

NEW CAR ASSESSMENT PROGRAM
SIDE IMPACT TESTING
PASSENGER CARS

1997 MAZDA 626
4-DOOR SEDAN
NHTSA NO: MV5400

MGA PROVING GROUNDS
5000 WARREN ROAD
BURLINGTON, WI 53105



Test Date: January 30, 1997

Report Date: February 25, 1997

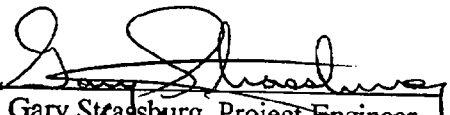
FINAL REPORT

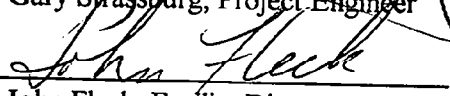
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NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
SAFETY PERFORMANCE STANDARDS
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7. Author(s) Gary Strassburg, Project Engineer			8. Performing Organization Report No. MGA-DOT-214-0																										
9. Performing Organization Name and Address MGA Research Corporation 5000 Warren Road Burlington, WI 53105			10. Work Unit No.																										
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			14. Sponsoring Agency Code NPS-10																										
15. Supplementary Notes																													
16. Abstract A 90° Moving Deformable Barrier NCAP side impact was conducted on the subject 1997 Mazda 626 4-Door to obtain new car assessment and research data indicant of FMVSS No. 214D performance. The test was conducted at MGA Research Corporation in Burlington, Wisconsin, on January 30, 1997. The impact velocity of the Moving Deformable Barrier (MDB) was 61.3 kph, and the ambient temperature at the struck side (driver's) of the target vehicle at the time of impact was 20.3°C. The target vehicle post test maximum crush was 465 mm at level 2. The test vehicle's performance follows:																													
<table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 20%; text-align: center;"><u>DRIVER</u></th> <th style="width: 20%; text-align: center;"><u>PASS.</u></th> <th style="width: 20%;"></th> </tr> </thead> <tbody> <tr> <td>Left Upper Rib (LUR) Accel., g</td> <td style="text-align: center;">70.7</td> <td style="text-align: center;">71.5</td> <td></td> </tr> <tr> <td>Left Lower Rib (LLR) Accel., g</td> <td style="text-align: center;">90.4</td> <td style="text-align: center;">84.5</td> <td></td> </tr> <tr> <td>Lower Spine (T₁₂) Accel., g</td> <td style="text-align: center;">95.4</td> <td style="text-align: center;">61.0</td> <td></td> </tr> <tr> <td>Thoracic Trauma Index (TTI)</td> <td style="text-align: center;">92.9</td> <td style="text-align: center;">72.8</td> <td></td> </tr> <tr> <td>Pelvis (PEV) Accel., g</td> <td style="text-align: center;">114.5</td> <td style="text-align: center;">78.7</td> <td></td> </tr> </tbody> </table>							<u>DRIVER</u>	<u>PASS.</u>		Left Upper Rib (LUR) Accel., g	70.7	71.5		Left Lower Rib (LLR) Accel., g	90.4	84.5		Lower Spine (T ₁₂) Accel., g	95.4	61.0		Thoracic Trauma Index (TTI)	92.9	72.8		Pelvis (PEV) Accel., g	114.5	78.7	
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The doors on the struck side of the vehicle did not separate from the body at the hinges or latches and the opposite doors did not open during the side impact event.																													
17. Key Words New Car Assessment Program (NCAP) FMVSS No. 214D Side Impact Dummy (SID) Occupant Side Impact Protection			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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SECTION 1
PURPOSE AND TEST PROCEDURE

This side impact test is part of the FY97 NCAP Side Impact 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 Mazda 626 4-Door.

This side impact test was conducted in accordance with the New Car Assessment Program Side Impact Testing Procedure dated October 1996.

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 Mazda 626 4-Door was impacted on the left or driver's side by a Moving Deformable Barrier (MDB) which was moving forward in a 27° crabbed position to the tow road guidance system at a velocity of 38.1 mph (61.3 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 January 30, 1997. 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 driver and left rear designated seating positions according to instructions specified in the New Car Assessment Program Side Impact Laboratory Test Procedure which is dated October 1996. 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. Left Upper Rib (LUR) uniaxial accelerometer (Y-direction)
2. Left Lower Rib (LLR) 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 test:

Injury Criteria	Front SID	Rear SID
TTI (g)	92.9	72.8
Pelvis (g)	114.5	78.7

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/Mazda/626/4-Door

Vehicle NHTSA No.: MV5400 VIN: 1YVGE22C7V5606113

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

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

Placement Longitudinal; X Lateral

Transmission: 5 Speed; Manual; X Automatic; Overdrive

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

Odometer Reading 65 miles

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

 Cruise Control; X Tilt Wheel; Power Door Locks;

DATA FROM TIRE PLACARD:

Tire Pressure (at capacity): 32 Psi FRONT

26 Psi REAR

Recommended Tire Size: P195/65/R14

Tires on Test Vehicle: P195/65/R14 Manufacturer: Firestone

Vehicle Capacity Data:

Number of Occupants: 2 Front; 3 Rear; 3rd Seat, 5 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 = 385.6 kg (A)

No. of Occupants x 68.04 kg. = 340.2 kg (B)

Cargo Capacity (A-B) = 45.4 kg

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

WEIGHT OF TEST VEHICLE WITH MAXIMUM FLUIDS:

Right Front	=	<u>379.7</u> kg	Right Rear	=	<u>230.9</u> kg
Left Front	=	<u>378.3</u> kg	Left Rear	=	<u>233.1</u> kg
TOTAL FRONT	=	<u>758.0</u> kg	TOTAL REAR	=	<u>464.0</u> kg
% of Total Vehicle Weight =		<u>62.0</u> %;	% of Total Weight =		<u>38.0</u> %
TOTAL WEIGHT	=	<u>1222.0</u> kg			

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

Year/Make/Model/Body Style: 1997/Mazda/626/4-Door

Vehicle NHTSA No.: MV5400 Test Date: January 30, 1997

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Test Vehicle Delivered Weight with Maximum Fluids	=	<u>1222.0</u> kg
Cargo Carrying Capacity of Test Vehicle	=	<u>45.4</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>1428.8</u> kg

WEIGHT OF TEST VEHICLE WITH 2 DUMMIES AND CARGO (Fully Loaded Weight):

Right Front	=	<u>385.6</u> kg	Right Rear	=	<u>285.8</u> kg
Left Front	=	<u>428.2</u> kg	Left Rear	=	<u>328.9</u> kg
TOTAL FRONT	=	<u>813.8</u> kg	TOTAL REAR	=	<u>614.7</u> kg
% of Total Weight	=	<u>57.0</u> %	% of Total Weight	=	<u>43.0</u> %
TOTAL TEST WEIGHT	=	<u>1428.5</u> kg			

TEST VEHICLE ATTITUDE:

CURB WEIGHT ATTITUDE:

Right Front 683 mm Left Front 696 mm Right Rear 691 mm Left Rear 684 mm

FULLY LOADED WEIGHT ATTITUDE:

Right Front 682 mm Left Front 680 mm Right Rear 657 mm Left Rear 633 mm

TEST ATTITUDE:

Right Front 674 mm Left Front 683 mm Right Rear 659 mm Left Rear 645 mm

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

Test Vehicle Wheelbase: 2608 mm

C.G. = 1089 mm rearward of front wheel centerline

TOTAL VEHICLE LENGTH:

Right Side = 4335 mm

Centerline = 4622 mm

Left Side = 4335 mm

DATA SHEET NO. 2

TEST VEHICLE SUMMARY OF RESULTS

Year/Make/Model/Body Style: 1997/Mazda/626/4-Door

Vehicle NHTSA No.: MV5400 Test Date: January 30, 1997

Overall Length = 4622 mm; Overall Width = 1752 mm

TEST WEIGHT:

Right Front = 411.4 kg Right Rear = 289.9 kg

Left Front = 417.8 kg Left Rear = 304.8 kg

TOTAL FRONT = 829.2 kg TOTAL REAR = 594.7 kg

% of Total Weight = 58.2% % of Total Weight = 41.8%

TOTAL VEHICLE WEIGHT = 1423.9 kg

Wheelbase = 2608 mm

Longitudinal C.G. from Center of Front Axle = 1089 mm

Impact Angle with Respect to Impactor = 90° degrees

MAXIMUM EXTERIOR STATIC CRUSH:

1. LEVEL 1 (294 mm above ground) = 356 mm

2. LEVEL 2 (457 mm above ground) = 465 mm

3. LEVEL 3 (594 mm above ground) = 390 mm

4. LEVEL 4 (885 mm above ground) = 315 mm

5. LEVEL 5 (1312 mm above ground) = 128 mm

Maximum Post-Test Intrusion = 465 mm

OCCUPANTS:

Left Front Passenger Left Rear Passenger

Type of Dummy SID SID

Restraints Used type II belt type II belt
and airbag

TEST VEHICLE SUMMARY OF RESULTS (Cont'd)

INSTRUMENTATION:

Number of Vehicle Data Channels:	=	<u>24</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/Mazda/626/4-Door

Vehicle NHTSA No.: MV5400 Test Date: January 30, 1997

POSITION OF IMPACT (MDB) ON MONORAIL:

Crabbed 27° to left

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>1102 mm</u>
C.G. Location From Center Line	=	<u>-23 mm</u>
C.G. Location Above Ground Level	=	<u>508 mm</u>

MDB WEIGHT:

Left Front	=	<u>396.1 kg</u>	Left Rear	=	<u>284.4 kg</u>
Right Front	=	<u>383.4 kg</u>	Right Rear	=	<u>293.8 kg</u>
TOTAL FRONT	=	<u>779.5 kg</u>	TOTAL REAR	=	<u>578.2 kg</u>
TOTAL MDB WEIGHT	=	<u>1357.7 kg</u>			

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

Impact Speed = Primary: 38.06 mph (61.3 kph) Secondary: 38.03 mph (61.2 kph)

CRASH TEST SUMMARY FOR SIDE IMPACTOR (Cont'd)

MAXIMUM STATIC CRUSH OF HONEYCOMB IMPACT FACE:

- | | | |
|----|---------------------------------|-----------------|
| 1. | Row A Top of Stack (813 mm) | = <u>198</u> mm |
| 2. | Row B Mid Stack (686 mm) | = <u>156</u> mm |
| 3. | Row C Top of Bumper (533 mm) | = <u>104</u> mm |
| 4. | Row D Center of Bumper (432 mm) | = <u>153</u> mm |

INSTRUMENTATION:

Number of MDB Data Channels = 5

DATA SHEET NO. 4
POST-TEST OBSERVATIONS

Year/Make/Model/Body Style: 1997/Mazda/626/4-Door

Vehicle NHTSA No.: MV5400 Test Date: January 30, 1997

VISIBLE DUMMY CONTACT POINTS:

	<u>LEFT FRONT SID</u>	<u>LEFT REAR SID</u>
Head	<u>airbag</u>	<u>to C-post</u>
Arm	<u>to door</u>	<u>to door and armrest</u>
Pelvis	<u>to door and armrest</u>	<u>to door and armrest</u>
Left Knee	<u>to door</u>	<u>to door</u>
Right Knee	<u>to left knee</u>	<u>to left knee</u>

DOOR OPENING:

	<u>LEFT SIDE</u>	<u>RIGHT SIDE</u>
Front	<u>Remained closed</u>	<u>Remained closed</u>
Rear	<u>Remained closed</u>	<u>Remained closed</u>

MDB DISTANCE FROM TARGET IMPACT POINT:

Horizontal: 15 mm rearward Vertical: 6 mm high

ARM REST LOCATIONS:

Front: 252 mm from bottom of window

Rear: 270 mm from bottom of window

POST-TEST OBSERVATIONS (Cont'd)

SEAT CRUSH:

Front Seat Back: 145 mm Front Seat Cushion: 104 mm

Left Rear Seat Back: 307 mm Rear Seat Cushion: 92 mm

GLAZING DAMAGE:

Left side windows broke, windshield cracked

PILLAR PERFORMANCE:

No failure noted

SILL SEPARATION:

None noted

OTHER NOTABLE IMPACT EFFECTS:

Driver and front passenger airbags deployed

SECTION 4
OCCUPANT AND VEHICLE INFORMATION

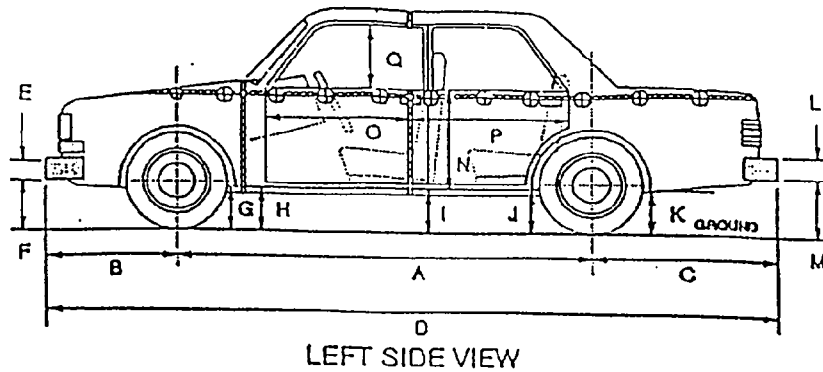
DATA SHEET NO. 5
SIDE IMPACT DUMMY (SID) INSTRUMENTATION DATA

Year/Make/Model/Body Style: 1997/Mazda/626/4-Door
 Vehicle NHTSA No.: MV5400 Test Date: January 30, 1997

	Front Dummy ID # 275			Rear Dummy ID # 274				
	Pos. Direct.	Neg. Direct		Pos. Direct.	Neg. Direct			
	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)		
RIB ACCELERATIONS								
Left Upper Rib (LUR) Y	70.7	28	-24.3	71	71.5	42	-6.0	152
Left Lower Rib (LLR) Y	90.4	30	-21.8	82	84.5	41	-13.5	68
SPINE ACCELERATIONS								
Lower Lateral Y	95.4	30	-33.1	63	61.0	46	-17.9	66
PELVIS ACCELERATIONS								
Lateral Y	114.5	31	-19.4	78	78.7	36	-19.0	76

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)

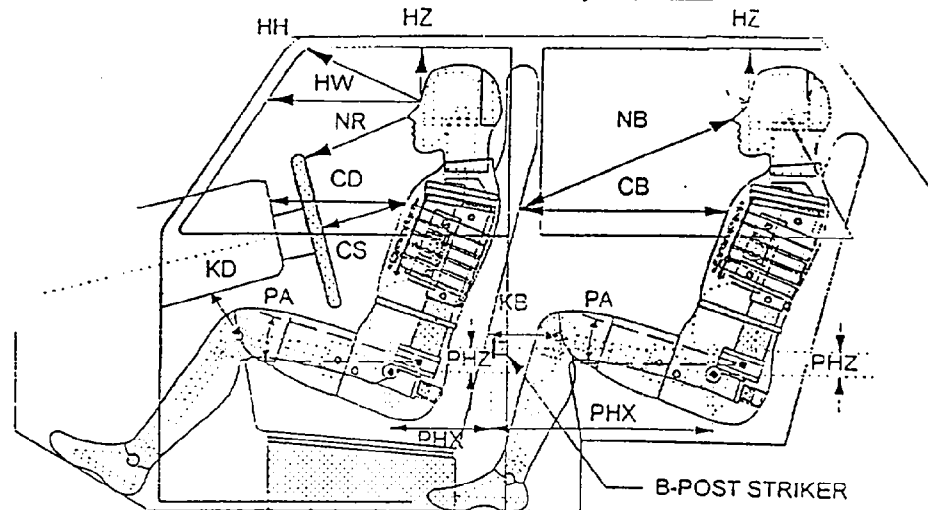
	PRE-TEST	POST-TEST	Δ CHANGE
A	2606	2579	27
B	942	990	-48
C	1074	1043	31
D	4622	4612	10
E	170	170	0
F	389	413	-24
G	180	194	-14
H	175	205	-30
I	170	170	0
J1/J2	175/175	176/178	-1/-3
K	233	246	-13
L	275	275	0
M	344	379	-35
N	613	570	43
O	677	653	24
P	1176	1101	75
Q	404	383	21
R	4335	4338	-3
S	4335	4252	83
T	1752	1466	286

DATA SHEET NO. 7

SIDE IMPACT DUMMY (SID) LONGITUDINAL CLEARANCE DIMENSIONS

Year/Make/Model/Body Style: 1997/Mazda/626/4-Door

NHTSA NO.: MV5400 Test Date: January 30, 1997



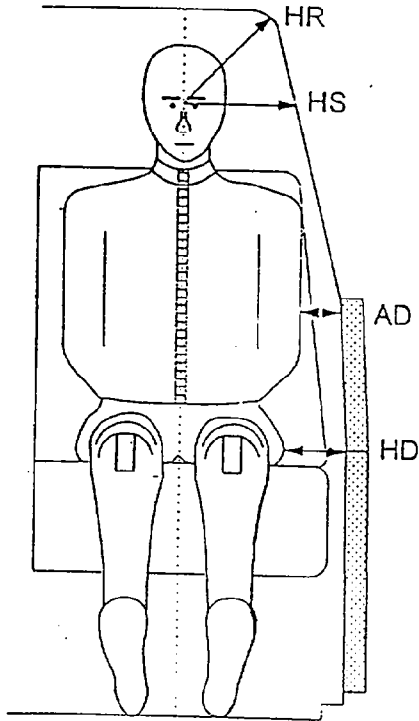
NOTE: All dimensions are in mm with tolerance of ± 3 mm

	DRIVER SID ID # 275		LEFT REAR PASSENGER SID ID # 274
HH	441	HZ	155
HW	627	NB	634
HZ	171	CB	531
NR	442	KBL (KBA)	224 (0°)
CD	609	KBR (KBA)	242 (0°)
CS	331	PA°	23.7°
KDL(KDA°)	181 (37.2°)	PHX	246
KDR(KDA°)	239 (11.2°)	PHZ	307
PA°	23.4°		
PHX	185		
PHZ	127		

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/Mazda/626/4-Door
 NHTSA NO.: MV5400 Test Date: January 30, 1997



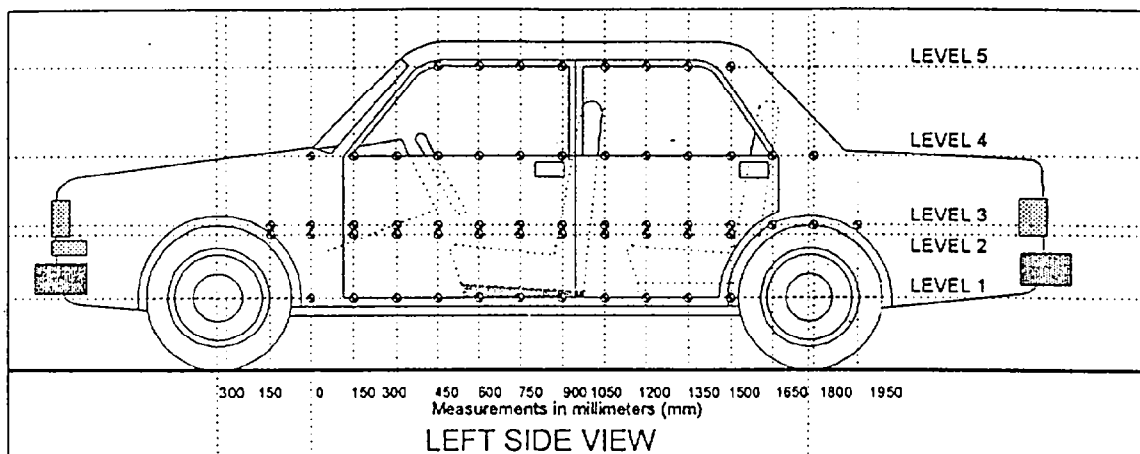
NOTE: All dimensions are in mm

	DRIVER SID ID # 275	LEFT REAR PASSENGER SID ID # 274
HR	200	225
HS	300	247
AD	113	105
HD	189	158

DATA SHEET NO. 9
VEHICLE SIDE MEASUREMENTS

Year/Make/Model/Body Style: 1997/Mazda/626/4-Door

NHTSA NO.: MV5400 Test Date: January 30, 1997



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

MEASUREMENTS ALONG THE VERTICAL 750 mm. LINE SHOWN ABOVE

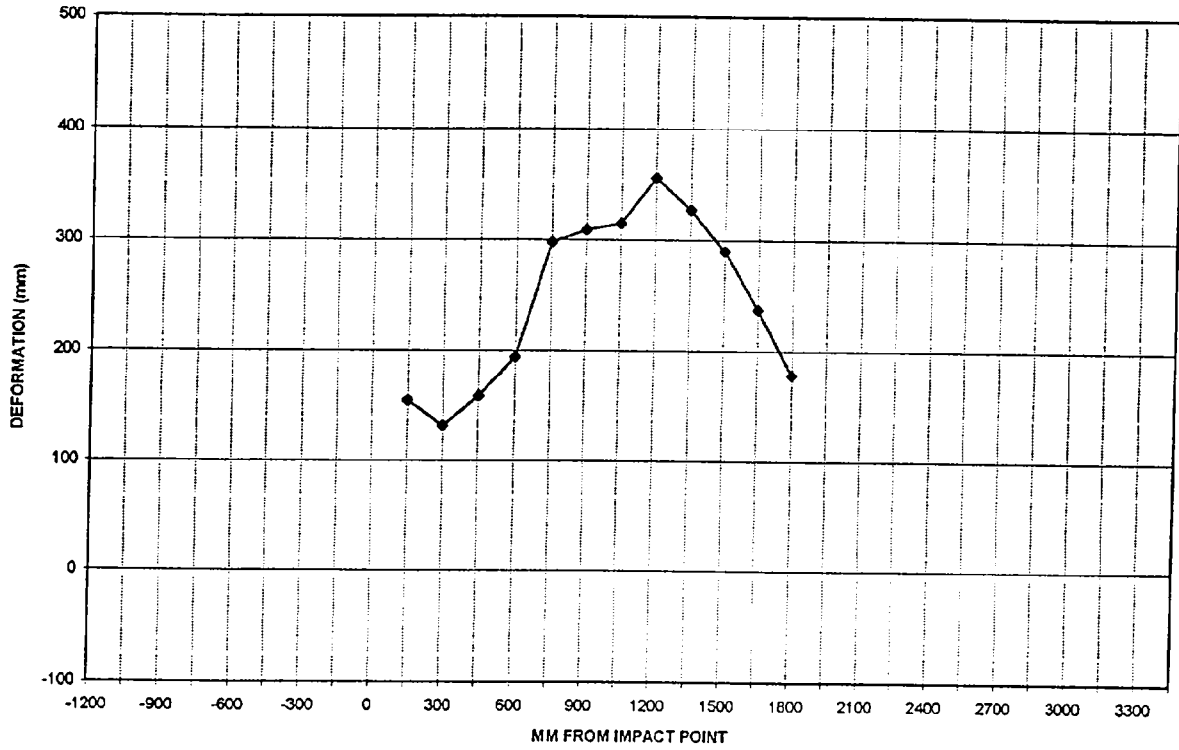
Level 1 @ Axle Centerline Height (or Sill Top Height)	=	<u>294</u>	mm
Level 2 @ Occupant H-Point	=	<u>457</u>	mm
Level 3 @ Mid Door	=	<u>594</u>	mm
Level 4 @ Window Sill	=	<u>885</u>	mm
Level 5 @ Window Top	=	<u>1312</u>	mm

DATA SHEET NO. 10
VEHICLE EXTERIOR CRUSH PROFILES

Longitudinal Distance (mm)	Level 1 - Axle Centerline		
	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1050			
-900			
-750			
-600			
-450			
-300			
-150			
0 (impact point)			
150	733	887	154
300	737	868	131
450	737	895	158
600	735	929	194
750	736	1034	298
900	734	1043	309
1050	734	1049	315
1200	735	1091	356
1350	736	1063	327
1500	739	1029	290
1650	742	980	238
1800	740	918	178
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



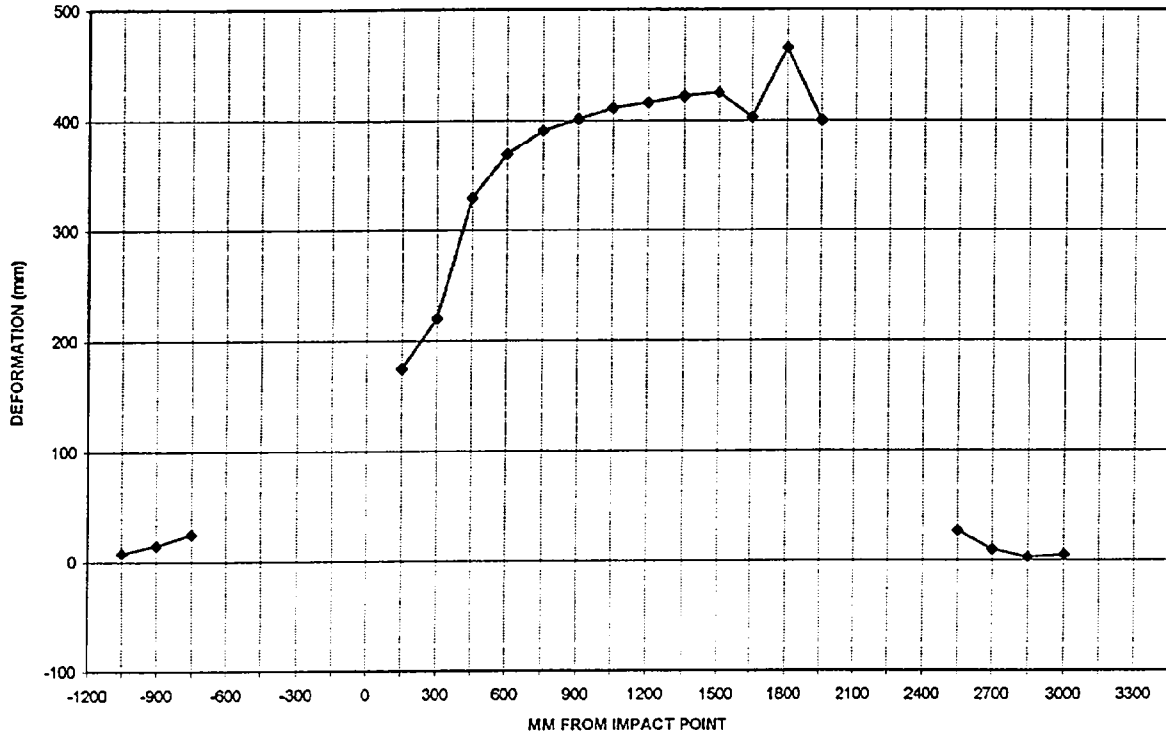
LEVEL 1 - AXLE CENTERLINE

DATA SHEET NO. 10
VEHICLE EXTERIOR CRUSH PROFILES

Longitudinal Distance (mm)	Level 2 - Occupant H Point		
	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1050	808	816	8
-900	764	779	15
-750	736	761	25
-600			
-450			
-300			
-150			
0 (impact point)	715	890	175
150	714	934	220
300	714	1043	329
450	715	1084	369
600	713	1104	391
750	714	1115	401
900	713	1124	411
1050	711	1127	416
1200	709	1131	422
1350	709	1134	425
1500	709	1112	403
1650	710	1175	465
1800	711	1111	400
1950			
2100			
2250			
2400			
2550	727	754	27
2700	741	751	10
2850	771	774	3
3000	795	800	5

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

VEHICLE EXTERIOR STATIC CRUSH



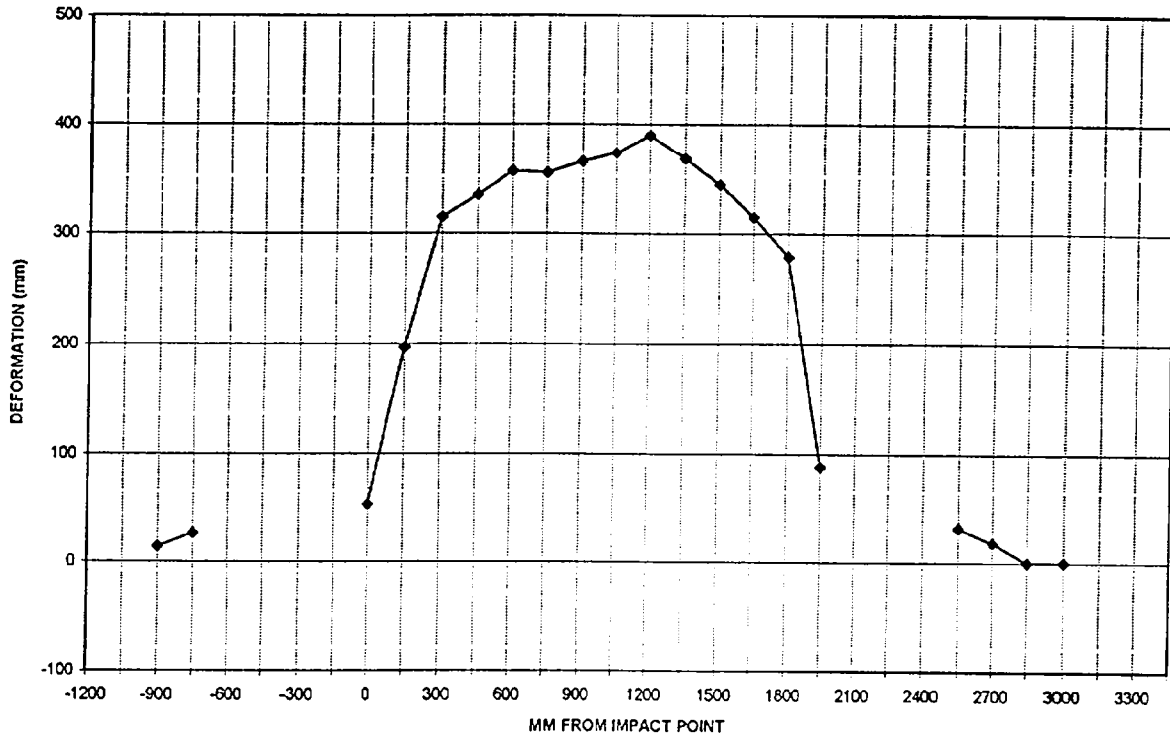
LEVEL 2 - OCCUPANT H-POINT

DATA SHEET NO. 10
VEHICLE EXTERIOR CRUSH PROFILES

Longitudinal Distance (mm)	Level 3 - Mid Door		
	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1050			
-900	776	790	14
-750	746	772	26
-600			
-450			
-300			
-150			
0 (impact point)	707	760	53
150	708	905	197
300	708	1023	315
450	709	1044	335
600	708	1065	357
750	708	1064	356
900	708	1074	366
1050	707	1081	374
1200	704	1094	390
1350	704	1073	369
1500	706	1051	345
1650	706	1021	315
1800	704	983	279
1950	702	790	88
2100			
2250			
2400			
2550	725	756	31
2700	746	764	18
2850	777	777	0
3000	800	800	0

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

VEHICLE EXTERIOR STATIC CRUSH



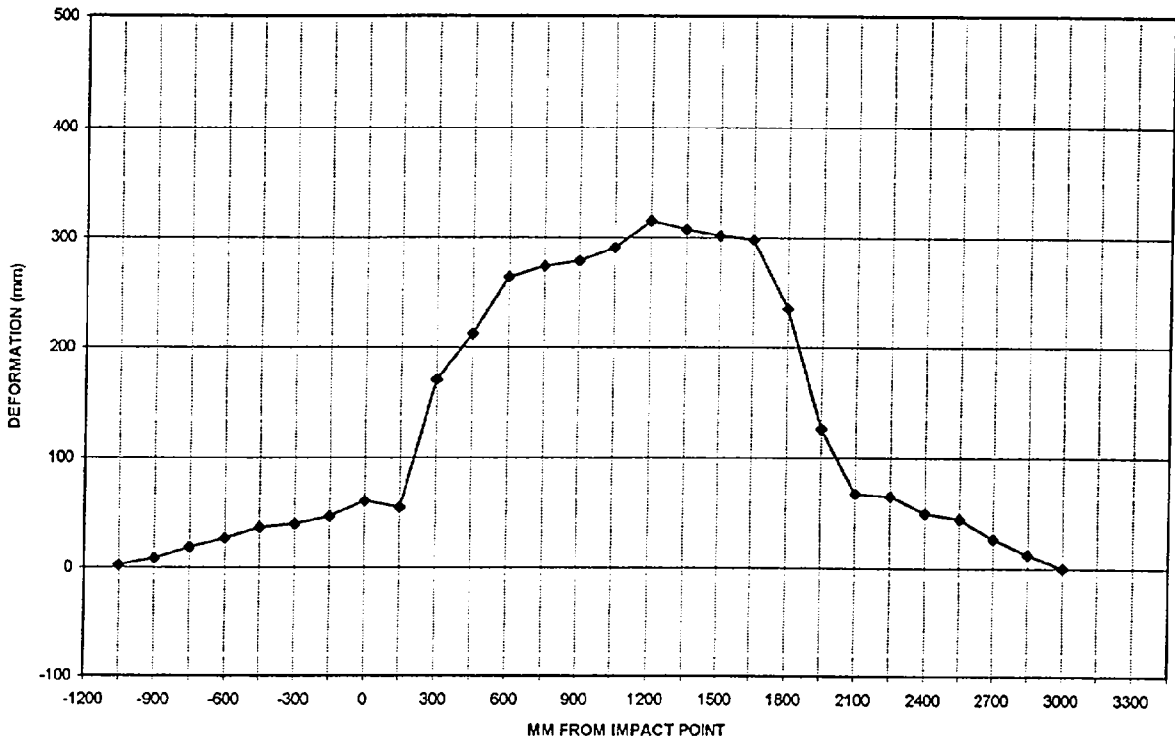
LEVEL 3 - MID DOOR

DATA SHEET NO. 10
VEHICLE EXTERIOR CRUSH PROFILES

Longitudinal Distance (mm)	Level 4 - Window Sill		
	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1050	894	896	2
-900	863	871	8
-750	845	863	18
-600	828	854	26
-450	814	850	36
-300	806	845	39
-150	798	844	46
0 (impact point)	796	856	60
150	794	848	54
300	789	959	170
450	787	999	212
600	789	1053	264
750	788	1062	274
900	789	1068	279
1050	790	1081	291
1200	791	1106	315
1350	790	1097	307
1500	792	1094	302
1650	793	1091	298
1800	795	1030	235
1950	796	922	126
2100	798	865	67
2250	803	868	65
2400	816	865	49
2550	829	873	44
2700	845	871	26
2850	865	877	12
3000	892	892	0

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

VEHICLE EXTERIOR STATIC CRUSH



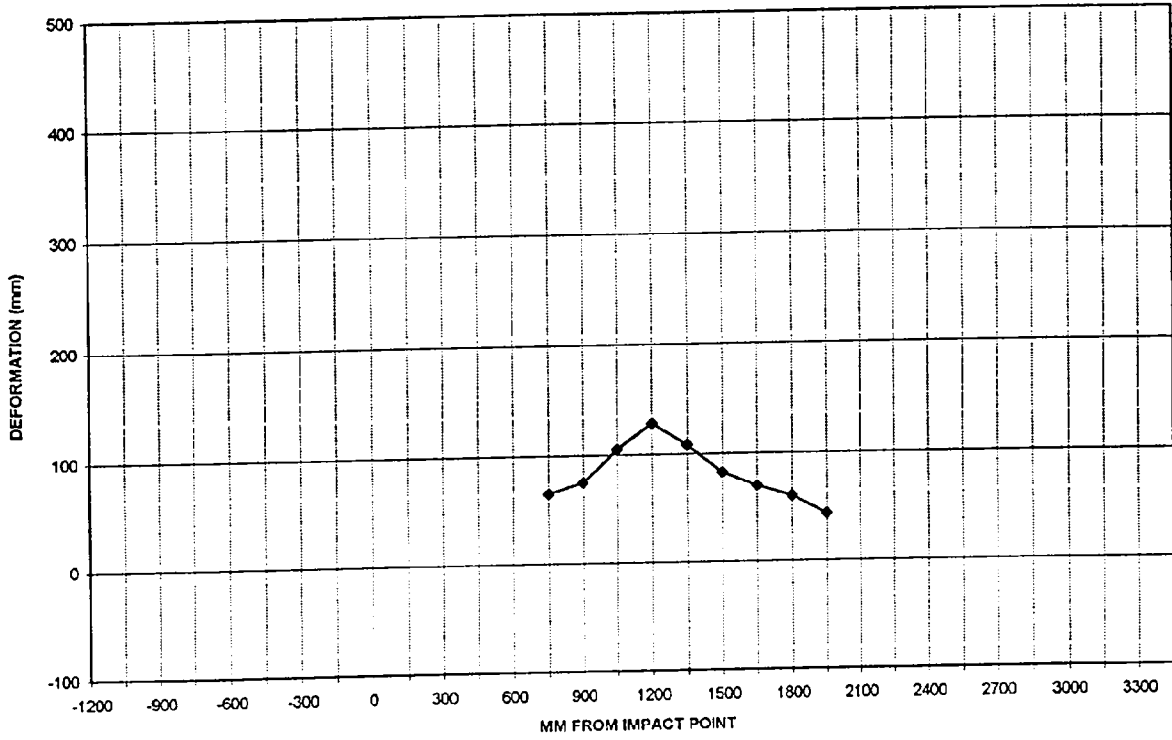
LEVEL 4 - WINDOW SILL

DATA SHEET NO. 10
VEHICLE EXTERIOR CRUSH PROFILES

Longitudinal Distance (mm)	Level 5 - Window Top		
	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1050			
-900			
-750			
-600			
-450			
-300			
-150			
0 (impact point)			
150			
300			
450			
600			
750	1016	1080	64
900	1015	1099	74
1050	1017	1122	105
1200	1019	1147	128
1350	1018	1126	108
1500	1018	1100	82
1650	1017	1086	69
1800	1015	1074	59
1950	1023	1066	43
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



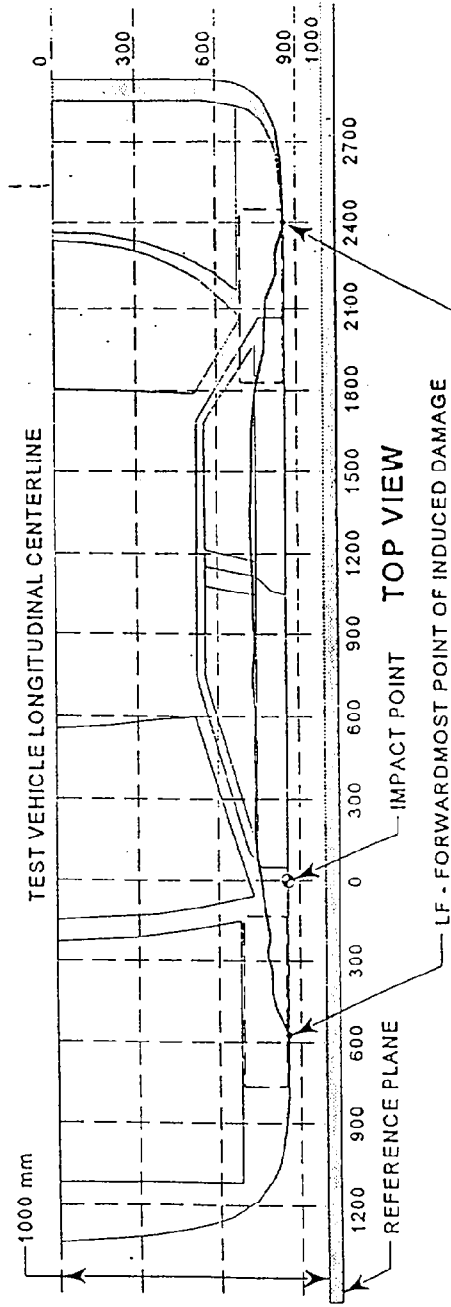
LEVEL 5 - WINDOW TOP

DATA SHEET NO. 11

VEHICLE DAMAGE PROFILE DISTANCES

Year/Make/Model/Body Style: 1997/Mazda/626/4-Door

NHTSA NO.: MV5400 Test Date: January 30, 1997



MEASUREMENT CONVENTIONS: LR - REARWARDMOST POINT OF INDUCED DAMAGE
 Forward of the impact point (towards front of vehicle) is considered negative (-).
 Rearward of the impact point (towards rear of vehicle) is considered positive (+).

DPD MEASUREMENTS	POST-TEST (mm)	PRE-TEST (mm)	STATIC CRUSH (mm)
1. (LF = -1050 mm)	896	894	2
2. -265 mm	850	805	45
3. 523 mm	1105	714	391
4. 1296 mm	1136	709	427
5. 2205 mm	868	802	66
6. (LR = 3000 mm)	892	892	0

DATA SHEET NO. 12

EXTERIOR STATIC CRUSH FOR SIDE IMPACTOR

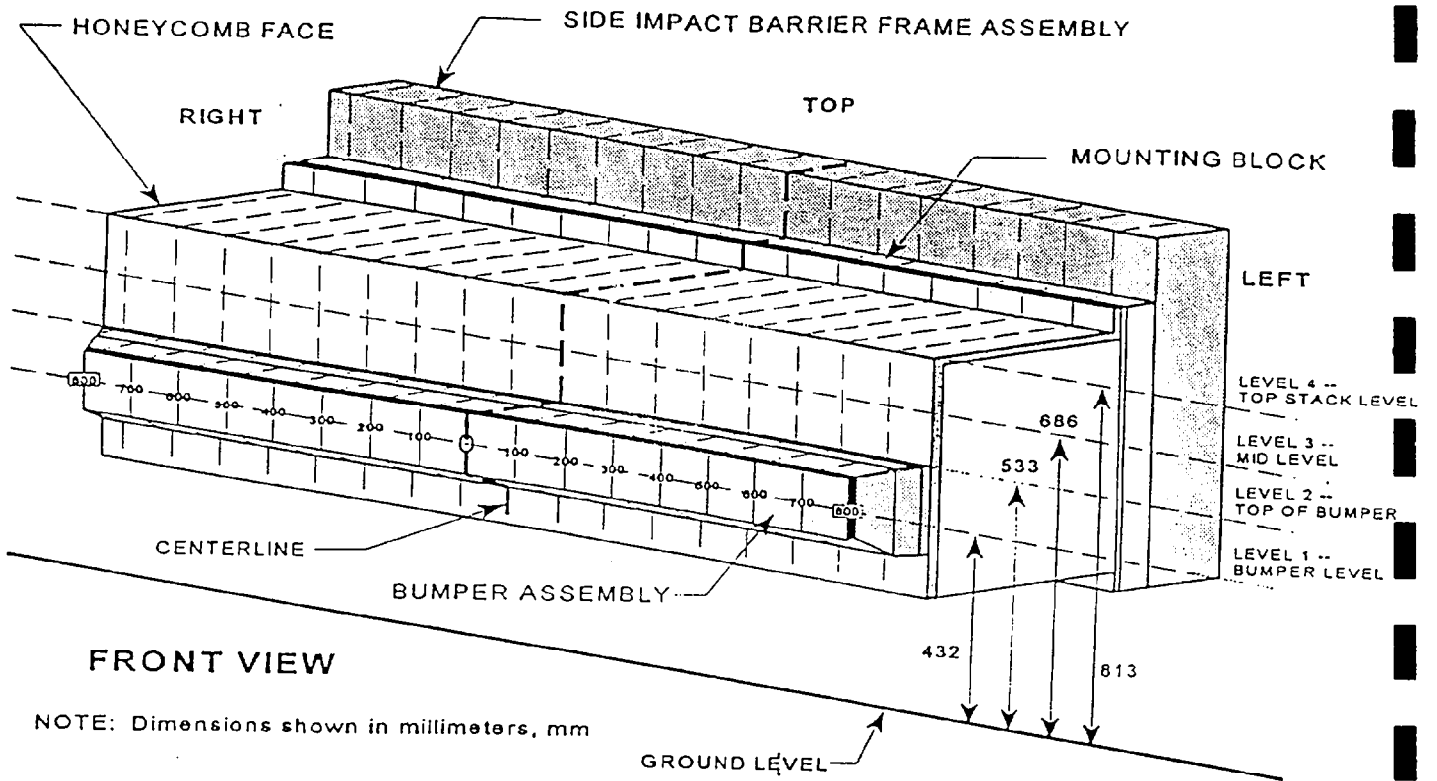
Year/Make/Model/Body Style: 1997/Mazda/626/4-Door

Vehicle NHTSA No.: MV5400 Test Date: January 30, 1997

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	59	11	0	0	1	3	6	8	10	12	15	16	29	59	93	138	198			
Mid Level Level 3	686 mm	56	16	2	0	0	1	5	4	5	8	9	10	12	17	42	97	156			
Top Bumper Level 2	533 mm	96	60	28	13	9	9	13	17	17	21	24	26	28	35	48	69	104			
Mid Bumper Level 1	432 mm	115	80	54	38	25	25	28	31	35	37	42	45	49	61	87	126	153			

See next page for Barrier Face Graphic

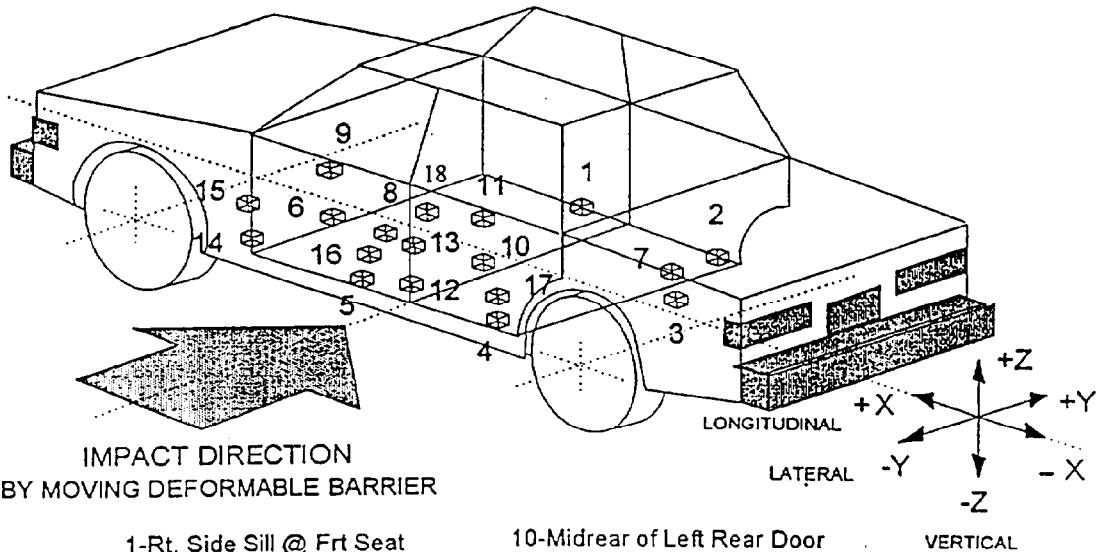
DATA SHEET NO. 12 (Cont'd)



DATA SHEET 13
TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Year/Make/Model/Body Style: 1997/Mazda/626/4-Door

Vehicle NHTSA No.: MV5400 Test Date: January 30, 1997



- | | |
|--------------------------------|---------------------------------|
| 1-Rt. Side Sill @ Frt Seat | 10-Midrear of Left Rear Door |
| 2-Rt. Side Sill @ Rr. Seat | 11-Left Rear Door Upper Ctrline |
| 3-Rr. Floorpan Above Axle | 12-Left Lower B-Post |
| 4-Left Side Sill @ Rr. Seat | 13-Left Middle B-Post |
| 5-Left Side Sill @ Frt. Seat | 14-Left Lower A-Post |
| 6-Left Frt. Door On Centerline | 15-Left Middle A-Post |
| 7-Rt. Rr. Occ Compartment | 16-Front Seat Track |
| 8-Midrear of Left Frt. Door | 17-Rear Seat Track |
| 9-Left Frt. Door Upper Ctrline | 18-Vehicle C.G. |

DATA SHEET NO. 13

TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Year/Make/Model/Body Style: 1997/Mazda/626/4-Door

Vehicle NHTSA No.: MV5400 Test Date: January 30, 1997

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	Rt. Side Sill @ Front Seat	2641	650	203	3.8	-3.1	20.1	-2.6	4.2	-6.2	21.0
2	Rt. Side Sill @ Rear Seat	1543	660	207	3.6	-4.4	26.5	-3.2	5.4	-6.5	26.6
3	Rr. Floorpan Above Axle	1084	0	556	9.3	-2.3	26.2	-2.5	12.2	-16.2	29.5
4	Left Side Sill @ Rr. Seat	1559	-680	221	---	---	66.0	-12.1	---	---	---
5	Left Side Sill @ Frt. Seat	2643	-670	209	---	---	46.4	**	---	---	---
6	Left Front Door Centerline	2607	-708	632	---	---	216.6	129.6	---	---	---
7	Right Rear Occupant Compartment	1827	286	378	---	---	27.8	-2.8	---	---	---
9	Left Front Door Upper Centerline	2492	-740	795	---	---	180.9	-58.2	---	---	---
10	Left Rear Door Mid Rear	1628	-697	800	---	---	196.6	-40.7	---	---	---
11	Left Rear Door Upper Centerline	1532	-718	640	---	---	182.7	-284.0	---	---	---
12	Left Lower B-Post	1985	-668	366	---	---	85.4	-11.6	---	---	---
13	Left Mid B-Post	2009	-685	826	---	---	180.6	-40.9	---	---	---
14	Left Lower A-Post	3063	-684	294	---	---	35.8	-12.1	---	---	---
15	Left Mid A-Post	3045	-758	854	---	---	46.5	-16.4	---	---	---
16	Driver Left Seat Track	2143	-575	382	---	---	225.9	-92.5	---	---	---
18	Vehicle CG	2591	0	372	3.6	-15.0	63.0	-12.0	16.1	-10.6	64.4

*Reference: X - Rear Bumper (+ Forward) ** Data is not valid after 45 msec.

Y - Vehicle Centerline (+ To right)

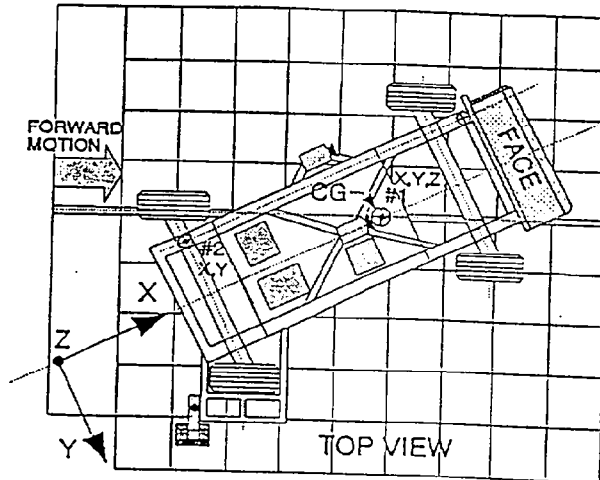
Z - Ground Level (+ Up)

DATA SHEET NO. 14

MOVING DEFORMABLE BARRIER (MDB) ACCELEROMETER LOCATIONS AND DATA SUMMARY

Year/Make/Model/Body Style: 1997/Mazda/626/4-Door

Vehicle NHTSA No.: MV5400 Test Date: January 30, 1997



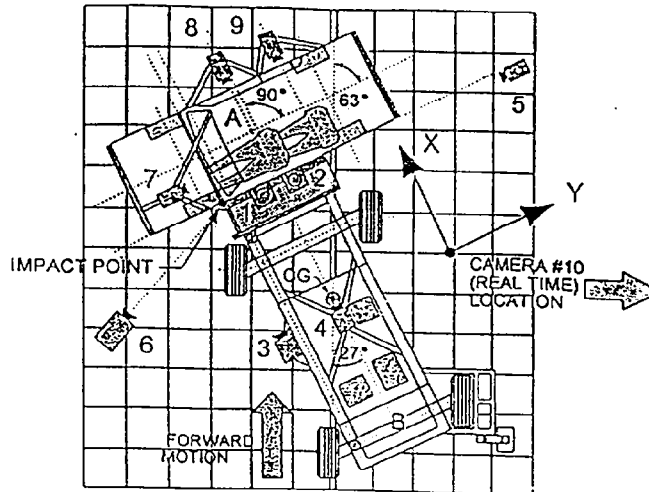
Accel. No.	Description	Coordinates (mm)*			(+) Positive		(-) Negative	
		X	Y	Z	Max. (g)	Time (msec)	Max. (g)	Time (msec)
1	MDB Center of Gravity	-1092	0	483				
	Longitudinal (X)	---	---	---	1.4	199	-16	42
	Lateral (Y)	---	---	---	7.8	37	-.9	66
	Vertical (Z)	---	---	---	9.8	63	-6.8	76
	Resultant (R)	---	---	---	18.8	32	---	---
2	Rear Frame Member	-2591	-625	622				
	Longitudinal (X)	---	---	---	2.0	198	-22.5	35
	Lateral (Y)	---	---	---	5.1	36	-.6	197

*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/Mazda/626/4-Door

Vehicle NHTSA No.: MV5400 Test Date: January 30, 1997



Camera No.	View	Coordinates (mm)*			Angle	Lens (mm)	Film Speed (fps)
		X	Y	Z			
	Real Time						
6	Left Impact	-900	2280	1675		13	985
8	Onboard Driver					8	840
9	Onboard Passenger					8	1026
7	Onboard Hood					13	645
5	Right Impact	-450	10640	1780		25	1015
1	Top Overall	-270	-1270	5000		8	1053
2	Top Impact	-280	-20	5000		13	820
4	Cart Overall					13	1010
3	Cart Pointer					35	1005

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

DATA SHEET 16
FUEL SYSTEM INTEGRITY POST IMPACT TEST DATA

Vehicle Year/Make/Model/Body Style: 1997/Mazda/626/4-Door

Vehicle NHTSA No.: MV5400 Test Date: January 30, 1997

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 38.06 mph (61.3 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

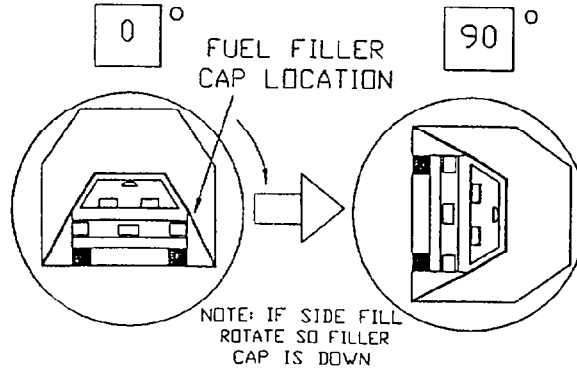
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA

Vehicle Year/Make/Model/Body Style: 1997/Mazda/626/4-Door

Vehicle NHTSA No.: MV5400 Test Date: January 30, 1997

TEST PHASE: 0° - 90°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 51 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 51 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

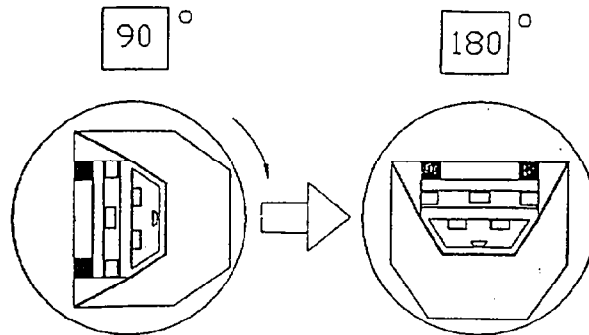
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA (Cont'd)

Vehicle Year/Make/Model/Body Style: 1997/Mazda/626/4-Door

Vehicle NHTSA No.: MV5400 Test Date: January 30, 1997

TEST PHASE: 90° - 180°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 33 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 33 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

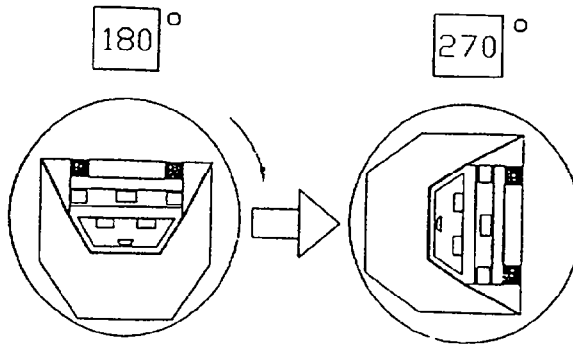
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA (Cont'd)

Vehicle Year/Make/Model/Body Style: 1997/Mazda/626/4-Door

Vehicle NHTSA No.: MV5400 Test Date: January 30, 1997

TEST PHASE: 180° - 270°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 18 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 18 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

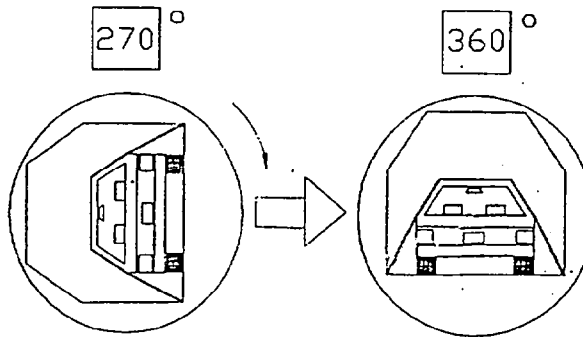
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA

Vehicle Year/Make/Model/Body Style: 1997/Mazda/626/4-Door

Vehicle NHTSA No.: MV5400 Test Date: January 30, 1997

TEST PHASE: 270° - 360°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 39 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 39 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-44 - Rollover 360°	A-44

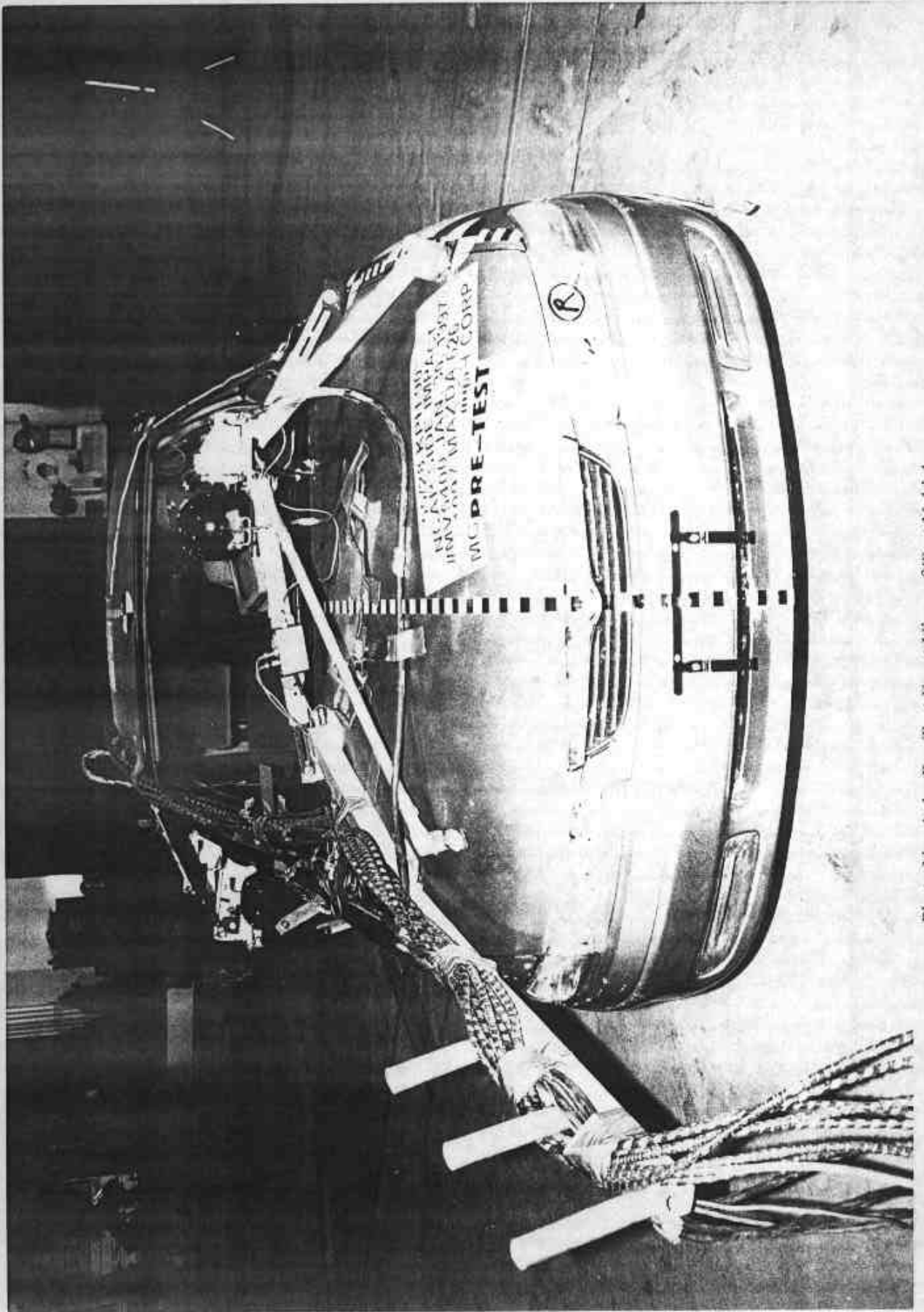


Photo No. A-1 - Pre-Test Front View of Test Vehicle

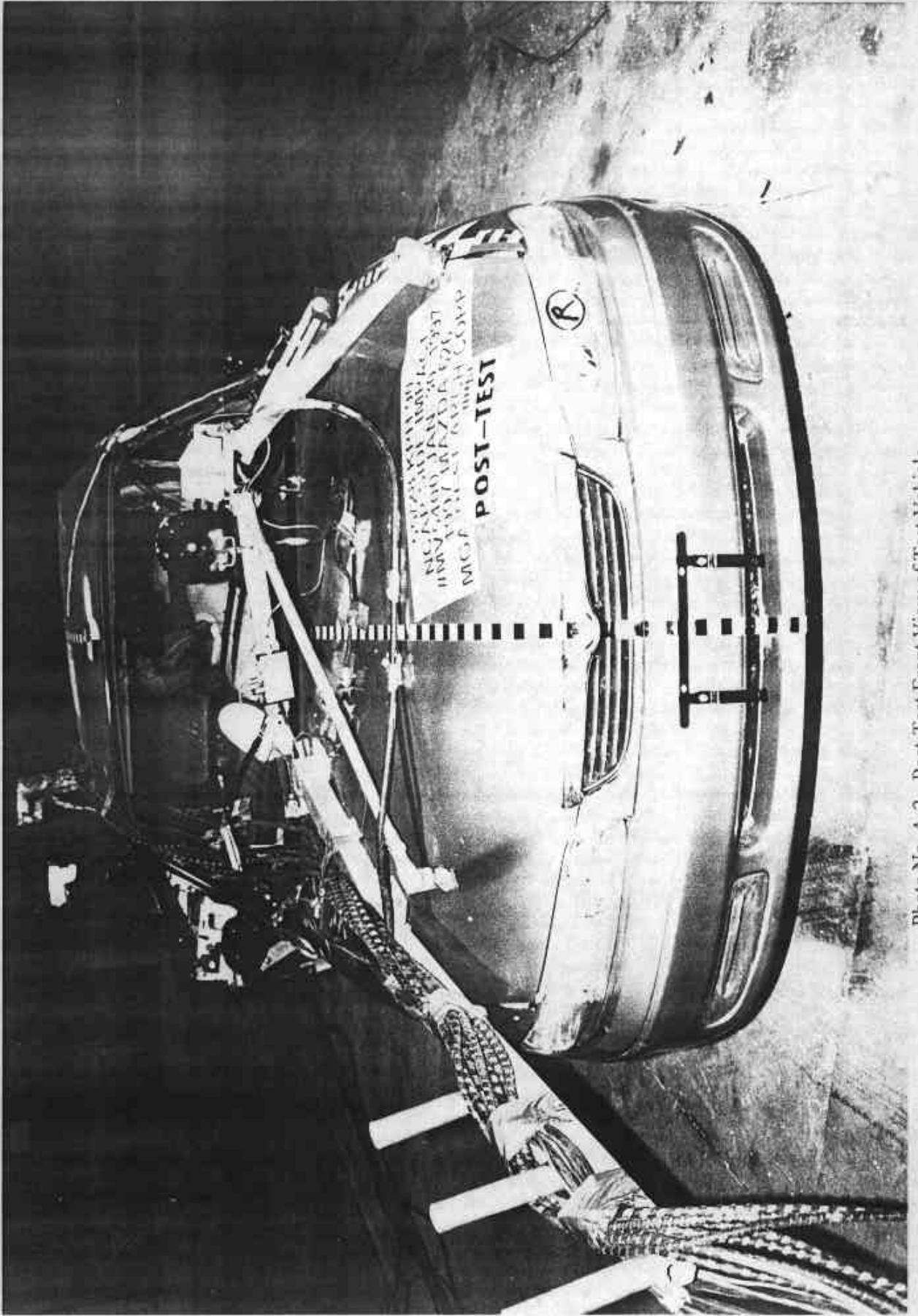


Photo No. A-2 - Post-Test Front View of Test Vehicle

A-2

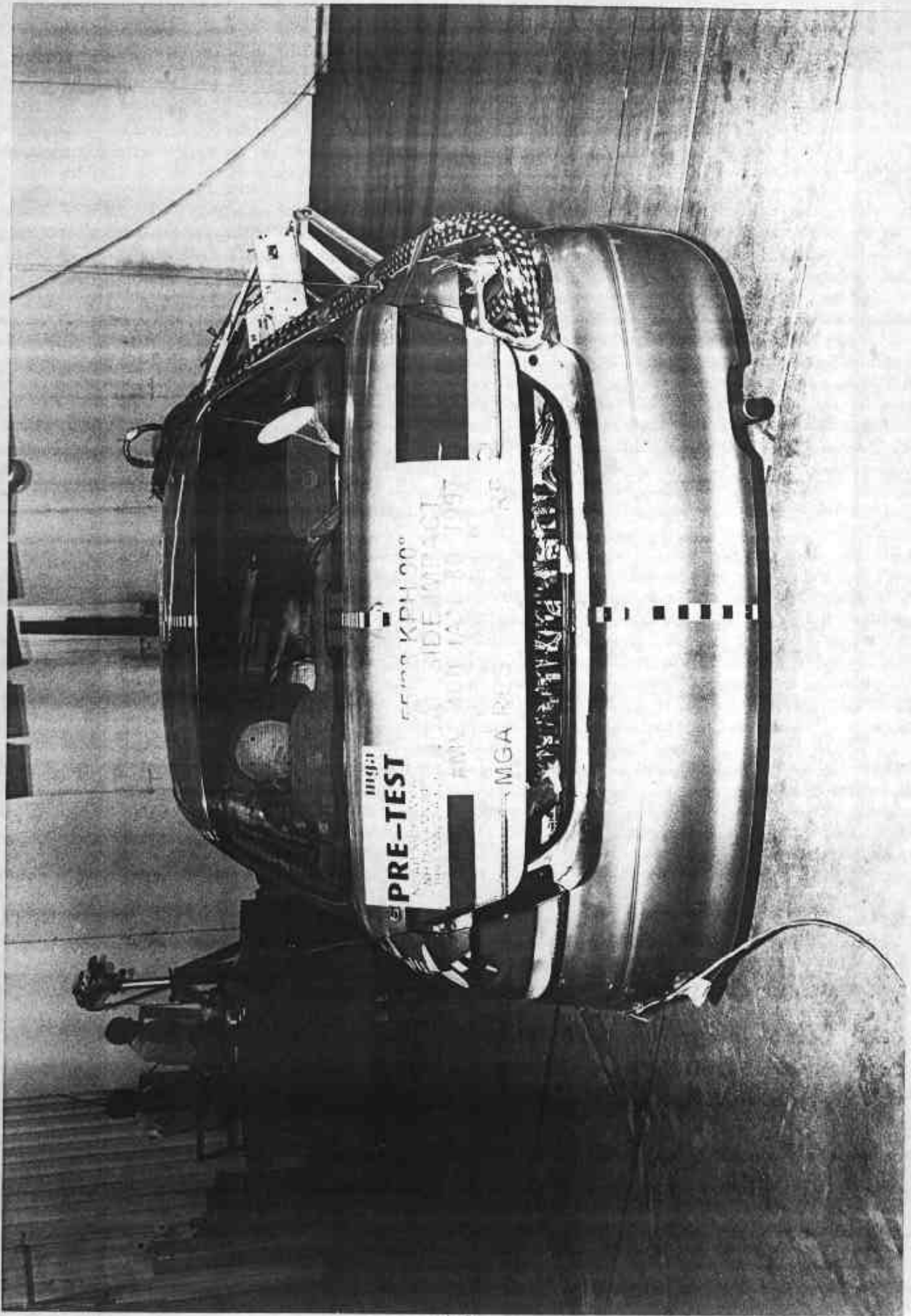


Photo No. A-3 - Pre-Test Rear View of Test Vehicle

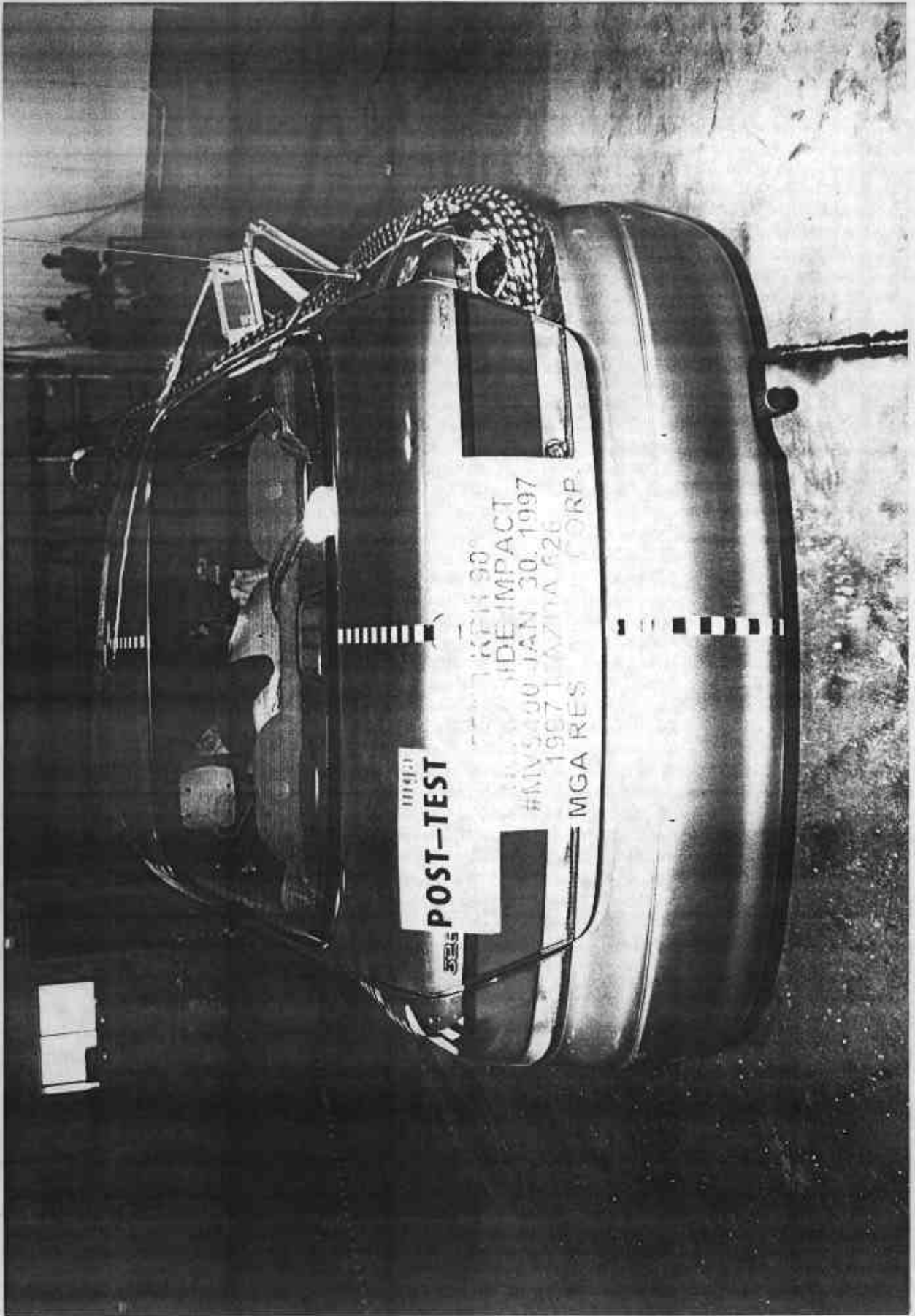


Photo No. A-4 - Post-Test Rear View of Test Vehicle

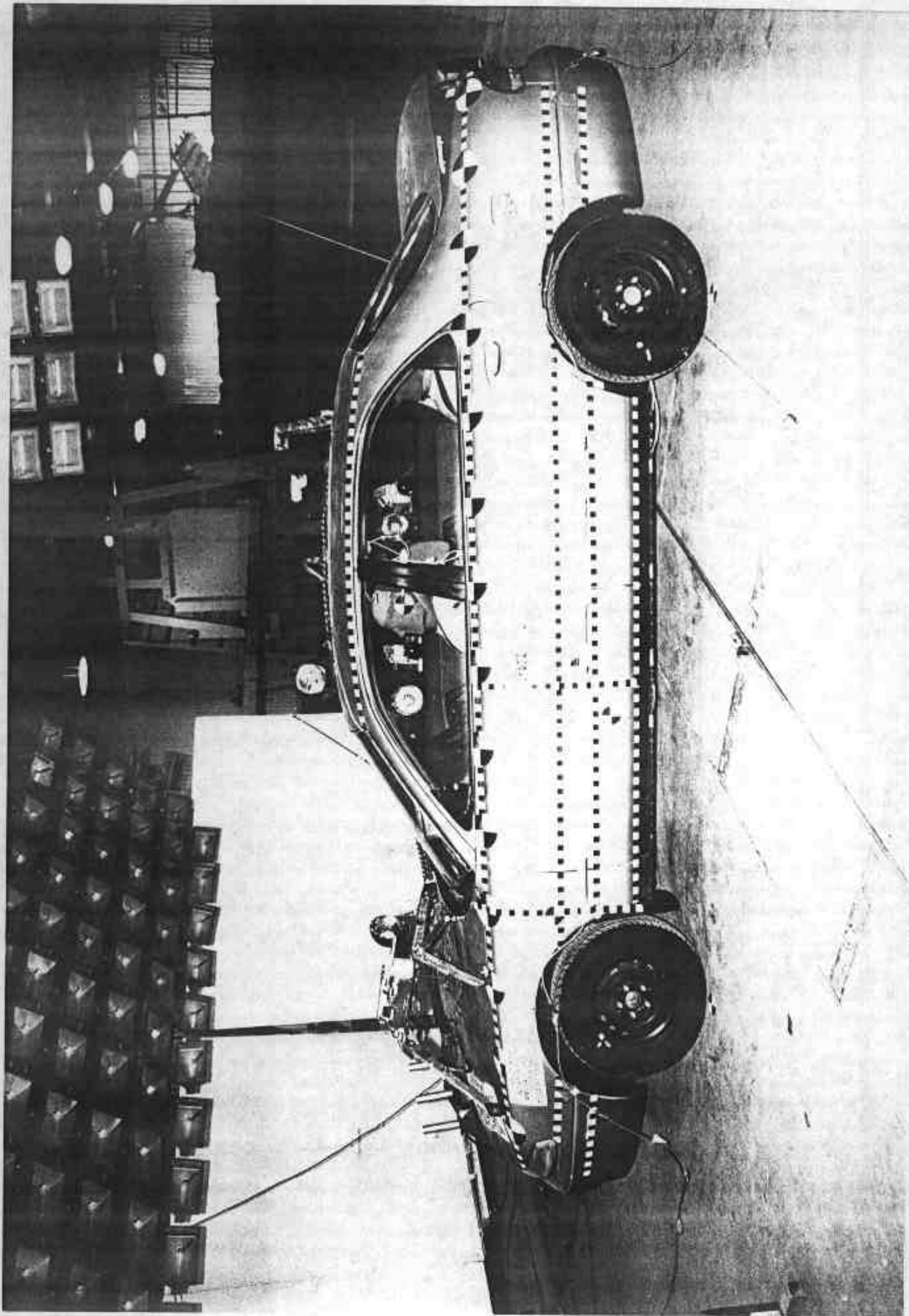


Photo No. A-5 - Pre-Test Left Side View of Test Vehicle

A-5

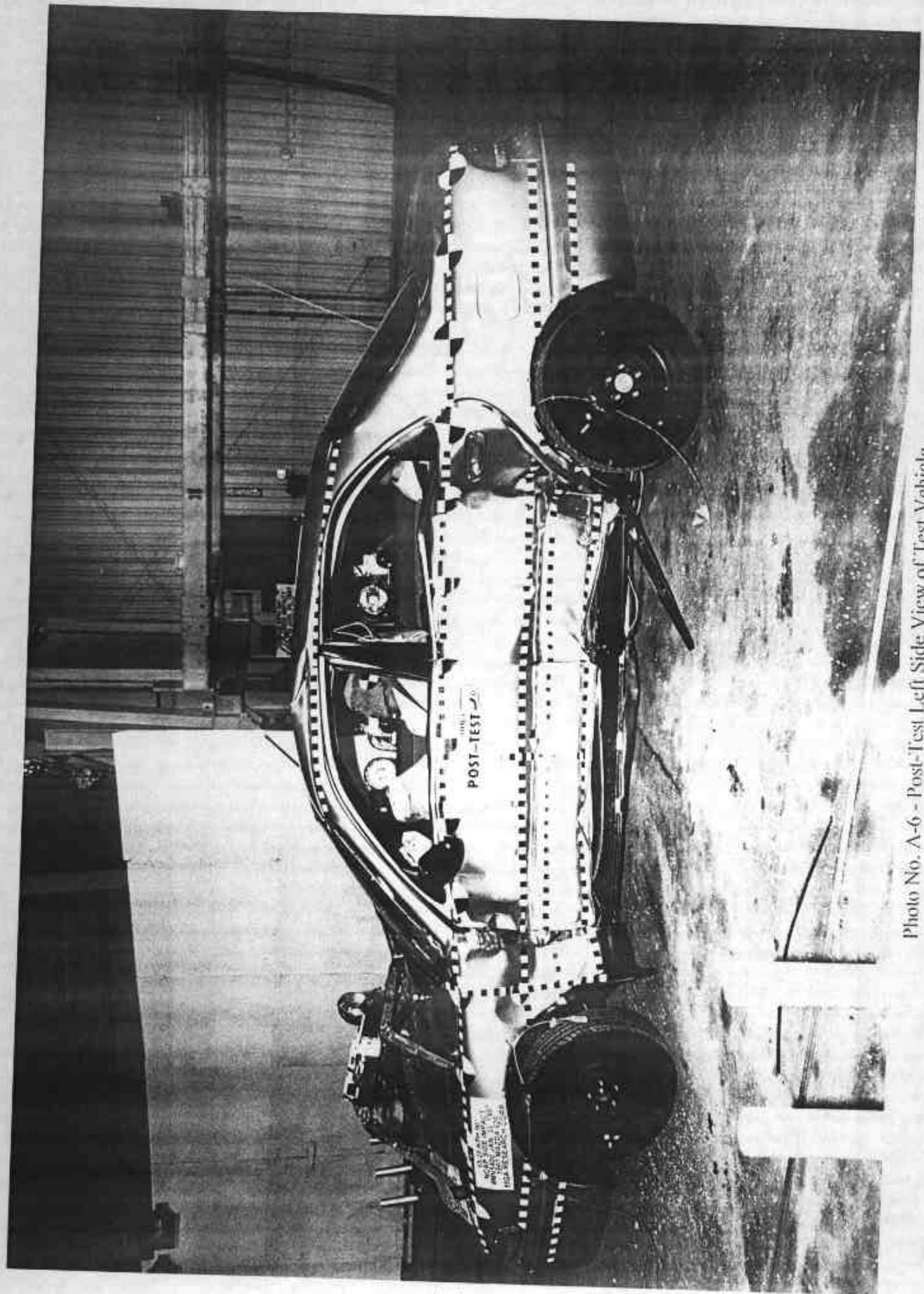


Photo No. A-6 - Post-Test Left Side View of Test Vehicle

A-6

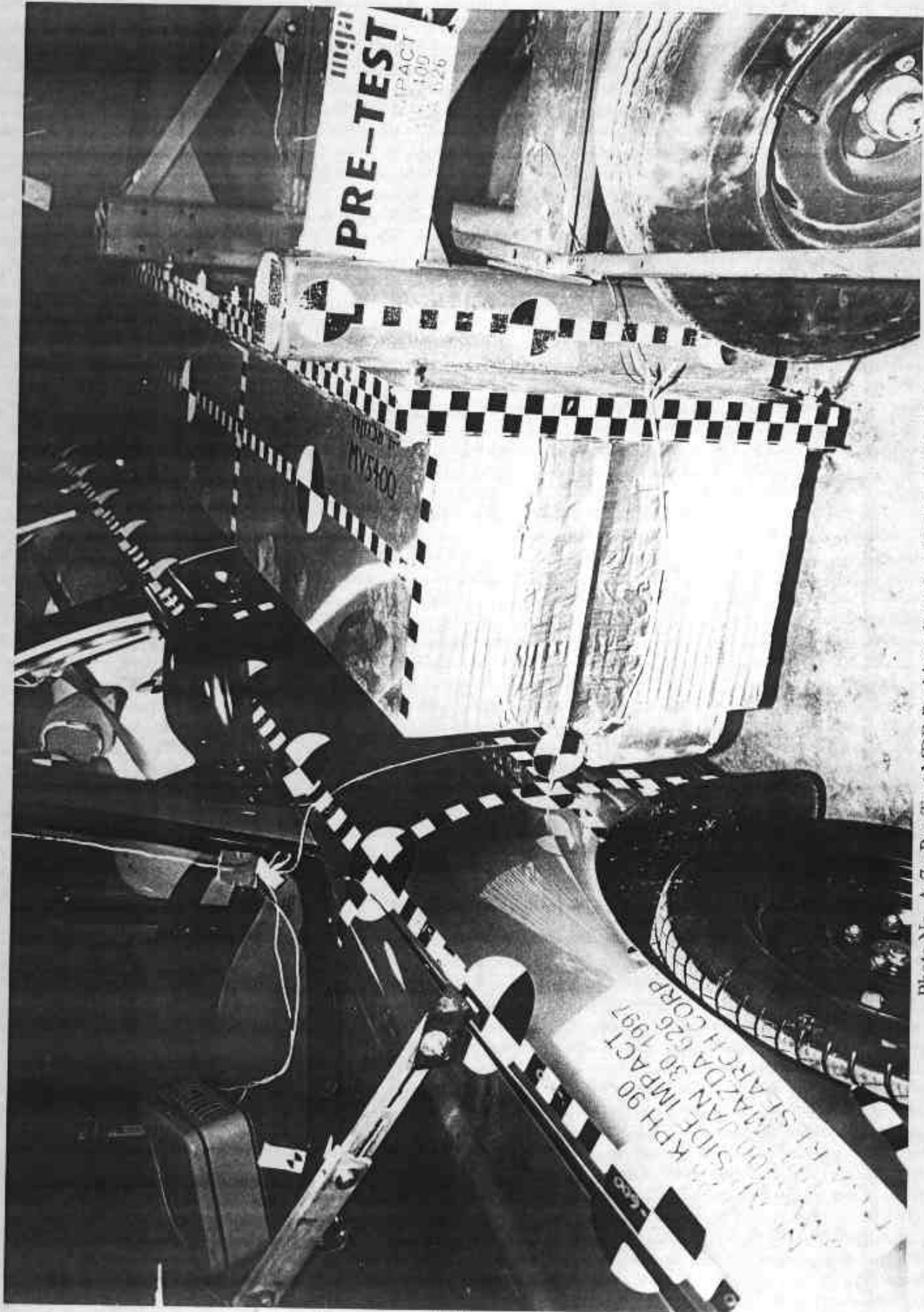


Photo No. A-7 - Pre-Test MDB Positioned Against Vehicle (left side)

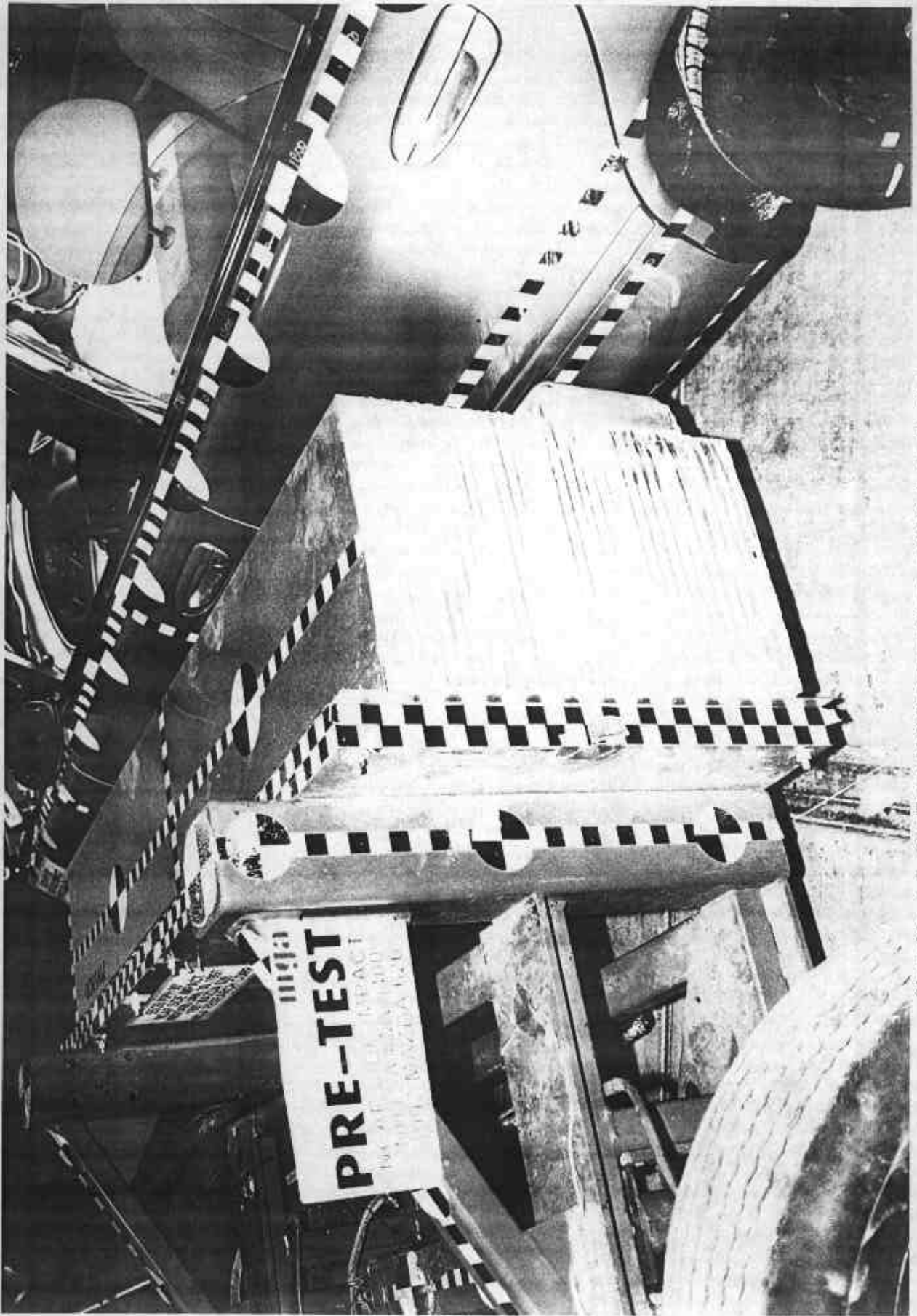


Photo No. A-8 - Pre-Test MDB Positioned Against Vehicle (right side)

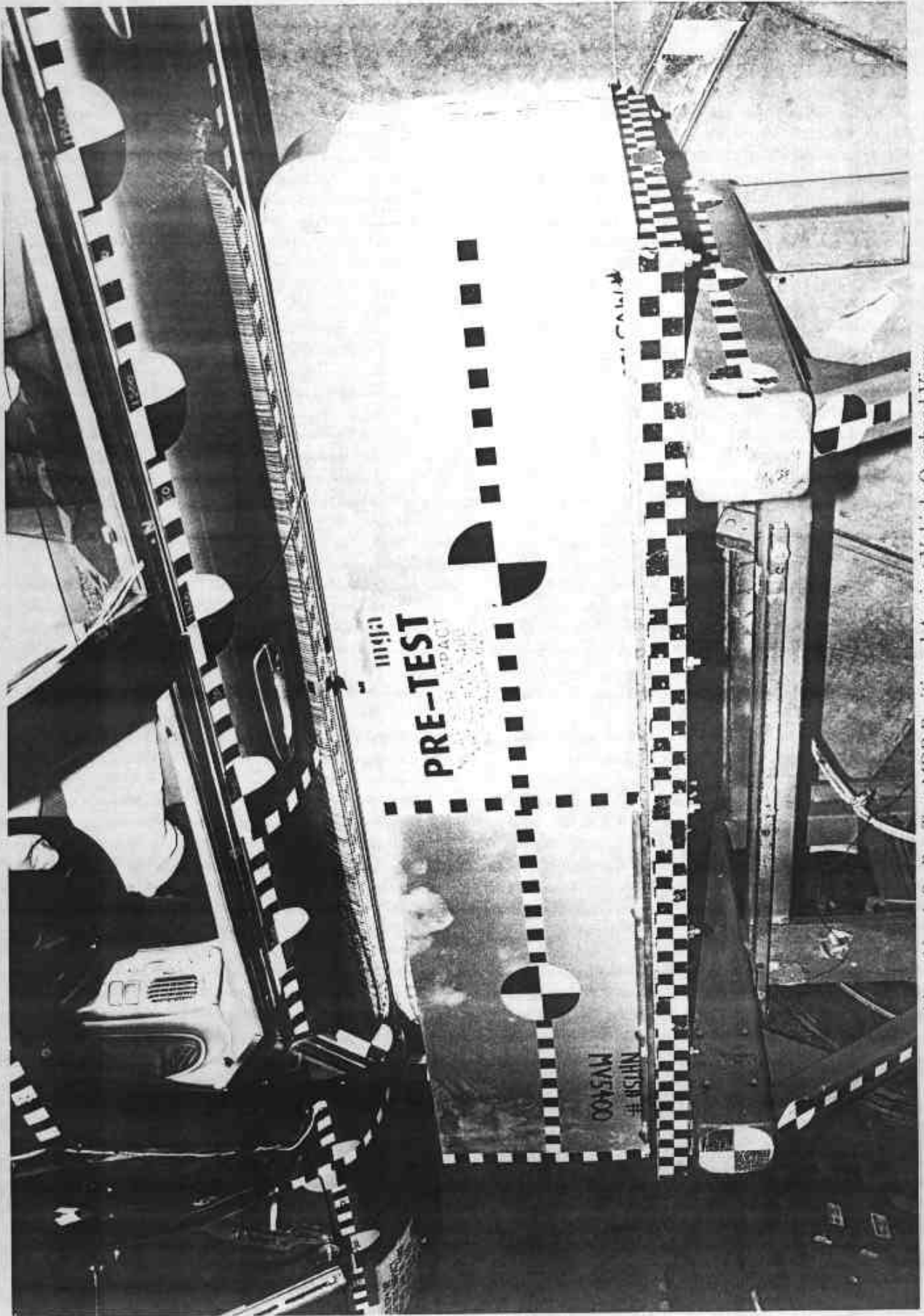


Photo No. A-9 - Pre-Test MDB Positioned Against Vehicle Overhead View

A-9

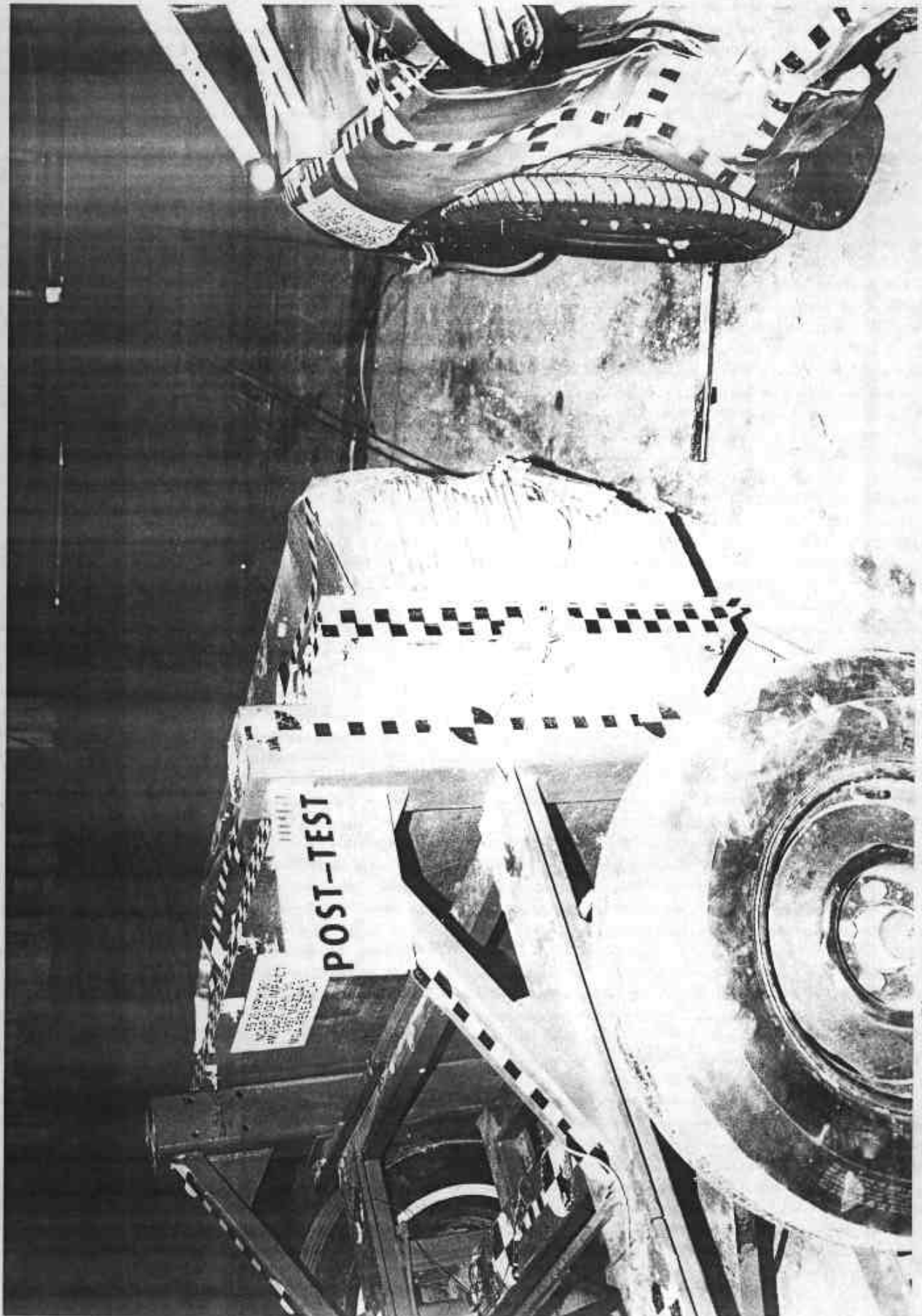


Photo No. A-10 - Post-Test MDB Positioned Against Vehicle (right side)

A-10

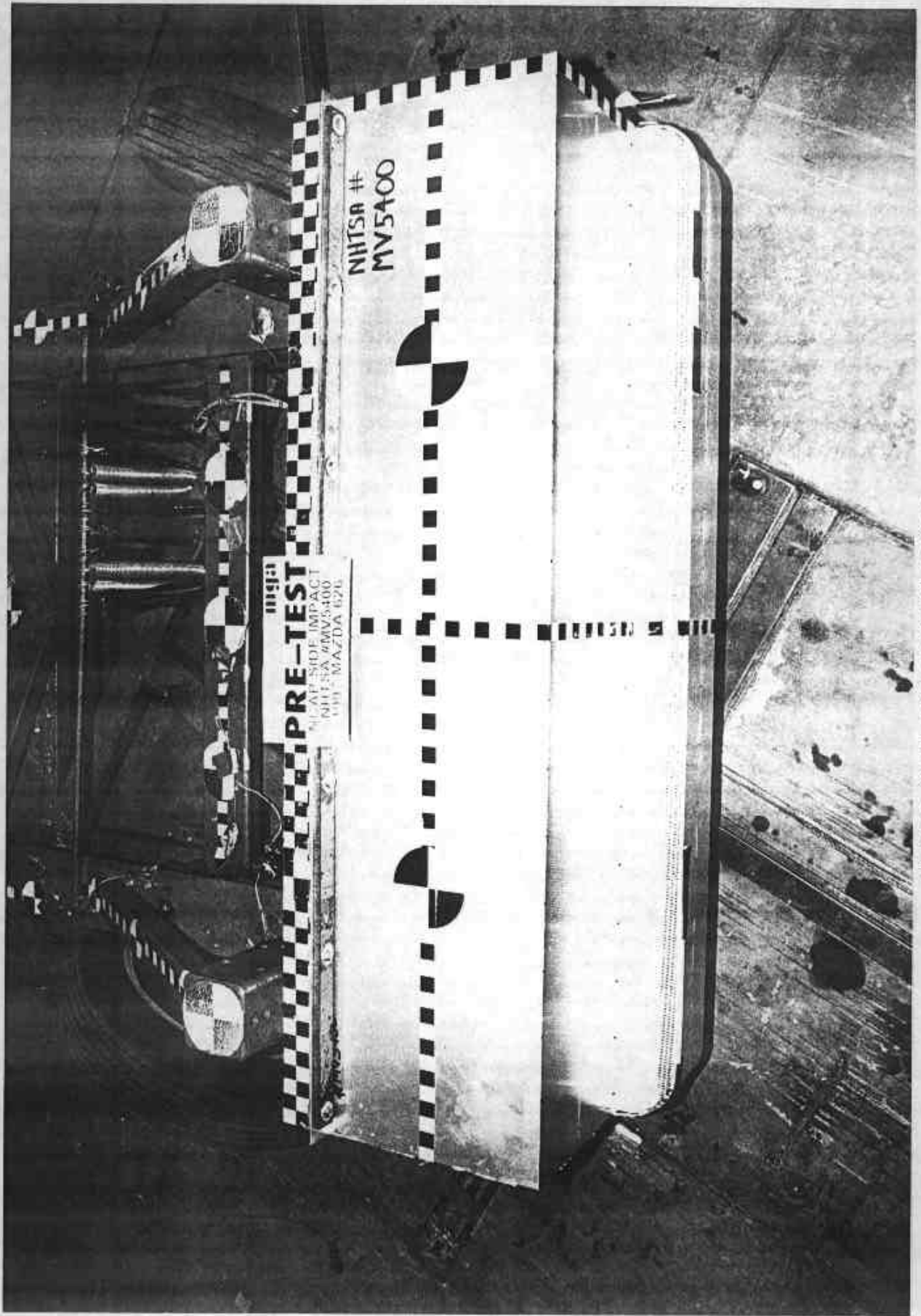


Photo No. A-11 - Pre-Test MDB Top View

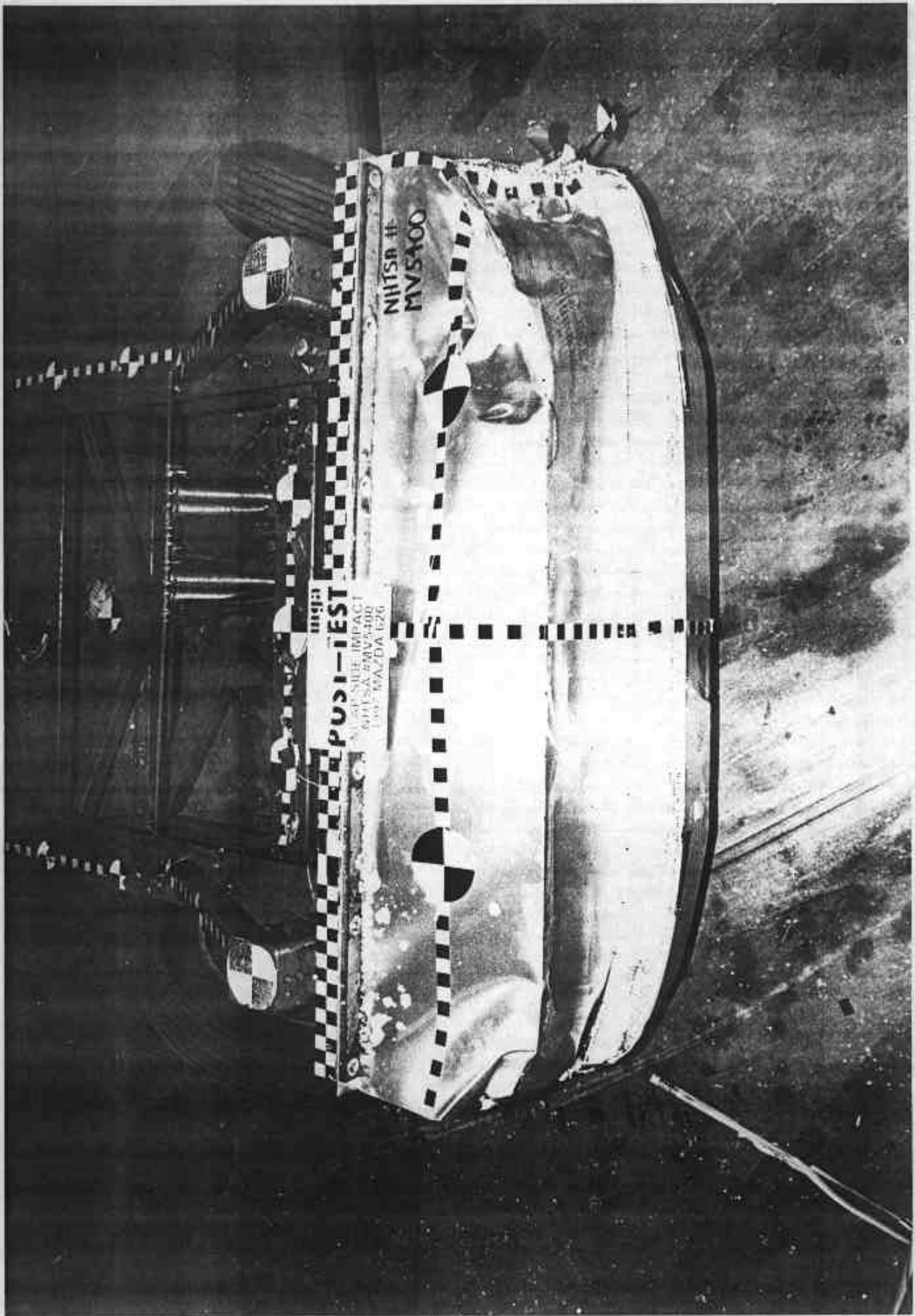
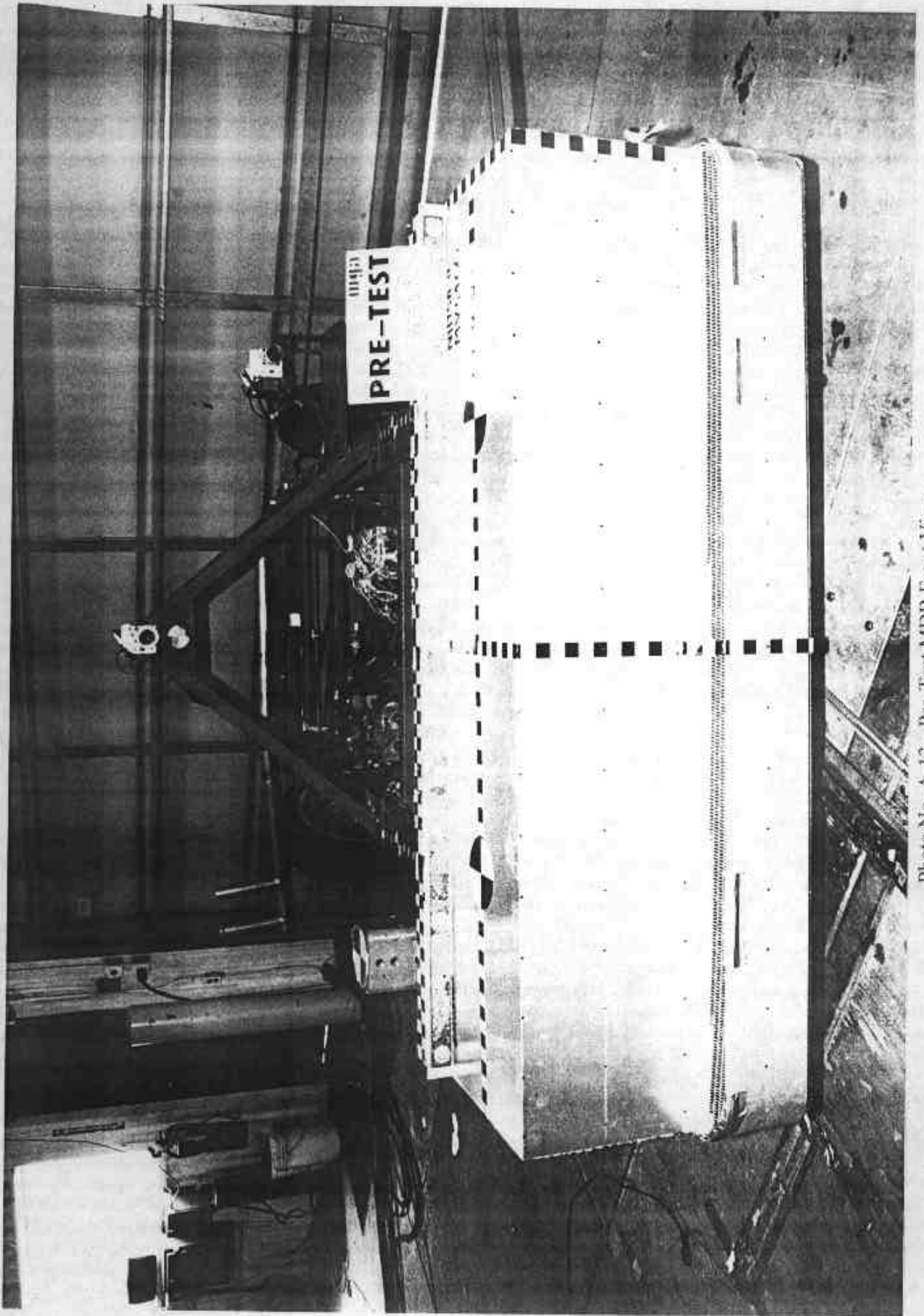


Photo No. A-12 - Post-Test MDB Top View

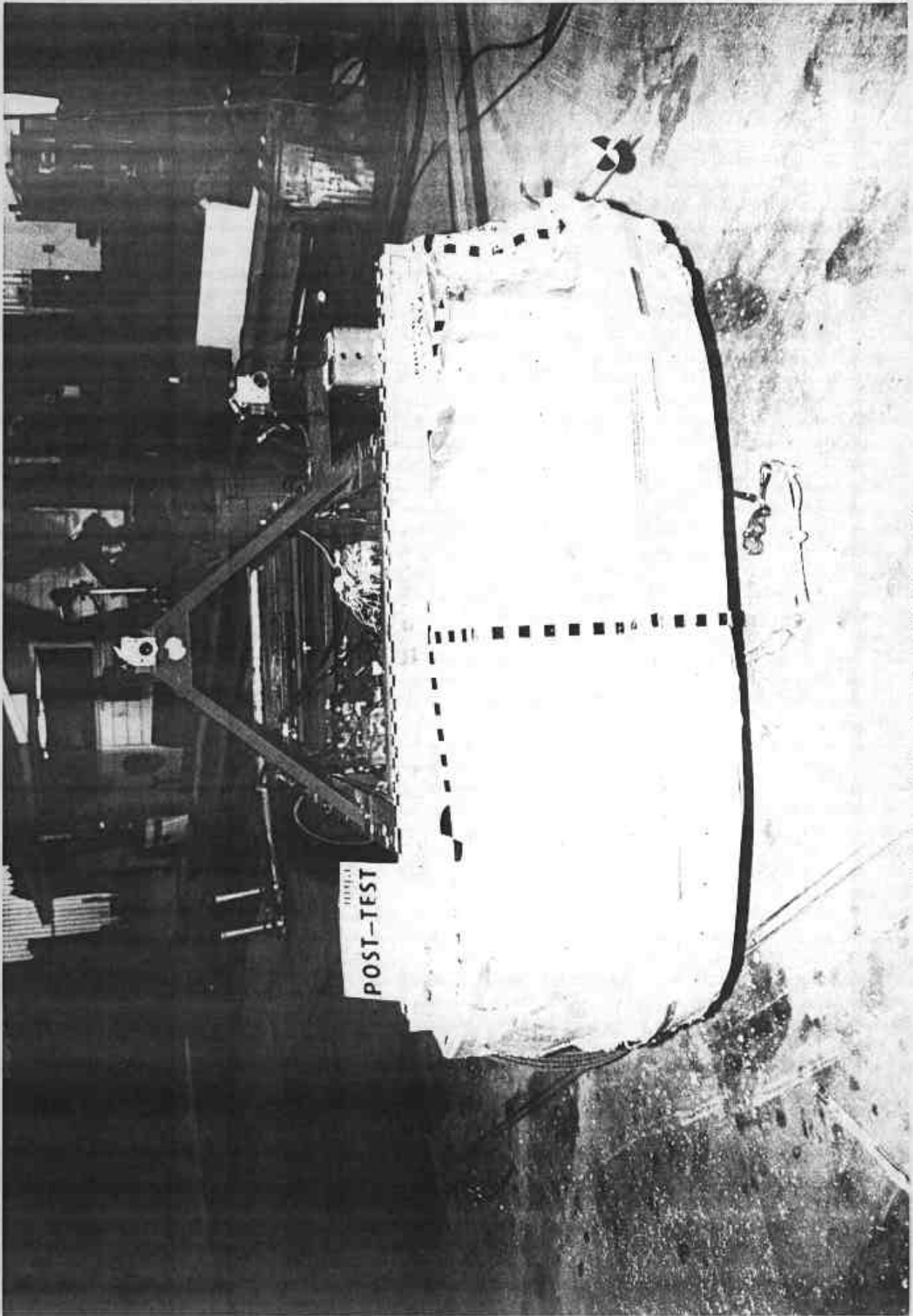
A-12



1114131
PRE-TEST

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

A-13



A-14

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

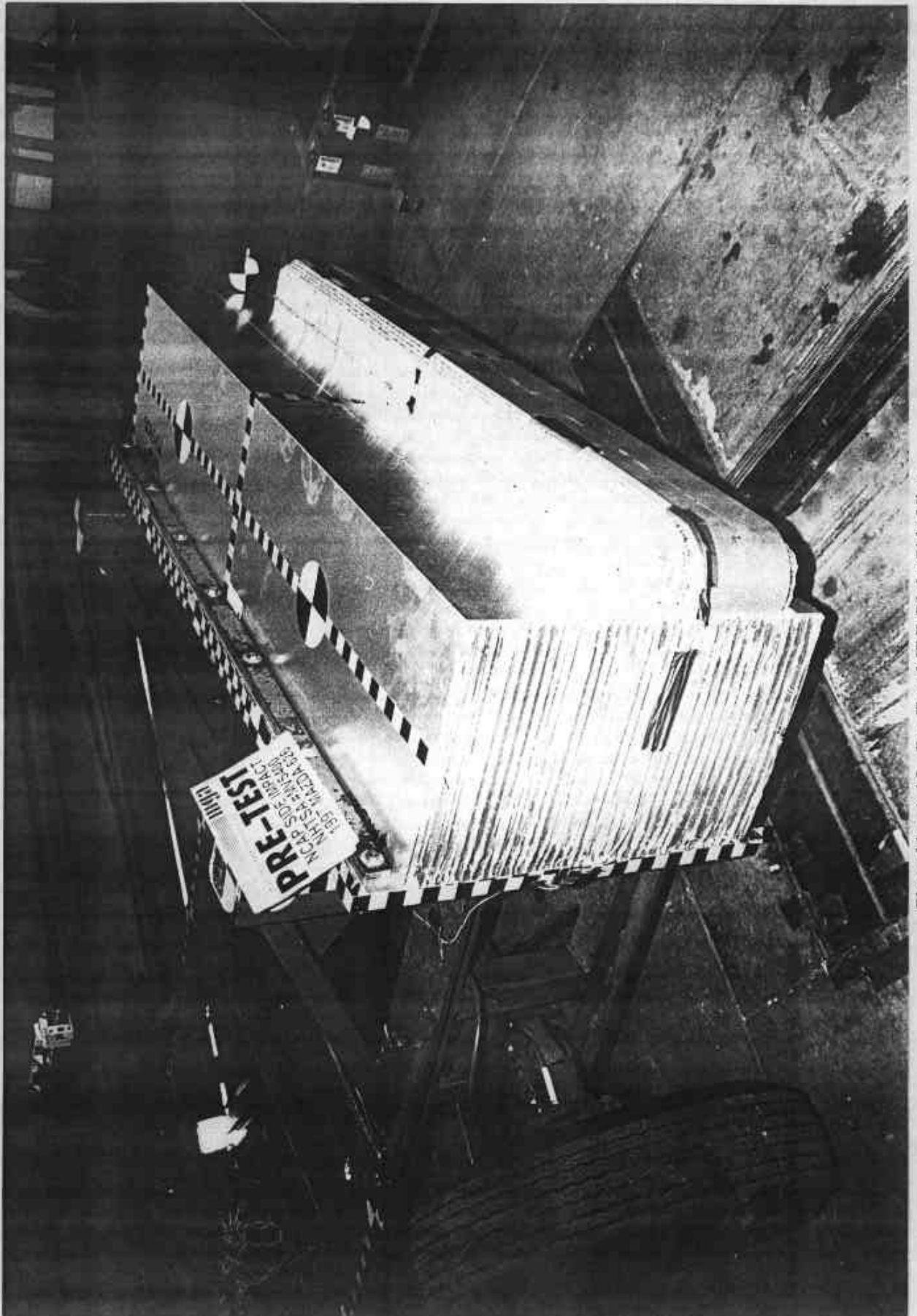


Photo No. A-15 - Pre-Test MDB Right Side View

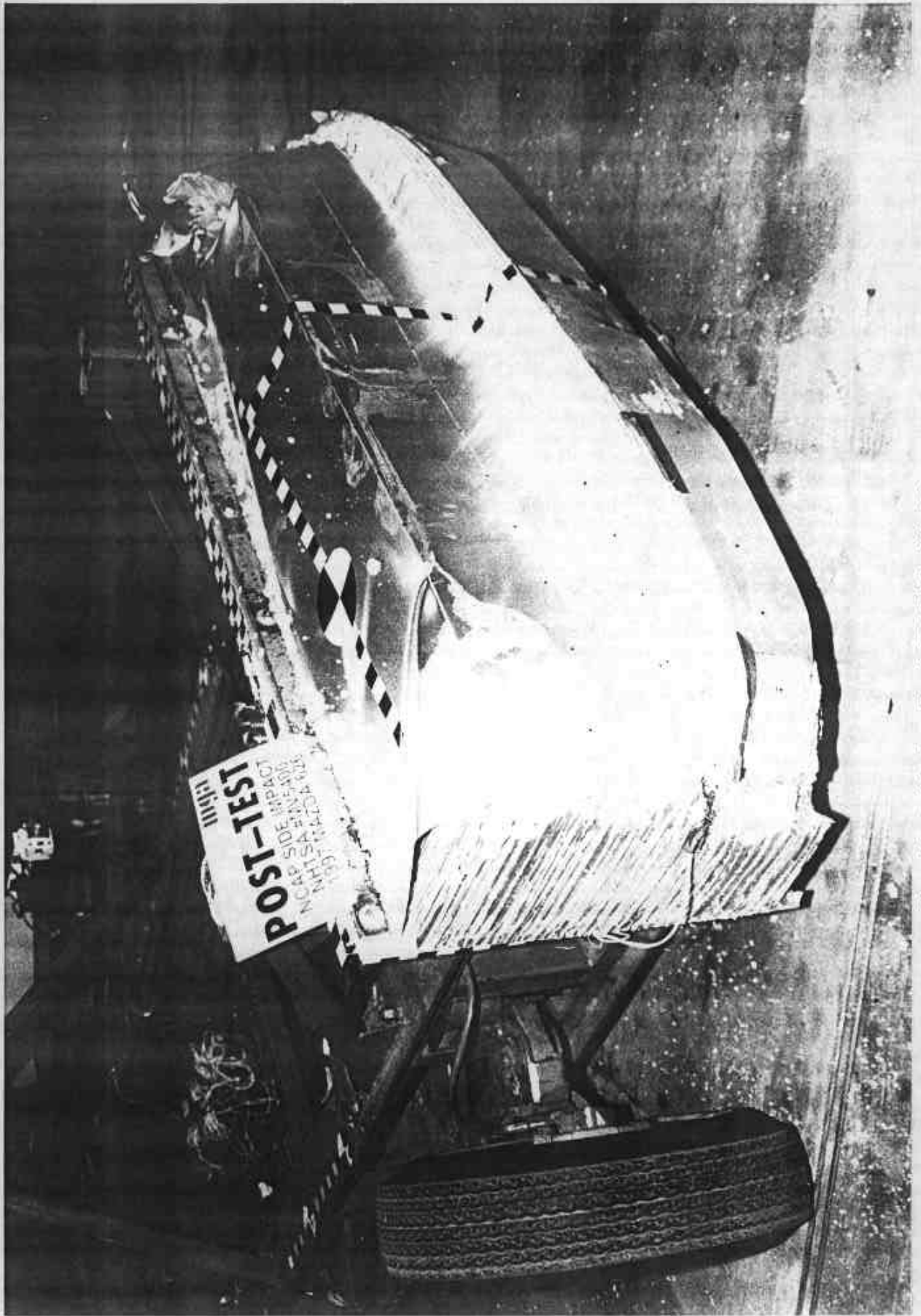


Photo No. A-16 - Post-Test MDB Right Side View

A-16

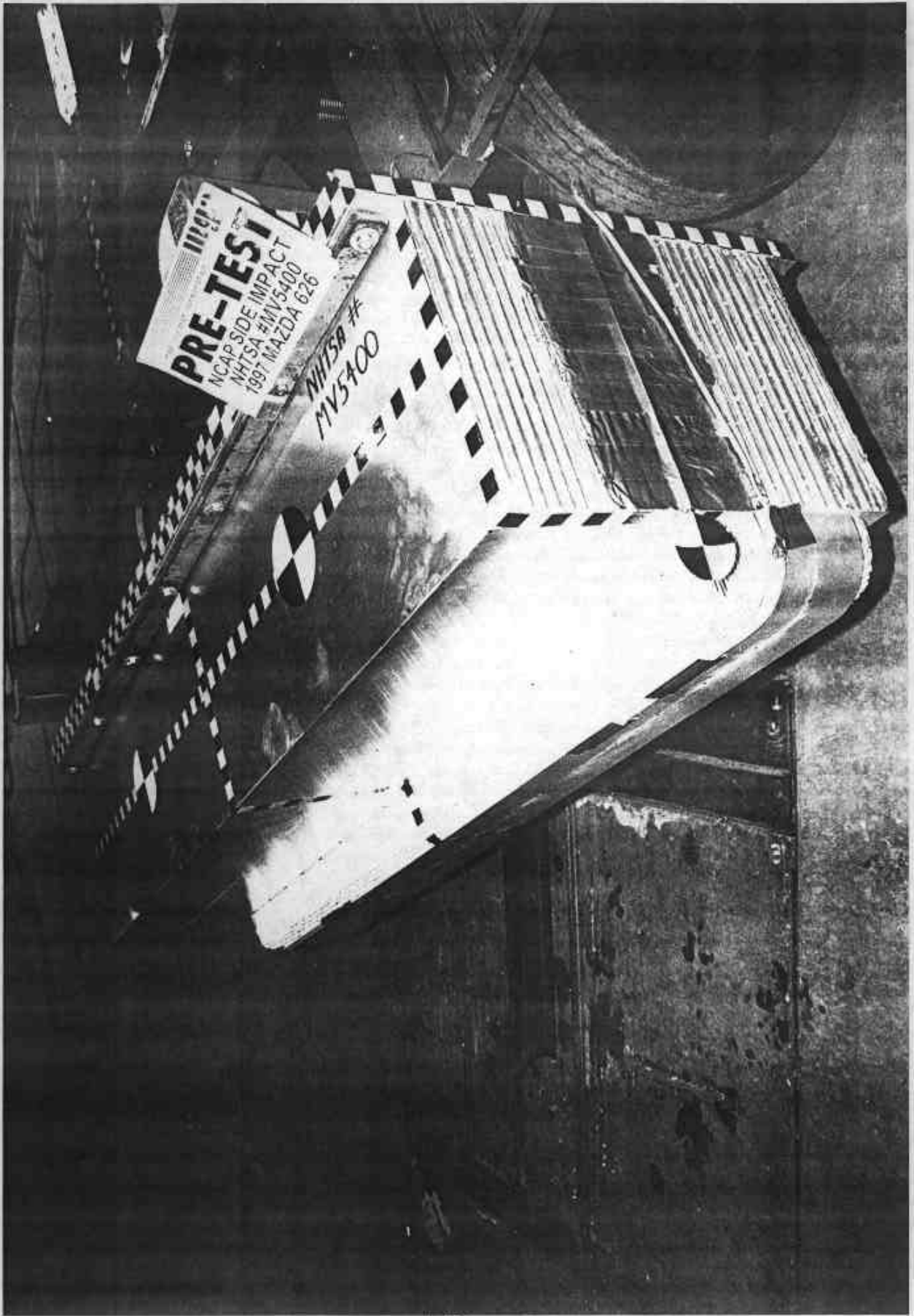


Photo No. A-17 - Pre-Test MDB Left Side View

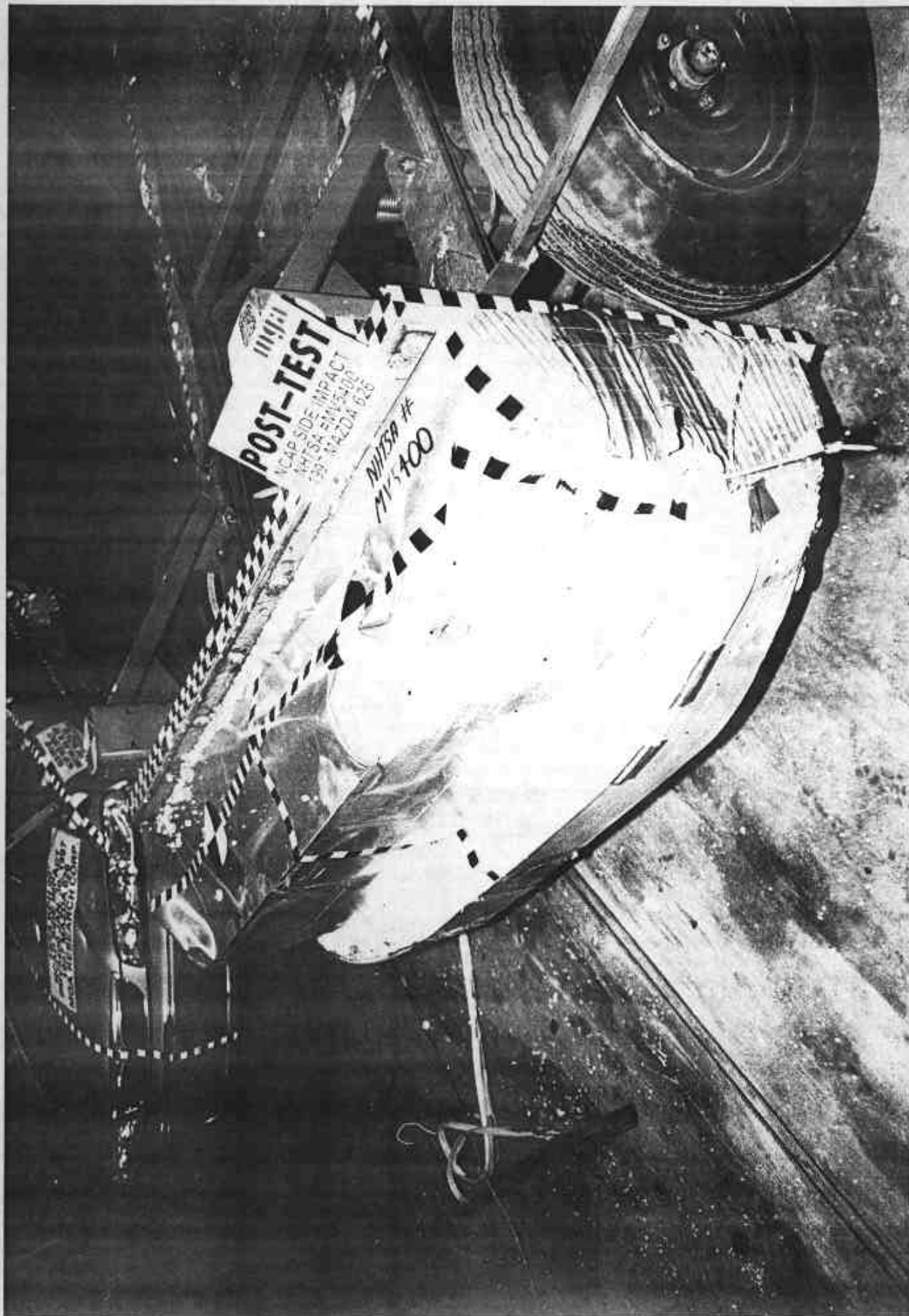


Photo No. A-18 - Post-Test MDB Left Side View

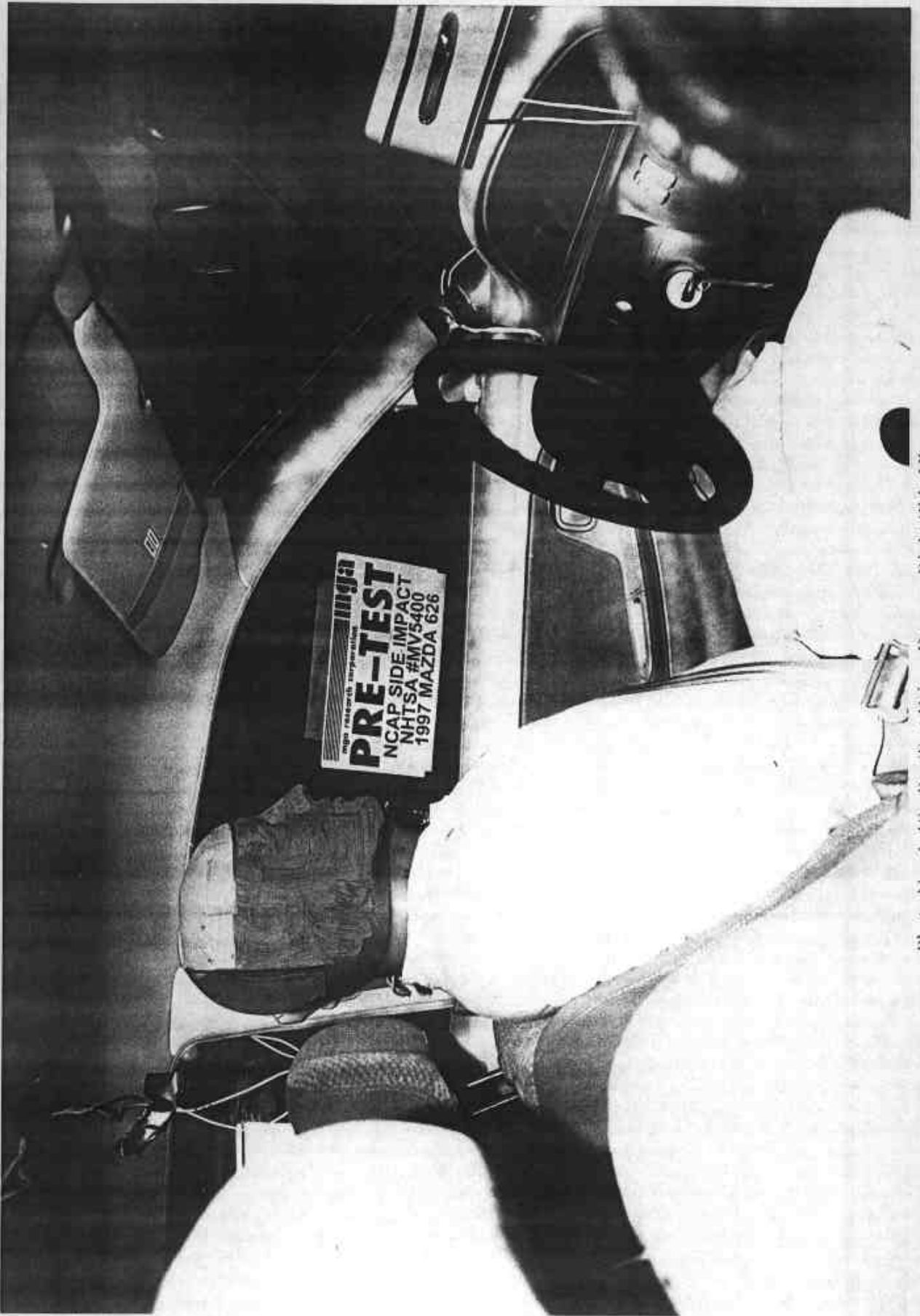
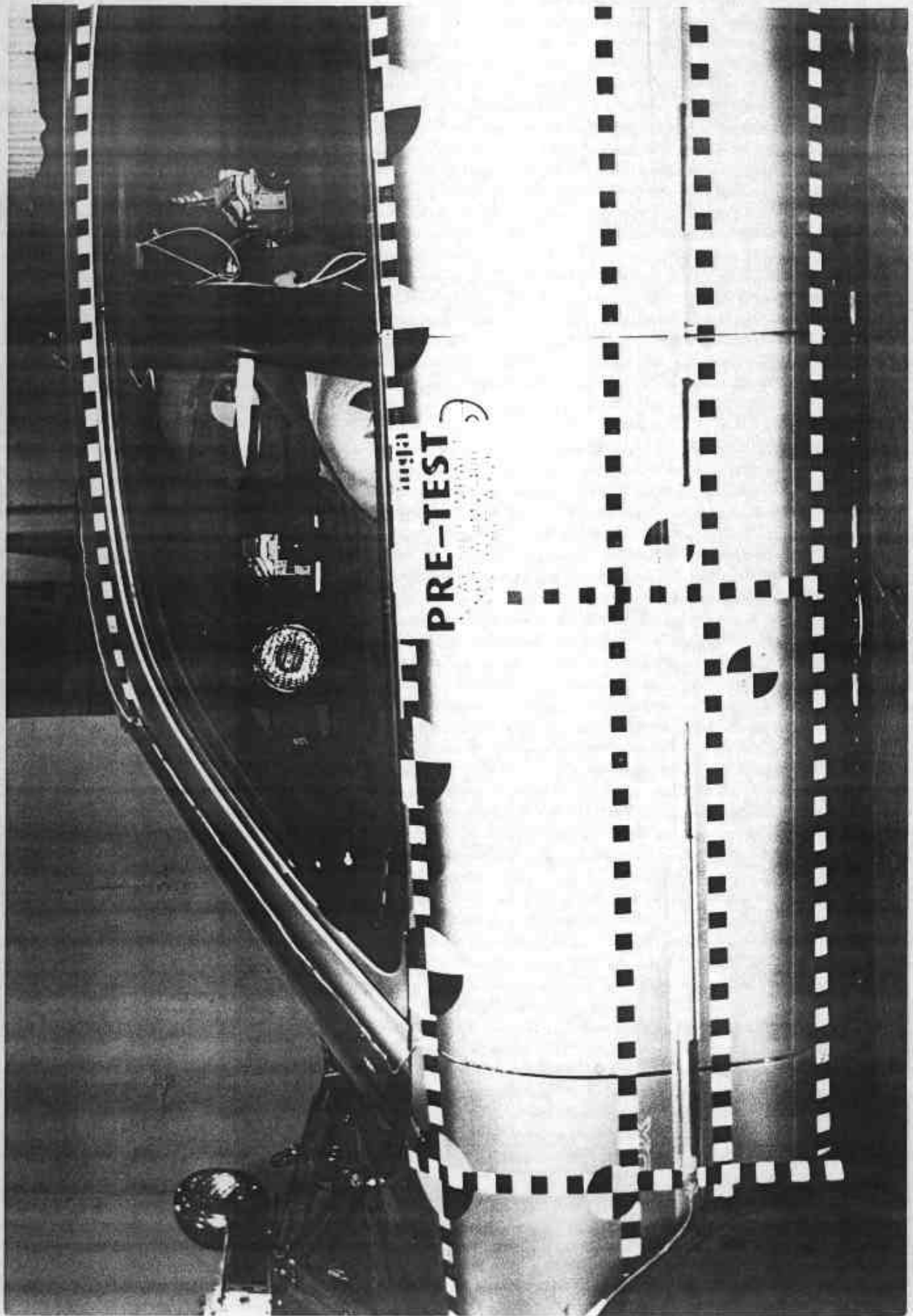


Photo No. A-19 - Pre-Test Driver Dummy Right Side View



Photo No. A-20 - Post-Test Driver Dummy Right Side View

A-20



A-21

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

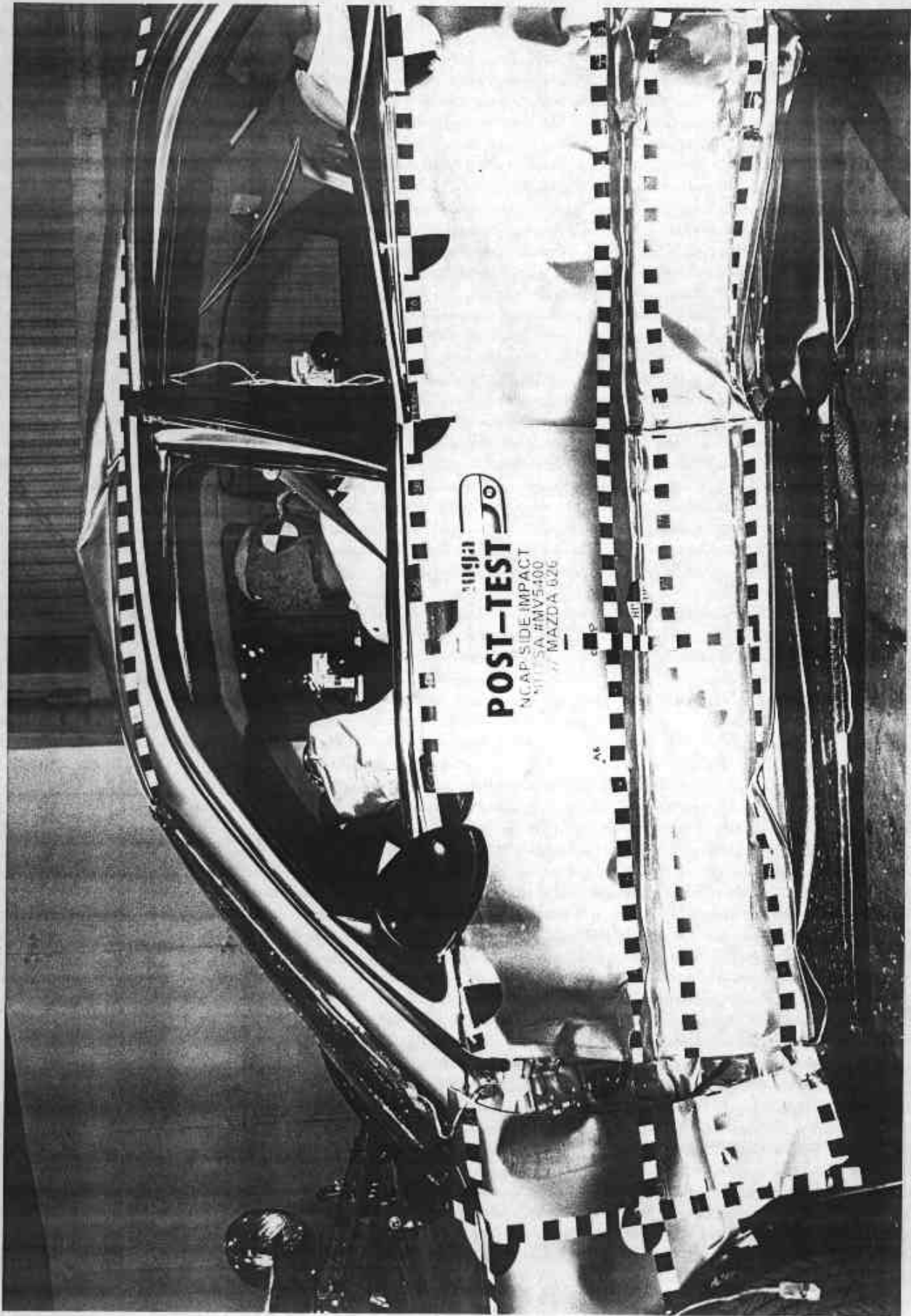
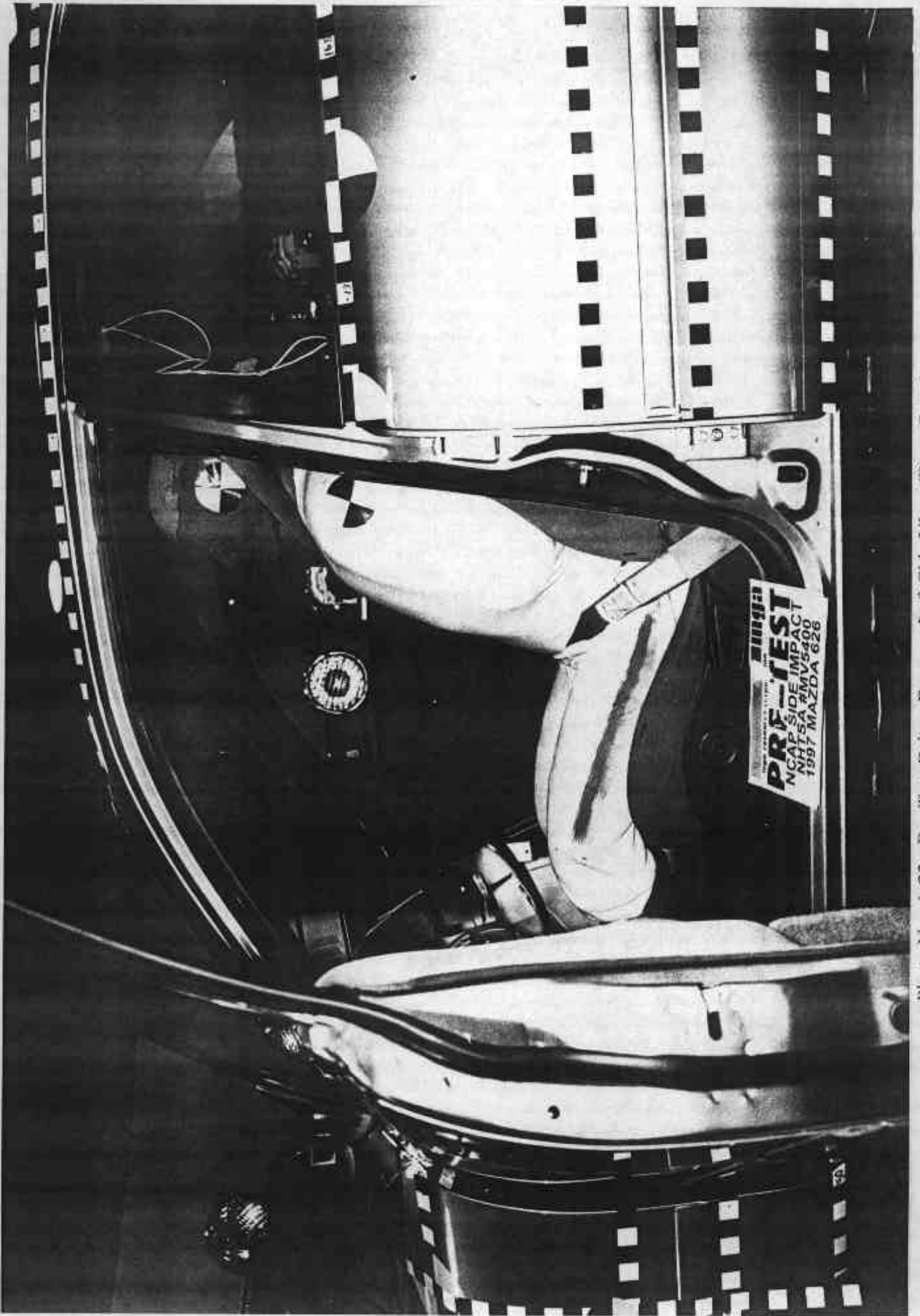
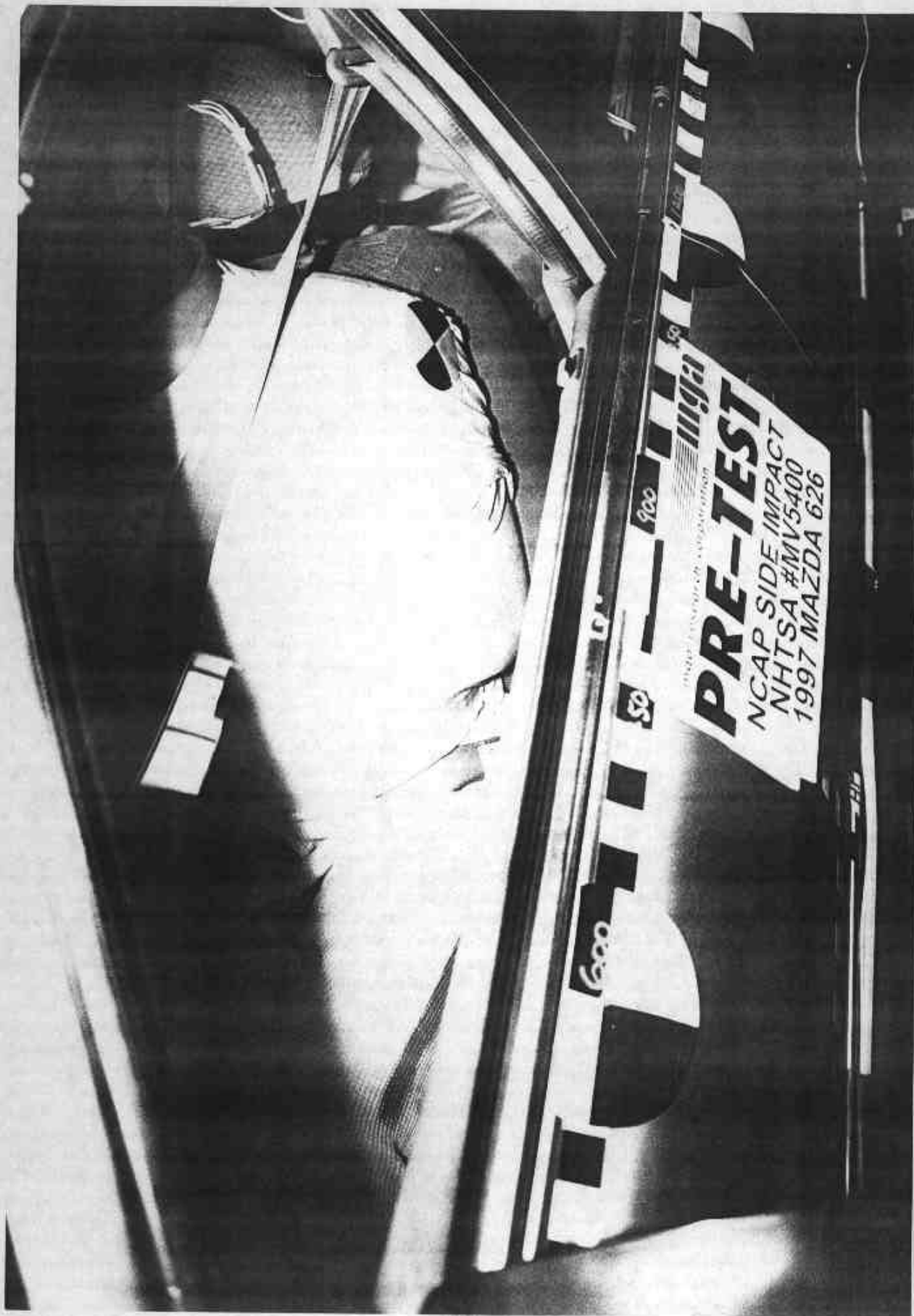


Photo No. A-22 - Post-Test Driver Dummy Left Side View



A-23

Photo No. A-23 - Pre-Test Driver Dummy Left Side View (Door Open)



A-24

Photo No. A-24 - Pre-Test Driver Dummy Shoulder and Door Top View



A-25

Photo No. A-25 - Post-Test Driver Dummy Shoulder and Door Top View



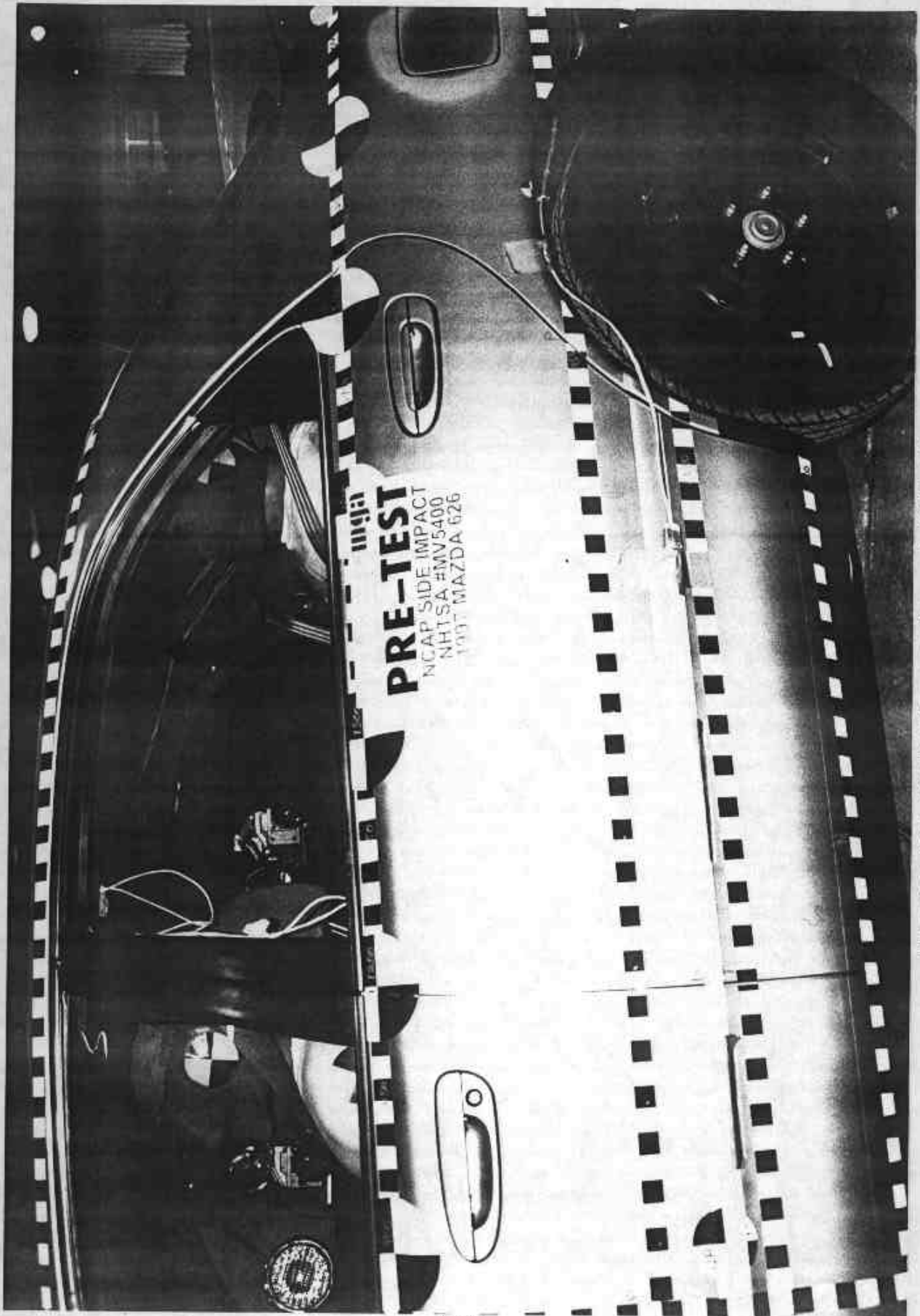
Photo No. A-26 - Post-Test Driver Dummy Contact



Photo No. A-27 - Pre-Test Passenger Dummy Right Side View



Photo No. A-28 - Post-Test Passenger Dummy Right Side View



A-29

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

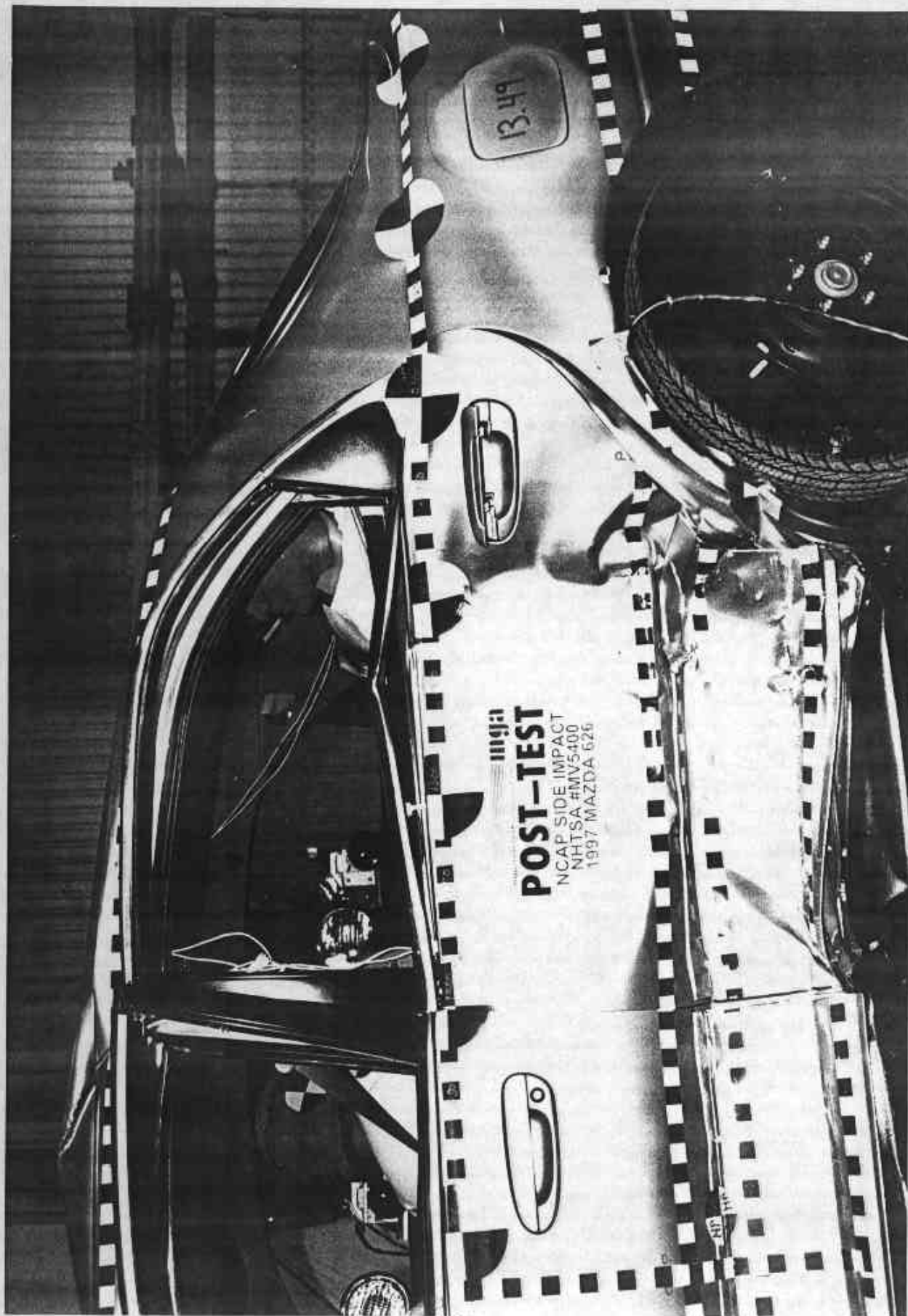


Photo No. A-30 - Post-Test Passenger Dummy Left Side View

A-30

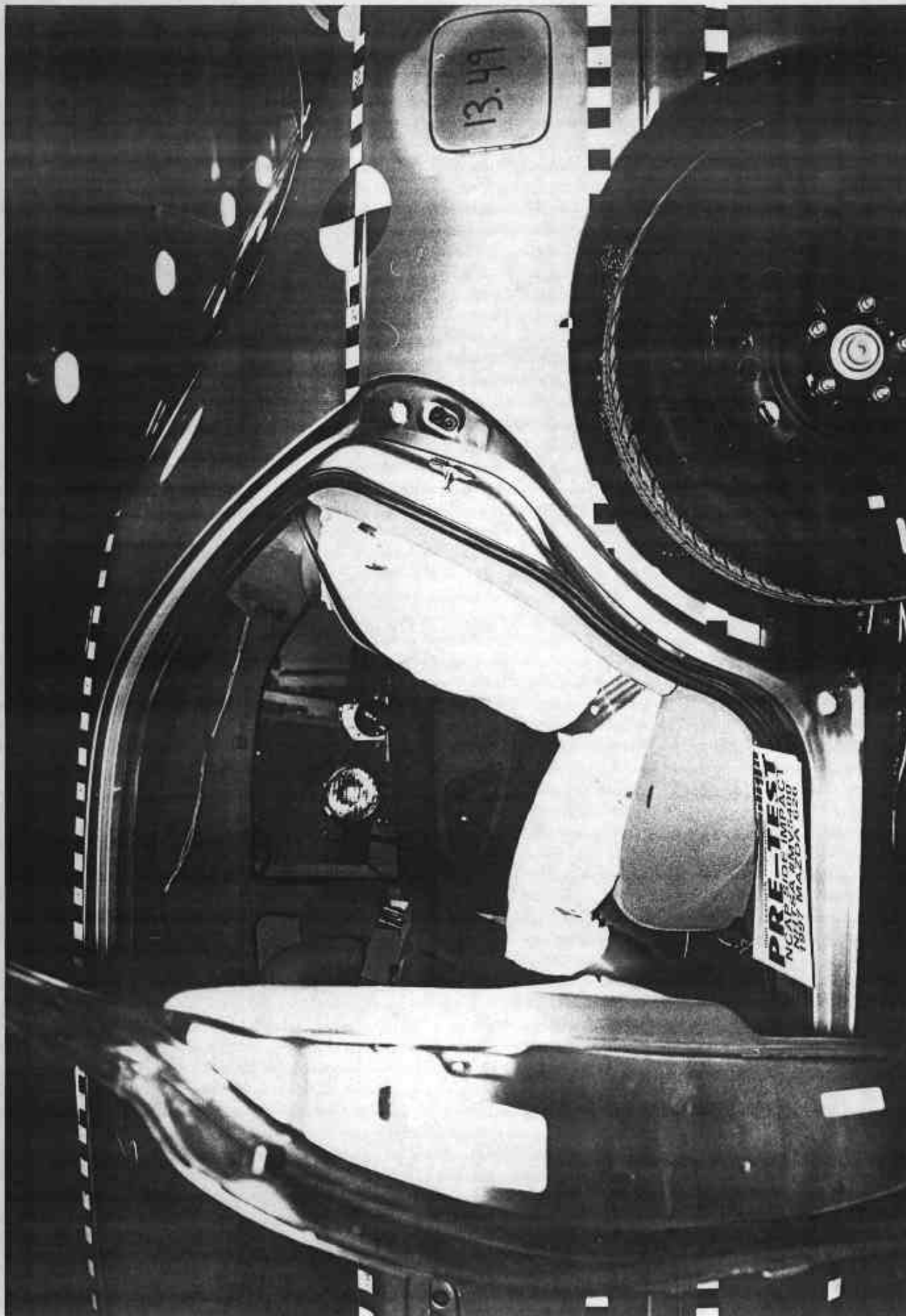
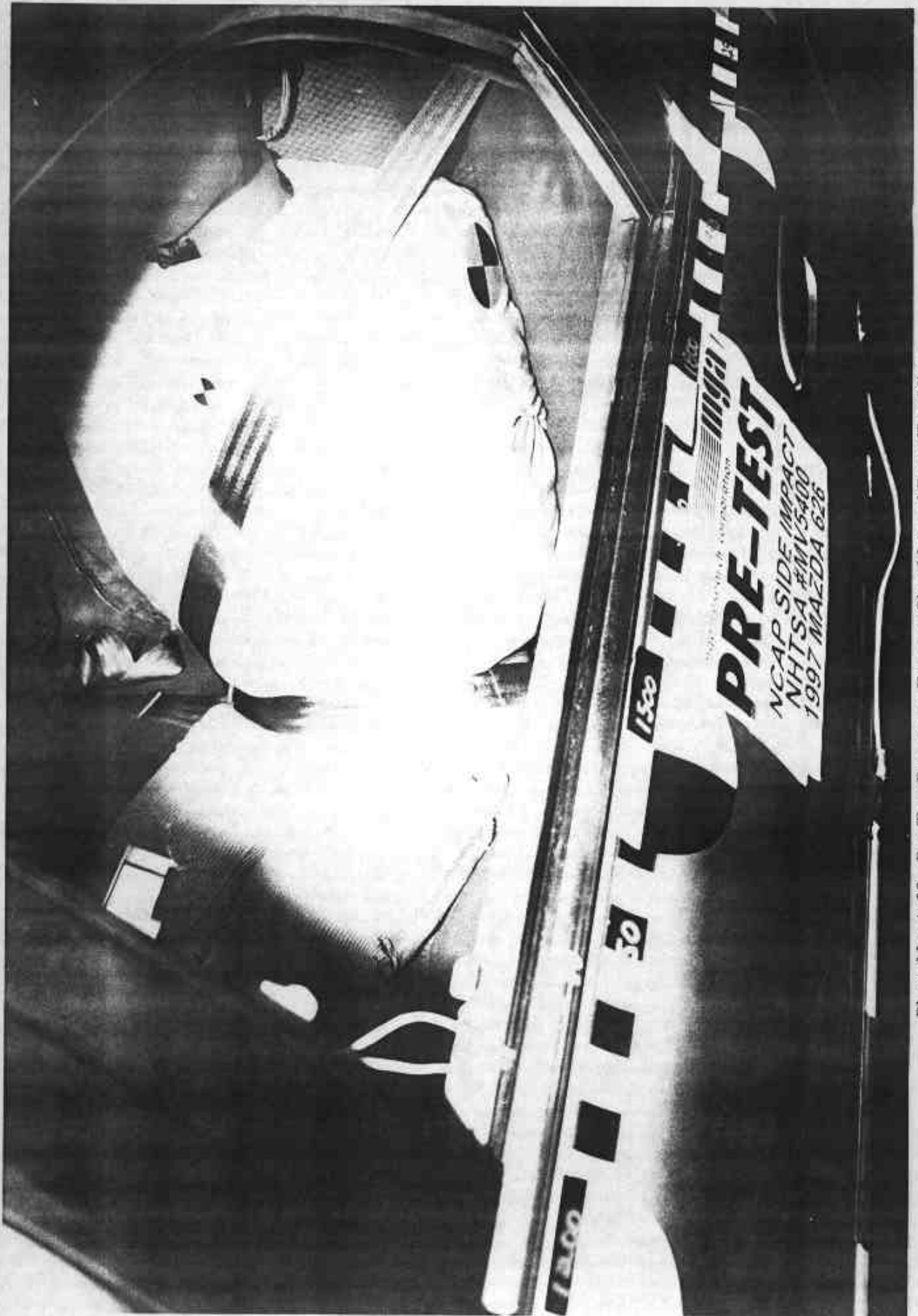


Photo No. A-31 - Pre-Test Passenger Dummy Left Side View (Door Open)

A-31



A-32

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

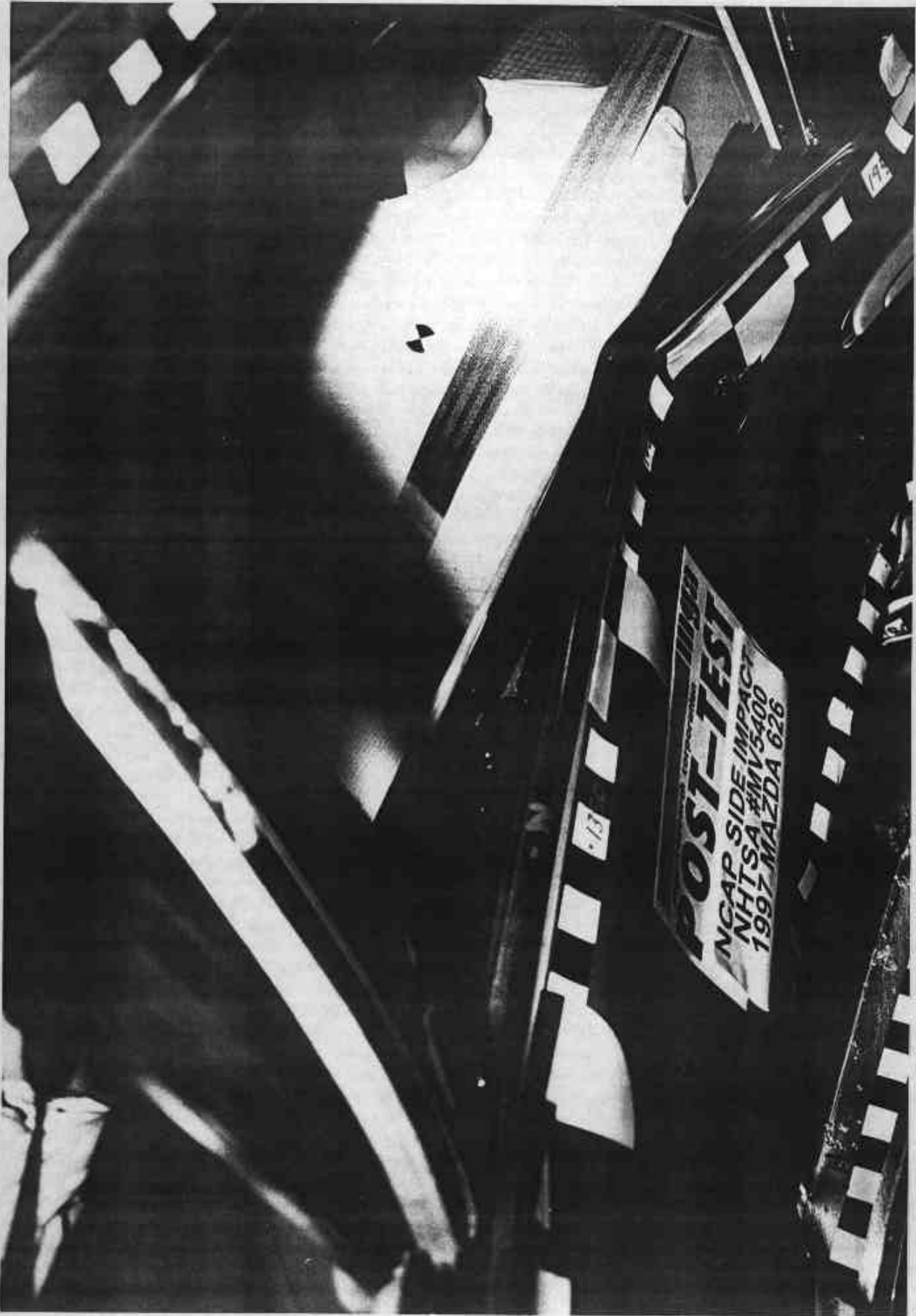


Photo No. A-33 - Post-Test Passenger Dummy Shoulder and Door Top View

A-33

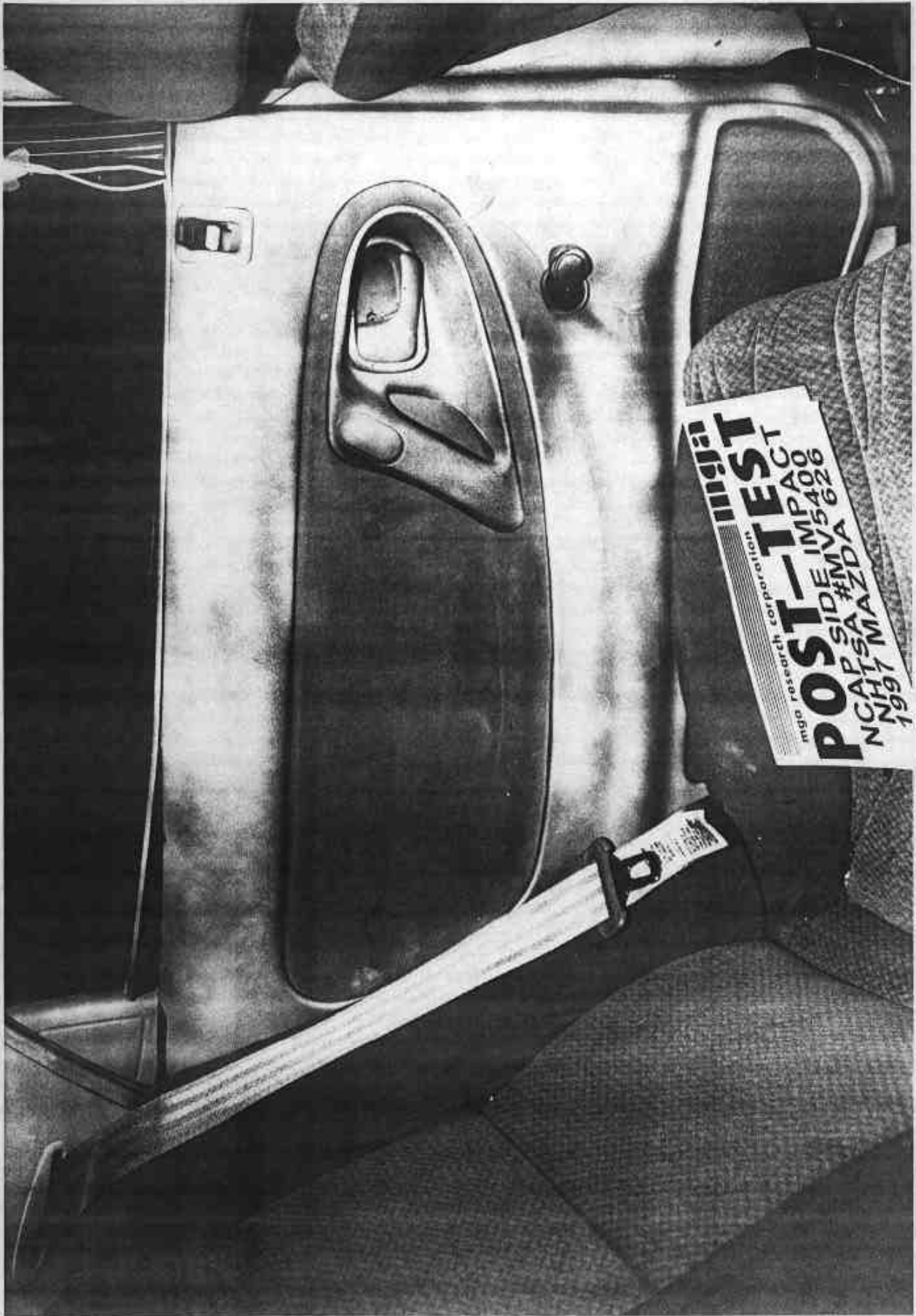


Photo No. A-34 - Post-Test Passenger Dummy Contact



A-35

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

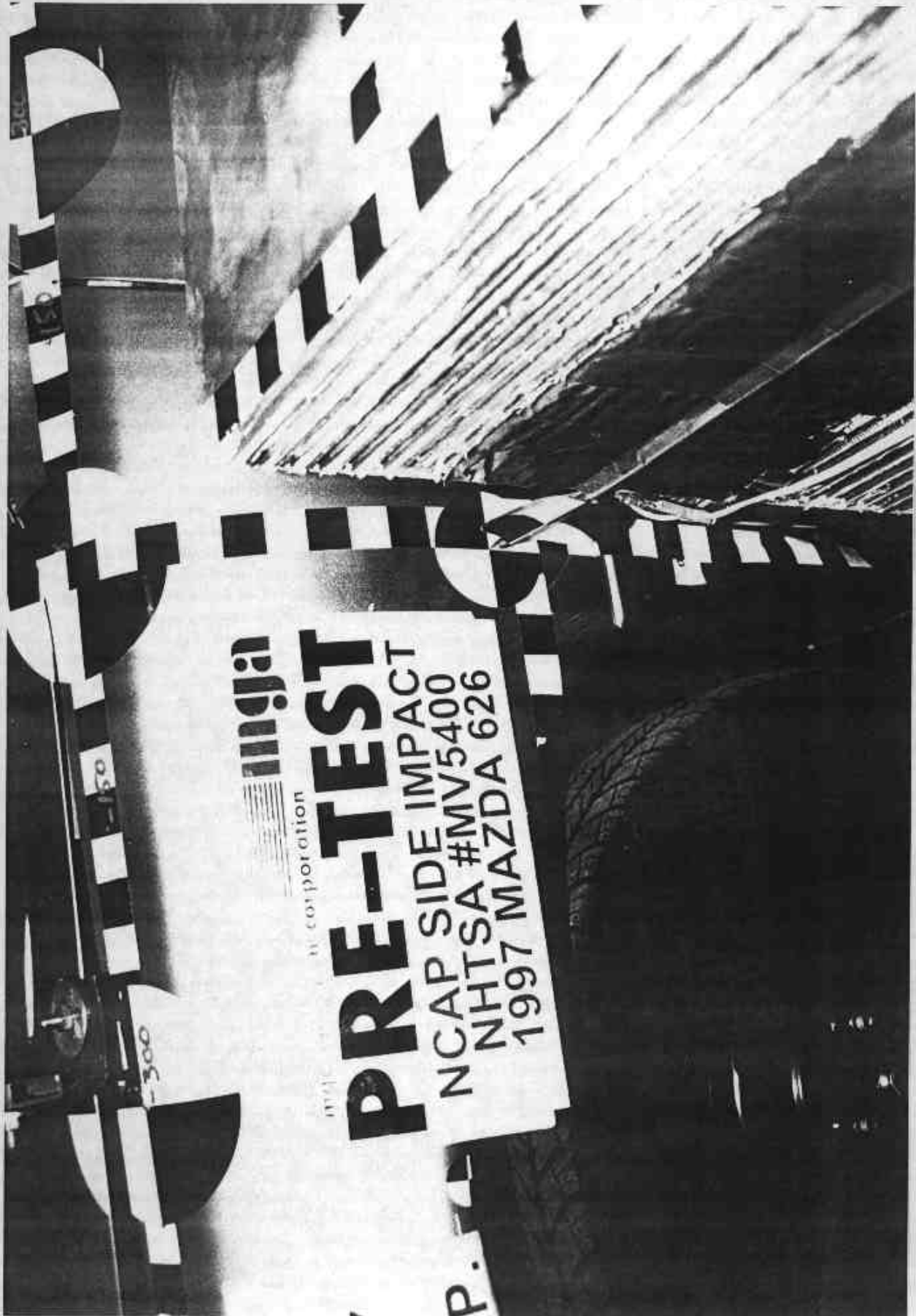


Photo No. A-36 - Pre-Test Left Front Impact Point on Vehicle



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POST-TEST

NCAP SIDE IMPACT

NHTSA #MV5400

1997 MAZDA 626

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

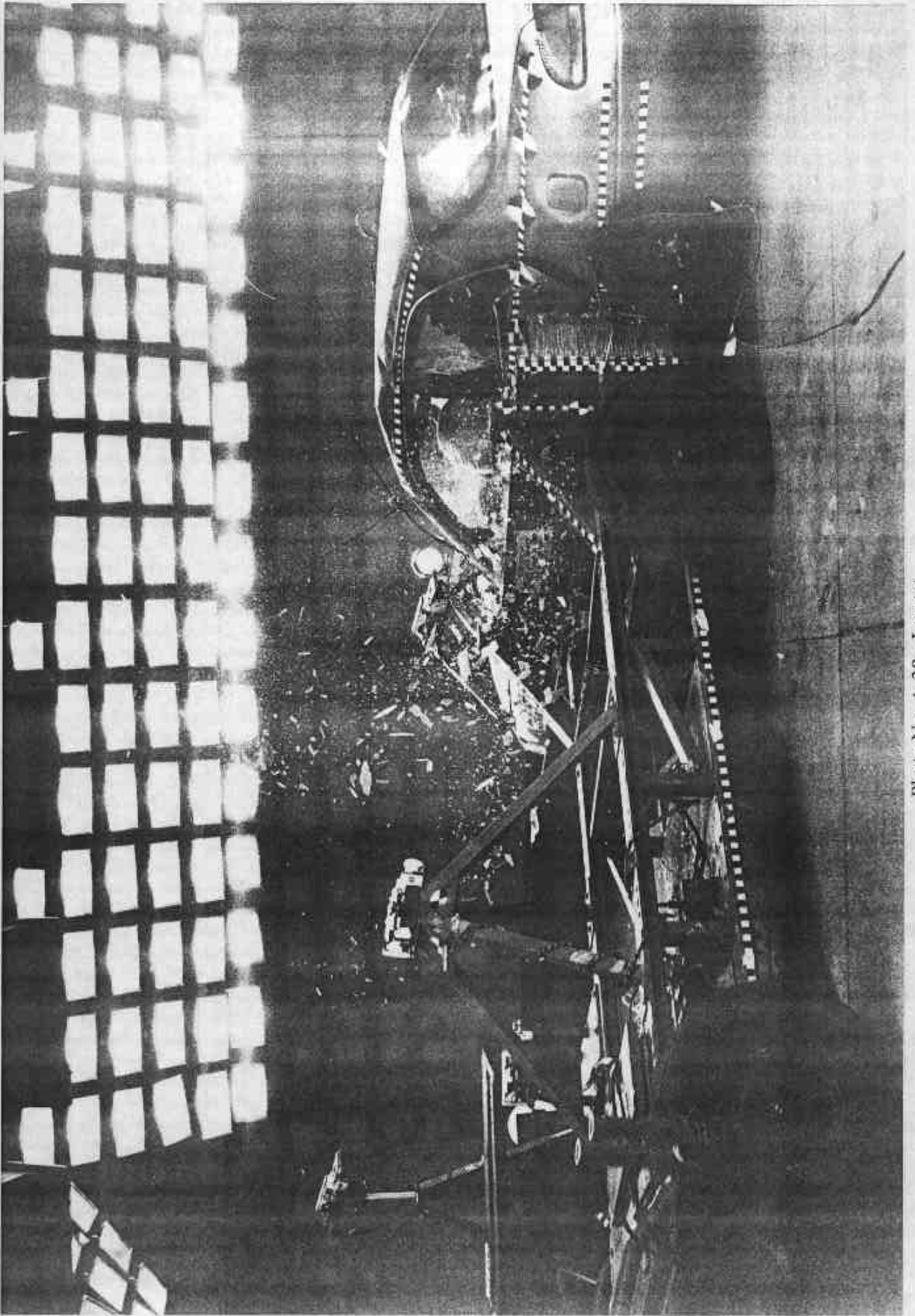


Photo No. A-38 - Impact

A-38

**MFD. BY AUTOALLIANCE
INTERNATIONAL, INC.**

DATE	GWR/PNBA	GAWR/PNBE FRT	GAWR/PNBE RR
09/03/96	3801 LB	2053 LB	1748 LB
	1724 KG	931 KG	793 KG

**THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY
, BUMPER, AND THEFT PREVENTION**

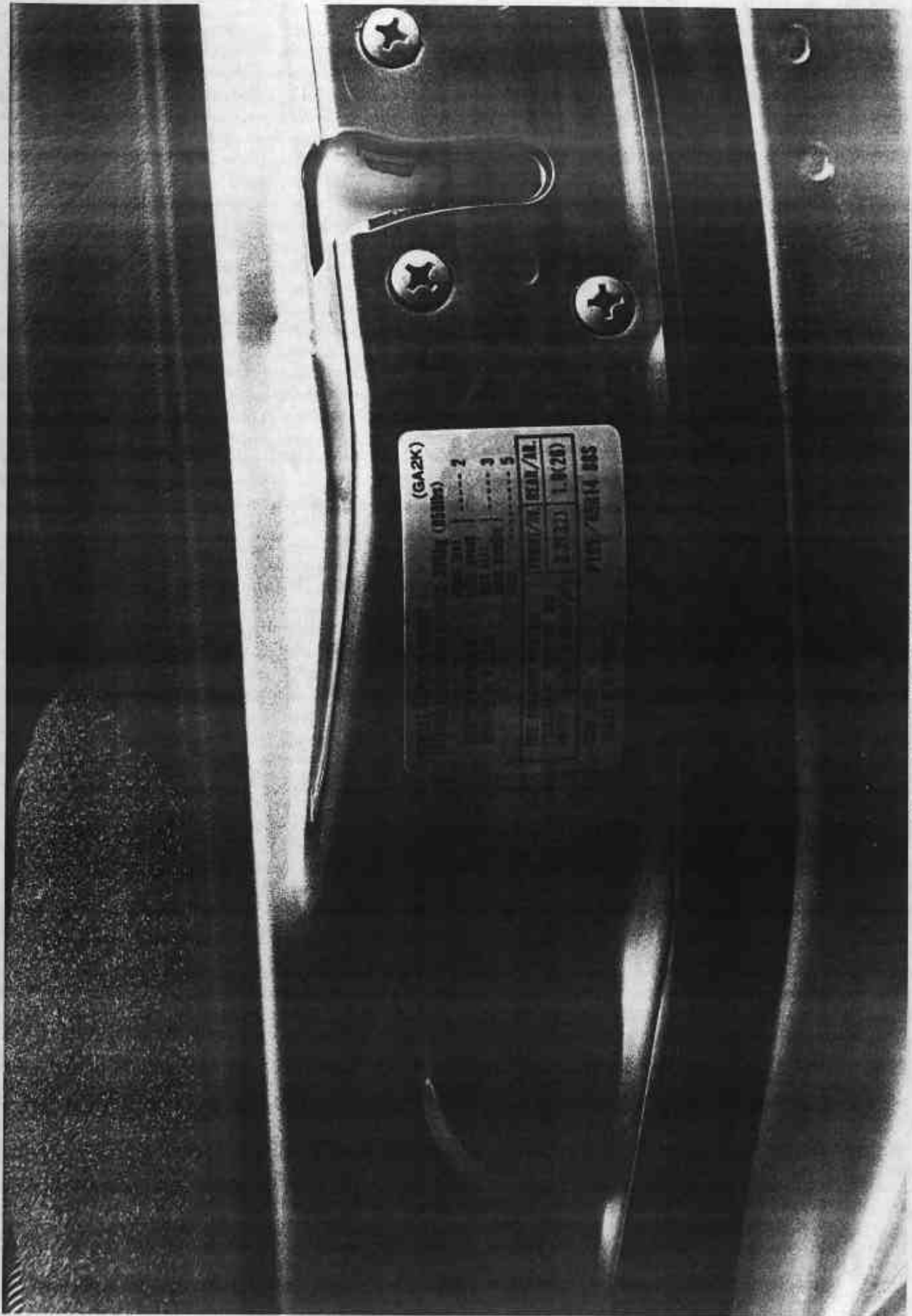
STANDARD IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.

1YVGE22C7V5606113 TYPE PASSENGER



BODY COLOR CODE;11F

MADE IN U.S.A.



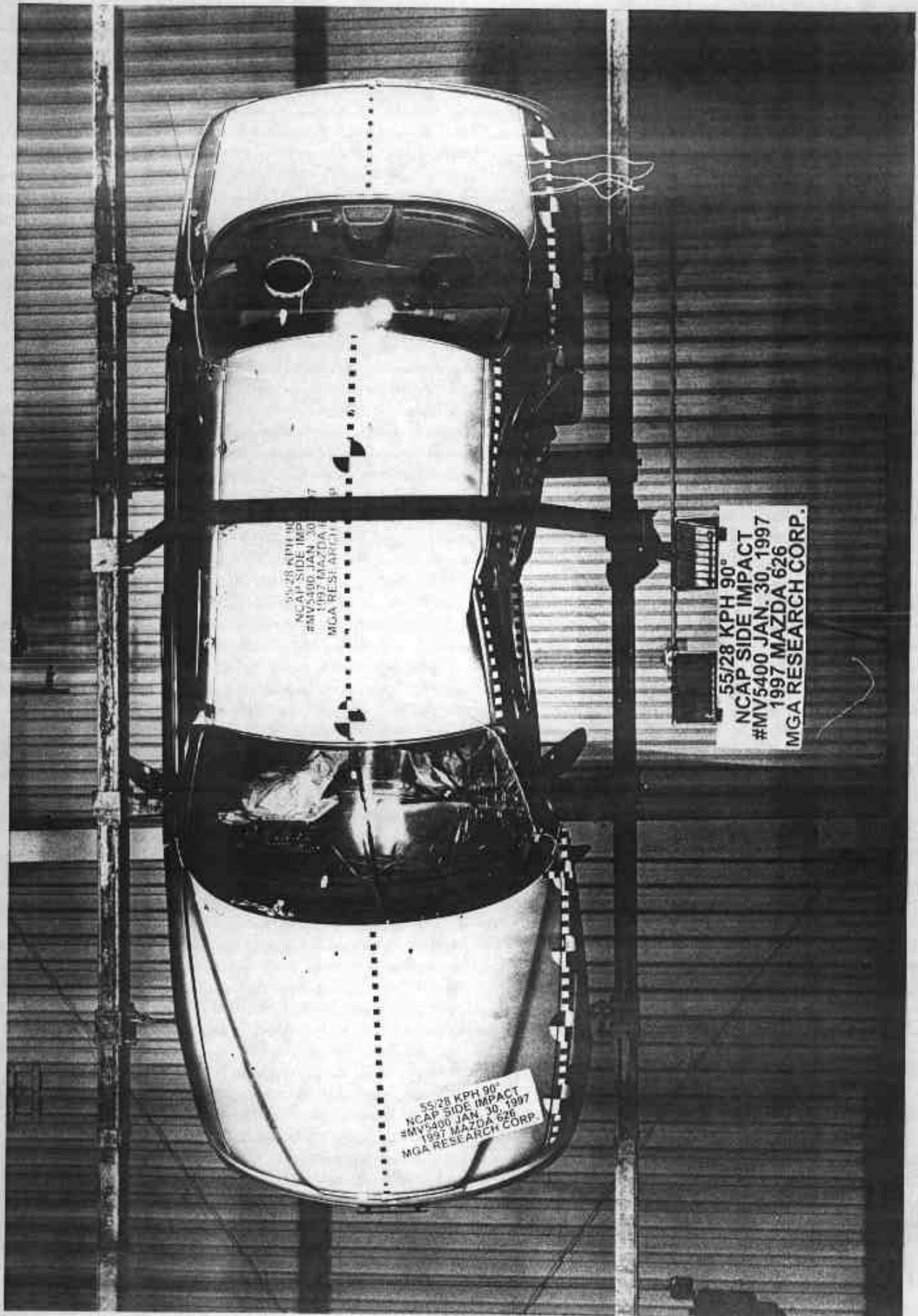
(GA2K)

FRONT/FR REAR/RL

PSI	TREAD
2.3(23)	1.9(20)

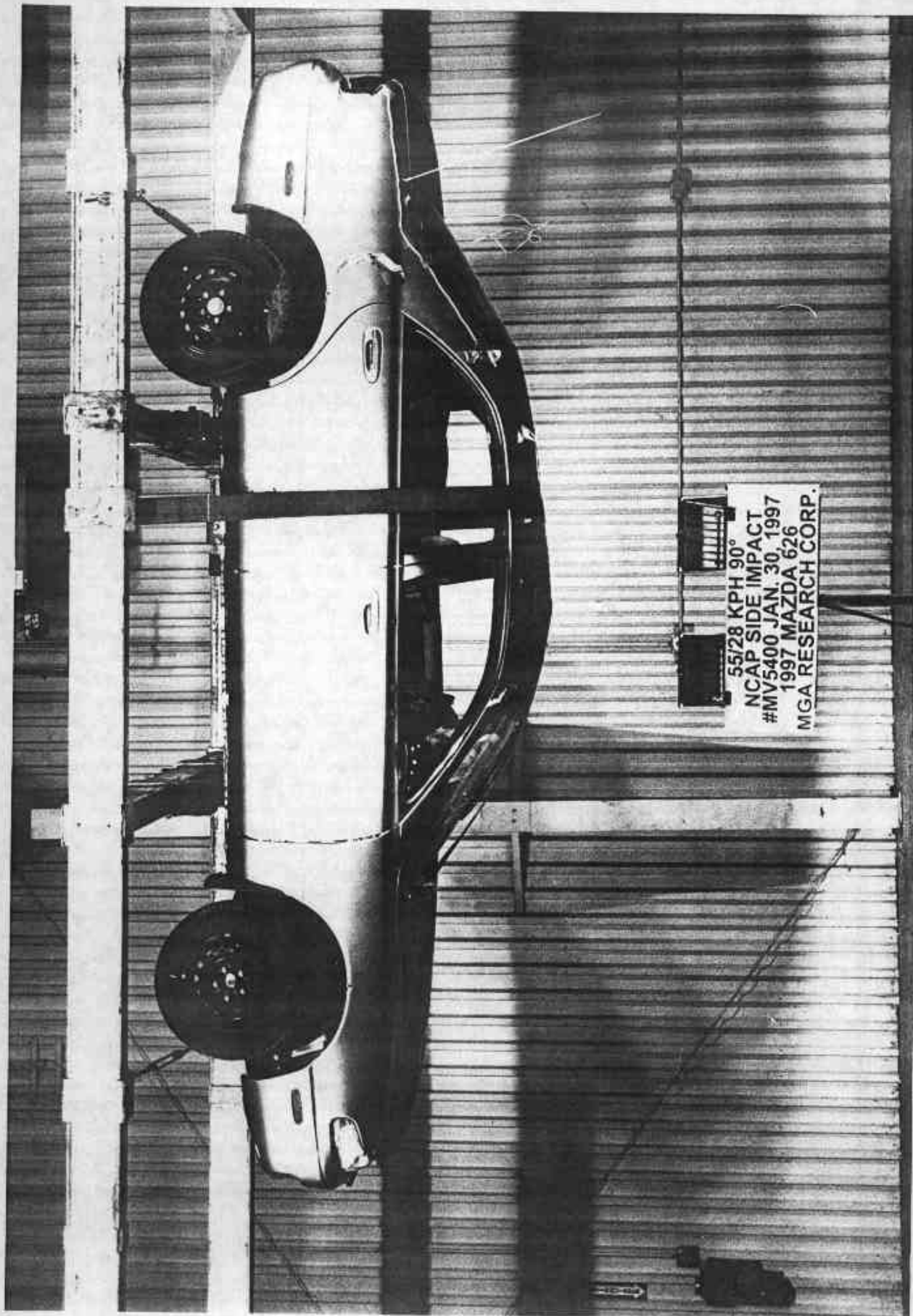
715X/55R14 5BS

Photo No. A-40 - Tire Placard



A-41

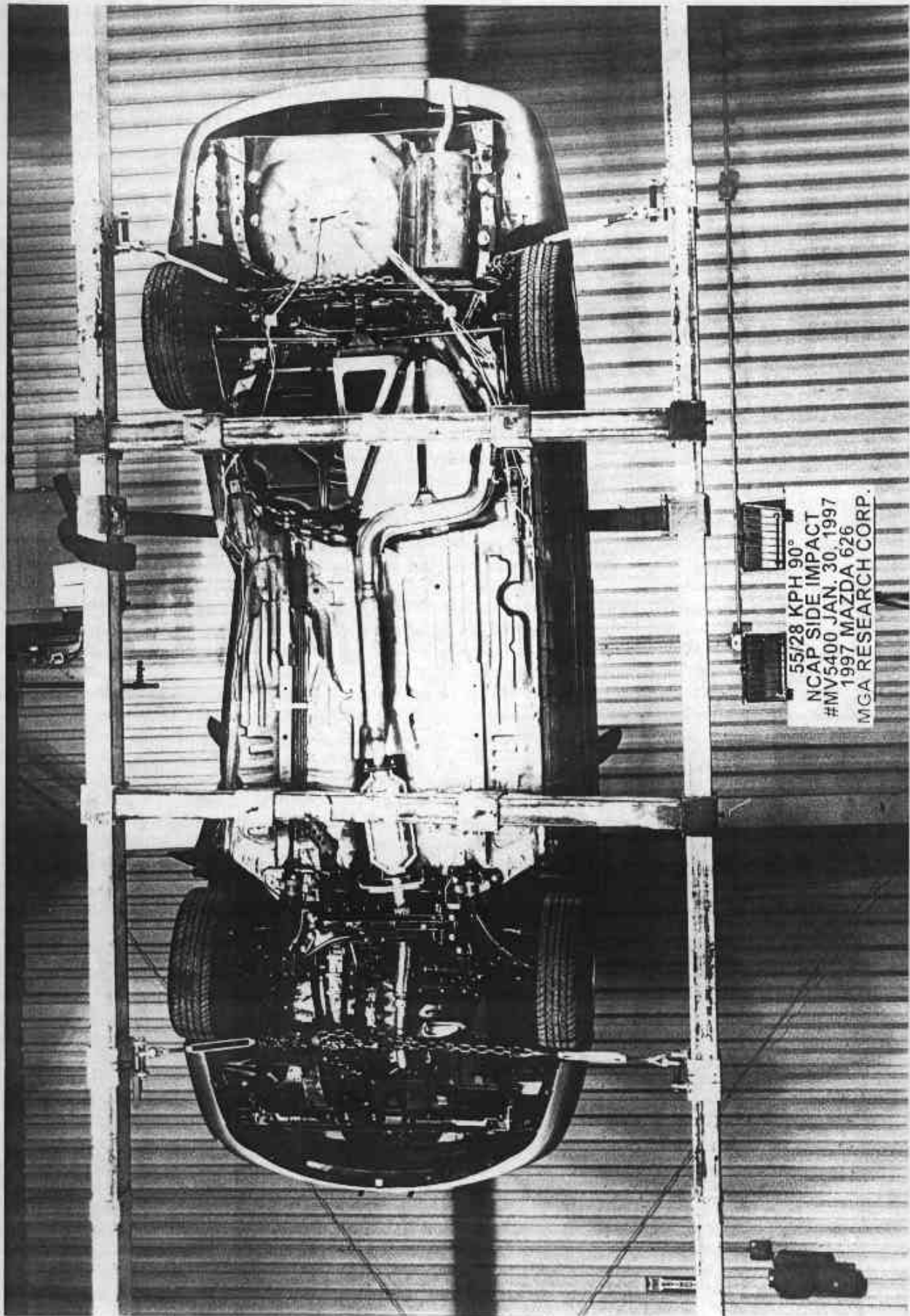
Photo No. A-41 - Rollover 90°



55/28 KPH 90°
NCAP SIDE IMPACT
#MV5400 JAN. 30, 1997
1997 MAZDA 626
MGA RESEARCH CORP.

A-42

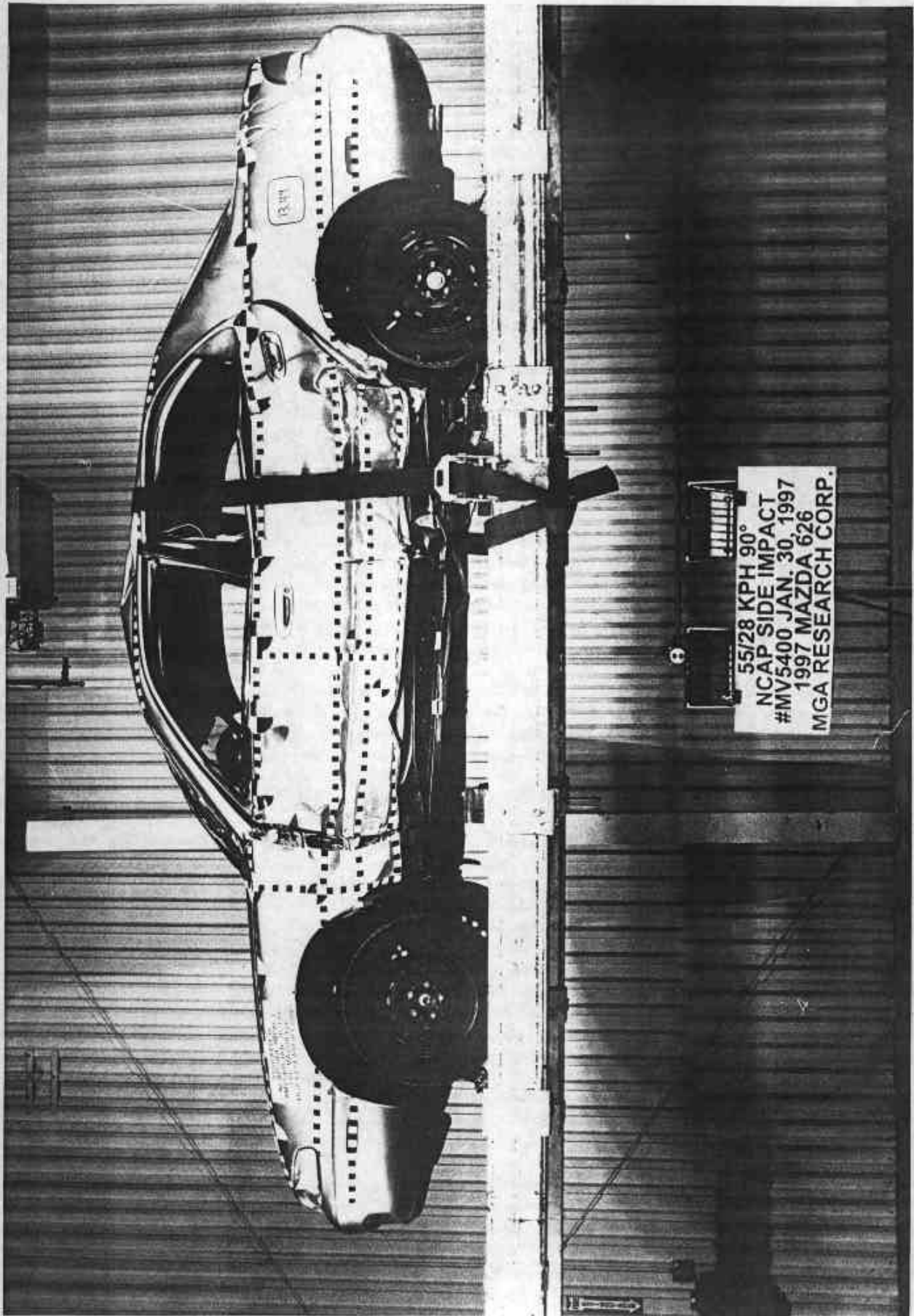
Photo No. A-42 - Rollover 180°



55/28 KPH 90°
NCAP SIDE IMPACT
#MV5400 JAN. 30, 1997
1997 MAZDA 626
MGA RESEARCH CORP.

A-43

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A-44

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FIR Filtered

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TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

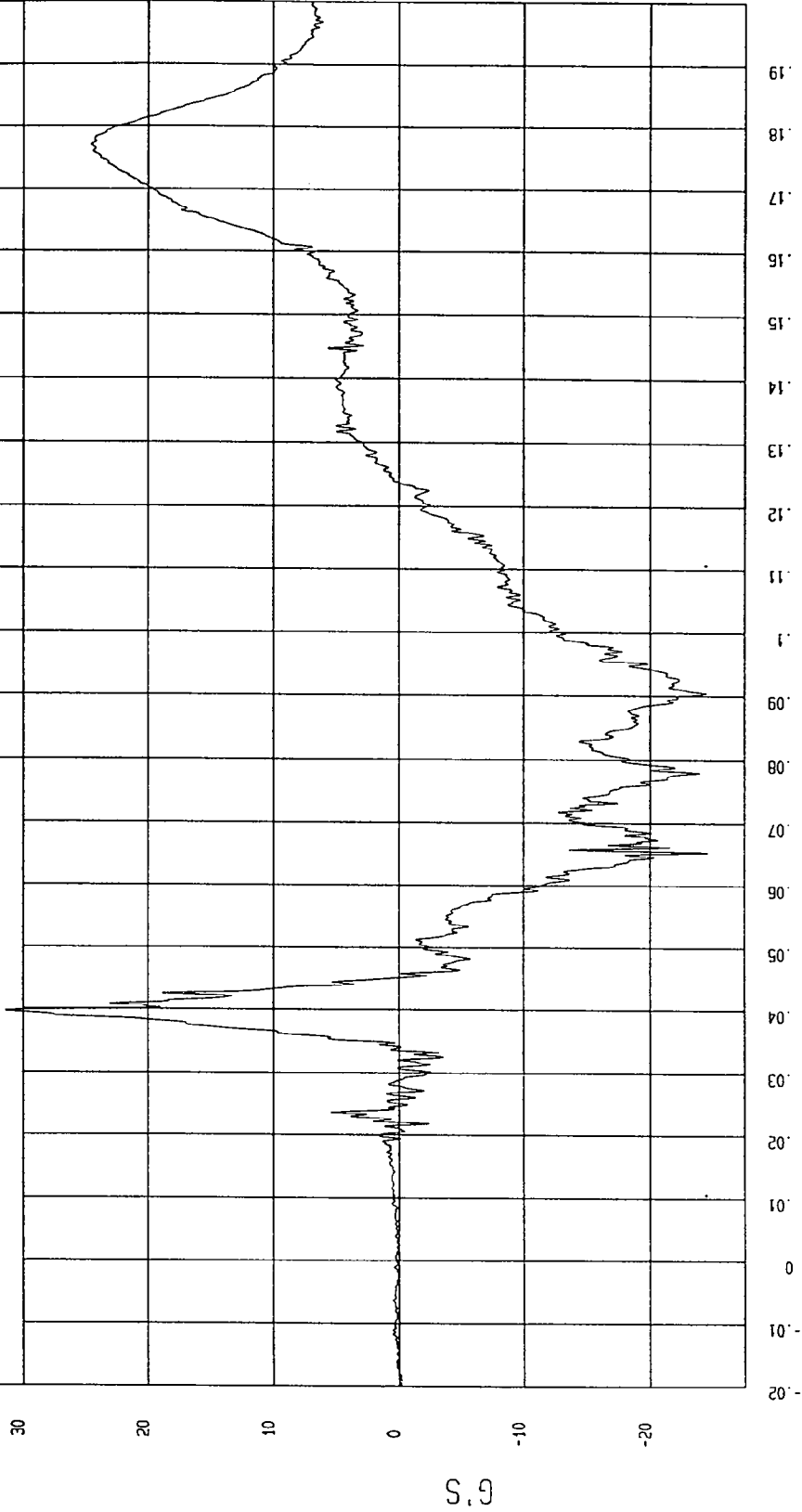
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -24.65 G'S at 65 msec

Maximum = 31.39 G'S at 40 msec

DRIVER HEAD X ACCELERATION

1 897019AF.A12 Filterclass (1000)



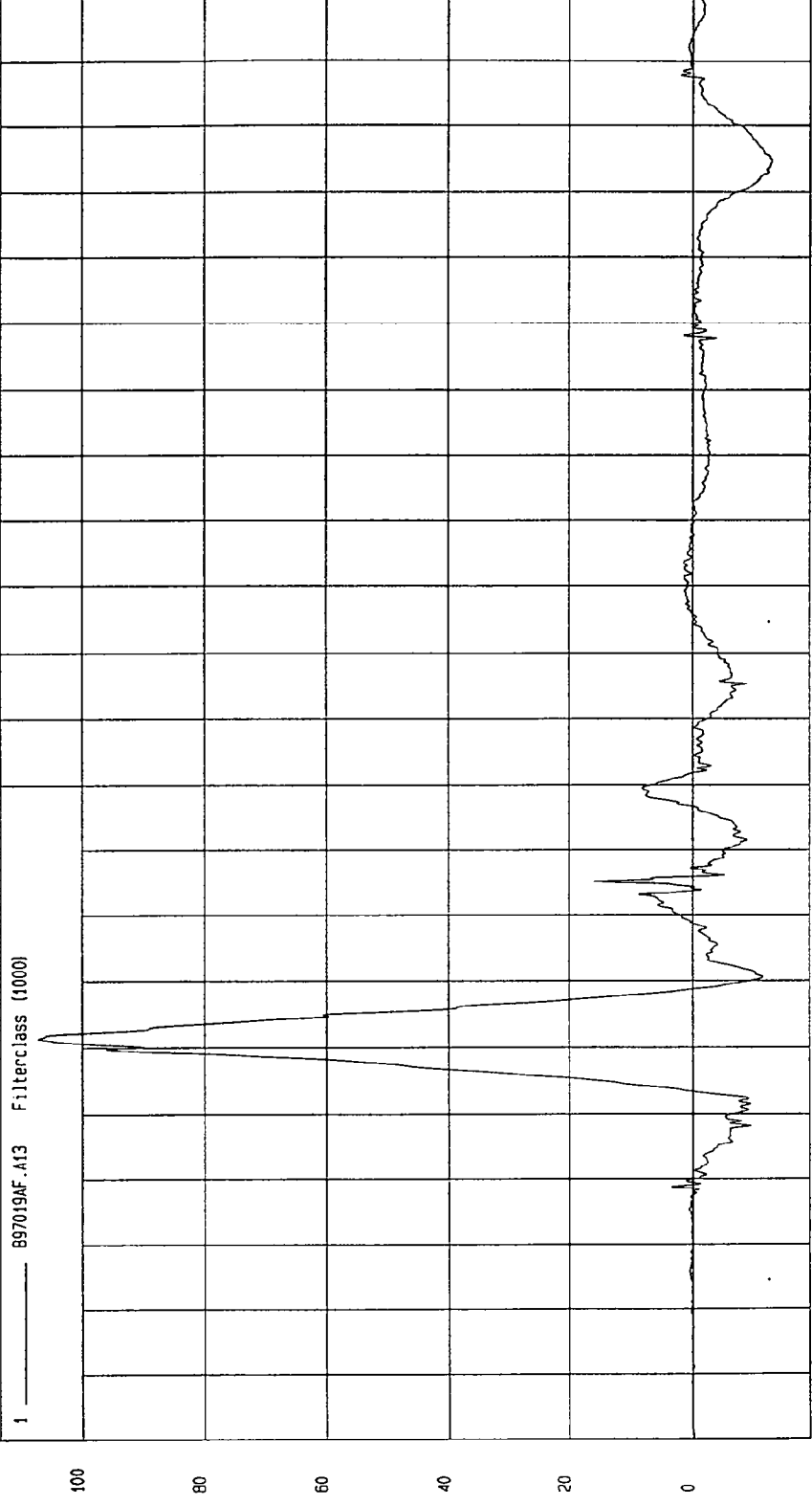
MOA Report Ch
02-13-1997 13:42

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -12.66 G'S at 175 msec Maximum = 107.15 G'S at 42 msec

DRIVER HEAD Y ACCELERATION



MGA Research
02-13-1997 13.42

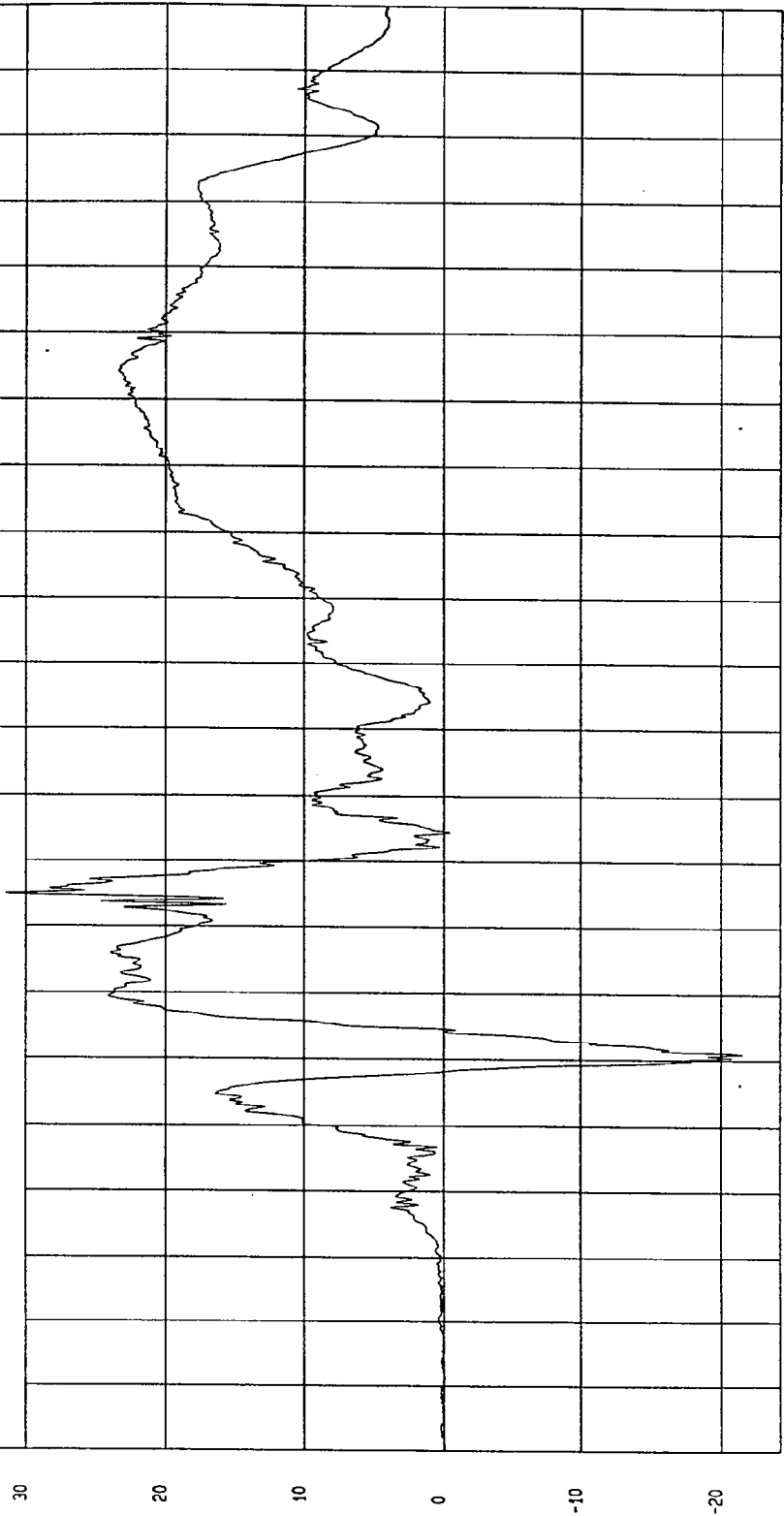
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -21.49 G'S at 41 msec
Maximum = 31.46 G'S at 65 msec

DRIVER HEAD Z ACCELERATION

1 897019AF.A14 Filterclass (1000)



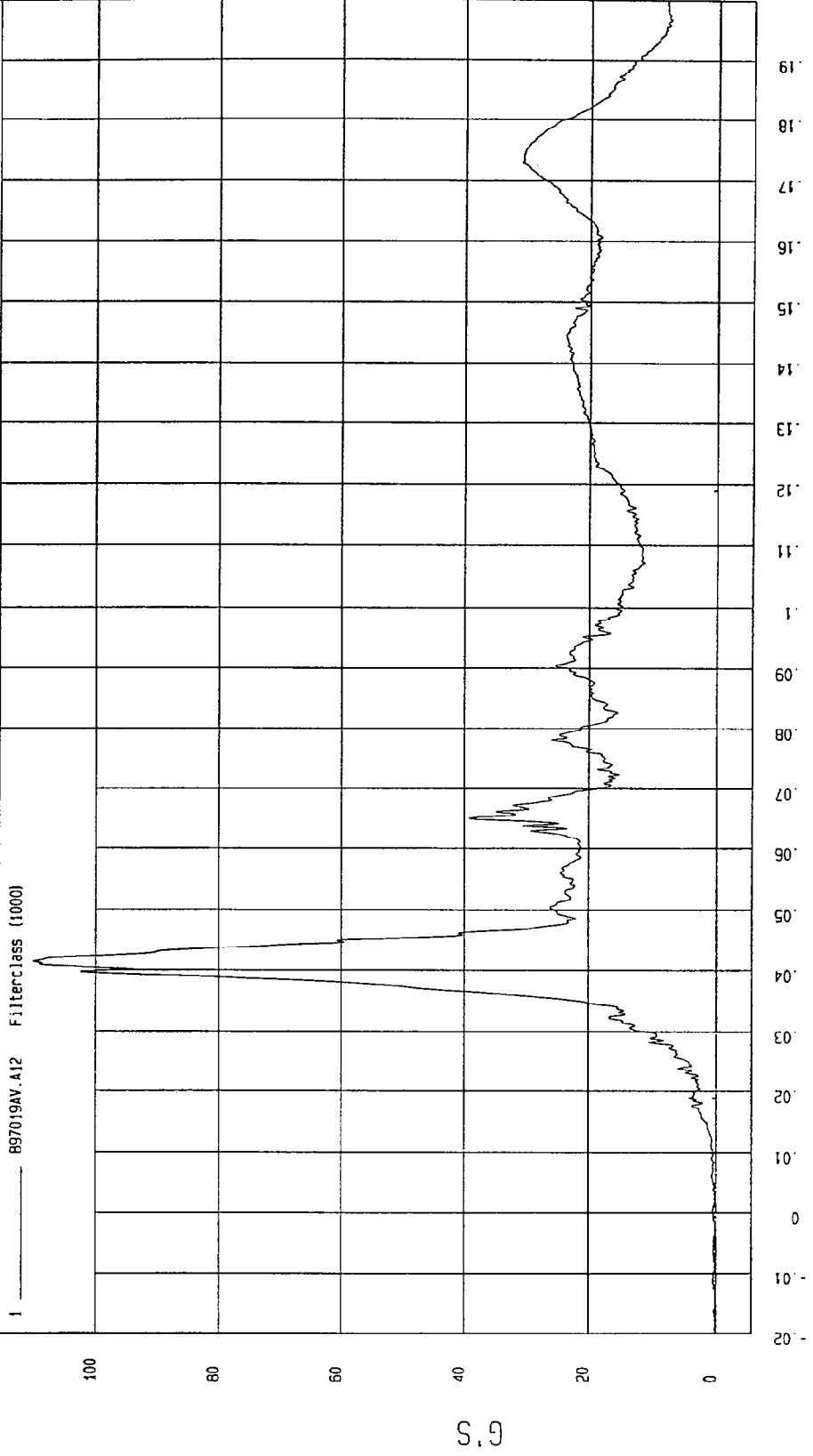
MCA Research
02-13-1997 13.42

TIME (SECONDS)

G.S

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997
 COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH
 Minimum = 6.43E-02 G'S at -3 msec Maximum = 109.90 G'S at 42 msec

DRIVER HEAD RESULTANT



MSA Report
02-13-1997 13.43

TEST: NCAP LATERAL IMPACT TEST

TEST DATE: 01-30-1997

Speed: 38.06 MPH 61.3 KPH

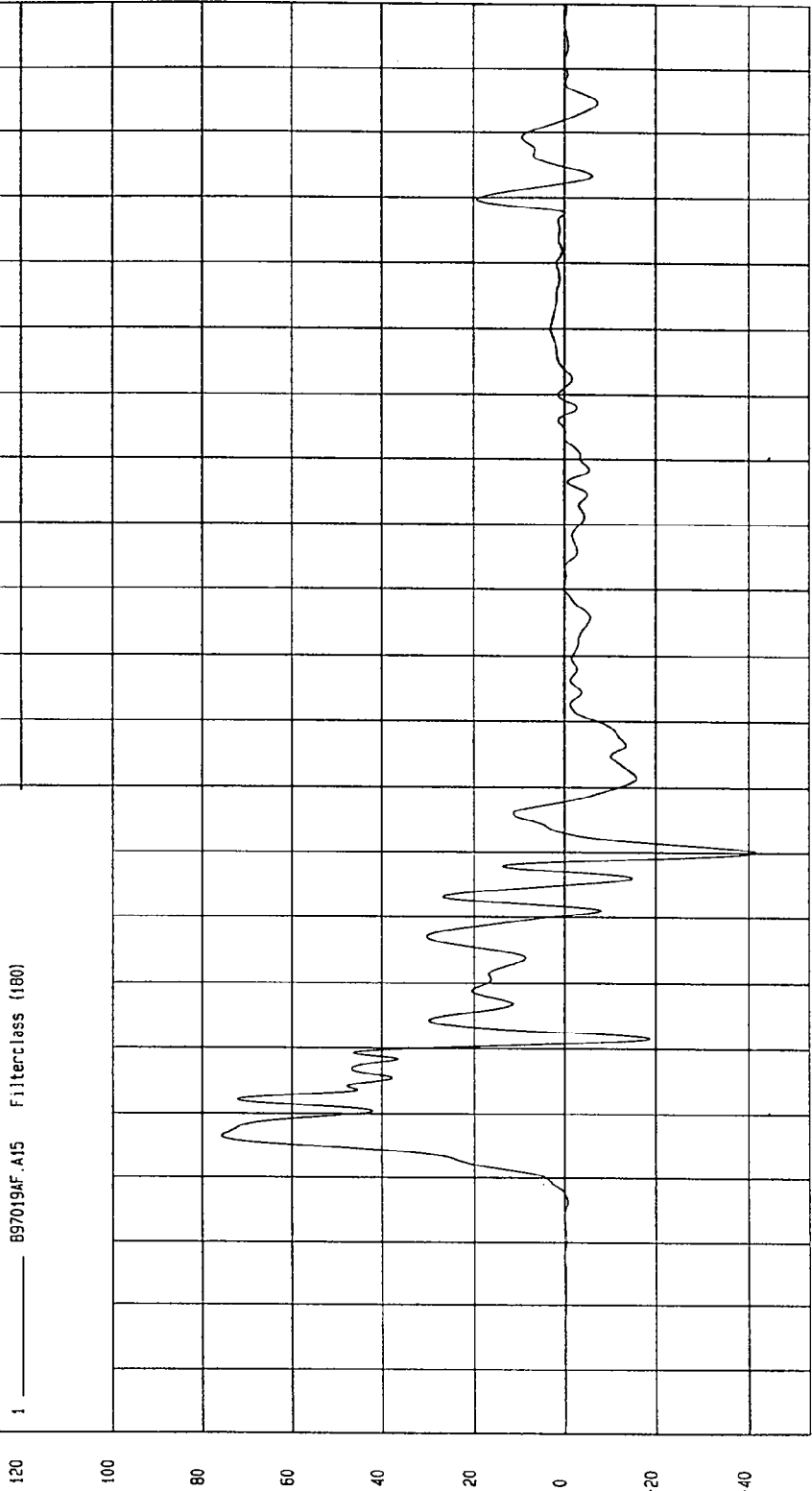
COMPONENT: 1997 MAZDA 626 (MV5400)

Maximum = 75.95 G'S at 26 msec

Minimum = -41.58 G'S at 70 msec

DRIVER UPPER RIB Y ACCELERATION

1 897019AF.A15 Filterclass (180)



TIME (SECONDS)

MGA Research
02-13-1997 13: 43

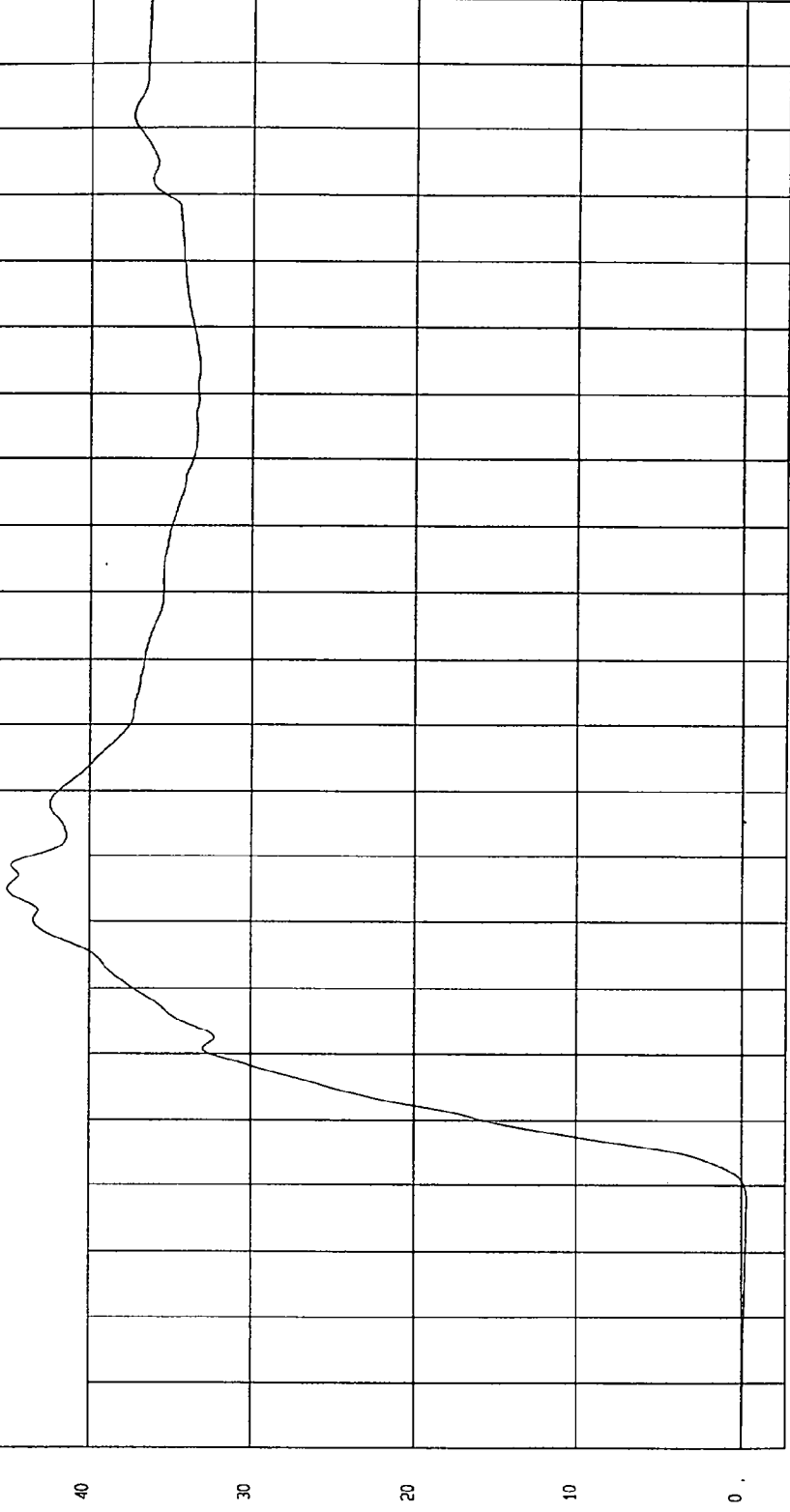
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -.29 KPH at .18 msec Maximum = 45.02 KPH at .65 msec

DRIVER UPPER RIB Y VELOCITY

1 ——— 897019A1.V15 Filterclass (180)

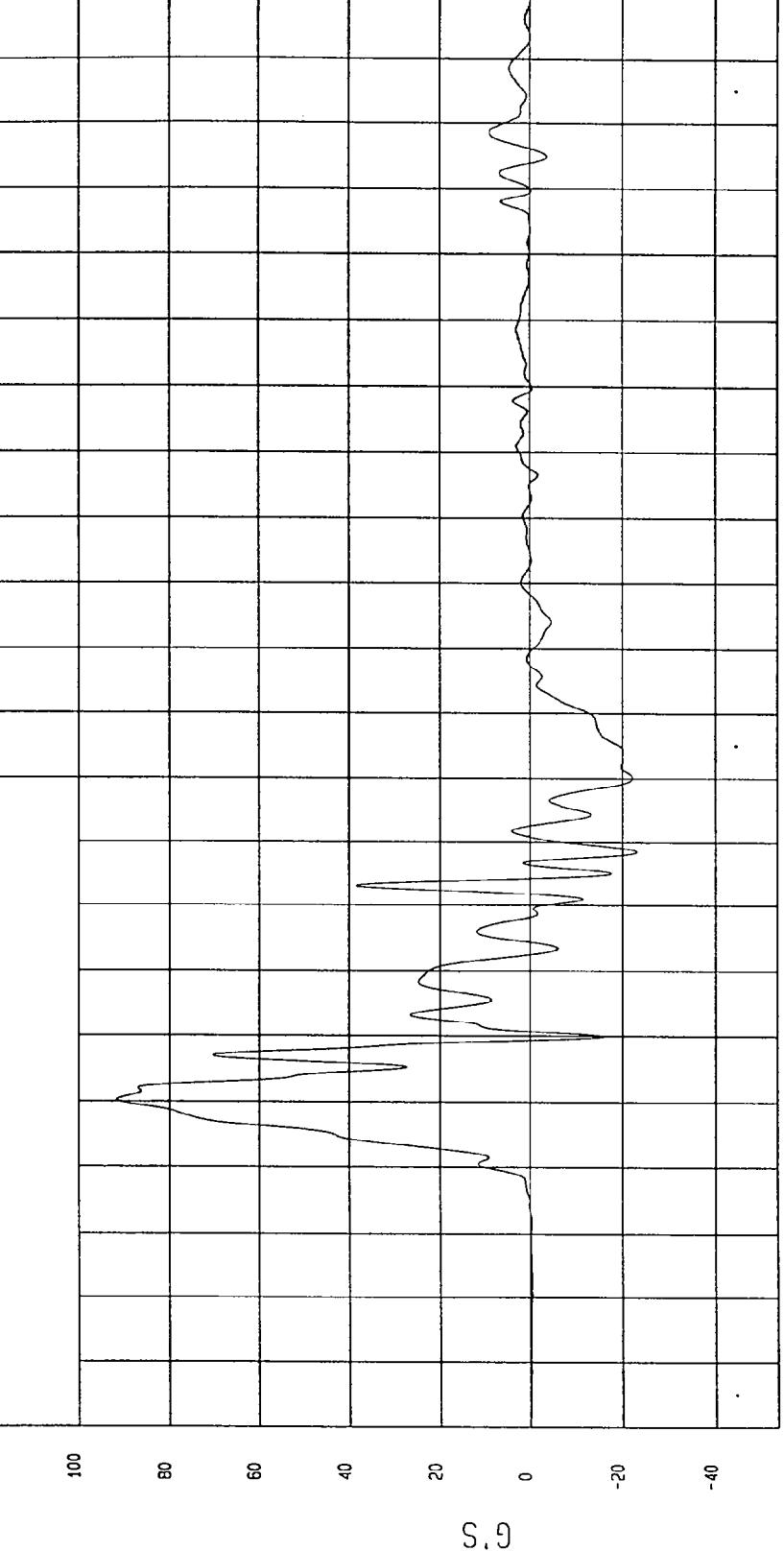


TIME Seconds
NCA Research
02-13-1997 13.43

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -23.24 G'S at 68 msec Maximum = 91.69 G'S at 30 msec

1 897019AF.A16 Filterclass (180)
DRIVER LOWER RIB Y ACCELERATION



TIME (SECONDS)

MGA Research
02-13-1997 13.43

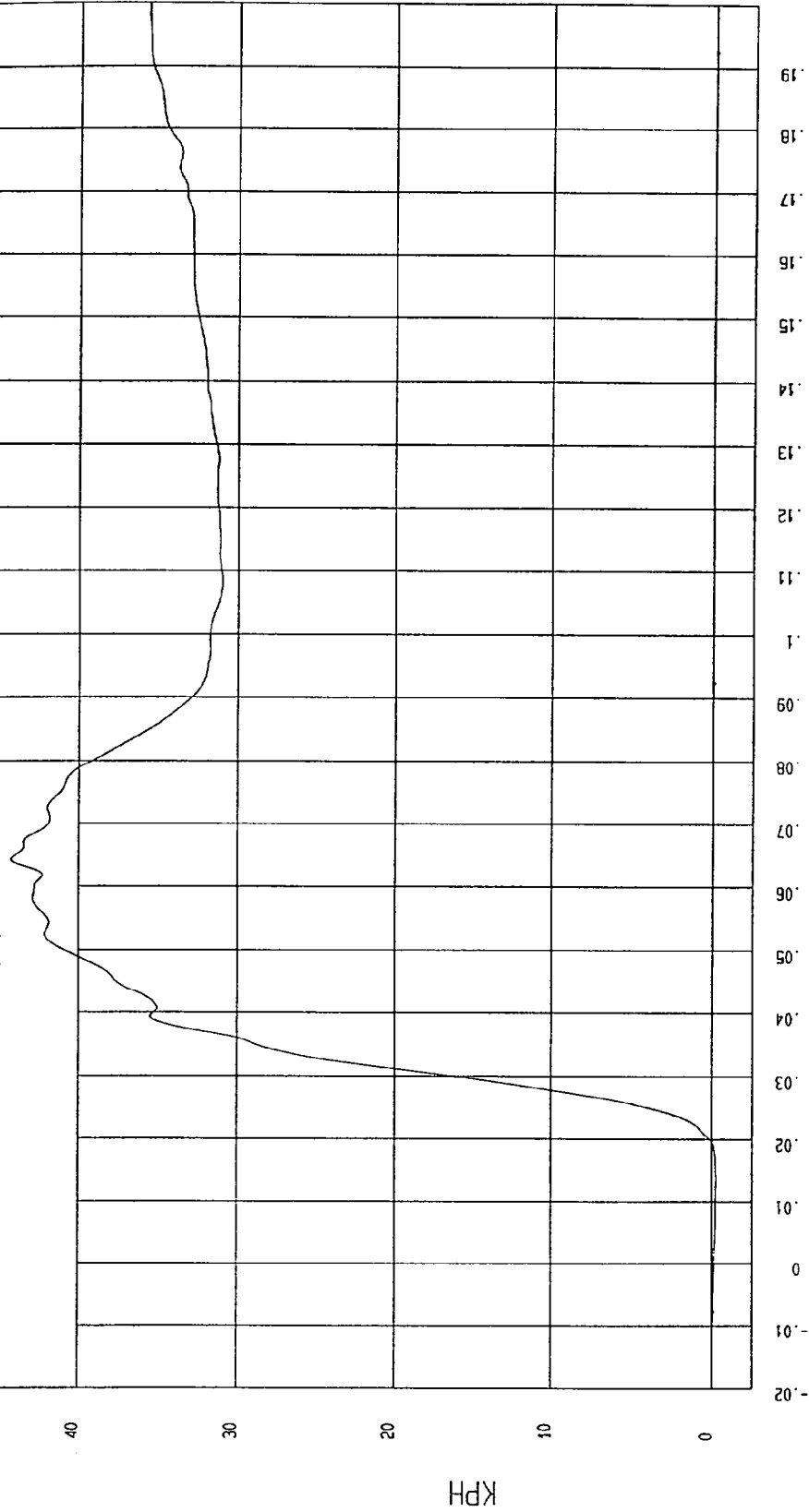
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -.24 KPH at .13 msec
Maximum = 44.26 KPH at .64 msec

DRIVER LOWER RIB Y VELOCITY

1 ——— B97019A1.V16 Filterclass (180)



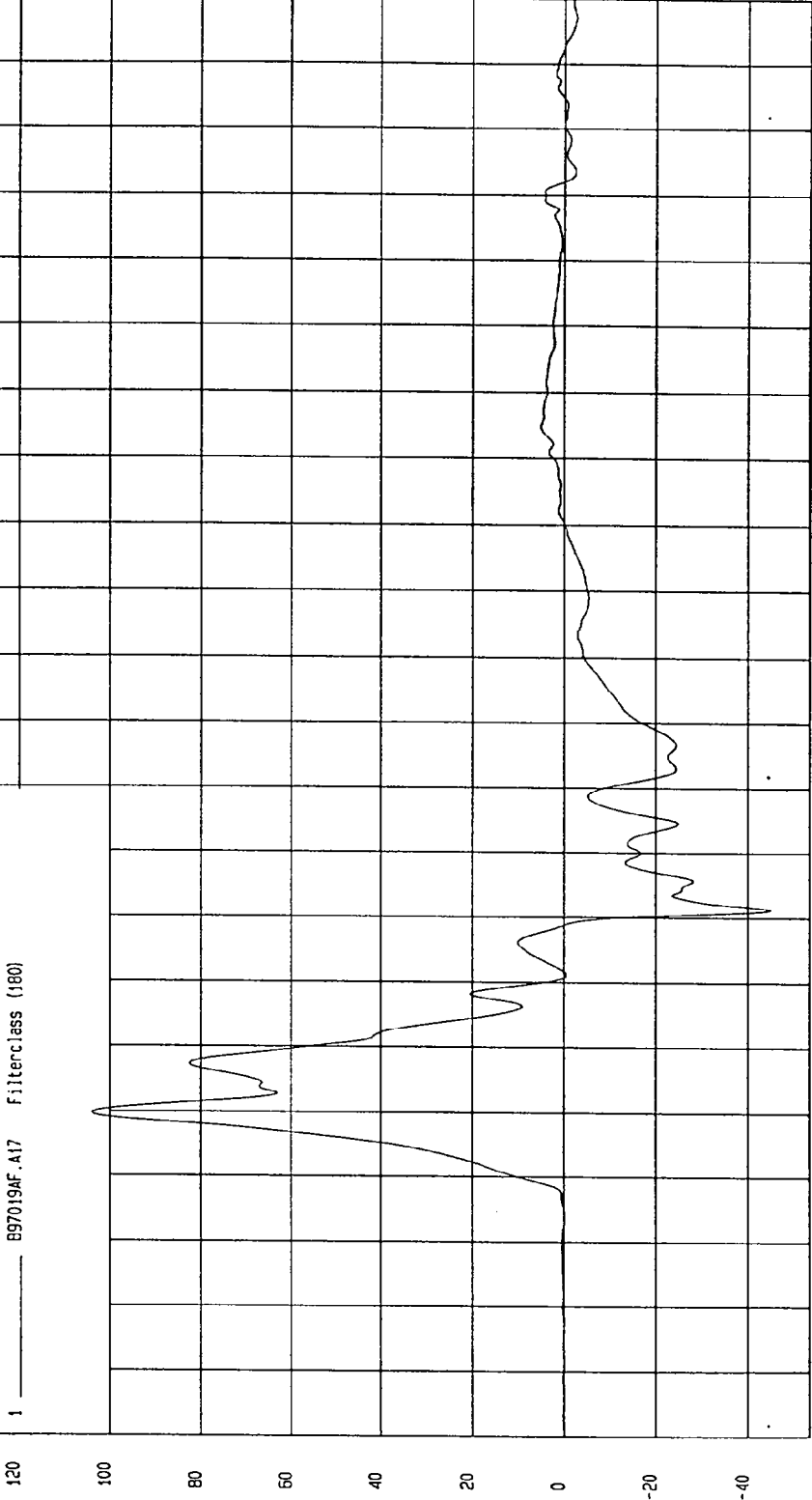
MCA Research
02-13-1997 13.43

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -44.95 G'S at 61 msec Maximum = 104.07 G'S at 30 msec

DRIVER LOWER SPINE Y ACCELERATION



NSA Research
02-13-1997 13.43

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

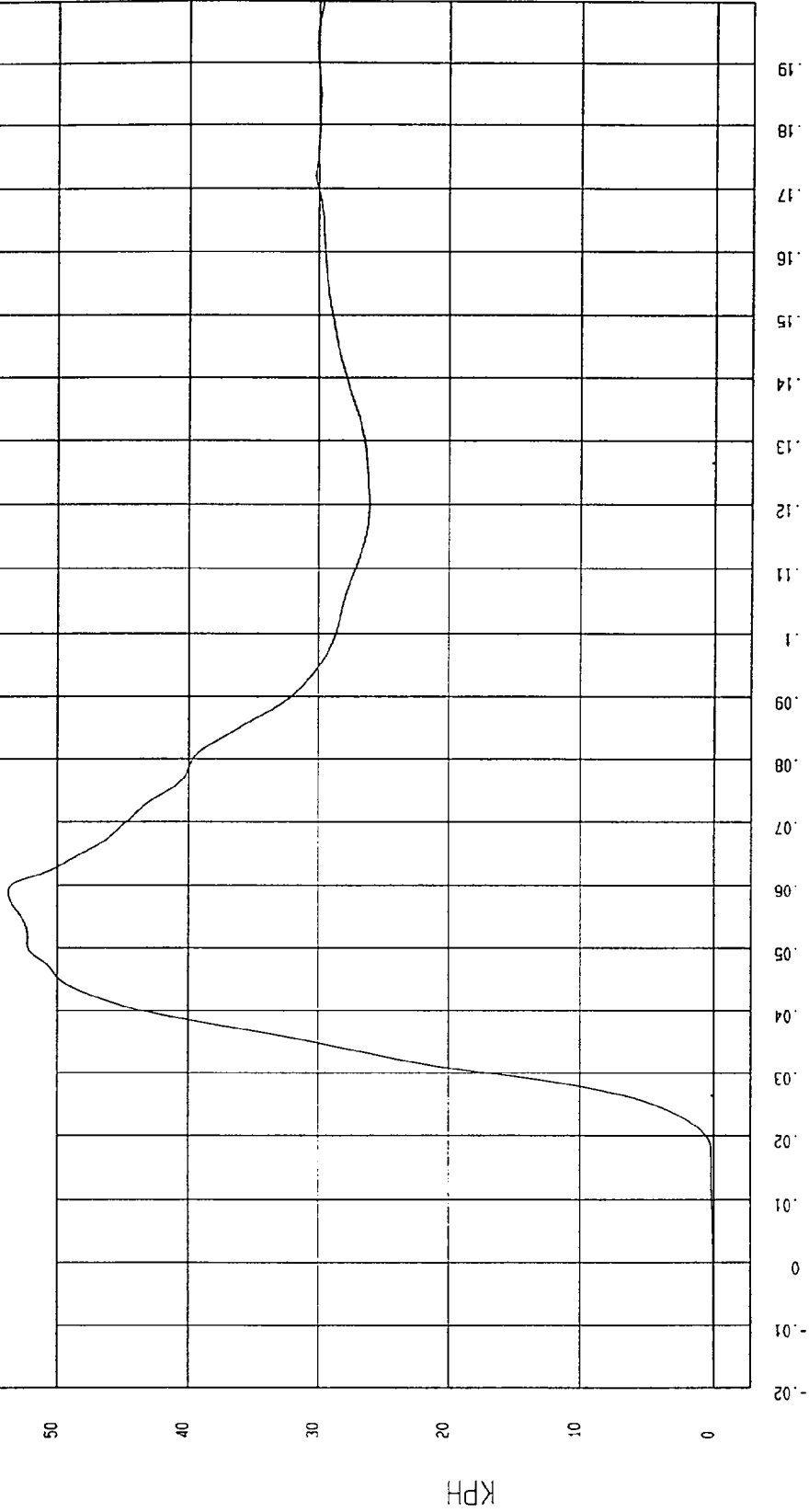
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -1.80E-03 KPH at -19 msec

Maximum = 53.62 KPH at 59 msec

DRIVER LOWER SPINE Y VELOCITY

1 ——— 097019A1.V17 Filterclass (480)



MGA Research
02-13-1997 13: 43

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

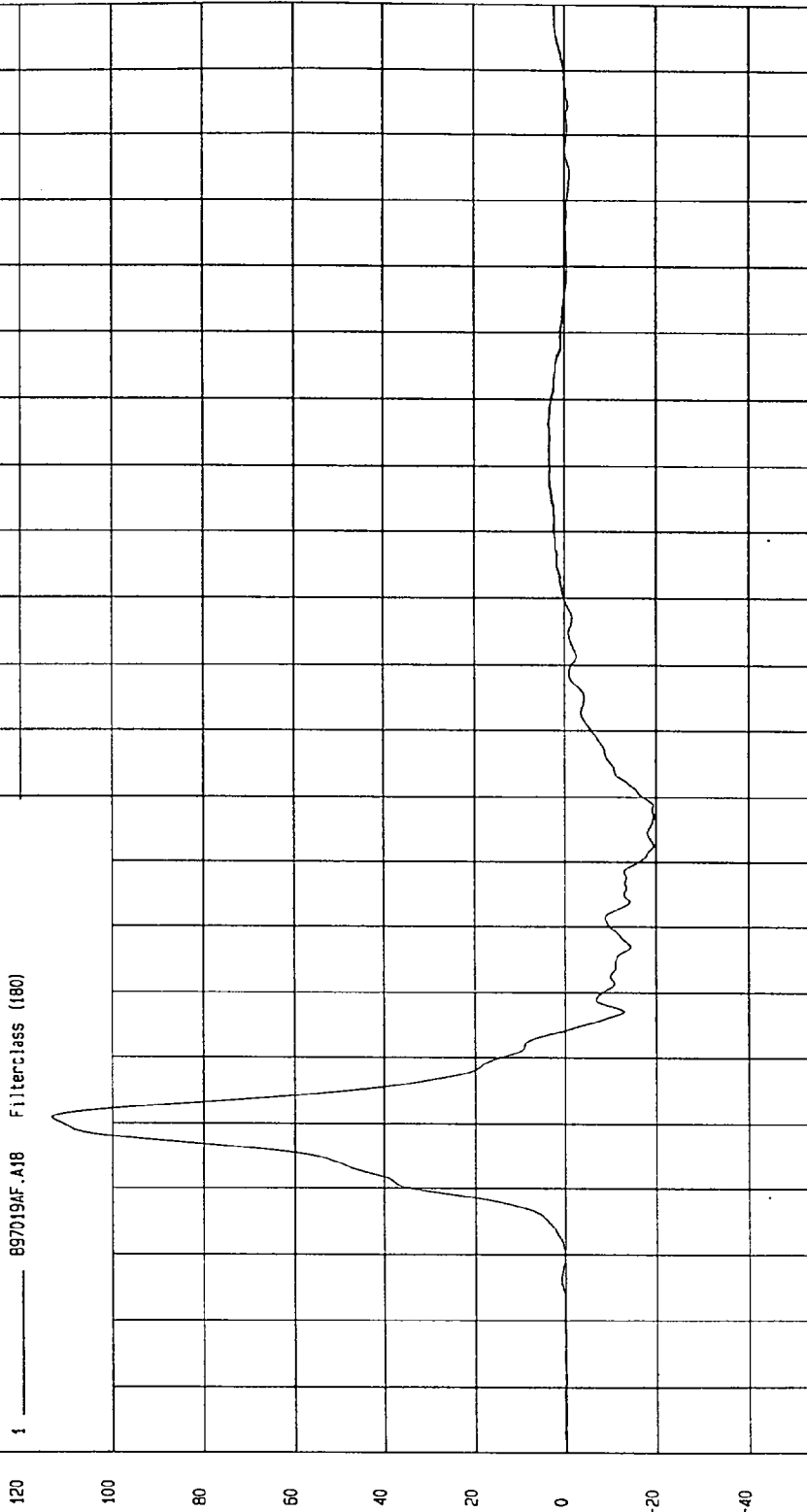
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -19.92 G'S at 77 msec

Maximum = 113.33 G'S at 31 msec

DRIVER PELVIS Y ACCELERATION

1 897019AF.A18 Filterclass (180)



MCA Research
02-15-1997 13.43

TIME (SECONDS)

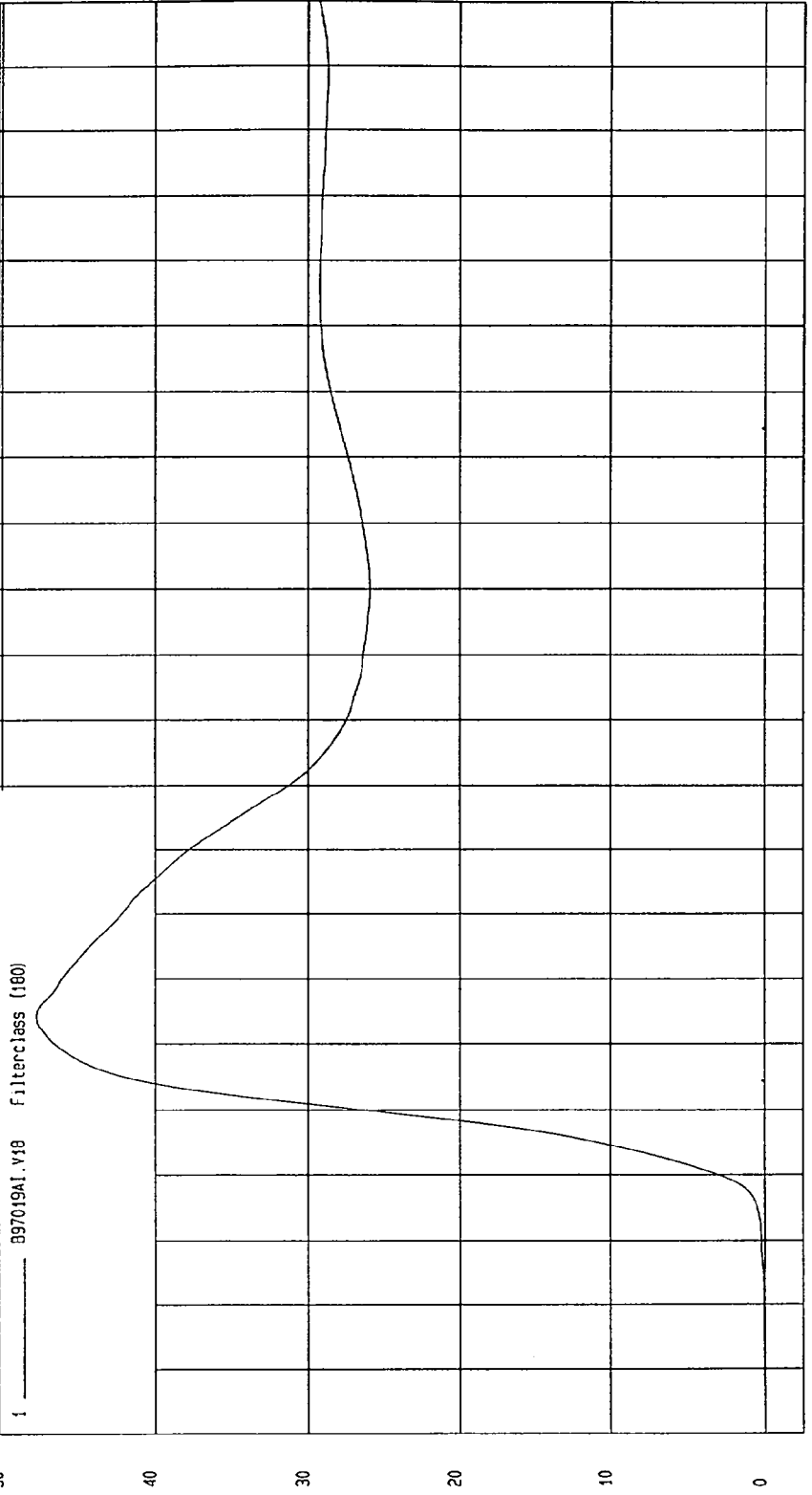
G.S

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -3.18E-03 KPH at -19 msec Maximum = 47.82 KPH at 44 msec

DRIVER PELVIS Y VELOCITY

1 897019A1.V10 Filterclass (180)



MOA Research
02-13-1997 13:43

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

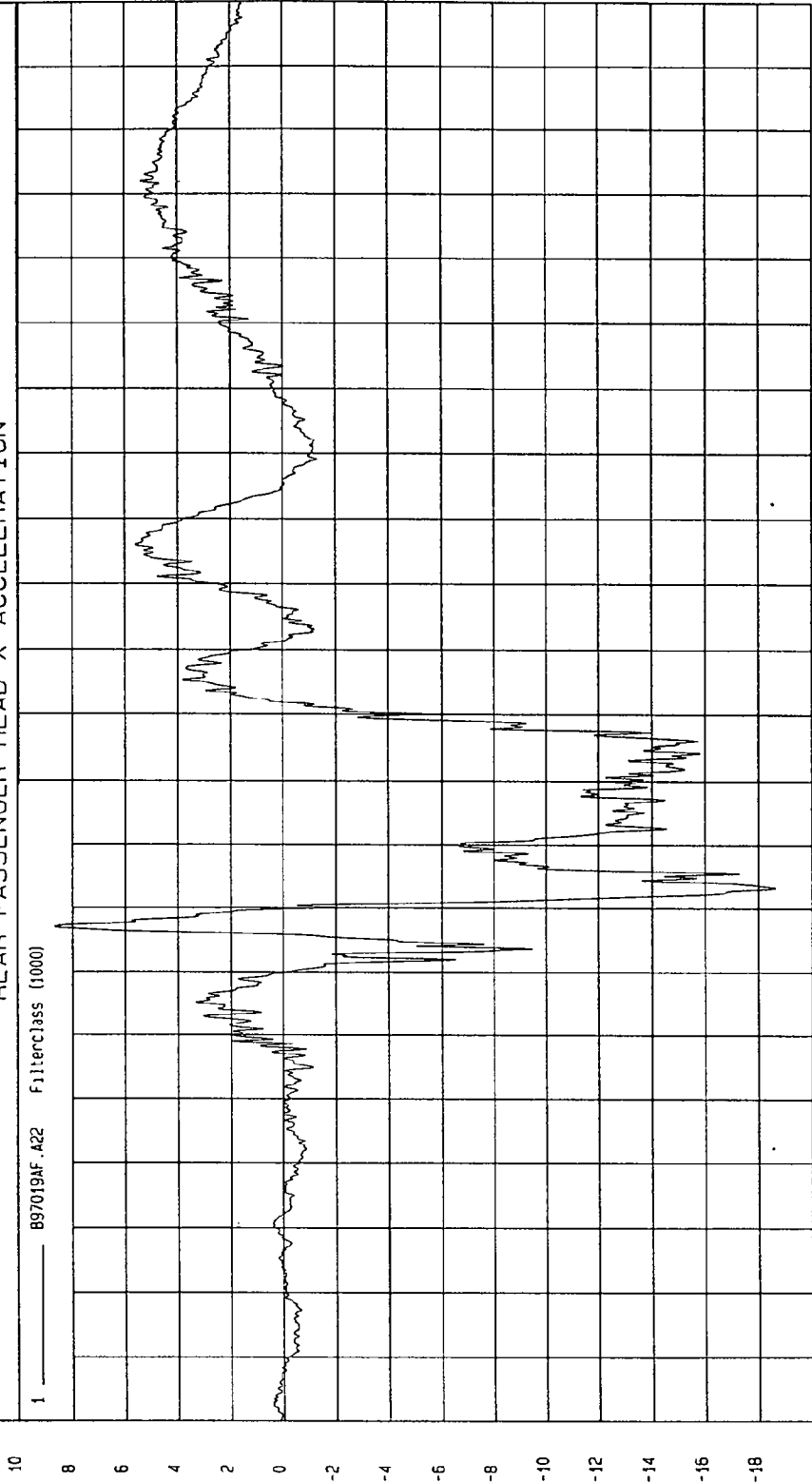
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -18.63 G'S at 63 msec

Maximum = 8.67 G'S at 57 msec

REAR PASSENGER HEAD X ACCELERATION

1 897019AF.A22 FilterClass (1000)



MSA Research
02-13-1997 13:45

TIME (SECONDS)

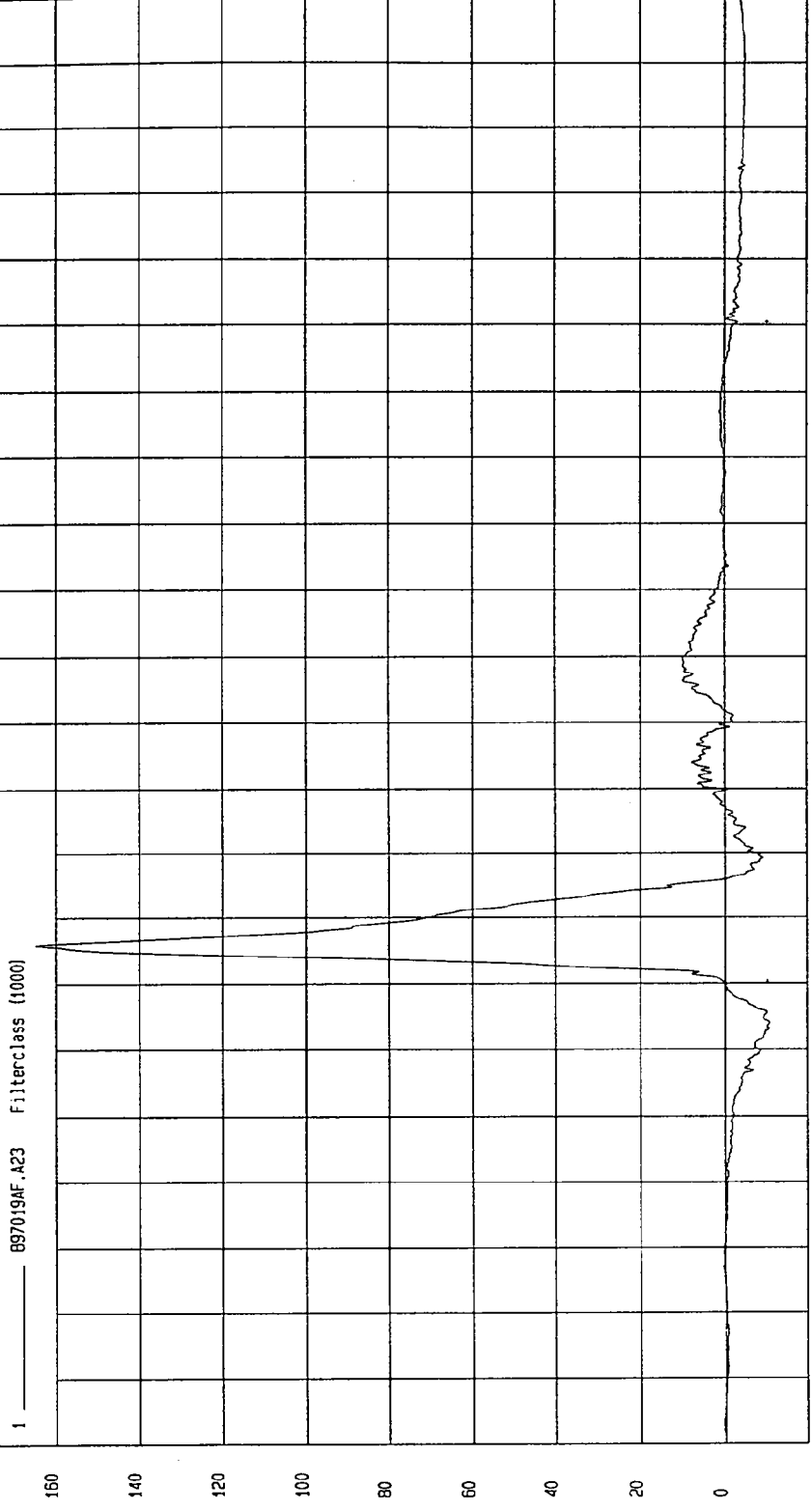
G.S

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -10.49 G'S at 44 msec Maximum = 164.95 G'S at 56 msec

REAR PASSENGER HEAD Y ACCELERATION



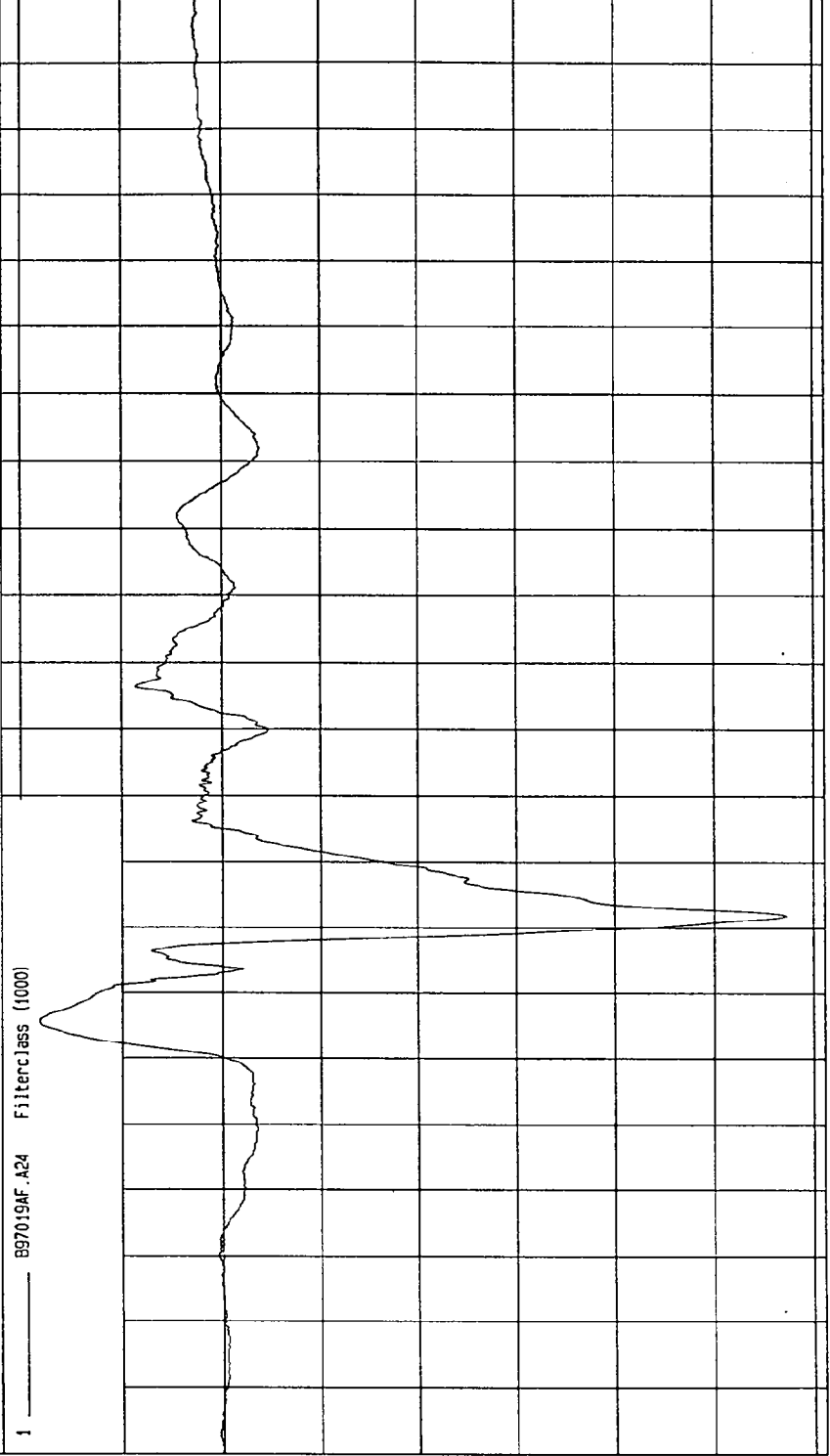
MOA Research
02-13-1997 13:45

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -57.32 G'S at 62 msec Maximum = 18.12 G'S at 46 msec

REAR PASSENGER HEAD Z ACCELERATION



TIME (SECONDS)

MGA Research
02-13-1997 13.46

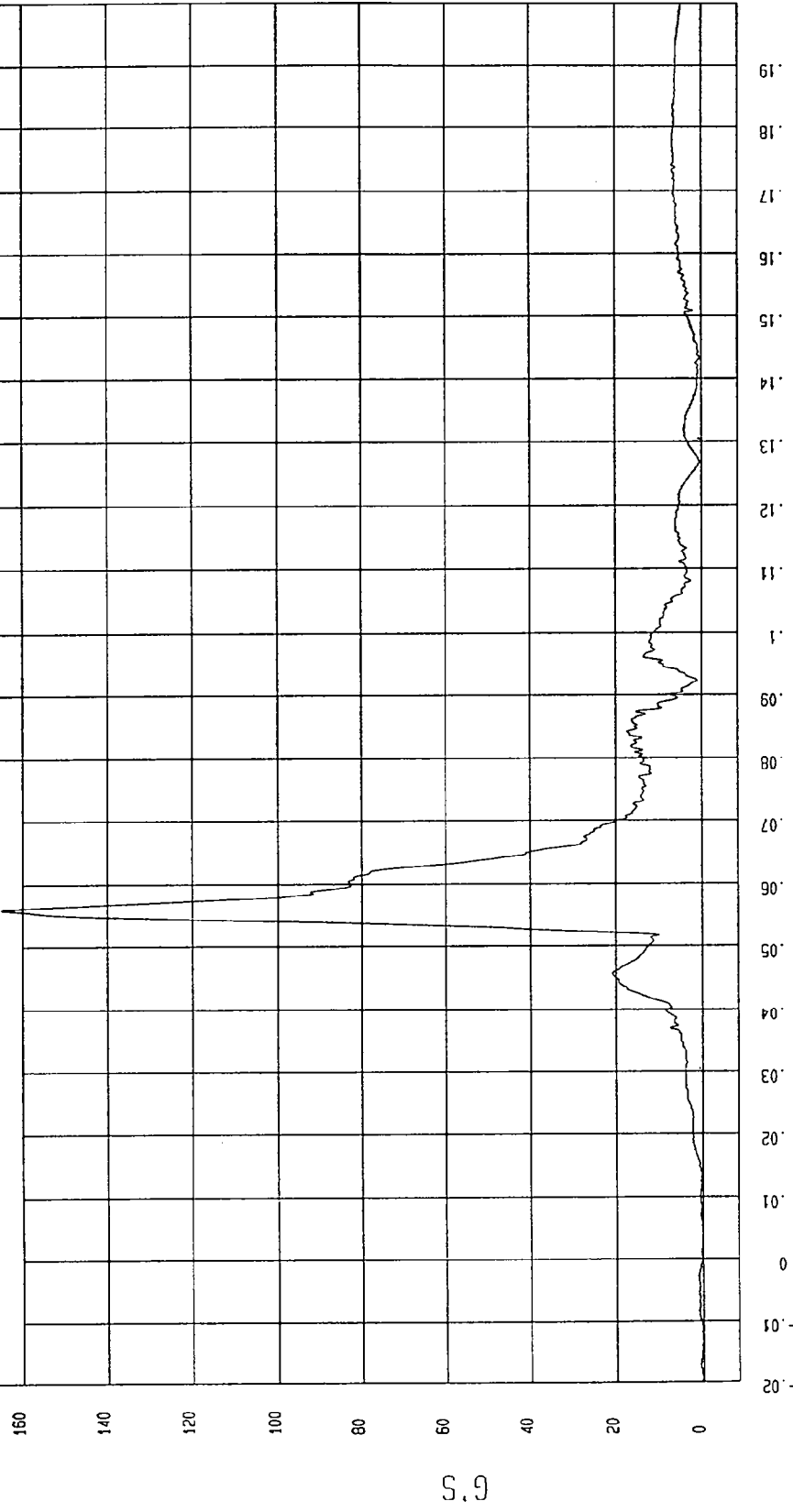
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = 3.62E-02 G'S at 4 msec Maximum = 165.05 G'S at 56 msec

REAR PASSENGER HEAD RESULTANT

1 897019AV.A22 Filterclass (1000)



NSA Research
02-13-1997 13:46

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

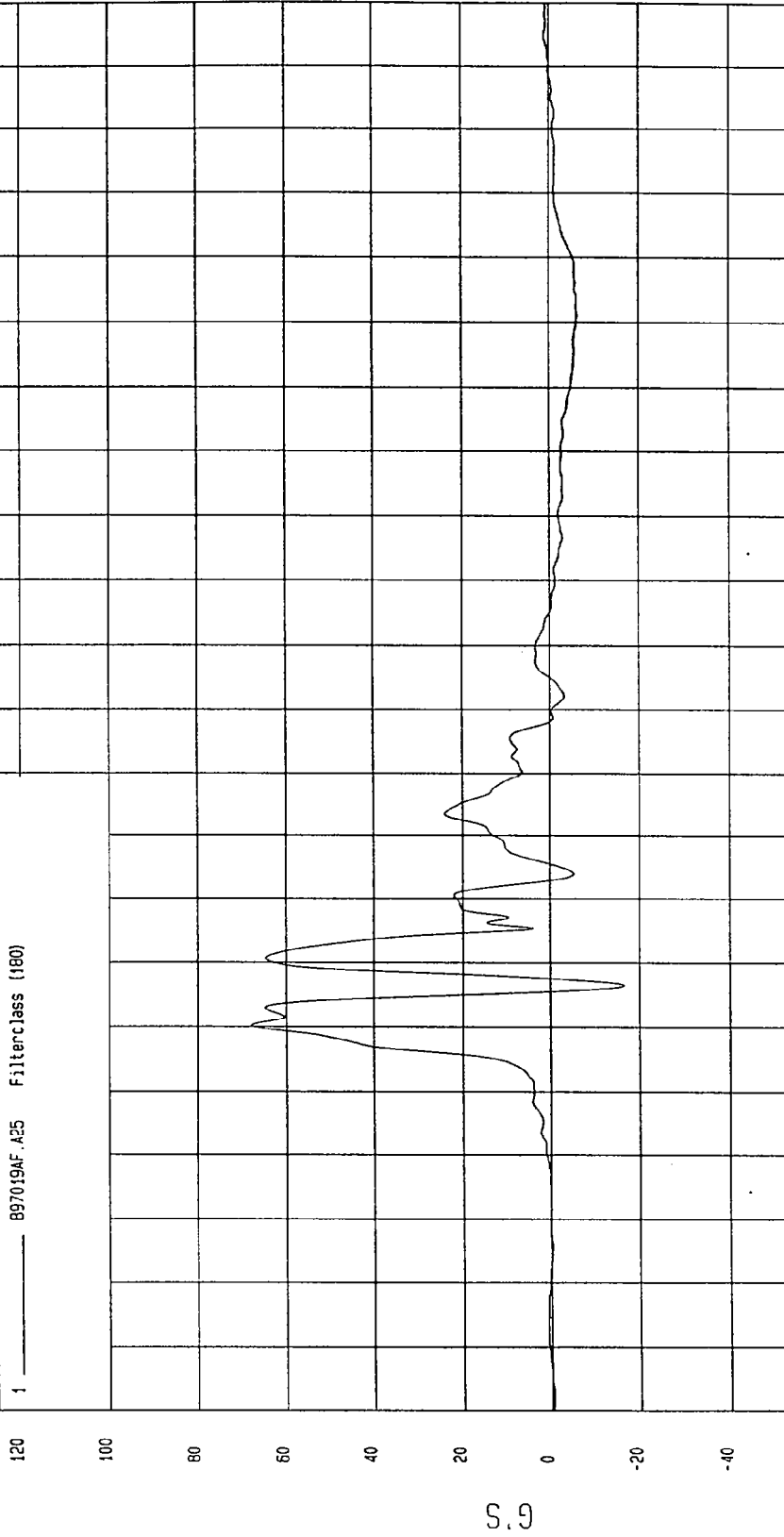
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -16.44 G'S at 46 msec

Maximum = 67.86 G'S at 40 msec

REAR PASSENGER UPPER RIB Y ACCELERATION

1 897019AF.A25 Filterclass (180)



MVA Research
02-13-1997 13:44

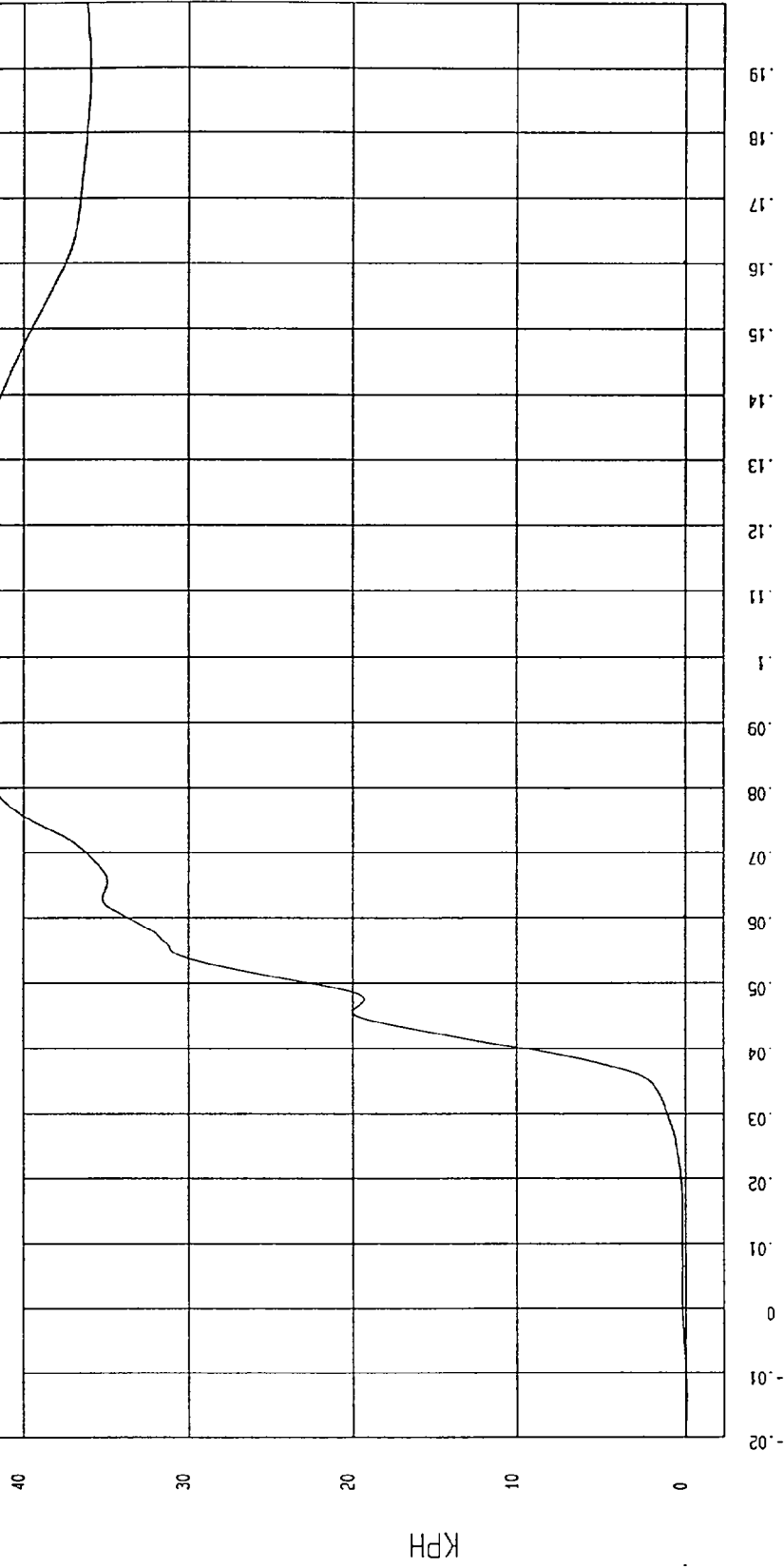
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -6.43E-02 KPH at -14 msec Maximum = 44.24 KPH at 105 msec

REAR PASSENGER UPPER RIB Y VELOCITY

1 897019A1.V25 Filterclass (180)



MCA Research
02-13-1997 13:44

TEST DATE: 01-30-1997

TEST: NCAP LATERAL IMPACT TEST

Speed: 38.06 MPH 61.3 KPH

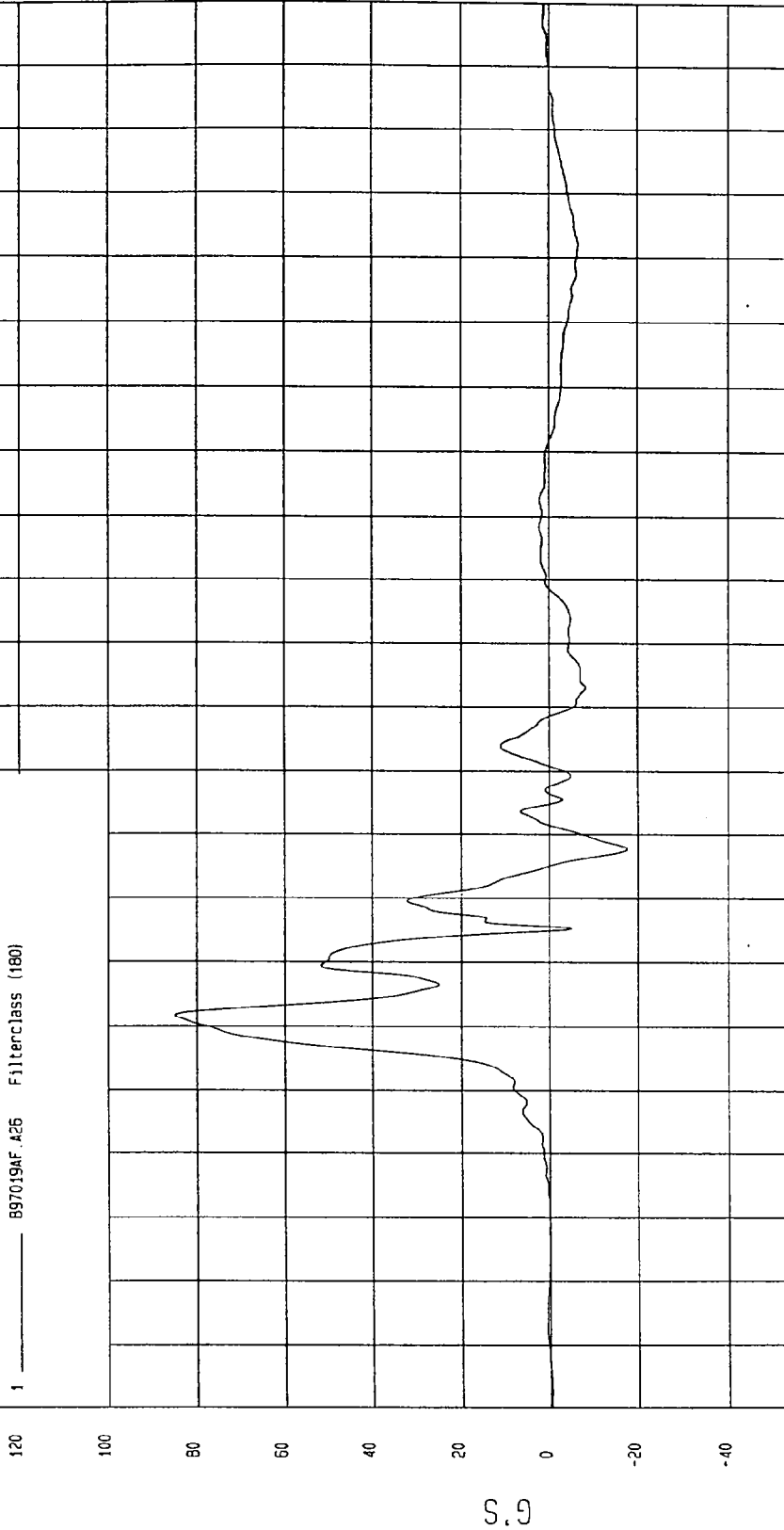
COMPONENT: 1997 MAZDA 626 (MV5400)

Maximum = 84.92 G'S at 42 msec

Minimum = -17.60 G'S at 68 msec

REAR PASSENGER LOWER RIB Y ACCELERATION

1 897019AF.A25 Filterclass (180)



NSA Research
02-13-1997 13:44

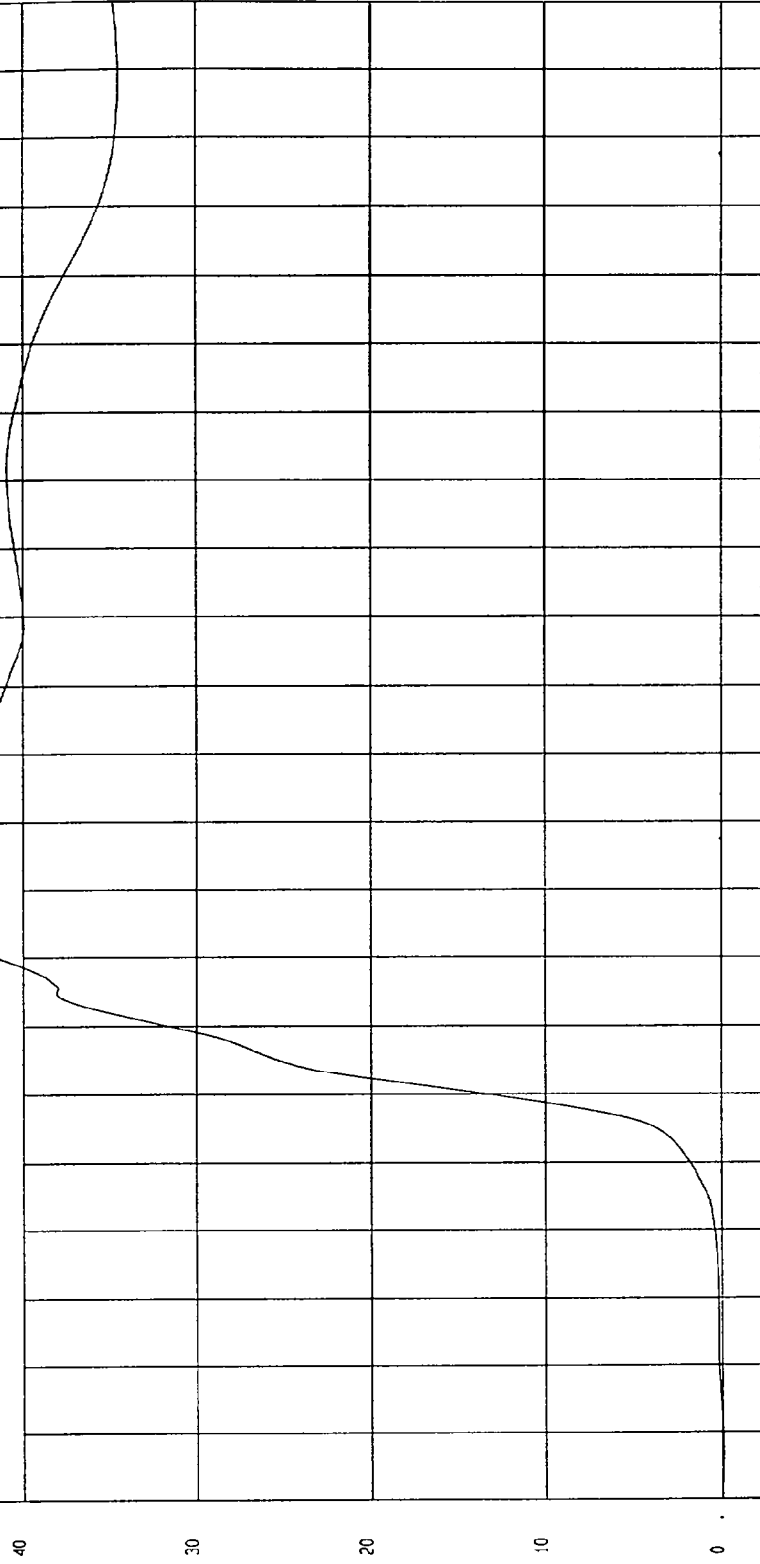
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -5.50E-02 KPH at -13 msec
Maximum = 43.87 KPH at 65 msec

REAR PASSENGER LOWER RIB Y VELOCITY

1 897019A1.V26 Filterclass (180)



MCA Research
02-13-1997 13:44

TIME Seconds

KPH

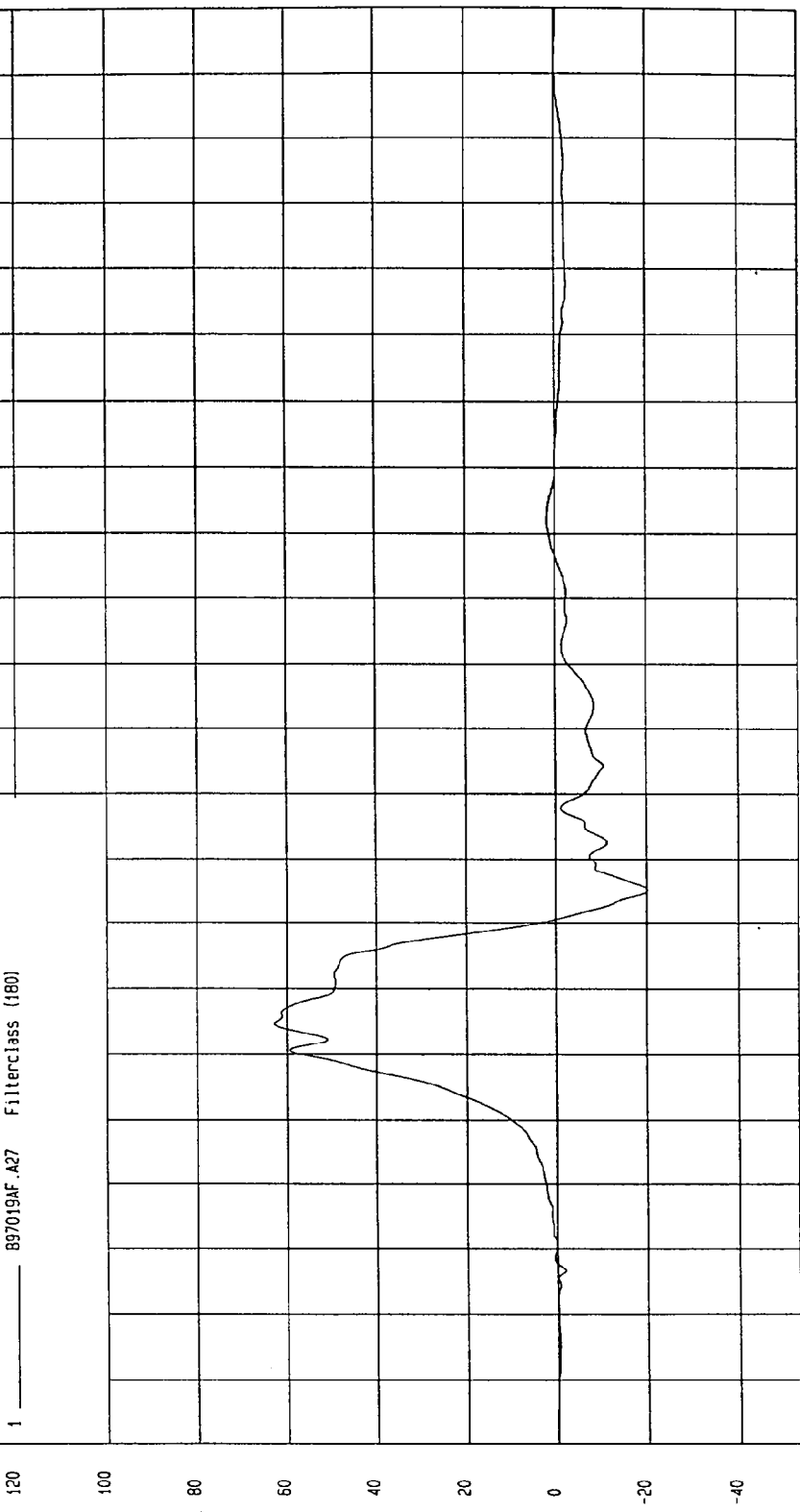
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -20.33 G's at 65 msec Maximum = 62.82 G's at 45 msec

REAR PASSENGER LOWER SPINE Y ACCELERATION

1 897019AF.A27 Filterclass (180)



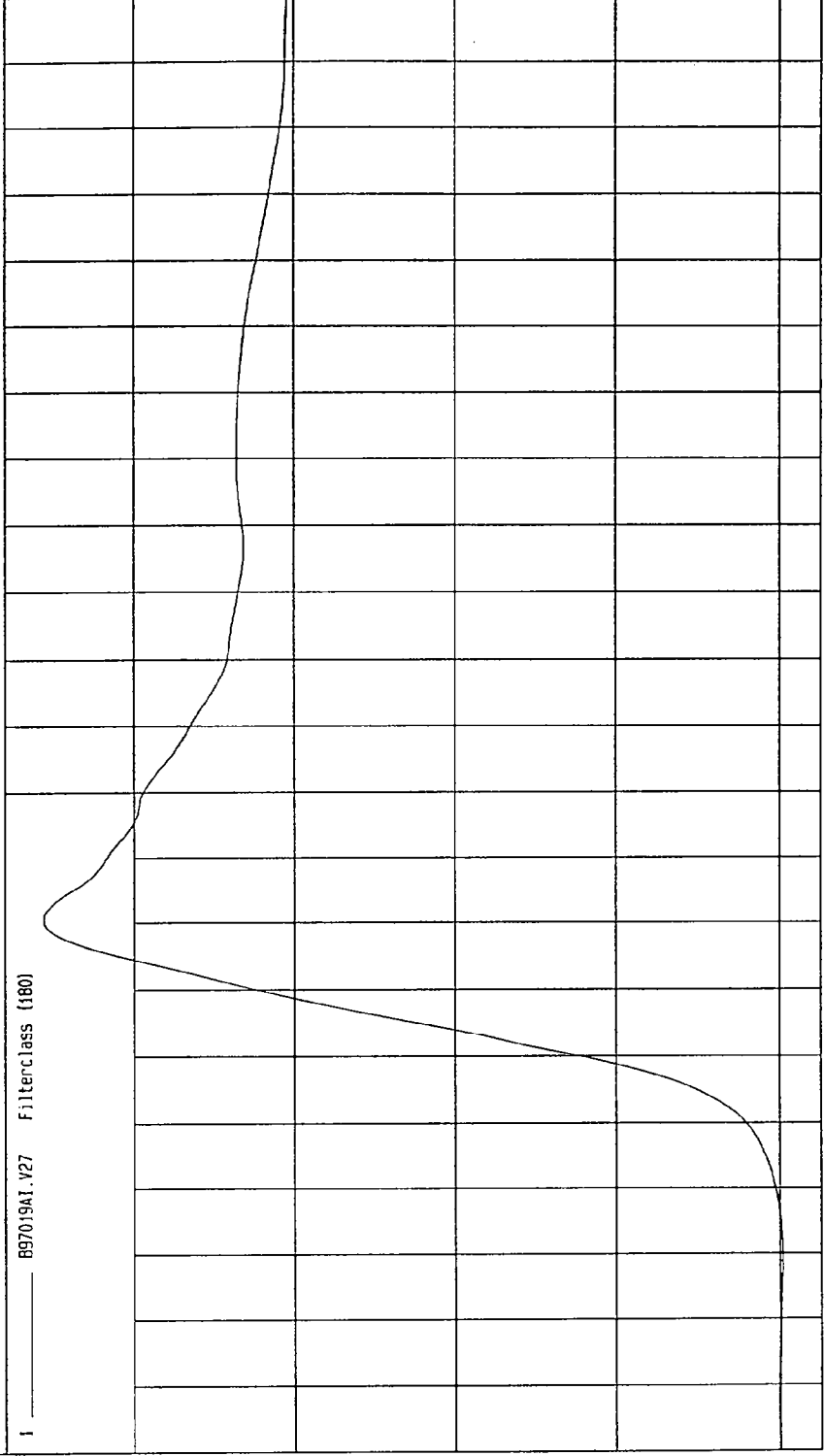
MGA Research
02-13-1997 13:44

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -19 KPH at 8 msec Maximum = 45.63 KPH at 61 msec

REAR PASSENGER LOWER SPINE Y VELOCITY



TIME Seconds

MCA Research
02-13-1997 13:44

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -19.59 G'S at 75 msec

Maximum = 82.77 G'S at 37 msec

REAR PASSENGER PELVIS Y ACCELERATION

1 897019AF.A28 Filterclass (180)

120

100

80

60

40

20

0

-20

-40

G.S

0.19

0.18

0.17

0.16

0.15

0.14

0.13

0.12

0.11

0.1

0.09

0.08

0.07

0.06

0.05

0.04

0.03

0.02

0.01

0

-0.01

-0.02

TIME (SECONDS)

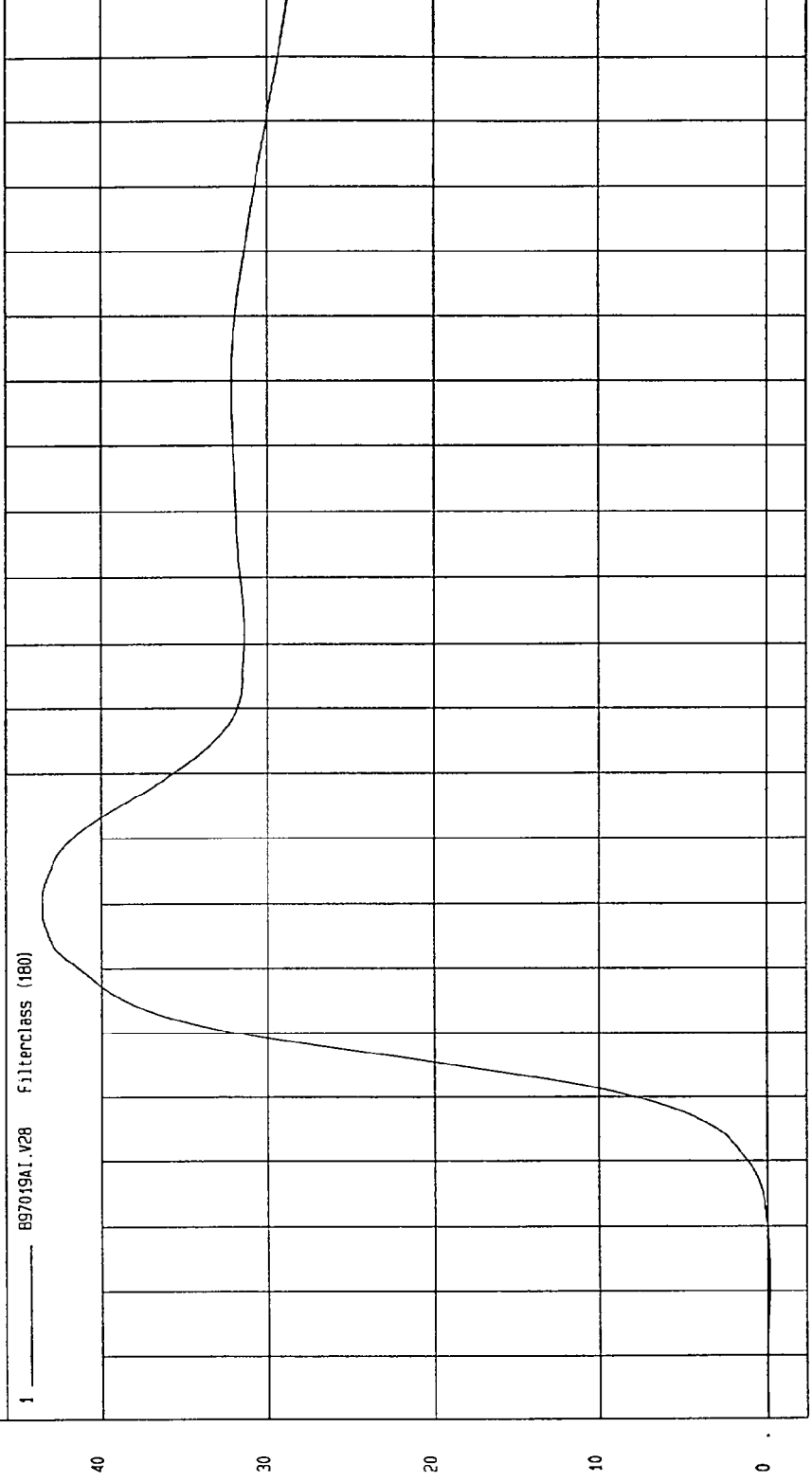
NSA Research
02-13-1997 13:44

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = .11 KPH at 3 msec Maximum = 43.54 KPH at 61 msec

REAR PASSENGER PELVIS Y VELOCITY



KPH

TIME Seconds

NGA Research
02-13-1997 13:45

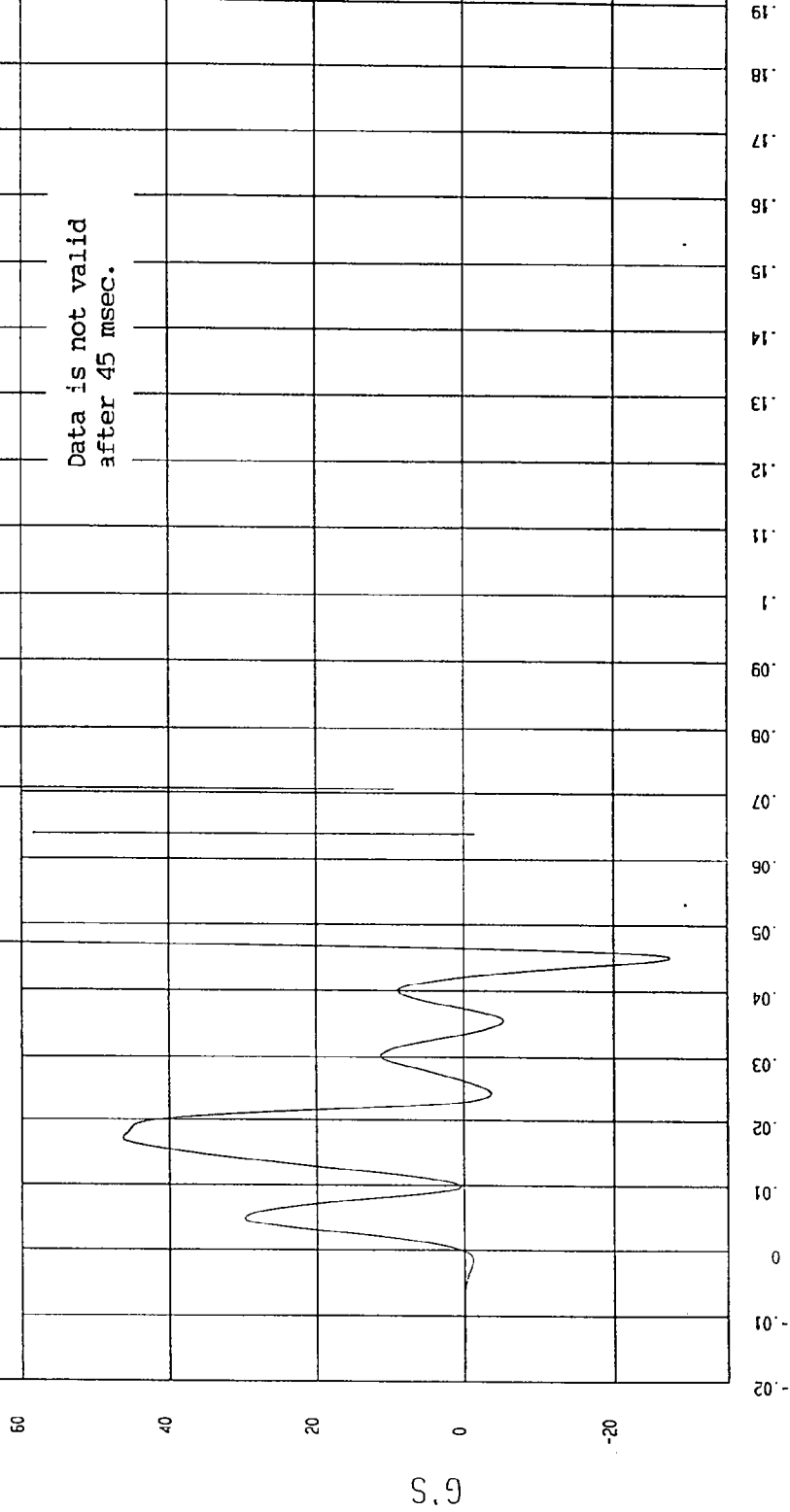
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -1136.52 G'S at 67 msec Maximum = 1121.74 G'S at 75 msec

LEFT SIDE SILL AT FRONT SEAT Y ACCELERATION

1 ——— 897019AF.X38 Filterclass (60)



MGA Research
02-13-1997 13:19

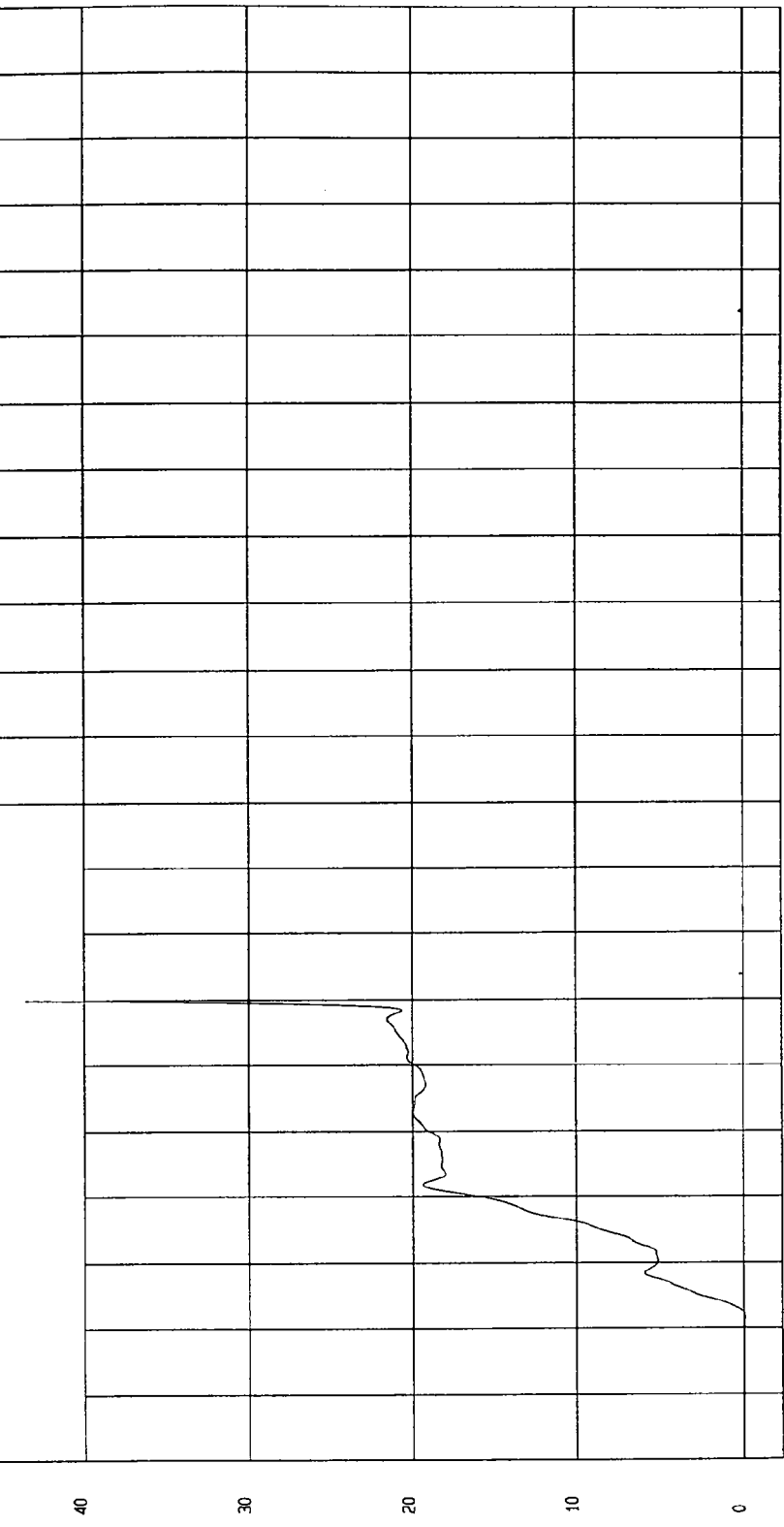
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -10 KPH at 2 msec Maximum = 5104.83 KPH at 200 msec

LEFT SIDE SILL AT FRONT SEAT Y VELOCITY

1 ——— B97019A1.V38 Fjilterclass (160)



TIME Seconds

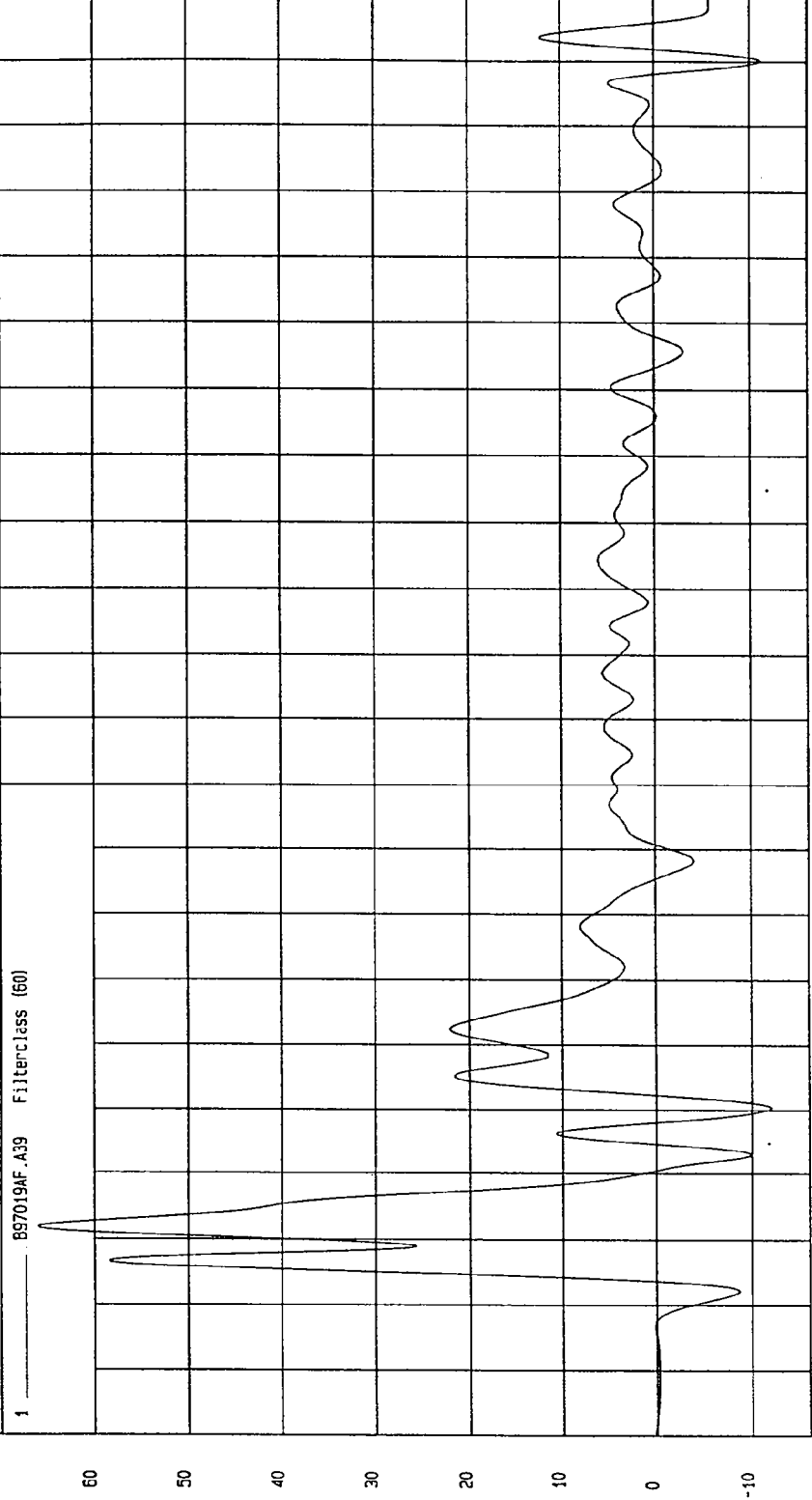
MCA Research
02-13-1997 13:50

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -12.11 G'S at 30 msec Maximum = 65.95 G'S at 12 msec

LEFT SIDE SILL AT REAR SEAT Y ACCELERATION



TIME (SECONDS)

NSA Research
02-10-1997 15.42

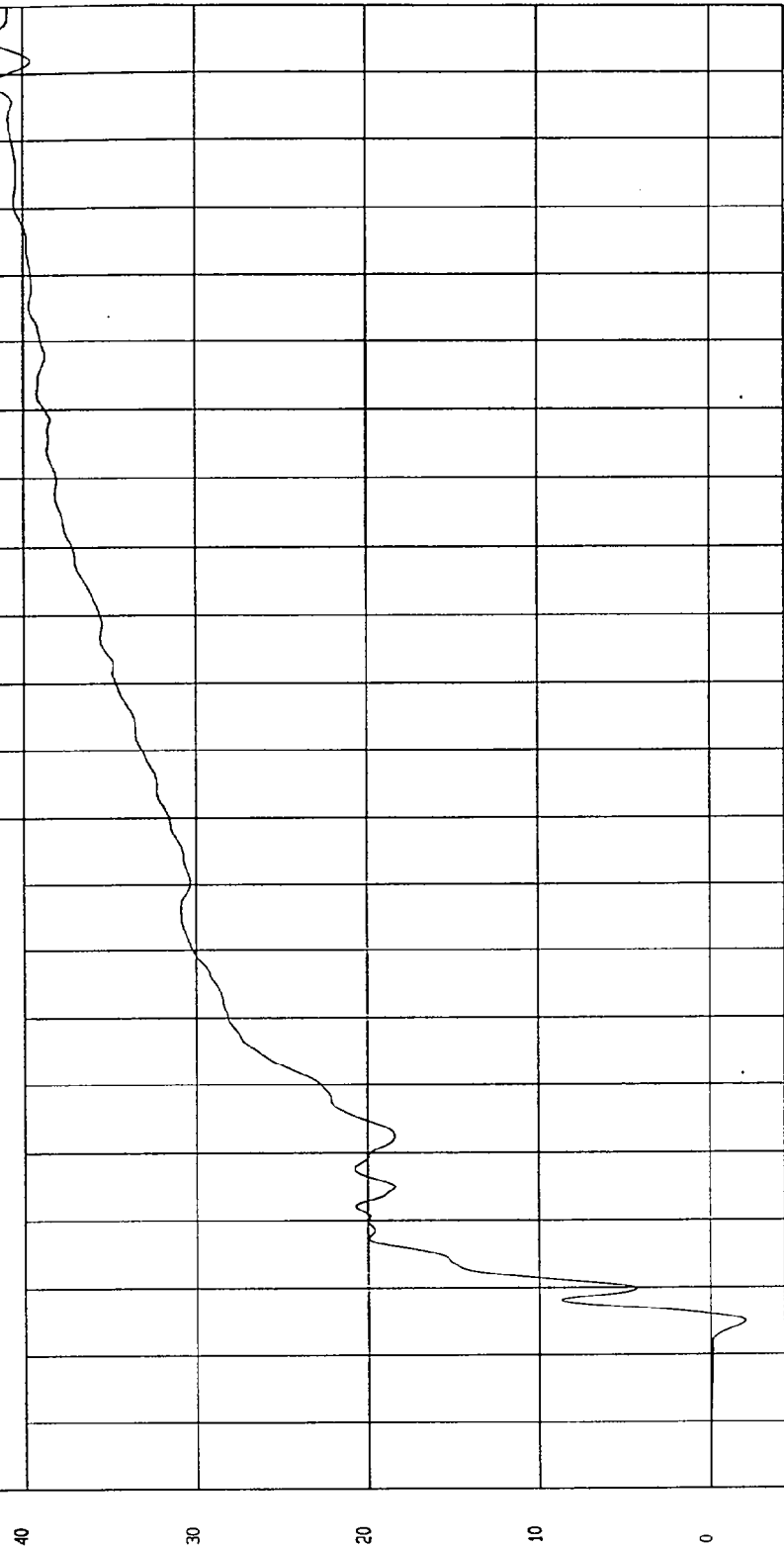
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -2.01 KPH at 5 msec Maximum = 41.86 KPH at 195 msec

LEFT SIDE SILL AT REAR SEAT Y VELOCITY

1 ——— B97019A1.V39 Filterclass (180)



MCA Research
02-13-1997 13:39

TIME Seconds

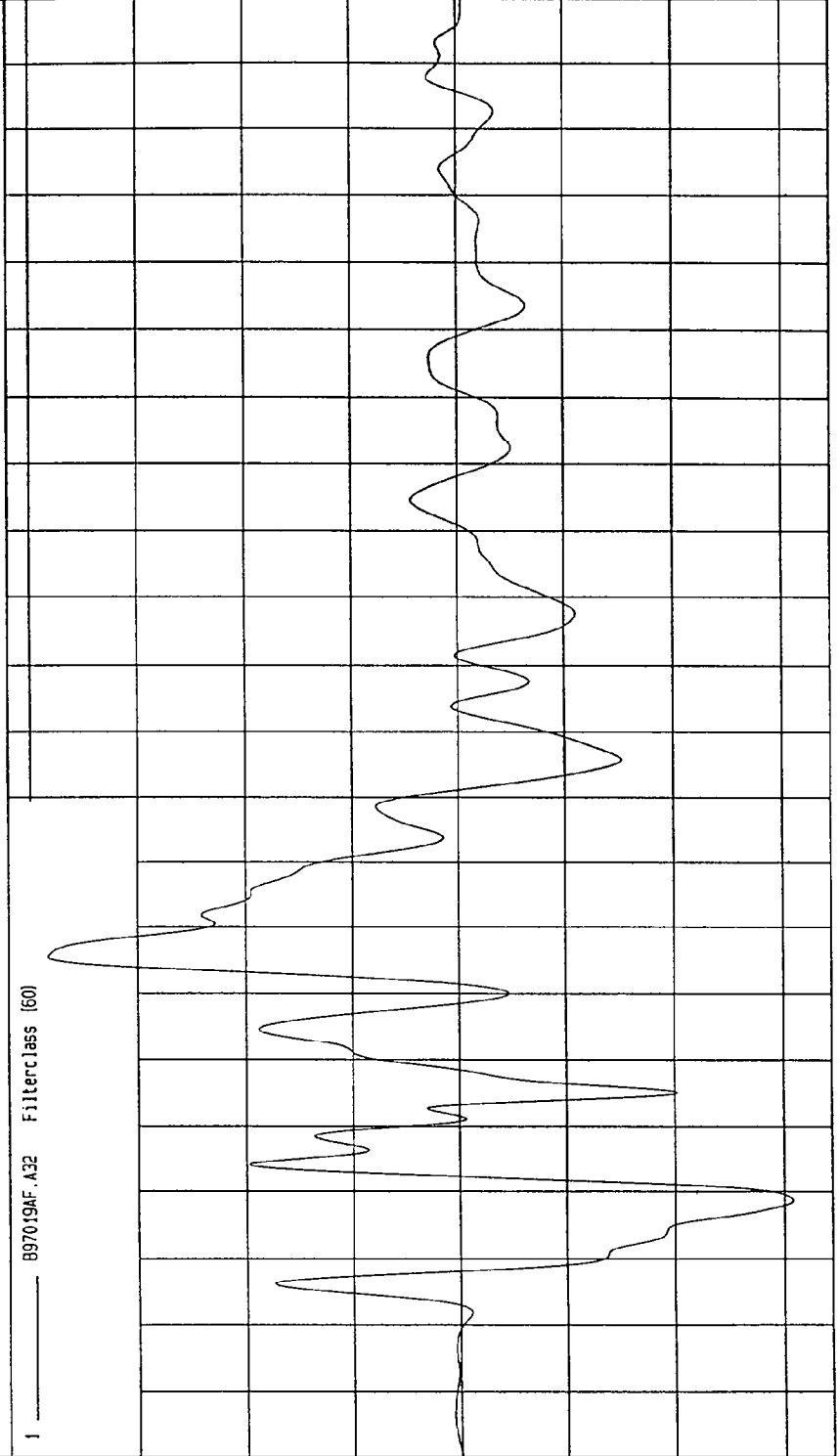
KPH

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -3.08 G'S at .19 msec Maximum = 3.84 G'S at 56 msec

RIGHT SIDE SILL AT FRONT SEAT X ACCELERATION



TIME (SECONDS)

WCA Research
02-10-1997 15.42

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

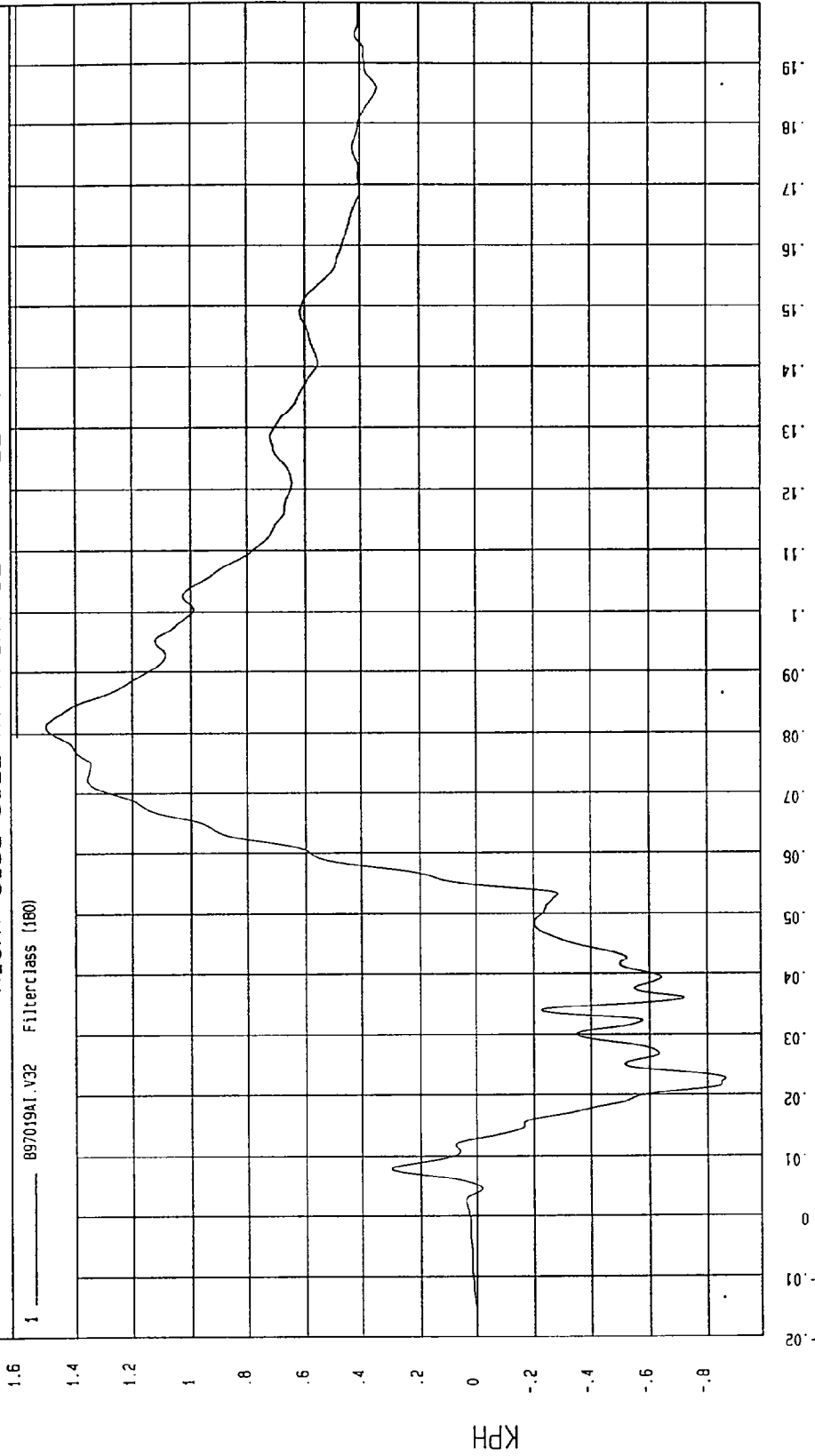
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -.86 KPH at 23 msec

Maximum = 1.50 KPH at 81 msec

RIGHT SIDE SILL AT FRONT SEAT X VELOCITY

1 897019A1.V32 Filterclass (180)



NSA Research
02-13-1997 13:39

TIME Seconds

TEST: NCAP LATERAL IMPACT TEST

TEST DATE: 01-30-1997

Speed: 38.06 MPH 61.3 KPH

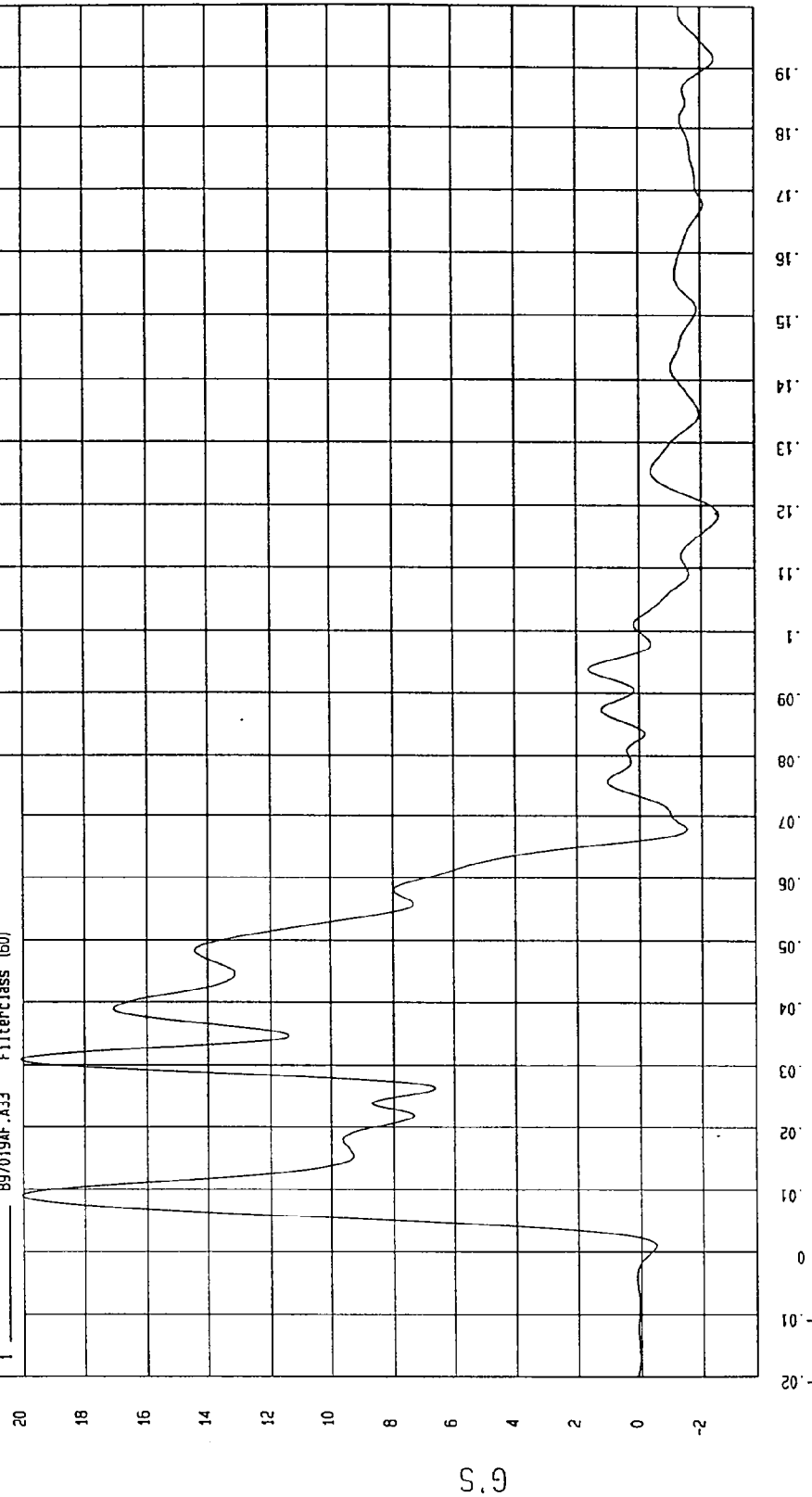
COMPONENT: 1997 MAZDA 626 (MV5400)

Maximum = 20.07 G'S at 31 msec

Minimum = -2.95 G'S at 118 msec

RIGHT SIDE SILL AT FRONT SEAT Y ACCELERATION

1 897019AF.A33 Filterclass (60)



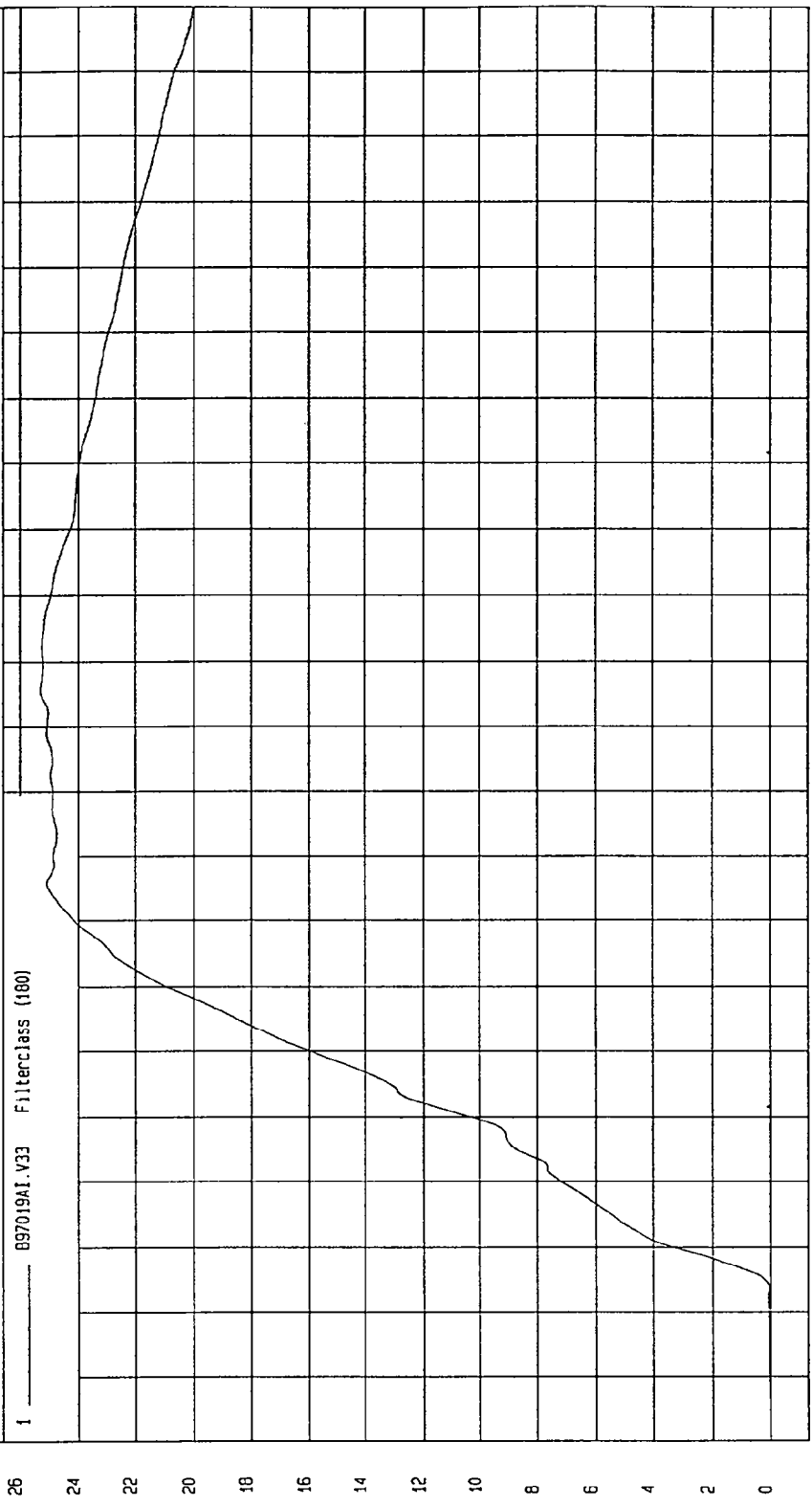
MGA Research
02-10-1997 15: 42

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = 0 KPH at -20 msec Maximum = 25.30 KPH at 95 msec

RIGHT SIDE SILL AT FRONT SEAT Y VELOCITY



MGA Research
02-13-1997 13:40

TIME Seconds

KPH

TEST: NCAP LATERAL IMPACT TEST

TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400)

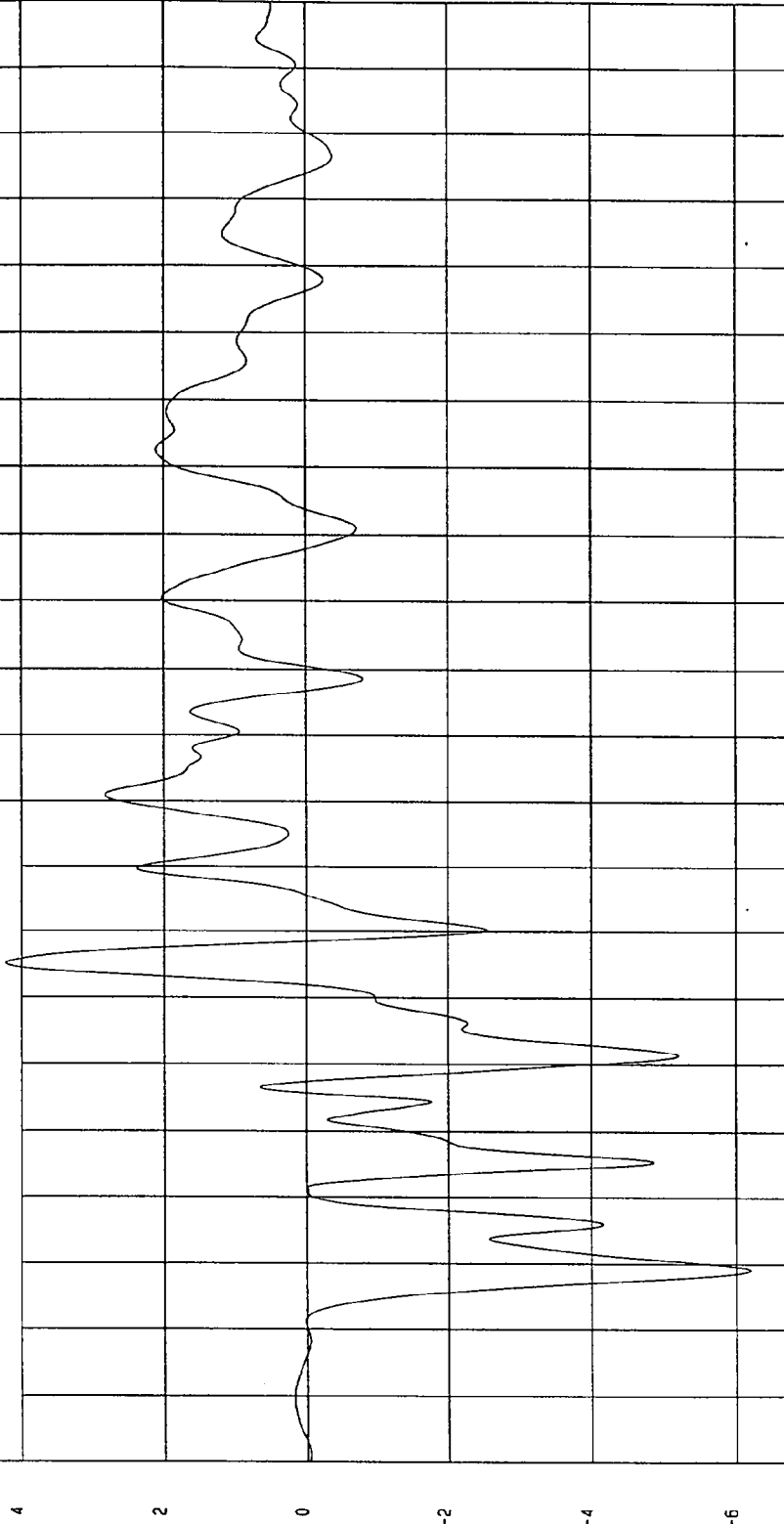
Speed: 38.06 MPH 61.3 KPH

Minimum = -6.20 G'S at 9 msec

Maximum = 4.21 G'S at 55 msec

RIGHT SIDE SILL AT FRONT SEAT Z ACCELERATION

1 ——— 897019AF.A34 Filterclass (60)



MCA Research
02-10-1997 15:42

TEST DATE: 01-30-1997

TEST: NCAP LATERAL IMPACT TEST

Speed: 38.06 MPH 61.3 KPH

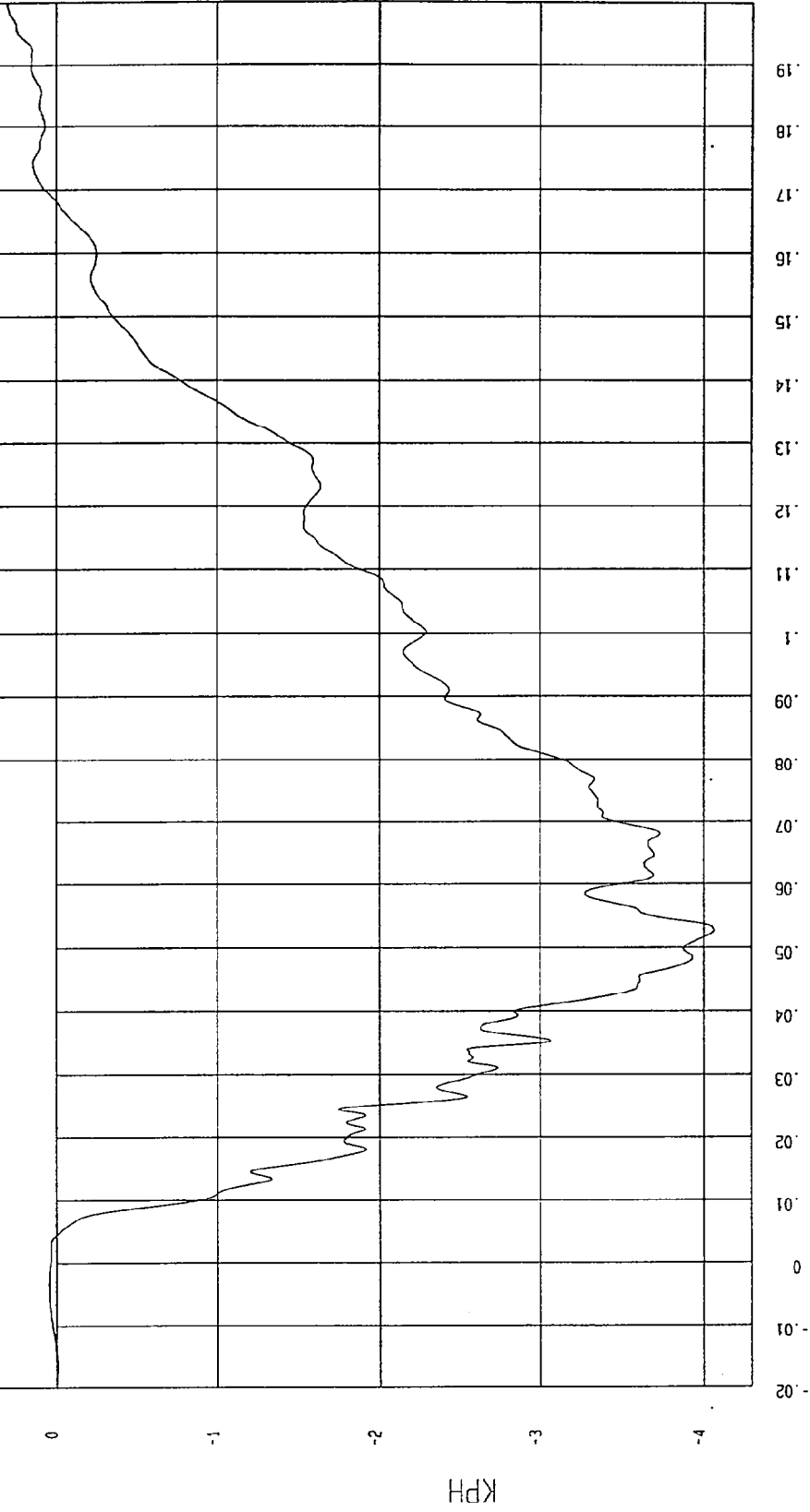
COMPONENT: 1997 MAZDA 626 (MV5400)

Maximum = .30 KPH at 200 msec

Minimum = -4.06 KPH at 53 msec

RIGHT SIDE SILL AT FRONT SEAT Z VELOCITY

1 897019AI.V34 Filterclass (f80)



MOA Research
02-13-1997 13:40

TEST DATE: 01-30-1997

TEST: NCAP LATERAL IMPACT TEST

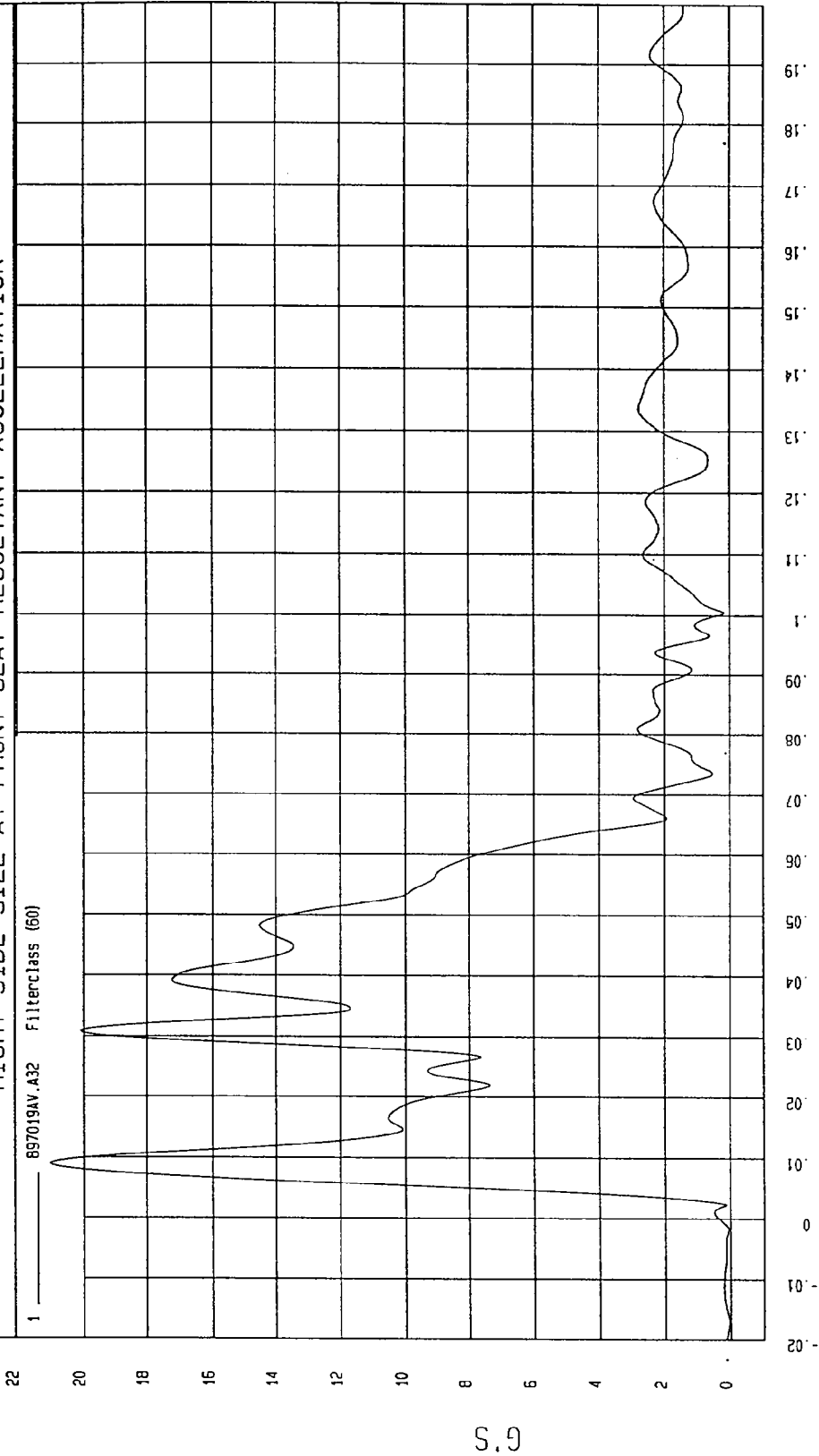
Speed: 38.06 MPH 61.3 KPH

COMPONENT: 1997 MAZDA 626 (MV5400)

Maximum = 21.01 G'S at 9 msec

Minimum = 5.56E-02 G'S at -2 msec

RIGHT SIDE SILL AT FRONT SEAT RESULTANT ACCELERATION



MGA Research
02-10-1997 15:46

TIME (SECONDS)

G.S

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -4.42 G'S at 18 msec
Maximum = 3.61 G'S at 55 msec

RIGHT SIDE SILL AT REAR SEAT X ACCELERATION

1 897019AF.A35 Filterclass (60)

4
3
2
1
0
-1
-2
-3
-4

G.S

TIME (SECONDS)
0.02 0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.1 0.11 0.12 0.13 0.14 0.15 0.16 0.17 0.18 0.19
MVA Research
02-10-1997 15:42

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

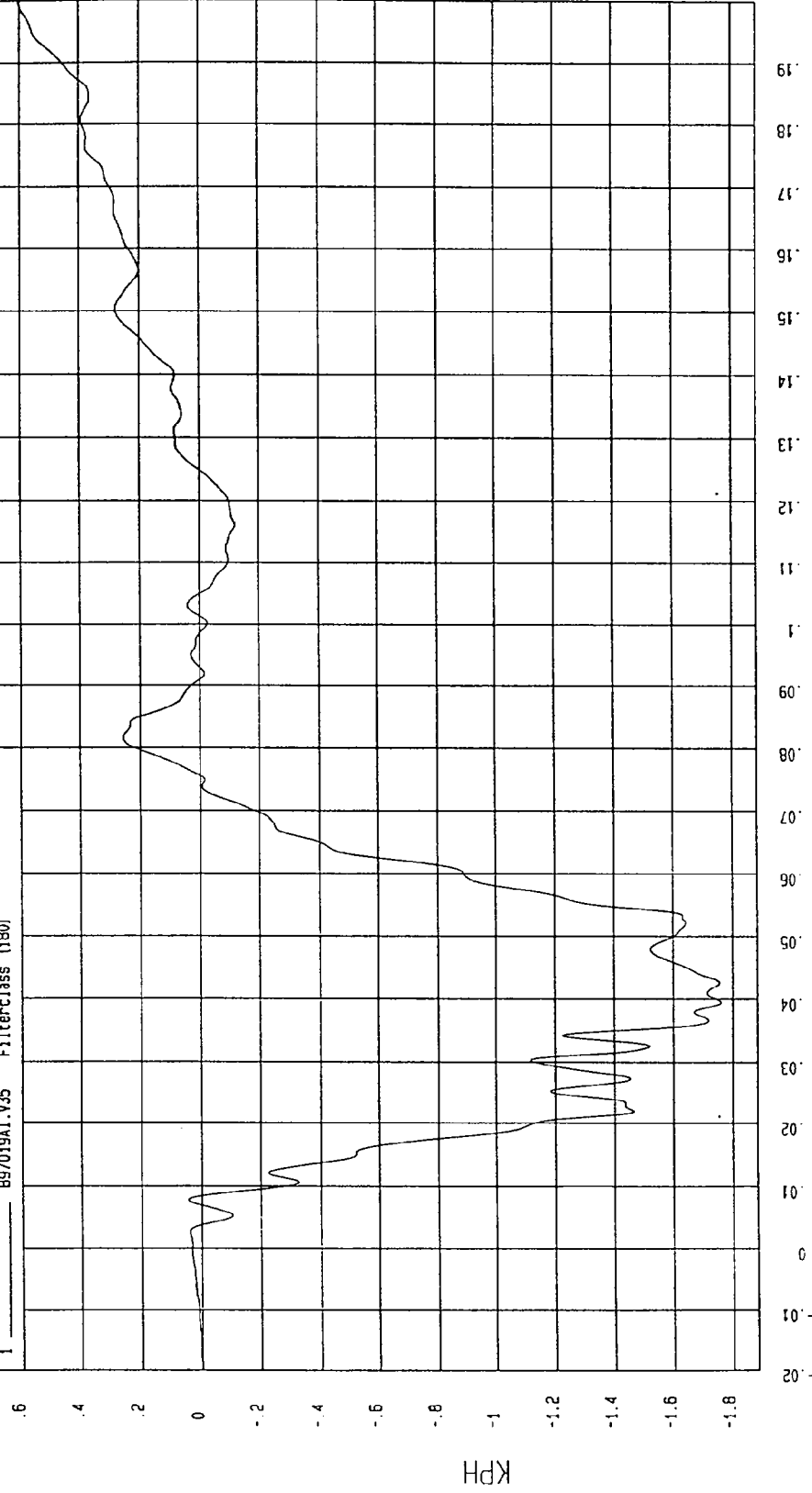
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -1.76 KPH at 39 msec

Maximum = .60 KPH at 200 msec

RIGHT SIDE SILL AT REAR SEAT X VELOCITY

1 897019A1.V35 Filterclass (180)



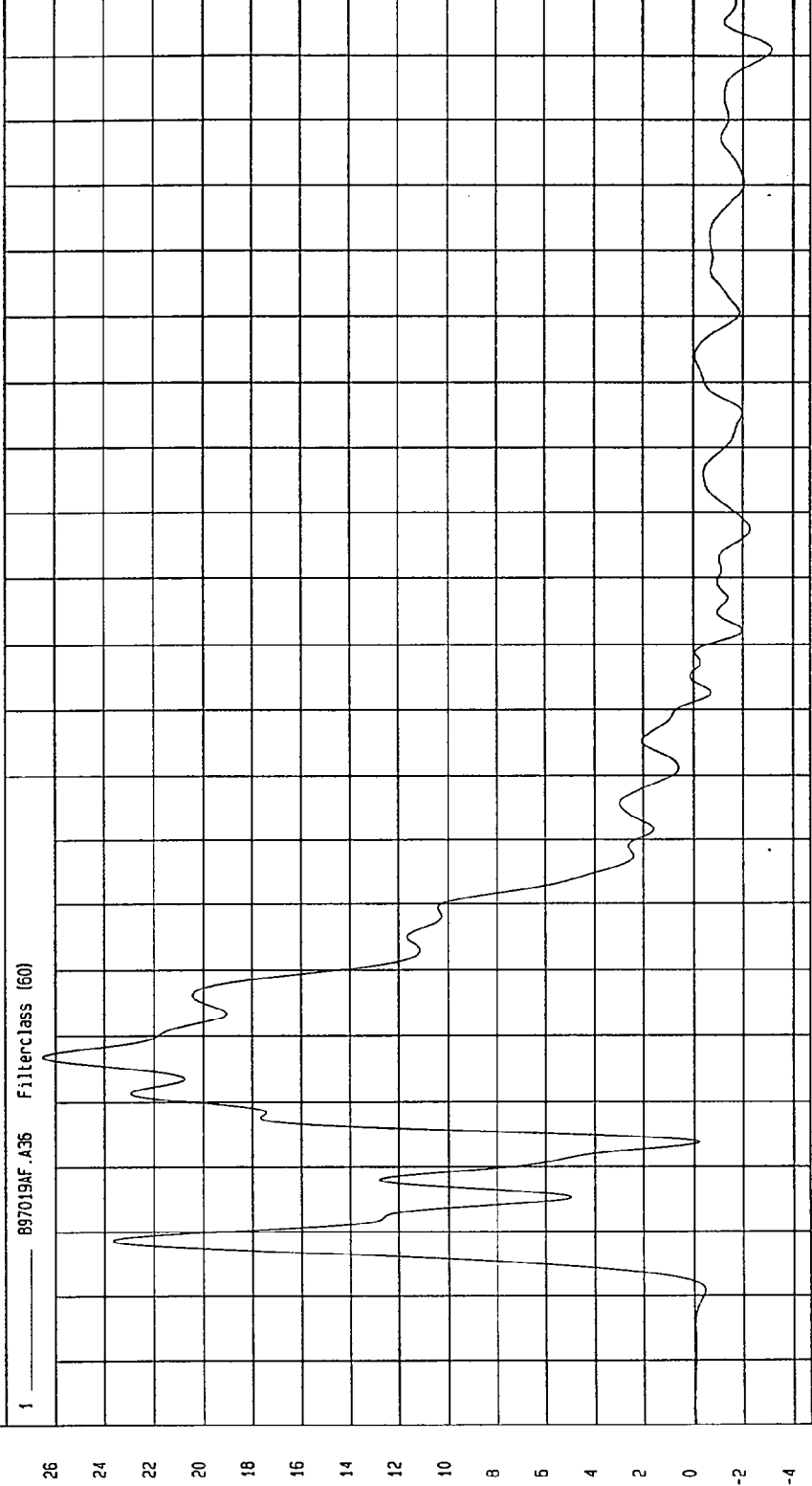
MSA Research
02-13-1997 13:40

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -3.15 G'S at 191 msec Maximum = 26.50 G'S at 37 msec

RIGHT SIDE SILL AT REAR SEAT Y ACCELERATION



TIME (SECONDS)

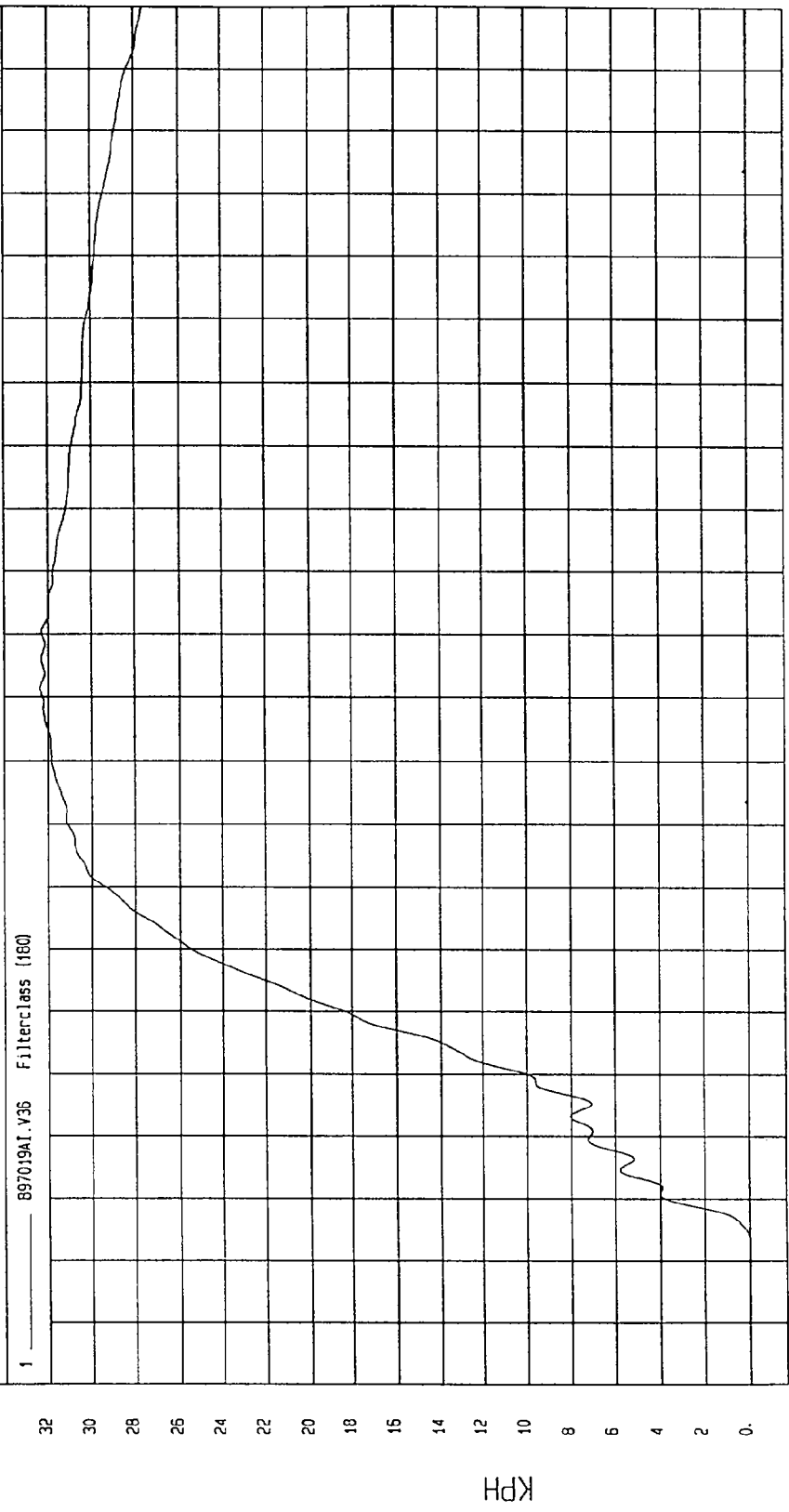
MSA Research
02-10-1997 15:42

G.S.

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997
 COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -2.43E-02 KPH at 2 msec Maximum = 32.35 KPH at 91 msec

RIGHT SIDE SILL AT REAR SEAT Y VELOCITY



TIME Seconds
 MGA Research
 02-13-1997 13.40

TEST: NCAP LATERAL IMPACT TEST

TEST DATE: 01-30-1997

Speed: 38.06 MPH 61.3 KPH

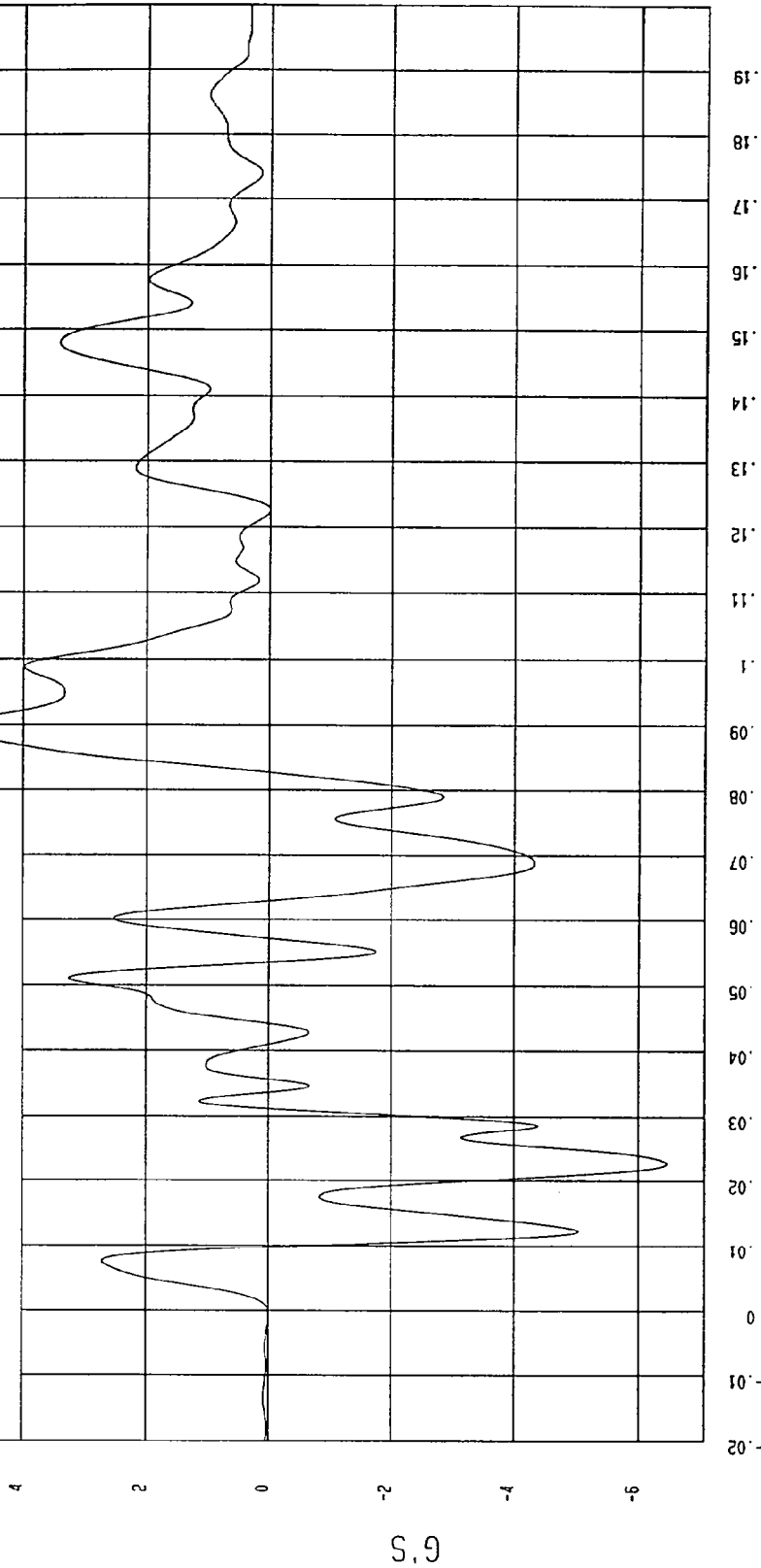
COMPONENT: 1997 MAZDA 626 (MV5400)

Maximum = 5.39 G'S at 90 msec

Minimum = -6.45 G'S at 23 msec

RIGHT SIDE SILL AT REAR SEAT Z ACCELERATION

1 ——— 897019AF.A37 Filterclass (60)



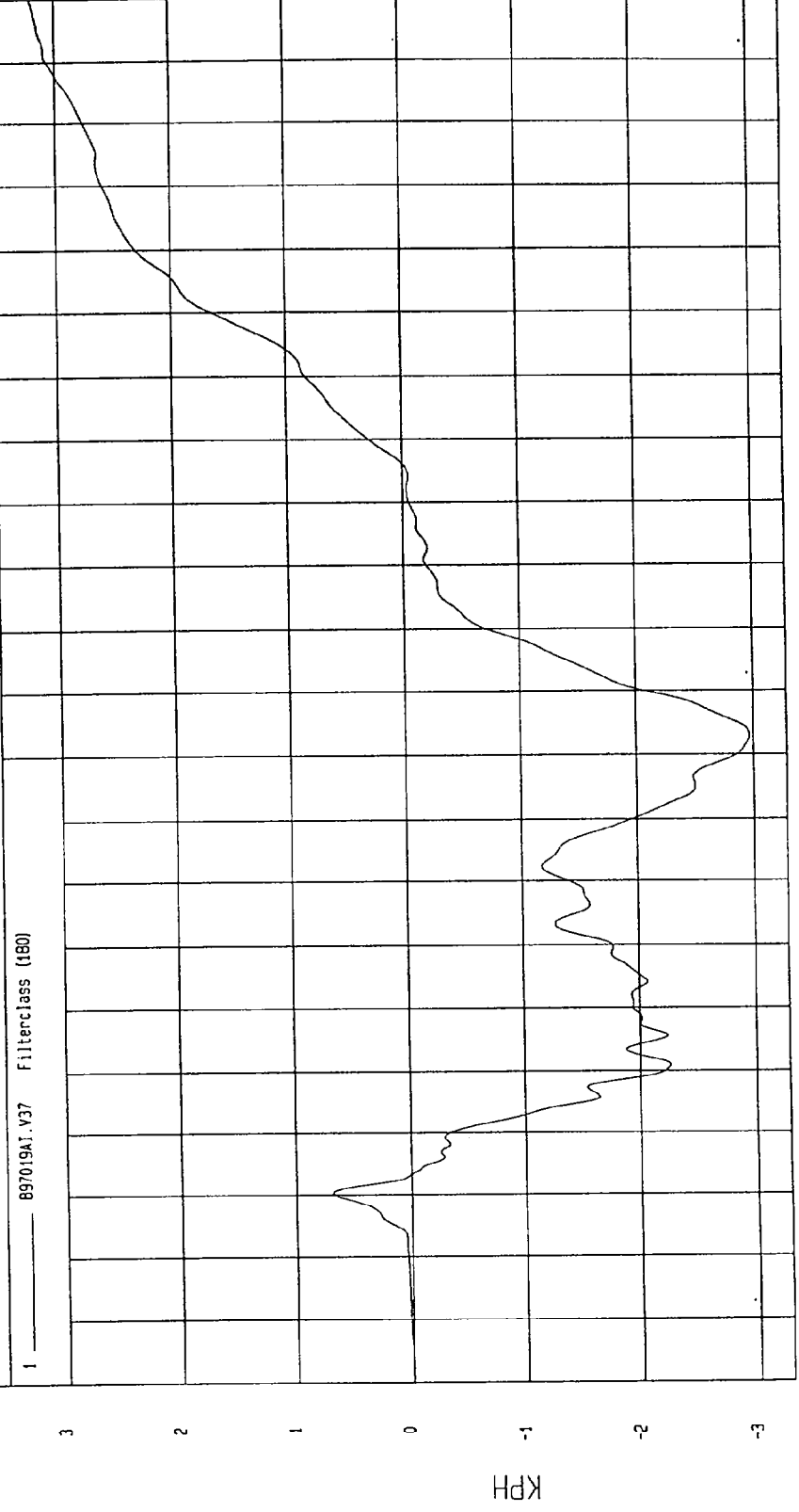
MCA Research
02-10-1997 15:42

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -2.96 KPH at 83 msec Maximum = 3.20 KPH at 200 msec

RIGHT SIDE SILL AT REAR SEAT Z VELOCITY



MGA Research
02-13-1997 13:40

TEST: NCAP LATERAL IMPACT TEST

TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400)

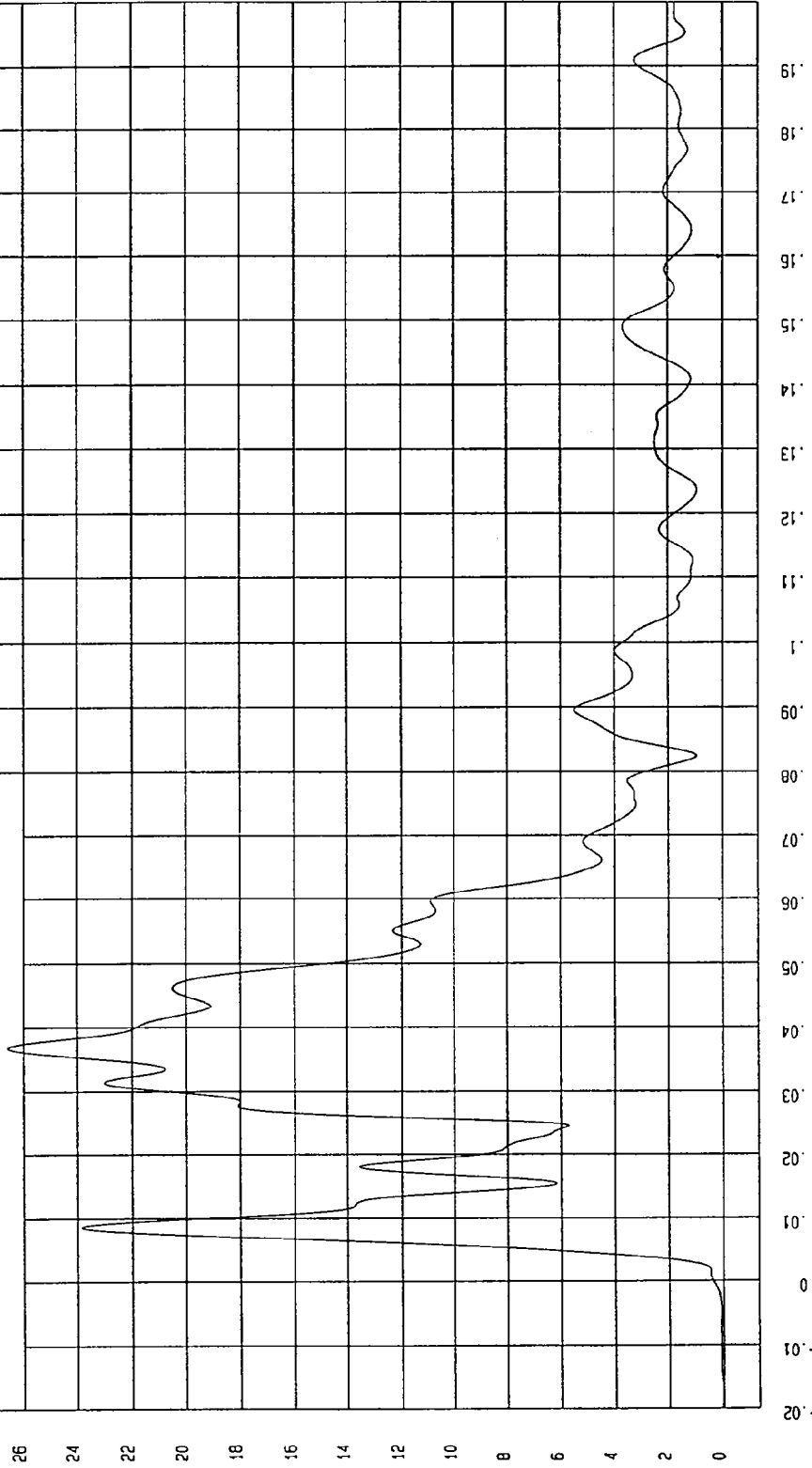
Speed: 38.06 MPH 61.3 KPH

Minimum = 3.82E-02 G'S at -18 msec

Maximum = 26.58 G'S at 37 msec

RIGHT SIDE SILL AT REAR SEAT RESULTANT ACCELERATION

1 ——— B97019AV.A35 Filterclass (60)



MOA Research
02-10-1997 15:45

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

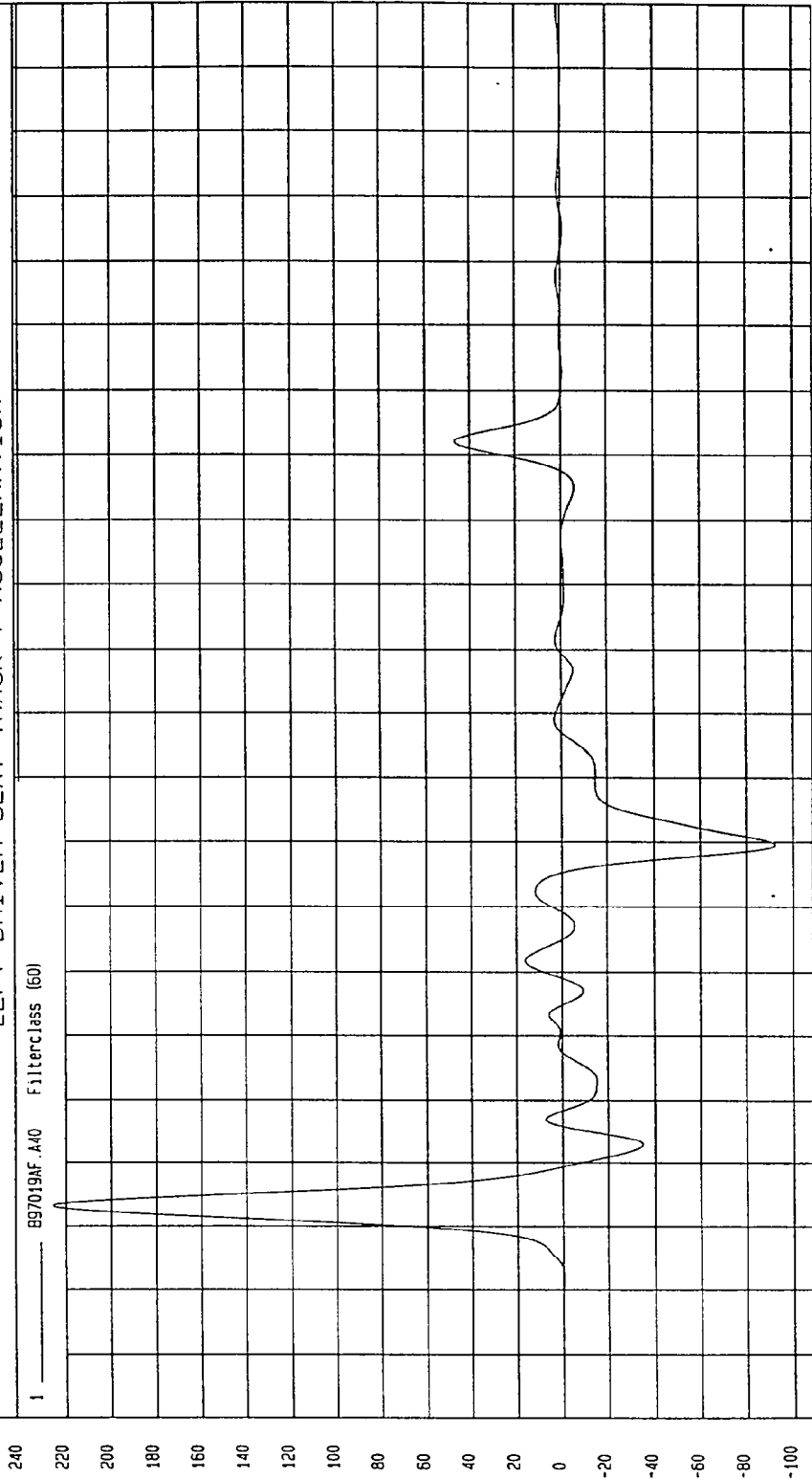
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -92.53 G'S at 70 msec

Maximum = 225.85 G'S at 13 msec

LEFT DRIVER SEAT TRACK Y ACCELERATION

1 897019AF.A40 Filterclass (50)



MGA Research
02-10-1997 15:43

TIME (SECONDS)

G.S

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

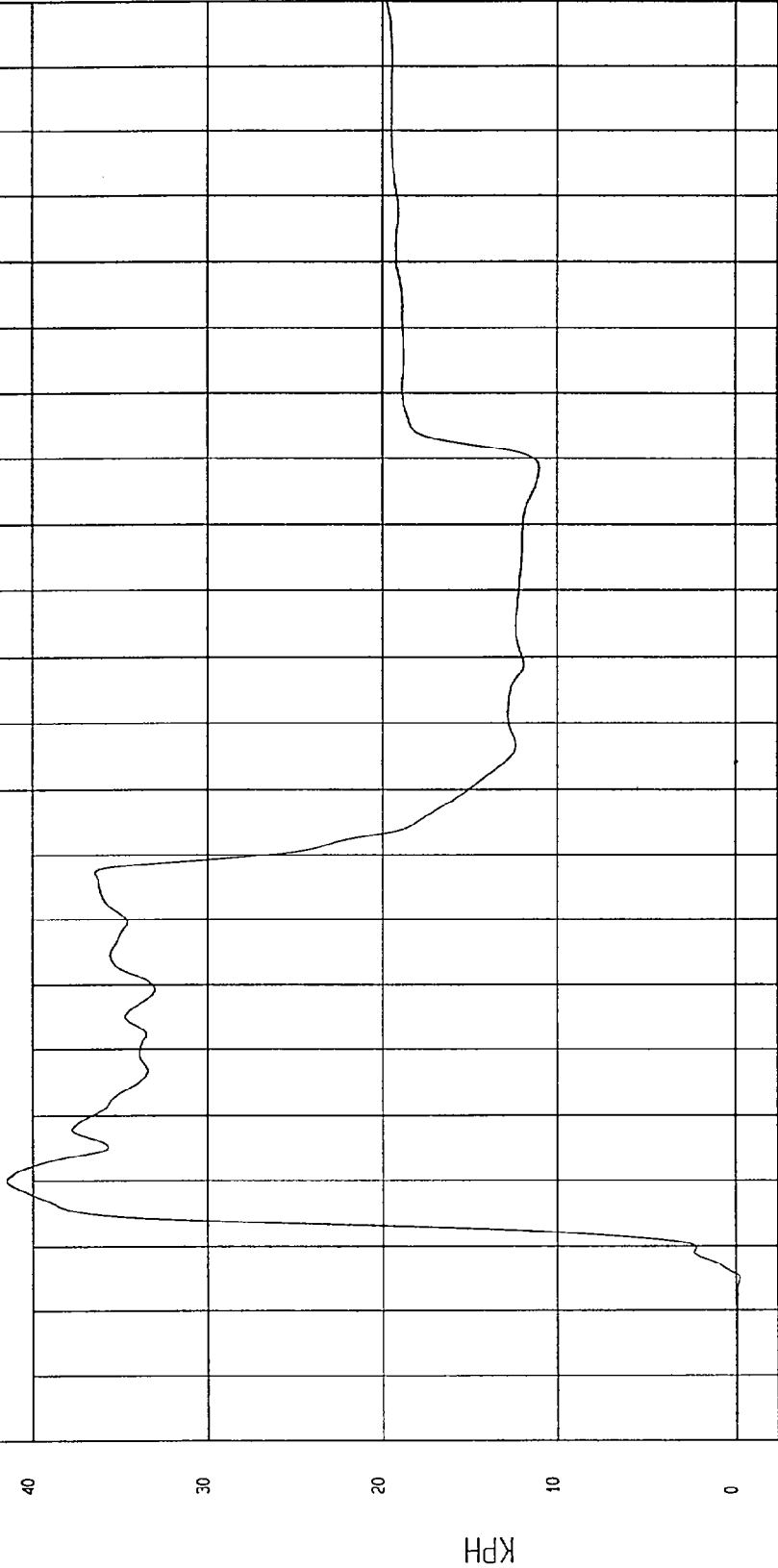
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -.20 KPH at 5 msec

Maximum = 41.49 KPH at 20 msec

LEFT DRIVER SEAT TRACK Y VELOCITY

1 ——— 897019A1.V40 Filterclass (180)



MCA Research
02-13-1997 13:40

TIME Seconds

KPH

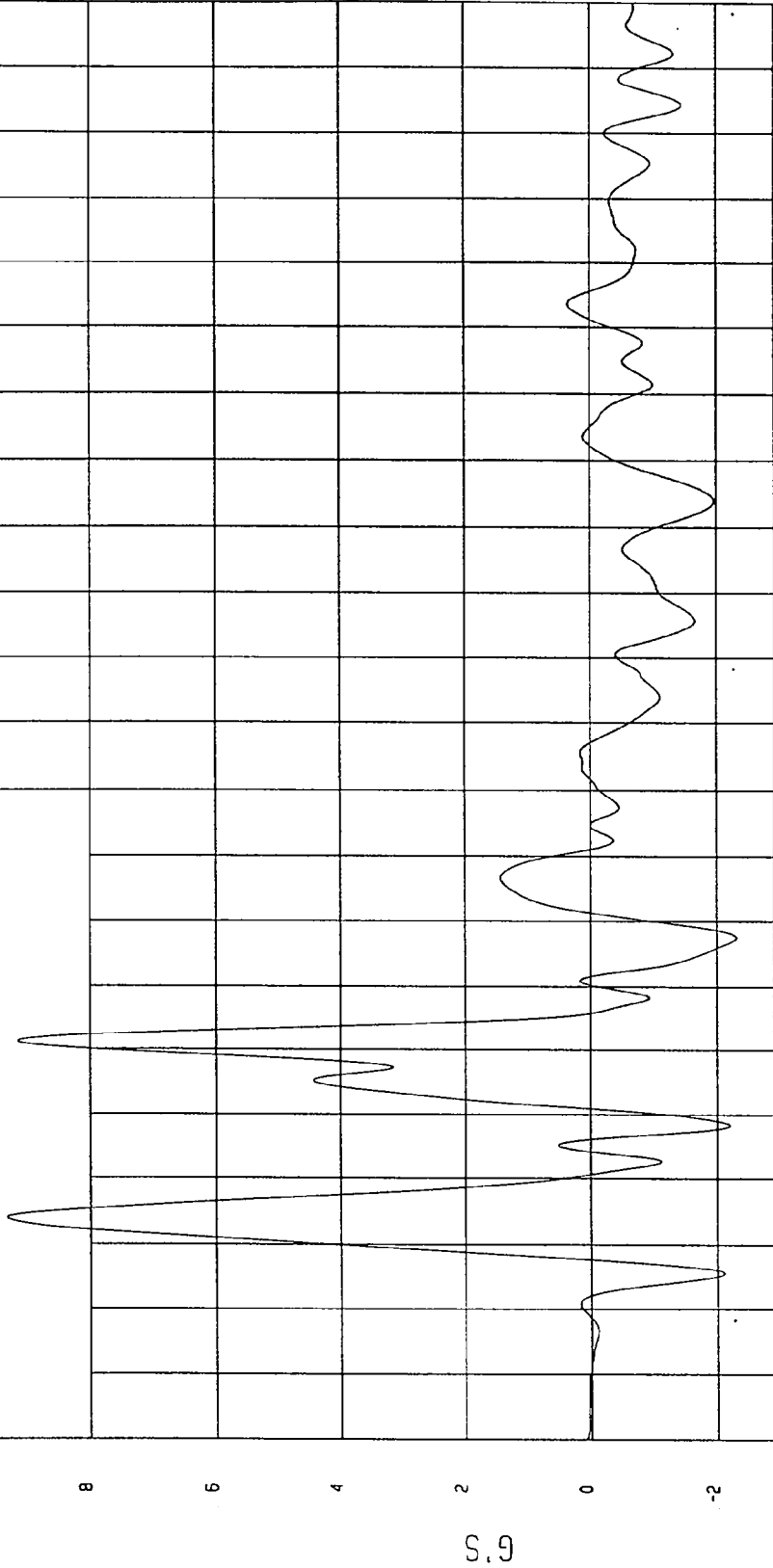
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -2.31 G'S at 58 msec Maximum = 9.34 G'S at 14 msec

REAR FLOORPAN ABOVE AXLE X ACCELERATION

1 ——— 897019AF.A08 Filterclass (60)



MOA Research
02-10-1997 15.43

TIME (SECONDS)

G.S

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

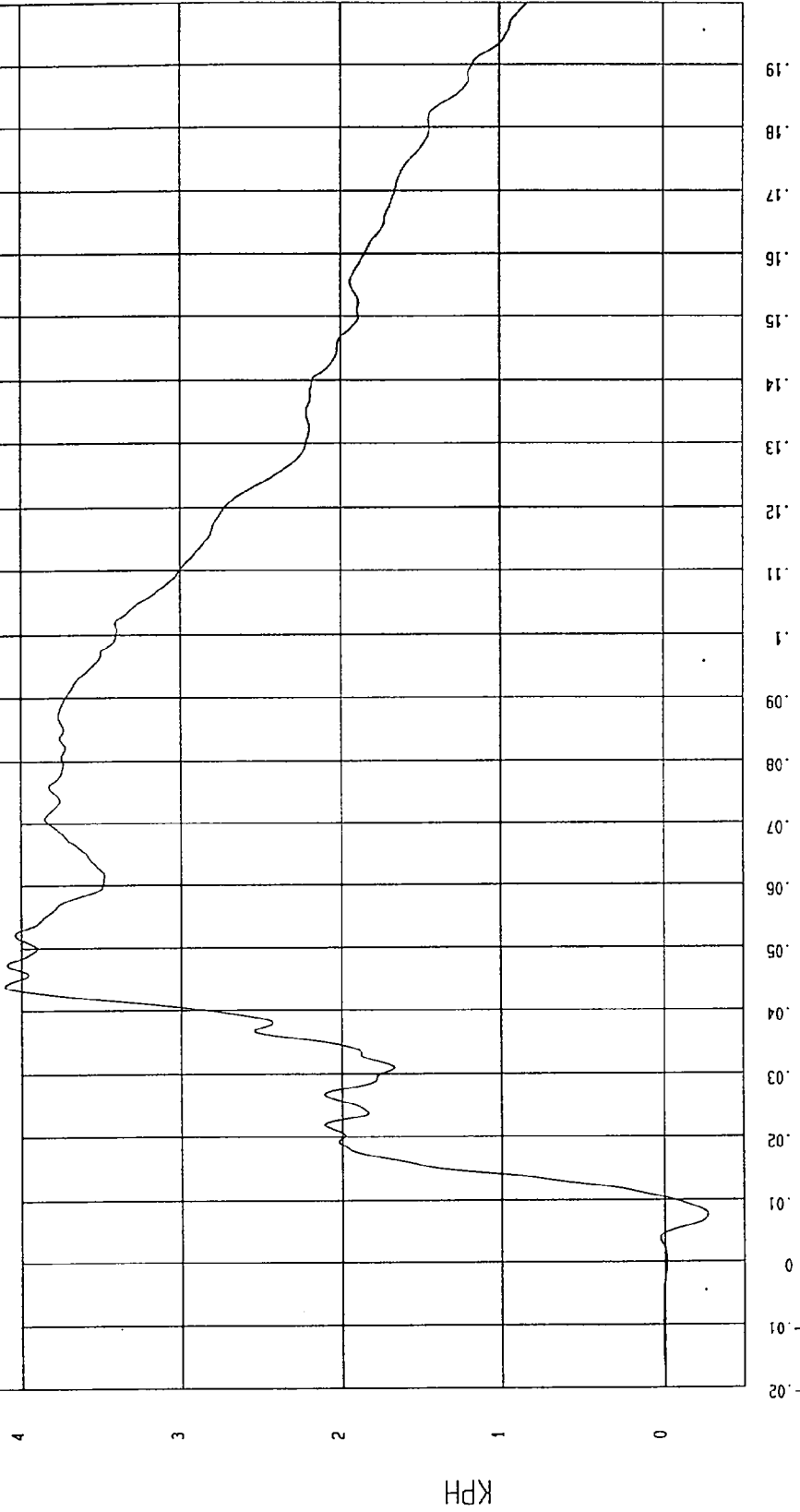
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -26 KPH at 8 msec

Maximum = 4.10 KPH at 44 msec

REAR FLOORPAN ABOVE AXLE X VELOCITY

1 897019A1.V08 Filterclass (180)

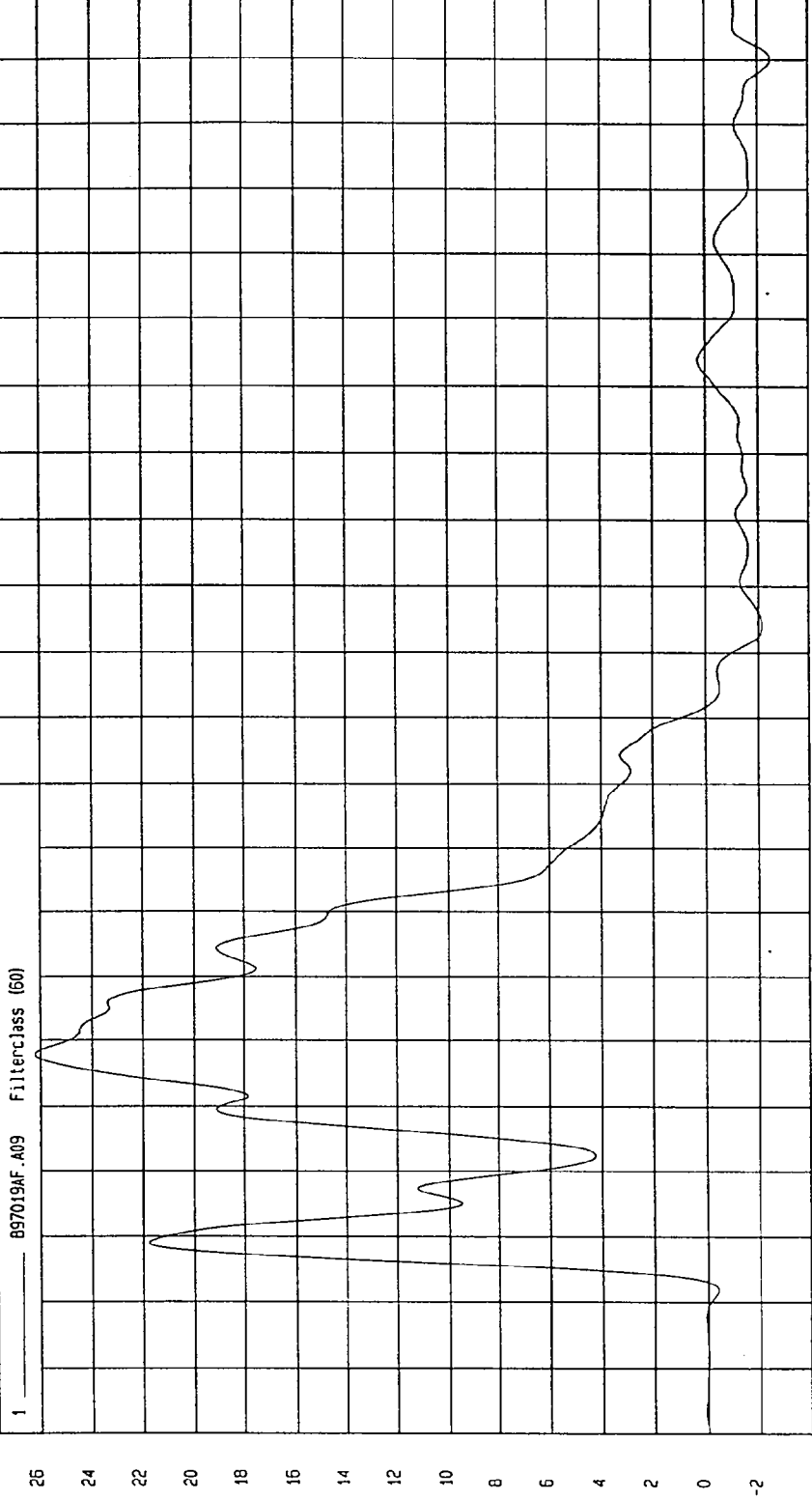


NSA Research
02-13-1997 13:40

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -2.49 G'S at 190 msec Maximum = 26.20 G'S at 38 msec

REAR FLOORPAN ABOVE AXLE Y ACCELERATION



TIME (SECONDS)

MGA Research
02-10-1997 15:43

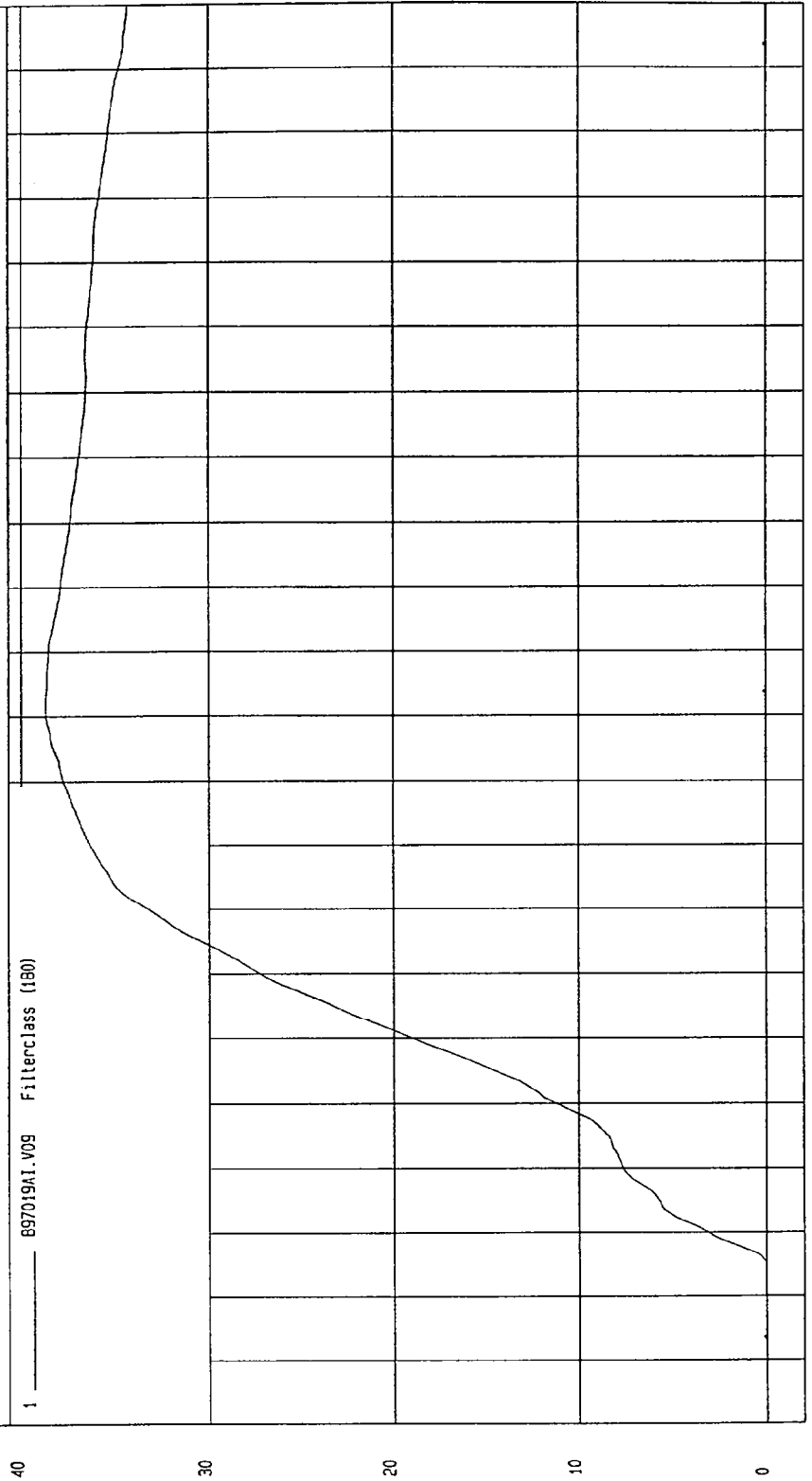
G.S

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -4.40E-03 KPH at -19 msec Maximum = 38.74 KPH at 91 msec

REAR FLOORPAN ABOVE AXLE Y VELOCITY

1 ——— 897019A1.V09 Filterclass (180)



MGA Research
02-13-1997 13:40

TEST: NCAP LATERAL IMPACT TEST

TEST DATE: 01-30-1997

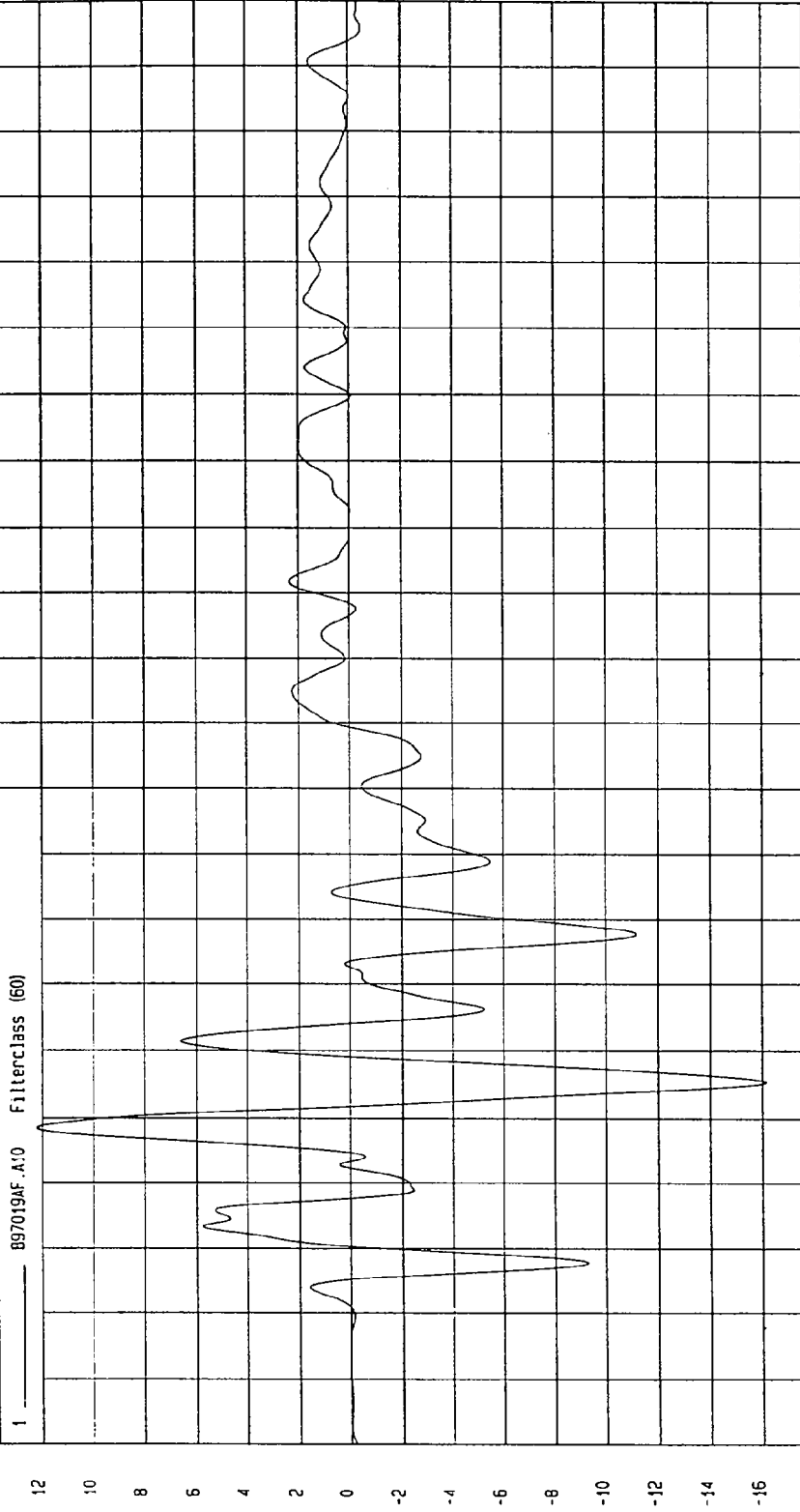
COMPONENT: 1997 MAZDA 626 (MV5400)

Speed: 38.06 MPH 61.3 KPH

Minimum = -16.15 G'S at 35 msec

Maximum = 12.21 G'S at 28 msec

REAR FLOORPAN ABOVE AXLE Z ACCELERATION



MSA Research
02-10-1997 15:43

TIME (SECONDS)

G.S

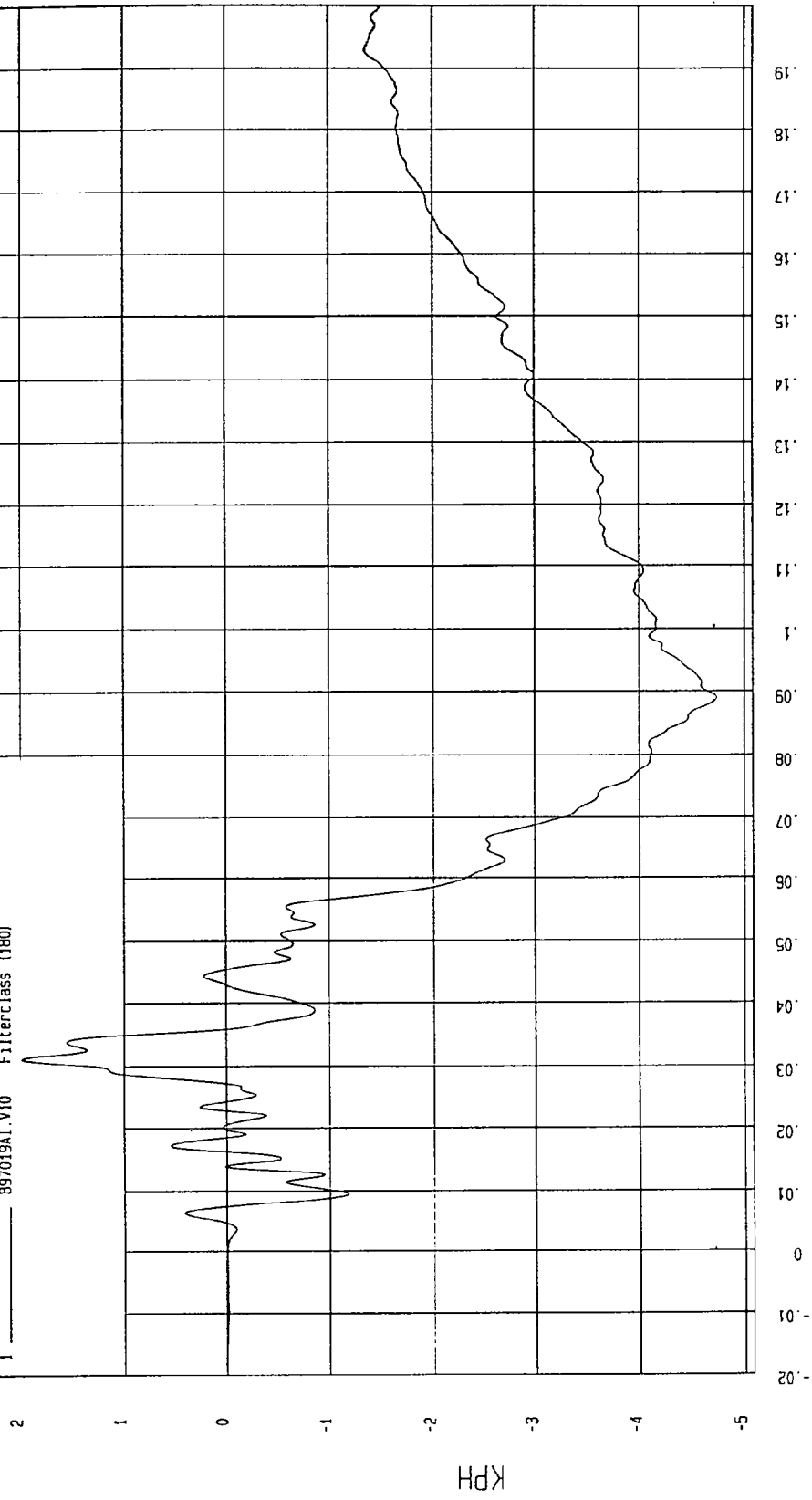
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -4.74 KPH at 89 msec Maximum = 1.99 KPH at 31 msec

REAR FLOORPAN ABOVE AXLE Z VELOCITY

1 897019A1.V10 Filterclass (180)



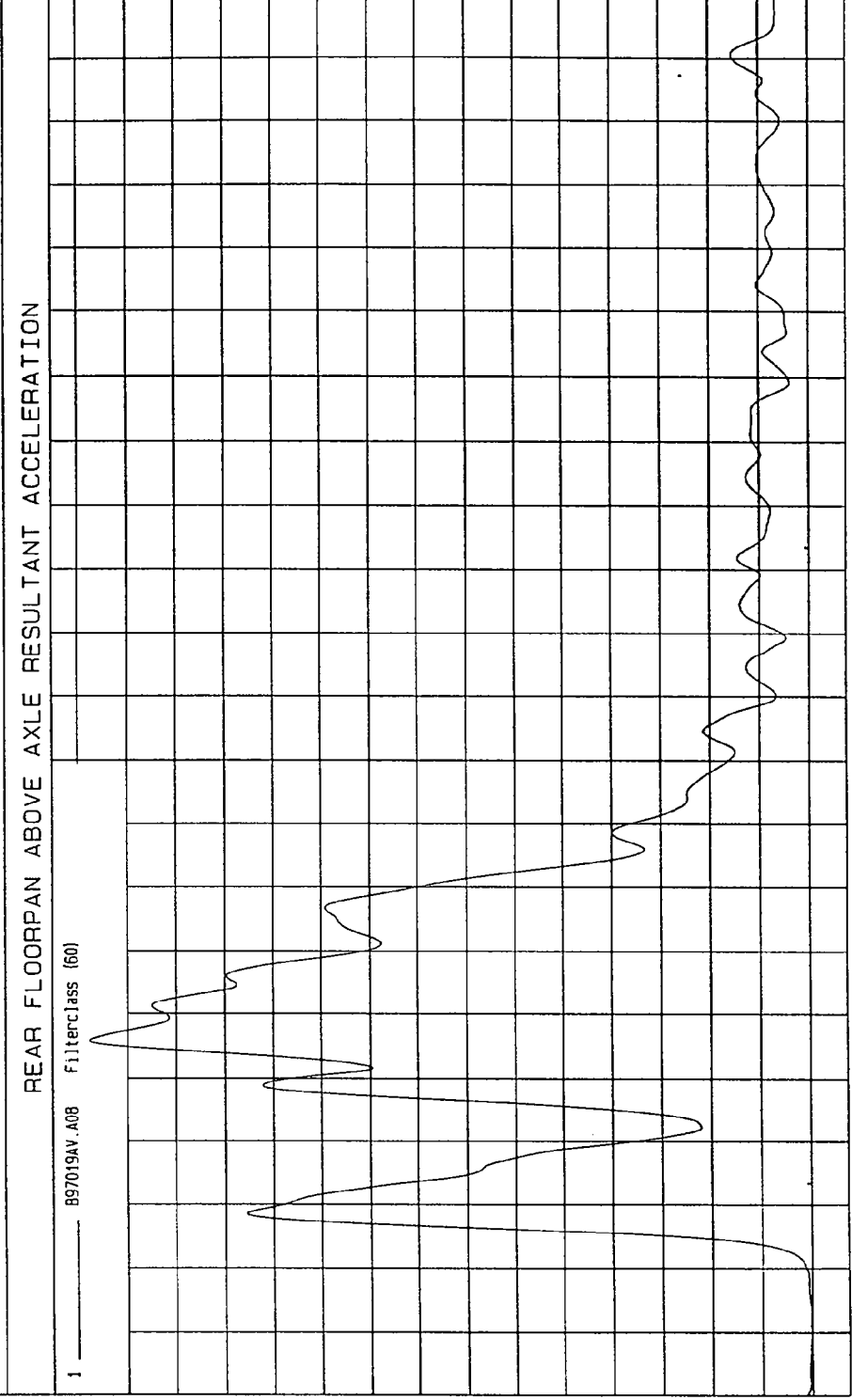
MCA Research
02-13-1997 13:40

TIME Seconds

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = 3.21E-02 G'S at -10 msec Maximum = 29.53 G'S at 36 msec



TIME (SECONDS)

0.19
0.18
0.17
0.16
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0.12
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0.03
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-0.01
-0.02

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Minimum = 3.21E-02 G'S at -10 msec
Maximum = 29.53 G'S at 36 msec

1 897019AV.A08 Filterclass (60)

NCAP Research
02-10-1997 15:45

TEST DATE: 01-30-1997

TEST: NCAP LATERAL IMPACT TEST

Speed: 38.06 MPH 61.3 KPH

COMPONENT: 1997 MAZDA 626 (MV5400)

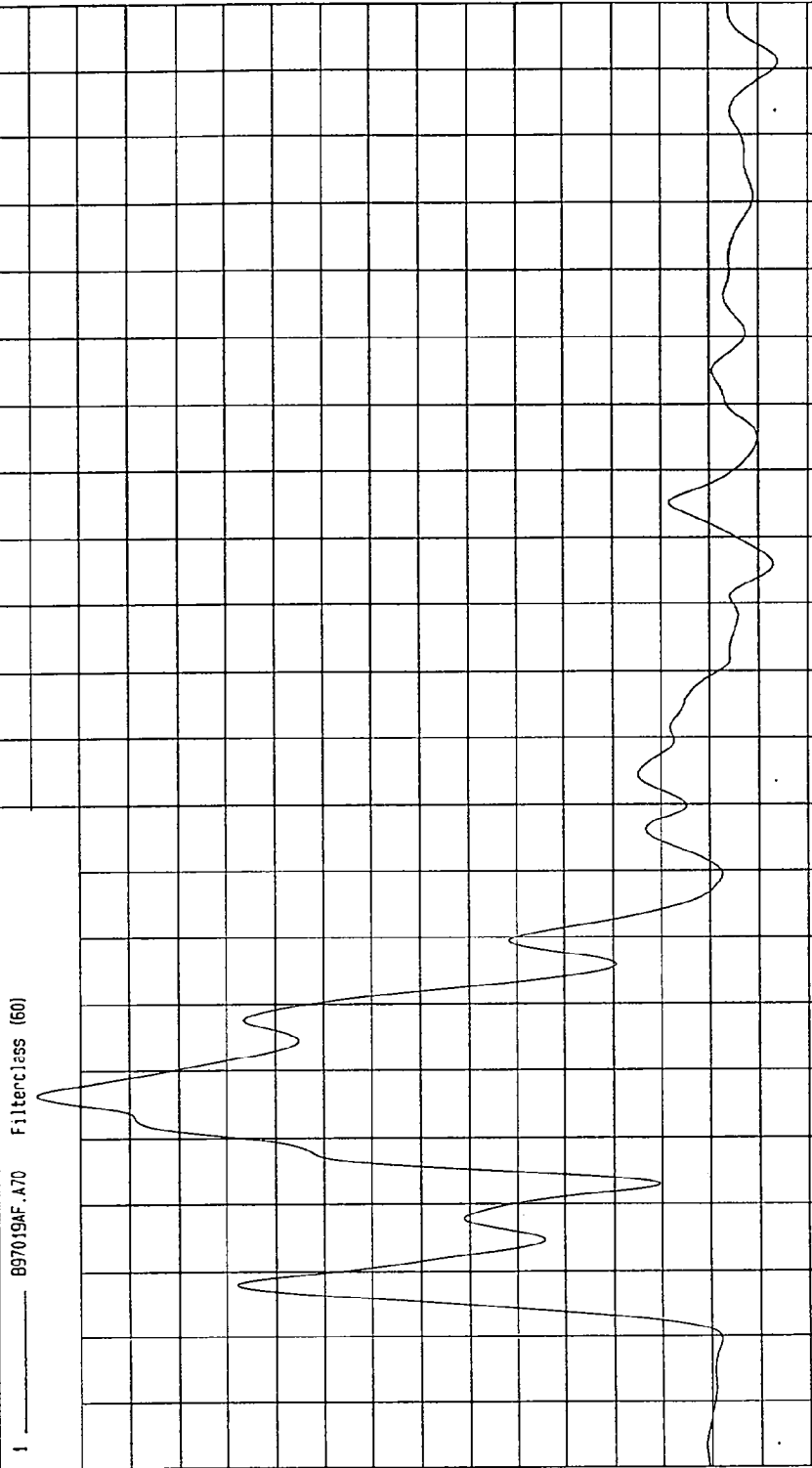
Maximum = 27.61 G'S at 36 msec

Minimum = -2.79 G'S at 191 msec

RIGHT REAR OCCUPANT COMPARTMENT Y ACCELERATION

1 897019AF.A70 Filterclass (60)

28
26
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-2
-4



MSA Research
02-10-1997 15:43

TIME (SECONDS)

G

TEST: NCAP LATERAL IMPACT TEST

TEST DATE: 01-30-1997

Speed: 38.06 MPH 61.3 KPH

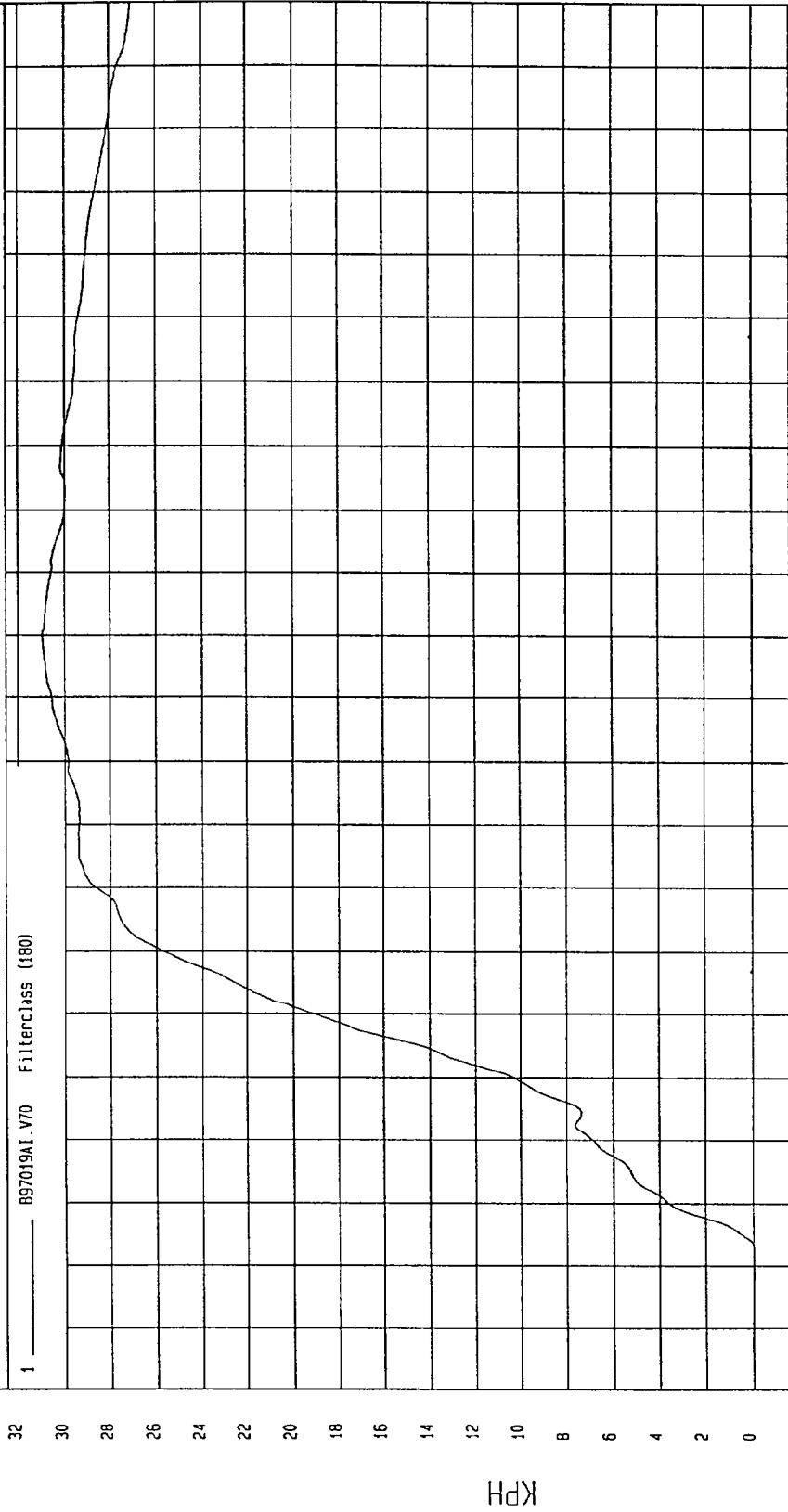
COMPONENT: 1997 MAZDA 626 (MV5400)

Minimum = -3.04E-02 KPH at 2 msec

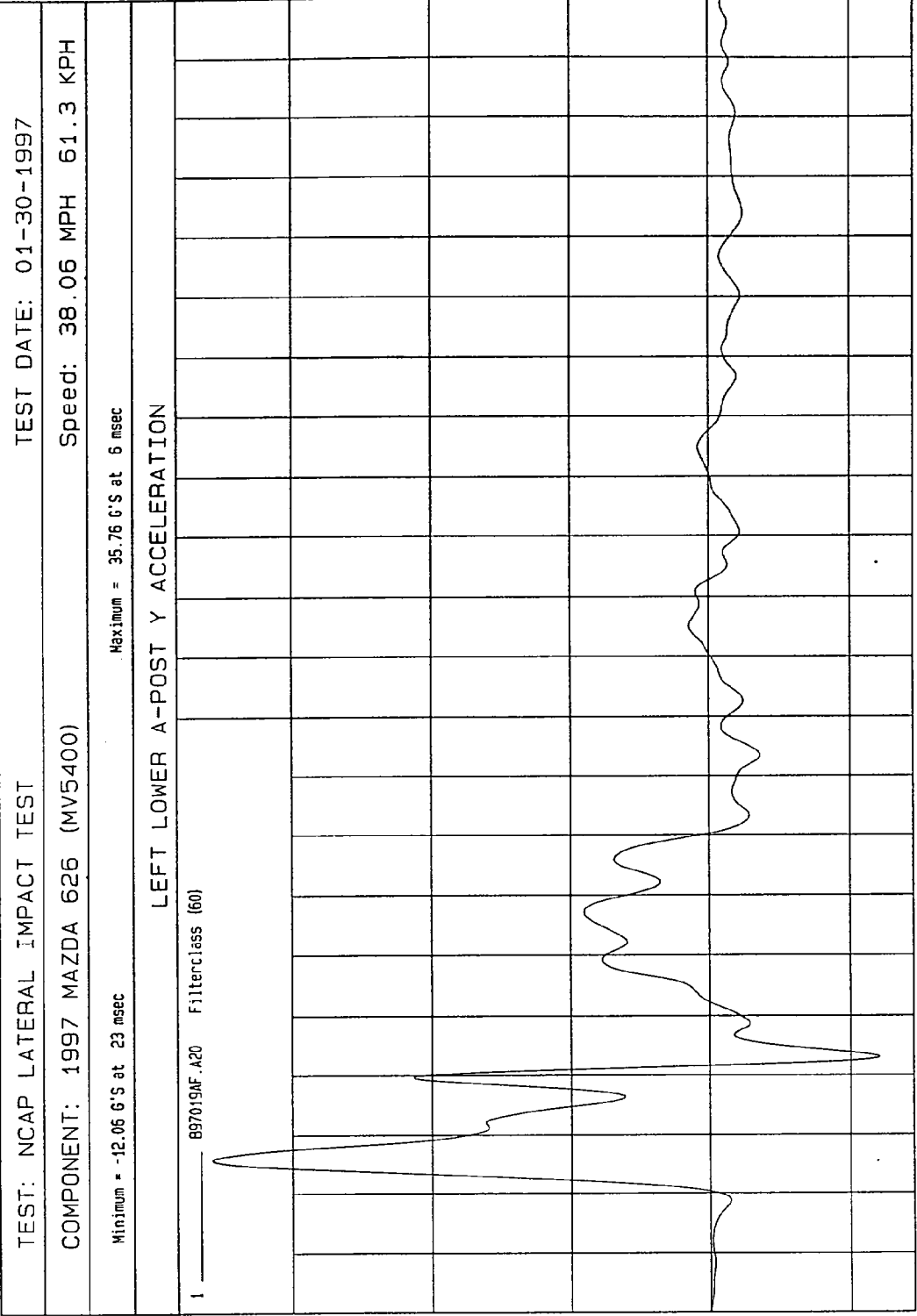
Maximum = 30.95 KPH at 100 msec

RIGHT REAR OCCUPANT COMPARTMENT Y VELOCITY

1 097019A1.V70 Filterclass (480)



MEA Research
02-13-1997 13:40



MCA Research
02-10-1997 15:43

TIME (SECONDS)

G.S

TEST DATE: 01-30-1997

TEST: NCAP LATERAL IMPACT TEST

Speed: 38.06 MPH 61.3 KPH

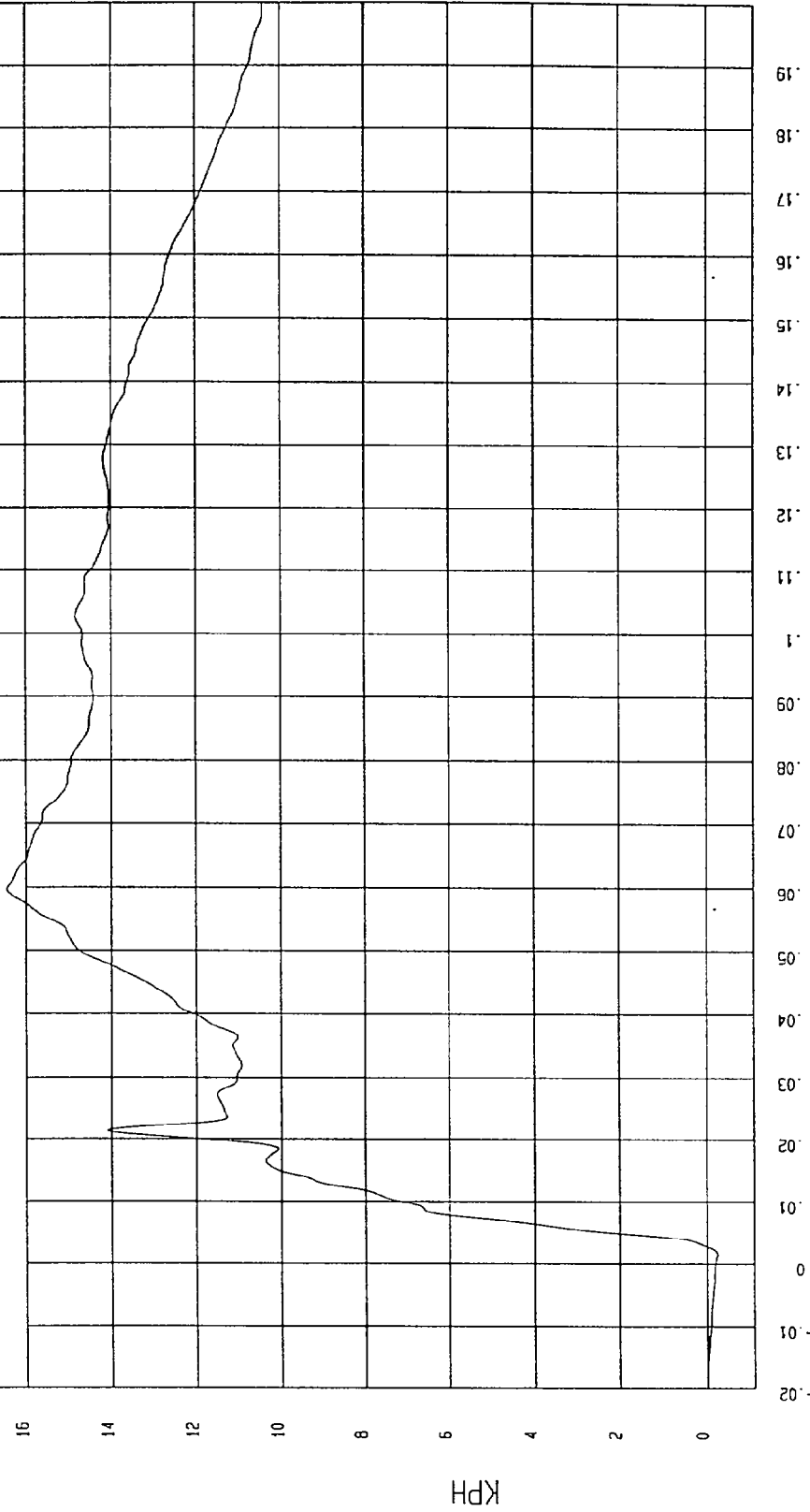
COMPONENT: 1997 MAZDA 626 (MV5400)

Maximum = 16.44 KPH at 60 msec

Minimum = -2.24 KPH at 1 msec

LEFT LOWER A-POST Y VELOCITY

1 ——— B97019A1.V20 Filterclass (180)



MCA Research
02-13-1997 13:40

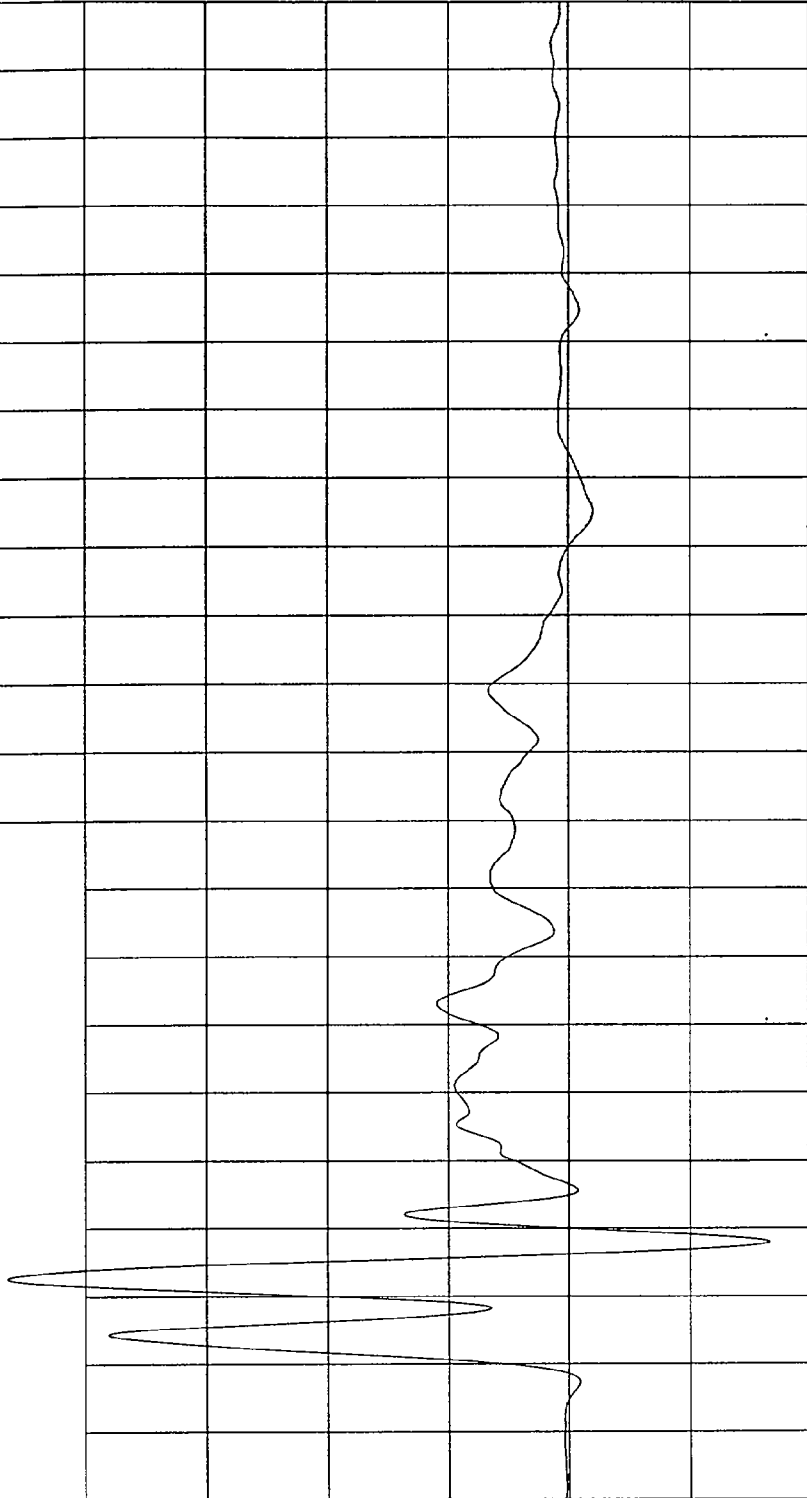
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -16.37 G'S at 18 msec Maximum = 46.51 G'S at 13 msec

LEFT MID A-POST Y ACCELERATION

1 897019AF.A19 Filterclass (60)



NSA Research
02-10-1997 15.43

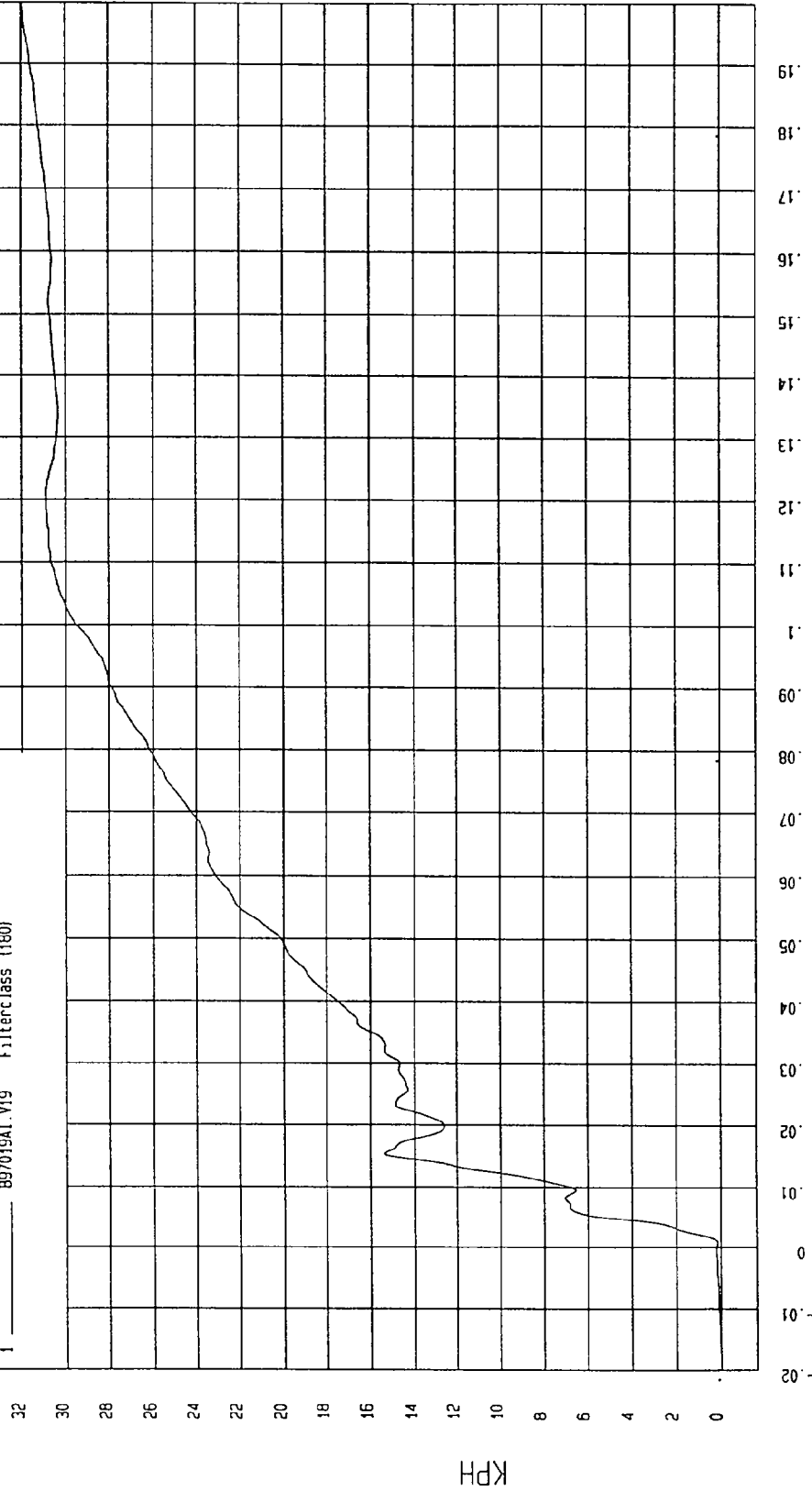
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = 0 KPH at -20 msec Maximum = 32.00 KPH at 200 msec

LEFT MID A-POST Y VELOCITY

1 897019AI.V19 Filterclass (180)



MSA Research
02-13-1997 13:41

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

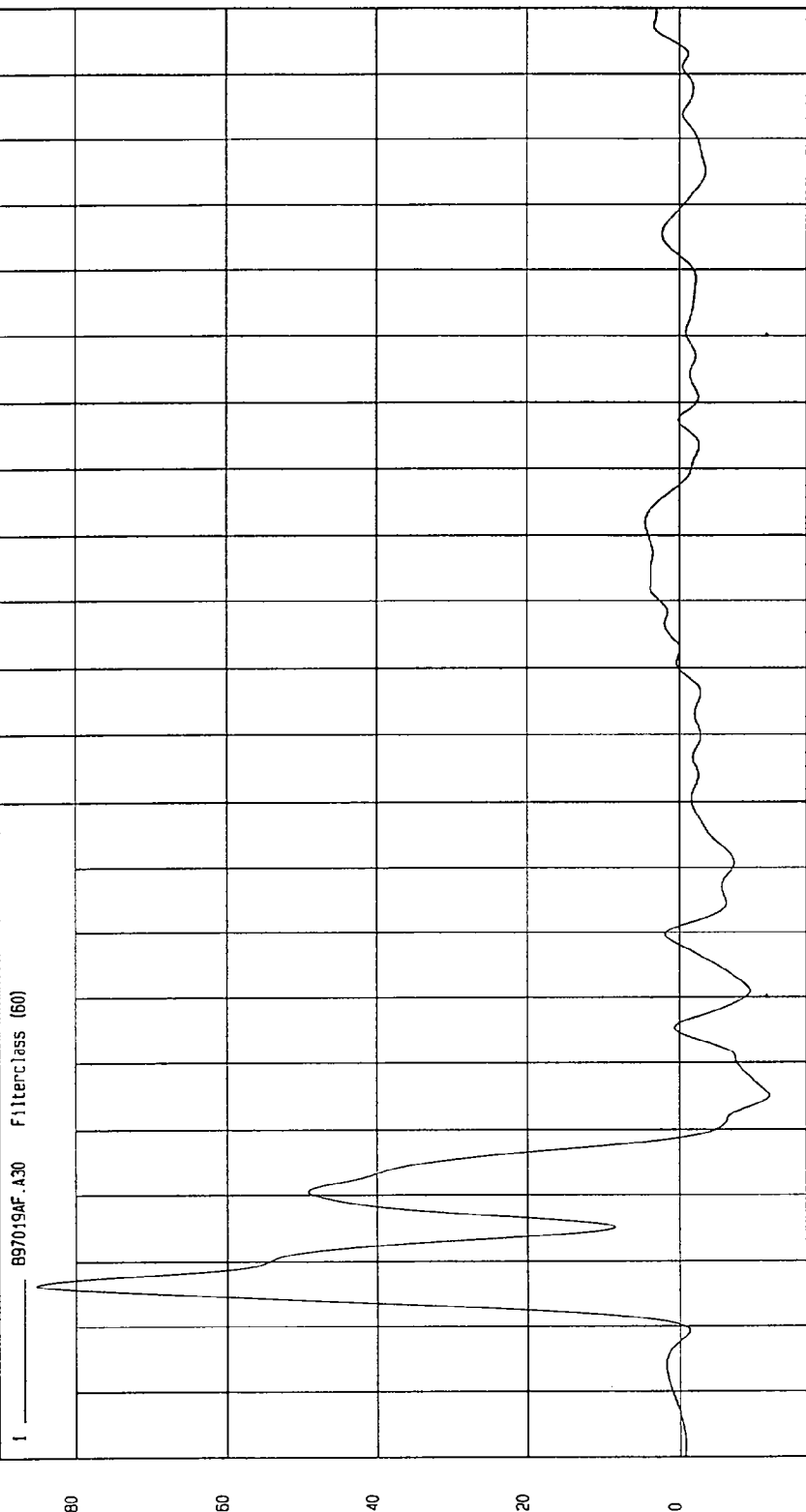
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -11.62 G'S at 35 msec

Maximum = 85.35 G'S at 6 msec

LEFT LOWER B-POST Y ACCELERATION

B97019AF.A30 Filterclass (60)



MGA Research
02-10-1997 15:43

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

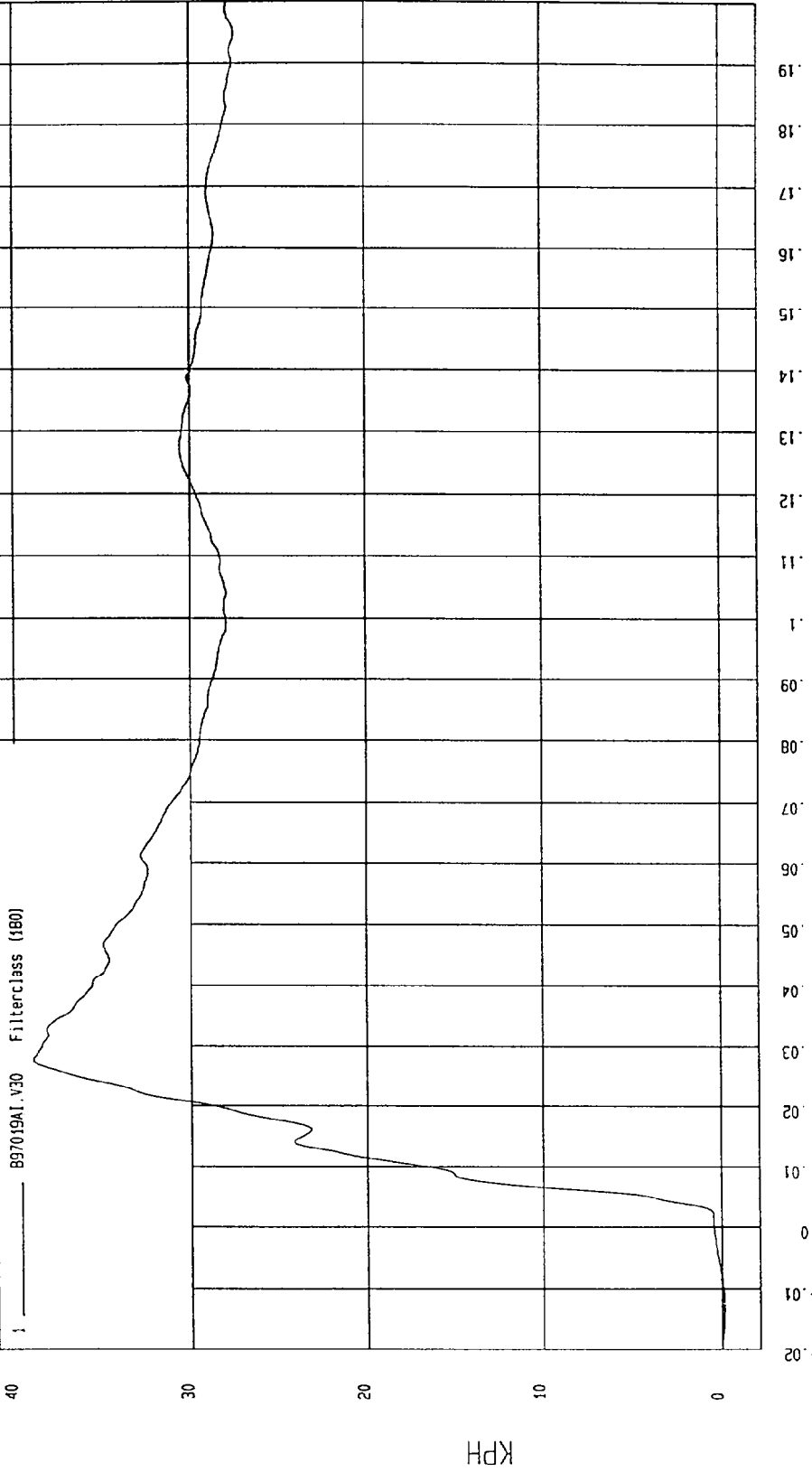
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -12 KPH at -13 msec

Maximum = 38.95 KPH at 28 msec

LEFT LOWER B-POST Y VELOCITY

897019A1.V30 Filterclass (180)



MSA Research
02-13-1997 13:41

TIME Seconds

KPH

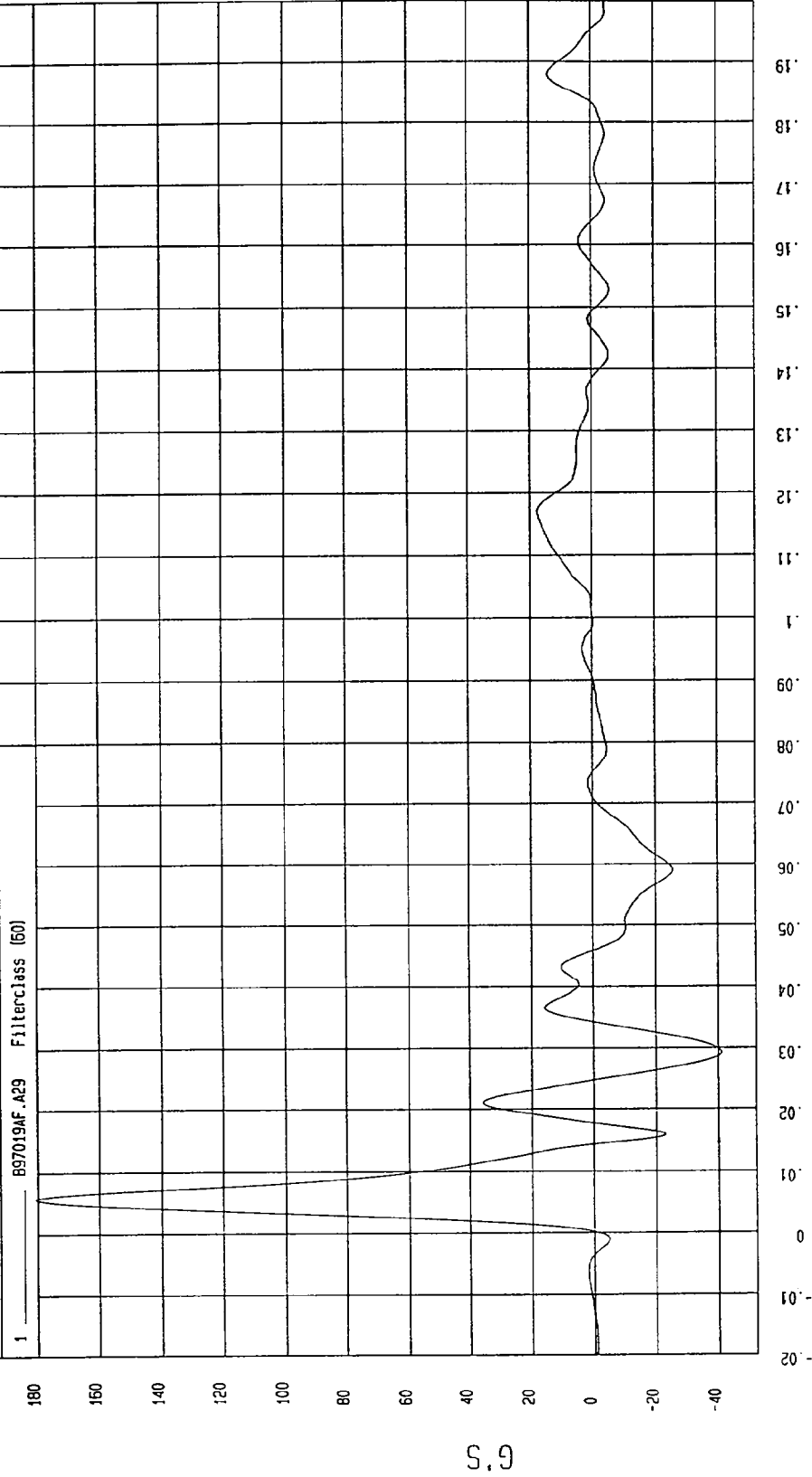
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -40.94 G'S at 29 msec

Maximum = 180.61 G'S at 6 msec

LEFT MID B-POST Y ACCELERATION



NSA Research
02-10-1997 15.44

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

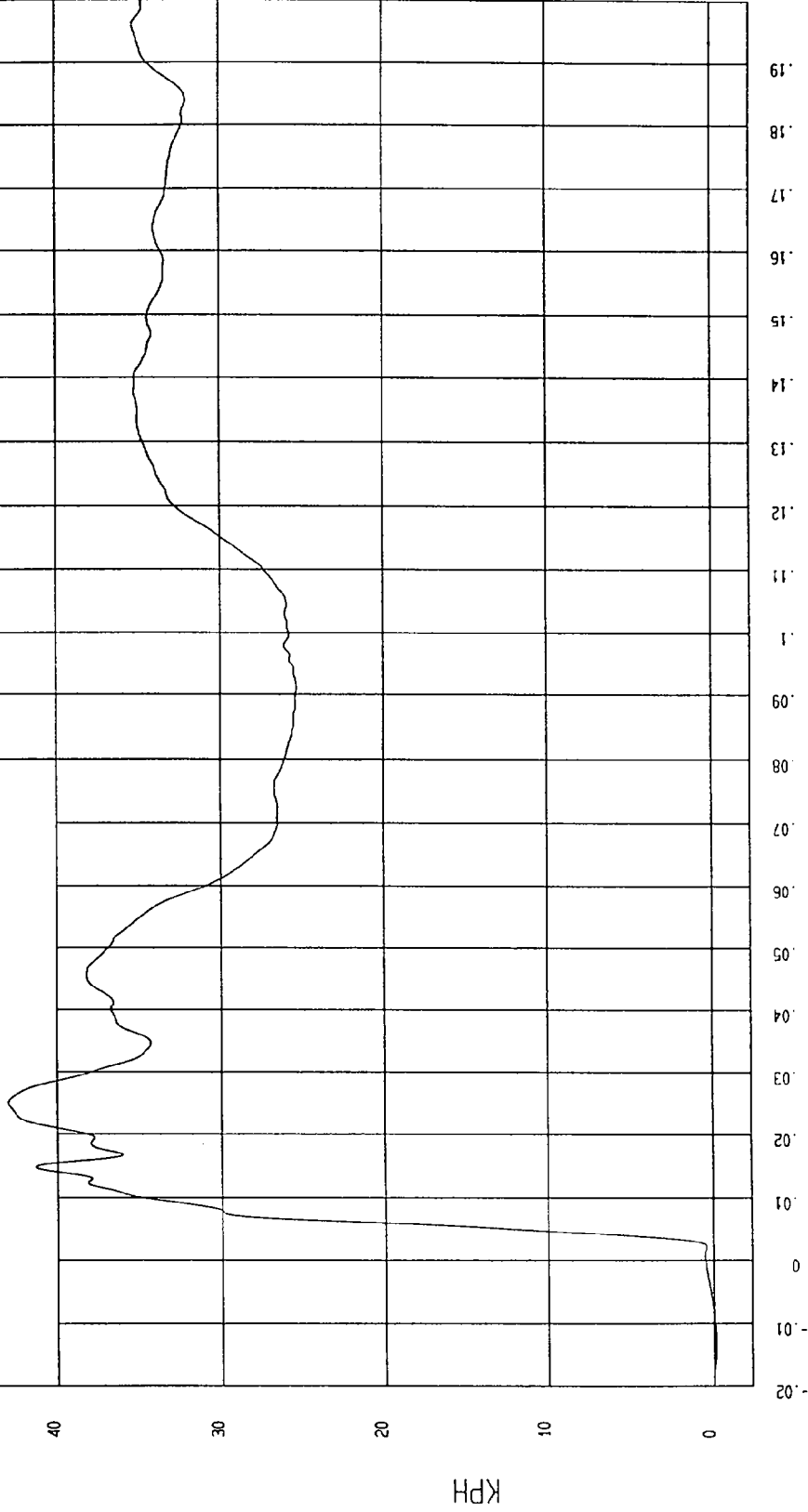
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -.15 KPH at -13 msec

Maximum = 43.03 KPH at 25 msec

LEFT MID B-POST Y VELOCITY

1 897019AI.V29 Filter: class (180)



MGA Research
02-13-1997 13:41

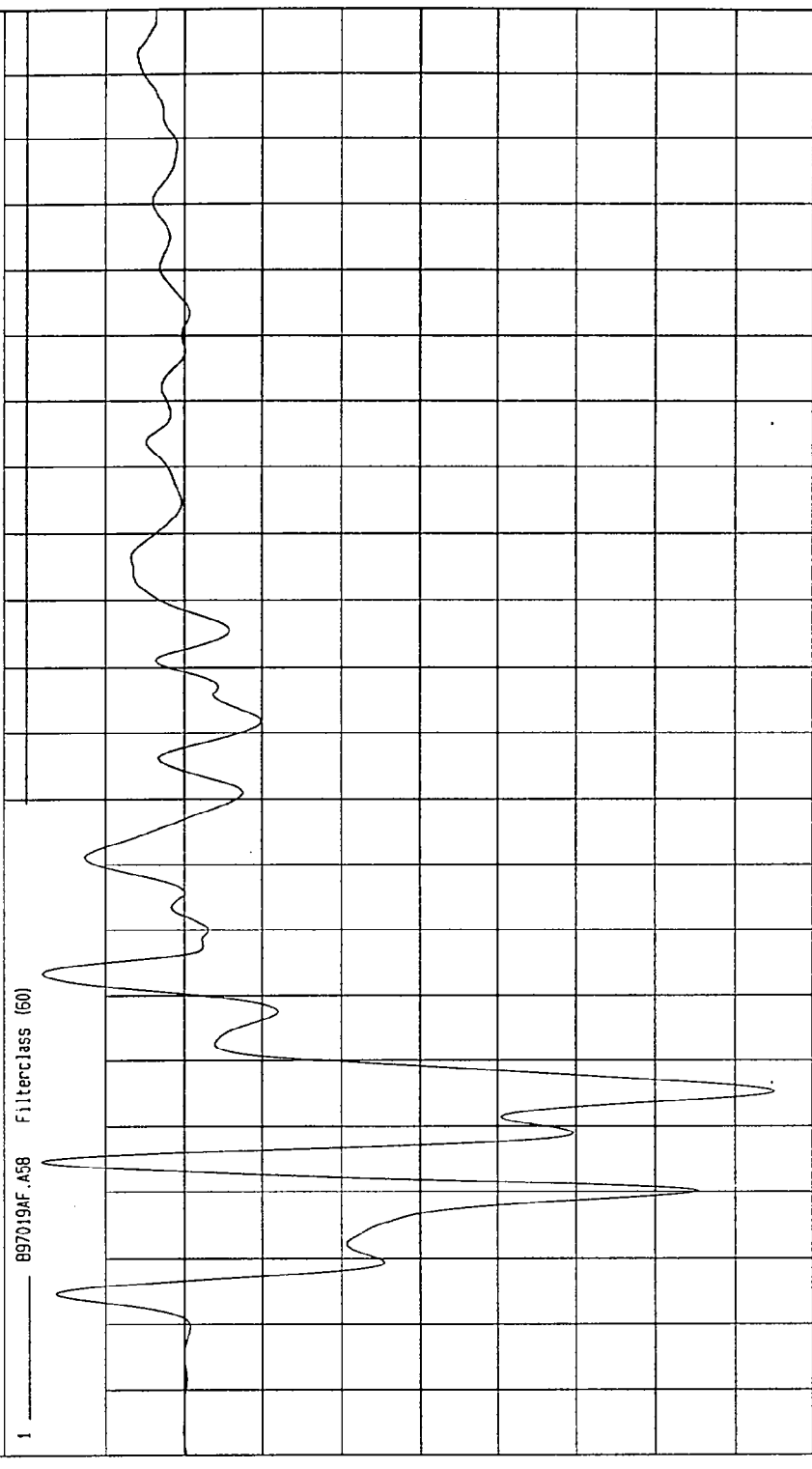
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -14.97 G'S at 35 msec Maximum = 3.62 G'S at 25 msec

VEHICLE CG X ACCELERATION

1 897019AF.A58 Filterclass (60)



TIME (SECONDS)

NSA Research
02-10-1997 15:44

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

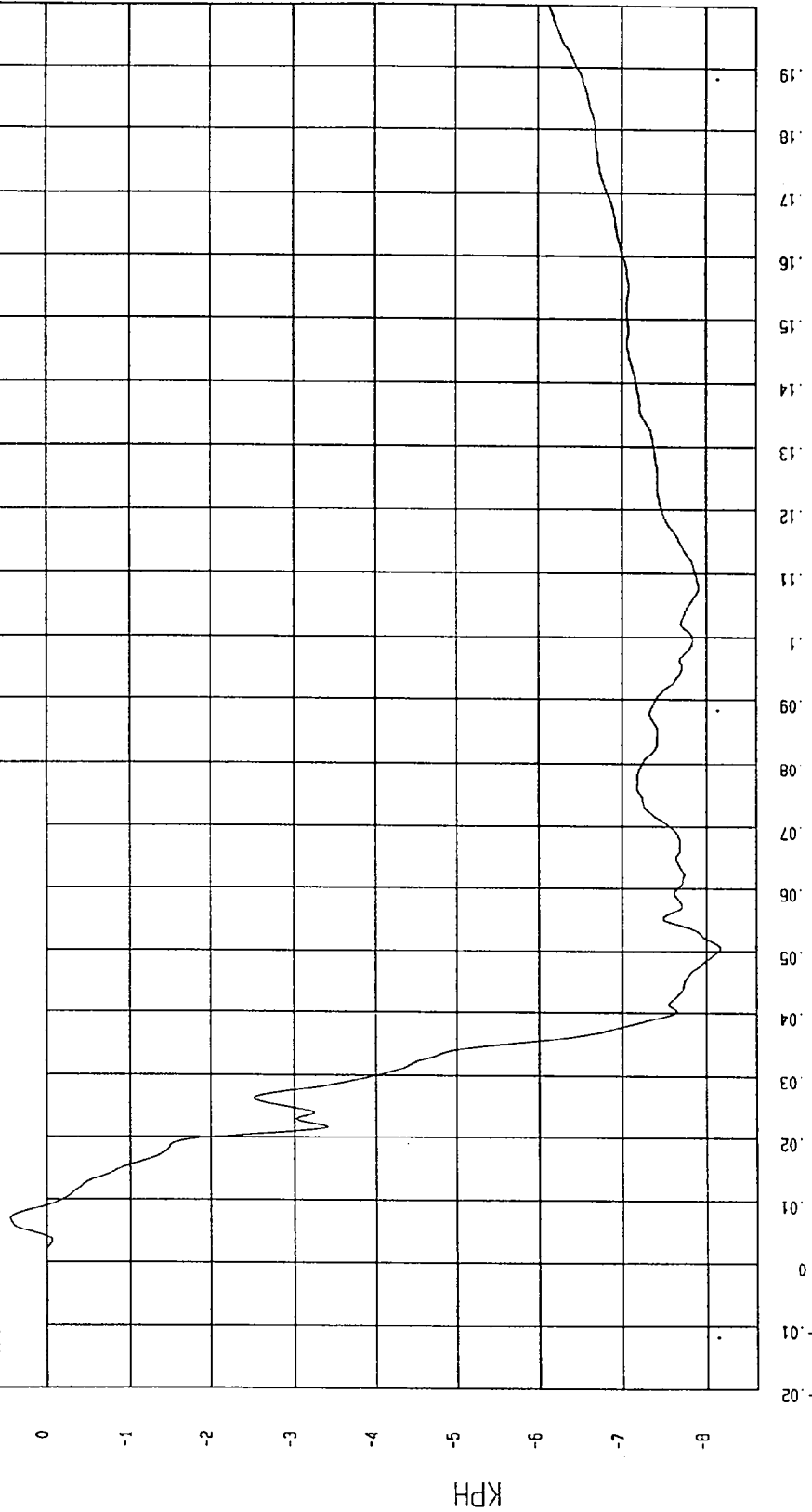
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -8.16 KPH at 50 msec

Maximum = .45 KPH at 7 msec

VEHICLE CG X VELOCITY

1 897019A1.V58 Filterclass (180)



NSA Research
02-13-1997 13:41

TIME Seconds

KPH

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

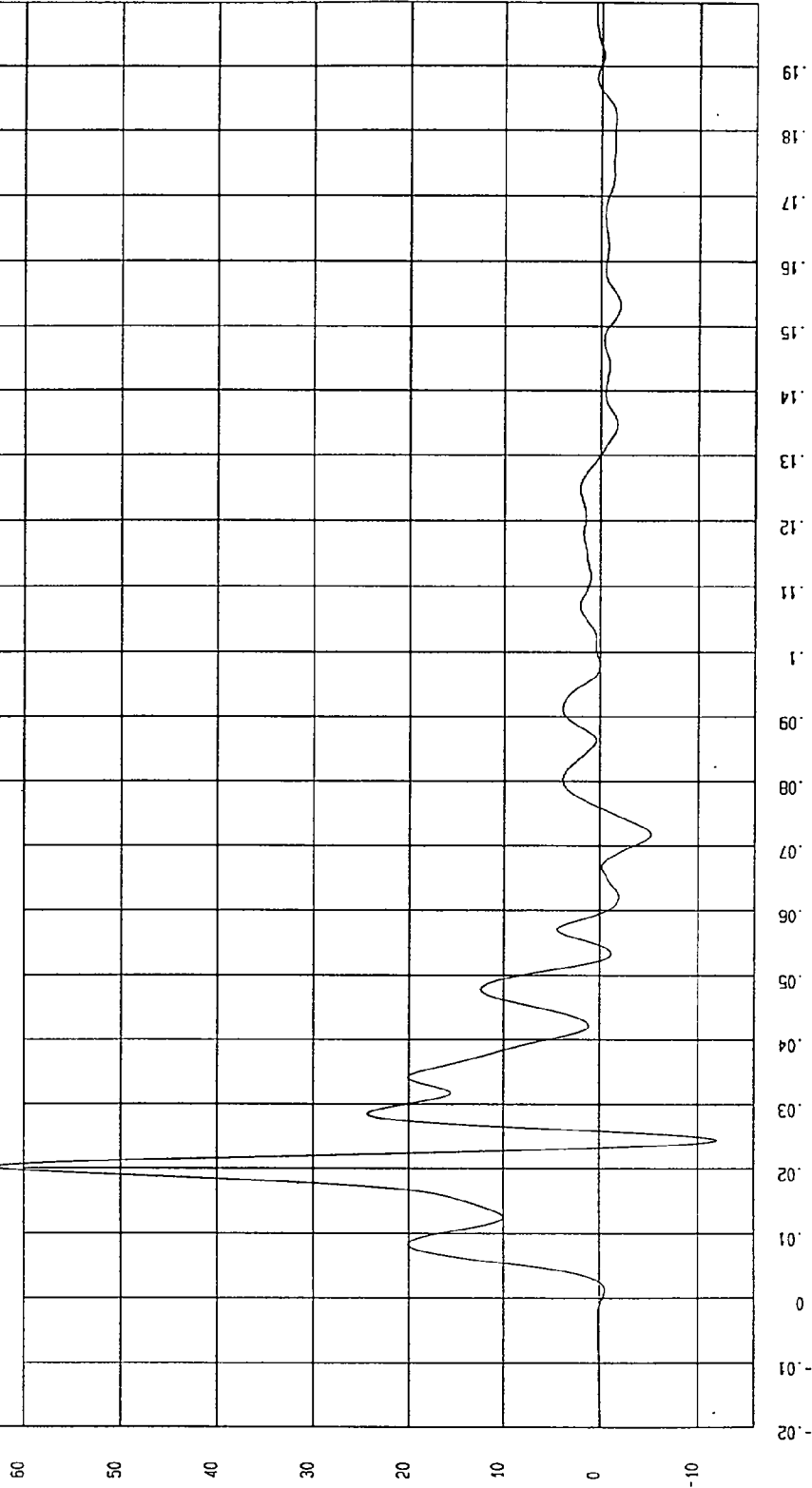
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -11.97 G'S at 24 msec

Maximum = 63.04 G'S at 20 msec

VEHICLE CG Y ACCELERATION

1 897019AF.A59 FilterClass (60)



NSA Research Corp.
02-10-1997 15:44

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

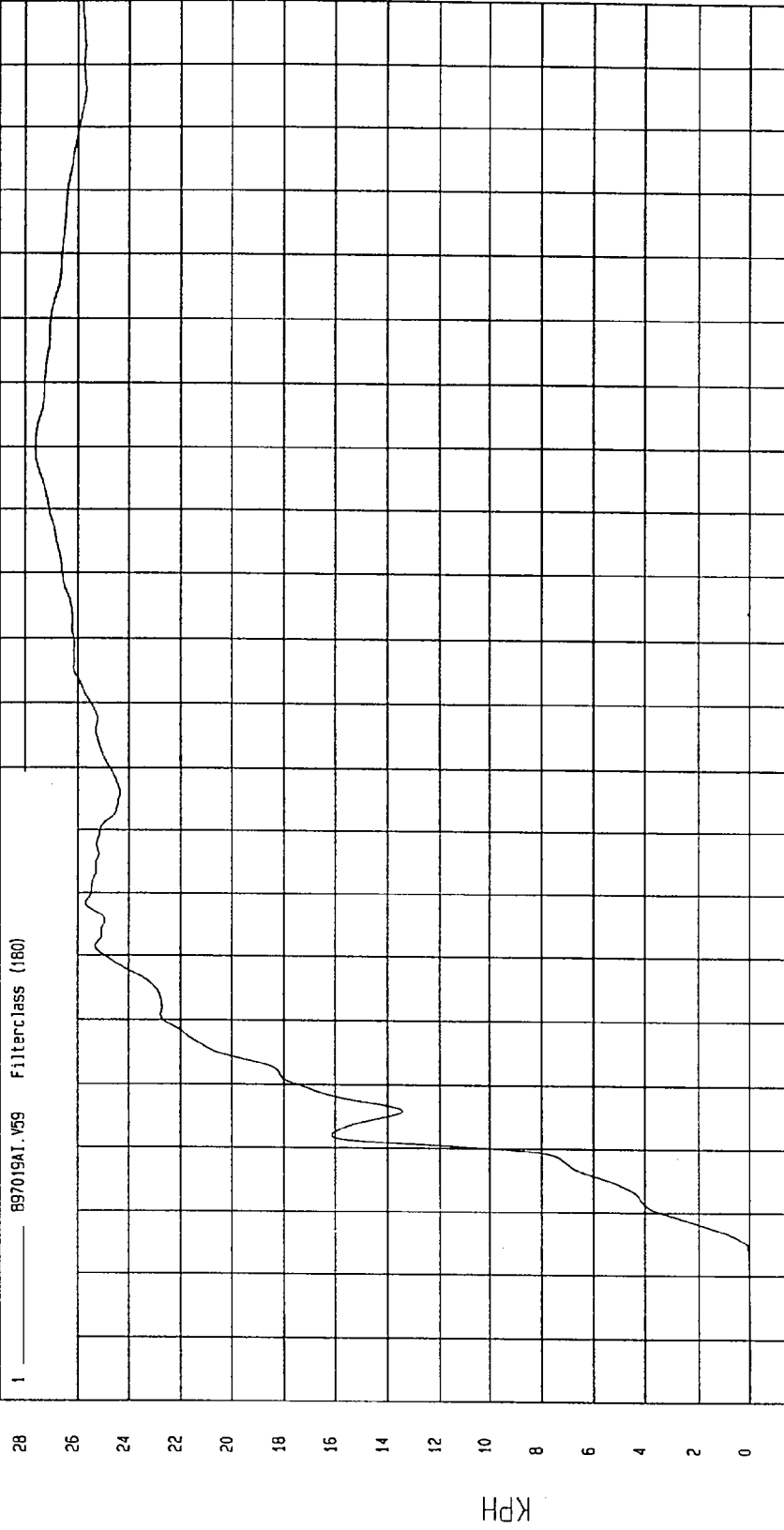
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -1.40E-02 KPH at -12 msec

Maximum = 27.61 KPH at 130 msec

VEHICLE CG Y VELOCITY

1 887019AT.V59 Filterclass (180)



TIME Seconds

NSA Research
02-13-1997 13:41

TEST: NCAP LATERAL IMPACT TEST

TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400)

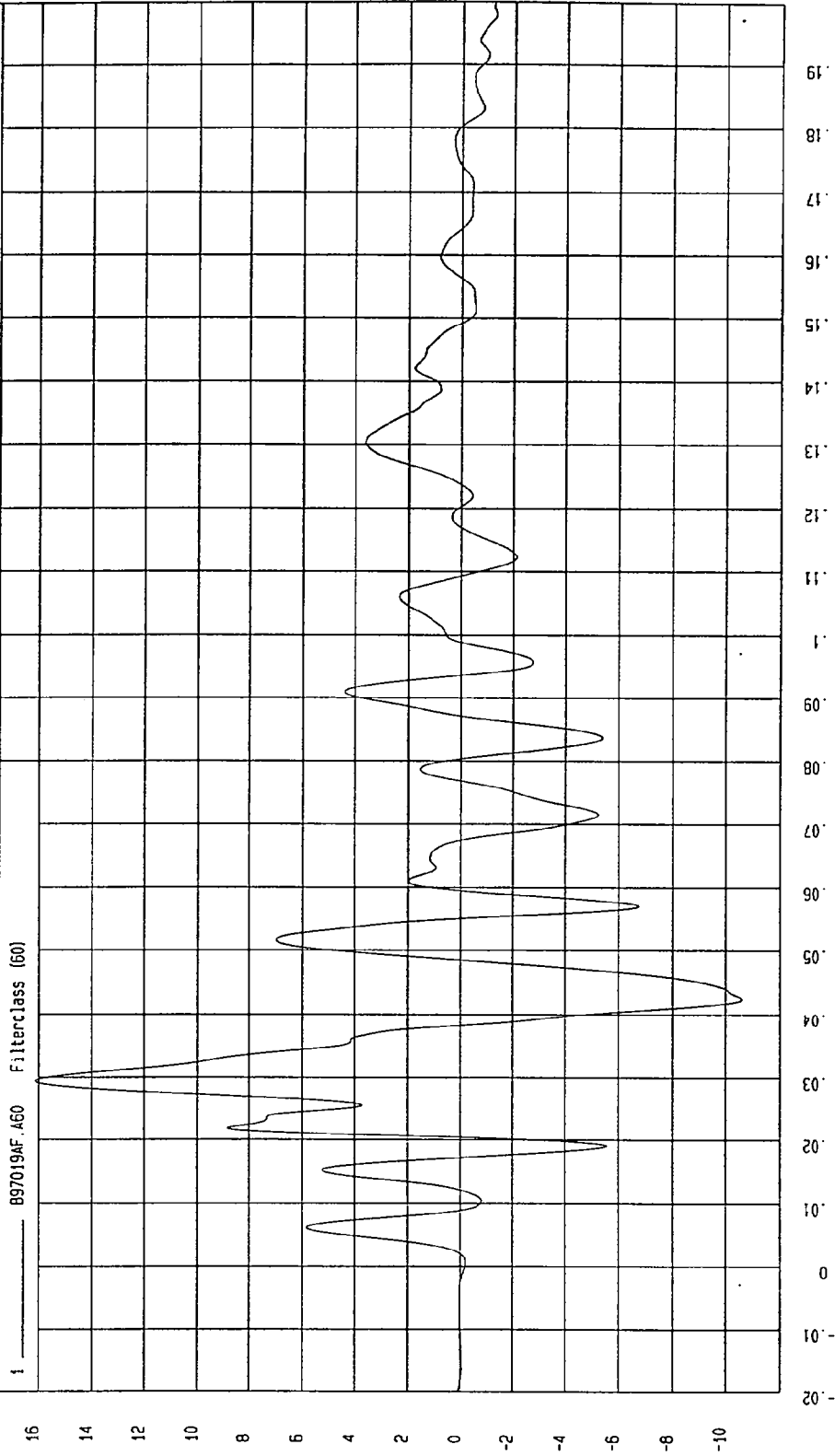
Speed: 38.06 MPH 61.3 KPH

Minimum = -10.61 G'S at 42 msec

Maximum = 16.13 G'S at 29 msec

VEHICLE CG Z ACCELERATION

1 B97019AF.A60 Filterclass (60)



MGA Research
02-10-1997 15:44

TIME (SECONDS)

G.S

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

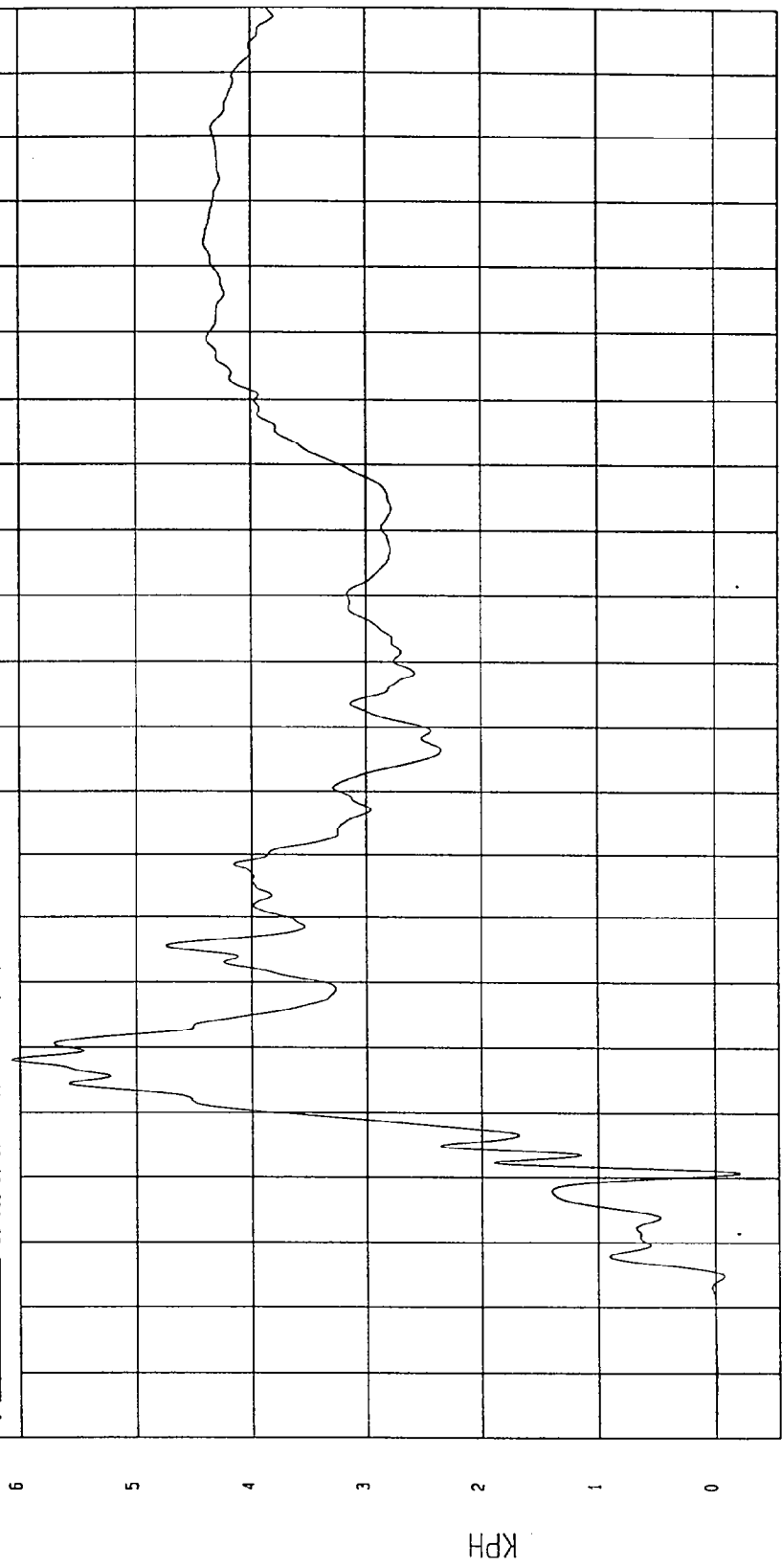
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -21 KPH at 21 msec

Maximum = 6.07 KPH at 39 msec

VEHICLE CG Z VELOCITY

1 B97019AI.V60 Filterclass (180)



MGA Research
02-13-1997 13:41

TEST DATE: 01-30-1997

TEST: NCAP LATERAL IMPACT TEST

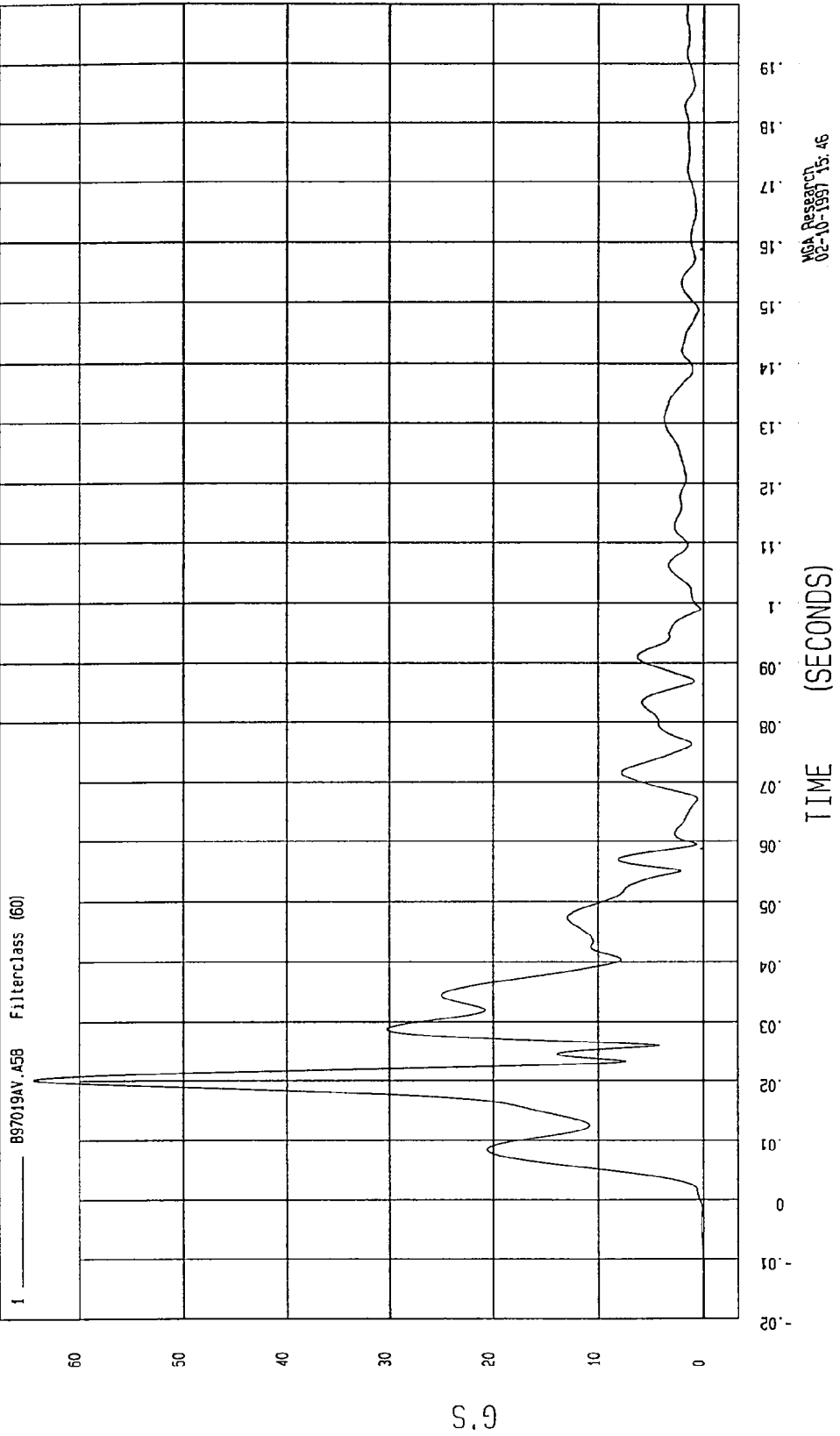
Speed: 38.06 MPH 61.3 KPH

COMPONENT: 1997 MAZDA 626 (MV5400)

Maximum = 64.39 G'S at 20 msec

Minimum = 2.15E-02 G'S at -12 msec

VEHICLE CG RESULTANT ACCELERATION



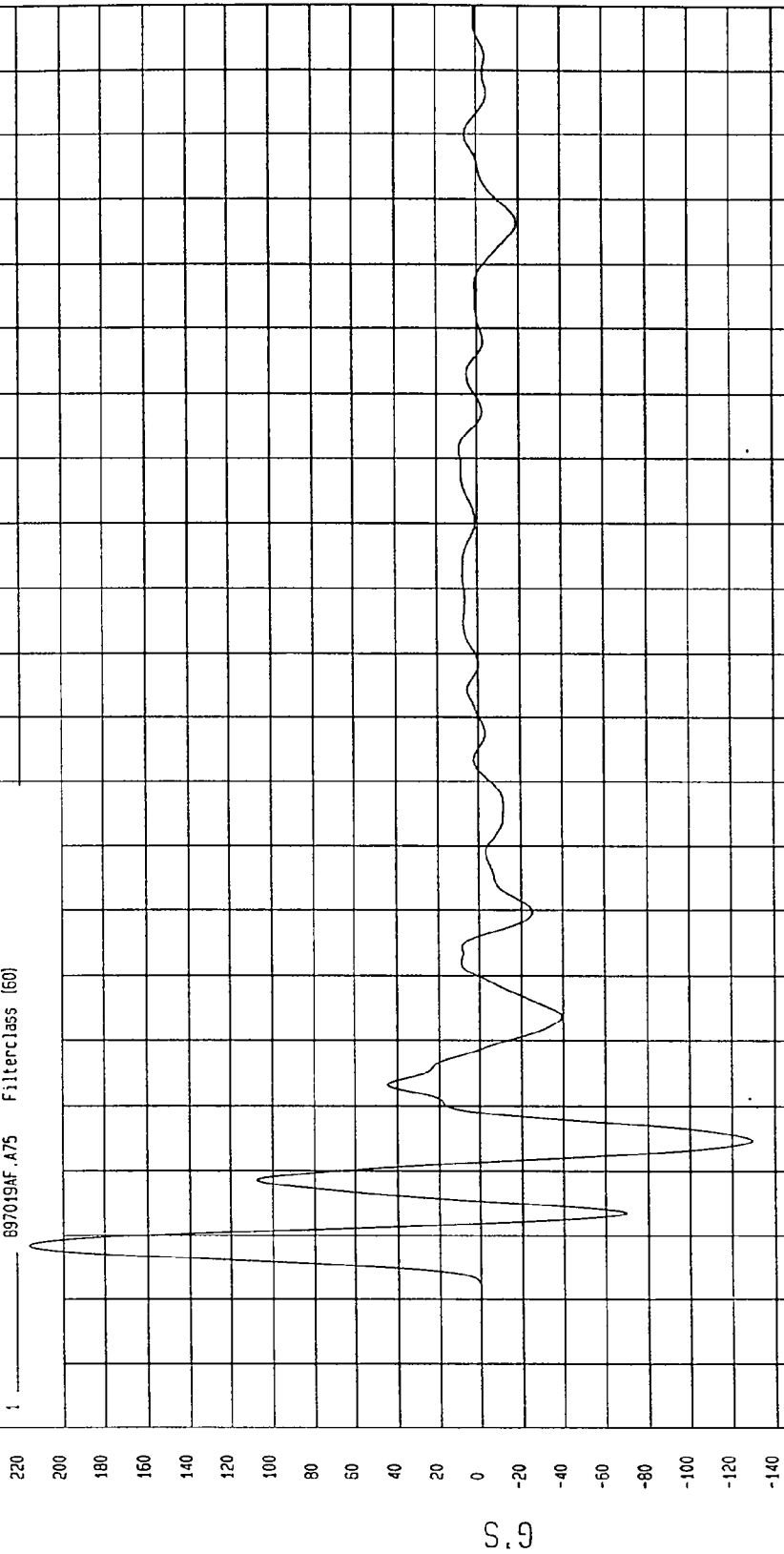
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -129.59 G'S at .25 msec Maximum = 216.57 G'S at 8 msec

LEFT FRONT DOOR MID CENTERLINE Y ACCELERATION

1 897019AF.A75 Filterclass (60)



MCA Research
02-10-1997 15.44

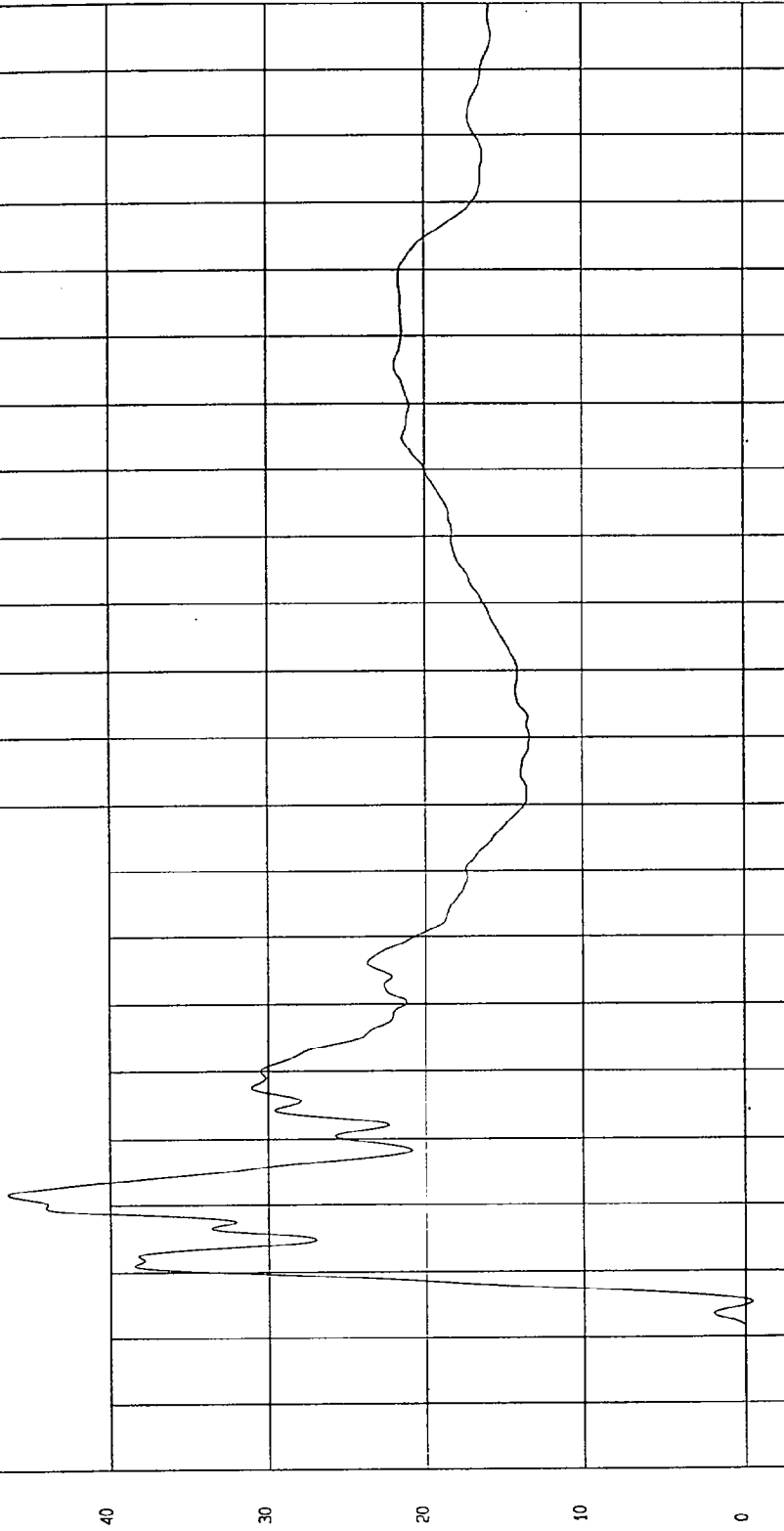
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = .43 KPH at 5 msec Maximum = 46.50 KPH at 22 msec

LEFT FRONT DOOR CENTERLINE Y VELOCITY

1 — 897019A1.V75 Filterclass (180)



NECA Research
02-15-1997 13:41

TIME Seconds

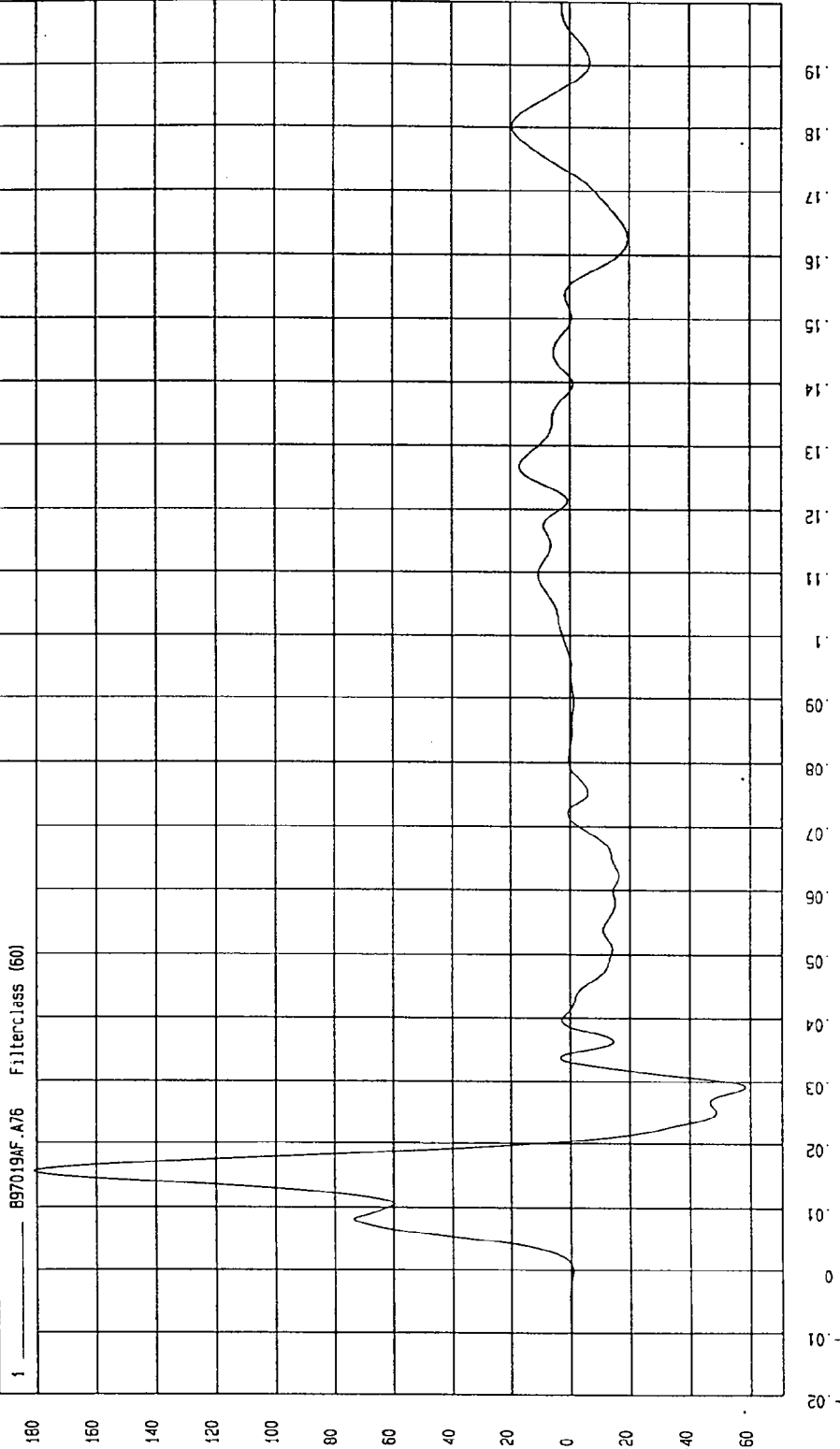
KPH

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -58.23 G'S at 29 msec
Maximum = 180.88 G'S at 16 msec

LEFT FRONT DOOR UPPER CENTERLINE Y ACCELERATION



NGA Research
02-10-1997 15.44

TIME (SECONDS)

G.S

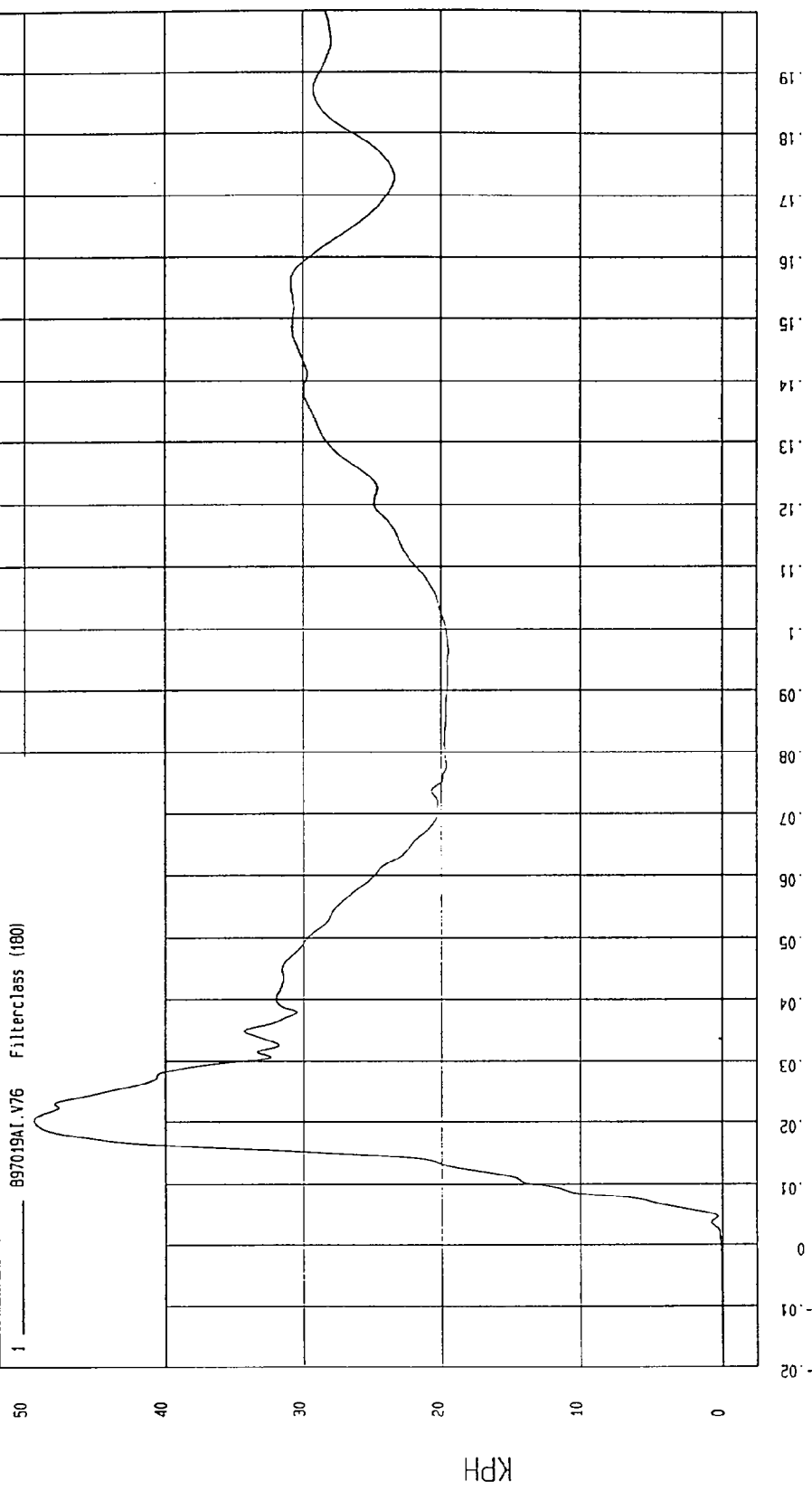
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = 0 KPH at -20 msec Maximum = 49.38 KPH at 20 msec

LEFT FRONT DOOR UPPER CENTERLINE Y VELOCITY

1 897019A1.V76 Filterclass (180)



MGA Research
02-13-1997 13:41

TEST: NCAP LATERAL IMPACT TEST

TEST DATE: 01-30-1997

Speed: 38.06 MPH 61.3 KPH

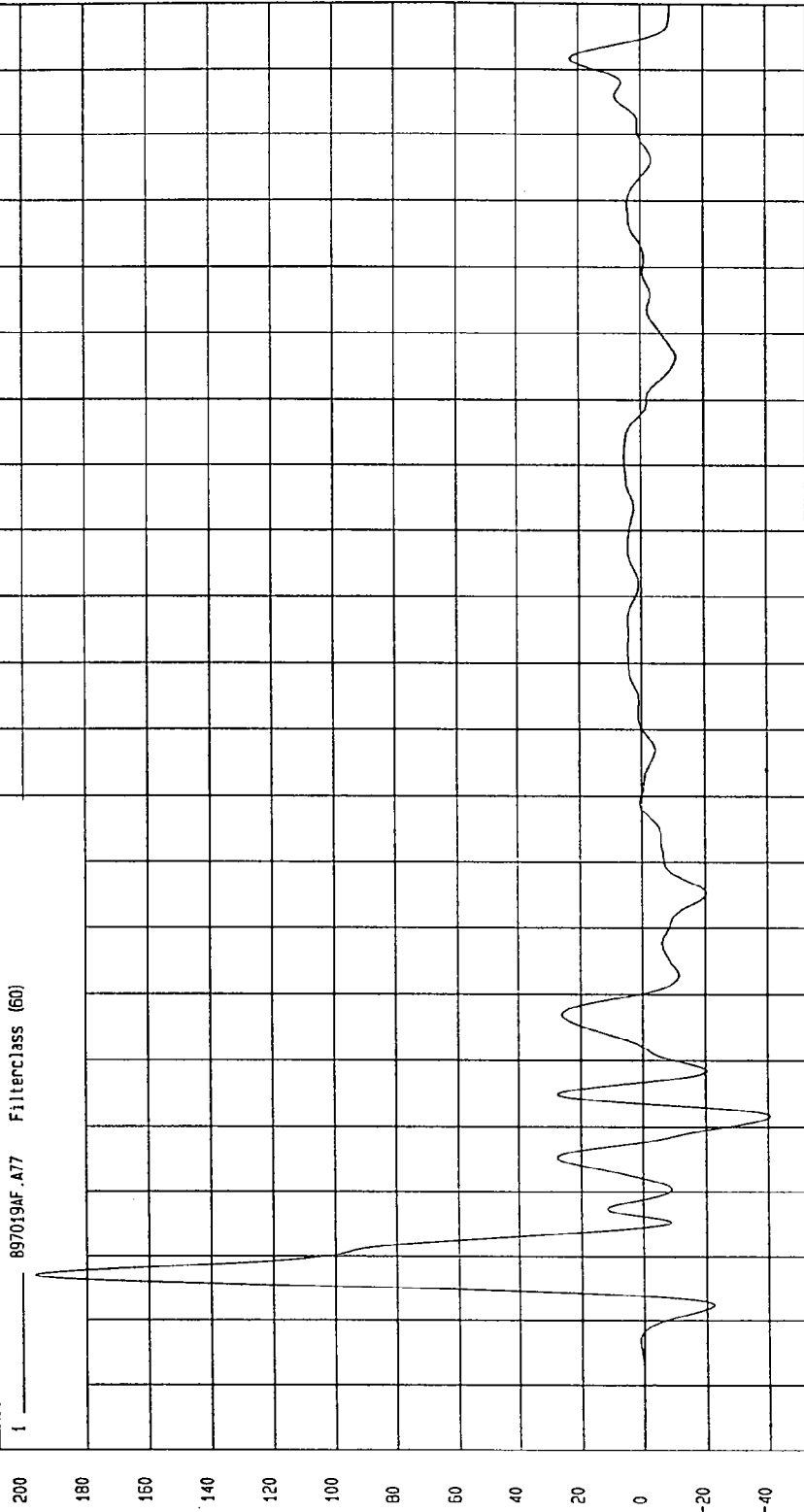
COMPONENT: 1997 MAZDA 626 (MV5400)

Maximum = 196.55 G'S at 7 msec

Minimum = -40.73 G'S at 32 msec

LEFT REAR DOOR MID REAR Y ACCELERATION

897019AF.A77 Filterclass (60)



NSA Research
02-10-1997 15:44

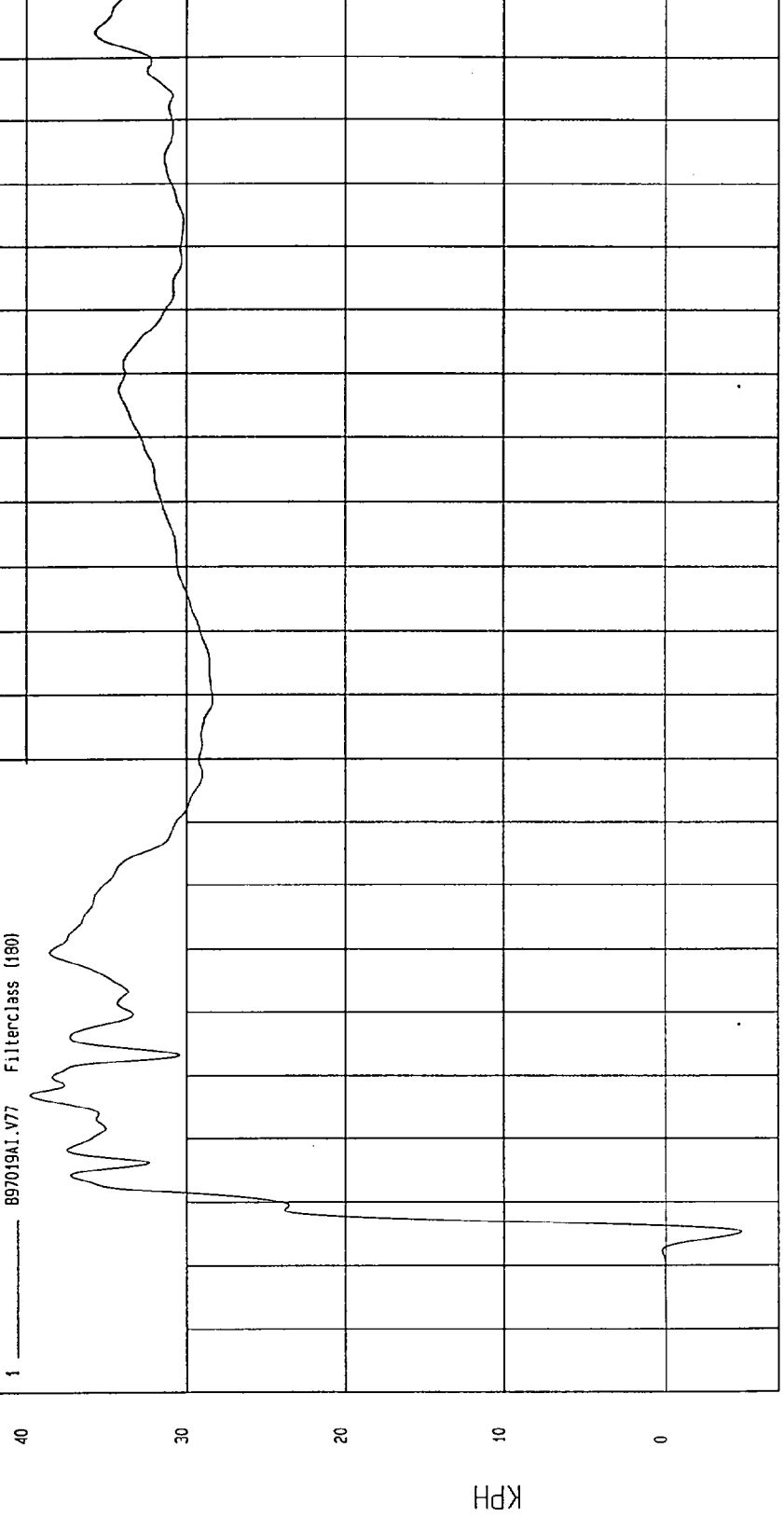
TIME (SECONDS)

S.G

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -4.67 KPH at 5 msec Maximum = 39.80 KPH at 27 msec

LEFT REAR DOOR MID REAR Y VELOCITY



KPH

TIME Seconds

NGA Research
02-13-1997 13:41

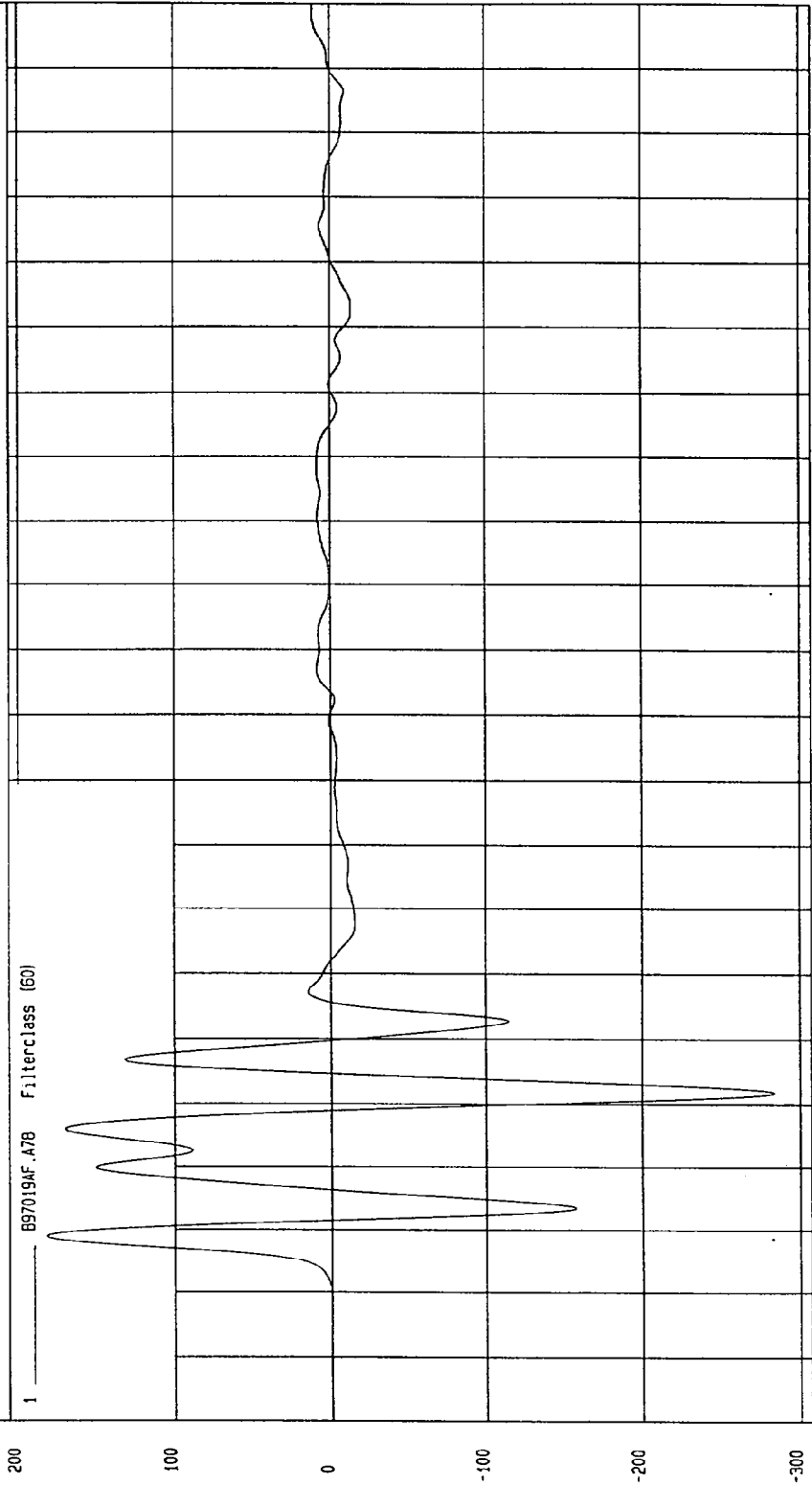
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -283.99 G'S at 32 msec Maximum = 182.69 G'S at 9 msec

LEFT REAR DOOR UPPER CENTERLINE Y ACCELERATION

1 897019AF.A78 Filterclass (50)



MGA Research
02-10-1997 15:44

TIME (SECONDS)

G.S

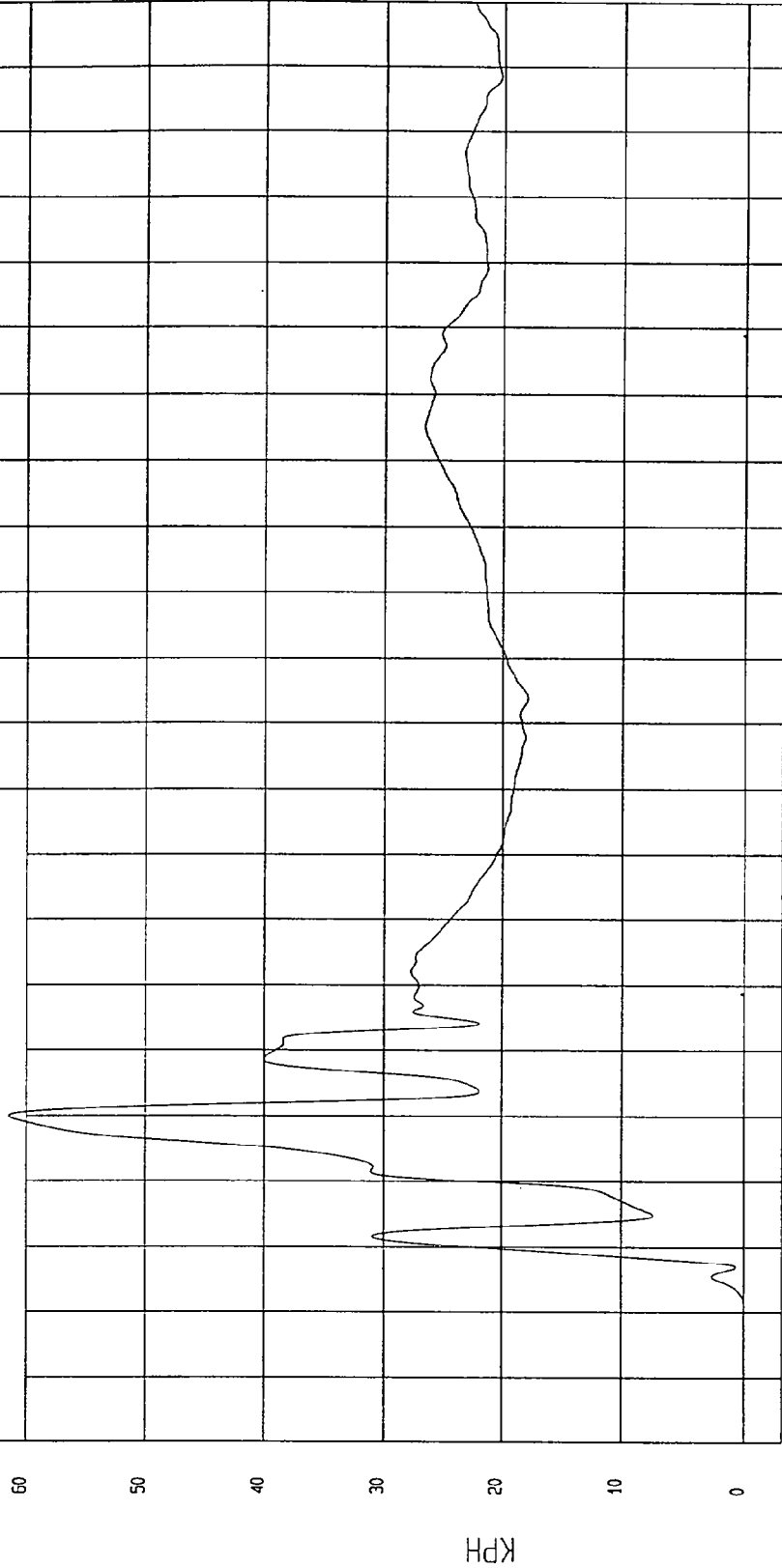
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = 0 KPH at -20 msec Maximum = 61.43 KPH at 30 msec

LEFT REAR DOOR UPPER CENTERLINE Y VELOCITY

1 097019A1.V78 Filterclass (180)



VECA Research
02-15-1997 13.41

TIME Seconds

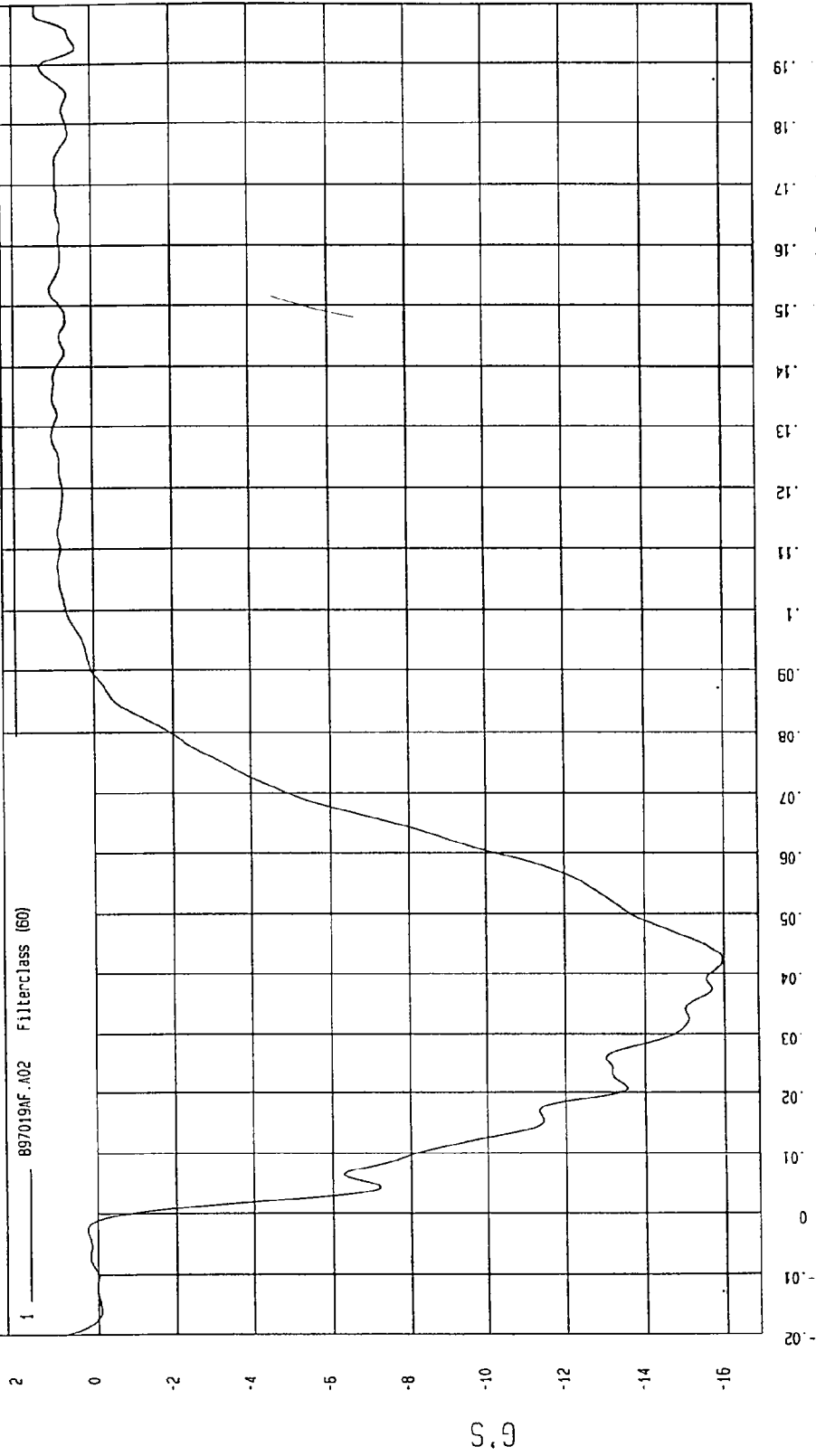
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -15.95 G'S at 42 msec Maximum = 1.44 G'S at 199 msec

MOVING BARRIER CG X ACCELERATION

1 — 897019AF.A02 Filterclass (60)



NSA Research
02-10-1997 15:45

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

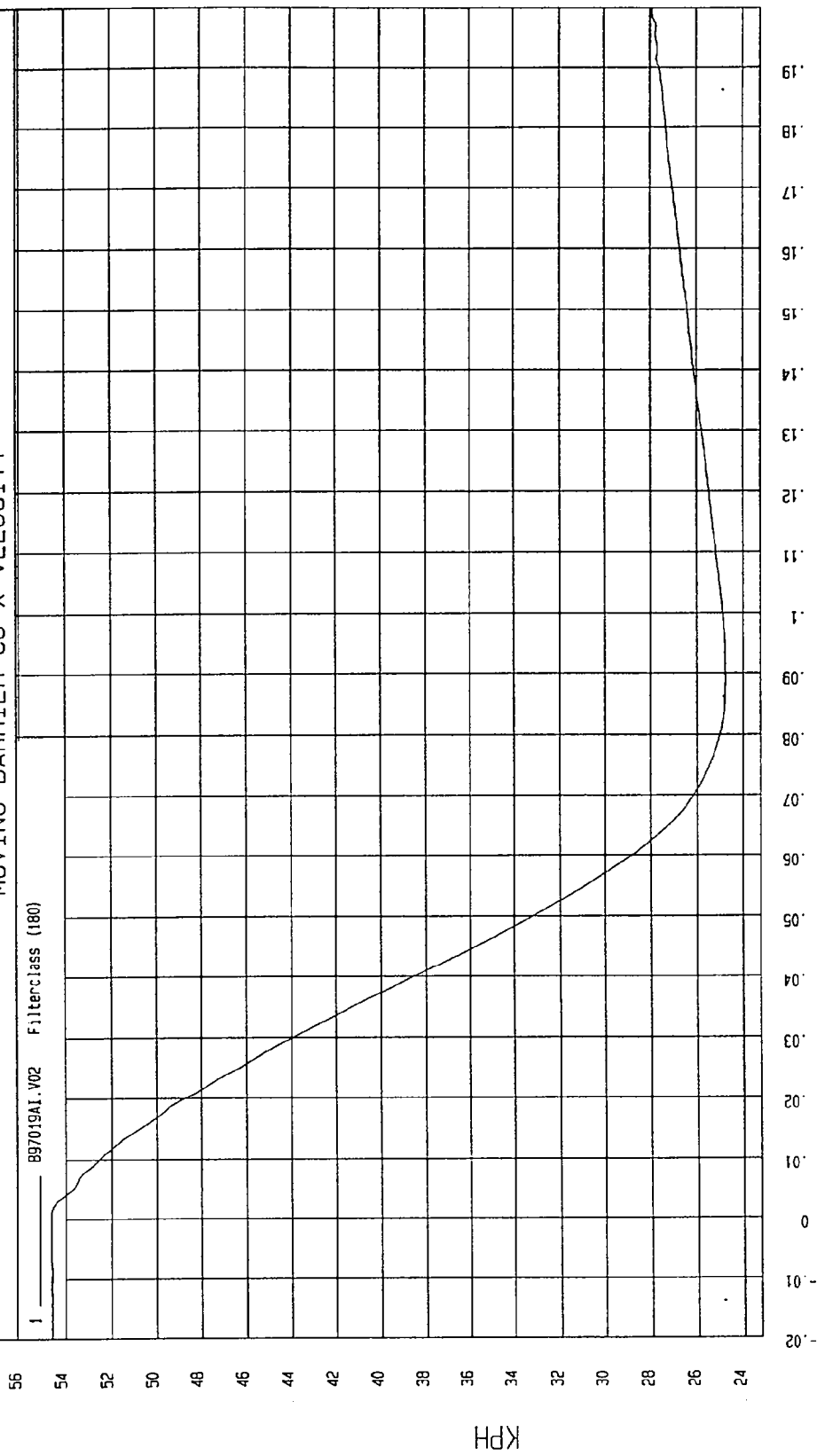
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = 24.74 KPH at 89 msec

Maximum = 54.63 KPH at -1 msec

MOVING BARRIER CG X VELOCITY

1 897019A1.V02 Filterclass (180)



NSA Research
02-13-1997 13:41

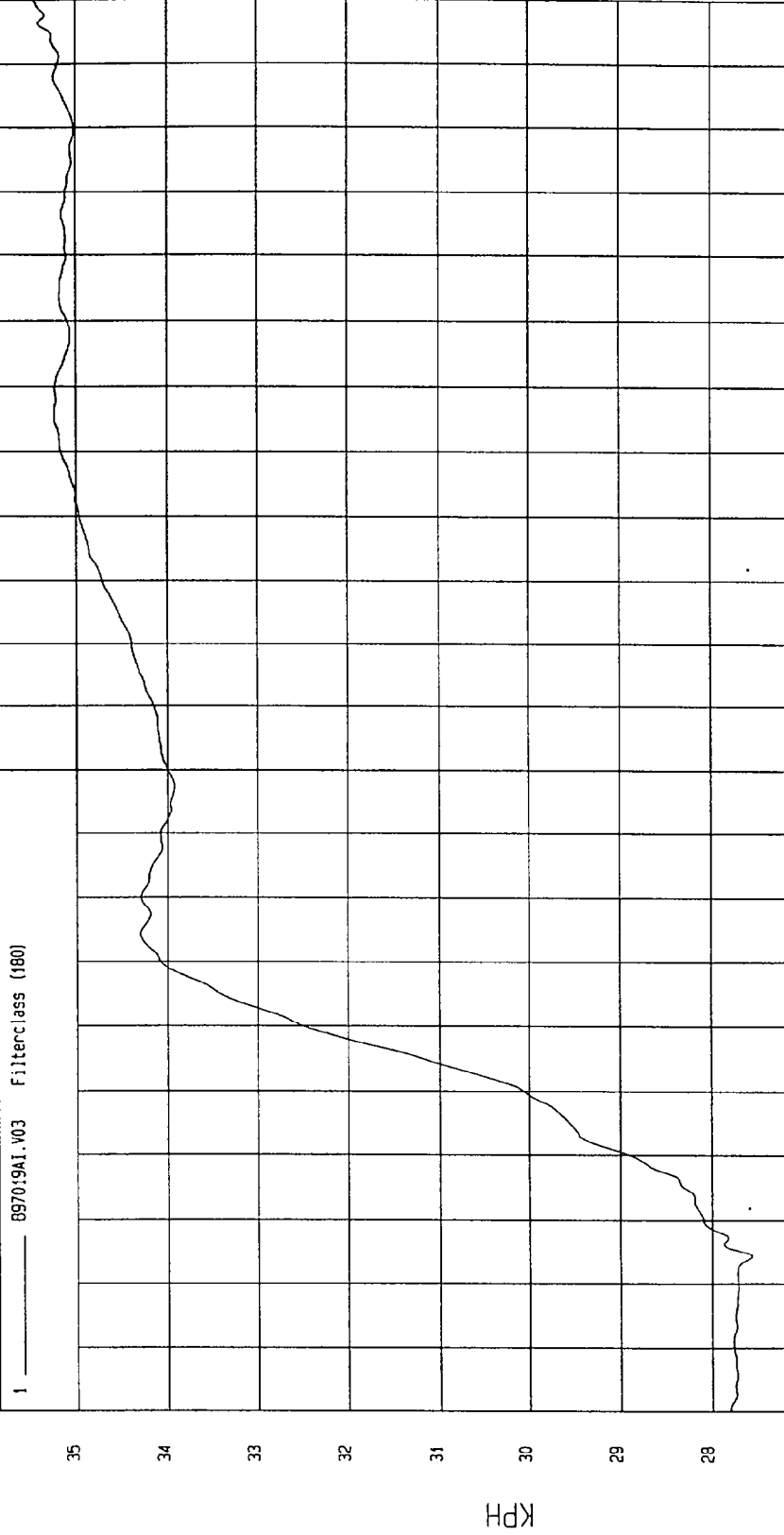
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = 27.55 KPH at 4 msec Maximum = 35.46 KPH at 200 msec

MOVING BARRIER CG Y VELOCITY

1 — 097019A1.V03 Filterclass (180)



TIME Seconds
MCA Research
02-13-1997 13:42

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -0.89 G'S at 66 msec
Maximum = 7.78 G'S at 37 msec

MOVING BARRIER CG Y ACCELERATION

1 _____ 897019AF.A03 Filterclass (60)

8

7

6

5

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3

2

1

0

-1

G.S

0.02 0.01 0 1 2 3 4 5 6 7 8 0.00 0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.10 0.11 0.12 0.13 0.14 0.15 0.16 0.17 0.18 0.19

TIME (SECONDS)

MCA Research
02-10-1997 15:45

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

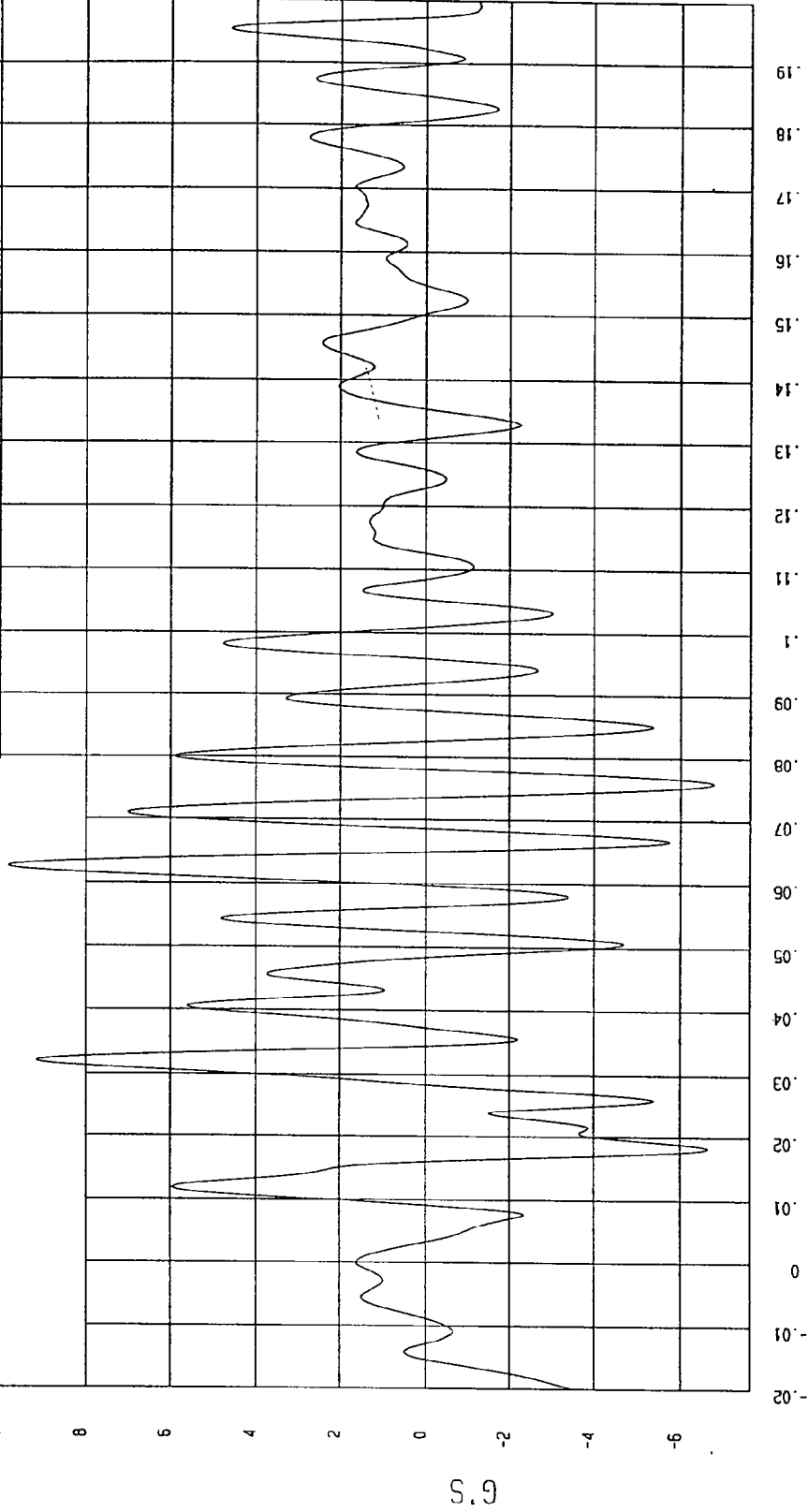
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -6.80 G'S at 76 msec

Maximum = 9.80 G'S at 63 msec

MOVING BARRIER CG Z ACCELERATION

1 ——— 897019AF.404 Filterclass (60)



MCA Research
02-10-1997 15.45

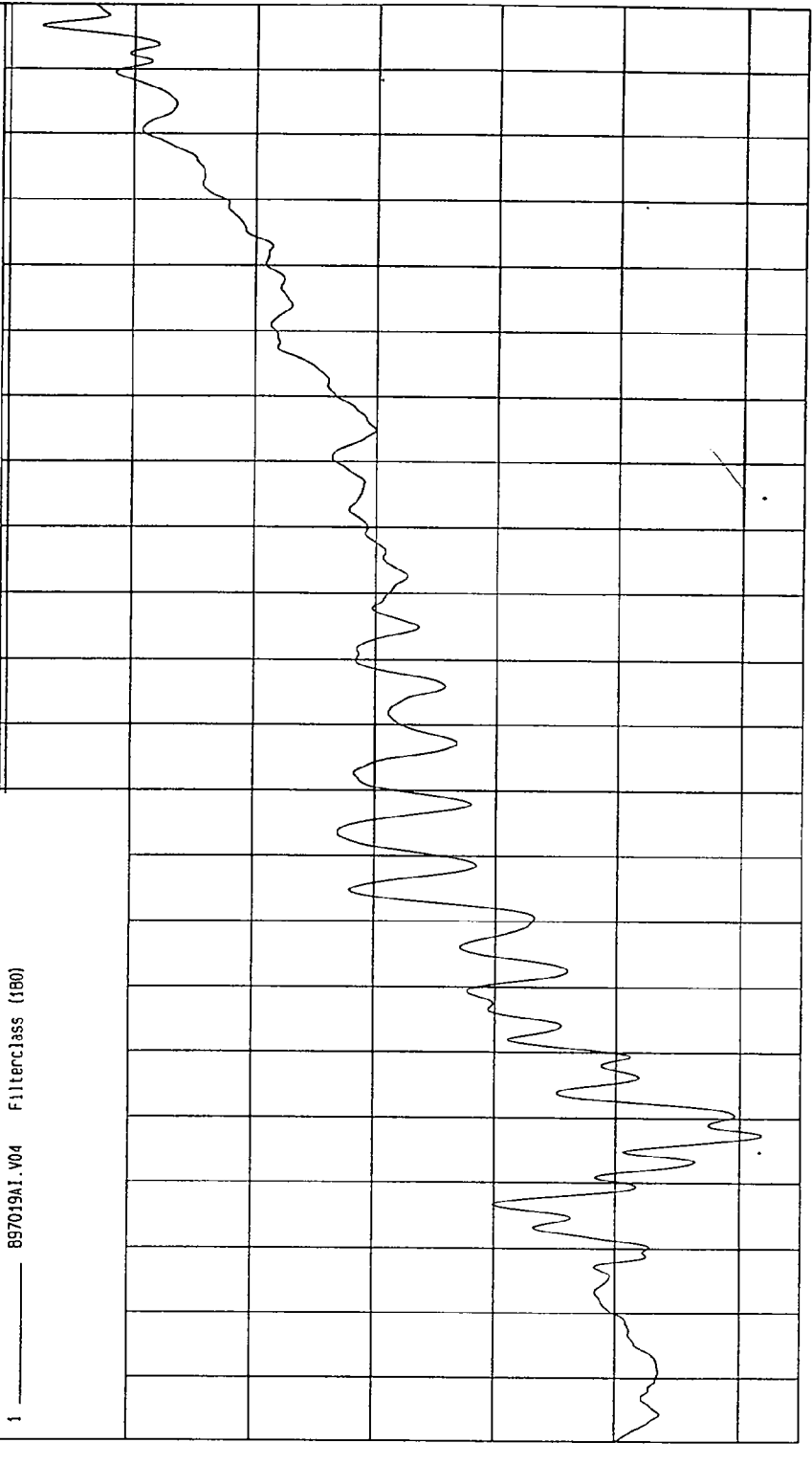
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -1.17 KPH at 27 msec Maximum = 4.75 KPH at 197 msec

MOVING BARRIER CG Z VELOCITY

1 897019A1.V04 Filterclass (180)



MEV Research
02-13-1997 13:42

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

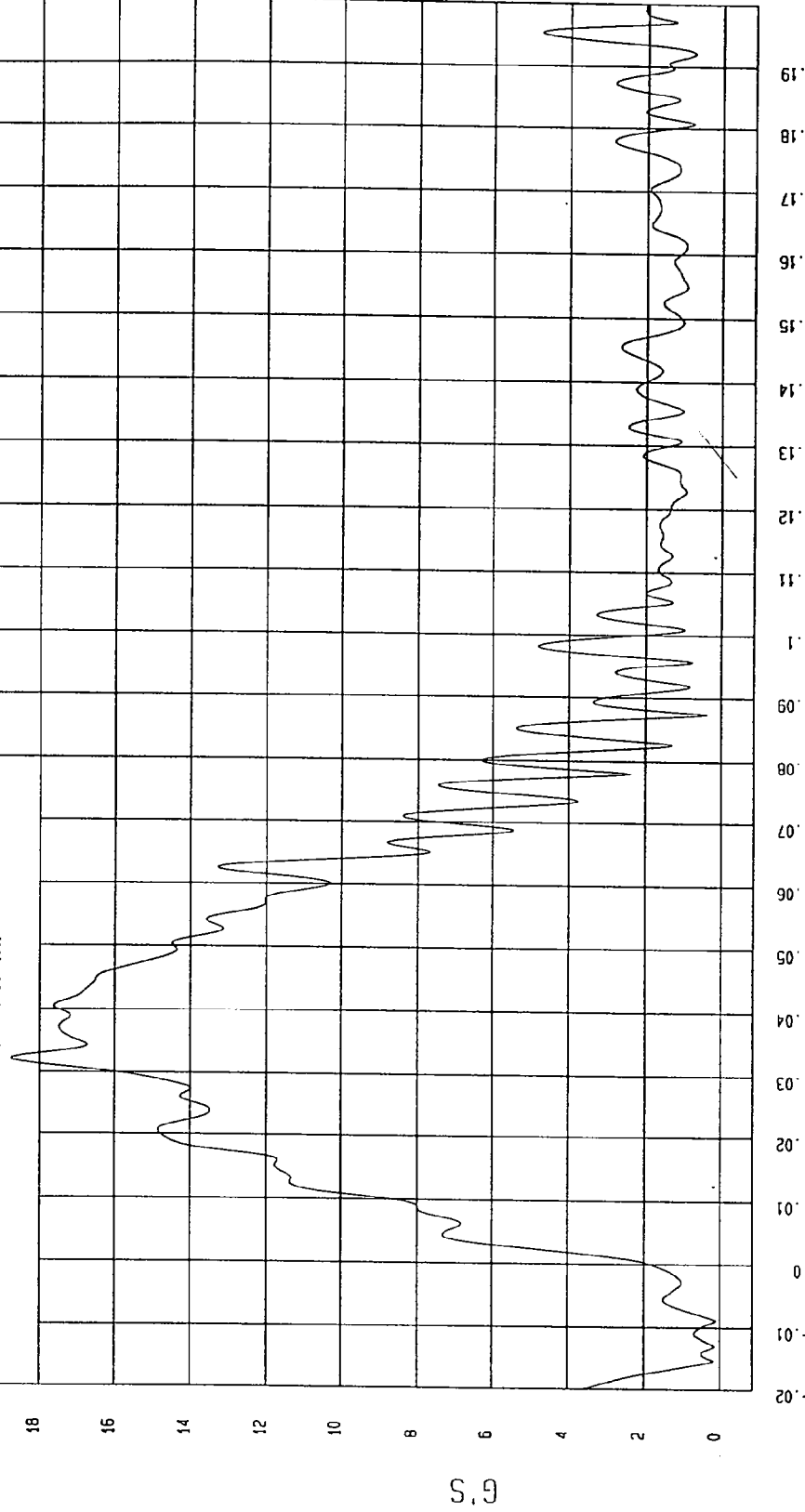
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = .10 G'S at -9 msec

Maximum = 18.75 G'S at 32 msec

MOVING BARRIER CG RESULTANT ACCELERATION

1 ——— 897019AV.A02 Filterclass (60)



MSA Research
02-10-1997 15:46

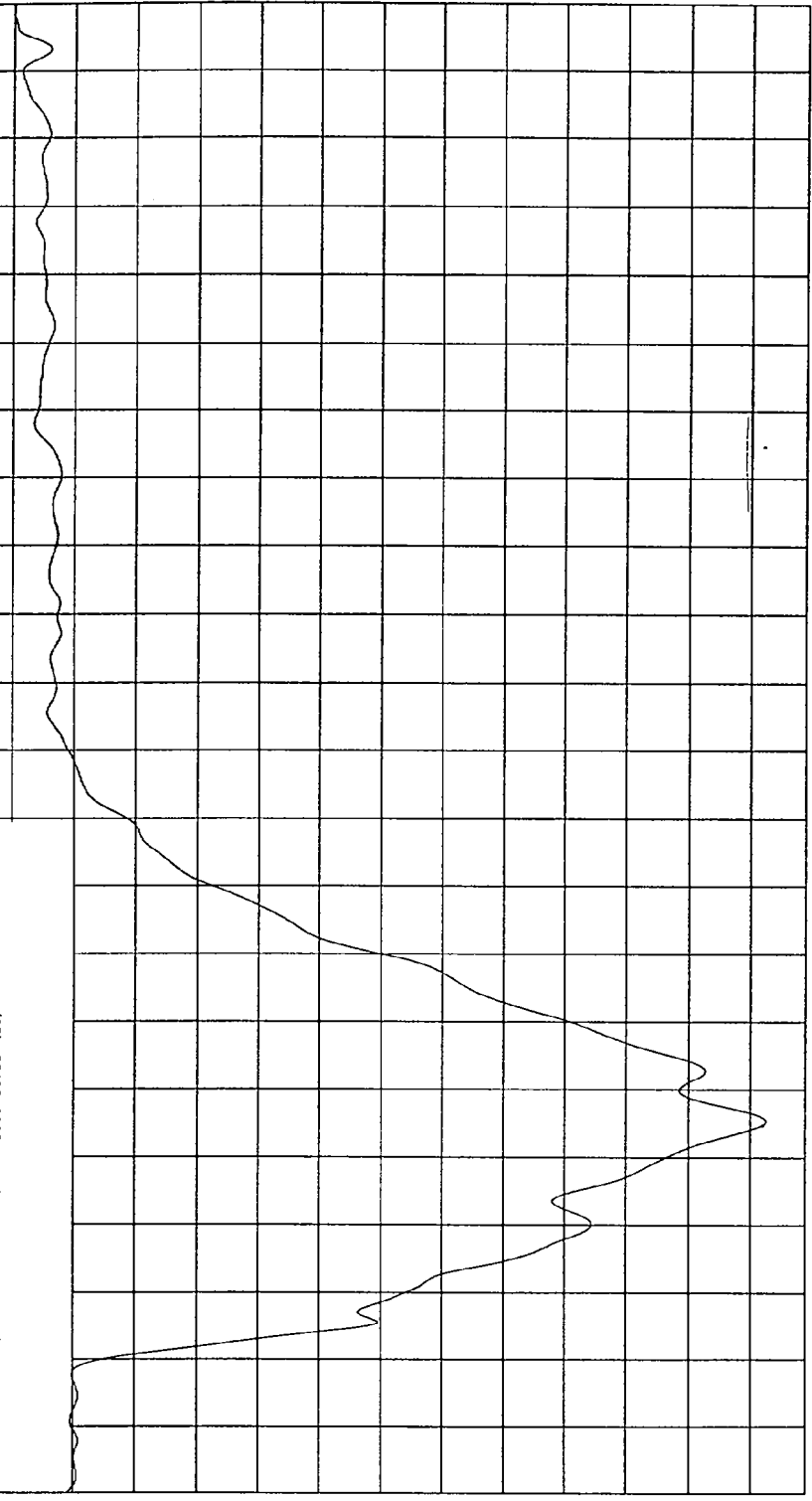
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -22.48 G'S at 35 msec Maximum = 1.97 G'S at 198 msec

MOVING BARRIER REAR AXLE X ACCELERATION

1 ——— B97019AF.A05 Filterclass (60)



TIME (SECONDS) MGA Research 02-10-1997 15:45

S.G

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

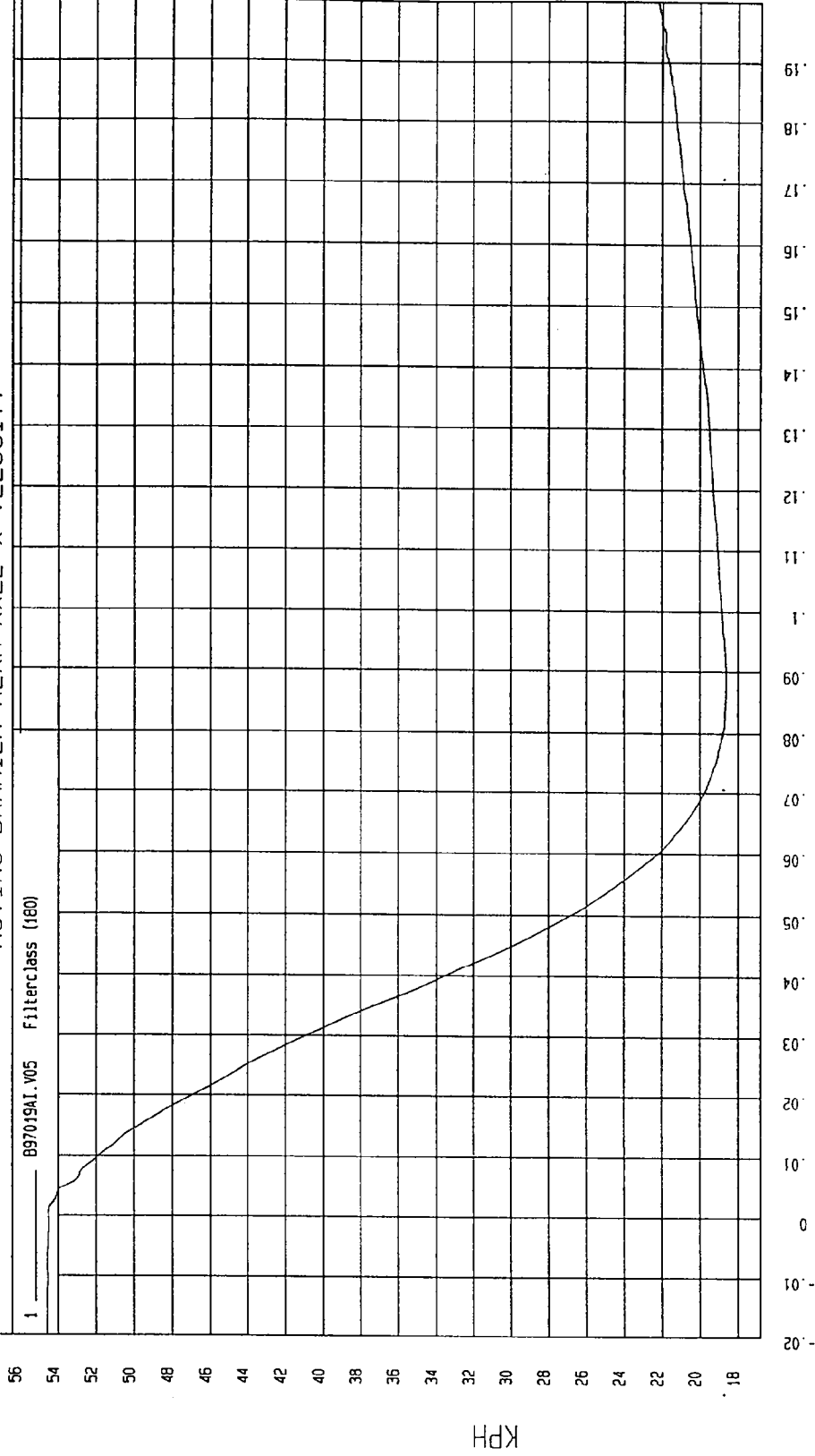
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = 18.62 KPH at 88 msec

Maximum = 54.60 KPH at -19 msec

MOVING BARRIER REAR AXLE X VELOCITY

1 897019A1.V05 Filterclass (160)



MVA Research
02-13-1997 13.42

TIME Seconds

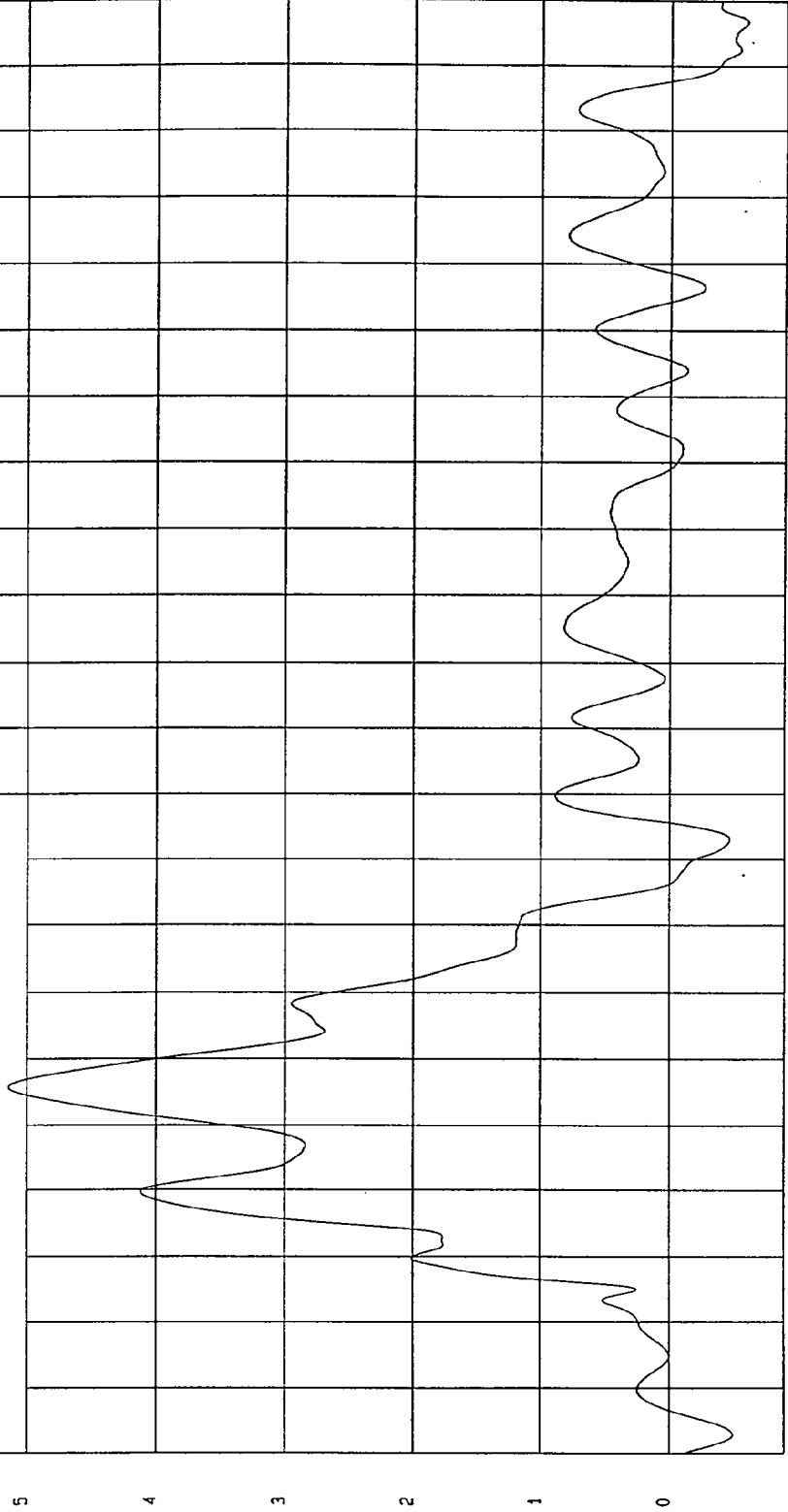
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -.58 G'S at .197 msec
Maximum = 5.14 G'S at .36 msec

MOVING BARRIER REAR AXLE Y ACCELERATION

1 _____ B97019AF.A06 Filterclass (60)



NSA Research
02-10-1997 15.45

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

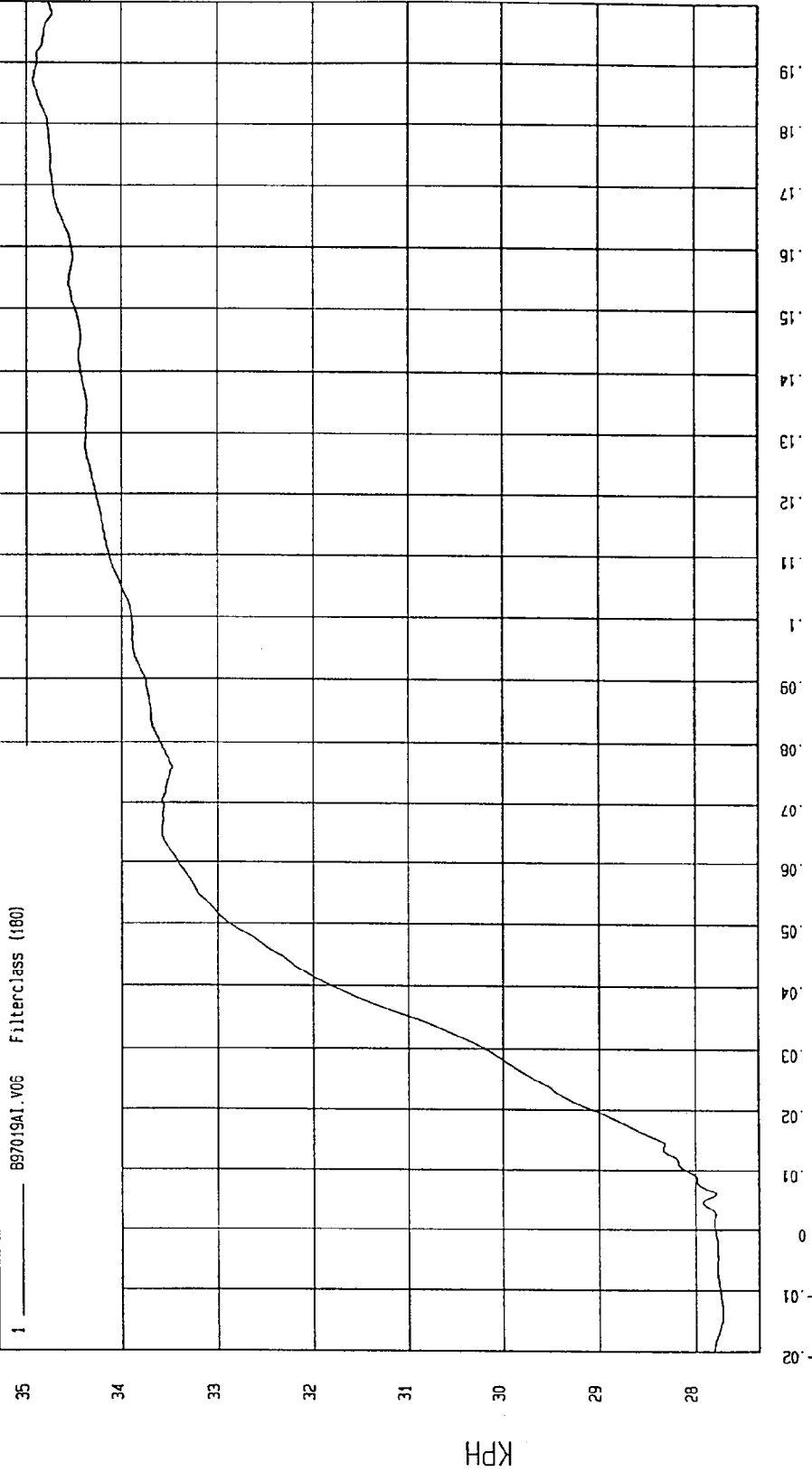
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = 27.71 KPH at -14 msec

Maximum = 34.93 KPH at 187 msec

MOVING BARRIER REAR AXLE Y VELOCITY

1 ——— 897019A1.V06 Filterclass (180)



MOA Research
02-13-1997 13.42

TIME Seconds

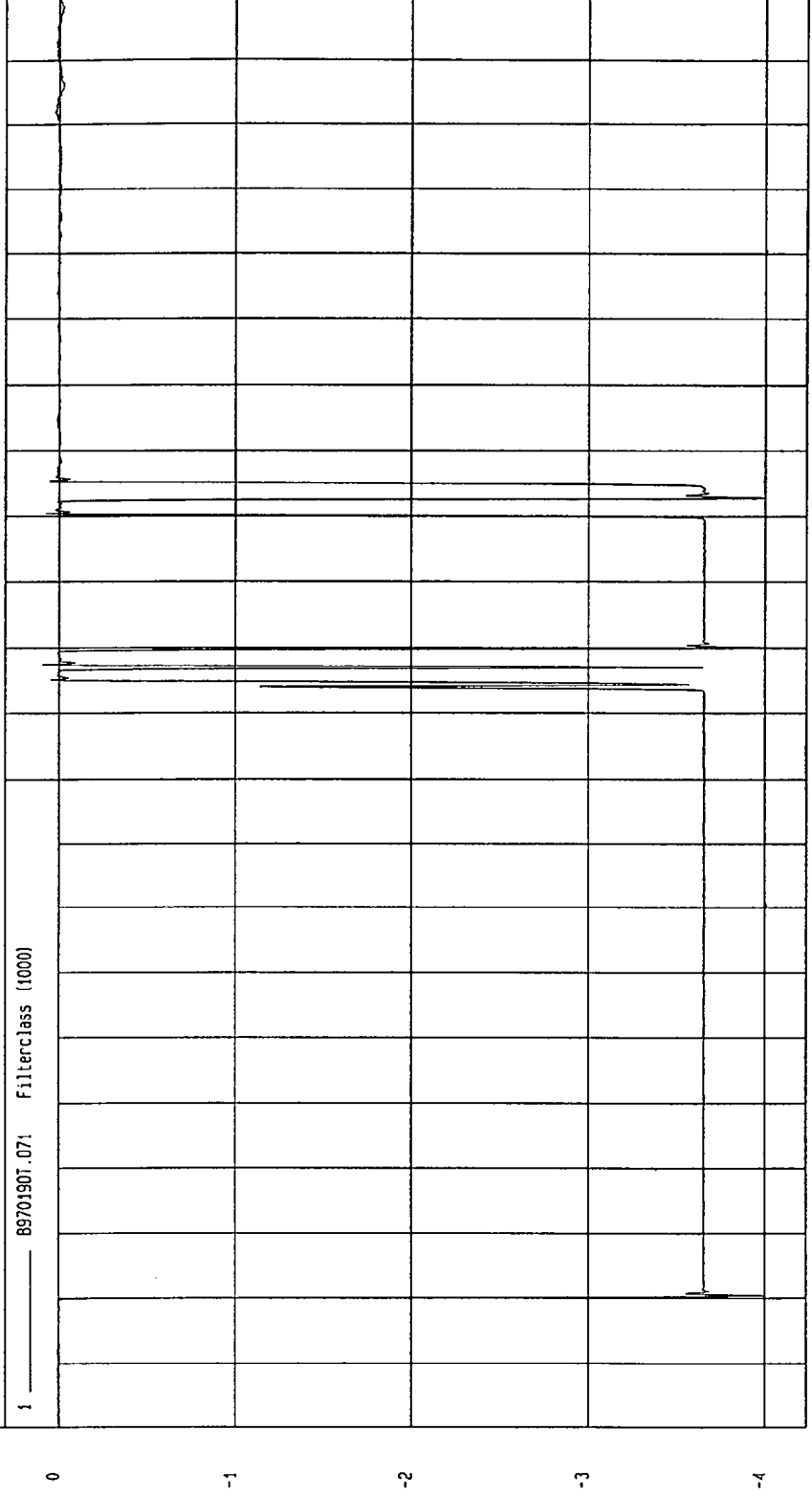
KPH

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -4.01 VOLTS at 100 msec Maximum = 9.27E-02 VOLTS at 97 msec

LEFT BARRIER CONTACT



TIME (SECONDS)

MGA Research
02-18-1997 14:42

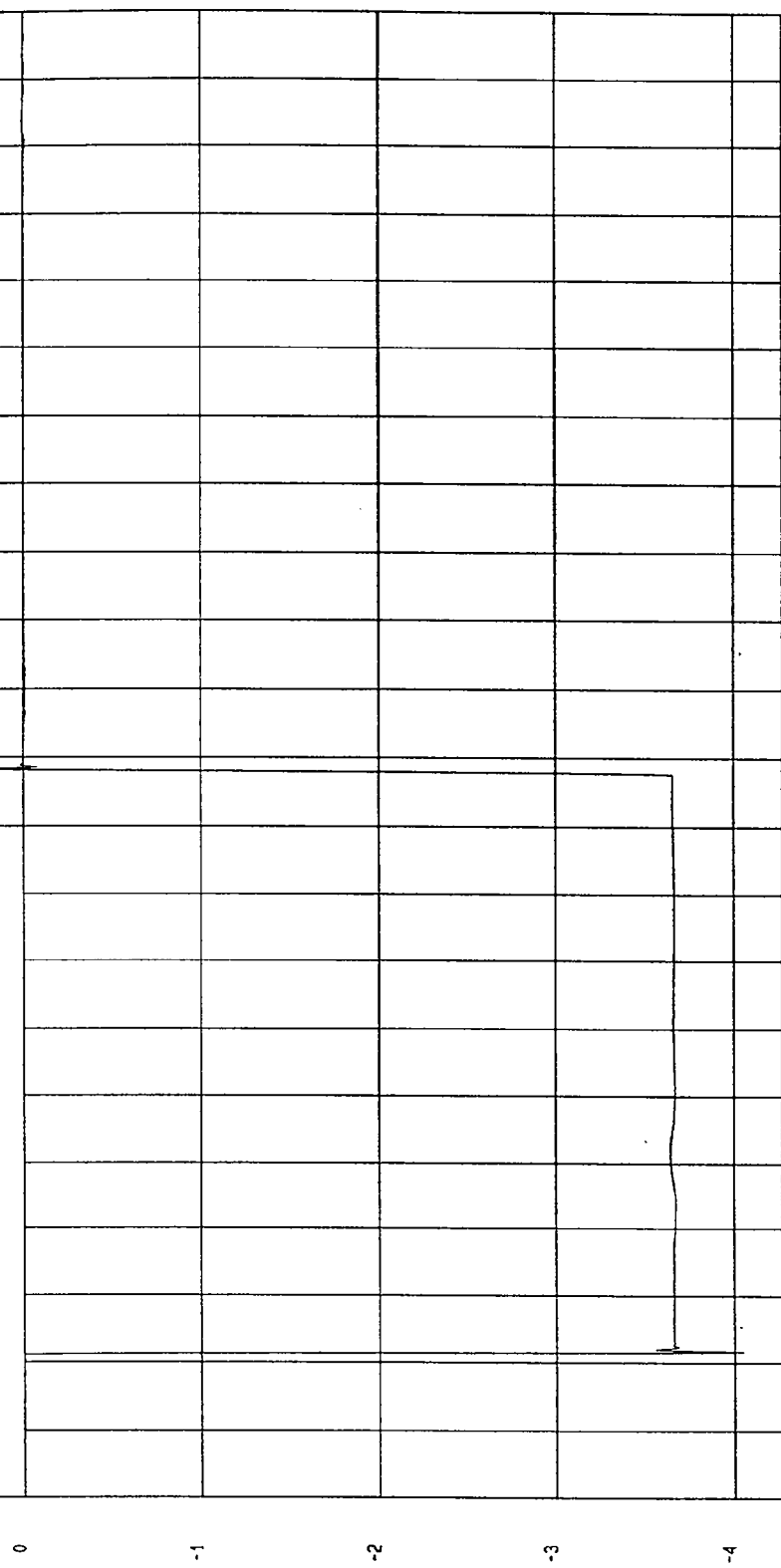
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -4.05 VOLTS at 2 msec Maximum = .21 VOLTS at 88 msec

RIGHT BARRIER CONTACT

1 ——— 89701907.072 Filterclass (1000)



NEA Research
02-16-1997 14:42

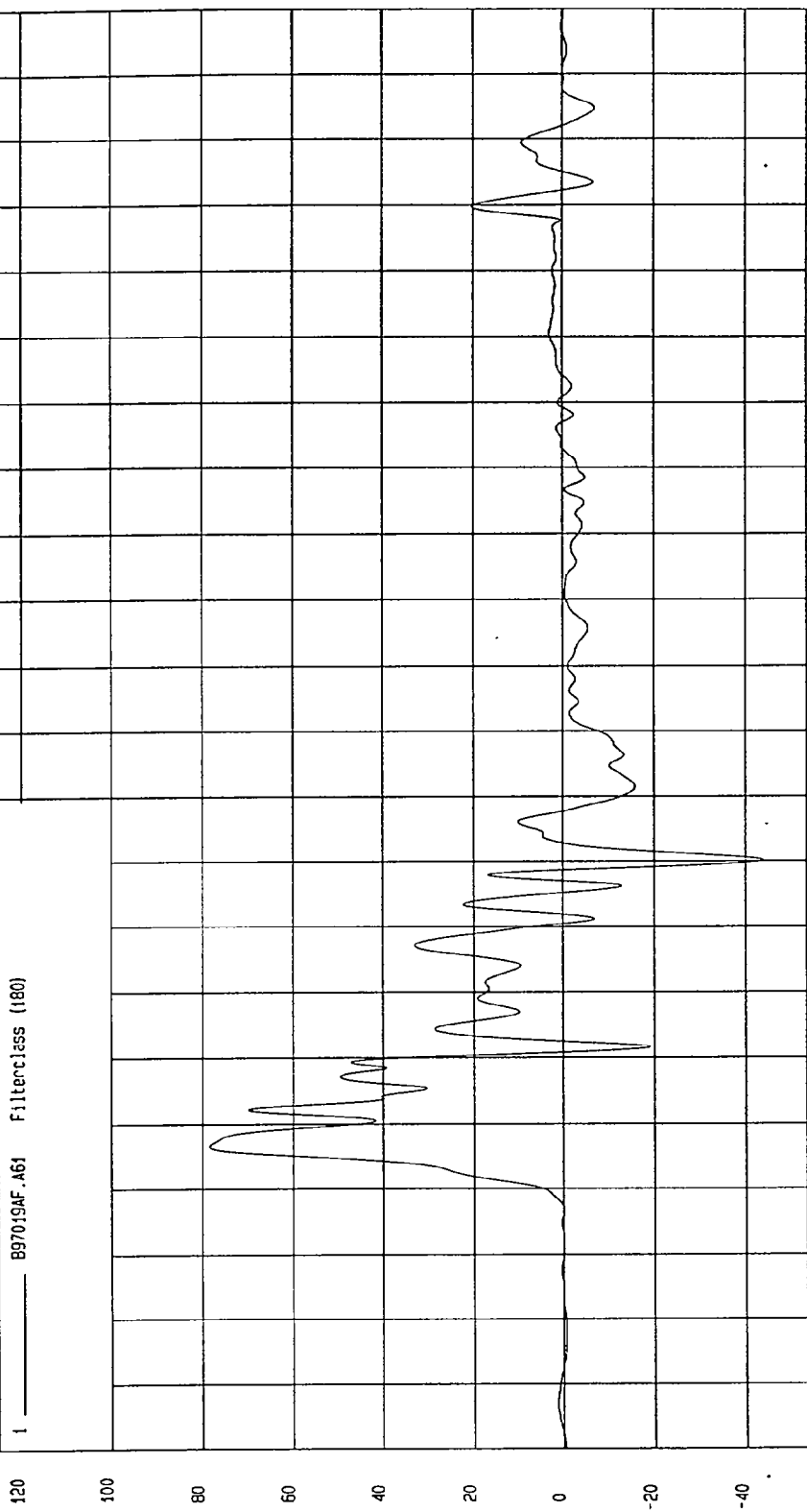
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -43.72 G'S at 70 msec
Maximum = 78.44 G'S at 27 msec

DRIVER UPPER RIB Y REDUNDANT ACCELERATION

1 _____ B9709AF.A61 Filterclass (180)



MCA Research
02-13-1997 13:46

TEST: NCAP LATERAL IMPACT TEST

TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400)

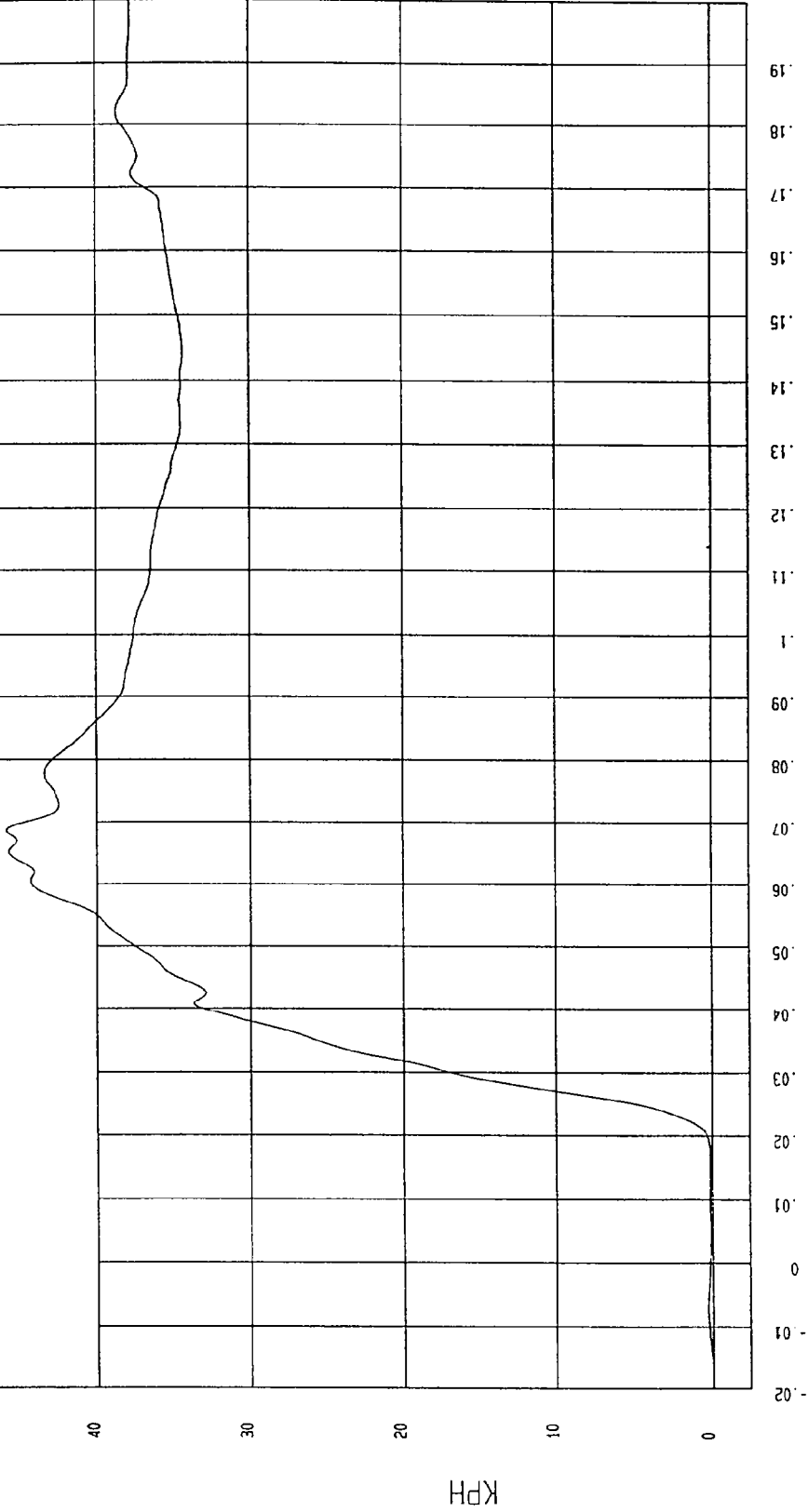
Speed: 38.06 MPH 61.3 KPH

Minimum = -1.27E-02 KPH at -18 msec

Maximum = 45.84 KPH at 69 msec

DRIVER UPPER RIB Y REDUNDANT VELOCITY

1 897019AI.V61 Filterclass (180)



MCA Research
02-13-1997 13:46

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

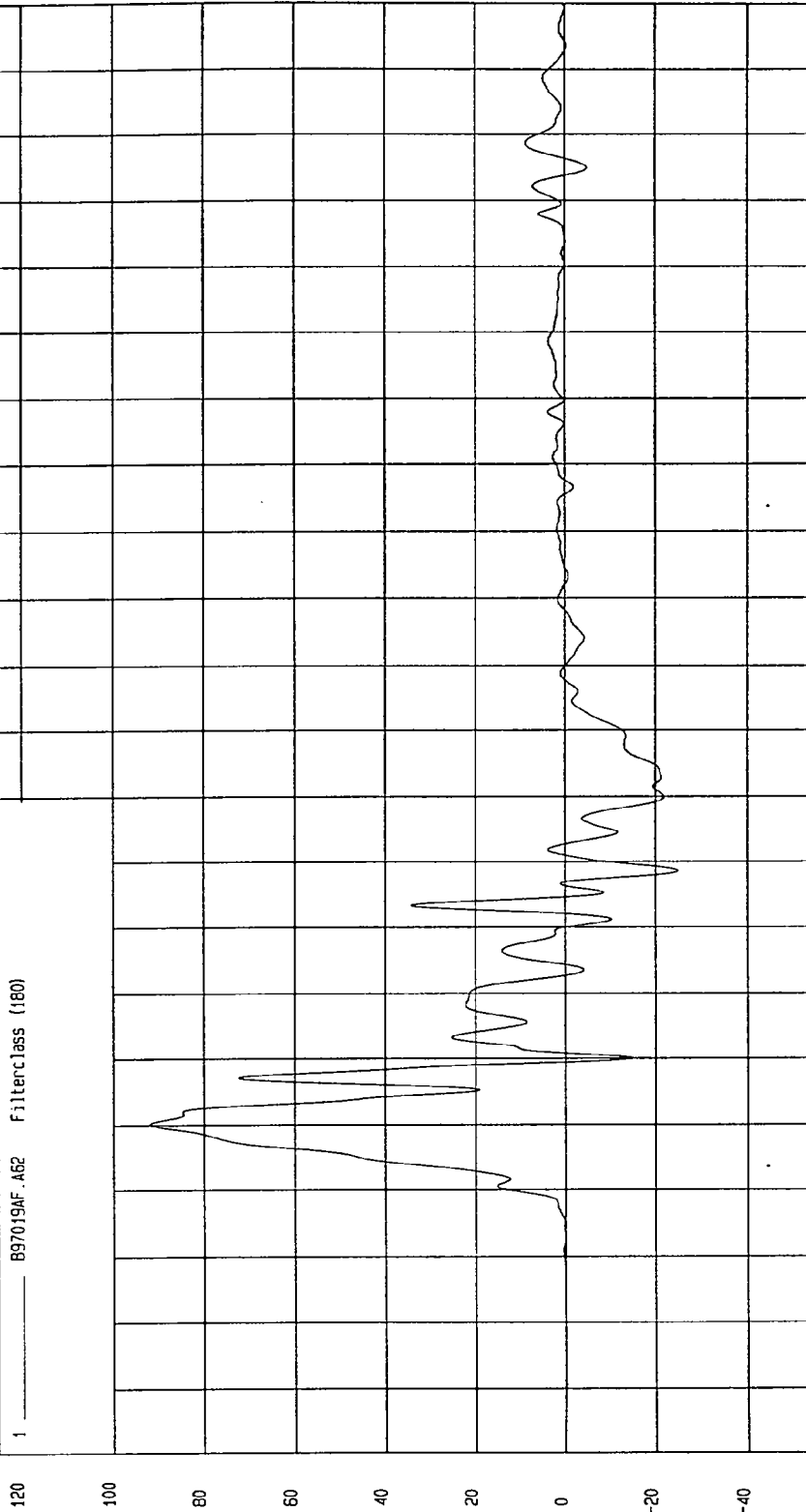
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -25.03 G's at 69 msec

Maximum = 91.94 G's at 30 msec

DRIVER LOWER RIB Y REDUNDANT ACCELERATION

1 B97019AF.A62 Filterclass (180)



MGA Research
02-13-1997 13:46

TIME (SECONDS)

G.S

TEST DATE: 01-30-1997

TEST: NCAP LATERAL IMPACT TEST

Speed: 38.06 MPH 61.3 KPH

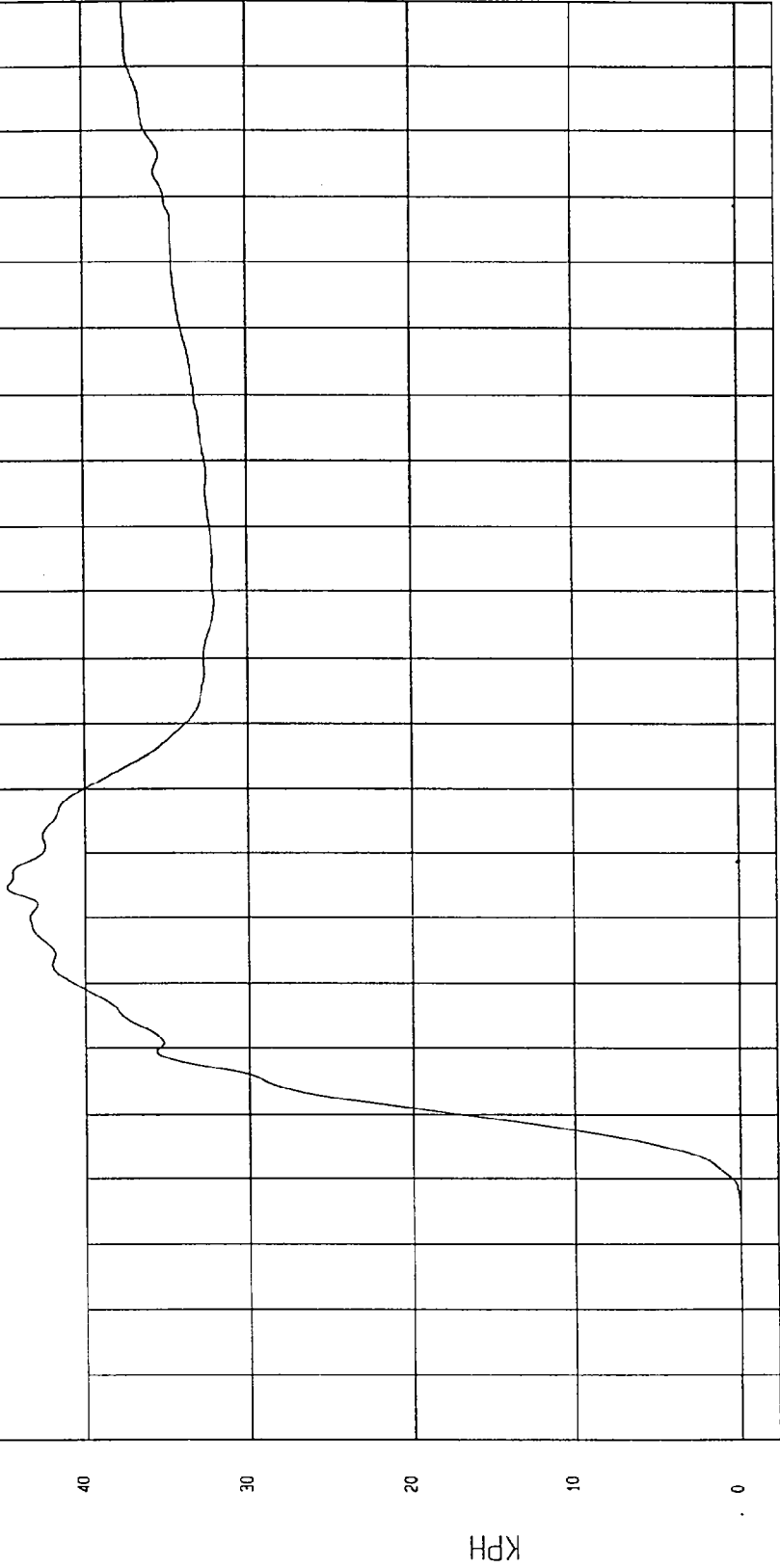
COMPONENT: 1997 MAZDA 626 (MV5400)

Maximum = 44.69 KPH at 65 msec

Minimum = -3.09E-02 KPH at 2 msec

DRIVER LOWER RIB Y REDUNDANT VELOCITY

1 — 897019A1.V62 FilterClass (180)



MPA Research
02-13-1997 13:46

TIME Seconds

KPH

TEST DATE: 01-30-1997

TEST: NCAP LATERAL IMPACT TEST

Speed: 38.06 MPH 61.3 KPH

COMPONENT: 1997 MAZDA 626 (MV5400)

Maximum = 107.72 G'S at 30 msec

Minimum = -34.55 G'S at 61 msec

DRIVER LOWER SPINE Y REDUNDANT ACCELERATION

1 _____ B97019AF.A63 Filterclass (180)

120

100

80

60

40

20

0

-20

-40

G.S

0 -0.02 -0.01 0 0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.1 0.11 0.12 0.13 0.14 0.15 0.16 0.17 0.18 0.19

TIME (SECONDS)

MGA Research
02-13-1997 13:46

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

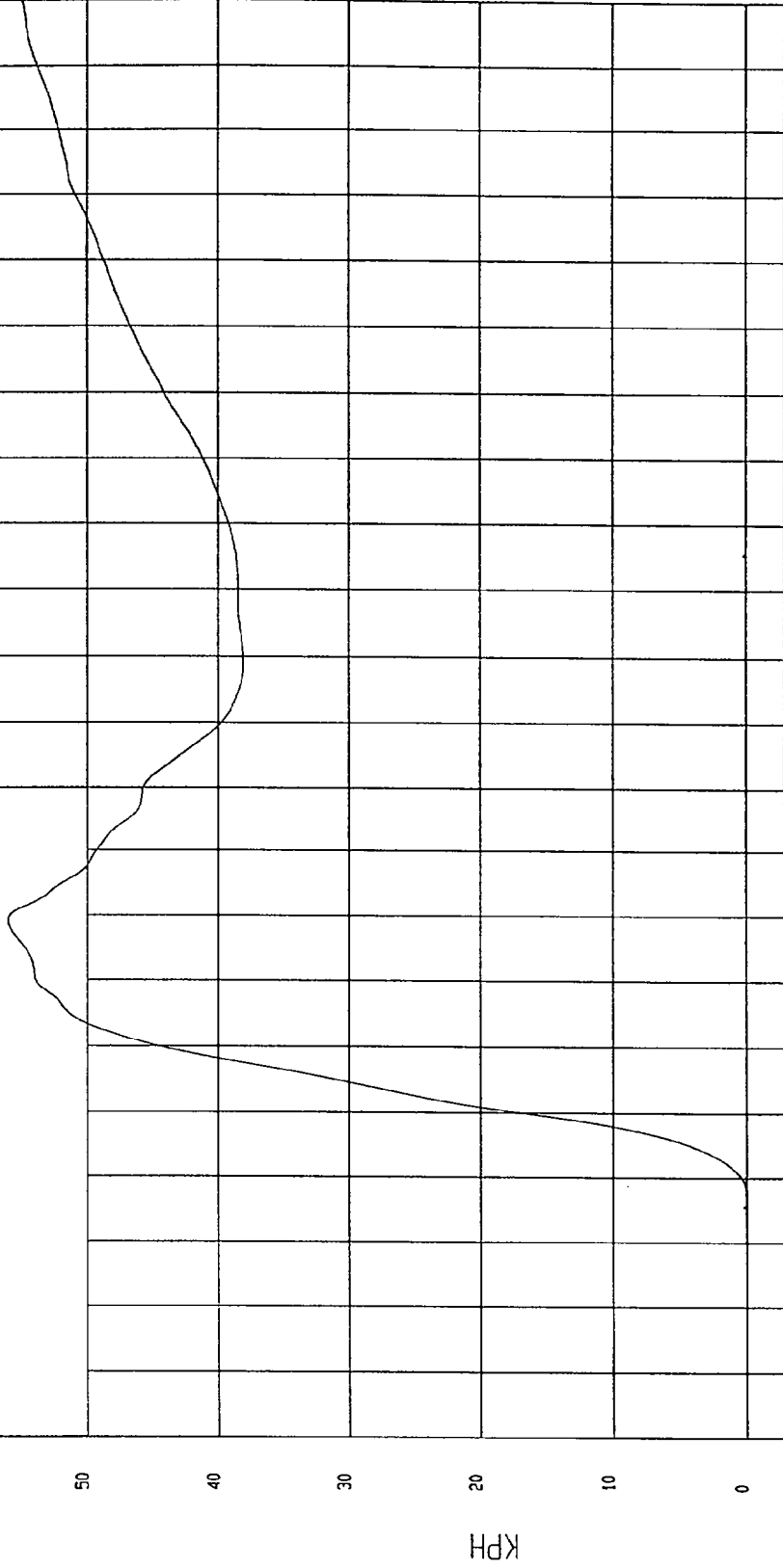
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -1.09E-02 KPH at -2 msec

Maximum = 56.01 KPH at 59 msec

DRIVER LOWER SPINE Y REDUNDANT VELOCITY

1 897019AI.V63 Filterclass (180)



NSA Research
02-13-1997 13:46

TIME Seconds

KPH

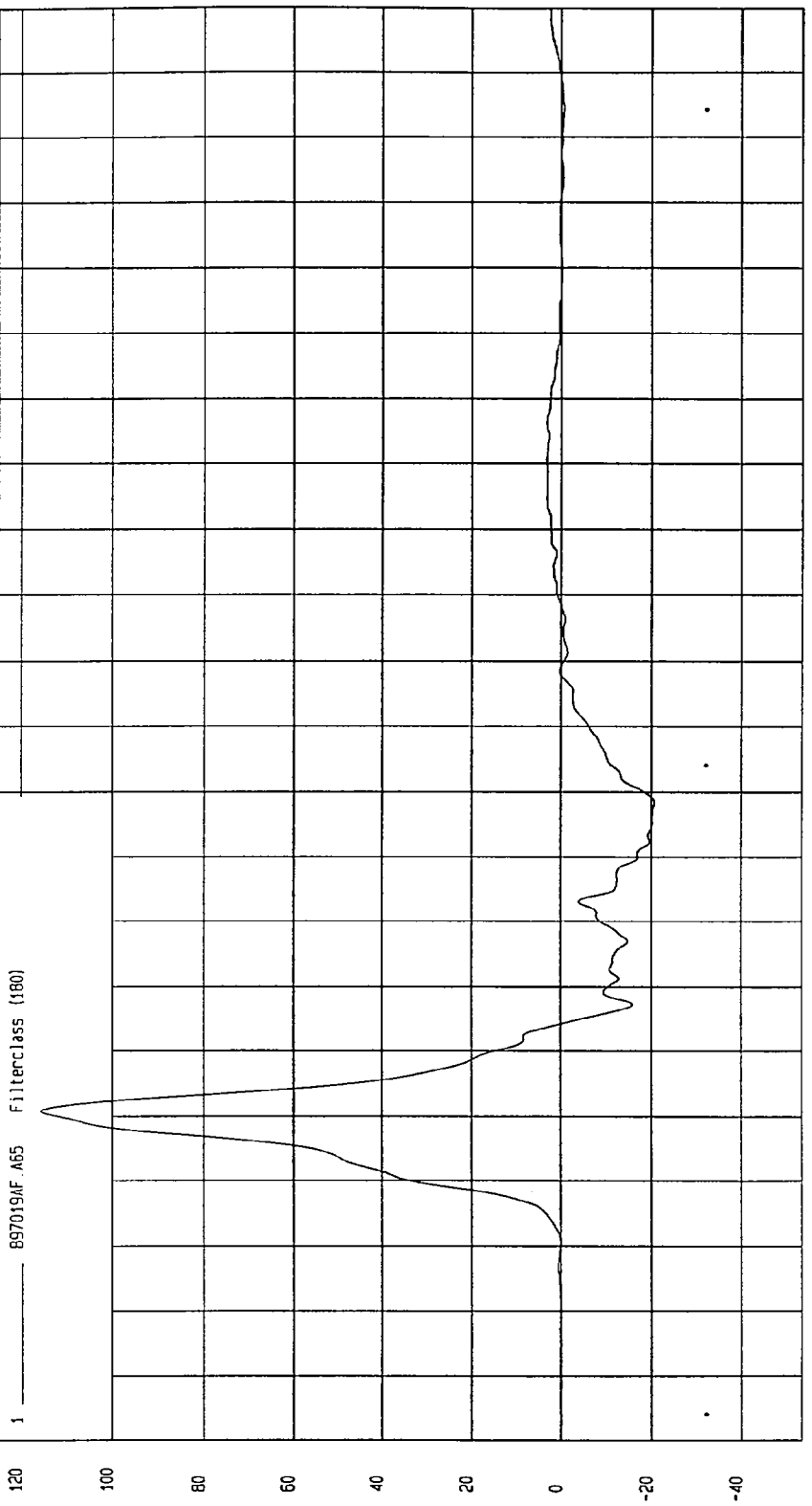
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -20.67 G'S at 78 msec Maximum = 115.91 G'S at 31 msec

DRIVER PELVIS Y REDUNDANT ACCELERATION

1 897019AF.A65 Filterclass (180)



MGA Research Corp
02-28-1997 17:33

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

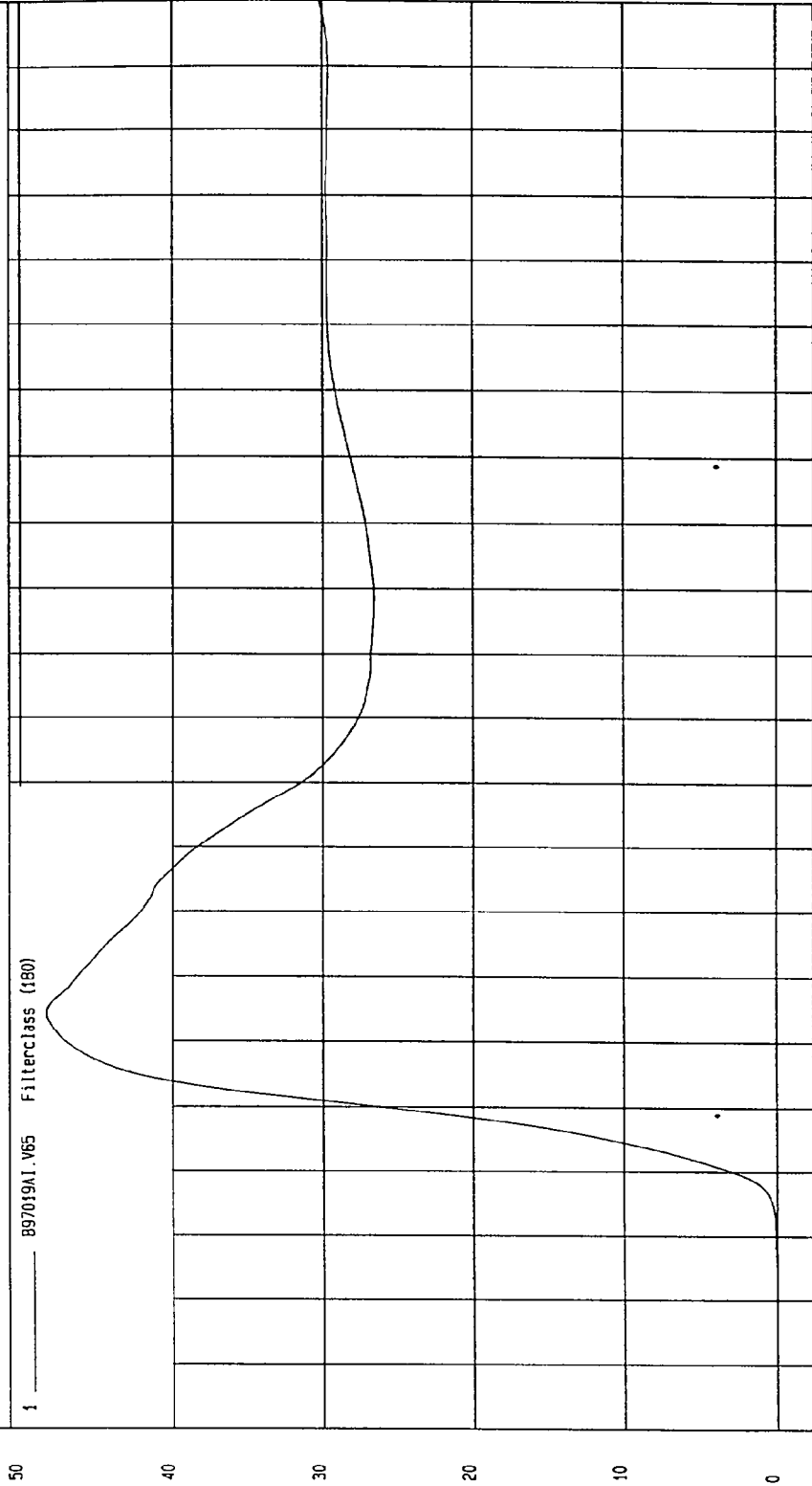
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -.00 KPH at 3 msec

Maximum = 48.31 KPH at 44 msec

DRIVER PELVIS Y REDUNDANT VELOCITY

1 897019A1.V65 Filterclass (180)



NSA Research
02-28-1997 11:33

TIME Seconds

KPH

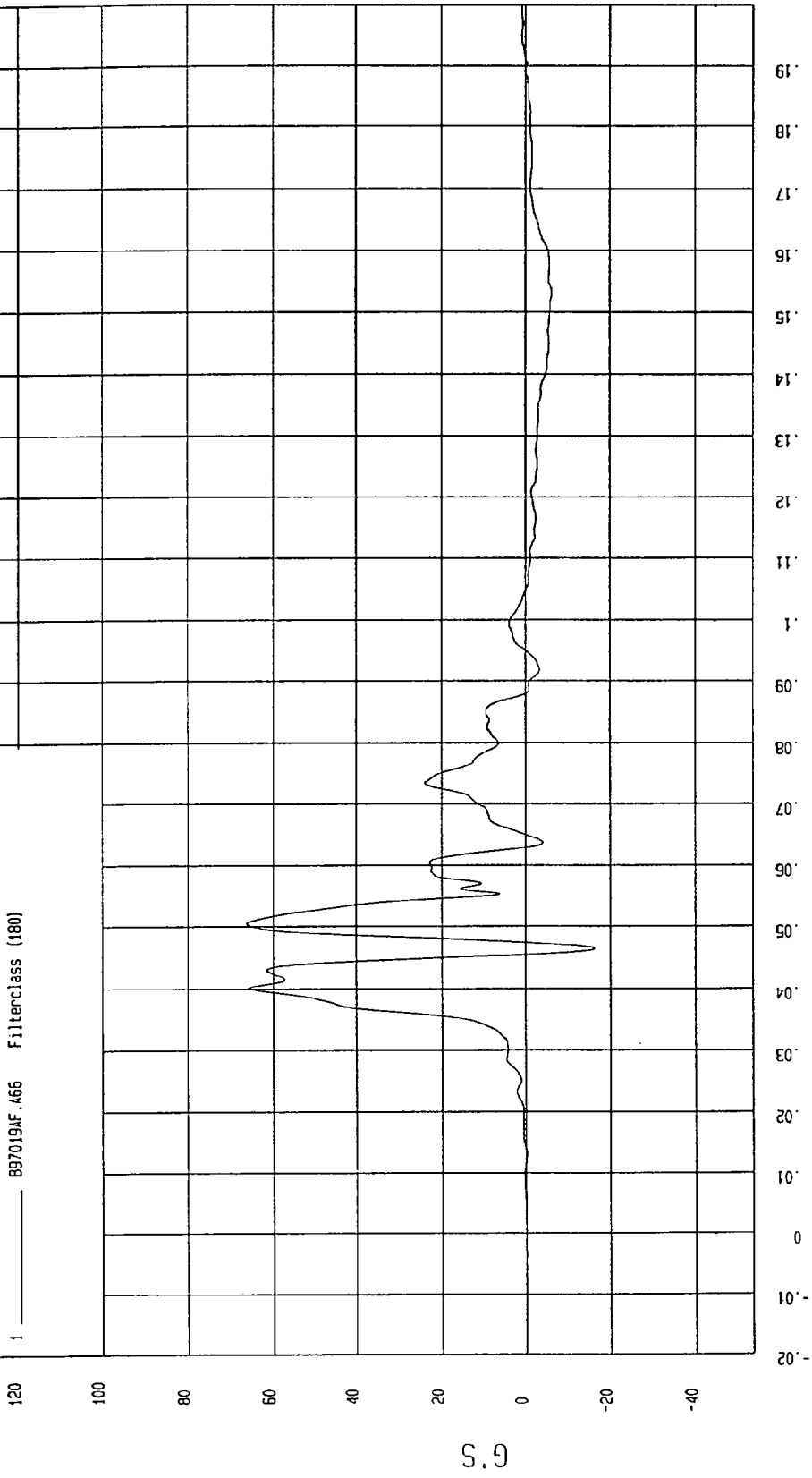
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -16.41 G'S at 46 msec Maximum = 66.16 G'S at 50 msec

REAR PASSENGER UPPER RIB Y REDUNDANT ACCELERATION

1 897019AF.A66 Filterclass (180)



MGA Research
02-13-1997 13:47

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

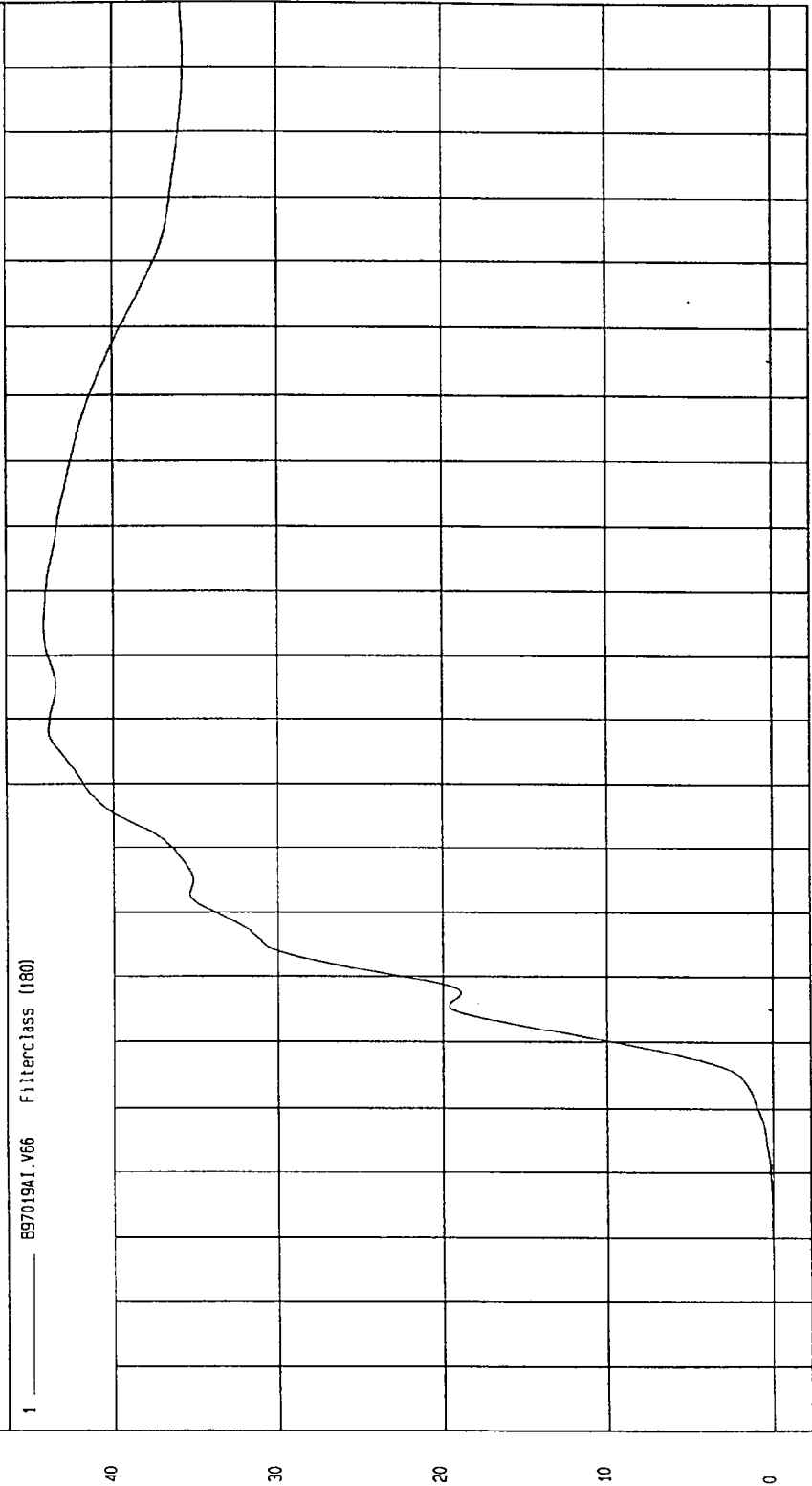
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = 0 KPH at -20 msec

Maximum = 44.24 KPH at 105 msec

REAR PASSENGER UPPER RIB Y REDUNDANT VELOCITY

1 ——— 897019A1.V66 Filterclass (180)



MOA Research
02-13-1997 13:47

TIME Seconds

KPH

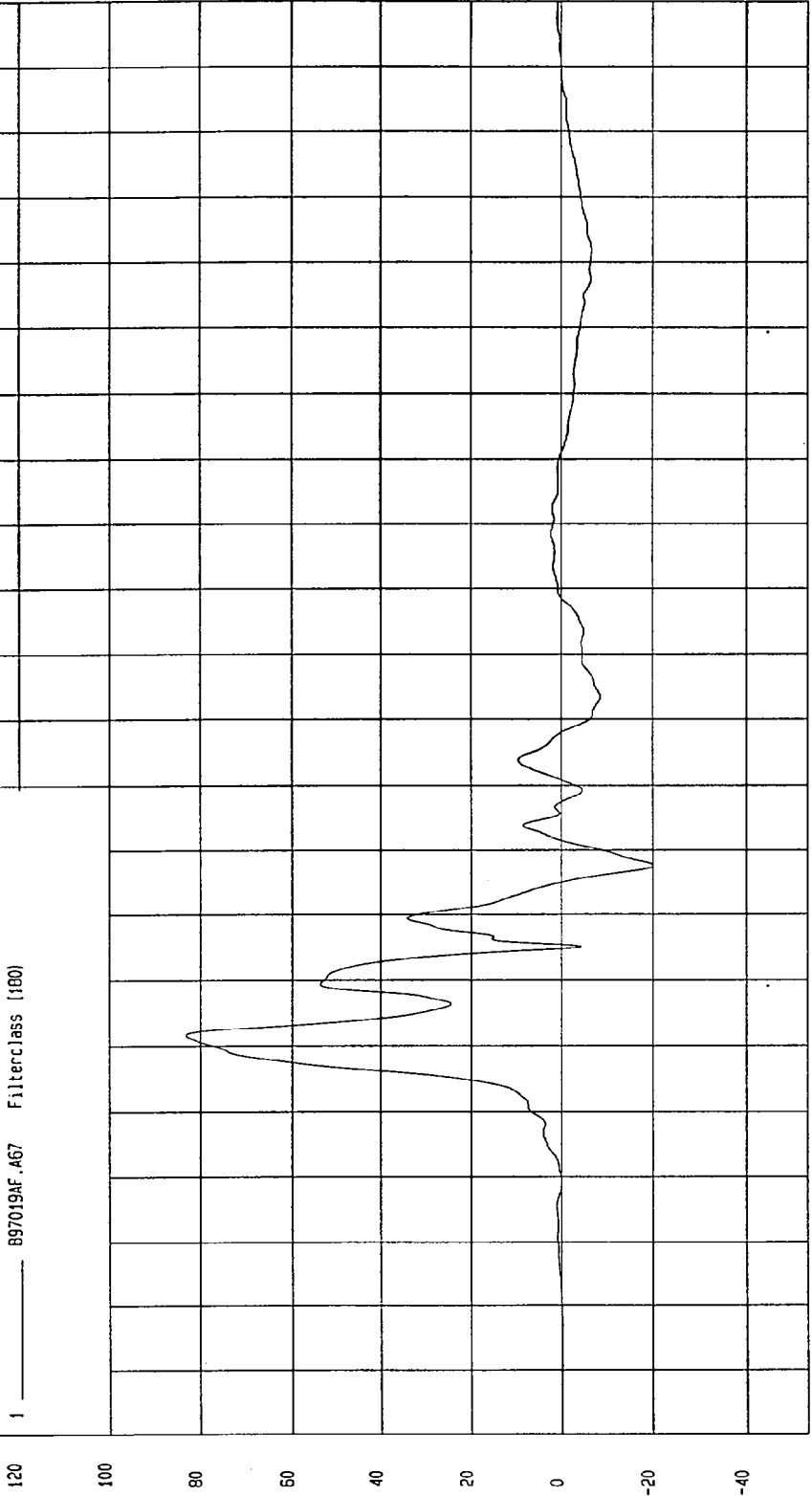
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -20.17 G'S at 68 msec Maximum = 83.30 G'S at 42 msec

REAR PASSENGER LOWER RIB Y REDUNDANT ACCELERATION

1 _____ B97019AF.A67 Filterclass (100)



MOA Research
02-13-1997 13: 47

TEST: NCAP LATERAL IMPACT TEST

TEST DATE: 01-30-1997

Speed: 38.06 MPH 61.3 KPH

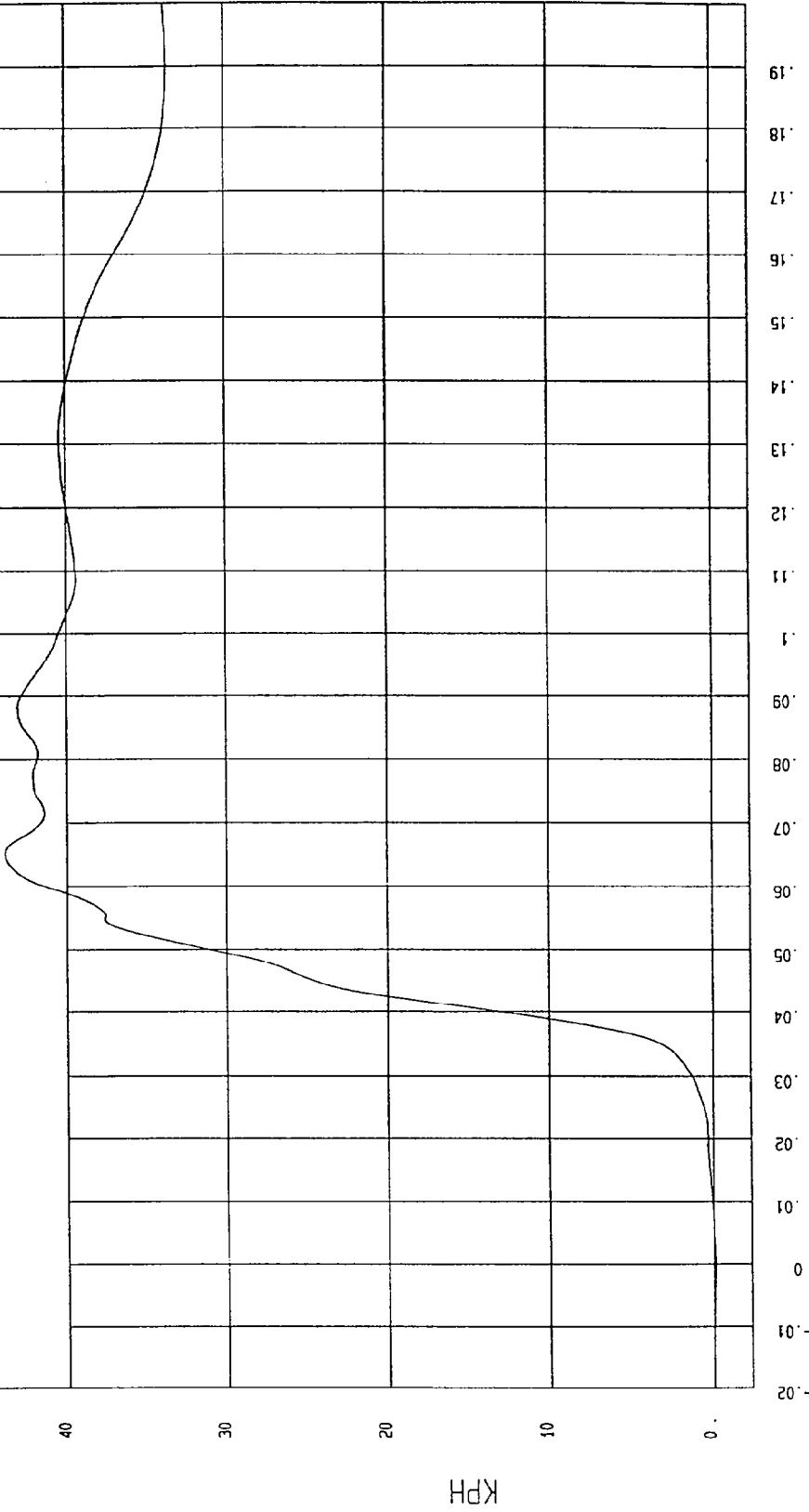
COMPONENT: 1997 MAZDA 626 (MV5400)

Minimum = -9.65E-02 KPH at 0 msec

Maximum = 43.84 KPH at 65 msec

REAR PASSENGER LOWER RIB Y REDUNDANT VELOCITY

1 ——— 897019A1.V67 Filterclass (180)



MSC Research
02-13-1997 13:47

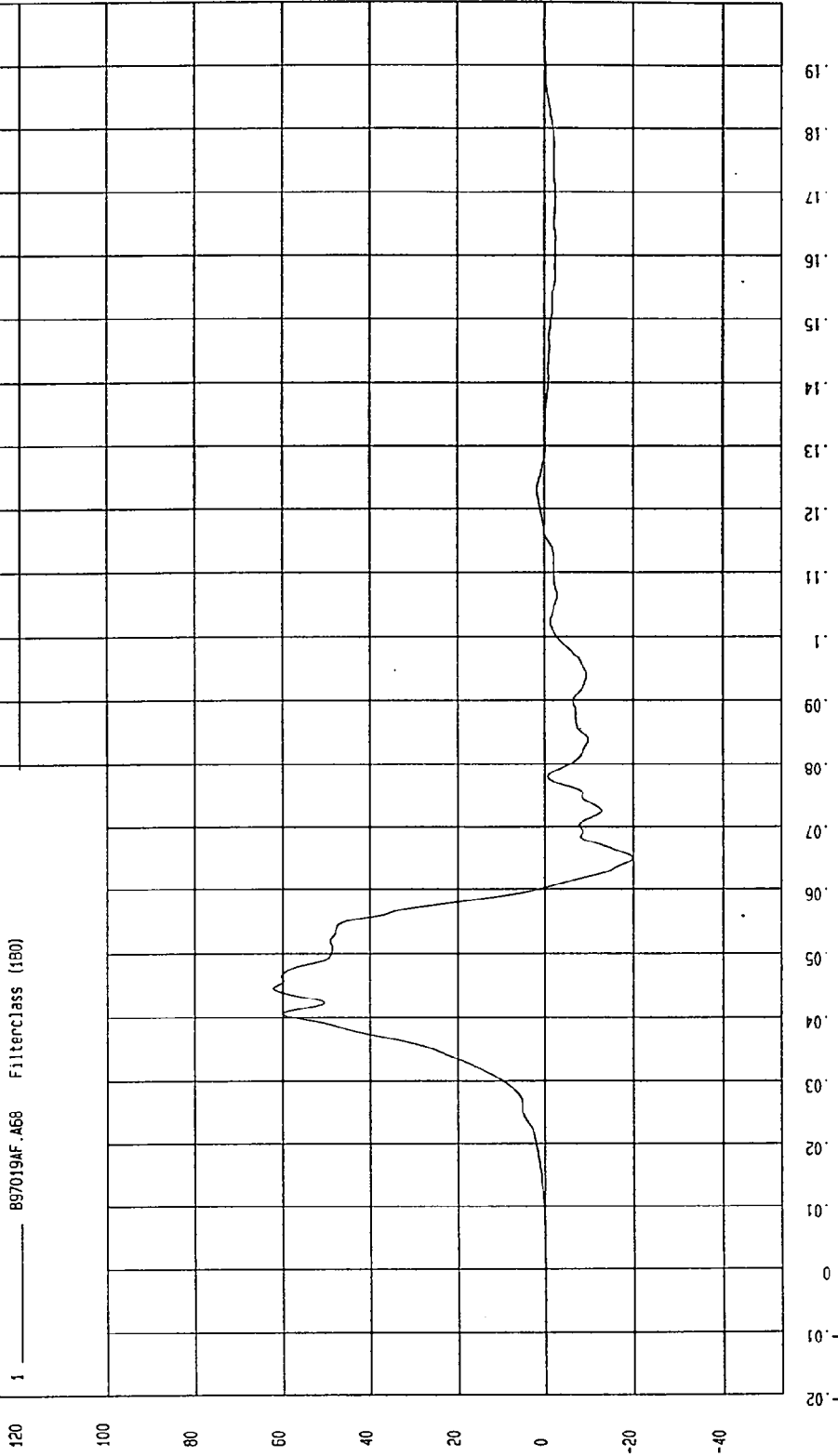
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -19.82 G'S at 65 msec Maximum = 62.16 G'S at 45 msec

REAR PASSENGER LOWER SPINE Y REDUNDANT ACCELERATION

1 897019NF.A68 FilterClass (180)



MOA Research
02-13-1997 13: 47

TIME (SECONDS)

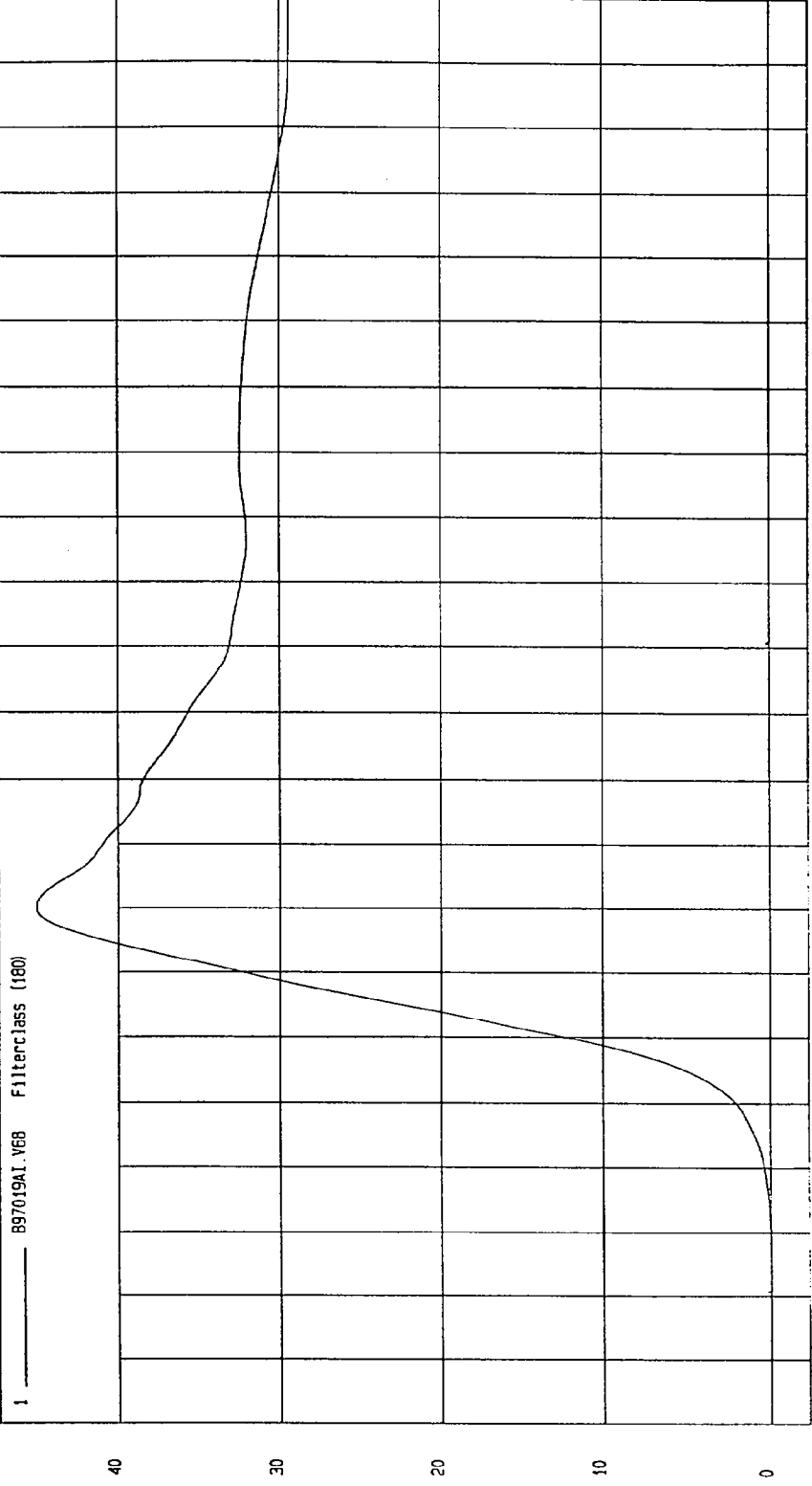
G.S

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -5.81E-03 KPH at 2 msec Maximum = 45.06 KPH at 60 msec

REAR PASSENGER LOWER SPINE Y REDUNDANT VELOCITY



MOA Report CT
02-13-1997 13:47

TIME Seconds

KPH

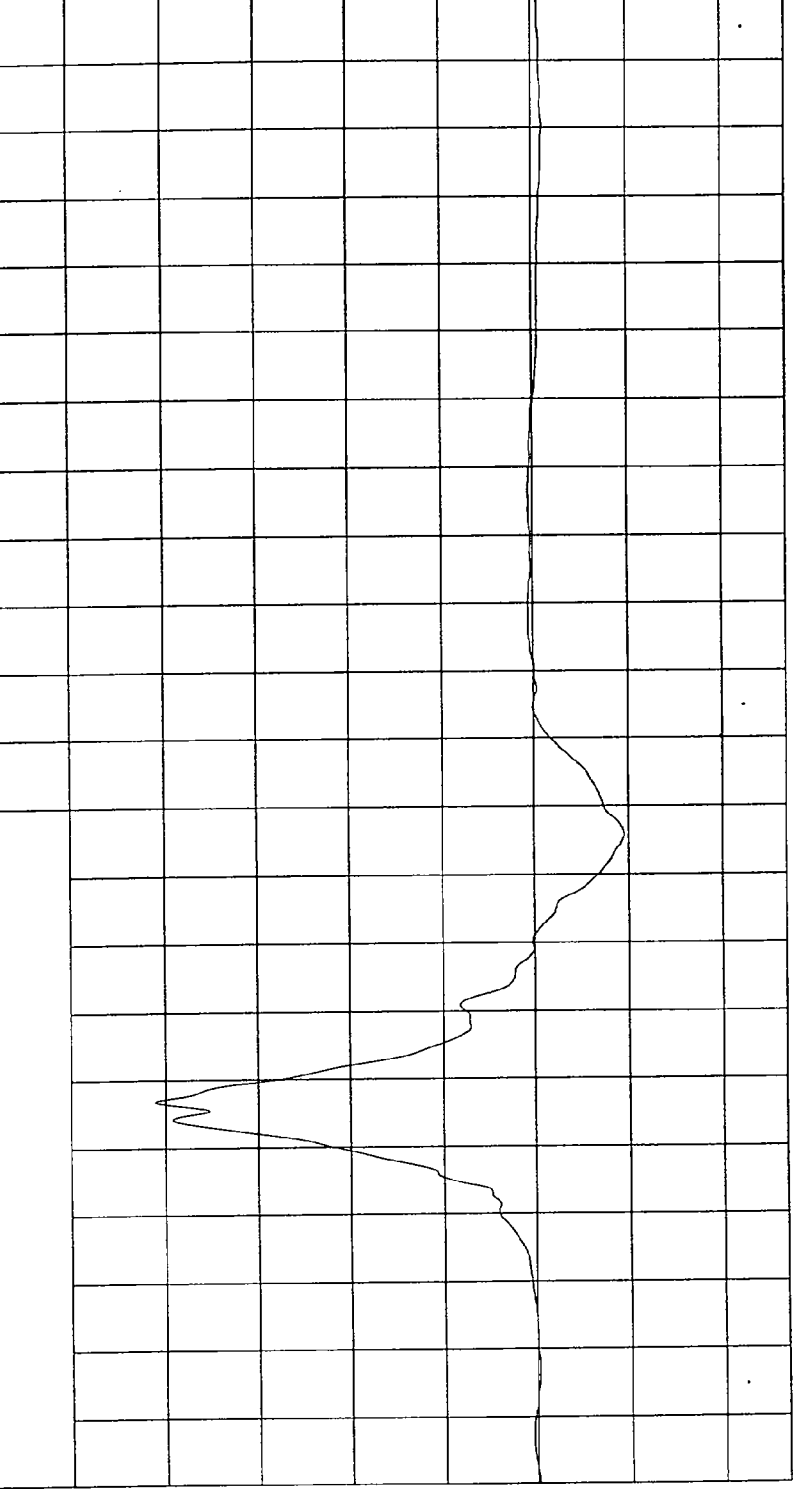
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -19.05 G'S at 76 msec Maximum = 82.29 G'S at 37 msec

REAR PASSENGER PELVIS Y REDUNDANT ACCELERATION

1 897019AF A99 Filterclass (180)



TIME (SECONDS)

MSA Research
02-13-1997 13:47

S.9

TEST DATE: 01-30-1997

TEST: NCAP LATERAL IMPACT TEST

Speed: 38.06 MPH 61.3 KPH

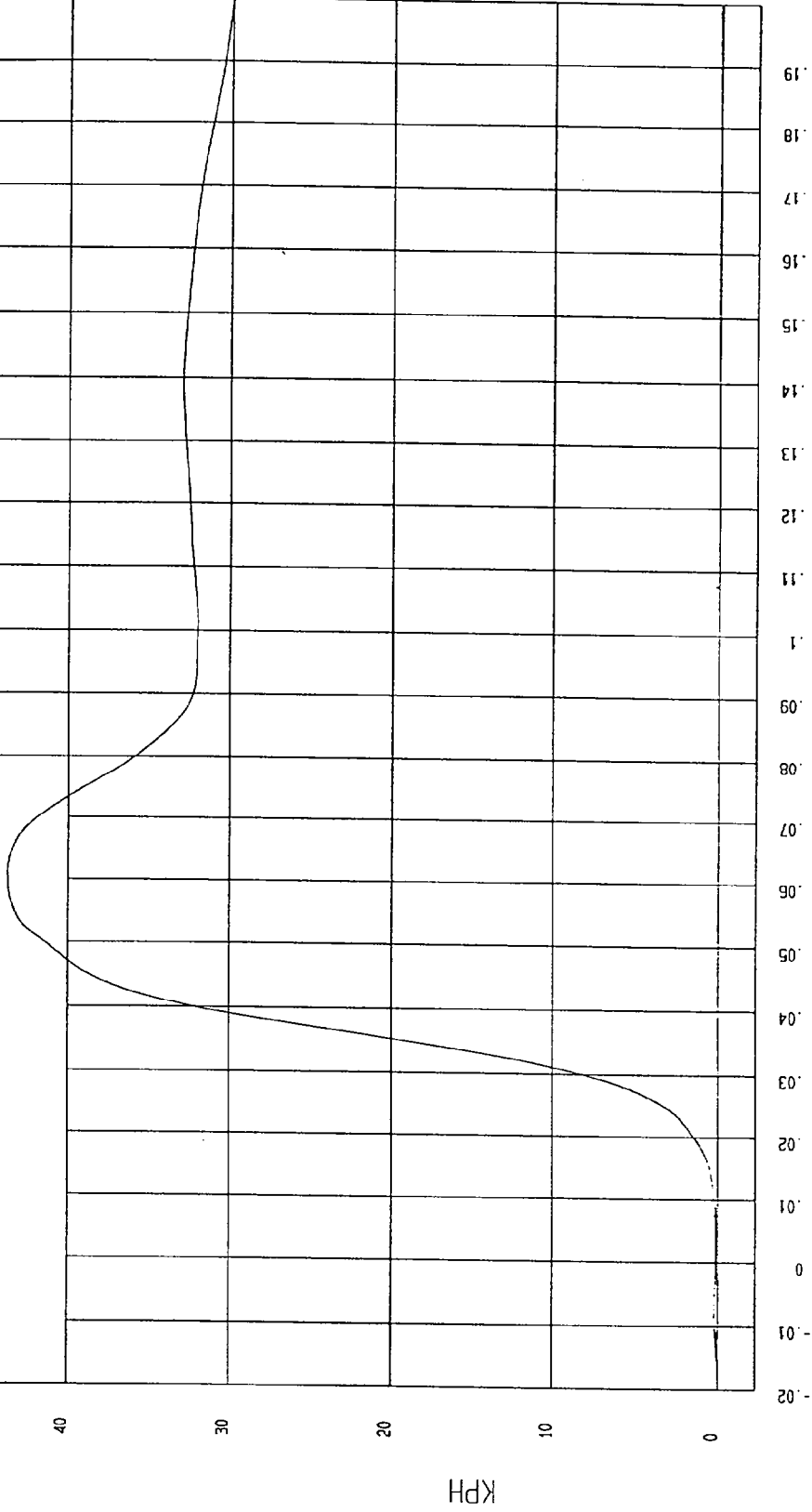
COMPONENT: 1997 MAZDA 626 (MV5400)

Maximum = 43.75 KPH at 61 msec

Minimum = -1.59E-02 KPH at -18 msec

REAR PASSENGER PELVIS Y REDUNDANT VELOCITY

1 897019A1.V69 Filterclass (180)



NSA Research
02-13-1997 13:47

FINITE IMPULSE RESPONSE (FIR) FILTERED DATA

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

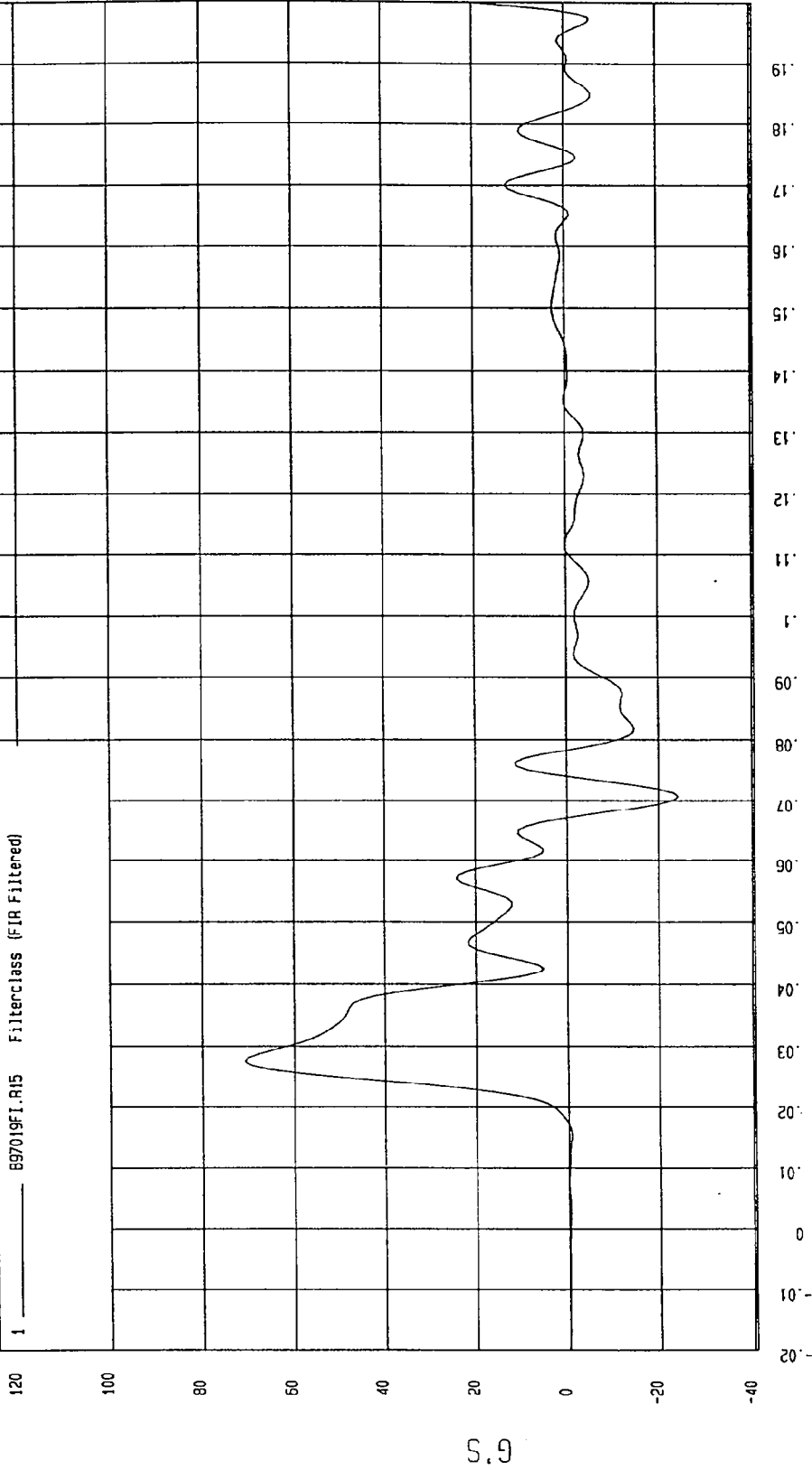
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -24.26 G'S at 71 msec

Maximum = 70.68 G'S at 28 msec

DRIVER UPPER RIB Y ACCELERATION

1 897019F1.R15 Filterclass (FIR Filtered)



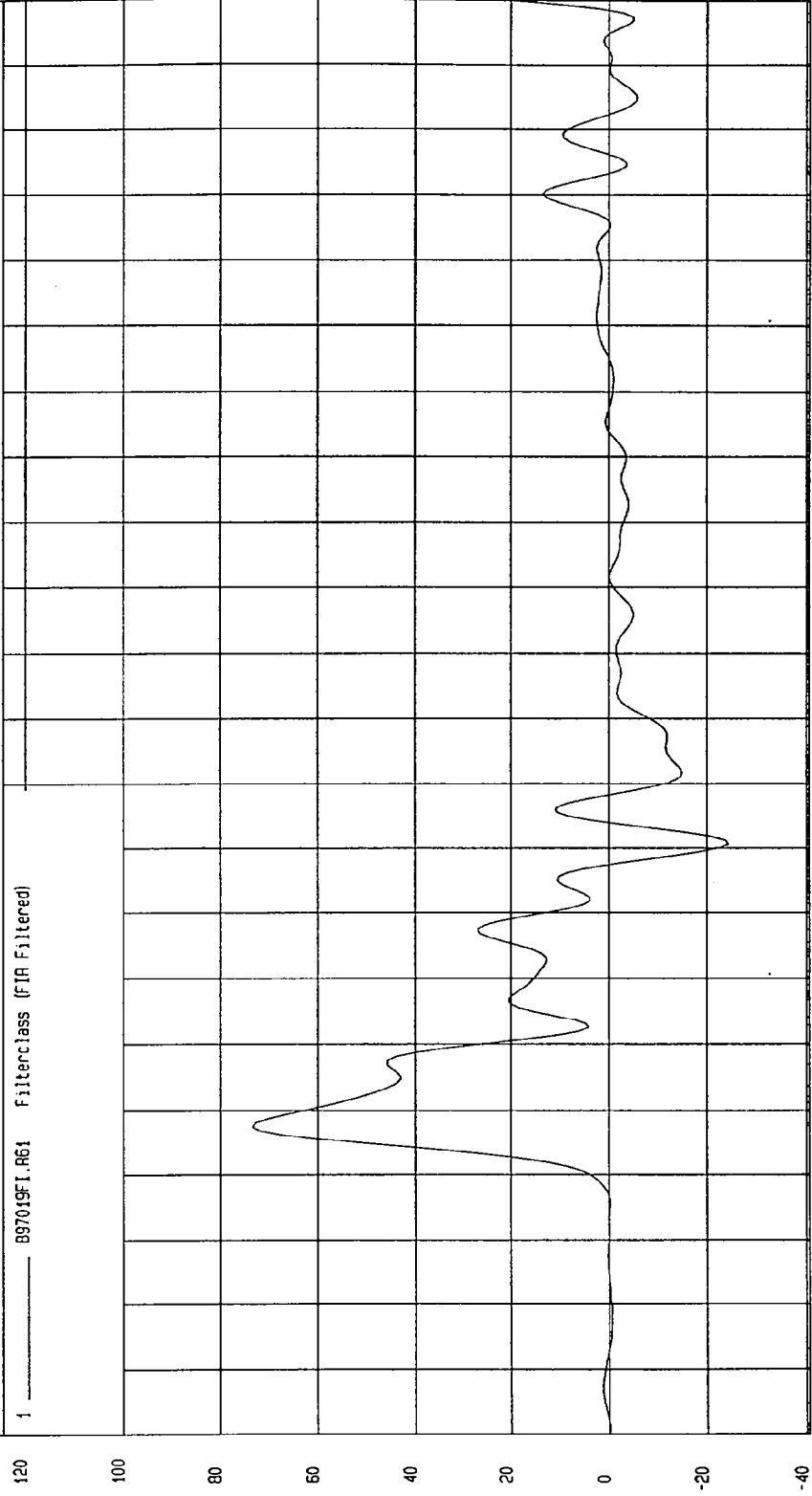
MEA Research
02-13-1997 13:52

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -24.25 G'S at 71 msec Maximum = 73.39 G'S at 28 msec

DRIVER UPPER RIB Y REDUNDANT ACCELERATION



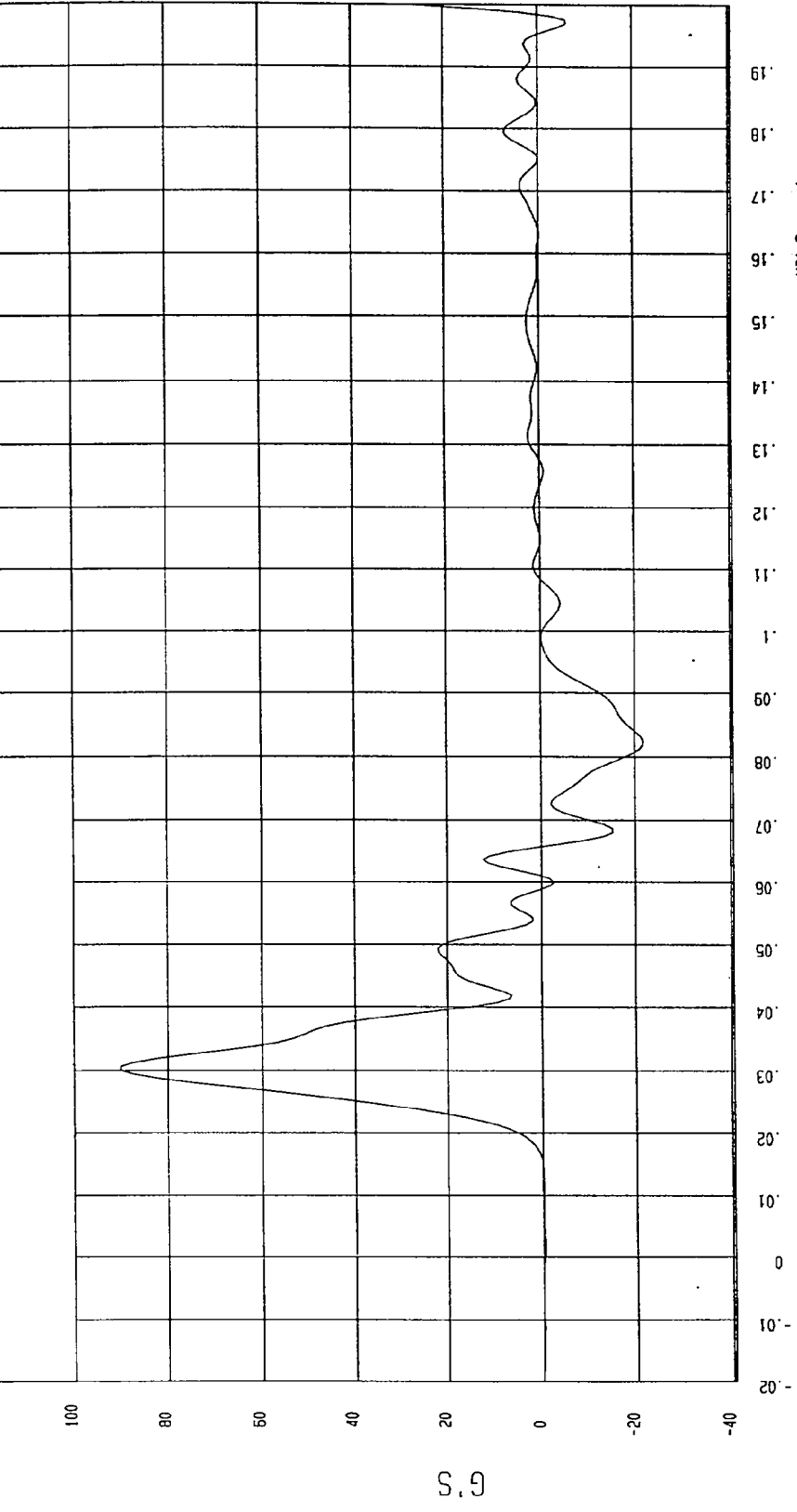
NSI Research
02-13-1997 13:52

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -21.83 G'S at 82 msec Maximum = 90.35 G'S at 30 msec

DRIVER LOWER RIB Y ACCELERATION
1 897019FI.R16 Filterclass (FIR Filtered)



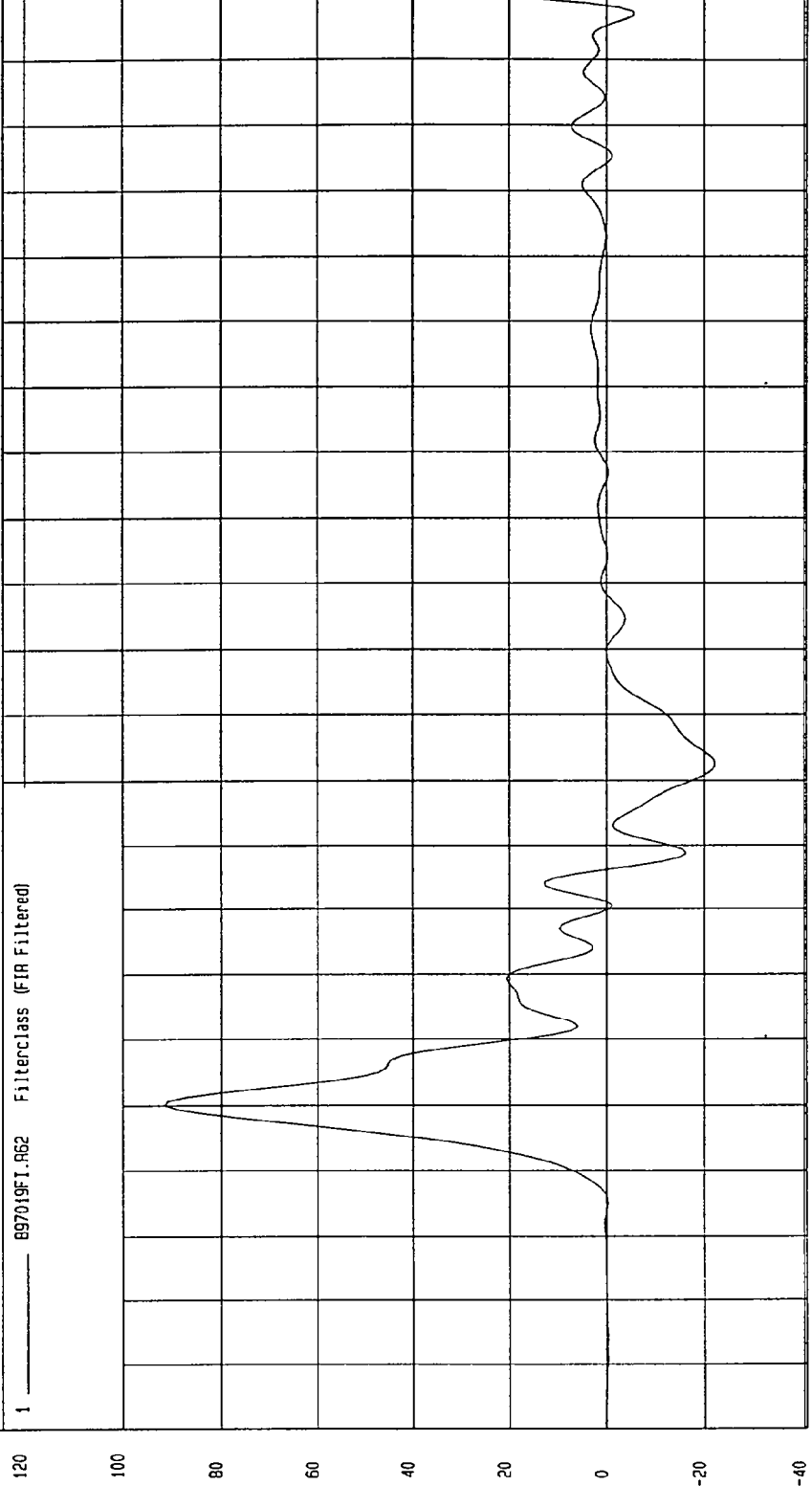
MOA Research
02-13-1997 13:52

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -22.29 G'S at 82 msec Maximum = 91.52 G'S at 30 msec

DRIVER LOWER RIB Y REDUNDANT ACCELERATION



TIME (SECONDS)

NGA Research
02-13-1997 13:52

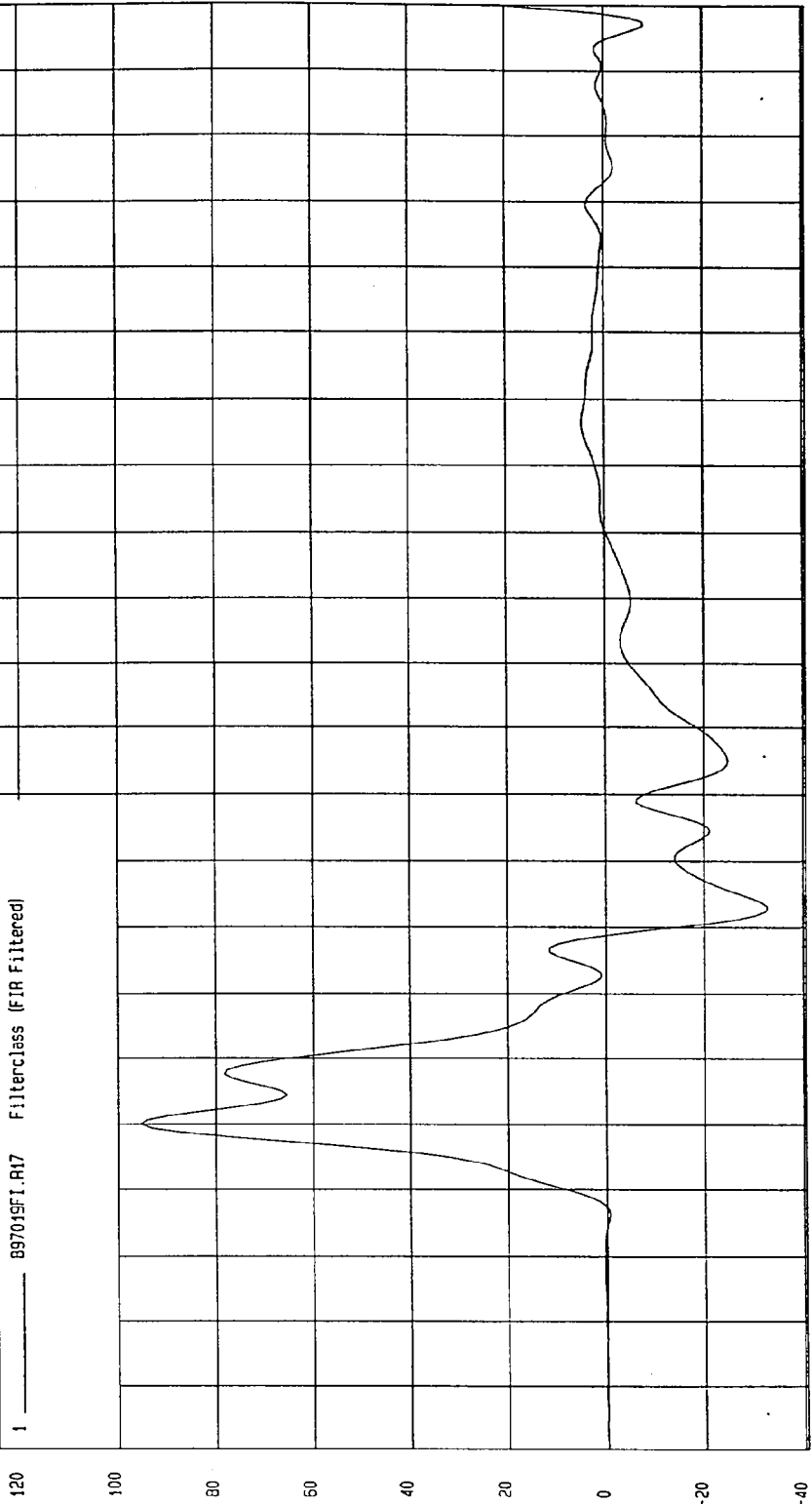
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -33.05 G'S at 63 msec Maximum = 95.41 G'S at 30 msec

DRIVER LOWER SPINE Y ACCELERATION

1 897019FI.R17 Filterclass (FIR Filtered)



TIME (SECONDS)

MVA Research
02-13-1997 13:52

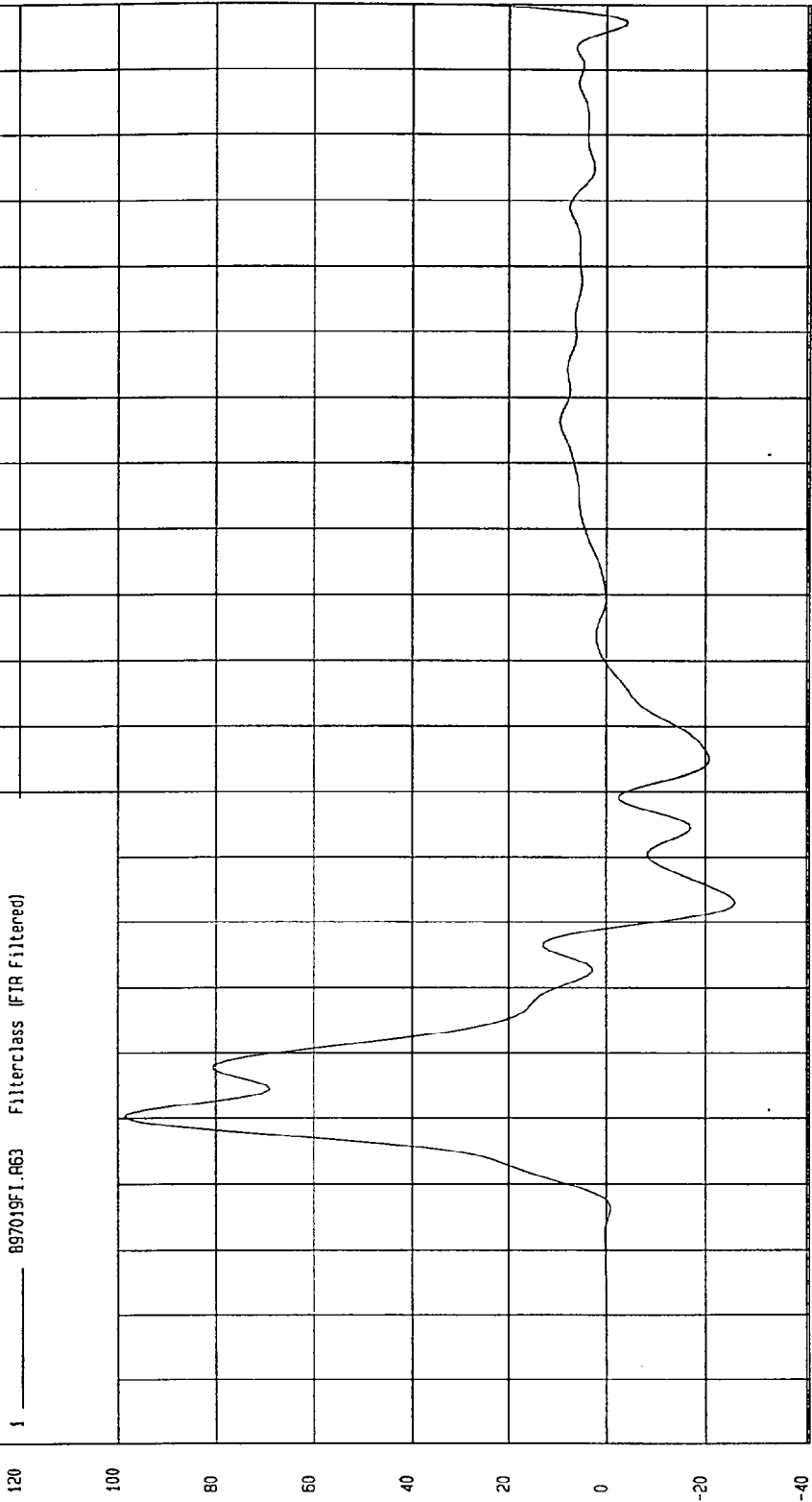
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -25.98 G'S at 63 msec Maximum = 98.62 G'S at 30 msec

DRIVER LOWER SPINE Y REDUNDANT ACCELERATION

1 897019F1.R63 Filterclass (FIR Filtered)



NCA Research
02-13-1997 13.52

TIME (SECONDS)

G.S

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

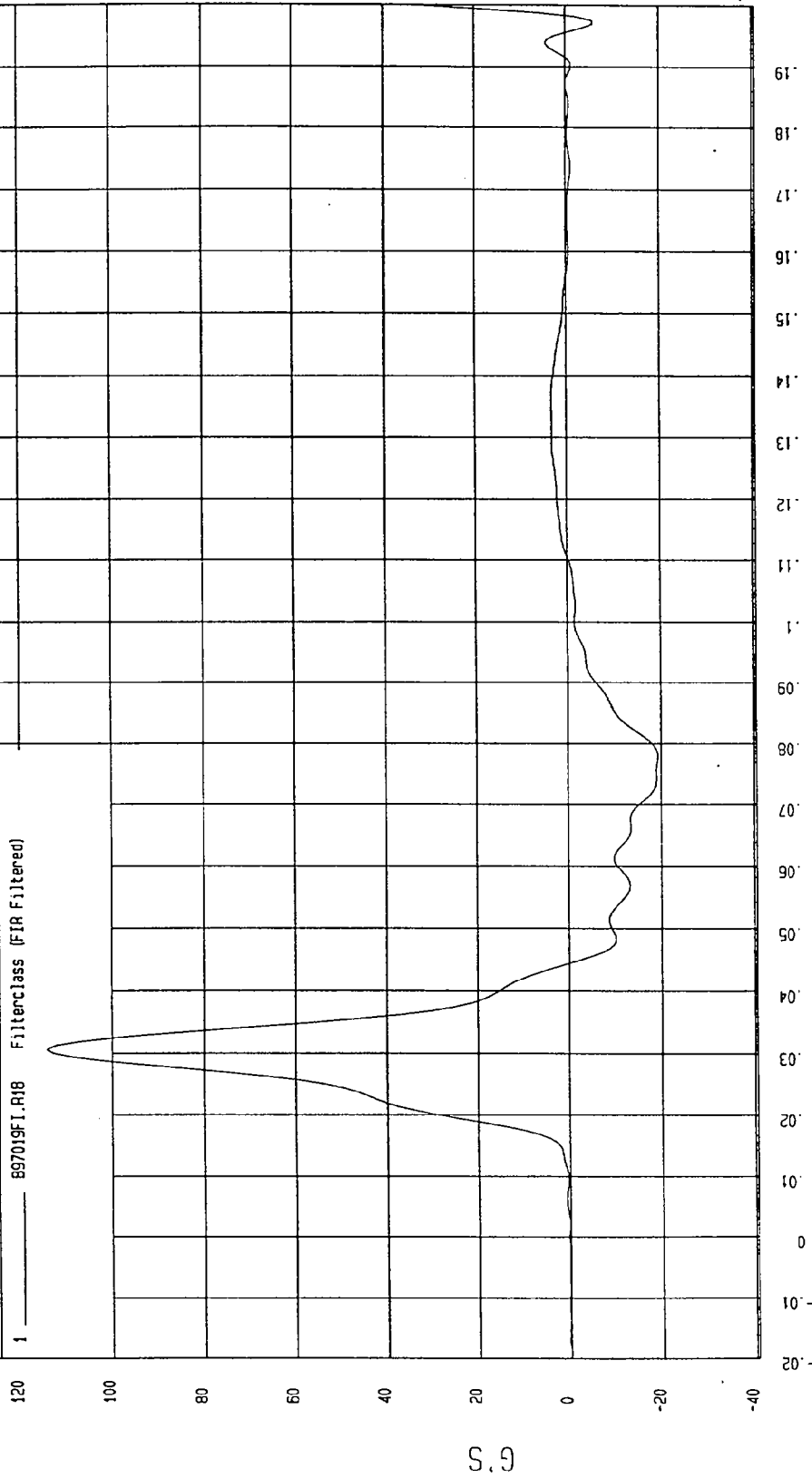
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -19.26 G'S at 78 msec

Maximum = 114.52 G'S at 31 msec

DRIVER PELVIS Y ACCELERATION

1 897019F1.R18 Filterclass (FIR Filtered)



MOA Research
02-13-1997 13:52

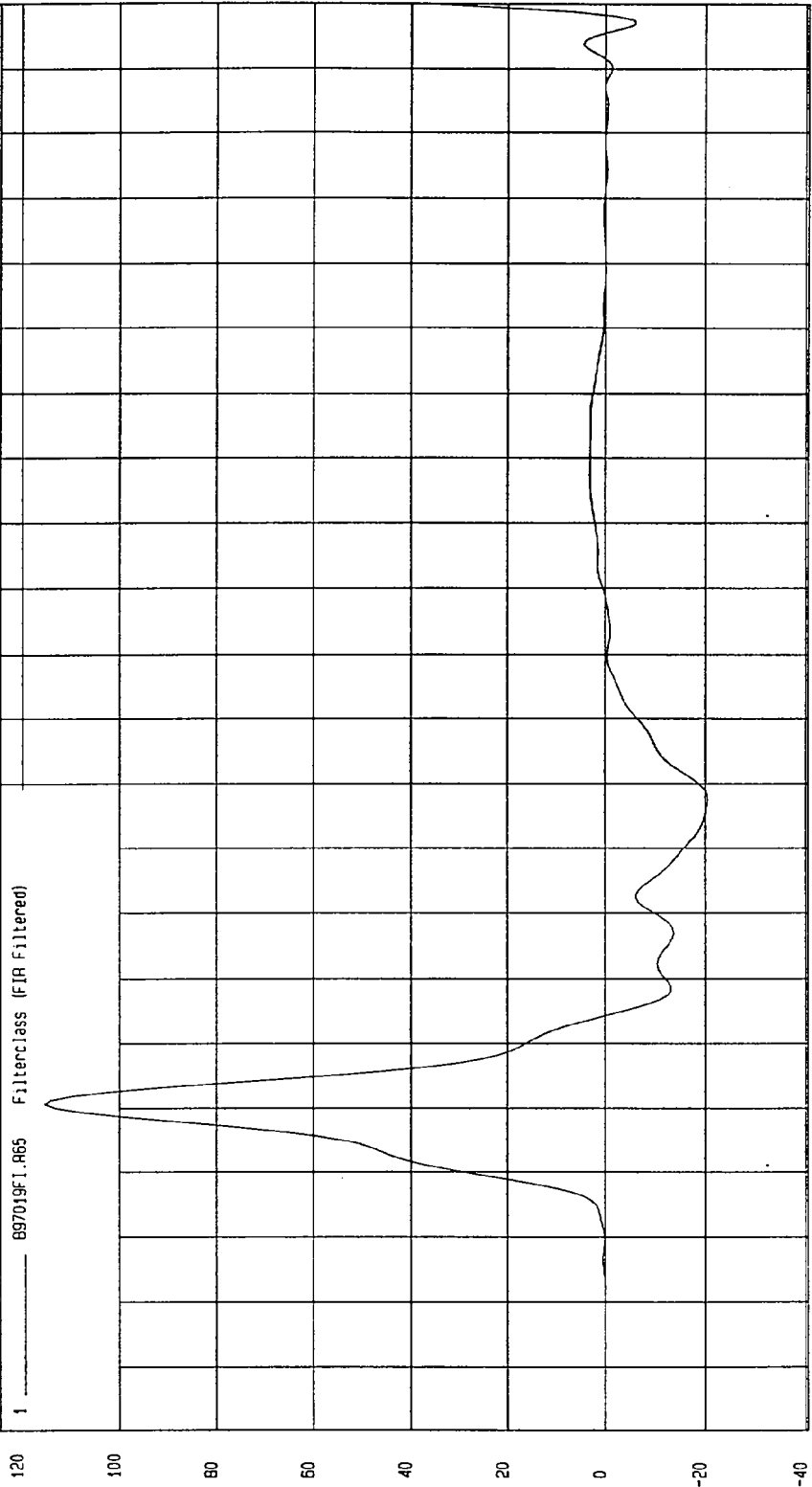
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -20.56 G'S at 78 msec Maximum = 115.49 G'S at 31 msec

DRIVER PELVIS Y REDUNDANT ACCELERATION

1 897019F1.R65 Filterclass (FIR Filtered)



MGA Research
02-13-1997 13:53

TIME (SECONDS)

G.S

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

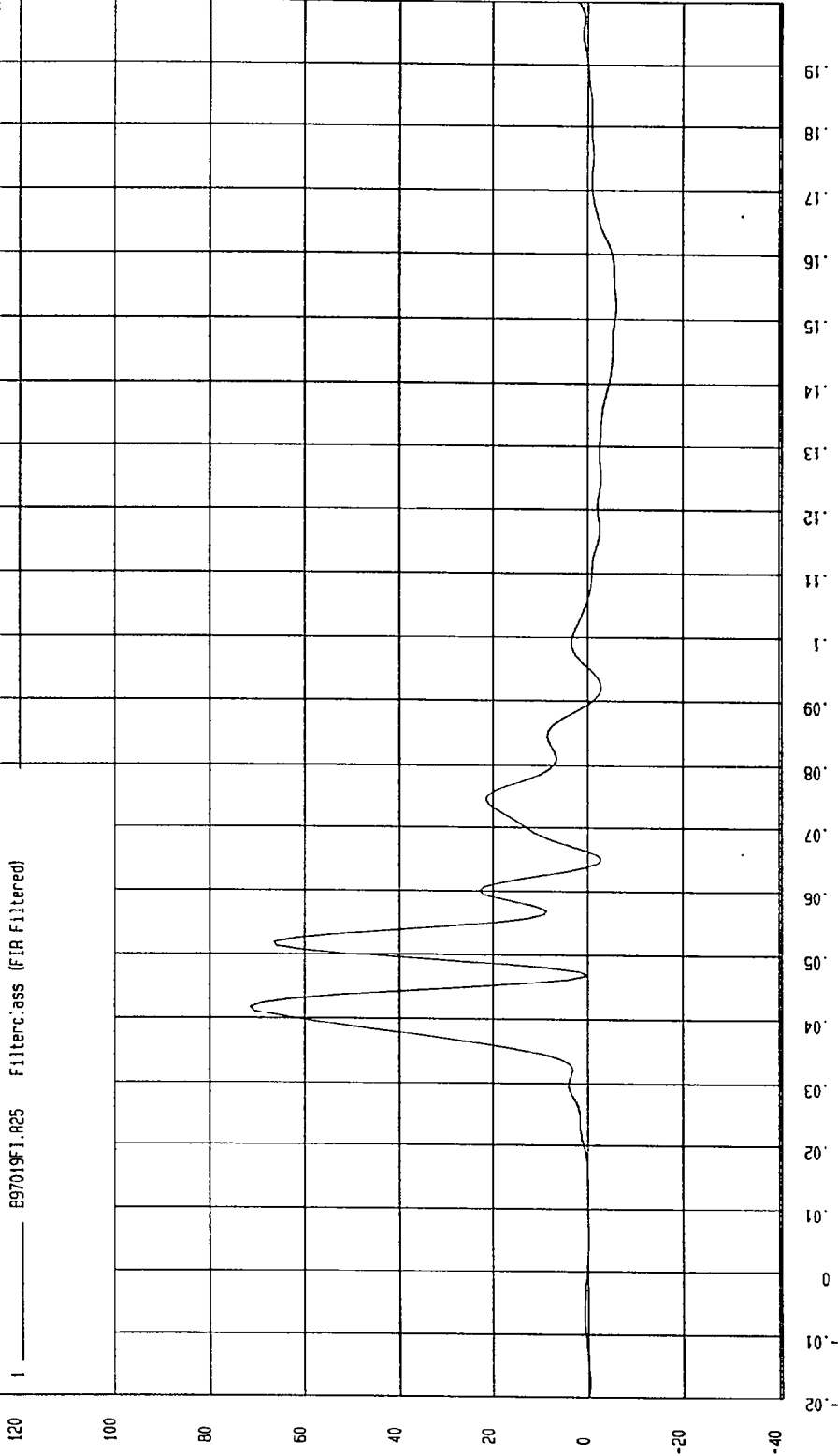
COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -6.00 G's at 152 msec

Maximum = 71.48 G's at 42 msec

FEAR PASSENGER UPPER RIB Y ACCELERATION

1 ——— 697019F1.R25 FilterClass (FIR Filtered)



WCA Research
02-13-1997 13:53

TIME (SECONDS)

G.S

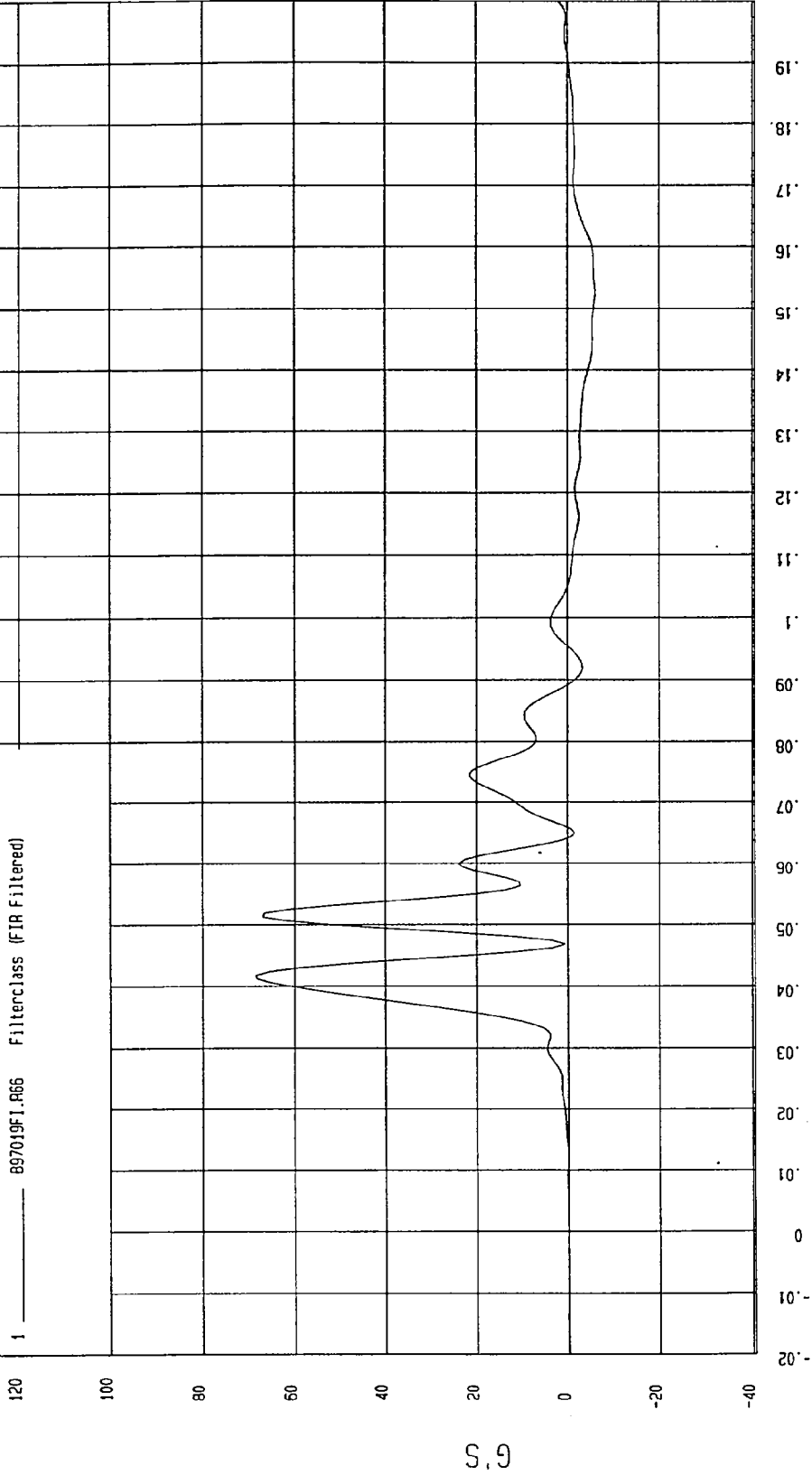
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -6.00 G'S at 152 msec Maximum = 68.43 G'S at 42 msec

REAR PASSENGER UPPER RIB Y REDUNDANT ACCELERATION

1 897019F1.R66 Filterclass (FIR Filtered)



NSA Research
02-15-1997 13:53

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

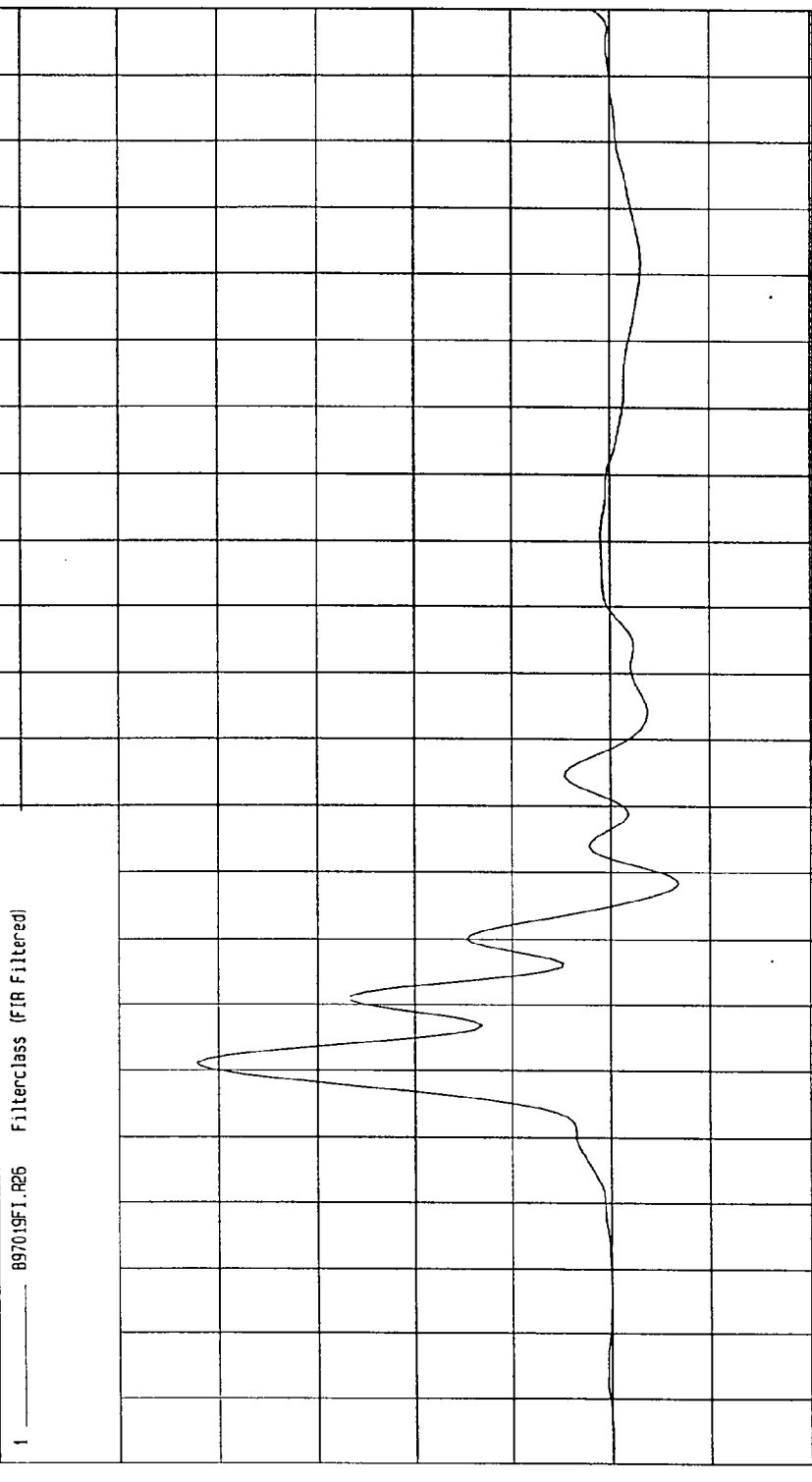
Minimum = -13.48 G'S at 68 msec

Maximum = 84.52 G'S at 41 msec

REAR PASSENGER LOWER RIB Y ACCELERATION

1 897019FI.R26 Filterclass (FIR Filtered)

G



MCA Research
02-13-1997 13:53

TIME (SECONDS)

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -15.85 G'S at 69 msec

Maximum = 83.12 G'S at 41 msec

REAR PASSENGER LOWER RIB Y REDUNDANT ACCELERATION

1 897019F1.R67 Filterclass (IR Filtered)

120
100
80
60
40
20
0
-20
-40

G.S

TIME (SECONDS)
0.19
0.18
0.17
0.16
0.15
0.14
0.13
0.12
0.11
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
-0.01
-0.02

MVA Research
02-13-1997 13:53

TEST DATE: 01-30-1997

TEST: NCAP LATERAL IMPACT TEST

Speed: 38.06 MPH 61.3 KPH

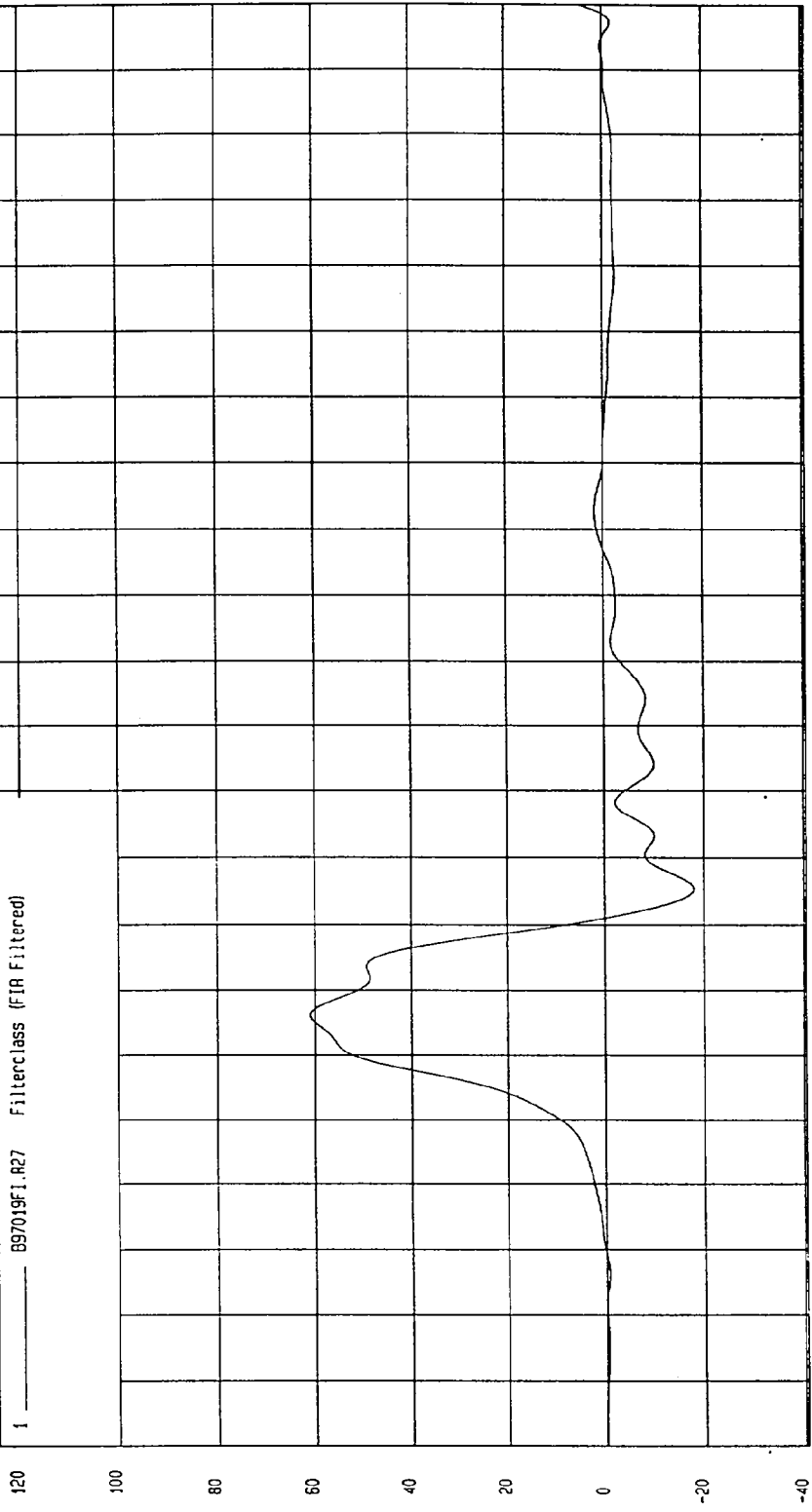
COMPONENT: 1997 MAZDA 626 (MV5400)

Maximum = 61.02 G'S at 46 msec

Minimum = -17.92 G'S at 56 msec

REAR PASSENGER LOWER SPINE Y ACCELERATION

1 ——— B97019F1.R27 Filterclass (FIR Filtered)



MGA Research
02-13-1997 13:53

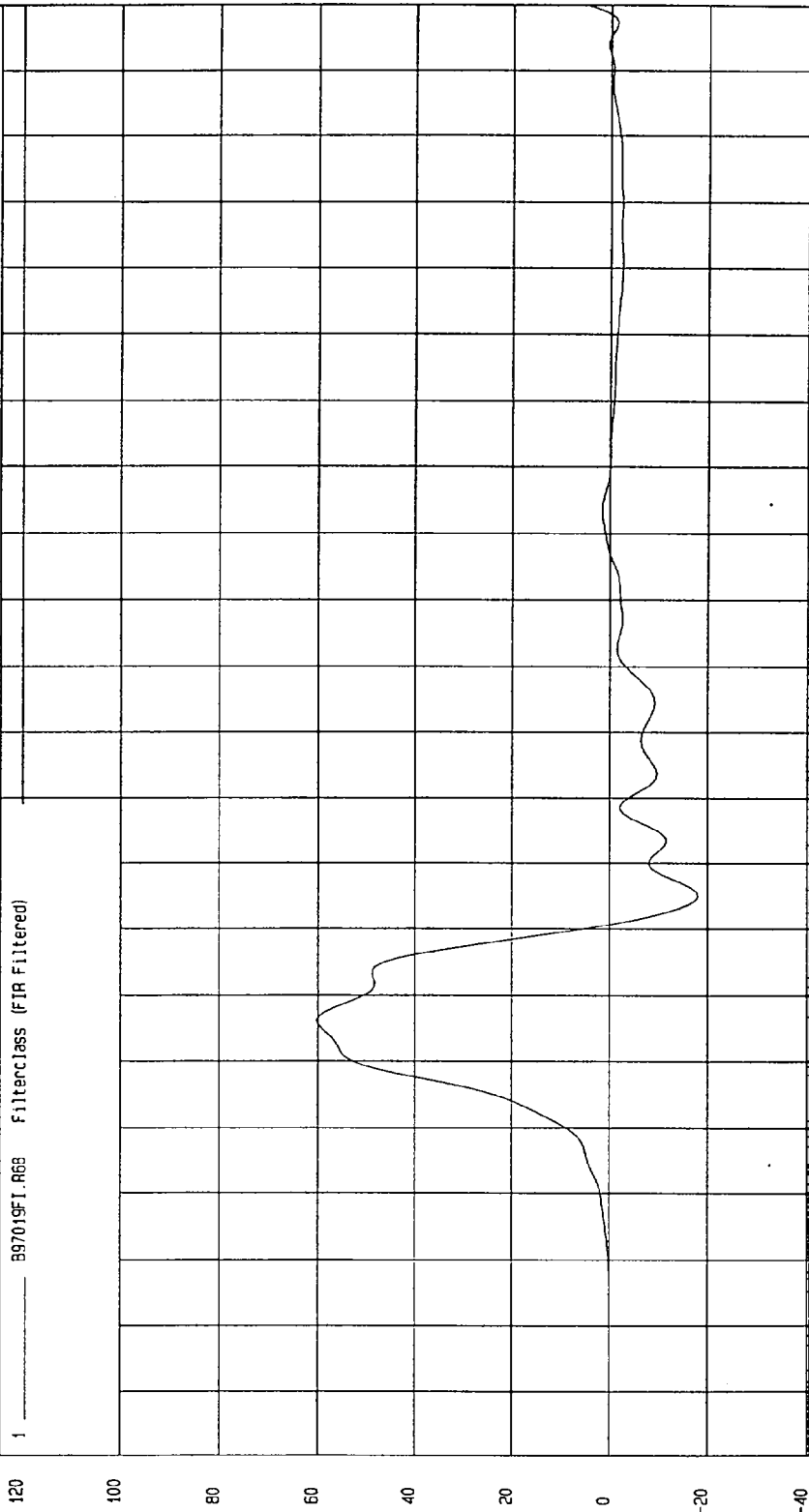
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -19.11 G'S at 65 msec
Maximum = 60.23 G'S at 46 msec

REAR PASSENGER LOWER SPINE Y REDUNDANT ACCELERATION

1 897019F1.R68 Filterclass (FIR Filtered)



MCA Research
02-15-1997 13:53

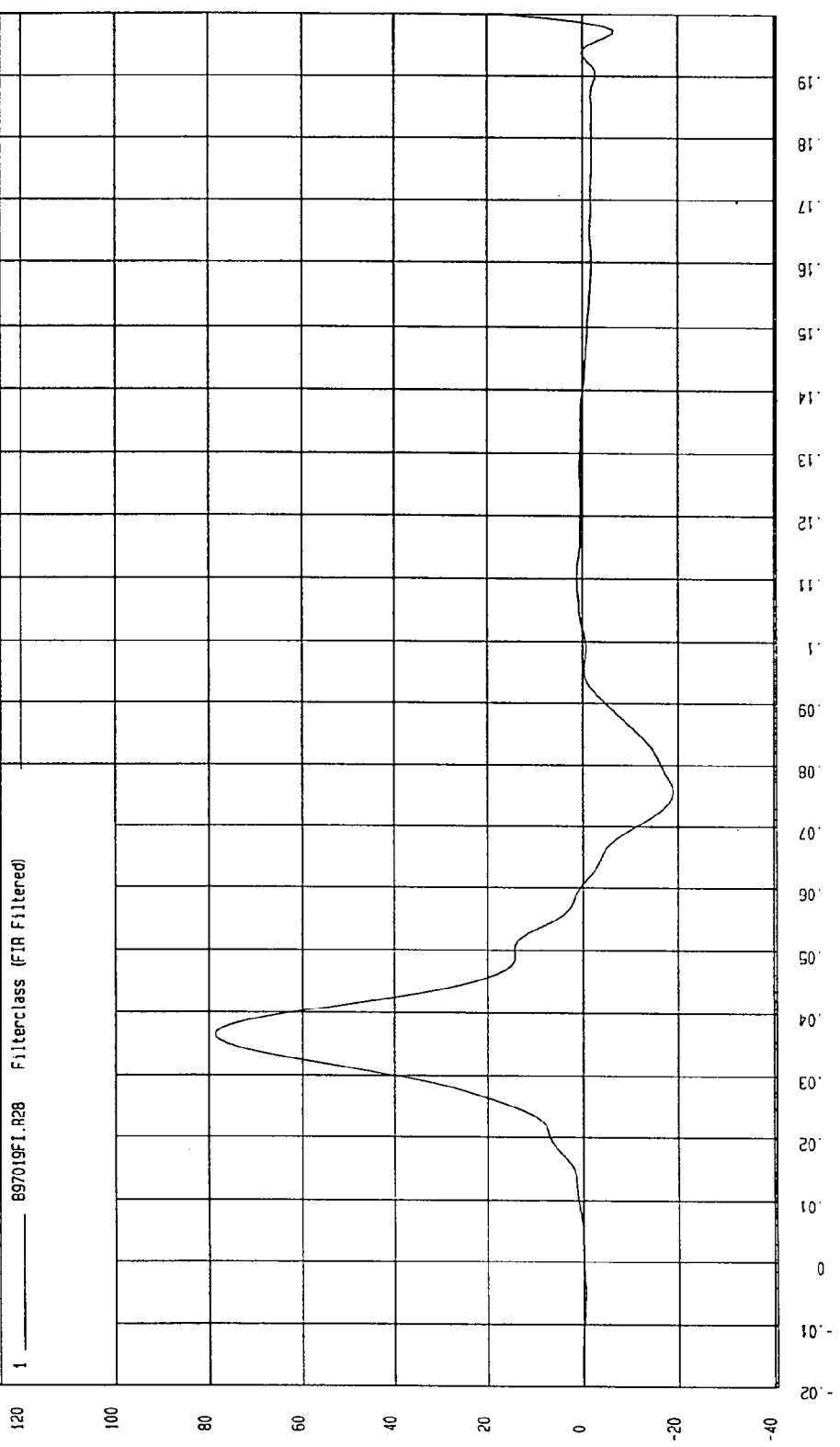
TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -18.98 G'S at 76 msec
Maximum = 78.67 G'S at 36 msec

REAR PASSENGER PELVIS Y ACCELERATION

1 897019F1.R28 Filterclass (FIR Filtered)



MCA Research
02-13-1997 13:53

TEST: NCAP LATERAL IMPACT TEST TEST DATE: 01-30-1997

COMPONENT: 1997 MAZDA 626 (MV5400) Speed: 38.06 MPH 61.3 KPH

Minimum = -18.67 G'S at 76 msec
Maximum = 78.66 G'S at 36 msec

REAR PASSENGER PELVIS Y REDUNDANT ACCELERATION

1 ——— 897019F1.R69 Filterclass (FIR Filtered)

120

100

80

60

40

20

0

-20

-40

G.S

.19

.18

.17

.16

.15

.14

.13

.12

.11

.1

.09

.08

.07

.06

.05

.04

.03

.02

.01

0

-.01

-.02

TIME (SECONDS)

MGA Research
02-13-1997 13:53

APPENDIX C
SID CONFIGURATION AND PERFORMANCE VERIFICATION

REPORT NO. MGA-97-DC14

DUMMY PERFORMANCE CALIBRATIONS

NEW CAR ASSESSMENT PROGRAM
SIDE IMPACT TEST

1997 MAZDA 626 4-DOOR
NHTSA NO. MV5400

MGA PROVING GROUNDS
5000 WARREN ROAD
BURLINGTON, WI 53105



Test Date: January 30, 1997

Report Date: February 25, 1997

FINAL REPORT

Prepared For:

U. S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
OFFICE OF CRASHWORTHINESS STANDARDS
ROOM 5313, NPS-10
400 SEVENTH STREET, S.W.
Washington, D.C. 20590

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DUMMY S/N: 274	POST-TEST CERTIFICATION DATA	4-1
DUMMY S/N: 275	POST-TEST INSPECTION CHECKLIST	5-1
DUMMY S/N: 274	POST-TEST INSPECTION CHECKLIST	6-1
	VEHICLE AND DUMMY TEMPERATURE	7-1

PRE-TEST CERTIFICATION DATA

Front Dummy Serial Number: 275

Calibration Test Results Summary

Dummy Serial Number: 275

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.: 275

DATE OF VERIFICATION: January 29, 1997

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH - Seated Height	35.0" - 35.8"	35.3
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"	9.1
KV - Knee Pivot From Back Line	20.1" - 20.7"	20.5
SW - Knee Pivot to Floor	19.3" - 19.9"	19.4
HW - Hip Width	14.0" - 15.4"	14.5

MEASUREMENTS BY: Jim Wilson

APPROVED BY: Dave Koskache

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: January 29, 1997

DUMMY NUMBER: 275

TEST NUMBER: D97262

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	16%
PROBE SPEED	13.8 - 14.2 fps	14.1
UPPER RIB	37 - 46 g's	39
LOWER RIB	37 - 46 g's	38
LOWER SPINE	15 - 22 g's	19

TEST MEETS SPECIFICATIONS

TECHNICIAN Jim Wilby

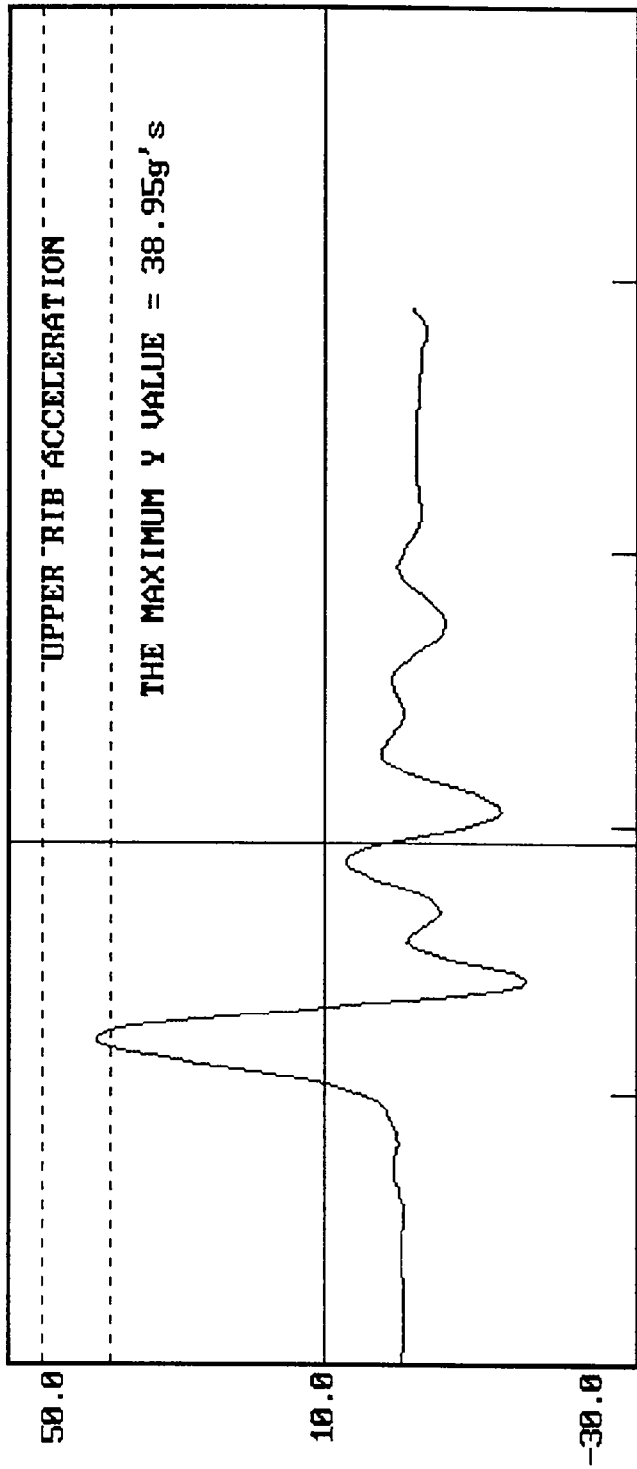
APPROVED BY Dave Kuwabara

DUMMY CALIBRATION - THORAX IMPACT

DUMMY # 275

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

01-29-1997 13:11

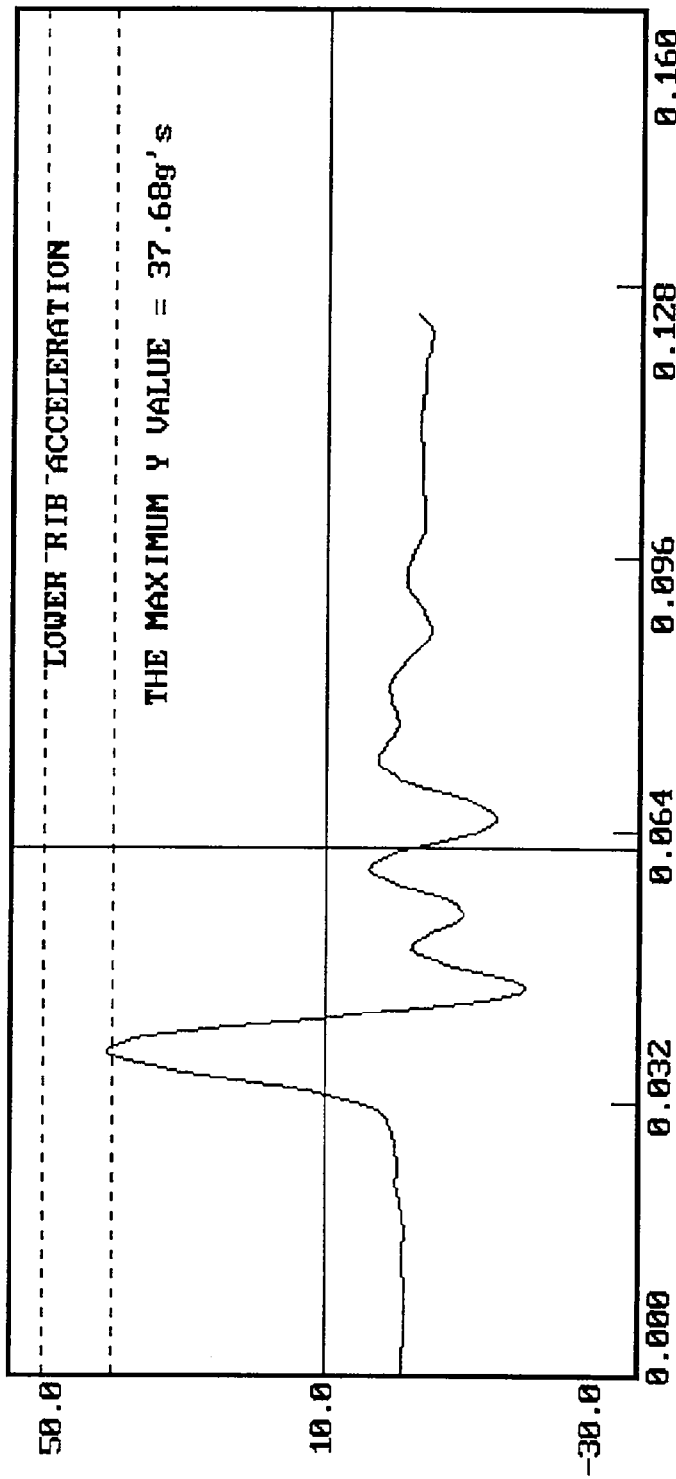


X = 0.618750E-01 Y = 0.170579E+01
IMPACT SPEED = 14.11 FT/SEC

DUMMY CALIBRATION - THORAX IMPACT
DUMMY # 275

01-29-1997 13:11

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



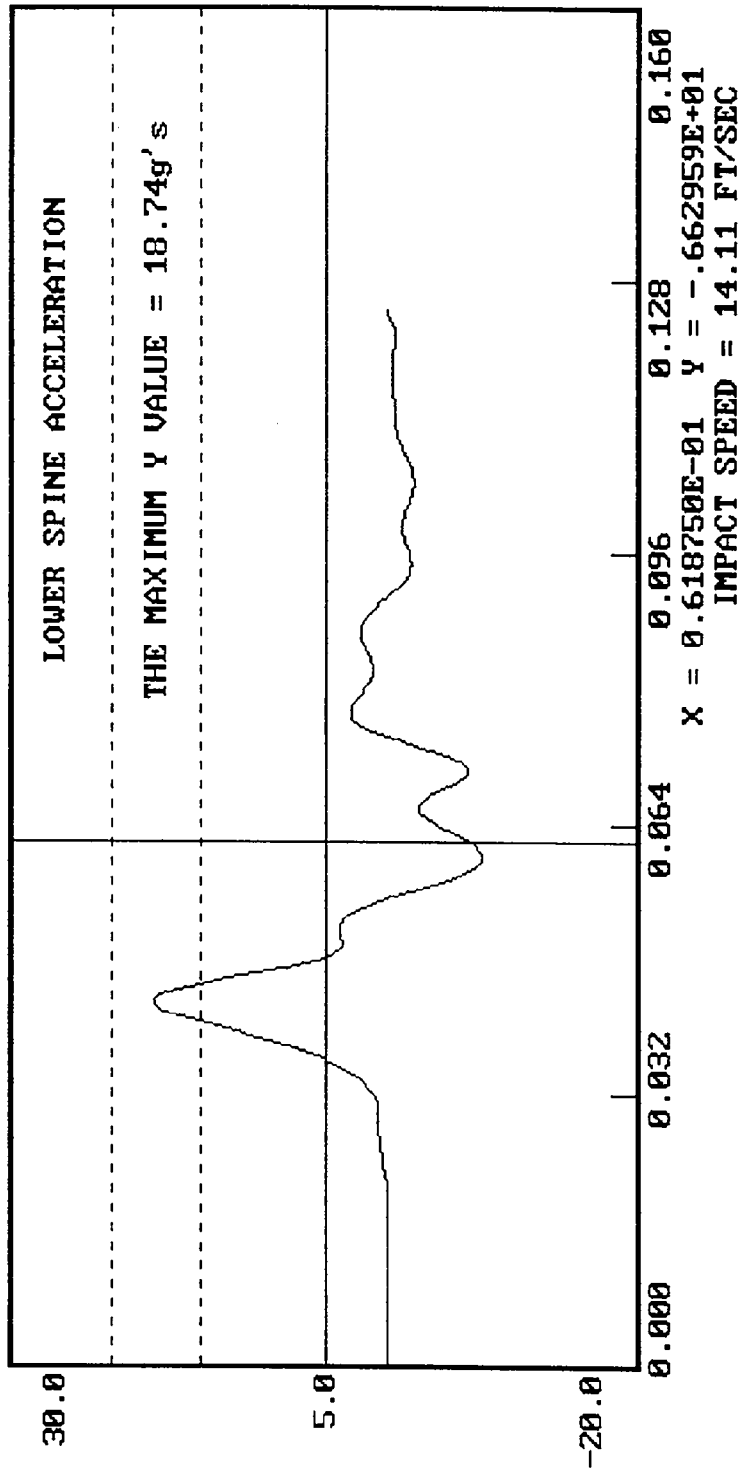
X = 0.618750E-01 Y = -.133390E+01
IMPACT SPEED = 14.11 FT/SEC

01-29-1997 13:12

DUMMY CALIBRATION - THORAX IMPACT

DUMMY # 275

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



MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: December 29, 1996

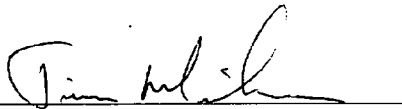
DUMMY NUMBER: 275

TEST NUMBER: D97263

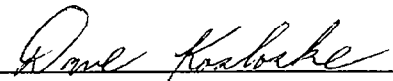
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	16%
PROBE SPEED	13.8 - 14.2 f/s	14.0
PELVIS ACCELERATION	40 - 60 g's	46

TEST MEETS SPECIFICATIONS

TECHNICIAN



APPROVED BY

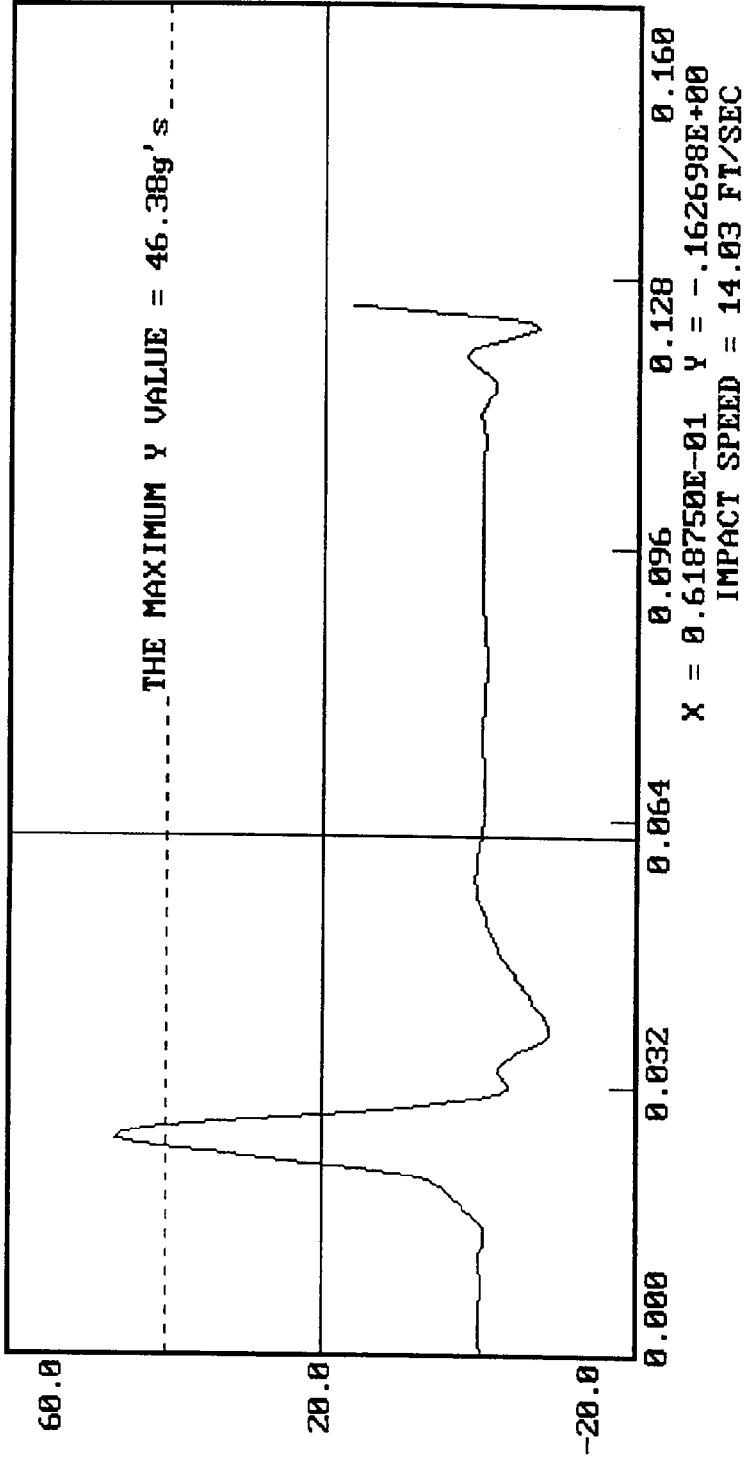


01-29-1997 13:18

DUMMY CALIBRATION - PELVIS IMPACT

DUMMY # 275

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



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

DATE: January 27, 1997

DUMMY NUMBER: 275

TEST NUMBER: D97264

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
FORCE @ 0.5 in	23.3 - 36.5 lbs	31.6
FORCE @ 0.75 in	36.7 - 49.8 lbs	44.4
FORCE @ 1.0 in	50 - 63 lbs	60
FORCE @ 1.3 in	73 - 88 lbs	82

TEST MEETS SPECIFICATIONS

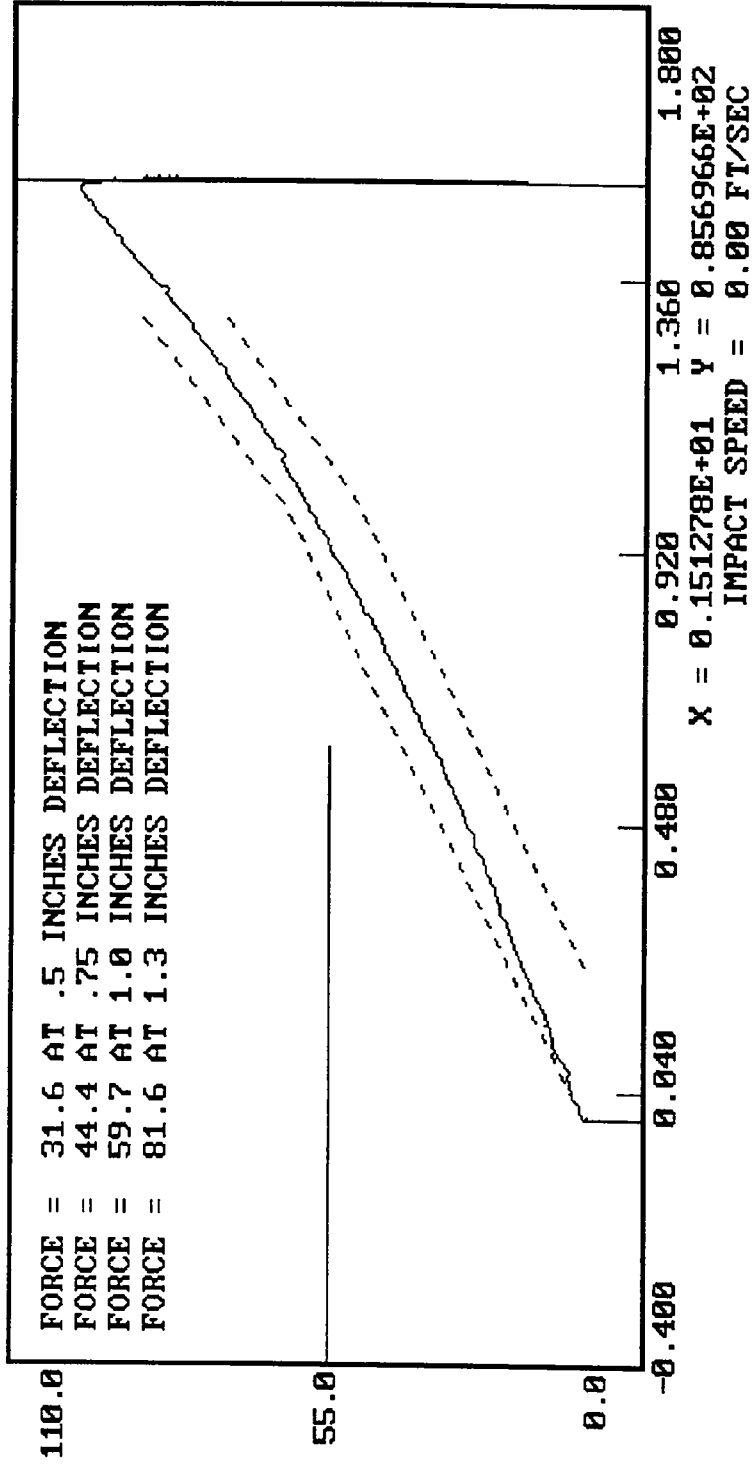
TECHNICIAN Tim Mahan

APPROVED BY Paul Kobabe

DUMMY CALIBRATION - ABDOMEN COMPRESSION
DUMMY # 275

01-27-1997 15:10

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



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: January 27, 1997

DUMMY NUMBER: 275

TEST NUMBER: D97265

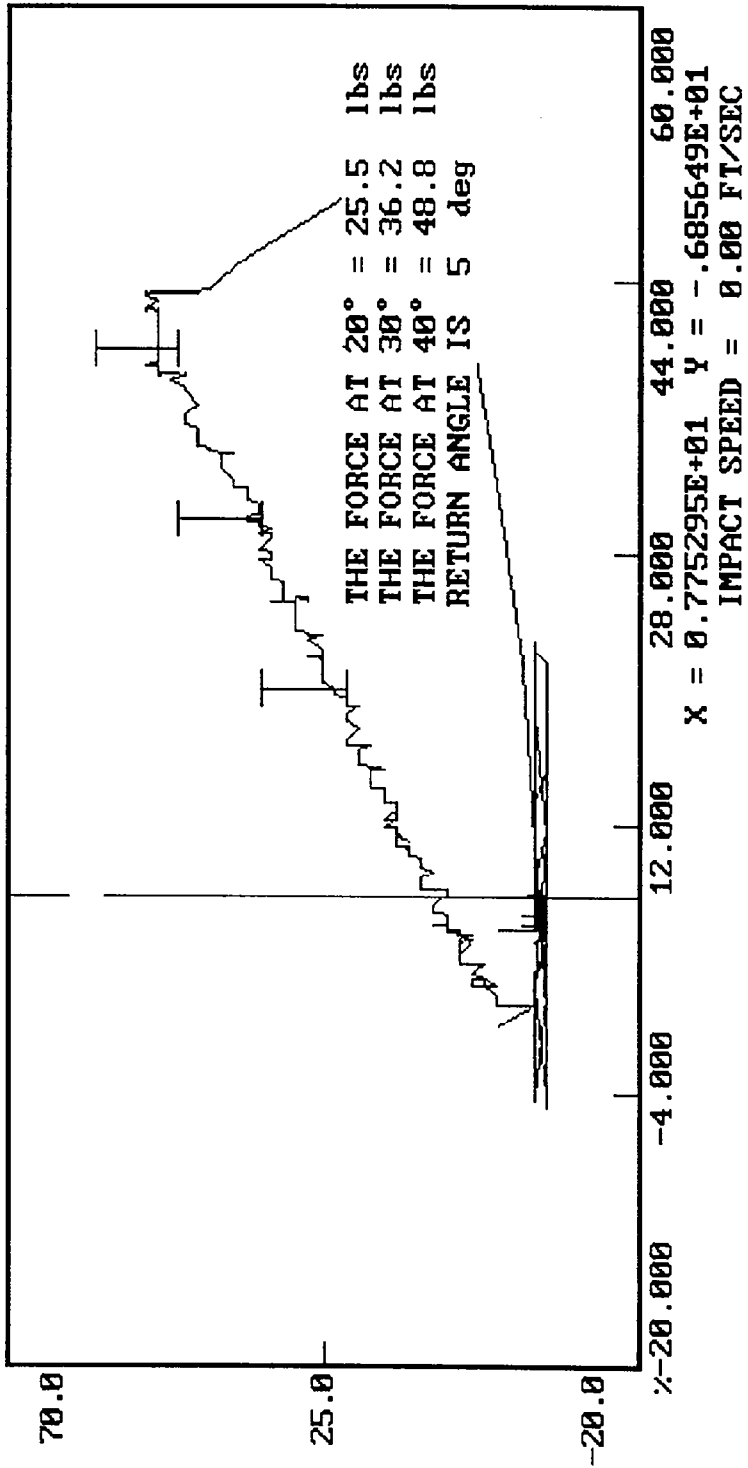
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	13%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	26
FORCE @ 30°	34 - 46 lbs	36
FORCE @ 40°	46 - 58 lbs	49
RETURN ANGLE	12° maximum	5°

TEST MEETS SPECIFICATIONS

TECHNICIAN Jim Mila

APPROVED BY Dave Kabake

DUMMY CALIBRATION - LUMBAR FLEXION
 DUMMY # 275
 FORCE (LBS) VS. TORSO ROTATION (DEGREES) 01-27-1997 23:21



PRE-TEST CERTIFICATION DATA

Rear Dummy Serial Number: 274

Calibration Test Results Summary

Dummy Serial Number: 274

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.: 274

DATE OF VERIFICATION: January 29, 1997

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH - Seated Height	35.0" - 35.8"	35.4
RH - Rib Height	19.75" - 20.50"	20.25
HP - Hip Pivot Height	3.9" ref.	3.9
RD - Rib From Back Line	9.0" to 9.5"	9.1
KV - Knee Pivot From Back Line	20.1" - 20.7"	20.5
SW - Knee Pivot to Floor	19.3" - 19.9"	19.6
HW - Hip Width	14.0" - 15.4"	14.6

MEASUREMENTS BY: Jim Melich

APPROVED BY: Rave Katsube

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: January 29.1 997

DUMMY NUMBER: 274

TEST NUMBER: D97252

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	15%
PROBE SPEED	13.8 - 14.2 fps	14.2
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 Jim Melillo

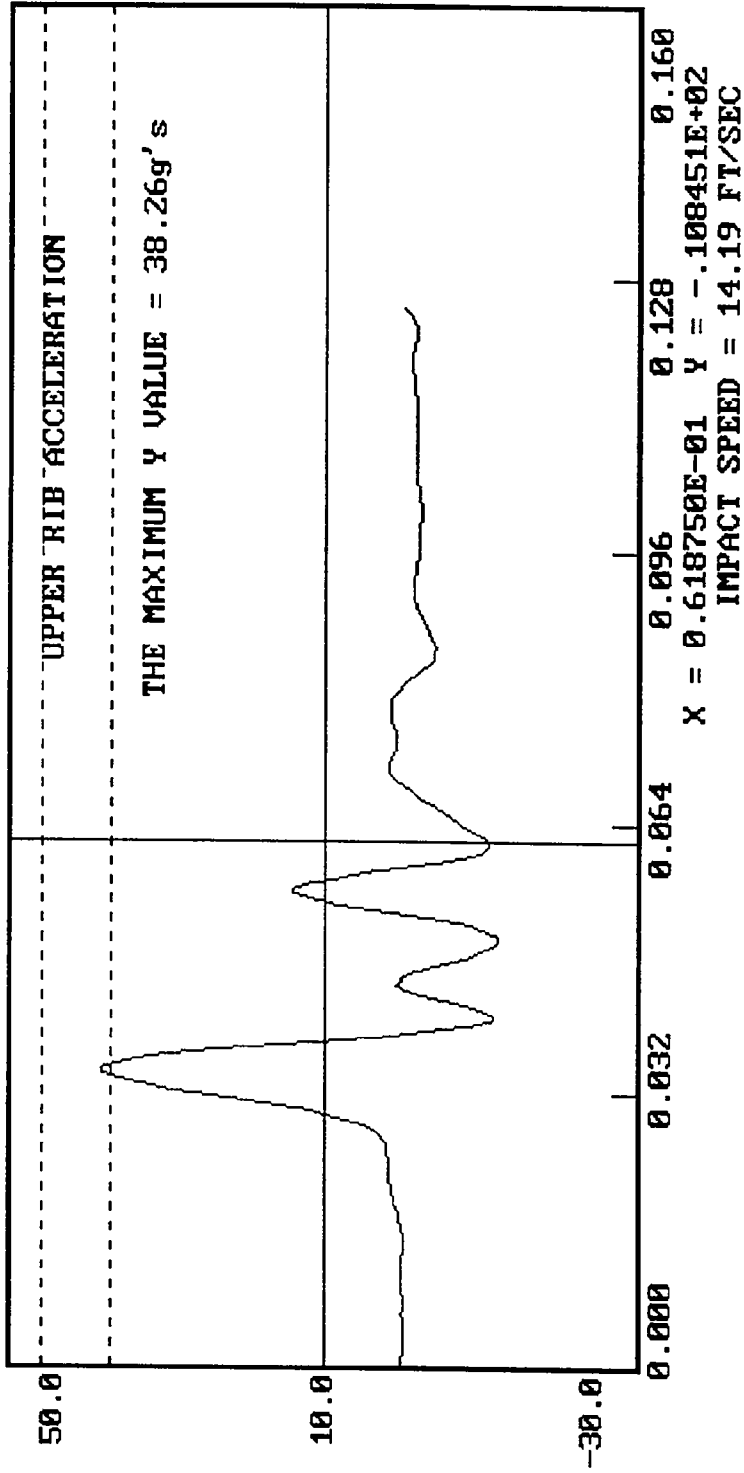
APPROVED BY Rare Kobabe

DUMMY CALIBRATION - THORAX IMPACT

DUMMY # 274

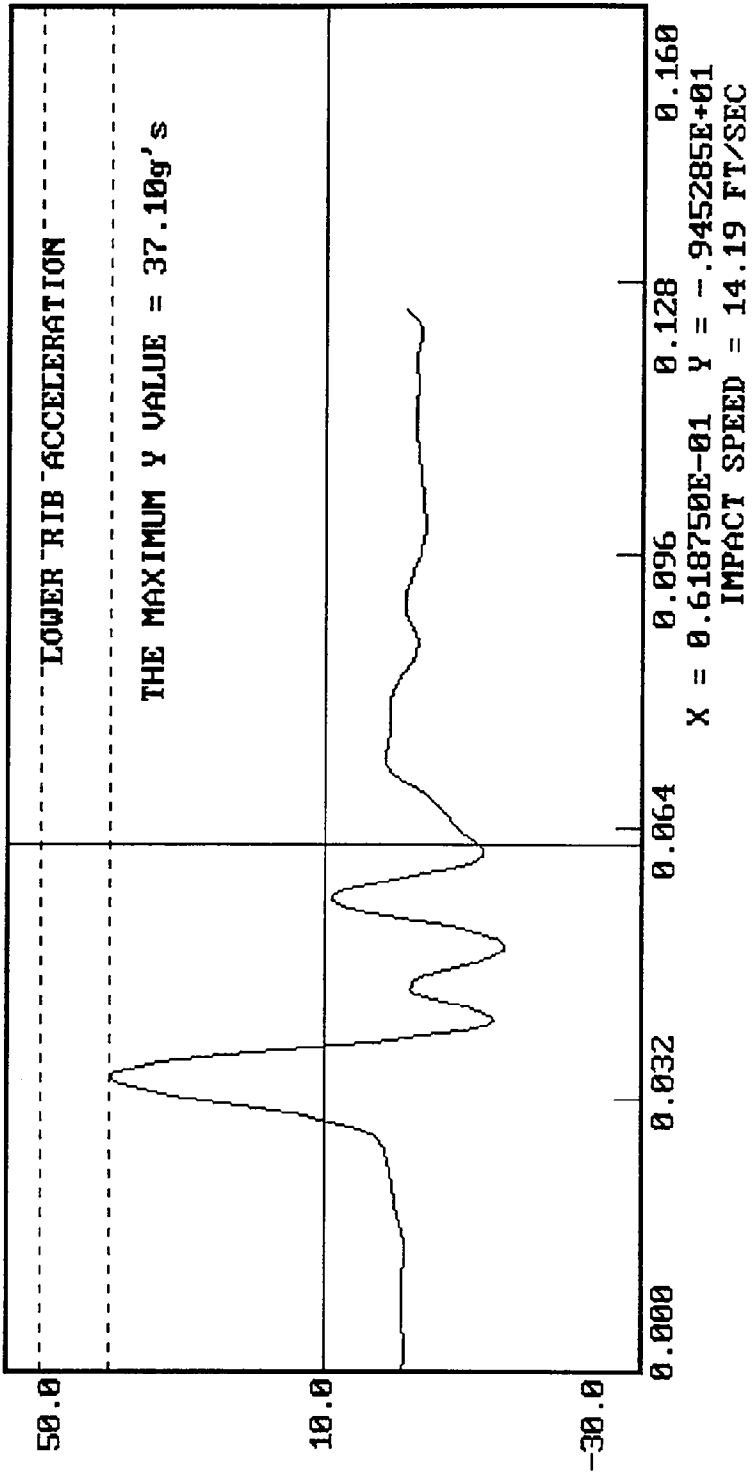
ACCELERATION (G'S) VS. TIME ((SECONDS))

01-29-1997 11:29



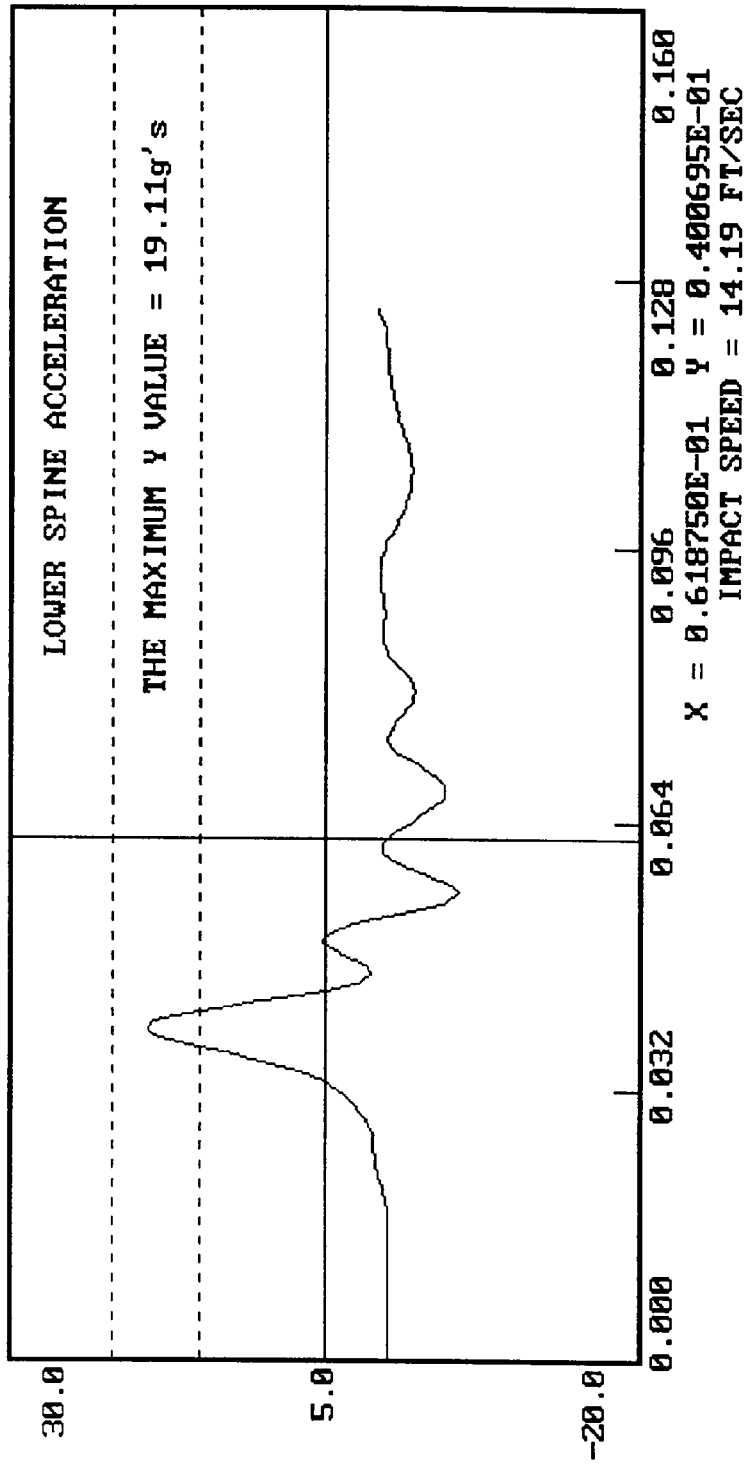
DUMMY CALIBRATION - THORAX IMPACT
DUMMY # 274
ACCELERATION (G'S) VS. TIME ((SECONDS))

01-29-1997 11:41



DUMMY CALIBRATION - THORAX IMPACT
DUMMY # 274
ACCELERATION (G'S) VS. TIME ((SECONDS))

01-29-1997 11:43



MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: January 29, 1997

DUMMY NUMBER: 274

TEST NUMBER: D97253

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	43

TEST MEETS SPECIFICATIONS

TECHNICIAN Jim Mel...

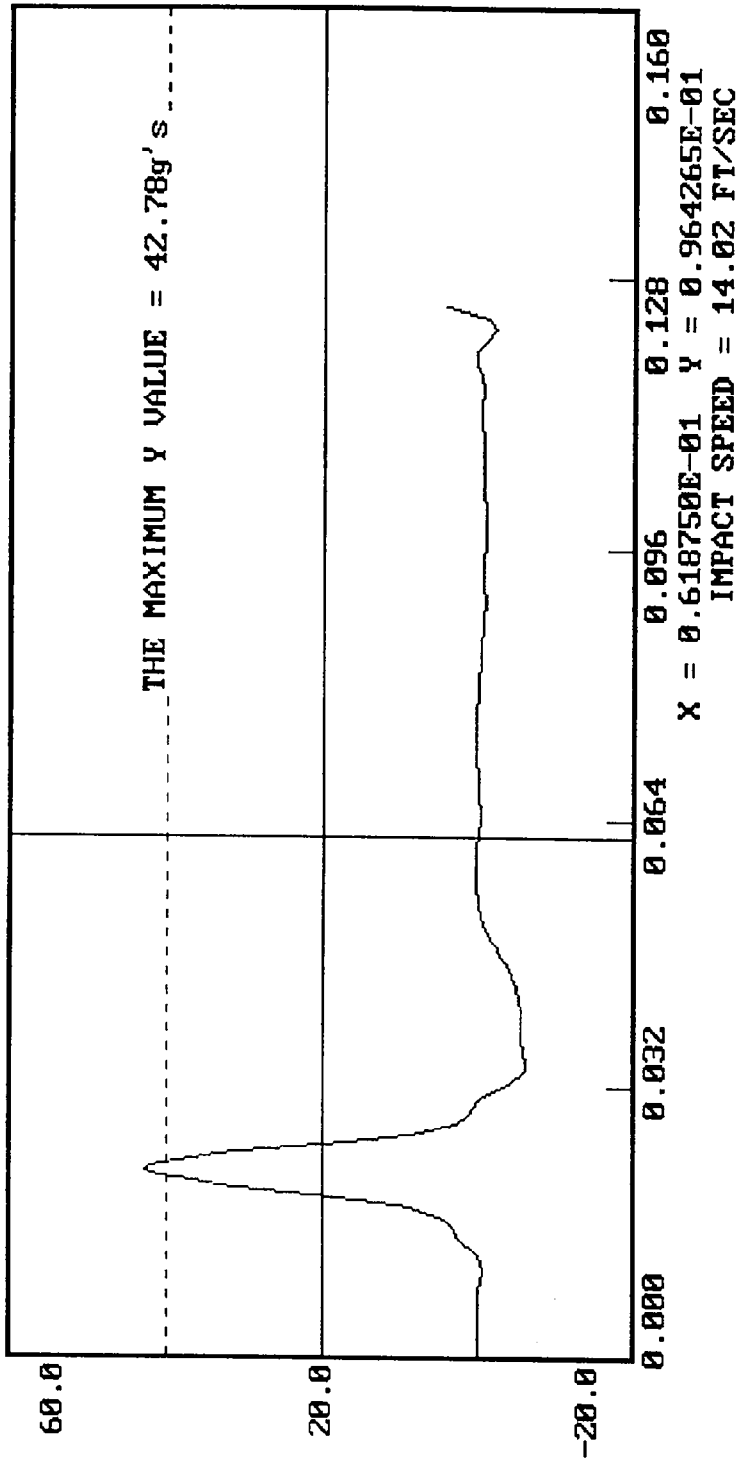
APPROVED BY Ross Kobabe

01-29-1997 12:12

DUMMY CALIBRATION - PELVIS IMPACT

DUMMY # 274

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



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

DATE: January 27, 1997

DUMMY NUMBER: 274

TEST NUMBER: D97254

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
FORCE @ 0.5 in	23.3 - 36.5 lbs	31.0
FORCE @ 0.75 in	36.7 - 49.8 lbs	43.4
FORCE @ 1.0 in	50 - 63 lbs	56
FORCE @ 1.3 in	73 - 88 lbs	78

TEST MEETS SPECIFICATIONS

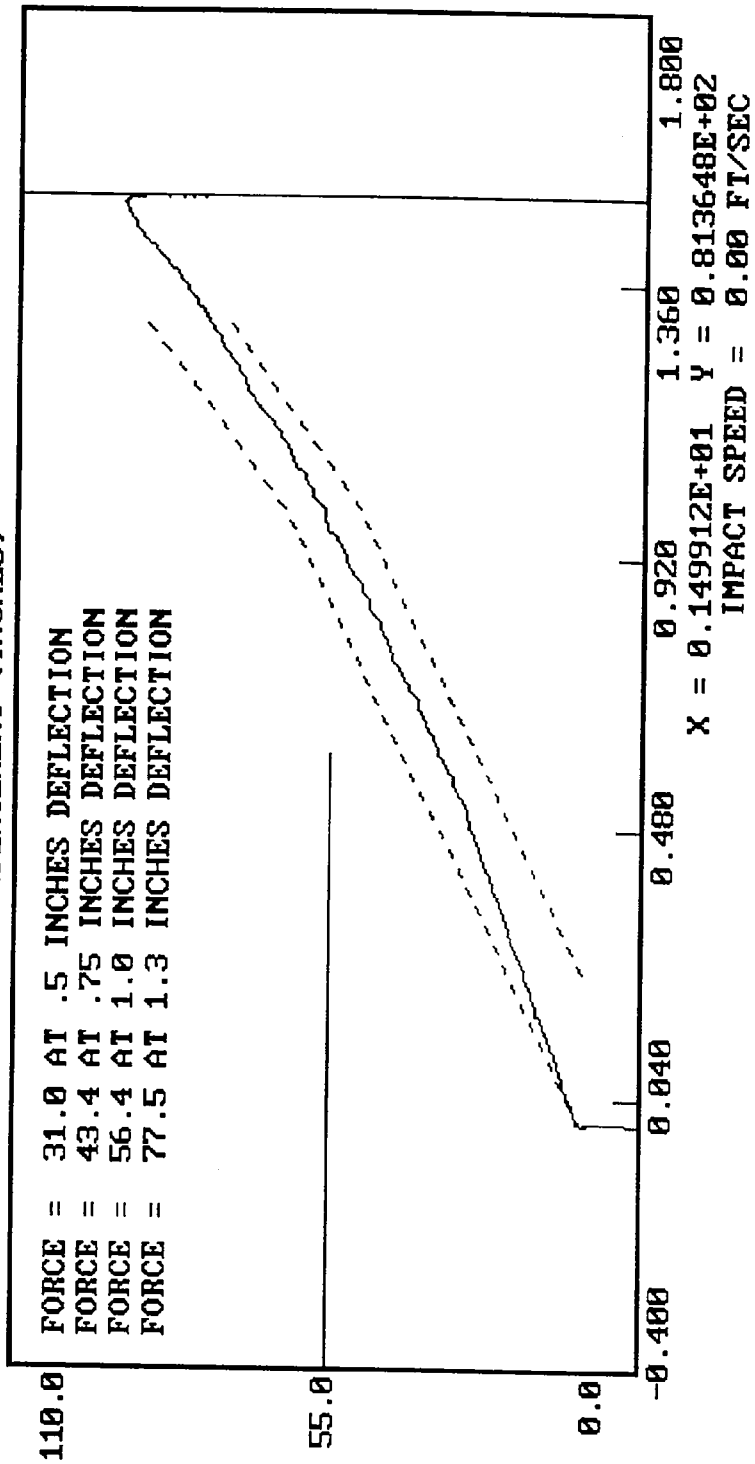
TECHNICIAN Jim Milich

APPROVED BY Dave Koabsche

DUMMY CALIBRATION - ABDOMEN COMPRESSION
DUMMY # 274

01-27-1997 15:06

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



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: January 27, 1997

DUMMY NUMBER: 274

TEST NUMBER: D97255

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	13%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	26
FORCE @ 30°	34 - 46 lbs	40
FORCE @ 40°	46 - 58 lbs	51
RETURN ANGLE	12° maximum	2°

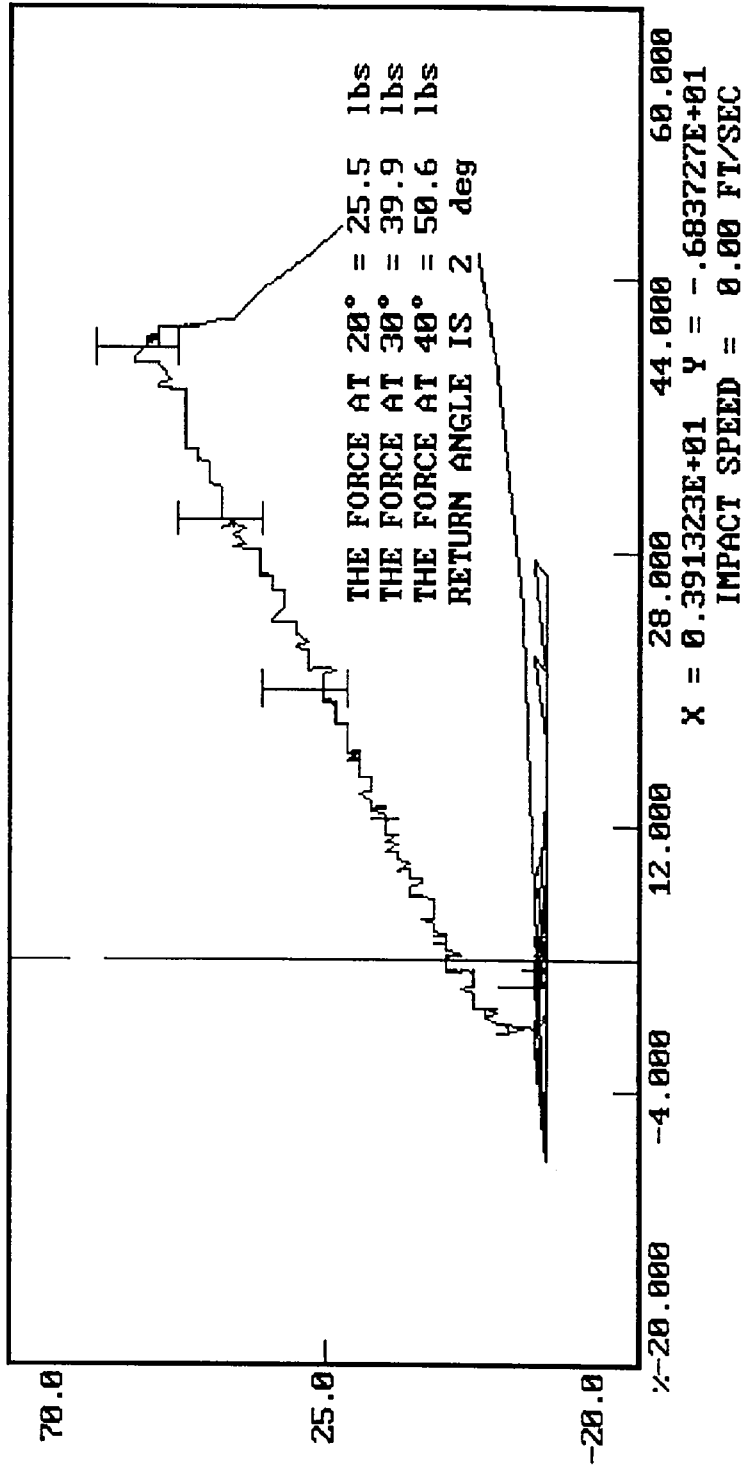
TEST MEETS SPECIFICATIONS

TECHNICIAN Tim White

APPROVED BY Rene Koalske

01-27-1997 23:02

DUMMY CALIBRATION - LUMBAR FLEXION
DUMMY # 274
FORCE (LBS) VS. TORSO ROTATION (DEGREES)



POST-TEST CERTIFICATION DATA

Front Dummy Serial Number: 275

Calibration Test Results Summary

Dummy Serial Number: 275

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.: 275

DATE OF VERIFICATION: February 3, 1997

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH - Seated Height	35.0" - 35.8"	35.3
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"	9.1
KV - Knee Pivot From Back Line	20.1" - 20.7"	20.5
SW - Knee Pivot to Floor	19.3" - 19.9"	19.4
HW - Hip Width	14.0" - 15.4"	14.5

MEASUREMENTS BY: Jim McL...

APPROVED BY: Dave Koelbake

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: February 3, 1997

DUMMY NUMBER: 275

TEST NUMBER: D97342

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	19%
PROBE SPEED	13.8 - 14.2 fps	14.2
UPPER RIB	37 - 46 g's	39
LOWER RIB	37 - 46 g's	38
LOWER SPINE	15 - 22 g's	18

TEST MEETS SPECIFICATIONS

TECHNICIAN Tim Melton

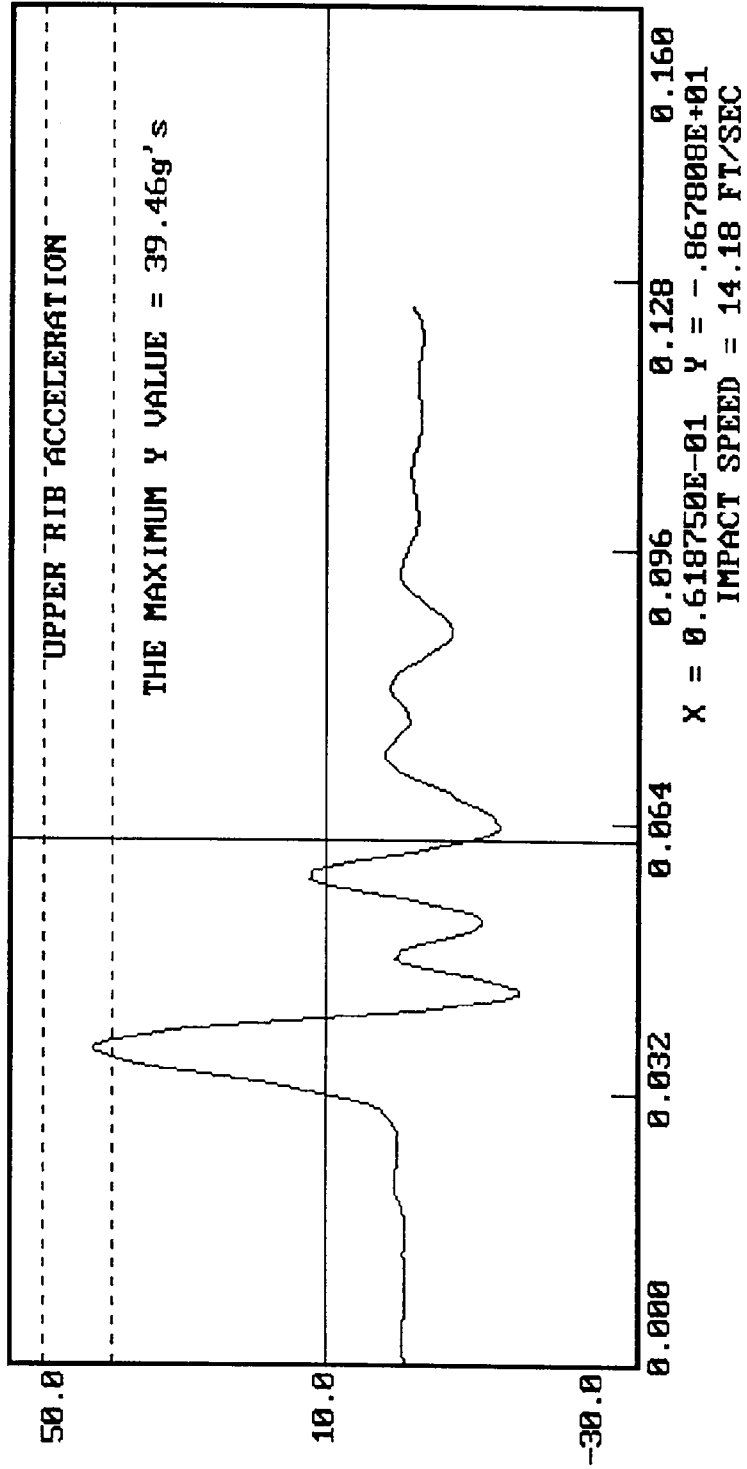
APPROVED BY Dave Kabake

DUMMY CALIBRATION - THORAX IMPACT

DUMMY # 275

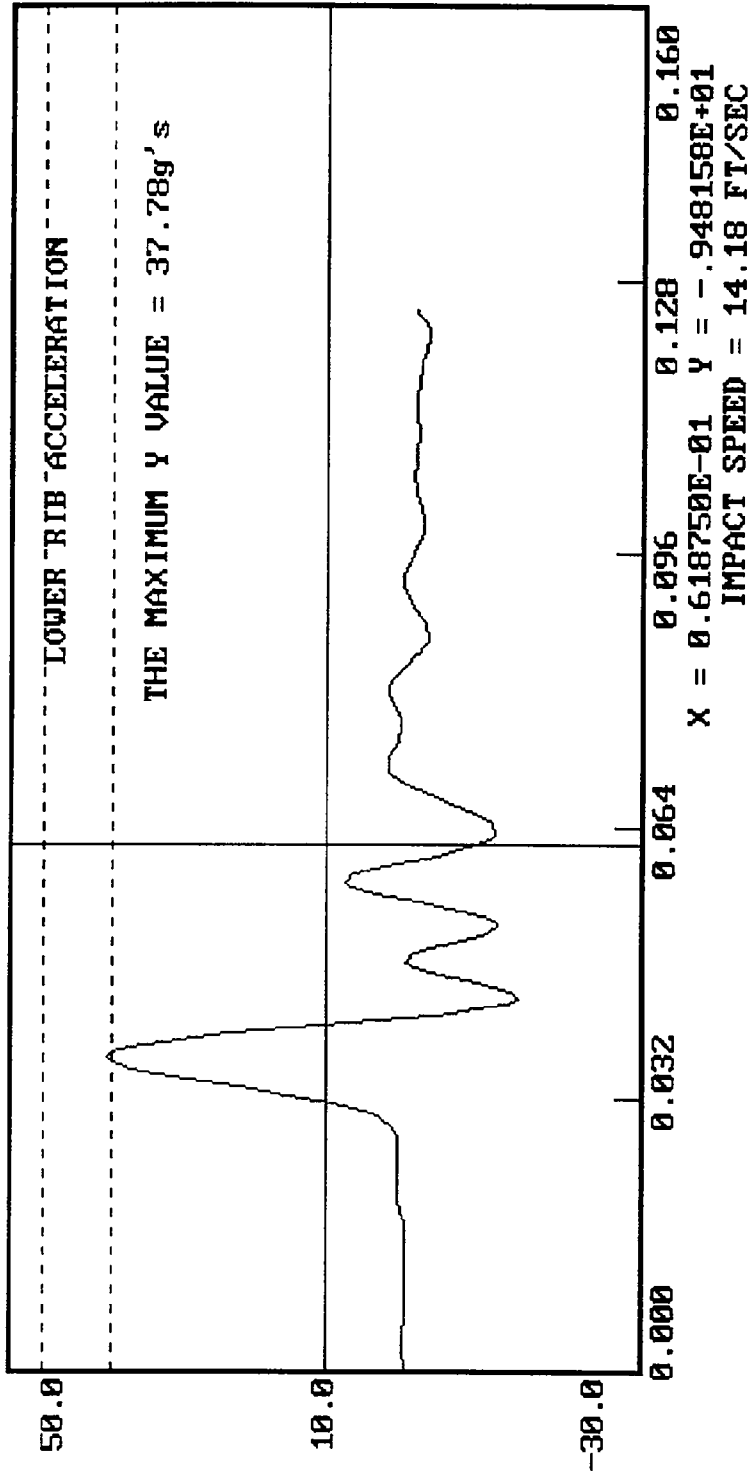
ACCELERATION (G'S) VS. TIME ((SECONDS))

02-03-1997 15:03



02-03-1997 15:03

DUMMY CALIBRATION - THORAX IMPACT
DUMMY # 275
ACCELERATION (G'S) VS. TIME ((SECONDS))

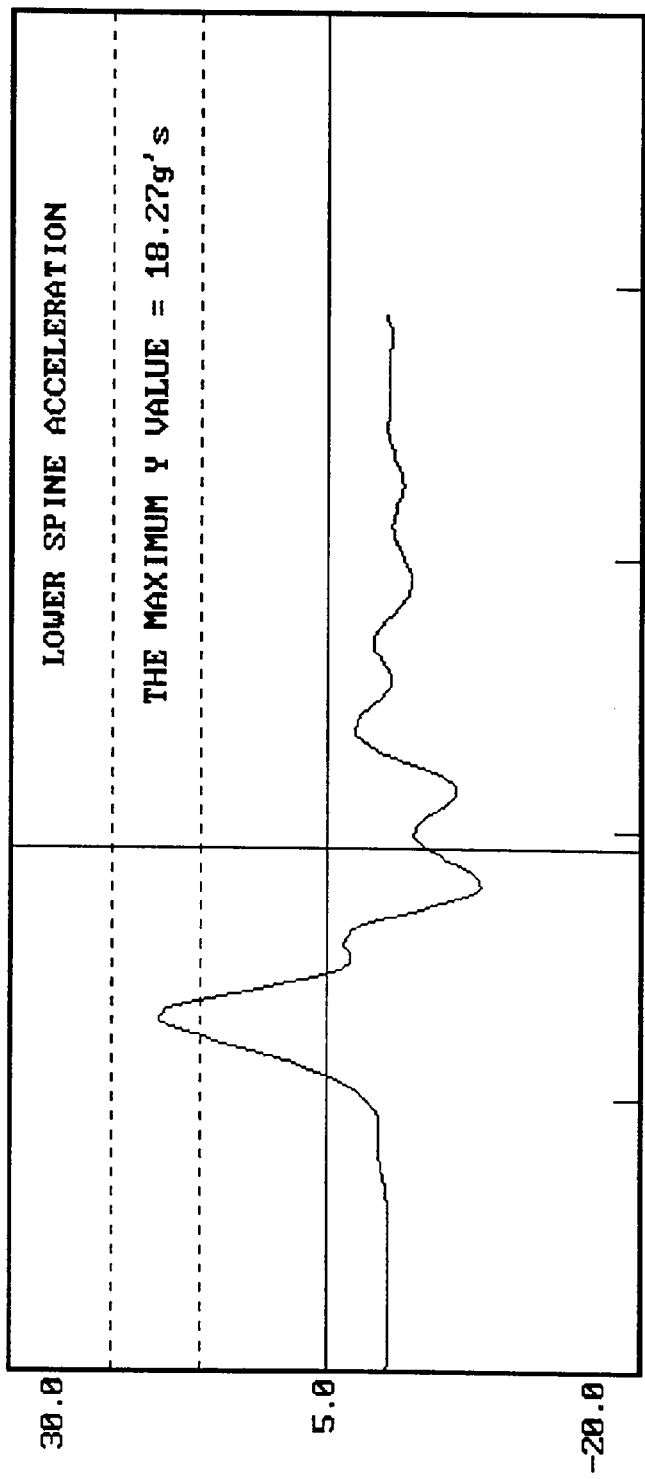


DUMMY CALIBRATION - THORAX IMPACT

DUMMY # 275

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

02-03-1997 15:04



X = 0.618750E-01 Y = -.296818E+01
IMPACT SPEED = 14.18 FT/SEC

MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: February 3, 1997

DUMMY NUMBER: 275

TEST NUMBER: D97343

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	19%
PROBE SPEED	13.8 - 14.2 f/s	14.2
PELVIS ACCELERATION	40 - 60 g's	48

TEST MEETS SPECIFICATIONS

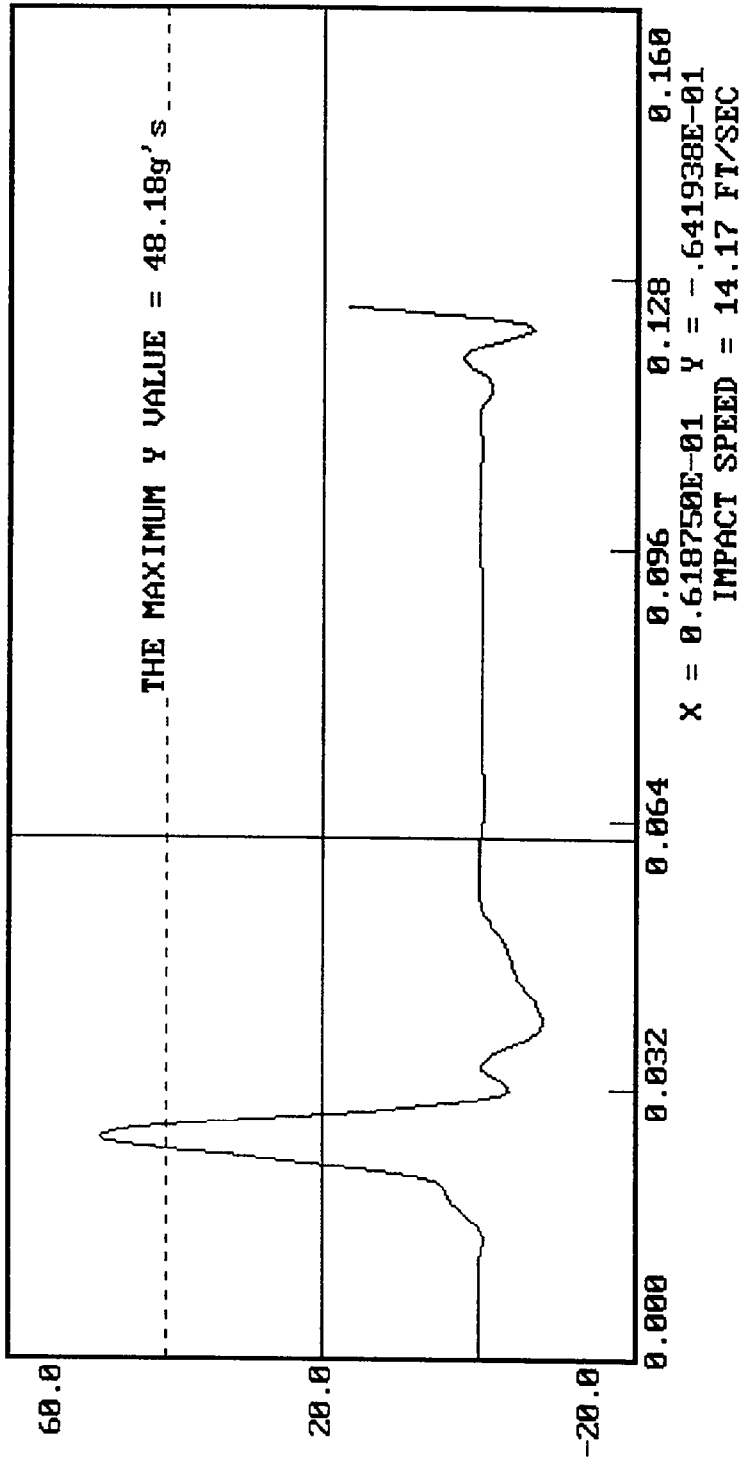
TECHNICIAN *Jim Miller*

APPROVED BY *Bob Kabeke*

DUMMY CALIBRATION - PELVIS IMPACT
DUMMY # 275

02-03-1997 15:27

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



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

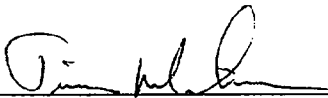
DATE: January 31, 1997

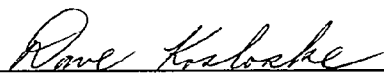
DUMMY NUMBER: 275

TEST NUMBER: D97344

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	16%
FORCE @ 0.5 in	23.3 - 36.5 lbs	29.9
FORCE @ 0.75 in	36.7 - 49.8 lbs	41.7
FORCE @ 1.0 in	50 - 63 lbs	56
FORCE @ 1.3 in	73 - 88 lbs	77

TEST MEETS SPECIFICATIONS

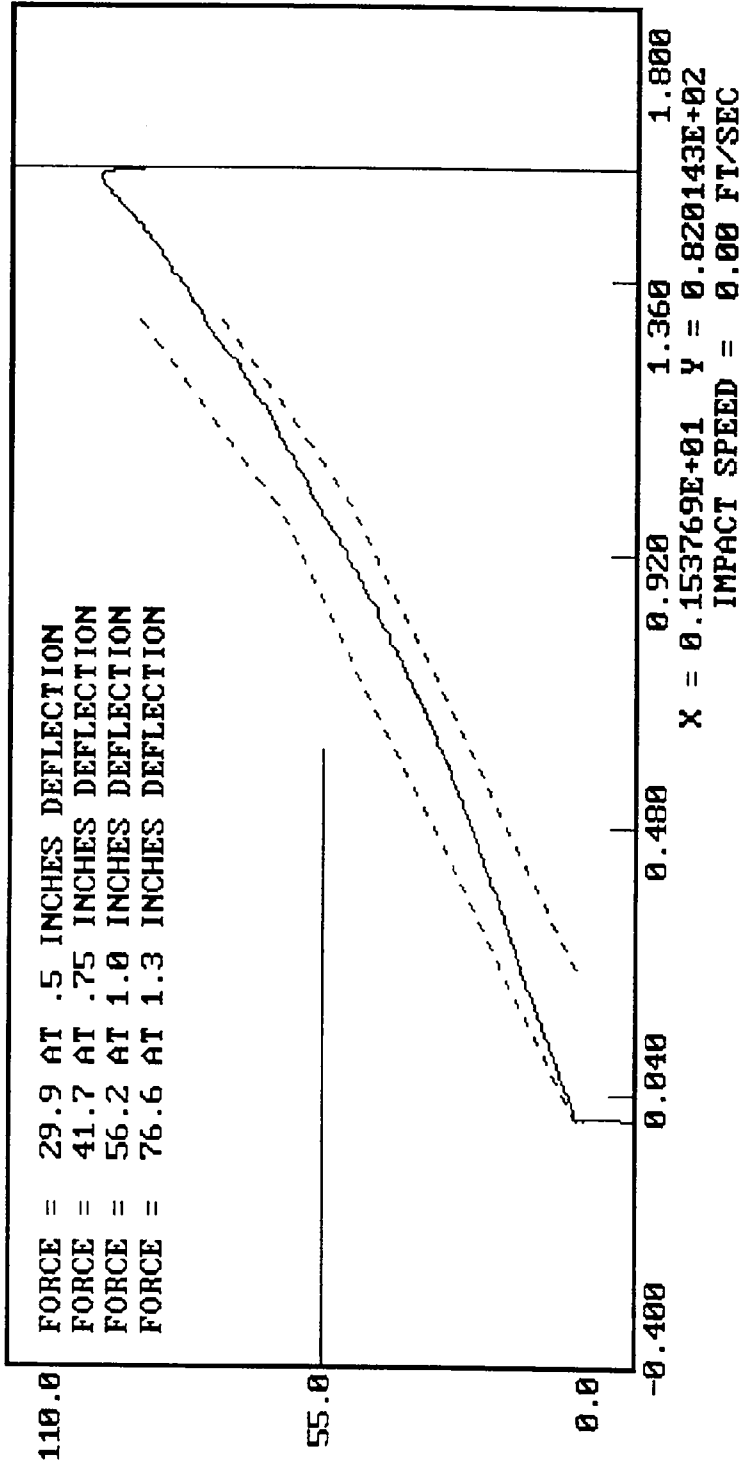
TECHNICIAN 

APPROVED BY 

DUMMY CALIBRATION - ABDOMEN COMPRESSION
DUMMY # 275

01-31-1997 12:44

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



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: January 31, 1997

DUMMY NUMBER: 275

TEST NUMBER: D97345

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	19%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	28
FORCE @ 30°	34 - 46 lbs	37
FORCE @ 40°	46 - 58 lbs	46
RETURN ANGLE	12° maximum	3°

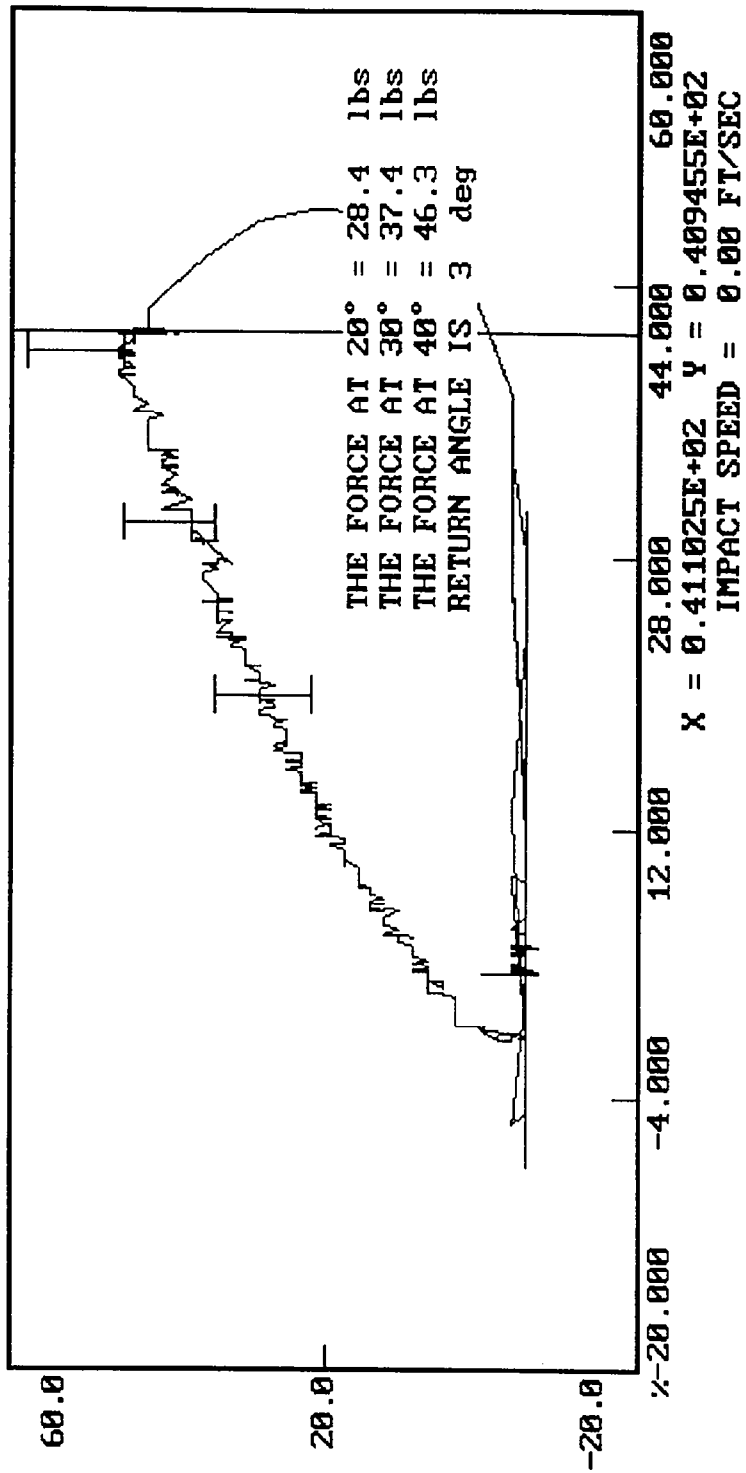
TEST MEETS SPECIFICATIONS

TECHNICIAN *Tim Kish*

APPROVED BY *Rove Kishabe*

01-31-1997 16:53

DUMMY CALIBRATION - LUMBAR FLEXION
DUMMY # 275
FORCE (LBS) VS. TORSO ROTATION (DEGREES)



POST-TEST CERTIFICATION DATA

Rear Dummy Serial Number: 274

Calibration Test Results Summary

Dummy Serial Number: 274

Post-Test Calibration

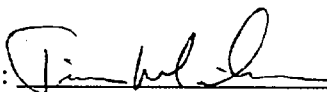
External Dimensions:	The dummy passed all external dimension requirements.
Thorax Impact Test:	The thorax passed all impact test requirements.
Pelvic Impact Test:	The pelvis passed all impact test requirements.
Abdominal Compression Test:	The abdomen passed all compression test requirements.
Lumbar Flexion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

SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 274

DATE OF VERIFICATION: February 3, 1997

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH - Seated Height	35.0" - 35.8"	35.4
RH - Rib Height	19.75" - 20.50"	20.25
HP - Hip Pivot Height	3.9" ref.	3.9
RD - Rib From Back Line	9.0" to 9.5"	9.1
KV - Knee Pivot From Back Line	20.1" - 20.7"	20.5
SW - Knee Pivot to Floor	19.3" - 19.9"	19.6
HW - Hip Width	14.0" - 15.4"	14.6

MEASUREMENTS BY: 

APPROVED BY: 

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: February 3, 1997

DUMMY NUMBER: 274

TEST NUMBER: D97332

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	18%
PROBE SPEED	13.8 - 14.2 fps	14.2
UPPER RIB	37 - 46 g's	41
LOWER RIB	37 - 46 g's	38
LOWER SPINE	15 - 22 g's	20

TEST MEETS SPECIFICATIONS

TECHNICIAN 

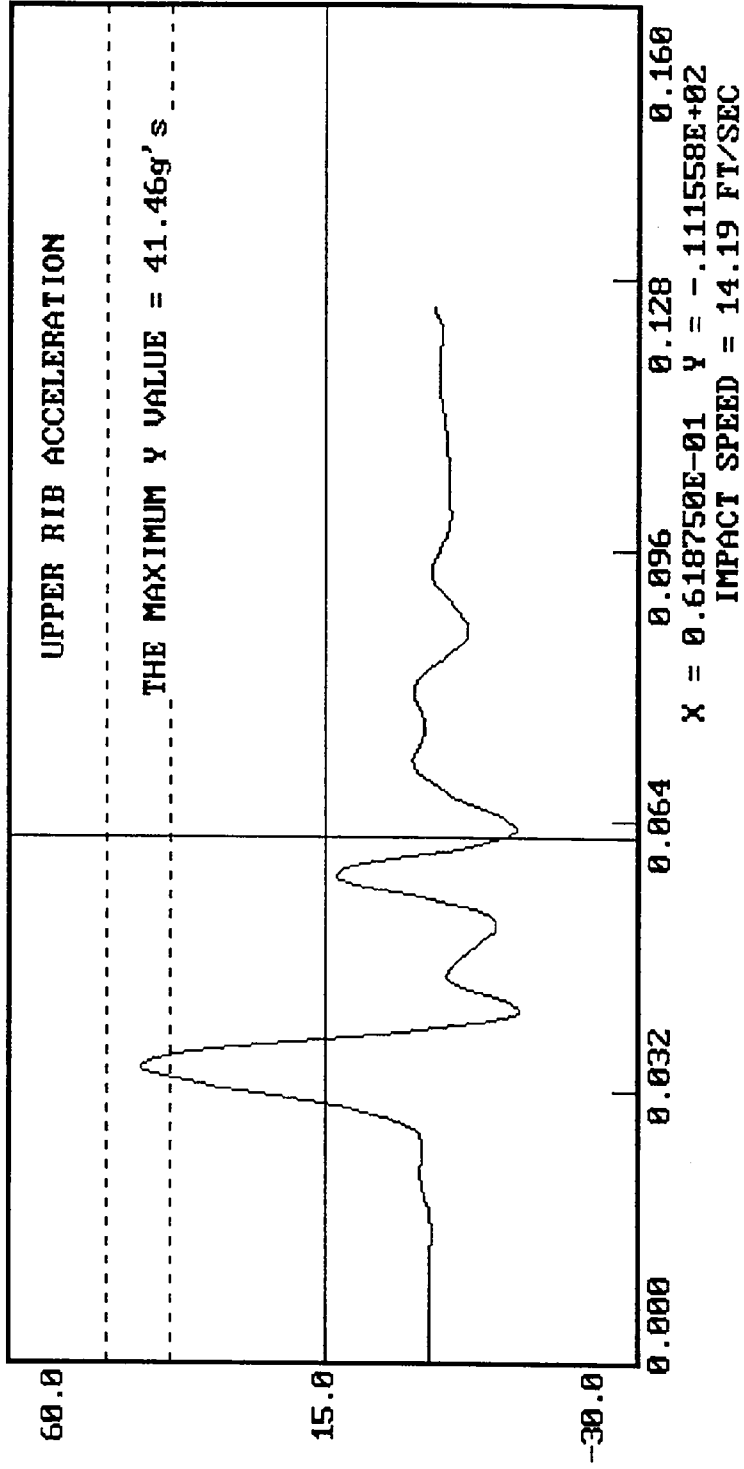
APPROVED BY 

02-03-1997 13:42

DUMMY CALIBRATION - THORAX IMPACT

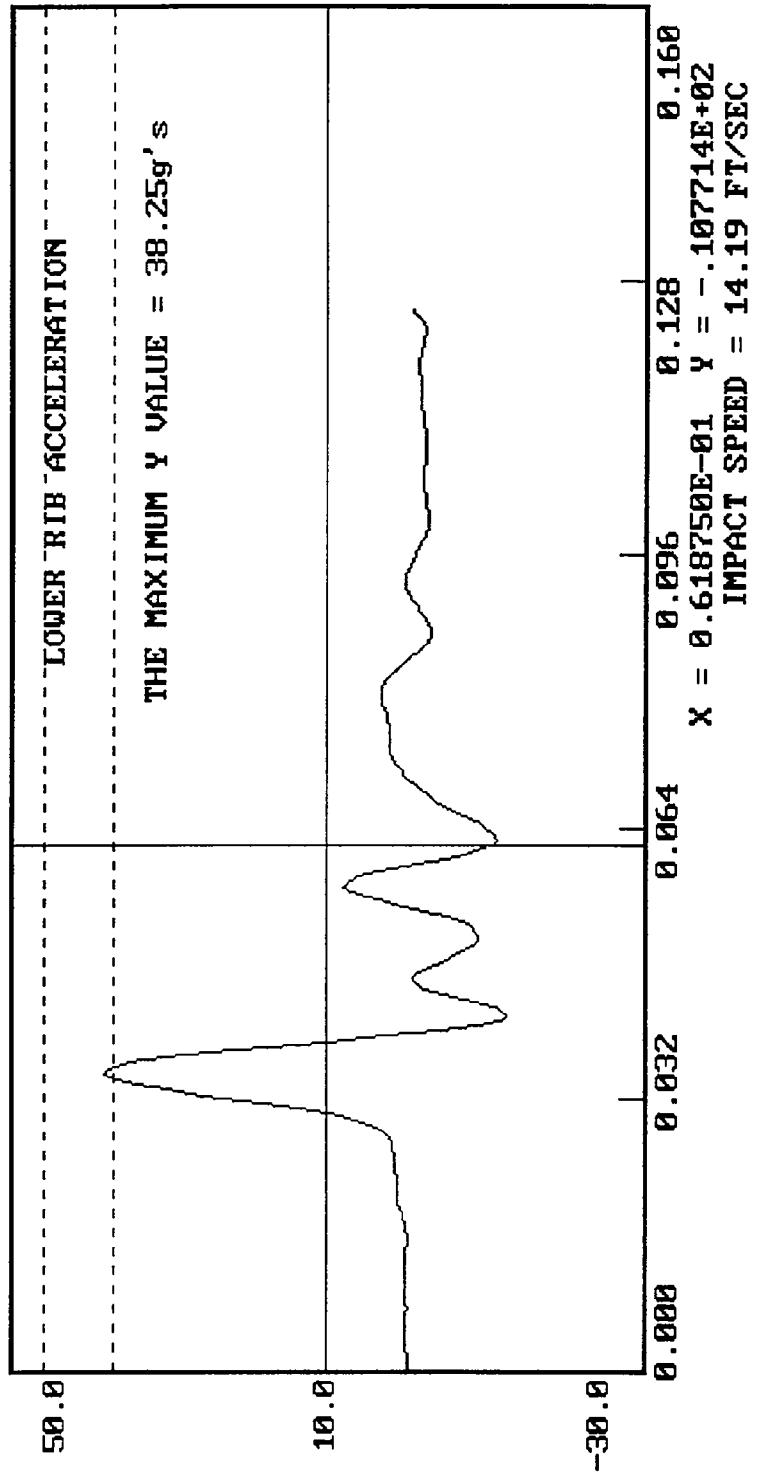
DUMMY # 274

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



DUMMY CALIBRATION - THORAX IMPACT
DUMMY # 274
ACCELERATION (G'S) VS. TIME ((SECONDS))

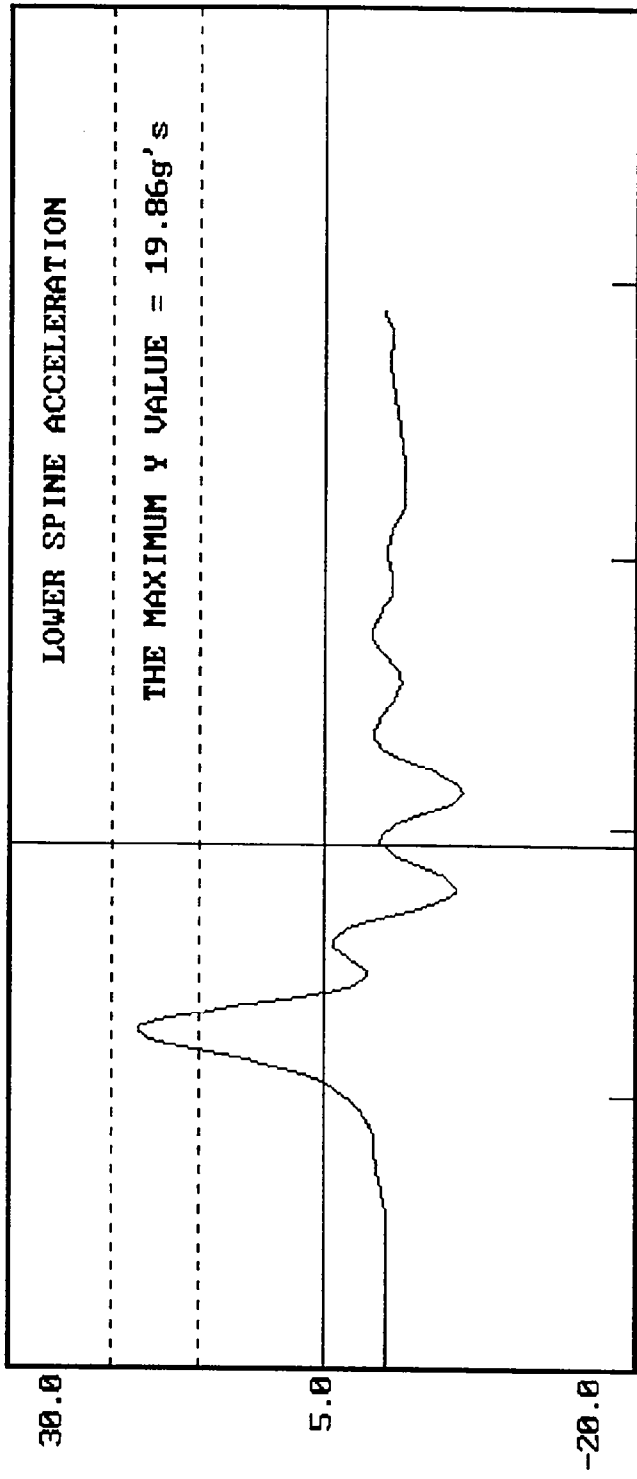
02-03-1997 13:42



02-03-1997 13:44

DUMMY CALIBRATION - THORAX IMPACT
DUMMY # 274

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



X = 0.618750E-01 Y = 0.344813E+00
IMPACT SPEED = 14.19 FT/SEC

MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: February 3, 1997

DUMMY NUMBER: 274

TEST NUMBER: D97333

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	18%
PROBE SPEED	13.8 - 14.2 f/s	14.0
PELVIS ACCELERATION	40 - 60 g's	49

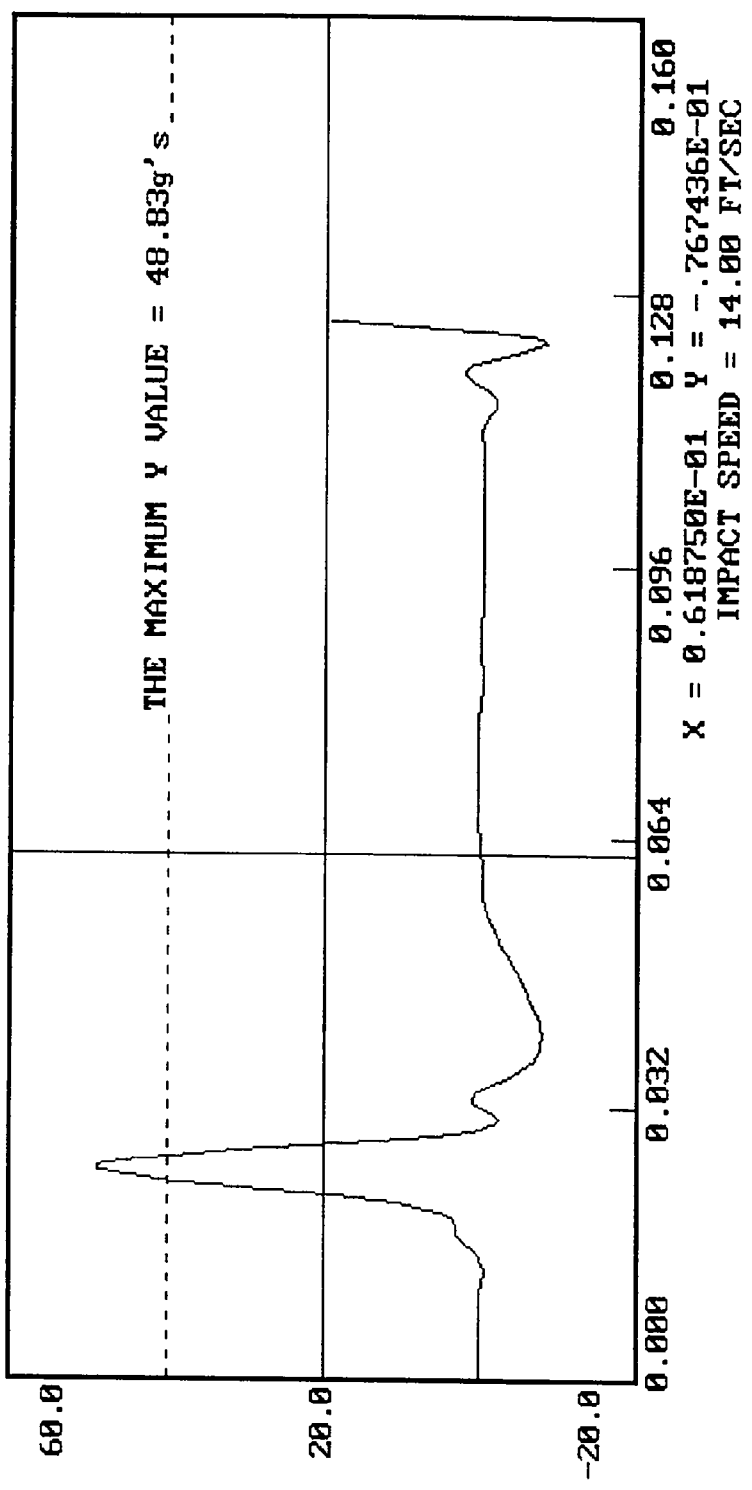
TEST MEETS SPECIFICATIONS

TECHNICIAN Jim Welch

APPROVED BY Dave Kusabe

02-03-1997 13:50

DUMMY CALIBRATION - PELVIS IMPACT
DUMMY # 274
ACCELERATION (G'S) VS. TIME ((SECONDS))



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

DATE: January 31, 1997

DUMMY NUMBER: 274

TEST NUMBER: D97334

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	16%
FORCE @ 0.5 in	23.3 - 36.5 lbs	30.4
FORCE @ 0.75 in	36.7 - 49.8 lbs	42.0
FORCE @ 1.0 in	50 - 63 lbs	56
FORCE @ 1.3 in	73 - 88 lbs	75

TEST MEETS SPECIFICATIONS

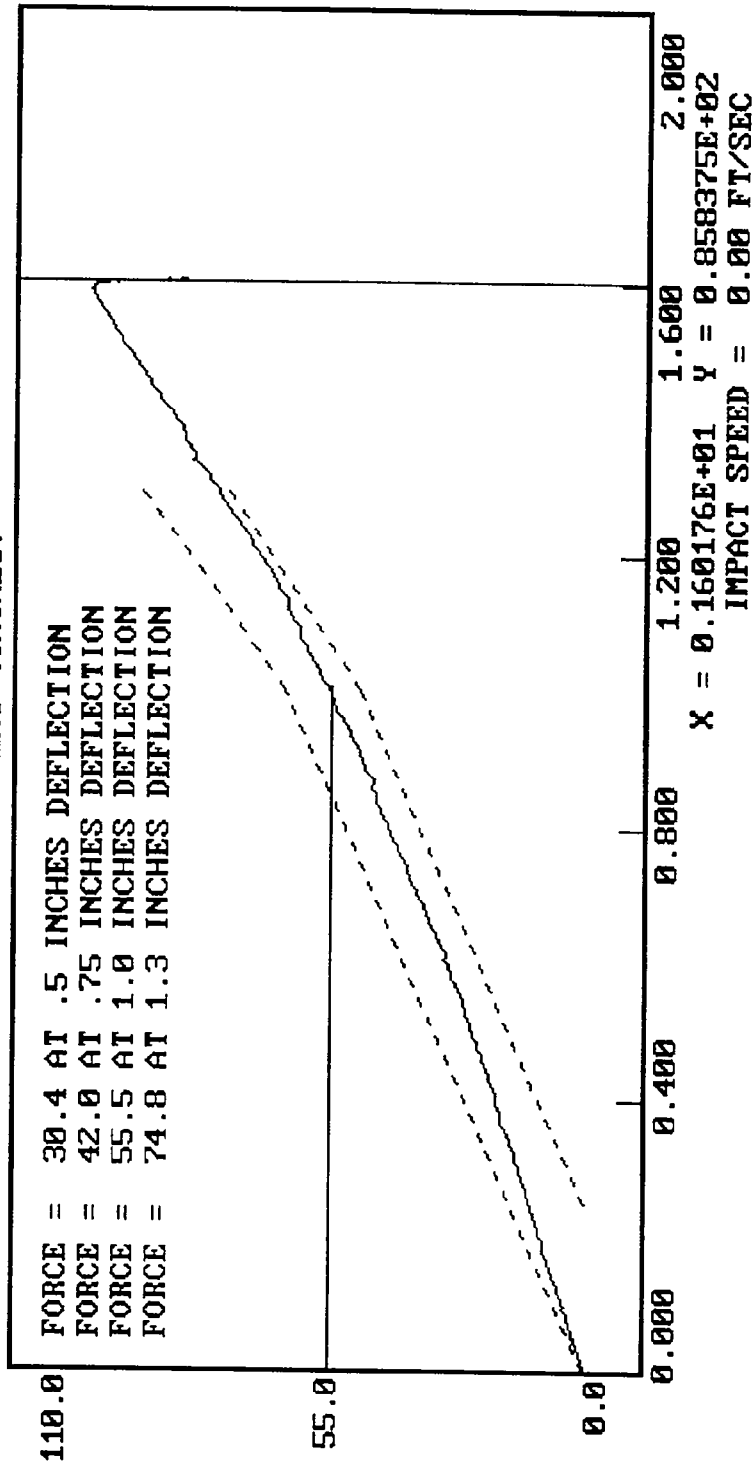
TECHNICIAN Tim M. Sch

APPROVED BY Rene Kobayashi

DUMMY CALIBRATION - ABDOMEN COMPRESSION
DUMMY # 274

01-31-1997 12:40

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



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

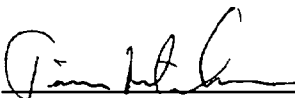
DATE: January 31, 1997


DUMMY NUMBER: 274

TEST NUMBER: D97335

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	19%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	25
FORCE @ 30°	34 - 46 lbs	36
FORCE @ 40°	46 - 58 lbs	46
RETURN ANGLE	12° maximum	4°

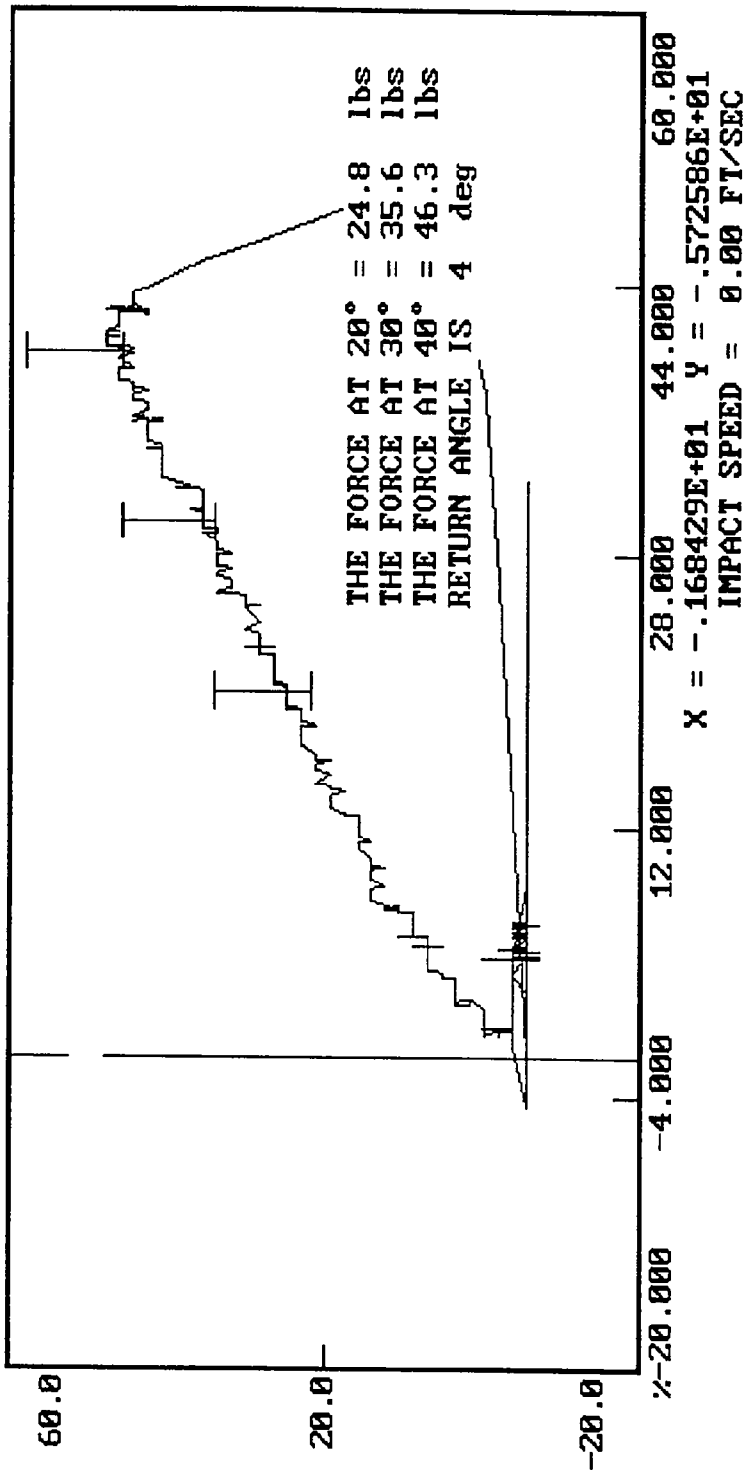
TEST MEETS SPECIFICATIONS

TECHNICIAN 

APPROVED BY 

01-31-1997 16:21

DUMMY CALIBRATION - LUMBAR FLEXION
DUMMY # 274
FORCE (LBS) VS. TORSO ROTATION (DEGREES)



POST-TEST DRIVER DUMMY INSPECTION CHECKLIST

Type: Side Impact Dummy

Serial Number: 275

Inspected By: Tim Michnay

Date: February 3, 1997

<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: 274

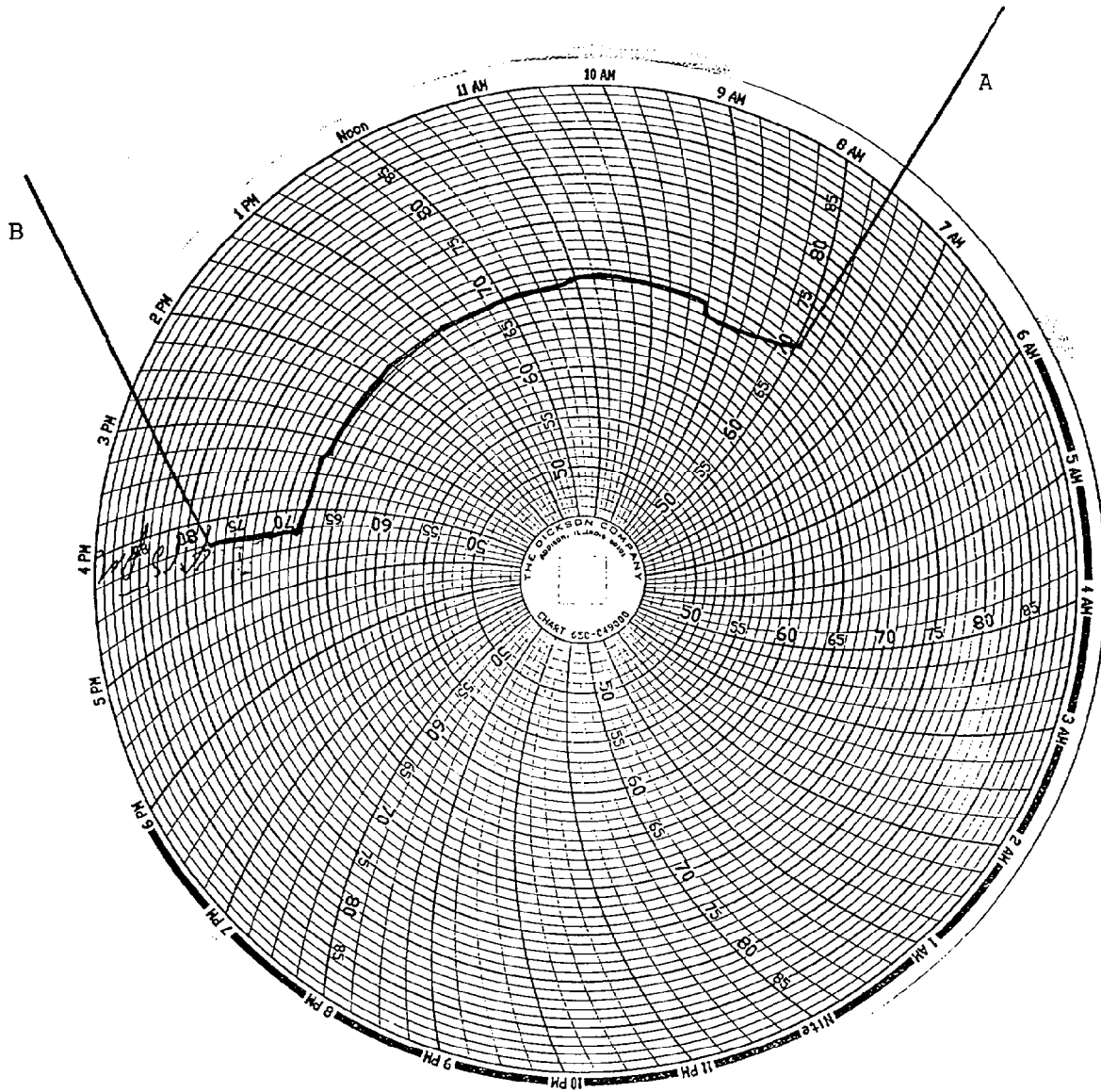
Inspected By: Tim Michnay

Date: February 3, 1997

<u>Part</u>	<u>Items Checked</u>	<u>Comments</u>
Skin	visual inspection	OK
Head	visual, ballast, accelerometer mount	OK
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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 DRIVER DUMMY NO. 275

	DRIVER		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Upper Rib Y	AHRP6	Endevco	1/02/97
Lower Rib Y	AJ8T5	Endevco	1/02/97
Lower Spine Y	AHT20	Endevco	1/02/97
Pelvis Y	AJ417	Endevco	1/02/97
Upper Rib Redundant Y	AJ412	Endevco	1/02/97
Lower Rib Redundant Y	APYR7	Endevco	1/02/97
Lower Spine Redundant Y	AH0N9	Endevco	1/02/97
Pelvis Redundant Y	ACP20	Endevco	1/02/97

INSTRUMENTS FOR PASSENGER DUMMY NO. 274

LEFT REAR PASSENGER		
	SERIAL NO.	CALIBRATION DATE
Upper Rib Y	AN8L6	1/02/97
Lower Rib Y	J12465	1/02/97
Lower Spine Y	J12450	1/02/97
Pelvis Y	AGTP7	1/02/97
Upper Rib Redundant Y	APY13	1/02/97
Lower Rib Redundant Y	J11361	1/02/97
Lower Spine Redundant Y	J12461	1/02/97
Pelvis Redundant Y	AGT04	1/02/97

VEHICLE INSTRUMENT CALIBRATION

VEHICLE ACCELEROMETERS			
SERIAL NO.	MANUFACTURER	CALIBRATION DATE	
Moving Barrier CG X	C25-A04	Entran	1/06/97
Moving Barrier CG Y	C25-A06	Entran	1/07/97
Moving Barrier CG Z	B13-Z02	Entran	1/11/97
Moving Barrier Rear Axle X	D05-R20	Entran	1/02/97
Moving Barrier Rear Axle Y	B12-G09	Entran	1/02/97
Left Mid A-Post Y	B14-R15	Entran	1/03/97
Left Lower A-Post Y	J06-D17	Entran	1/03/97
Left Mid B-Post Y	L14-D14	Entran	1/06/97
Left Lower B-Post Y	E13-D01	Entran	1/03/97
Rear Floorpan Above Axle X	H16-X15	Entran	1/08/97
Rear Floorpan Above Axle Y	MGA144	Entran	1/06/97
Rear Floorpan Above Axle Z	E24-G07	Entran	1/07/97
Driver Seat Track Y	F07-A04	Entran	1/07/97
Right Side Sill at Front Seat X	E24-G08	Entran	1/06/97
Right Side Sill at Front Seat Y	E25-G11	Entran	1/08/97
Right Side Sill at Front Seat Z	E24-G04	Entran	1/03/97
Right Side Sill at Rear Seat X	H16-X11	Entran	12/04/96
Right Side Sill at Rear Seat Y	B14-R04	Entran	12/04/96
Right Side Sill at Rear Seat Z	J23-E06	Entran	1/03/97
Left Side Sill at Front Seat Y	L14-D05	Entran	1/03/97

VEHICLE INSTRUMENT CALIBRATION

VEHICLE ACCELEROMETERS			
	SERIAL NO	MANUFACTURER	CALIBRATION DATE
Left Side Sill at Rear Seat Y	E25-G07	Entran	1/03/97
Right Rear Occupant Compartment Y	H07-A25	Entran	1/02/97
Vehicle CG X	D05-R16	Entran	1/06/97
Vehicle CG Y	MGA125	Entran	1/06/97
Vehicle CG Z	L18-E18	Entran	1/08/97

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