V2211

Report Number TRC-95-N10

New Car Assessment Program (NCAP)

Frontal Barrier Impact Test

Ford Motor Company

1995 Ford Explorer

4-door multipurpose passenger vehicle

NHTSA Number: MS0205

TRC Test Number: 950127

Prepared By:

Transportation Research Center Inc.

10820 State Route 347

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February 21, 1995

Final Report

Prepared For:

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16. Abstract

A 56 kph (35 mph) frontal load cell barrier impact test was conducted on a 1995 Ford Explorer 4-door multi-purpose passenger vehicle, NHTSA No. MS0205, at Transportation Research Center Inc. on January 27, 1995. This test was conducted to obtain new car assessment and research data indicant of FMVSS 208, 212, 219 (partial), and 301 performance. The barrier impact velocity was 56.2 kph. The vehicle's maximum static crush was 529 millimeters. The ambient temperature was 23° C.

The driver's Head Injury Criteria (HIC) was 525. The driver's chest maximum resultant acceleration with three (3) milliseconds minimum duration was 48.5 g. The driver's chest maximum deflection was 32 millimeters. The driver's left and right femur maximum axial forces were 4376 N and 5008 N, respectively.

The passenger's HIC was 448. The passenger's chest maximum resultant acceleration with three (3) milliseconds minimum duration was 47.8 g. The passenger's chest maximum deflection was 40 millimeters. The passenger's left and right femur maximum axial forces were 3476 N and 4572 N, respectively.

17. Key Words	18. Distribution Statement
56 kph (35 mph) Frontal Barrier Impact Test: New Car Assessment Program (NCAP) FMVSS 208, "Occupant Crash Protection" FMVSS 212, "Windshield Retention" FMVSS 219, "Windshield Zone Intrusion" FMVSS 301, "Fuel System Integrity"	Copies of this report are available from: National Highway Traffic Safety Admin. Technical Reference Division Nassif Building, Room 5108 400 Seventh Street, S.W. Washington, DC 20590

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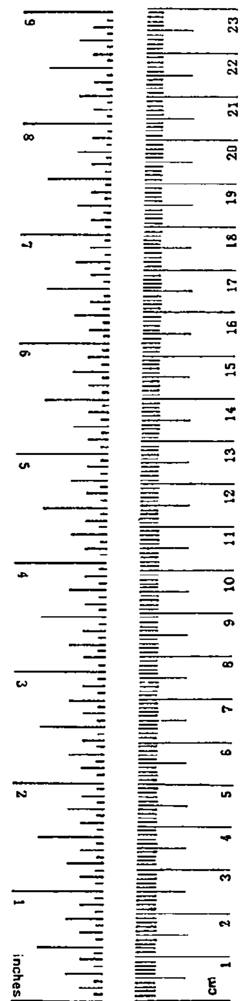
METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

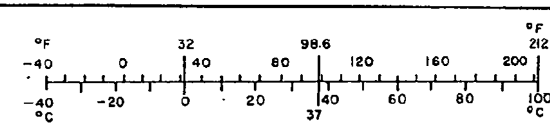
Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
in	inches	*2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
		AREA		
in^2	square inches	6.5	square centimeters	cm^2
ft^2	square feet	0.09	square meters	m^2
yd^2	square yards	0.8	square meters	m^2
mi^2	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	0.95	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 Misc. Publ. 286, Units of Weights and Measures, Price $2.25, SD 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
m	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	
		MASS (weight)		
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
		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 1.0

Purpose and Test Procedure

Purpose

This 56 kph (35 mph) frontal barrier impact test is part of the New Car Assessment Program (NCAP) conducted for the National Highway Traffic Safety Administration's (NHTSA) Office of Market Incentives by Transportation Research Center Inc. (TRC) under Contract Number DTNH22-90-D-22121.

The purpose of this test was to obtain new car assessment and research data for vehicle crashworthiness and occupant restraint system performance for the subject vehicle, a 1995 Ford Explorer 4-door multipurpose passenger vehicle, NHTSA Number MS0205, at an impact speed in excess of the current 48 kph (30 mph) FMVSS 208 requirements.

Test Procedure

This test was conducted in accordance with NHTSA's Laboratory Indicant Test Procedure, New Car Assessment Program, dated January 1, 1990. Data was obtained indicant of FMVSS 208, "Occupant Crash Protection"; FMVSS 212, "Windshield Retention"; FMVSS 219 (partial), "Windshield Zone Intrusion"; and FMVSS 301, "Fuel System Integrity," performance.

The test vehicle was instrumented with nine (9) accelerometers to measure longitudinal axis accelerations. The vehicle impacted a frontal load cell barrier instrumented with thirty-six (36) barrier face load cells. The vehicle's specified impact velocity range was 55.5 to 57.1 kph.

The test vehicle contained two (2) Part 572E 50th percentile adult male anthropomorphic test devices (dummies). The dummies were positioned in the front outboard designated seating positions according to the dummy placement procedures specified in Appendices VII and VIII of the Laboratory Indicant Test Procedure. This test was the first use of the driver dummy and the first use of the passenger dummy.

Both dummies were instrumented with head, chest, and pelvis accelerometers to measure longitudinal, lateral, and vertical accelerations, and with left and right femur load cells to measure axial forces. Each Part 572E dummy's instrumentation also included a chest potentiometer to measure longitudinal deflection and a six-axis neck load cell to measure longitudinal, lateral, and vertical forces and moments.

The eighty-nine (89) data channels were multiplexed and recorded on two (2) 14-track tape drives. The data was digitally sampled at 12,500 samples per second and processed per section IP11 of the Laboratory Indicant Test Procedure.

The crash event was recorded by one (1) real-time panning motion picture camera and sixteen (16) high-speed motion picture cameras. The pre- and post-test conditions were recorded by one (1) real-time motion picture camera.

The vehicle, occupant, and load cell barrier data are presented in Section 2.0. The occupant, camera, and vehicle measurements are presented in Section 3.0. Appendix A contains the still photographic prints. Appendix B contains the dummy, vehicle, and load cell barrier data plots. Appendix C contains the dummy certification data. Appendix D contains miscellaneous test information. Appendix E contains the restraint system instructions from the owner's manual.

Section 2.0

Frontal Barrier Impact Test Summary

Test Results Summary

This frontal load cell barrier test was conducted at TRC on January 27, 1995.

The test vehicle, a 1995 Ford Explorer 4-door multipurpose passenger vehicle, NHTSA Number MS0205, was equipped with a 4.0-liter inline engine, automatic transmission, power steering, and power brakes. The vehicle's test weight was 2206 kg. The vehicle's impact speed was 56.2 kph. The vehicle sustained 529 mm of static crush during the impact.

The driver's Head Injury Criteria (HIC) was 525. The driver's chest maximum resultant acceleration with three (3) milliseconds minimum duration was 48.5 g. The driver's chest maximum deflection was 32 mm. The driver's left and right femur maximum axial forces were 4376 N and 5008 N, respectively.

The passenger's HIC was 448. The passenger's chest maximum resultant acceleration with three (3) milliseconds minimum duration was 47.8 g. The passenger's chest maximum deflection was 40 mm. The passenger's left and right femur maximum axial forces were 3476 N and 4572 N, respectively.

There was no loss of windshield retention.

There was no penetration through the windshield.

Following the impact, no fluid spilled from the vehicle's fuel system prior to the static rollover test or during any portion of the static rollover test.

Data Acquisition Explanations

The driver's head Y-axis accelerometer, HEDYG1, recorded questionable data spikes from 50 to 148 milliseconds. The spikes affected the driver's head resultant acceleration and 36 millisecond Head Injury Criteria (HIC) calculations.

The left rear seat redundant X-axis accelerometer, TLRXGA, lost data after 130 milliseconds as a result of the accelerometer's cable being damaged by the vehicle's crush on impact.

Table 1 Crash Test Summary

NHTSA number:	MS0205	
Test type:	Frontal Load Cell Barrier	
Test date:	1/27/95	
Test time:	1454	
Ambient temperature:	23° C	
Vehicle year/make/ model/body style:	1995/Ford/Explorer/4-door multipurpose passenger vehicle	
Vehicle test weight:	2206 kg	
Impact angle[1]:	0°	
Impact velocity[2]:	Primary = 56.2 kph Secondary = 56.2 kph	
Maximum static crush:	529 mm	
Average rebound:	355 mm	
Dummies:	Driver #142	Passenger #192
Type:	Part 572 E	Part 572 E
Location:	Left front	Right front
Restraint:	Airbag and 3-point unibelt	Airbag and 3-point unibelt
Number of data channels:	89	
Number of cameras:	High-speed 16 Real-time 2	

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

Table 2 Test Vehicle Information

Vehicle year/make/ model/body style:	1995/Ford/Explorer/4-door multipurpose passenger vehicle		
Color:	Tan		
VIN:	1FMDU34X7SUA24690		
NHTSA number:	MS0205		
Engine data:			
Placement:	Inline		
Cylinders:	6		
Displacement	4.0 liters		
Transmission data:	_4_ speed, __manual, _X_ automatic, __overdrive		
	__FWD, __RWD, _X_ 4WD		
Date vehicle received:	1/20/95		
Odometer reading:	71		
Dealer's name and address:	Ricart Ford, Inc. 4255 S. Hamilton Road Columbus, OH 43227		

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	Yes	Air conditioning	Yes
Radio	Yes	Anti-skid brake	Yes
Clock	Yes	Rear window defroster	Yes
Other	None		

Certification data from vehicle's label:

Vehicle manufactured by:	Ford Motor Company
Date of manufacture:	01/95
VIN:	1FMDU34X7SUA24690
GVWR:	2394 kg
GAWR: Front:	1229 kg
Rear:	1315 kg

Table 2 Test Vehicle Information, Cont'd.

Size of tires:	235/75R15
Tire pressure with maximum capacity vehicle load:	
Front:	240 kPa
Rear:	240 kPa
Spare tire:	P235/75R15
Type of front seats:	Bucket

Tire & capacity data from vehicle's label:

Recommended tire size:	235/75R15
Recommended cold tire pressure:	
Front:	180 kPa
Rear:	180 kPa
Designated seating capacity:	
Front	NA
Rear	NA
Total	NA
Vehicle capacity weight:	NA

Test vehicle attitude:

Delivered attitude:	LF 852 mm;	RF 858 mm;	LR 831 mm;	RR 841 mm
Pre-test attitude:	LF 842 mm;	RF 845 mm;	LR 799 mm;	RR 801 mm
Post-test attitude:	LF 710 mm;	RF 838 mm;	LR 757 mm;	RR 866 mm

Table 2 Test Vehicle Information Cont'd

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

Right front	487	kg	Right rear	436	kg
Left front	543	kg	Left rear	458	kg
Total front weight	1030	kg	(53.5% of total vehicle weight)		
Total rear weight	894	kg	(46.5% of total vehicle weight)		
Total delivered weight	1924	kg			

Calculation of test vehicle's target test weight:

RCLW = Rated cargo and luggage weight

UDW = Unloaded delivered weight (1924 kg)

VCW = Vehicle capacity weight (NA)

DSC = Designated seating capacity (NA)

RCLW[1] = VCW - 68 (DSC) = 136 kg

Target test weight = UDW + RCLW[1] + (Number of Hybrid III dummies x 76 kg/dummy)

Target test weight = 1924 + 136 + 152

Target test weight = 2212 kg

Weight of test vehicle with required dummies and 130 kg of cargo weight:

Right front	549	kg	Right rear	539	kg
Left front	565	kg	Left rear	553	kg
Total front weight	1114	kg	(50.5% of total vehicle weight)		
Total rear weight	1092	kg	(49.5% of total vehicle weight)		
Total test weight	2206	kg	(0.3% under target test weight)		

No ballast was added to the vehicle to meet target test weight.

Components removed to meet target test weight: None

CG rearward of front wheel centerline: 1403 mm

Vehicle wheelbase: 2835 mm

[1] Cargo weight for multi-purpose passenger vehicles, trucks, and buses is the vehicle's rated cargo and luggage weight from the vehicle's label or 136 kg, whichever is less.

Table 3 Post-Impact Data

Test number:	950127
NHTSA number:	MS0205
Test date:	1/27/95
Test time:	1454
Test type:	Frontal load cell barrier
Impact angle:	0°
Ambient temperature at impact area:	23° C
Temperature in occupant compartment:	20° C
Impact velocity:	
Primary	56.2 kph
Secondary	56.2 kph
Specified range	55.5 to 57.1 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:

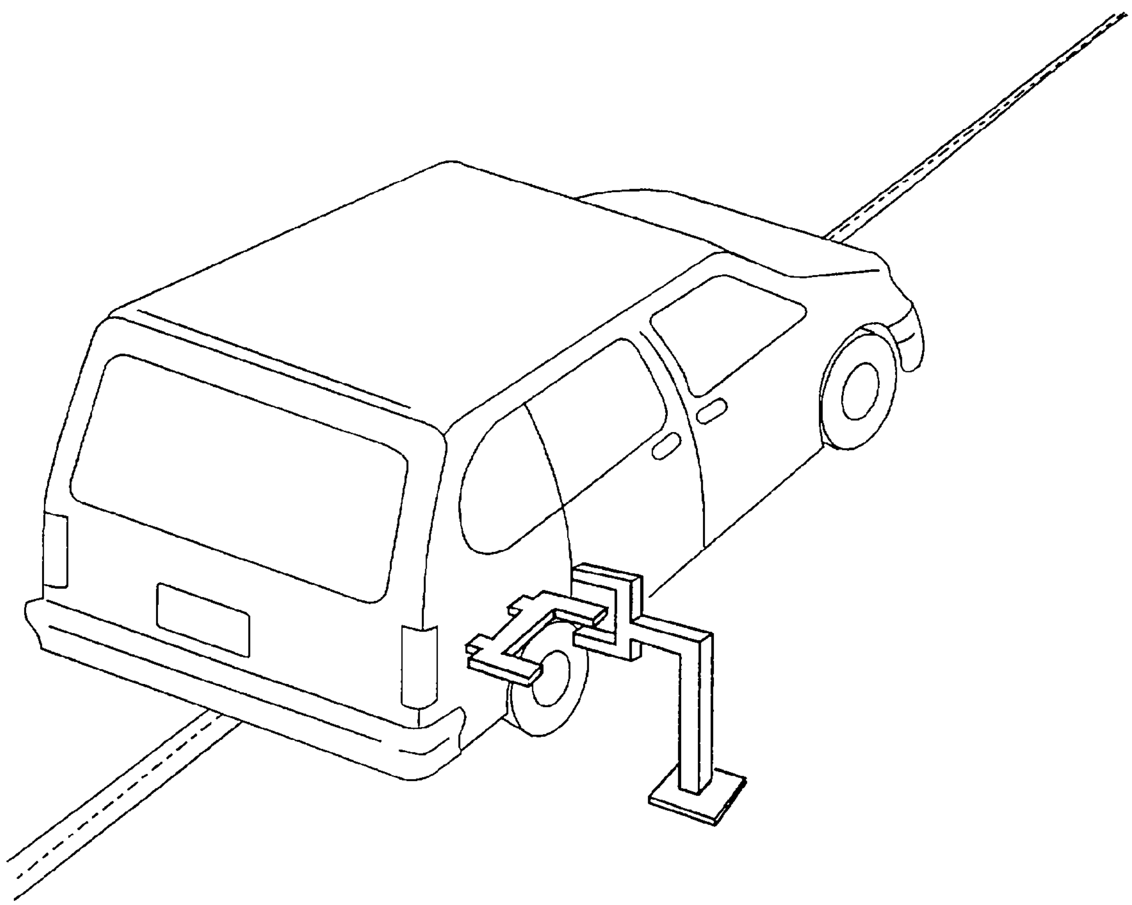
Pre-test:	L	4660 mm;	C	4773 mm;	R	4667 mm
Post-test:	L	4220 mm;	C	4244 mm;	R	4215 mm
Total crush:	L	440 mm;	C	529 mm;	R	452 mm
Average crush:	474 mm					

Test vehicle rebound from flat barrier:

Distance from test vehicle to barrier:

Post-test:	L	370 mm;	C	344 mm;	R	352 mm
Average rebound	355 mm					

Figure 1 Impact Velocity Measurement System

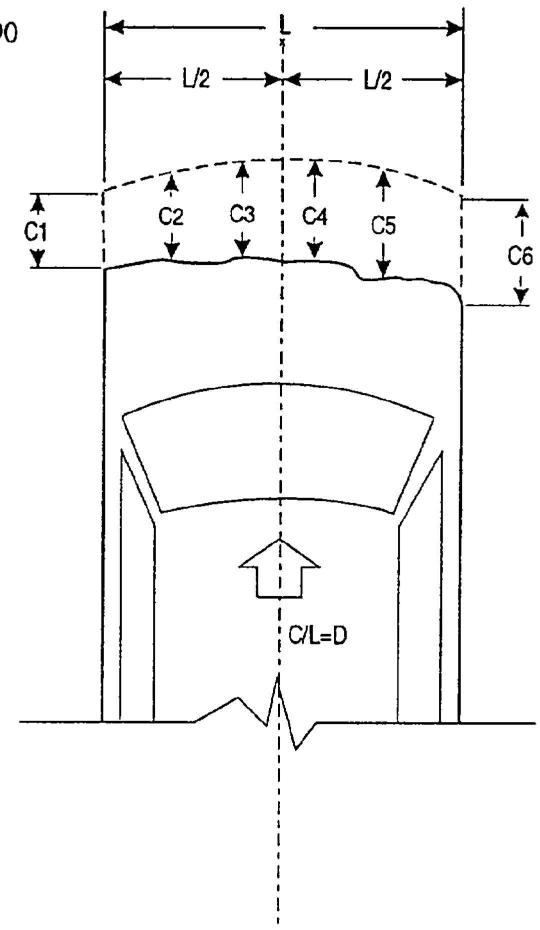


The final vane clears emitter/receiver pair 51 millimeters before impact.

The vanes have 305-millimeter spacing.

<u>Figure 2 Accident Investigation Division Data</u>
<u>for 56 kph (35 mph) Frontal Barrier Impact</u>

NHTSA number:	MS0205
Test date:	1/27/95
Vehicle year/make/ model/body style:	1995/Ford/Explorer/4-door multipurpose passenger vehicle
Vehicle size category:	Special purpose
VIN:	1FMDU34X7SUA24690
Build date:	01/95
Test weight:	2206 kg
Vehicle wheelbase:	2835 mm
Maximum width:	1746 mm
Front overhang:	860 mm



Collision Deformation Classification (CDC) code: 12FDEW3

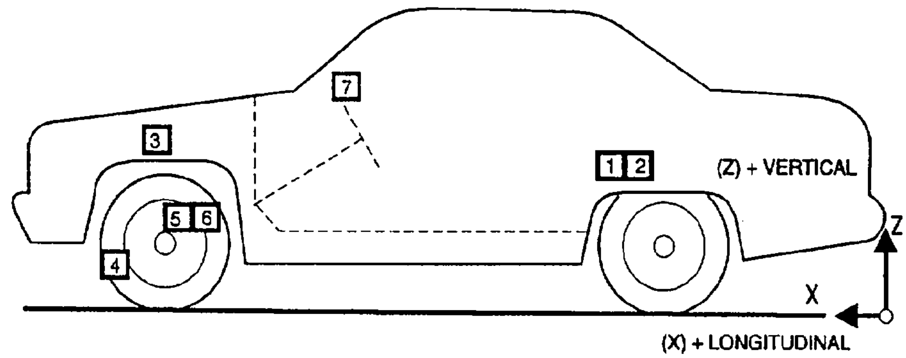
Crush depth measurements:

C1 = 440 mm
C2 = 491 mm
C3 = 527 mm
C4 = 522 mm
C5 = 492 mm
C6 = 452 mm

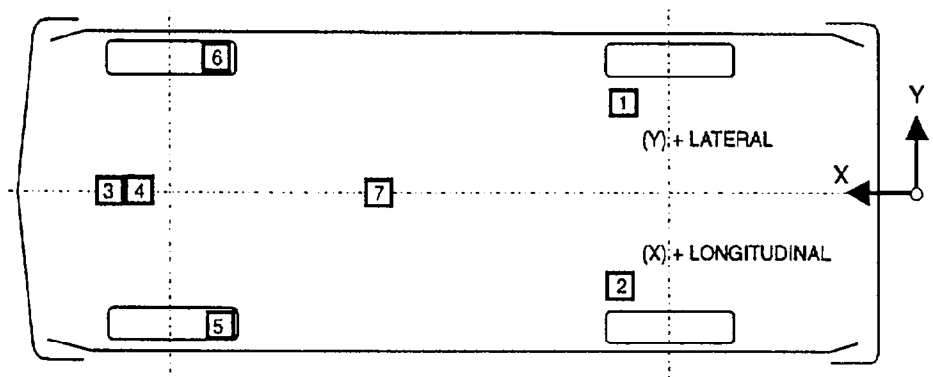
Midpoint of damage: D: Vehicle Longitudinal Centerline

Length of damaged region: L: 1524 mm

Figure 3 Vehicle Accelerometer Placement



SIDE VIEW



BOTTOM VIEW

Table 4 Vehicle Accelerometer Locations and Data Summary

TEST NUMBER: 950127

No. LOCATION	X	Y	Z	POSITIVE DIRECTION	NEGATIVE DIRECTION
1 LEFT REAR SEAT CROSSMEMBER	3163 mm	560 mm	616 mm		
LONGITUDINAL				2.1 g @ 134.1 ms	33.0 g @ 53.0 ms
REDUNDANT[1]				--- ---	57.0 g @ 53.0 ms
2 RIGHT REAR SEAT CROSSMEMBER	3128 mm	-550 mm	627 mm		
LONGITUDINAL				2.4 g @ 125.4 ms	35.2 g @ 53.4 ms
REDUNDANT				2.5 g @ 125.3 ms	34.8 g @ 53.3 ms
3 ENGINE TOP	969 mm	100 mm	1107 mm		
LONGITUDINAL				30.1 g @ 54.6 ms	92.7 g @ 38.6 ms
4 ENGINE BOTTOM	1043 mm	0 mm	382 mm		
LONGITUDINAL				50.1 g @ 53.2 ms	83.9 g @ 38.8 ms
5 RIGHT BRAKE CALIPER	948 mm	-580 mm	354 mm		
LONGITUDINAL				24.9 g @ 70.7 ms	91.6 g @ 54.1 ms
6 LEFT BRAKE CALIPER	948 mm	580 mm	355 mm		
LONGITUDINAL				41.7 g @ 68.6 ms	81.7 g @ 52.8 ms
7 INSTRUMENT PANEL CENTER	1473 mm	0 mm	1298 mm		
LONGITUDINAL				56.1 g @ 40.4 ms	78.4 g @ 23.0 ms

* X-AXIS LOCATIONS ARE MEASURED REARWARD FROM THE FRONT BUMPER.

REFERENCE: X: + FORWARD ACCELERATION
Y: + LEFT FROM VEHICLE CENTERLINE
Z: + UP FROM GROUND LEVEL

[1] See DATA ACQUISITION EXPLANATIONS

Table 5 Post-Impact Dummy/Vehicle Data

Visible Dummy Contact Points:

	Driver #142	Passenger #192
Head	Airbag and D-ring	Airbag
Chest	Airbag	Airbag
Abdomen	None	None
Left knee	Instrument panel	Instrument panel
Right knee	Instrument panel	Instrument panel

Door Opening:

	Left	Right
Front	Easy	Easy
Rear	Easy	Easy

Seat Movement:

	Seat Back Failure	Seat Shift
Front	None	None
Rear	NA	NA

Glazing Damage: The entire windshield cracked on impact.

Other Notable Impact Effects: The left front tire deflated on impact.

Table 6 FMVSS 208 Data Summary

Vehicle year/make/ model/body style:	1995/Ford/Explorer/4-door multipurpose passenger vehicle
Vehicle NHTSA number:	MS0205
Test date:	1/27/95

	Driver Dummy #142		Passenger Dummy #192	
Maximum Accelerations:				
Head X-axis	-60.0	g	-47.1	g
Head Y-axis[1]	108.2	g	12.8	g
Head Z-axis	-19.2	g	-29.9	g
Head resultant[1]	118.2	g	54.0	g
Chest X-axis	-49.2	g	-48.1	g
Chest Y-axis	-5.4	g	-4.1	g
Chest Z-axis	-11.9	g	11.6	g
Chest resultant[2]	48.5	g	47.8	g
Chest resultant time interval[2]	.003	sec	.003	sec
Head Injury Criteria (HIC) Values:				
HIC[1,3]	525		448	
HIC starting time	.050	sec	.051	sec
HIC ending time	.083	sec	.087	sec
Avg. head resultant accel. during HIC time interval	47.9	g	43.4	g
Maximum Chest Deflections:				
Chest X-axis	32	mm	40	mm
Maximum chest deflection time	.076	sec	.071	sec
Maximum Compressive Femur Forces:				
Left femur	4376	N	3476	N
Right femur	5008	N	4572	N
Maximum Seat Belt Forces:				
Lap belt	5237	N	3007	N
Shoulder belt	7223	N	7698	N

Note: All values listed must be occurring during primary impact event. (Head accelerations listed must be during hic time interval.)

1 See data acquisition explanations.

2 0.003 Sec. Minimum duration.

3 The maximum hic time interval is 36 milliseconds.

Table 7 Hybrid III Neck and Pelvis Data Summary

Vehicle year/make/ model/body style: 1995/Ford/Explorer/4-door multipurpose passenger vehicle

Vehicle NHTSA number: MS0205

Test date: 1/27/95

	Driver Dummy #142		Passenger Dummy #192	
Maximum Values:				
Neck X-axis force	320	N	656	N
Neck Y-axis force	-240	N	326	N
Neck Z-axis force	2294	N	1943	N
Neck moment about X-axis	16	N-m	19	N
Neck moment about Y-axis	-33	N-m	53	N
Neck moment about Z-axis	20	N-m	27	N
Maximum Accelerations:				
Pelvis X-axis	-65.1	g	-57.4	g
Pelvis Y-axis	10.2	g	7.7	g
Pelvis Z-axis	14.8	g	15.8	g
Pelvis resultant	65.3	g	58.5	g

Note: All values listed must be occurring during primary impact event.

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 driver dummy was restrained by the airbag and the three-point unibelt. The dummy rebounded rearward into the seat back with the dummy's head rotating rearward contacting the seat back. The driver dummy came to rest in the driver's seat, restrained by the three-point unibelt.

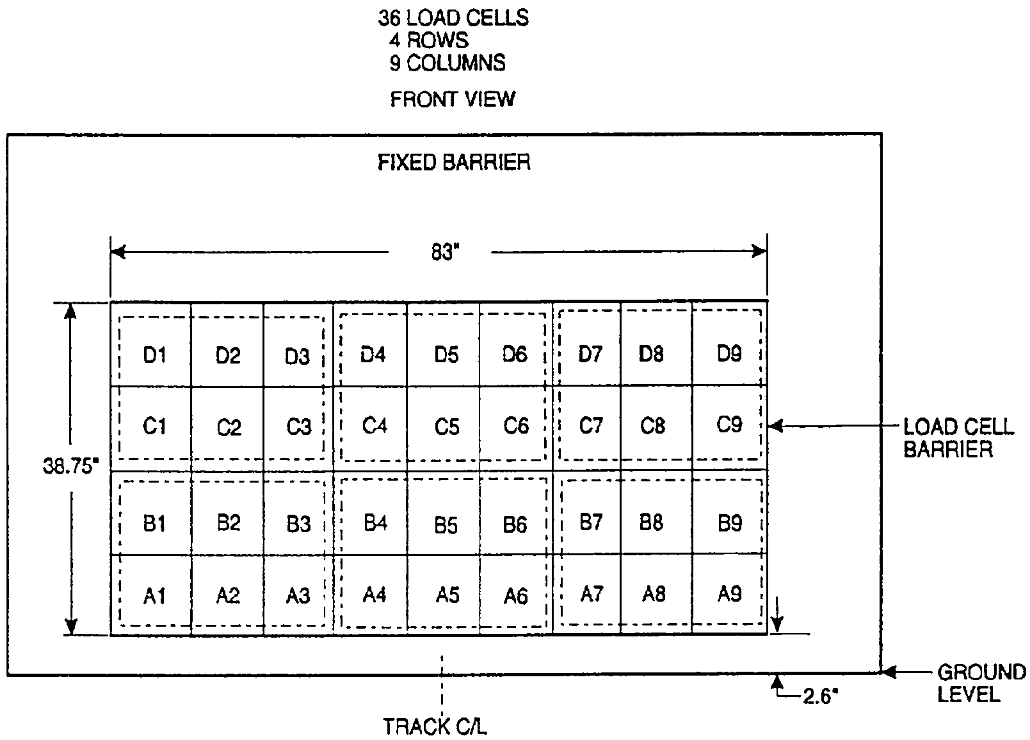
Right Front Passenger Dummy

Upon impact, the right front passenger dummy translated forward on the seat impacting both knees into the instrument panel. The dummy's head rotated slightly forward with the dummy's head and chest impacting the airbag. The right front passenger dummy was restrained by the airbag and three-point unibelt. The dummy rebounded rearward into the seat back as the dummy's head rotated rearward contacting the seat back. The right front passenger dummy came to rest in the right front passenger's seat restrained by the three-point unibelt.

Table 8 Seat Belt Performance Assessment Test Data

	Driver	Passenger
Belt length data:		
Belt length from trim panel exit to bolt hole anchor point for continuous webbing systems.	3070 mm	3070 mm
Shoulder belt length as measured on Part 572 dummy.	880 mm	880 mm
Lap belt length as measured on Part 572 dummy.	910 mm	860 mm
Shoulder belt spool-off length:		
As determined by film analysis	51 mm	46 mm
As determined mechanically	49 mm	51 mm
As determined electronically	69 mm	71 mm
Belt stretch length:		
As measured mechanically	5 mm/m	6 mm/m
As measured electronically	0 mm/m	22 mm/m
Retractor lock-up time:		
As determined by shoulder belt spool-off	74 ms	72 ms

Figure 4 Load Cell Barrier Configuration



Group 1: A1 through B3
Group 2: A4 through B6
Group 3: A7 through B9
Group 4: C1 through D3
Group 5: C4 through D6
Group 6: C7 through D9

Table 9 Load Cell Barrier Data Summary

Location	Positive direction	Negative direction
Total group 1	1.4 kN @ 226.0 ms	62.3 kN @ 52.8 ms
Total group 2	1.2 kN @ 167.1 ms	74.3 kN @ 53.6 ms
Total group 3	1.3 kN @ 2.4 ms	56.7 kN @ 53.8 ms
Total group 4	2.0 kN @ 0.9 ms	159.8 kN @ 27.2 ms
Total group 5	1.7 kN @ 226.5 ms	364.4 kN @ 40.2 ms
Total group 6	1.6 kN @ 226.3 ms	149.6 kN @ 26.5 ms
Total load cell force	7.2 kN @ 226.3 ms	746.2 kN @ 38.6 ms

Tension is positive
Compression is negative

Section 3.0

FMVSS 212, 219 (partial), and 301 Data

Figure 5 FMVSS 212 Test Data

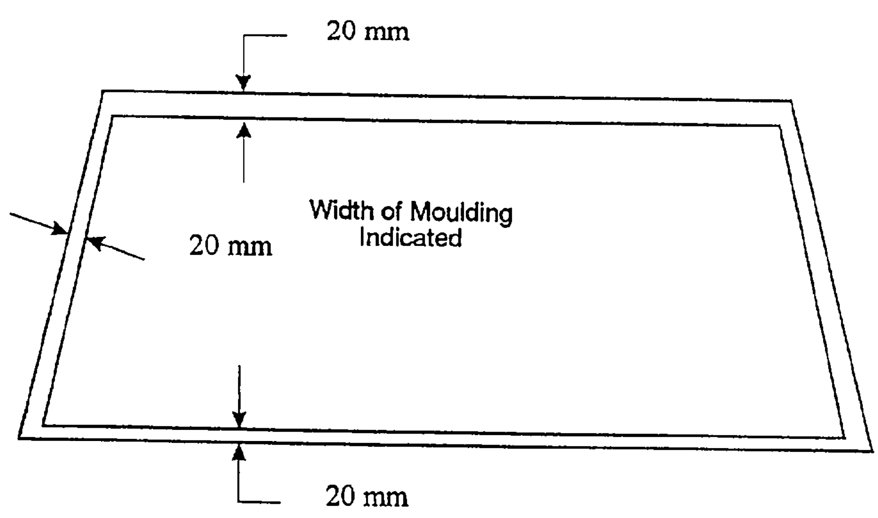
Details of windshield mounting such as retention method, trim type, etc.:
Plastic trim around outer perimeter, adhesive around inner perimeter.

FMVSS 212 requirements: The post-test periphery retention amount must be at least 75% of the pre-test periphery measurement for vehicles NOT equipped with automatic restraints, and 50% for each side of windshield for vehicles equipped with automatic restraint systems for front occupants.

Windshield periphery measurements:

	Pre-test	Post-test	Percent retention
Right side	2040 mm	2040 mm	100.0
Left side	2040 mm	2040 mm	100.0
Total	4080 mm	4080 mm	100.0

Pre-test windshield mounting material temperature: 20° C



Front view of windshield[1]

Loss of windshield retention lengths: None

[1] Indicate areas of loss of retention, if any, on windshield diagram.

Figure 6 FMVSS 219 Test Data

Protected zone lower edge requirement:

The lower edge of the protected zone is determined by placing a 165-millimeter diameter rigid sphere weighing 6.8 kg in a position such that it simultaneously contacts the inner surface of the windshield and the top surface of the instrument panel including padding. Draw the locus of points on the inner surface of the windshield contactable by the sphere across the width of the instrument panel. From the outermost contactable points, extend the locus line horizontally to the edges of the windshield, and then draw a line on the inner surface of the windshield below and 13 millimeters from the locus line. The **lower edge of the protected zone** is the longitudinal projection onto the outer surface of the windshield of this line.

Windshield measurements:

A = 1290 mm

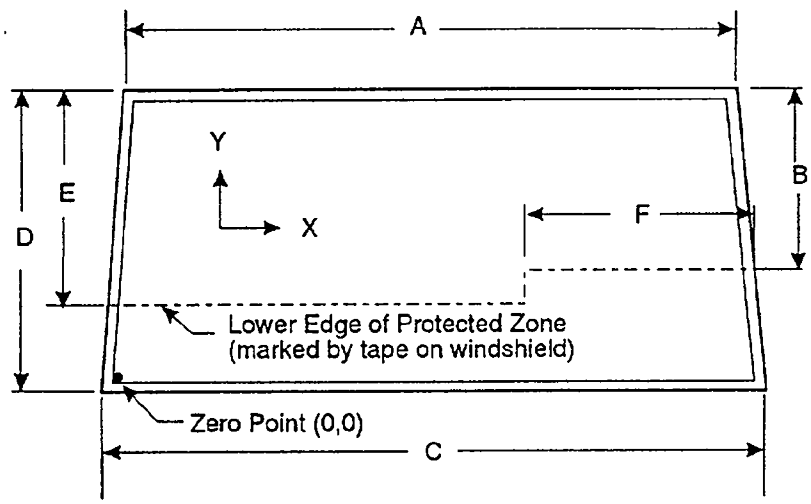
B = 430 mm

C = 1580 mm

D = 675 mm

E = 455 mm

F = 740 mm



Method of adhering protected zone template to windshield: NA

Areas of windshield template penetration greater than 6 mm: NA

	Coordinates X	Y
1.		
2.		
3.		

Areas of windshield penetration, below the protected zone, through the inner surface of the windshield: None

	X	Y
1.		
2.		
3.		

Table 10 Fuel System Data

Vehicle year/make/ model/body style:	1995/Ford/Explorer/4-door multipurpose passenger vehicle
NHTSA number:	MS0205
Fuel system capacity:	83.3 liters (from owner's manual)
Usable capacity:	79.5 liters (furnished by COTR)
Test volume range:	73.1 liters to 74.7 liters (92-94% of usable)
Actual test volume:	73.8 liters (with entire fuel system filled)
Test fluid type:	Stoddard solvent
Specific gravity:	0.764
Kinematic viscosity:	0.99 centistoke
Test fluid color:	Purple

The electric fuel pump does not operate with ignition switch "on" and the engine not operating.

Details of fuel system:	The fuel tank is located in front of the rear axle on the left side. The fuel filler neck is located on the left side. The fuel lines run along the left frame rail to the front.

Table 11 FMVSS 301 Post-Impact Test Data

NHTSA number: MS0205

Test date: 1/27/95

Vehicle year/make/model/body style: 1995/Ford/Explorer/4-door multipurpose passenger vehicle

Test requirements:

Test vehicle fuel tank filled to 92 to 94% of manufacturer's usable capacity and with electric fuel pump operating (if it will operate without engine operation). Part 572 test dummies located at each front designated seating position.

Test vehicle impact type:

_x_ Frontal (_56_ kph)

___ Oblique (48 kph) with __° barrier face first contacting ___ (driver/pass.) side

___ Rear moving barrier (48 kph)

___ Lateral moving barrier (32 kph)

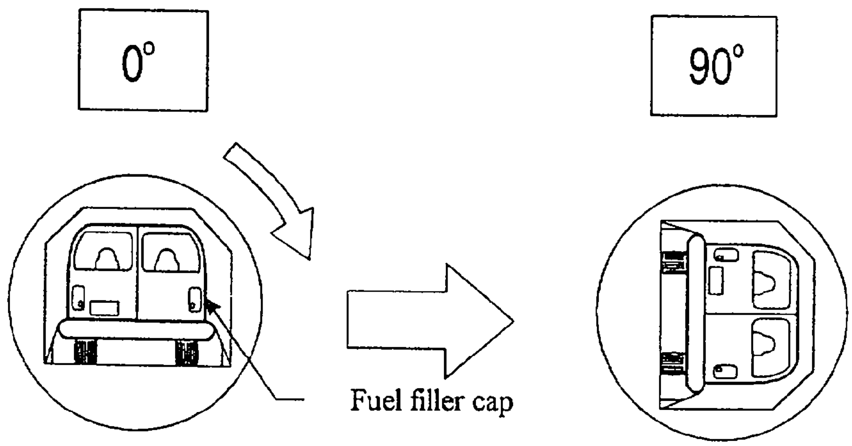
Fuel system fluid spillage measurements:

	Test Results	Maximum Allowable
1. From impact until vehicle motion ceases	0 g	28 g
2. 5-minute period after vehicle motion ceases	0 g	142 g
3. Next 25 minutes after 5-minute period	0 g	28 g/min

Fuel system fluid spillage location(s): None

Figure 7 FMVSS 301 Static Rollover Test Data

NHTSA number: MS0205
Test phase



Static rollover machine rotation time information: (specified range is 1-3 minutes)

Time required for machine to rotate 90°	=	2	minutes,	0 seconds
FMVSS 301 position hold time	=	5	minutes,	0 seconds
Total	=	7	minutes,	0 seconds
Next whole minute interval	=	7	minutes	

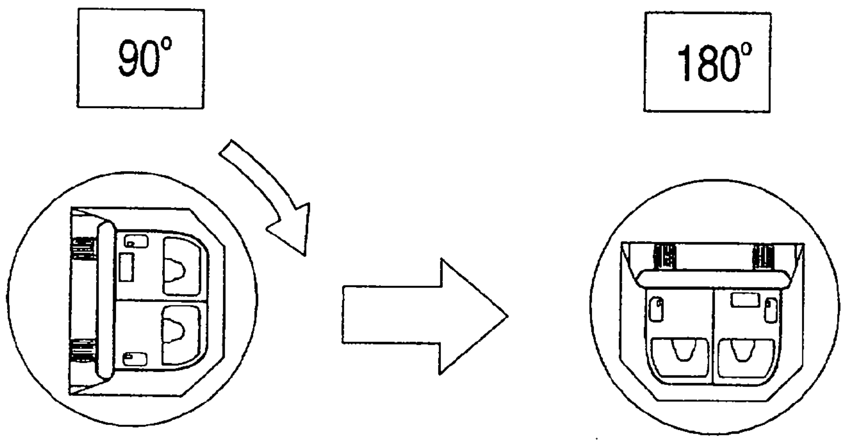
Fuel system fluid spillage measurements:

0° to 90° rotation (fuel filler cap down)	Test Results	Maximum Allowable
1. First 5 minutes from onset of rotation	0 g	142 g
2. Sixth minute from onset of rotation	0 g	28 g
3. Seventh minute from onset of rotation	0 g	28 g

Fuel system fluid spillage location(s): None

Figure 7 FMVSS 301 Static Rollover Test Data, Cont'd.

Test phase



Static rollover machine rotation time information: (specified range is 1-3 minutes)

Time required for machine to rotate 90°	=	2	minutes,	0 seconds
FMVSS 301 position hold time	=	5	minutes,	0 seconds
Total	=	7	minutes,	0 seconds
Next whole minute interval	=	14	minutes	

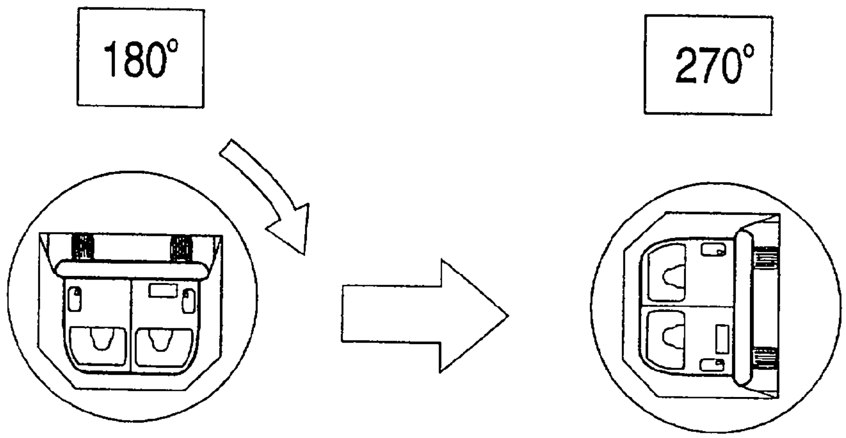
Fuel system fluid spillage measurements:

90° to 180° rotation	Test Results	Maximum Allowable
1. First 5 minutes from onset of rotation	0 g	142 g
2. Sixth minute from onset of rotation	0 g	28 g
3. Seventh minute from onset of rotation	0 g	28 g

Fuel system fluid spillage location(s): None

Figure 7 FMVSS 301 Static Rollover Test Data, Cont'd.

Test phase



Static rollover machine rotation time information: (specified range is 1-3 minutes)

Time required for machine to rotate 90°	=	2	minutes,	0	seconds
FMVSS 301 position hold time	=	5	minutes,	0	seconds
Total	=	7	minutes,	0	seconds
Next whole minute interval	=	21	minutes		

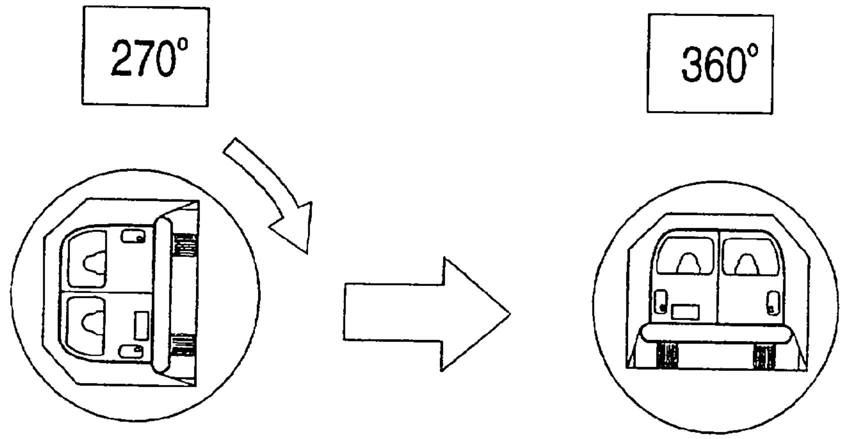
Fuel system fluid spillage measurements:

180° to 270° rotation	Test Results	Maximum Allowable
1. First 5 minutes from onset of rotation	0 g	142 g
2. Sixth minute from onset of rotation	0 g	28 g
3. Seventh minute from onset of rotation	0 g	28 g

Fuel system fluid spillage location(s): None

Figure 7 FMVSS 301 Static Rollover Test Data, Cont'd.

Test phase



Static rollover machine rotation time information: (specified range is 1-3 minutes)

Time required for machine to rotate 90°	=	2	minutes,	0	seconds
FMVSS 301 position hold time	=	5	minutes,	0	seconds
Total	=	7	minutes,	0	seconds
Next whole minute interval	=	28	minutes		

Fuel system fluid spillage measurements:

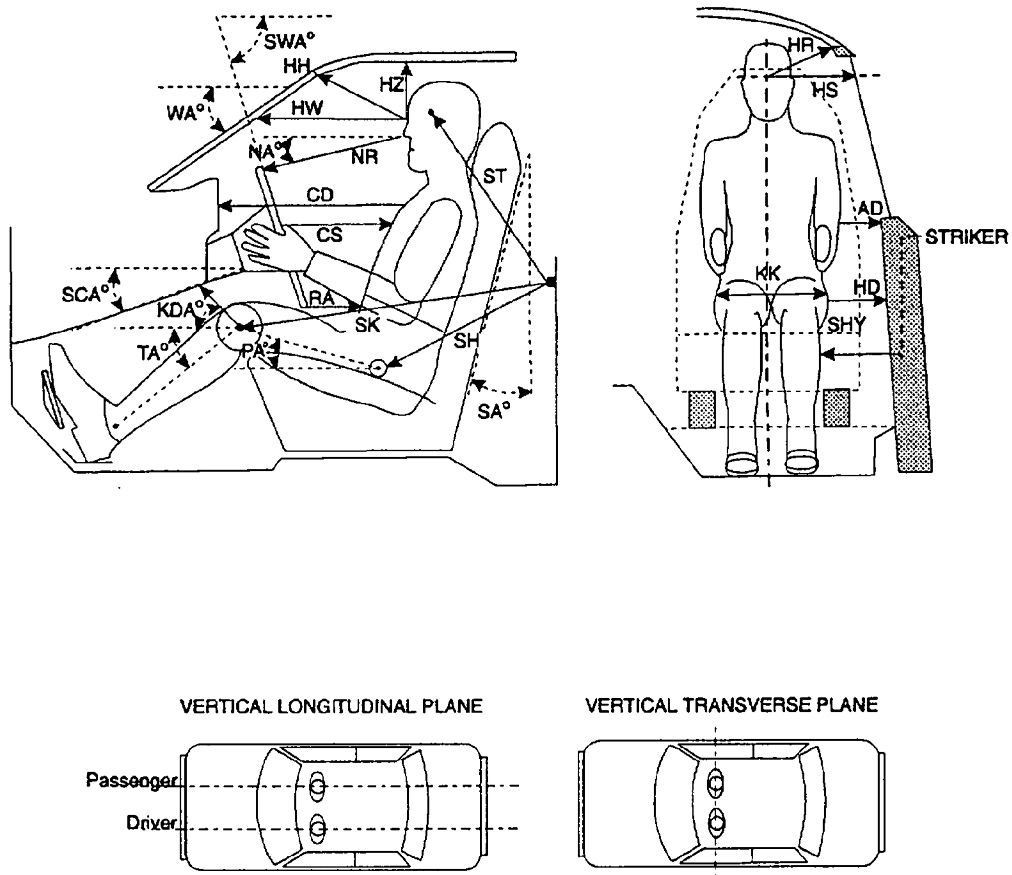
270° to 360° rotation	Test Results	Maximum Allowable
1. First 5 minutes from onset of rotation	0 g	142 g
2. Sixth minute from onset of rotation	0 g	28 g
3. Seventh minute from onset of rotation	0 g	28 g

Fuel system fluid spillage location(s): None

Section 4.0

Occupant, Camera, and Vehicle Information

Figure 8 Dummy Measurement Locations for Front Seat Occupants



950127

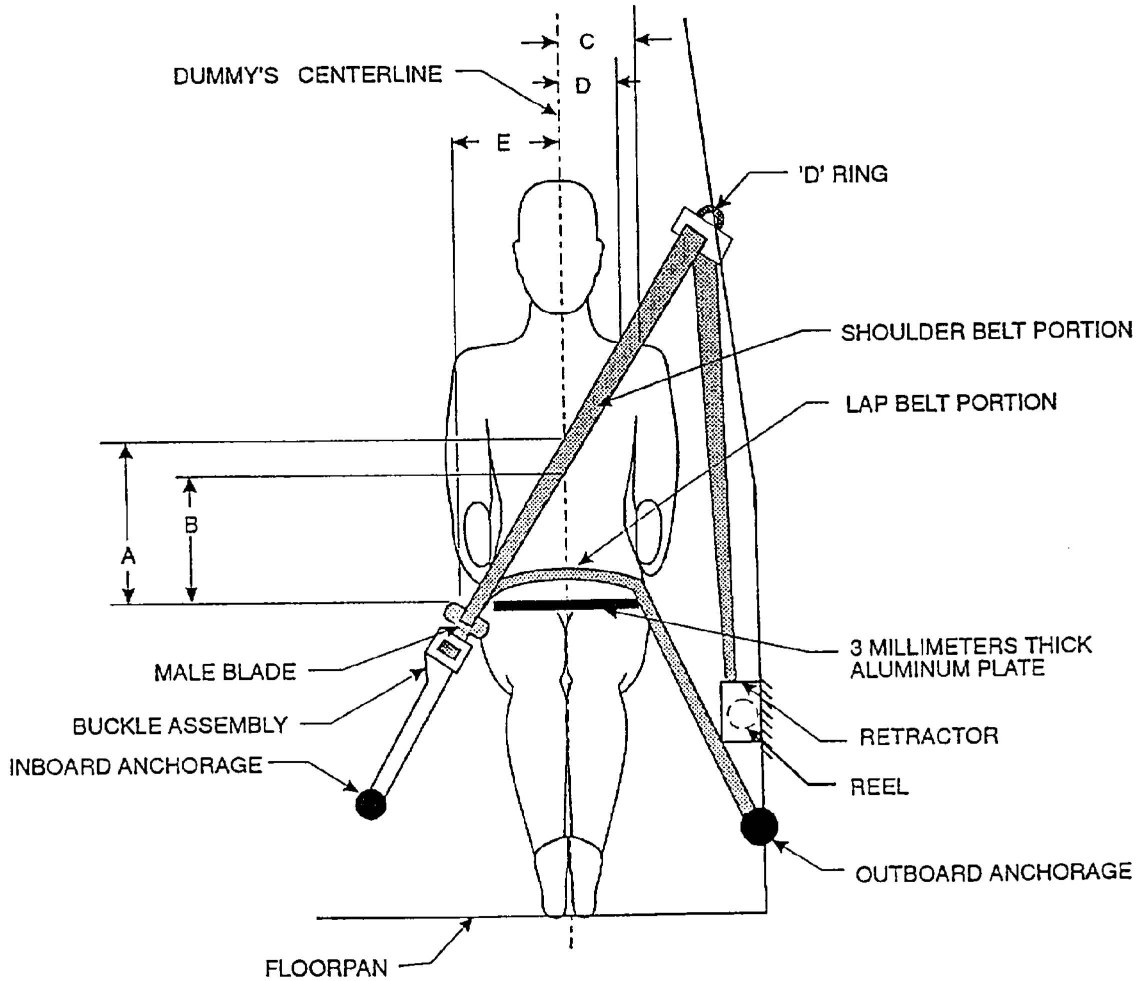
Table 12 Dummy Measurement Data For Front Seat Occupants

Designation	Type of Measurement	Driver (Serial #142)	Passenger (Serial #192)
WA	Windshield angle	38°	NA
SWA	Steering wheel angle	73°	NA
SCA	Steering column angle	21°	NA
SA	Seat back angle	18°	20°
HZ	Head to roof	239 mm	227 mm
HH	Head to header	392 mm	400 mm
HW	Head to windshield	570 mm	566 mm
HR	Head to side header	256 mm	239 mm
NR	Nose to rim	335 mm	NA
NA	Nose to rim angle	15°	NA
CD	Chest to dash	510 mm	550 mm
CS	Steering wheel to chest	274 mm	NA
RA	Rim to abdomen	160 mm	NA
KDL	Left knee to dash	155 mm	159 mm
KDR	Right knee to dash	130 mm	167 mm
KDA	Outboard knee to dash angle	25°	33°
PA	Pelvic angle	22°	23°
TA	Tibial angle	41°	38°
KK	Knee to knee	302 mm	255 mm
ST[1]	Striker to head	511 mm	507 mm
	Striker to head angle	-80°	-83°
SK[1]	Striker to knee	632 mm	612 mm
	Striker to knee angle	0°	2°
SH[1]	Striker to H-point	289 mm	290 mm
	Striker to H-point angle	30°	31°
SHY	Striker to H-point (Y dir.)	230 mm	223 mm
HS	Head to side window	350 mm	357 mm
HD	H-point to door	124 mm	128 mm
AD	Arm to door	98 mm	111 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 located above the striker.

Figure 9 Seat Belt Positioning Data



	Driver	Passenger
A - Top surface of aluminum plate to belt upper edge	340 mm	325 mm
B - Top surface of aluminum plate to belt lower edge	262 mm	235 mm
C - Dummy centerline to outer edge of belt at chest flesh top	140 mm	138 mm
D - Dummy centerline to inner edge of belt at chest flesh top	70 mm	85 mm
Lap belt tension	18 N	18 N
Shoulder belt tension	18 N	9 N
Adjustable seat belt anchorage position	Third of five positions	Third of five positions

Figure 10 Camera Positions

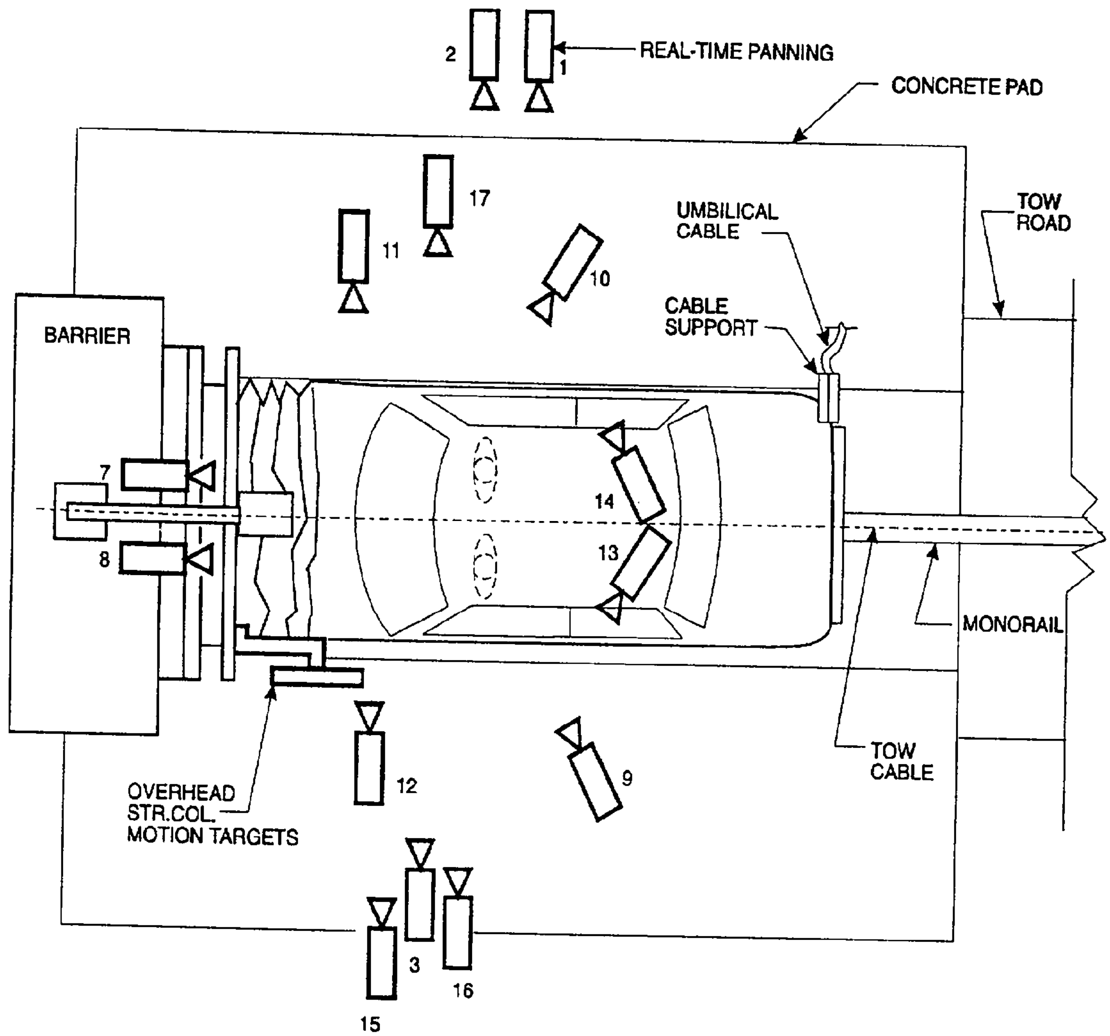


Figure 10 Camera Positions, Cont'd.

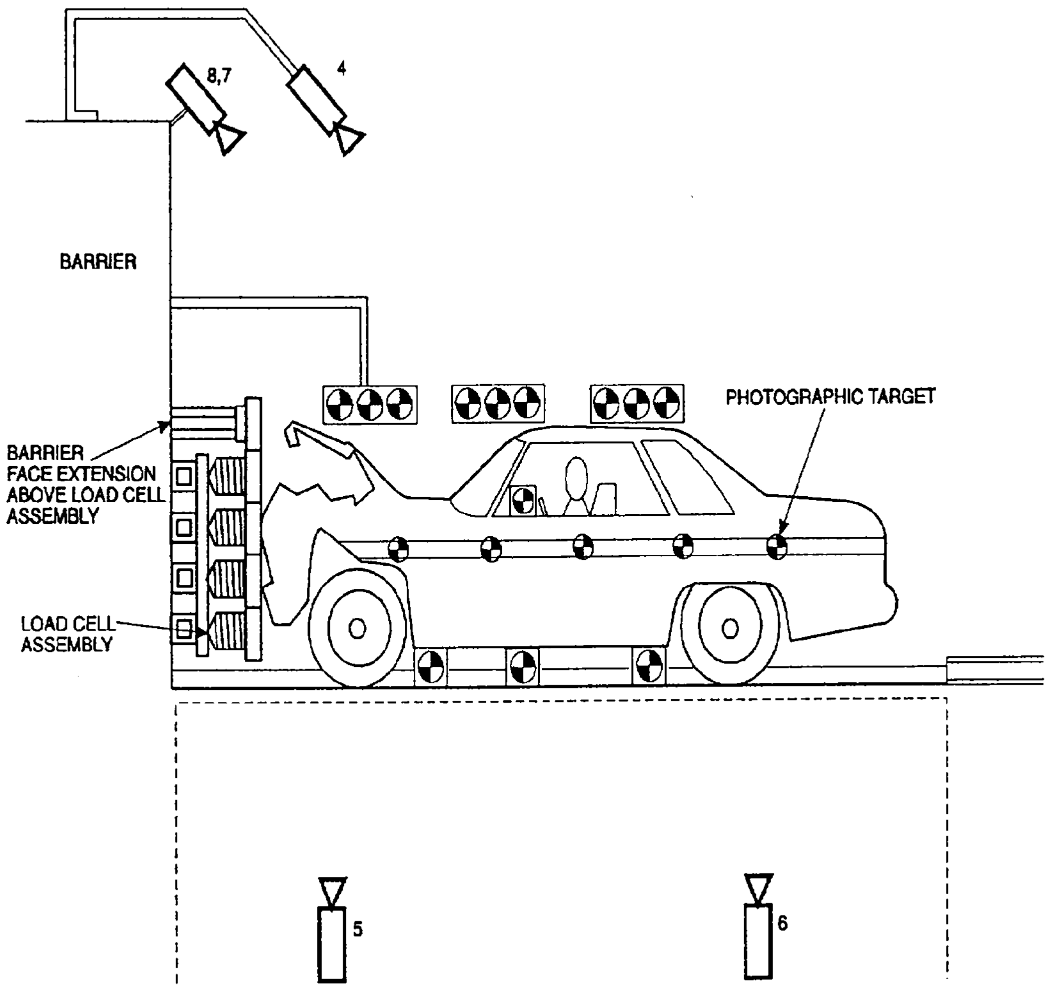


Table 13 Motion Picture Camera Locations

Test Number: 950127

Vehicle year/make/model/body style: 1995/Ford/Explorer/4-door multipurpose passenger vehicle

Camera Number	View	Camera Positions[1] X	Y	Z	Angle[2]	Film Plane to Head Target	Lens	Film Speed
1	Real-time panning	-3607 mm	-2802 mm	1549 mm	NA	NA mm	16 mm	24 frames/s
2	Vehicle crush	-2065 mm	-6767 mm	942 mm	-2°	NA mm	13 mm	508 frames/s
3	Dummy kinematics	-1054 mm	7493 mm	1118 mm	-12°	6045 mm	25 mm	983 frames/s
4	Windshield damage	-925 mm	0 mm	2489 mm	-40°	NA mm	13 mm	498 frames/s
5	Crush & fluid spillage	-1283 mm	0 mm	-2347 mm	90°	NA mm	13 mm	1002 frames/s
6	Fluid spillage	-2522 mm	0 mm	-2515 mm	90°	NA mm	13 mm	1000 frames/s
7	Passenger kinematics	-114 mm	-351 mm	2159 mm	-40°	NA mm	17 mm	500 frames/s
8	Driver kinematics	-173 mm	368 mm	2159 mm	-41°	NA mm	17 mm	508 frames/s
9	Driver kinematics	-4572 mm	1854 mm	2591 mm	-27°	2362 mm	25 mm	500 frames/s
10	Passenger kinematics	-4674 mm	-1880 mm	2540 mm	-26°	2007 mm	25 mm	495 frames/s
11	Windshield intrusion	-968 mm	-7775 mm	1118 mm	0°	NA mm	50 mm	502 frames/s
12	Windshield intrusion	-1346 mm	7859 mm	1074 mm	0°	NA mm	50 mm	505 frames/s
13	Driver seat belt movement	NA	NA	NA	NA	NA mm	NA mm	500 frames/s
14	Passenger seat belt movement	NA	NA	NA	NA	NA mm	NA mm	505 frames/s
15	Column movement	-2134 mm	7264 mm	2616 mm	-14°	NA mm	25 mm	500 frames/s
16	Column movement	-2134 mm	7264 mm	1908 mm	-9°	NA mm	25 mm	505 frames/s
17	Passenger kinematics	-986 mm	-5354 mm	1151 mm	7°	6096 mm	25 mm	983 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

Figure 11 Vehicle Target Locations

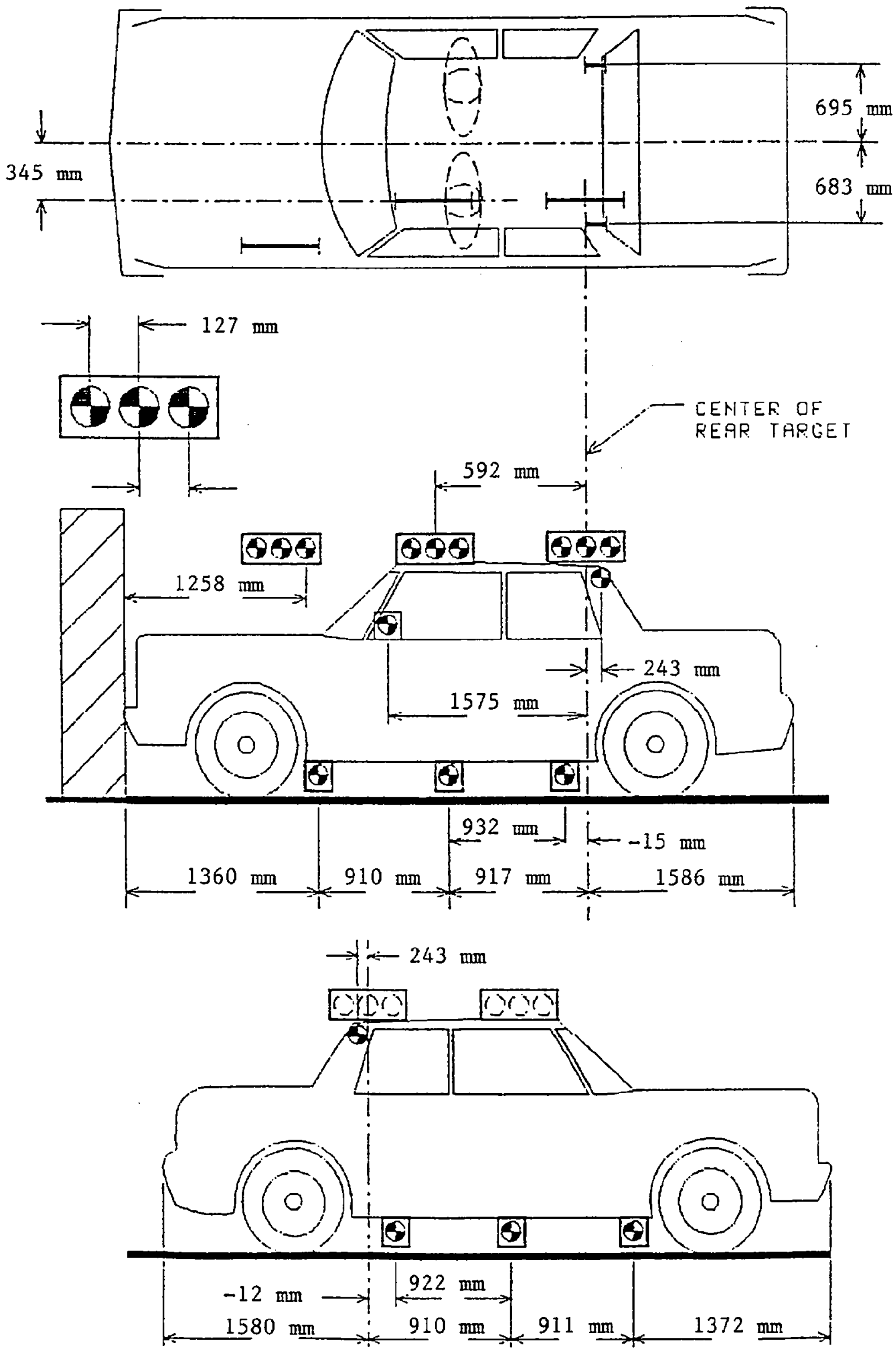


Figure 12 Pre-Test And Post-Test Measurement Points

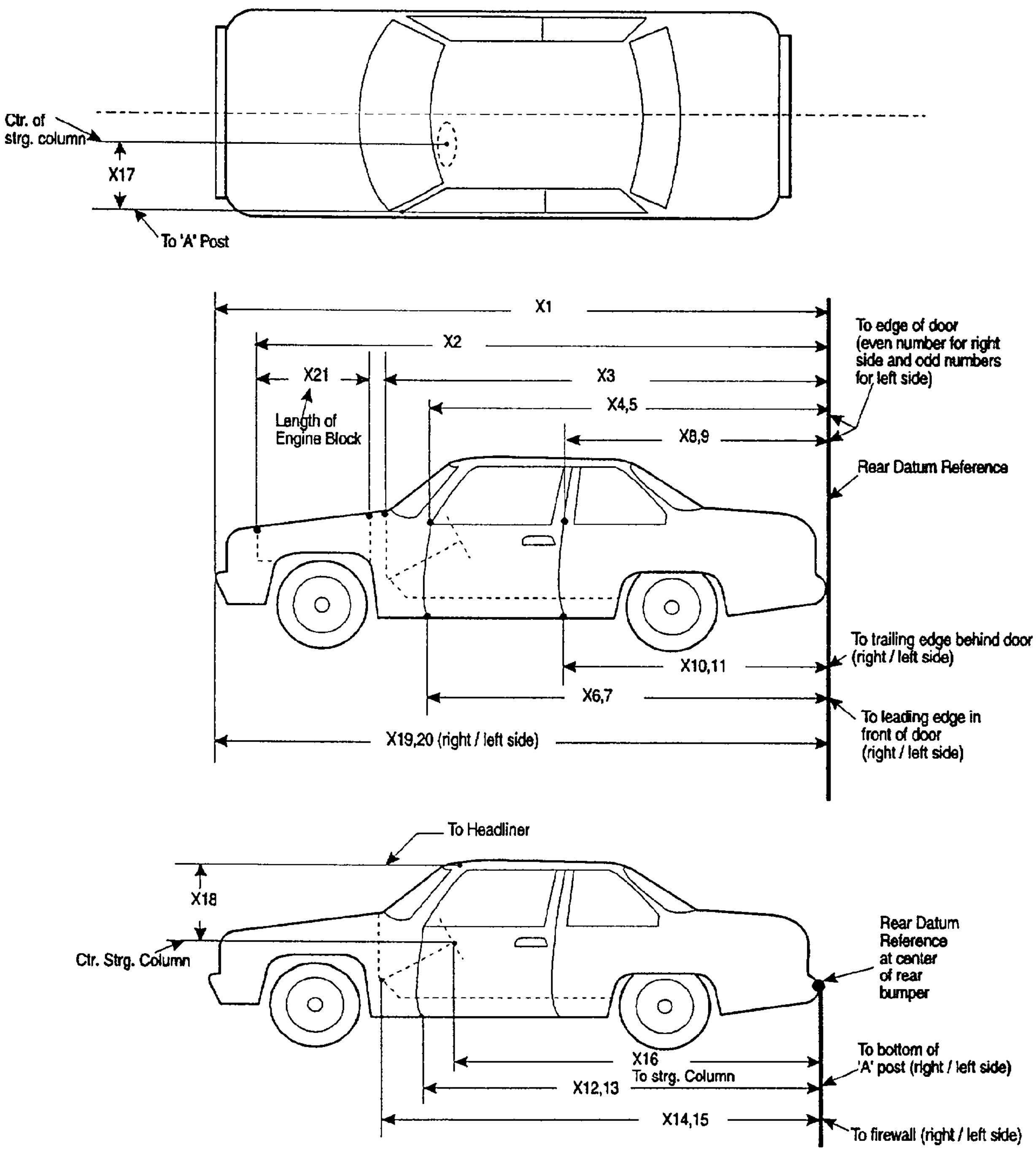


Table 14 Impacted Vehicle Measurements

Vehicle Make/Model: Ford/Explorer Test Number: 950127

No.	Type of measurement	Pre-test	Post-test	Diff.
X1	Total length of vehicle at centerline	4773 mm	4244 mm	529 mm
X2	Rear surface of vehicle to front of engine block	4015 mm	3944 mm	71 mm
X3	Rear surface of vehicle to firewall	3594 mm	3604 mm	-10 mm
X4	Rear surface of vehicle to upper leading edge of right door	3347 mm	3386 mm	-39 mm
X5	Rear surface of vehicle to upper leading edge of left door	3347 mm	3415 mm	-68 mm
X6	Rear surface of vehicle to lower leading edge of right door	3307 mm	3310 mm	-3 mm
X7	Rear surface of vehicle to lower leading edge of left door	3310 mm	3307 mm	3 mm
X8	Rear surface of vehicle to upper trailing edge of right door	2295 mm	2350 mm	-55 mm
X9	Rear surface of vehicle to upper trailing edge of left door	2297 mm	2362 mm	-65 mm
X10	Rear surface of vehicle to lower trailing edge of right door	2325 mm	2336 mm	-11 mm
X11	Rear surface of vehicle to lower trailing edge of left door	2326 mm	2332 mm	-6 mm
X12	Rear surface of vehicle to bottom of "A" post on right side	3292 mm	3307 mm	-15 mm
X13	Rear surface of vehicle to bottom of "A" post on left side	3291 mm	3314 mm	-23 mm
X14	Rear surface of vehicle to firewall - right side	3567 mm	3610 mm	-43 mm
X15	Rear surface of vehicle to firewall - left side	3584 mm	3735 mm	-151 mm
X16	Rear surface of vehicle to steering wheel center	2918 mm	3011 mm	-93 mm
X17	Center of steering column to "A" post	330 mm	320 mm	10 mm
X18	Center of steering column to headliner	405 mm	402 mm	3 mm
X19	Rear surface of vehicle to right side of front bumper	4667 mm	4215 mm	452 mm
X20	Rear surface of vehicle to left side of front bumper	4660 mm	4220 mm	440 mm
X21	Length of engine block	360 mm	360 mm	0 mm

Appendix A

Photographs

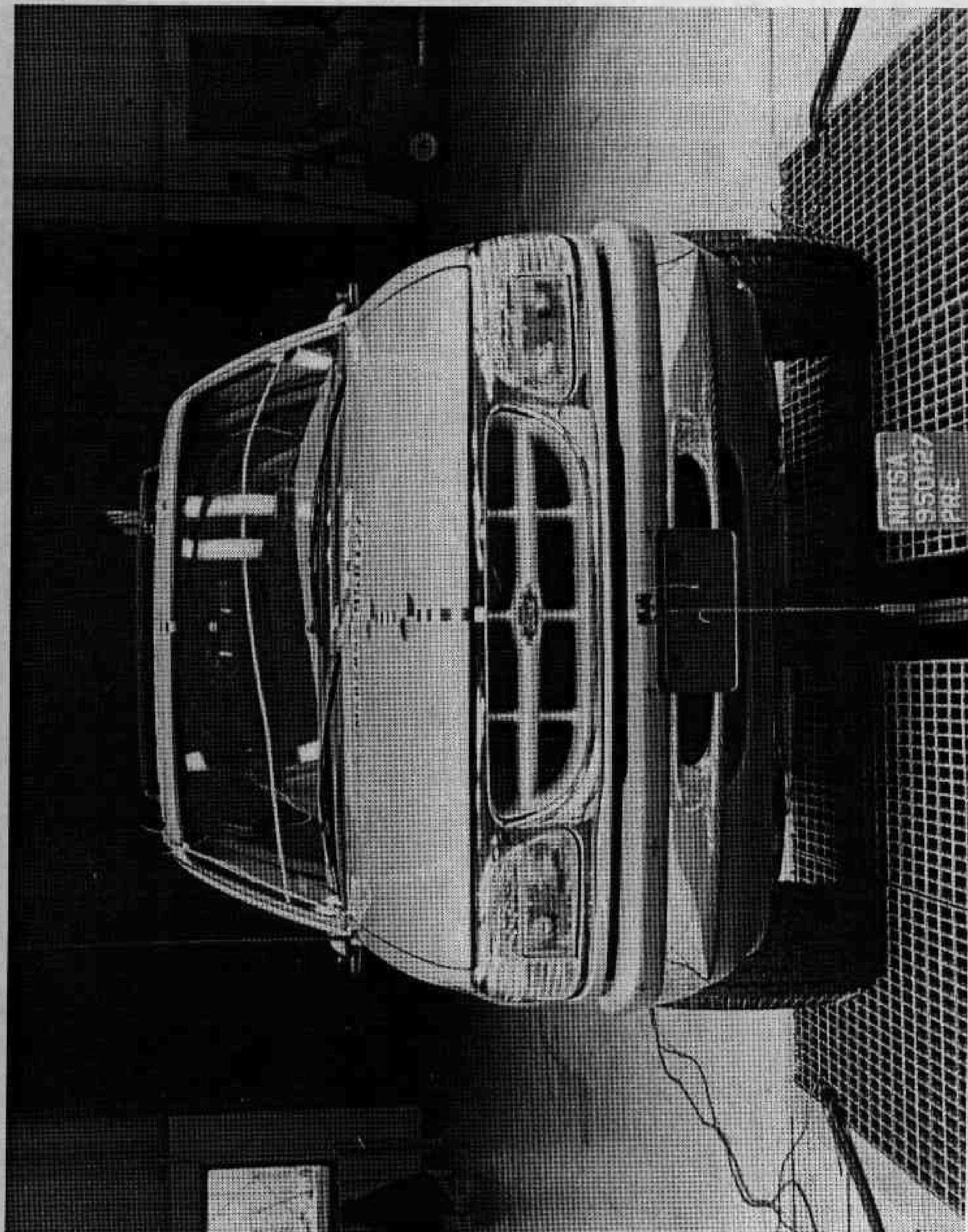


Figure A-1. Pre-Test Front View

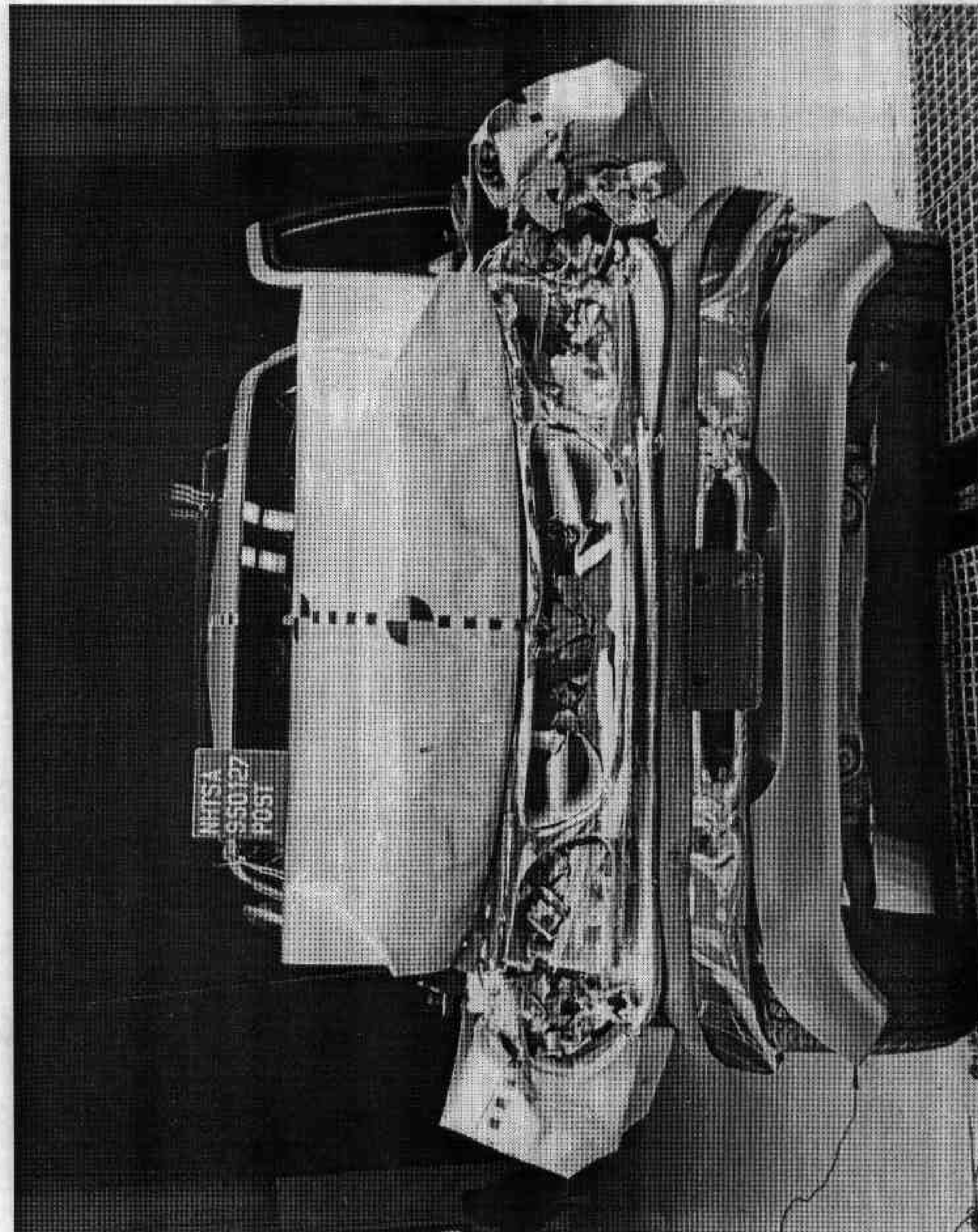


Figure A-2. Post-Test Front View

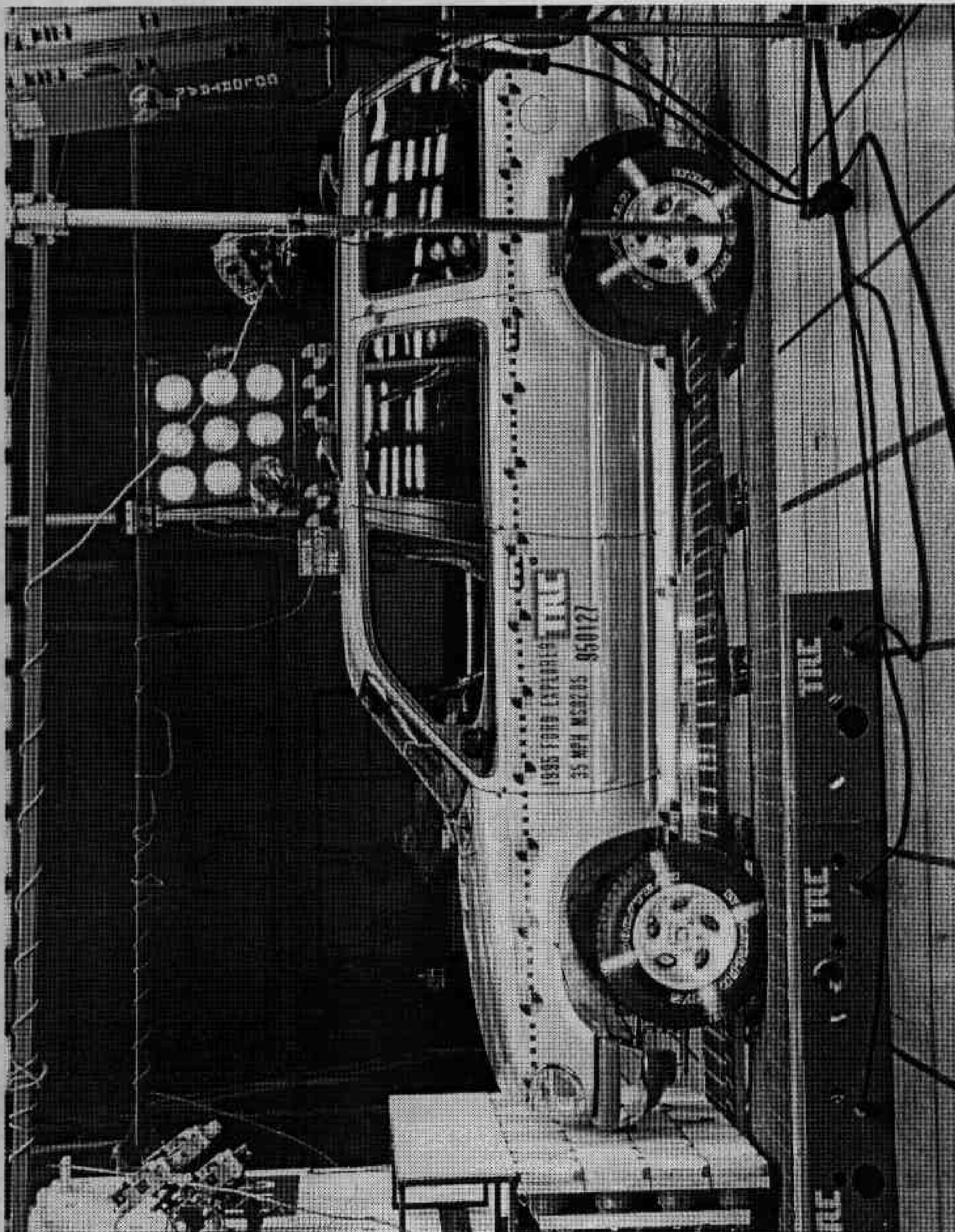


Figure A-3. Pre-Test Left Side View

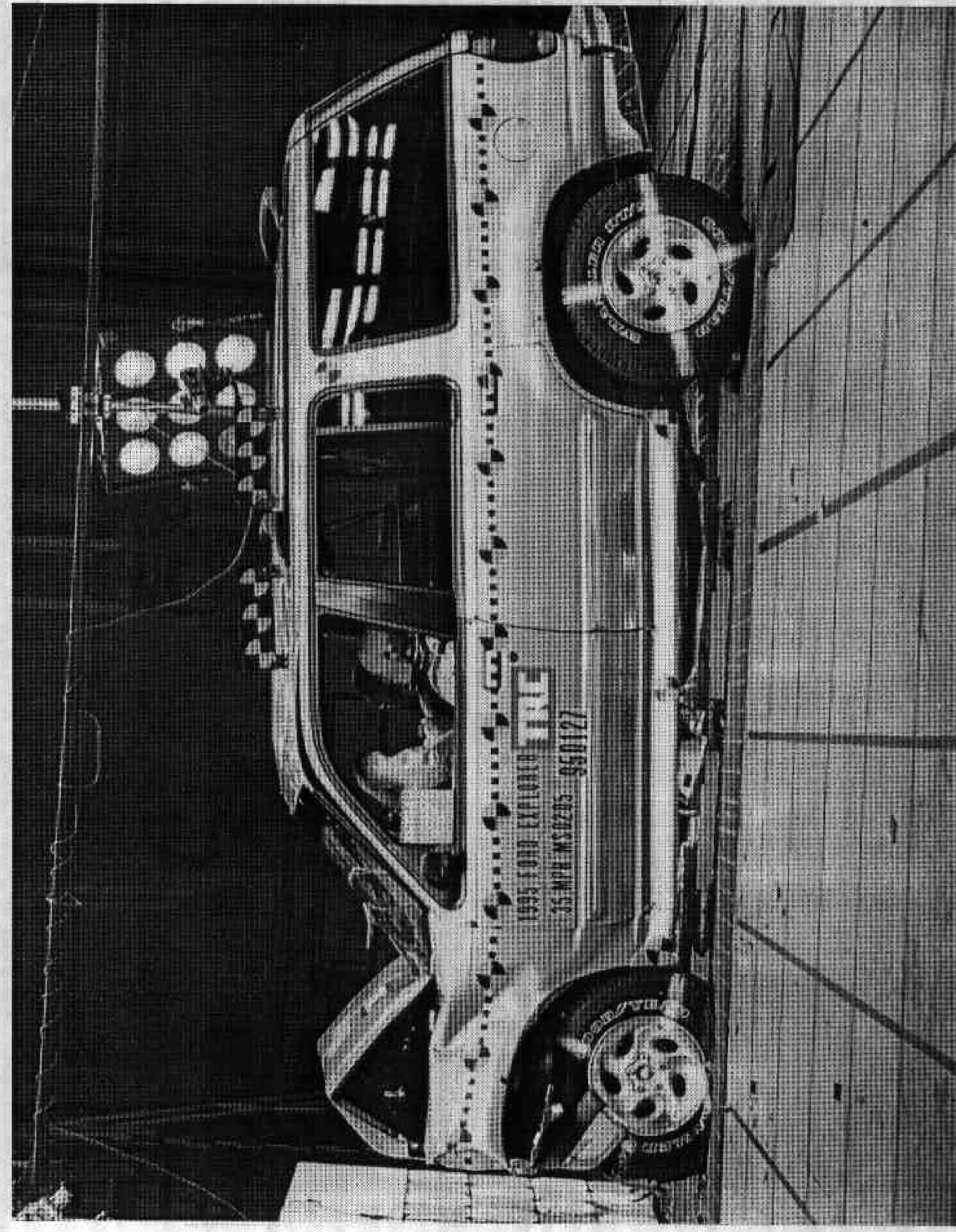


Figure A-4. Post-Test Left Side View

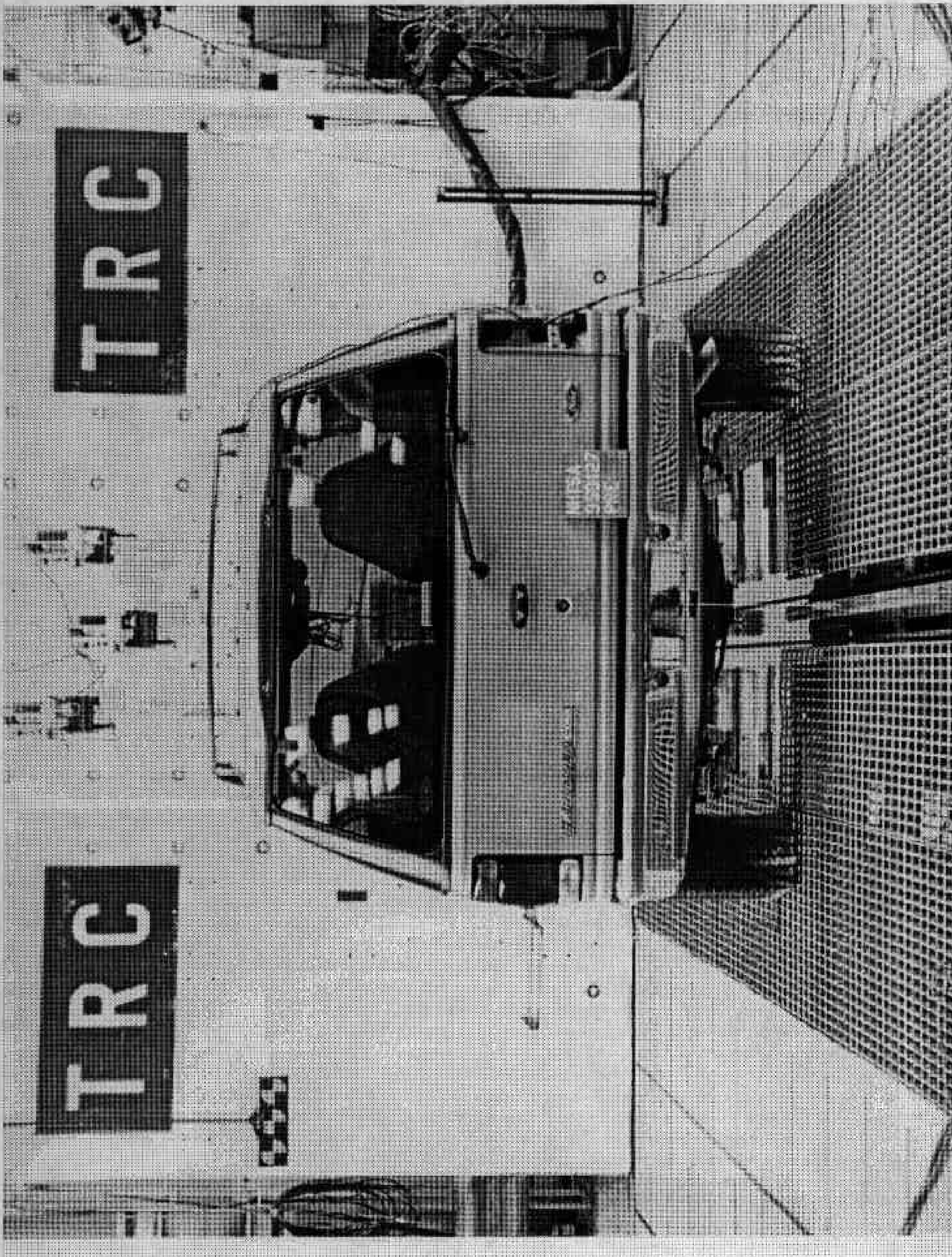


Figure A-5. Pre-Test Rear View

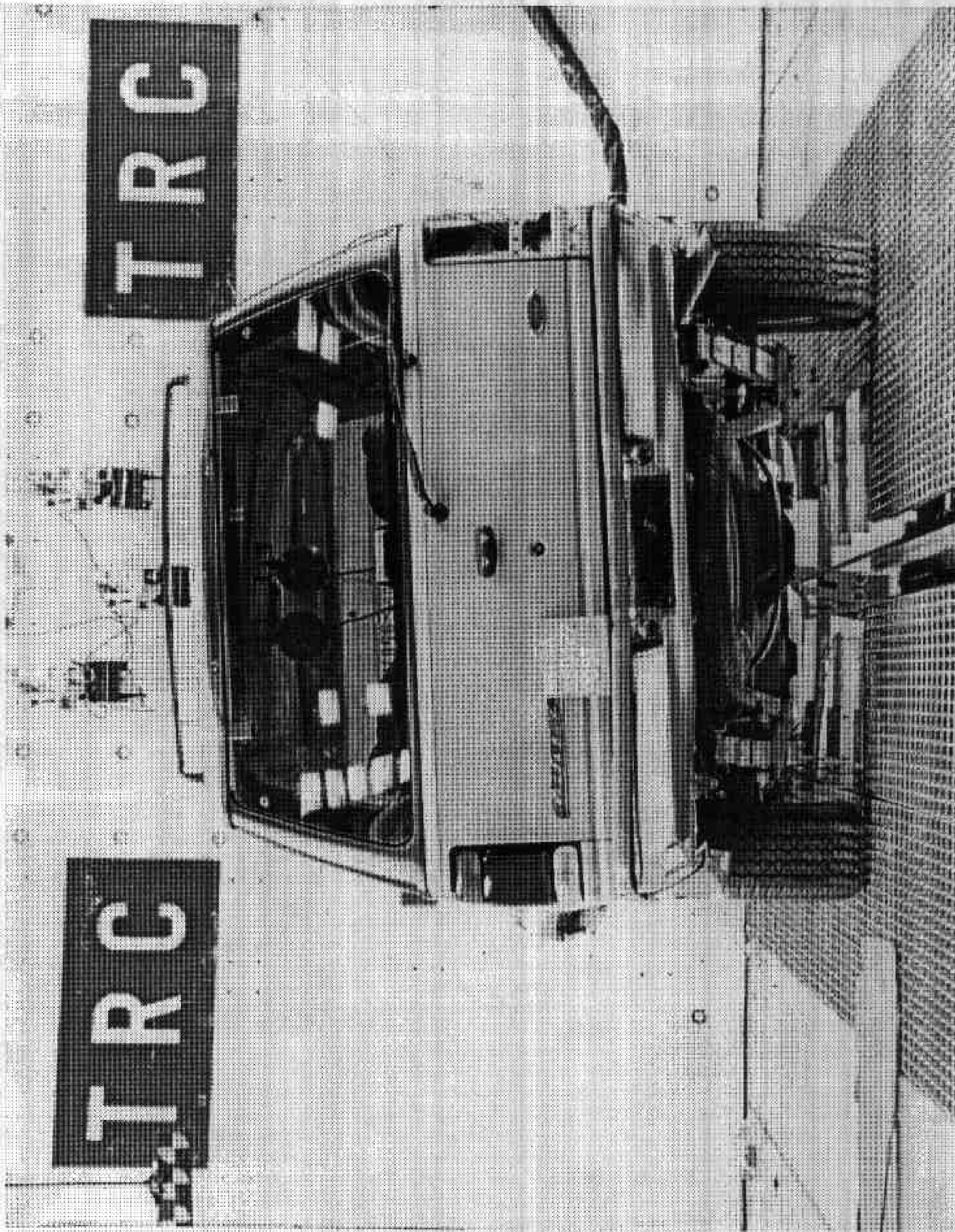


Figure A-6. Post-Test Rear View

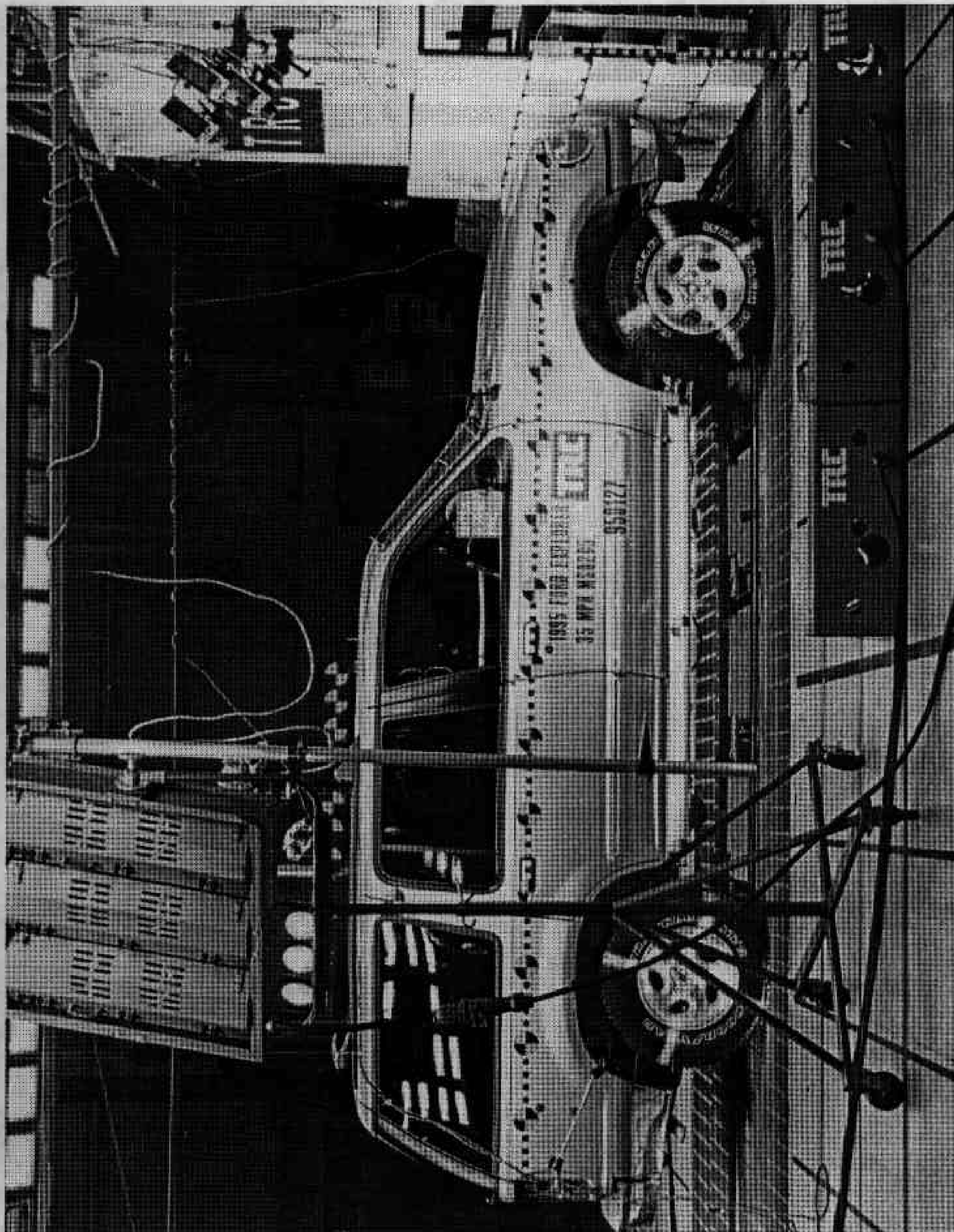


Figure A-7. Pre-Test Right Side View

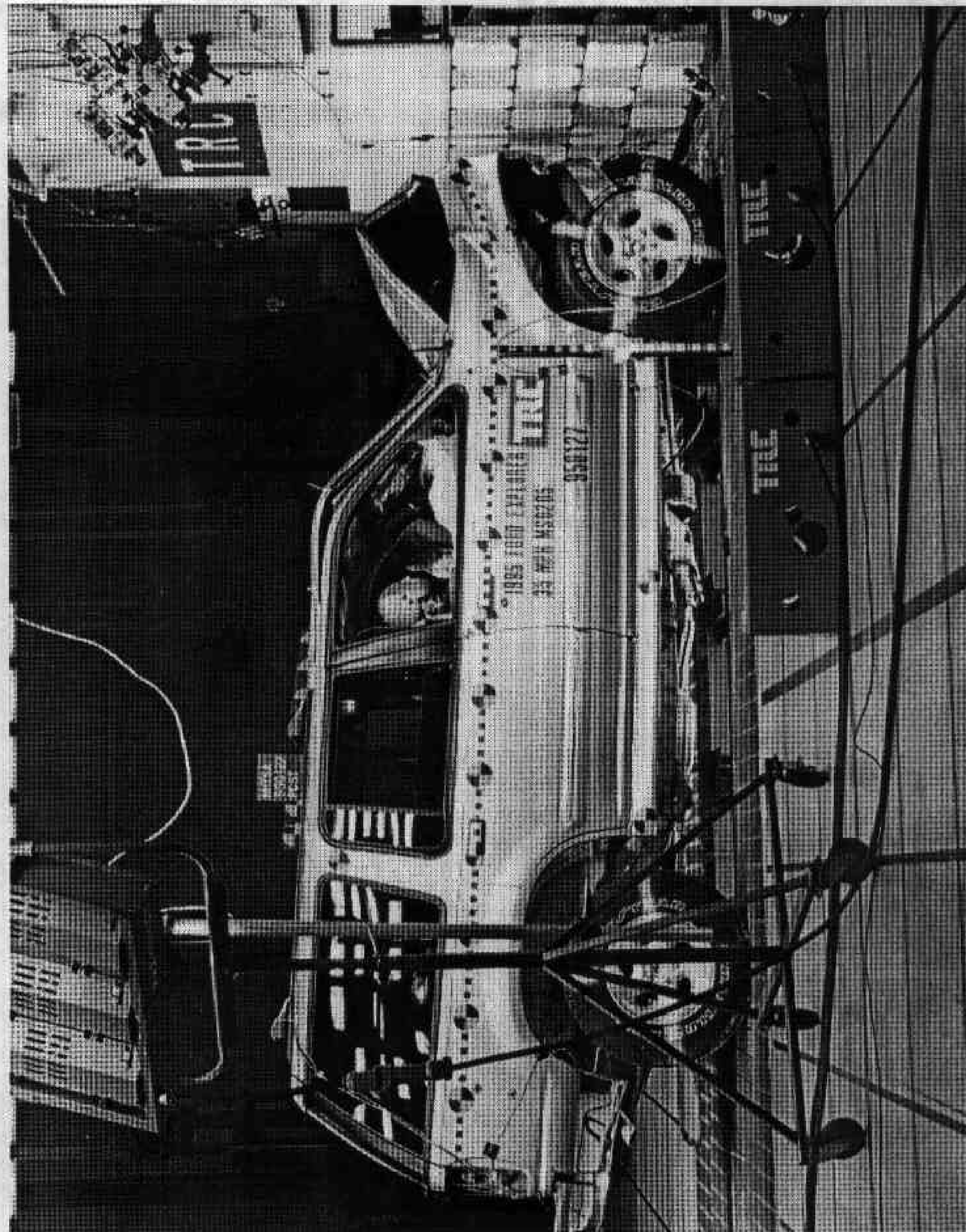


Figure A-8. Post-Test Right Side View

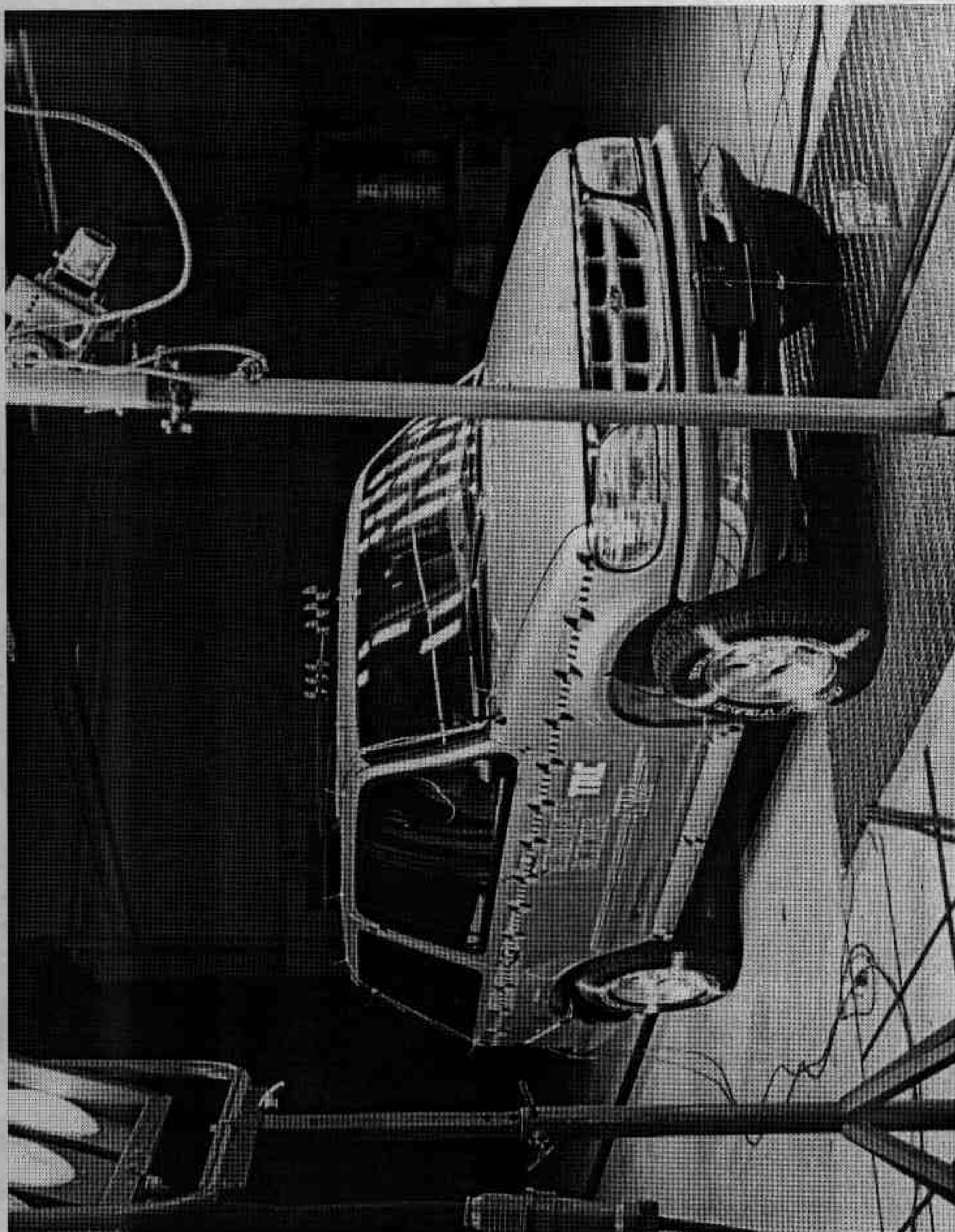


Figure A-9. Pre-Test Right Front Three-Quarter View

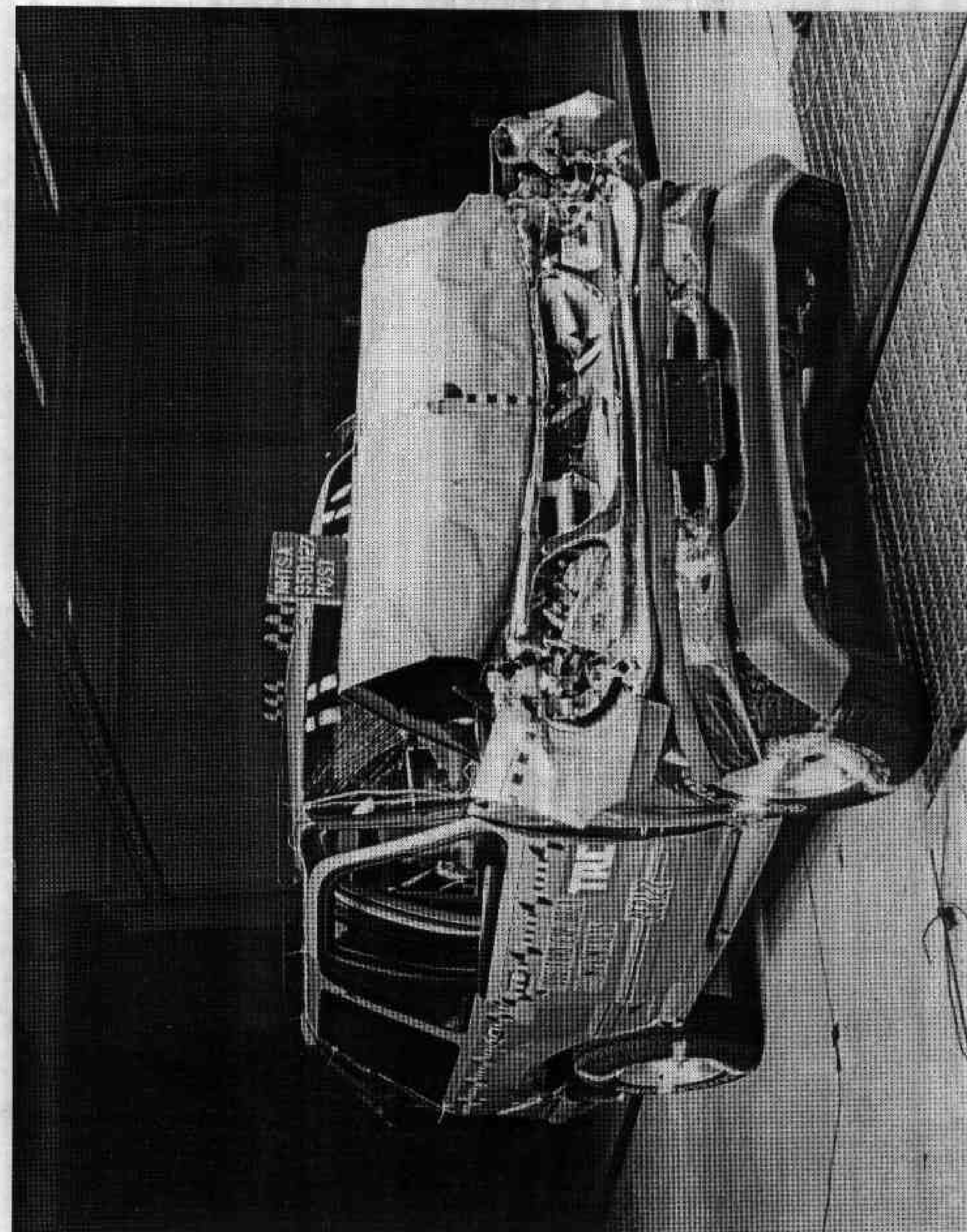


Figure A-10. Post-Test Right Front Three-Quarter View

Figure A-11. Pre-Test Left Rear Three-Quarter View

Figure A-12. Post-Test Left Rear Three-Quarter View

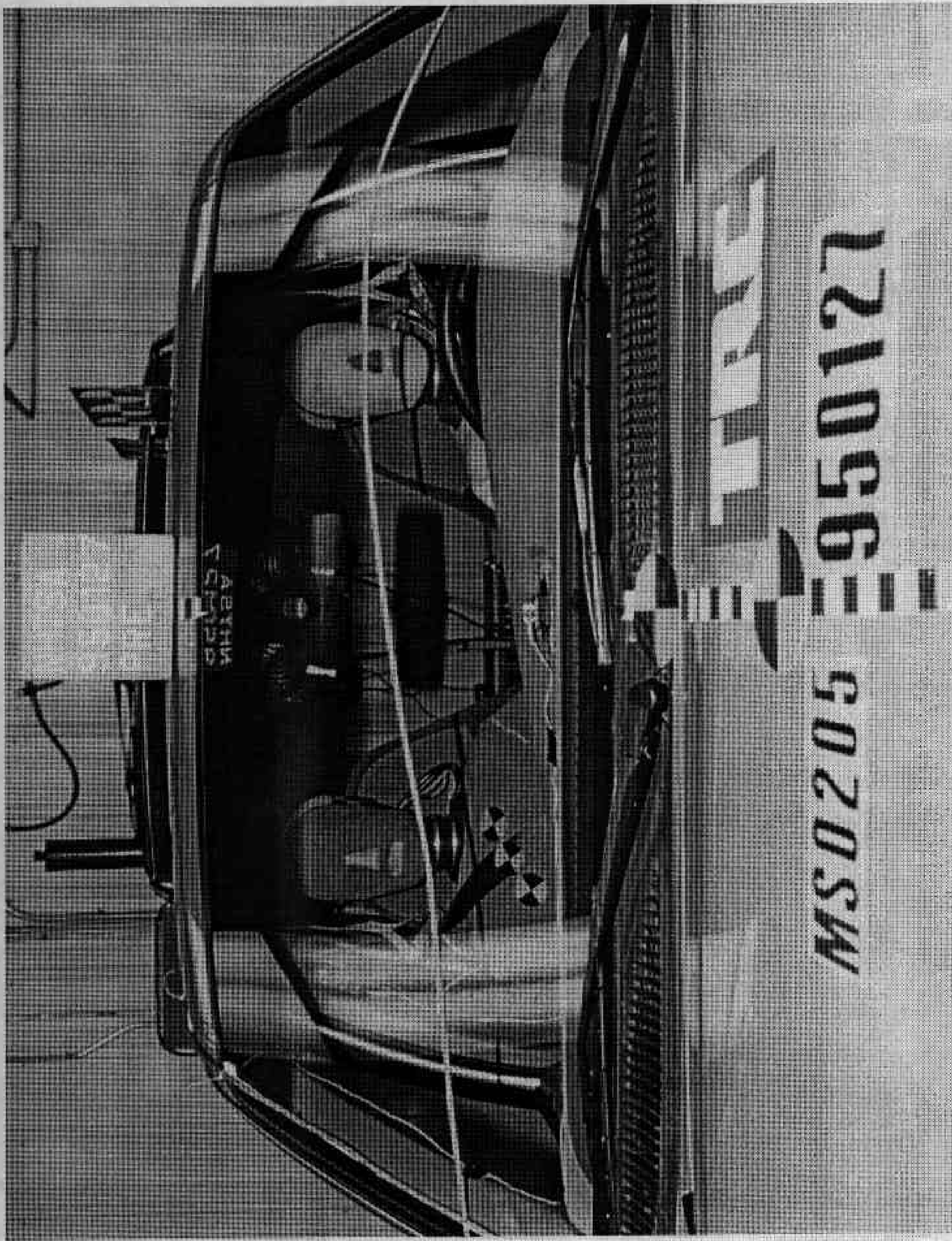


Figure A-13. Pre-Test Windshield View

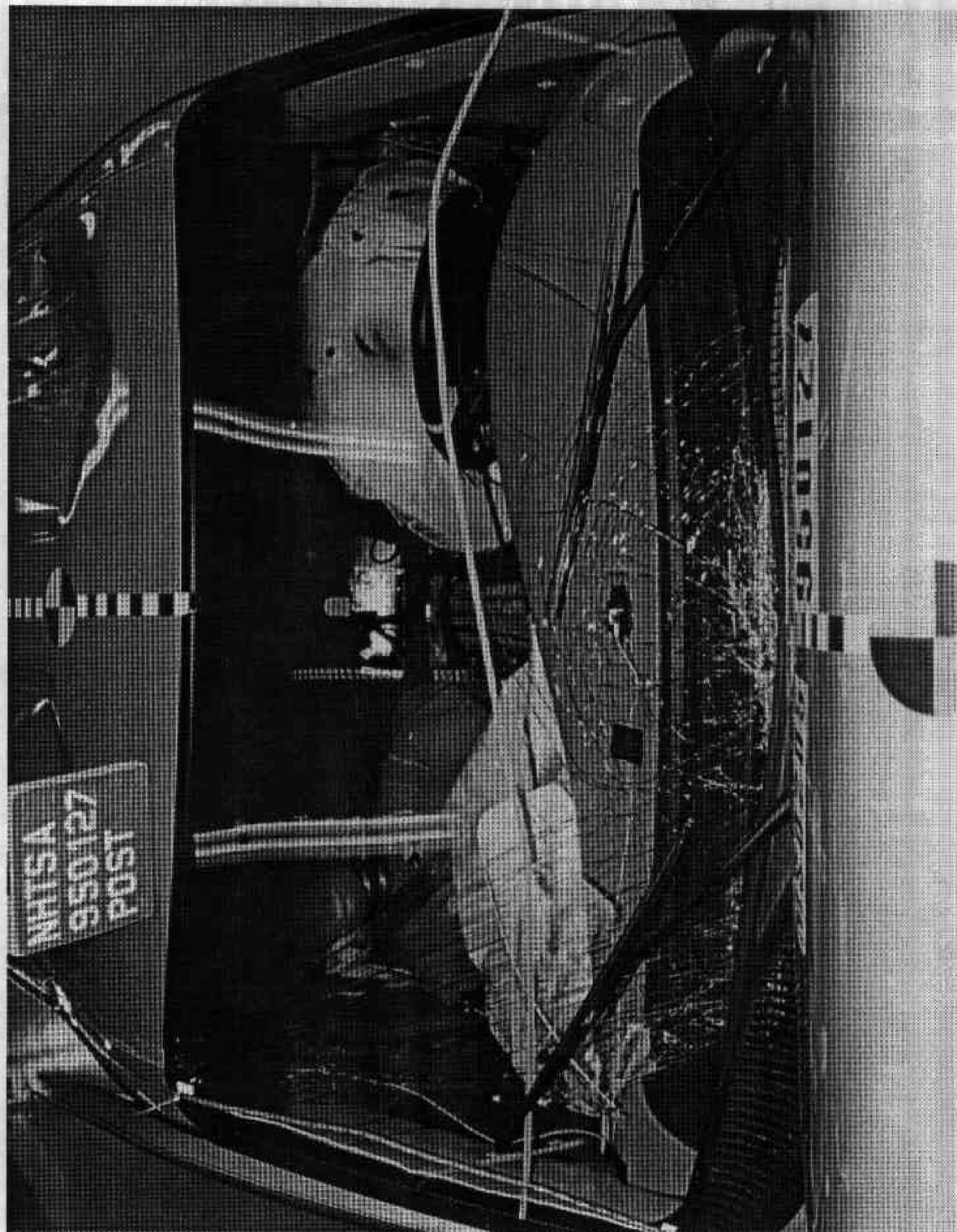


Figure A-14. Post-Test Windshield View

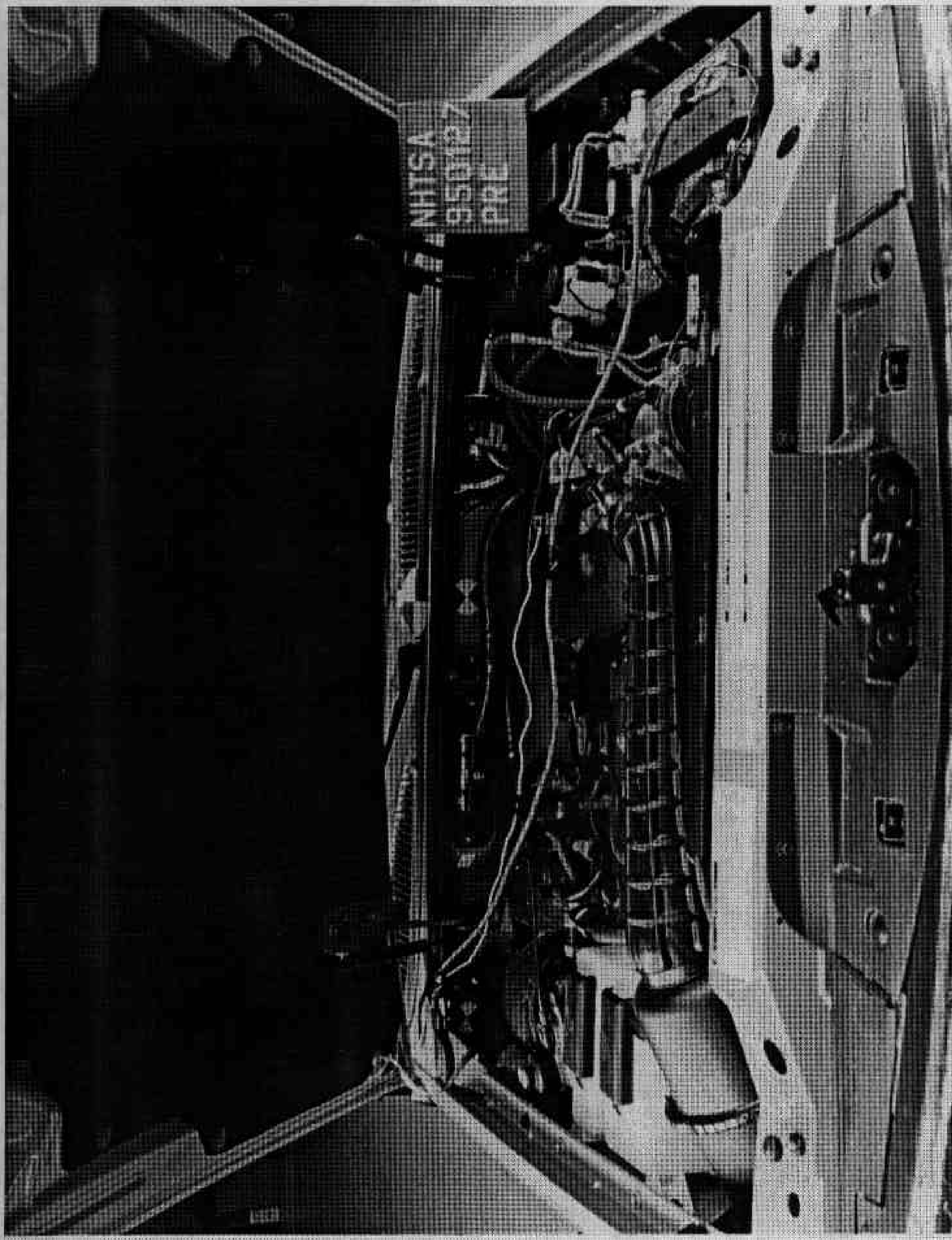


Figure A-15. Pre-Test Engine Compartment View

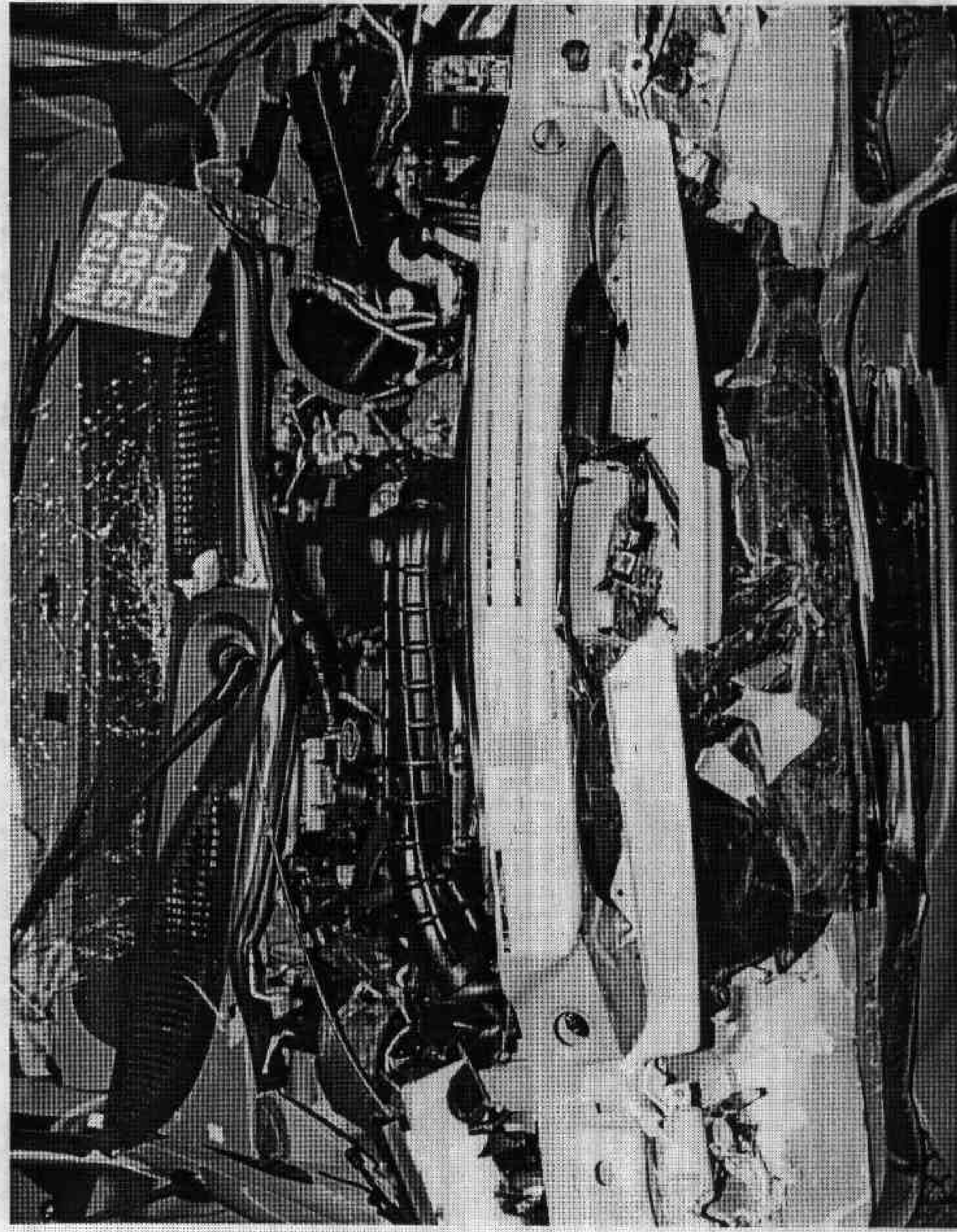


Figure A-16. Post-Test Engine Compartment View

Figure A-17. Pre-Test Fuel Filler Cap View

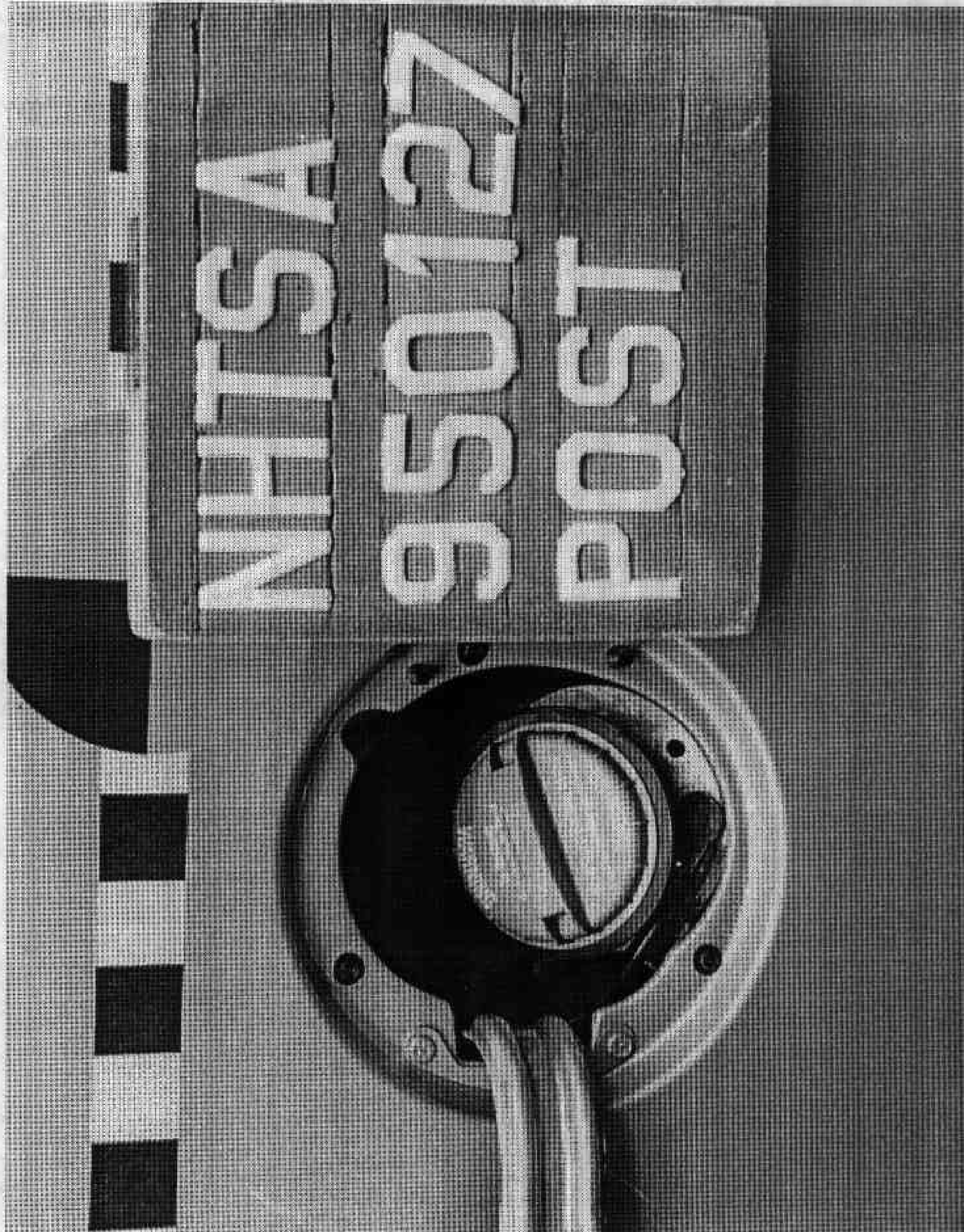


Figure A-18. Post-Test Fuel Filler Cap View

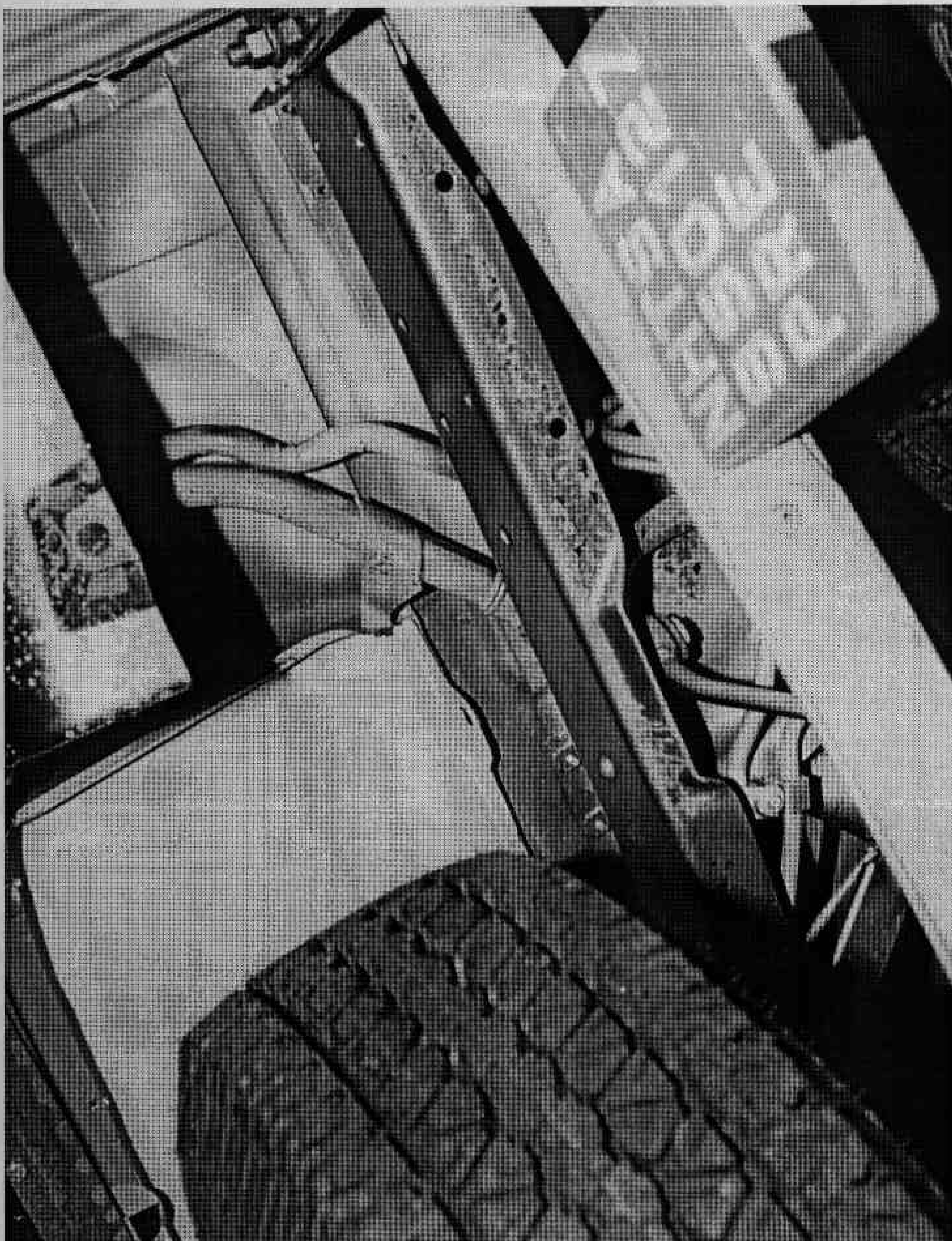


Figure A-19. Pre-Test Fuel Filler Neck View

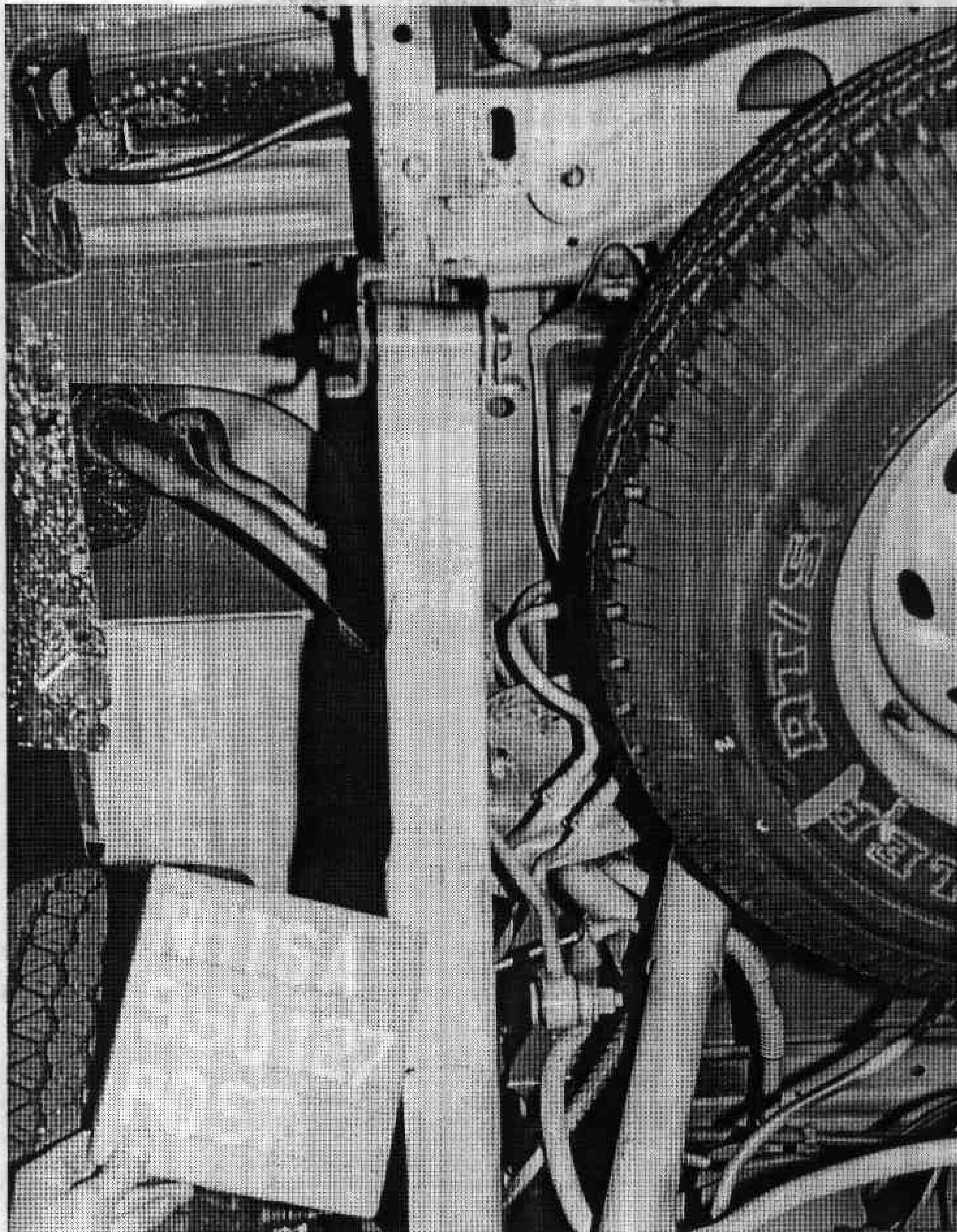


Figure A-20. Post-Test Fuel Filler Neck View

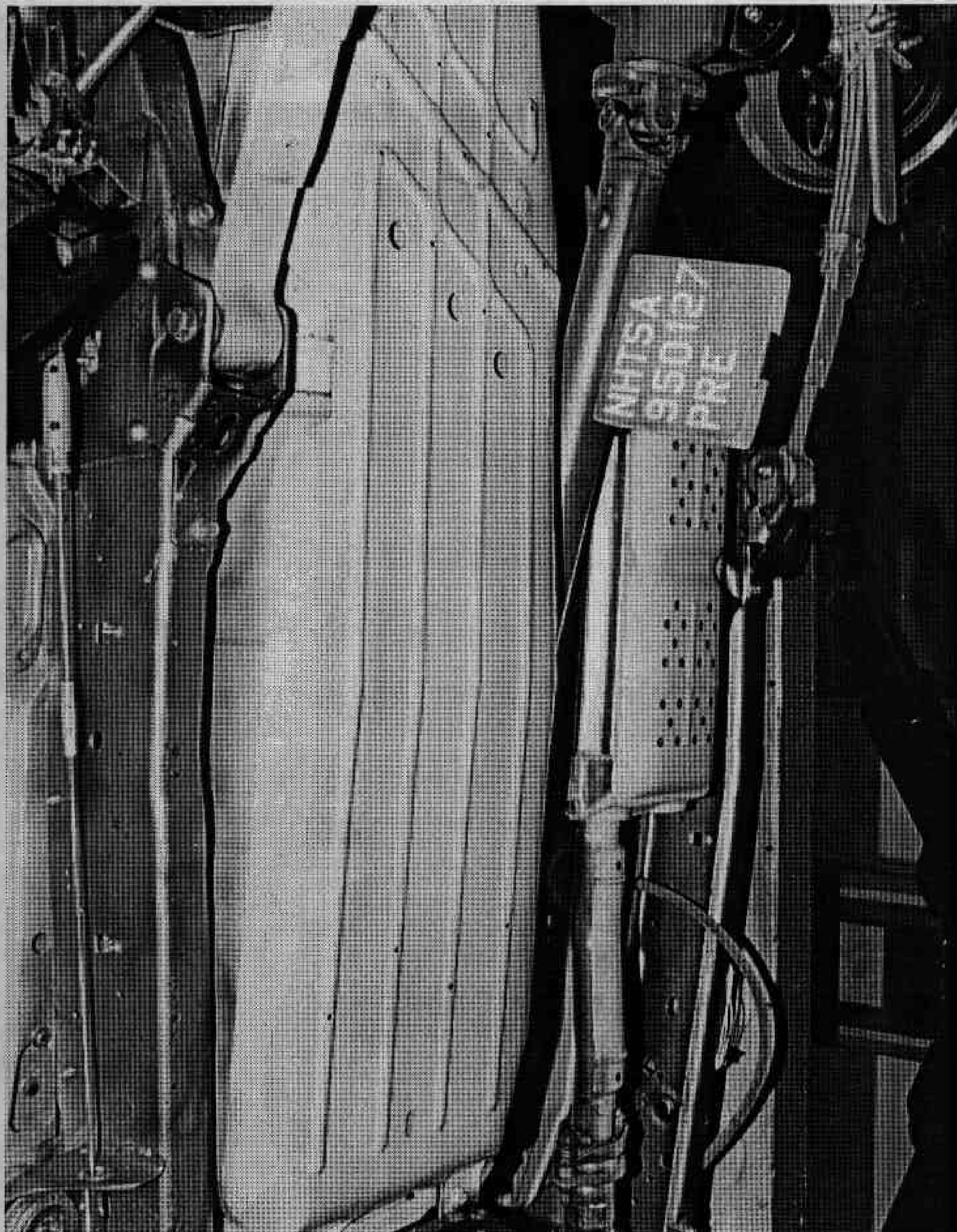


Figure A-21. Pre-Test Fuel Tank View

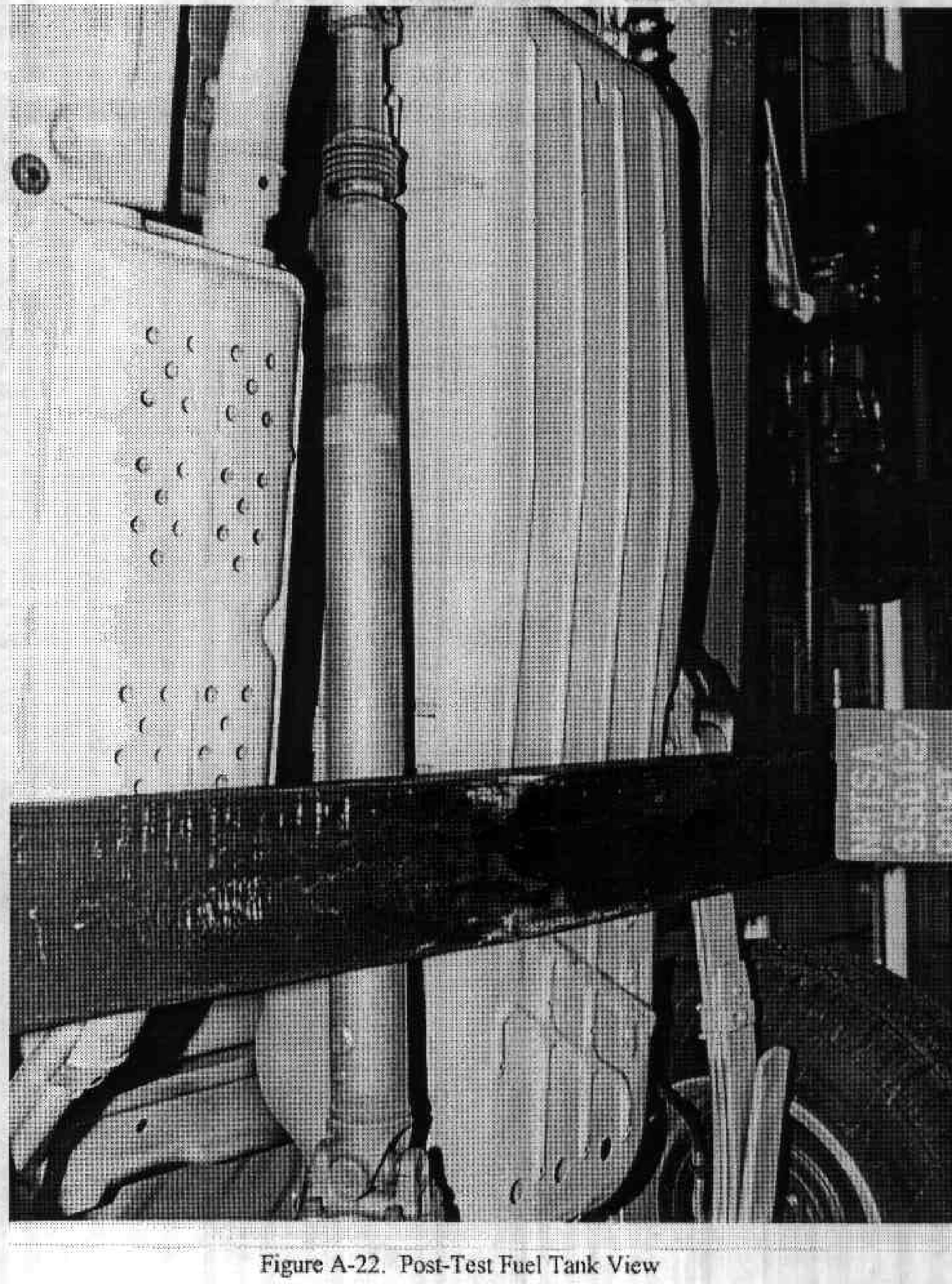


Figure A-22. Post-Test Fuel Tank View

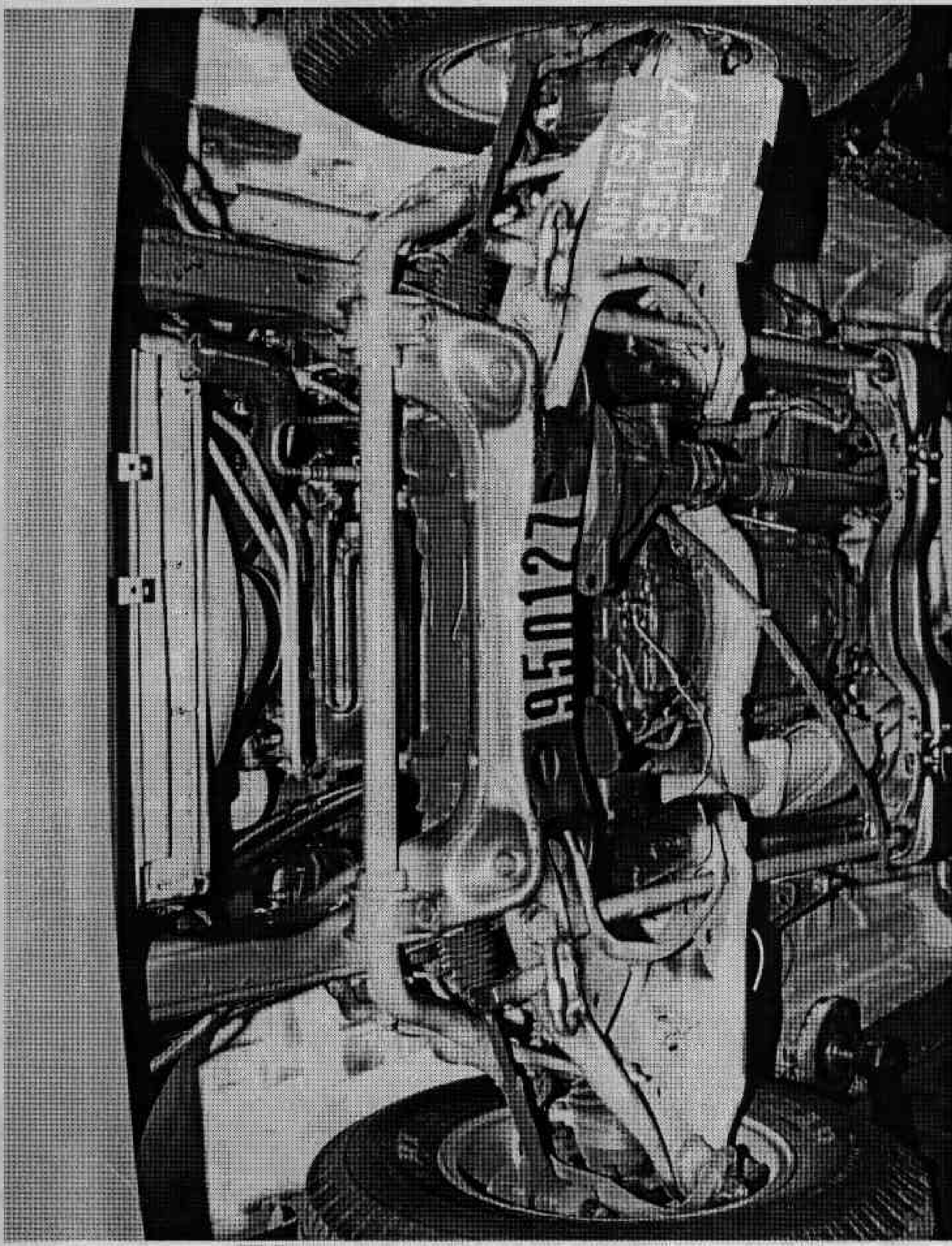


Figure A-23. Pre-Test Front Underbody View

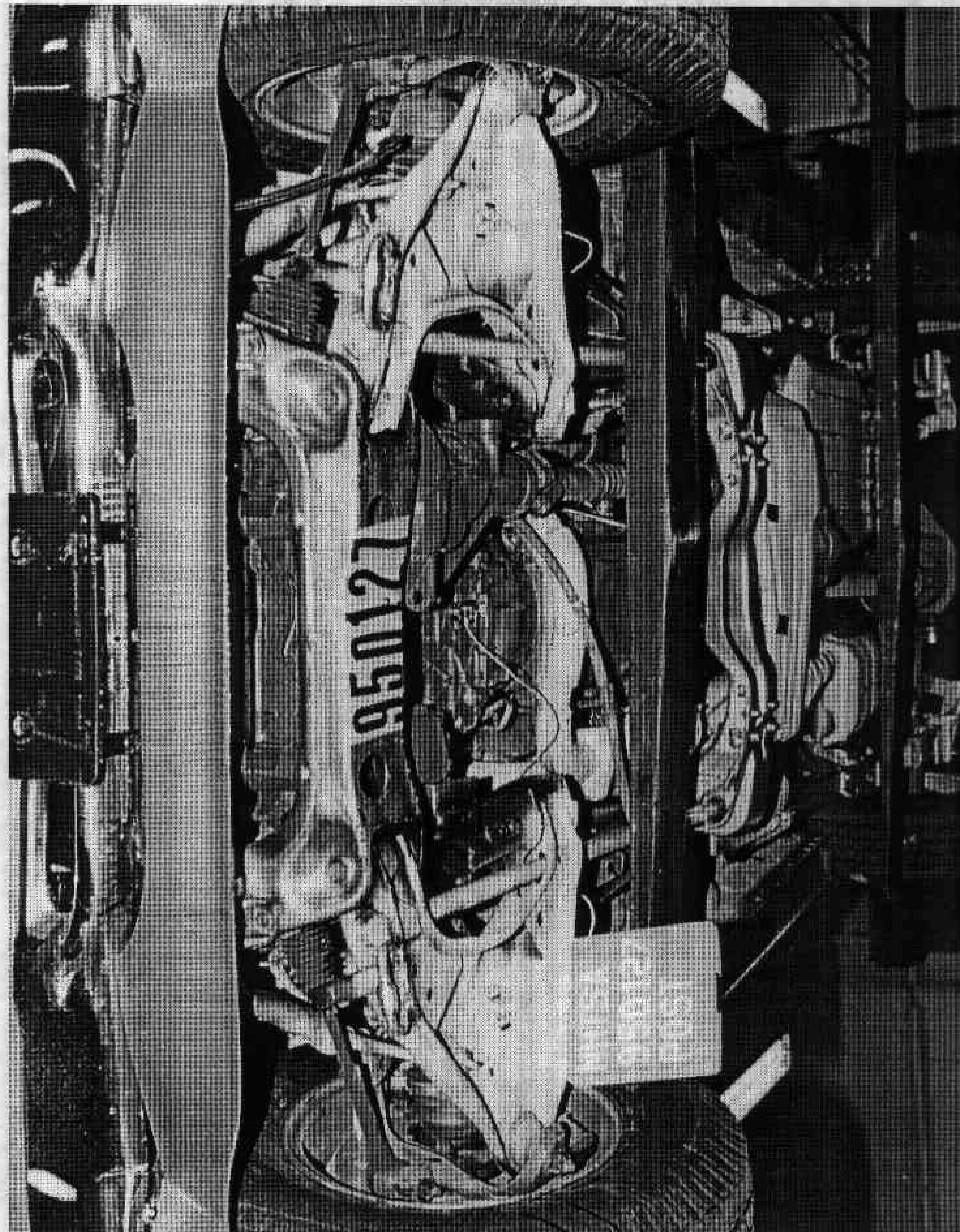


Figure A-24. Post-Test Front Underbody View

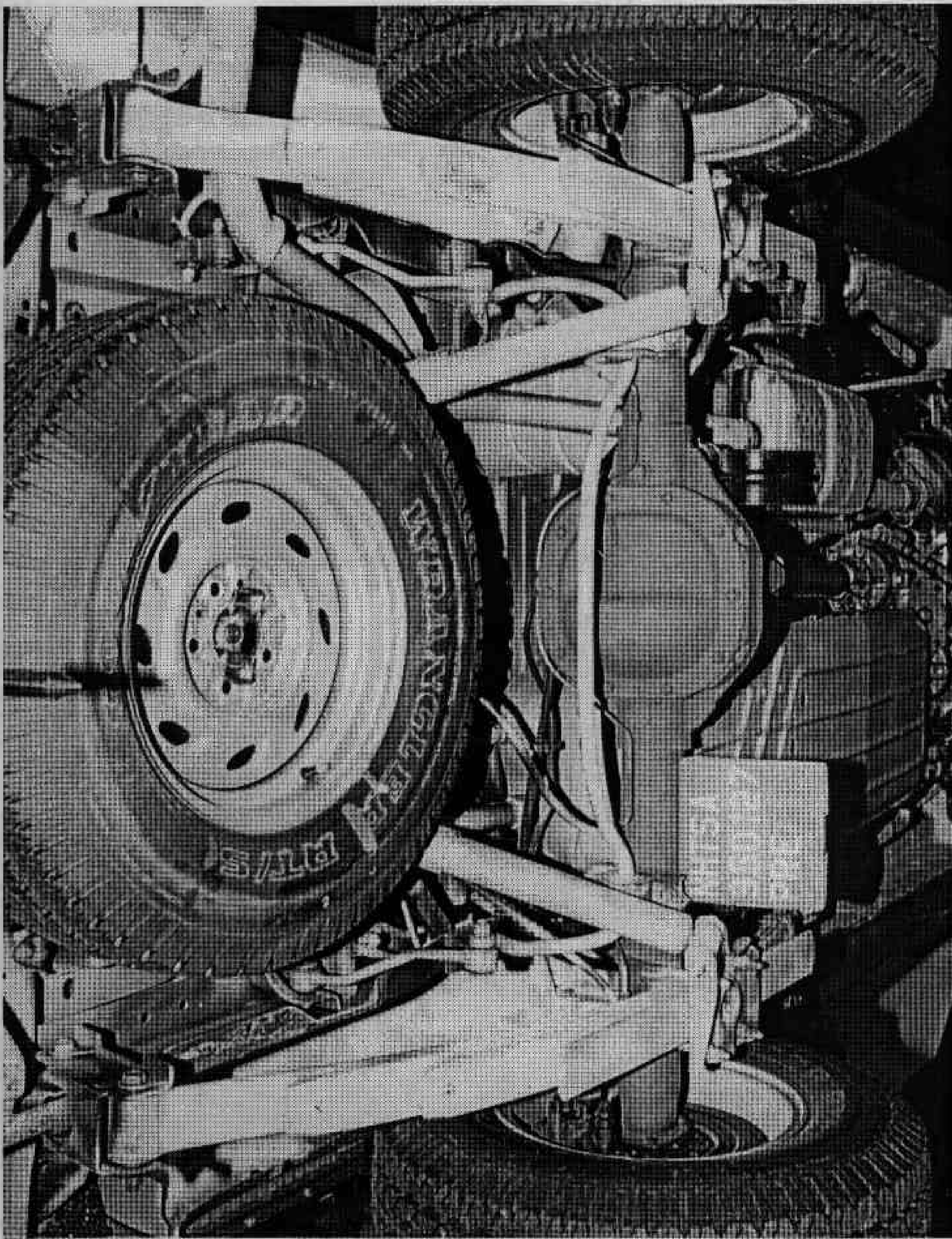


Figure A-25. Pre-Test Rear Underbody View

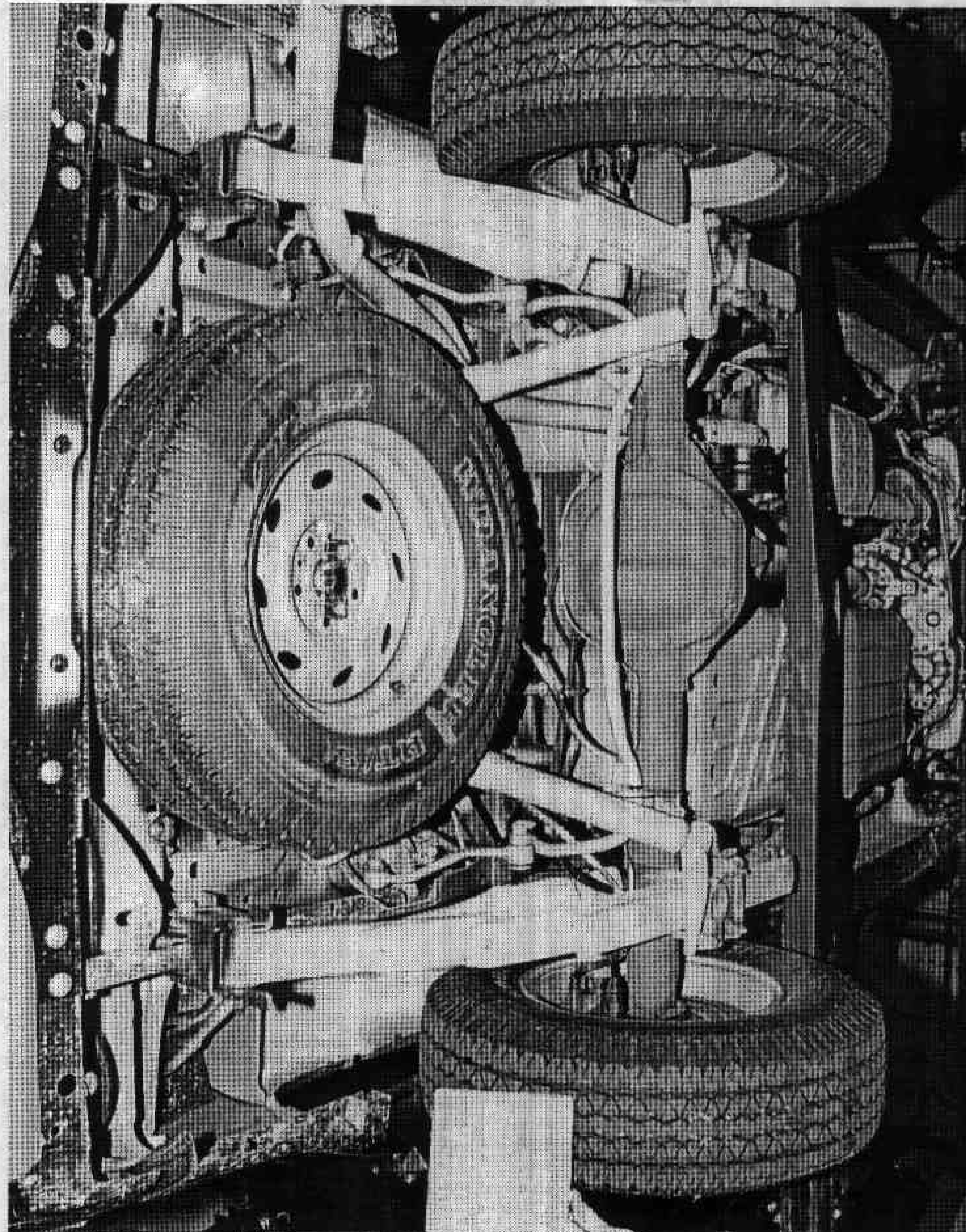


Figure A-26. Post-Test Rear Underbody View

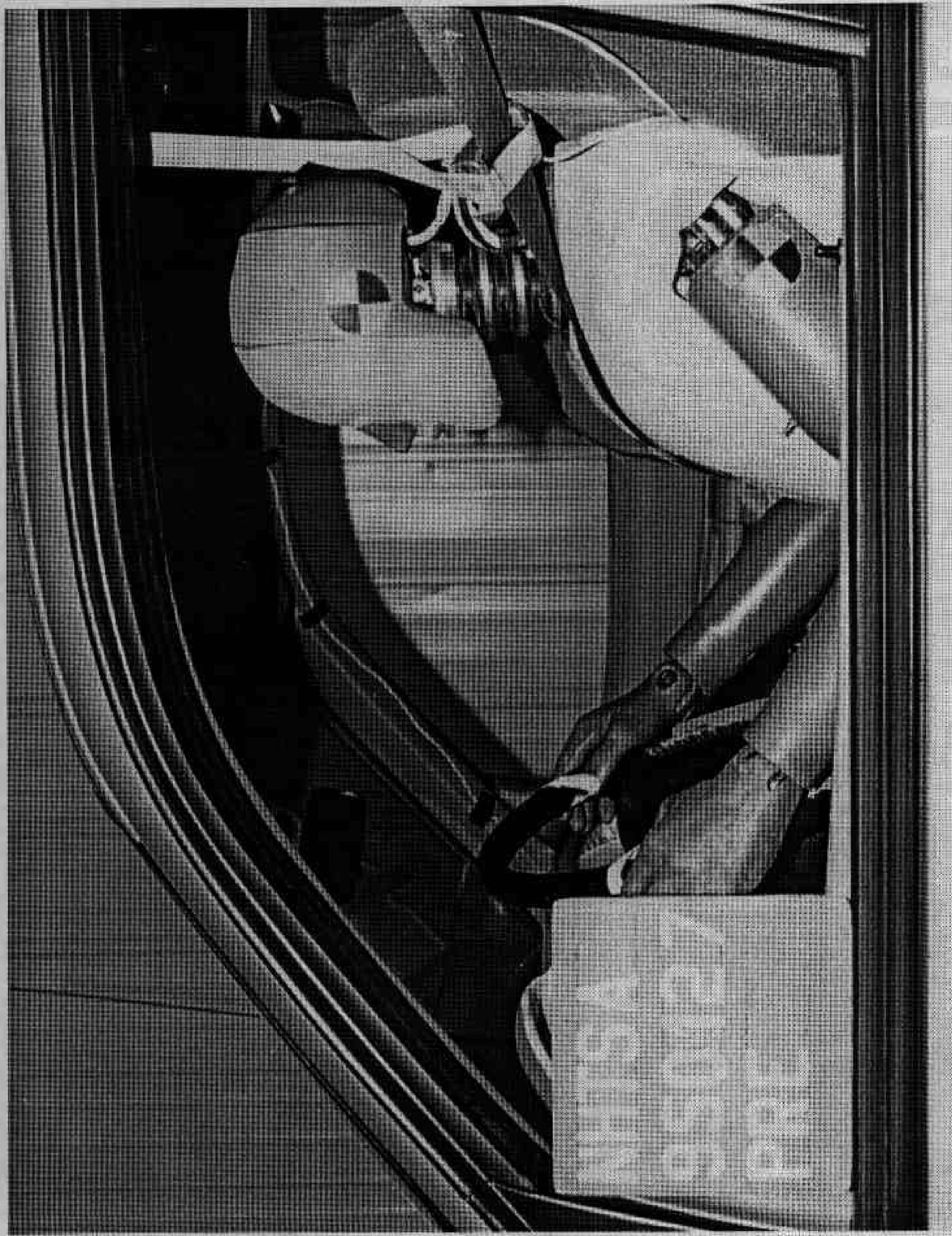


Figure A-27. Pre-Test Driver Dummy Position View

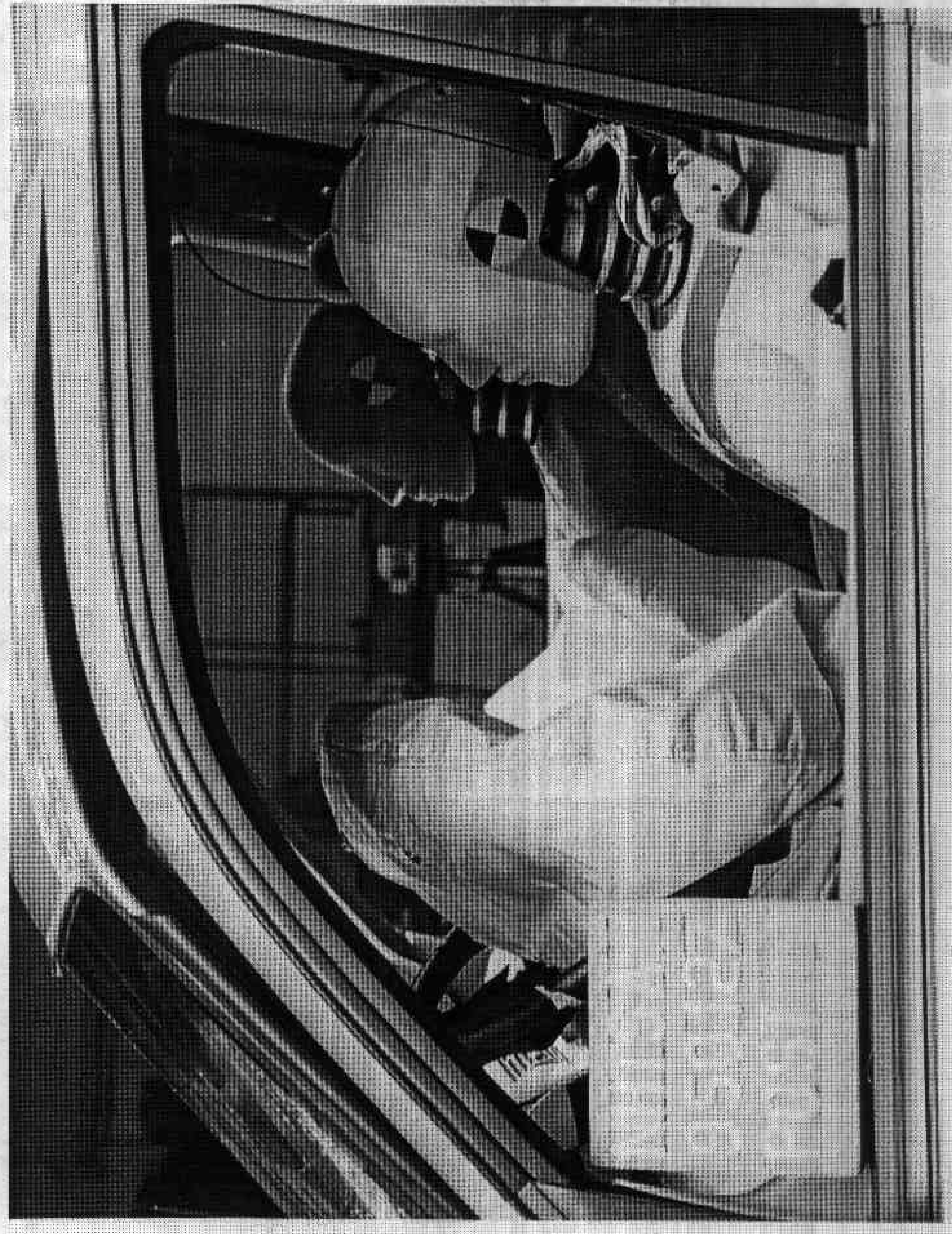


Figure A-28. Post-Test Driver Dummy Position View

Figure A-29. Post-Test Passenger Dummy Position View

Figure A-30. Pre-Test Driver Dummy & Vehicle Interior - View 1

Figure A-31. Post-Test Driver Dummy & Vehicle Interior - View 1

Figure A-32. Pre-Test Driver Dummy & Vehicle Interior - View 2

Figure A-33. Post-Test Driver Dummy & Vehicle Interior - View 2

Figure A-34. Pre-Test Passenger Dummy & Vehicle Interior - View 1

Figure A-35. Post-Test Passenger Dummy & Vehicle Interior - View 1

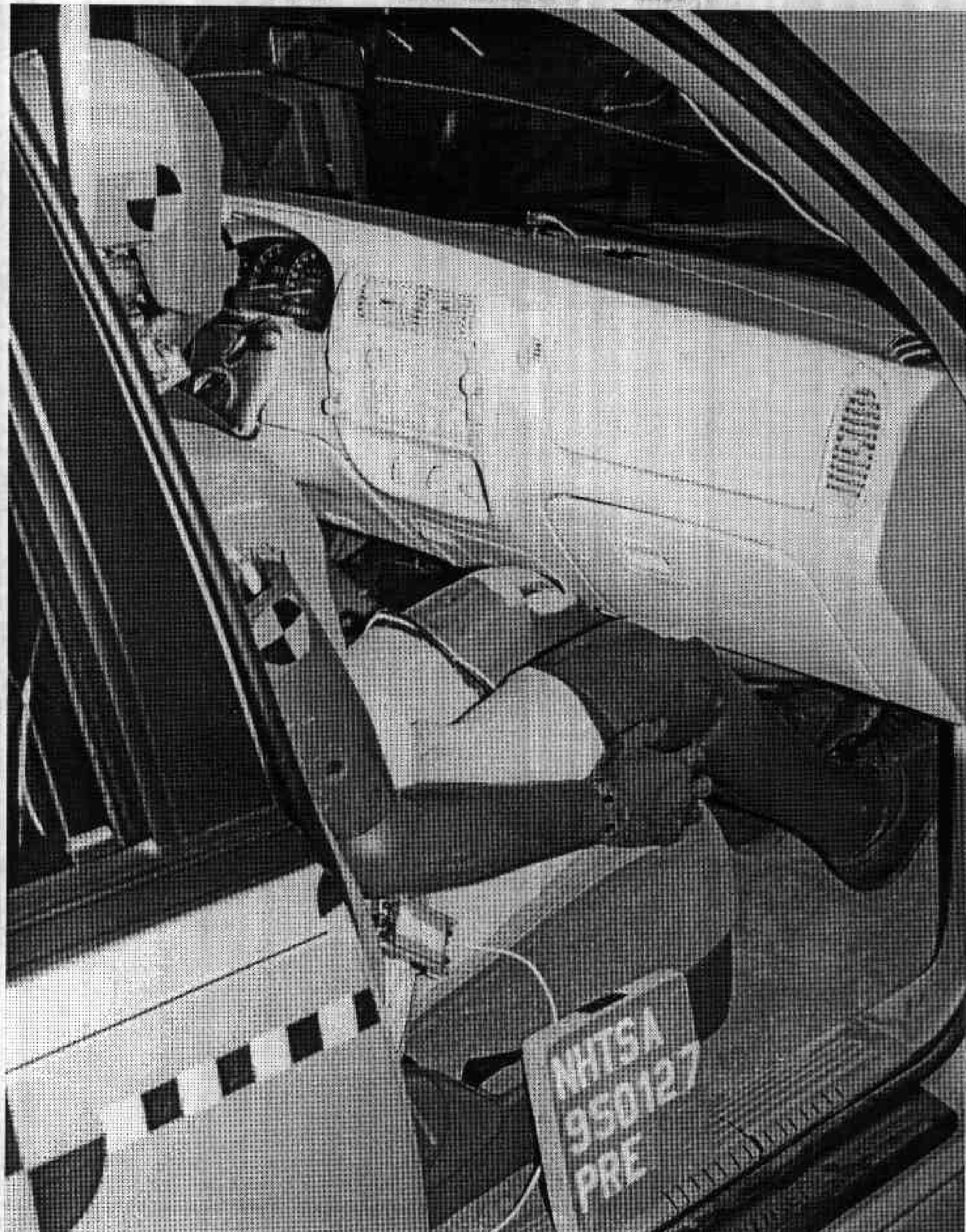


Figure A-36. Pre-Test Passenger Dummy & Vehicle Interior - View 2

Figure A-37. Post-Test Passenger Dummy & Vehicle Interior - View 2

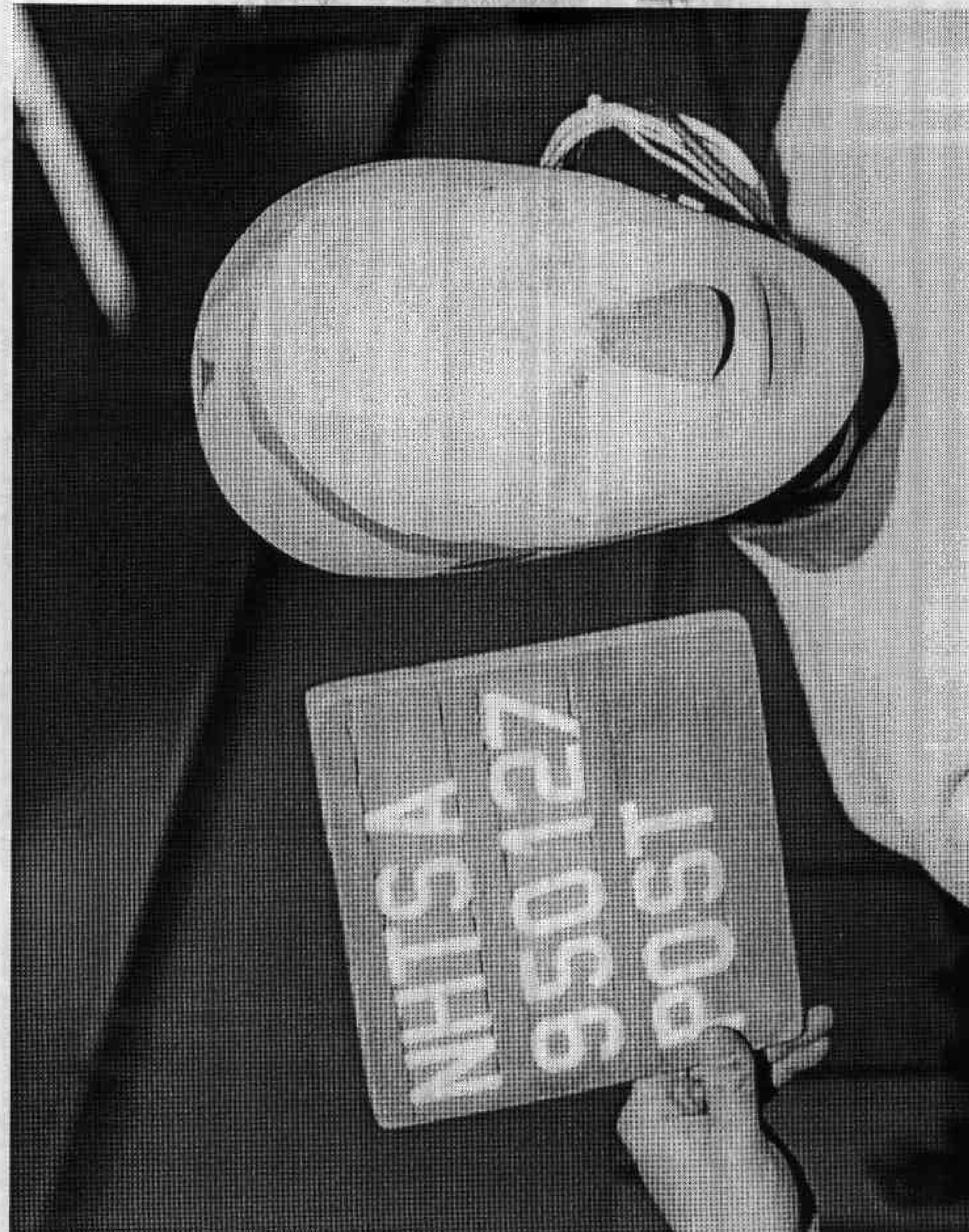


Figure A-38. Post-Test Driver Dummy Head Contact - View 1

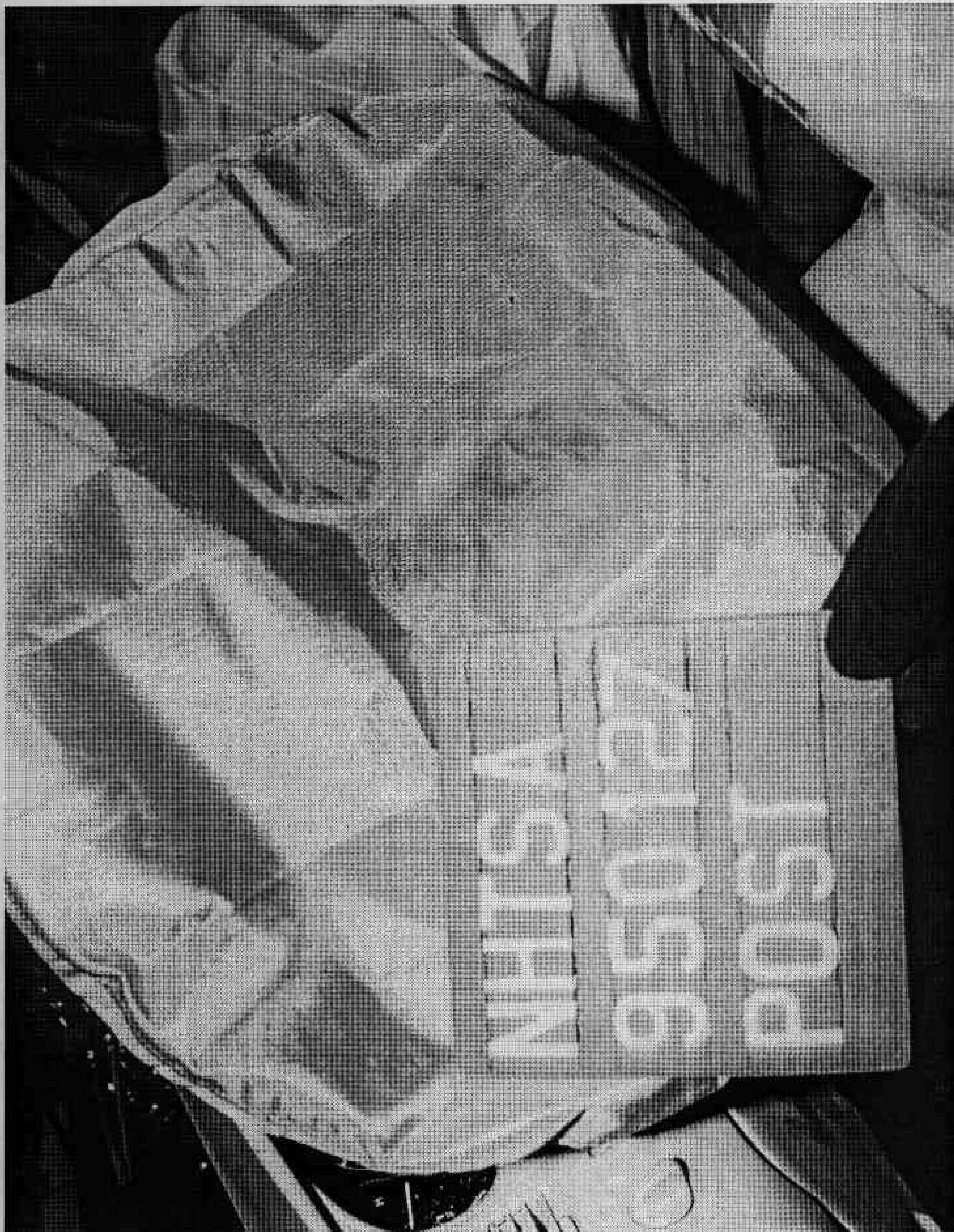


Figure A-39. Post-Test Driver Dummy Head Contact - View 2

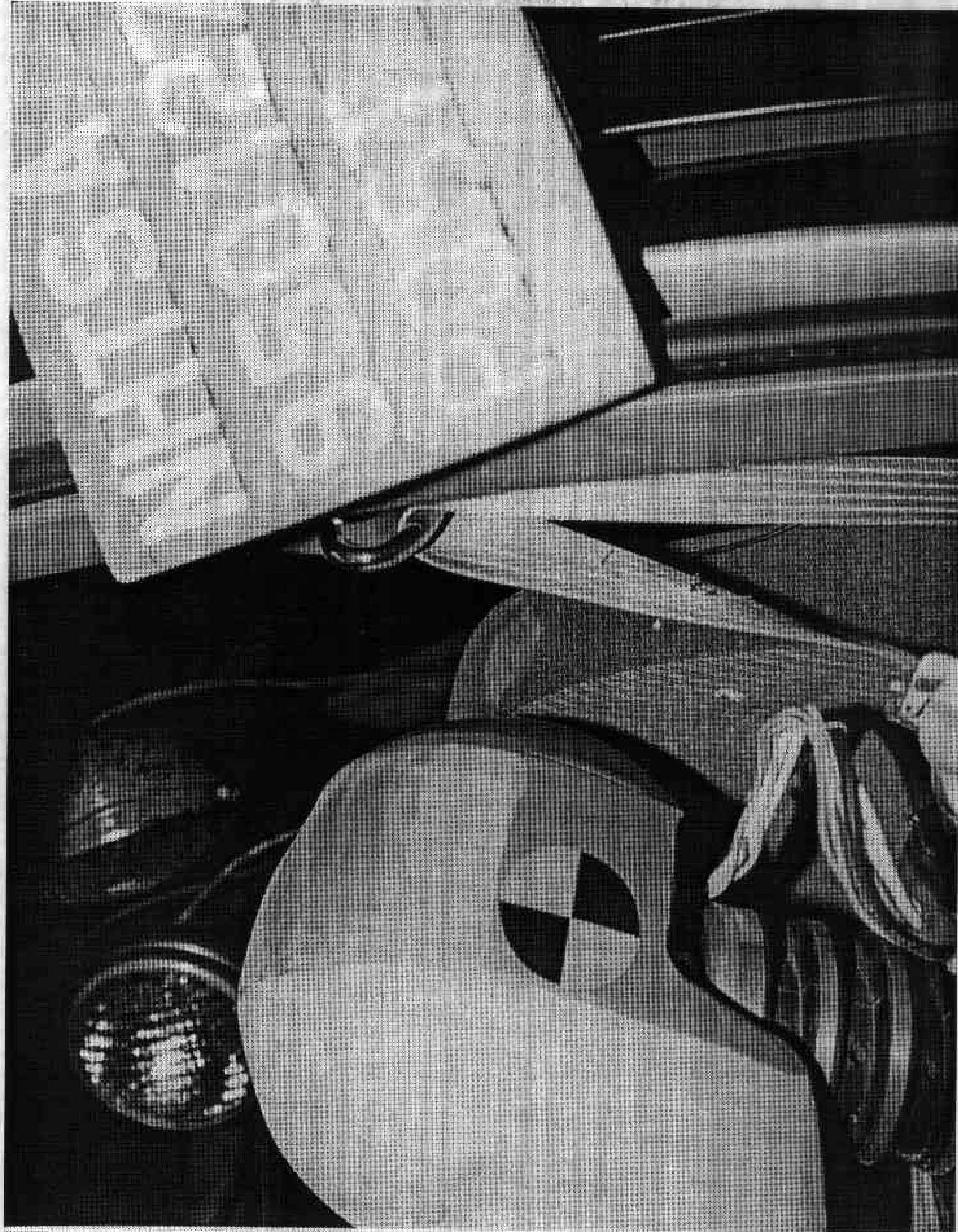


Figure A-40. Post-Test Driver Dummy Head Contact - View 3

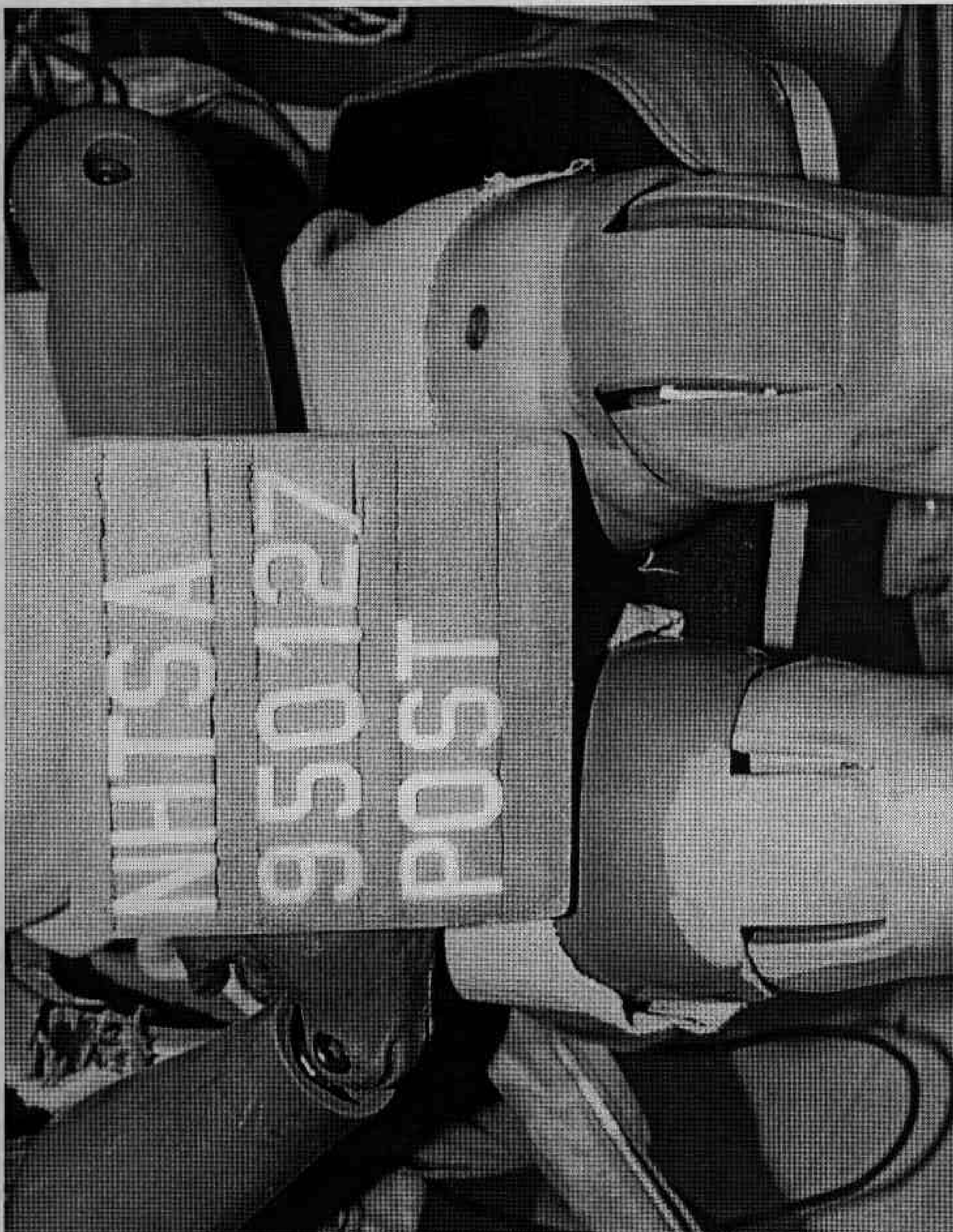


Figure A-41. Post-Test Driver Dummy Knee Contact - View 1

Figure A-42. Post-Test Driver Dummy Knee Contact - View 2

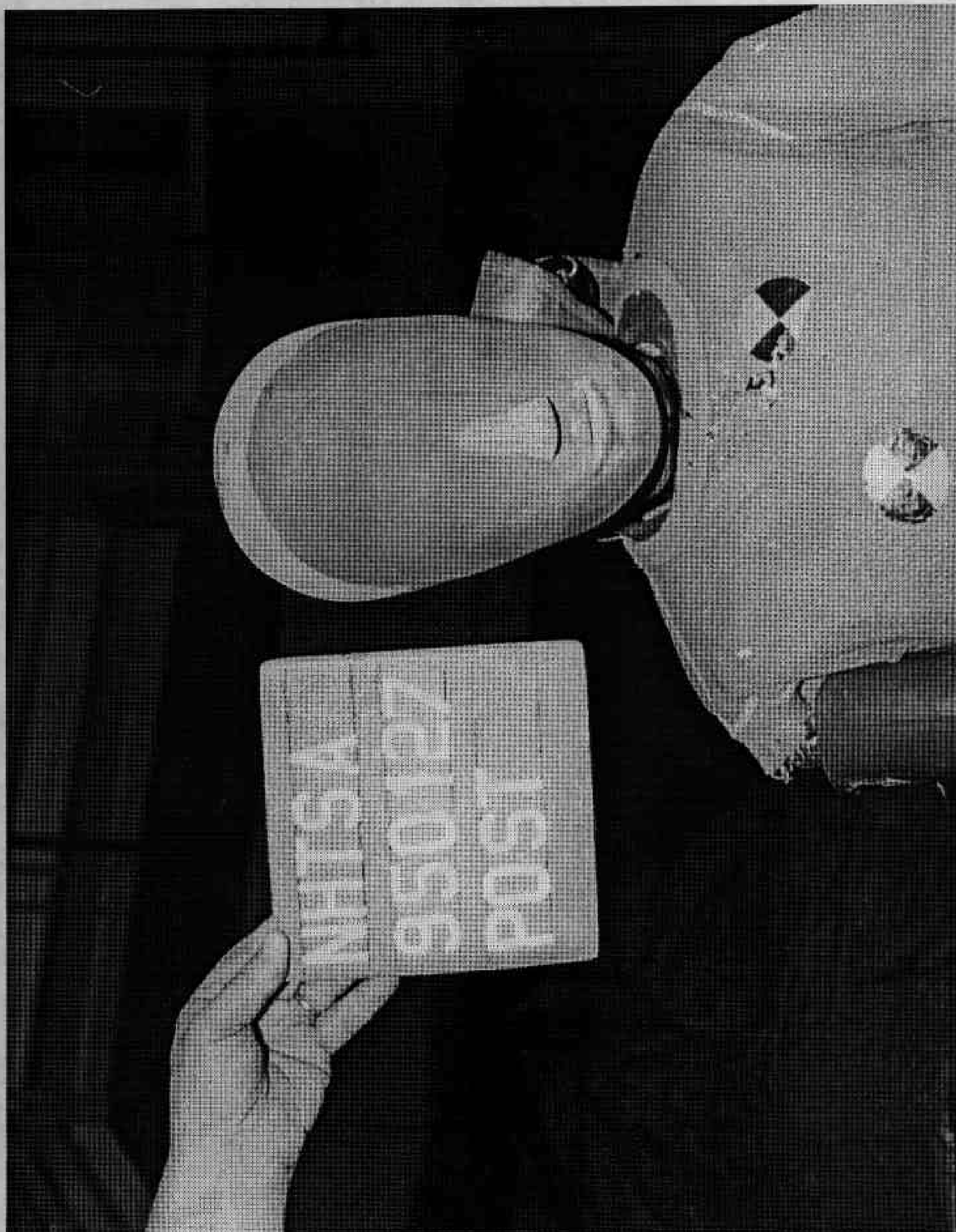


Figure A-43. Post-Test Passenger Dummy Head Contact - View 1

Figure A-44. Post-Test Passenger Dummy Head Contact - View 2

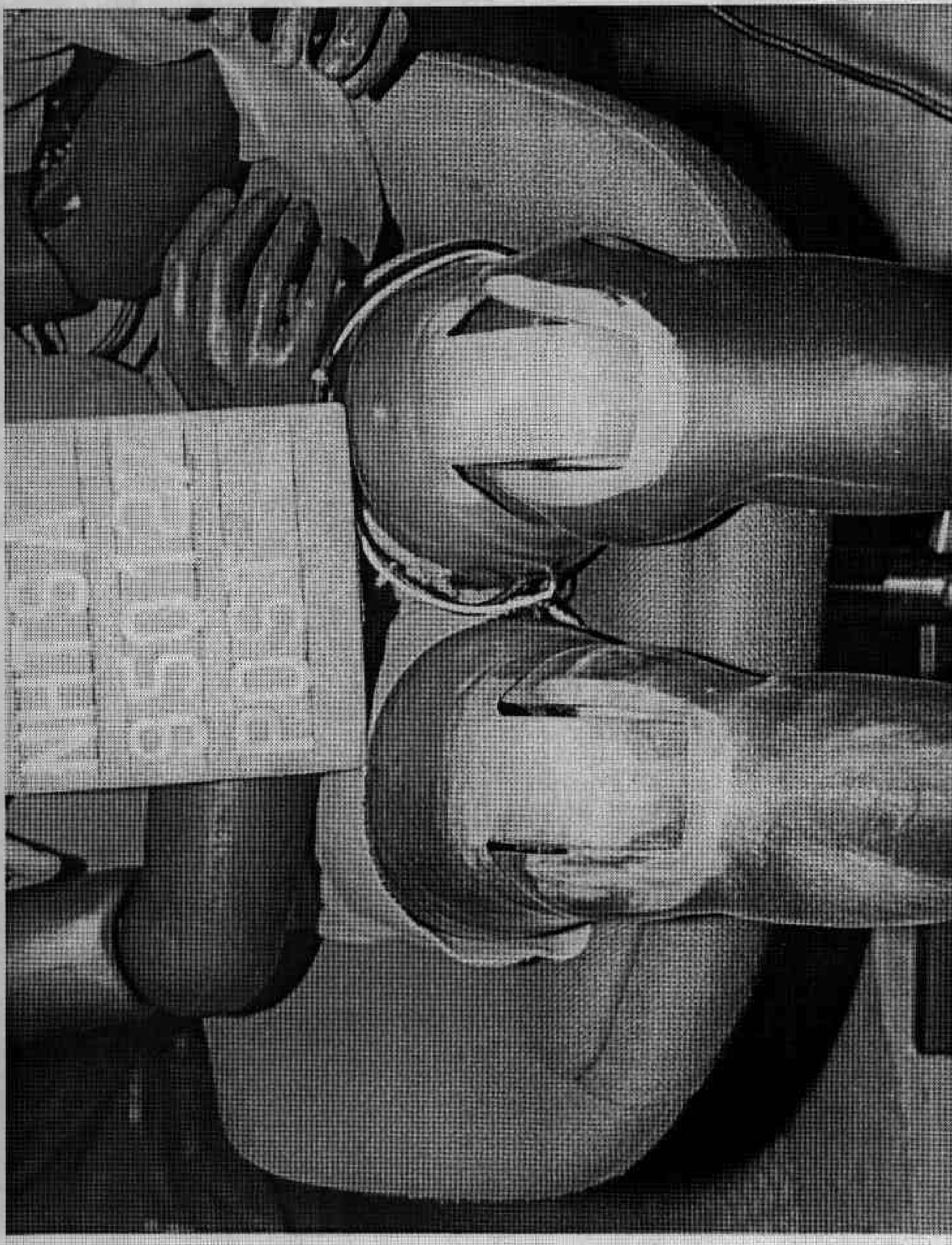


Figure A-45. Post-Test Passenger Dummy Knee Contact - View 1

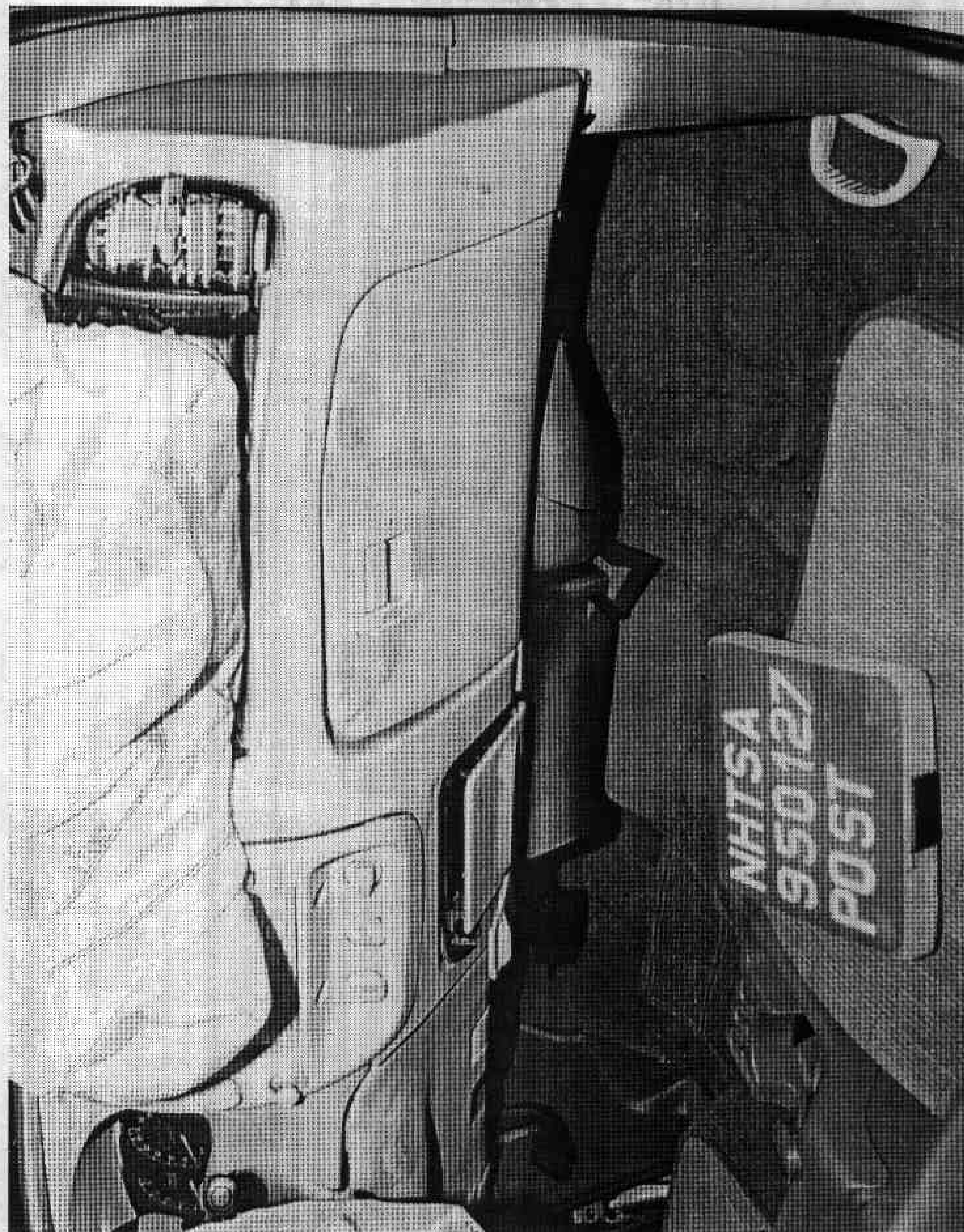


Figure A-46. Post-Test Passenger Dummy Knee Contact - View 2

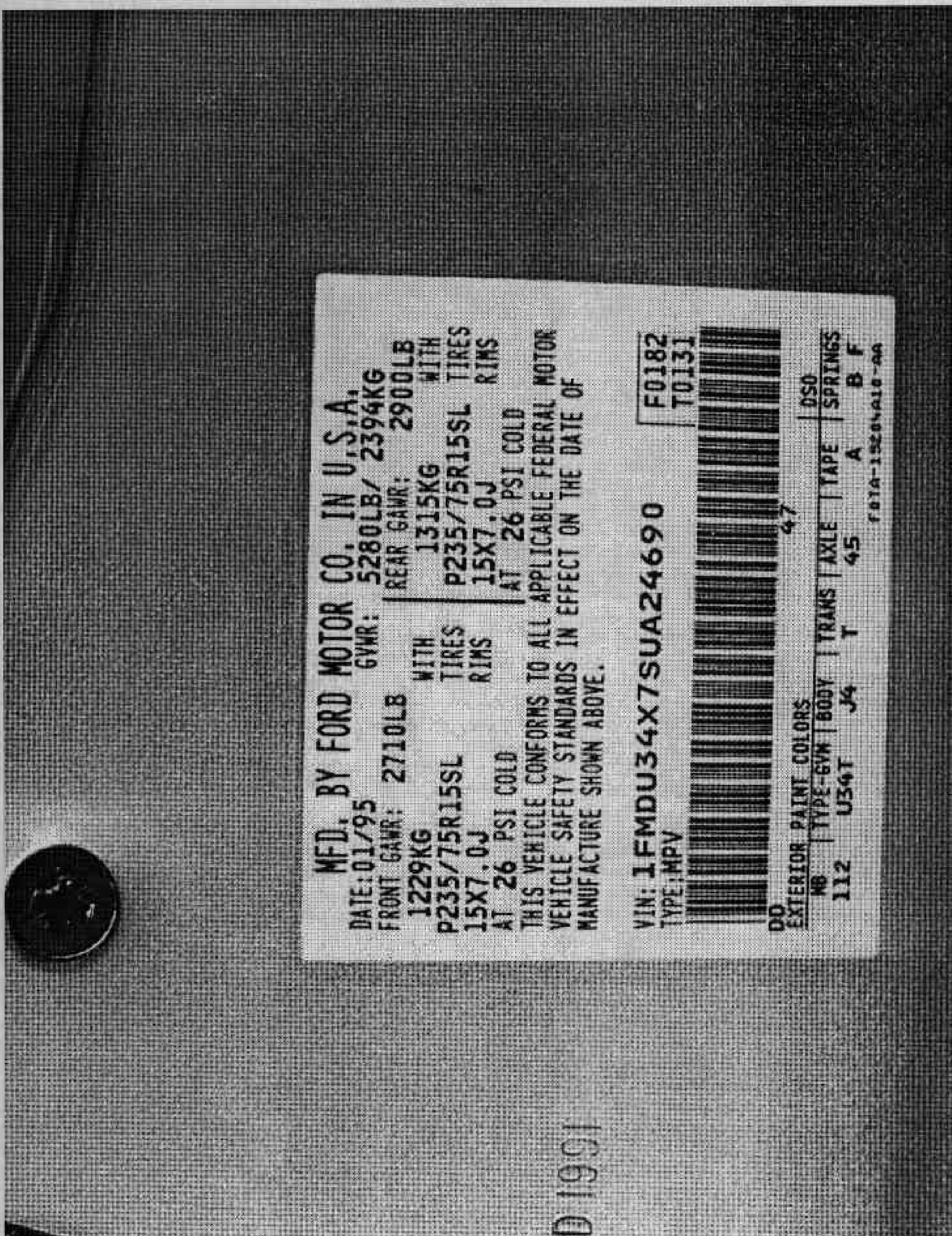


Figure A-47. Pre-Test Vehicle Certification and Recommended Tire Pressure Label View

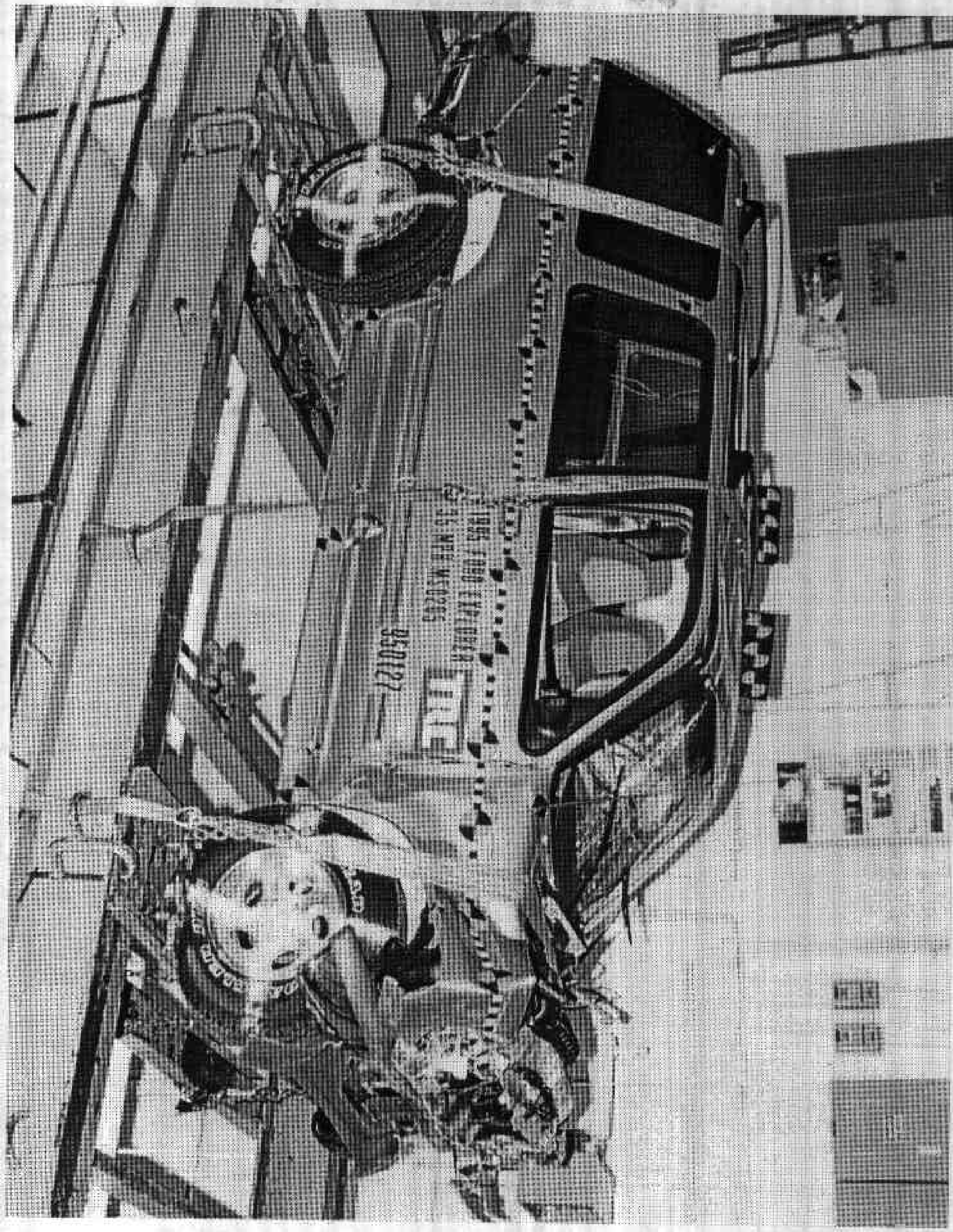
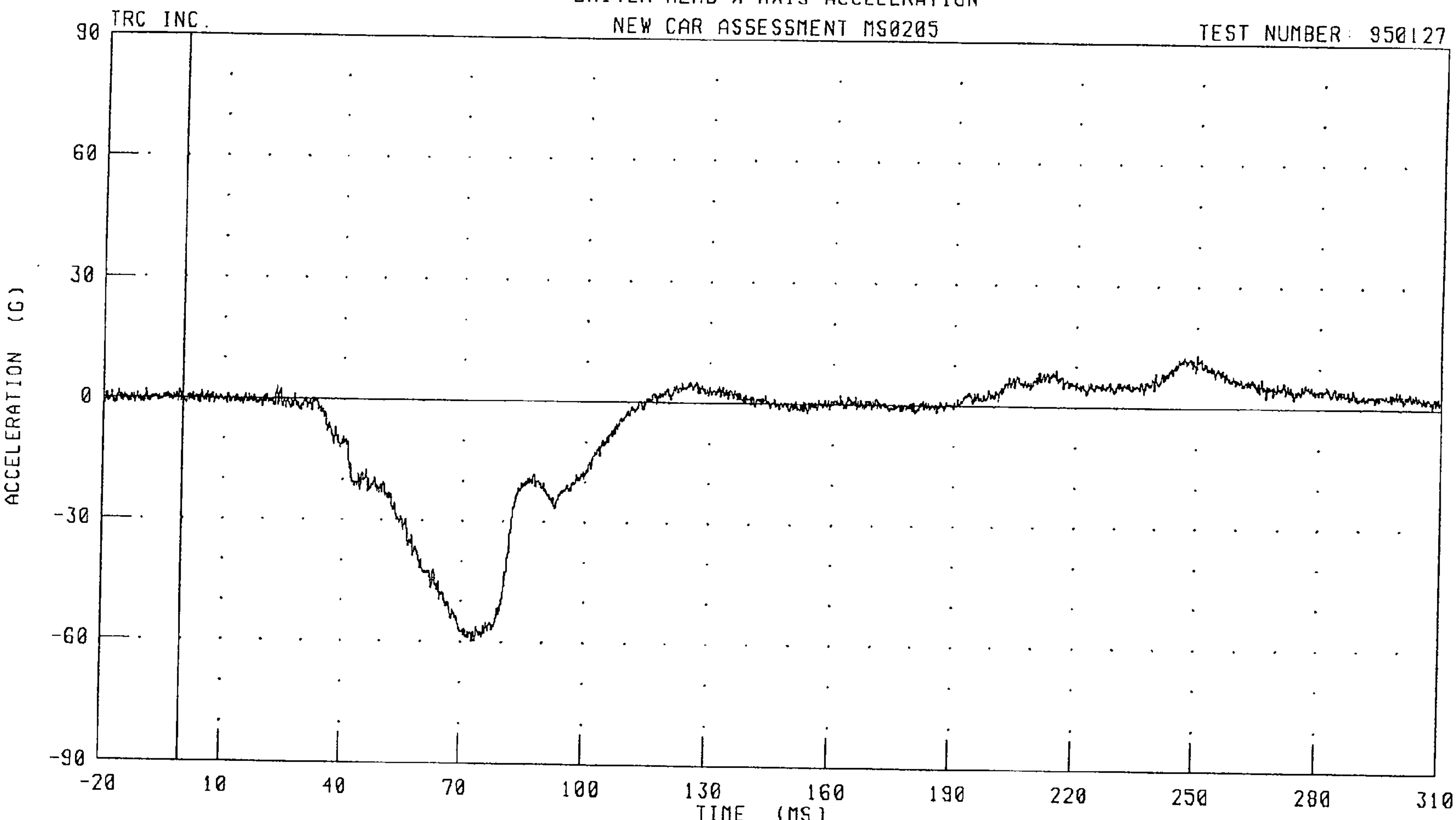


Figure A-48. Post-Test Vehicle on Static Rollover Machine View

Appendix B

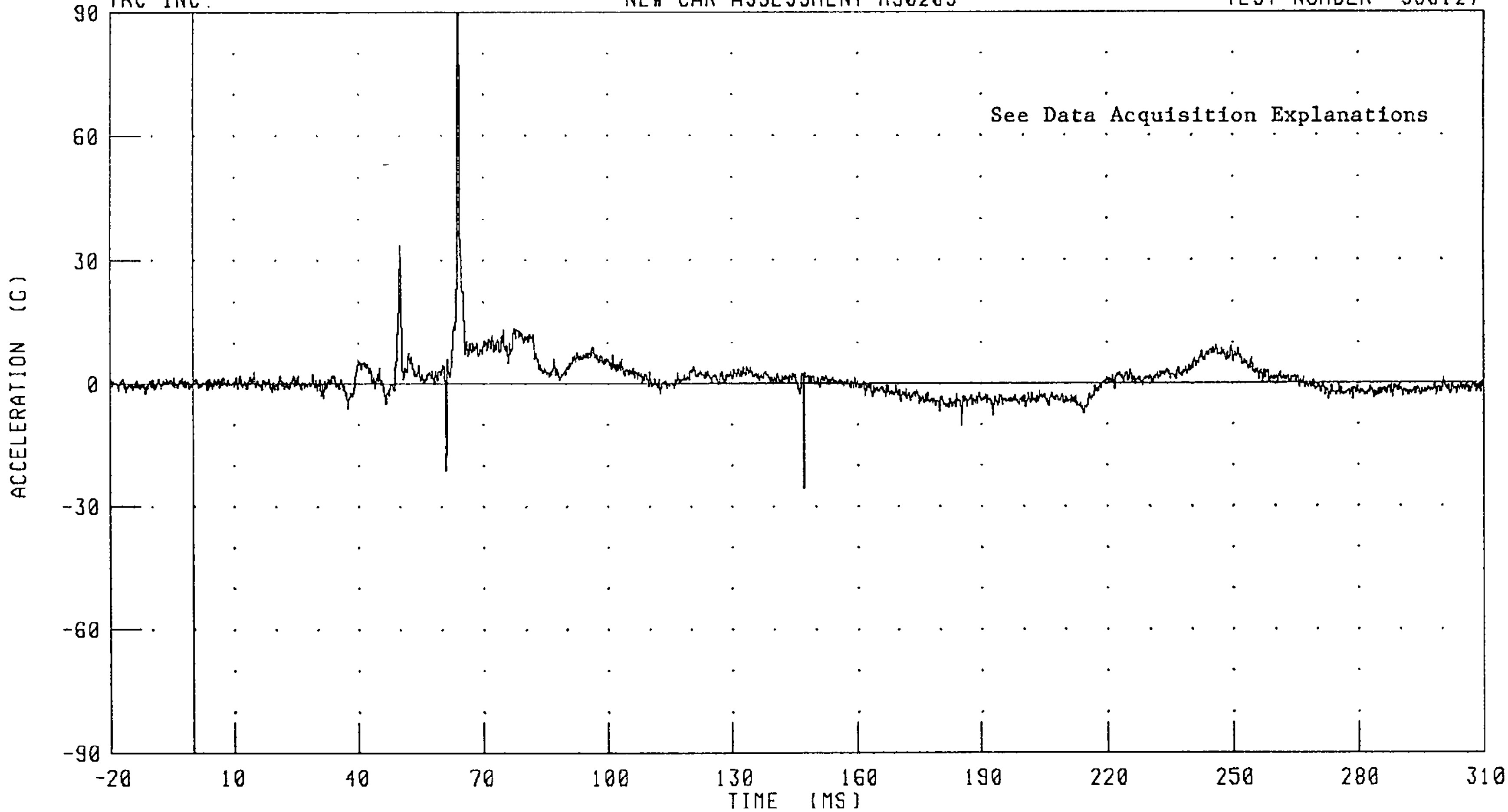
Data Plots

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
DRIVER HEAD X-AXIS ACCELERATION
NEW CAR ASSESSMENT MS0205



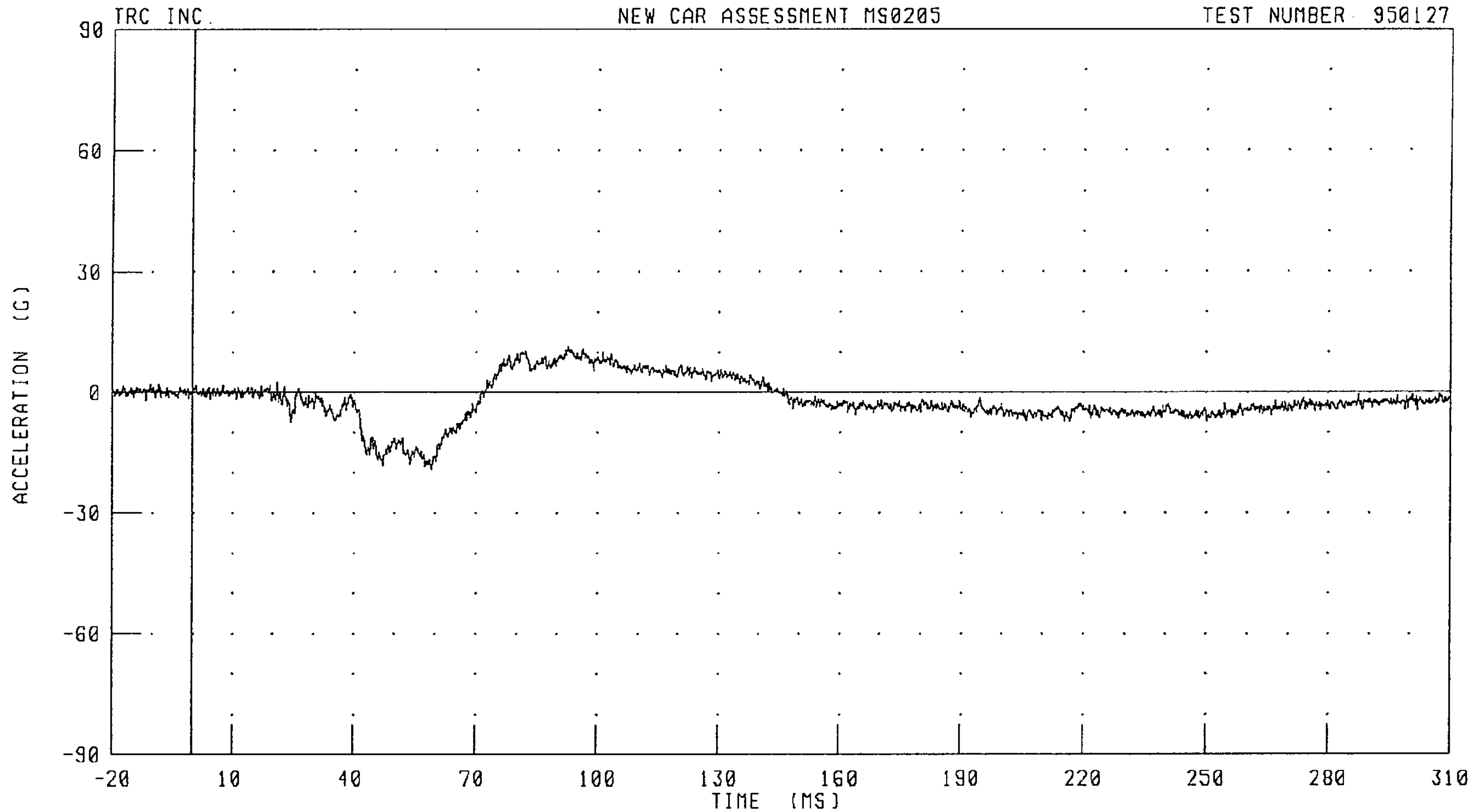
CHANNEL: HEDXG1 FILTER: CH. CLASS 1000 PEAK DATA: 13.16 G @ 250.24 MS; -59.99 G @ 72.88 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
DRIVER HEAD Y-AXIS ACCELERATION
NEW CAR ASSESSMENT MS0205



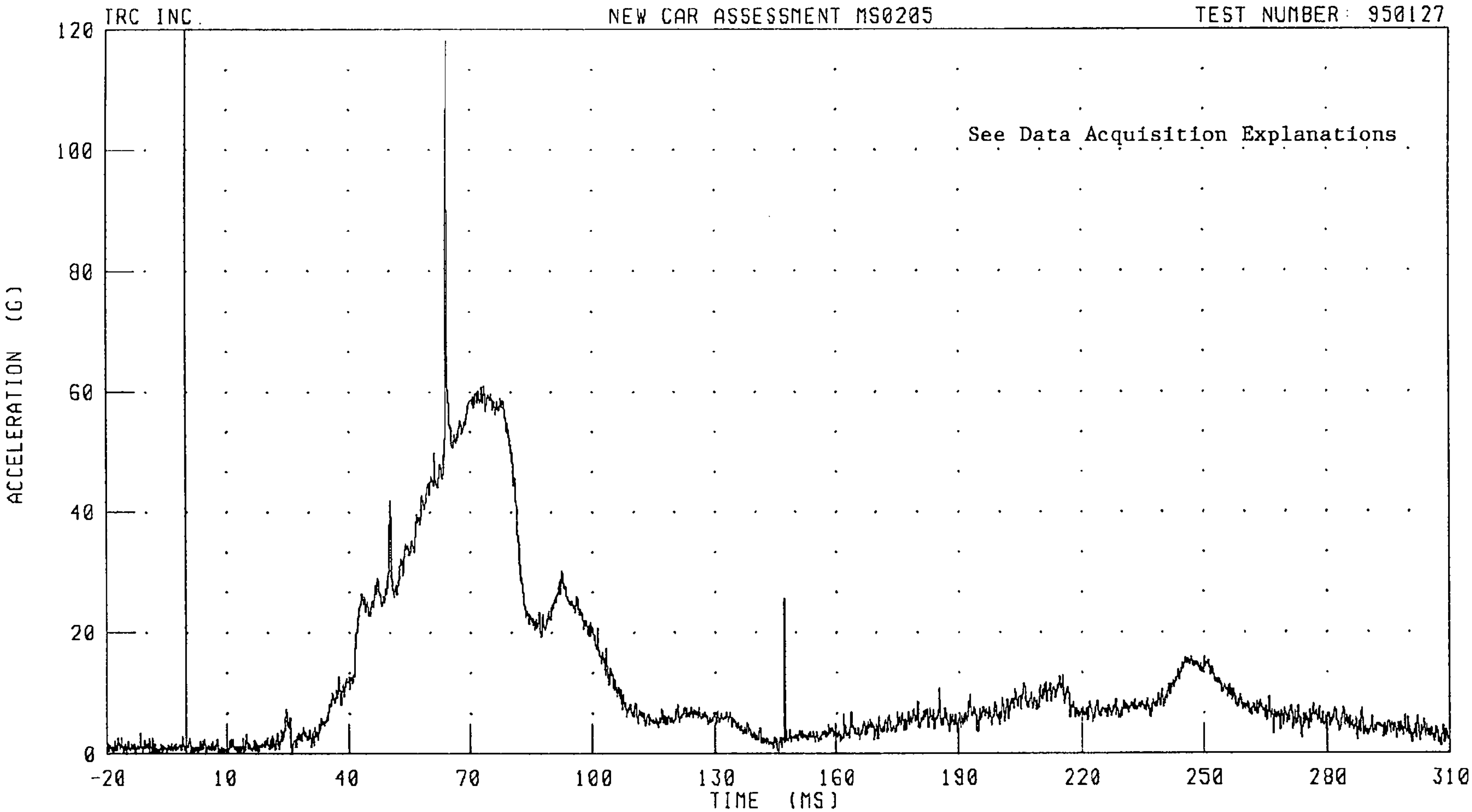
CHANNEL: HEDYG1 FILTER: CH. CLASS 1000 PEAK DATA: 108.20 G @ 64.08 MS; -25.55 G @ 147.28 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
DRIVER HEAD Z-AXIS ACCELERATION
NEW CAR ASSESSMENT MS0205



CHANNEL: HEDZG1 FILTER: CH. CLASS 1000 PEAK DATA: 11.56 G @ 92.64 MS; -19.22 G @ 59.28 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
DRIVER HEAD RESULTANT ACCELERATION
NEW CAR ASSESSMENT MS0205

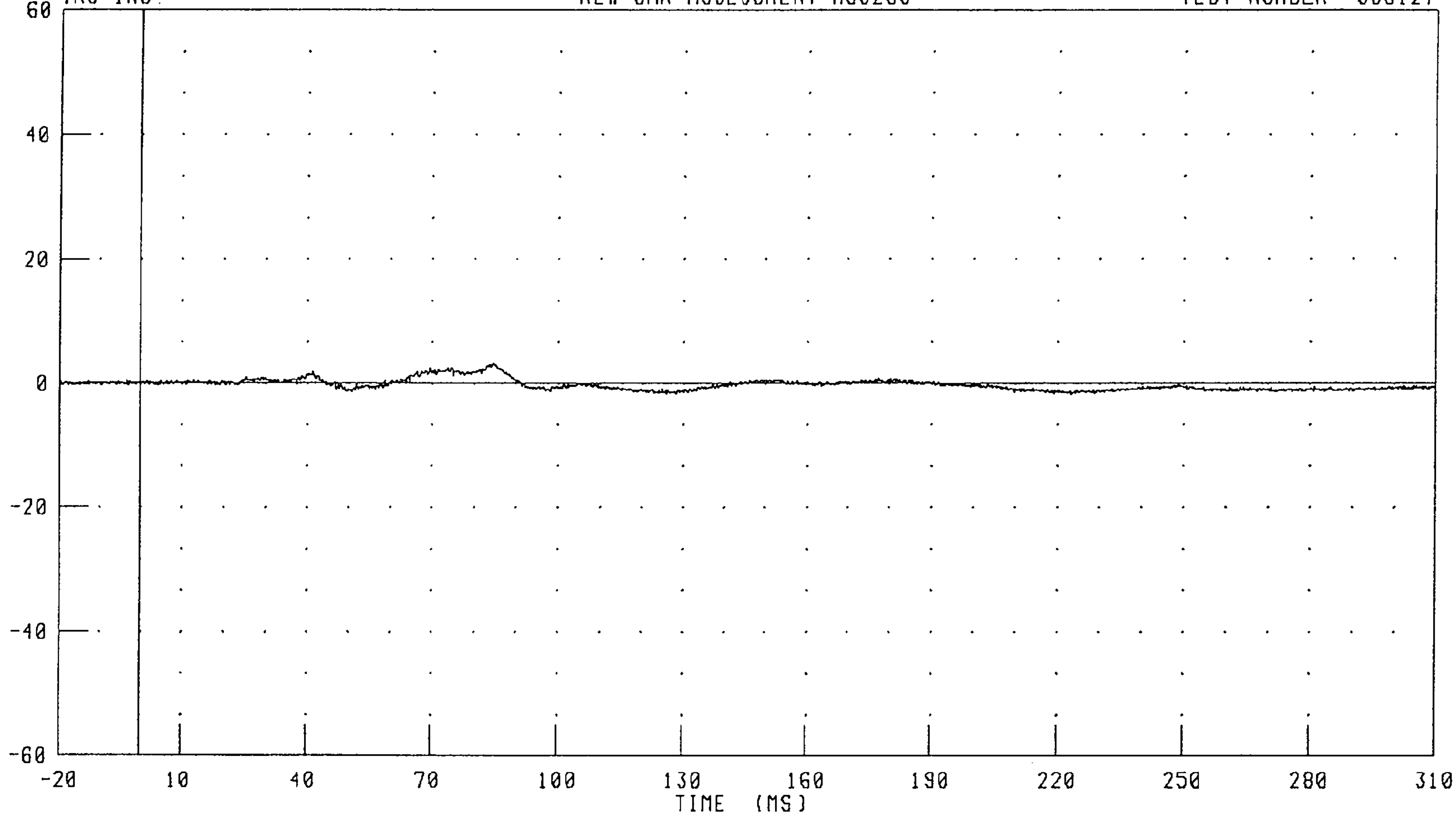


CHANNEL: HEDRG1 FILTER: CH. CLASS 1000 PEAK DATA: 118.17 G @ 64.08 MS; 0.05 G @ 14.08 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
DRIVER NECK X-AXIS SHEAR FORCE
NEW CAR ASSESSMENT MS0205

TRC INC.

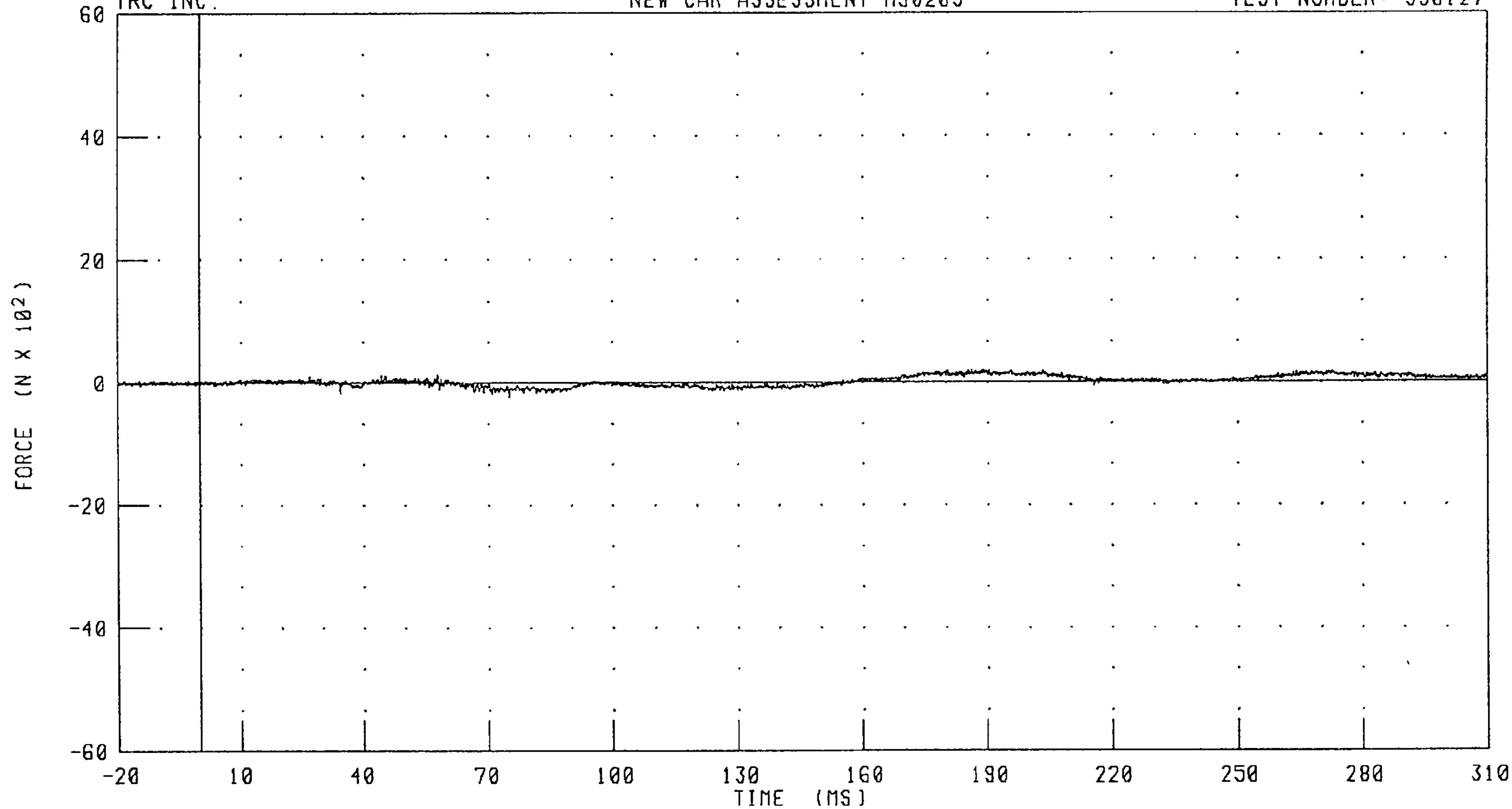
TEST NUMBER: 950127



CHANNEL: NEKXF1 FILTER: CH. CLASS 1000 PEAK DATA: 320.11 N @ 84.56 MS; -179.38 N @ 223.28 MS

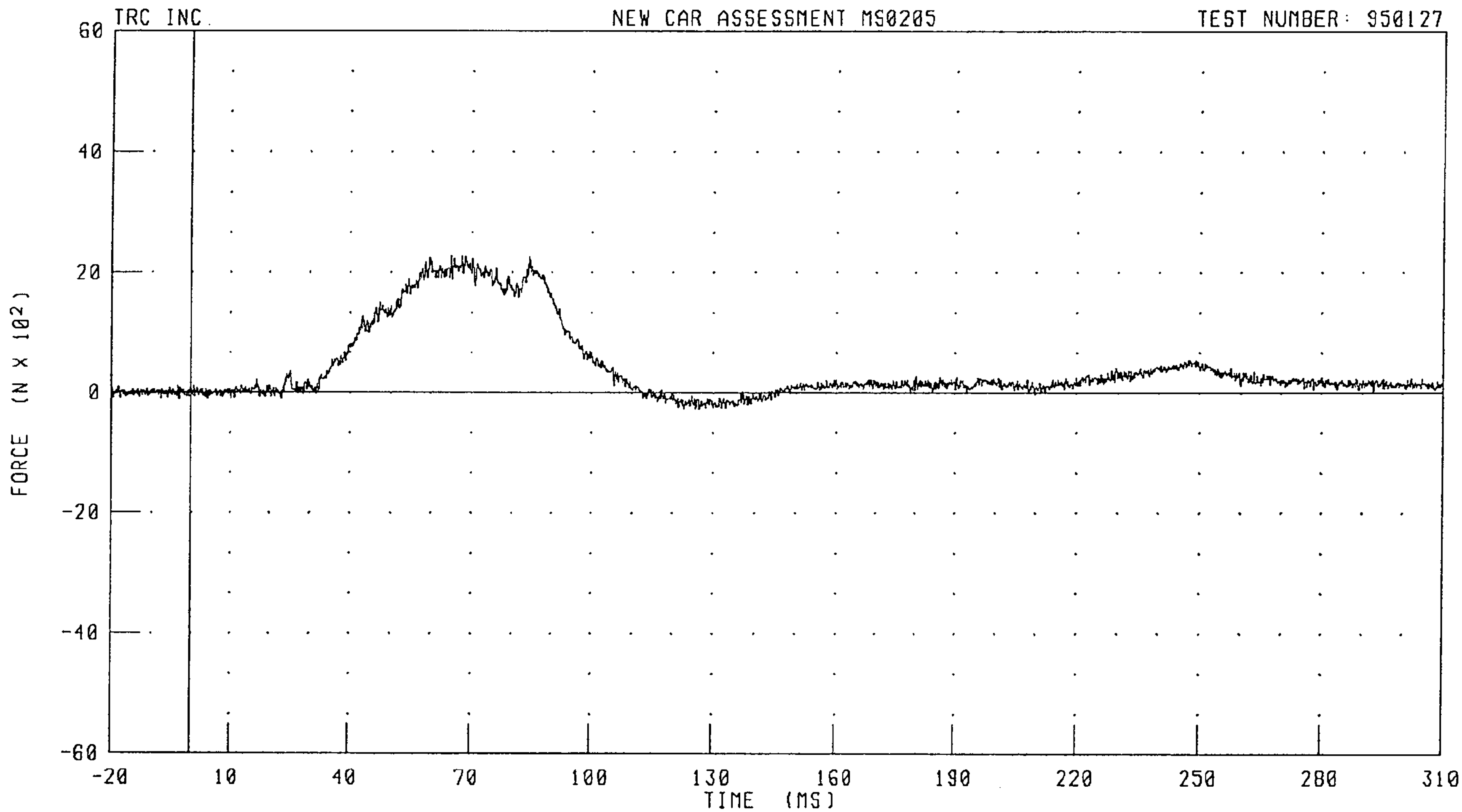
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
DRIVER NECK Y-AXIS SHEAR FORCE
NEW CAR ASSESSMENT MS0205

TRC INC. TEST NUMBER: 950127



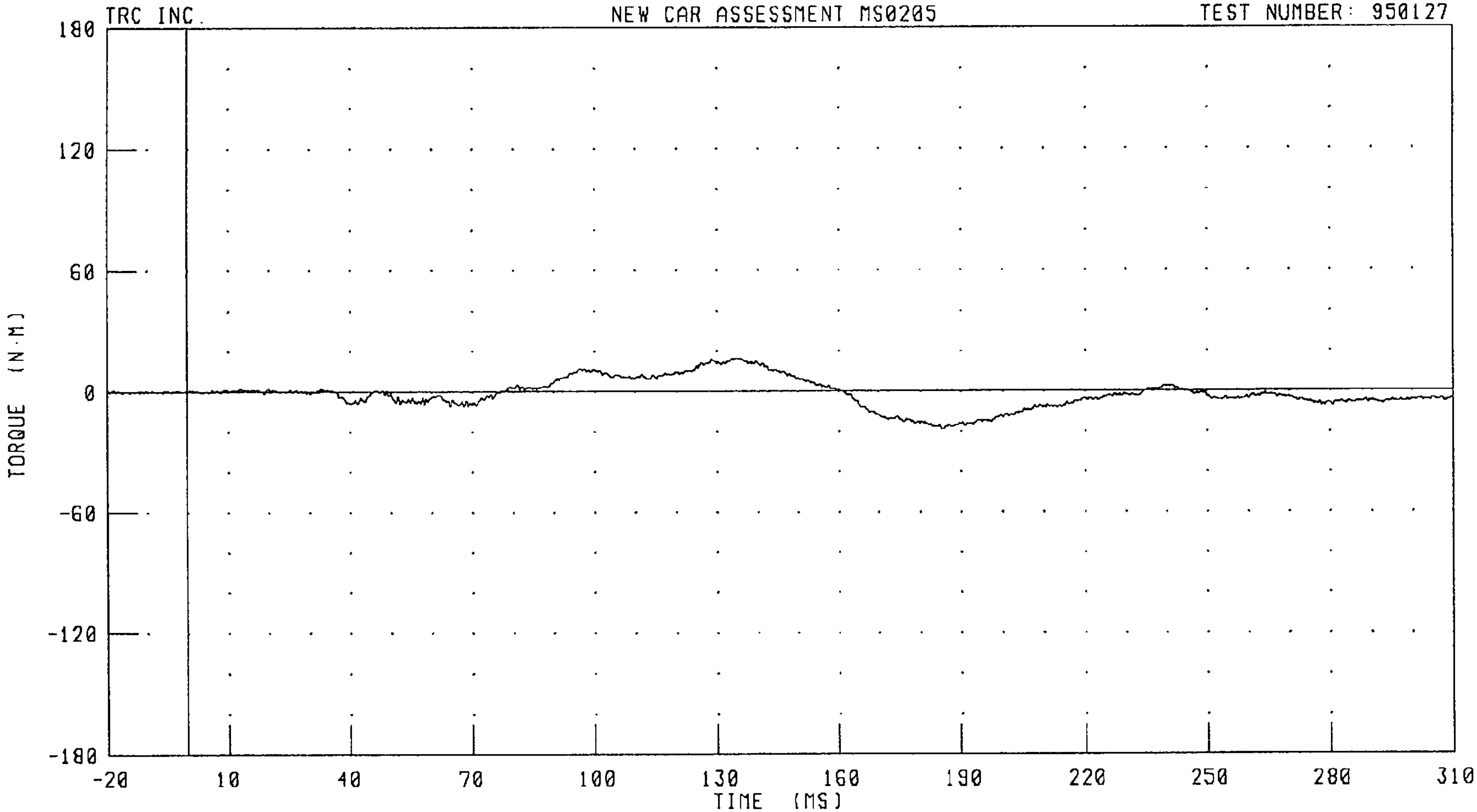
CHANNEL: NEKYF1 FILTER: CH. CLASS 1000 PEAK DATA: 203.46 N @ 188.96 MS; -239.81 N @ 75.20 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
DRIVER NECK Z-AXIS AXIAL FORCE
NEW CAR ASSESSMENT MS0205



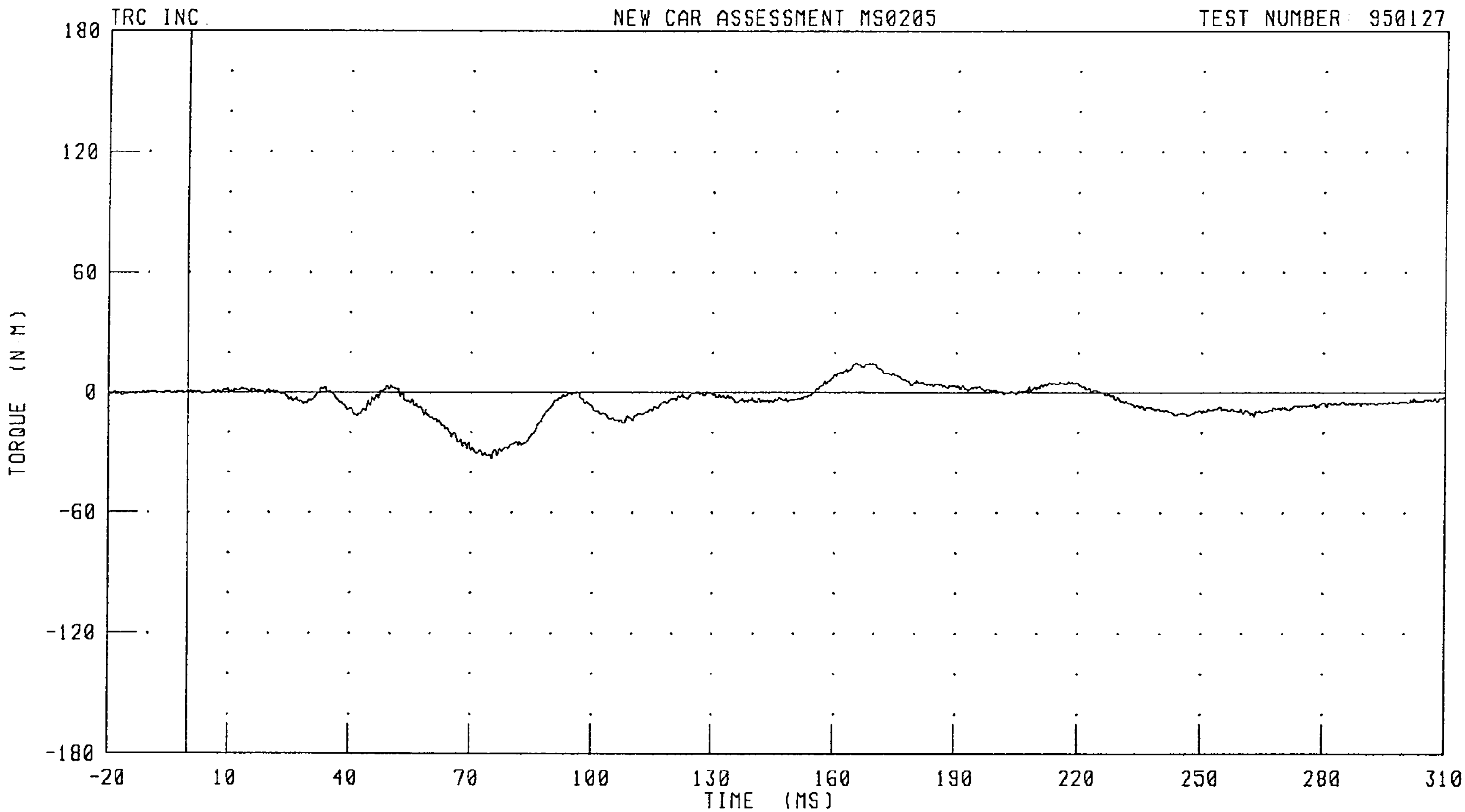
CHANNEL: NEKZF1 FILTER: CH. CLASS 1000 PEAK DATA: 2293.51 N @ 65.04 MS; -277.91 N @ 126.72 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
DRIVER NECK MOMENT ABOUT X AXIS
NEW CAR ASSESSMENT MS0205



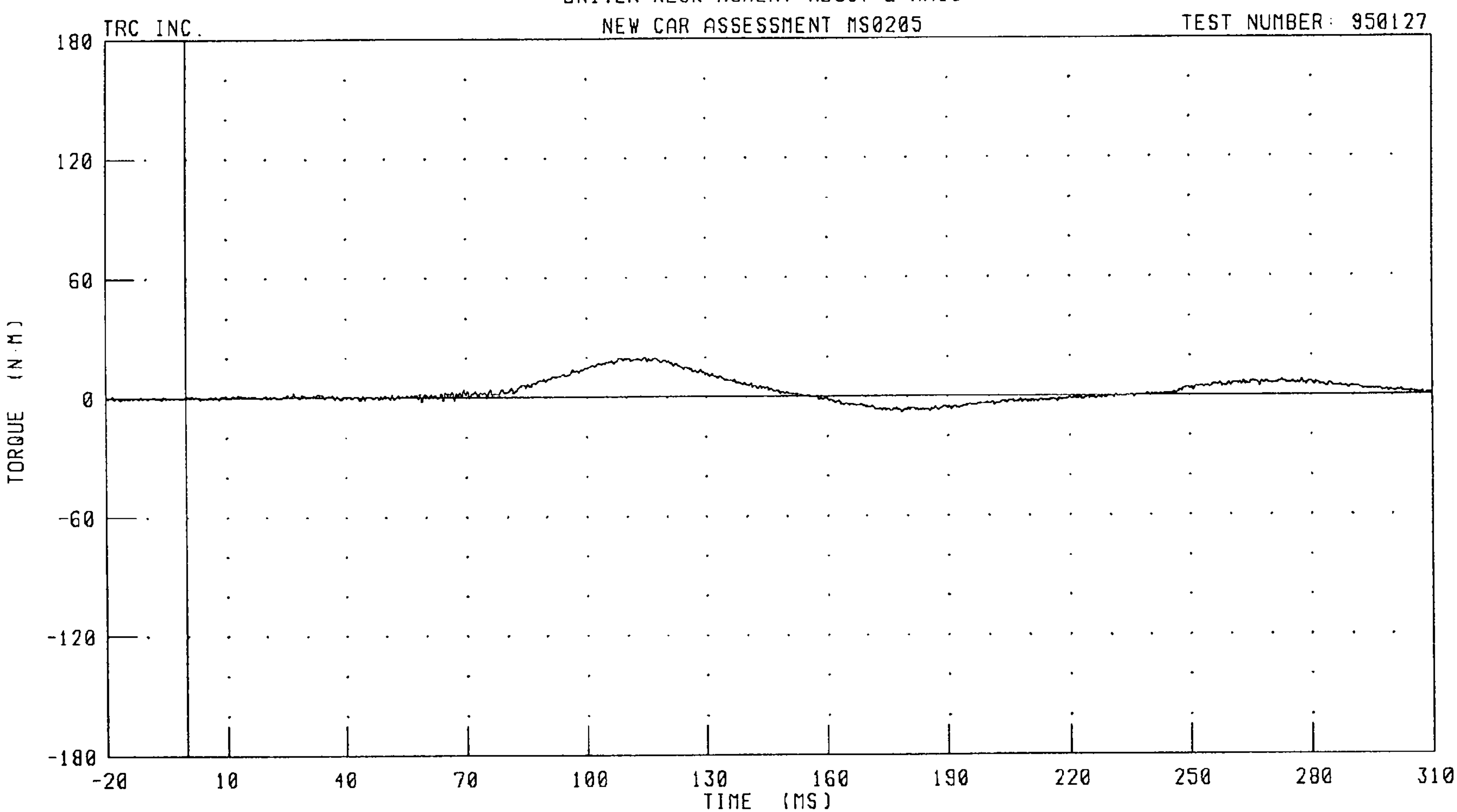
CHANNEL: NEKXM1 FILTER: CH. CLASS 600 PEAK DATA: 16.49 N·M @ 134.96 MS; -18.85 N·M @ 185.76 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
DRIVER NECK MOMENT ABOUT Y AXIS
NEW CAR ASSESSMENT MS0205



CHANNEL: NEKYM1   FILTER: CH. CLASS 600   PEAK DATA: 14.88 N·M @ 168.88 MS; -33.04 N·M @ 75.12 MS

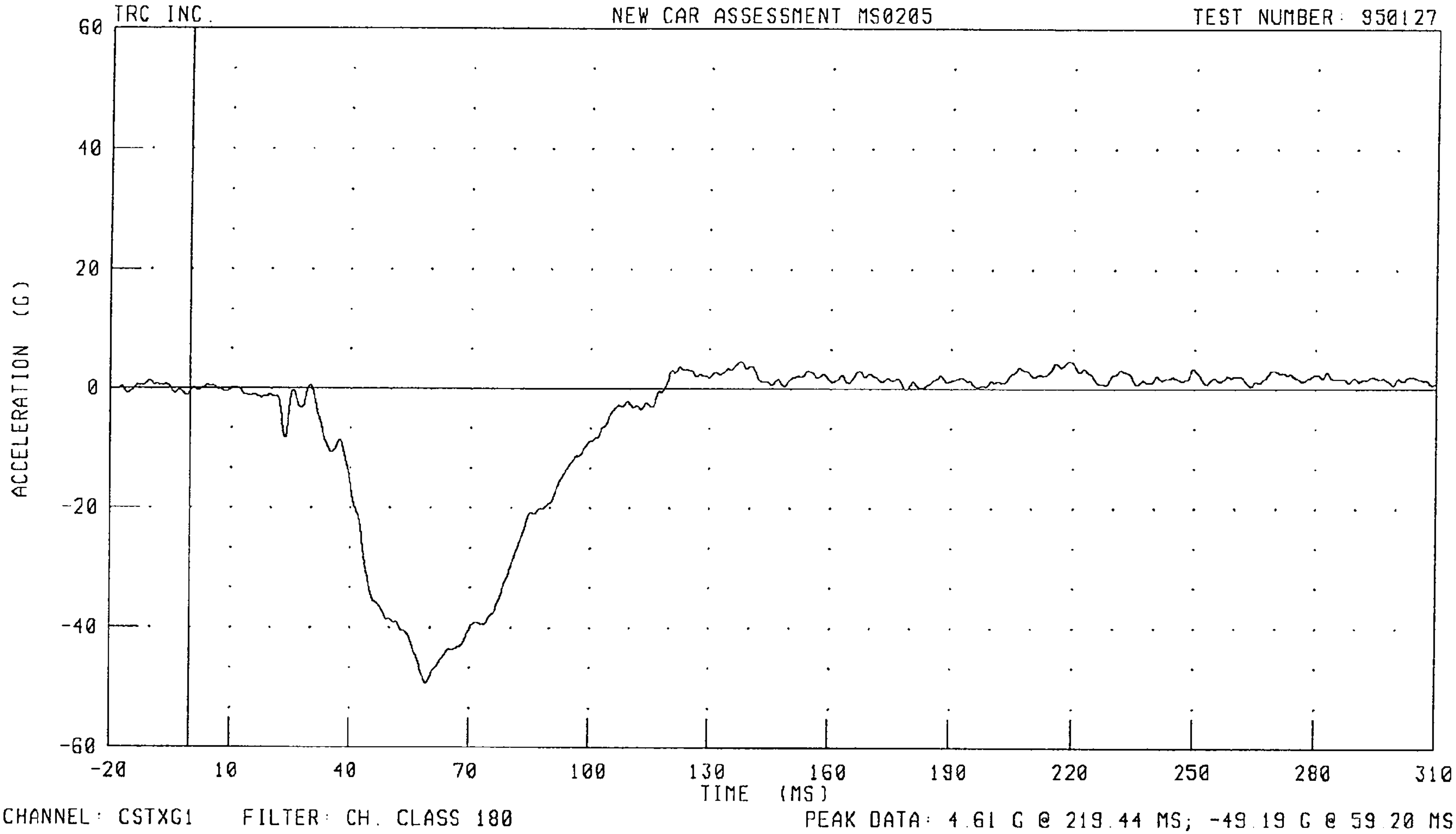
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
DRIVER NECK MOMENT ABOUT Z AXIS
NEW CAR ASSESSMENT MS0205



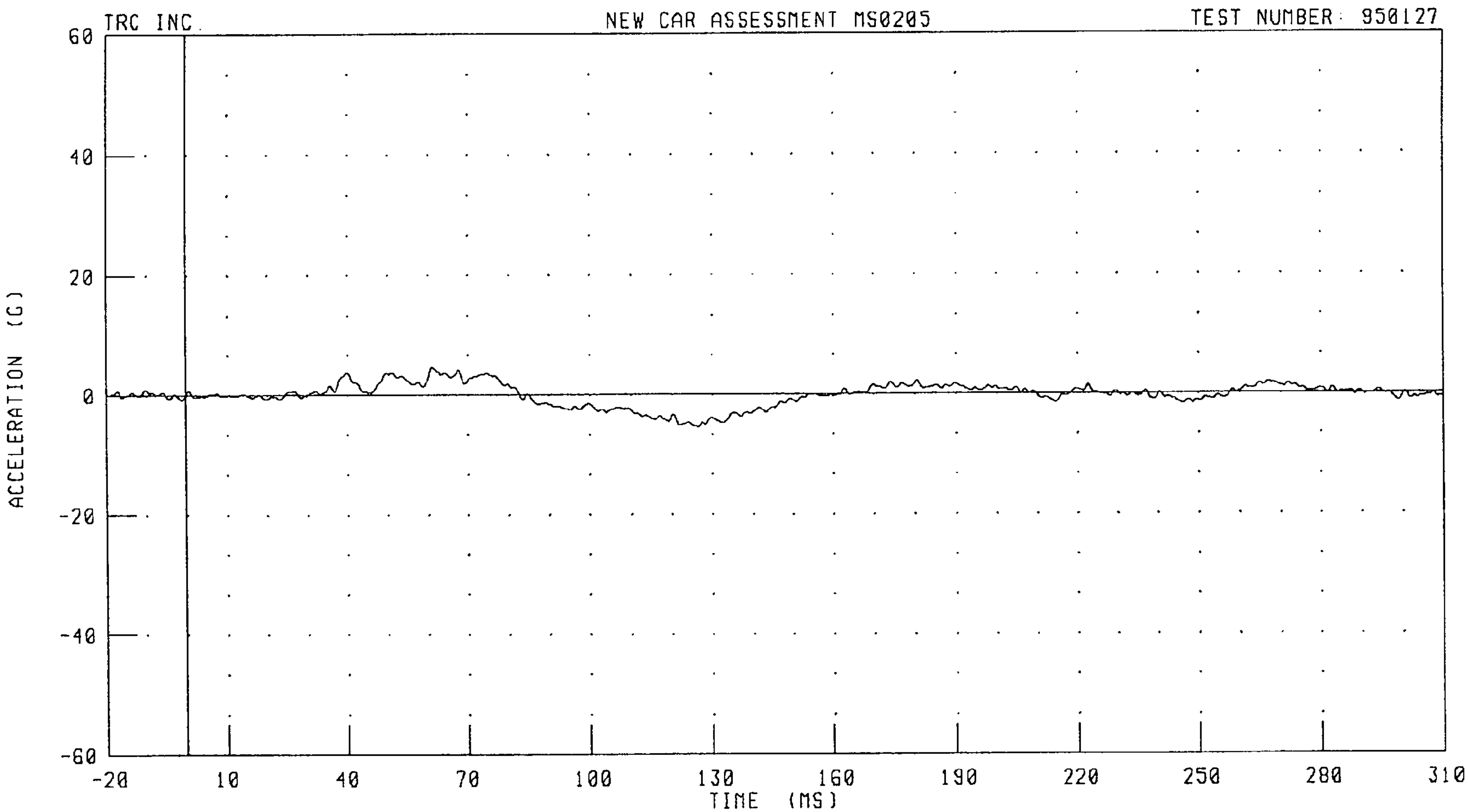
CHANNEL: NEKZM1 FILTER: CH. CLASS 600 PEAK DATA: 20.02 N·M @ 114.56 MS; -8.29 N·M @ 178.80 MS

950127

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
DRIVER CHEST X-AXIS ACCELERATION
NEW CAR ASSESSMENT MS0205

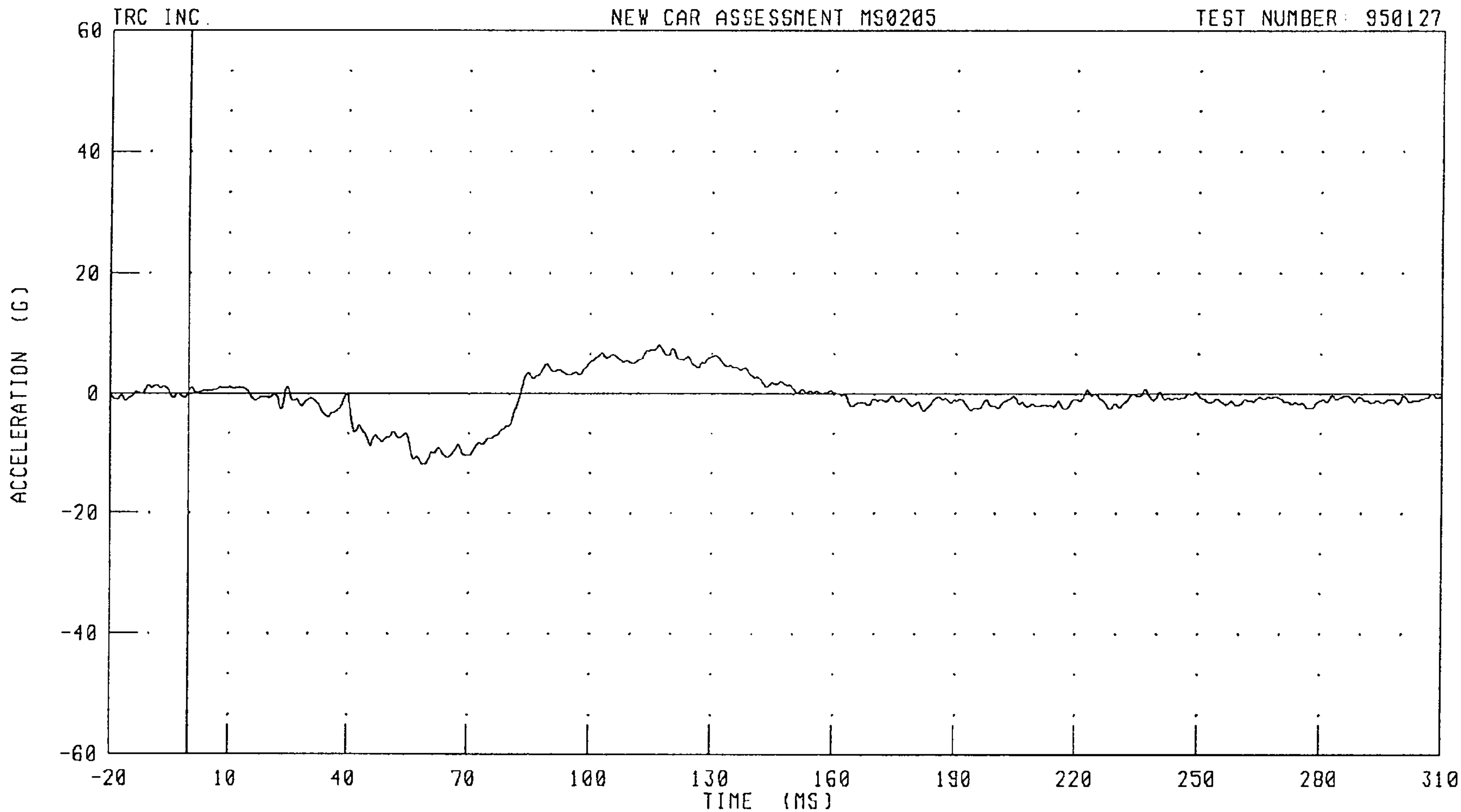


1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
DRIVER CHEST Y-AXIS ACCELERATION
NEW CAR ASSESSMENT MS0205

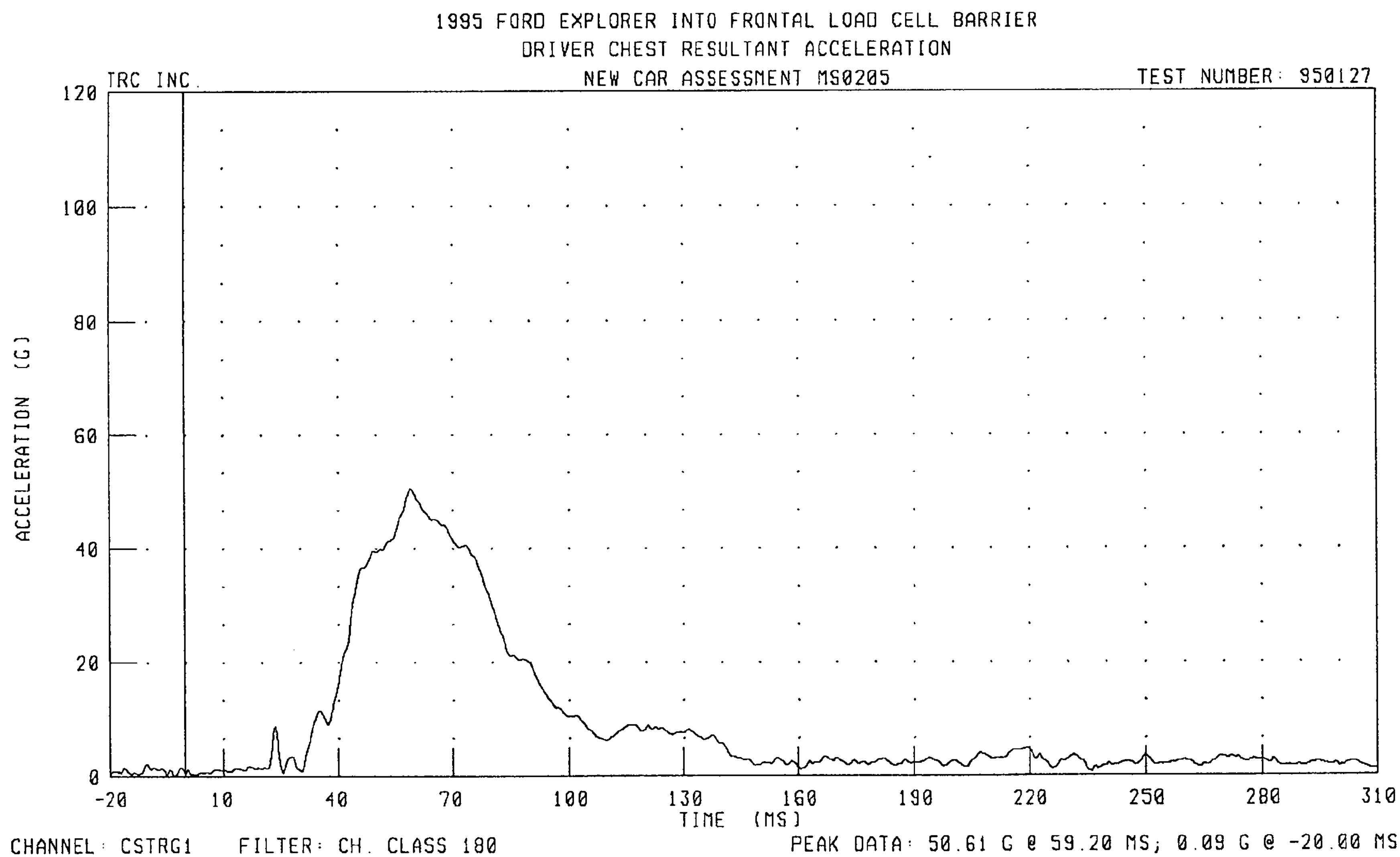


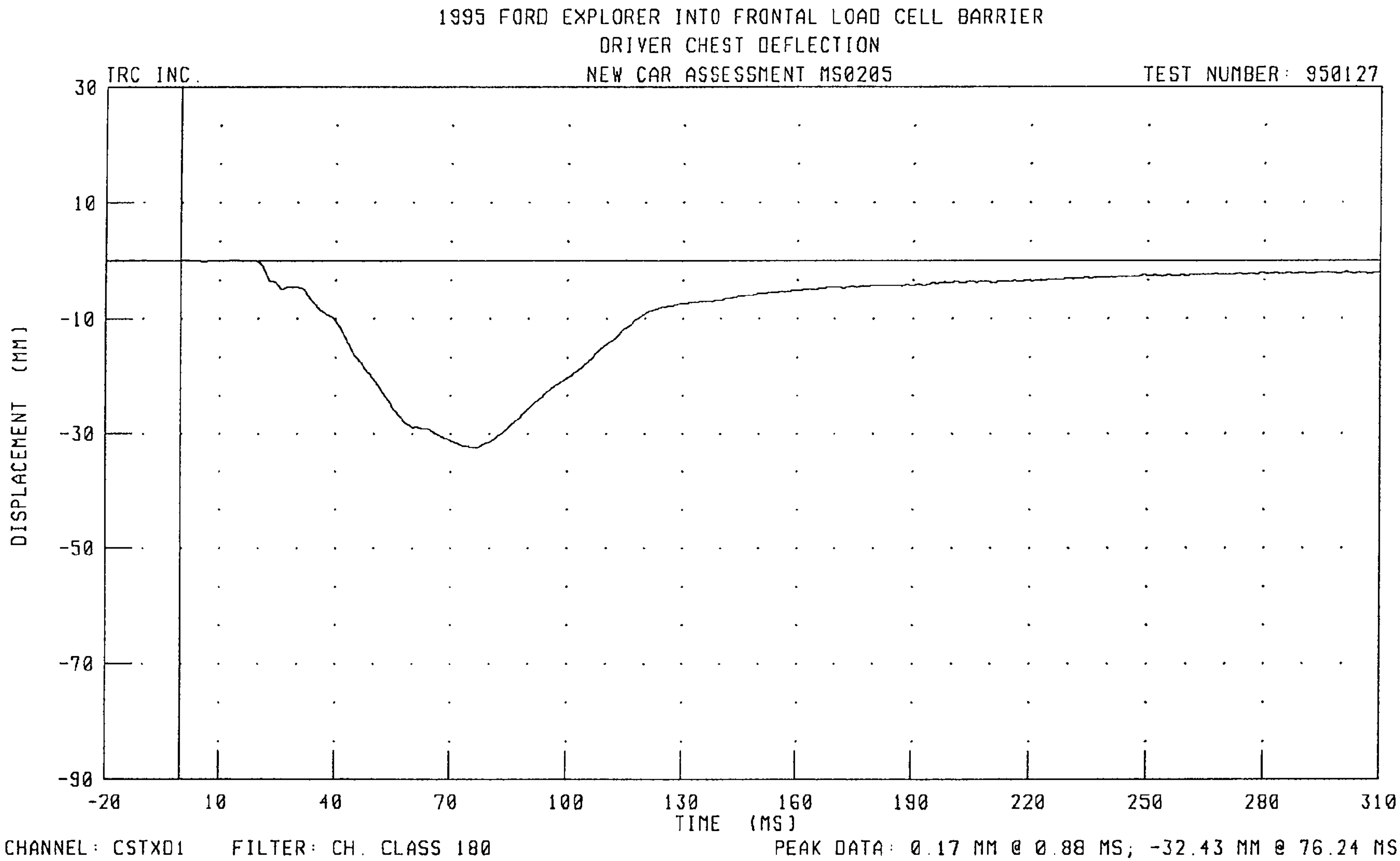
CHANNEL: CSTYG1   FILTER: CH. CLASS 180   PEAK DATA: 4.70 G @ 61.04 MS; -5.40 G @ 126.64 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
DRIVER CHEST Z-AXIS ACCELERATION
NEW CAR ASSESSMENT MS0205



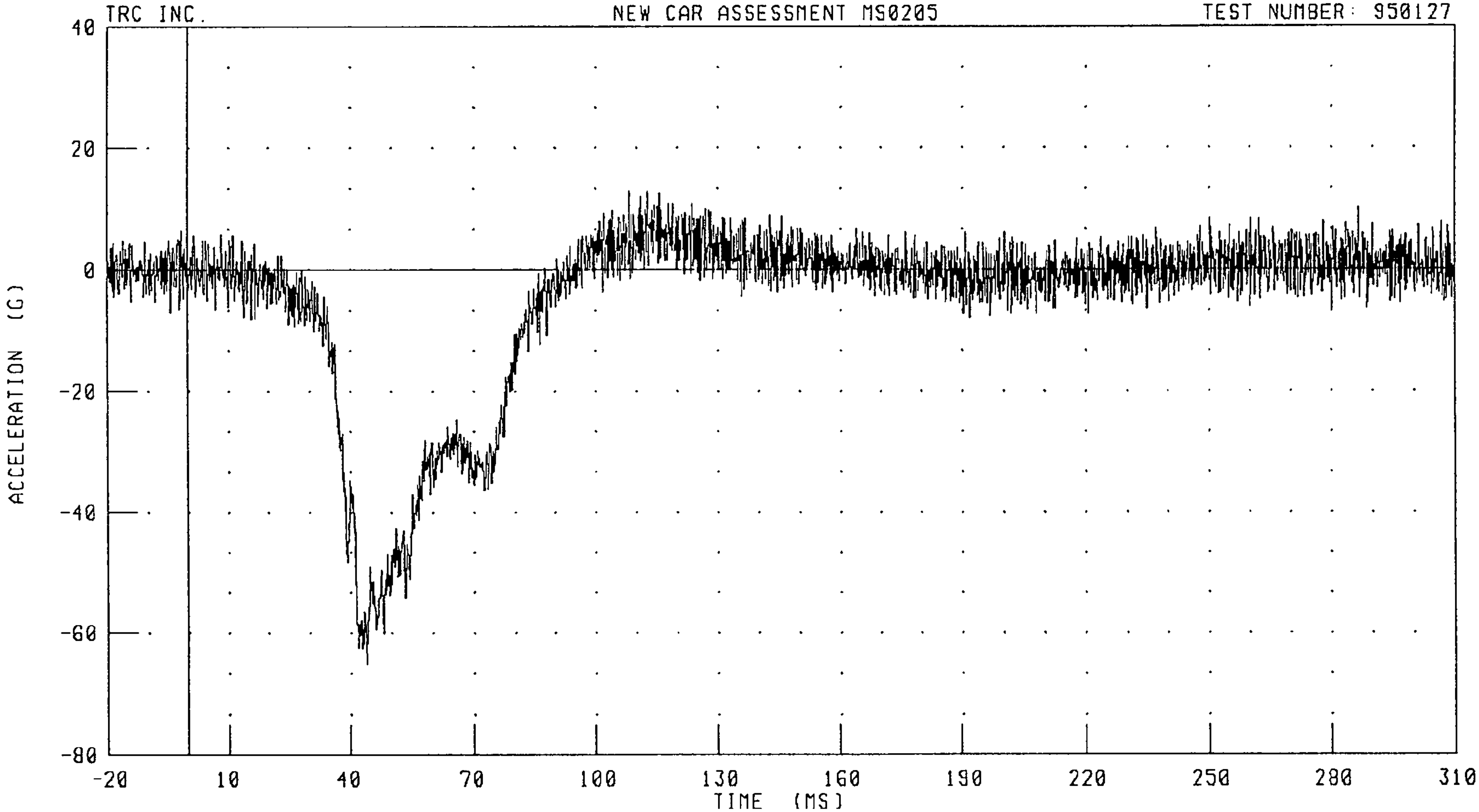
CHANNEL: CSTZG1   FILTER: CH. CLASS 180   PEAK DATA: 8.14 G @ 117.12 MS; -11.91 G @ 58.64 MS


1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
DRIVER CHEST RESULTANT ACCELERATION
NEW CAR ASSESSMENT MS0205
TRC INC.
TEST NUMBER: 950127
ACCELERATION (G)
120
100
80
60
40
20
0
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTRG1
FILTER: CH. CLASS 180
PEAK DATA: 50.61 G @ 59.20 MS; 0.09 G @ -20.00 MS

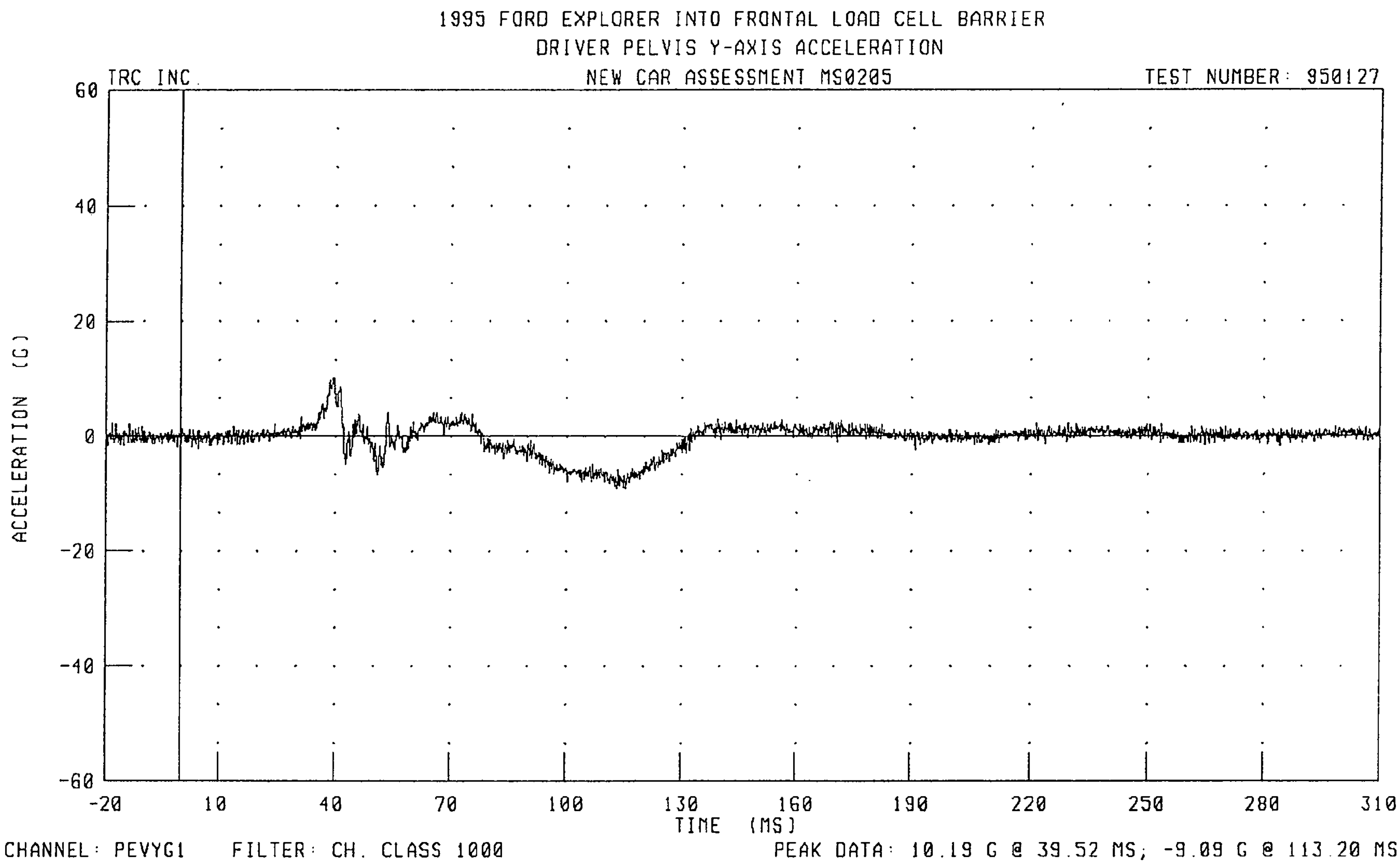

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
DRIVER CHEST DEFLECTION
NEW CAR ASSESSMENT MS0205
TRC INC.
TEST NUMBER: 950127
DISPLACEMENT (MM)
30
10
-10
-30
-50
-70
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTXD1
FILTER: CH. CLASS 180
PEAK DATA: 0.17 MM @ 0.88 MS; -32.43 MM @ 76.24 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
DRIVER PELVIS X-AXIS ACCELERATION
NEW CAR ASSESSMENT MS0205

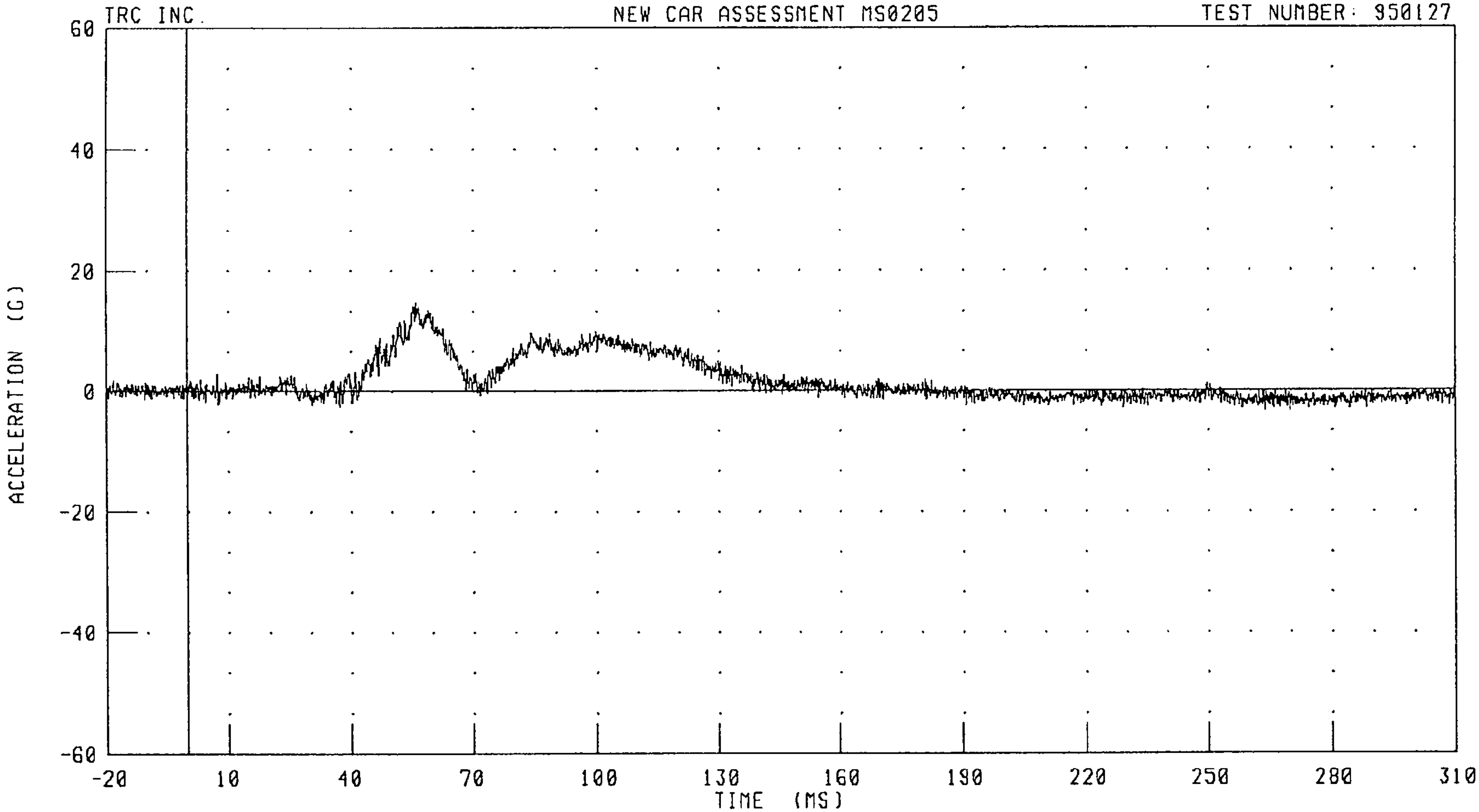
TRC INC. TEST NUMBER: 950127



CHANNEL: PEVXG1 FILTER: CH. CLASS 1000 PEAK DATA: 12.84 G @ 108.32 MS; -65.14 G @ 44.00 MS

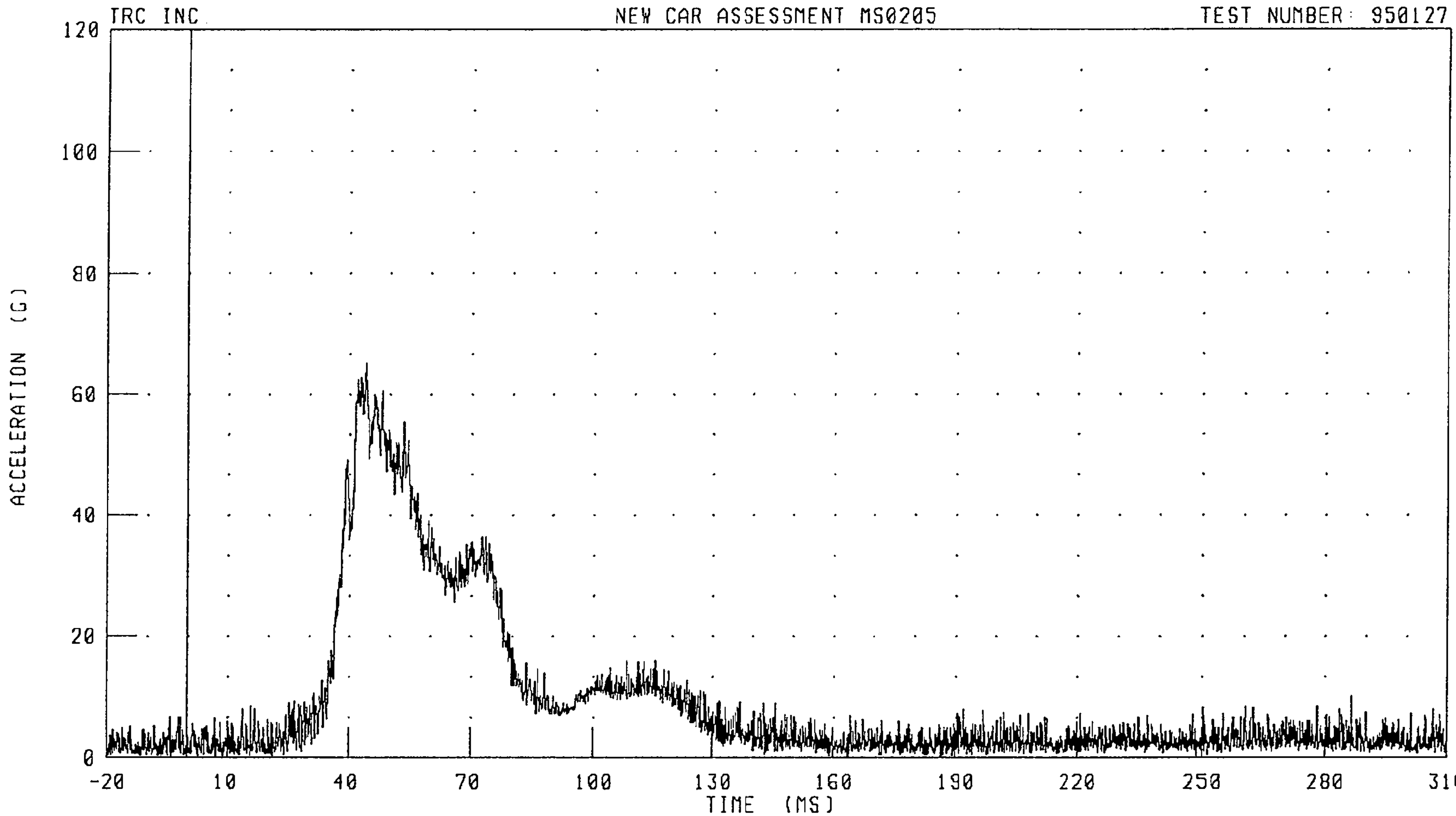

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
DRIVER PELVIS Y-AXIS ACCELERATION
NEW CAR ASSESSMENT MS0205
TRC INC.
TEST NUMBER: 950127
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: PEVYG1
FILTER: CH. CLASS 1000
PEAK DATA: 10.19 G @ 39.52 MS; -9.09 G @ 113.20 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
DRIVER PELVIS Z-AXIS ACCELERATION
NEW CAR ASSESSMENT MS0205



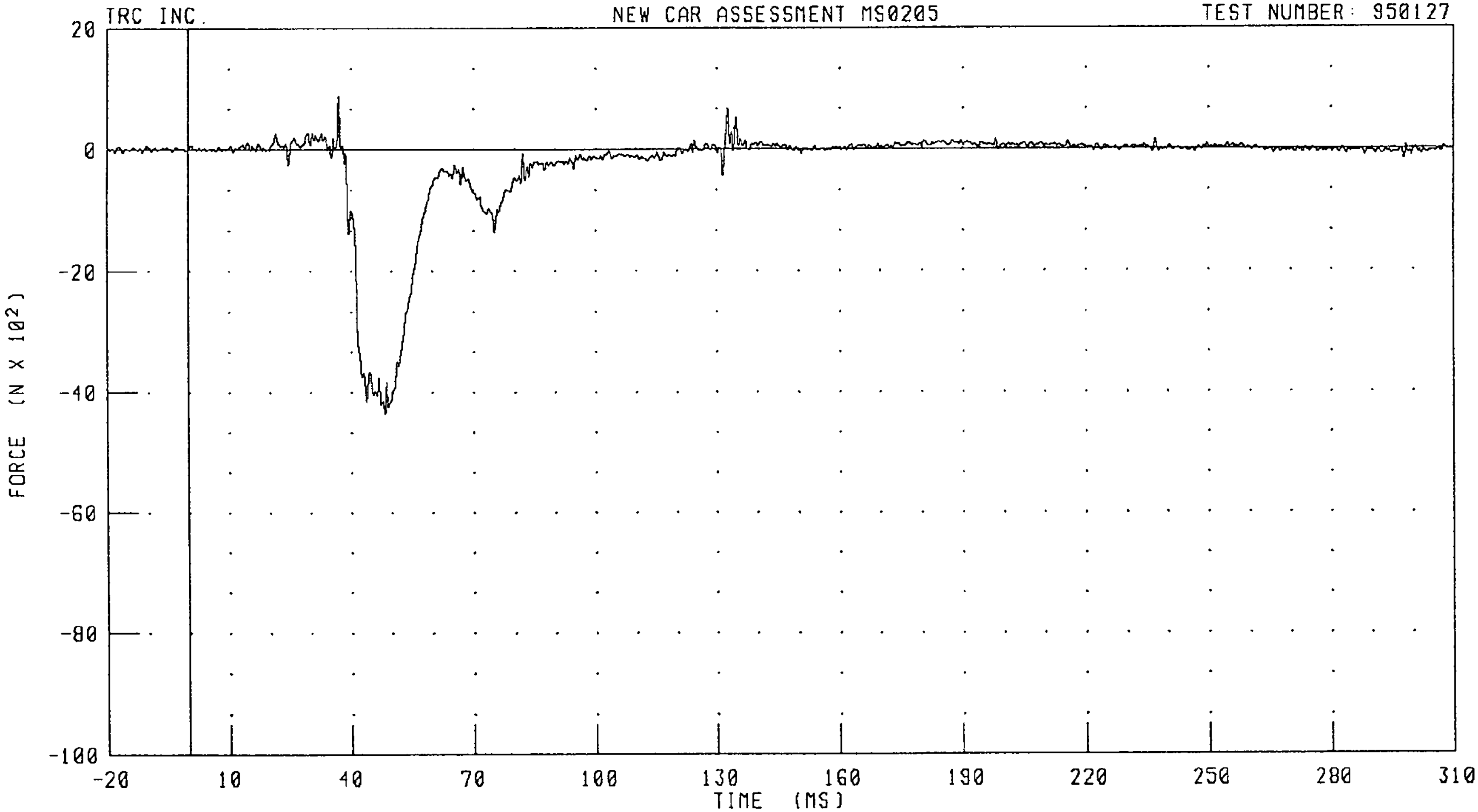
CHANNEL: PEVZG1 FILTER: CH. CLASS 1000 PEAK DATA: 14.78 G @ 56.08 MS; -3.44 G @ 269.92 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
DRIVER PELVIS RESULTANT ACCELERATION
NEW CAR ASSESSMENT MS0205



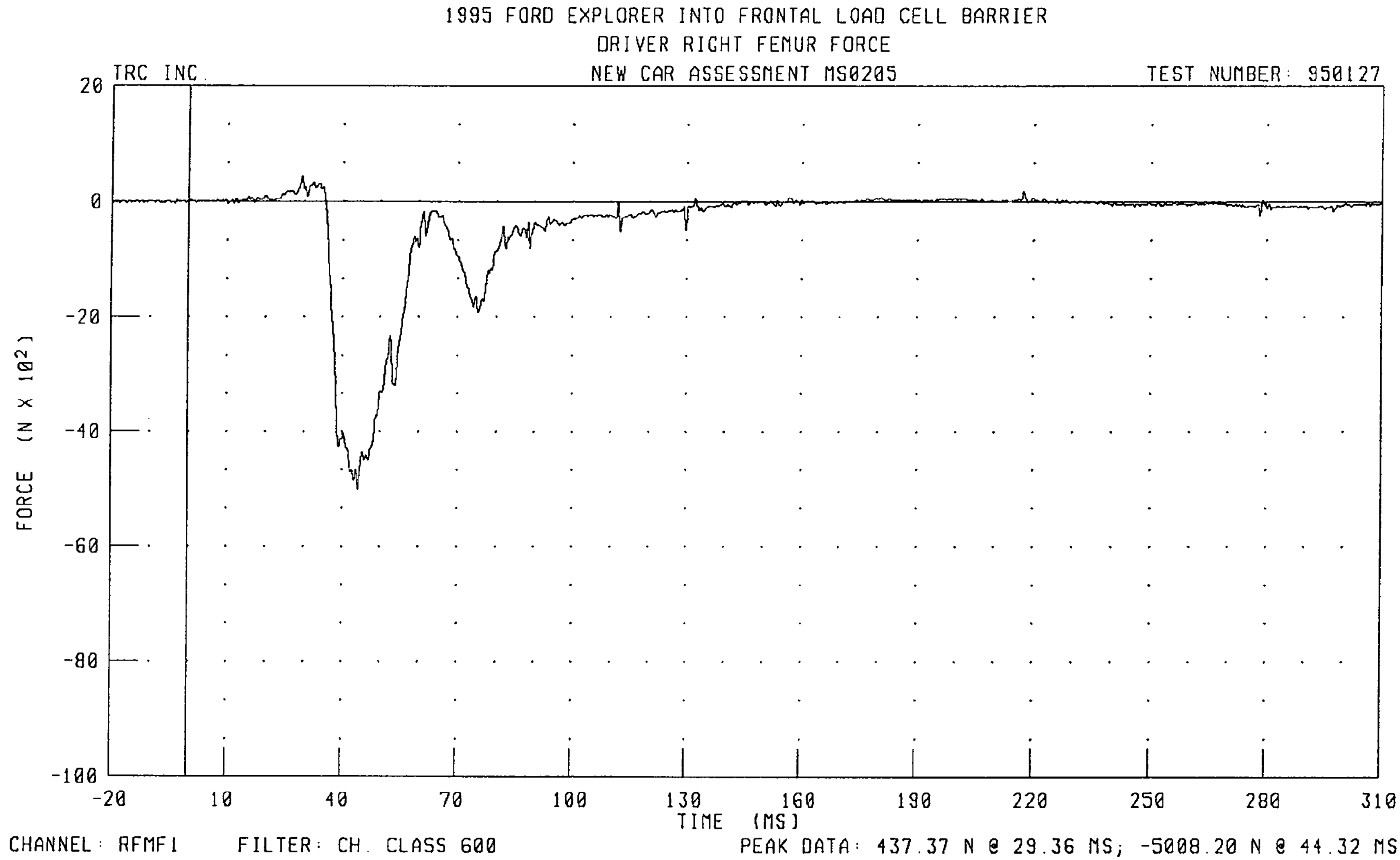
CHANNEL: PEVRG1 FILTER: CH. CLASS 1000 PEAK DATA: 65.32 G @ 44.00 MS; 0.19 G @ 163.60 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
DRIVER LEFT FEMUR FORCE
NEW CAR ASSESSMENT MS0205

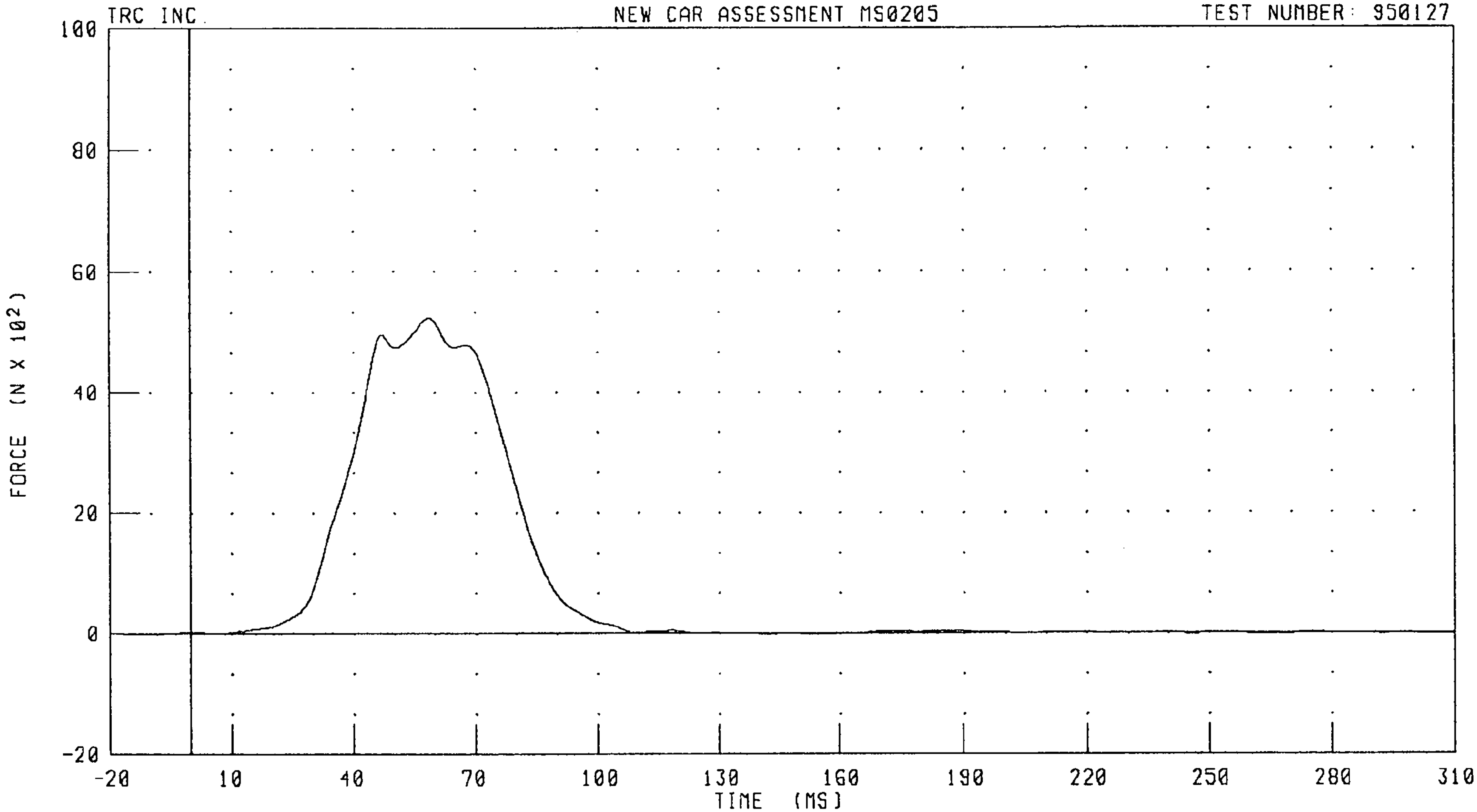


CHANNEL: LFMF1   FILTER: CH. CLASS 600   PEAK DATA: 870.70 N @ 37.12 MS; -4375.87 N @ 48.40 MS

950127


1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
DRIVER RIGHT FEMUR FORCE
NEW CAR ASSESSMENT MS0205
TRC INC.
TEST NUMBER: 950127
FORCE (N X 10²)
20
0
-20
-40
-60
-80
-100
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: RFMFI
FILTER: CH. CLASS 600
PEAK DATA: 437.37 N @ 29.36 MS; -5008.20 N @ 44.32 MS

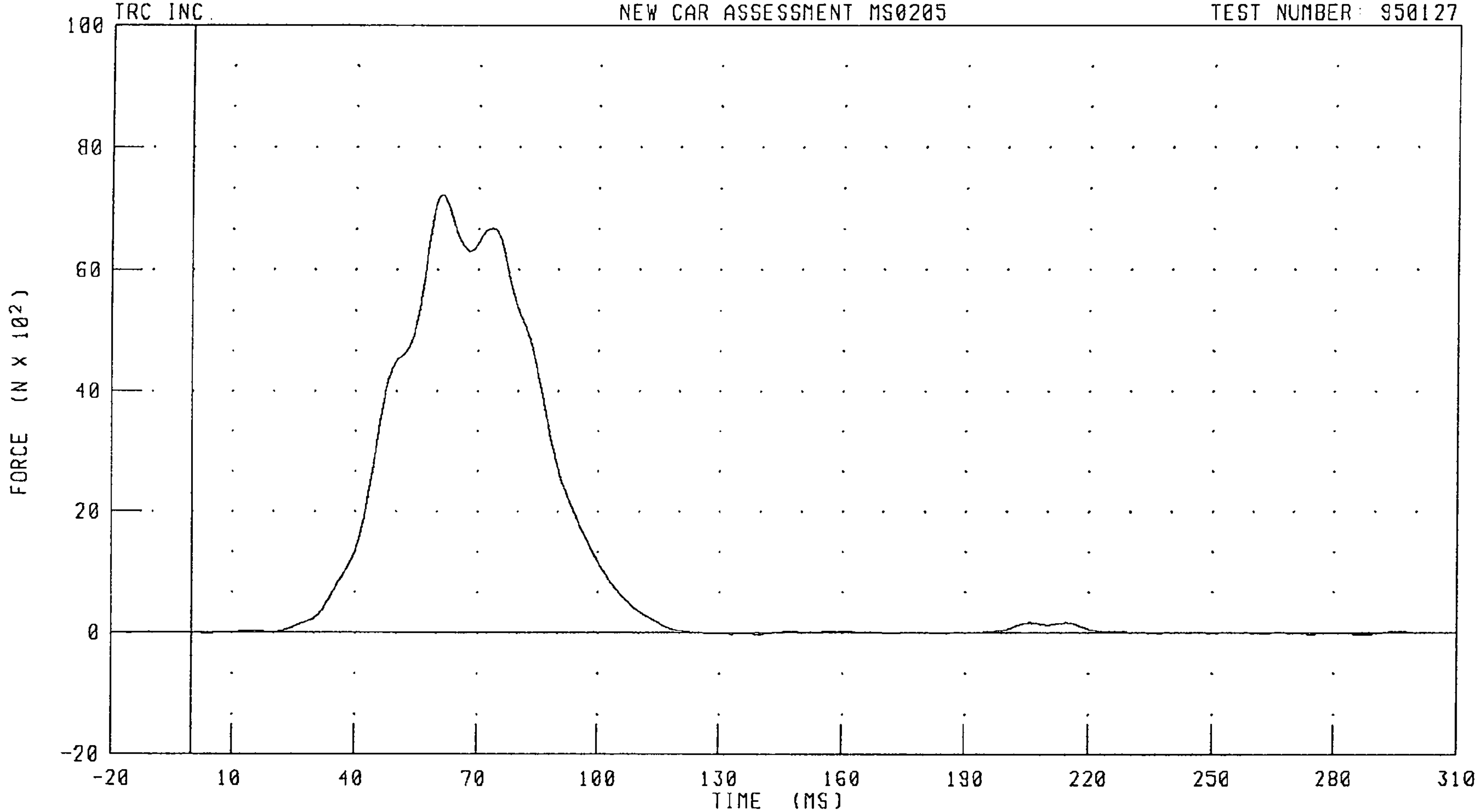
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
DRIVER LAP BELT OUTBOARD FORCE
NEW CAR ASSESSMENT MS0205



CHANNEL: LBOF1 FILTER: CH. CLASS 60 PEAK DATA: 5237.11 N @ 58.72 MS; -16.25 N @ 306.40 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
DRIVER SHOULDER BELT FORCE
NEW CAR ASSESSMENT MS0205

TRC INC. TEST NUMBER: 950127

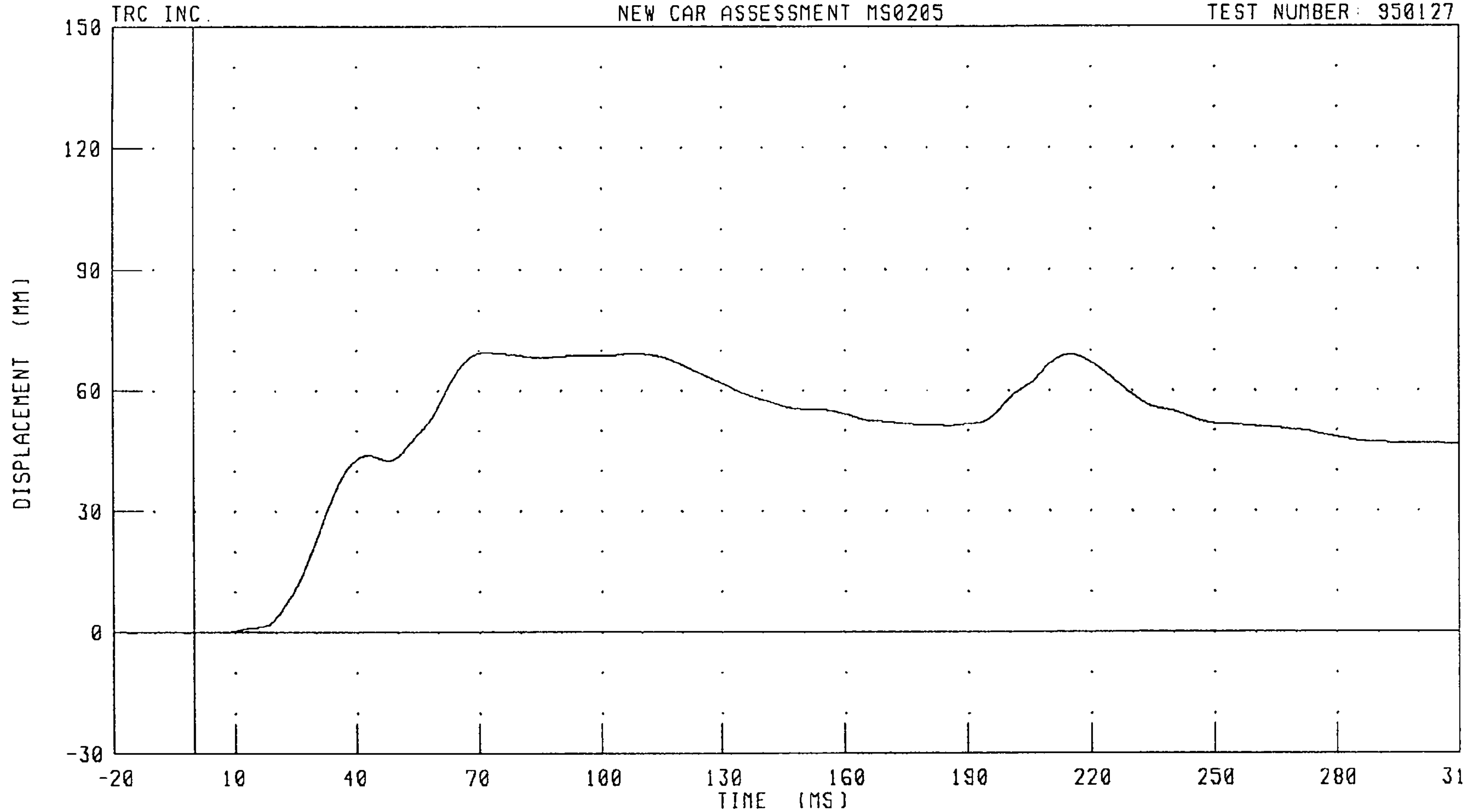


CHANNEL: SHBF1 FILTER: CH. CLASS 60 PEAK DATA: 7222.82 N @ 61.12 MS; -24.77 N @ 139.76 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
DRIVER SHOULDER BELT DISPLACEMENT
NEW CAR ASSESSMENT MS0205

TRC INC.

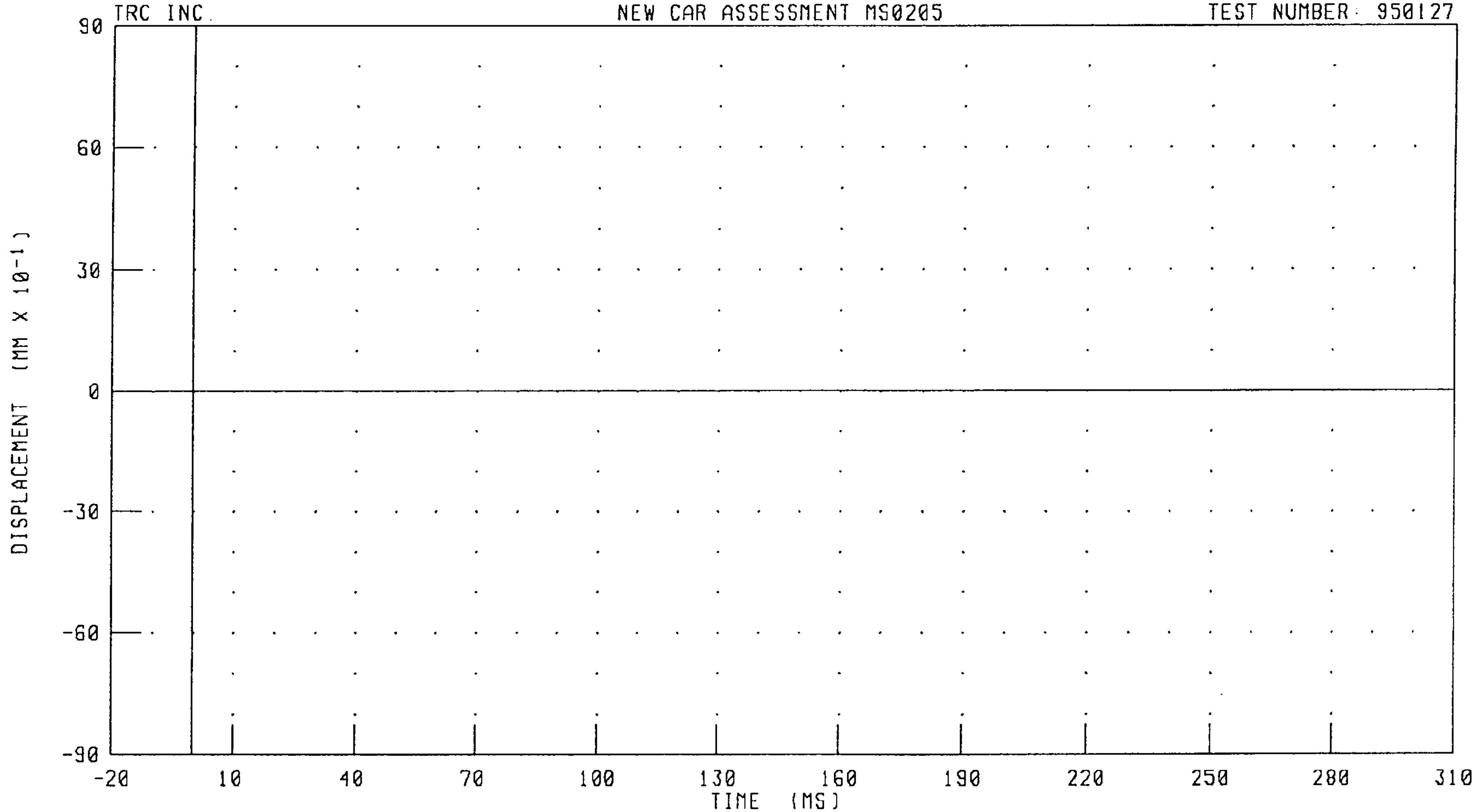
TEST NUMBER: 950127



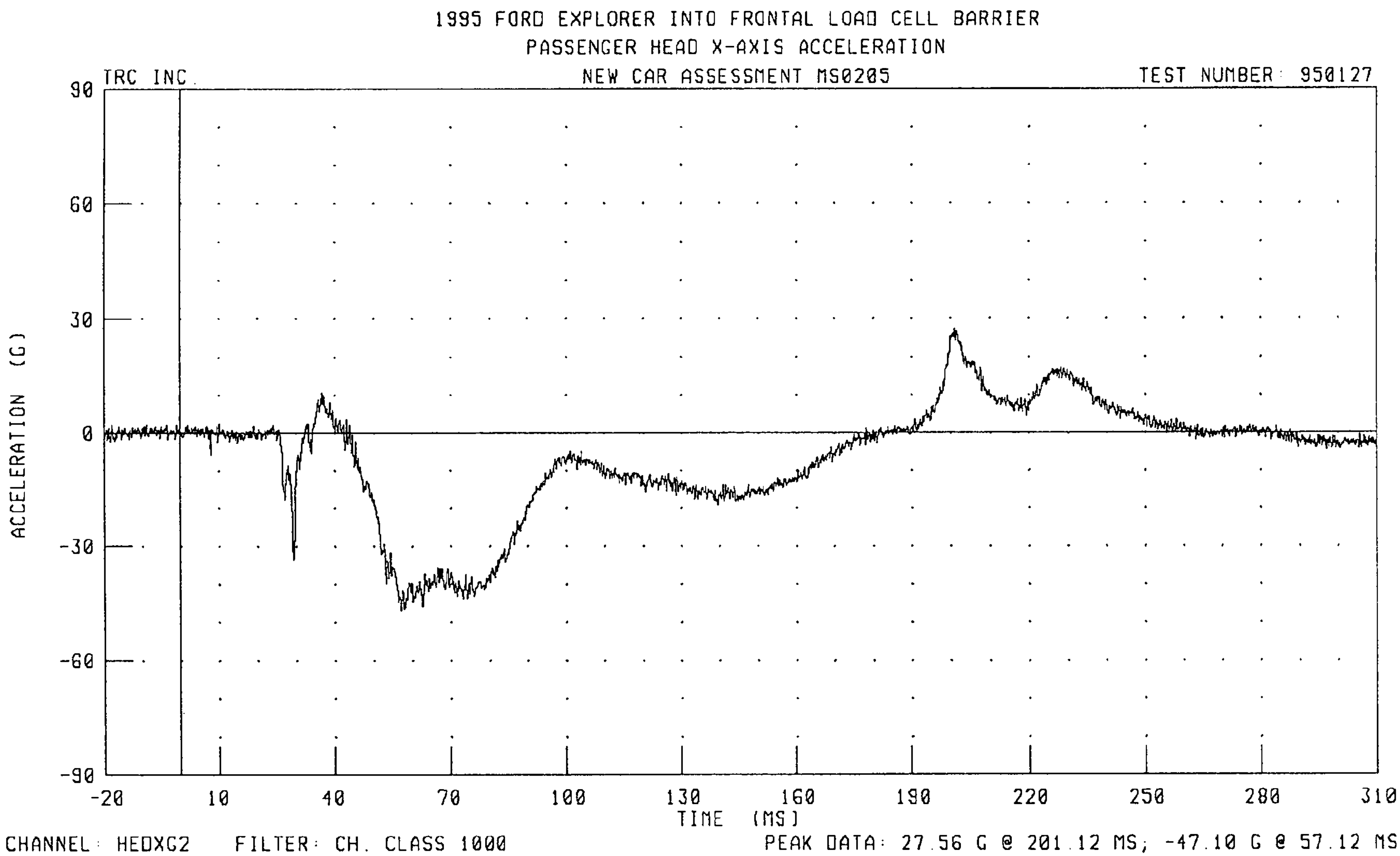
CHANNEL: SHB01 FILTER: CH. CLASS 60 PEAK DATA: 69.37 MM @ 71.84 MS; -0.08 MM @ -15.52 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
DRIVER SEAT BELT EXTENSION
NEW CAR ASSESSMENT MS0205

TRC INC. TEST NUMBER: 950127



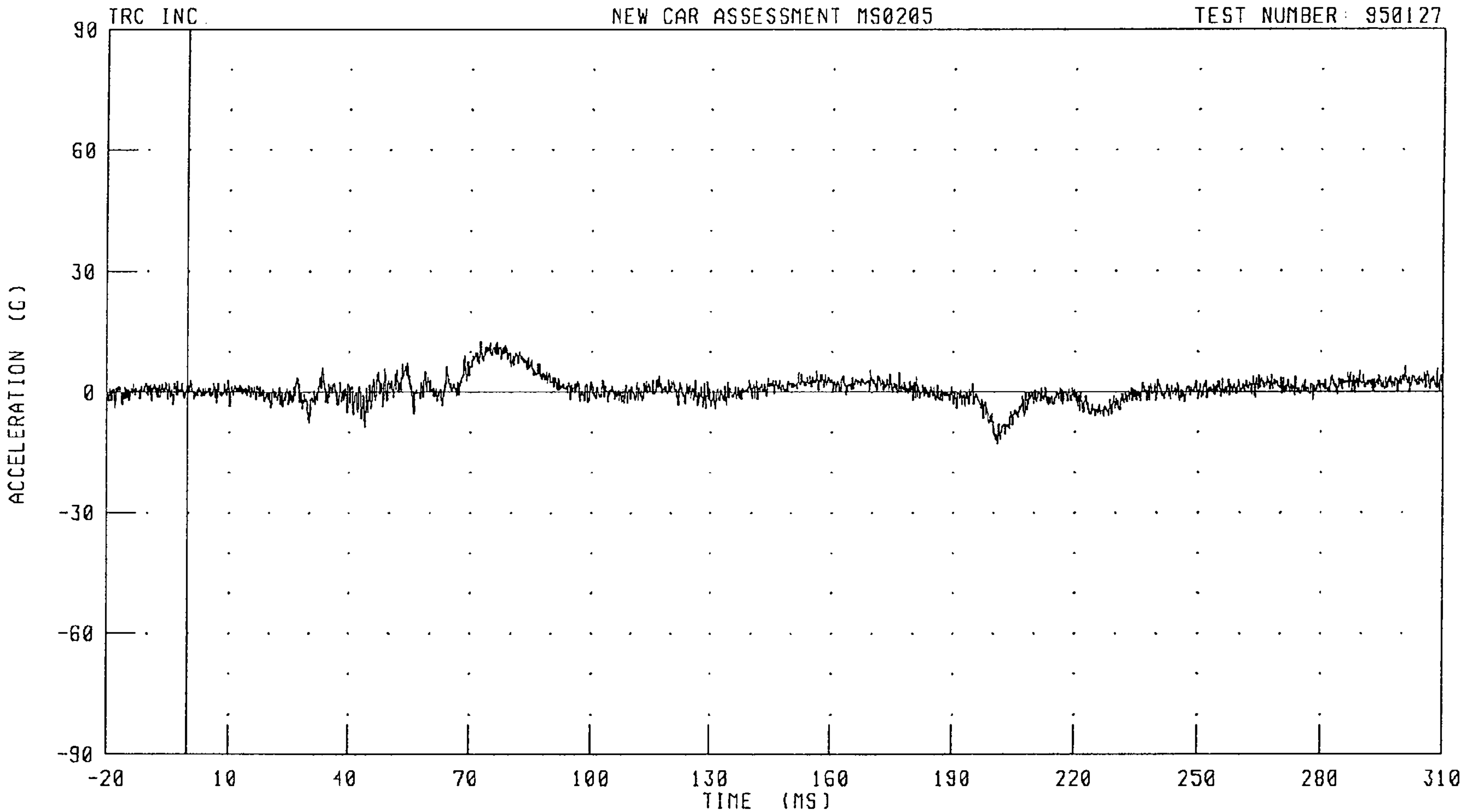
CHANNEL: SBE01 FILTER: CH. CLASS 60 PEAK DATA: 0.00 MM @ 310.00 MS; 0.00 MM @ -20.00 MS



1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
PASSENGER HEAD X-AXIS ACCELERATION
NEW CAR ASSESSMENT MS0205
TRC INC.
TEST NUMBER: 950127
ACCELERATION (G)
90
60
30
0
-30
-60
-90
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HEDXG2
FILTER: CH. CLASS 1000
PEAK DATA: 27.56 G @ 201.12 MS; -47.10 G @ 57.12 MS

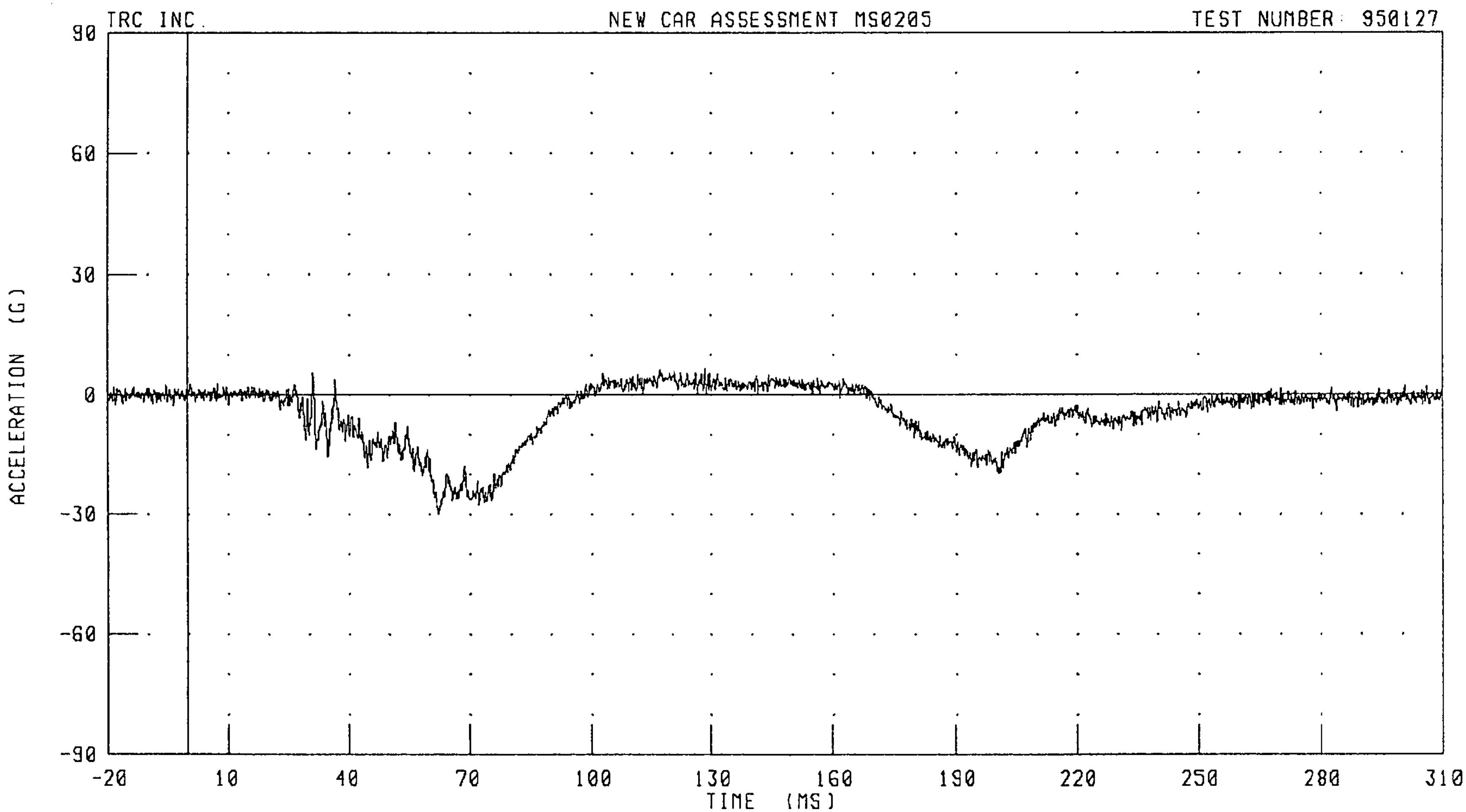
950127

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
PASSENGER HEAD Y-AXIS ACCELERATION
NEW CAR ASSESSMENT MS0205

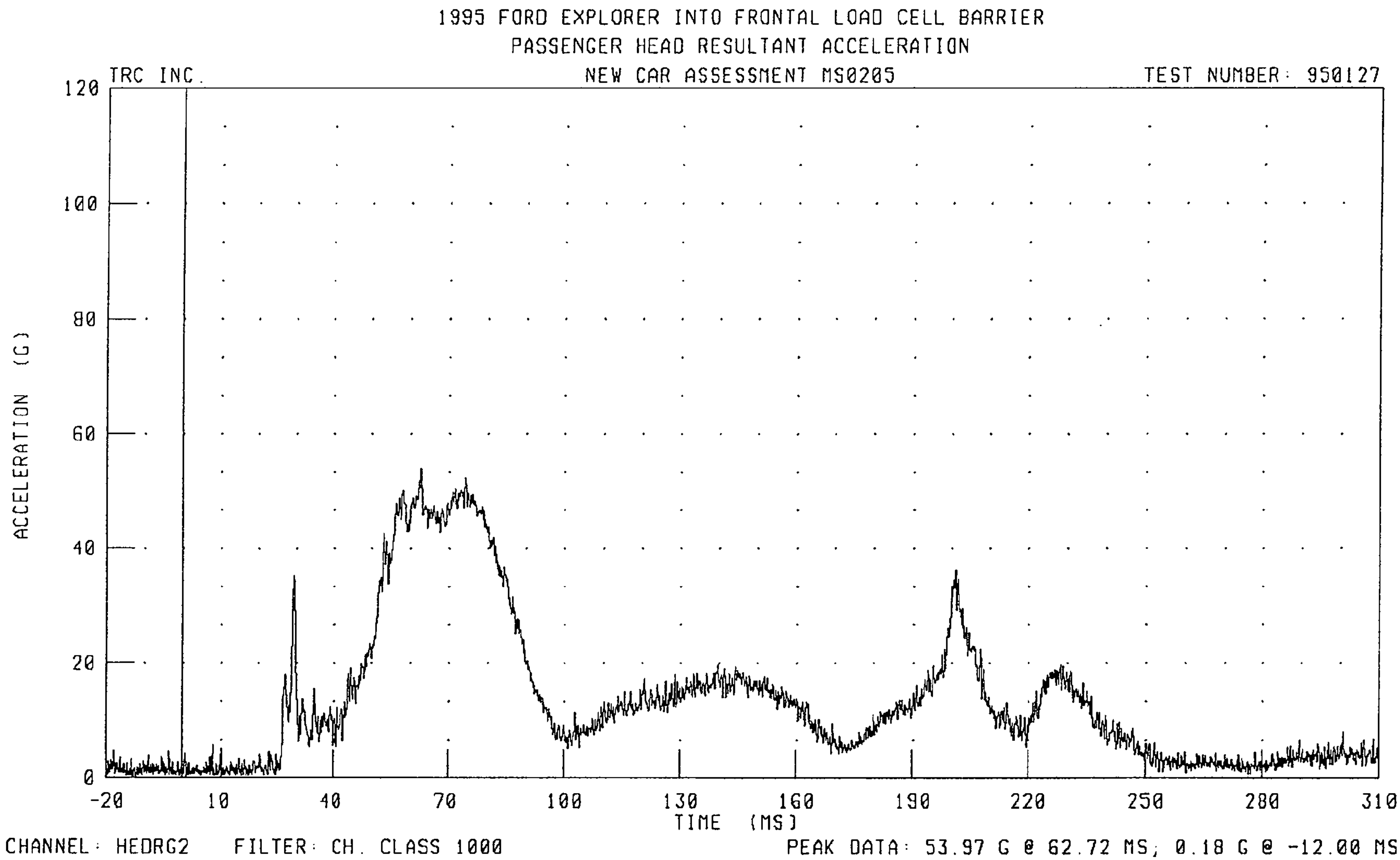


CHANNEL: HEDYG2 FILTER: CH. CLASS 1000 PEAK DATA: 12.76 G @ 72.64 MS; -12.85 G @ 201.04 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
PASSENGER HEAD Z-AXIS ACCELERATION
NEW CAR ASSESSMENT MS0205



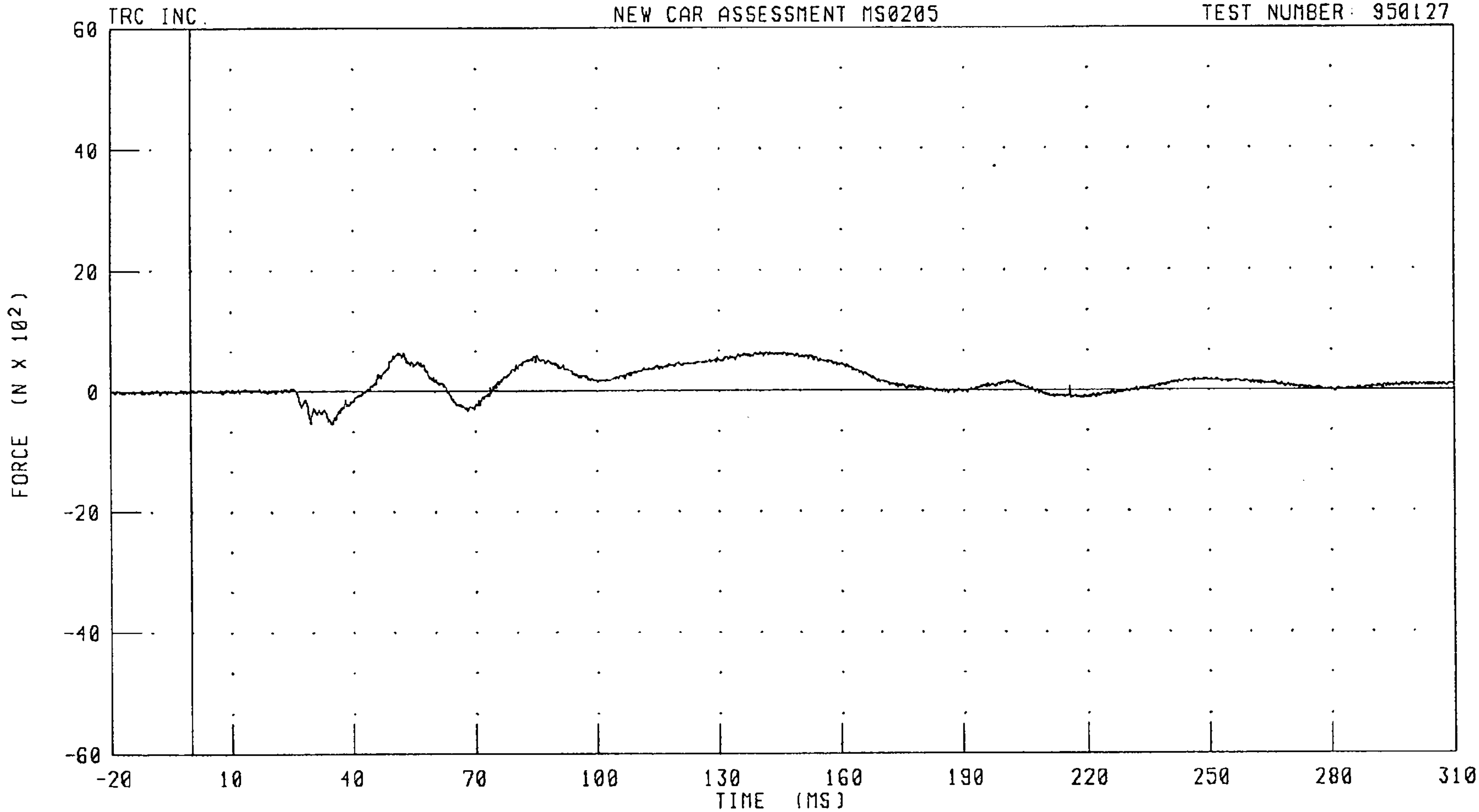
CHANNEL: HEDZG2   FILTER: CH. CLASS 1000   PEAK DATA: 6.59 G @ 128.56 MS; -29.93 G @ 62.32 MS


1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
PASSENGER HEAD RESULTANT ACCELERATION
NEW CAR ASSESSMENT MS0205
TRC INC.
TEST NUMBER: 950127
ACCELERATION (G)
120
100
80
60
40
20
0
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: HEDRG2
FILTER: CH. CLASS 1000
PEAK DATA: 53.97 G @ 62.72 MS; 0.18 G @ -12.00 MS

950127

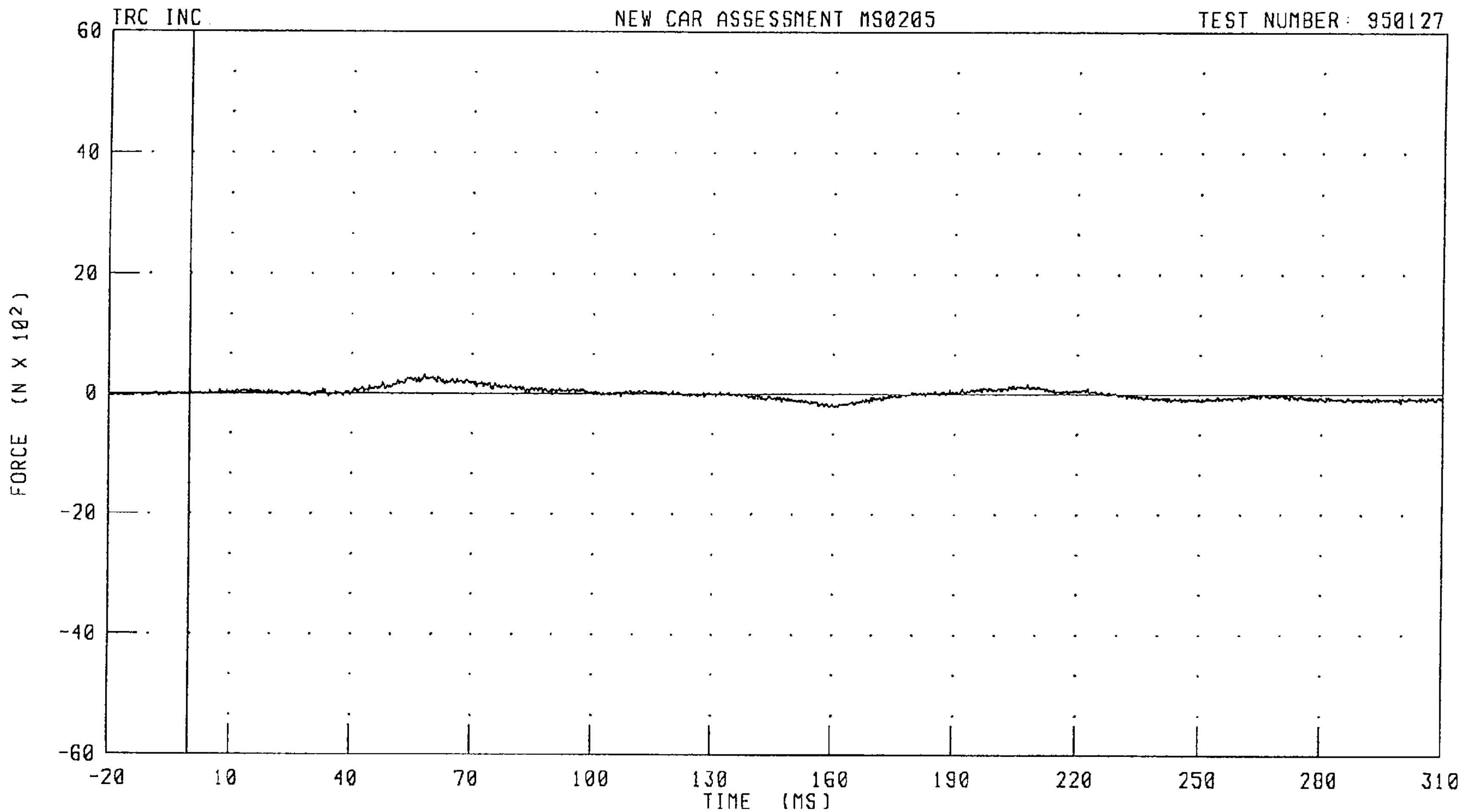
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
PASSENGER NECK X-AXIS SHEAR FORCE
NEW CAR ASSESSMENT MS0205

TRC INC. TEST NUMBER: 950127



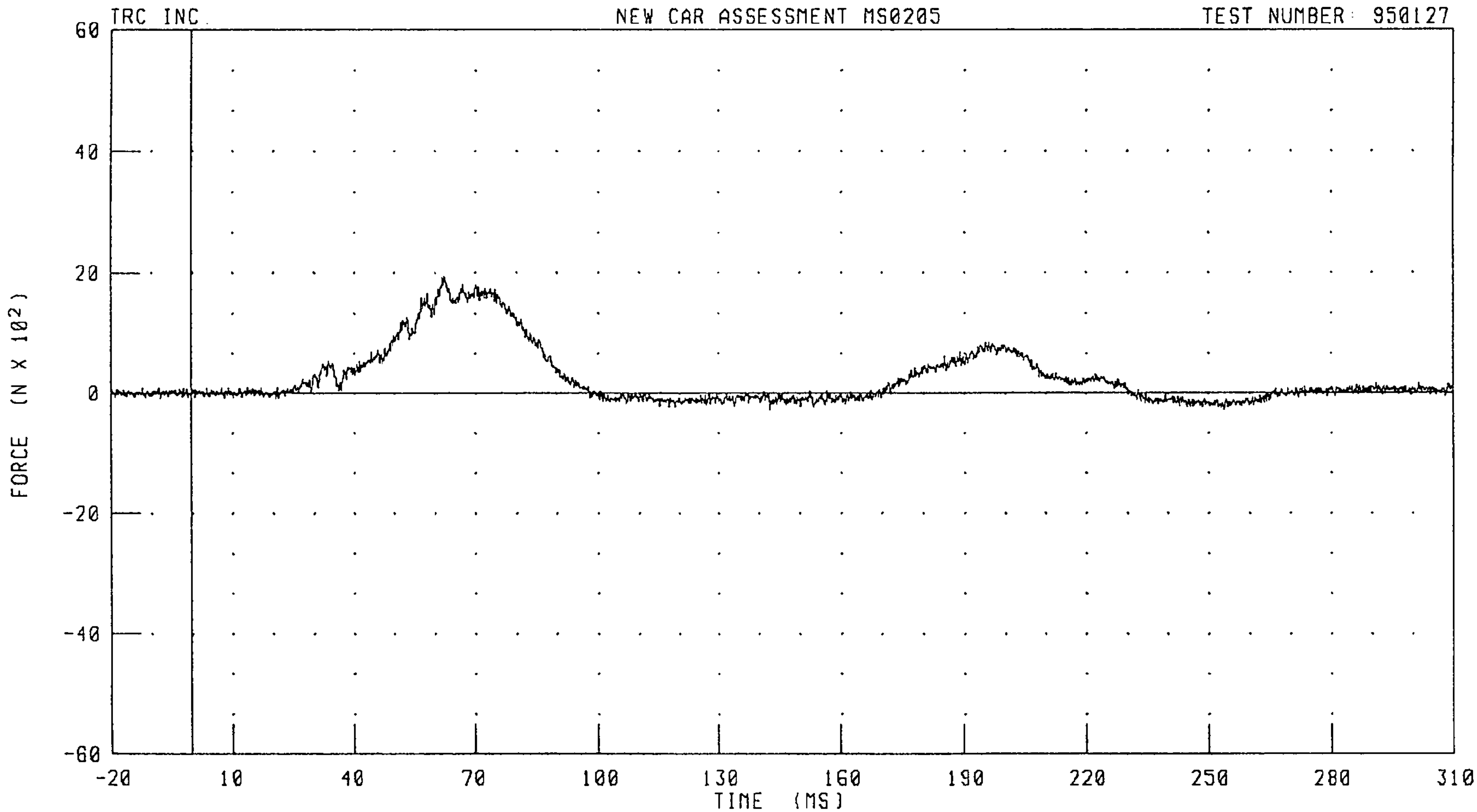
CHANNEL: NEKXF2 FILTER: CH. CLASS 1000 PEAK DATA: 655.92 N @ 140.08 MS; -566.26 N @ 34.88 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
PASSENGER NECK Y-AXIS SHEAR FORCE
NEW CAR ASSESSMENT MS0205



CHANNEL: NEKYF2 FILTER: CH. CLASS 1000 PEAK DATA: 326.16 N @ 58.08 MS; -227.27 N @ 157.84 MS

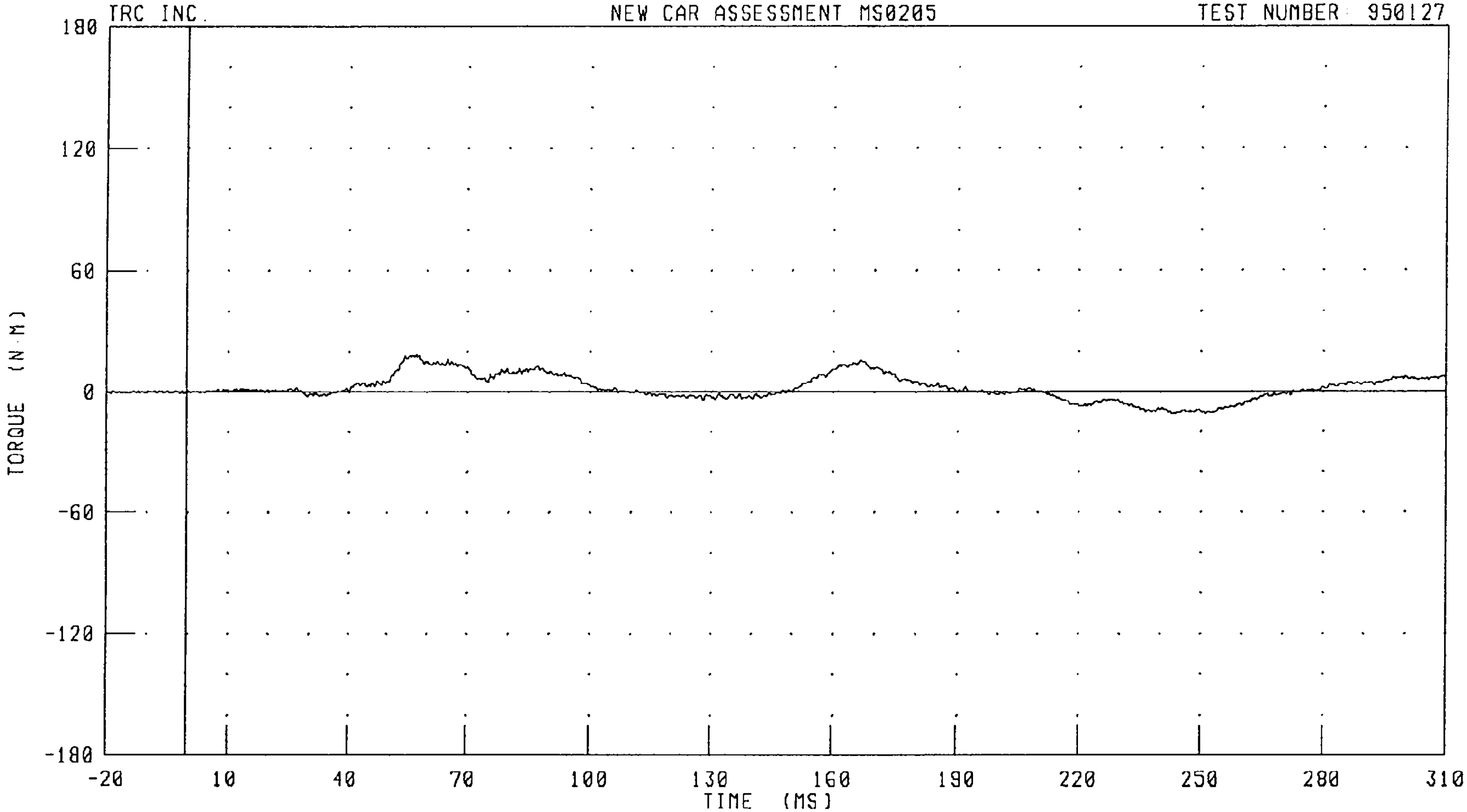
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
PASSENGER NECK Z-AXIS AXIAL FORCE
NEW CAR ASSESSMENT MS0205



CHANNEL: NEKZF2 FILTER: CH. CLASS 1000 PEAK DATA: 1942.86 N @ 62.40 MS; -280.58 N @ 142.80 MS

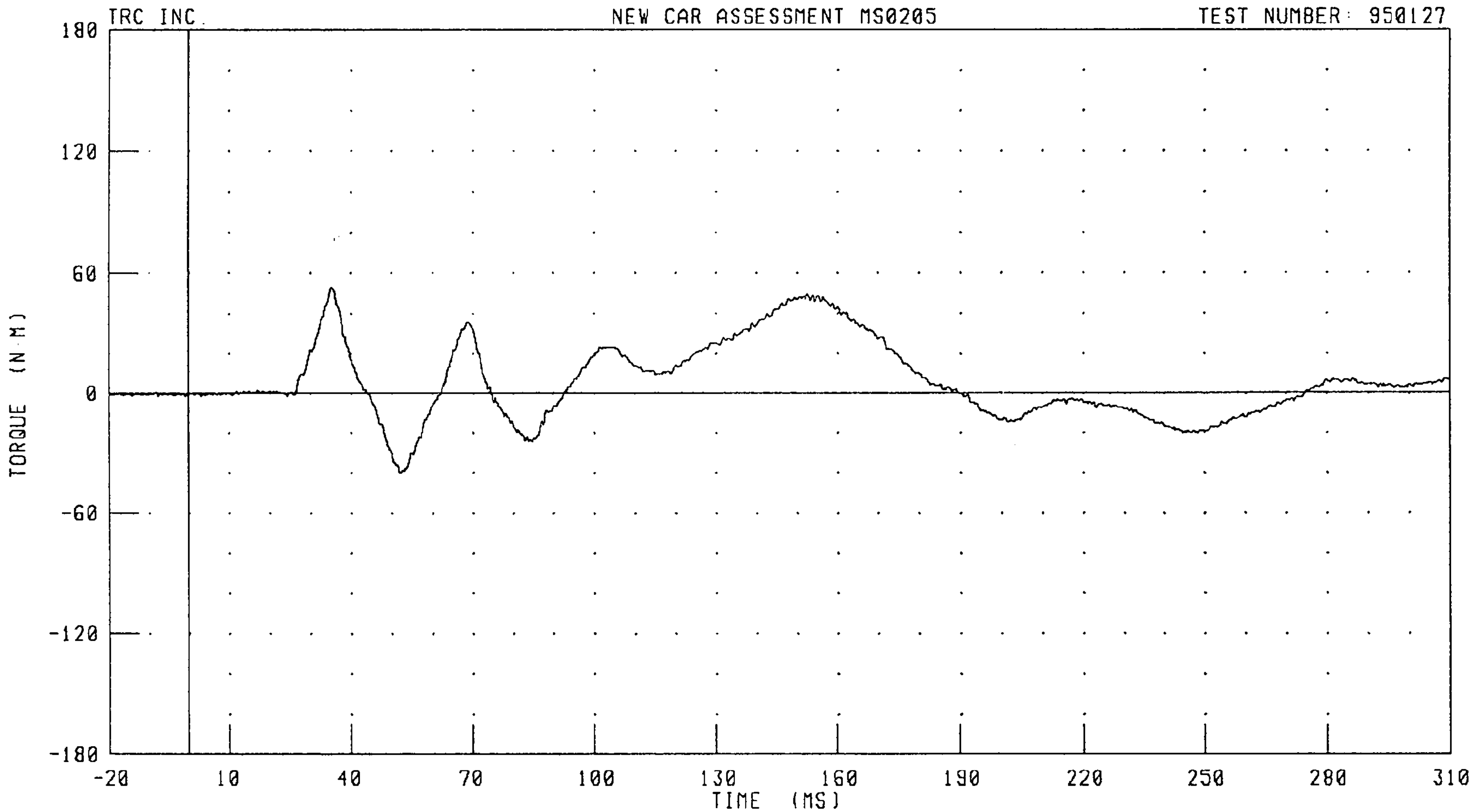
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
PASSENGER NECK MOMENT ABOUT X AXIS

TRC INC.   NEW CAR ASSESSMENT MS0205   TEST NUMBER: 950127



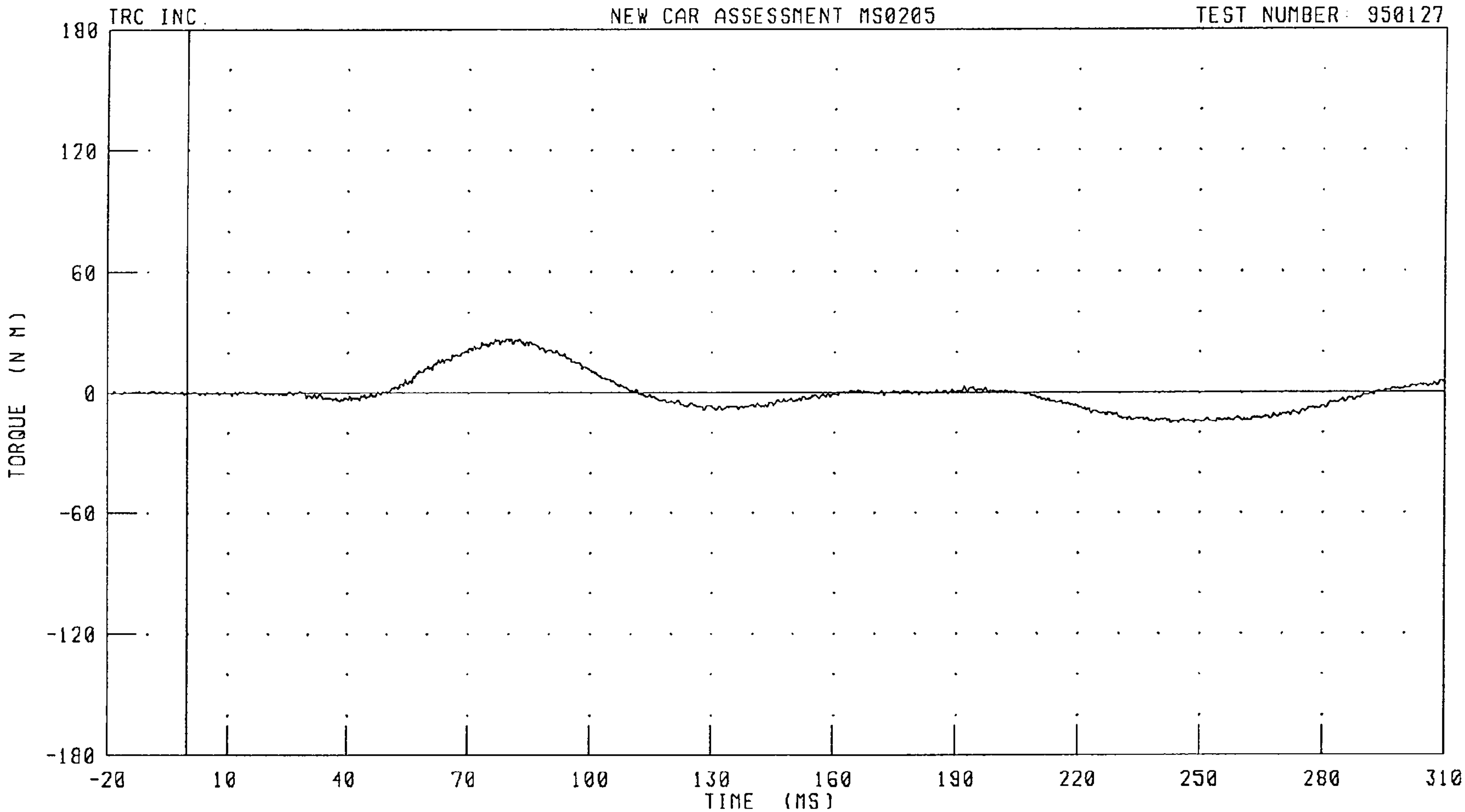
CHANNEL: NEKXM2   FILTER: CH. CLASS 600   PEAK DATA: 18.81 N·M @ 57.36 MS; -11.34 N·M @ 242.88 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
PASSENGER NECK MOMENT ABOUT Y AXIS
NEW CAR ASSESSMENT MS0205

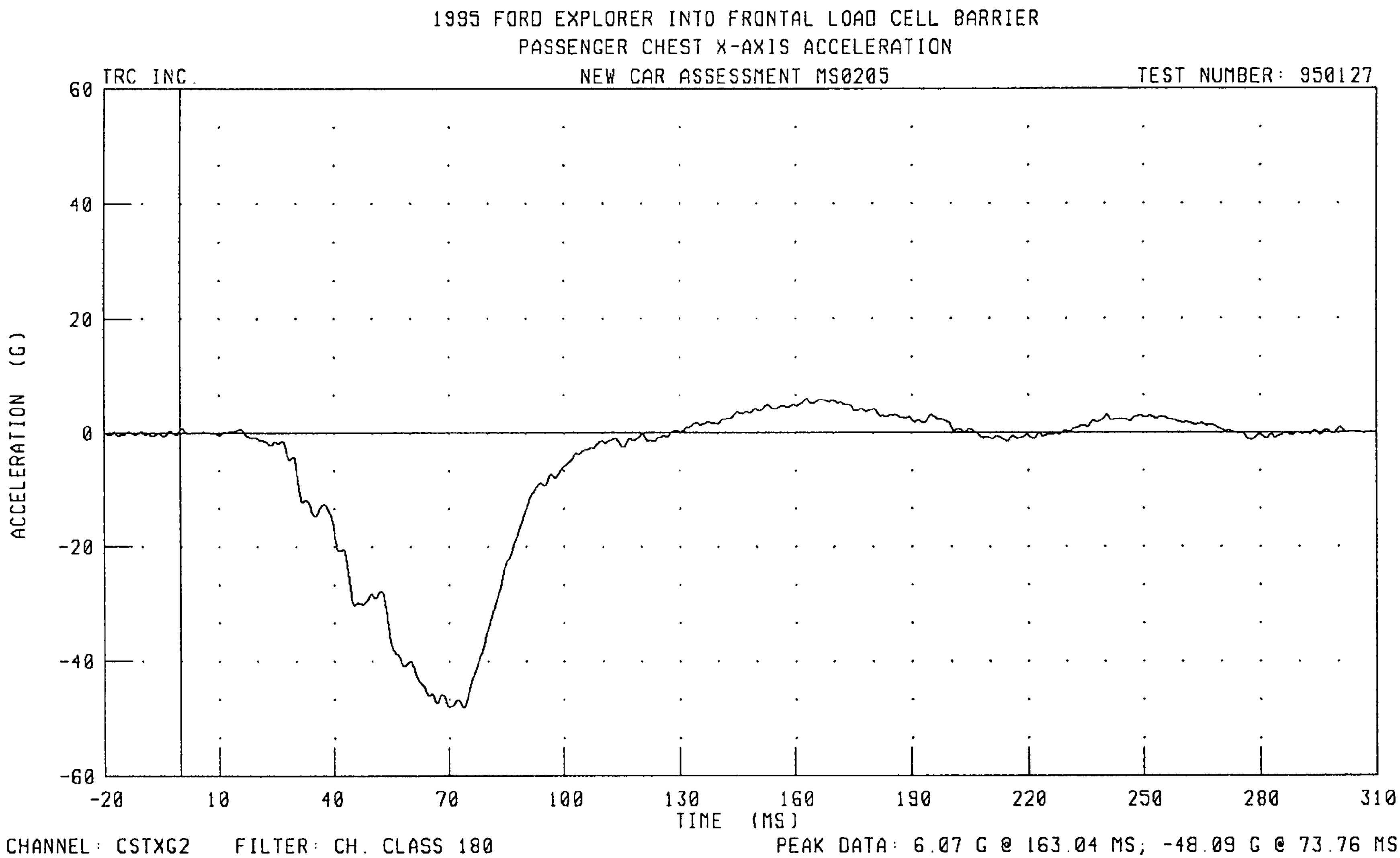


CHANNEL: NEKYM2   FILTER: CH. CLASS 600   PEAK DATA: 52.90 N·M @ 35.28 MS; -40.26 N·M @ 52.16 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
PASSENGER NECK MOMENT ABOUT Z AXIS
NEW CAR ASSESSMENT MS0205

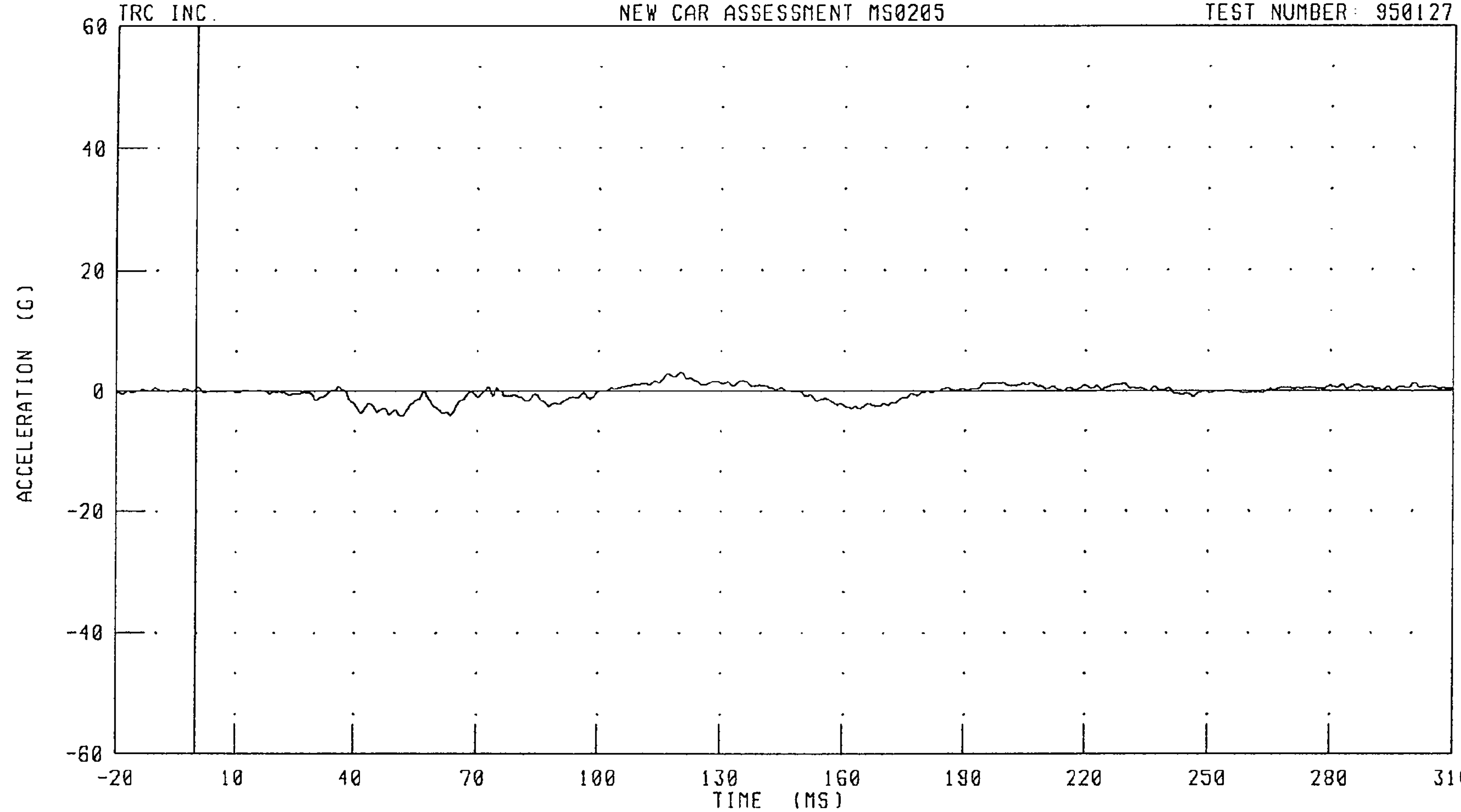


CHANNEL: NEKZM2 FILTER: CH. CLASS 600 PEAK DATA: 26.96 N·M @ 79.76 MS; -15.38 N·M @ 242.96 MS


1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
PASSENGER CHEST X-AXIS ACCELERATION
TRC INC.
NEW CAR ASSESSMENT MS0205
TEST NUMBER: 950127
60
40
20
0
-20
-40
-60
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: CSTXG2 FILTER: CH. CLASS 180
PEAK DATA: 6.07 G @ 163.04 MS; -48.09 G @ 73.76 MS

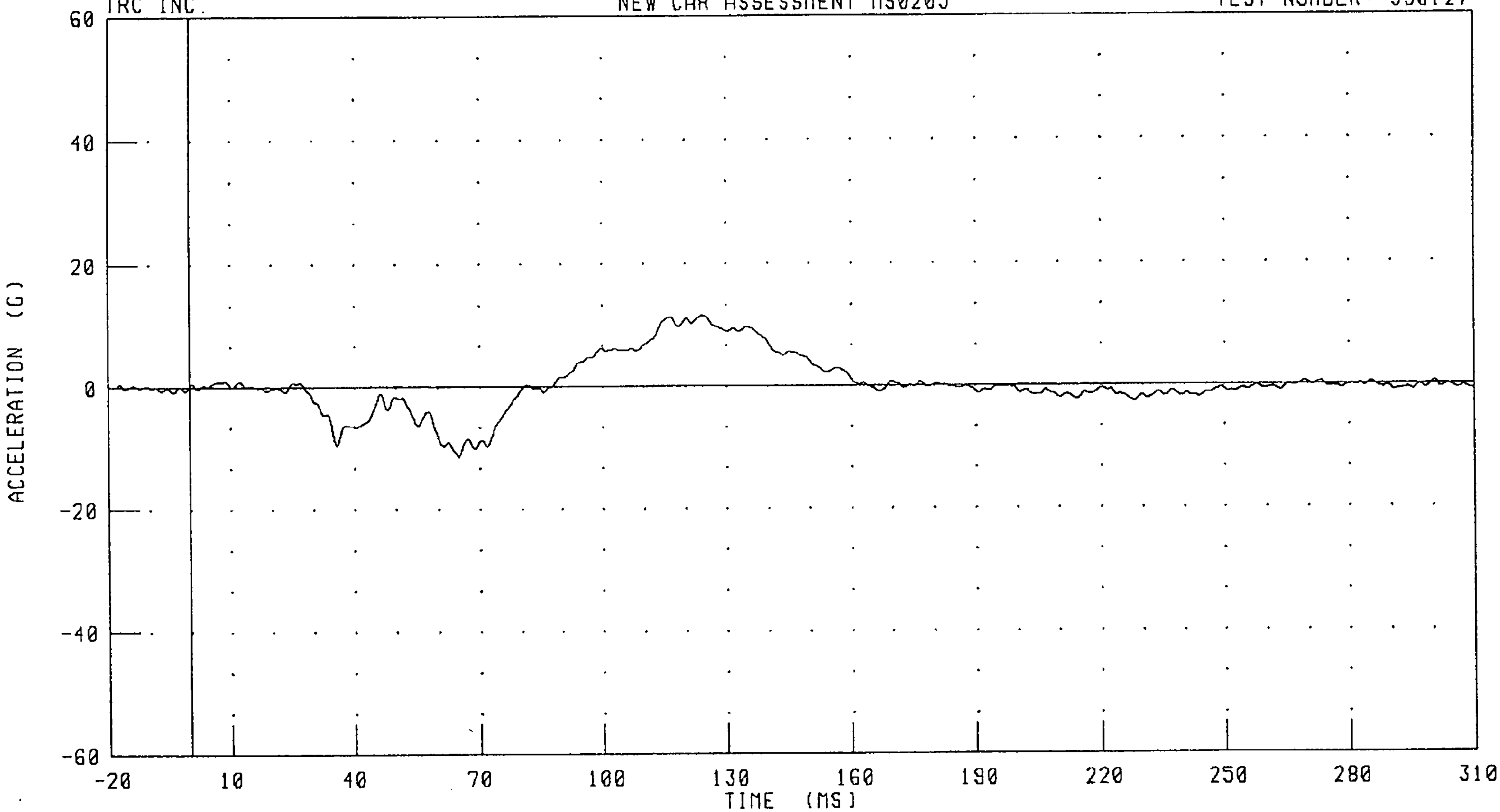
950127

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
PASSENGER CHEST Y-AXIS ACCELERATION
NEW CAR ASSESSMENT MS0205



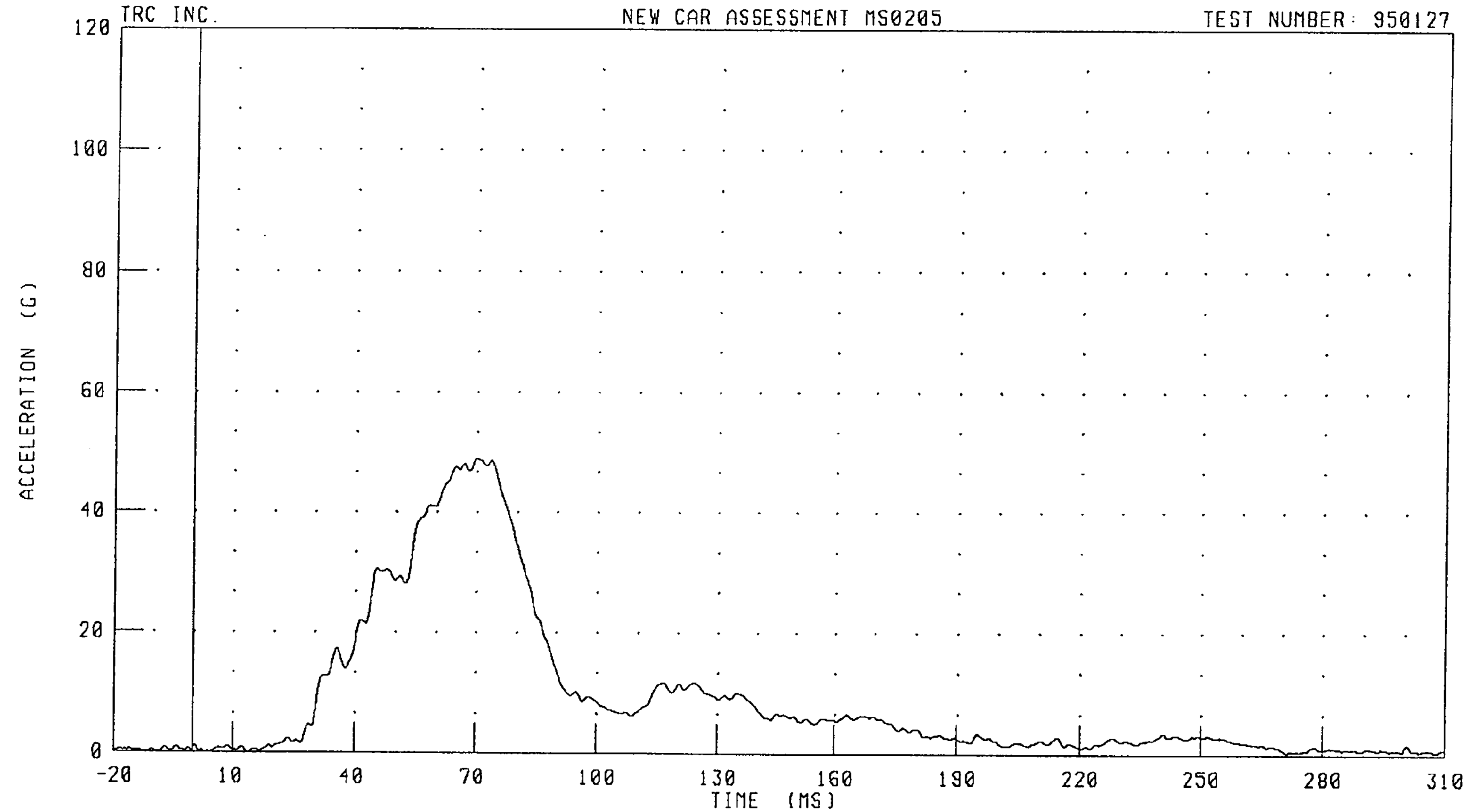
CHANNEL: CSTYG2 FILTER: CH. CLASS 180 PEAK DATA: 3.10 G @ 120.40 MS; -4.12 G @ 51.76 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
PASSENGER CHEST Z-AXIS ACCELERATION
NEW CAR ASSESSMENT MS0205



CHANNEL: CSTZG2 FILTER: CH. CLASS 180 PEAK DATA: 11.64 G @ 124.24 MS; -11.44 G @ 64.96 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
PASSENGER CHEST RESULTANT ACCELERATION
NEW CAR ASSESSMENT MS0205

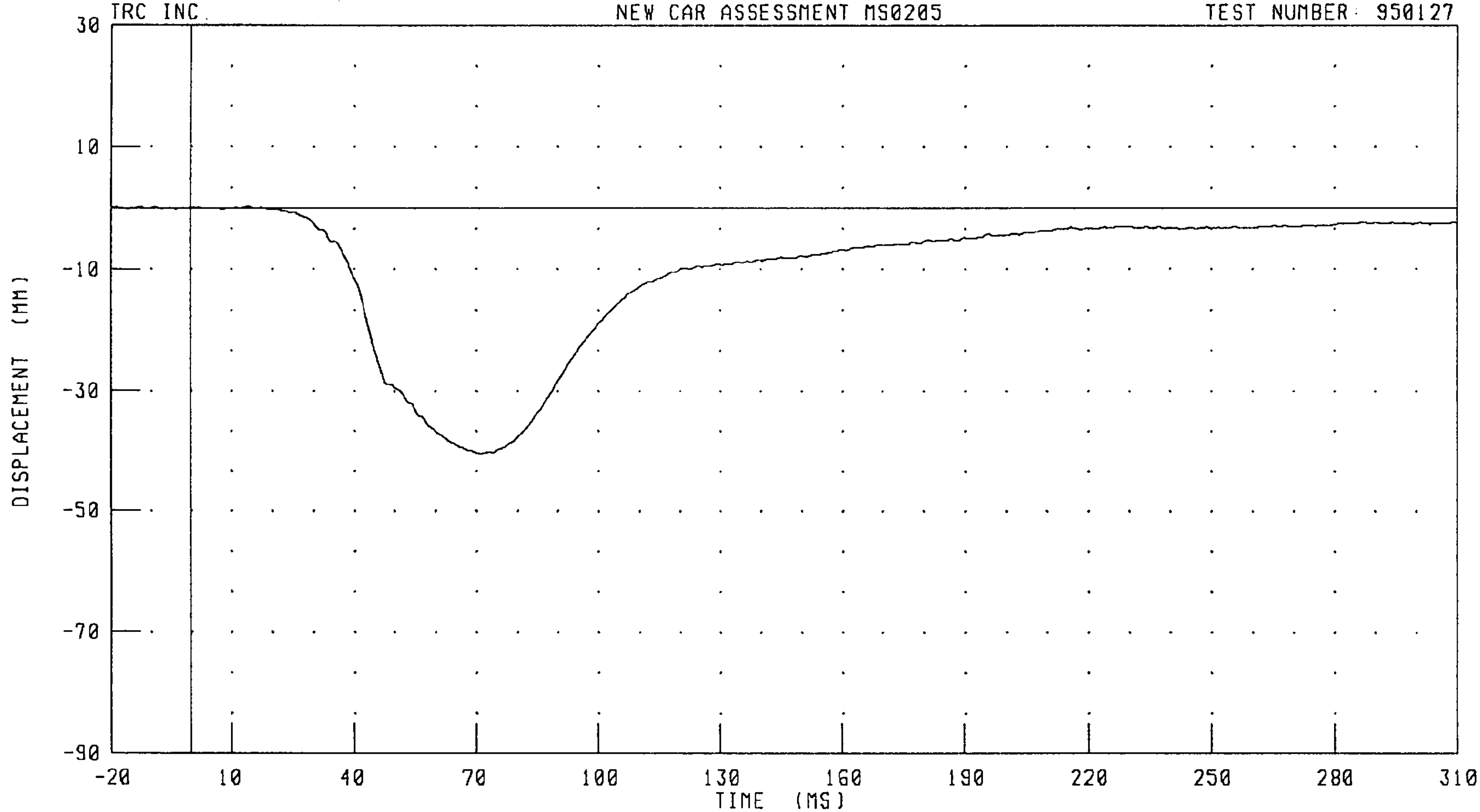


CHANNEL: CSTRG2 FILTER: CH. CLASS 180 PEAK DATA: 48.89 G @ 69.92 MS; 0.05 G @ -20.00 MS

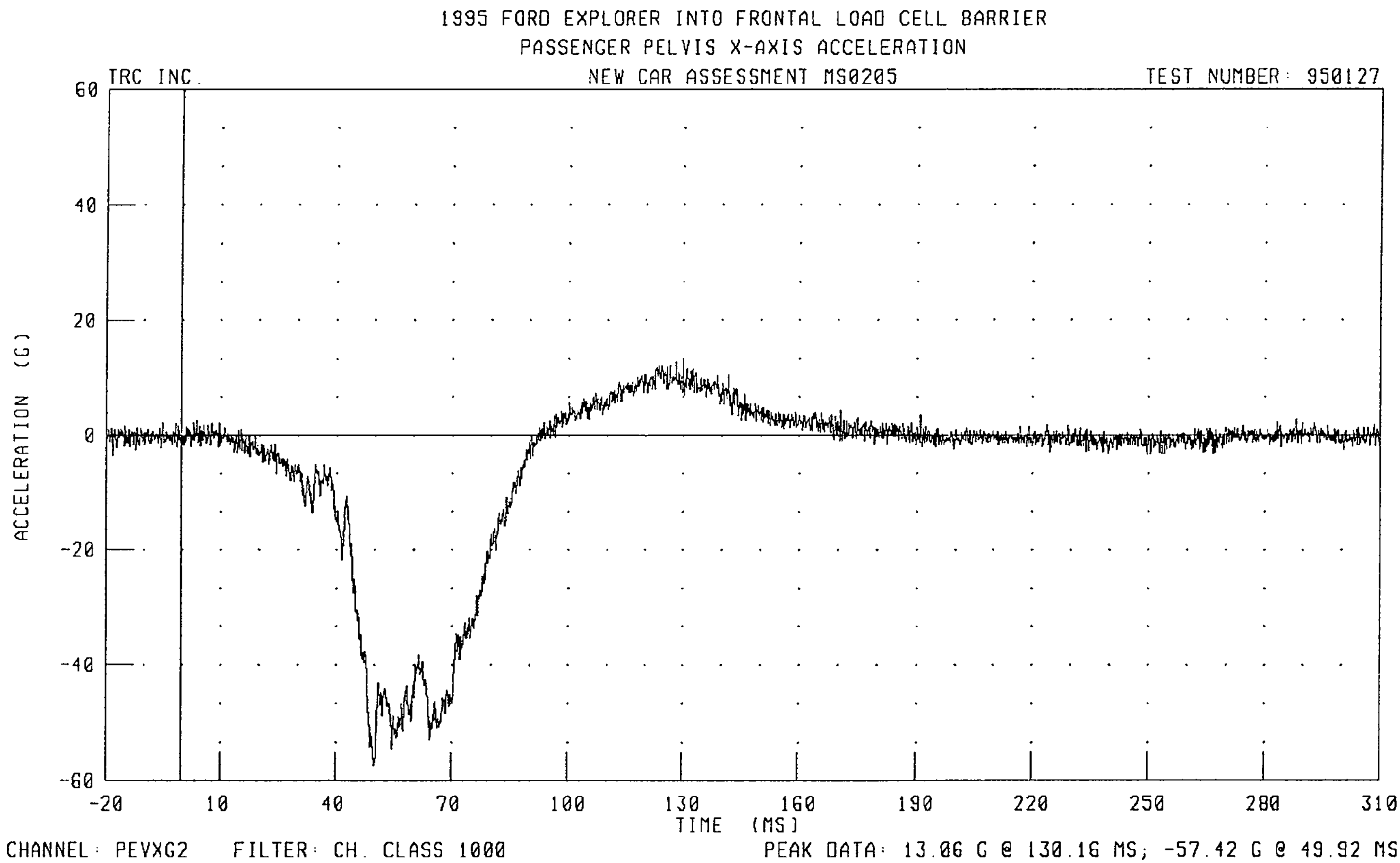
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
PASSENGER CHEST DEFLECTION
NEW CAR ASSESSMENT MS0205

TRC INC.

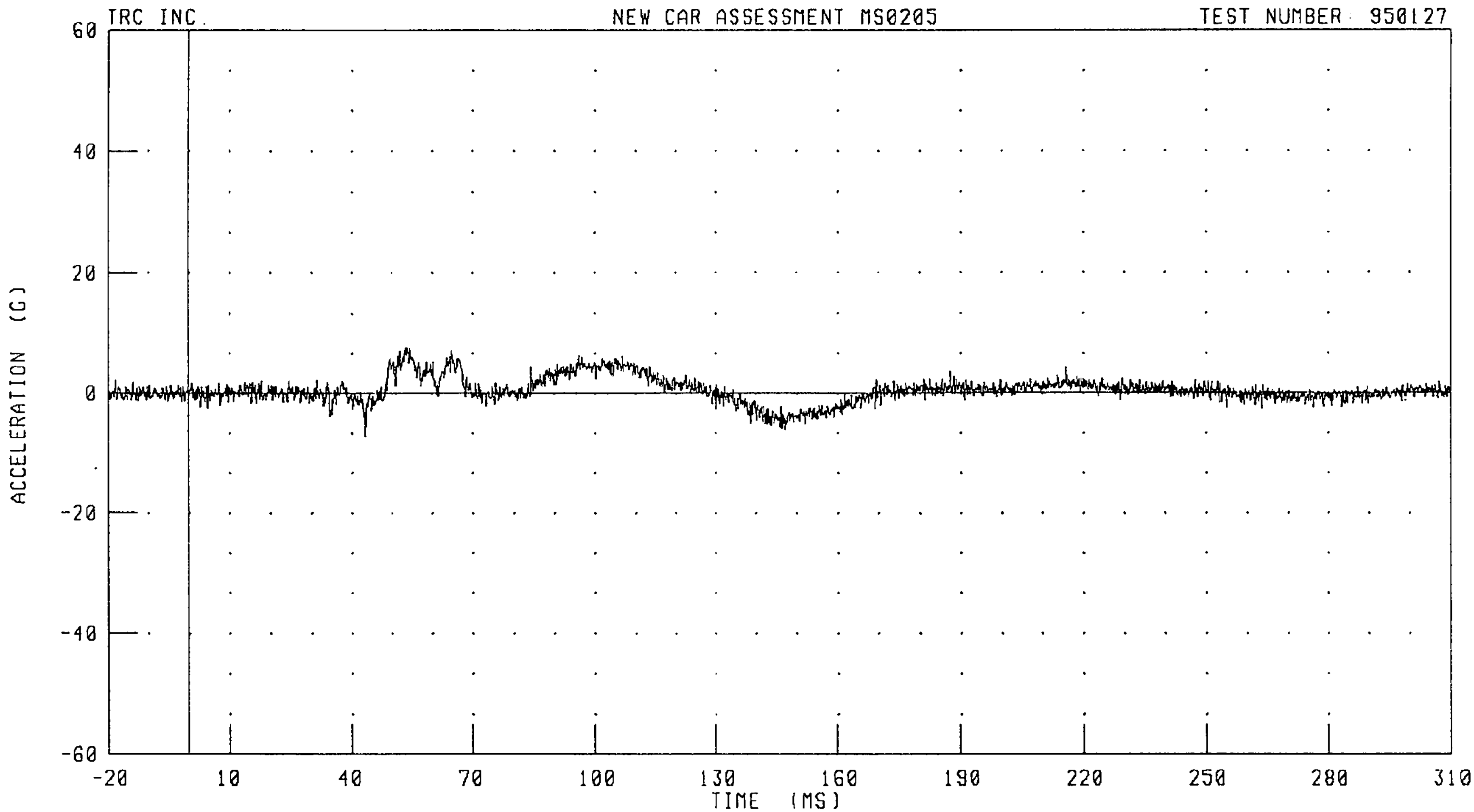
TEST NUMBER: 950127



CHANNEL: CSTXD2 FILTER: CH. CLASS 180 PEAK DATA: 0.29 MM @ 14.08 MS; -40.44 MM @ 70.96 MS

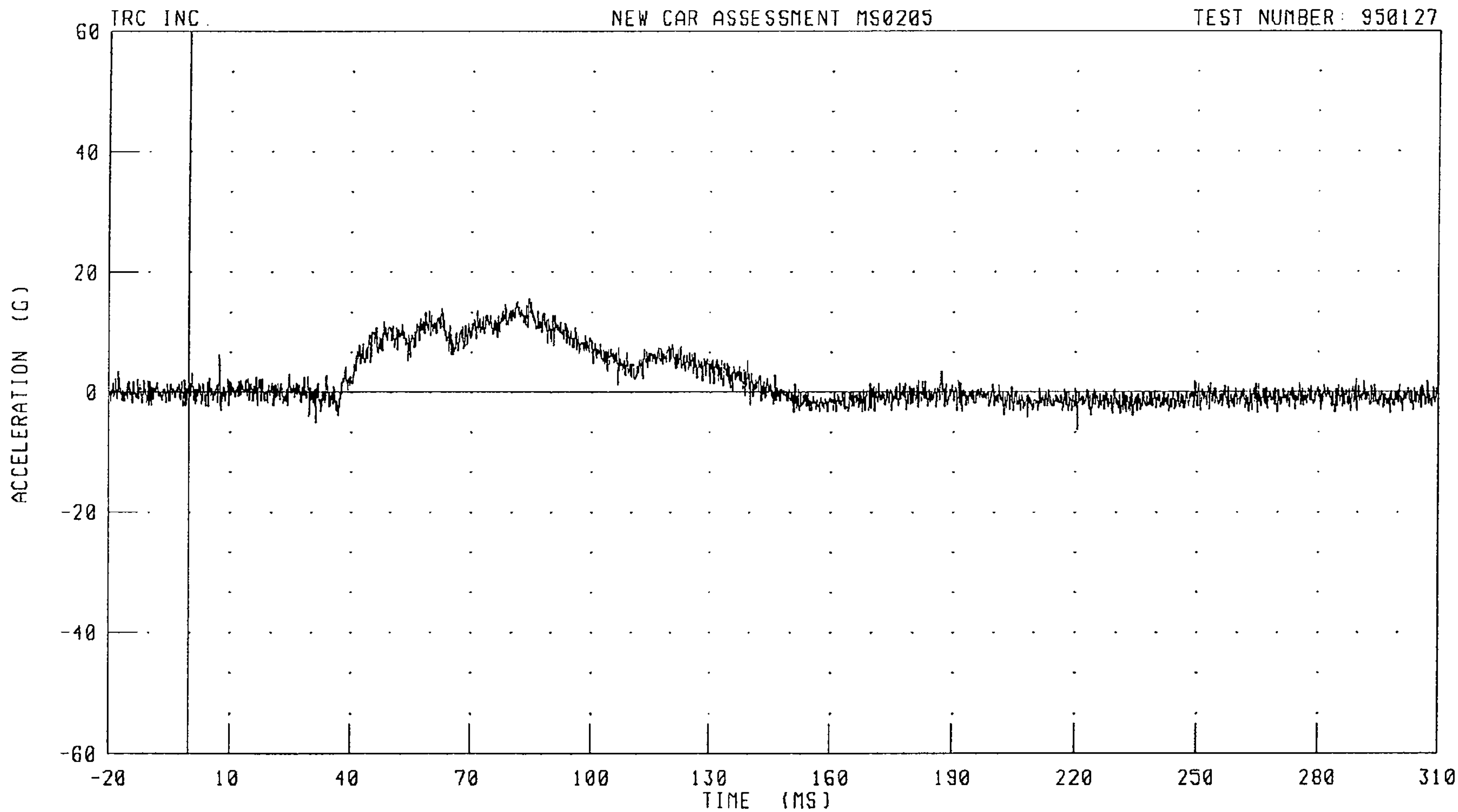

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
PASSENGER PELVIS X-AXIS ACCELERATION
NEW CAR ASSESSMENT MS0205
TRC INC.
TEST NUMBER: 950127
ACCELERATION (G)
60
40
20
0
-20
-40
-60
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: PEVXG2
FILTER: CH. CLASS 1000
PEAK DATA: 13.06 G @ 130.16 MS; -57.42 G @ 49.92 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
PASSENGER PELVIS Y-AXIS ACCELERATION
NEW CAR ASSESSMENT MS0205

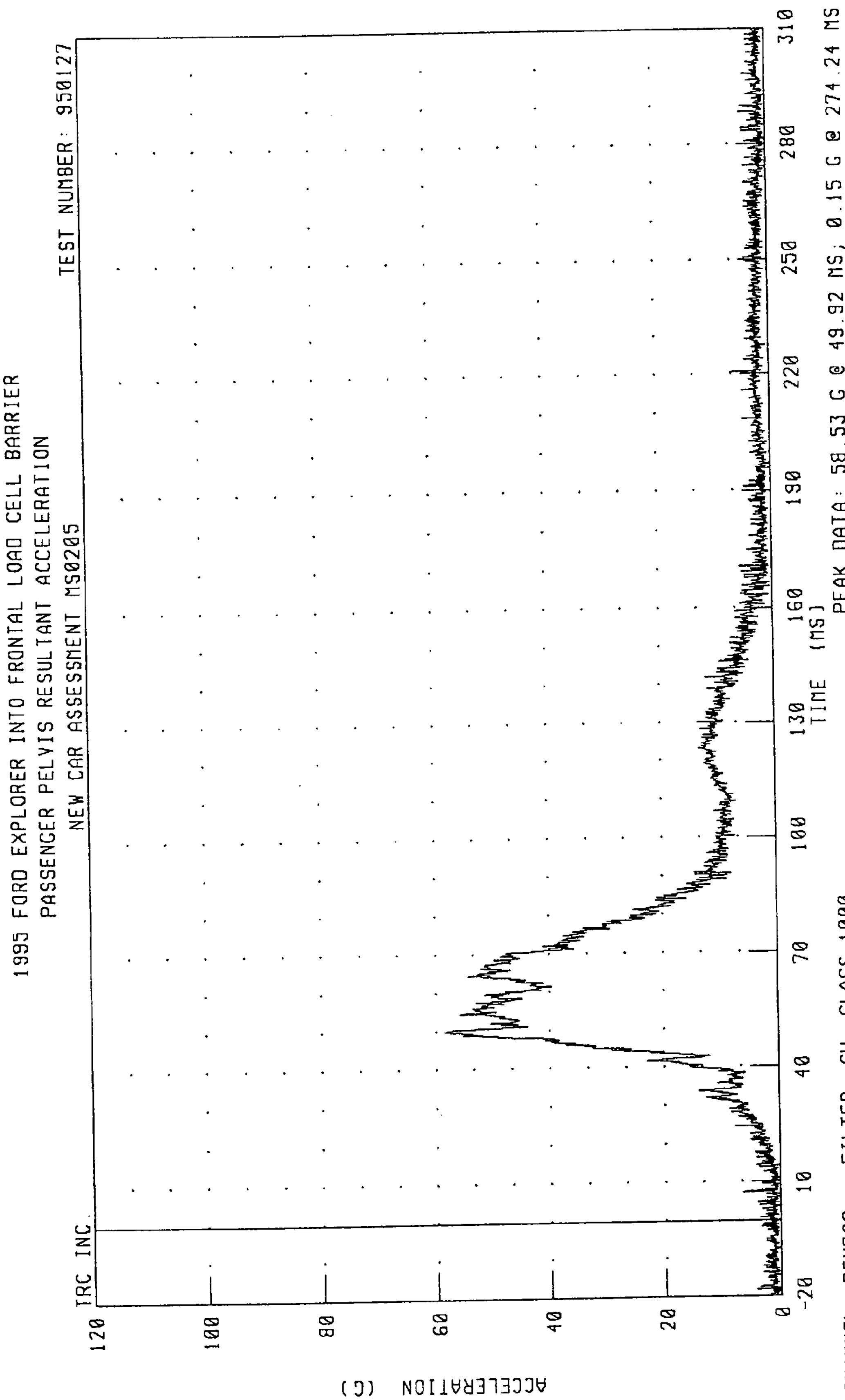


CHANNEL: PEVYG2 FILTER: CH. CLASS 1000 PEAK DATA: 7.71 G @ 53.52 MS; -7.34 G @ 43.36 MS

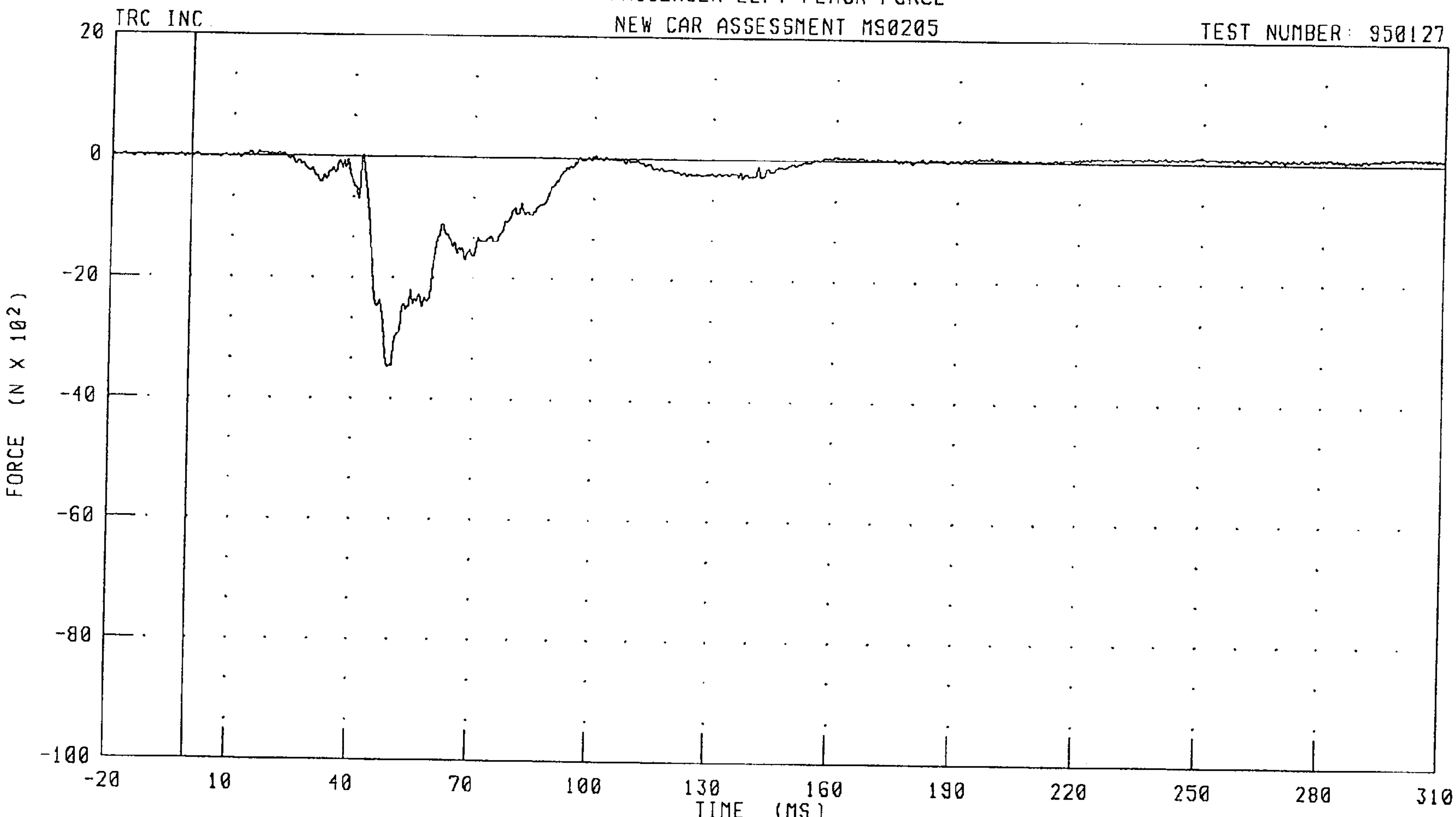
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
PASSENGER PELVIS Z-AXIS ACCELERATION
NEW CAR ASSESSMENT MS0205



CHANNEL: PEVZG2 FILTER: CH. CLASS 1000 PEAK DATA: 15.80 G @ 84.40 MS; -6.24 G @ 220.56 MS

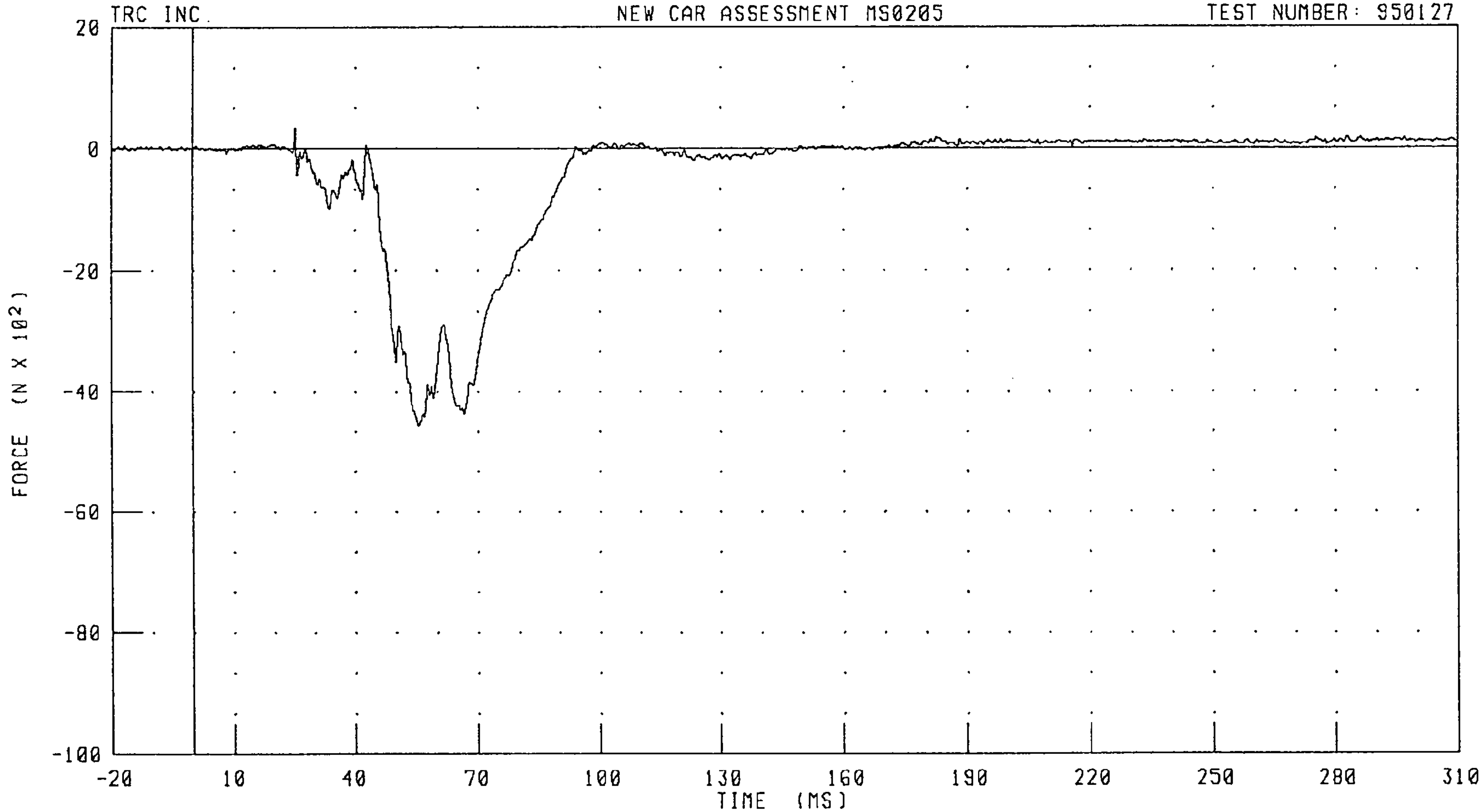

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
PASSENGER PELVIS RESULTANT ACCELERATION
NEW CAR ASSESSMENT MS0205
TEST NUMBER: 950127
TRC INC.
ACCELERATION (G)
120
100
80
60
40
20
0
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: PEVRG2
FILTER: CH. CLASS 1000
PEAK DATA: 58.53 G @ 49.92 MS; 0.15 G @ 274.24 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
PASSENGER LEFT FEMUR FORCE
NEW CAR ASSESSMENT MS0205

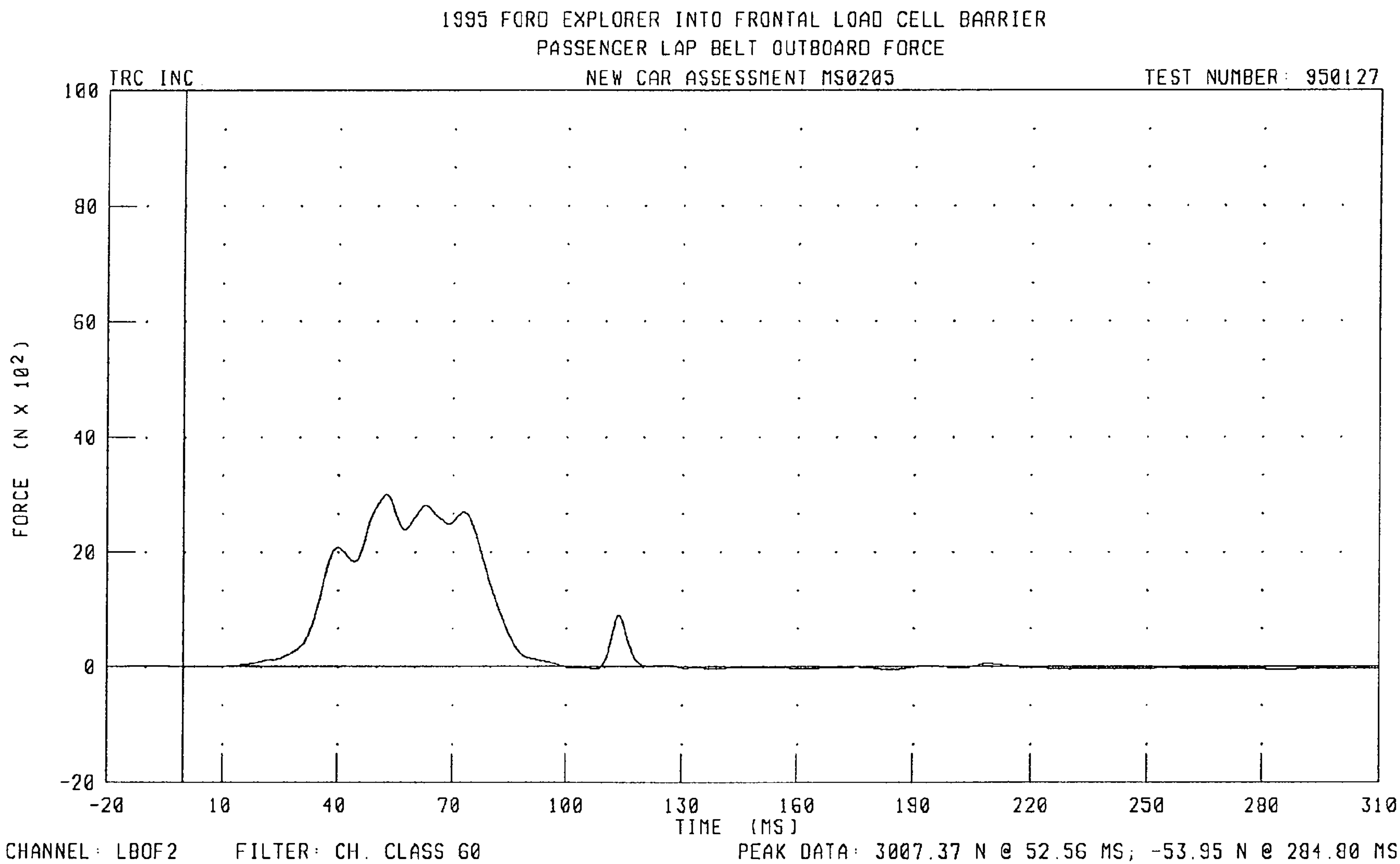


CHANNEL: LFMF2 FILTER: CH. CLASS 600 PEAK DATA: 122.02 N @ 301.44 MS; -3476.10 N @ 48.96 MS

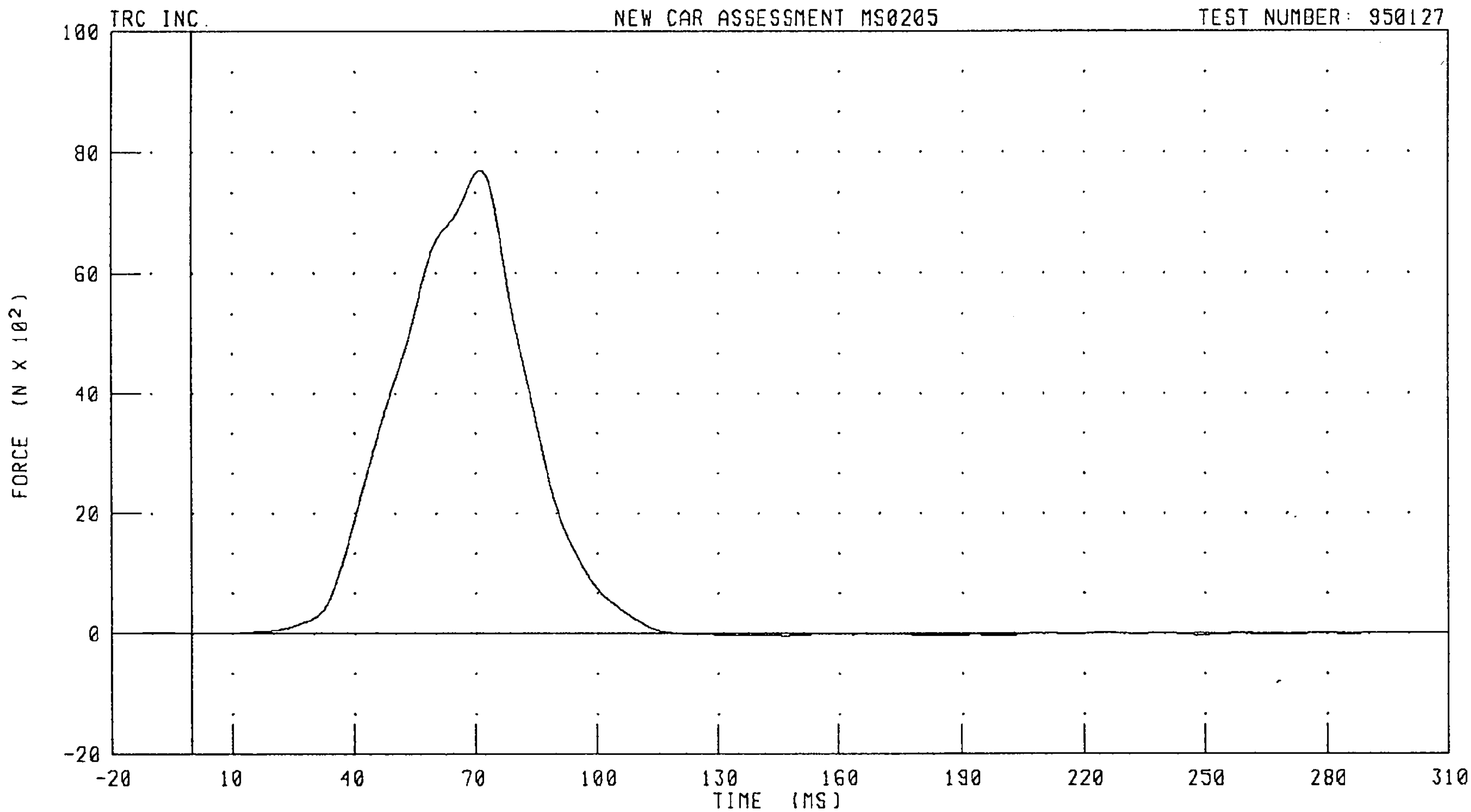
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
PASSENGER RIGHT FEMUR FORCE
NEW CAR ASSESSMENT MS0205



CHANNEL: RFMF2 FILTER: CH. CLASS 600 PEAK DATA: 339.11 N @ 25.36 MS; -4571.77 N @ 55.52 MS


1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
PASSENGER LAP BELT OUTBOARD FORCE
TRC INC
NEW CAR ASSESSMENT MS0205
TEST NUMBER: 950127
100
80
60
40
20
0
-20
FORCE (N X 10²)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: LBOF2
FILTER: CH. CLASS 60
PEAK DATA: 3007.37 N @ 52.56 MS; -53.95 N @ 284.80 MS

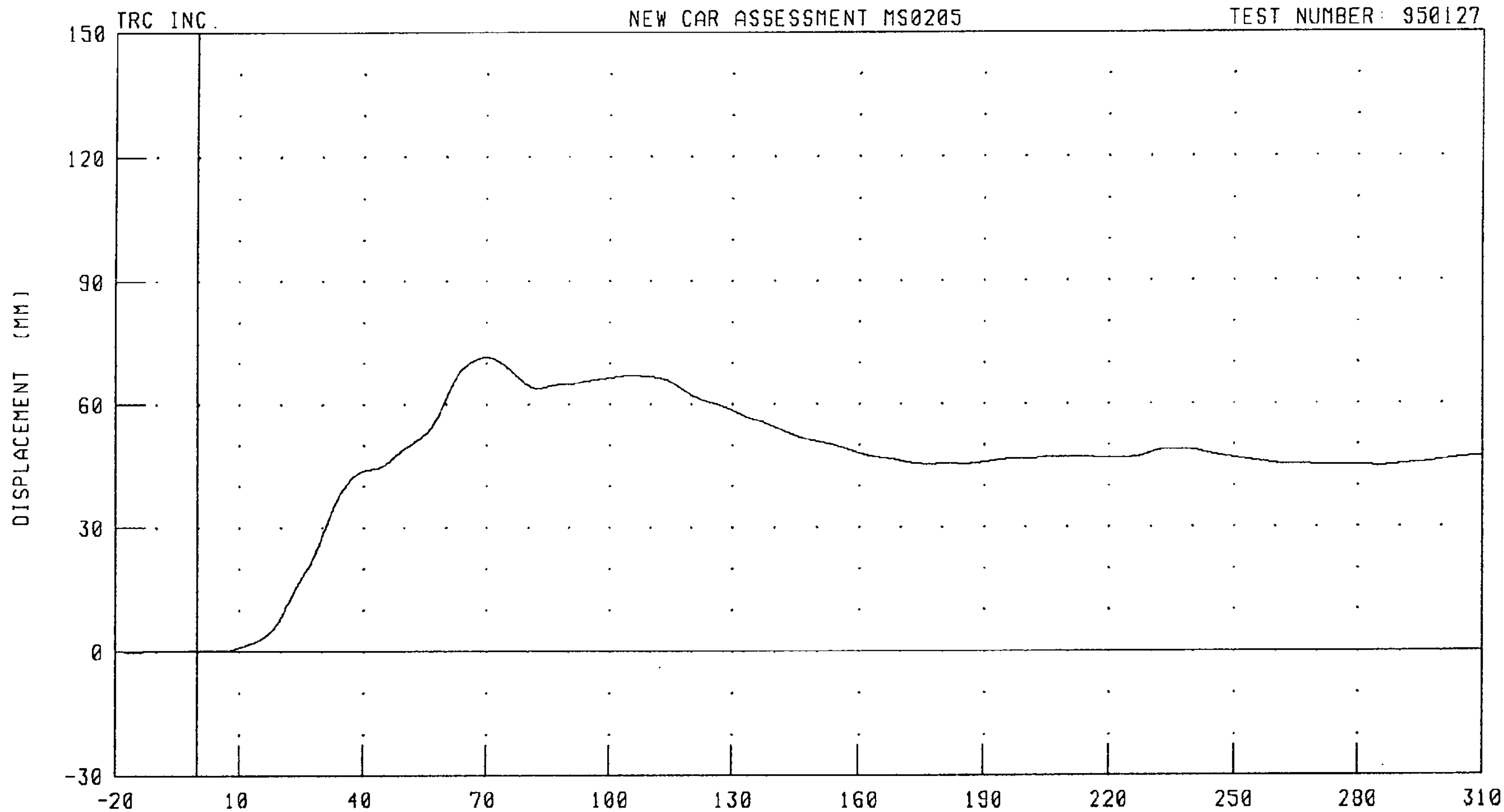
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
PASSENGER SHOULDER BELT FORCE
NEW CAR ASSESSMENT MS0205



CHANNEL: SHBF2 FILTER: CH. CLASS 60 PEAK DATA: 7698.41 N @ 71.28 MS; -39.34 N @ 146.96 MS

950127

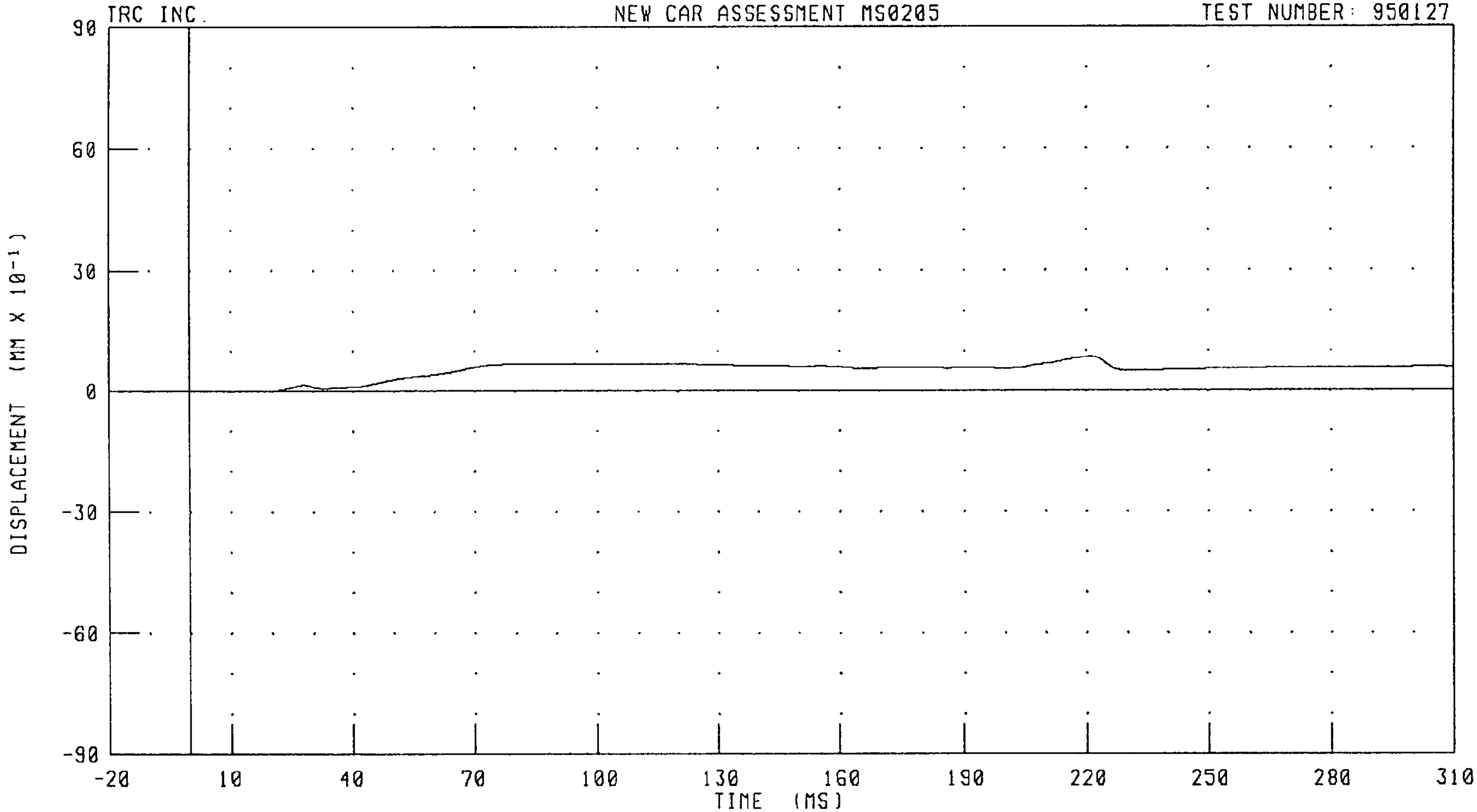
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
PASSENGER SHOULDER BELT DISPLACEMENT
NEW CAR ASSESSMENT MS0205



CHANNEL: SHBD2 FILTER: CH. CLASS 60 PEAK DATA: 71.39 MM @ 70.00 MS; -0.16 MM @ -15.52 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
PASSENGER SEAT BELT EXTENSION
NEW CAR ASSESSMENT MS0205

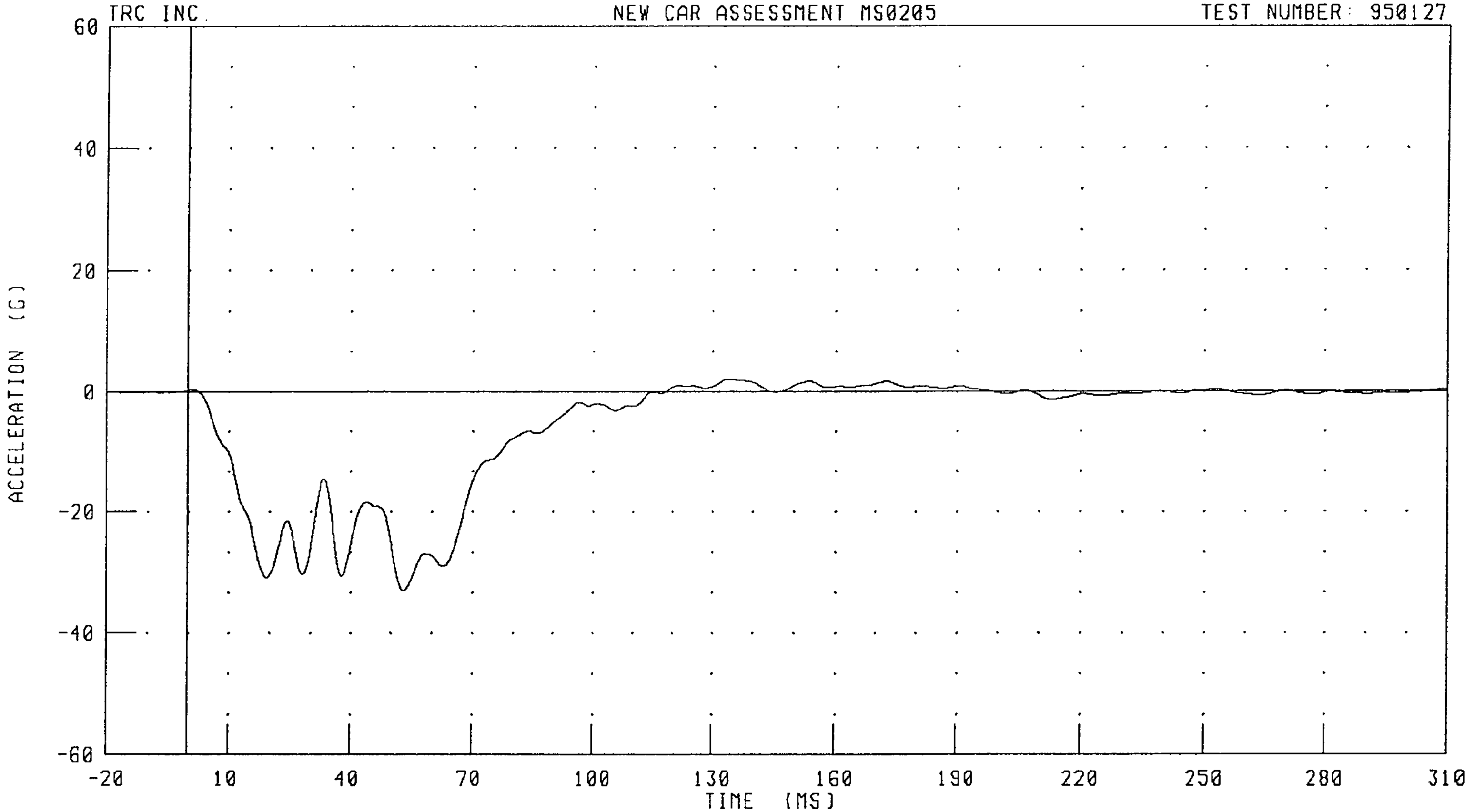
TRC INC. TEST NUMBER: 950127



CHANNEL: SBED2 FILTER: CH. CLASS 60 PEAK DATA: 0.85 MM @ 221.28 MS; -0.01 MM @ -15.60 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LEFT REAR SEAT X-AXIS ACCELERATION

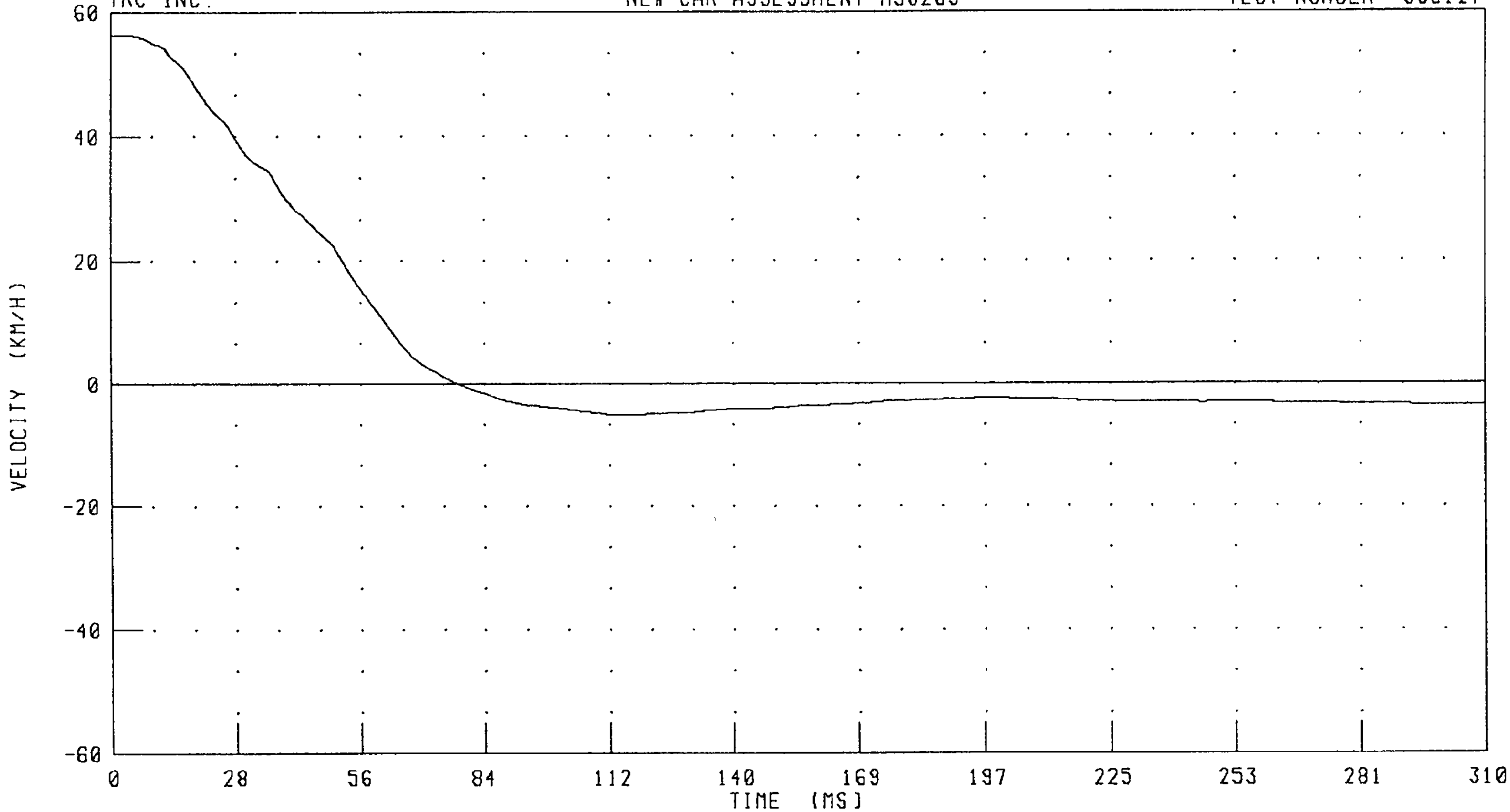
TRC INC. NEW CAR ASSESSMENT MS0205 TEST NUMBER: 950127



CHANNEL: TLRXG1 FILTER: CH. CLASS 60 PEAK DATA: 2.09 G @ 134.08 MS; -33.03 G @ 53.04 MS

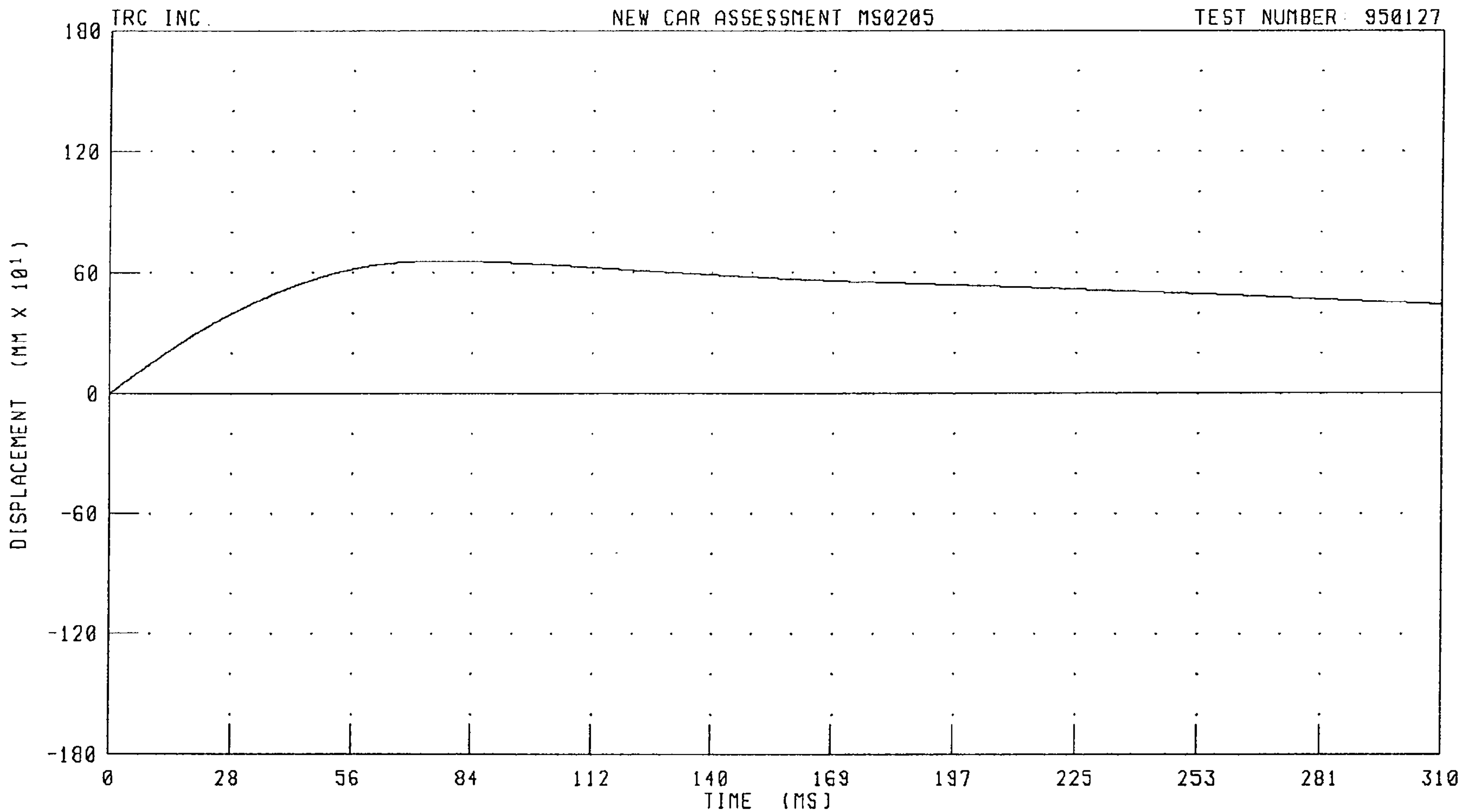
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LEFT REAR SEAT X-AXIS VELOCITY
NEW CAR ASSESSMENT MS0205

TRC INC. TEST NUMBER: 950127



CHANNEL: TLRXV1 FILTER: CH. CLASS 180 PEAK DATA: 56.22 KM/H @ 2.00 MS; -5.07 KM/H @ 118.72 MS

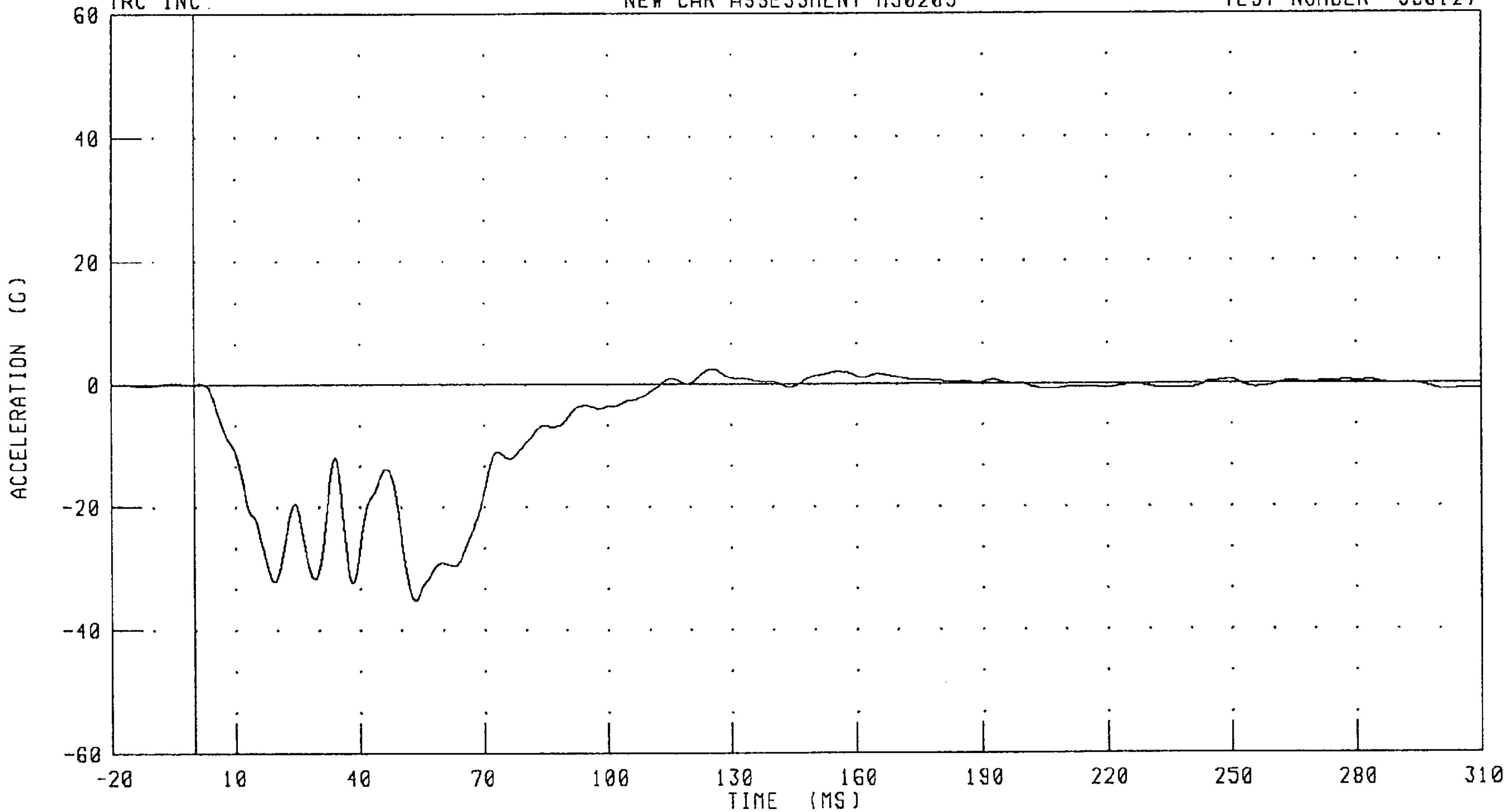
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LEFT REAR SEAT X-AXIS DISPLACEMENT
NEW CAR ASSESSMENT MS0205



CHANNEL: TLRXD1 FILTER: CH. CLASS 180 PEAK DATA: 656.05 MM @ 78.32 MS; 0.00 MM @ 0.00 MS

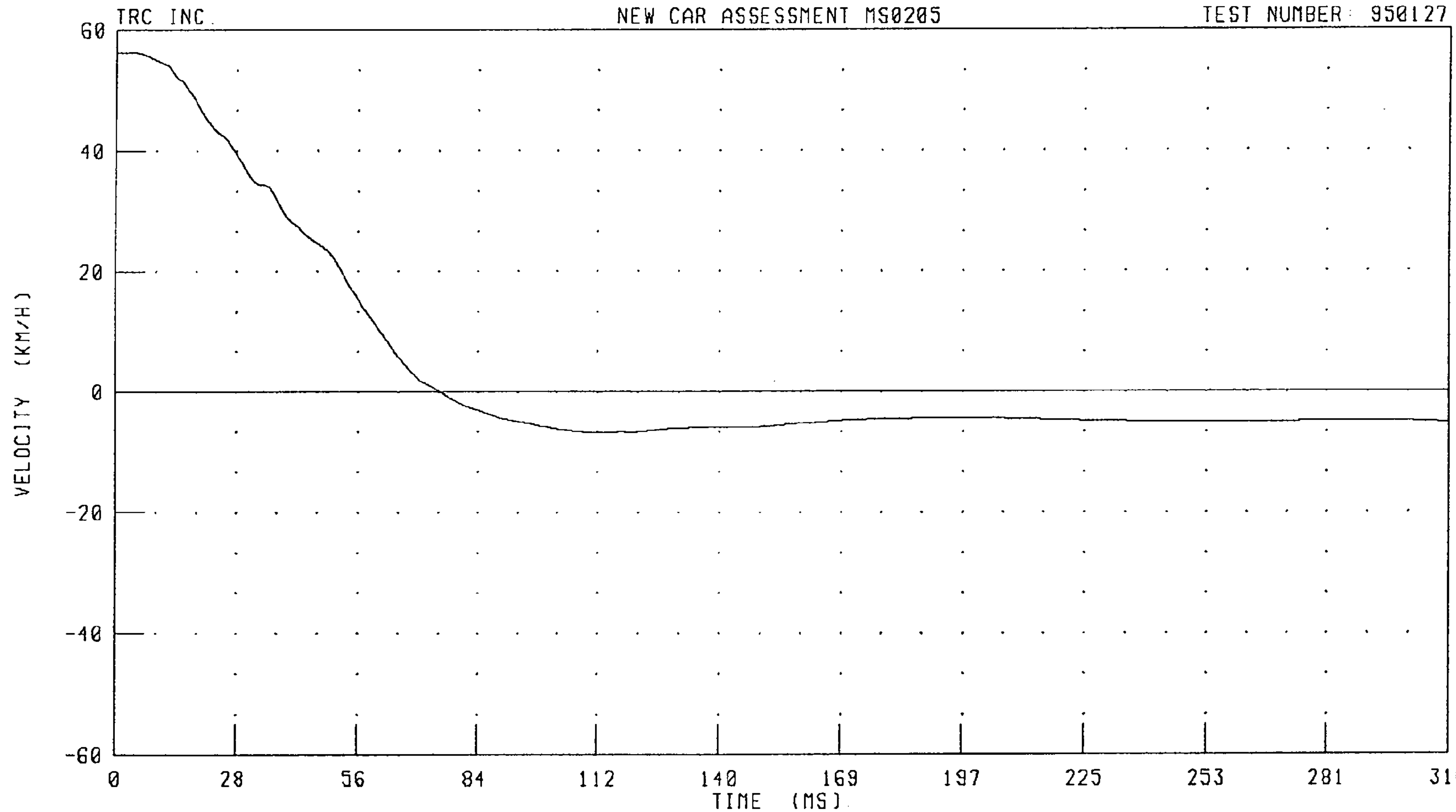
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
RIGHT REAR SEAT X-AXIS ACCELERATION
NEW CAR ASSESSMENT MS0205

TRC INC. TEST NUMBER: 950127



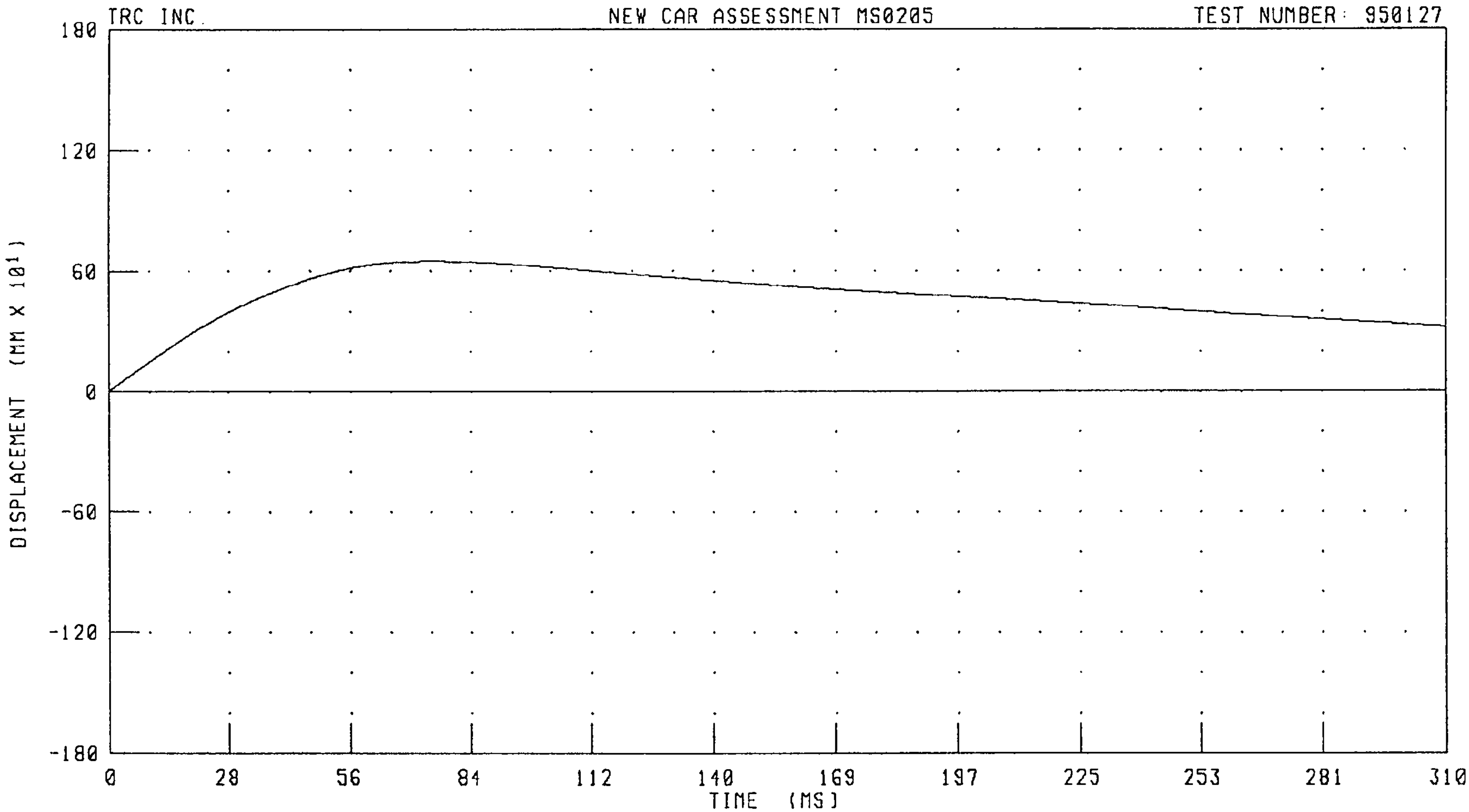
CHANNEL: TRRXG1 FILTER: CH. CLASS 60 PEAK DATA: 2.40 G @ 125.44 MS; -35.21 G @ 53.36 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
RIGHT REAR SEAT X-AXIS VELOCITY
NEW CAR ASSESSMENT MS0205



CHANNEL: TRRXV1 FILTER: CH. CLASS 180 PEAK DATA: 56.20 KM/H @ 0.00 MS; -6.82 KM/H @ 113.12 MS

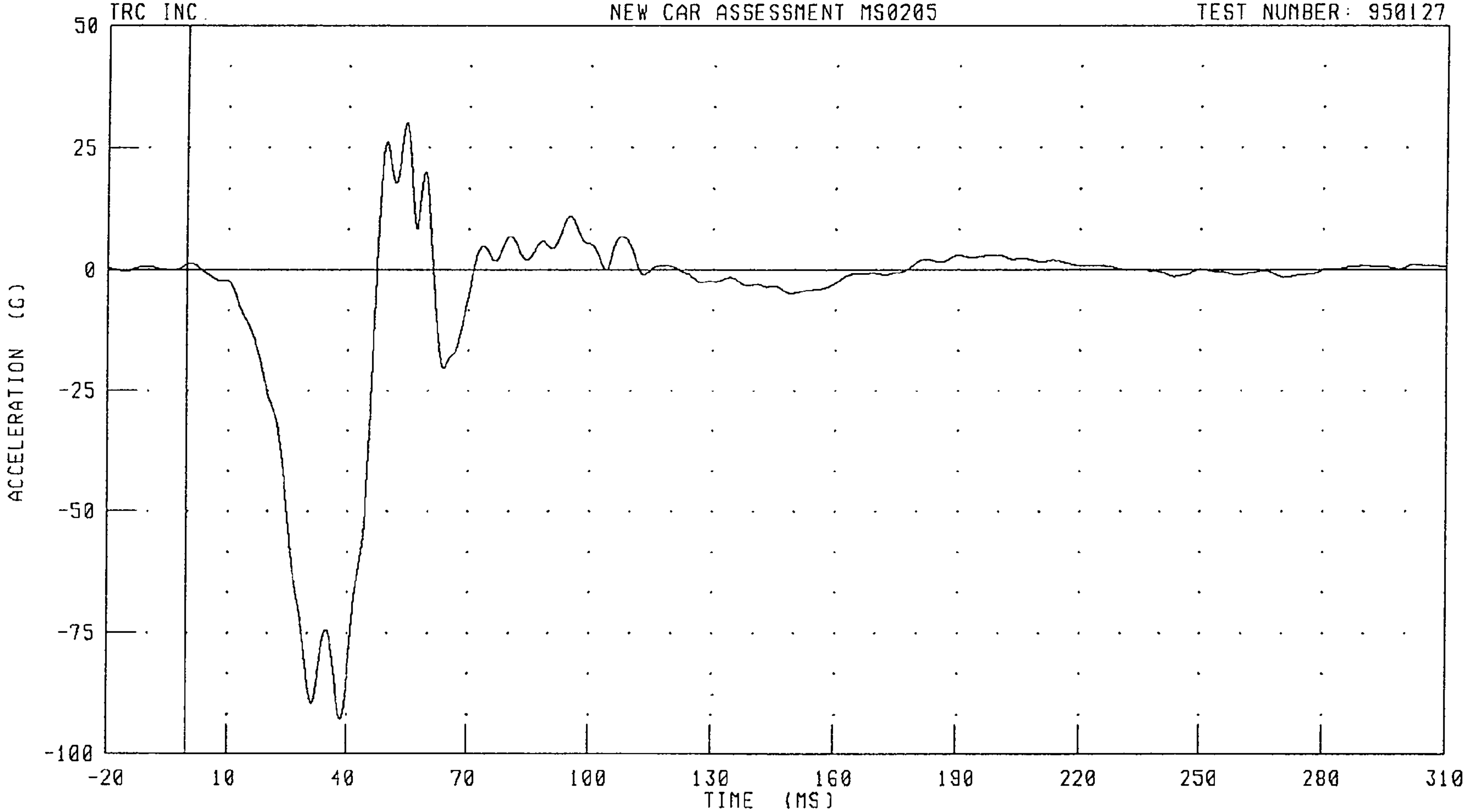
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
RIGHT REAR SEAT X-AXIS DISPLACEMENT
NEW CAR ASSESSMENT MS0205



CHANNEL: TRRXD1 FILTER: CH. CLASS 180 PEAK DATA: 648.58 MM @ 75.60 MS; 0.00 MM @ 0.00 MS

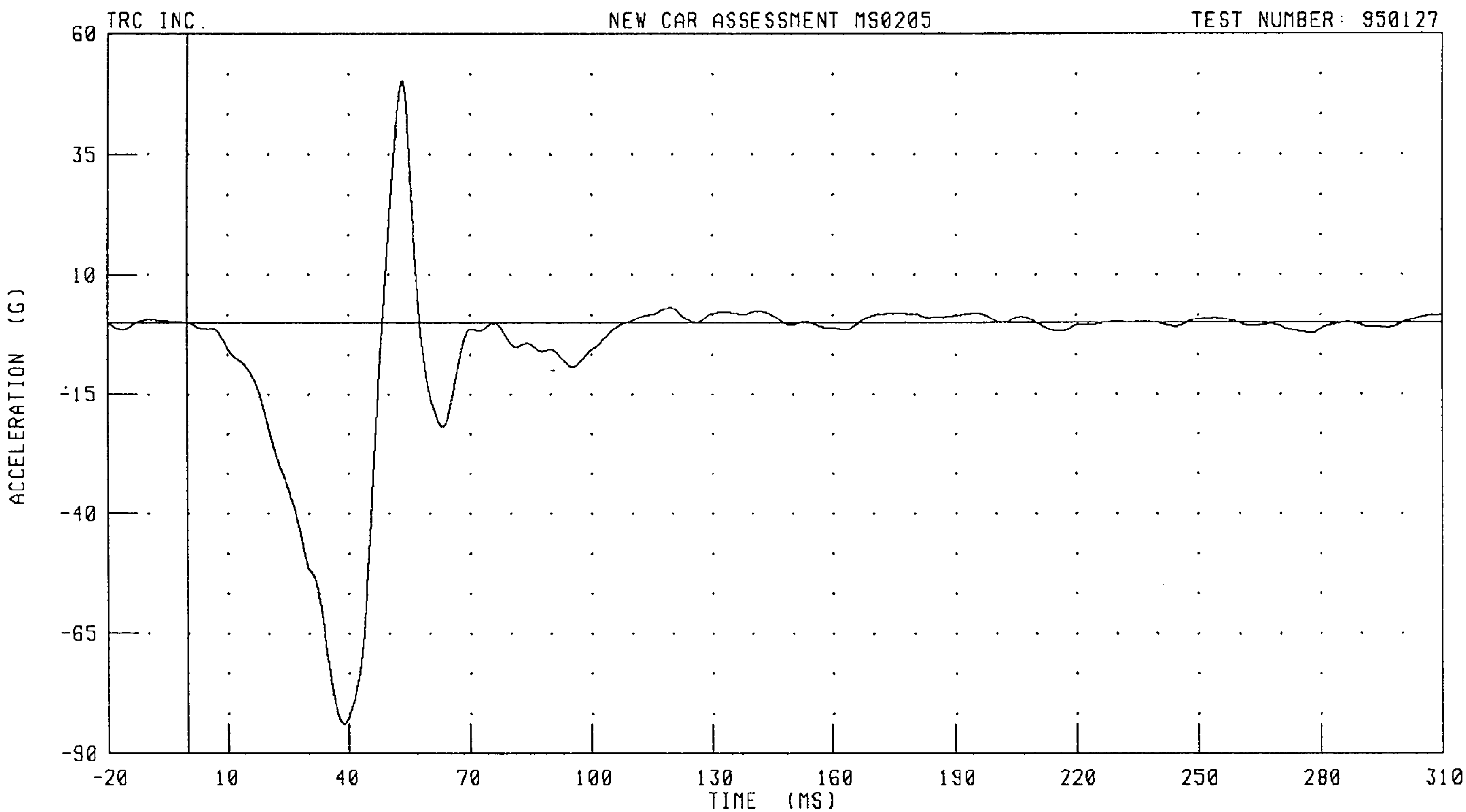
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
ENGINE TOP X-AXIS ACCELERATION
NEW CAR ASSESSMENT MS0205

TRC INC. TEST NUMBER: 950127

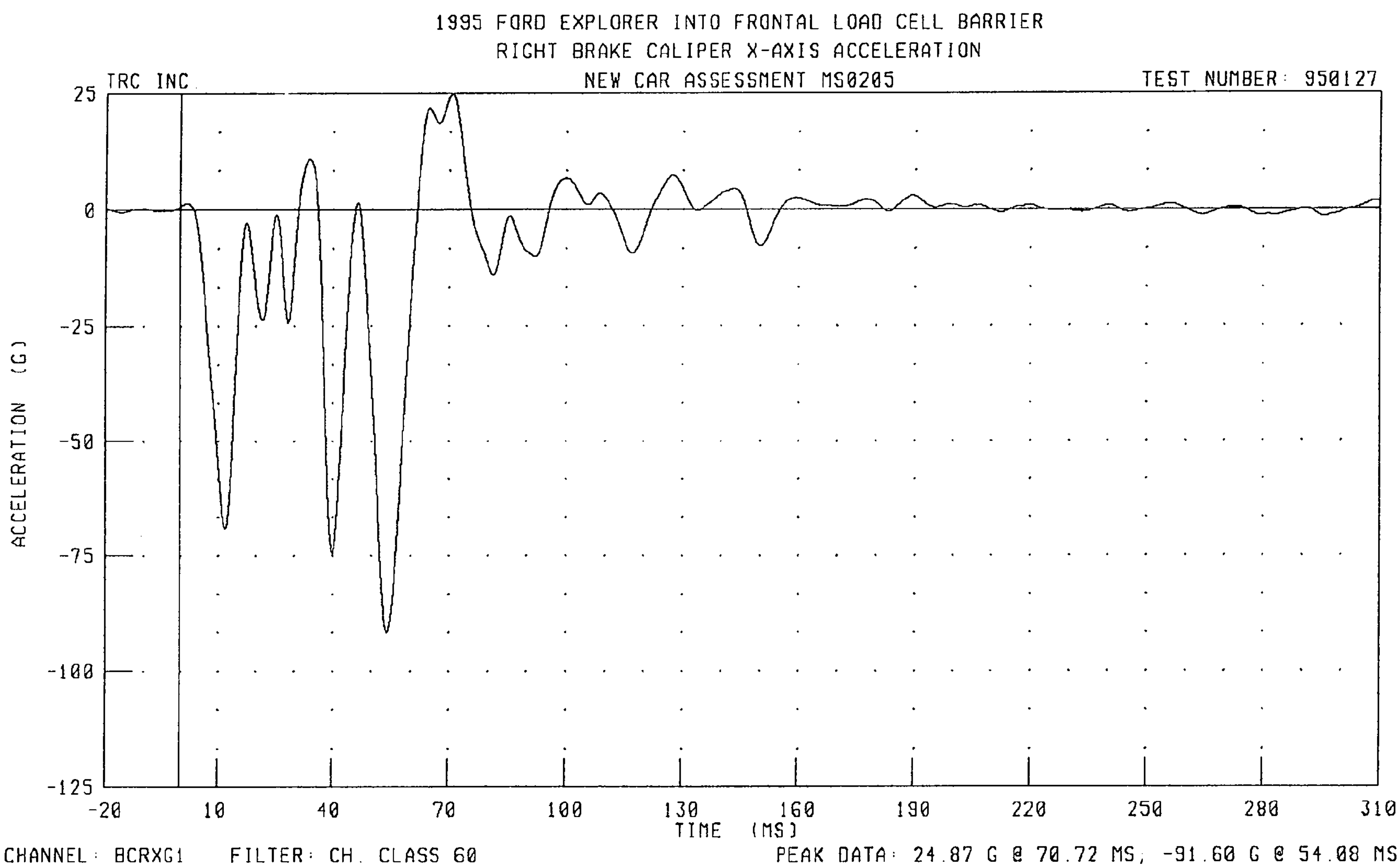


CHANNEL: ENGXG1 FILTER: CH. CLASS 60 PEAK DATA: 30.10 G @ 54.56 MS; -92.74 G @ 38.64 MS

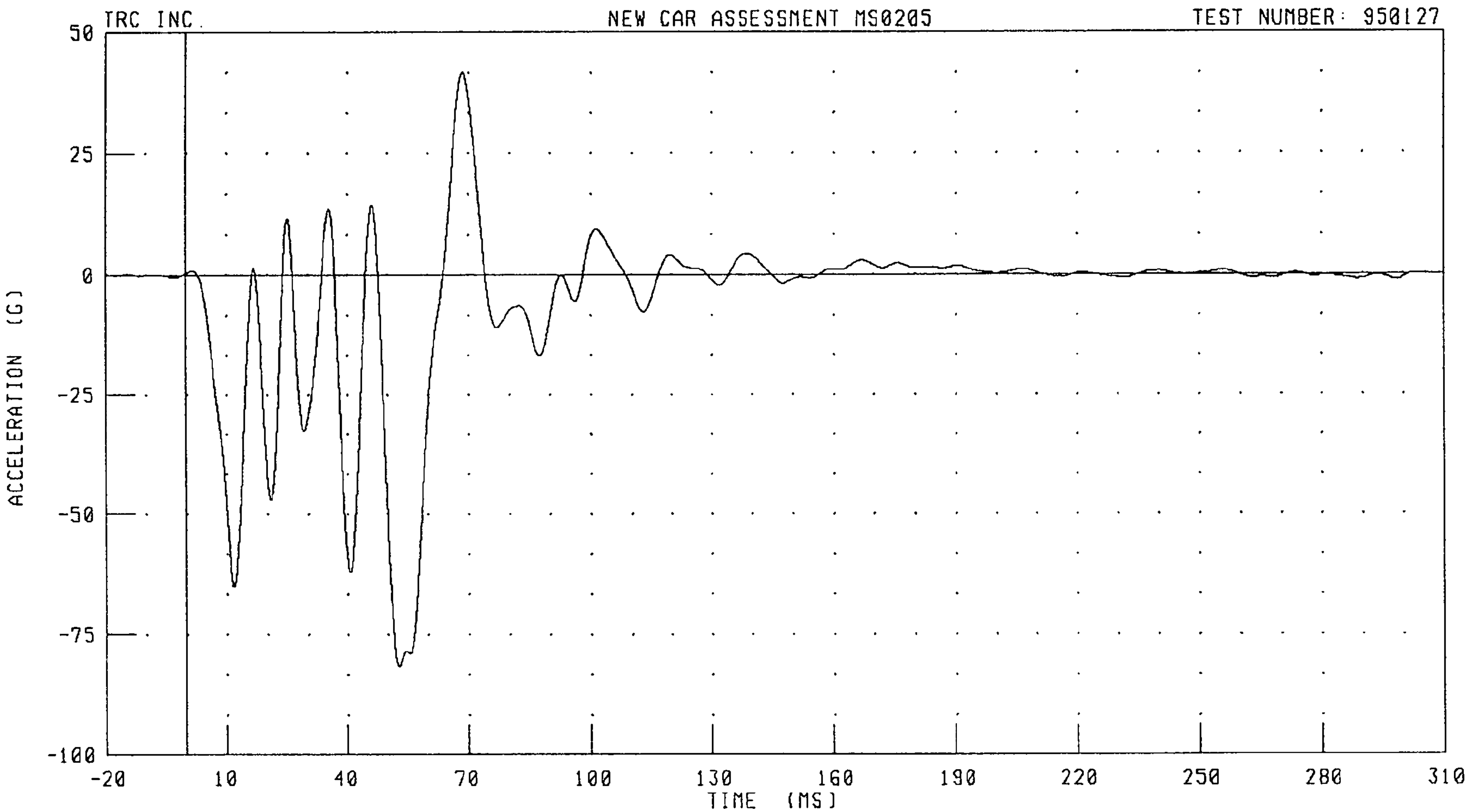
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
ENGINE BOTTOM X-AXIS ACCELERATION
NEW CAR ASSESSMENT MS0205



CHANNEL: ENGXG2 FILTER: CH. CLASS 60 PEAK DATA: 50.11 G @ 53.20 MS; -83.92 G @ 38.80 MS

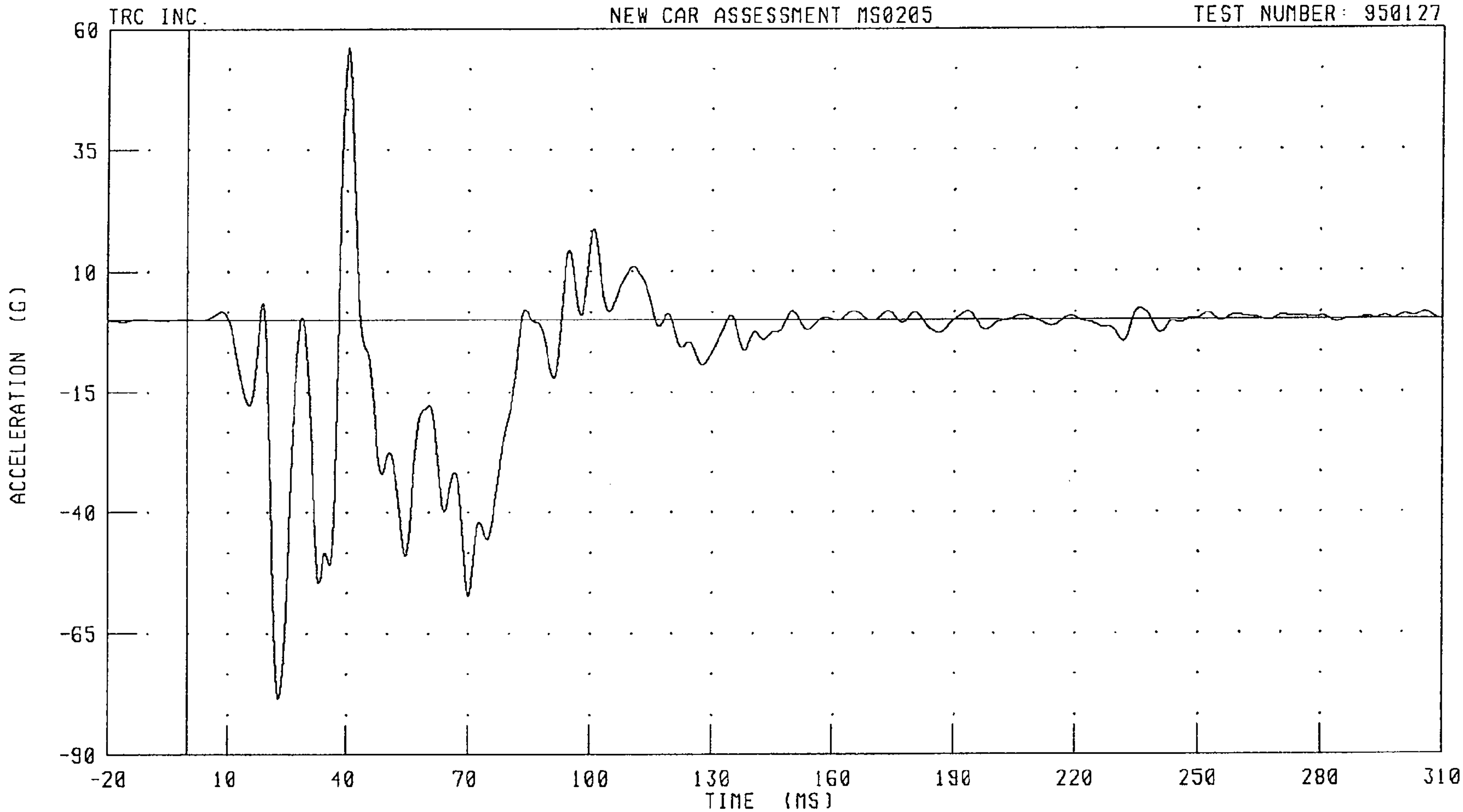

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
RIGHT BRAKE CALIPER X-AXIS ACCELERATION
NEW CAR ASSESSMENT MS0205
TRC INC.
TEST NUMBER: 950127
25
0
-25
-50
-75
-100
-125
ACCELERATION (G)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BCRXG1 FILTER: CH. CLASS 60
PEAK DATA: 24.87 G @ 70.72 MS; -91.60 G @ 54.08 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LEFT BRAKE CALIPER X-AXIS ACCELERATION
NEW CAR ASSESSMENT MS0205



CHANNEL: BCLXG1 FILTER: CH. CLASS 60 PEAK DATA: 41.72 G @ 68.64 MS; -81.74 G @ 52.80 MS

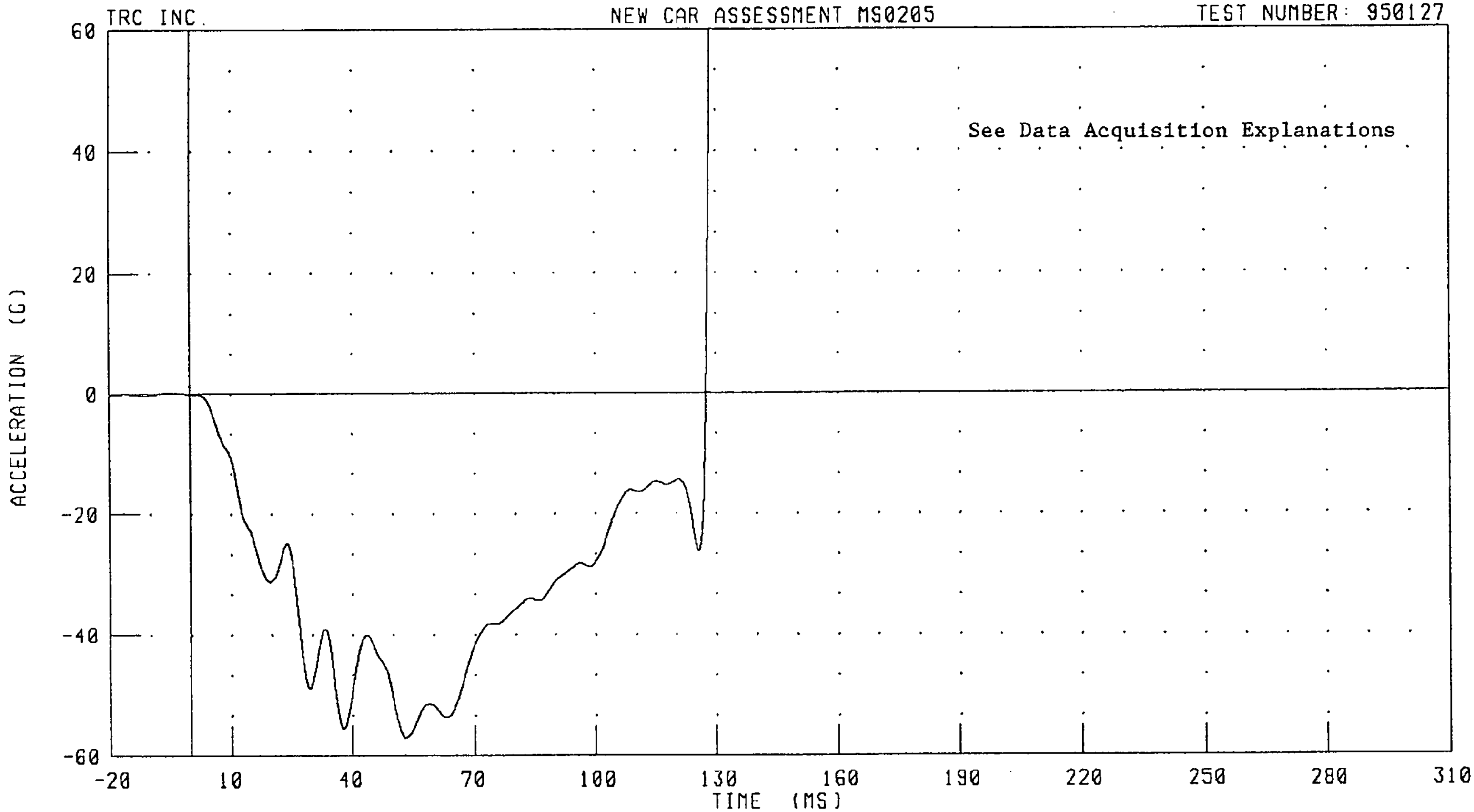
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
INSTRUMENT PANEL CENTER X-AXIS ACCELERATION
NEW CAR ASSESSMENT MS0205



CHANNEL: OPCXG1 FILTER: CH. CLASS 60 PEAK DATA: 56.06 G @ 40.40 MS; -78.45 G @ 22.96 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LEFT REAR SEAT REDUNDANT X-AXIS ACCELERATION
NEW CAR ASSESSMENT MS0205

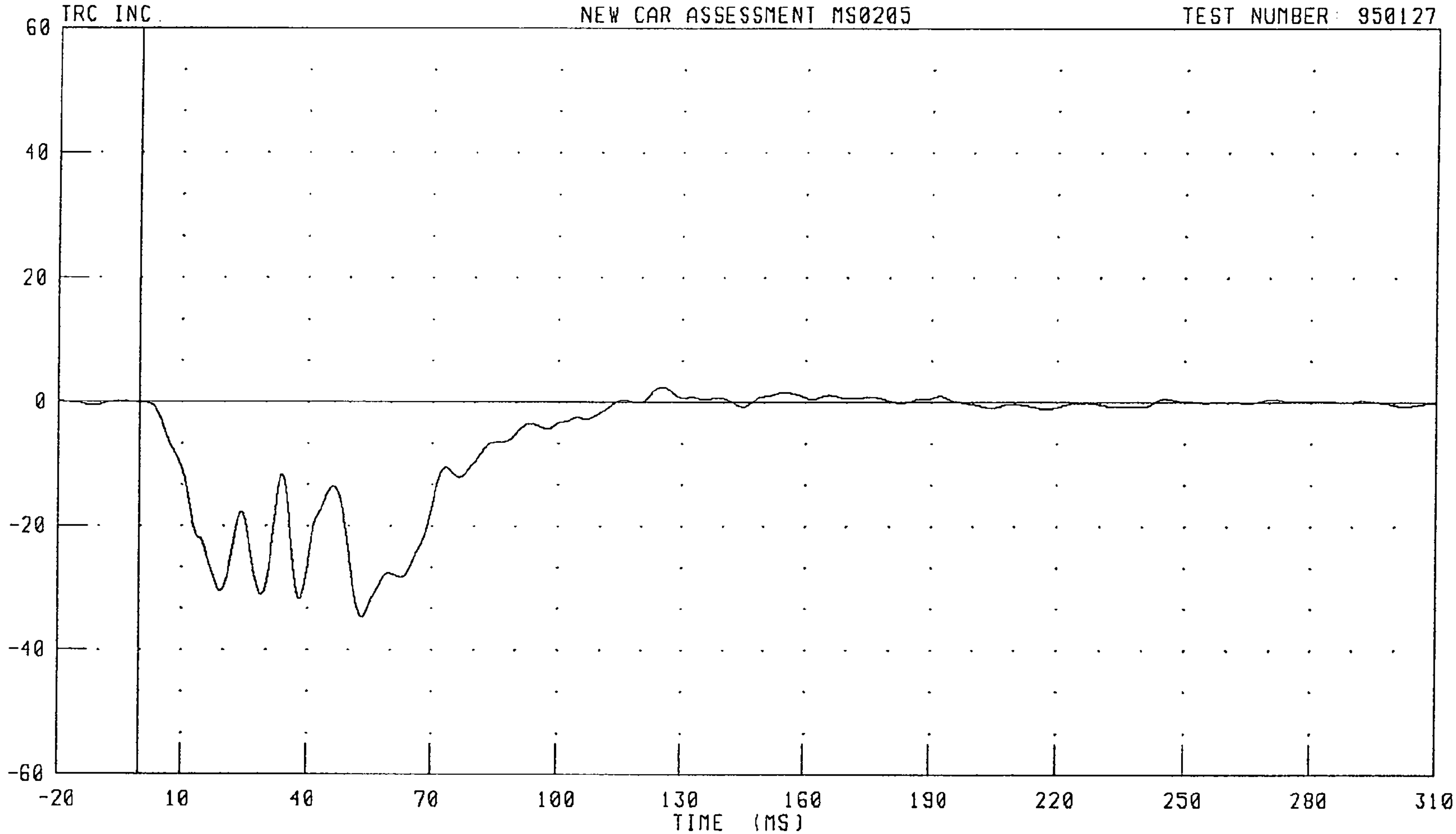
TRC INC. TEST NUMBER: 950127



CHANNEL: TLRXGA FILTER: CH. CLASS 60

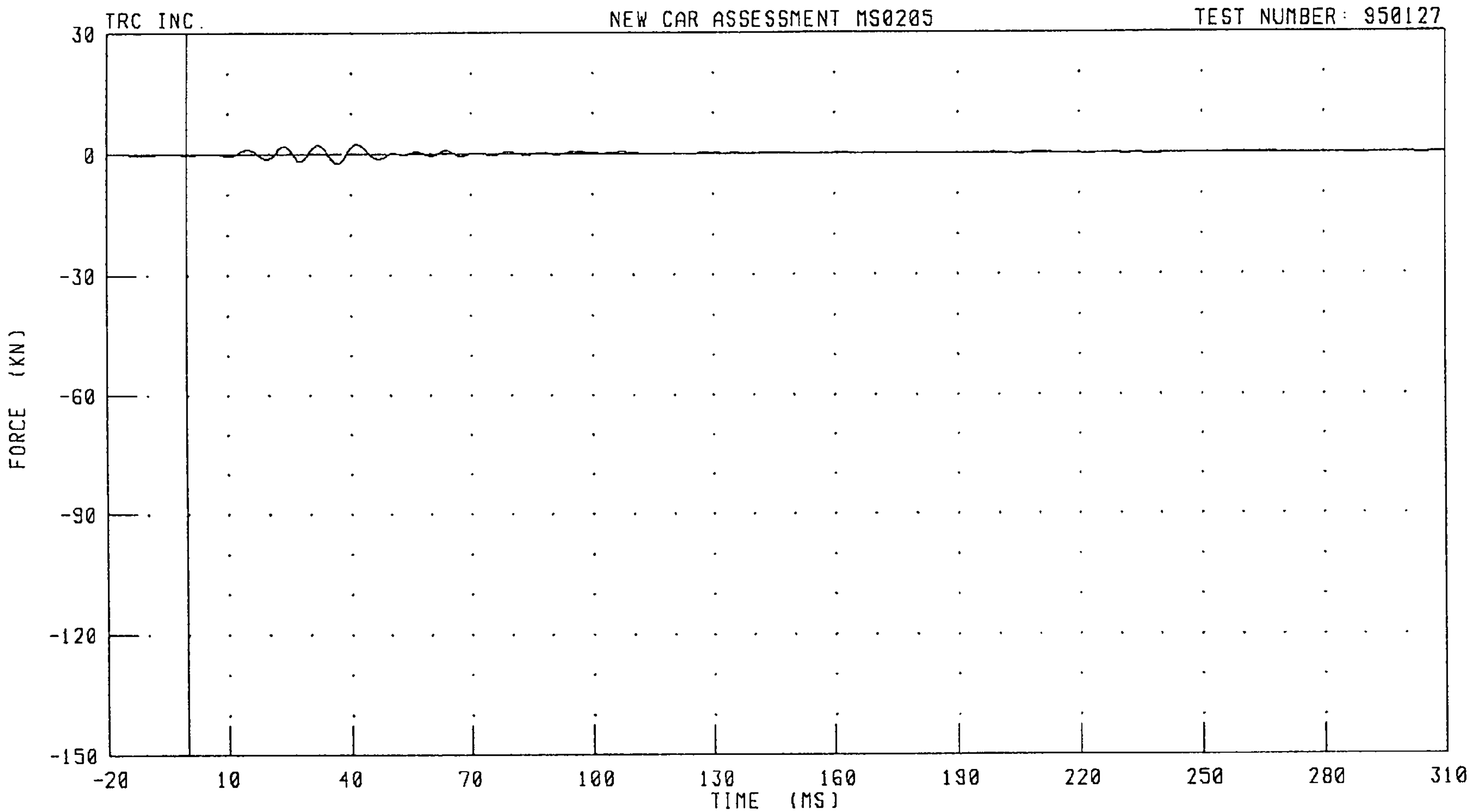
PEAK DATA: 460.02 G @ 283.04 MS; -57.02 G @ 53.04 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
RIGHT REAR SEAT REDUNDANT X-AXIS ACCELERATION
NEW CAR ASSESSMENT MS0205



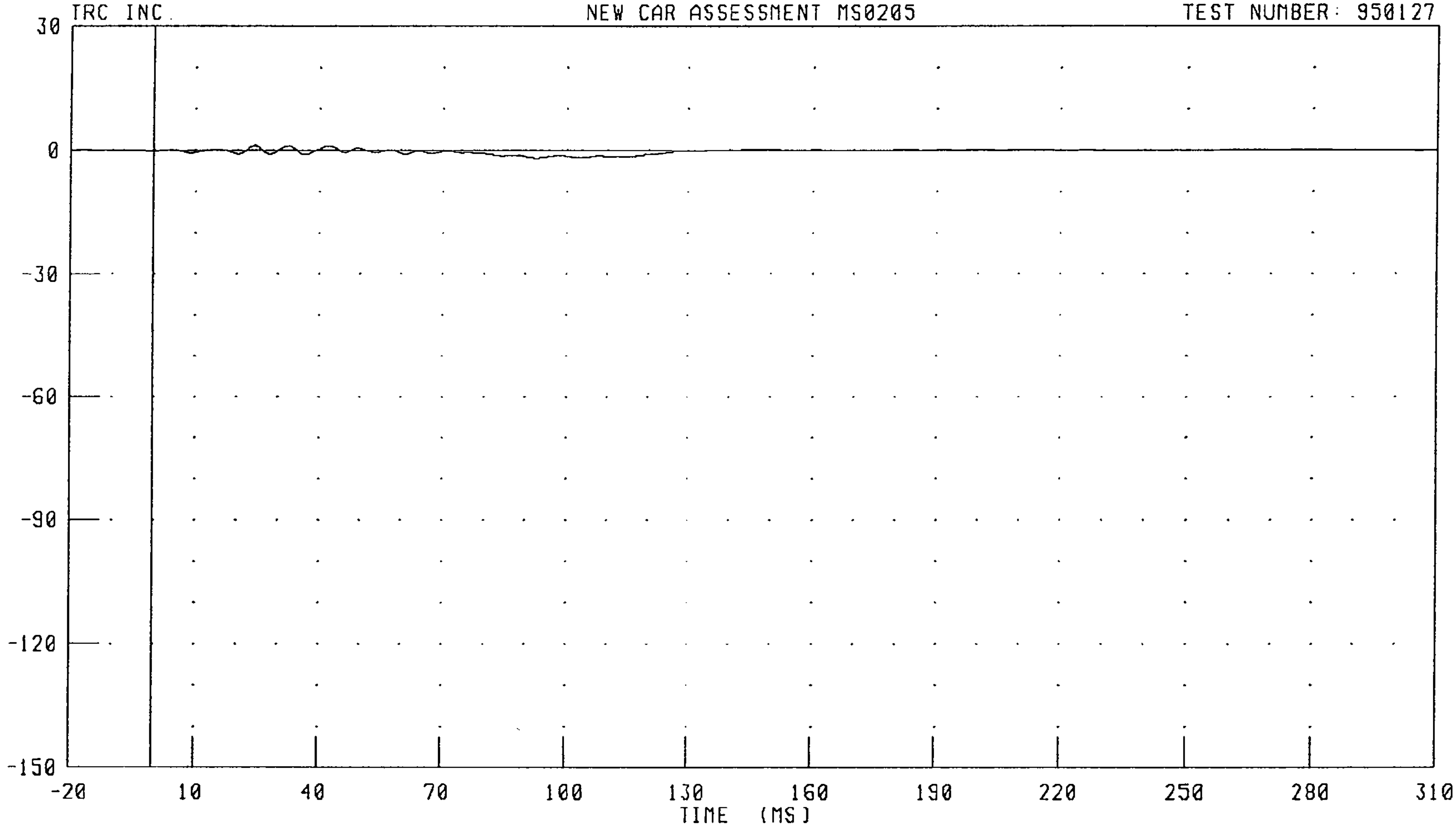
CHANNEL: TRRXGA FILTER: CH. CLASS 60 PEAK DATA: 2.45 G @ 125.28 MS; -34.75 G @ 53.28 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION A1 FORCE
NEW CAR ASSESSMENT MS0205



CHANNEL: BA1F FILTER: CH. CLASS 60 PEAK DATA: 2.39 KN @ 41.52 MS; -2.45 KN @ 36.88 MS

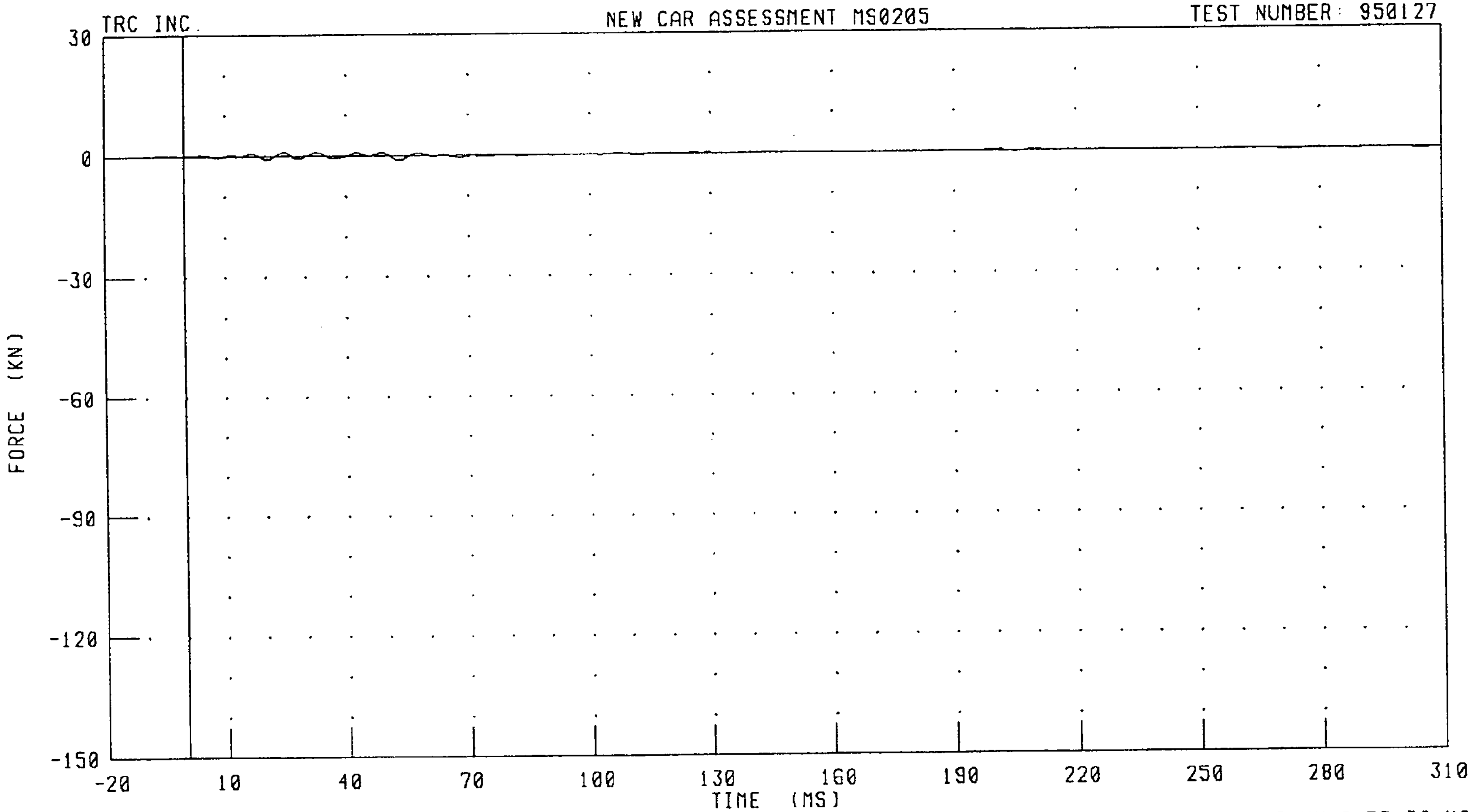
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION A2 FORCE
NEW CAR ASSESSMENT MS0205



CHANNEL: BA2F FILTER: CH. CLASS 60 PEAK DATA: 1.10 KN @ 24.24 MS; -1.97 KN @ 92.64 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION A3 FORCE
NEW CAR ASSESSMENT MS0205

TRC INC.	TEST NUMBER: 950127

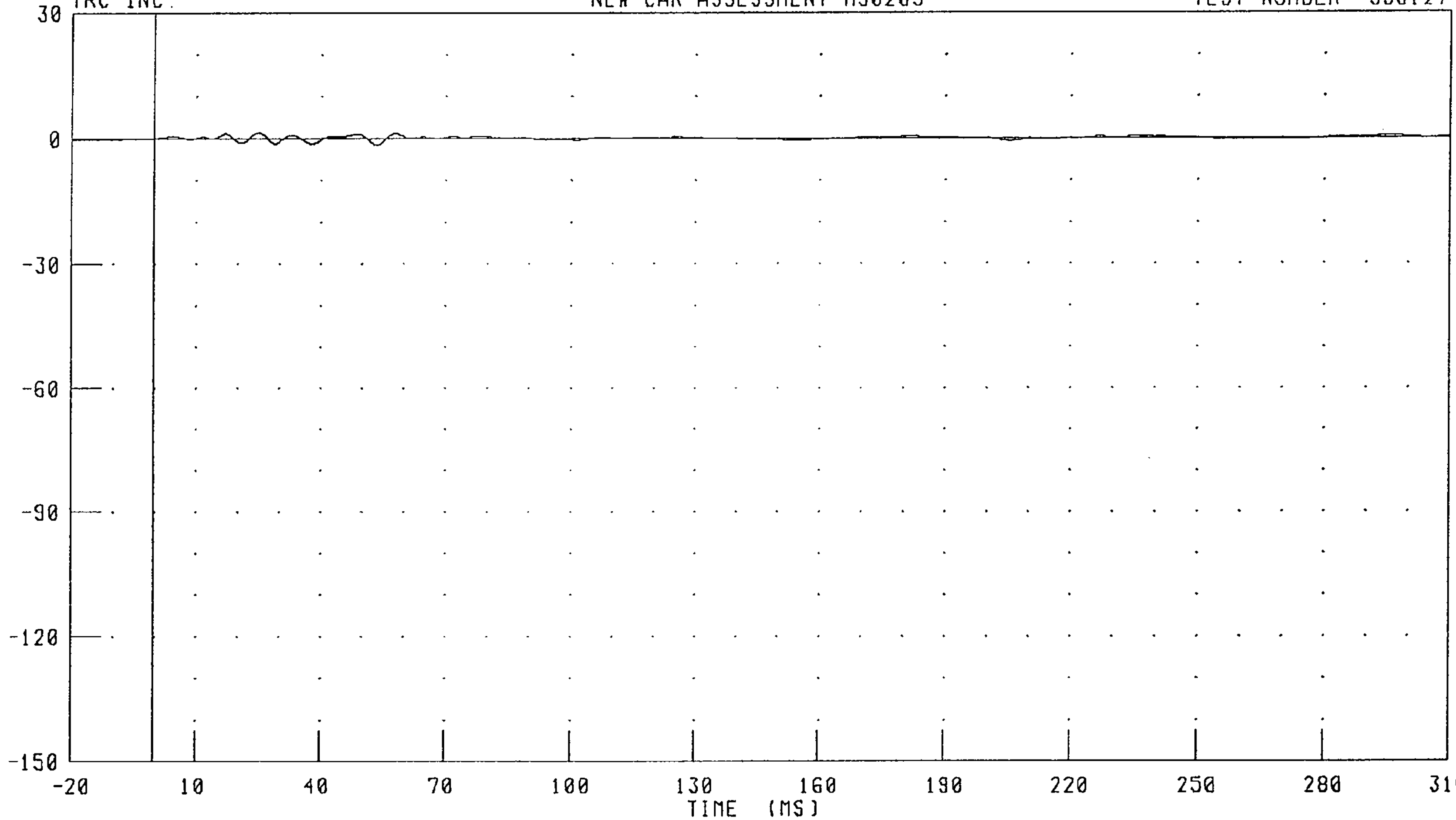


CHANNEL: BA3F	FILTER: CH. CLASS 60	PEAK DATA: 0.93 KN @ 24.72 MS; -1.19 KN @ 53.36 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION A4 FORCE
NEW CAR ASSESSMENT MS0205

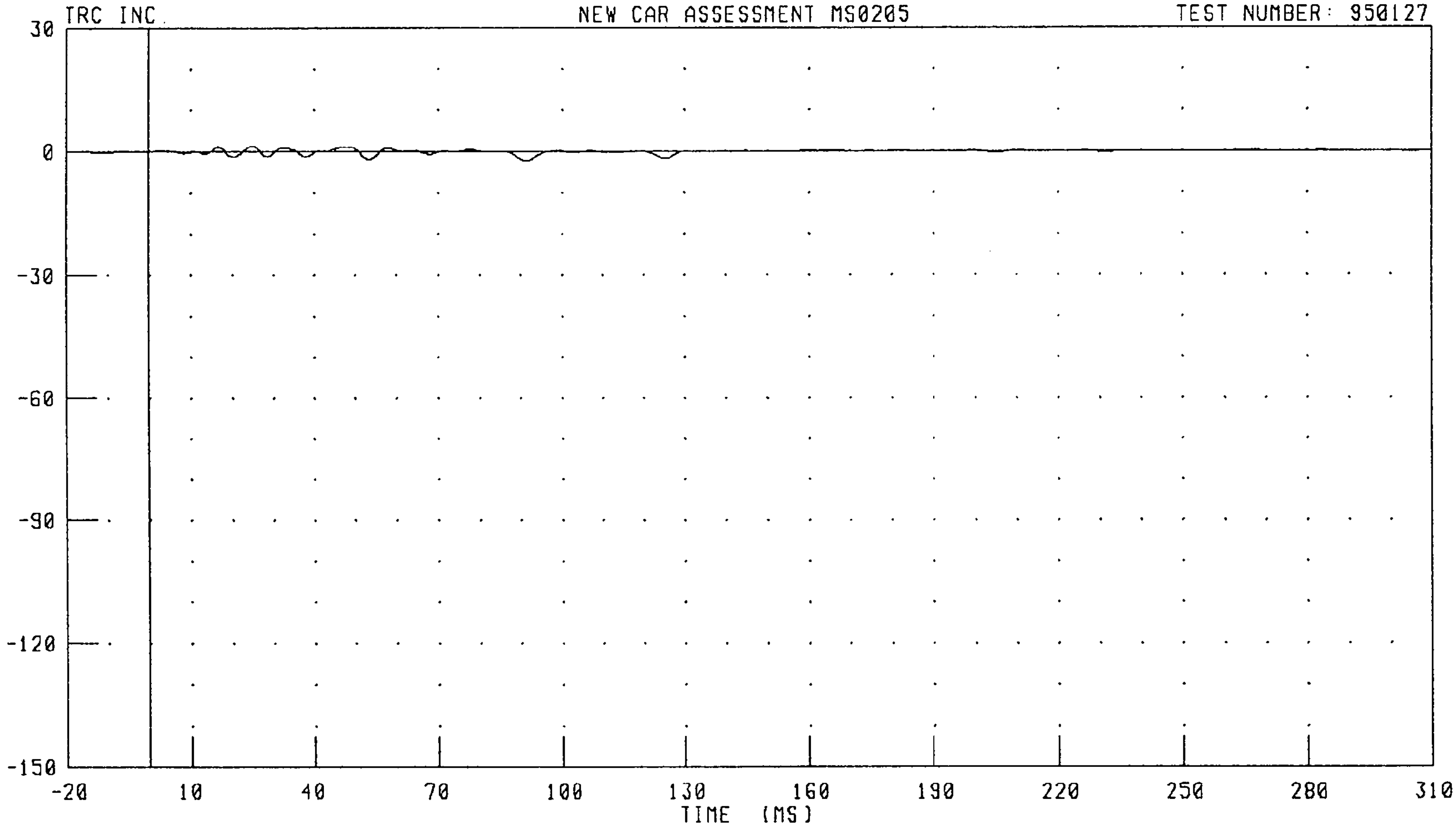
TRC INC.

TEST NUMBER: 950127



CHANNEL: BA4F FILTER: CH. CLASS 60 PEAK DATA: 1.37 KN @ 24.96 MS; -1.67 KN @ 53.44 MS

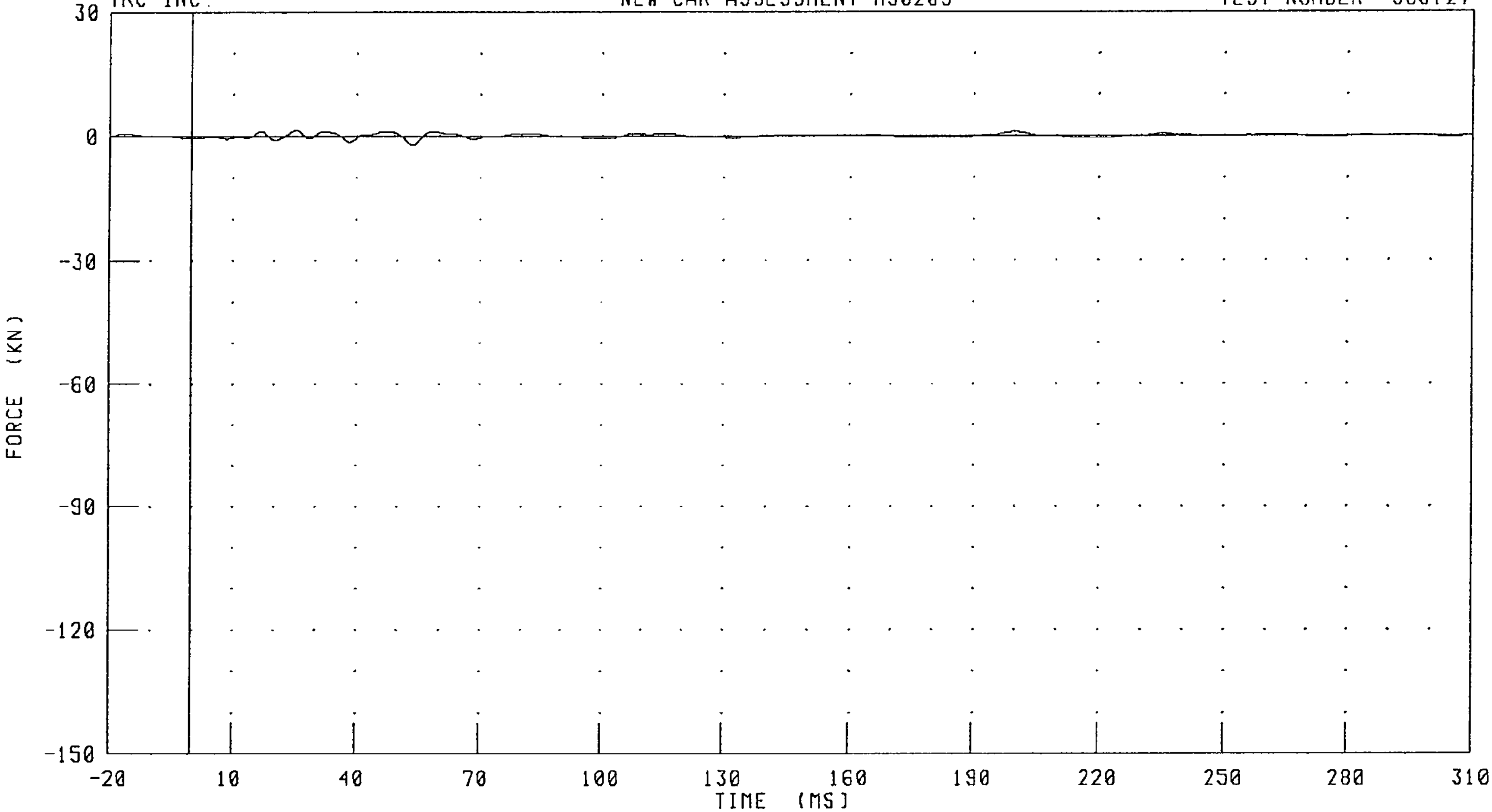
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION A5 FORCE
NEW CAR ASSESSMENT MS0205



CHANNEL: BA5F FILTER: CH. CLASS 60 PEAK DATA: 1.36 KN @ 25.12 MS; -2.39 KN @ 91.44 MS

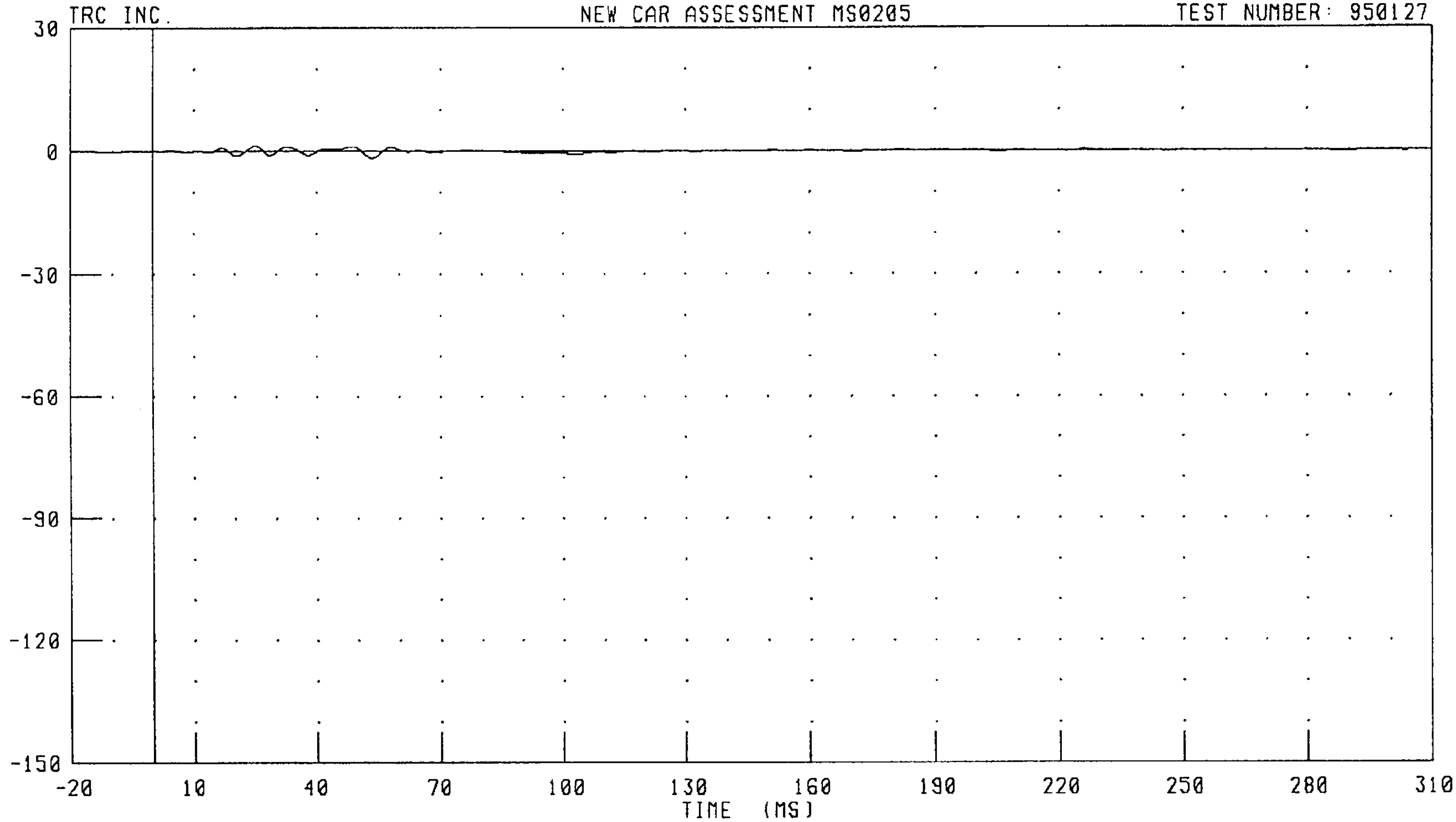
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION A6 FORCE
NEW CAR ASSESSMENT MS0205

TRC INC. TEST NUMBER: 950127

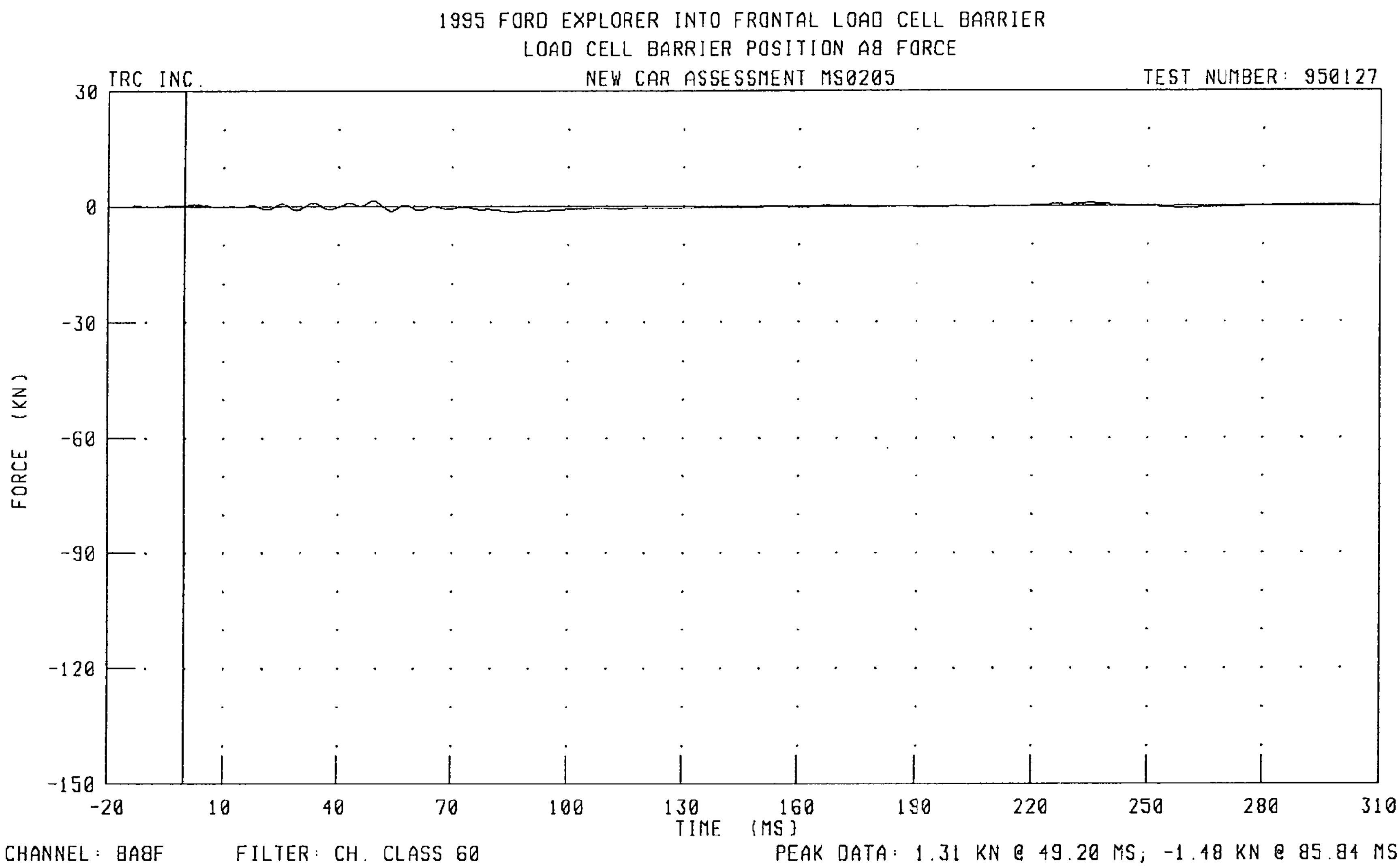


CHANNEL: BA6F FILTER: CH. CLASS 60 PEAK DATA: 1.43 KN @ 25.44 MS; -2.16 KN @ 53.52 MS

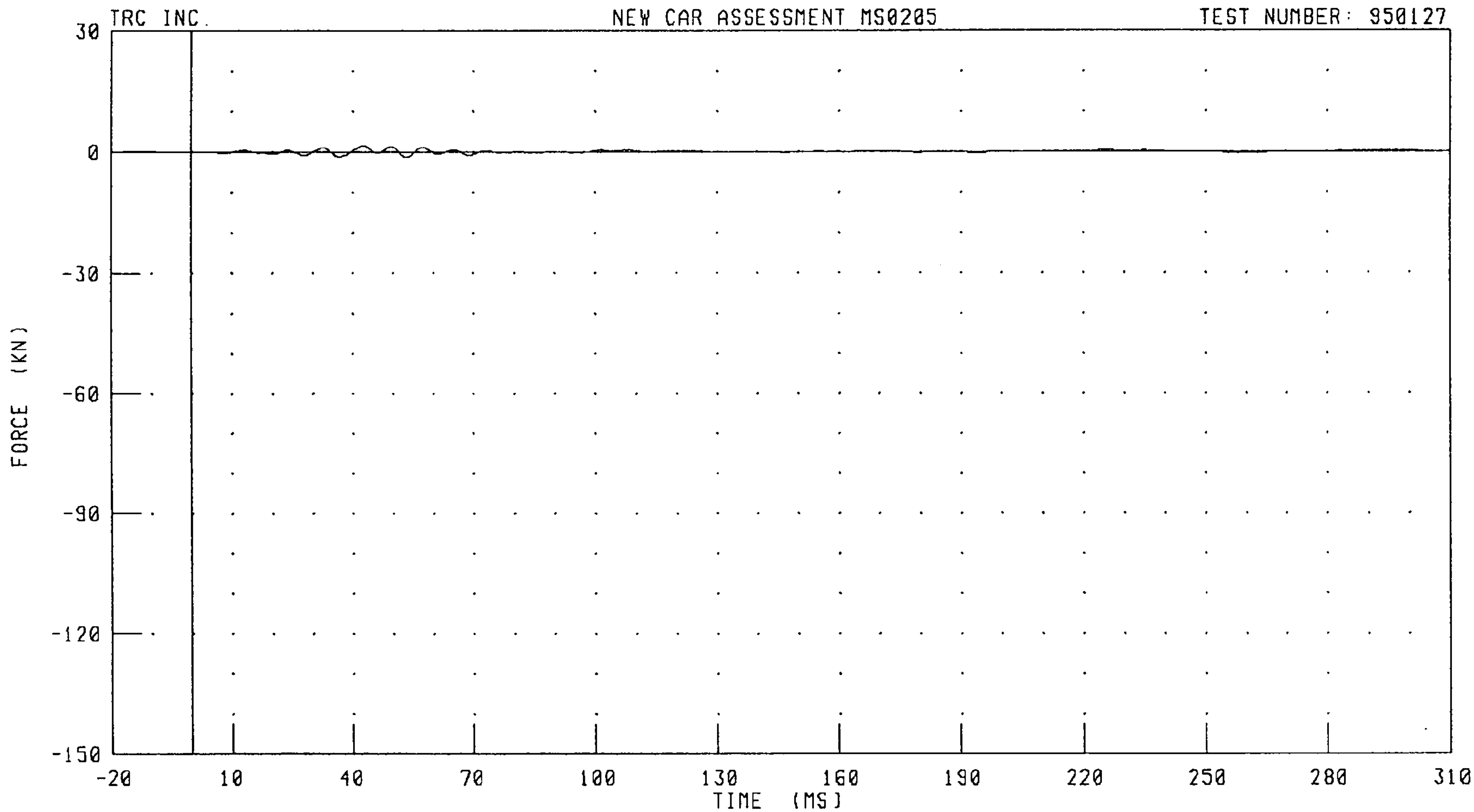
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION A7 FORCE
NEW CAR ASSESSMENT MS0205



CHANNEL: BA7F FILTER: CH. CLASS 60 PEAK DATA: 1.27 KN @ 25.28 MS; -1.74 KN @ 53.60 MS


1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION A8 FORCE
TRC INC.
NEW CAR ASSESSMENT MS0205
TEST NUMBER: 950127
30
0
-30
-60
-90
-120
-150
FORCE (KN)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: 8A8F
FILTER: CH. CLASS 60
PEAK DATA: 1.31 KN @ 49.20 MS; -1.48 KN @ 85.84 MS

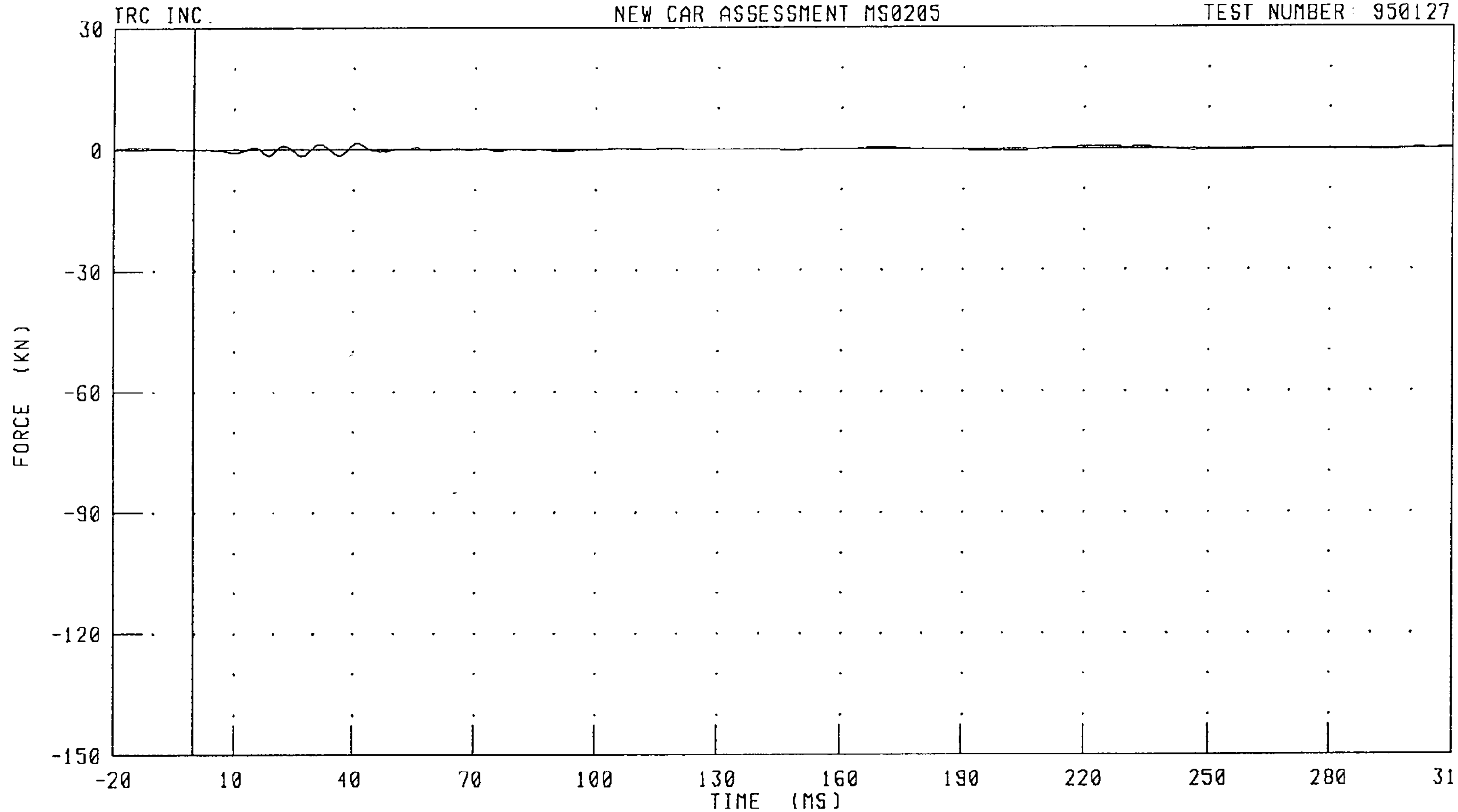
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION A9 FORCE
NEW CAR ASSESSMENT MS0205



CHANNEL: 8A9F FILTER: CH. CLASS 60 PEAK DATA: 1.50 KN @ 42.64 MS; -1.39 KN @ 53.36 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION B1 FORCE
NEW CAR ASSESSMENT MS0205

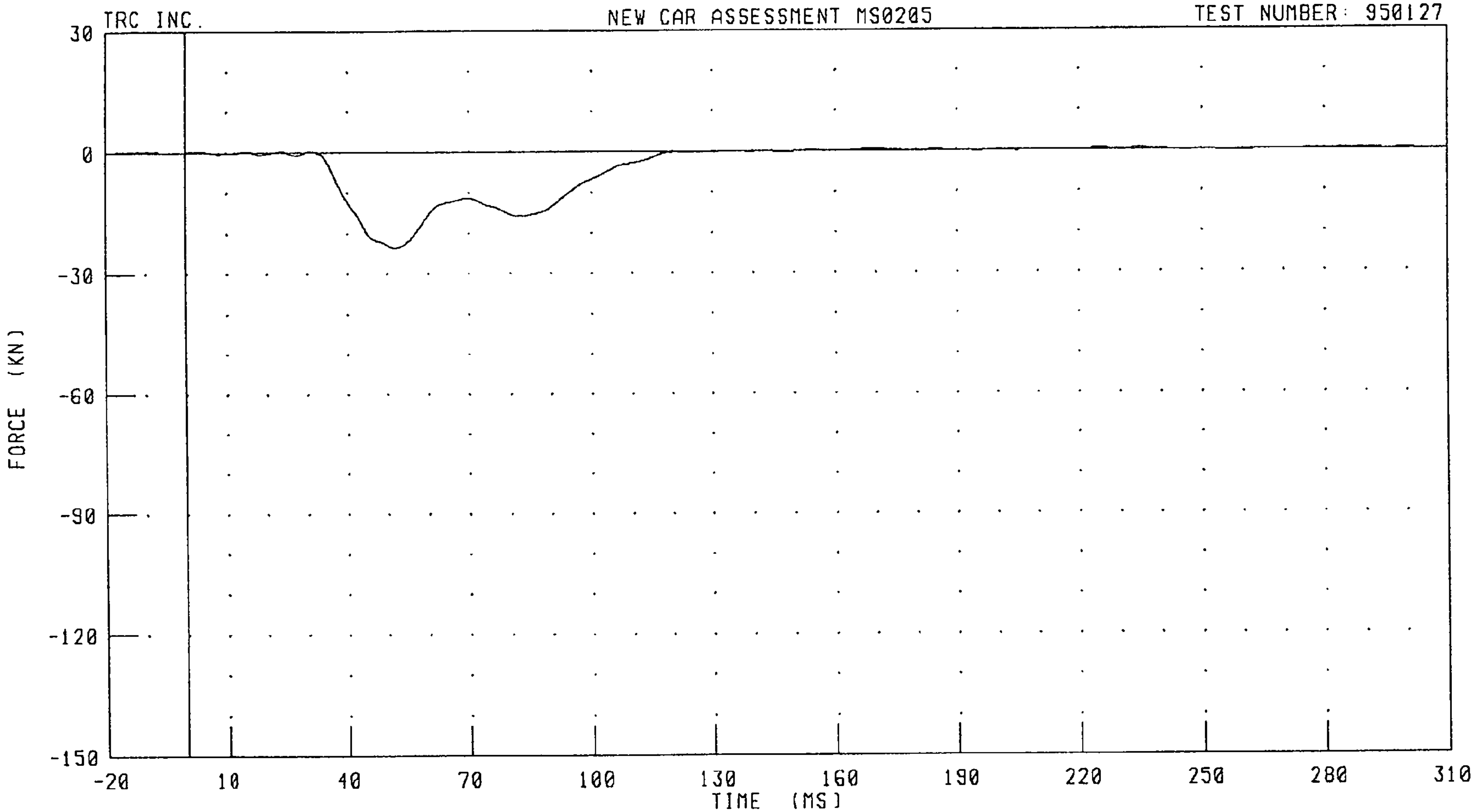
TRC INC. TEST NUMBER: 950127



CHANNEL: BB1F FILTER: CH. CLASS 60 PEAK DATA: 1.56 KN @ 41.04 MS; -1.57 KN @ 27.28 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION B2 FORCE
NEW CAR ASSESSMENT MS0205

TEST NUMBER: 950127

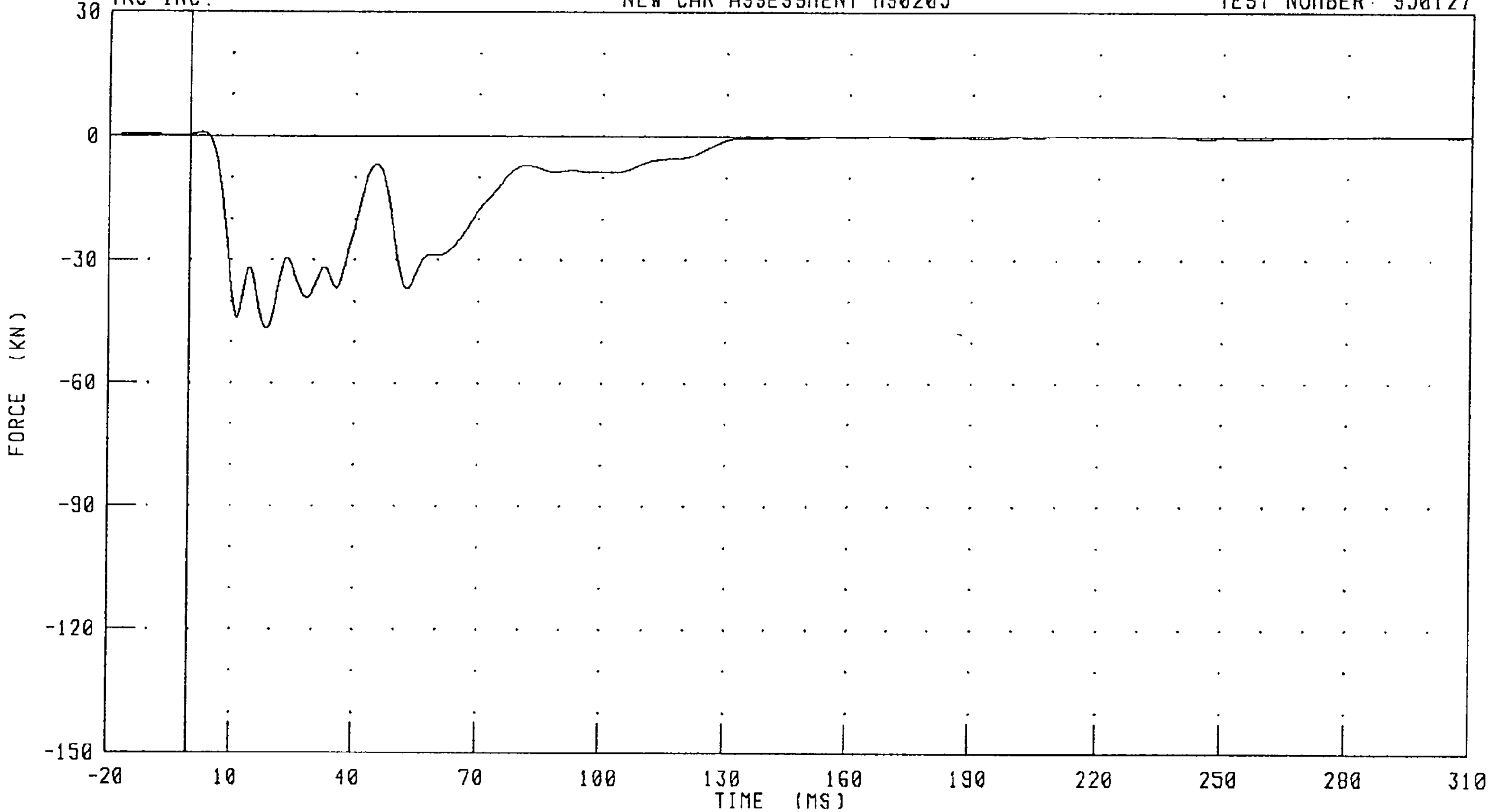


CHANNEL: BB2F FILTER: CH. CLASS 60 PEAK DATA: 0.42 KN @ 168.40 MS; -23.73 KN @ 52.08 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION B3 FORCE
NEW CAR ASSESSMENT MS0205

TRC INC.

TEST NUMBER: 950127

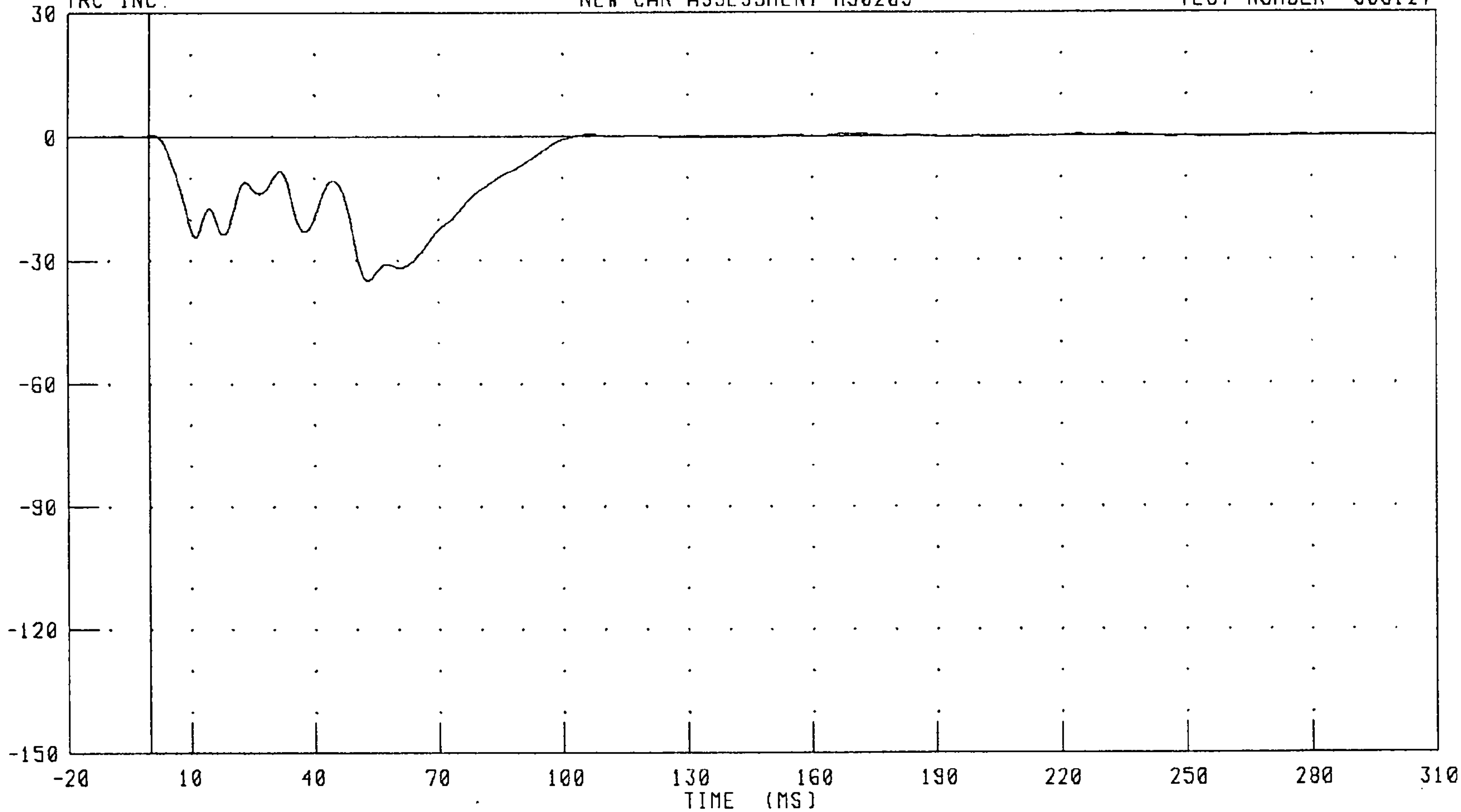


CHANNEL: BB3F FILTER: CH. CLASS 60 PEAK DATA: 0.85 KN @ 2.88 MS; -46.55 KN @ 18.72 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION B4 FORCE
NEW CAR ASSESSMENT MS0205

TRC INC.

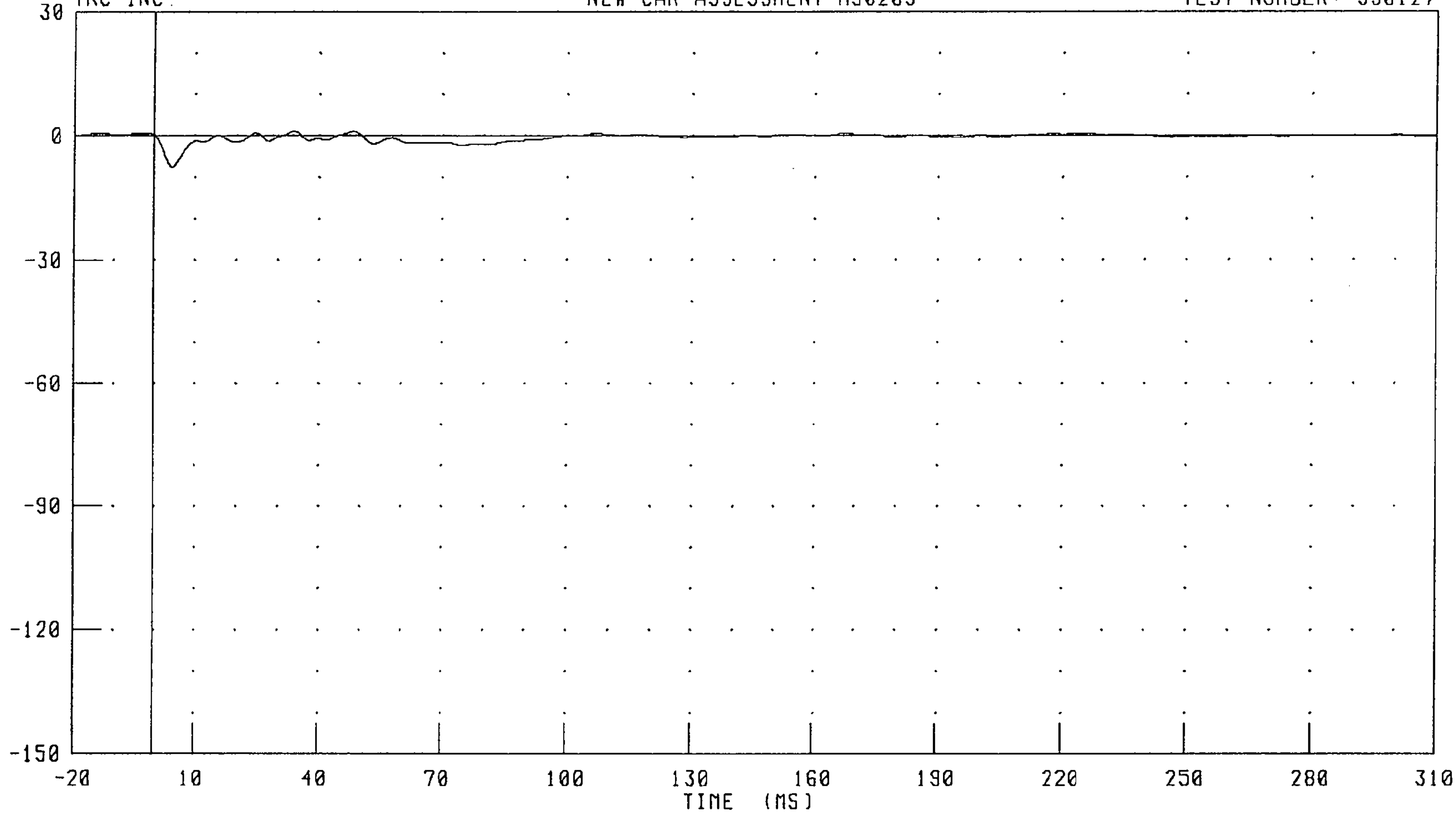
TEST NUMBER: 950127



CHANNEL: BB4F FILTER: CH. CLASS 60 PEAK DATA: 0.47 KN @ 168.24 MS; -34.87 KN @ 52.88 MS

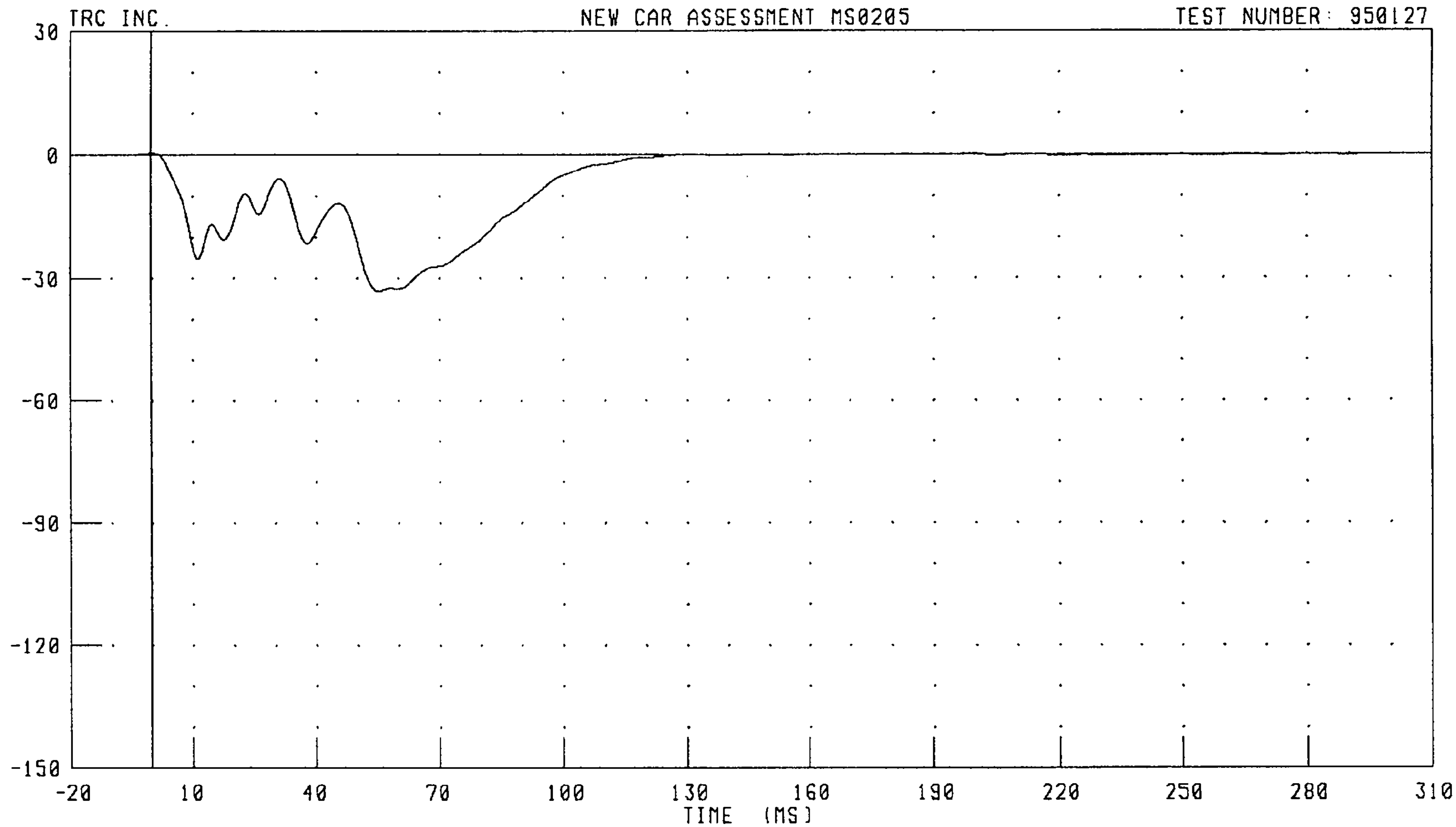
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION B5 FORCE
NEW CAR ASSESSMENT MS0205

TRC INC. TEST NUMBER: 950127



CHANNEL: BB5F FILTER: CH. CLASS 60 PEAK DATA: 1.05 KN @ 34.00 MS; -7.66 KN @ 4.24 MS

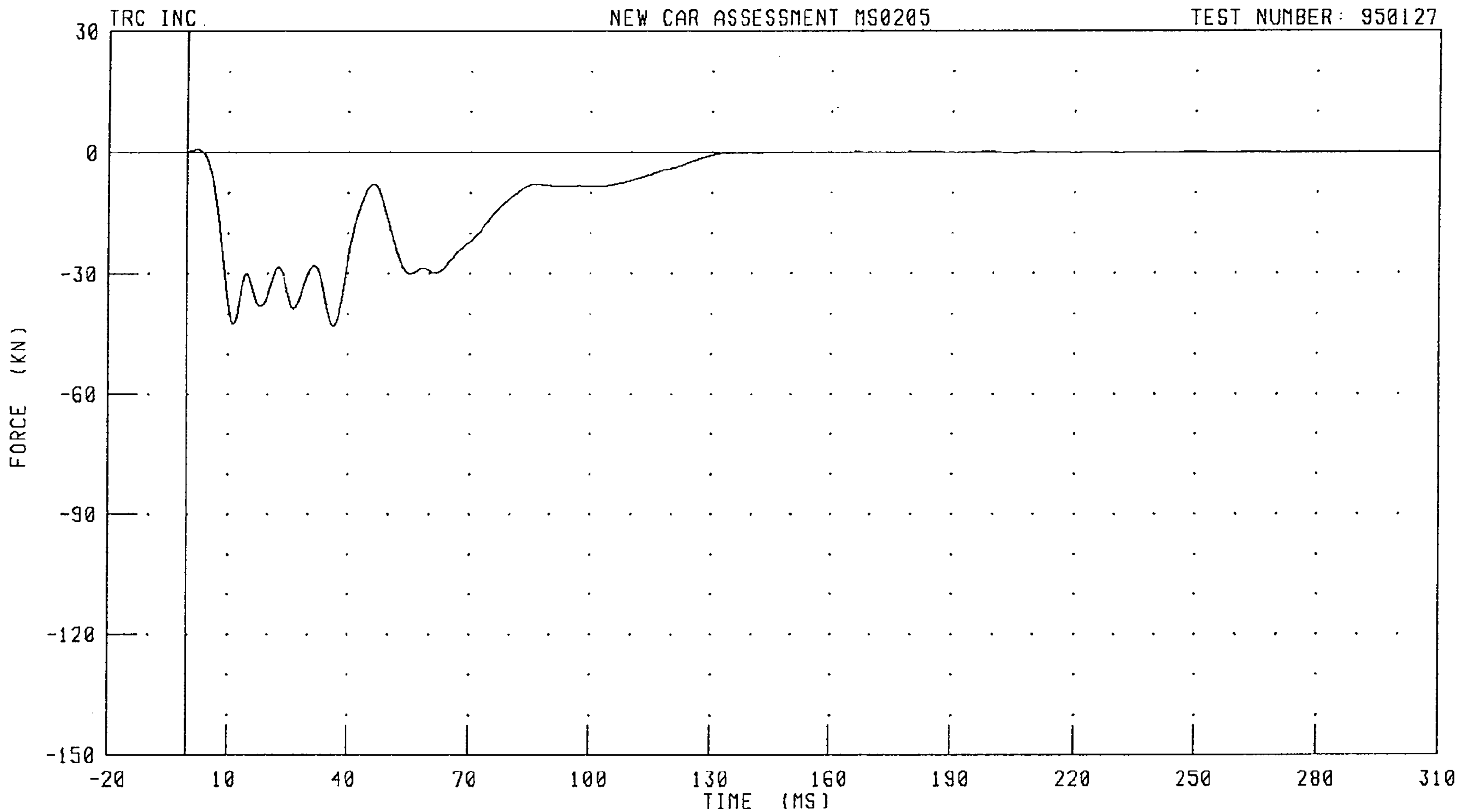
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION B6 FORCE
NEW CAR ASSESSMENT MS0205



CHANNEL: BB6F FILTER: CH. CLASS 60 PEAK DATA: 0.41 KN @ 0.32 MS; -33.10 KN @ 55.36 MS

950127

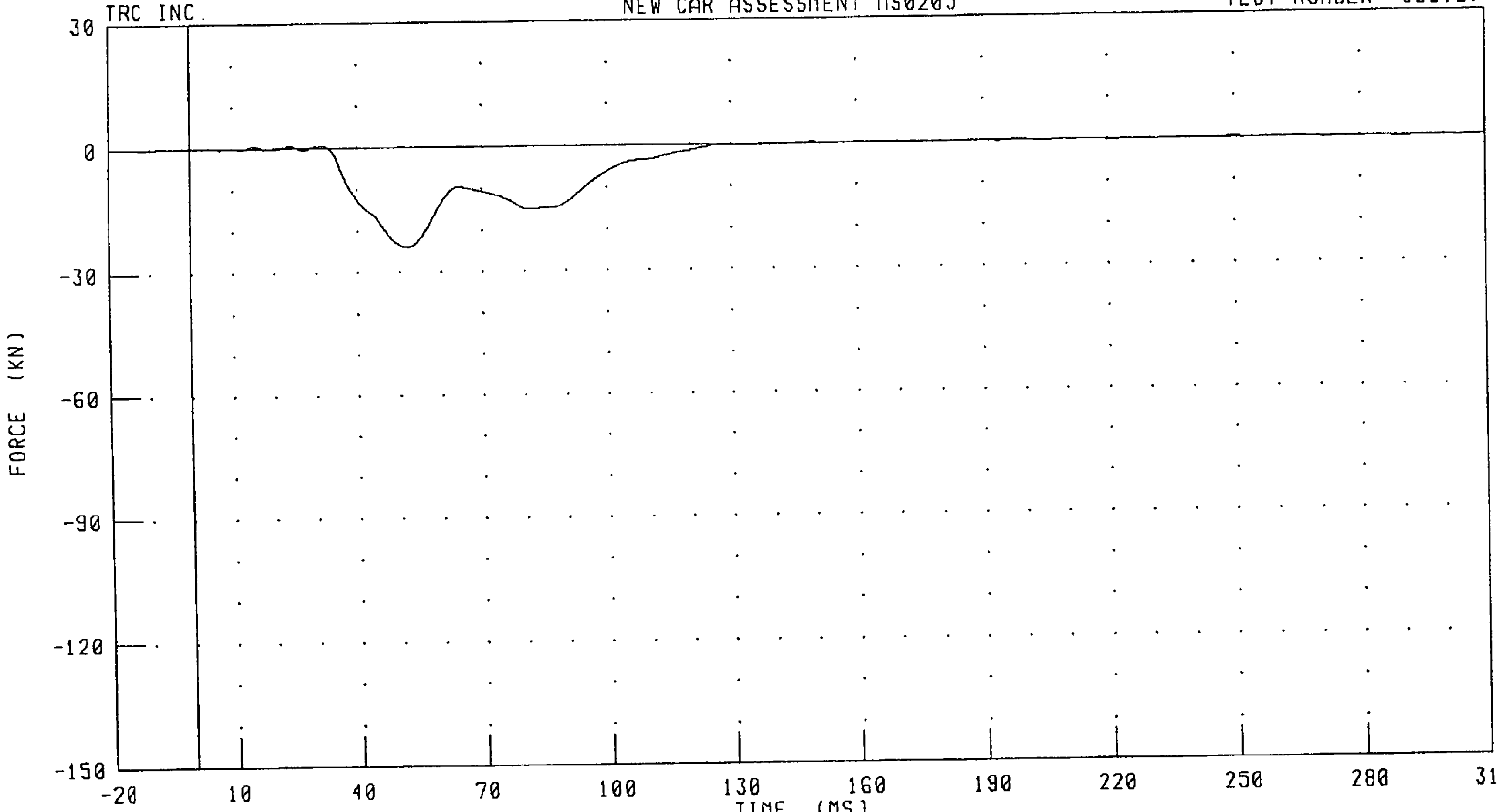
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION B7 FORCE
NEW CAR ASSESSMENT MS0205



CHANNEL: BB7F FILTER: CH. CLASS 60 PEAK DATA: 0.69 KN @ 2.32 MS; -42.95 KN @ 36.40 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION B8 FORCE
NEW CAR ASSESSMENT MS0205

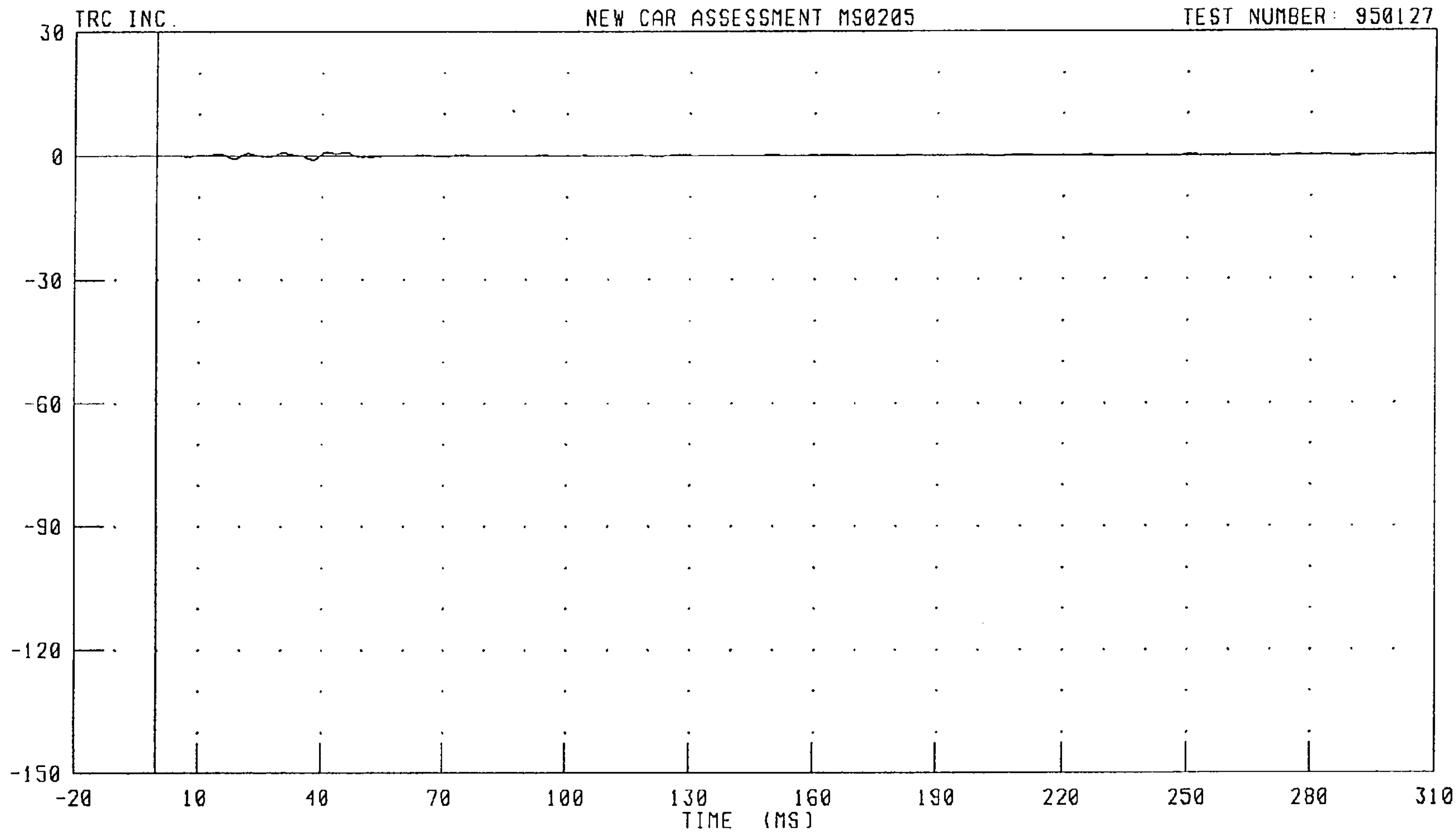
TEST NUMBER: 950127



CHANNEL: B8BF FILTER: CH. CLASS 60 PEAK DATA: 0.54 KN @ 31.12 MS; -23.98 KN @ 52.00 MS

950127

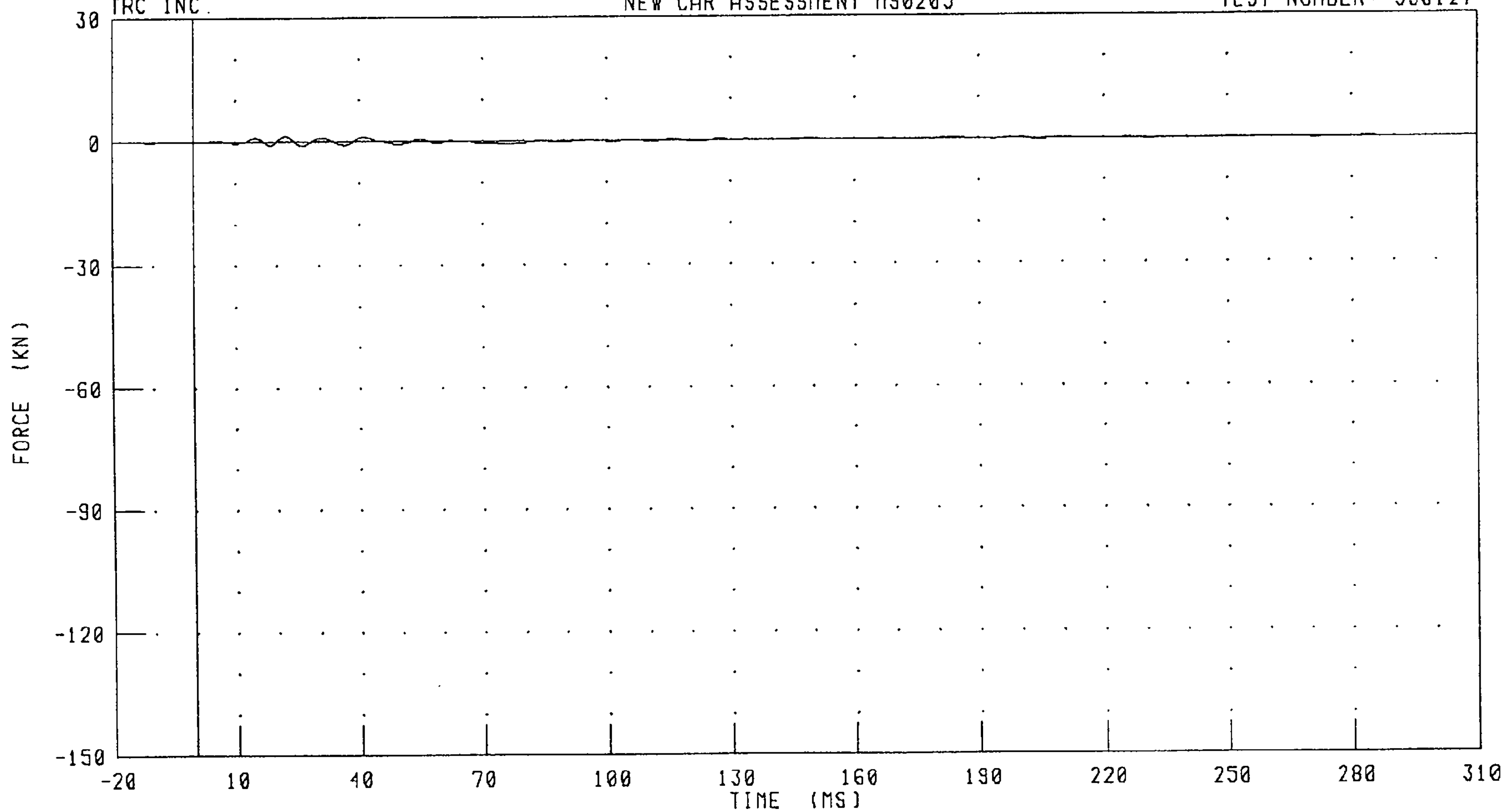
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION B9 FORCE
NEW CAR ASSESSMENT MS0205



CHANNEL: BB9F FILTER: CH. CLASS 60 PEAK DATA: 0.87 KN @ 41.28 MS; -1.03 KN @ 37.68 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION C1 FORCE
NEW CAR ASSESSMENT MS0205

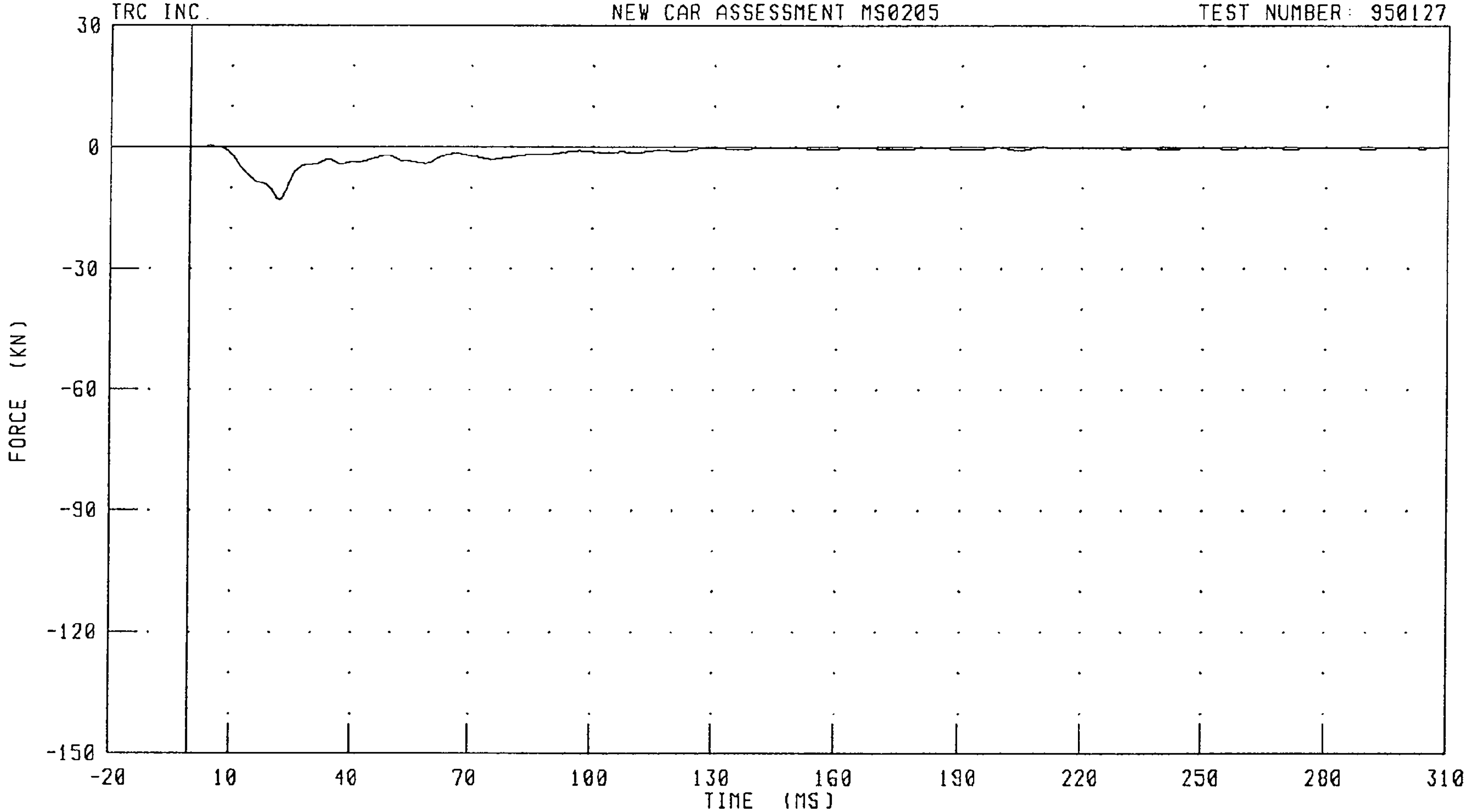
TEST NUMBER: 950127



CHANNEL: BC1F FILTER: CH. CLASS 60 PEAK DATA: 1.19 KN @ 22.16 MS; -1.17 KN @ 26.32 MS

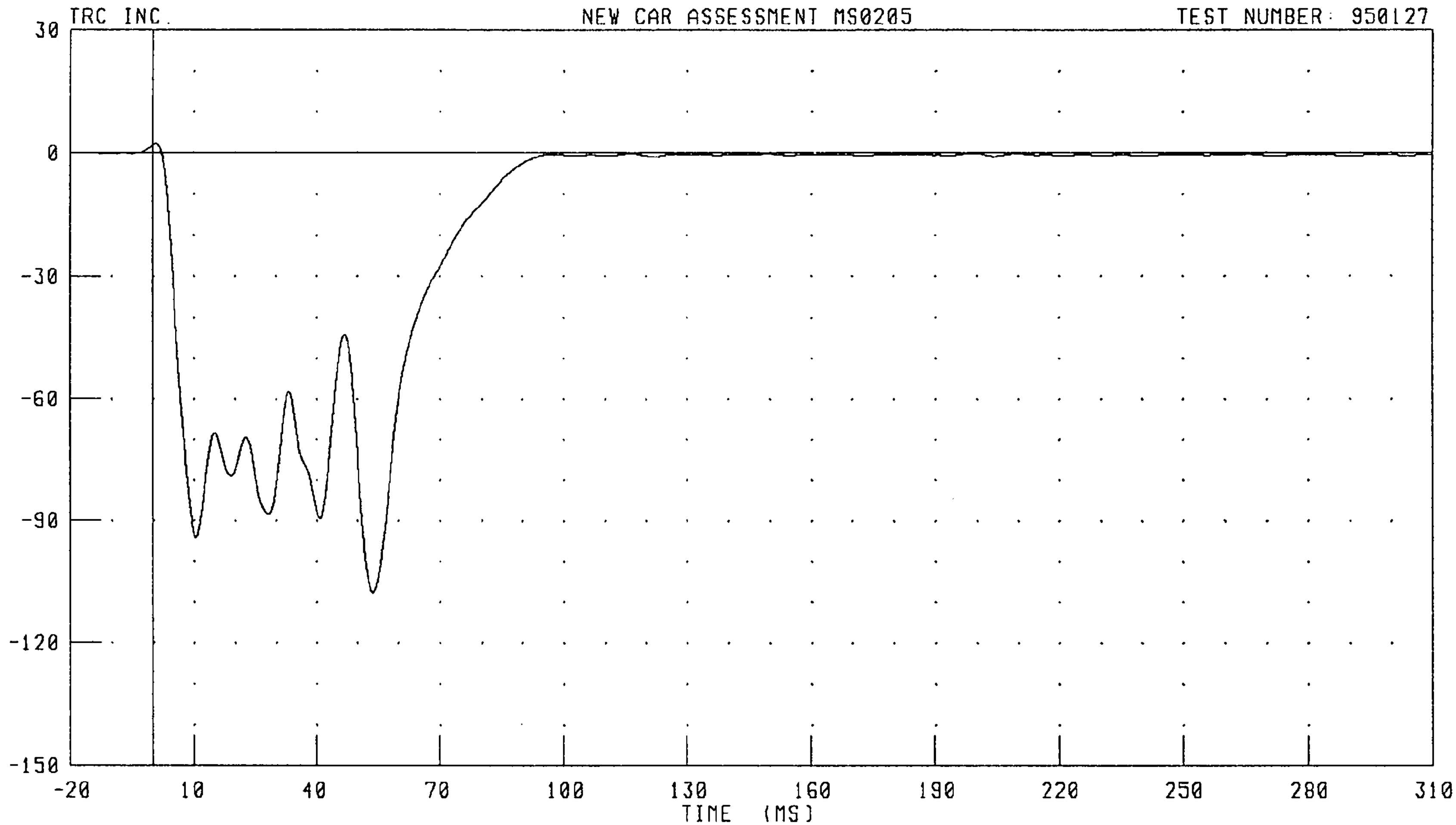
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION C2 FORCE

TRC INC. NEW CAR ASSESSMENT MS0205 TEST NUMBER: 950127



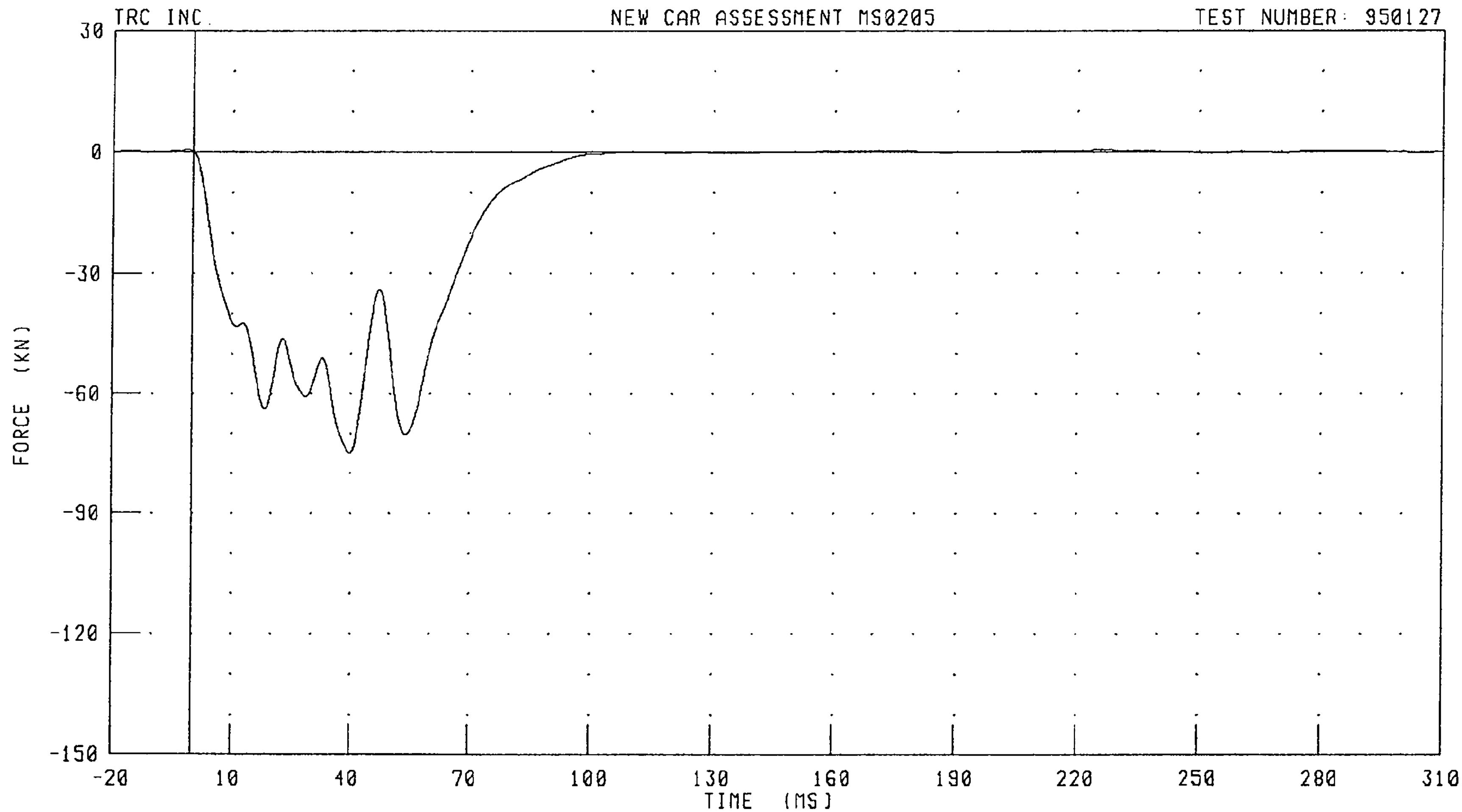
CHANNEL: BC2F FILTER: CH. CLASS 60 PEAK DATA: 0.36 KN @ 4.80 MS; -12.88 KN @ 22.08 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION C3 FORCE
NEW CAR ASSESSMENT MS0205



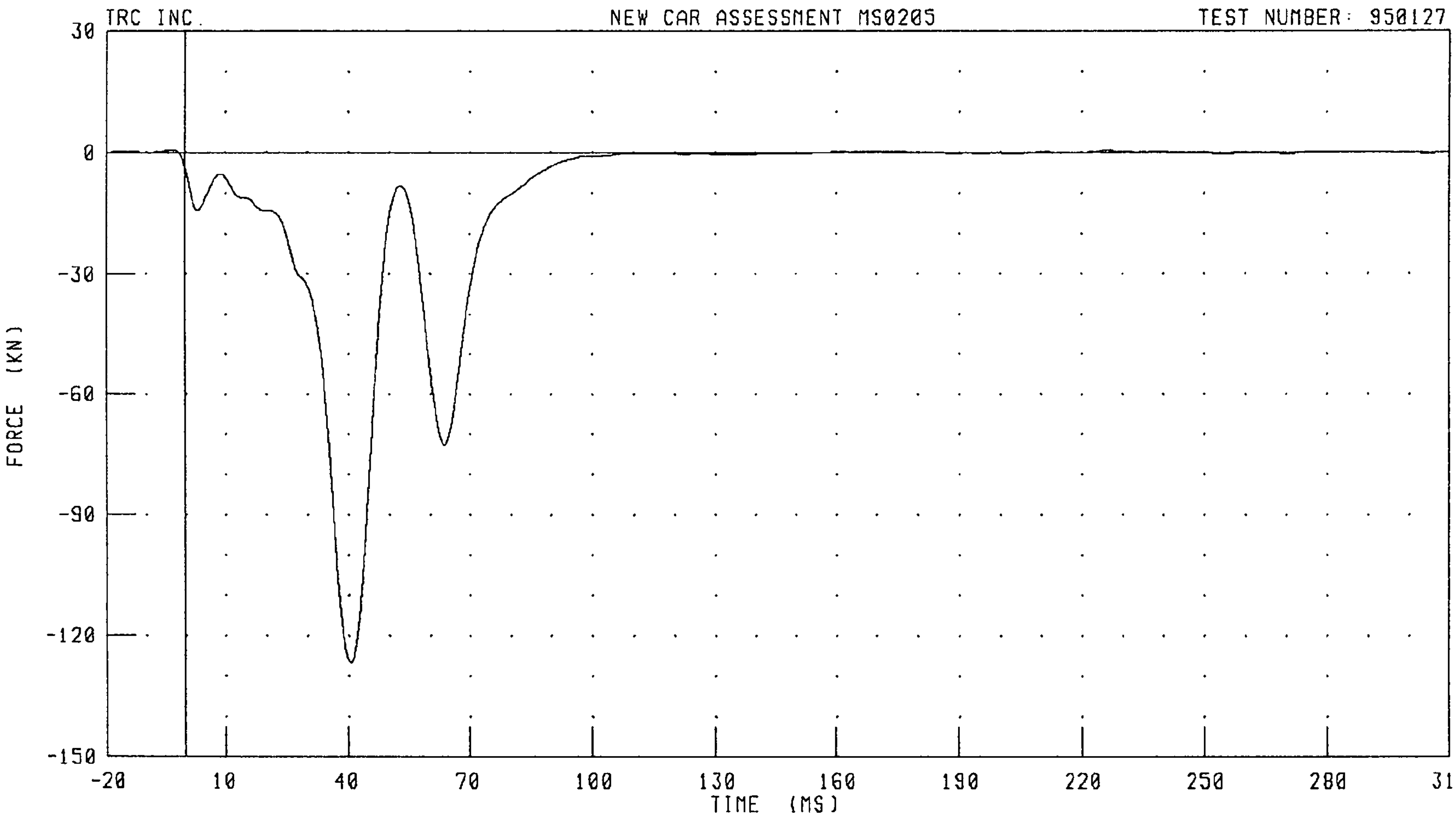
CHANNEL: BC3F FILTER: CH. CLASS 60 PEAK DATA: 2.15 KN @ 0.72 MS; -107.63 KN @ 53.84 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION C4 FORCE
NEW CAR ASSESSMENT MS0205



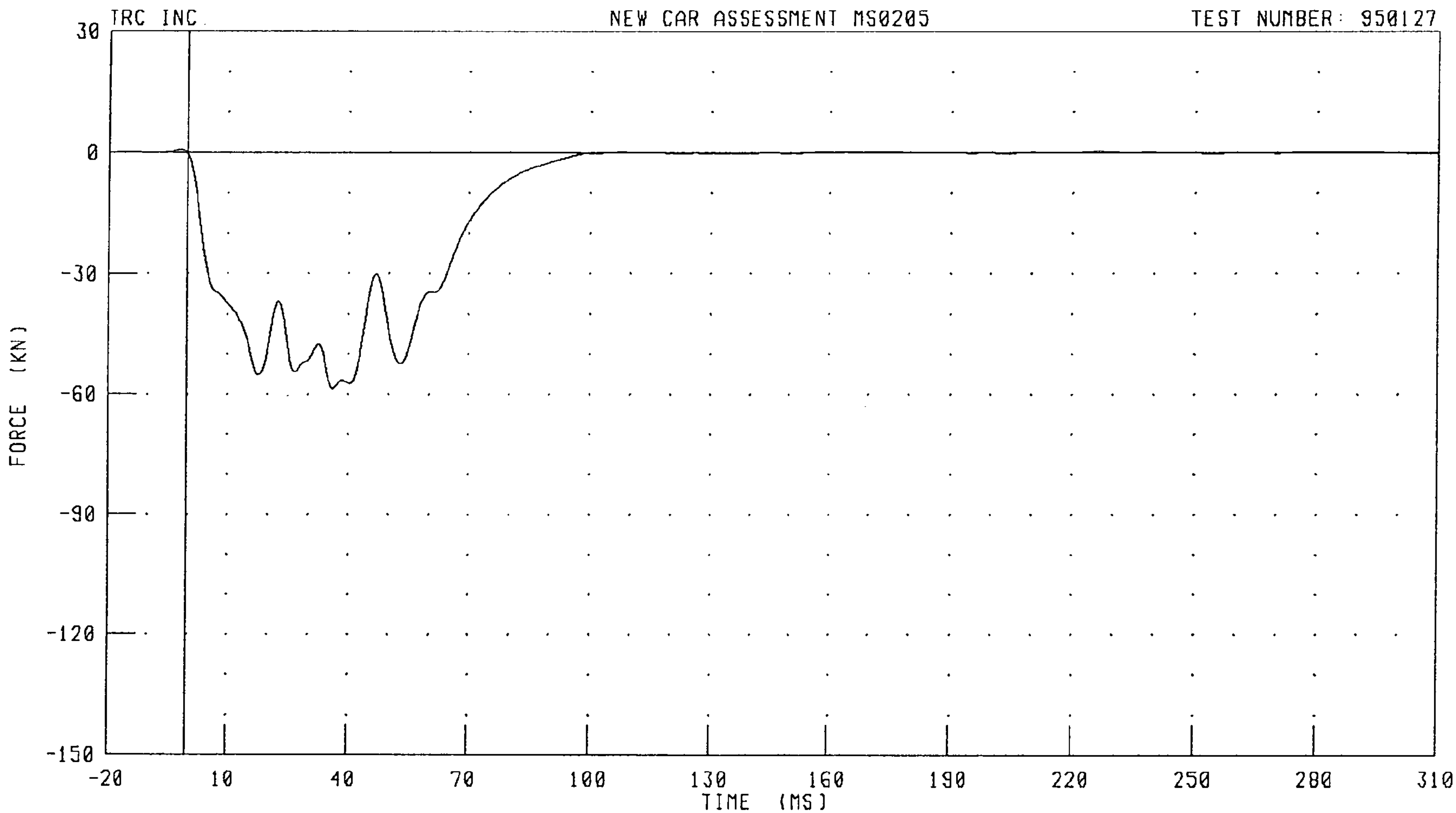
CHANNEL: BC4F FILTER: CH. CLASS 60 PEAK DATA: 0.48 KN @ -1.44 MS; -74.91 KN @ 39.92 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION C5 FORCE
NEW CAR ASSESSMENT MS0205



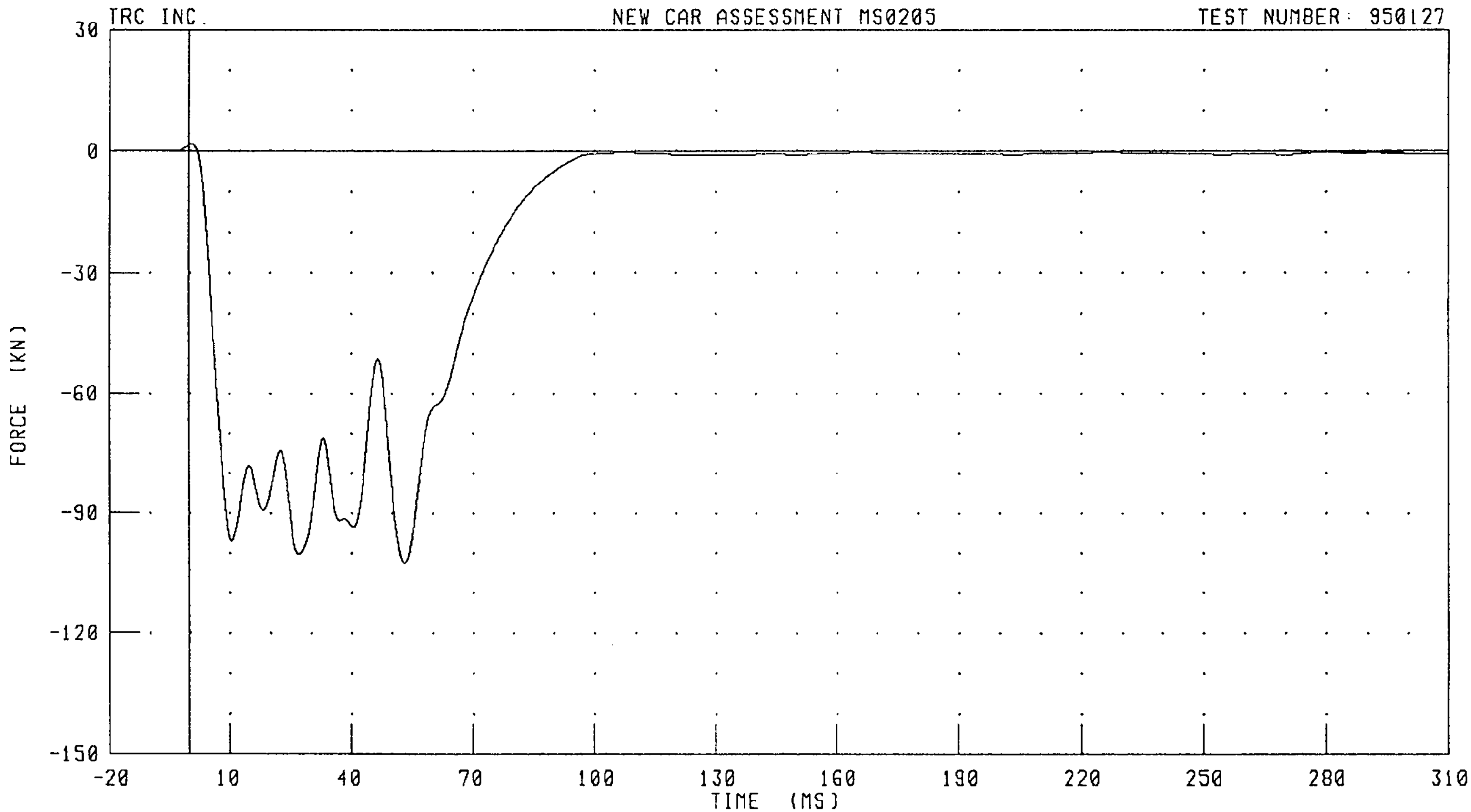
CHANNEL: BC5F FILTER: CH. CLASS 60 PEAK DATA: 0.60 KN @ -3.44 MS; -126.68 KN @ 40.64 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION C6 FORCE
NEW CAR ASSESSMENT MS0205



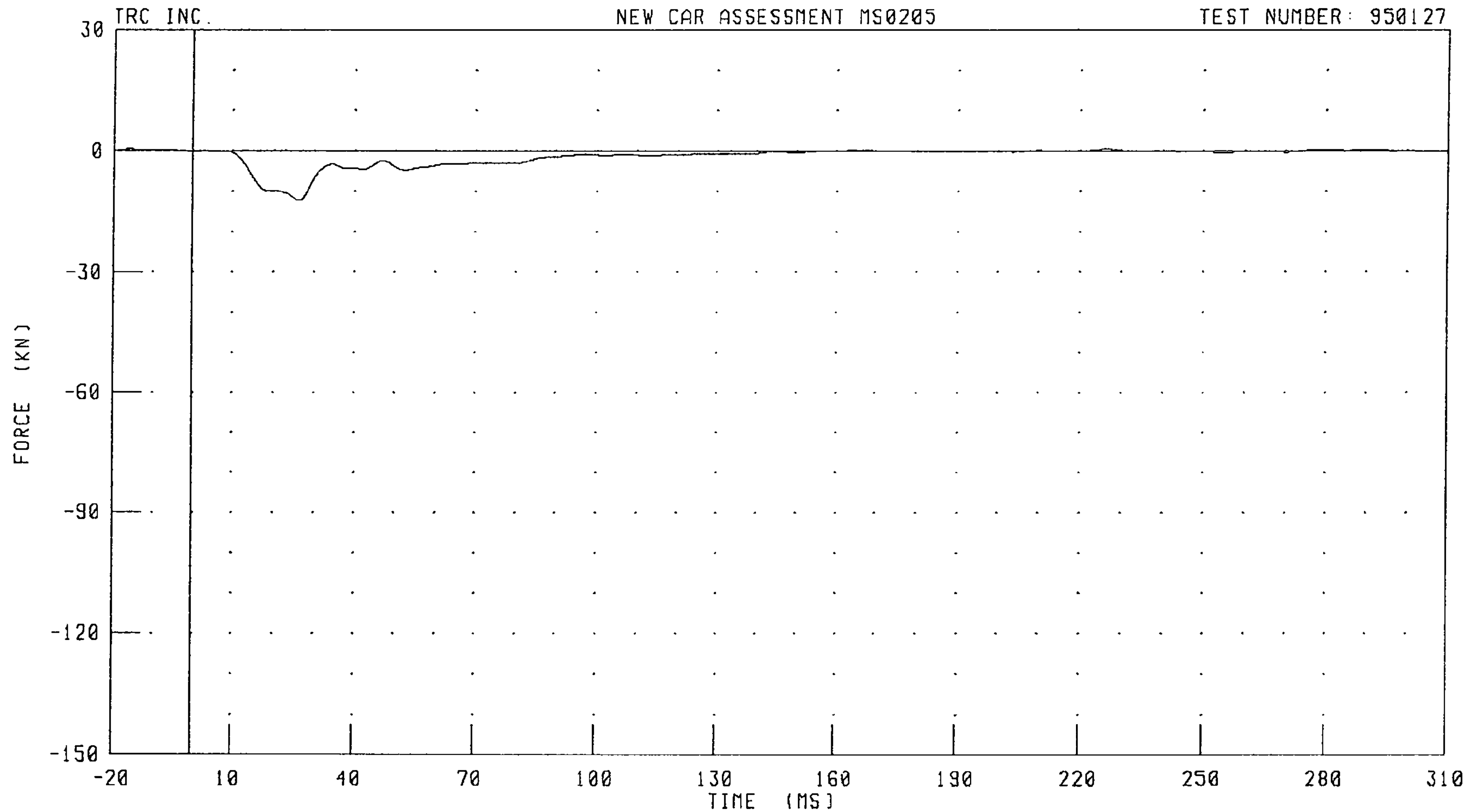
CHANNEL: BC6F   FILTER: CH. CLASS 60   PEAK DATA: 0.71 KN @ -1.76 MS; -58.63 KN @ 36.32 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION C7 FORCE



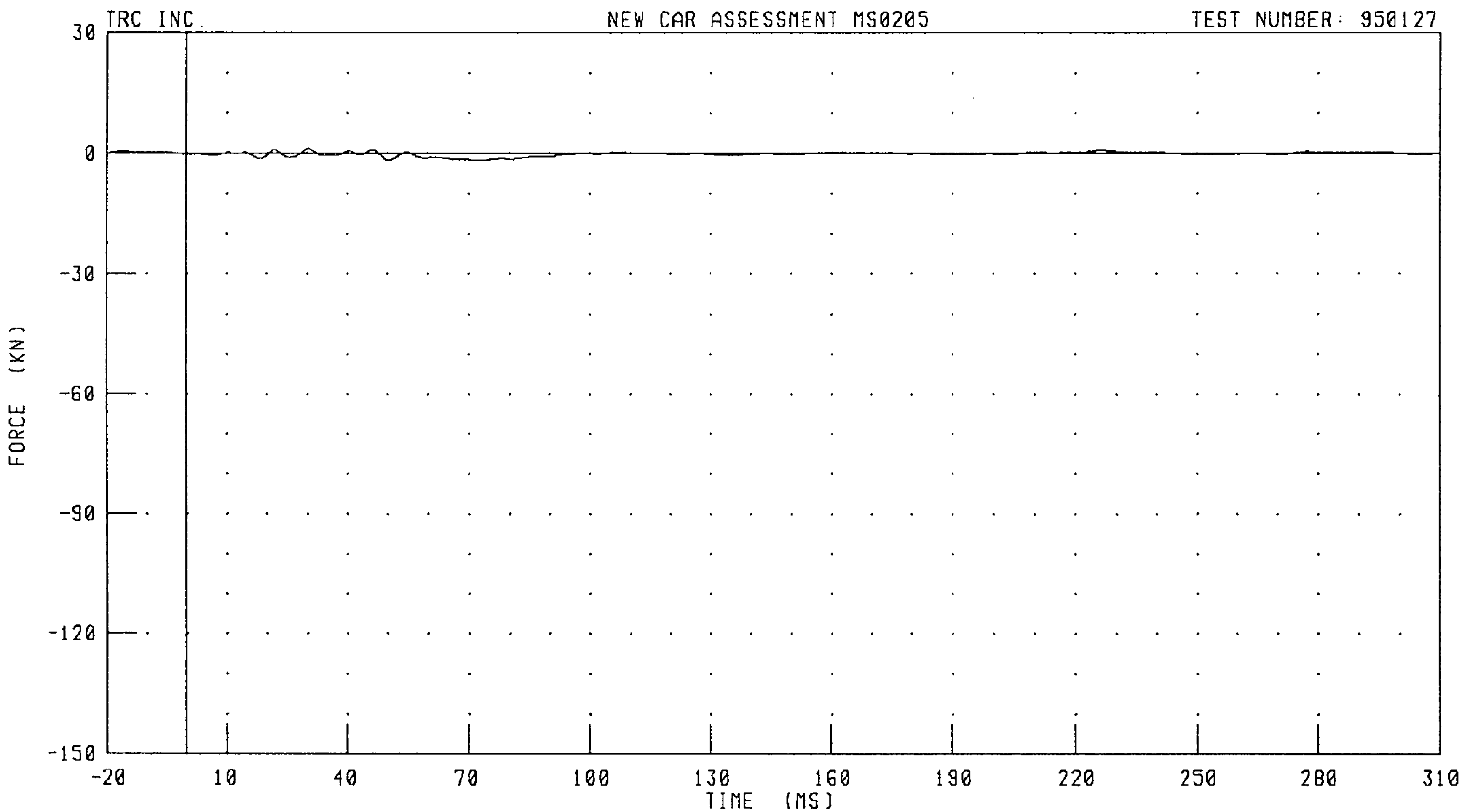
CHANNEL: BC7F FILTER: CH. CLASS 60 PEAK DATA: 1.73 KN @ 0.64 MS; -102.63 KN @ 53.12 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION C8 FORCE
NEW CAR ASSESSMENT MS0205



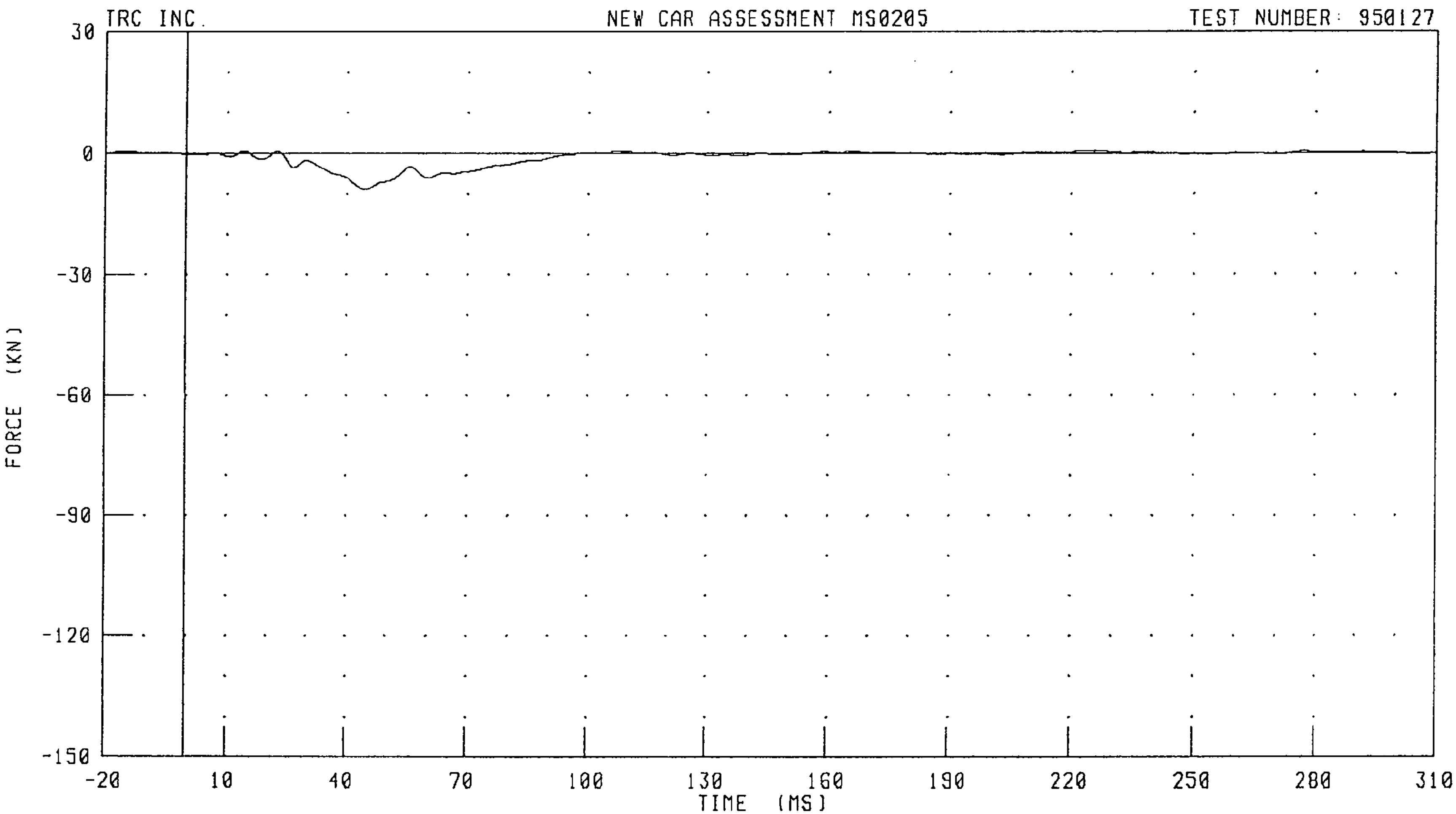
CHANNEL: BC8F FILTER: CH. CLASS 60 PEAK DATA: 0.40 KN @ 226.32 MS; -12.31 KN @ 26.32 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION C9 FORCE



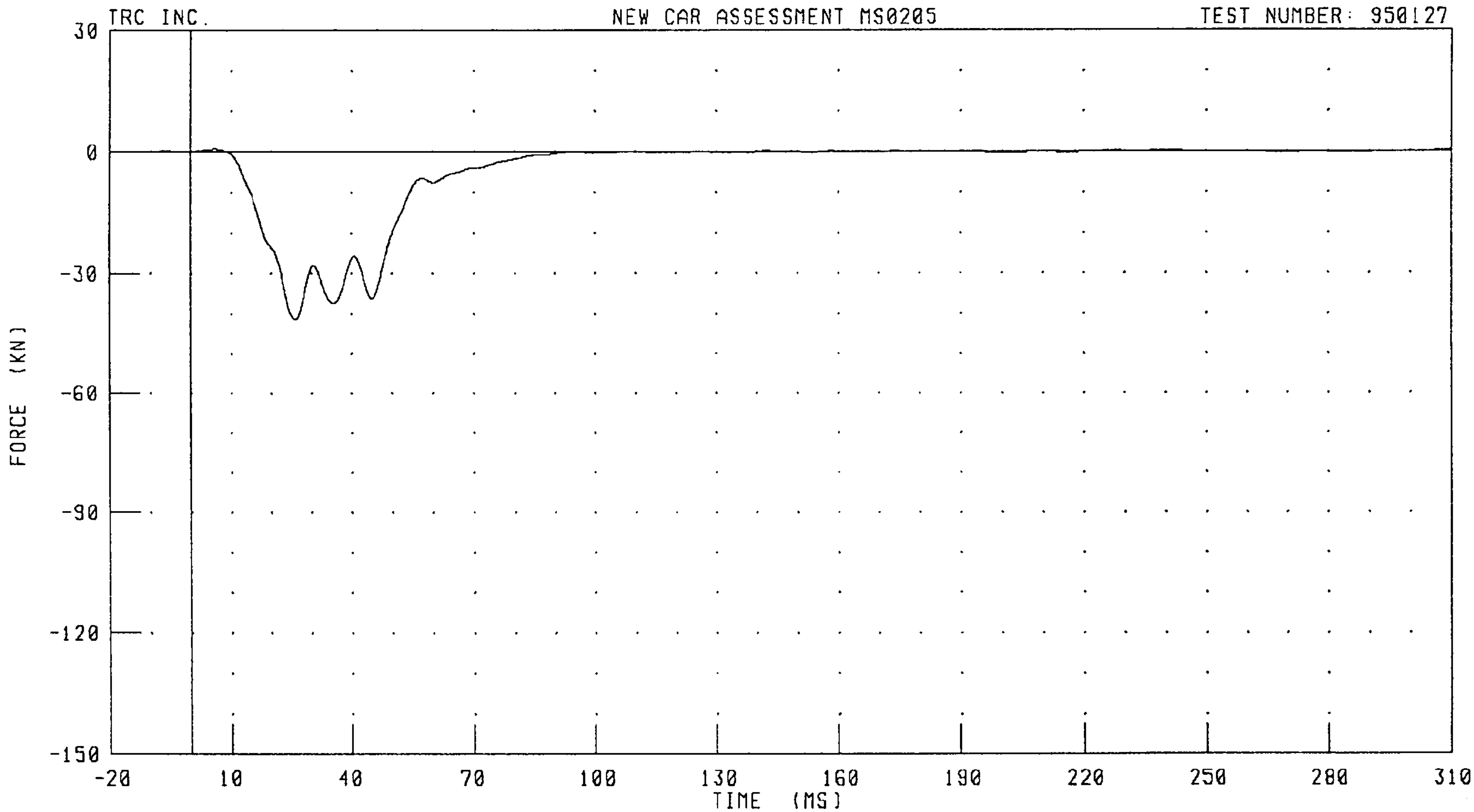
CHANNEL: BC9F FILTER: CH. CLASS 60 PEAK DATA: 0.92 KN @ 30.40 MS; -1.85 KN @ 72.96 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION D1 FORCE
NEW CAR ASSESSMENT MS0205



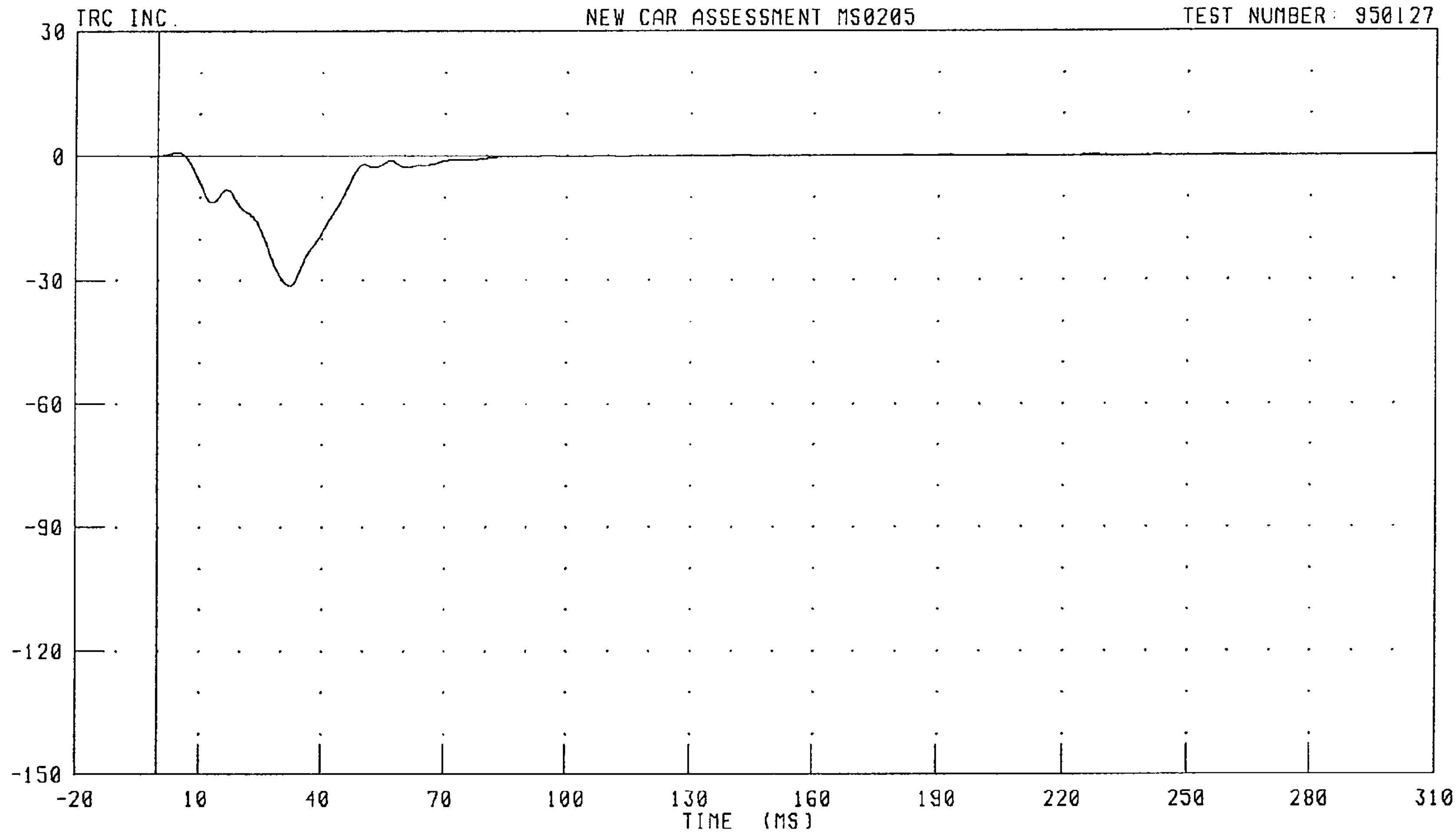
CHANNEL: BD1F FILTER: CH. CLASS 60 PEAK DATA: 0.60 KN @ 225.92 MS; -9.05 KN @ 44.72 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION D2 FORCE
NEW CAR ASSESSMENT MS0205



CHANNEL: BD2F FILTER: CH. CLASS 60 PEAK DATA: 0.62 KN @ 6.00 MS; -41.43 KN @ 26.08 MS

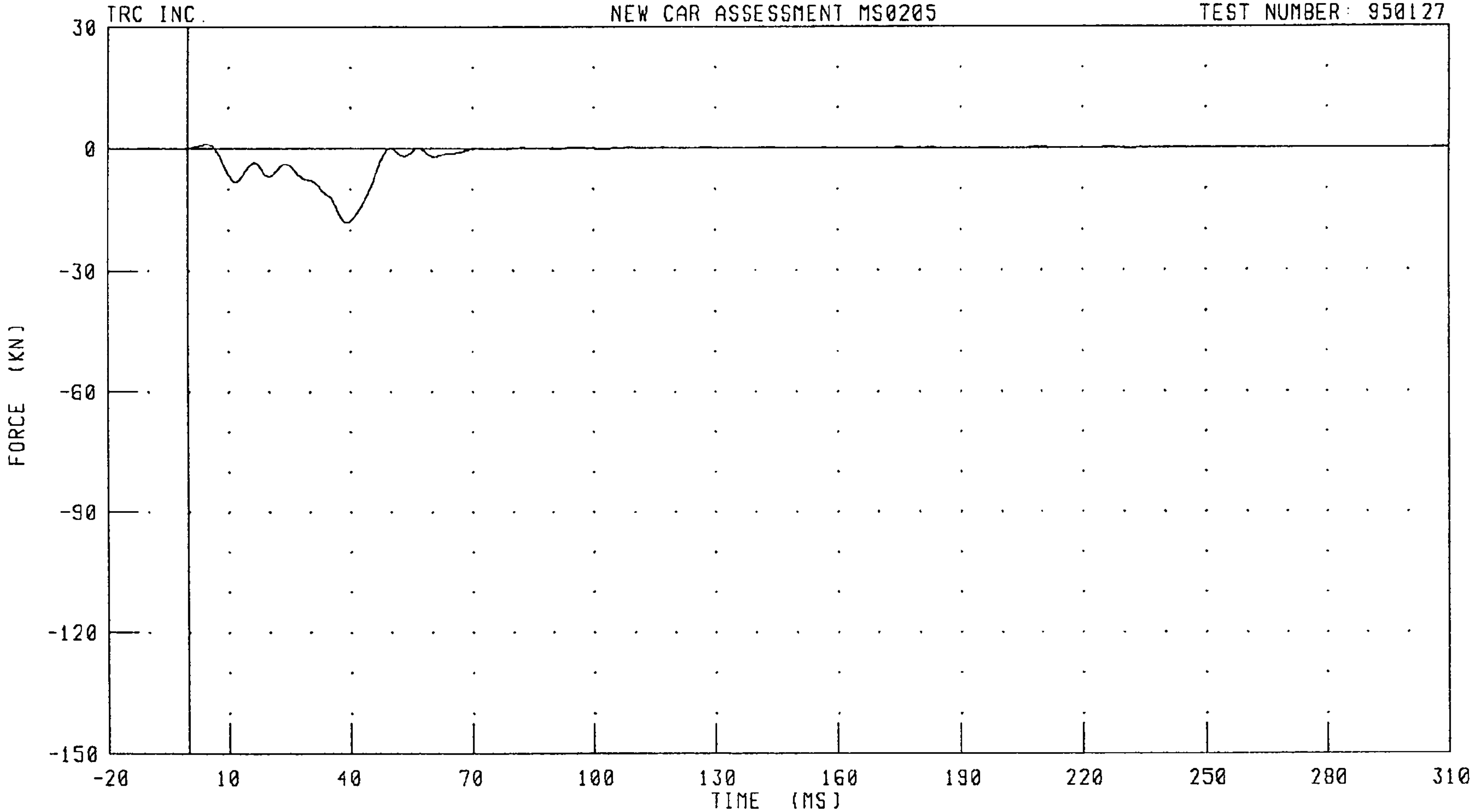
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION D3 FORCE
NEW CAR ASSESSMENT MS0205



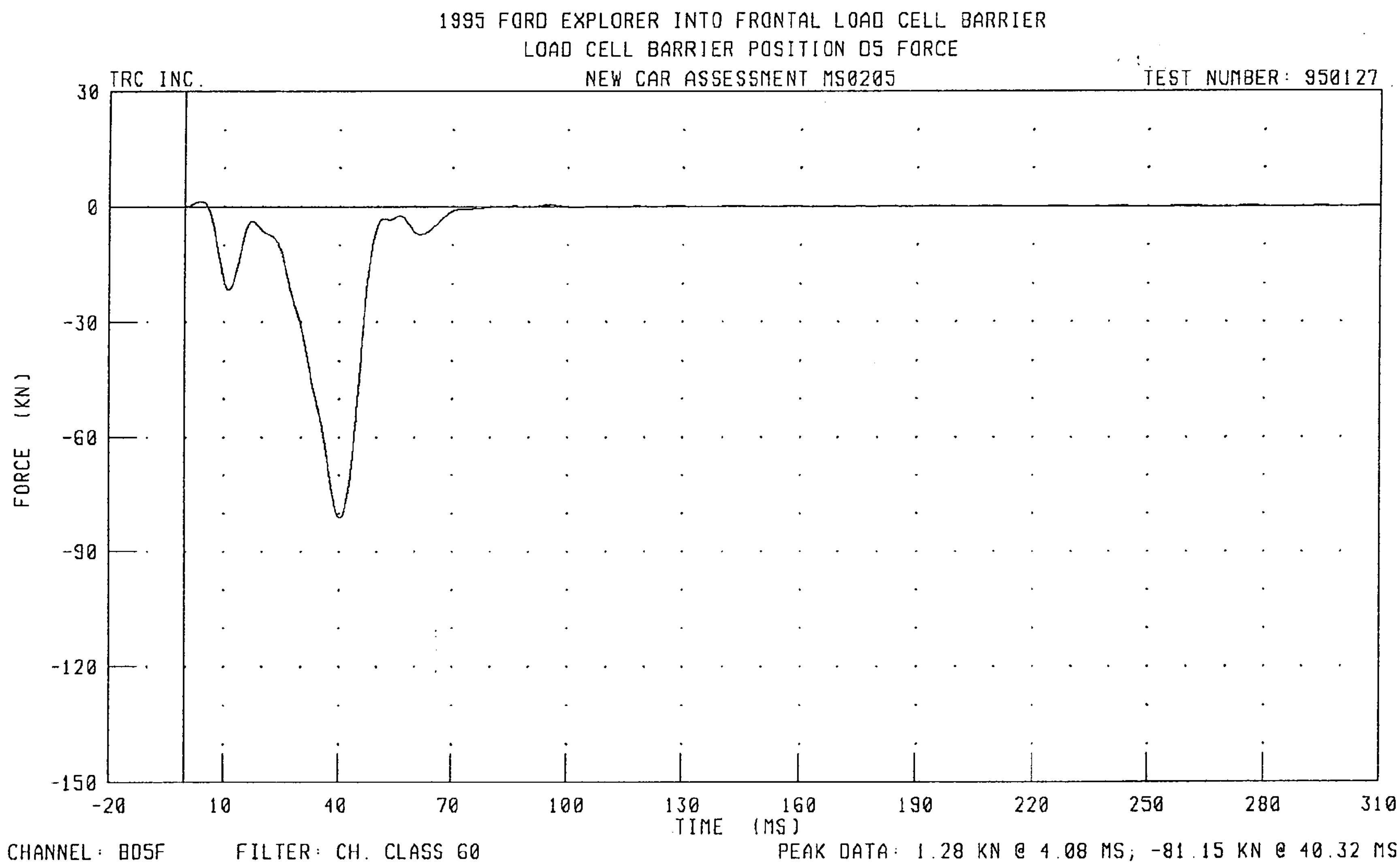
CHANNEL: BD3F FILTER: CH. CLASS 60 PEAK DATA: 0.75 KN @ 4.56 MS; -31.28 KN @ 32.24 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION D4 FORCE
NEW CAR ASSESSMENT MS0205

TRC INC. TEST NUMBER: 950127

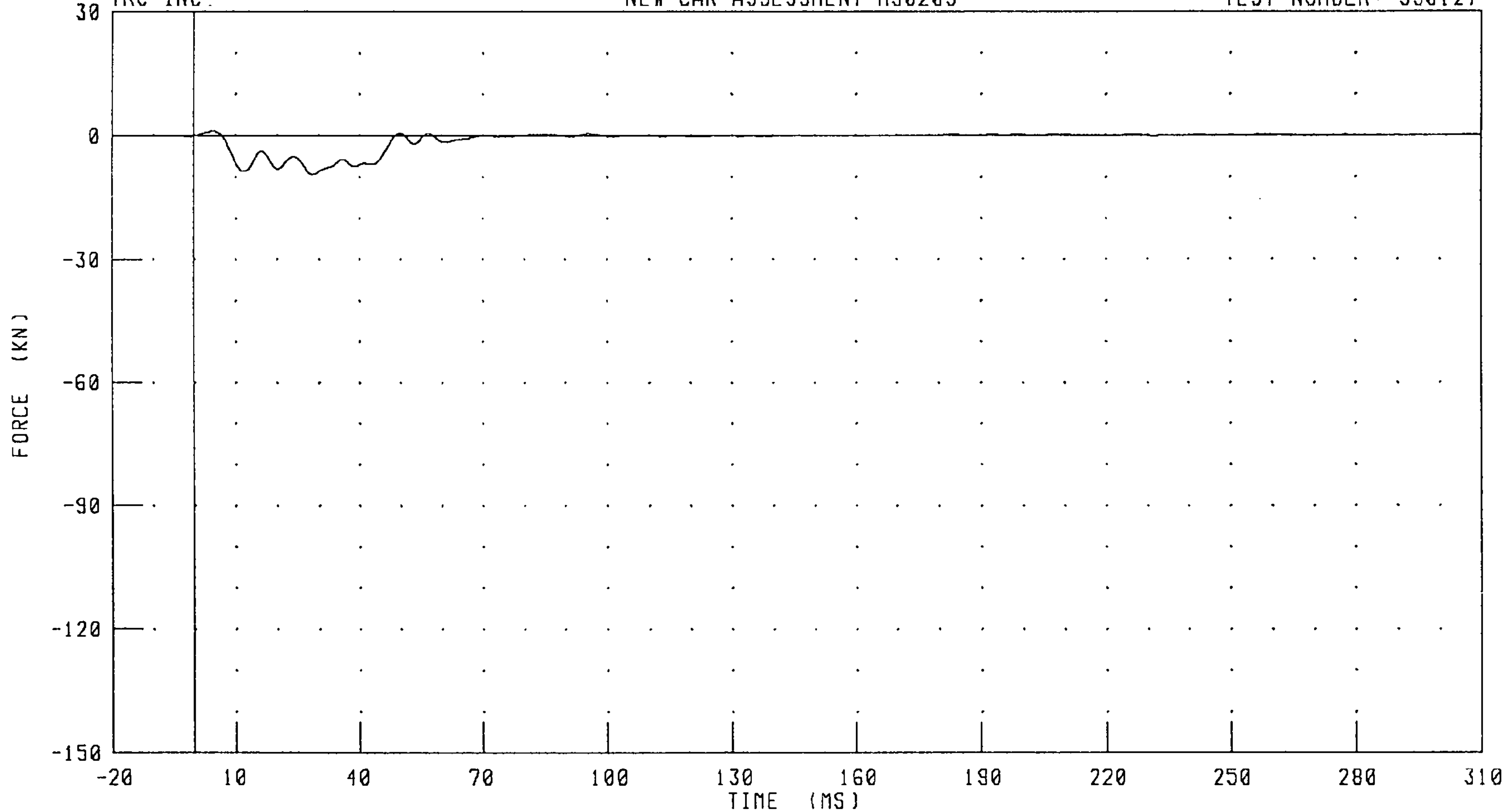


CHANNEL: BD4F FILTER: CH. CLASS 60 PEAK DATA: 1.00 KN @ 4.64 MS; -18.13 KN @ 39.36 MS


1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION D5 FORCE
NEW CAR ASSESSMENT MS0205
TRC INC.
TEST NUMBER: 950127
30
0
-30
-60
-90
-120
-150
FORCE (KN)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: B05F
FILTER: CH. CLASS 60
PEAK DATA: 1.28 KN @ 4.08 MS; -81.15 KN @ 40.32 MS

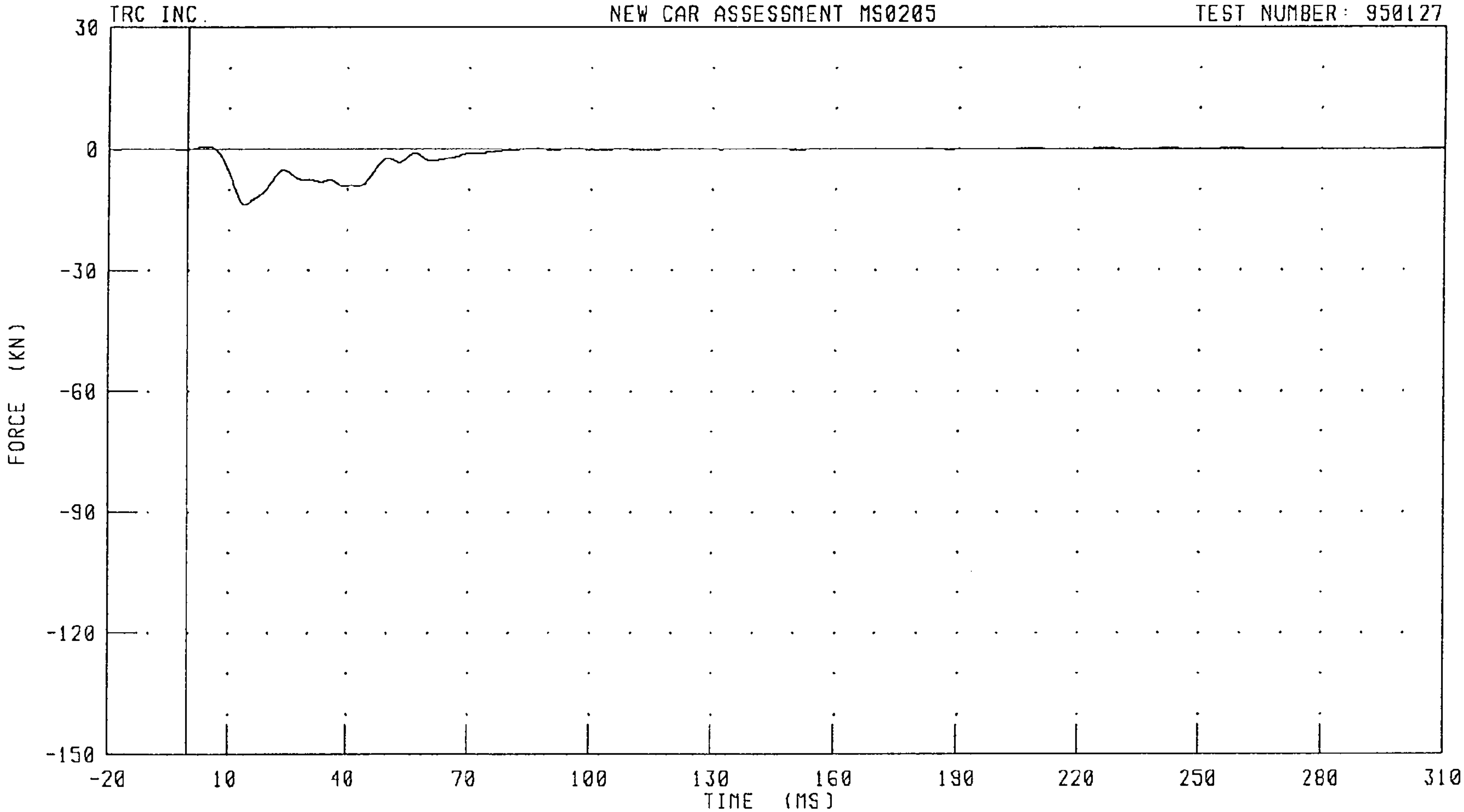
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION D6 FORCE
NEW CAR ASSESSMENT MS0205

TRC INC. TEST NUMBER: 950127



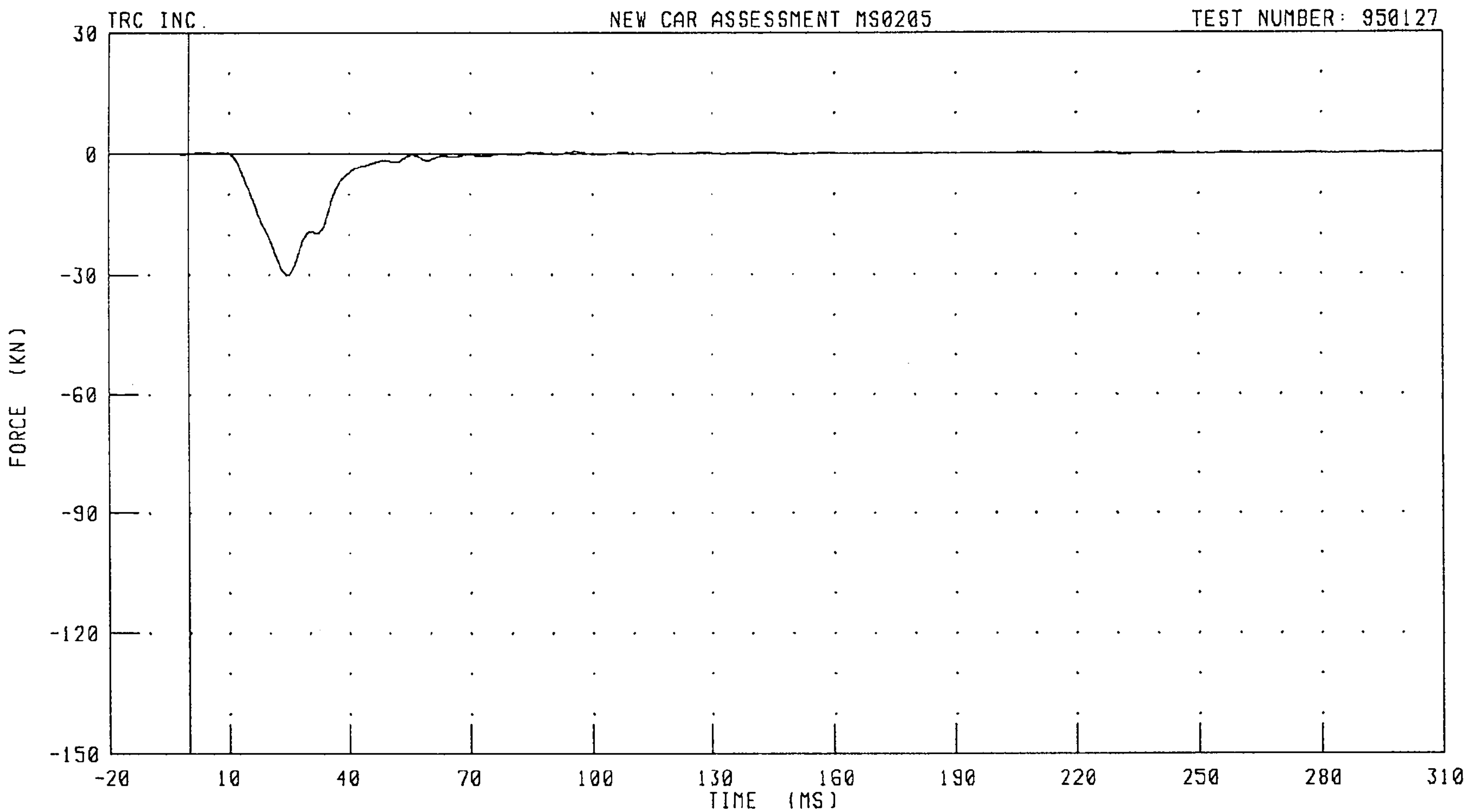
CHANNEL: BD6F FILTER: CH. CLASS 60 PEAK DATA: 0.91 KN @ 4.56 MS; -9.46 KN @ 28.48 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION D7 FORCE
NEW CAR ASSESSMENT MS0205

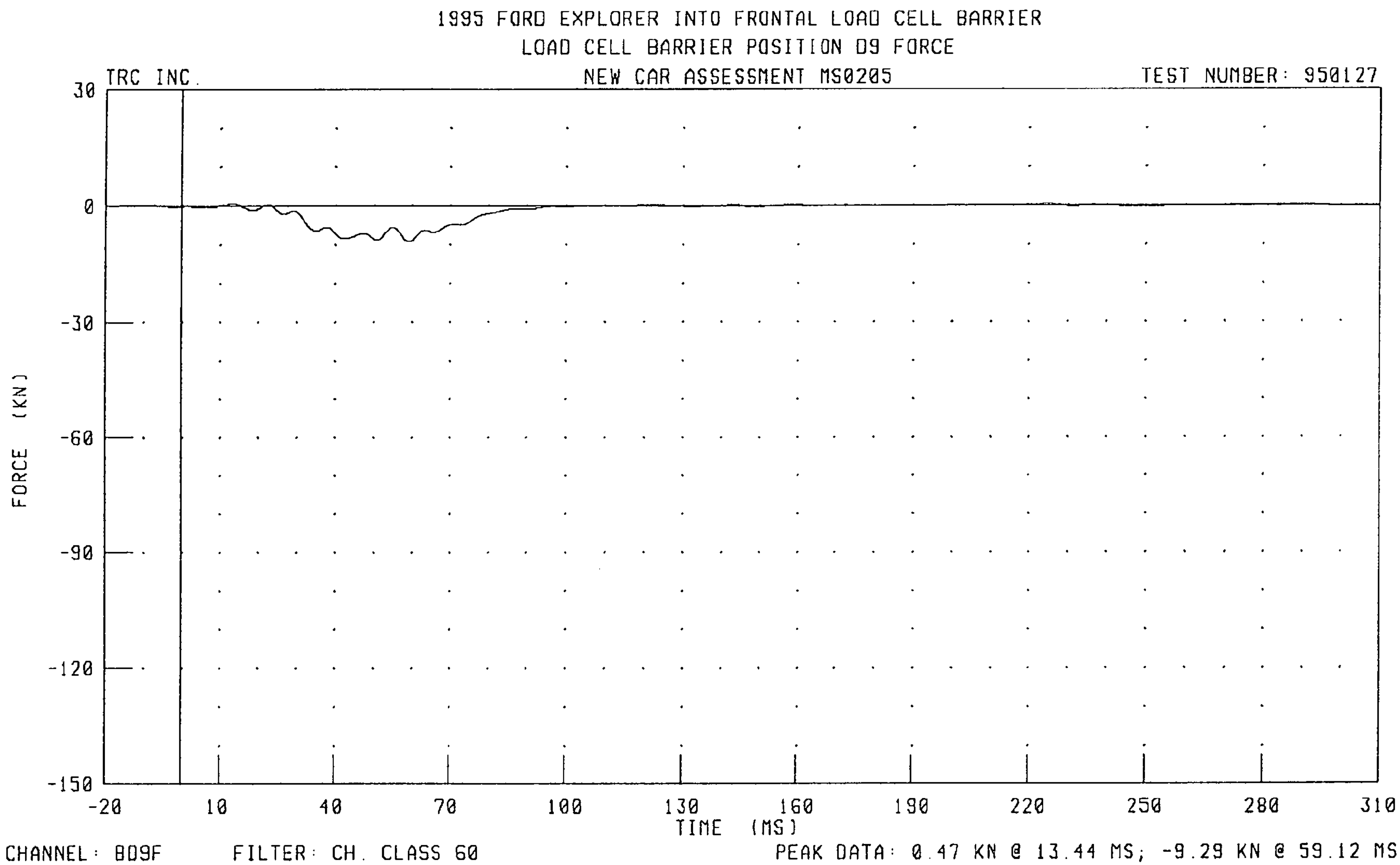


CHANNEL: 8D7F FILTER: CH. CLASS 60 PEAK DATA: 0.59 KN @ 4.56 MS; -13.76 KN @ 14.00 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION D8 FORCE
NEW CAR ASSESSMENT MS0205

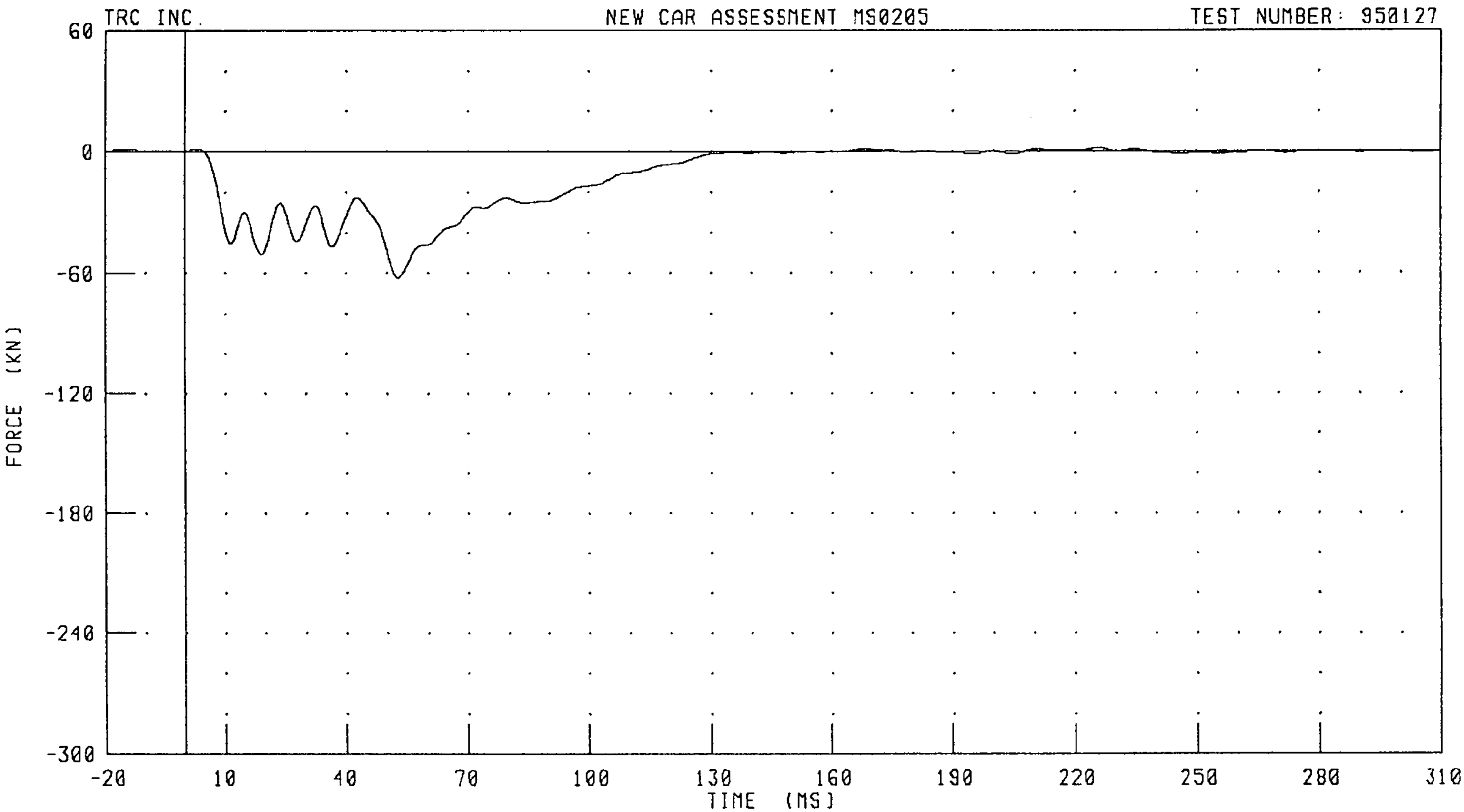


CHANNEL: BD8F FILTER: CH. CLASS 60 PEAK DATA: 0.37 KN @ 95.84 MS; -30.12 KN @ 24.64 MS


1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER POSITION D9 FORCE
NEW CAR ASSESSMENT MS0205
TRC INC.
TEST NUMBER: 950127
30
0
-30
-60
-90
-120
-150
FORCE (KN)
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BD9F
FILTER: CH. CLASS 60
PEAK DATA: 0.47 KN @ 13.44 MS; -9.29 KN @ 59.12 MS

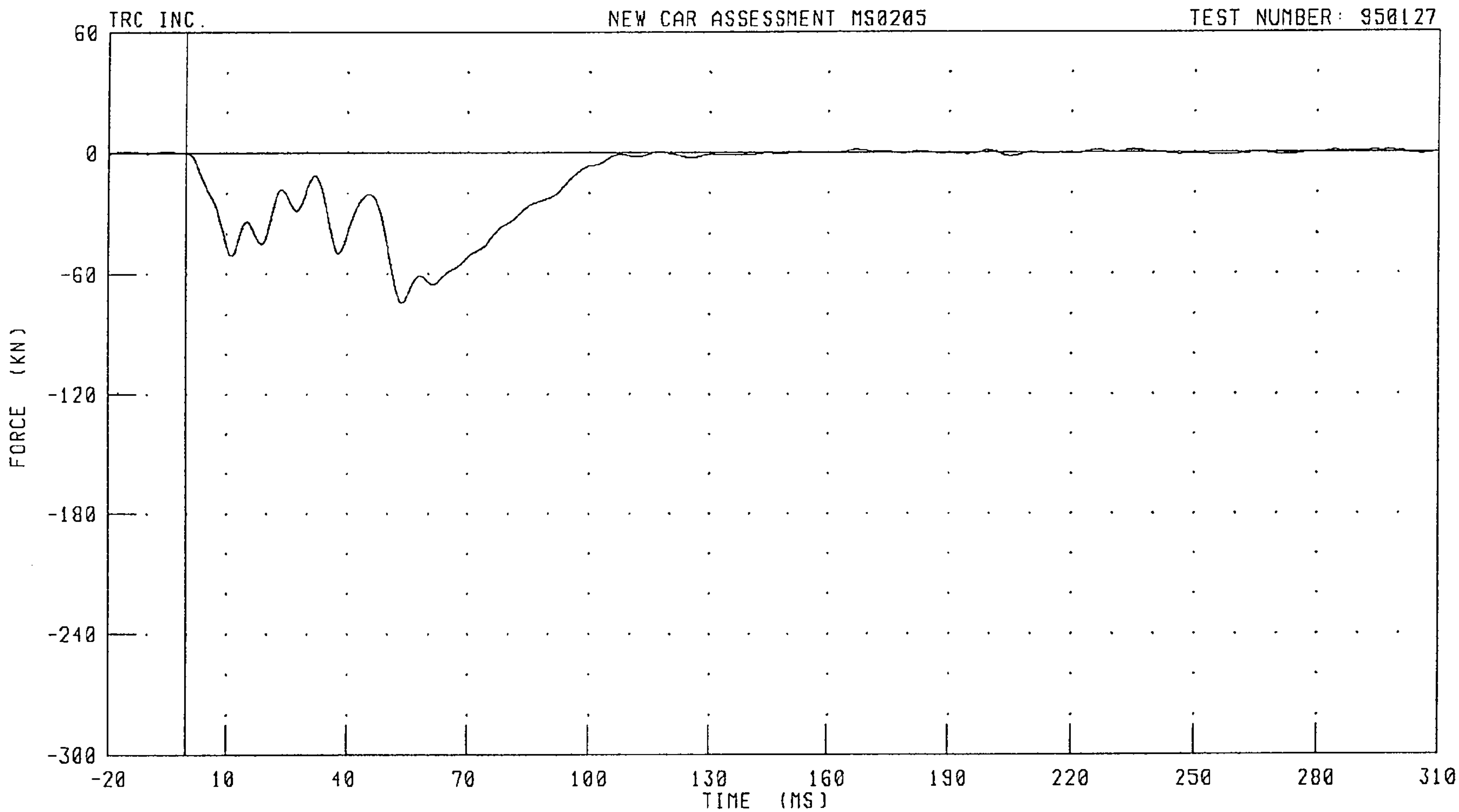
950127

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER GROUP # 1 FORCE TOTAL
NEW CAR ASSESSMENT MS0205



CHANNEL: LCBGIF FILTER: CH. CLASS 60 PEAK DATA: 1.43 KN @ 226.00 MS; -62.32 KN @ 52.80 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER GROUP # 2 FORCE TOTAL
NEW CAR ASSESSMENT MS0205

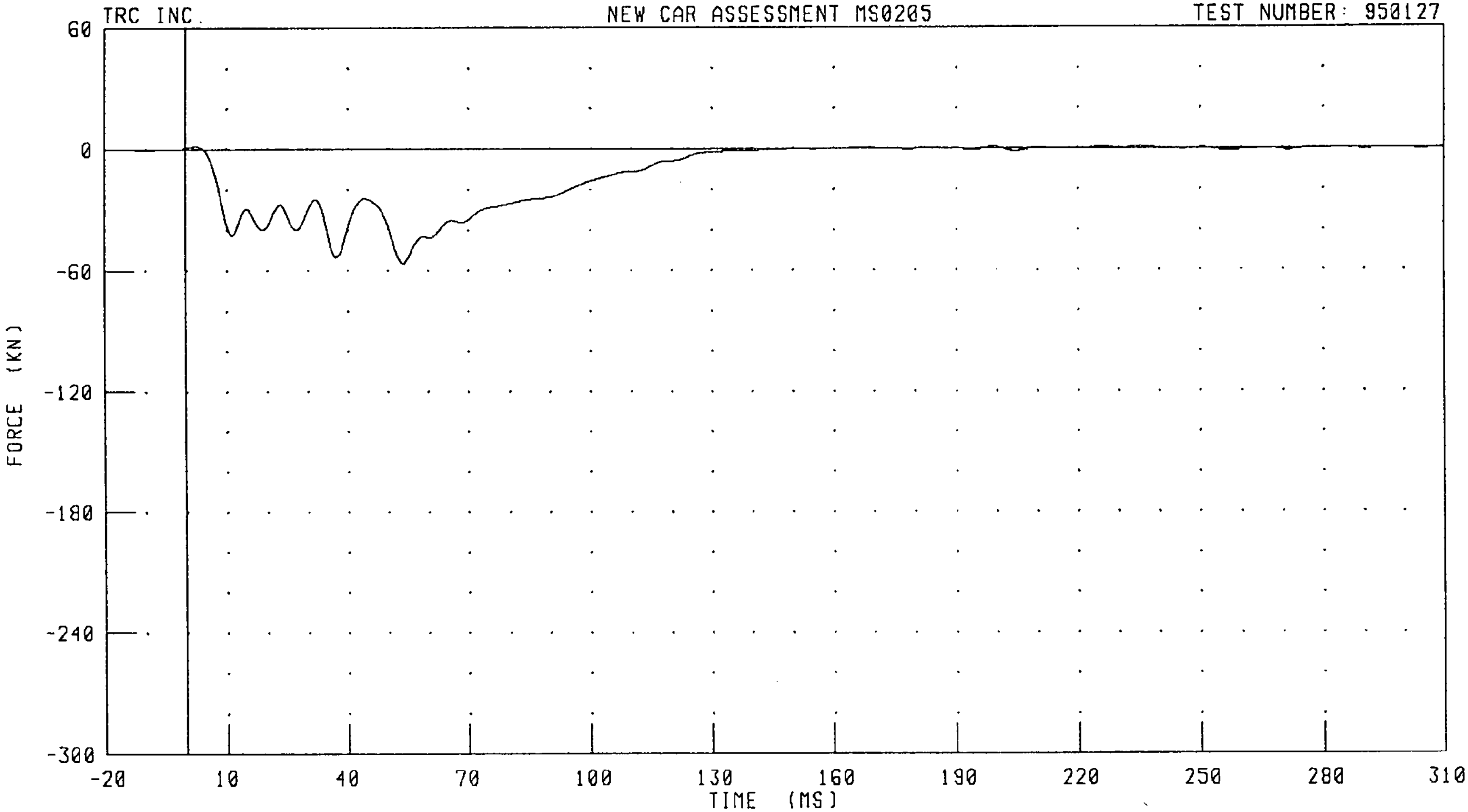


CHANNEL: LCBG2F FILTER: CH. CLASS 60 PEAK DATA: 1.24 KN @ 167.12 MS; -74.33 KN @ 53.60 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER GROUP # 3 FORCE TOTAL
NEW CAR ASSESSMENT MS0205

TRC INC.

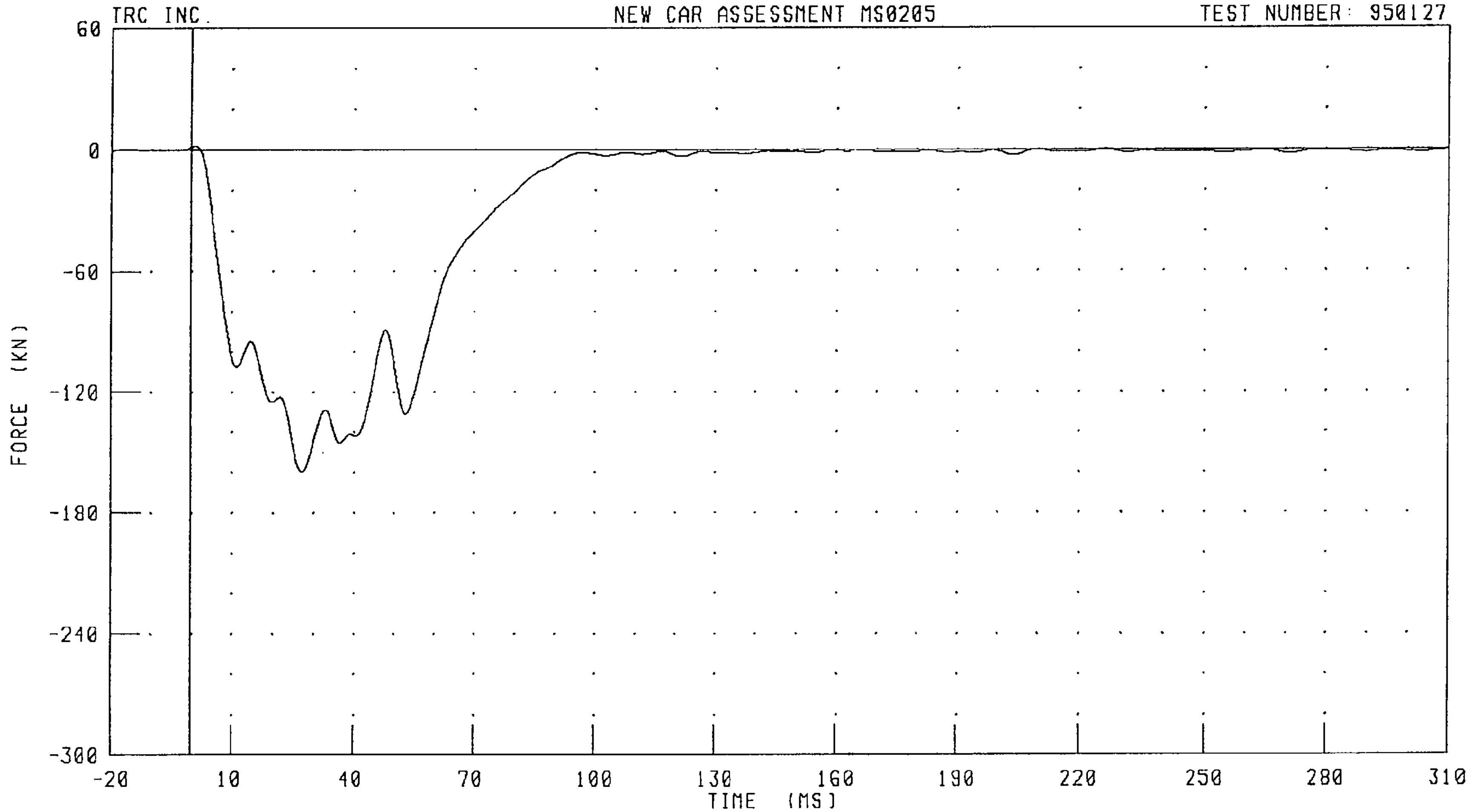
TEST NUMBER: 950127



CHANNEL: LCBG3F   FILTER: CH. CLASS 60

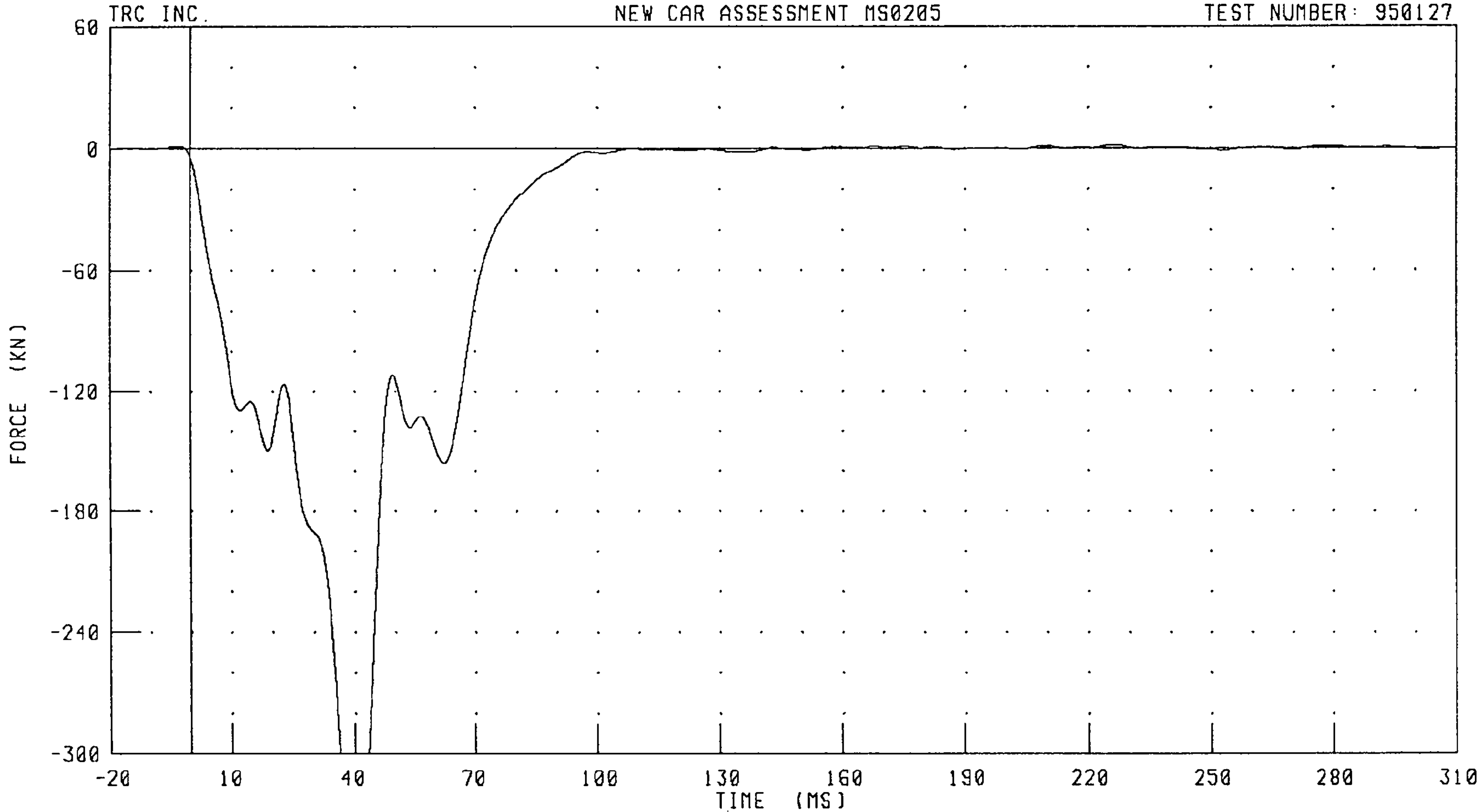
PEAK DATA: 1.25 KN @ 2.40 MS; -56.65 KN @ 53.84 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER GROUP # 4 FORCE TOTAL
NEW CAR ASSESSMENT MS0205



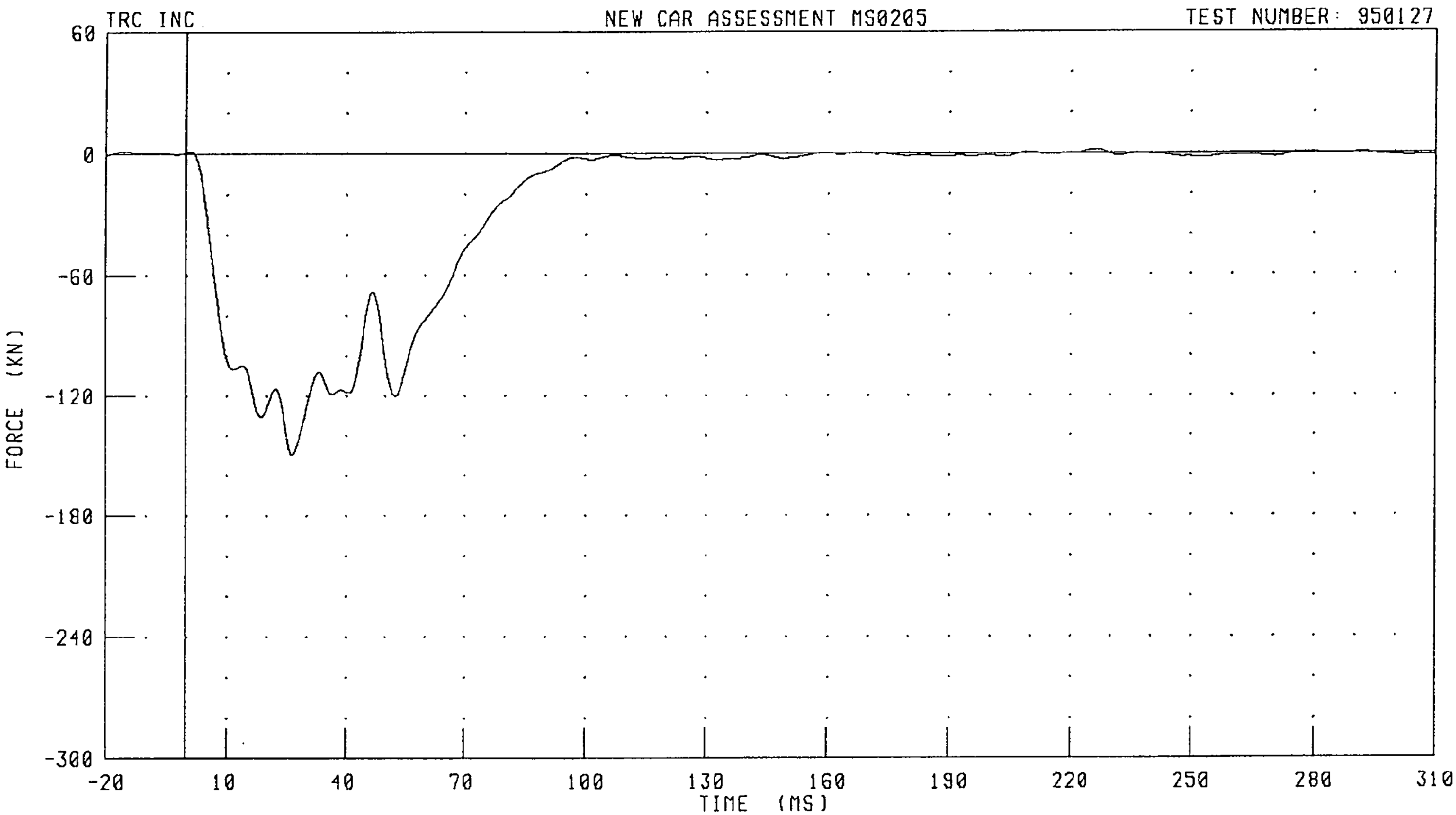
CHANNEL: LCBG4F   FILTER: CH. CLASS 60   PEAK DATA: 1.98 KN @ 0.88 MS; -159.80 KN @ 27.20 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER GROUP # 5 FORCE TOTAL
NEW CAR ASSESSMENT MS0205



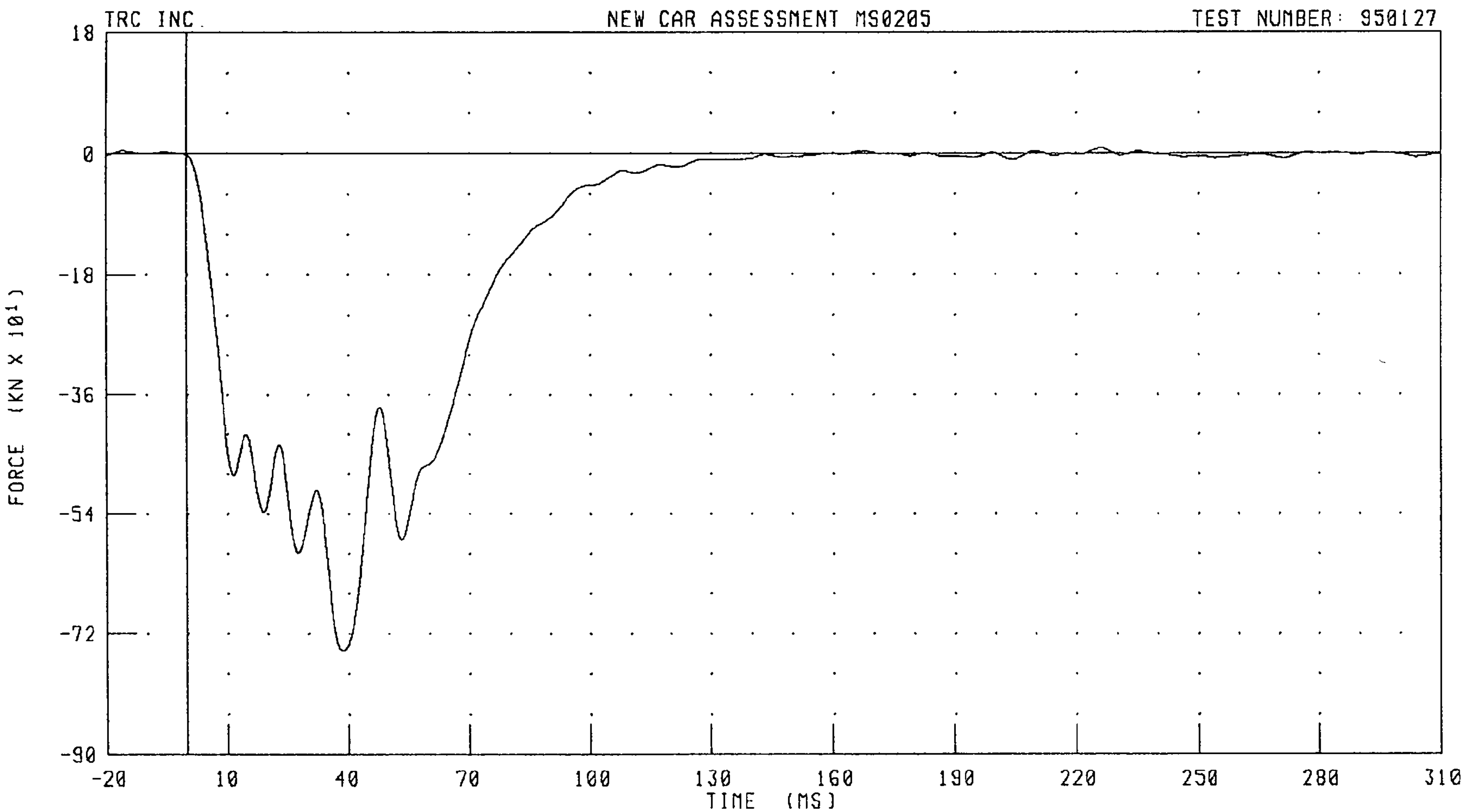
CHANNEL: LCBG5F FILTER: CH. CLASS 60 PEAK DATA: 1.69 KN @ 226.48 MS; -364.37 KN @ 40.24 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
LOAD CELL BARRIER GROUP # 6 FORCE TOTAL
NEW CAR ASSESSMENT MS0205



CHANNEL: LCBG6F FILTER: CH. CLASS 60 PEAK DATA: 1.62 KN @ 226.32 MS; -149.57 KN @ 26.48 MS

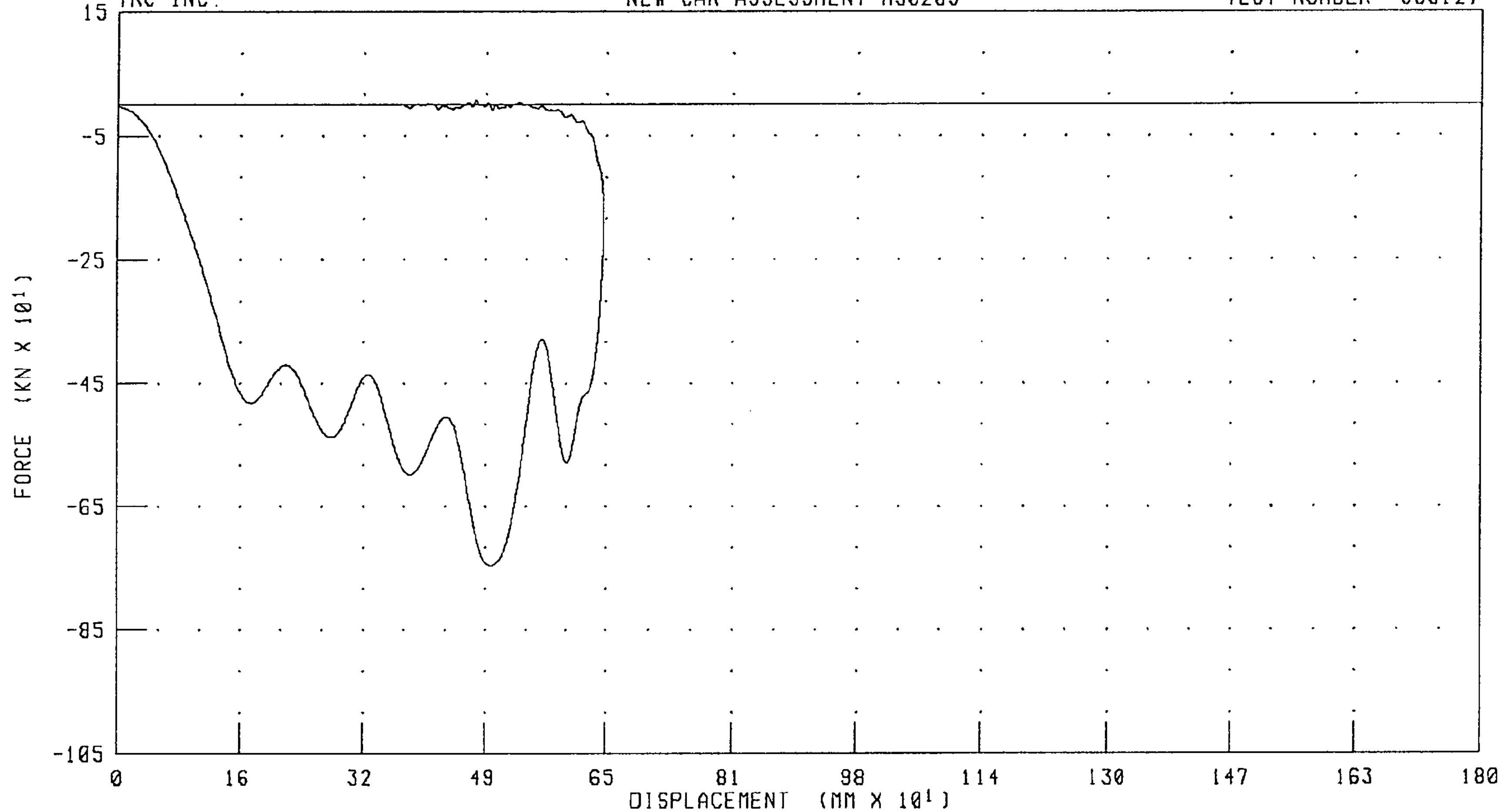
1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
TOTAL LOAD CELL BARRIER FORCE
NEW CAR ASSESSMENT MS0205



CHANNEL: LCBGT FILTER: CH. CLASS 60 PEAK DATA: 7.15 KN @ 226.32 MS; -746.17 KN @ 38.64 MS

1995 FORD EXPLORER INTO FRONTAL LOAD CELL BARRIER
TOTAL LOAD CELL BARRIER FORCE VS AVERAGE VEHICLE X-AXIS DISPLACEMENT

TRC INC. NEW CAR ASSESSMENT MS0205 TEST NUMBER: 950127



CHANNEL: 0THXD FILTER: CH. CLASS 180
LCBGT CH. CLASS 60

PEAK DATA: 652.22 MM @ 76.72 MS; 0.00 MM @ 0.00 MS
7.15 KN @ 226.32 MS; -746.17 KN @ 38.64 MS

Appendix C

Dummy Certification Data

Pre-test Certification Data

Driver Dummy S/N: 142

TRANSPORTATION RESEARCH CENTER INC.
HYBRID III EXTERNAL DIMENSIONS
142 HUMANOID 25-JAN-95

TRC INC. TEST NO: 142C26ED1 572E SN142 EXT.DIMENSION CAL26

TEST PARAMETER	(DIMEN.)	SPECIFICATION	TEST RESULTS
LOCATION FOR CHEST CIRCUMFERENCE	(AA)	429 - 434 MM	432. MM
LOCATION FOR WAIST CIRCUMFERENCE	(BB)	226 - 231 MM	229. MM
CHEST CIRCUMFERENCE	(Y)	970 -1001 MM	986. MM
WAIST CIRCUMFERENCE	(Z)	836 - 866 MM	848. MM
CHEST DEPTH	(O)	213 - 229 MM	221. MM
H-POINT HEIGHT	(C)	84 - 89 MM	84. MM
H-POINT FROM SEATBACK	(D)	135 - 140 MM	137. MM
SKULL CAP TO BACKLINE	(H)	41 - 46 MM	43. MM
TOTAL SITTING HEIGHT	(A)	879 - 889 MM	879. MM
THIGH CLEARANCE	(F)	140 - 155 MM	145. MM
BUTTOCK KNEE LENGTH	(K)	579 - 605 MM	602. MM
BUTTOCK POPLITEAL LENGTH	(N)	452 - 478 MM	470. MM
POPLITEAL HEIGHT	(L)	429 - 455 MM	445. MM
KNEE PIVOT HEIGHT	(M)	485 - 500 MM	488. MM
FOOT LENGTH	(P)	252 - 267 MM	257. MM
FOOT BREADTH	(W)	91 - 107 MM	97. MM
SHOULDER PIVOT FROM BACKLINE	(E)	84 - 94 MM	91. MM
SHOULDER BREADTH	(V)	422 - 437 MM	429. MM
SHOULDER PIVOT HEIGHT	(B)	506 - 521 MM	508. MM
ELBOW REST HEIGHT	(J)	191 - 211 MM	203. MM
SHOULDER-ELBOW LENGTH	(I)	330 - 345 MM	345. MM
BACK OF ELBOW TO WRIST PIVOT	(G)	290 - 305 MM	292. MM

DUMMY MEETS SPECIFICATIONS
TECHNICIAN Pete Foust RUN NUMBER: 012595.1342

TRANSPORTATION RESEARCH CENTER INC.

HEAD DROP TEST

HYBRID III 13-JAN-95

TRC INC. TEST NO: 142C26HD7 572E SN142 HEAD DROP CAL 26

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	58.0 %
PEAK RESULTANT ACCELERATION	225 - 275 G	230.81 G
PEAK LATERAL ACCELERATION	15 G MAX	-1.41 G
IS ACCELERATION CURVE UNIMODAL?	YES	YES

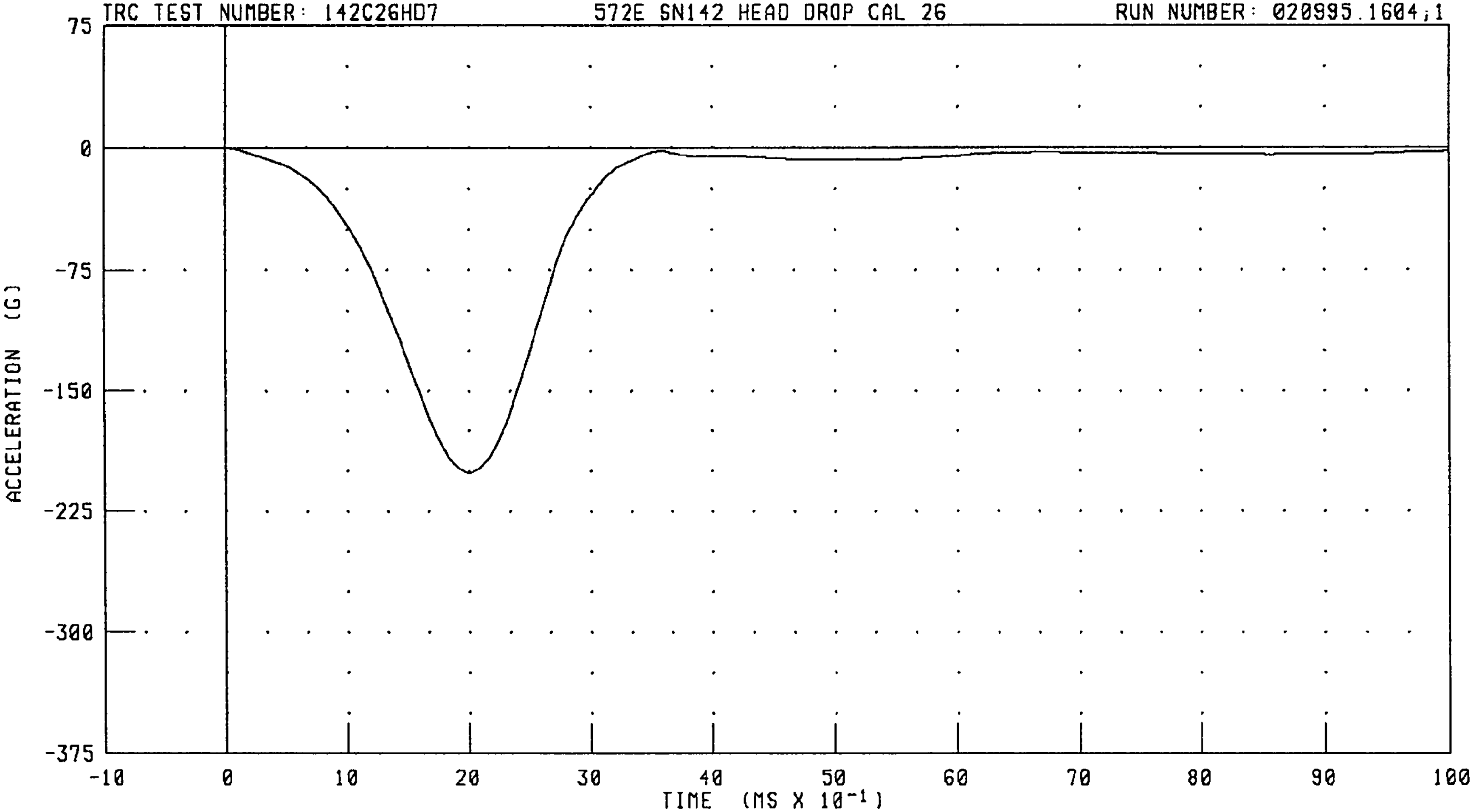
HEAD WAS INSTRUMENTED WITH THREE 7264 ACCELEROMETERS

TEST MEETS SPECIFICATIONS

TECHNICIAN Pete Foster RUN NUMBER: 011395.1457;1

PART 572-E HYBRID III HEAD CALIBRATION
HEAD ACCELERATION X AXIS

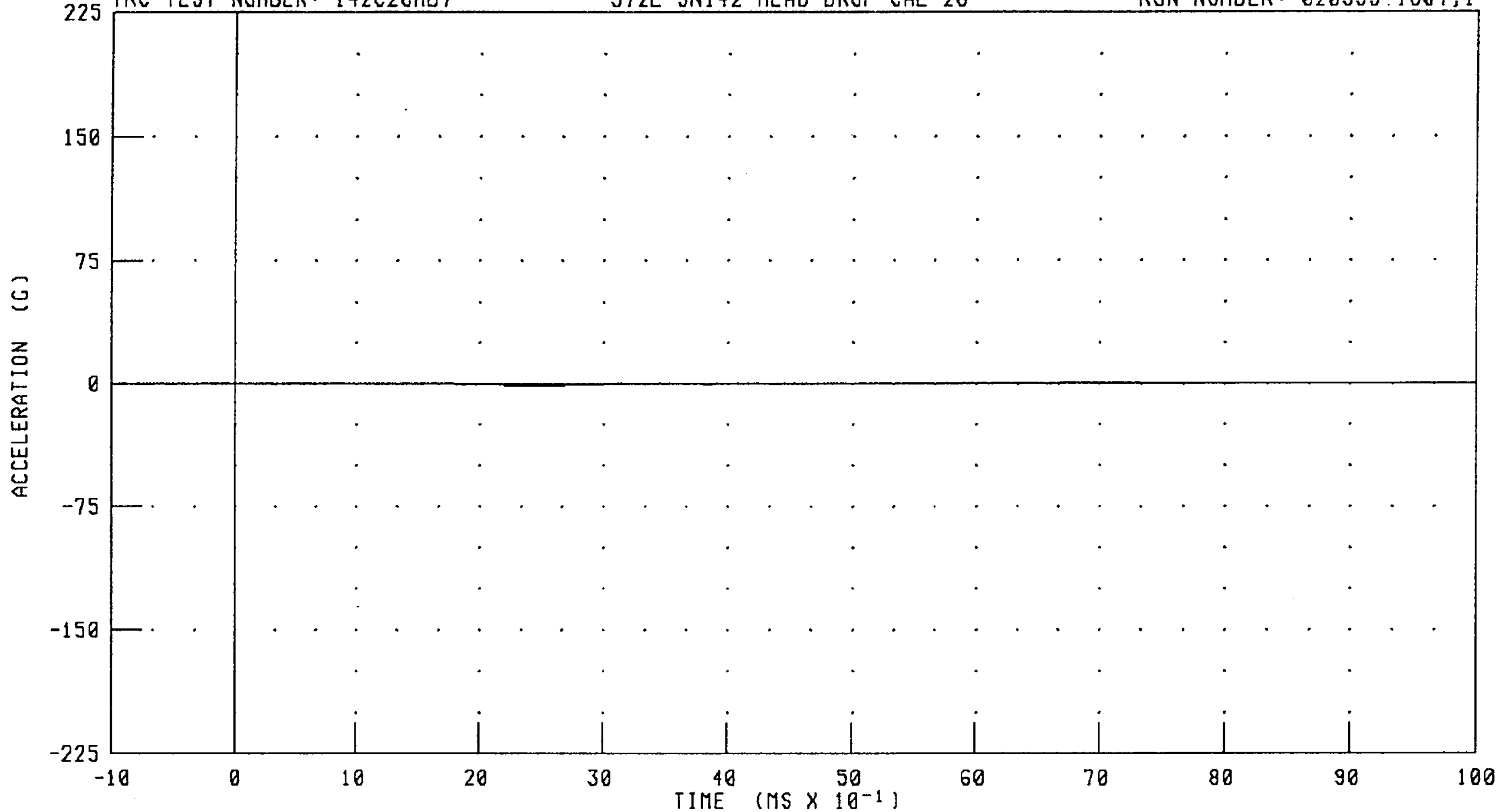
TRC TEST NUMBER: 142C26HD7 572E SN142 HEAD DROP CAL 26 RUN NUMBER: 020995.1604;1



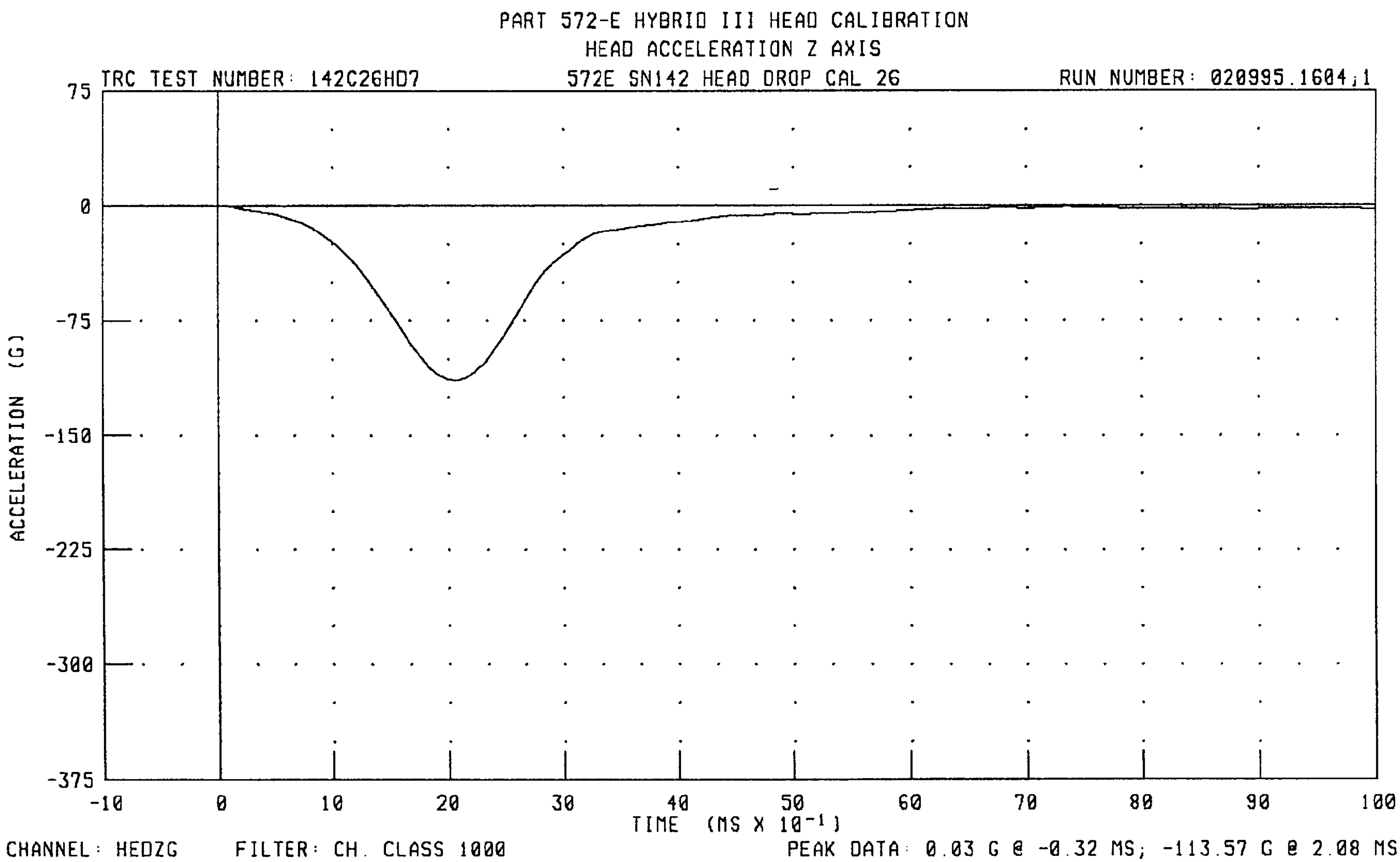
CHANNEL: HEDXG FILTER: CH. CLASS 1000 PEAK DATA: 0.04 G @ -0.08 MS; -201.23 G @ 2.00 MS

PART 572-E HYBRID III HEAD CALIBRATION
HEAD ACCELERATION Y AXIS

TRC TEST NUMBER: 142C26HD7 572E SN142 HEAD DROP CAL 26 RUN NUMBER: 020995.1604;1



CHANNEL: HEDYG FILTER: CH. CLASS 1000 PEAK DATA: 0.65 G @ 6.96 MS; -1.42 G @ 2.48 MS


PART 572-E HYBRID III HEAD CALIBRATION
HEAD ACCELERATION Z AXIS
TRC TEST NUMBER: 142C26HD7
572E SN142 HEAD DROP CAL 26
RUN NUMBER: 020995.1604;1
75
0
-75
-150
-225
-300
-375
ACCELERATION (G)
-10
0
10
20
30
40
50
60
70
80
90
100
TIME (MS X 10^{-1})
CHANNEL: HEDZG
FILTER: CH. CLASS 1000
PEAK DATA: 0.03 G @ -0.32 MS; -113.57 G @ 2.08 MS

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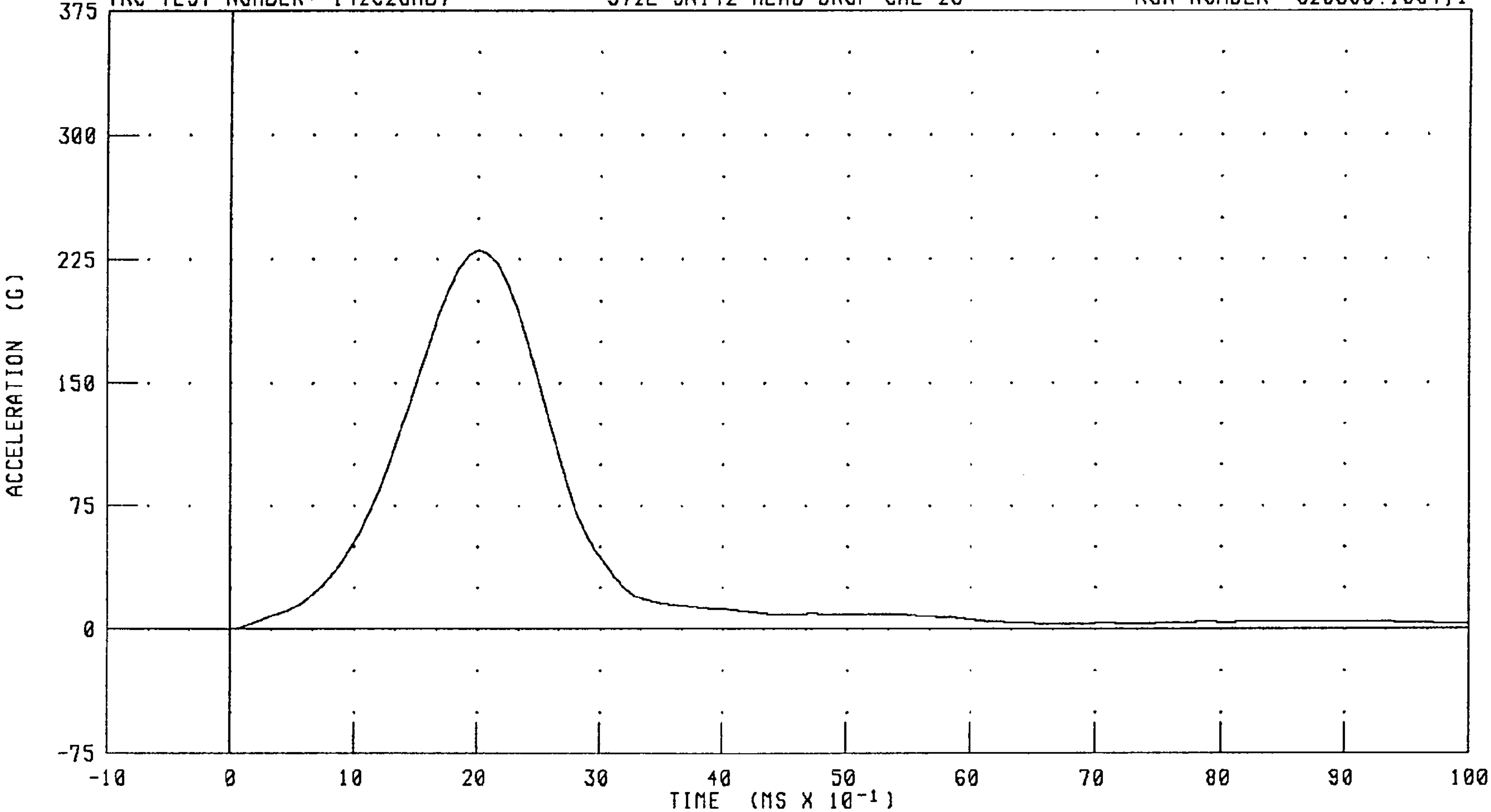
PART 572-E HYBRID III HEAD CALIBRATION
HEAD RESULTANT ACCELERATION

TRC TEST NUMBER: 142C26HD7 572E SN142 HEAD DROP CAL 26 RUN NUMBER: 020995.1604;1



CHANNEL: HEDRG FILTER: CH. CLASS 1000 PEAK DATA: 230.81 G @ 2.00 MS; 0.03 G @ -0.40 MS

TRANSPORTATION RESEARCH CENTER INC.

NECK FLEXION TEST - 6 CHANNEL TRANSDUCER

HYBRID III 13-JAN-95

TRC INC. TEST NO: 142C26NF7 572E SN142 NECK FLEXION CAL26

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6-22.2 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY		10 - 70 %	58.0 %
IMPACT VELOCITY		6.89 - 7.13 M/S	7.06 M/S
PENDULUM DECELERATION	10 MS	22.50 - 27.50 G	23.08 G
	20 MS	17.60 - 22.60 G	20.10 G
	30 MS	12.50 - 18.50 G	16.77 G
MAX PENDULUM G		29 G MAX	23.86 G
MAX PENDULUM G ABOVE 30 MS		29 G MAX	16.72 G
DECELERATION-TIME CURVE DECAY TIME TO 5 G		34 - 42 MS	39.28 MS
D PLANE ROTATION	MAX	64 - 78 DEG.	73.75 DEG.
	TIME	57 - 64 MS	60.48 MS
MOMENT ABOUT OCCIPITAL CONDYLE	MAX	88.2 - 108.5 NM	95.22 NM
	TIME	47 - 58 MS	52.88 MS
ROTATION ANGLE-TIME CURVE DECAY TIME TO ZERO		113 - 128 MS	115.76 MS
POSITIVE MOMENT-TIME CURVE DECAY TIME TO ZERO		97 - 107 MS	104.40 MS

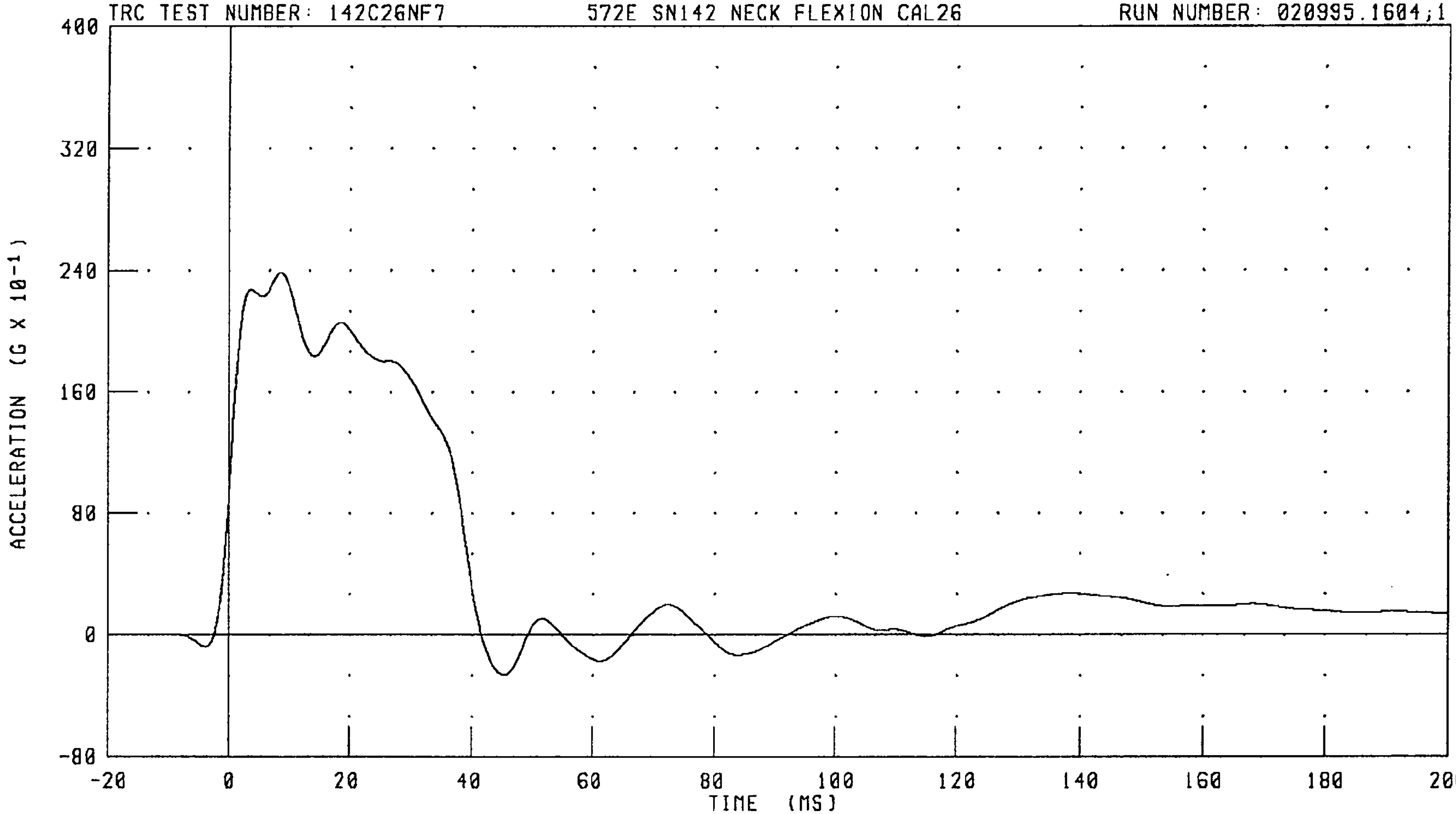
TEST WITH ORIGINAL THREE 7264 ACCELEROMETERS

TEST MEETS SPECIFICATIONS

TECHNICIAN Pete [illegible] RUN NUMBER: 011395.1436;1

PART 572-E HYBRID III NECK FLEXION CALIBRATION
PENDULUM DECELERATION

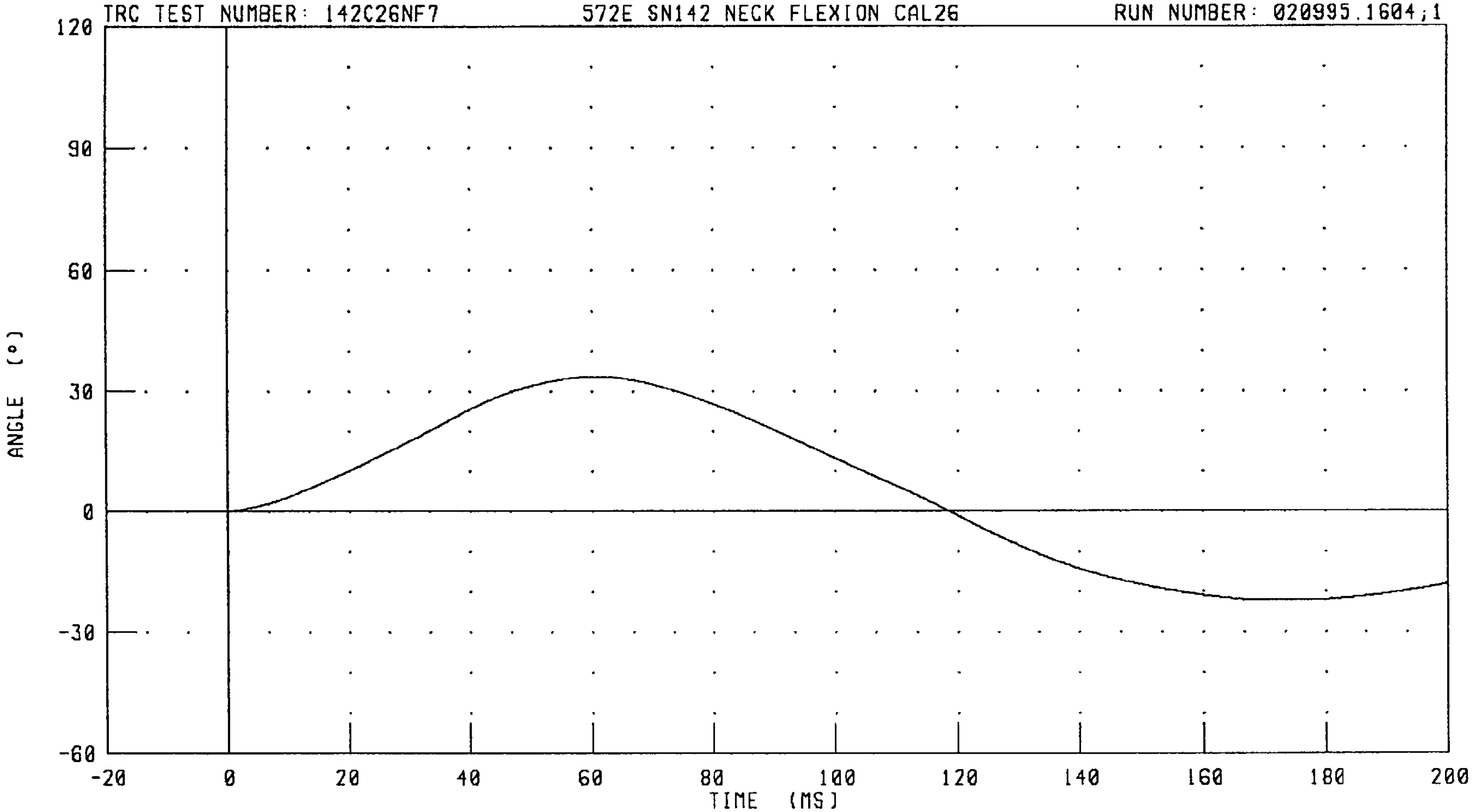
TRC TEST NUMBER: 142C26NF7 572E SN142 NECK FLEXION CAL26 RUN NUMBER: 020995.1604;1



CHANNEL: PENXG FILTER: CH. CLASS 60 PEAK DATA: 23.86 G @ 8.72 MS; -2.64 G @ 45.36 MS

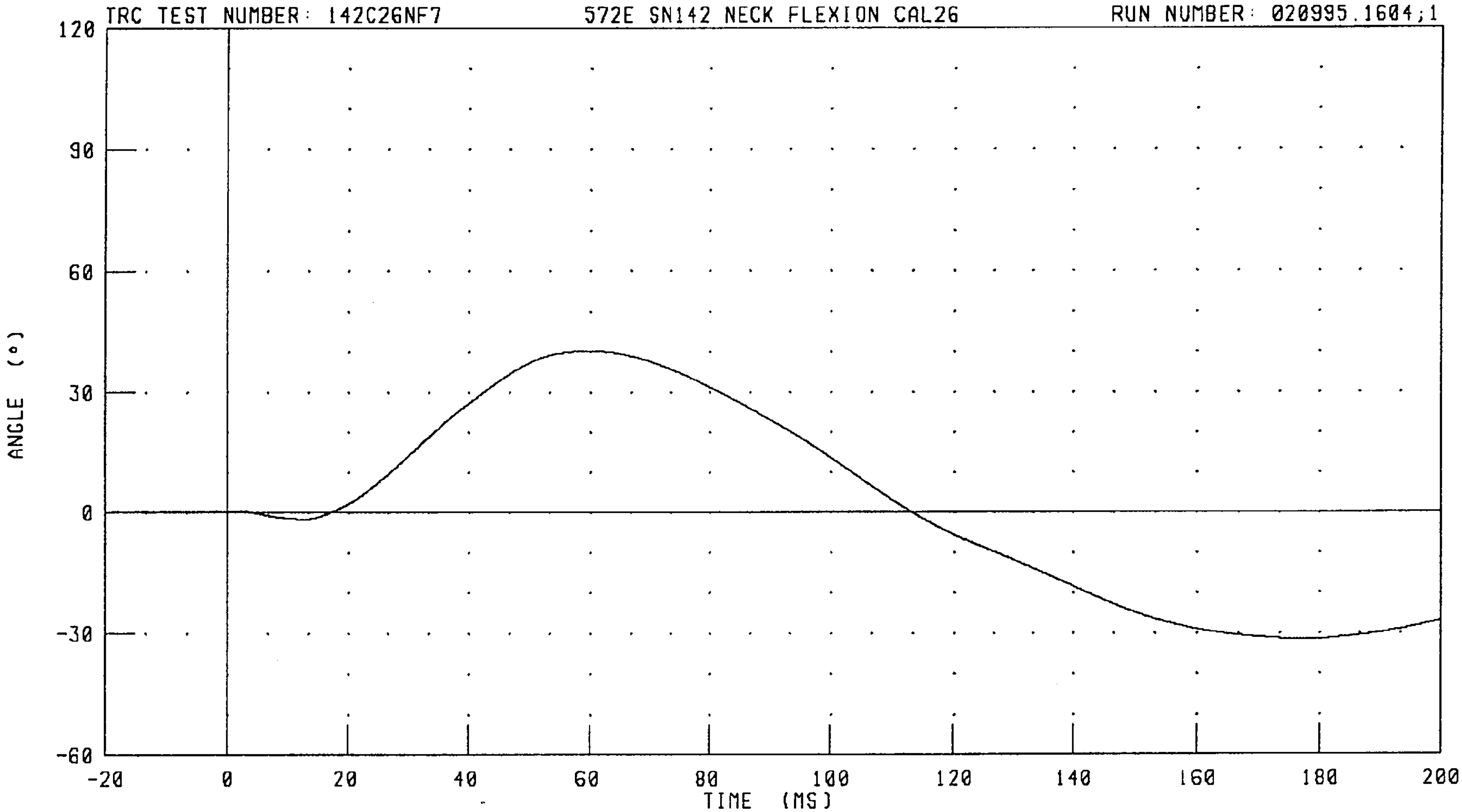
PART 572-E HYBRID III NECK FLEXION CALIBRATION
ROTATION ABOUT BASE OF NECK

TRC TEST NUMBER: 142C26NF7 572E SN142 NECK FLEXION CAL26 RUN NUMBER: 020995.1604;1



CHANNEL: BETA FILTER: CH. CLASS 60 PEAK DATA: 33.61 ° @ 60.72 MS; -22.04 ° @ 174.72 MS

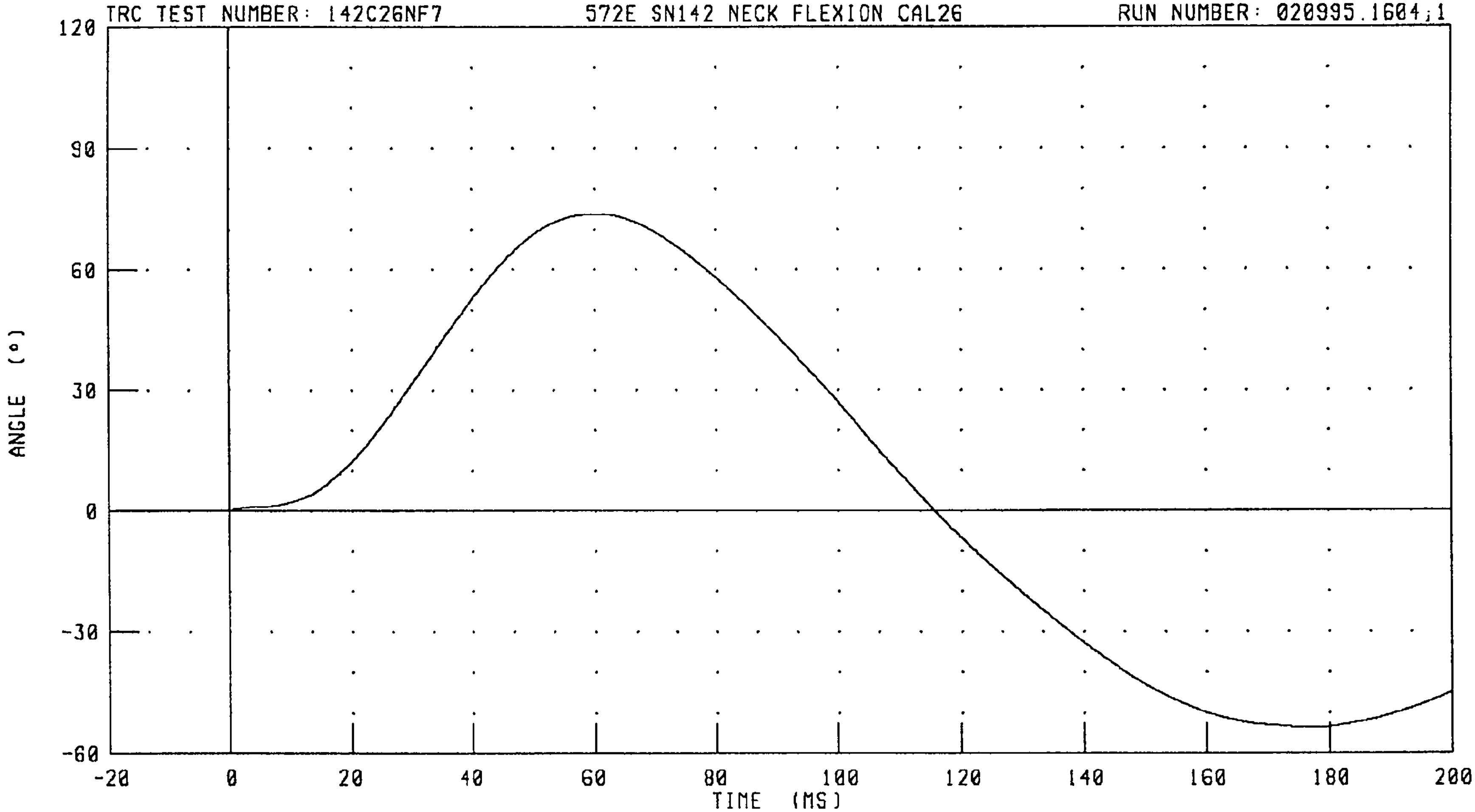
PART 572-E HYBRID III NECK FLEXION CALIBRATION
ROTATION ABOUT OCCIPITAL CONDYLE



CHANNEL: THETA FILTER: CH. CLASS 60 PEAK DATA: 40.15 ° @ 59.92 MS; -31.56 ° @ 177.52 MS

PART 572-E HYBRID III NECK FLEXION CALIBRATION
TOTAL ROTATION

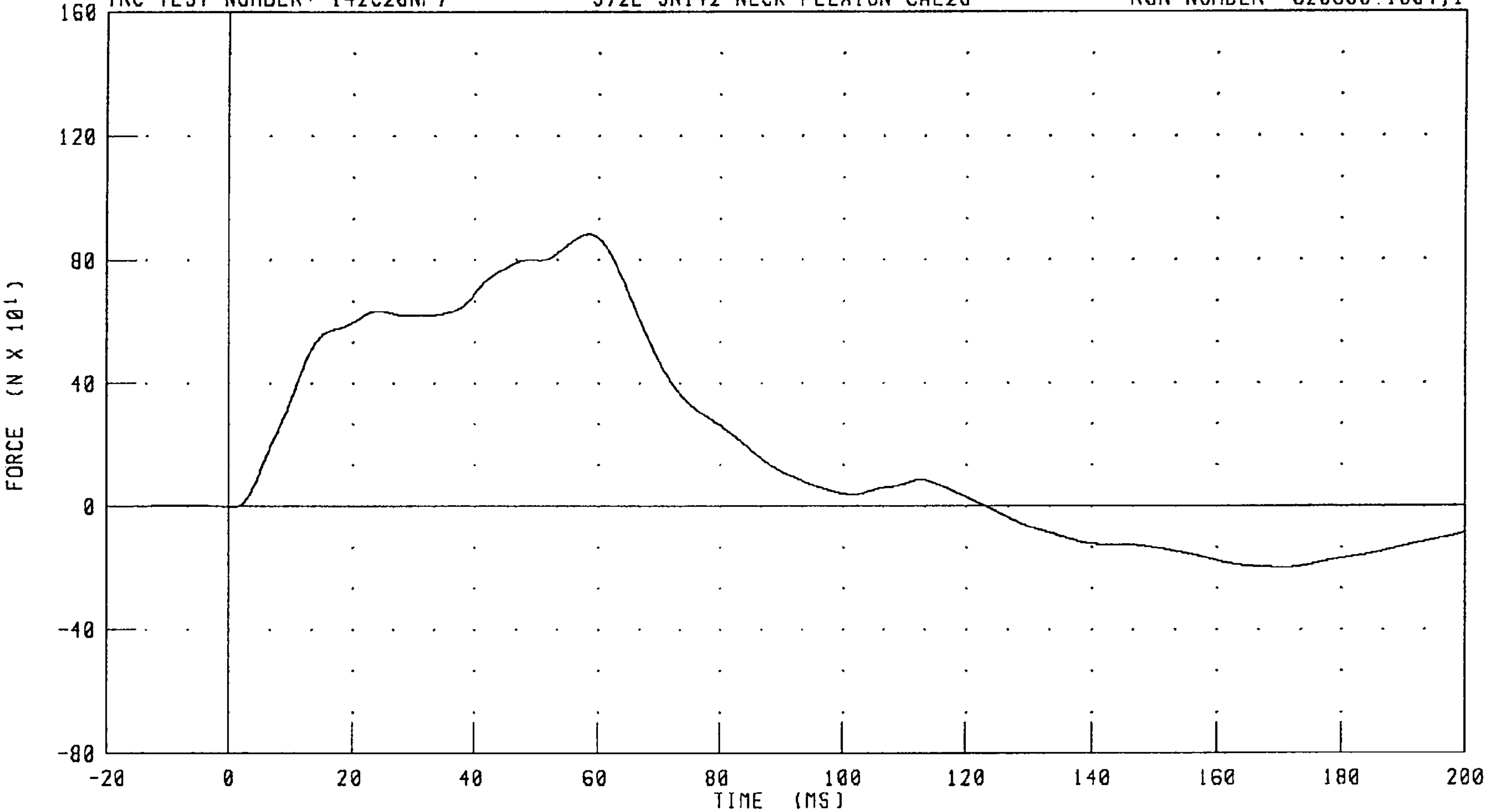
TRC TEST NUMBER: 142C26NF7   572E SN142 NECK FLEXION CAL26   RUN NUMBER: 020995.1604;1



CHANNEL: TOTAN   FILTER: CH. CLASS 60   PEAK DATA: 73.76 ° @ 60.48 MS; -53.60 ° @ 177.20 MS

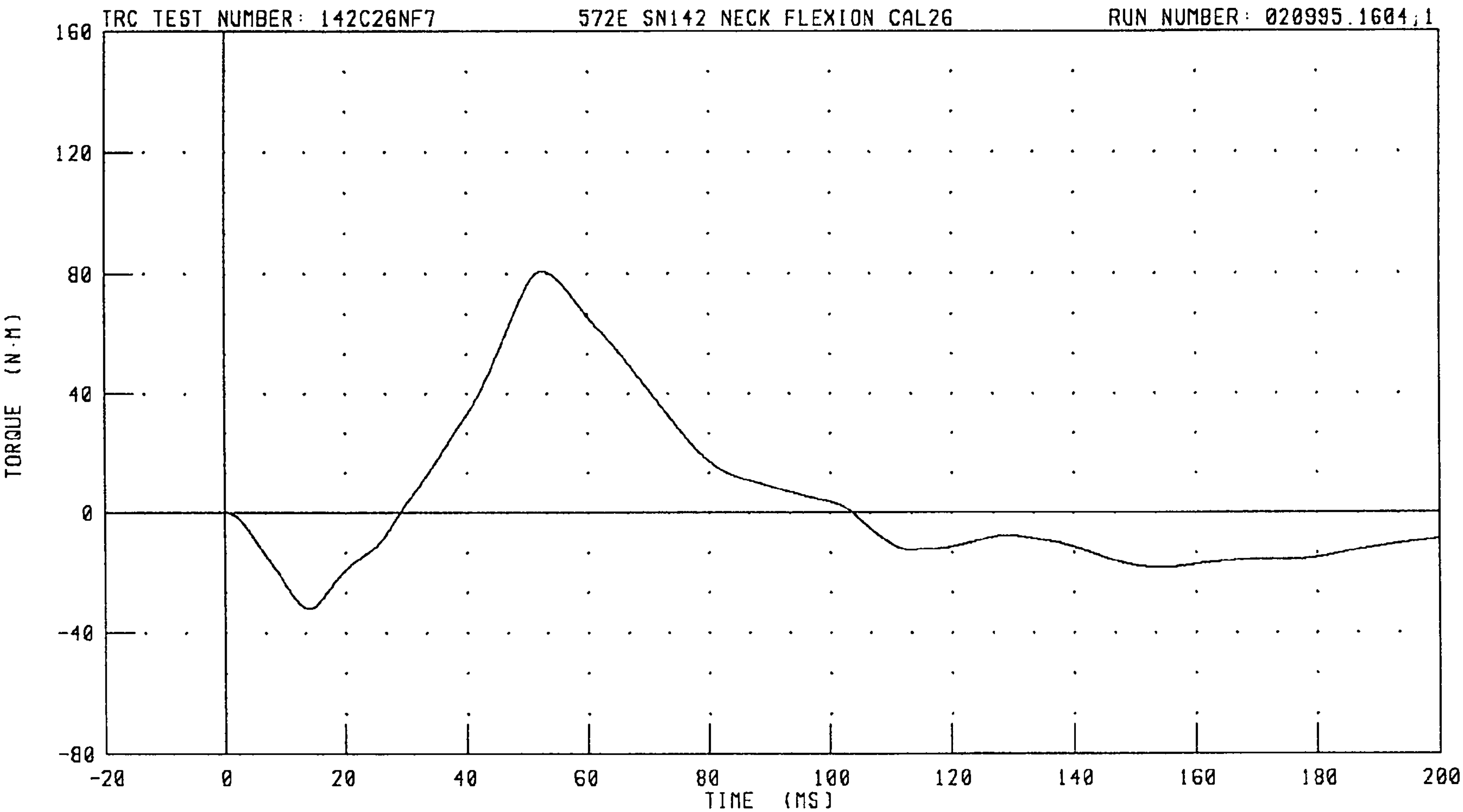
PART 572-E HYBRID III NECK FLEXION CALIBRATION
NECK FORCE X AXIS

TRC TEST NUMBER: 142C26NF7 572E SN142 NECK FLEXION CAL26 RUN NUMBER: 020995.1604;1



CHANNEL: NEKXF FILTER: CH. CLASS 60 PEAK DATA: 883.20 N @ 58.40 MS; -198.76 N @ 170.56 MS

PART 572-E HYBRID III NECK FLEXION CALIBRATION
NECK MOMENT Y AXIS



CHANNEL: NEKYM FILTER: CH. CLASS 60 PEAK DATA: 80.76 N·M @ 52.72 MS; -31.92 N·M @ 14.00 MS

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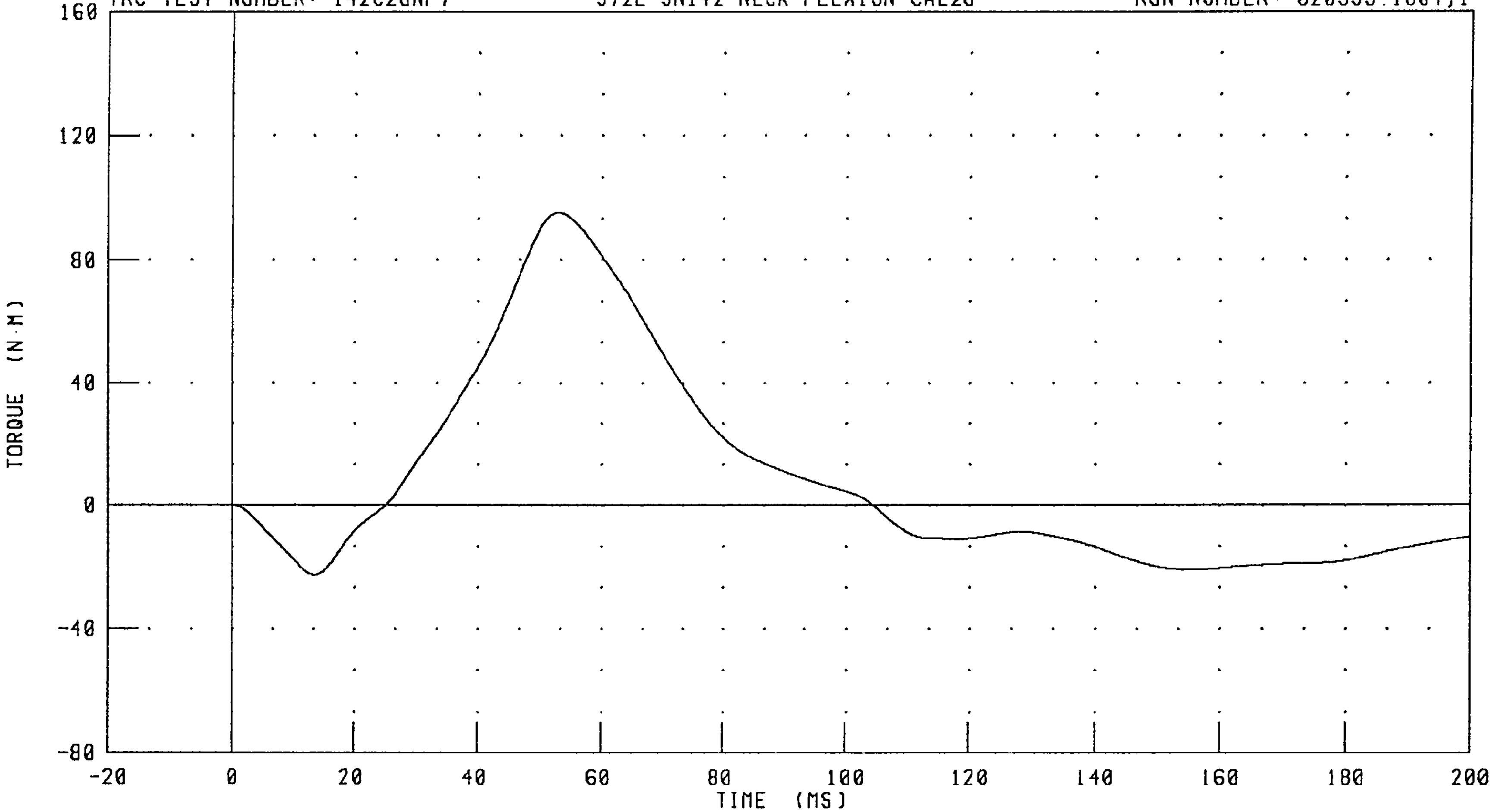
PART 572-E HYBRID III NECK FLEXION CALIBRATION
TOTAL MOMENT ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER: 142C26NF7 572E SN142 NECK FLEXION CAL26 RUN NUMBER: 020995.1604;1



CHANNEL: NEKOM FILTER: CH. CLASS 60 PEAK DATA: 95.22 N·M @ 52.88 MS; -22.57 N·M @ 13.60 MS

TRANSPORTATION RESEARCH CENTER INC.

NECK EXTENSION TEST - 6 CHANNEL TRANSDUCER

HYBRID III 09-JAN-95

TRC INC. TEST NO: 142C26NE1 572E SN142 NECK EXT. CAL26

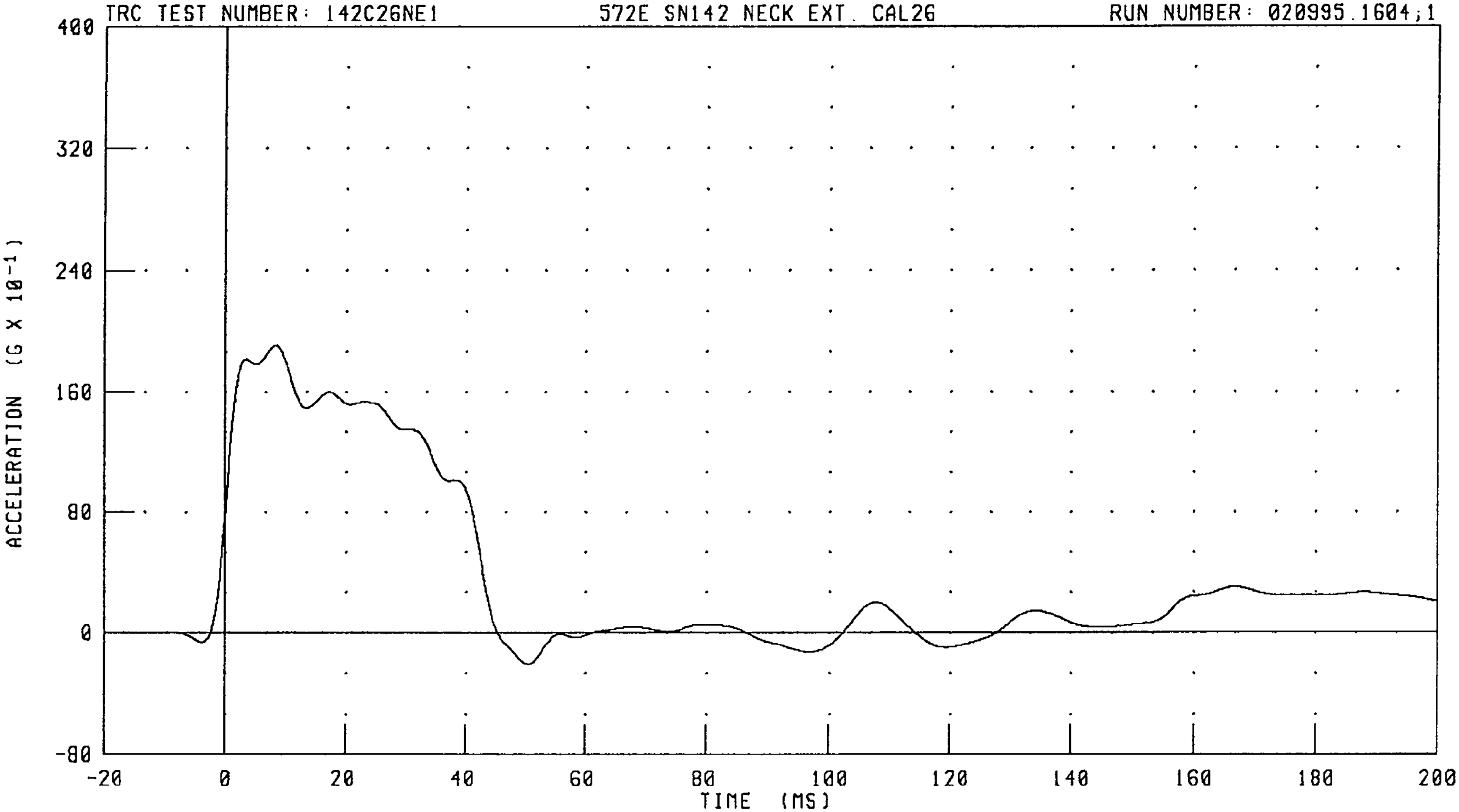
TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6 - 22.2 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY		10 - 70 %	26.0 %
IMPACT VELOCITY		5.95 - 6.19 M/S	6.05 M/S
PENDULUM DECELERATION	10 MS	17.20 - 21.20 G	17.95 G
	20 MS	14.00 - 19.00 G	15.21 G
	30 MS	11.00 - 16.00 G	13.47 G
MAX PENDULUM G		22 G MAX	19.05 G
MAX PENDULUM G ABOVE 30 MS		22 G MAX	13.49 G
DECELERATION-TIME CURVE DECAY TIME TO 5 G		38 - 46 MS	42.40 MS
D PLANE ROTATION	MAX	81 - 106 DEG.	95.90 DEG.
	TIME	72 - 82 MS	74.72 MS
MOMENT ABOUT OCCIPITAL CONDYLE	MIN	-80.0/-52.9 NM	-69.77 NM
	TIME	65 - 79 MS	70.48 MS
ROTATION ANGLE-TIME CURVE DECAY TIME TO ZERO		147 - 174 MS	152.80 MS
NEGATIVE MOMENT-TIME CURVE DECAY TIME TO ZERO		120 - 148 MS	140.48 MS

TEST MEETS SPECIFICATIONS

TECHNICIAN Pete Foster RUN NUMBER: 010995.0930;1

PART 572-E HYBRID III NECK EXTENSION CALIBRATION
PENDULUM DECELERATION

TRC TEST NUMBER: 142C26NE1 572E SN142 NECK EXT. CAL26 RUN NUMBER: 020995.1604;1



CHANNEL: PENXG FILTER: CH. CLASS 60 PEAK DATA: 19.06 G @ 8.32 MS; -2.06 G @ 50.48 MS

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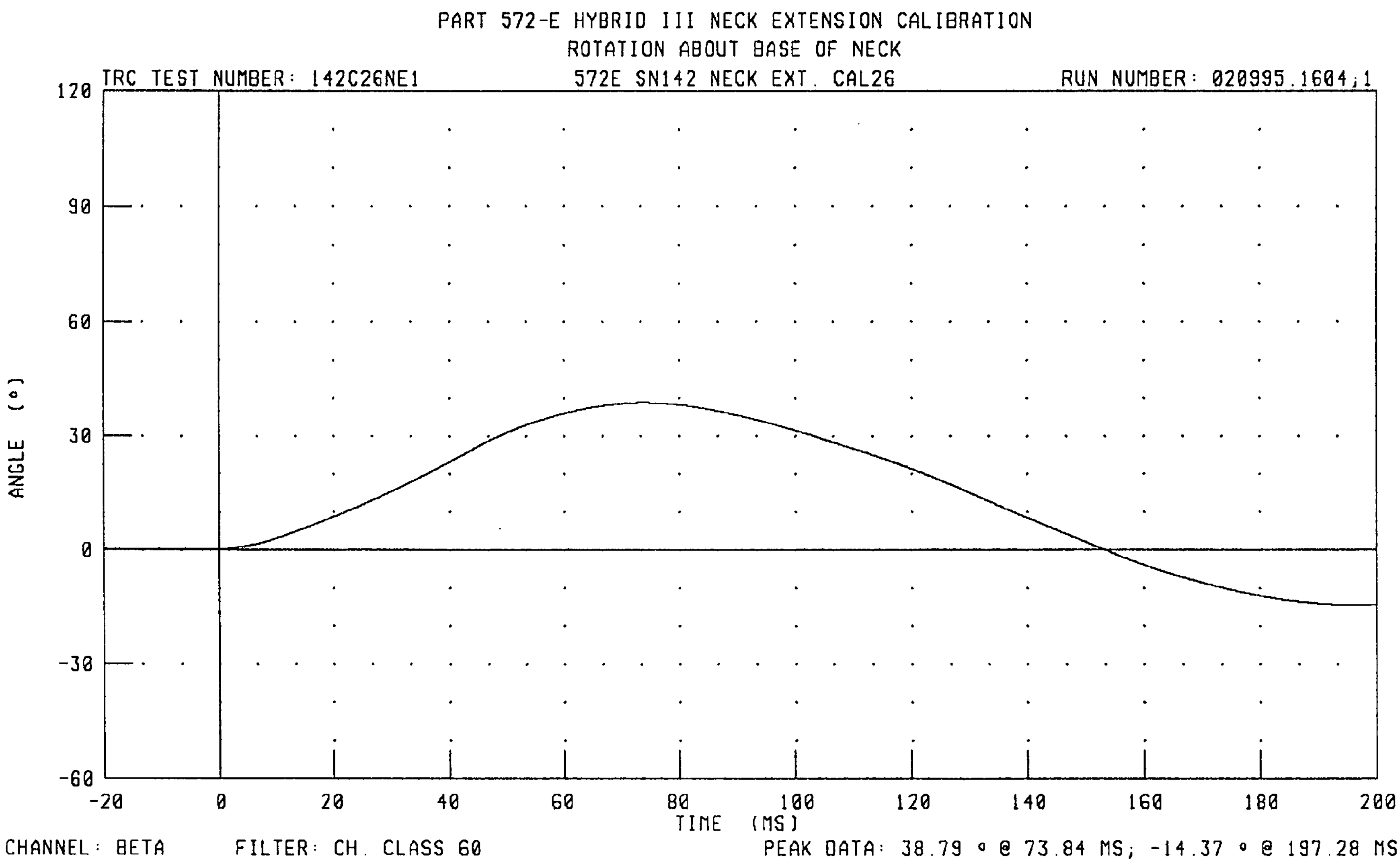
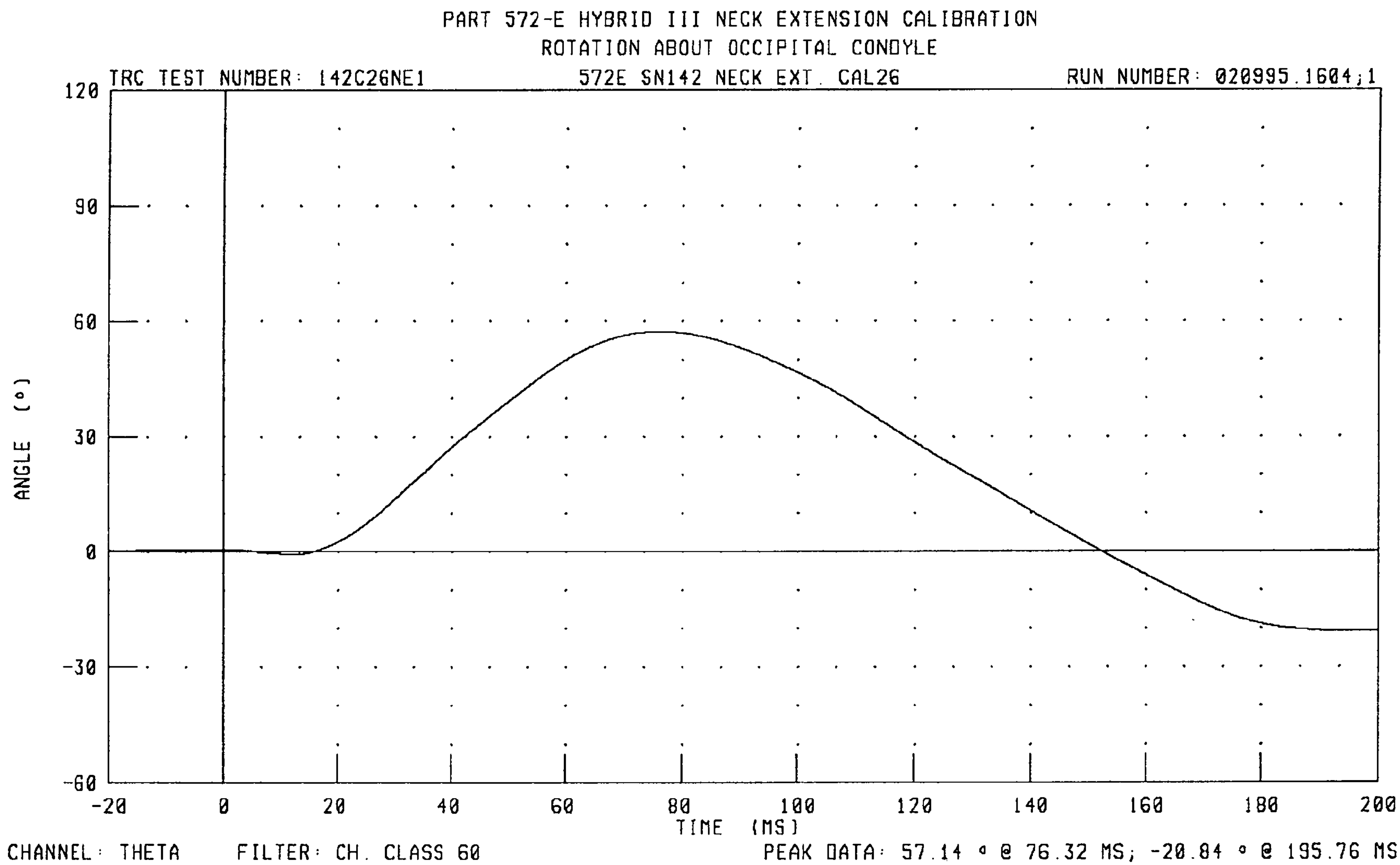
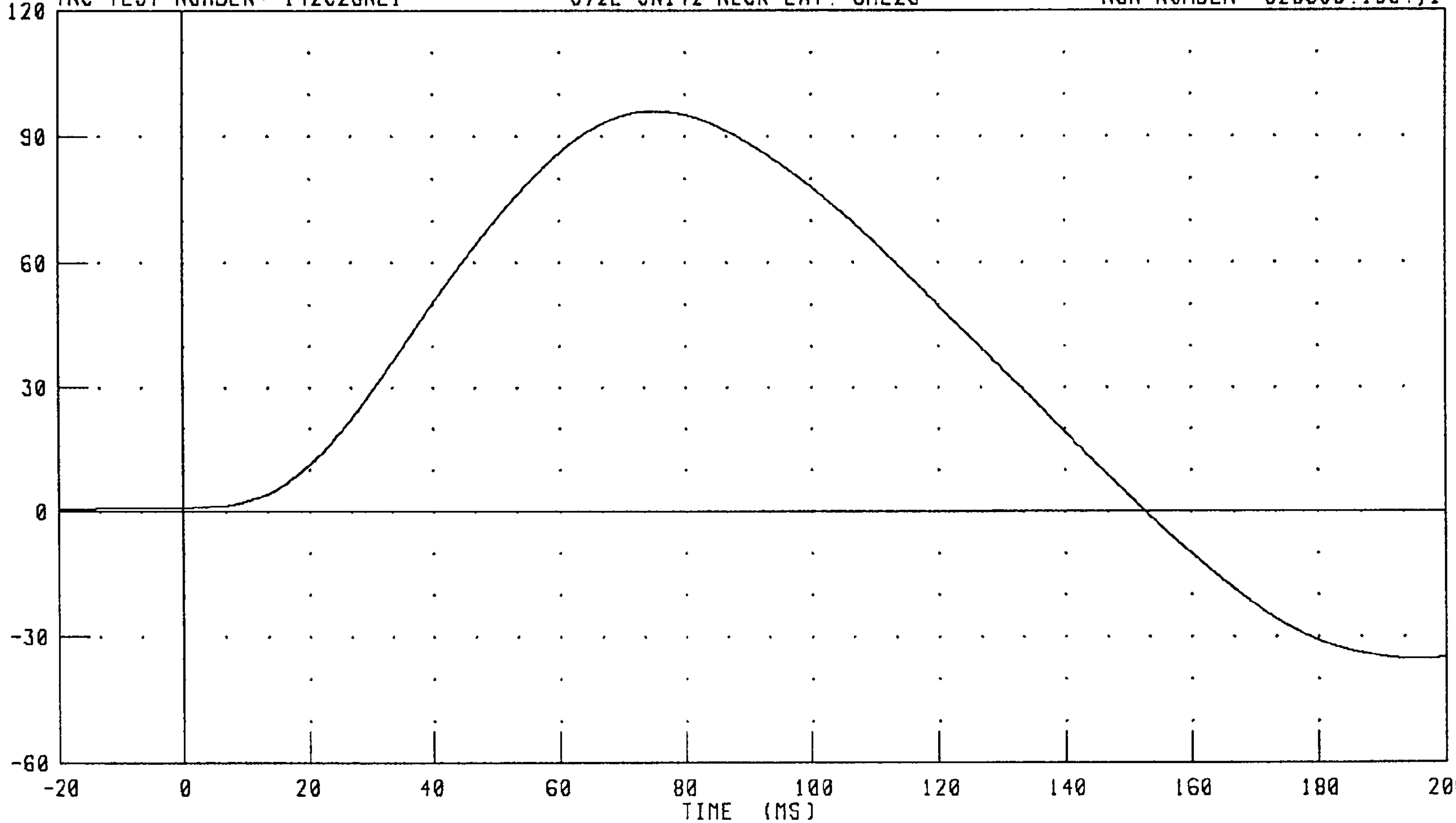

PART 572-E HYBRID III NECK EXTENSION CALIBRATION
ROTATION ABOUT BASE OF NECK
TRC TEST NUMBER: 142C26NE1
572E SN142 NECK EXT. CAL26
RUN NUMBER: 020995.1604;1
ANGLE (°)
120
90
60
30
0
-30
-60
-20
0
20
40
60
80
100
120
140
160
180
200
TIME (MS)
CHANNEL: BETA
FILTER: CH. CLASS 60
PEAK DATA: 38.79 ° @ 73.84 MS; -14.37 ° @ 197.28 MS


PART 572-E HYBRID III NECK EXTENSION CALIBRATION
ROTATION ABOUT OCCIPITAL CONDYLE
TRC TEST NUMBER: 142C26NE1
572E SN142 NECK EXT. CAL26
RUN NUMBER: 020995.1604;1
ANGLE (°)
120
90
60
30
0
-30
-60
-20
0
20
40
60
80
100
120
140
160
180
200
TIME (MS)
CHANNEL: THETA
FILTER: CH. CLASS 60
PEAK DATA: 57.14 ° @ 76.32 MS; -20.84 ° @ 195.76 MS

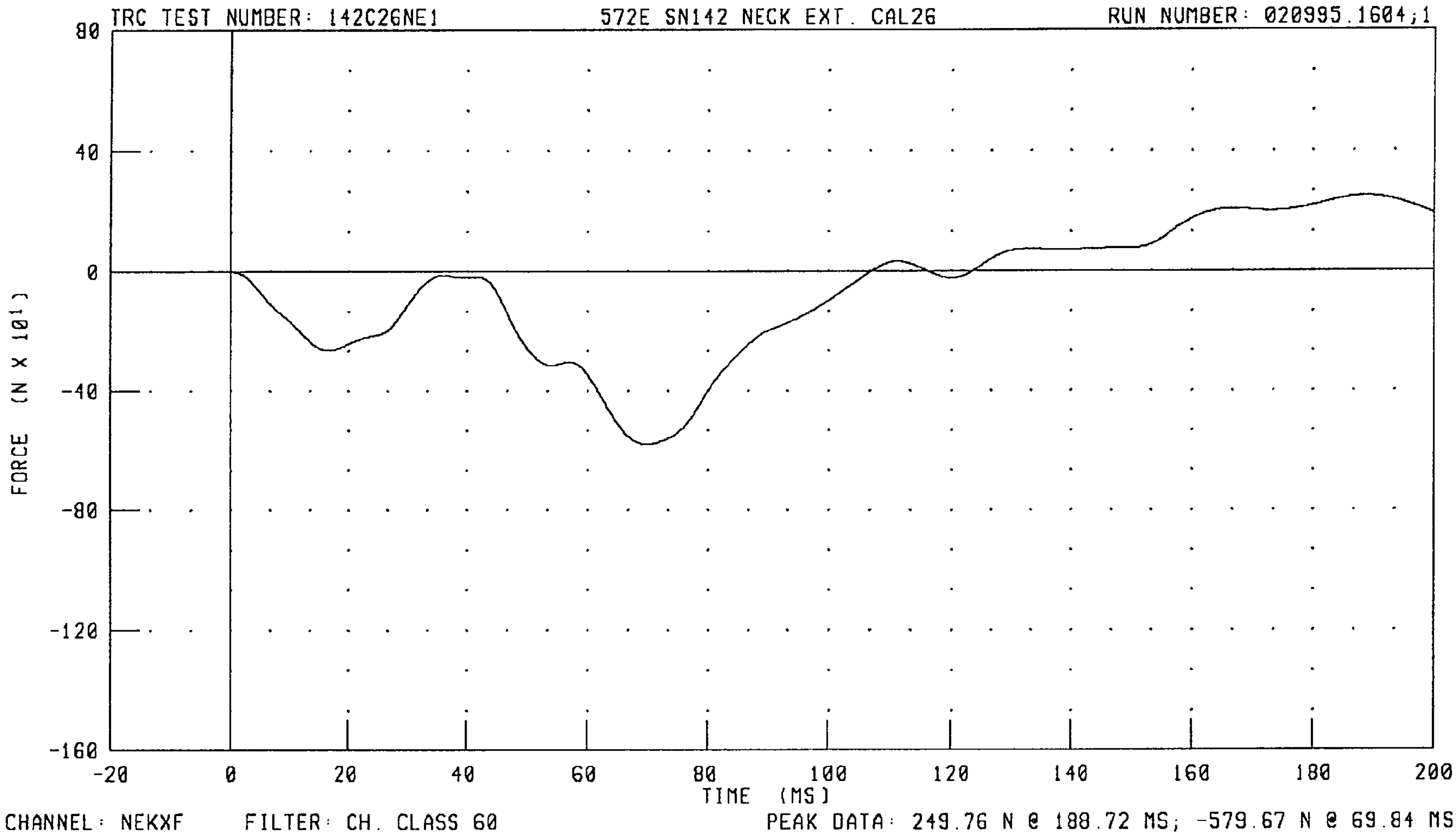
PART 572-E HYBRID III NECK EXTENSION CALIBRATION
TOTAL ROTATION

TRC TEST NUMBER: 142C26NE1 572E SN142 NECK EXT. CAL26 RUN NUMBER: 020995.1604;1



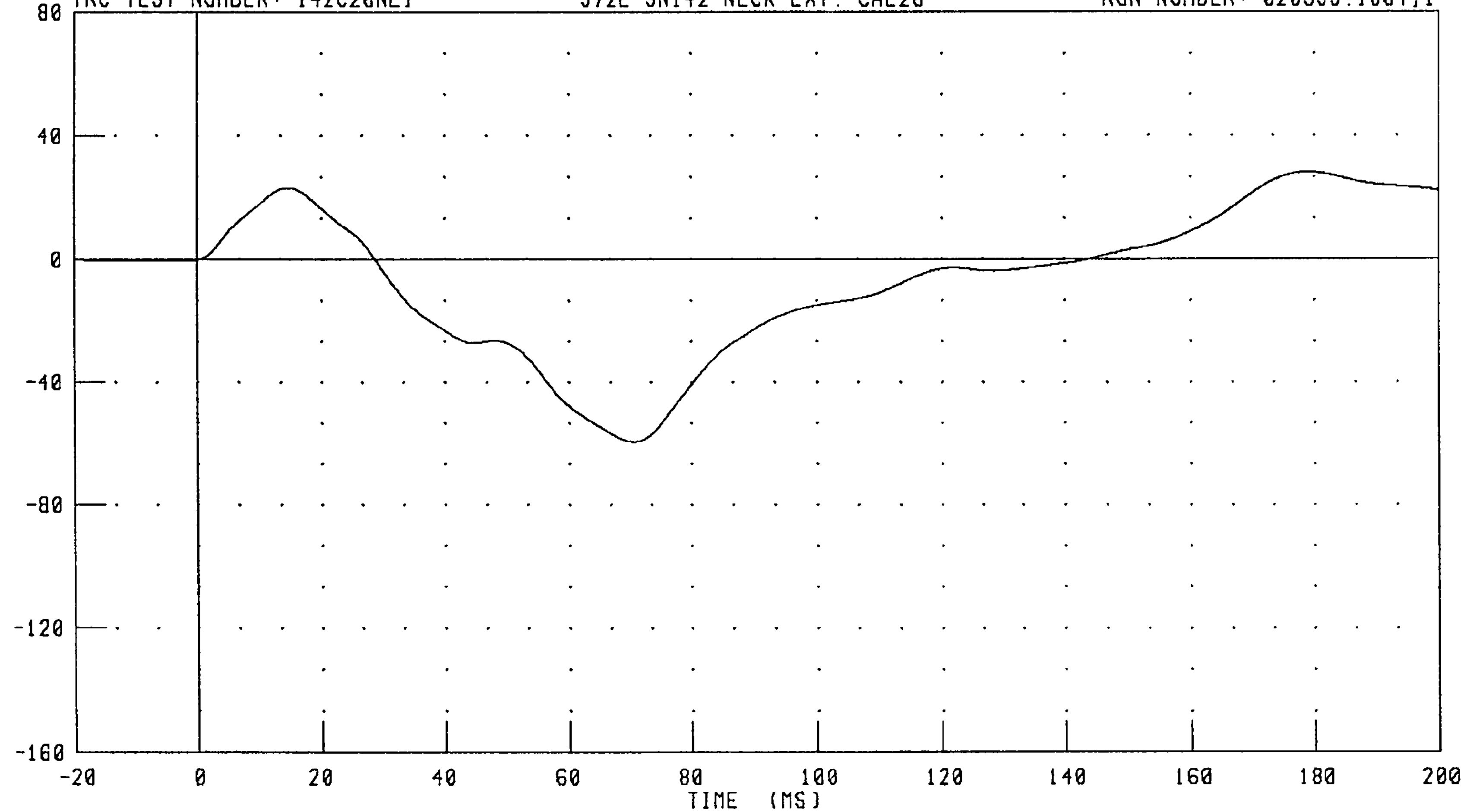
CHANNEL: TOTAN FILTER: CH. CLASS 60 PEAK DATA: 95.90 ° @ 74.72 MS; -35.21 ° @ 195.84 MS

PART 572-E HYBRID III NECK EXTENSION CALIBRATION
NECK FORCE X AXIS



PART 572-E HYBRID III NECK EXTENSION CALIBRATION
NECK MOMENT Y AXIS

TRC TEST NUMBER: 142C26NE1 572E SN142 NECK EXT. CAL26 RUN NUMBER: 020995.1604;1



CHANNEL: NEKYM FILTER: CH. CLASS 60 PEAK DATA: 28.08 N·M @ 179.12 MS; -59.48 N·M @ 70.56 MS

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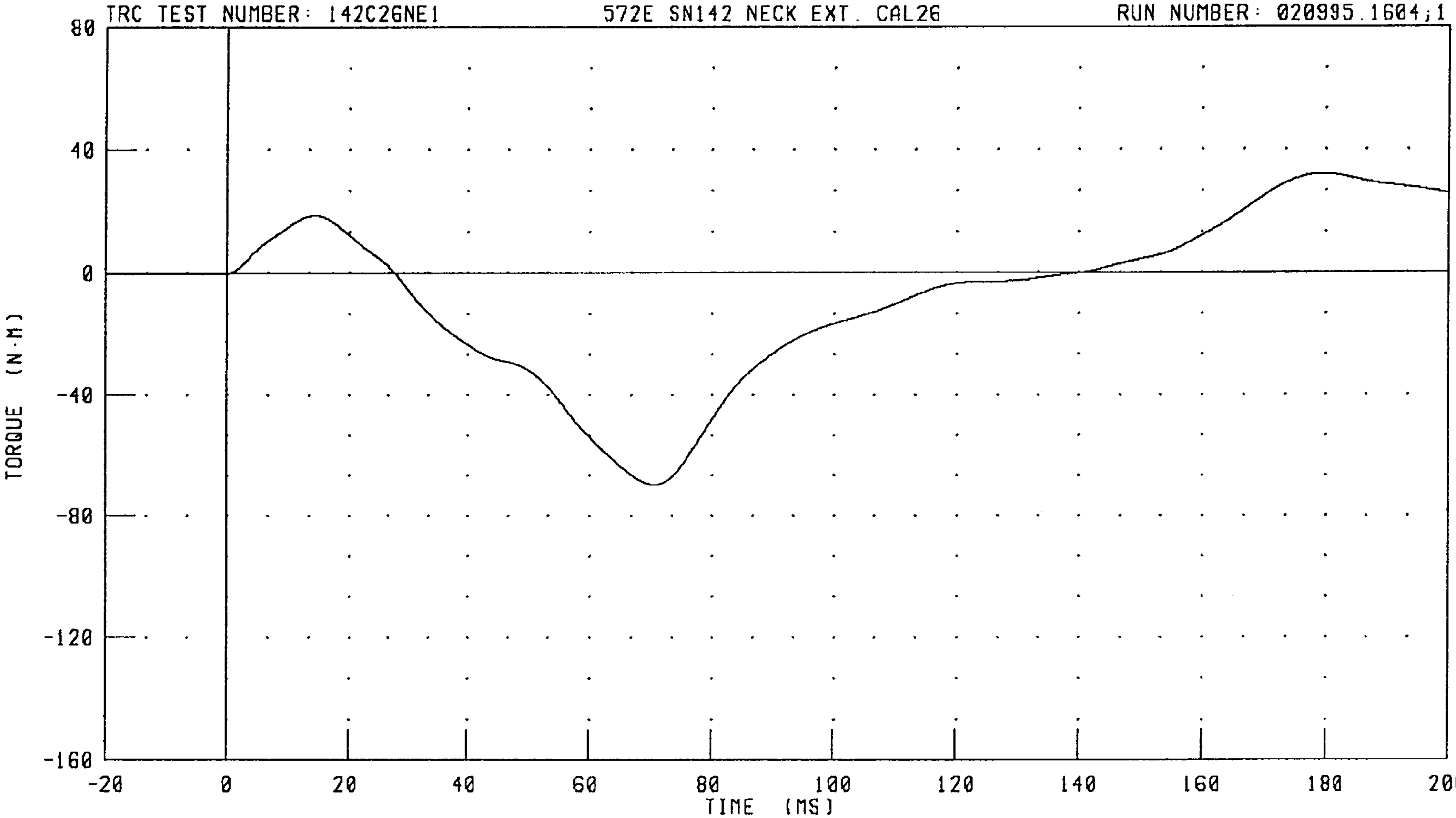
PART 572-E HYBRID III NECK EXTENSION CALIBRATION
TOTAL MOMENT ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER: 142C26NE1 572E SN142 NECK EXT. CAL26 RUN NUMBER: 020995.1604;1



CHANNEL: NEKOM FILTER: CH. CLASS 60 PEAK DATA: 31.92 N·M @ 179.60 MS; -69.77 N·M @ 70.48 MS

TRANSPORTATION RESEARCH CENTER INC.

THORAX IMPACT TEST

HYBRID III 25-JAN-95

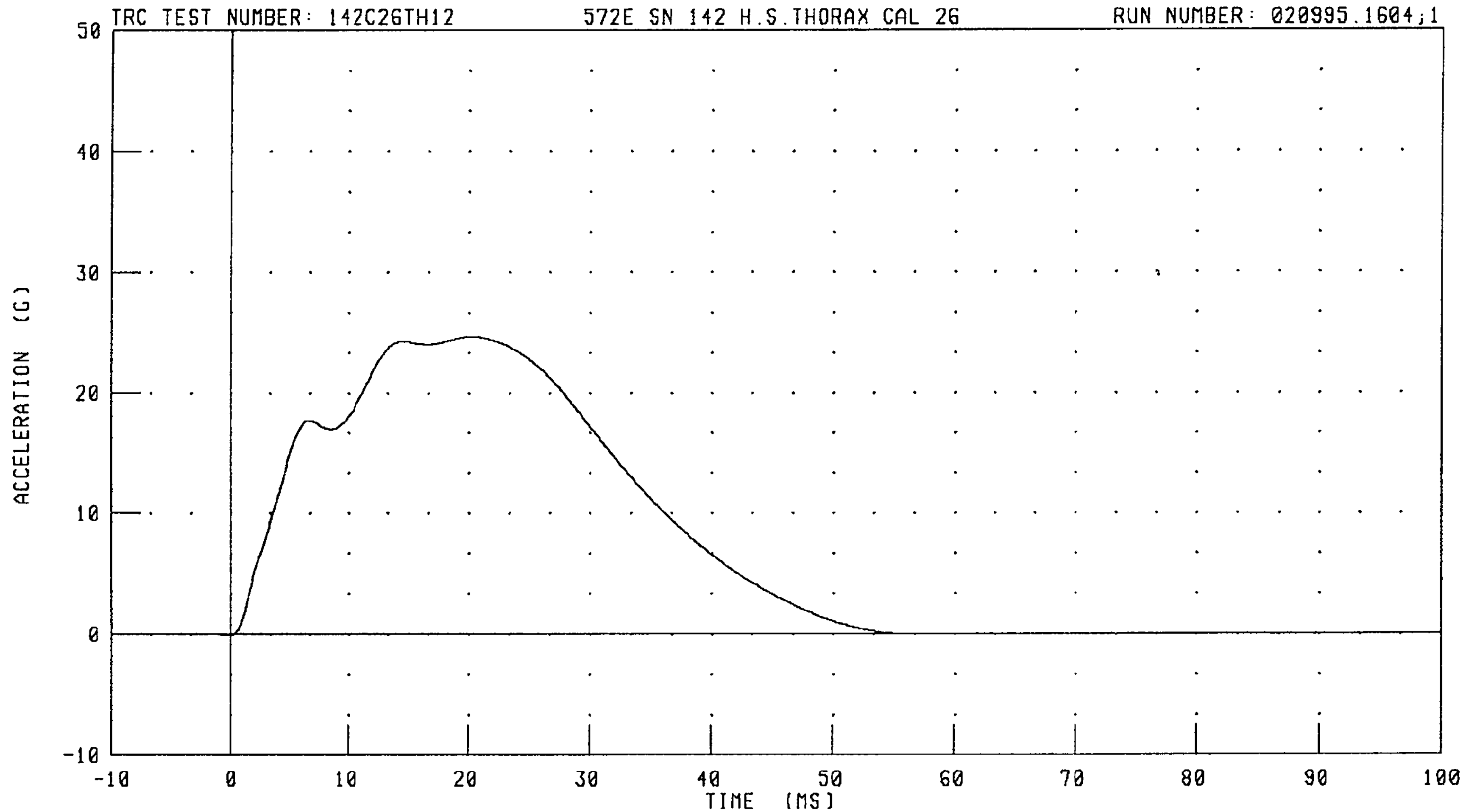
TRC INC. TEST NO: 142C26TH12 572E SN 142 H.S.THORAX CAL 26

TEST PARAMETER	HIGH SPEED TEST SPECIFICATION	TEST RESULTS
TEMPERATURE	20.6-22.2 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	25.0 %
PENDULUM VELOCITY	6.59 - 6.83 M/S	6.68 M/S
MAXIMUM DEFLECTION	63.5 - 72.6 MM	66.6 MM
MAXIMUM RESISTIVE FORCE	5159 - 5894 N	5652. N
INTERNAL HYSTERESIS	69% - 85%	75.1%

TEST MEETS SPECIFICATIONS

TECHNICIAN Pete Frost RUN NUMBER: 012595.1305;1

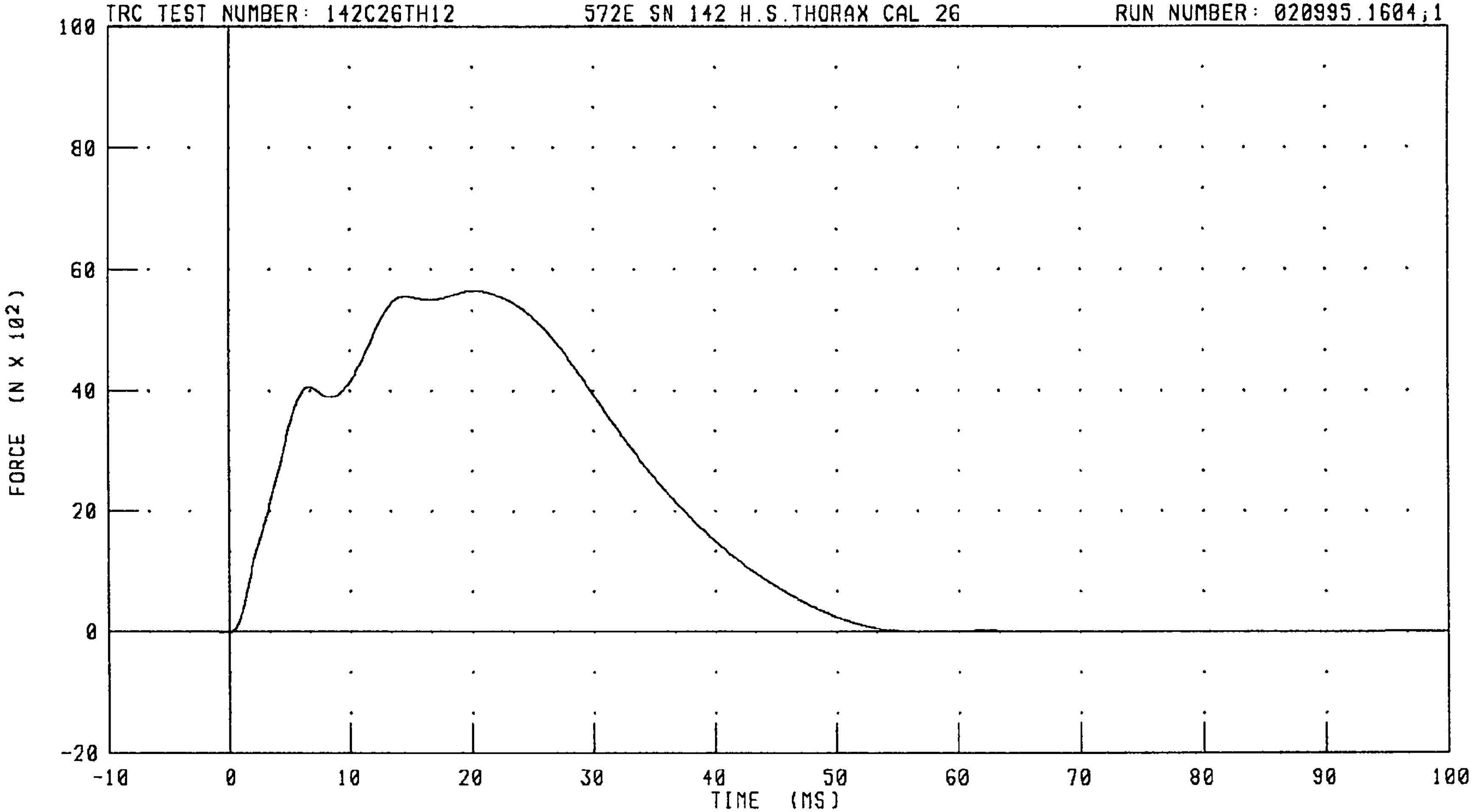
PART 572-E HYBRID III THORAX CALIBRATION
PENDULUM DECELERATION



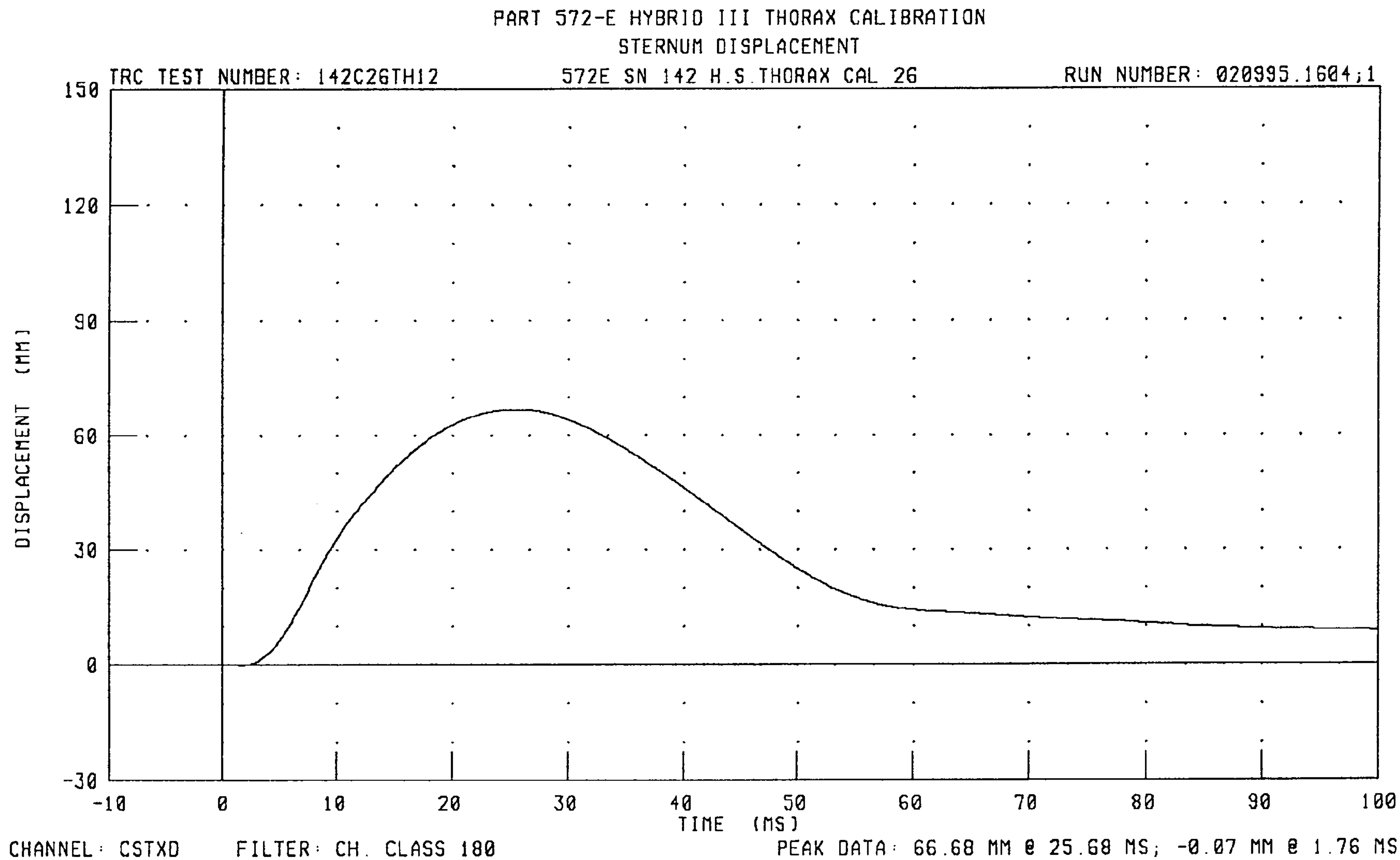
CHANNEL: PENXG FILTER: CH. CLASS 180 PEAK DATA: 24.67 G @ 20.24 MS; -0.09 G @ -0.16 MS

PART 572-E HYBRID III THORAX CALIBRATION
PENDULUM FORCE

TRC TEST NUMBER: 142C26TH12   572E SN 142 H.S.THORAX CAL 26   RUN NUMBER: 020995.1604;1



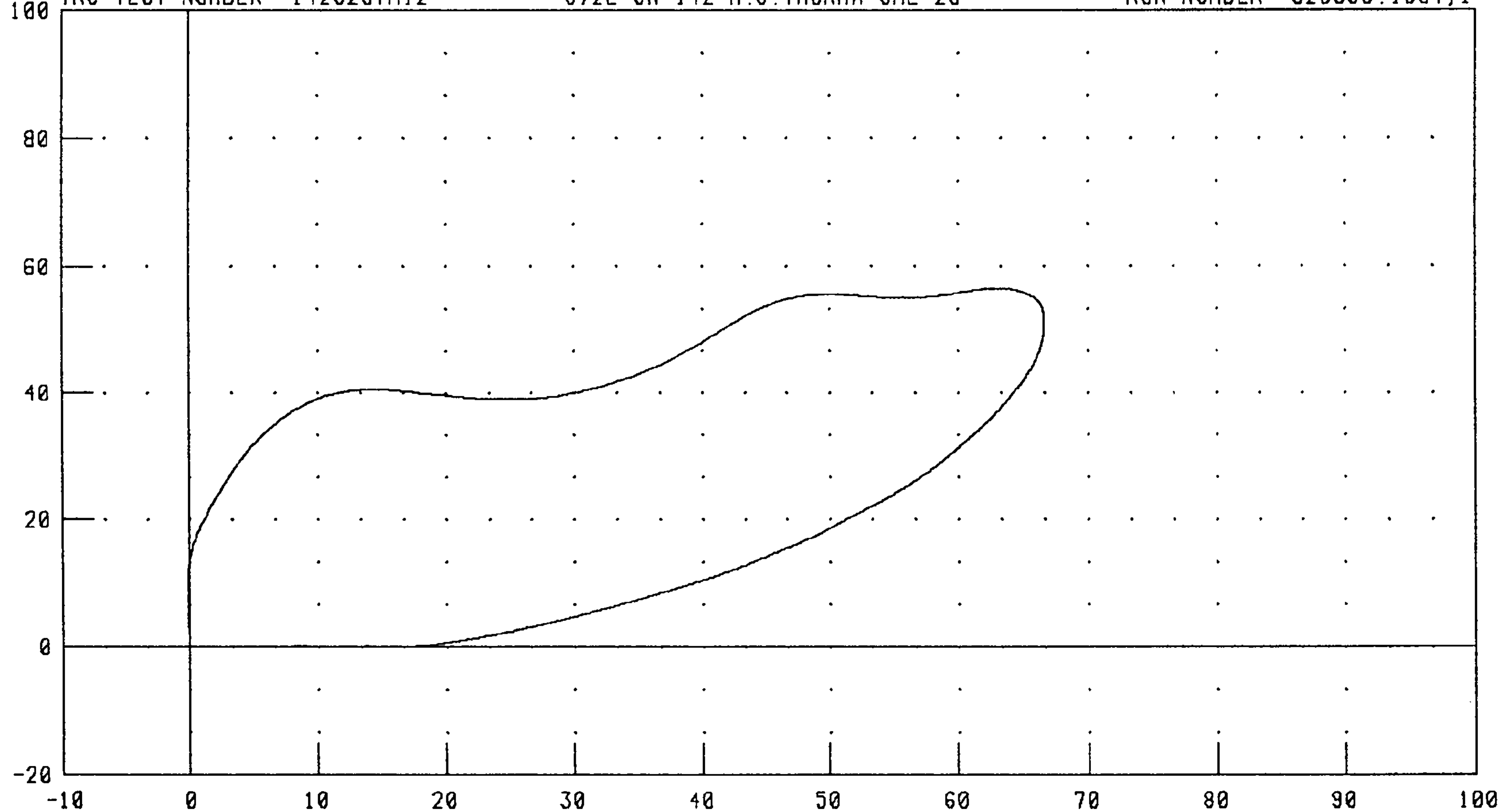
CHANNEL: PENXF   FILTER: CH. CLASS 180   PEAK DATA: 5652.18 N @ 20.24 MS; -19.72 N @ -0.16 MS


PART 572-E HYBRID III THORAX CALIBRATION
STERNUM DISPLACEMENT
TRC TEST NUMBER: 142C26TH12
572E SN 142 H.S.THORAX CAL 26
RUN NUMBER: 020995.1604;1
150
120
90
60
30
0
-30
DISPLACEMENT (MM)
-10
0
10
20
30
40
50
60
70
80
90
100
TIME (MS)
CHANNEL: CSTXD
FILTER: CH. CLASS 180
PEAK DATA: 66.68 MM @ 25.68 MS; -0.07 MM @ 1.76 MS

950127

PART 572-E HYBRID III THORAX CALIBRATION
CHEST DISPLACEMENT VS PENDULUM FORCE

TRC TEST NUMBER: 142C26TH12 572E SN 142 H.S.THORAX CAL 26 RUN NUMBER: 020995.1604;1



CHANNEL: CSTXD FILTER: CH. CLASS 180 PEAK DATA: 66.68 MM @ 25.68 MS; -0.07 MM @ 1.76 MS
PENXF CH. CLASS 180 5652.18 N @ 20.24 MS; -19.72 N @ -0.16 MS

950127

TRANSPORTATION RESEARCH CENTER INC.

RIGHT KNEE IMPACT TEST

HYBRID III 09-JAN-95

TRC INC. TEST NO: 142C26RK1 572E SN142 RIGHT KNEE CAL 26

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	26.0 %
PROBE VELOCITY	2.07 - 2.13 M/S	2.13 M/S
PEAK KNEE IMPACT FORCE 5.0 KG PENDULUM	4714 - 5783 N	5594.3 N

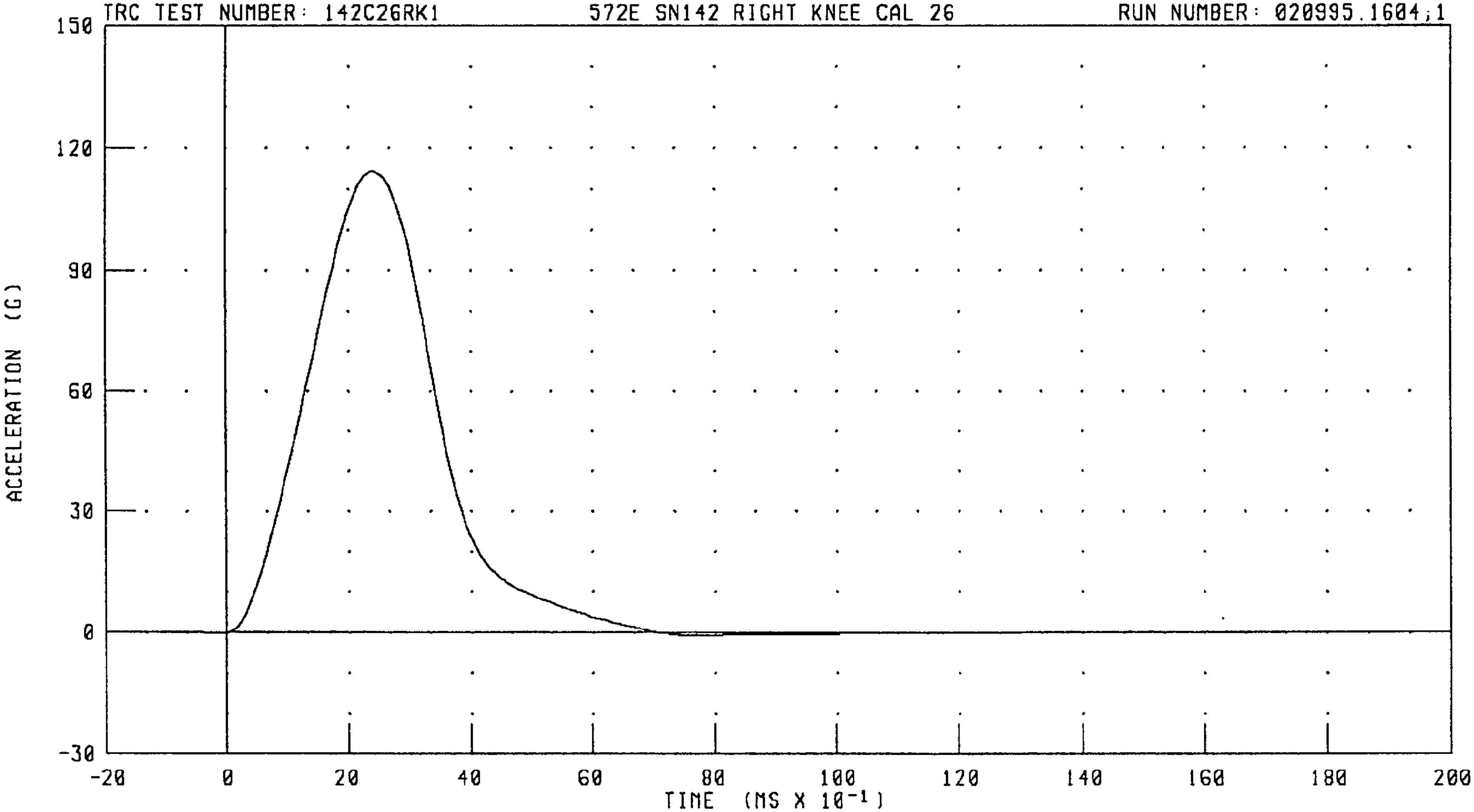
TEST MEETS SPECIFICATIONS

TECHNICIAN Pete Foust RUN NUMBER: 010995.0832;1

PART 572-E HYBRID III RIGHT KNEE CALIBRATION

PENDULUM DECELERATION (5 KG PEND.)

TRC TEST NUMBER: 142C26RK1 | 572E SN142 RIGHT KNEE CAL 26 | RUN NUMBER: 020995.1604;1



CHANNEL: PENXG FILTER: CH. CLASS 600 PEAK DATA: 114.34 G @ 2.40 MS; -0.75 G @ 7.76 MS

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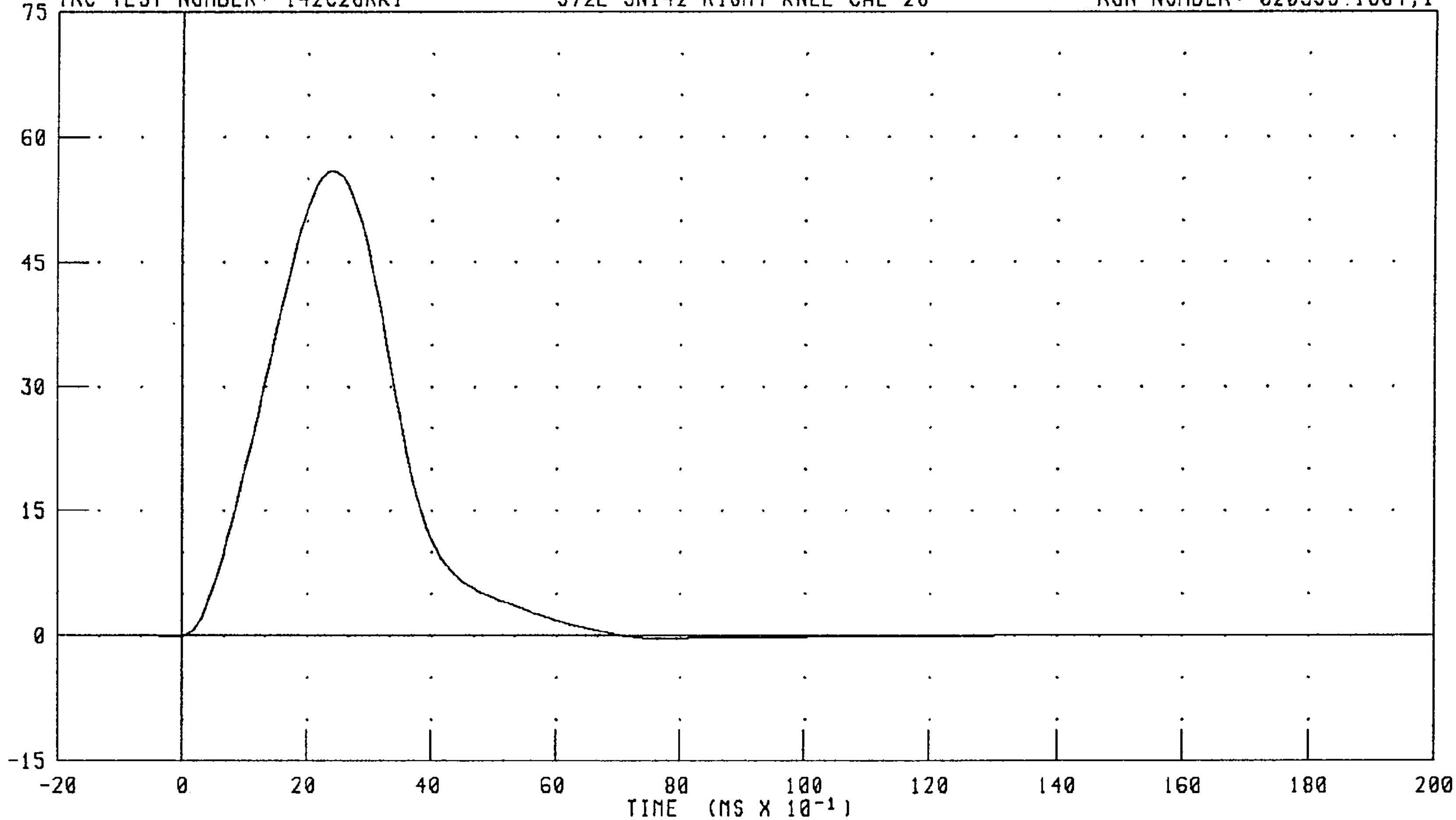
PART 572-E HYBRID III RIGHT KNEE CALIBRATION
PENDULUM FORCE (5 KG PEND.)

TRC TEST NUMBER: 142C26RK1 572E SN142 RIGHT KNEE CAL 26 RUN NUMBER: 020995.1604;1



CHANNEL: PENXF FILTER: CH. CLASS 600 PEAK DATA: 5594.38 N @ 2.40 MS; -36.91 N @ 7.76 MS

TRANSPORTATION RESEARCH CENTER INC.

LEFT KNEE IMPACT TEST

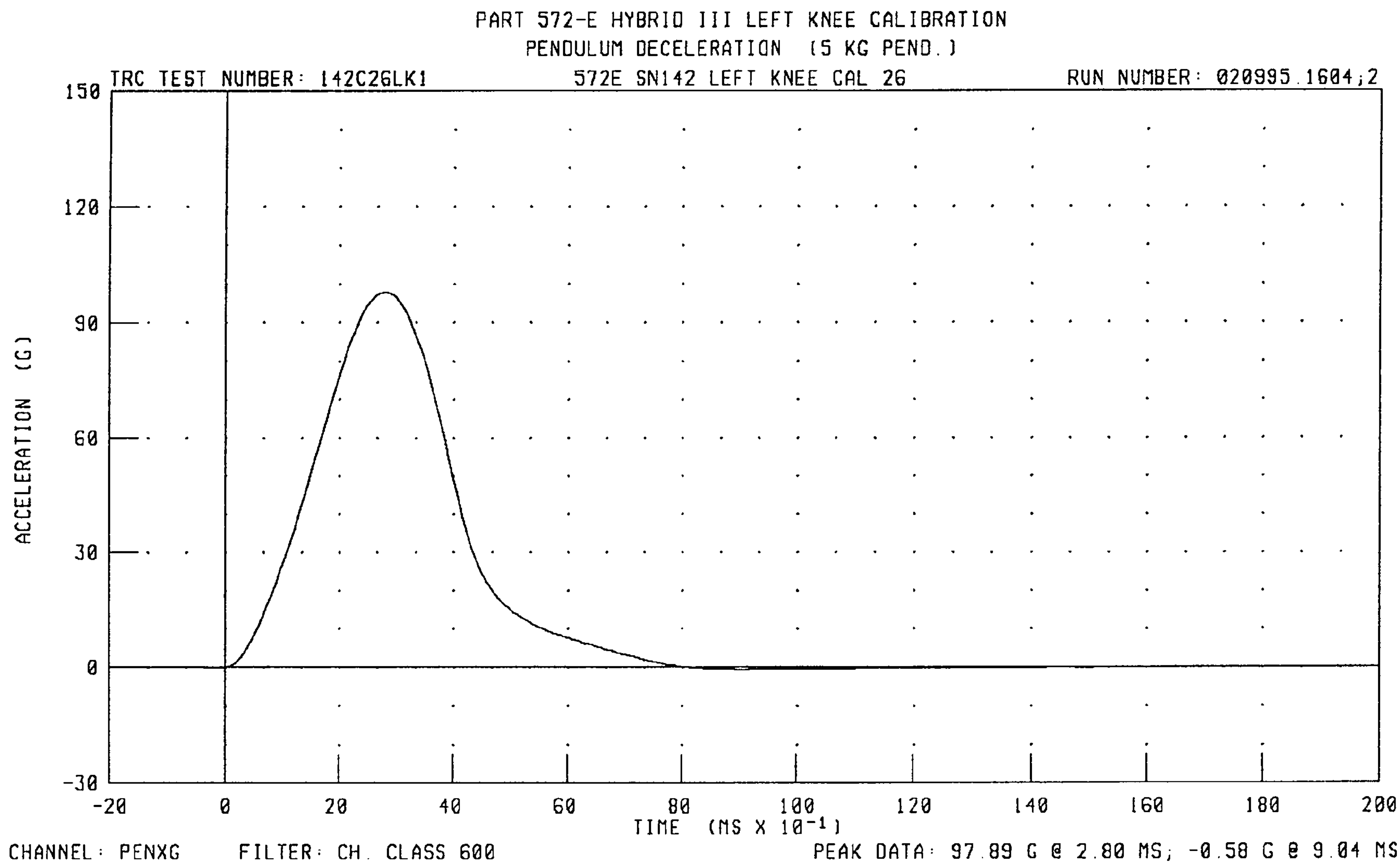
HYBRID III 09-JAN-95

TRC INC. TEST NO: 142C26LK1 572E SN142 LEFT KNEE CAL 26

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	26.0 %
PROBE VELOCITY	2.07 - 2.13 M/S	2.09 M/S
PEAK KNEE IMPACT FORCE 5.0 KG PENDULUM	4714 - 5783 N	4789.6 N

TEST MEETS SPECIFICATIONS.

TECHNICIAN Peter Foster RUN NUMBER: 010995.1010;2


PART 572-E HYBRID III LEFT KNEE CALIBRATION
PENDULUM DECELERATION (5 KG PEND.)
TRC TEST NUMBER: 142C26LK1
572E SN142 LEFT KNEE CAL 26
RUN NUMBER: 020995.1604;2
150
120
90
60
30
0
-30
ACCELERATION (G)
-20
0
20
40
60
80
100
120
140
160
180
200
TIME (MS X 10⁻¹)
CHANNEL: PENXG
FILTER: CH. CLASS 600
PEAK DATA: 97.89 G @ 2.80 MS; -0.58 G @ 9.04 MS

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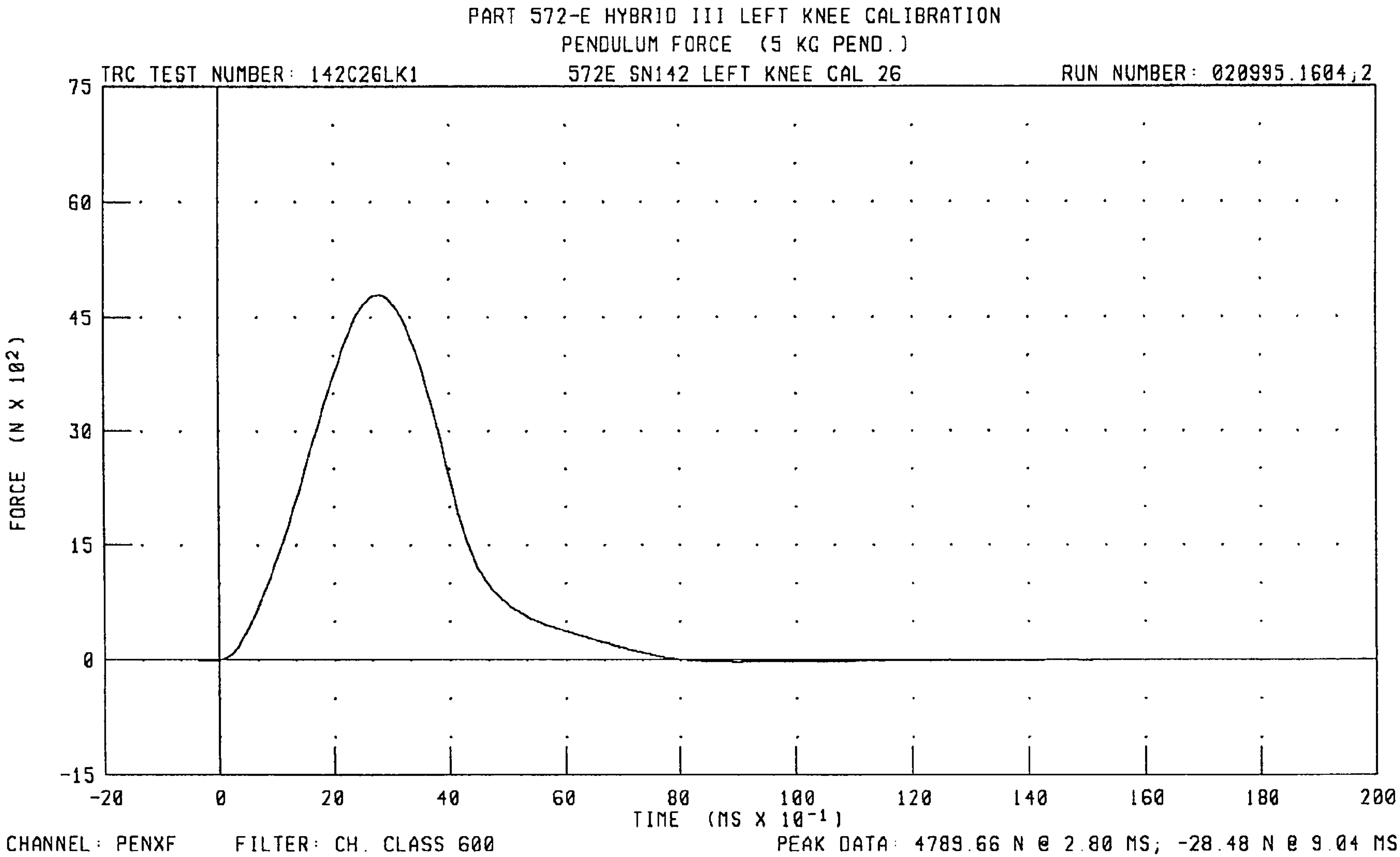

PART 572-E HYBRID III LEFT KNEE CALIBRATION
PENDULUM FORCE (5 KG PEND.)
TRC TEST NUMBER: 142C26LK1
572E SN142 LEFT KNEE CAL 26
RUN NUMBER: 020995.1604;2
FORCE (N X 10²)
75
60
45
30
15
0
-15
-20
0
20
40
60
80
100
120
140
160
180
200
TIME (MS X 10⁻¹)
CHANNEL: PENXF
FILTER: CH. CLASS 600
PEAK DATA: 4789.66 N @ 2.80 MS; -28.48 N @ 9.04 MS

950127

Pre-test Certification Data

Passenger Dummy S/N: 192

TRANSPORTATION RESEARCH CENTER INC.
HYBRID III EXTERNAL DIMENSIONS
192 ALDERSON 25-JAN-95

TRC INC. TEST NO: 192C25ED1 572E SN192 EXT.DIMENSION CAL25

TEST PARAMETER	(DIMEN.)	SPECIFICATION	TEST RESULTS
LOCATION FOR CHEST CIRCUMFERENCE	(AA)	429 - 434 MM	432. MM
LOCATION FOR WAIST CIRCUMFERENCE	(BB)	226 - 231 MM	229. MM
CHEST CIRCUMFERENCE	(Y)	970 -1001 MM	980. MM
WAIST CIRCUMFERENCE	(Z)	836 - 866 MM	851. MM
CHEST DEPTH	(O)	213 - 229 MM	218. MM
H-POINT HEIGHT	(C)	84 - 89 MM	84. MM
H-POINT FROM SEATBACK	(D)	135 - 140 MM	135. MM
SKULL CAP TO BACKLINE	(H)	41 - 46 MM	43. MM
TOTAL SITTING HEIGHT	(A)	879 - 889 MM	889. MM
THIGH CLEARANCE	(F)	140 - 155 MM	150. MM
BUTTOCK KNEE LENGTH	(K)	579 - 605 MM	597. MM
BUTTOCK POPLITEAL LENGTH	(N)	452 - 478 MM	470. MM
POPLITEAL HEIGHT	(L)	429 - 455 MM	447. MM
KNEE PIVOT HEIGHT	(M)	485 - 500 MM	493. MM
FOOT LENGTH	(P)	252 - 267 MM	259. MM
FOOT BREADTH	(W)	91 - 107 MM	102. MM
SHOULDER PIVOT FROM BACKLINE	(E)	84 - 94 MM	94. MM
SHOULDER BREADTH	(V)	422 - 437 MM	429. MM
SHOULDER PIVOT HEIGHT	(B)	506 - 521 MM	516. MM
ELBOW REST HEIGHT	(J)	191 - 211 MM	211. MM
SHOULDER-ELBOW LENGTH	(I)	330 - 345 MM	345. MM
BACK OF ELBOW TO WRIST PIVOT	(G)	290 - 305 MM	290. MM

DUMMY MEETS SPECIFICATIONS
TECHNICIAN Peter Fo[illegible] RUN NUMBER: 012595.1352

TRANSPORTATION RESEARCH CENTER INC.

HEAD DROP TEST

HYBRID III 25-JAN-95

TRC INC. TEST NO: 192C25HD1 572E SN192 HEAD DROP CAL 25

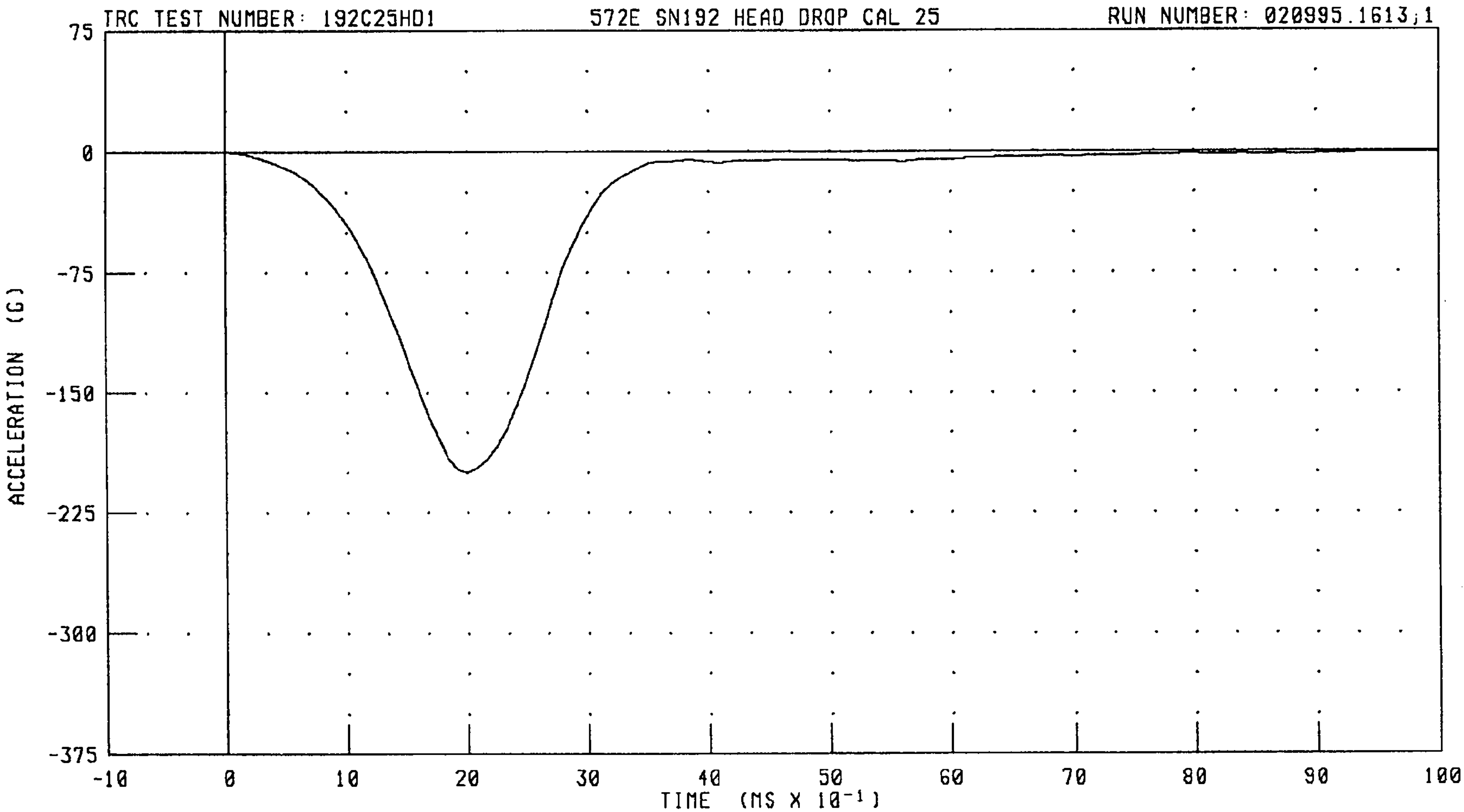
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	25.0 %
PEAK RESULTANT ACCELERATION	225 - 275 G	229.49 G
PEAK LATERAL ACCELERATION	15 G MAX	-8.03 G
IS ACCELERATION CURVE UNIMODAL?	YES	YES

TEST MEETS SPECIFICATIONS

TECHNICIAN Peter F[illegible] RUN NUMBER: 012595.1011;1

PART 572-E HYBRID III HEAD CALIBRATION

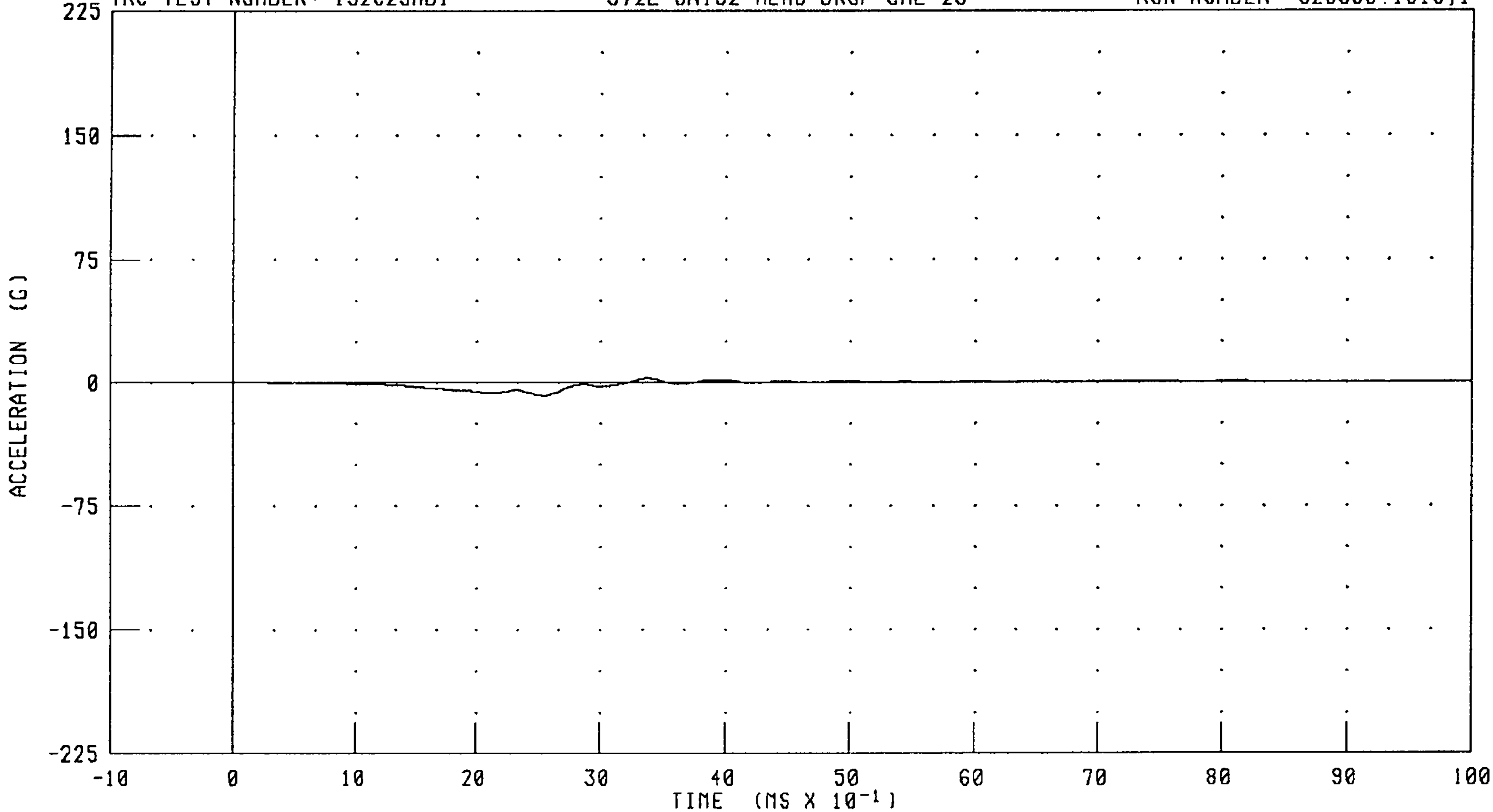
HEAD ACCELERATION X AXIS



CHANNEL: HEDXG FILTER: CH. CLASS 1000 PEAK DATA: 0.04 G @ -0.72 MS; -199.84 G @ 2.00 MS

PART 572-E HYBRID III HEAD CALIBRATION
HEAD ACCELERATION Y AXIS

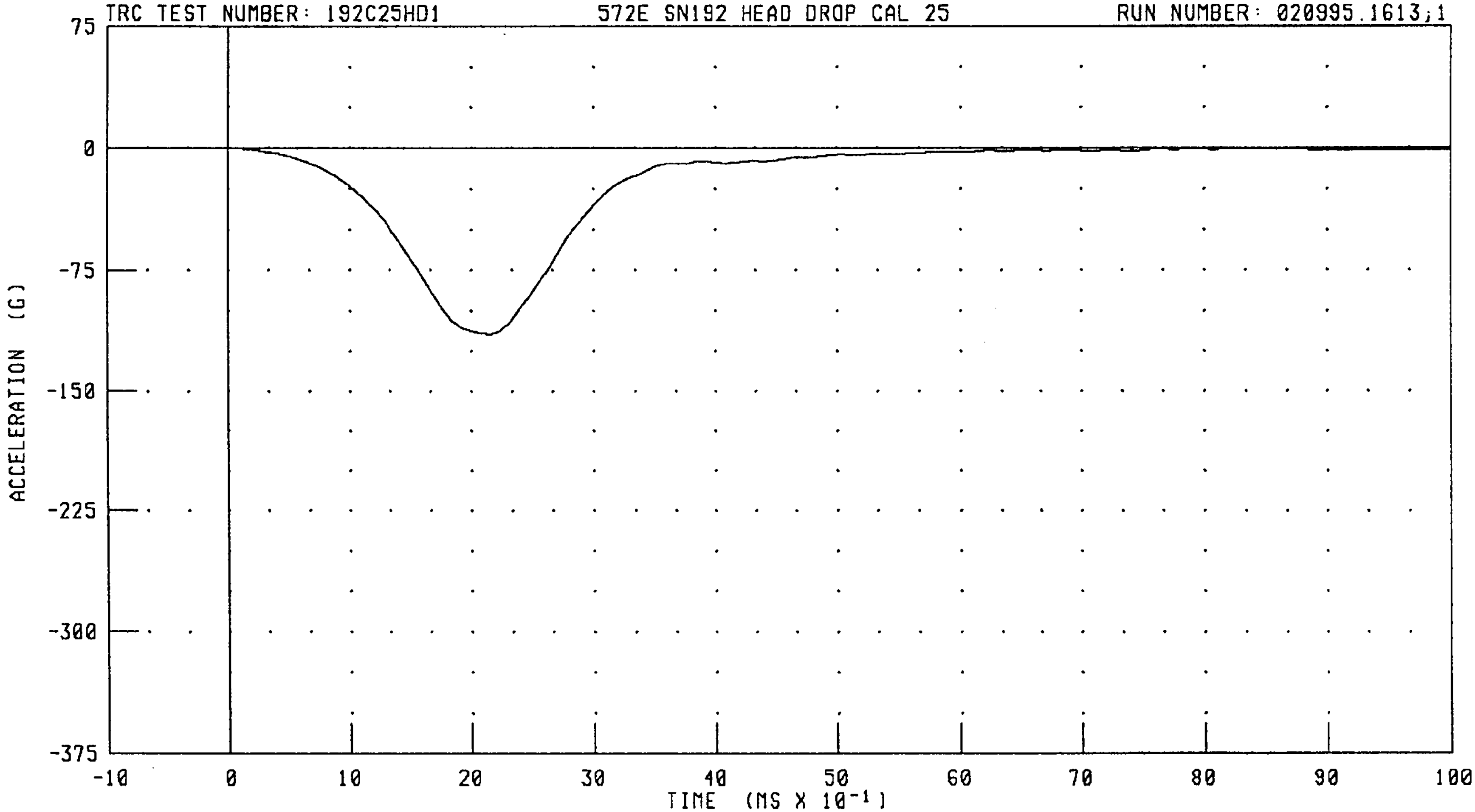
TRC TEST NUMBER: 192C25HD1 572E SN192 HEAD DROP CAL 25 RUN NUMBER: 020995.1613;1



CHANNEL: HEDYG FILTER: CH. CLASS 1000 PEAK DATA: 2.28 G @ 3.36 MS; -8.03 G @ 2.56 MS

PART 572-E HYBRID III HEAD CALIBRATION
HEAD ACCELERATION Z AXIS

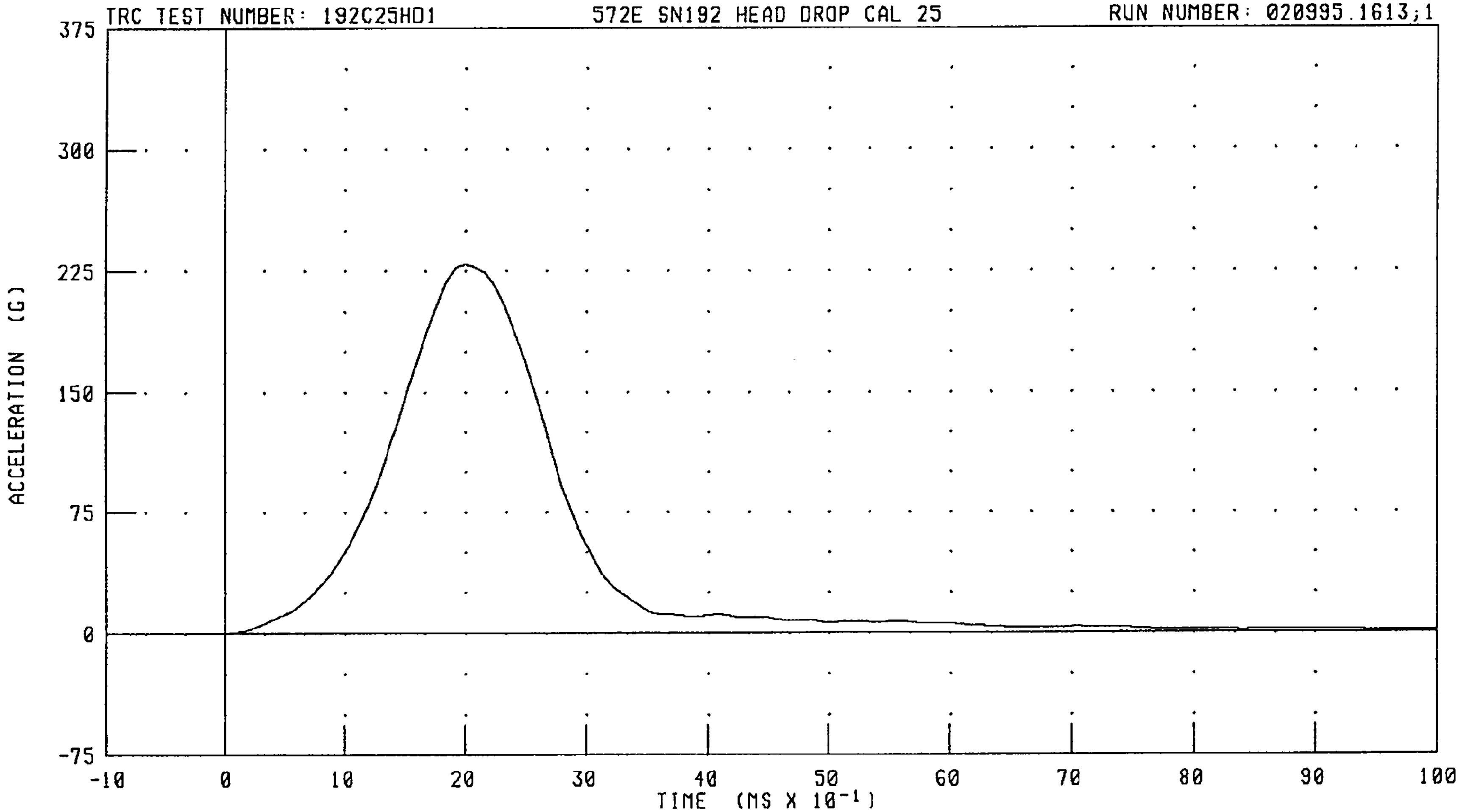
TRC TEST NUMBER: 192C25HD1 572E SN192 HEAD DROP CAL 25 RUN NUMBER: 020995.1613;1



CHANNEL: HEDZG FILTER: CH. CLASS 1000 PEAK DATA: -0.02 G @ -0.24 MS; -114.57 G @ 2.16 MS

PART 572-E HYBRID III HEAD CALIBRATION
HEAD RESULTANT ACCELERATION

TRC TEST NUMBER: 192C25HD1   572E SN192 HEAD DROP CAL 25   RUN NUMBER: 020995.1613;1



CHANNEL: HEDRG   FILTER: CH. CLASS 1000   PEAK DATA: 229.49 G @ 2.00 MS; 0.04 G @ -0.16 MS

TRANSPORTATION RESEARCH CENTER INC.

NECK FLEXION TEST - 6 CHANNEL TRANSDUCER

HYBRID III 25-JAN-95

TRC INC. TEST NO: 192C25NF1 572E SN192 NECK FLEXION CAL25

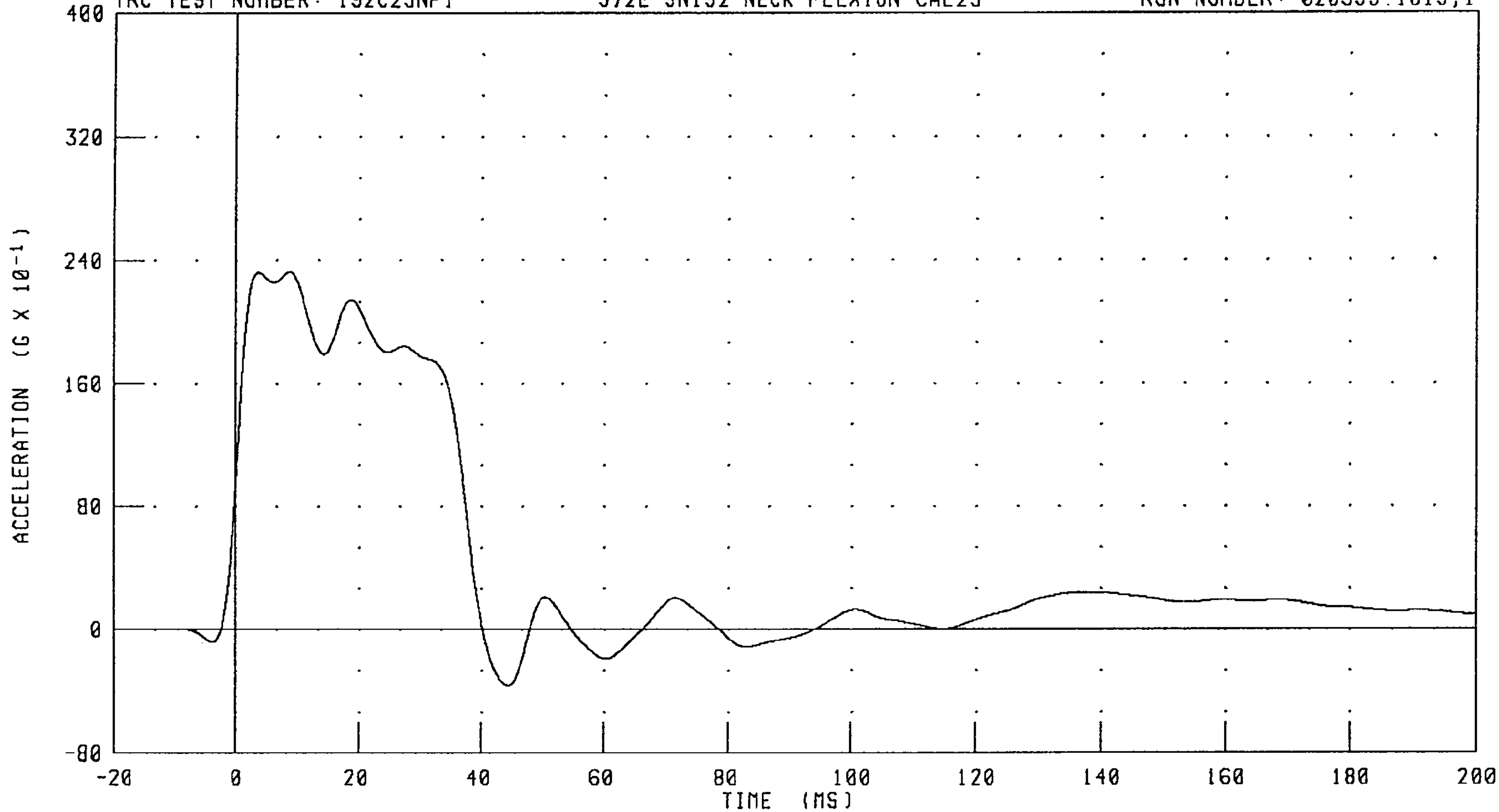
TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6-22.2 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY		10 - 70 %	25.0 %
IMPACT VELOCITY		6.89 - 7.13 M/S	7.06 M/S
PENDULUM DECELERATION	10 MS	22.50 - 27.50 G	22.58 G
	20 MS	17.60 - 22.60 G	20.88 G
	30 MS	12.50 - 18.50 G	17.77 G
MAX PENDULUM G		29 G MAX	23.24 G
MAX PENDULUM G ABOVE 30 MS		29 G MAX	17.75 G
DECELERATION-TIME CURVE DECAY TIME TO 5 G		34 - 42 MS	38.24 MS
D PLANE ROTATION	MAX	64 - 78 DEG.	65.20 DEG.
	TIME	57 - 64 MS	57.28 MS
MOMENT ABOUT OCCIPITAL CONDYLE	MAX	88.2 - 108.5 NM	92.02 NM
	TIME	47 - 58 MS	50.40 MS
ROTATION ANGLE-TIME CURVE DECAY TIME TO ZERO		113 - 128 MS	113.68 MS
POSITIVE MOMENT-TIME CURVE DECAY TIME TO ZERO		97 - 107 MS	102.96 MS

TEST MEETS SPECIFICATIONS

TECHNICIAN Pete F. S. RUN NUMBER: 012595.1059;1

PART 572-E HYBRID III NECK FLEXION CALIBRATION
PENDULUM DECELERATION

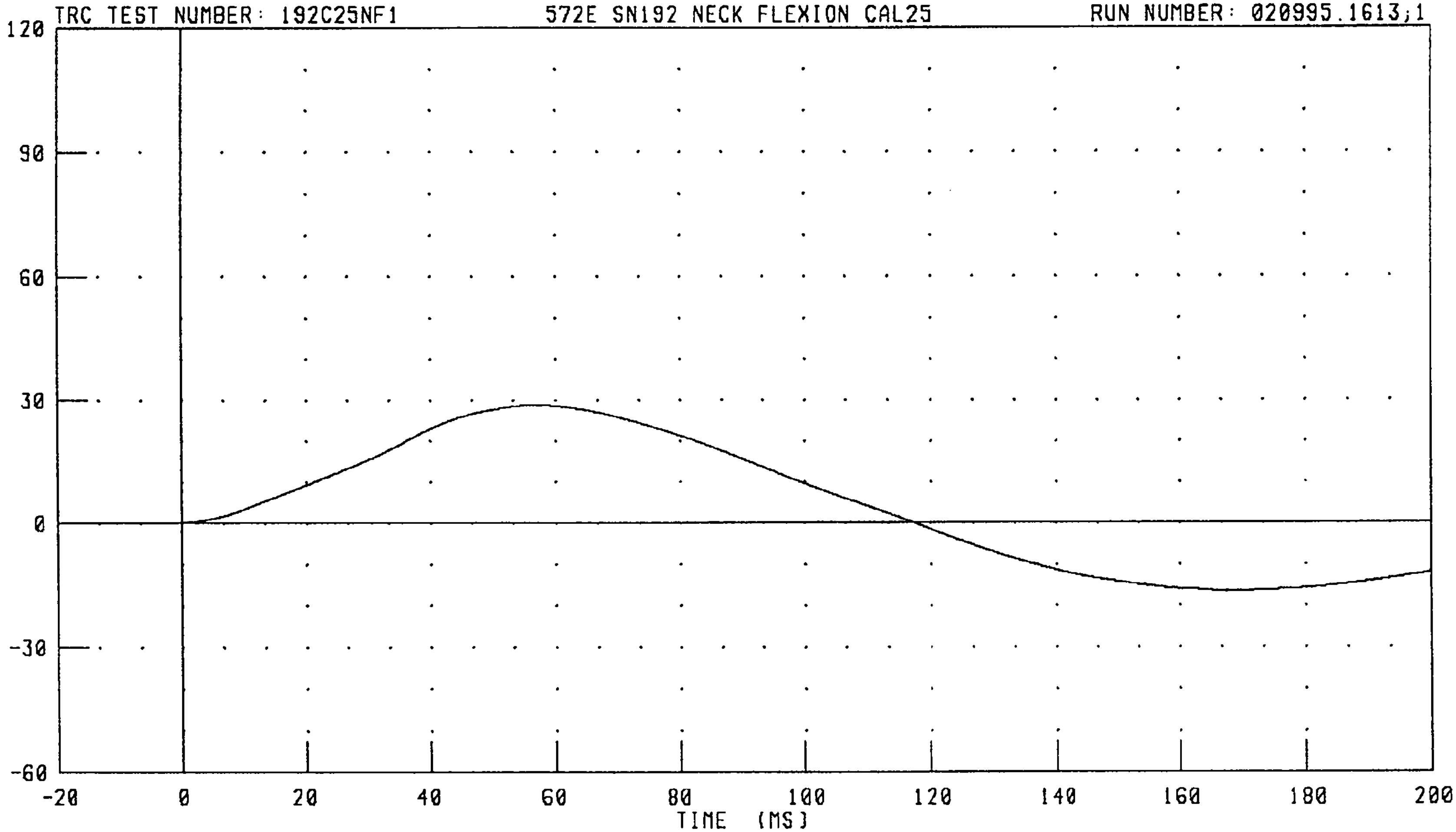
TRC TEST NUMBER: 192C25NF1   572E SN192 NECK FLEXION CAL25   RUN NUMBER: 020995.1613;1



CHANNEL: PENXG   FILTER: CH. CLASS 60   PEAK DATA: 23.24 G @ 8.72 MS; -3.65 G @ 44.40 MS

PART 572-E HYBRID III NECK FLEXION CALIBRATION
ROTATION ABOUT BASE OF NECK

TRC TEST NUMBER: 192C25NF1 572E SN192 NECK FLEXION CAL25 RUN NUMBER: 020995.1613;1



CHANNEL: BETA FILTER: CH. CLASS 60 PEAK DATA: 28.74 ° @ 56.88 MS; -16.50 ° @ 168.32 MS

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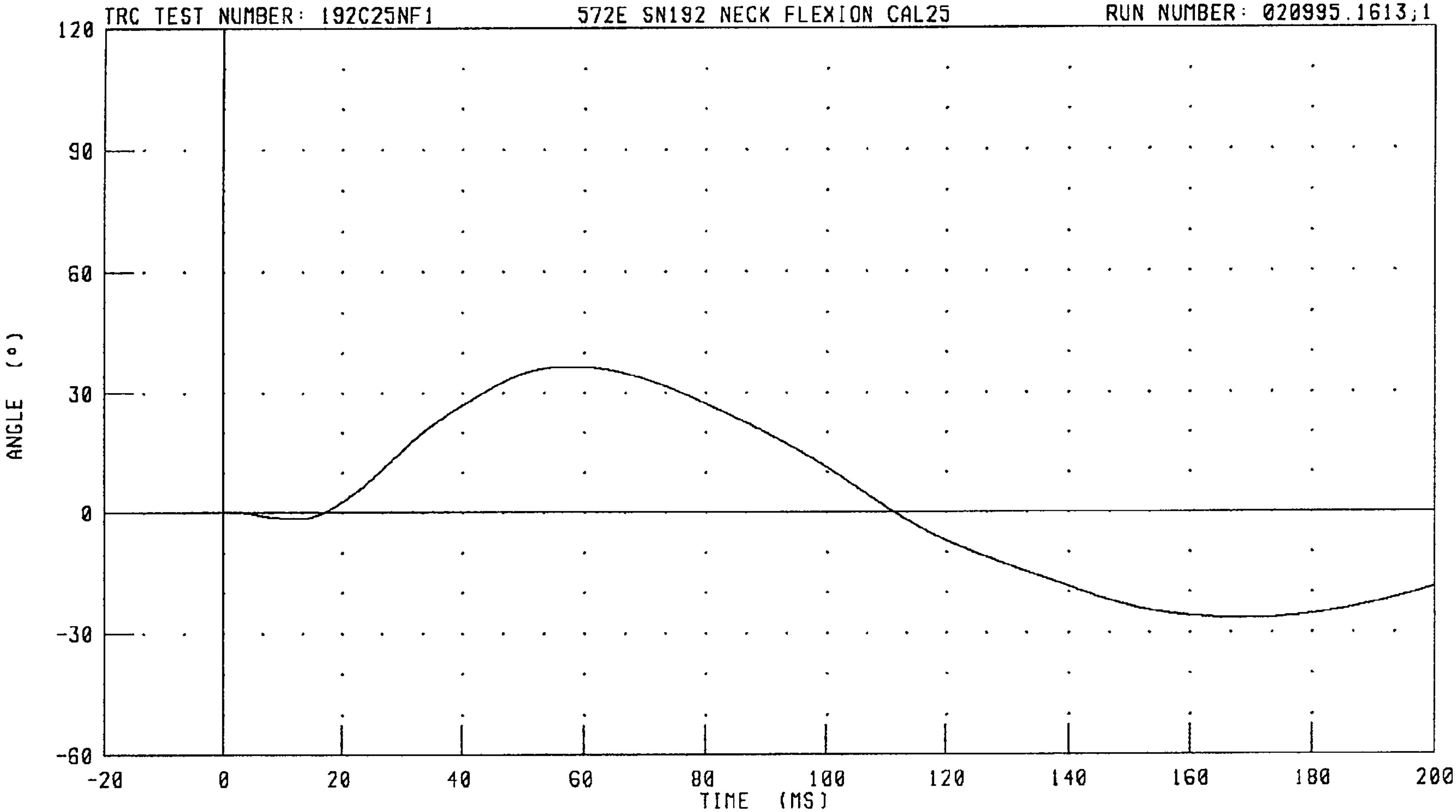
PART 572-E HYBRID III NECK FLEXION CALIBRATION
ROTATION ABOUT OCCIPITAL CONDYLE

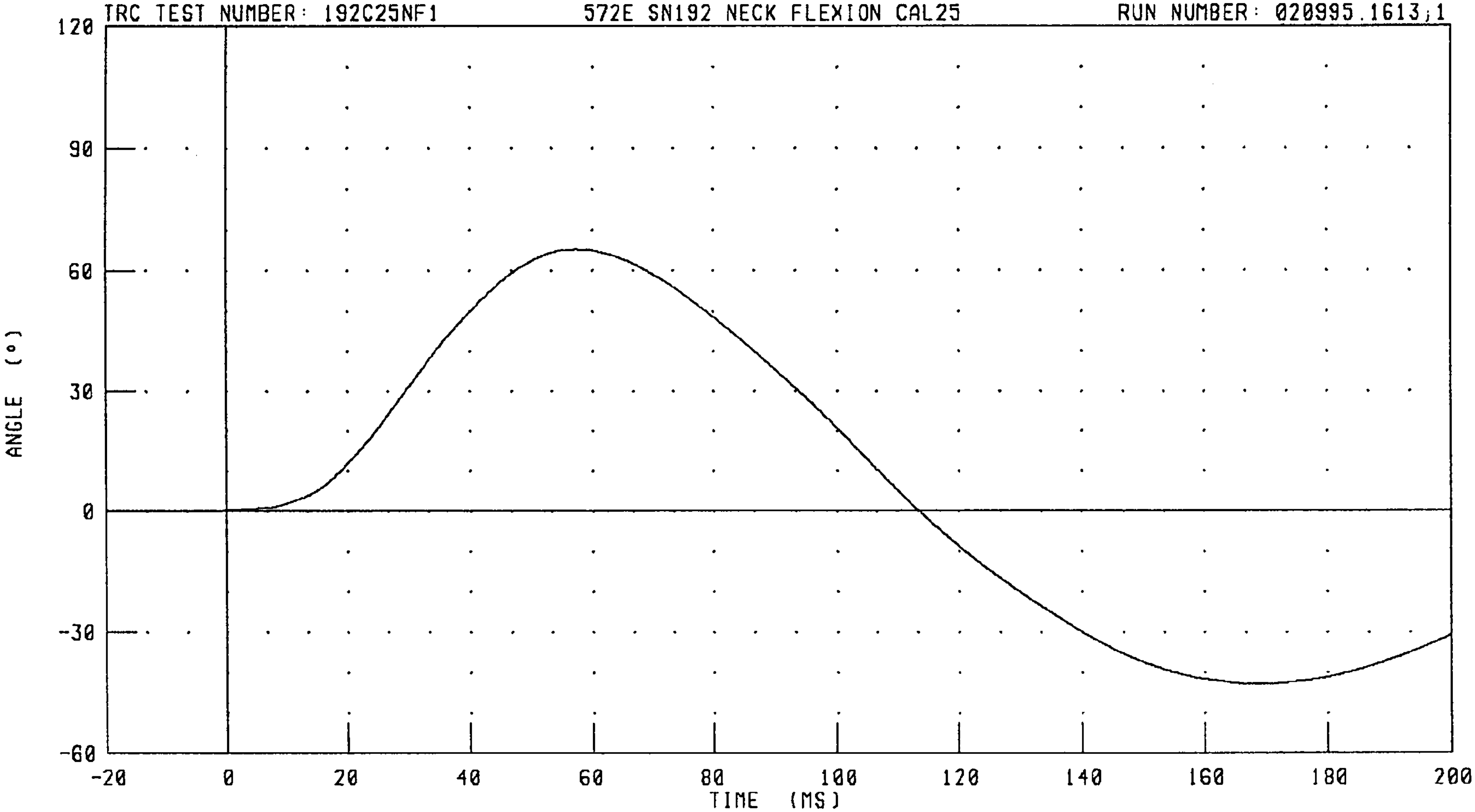
TRC TEST NUMBER: 192C25NF1 572E SN192 NECK FLEXION CAL25 RUN NUMBER: 020995.1613;1



CHANNEL: THETA FILTER: CH. CLASS 60 PEAK DATA: 36.47 ° @ 58.00 MS; -26.44 ° @ 169.92 MS

PART 572-E HYBRID III NECK FLEXION CALIBRATION
TOTAL ROTATION

TRC TEST NUMBER: 192C25NF1   572E SN192 NECK FLEXION CAL25   RUN NUMBER: 020995.1613;1

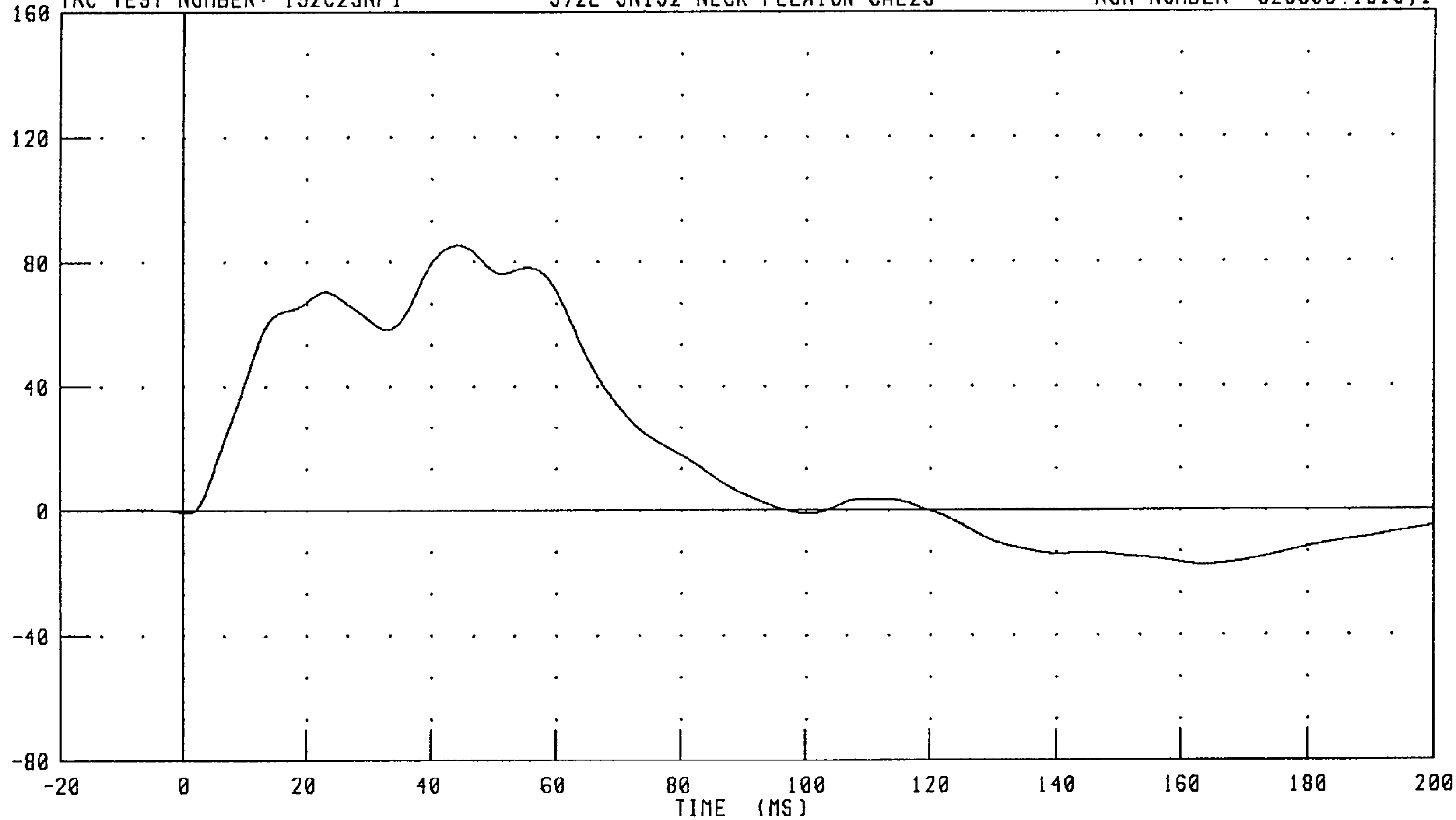


CHANNEL: TOTAN   FILTER: CH. CLASS 60   PEAK DATA: 65.20 ° @ 57.28 MS; -42.94 ° @ 168.40 MS

950127

PART 572-E HYBRID III NECK FLEXION CALIBRATION
NECK FORCE X AXIS

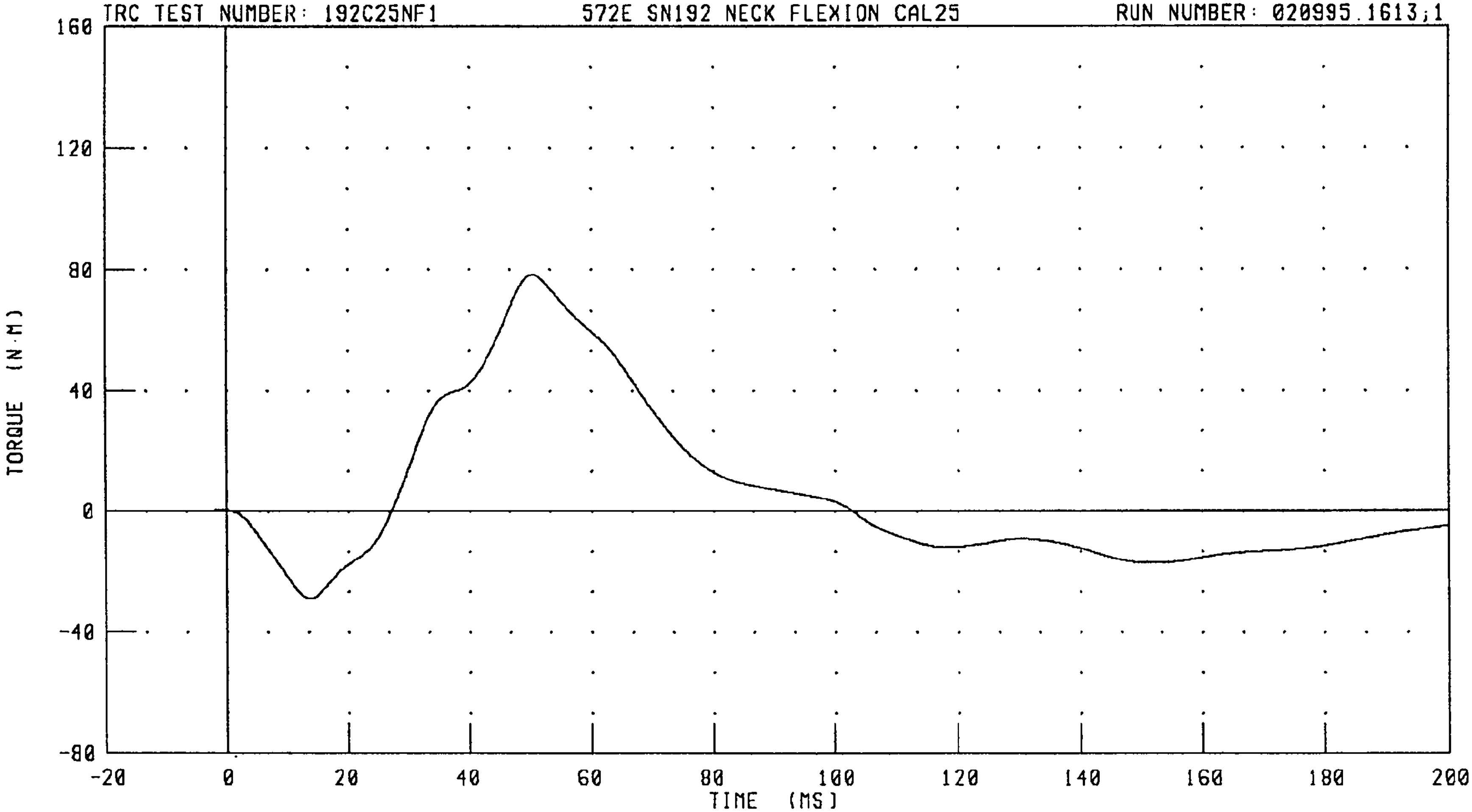
TRC TEST NUMBER: 192C25NF1 572E SN192 NECK FLEXION CAL25 RUN NUMBER: 020995.1613;1



CHANNEL: NEKXF FILTER: CH. CLASS 60 PEAK DATA: 853.28 N @ 44.24 MS; -175.10 N @ 163.68 MS

PART 572-E HYBRID III NECK FLEXION CALIBRATION
NECK MOMENT Y AXIS

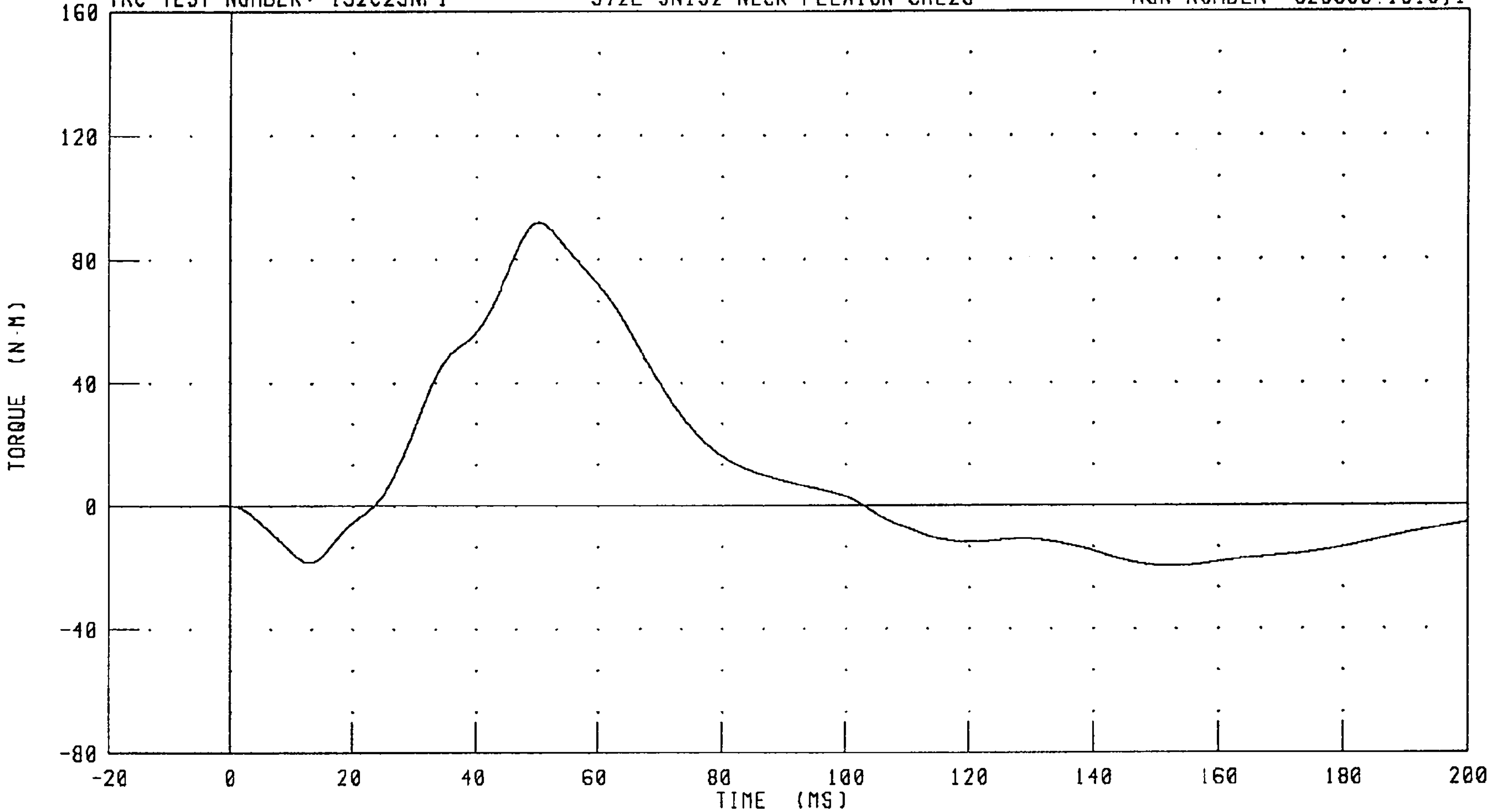
TRC TEST NUMBER: 192C25NF1 572E SN192 NECK FLEXION CAL25 RUN NUMBER: 020995.1613;1



CHANNEL: NEKYM FILTER: CH. CLASS 60 PEAK DATA: 78.41 N·M @ 50.48 MS; -28.87 N·M @ 13.68 MS

PART 572-E HYBRID III NECK FLEXION CALIBRATION
TOTAL MOMENT ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER: 192C25NF1 572E SN192 NECK FLEXION CAL25 RUN NUMBER: 020995.1613;1



CHANNEL: NEKOM FILTER: CH. CLASS 60 PEAK DATA: 92.02 N·M @ 50.40 MS; -19.68 N·M @ 152.64 MS

950127

TRANSPORTATION RESEARCH CENTER INC.

NECK EXTENSION TEST - 6 CHANNEL TRANSDUCER

HYBRID III 25-JAN-95

TRC INC. TEST NO: 192C25NE1 572E SN192 NECK EXT. CAL25

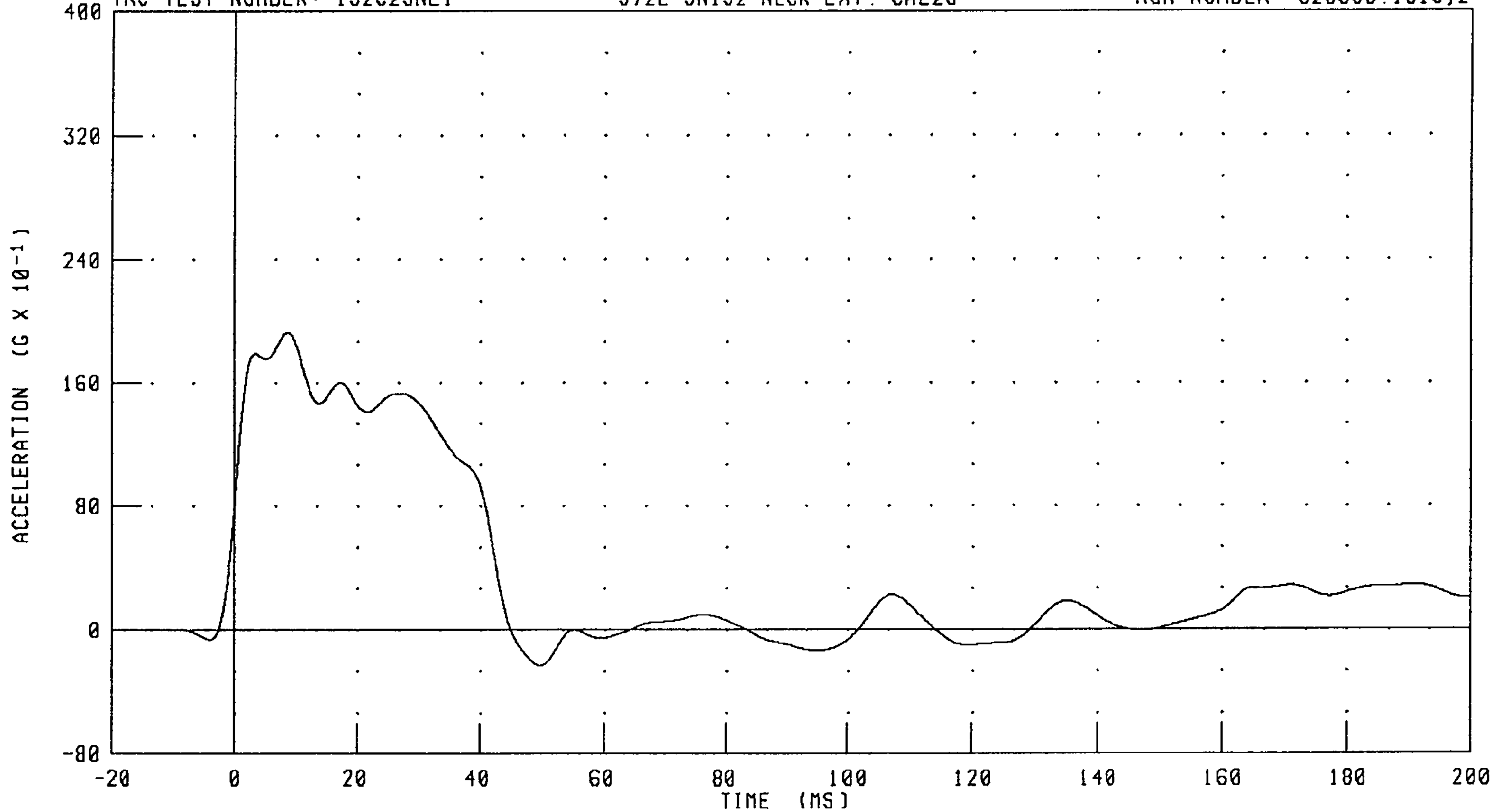
TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6 - 22.2 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY		10 - 70 %	25.0 %
IMPACT VELOCITY		5.95 - 6.19 M/S	6.05 M/S
PENDULUM DECELERATION	10 MS	17.20 - 21.20 G	18.44 G
	20 MS	14.00 - 19.00 G	14.52 G
	30 MS	11.00 - 16.00 G	14.60 G
MAX PENDULUM G		22 G MAX	19.28 G
MAX PENDULUM G ABOVE 30 MS		22 G MAX	14.56 G
DECELERATION-TIME CURVE DECAY TIME TO 5 G		38 - 46 MS	42.16 MS
D PLANE ROTATION	MAX	81 - 106 DEG.	92.06 DEG.
	TIME	72 - 82 MS	74.80 MS
MOMENT ABOUT OCCIPITAL CONDYLE	MIN	-80.0/-52.9 NM	-56.74 NM
	TIME	65 - 79 MS	71.60 MS
ROTATION ANGLE-TIME CURVE DECAY TIME TO ZERO		147 - 174 MS	157.44 MS
NEGATIVE MOMENT-TIME CURVE DECAY TIME TO ZERO		120 - 148 MS	140.08 MS

TEST MEETS SPECIFICATIONS

TECHNICIAN Pete Foust RUN NUMBER: 012595.1219;2

PART 572-E HYBRID III NECK EXTENSION CALIBRATION
PENDULUM DECELERATION

TRC TEST NUMBER: 192C25NE1 572E SN192 NECK EXT. CAL25 RUN NUMBER: 020995.1613;2



CHANNEL: PENXG FILTER: CH. CLASS 60 PEAK DATA: 19.29 G @ 8.64 MS; -2.30 G @ 49.60 MS

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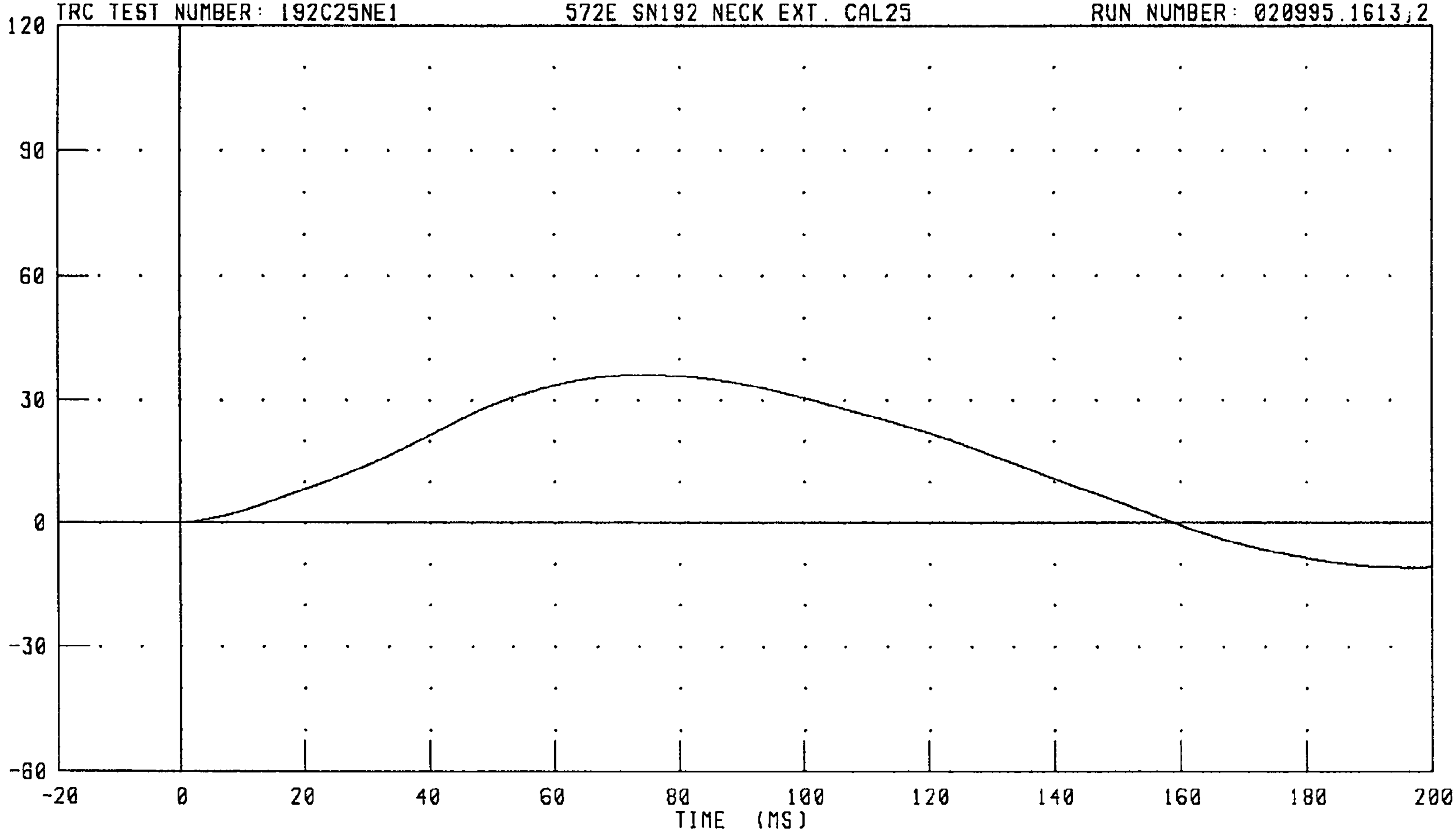
PART 572-E HYBRID III NECK EXTENSION CALIBRATION
ROTATION ABOUT BASE OF NECK

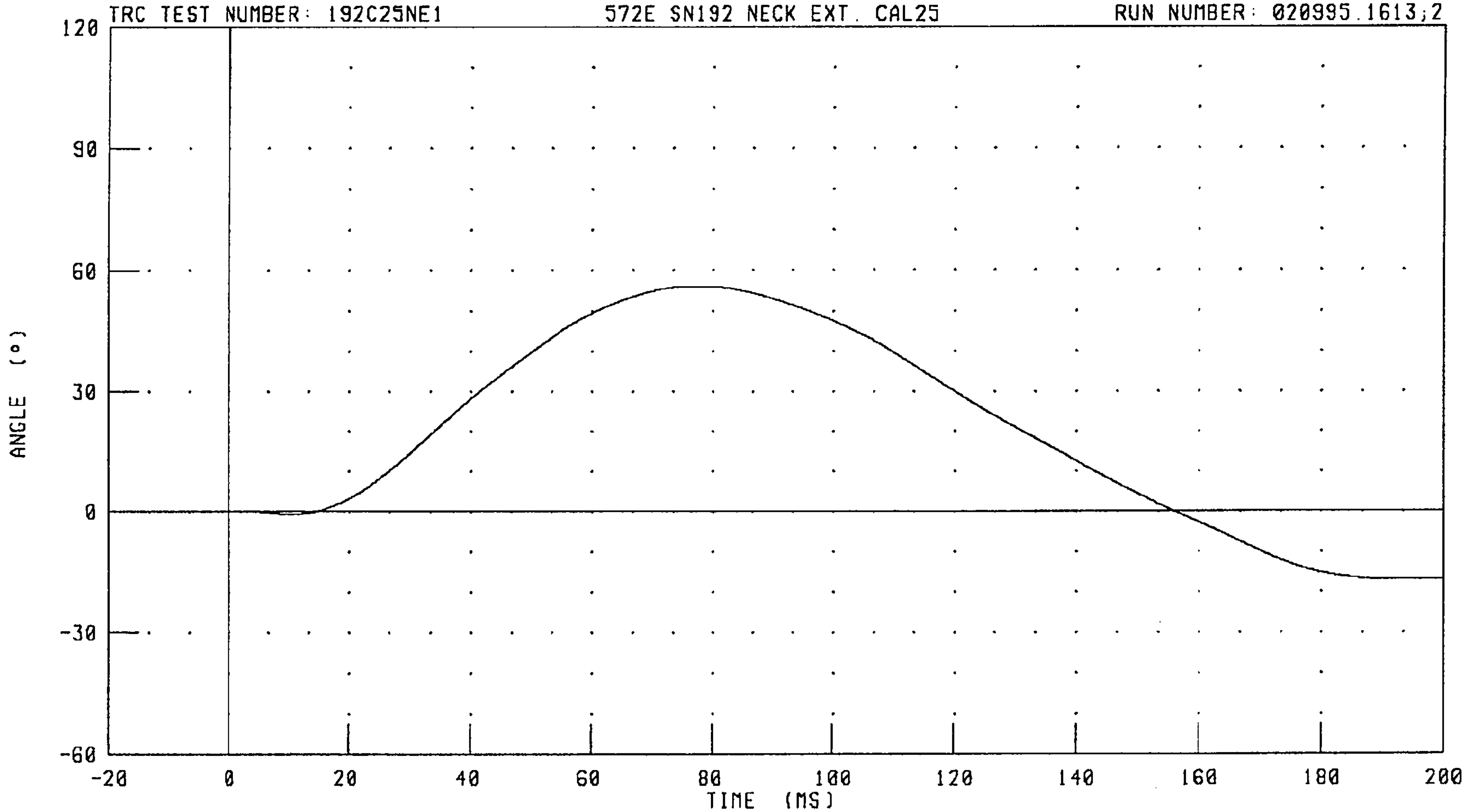
TRC TEST NUMBER: 192C25NE1 572E SN192 NECK EXT. CAL25 RUN NUMBER: 020995.1613;2



CHANNEL: BETA FILTER: CH. CLASS 60 PEAK DATA: 36.16 ° @ 73.84 MS; -10.79 ° @ 197.04 MS

PART 572-E HYBRID III NECK EXTENSION CALIBRATION
ROTATION ABOUT OCCIPITAL CONDYLE

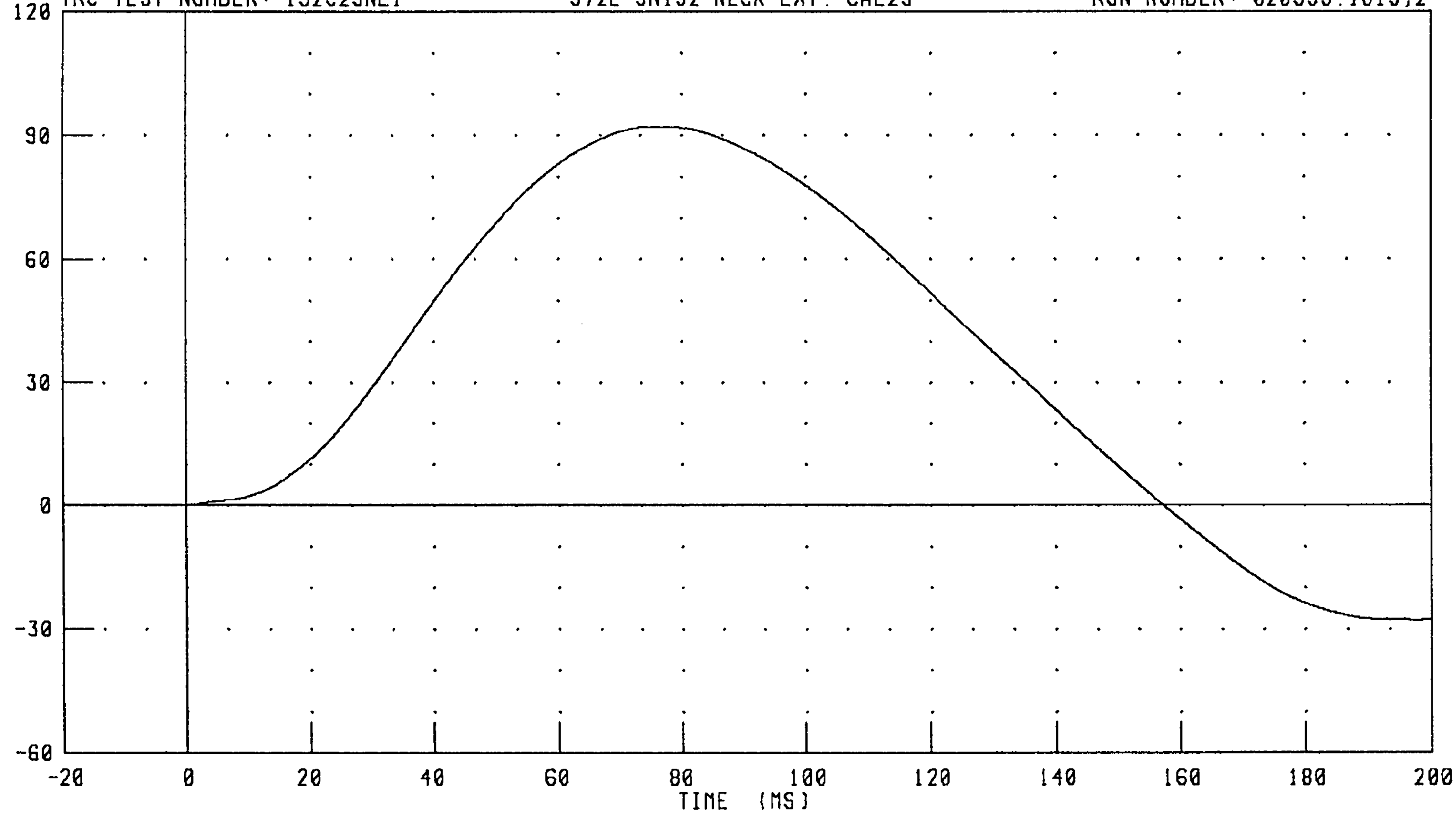
TRC TEST NUMBER: 192C25NE1 572E SN192 NECK EXT. CAL25 RUN NUMBER: 020995.1613;2



CHANNEL: THETA FILTER: CH. CLASS 60 PEAK DATA: 55.95 ° @ 78.40 MS; -17.00 ° @ 198.64 MS

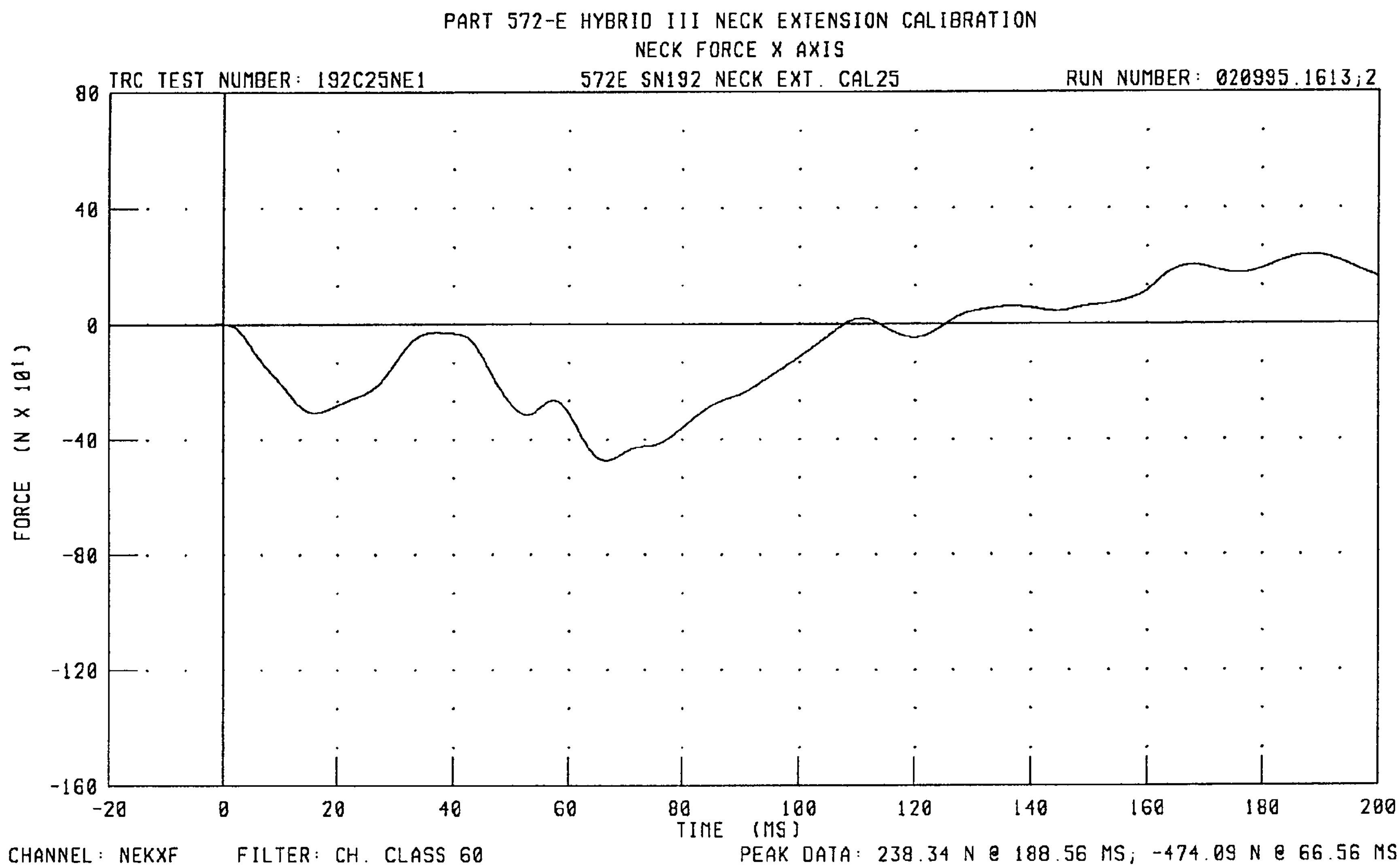
PART 572-E HYBRID III NECK EXTENSION CALIBRATION
TOTAL ROTATION

TRC TEST NUMBER: 192C25NE1 572E SN192 NECK EXT. CAL25 RUN NUMBER: 020995.1613;2

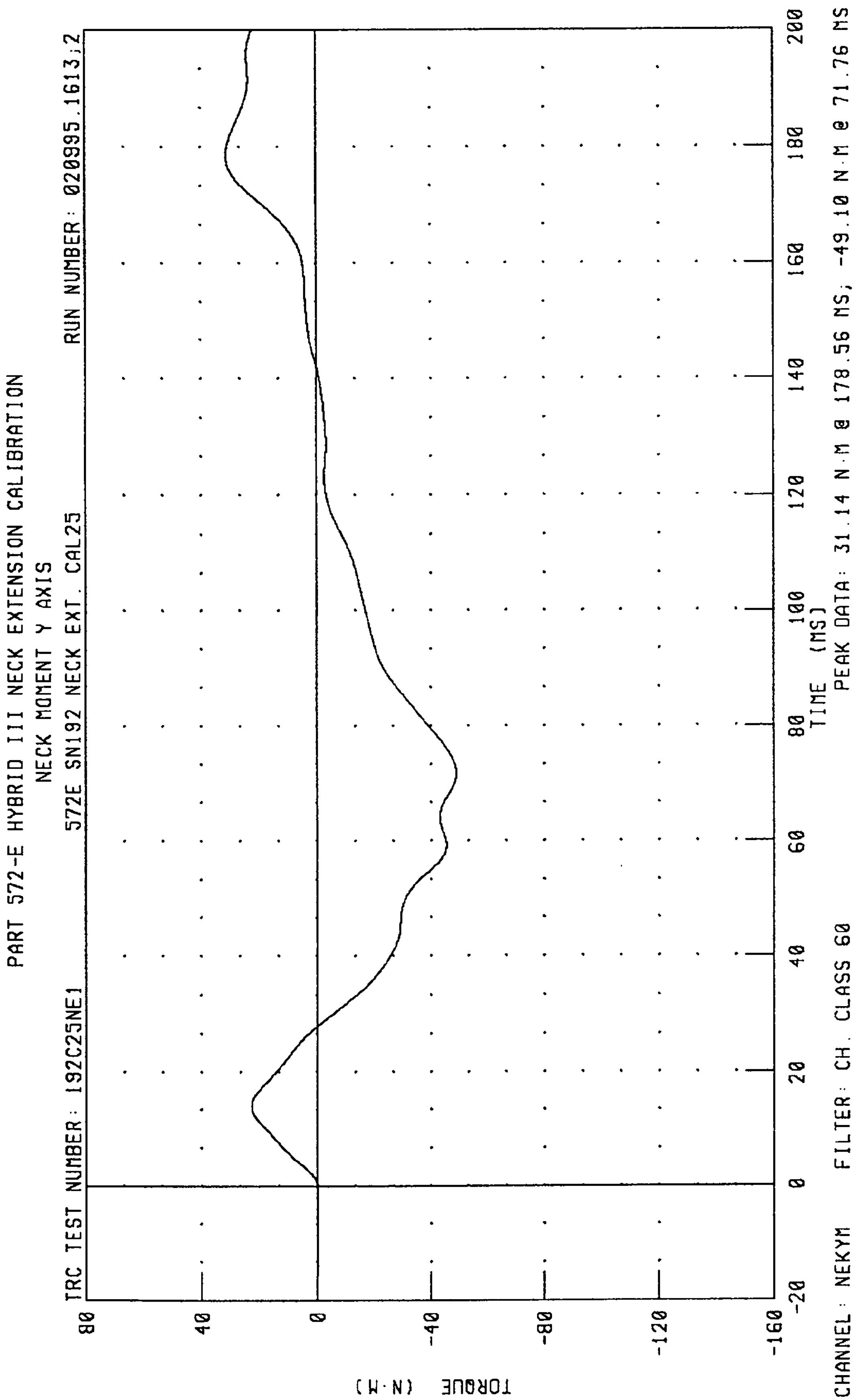


CHANNEL: TOTAN FILTER: CH. CLASS 60 PEAK DATA: 92.07 ° @ 74.80 MS; -27.78 ° @ 197.52 MS

950127

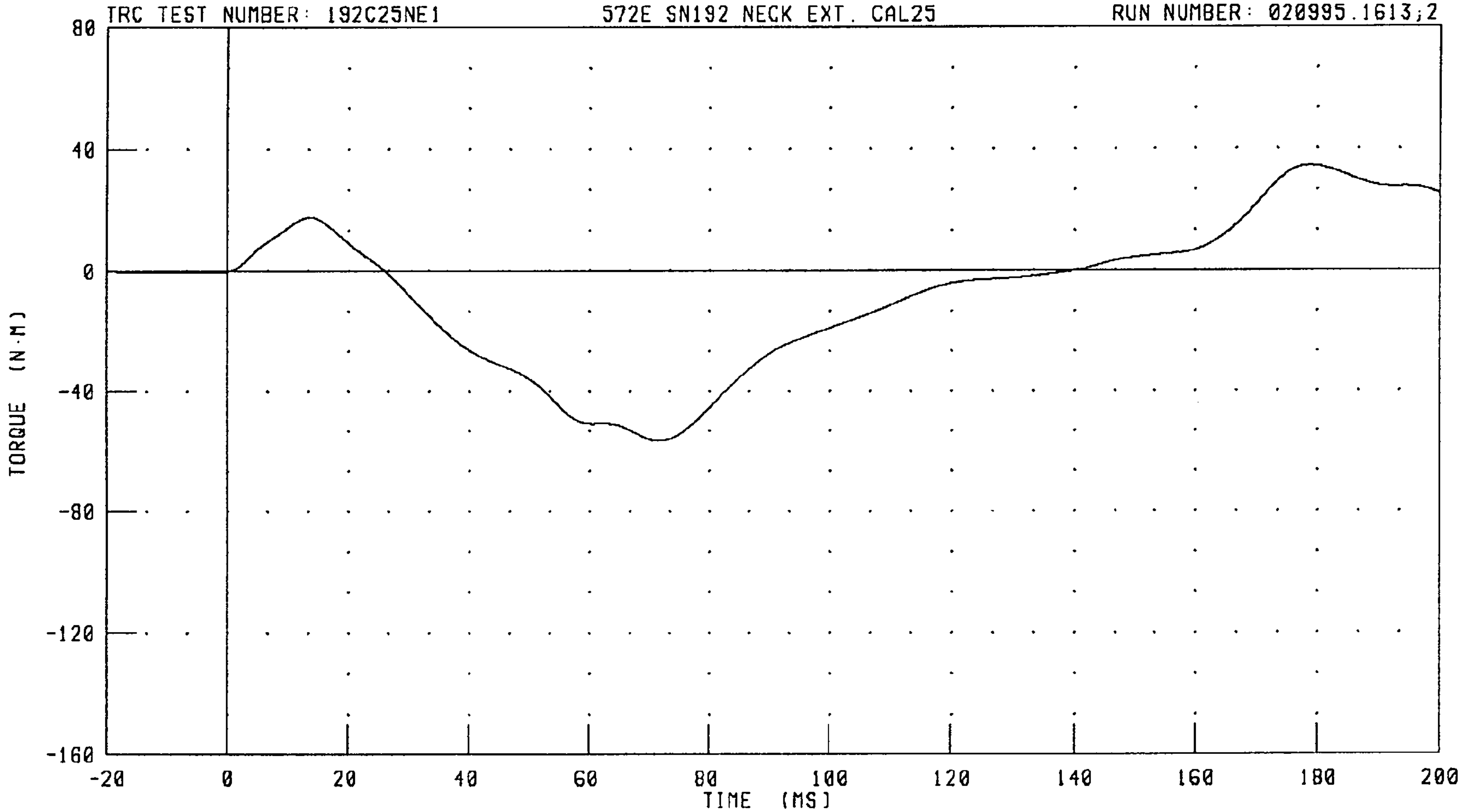

PART 572-E HYBRID III NECK EXTENSION CALIBRATION
NECK FORCE X AXIS
TRC TEST NUMBER: 192C25NE1
572E SN192 NECK EXT. CAL25
RUN NUMBER: 020995.1613;2
80
40
0
-40
-80
-120
-160
FORCE (N X 10¹)
-20
0
20
40
60
80
100
120
140
160
180
200
TIME (MS)
CHANNEL: NEKXF
FILTER: CH. CLASS 60
PEAK DATA: 238.34 N @ 188.56 MS; -474.09 N @ 66.56 MS

950127


PART 572-E HYBRID III NECK EXTENSION CALIBRATION
NECK MOMENT Y AXIS
TRC TEST NUMBER: 192C25NE1
572E SN192 NECK EXT. CAL25
RUN NUMBER: 020995.1613;2
TORQUE (N·M)
80
40
0
-40
-80
-120
-160
-20
0
20
40
60
80
100
120
140
160
180
200
TIME (MS)
CHANNEL: NEKYM
FILTER: CH. CLASS 60
PEAK DATA: 31.14 N·M @ 178.56 MS; -49.10 N·M @ 71.76 MS

PART 572-E HYBRID III NECK EXTENSION CALIBRATION
TOTAL MOMENT ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER: 192C25NE1 572E SN192 NECK EXT. CAL25 RUN NUMBER: 020995.1613;2



CHANNEL: NEKOM FILTER: CH. CLASS 60 PEAK DATA: 34.39 N·M @ 178.96 MS; -56.74 N·M @ 71.60 MS

TRANSPORTATION RESEARCH CENTER INC.

THORAX IMPACT TEST

HYBRID III 25-JAN-95

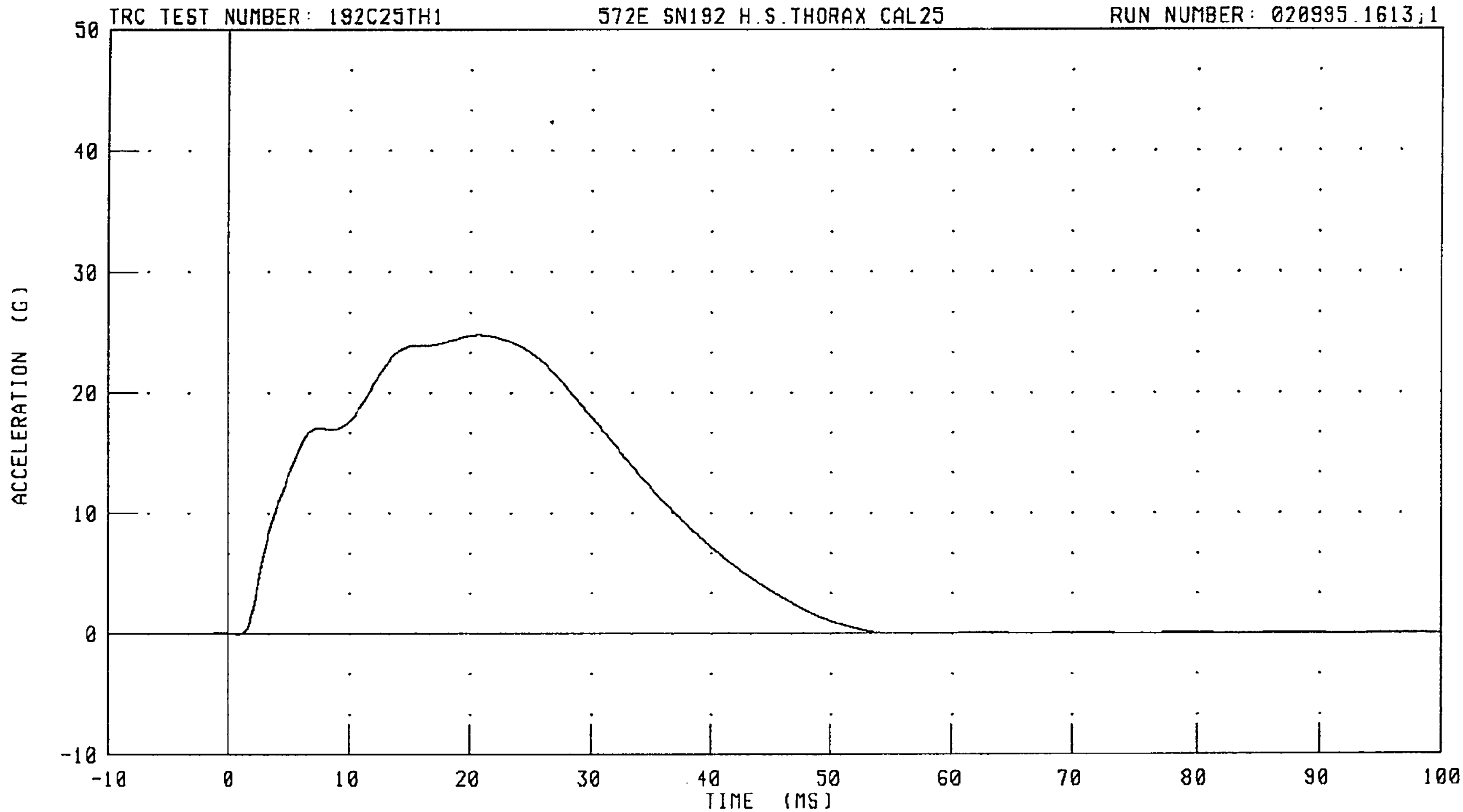
TRC INC. TEST NO: 192C25TH1 572E SN192 H.S.THORAX CAL25

TEST PARAMETER	HIGH SPEED TEST SPECIFICATION	TEST RESULTS
TEMPERATURE	20.6-22.2 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	25.0 %
PENDULUM VELOCITY	6.59 - 6.83 M/S	6.62 M/S
MAXIMUM DEFLECTION	63.5 - 72.6 MM	65.2 MM
MAXIMUM RESISTIVE FORCE	5159 - 5894 N	5680. N
INTERNAL HYSTERESIS	69% - 85%	71.9%

TEST MEETS SPECIFICATIONS

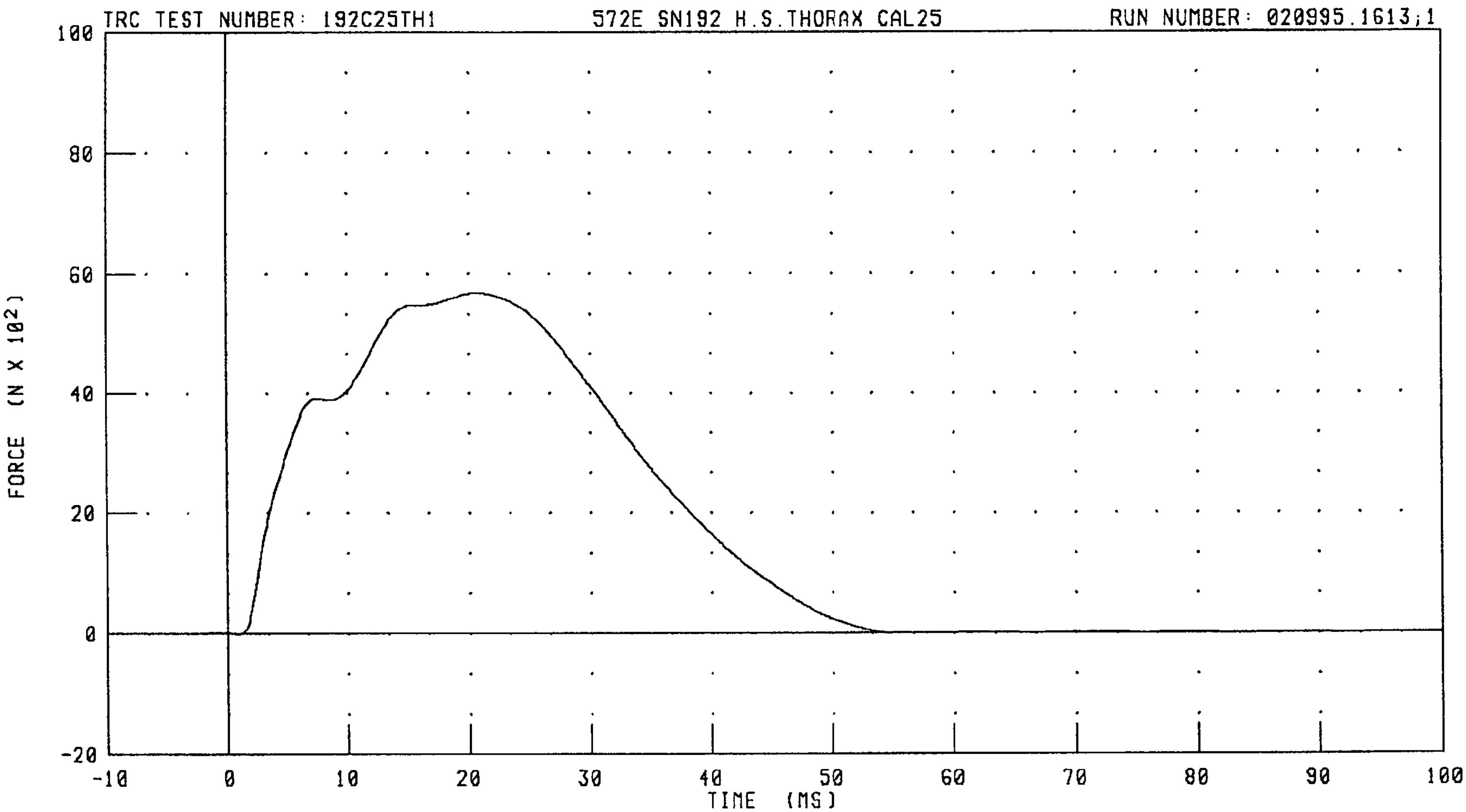
TECHNICIAN Peter Foster RUN NUMBER: 012595.1323;1

PART 572-E HYBRID III THORAX CALIBRATION
PENDULUM DECELERATION



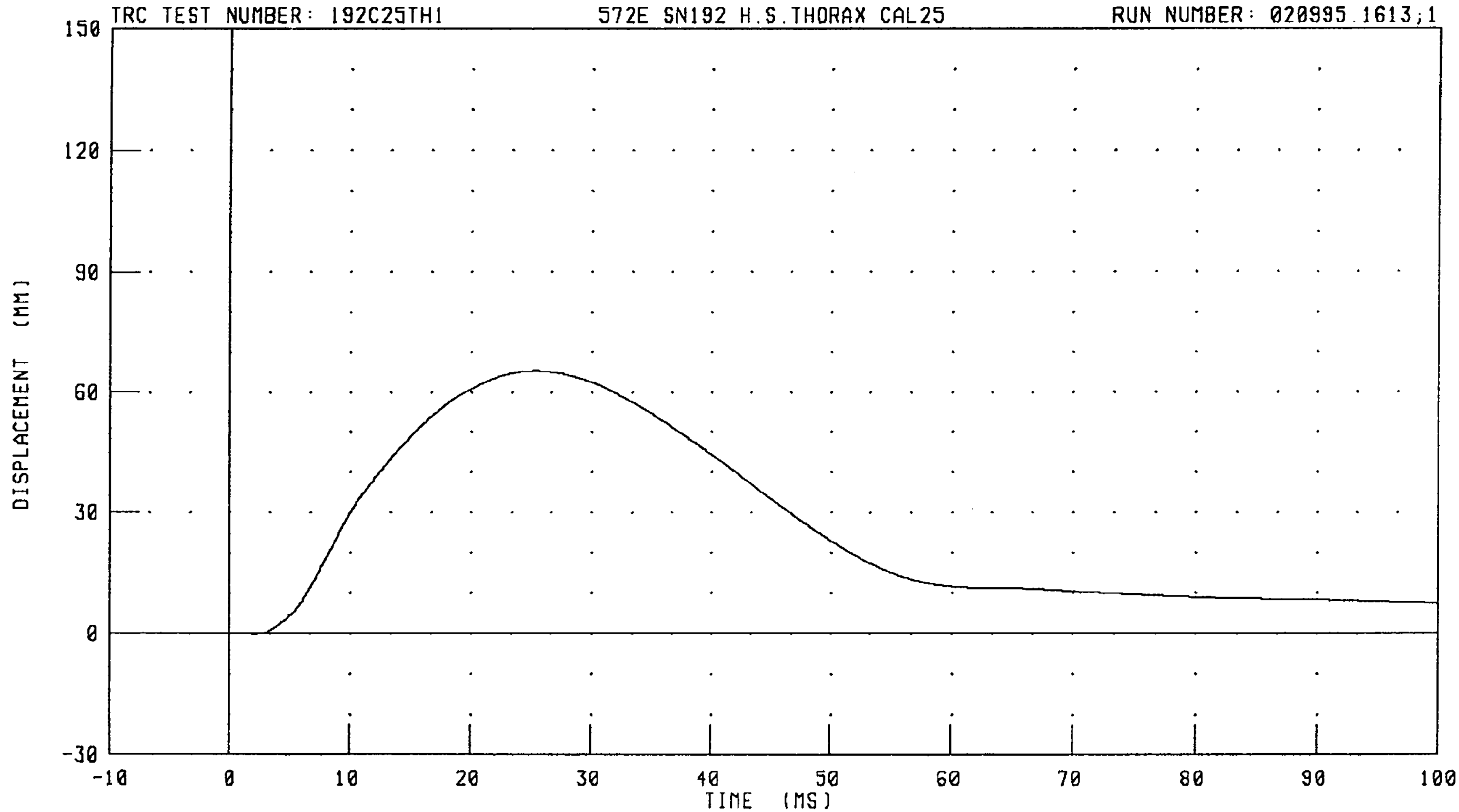
CHANNEL: PENXG FILTER: CH. CLASS 180 PEAK DATA: 24.80 G @ 20.64 MS; -0.03 G @ 0.88 MS

PART 572-E HYBRID III THORAX CALIBRATION
PENDULUM FORCE



CHANNEL: PENXF FILTER: CH. CLASS 180 PEAK DATA: 5680.22 N @ 20.64 MS; -6.45 N @ 0.88 MS

PART 572-E HYBRID III THORAX CALIBRATION
STERNUM DISPLACEMENT



CHANNEL: CSTXD FILTER: CH. CLASS 180 PEAK DATA: 65.24 MM @ 25.36 MS; -0.07 MM @ 2.16 MS

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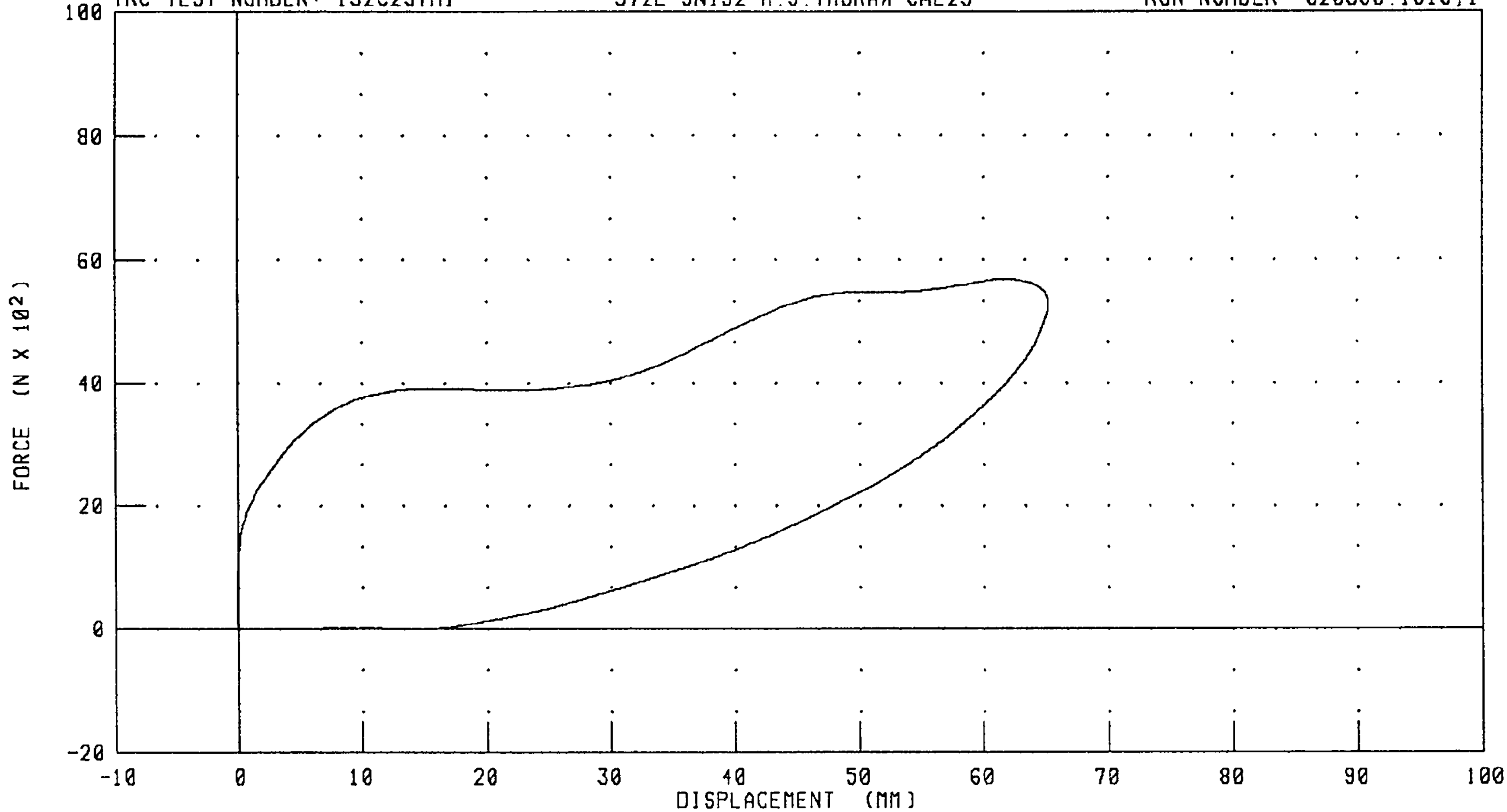
PART 572-E HYBRID III THORAX CALIBRATION
CHEST DISPLACEMENT VS PENDULUM FORCE

TRC TEST NUMBER: 192C25TH1 572E SN192 H.S.THORAX CAL25 RUN NUMBER: 020995.1613;1



CHANNEL: CSTXD FILTER: CH. CLASS 180 PEAK DATA: 65.24 MM @ 25.36 MS; -0.07 MM @ 2.16 MS
PENXF CH. CLASS 180 5680.22 N @ 20.64 MS; -6.45 N @ 0.88 MS

950127

TRANSPORTATION RESEARCH CENTER INC.

RIGHT KNEE IMPACT TEST

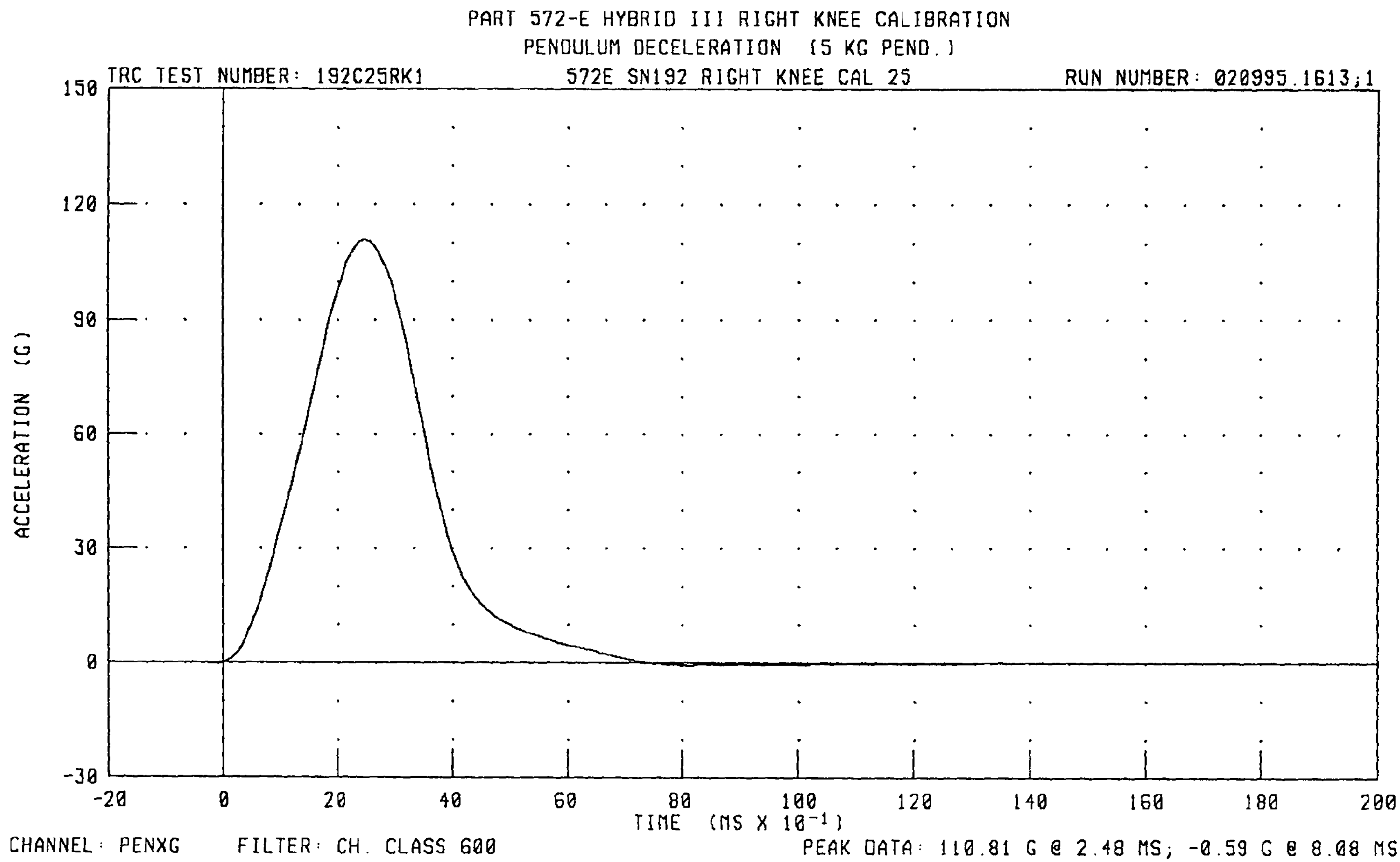
HYBRID III 25-JAN-95

TRC INC. TEST NO: 192C25RK1 572E SN192 RIGHT KNEE CAL 25

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	25.0 %
PROBE VELOCITY	2.07 - 2.13 M/S	2.10 M/S
PEAK KNEE IMPACT FORCE 5.0 KG PENDULUM	4714 - 5783 N	5421.4 N

TEST MEETS SPECIFICATIONS

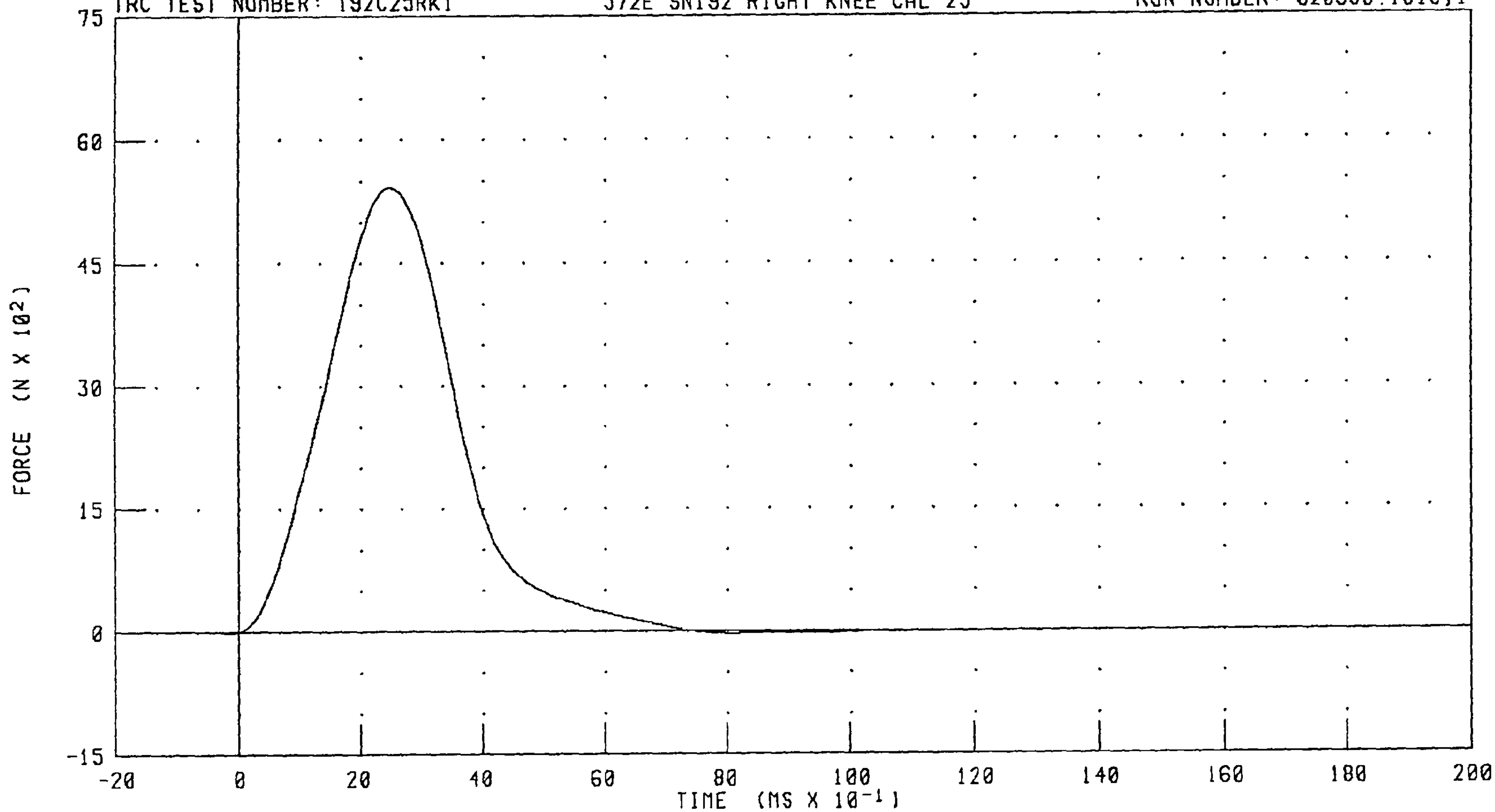
TECHNICIAN Pete Foust RUN NUMBER: 012595.1052;1


PART 572-E HYBRID III RIGHT KNEE CALIBRATION
PENDULUM DECELERATION (5 KG PEND.)
TRC TEST NUMBER: 192C25RK1
572E SN192 RIGHT KNEE CAL 25
RUN NUMBER: 020995.1613;1
ACCELERATION (G)
150
120
90
60
30
0
-30
-20
0
20
40
60
80
100
120
140
160
180
200
TIME (MS X 10⁻¹)
CHANNEL: PENXG
FILTER: CH. CLASS 600
PEAK DATA: 110.81 G @ 2.48 MS; -0.59 G @ 8.08 MS

950127

PART 572-E HYBRID III RIGHT KNEE CALIBRATION
PENDULUM FORCE (5 KG PEND.)

TRC TEST NUMBER: 192C25RK1 572E SN192 RIGHT KNEE CAL 25 RUN NUMBER: 020995.1613;1



CHANNEL: PENXF FILTER: CH. CLASS 600 PEAK DATA: 5421.48 N @ 2.48 MS; -28.95 N @ 8.08 MS

TRANSPORTATION RESEARCH CENTER INC.

LEFT KNEE IMPACT TEST

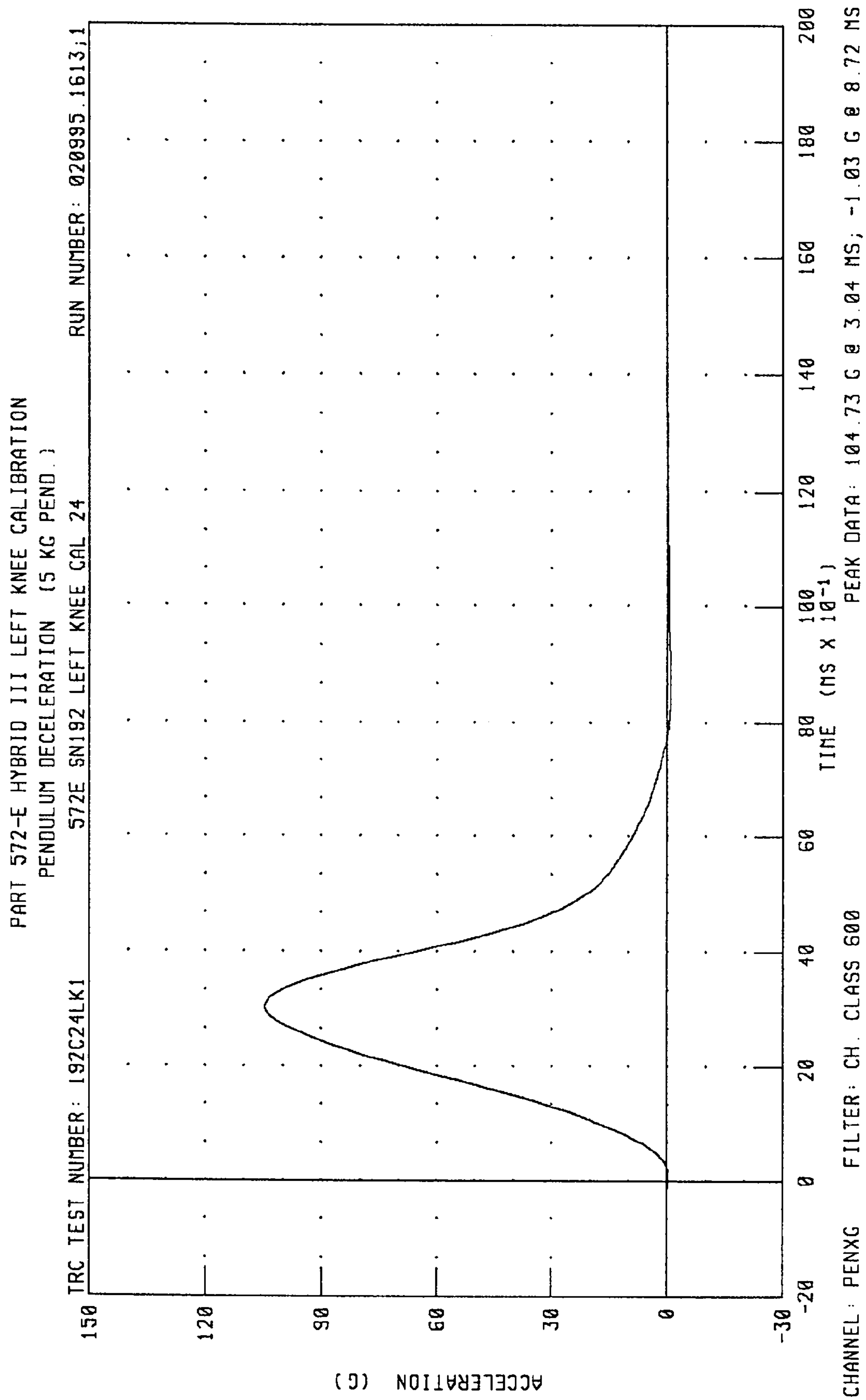
HYBRID III   26-DEC-94

TRC INC.   TEST NO: 192C24LK1   572E SN192 LEFT KNEE CAL 24

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9-25.6 DEG. C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	25.0 %
PROBE VELOCITY	2.07 - 2.13 M/S	2.11 M/S
PEAK KNEE IMPACT FORCE 5.0 KG PENDULUM	4714 - 5783 N	5124.3 N

TEST MEETS SPECIFICATIONS

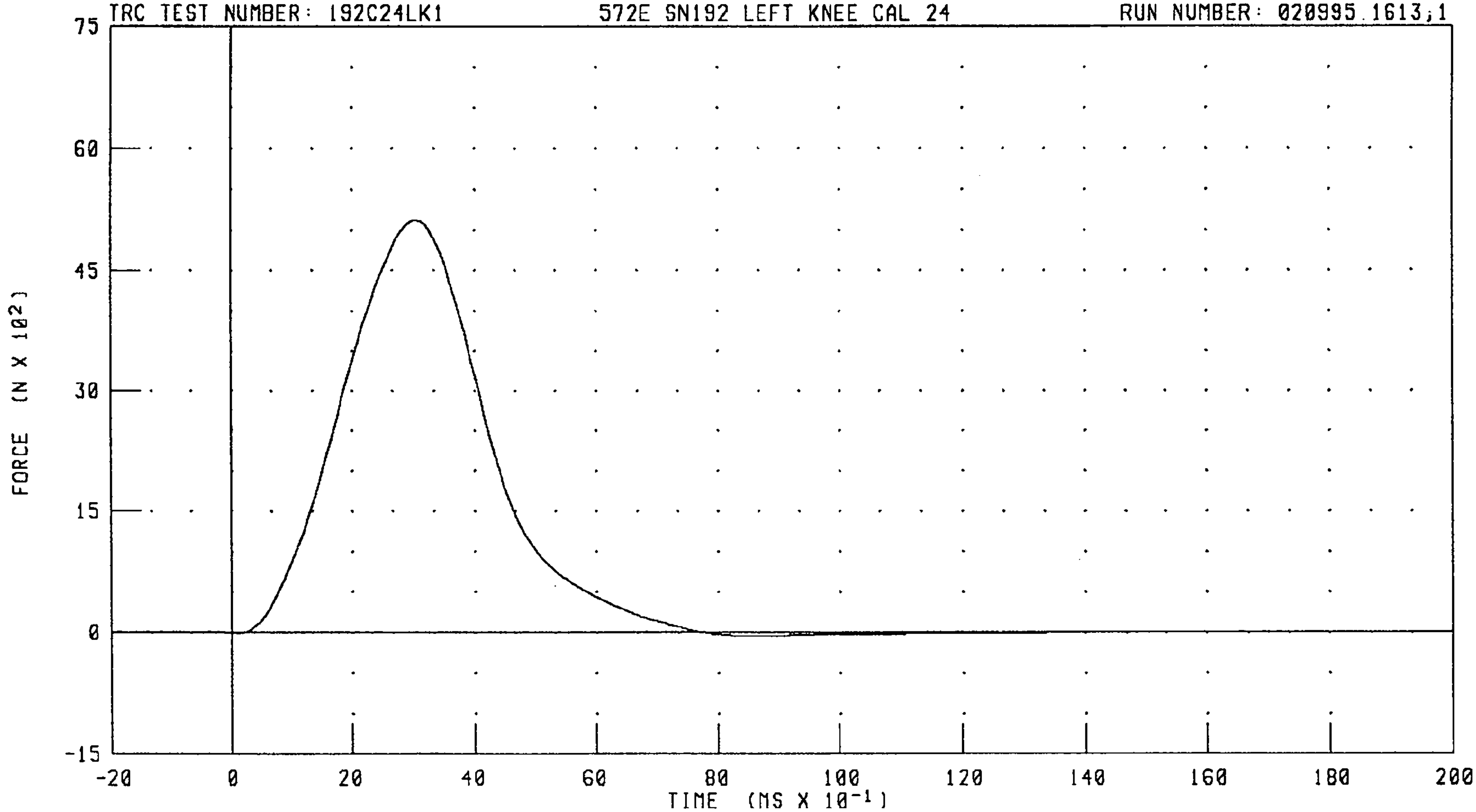
TECHNICIAN Pete Foster   RUN NUMBER: 012595.1048;1


PART 572-E HYBRID III LEFT KNEE CALIBRATION
PENDULUM DECELERATION (5 KG PEND.)
TRC TEST NUMBER: 192C24LK1
572E SN192 LEFT KNEE CAL 24
RUN NUMBER: 020995.1613;1
ACCELERATION (G)
150
120
90
60
30
0
-30
-20
0
20
40
60
80
100
120
140
160
180
200
TIME (MS X 10^-1)
CHANNEL: PENXG
FILTER: CH. CLASS 600
PEAK DATA: 104.73 G @ 3.04 MS; -1.03 G @ 8.72 MS

950127

PART 572-E HYBRID III LEFT KNEE CALIBRATION
PENDULUM FORCE (5 KG PEND.)

TRC TEST NUMBER: 192C24LK1 572E SN192 LEFT KNEE CAL 24 RUN NUMBER: 020995.1613;1



CHANNEL: PENXF FILTER: CH. CLASS 600 PEAK DATA: 5124.36 N @ 3.04 MS; -50.41 N @ 8.72 MS

Appendix D

Miscellaneous Test Information

Dummy Instrument Calibrations

Driver Dummy #142

	Serial Number	Model Number	Manufacturer	Calibration Date Last	Calibration Date Due
Head X-axis accelerometer	FH25J	7264	Endevco	08/29/94	03/01/95
Head Y-axis accelerometer	CY32H	7264	Endevco	08/29/94	03/01/95
Head Z-axis accelerometer	DB81H	7264	Endevco	08/29/94	03/01/95
Chest X-axis accelerometer	A79GJ	7264	Endevco	08/25/94	02/25/95
Chest Y-axis accelerometer	AC8W6	7264	Endevco	08/29/94	03/01/95
Chest Z-axis accelerometer	CW42H	7264	Endevco	08/29/94	03/01/95
Left femur force load cell	901	2430	GSE	08/30/94	03/02/95
Right femur force load cell	902	2430	GSE	08/30/94	03/02/95
Neck X-axis force load cell[1]	0280	1716	Denton	08/30/94	03/02/95
Neck Y-axis force load cell[1]	0280	1716	Denton	08/30/94	03/02/95
Neck Z-axis force load cell[1]	0280	1716	Denton	08/30/94	03/02/95
Neck Moment about X-axis load cell[1]	0280	1716	Denton	08/30/94	03/02/95
Neck Moment about Y-axis load cell[1]	0280	1716	Denton	08/30/94	03/02/95
Neck Moment about Z-axis load cell[1]	0280	1716	Denton	08/30/94	03/02/95
Pelvis X-axis accelerometer	AJ8A6	7264	Endevco	10/11/94	04/11/95
Pelvis Y-axis accelerometer	AJ8J7	7264	Endevco	10/11/94	04/11/95
Pelvis Z-axis accelerometer	AJ789	7264	Endevco	10/11/94	04/11/95
Chest deflection potentiometer[1]	90320B	81422A	Vernitech	08/29/94	03/01/95
Shoulder Belt Load Cell	610	3419	Lebow	08/19/94	02/19/95
Lap Belt Load Cell	616	3419	Lebow	08/19/94	02/19/95

[1] Hybrid III use only.

Dummy Instrument Calibrations

Right Front Passenger Dummy #192

	Serial Number	Model Number	Manufacturer	Calibration Date Last	Due
Head X-axis accelerometer	AAL82	7264	Endevco	08/30/94	03/02/95
Head Y-axis accelerometer	A84JJ	7264	Endevco	08/30/94	03/02/95
Head Z-axis accelerometer	DW04J	7264	Endevco	08/30/94	03/02/95
Chest X-axis accelerometer	CT22H	7264	Endevco	08/30/94	03/02/95
Chest Y-axis accelerometer	AC708	7264	Endevco	08/30/94	03/02/95
Chest Z-axis accelerometer	CW59H	7264	Endevco	08/30/94	03/02/95
Left femur force load cell	986	2430	GSE	08/30/94	03/02/95
Right femur force load cell	987	2430	GSE	08/30/94	03/02/95
Neck X-axis force load cell[1]	085	1716	Denton	08/30/94	03/02/95
Neck Y-axis force load cell[1]	085	1716	Denton	08/30/94	03/02/95
Neck Z-axis force load cell[1]	085	1716	Denton	08/30/94	03/02/95
Neck Moment about X-axis load cell[1]	085	1716	Denton	08/30/94	03/02/95
Neck Moment about Y-axis load cell[1]	085	1716	Denton	08/30/94	03/02/95
Neck Moment about Z-axis load cell[1]	085	1716	Denton	08/30/94	03/02/95
Pelvis X-axis accelerometer	AJ694	7264	Endevco	10/11/94	04/11/95
Pelvis Y-axis accelerometer	AJ656	7264	Endevco	10/11/94	04/11/95
Pelvis Z-axis accelerometer	AJ788	7264	Endevco	10/11/94	04/11/95
Chest deflection potentiometer[1]	87313-96	81422A	Vernitech	08/30/94	03/02/95
Shoulder Belt Load Cell	615	3419	Lebow	08/19/94	02/19/95
Lap Belt Load Cell	236	3419	Lebow	08/19/94	02/19/95

[1] Hybrid III use only.

Vehicle and Calibration Laboratory Instrument Calibrations

Vehicle Accelerometers

	Serial Number	Model Number	Manufacturer	Calibration Date Last	Due
Left rear seat crossmember X-axis	AGRJ1	7264	Endevco	08/24/94	04/24/95
Left rear seat crossmember X-axis redundant	AGRG7	7264	Endevco	09/08/94	03/08/95
Right rear seat crossmember X-axis	DR49J7	7264	Endevco	08/29/94	04/29/95
Right rear seat crossmember X-axis redundant	AHRK5	7264	Endevco	09/13/94	03/13/95
Engine top X-axis	AHR06	7264	Endevco	10/07/94	04/07/95
Engine bottom X-axis	ACCJ0	7264	Endevco	09/08/94	03/08/95
Right brake caliper X-axis	DR10JT	7264	Endevco	09/08/94	03/08/95
Left brake caliper X-axis	AGR8J	7264	Endevco	10/07/94	04/07/95
Instrument panel center X-axis	DW34JC	7264	Endevco	10/27/94	04/27/95

Calibration Laboratory Instruments

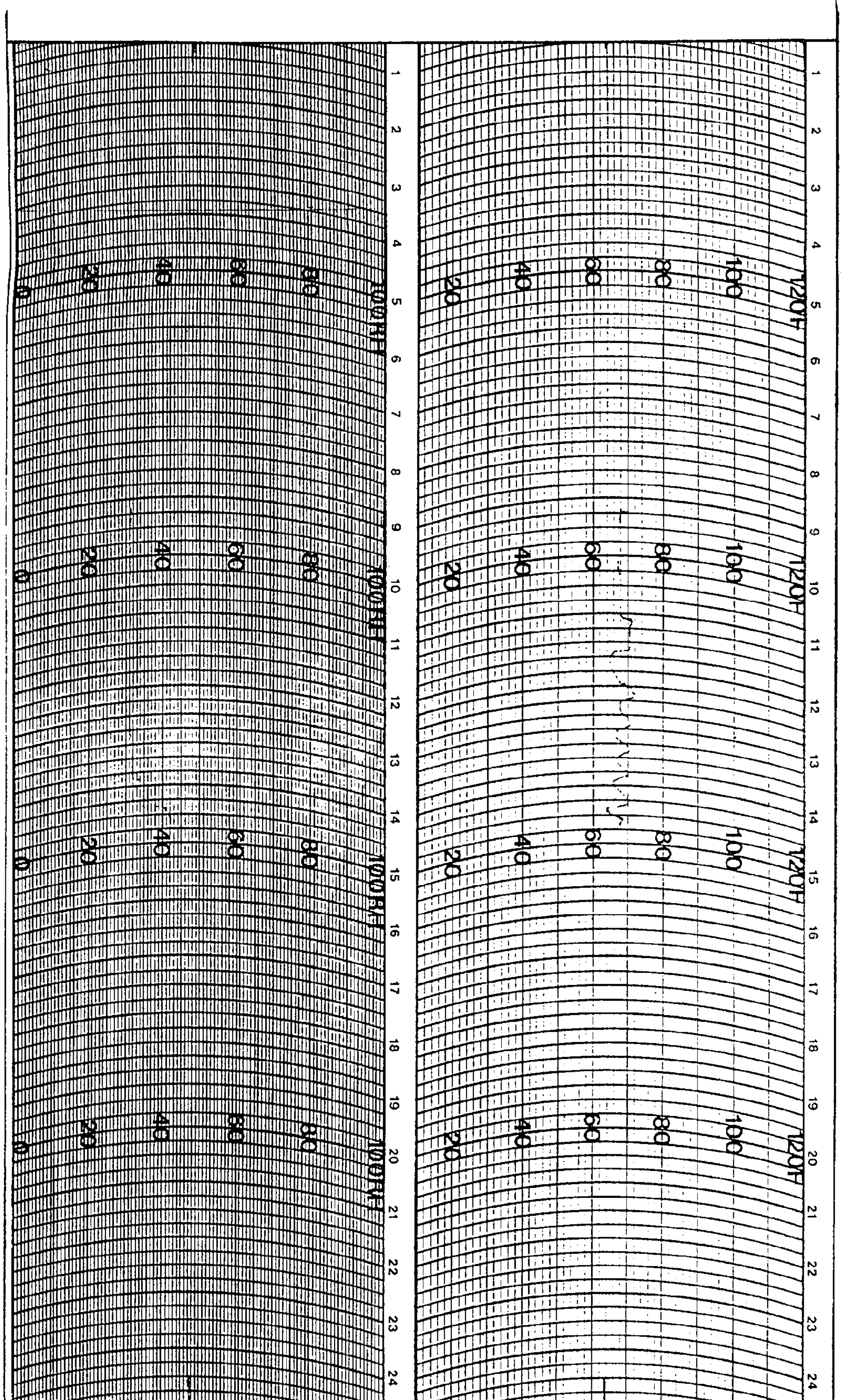
	Serial Number	Model Number	Manufacturer	Calibration Date Last	Due
Neck bending pendulum accelerometer	CB27	7232	Endevco	09/26/94	03/26/95
Neck bending rotary potentiometer	NA	35435-1-102	Bournes	Mfr. Specification	
Neck bending linear potentiometer	NA	5184-2051846003	Bournes	09/26/94	03/26/95
Thorax/Hybrid II femur pendulum accelerometer	CC64	7232	Endevco	09/26/94	03/26/95
Lumbar flexion force gauge	NA	DPPH-50	Chatillon	05/03/89	repaired
Lumbar flexion rotation gauge	CP17-0601-1	7020	Humphrey	Mfr. Specification	
Abdomen compression displacement gauge	4075-175	80294-2051941504	Bournes	09/26/94	03/26/95
Abdomen compression force gauge	3443	3167	Lebow	09/26/94	03/26/95
Hybrid III femur pendulum accelerometer	CG83	7232	Endevco	09/26/94	03/26/95

Sign Convention
NHTSA Data Tape Reference Guide

Accelerometers:	+X: Forward	
	+Y: Leftward	
	+Z: Upward	
Potentiometers:	+Chest longitudinal deflection:	Outward
	+Chest lateral deflection:	Leftward
	+Seat belt displacement:	Outward
	+Seat belt extension:	Elongation
	+Knee slider displacement:	Distance between femur and tibia increased (in relation to a seated dummy)
Load cells:	+Femur force:	Tension
	+Seat belt force:	Tension
	+Barrier force:	Tension
Neck load cells:	+X force:	Head pushed forward
	+y force:	Head pushed leftward
	+Z force:	Head pulled upward (tension on neck)
	+X moment:	Right ear rotating toward right shoulder
	+Y moment:	Chin rotating toward chest
	+Z moment:	Chin rotating toward left shoulder
Tibia load cells:	+X force:	Tension
	+Y force:	Tension
	+Z force:	Tension
	+X moment:	Bottom of tibia moving leftward
	+Y moment:	Bottom of tibia moving rearward

Frequency Response Classes
SAE J211 OCT88

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



WEATHER MEASURE
P.O. BOX 41257
SACRAMENTO, CA. 95841
PHONE (916) 481-7565

HYGROTHERMOGRAPH
1 DAY NCAP

CHART # C311 D HF
PART # 699123

STATION 950127 DATE ON 1/27 DATE OFF 1/27

Appendix E

Restraint System Instructions from Owner's Manual

Safety Restraints

Using Safety Restraints Properly

Safety Belts

The use of safety belts helps to restrain you and your passengers in case of a collision. In most states and in Canada, the law requires their use. We strongly recommend that you use them every time you travel in your vehicle.

Safety belts provide best restraint when:

- the seatback is upright
- the occupant is sitting upright (not slouched)
- the lap belt is snug and low on the hips
- the shoulder belt is snug against the chest
- the knees are straight forward

For your safety, your vehicle has different types of safety belts:

- Combination lap and shoulder belts - for people who sit next to the side windows in either the front or rear seats
- Rear lap belt with retractor (4 door only) -for the center rear seat
- Front lap belt without retractor - if your vehicle has a center front seat

See the following sections in this chapter for directions on how to properly use these safety belts. Also see *Safety Restraints for Children* in this chapter for special instructions about using safety belts for children.

WARNING *Make sure that you and your passengers, including pregnant women, wear safety belts. Be sure that the lap belt portion of your safety belt fits snugly and as low as possible around the hips. If safety belts are not used properly, the risk of you or your passengers being injured in a collision greatly increases.*

WARNING *Always drive and ride with your seatback upright and the lap belt portion of your safety belt snug and low across the hips. This will reduce the risk of serious injury to the abdomen or neck that could be caused by sliding under the safety belts in a collision.*

Do not allow any people to ride in the cargo area of your vehicle. People who are not riding in seats with their safety belts fastened are much more likely to be injured in a collision.

Never let a passenger hold a child on his or her lap while the vehicle is moving. The passenger cannot protect the child from injury in a collision.

WARNING *Children should always ride with the seatback in the fully upright position. When the seatback is not fully upright, there is a greater risk that the child will slide under the safety belt and be seriously injured in a collision.*

WARNING *Never use a single belt for more than one person or across more than one seating position. This greatly increases the risk that one or both of the people will be injured in a collision. Each seating position in your vehicle has a specific safety belt assembly which is made up of one buckle and one tongue that are designed to be used as a pair.*

WARNING *Use the shoulder belt on the outside shoulder only. Never wear the shoulder belt under the arm. Never swing it around the neck over the inside shoulder. Never use a single belt for more than one person. Failure to follow these precautions could increase the risk and/or severity of injury in a collision.*

WARNING *Lock the doors of your vehicle before driving to lessen the risk of the door coming open in a collision.*

Combination Lap and Shoulder Belts

While your vehicle is in motion, the combination lap and shoulder belts adjusts to your movement. However, if you brake hard, corner hard or if your vehicle receives an impact of 5 mph (8 km/h) or more, the lap and shoulder belt locks and helps reduce your forward movement. The front seat belt systems can also be made to lock by jerking on the belt.

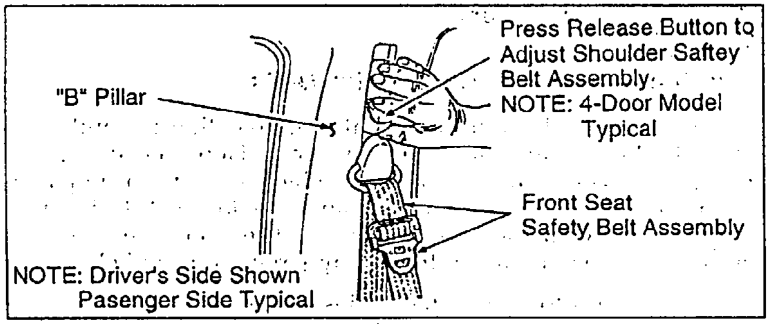
After you get into your vehicle, close the door and lock it. Then adjust the seat to the position that suits you best.

To fasten the belt, pull the lap/shoulder belt from the retractor so that the shoulder portion of the belt crosses your shoulder and chest. Be sure the belt is not twisted. If it is, remove the twist. Insert the belt tongue into the proper buckle until you hear a snap and feel it latch. Make sure the tongue is securely fastened to the buckle.

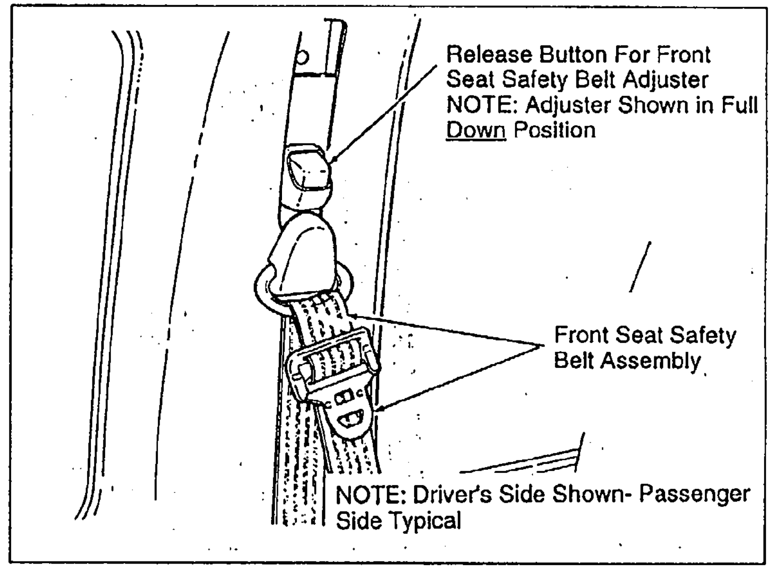
The driver and right front passenger shoulder belt height is adjustable to one of five (5) positions. To adjust the belt down, push the release button on the adjuster down and slide the adjuster down. Then release the button and make sure the adjuster is firmly in one of the five (5) positions. To adjust the belt up, slide the adjuster up. (You do not have to push the release button.) Slide it up or down until the belt rests across the middle of your shoulder.

WARNING ***If the shoulder belt is off your shoulder or on your upper arm, there is a greater risk of severe injury in a collision.***

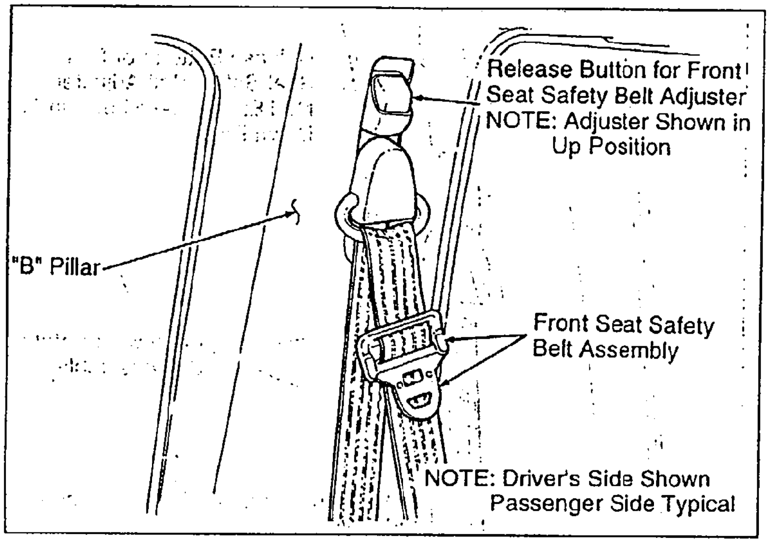
NOTE: Be sure the belt is properly positioned on your shoulder each time you use the belt.



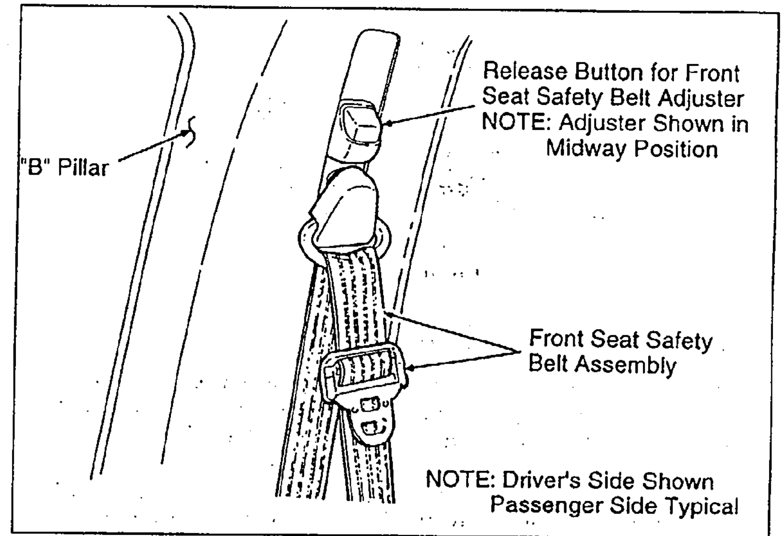
Adjusting shoulder belt height (2 door models)



Shoulder belt height adjuster — full down position (2 door models)



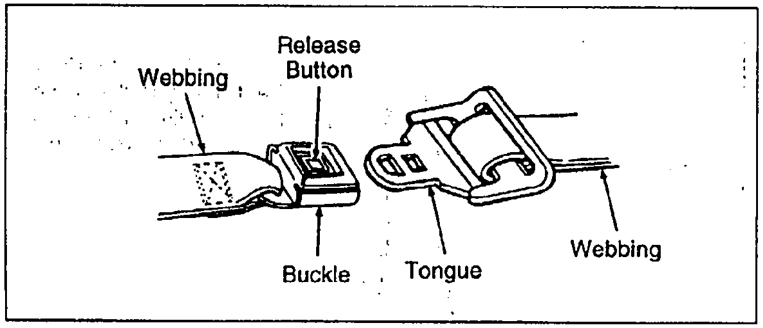
Shoulder belt height adjuster — full up position (4 door models)



Shoulder belt height adjuster — mid-way position (4 door models)

WARNING ***Use the shoulder belt only on the shoulder that is closest to the side of the vehicle. Never wear the belt under your arm. Never swing it around your neck over the inside shoulder. If you do not use the shoulder belt properly, the chances of your being injured in a collision greatly increase.***

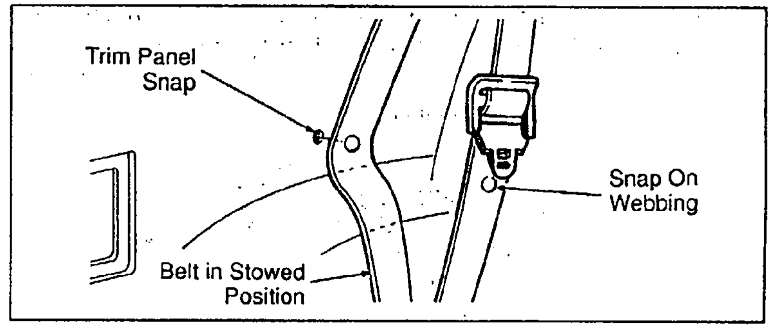
To tighten the lap portion of the belt, pull up on the shoulder belt until it fits you snugly. The belt should rest as low on your hips as possible.



Unfastening the outboard lap/shoulder belts

The rear seat shoulder safety belts have a feature which allows the seat belt webbing to be stowed out of the way when the rear seats are folded down (2 door only). To stow the belt while the seat is folded, attach the plastic snap on the seat belt to the metal mating part on the plastic trim panel. This will keep the belt out of the way while the seats are folded. Once the rear seats have been returned to their upright position, unsnap the belt from the trim panel.

WARNING ***It is important that the rear seat belt snap be detached from the trim panel prior to wearing the belt.***



Rear combination lap and shoulder belts (2 door model)

Center Front Lap Belt (If equipped)

The lap belt in the center of the front seat does not adjust automatically. You must adjust it to fit snugly around your hips. Do not wear it around your waist.

Before you fasten your center position lap belt in the front seat, you may need to lengthen it.

To lengthen the belt, tip the belt tongue at a right angle to the belt. Pull the belt tongue over your lap until it reaches the buckle.

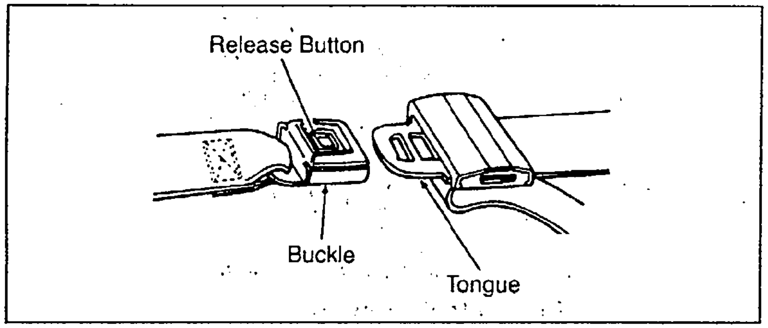
To fasten the belt, pull the belt across your hips and insert the tongue into the correct buckle on your seat until you hear a snap and feel it lock. Make sure the buckle is securely fastened.

Adjust the belt so that it fits snugly around your hips:

- If you need to lengthen the belt, unfasten it and repeat the procedure above.
- If you need to shorten the belt, pull on the loose end of the webbing.

To unfasten the belt, push the release button on the buckle. This allows the tongue to unlatch from the buckle.

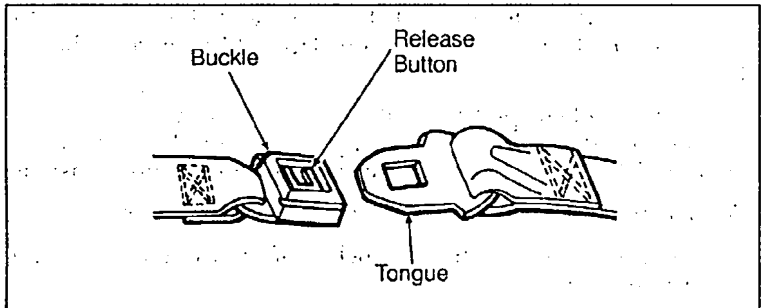
Because the center front lap belt does not have a retractor, it should be shortened and fastened when not in use.



Fastening and unfastening the front center safety belt

Rear Lap Belt with Retractor

Pull the belt out of the retractor with a steady motion and insert the tongue into the proper buckle until you hear a snap and feel the latch engage.



Fastening and unfastening the rear center safety belts (4-door model)

To Unfasten the Safety Belts with Retractors:

1. Push the release button on the buckle. This allows the tongue to unlatch from the buckle.
2. While the belt retracts, guide the tongue to its original position. If you do not guide the tongue, it may strike you or part of the vehicle.

How to Untwist or Unjam a Safety Belt Retractor

If you should jam the lap belt retractor by allowing the belt to retract when it is twisted, you can free the webbing with this procedure:

1. Pull on the belt with both hands to tighten it on the retractor spool.
2. Feed the belt back into the retractor until it is completely retracted. Repeat previous step if necessary.
3. Pull the belt out of its holder as far as it will go and untwist the belt or remove the object that is jamming the belt. Let the belt retract.
4. Then, pull the belt out and let it retract several times to make sure that the belt works properly.

Procedure to Correct a Twisted Safety Belt at the "D" Ring (If so equipped) Front and/or Rear Outboard Seating Positions

NOTE: The restraint system shown in the following figures may be different than the restraint system in your vehicle. However, use these figures and this procedure to correct a twisted safety belt at any outboard seating position that has a "D" ring.

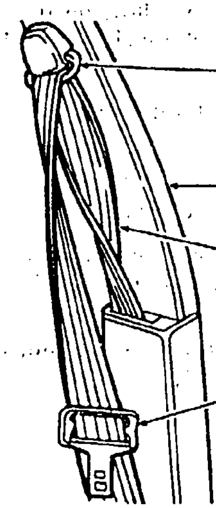


Figure 1

1. Grasp the belt webbing at the "D" ring. See Figure 2.

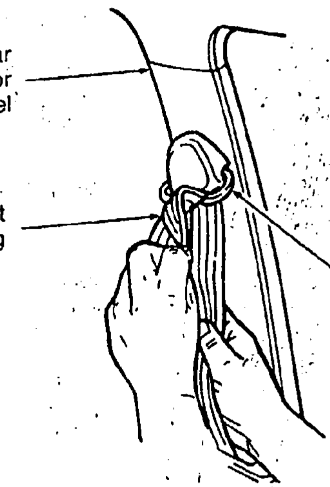


Figure 2

2. Rotate and fold the belt webbing over itself as required to remove the twist.
3. Feed the folded portion of the belt through the "D" ring.

4. When completed, the safety belt should look like Figure 3.

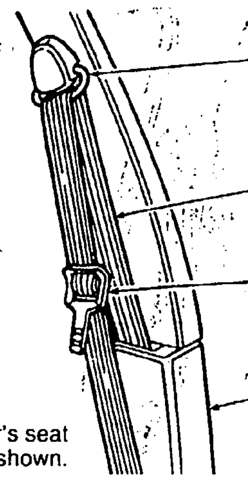


Figure 3

Procedure to Correct a Rotated Tongue on the Safety Belt (Front and/or Rear Outboard Seating Positions)

NOTE: The restraint system shown in the following figures may be different than the restraint system in your vehicle. However, use these figures and this procedure to correct a rotated tongue on the safety belt at any seating position that has a "D" ring.

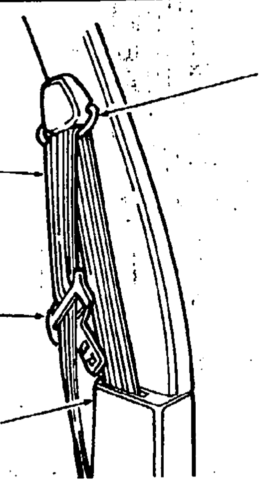


Figure 4

1. Grasp the belt tongue and pull down on the belt webbing closest to you to form a loop through the **upper** (narrow and longer) slot in the tongue. See Figure 5.

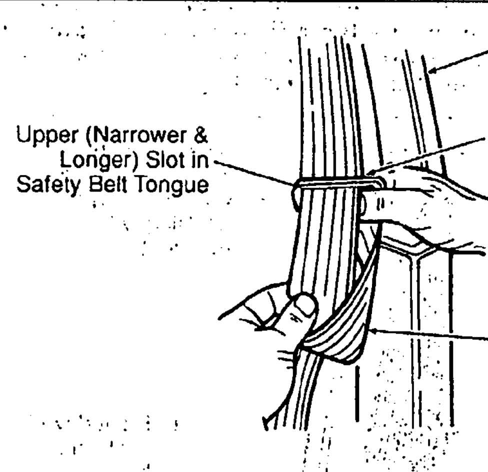


Figure 5

2. Working within the **upper** slot, rotate and fold the belt webbing over itself as required to remove the twist.
3. Pull the excess belt webbing back through the **upper** slot in the tongue.

4. Repeat the above steps to complete the removal of the twist at the **lower** (wider and shorter) slot in the tongue. See Figure 6.

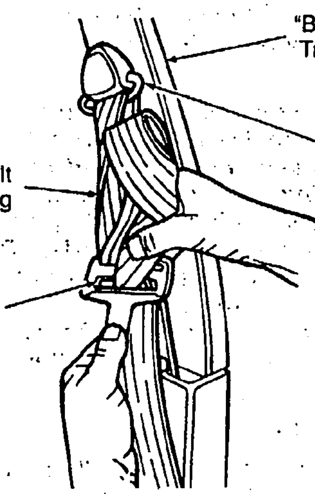


Figure 6

5. When completed, the safety belt should look like Figure 3.

Safety Belt Extension Assembly

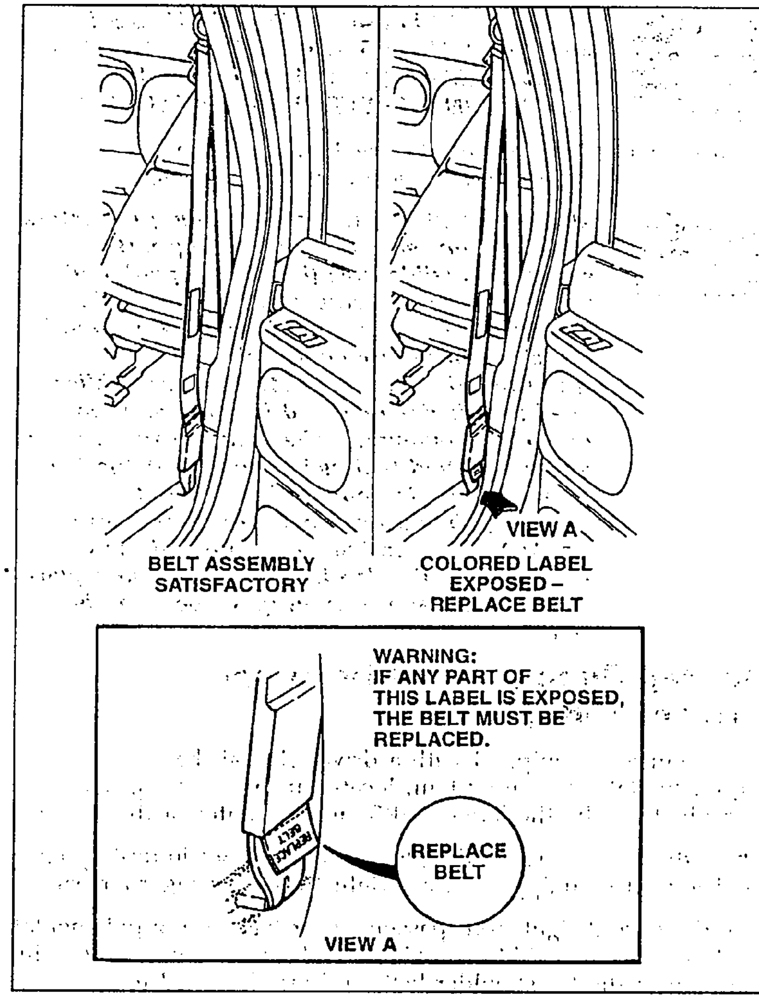
For some people, the safety belt may be too short even when it is fully extended. You can add about eight inches (20 cm) to the belt length with a safety belt extension assembly (Part number 611C22). Safety belt extensions are available at no cost from your dealer.

WARNING ***Use only extensions manufactured by the same supplier as the safety belt. Manufacturer identification is located at the end of the webbing on the label. Also, use the safety belt extension only if the safety belt is too short for you when fully extended. Do not use extension to change the fit of the shoulder belt across the torso. Failure to follow these instructions will affect the performance of the safety belts and increase the risk of personal injury.***

Safety Belt Maintenance

Check your safety belt system periodically to make sure that it works properly and isn't damaged. If the webbing shows any wear, nicks or cuts, have it examined by a qualified technician to determine if replacement is necessary. Always have your safety belt system checked after a collision.

The short plastic boot on the front safety belt at the passenger outboard anchor location covers an energy absorbing sew pattern on the safety belt. In the event of an accident, sew pattern may release, and the colored label (REPLACE BELT) may become visible. If this occurs, **the safety belt must be replaced.**



Energy absorbing sew pattern

WARNING ***FAILURE TO REPLACE THE SAFETY BELT ASSEMBLY UNDER THE ABOVE CONDITIONS COULD RESULT IN SEVERE PERSONAL INJURIES IN THE EVENT OF A COLLISION.***

For information on cleaning the webbing of seat belt assemblies, see *"Cleaning the Safety Belts"* in the Index.

WARNING ***All safety belt assemblies, including retractors, buckles, front seat belt buckle support assemblies (slide bar) (if so equipped), child safety seat tether bracket assemblies (if so equipped), and attaching hardware, should be inspected after any collision. Ford recommends that all safety belt assemblies used in vehicles involved in a collision be replaced. However, if the collision was minor and a qualified technician finds that the belts do not show damage and continue to operate properly, they do not need to be replaced. Safety belt assemblies not in use during a collision should also be inspected and replaced if either damage or improper operation is noted.***

Air Bag Supplemental Restraint System (SRS)

Your vehicle is equipped with a driver side air bag supplemental restraint system, located in the steering wheel and identified by the letters "SRS" in the center of the wheel.

The letters "SRS" above the glove compartment indicate your vehicle is also equipped with a right front passenger air bag.

The driver and right front passenger air bags are Supplemental Restraint Systems (SRS), provided at these seating positions in addition to the lap/shoulder belt, and are designed to supplement the protection provided to properly belted occupants in moderate to severe frontal collisions. The supplemental air bag system does not provide restraint to the lower body.

The Importance of Wearing Safety Belts

WARNING ***ALWAYS WEAR YOUR SAFETY BELT!***

WARNING ***All occupants of the vehicle, including the driver, should always wear their safety belts, whether or not an air bag Supplemental Restraint System is also provided at their seating position. Failure to do so may increase the risk of severe injury or death in the event of a collision.***

There are four very important reasons to use safety belts even with an air bag system. Use your safety belts to:

- help keep you in the proper position (away from the air bag) when it inflates
- reduce the risk of harm in rollover, side or rear impact collisions, because an air bag is not designed to inflate in such situations
- reduce the risk of harm in frontal collisions that are not severe enough to activate the supplemental air bag
- reduce the risk of being thrown from your vehicle

WARNING ***The right front passenger air bag is not designed to restrain occupants in the center front seating position.***

The Importance of Being Properly Seated

In a collision, the air bag must inflate extremely fast to help provide additional protection for you. In order to do this, the air bag must inflate with considerable force. If you are not seated in a normal riding position with your back against the seatback, the air bag may not protect you properly and could possibly hurt you as it inflates.

Important Information About The Passenger Air Bag

Your vehicle has a right front passenger air bag. It is important for the front seat passengers' safety that they remain properly seated whenever the vehicle is moving. This means that small children should be secured in appropriate child safety seats, and all other occupants should sit upright, with their backs against the seatback, and restrained by lap and shoulder belts. No passenger should sit toward the front edge of the seat, or stand or lean near the air bag cover (which is near the glove box).

WARNING

If a passenger is not properly seated and restrained, an inflating air bag could cause serious injury.

WARNING

Rear-facing infant seats should never be placed in the front seat. In rear-facing infant seats, the infant's head is closer to the passenger air bag. The force of the rapidly inflating air bag could push the top of the rear-facing seat against the vehicle seatback. REAR-FACING INFANT SEATS MUST ALWAYS BE SECURED IN THE REAR SEAT.

WARNING

Your vehicle is equipped with a right front passenger air bag. Front passengers, especially children and small adults, should never sit on the edge of the seat, stand near the glove compartment on the instrument panel, or lean over with their faces near the glove compartment when the vehicle is moving. All occupants should sit with their backs against the seatback and use the safety belts. Children weighing less than 40 lbs. (18 kg) should use child or infant seats. Forward-facing child seats must have the passenger seat moved as far back from the instrument panel as possible. REAR-FACING INFANT SEATS SHOULD NEVER BE USED IN THE FRONT SEAT, BECAUSE THE FORCE OF THE RAPIDLY INFLATING PASSENGER AIR BAG COULD PUSH THE TOP OF THE REAR-FACING SEAT AGAINST THE VEHICLE SEATBACK OR CENTER CONSOLE/ARMRESTS. REAR-FACING INFANT SEATS MUST ALWAYS BE PLACED IN THE REAR SEAT.

WARNING

Do not place objects or mount equipment on or near the air bag module covers (identified by the letters "SRS") on the steering wheel and instrument panel, or in front seat areas that may come in contact with a deploying air bag, because any such objects could cause harm if the vehicle is in a collision severe enough to cause the air bag to inflate. Failure to follow this instruction may increase the risk of personal injury in the event of a collision.

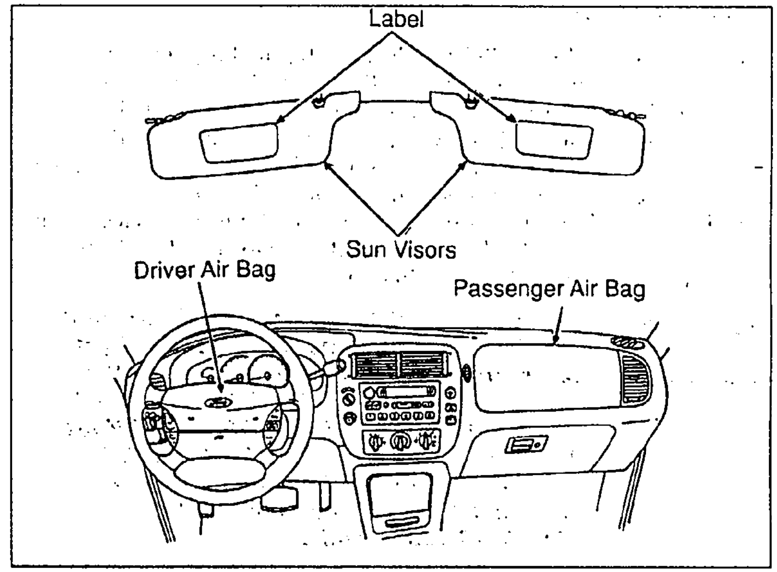
For additional important safety information on the proper use of seat belts, child seats, and infant seats, please read the other sections of this part of the Owner Guide, especially sections entitled *Safety Belts for Children* and *Safety Seats for Children.*

For further information about the proper mounting of equipment in the front seat of this vehicle, please refer to Ford's brochure entitled *Some Important Information About Air Bag Supplemental Restraint System* which can be obtained by calling Helm Inc. at 1-800-782-4356. Ask for brochure FPS-8602.

How the Air Bag Supplemental Restraint System Operates

The air bag supplemental restraint system has two main parts. One part is the air bag system with driver and passenger-side air bags and inflators. The second part is the electrical system, which has impact sensors and a diagnostic module. The diagnostic module monitors its own internal circuits and the supplemental air bag electrical system readiness (including the impact sensors), the system wiring, the air bag system readiness light, air bag back up power, and the air bag igniters.

The driver air bag is in the center of the steering wheel. The front passenger seat air bag is in the upper right hand section of the instrument panel ledge above the glove compartment.



The location of the air bag and warning labels

The air bag system uses a readiness light and a tone to indicate the condition of the system. The readiness light is in the instrument cluster. When you turn the ignition key to ON, this light will illuminate for approximately six (6) seconds and then turn off. This indicates that the system is operating normally. NOTE: Maintenance of the air bag system is not required.

WARNING

A problem with the system is indicated by one or more of the following: the readiness light will either flash or stay lit, or it will not light, or a group of five beeps will be heard.

If any of these things happen, even intermittently, have the air bag system serviced at your Ford or Lincoln-Mercury dealer immediately.

Tone generator

The air bag readiness light indicates the air bag system condition. However, a series of five sets of five beeps will be heard only if the readiness light does not work and there is a problem with the air bag system. This also means that the Air Bag Supplemental Restraint System (SRS) is in need of service. The tone pattern will repeat (five sets of five beeps) periodically until the problem and light are repaired. Unless serviced, the Air Bag Supplemental Restraint System may not function properly in the event of a collision.

WARNING ***Do not attempt to service, repair, or modify the Air Bag Supplemental Restraint System; tampering could cause activation of the system and increase the risk of personal injury. DO NOT REPLACE OR OTHERWISE TAMPER WITH THE AIR BAG FUSES. For servicing of the Air Bag Supplemental Restraint System, see your Ford or Lincoln-Mercury dealer.***

The air bag system is designed to stay out of sight until it is activated. The air bag system is designed to deploy in frontal and front-angled collisions more severe than hitting a parked vehicle of similar size and weight head-on at about 28 mph (45 km/h). Because the system senses the crash severity rather than vehicle speed, some frontal collisions at speeds above 28 mph (45 km/h) will not inflate the air bag.

The following four steps show how the air bag system works:

1. Sensors in the vehicle will detect the degree of severity of a frontal impact. When the sensor system is activated, electric current flows to the inflator and the system ignites the gas generant.

2. The propellant then rapidly burns in the metal container. The rapid burning produces nitrogen gas and small amounts of dust. The nitrogen gas and dust are cooled and filtered during inflation of the air bag.
3. The inflating supplemental air bags split open the trim covers. The supplemental air bags then rapidly unfold and inflate in front of the driver and front seat passenger.

NOTE: STEPS 1-3 TAKE PLACE IN A FRACTION OF A SECOND.

4. After inflation, the gas empties through holes in the air bag. The air bag deflates at once.

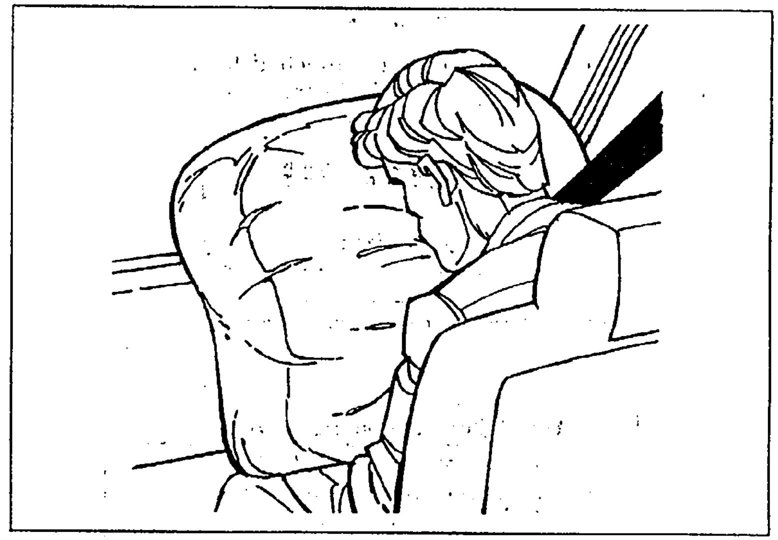
The surface of the air bags and the vehicle interior may be dusted with a powdery residue. The powder is cornstarch or talcum powder, which is used to lubricate the air bag as it inflates, and sodium compounds such as sodium carbonates (e.g., baking soda), and possibly a very small amount of sodium hydroxide that may be irritating to the skin and eyes, but is not toxic.

Right after air bag inflation, you may notice smoke (from the powder and dust) and smell the burnt propellant. This is normal.

WARNING ***Several air bag system components get hot after inflation. Do not try to touch them after inflation.***

Air bags may not inflate in certain frontal collisions, even though the vehicle may be badly damaged. The fact that your air bag did not inflate in such a collision does not mean that something is wrong with the air bag system. Rather, it means the crash forces were not severe enough to need an air bag to prevent serious injury.

Inflated driver-side air bag



Inflated passenger-side air bag

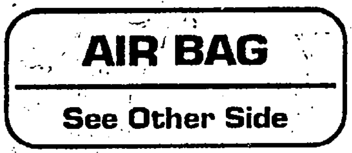
WARNING ***The air bag will inflate only once. The system is designed to function on a one-time-only basis. If the air bag is inflated, THE AIR BAG WILL NOT FUNCTION AGAIN AND MUST BE REPLACED IMMEDIATELY. If the air bag is not replaced, the unrepaired area will increase the risk of injury in a collision.***

Disposal of supplemental air bag equipped vehicles

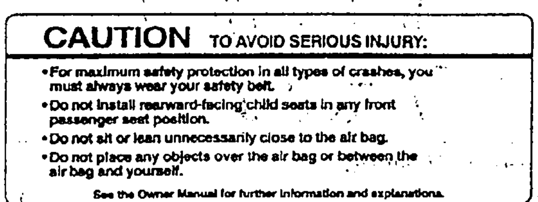
For disposal of air bags or air bag equipped vehicles, see your local Ford or Lincoln-Mercury dealer, or refer to the procedures in the 1995 Ford Service Manual. Information on how to order a service manual is available at an authorized Ford or Lincoln-Mercury dealer. You can also order a service manual using the order form in the *Accessories* chapter of your Owner Guide.

Service and information labels

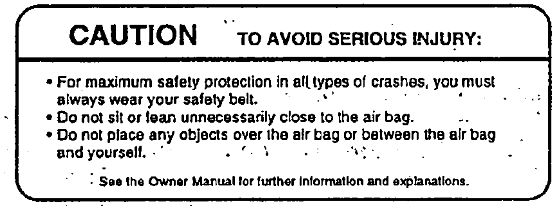
Service and information labels are attached to the sun visors and to the radiator support sheild in the engine compartment.



Label located on front of driver's and passenger's visors



Label located on back of passenger's visors



Label located on back of driver's visor

Air bag label on the radiator support in the engine compartment

Safety Restraints for Children

In the U.S. and Canada, you are required by law to use safety restraints for children. If small children ride in your vehicle – this generally includes children who are four years old or younger and who weigh 40 pounds (18 kg) or less – you must put them in safety seats that are madê specially for children. Safety belts alone do not provide maximum protection for these children. Check your local and state laws for specific requirements.

WARNING *Never let a passenger hold a child on his or her lap while the vehicle is moving. The passenger cannot protect the child from injury in a collision.*

WARNING *Never let children or adults ride in the cargo area of your vehicle. Make sure that they sit where they can be properly restrained. If they are not restrained, the risk of their being injured in a collision greatly increases.*

WARNING *When using any infant or child restraint system, it is important that you follow the instructions and warnings provided by the manufacturer concerning its installation and use. Failure to follow each of the restraint manufacturer's instructions could increase the risk or severity of an injury in the event of a collision or sudden stop.*

When possible, put children in the rear seat of your vehicle. Accident statistics suggest that children are safer when properly restrained in the rear seating positions than in the front seating positions.

Safety belts and seats can become hot in a vehicle that has been closed up in sunny weather; they could burn a small child. Check seat covers and buckles before you place a child anywhere near them.

WARNING *Never leave a child unattended in your vehicle. Always remove the key from the ignition and take it with you.*

Built-In Child Seat (If equipped)

The rear seat may include an optional built-in child safety seat (passenger side). Refer to Figures 1 and 2. This child restraint is to be used **only** by children who are at least one year old, weight between 20 and 60 pounds (9 and 27 kilograms) and whose shoulders (top) are below the bottom of the headrest in the **full up** position. If your child is less than one year old or weighs less than 20 pounds (9 kilograms), always use a rear facing infant child seat because a child of that size is not sufficiently developed to withstand crash forces in a front facing position.

If your child is less than one year old but is too big for an infant seat, use a convertible child safety seat placed in the rear facing mode.

WARNING *Always latch the vehicle seat to the floor, whether the seat is occupied or empty. If not latched, the seat can fly around in a crash, injuring occupants.*

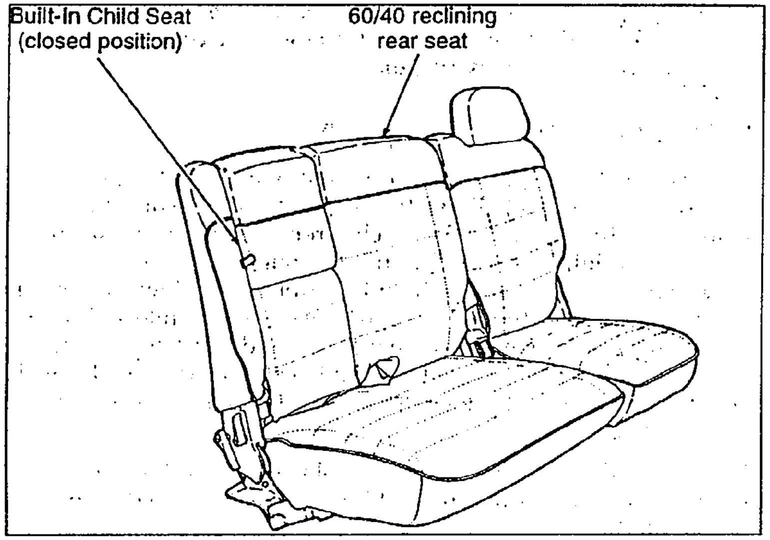


Figure 1: Built-in child safety seat in the closed position

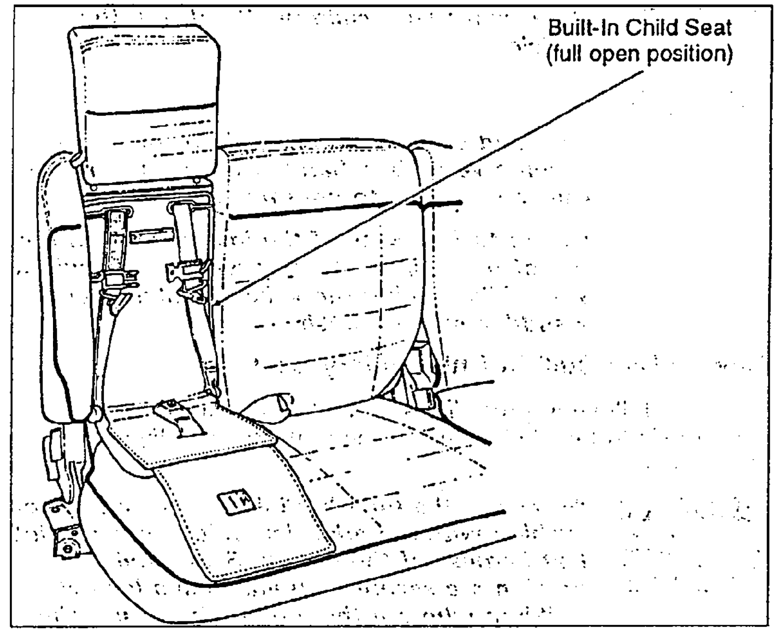


Figure 2: Built-in child safety seat in the open position

Children must be properly buckled before riding in the vehicle. It is the law in every state and province. This child seat conforms to all Federal/Canadian motor vehicle safety standards.

Frequently check the child seat's lap and shoulder harness belts for correct placement and tightness. Use only if the harness belts can be pulled snug and will stay snug. If belts do not stay snug, return to dealer for repair.

WARNING ***Always adjust the lap and shoulder harness belts provided with this child seat snugly around your child.***

WARNING ***Never leave your child unattended in the vehicle.***

The child seat's metal and plastic parts can become very hot when left in the sun. These can cause burns to unprotected skin.

Failure to follow all of the instructions on the use of this child restraint system can result in your child striking the vehicle's interior during a sudden stop or crash.

How to Use Built-In Child Safety Seat

Read the following procedures and all of the labels on the Built-In Child Seat before using the seat. Refer to Figures 1 through 14.

WARNING ***Never use the Built-In Child Seat as a booster cushion with the adult lap belt. The five-point belt harness of the Built-In Seat provides much more secure restraint than a lap belt. Children who are the proper size to use the Built-In Child Seat should use the five-point belts. Children who sit in the center rear seat but are too large to use the Built-In Child Seat should use the lap belt, but should sit on the seat cushion rather than on the built-in seat. Using the Built-In Seat as a booster cushion with the center rear lap belt can result in your child striking the vehicle's interior during a sudden stop or crash.***

WARNING ***The Built-In Child Safety Seat cannot be lowered if the bench seat is not fully locked in the full upright position.***

1. To release the head restraint, grasp the pull strap and pull toward you (approximately one inch), which will allow you to insert your hand at the bottom of the head restraint, as shown in Figure 3.

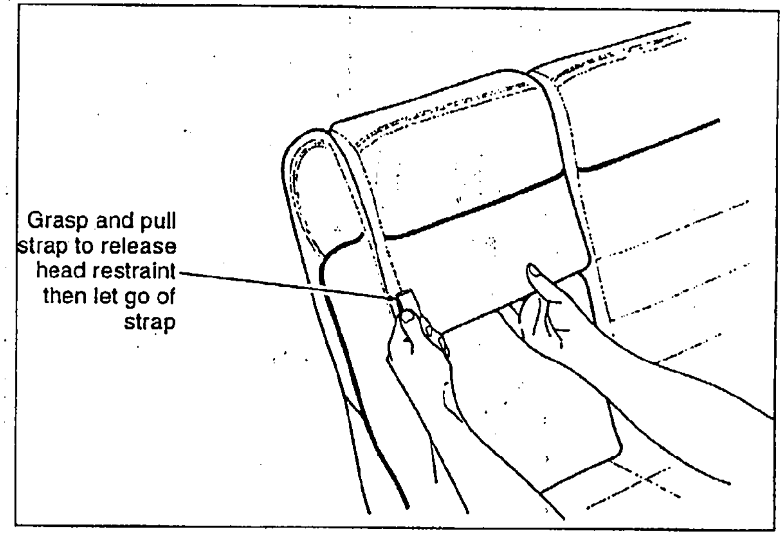


Figure 3: Releasing the child safety seat head restraint

2. Release strap and slide the head restraint to the full up position. Refer to Figure 4.

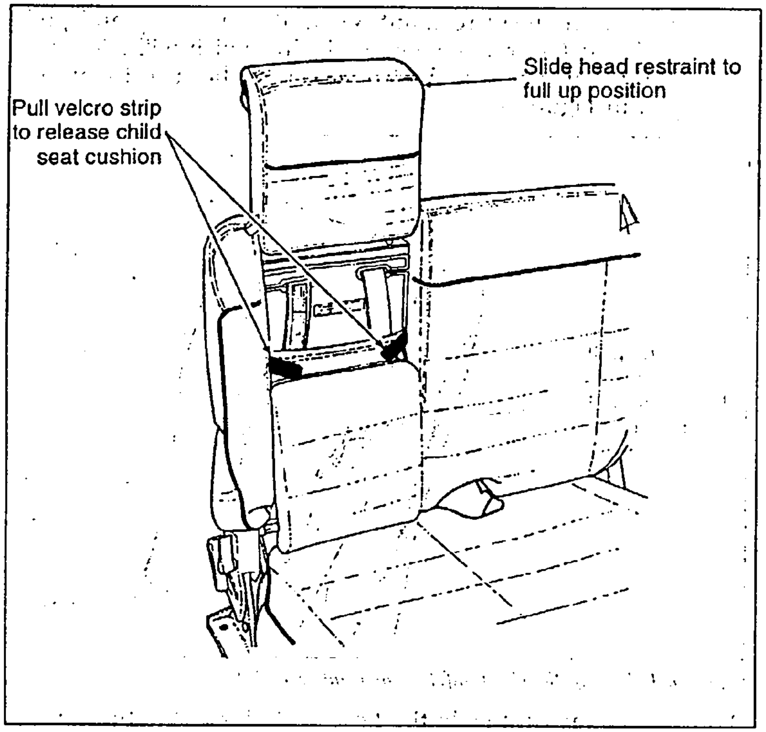


Figure 4: Positioning child safety seat head restraint and release of child seat cushion

3. Pull both velcro straps to release the child seat cushion. Refer to Figure 4.
4. Check the child's size, weight and age to be sure that the child is not too small or too large for the seat. Then lower the child seat cushion onto the adult seat cushion. Read the information and warnings carefully on the child seat cushion protector flap and shoulder safety belt. Refer to Figure 5.

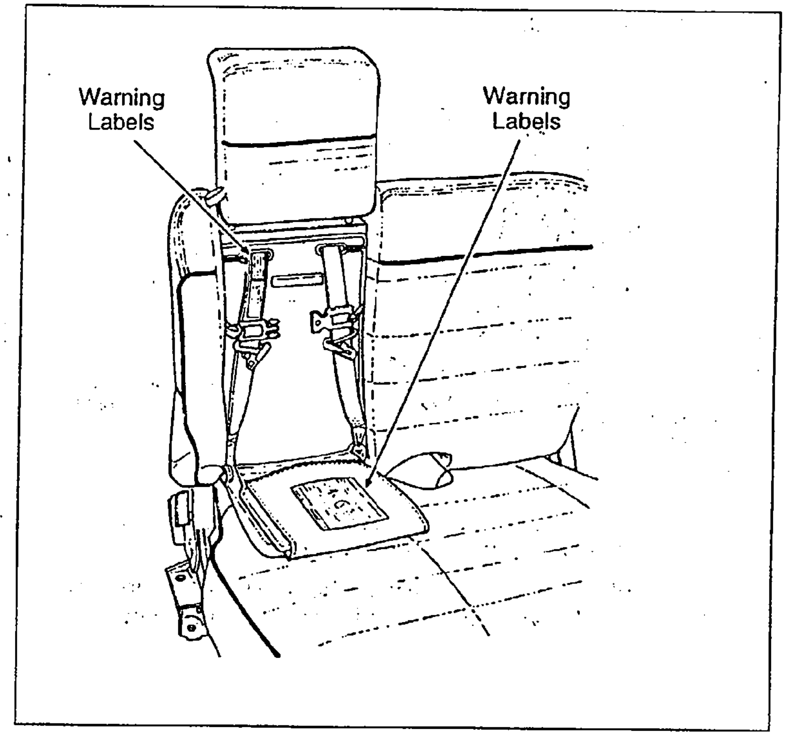


Figure 5: Child seat information and warnings

NOTE: **The Built-In Child Safety Seat cannot be lowered if the adult seatback is not fully latched in the full upright position.**

5. Unfold cushion protector flap onto adult seat cushion. Refer to Figures 5 and 6.

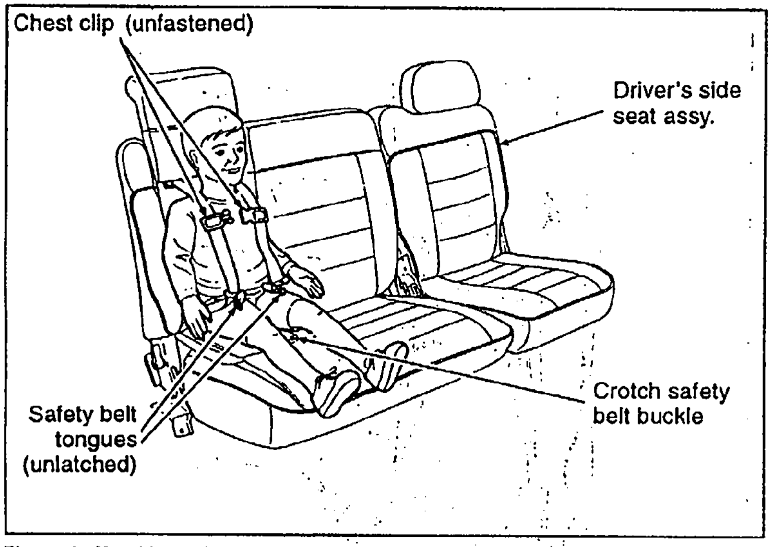


Figure 6: Shoulder safety belt placement on the child

6. Place child on the child seat cushion. Then position the shoulder belt over each shoulder as shown in Figure 7.

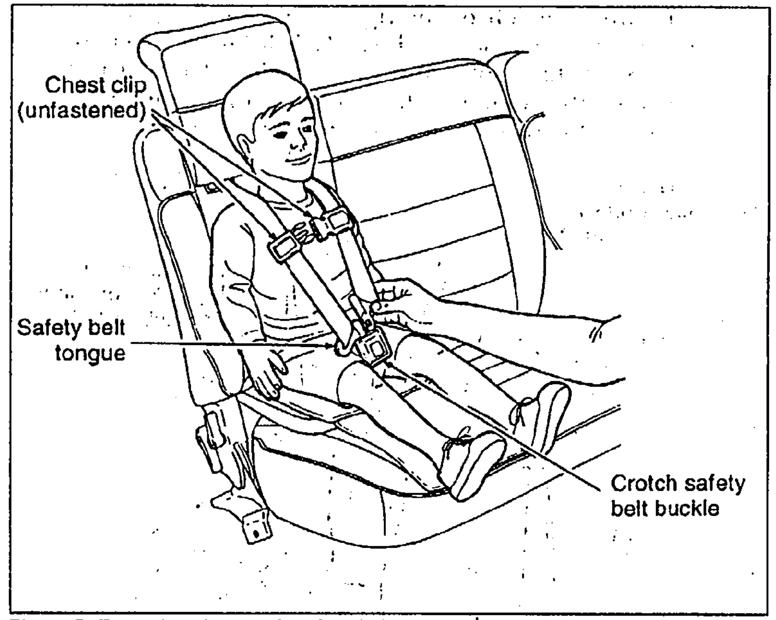


Figure 7: Fastening the crotch safety belt

NOTE: Read the following steps carefully to become familiar with the color indicator windows located on each safety belt tongue and the chest clip. When either of the tongues or the chest clip is unfastened, the color red appears. When the tongues and/or the chest clips are properly fastened, the color green appears.

7. Insert either the left or the right safety belt tongue into the single opening of the crotch safety belt buckle as shown in Figure 8. (It does not matter which is inserted first.) Then insert the other tongue. The color **green** must appear in the color indicator window on each buckled tongue.

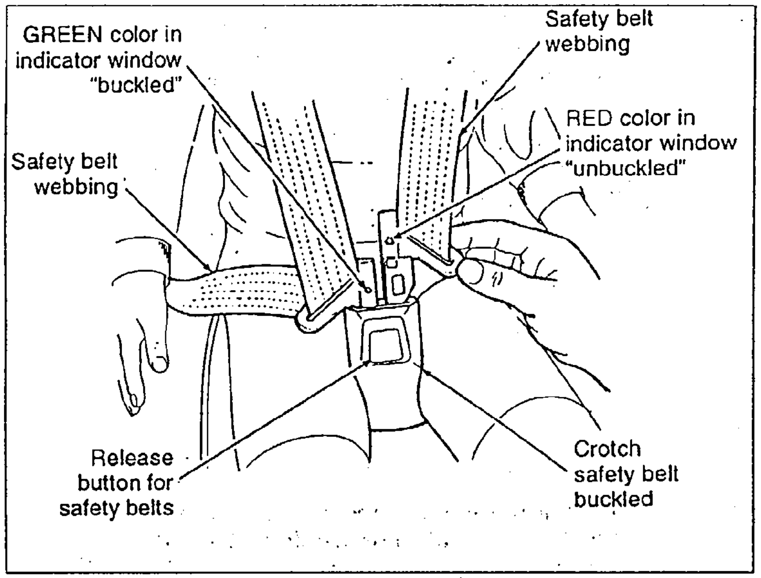


Figure 8: Fastening the crotch safety belt

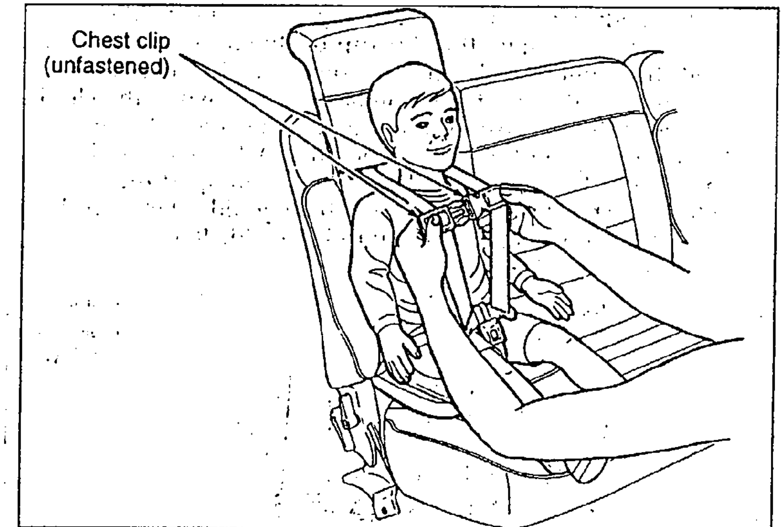


Figure 9: Fastening the chest clip

8. Pull on both safety belt tongues to be sure that both tongues are latched.

WARNING ***If both tongues do not latch in the buckle, do not use the child safety seat. See your Ford dealer for service.***

9. Fasten both halves of the chest clip below the child's shoulders and adjust the clip (up or down) to comfortably hold the shoulder belts in place on the child's chest. The indicator on the chest clip will show green when the clip is latched. (The purpose of this clip is to position the shoulder belts correctly on the child's shoulders.) The clip can be easily pulled apart and is designed to pull apart during a collision. The clip will help keep the shoulder belts on the shoulders of a sleeping or squirming child. Refer to Figures 10 and 11.

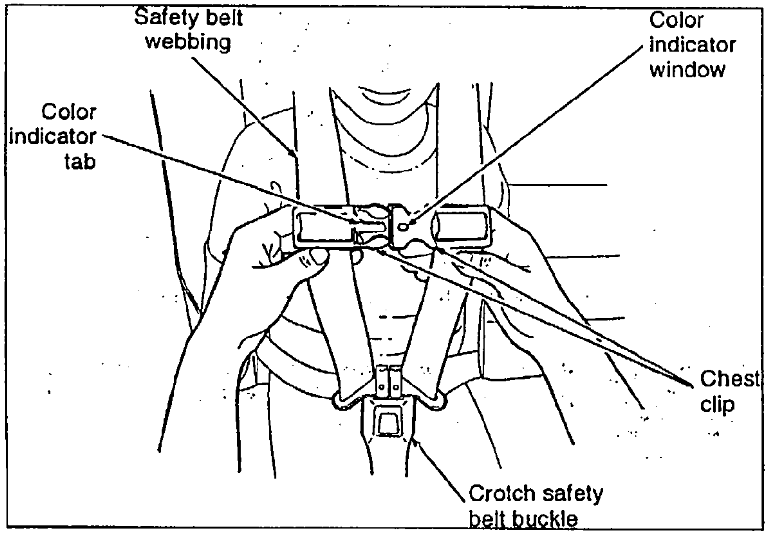


Figure 10

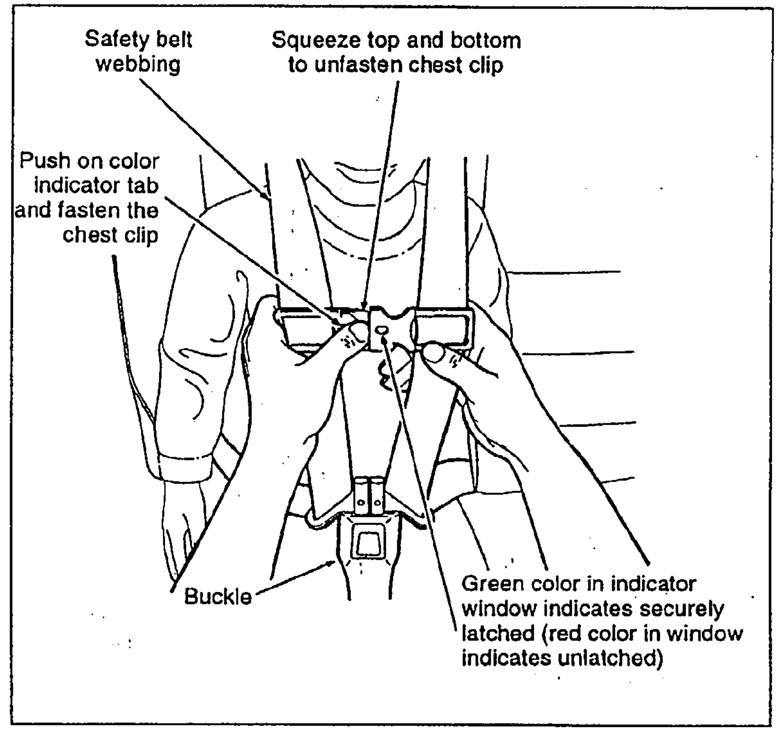


Figure 11: Fastening the chest clip

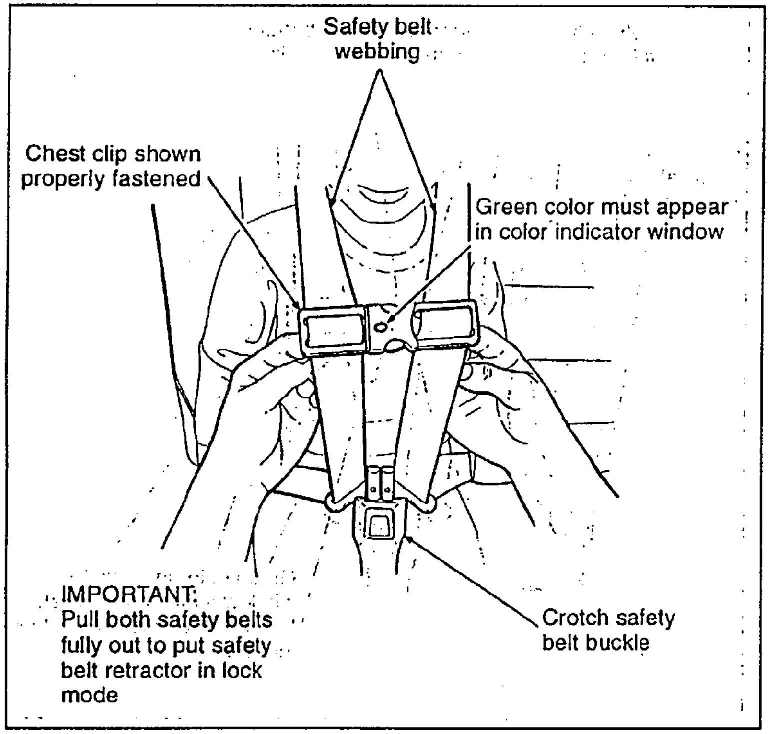


Figure 12: Securing the chest clip

11. Pull shoulder belts fully out to put the retractor into the lock mode. At this time, the shoulder belts are in an automatic lock mode. Allow belts to tighten snugly against the child's shoulders. The belt will automatically lock and cannot be pulled out. Refer to Figure 13.

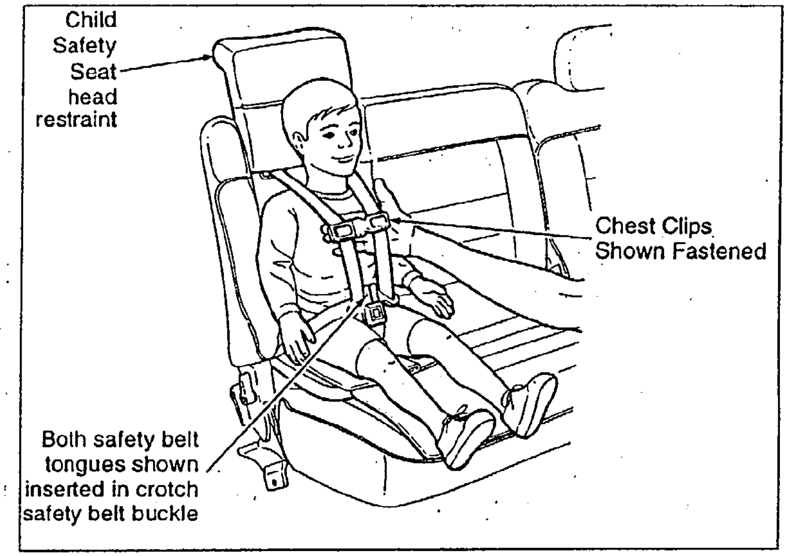


Figure 13: Checking for properly fastened chest clip and safety belts

12. When properly used, the child safety seat should look like Figure 14.

12. When properly used, the child safety seat should look like Figure 14.

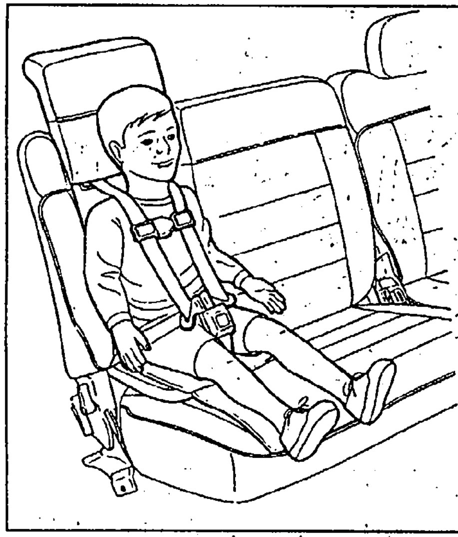


Figure 14: Built-in child seat properly being used

Built-In Child Seat Belt Retractors

The belts on the Built-In Child Seat are equipped with a dual locking mode retractor. The child seat belts can be used with the retractor in either the emergency locking mode or the automatic mode. In the emergency locking mode, the retractor allows freedom of movement, locking only on hard braking, hard cornering, or collisions. In the automatic locking mode, the retractor will remain locked and does not allow the child freedom of movement.

The retractor will switch from the emergency locking mode to the automatic locking mode when the shoulder belts are pulled all the way out. The retractor will switch back to emergency

locking mode when the belts are unbuckled and the shoulder belts retract completely.

The automatic locking mode must be used to hold small children in position, particularly sleeping children and those who may try to squirm out of the belts. The emergency locking mode is also used while buckling the belts.

Frequently check the child seat's lap and shoulder harness belts for correct placement and tightness. Use the child seat only if the harness belts will stay snug when belts are placed into the lock mode with a child in the seat. If not, take the child seat to the dealer for repair.

WARNING

Always adjust the lap and shoulder harness belts provided with this child seat snugly around your child.

Never leave your child unattended in the vehicle.

The child seat's metal and plastic parts can become very hot when left in the sun. These can cause burns to unprotected skin.

Failure to follow all of the instructions on the use of this child restraint system can result in your child striking the vehicle's interior during a sudden stop or crash.

To remove the child from the shoulder belts:

1. Open the chest clip. Refer back to Figure 9.
2. Press release button on the crotch safety buckle. Refer back to Figure 8.
3. Slide the shoulder safety belts off the child's shoulders and remove the child from the seat. Refer to Figure 6.

To fold up the Built-In Child Safety Seat:

Make sure belts have fully retracted to the stowed position before stowing the child restraint seat.

NOTE: **If belts did not retract after removing child, pull belts fully out and release. Belts should retract automatically.**

1. Fold the protector flap over the child's seat cushion. Refer to Figure 5.
2. Rotate the child seat cushion upward, securing both velcro straps. Refer to Figure 4.
3. Slide the head restraint down until it is flush with the top of the adult seatback. Refer to Figure 4.

NOTE: **When the child's safety seat is not in use, it may be folded up so that an adult may use the vehicle's rear seat. Refer to Figure 1.**

Inspection after a collision

WARNING ***All built-in child restraints, including seats, buckles, retractors, seat latches, interlocks, and attaching hardware should be inspected by a qualified dealer technician after any collision. If the child seat was in use during a collision, Ford recommends replacing it. However, if the collision was minor and a qualified technician finds that the child restraints do not show damage and continue to operate properly, they do not need to be replaced. Built-In Child Seats not in use during a collision should also be inspected and replaced if either damage or improper operation is noted.***

Cleaning

Your Built-In Child Seat may be cleaned with mild soap and water. Do not use household cleaners as they may weaken the webbing or damage the plastic parts. For your convenience, the liner is made to be machine washable and air dried (do not use heat).

Inspection

Regularly inspect the lap and shoulder belts system of your child seat. See your Ford Dealer if the shoulder belt webbing is frayed, or if the buckle and tongue are damaged and/or do not function properly.

Safety Belts for Children

Children who are too large for child safety seats should always wear safety belts. (See instructions with your child seat, or contact its manufacturer, to determine maximum size of child that will safely fit in the seat.)

WARNING ***If safety belts are not properly worn and adjusted as described, the risk of serious injury to the child in a collision will be much greater.***

WARNING ***If the shoulder belt portion of one of the lap and shoulder belts can be positioned so that it does not cross or rest in front of the child's face or neck, the child should wear the lap and shoulder belt. Moving the child closer to the center of the vehicle may help provide a good shoulder belt fit.***

If the shoulder belt cannot be properly positioned, move the child to one of the seats with a lap belt only (preferably in a rear seat) and use the lap belt.

WARNING *Lap belts and the lap belt portion of lap and shoulder belts should always be worn snugly and below the hips, touching the child's thighs.*

WARNING *Children should always ride with the seatback in the fully upright position. When the seatback is not fully upright, there is a greater risk that the child will slide under the safety belt and be seriously injured in a collision.*

Safety Seats for Children

Use a safety seat that is recommended for the size and weight of the child. Always follow the safety seat manufacturer's instructions when installing and using the safety seat.

Ford recommends the use of a child safety seat having a top tether strap. Install the child safety seat in a seating position which is capable of providing a tether anchorage. For more information on top tether straps see *Attaching Safety Seats With Tether Straps* in this chapter.

When installing a child safety seat, be sure to use the correct safety belt buckle for that seating position, and make sure the tongue is securely fastened in the buckle.

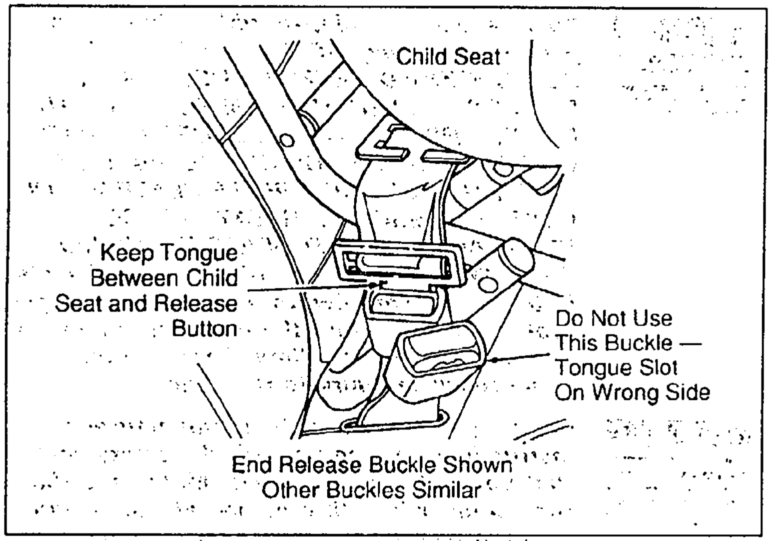
WARNING *All child restraint systems are designed to be secured in vehicle seats by lap belts or by the lap portion of a lap-shoulder belt. If you do not properly secure the safety seat to the vehicle, the risk is greater that a child, occupying the seat during a collision or sudden stop, will be injured. An unsecured safety seat could also injure other passengers in the vehicle.*

WARNING *Your vehicle is equipped with a right front passenger air bag. REAR-FACING INFANT SEATS SHOULD NEVER BE USED IN THE FRONT SEAT, BECAUSE THE FORCE OF THE RAPIDLY INFLATING PASSENGER AIR BAG COULD PUSH THE TOP OF THE REAR-FACING SEAT AGAINST THE VEHICLE SEATBACK OR CENTER ARMRESTS. ALWAYS PLACE REAR-FACING INFANT SEATS IN THE REAR SEAT. When using forward-facing child seats in the front seat, always move the passenger seat as far back from the instrument panel as possible. Failure to follow these warnings could result in injury to the child.*

WARNING *Carefully follow all of the manufacturer's instructions that come with the safety seat that you put in your vehicle. Make sure that the shoulder belt (if provided at the seating position where the safety seat is being used) does not cross or rest in front of the child's face or neck. If you do not install and use the safety seat properly, the child may be injured in a sudden stop or collision.*

Seatbacks should be upright for use with child safety seats.

WARNING *Always keep the buckle release button pointing upward and away from the child seat, with the tongue between the child seat and the release button as shown in the following illustration. Failure to follow these instructions could result in accidental unbuckling of the safety belt if the child safety seat hits the release button. Release of the safety belt could result in serious injuries.*

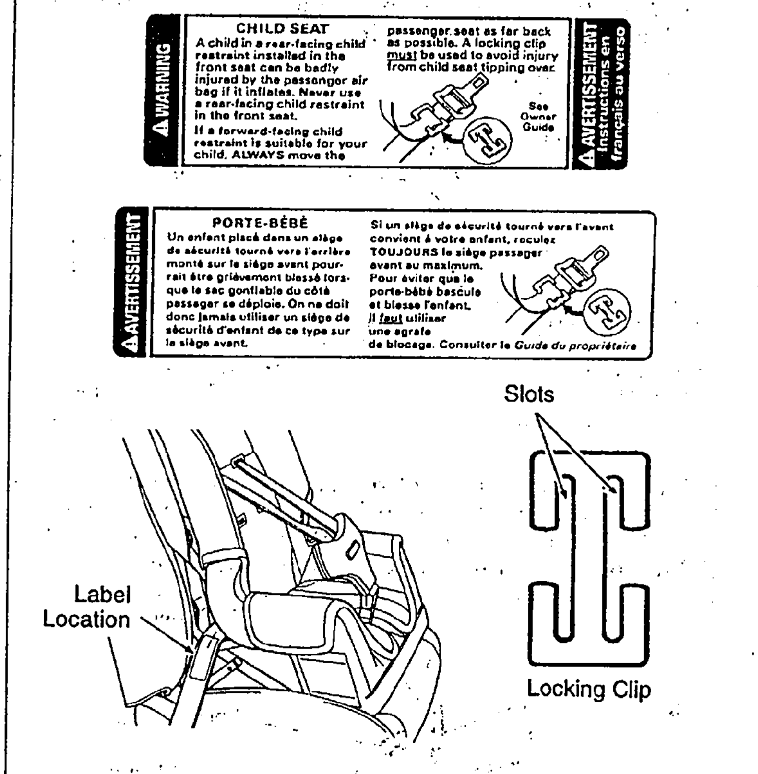


Installation Instructions for Child Safety Seat Locking Clip

Obtain the locking clip kit (Part Number FO3Z-5461248-A) at no charge from an authorized Ford or Lincoln-Mercury dealer.

The locking clip must be used to secure a child seat when your vehicle has a shoulder and lap belt with a sliding tongue. Every Ford and Lincoln-Mercury safety belt that requires a locking clip is identified on the belt, with the label as shown in Figure 1. The locking clip is installed on a sample piece of webbing to show proper installation.

Safety Belt Locking Clip Label



WARNING ***If you do not use a locking clip, injuries could result from the child seat tipping over during normal vehicle braking or cornering.***

To install the locking clip

1. Thread the belt webbing through the child seat according to the child seat manufacturer's instructions.
2. Buckle the safety belt.

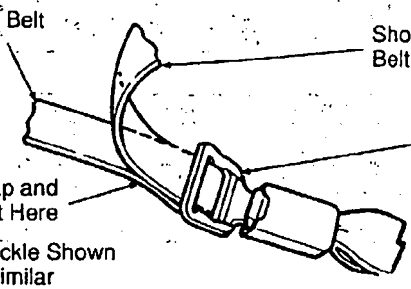


Figure 2

3. Pull on shoulder portion of the belt to make the lap portion fit snugly. Keeping the lap belt snug, hold the lap and shoulder belt portions of the webbing together next to the sliding tongue and unbuckle the seat belt, Figure 2.

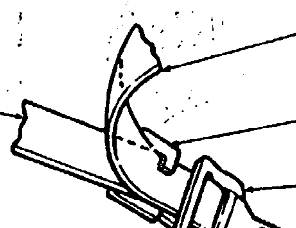


Figure 3

4. Slide either corner of the locking clip slot closest to the tongue over both layers of webbing as shown in Figure 3.

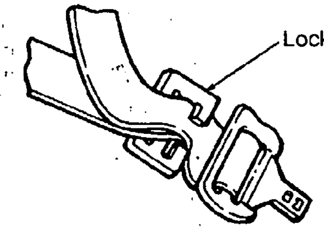


Figure 4

5. Pinch both opposite edges of webbing together and insert them into the locking clip slot as shown in Figure 4.

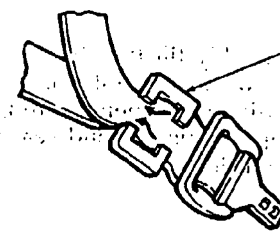


Figure 5

6. Pinch both layers of webbing together and insert into other slot of locking clip, Figure 5.

View of Final Installation

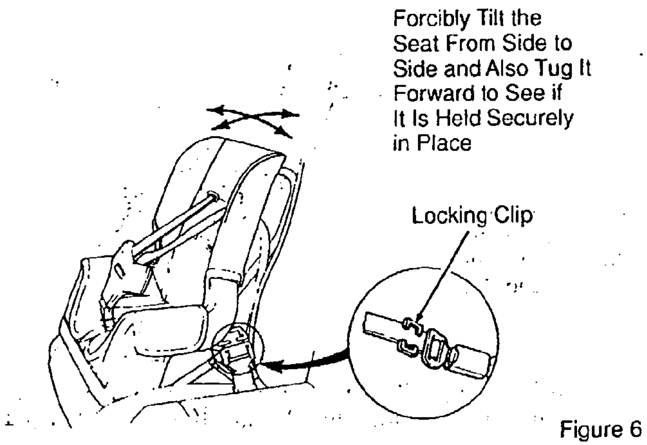


Figure 6

7. Re-buckle belt. Forcibly tilt the child seat from side to side and also tug it forward to see if it is held securely in place, Figure 6. If excessive movement occurs, repeat steps 2 through 7 or properly install child seat in a different seating position in the vehicle.

WARNING ***Once you have attached the safety seat, test the seat before you place the child in it. Tilt the seat from side to side. Also try to tug the seat forward. Check to see if the belt holds the seat in place. If the lap belt is too loose, tighten it by moving the locking clip, or put the safety seat in another seat and test it again. If the safety seat is not anchored properly, the risk of a child being injured in a collision or sudden stop greatly increases. Reclining seatbacks should be in the most upright position for use with child safety seats.***

Attaching Safety Seats With Tether Straps

General Instructions

Some manufacturers make safety seats that include a tether strap that goes over the back of the vehicle seat and attaches to an anchoring point. Other manufacturers offer the tether strap as an accessory. Contact the manufacturer of your child safety seat for information about ordering a tether strap.

You can attach a tether strap anchor bracket to the rear floor by using a tether anchor kit (613D74), available at no charge from any Ford dealership.

Read and follow the instructions provided with the kit carefully for installation of the child tether strap anchor.

Follow the child seat manufacturer's instructions to attach the tether strap to the tether bracket.

Ford recommends placement of tethered safety seats in a rear seating position with the tether strap attached to the tether anchoring point as shown in the instructions provided with the child tether strap anchor kit.

WARNING ***Use only the tether attachment hole locations shown in the instructions. The tether anchorage may not perform properly if the wrong mounting location is used.***

The rear lap/shoulder safety belts should not be used to secure the tether strap of a safety seat located in the front seat.

WARNING ***Failure to follow these precautions could increase the chance and/or severity of injury in an accident.***

WARNING ***If the anchor bolt(s) are ever removed, the hole(s) in the floor must be sealed to prevent the possibility of exhaust fumes entering the passenger compartment.***