

V2532

REPORT NO.: 214-MGA-97-09
SAFETY COMPLIANCE TESTING FOR
FMVSS 214 "SIDE IMPACT PROTECTION -
PASSENGER CARS"

FORD MOTOR COMPANY
1997 FORD PROBE 3 DOOR HATCHBACK
NHTSA NO: CV0208

MGA PROVING GROUNDS
5000 WARREN ROAD
BURLINGTON, WI 53105



Test Date: November 14, 1996

Report Date: December 10, 1996

FINAL REPORT

Prepared For:

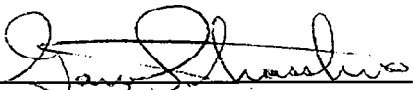
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
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OFFICE OF VEHICLE SAFETY COMPLIANCE
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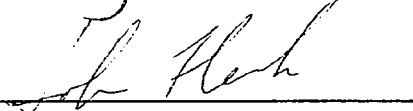
TECHNICAL REPORT STANDARD TITLE PAGE

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4. Title and Subtitle Final Report of FMVSS No.214 Compliance Side Impact Protection Testing of a 1997 Ford Probe 3 Door Hatchback NHTSA No. CV0208				5. Report Date December 10, 1996																			
				6. Performing Organization Code MGA																			
7. Author(s) Gary Strassburg, Project Engineer				8. Performing Organization Report No. MGA-DOT-214-10																			
9. Performing Organization Name and Address MGA Research Corporation 5000 Warren Road Burlington, WI 53105				10. Work Unit No.																			
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12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration Office of Vehicle Safety Compliance (Mail Code: NSA-30) 400 Seventh St., S.W., Room 6115 Washington, D.C. 20590				13. Type of Report and Period Covered Final Test Report November 14 to December 10, 1996																			
				14. Sponsoring Agency Code NSA-30																			
15. Supplementary Notes																							
16. Abstract A 48/24 kph 90° Impact (Moving Deformable Barrier) Compliance Test was conducted on the subject 1997 Ford Probe 3 Door Hatchback in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-214D-04 for the determination of FMVSS No. 214 Side Impact Protection compliance. The test was conducted at MGA Research Corporation in Burlington, Wisconsin, on November 14, 1996. The impact velocity of the Moving Deformable Barrier (MDB) was 53.6 kph, and the ambient temperature at the struck side of the target vehicle at the time of impact was 24.4°C. The target vehicle post test maximum crush was 378 mm at level 3. The test vehicle's performance follows:																							
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"></th> <th style="width: 25%; text-align: center;"><u>RIGHT FRONT PASS.</u></th> <th style="width: 25%; text-align: center;"><u>RIGHT REAR PASS.</u></th> </tr> </thead> <tbody> <tr> <td>Right Upper Rib (RUR) Accel., g</td> <td style="text-align: center;">76</td> <td style="text-align: center;">70</td> </tr> <tr> <td>Right Lower Rib (RLR) Accel., g</td> <td style="text-align: center;">66</td> <td style="text-align: center;">76</td> </tr> <tr> <td>Lower Spine (T₁₂) Accel., g</td> <td style="text-align: center;">85</td> <td style="text-align: center;">77</td> </tr> <tr> <td>Thoracic Trauma Index (TTI)</td> <td style="text-align: center;">80</td> <td style="text-align: center;">76</td> </tr> <tr> <td>Pelvis (PEV) Accel., g</td> <td style="text-align: center;">90</td> <td style="text-align: center;">98</td> </tr> </tbody> </table>							<u>RIGHT FRONT PASS.</u>	<u>RIGHT REAR PASS.</u>	Right Upper Rib (RUR) Accel., g	76	70	Right Lower Rib (RLR) Accel., g	66	76	Lower Spine (T ₁₂) Accel., g	85	77	Thoracic Trauma Index (TTI)	80	76	Pelvis (PEV) Accel., g	90	98
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Pelvis (PEV) Accel., g	90	98																					
The door on the struck side of the vehicle did not separate from the body at the hinges or latches and the opposite door did not open during the side impact event.																							
17. Key Words Compliance Testing Side Impact Protection FMVSS 214 Side Impact Dummy (SID)				18. Distribution Statement Copies of this report are available from: National Highway Traffic Safety Adm. Technical Ref. Division, Room 5108 (NAD-52) 400 Seventh Street, S.W. Washington, D.C. 20590 Telephone No. 202-366-4946 Attn: Robert Hornickle																			
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Approved By: 
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Approval Date: 12-19-96

FINAL REPORT ACCEPTED BY (OVSC):

Accepted By: 
Contract Technical Manager

Acceptance Date: 2/25/97

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SECTION 1
PURPOSE AND TEST PROCEDURE

This side impact test is part of the FY 96 FMVSS 214 Side Impact Protection Compliance Test Program, sponsored by the National Highway Traffic Safety Administration (NHTSA), under Contract No. DTNH22-93-C-02047. The purpose of this test was to evaluate side impact protection of a 1997 Ford Probe 3 Door Hatchback.

This side impact test was conducted in accordance with the Vehicle Safety Compliance's FMVSS 214 test procedure (TP-214D-04, dated September 1, 1995).

MGA does not endorse or certify products. The manufacturer's name appears solely for identification purposes only.

SECTION 2
SUMMARY OF SIDE IMPACT TEST

A 1997 Ford Probe 3 Door Hatchback was impacted on the right side by a Moving Deformable Barrier (MDB) which was moving forward in a 27° crabbed position to the tow road guidance system at a velocity of 33.3 mph (53.6 kph). The target vehicle was stationary and was positioned at an angle of 63° to the line of forward motion. The side impact test was conducted by MGA Research Corporation in Burlington, Wisconsin, on November 14, 1996. Pre- and post-test photographs of the test vehicle, the MDB and the side impact dummies (SIDs) are included in Appendix A.

Two Side Impact Dummies (SIDs) were placed in the right front and right rear designated seating positions according to instructions specified in the OVSC Side Impact Laboratory Test Procedure which is dated September 1, 1995. The side impact event was documented by nine high speed cameras. Camera locations and other pertinent camera information can be found in this report.

The SIDs were instrumented with the following accelerometers.

1. Right Upper Rib (RUR) uniaxial accelerometer (Y-direction)
2. Right Lower Rib (RLR) uniaxial accelerometer (Y-direction)
3. Lower Thoracic Spine (T₁₂) uniaxial accelerometer (Y-direction)
4. Pelvic (PEV) section uniaxial accelerometer (Y-direction)

Appendix B contains the vehicle and dummy response data traces. A summary of the side impact dummy (SID) configuration and performance verification test data is shown in Appendix C. Dummy and vehicle calibration data can be found in Appendix D of this report.

The following table summarizes the results of the FMVSS 214 Right Side Impact test:

Injury Criteria	Front SID	Rear SID
TTI (g)	80.3	76.5
Pelvis (g)	89.5	98.1

TEST NOTES

1. The following accelerometers were not used for this test:

Right Front Door on Centerline

Midrear of Right Front Door

Right Front Door Upper Centerline

Midrear of Right Rear Door

Right Rear Door Upper Centerline

Rear Seat Track

Right Mid B-Post

SECTION 3
SIDE IMPACT DUMMY (SID) AND
VEHICLE TEST DATA

DATA SHEET NO. 1

GENERAL VEHICLE TEST PARAMETER DATA

TEST VEHICLE INFORMATION:

Year/Make/Model/Body Style: 1997/Ford/Probe/3 Door Hatchback

Vehicle NHTSA No.: CV0208 VIN: 1ZVLT20A0V5134717

Vehicle Body Color: Gold Build Date: 9/3/96

Engine Data: 4 Cylinders; CID; 2.0 Liter; cc

Placement Longitudinal; X Lateral

Transmission: 5 speed; X Manual; Automatic; Overdrive

Final Drive: Rear Wheel Drive; X Frt. Wheel Drive; Four Wheel Drive

Odometer Reading 259 miles

Options: X A/C; X Pwr. Steering; X Pwr. Brakes; Pwr. Windows;

 Cruise Control; Tilt Wheel; Power Door Locks;

DATA FROM TIRE PLACARD:

Tire Pressure (at capacity): 32 Psi FRONT

 26 Psi REAR

Recommended Tire Size: 195/65R14

Tires on Test Vehicle: 195/65R14 Manufacturer: Bridgestone

Vehicle Capacity Data:

Number of Occupants: 2 Front; 2 Rear; 3rd Seat 4 Total

Type of Front Seats: X Bucket; Bench; Split Bench

Type of Front Seat Back: Fixed; X Adjustable with X Lever

Vehicle Maximum Capacity Loading = 308.4 kg (A)

No. of Occupants x 68.04 kg. = 272.2 kg (B)

Cargo Capacity (A-B) = 36.2 kg

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

WEIGHT OF TEST VEHICLE WITH MAXIMUM FLUIDS:

Right Front	=	<u>376.5</u>	kg	Right Rear	=	<u>223.2</u>	kg		
Left Front	=	<u>373.8</u>	kg	Left Rear	=	<u>219.1</u>	kg		
TOTAL FRONT	=	<u>750.3</u>	kg	TOTAL REAR	=	<u>442.3</u>	kg		
% of Total Vehicle Weight		=	<u>62.9</u>	%	% of Total Weight		=	<u>37.1</u>	%
TOTAL WEIGHT		=	<u>1192.6</u>	kg					

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

Year/Make/Model/Body Style: 1997/Ford/Probe/3 Door Hatchback

Vehicle NHTSA No.: CV0208 Test Date: November 14, 1996

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Test Vehicle Delivered Weight with Maximum Fluids	= <u>1192.6</u> kg
Cargo Carrying Capacity of Test Vehicle	= <u>36.2</u> kg
Weight of 2 Side Impact Dummies (2 x <u>80.7</u> kg.)	= <u>161.4</u> kg
TEST VEHICLE TARGET WEIGHT	= <u>1390.2</u> kg

FULLY LOADED WEIGHT OF TEST VEHICLE:

Right Front	= <u>423.2</u> kg	Right Rear	= <u>311.2</u> kg
Left Front	= <u>386.5</u> kg	Left Rear	= <u>267.6</u> kg
TOTAL FRONT	= <u>809.7</u> kg	TOTAL REAR	= <u>578.8</u> kg
% of Total Weight	= <u>58.3</u> %	% of Total Weight	= <u>41.7</u> %
TOTAL TEST WEIGHT	= <u>1388.5</u> kg		

TEST VEHICLE ATTITUDE:

CURB WEIGHT ATTITUDE:

Right Front 692 mm Left Front 695 mm Right Rear 689 mm Left Rear 696 mm

FULLY LOADED WEIGHT ATTITUDE:

Right Front 673 mm Left Front 695 mm Right Rear 650 mm Left Rear 675 mm

TEST ATTITUDE:

Right Front 675 mm Left Front 691 mm Right Rear 667 mm Left Rear 678 mm

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

Test Vehicle Wheelbase: 2611 mm

C.G. = 1012 mm rearward of front wheel centerline

TOTAL VEHICLE LENGTH:

Right Side = 4152 mm

Centerline = 4393 mm

Left Side = 4152 mm

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

Year/Make/Model/Body Style: 1997/Ford/Probe/3 Door Hatchback
Vehicle NHTSA No.: CV0208 Test Date: November 14, 1996

FRONT SEAT CUSHION PLACEMENT:

Total Length of Adjustment Travel: 200 mm

Test Position: 11th position rearward out of 21 total

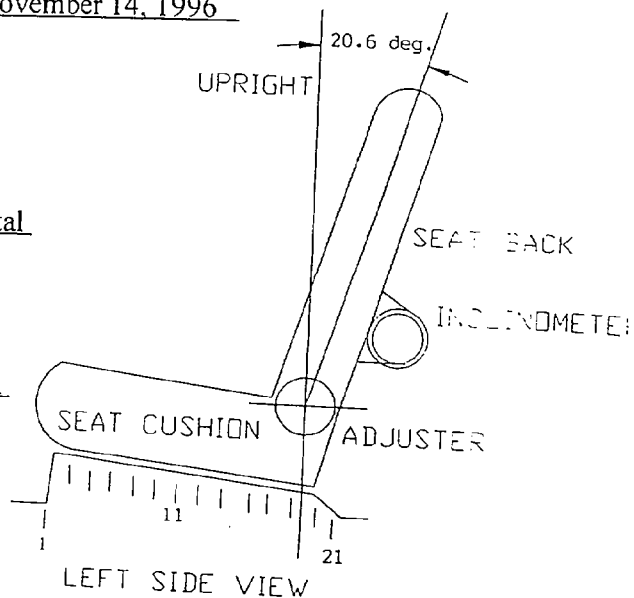
FRONT SEAT BACK ADJUSTMENT POSITION:

Seat Back Angle = 20.6° from the vertical position

REAR POSITION SEAT:

Total Length of Fore/Aft Adjustment Travel: 0

Seat Back Adjustment Position: Non-Adjustable



ADJUSTABLE STEERING COLUMN POSITION: NA

WINDOW POSITIONS: Left Front Down Left Rear Down
Right Front Up Right Rear Up

AMOUNT OF STODDARD SOLVENT IN FUEL TANK:

Fuel system usable capacity = 54.9 liters

Test Volume: 50.9 liters 92.7 % of capacity

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

Wheelbase: = 2611 mm

Impact Point is 366 mm rearward of front axle centerline

DATA SHEET NO. 2

TEST VEHICLE SUMMARY OF RESULTS

Year/Make/Model/Body Style: 1997/Ford/Probe/3 Door Hatchback

Vehicle NHTSA No.: CV0208 Test Date: November 14, 1996

Overall Length = 4393 mm; Overall Width = 1754 mm

TEST WEIGHT:

Right Front = 441.8 kg Right Rear = 275.8 kg
Left Front = 404.6 kg Left Rear = 259.9 kg
TOTAL FRONT = 846.4 kg TOTAL REAR = 535.7 kg
% of Total Weight = 61.2% % of Total Weight = 38.8%
TOTAL VEHICLE WEIGHT = 1382.1 kg
Wheelbase = 2611 mm
Longitudinal C.G. from Center of Front Axle = 1012 mm
Impact Angle with Respect to Impactor = 0° degrees

MAXIMUM EXTERIOR STATIC CRUSH:

1. LEVEL 1 (236 mm above ground) = 196 mm
2. LEVEL 2 (422 mm above ground) = 357 mm
3. LEVEL 3 (572 mm above ground) = 378 mm
4. LEVEL 4 (831 mm above ground) = 224 mm
5. LEVEL 5 (1202 mm above ground) = 66 mm
Maximum Post-Test Intrusion = 378 mm

OCCUPANTS:

	<u>Right Front Passenger</u>	<u>Right Rear Passenger</u>
Type of Dummy	<u>SID</u>	<u>SID</u>
Restraints Used	<u>type II belt</u> <u>with airbag</u>	<u>type II belt</u>

TEST VEHICLE SUMMARY OF RESULTS (Cont'd)

INSTRUMENTATION:

Number of Vehicle Data Channels:	=	<u>19</u>
Number of Cameras: Onboard Vehicle	=	<u>3</u>
Offboard Vehicle	=	<u>4</u>
Deformable Barrier	=	<u>2</u>
TOTAL	=	<u>9</u>

DATA SHEET NO. 3

MOVING DEFORMABLE BARRIER (MDB) SUMMARY OF RESULTS

Year/Make/Model/Body Style: 1997/Ford/Probe/3 Door Hatchback

Vehicle NHTSA No.: CV0208 Test Date: November 14, 1996

POSITION OF IMPACT (MDB) ON MONORAIL:

Crabbed 27° to right

MDB DETAILS:

Overall Width of Framework Carriage	= <u>1252 mm</u>
Overall Length of MDB (incl. honeycomb impact face)	= <u>4115 mm</u>
Wheelbase of Framework Carriage	= <u>2591 mm</u>
Tread of Framework Carriage (Front & Rear)	= <u>1880 mm</u>
C.G. Location Rearward of Front Axle	= <u>1106 mm</u>
C.G. Location From Center Line	= <u>14.7 mm</u>
C.G. Location Above Ground Level	= <u>488 mm</u>

MDB WEIGHT:

Left Front	= <u>434.5 kg</u>	Left Rear	= <u>233.2 kg</u>
Right Front	= <u>342.9 kg</u>	Right Rear	= <u>346.0 kg</u>
TOTAL FRONT	= <u>777.4 kg</u>	TOTAL REAR	= <u>579.2 kg</u>
TOTAL MDB WEIGHT = <u>1356.6 kg</u>			

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

Impact Speed = Primary: 33.3 mph (53.6 kph) Secondary: 33.2 mph (53.4 kph)

CRASH TEST SUMMARY FOR SIDE IMPACTOR (Cont'd)

MAXIMUM STATIC CRUSH OF HONEYCOMB IMPACT FACE:

1. Row A Top of Stack (813 mm) = 130 mm
2. Row B Mid Stack (686 mm) = 150 mm
3. Row C Top of Bumper (533 mm) = 110 mm
4. Row D Center of Bumper (432 mm) = 122 mm

INSTRUMENTATION:

Number of MDB Data Channels = 5

DATA SHEET NO. 4
POST-TEST OBSERVATIONS

Year/Make/Model/Body Style: 1997/Ford/Probe/3 Door Hatchback

Vehicle NHTSA No.: CV0208 Test Date: November 14, 1996

VISIBLE DUMMY CONTACT POINTS:

	<u>RIGHT FRONT SID</u>	<u>RIGHT REAR SID</u>
Head	<u>to door window sill</u>	<u>to C Post</u>
Arm	<u>to door</u>	<u>to interior panel</u>
Pelvis	<u>to armrest</u>	<u>to interior panel</u>
Left Knee	<u>to right knee</u>	<u>to right knee</u>
Right Knee	<u>to door</u>	<u>to interior panel</u>

DOOR OPENING:

	<u>LEFT SIDE</u>	<u>RIGHT SIDE</u>
Front	<u>No</u>	<u>No</u>
Rear	<u>No</u>	<u>No</u>

MDB DISTANCE FROM TARGET IMPACT POINT:

Horizontal: 8 mm forward Vertical: 7 mm high

ARM REST LOCATIONS:

Front: 275 mm from bottom of window

Rear: 286 mm from bottom of window

POST-TEST OBSERVATIONS (Cont'd)

SEAT CRUSH:

Front Seat Back: 94 mm Front Seat Cushion: 64 mm

Left Rear Seat Back: 48 mm Rear Seat Cushion: 199 mm

GLAZING DAMAGE:

Windshield and both right side windows broke

PILLAR PERFORMANCE:

No separation noted

SILL SEPARATION:

None noted

OTHER NOTABLE IMPACT EFFECTS:

None noted

SECTION 4
OCCUPANT AND VEHICLE INFORMATION

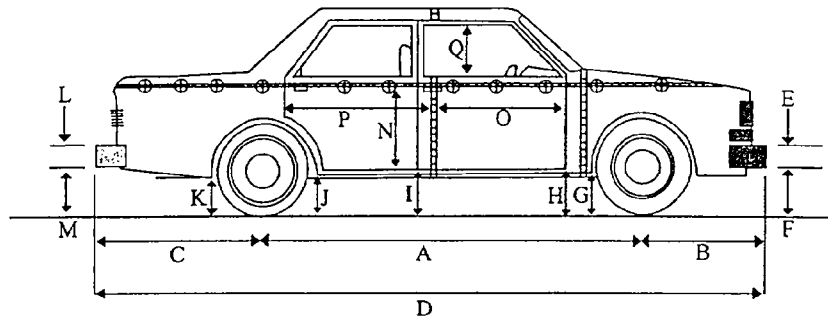
DATA SHEET NO. 5
SIDE IMPACT DUMMY (SID) INSTRUMENTATION DATA

Year/Make/Model/Body Style: 1997/Ford/Probe/3 Door Hatchback
 Vehicle NHTSA No.: CV0208 Test Date: November 14, 1996

	Front SID ID #270			Rear SID ID #269		
	Pos. Direct.		Neg. Direct	Pos. Direct.		Neg. Direct
	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)
RIB ACCELERATIONS						
Right Upper Rib (RUR) Y	17.0	77	-75.8	28	14.9	105
Right Lower Rib (RLR) Y	12.9	85	-66.3	29	24.2	71
SPINE ACCELERATIONS						
Lower Lateral Y	21.7	70	-84.8	33	12.5	76
PELVIS ACCELERATIONS						
Lateral Y	12.7	51	-89.5	32	8.5	74
						34

REFERENCE: Positive Direction- Longitudinal (X) = forward
 Lateral (Y) = to right
 Vertical (Z) = down

DATA SHEET NO. 6
VEHICLE PRE AND POST-TEST MEASUREMENTS



D = Length at Centerline
 R = Right Side Length
 S = Left Side Length
 T = Width at B Post
 E & L = Bumper Thickness

J1 = To Pinch Weld
 J2 = To Sill

ALL MEASUREMENTS IN (mm)

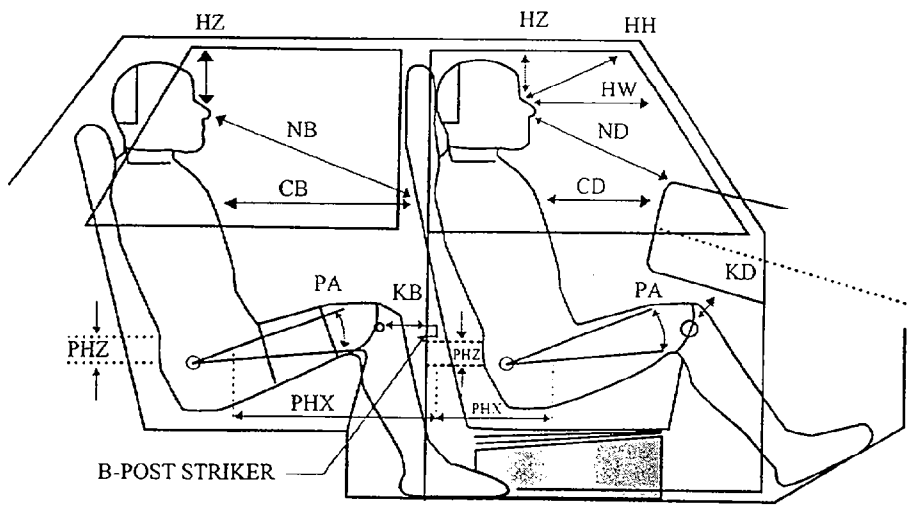
	PRE-TEST	POST-TEST	Δ CHANGE
A	2611	2604	7
B	964	968	-4
C	818	808	10
D	4393	4380	13
E	248	248	0
F	400	425	-25
G	146	164	-18
H	167	194	-27
I	163	185	-22
J1/J2	165/166	170/173	-5/-7
K	291	287	4
L	N/A	N/A	N/A
M	329	331	-2
N	686	610	76
O	708	690	18
P	622	618	4
Q	410	395	15
R	4152	4098	54
S	4152	4152	0
T	1754	1391	363

DATA SHEET NO. 7

SIDE IMPACT DUMMY (SID) LONGITUDINAL CLEARANCE DIMENSIONS

Year/Make/Model/Body Style: 1997/Ford/Probe/3 Door Hatchback

NIHTSA NO.: CV0208 Test Date: November 14, 1996



NOTE: All dimensions are in mm with tolerance of ± 3 mm

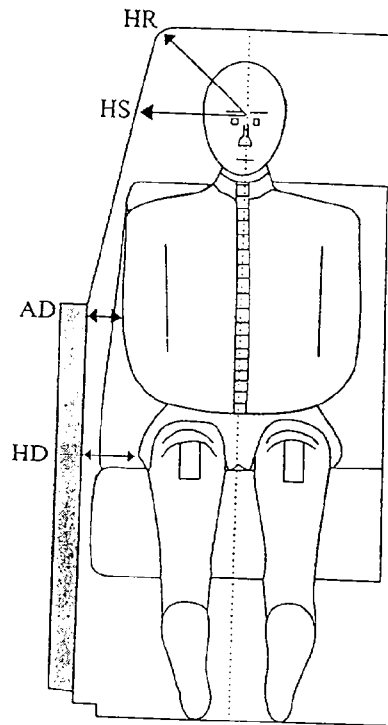
	FRONT PASSENGER ID #270	REAR PASSENGER SID ID #269
HH	287	
HW	528	
HZ	126	93
ND	632	
CD	517	
CS	N/A	
KDL(KDA°)	157 (32.3°)	
KDR(KDA°)	161 (27.3°)	
PA°	24.4°	24.8°
PHX	517	
PHZ	196	174

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

DATA SHEET NO. 8
SIDE IMPACT DUMMY (SID) LATERAL CLEARANCE DIMENSIONS

Year/Make/Model/Body Style: 1997/Ford/Probe/3 Door Hatchback

NHTSA NO.: CV0208 Test Date: November 14, 1996



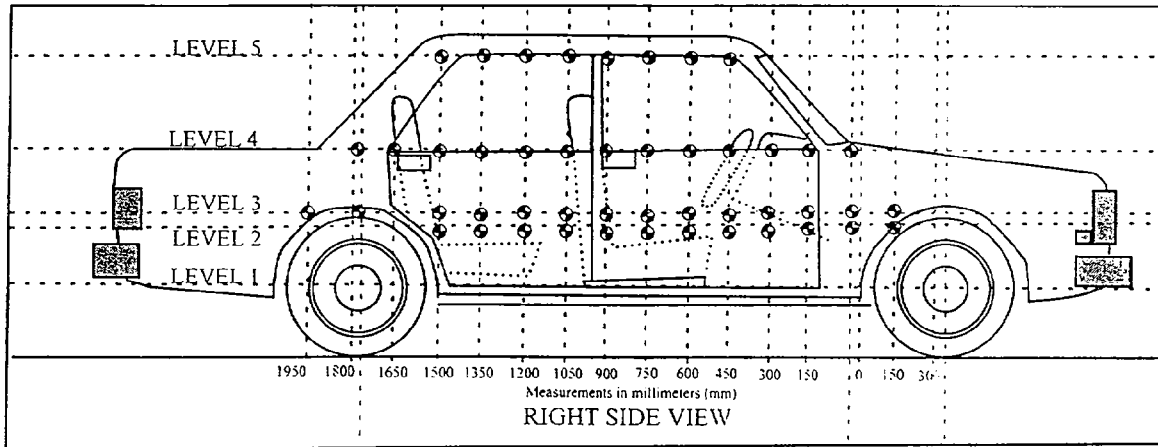
NOTE: All dimensions are in mm

	FRONT PASSENGER ID #270	REAR PASSENGER ID #269
HR	147	120
HS	228	289
AD	58	136
HD	163	141

DATA SHEET NO. 9
VEHICLE SIDE MEASUREMENTS

Year/Make/Model/Body Style: 1997/Ford/Probe/3 Door Hatchback

NHTSA NO.: CV0208 Test Date: November 14, 1996



LEVEL 5 - WINDOW TOP

LEVEL 4 - WINDOW SILL

LEVEL 3 - MID DOOR

LEVEL 2 - OCCUPANT H-POINT

LEVEL 1 - AXLE CENTERLINE HEIGHT OR SILL HEIGHT

MEASUREMENTS ARE TAKEN WHEN THE VEHICLE IS IN THE "AS TESTED"
CONFIGURATION

MEASUREMENTS ALONG THE VERTICAL 750 mm. LINE SHOWN ABOVE

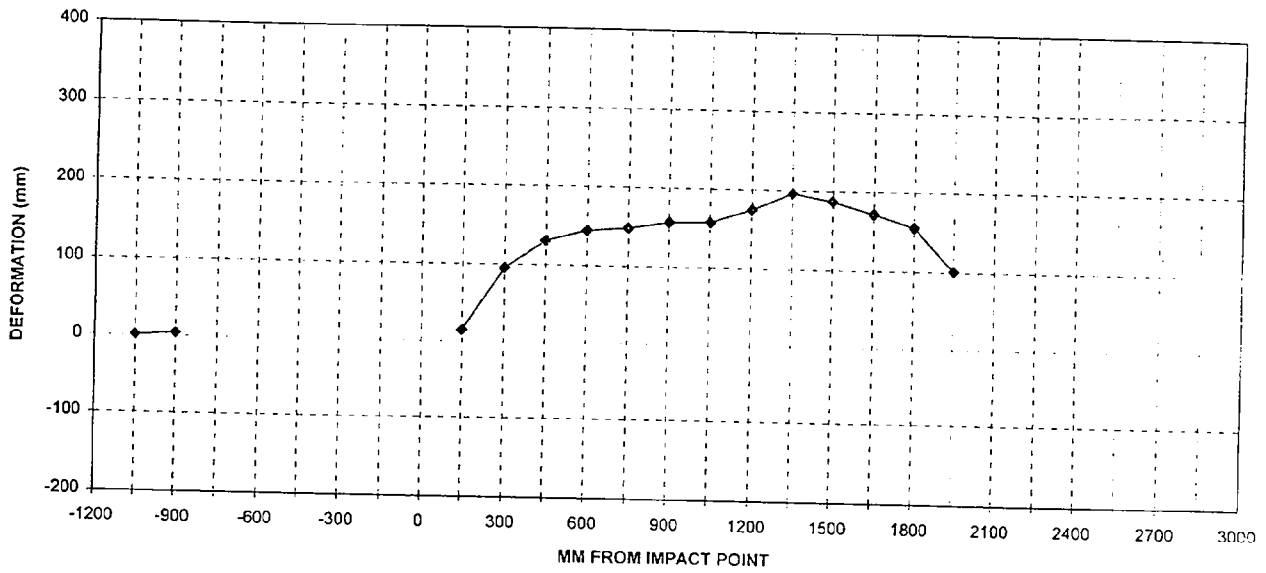
Level 1 @ Axle Centerline Height (or Sill Top Height)	=	<u>236</u> mm
Level 2 @ Occupant H-Point	=	<u>422</u> mm
Level 3 @ Mid Door	=	<u>572</u> mm
Level 4 @ Window Sill	=	<u>831</u> mm
Level 5 @ Window Top	=	<u>1202</u> mm

DATA SHEET NO. 10
VEHICLE EXTERIOR CRUSH PROFILES

Longitudinal Distance (mm)	Level 1 - Axle Centerline		
	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1200			
-1050	716	717	1
-900	658	662	4
-750			
-600			
-450			
-300			
-150			
0 (impact point)	616	630	14
150	618	713	95
300	627	758	131
450	627	772	145
600	633	782	149
750	636	793	157
900	644	802	158
1050	641	816	175
1200	638	834	196
1350	634	821	187
1500	630	802	172
1650	624	780	156
1800	622	723	101
1950			
2100			
2250			
2400			
2550			
2700			
2850			
3000			

Reference plane is parallel to test vehicle longitudinal centerline.
Given dimensions = Reference plane to car body

VEHICLE EXTERIOR STATIC CRUSH (Cont'd)



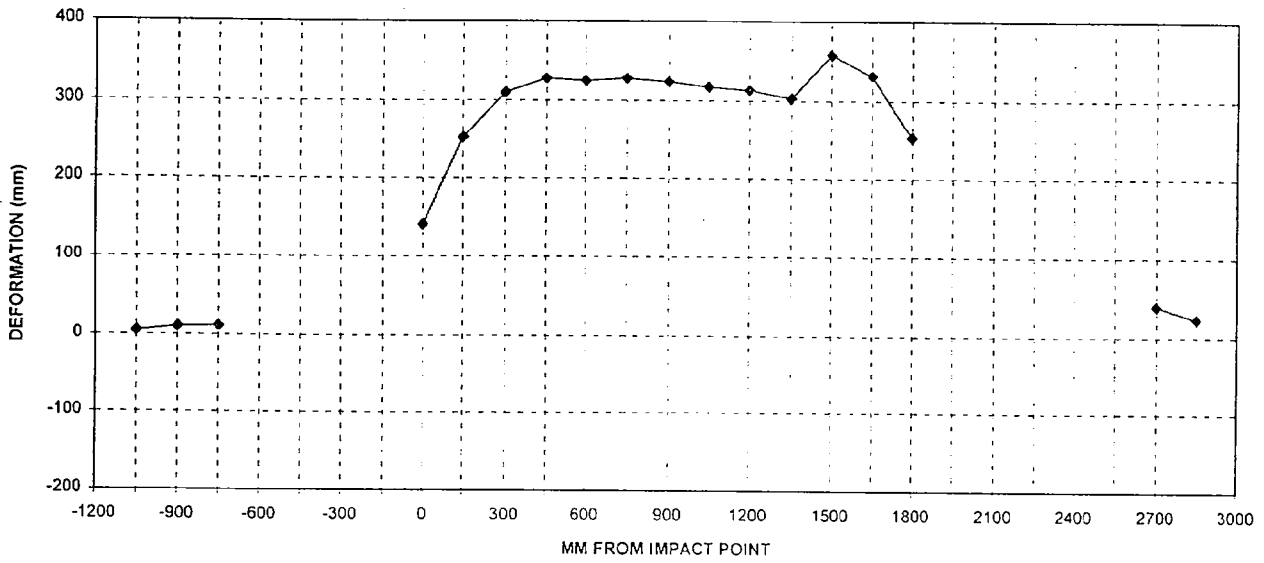
LEVEL 1 - AXLE CENTERLINE

DATA SHEET NO. 10 (Cont'd)
VEHICLE EXTERIOR CRUSH PROFILES

Longitudinal Distance (mm)	Level 2 - Occupant H Point		
	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1200			
-1050	679	684	5
-900	627	637	10
-750	585	596	11
-600			
-450			
-300			
-150			
0 (impact point)	560	701	141
150	559	811	252
300	564	874	310
450	565	892	327
600	566	890	324
750	567	894	327
900	568	891	323
1050	569	886	317
1200	570	883	313
1350	569	872	303
1500	569	926	357
1650	574	905	331
1800	572	825	253
1950			
2100			
2250			
2400			
2550			
2700	653	692	39
2850	682	705	23
3000			

Reference plane is parallel to test vehicle longitudinal centerline.
Given dimensions = Reference plane to car body

VEHICLE EXTERIOR STATIC CRUSH (Cont'd)



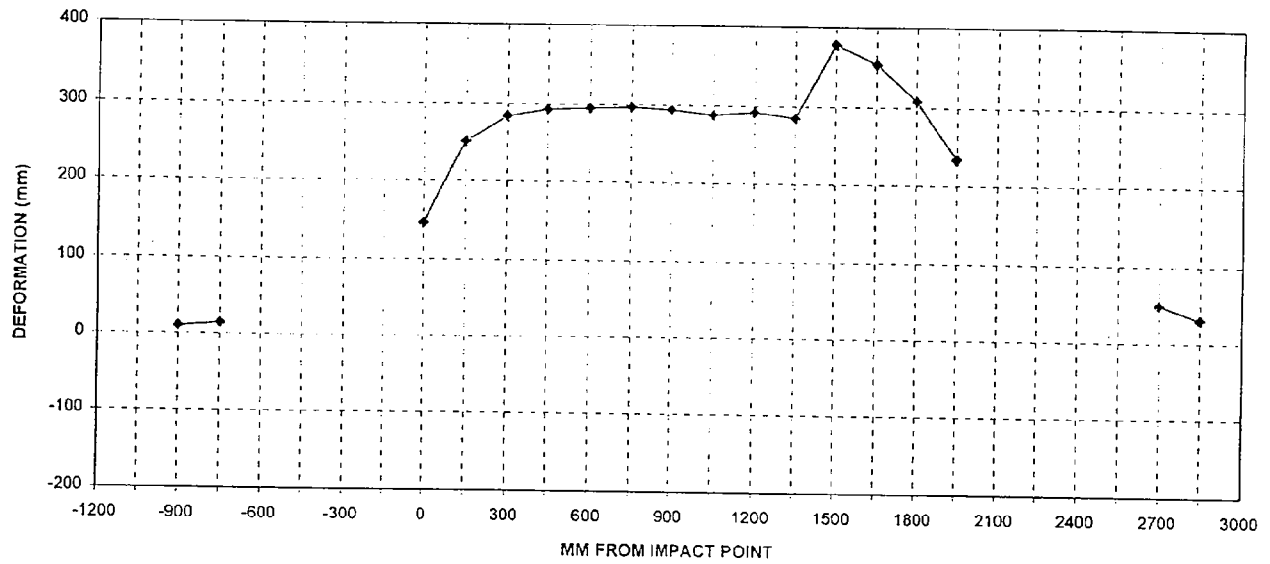
LEVEL 2 - OCCUPANT H-POINT

DATA SHEET NO. 10 (Cont'd)
VEHICLE EXTERIOR CRUSH PROFILES

Longitudinal Distance (mm)	Level 3 - Mid Door		
	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1200			
-1050			
-900	628	638	10
-750	588	602	14
-600			
-450			
-300			
-150			
0 (impact point)	560	707	147
150	556	807	251
300	560	844	284
450	564	857	293
600	564	859	295
750	564	861	297
900	563	857	294
1050	562	850	288
1200	560	852	292
1350	559	844	285
1500	537	915	378
1650	555	909	354
1800	554	862	308
1950	554	787	233
2100			
2250			
2400			
2550			
2700	581	629	48
2850	604	634	30
3000			

Reference plane is parallel to test vehicle longitudinal centerline.
Given dimensions = Reference plane to car body

VEHICLE EXTERIOR STATIC CRUSH (Cont'd)



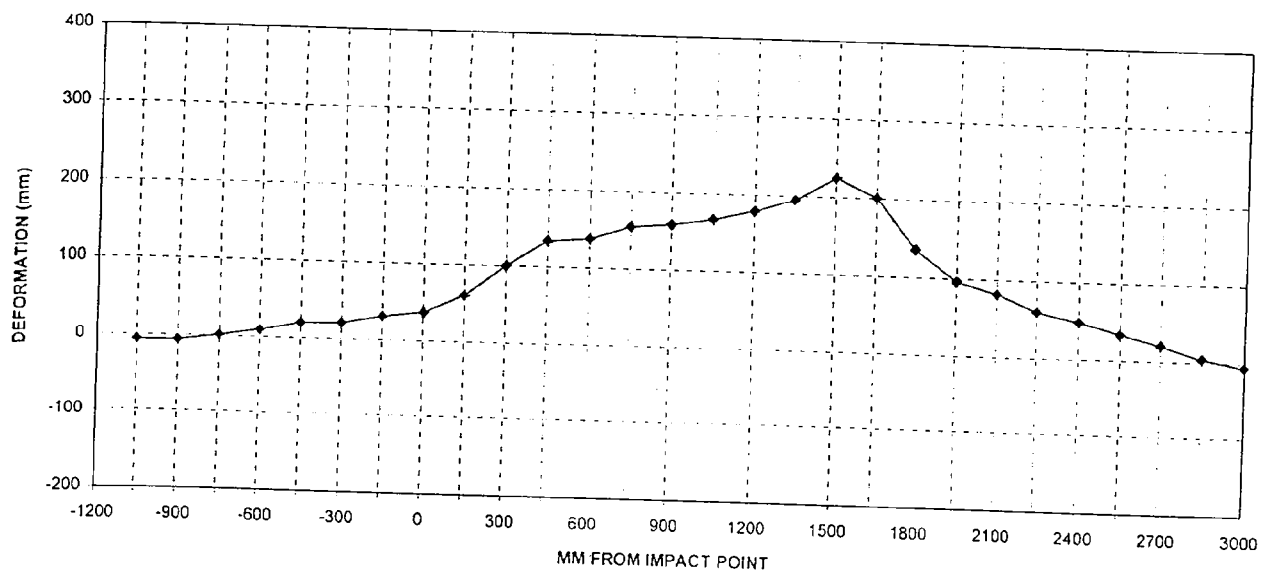
LEVEL 3 - MID DOOR

DATA SHEET NO. 10 (Cont'd)
VEHICLE EXTERIOR CRUSH PROFILES

Longitudinal Distance (mm)	Level 4 - Window Sill		
	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1200			
-1050	712	706	-6
-900	702	696	-6
-750	689	690	1
-600	680	689	9
-450	672	692	20
-300	673	694	21
-150	669	700	31
0 (impact point)	667	704	37
150	660	720	60
300	662	762	100
450	660	794	134
600	658	796	138
750	653	808	155
900	653	812	159
1050	650	817	167
1200	649	828	179
1350	648	843	195
1500	648	872	224
1650	652	853	201
1800	658	794	136
1950	658	754	96
2100	662	743	81
2250	666	726	60
2400	672	720	48
2550	677	710	33
2700	687	707	20
2850	704	708	4
3000	726	720	-6

Reference plane is parallel to test vehicle longitudinal centerline.
Given dimensions = Reference plane to car body

VEHICLE EXTERIOR STATIC CRUSH (Cont'd)



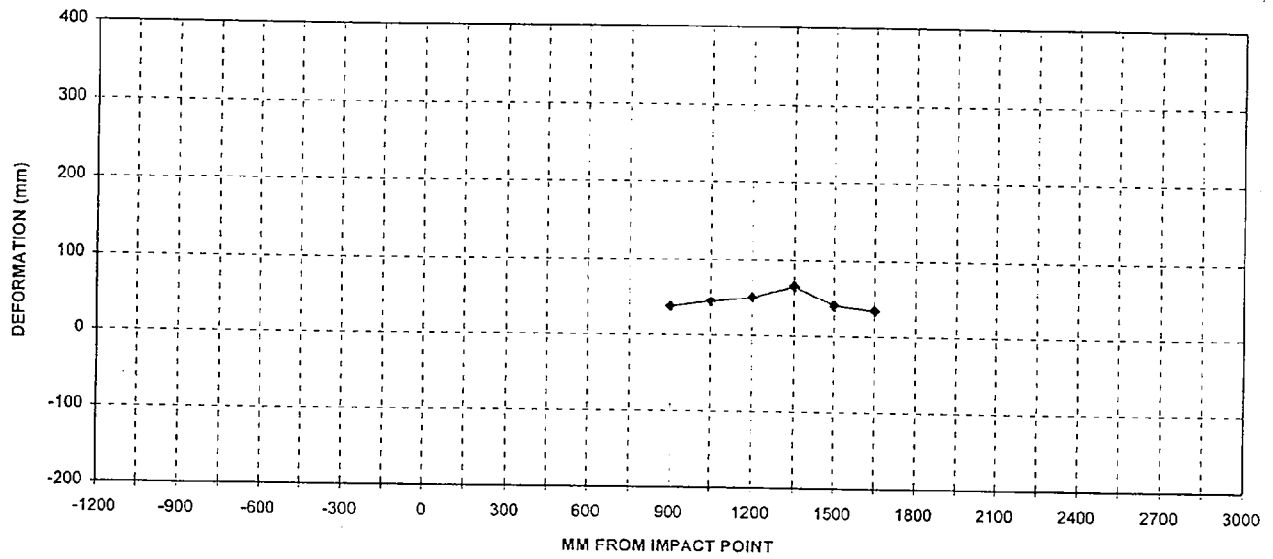
LEVEL 4 - WINDOW SILL

DATA SHEET NO. 10 (Cont'd)
VEHICLE EXTERIOR CRUSH PROFILES

Longitudinal Distance (mm)	Level 5 - Window Top		
	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1200			
-1050			
-900			
-750			
-600			
-450			
-300			
-150			
0 (impact point)			
150			
300			
450			
600			
750			
900	899	936	37
1050	901	945	44
1200	902	952	50
1350	906	972	66
1500	916	956	40
1650	930	964	34
1800			
1950			
2100			
2250			
2400			
2550			
2700			
2850			
3000			

Reference plane is parallel to test vehicle longitudinal centerline.
Given dimensions = Reference plane to car body

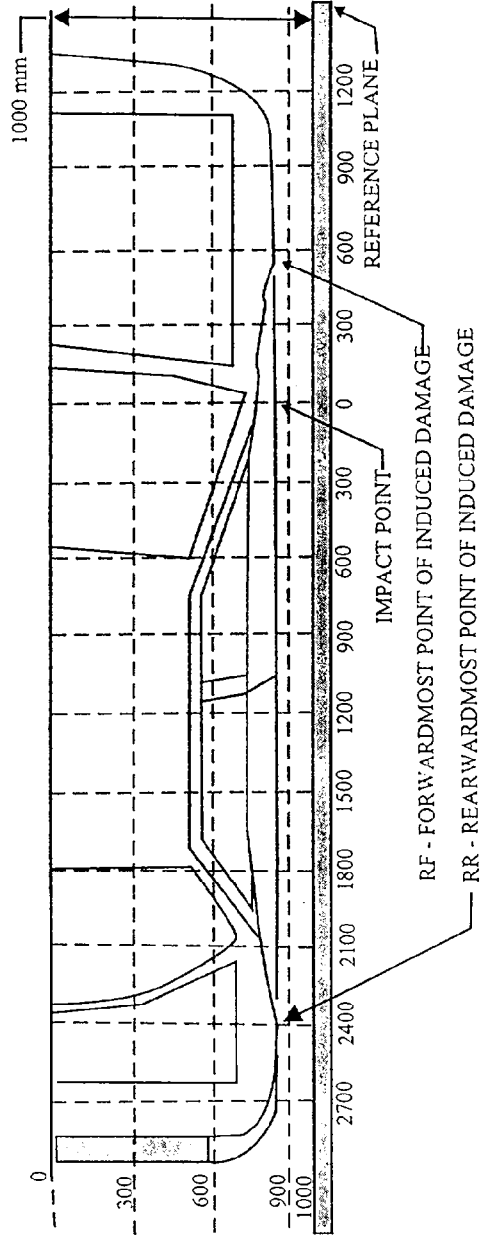
VEHICLE EXTERIOR STATIC CRUSH (Cont'd)



LEVEL 5 - WINDOW TOP

DATA SHEET NO. 11
 VEHICLE DAMAGE PROFILE DISTANCES
 Year/Make/Model/Body Style: 1997/Ford/Probe/3 Door Hatchback

NHTSA NO.: CV0208 Test Date: November 14, 1996



DPD MEASUREMENTS	POST-TEST (mm)	PRE-TEST (mm)	STATIC CRUSH (mm)
1. (RF = <u>-750</u> mm)	690	689	1
2. <u>-15</u> mm	707	560	147
3. 643 mm	892	566	326
4. 1350 mm	872	568	304
5. 2140 mm	736	663	73
6. (RR = <u>2850</u> mm)	708	704	4

DATA SHEET NO. 12

EXTERIOR STATIC CRUSH FOR SIDE IMPACTOR

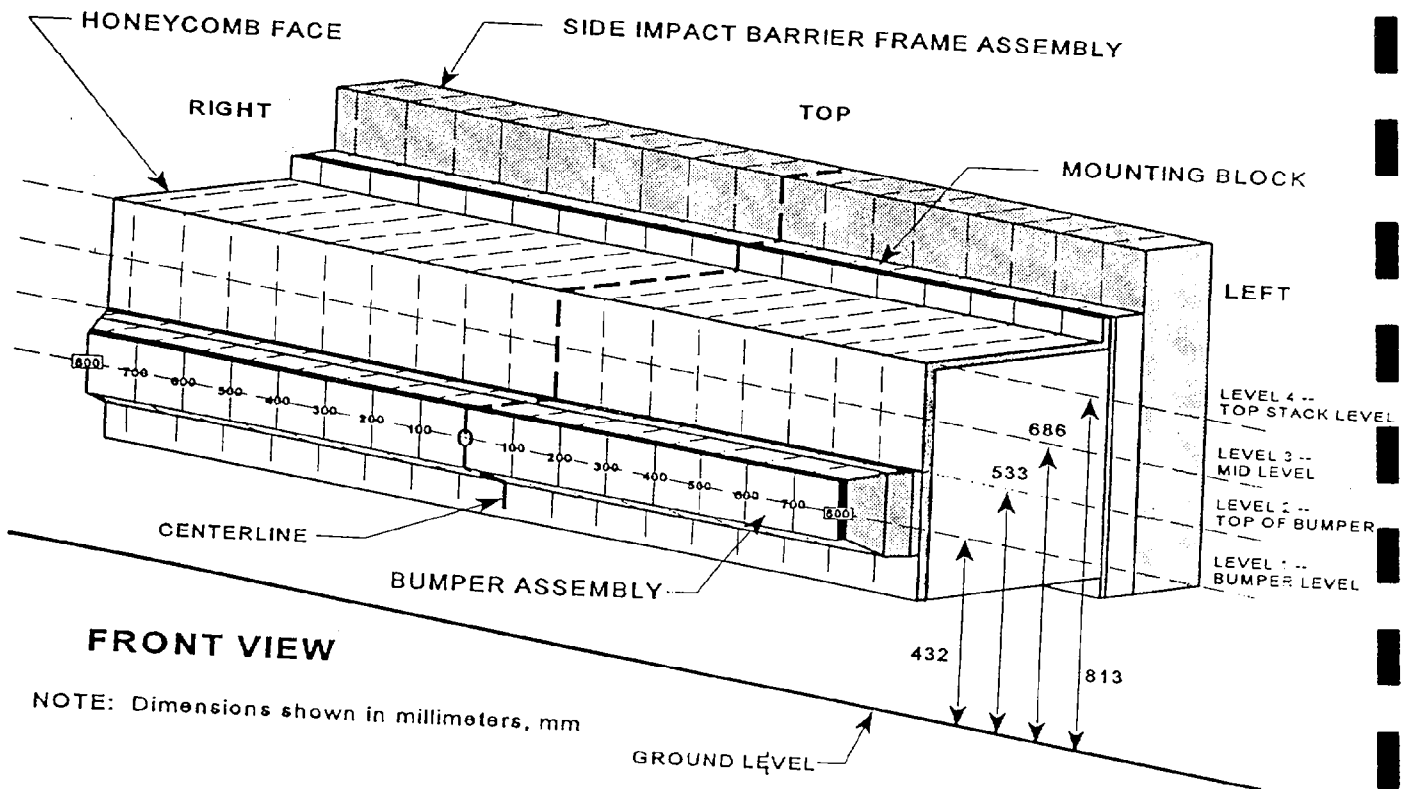
Year/Make/Model/Body Style: 1997/Ford/Probe/3 Door Hatchback

Vehicle NHTSA No.: CV0208 Test Date: November 14, 1996

Location	Height at CL	Distance Right of Center (mm)								Distance Left of Center (mm)								
		800	700	600	500	400	300	200	100	0	100	200	300	400	500	600	700	800
Top Stack Level 4	813 mm	130	96	73	46	17	9	5	5	4	1	1	1	1	-3	-4	1	51
Mid Level Level 3	686 mm	150	100	44	10	7	7	5	5	3	3	1	-1	-3	-4	-4	-2	15
Top Bumper Level 2	533 mm	110	60	28	20	18	15	13	8	6	5	2	0	-1	-2	-3	8	19
Mid Bumper Level 1	432 mm	122	95	59	37	36	28	22	16	16	14	11	10	8	9	20	31	36

See next page for Barrier Face Graphic

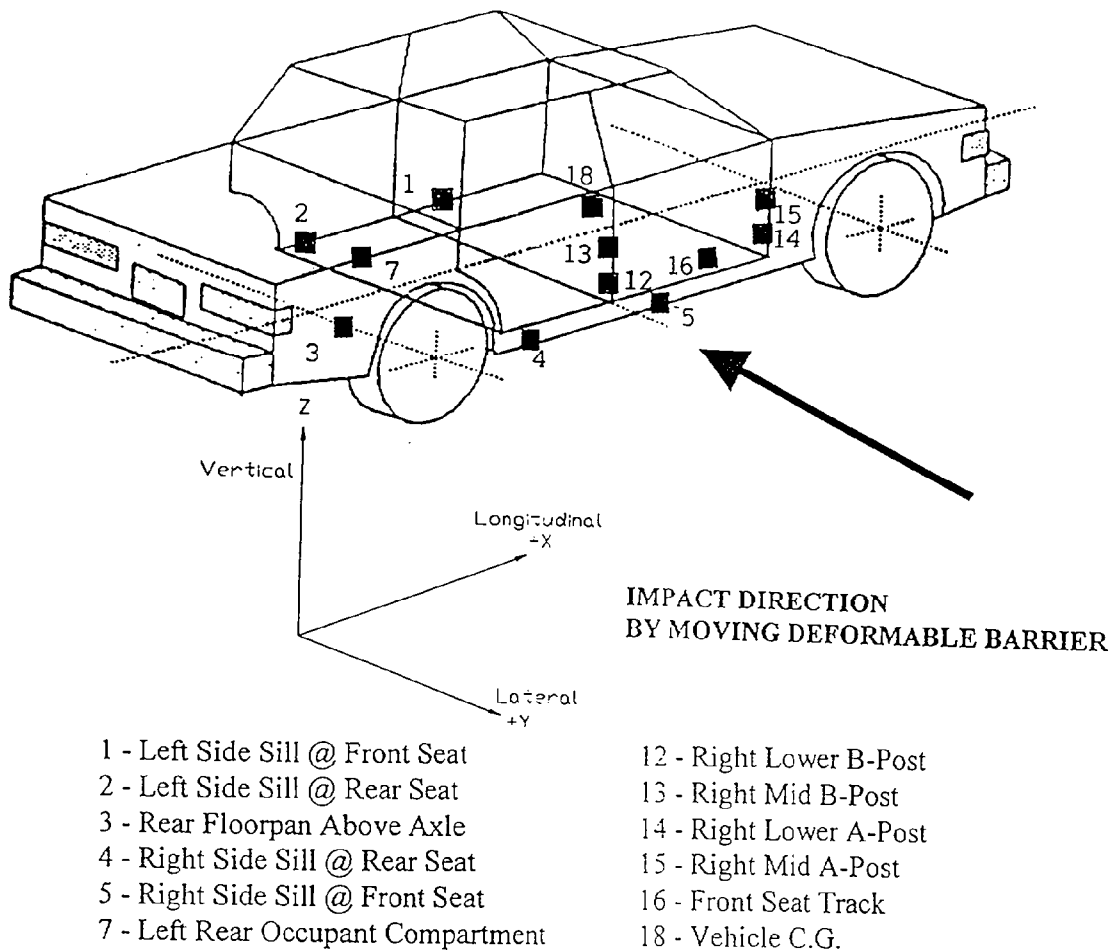
DATA SHEET NO. 12 (Cont'd)



DATA SHEET 13
TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Year/Make/Model/Body Style: 1997/Ford/Probe/3 Door Hatchback

Vehicle NHTSA No.: CV0208 Test Date: November 14, 1996



DATA SHEET NO. 13

TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Year/Make/Model/Body Style: 1997/Ford/Probe/3 Door Hatchback

Vehicle NHTSA No.: CY0208 Test Date: November 14, 1996

Accel. No.	Description	Coordinates (mm)*			Long. (X) Maximums (g's)		Lat. (Y) Maximums (g's)		Vert. (Z) Maximums (g's)		Resultant (g's)
		X	Y	Z	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	
1	Left Side Sill @ Front Seat	2104	-658	191	5.3	-4.6	3.7	-19.8	3.6	-6.8	20.0
2	Left Side Sill @ Rear Seat	1299	-664	202	5.6	-5.7	3.9	-26.4	5.1	-4.5	26.5
3	Rr. Floorpan Above Axle	838	0	504	3.7	-14.5	5.7	-26.4	19.5	-6.0	27.2
4	Right Side Sill @ Rr. Seat	1303	664	196	---	---	25.6	-50.5	---	---	---
5	Right Side Sill @ Frt. Seat	2093	658	188	---	---	6.9	-34.5	---	---	---
7	Left Rear Occupant Compartment	1583	-338	268	---	---	3.3	-21.9	---	---	---
12	Right Lower B-Post	1579	662	278	---	---	41.4	-89.7	---	---	---
14	Right Lower A-Post	2821	672	308	---	---	14.2	-29.0	---	---	---
15	Right Mid A-Post	2827	754	788	---	---	**	**	---	---	---
16	Right Front Passenger Seat Track	1927	572	222	---	---	88.5	-66.7	---	---	---
18	Vehicle CG	2431	0	176	3.0	-8.3	2.3	-22.5	10.5	-6.8	22.7

** No valid data collected

*Reference: X - Rear Bumper (+ Forward)

Y - Vehicle Centerline (+ To right)

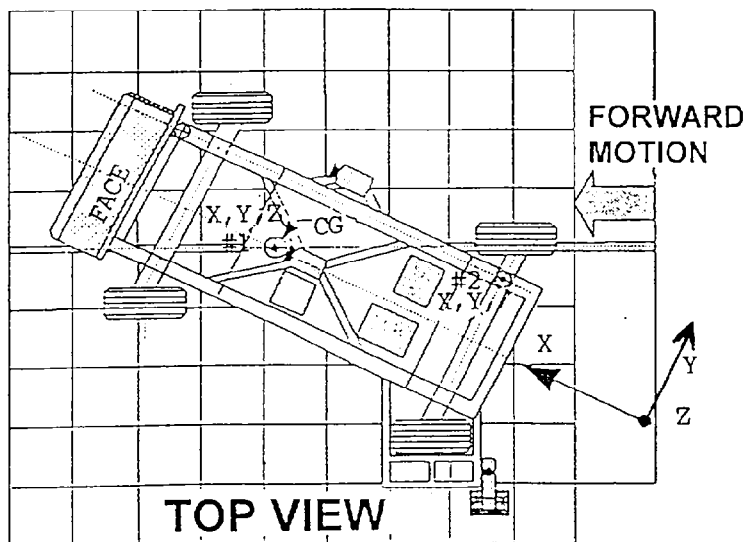
Z - Ground Level (+ Up)

DATA SHEET NO. 14

MOVING DEFORMABLE BARRIER (MDB) ACCELEROMETER LOCATIONS AND DATA SUMMARY

Year/Make/Model/Body Style: 1997/Ford/Probe/3 Door Hatchback

Vehicle NHTSA No.: CV0208 Test Date: November 14, 1996



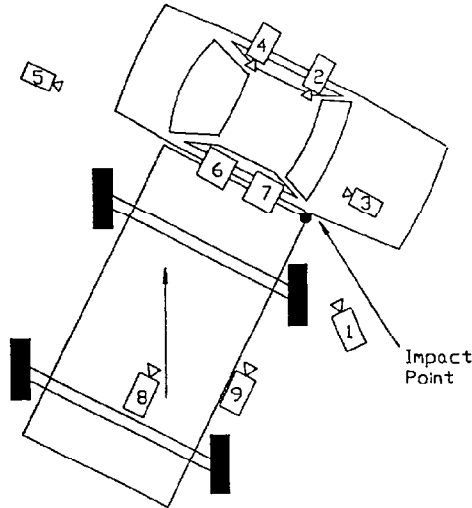
Accel. No.	Description	Coordinates (mm)*			(+) Positive		(-) Negative	
		X	Y	Z	Max. (g)	Time (msec)	Max. (g)	Time (msec)
1	MDB Center of Gravity	-1092	0	483				
	Longitudinal (X)	---	---	---	1.0	112	-16.9	33
	Lateral (Y)	---	---	---	6.3	33	-2.1	55
	Vertical (Z)	---	---	---	8.7	75	-12.9	61
	Resultant (R)	---	---	---	19.2	32	---	---
2	Rear Frame Member	-2591	625	622				
	Longitudinal (X)	---	---	---	1.6	138	-21.6	33
	Lateral (Y)	---	---	---	.7	64	-6.4	33

*Reference: X - Front Axle (+ Forward)
 Y - Vehicle Centerline (+ To right)
 Z - Ground Level (+ Up)

DATA SHEET NO. 15
HIGH SPEED CAMERA LOCATIONS AND DATA

Year/Make/Model/Body Style: 1997/Ford/Probe/3 Door Hatchback

Vehicle NHTSA No.: CV0208 Test Date: November 14, 1996



Camera No.	View	Coordinates (mm)*			Angle	Lens (mm)	Film Speed (fps)
		X	Y	Z			
	Real Time					13	24
1	Right Impact	-1200	-2150	1685	90°	13	952
2	Onboard Front Passenger					8	909
3	Onboard Hood					13	980
4	Onboard Rear Passenger					8	1000
5	Left Impact	50	9230	1940		13	1020
6	Top Wide	-130	1200	5200		8	1020
7	Top Impact	-80	-10	5200		13	901
8	Cart Wide					13	1020
9	Cart Impact					35	952

* Reference: (from impact point)
 +X = Forward
 +Y = To Right
 +Z = Upward from floor level

DATA SHEET 16
FUEL SYSTEM INTEGRITY POST IMPACT TEST DATA

Vehicle Year/Make/Model/Body Style: 1997/Ford/Probe/3 Door Hatchback

Vehicle NHTSA No.: CV0208 Test Date: November 14, 1996

TEST REQUIREMENTS:

Drain the test vehicle's fuel system and operate the engine until the fuel system is dry. Add Stoddard solvent, which has been dyed purple, until 92-94% of the stated usable capacity is reached. Operate the engine to assure the Stoddard solvent is present throughout the entire fuel system.

TEST VEHICLE IMPACT TYPE: X Side Impact MDB 33.3 mph (53.6 kph)

FUEL SPILLAGE MEASUREMENT:

POST IMPACT TEST	TEST RESULTS	MAXIMUM ALLOWABLE
1. From impact until vehicle motion ceases	0	1 oz
2. For 5 minute period after vehicle motion ceases	0	5 oz
3. For next 25 minutes	0	1 oz./1 min

FUEL SPILLAGE LOCATION(S): None

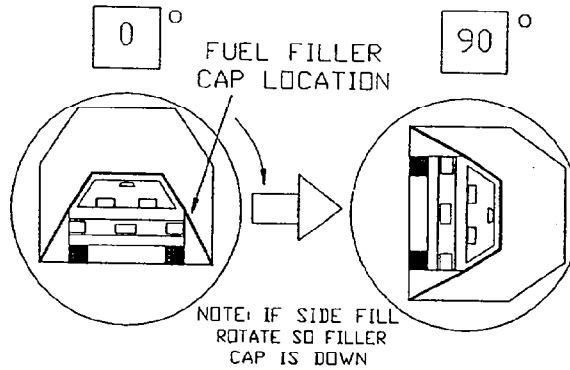
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA

Vehicle Year/Make/Model/Body Style: 1997/Ford/Probe/3 Door Hatchback

Vehicle NHTSA No.: CV0208 Test Date: November 14, 1996

TEST PHASE: 0° - 90°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 45 seconds
(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 45 seconds

Next Whole Minute Interval = 8 minutes

FUEL SPILLAGE MEASUREMENT:

0° TO 90° ROTATION (FILLER CAP DOWN)	TEST RESULTS	MAXIMUM ALLOWABLE
1. First 5 Minutes From Onset of Rotation	0 oz	5 oz
2. Sixth Minute From Onset of Rotation	0 oz	1 oz
3. Seventh Minute From Onset of Rotation	0 oz	1 oz
4. Eighth Minute if Required	0 oz	1 oz

FUEL SPILLAGE LOCATIONS(S): None

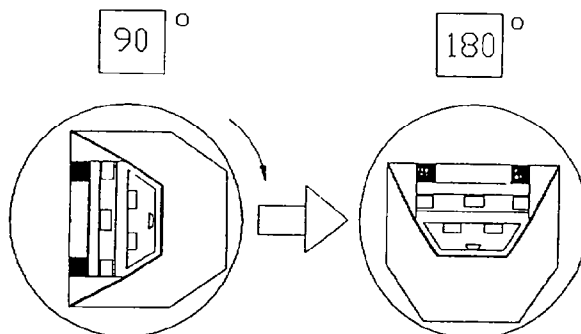
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA (Cont'd)

Vehicle Year/Make/Model/Body Style: 1997/Ford/Probe/3 Door Hatchback

Vehicle NHTSA No.: CV0208 Test Date: November 14, 1996

TEST PHASE: 90° - 180°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 30 seconds
 (Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 30 seconds

Next Whole Minute Interval = 8 minutes

FUEL SPILLAGE MEASUREMENT:

90° TO 180° ROTATION	TEST RESULTS	MAXIMUM ALLOWABLE
1. First 5 Minutes From Onset of Rotation	0 oz	5 oz
2. Sixth Minute From Onset of Rotation	0 oz	1 oz
3. Seventh Minute From Onset of Rotation	0 oz	1 oz
4. Eighth Minute if Required	0 oz	1 oz

FUEL SPILLAGE LOCATIONS(S): None

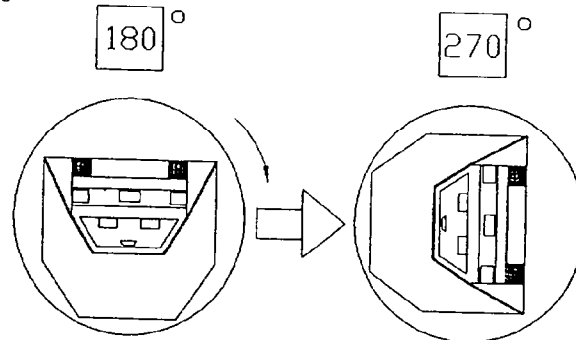
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA (Cont'd)

Vehicle Year/Make/Model/Body Style: 1997/Ford/Probe/3 Door Hatchback

Vehicle NHTSA No.: CV0208 Test Date: November 14, 1996

TEST PHASE: 180° - 270°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 30 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 30 seconds

Next Whole Minute Interval = 8 minutes

FUEL SPILLAGE MEASUREMENT:

180° TO 270° ROTATION	TEST RESULTS	MAXIMUM ALLOWABLE
1. First 5 Minutes From Onset of Rotation	0 oz	5 oz
2. Sixth Minute From Onset of Rotation	0 oz	1 oz
3. Seventh Minute From Onset of Rotation	0 oz	1 oz
4. Eighth Minute if Required	0 oz	1 oz

FUEL SPILLAGE LOCATIONS(S): None

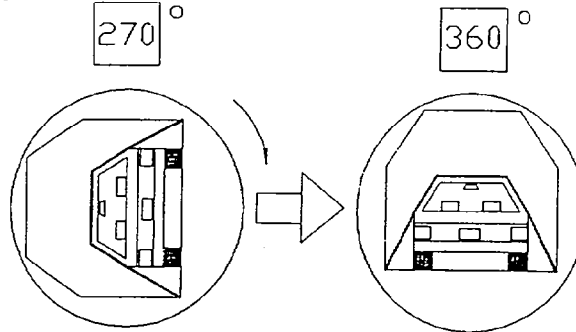
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA

Vehicle Year/Make/Model/Body Style: 1997/Ford/Probe/3 Door Hatchback

Vehicle NHTSA No.: CV0208 Test Date: November 14, 1996

TEST PHASE: 270° - 360°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 40 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 40 seconds

Next Whole Minute Interval = 8 minutes

FUEL SPILLAGE MEASUREMENT:

270° TO 360° ROTATION	TEST RESULTS	MAXIMUM ALLOWABLE
1. First 5 Minutes From Onset of Rotation	0 oz	5 oz
2. Sixth Minute From Onset of Rotation	0 oz	1 oz
3. Seventh Minute From Onset of Rotation	0 oz	1 oz
4. Eighth Minute if Required	0 oz	1 oz

FUEL SPILLAGE LOCATIONS(S): None

APPENDIX A - PHOTOGRAPHS

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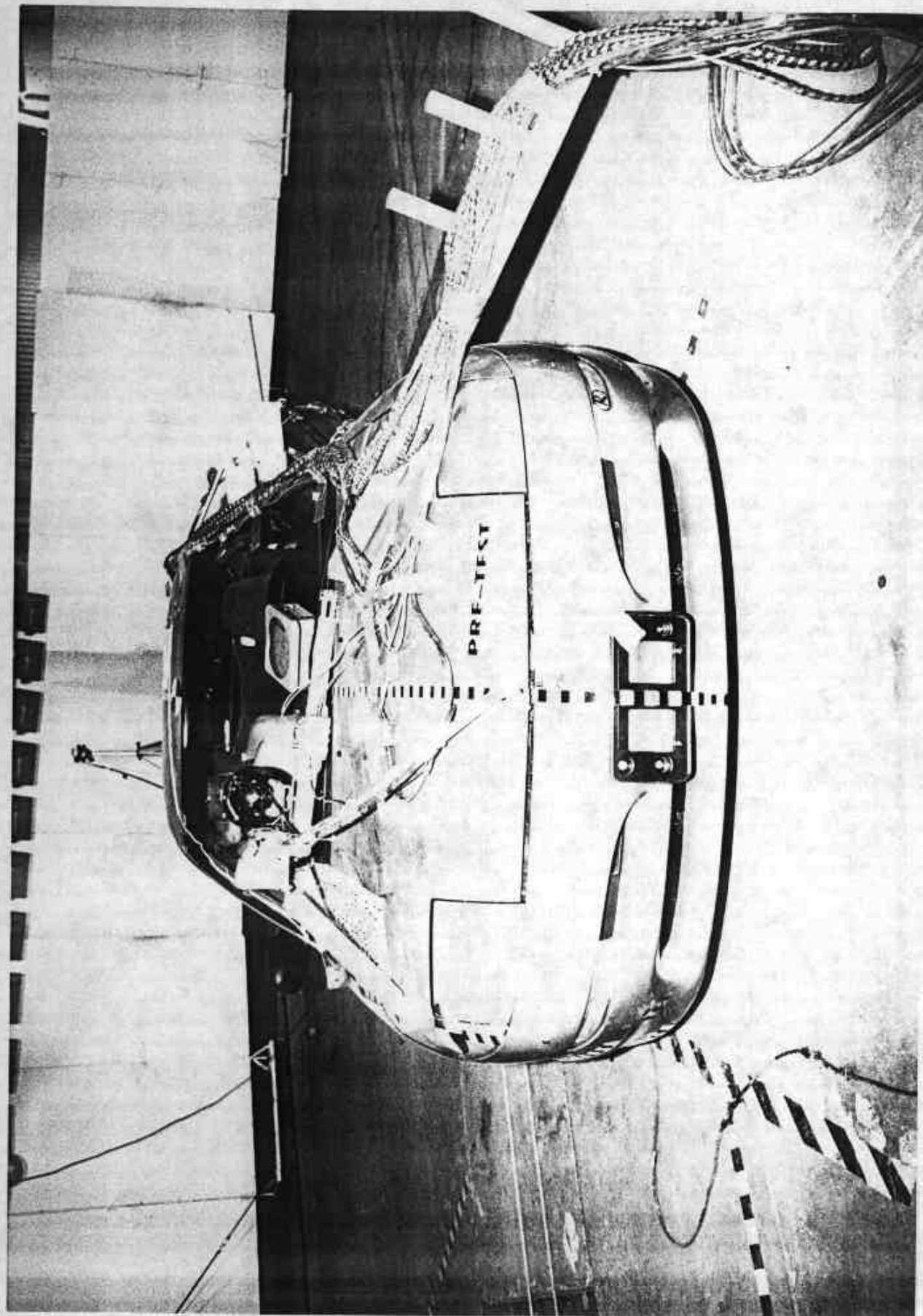


Photo No. A-1 - Pre-Test Front View of Test Vehicle

A-1

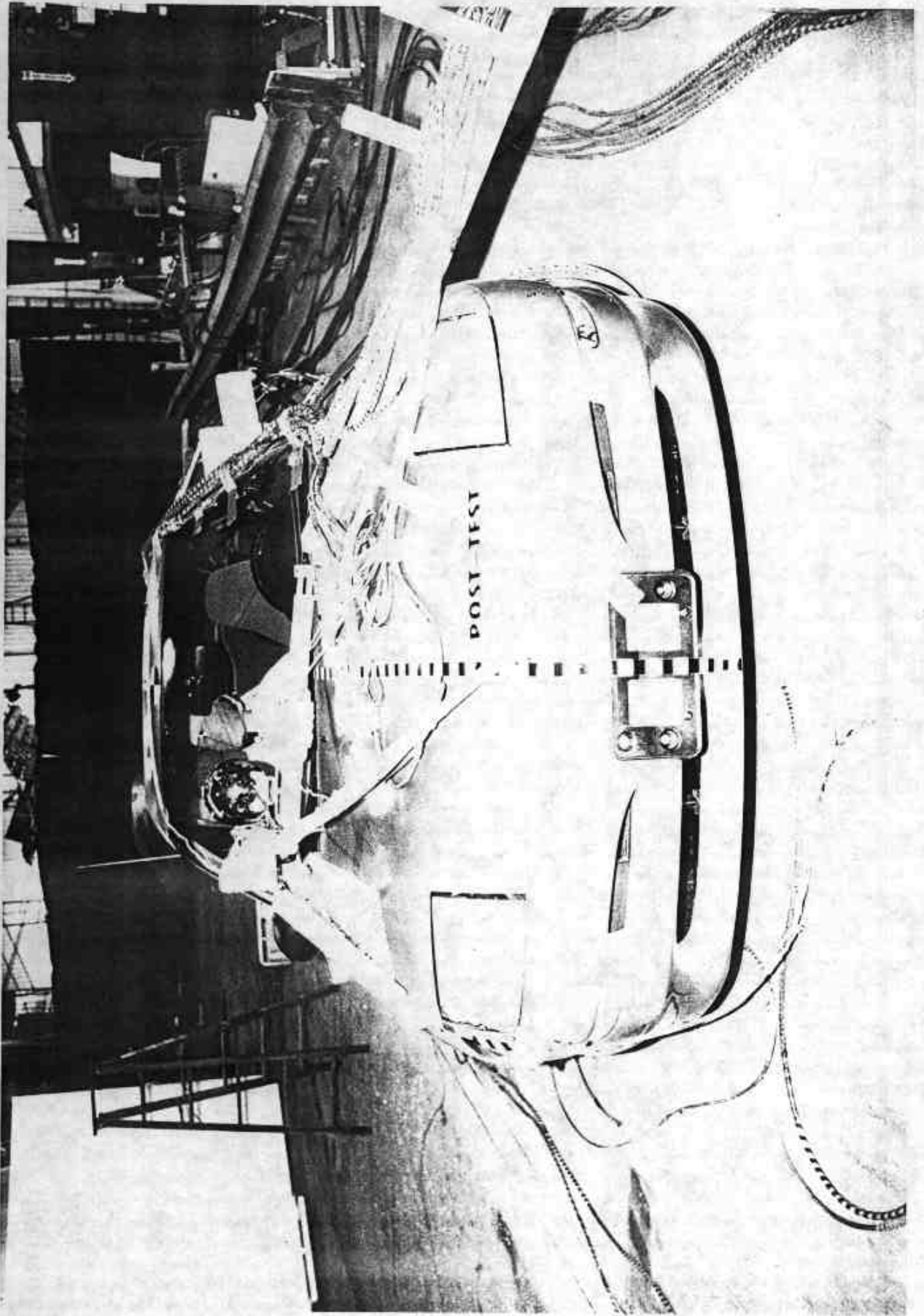


Photo No. A-2 - Post-Test Front View of Test Vehicle

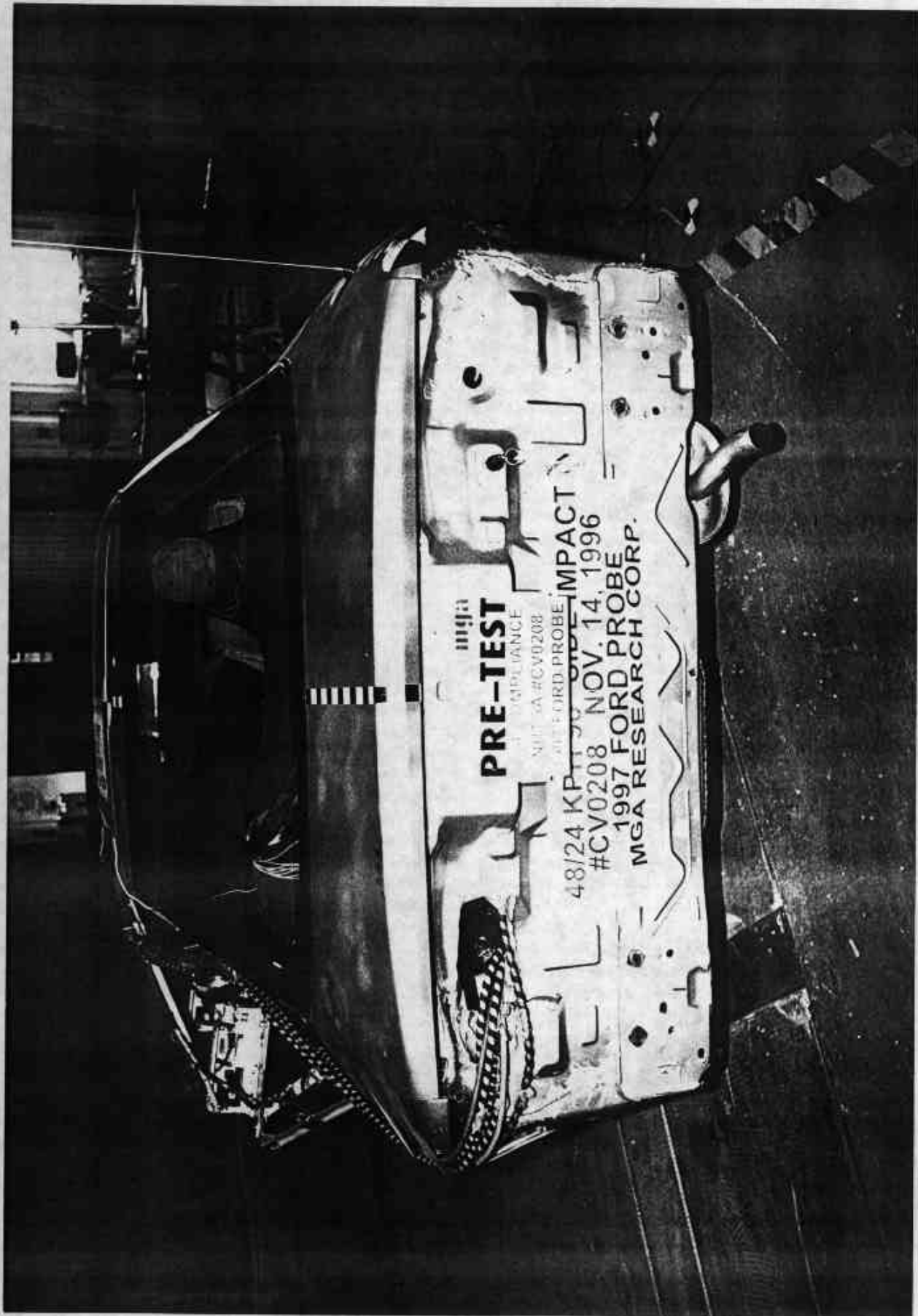


Photo No. A-3 - Pre-Test Rear View of Test Vehicle

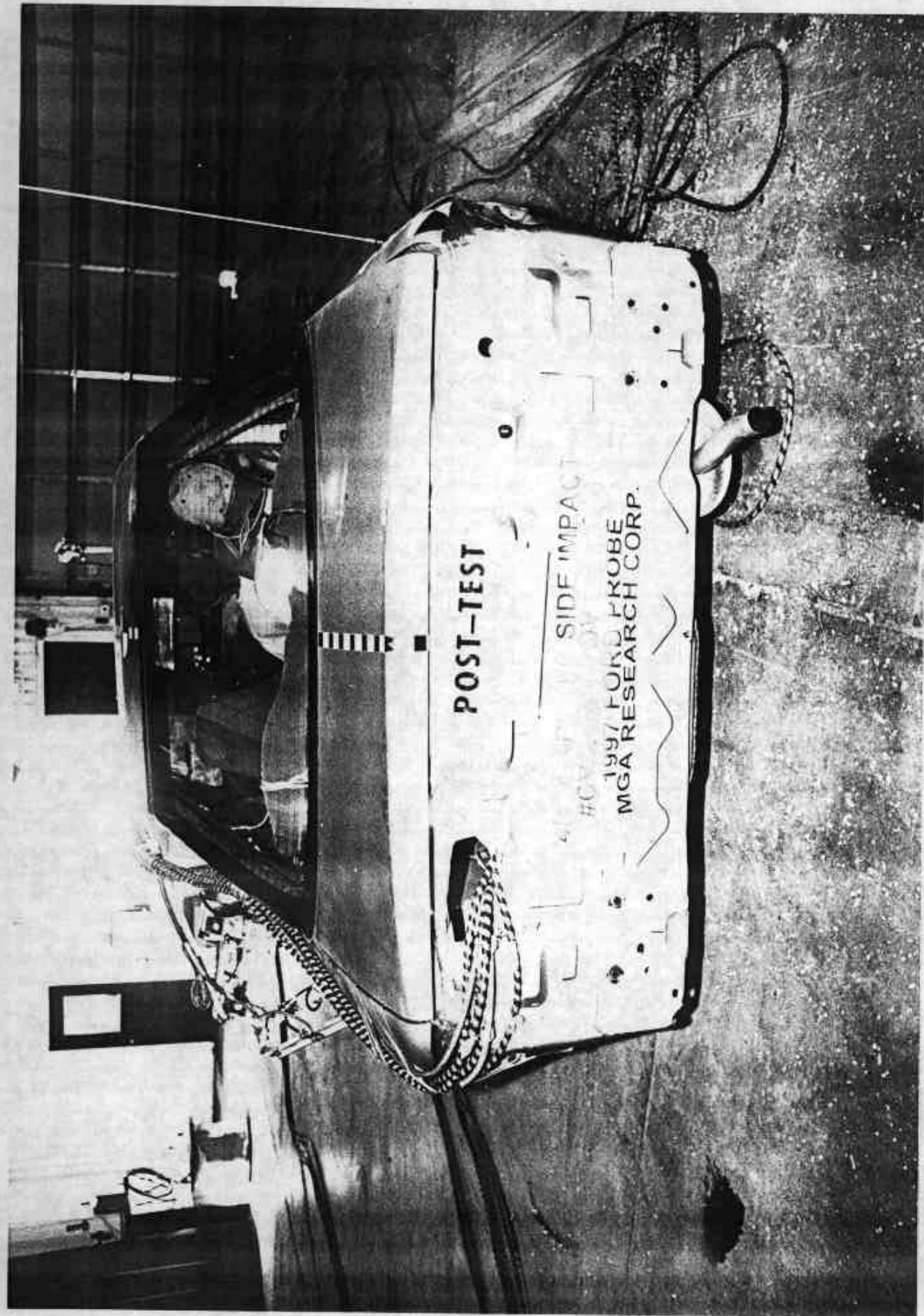


Photo No. A-4 - Post-Test Rear View of Test Vehicle

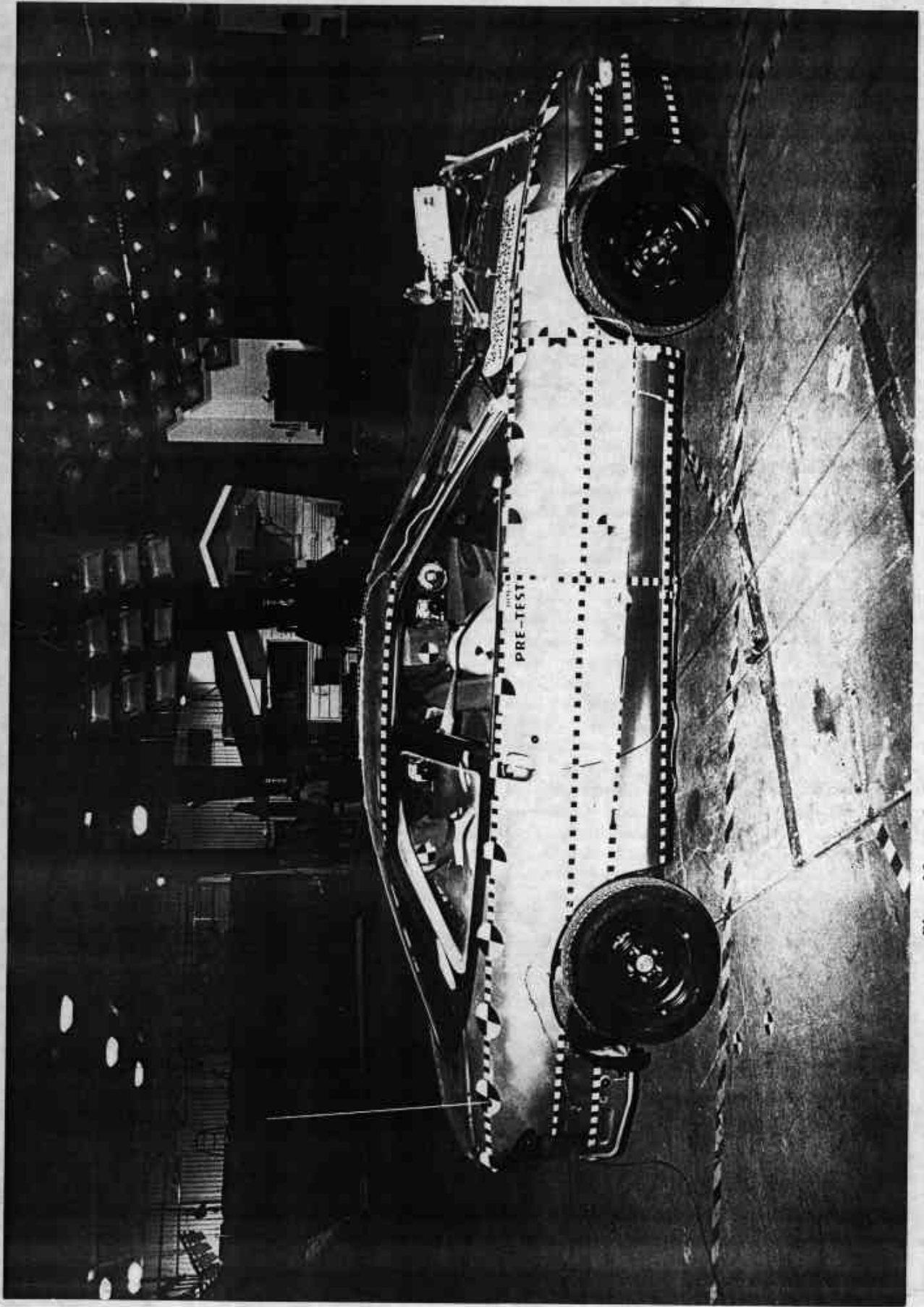


Photo No. A-5 - Pre-Test Right Side View of Test Vehicle

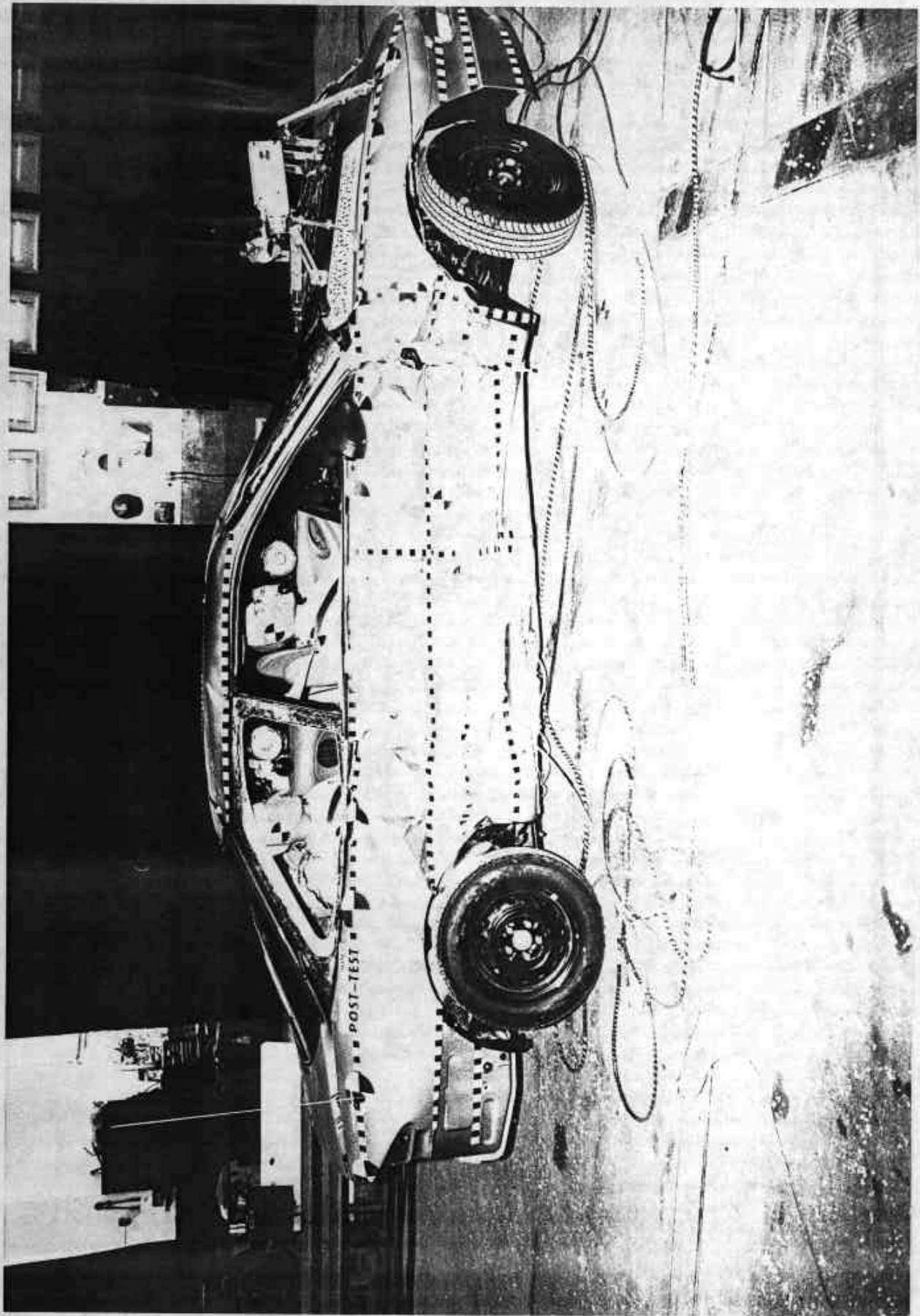


Photo No. A-6 - Post-Test Right Side View of Test Vehicle

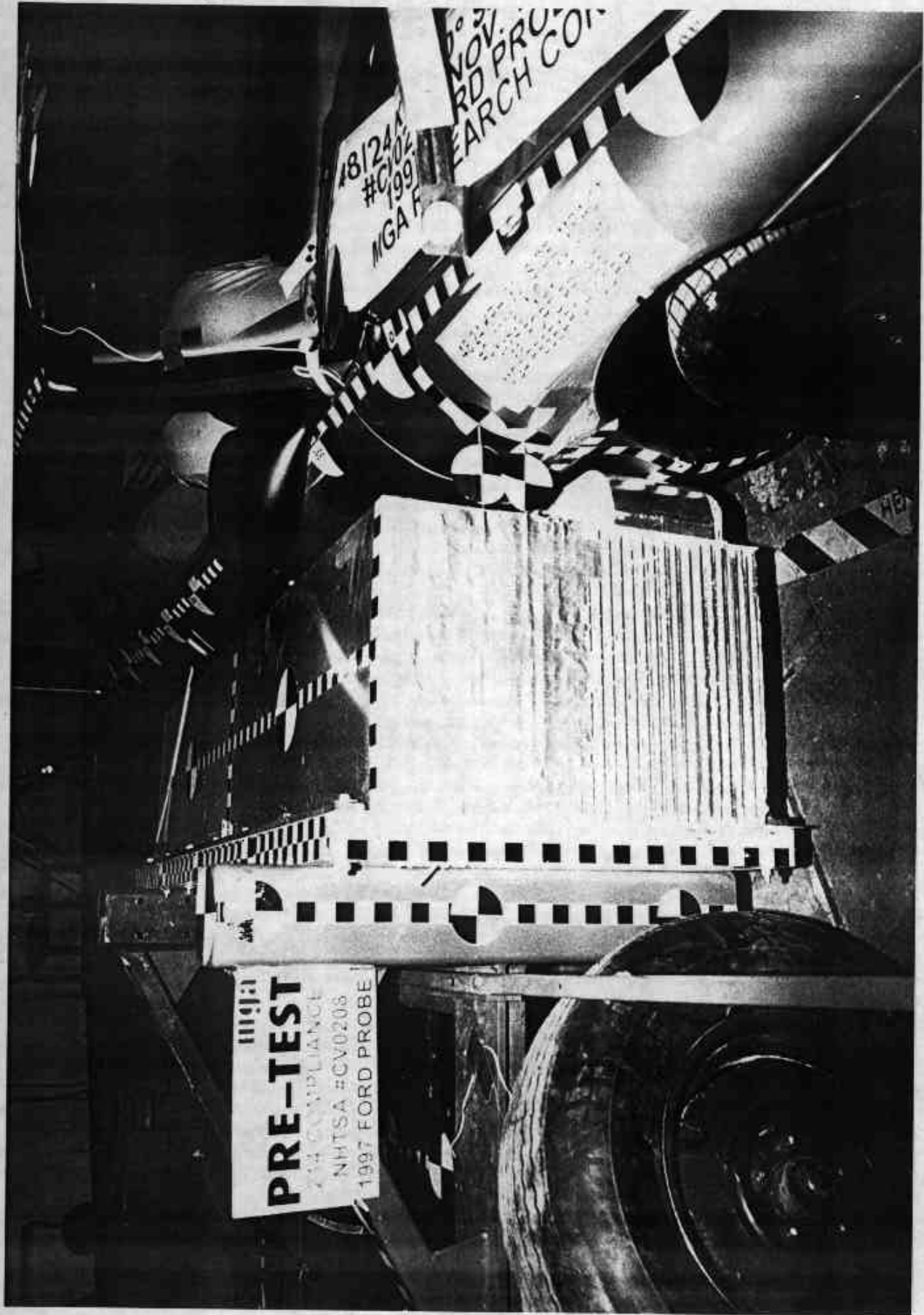


Photo No. A-7 - Pre-Test MDB Positioned Against Vehicle (right side)

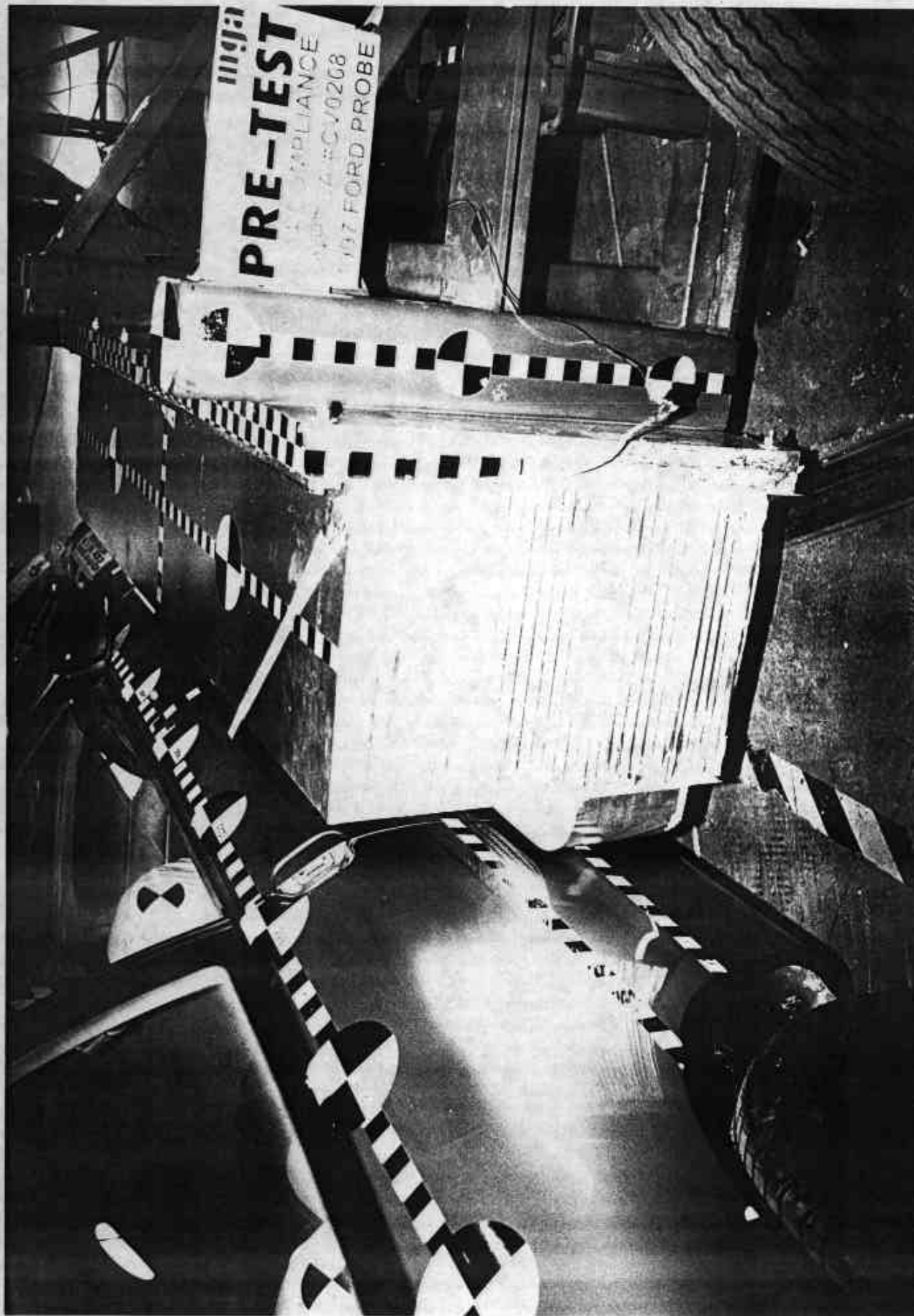


Photo No. A-8 - Pre-Test MDB Positioned Against Vehicle (left side)

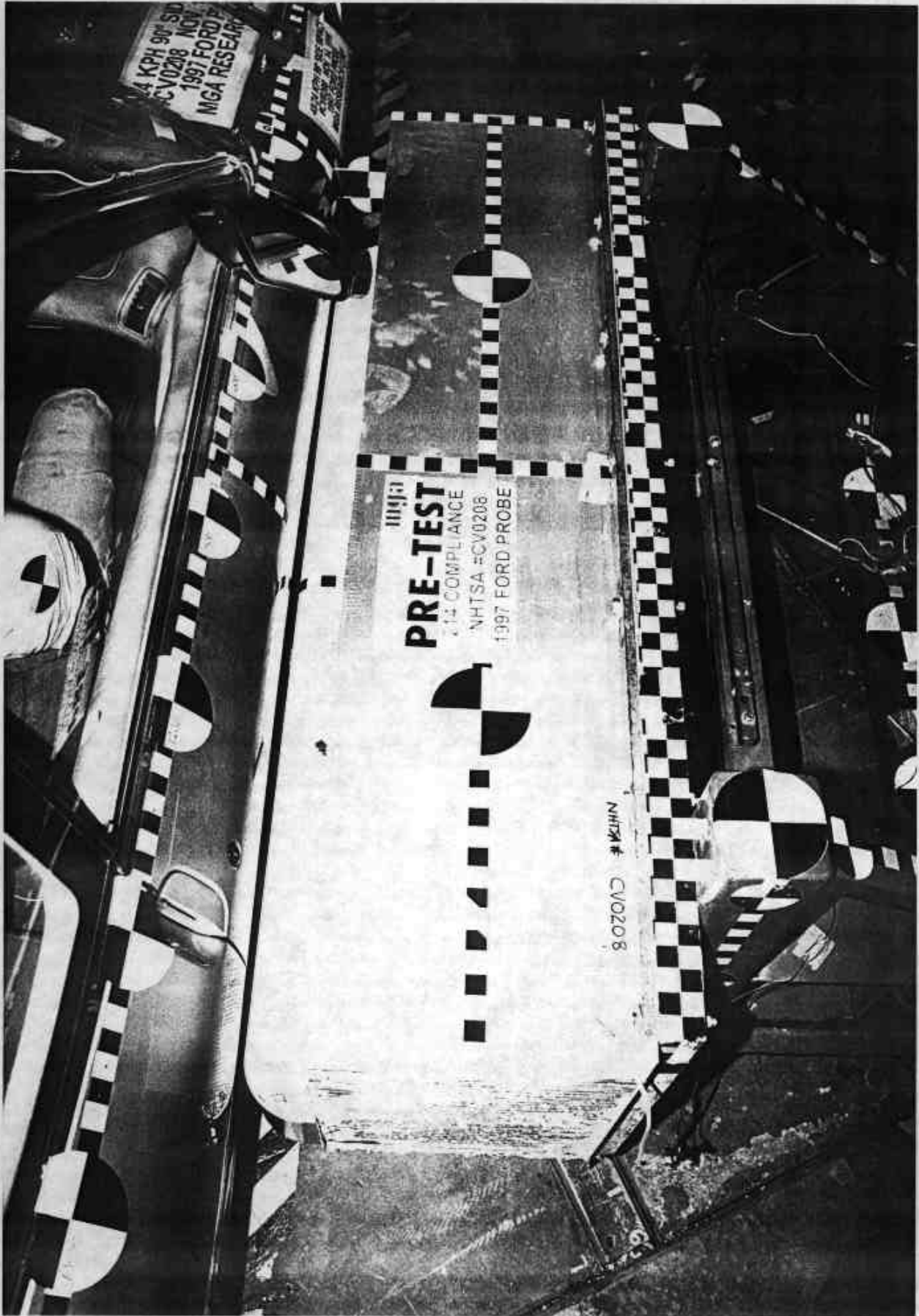


Photo No. A-9 - Pre-Test MDB Positioned Against Vehicle Overhead View

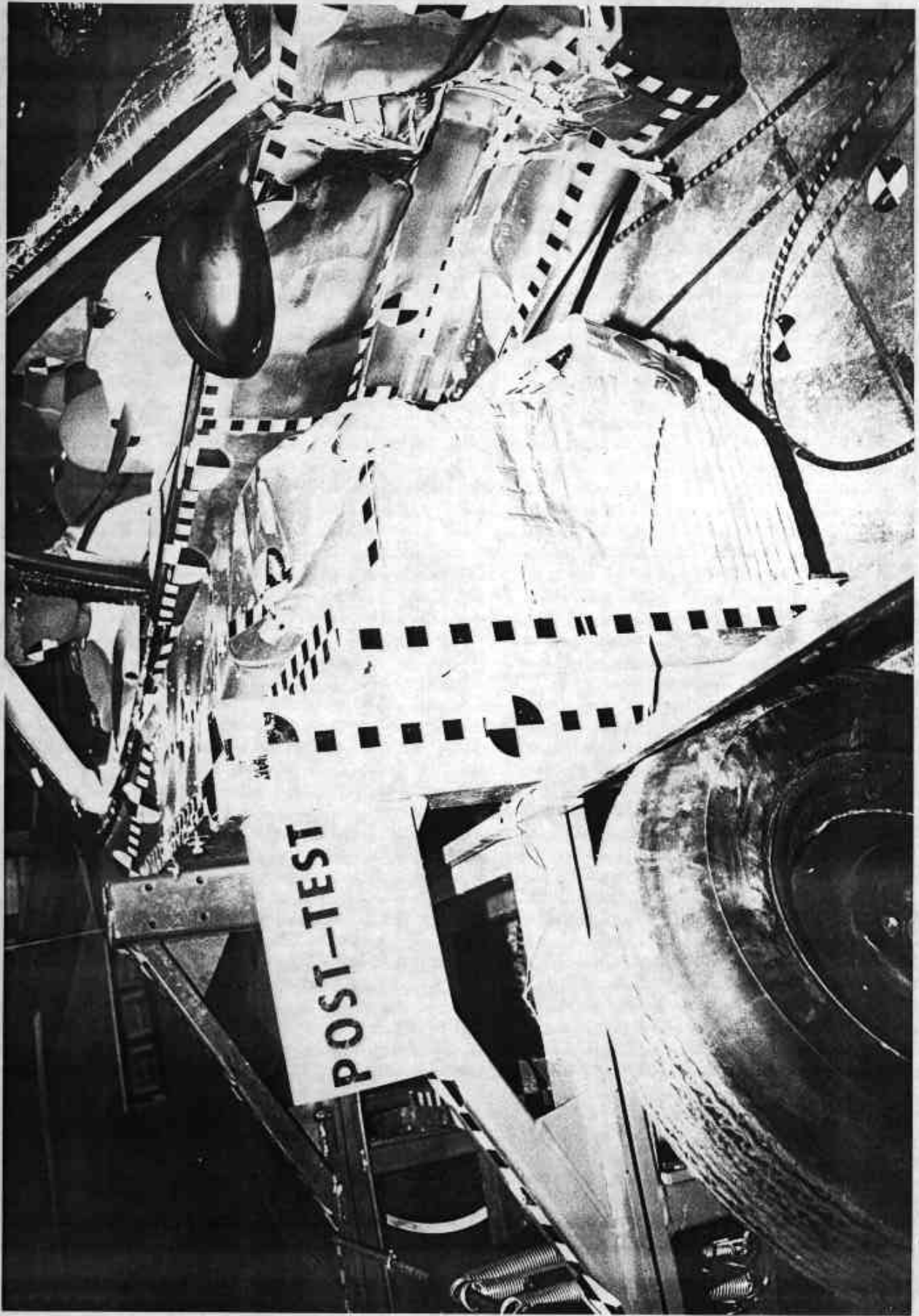


Photo No. A-10 - Post-Test MDB Positioned Against Vehicle (right side)

A-10

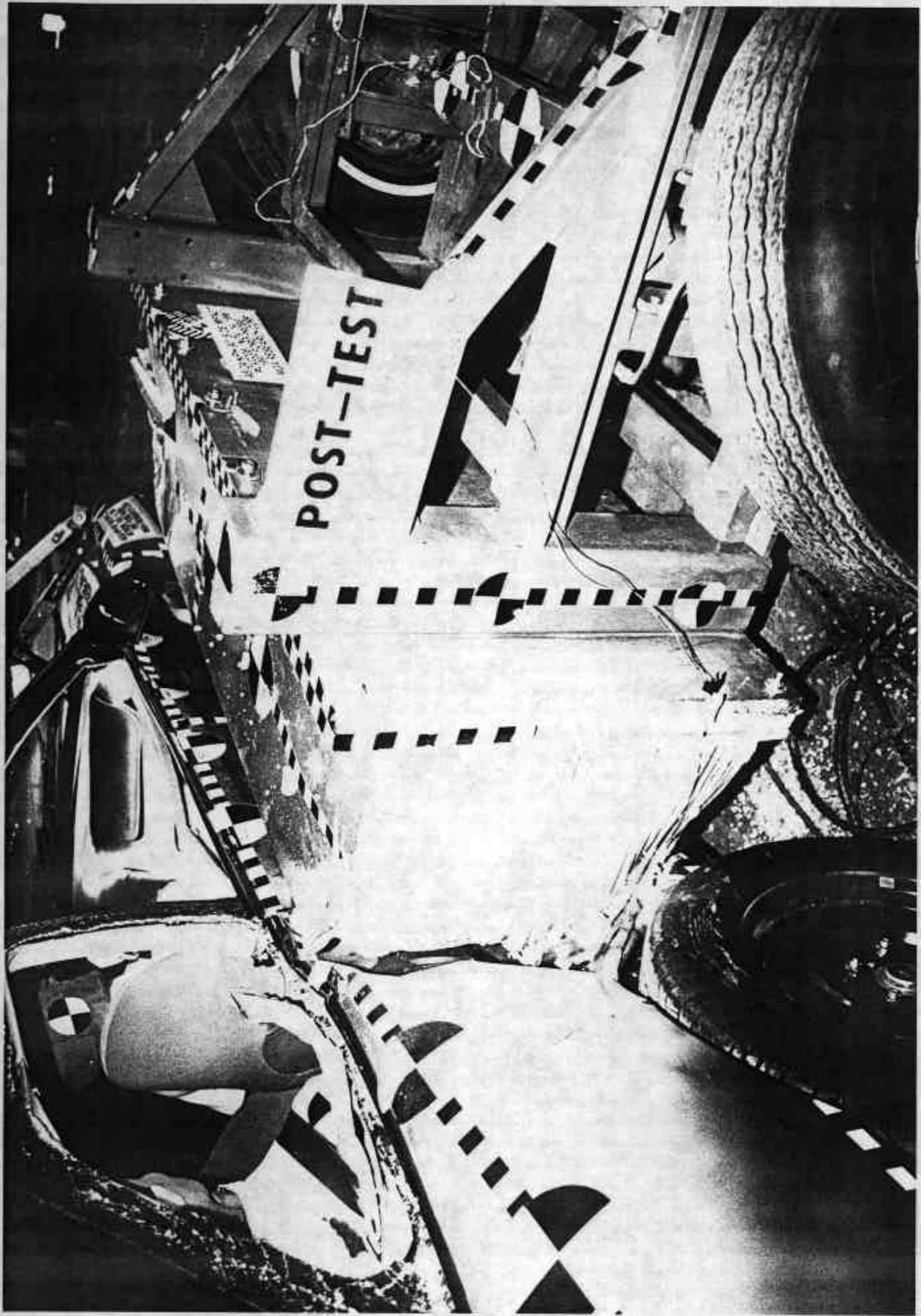


Photo No. A-11 - Post-Test MDB Positioned Against Vehicle (left side)

A-11

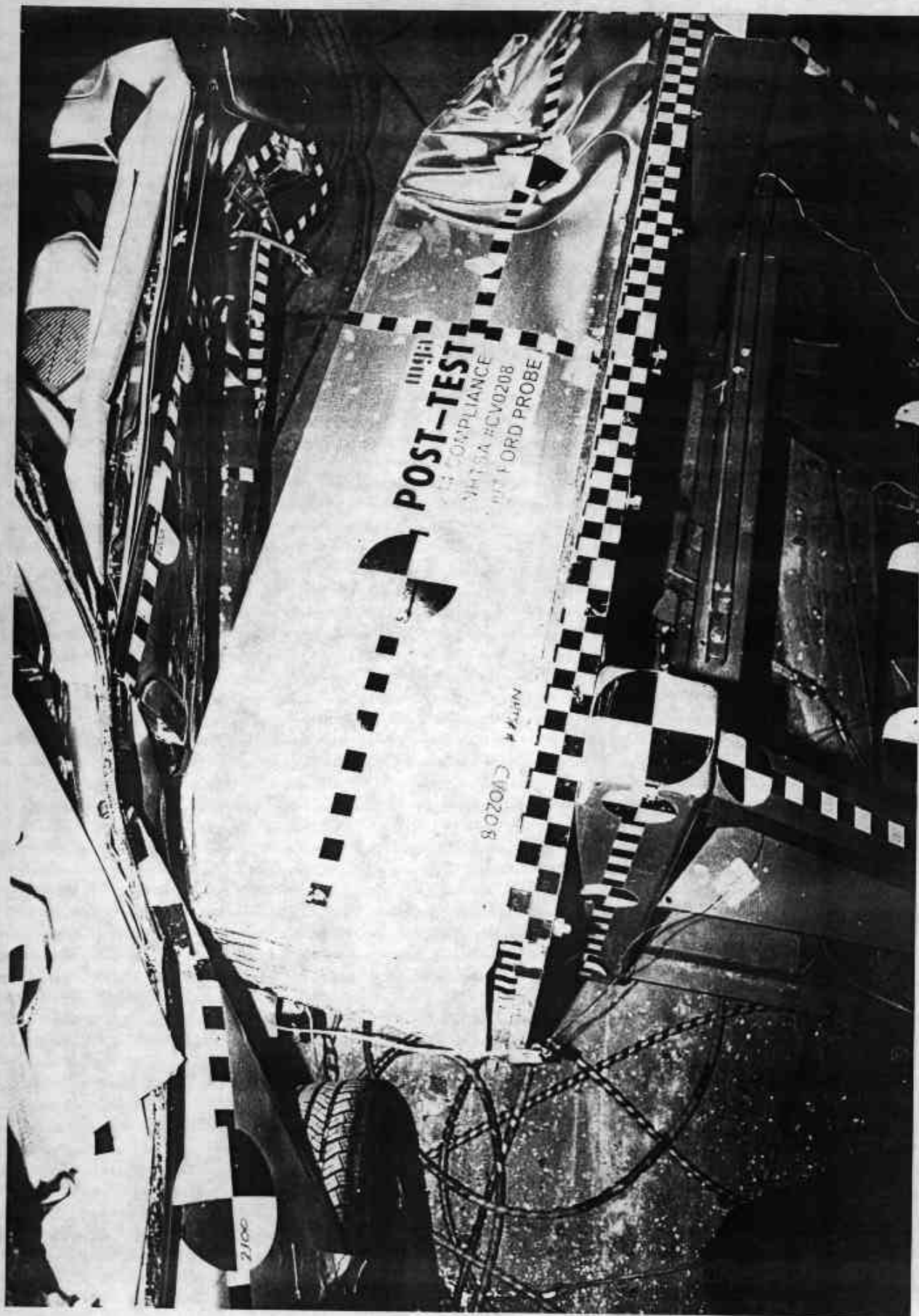
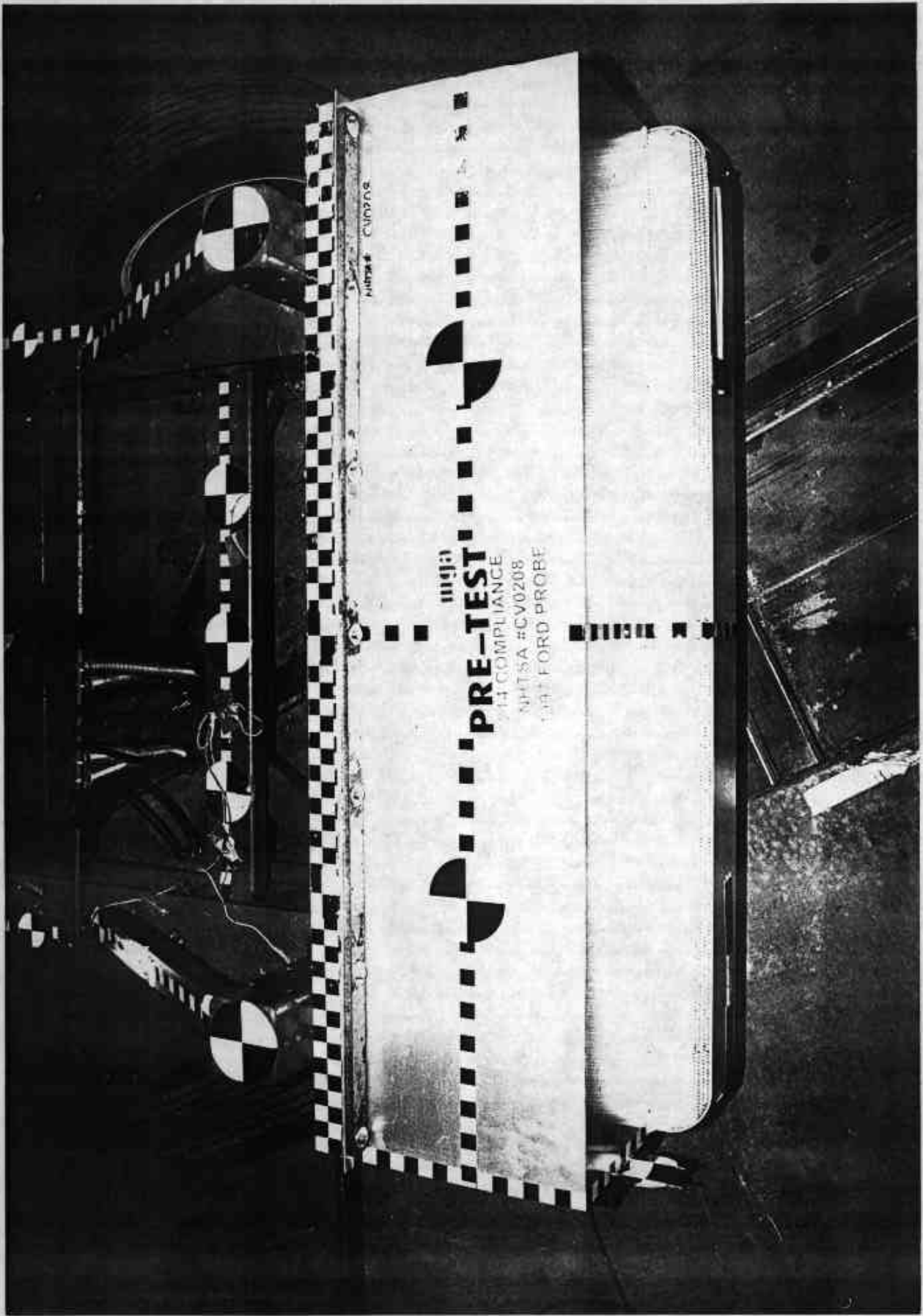


Photo No. A-12 - Post-Test MDB Positioned Against Vehicle Overhead View



PRE-TEST
COMPLIANCE
NHTSA #CV0208
FORD PROBE

Photo No. A-13 - Pre-Test MDB Top View

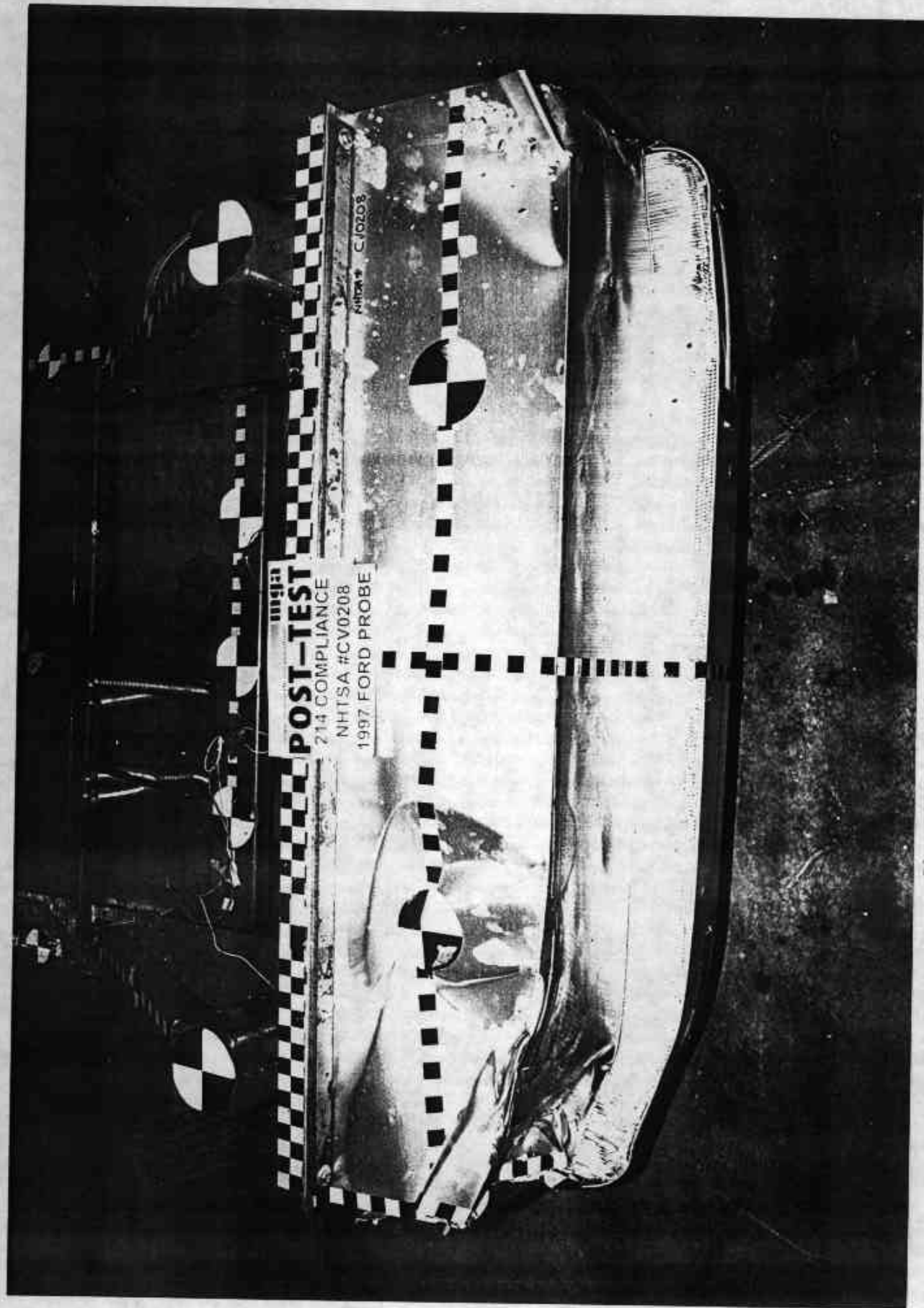


Photo No. A-14 - Post-Test MDB Top View

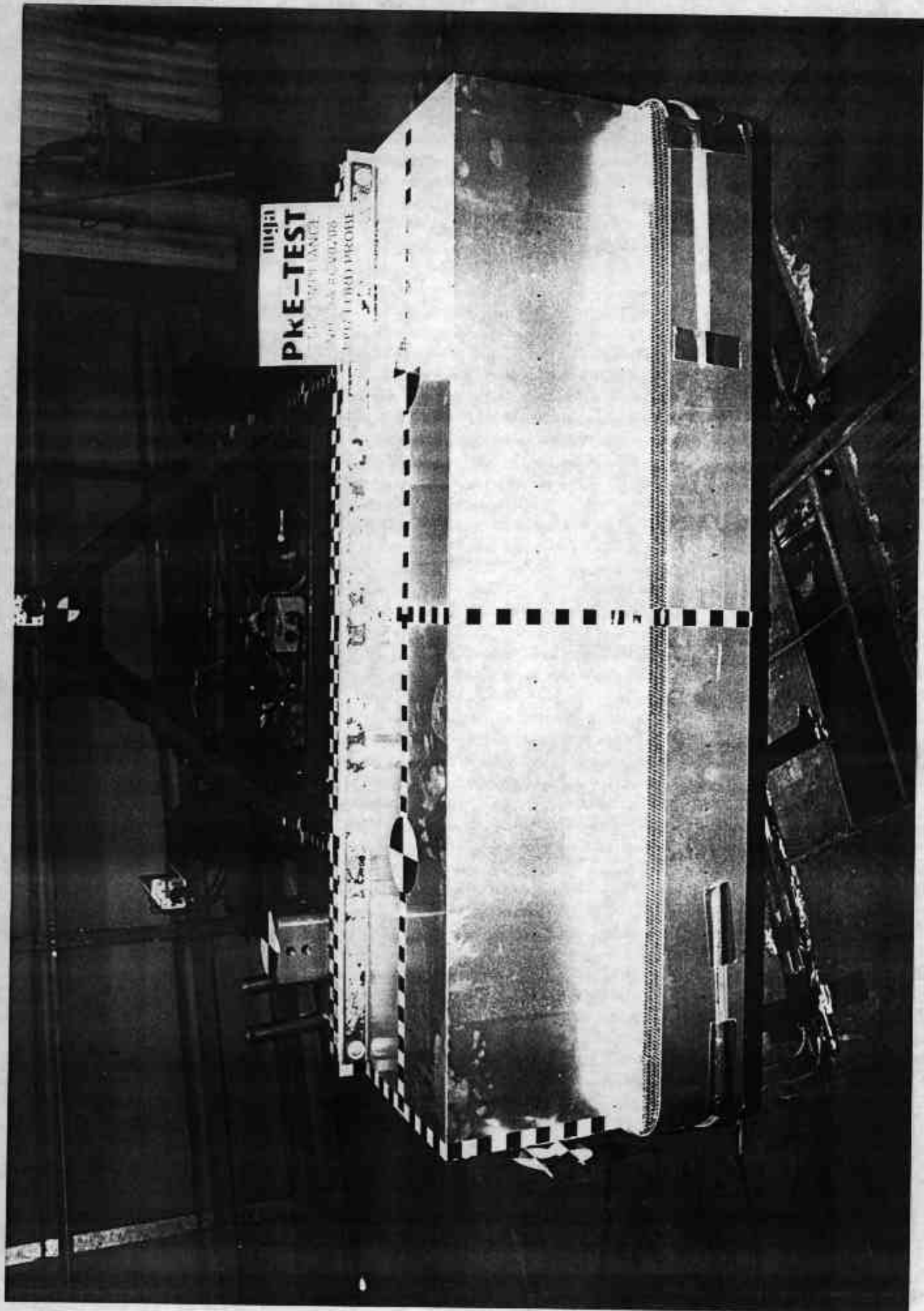
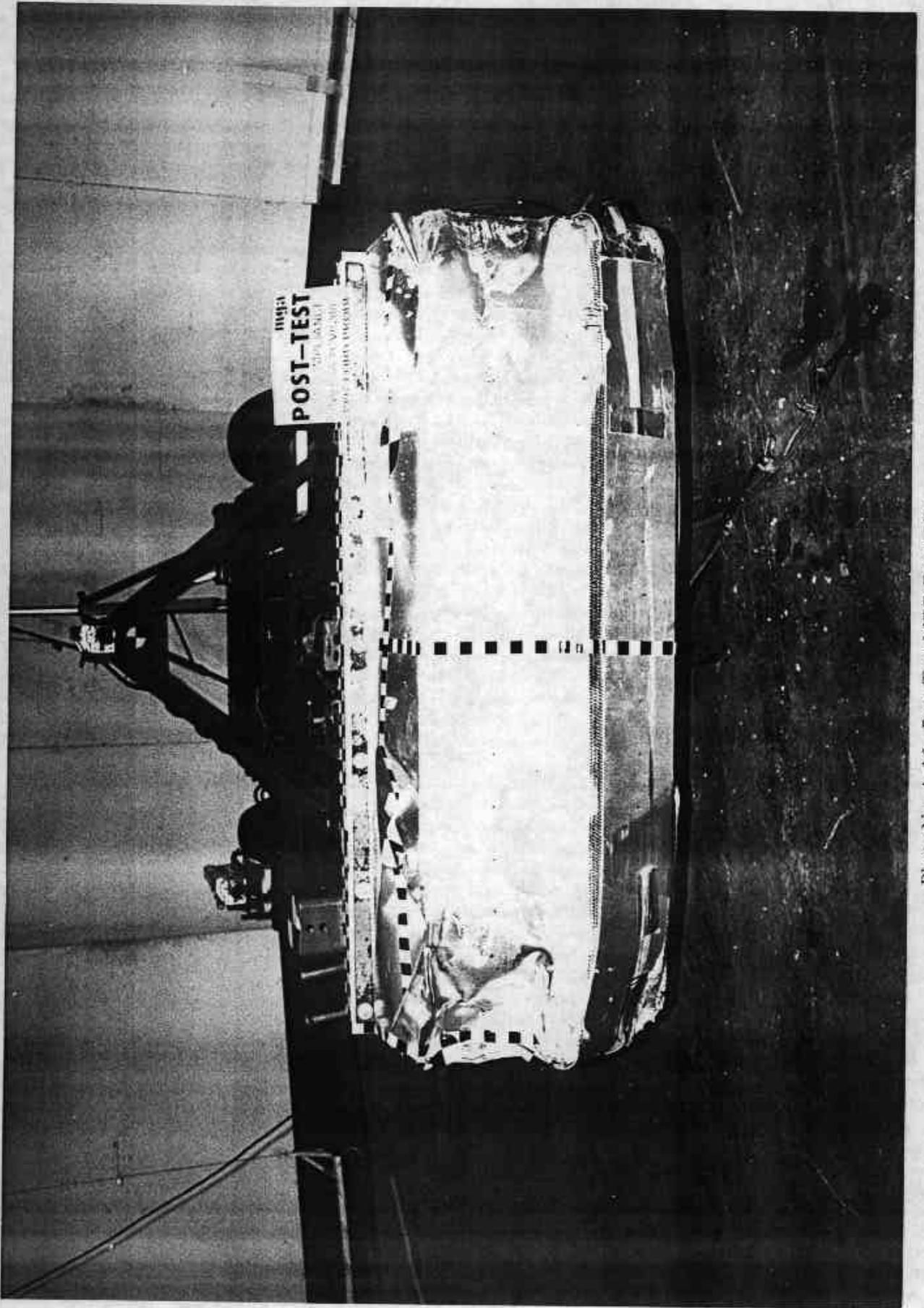


Photo No. A-15 - Pre-Test MDB Front View

A-15



POST-TEST
A-16
A-16

Photo No. A-16 - Post-Test MDB Front View

A-16

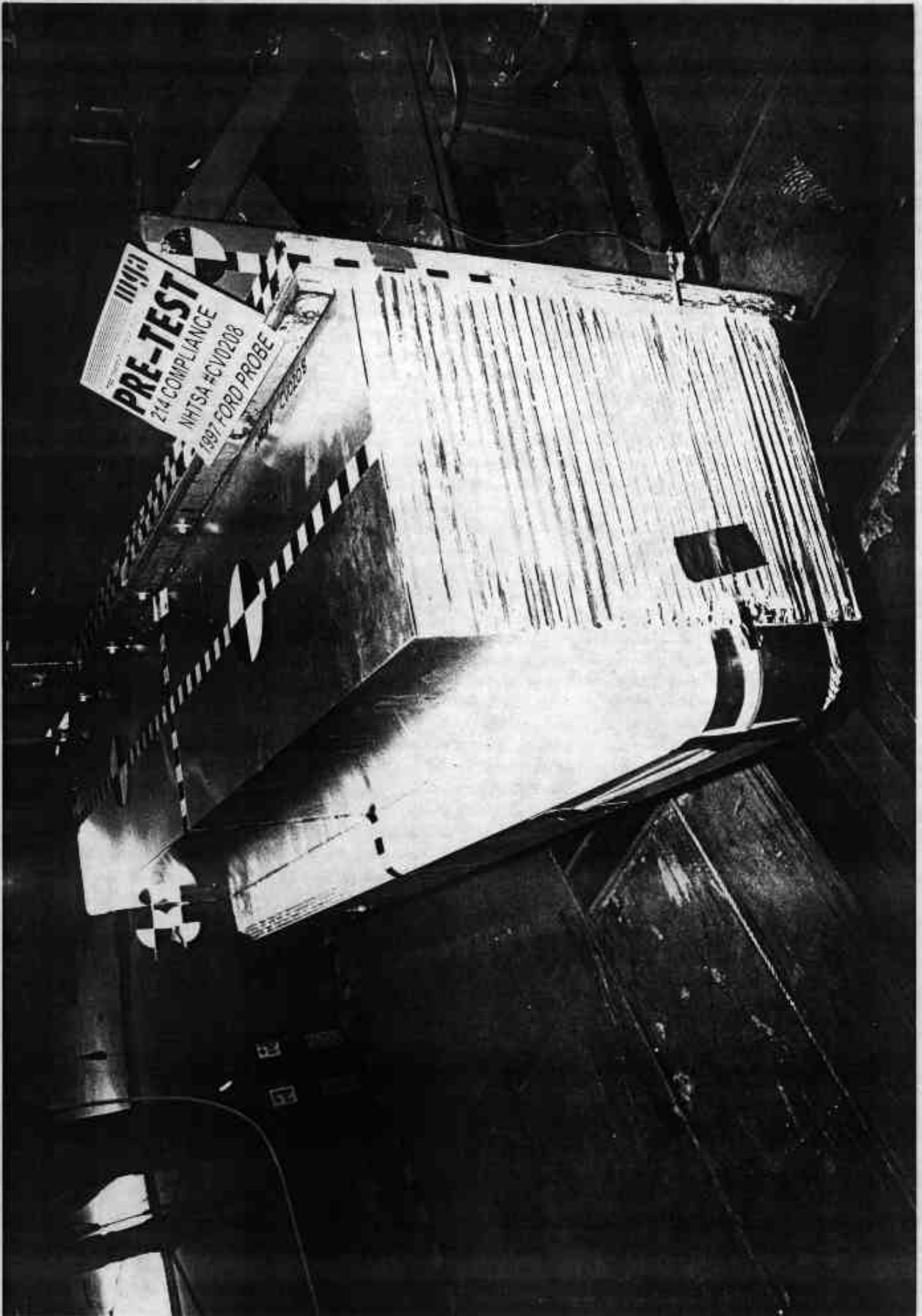


Photo No. A-17 - Pre-Test MDB Left Side View



Photo No. A-18 - Post-Test MDB Left Side View

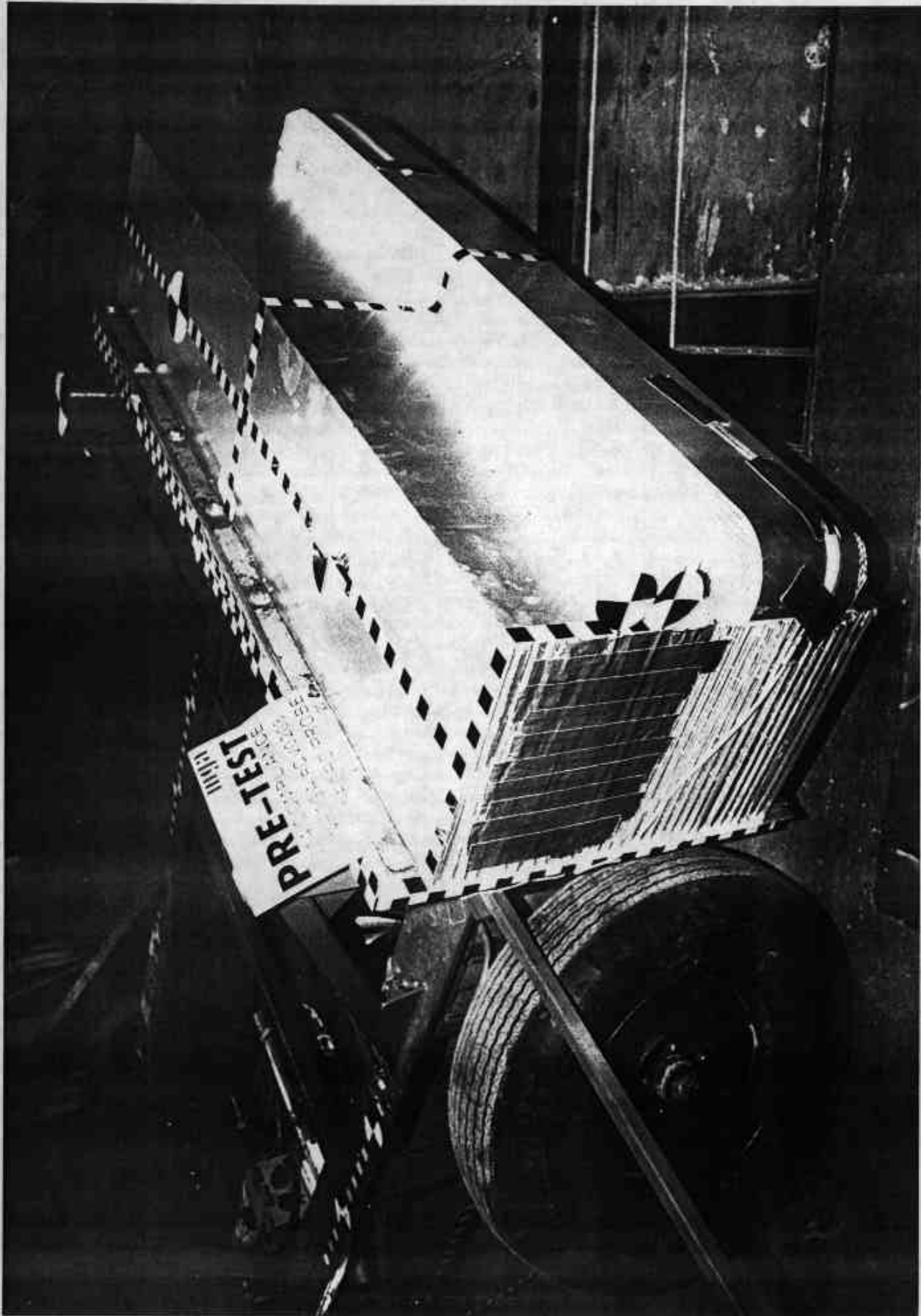


Photo No. A-19 - Pre-Test MDB Right Side View

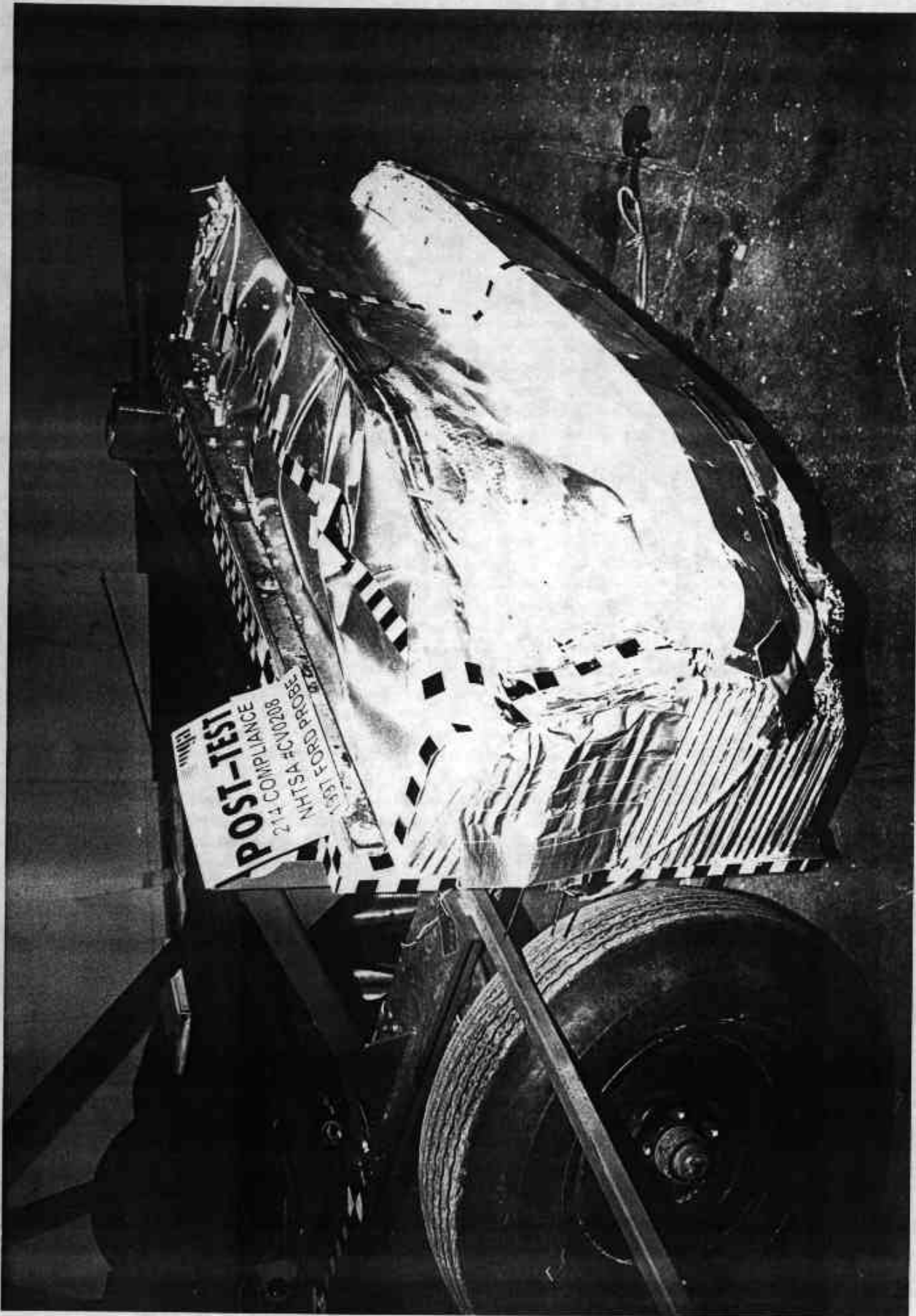


Photo No. A-20 - Post-Test MDB Right Side View

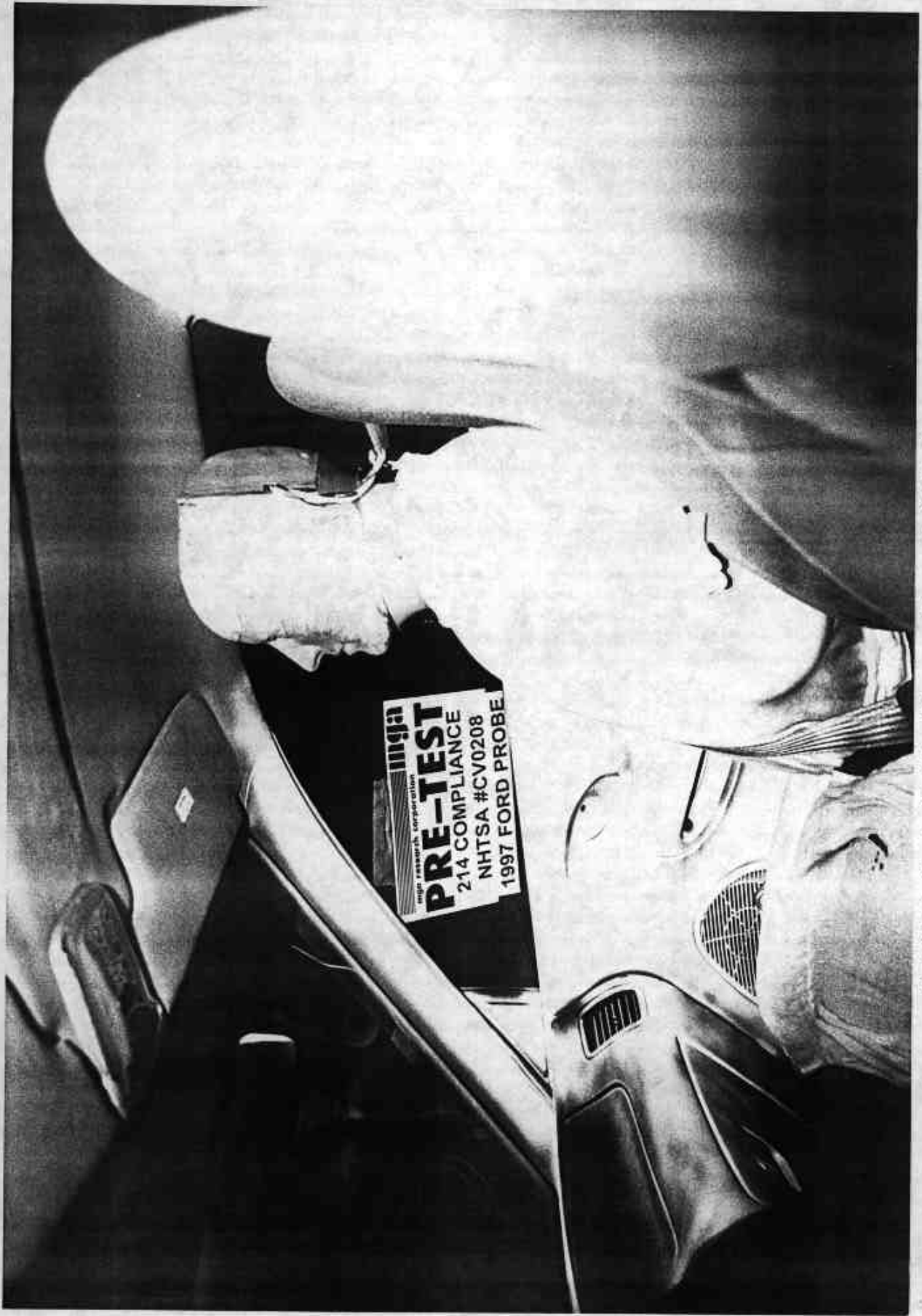


Photo No. A-21 - Pre-Test Front Passenger Dummy Left Side View



Photo No. A-22 - Post-Test Front Passenger Dummy Left Side View

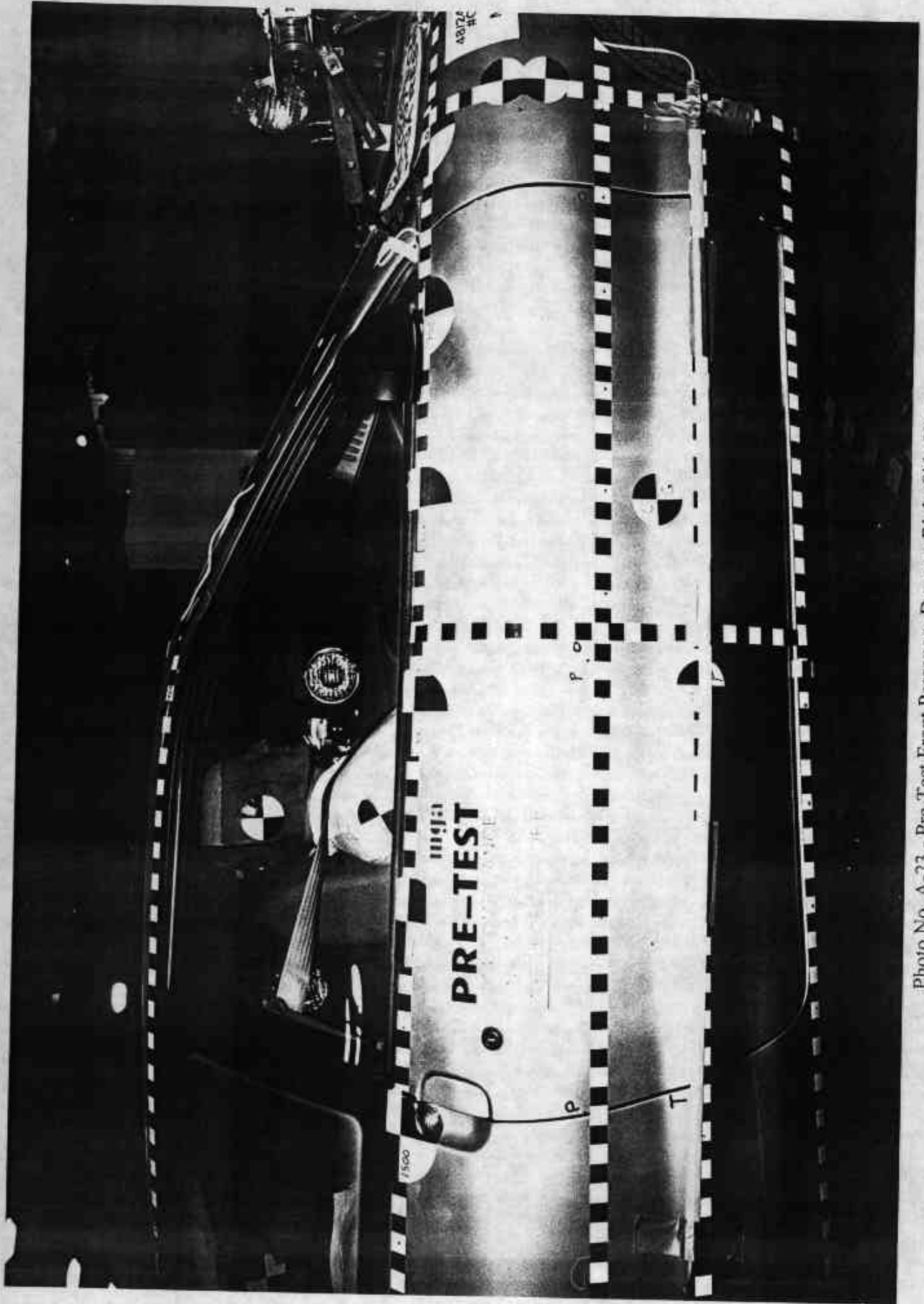


Photo No. A-23 - Pre-Test Front Passenger Dummy Right Side View

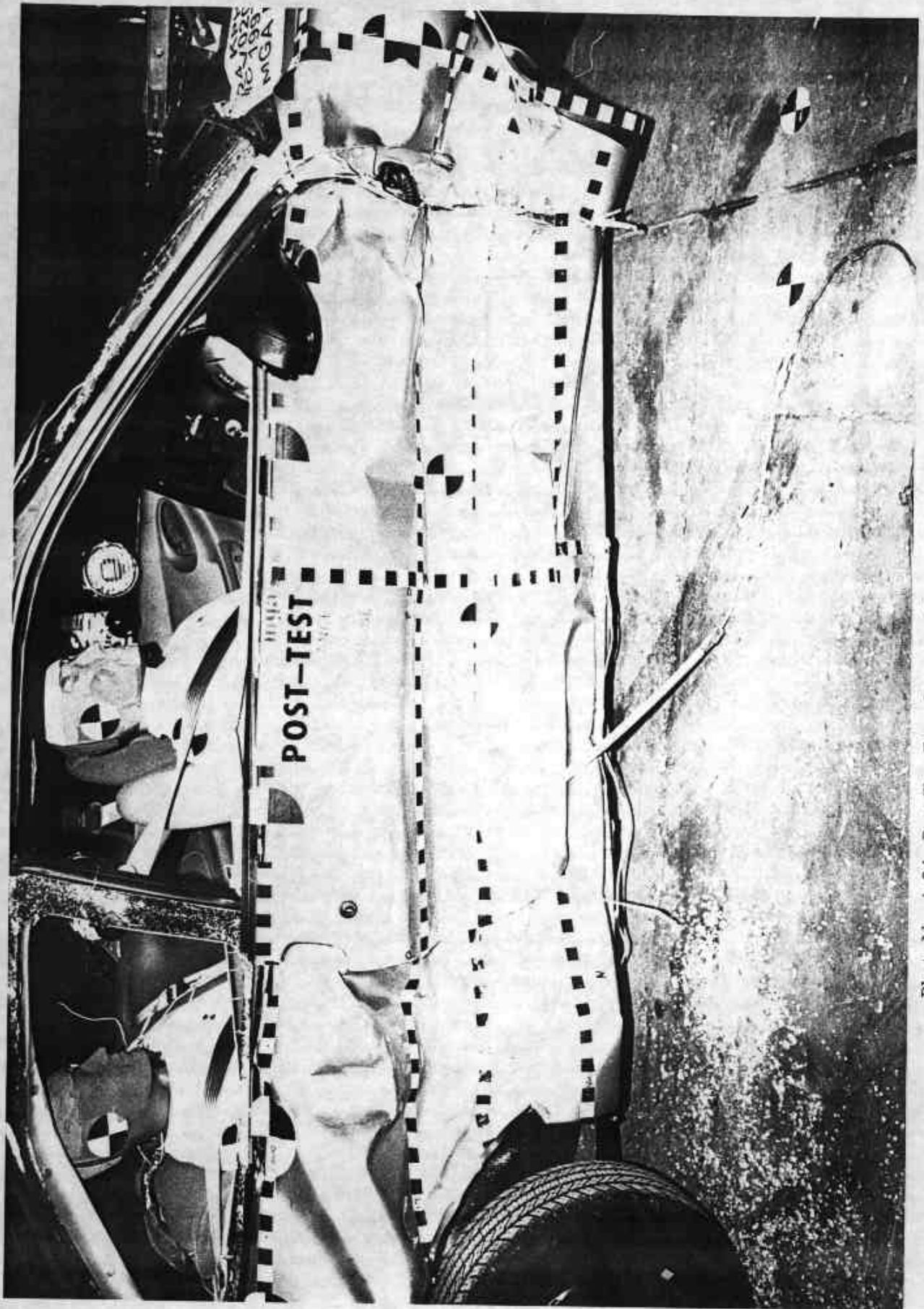


Photo No. A-24 - Post-Test Front Passenger Dummy Right Side View

A-24

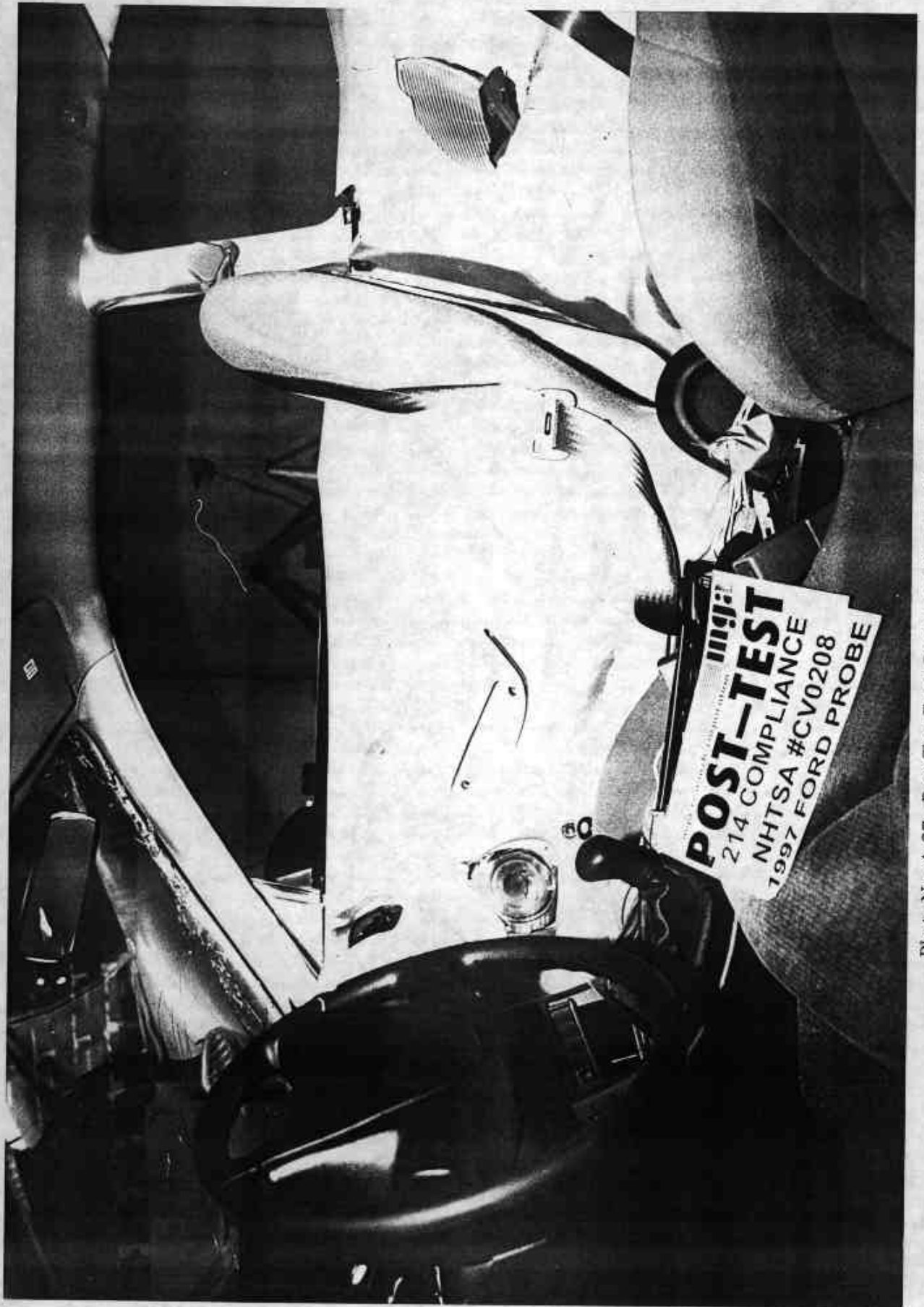


Photo No. A-25 - Pre-Test Front Passenger Shoulder and Door Top View



A-26

Photo No. A-26 - Post-Test Front Passenger Dummy Shoulder and Door Top View

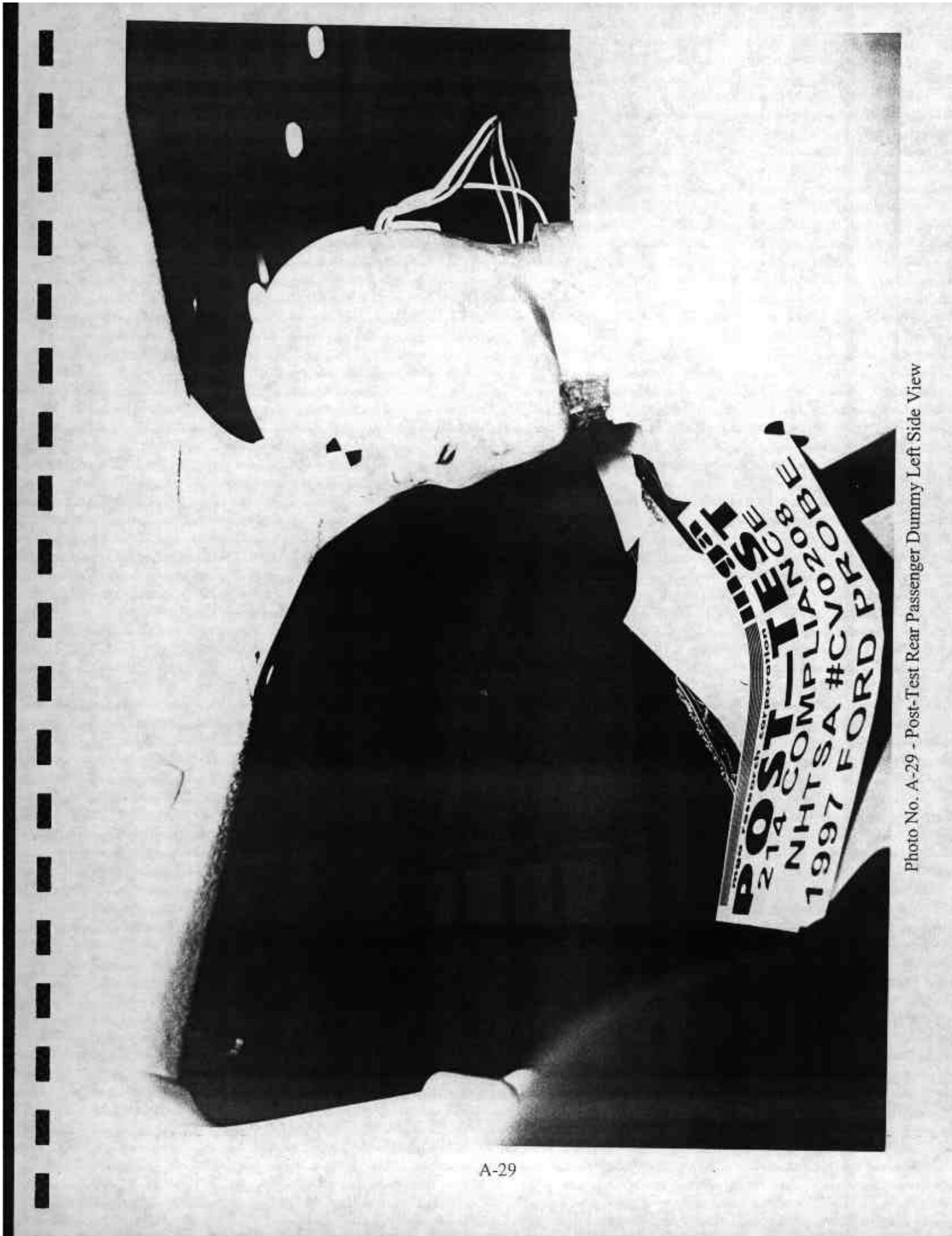


A-27

Photo No. A-27 - Post-Test Front Passenger Dummy Contact



Photo No. A-28 - Pre-Test Rear Passenger Dummy Left Side View



A-29

Photo No. A-29 - Post-Test Rear Passenger Dummy Left Side View

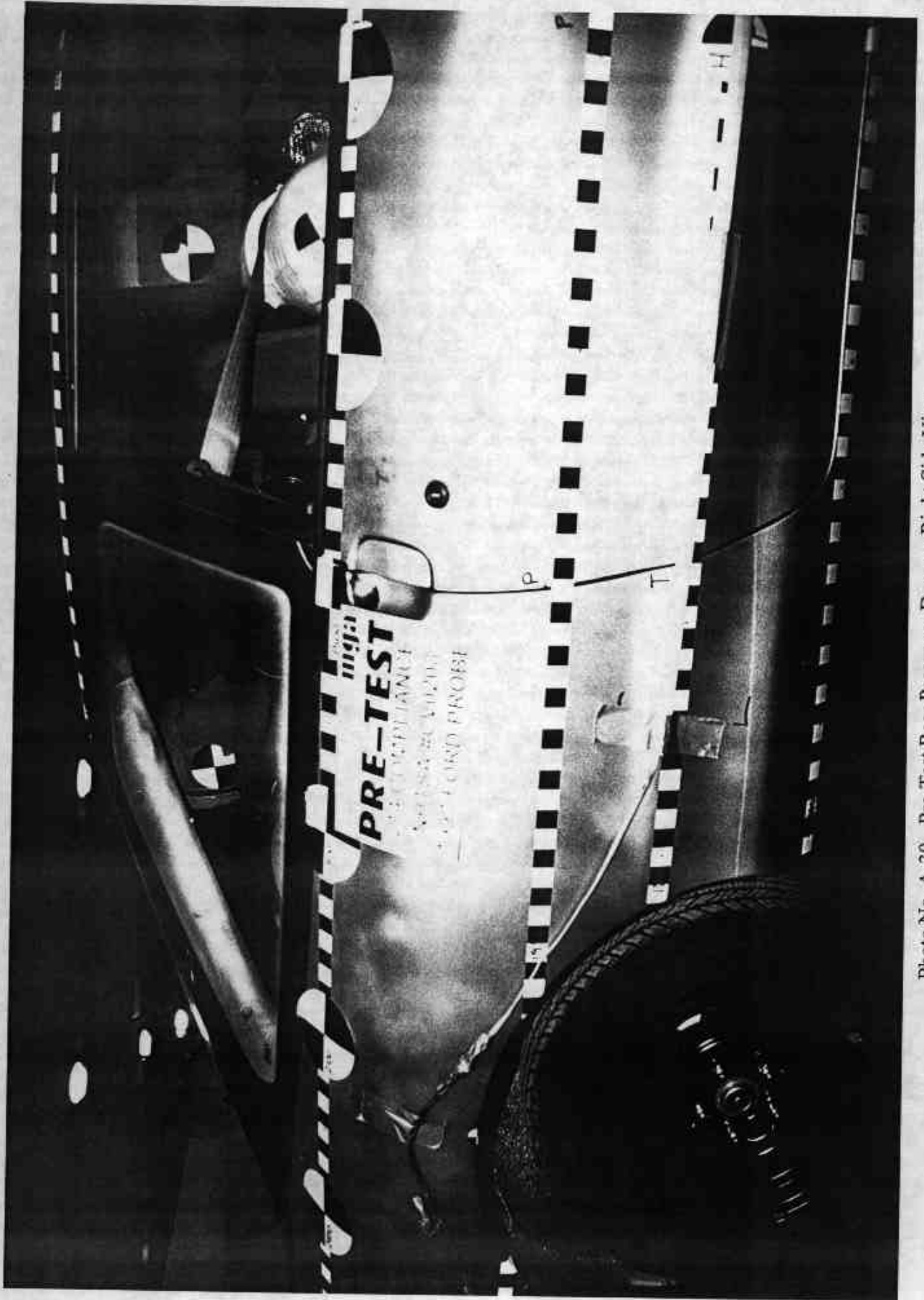


Photo No. A-30 - Pre-Test Rear Passenger Dummy Right Side View

A-30

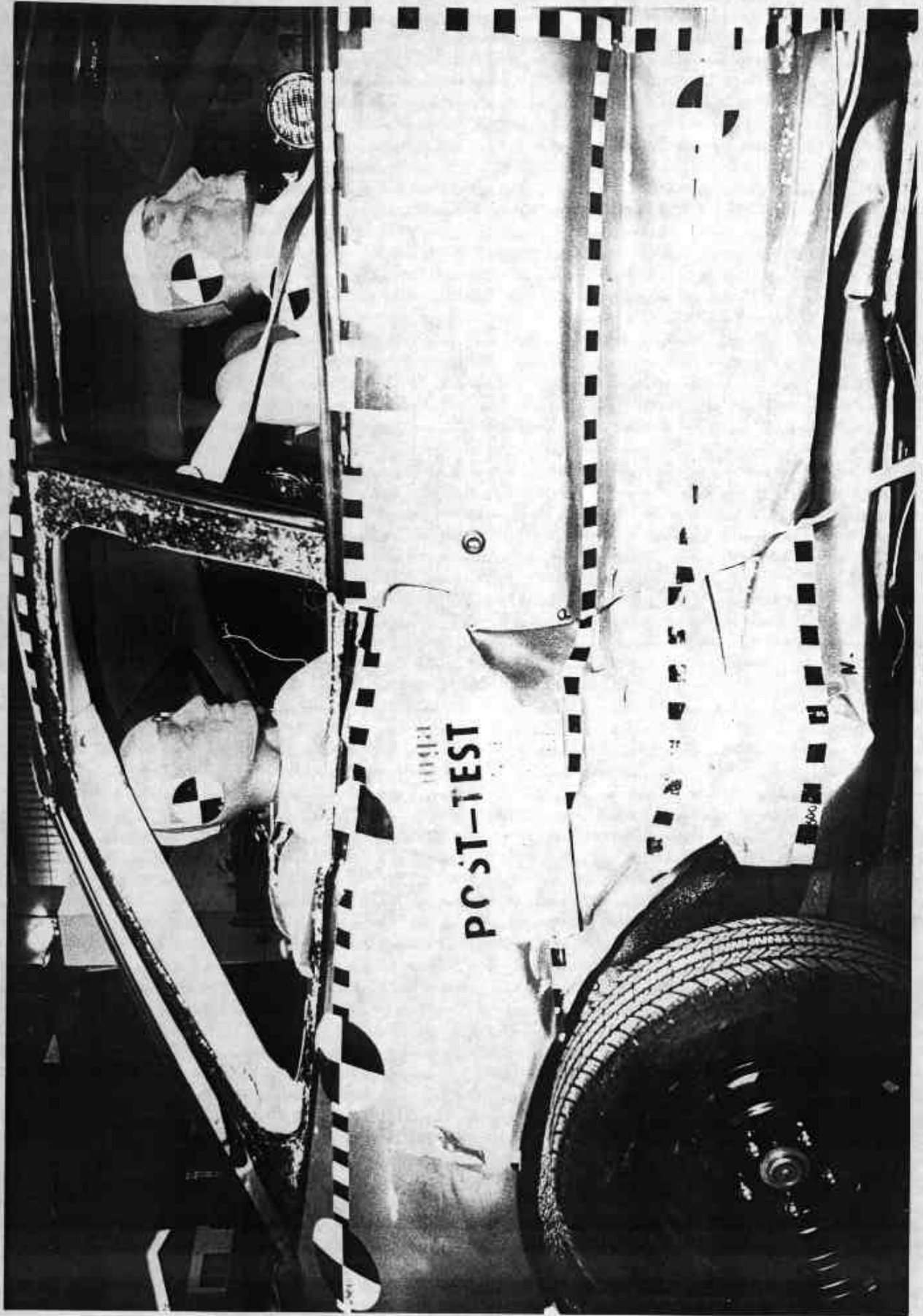


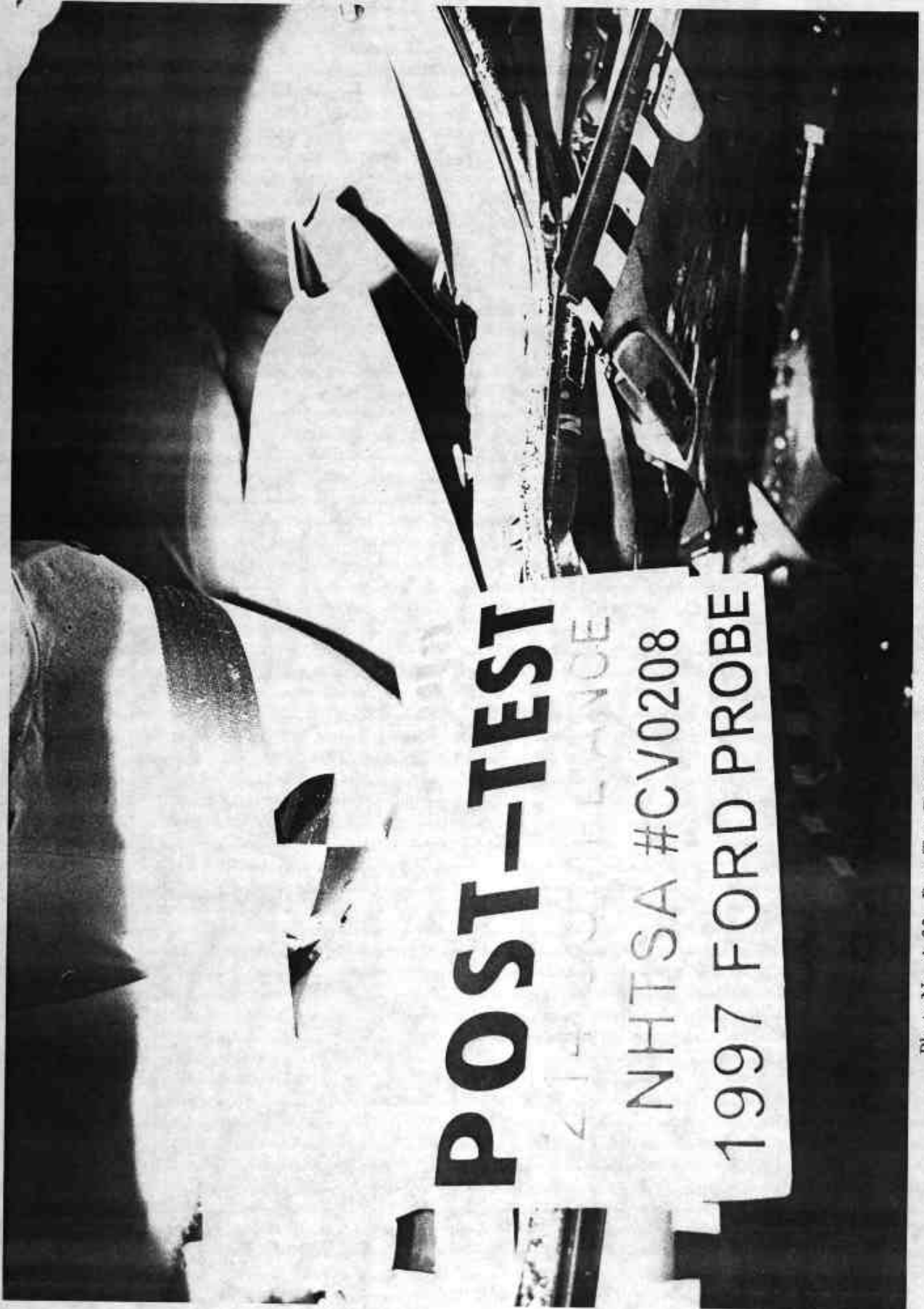
Photo No. A-31 - Post-Test Rear Passenger Dummy Right Side View



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214 COMPLIANCE
NHTSA #CV0208
1997 FORD PROBE

1800

Photo No. A-32 - Pre-Test Rear Passenger Dummy Shoulder and Door Top View



A-33

Photo No. A-33 - Post-Test Rear Passenger Dummy Shoulder and Door Top View

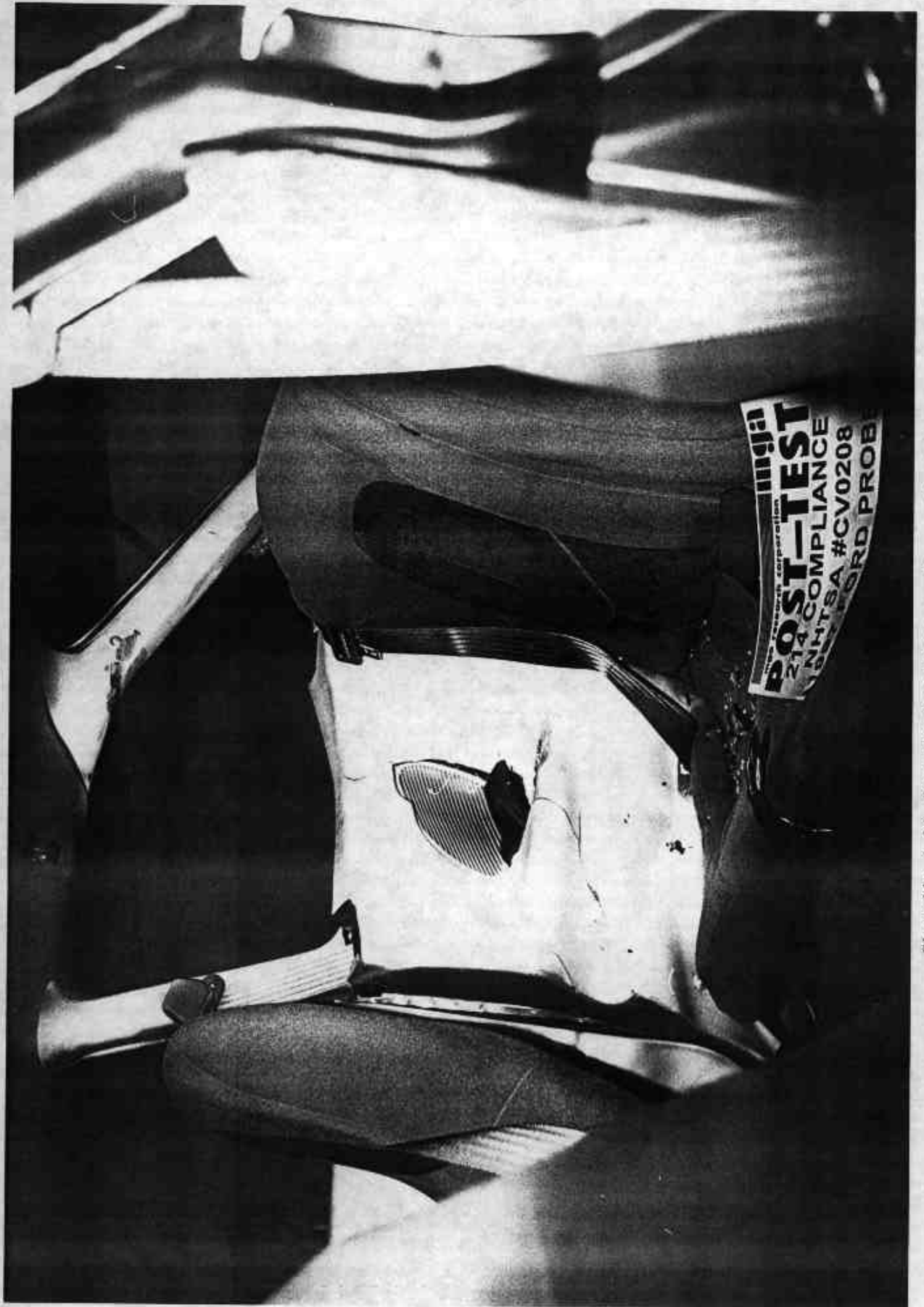


Photo No. A-34 - Post-Test Rear Passenger Dummy Contact



Photo No. A-35 - Post-Test Rear Passenger Dummy Head Contact

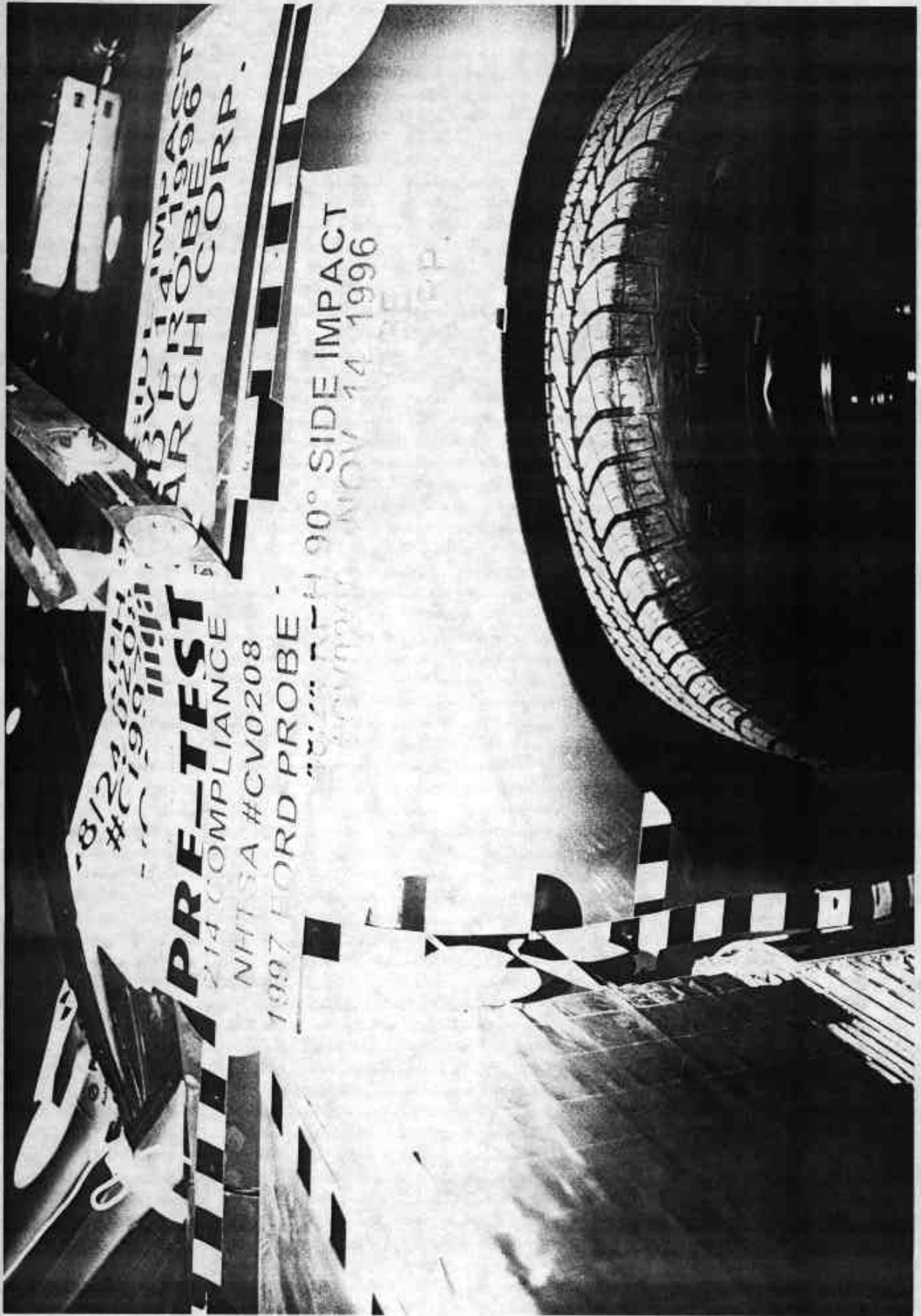
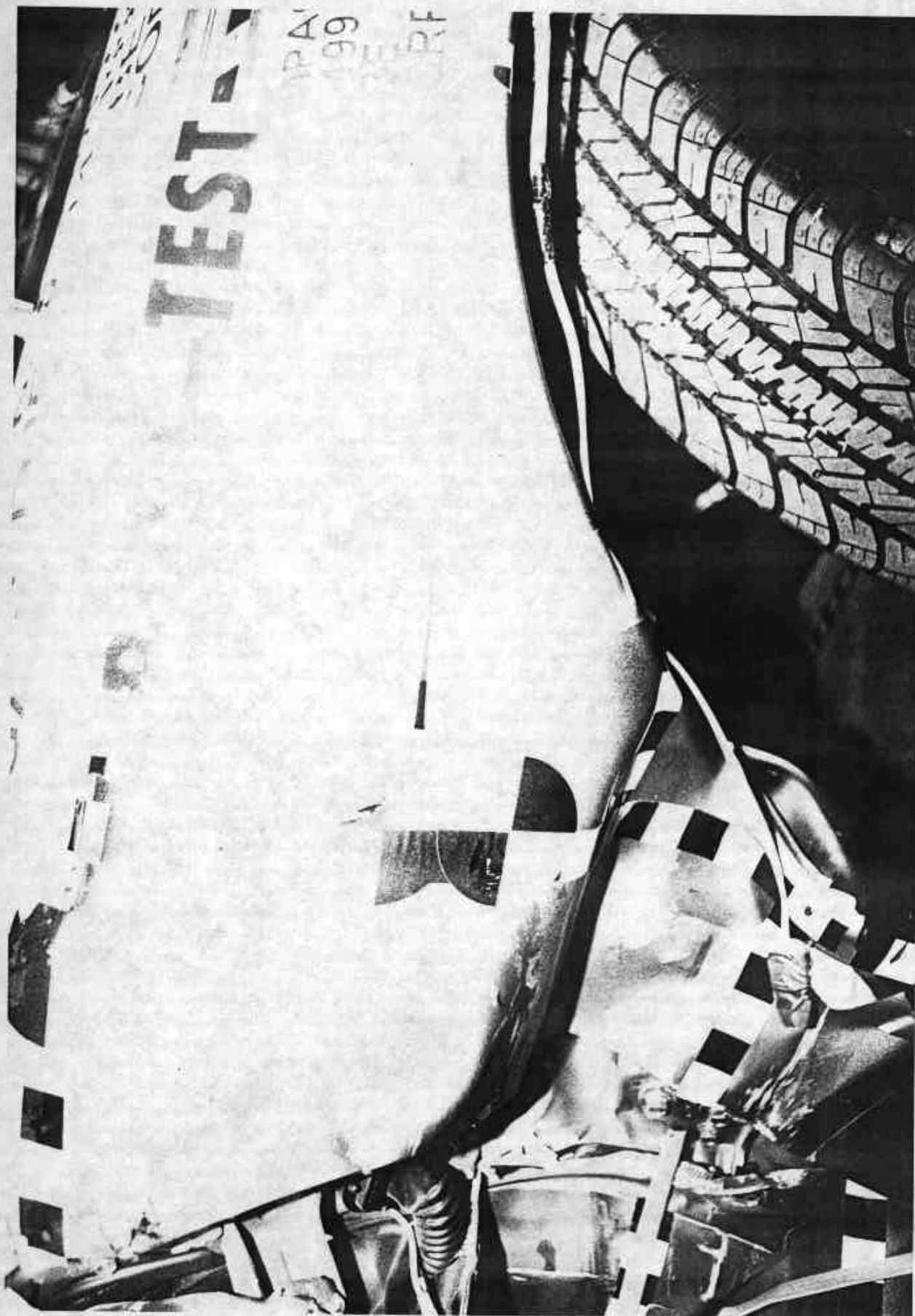


Photo No. A-36 - Pre-Test Right Front Impact Point on Vehicle



PA
199
RF

TEST

A-37

Photo No. A-37 - Post-Test Right Front Impact Point on Vehicle

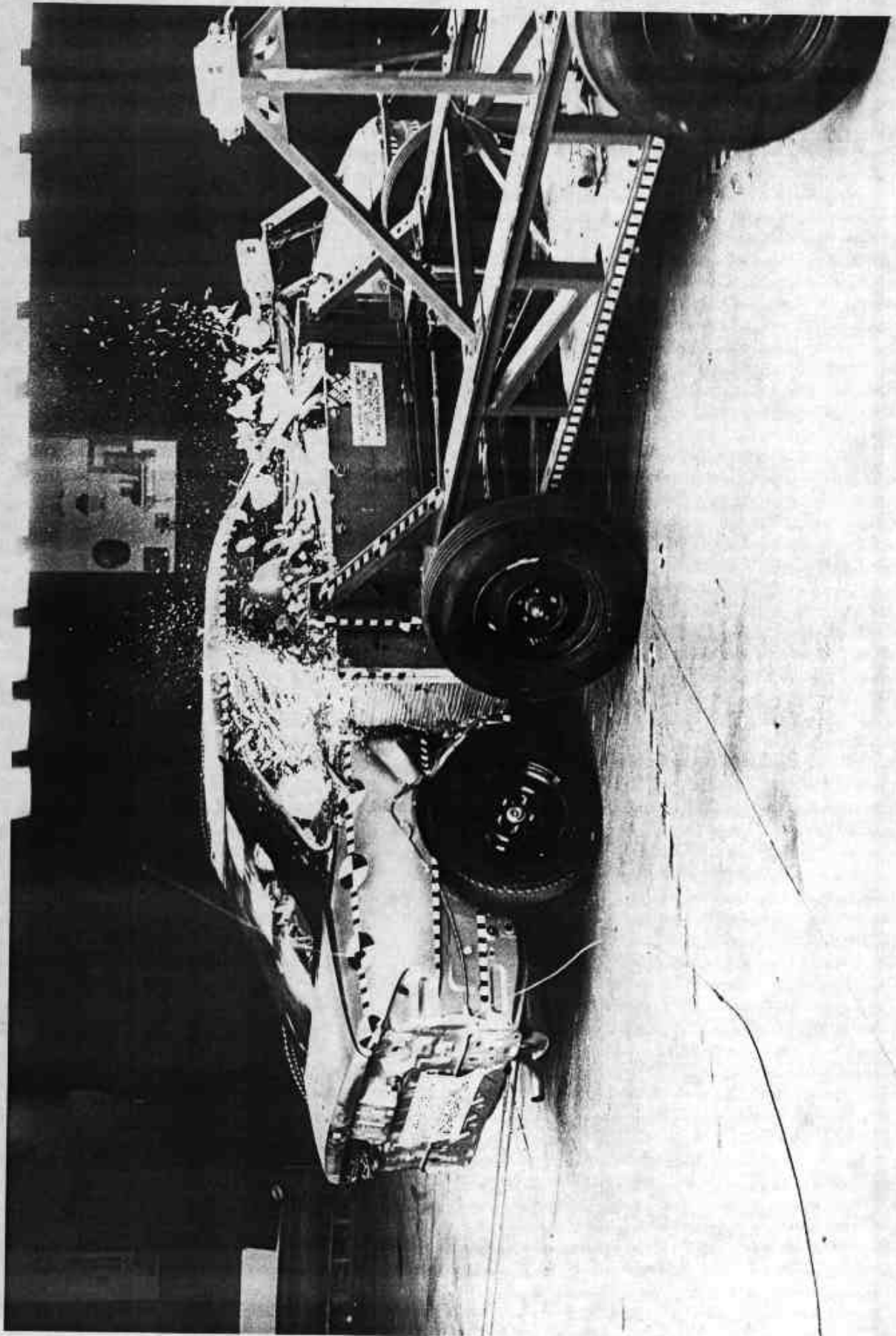


Photo No. A-38 - Impact

A-38

BY AUTOALLIANCE INTERNATIONAL

1984
900

MFD. BY AUTOALLIANCE INTERNATIONAL
INC. FOR FORD MOTOR CO. 2105

3616 LB GAWR FRT 2105
1640 KG PNBE FRT 955

DATE 09/03/96 PNBA

THIS VEHICLE CONFIRMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE
PREVENTION STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE

VIN 1ZVLT20A0V5134717

TYPE PASSENGER

BE

0420 C

95

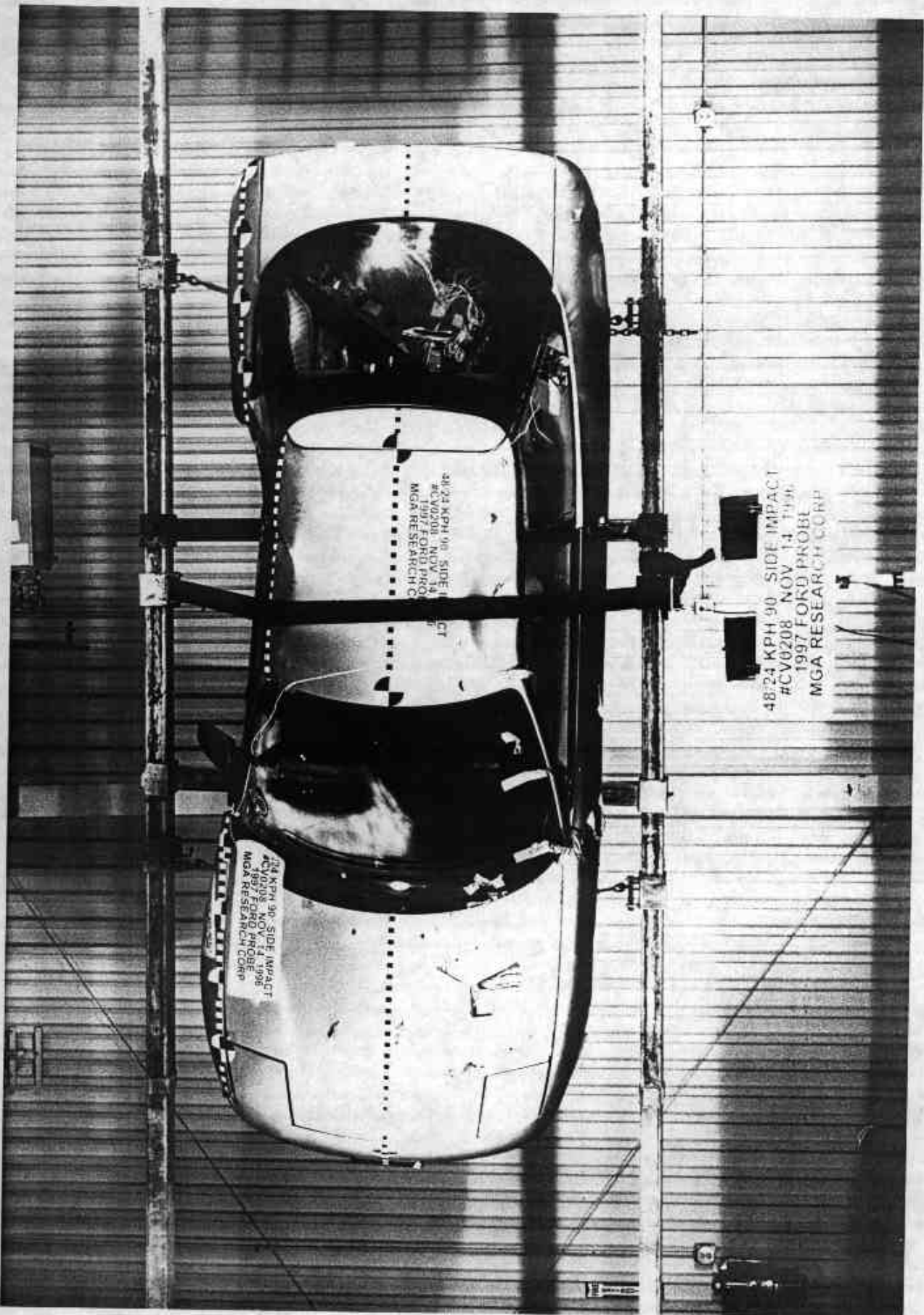
9

MADE IN U.S.A.



A-39

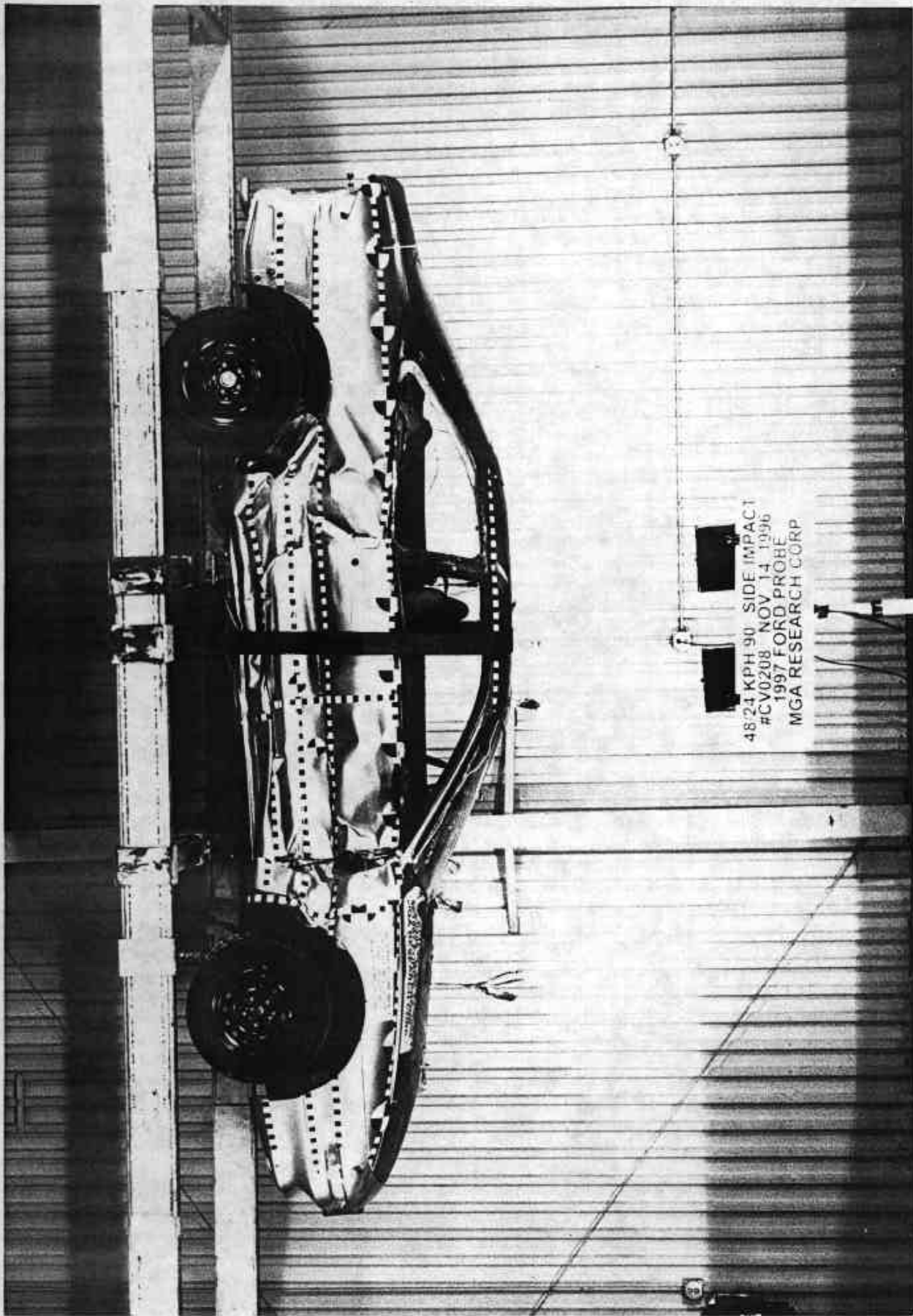
Photo No. A-39 - Vehicle Certification Label



48:24 KPH 90° SIDE IMPACT
#CV0208 NOV 14 1996
1997 FORD PROBE
MGA RESEARCH CORP

48:24 KPH 90° SIDE IMPACT
#CV0208 NOV 14 1996
1997 FORD PROBE
MGA RESEARCH CORP

Photo No. A-41 - Rollover 90°



48.24 KPH 90° SIDE IMPACT
#CV0208 NOV 14 1996
1997 FORD PROBE
MGA RESEARCH CORP

A-42

Photo No. A-42 - Rollover 180°

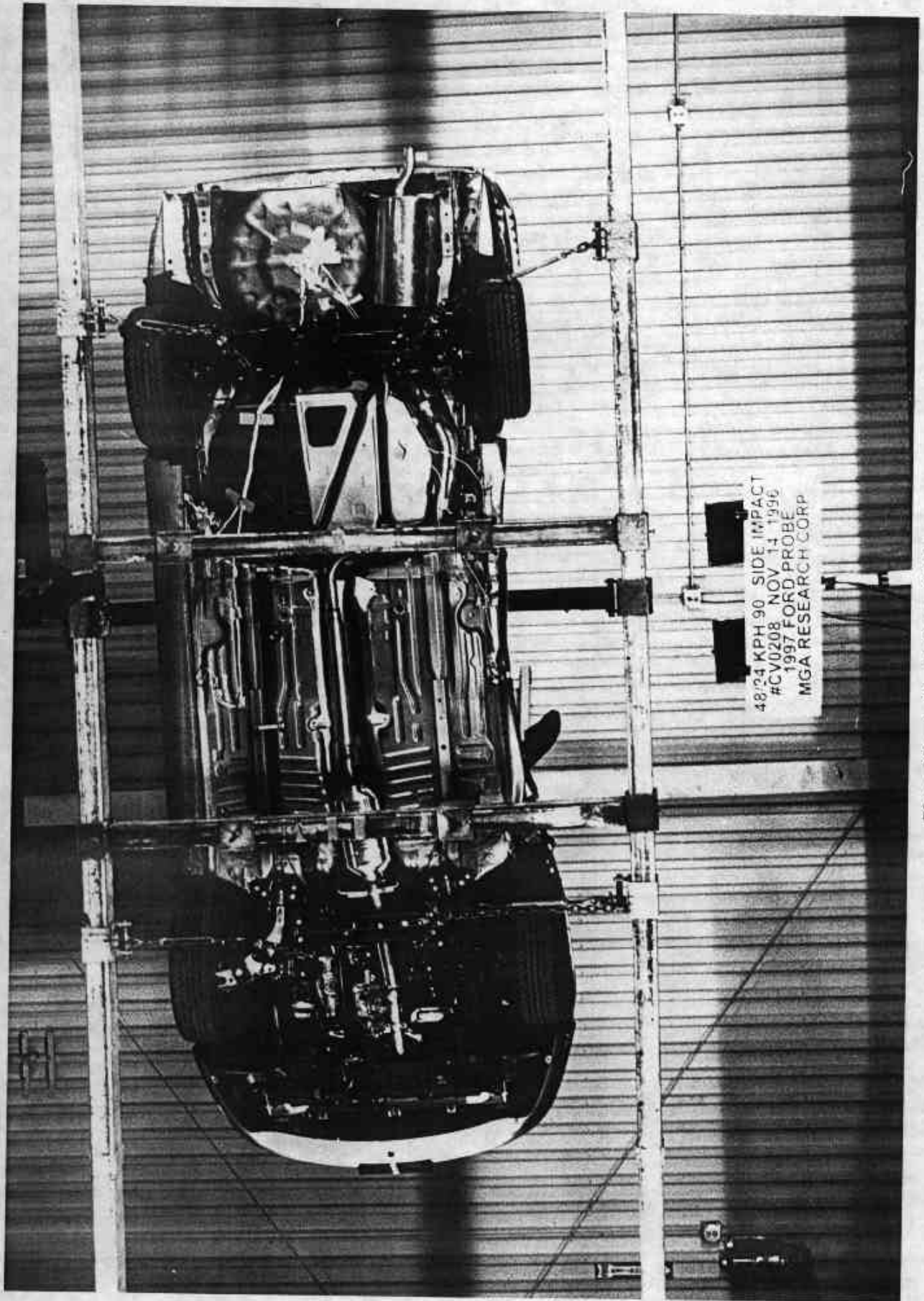
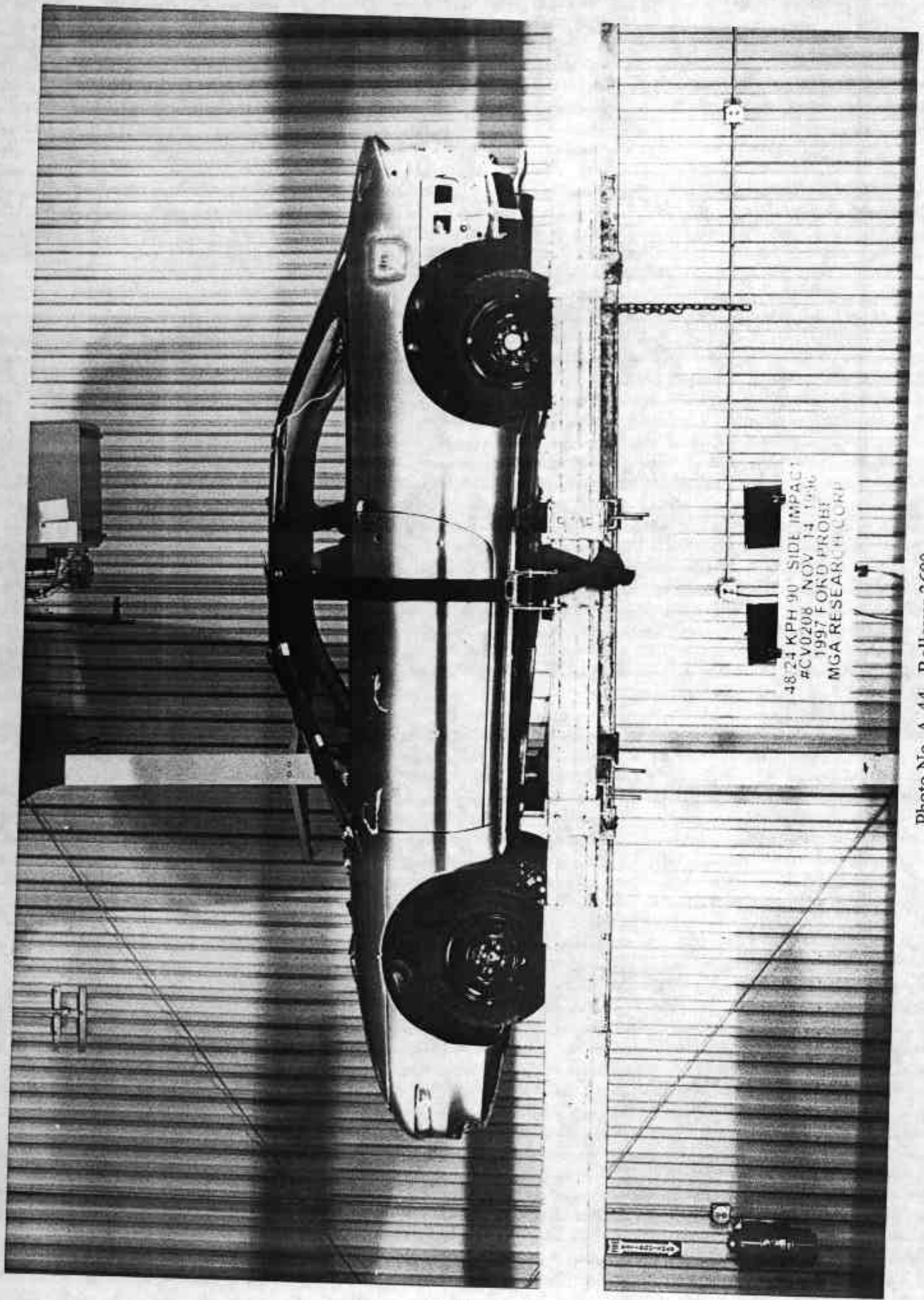


Photo No. A-43 - Rollover 270°

A-43



A-44

Photo No. A-44 - Rollover 360°

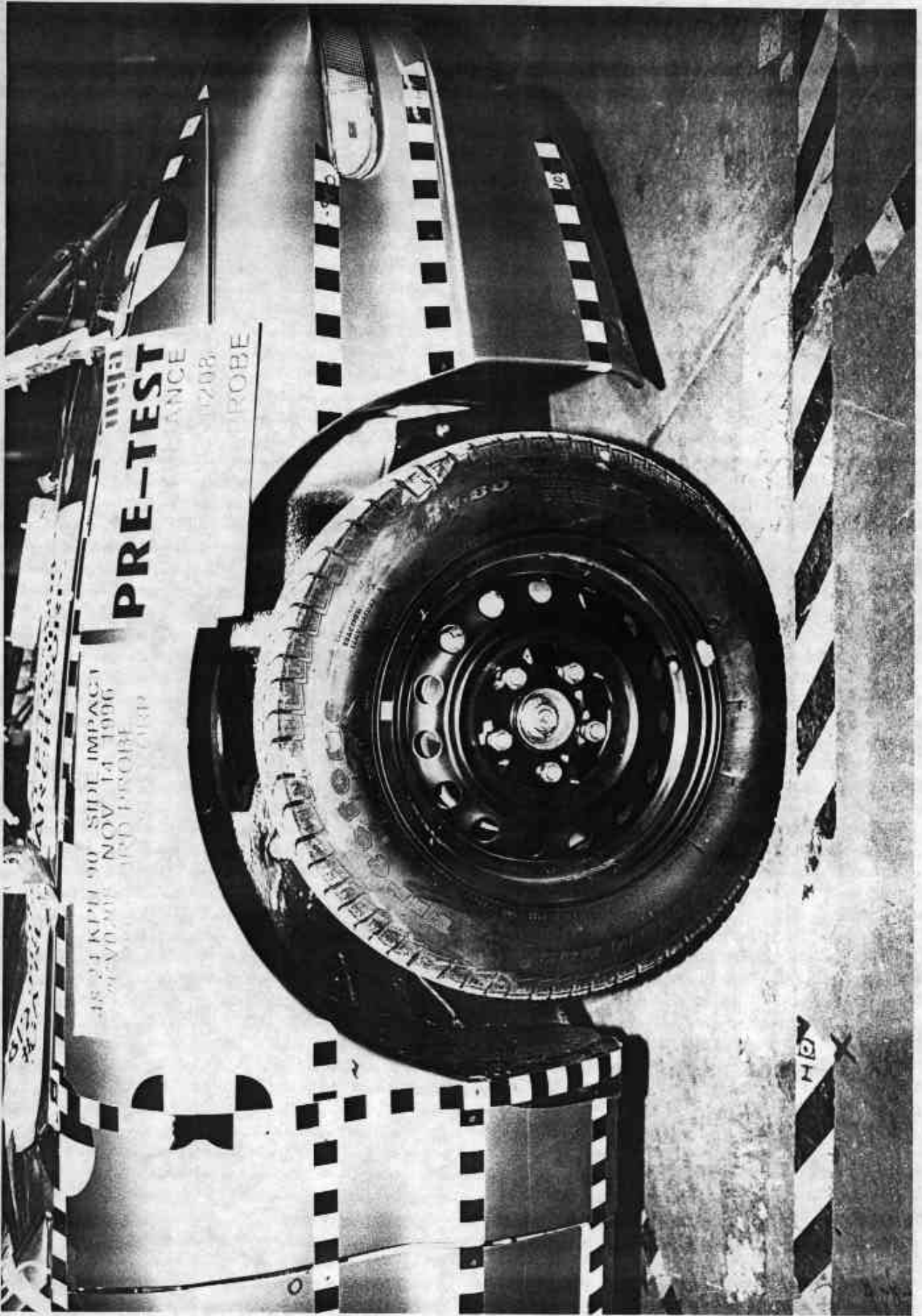


Photo No. A-45 - Right Front Attitude Point

A-45



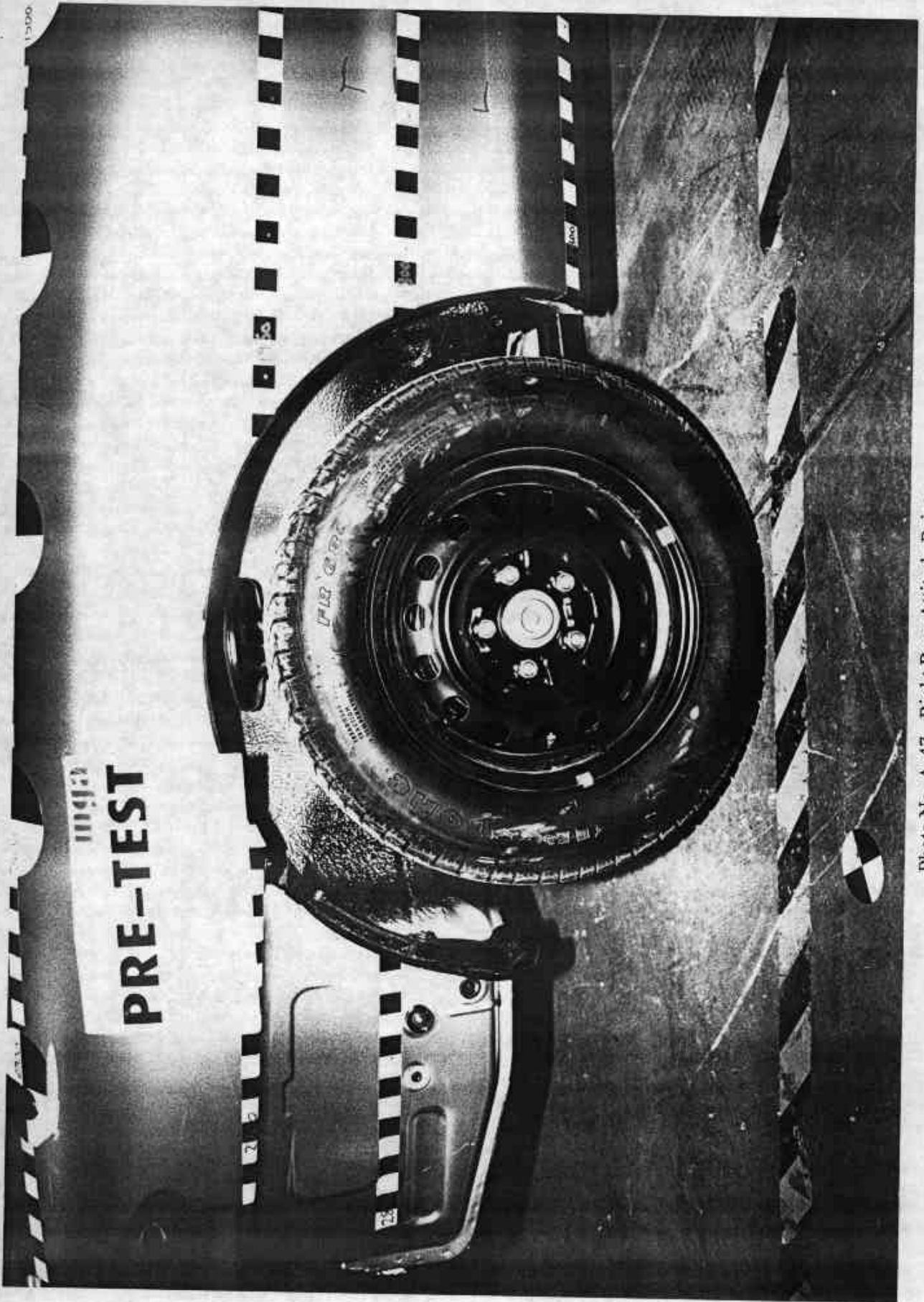
Photo No. A-46 - Left Front Attitude Point

A-46

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PRE-TEST



A-47

Photo No. A-47 - Right Rear Attitude Point

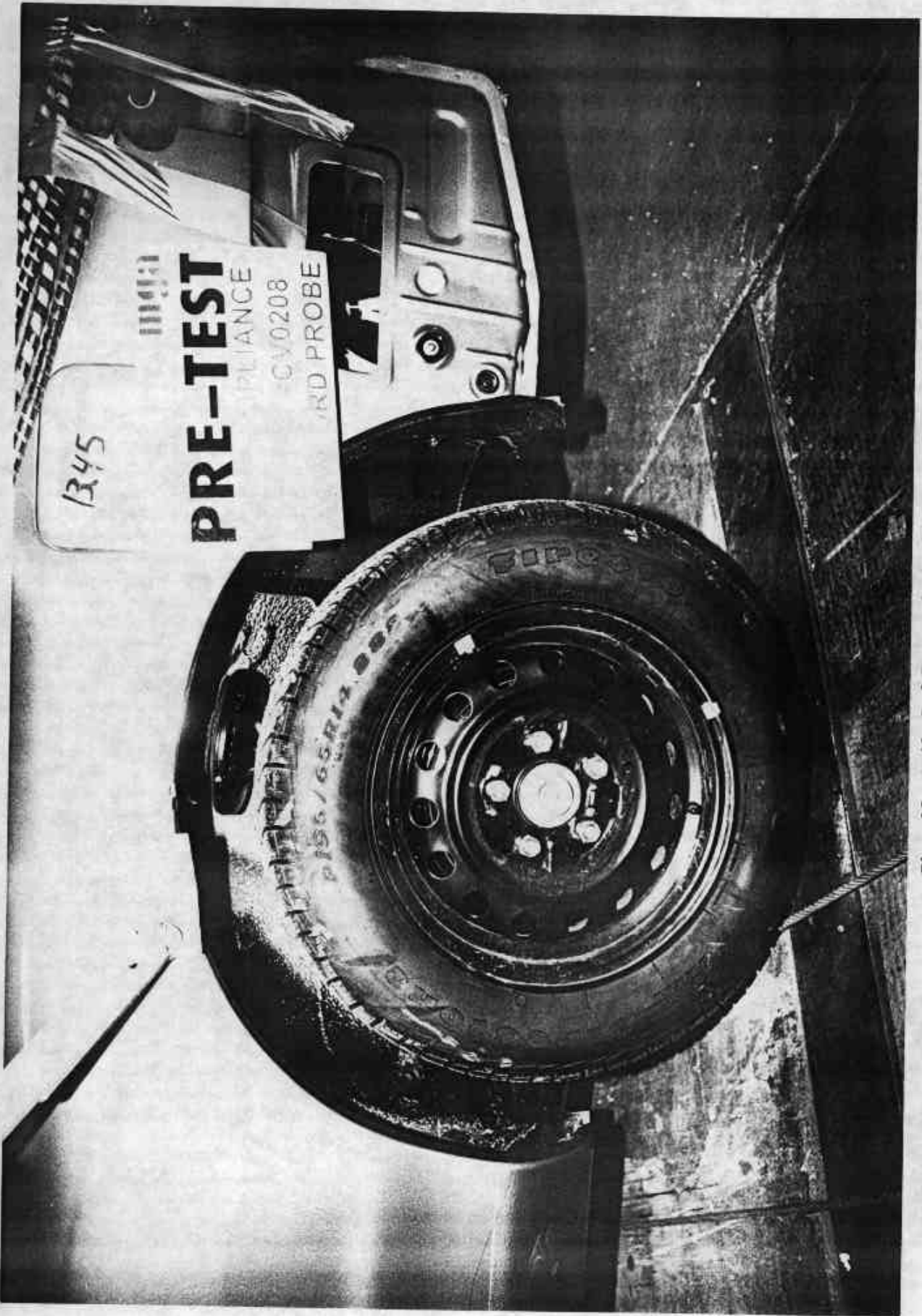


Photo No. A-48 - Left Rear Attitude Point

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TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

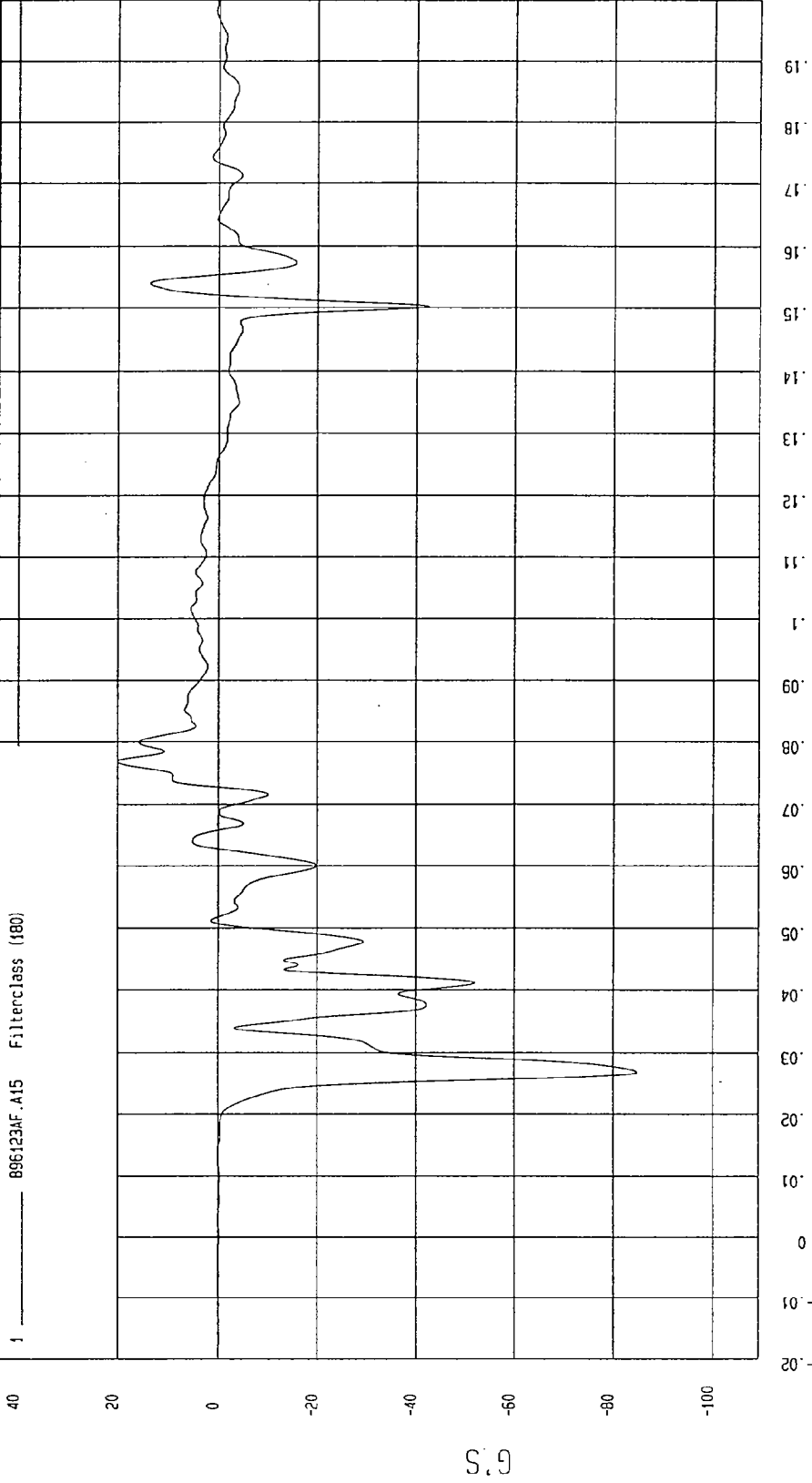
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-84.81932 G'S at 26. msec

YMAX= 20.07288 G'S at 76. msec

FRONT PASSENGER UPPER RIB Y ACCELERATION

1 896123AF.A15 Filterclass (180)



MCA Research
12-01-1996 03:57

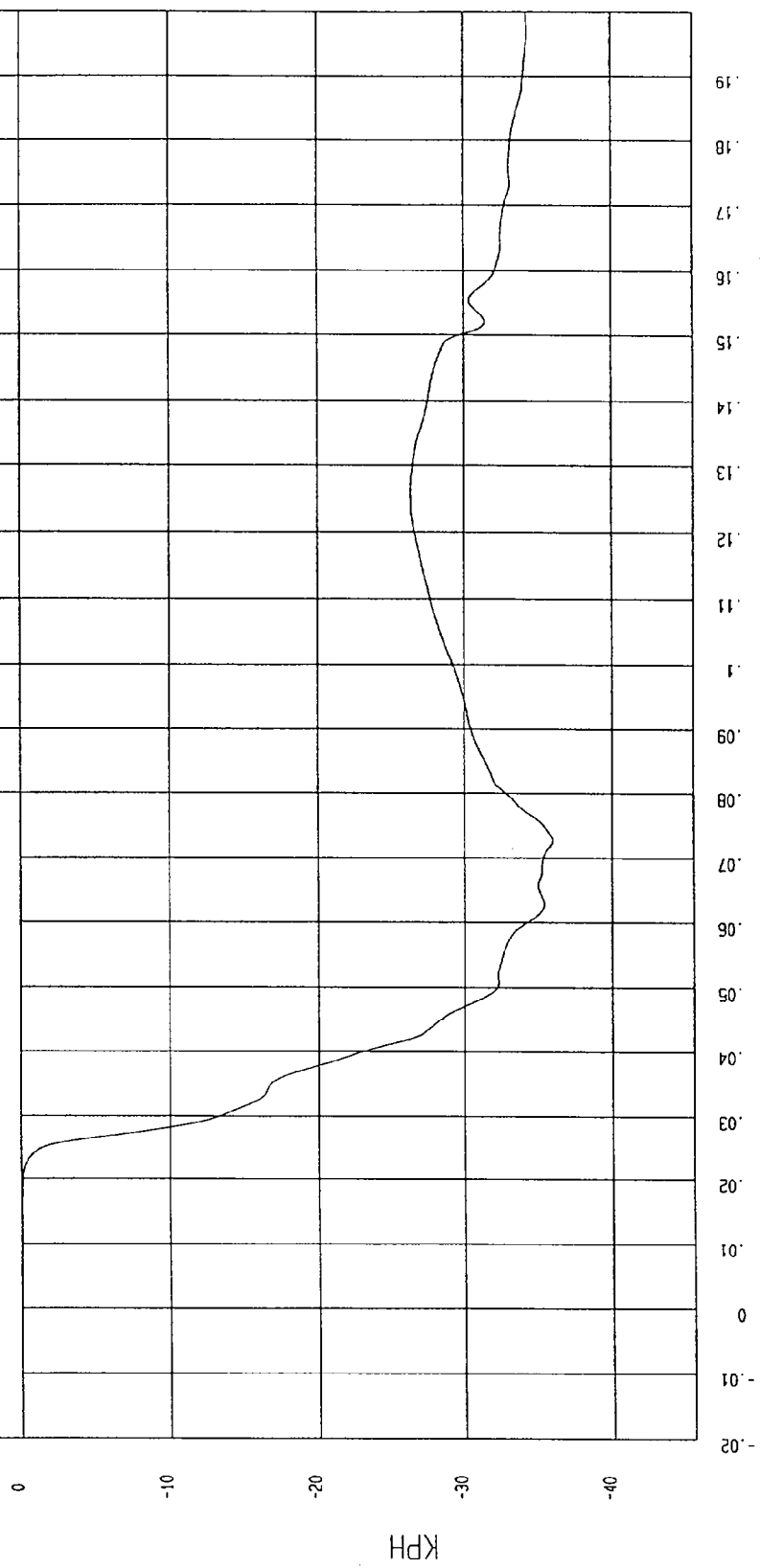
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-36.0492 KPH at 72. msec YMAX= 4.576317E-03 KPH at -1.5 msec

FRONT PASSENGER UPPER RIB Y VELOCITY

1 — 896123A1.V15 Filterclass (180)



HGA Research
12-01-1996 03:59

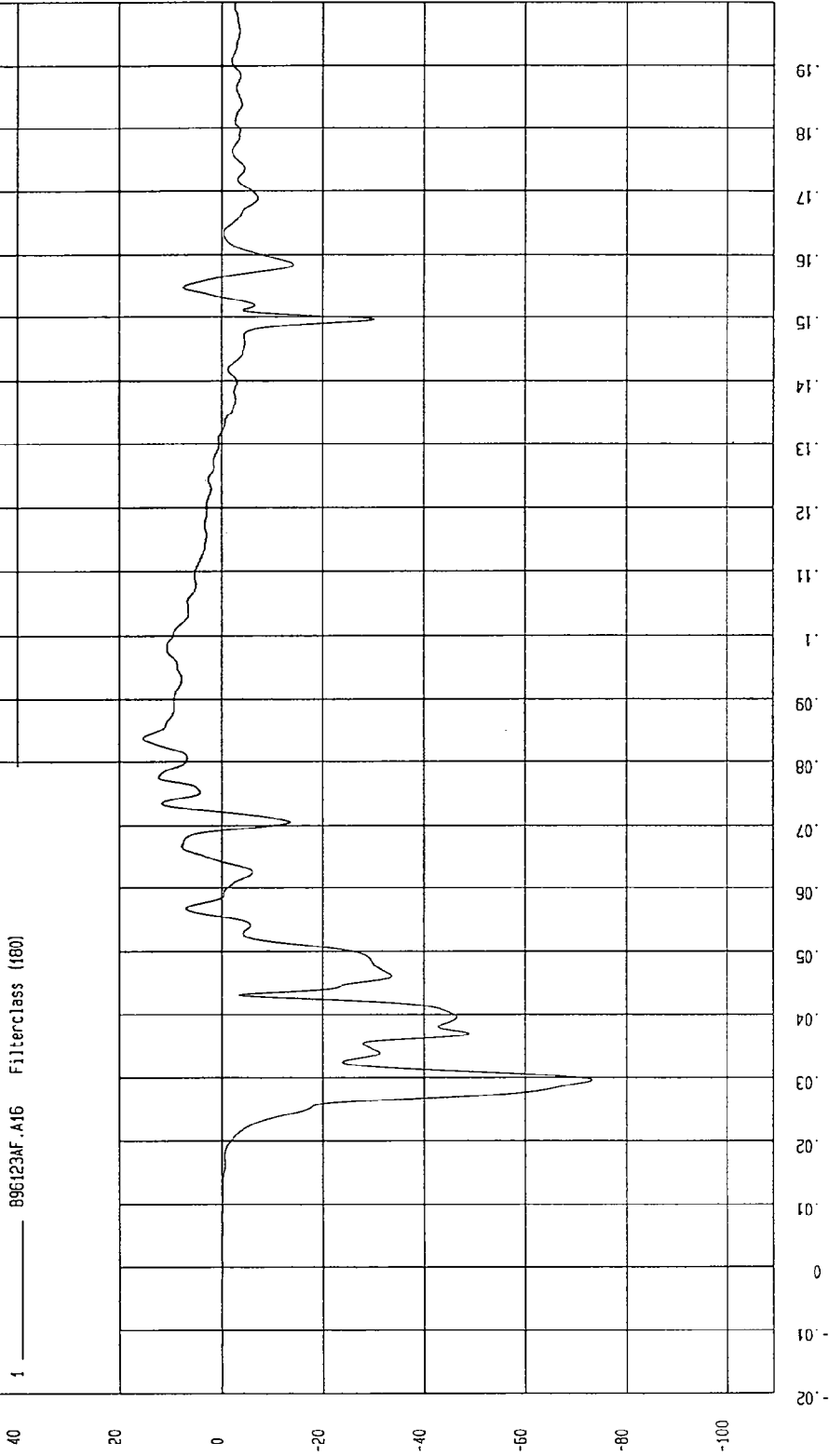
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-73.31832 G'S at 29. msec YMAX= 15.36097 G'S at 83. msec

FRONT PASSENGER LOWER RIB Y ACCELERATION

1 ——— 896123AF.A16 Filterclass (180)



MCA Research
12-01-1996 03:57

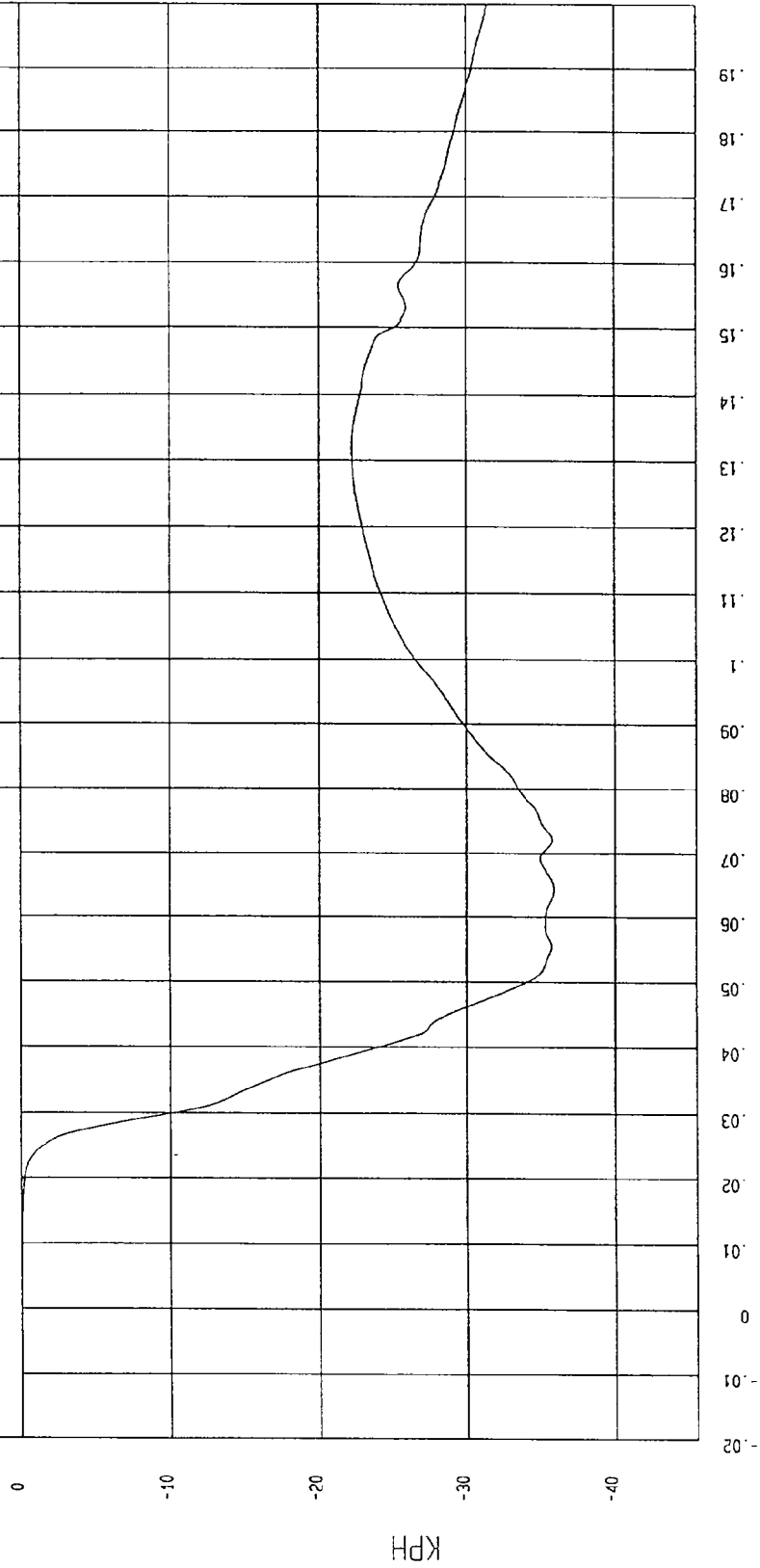
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-35.93058 KPH at 64. msec YMAX= 3.050658E-03 KPH at -18. msec

FRONT PASSENGER LOWER RIB Y VELOCITY

1 896123A1.V16 Filterclass (180)



MSA Research
12-01-1996 03:59

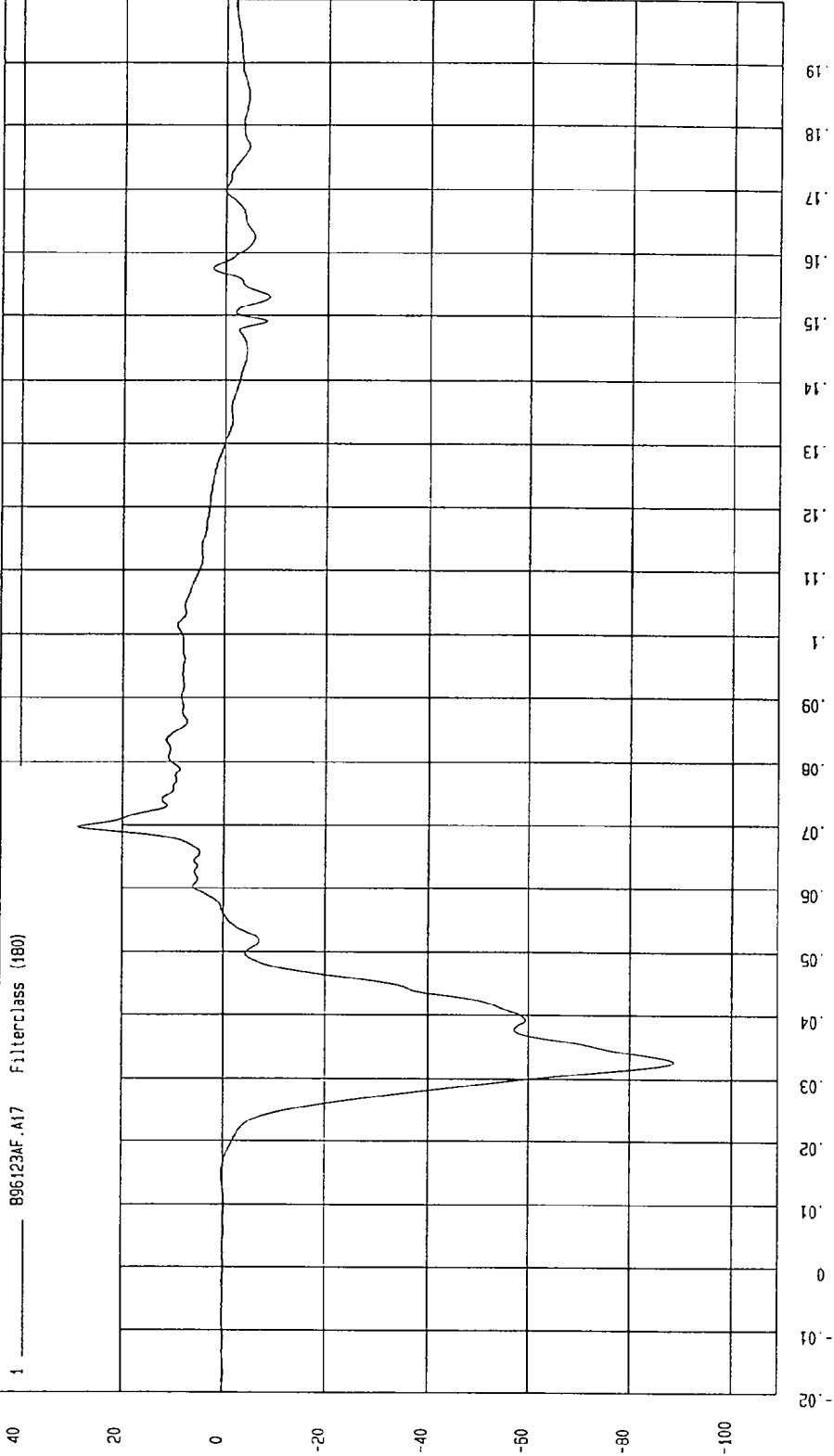
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-88.78658 G'S at 32. msec YMAX= 28.73432 G'S at 69. msec

FRONT PASSENGER LOWER SPINE Y ACCELERATION

1 896123AF-A17 Filterclass (180)



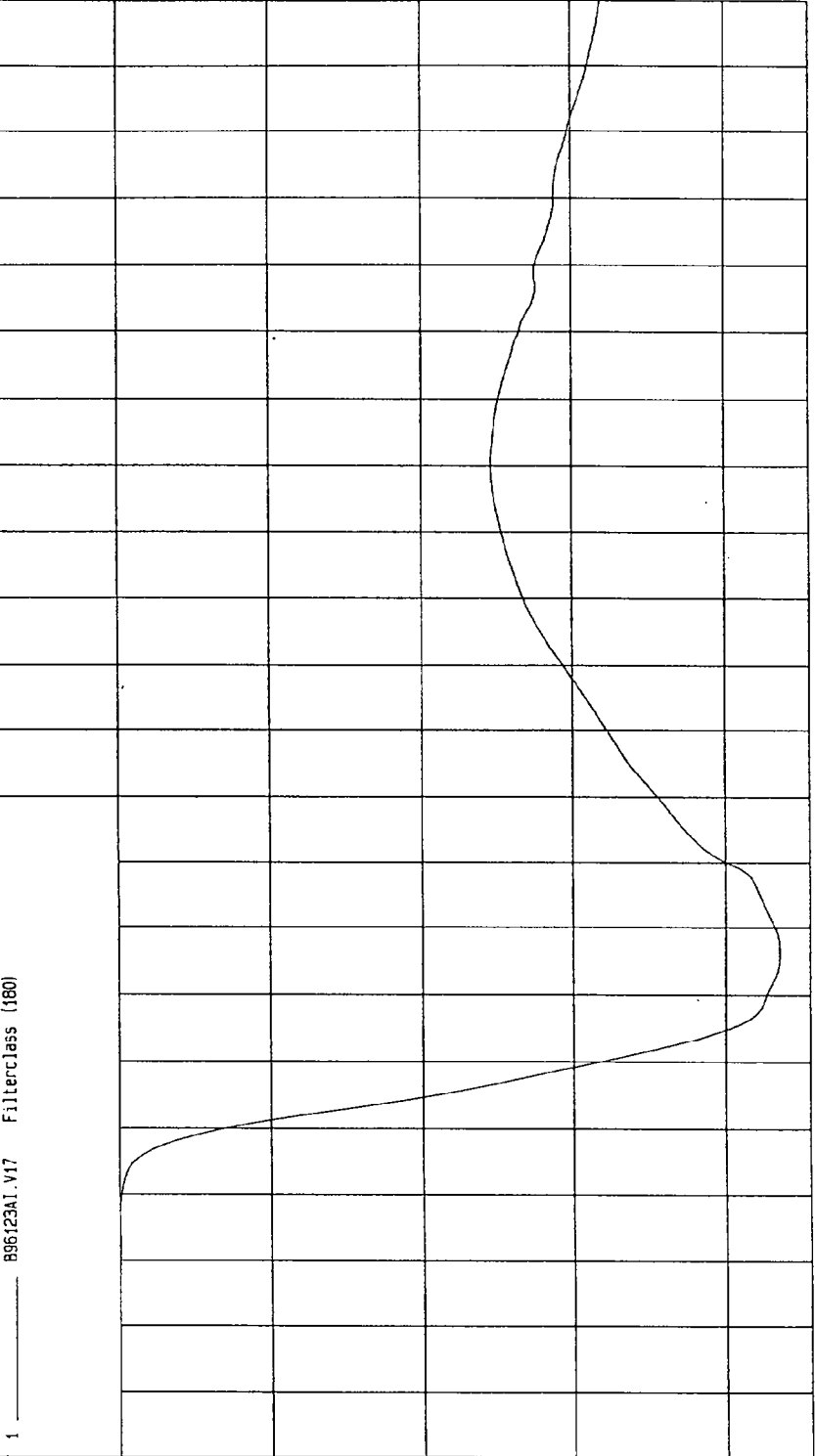
MGA Research
12-01-1996 03:57

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-43.50768 KPH at 56 msec YMAX= 1.027273E-02 KPH at -1.5 msec

FRONT PASSENGER LOWER SPINE Y VELOCITY



1 896123A1.V17 FillerClass (180) MCA Research 12-01-1996 03:59

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

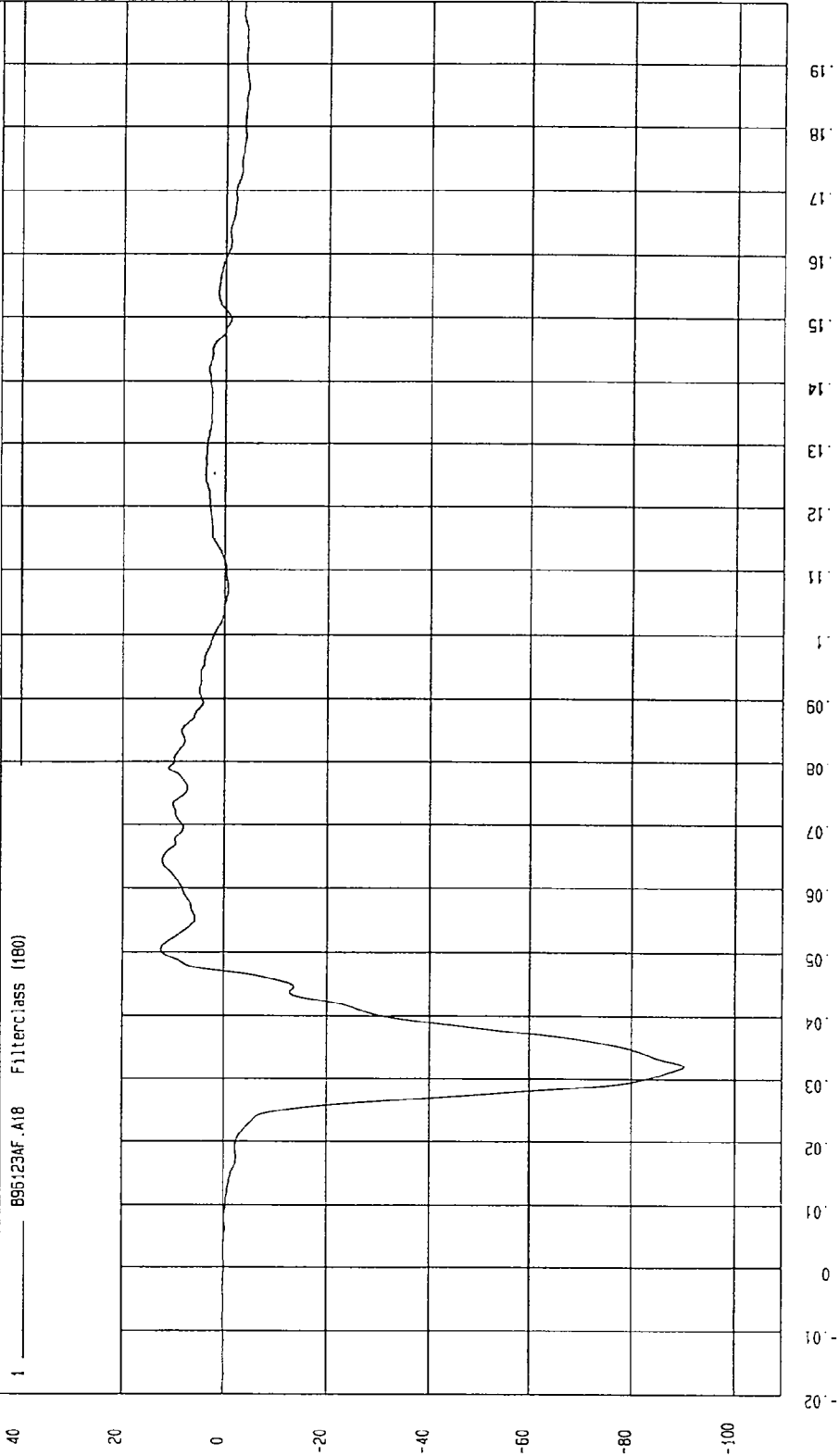
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-90.2845 G'S at 32. msec

YMAX= 12.56196 G'S at 50. msec

FRONT PASSENGER PELVIS Y ACCELERATION

1 ——— B951234F.A18 Filterc1ass (180)



MGA Research
12-01-1996 03.57

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

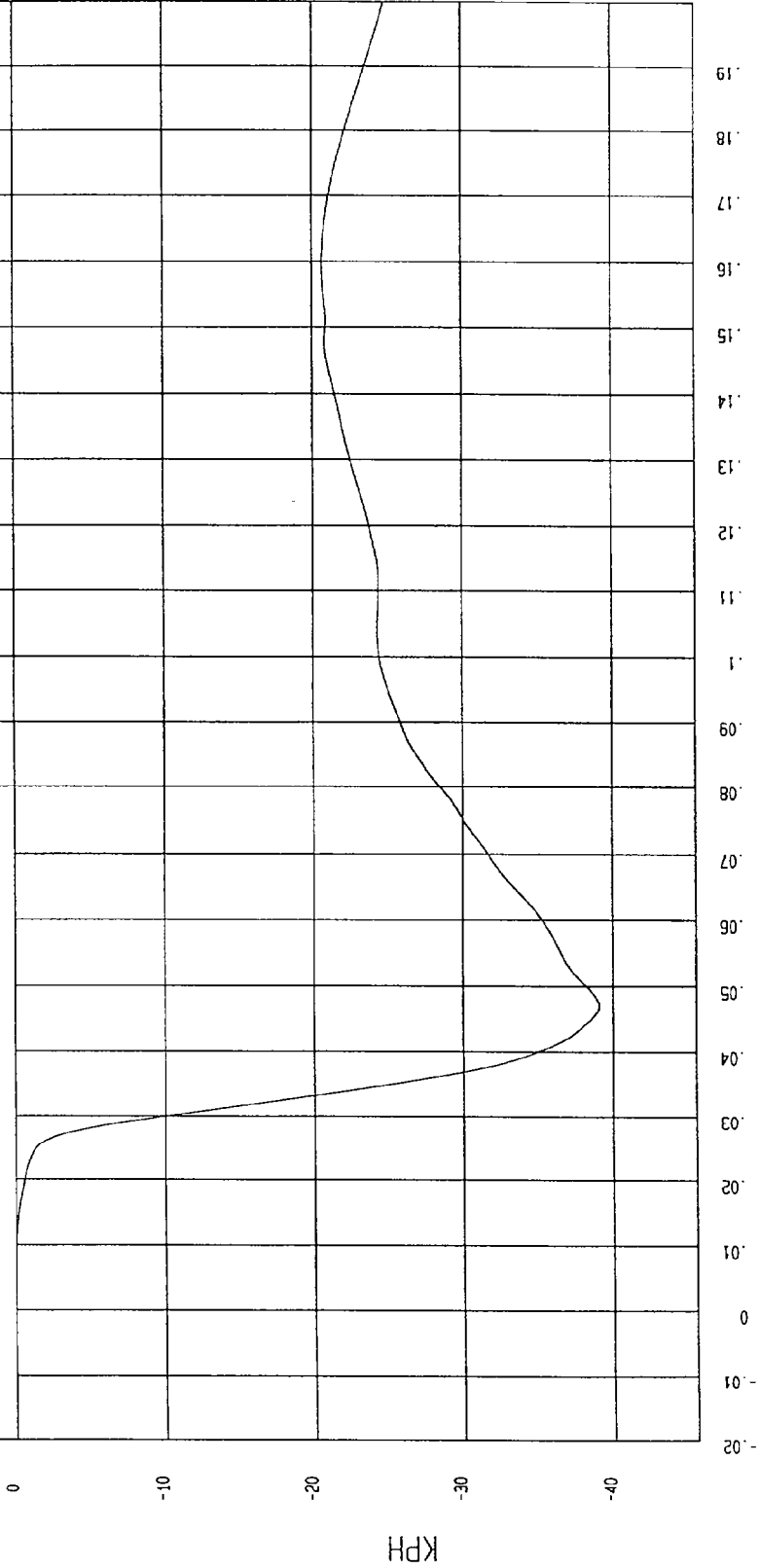
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-39.06809 KPH at 47. msec

YMAX= 1.35785E-02 KPH at -1.3 msec

FRONT PASSENGER PELVIS Y VELOCITY

1 896123AI.V18 Filterclass (180)



MCA Research
12-01-1996 03:59

TIME Seconds

KPH

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

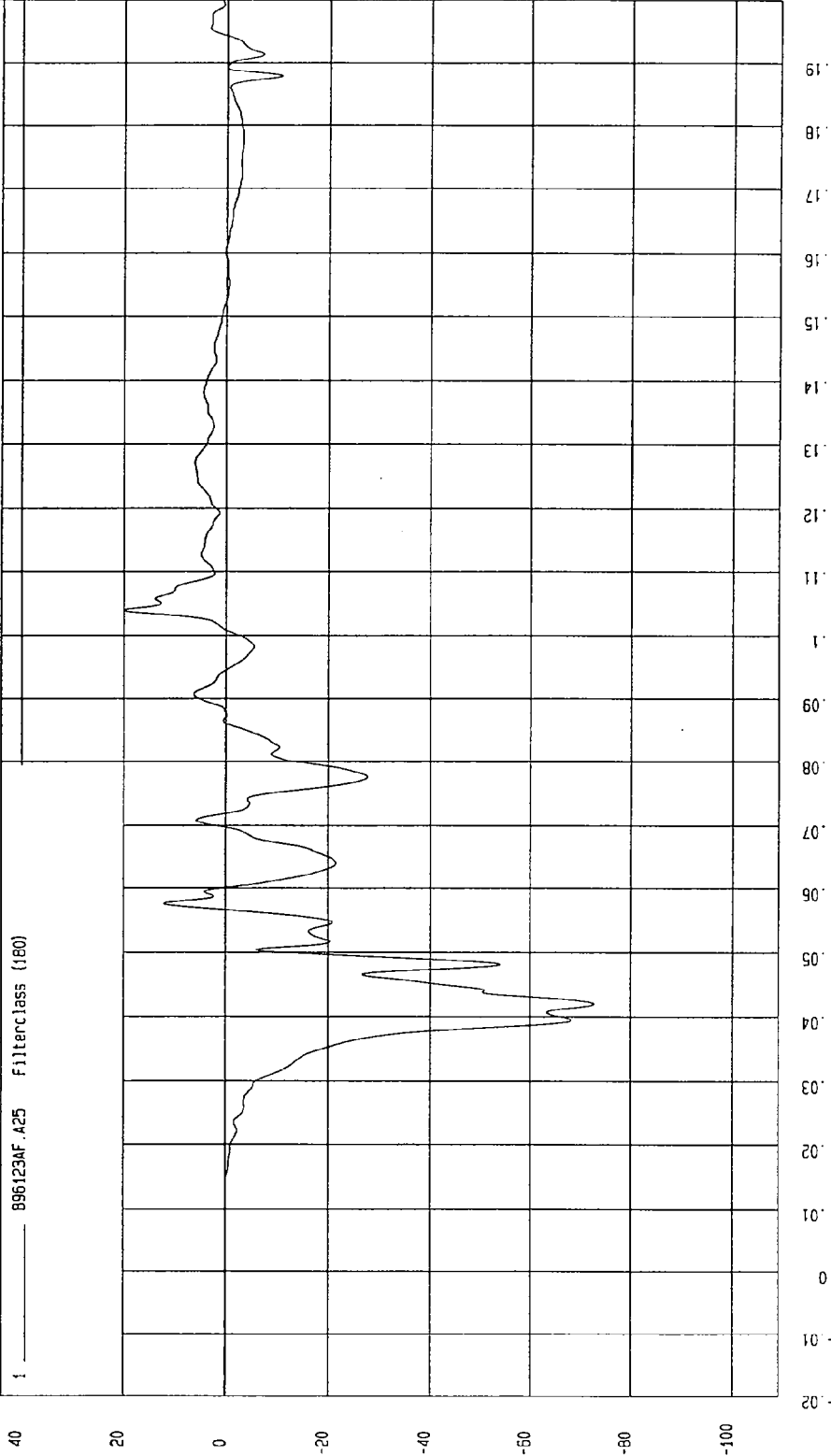
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-72.7484 G'S at 42 msec

YMAX= 20.14281 G'S at 103 msec

REAR PASSENGER UPPER RIB Y ACCELERATION

! _____ 896123AF.A25 Filterclass (160)



MCA Research
12-01-1996 03:58

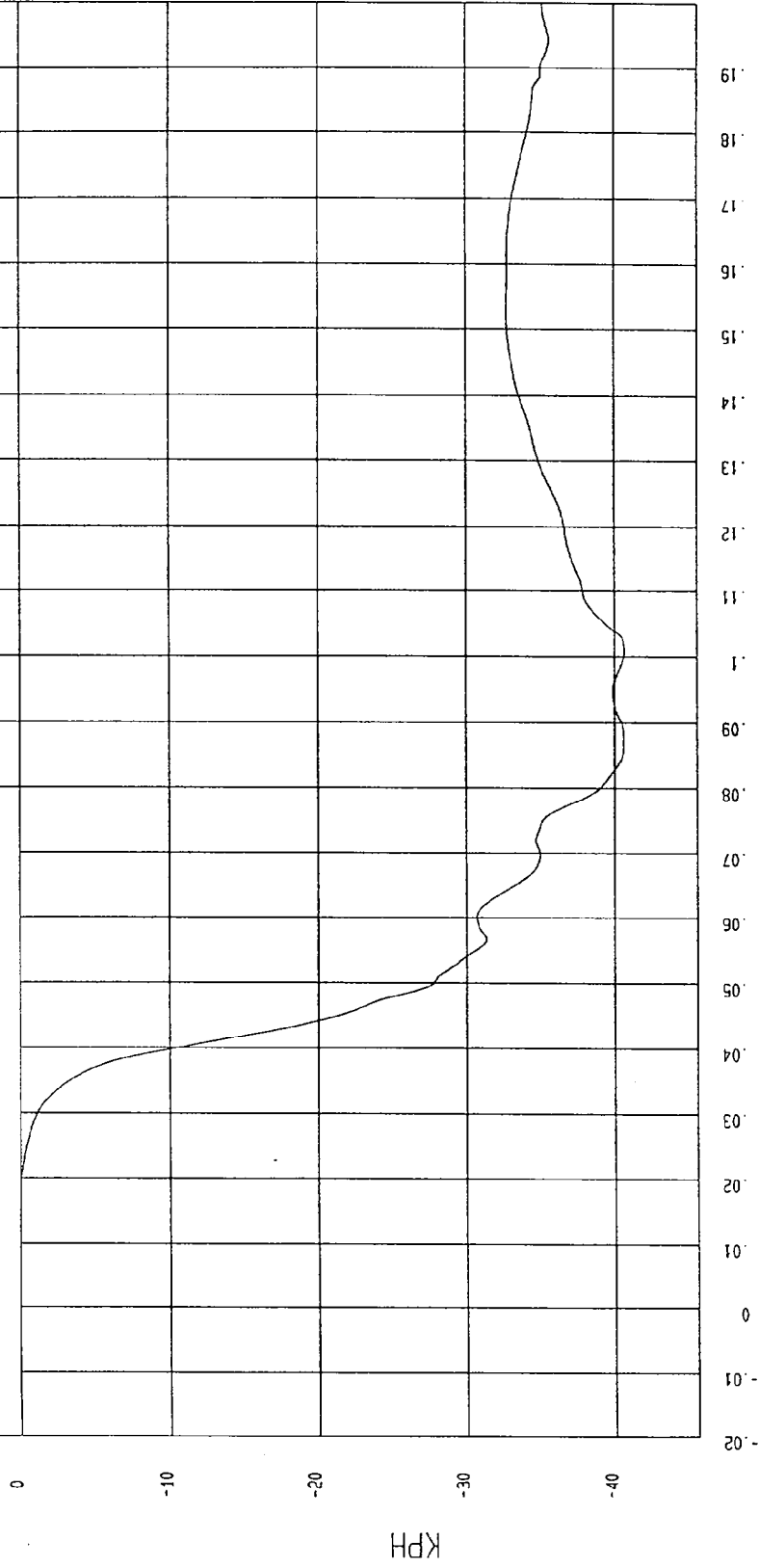
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-40.65262 KPH at 100 msec YMAX= 5.569203E-02 KPH at -2.2 msec

REAR PASSENGER UPPER RIB Y VELOCITY

1 896123A1.V25 FilterClass (180)



MGA Research
12-01-1996 03:59

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

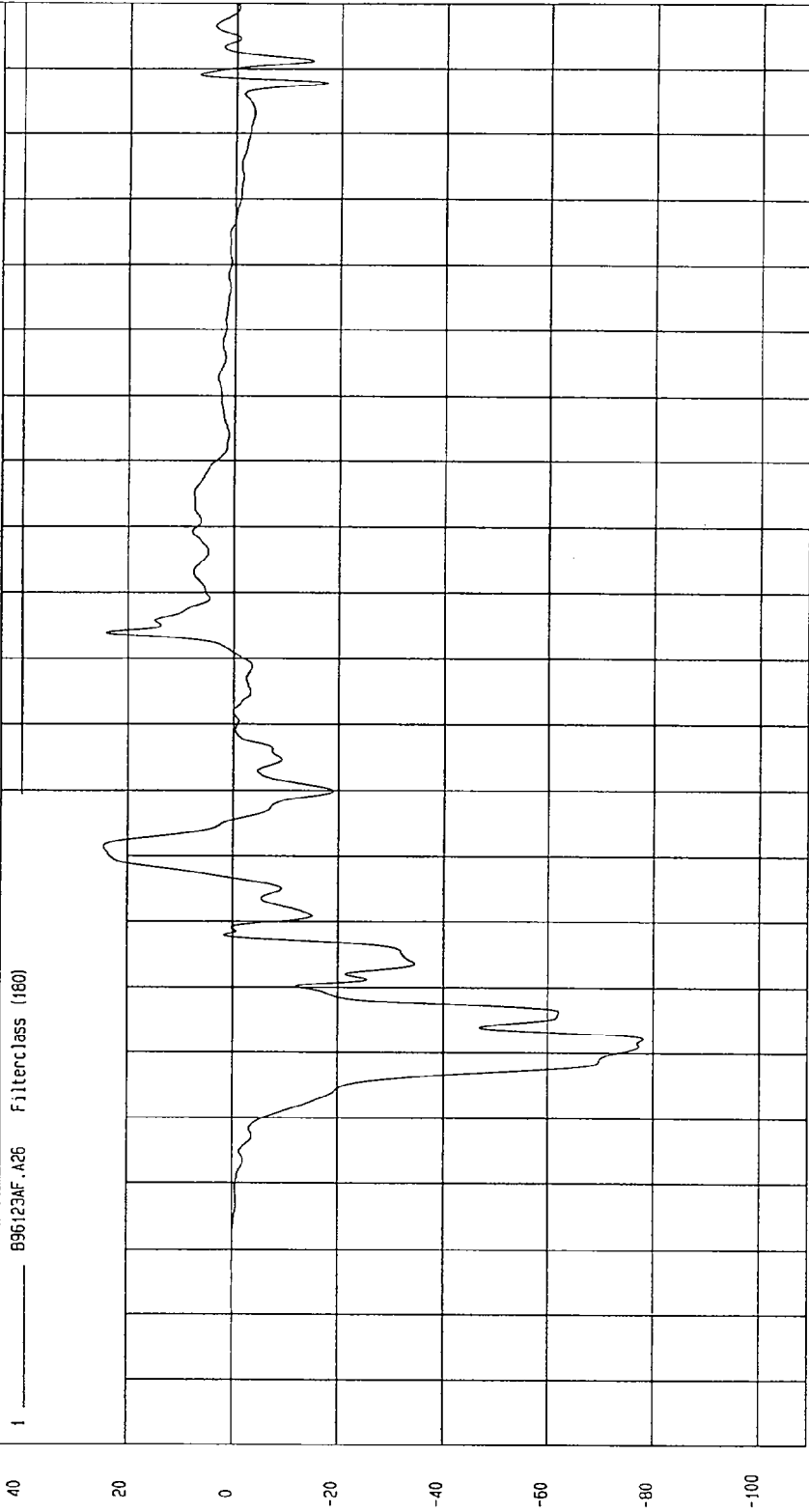
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-78.17554 G'S at 42. msec

YMAX= 24.55355 G'S at 71. msec

REAR PASSENGER LOWER RIB Y ACCELERATION

1 _____ B96123AF.A26 Filterclass (180)



MCA Research
12-01-1996 03:58

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

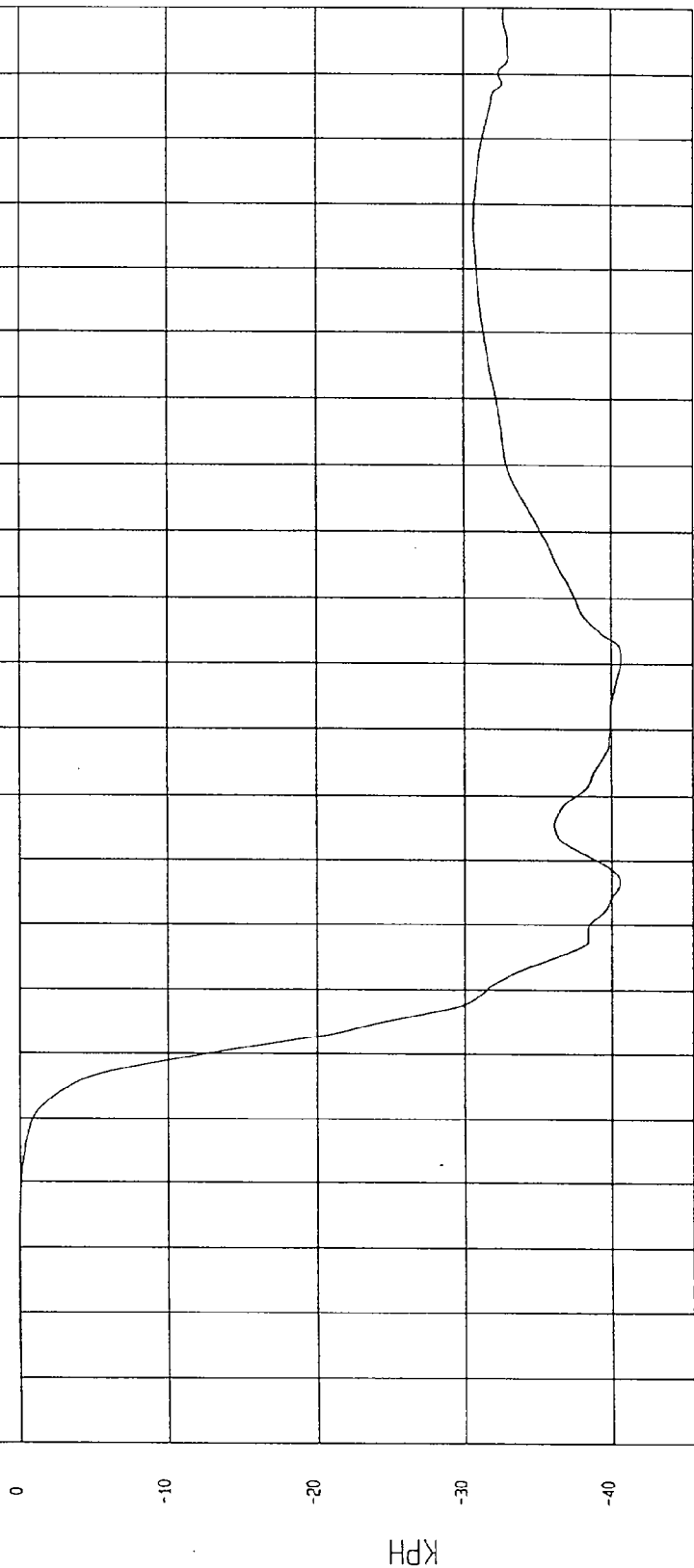
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-40.63498 KPH at 100 msec

YMAX= .087971 KPH at 8.5 msec

REAR PASSENGER LOWER RIB Y VELOCITY

1 896123A1.V26 Filterclass (180)



MGA Research
12-01-1996 04:00

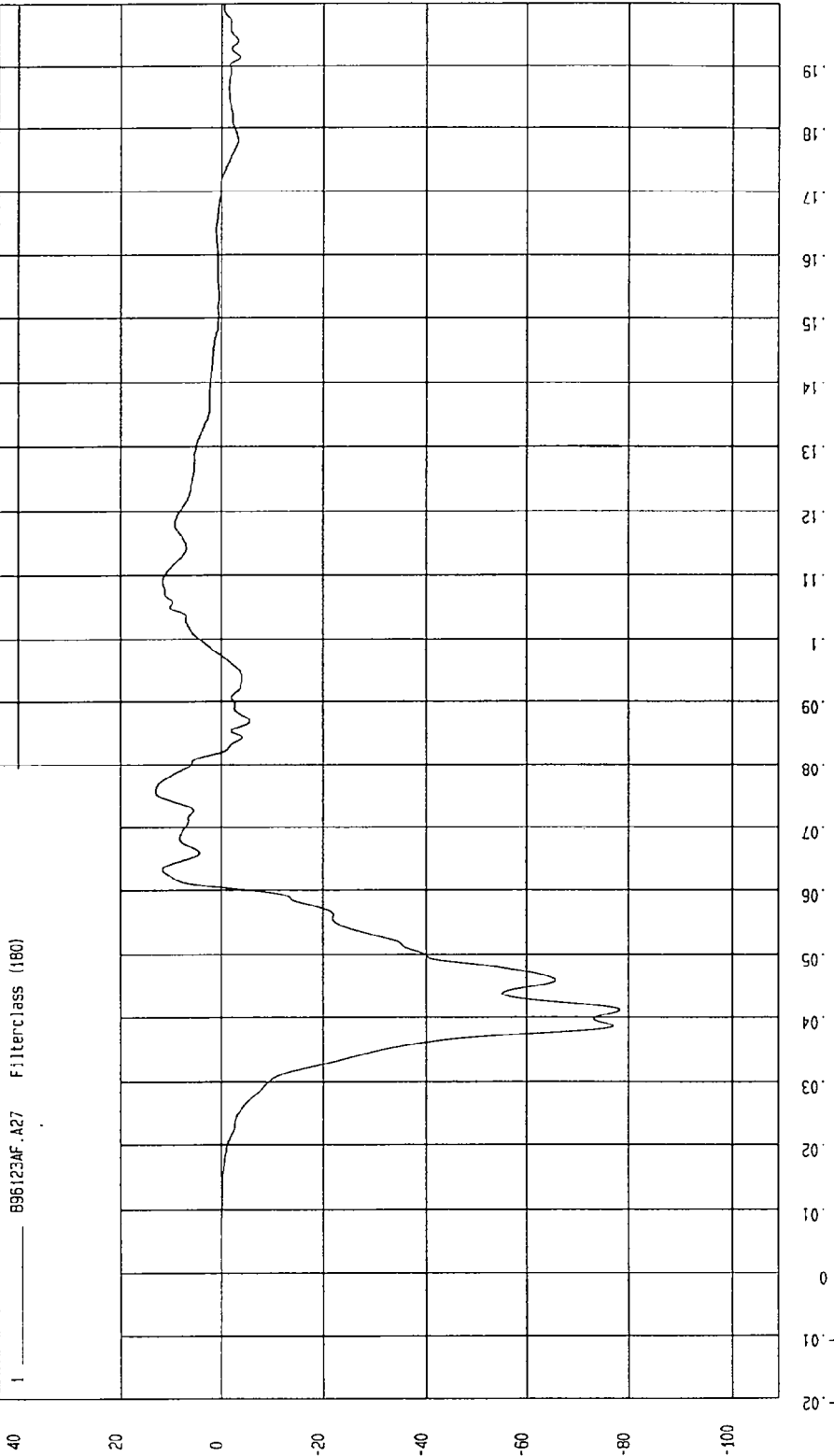
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-78.30484 G'S at 41. msec YMAX= 13.11218 G'S at 75. msec

REAR PASSENGER LOWER SPINE Y ACCELERATION

1 ——— B96123AF.A27 Filter: class (180)



MGA Research
12-01-1996 03:58

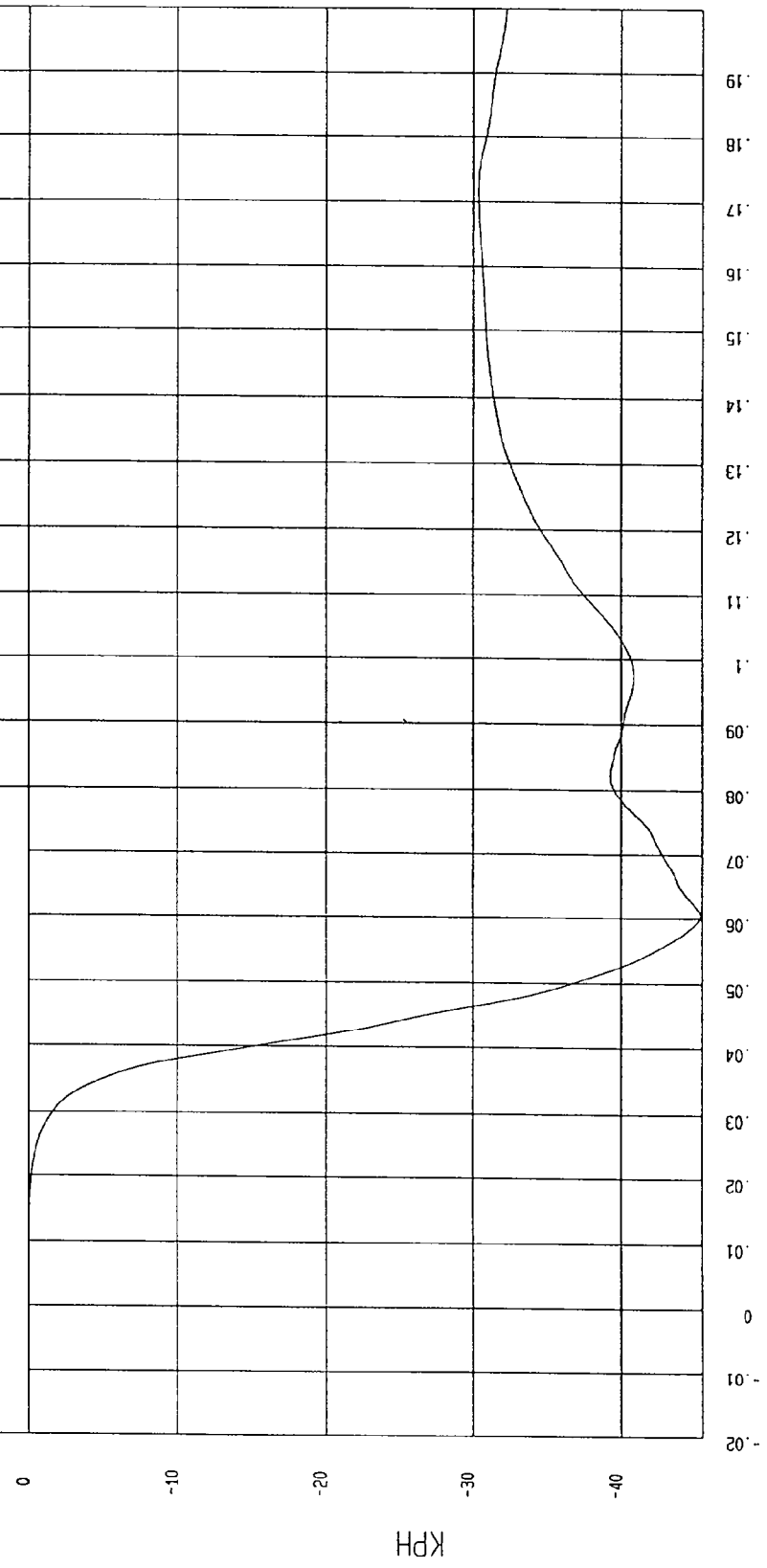
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-45.3495 KPH at 60. msec YMAX= 2.520001E-02 KPH at -8 msec

REAR PASSENGER LOWER SPINE Y VELOCITY

1 ——— 896123A1.V27 Filterclass (180)



MCA Research
12-01-1996 04:00

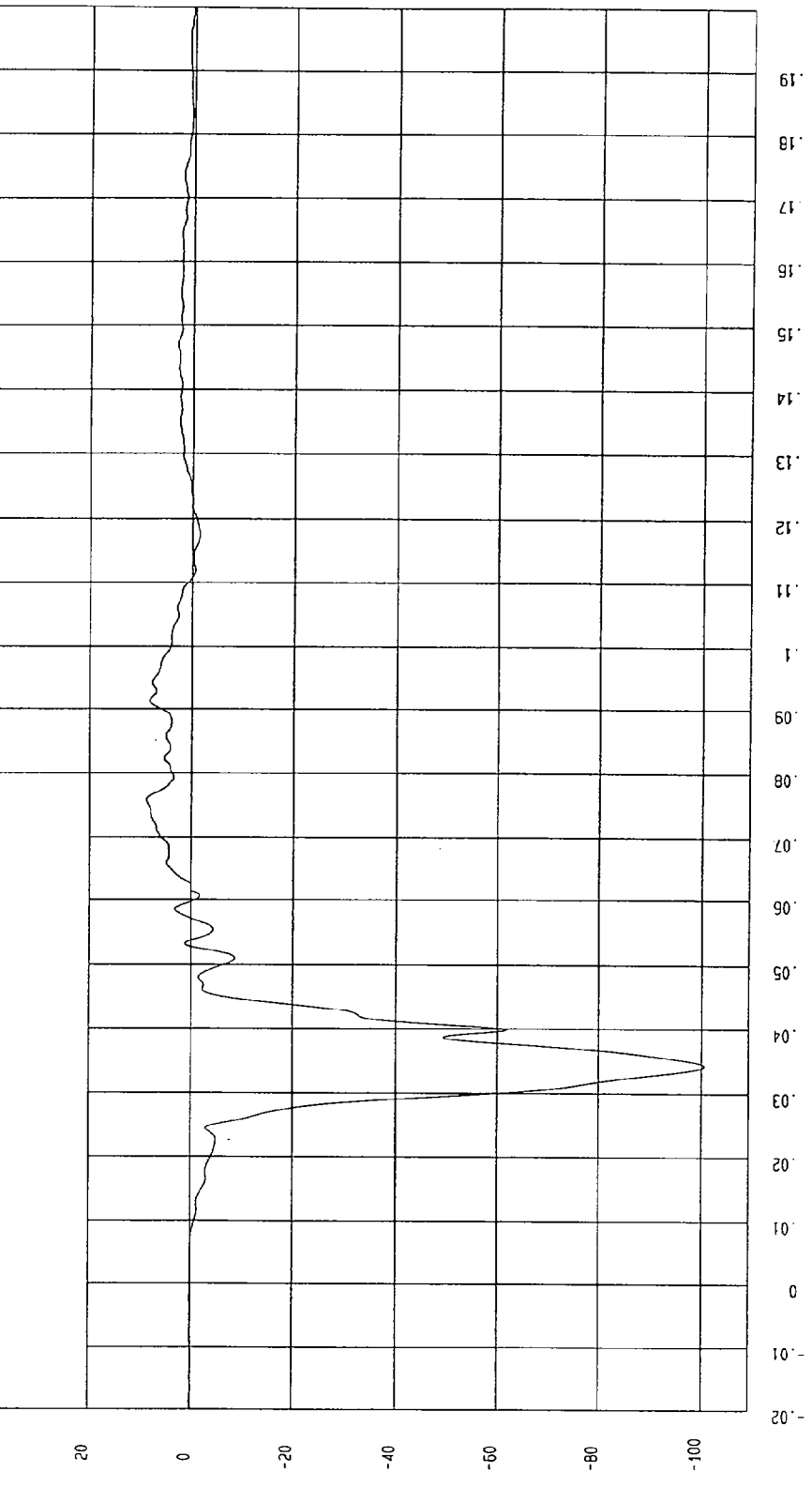
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-100.5776 G'S at 34. msec YMAX= 8.734036 G'S at 75. msec

REAR PASSENGER PELVIS Y ACCELERATION

1 896123MF.A28 Filterclass (180)



WGA Research
12-01-1996 03:58

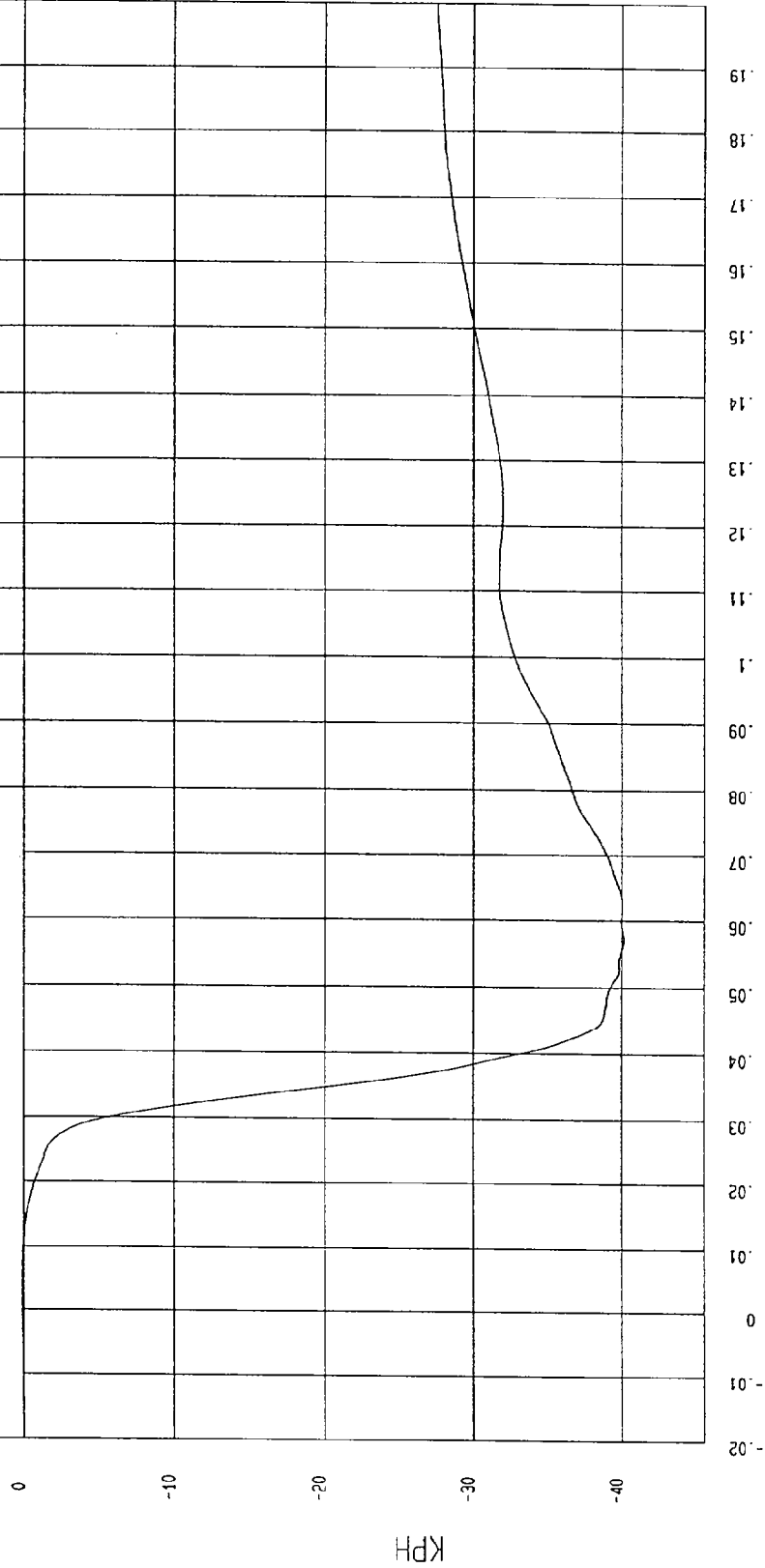
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-40.14946 KPH at 57. msec YMAX= 8.61332E-02 KPH at 5.1 msec

REAR PASSENGER PELVIS Y VELOCITY

1 ——— 896123A1.V28 Filterclass (180)

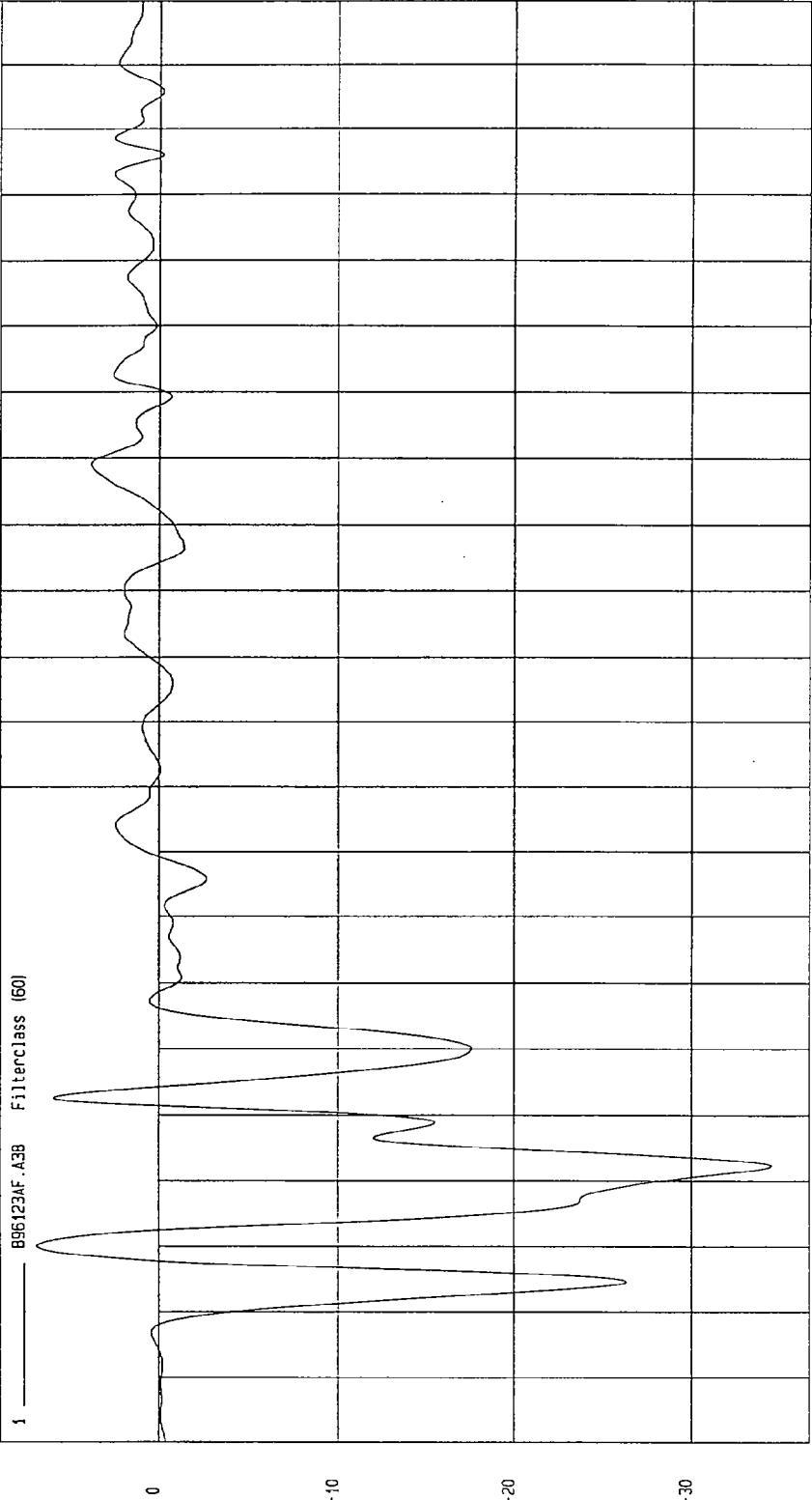


NSA Research
12-01-1996 04:00

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-34.48535 G'S at 22. msec YMAX= 6.900465 G'S at 10. msec

RIGHT SIDE SILL AT FRONT SEAT Y ACCELERATION



TIME (SECONDS)

MSA Research
12-01-1996 04:02

G.S

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

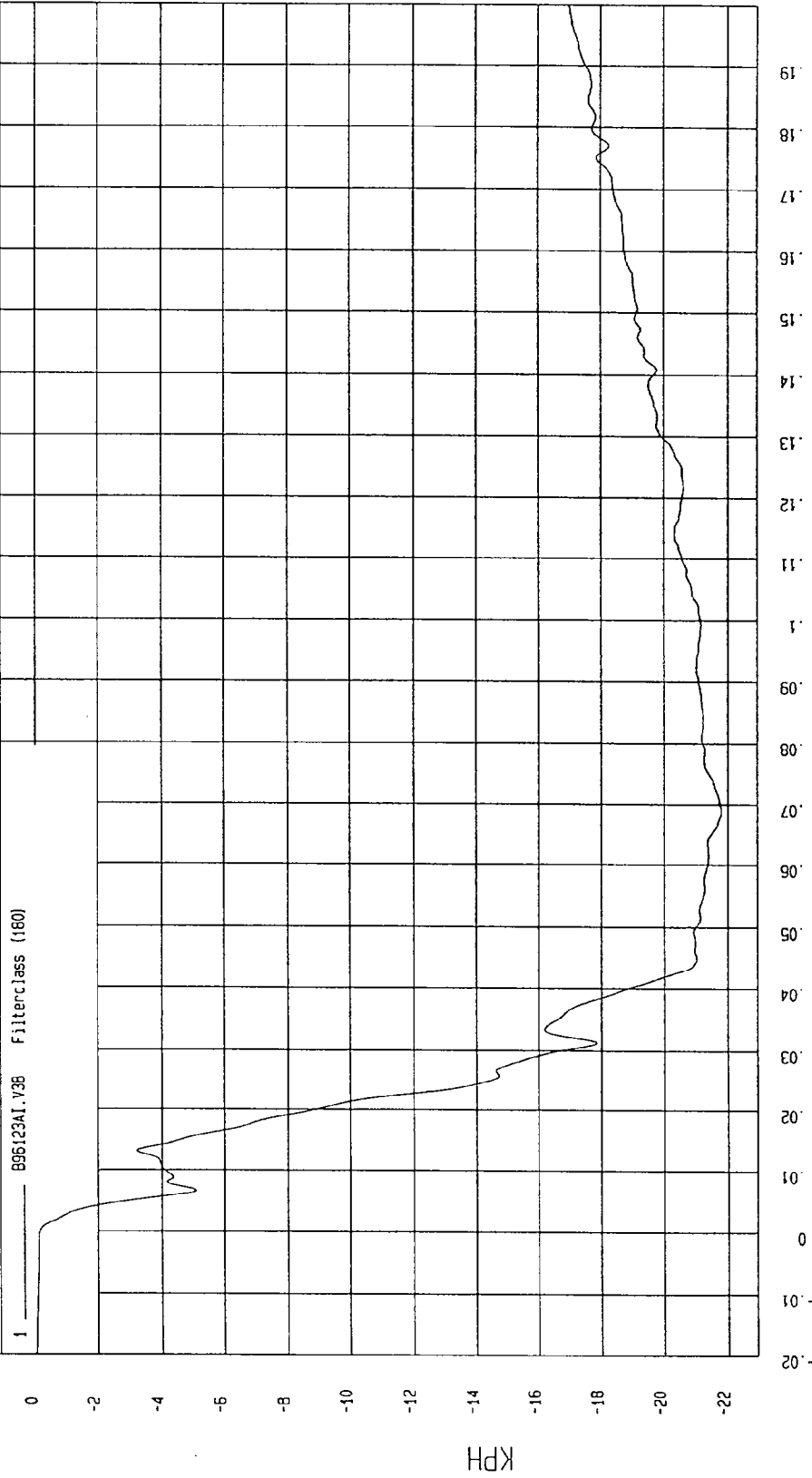
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-21.7964 KPH at 66. msec

YMAX= 0 KPH at -20 msec

RIGHT SIDE SILL AT FRONT SEAT Y VELOCITY

1 895123A1.V36 Filterclass (180)



MCA Research
12-01-1996 03:54

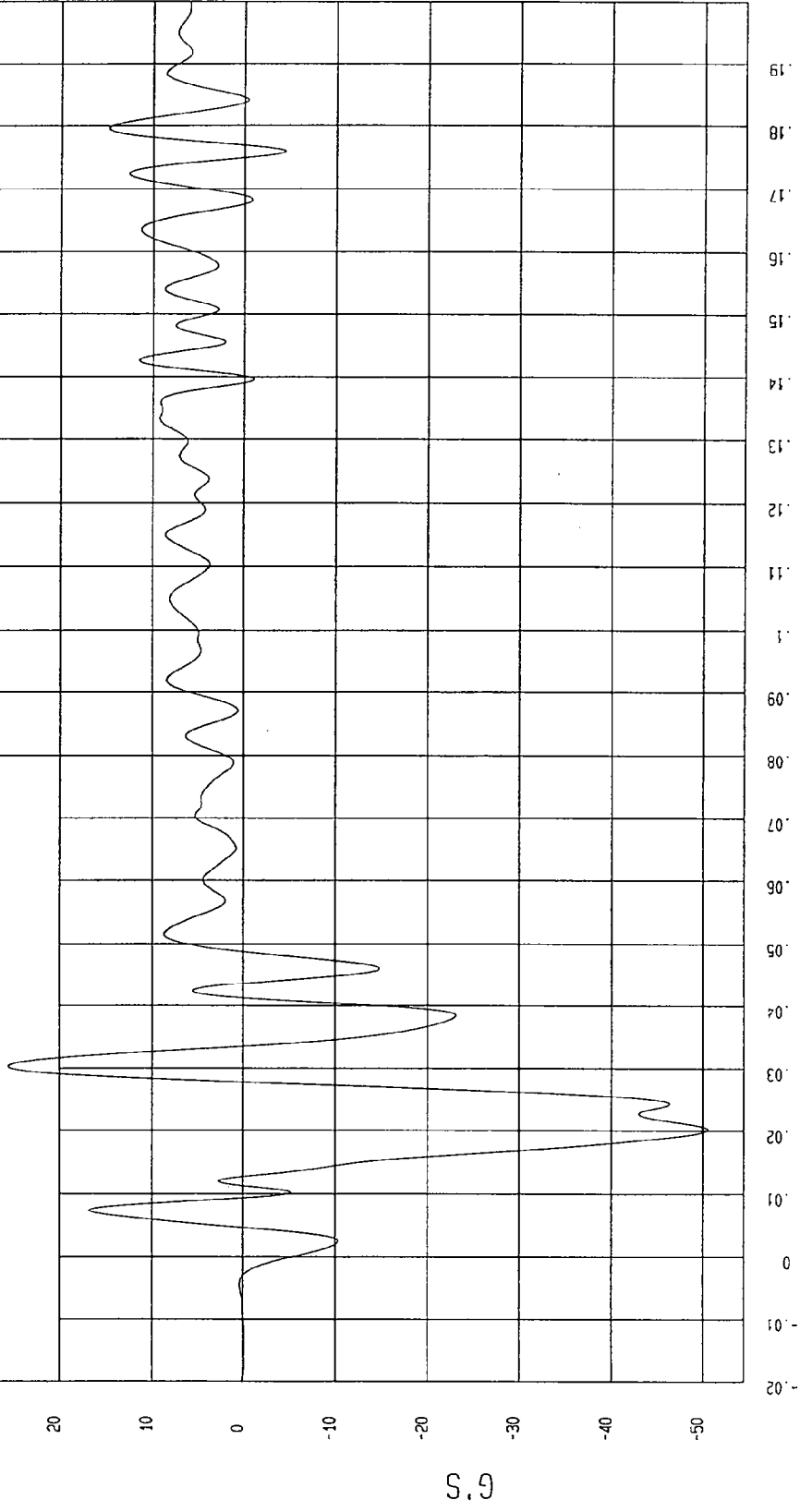
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-50.53554 G'S at 20. msec YMAX= 25.60023 G'S at 30. msec

RIGHT SIDE SILL AT REAR SEAT Y ACCELERATION

1 896123AF.A39 Filterclass (50)



MGA Research
12-01-1996 04: 02

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

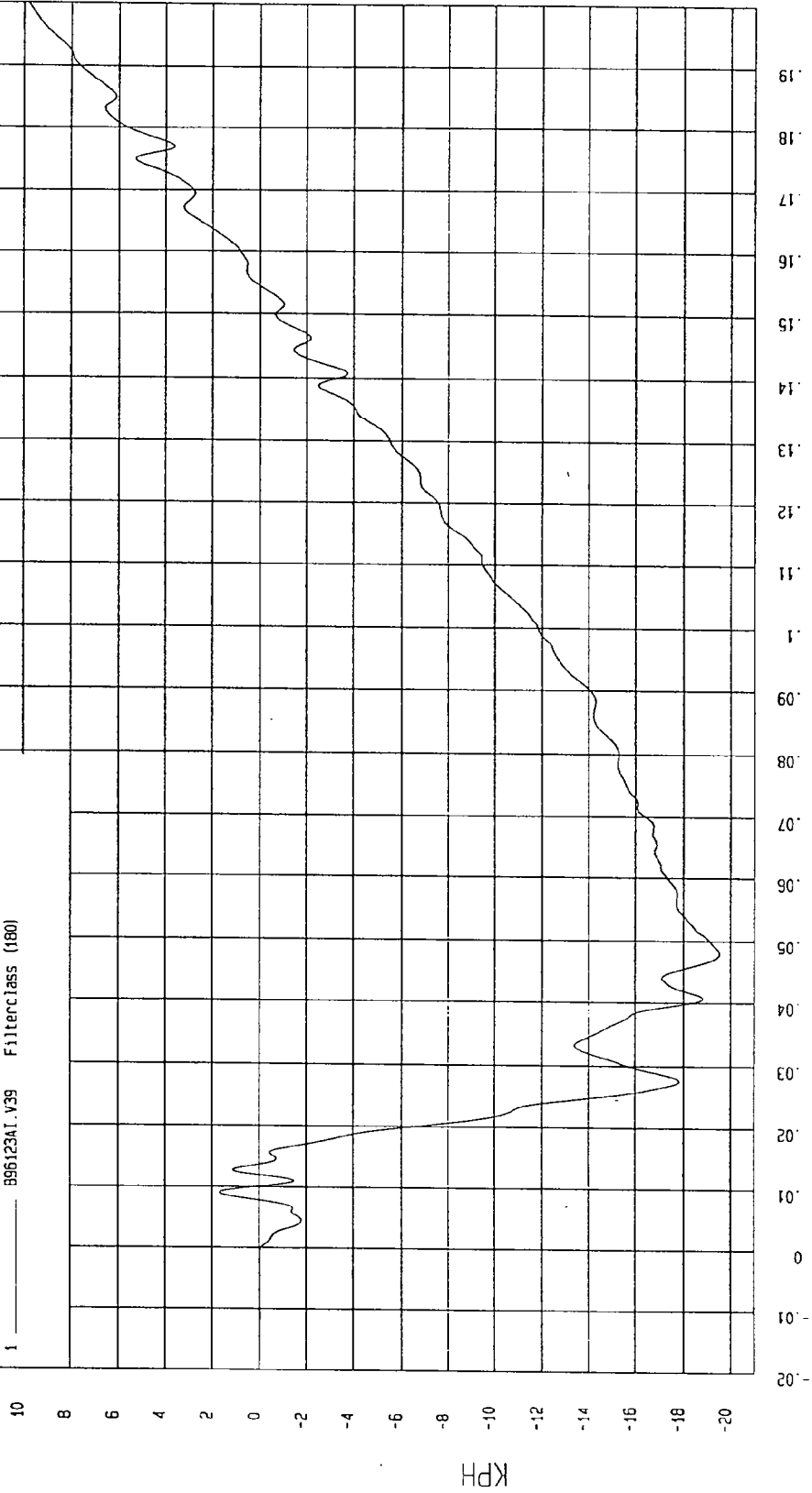
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-19.53735 KPH at 47. msec

YMAX= 9.791218 KPH at 199 msec

RIGHT SIDE SILL AT REAR SEAT Y VELOCITY

1 996123A1.V39 Filterclass (180)



NSA Resect
12-01-1996 03:54

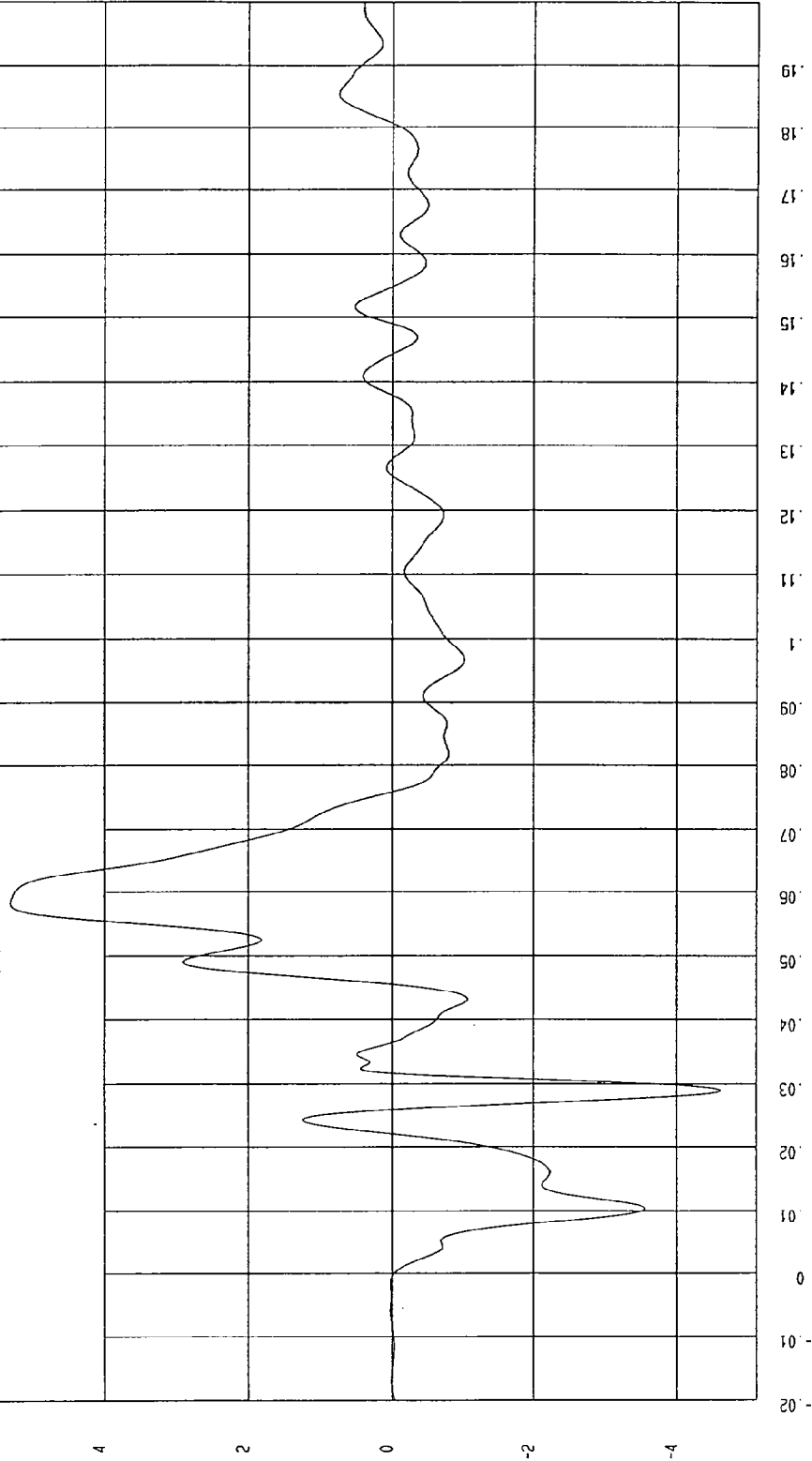
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-4.598572 G'S at 28. msec YMAX= 5.315916 G'S at 58. msec

LEFT SIDE SILL AT FRONT SEAT X ACCELERATION

1 ——— 896123AF.A32 Filterclass (60)



MCA Research
11-26-1996 00:43

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

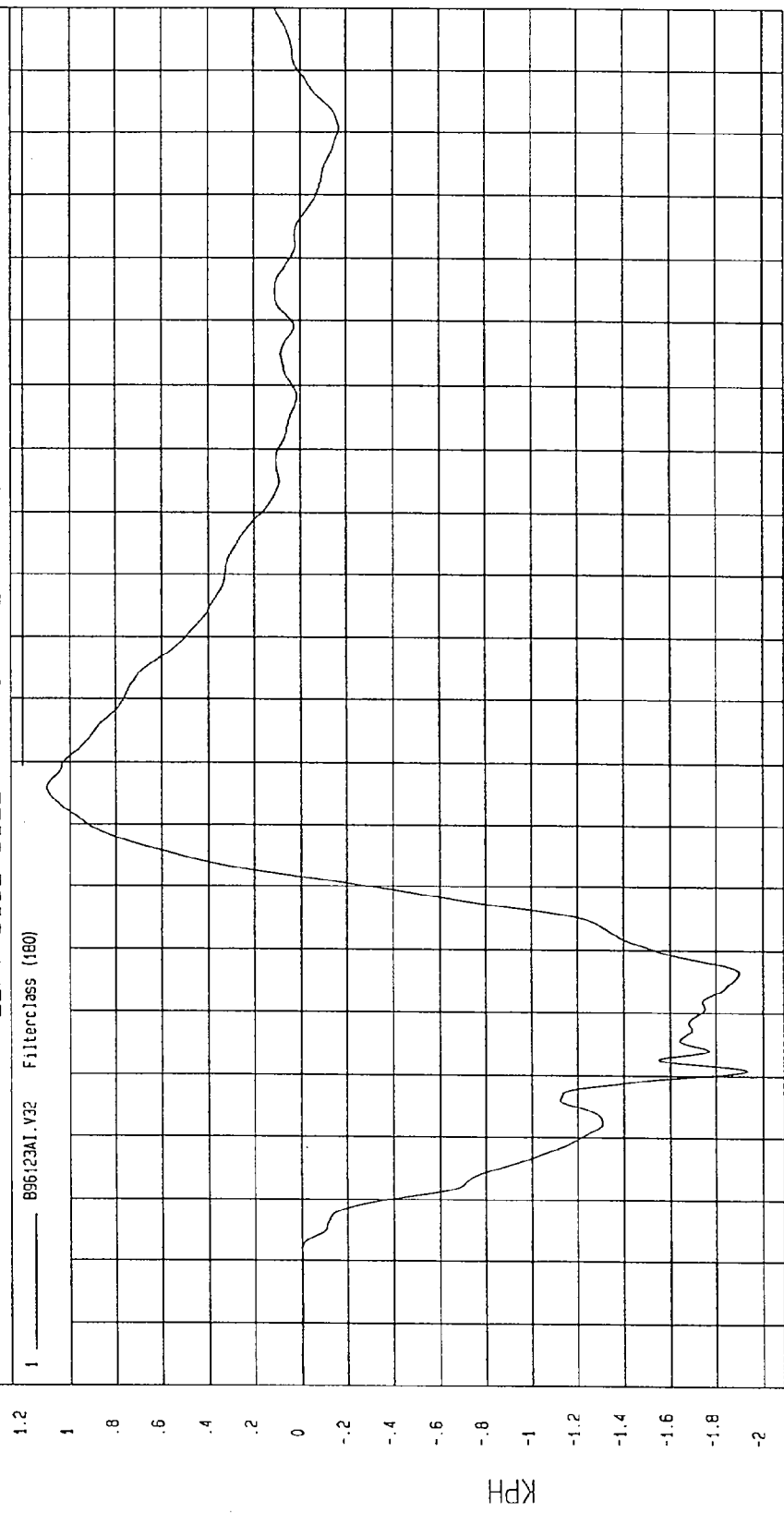
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-1.93507 KPH at 30. msec

YMAX= 1.100265 KPH at 75. msec

LEFT SIDE SILL AT FRONT SEAT X VELOCITY

1 896123A1.V32 Filterclass (180)



MSA Research
12-01-1996 03.54

TIME Seconds

KPH

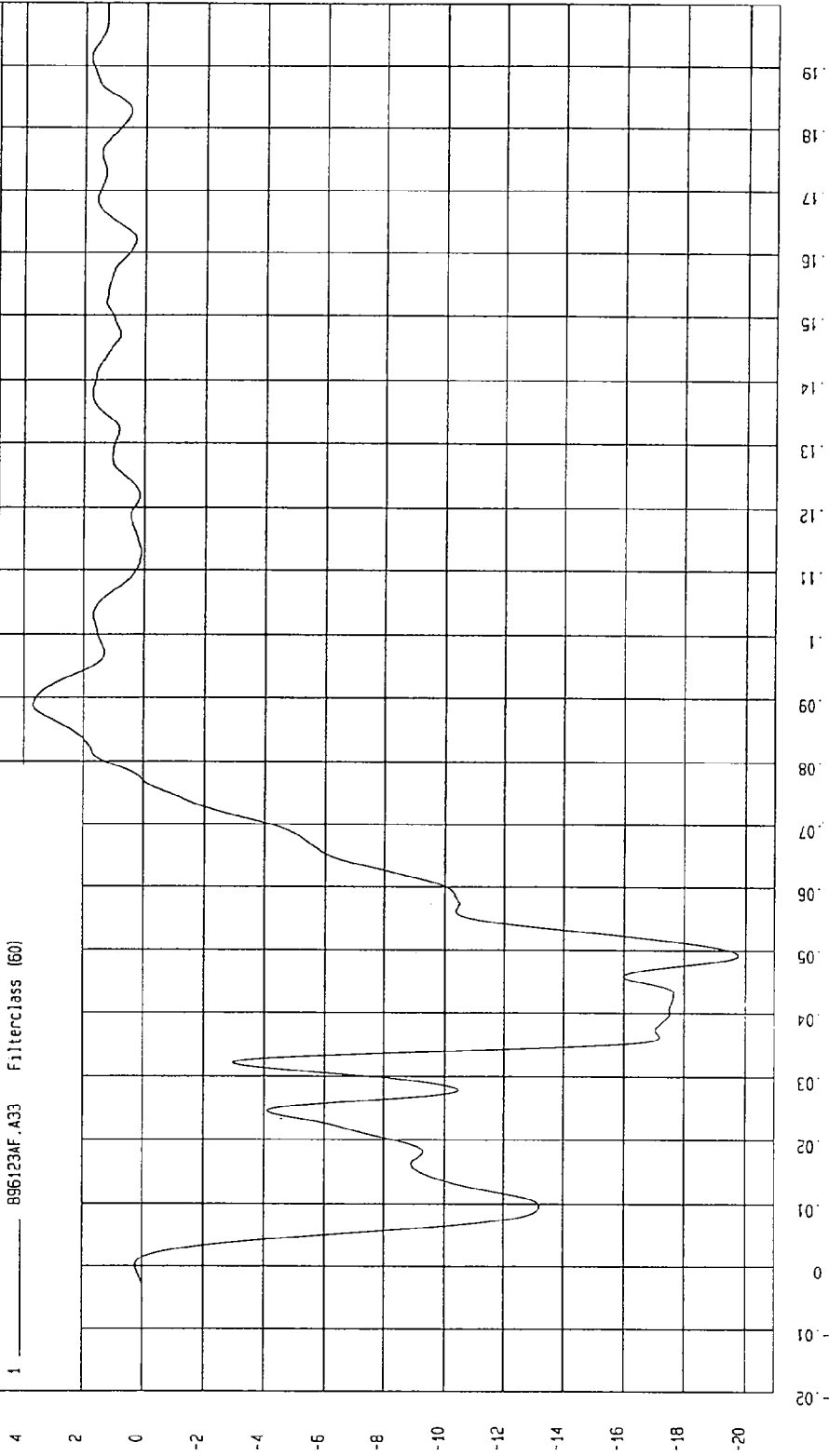
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-19.76686 G'S at 49. msec YMAX= 3.682513 G'S at 98. msec

LEFT SIDE SILL AT FRONT SEAT Y ACCELERATION

1 ——— 896123AF.A33 FilterClass (60)



MCA Research
11-26-1996 00:44

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

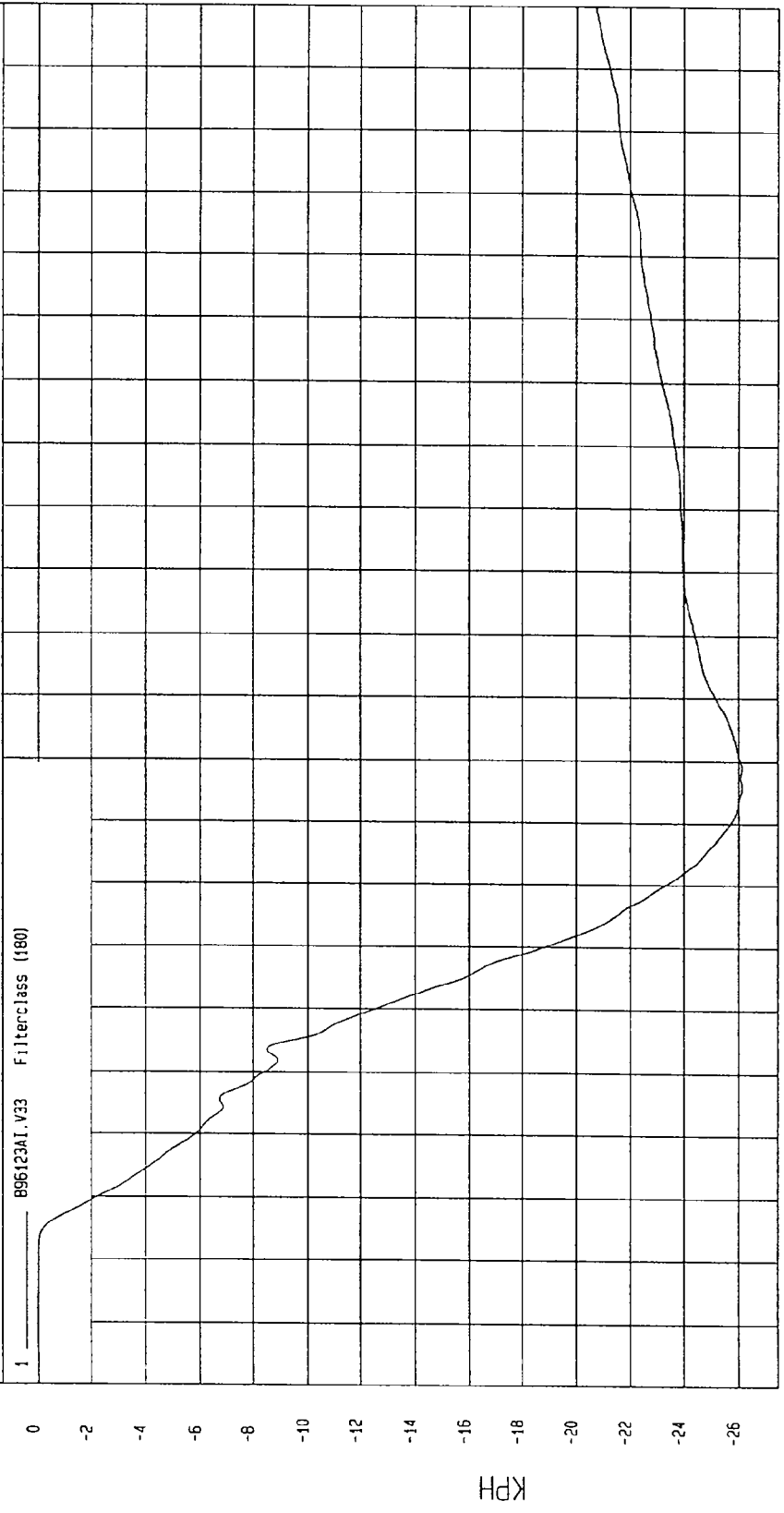
SPEED: 33.32 MPH 53.6 KPH

COMPONENT: 1997 FORD PROBE (CV0208)

YMIN=-26.1246 KPH at 75. msec YMAX= 5.005057E-03 KPH at -10. msec

LEFT SIDE SILL AT FRONT SEAT Y VELOCITY

1 896123AI.V33 Filterclass (180)



TIME Seconds

MGA Research
12-01-1996 03.54

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

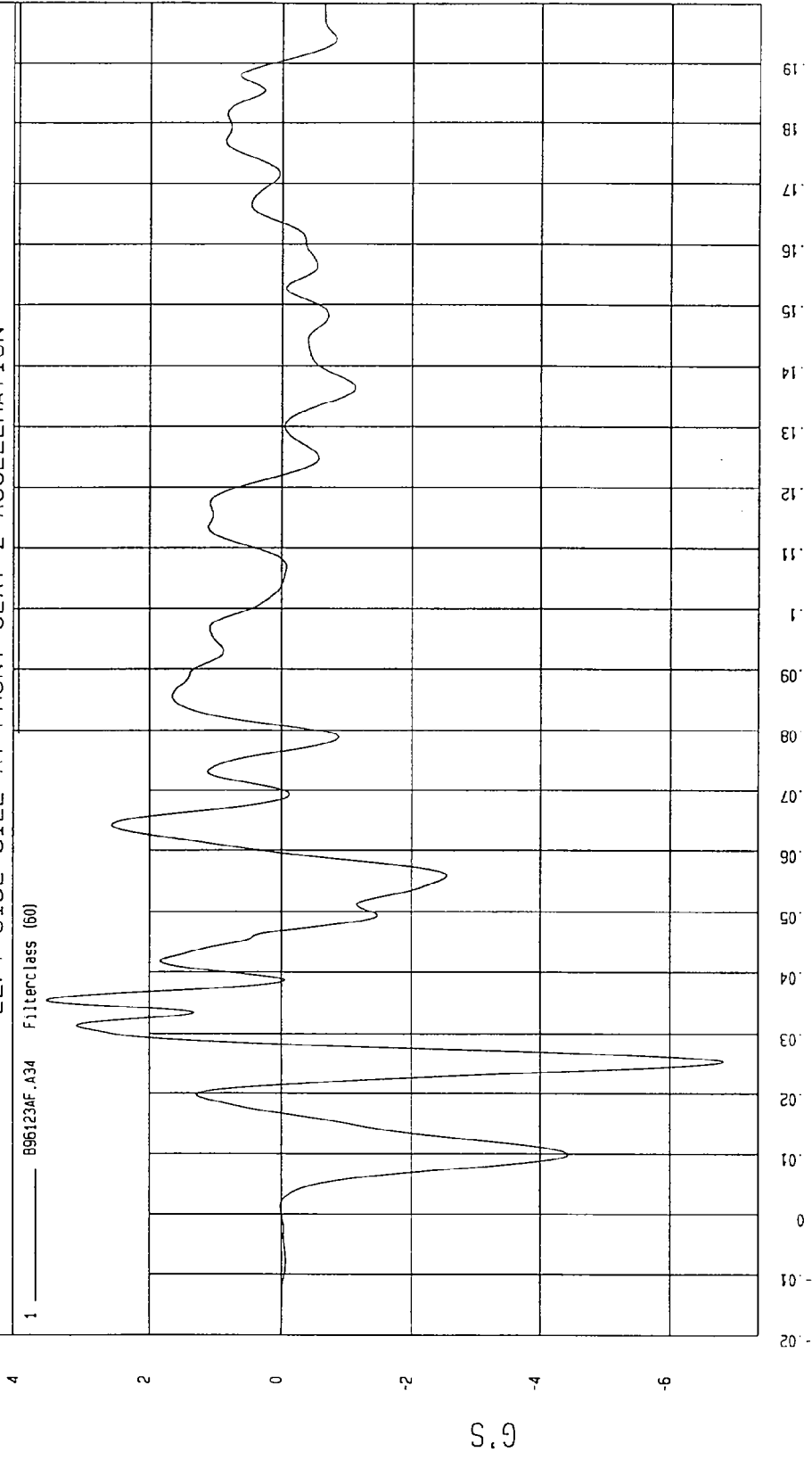
COMPONENT: 1997 FORD PROBE (CVO208) Speed: 33.32 MPH 53.6 KPH

YMIN=-6.810522 G'S at 25. msec

YMAX= 3.564653 G'S at 35. msec

LEFT SIDE SILL AT FRONT SEAT Z ACCELERATION

1 ——— 896123AF.A34 Filterclass (60)



MCA Research
11-26-1996 00:44

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

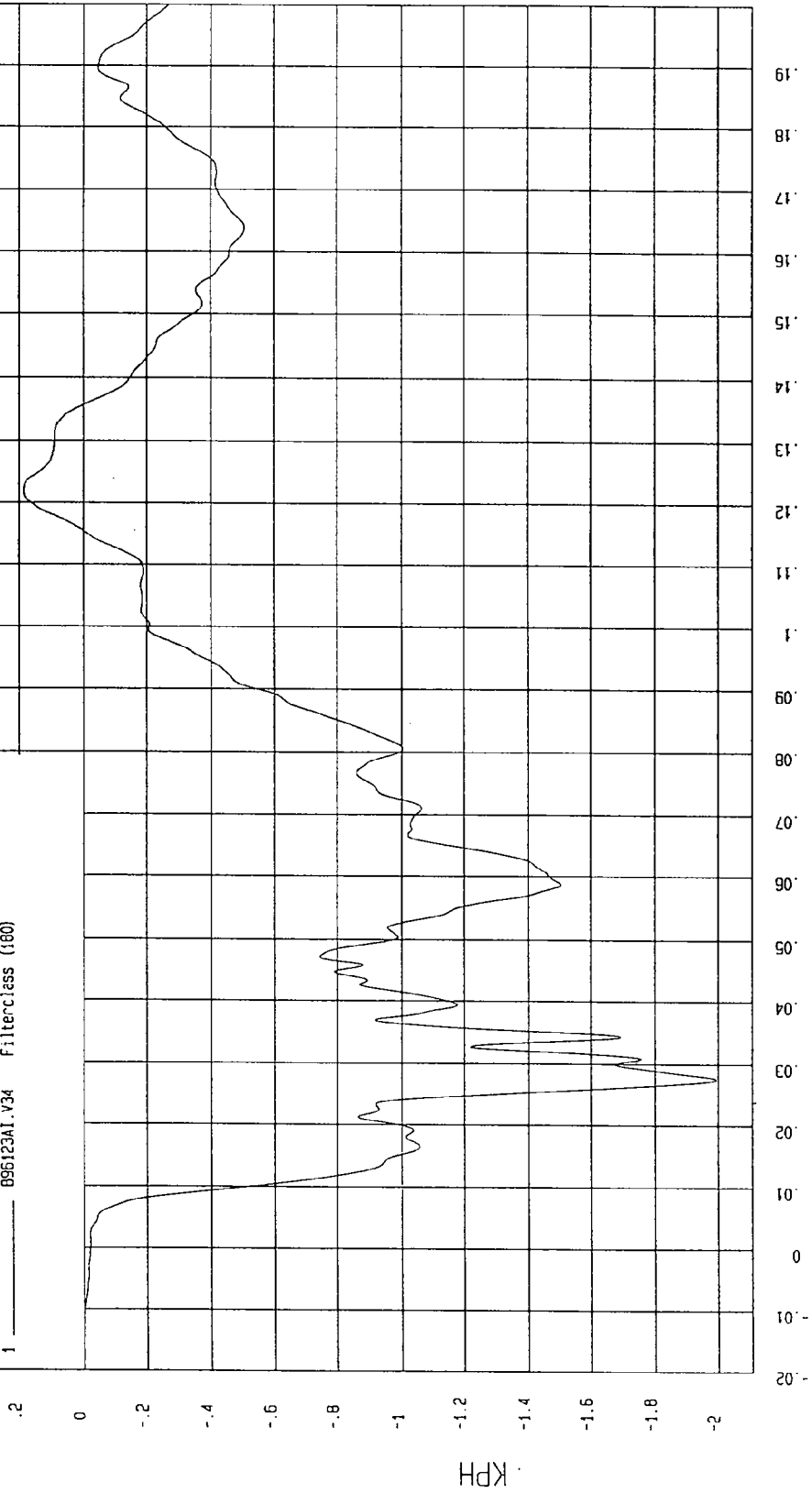
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-1.994241 KPH at 27. msec

YMAX=.1862968 KPH at 122 msec

LEFT SIDE SILL AT FRONT SEAT Z VELOCITY

1 896123A1.V34 Filterclass (180)



MCA Research
12-01-1996 03:55

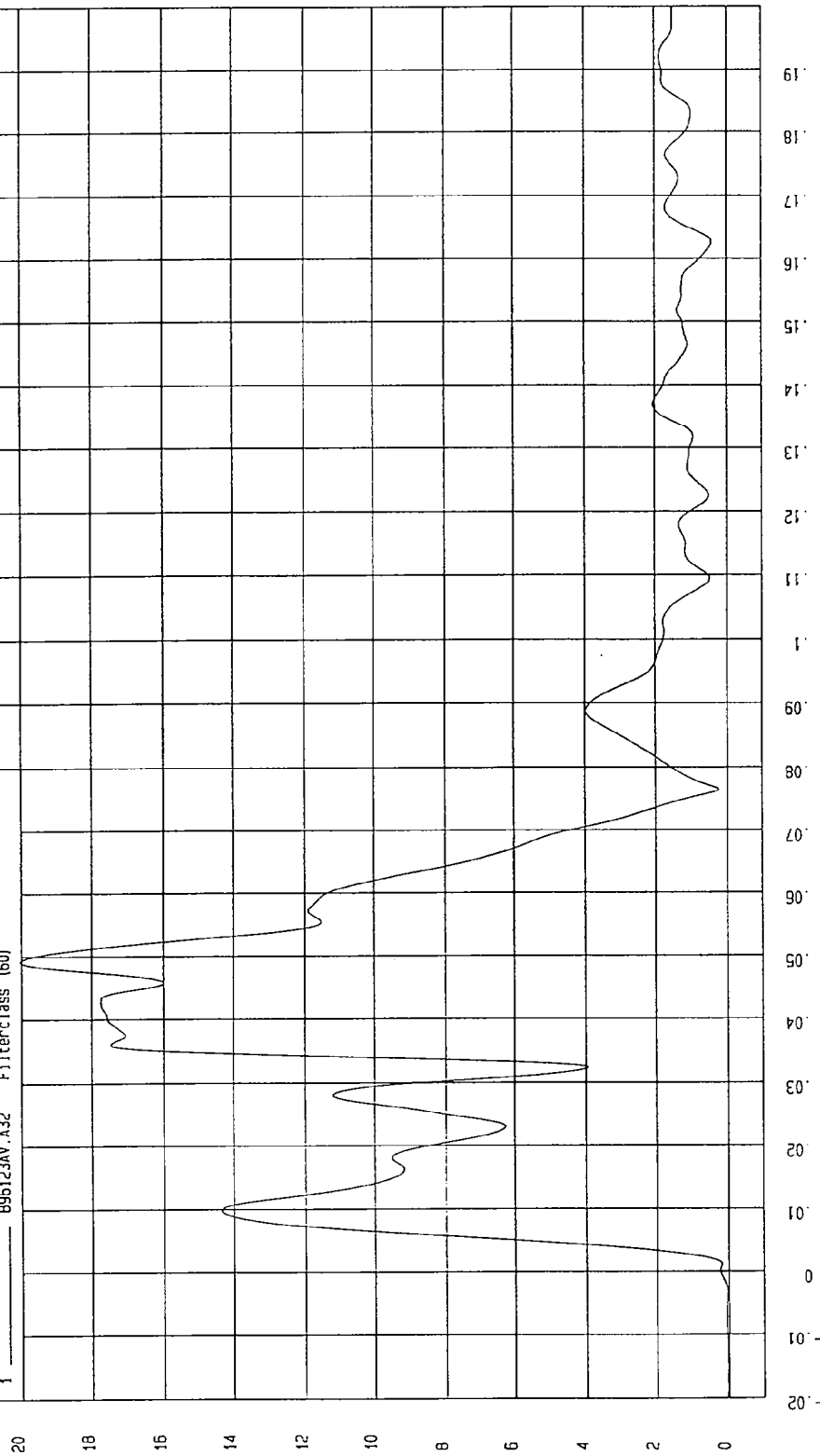
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN= 1.502808E-02 G'S at -15. msec YMAX= 20.03195 G'S at 49. msec

LEFT SIDE SILL AT FRONT SEAT RESULTANT ACCELERATION

1 896123AV.A32 Filterclass (60)



MCA Research
11-29-1996 23.14

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

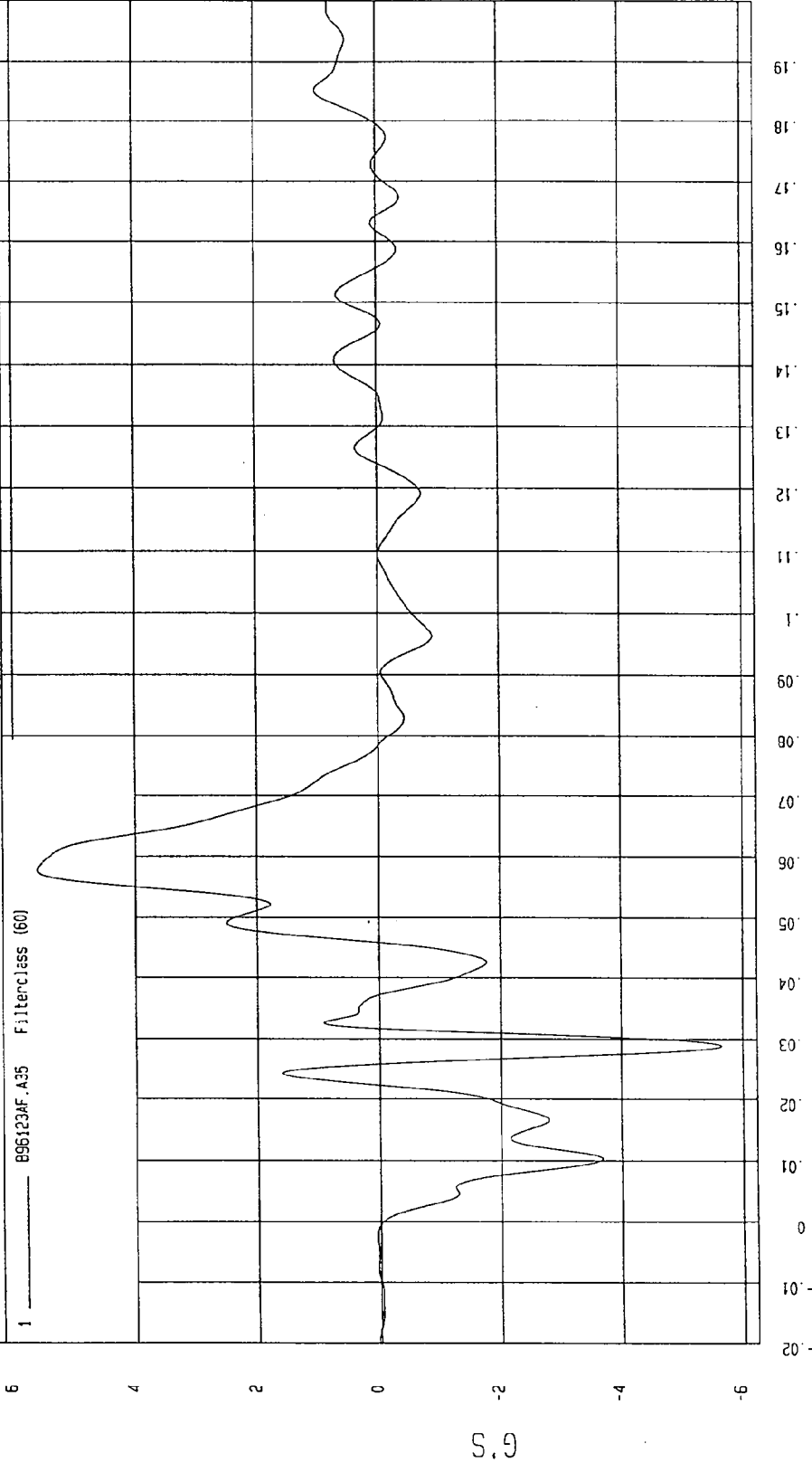
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-5.653751 G'S at 28. msec

YMAX= 5.609951 G'S at 57. msec

LEFT SIDE SILL AT REAR SEAT X ACCELERATION

1 896123AF.A35 Filterclass (60)



MGA Research Co.
11-26-1996 00:44

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

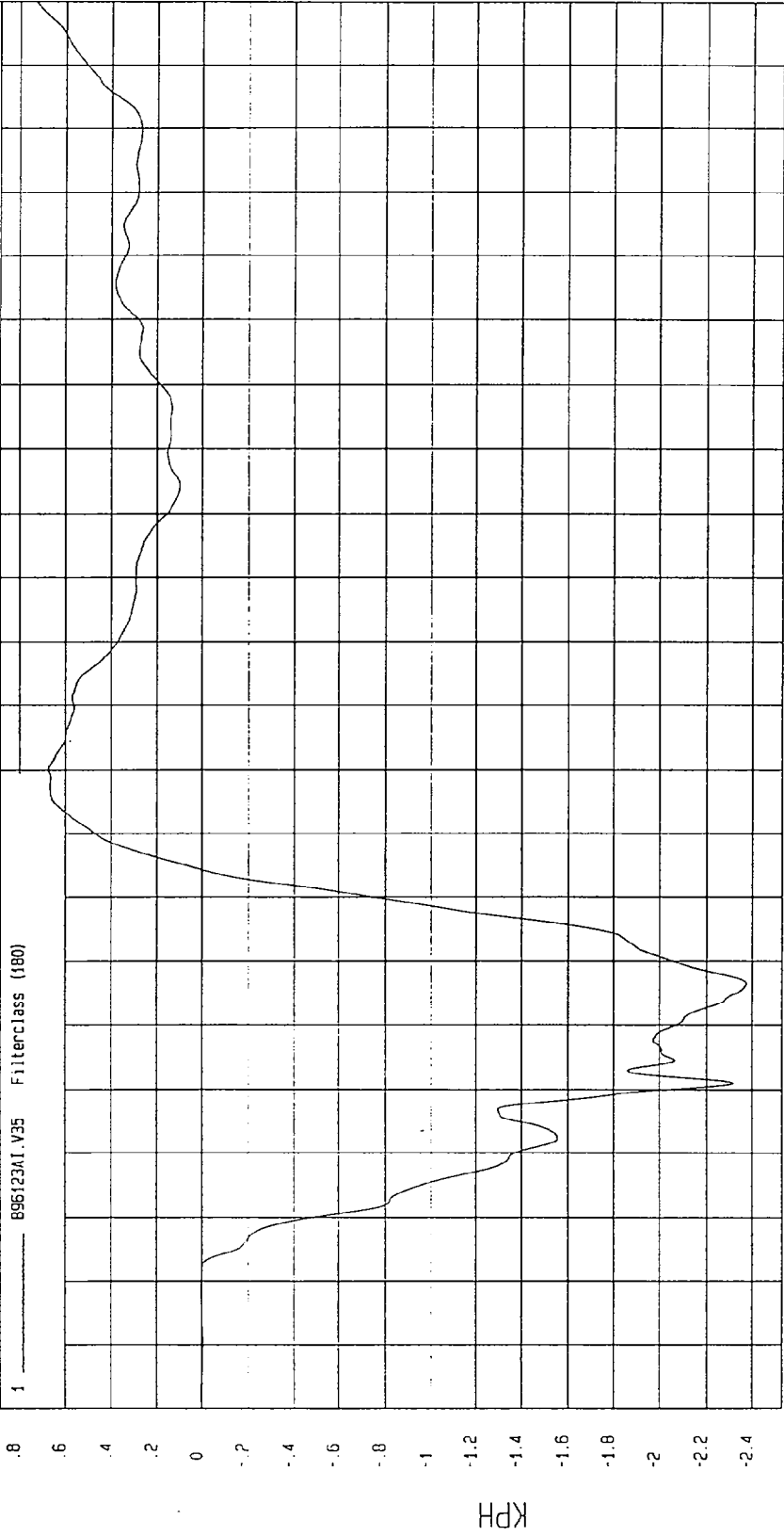
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-2.373325 KPH at 46. msec

YMAX=.7289392 KPH at 199 msec

LEFT SIDE SILL AT REAR SEAT X VELOCITY

1 896123A1.V35 Filterclass (180)



TIME Seconds

MCA Research
12-01-1996 03:55

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST

TEST DATE: 11-14-1996

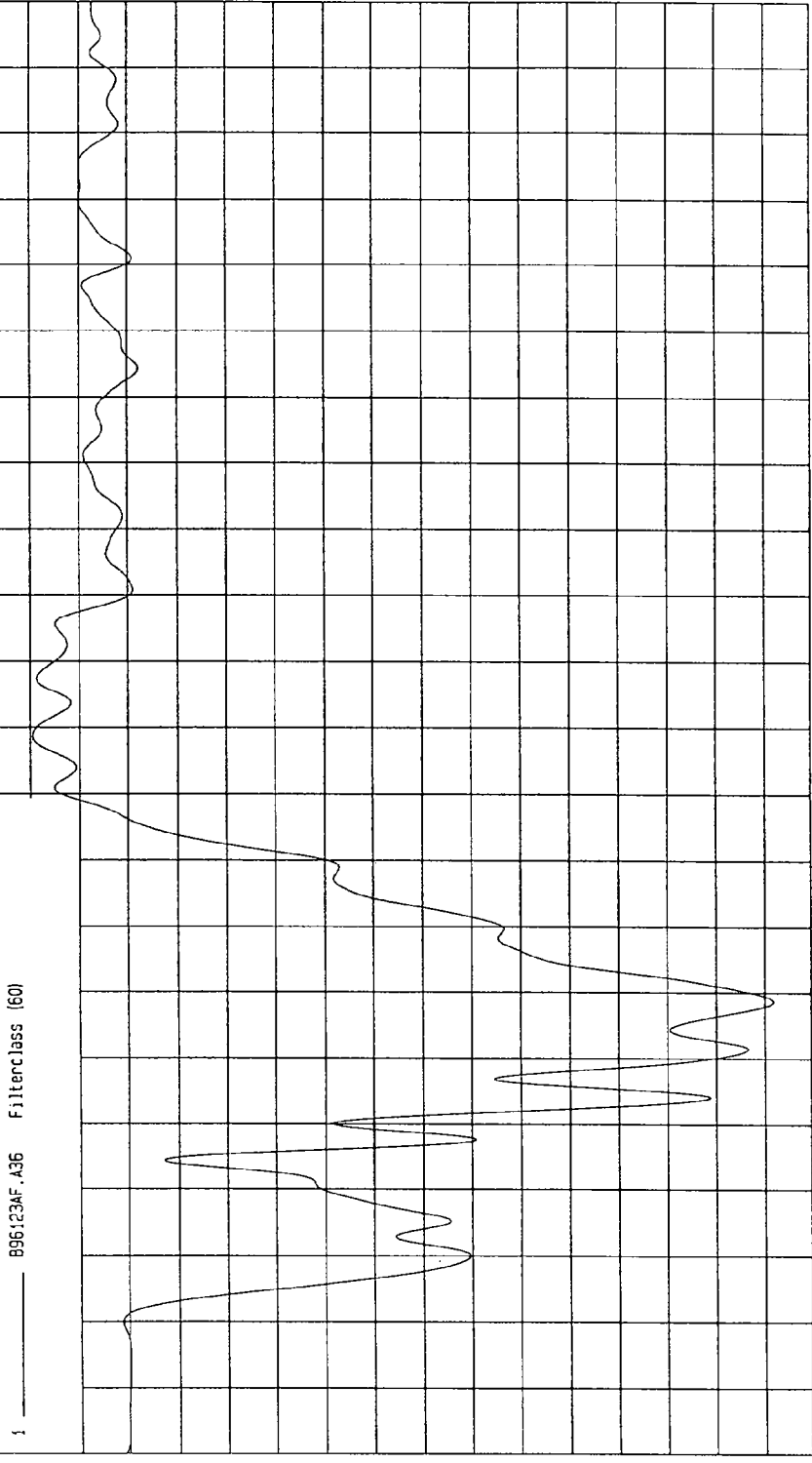
Speed: 33.32 MPH 53.6 KPH

COMPONENT: 1997 FORD PROBE (CV0208)

YMIN=-26.35227 G'S at 48. msec

YMAX= 3.919105 G'S at 88. msec

LEFT SIDE SILL AT REAR SEAT Y ACCELERATION



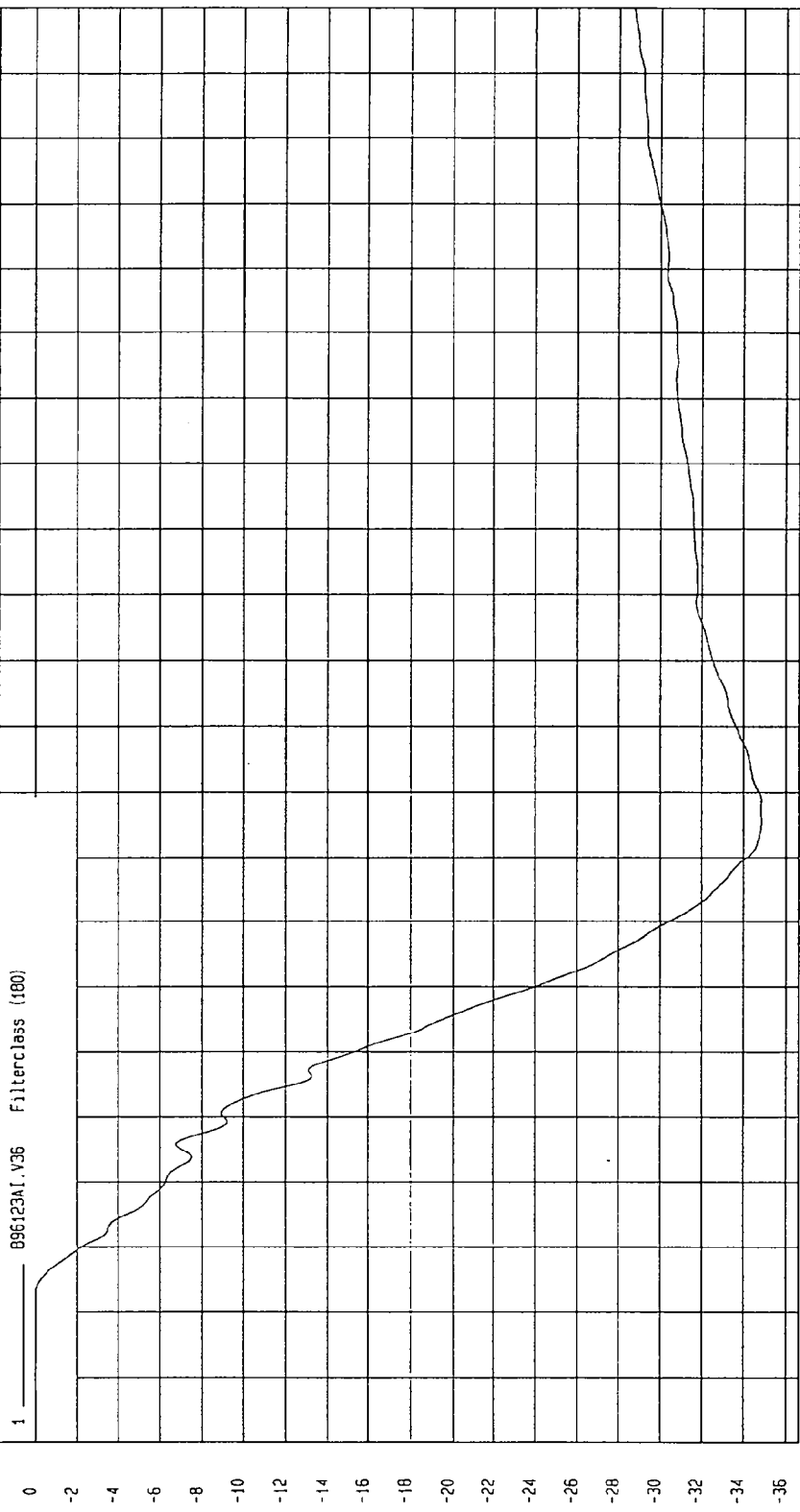
MCA Research
11-26-1996 00:44

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-34.87024 KPH at 75. msec YMAX= 7.465016E-04 KPH at -11. msec

LEFT SIDE SILL AT REAR SEAT Y VELOCITY

1 096123M.V36 Filterclass (180)



MCA Research
12-01-1996 03:55

TIME Seconds

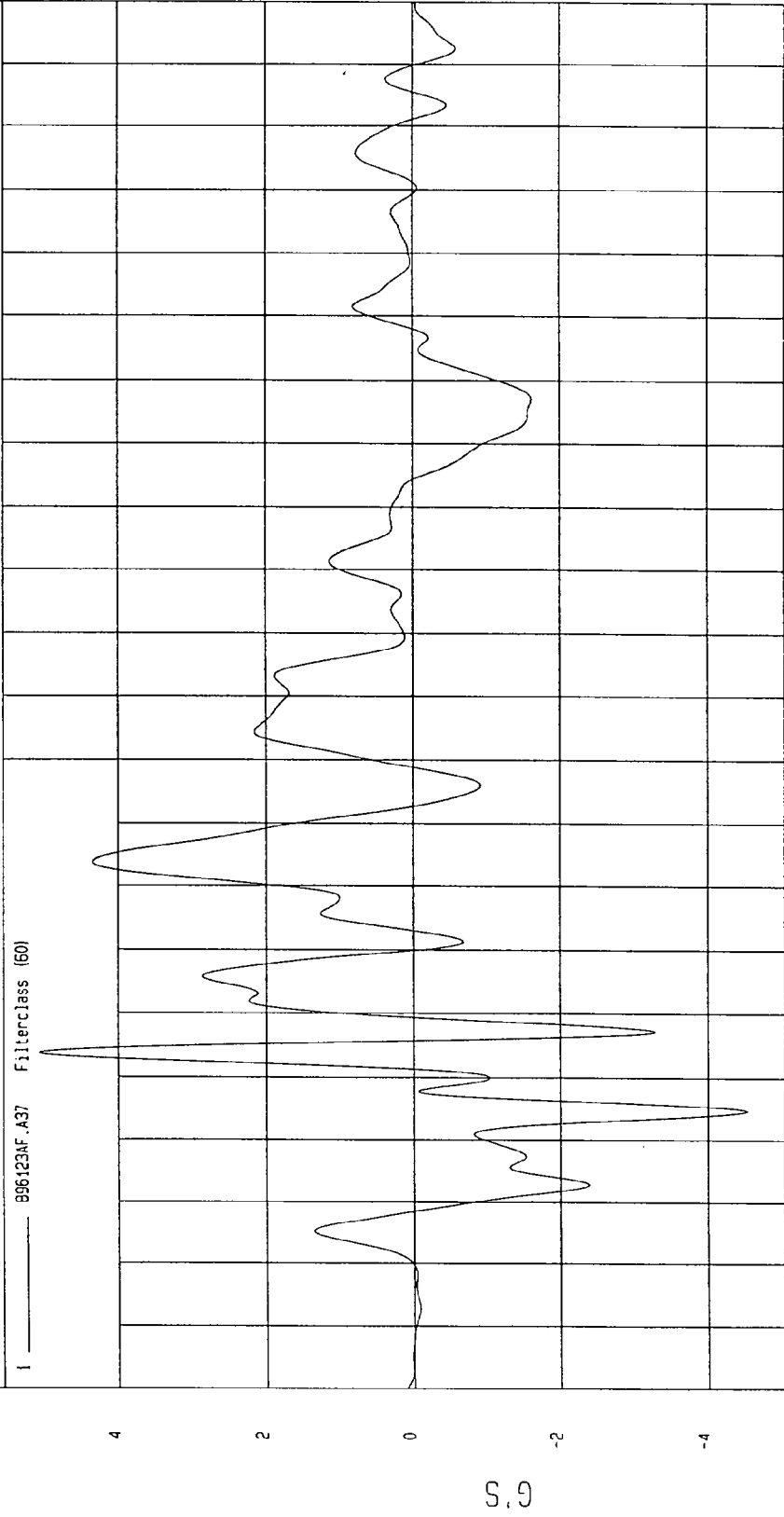
KPH

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-4.533785 G'S at 24. msec YMAX= 5.084249 G'S at 33. msec

LEFT SIDE SILL AT REAR SEAT Z ACCELERATION



TIME (SECONDS)

WCA Research
11-26-1996 00:44

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

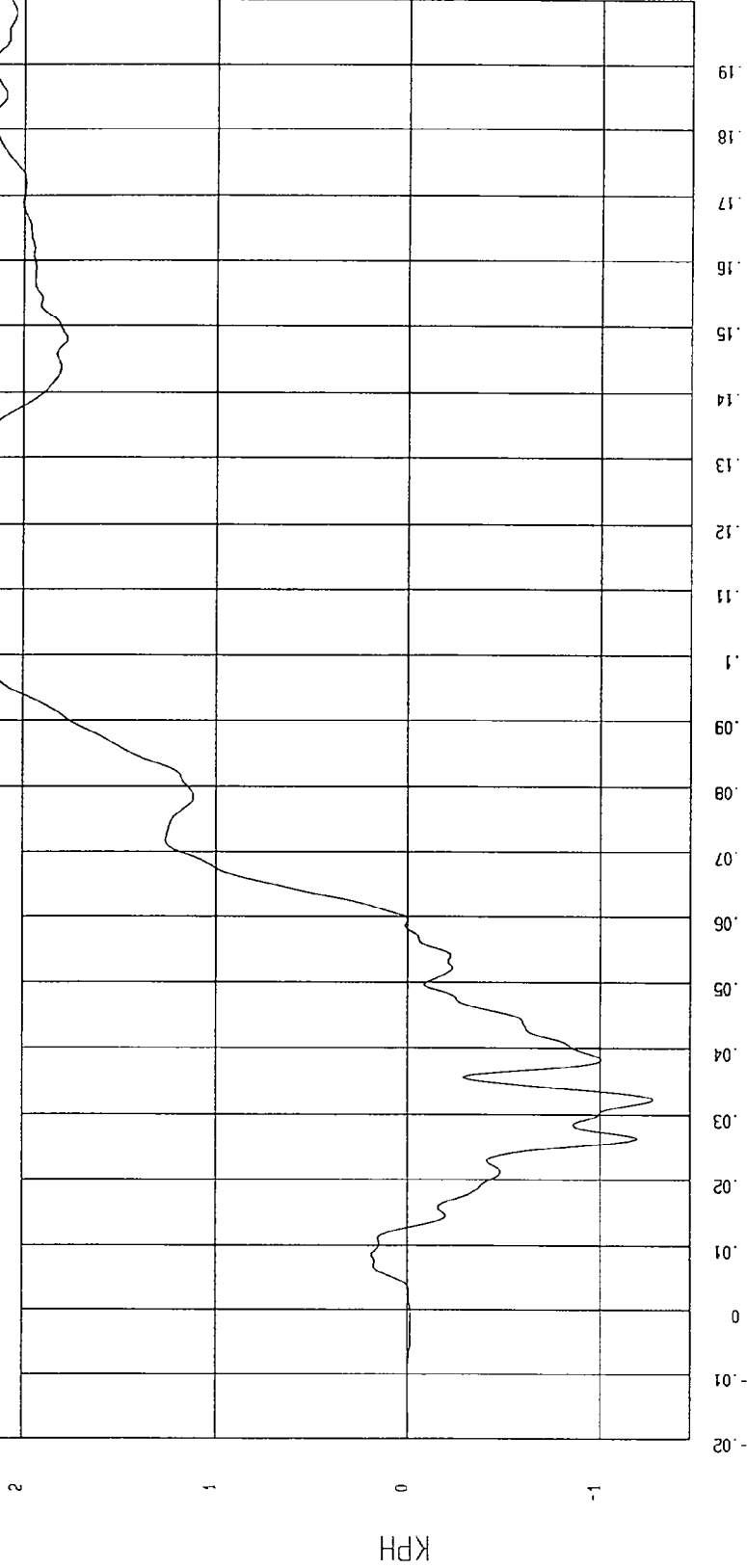
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-1.278407 KPH at 32. msec

YMAX= 2.520622 KPH at 124 msec

LEFT SIDE SILL AT REAR SEAT Z VELOCITY

1 ——— 896123A1.V37 Filterclass (f80)



NSA Research
12-01-1996 03:55

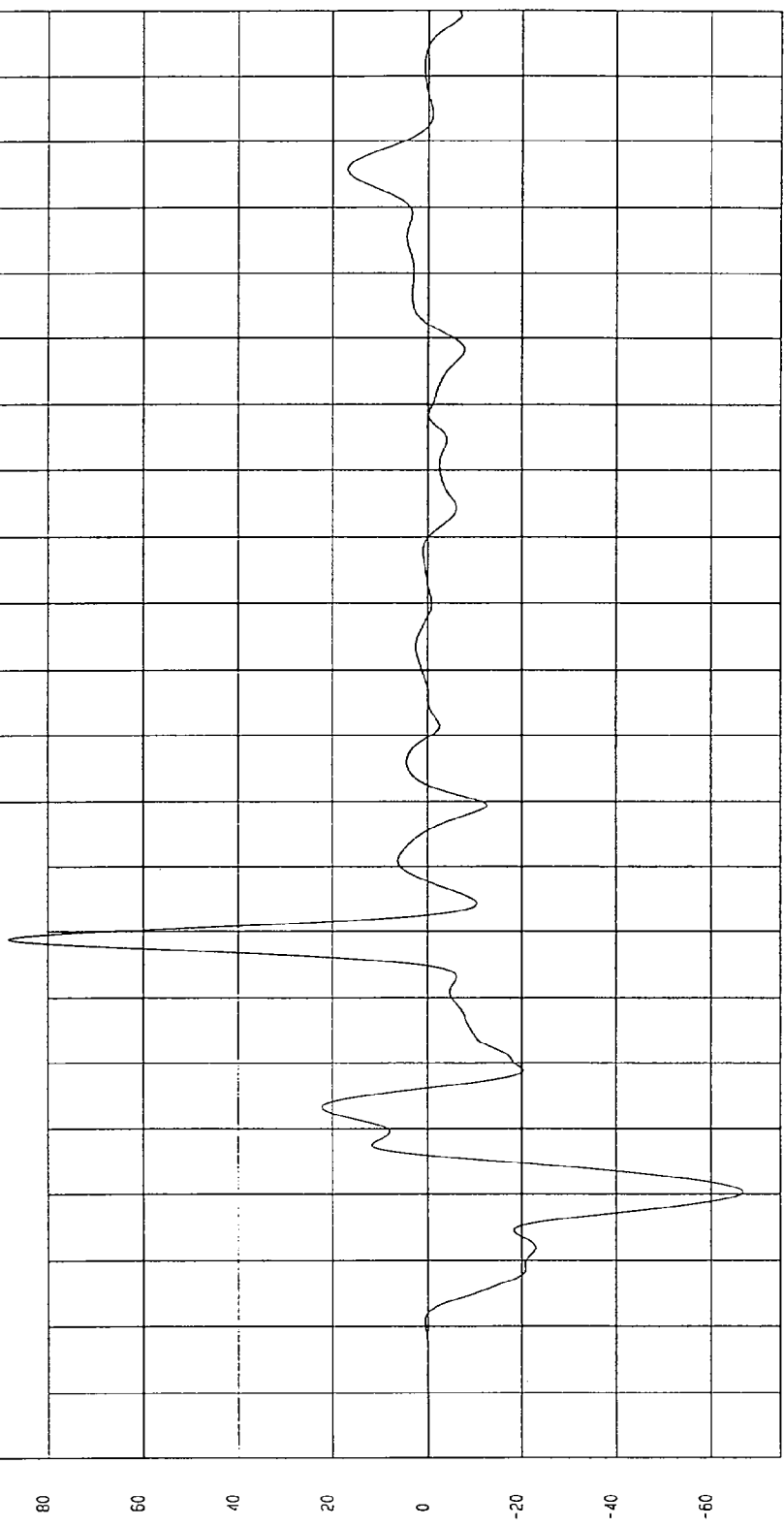
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-66.74314 G'S at 20. msec YMAX= 88.51524 G'S at 58. msec

RIGHT FRONT PASSENGER SEAT TRACK Y ACCELERATION

1 896123NF.A40 Filterclass (50)



TIME (SECONDS)

MGA Research
11-26-1996 00:44

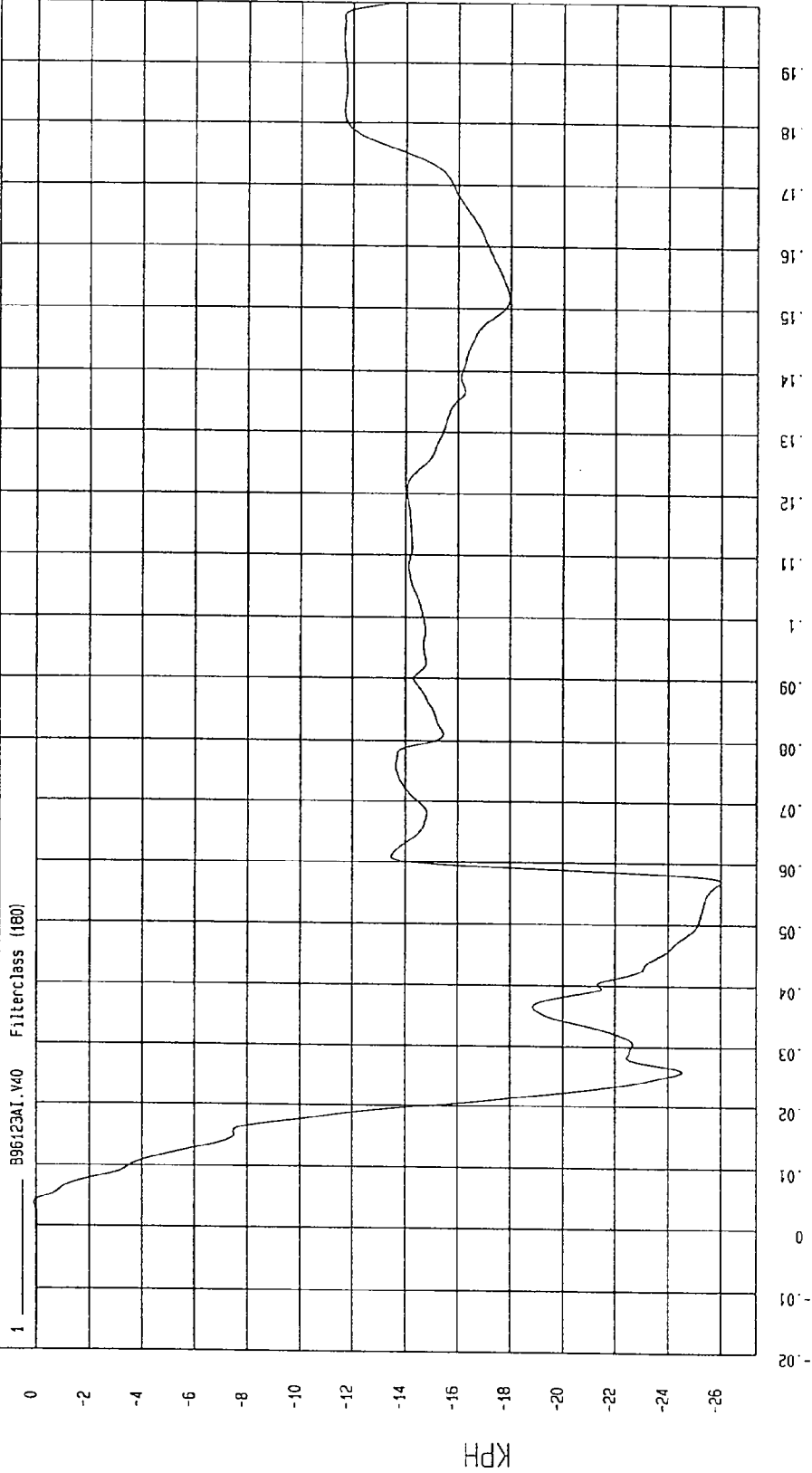
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-26.02584 KPH at 57 msec

YMAX= .1030203 KPH at 3.6 msec

RIGHT FRONT PASSENGER SEAT TRACK Y VELOCITY



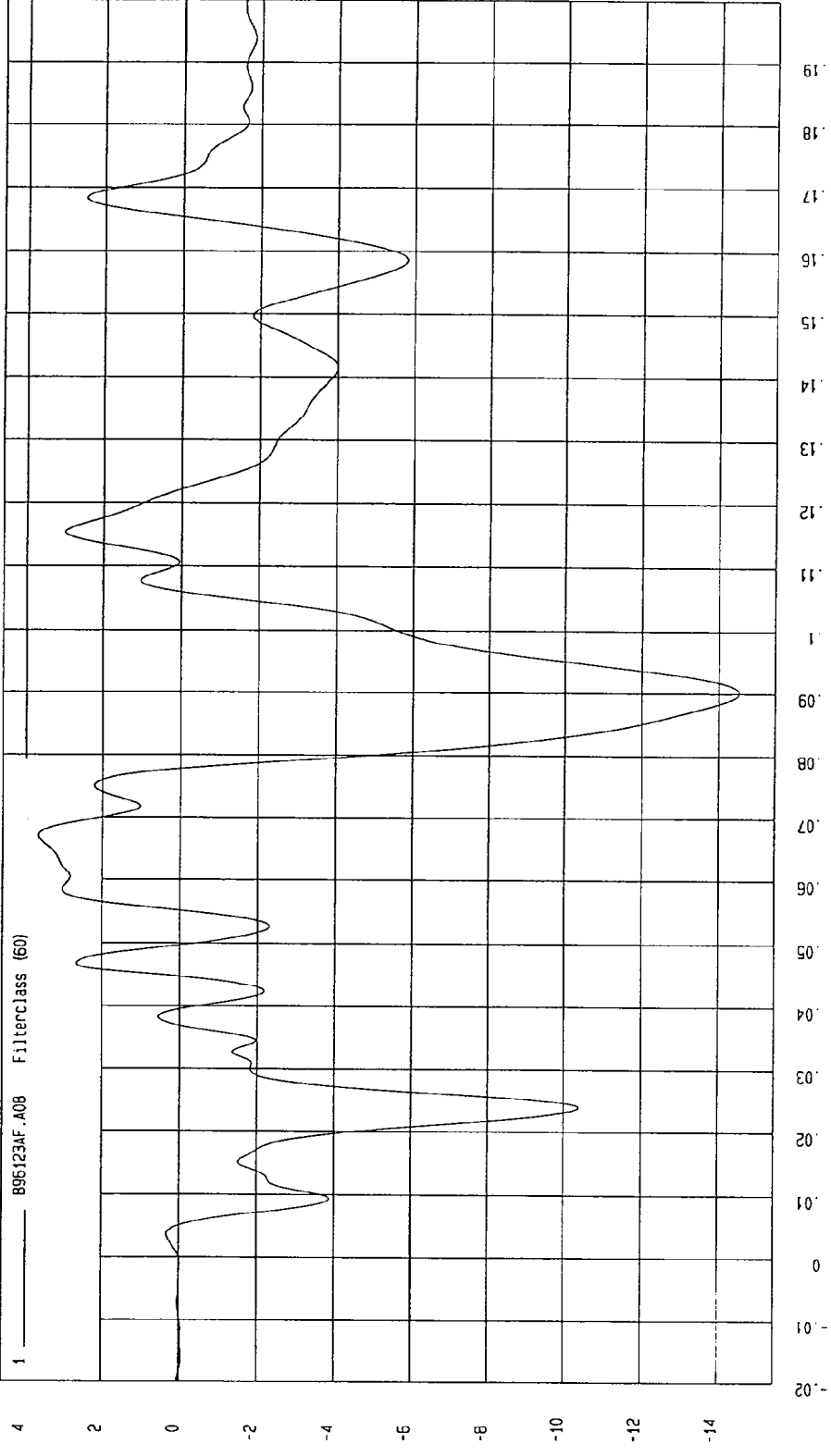
MCA Research
12-01-1996 03:55

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-14.53084 G'S at 90. msec YMAX= 3.665987 G'S at 67. msec

REAR FLOORPAN ABOVE AXLE X ACCELERATION



MGA Research
11-26-1996 00:45

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

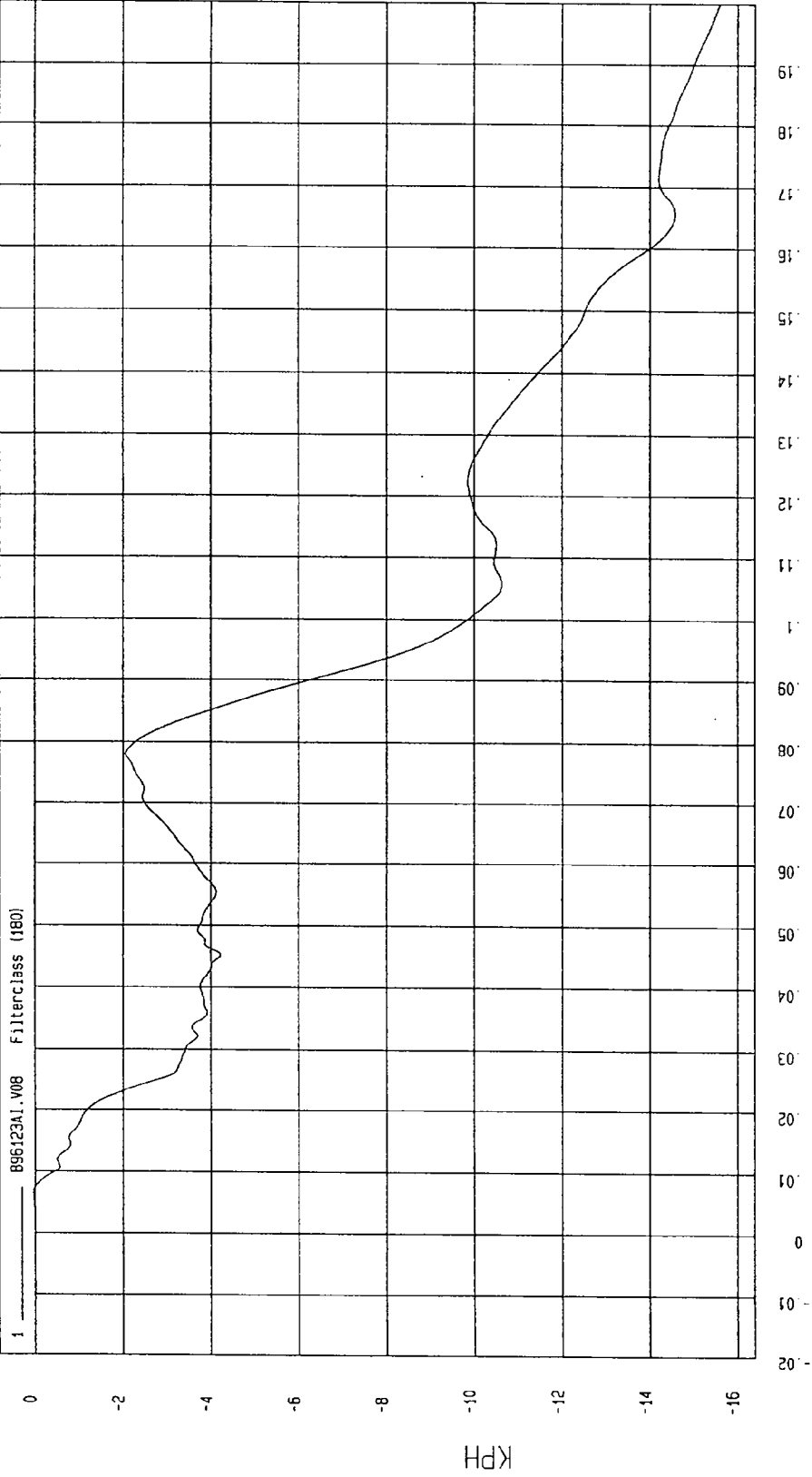
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-15.60441 KPH at .199 msec

YMAX= .0331621 KPH at 6.7 msec

REAR FLOORPAN ABOVE AXLE X VELOCITY

1 896123A1.V08 Filterclass (180)



NGA Research
12-01-1996 03:55

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST

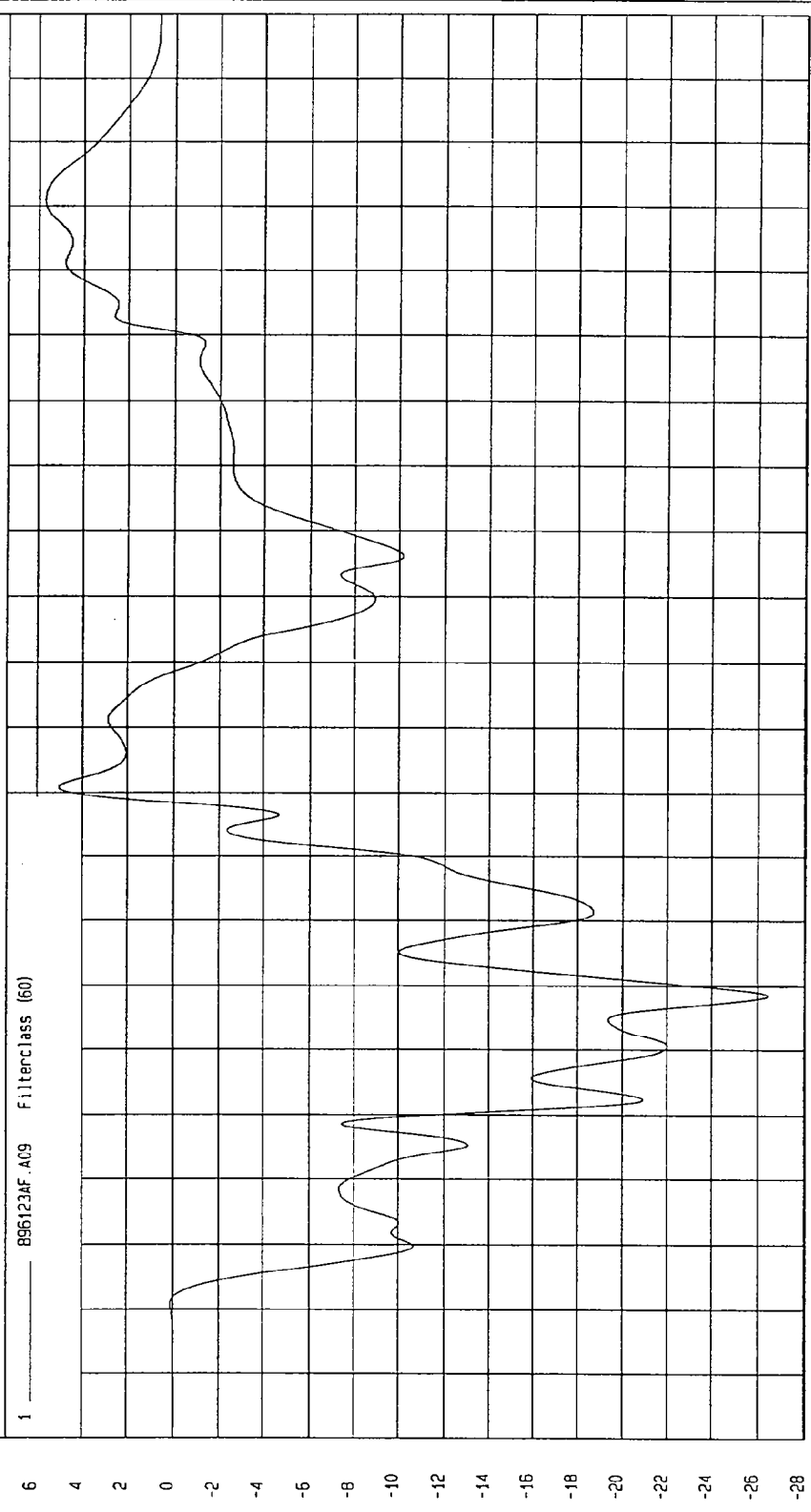
TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-26.4609 G'S at 40. msec YMAX= 5.713118 G'S at 170 msec

REAR FLOORPAN ABOVE AXLE Y ACCELERATION

1 896123AF.AC9 Filterclass (60)



TIME (SECONDS)

MGA Research
11-26-1996 00: 45

S.9

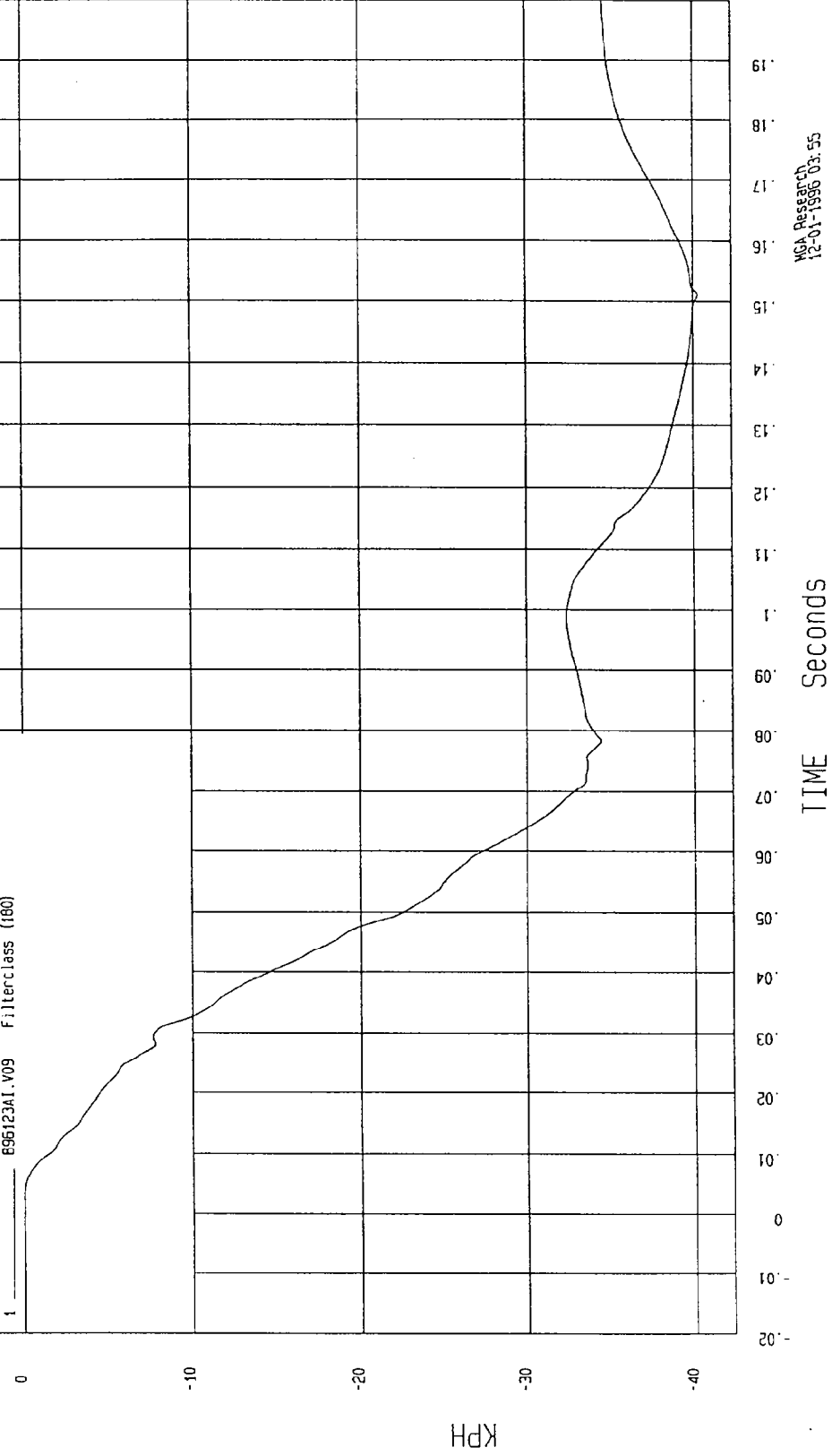
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-40.26273 KPH at 151 msec YMAX= 2.306328E-03 KPH at -1.7 msec

REAR FLOORPAN ABOVE AXLE Y VELOCITY

1 895123A1.V09 Filterclass (180)



MGA Research
12-01-1996 03:55

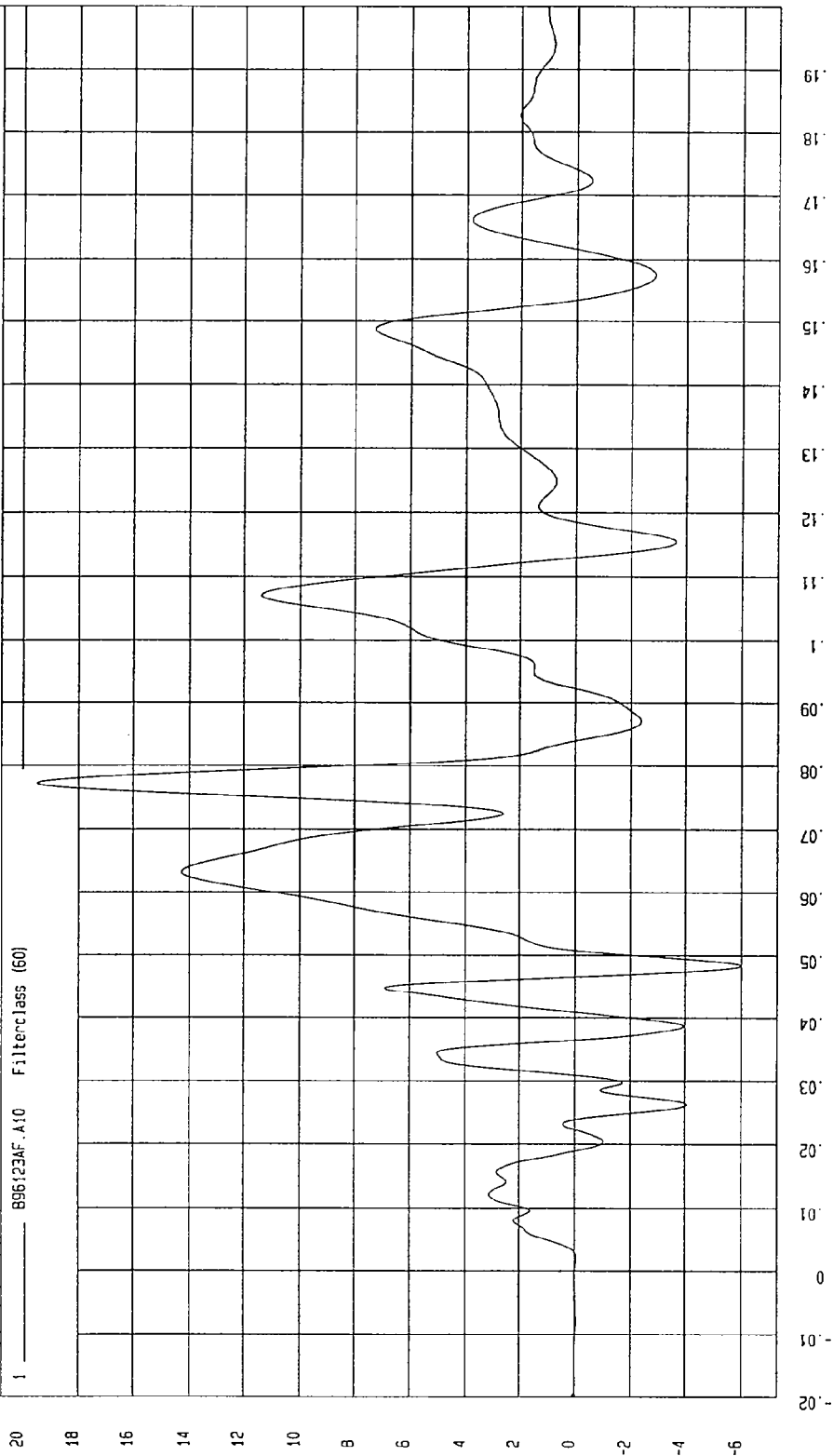
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-5.99404 G'S at 48. msec YMAX= 19.49955 G'S at 77. msec

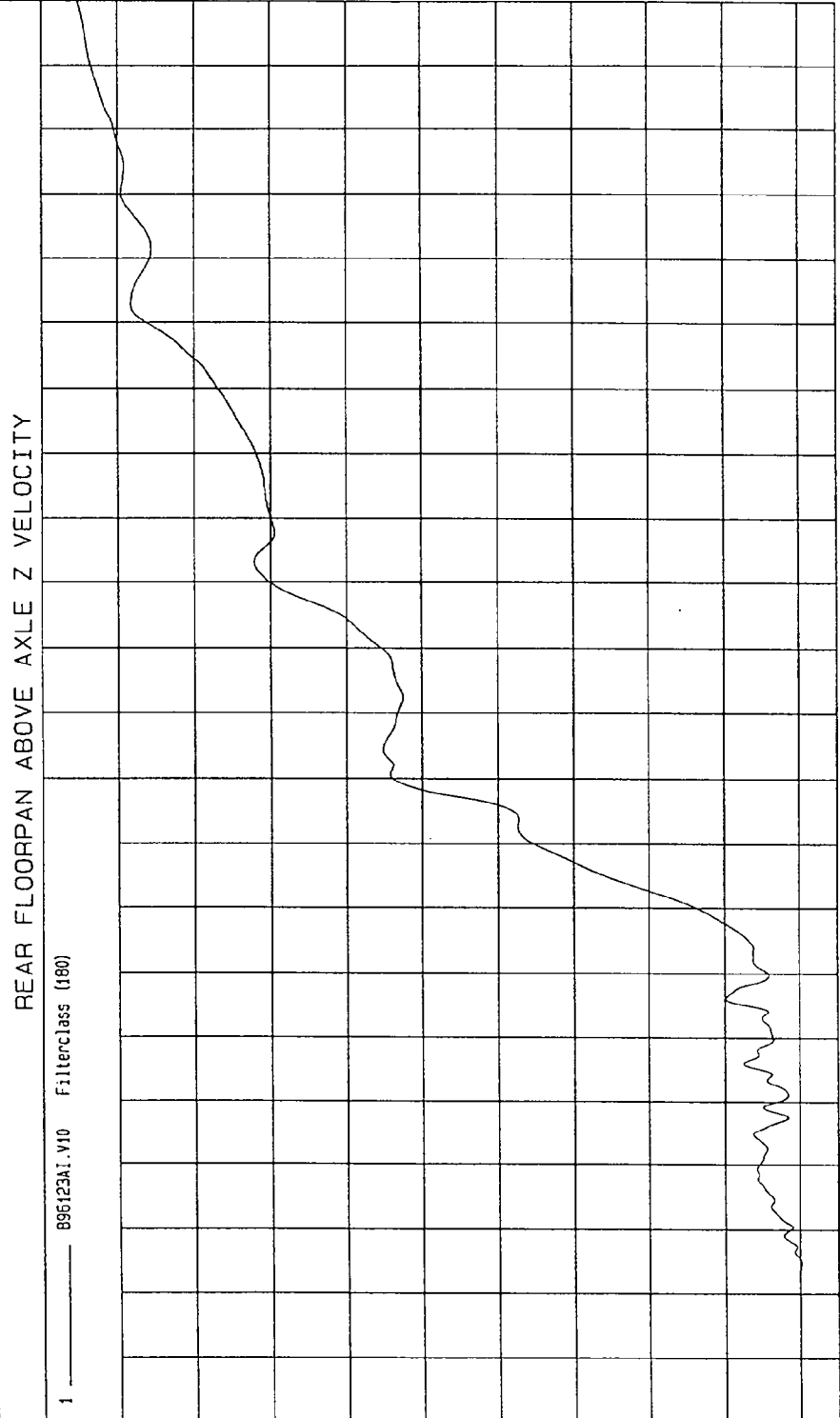
REAR FLOORPAN ABOVE AXLE Z ACCELERATION

1 896123AF.A10 Filterclass (60)



MCA Research
11-26-1996 00:45

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996
 COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH
 YMIN=-3.462766E-02 KPH at 4.6 msec YMAX= 19.04572 KPH at 199 msec



TIME Seconds

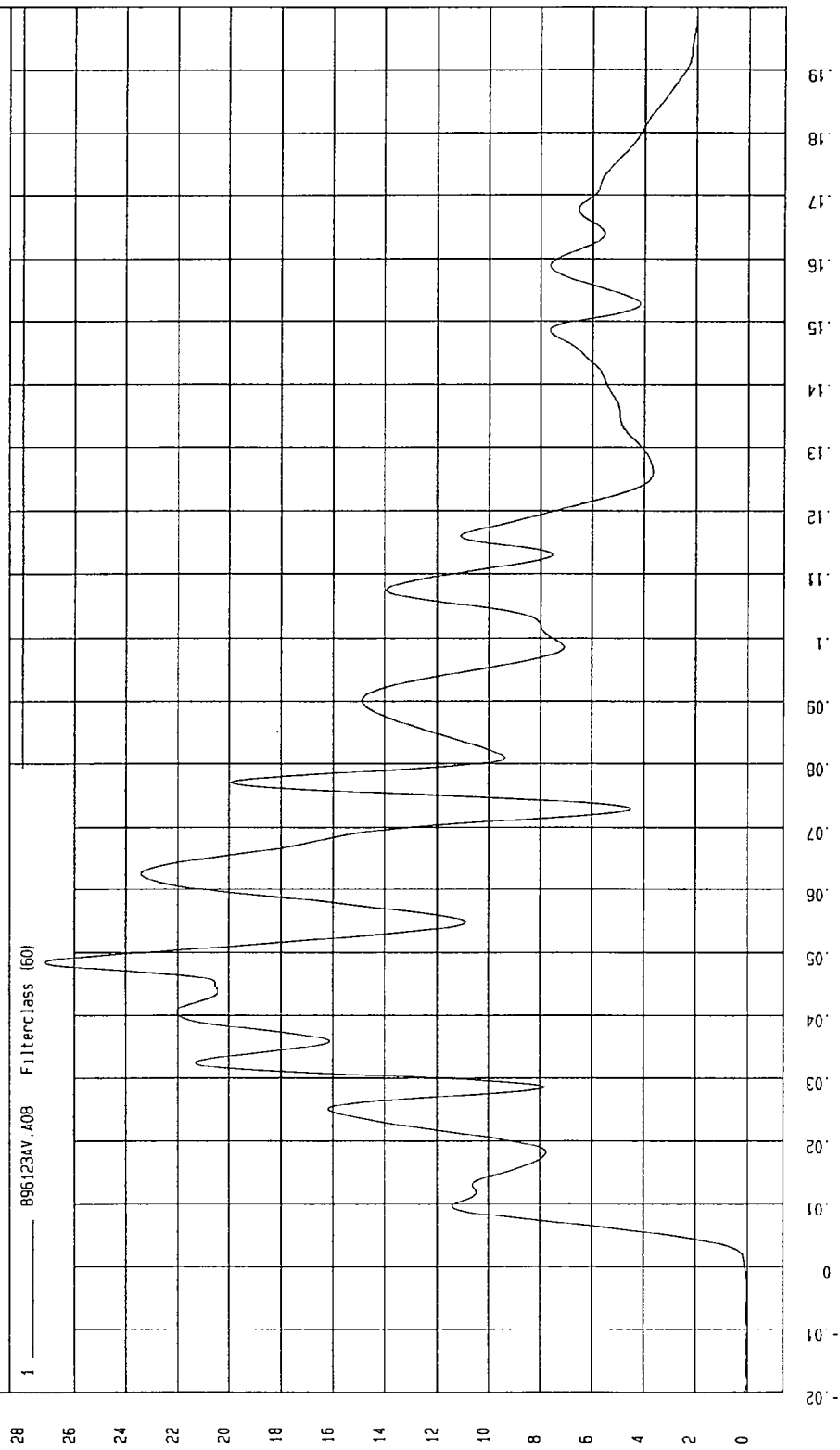
MCA Research
 12-01-1996 03.55

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN= 1.486056E-02 G'S at -9.9 msec YMAX= 27.17325 G'S at 48. msec

REAR FLOORPAN ABOVE AXLE RESULTANT ACCELERATION



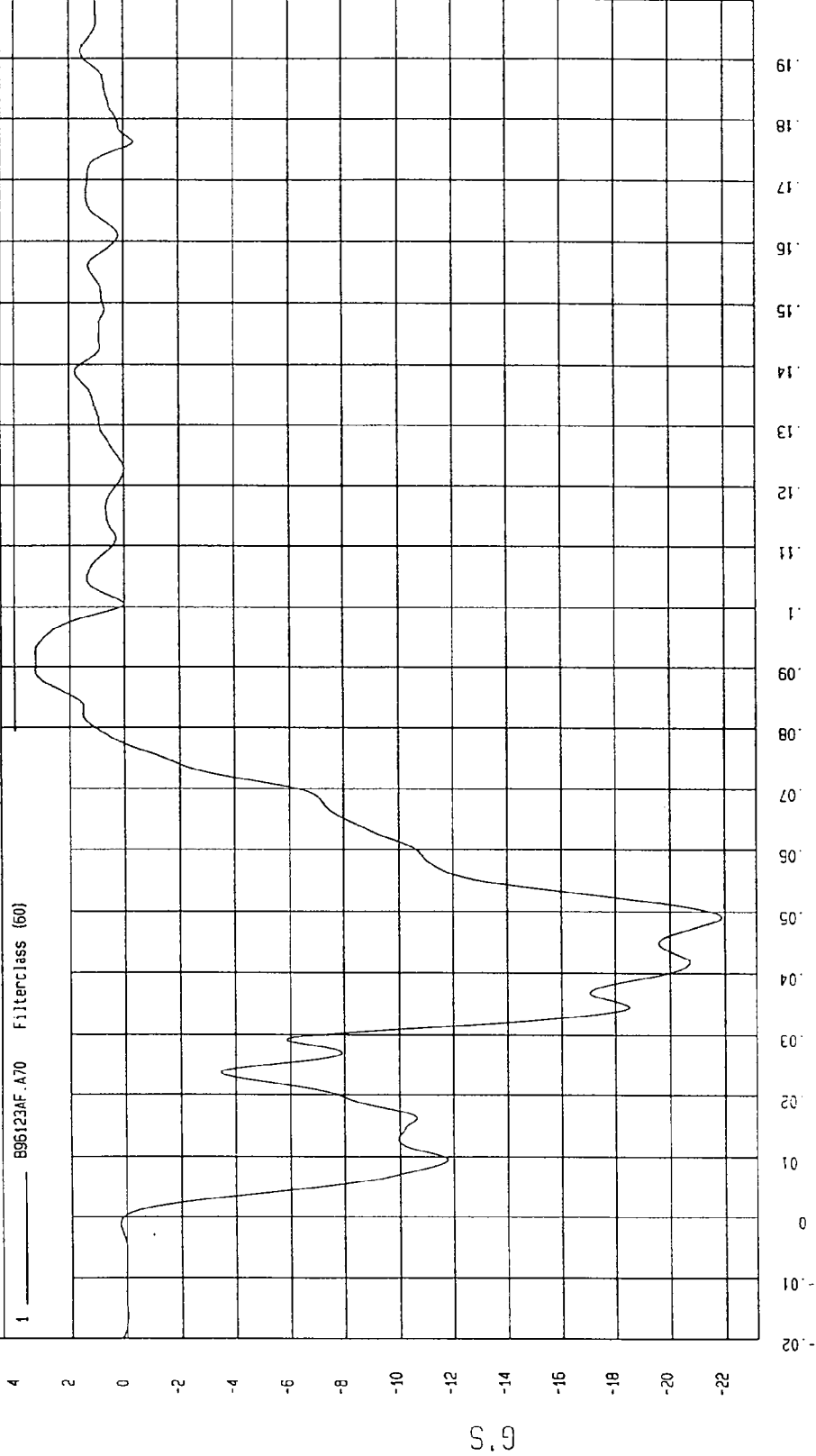
MCA Research
11-29-1996 23:1A

G.S

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-21.8919 G'S at 49. msec YMAX= 3.254057 G'S at 89. msec

LEFT REAR OCCUPANT COMPARTMENT Y ACCELERATION



MCA Research
11-26-1996 00:45

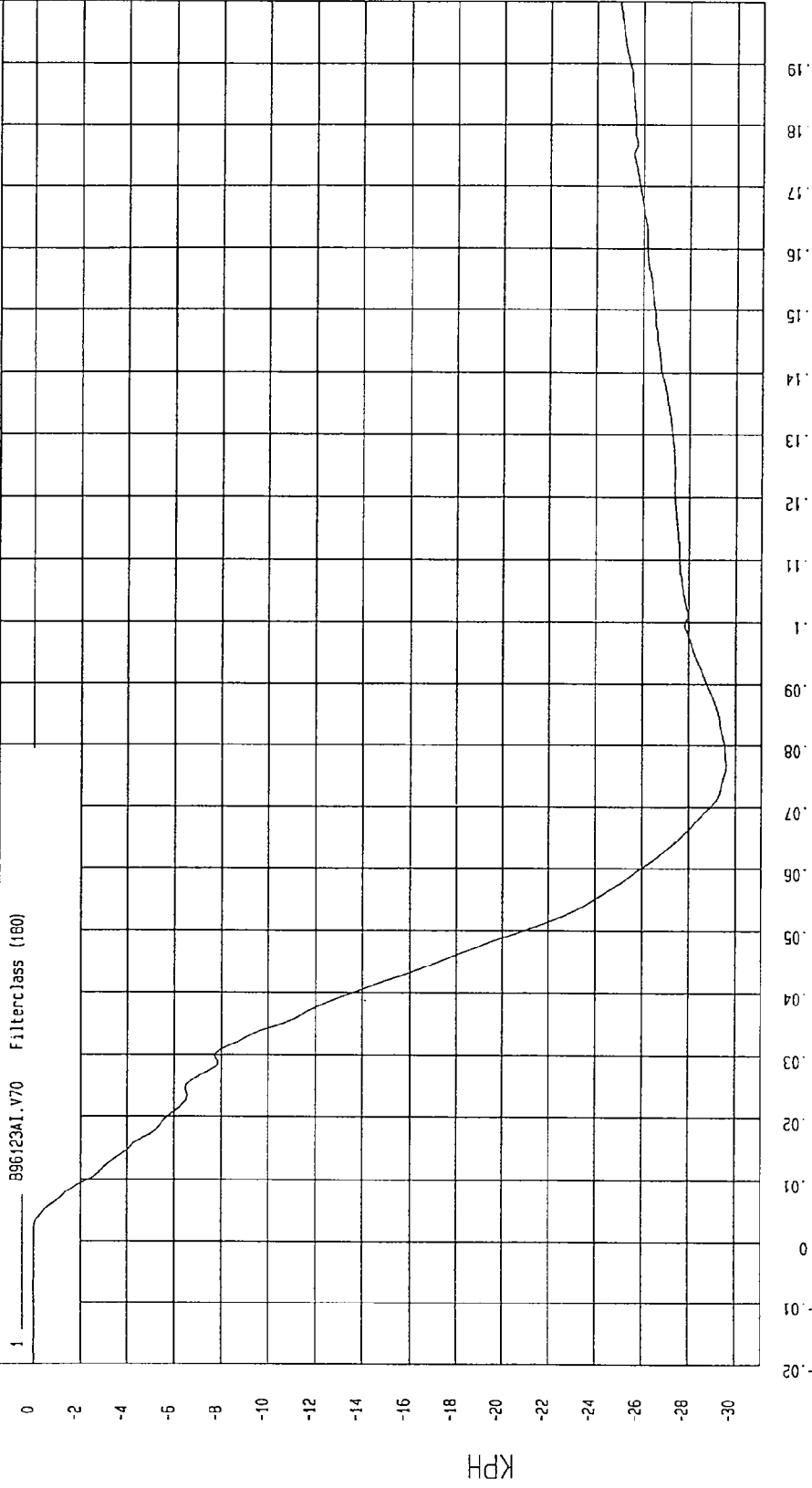
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-29.60321 KPH at 76. msec

YMAX= 0 KPH at -20 msec

LEFT REAR OCCUPANT COMPARTMENT Y VELOCITY



MGA Research
12-01-1996 03:55

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

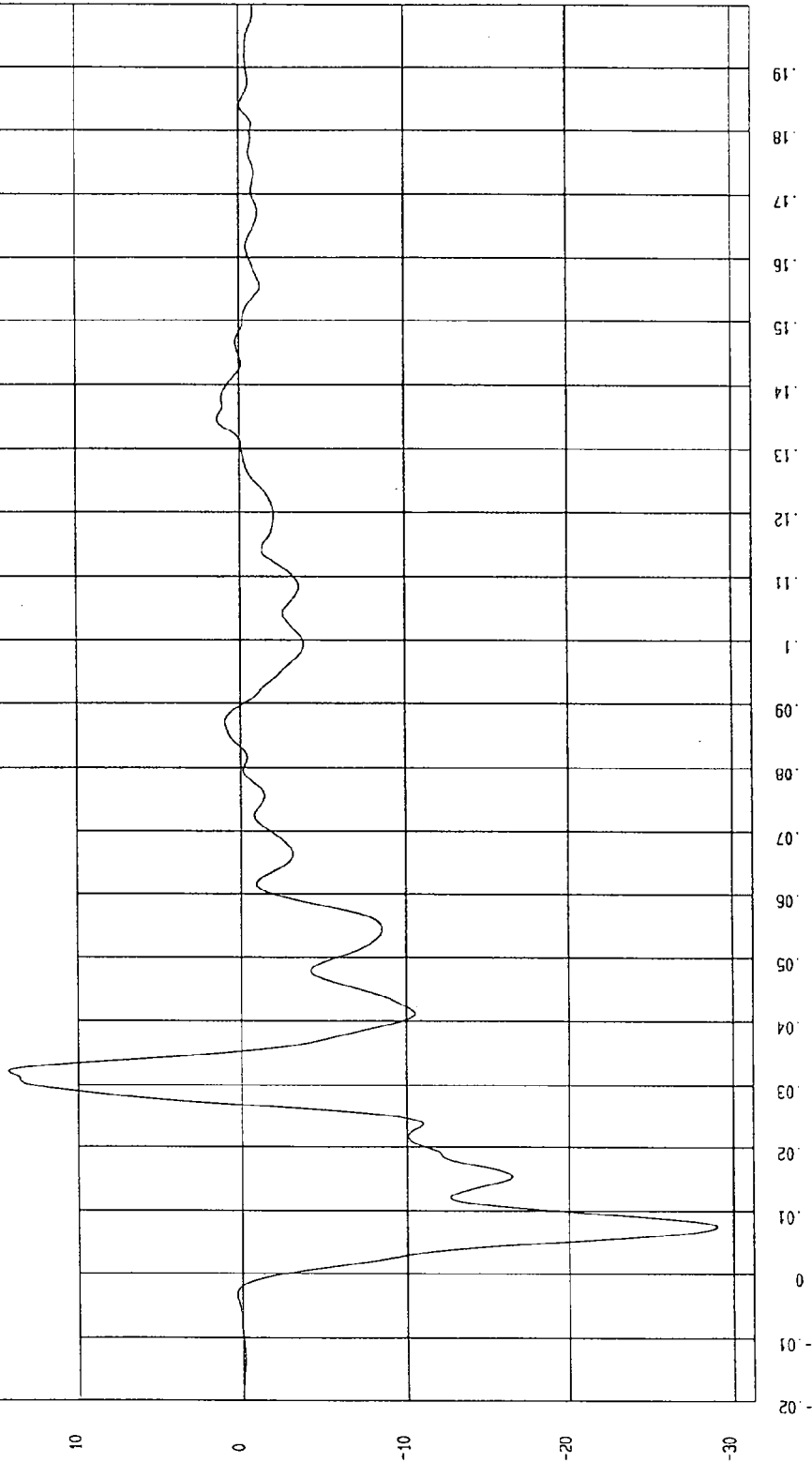
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-29.03211 G'S at 7.5 msec

YMAX= 14.19967 G'S at 32. msec

RIGHT LOWER A-POST Y ACCELERATION

1 896123AF.A20 Filterclass (60)



MGA Research
11-26-1996 00:45

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST

TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208)

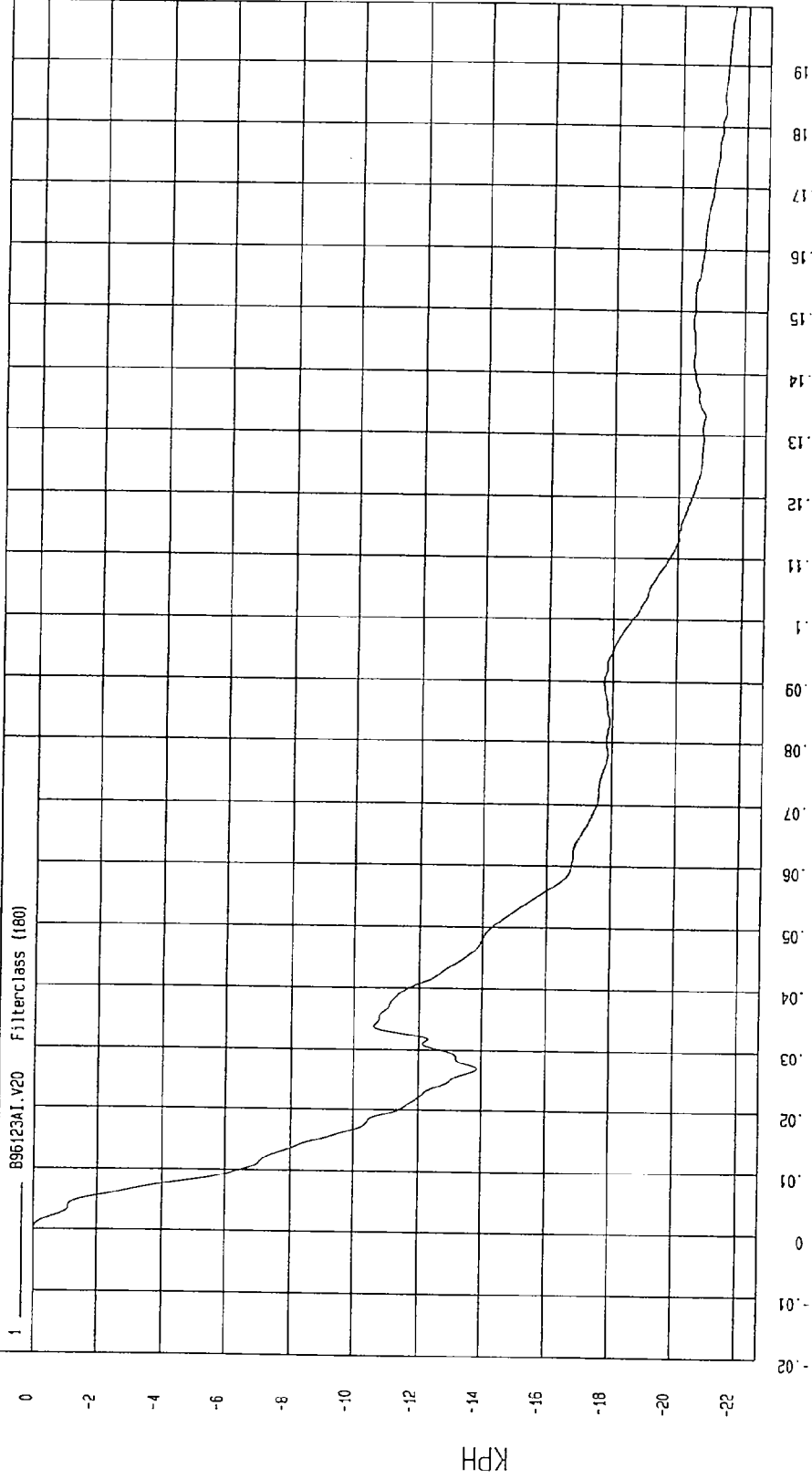
Speed: 33.32 MPH 53.6 KPH

YMIN=-21.60261 KPH at 199 msec

YMAX= 1.151197E-02 KPH at -18 msec

RIGHT LOWER A-POST Y VELOCITY

1 B96123A1.V20 Filterclass (180)



TIME Seconds

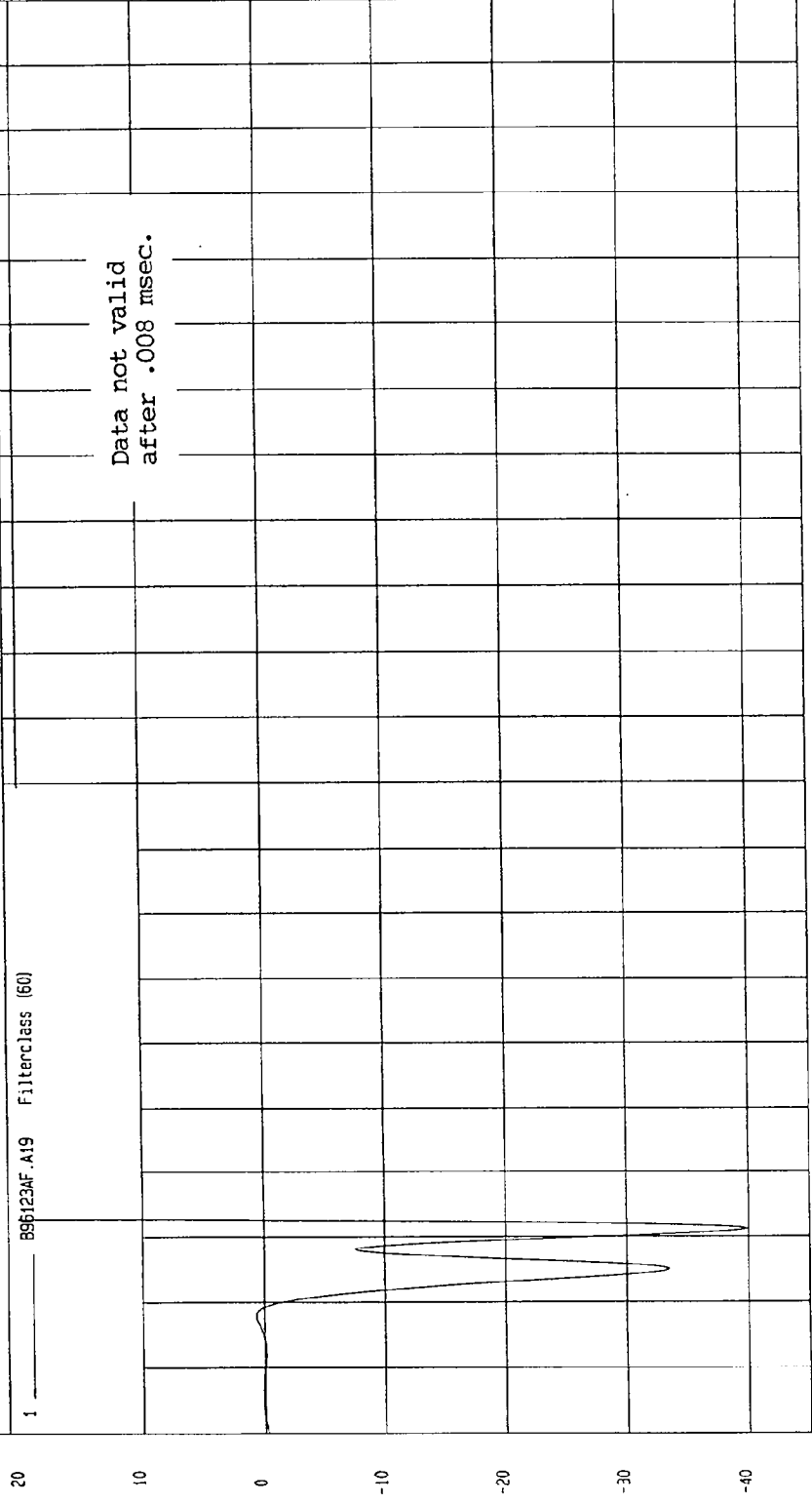
MSA Research
12-01-1996 03:55

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-39.86724 G'S at 11. msec YMAX= 1062.906 G'S at 19. msec

RIGHT MID A-POST Y ACCELERATION



Data not valid after .008 msec.

MCA Research
12-01-1996 03:51

S.9

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

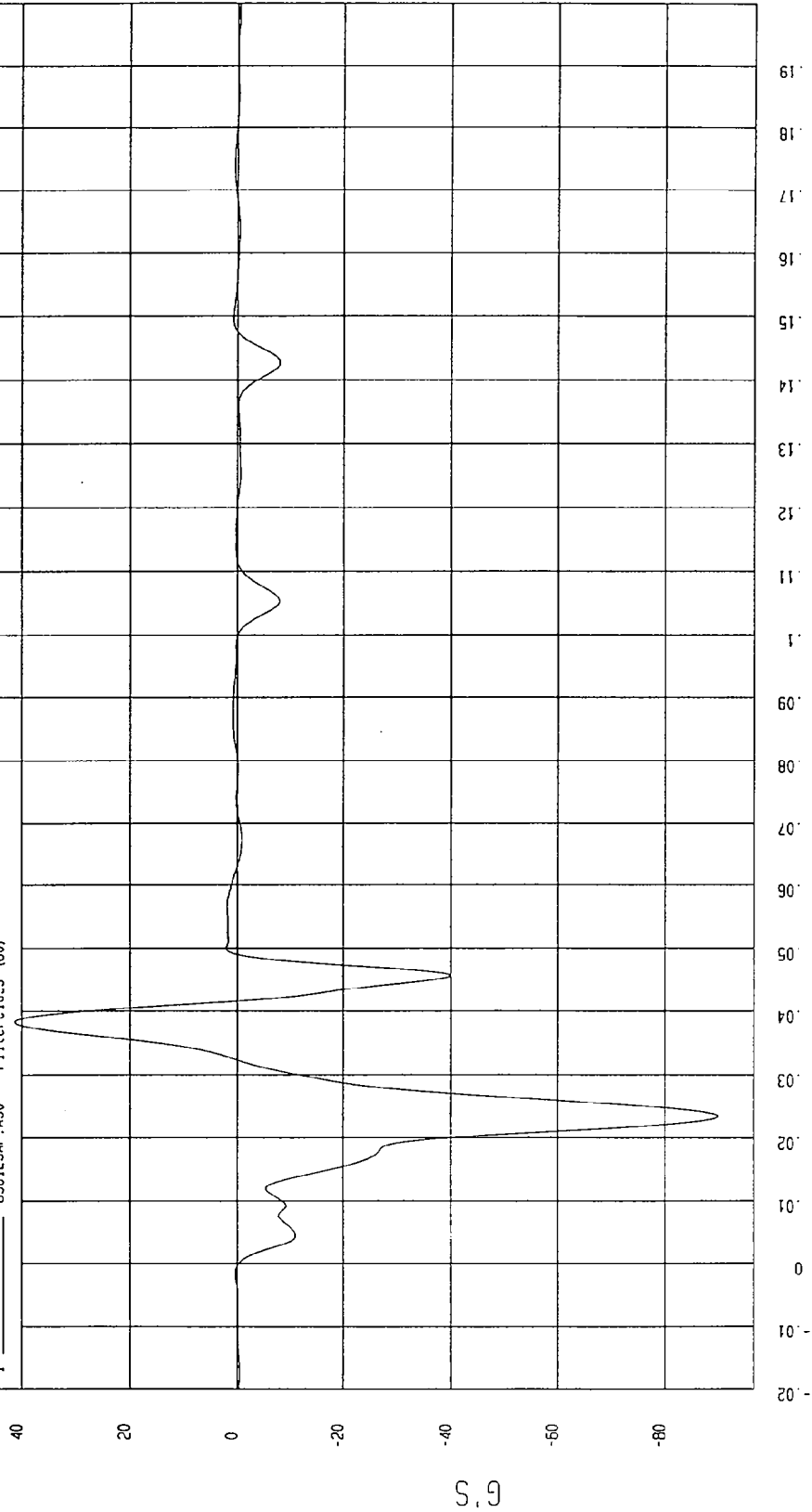
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-89.74799 G'S at 23. msec

YMAX= 41.39754 G'S at 38. msec

RIGHT LOWER B-POST Y ACCELERATION

1 ——— 896123AF.A30 Filterclass (60)



W&A Research
11-26-1996 00.45

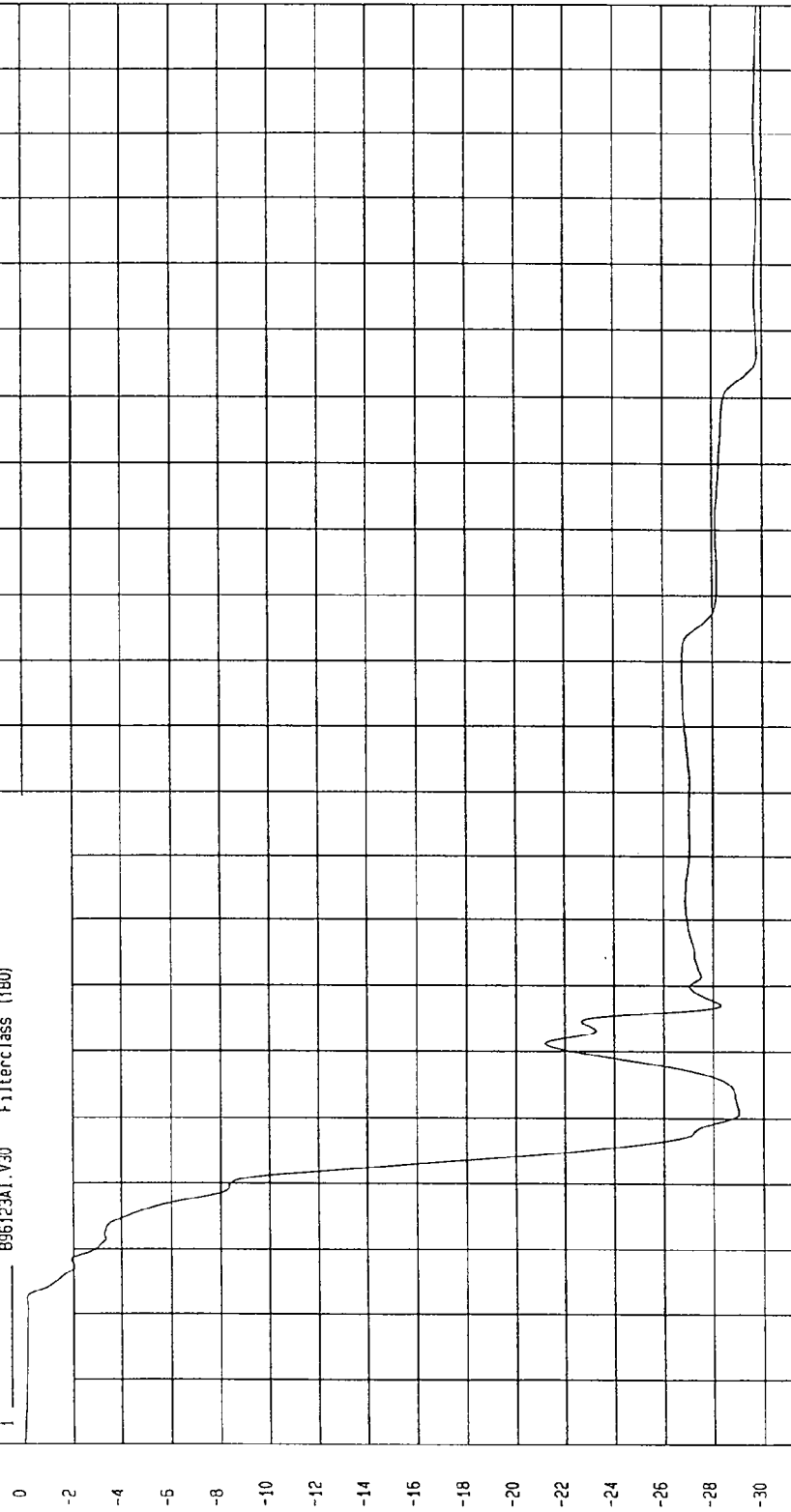
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-29.81586 KPH at 199 msec YMAX=0 KPH at -20 msec

RIGHT LOWER B-POST Y VELOCITY

896123A1.V30 Filterclass (180)



MCA Research
12-01-1996 03:56

TIME Seconds

KPH

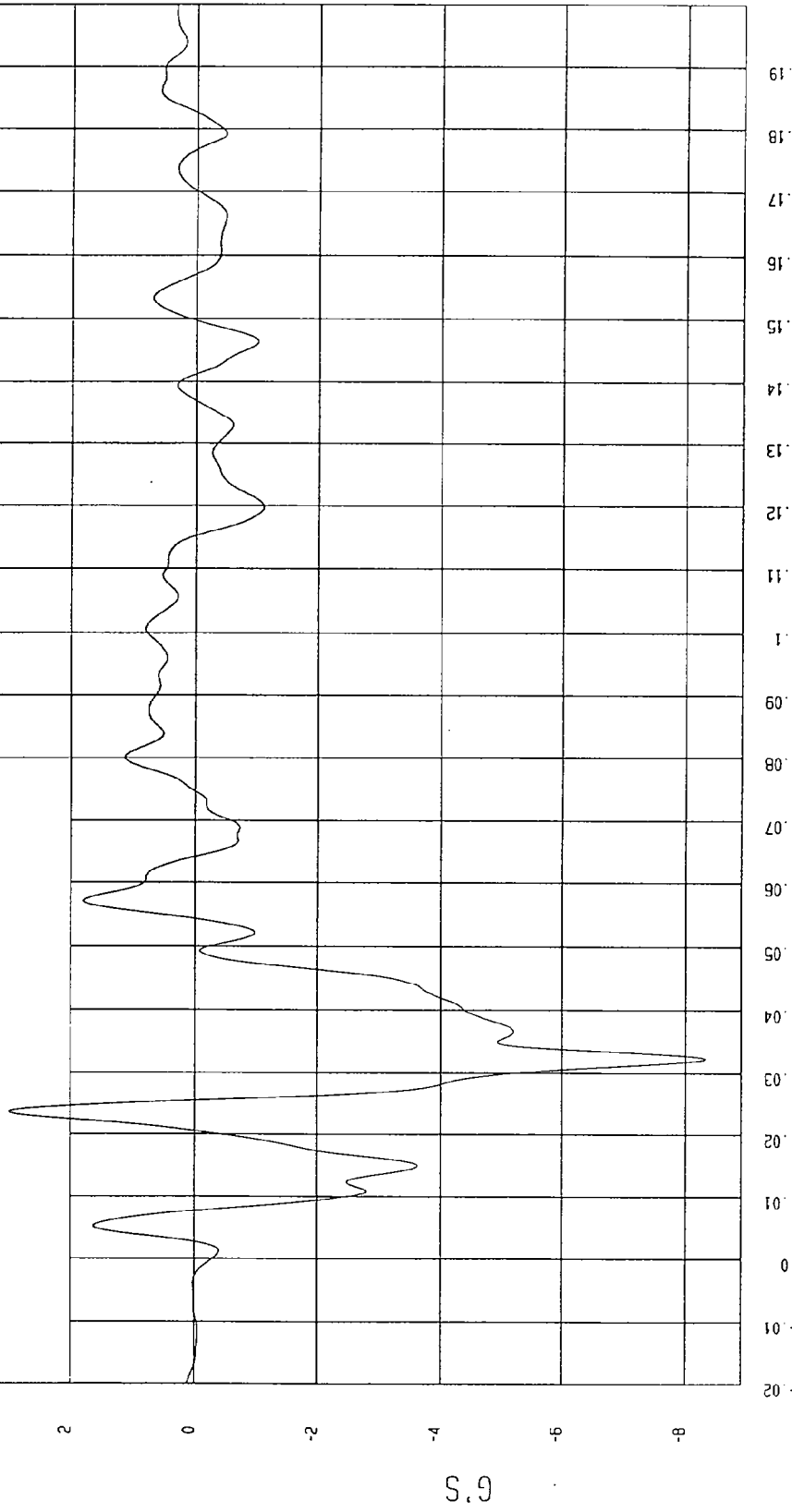
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-8.332462 G'S at 32. msec YMAX= 2.993735 G'S at 23. msec

VEHICLE CG X ACCELERATION

1 ——— 896123AF.A58 Filterclass (60)



MCA Research
11-26-1996 00:45

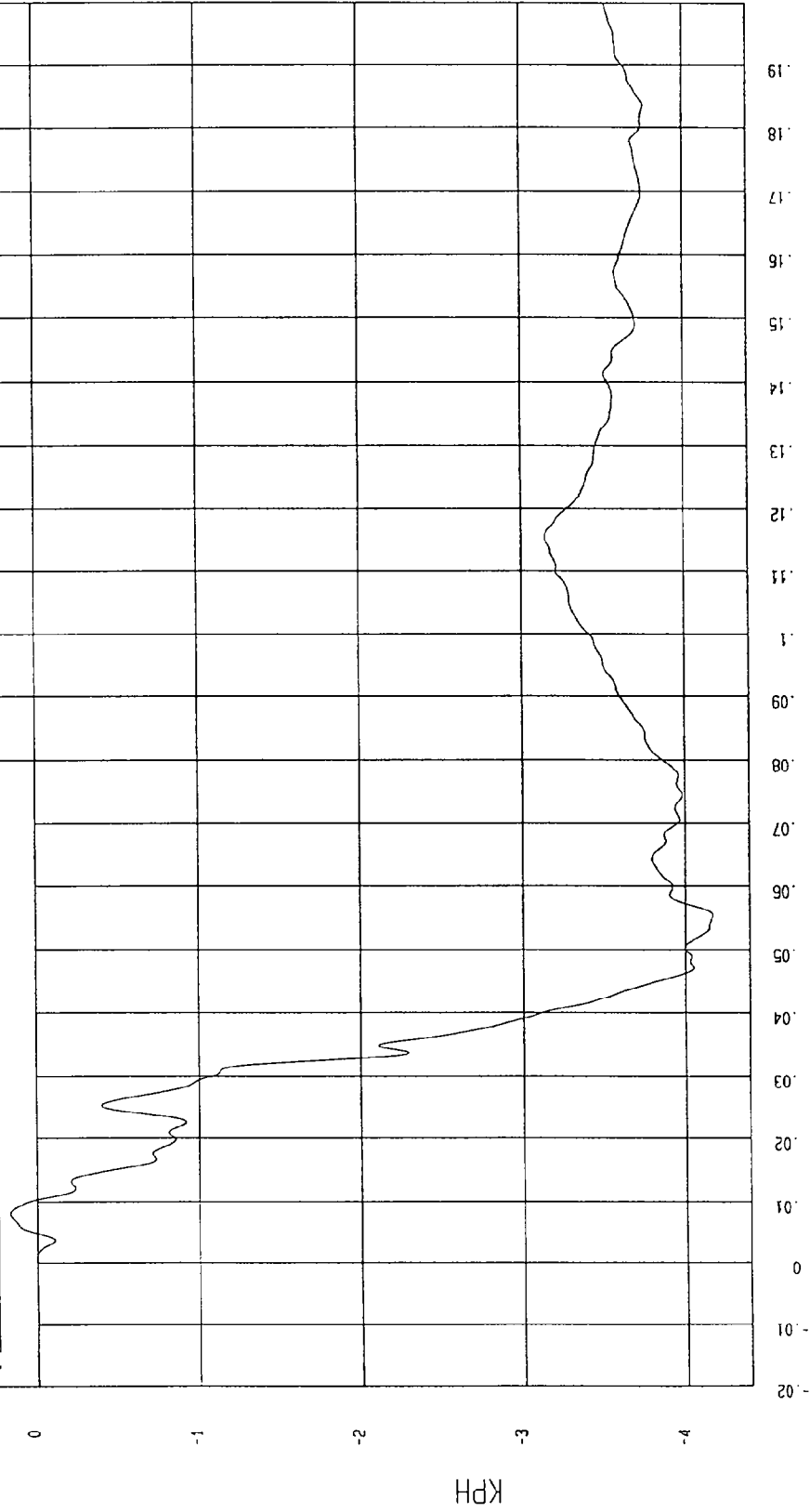
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-4.164778 KPH at 55. msec YMAX= .166676 KPH at 8 msec

VEHICLE CG X VELOCITY

1 896123A1.V58 Filterclass (180)



MCA Research
12-01-1996 03:56

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

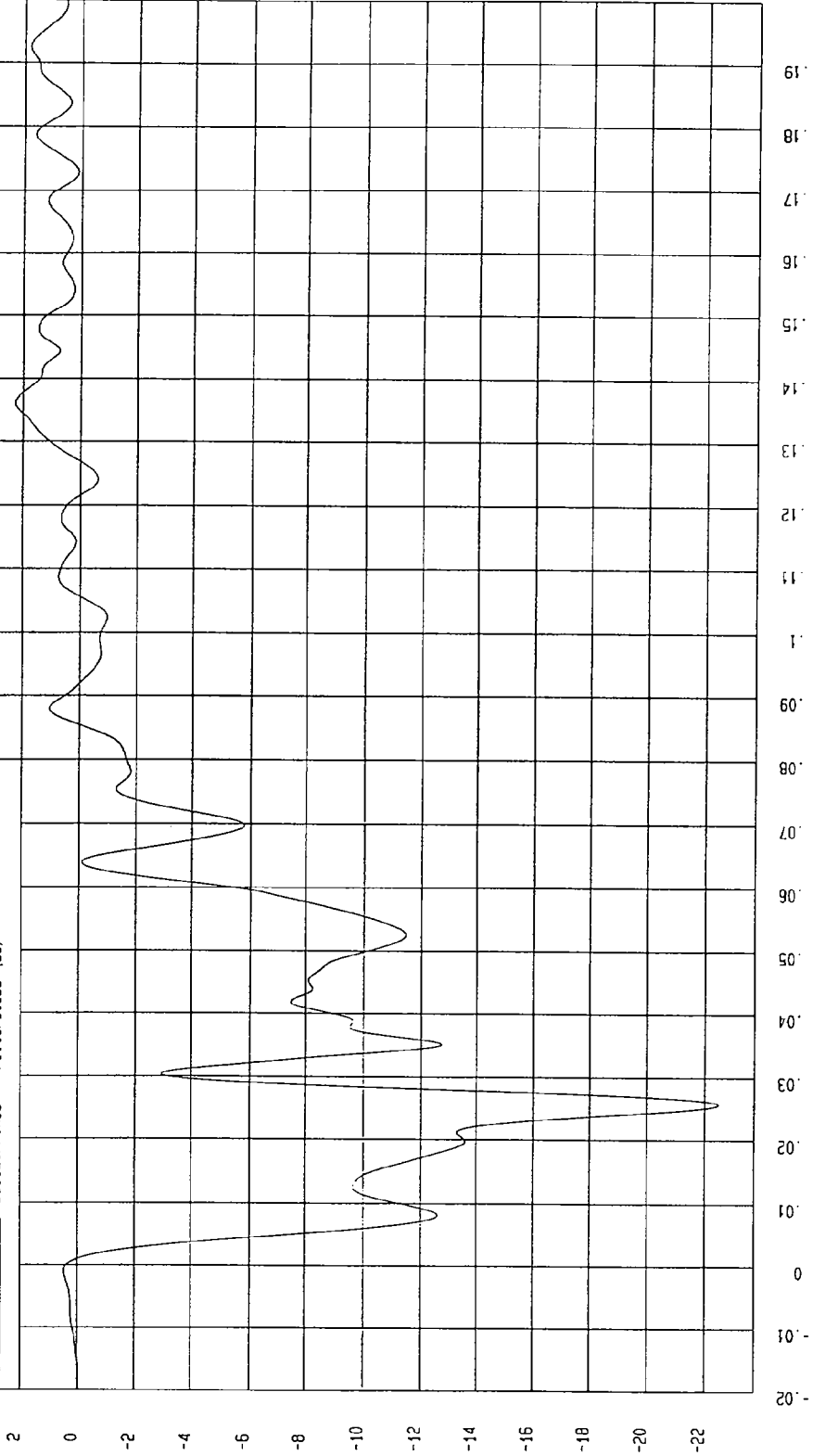
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-22.48951 G'S at 25. msec

YMAX= 2.284365 G'S at 136 msec

VEHICLE CG Y ACCELERATION

1 896123AF.A59 Filterclass (60)



MCA Research
11-26-1996 00:46

G.S

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

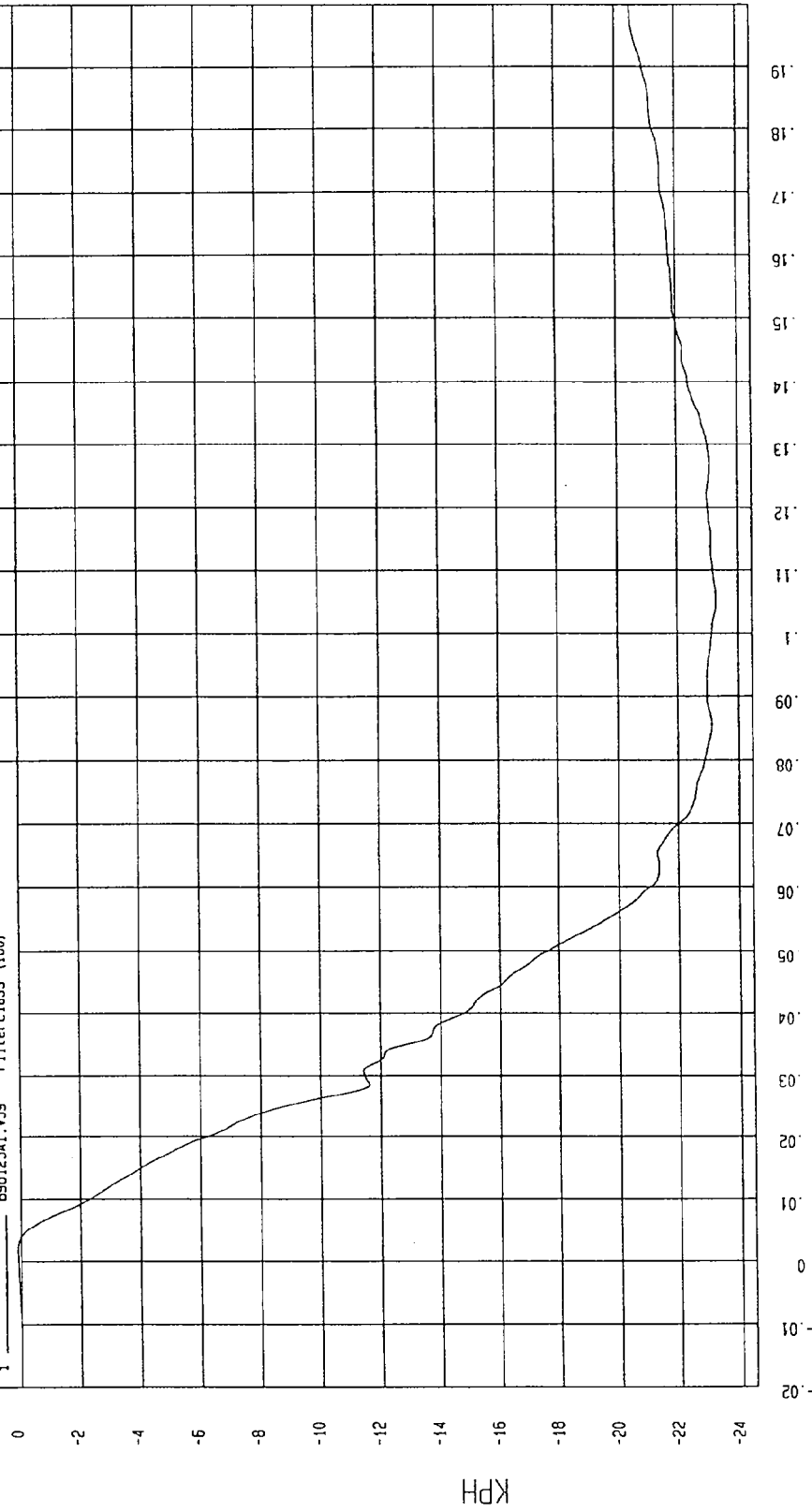
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-23.27488 KPH at 104 msec

YMAX=.1076789 KPH at 1.6 msec

VEHICLE CG Y VELOCITY

1 896123A1.V59 Filterclass (180)



MGA Research Co.
12-01-1996 03:56

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

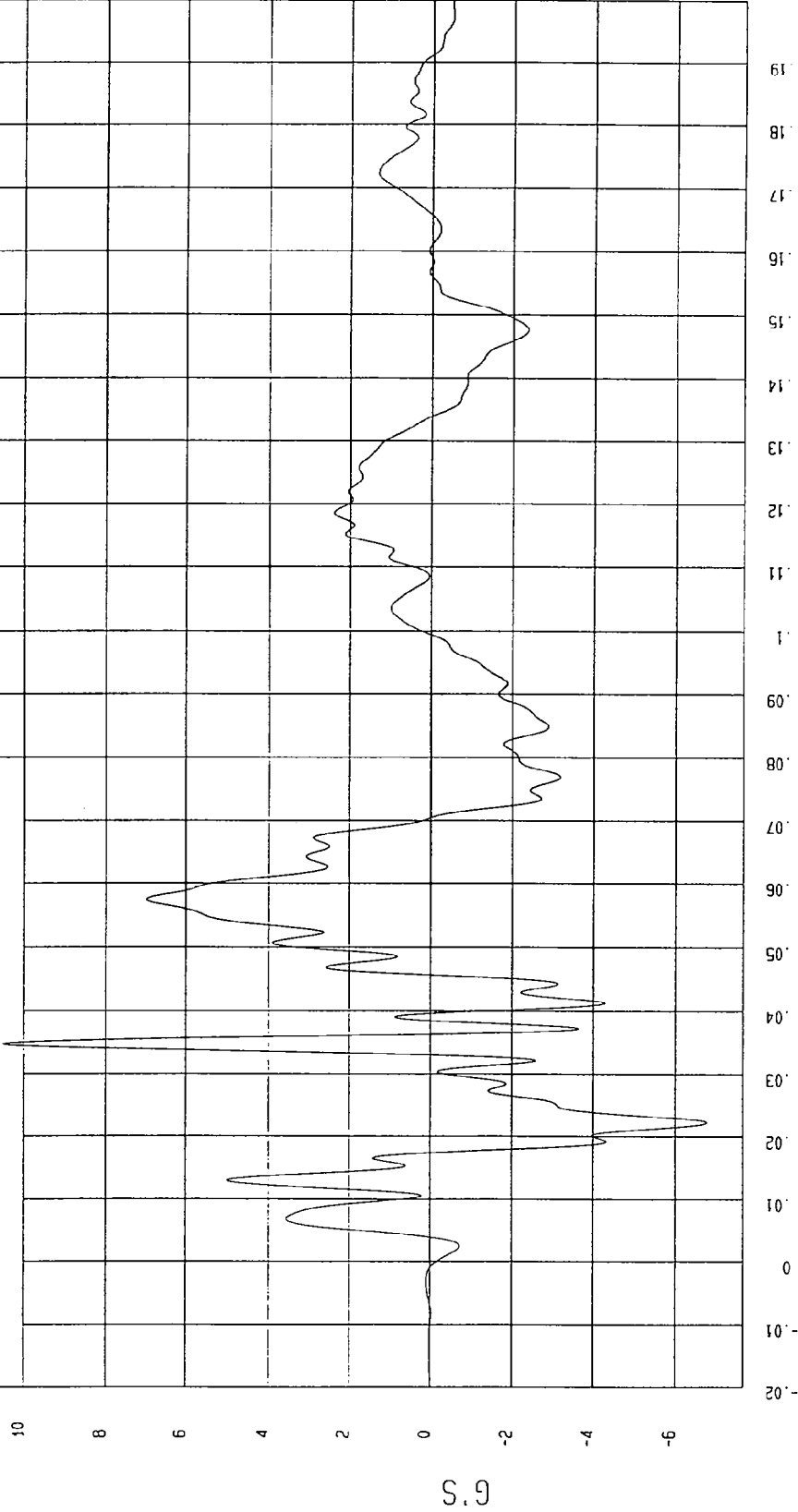
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-6.781473 G'S at 22. msec

YMAX= 10.52324 G'S at 34. msec

VEHICLE CG Z ACCELERATION

1 896123AF.460 Filterclass (60)



MGA Research
11-26-1996 00:46

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

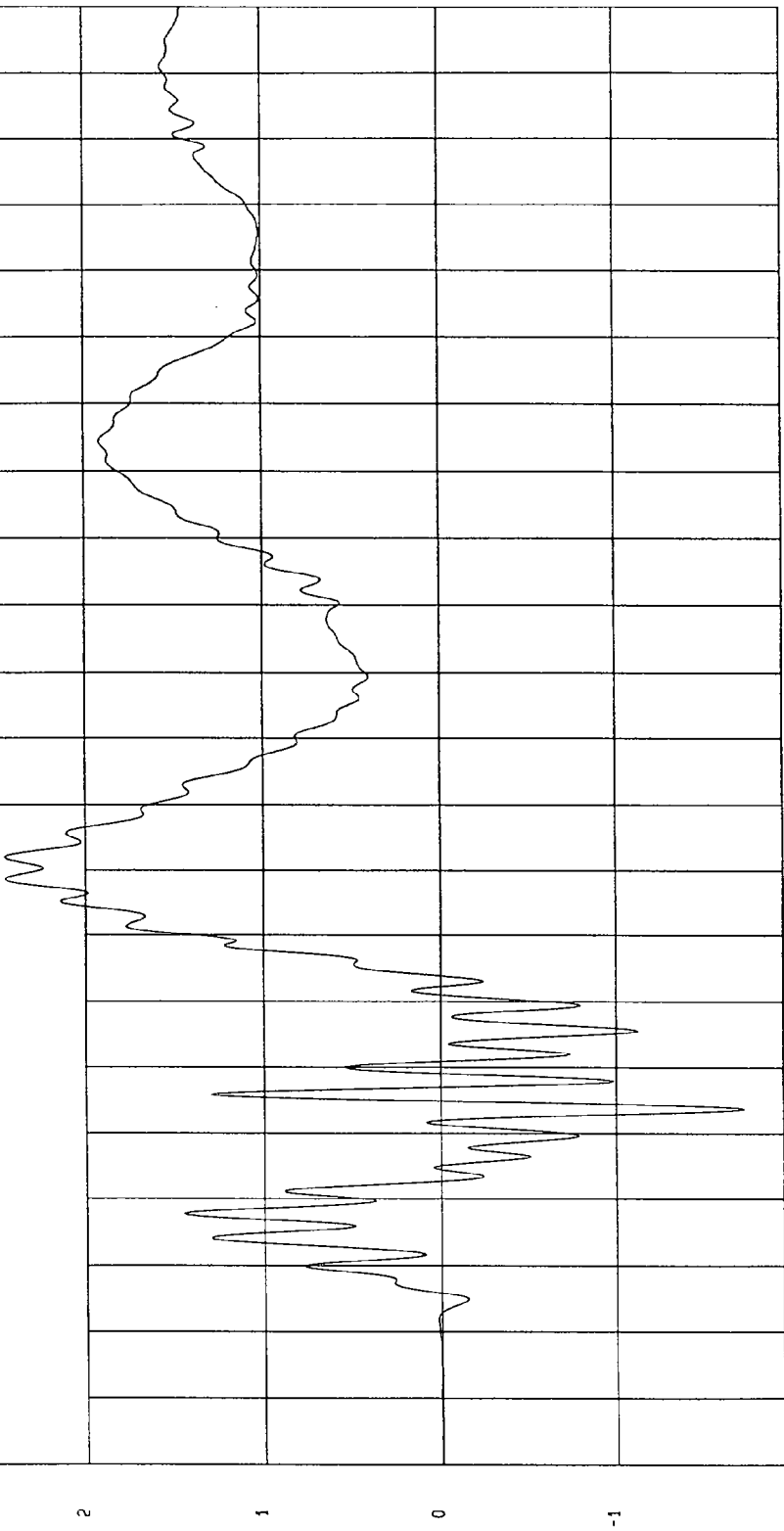
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-1.736283 KPH at 33. msec

YMAX= 2.465208 KPH at 71. msec

VEHICLE CG Z VELOCITY

1 ——— B96123A1.V60 Filterclass (180)



MGA Research
12-01-1996 03:56

TIME Seconds

KPH

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

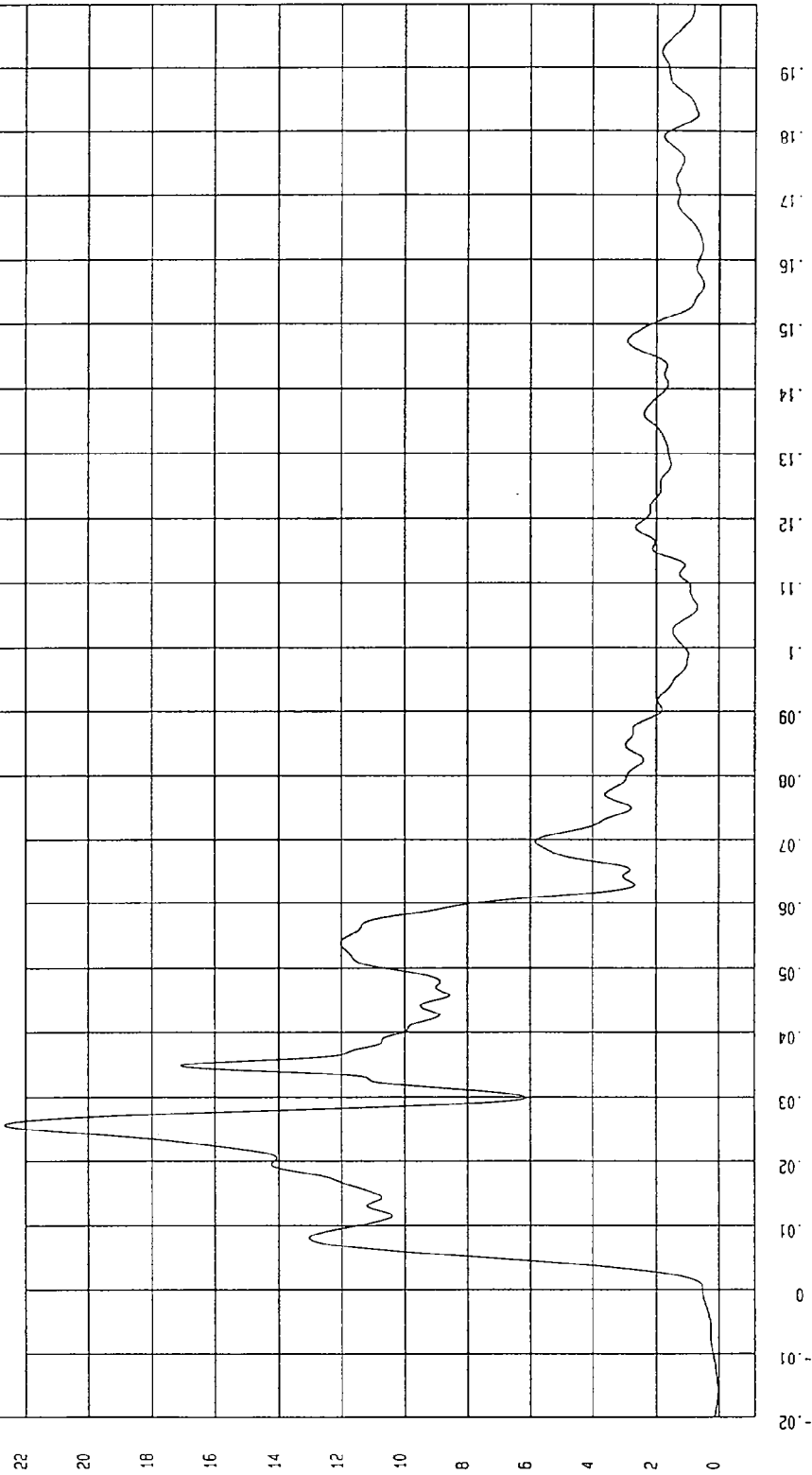
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN= 2.335976E-02 G'S at -15. msec

YMAX= 22.68337 G'S at 25. msec

VEHICLE CG RESULTANT ACCELERATION

1 ——— 896123AV.A58 FilterClass (60)



MGA Research
11-29-1996 23.14

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

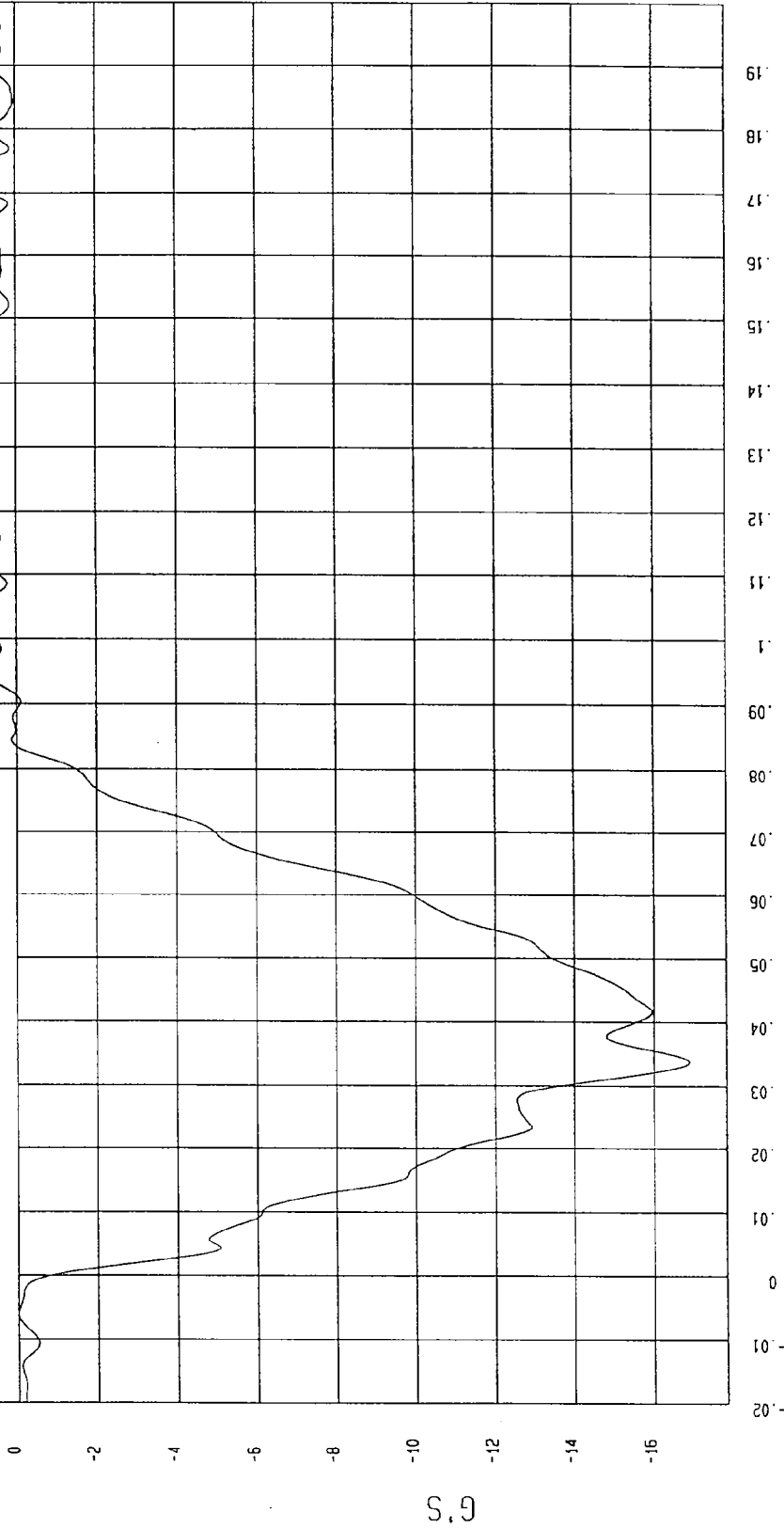
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-16.69492 G'S at 33. msec

YMAX= .990157 G'S at 112 msec

MOVING BARRIER CG X ACCELERATION

1 ——— 896123AF.A02 Filterclass (60)



MCA Research
11-25-1996 00:46

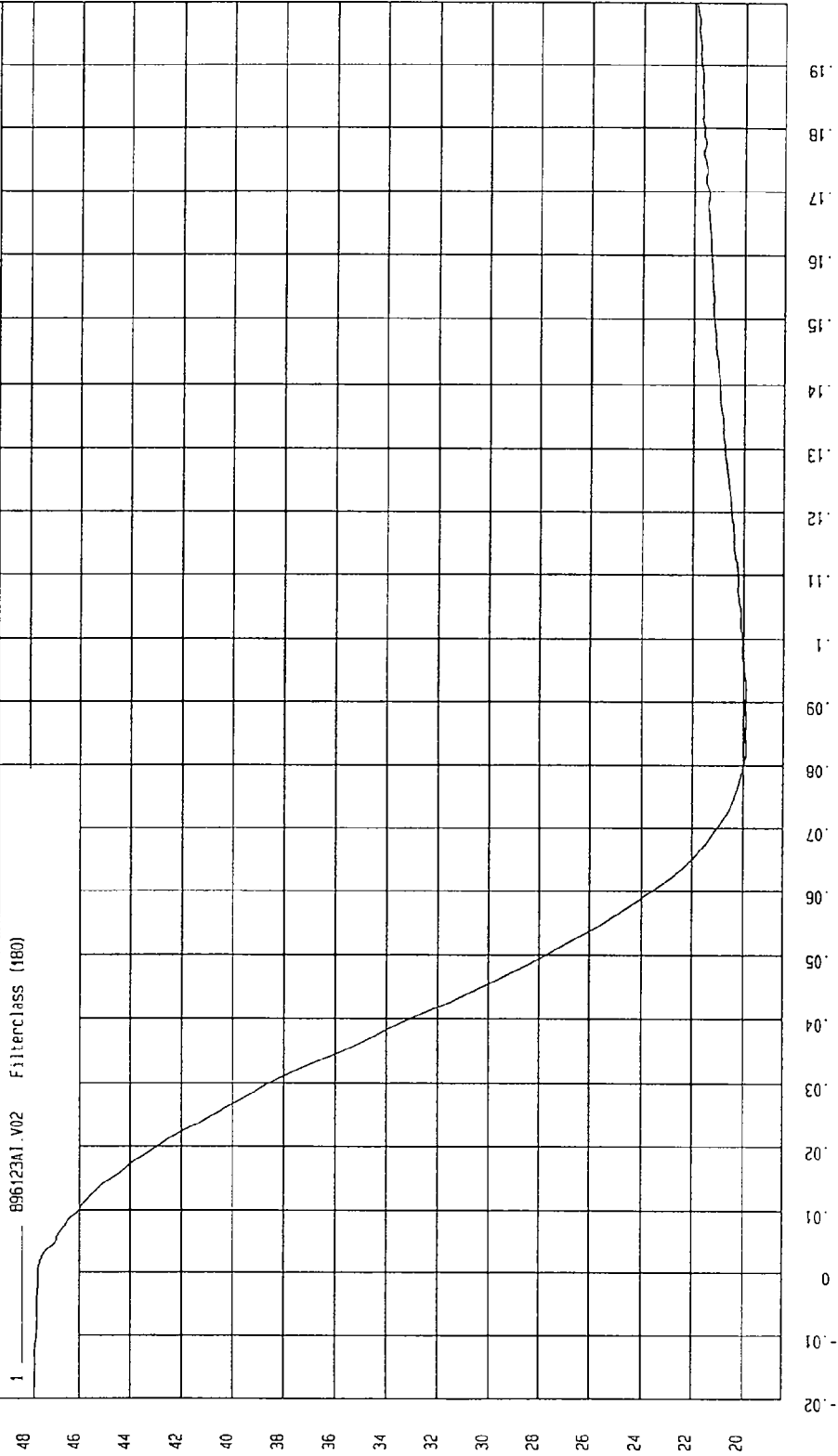
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN= 19.09292 KPH at 02 msec YMAX= 47.80322 KPH at -19. msec

MOVING BARRIER CG X VELOCITY

1 --- 896123A1.V02 Filterclass (180)



MGA Research
12-01-1996 03:56

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

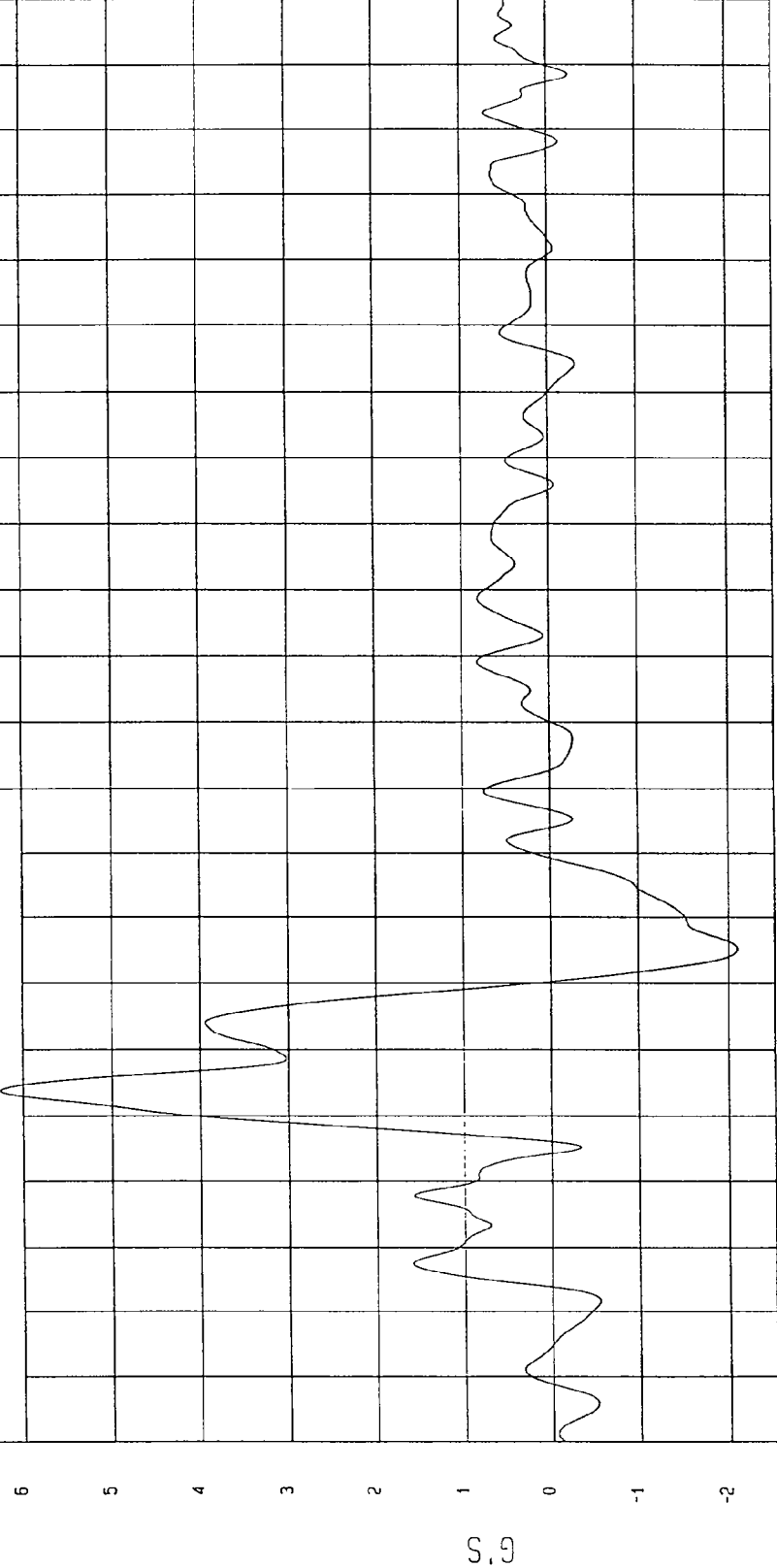
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-2.099208 G'S at 55. msec

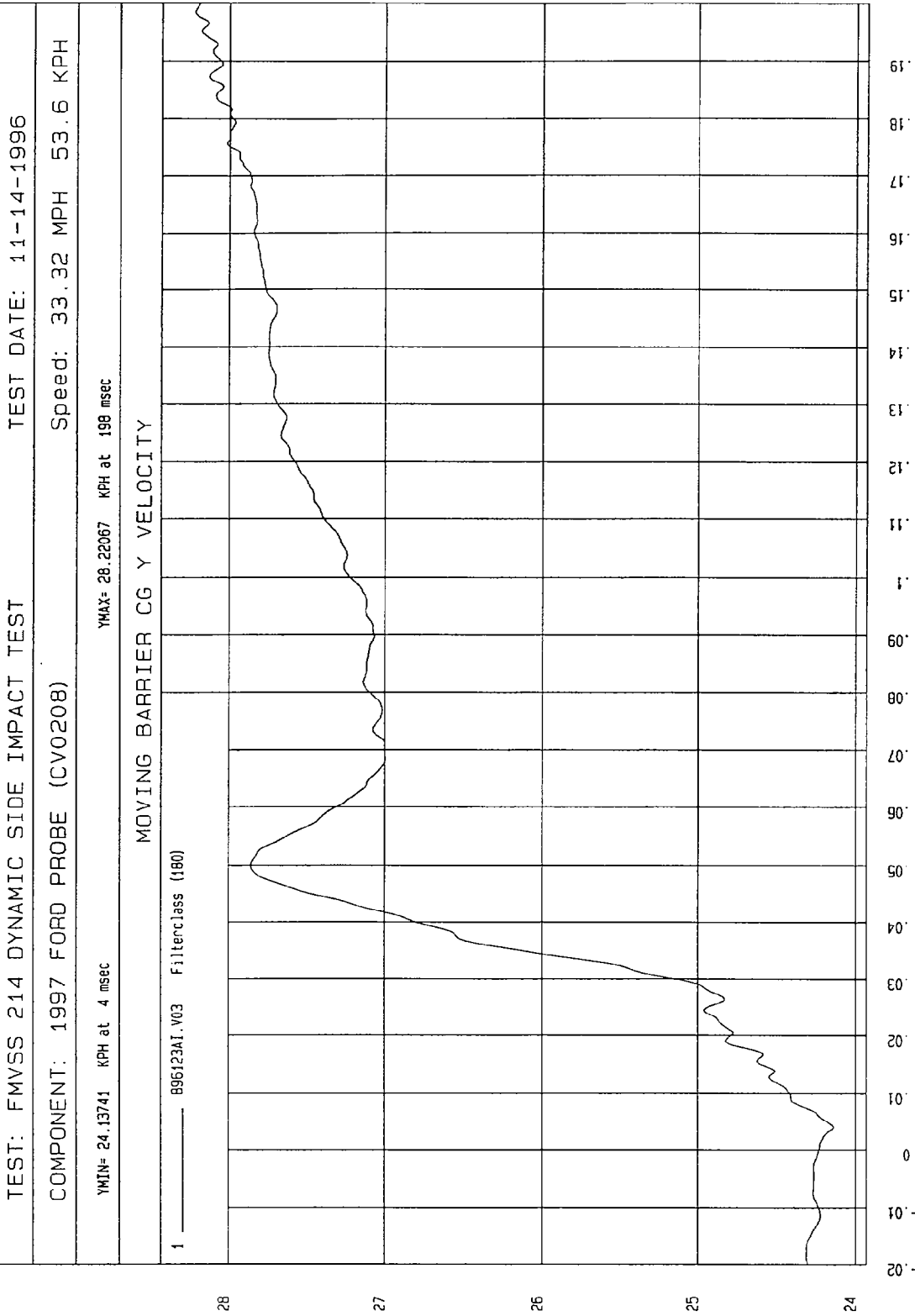
YMAX= 6.250568 G'S at 33. msec

MOVING BARRIER CG Y ACCELERATION

1 ——— B96123AF.A03 Filterclass (60)



MGA Research
11-26-1996 00:46



MGA Research
12-01-1996 03:56

TIME Seconds

KPH

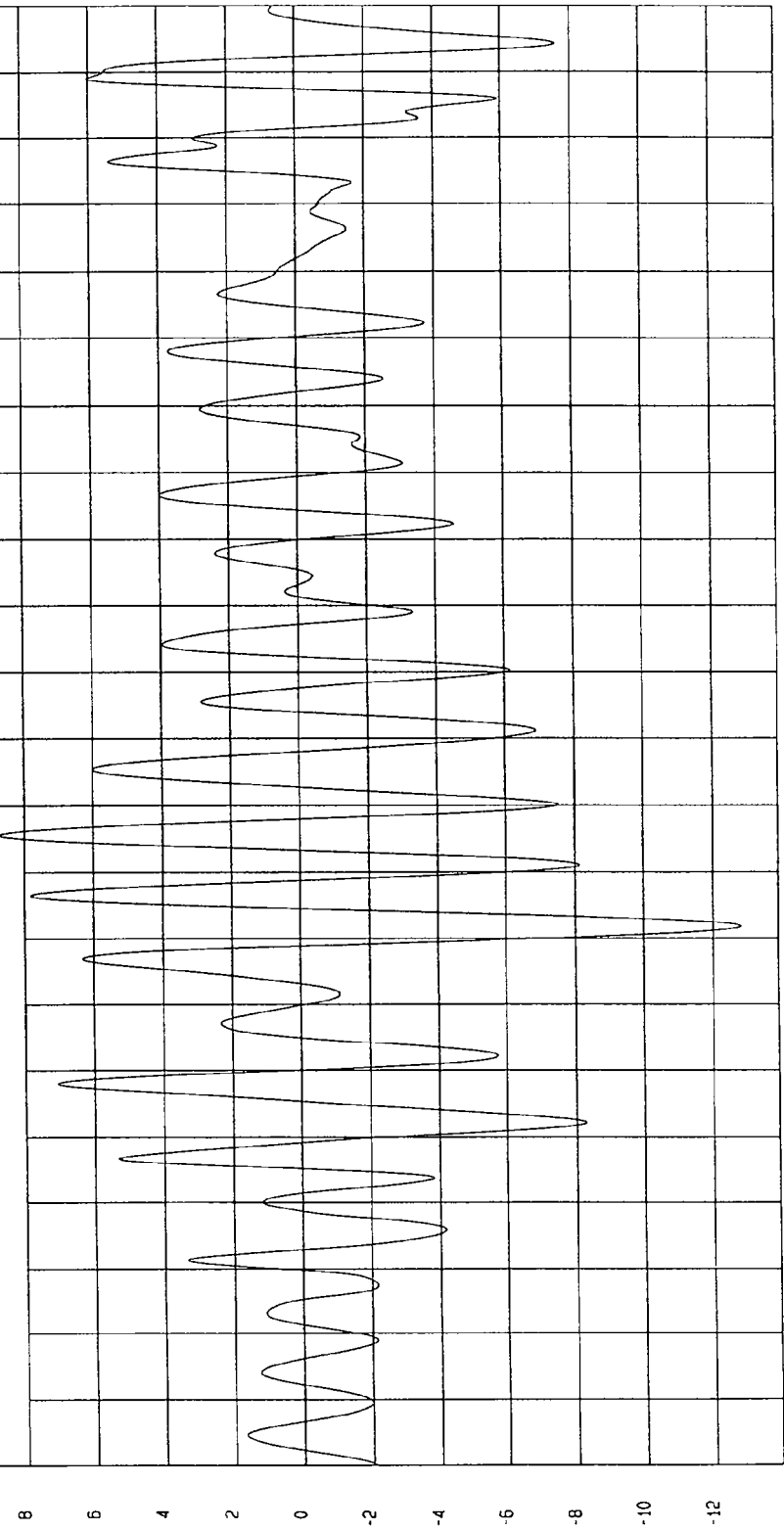
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-12.82696 G'S at 61. msec YMAX= 8.731078 G'S at 75. msec

MOVING BARRIER CG Z ACCELERATION

1 ——— 895123AF.A04 FilterClass (60)



MCA Research
11-26-1996 00:46

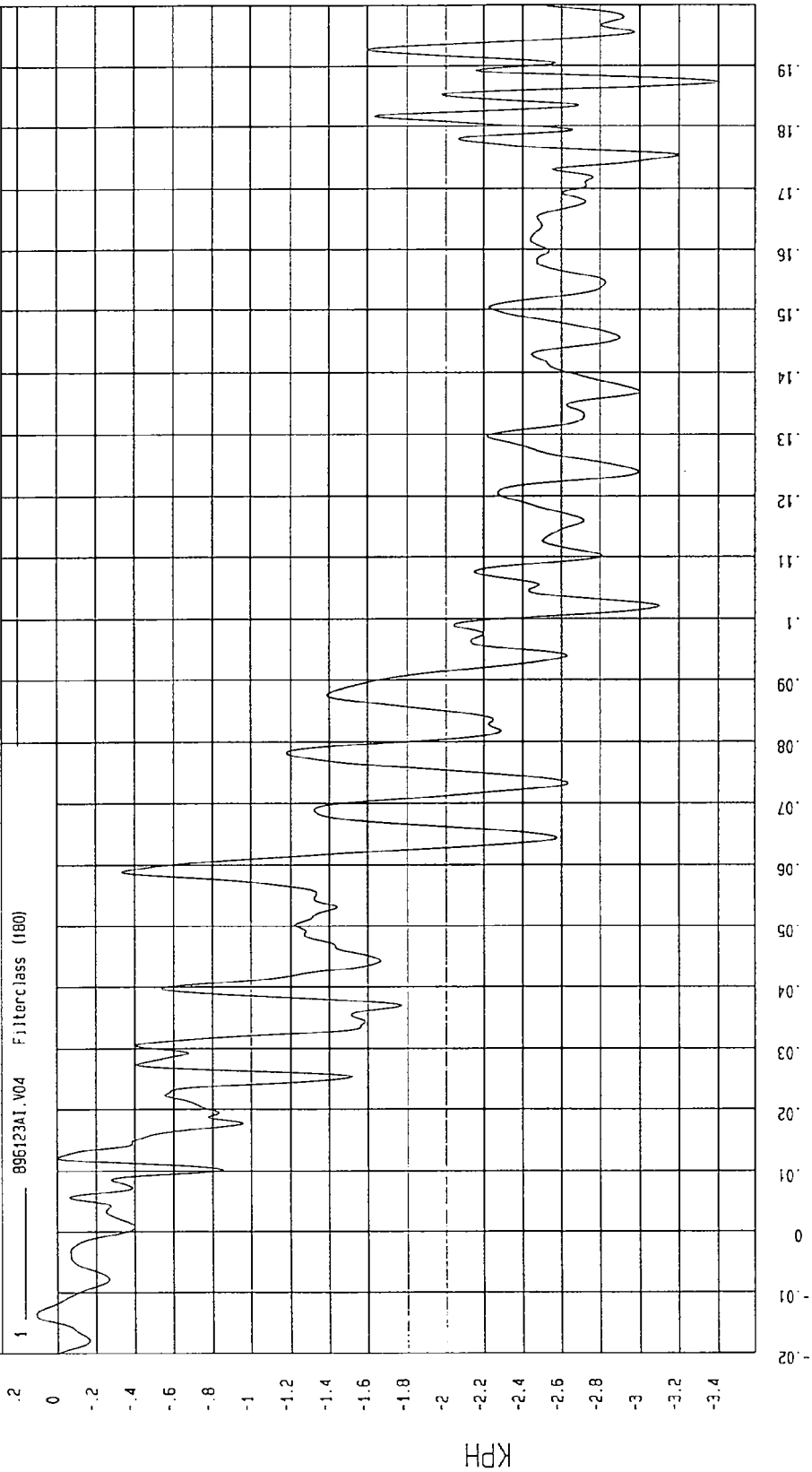
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-3.40031 KPH at 187 msec

YMAX= .1072875 MPH at -13. msec

MOVING BARRIER CG Z VELOCITY



MCA Research
12-01-1996 03:56

TIME Seconds

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

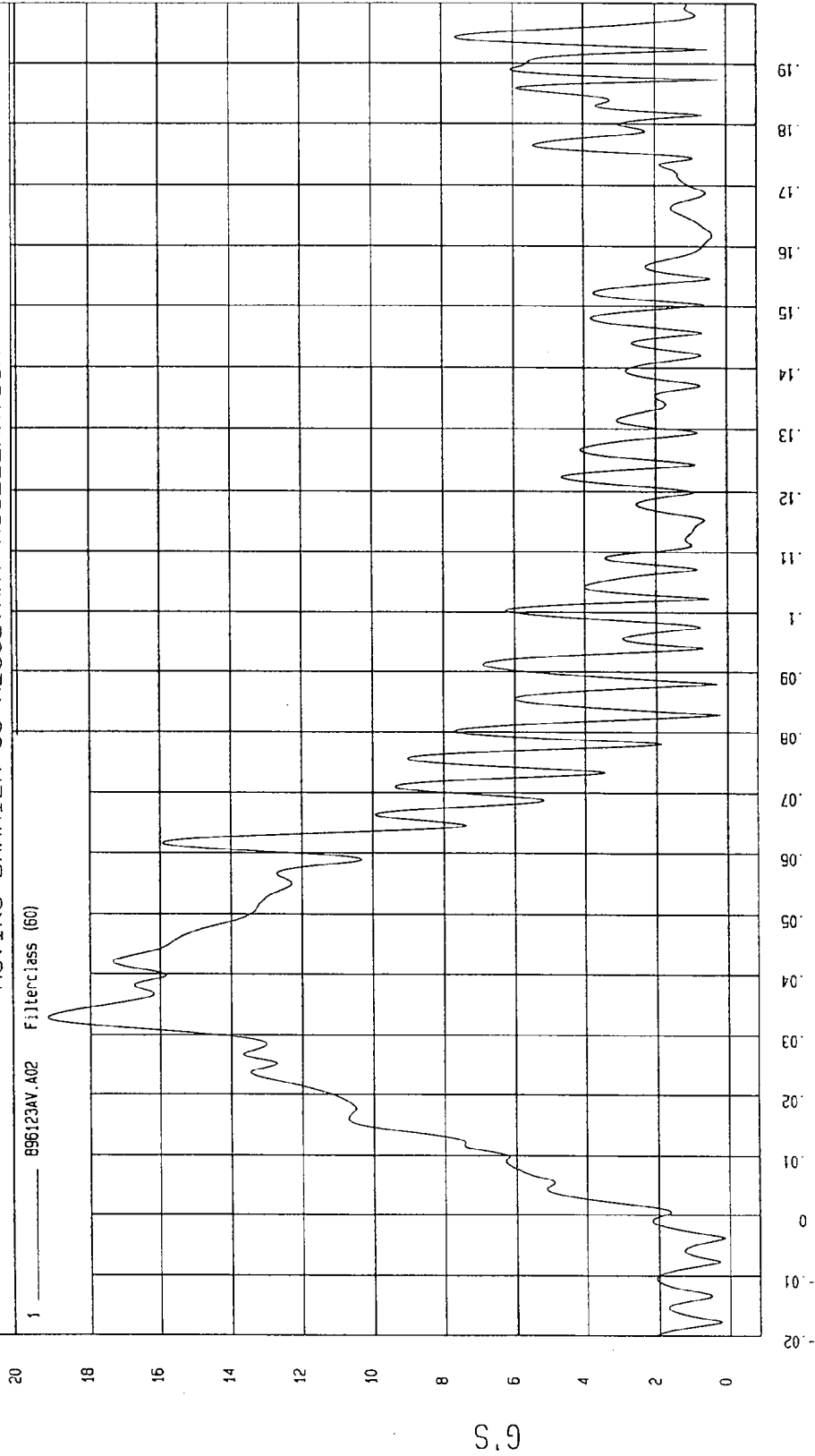
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN= .1381066 G'S at -3.8 msec

YMAX= 19.1794 G'S at 32. msec

MOVING BARRIER CG RESULTANT ACCELERATION

1 ——— 896123AV.A02 Filterclass (60)



MCA Research
11-29-1996 23.14

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

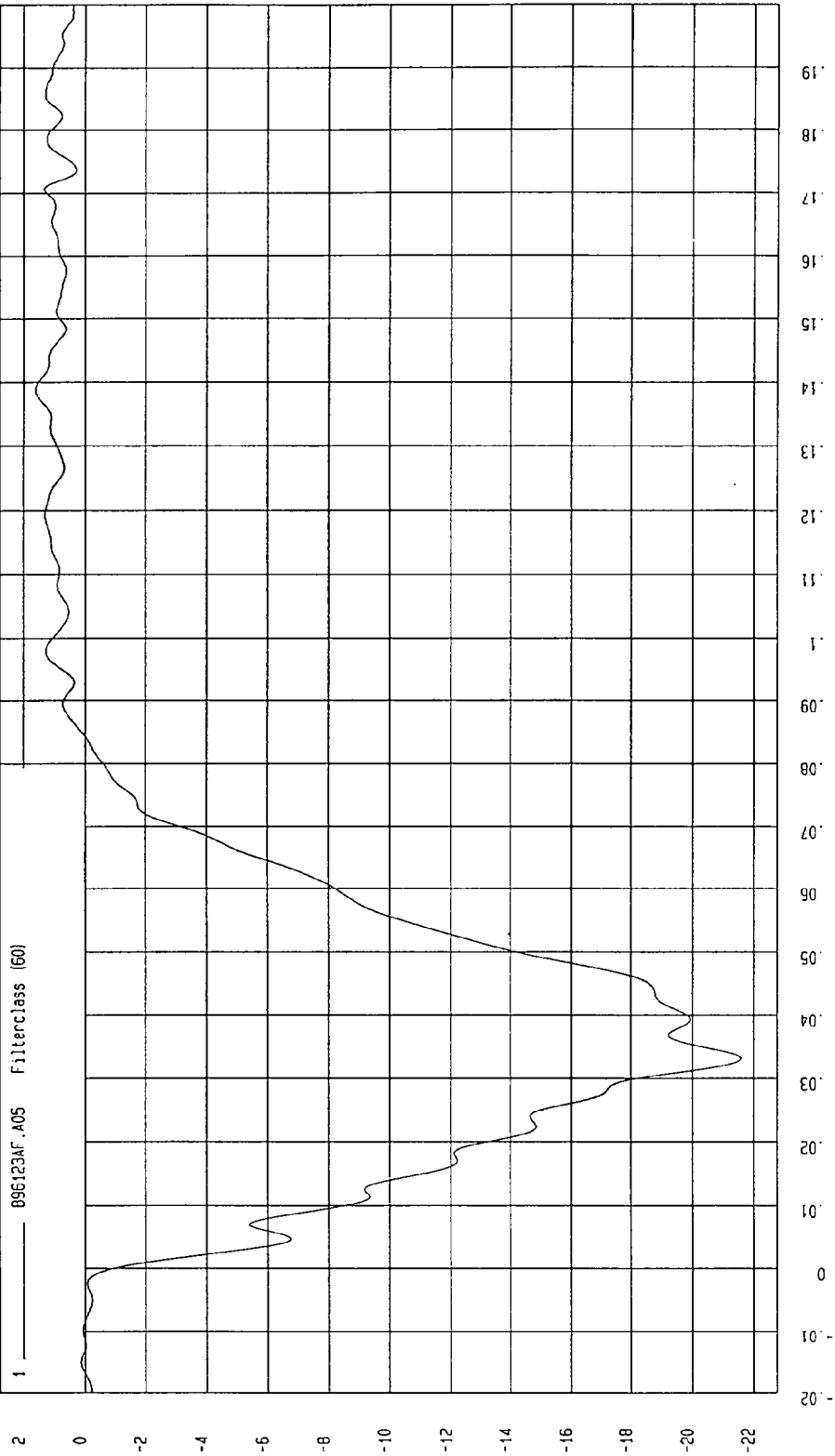
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-21.60524 G'S at 33. msec

YMAX= 1.614699 G'S at 138 msec

MOVING BARRIER REAR AXLE X ACCELERATION

1 ——— 096123AF.A05 Filterclass (60)



MGA Research
11-26-1996 00.46

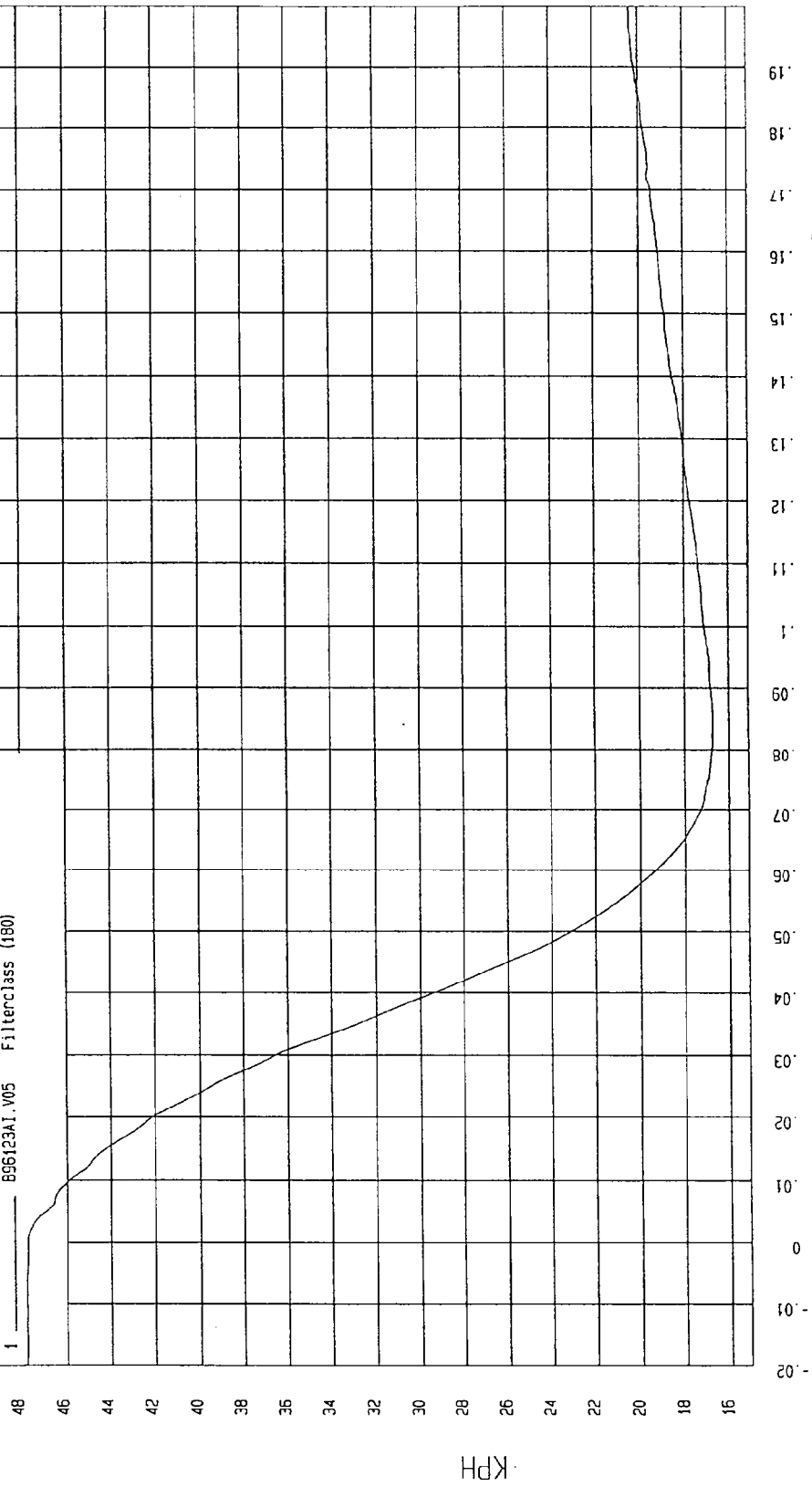
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN= 16.7:135 KPH at 84. msec YMAX= 47.80307 KPH at -13. msec

MOVING BARRIER REAR AXLE X VELOCITY

1 896123A1.V05 Filterclass (180)



MGA Research
12-01-1996 09:56

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

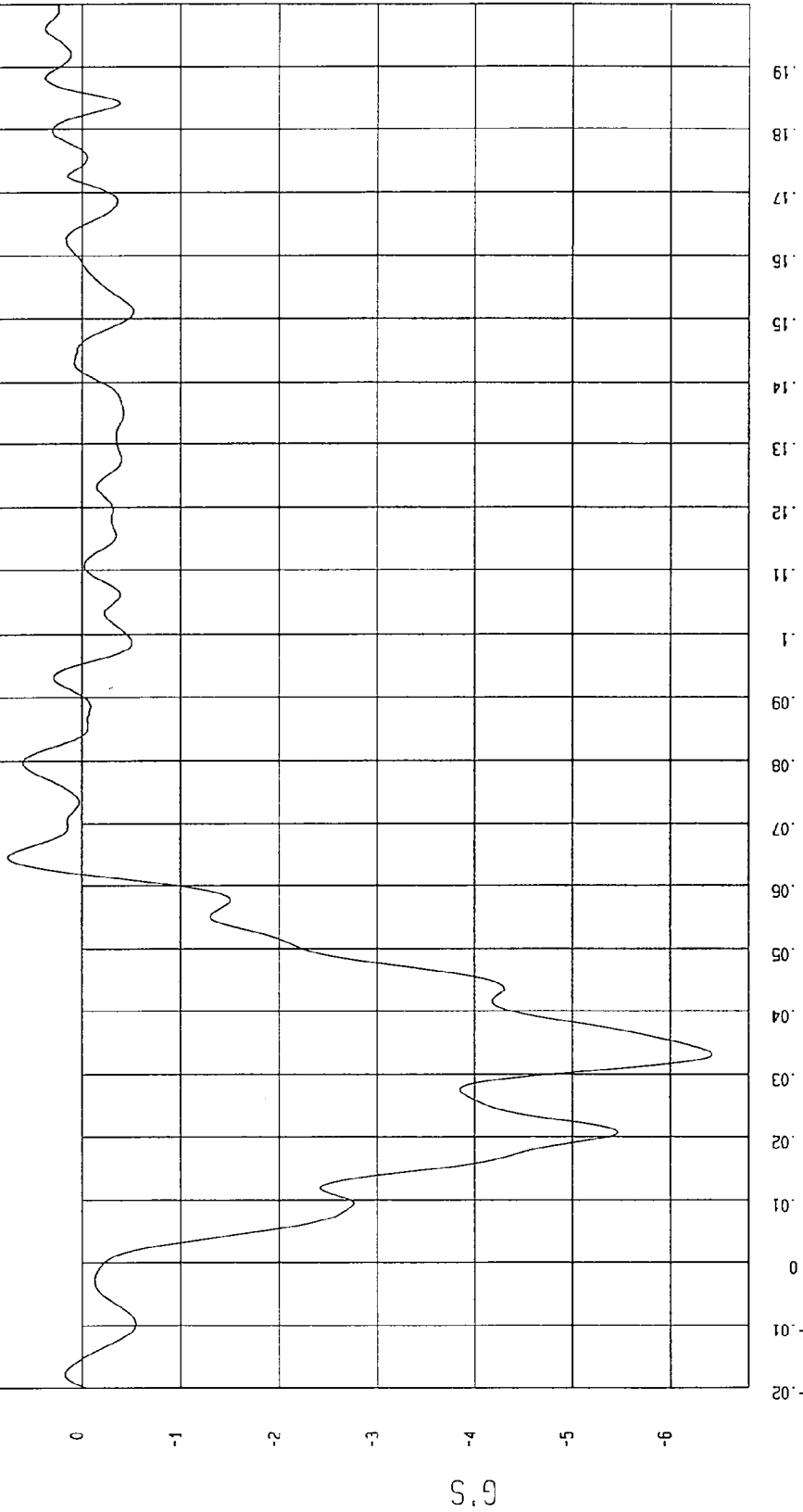
COMPONENT: 1997 FORD PROBE (CVO208) Speed: 33.32 MPH 53.6 KPH

YMIN=-6.423137 G'S at 33. msec

YMAX= .7459309 G'S at 64. msec

MOVING BARRIER REAR AXLE Y ACCELERATION

1 895123AF.A05 FilterClass (50)



MSA REPORT
11-26-1996 00.47

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

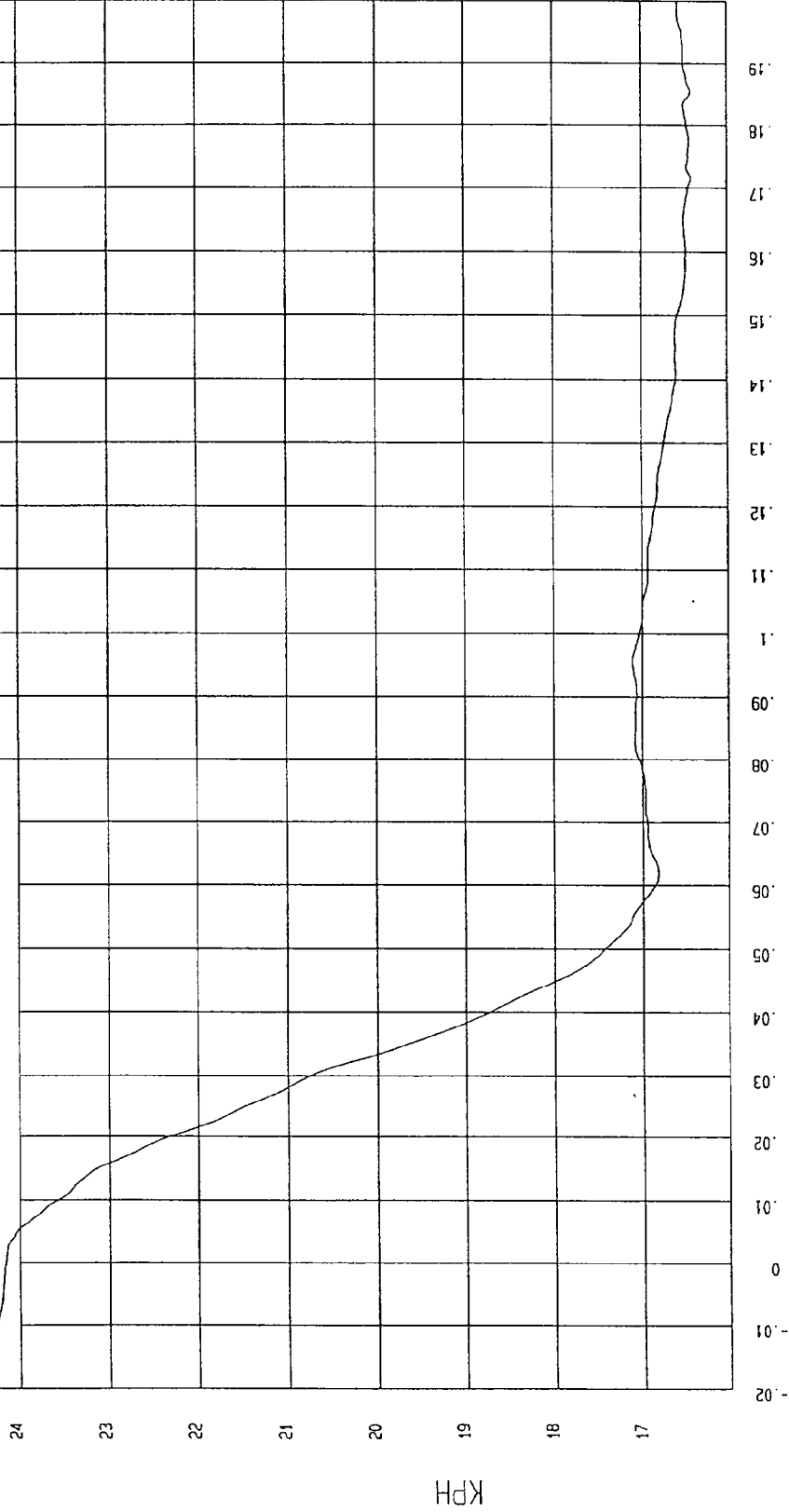
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN= 15.44588 KPH at 171 msec

YMAX= 24.33008 KPH at -16. msec

MOVING BARRIER REAR AXLE Y VELOCITY

1 — 895123A1.V06 Filterclass (180)



MEA Research
12-01-1996 03:56

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

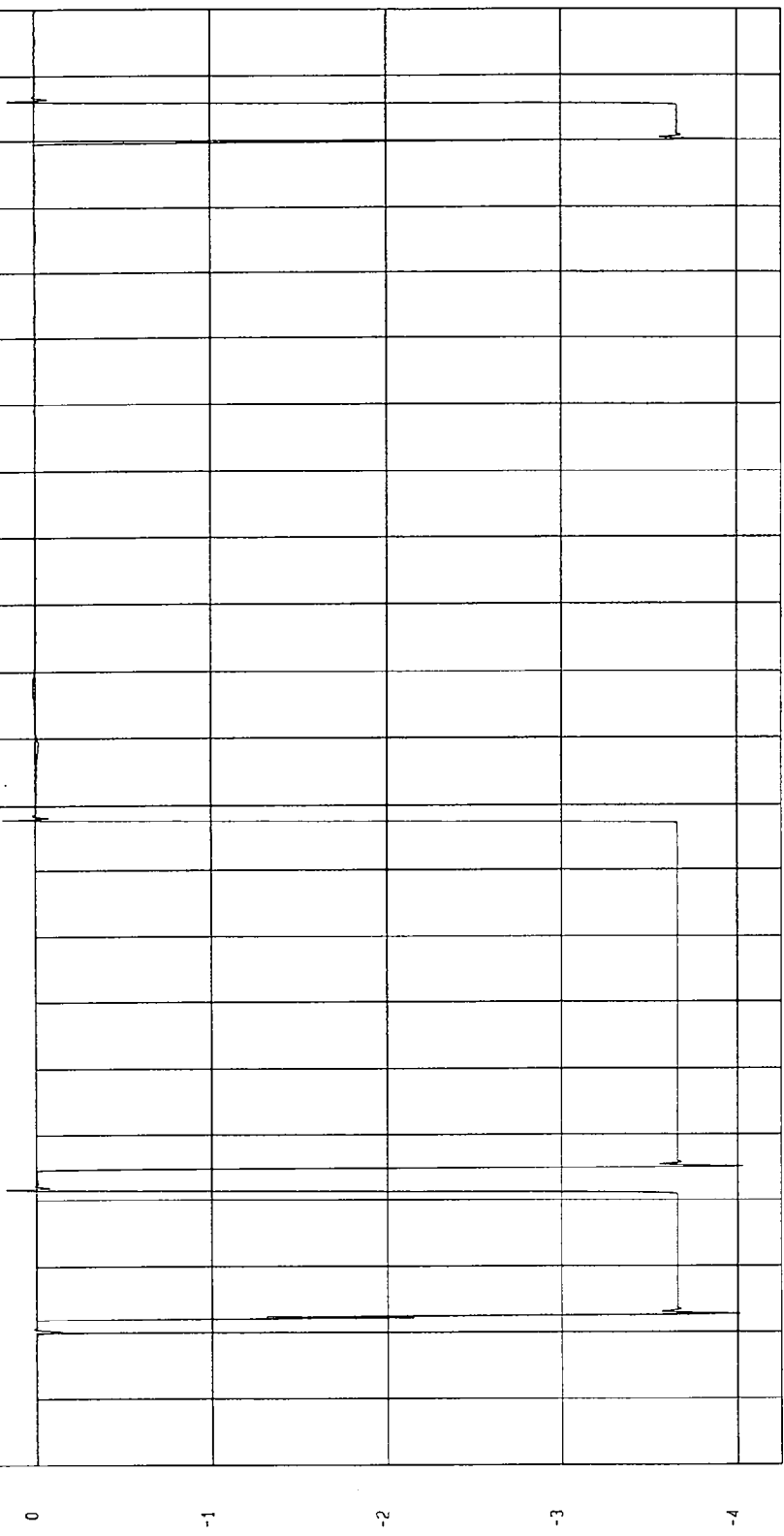
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-4.030909 VOLTS at 25. msec

YMAX= .1854 VOLTS at 77. msec

LEFT BARRIER CONTACT

1 ——— B961230T.071 Filterclass (1000)



WGA Research
11-29-1996 23:13

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

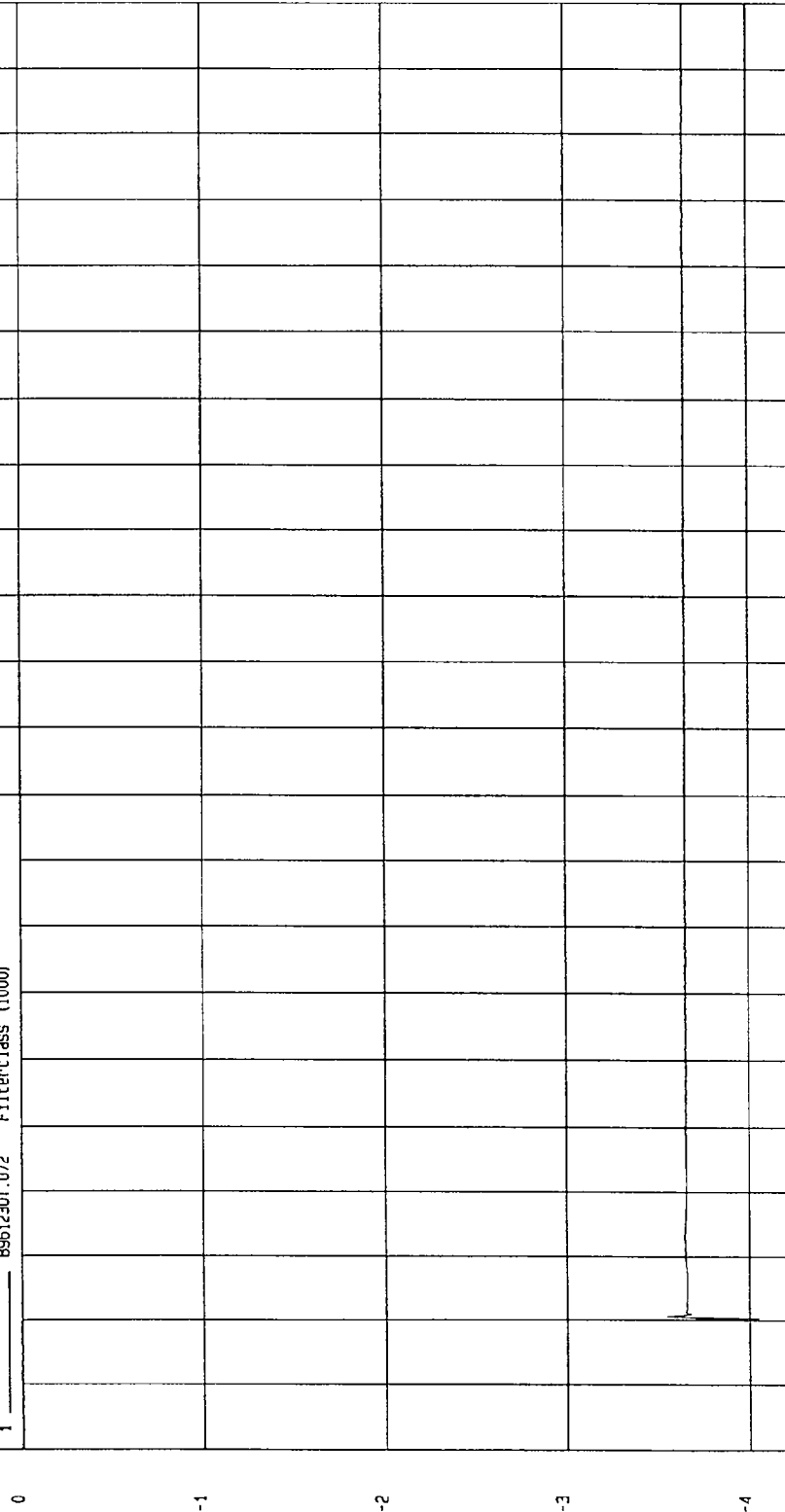
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-4.049259 VOLTS at .29 msec

YMAX= 5.917072E-03 VOLTS at -3.5 msec

RIGHT BARRIER CONTACT

1 89612301.072 Filterclass (1000)



MGA Research
11-29-1996 13.13

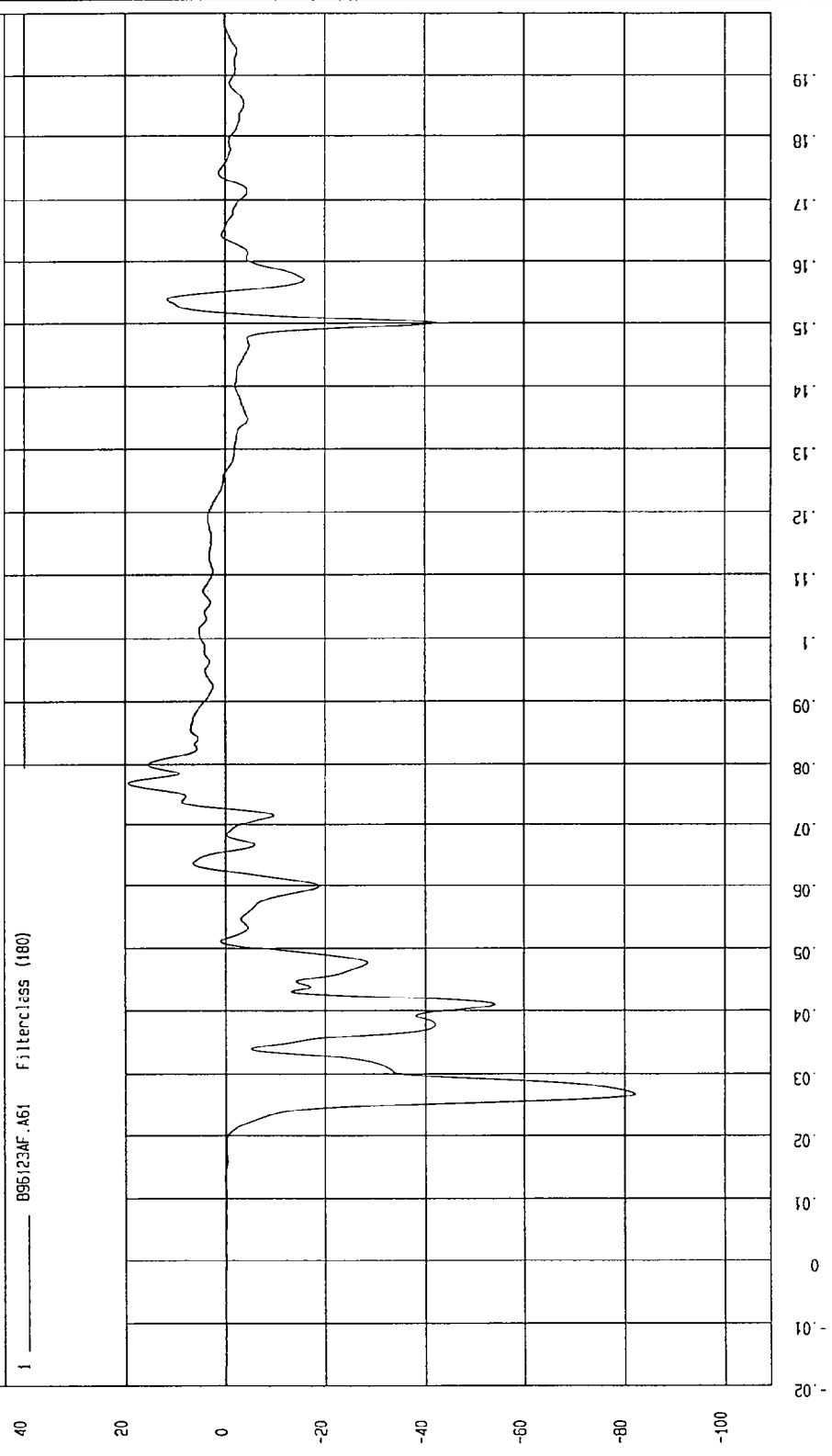
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-81.97109 G'S at 25. msec YMAX= 19.46569 G'S at 76. msec

FRONT PASSENGER UPPER RIB Y REDUNDANT ACCELERATION

1 ——— B96123AF.A61 Filterless (180)



MCA Research
12-01-1996 03:58

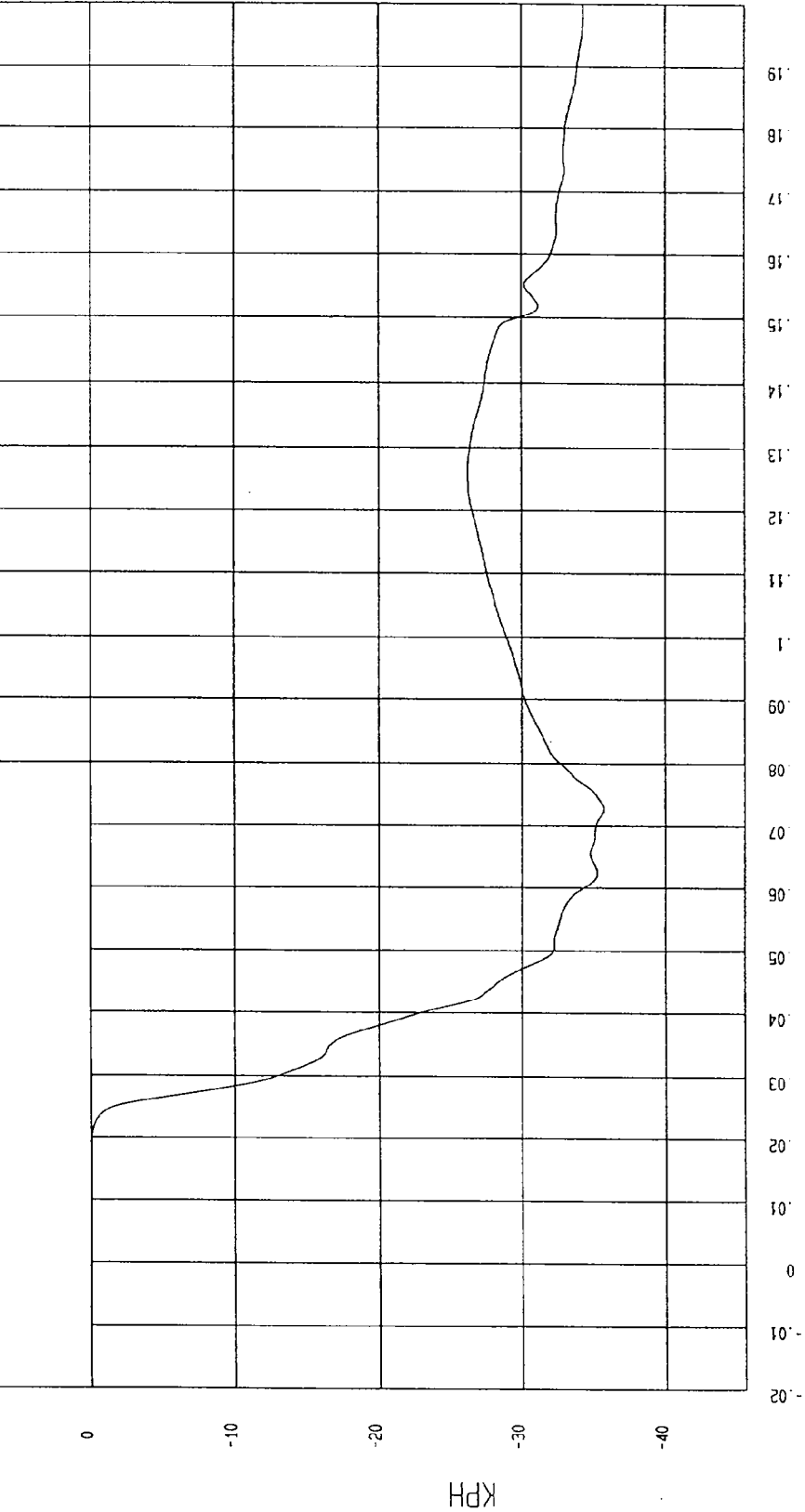
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-35.74147 KPH at 72. msec YMAX= 2.671477E-02 KPH at -13. msec

FRONT PASSENGER UPPER RIB Y REDUNDANT VELOCITY

1 ——— 896123A1.V61 Filterclass (180)



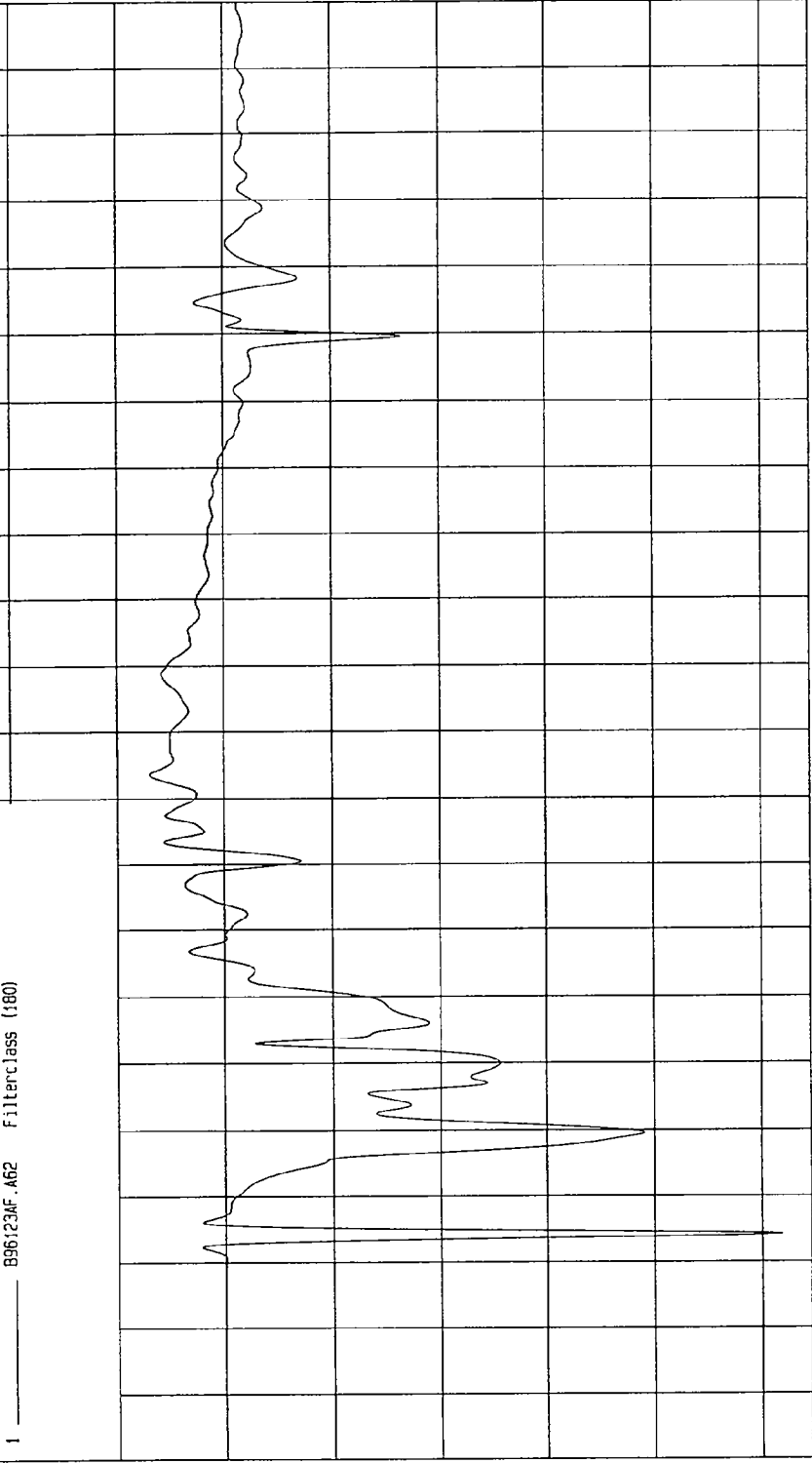
MCA Research
12-01-1996 04:00

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-103.7506 G'S at 14. msec YMAX= 14.02818 G'S at 83. msec

FRONT PASSENGER LOWER RIB Y REDUNDANT ACCELERATION



TIME (SECONDS)

MCA Research
12-01-1996 03:58

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

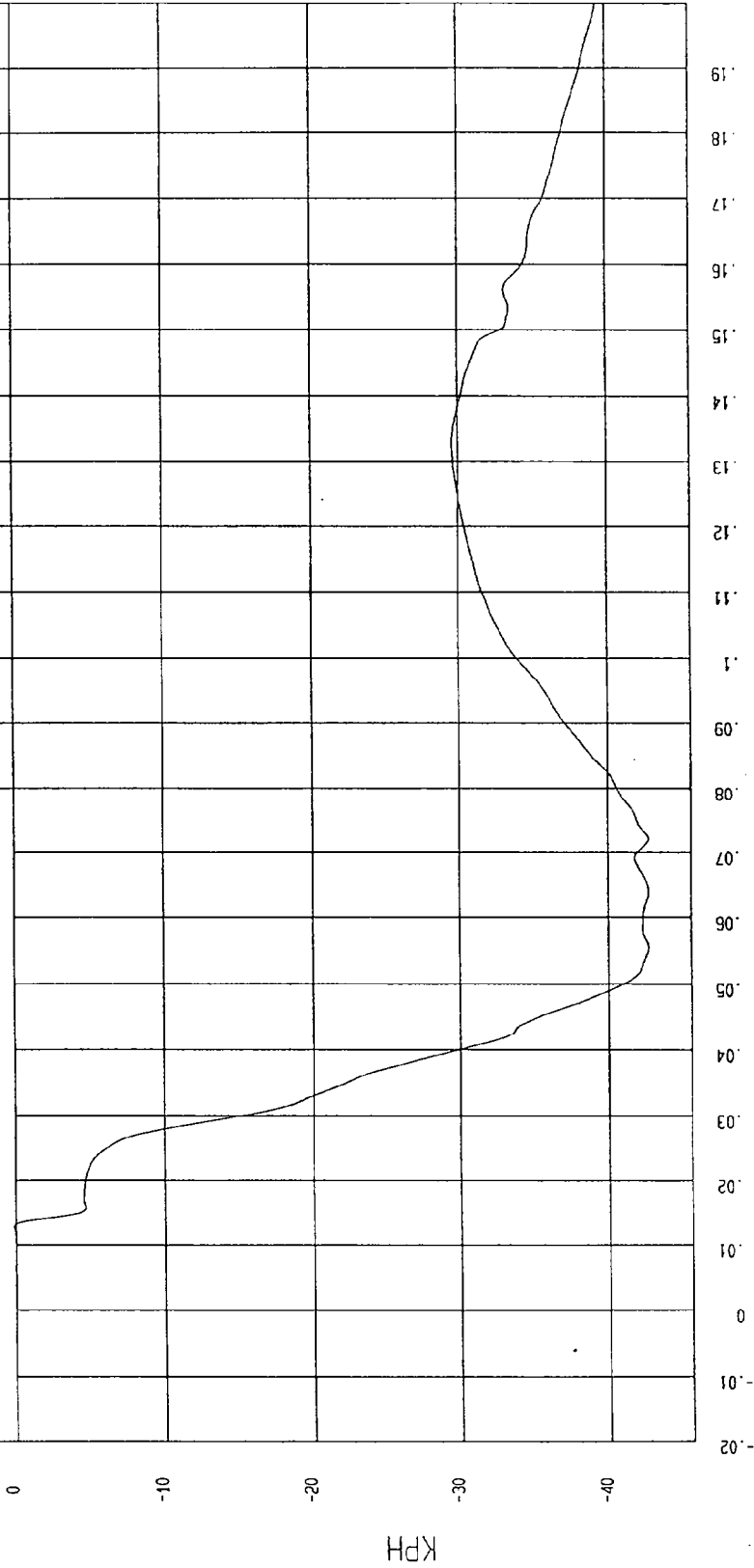
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-42.67847 KPH at 72. msec

YMAX= .1404329 KPH at 12. msec

FRONT PASSENGER LOWER RIB Y REDUNDANT VELOCITY

1 896123A1.V62 Filterclass (180)



MGA Research
12-01-1996 04:00

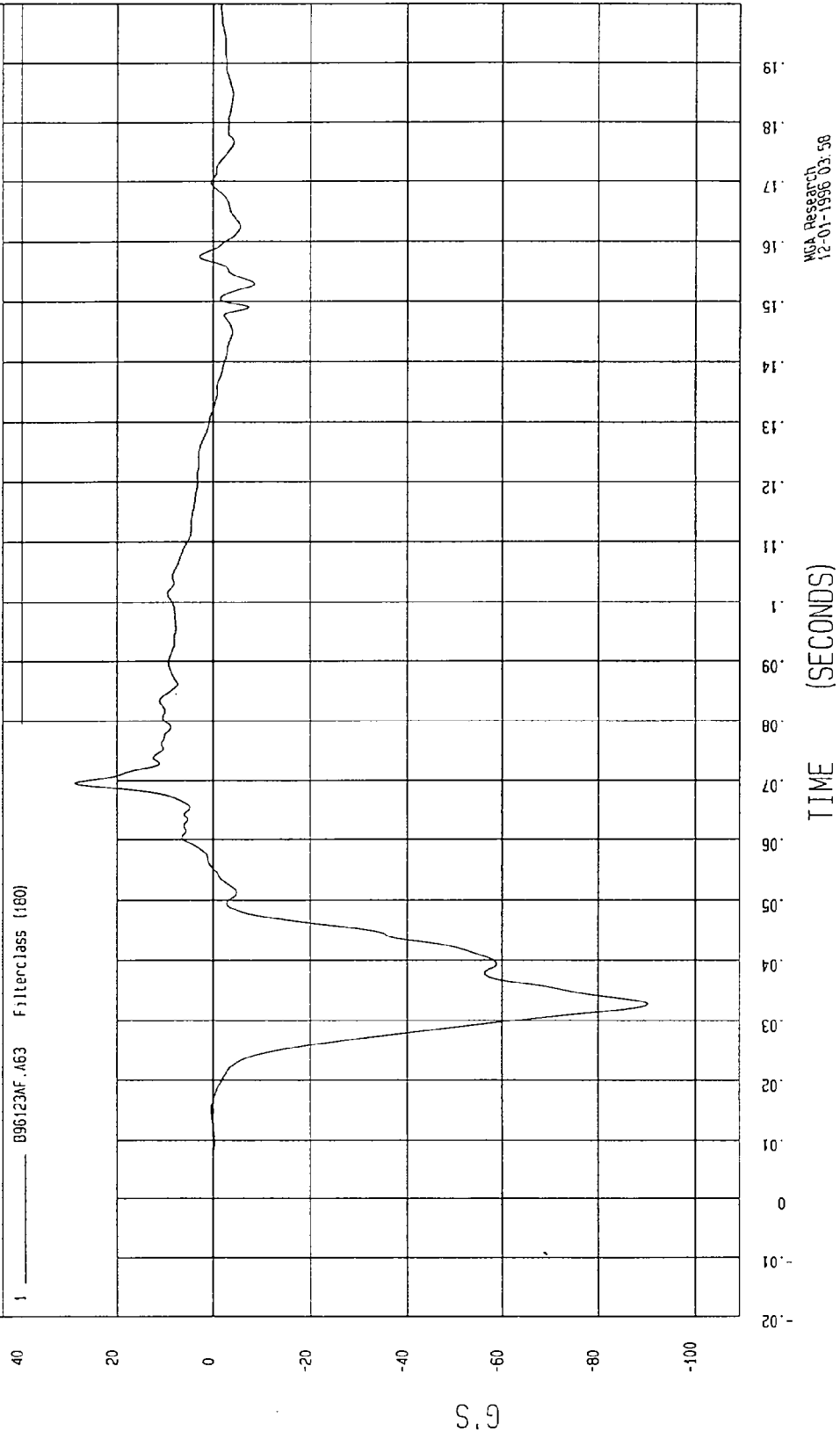
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-90.328 G'S at 32. msec YMAX= 29.06079 G'S at 69. msec

FRONT PASSENGER LOWER SPINE Y REDUNDANT ACCELERATION

1 090123MF.A63 Filterclass (180)



MGA Research
12-01-1996 03:58

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

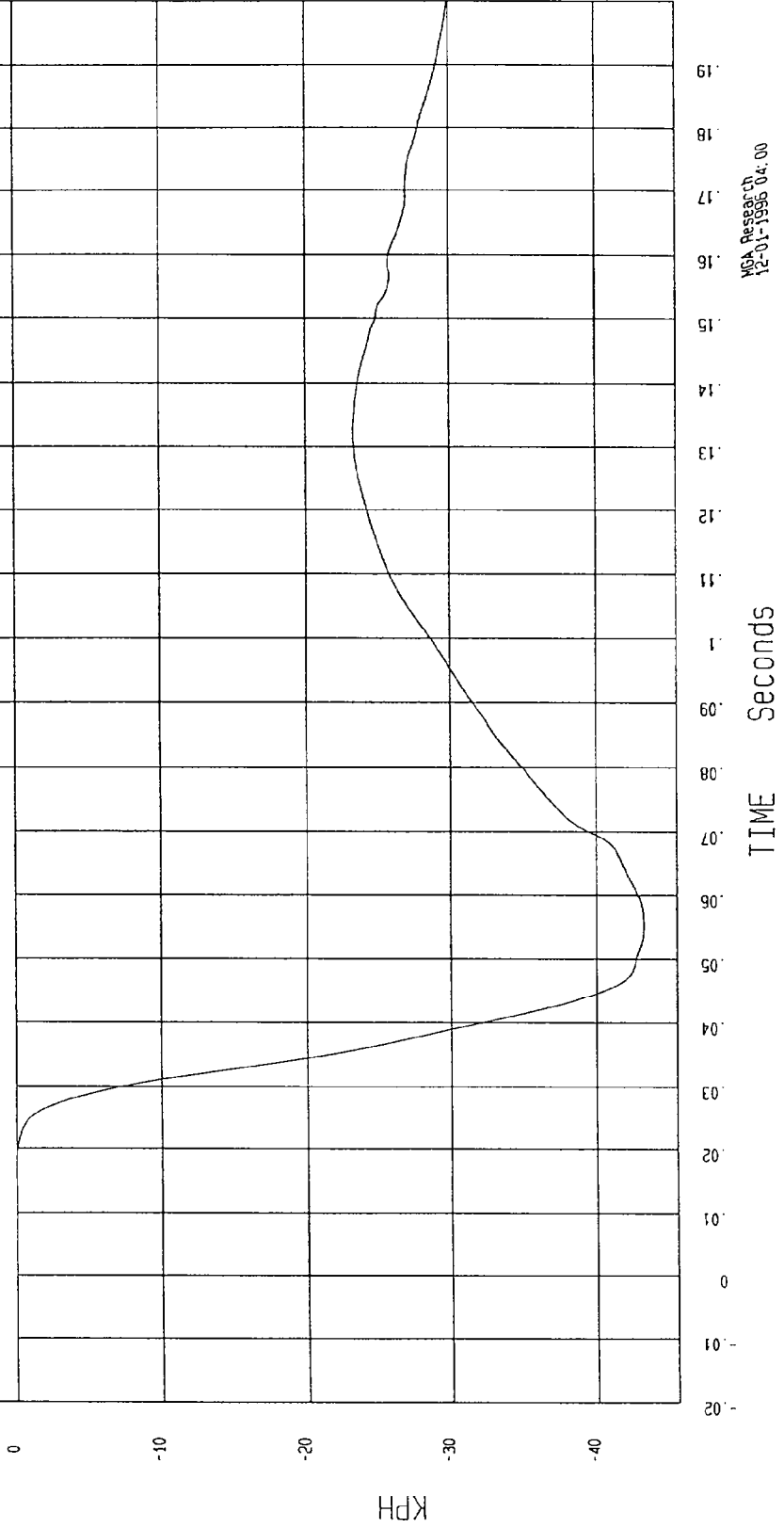
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-43.22938 KPH at 55. msec

YMAX= 3.664495E-02 KPH at -1.2 msec

FRONT PASSENGER LOWER SPINE Y REDUNDANT VELOCITY

1 _____ 896123A1.V63 Filterclass (180)



MSA Research
12-01-1996 04:00

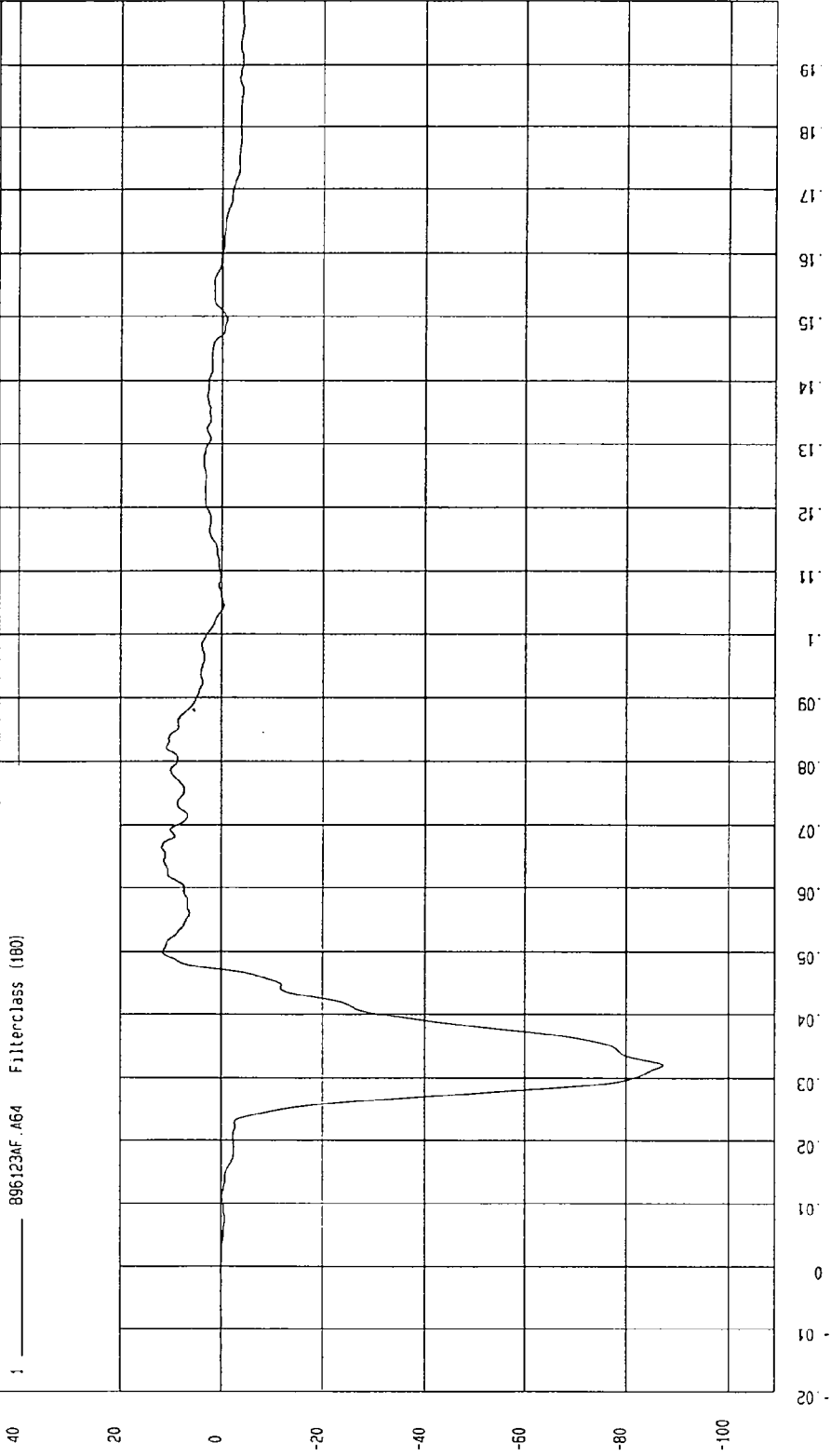
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-87.31473 G'S at 32 msec YMAX= 11.8618 G'S at 66. msec

FRONT PASSENGER PELVIS Y REDUNDANT ACCELERATION

1 896123AF.A64 Filterclass (180)



MCA Research
12-01-1996 03:58

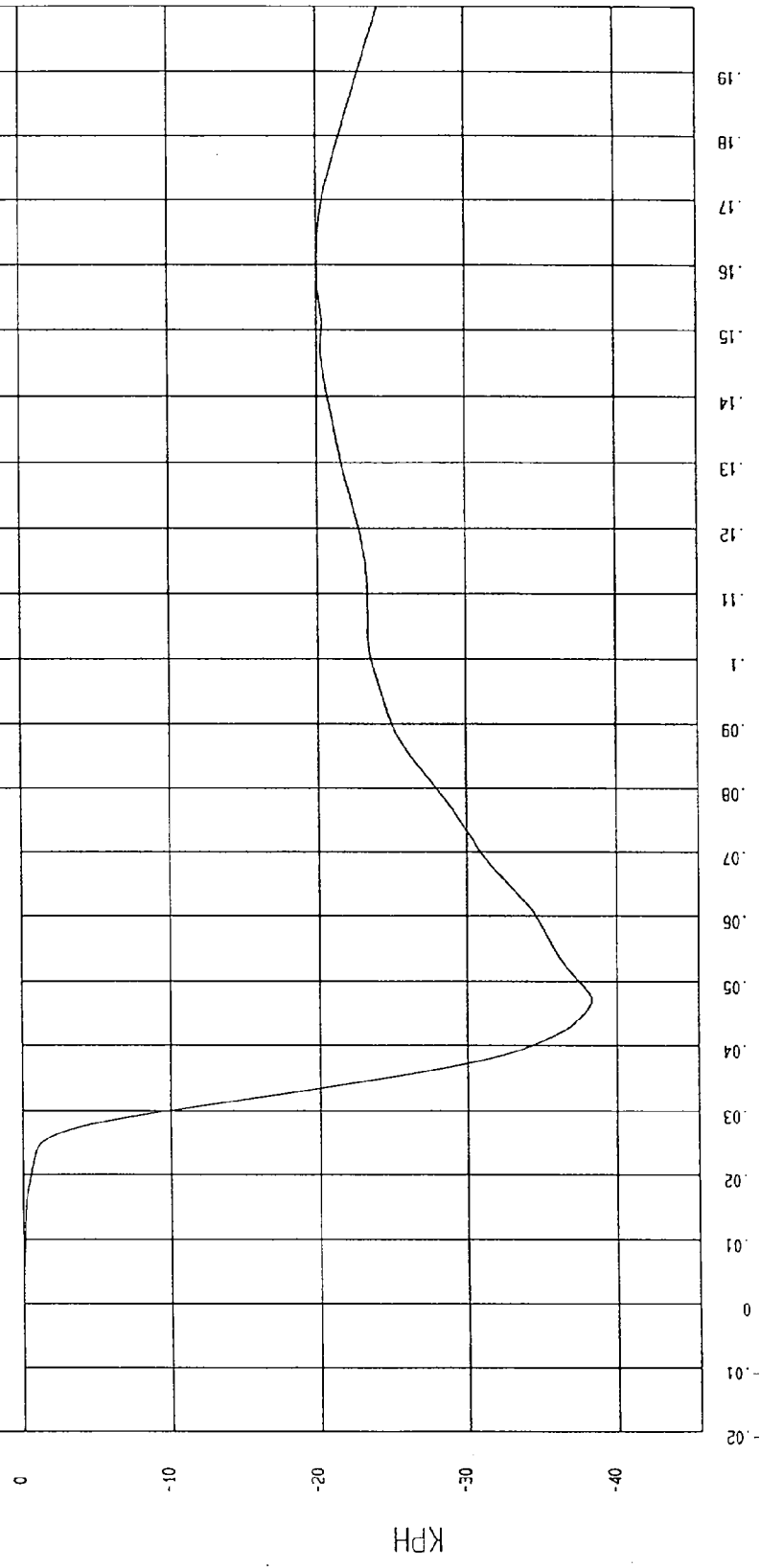
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-38.29082 KPH at 47. msec YMAX= 7.721491E-03 KPH at .5 msec

FRONT PASSENGER PELVIS Y REDUNDANT VELOCITY

1 ——— 896123A1.V64 Filterclass (180)



MCA Research
12-01-1995 04:00

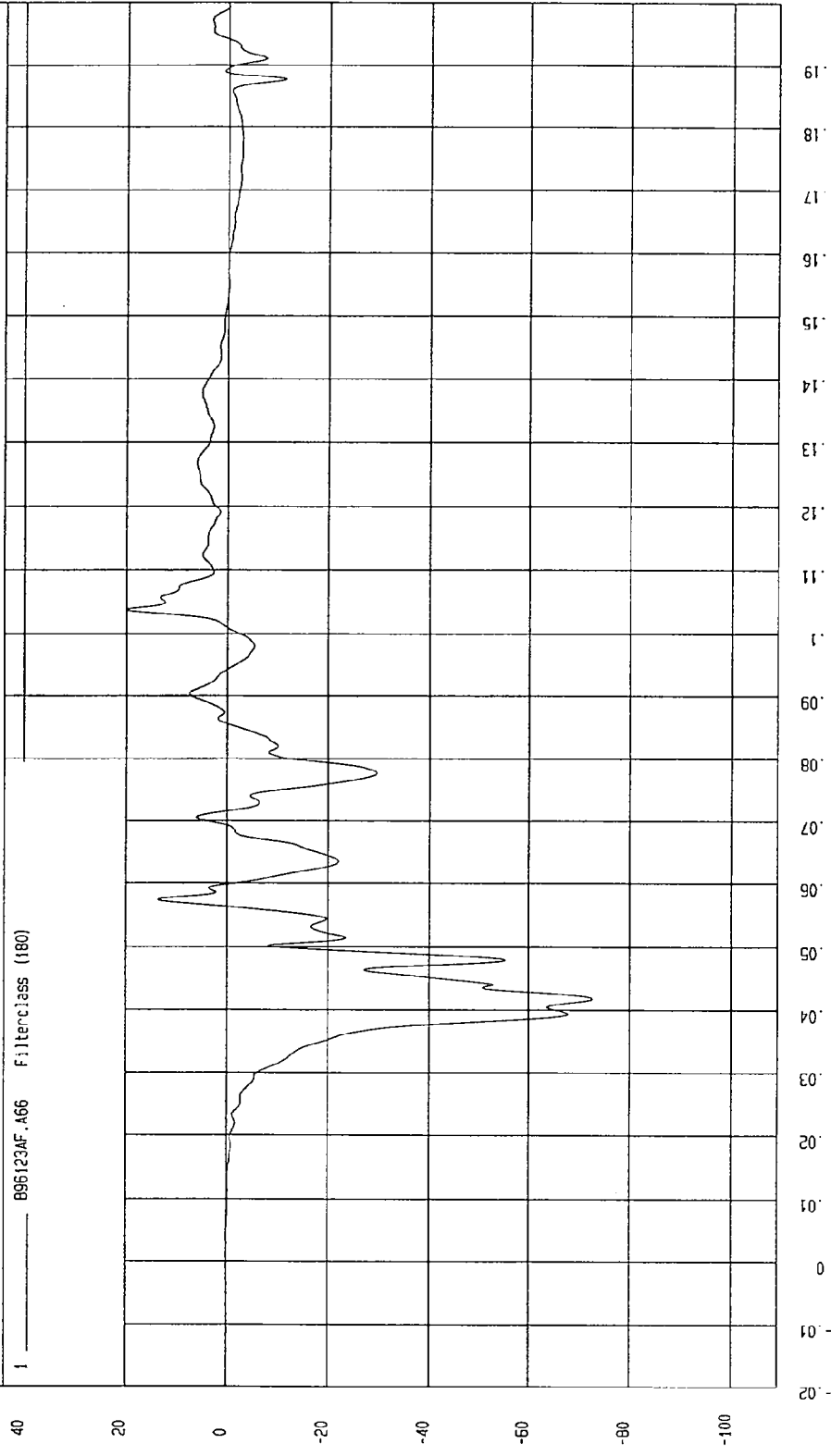
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-72.61108 G'S at 41. msec YMAX= 20.05439 G'S at 103 msec

REAR PASSENGER UPPER RIB Y REDUNDANT ACCELERATION

1 896123AF.A66 Filterclass (180)



MSA Research
12-01-1996 03:59

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

SPEED: 33.32 MPH 53.6 KPH

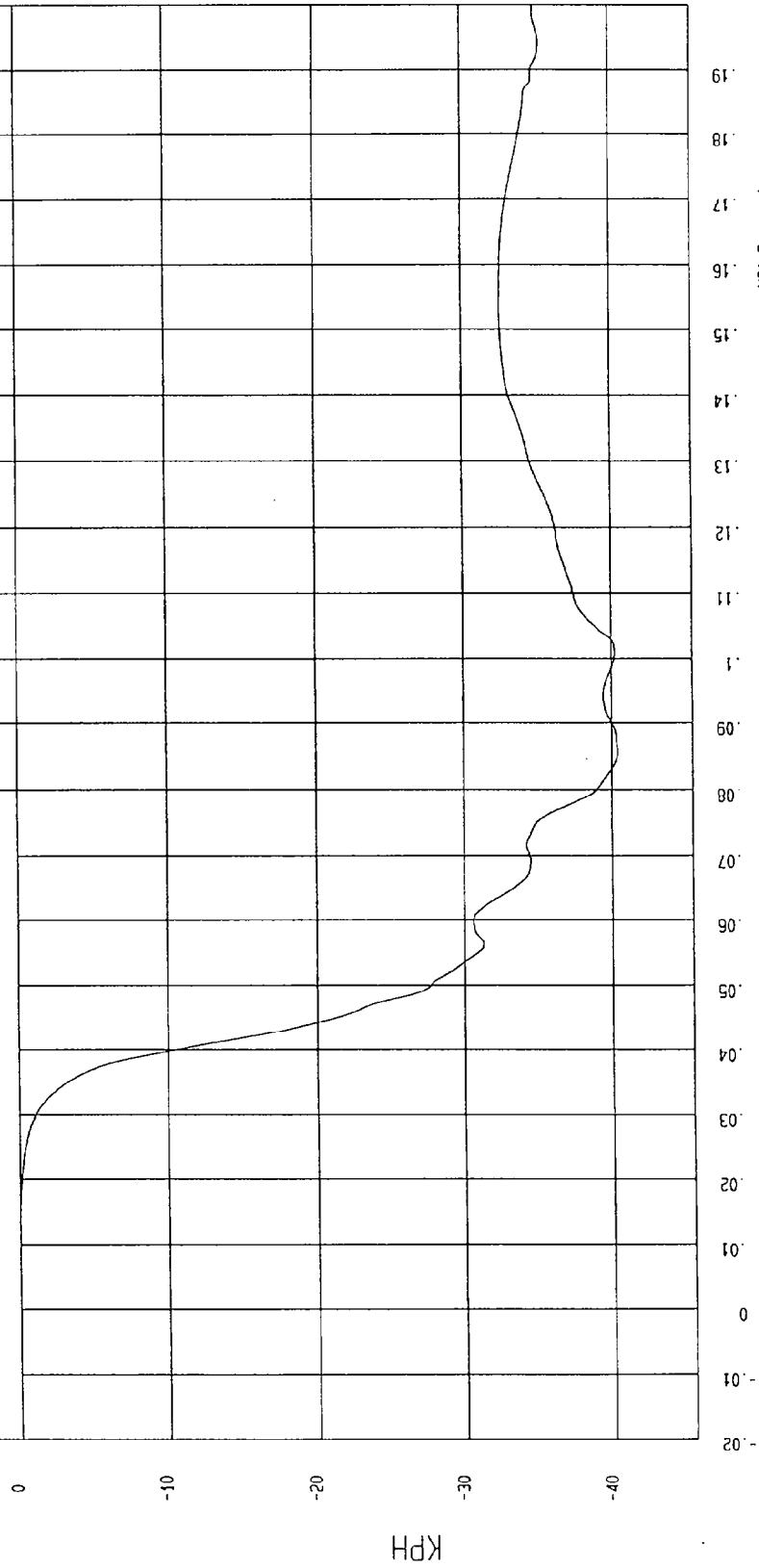
COMPONENT: 1997 FORD PROBE (CV0208)

YMIN=-40.35175 KPH at 85. msec

YMAX= 3.126093E-02 KPH at 6.2 msec

REAR PASSENGER UPPER RIB Y REDUNDANT VELOCITY

1 ——— B96123A1.V66 Filterclass (f80)



MGA Research
12-01-1996 04:00

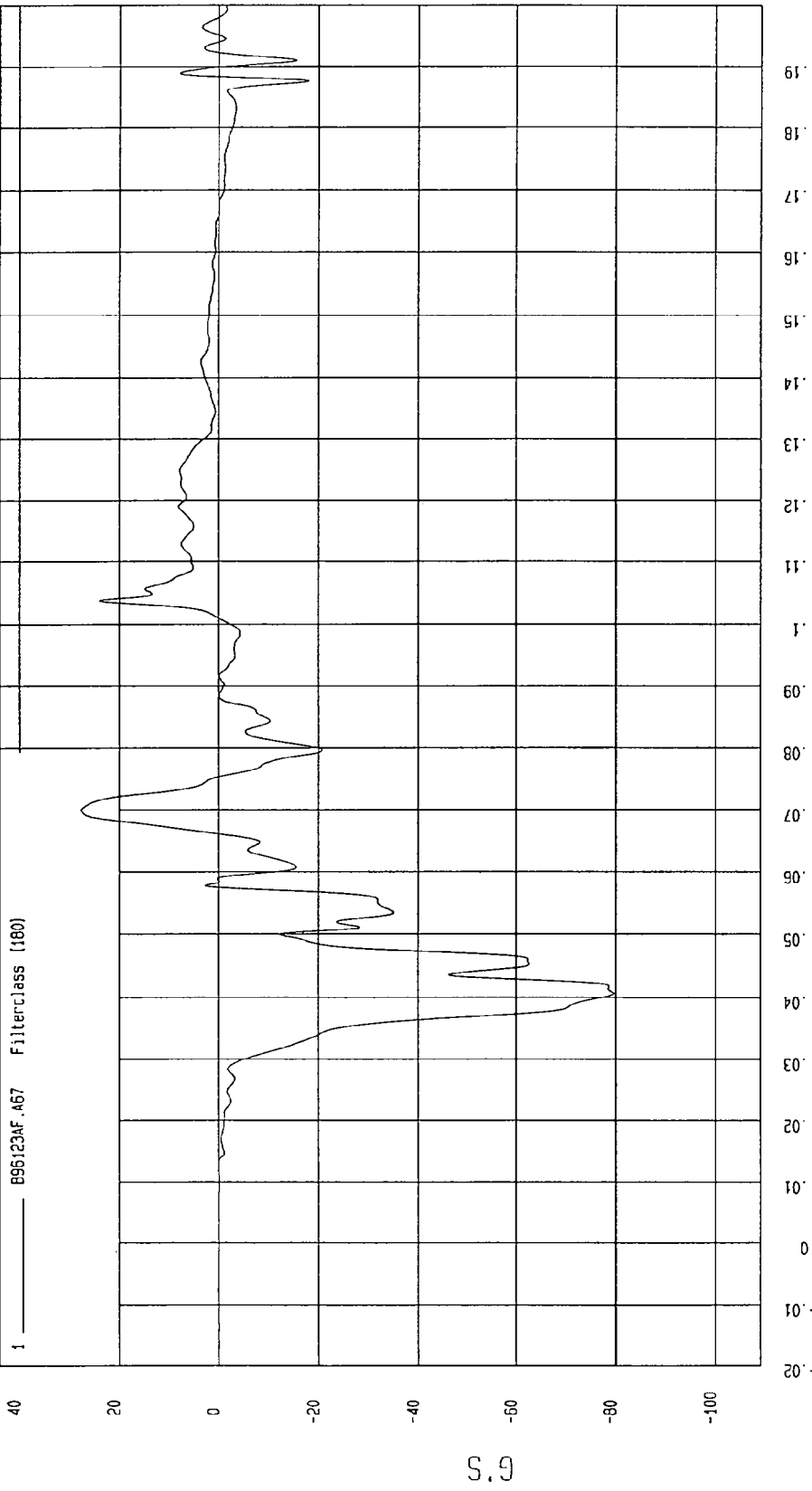
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-79.68714 G'S at 40 msec YMAX= 27.46569 G'S at 70 msec

REAR PASSENGER LOWER RIB Y REDUNDANT ACCELERATION

1 ——— B95123AF.A67 Filterclass (180)



MGA Research
12-01-1996 03:59

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

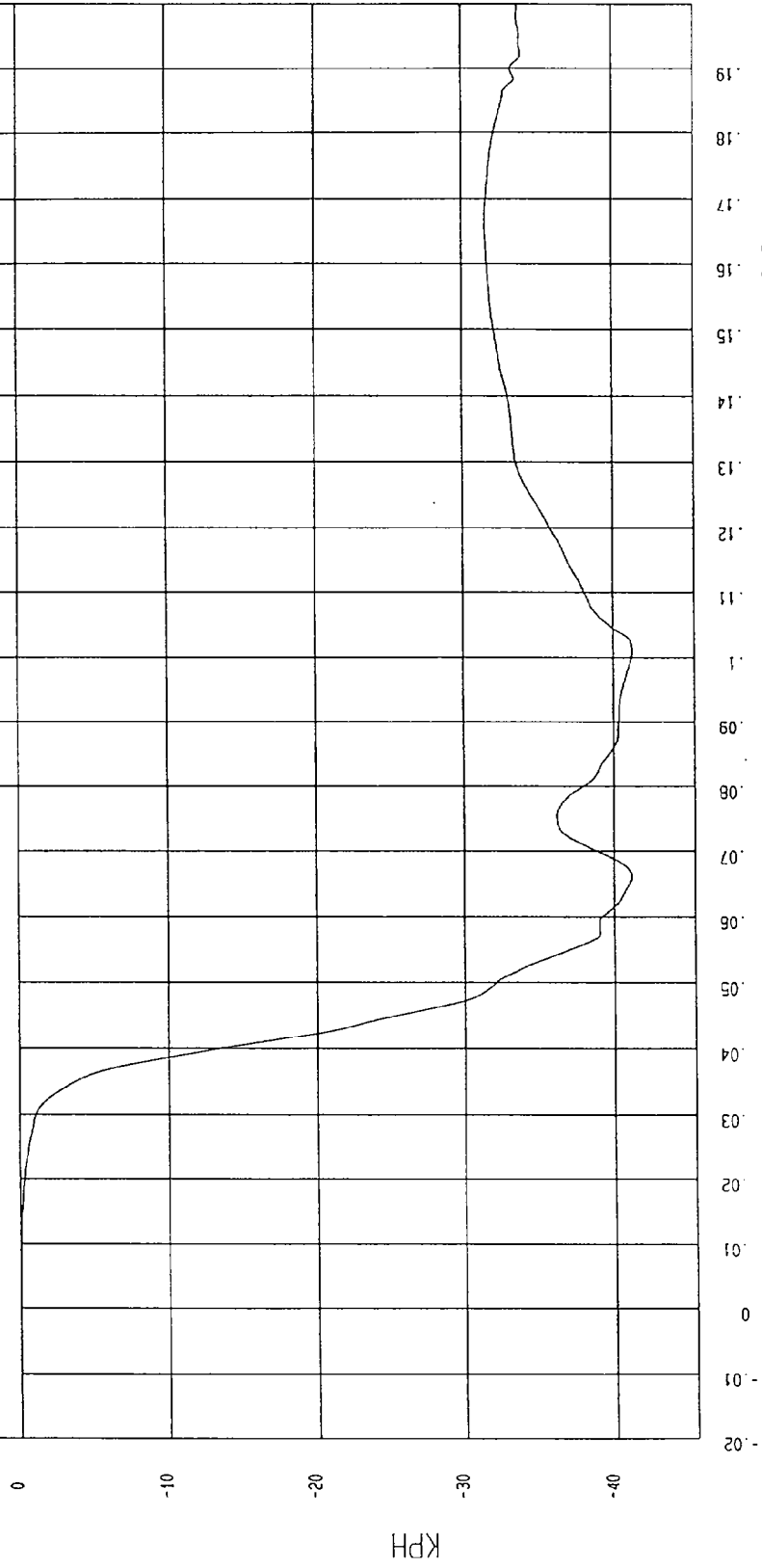
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-41.23861 KPH at 101 msec

YMAX= 0 KPH at -20 msec

REAR PASSENGER LOWER RIB Y REDUNDANT VELOCITY

1 — 896123A1.V67 Filterclass (180)



MGA Research
12-01-1996 04:00

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

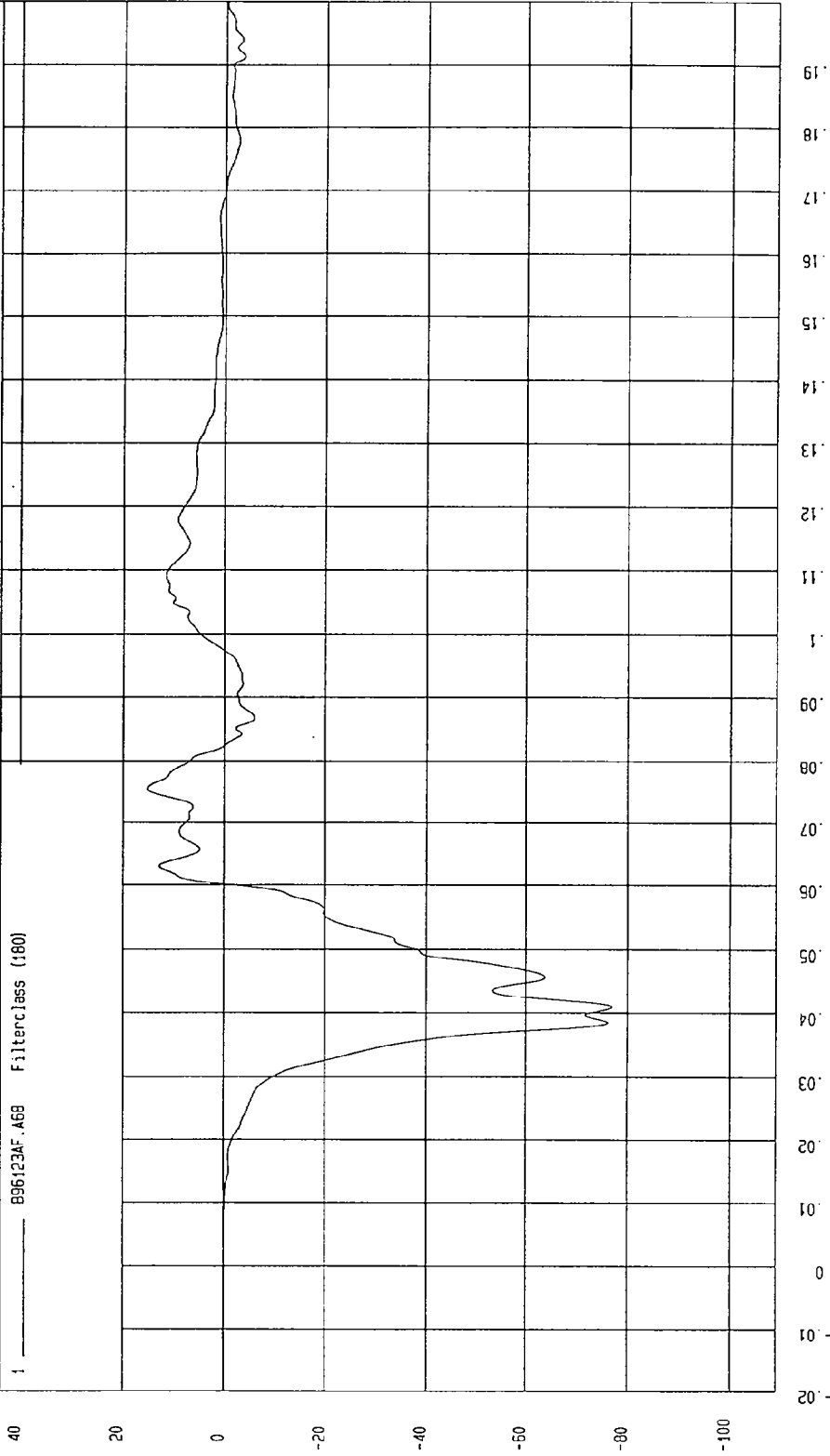
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-77.02223 G'S at 40. msec

YMAX= 15.30349 G'S at 75. msec

REAR PASSENGER LOWER SPINE Y REDUNDANT ACCELERATION

1 896123AF.A68 Filterclass (180)



MCA Research
12-01-1996 03:59

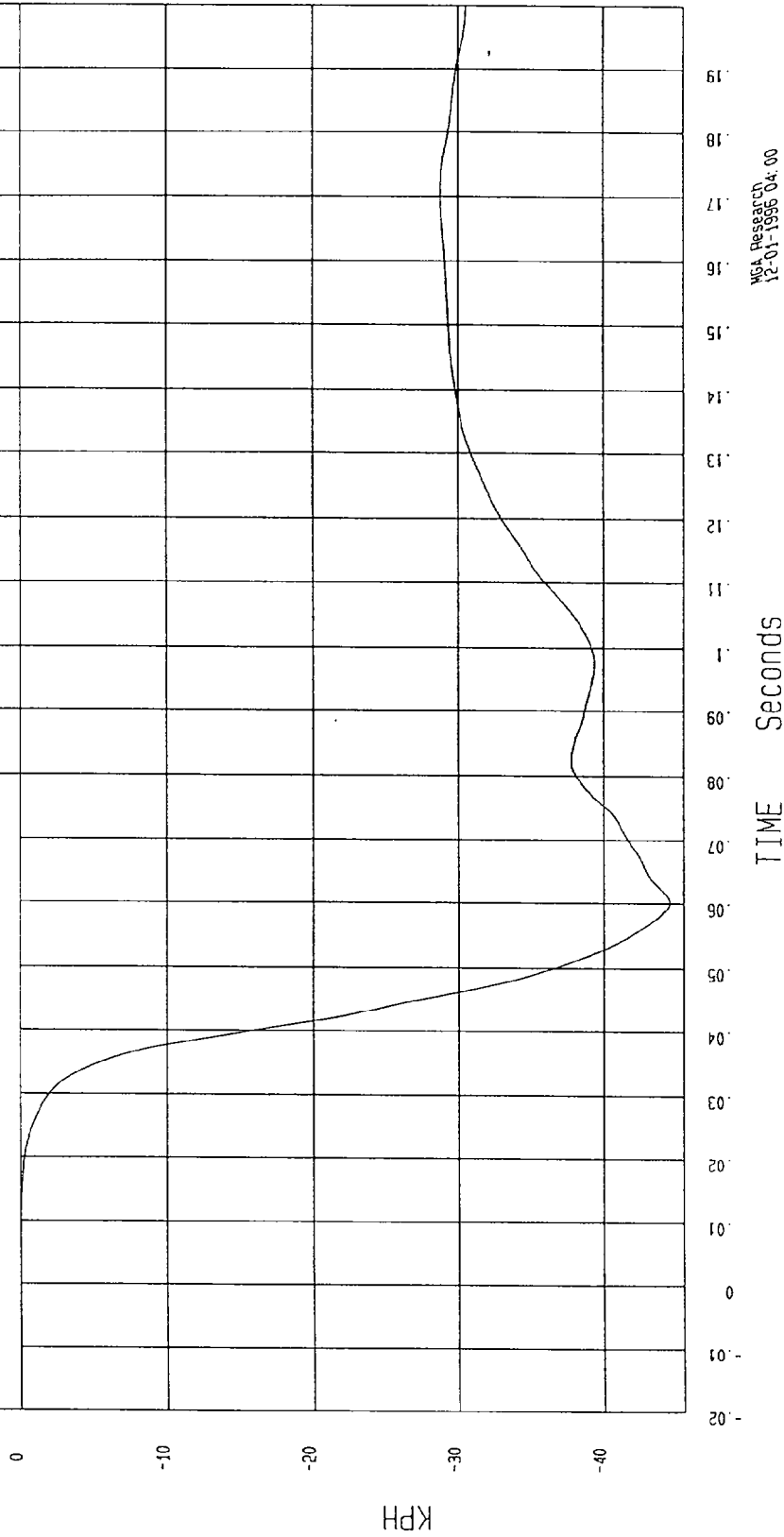
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-44.50642 KPH at 60. msec YMAX= 1.90386E-02 KPH at -3.8 msec

REAR PASSENGER LOWER SPINE Y REDUNDANT VELOCITY

1 896123A1.V68 Filterclass (180)



MSA Research
12-01-1996 04:00

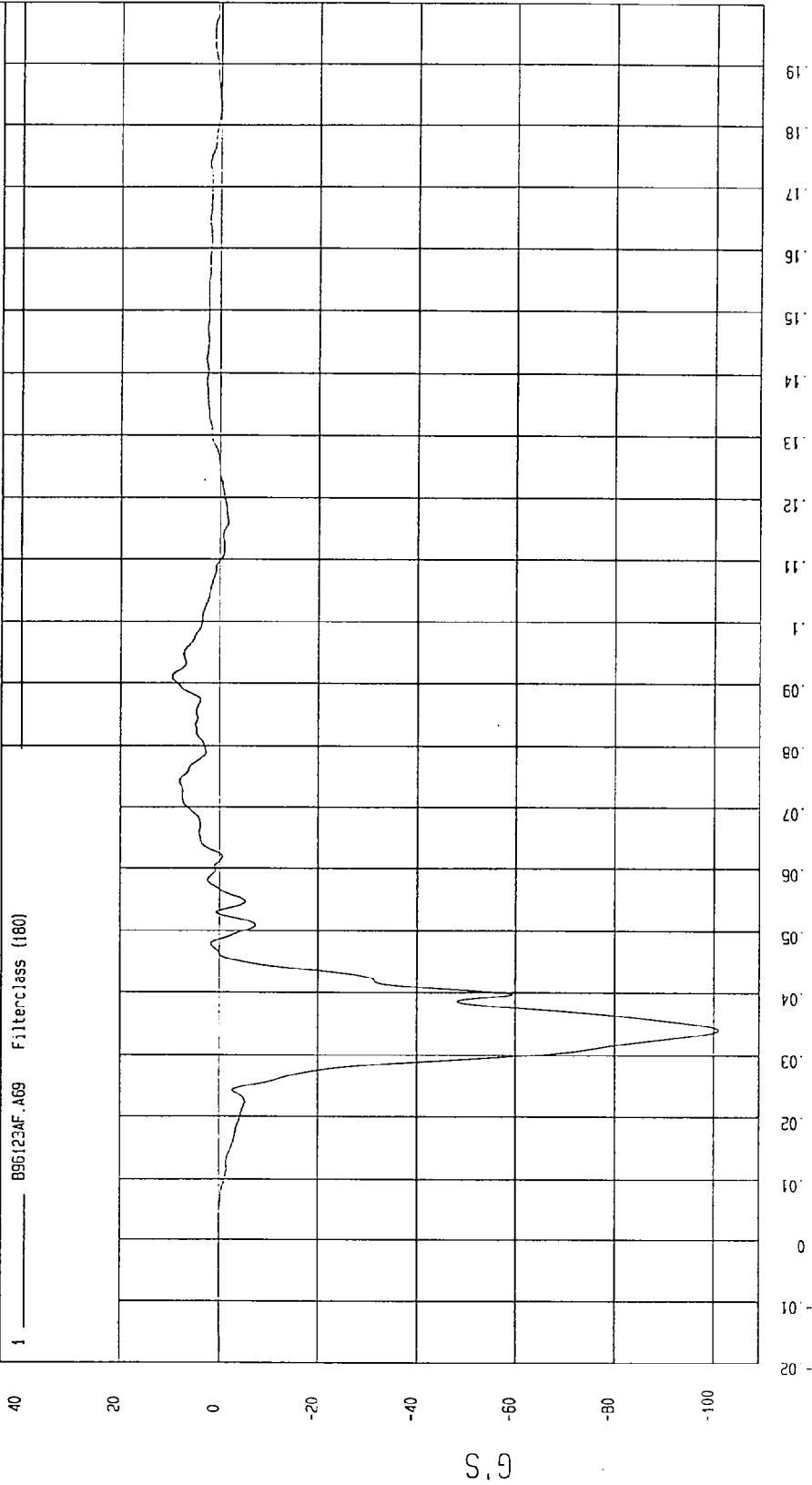
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-100.931 G'S at 34. msec YMAX= 9.655628 G'S at 91 msec

REAR PASSENGER PELVIS Y REDUNDANT ACCELERATION

1 ——— B96123AF.A69 Filter: class (180)



MCA Research
12-01-1996 03.59

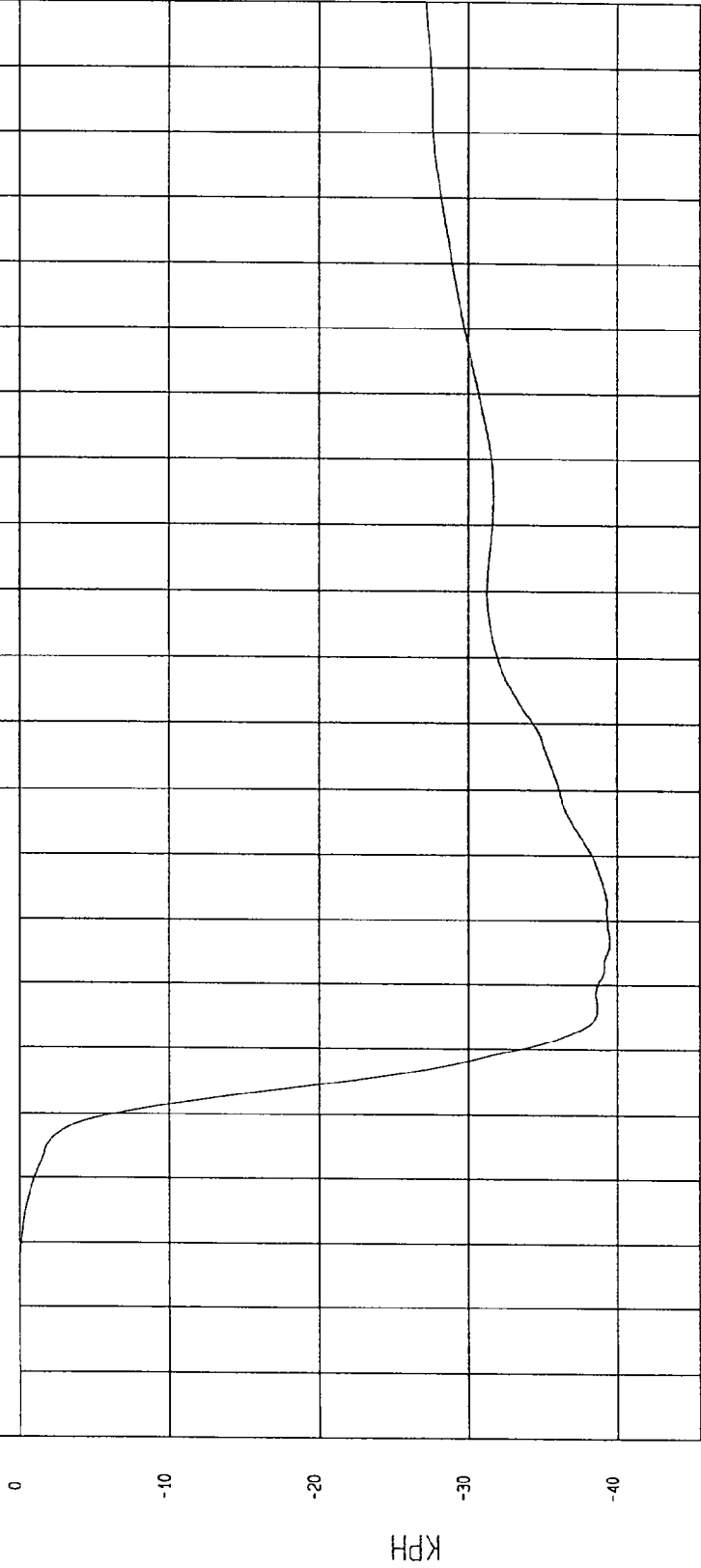
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-39.48159 KPH at 56. msec YMAX= 0 KPH at -20 msec

REAR PASSENGER PELVIS Y REDUNDANT VELOCITY

1 896123A1.V69 Filter:ass (180)



MGA Research
12-01-1996 04:00

FINITE IMPULSE RESPONSE (FIR) FILTERED DATA

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

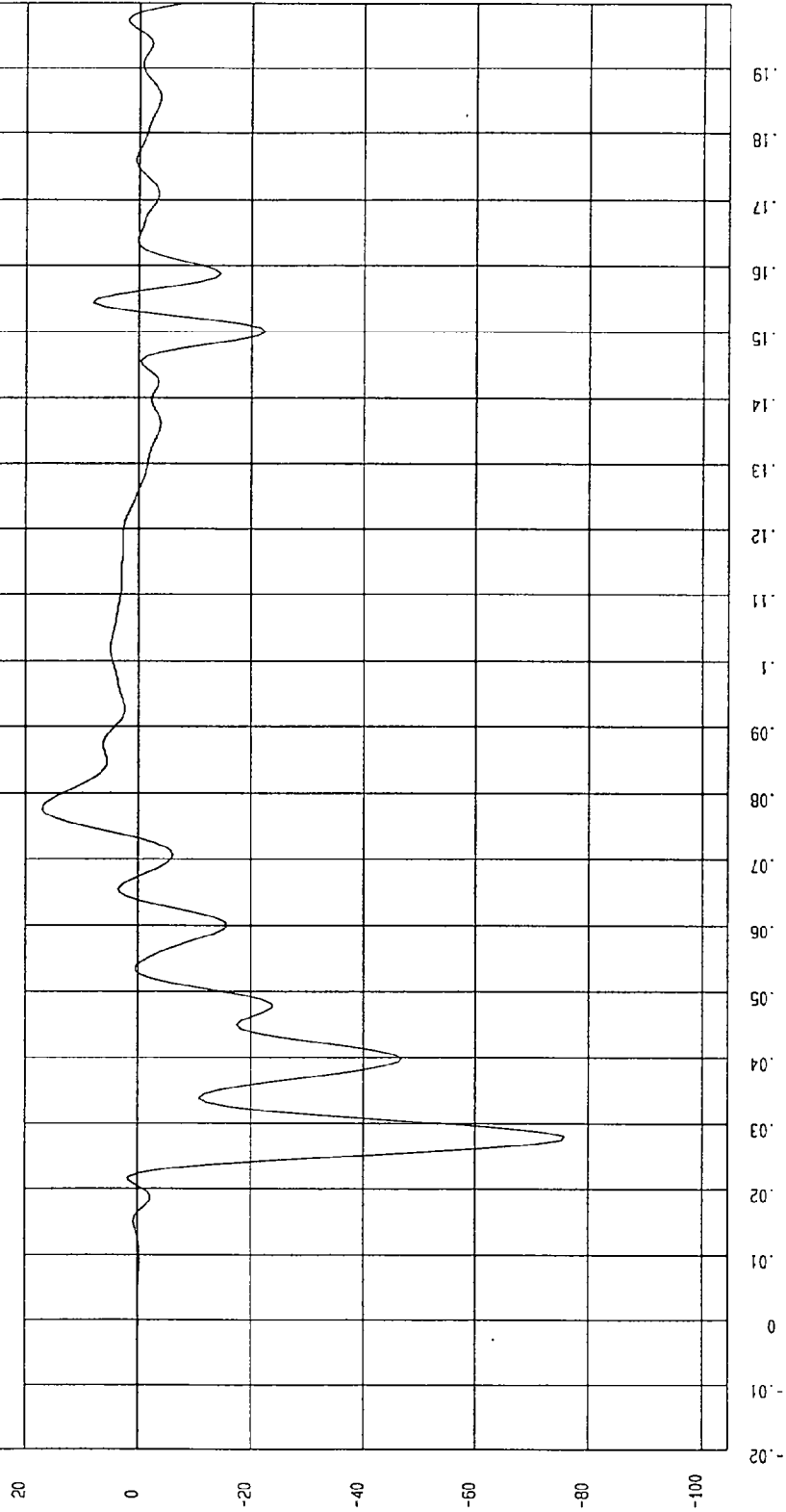
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-75.83286 G'S at 28. msec

YMAX= 16.97604 G'S at 77. msec

FRONT PASSENGER UPPER RIB Y ACCELERATION

1 — 896123F1.R15 Filterclass (FIR Filtered)



MGA Report CD
11-26-1996 00.41

G.S

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

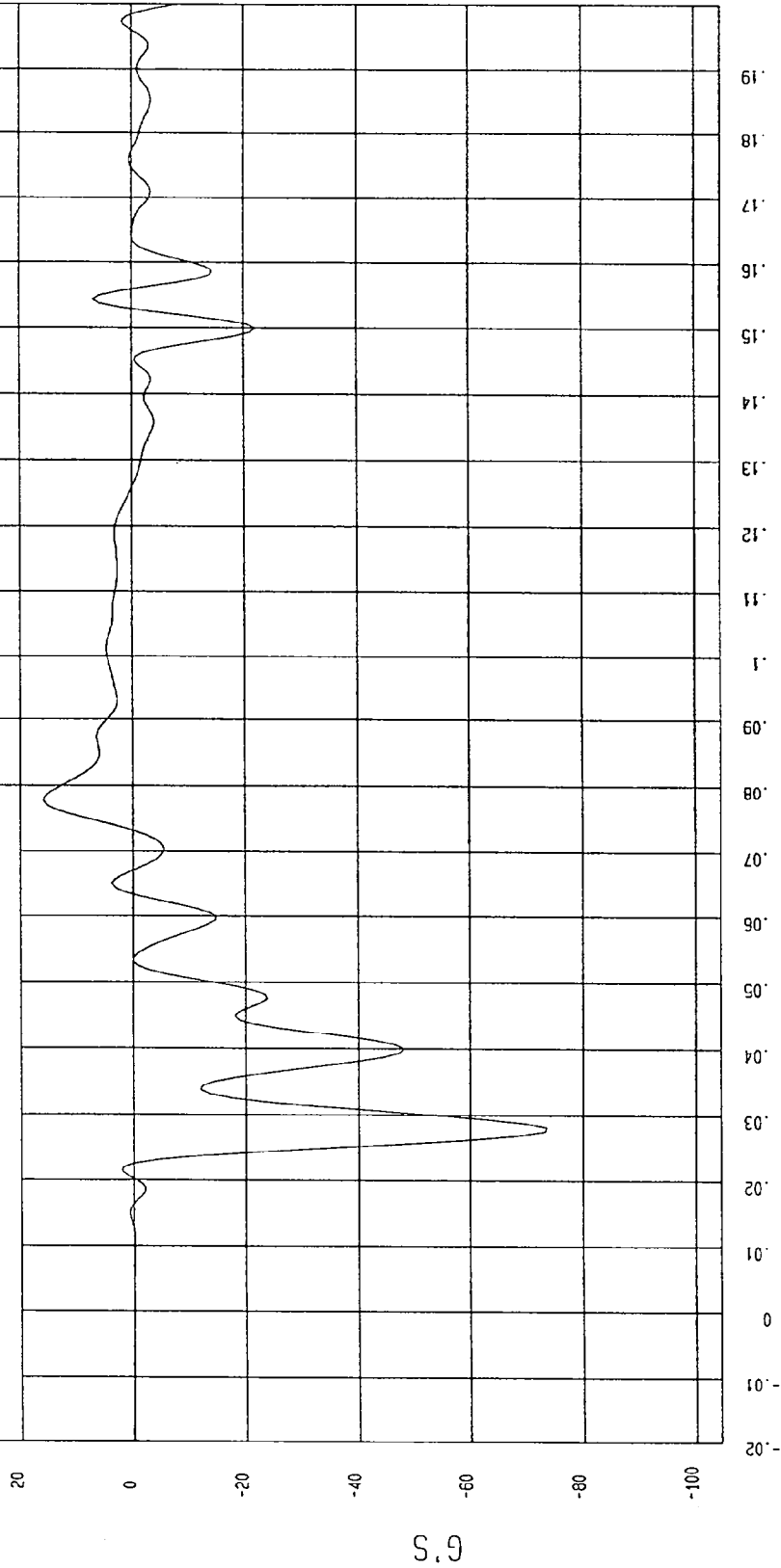
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-73.64535 G'S at 28. msec

YMAX= 15.84417 G'S at 77. msec

FRONT PASSENGER UPPER RIB Y REDUNDANT ACCELERATION

1 ——— 896123FI.R61 Filterclass (FIR Filtered)



NCA Research
11-25-1998 00: 41

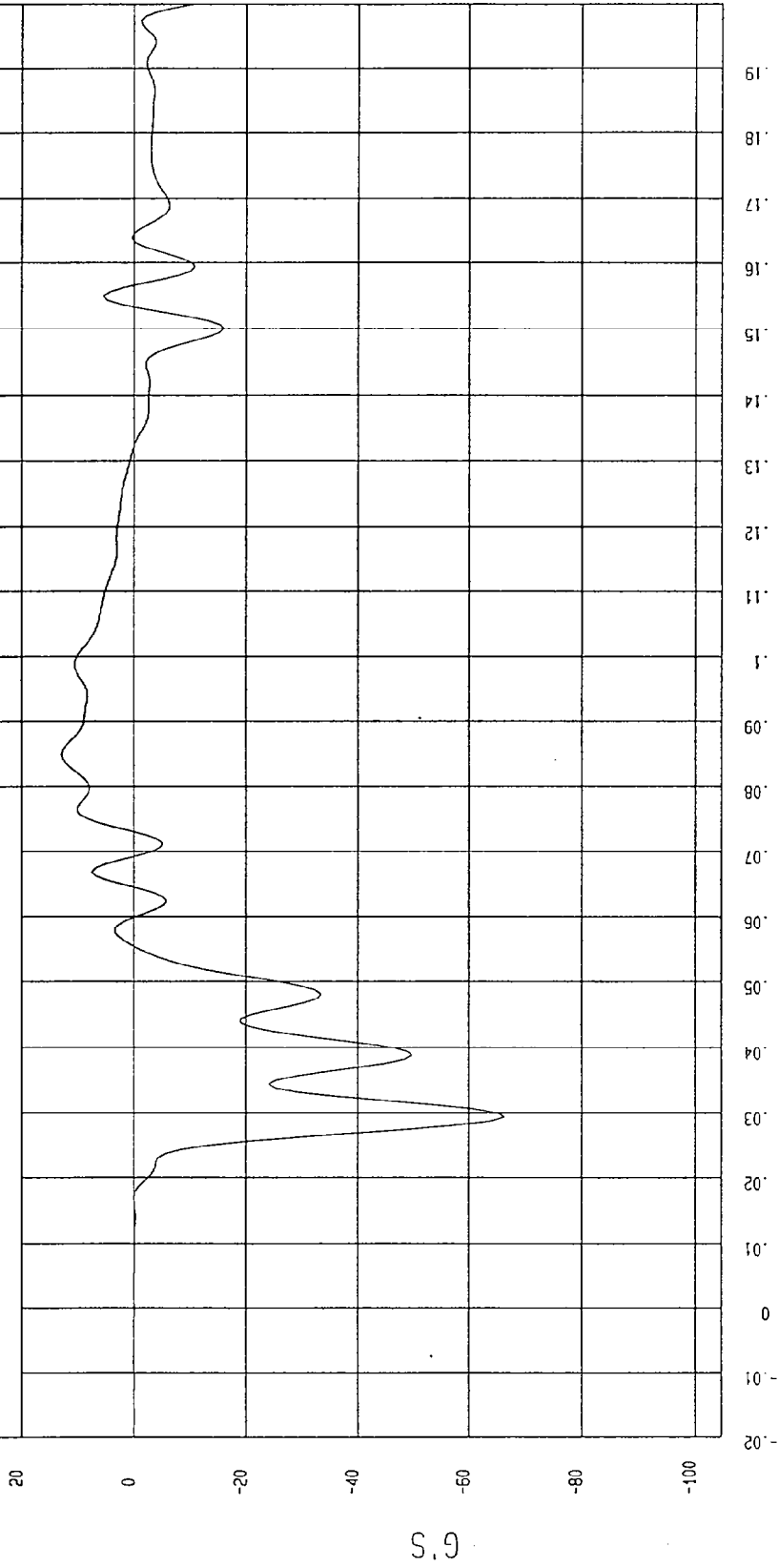
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-66.30679 G'S at 29. msec YMAX= 12.8766 G'S at 85 msec

FRONT PASSENGER LOWER RIB Y ACCELERATION

1 896123F1.R16 FilterClass (FIR Filtered)



MOB Research CO
11-26-1996 00.41

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

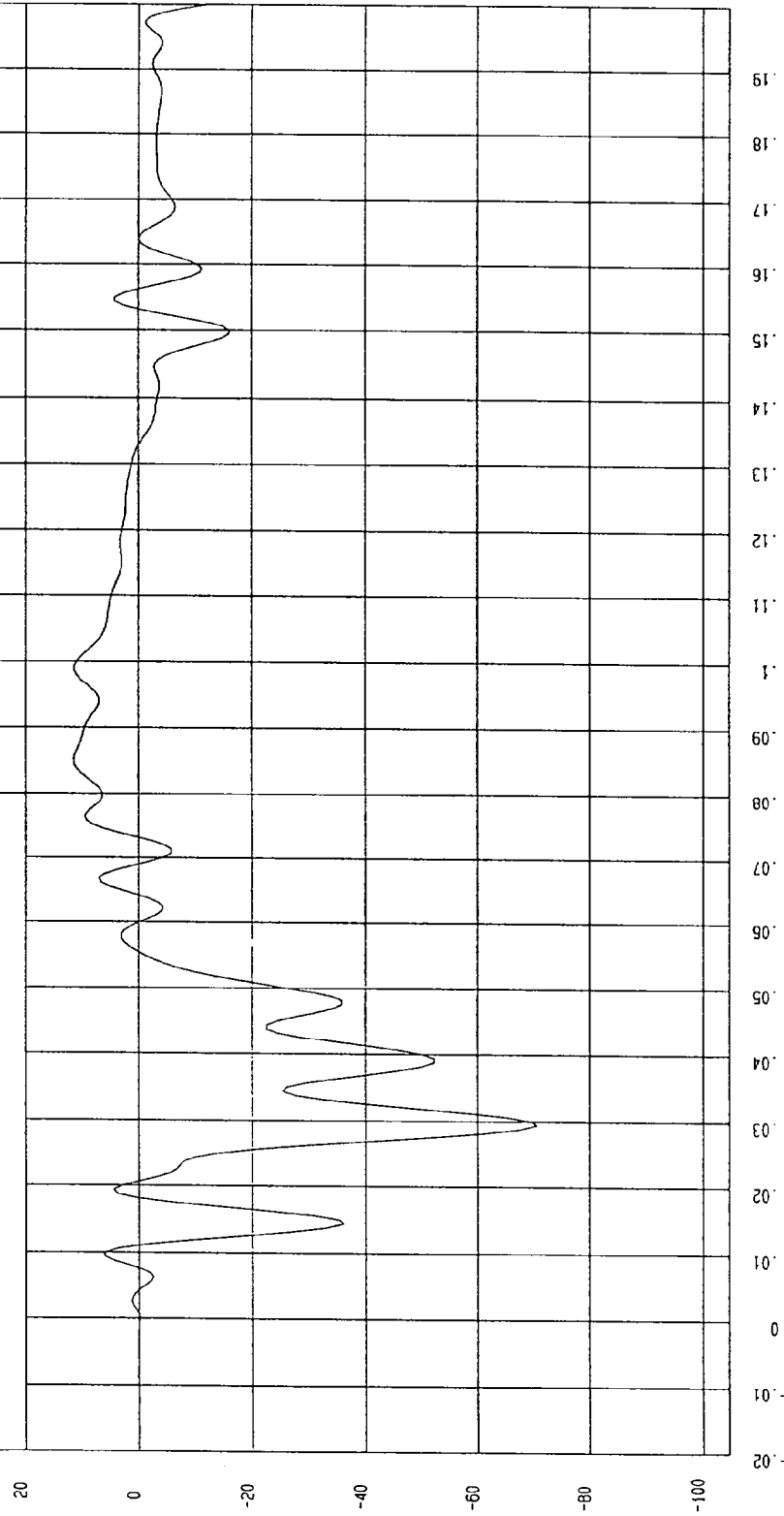
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-70.61658 G'S at 29. msec

YMAX= 11.5074 G'S at 85 msec

FRONT PASSENGER LOWER RIB Y REDUNDANT ACCELERATION

1 _____ 896123FI.P62 FilterClass (FIR Filtered)

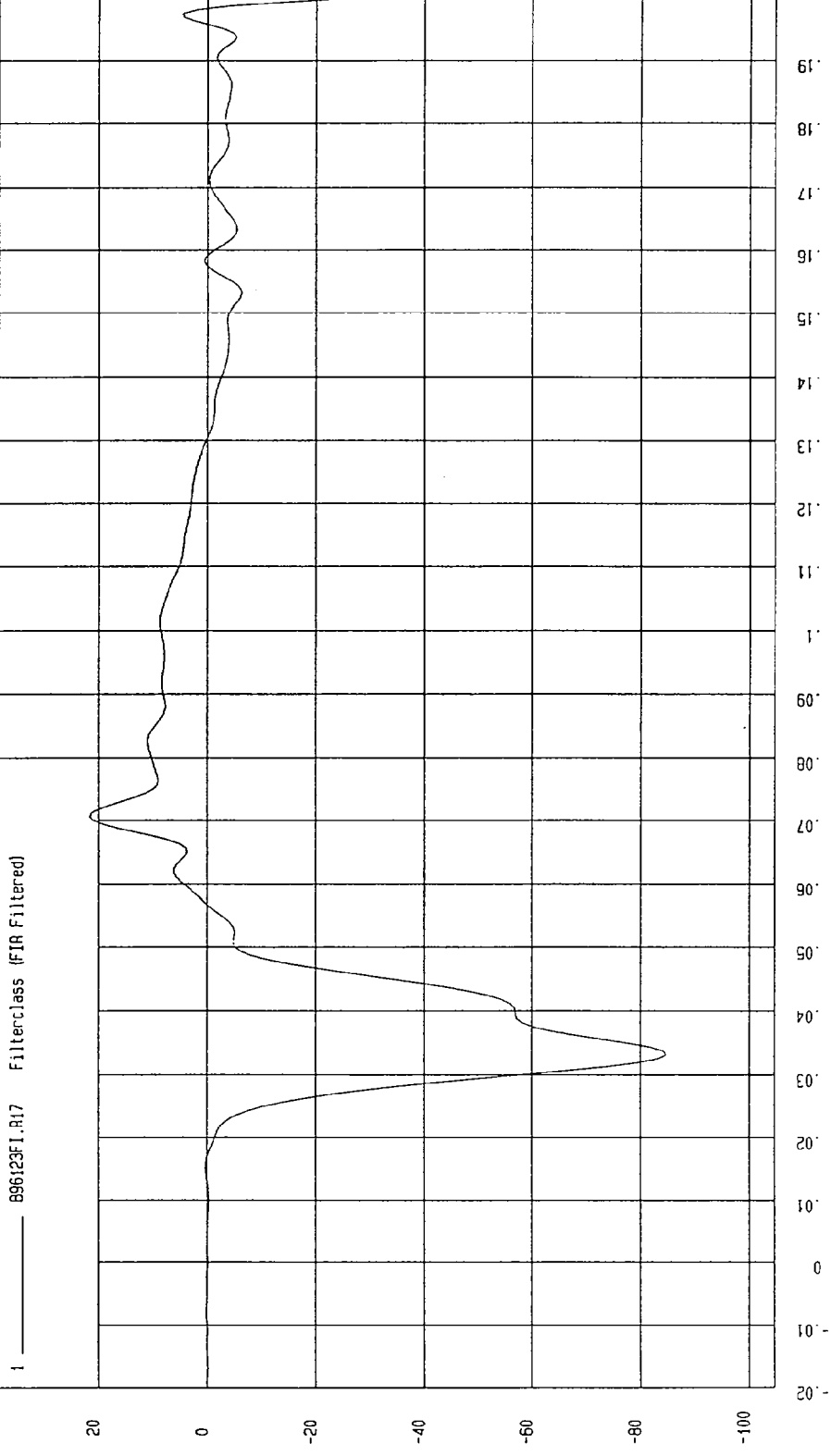


MCA Research
11-26-1996 00.41

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-84.78909 G'S at 33. msec YMAX= 21.7058 G'S at 70. msec

FRONT PASSENGER LOWER SPINE Y ACCELERATION



MGA Research Co.
11-26-1996 00:41

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

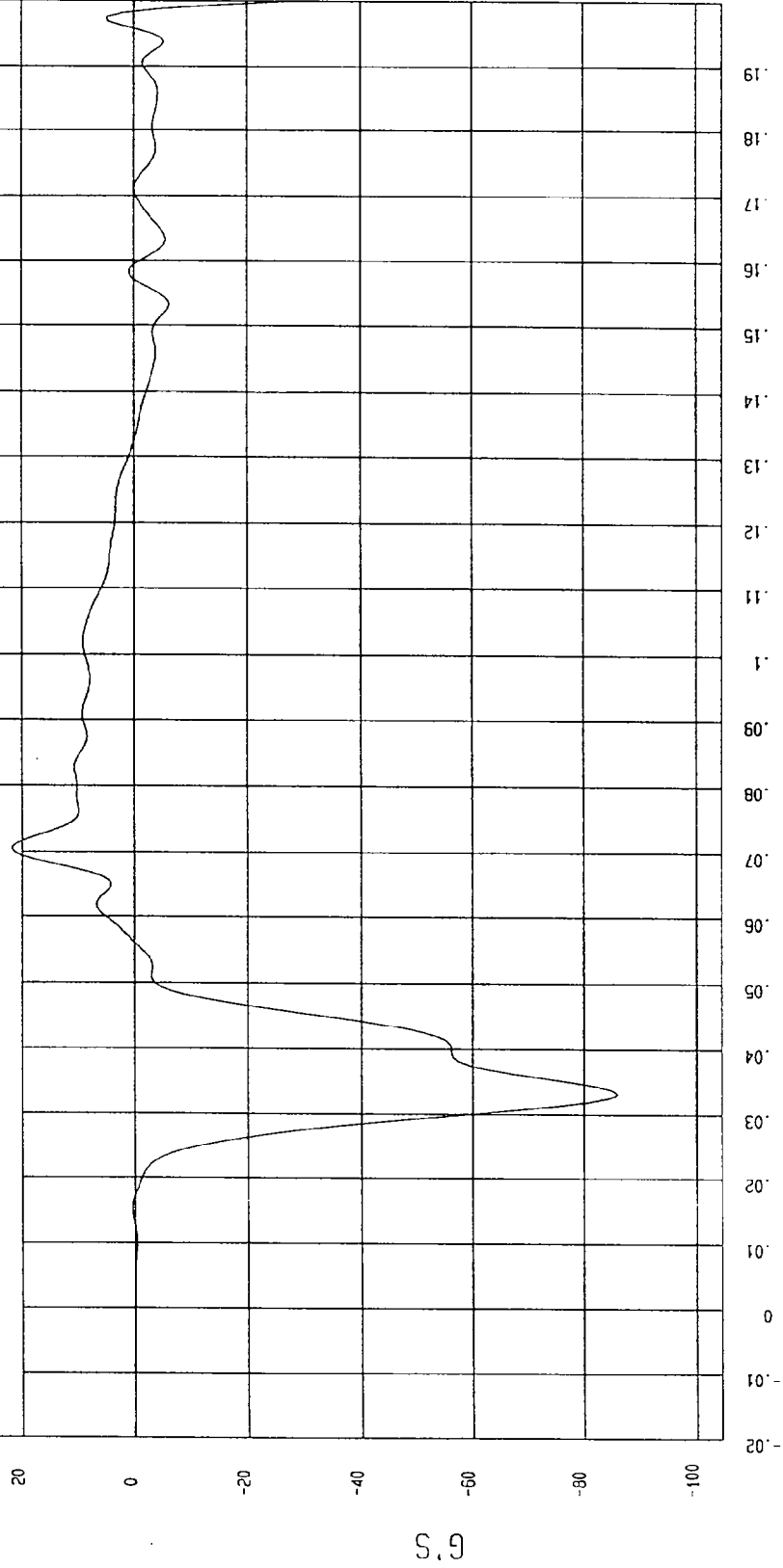
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-85.981 G'S at 33. msec

YMAX= 21.83184 G'S at 70. msec

FRONT PASSENGER LOWER SPINE Y REDUNDANT ACCELERATION

1 _____ 896123FI.R63 Filterclass (FIR Filtered)



MVA Research
11-26-1996 00:41

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

SPEED: 33.32 MPH 53.6 KPH

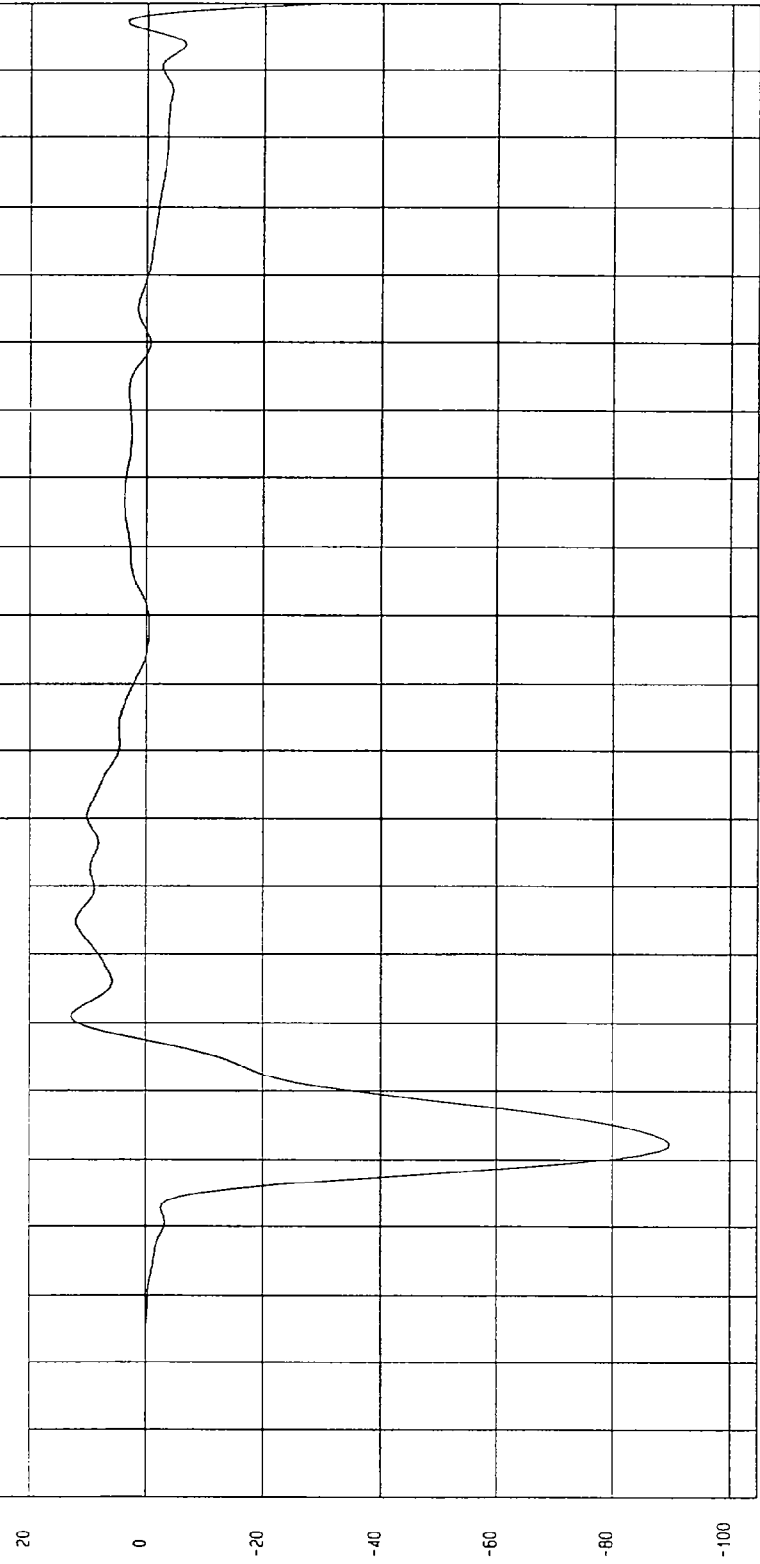
COMPONENT: 1997 FORD PROBE (CV0208)

YMIN=-89.51198 G'S at 32. msec

YMAX= 12.67857 G'S at 51. msec

FRONT PASSENGER PELVIS Y ACCELERATION

1 895123F1.R18 Filterclass (FIR Filtered)



TIME (SECONDS)

NCA Research
11-26-1998 00:41

G.S

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

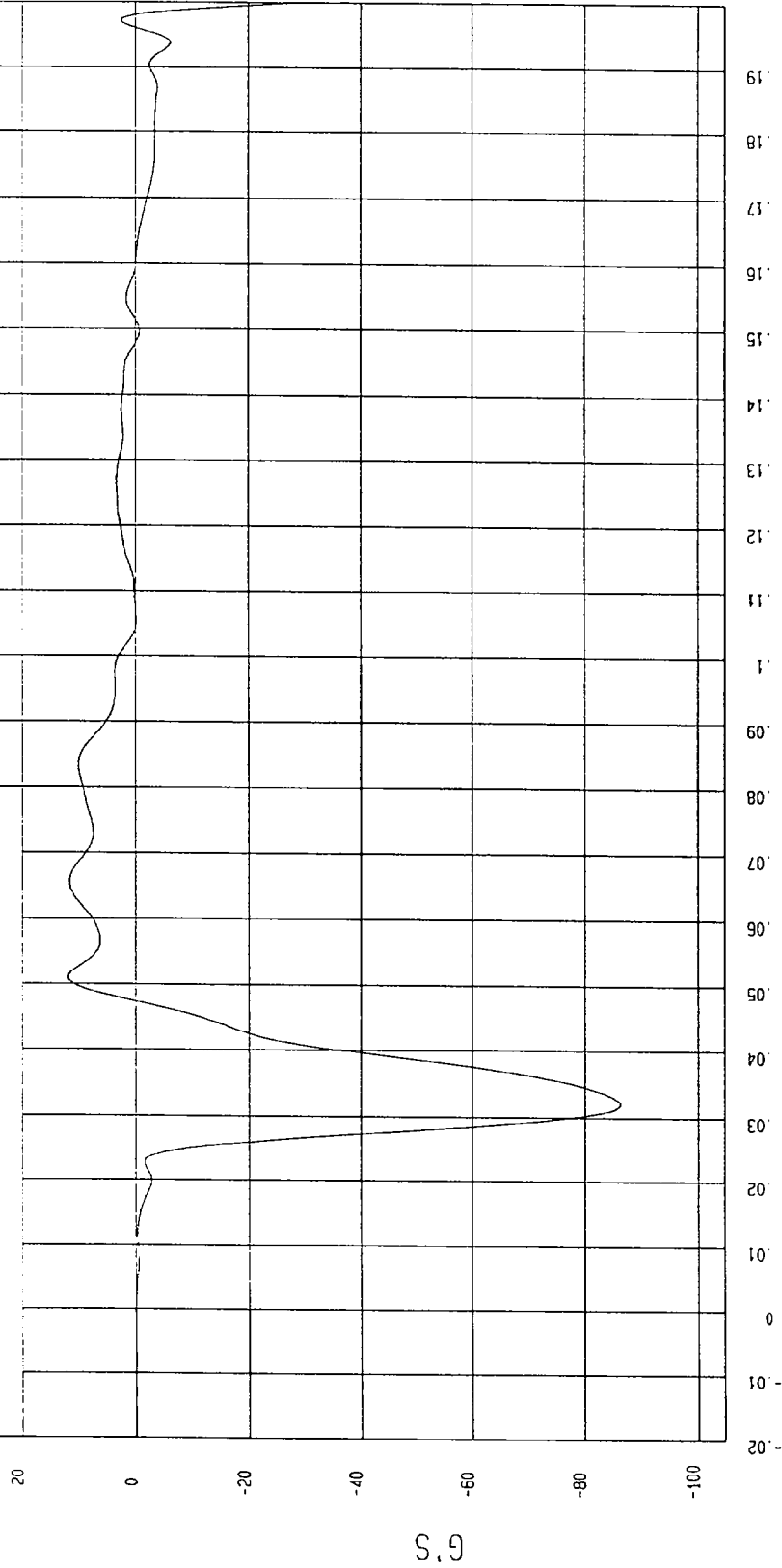
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-86.4(564 G'S at 31. msec

YMAX= 11.86405 G'S at 51. msec

FRONT PASSENGER PELVIS Y REDUNDANT ACCELERATION

1 896123F1.R64 Filterclass (FIR Filtered)



MCA Research
11-26-1996 00: 41

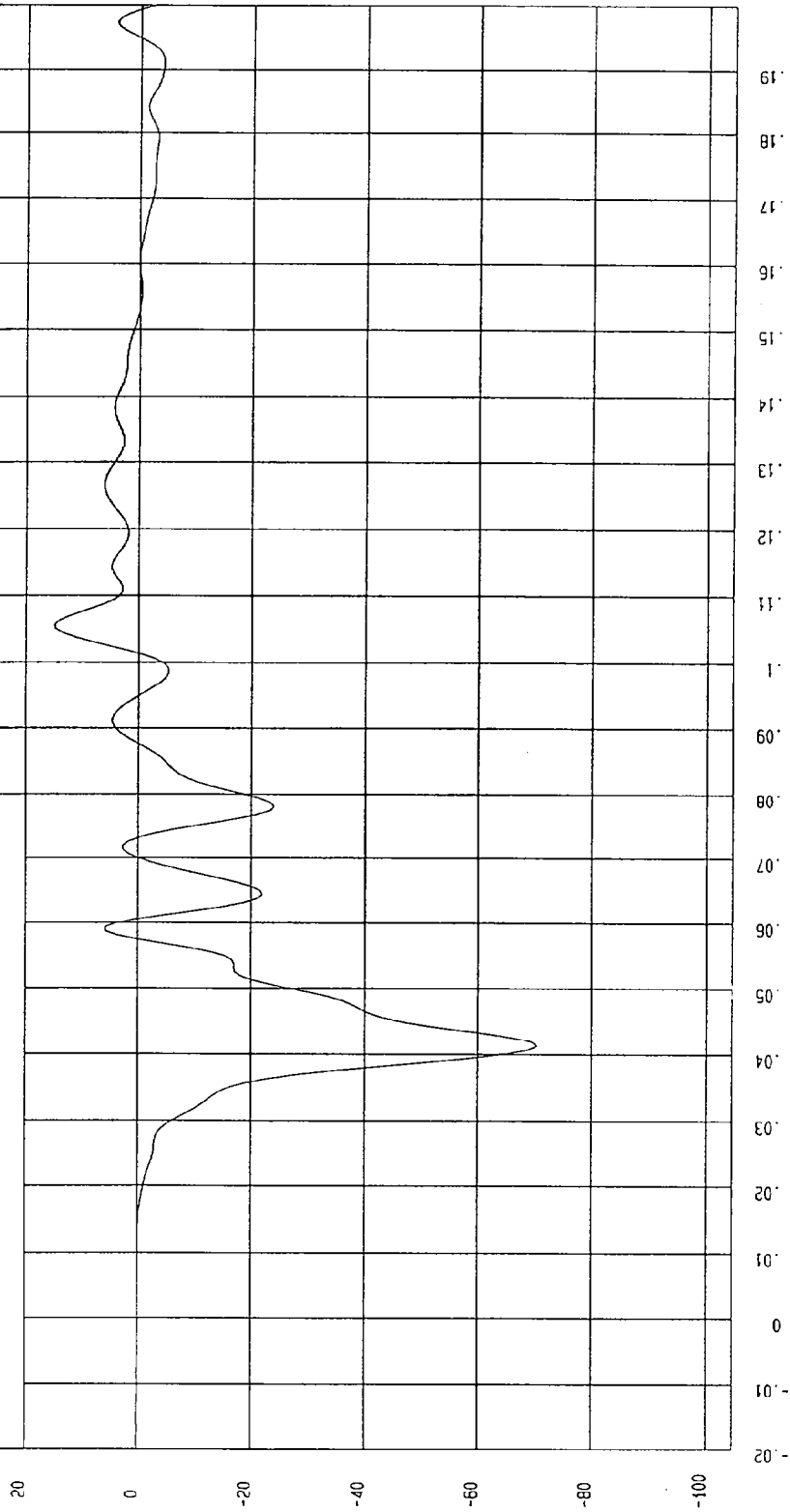
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-70.4688 G'S at 41. msec YMAX= 14.90448 G'S at 105 msec

REAR PASSENGER UPPER RIB Y ACCELERATION

1 ——— 896123FI.R25 Filterclass (FIR Filtered)



WGA Research
11-26-1996 00:42

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

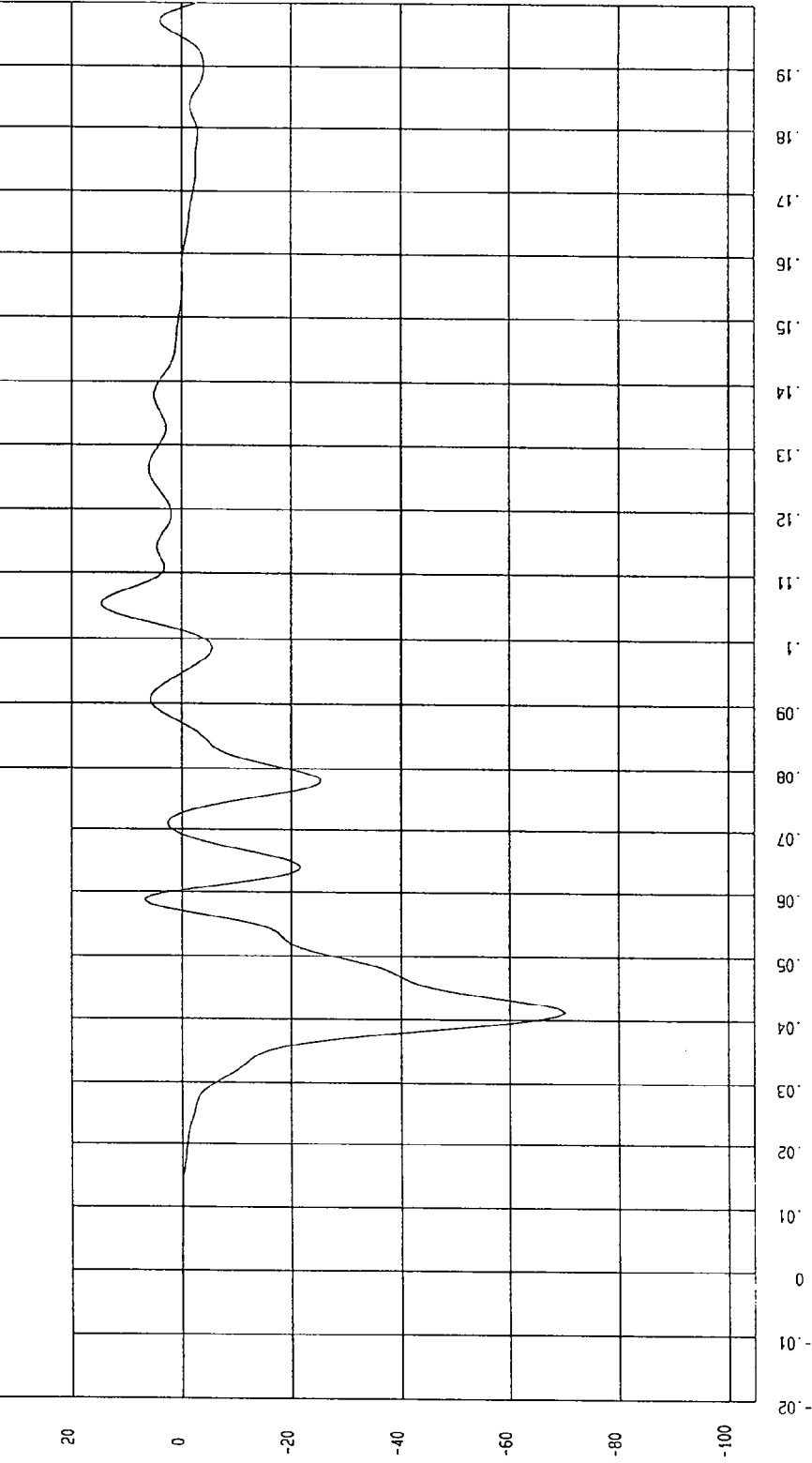
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-70.20827 G'S at 41. msec

YMAX= 14.44179 G'S at 105 msec

REAR PASSENGER UPPER RIB Y REDUNDANT ACCELERATION

1 896123F1.P66 Filterclass (FIR Filtered)



MGA Research
11-26-1996 00:42

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

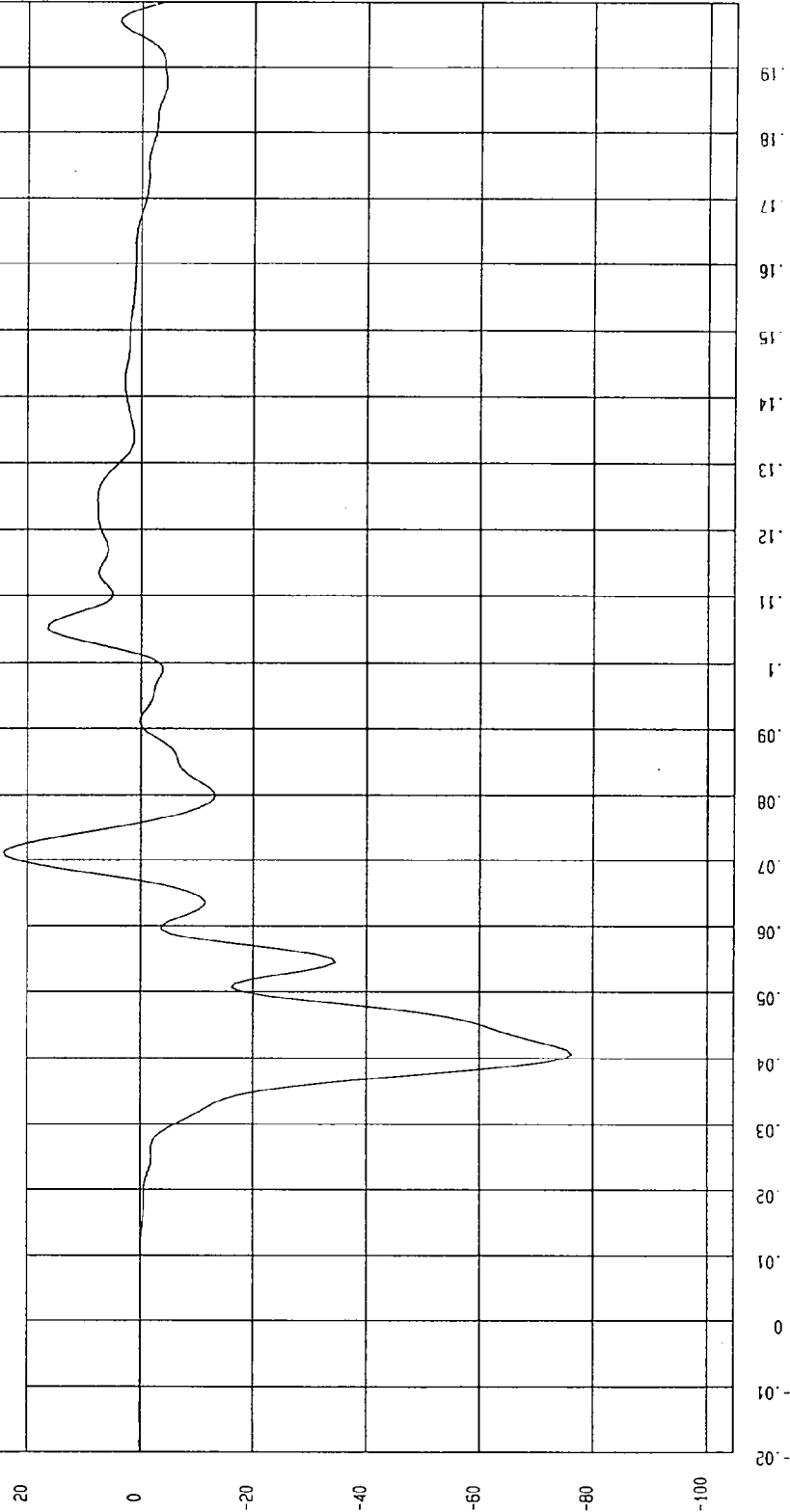
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-76.30984 G'S at 40. msec

YMAX= 24.23229 G'S at 71. msec

REAR PASSENGER LOWER RIB Y ACCELERATION

1 — 896123FI.R26 Filterclass (FIR Filtered)



MSA Research
11-26-1996 00.42

G.S

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

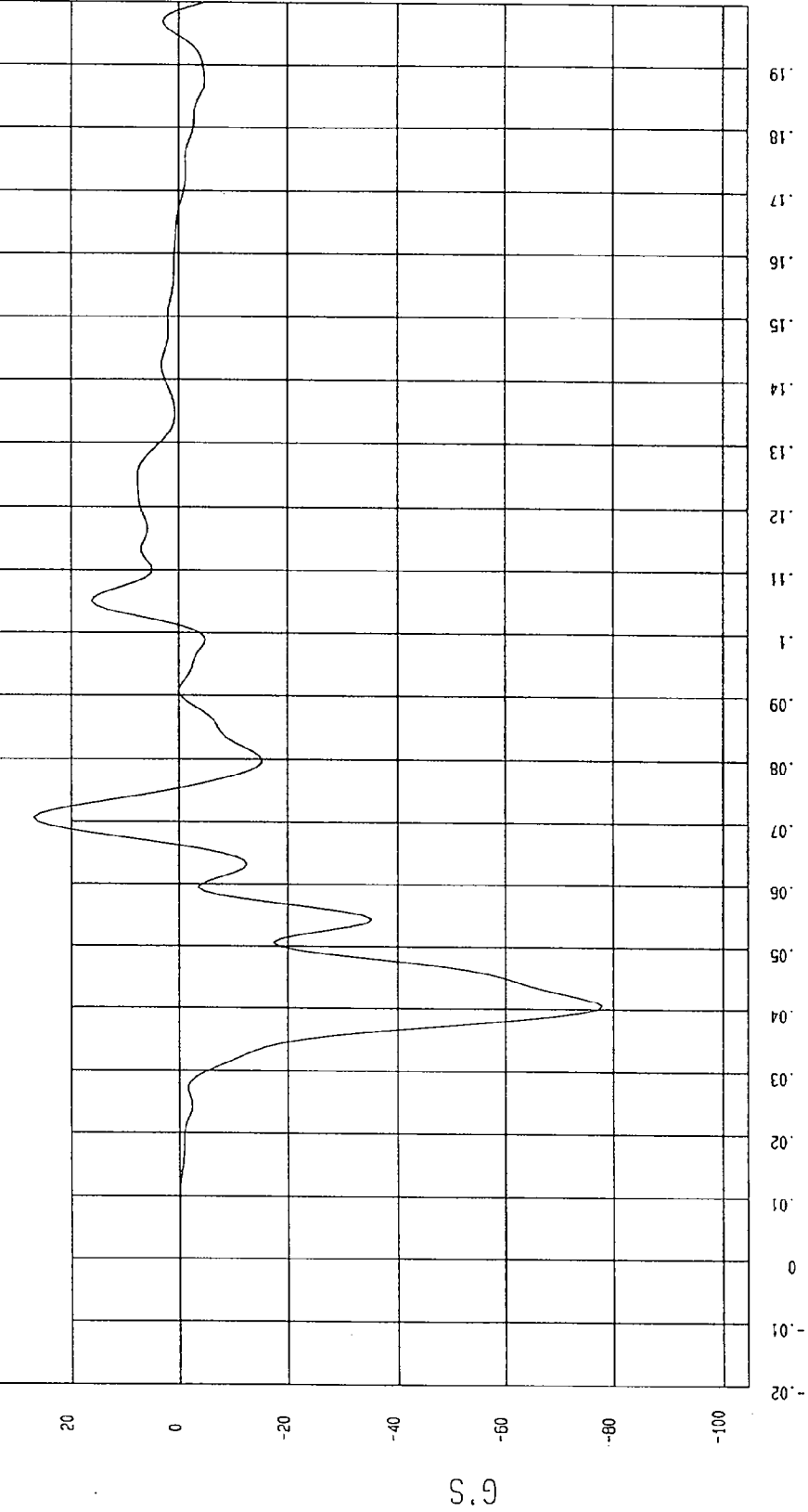
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-77.95327 G'S at 40. msec

YMAX= 26.79457 G'S at 70. msec

REAR PASSENGER LOWER RIB Y REDUNDANT ACCELERATION

1 _____ 896123F1.R67 FilterClass (FIR Filtered)



MCA Research
11-26-1996 00:43

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

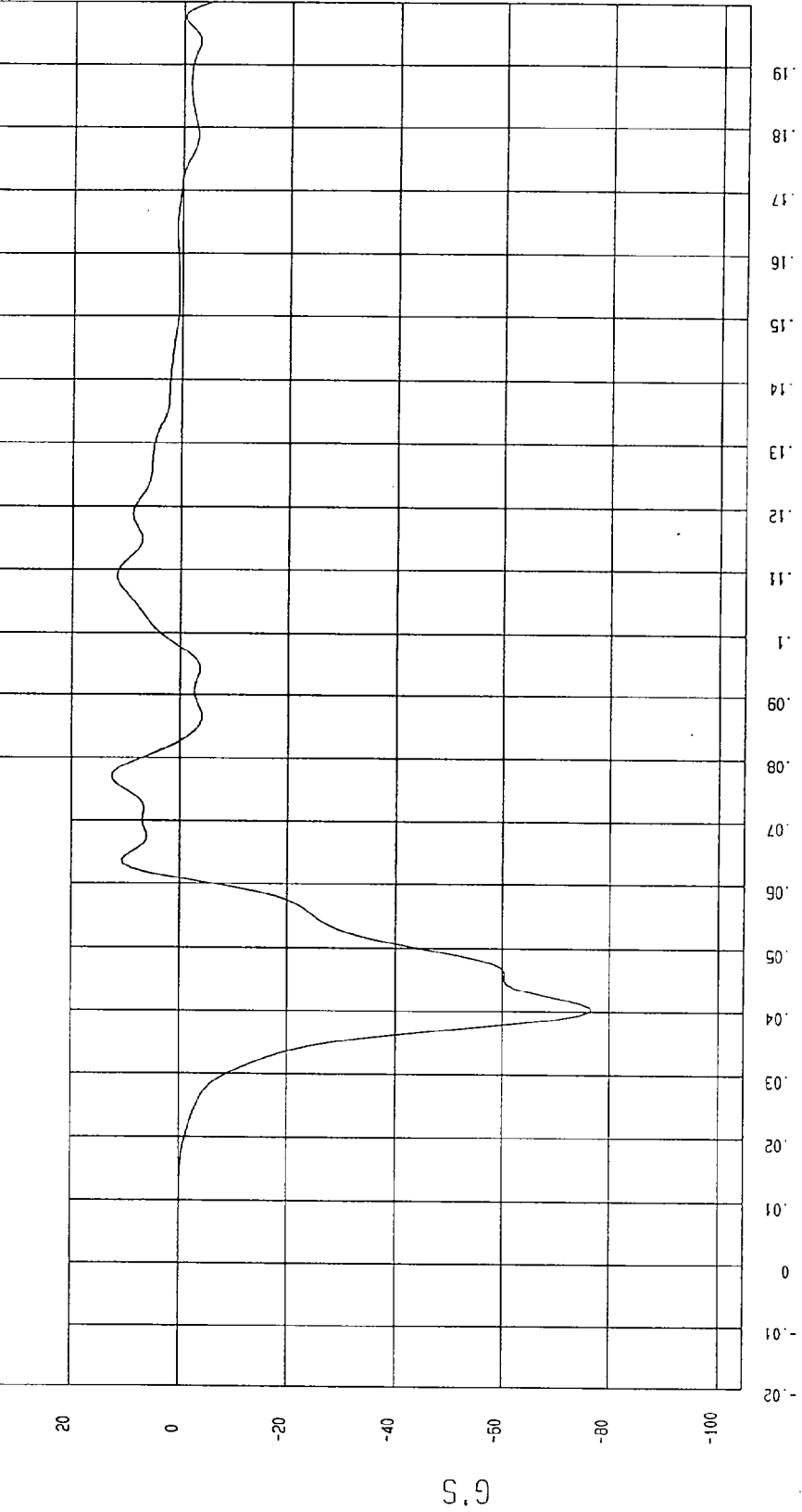
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-76.59558 G'S at 40. msec

YMAX= 12.53513 G'S at 76. msec

REAR PASSENGER LOWER SPINE Y ACCELERATION

1 896123FT.R27 FilterClass (FIR Filtered)



MGA Research
11-26-1996 00:43

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

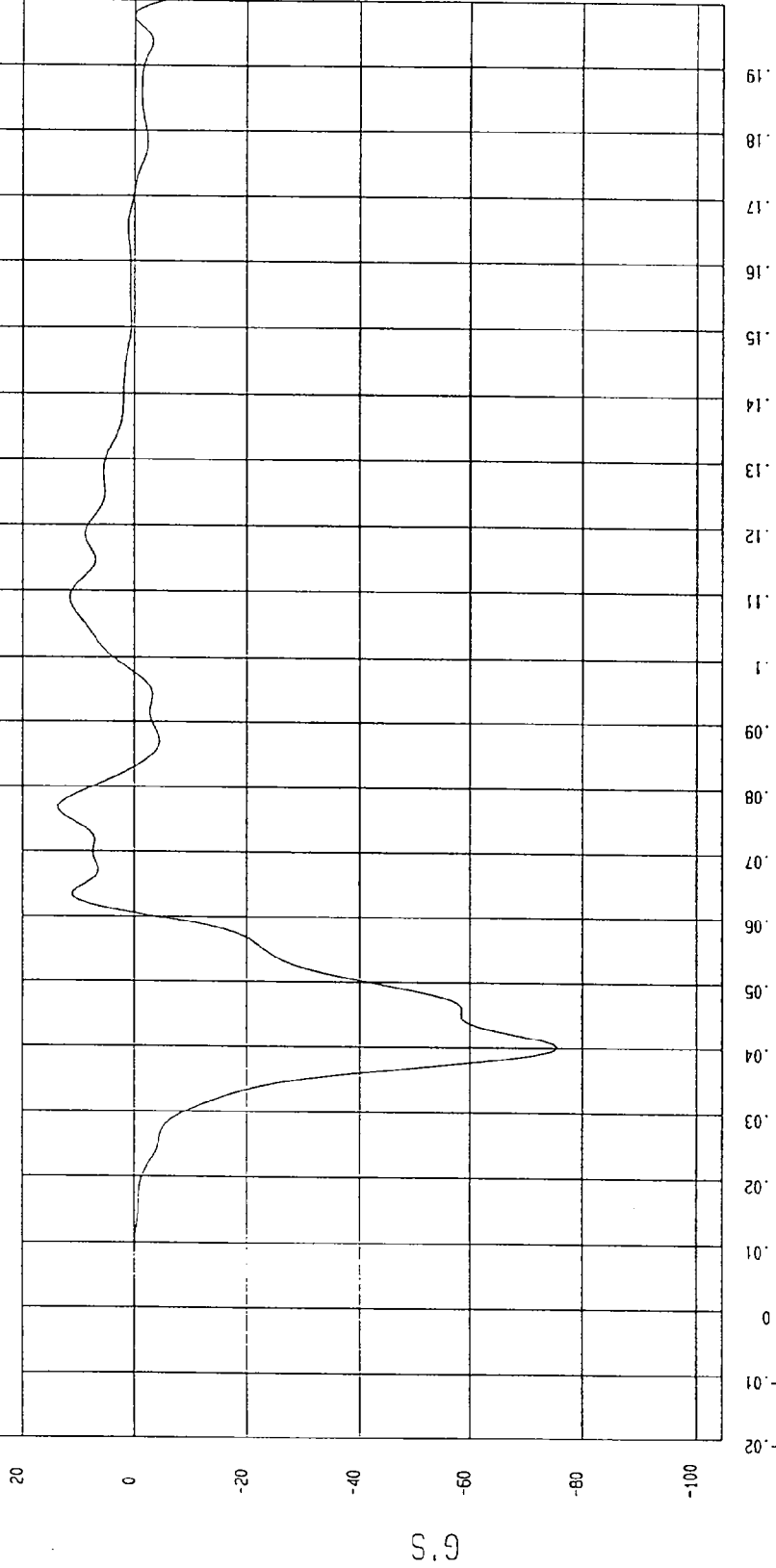
COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-75.68096 G'S at 40 msec

YMAX= 13.72443 G'S at 76. msec

REAR PASSENGER LOWER SPINE Y REDUNDANT ACCELERATION

1 896123FI.R68 Filterc.ass (FIR Filtered)



MOA Research
11-26-1996 00:43

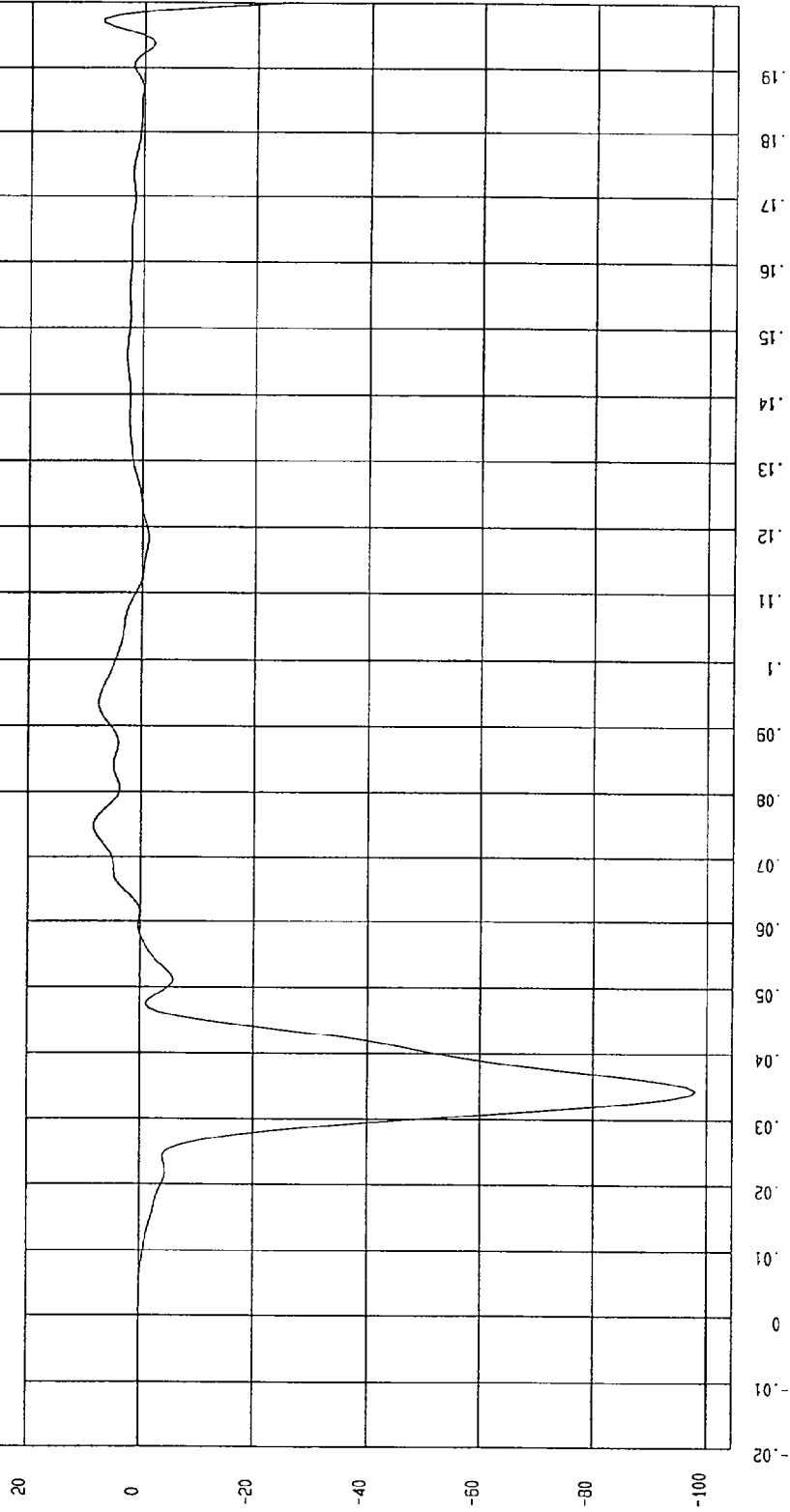
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-98.12201 G'S at 34. msec YMAX= 8.462317 G'S at 74. msec

REAR PASSENGER PELVIS Y ACCELERATION

1 _____ 896123FI.R20 Filterclass (FIR Filtered)



MSA REPORT
11-26-1996 00.43

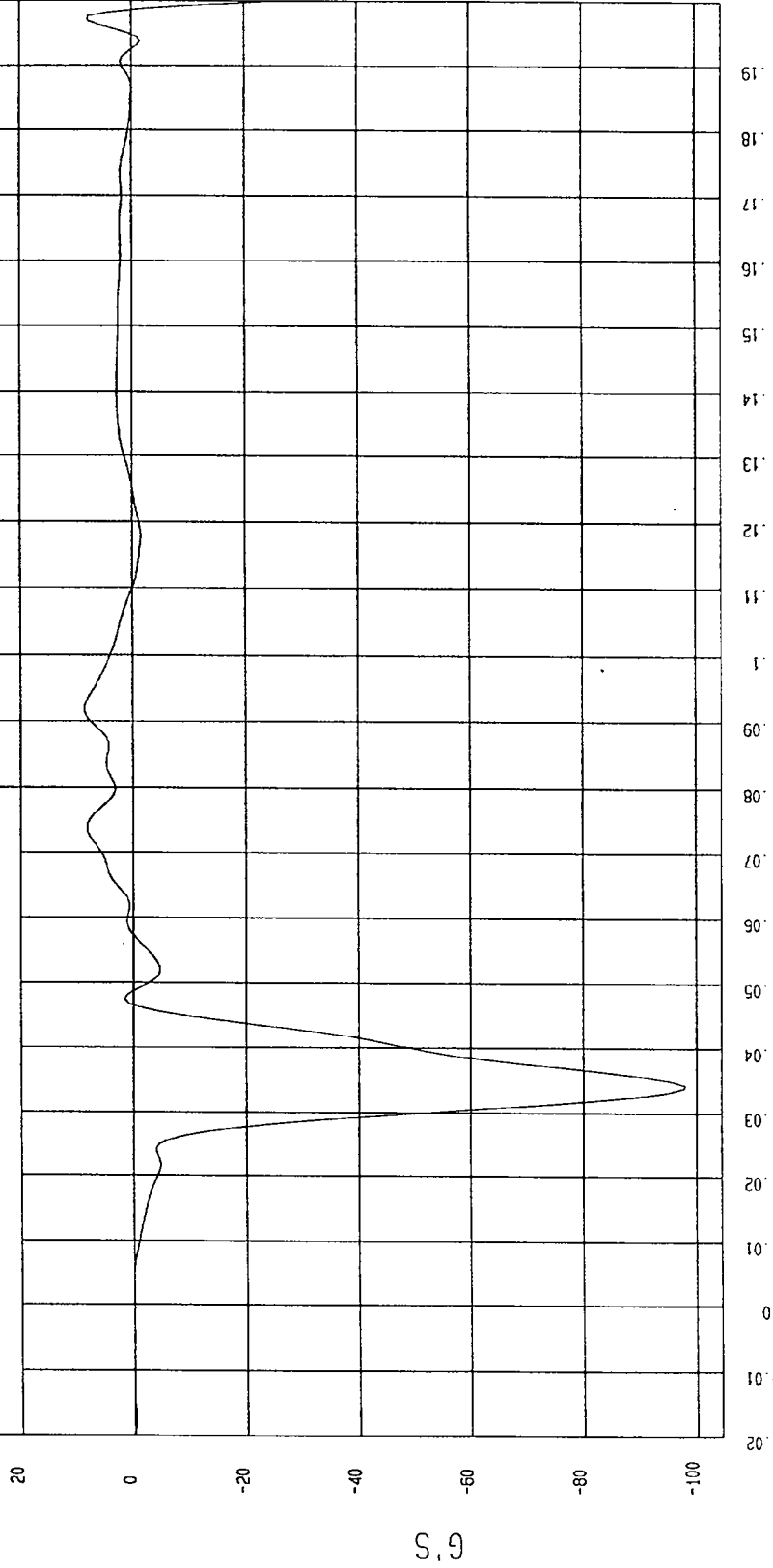
TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST TEST DATE: 11-14-1996

COMPONENT: 1997 FORD PROBE (CV0208) Speed: 33.32 MPH 53.6 KPH

YMIN=-99.02517 G'S at 34. msec YMAX= 8.75454 G'S at 91. msec

REAR PASSENGER PELVIS Y REDUNDANT ACCELERATION

1 896123FI.069 Filterclass (FIR Filtered)



HGA Research
11-26-1996 00: 43

APPENDIX C
SID CONFIGURATION AND PERFORMANCE VERIFICATION

REPORT NO. MGA-96-DC09

DUMMY PERFORMANCE CALIBRATIONS

FMVSS 214 - SIDE IMPACT TEST

FORD MOTOR COMPANY
1997 FORD PROBE 3 DOOR HATCHBACK
NHTSA NO. CV0208

MGA PROVING GROUNDS
5000 WARREN ROAD
BURLINGTON, WI 53105



Test Date: November 14, 1996

Report Date: December 10, 1996

FINAL REPORT

Prepared For:

U. S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
ENFORCEMENT
OFFICE OF VEHICLE SAFETY COMPLIANCE
MAIL CODE: NEF-30
400 SEVENTH STREET, S.W., ROOM 6115
Washington, D.C. 20590

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DUMMY S/N: 269	POST-TEST CERTIFICATION DATA	4-1
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DUMMY S/N: 269	POST-TEST INSPECTION CHECKLIST	6-1
	VEHICLE AND DUMMY TEMPERATURE	7-1

PRE-TEST CERTIFICATION DATA

Front Dummy Serial Number: 270

Calibration Test Results Summary

Dummy Serial Number: 270

Pre-Test Calibration

External Dimensions:	The dummy passed all external dimension requirements.
Thorax Impact Test:	The thorax passed all impact test requirements.
Pelvic Impact Test:	The pelvis passed all impact test requirements.
Abdominal Compression Test:	The abdomen passed all compression test requirements.
Lumbar Flexion Test:	The lumbar passed all flexion test requirements.

SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 270

DATE OF VERIFICATION: November 13, 1996

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH - Seated Height	35.0" - 35.8"	35.2
RH - Rib Height	19.75" - 20.50"	20.50
HP - Hip Pivot Height	3.9" ref.	3.9
RD - Rib From Back Line	9.0" to 9.5"	9.5
KV - Knee Pivot From Back Line	20.1" - 20.7"	20.6
SW - Knee Pivot to Floor	19.3" - 19.9"	19.5
HW - Hip Width	14.0" - 15.4"	15.0

MEASUREMENTS BY: 

APPROVED BY: 

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

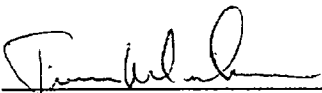
DATE: November 13, 1996

DUMMY NUMBER: 270

TEST NUMBER: D961772

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	15%
PROBE SPEED	13.8 - 14.2 fps	14.0
UPPER RIB	37 - 46 g's	41
LOWER RIB	37 - 46 g's	45
LOWER SPINE	15 - 22 g's	21

TEST MEETS SPECIFICATIONS

TECHNICIAN 

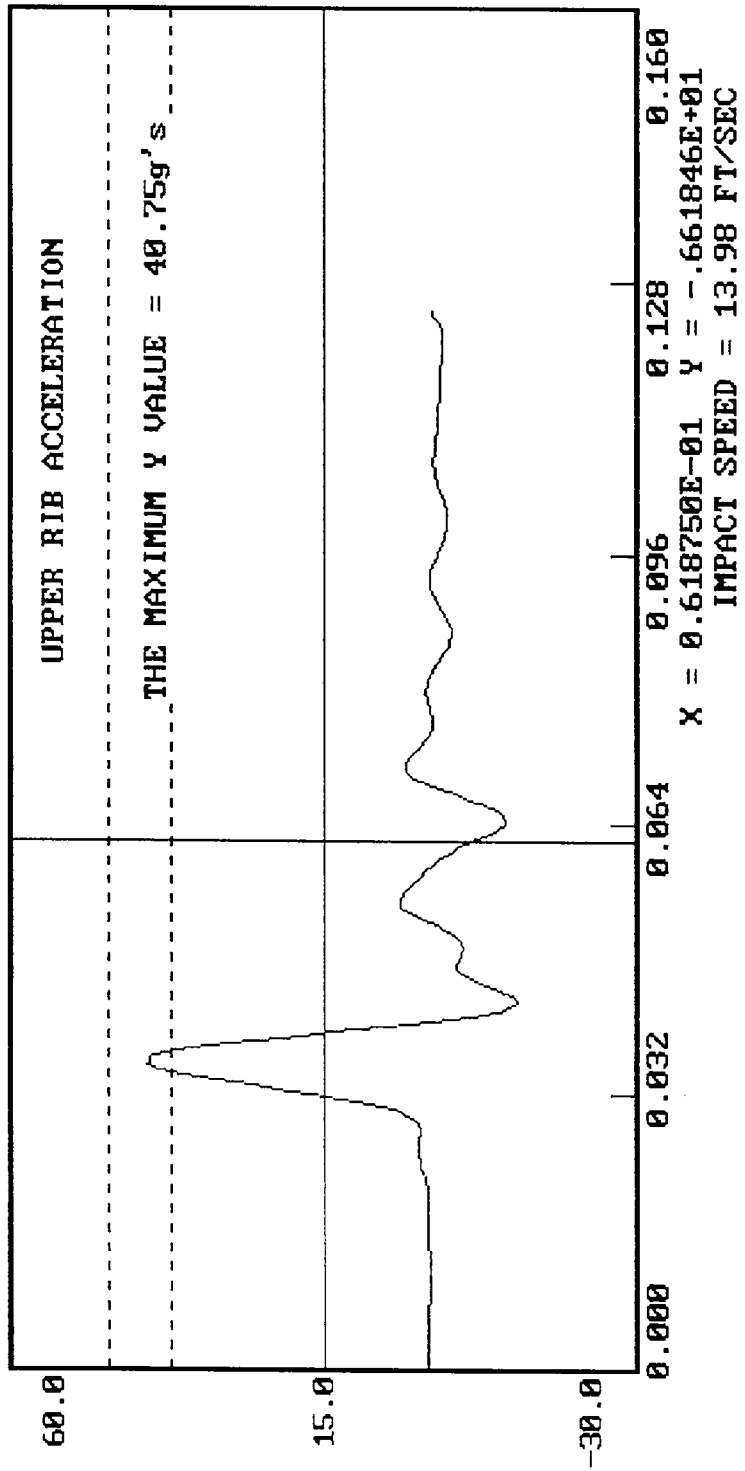
APPROVED BY 

11-13-1996 15:11

DUMMY CALIBRATION - THORAX IMPACT

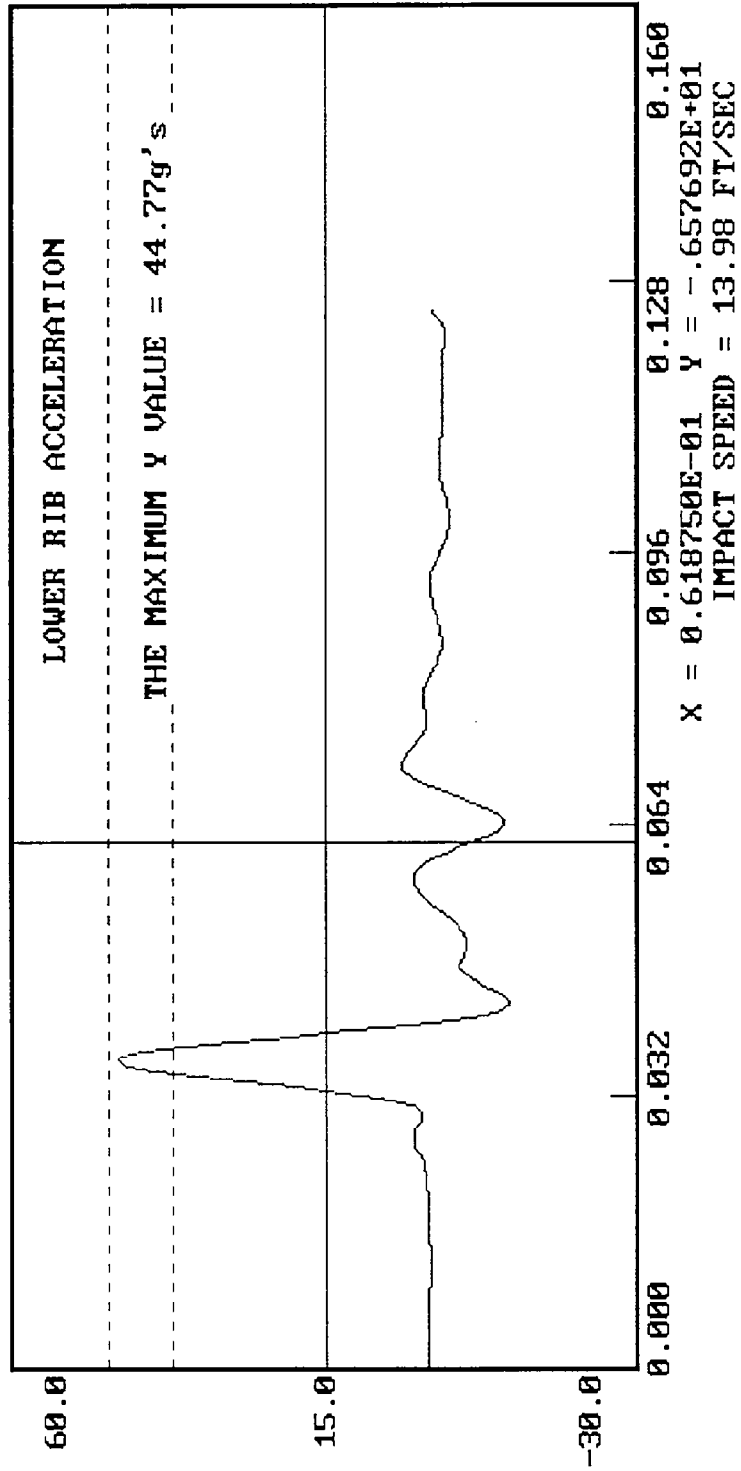
DUMMY # 270

ACCELERATION (G'S) VS. TIME ((SECONDS))



11-13-1996 15:11

DUMMY CALIBRATION - THORAX IMPACT
DUMMY # 278
ACCELERATION (G'S) VS. TIME ((SECONDS))

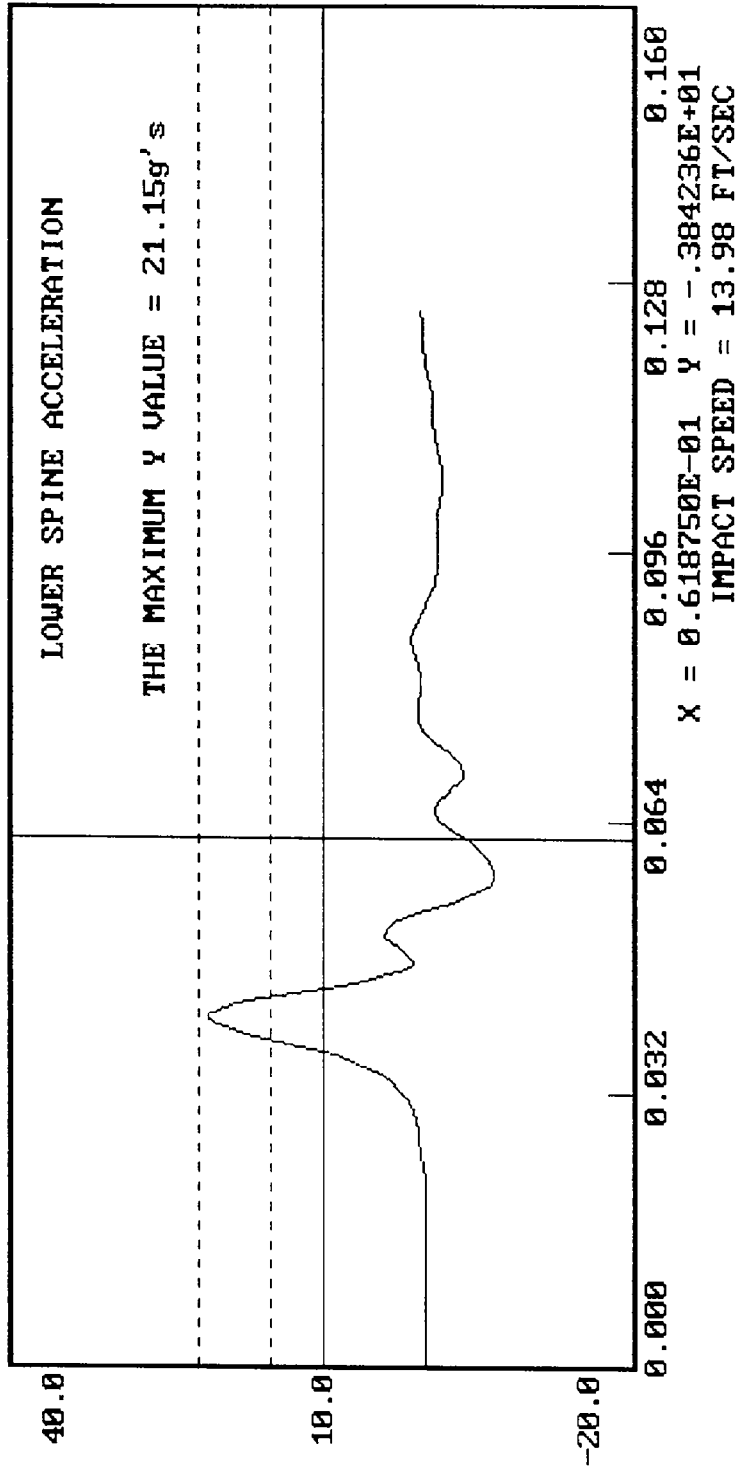


11-13-1996 15:27

DUMMY CALIBRATION - THORAX IMPACT

DUMMY # 270

ACCELERATION (G'S) VS. TIME ((SECONDS))



MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: November 13, 1996

DUMMY NUMBER: 270

TEST NUMBER: D961773

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	16%
PROBE SPEED	13.8 - 14.2 f/s	14.0
PELVIS ACCELERATION	40 - 60 g's	56

TEST MEETS SPECIFICATIONS

TECHNICIAN 

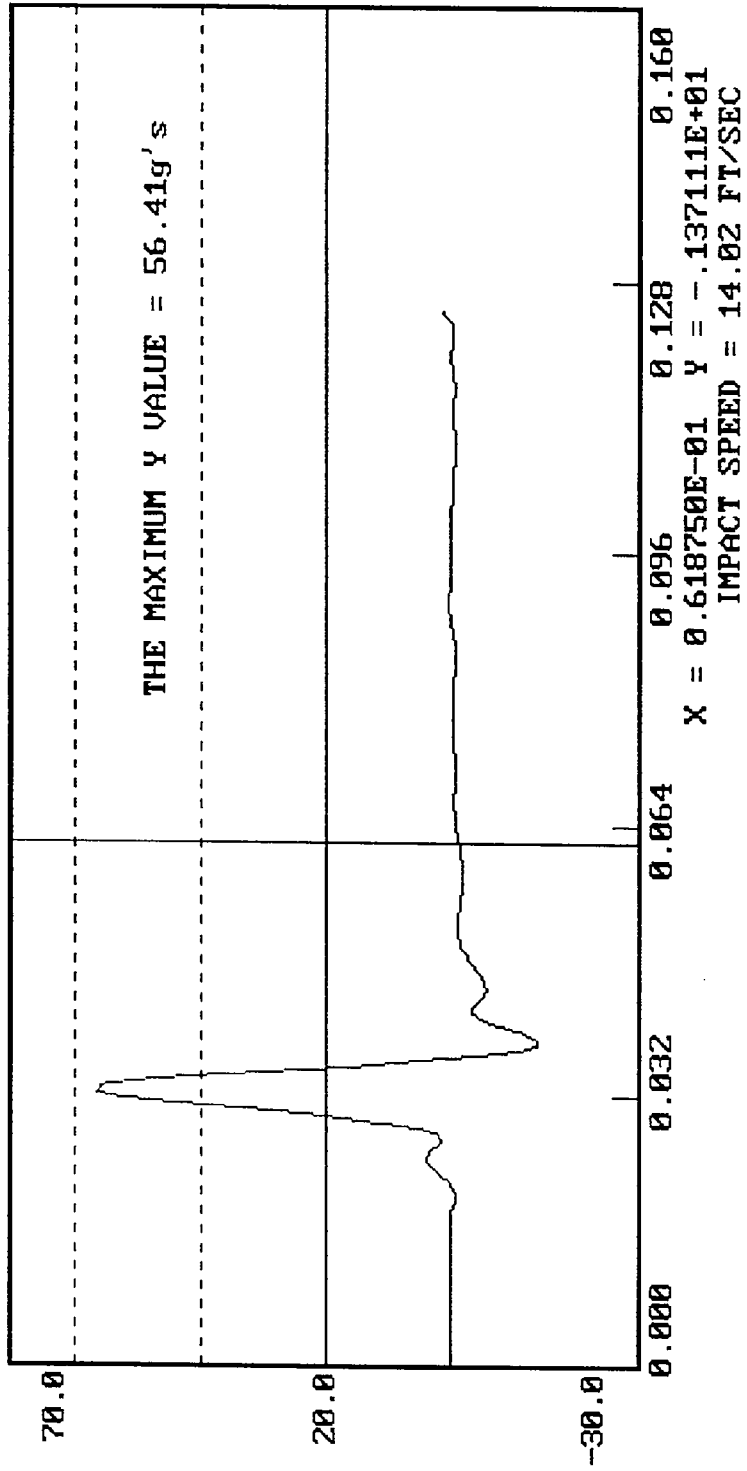
APPROVED BY 

DUMMY CALIBRATION - PELVIS IMPACT

DUMMY # 270

ACCELERATION (G'S) VS. TIME ((SECONDS))

11-13-1996 15:02



MGA RESEARCH CORPORATION
ABDOMINAL COMPRESSION TEST
(PRELOAD = 10 LBS)
SIDE IMPACT DUMMY (SID)

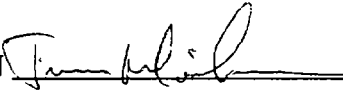
DATE: November 13, 1996

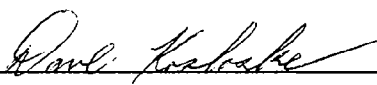
DUMMY NUMBER: 270

TEST NUMBER: D961774

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	15%
FORCE @ 0.5 in	23.3 - 36.5 lbs	32.6
FORCE @ 0.75 in	36.7 - 49.8 lbs	45.8
FORCE @ 1.0 in	50 - 63 lbs	60
FORCE @ 1.3 in	73 - 88 lbs	76

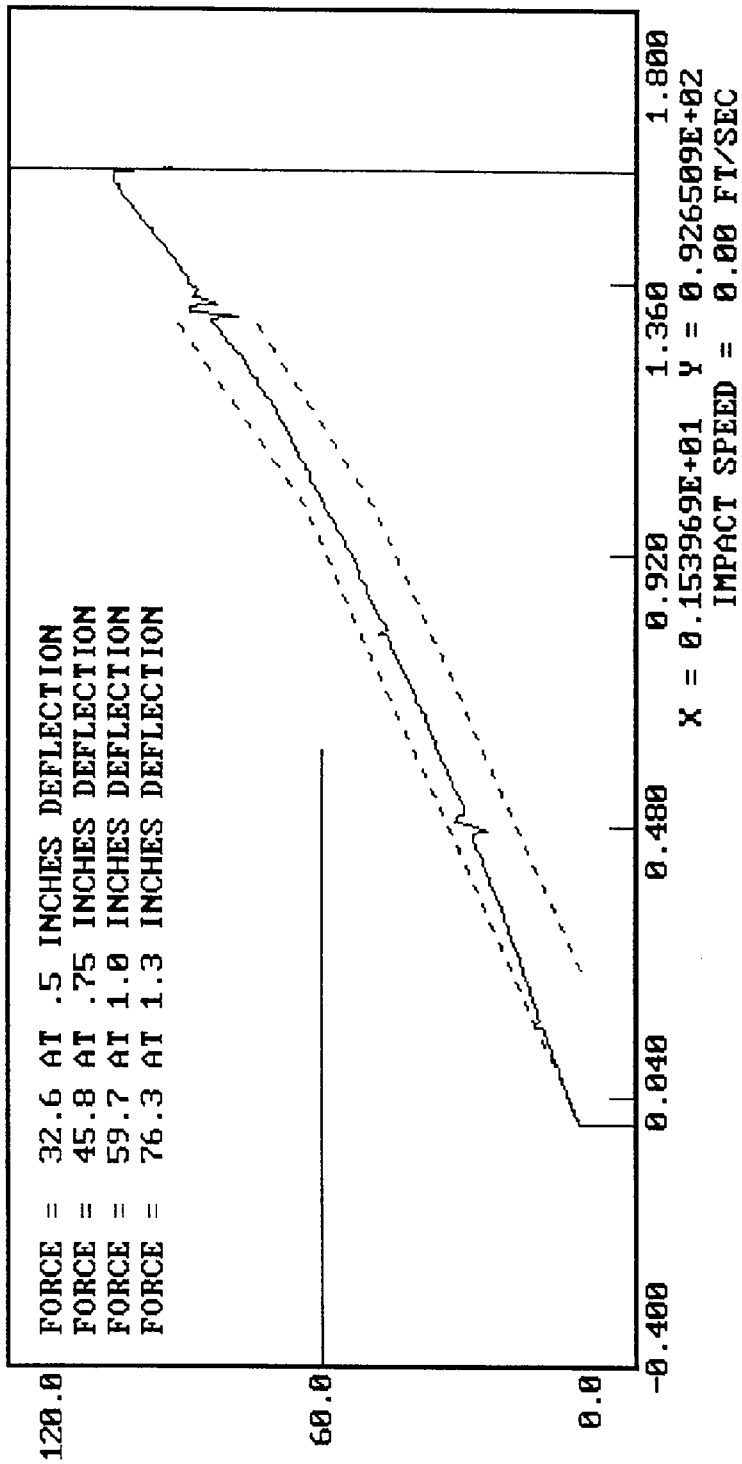
TEST MEETS SPECIFICATIONS

TECHNICIAN 

APPROVED BY 

DUMMY CALIBRATION - ABDOMEN COMPRESSION
 DUMMY # 270
 11-13-1996 11:02

ABDOMEN FORCE (LBS) VS. ABDOMEN DISPLACEMENT (INCHES)



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: November 13, 1996

DUMMY NUMBER: 270

TEST NUMBER: D961775

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	15%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	23
FORCE @ 30°	34 - 46 lbs	38
FORCE @ 40°	46 - 58 lbs	47
RETURN ANGLE	12° maximum	3°

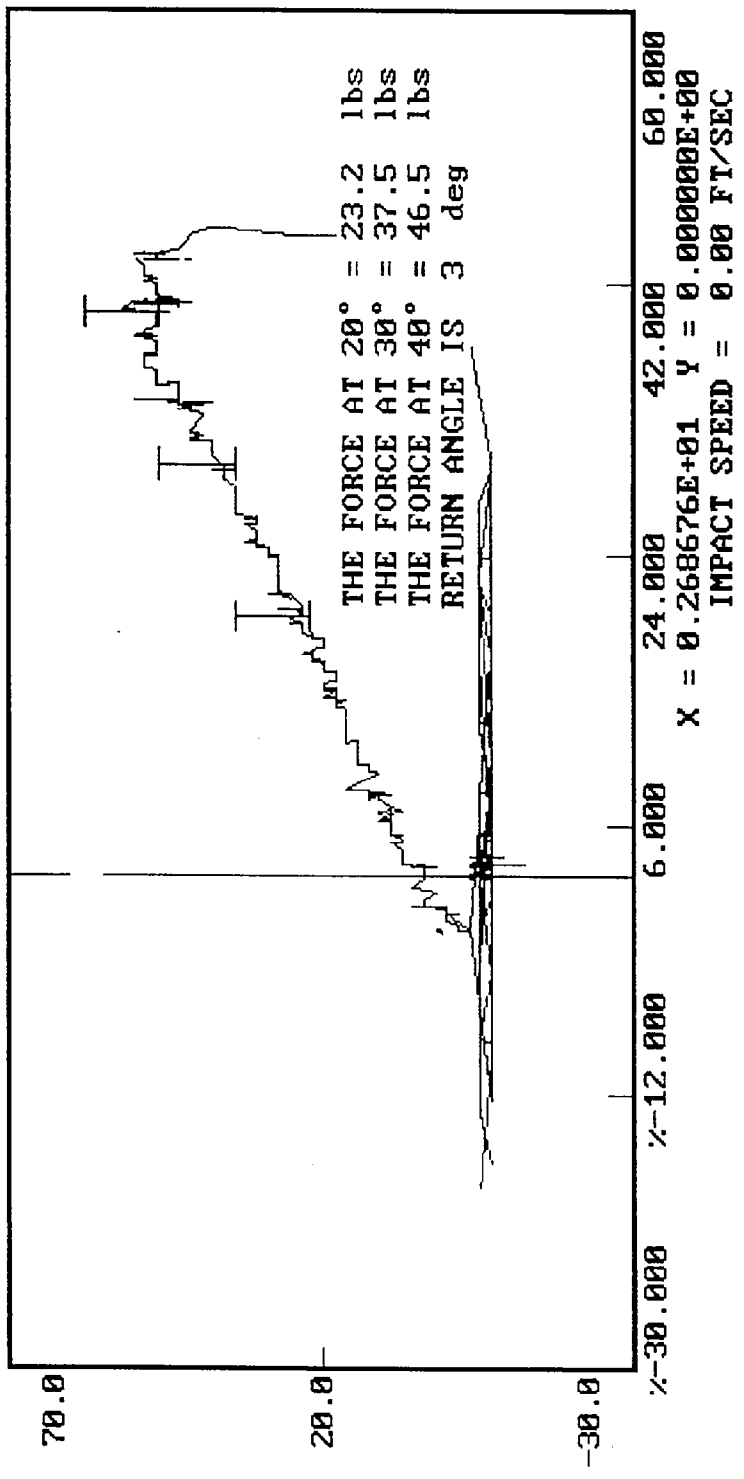
TEST MEETS SPECIFICATIONS

TECHNICIAN 

APPROVED BY 

11-13-1996 12:27

DUMMY CALIBRATION - LUMBAR FLEXION
DUMMY # 270
FORCE (LBS) VS. TORSO ROTATION (DEGREES)



PRE-TEST CERTIFICATION DATA

Rear Dummy Serial Number: 269

Calibration Test Results Summary

Passenger Serial Number: 269

Pre-Test Calibration

External Dimensions:	The dummy passed all external dimension requirements.
Thorax Impact Test:	The thorax passed all impact test requirements.
Pelvic Impact Test:	The pelvis passed all impact test requirements.
Abdominal Compression Test:	The abdomen passed all compression test requirements.
Lumbar Flexion Test:	The lumbar passed all flexion test requirements.

SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 269

DATE OF VERIFICATION: November 13, 1996

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH - Seated Height	35.0" - 35.8"	35.1
RH - Rib Height	19.75" - 20.50"	20.00
HP - Hip Pivot Height	3.9" ref.	3.9
RD - Rib From Back Line	9.0" to 9.5"	9.3
KV - Knee Pivot From Back Line	20.1" - 20.7"	20.4
SW - Knee Pivot to Floor	19.3" - 19.9"	19.4
HW - Hip Width	14.0" - 15.4"	15.1

MEASUREMENTS BY: 

APPROVED BY: 

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: November 13, 1996

DUMMY NUMBER: 269

TEST NUMBER: D961762

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	18%
PROBE SPEED	13.8 - 14.2 fps	14.0
UPPER RIB	37 - 46 g's	38
LOWER RIB	37 - 46 g's	37
LOWER SPINE	15 - 22 g's	19

TEST MEETS SPECIFICATIONS

TECHNICIAN 

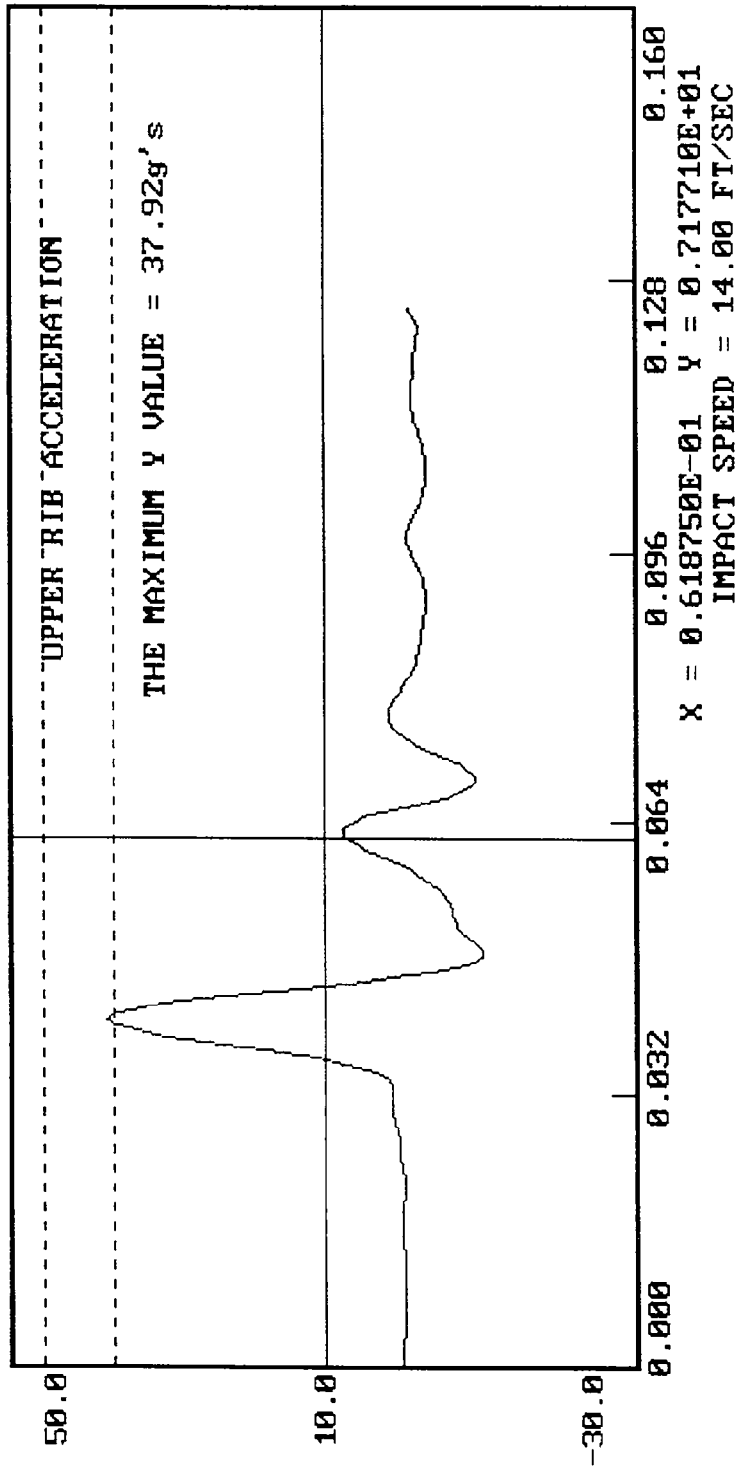
APPROVED BY 

11-13-1996 14:29

DUMMY CALIBRATION - THORAX IMPACT

DUMMY # 269

ACCELERATION (G'S) VS. TIME ((SECONDS))

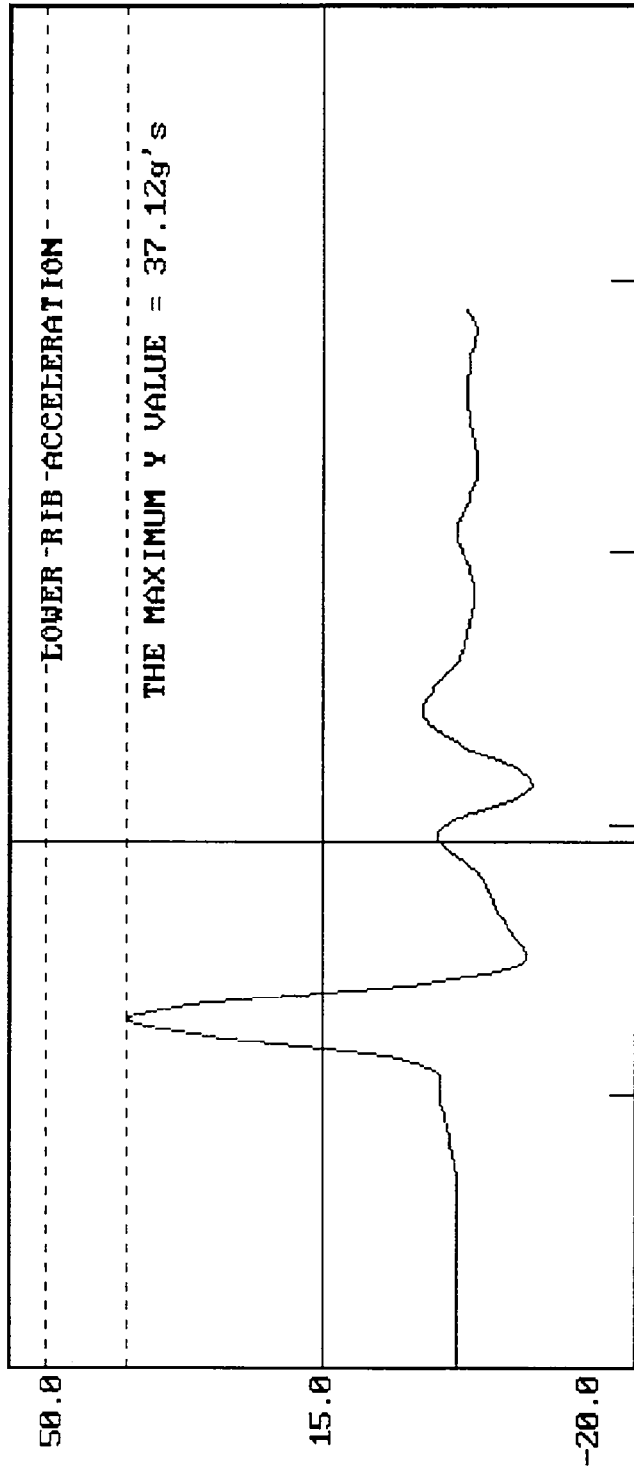


11-13-1996 14:29

DUMMY CALIBRATION - THORAX IMPACT

DUMMY # 269

ACCELERATION (G'S) VS. TIME ((SECONDS))



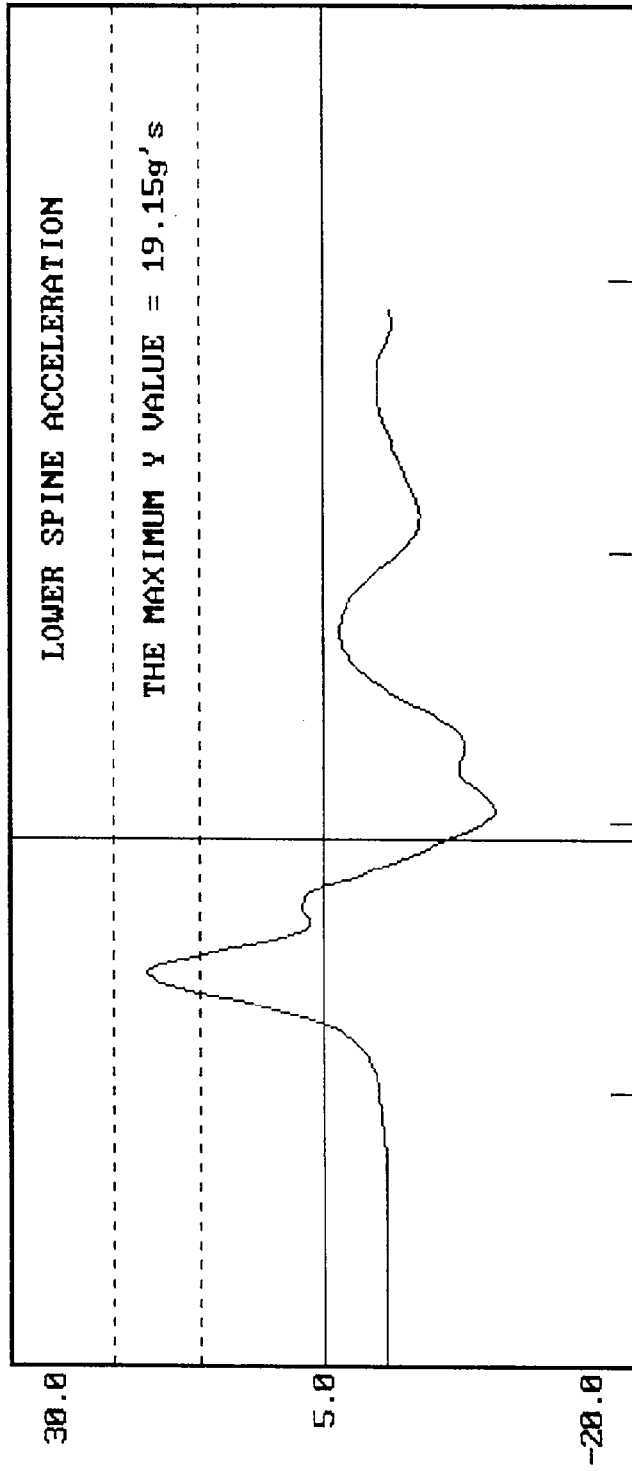
X = 0.618750E-01 Y = 0.193950E+01
IMPACT SPEED = 14.00 FT/SEC

11-13-1996 14:29

DUMMY CALIBRATION - THORAX IMPACT

DUMMY # 269

ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.498513E+01
IMPACT SPEED = 14.00 FT/SEC

MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: November 13, 1996

DUMMY NUMBER: 269

TEST NUMBER: D961763

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	15%
PROBE SPEED	13.8 - 14.2 f/s	14.0
PELVIS ACCELERATION	40 - 60 g's	60

TEST MEETS SPECIFICATIONS

TECHNICIAN Jim Hill

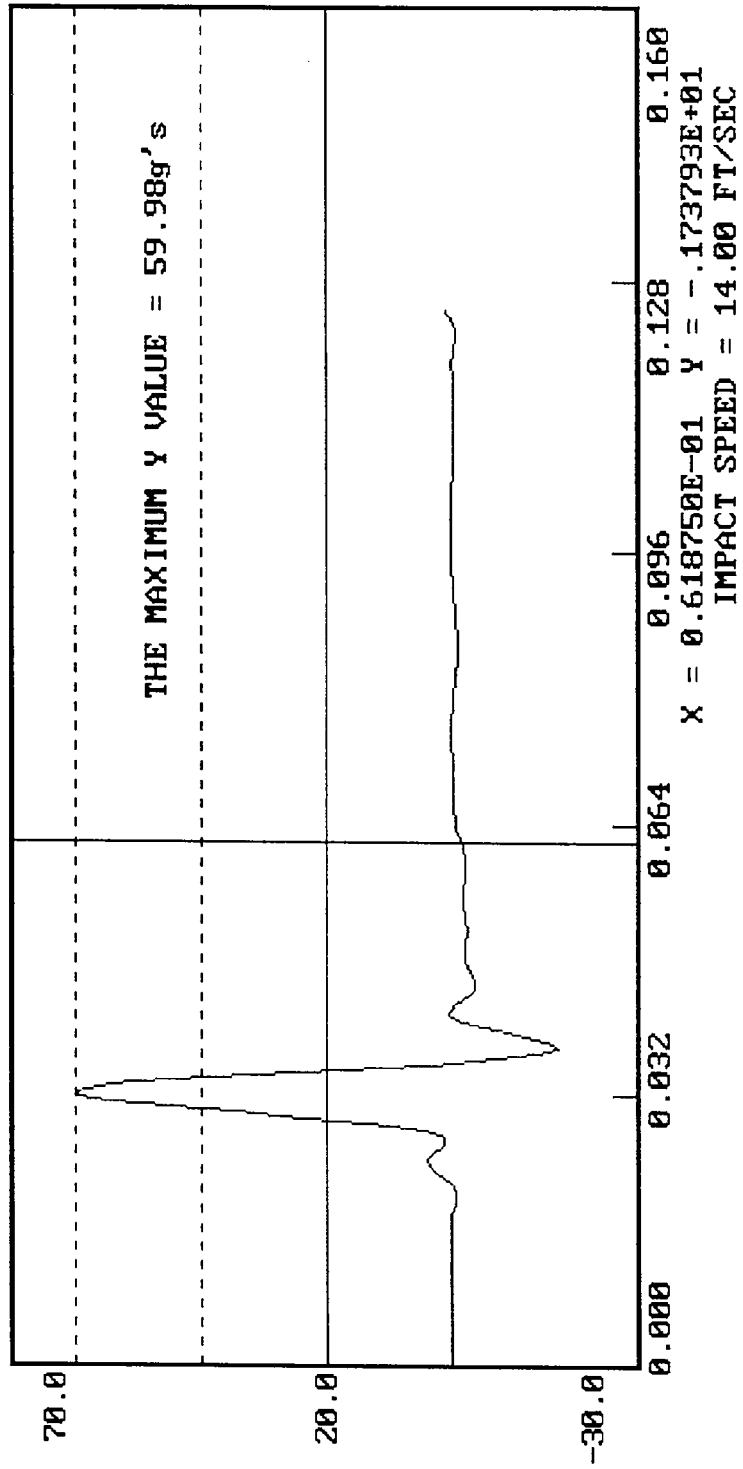
APPROVED BY Steve Koebke

11-13-1996 14:43

DUMMY CALIBRATION - PELVIS IMPACT

DUMMY # 269

ACCELERATION (G'S) VS. TIME ((SECONDS))



MGA RESEARCH CORPORATION

ABDOMINAL COMPRESSION TEST
(PRELOAD = 10 LBS)

SIDE IMPACT DUMMY (SID)

DATE: November 13, 1996

DUMMY NUMBER: 269

TEST NUMBER: D961764

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	15%
FORCE @ 0.5 in	23.3 - 36.5 lbs	30.8
FORCE @ 0.75 in	36.7 - 49.8 lbs	42.2
FORCE @ 1.0 in	50 - 63 lbs	55
FORCE @ 1.3 in	73 - 88 lbs	73

TEST MEETS SPECIFICATIONS

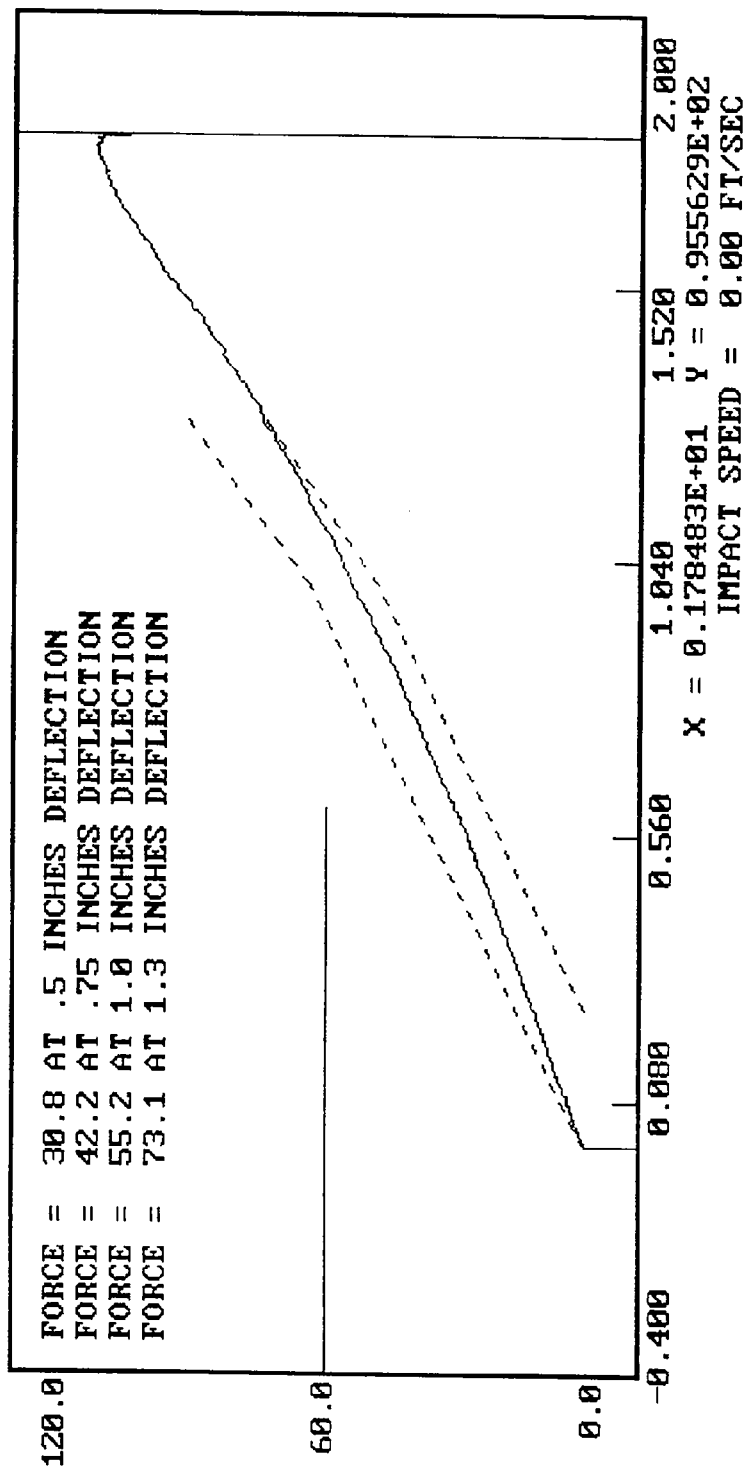
TECHNICIAN 

APPROVED BY 

DUMMY CALIBRATION - ABDOMEN COMPRESSION
 DUMMY # 269
 11-13-1996 11:07

ABDOMEN FORCE (LBS) VS. ABDOMEN DISPLACEMENT (INCHES)

FORCE = 30.8 AT .5 INCHES DEFLECTION
 FORCE = 42.2 AT .75 INCHES DEFLECTION
 FORCE = 55.2 AT 1.0 INCHES DEFLECTION
 FORCE = 73.1 AT 1.3 INCHES DEFLECTION



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: November 13, 1996

DUMMY NUMBER: 269

TEST NUMBER: D961765

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	15%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	27
FORCE @ 30°	34 - 46 lbs	36
FORCE @ 40°	46 - 58 lbs	48
RETURN ANGLE	12° maximum	2°

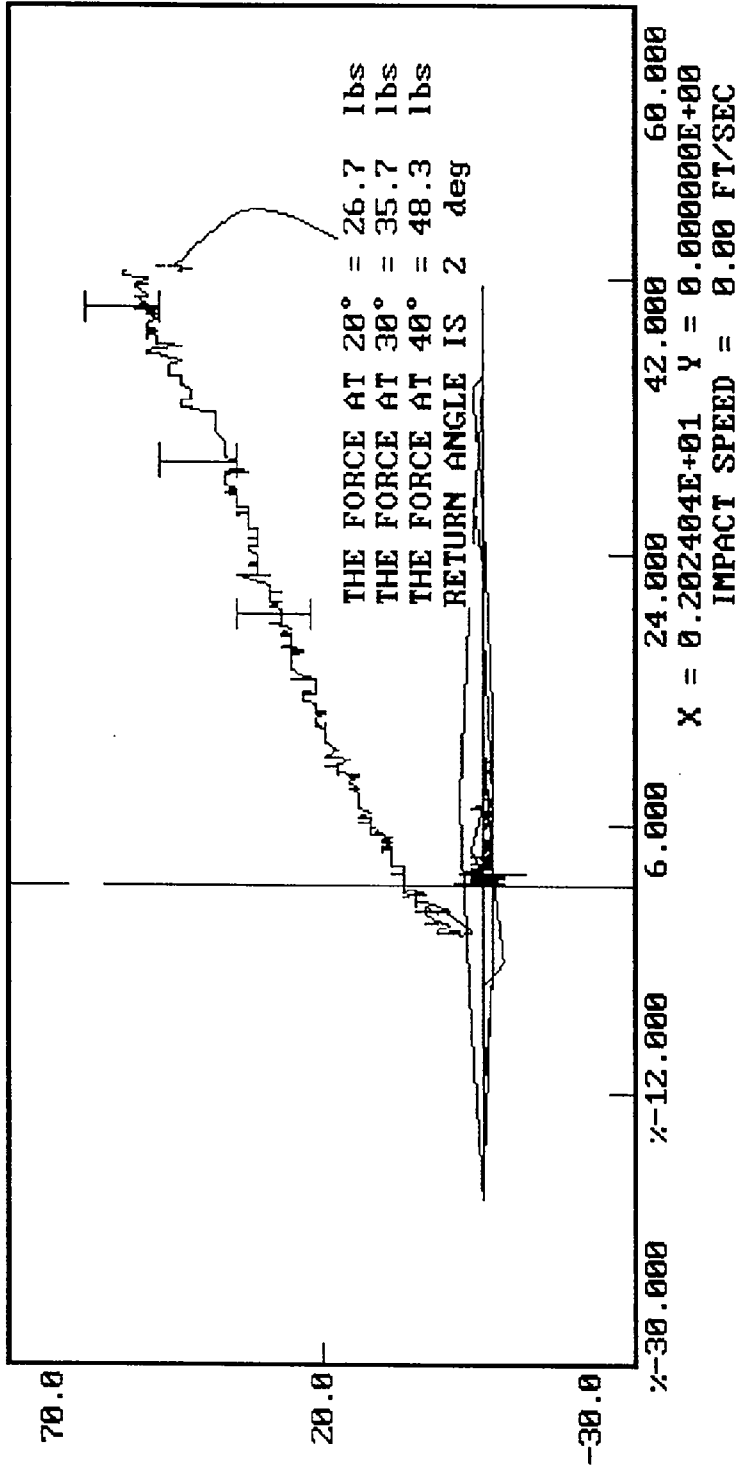
TEST MEETS SPECIFICATIONS

TECHNICIAN Tim W. G.

APPROVED BY Gene Krabake

11-13-1996 12:51

DUMMY CALIBRATION - LUMBAR FLEXION
DUMMY # 269
FORCE (LBS) VS. TORSO ROTATION (DEGREES)



POST-TEST CERTIFICATION DATA

Front Dummy Serial Number: 270

Calibration Test Results Summary

Dummy Serial Number: 270

Post-Test Calibration

External Dimensions:	The dummy passed all external dimension requirements.
Thorax Impact Test:	The thorax passed all impact test requirements.
Pelvic Impact Test:	The pelvis passed all impact test requirements.
Abdominal Compression Test:	The abdomen passed all compression test requirements.
Lumbar Flexion Test:	The lumbar passed all flexion test requirements.

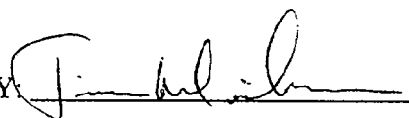
SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 270

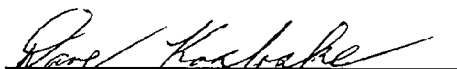
DATE OF VERIFICATION: November 19, 1996

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH - Seated Height	35.0" - 35.8"	35.2
RH - Rib Height	19.75" - 20.50"	20.50
HP - Hip Pivot Height	3.9" ref.	3.9
RD - Rib From Back Line	9.0" to 9.5"	9.5
KV - Knee Pivot From Back Line	20.1" - 20.7"	20.6
SW - Knee Pivot to Floor	19.3" - 19.9"	19.5
HW - Hip Width	14.0" - 15.4"	15.0

MEASUREMENTS BY:



APPROVED BY:



MGA RESEARCH CORPORATION
THORACIC SHOCK ABSORBER TEST
SIDE IMPACT DUMMY (SID)

DATE: November 19, 1996

DUMMY NUMBER: 270

TEST NUMBER: D9681678

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		66° - 78° F	70°
RELATIVE HUMIDITY		10 - 70%	20%
VELOCITY 10 ft/s	FORCE (lb.)	188 - 253	207
	DISPLACEMENT (in.)	1.18 - 1.38	1.23
VELOCITY 14 ft/s	FORCE (lb.)	389 - 472	394
	DISPLACEMENT (in.)	1.26 - 1.47	1.28
VELOCITY 20 ft/s	FORCE (lb.)	841 - 1000	848
	DISPLACEMENT (in.)	1.30 - 1.57	1.30

TEST MEETS SPECIFICATIONS

TECHNICIAN 

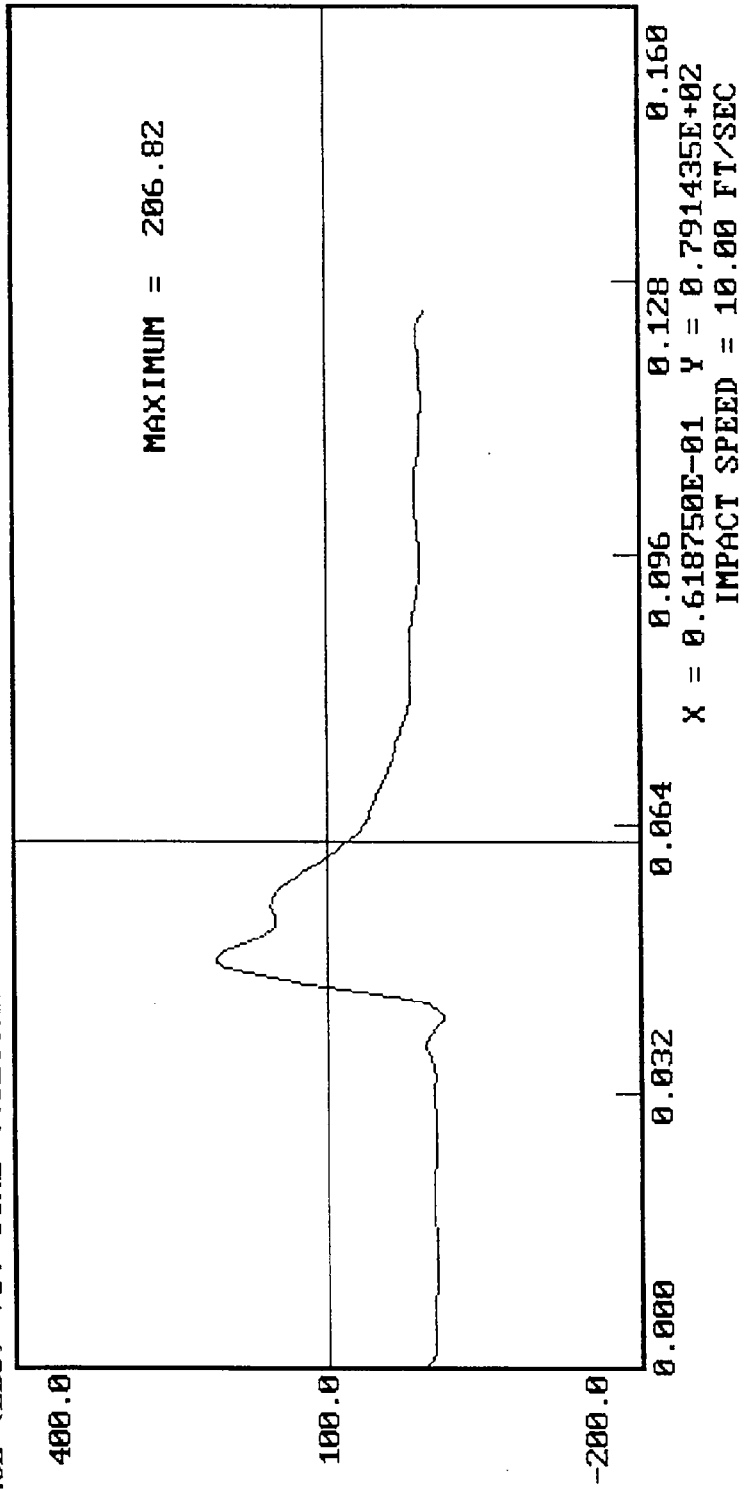
APPROVED BY 

11-19-1996 11:38

DUMMY CALIBRATION - DAMPENER BENCH TEST

DUMMY # 270

FORCE (LBS) VS. TIME ((SECONDS))

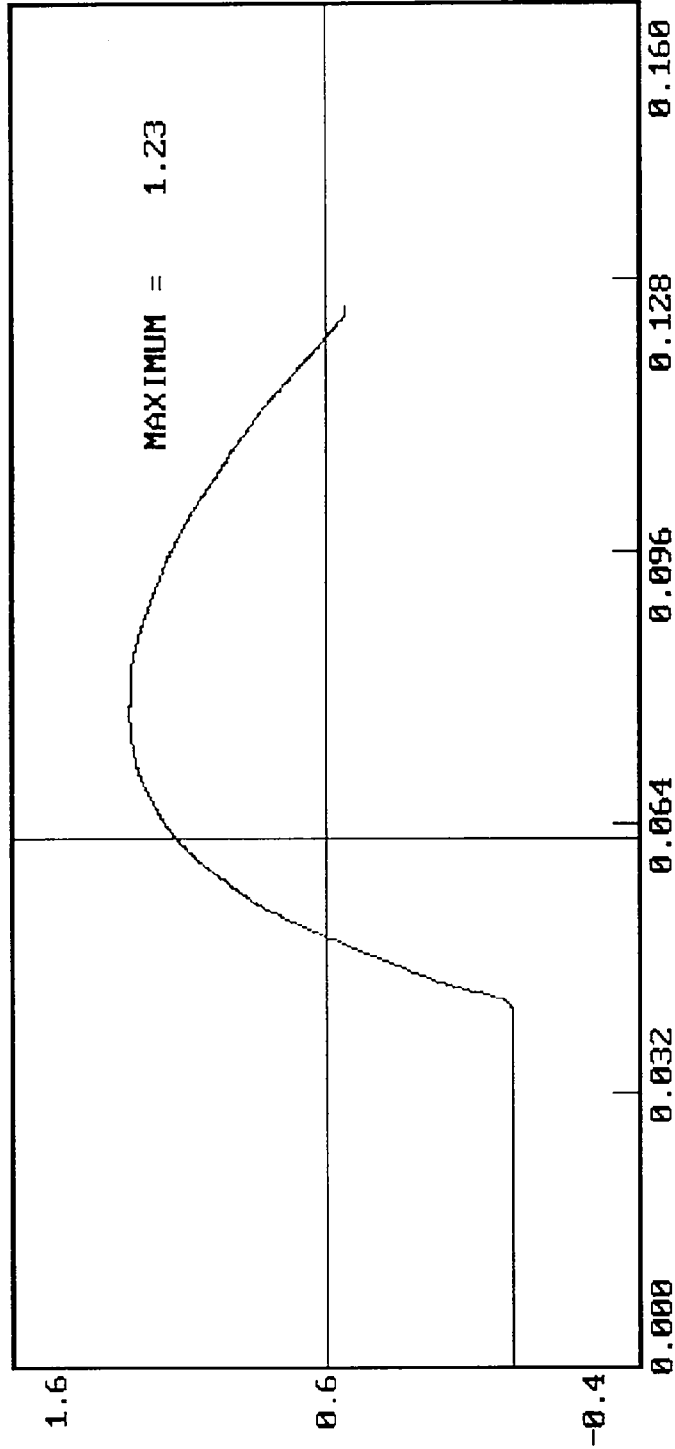


11-19-1996 11:38

DUMMY CALIBRATION - DAMPENER BENCH TEST

DUMMY # 270

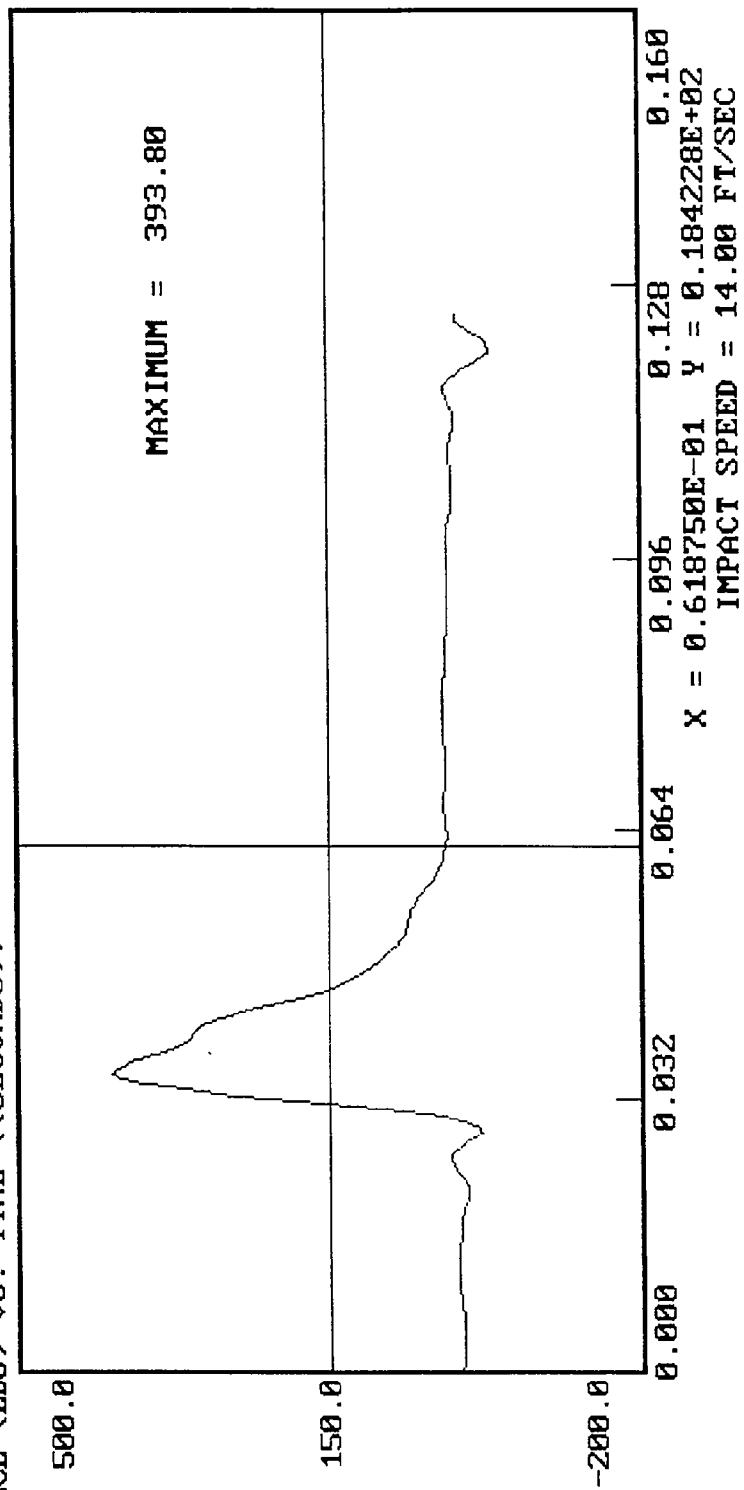
DISPLACEMENT (IN) VS. TIME ((SECONDS))



X = 0.622752E-01 Y = 0.108075E+01
IMPACT SPEED = 10.00 FT/SEC

11-19-1996 13:25

DUMMY CALIBRATION - DAMPENER BENCH TEST
DUMMY # 270
FORCE (LBS) VS. TIME ((SECONDS))

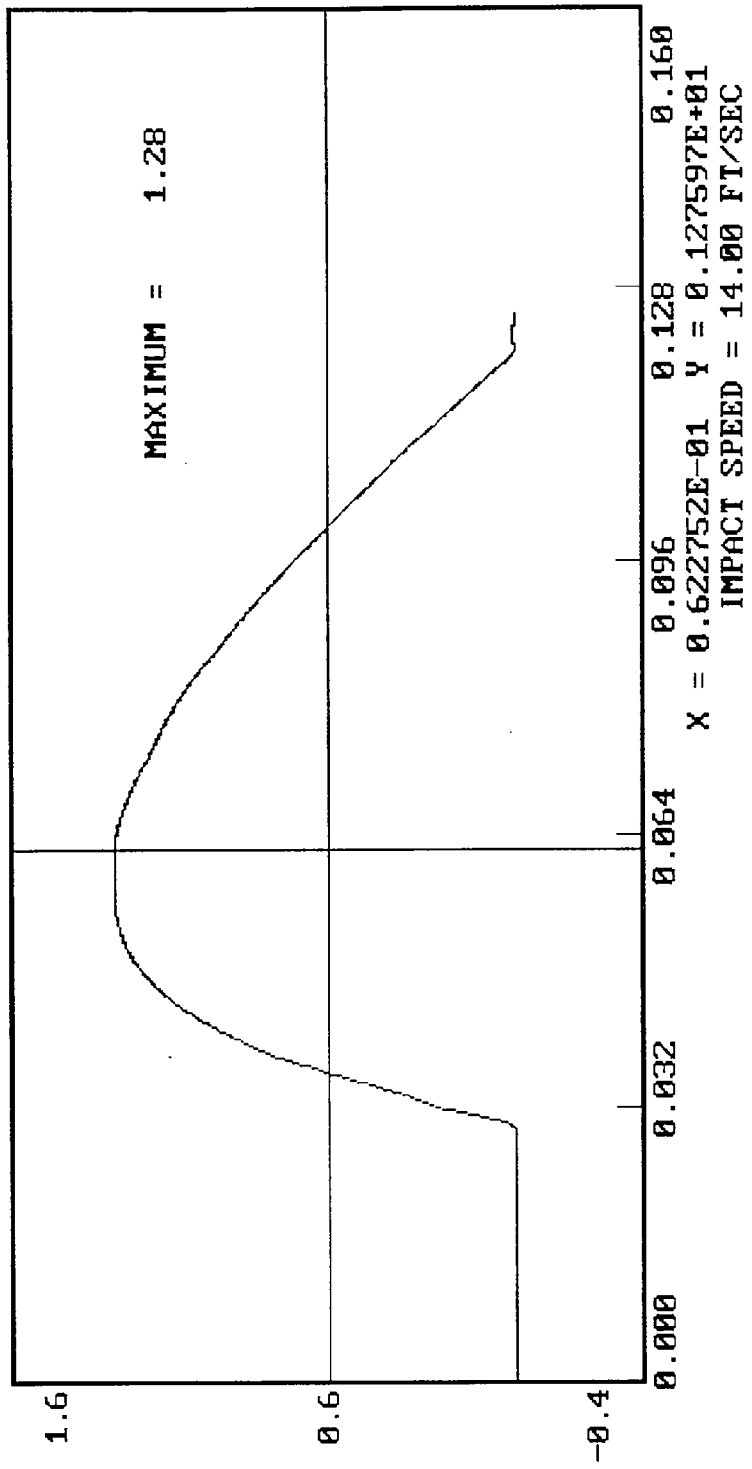


11-19-1996 13:25

DUMMY CALIBRATION - DAMPENER BENCH TEST

DUMMY # 270

DISPLACEMENT (IN) VS. TIME ((SECONDS))

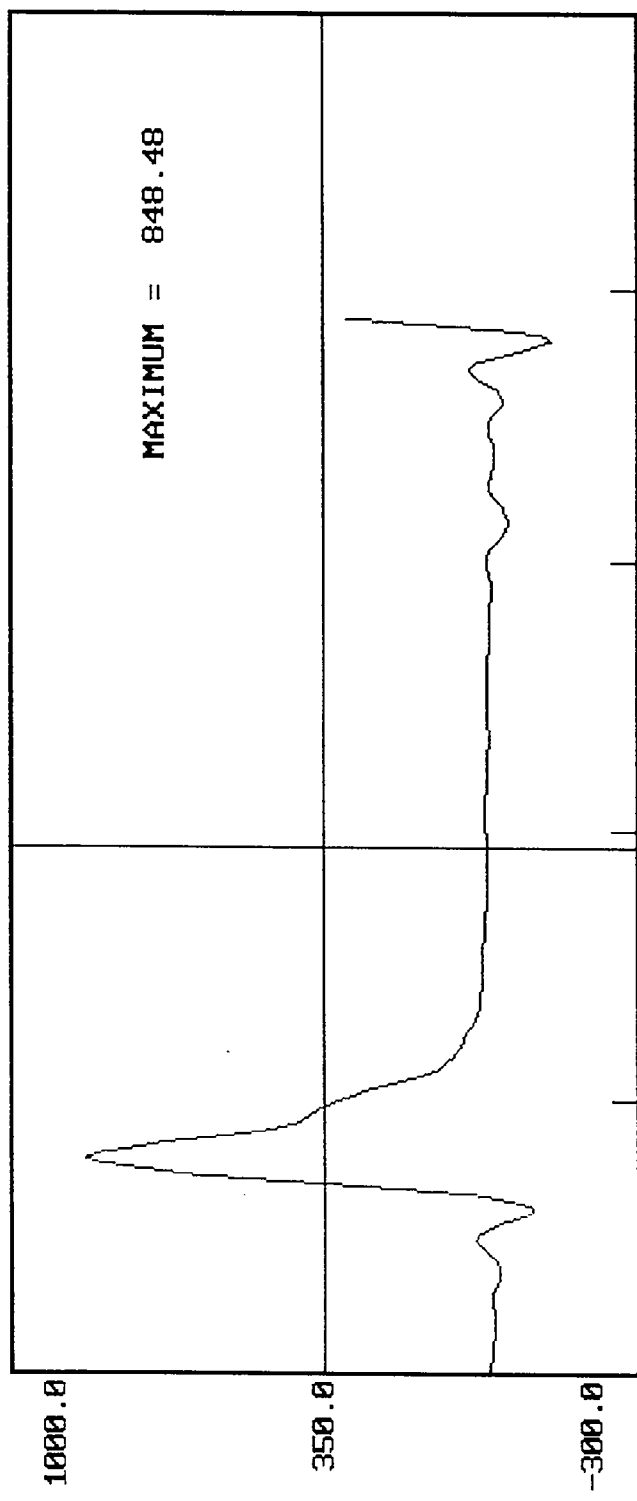


11-19-1996 16:22

DUMMY CALIBRATION - DAMPENER BENCH TEST

DUMMY # 270

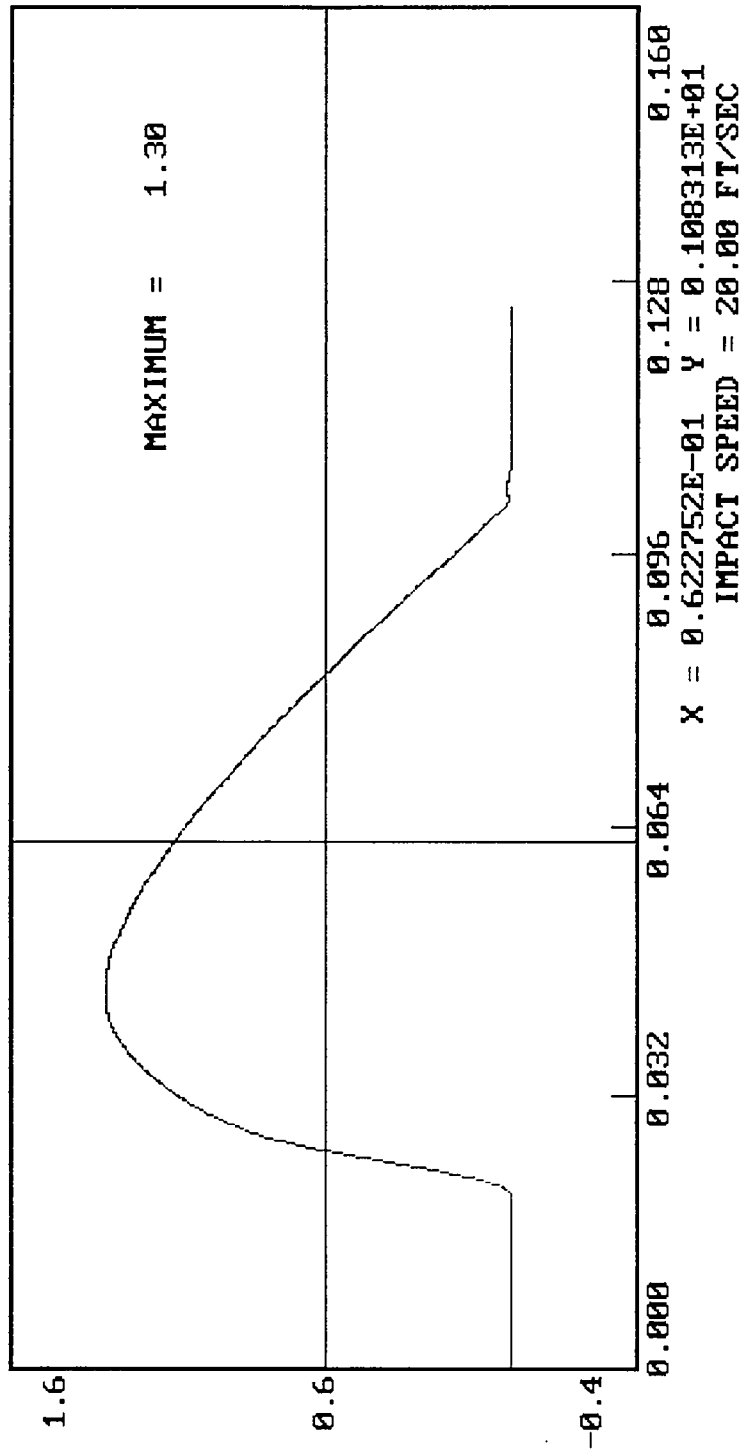
FORCE (LBS) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = 0.107429E+02
IMPACT SPEED = 20.00 FT/SEC

DUMMY CALIBRATION - DAMPENER BENCH TEST
DUMMY # 270
DISPLACEMENT (IN) VS. TIME ((SECONDS))

11-19-1996 16:21



MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: November 19, 1996

DUMMY NUMBER: 270

TEST NUMBER: D961812

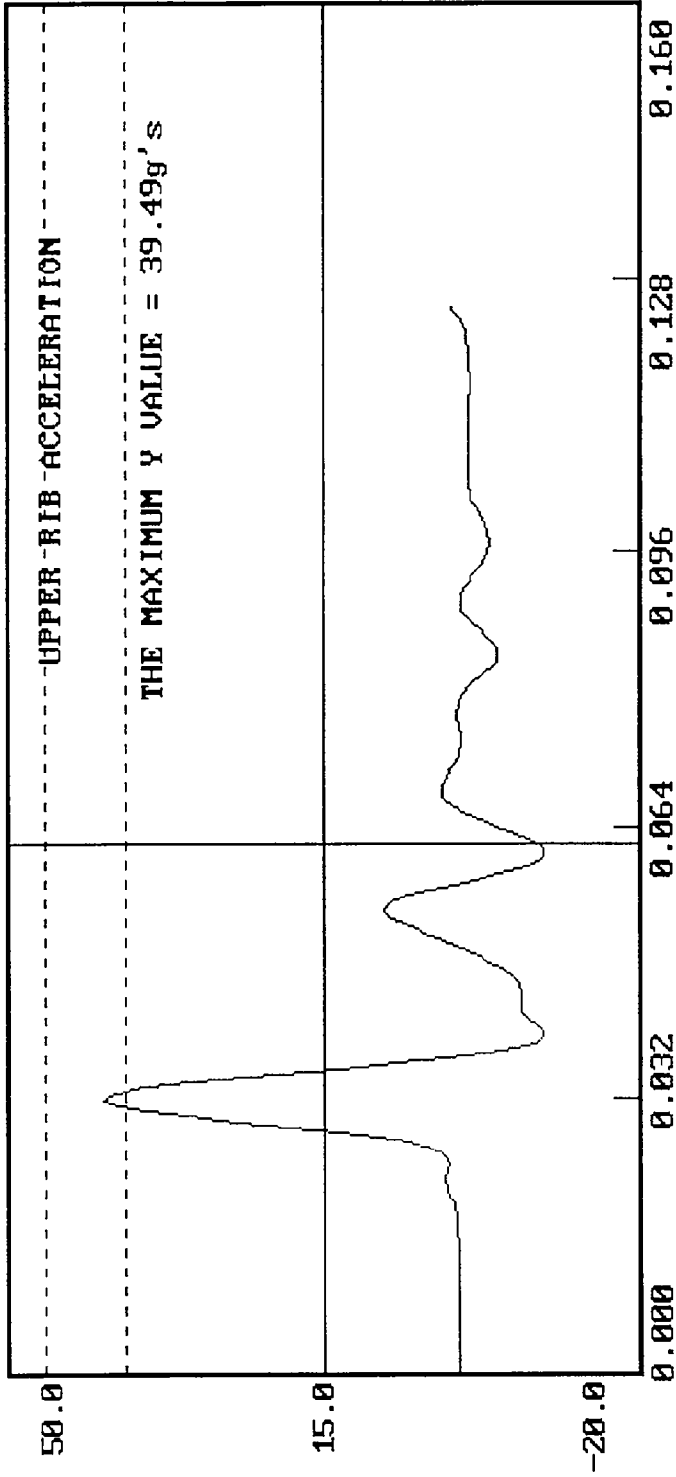
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	22%
PROBE SPEED	13.8 - 14.2 fps	14.0
UPPER RIB	37 - 46 g's	39
LOWER RIB	37 - 46 g's	41
LOWER SPINE	15 - 22 g's	21

TEST MEETS SPECIFICATIONS

TECHNICIAN 

APPROVED BY 

DUMMY CALIBRATION - THORAX IMPACT
 DUMMY # 270
 11-19-1996 17:09
 ACCELERATION (G'S) VS. TIME ((SECONDS))



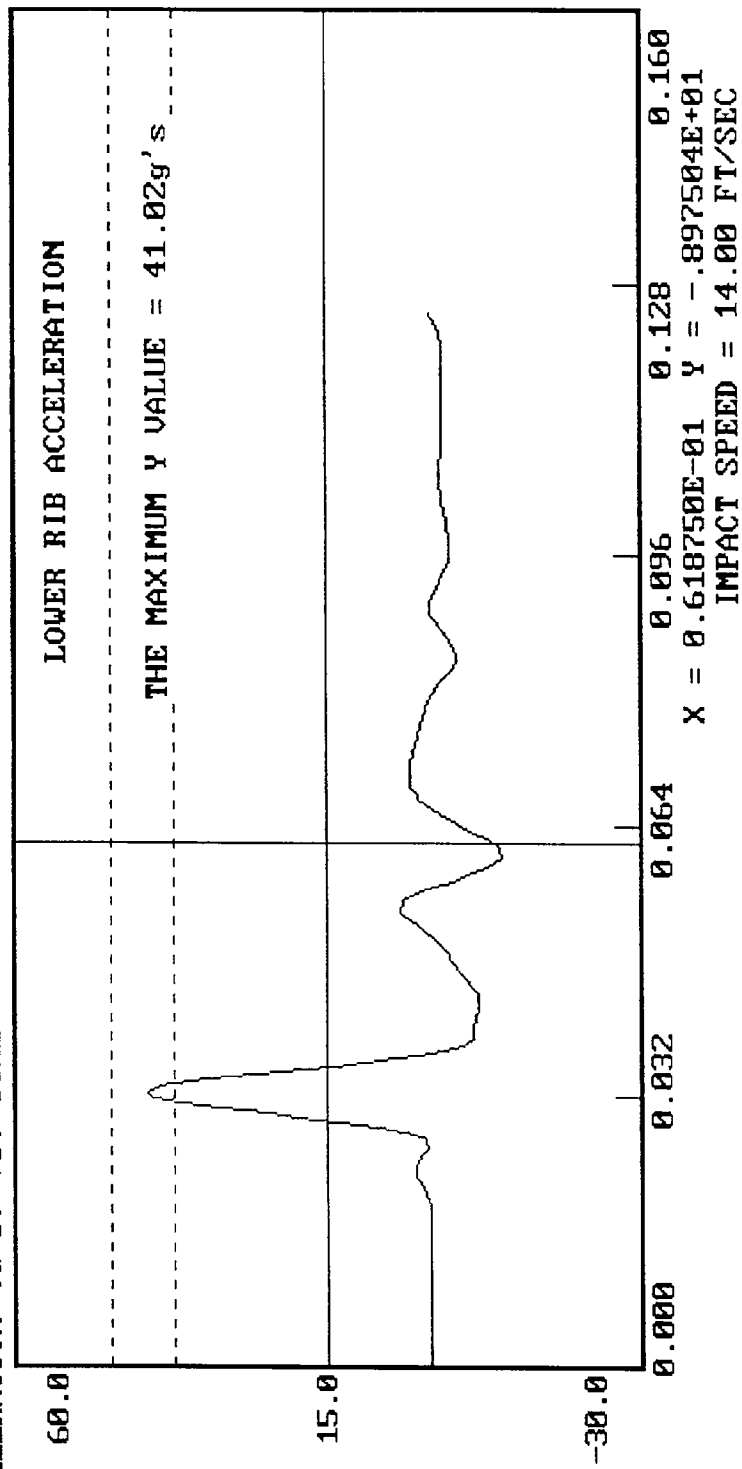
X = 0.618750E-01 Y = -.869902E+01
 IMPACT SPEED = 14.00 FT/SEC

11-19-1996 17:09

DUMMY CALIBRATION - THORAX IMPACT

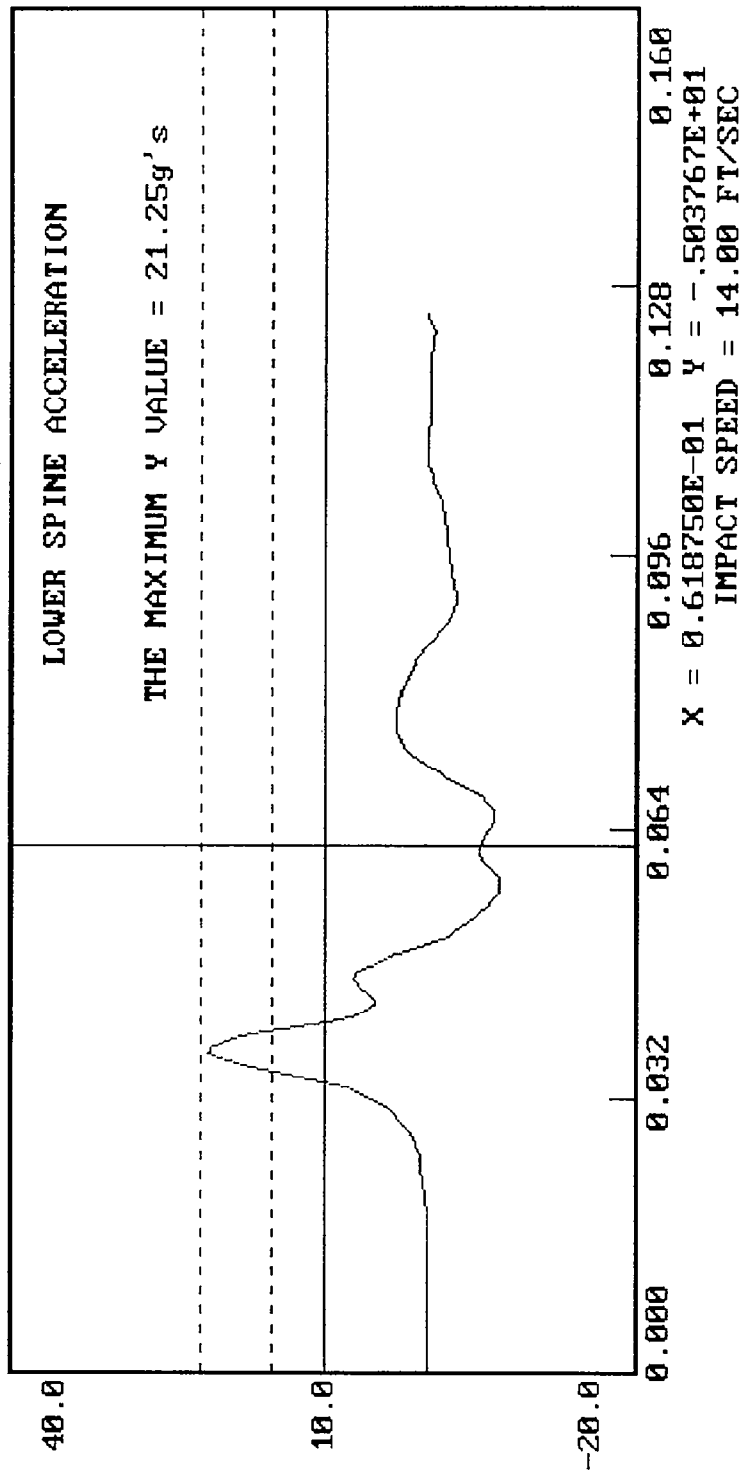
DUMMY # 270

ACCELERATION (G'S) VS. TIME ((SECONDS))



DUMMY CALIBRATION - THORAX IMPACT
DUMMY # 270
ACCELERATION (G'S) VS. TIME ((SECONDS))

11-19-1996 17:11



MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: November 19, 1996

DUMMY NUMBER: 270

TEST NUMBER: D961813

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	22%
PROBE SPEED	13.8 - 14.2 f/s	14.0
PELVIS ACCELERATION	40 - 60 g's	59

TEST MEETS SPECIFICATIONS

TECHNICIAN 

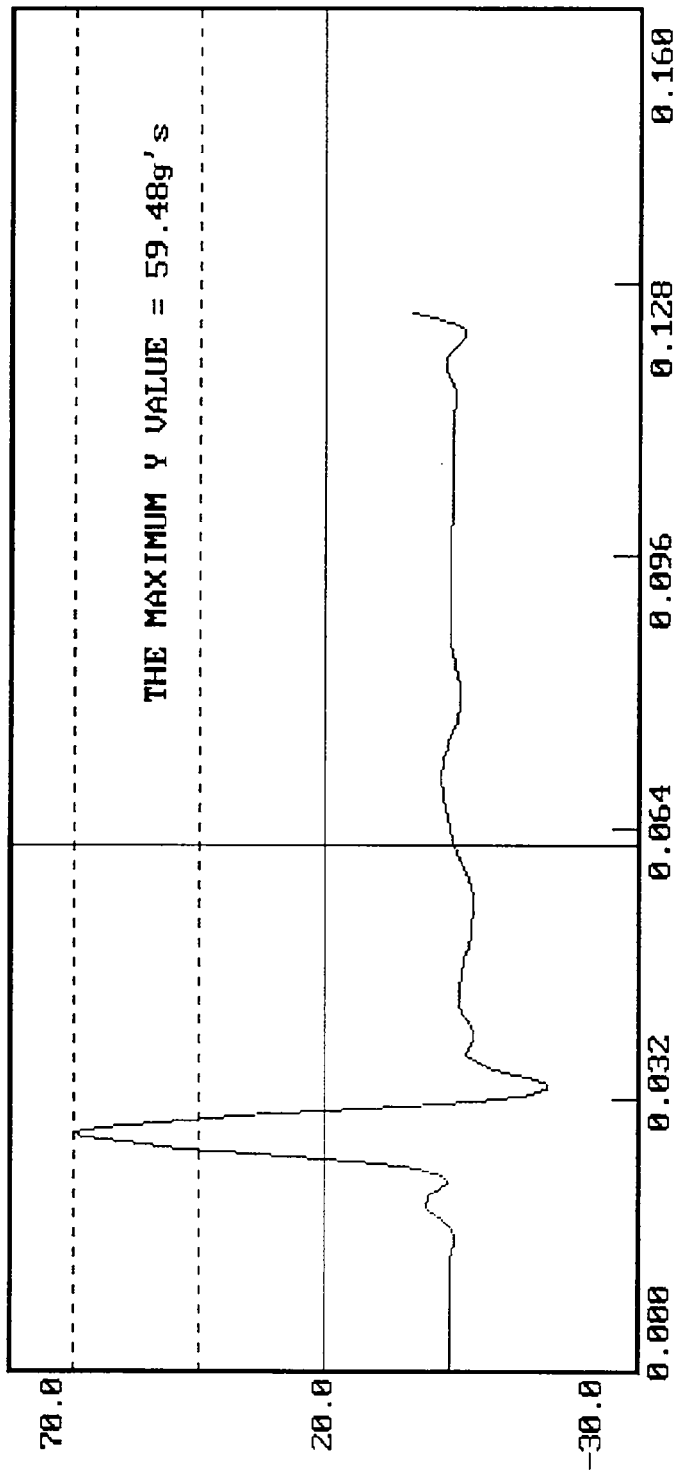
APPROVED BY 

11-19-1996 17:18

DUMMY CALIBRATION - PELVIS IMPACT

DUMMY # 270

ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.827135E+00
IMPACT SPEED = 14.02 FT/SEC

MGA RESEARCH CORPORATION
ABDOMINAL COMPRESSION TEST
(PRELOAD = 10 LBS)
SIDE IMPACT DUMMY (SID)

DATE: November 19, 1996

DUMMY NUMBER: 270

TEST NUMBER: D961814

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	22%
FORCE @ 0.5 in	23.3 - 36.5 lbs	30.4
FORCE @ 0.75 in	36.7 - 49.8 lbs	43.5
FORCE @ 1.0 in	50 - 63 lbs	57
FORCE @ 1.3 in	73 - 88 lbs	79

TEST MEETS SPECIFICATIONS

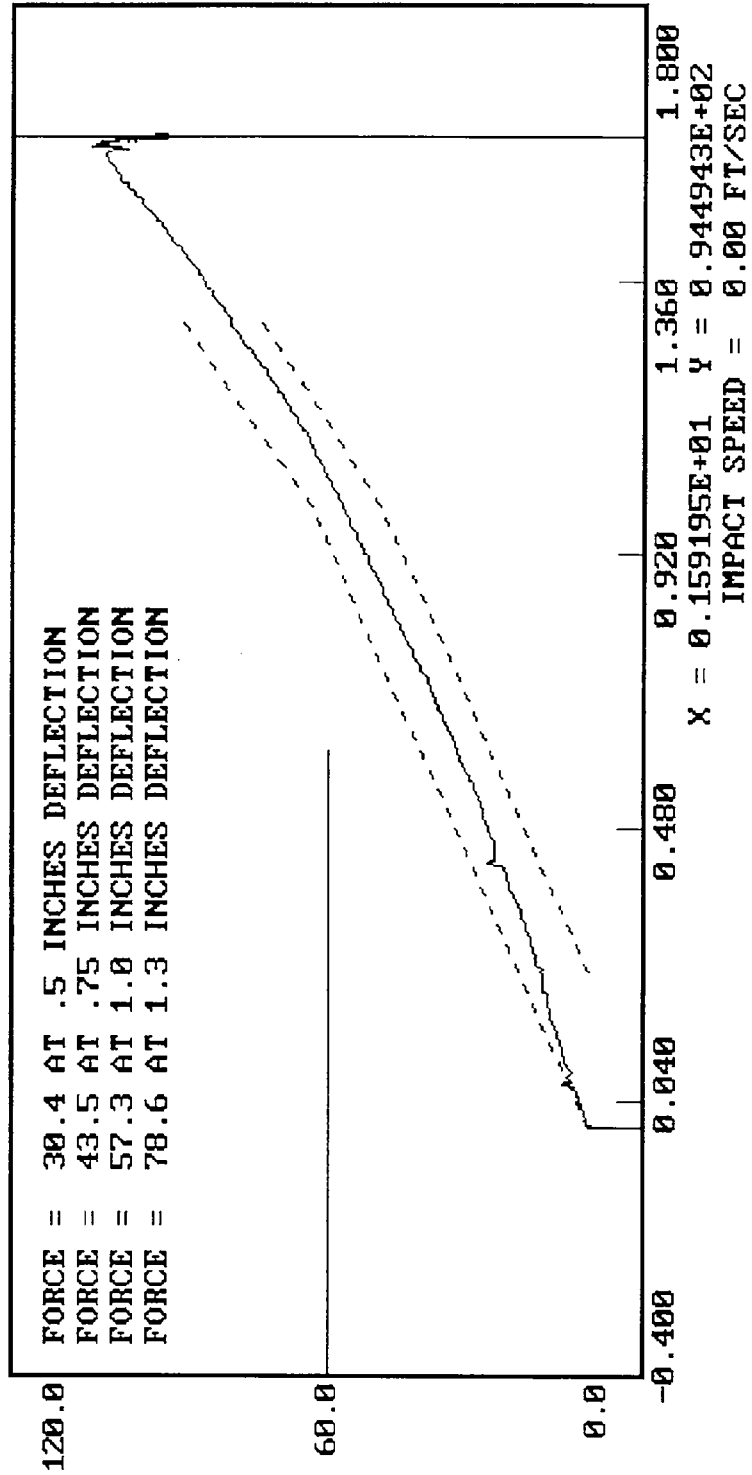
TECHNICIAN 

APPROVED BY 

DUMMY CALIBRATION - ABDOMEN COMPRESSION
DUMMY # 270

11-19-1996 15:38

ABDOMEN FORCE (LBS) VS. ABDOMEN DISPLACEMENT (INCHES)



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: November 19, 1996


DUMMY NUMBER: 270

TEST NUMBER: D961815

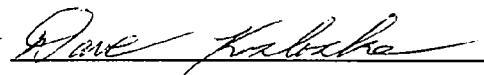
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	22%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	24
FORCE @ 30°	34 - 46 lbs	38
FORCE @ 40°	46 - 58 lbs	50
RETURN ANGLE	12° maximum	2°

TEST MEETS SPECIFICATIONS

TECHNICIAN

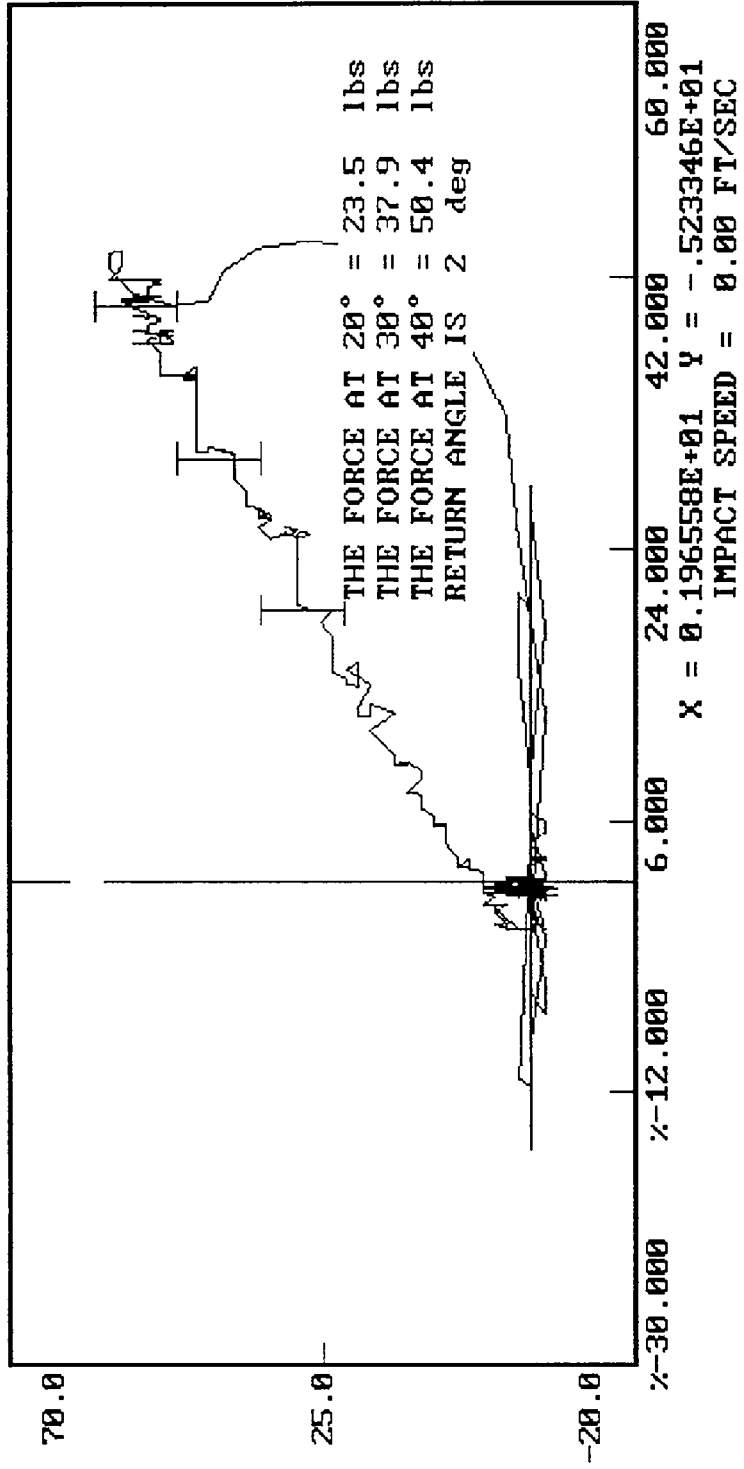


APPROVED BY



11-19-1996 16:24

DUMMY CALIBRATION - LUMBAR FLEXION
DUMMY # 270
FORCE (LBS) VS. TORSO ROTATION (DEGREES)



POST-TEST CERTIFICATION DATA

Rear Dummy Serial Number: 269

Calibration Test Results Summary

Dummy Serial Number: 269

Post-Test Calibration

External Dimensions: The dummy passed all external dimension requirements.

Thorax Impact Test: The thorax passed all impact test requirements.

Pelvic Impact Test: The pelvis passed all impact test requirements.

Abdominal Compression Test: The abdomen passed all compression test requirements.

Lumbar Flexion Test: The lumbar passed all flexion test requirements.

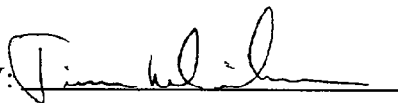
SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 269

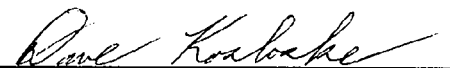
DATE OF VERIFICATION: November 19, 1996

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH - Seated Height	35.0" - 35.8"	35.1
RH - Rib Height	19.75" - 20.50"	20.00
HP - Hip Pivot Height	3.9" ref.	3.9
RD - Rib From Back Line	9.0" to 9.5"	9.3
KV - Knee Pivot From Back Line	20.1" - 20.7"	20.4
SW - Knee Pivot to Floor	19.3" - 19.9"	19.4
HW - Hip Width	14.0" - 15.4"	15.1

MEASUREMENTS BY:



APPROVED BY:



MGA RESEARCH CORPORATION
 THORACIC SHOCK ABSORBER TEST
 SIDE IMPACT DUMMY (SID)

DATE: November 18, 1996

DUMMY NUMBER: 269

TEST NUMBER: D9618078

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		66° - 78° F	70°
RELATIVE HUMIDITY		10 - 70%	25%
VELOCITY 10 ft/s	FORCE (lb.)	188 - 253	199
	DISPLACEMENT (in.)	1.18 - 1.38	1.31
VELOCITY 14 ft/s	FORCE (lb.)	389 - 472	400
	DISPLACEMENT (in.)	1.26 - 1.47	1.34
VELOCITY 20 ft/s	FORCE (lb.)	841 - 1000	854
	DISPLACEMENT (in.)	1.30 - 1.57	1.41

TEST MEETS SPECIFICATIONS

TECHNICIAN *Jim Hill*

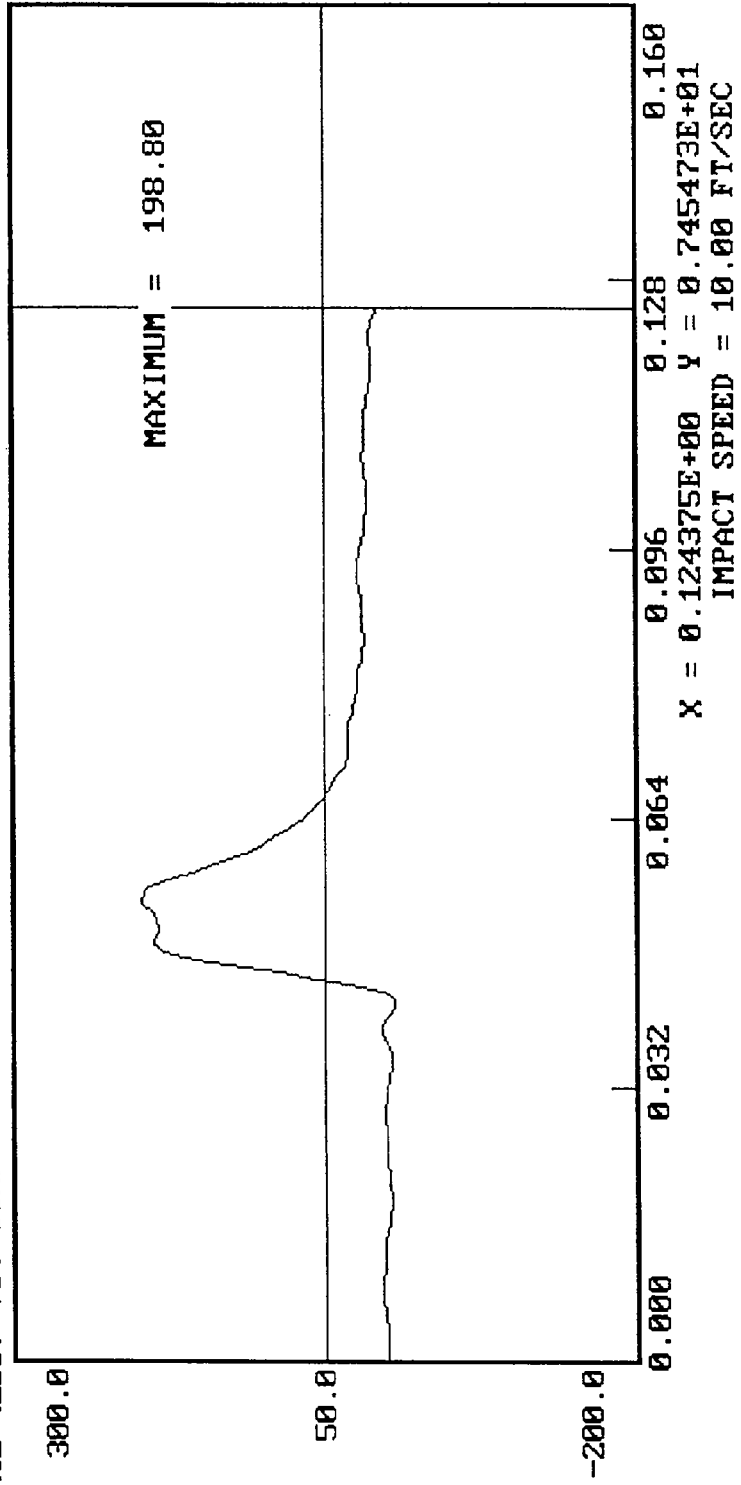
APPROVED BY *Paul Koobaka*

11-18-1996 13:34

DUMMY CALIBRATION - DAMPENER BENCH TEST

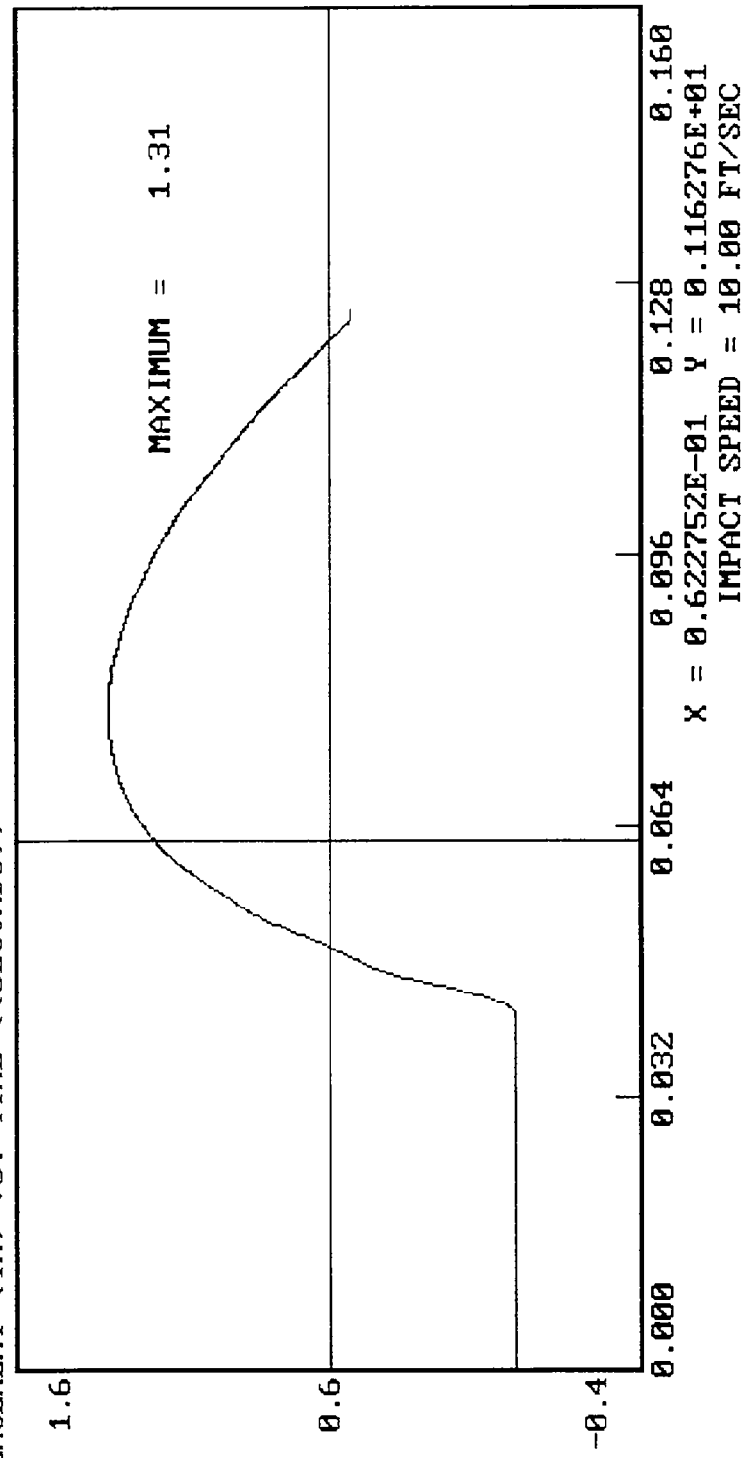
DUMMY # 269

FORCE (LBS) VS. TIME ((SECONDS))



DUMMY CALIBRATION - DAMPENER BENCH TEST
 DUMMY # 269
 DISPLACEMENT (IN) VS. TIME (SECONDS)

11-18-1996 13:34

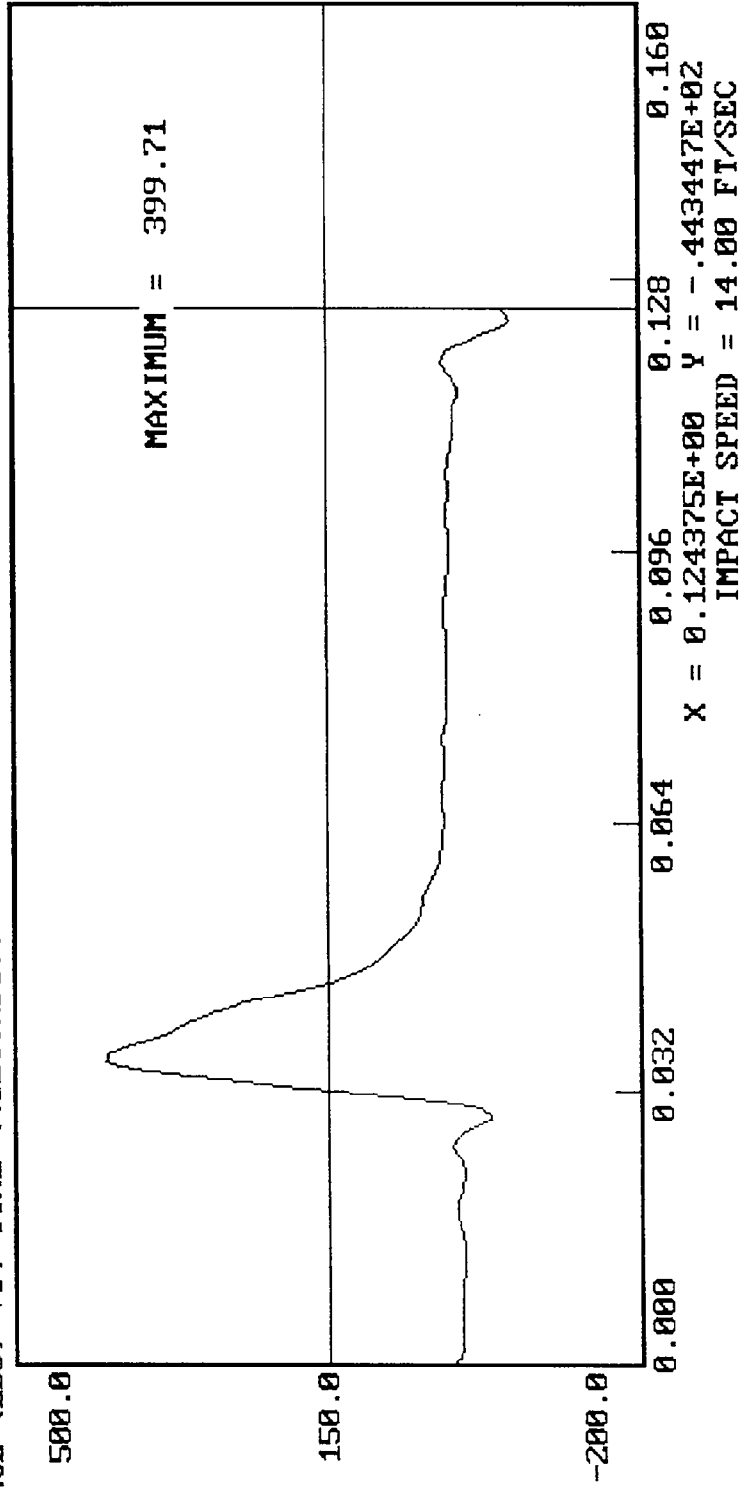


11-18-1996 13:48

DUMMY CALIBRATION - DAMPENER BENCH TEST

DUMMY # 269

FORCE (LBS) VS. TIME ((SECONDS))

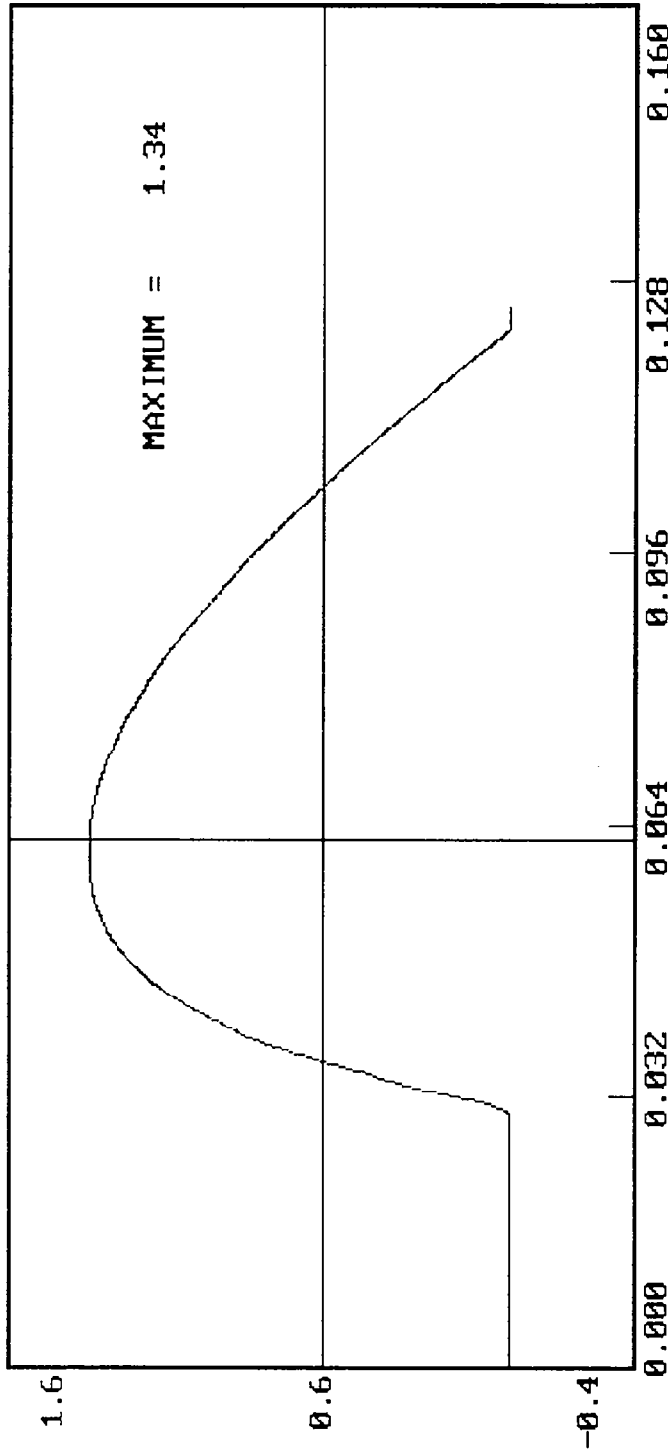


11-18-1996 13:48

DUMMY CALIBRATION - DAMPENER BENCH TEST

DUMMY # 269

DISPLACEMENT (IN) VS. TIME ((SECONDS))



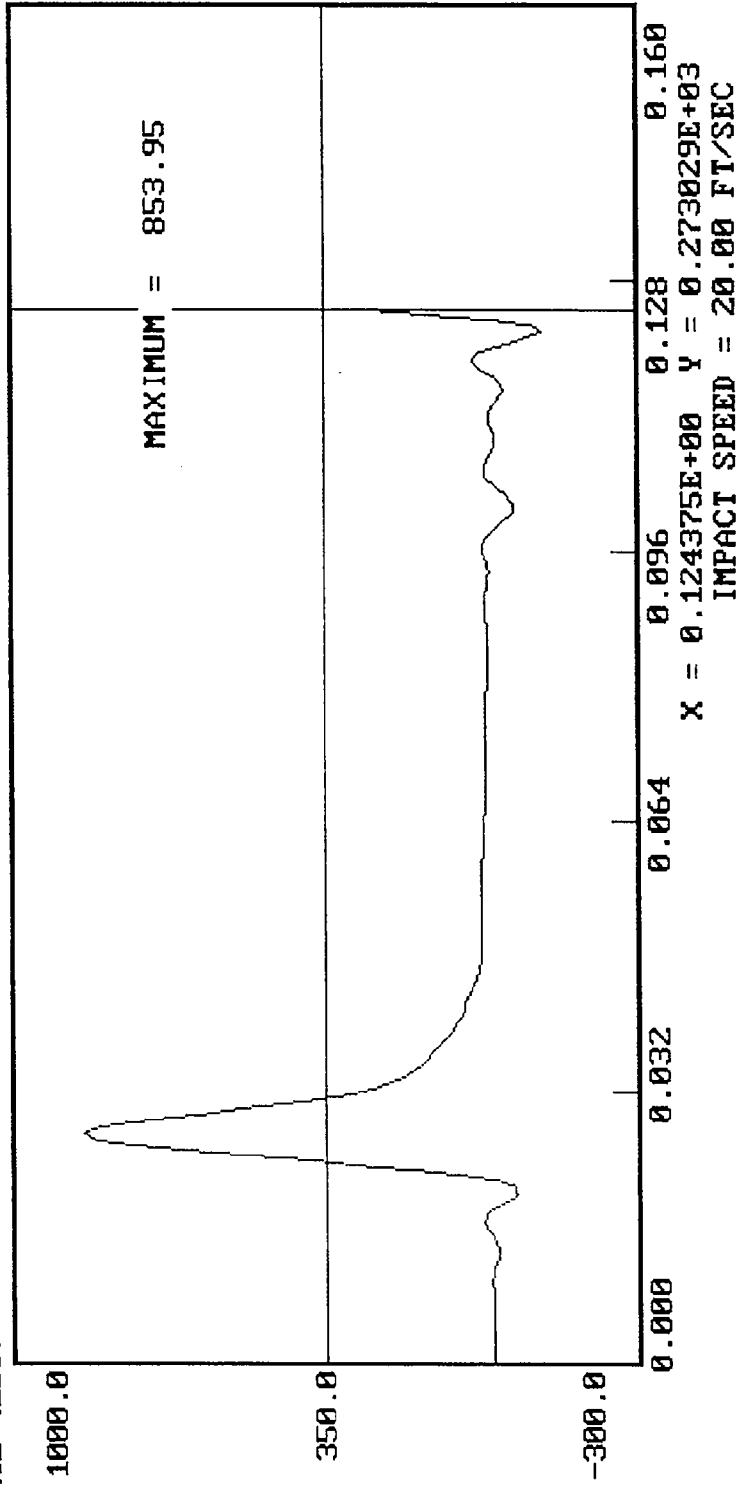
X = 0.622752E-01 Y = 0.134472E+01
IMPACT SPEED = 14.00 FT/SEC

11-18-1996 13:58

DUMMY CALIBRATION - DAMPENER BENCH TEST

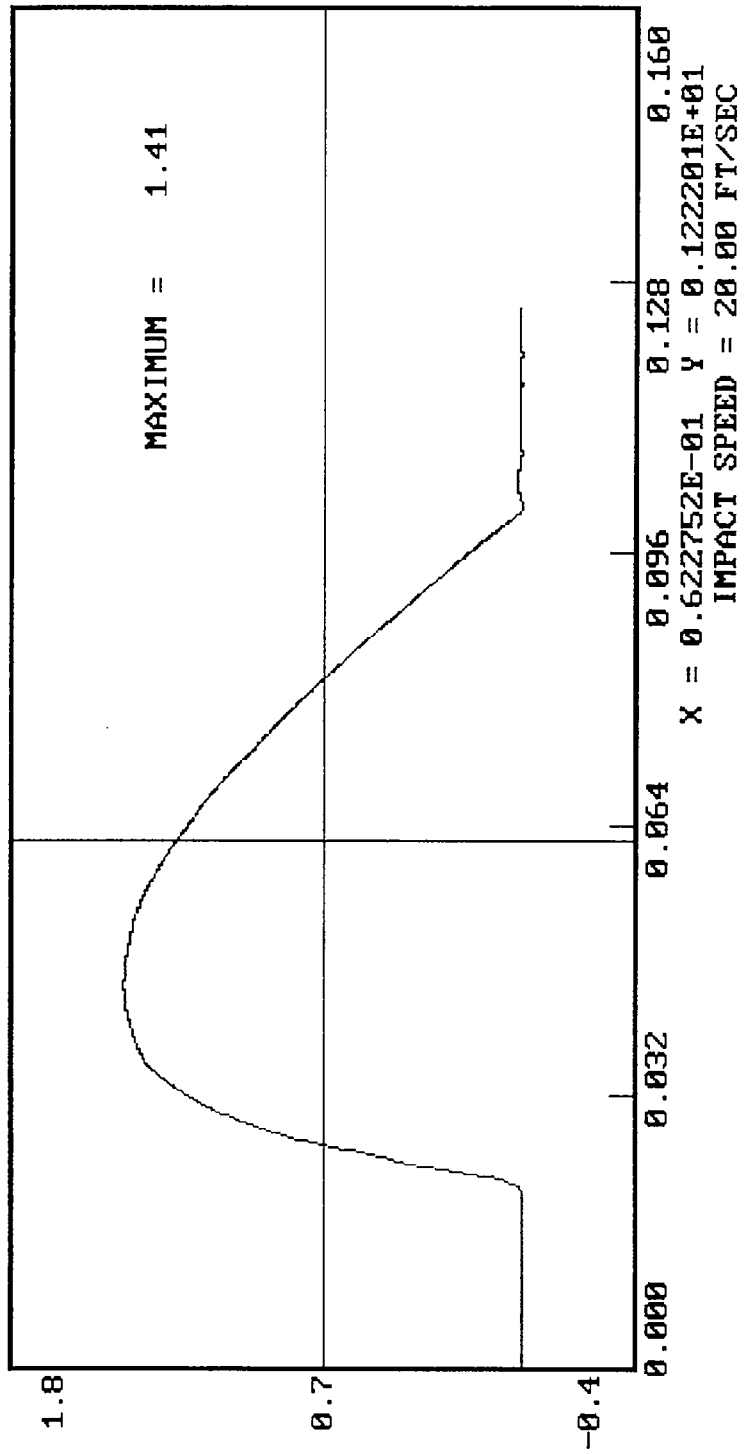
DUMMY # 269

FORCE (LBS) VS. TIME ((SECONDS))



DUMMY CALIBRATION - DAMPENER BENCH TEST
DUMMY # 269
DISPLACEMENT (IN) VS. TIME ((SECONDS))

11-18-1996 13:58



MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: November 19, 1996

DUMMY NUMBER: 269

TEST NUMBER: D961802

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	22%
PROBE SPEED	13.8 - 14.2 fps	14.1
UPPER RIB	37 - 46 g's	43
LOWER RIB	37 - 46 g's	39
LOWER SPINE	15 - 22 g's	21

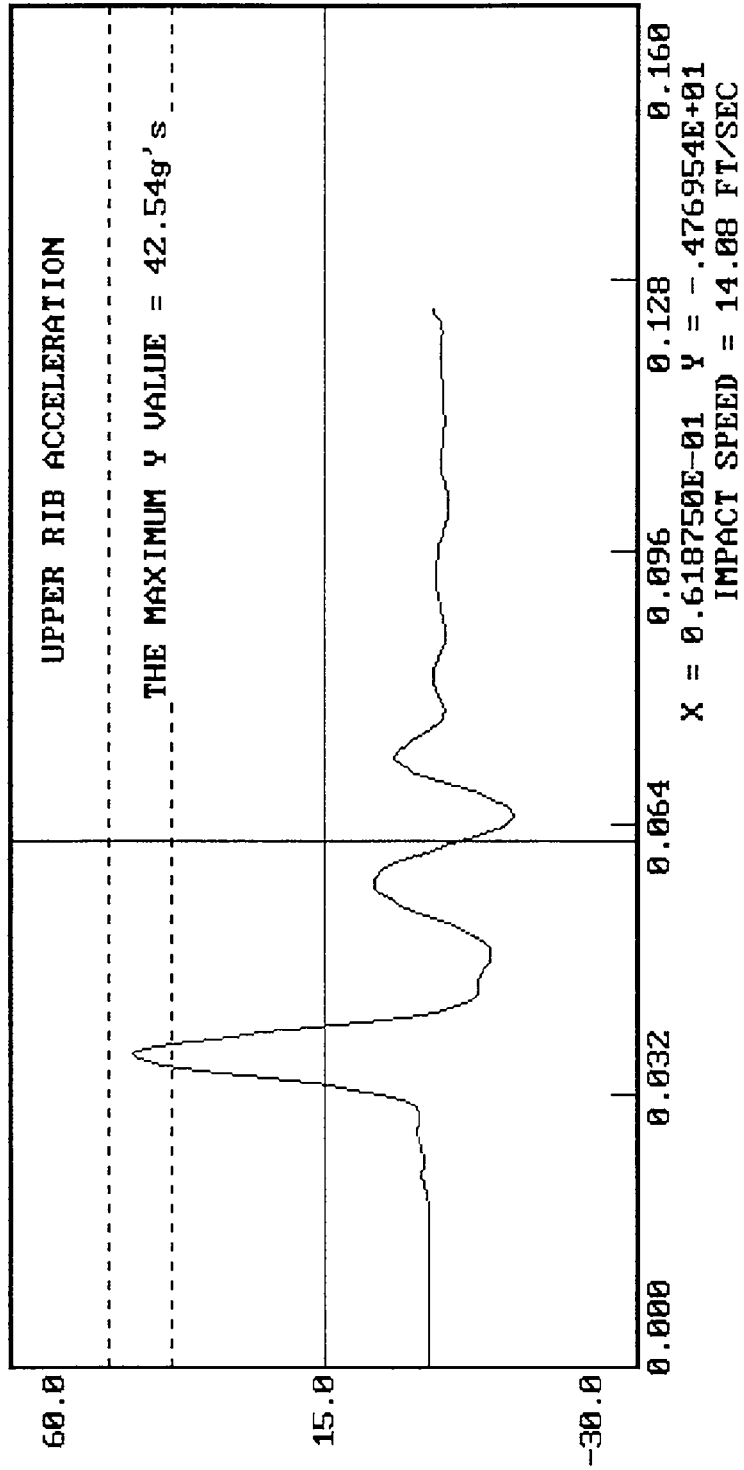
TEST MEETS SPECIFICATIONS

TECHNICIAN 

APPROVED BY 

DUMMY CALIBRATION - THORAX IMPACT
DUMMY # 269
ACCELERATION (G'S) VS. TIME ((SECONDS))

11-19-1996 18:59

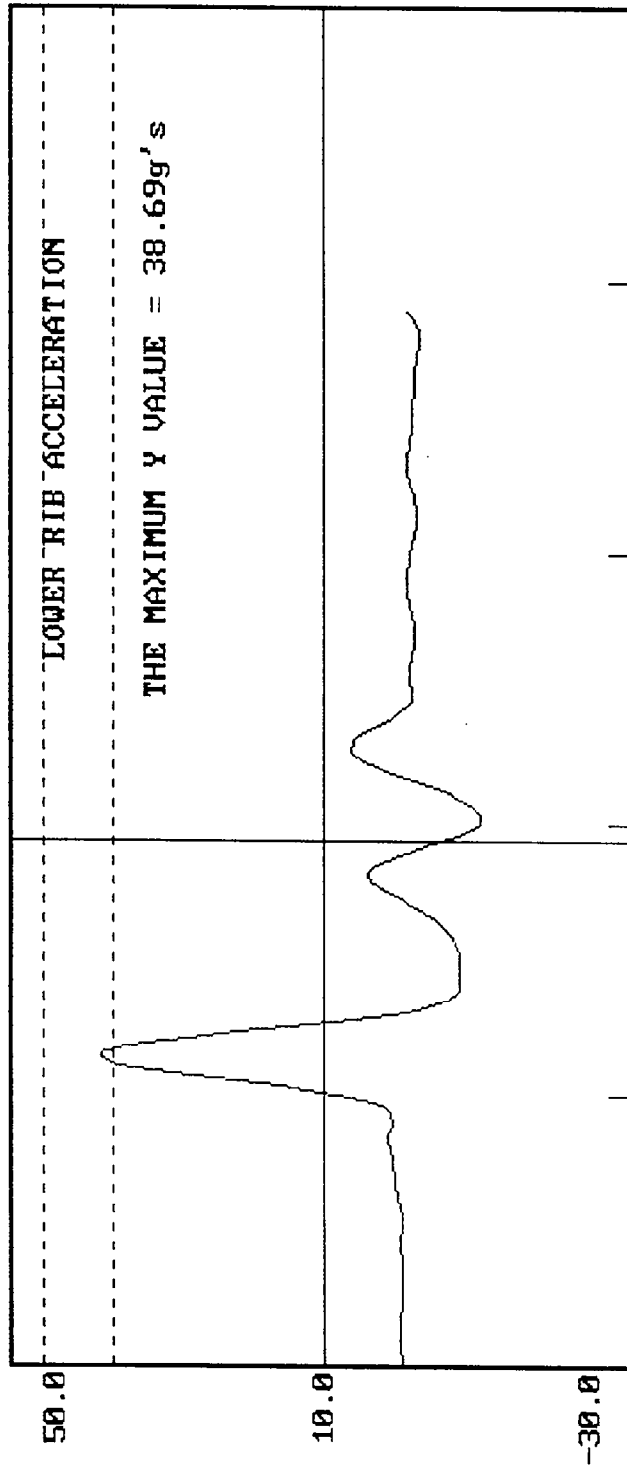


11-19-1996 18:59

DUMMY CALIBRATION - THORAX IMPACT

DUMMY # 269

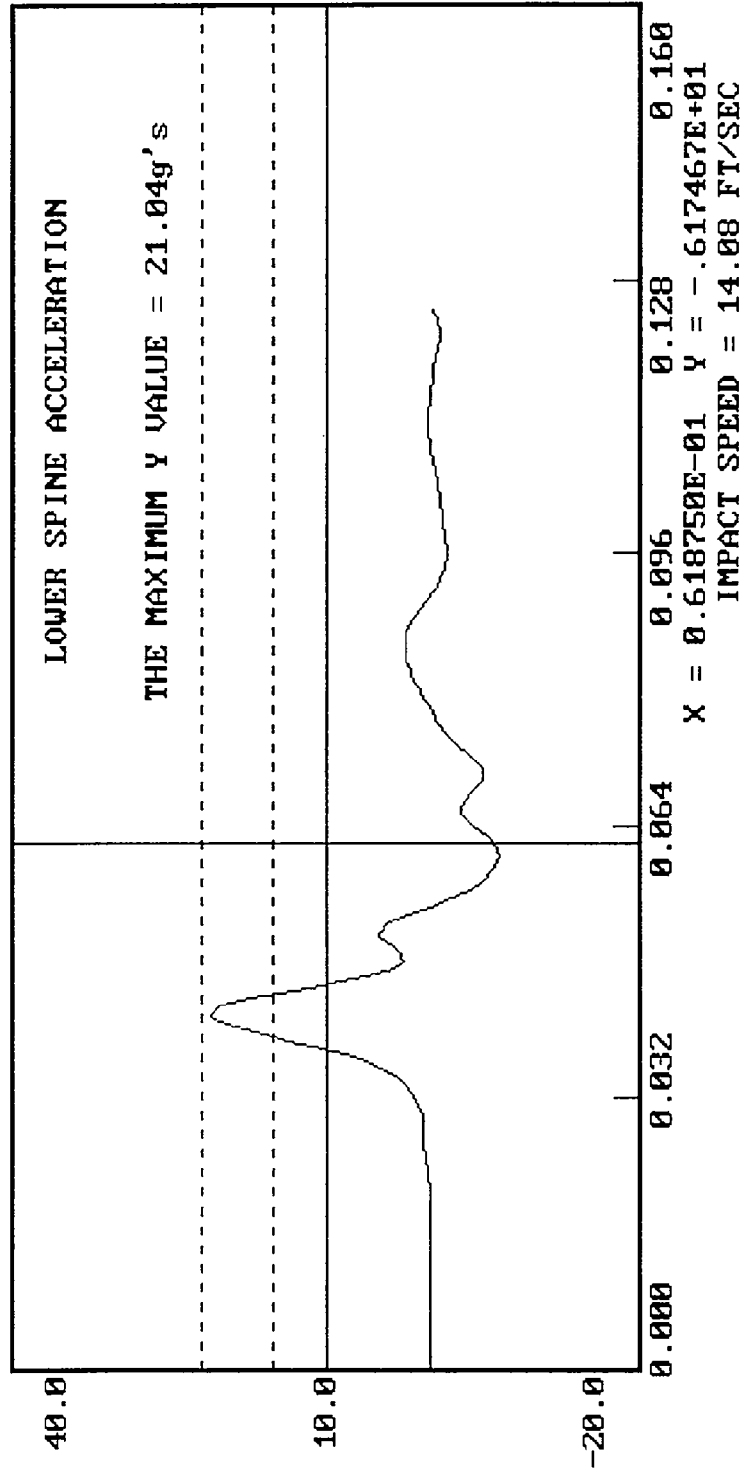
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.096 0.128 0.160
Y = 0.618750E-01 Y = -.548918E+01
IMPACT SPEED = 14.08 FT/SEC

11-19-1996 18:59

DUMMY CALIBRATION - THORAX IMPACT
DUMMY # 269
ACCELERATION (G'S) VS. TIME ((SECONDS))



MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: November 19, 1996

DUMMY NUMBER: 269

TEST NUMBER: D961803

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	22%
PROBE SPEED	13.8 - 14.2 f/s	14.1
PELVIS ACCELERATION	40 - 60 g's	58

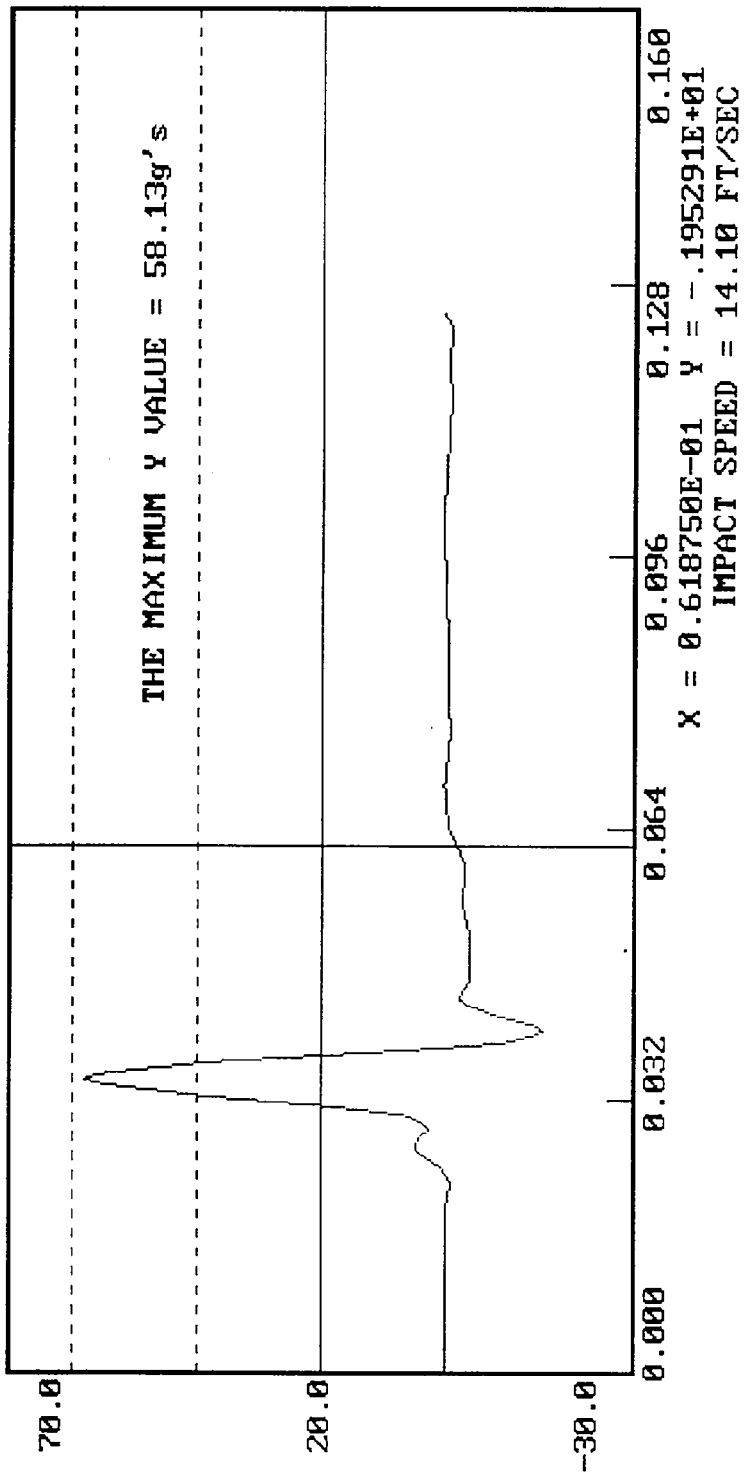
TEST MEETS SPECIFICATIONS

TECHNICIAN Tim M. [Signature]

APPROVED BY [Signature]

DUMMY CALIBRATION - PELVIS IMPACT
DUMMY # 269
ACCELERATION (G'S) VS. TIME ((SECONDS))

11-19-1996 19:05



MGA RESEARCH CORPORATION
ABDOMINAL COMPRESSION TEST
(PRELOAD = 10 LBS)
SIDE IMPACT DUMMY (SID)

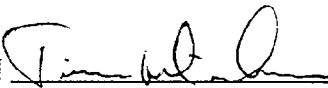
DATE: November 19, 1996

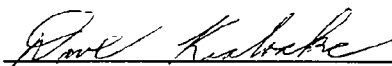
DUMMY NUMBER: 269

TEST NUMBER: D961804

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	22%
FORCE @ 0.5 in	23.3 - 36.5 lbs	33.4
FORCE @ 0.75 in	36.7 - 49.8 lbs	45.5
FORCE @ 1.0 in	50 - 63 lbs	58
FORCE @ 1.3 in	73 - 88 lbs	79

TEST MEETS SPECIFICATIONS

TECHNICIAN 

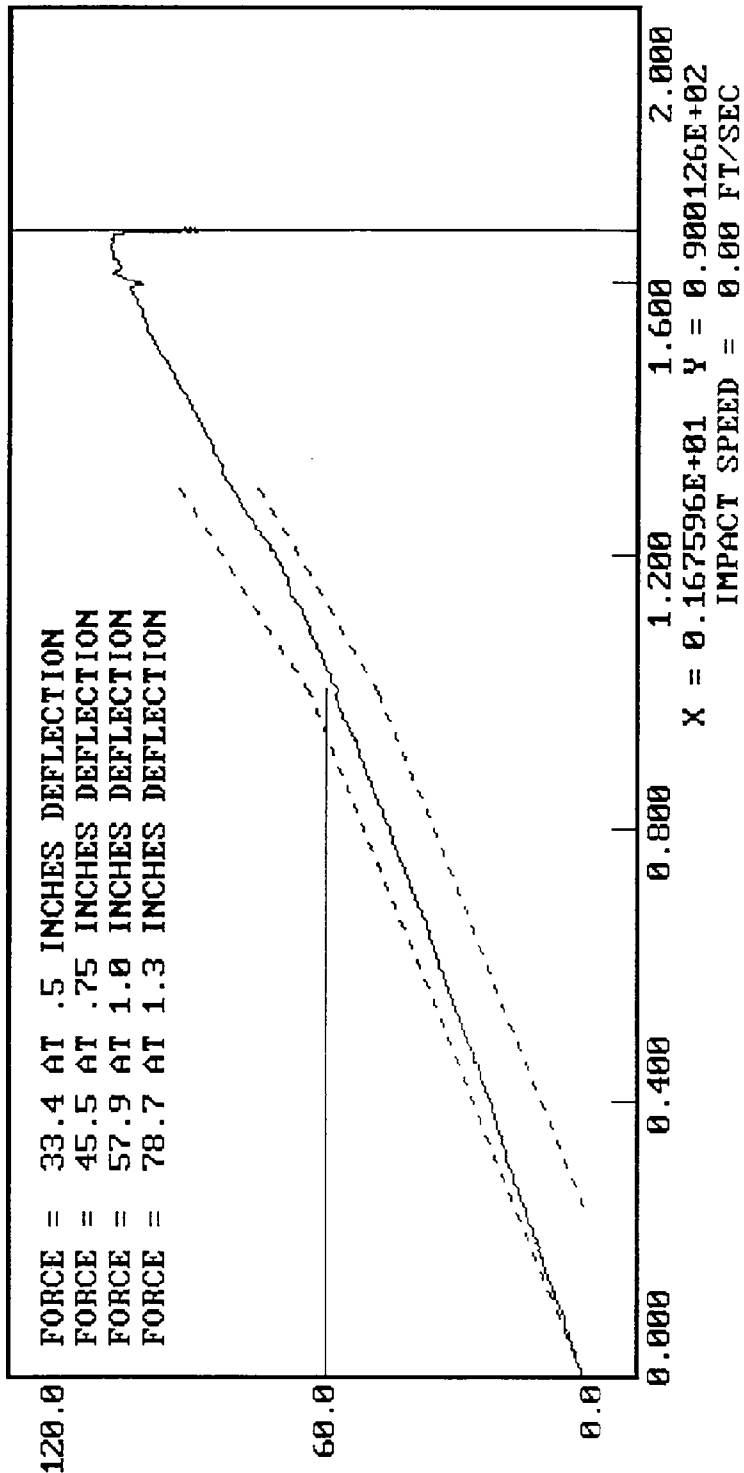
APPROVED BY 

11-19-1996 13:57

DUMMY CALIBRATION - ABDOMEN COMPRESSION

DUMMY # 269

ABDOMEN FORCE (LBS) VS. ABDOMEN DISPLACEMENT (INCHES)



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: November 19, 1996

DUMMY NUMBER: 269

TEST NUMBER: D961805

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	22%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	29
FORCE @ 30°	34 - 46 lbs	43
FORCE @ 40°	46 - 58 lbs	52
RETURN ANGLE	12° maximum	6°

TEST MEETS SPECIFICATIONS

TECHNICIAN Jim Hill

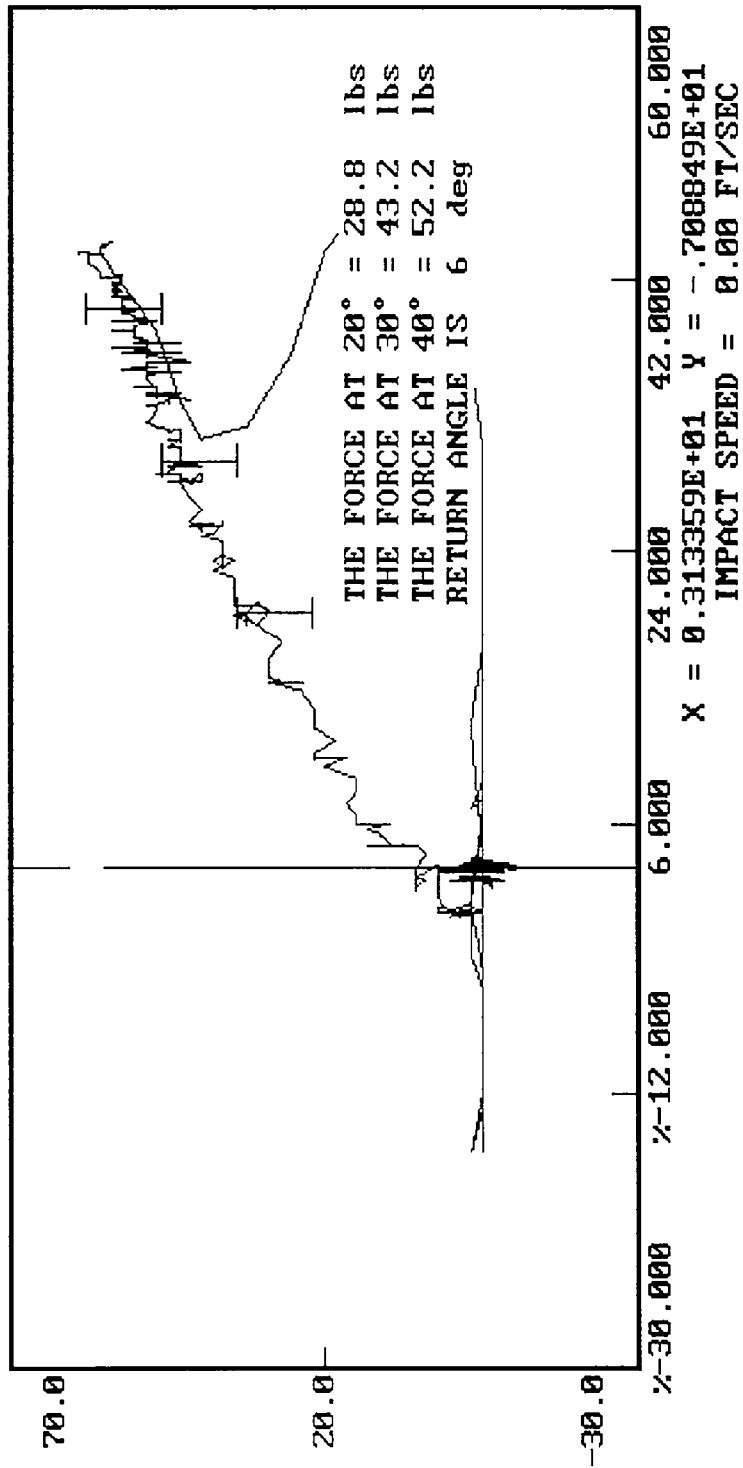
APPROVED BY Dave Kabeke

11-19-1996 16:10

DUMMY CALIBRATION - LUMBAR FLEXION

DUMMY # 269

FORCE (LBS) VS. TORSO ROTATION (DEGREES)



POST-TEST DRIVER DUMMY INSPECTION CHECKLIST

Type: Side Impact Dummy

Serial Number: 270

Inspected By: Tim Michnay

Date: November 19, 1996

<u>Part</u>	<u>Items Checked</u>	<u>Comments</u>
Skin	visual inspection	OK
Head	visual, ballast, accelerometer mount	OK
Neck	visual	OK
Spine box	visual, ballast, weldment, accelerometer mount	OK
Rib cage	visual, measure	OK
Sternum	visual	OK
Lumbar spine	visual	OK
Abdomen	visual	OK
Pelvis	visual, palpate, accelerometer mount	OK
Upper legs	visual	OK
Knees	visual	OK
Lower legs	visual, range of motion	OK
Ankles	visual, range of motion	OK
Feet	visual, range of motion	OK
Joints	1 to 2 g range	OK
Other		

NOTES: (include component/problem/action/reason):

POST-TEST PASSENGER DUMMY INSPECTION CHECKLIST

Type: Side Impact Dummy

Serial Number: 269

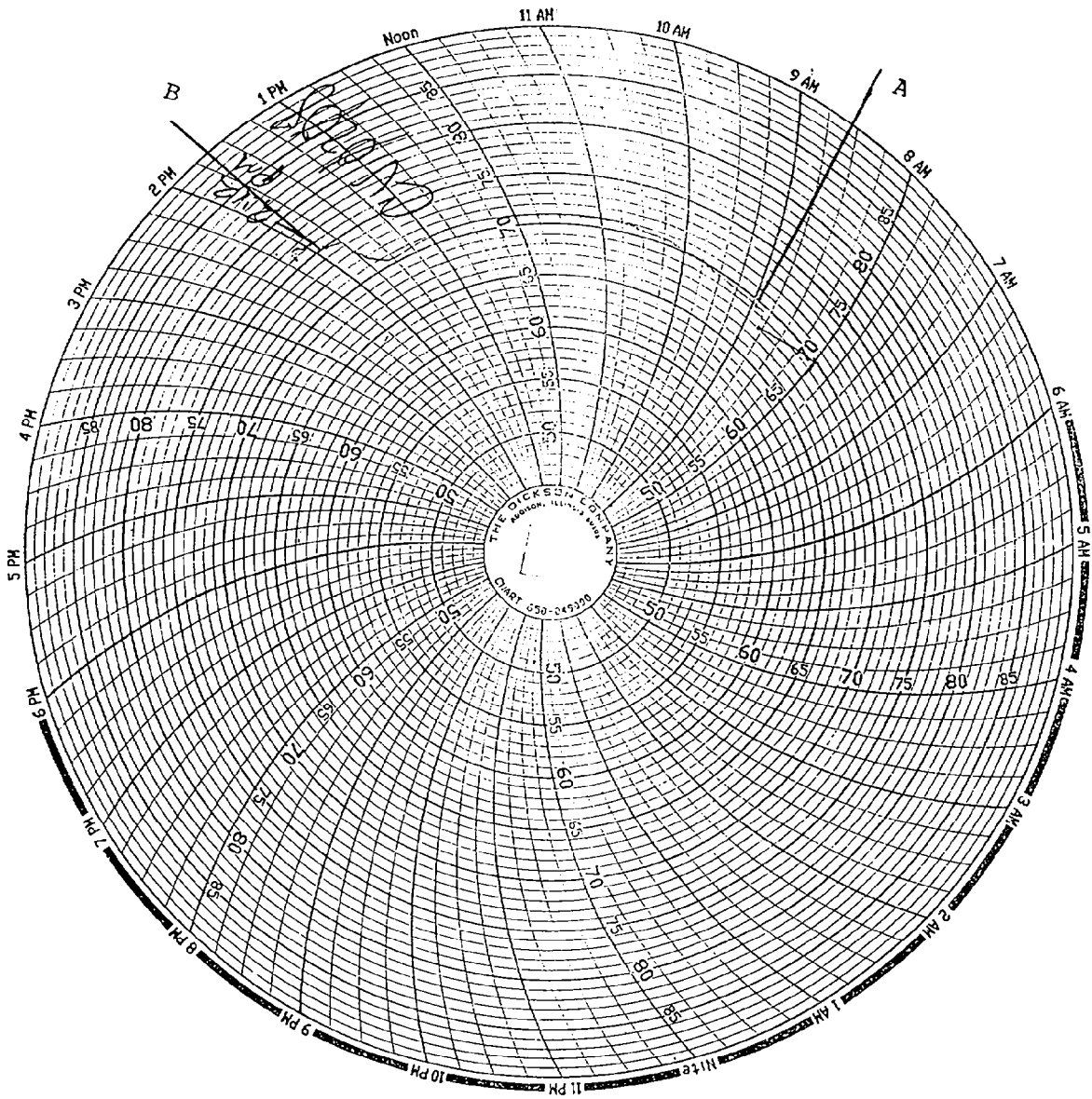
Inspected By: Tim Michnay

Date: November 19, 1996

<u>Part</u>	<u>Items Checked</u>	<u>Comments</u>
Skin	visual inspection	OK
Head	visual, ballast, accelerometer mount	OK
Neck	visual	OK
Spine box	visual, ballast, weldment, accelerometer mount	OK
Rib cage	visual, measure	OK
Sternum	visual	OK
Lumbar spine	visual	OK
Abdomen	visual	OK
Pelvis	visual, palpate, accelerometer mount	OK
Upper legs	visual	OK
Knees	visual	OK
Lower legs	visual, range of motion	OK
Ankles	visual, range of motion	OK
Feet	visual, range of motion	OK
Joints	1 to 2 g range	OK
Other		

NOTES: (include component/problem/action/reason):

VEHICLE AND DUMMY TEMPERATURE



A = Dummies installed in vehicle
B = Test conducted

APPENDIX D

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

DUMMY AND VEHICLE CALIBRATION DATA
 INSTRUMENTS FOR RIGHT FRONT PASSENGER DUMMY NO. 270

RIGHT FRONT PASSENGER			
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Upper Rib Y	AP1H2	Endevco	September 10, 1996
Lower Rib Y	AJ9C2	Endevco	September 09, 1996
Lower Spine Y	AP2D7	Endevco	September 10, 1996
Pelvis Y	ALCH7	Endevco	September 09, 1996
Upper Rib Redundant Y	AH030	Endevco	September 10, 1996
Lower Rib Redundant Y	AHTT2	Endevco	September 09, 1996
Lower Spine Redundant Y	AP1T8	Endevco	September 10, 1996
Pelvis Redundant Y	AJ420	Endevco	September 09, 1996

INSTRUMENTS FOR RIGHT REAR PASSENGER DUMMY NO. 269

RIGHT REAR PASSENGER		
	SERIAL NO.	CALIBRATION DATE
Upper Rib Y	AGTM2	September 10, 1996
Lower Rib Y	ALECI	September 11, 1996
Lower Spine Y	AHIG2	September 11, 1996
Pelvis Y	ALCN9	September 10, 1996
Upper Rib Redundant Y	AGTB5	September 10, 1996
Lower Rib Redundant Y	J10411	September 11, 1996
Lower Spine Redundant Y	AM751	September 11, 1996
Pelvis Redundant Y	AKAF3	September 10, 1996

VEHICLE INSTRUMENT CALIBRATION

VEHICLE AND MDB ACCELEROMETERS		
SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Moving Barrier CG X	Entran	July 12, 1996
Moving Barrier CG Y	Entran	July 15, 1996
Moving Barrier CG Z	Entran	July 11, 1996
Moving Barrier Rear Axle X	Entran	July 11, 1996
Moving Barrier Rear Axle Y	Entran	June 04, 1996
Right Mid A-Post Y	Entran	July 11, 1996
Right Lower A-Post Y	Entran	July 11, 1996
Right Lower B-Post Y	Entran	June 04, 1996
Rear Floorpan Above Axle X	Entran	July 15, 1996
Rear Floorpan Above Axle Y	Entran	October 02, 1996
Rear Floorpan Above Axle Z	Entran	October 02, 1996
Right Front Passenger Seat Track Y	Entran	October 02, 1996
Left Side Sill at Front Seat X	Entran	July 03, 1996
Left Side Sill at Front Seat Y	Entran	July 03, 1996
Left Side Sill at Front Seat Z	Entran	July 11, 1996
Left Side Sill at Rear Seat X	Entran	July 11, 1996
Left Side Sill at Rear Seat Y	Entran	July 11, 1996
Left Side Sill at Rear Seat Z	Entran	July 15, 1996
Right Side Sill at Front Seat Y	Entran	October 01, 1996

VEHICLE INSTRUMENT CALIBRATION

	VEHICLE AND MDB ACCELEROMETERS		
	SERIAL NO	MANUFACTURER	CALIBRATION DATE
Right Side Sill at Rear Seat Y	D06-A19	Entran	October 01, 1996
Left Rear Occupant Compartment Y	E25-G08	Entran	October 02, 1996
Vehicle CG X	A10-G02	Entran	July 12, 1996
Vehicle CG Y	B13-Z03	Entran	July 15, 1996
Vehicle CG Z	A09-G10	Entran	July 12, 1996

Note: All Endevco accelerometers are Model No. 7264-2000. All Entran accelerometers are Model No. EGE-72