

NEW CAR ASSESSMENT PROGRAM
SIDE IMPACT TESTING
PASSENGER CARS

1998 HONDA ACCORD
4-DOOR SEDAN
NHTSA NO: MW5304

MGA PROVING GROUNDS
5000 WARREN ROAD
BURLINGTON, WI 53105



Test Date: January 26, 1998

Report Date: February 2, 1998

FINAL REPORT

Prepared For:

U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
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15. Supplementary Notes																							
16. Abstract A 90° Moving Deformable Barrier NCAP side impact was conducted on the subject 1998 Honda Accord 4-Door Sedan 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 26, 1998. 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 21°C. The target vehicle post test maximum crush was 404 mm at level 2. The test vehicle's performance follows: <table border="0" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th style="text-align: center;"><u>DRIVER</u></th> <th style="text-align: center;"><u>PASS.</u></th> </tr> </thead> <tbody> <tr> <td>Left Upper Rib (LUR) Accel., g</td> <td style="text-align: center;">68</td> <td style="text-align: center;">62</td> </tr> <tr> <td>Left Lower Rib (LLR) Accel., g</td> <td style="text-align: center;">71</td> <td style="text-align: center;">60</td> </tr> <tr> <td>Lower Spine (T₁₂) Accel., g</td> <td style="text-align: center;">68</td> <td style="text-align: center;">71</td> </tr> <tr> <td>Thoracic Trauma Index (TTI)</td> <td style="text-align: center;">70</td> <td style="text-align: center;">67</td> </tr> <tr> <td>Pelvis (PEV) Accel., g</td> <td style="text-align: center;">77</td> <td style="text-align: center;">62</td> </tr> </tbody> </table> 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.							<u>DRIVER</u>	<u>PASS.</u>	Left Upper Rib (LUR) Accel., g	68	62	Left Lower Rib (LLR) Accel., g	71	60	Lower Spine (T ₁₂) Accel., g	68	71	Thoracic Trauma Index (TTI)	70	67	Pelvis (PEV) Accel., g	77	62
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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																				
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TABLE OF CONTENTS

<u>Section</u>		<u>Page No.</u>
1	PURPOSE AND TEST PROCEDURE	1-1
2	SUMMARY OF SIDE IMPACT TEST	2-1
3	SIDE IMPACT DUMMY (SID) AND VEHICLE TEST DATA	3-1
4	OCCUPANT AND VEHICLE INFORMATION	4-1
APPENDIX A	PHOTOGRAPHS	
APPENDIX B	VEHICLE AND SID RESPONSE DATA	
APPENDIX C	SID CONFIGURATION AND PERFORMANCE VERIFICATION	
APPENDIX D	TEST EQUIPMENT LIST AND CALIBRATION INFORMATION	

SECTION 1
PURPOSE AND TEST PROCEDURE

This side impact test is part of the FY98 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 1998 Honda Accord 4-Door Sedan.

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 1998 Honda Accord 4-Door Sedan 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 26, 1998. 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)
5. Head Center of Gravity triaxial accelerometers (X, Y, and Z-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)	70	67
Pelvis (g)	77	62

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: 1998/Honda/Accord/4-Door Sedan
Vehicle NHTSA No.: MW5304 VIN: 1HGCG5647WA045201
Vehicle Body Color: Black Build Date: 10-97
Engine Data: 4 Cylinders; CID; 2.3 Liter; cc
Placement Longitudinal; X Lateral
Transmission: 4 Speed; Manual; X Automatic; Overdrive
Final Drive: Rear Wheel Drive; X Frt. Wheel Drive; Four Wheel Drive

Odometer Reading 120 miles
Options: X A/C; X Pwr. Steering; X Pwr. Brakes; X Pwr. Windows;
 X Cruise Control; X Tilt Wheel; X Power Door Locks;

DATA FROM TIRE PLACARD:

Tire Pressure (at capacity): 30 Psi FRONT
30 Psi REAR
Recommended Tire Size: P195/65R15/89H
Tires on Test Vehicle: P195/65R15/89H Manufacturer: Michelin

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>426.8</u>	kg	Right Rear	=	<u>266.7</u>	kg
Left Front	=	<u>421.0</u>	kg	Left Rear	=	<u>272.1</u>	kg
TOTAL FRONT	=	<u>847.8</u>	kg	TOTAL REAR	=	<u>538.8</u>	kg
% of Total Vehicle Weight	=	<u>61.1</u>	%;	% of Total Weight	=	<u>38.9</u>	%
TOTAL WEIGHT	=	<u>1386.6</u>	kg				

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

Year/Make/Model/Body Style: 1998/Honda/Accord/4-Door Sedan

Vehicle NHTSA No.: MW5304 Test Date: January 26, 1998

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Test Vehicle Delivered Weight with Maximum Fluids	=	<u>1386.6</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>1593.4</u> kg

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

Right Front	=	<u>431.9</u> kg	Right Rear	=	<u>325.2</u> kg
Left Front	=	<u>471.7</u> kg	Left Rear	=	<u>364.7</u> kg
TOTAL FRONT	=	<u>903.6</u> kg	TOTAL REAR	=	<u>689.9</u> kg
% of Total Weight	=	<u>56.7</u> %	% of Total Weight	=	<u>43.3</u> %
TOTAL TEST WEIGHT	=	<u>1593.5</u> kg			

TEST VEHICLE ATTITUDE:

CURB WEIGHT ATTITUDE:

Right Front 700 mm Left Front 700 mm Right Rear 692 mm Left Rear 692 mm

FULLY LOADED WEIGHT ATTITUDE:

Right Front 694 mm Left Front 679 mm Right Rear 667 mm Left Rear 653 mm

TEST ATTITUDE:

Right Front 686 mm Left Front 681 mm Right Rear 667 mm Left Rear 653 mm

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

Test Vehicle Wheelbase: 2710 mm

C.G. = 1128 mm rearward of front wheel centerline

TOTAL VEHICLE LENGTH:

Right Side = 4445 mm

Centerline = 4708 mm

Left Side = 4445 mm

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

Year/Make/Model/Body Style: 1998/Honda/Accord/4-Door Sedan

Vehicle NHTSA No.: MW5304 Test Date: January 26, 1998

FRONT SEAT CUSHION PLACEMENT:

Total Length of Adjustment Travel: 242 mm

Test Position: 13th notch from foremost locking position

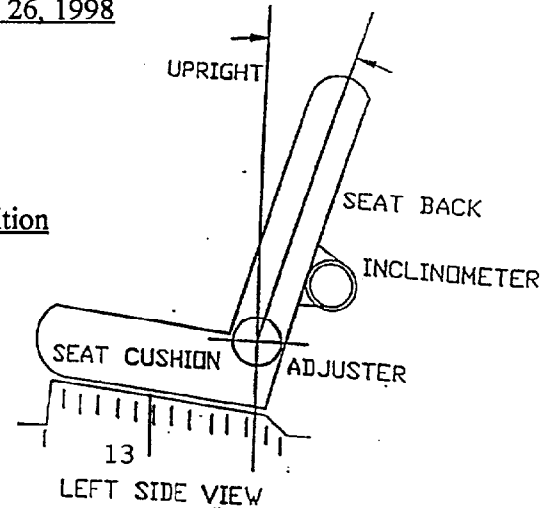
FRONT SEAT BACK ADJUSTMENT POSITION:

Seat Back Angle = 3rd from first locking position

SECOND POSITION SEAT:

Total Length of Fore/Aft Adjustment Travel: Non-adjustable

Seat Back Adjustment Position: Non-adjustable



ADJUSTABLE STEERING COLUMN POSITION: Mid-position

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

AMOUNT OF STODDARD SOLVENT IN FUEL TANK:

Fuel system usable capacity = 17.1 gallons

Test Volume: 15.9 gallons 93 % of capacity

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

Wheelbase: = 2710 mm

Impact Point is 415 mm rearward of front axle centerline

DATA SHEET NO. 2
TEST VEHICLE SUMMARY OF RESULTS

Year/Make/Model/Body Style: 1998/Honda/Accord/4-Door Sedan

Vehicle NHTSA No.: MW5304 Test Date: January 26, 1998

Overall Length = 4708 mm; Overall Width = 1754 mm

TEST WEIGHT:

Right Front = 453.2 kg Right Rear = 319.3 kg

Left Front = 473.5 kg Left Rear = 341.6 kg

TOTAL FRONT = 926.7 kg TOTAL REAR = 660.9 kg

% of Total Weight = 58.4 % % of Total Weight = 41.6 %

TOTAL VEHICLE WEIGHT = 1587.6 kg

Wheelbase = 2710 mm

Longitudinal C.G. from Center of Front Axle = 1128 mm

Impact Angle with Respect to Impactor = 90 ° degrees

MAXIMUM EXTERIOR STATIC CRUSH:

1. LEVEL 1 (297 mm above ground) = 20 mm

2. LEVEL 2 (512 mm above ground) = 116 mm

3. LEVEL 3 (595 mm above ground) = 383 mm

4. LEVEL 4 (878 mm above ground) = 362 mm

5. LEVEL 5 (1338 mm above ground) = 50 mm

Maximum Post-Test Intrusion = 404 mm

OCCUPANTS:

	<u>Left Front Passenger</u>	<u>Left Rear Passenger</u>
Type of Dummy	<u>SID</u>	<u>SID</u>
Restraints Used	<u>type II belt</u> <u>and frontal airbag</u>	<u>type II belt</u>

TEST VEHICLE SUMMARY OF RESULTS (Cont'd)

INSTRUMENTATION:

Number of Vehicle Data Channels:	=	<u>25</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: 1998/Honda/Accord/4-Door Sedan

Vehicle NHTSA No.: MW5304 Test Date: January 26, 1998

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>1105 mm</u>
C.G. Location From Center Line	=	<u>-12 mm</u>
C.G. Location Above Ground Level	=	<u>484 mm</u>

MDB WEIGHT:

Left Front	=	<u>440.0 kg</u>	Left Rear	=	<u>242.5 kg</u>
Right Front	=	<u>338.2 kg</u>	Right Rear	=	<u>331.9 kg</u>
TOTAL FRONT	=	<u>778.2 kg</u>	TOTAL REAR	=	<u>574.4 kg</u>
TOTAL MDB WEIGHT = <u>1352.9 kg</u>					

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

Impact Speed = Primary: 38.1 mph (61.3 kph) Secondary: 38.3 mph (61.6 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>203</u> mm |
| 2. | Row B Mid Stack (686 mm) | = <u>137</u> mm |
| 3. | Row C Top of Bumper (533 mm) | = <u>106</u> mm |
| 4. | Row D Center of Bumper (432 mm) | = <u>226</u> mm |

INSTRUMENTATION:

Number of MDB Data Channels = 7

DATA SHEET NO. 4
POST-TEST OBSERVATIONS

Year/Make/Model/Body Style: 1998/Honda/Accord/4-Door Sedan

Vehicle NHTSA No.: MW5304 Test Date: January 26, 1998

VISIBLE DUMMY CONTACT POINTS:

	<u>LEFT FRONT SID</u>	<u>LEFT REAR SID</u>
Head	<u>back of head to headrest</u>	<u>to C-post</u>
	<u>face to left shoulder</u>	
Arm	<u>rear of door panel and armrest</u>	<u>rear of door above armrest</u>
Pelvis	<u>armrest (rear of panel)</u>	<u>armrest</u>
Left Knee	<u>mid door below armrest</u>	<u>mid door below armrest</u>
Right Knee	<u>left knee</u>	<u>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: 9 mm rearward Vertical: 4 mm high

ARM REST LOCATIONS:

Front: 226 mm from bottom of window
Rear: 236 mm from bottom of window

POST-TEST OBSERVATIONS (Cont'd)

SEAT CRUSH:

Front Seat Back: 91 mm Front Seat Cushion: 86 mm
Left Rear Seat Back: 166 mm Rear Seat Cushion: 110 mm

GLAZING DAMAGE:

Left side front and rear door glass broken, windshield cracked

PILLAR PERFORMANCE:

No failure noted

SILL SEPARATION:

350 mm of separation starting approximately 1000 mm rearward of the front spindle

OTHER NOTABLE IMPACT EFFECTS:

Both frontal airbags deployed, gas tank access panel in trunk--2 of 3 screws fell off.

AIRBAG DEPLOYMENT STATUS:

	<u>DRIVER</u>	<u>PASSENGER</u>
Frontal	<u>Yes</u>	<u>Yes</u>
Side	<u>N/A</u>	<u>N/A</u>

SECTION 4
OCCUPANT AND VEHICLE INFORMATION

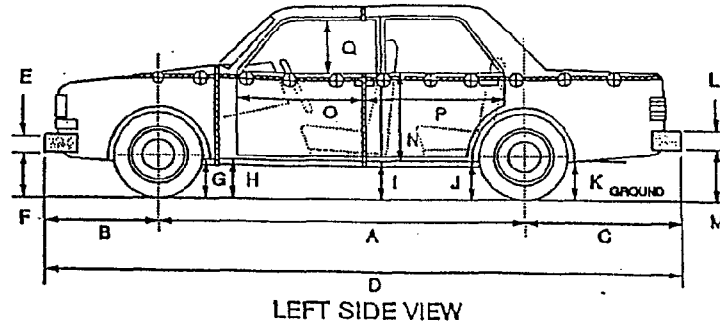
DATA SHEET NO. 5

Vehicle NHTSA No.: MW5304
Test Date: January 26, 1998

	Front Dummy ID #271				Rear Dummy ID #272			
	Pos. Direct.		Neg. Direct		Pos. Direct.		Neg. Direct	
	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)
RIB ACCELERATIONS								
Left Upper Rib (LUR) Y	67.7	35	-18.9	74	62.4	42	-11.7	92
Left Lower Rib (LLR) Y	71.4	36	-13.2	91	60.5	52	-16.7	77
SPINE ACCELERATIONS								
Lower Lateral Y	67.9	32	-27.3	65	70.9	55	-27.2	73
PELVIS ACCELERATIONS								
Lateral Y	77.4	30	-12.3	58	62.0	45	-6.2	92

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)

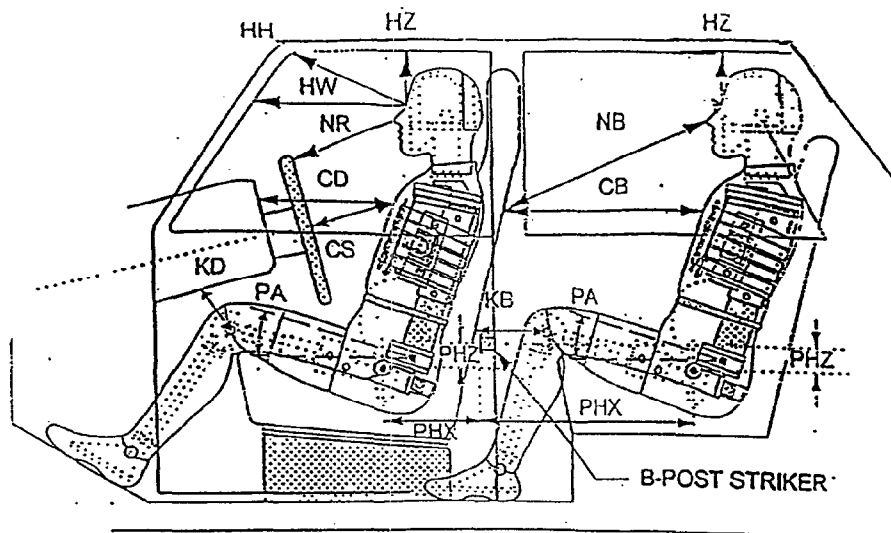
	PRE-TEST	POST-TEST	Δ CHANGE
A	2710	2683	27
B	948	954	6
C	1050	1061	11
D	4708	4698	10
E	125	125	0
F	410	418	8
G	141	126	25
H	165	168	3
I	184	162	22
J1/J2	185/151	190/151	5/0
K	240	248	8
L	260	260	0
M	320	324	4
N	672	537	135
O	789	558	231
P	1204	806	398
Q	432	424	8
R	4445	4447	2
S	4445	4399	46
T	1754	1417	337

DATA SHEET NO. 7

SIDE IMPACT DUMMY (SID) LONGITUDINAL CLEARANCE DIMENSIONS

Year/Make/Model/Body Style: 1998/Honda/Accord/4-Door Sedan

NHTSA NO.: MW5304 Test Date: January 26, 1998



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

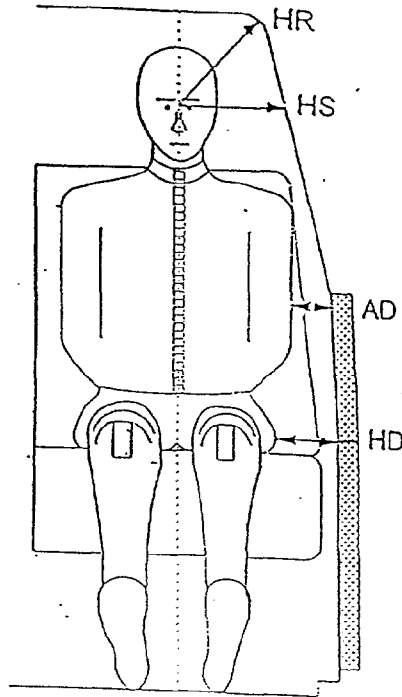
	DRIVER SID ID #271		LEFT REAR PASSENGER SID ID #272
HH	364	HZ	162
HW	603	NB	655
HZ	170	CB	558
NR	456	KBL (KBA)	262 (0.0°)
CD	537	KBR (KBA)	259 (0.0°)
CS	340	PA°	24.4°
KDL(KDA°)	137 (27.4°)	PHX	282
KDR(KDA°)	135 (26.8°)	PHZ	286
PA°	24.3°		
PHX	202		
PHZ	143		

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: 1998/Honda/Accord/4-Door Sedan

NHTSA NO.: MW5304 Test Date: January 26, 1998



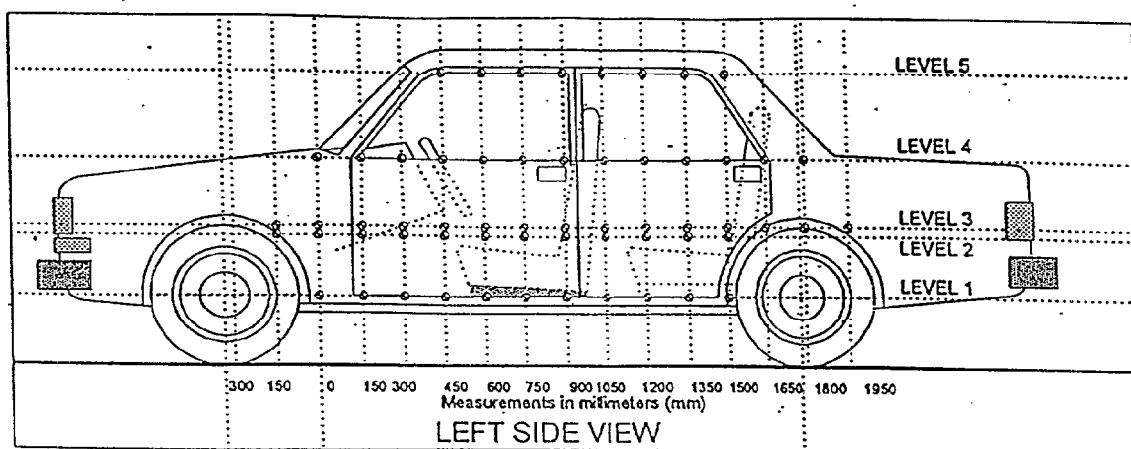
NOTE: All dimensions are in mm

	DRIVER SID ID #271	LEFT REAR PASSENGER SID ID #272
HR	190	193
HS	302	340
AD	114	134
HD	132	193

DATA SHEET NO. 9
VEHICLE SIDE MEASUREMENTS

Year/Make/Model/Body Style: 1998/Honda/Accord/4-Door Sedan

NHTSA NO.: MW5304 Test Date: January 26, 1998



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>297</u> mm
Level 2 @ Occupant H-Point	= <u>512</u> mm
Level 3 @ Mid Door	= <u>595</u> mm
Level 4 @ Window Sill	= <u>878</u> mm
Level 5 @ Window Top	= <u>1338</u> mm

DATA SHEET NO. 10
VEHICLE EXTERIOR CRUSH PROFILES

	Level 1 - Axle Centerline		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1800			
-1650			
-1500			
-1350			
-1200			
-1050			
-900			
-750			
-600			
-450			
-300			
-150			
0 (impact point)			
150	777	936	159
300	777	927	150
450	779	940	161
600	779	949	170
750	779	962	183
900	780	973	193
1050	781	988	207
1200	781	1011	230
1350	783	980	197
1500	783	943	160
1650	780	903	123
1800	774	852	78

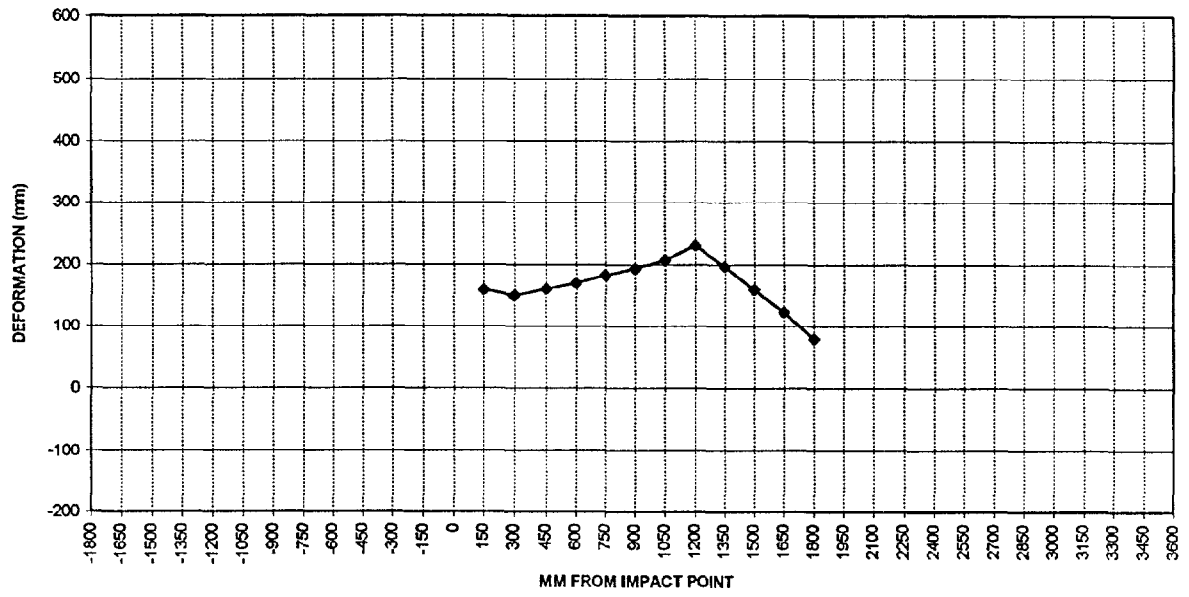
Reference plane is parallel to test vehicle longitudinal centerline.
Given dimensions = Reference plane to car body

DATA SHEET NO. 10
VEHICLE EXTERIOR CRUSH PROFILES

	Level 1 - Axle Centerline		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
1950			
2100			
2250			
2400			
2550			
2700			
2850			
3000			
3150			
3300			
3450			
3600			

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

	Level 2 - Occupant H-Point		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1800			
-1650			
-1500			
-1350			
-1200			
-1050			
-900			
-750			
-600			
-450			
-300			
-150			
0 (impact point)	724	840	116
150	730	999	269
300	731	1058	327
450	730	1084	354
600	730	1102	372
750	728	1111	383
900	729	1122	393
1050	729	1126	397
1200	729	1133	404
1350	730	1127	397
1500	730	1092	362
1650	730	1037	307
1800	730	968	238

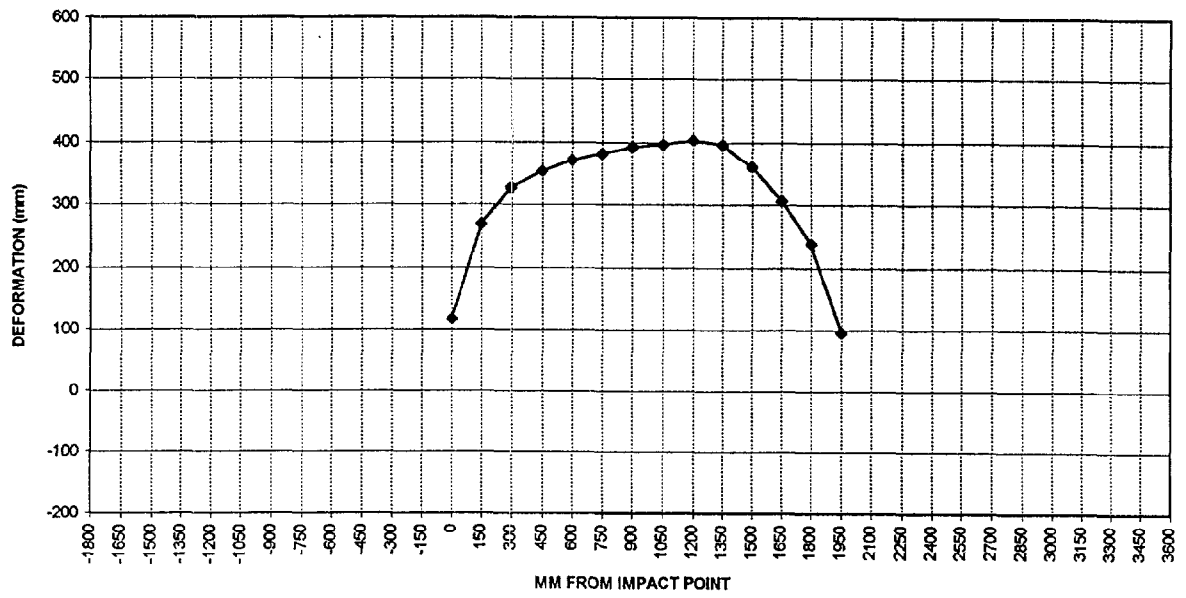
Reference plane is parallel to test vehicle longitudinal centerline.
Given dimensions = Reference plane to car body

DATA SHEET NO. 10
VEHICLE EXTERIOR CRUSH PROFILES

	Level 2 - Occupant H-Point		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
1950	722	818	96
2100			
2250			
2400			
2550			
2700			
2850			
3000			
3150			
3300			
3450			
3600			

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

	Level 3 - Mid-Door		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1800			
-1650			
-1500			
-1350			
-1200			
-1050			
-900			
-750			
-600			
-450			
-300			
-150	716	796	80
0 (impact point)	725	820	95
150	726	968	242
300	726	1026	300
450	725	1050	325
600	724	1064	340
750	722	1078	356
900	722	1078	356
1050	722	1080	358
1200	722	1086	364
1350	722	1079	357
1500	722	1078	356
1650	722	1057	335
1800	722	1015	293

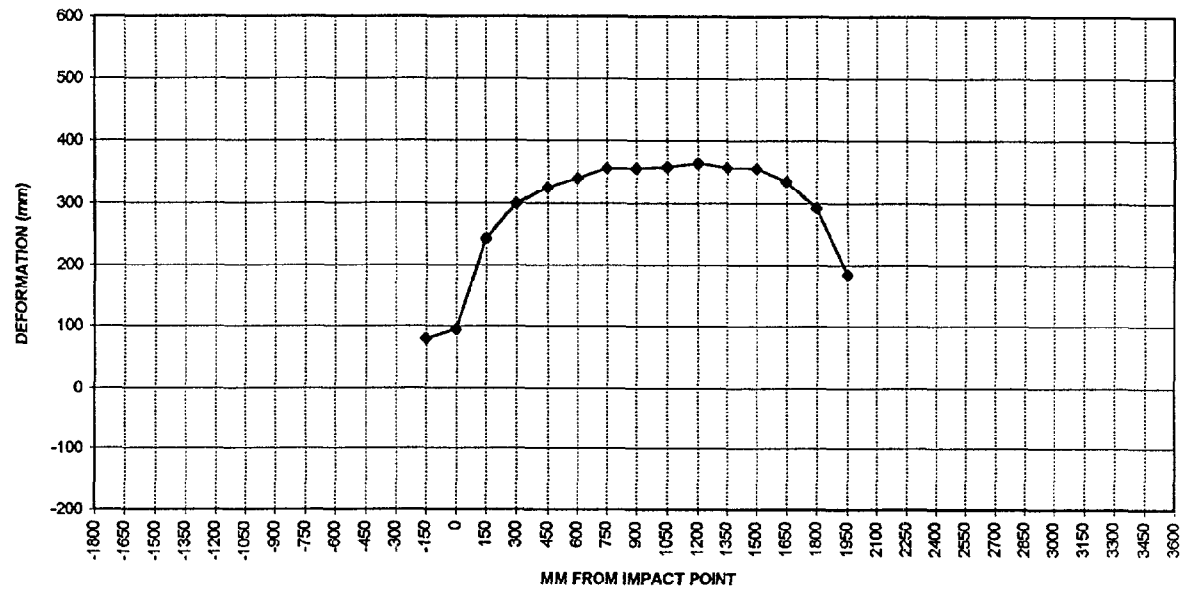
Reference plane is parallel to test vehicle longitudinal centerline.
Given dimensions = Reference plane to car body

DATA SHEET NO. 10
VEHICLE EXTERIOR CRUSH PROFILES

	Level 3 - Mid-Door		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
1950	722	907	185
2100			
2250			
2400			
2550			
2700			
2850			
3000			
3150			
3300			
3450			
3600			

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

	Level 4 - Window Sill		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1800			
-1650			
-1500			
-1350			
-1200			
-1050			
-900	848	868	20
-750	823	849	26
-600	810	838	28
-450	799	830	31
-300	791	825	34
-150	787	828	41
0 (impact point)	787	838	51
150	784	870	86
300	780	932	152
450	781	993	212
600	781	1043	262
750	781	1051	270
900	780	1058	278
1050	780	1069	289
1200	780	1082	302
1350	782	1086	304
1500	782	1086	304
1650	784	1090	306
1800	786	1050	264

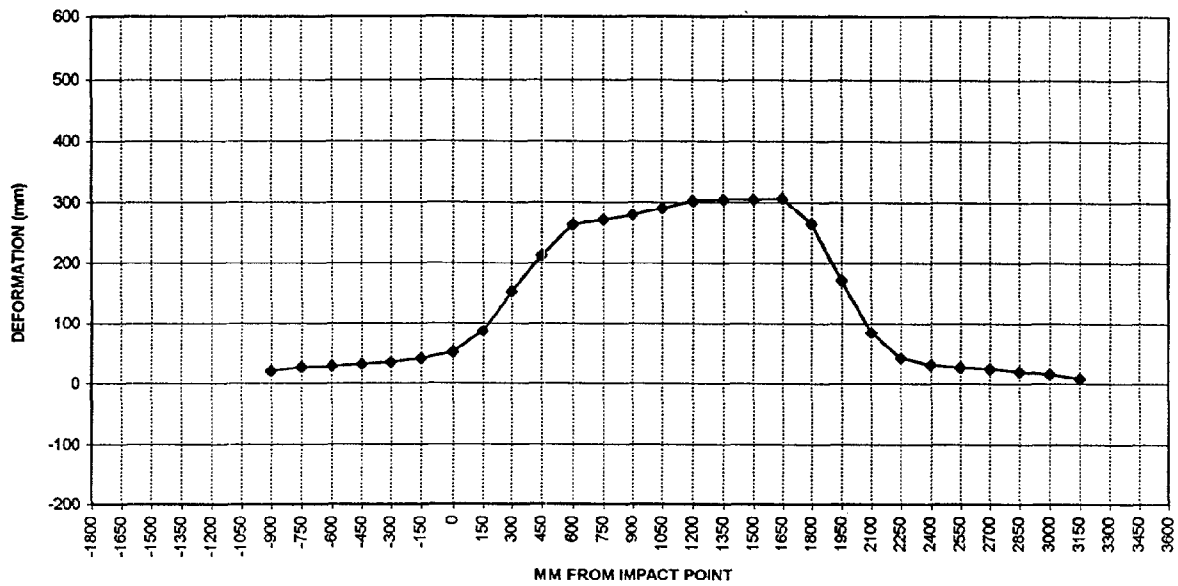
Reference plane is parallel to test vehicle longitudinal centerline.
 Given dimensions = Reference plane to car body

DATA SHEET NO. 10
VEHICLE EXTERIOR CRUSH PROFILES

	Level 4 - Window Sill		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
1950	788	959	171
2100	794	878	84
2250	802	844	42
2400	810	840	30
2550	822	848	26
2700	831	855	24
2850	846	865	19
3000	863	878	15
3150	890	898	8
3300			
3450			
3600			

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

	Level 5 - Window Top		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1800			
-1650			
-1500			
-1350			
-1200			
-1050			
-900			
-750			
-600			
-450			
-300			
-150			
0 (impact point)			
150			
300			
450			
600			
750	1040	1093	53
900	1035	1111	76
1050	1035	1139	104
1200	1036	1174	138
1350	1040	1175	135
1500	1041	1147	106
1650	1041	1118	77
1800	1044	1105	61

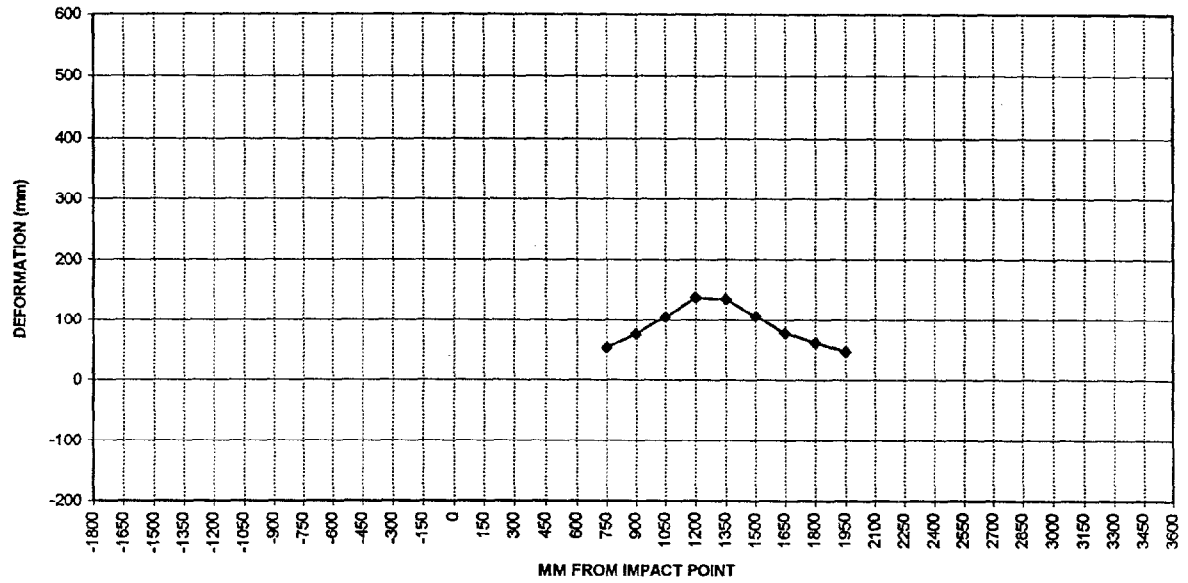
Reference plane is parallel to test vehicle longitudinal centerline.
Given dimensions = Reference plane to car body

DATA SHEET NO. 10
VEHICLE EXTERIOR CRUSH PROFILES

	Level 5 - Window Top		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
1950	1050	1096	46
2100			
2250			
2400			
2550			
2700			
2850			
3000			
3150			
3300			
3450			
3600			

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

VEHICLE EXTERIOR STATIC CRUSH



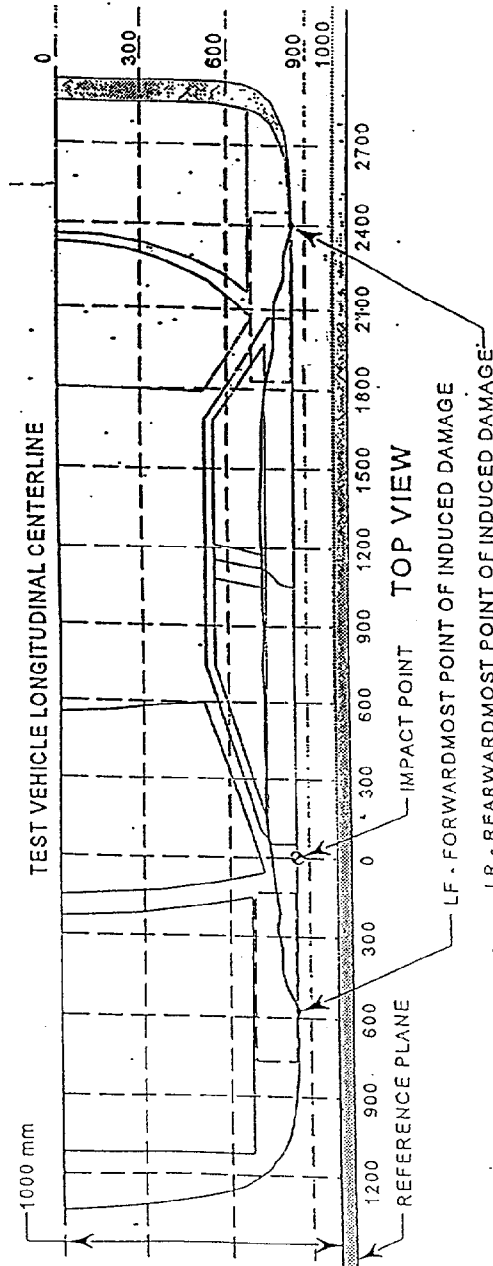
LEVEL 5 - WINDOW TOP

DATA SHEET NO. 11

VEHICLE DAMAGE PROFILE DISTANCES

Year/Make/Model/Body Style: 1998/Honda/Accord/4-Door Sedan

NHTSA NO.: MW5304 Test Date: January 26, 1998



MEASUREMENT CONVENTIONS:
Forward of the impact point (towards front of vehicle) is considered negative (-).
Rearward of the impact point (toward rear of vehicle) is considered positive (+).

DPD MEASUREMENTS	POST-TEST (mm)	PRE-TEST (mm)	STATIC CRUSH (mm)
1. (LF = -900 mm)	868	848	20
2. 0 mm	840	724	116
3. 750 mm	1111	728	383
4. 1500 mm	1092	730	362
5. 2400 mm	840	810	30
6. (LR = 3150 mm)	898	890	8

DATA SHEET NO. 12

EXTERIOR STATIC CRUSH FOR SIDE IMPACTOR

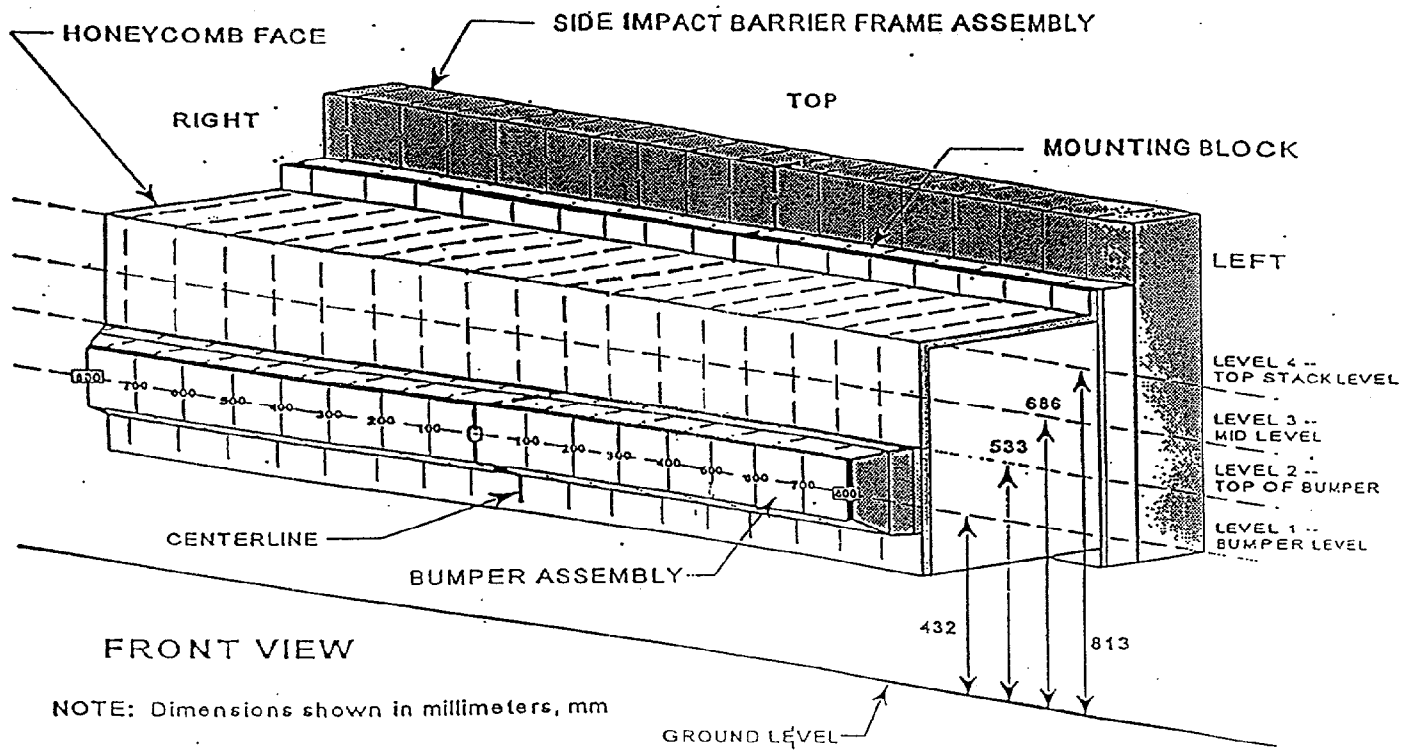
Year/Make/Model/Body Style: 1998/Honda/Accord/4-Door Sedan

Vehicle NHTSA No.: MW5304 Test Date: January 26, 1998

		Distance Right of Center (mm)									Distance Left of Center (mm)							
Location	Height at CL	800	700	600	500	400	300	200	100	0	100	200	300	400	500	600	700	800
Top Stack Level 4	813 mm	65	5	-8	-8	-4	0	6	11	17	21	27	31	37	47	101	152	203
Mid Level Level 3	686 mm	63	18	6	2	3	2	13	20	11	5	9	12	18	24	44	79	93
Top Bumper Level 2	533 mm	106	73	47	24	21	21	23	28	28	36	41	44	49	56	72	45	93
Mid Bumper Level 1	432 mm	226	193	153	121	100	91	87	93	92	94	96	98	104	112	127	143	162

See next page for Barrier Face Graphic

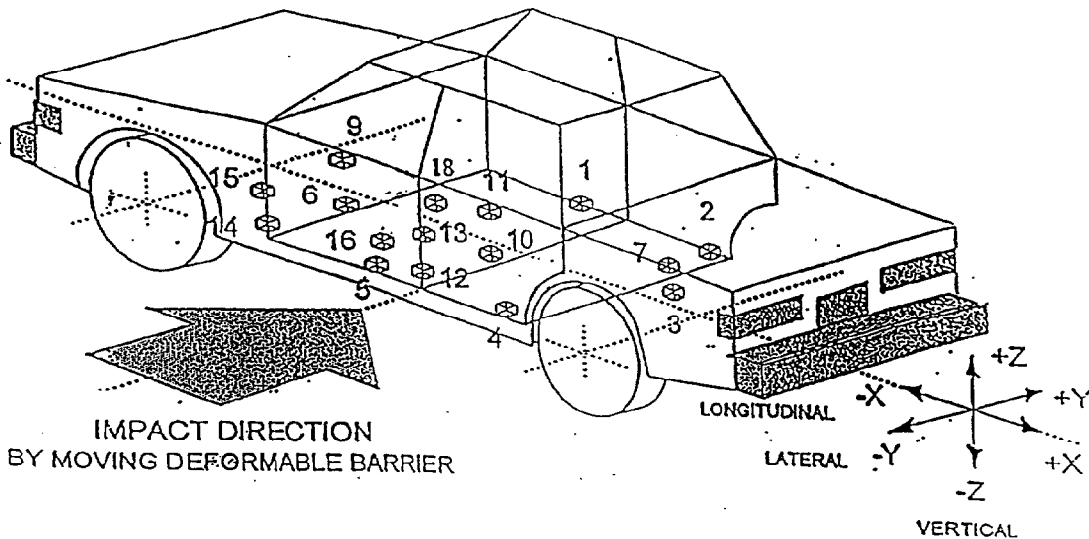
DATA SHEET NO. 12 (Cont'd)



DATA SHEET 13
TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Year/Make/Model/Body Style: 1998/Honda/Accord/4-Door Sedan

Vehicle NHTSA No.: MW5304 Test Date: January 26, 1998



1-Rt. Side Sill @ Frt Seat
 2-Rt. Side Sill @ Rr. Seat
 3-Rr. Floorpan Above Axle
 4-Left Side Sill @ Rr. Seat
 5-Left Side Sill @ Frt. Seat
 6-Left Frt. Door On Centerline
 7-Rt. Rr. Occ. Compartment
 8-Midrear of Left Frt. Door
 9-Left Frt. Door Upper Ctrline

10-Midrear of Left Rear Door
 11-Left Rear Door Upper Ctrline
 12-Left Lower B-Post
 13-Left Middle B-Post
 14-Left Lower A-Post
 15-Left Middle A-Post
 16-Front Seat Track

DATA SHEET NO. 13
TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY
Year/Make/Model/Body Style: 1998/Honda/Accord/4-Door Sedan

Vehicle NHTSA No.: MW5304 Test Date: January 26, 1998

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	2652	650	200	3.5	-2.9	18.4	-1.9	5.6	-3.4	18.7
2	Rt. Side Sill @ Rear Seat	1600	660	204	3.3	-3.9	22.9	-2.2	5.2	-7.0	23.3
3	Rr. Floorpan Above Axle*	1000	0	480	7.6	-9.9	24.2	-1.8	11.7	-6.5	26.4
4	Left Side Sill @ Rr. Seat	2668	-664	210	---	---	39.6	-7.3	---	---	---
5	Left Side Sill @ Frt. Seat	1622	-664	204	---	---	27.2	-2.8	---	---	---
6	Left Front Door on Centerline	2673	-761	670	---	---	180.8	-187.3	---	---	---
7	Right Rear Occupant Compartment	1898	352	280	---	---	21.7	-2.2	---	---	---
8	Mid Rear of Left Front Door	2352	-755	670	---	---	157.8	-84.4	---	---	---
9	Left Front Door Upper Centerline	2694	-758	862	---	---	321.9	-124.7	---	---	---
10	Mid Rear of Left Rear Door	1708	-760	650	---	---	234.5	-186.5	---	---	---
11	Left Rear Door Upper Centerline	1742	-770	870	---	---	180.9	-223.5	---	---	---
12	Left Lower B-Post	2090	-703	368	---	---	138.4	-75.8	---	---	---
13	Left Mid B-Post	2152	-696	894	---	---	121.3	-71.5	---	---	---
14	Left Lower A-Post	3198	-651	300	---	---	42.6	-11.7	---	---	---
15	Left Mid A-Post	3268	-772	820	---	---	21.1	-2.3	---	---	---
16	Driver Left Seat Track	2368	-620	280	---	---	115.1	-30.7	---	---	---
18	Vehicle CG	2618	0	340	18.1	-26.7	56.0	-45.7	34.6	-27.8	58.1

Reference: X - Rear Bumper (+ Forward) Accelerometers became detached after approximately 82 msec.

Y - Vehicle Centerline (+ To right)

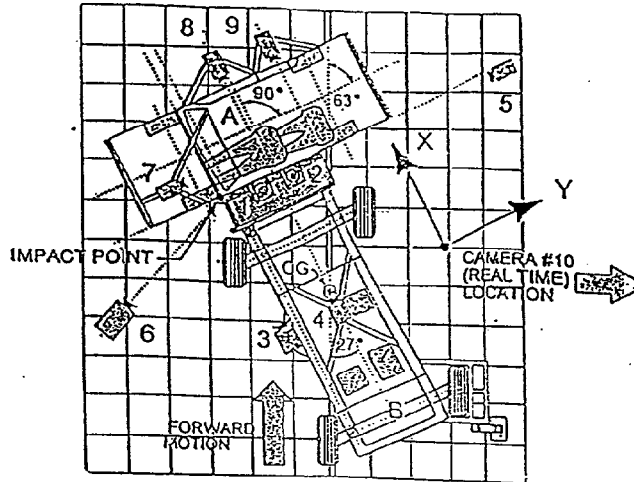
Z - Ground Level (+ Up)

DATA SHEET NO. 14

MOVING DEFORMABLE BARRIER (MDB) ACCELEROMETER LOCATIONS AND DATA SUMMARY

Year/Make/Model/Body Style: 1998/Honda/Accord/4-Door Sedan

Vehicle NHTSA No.: MW5304 Test Date: January 26, 1998



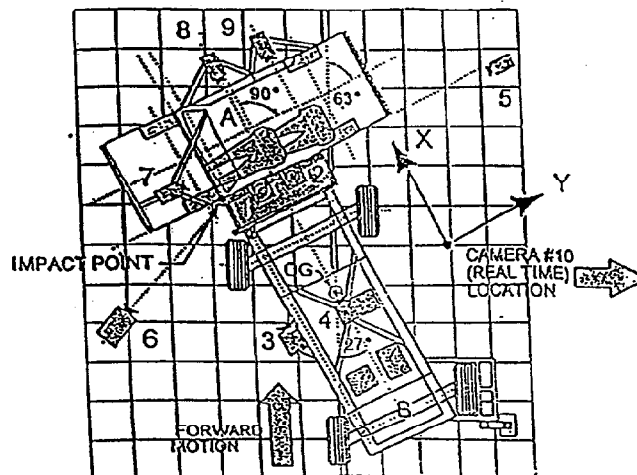
Accel. No.	Description	Coordinates (mm)*			(+) Positive		(-) Negative	
		X	Y	Z	Max. (g)	Time (msec)	Max. (g)	Time (msec)
1	MDB Center of Gravity	-1092	0	483				
	Longitudinal (X)	---	---	---	0.8	94	-19.0	33
	Lateral (Y)	---	---	---	2.5	66	-5.3	39
	Vertical (Z)	---	---	---	16.9	59	-11.4	42
	Resultant (R)	---	---	---	25.5	37	---	---
2	Rear Frame Member	-2591	-625	622				
	Longitudinal (X)	---	---	---	1.9	101	-22.4	40
	Lateral (Y)	---	---	---	2.5	34	-1.5	65

*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: 1998/Honda/Accord/4-Door Sedan

Vehicle NHTSA No.: MW5304 Test Date: January 26, 1998



Camera No.	View	Coordinates (mm)*			Angle	Lens (mm)	Film Speed (fps)
		X	Y	Z			
	Real Time						
6	Left Impact	-400	-2290	1670		13	966
8	Onboard Driver					8	939
9	Onboard Passenger					8	1115
7	Onboard Hood					13	1010
5	Right Impact	-640	10400	1860		25	1020
1	Top Overall	80	1320	5000		8	1010
2	Top Impact	-380	-20	5000		13	980
4	Cart Overall					13	1015
3	Cart Pointer					35	897

* 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: 1998/Honda/Accord/4-Door Sedan

Vehicle NHTSA No.: MW5304 Test Date: January 26, 1998

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 38.1 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

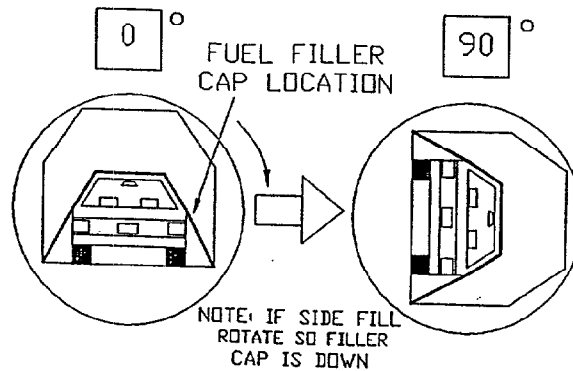
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA

Vehicle Year/Make/Model/Body Style: 1998/Honda/Accord/4-Door Sedan

Vehicle NHTSA No.: MW5304 Test Date: January 26, 1998

TEST PHASE: 0° - 90°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 56 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 56 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

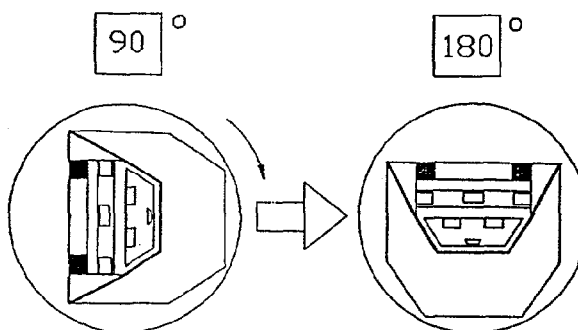
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA (Cont'd)

Vehicle Year/Make/Model/Body Style: 1998/Honda/Accord/4-Door Sedan

Vehicle NHTSA No.: MW5304 Test Date: January 26, 1998

TEST PHASE: 90° - 180°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 32 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 32 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

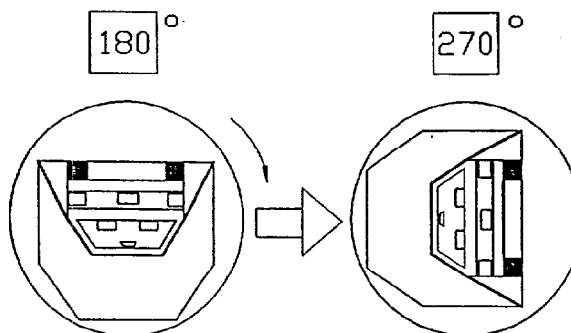
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA (Cont'd)

Vehicle Year/Make/Model/Body Style: 1998/Honda/Accord/4-Door Sedan

Vehicle NHTSA No.: MW5304 Test Date: January 26, 1998

TEST PHASE: 180° - 270°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 14 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 14 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

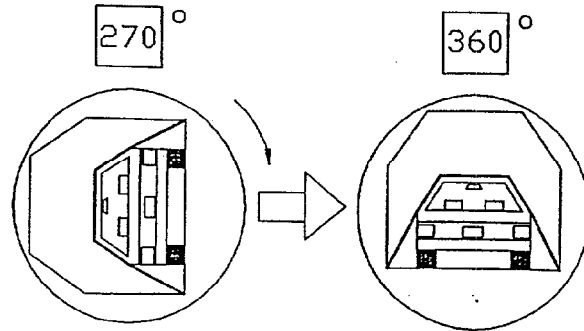
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA

Vehicle Year/Make/Model/Body Style: 1998/Honda/Accord/4-Door Sedan

Vehicle NHTSA No.: MW5304 Test Date: January 26, 1998

TEST PHASE: 270° - 360°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 37 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 37 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

TABLE OF PHOTOGRAPHS

	<u>Page No.</u>
Photo No. A-1 - Pre-Test Front View of Test Vehicle	A-1
Photo No. A-2 - Post-Test Front View of Test Vehicle	A-2
Photo No. A-3 - Pre-Test Rear View of Test Vehicle	A-3
Photo No. A-4 - Post-Test Rear View of Test Vehicle	A-4
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)	A-7
Photo No. A-8 - Pre-Test MDB Positioned Against Vehicle (right side)	A-8
Photo No. A-9 - Pre-Test MDB Positioned Against Vehicle Overhead View	A-9
Photo No. A-10 - Post-Test MDB Positioned Against Vehicle (left side)	A-10
Photo No. A-11 - Post-Test MDB Positioned Against Vehicle (right side)	A-11
Photo No. A-12 - Post-Test MDB Positioned Against Vehicle Overhead View	A-12
Photo No. A-13 - Pre-Test MDB Top View	A-13
Photo No. A-14 - Post-Test MDB Top View	A-14
Photo No. A-15 - Pre-Test MDB Front View	A-15
Photo No. A-16 - Post-Test MDB Front View	A-16
Photo No. A-17 - Pre-Test MDB Right Side View	A-17
Photo No. A-18 - Post-Test MDB Right Side View	A-18
Photo No. A-19 - Pre-Test MDB Left Side View	A-19
Photo No. A-20 - Post-Test MDB Left Side View	A-20
Photo No. A-21 - Pre-Test Driver Dummy Right Side View	A-21
Photo No. A-22 - Post-Test Driver Dummy Right Side View	A-22
Photo No. A-23 - Pre-Test Driver Dummy Left Side View	A-23
Photo No. A-24 - Post-Test Driver Dummy Left Side View	A-24
Photo No. A-25 - Pre-Test Driver Dummy Left Side View (Door Open)	A-25
Photo No. A-26 - Pre-Test Driver Dummy Shoulder and Door Top View	A-26
Photo No. A-27 - Post-Test Driver Dummy Shoulder and Door Top View	A-27
Photo No. A-28 - Post-Test Driver Dummy Contact	A-28

TABLE OF PHOTOGRAPHS

	<u>Page No.</u>
Photo No. A-29 - Post-Test Driver Dummy Contact	A-29
Photo No. A-30 - Post-Test Driver Dummy Head Contact	A-30
Photo No. A-31 - Pre-Test Passenger Dummy Right Side View	A-31
Photo No. A-32 - Post-Test Passenger Dummy Right Side View	A-32
Photo No. A-33 - Pre-Test Passenger Dummy Left Side View	A-33
Photo No. A-34 - Post-Test Passenger Dummy Left Side View	A-34
Photo No. A-35 - Pre-Test Passenger Dummy Left Side View (Door Open)	A-35
Photo No. A-36 - Pre-Test Passenger Dummy Shoulder and Door Top View	A-36
Photo No. A-37 - Post-Test Passenger Dummy Shoulder and Door Top View	A-37
Photo No. A-38 - Post-Test Passenger Dummy Contact	A-38
Photo No. A-39 - Post-Test Passenger Dummy Contact	A-39
Photo No. A-40 - Post-Test Passenger Dummy Head Contact	A-40
Photo No. A-41 - Pre-Test Left Front Impact Point on Vehicle	A-41
Photo No. A-42 - Post-Test Left Front Impact Point on Vehicle	A-42
Photo No. A-43 - Impact	A-43
Photo No. A-44 - Sill Separation	A-44
Photo No. A-45 - Vehicle Certification Label	A-45
Photo No. A-46 - Tire Placard	A-46
Photo No. A-47 - Rollover 90°	A-47
Photo No. A-48 - Rollover 180°	A-48
Photo No. A-49 - Rollover 270°	A-49
Photo No. A-50 - Rollover 360°	A-50
Photo No. A-51 - Left Front Attitude Point	A-51
Photo No. A-52 - Right Front Attitude Point	A-52
Photo No. A-53 - Left Rear Attitude Point	A-53
Photo No. A-54 - Right Rear Attitude Point	A-54

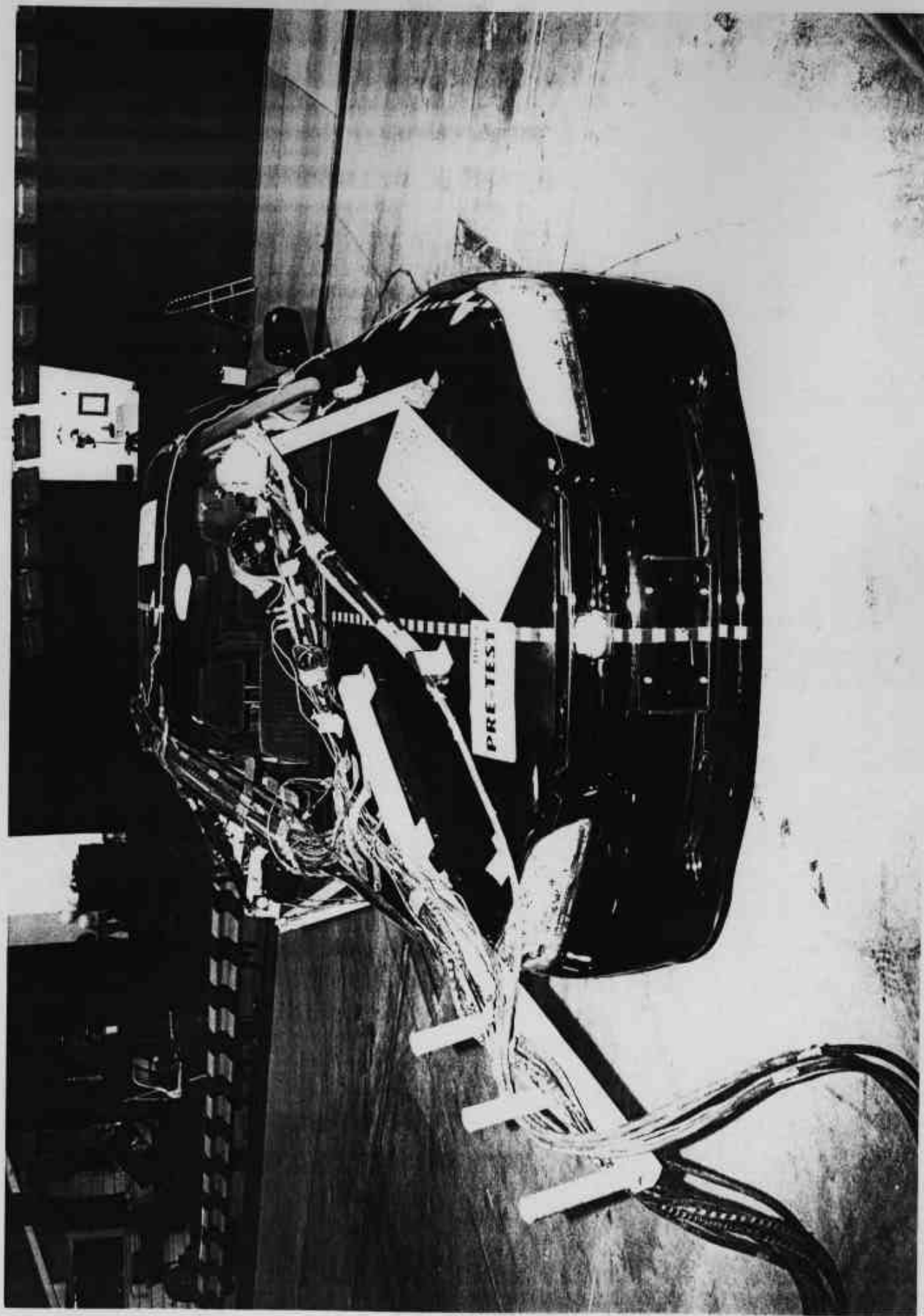


Photo No. A-1 - Pre-Test Front View of Test Vehicle

A-1

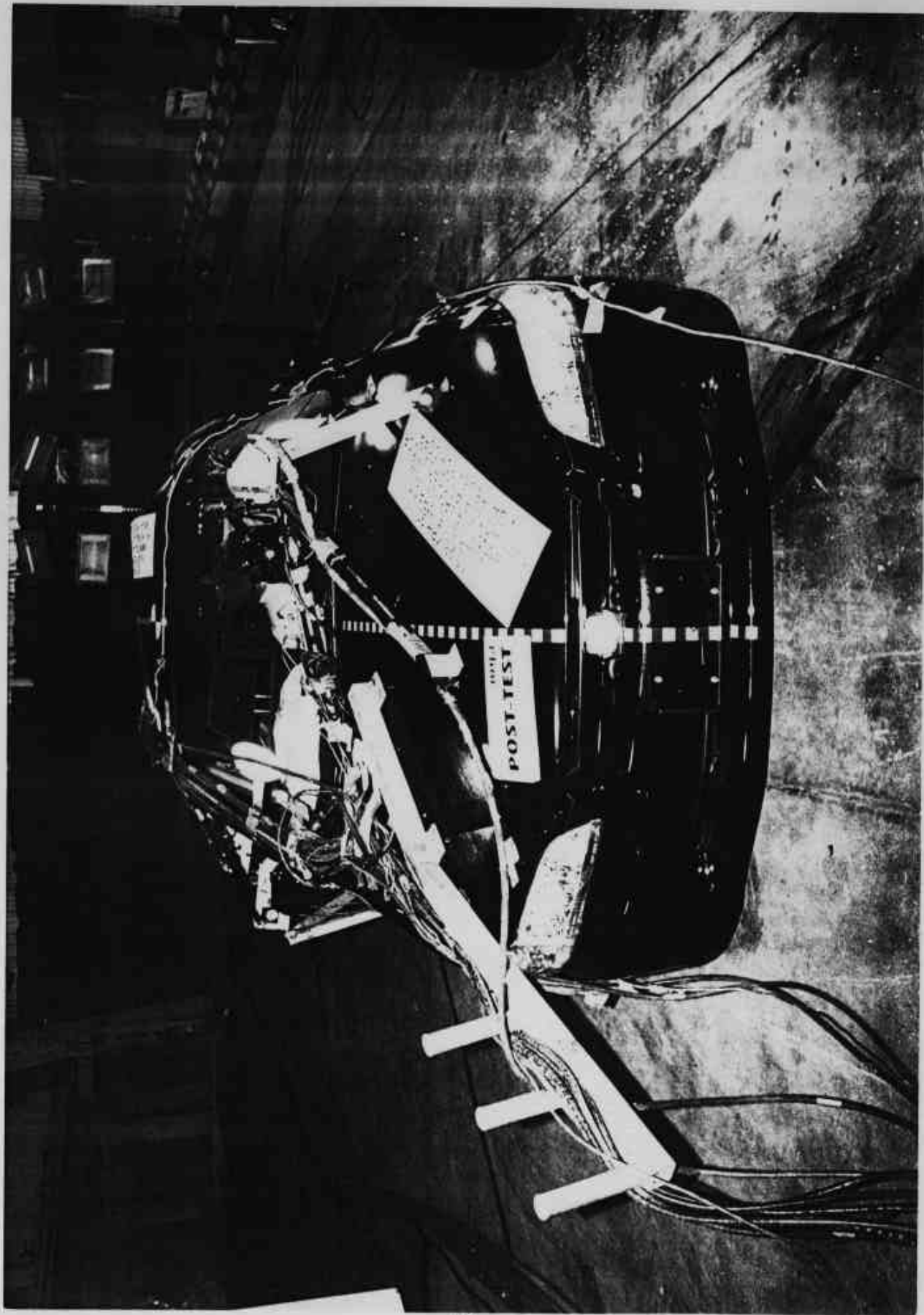


Photo No. A-2 - Post-Test Front View of Test Vehicle

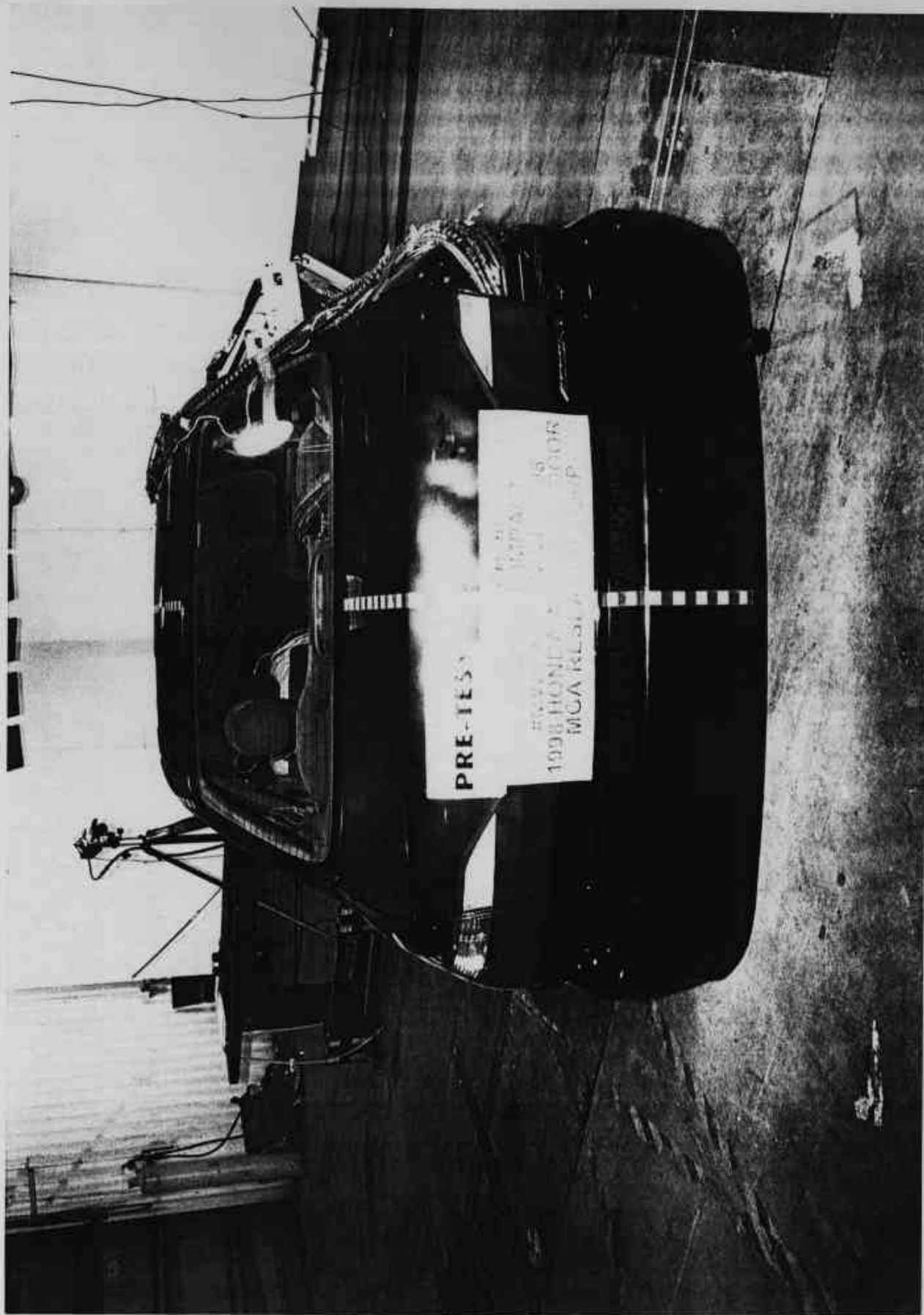


Photo No. A-3 - Pre-Test Rear View of Test Vehicle

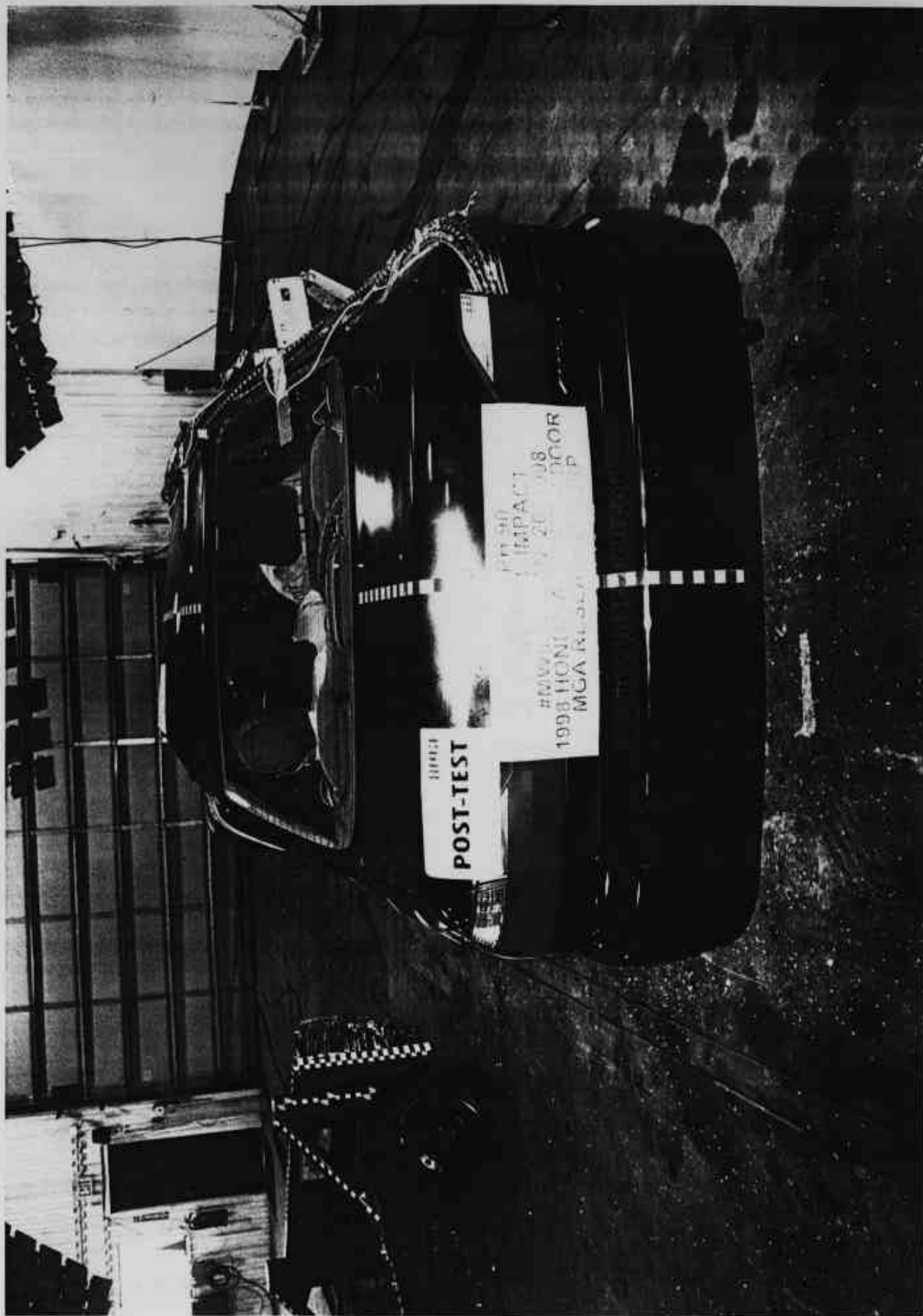
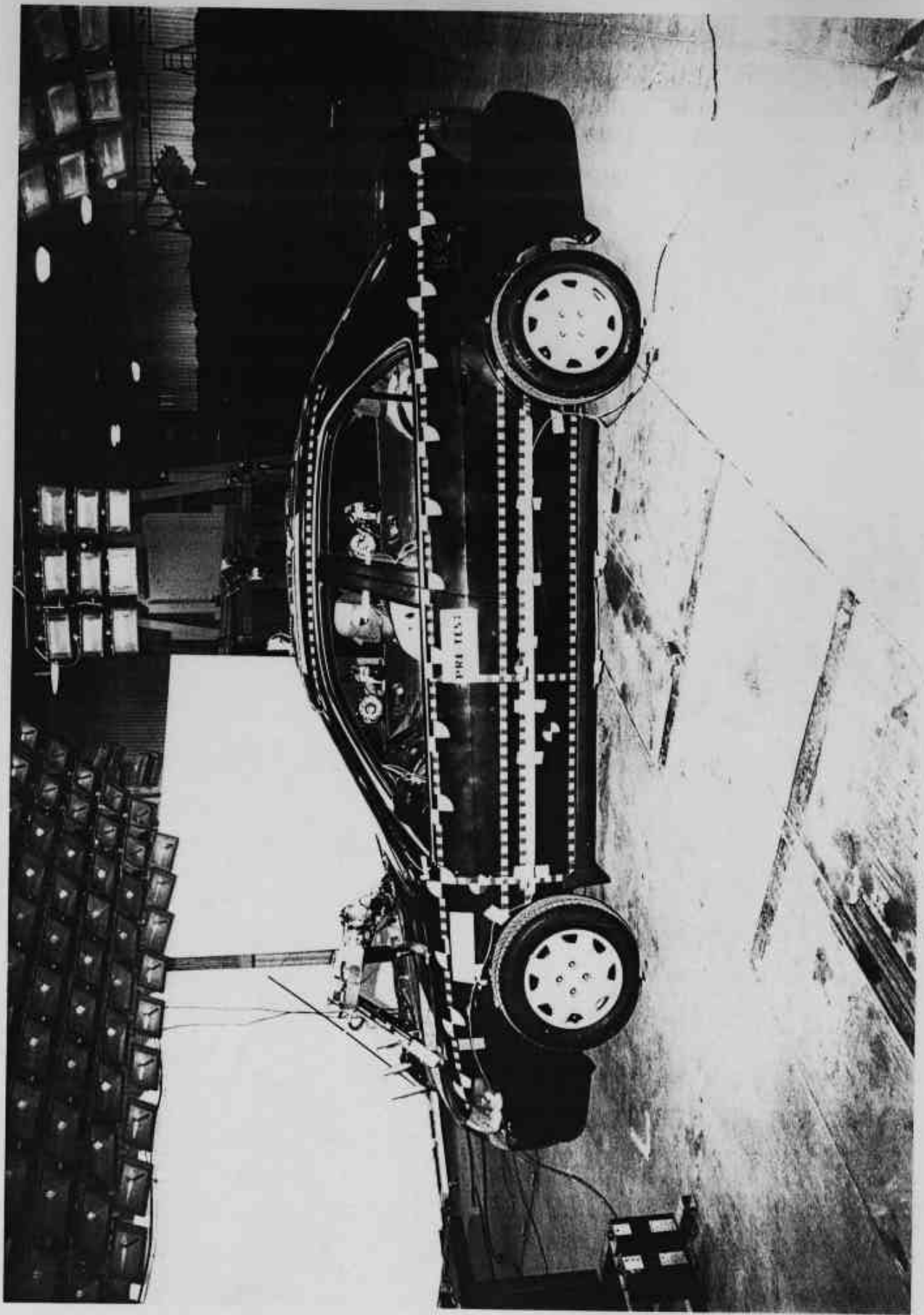


Photo No. A-4 - Post-Test Rear View of Test Vehicle



A-5

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

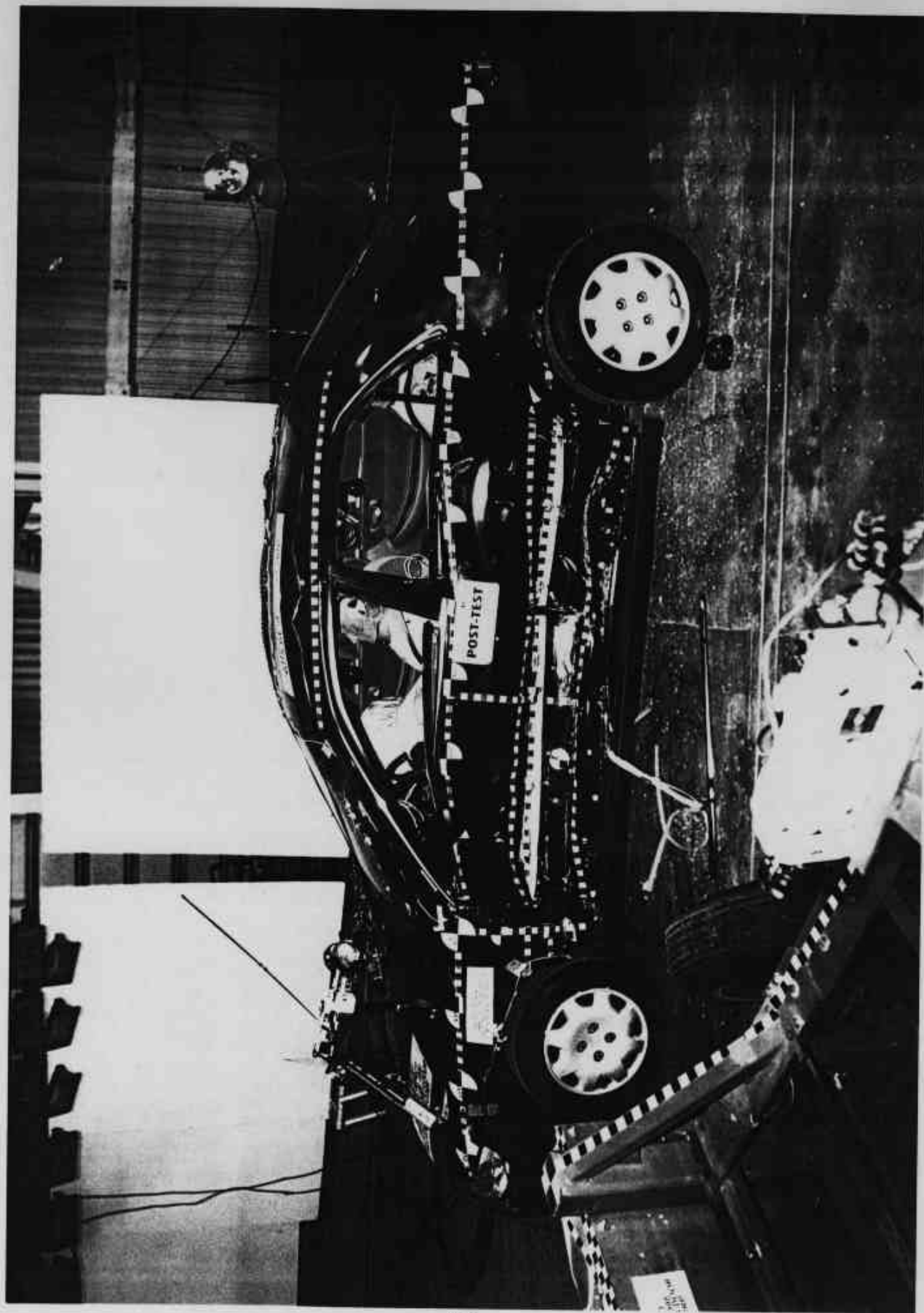


Photo No. A-6 - Post-Test Left Side View of Test Vehicle

A-6

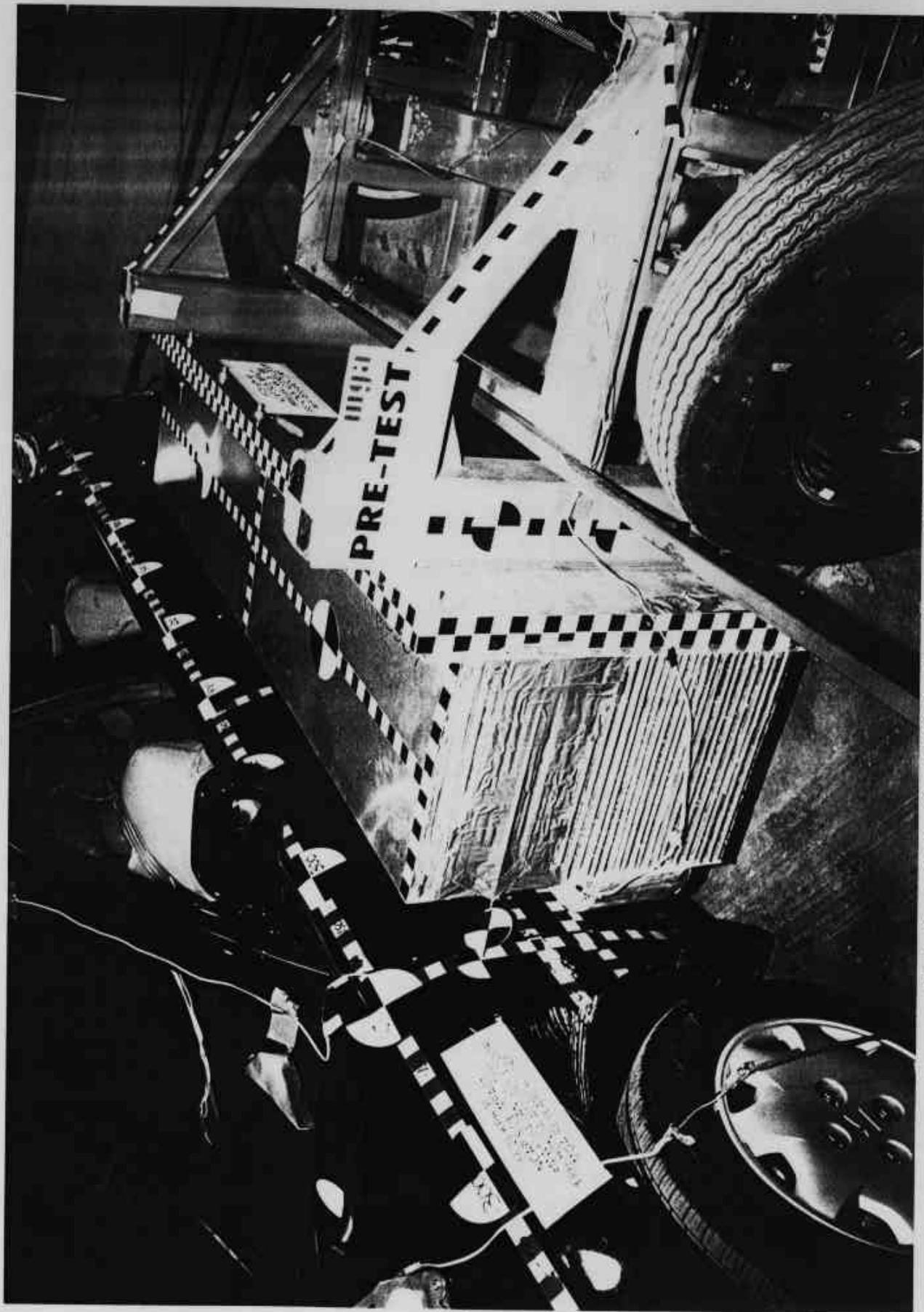


Photo No. A-7 - Pre-Test MDB Positioned Against Vehicle (left side)

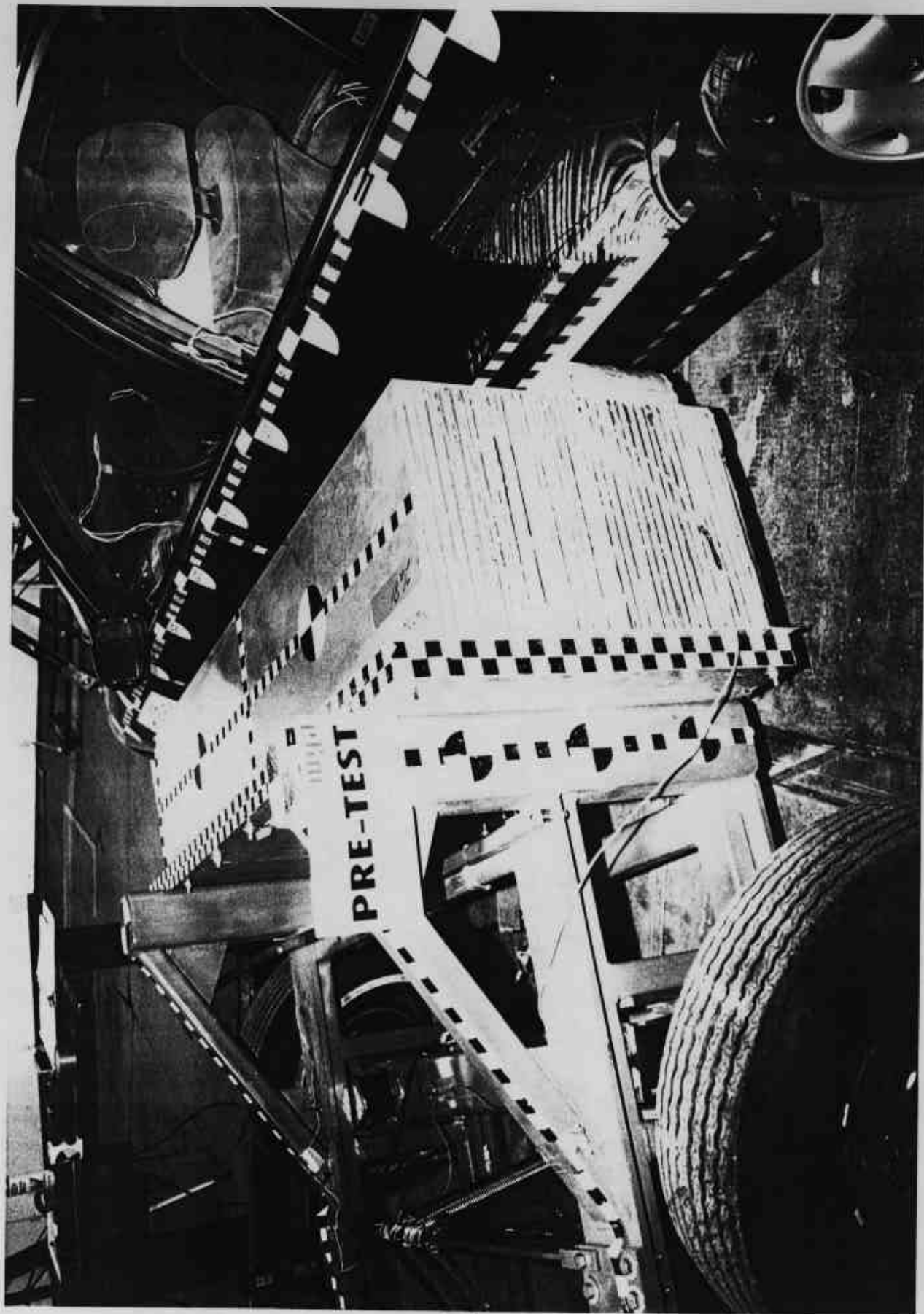


Photo No. A-8 - Pre-Test MDB Positioned Against Vehicle (right side)

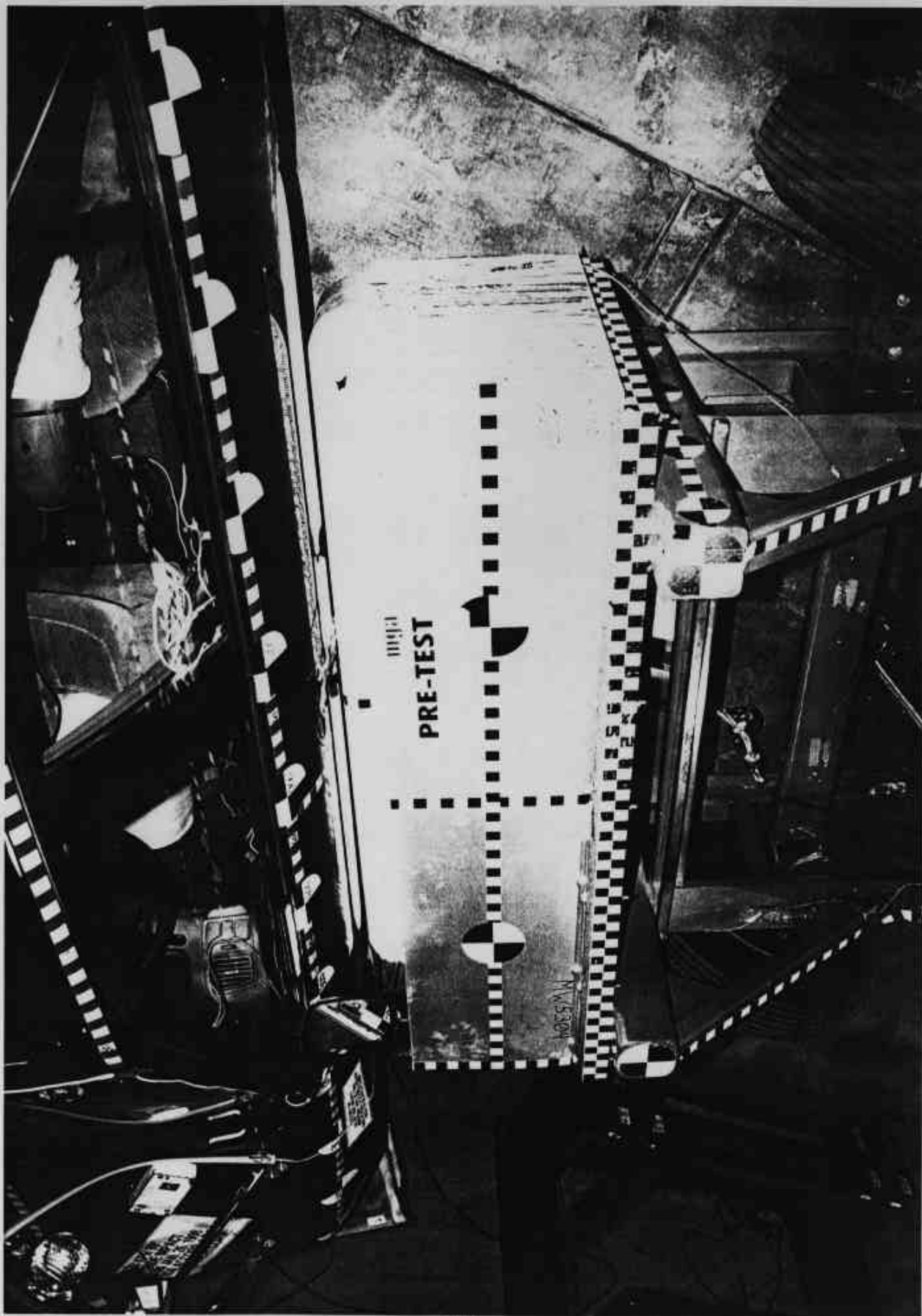


Photo No. A-9 - Pre-Test MDB Positioned Against Vehicle Overhead View

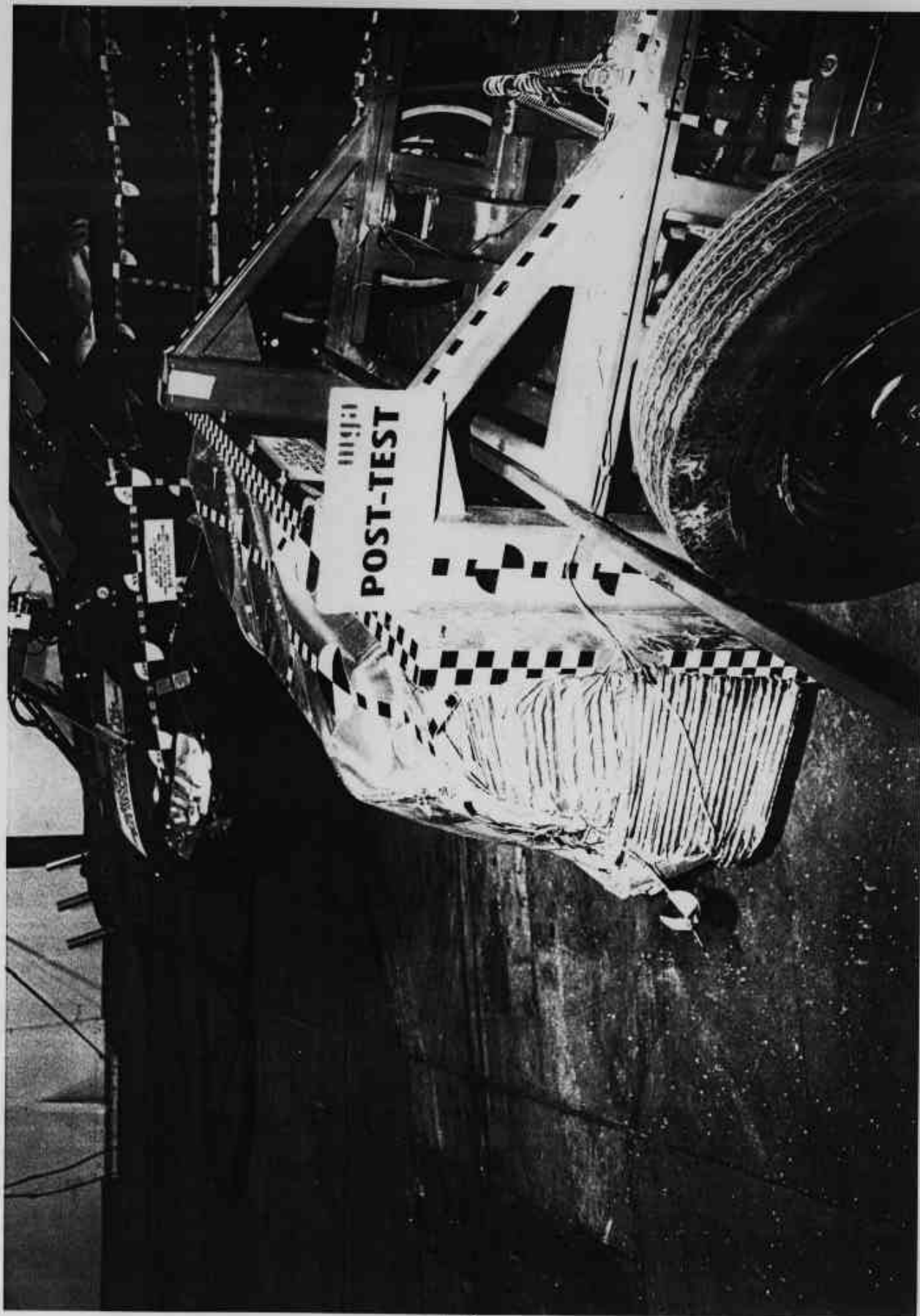


Photo No. A-10 - Post-Test MDB Positioned Against Vehicle (left side)

A-10

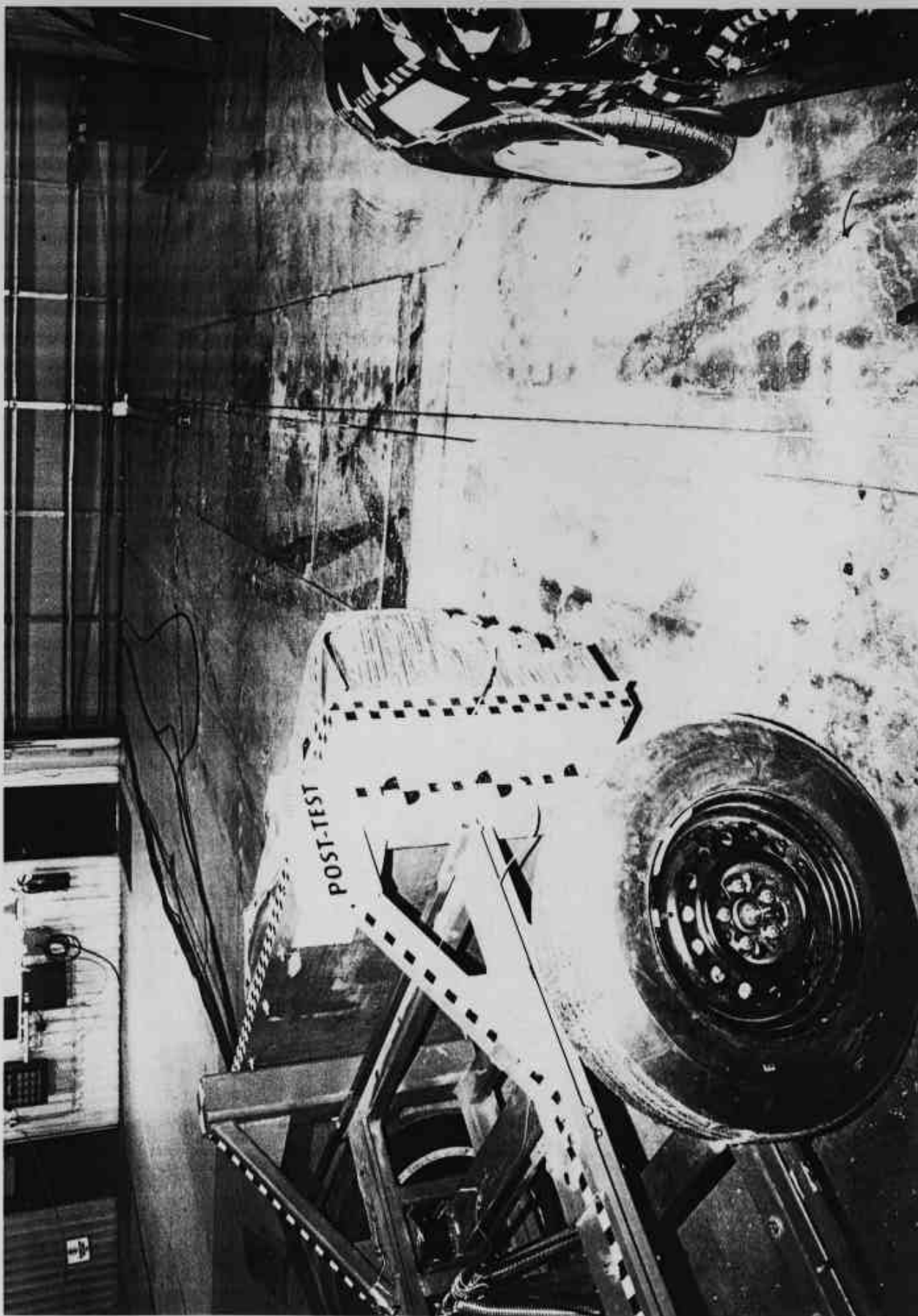


Photo No. A-11 - Post-Test MDB Positioned Against Vehicle (right side)

A-11

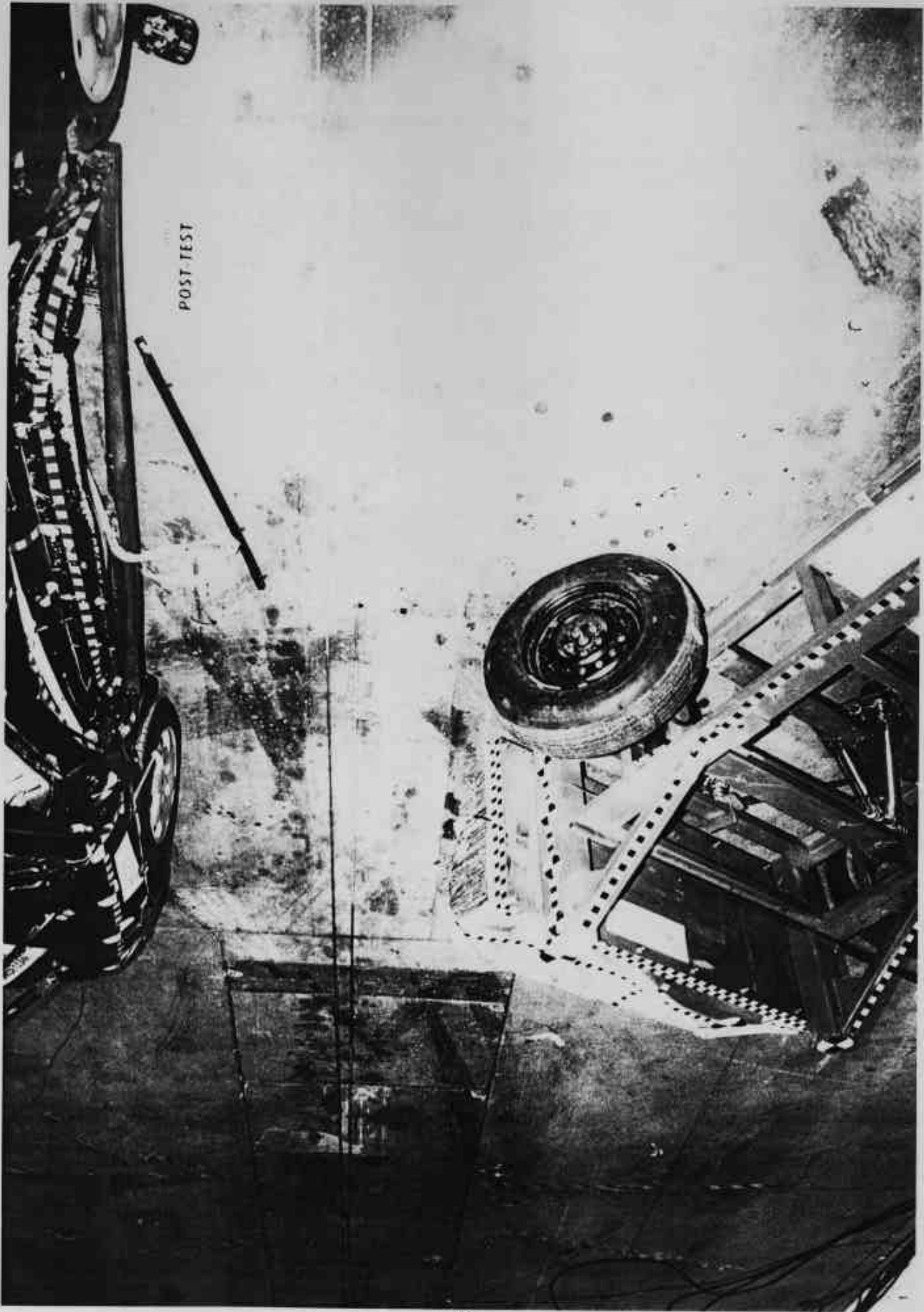


Photo No. A-12 - Post-Test MDB Positioned Against Vehicle Overhead View

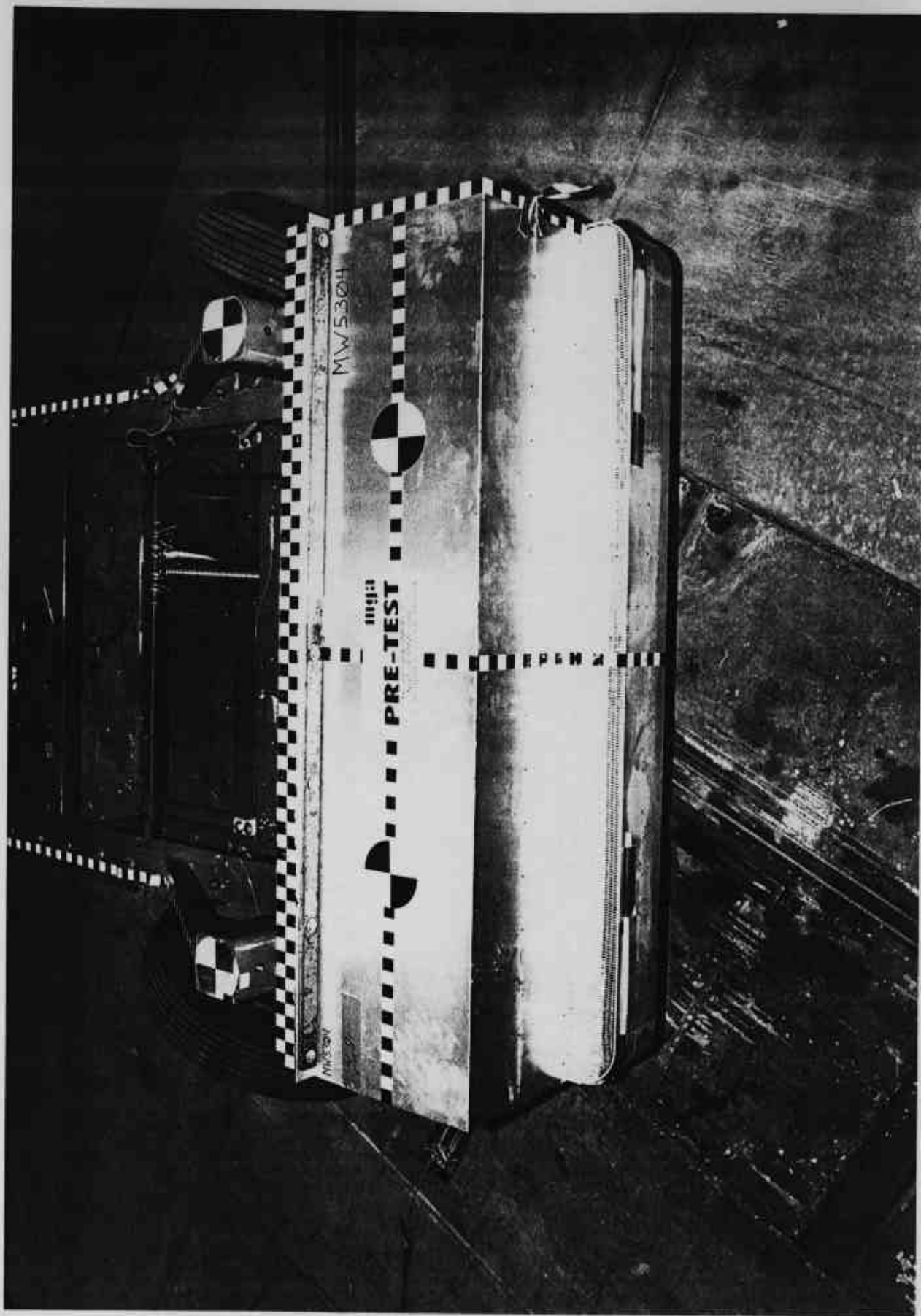


Photo No. A-13 - Pre-Test MDB Top View

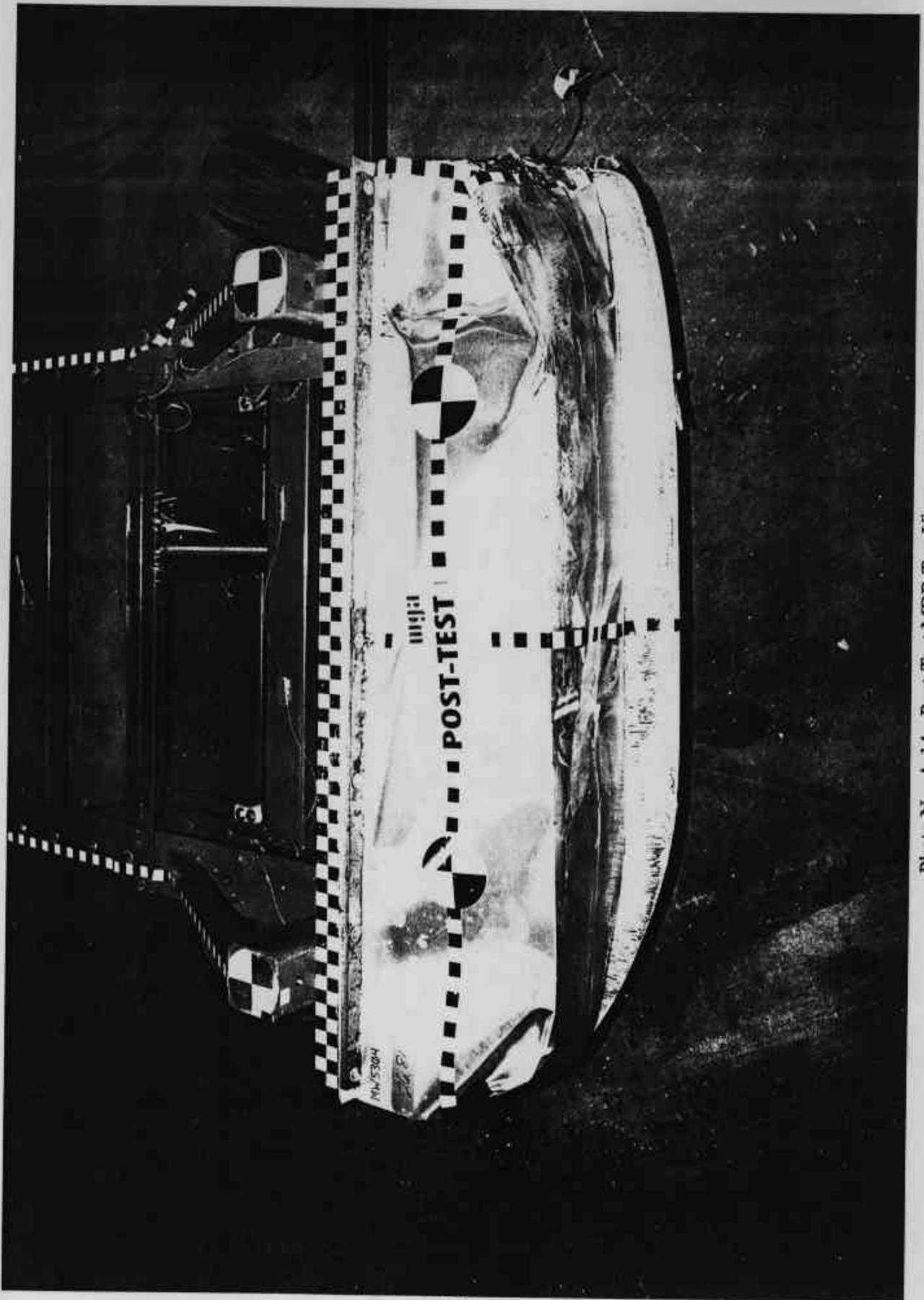
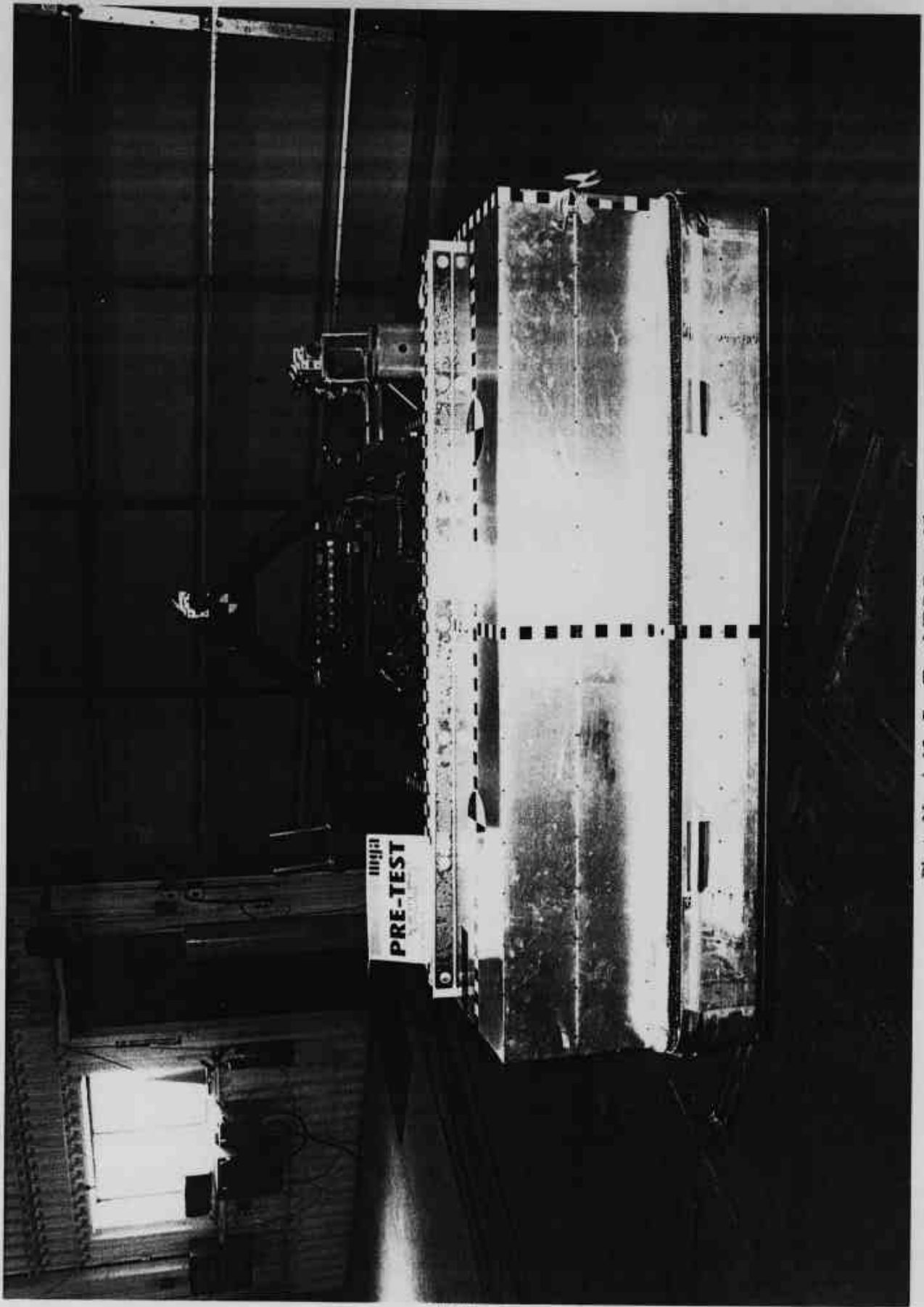


Photo No. A-14 - Post-Test MDB Top View



A-15

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

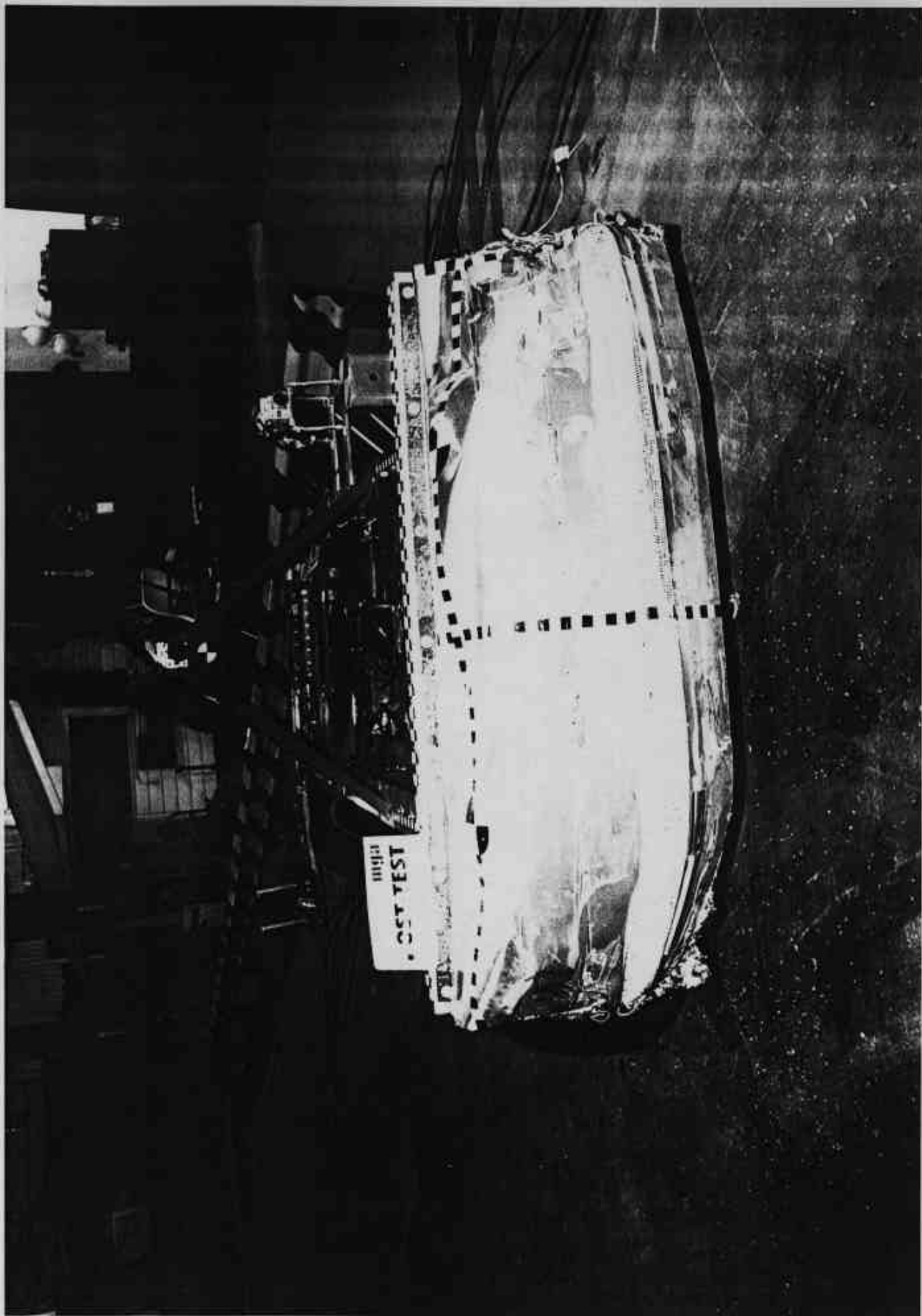


Photo No. A-16 - Post-Test MDB Front View

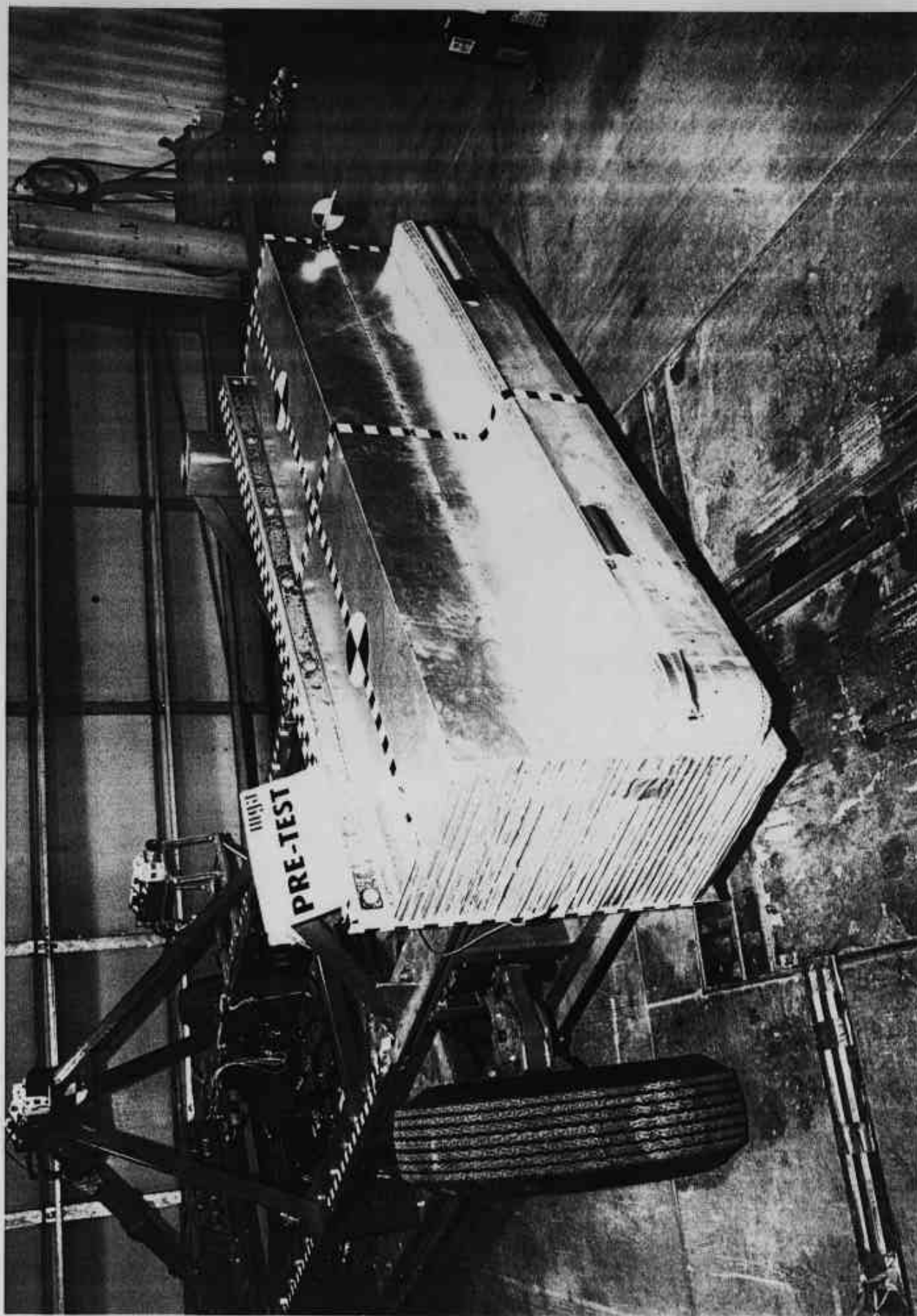


Photo No. A-17 - Pre-Test MDB Right Side View

A-17

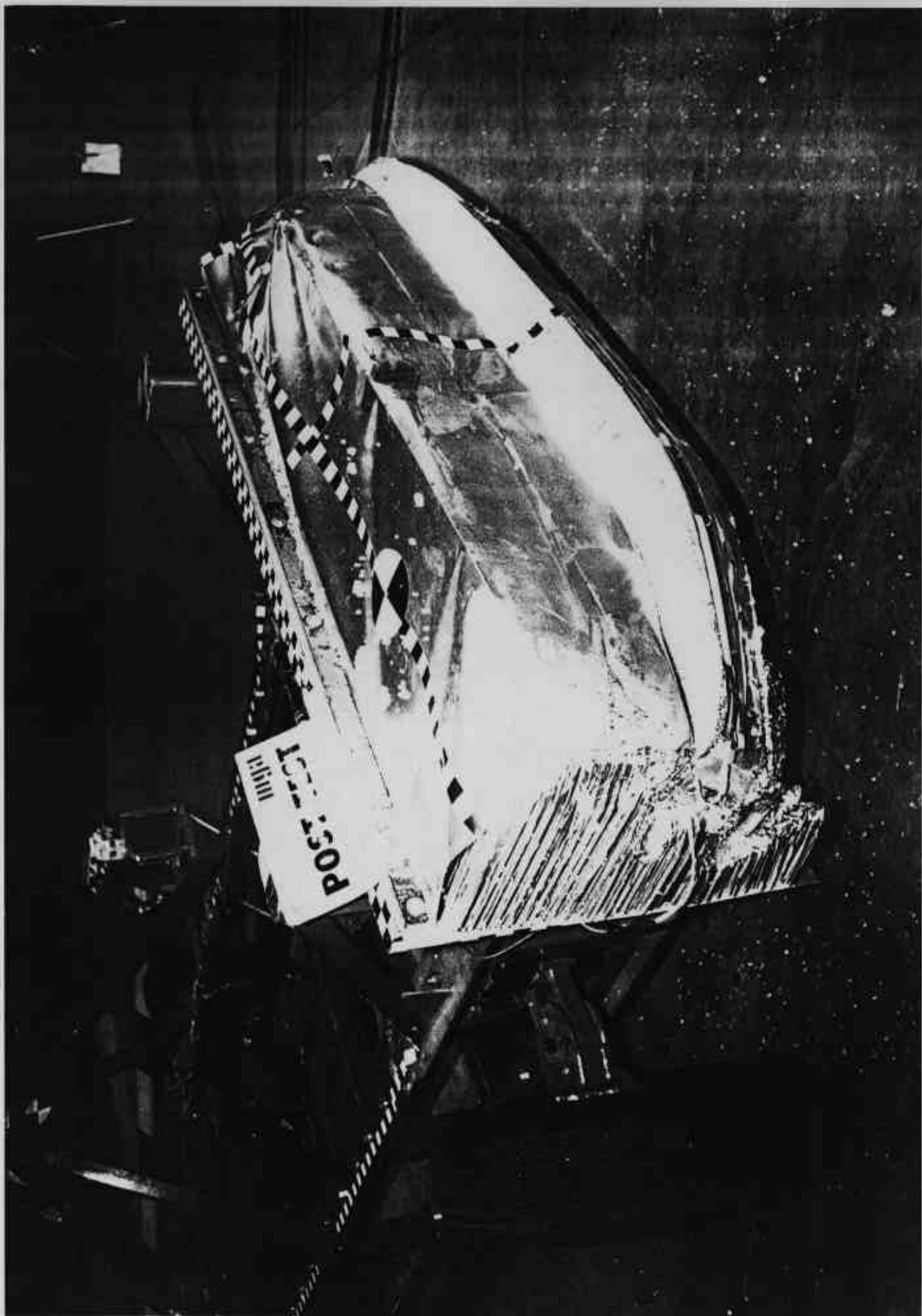


Photo No. A-18 - Post-Test MDB Right Side View

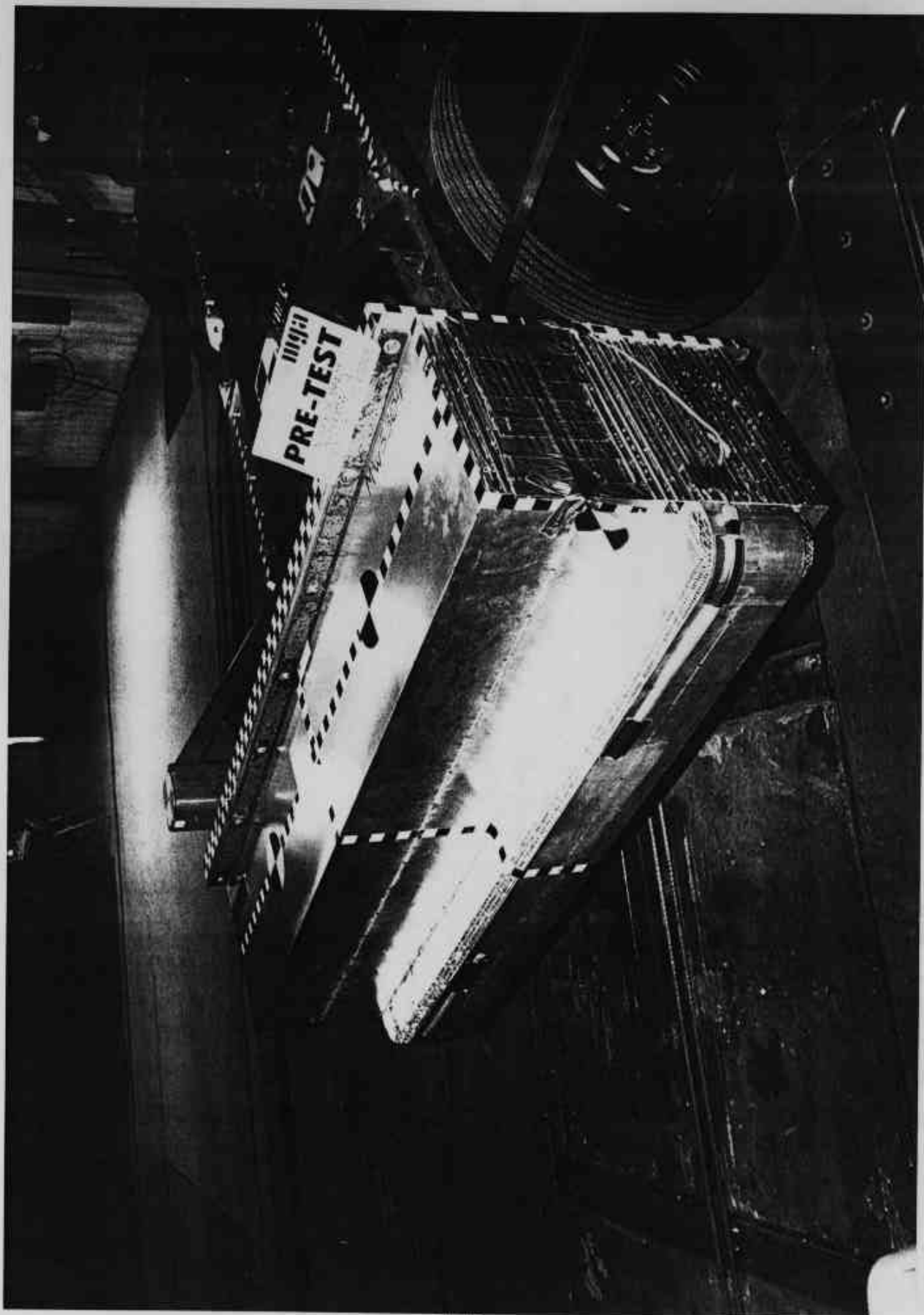


Photo No. A-19 - Pre-Test MDB Left Side View

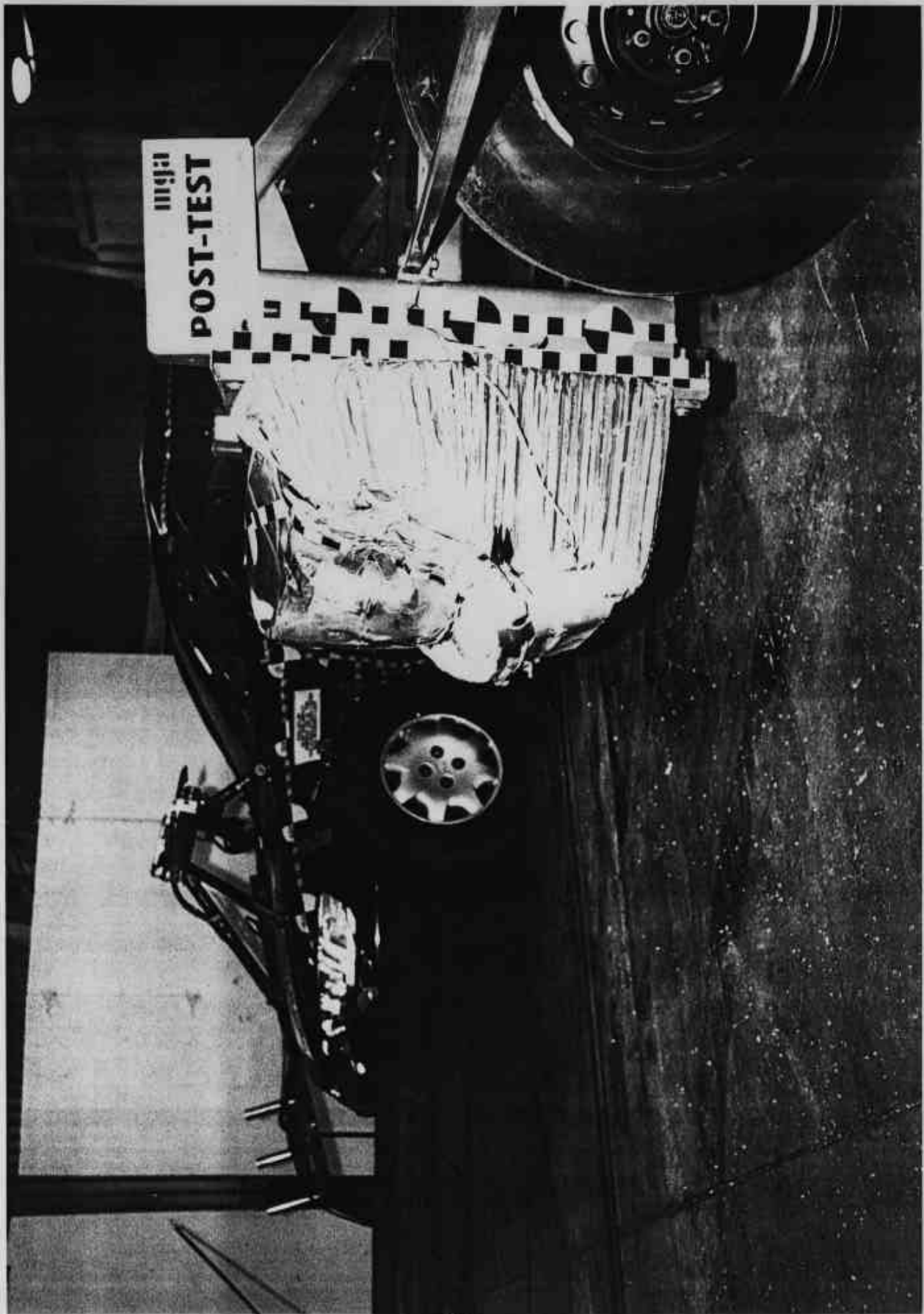


Photo No. A-20 - Post-Test MDB Left Side View

A-20

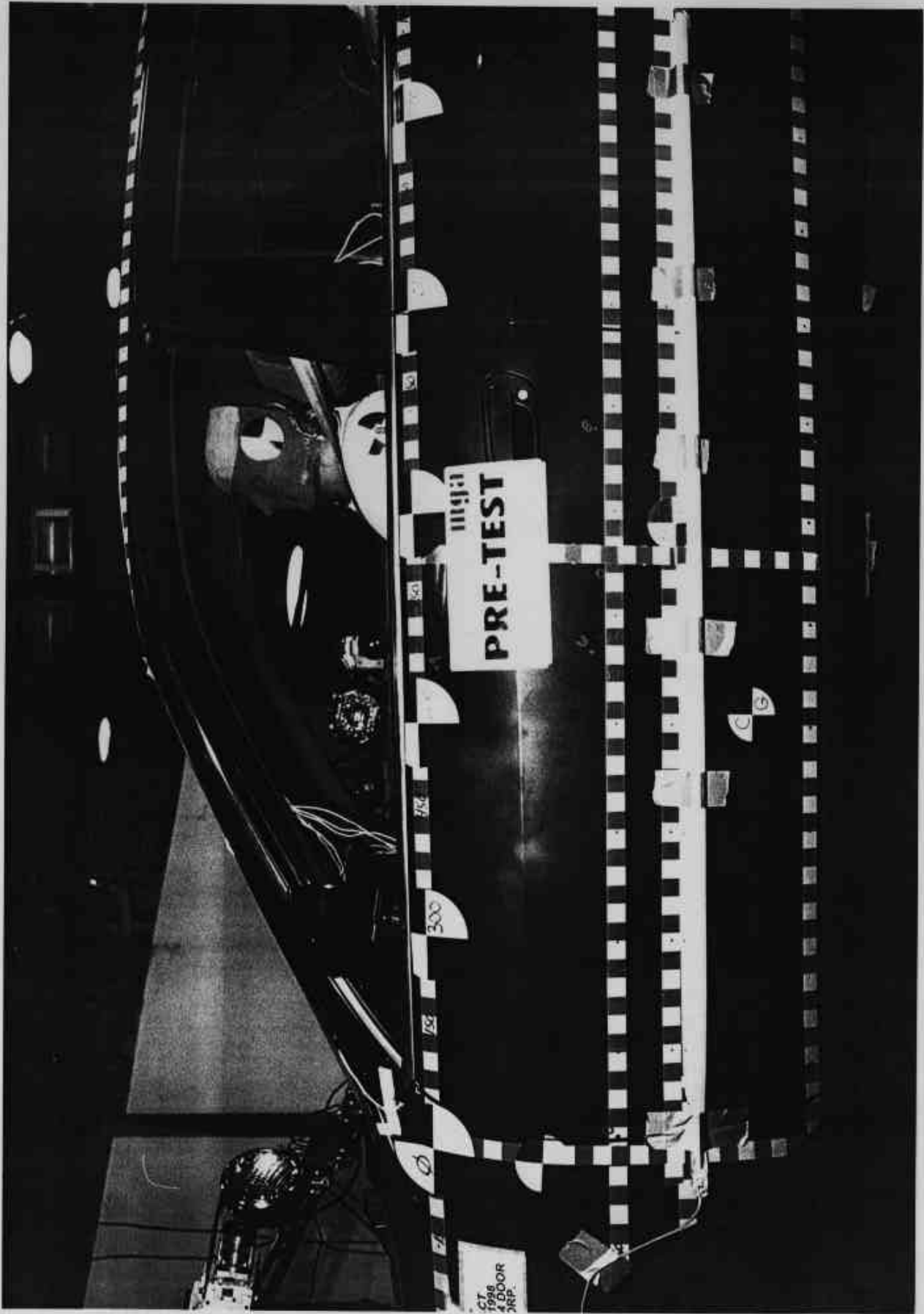


A-21

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



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



A-23

Photo No. A-23 - Pre-Test Driver Dummy Left Side View

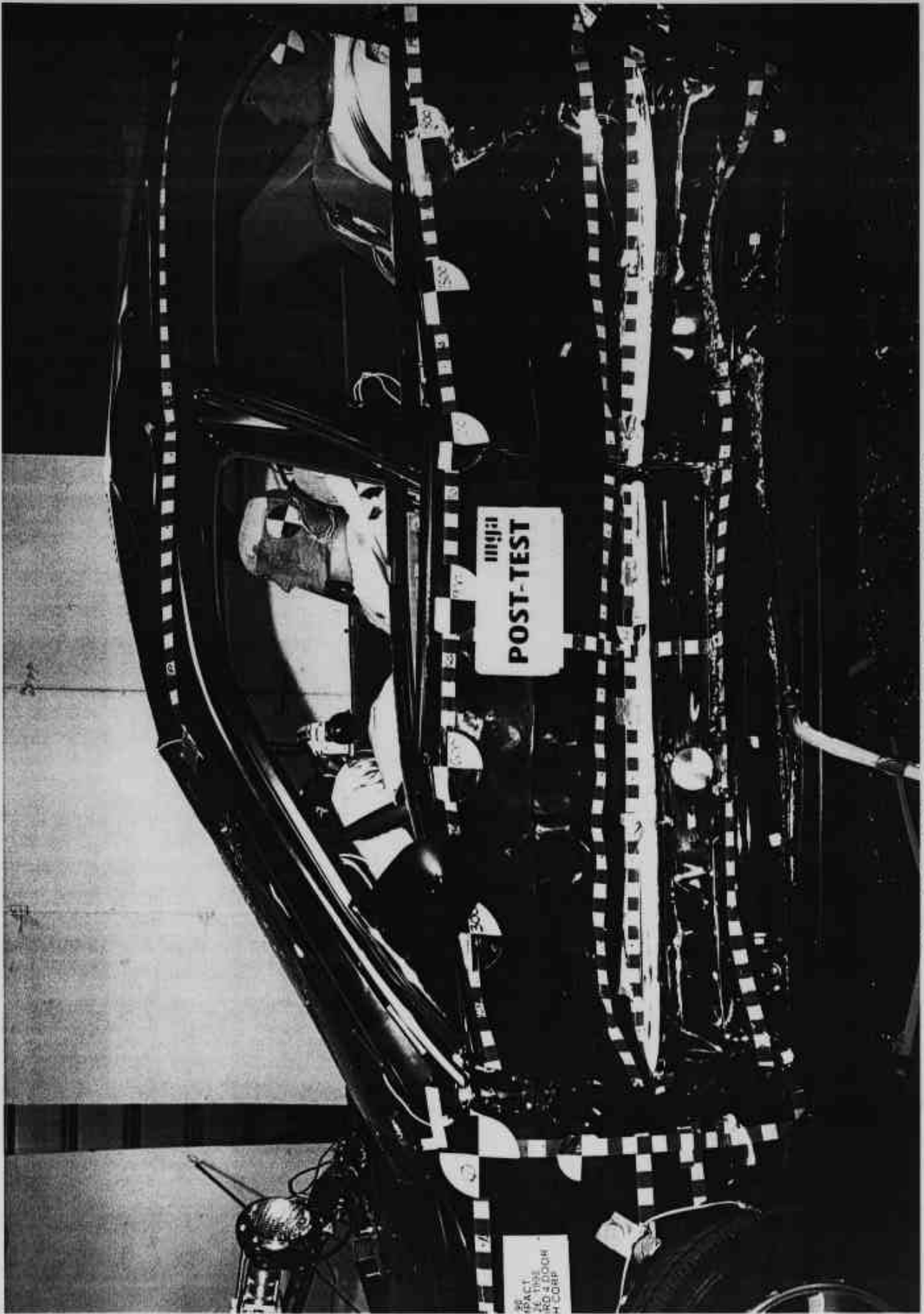


Photo No. A-24 - Post-Test Driver Dummy Left Side View

A-24



A-25

Photo No. A-25 - Pre-Test Driver Dummy Left Side View (Door Open)



Photo No. A-26 - Pre-Test Driver Dummy Shoulder and Door Top View

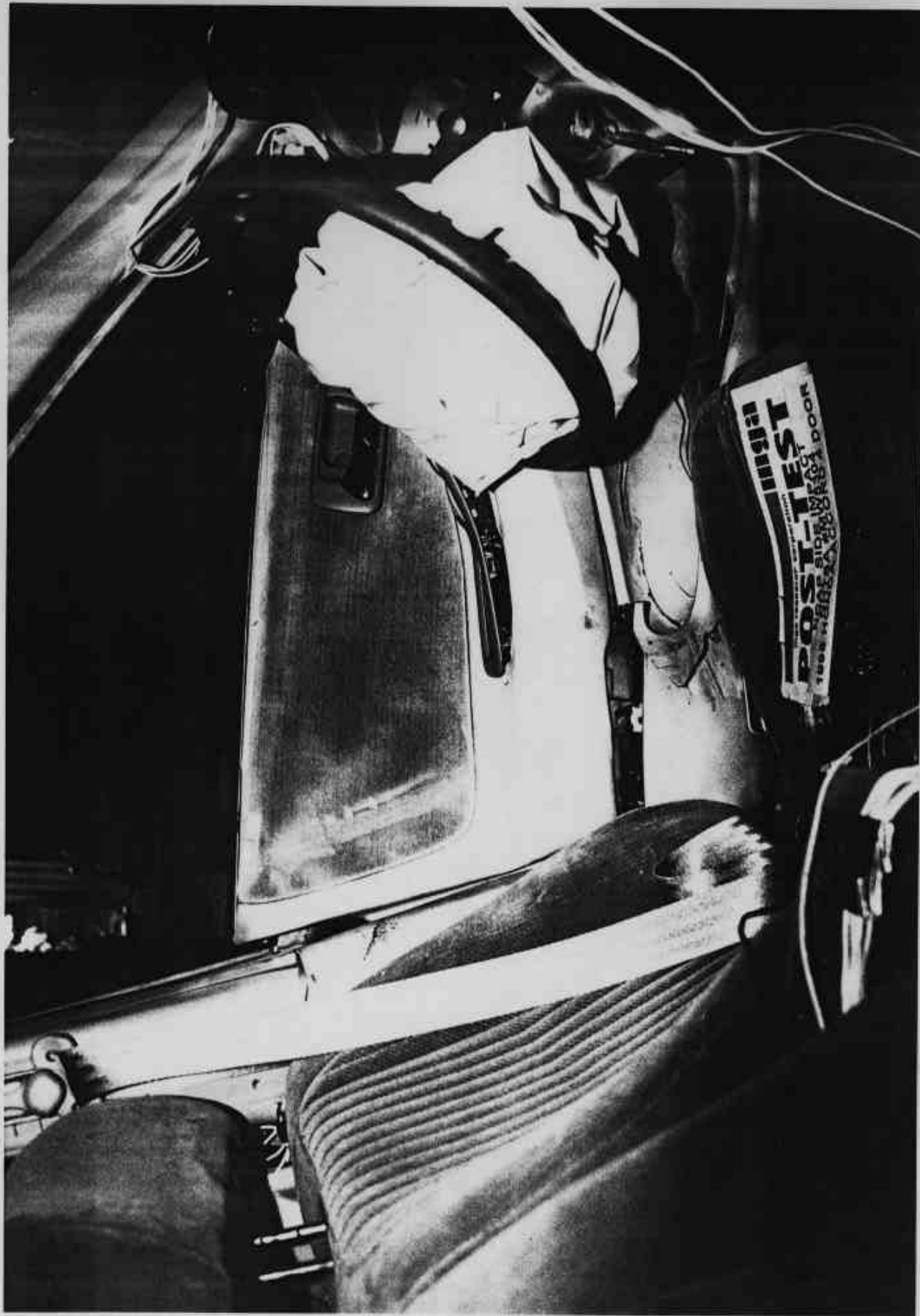


A-27

Photo No. A-27 - Post-Test Driver Dummy Shoulder and Door Top View



Photo No. A-28 - Post-Test Driver Dummy Contact



A-29

Photo No. A-29 - Post-Test Driver Dummy Contact



A-30

Photo No. A-30 - Post-Test Driver Dummy Head Contact



A-31

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

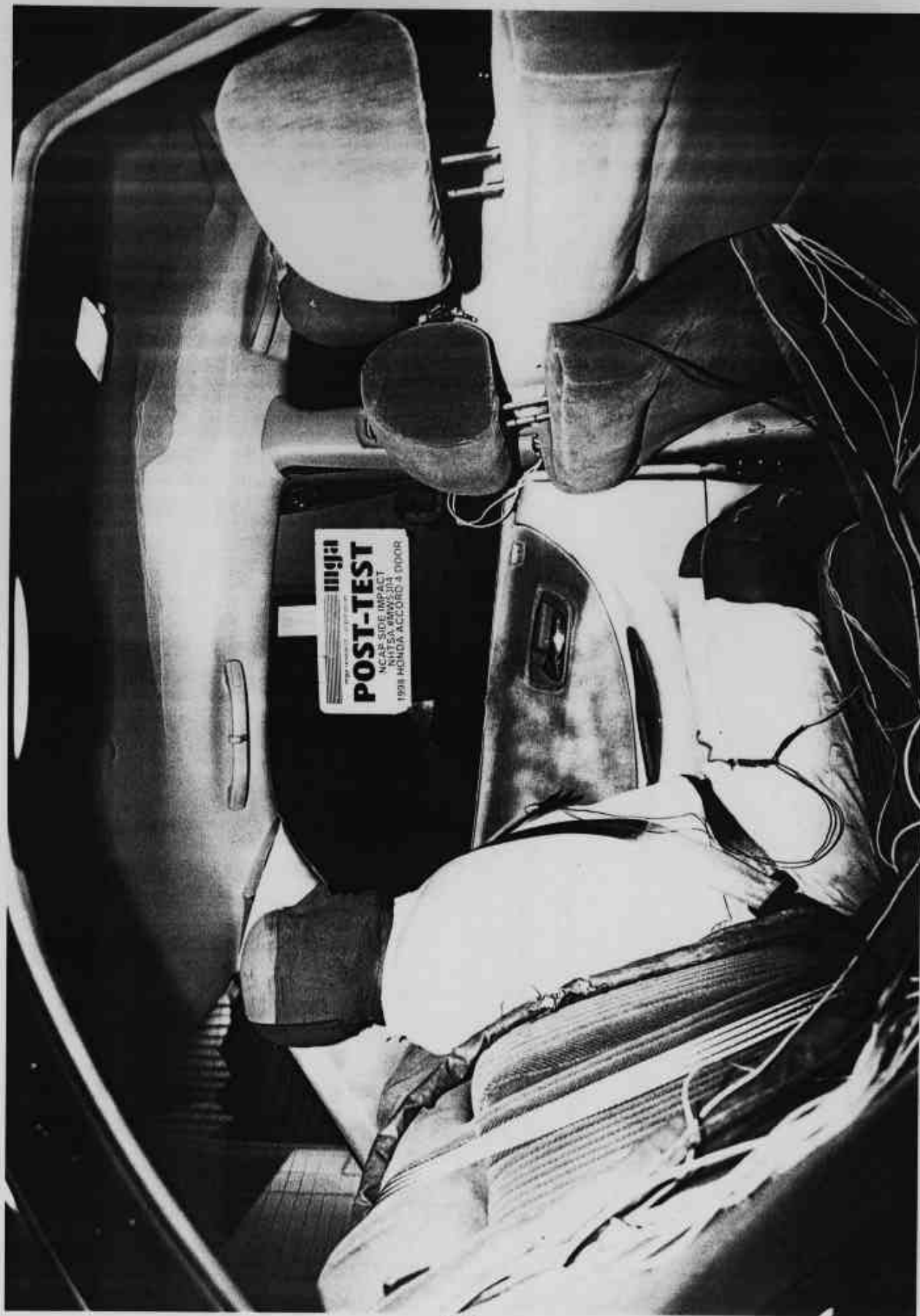


Photo No. A-32 - Post-Test Passenger Dummy Right Side View

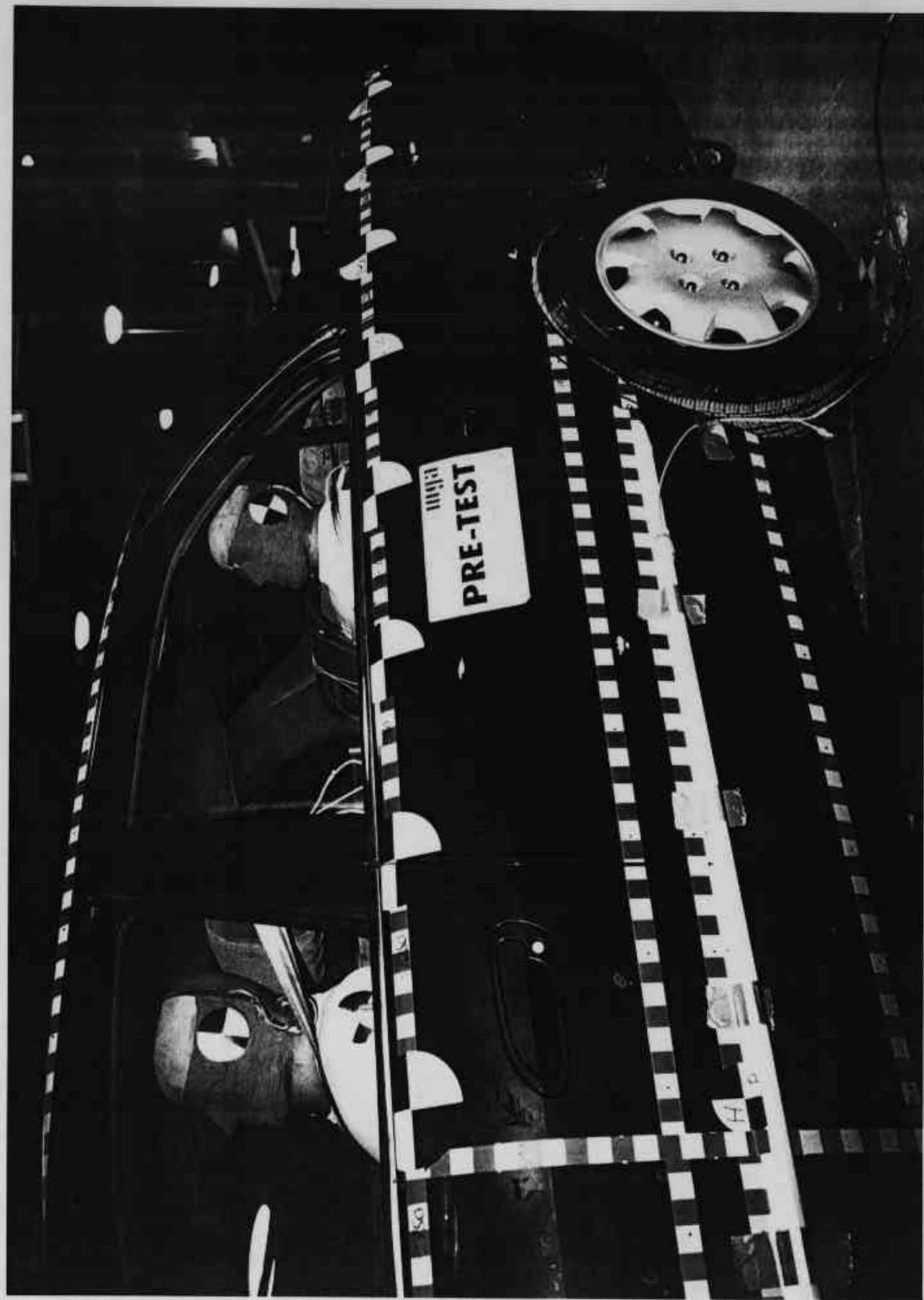
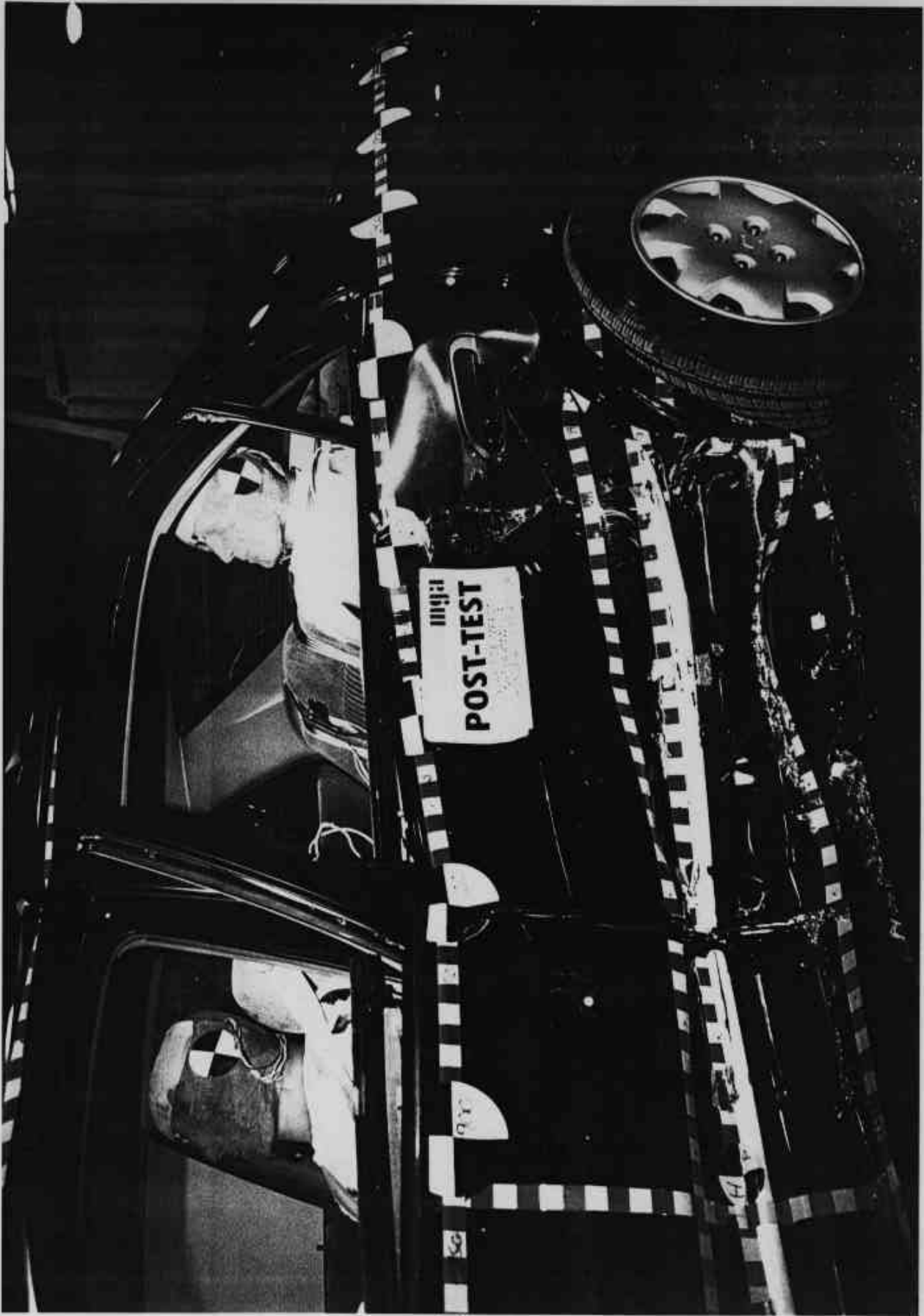


Photo No. A-33 - Pre-Test Passenger Dummy Left Side View



A-34

Photo No. A-34 - Post-Test Passenger Dummy Left Side View

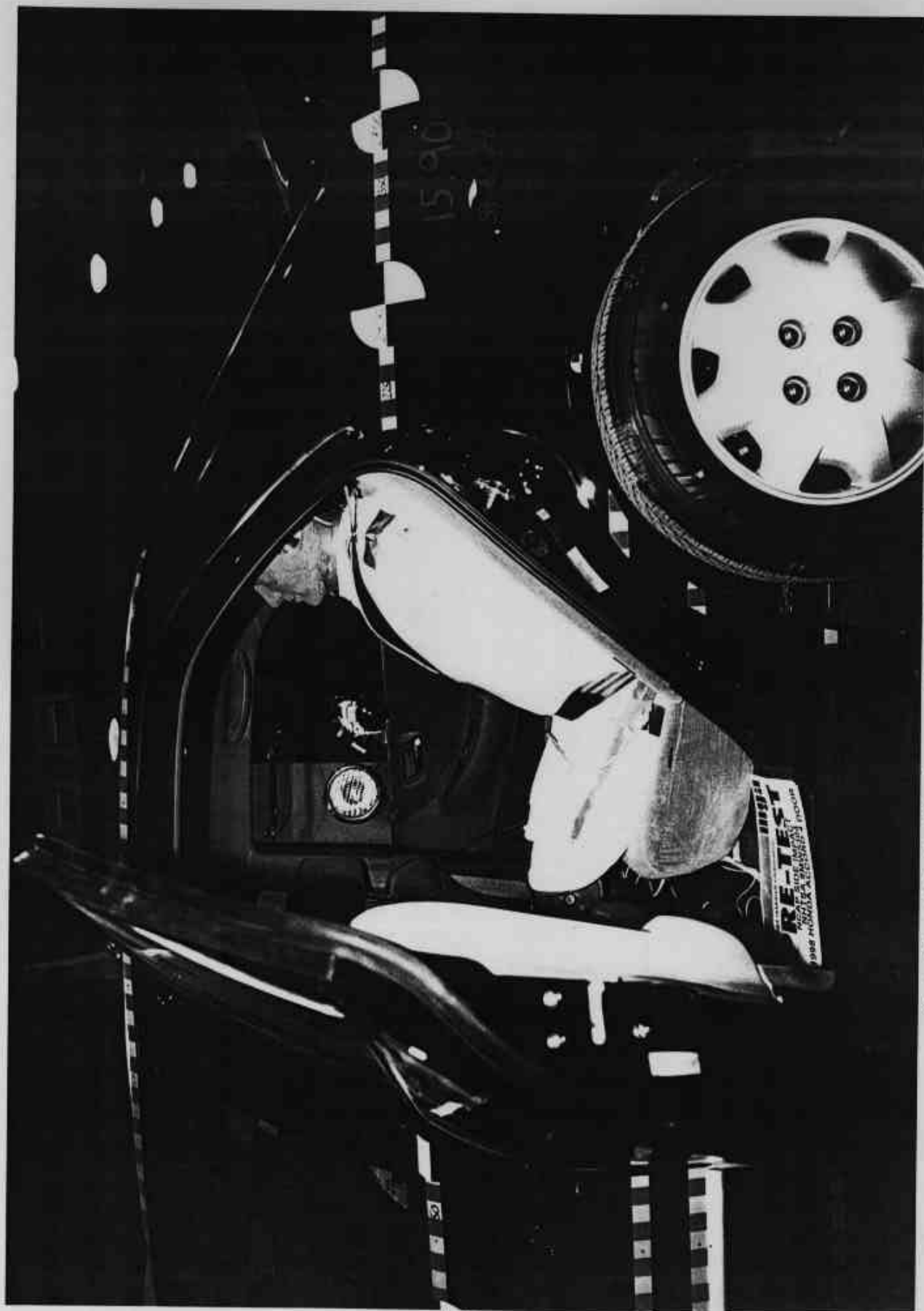
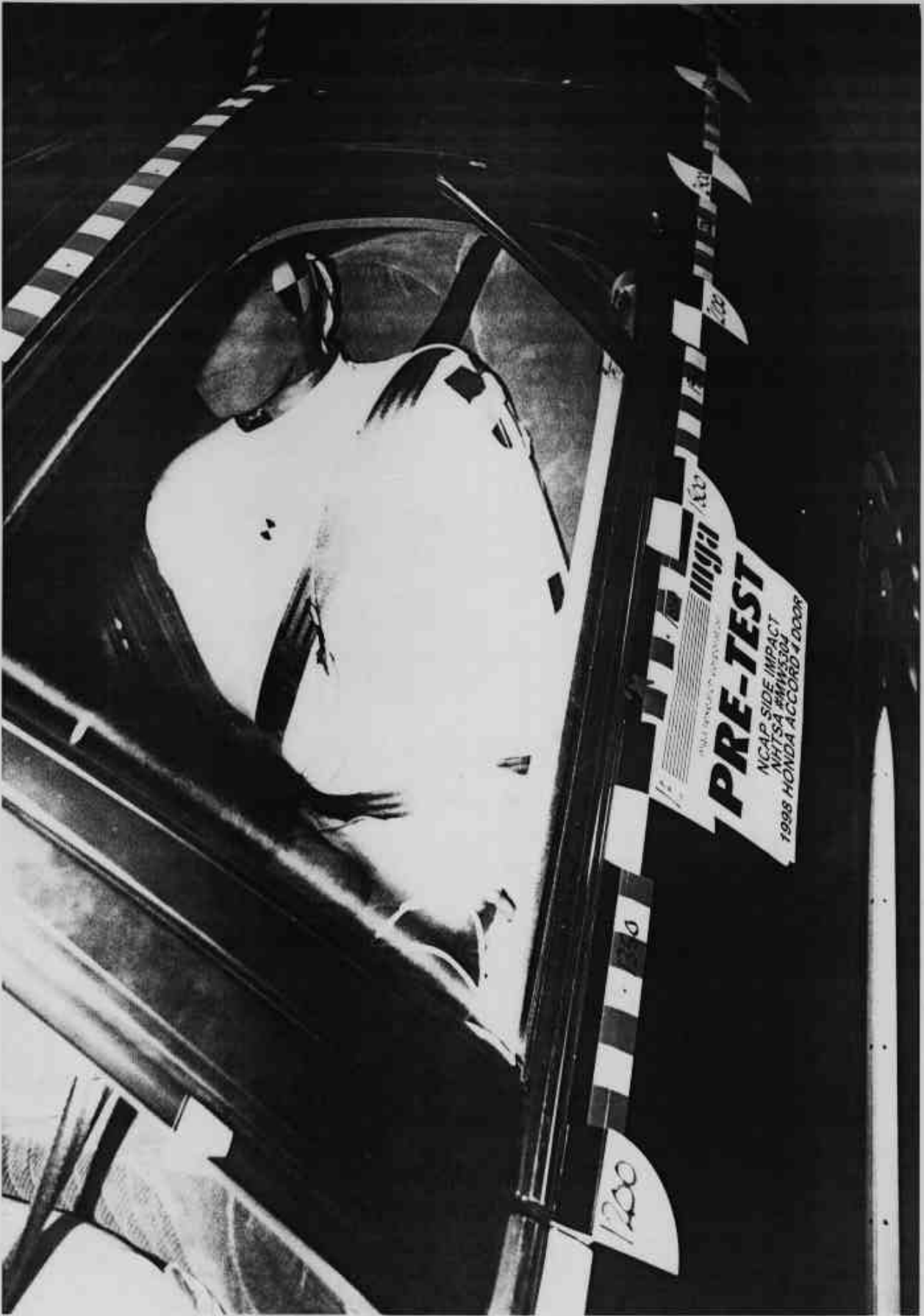


Photo No. A-35 - Pre-Test Passenger Dummy Left Side View (Door Open)

A-35



A-36

Photo No. A-36 - Pre-Test Passenger Dummy Shoulder and Door Top View



Photo No. A-37 - Post-Test Passenger Dummy Shoulder and Door Top View

A-37



Photo No. A-38 - Post-Test Passenger Dummy Contact

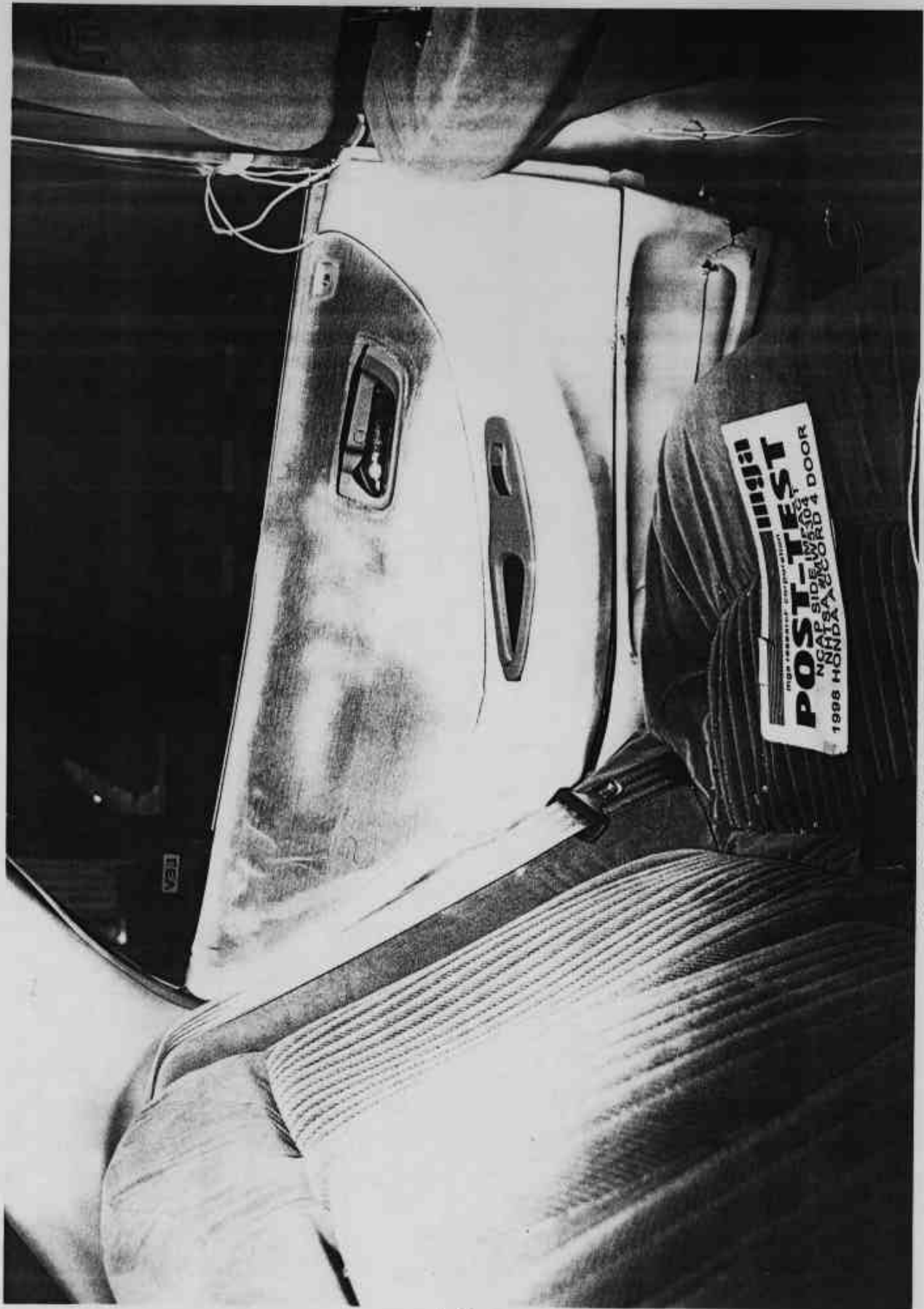


Photo No. A-39 - Post-Test Passenger Dummy Contact



Photo No. A-40 - Post-Test Passenger Dummy Head Contact

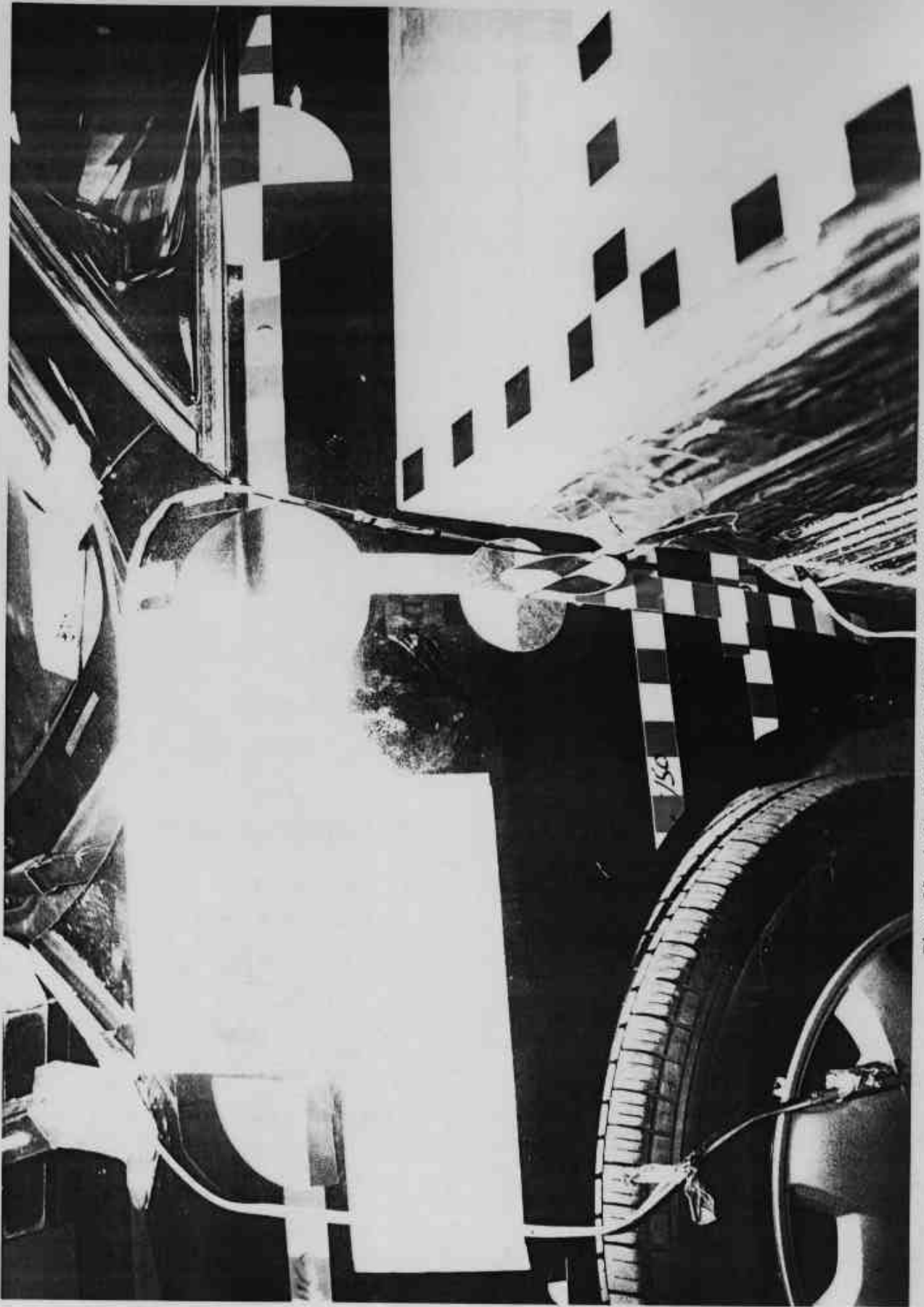
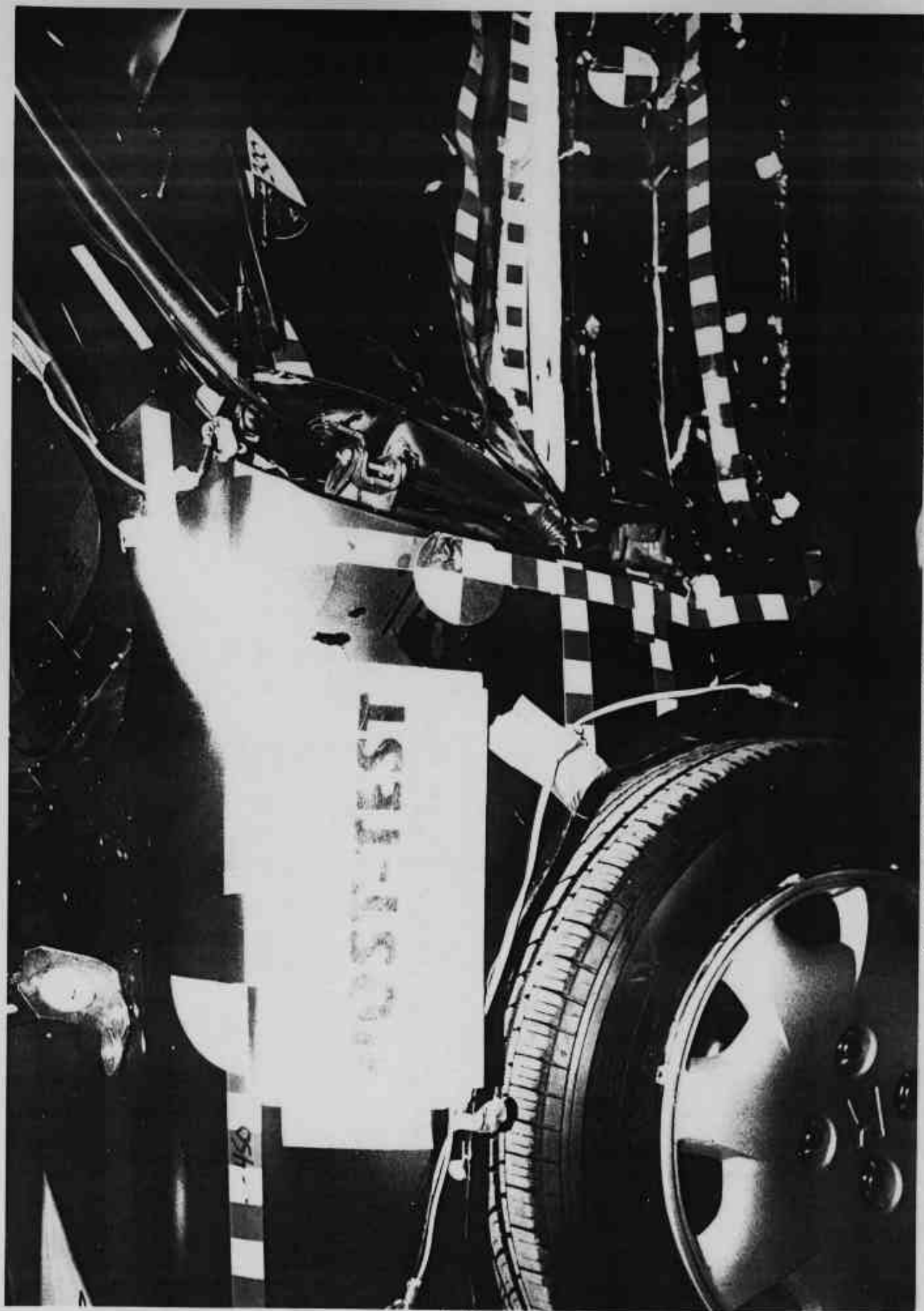


Photo No. A-41 - Pre-Test Left Front Impact Point on Vehicle

A-41



A-42

Photo No. A-42 - Post-Test Left Front Impact Point on Vehicle

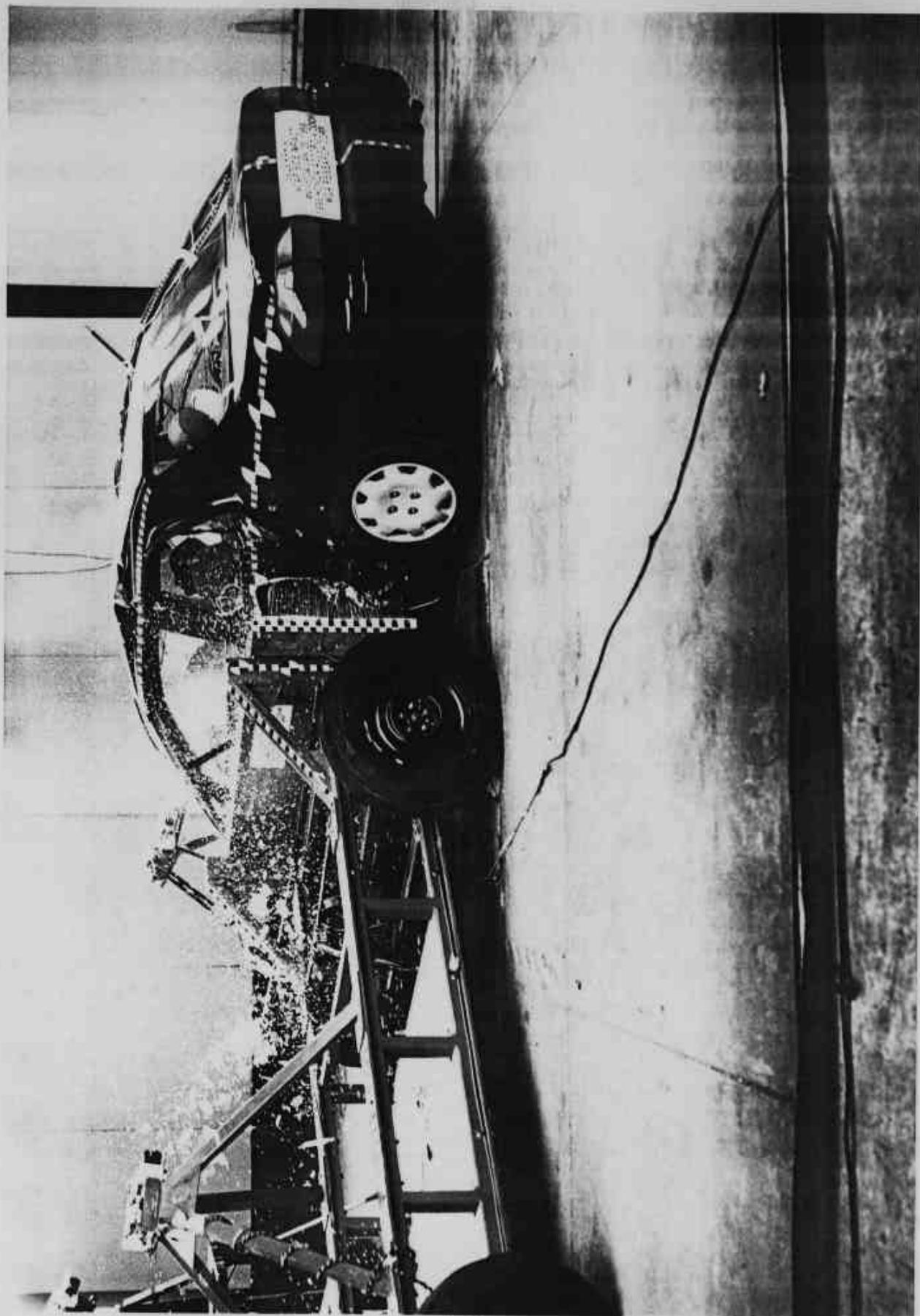


Photo No. A-43 - Impact

A-43



Photo No. A-44 - Sill Separation

A-44

11

MF. BY HONDA OF AMERICA MFG., INC. 10/97
GVWR 3990LBS GAWR F 2160LBS R 1895LBS
THIS VEHICLE CONFORMS TO ALL APPLICABLE
FEDERAL MOTOR VEHICLE SAFETY BUMPER,
AND THEFT PREVENTION STANDARDS IN EFFECT
ON THE DATE OF MANUFACTURE SHOWN ABOVE:

V.I.N.

1HGCG5647WA045201

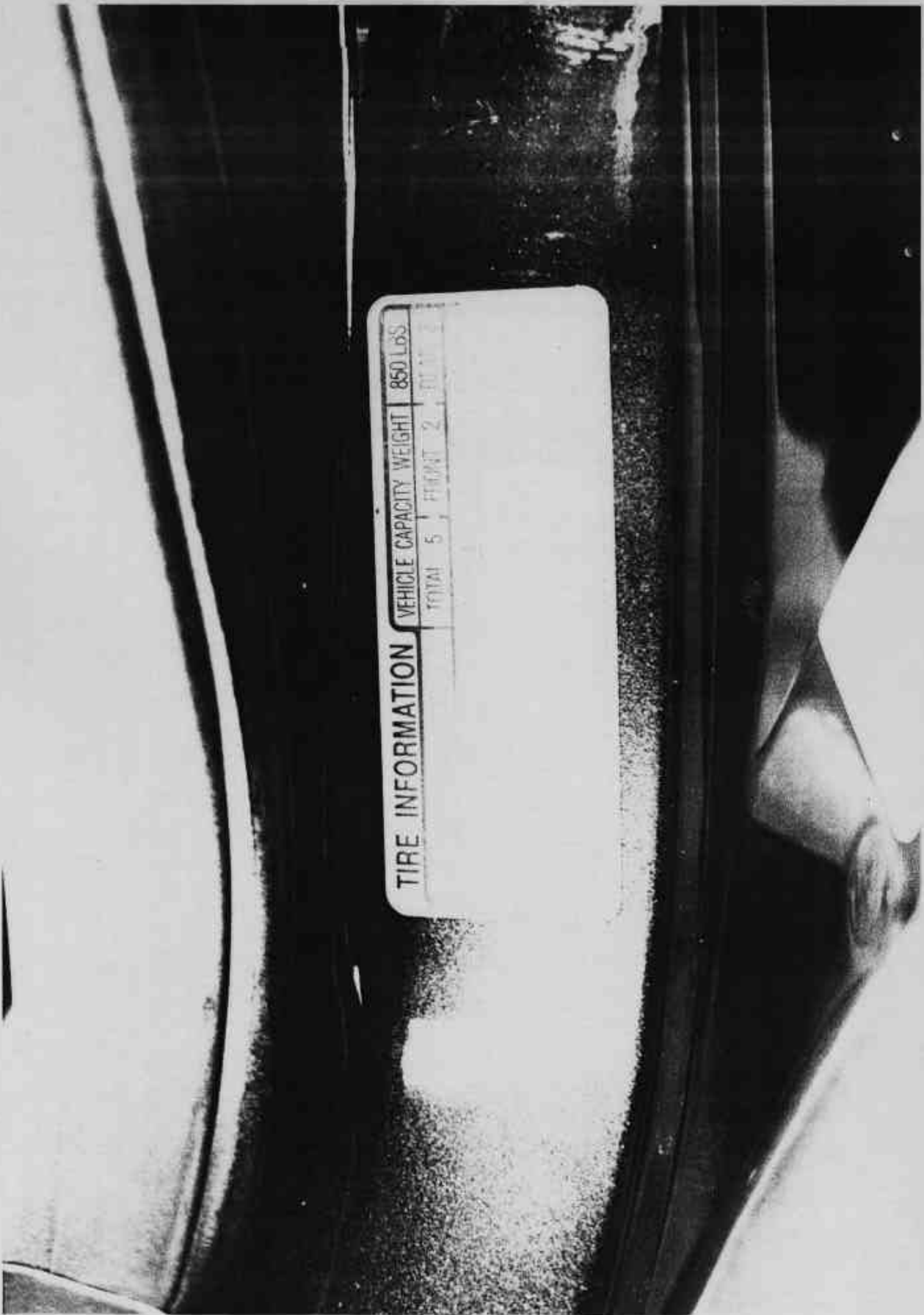


MADE IN U.S.A.

PASSENGER CAR

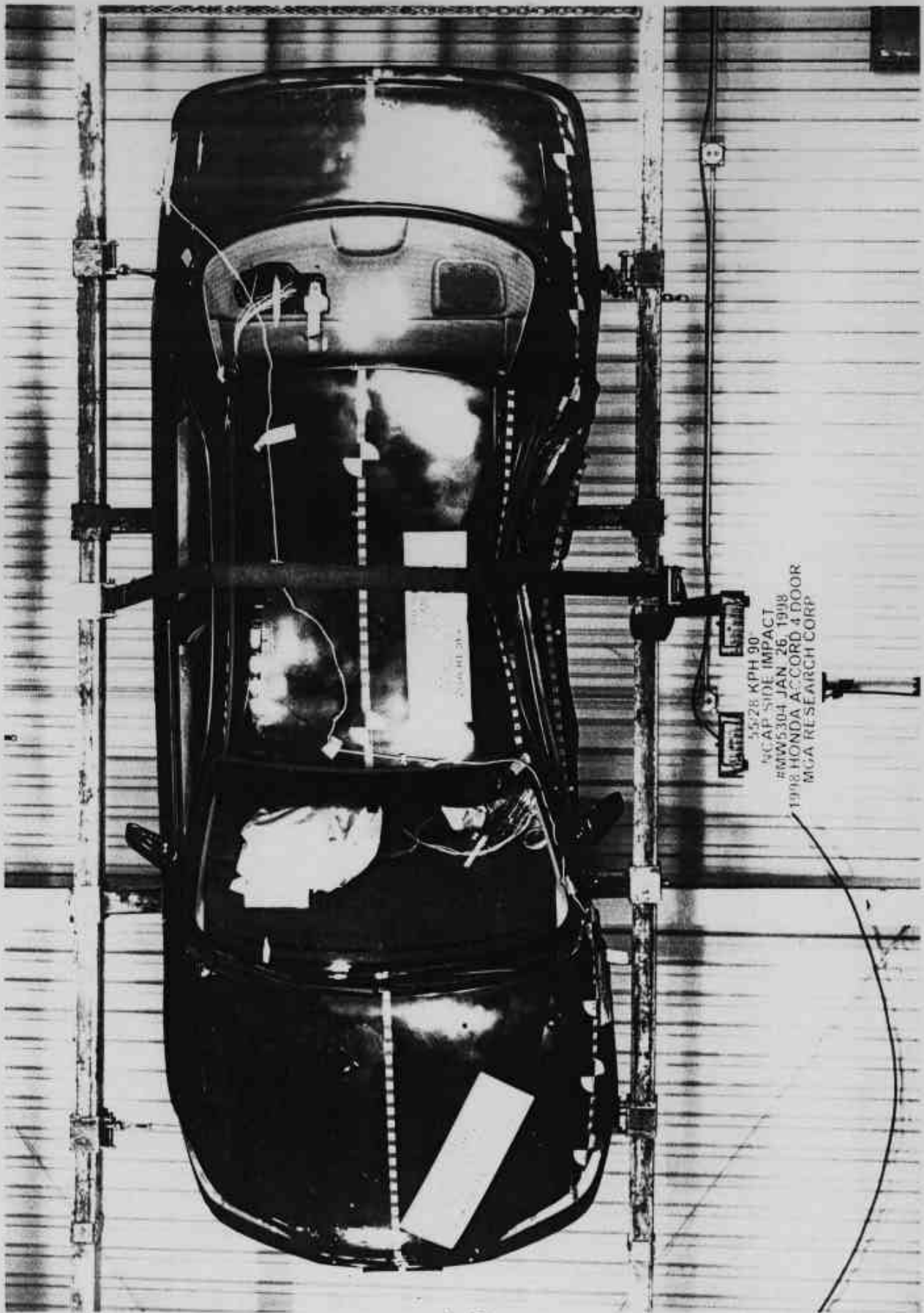
A-45

Photo No. A-45 - Vehicle Certification Label



A-46

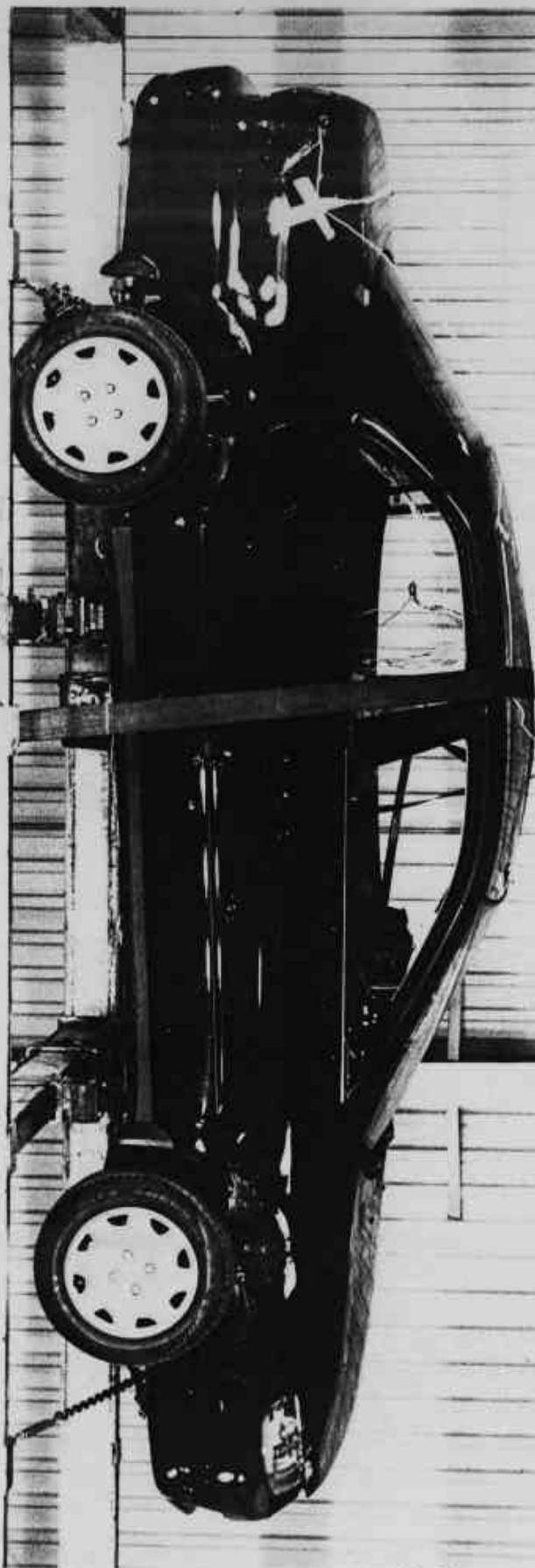
Photo No. A-46 - Tire Placard



35/28 KPH 90
N/CAP SIDE IMPACT
#MW5304 JAN. 26, 1998
1998 HONDA ACCORD 4 DOOR
MGA RESEARCH CORP

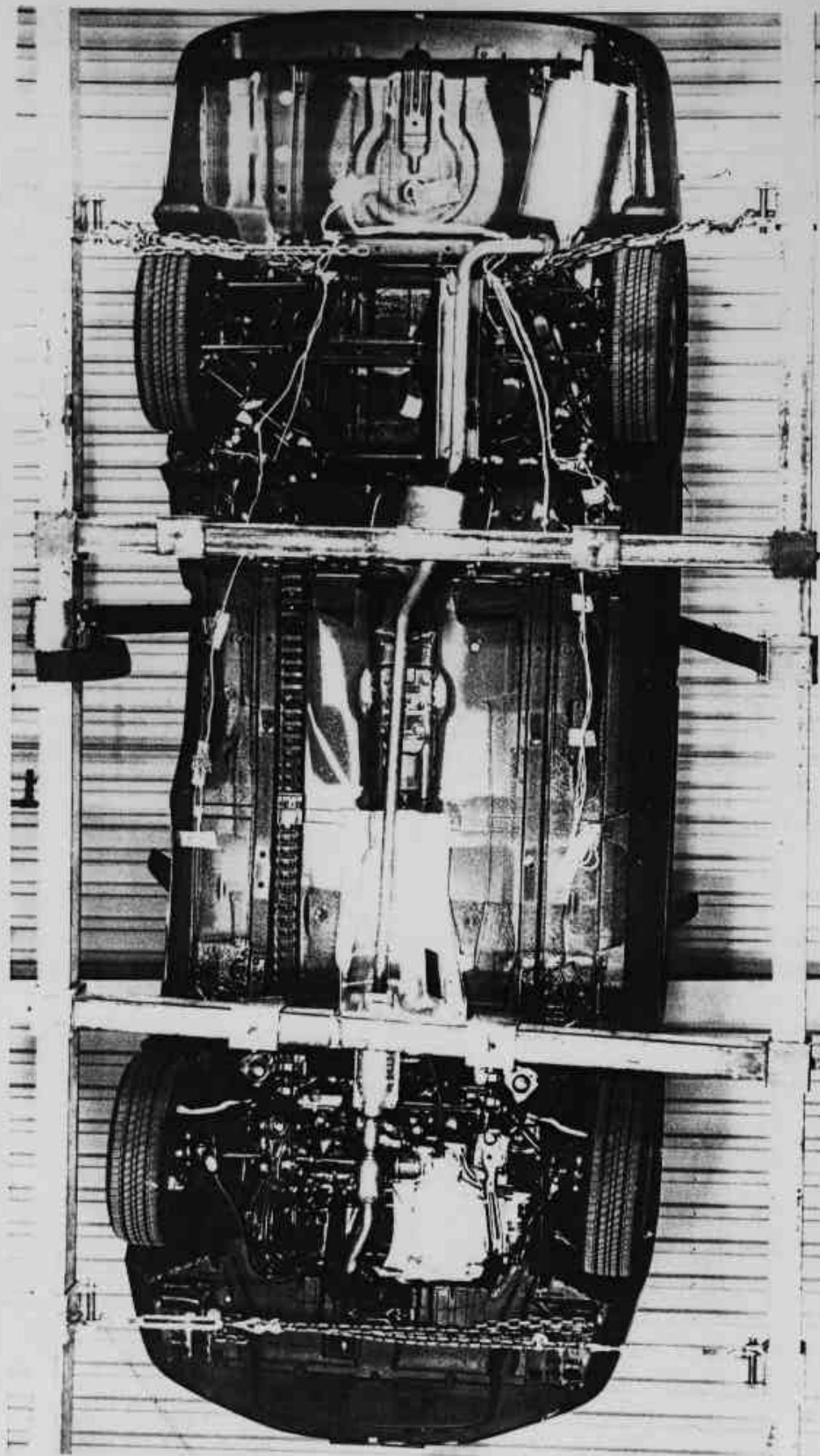
A-47

Photo No. A-47 - Rollover 90°



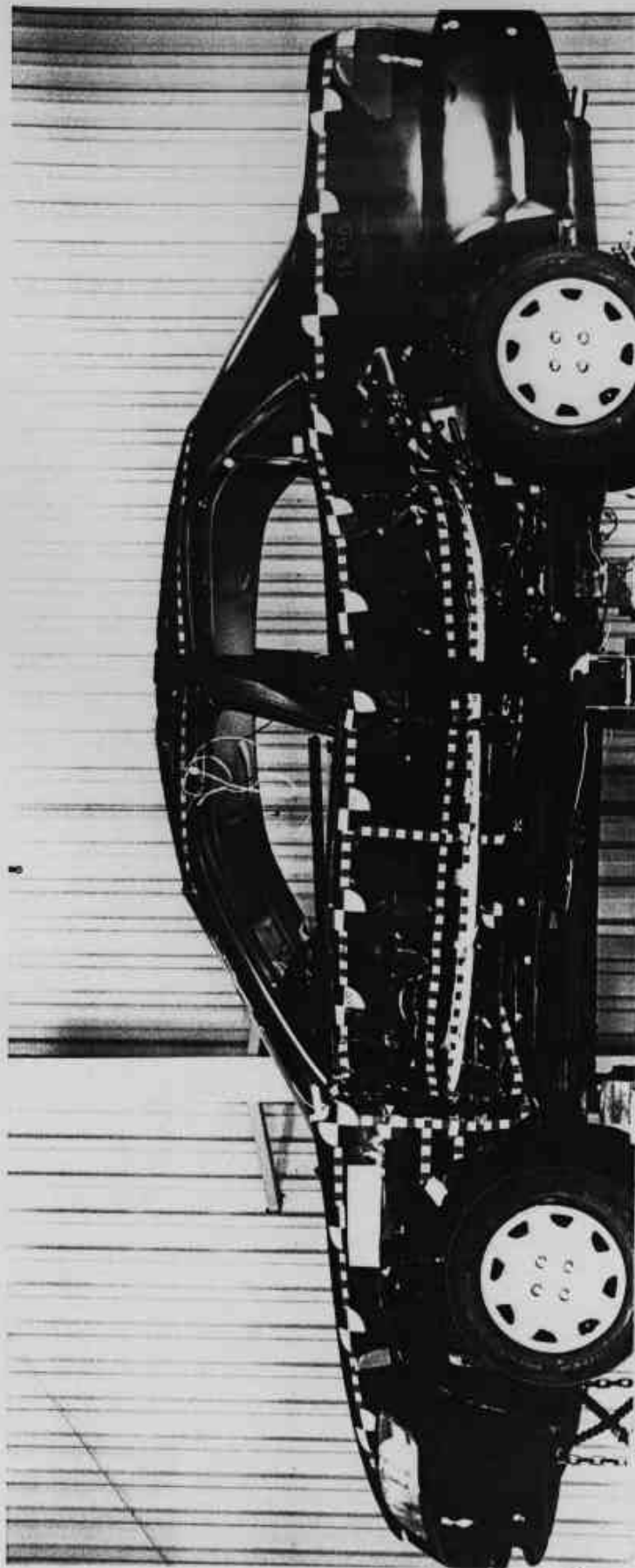
55.200 KPH 90
SCAP SIDE IMPACT
#1004 JAN 26 1998
1992 HONDA ACCORD 4 DOOR
TATA RESEARCH CORP.

Photo No. A-48 - Rollover 180°



55.25 KPH 90
N. CAP SIDE IMPACT
#W5304 JAN 26 1998
1998 HONDA ACCORD 4.000R
N. G. R. SEARCH CORP

Photo No. A-49 - Rollover 270°



A-50



55/28 KPH 90
NCAP SIDE IMPACT
#MW5304 JAN 26 1998
1998 HONDA ACCORD 4 DOOR
MGA RESEARCH CORP.

Photo No. A-50 - Rollover 360°

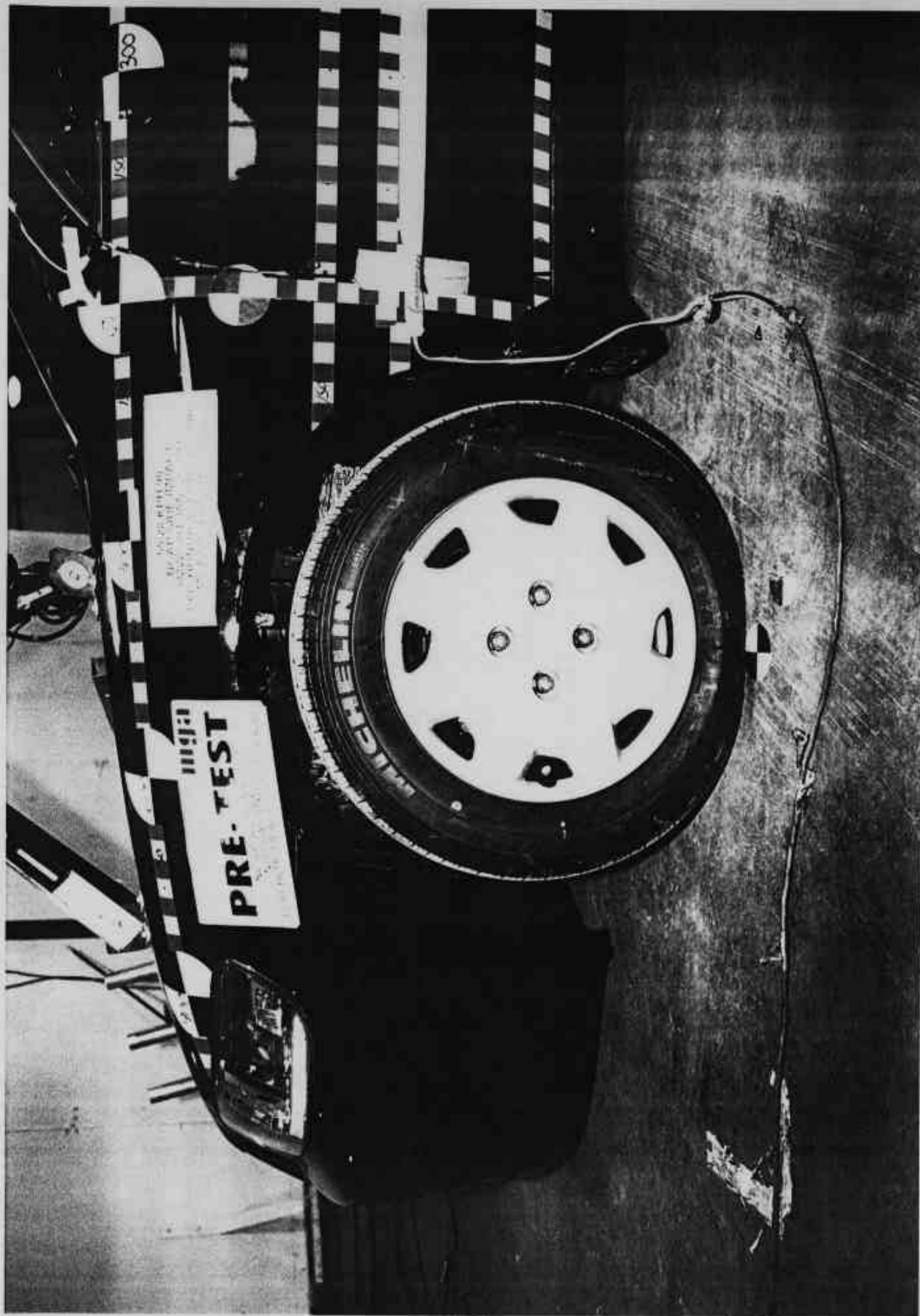


Photo No. A-51 - Left Front Attitude Point

A-51



Photo No. A-52 - Right Front Attitude Point

A-52



Photo No. A-53 - Left Rear Attitude Point

A-53

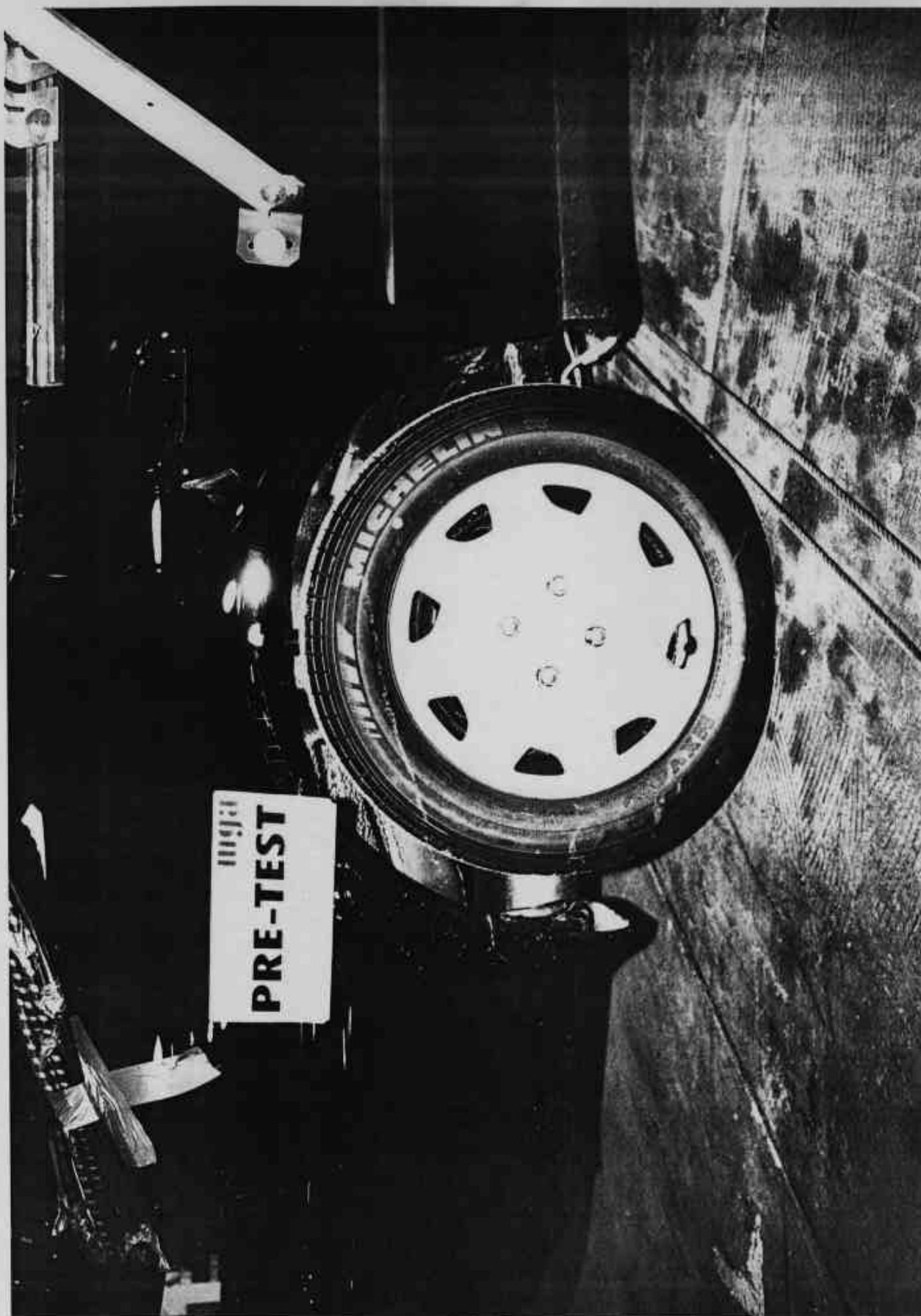


Photo No. A-54 - Right Rear Attitude Point

A-54

APPENDIX B - VEHICLE AND SID RESPONSE DATA

Table of Data Plots

<u>Occupant:</u>	<u>Page No.</u>
Figure B-1 - Driver Head X Acceleration vs. Time	B-1
Figure B-2 - Driver Head X Velocity vs. Time	B-2
Figure B-3 - Driver Head Y Acceleration vs. Time	B-3
Figure B-4 - Driver Head Y Velocity vs. Time	B-4
Figure B-5 - Driver Head Z Acceleration vs. Time	B-5
Figure B-6 - Driver Head Z Velocity vs. Time	B-6
Figure B-7 - Driver Head Resultant vs. Time	B-7
Figure B-8 - Driver Upper Rib Y Acceleration vs. Time	B-8
Figure B-9 - Driver Upper Rib Y Velocity vs. Time	B-9
Figure B-10 - Driver Lower Rib Y Acceleration vs. Time	B-10
Figure B-11 - Driver Lower Rib Y Velocity vs. Time	B-11
Figure B-12 - Driver Lower Spine Y Acceleration vs. Time	B-12
Figure B-13 - Driver Lower Spine Y Velocity vs. Time	B-13
Figure B-14 - Driver Pelvis Y Acceleration vs. Time	B-14
Figure B-15 - Driver Pelvis Y Velocity vs. Time	B-15
Figure B-16 - Driver Shoulder Contact vs. Time	B-16
Figure B-17 - Driver Leg Contact vs. Time	B-17
Figure B-18 - Rear Passenger Head X Acceleration vs. Time	B-18
Figure B-19 - Rear Passenger Head X Velocity vs. Time	B-19
Figure B-20 - Rear Passenger Head Y Acceleration vs. Time	B-20
Figure B-21 - Rear Passenger Head Y Velocity vs. Time	B-21
Figure B-22 - Rear Passenger Head Z Acceleration vs. Time	B-22
Figure B-23 - Rear Passenger Head Z Velocity vs. Time	B-23
Figure B-24 - Rear Passenger Head Resultant vs. Time	B-24
Figure B-25 - Rear Passenger Upper Rib Y Acceleration vs. Time	B-25
Figure B-26 - Rear Passenger Upper Rib Y Velocity vs. Time	B-26
Figure B-27 - Rear Passenger Lower Rib Y Acceleration vs. Time	B-27
Figure B-28 - Rear Passenger Lower Rib Y Velocity vs. Time	B-28
Figure B-29 - Rear Passenger Lower Spine Y Acceleration vs. Time	B-29

Table of Data Plots

<u>Occupant (Cont'd):</u>	<u>Page No</u>
Figure B-30 - Rear Passenger Lower Spine Y Velocity vs. Time	B-30
Figure B-31 - Rear Passenger Pelvis Y Acceleration vs. Time	B-31
Figure B-32 - Rear Passenger Pelvis Y Velocity vs. Time	B-32
Figure B-33 - Rear Passenger Shoulder Contact vs. Time	B-33
Figure B-34 - Rear Passenger Leg Contact vs. Time	B-34
 <u>Vehicle:</u>	
Figure B-35 - Left Side Sill at Front Seat Y Acceleration vs. Time	B-35
Figure B-36 - Left Side Sill at Front Seat Y Velocity vs. Time	B-36
Figure B-37 - Left Side Sill at Rear Seat Y Acceleration vs. Time	B-37
Figure B-38 - Left Side Sill at Rear Seat Y Velocity vs. Time	B-38
Figure B-39 - Right Side Sill at Front Seat X Acceleration vs. Time	B-39
Figure B-40 - Right Side Sill at Front Seat X Velocity vs. Time	B-40
Figure B-41 - Right Side Sill at Front Seat Y Acceleration vs. Time	B-41
Figure B-42 - Right Side Sill at Front Seat Y Velocity vs. Time	B-42
Figure B-43 - Right Side Sill at Front Seat Z Acceleration vs. Time	B-43
Figure B-44 - Right Side Sill at Front Seat Z Velocity vs. Time	B-44
Figure B-45 - Right Side Sill at Front Seat Resultant Acceleration vs. Time	B-45
Figure B-46 - Right Side Sill at Rear Seat X Acceleration vs. Time	B-46
Figure B-47 - Right Side Sill at Rear Seat X Velocity vs. Time	B-47
Figure B-48 - Right Side Sill at Rear Seat Y Acceleration vs. Time	B-48
Figure B-49 - Right Side Sill at Rear Seat Y Velocity vs. Time	B-49
Figure B-50 - Right Side Sill at Rear Seat Z Acceleration vs. Time	B-50
Figure B-51 - Right Side Sill at Rear Seat Z Velocity vs. Time	B-51
Figure B-52 - Right Side Sill at Rear Seat Resultant Acceleration vs. Time	B-52
Figure B-53 - Left Driver Seat Track Y Acceleration vs. Time	B-53
Figure B-54 - Left Driver Seat Track Y Velocity vs. Time	B-54

Table of Data Plots

<u>Vehicle (Cont'd):</u>	<u>Page No</u>
Figure B-55 - Rear Floorpan above Axle X Acceleration vs. Time*	B-55
Figure B-56 - Rear Floorpan above Axle X Velocity vs. Time*	B-56
Figure B-57 - Rear Floorpan above Axle Y Acceleration vs. Time*	B-57
Figure B-58 - Rear Floorpan above Axle Y Velocity vs. Time*	B-58
Figure B-59 - Rear Floorpan above Axle Z Acceleration vs. Time*	B-59
Figure B-60 - Rear Floorpan above Axle Z Velocity vs. Time*	B-60
Figure B-61 - Rear Floorpan above Axle Resultant Acceleration vs. Time*	B-61
Figure B-62 - Right Rear Occupant Compartment Y Acceleration vs. Time	B-62
Figure B-63 - Right Rear Occupant Compartment Y Velocity vs. Time	B-63
Figure B-64 - Left Lower A-Post Y Acceleration vs. Time	B-64
Figure B-65 - Left Lower A-Post Y Velocity vs. Time	B-65
Figure B-66 - Left Mid A-Post Y Acceleration vs. Time	B-66
Figure B-67 - Left Mid A-Post Y Velocity vs. Time	B-67
Figure B-68 - Left Lower B-Post Y Acceleration vs. Time	B-68
Figure B-69 - Left Lower B-Post Y Velocity vs. Time	B-69
Figure B-70 - Left Mid B-Post Y Acceleration vs. Time	B-70
Figure B-71 - Left Mid B-Post Y Velocity vs. Time	B-71
Figure B-72 - Vehicle Center of Gravity X Acceleration vs. Time	B-72
Figure B-73 - Vehicle Center of Gravity X Velocity vs. Time	B-73
Figure B-74 - Vehicle Center of Gravity Y Acceleration vs. Time	B-74
Figure B-75 - Vehicle Center of Gravity Y Velocity vs. Time	B-75
Figure B-76 - Vehicle Center of Gravity Z Acceleration vs. Time	B-76
Figure B-77 - Vehicle Center of Gravity Z Velocity vs. Time	B-77
Figure B-78 - Vehicle Center of Gravity Resultant Acceleration vs. Time	B-78
Figure B-79 - Left Front Door Centerline Y Acceleration vs. Time	B-79
Figure B-80 - Left Front Door Centerline Y Velocity vs. Time	B-80
Figure B-81 - Left Front Door Upper Centerline Y Acceleration vs. Time	B-81
Figure B-82 - Left Front Door Upper Centerline Y Velocity vs. Time	B-82
Figure B-83 - Midrear of Left Front Door Y Acceleration vs. Time	B-83

* Accelerometers became detached after approximately 82 msec.

Table of Data Plots

Vehicle (Cont'd):

	<u>Page No</u>
Figure B-84 - Midrear of Left Front Door Y Velocity vs. Time	B-84
Figure B-85 - Midrear of Left Rear Door Y Acceleration vs. Time	B-85
Figure B-86 - Midrear of Left Rear Door Y Velocity vs. Time	B-86
Figure B-87 - Left Rear Door Upper Centerline Y Acceleration vs. Time	B-87
Figure B-88 - Left Rear Door Upper Centerline Y Velocity vs. Time	B-88

Barrier:

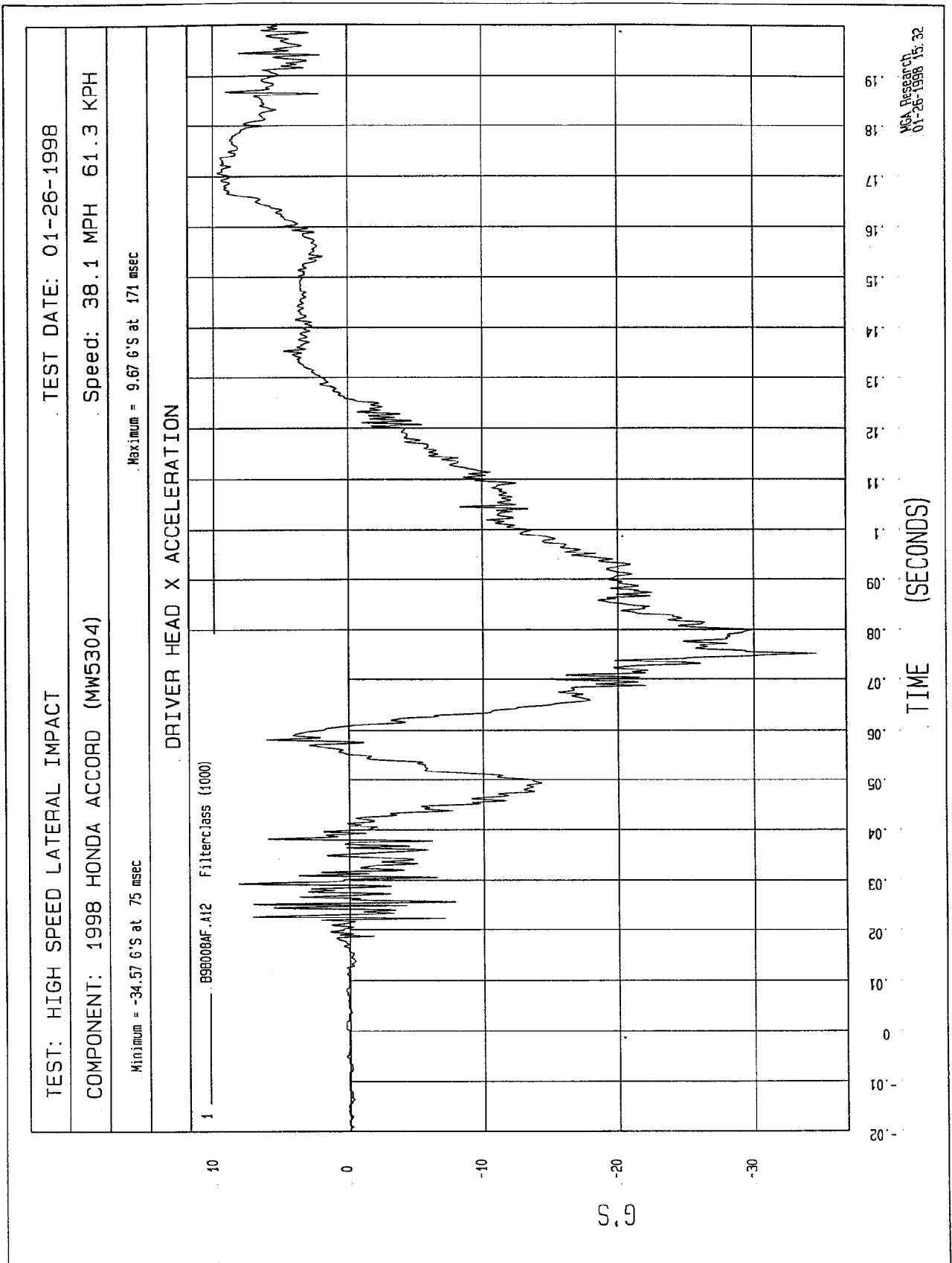
Figure B-89 - Moving Barrier Center of Gravity X Acceleration vs. Time	B-89
Figure B-90 - Moving Barrier Center of Gravity X Velocity vs. Time	B-90
Figure B-91 - Moving Barrier Center of Gravity Y Acceleration vs. Time	B-91
Figure B-92 - Moving Barrier Center of Gravity Y Velocity vs. Time	B-92
Figure B-93 - Moving Barrier Center of Gravity Z Acceleration vs. Time	B-93
Figure B-94 - Moving Barrier Center of Gravity Z Velocity vs. Time	B-94
Figure B-95 - Moving Barrier Center of Gravity Resultant Acceleration vs. Time	B-95
Figure B-96 - Moving Barrier Rear Axle X Acceleration vs. Time	B-96
Figure B-97 - Moving Barrier Rear Axle X Velocity vs. Time	B-97
Figure B-98 - Moving Barrier Rear Axle Y Acceleration vs. Time	B-98
Figure B-99 - Moving Barrier Rear Axle Y Velocity vs. Time	B-99
Figure B-100 - Left Barrier Contact	B-100
Figure B-101 - Right Barrier Contact	B-101

Redundant:

Figure B-102 - Driver Upper Rib Y Redundant Acceleration vs. Time	B-102
Figure B-103 - Driver Upper Rib Y Redundant Velocity vs. Time	B-103
Figure B-104 - Driver Lower Rib Y Redundant Acceleration vs. Time	B-104
Figure B-105 - Driver Lower Rib Y Redundant Velocity vs. Time	B-105
Figure B-106 - Driver Lower Spine Y Redundant Acceleration vs. Time	B-106

Table of Data Plots

<u>Redundant (Cont'd):</u>	<u>Page No</u>
Figure B-107 - Driver Lower Spine Y Redundant Velocity vs. Time	B-107
Figure B-108 - Driver Pelvis Y Redundant Acceleration vs. Time	B-108
Figure B-109 - Driver Pelvis Y Redundant Velocity vs. Time	B-109
Figure B-110 - Rear Passenger Upper Rib Y Redundant Acceleration vs. Time	B-110
Figure B-111 - Rear Passenger Upper Rib Y Redundant Velocity vs. Time	B-111
Figure B-112 - Rear Passenger Lower Rib Y Redundant Acceleration vs. Time	B-112
Figure B-113 - Rear Passenger Lower Rib Y Redundant Velocity vs. Time	B-113
Figure B-114 - Rear Passenger Lower Spine Y Redundant Acceleration vs. Time	B-114
Figure B-115 - Rear Passenger Lower Spine Y Redundant Velocity vs. Time	B-115
Figure B-116 - Rear Passenger Pelvis Y Redundant Acceleration vs. Time	B-116
Figure B-117 - Rear Passenger Pelvis Y Redundant Velocity vs. Time	B-117
 <u>FIR Filtered</u>	
Figure B-118 - Driver Upper Rib Y Acceleration vs. Time	B-118
Figure B-119 - Driver Upper Rib Y Redundant Acceleration vs. Time	B-119
Figure B-120 - Driver Lower Rib Y Acceleration vs. Time	B-120
Figure B-121 - Driver Lower Rib Y Redundant Acceleration vs. Time	B-121
Figure B-122 - Driver Lower Spine Y Acceleration vs. Time	B-122
Figure B-123 - Driver Lower Spine Y Redundant Acceleration vs. Time	B-123
Figure B-124 - Driver Pelvis Y Acceleration vs. Time	B-124
Figure B-125 - Driver Pelvis Y Redundant Acceleration vs. Time	B-125
Figure B-126 - Rear Passenger Upper Rib Y Acceleration vs. Time	B-126
Figure B-127 - Rear Passenger Upper Rib Y Redundant Acceleration vs. Time	B-127
Figure B-128 - Rear Passenger Lower Rib Y Acceleration vs. Time	B-128
Figure B-129 - Rear Passenger Lower Rib Y Redundant Acceleration vs. Time	B-129
Figure B-130 - Rear Passenger Lower Spine Y Acceleration vs. Time	B-130
Figure B-131 - Rear Passenger Lower Spine Y Redundant Acceleration vs. Time	B-131
Figure B-132 - Rear Passenger Pelvis Y Acceleration vs. Time	B-132
Figure B-133 - Rear Passenger Pelvis Y Redundant Acceleration vs. Time	B-133



TEST: HIGH SPEED LATERAL IMPACT

TEST DATE: 01-26-1998

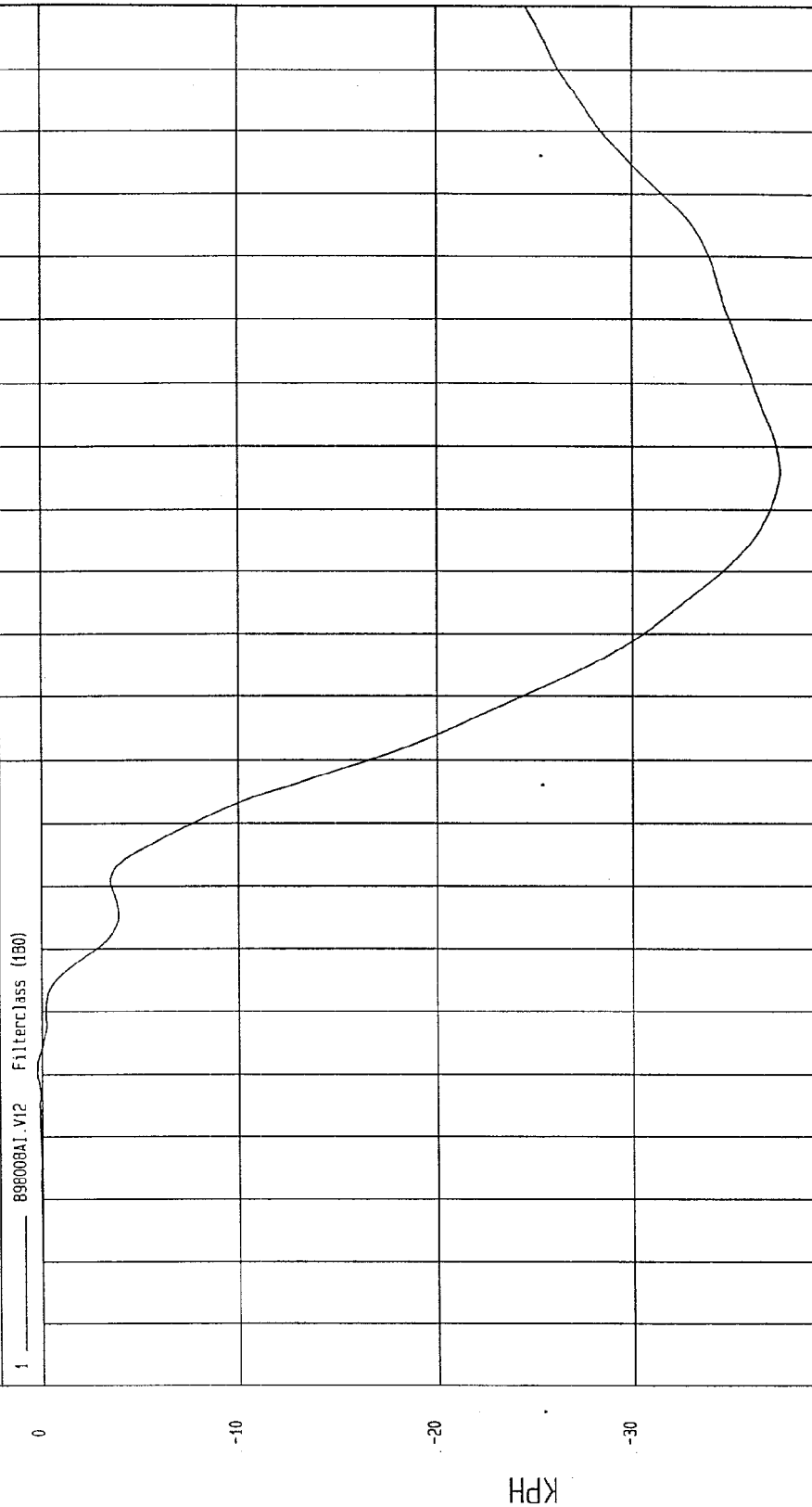
Speed: 38.1 MPH 61.3 KPH

COMPONENT: 1998 HONDA ACCORD (MW5304)

Maximum = .23 KPH at 30 msec

Minimum = -37.47 KPH at 126 msec

DRIVER HEAD X VELOCITY



MCA Research
01-26-1998 10:34

TIME Seconds

TEST: HIGH SPEED LATERAL IMPACT

TEST DATE: 01-26-1998

Speed: 38.1 MPH 61.3 KPH

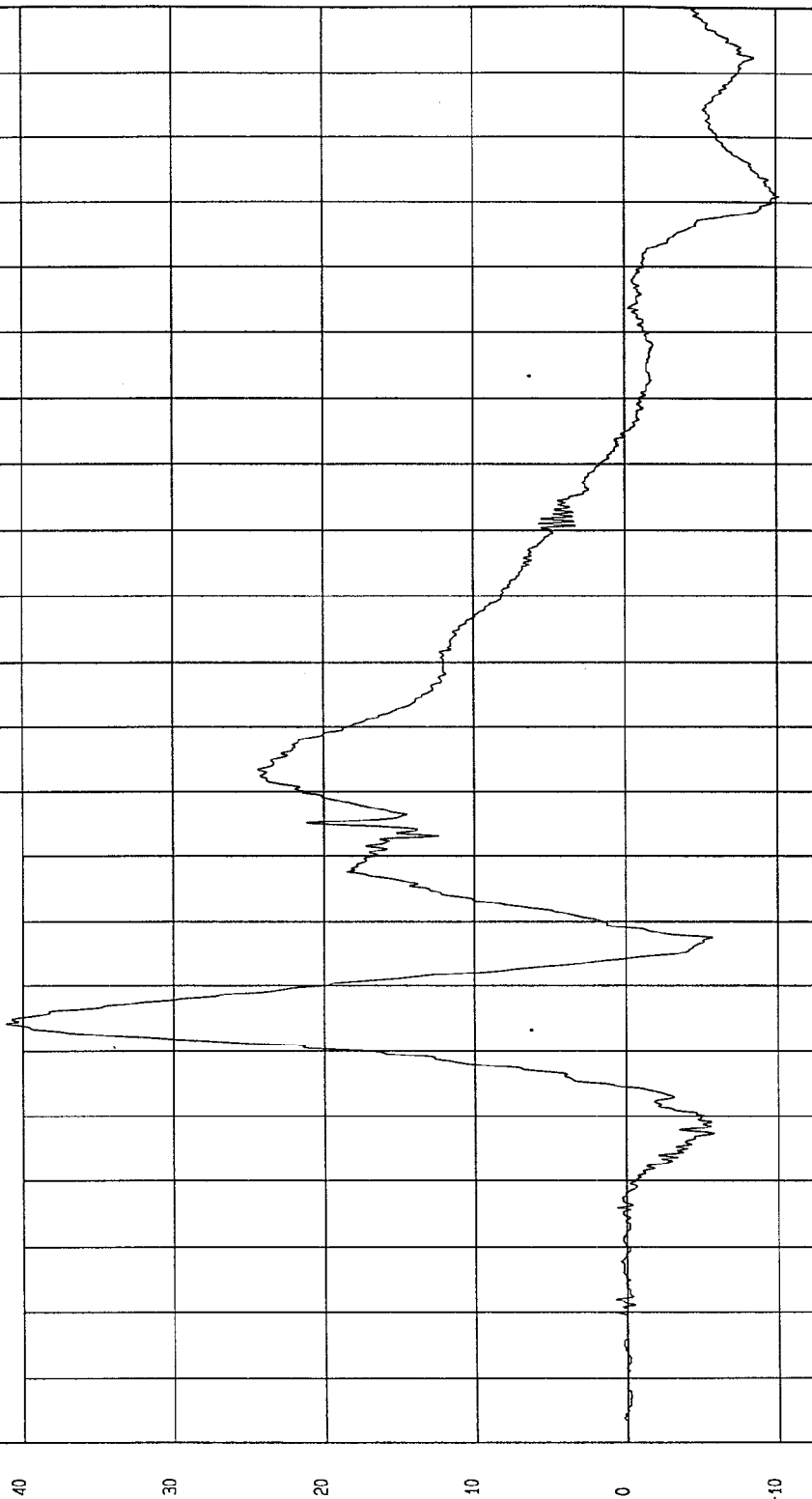
COMPONENT: 1998 HONDA ACCORD (MW5304)

Maximum = 41.10 G'S at 44 msec

Minimum = -10.22 G'S at 171 msec

DRIVER HEAD Y ACCELERATION

1 ——— B98008AF.A13 Filterclass (1000)



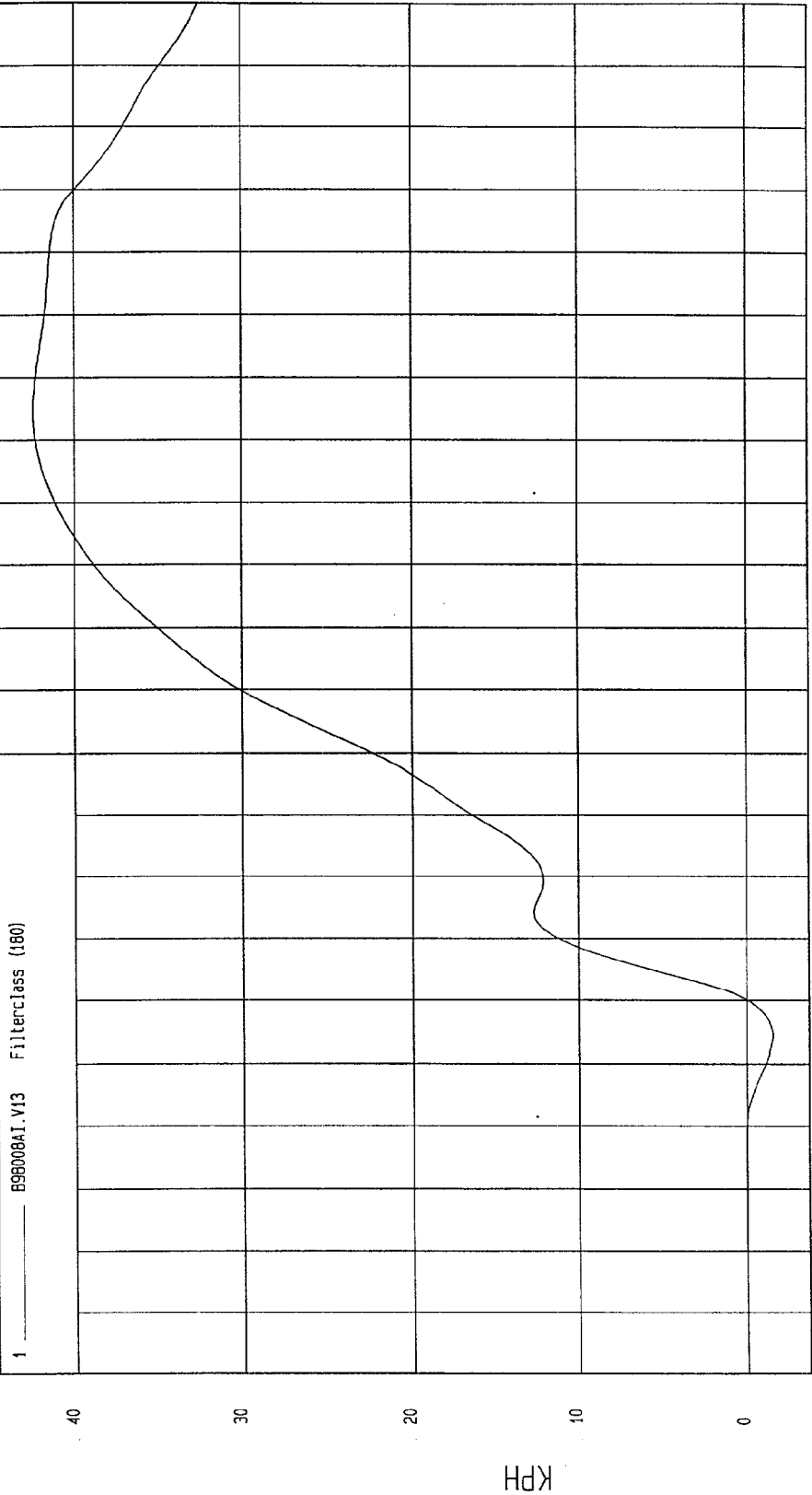
W&A Research
01-26-1998 15:33

TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH

Minimum = -1.58 KPH at 34 msec Maximum = 42.44 KPH at 135 msec

DRIVER HEAD Y VELOCITY



TIME Seconds

NCA Research
01-28-1998 10:34

TEST: HIGH SPEED LATERAL IMPACT

TEST DATE: 01-26-1998

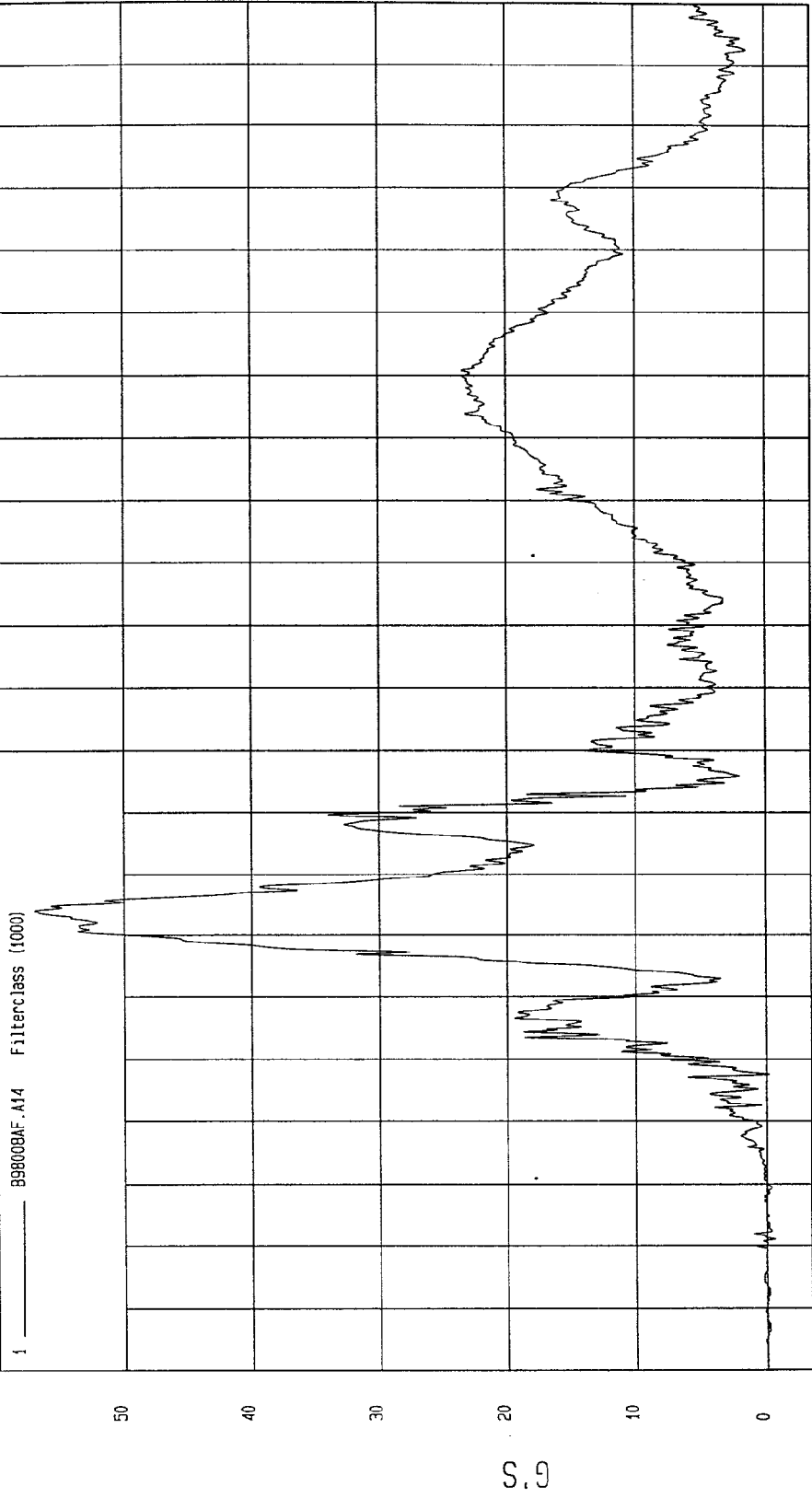
Speed: 38.1 MPH 61.3 KPH

COMPONENT: 1998 HONDA ACCORD (MW5304)

Maximum = 56.96 G'S at 54 msec

Minimum = -.67 G'S at 1 msec

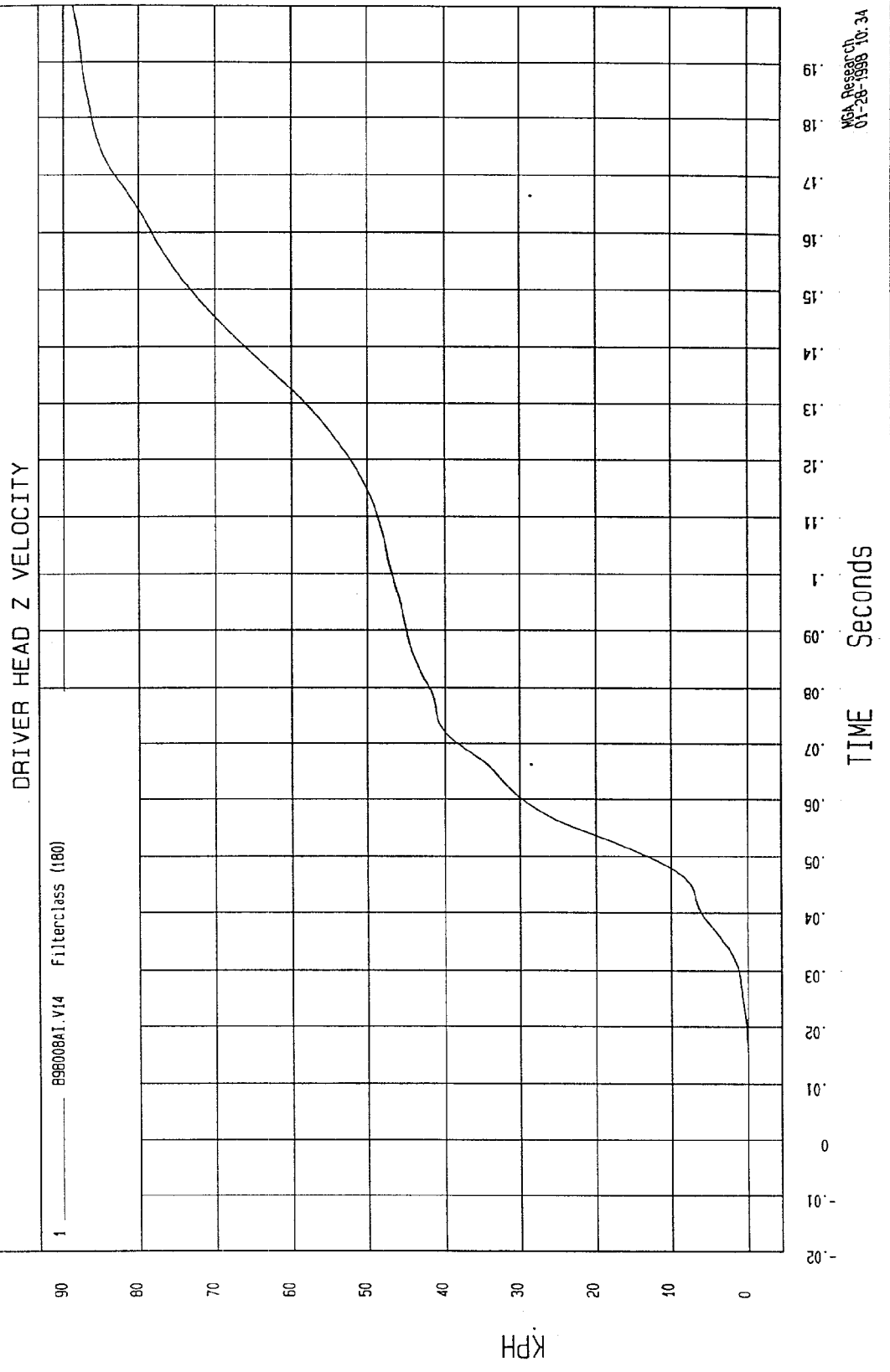
DRIVER HEAD Z ACCELERATION



MCA Research
01-26-1998 15:33

TIME (SECONDS)

TEST: HIGH SPEED LATERAL IMPACT	TEST DATE: 01-26-1998
COMPONENT: 1998 HONDA ACCORD (MW5304)	Speed: 38.1 MPH 61.3 KPH
Minimum = -1.50E-02 KPH at -6 msec	
Maximum = 88.78 KPH at 200 msec	



TEST: HIGH SPEED LATERAL IMPACT

TEST DATE: 01-26-1998

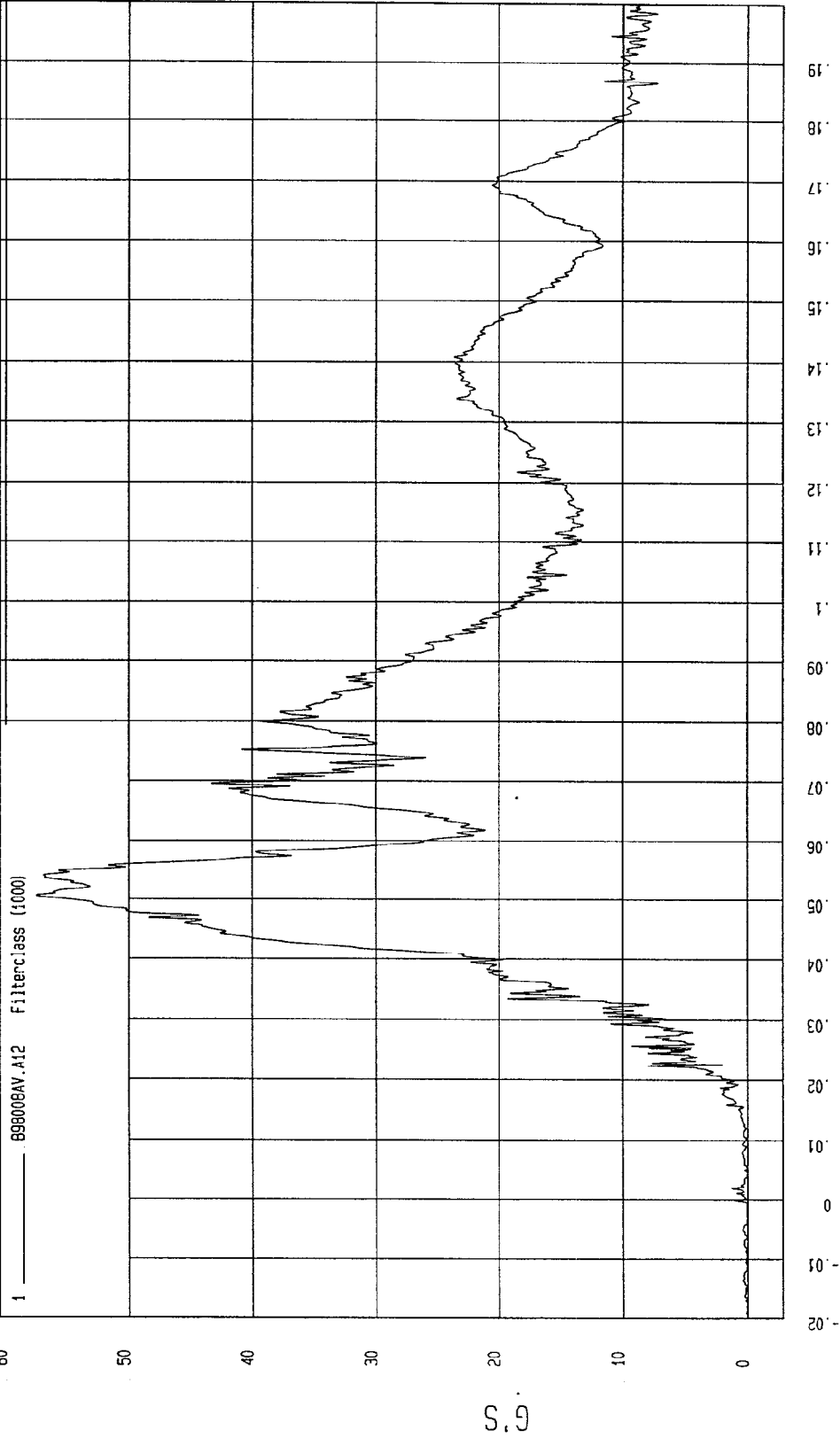
COMPONENT: 1998 HONDA ACCORD (MW5304)

Speed: 38.1 MPH 61.3 KPH

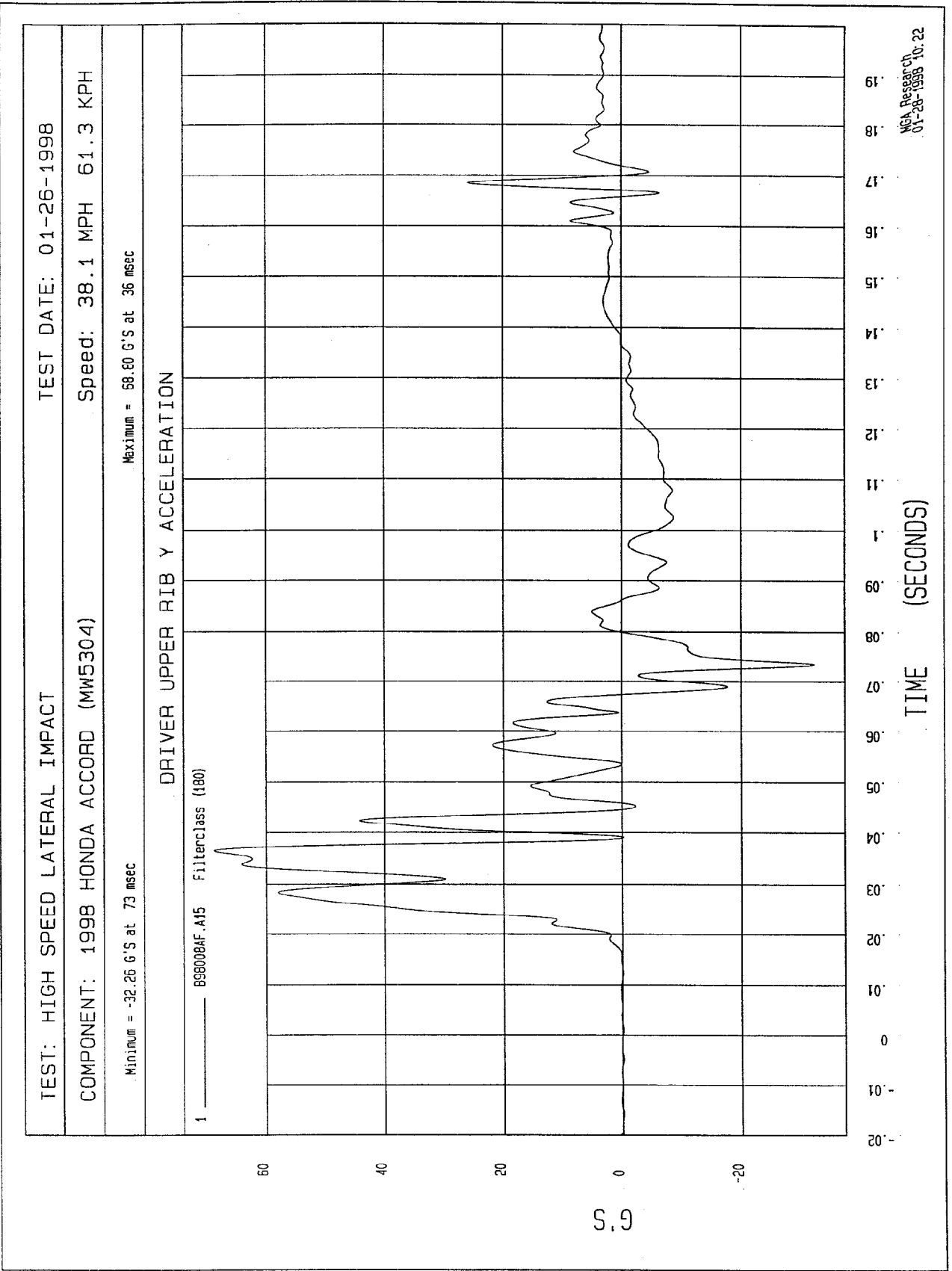
Minimum = 2.48E-02 G'S at -17 msec

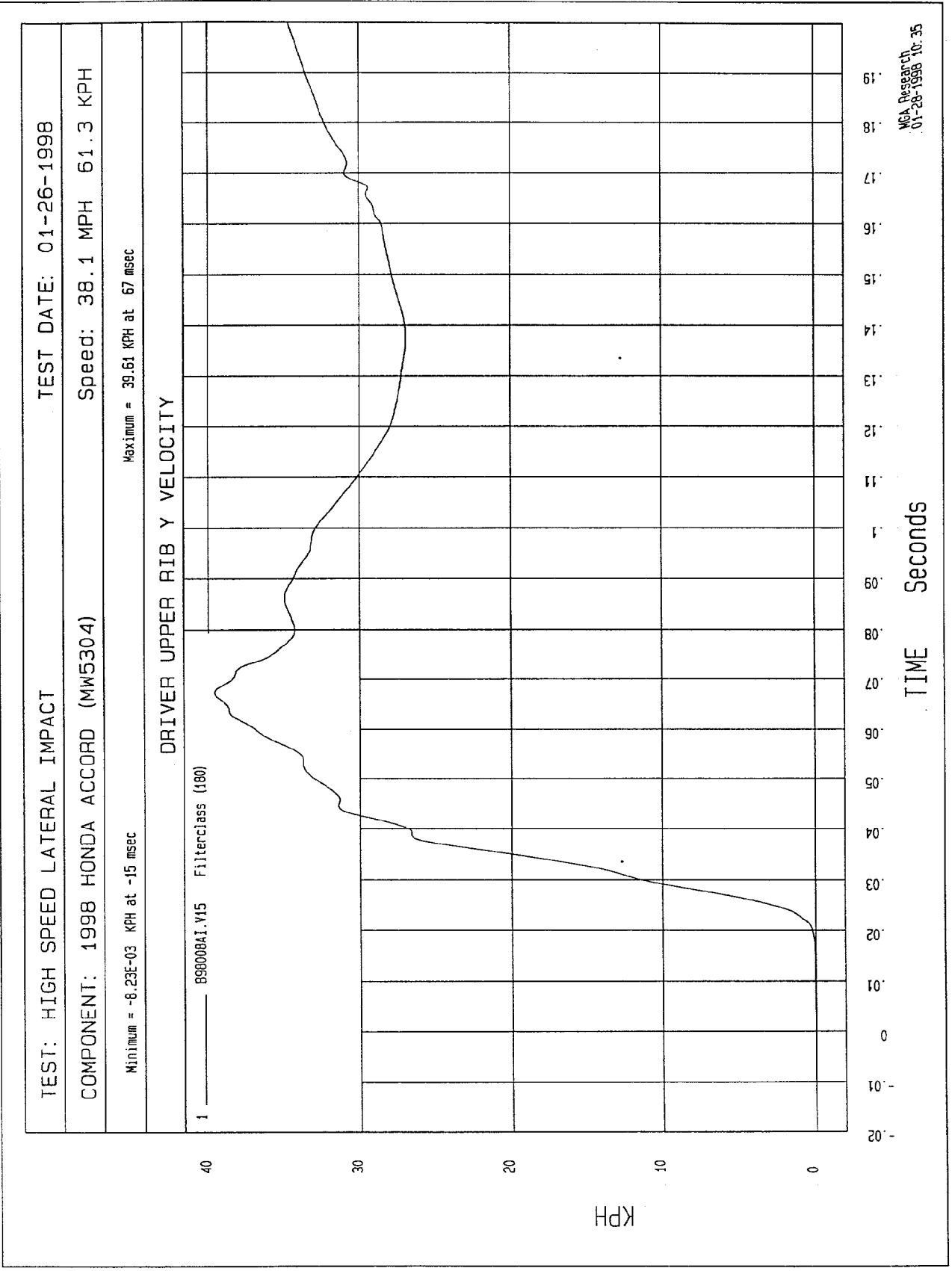
Maximum = 57.62 G'S at 51 msec

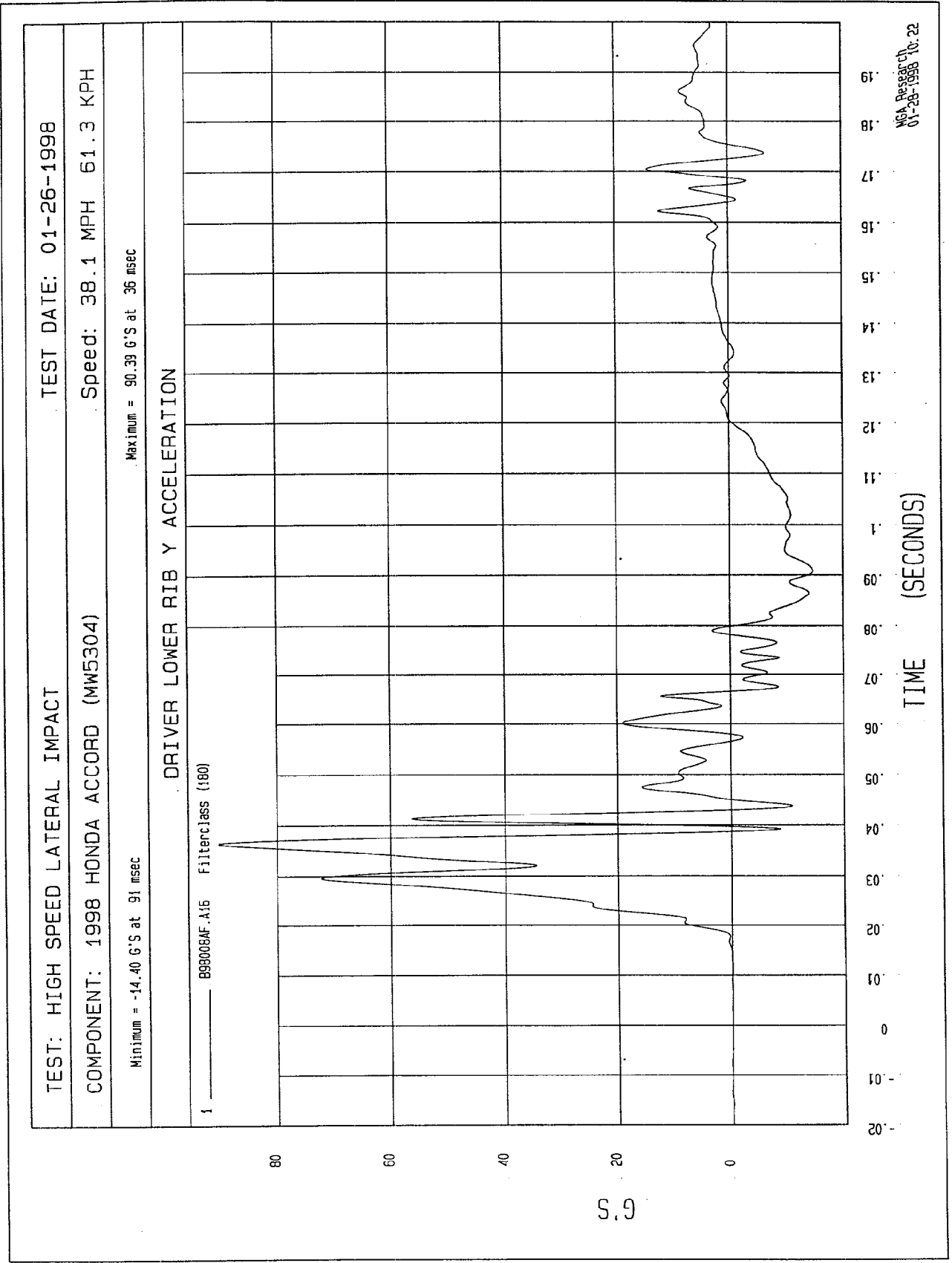
DRIVER HEAD RESULTANT

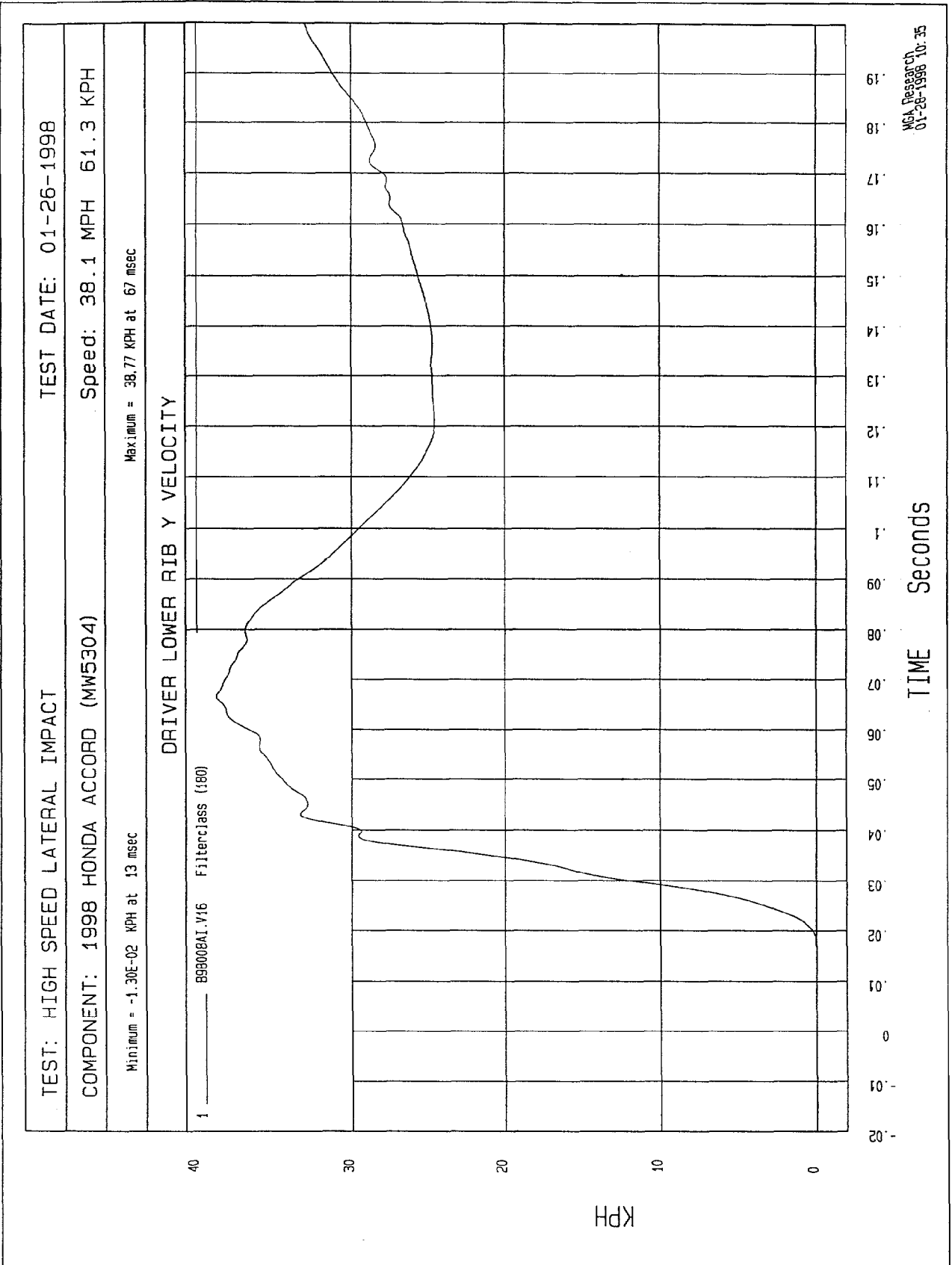


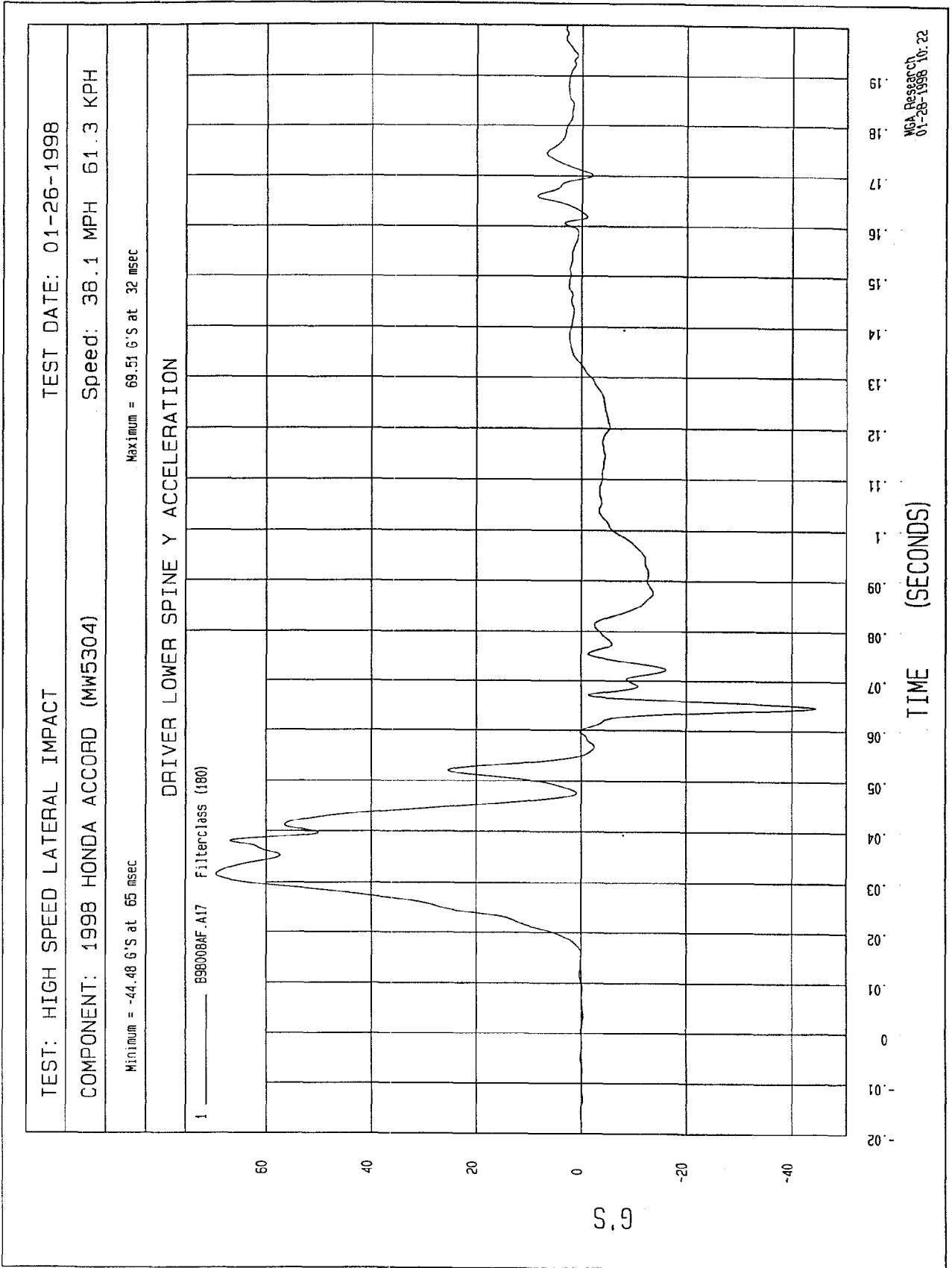
WGA Research
01-26-1998 15:33

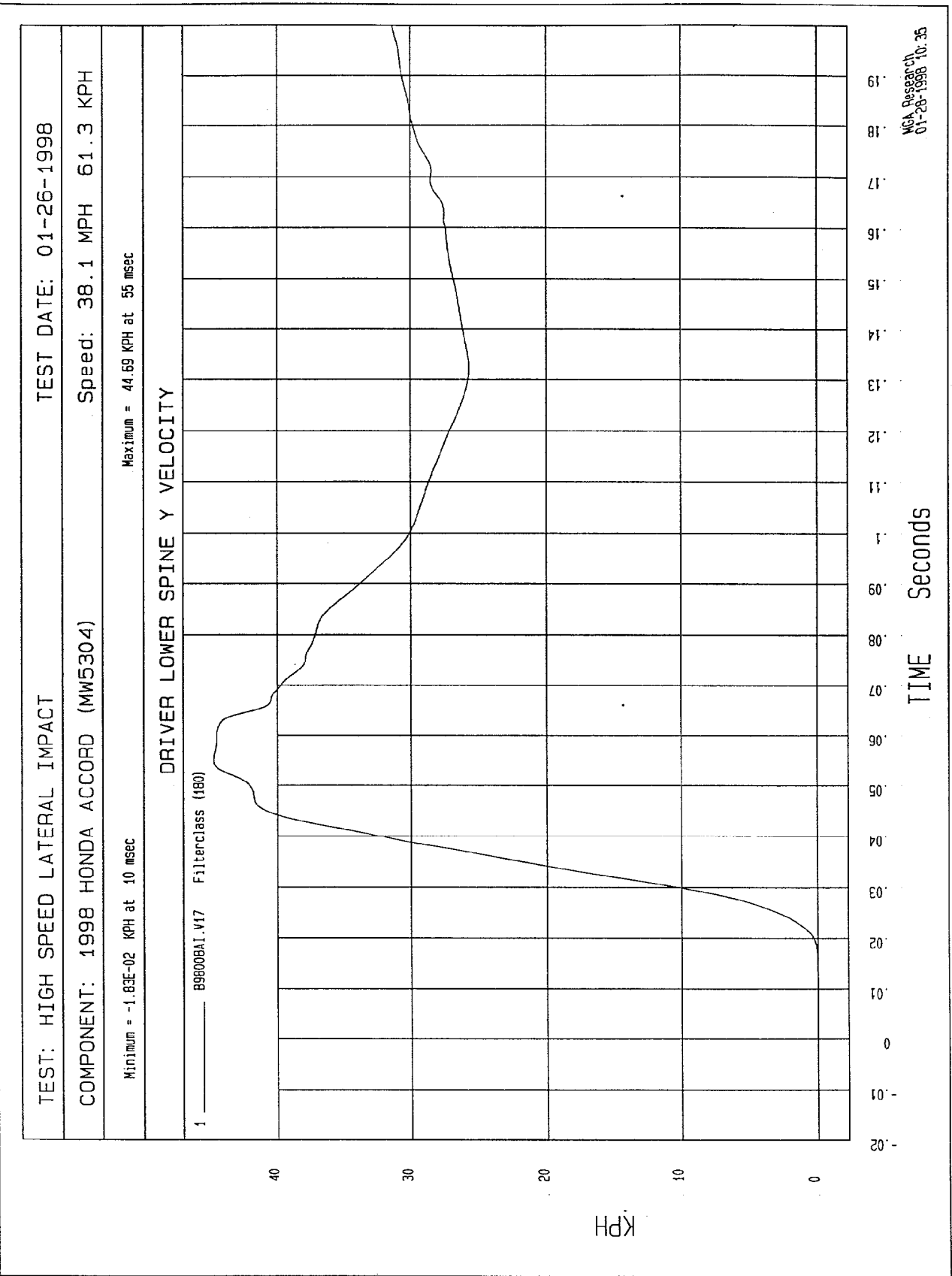


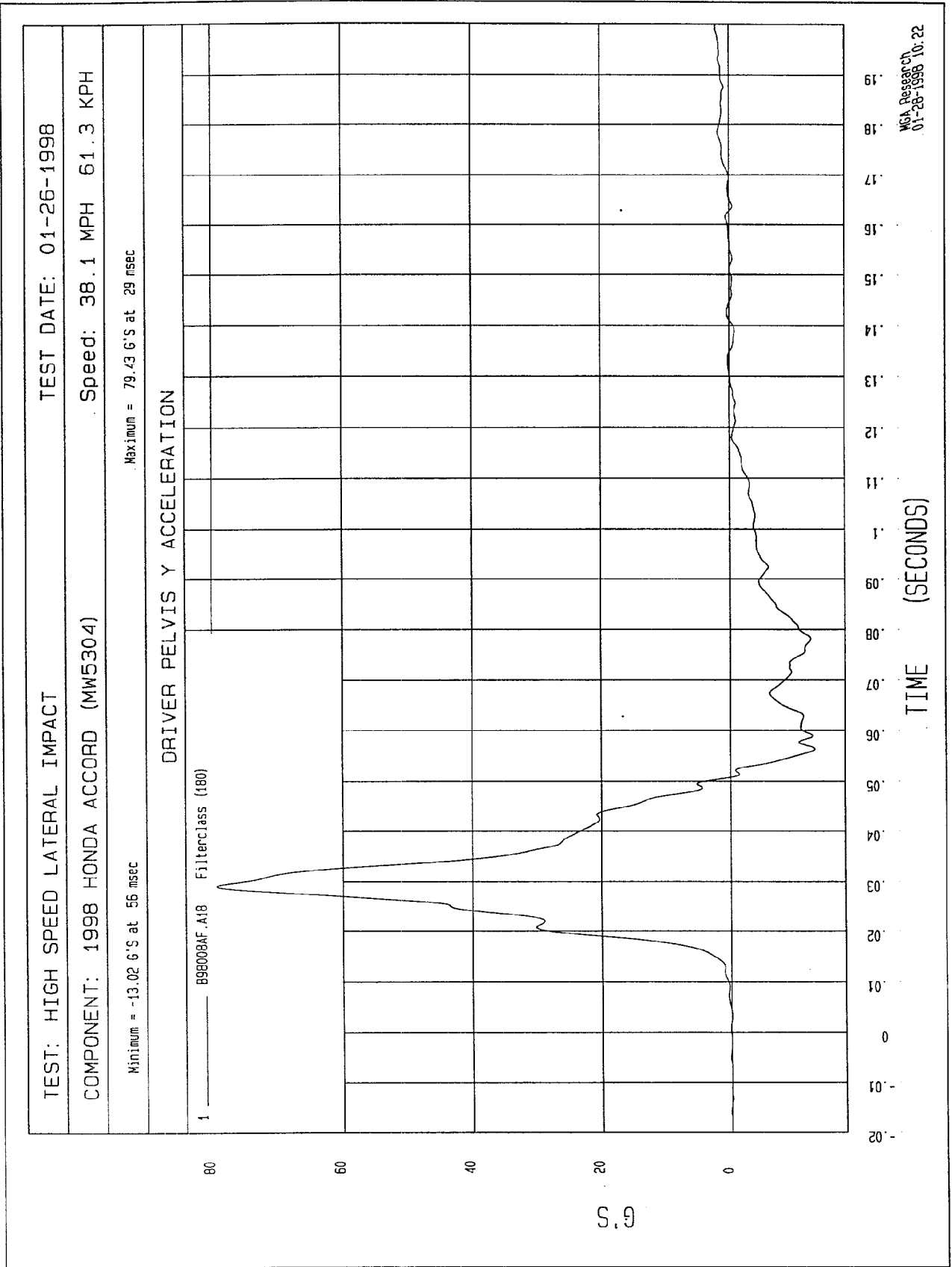


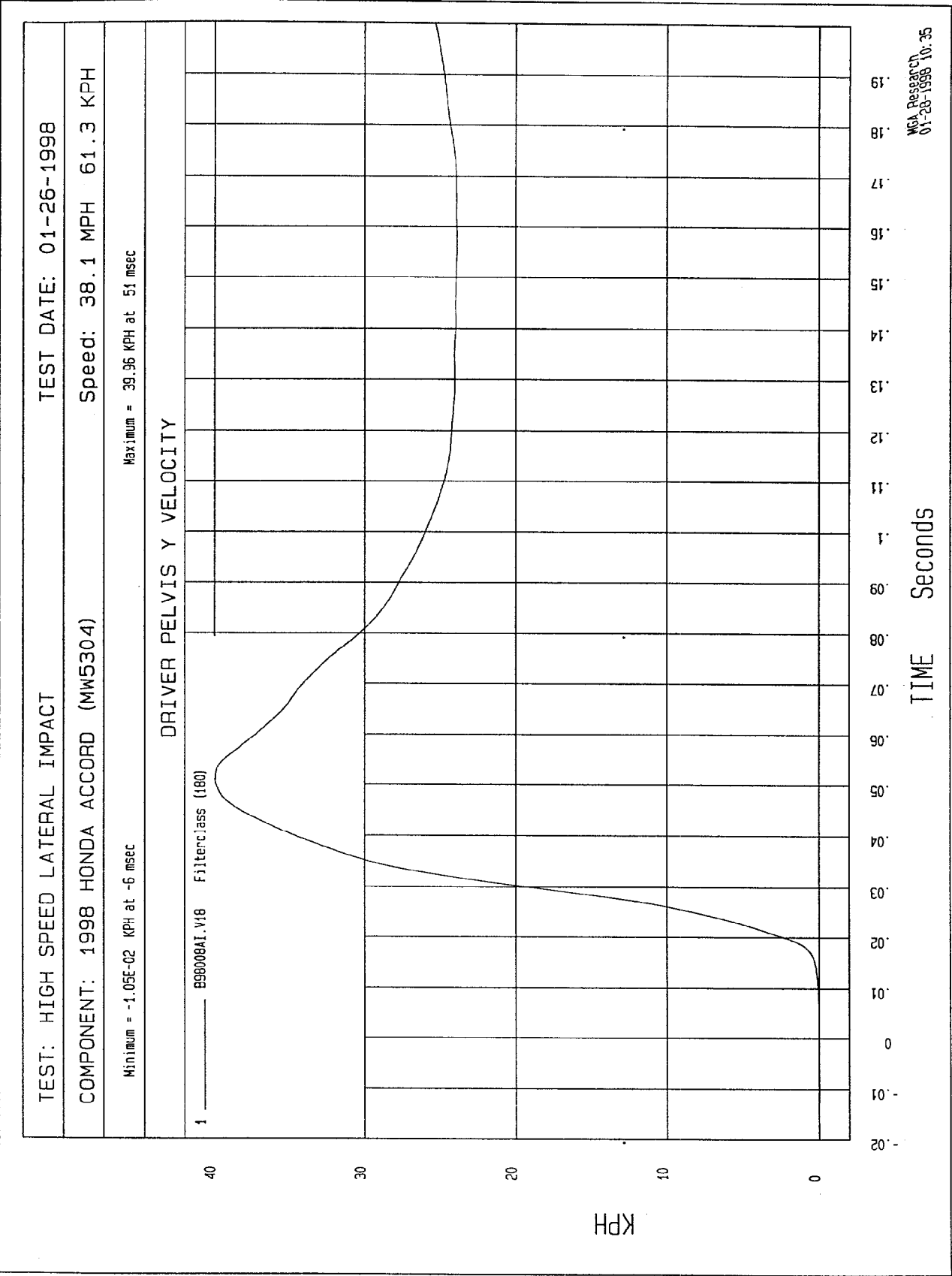


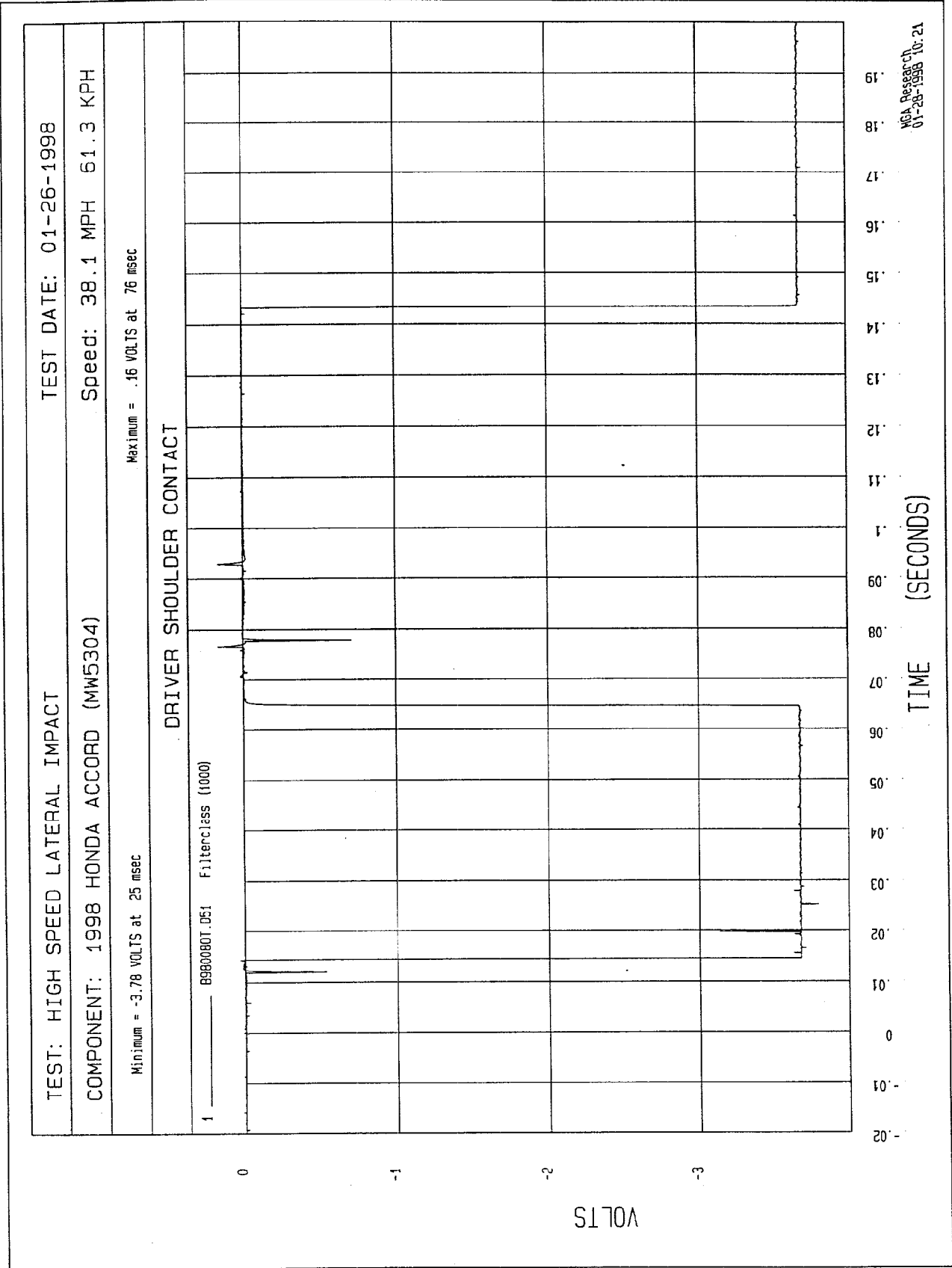


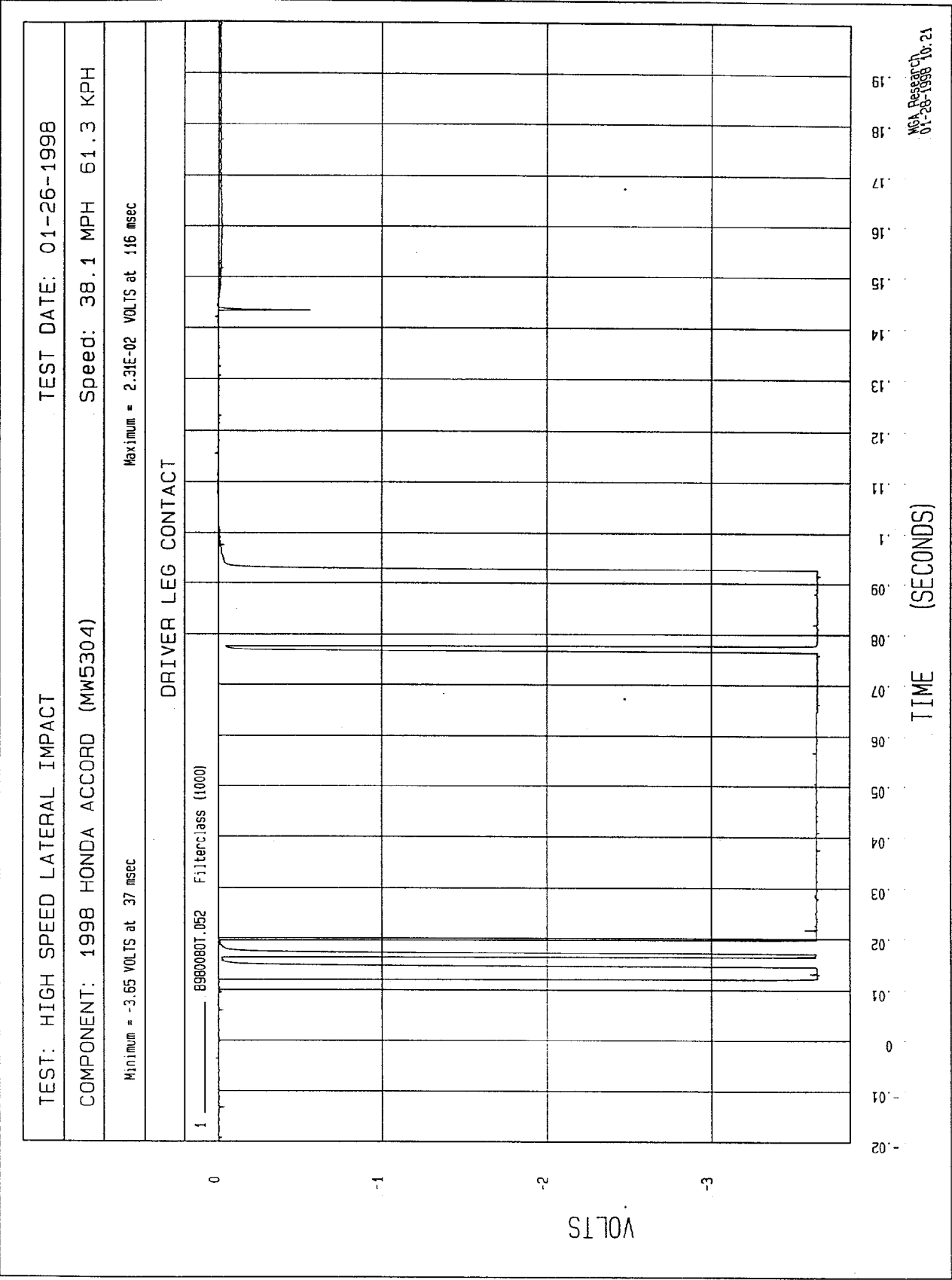


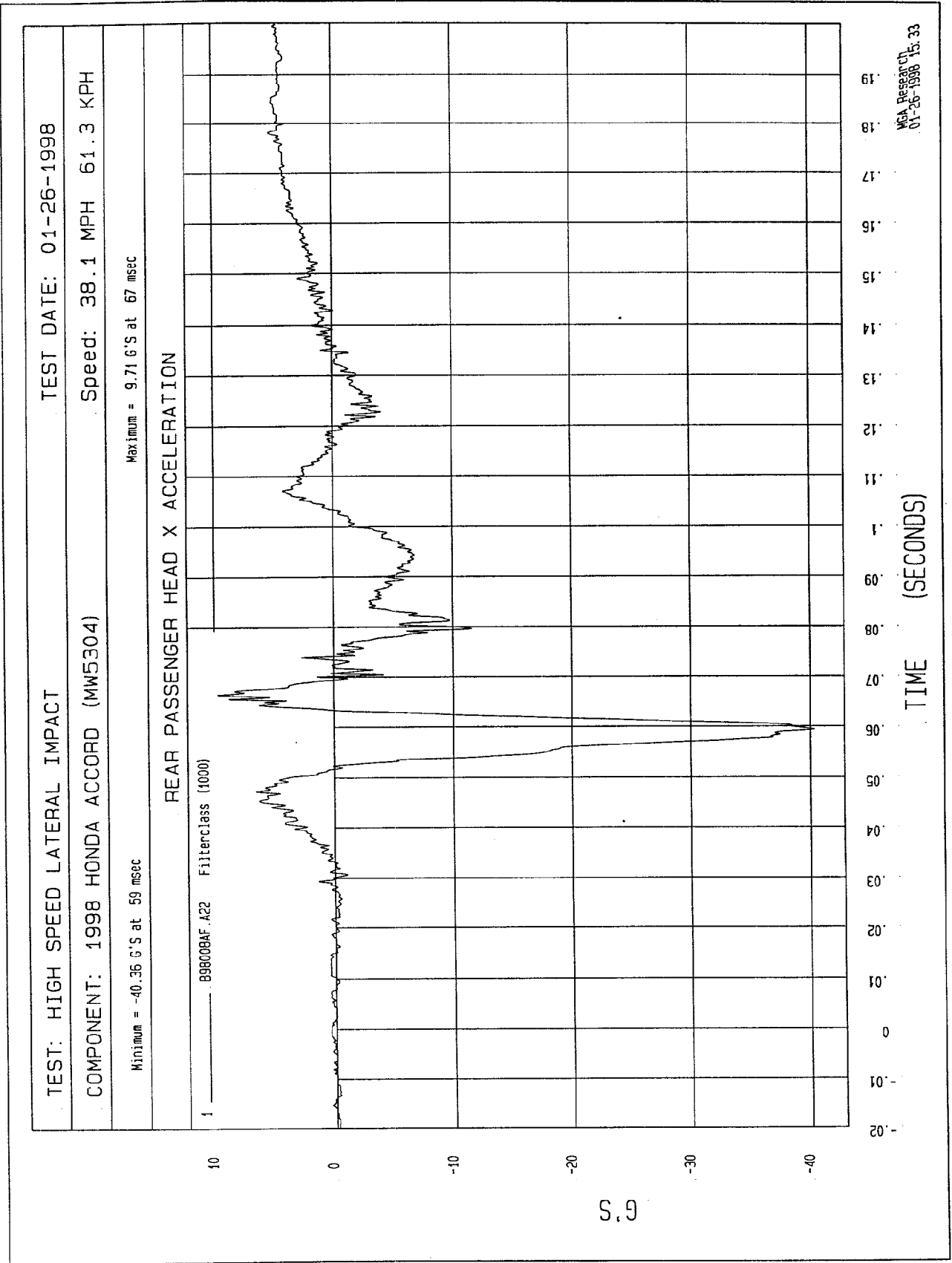


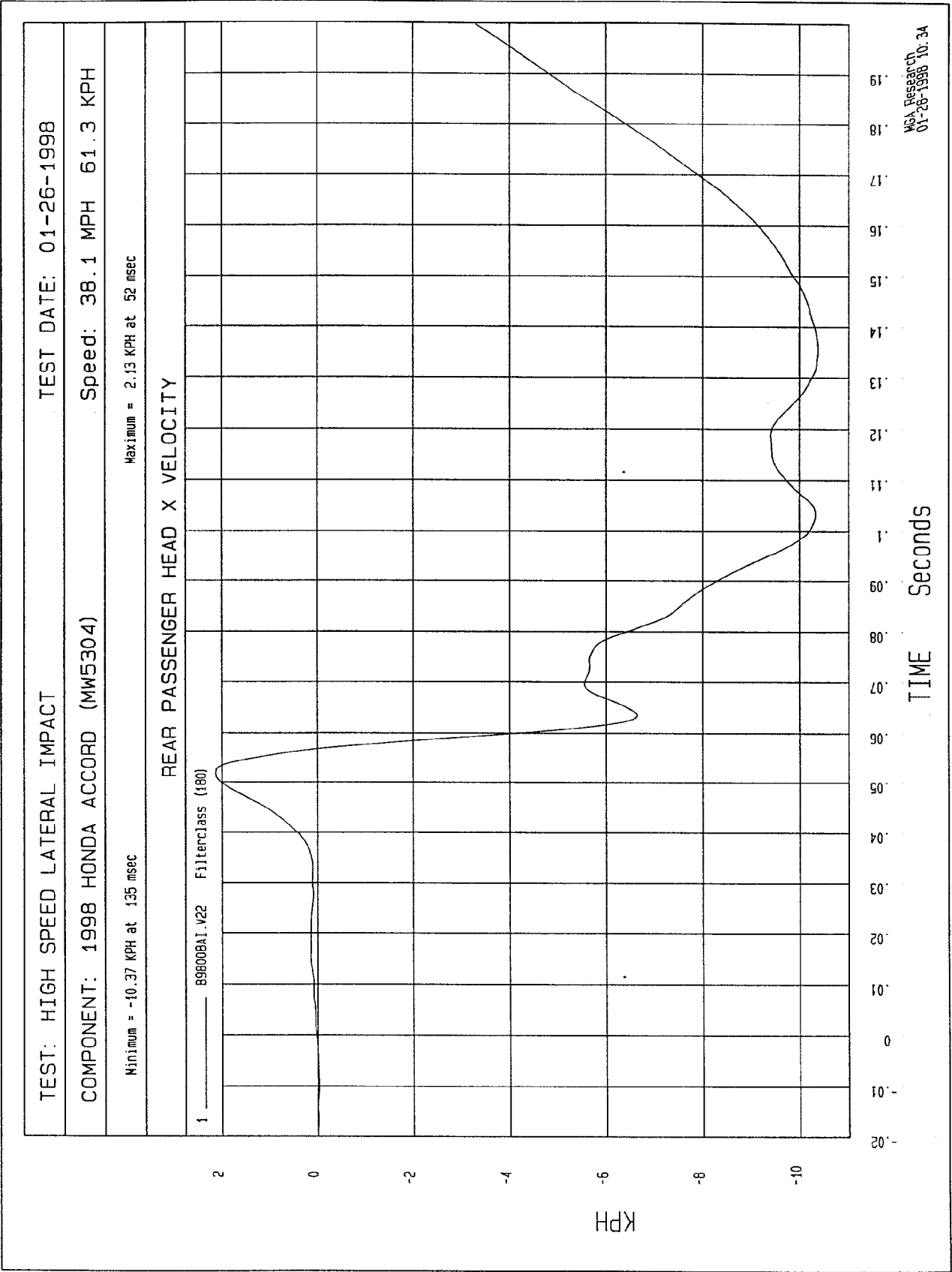


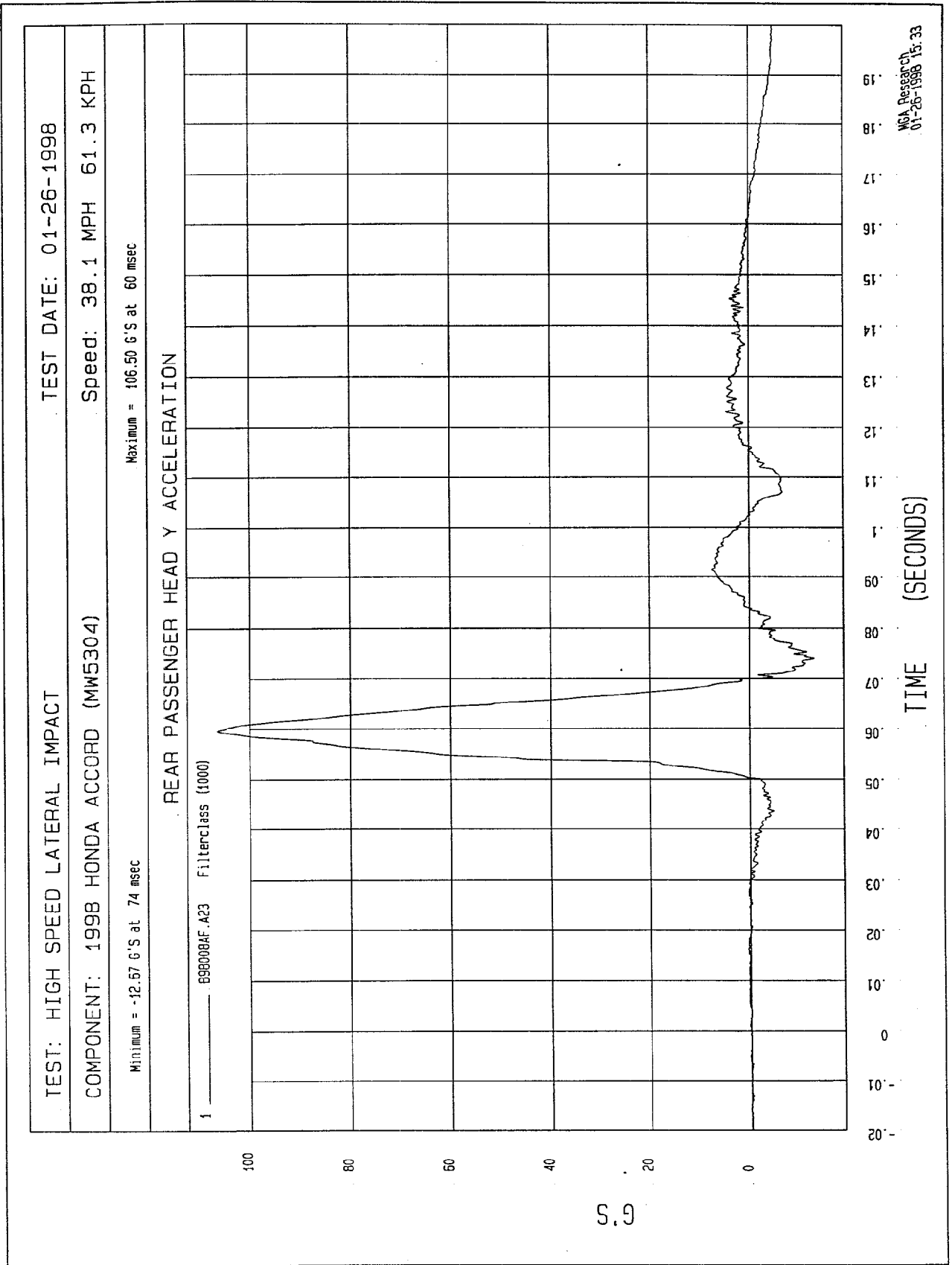


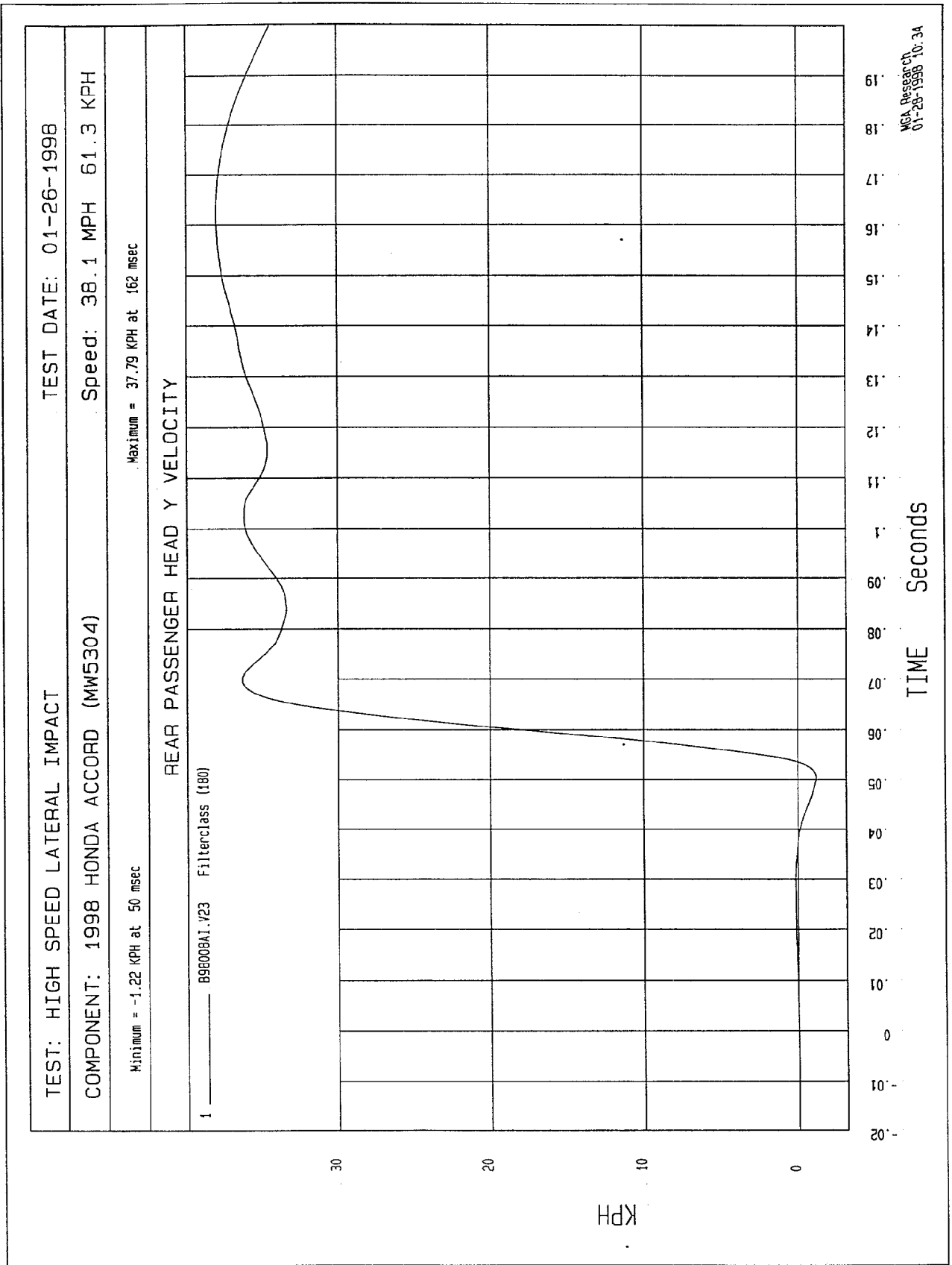


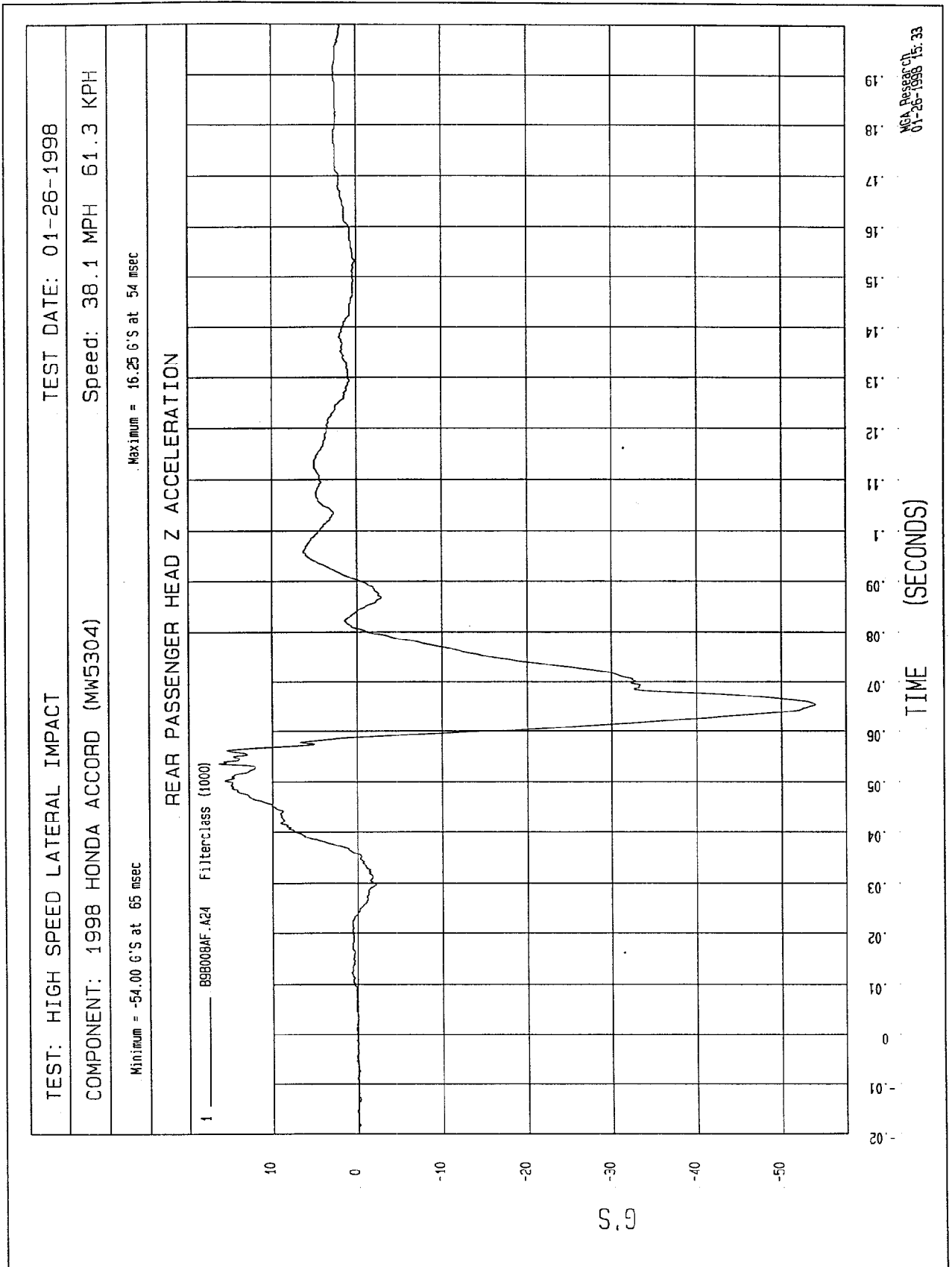












TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

SPEED: 38.1 MPH 61.3 KPH

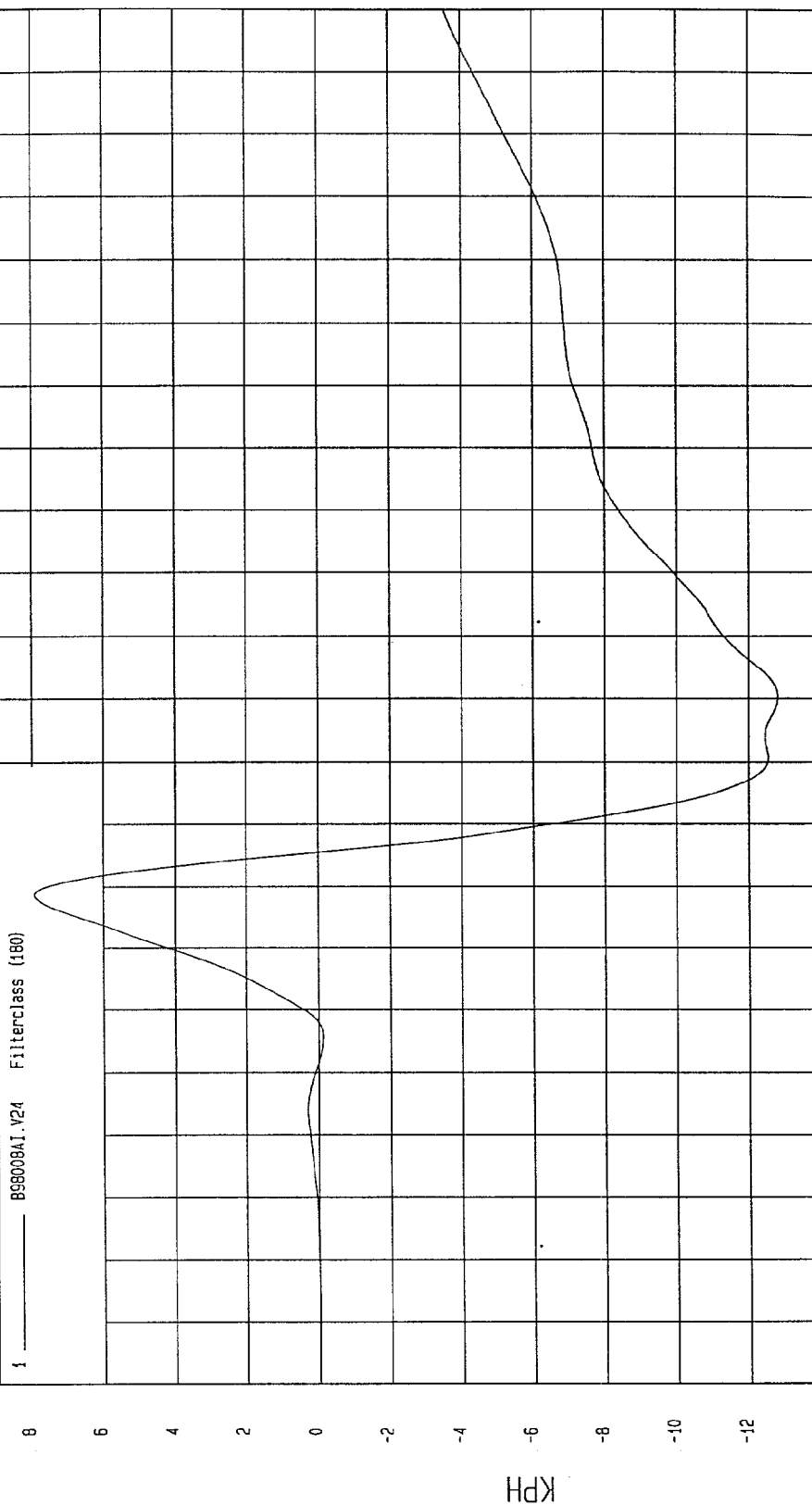
COMPONENT: 1998 HONDA ACCORD (MW5304)

Maximum = 7.93 KPH at 59 msec

Minimum = -12.81 KPH at 90 msec

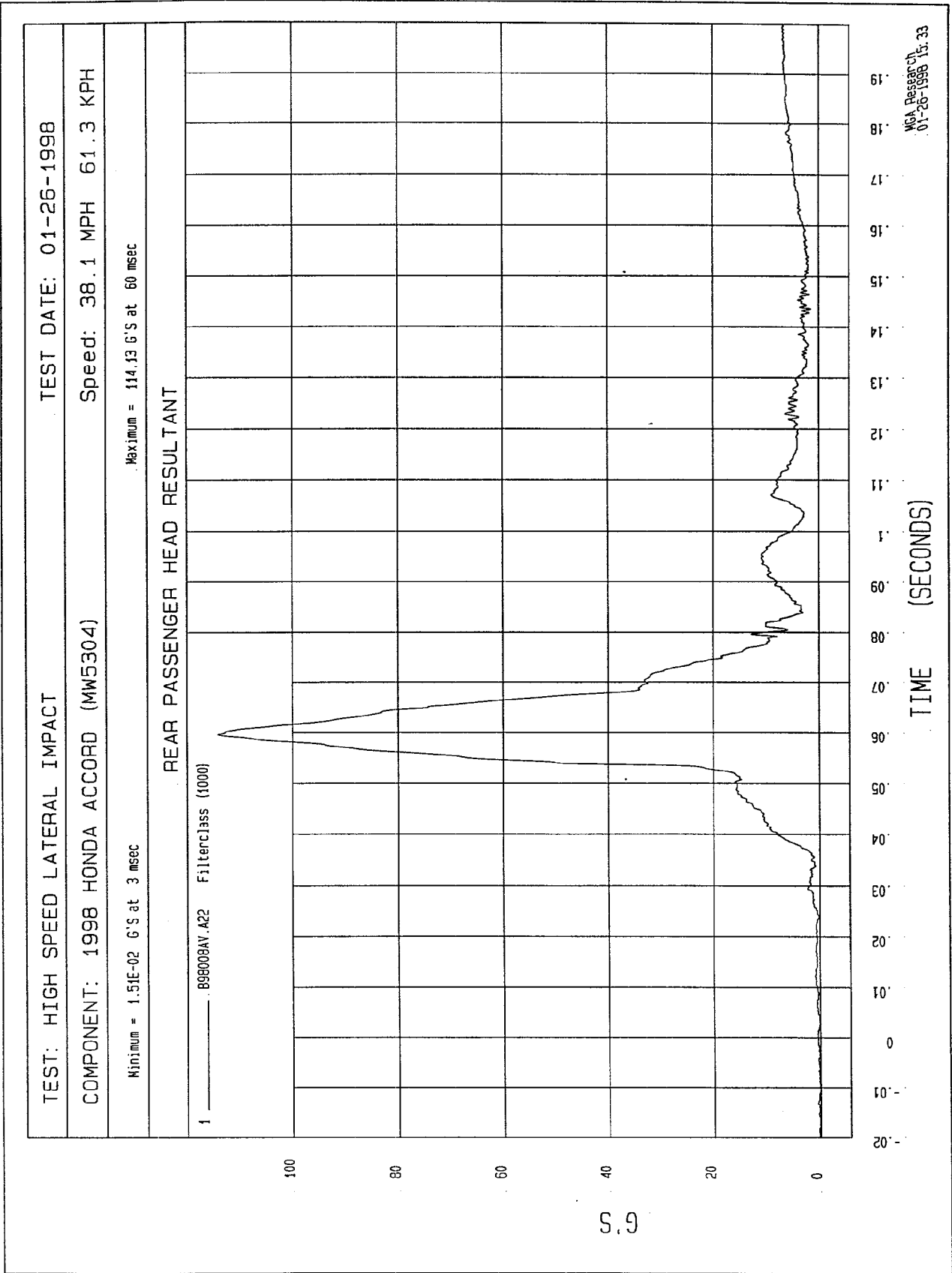
REAR PASSENGER HEAD Z VELOCITY

1 B98008A1.V24 Filterclass (180)



NGA Research
01-28-1998 10:35

TIME Seconds



TEST: HIGH SPEED LATERAL IMPACT

TEST DATE: 01-26-1998

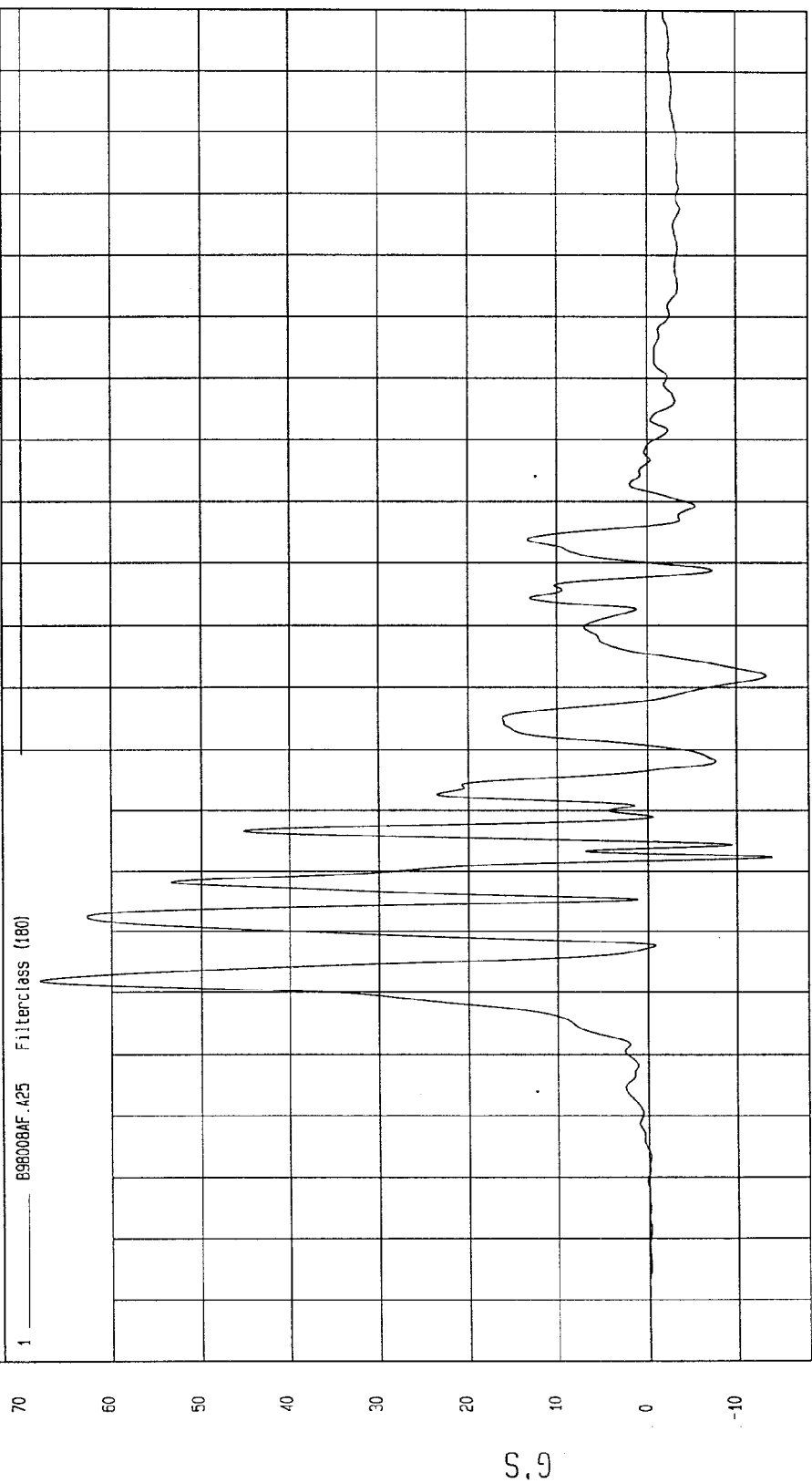
Speed: 38.1 MPH 61.3 KPH

COMPONENT: 1998 HONDA ACCORD (MW5304)

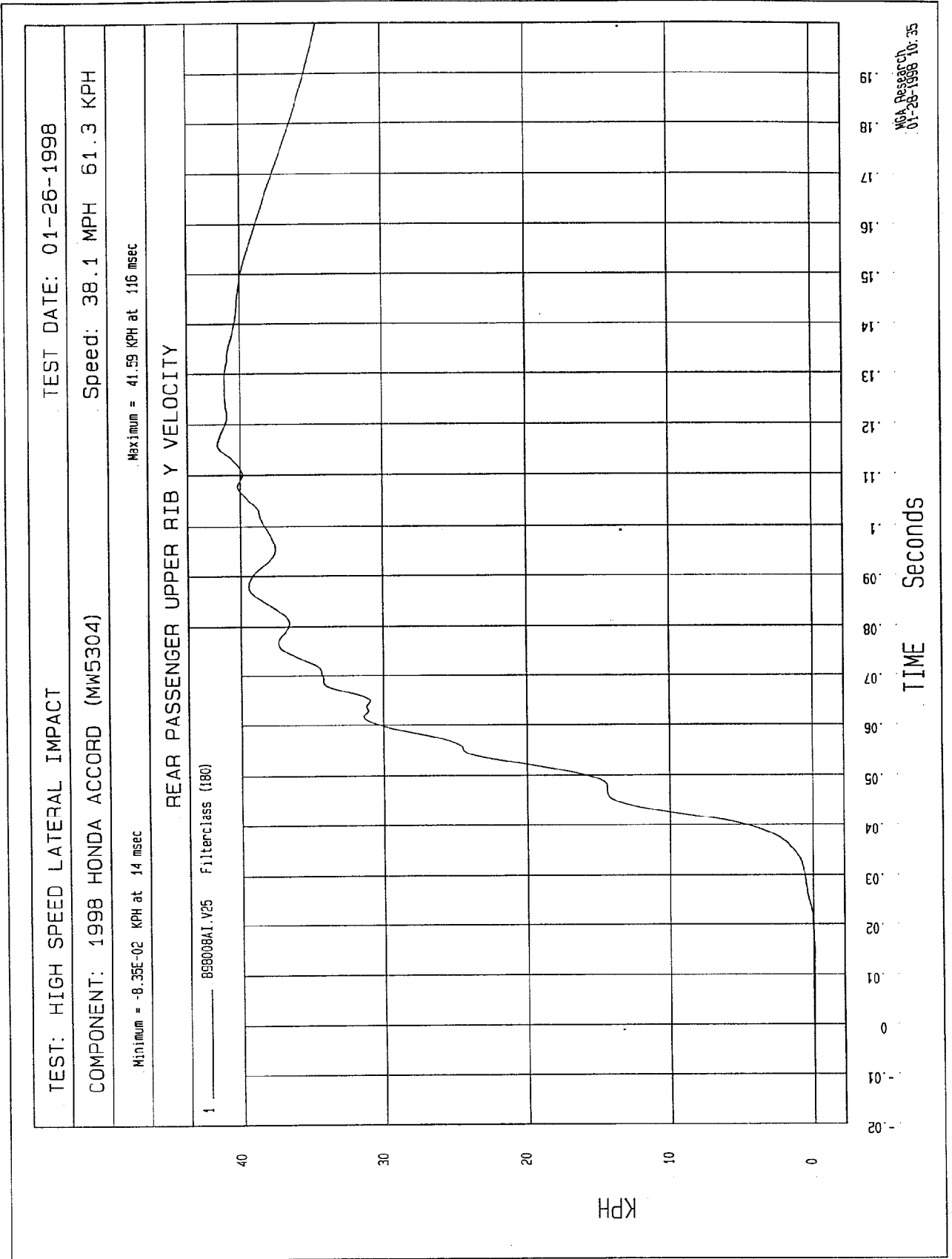
Maximum = 68.04 G'S at 42 msec

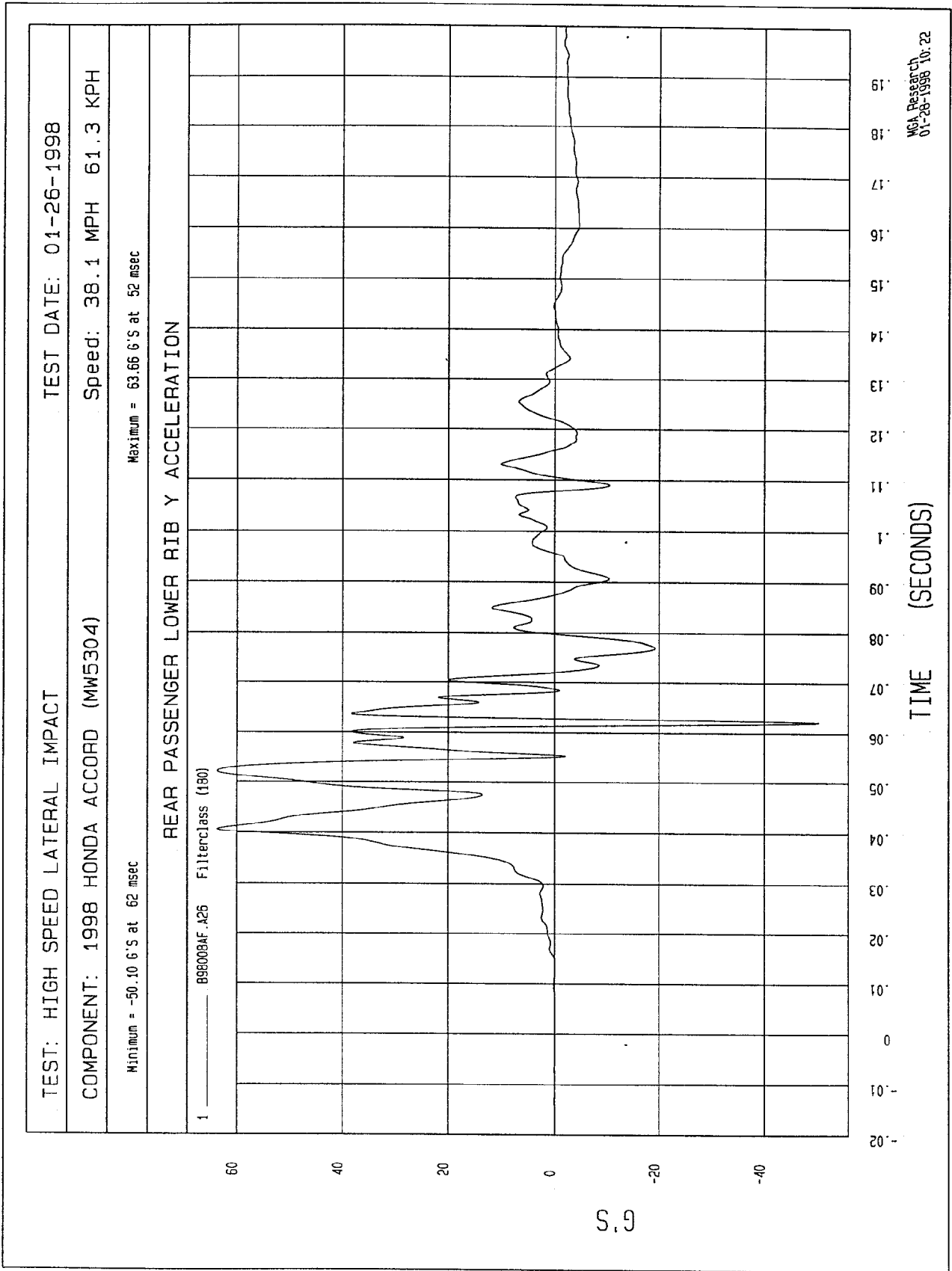
Minimum = -13.76 G'S at 62 msec

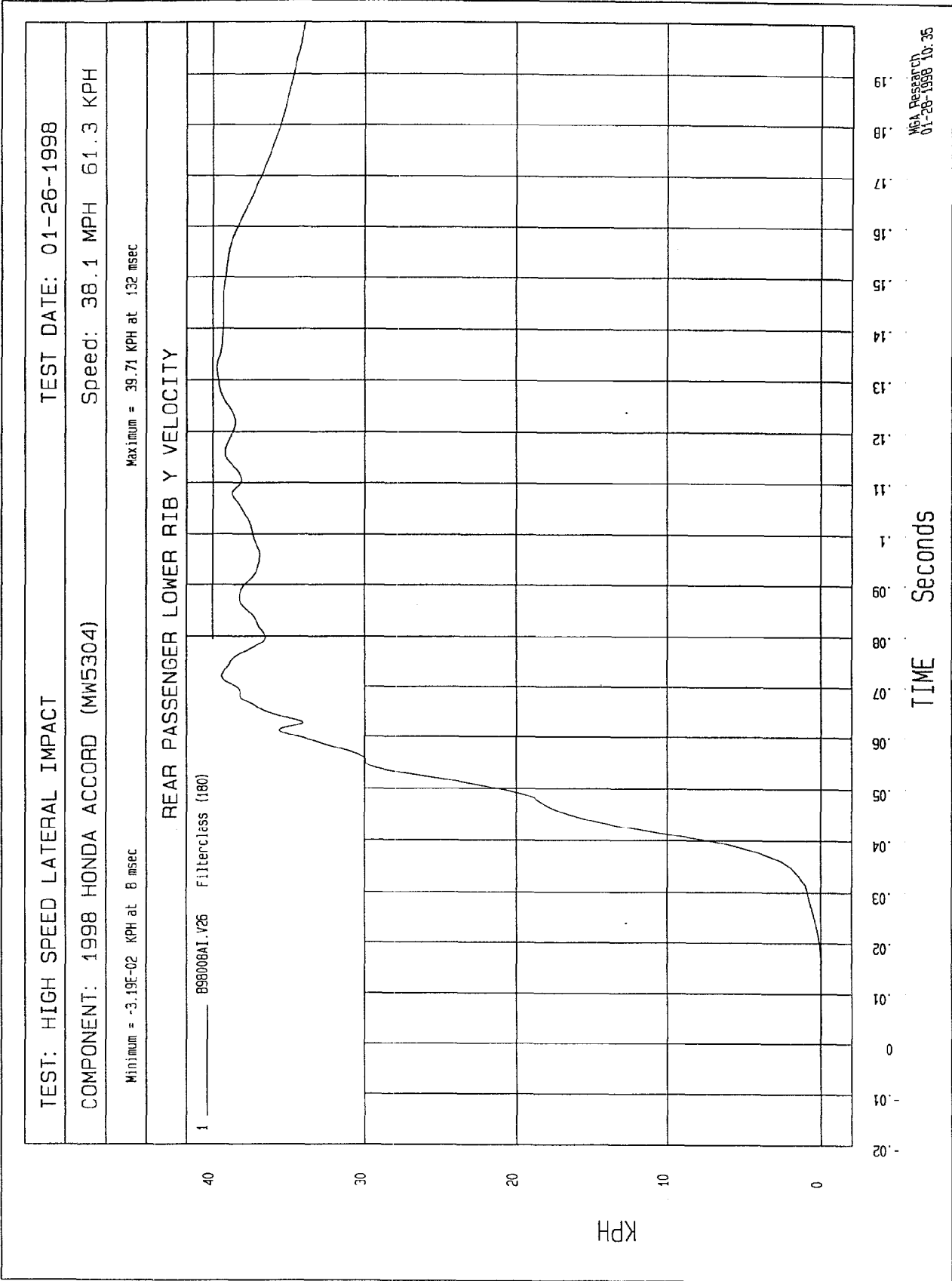
REAR PASSENGER UPPER RIB Y ACCELERATION



MCA Research
01-26-1998 10:22





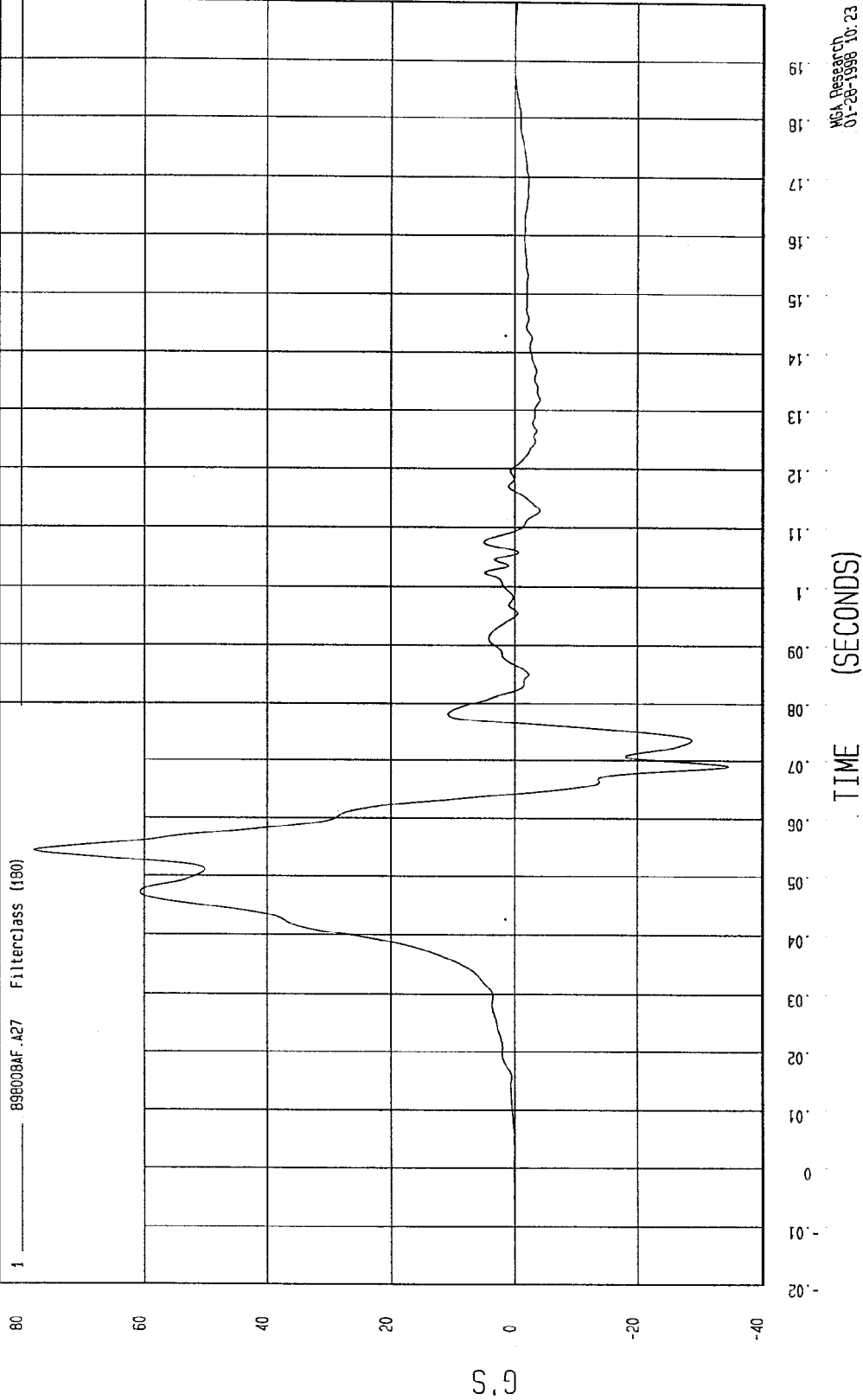


TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

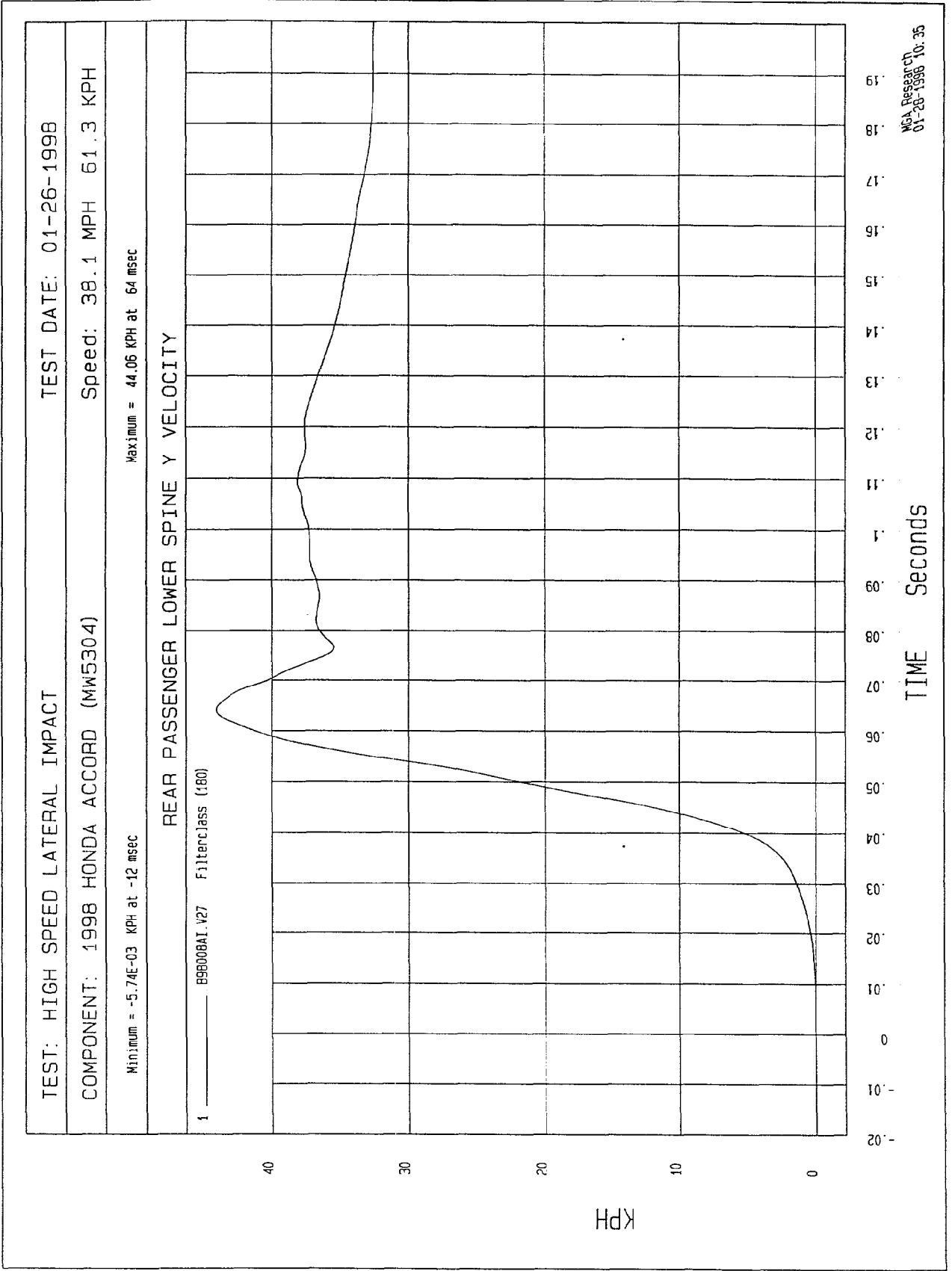
COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH

Minimum = -34.65 G'S at 69 msec Maximum = 78.00 G'S at 54 msec

REAR PASSENGER LOWER SPINE Y ACCELERATION



MCA Research
01-26-1998 10:23

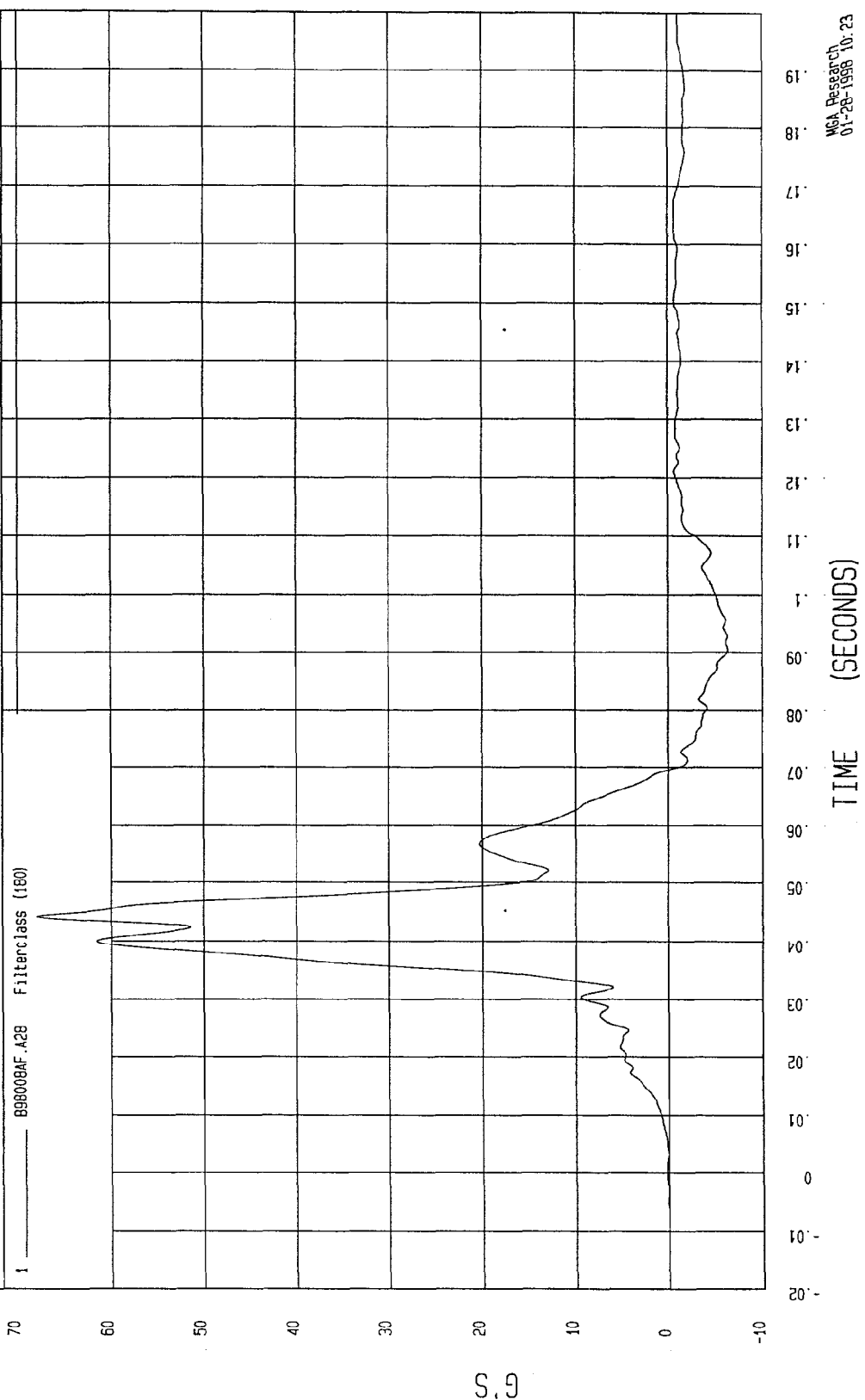


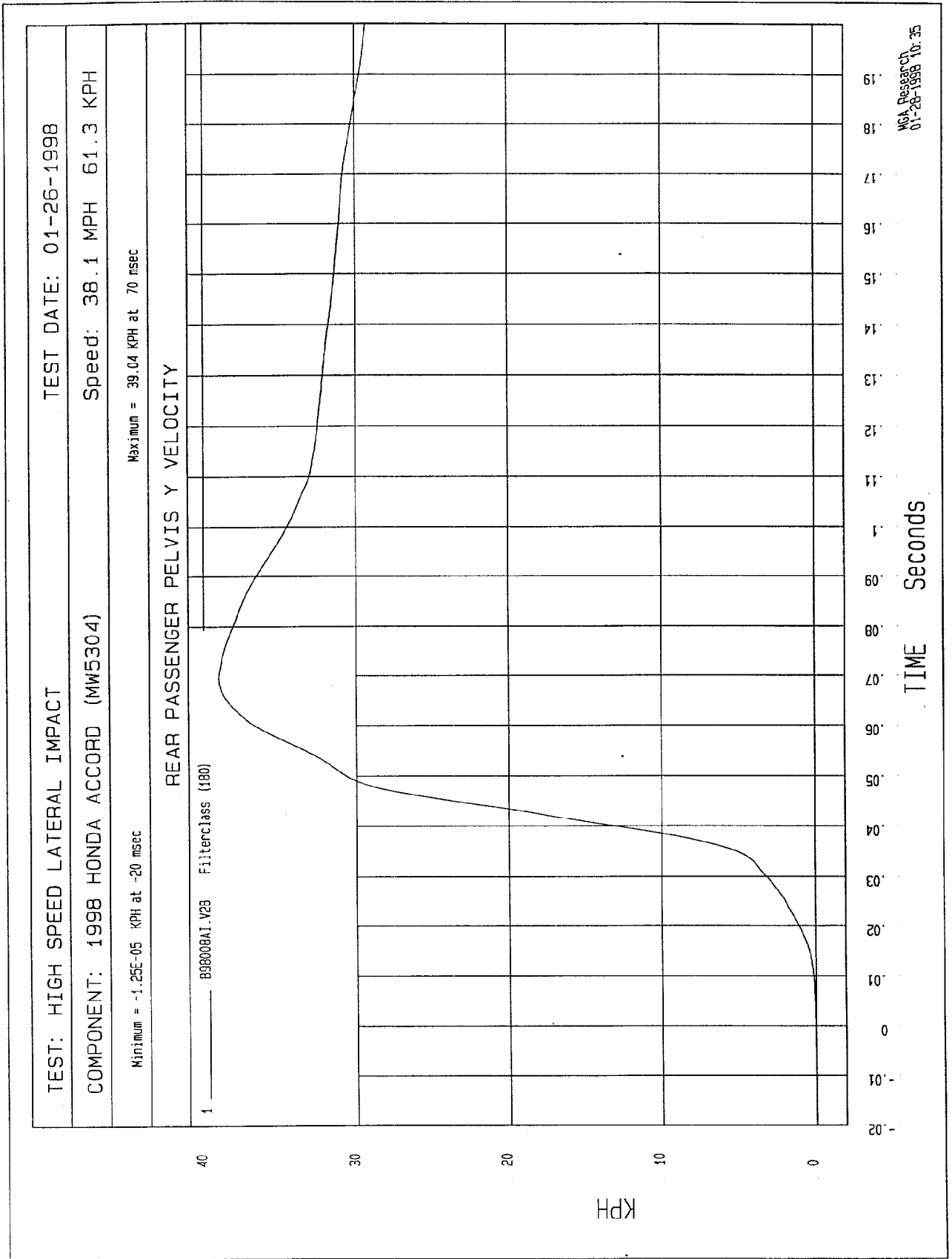
TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH

Minimum = -6.31 G'S at 90 msec Maximum = 67.95 G'S at 44 msec

REAR PASSENGER PELVIS Y ACCELERATION



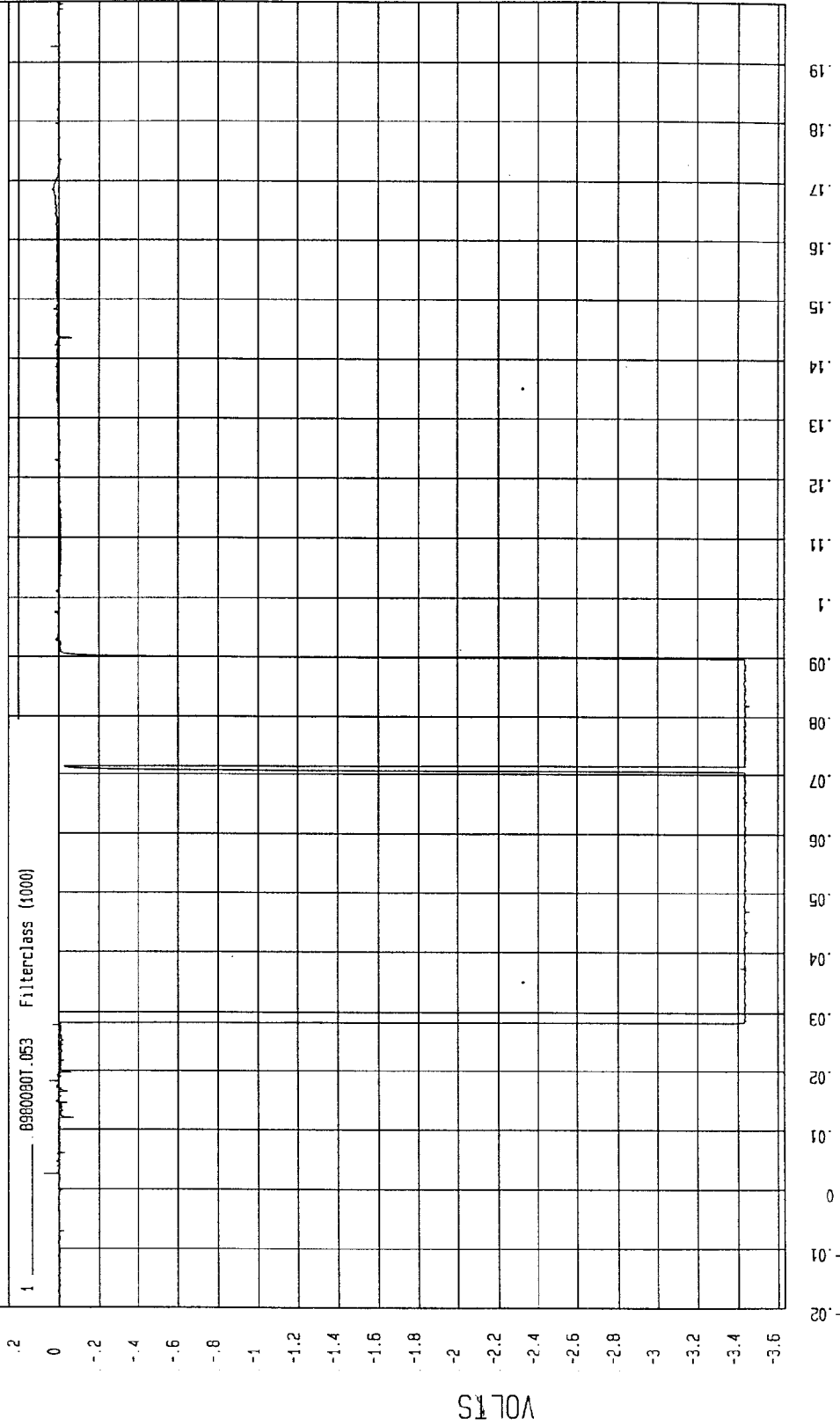


TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

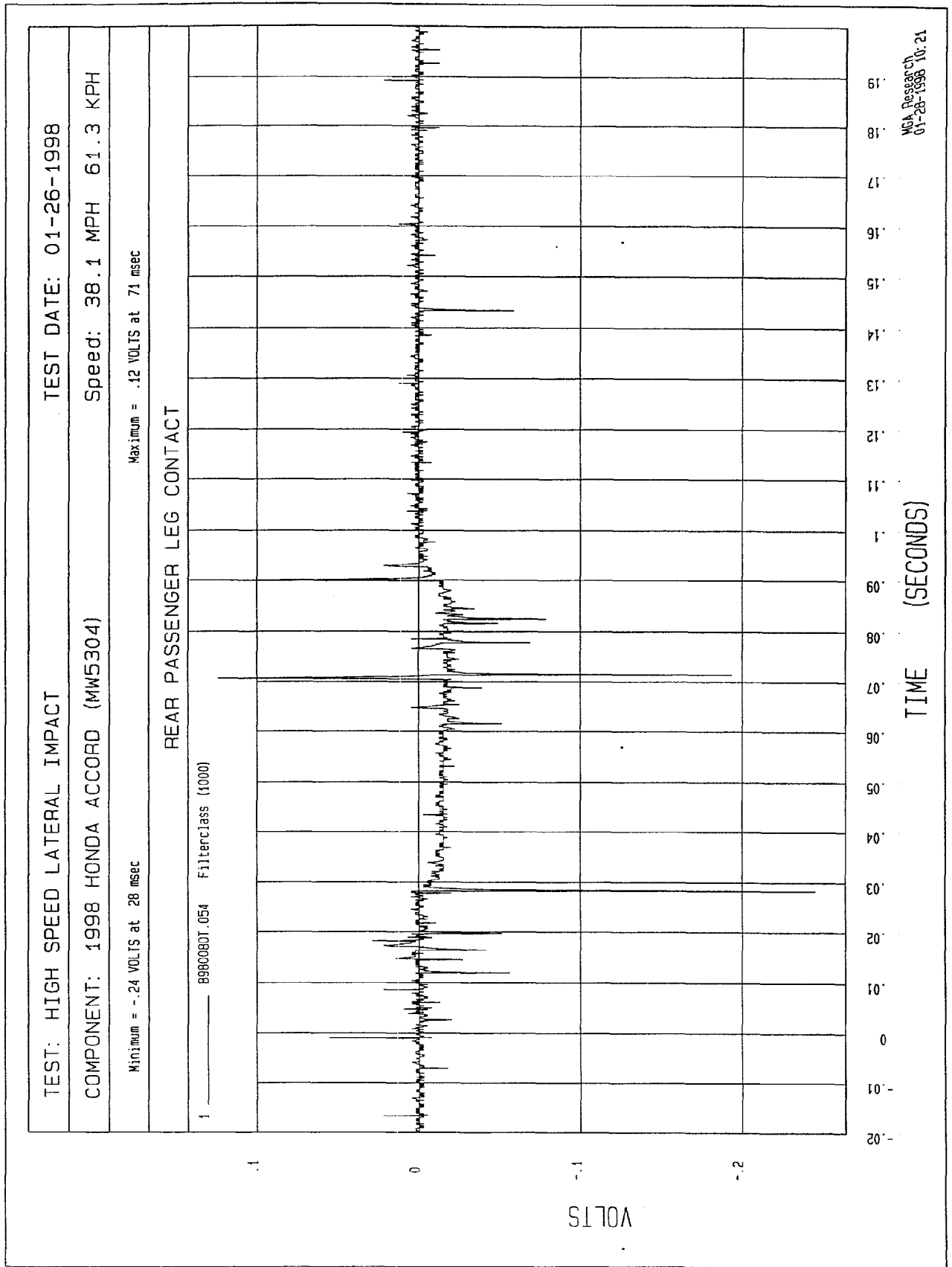
COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH

Minimum = -3.45 VOLTS at 47 msec Maximum = 7.46E-02 VOLTS at 2 msec

REAR PASSENGER SHOULDER CONTACT



MCA Research
01-26-1998 10:21

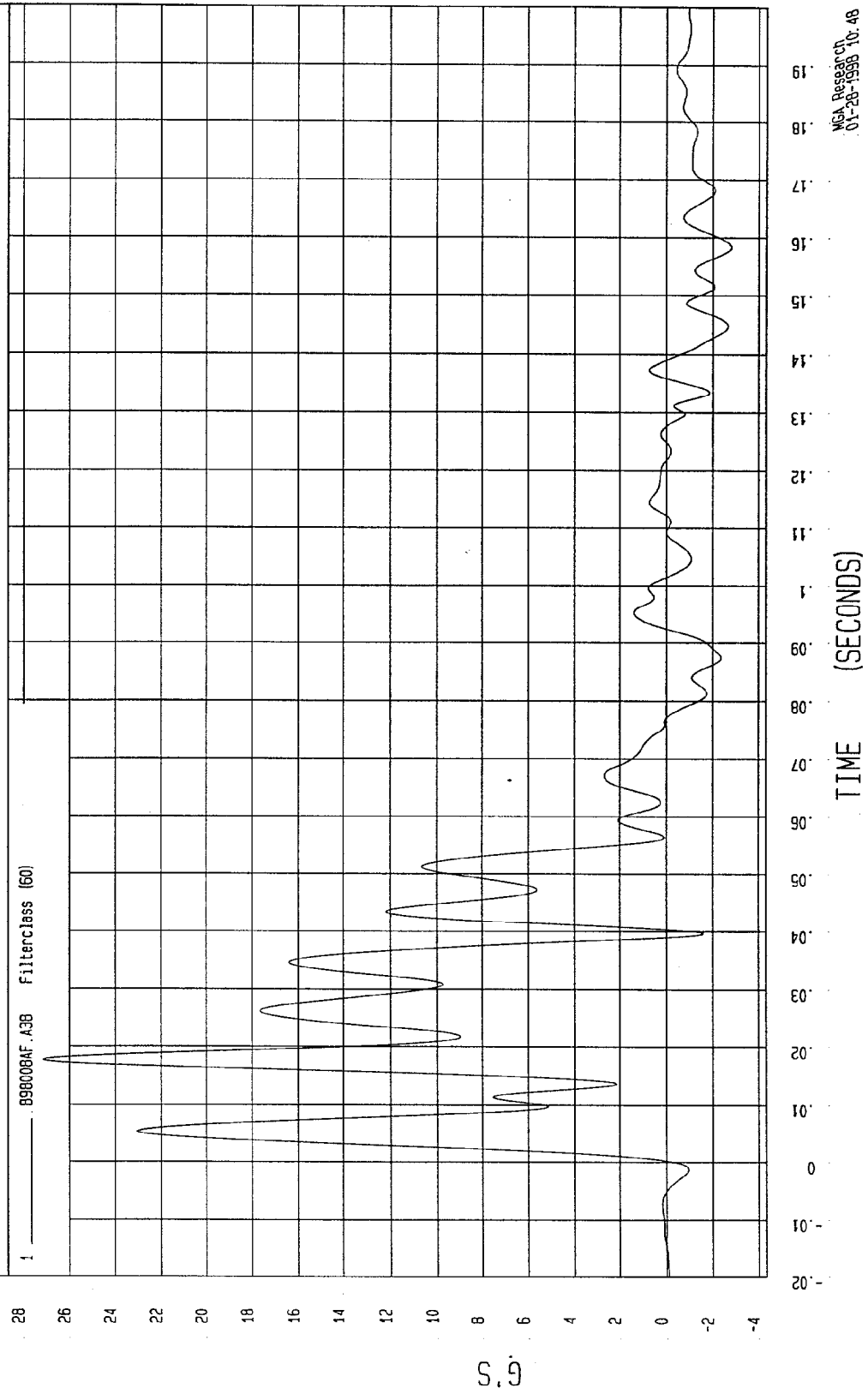


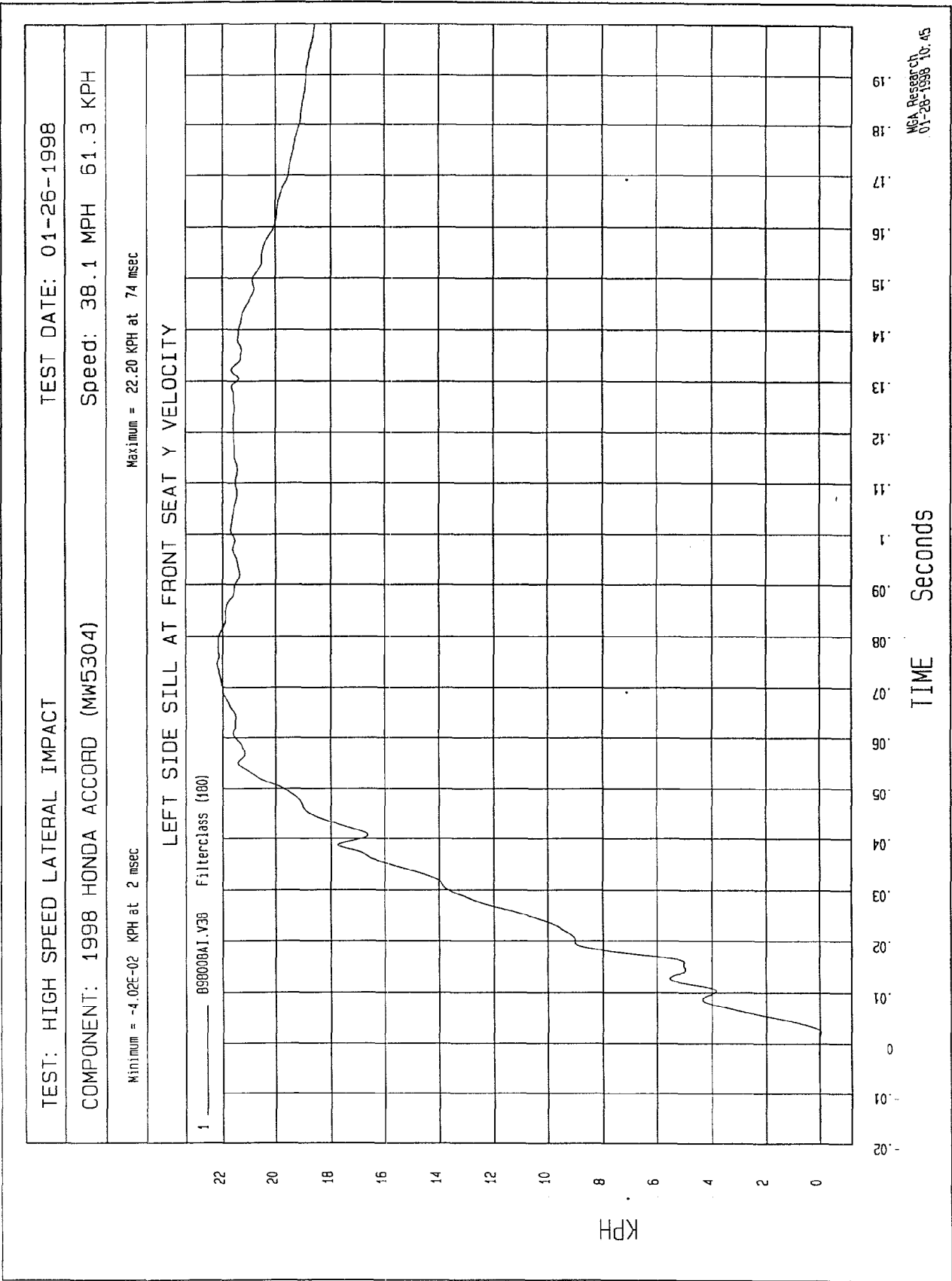
TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH

Minimum = -2.81 G'S at 158 msec Maximum = 27.15 G'S at 18 msec

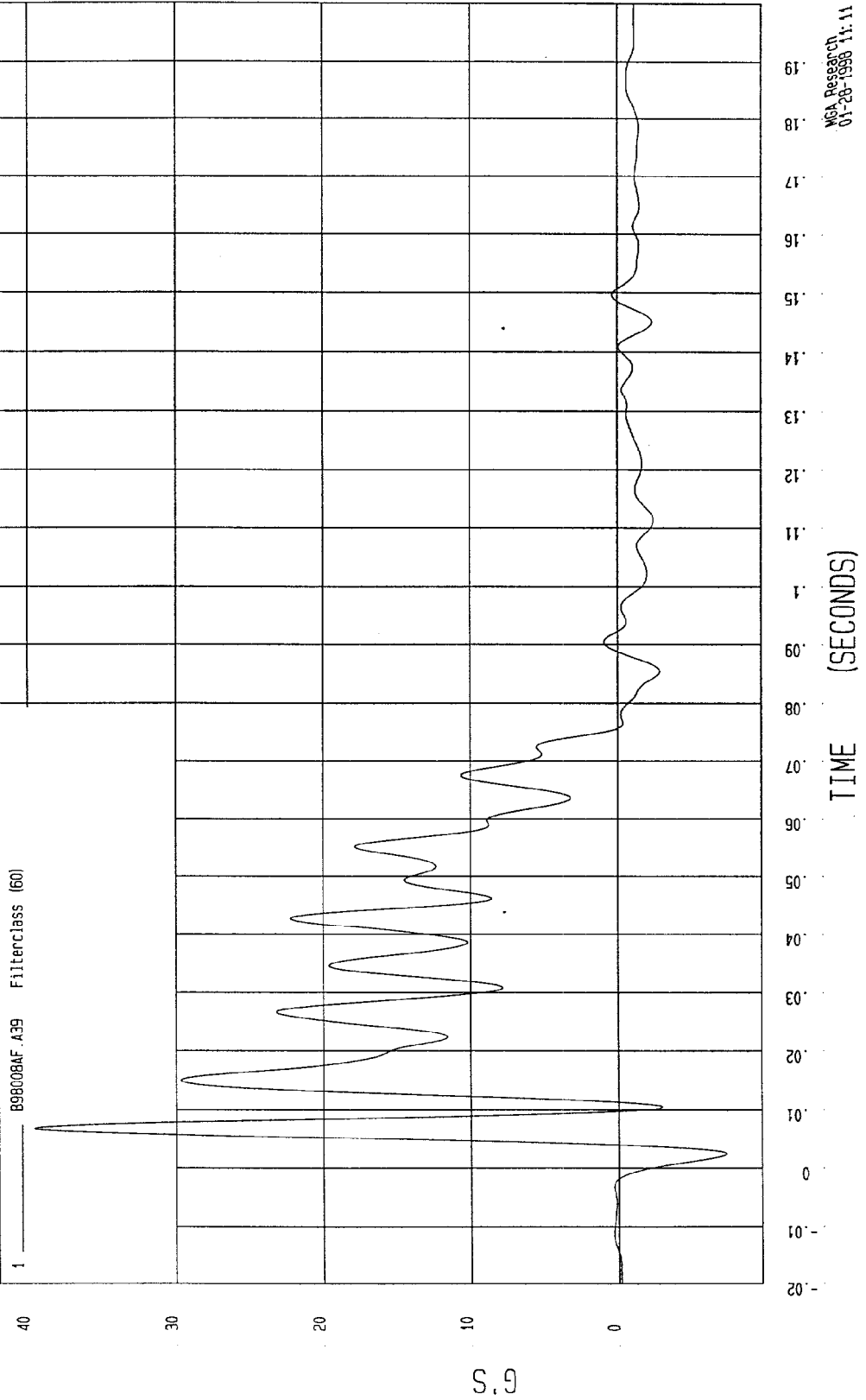
LEFT SIDE SILL AT FRONT SEAT Y ACCELERATION

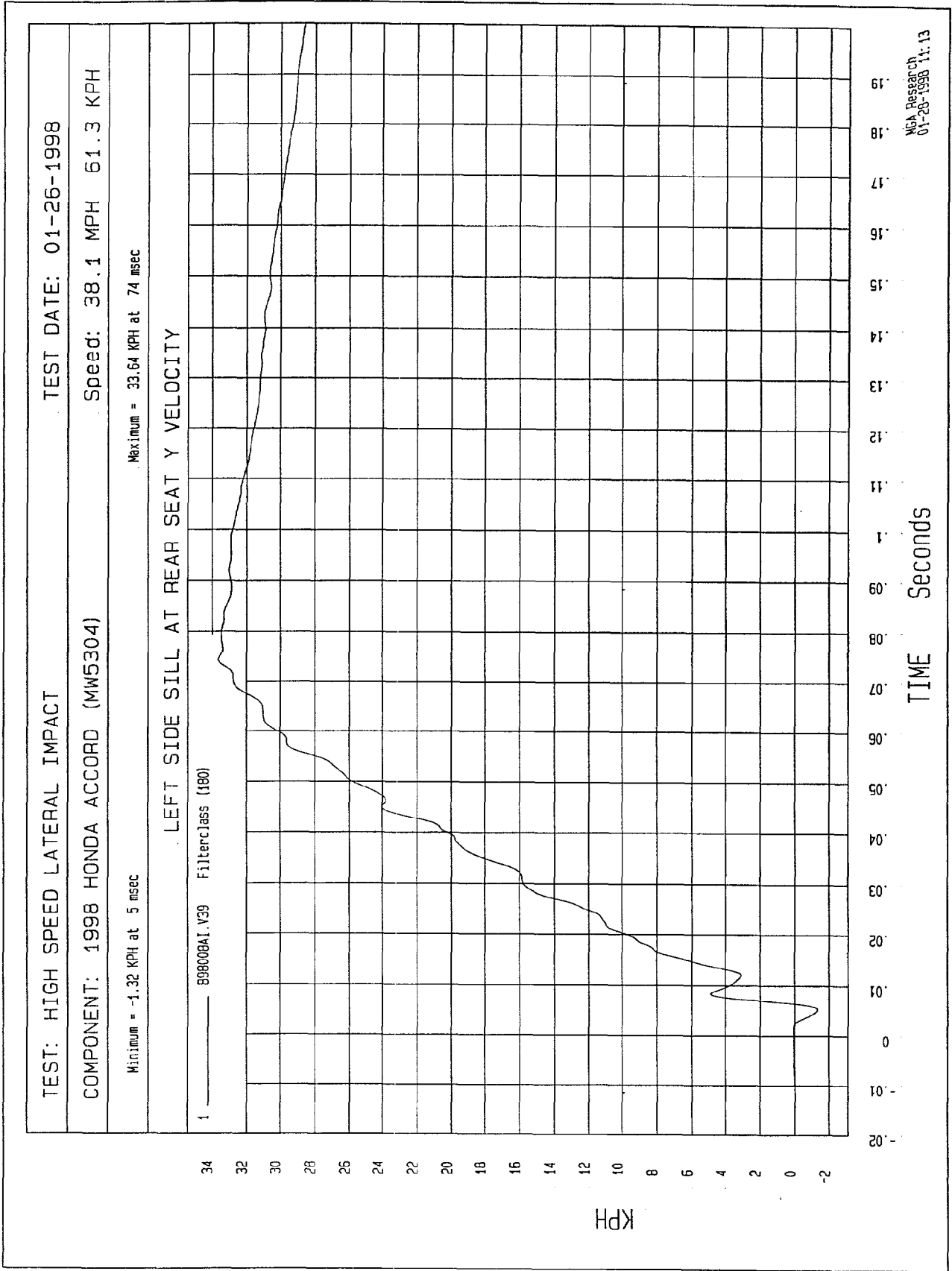




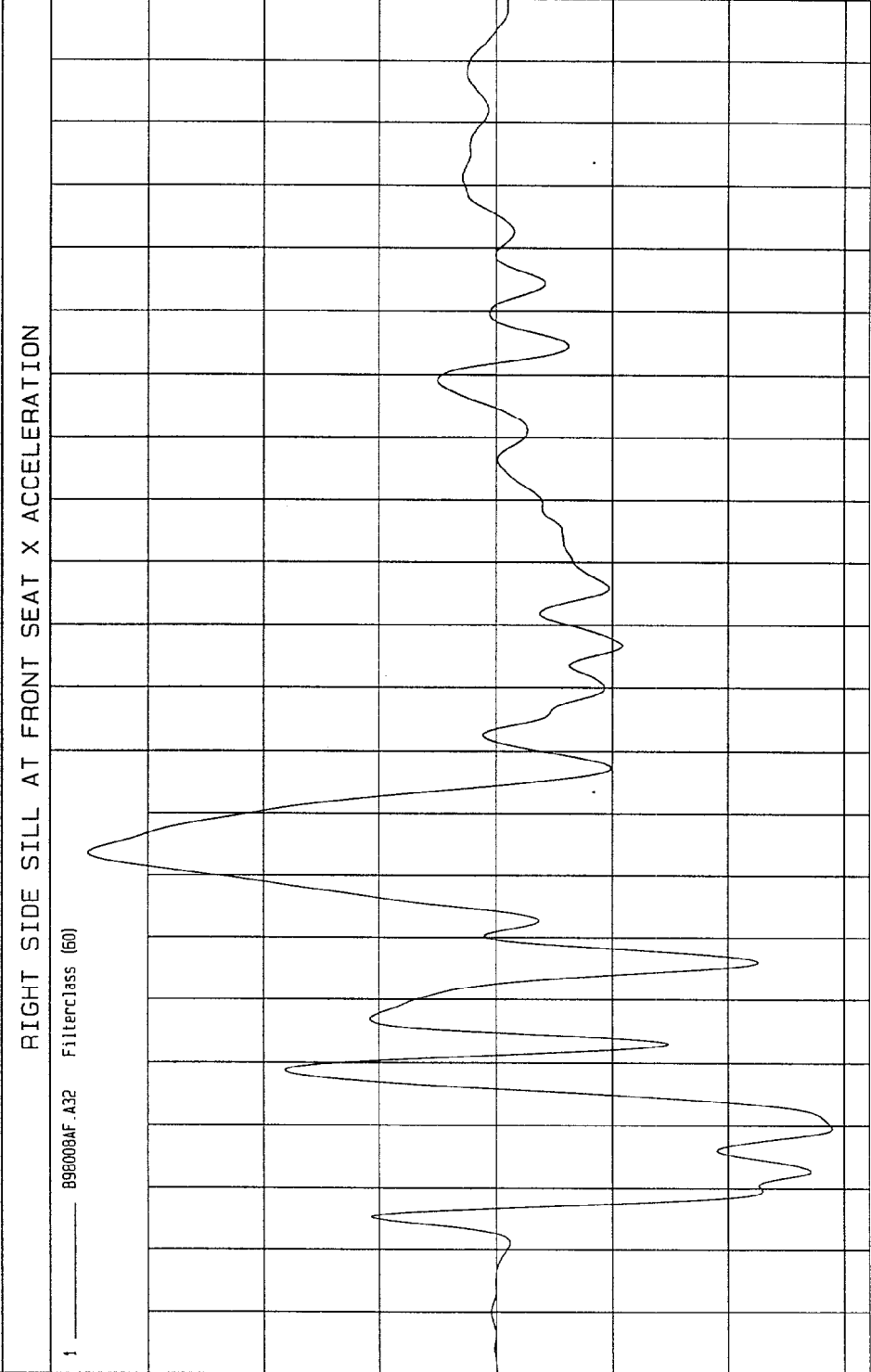
TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998
COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH
Minimum = -7.32 G'S at 2 msec Maximum = 39.59 G'S at 7 msec

LEFT SIDE SILL AT REAR SEAT Y ACCELERATION





TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998
COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH
Minimum = -2.89 G'S at 20 msec Maximum = 3.51 G'S at 64 msec



TIME (SECONDS)

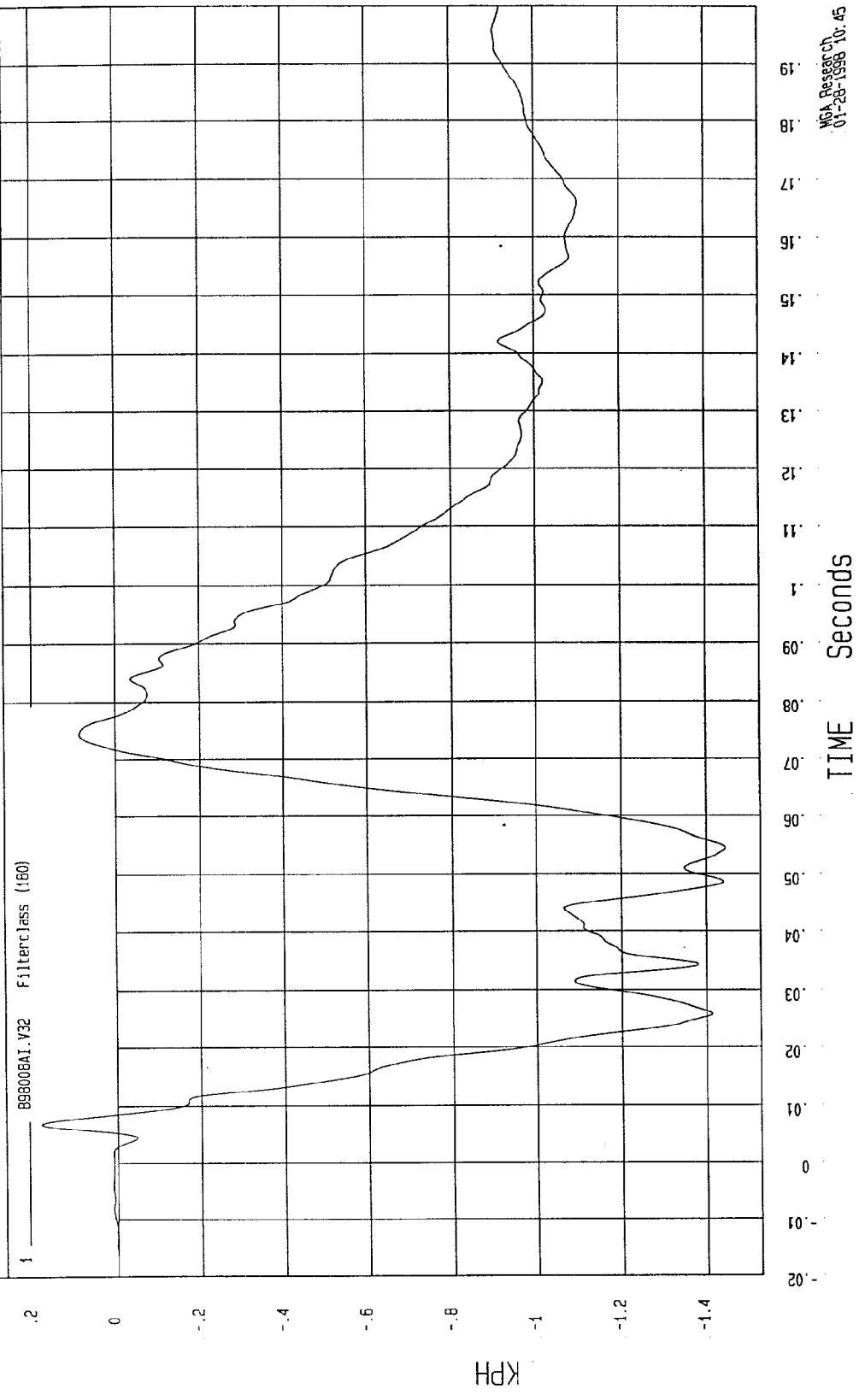
MOA Research
01-28-1998 10: 48

TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

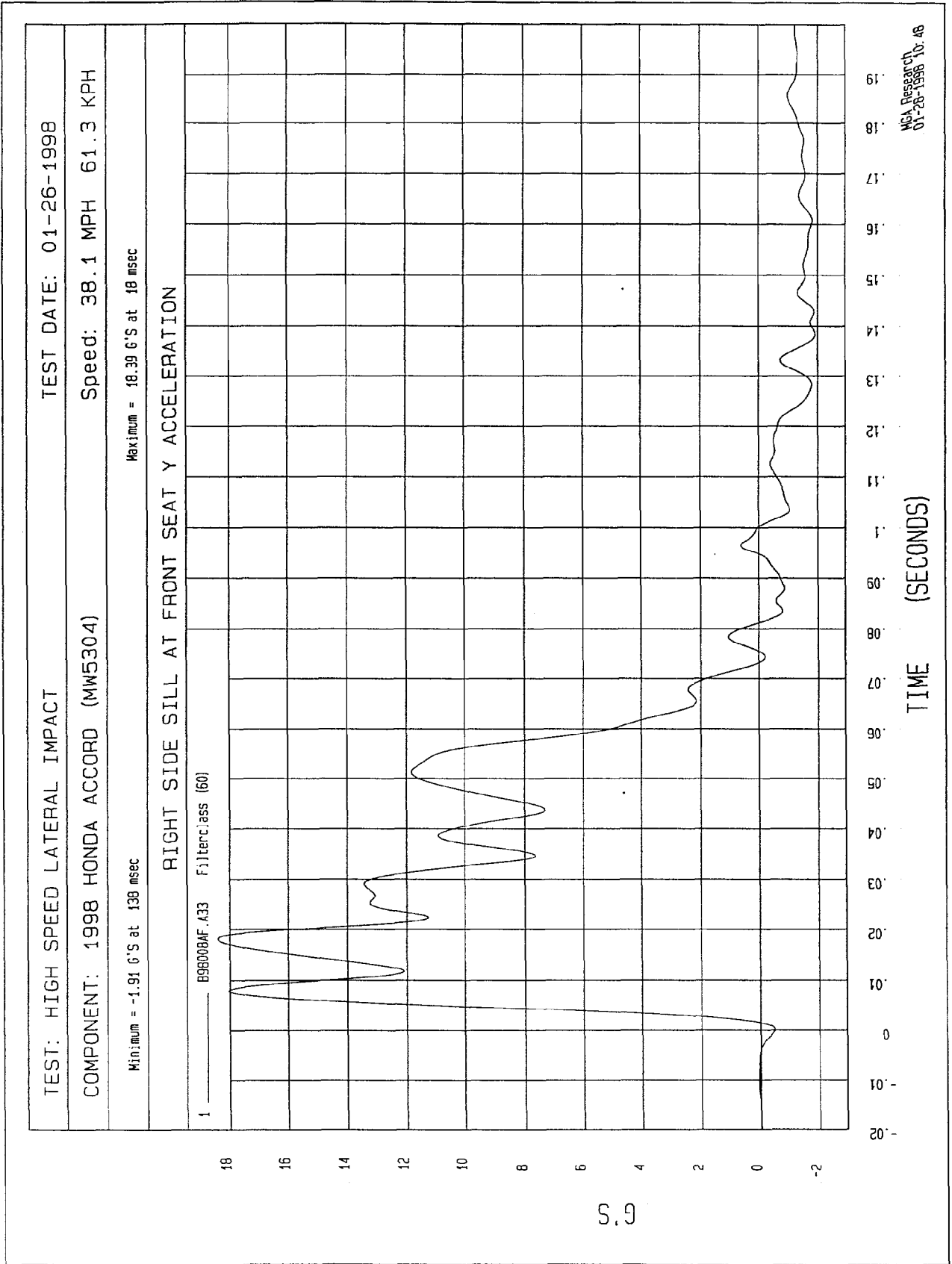
COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH

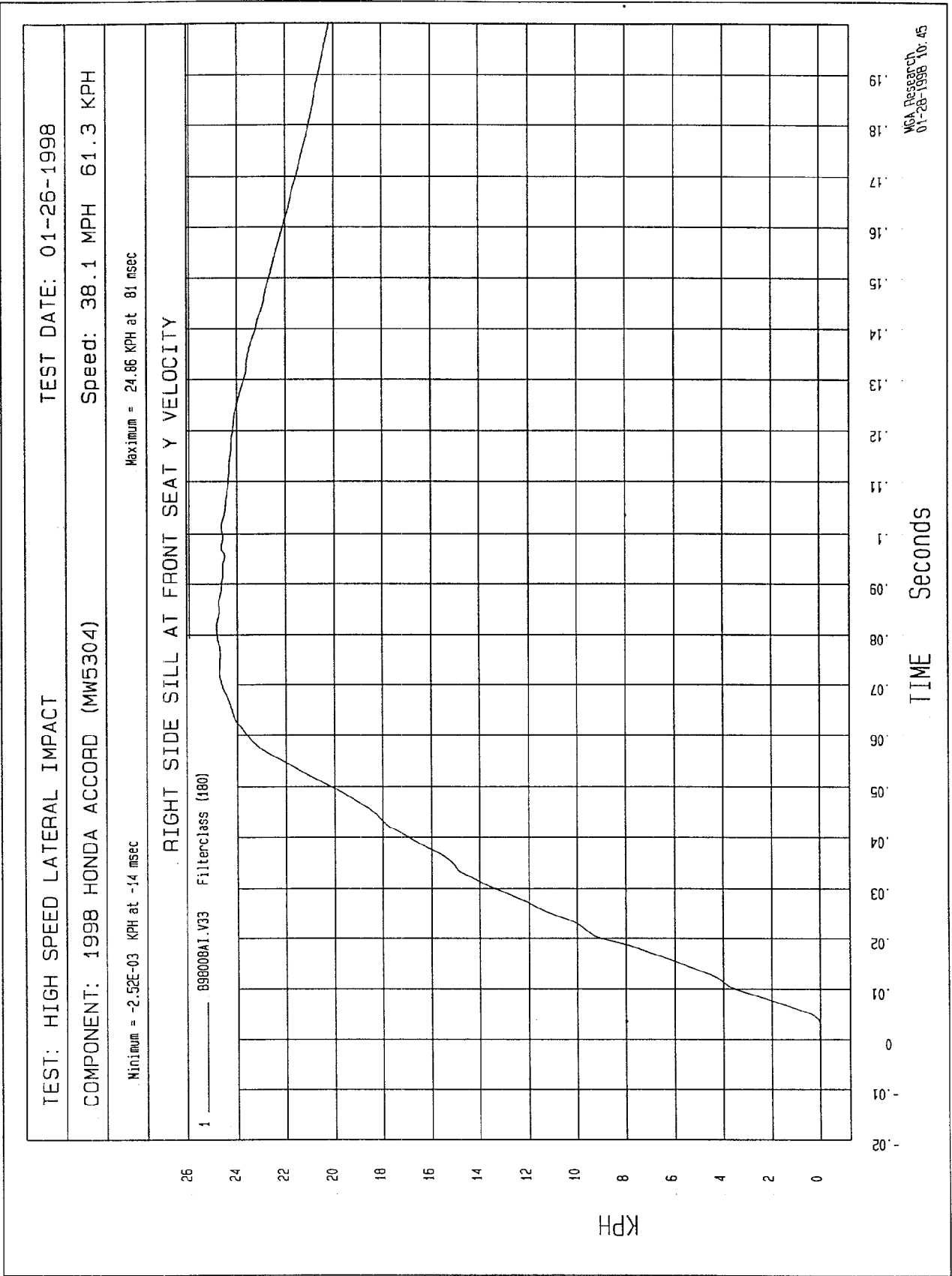
Minimum = -1.44 KPH at 54 msec Maximum = .18 KPH at 7 msec

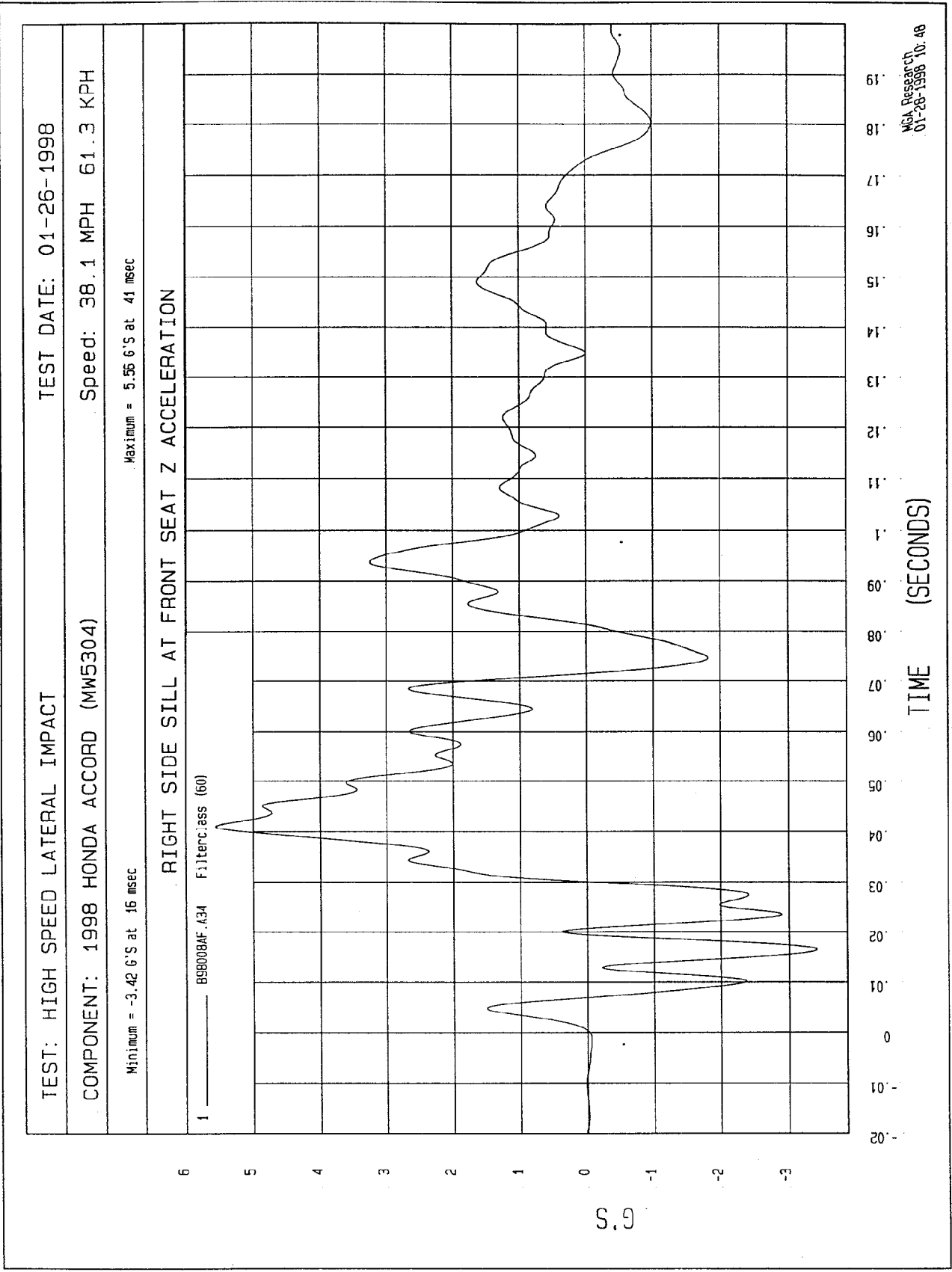
RIGHT SIDE SILL AT FRONT SEAT X VELOCITY



NCA Research
01-28-1998 10:45







TEST: HIGH SPEED LATERAL IMPACT

TEST DATE: 01-26-1998

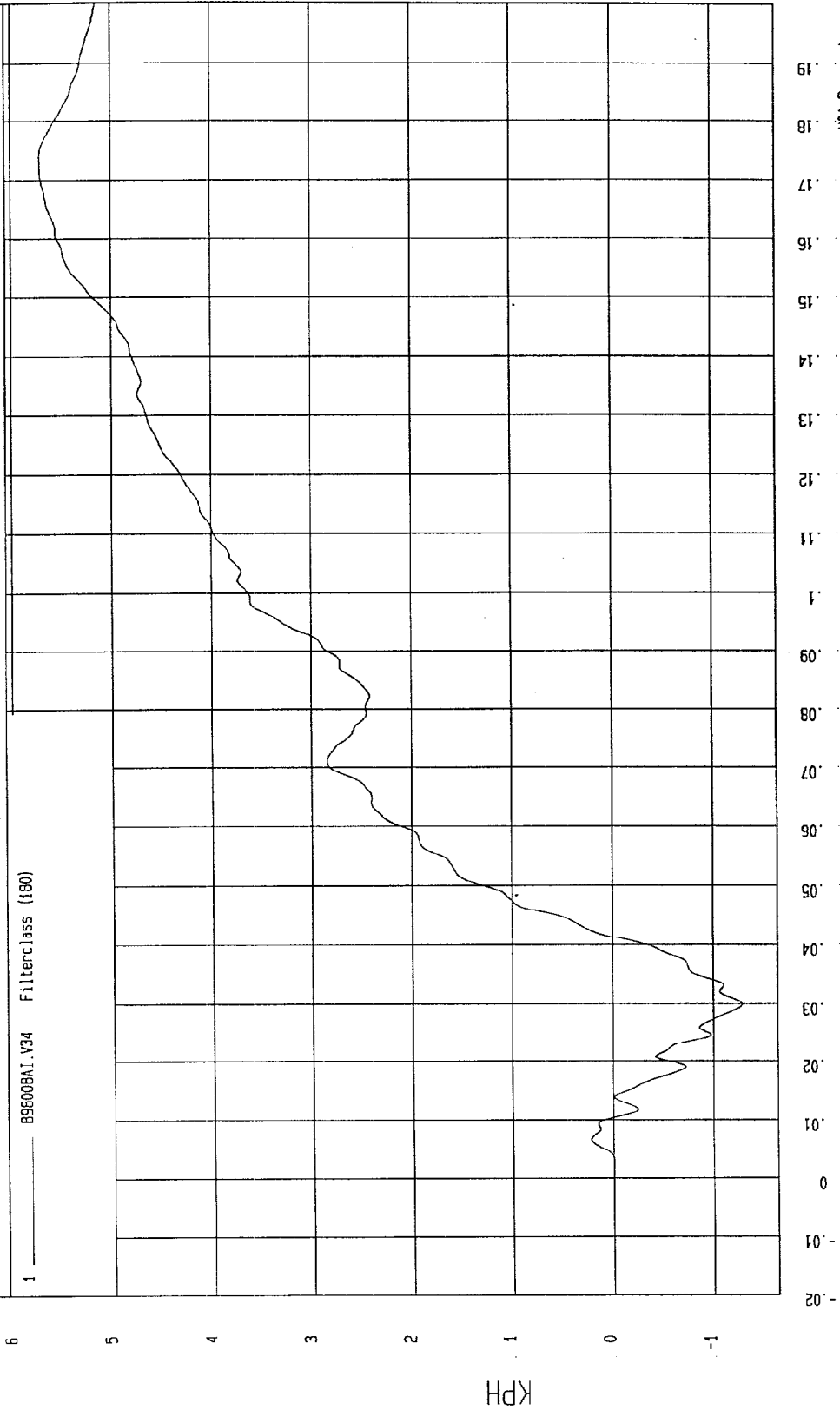
COMPONENT: 1998 HONDA ACCORD (MW5304)

Speed: 38.1 MPH 61.3 KPH

Minimum = -1.29 KPH at 30 msec

Maximum = 5.71 KPH at 174 msec

RIGHT SIDE SILL AT FRONT SEAT Z VELOCITY



WCA Research
01-28-1998 10:45

TEST: HIGH SPEED LATERAL IMPACT

TEST DATE: 01-26-1998

Speed: 38.1 MPH 61.3 KPH

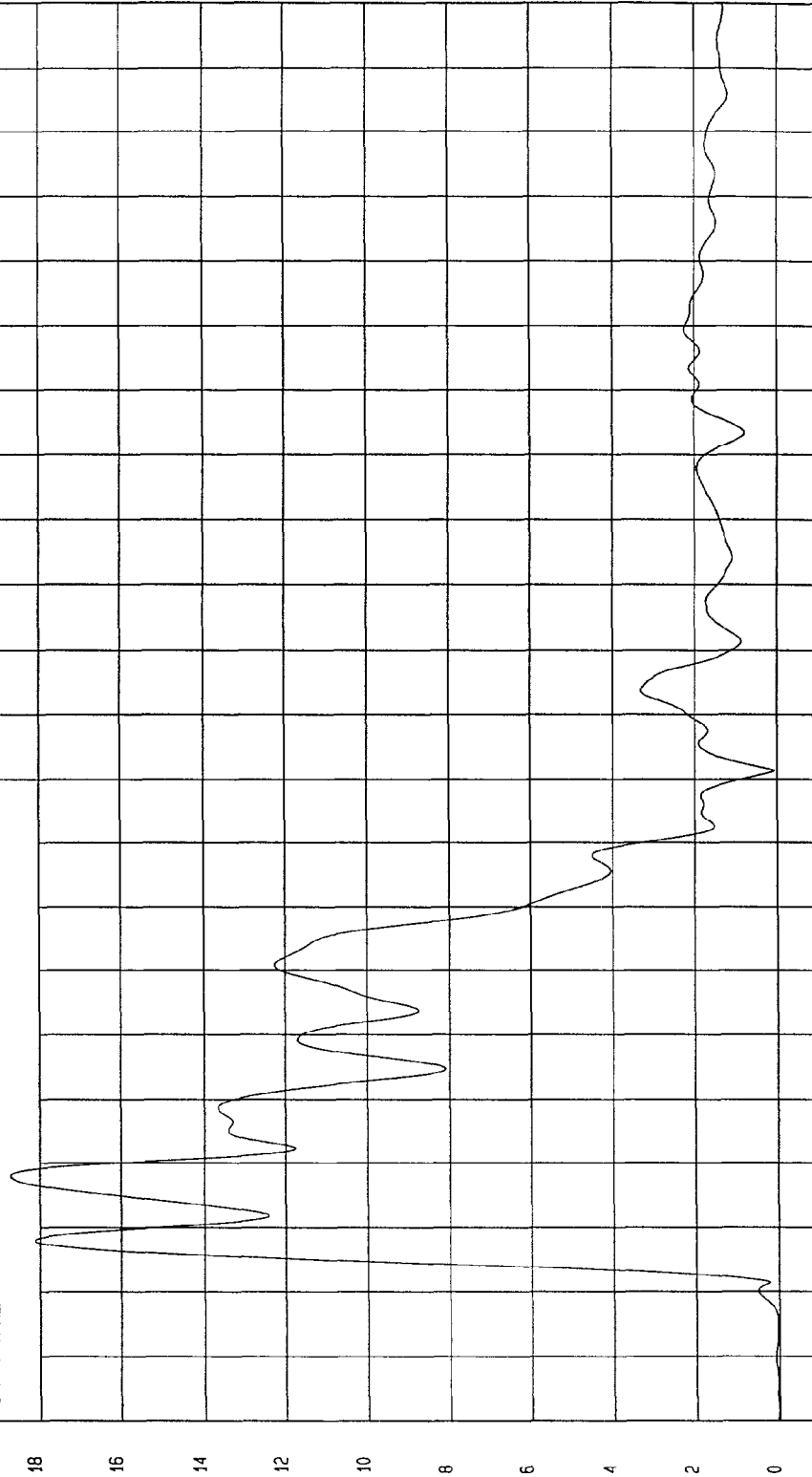
COMPONENT: 1998 HONDA ACCORD (MW5304)

Maximum = 18.69 G'S at 18 msec

Minimum = 1.33E-02 G'S at -14 msec

RIGHT SIDE SILL AT FRONT SEAT RESULTANT ACCELERATION

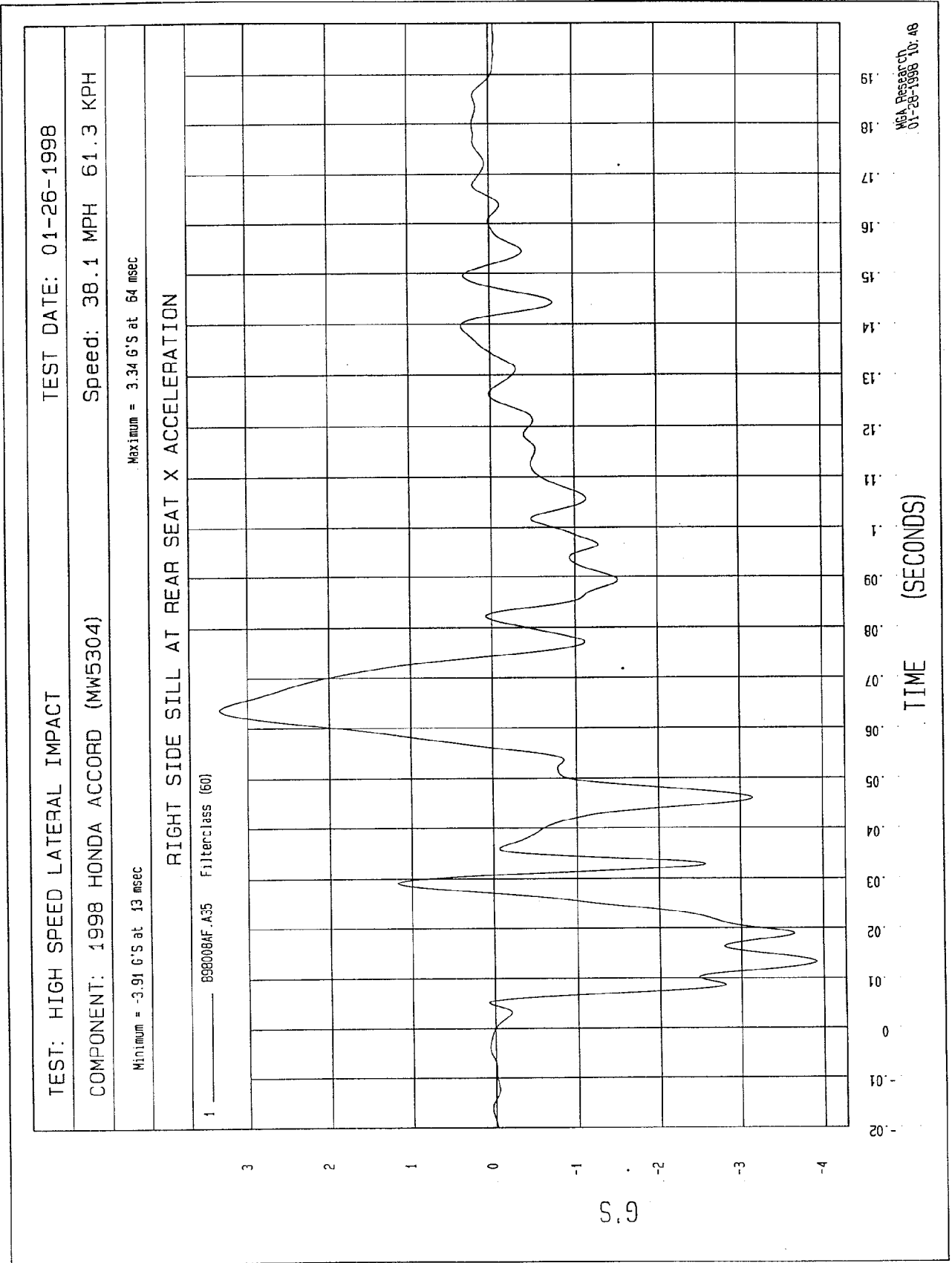
1 ——— B98008AV.A32 Filterclass (60)



WCA Research
01-26-1998 10:52

TIME (SECONDS)

G

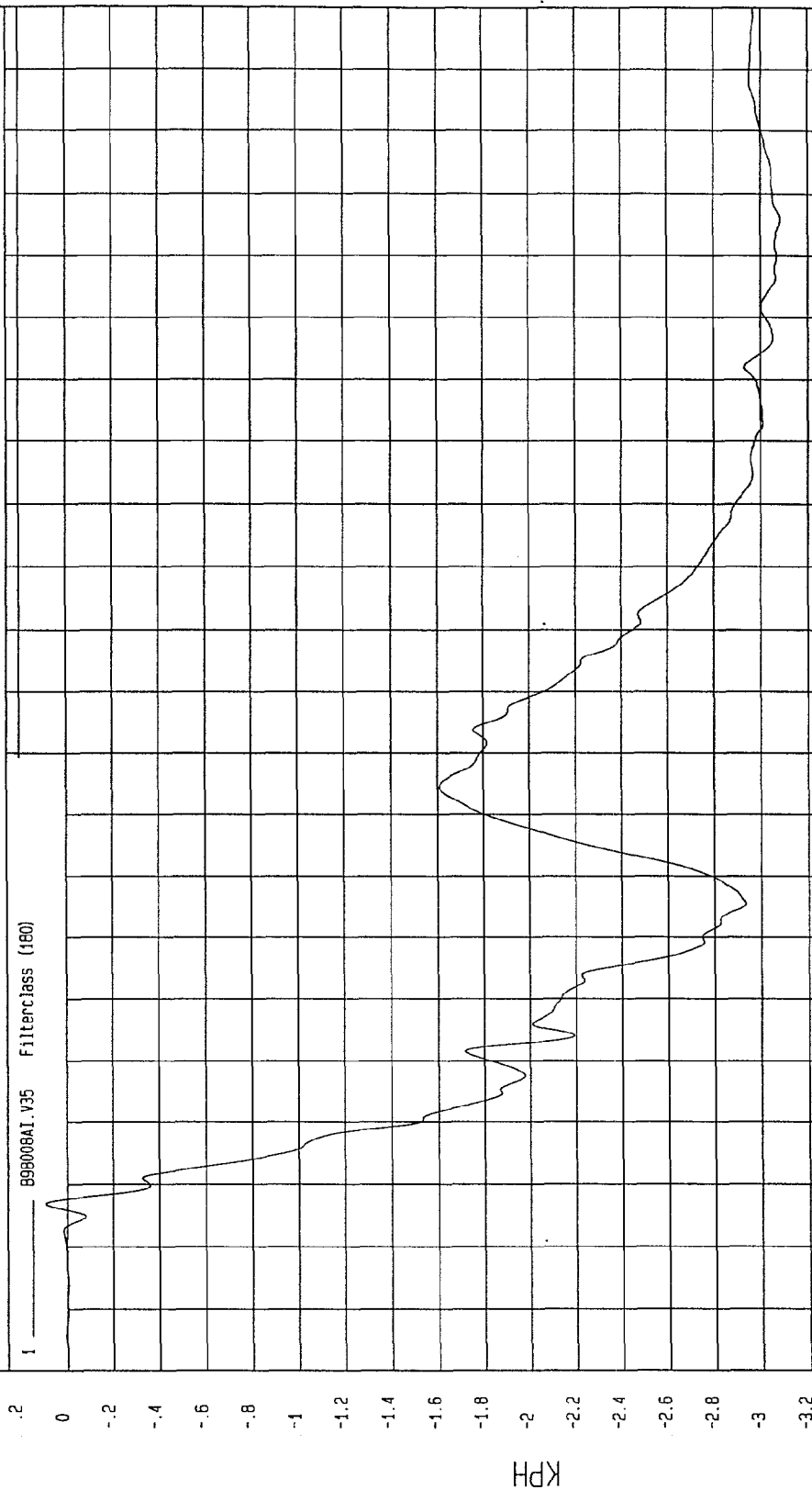


TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH

Minimum = -3.08 KPH at 156 msec Maximum = .09 KPH at 7 msec

RIGHT SIDE SILL AT REAR SEAT X VELOCITY



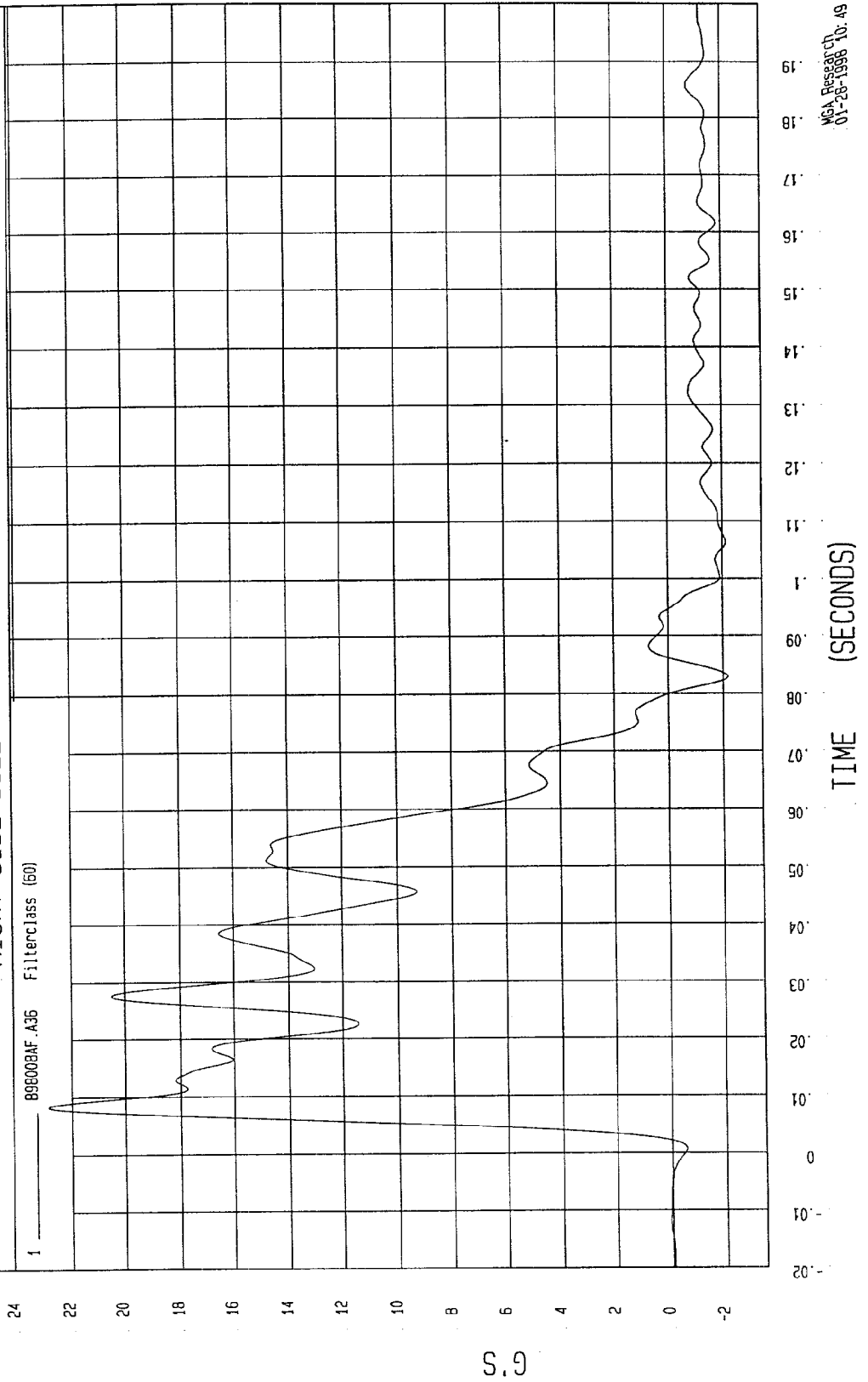
NSA Research
01-26-1998 10:45

TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH

Minimum = -2.18 G'S at 83 msec Maximum = 22.86 G'S at 8 msec

RIGHT SIDE SILL AT REAR SEAT Y ACCELERATION



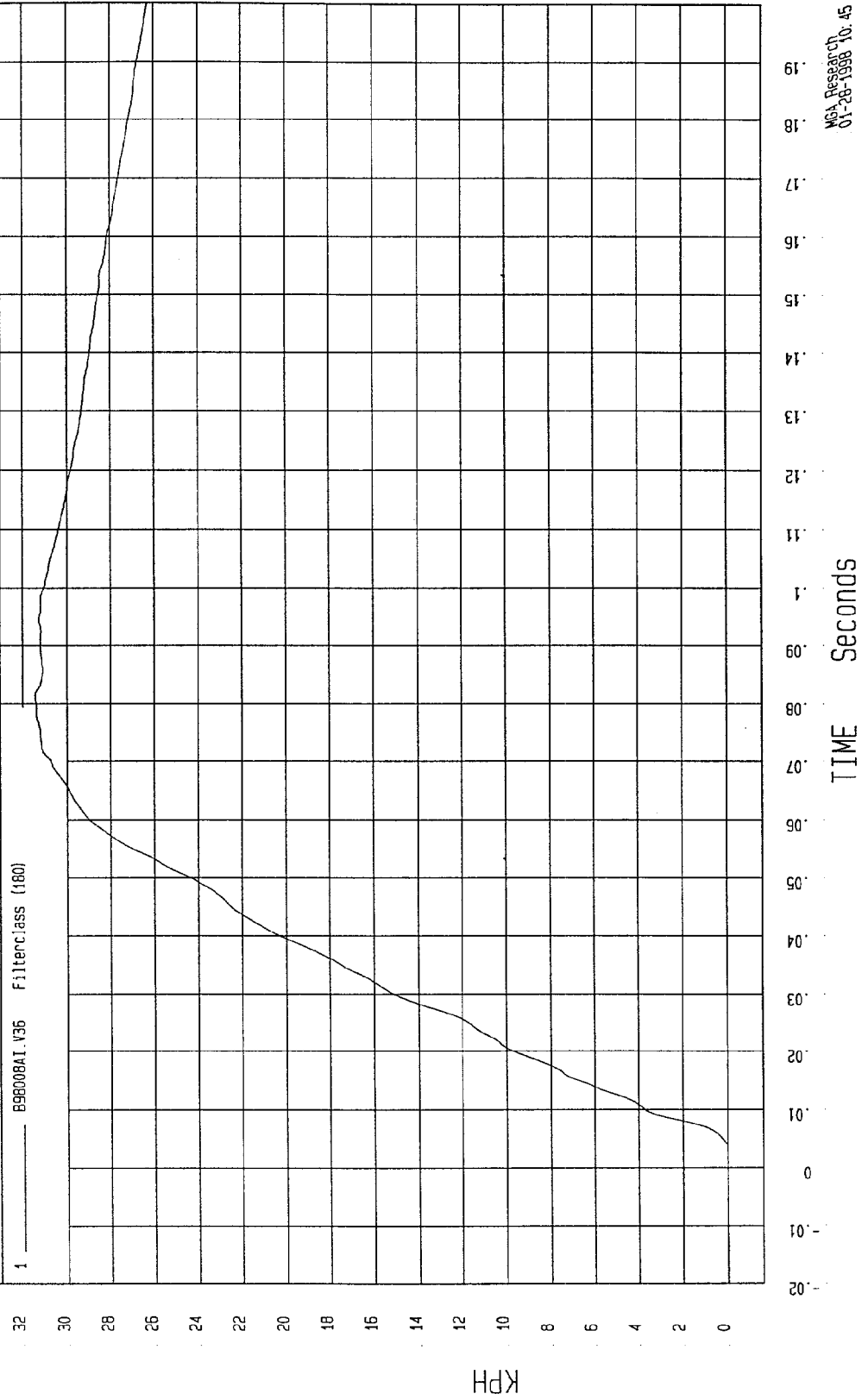
WCA Research
01-26-1998 10:49

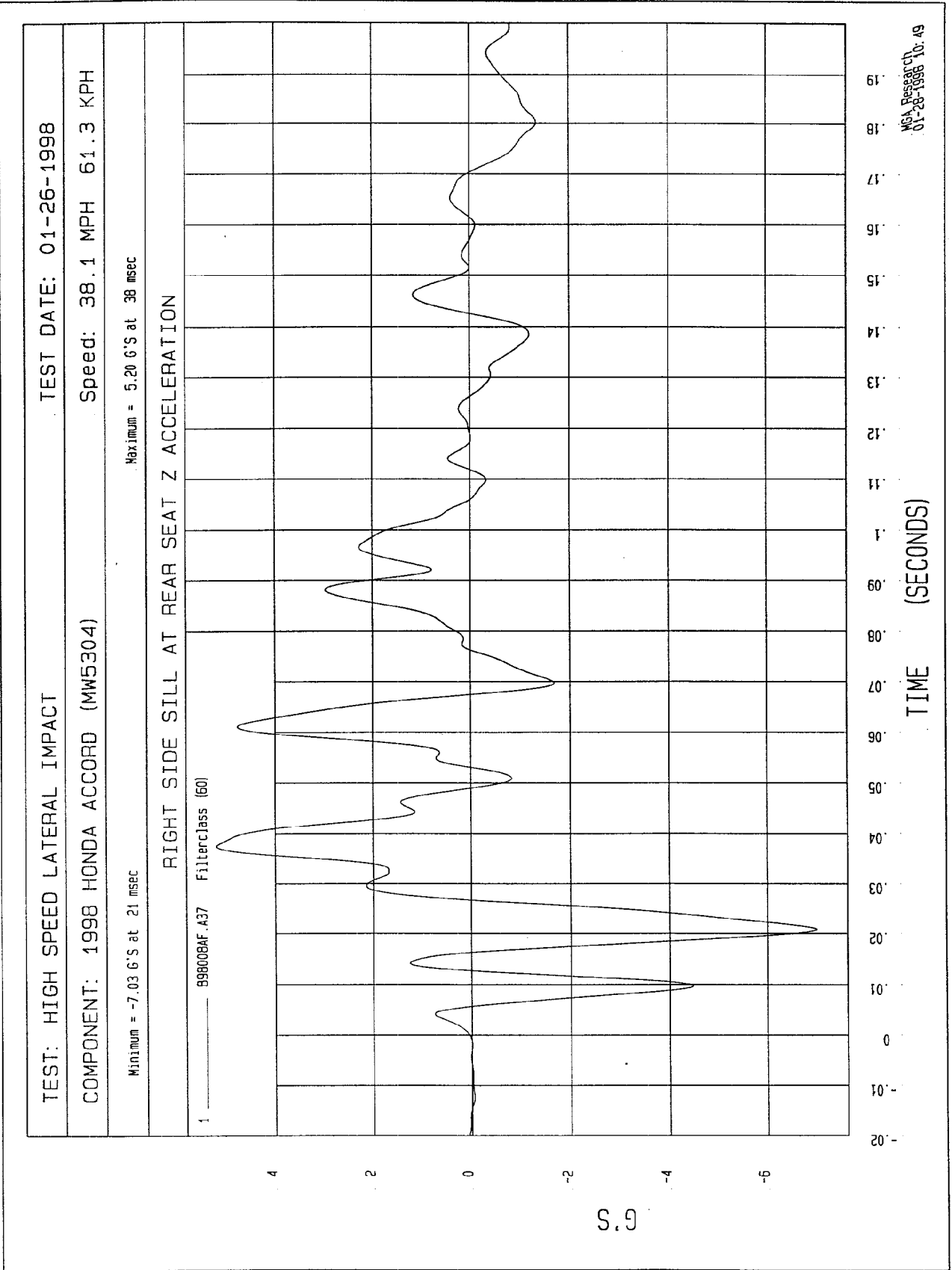
TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH

Minimum = -9.50E-03 KPH at -14 msec Maximum = 31.43 KPH at 81 msec

RIGHT SIDE SILL AT REAR SEAT Y VELOCITY



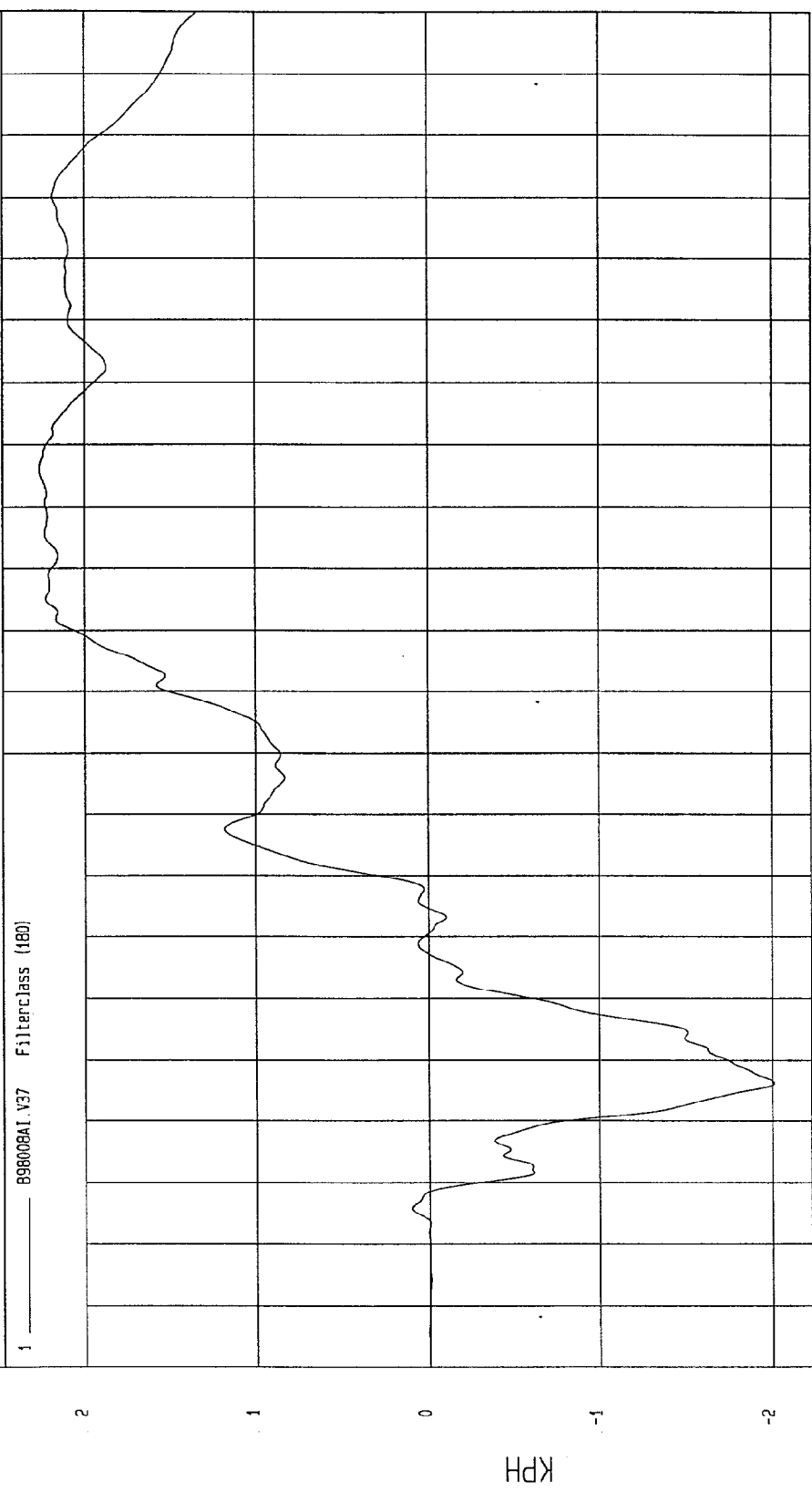


TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH

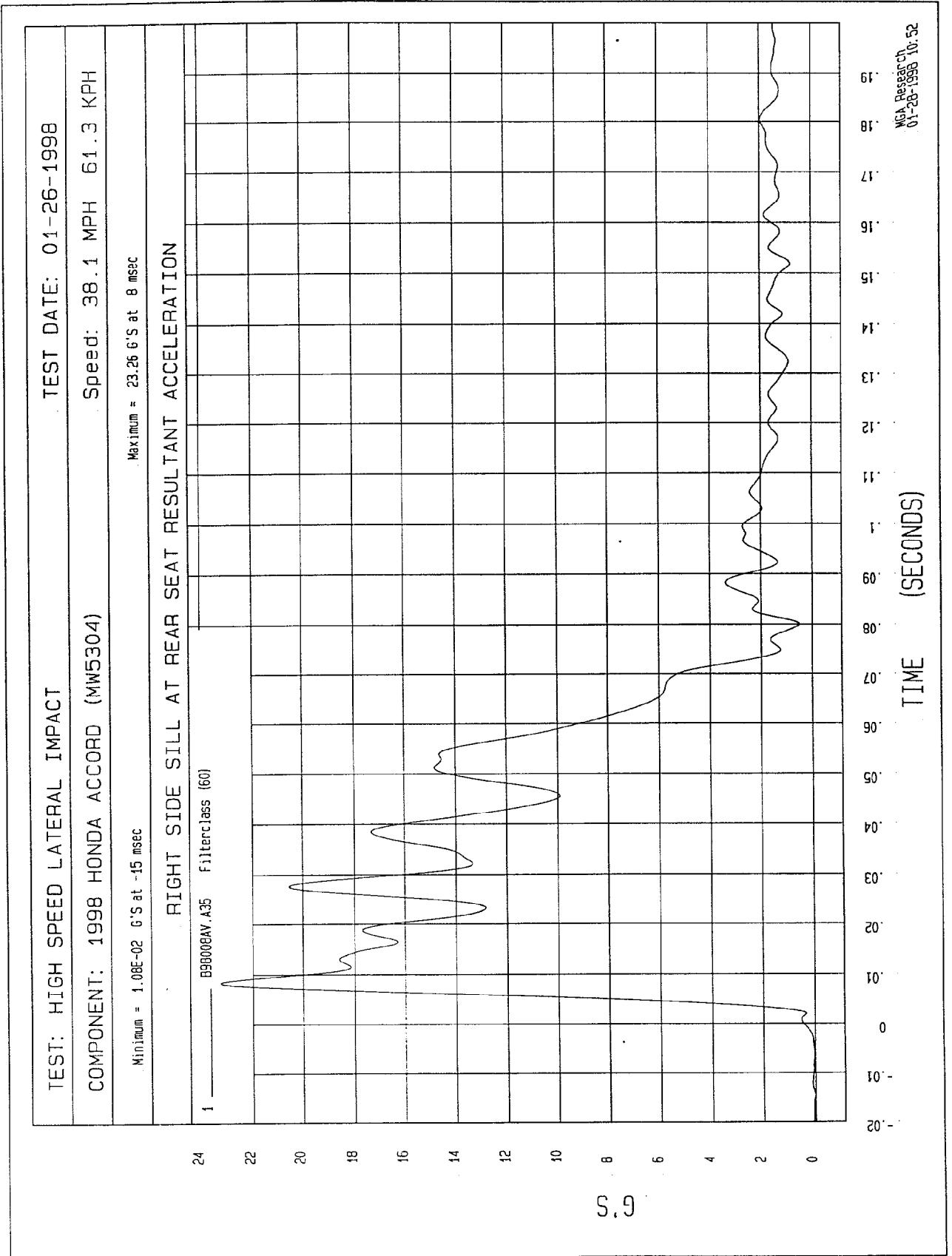
Minimum = -2.01 KPH at 26 msec Maximum = 2.25 KPH at 126 msec

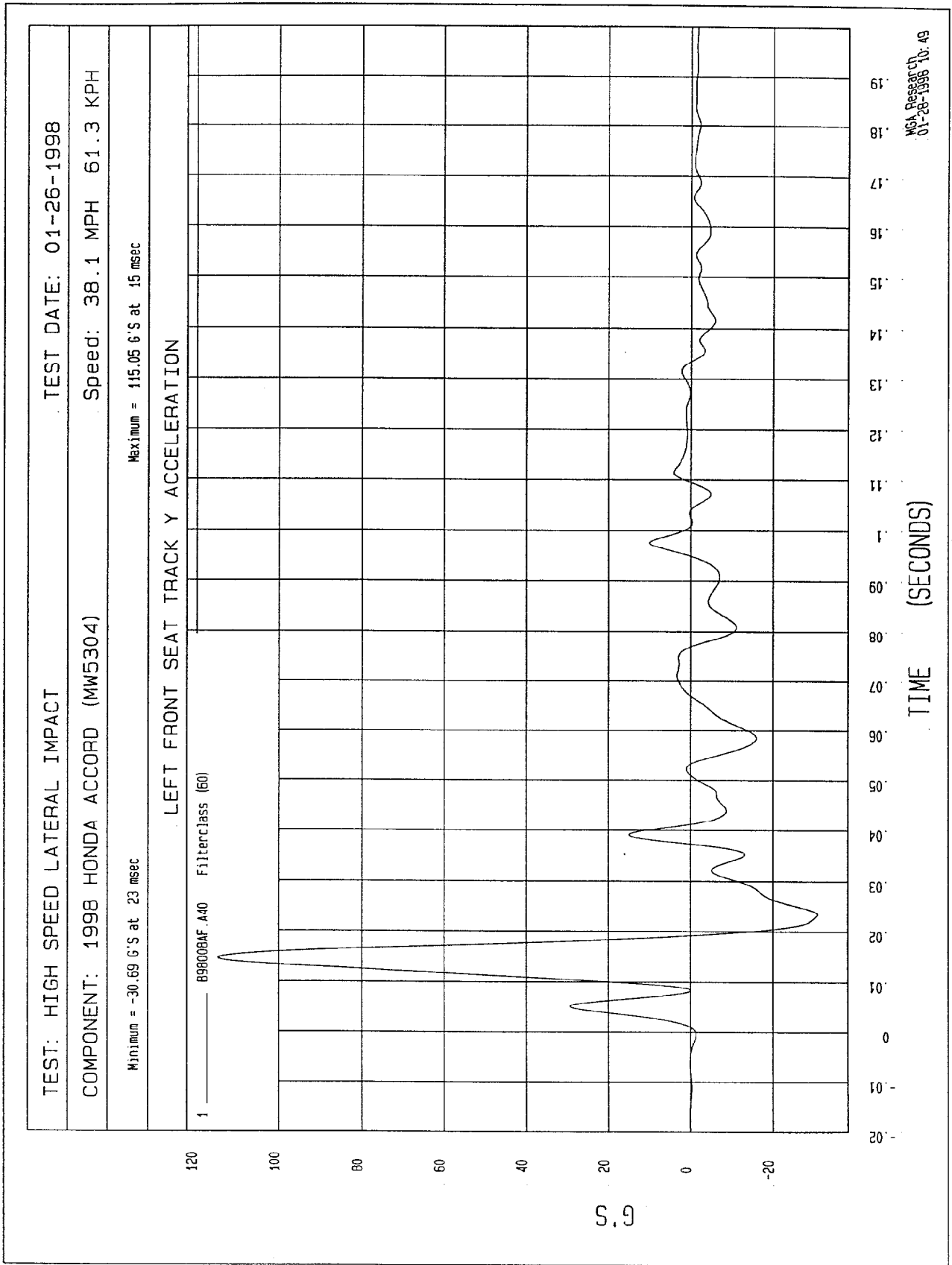
RIGHT SIDE SILL AT REAR SEAT Z VELOCITY

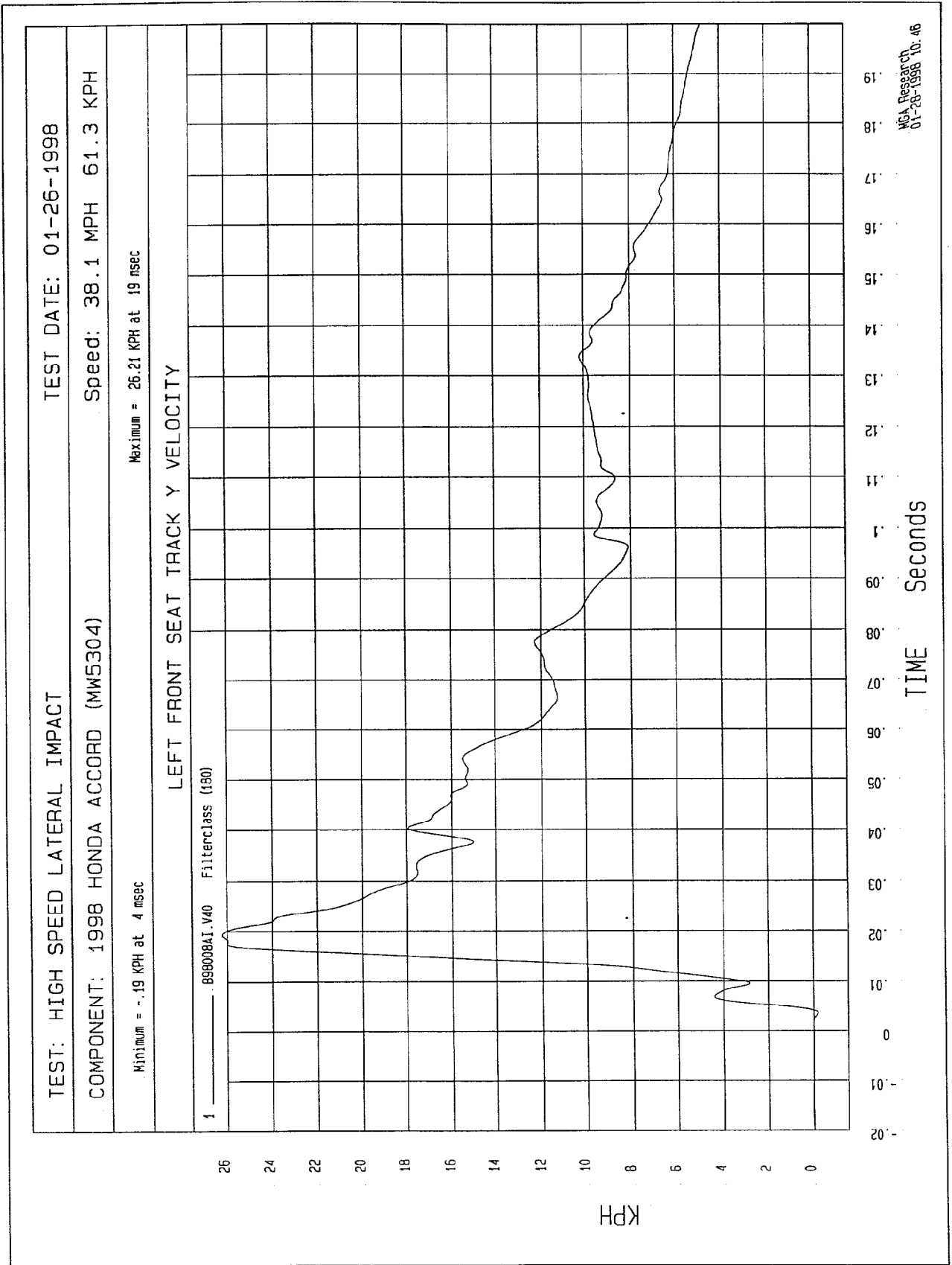


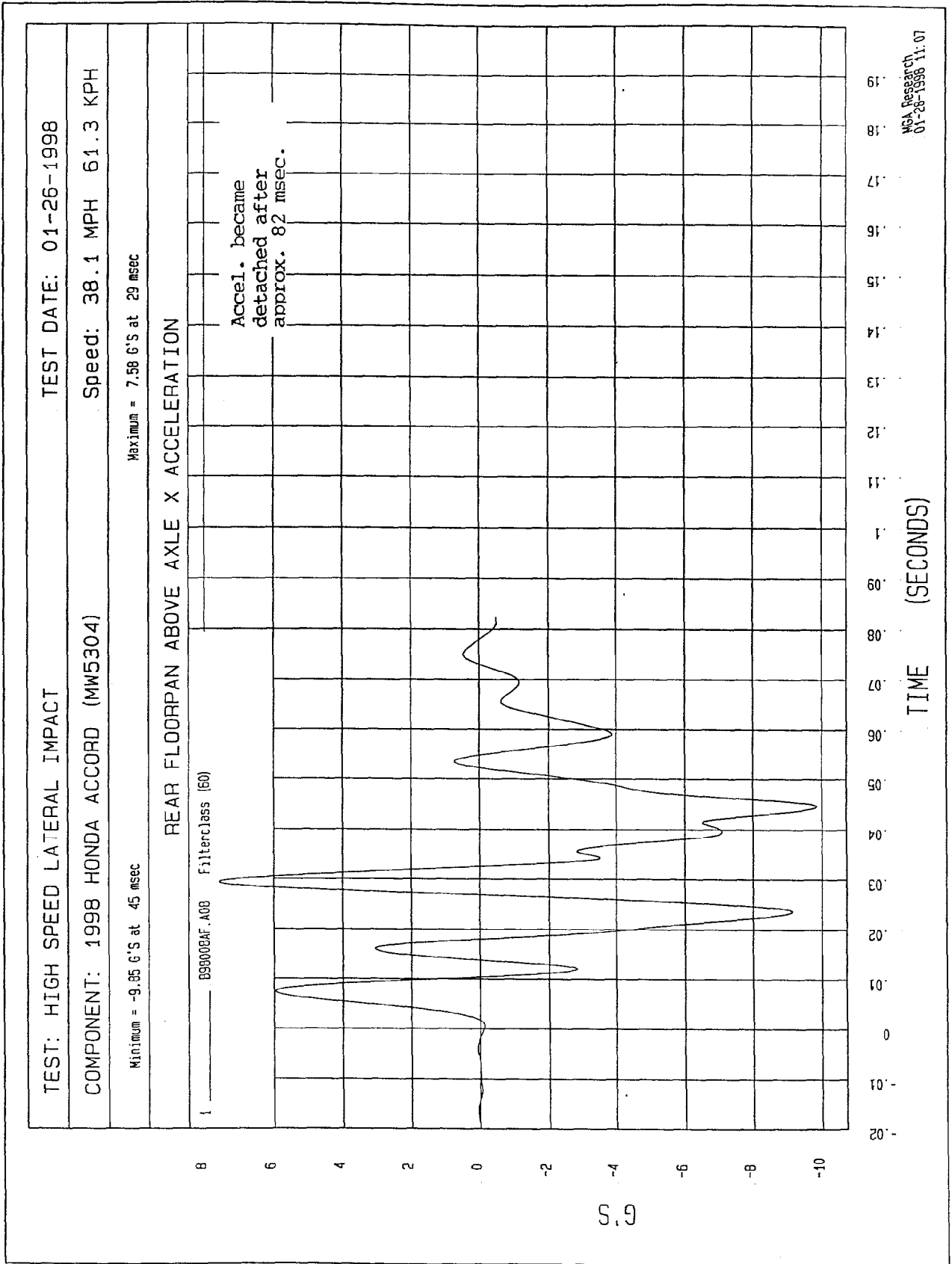
W&A Research
01-26-1998 10:46

TIME Seconds







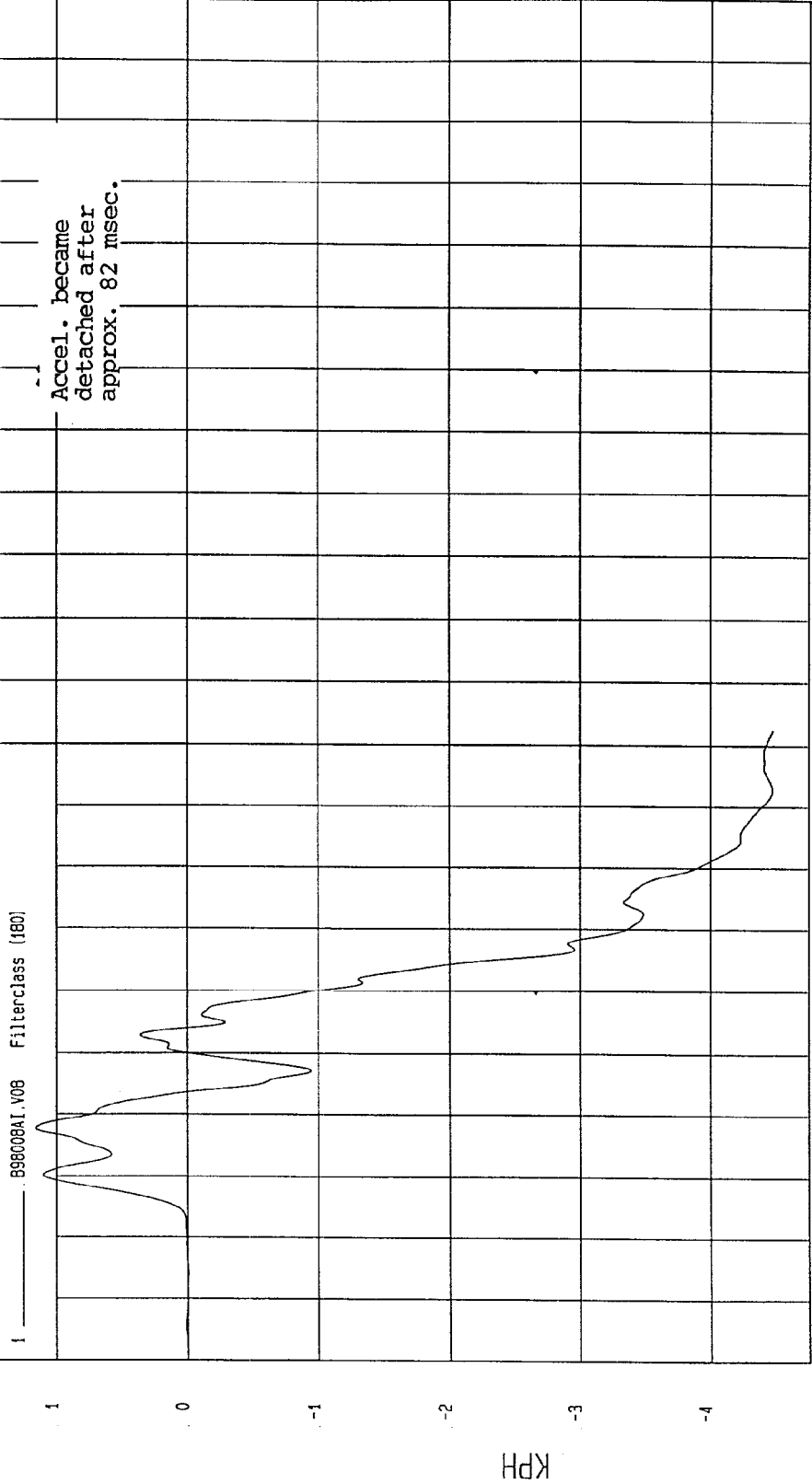


TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH

Minimum = -4.47 KPH at 82 msec Maximum = 1.15 KPH at 18 msec

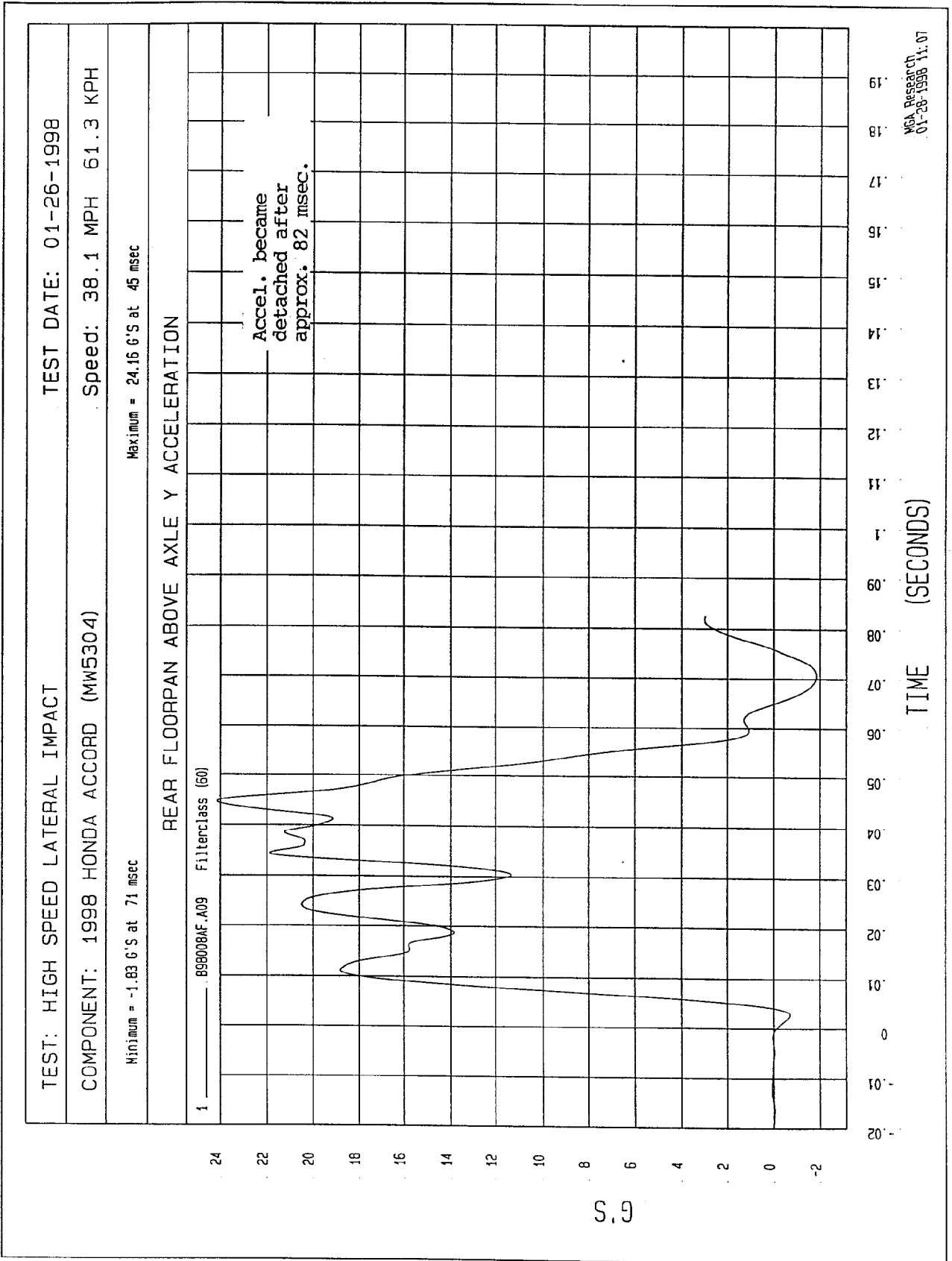
REAR FLOORPAN ABOVE AXLE X VELOCITY

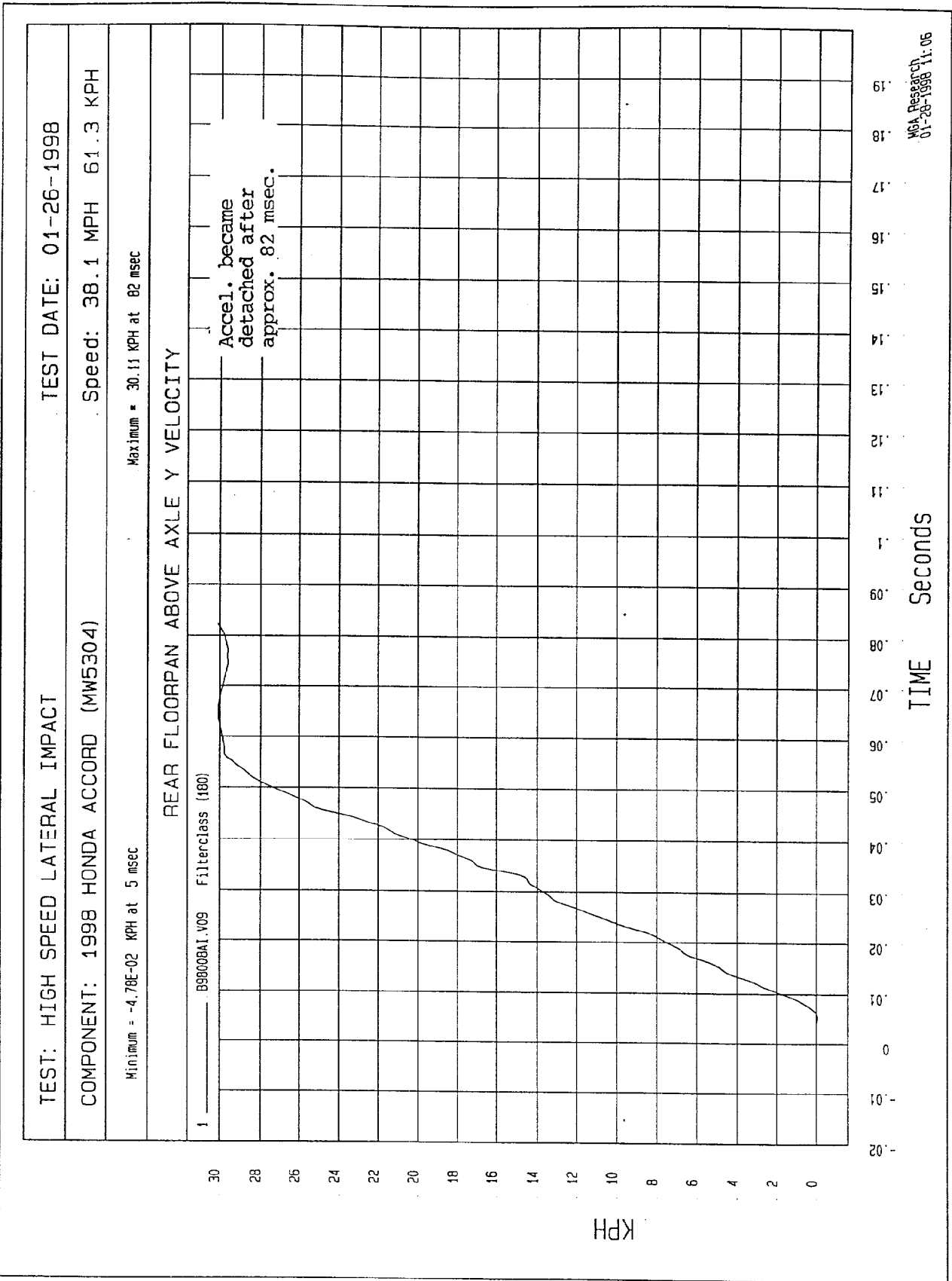


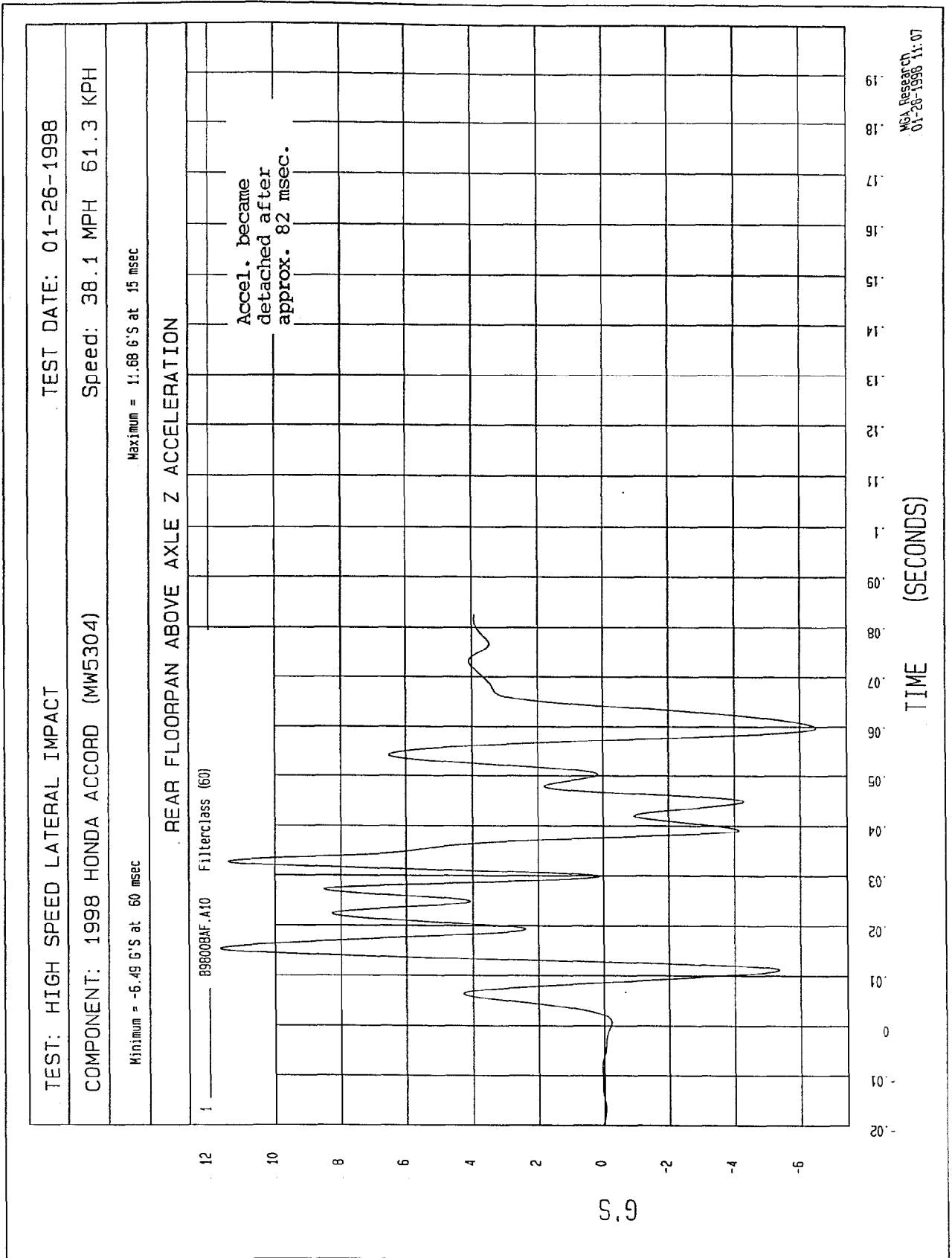
TIME Seconds

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

W&A Research
01-26-1998 11:06





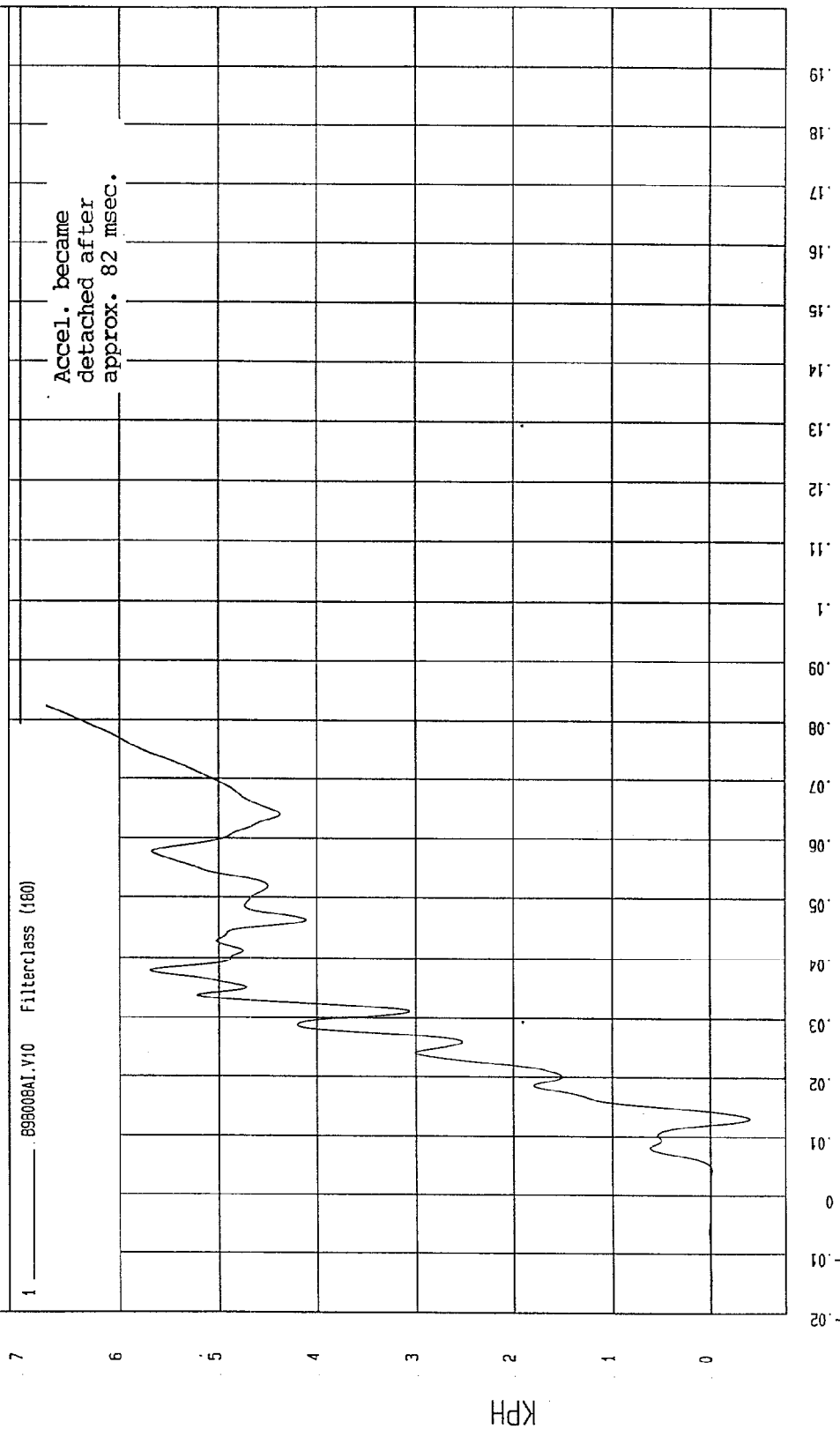


TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH

Minimum = -.39 KPH at 13 msec Maximum = 6.75 KPH at 82 msec

REAR FLOORPAN ABOVE AXLE Z VELOCITY



NCA Research
01-28-1998 11:06

TEST: HIGH SPEED LATERAL IMPACT

TEST DATE: 01-26-1998

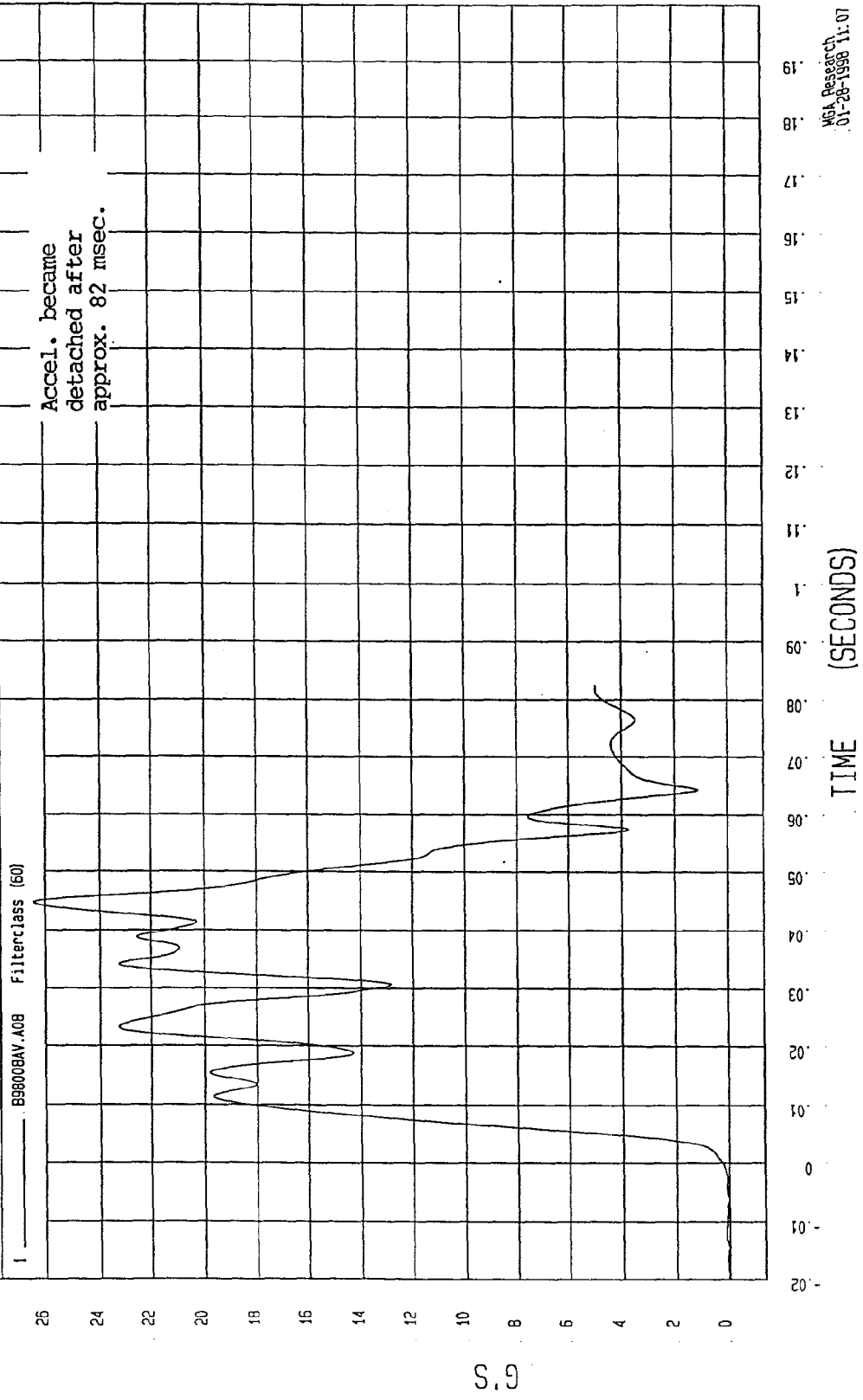
Speed: 38.1 MPH 61.3 KPH

COMPONENT: 1998 HONDA ACCORD (MW5304)

Maximum = 26.43 G'S at 45 msec

Minimum = 7.93E-03 G'S at -6 msec

REAR FLOORPAN ABOVE AXLE RESULTANT ACCELERATION

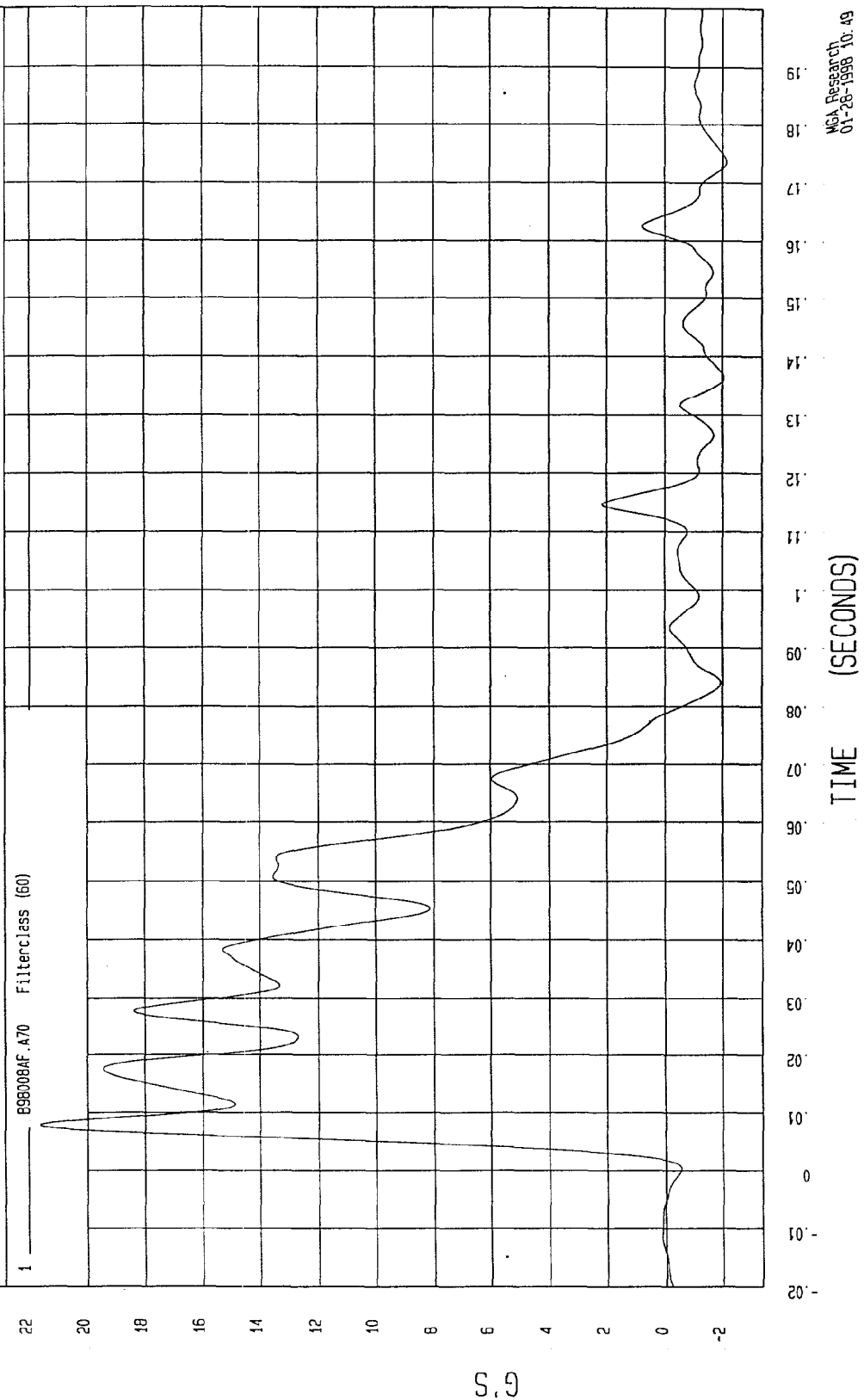


TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH

Minimum = -2.15 G'S at 174 msec Maximum = 21.65 G'S at 8 msec

RIGHT REAR OCCUPANT COMPARTMENT Y ACCELERATION



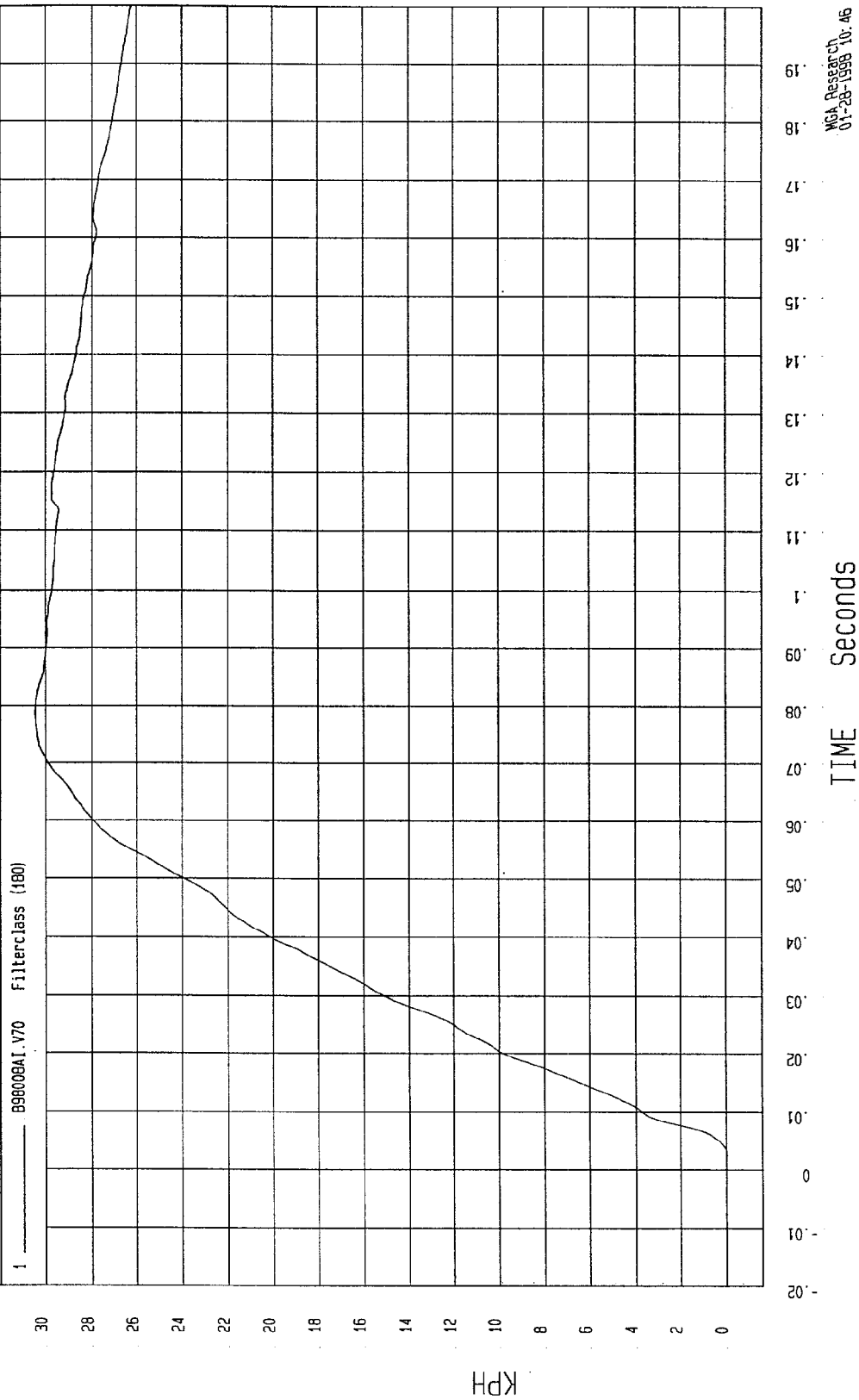
NCA Research
01-28-1998 10:49

TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH

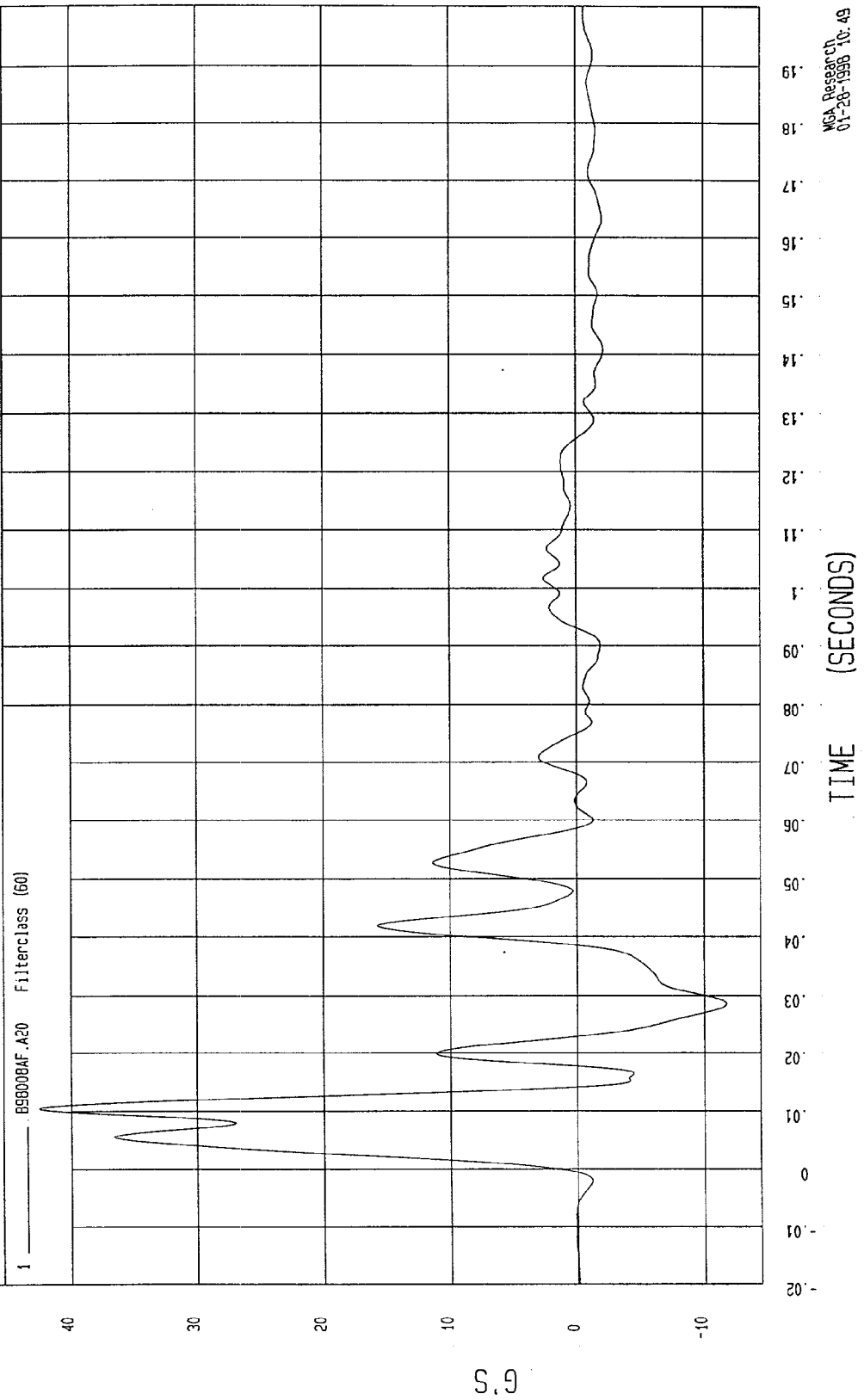
Minimum = -1.96E-02 KPH at -14 msec Maximum = 30.46 KPH at 79 msec

RIGHT REAR OCCUPANT COMPARTMENT Y VELOCITY

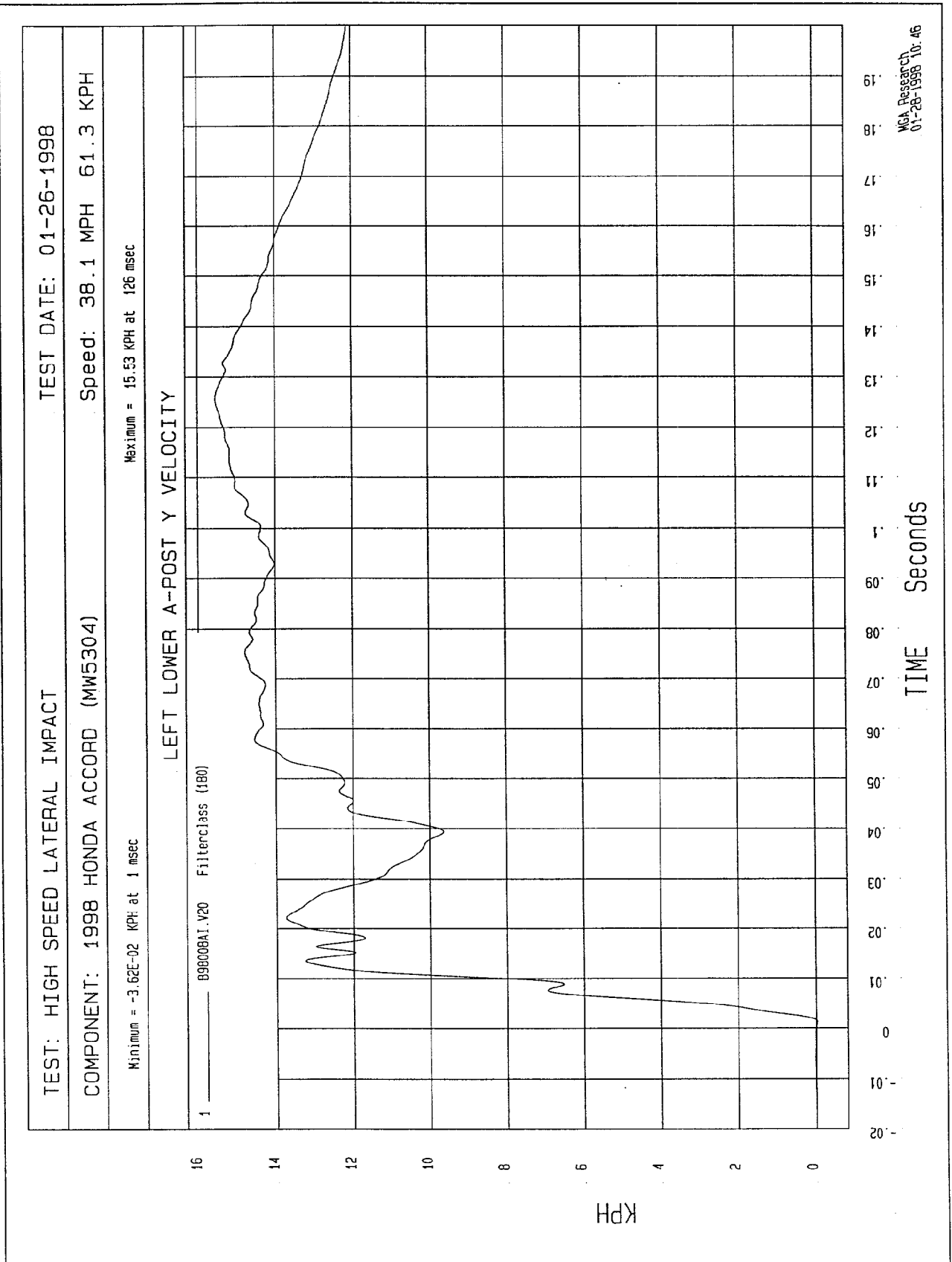


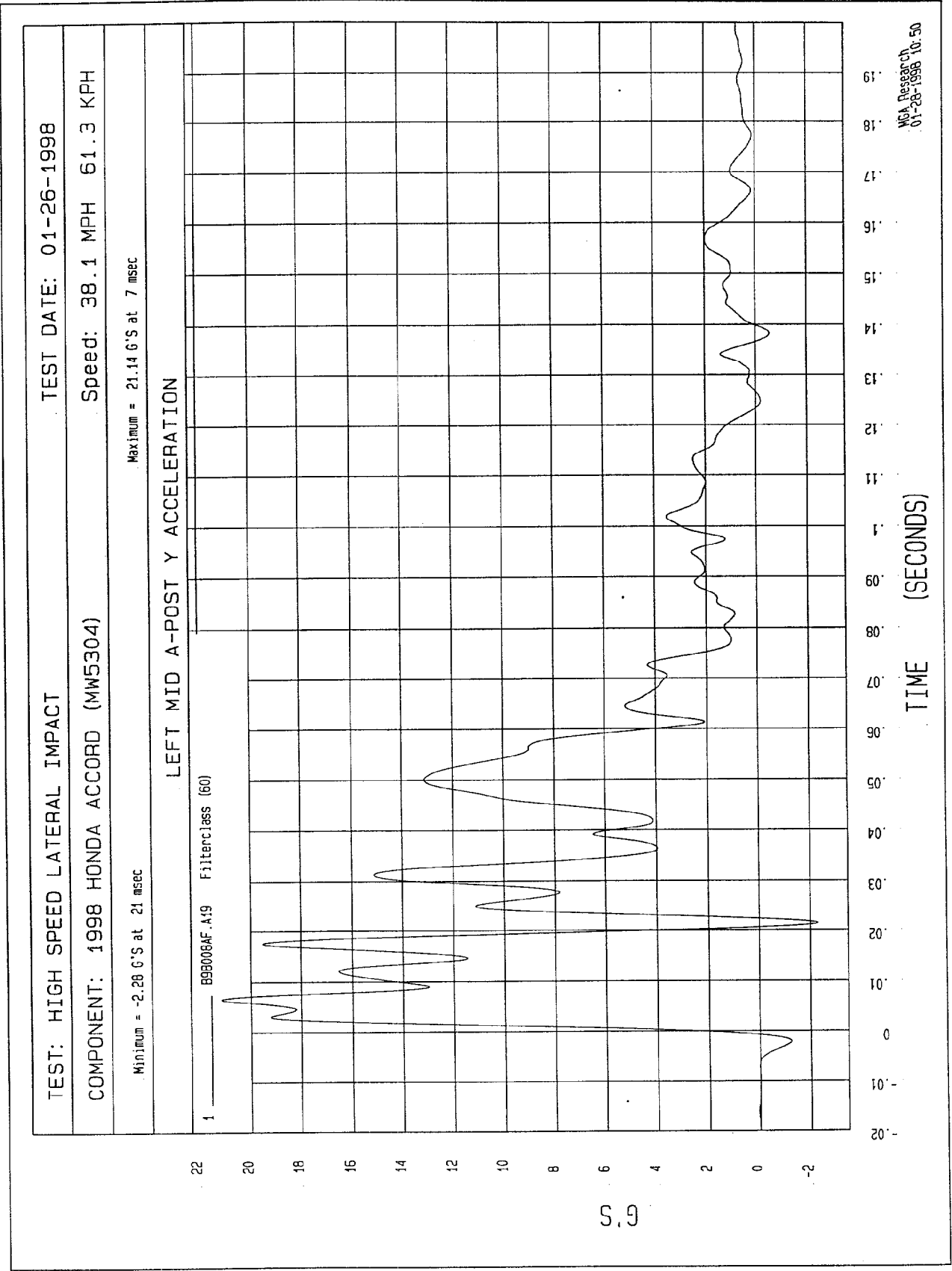
TEST: HIGH SPEED LATERAL IMPACT	TEST DATE: 01-26-1998
COMPONENT: 1998 HONDA ACCORD (MW5304)	Speed: 38.1 MPH 61.3 KPH
Minimum = -11.68 G'S at 29 msec	Maximum = 42.57 G'S at 10 msec

LEFT LOWER A-POST Y ACCELERATION



MCA Research
01-28-1998 10:49



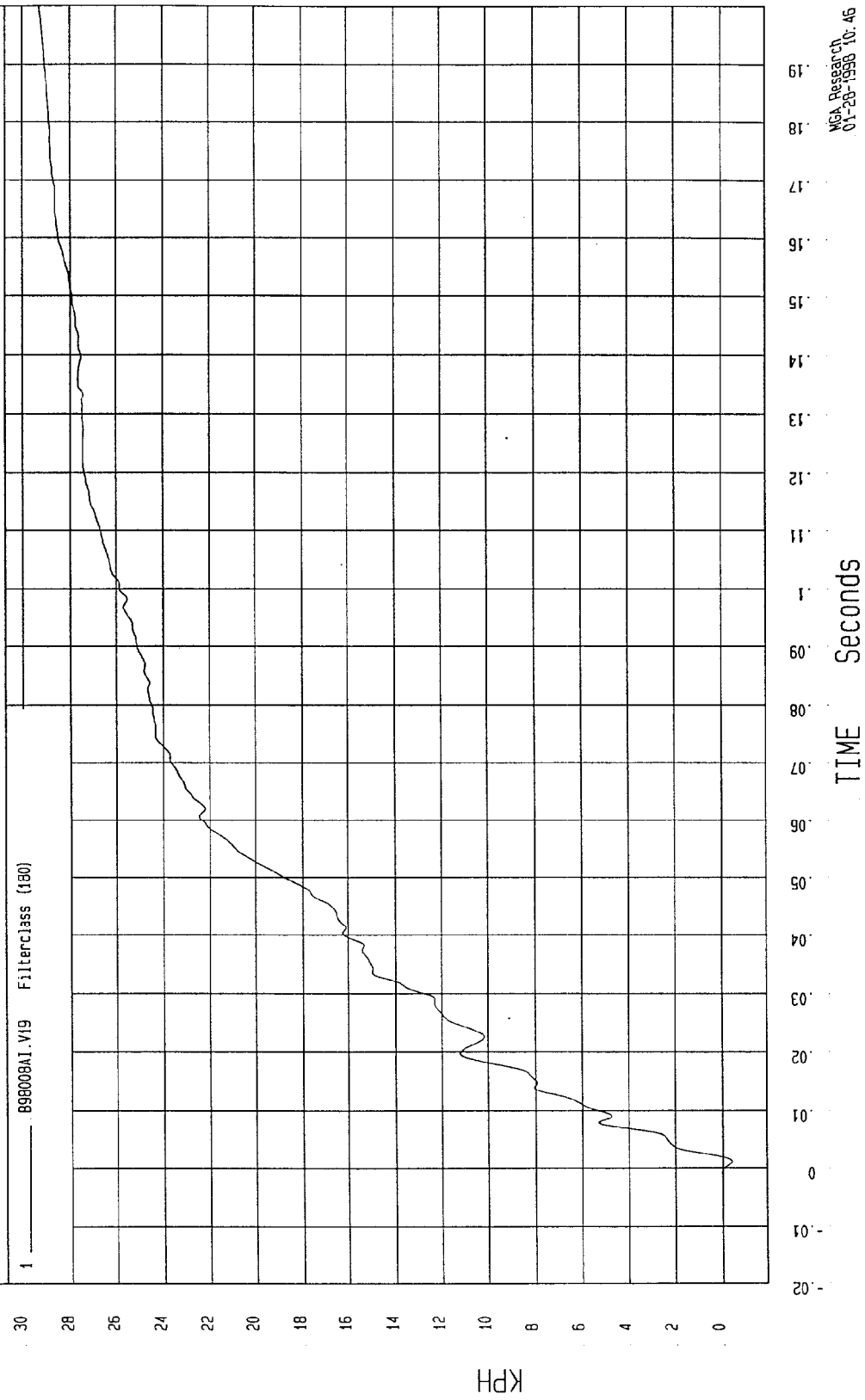


TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH

Minimum = -.39 KPH at 1 msec Maximum = 29.26 KPH at 200 msec

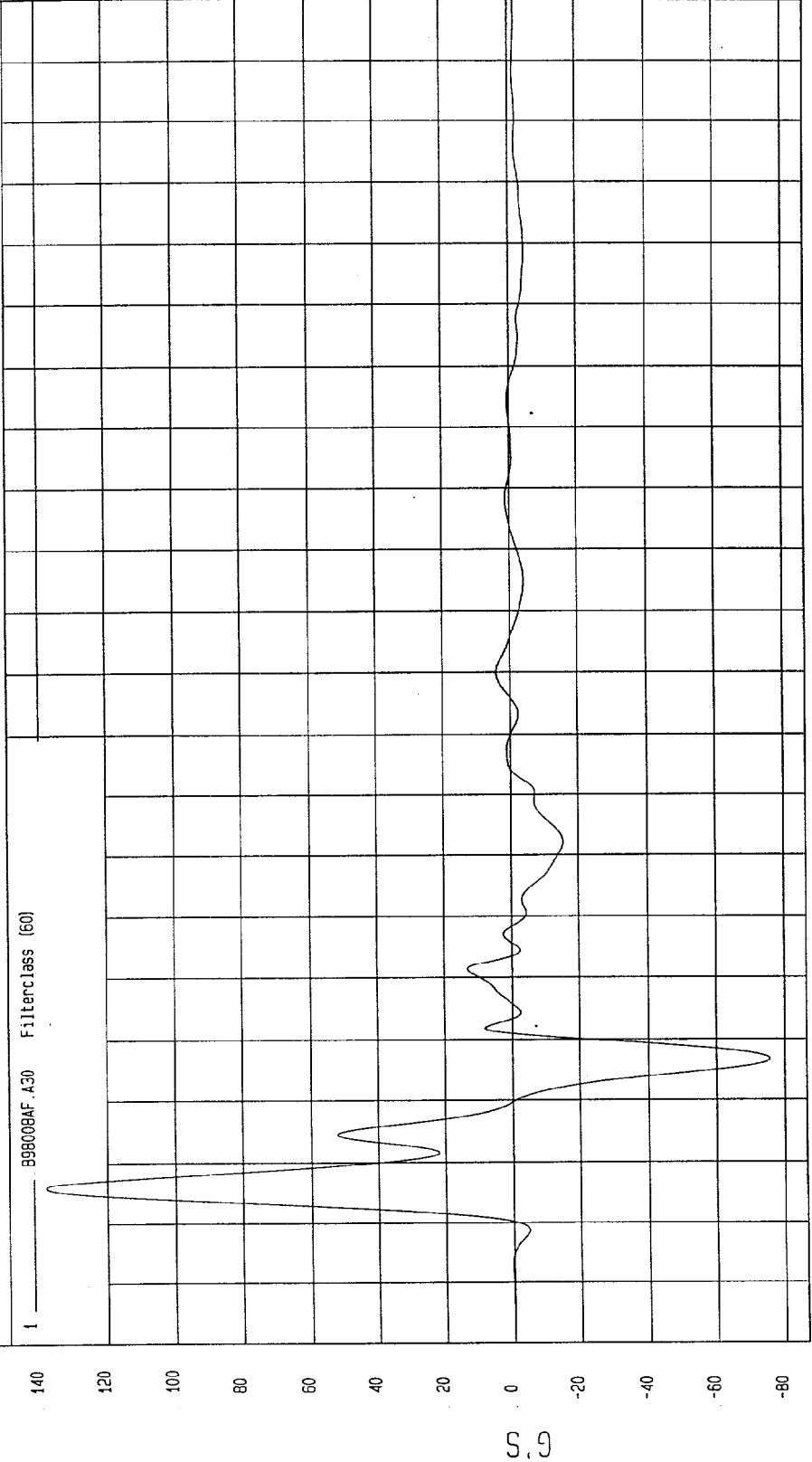
LEFT MID A-POST Y VELOCITY



NCA Research
01-26-1998 10:45

TEST: HIGH SPEED LATERAL IMPACT	TEST DATE: 01-26-1998
COMPONENT: 1998 HONDA ACCORD (MW5304)	Speed: 38.1 MPH 61.3 KPH
Minimum = -75.77 G'S at 27 msec	
Maximum = 138.41 G'S at 6 msec	

LEFT LOWER B-POST Y ACCELERATION



TIME (SECONDS)

MOA Research
01-28-1998 10:50

TEST: HIGH SPEED LATERAL IMPACT

TEST DATE: 01-26-1998

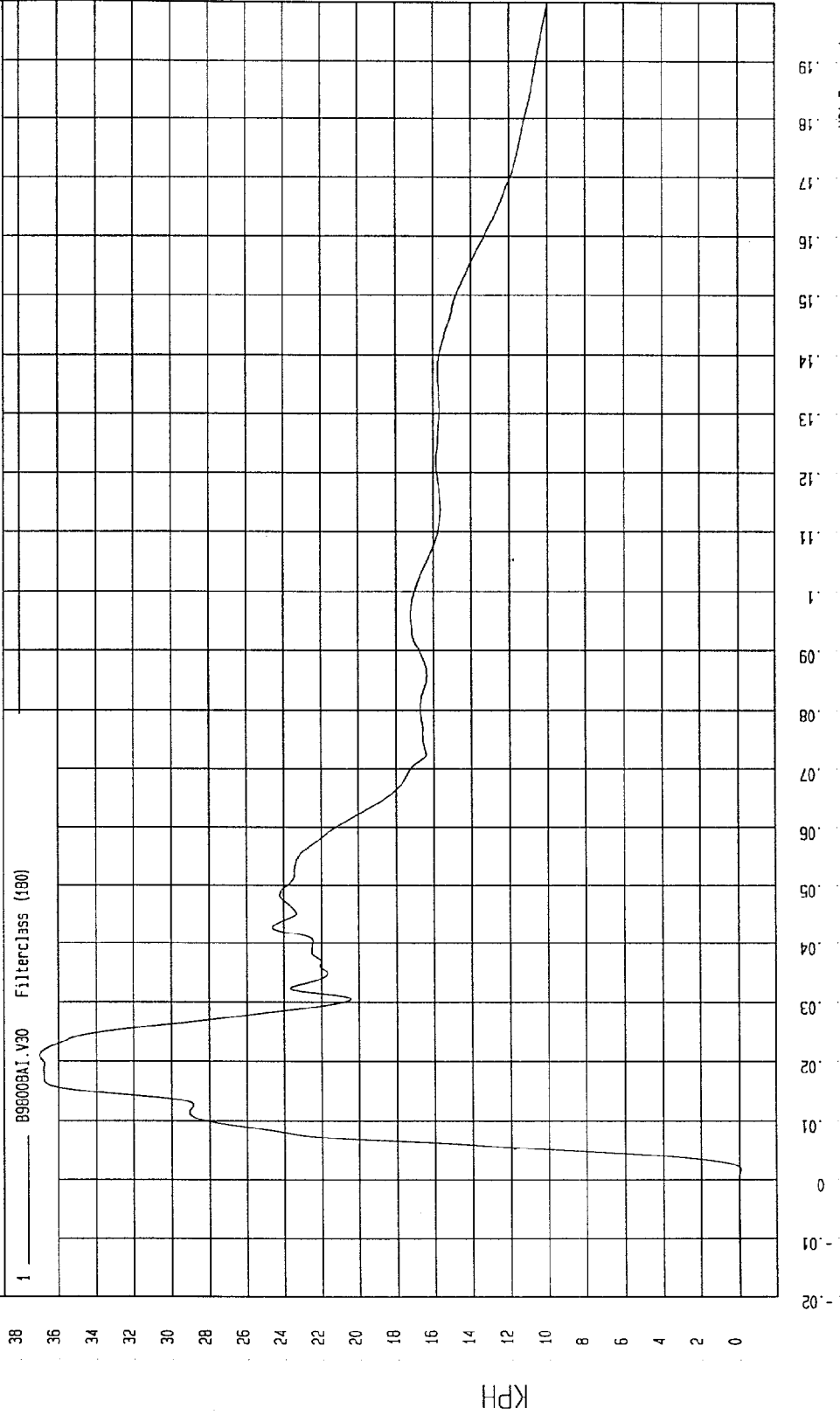
Speed: 38.1 MPH 61.3 KPH

COMPONENT: 1998 HONDA ACCORD (MW5304)

Minimum = -06 KPH at 2 msec

Maximum = 36.95 KPH at 21 msec

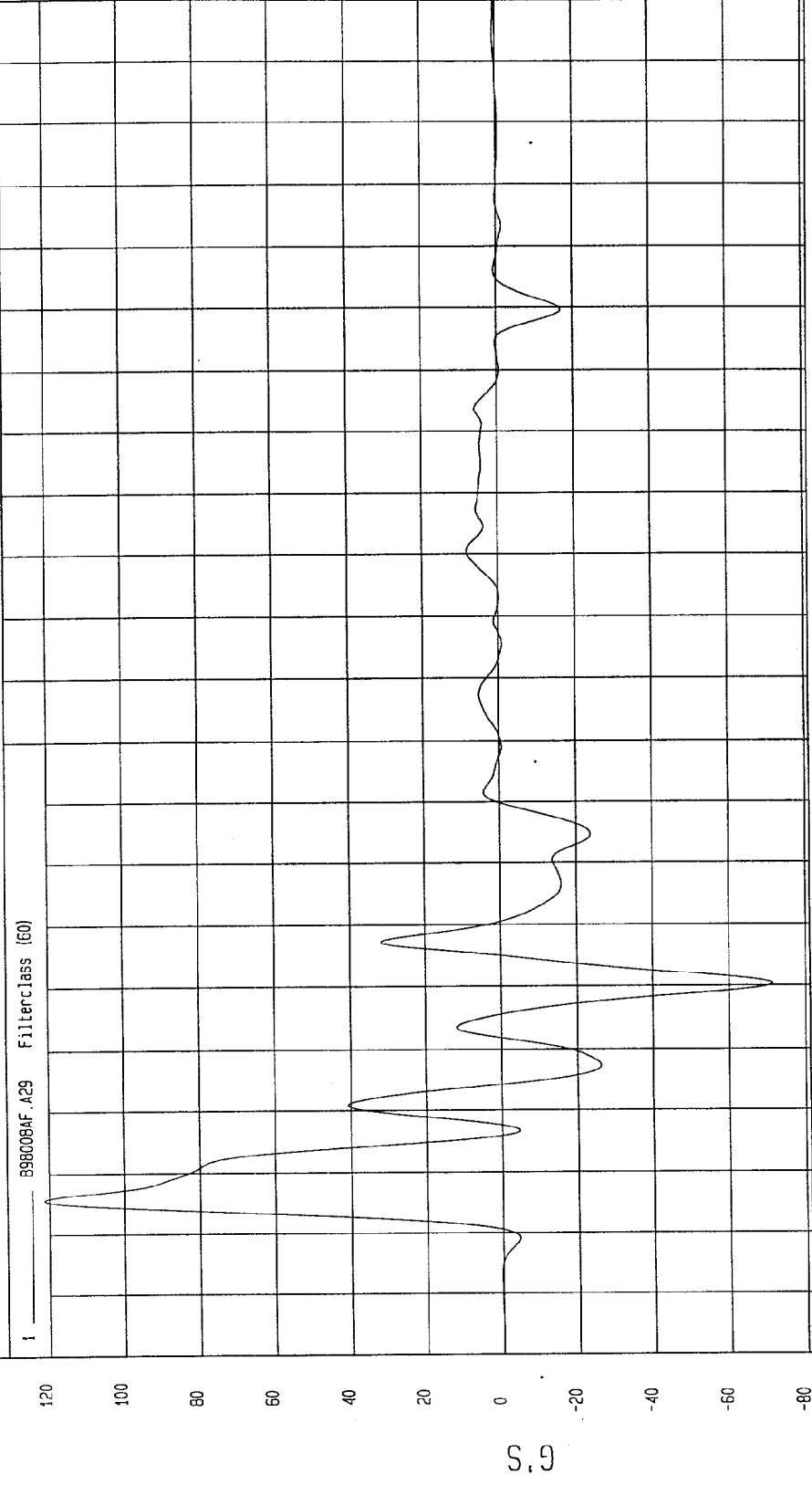
LEFT LOWER B-POST Y VELOCITY



MECA Research
01-28-1998 10:46

TEST: HIGH SPEED LATERAL IMPACT	TEST DATE: 01-26-1998
COMPONENT: 1998 HONDA ACCORD (MW5304)	Speed: 38.1 MPH 61.3 KPH
Minimum = -71.54 G'S at 40 msec	Maximum = 121.32 G'S at 6 msec

LEFT MID B-POST Y ACCELERATION

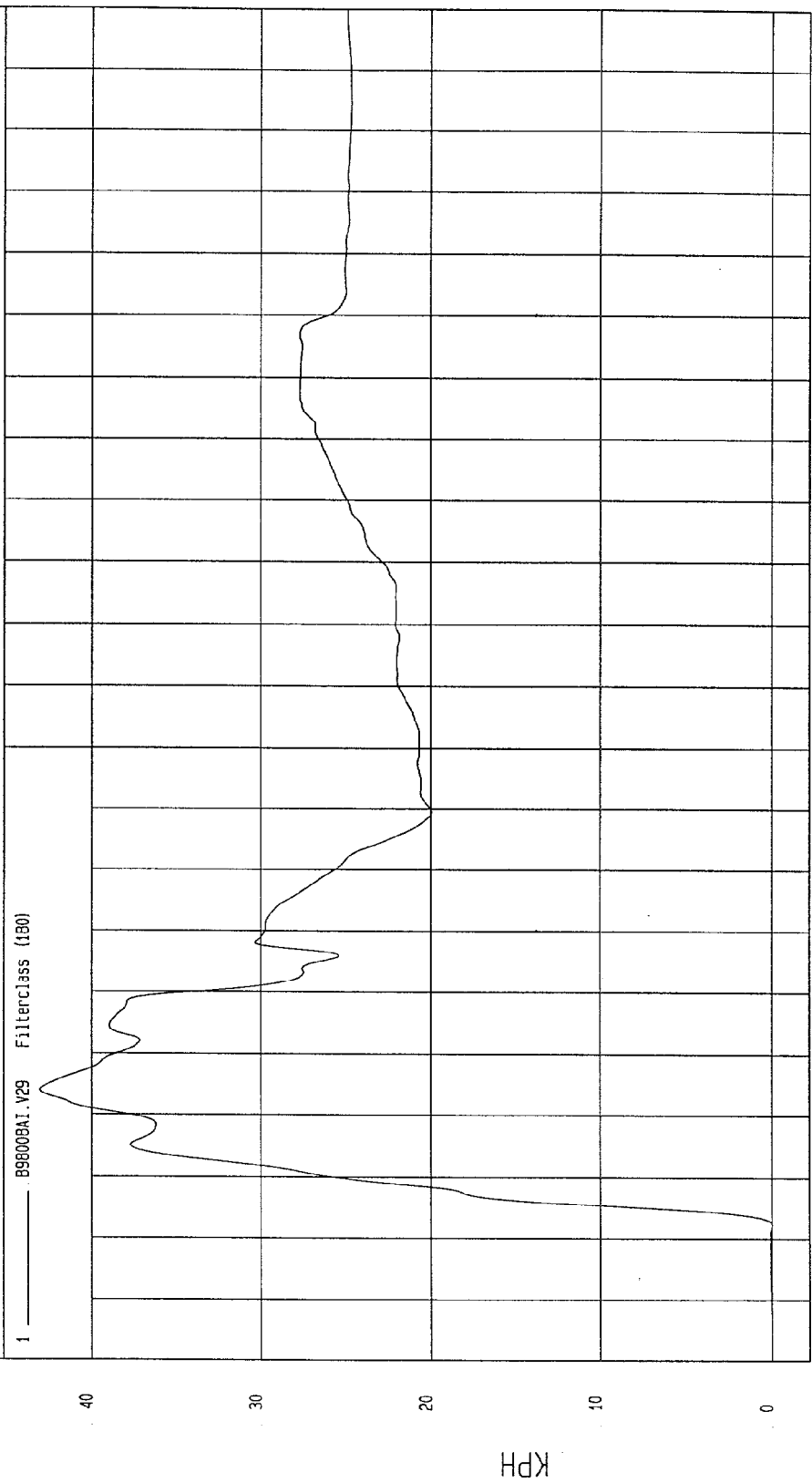


TIME (SECONDS)

MCA Research
01-28-1998 10:50

TEST: HIGH SPEED LATERAL IMPACT	TEST DATE: 01-26-1998
COMPONENT: 1998 HONDA ACCORD (MW5304)	Speed: 38.1 MPH 61.3 KPH
Minimum = -1.51E-02 KPH at 2 msec	Maximum = 42.98 KPH at 24 msec

LEFT MID B-POST Y VELOCITY



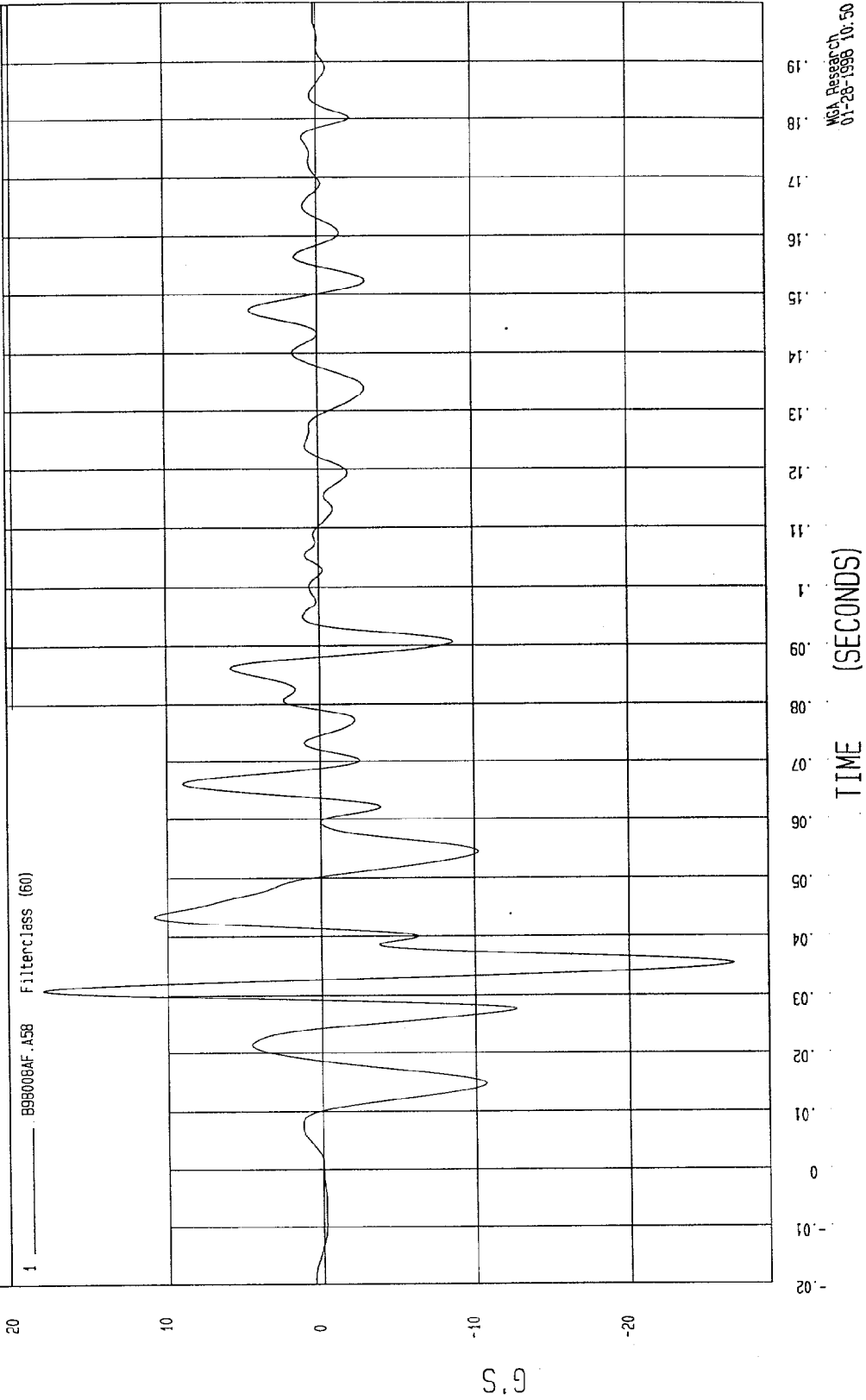
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WGA Research
01-28-1998 10:46

TEST: HIGH SPEED LATERAL IMPACT	TEST DATE: 01-26-1998
COMPONENT: 1998 HONDA ACCORD (MW5304)	Speed: 38.1 MPH 61.3 KPH
Minimum = -26.73 G'S at 35 msec	
Maximum = 18.13 G'S at 31 msec	

VEHICLE CG X ACCELERATION



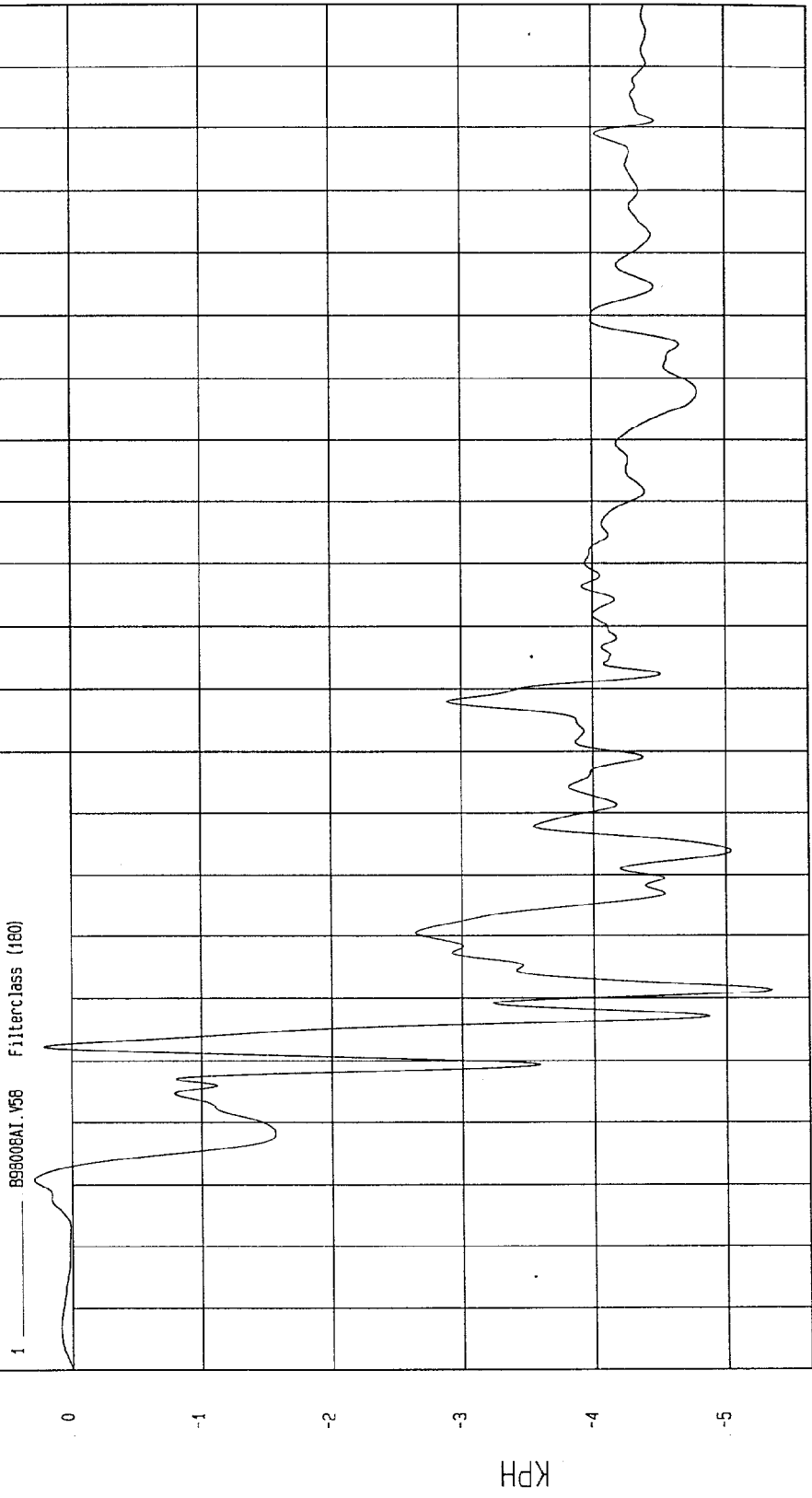
WCA Research
01-26-1998 10:50

TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH

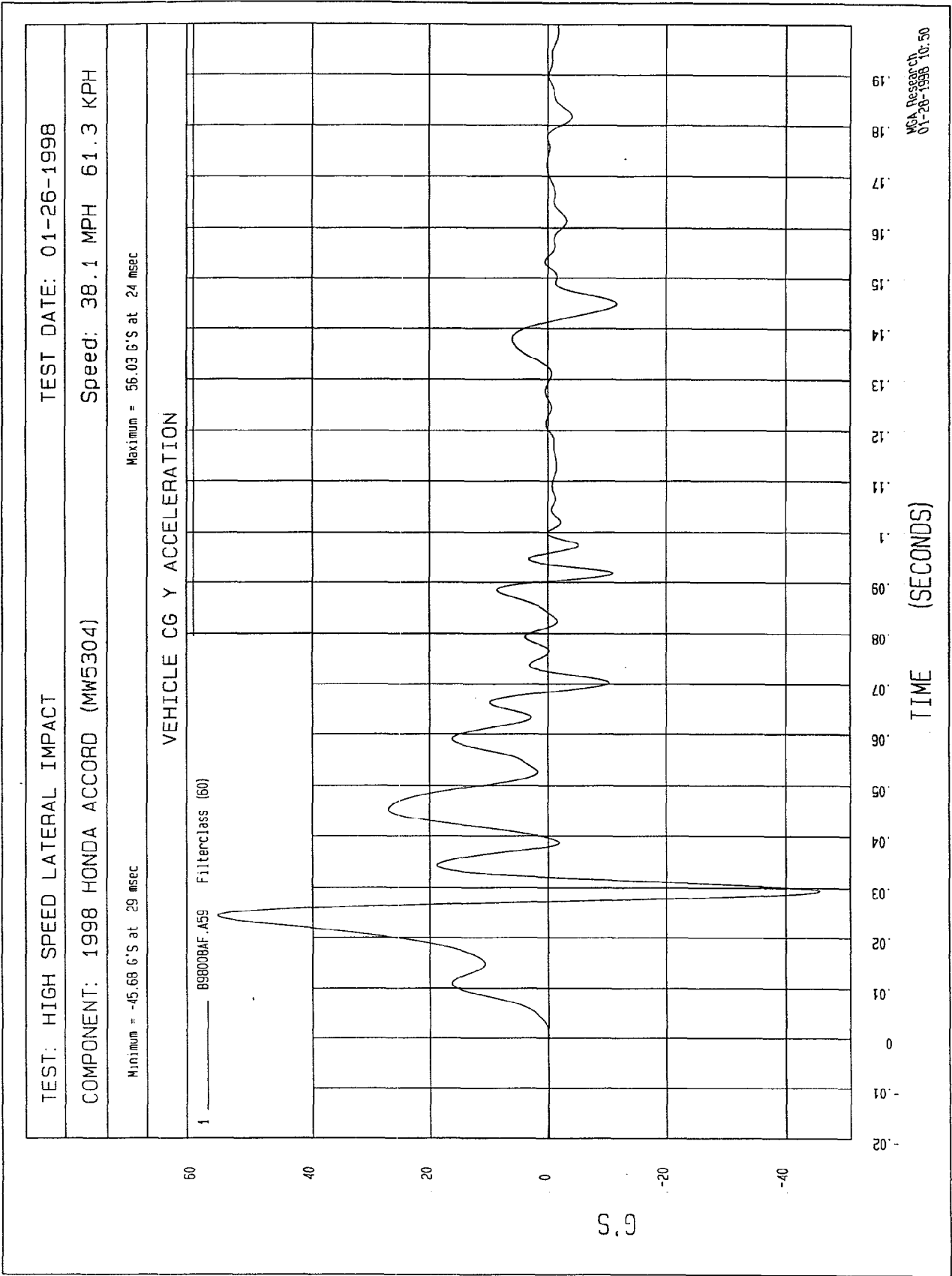
Minimum = -5.34 KPH at 41 msec Maximum = .28 KPH at 11 msec

VEHICLE CG X VELOCITY



TIME Seconds

MCA Research
01-26-1998 10: 47



TEST: HIGH SPEED LATERAL IMPACT

TEST DATE: 01-26-1998

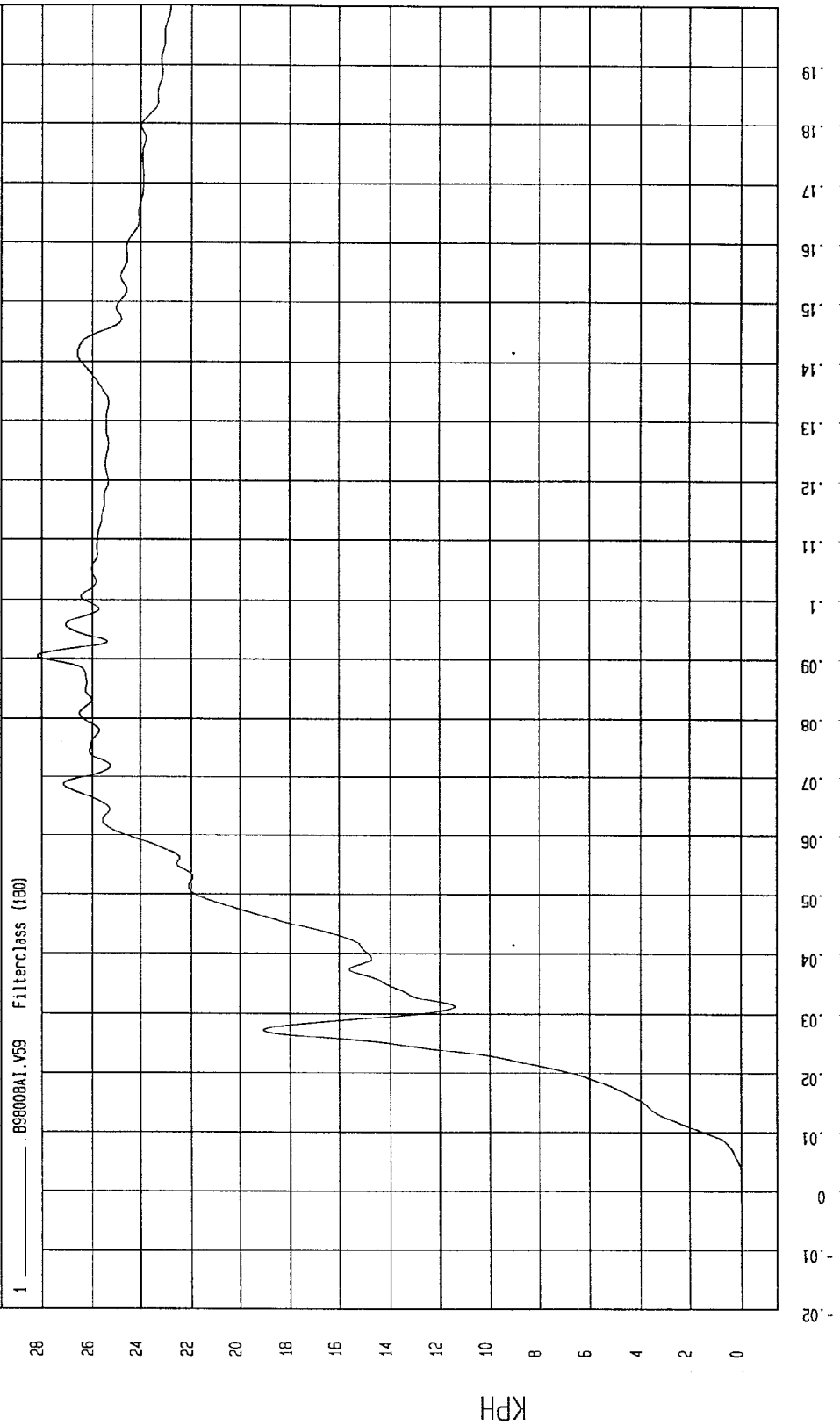
Speed: 38.1 MPH 61.3 KPH

COMPONENT: 1998 HONDA ACCORD (MW5304)

Minimum = 0 KPH at -20 msec

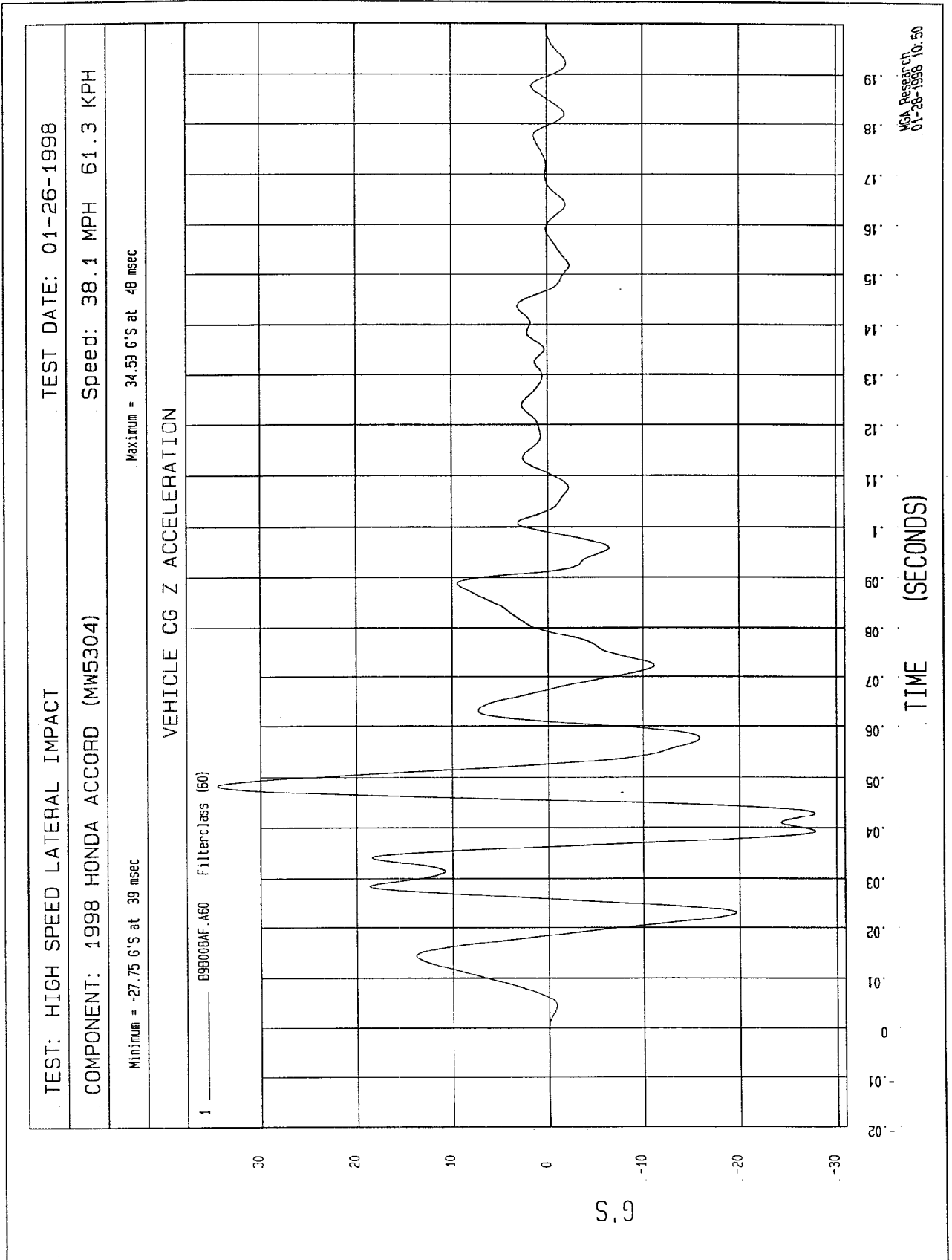
Maximum = 28.19 KPH at 90 msec

VEHICLE CG Y VELOCITY



NCA Research
01-26-1998 10.47

TIME Seconds

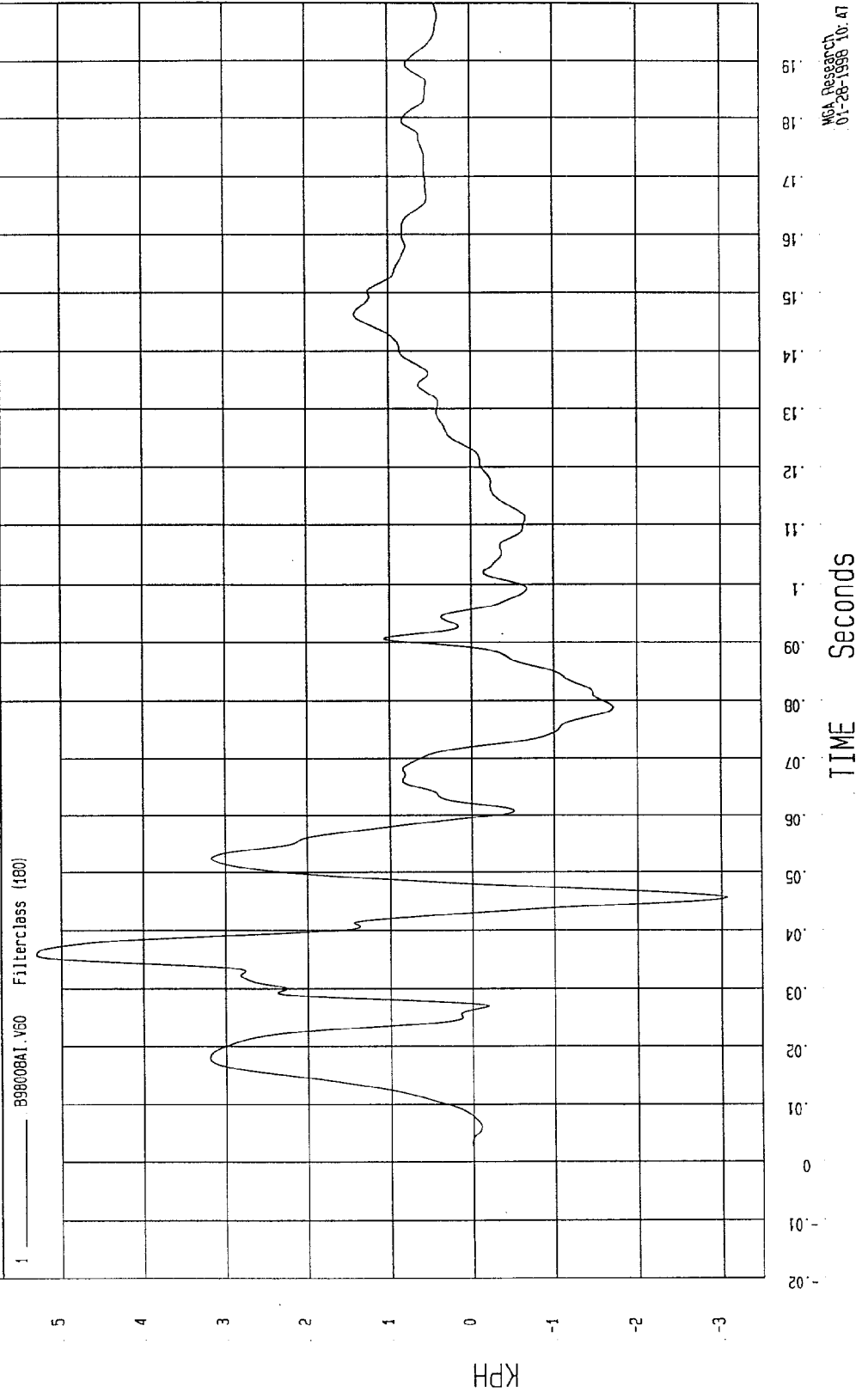


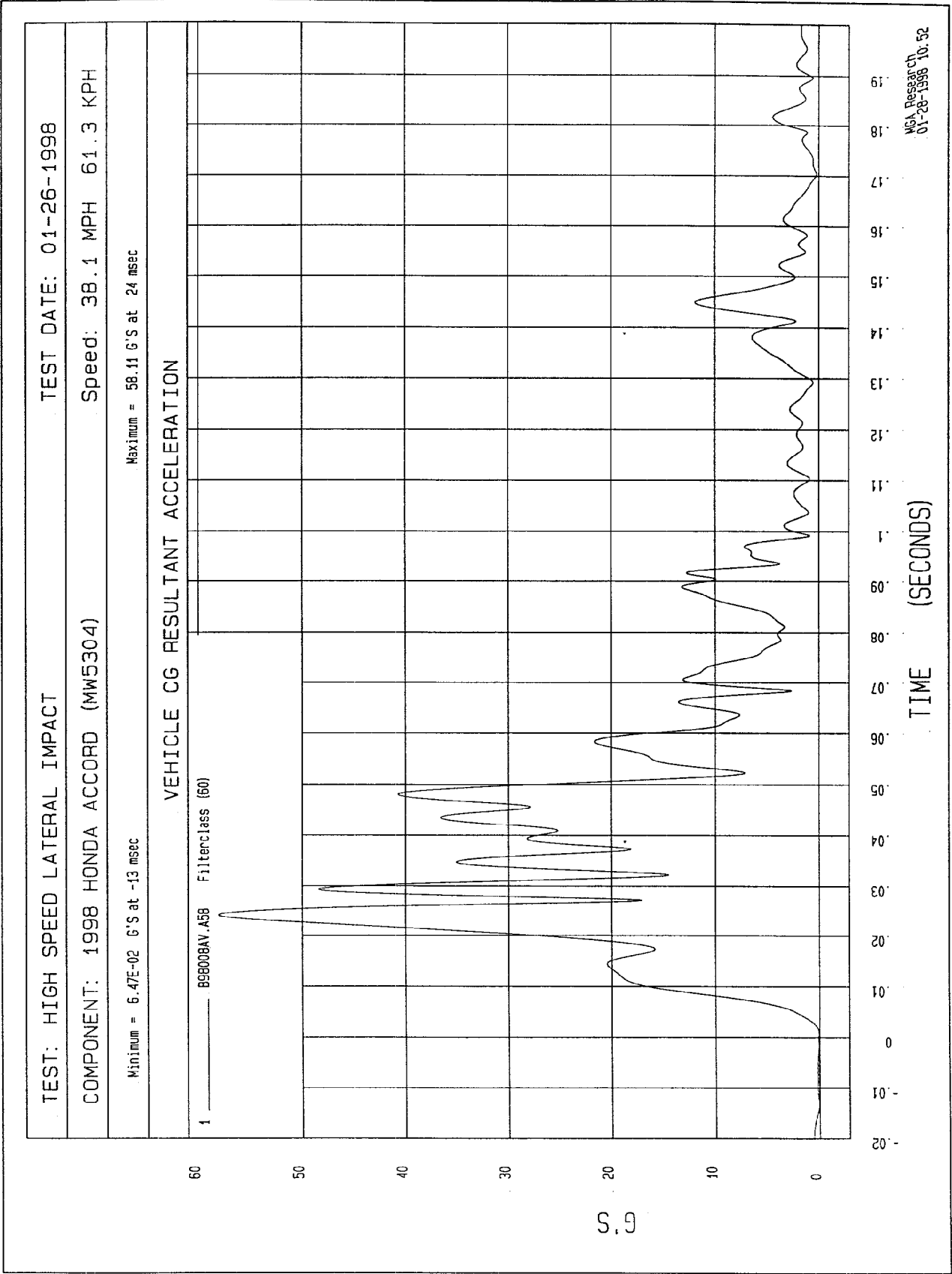
TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH

Minimum = -3.06 KPH at 46 msec Maximum = 5.29 KPH at 36 msec

VEHICLE CG Z VELOCITY



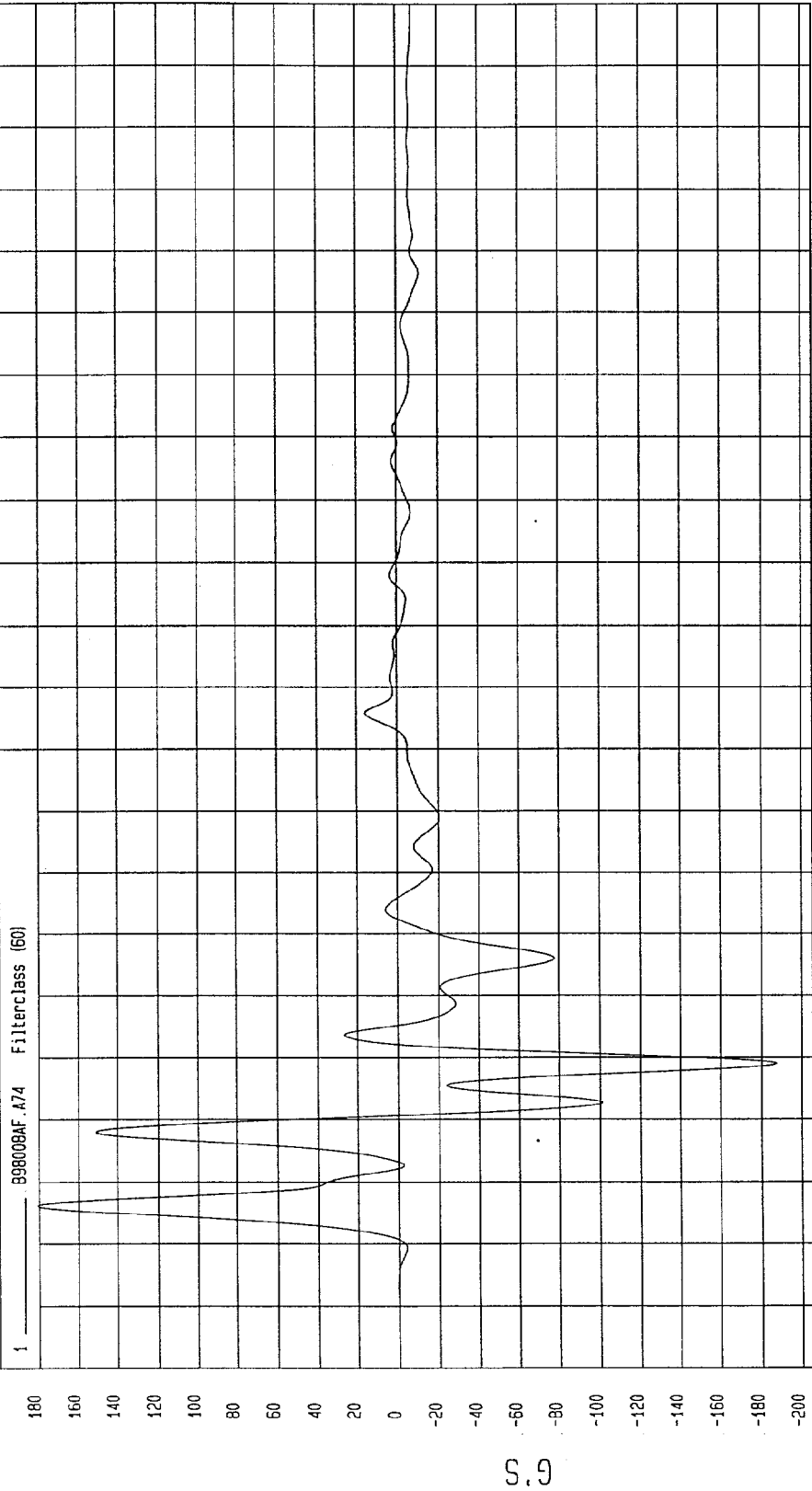


TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH

Minimum = -187.28 G'S at 29 msec Maximum = 180.80 G'S at 6 msec

LEFT FRONT DOOR ON CENTERLINE Y ACCELERATION



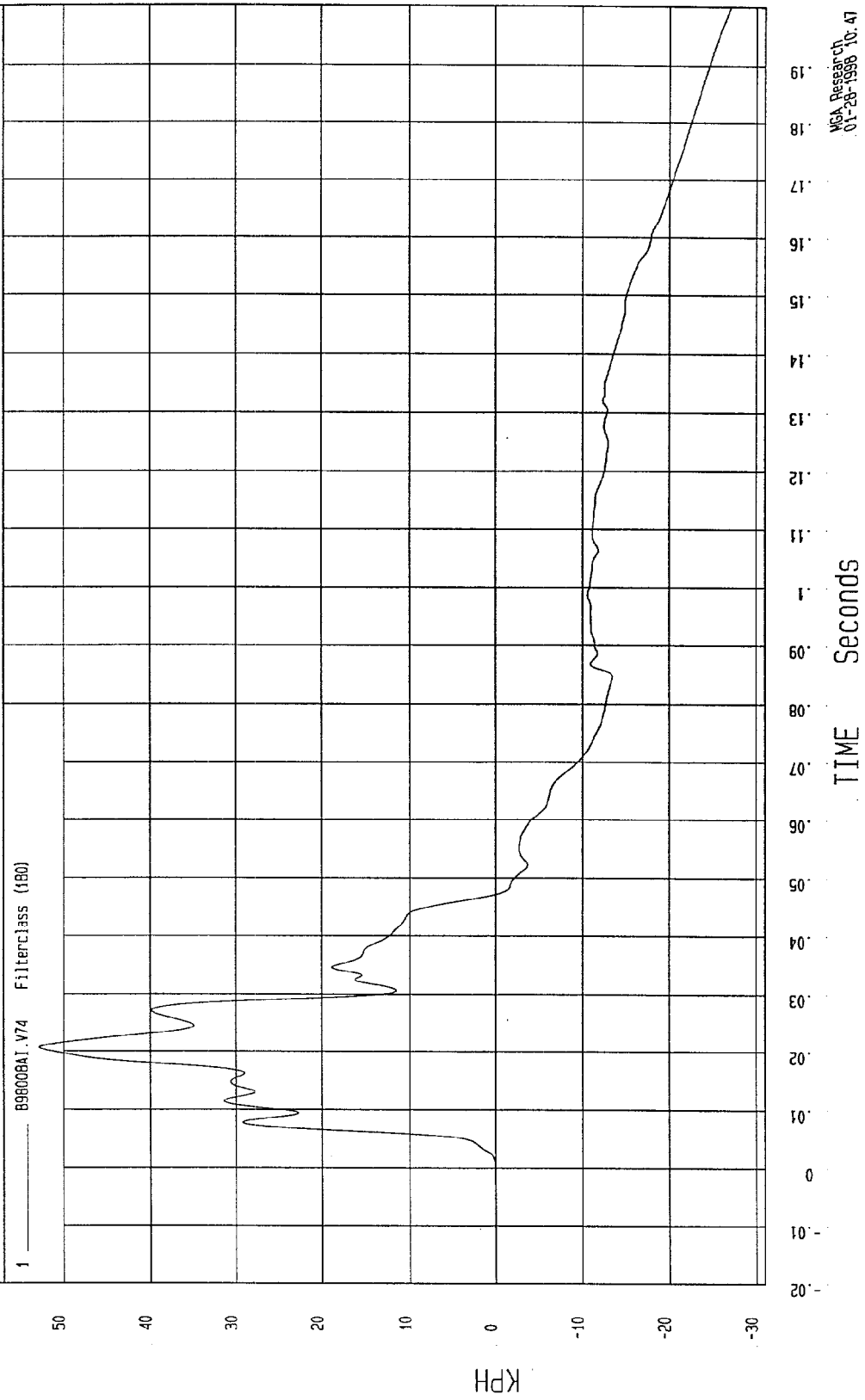
MCA Research
01-26-1998 10:50

TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

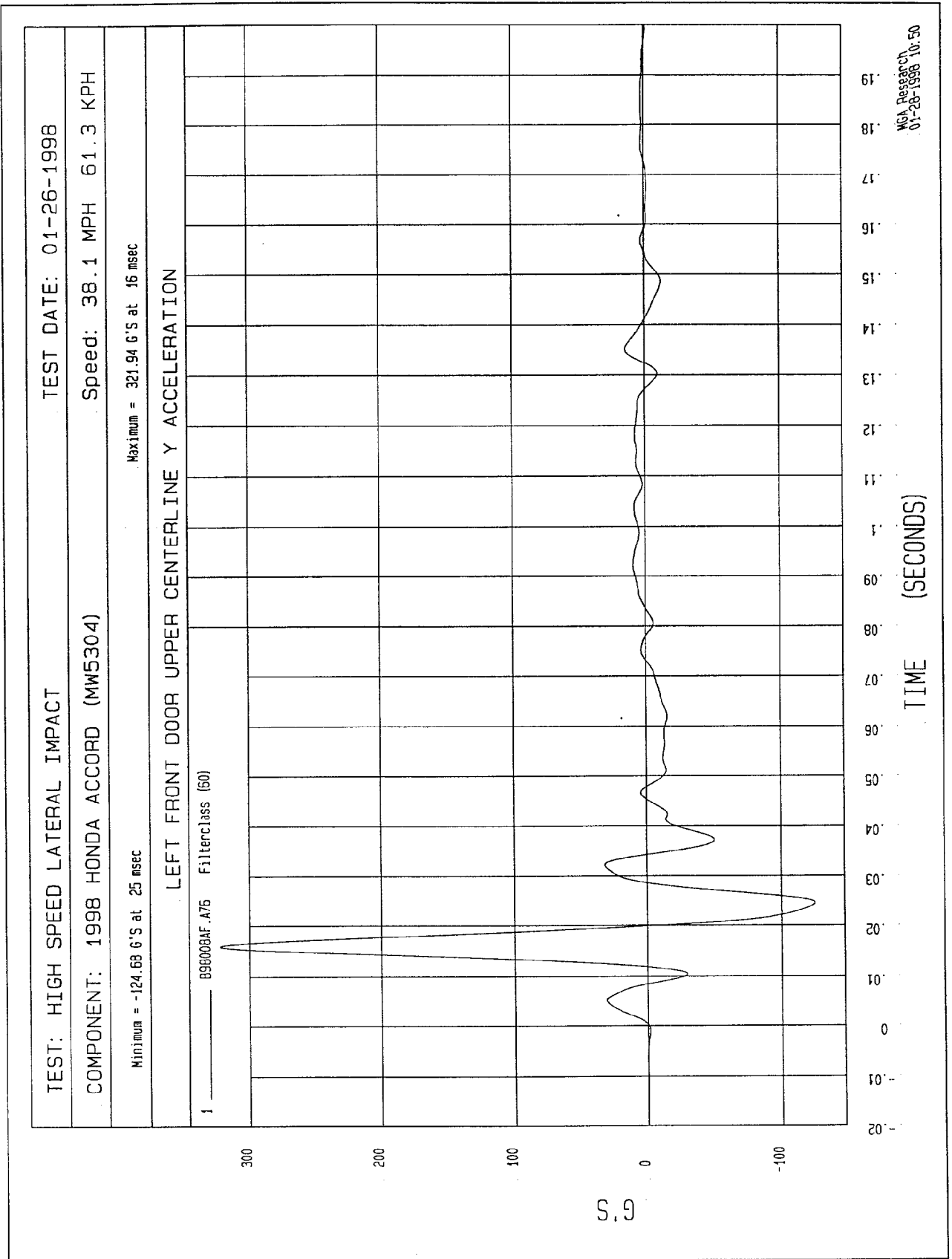
COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH

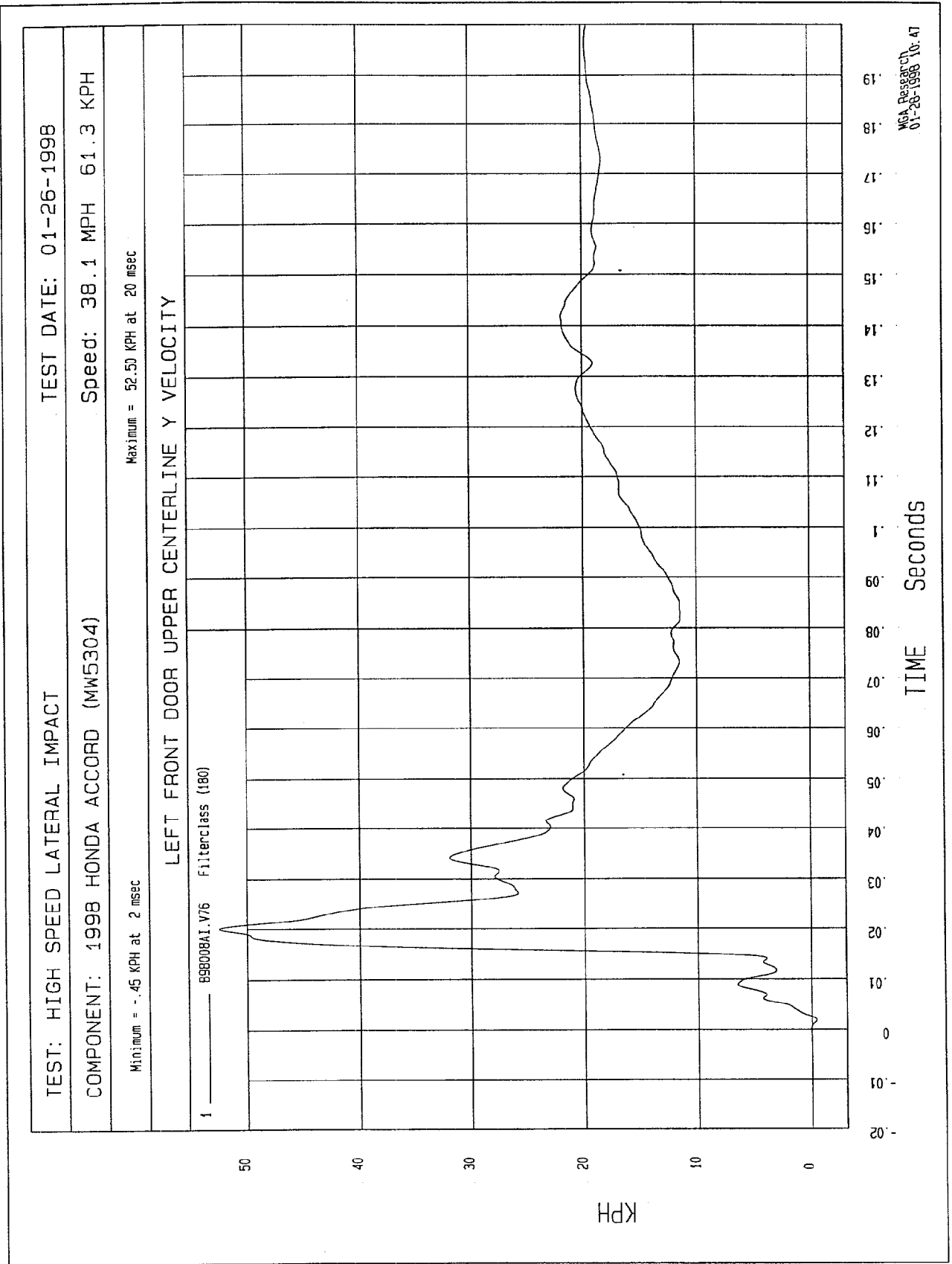
Minimum = -26.97 KPH at 200 msec Maximum = 52.81 KPH at 21 msec

LEFT FRONT DOOR ON CENTERLINE Y VELOCITY



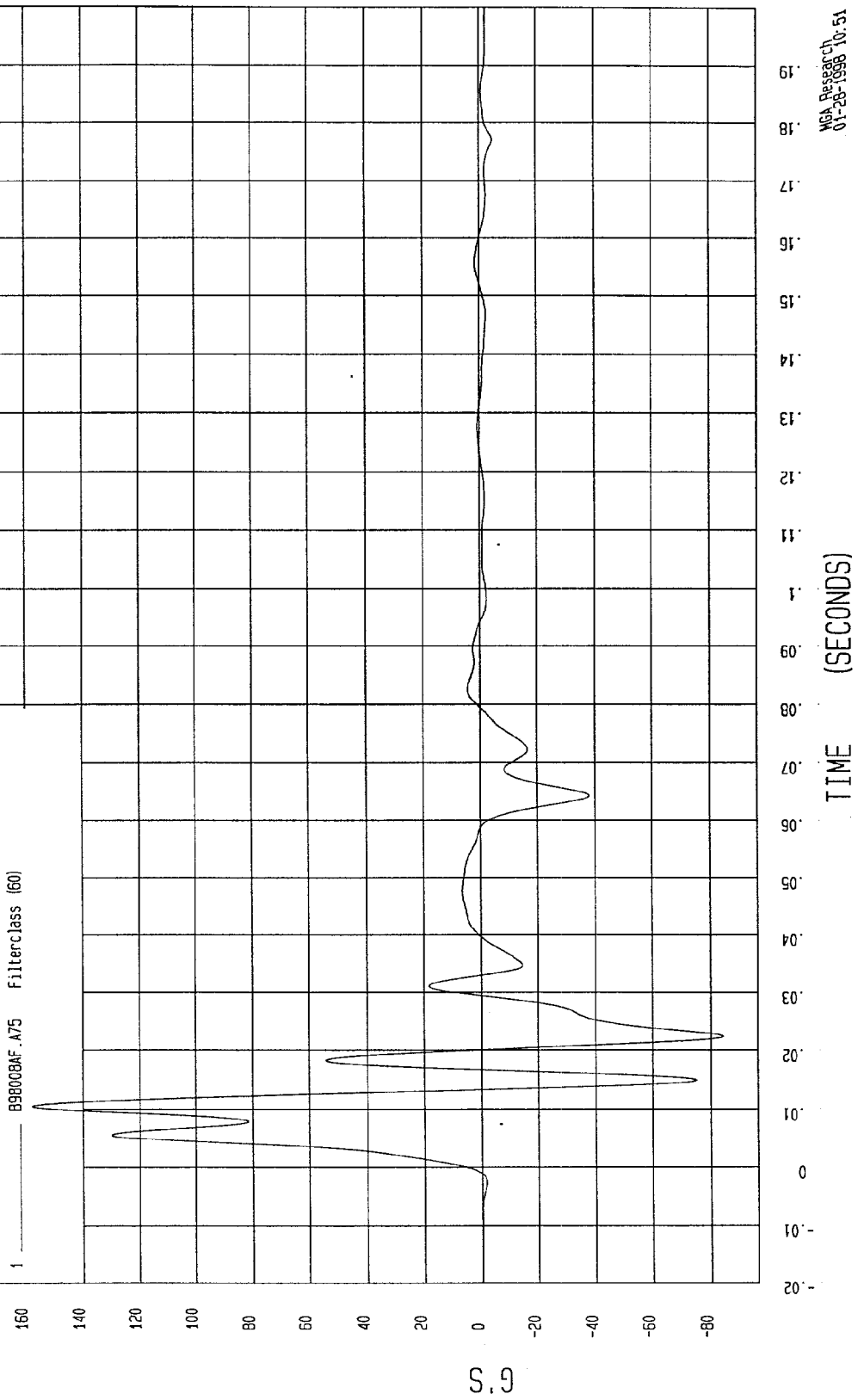
MOA Research
01-26-1998 10:47



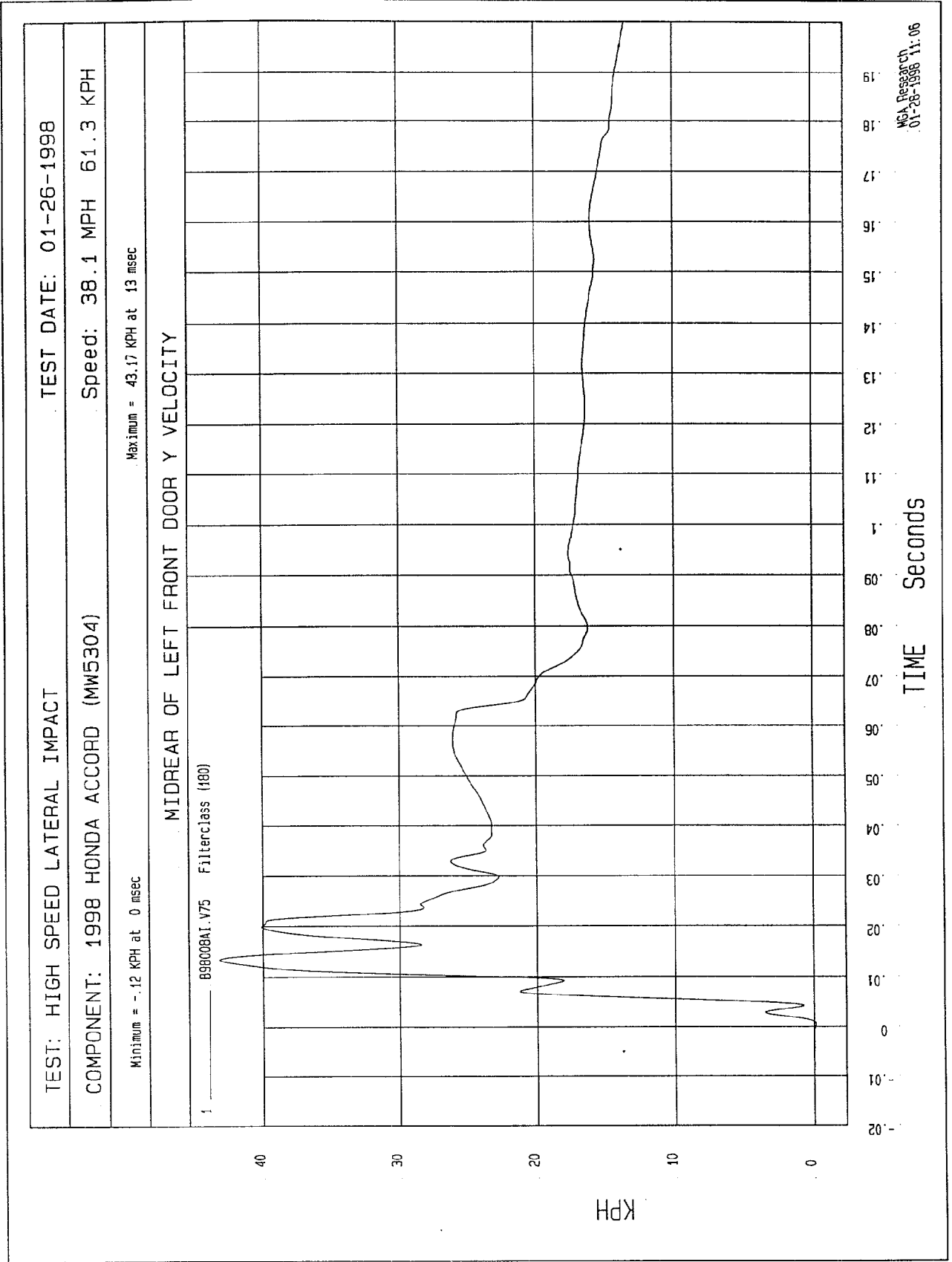


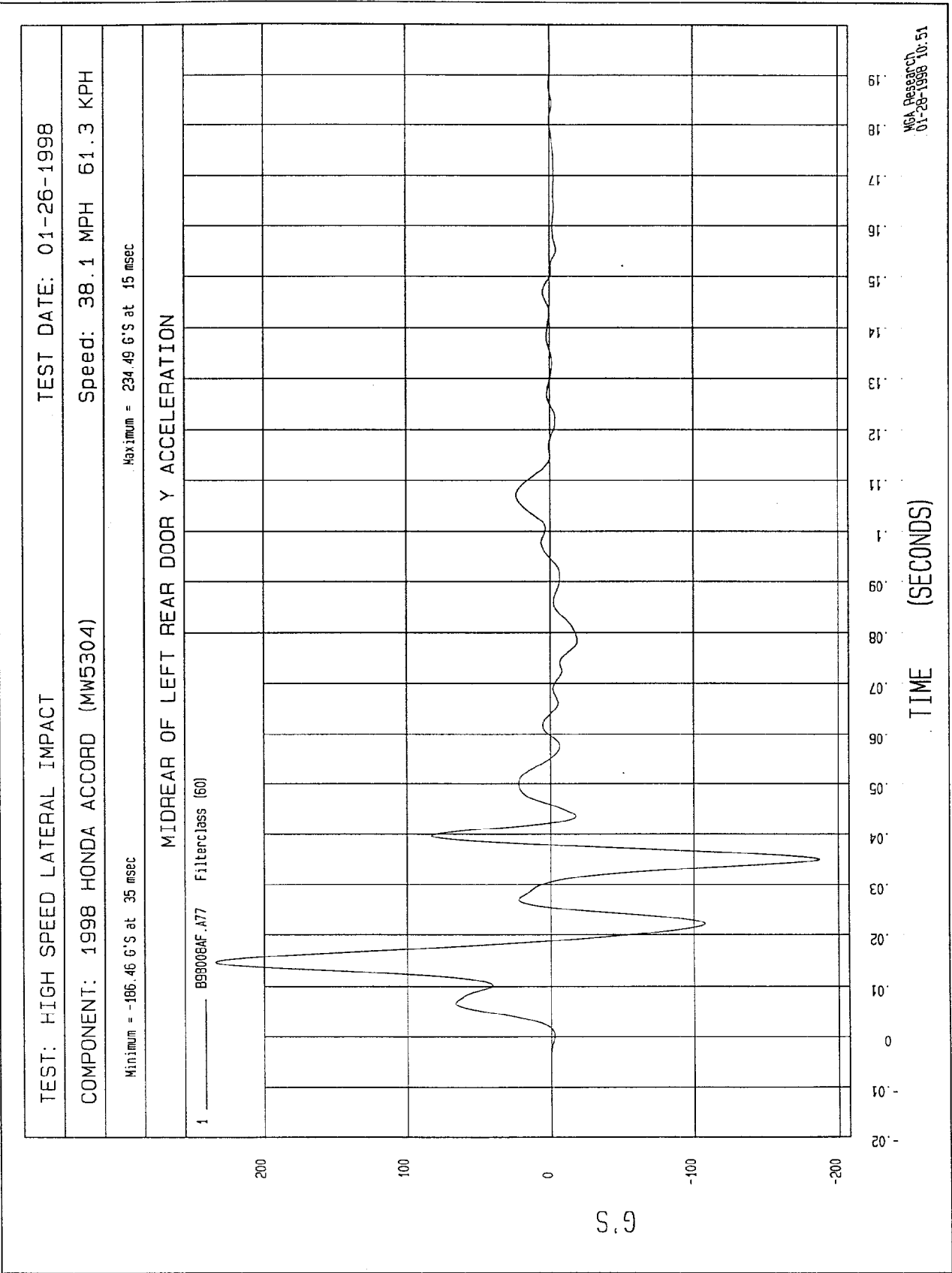
TEST: HIGH SPEED LATERAL IMPACT	TEST DATE: 01-26-1998
COMPONENT: 1998 HONDA ACCORD (MW5304)	Speed: 38.1 MPH 61.3 KPH
Minimum = -84.36 G'S at 22 msec	Maximum = 157.60 G'S at 10 msec

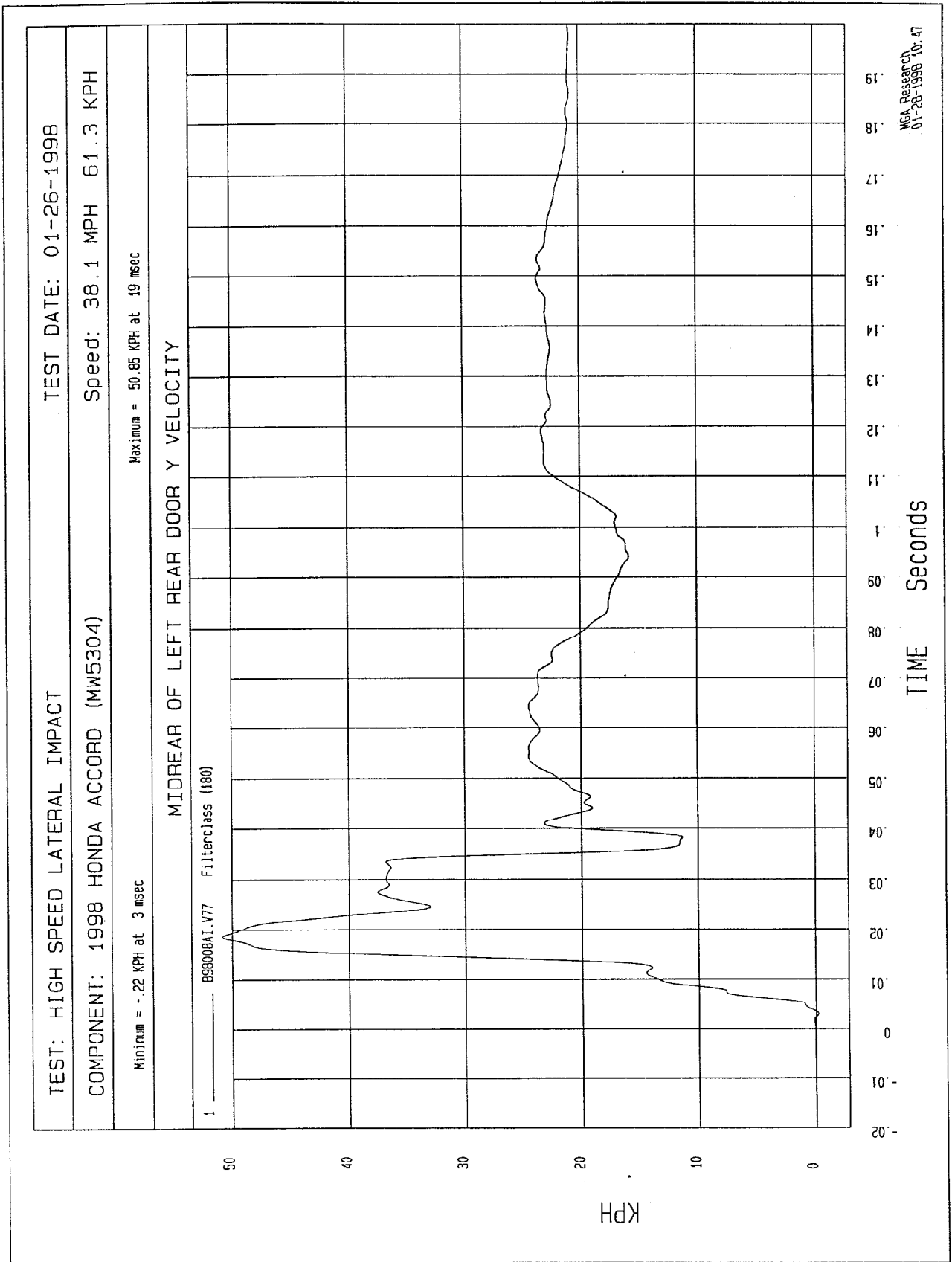
MIDREAR OF LEFT FRONT DOOR Y ACCELERATION

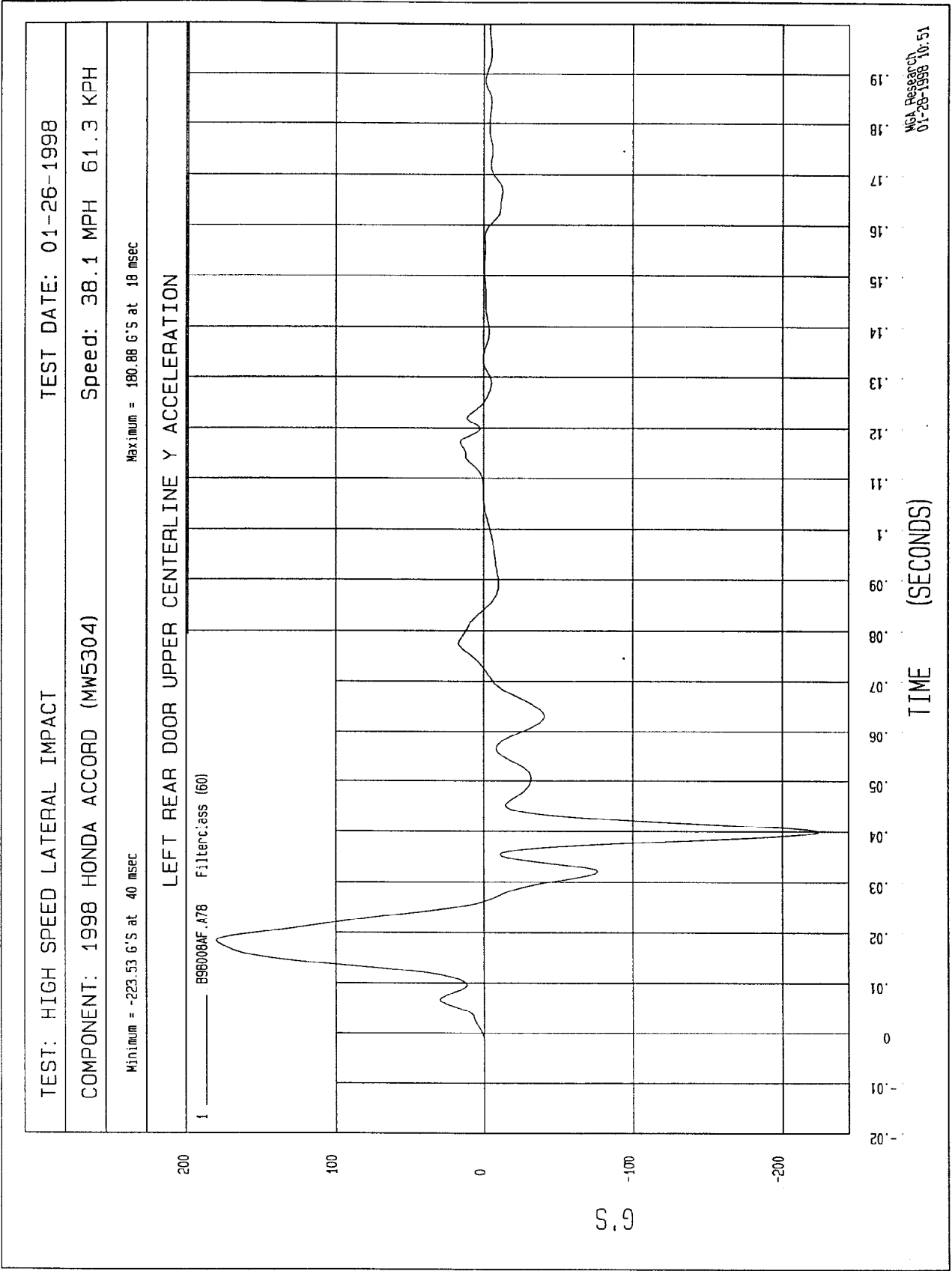


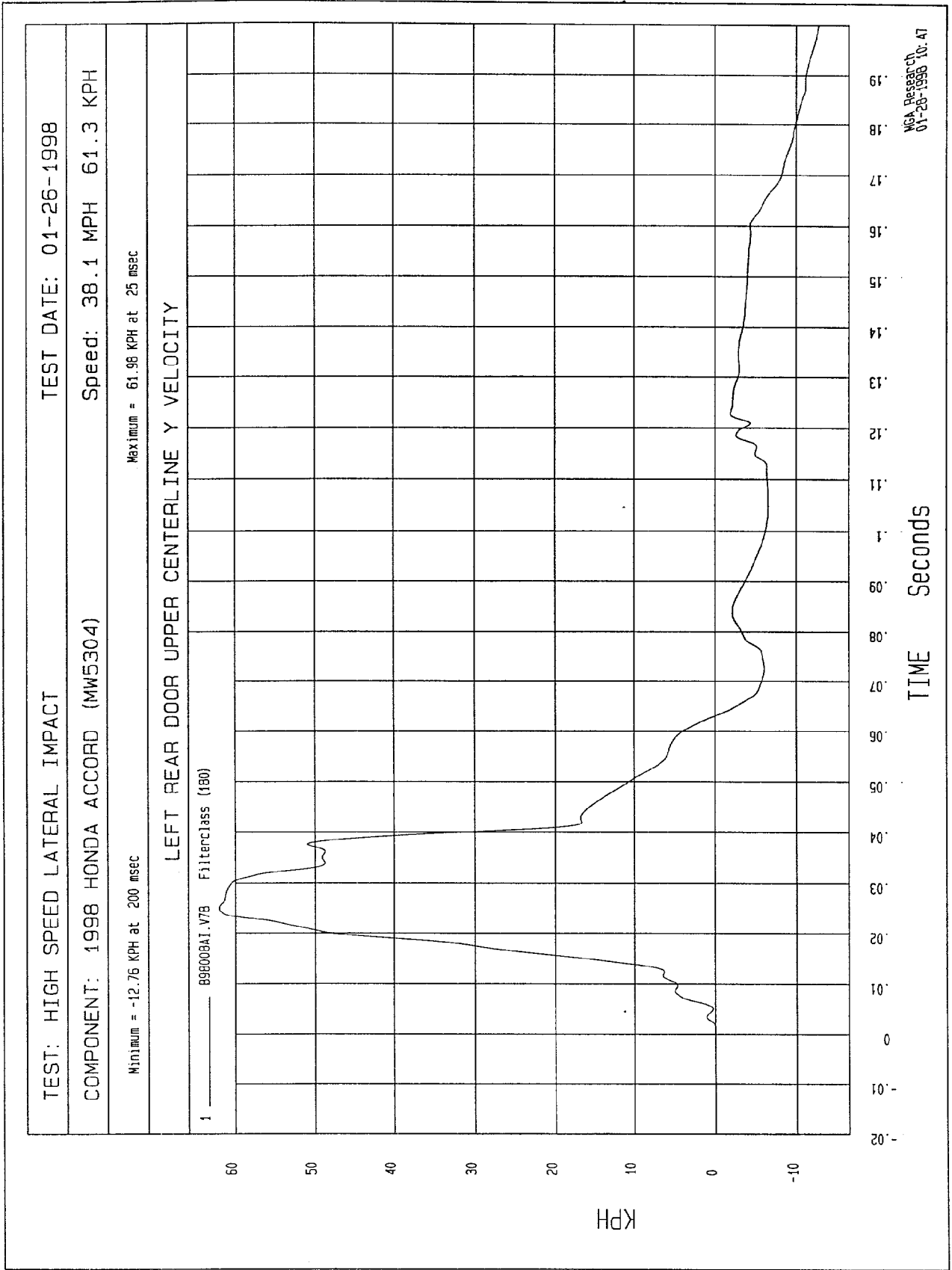
MCA Research
01-26-1998 10:51









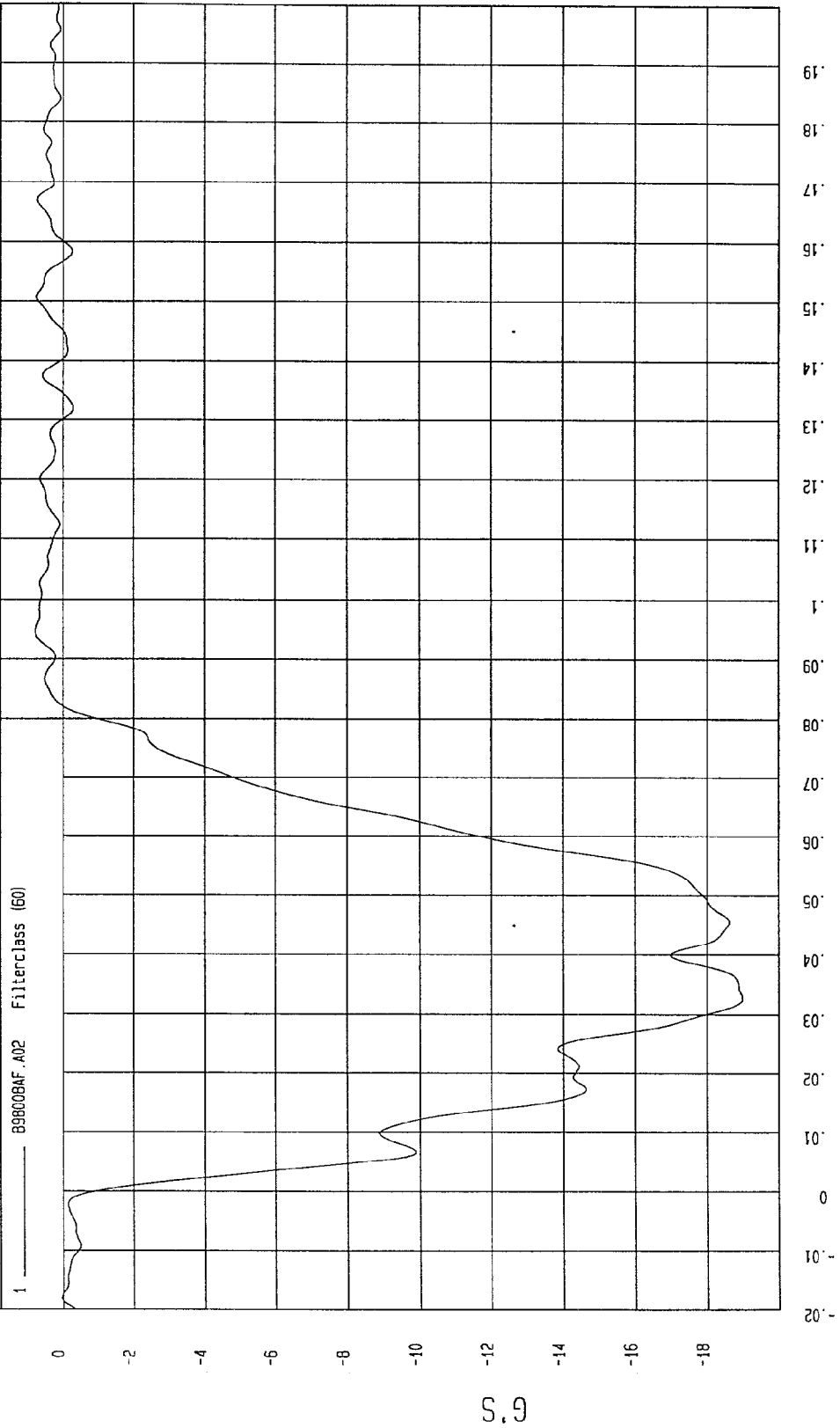


TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH

Minimum = -18.96 G'S at 33 msec Maximum = .75 G'S at 94 msec

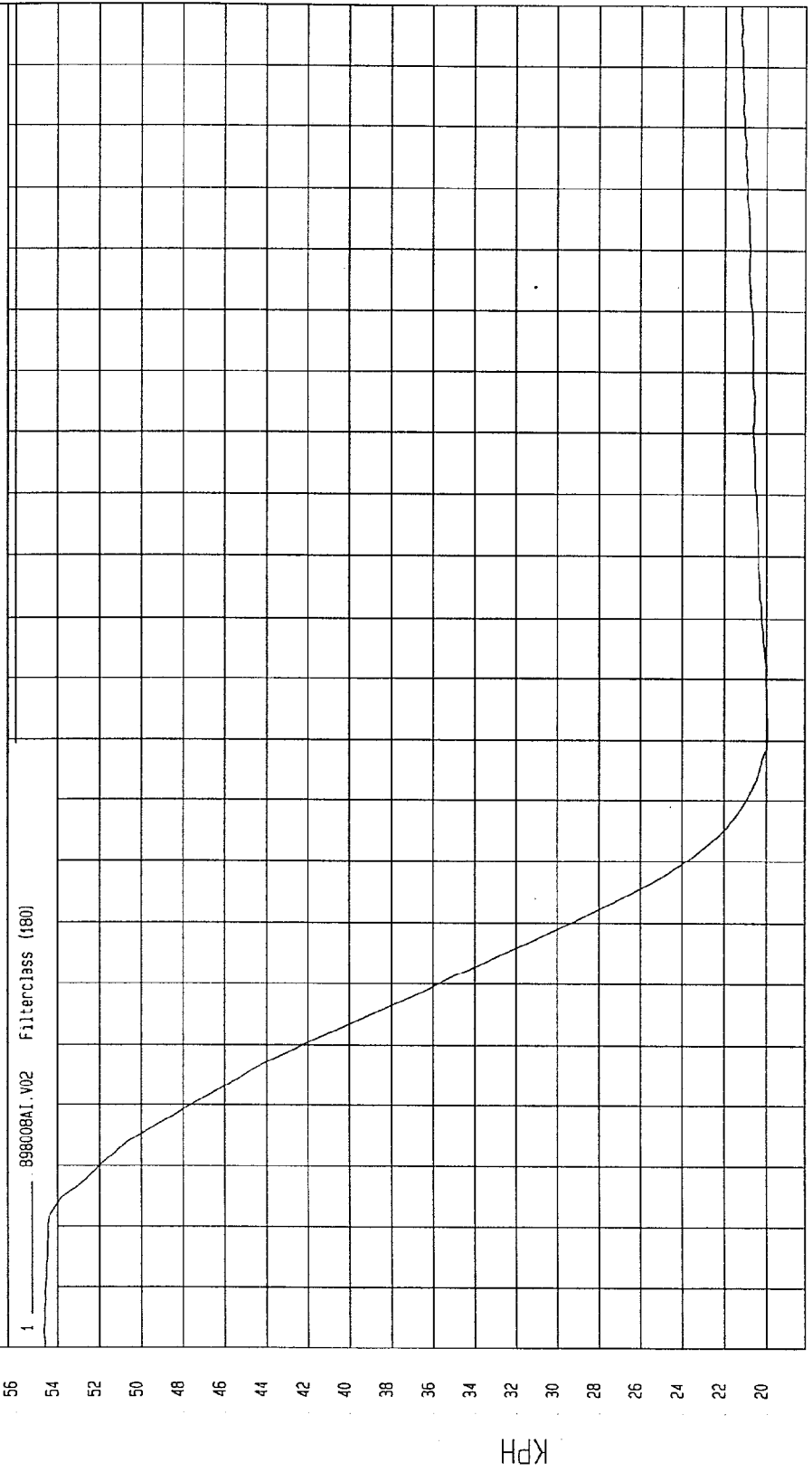
MOVING BARRIER CG X ACCELERATION



NCA Research
01-26-1998 10:51

TEST: HIGH SPEED LATERAL IMPACT	TEST DATE: 01-26-1998
COMPONENT: 1998 HONDA ACCORD (MW5304)	Speed: 38.1 MPH 61.3 KPH
Minimum = 19.91 KPH at 83 msec	Maximum = 54.64 KPH at -17 msec

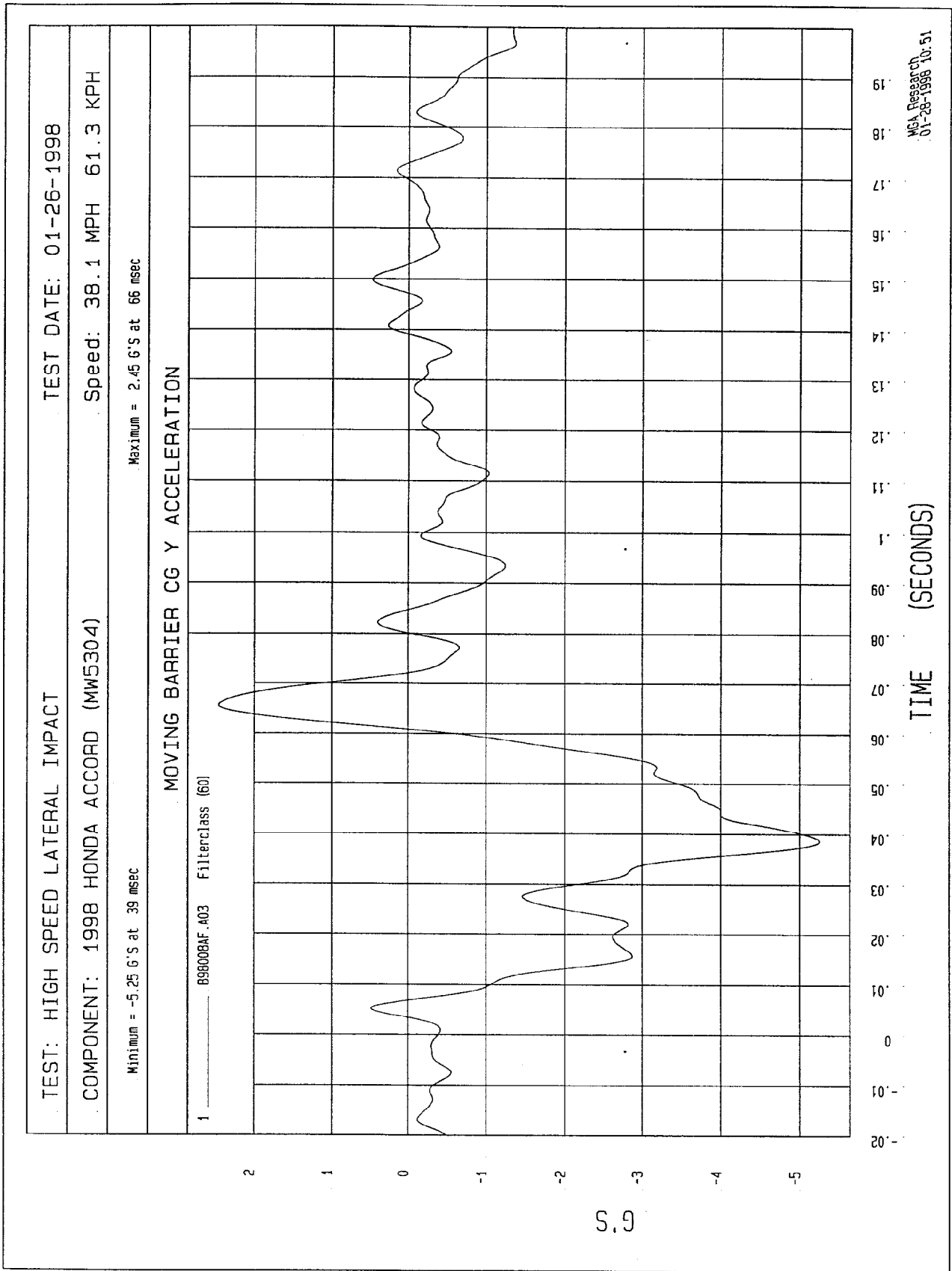
MOVING BARRIER CG X VELOCITY

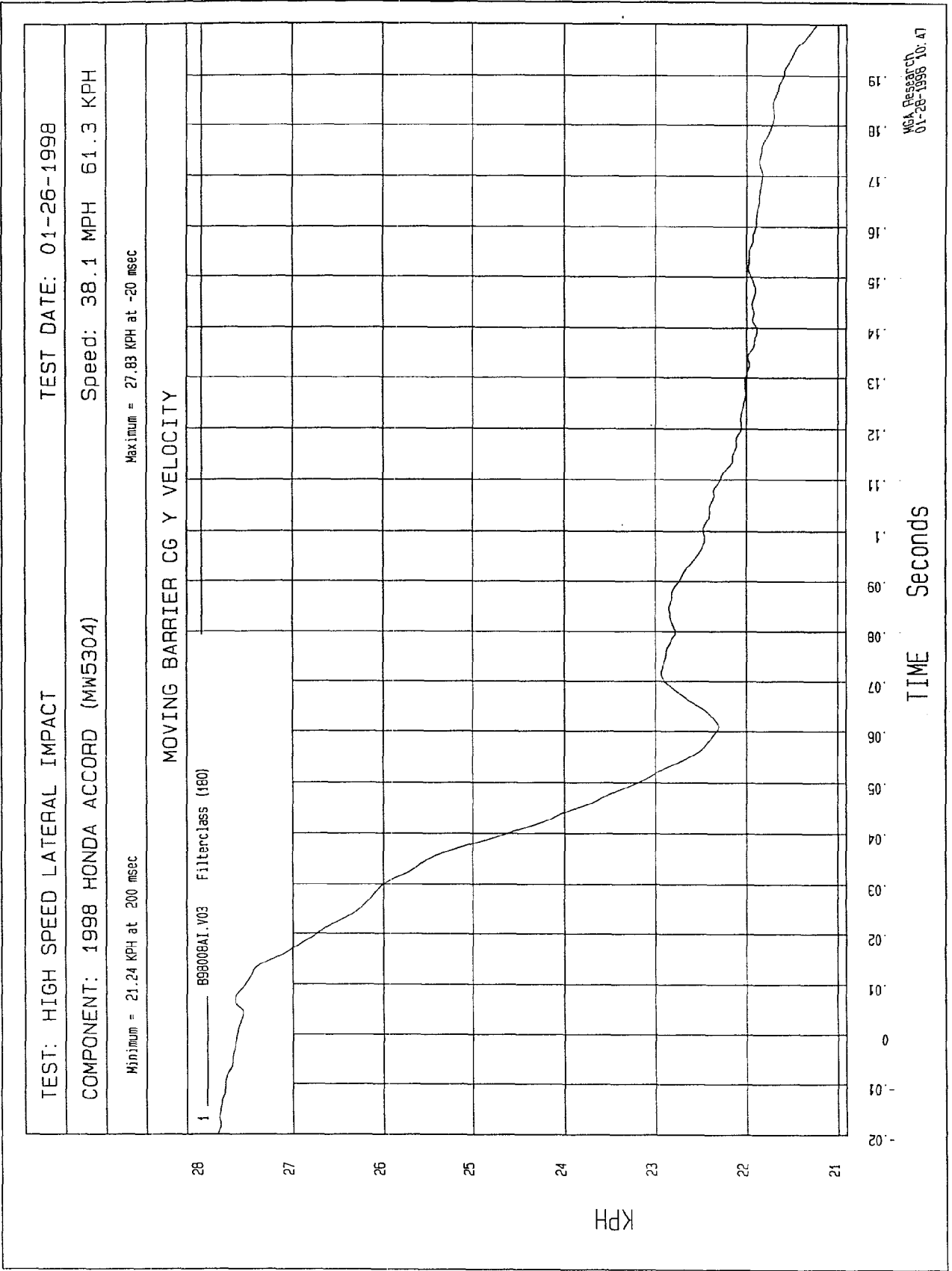


TIME Seconds

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01-28-1998 10: 47
MCA Research





TEST: HIGH SPEED LATERAL IMPACT

TEST DATE: 01-26-1998

Speed: 38.1 MPH 61.3 KPH

COMPONENT: 1998 HONDA ACCORD (MW5304)

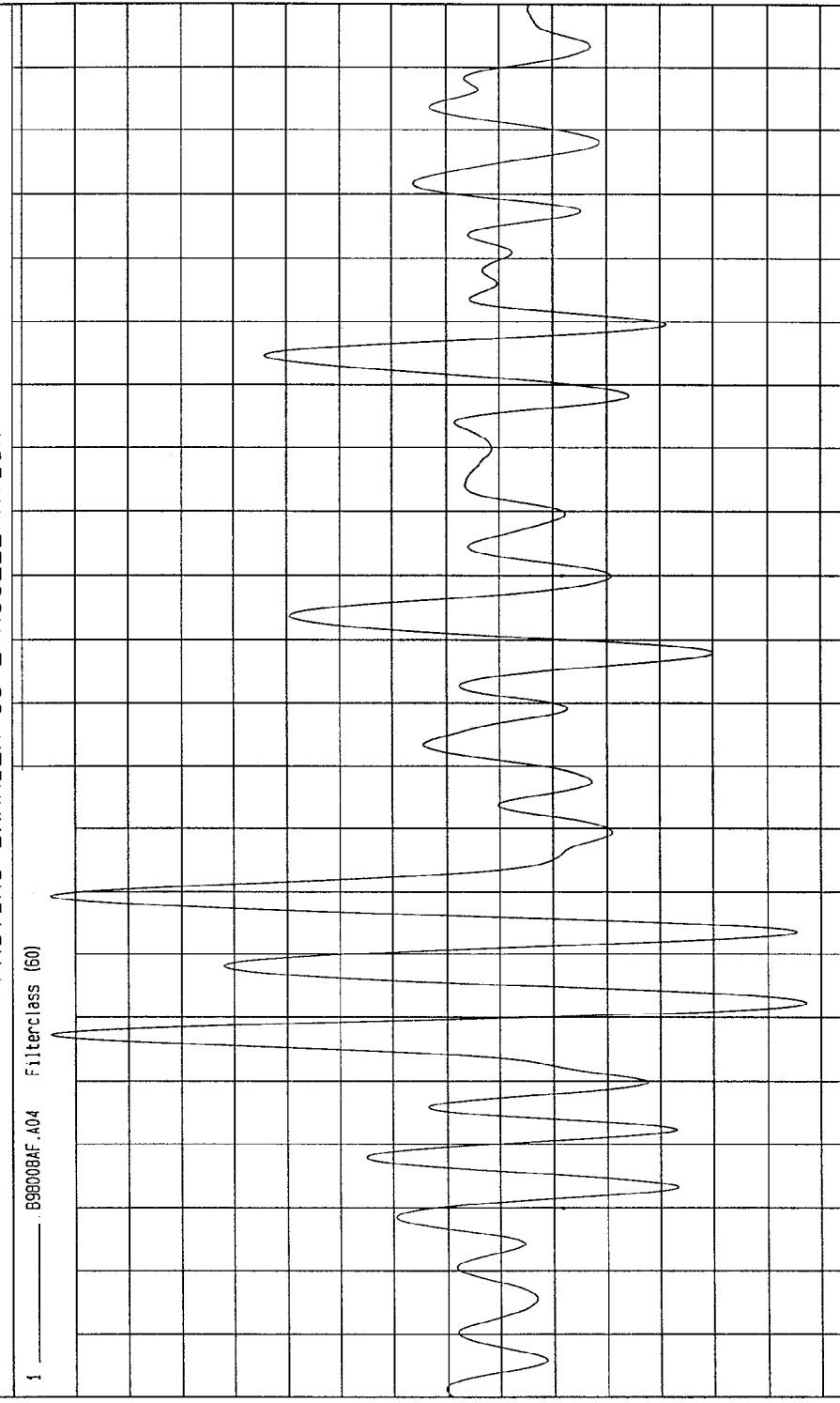
Maximum = 15.93 G'S at 59 msec

Minimum = -11.43 G'S at 42 msec

MOVING BARRIER CG Z ACCELERATION

1 _____ B98008AF.A04 Filterclass (50)

G.S

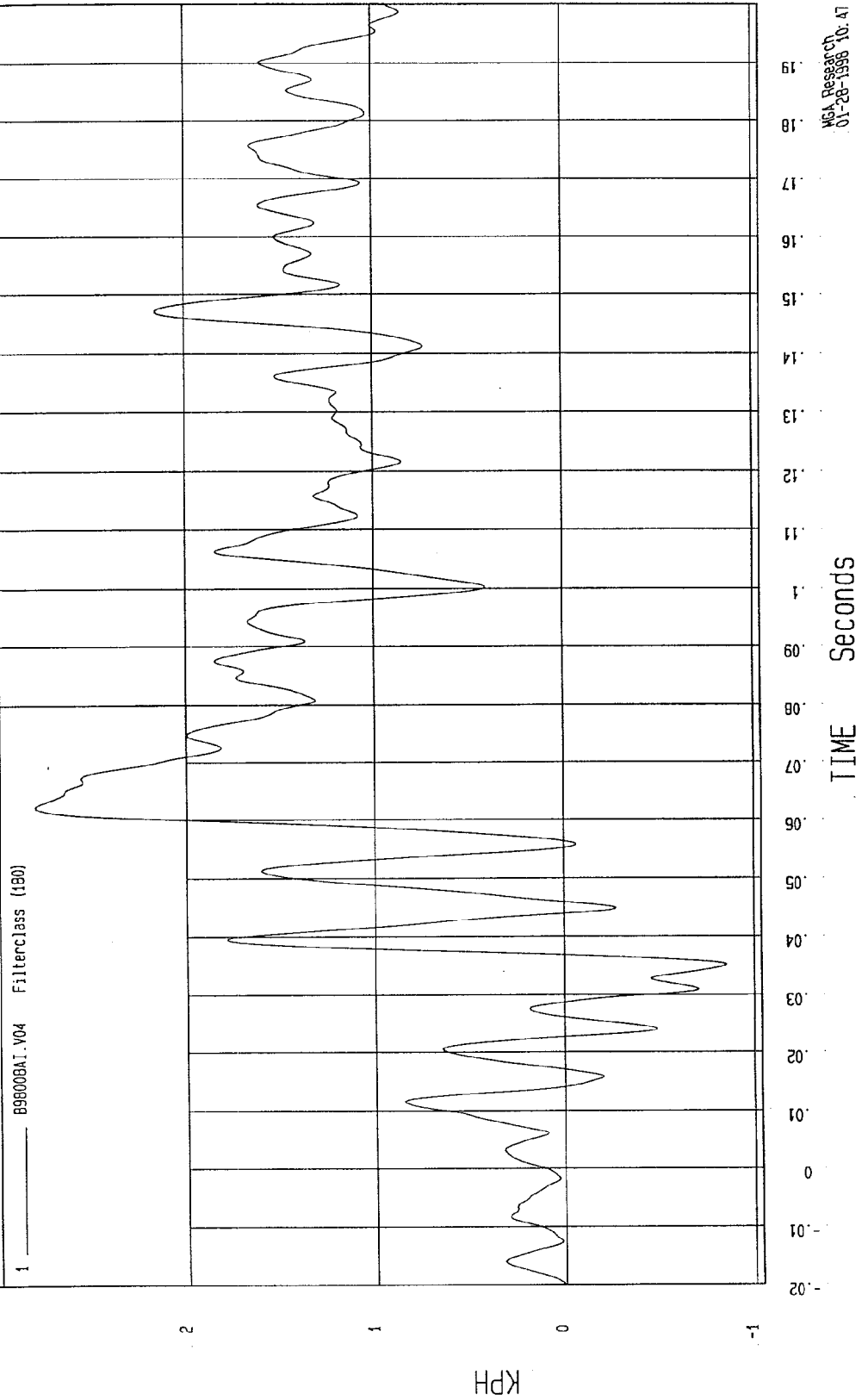


TIME (SECONDS)

WCA Research
01-26-1998 10: 51

TEST: HIGH SPEED LATERAL IMPACT	TEST DATE: 01-26-1998
COMPONENT: 1998 HONDA ACCORD (MW5304)	Speed: 38.1 MPH 61.3 KPH
Minimum = -.85 KPH at 35 msec	Maximum = 2.80 KPH at 62 msec

MOVING BARRIER CG Z VELOCITY

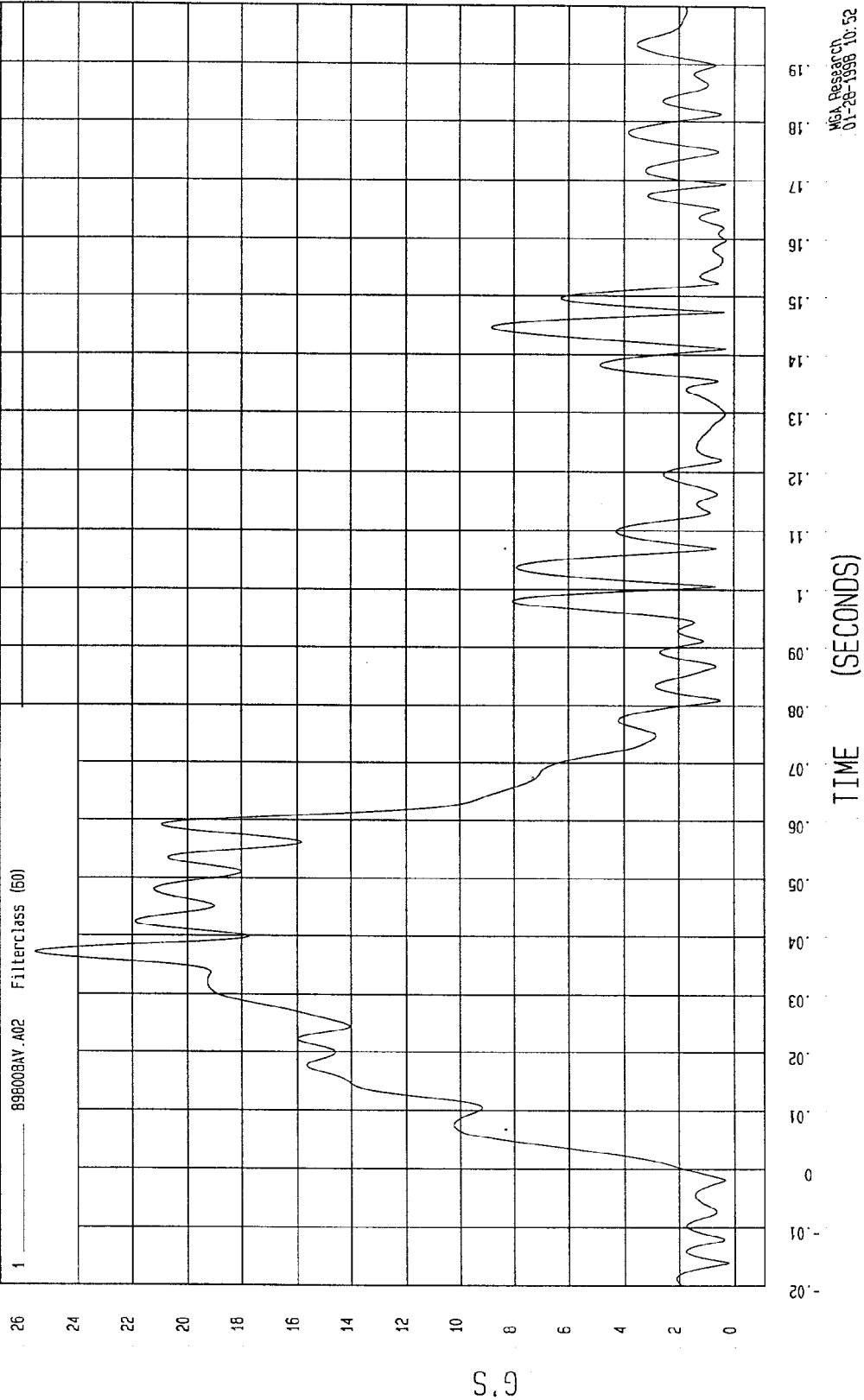


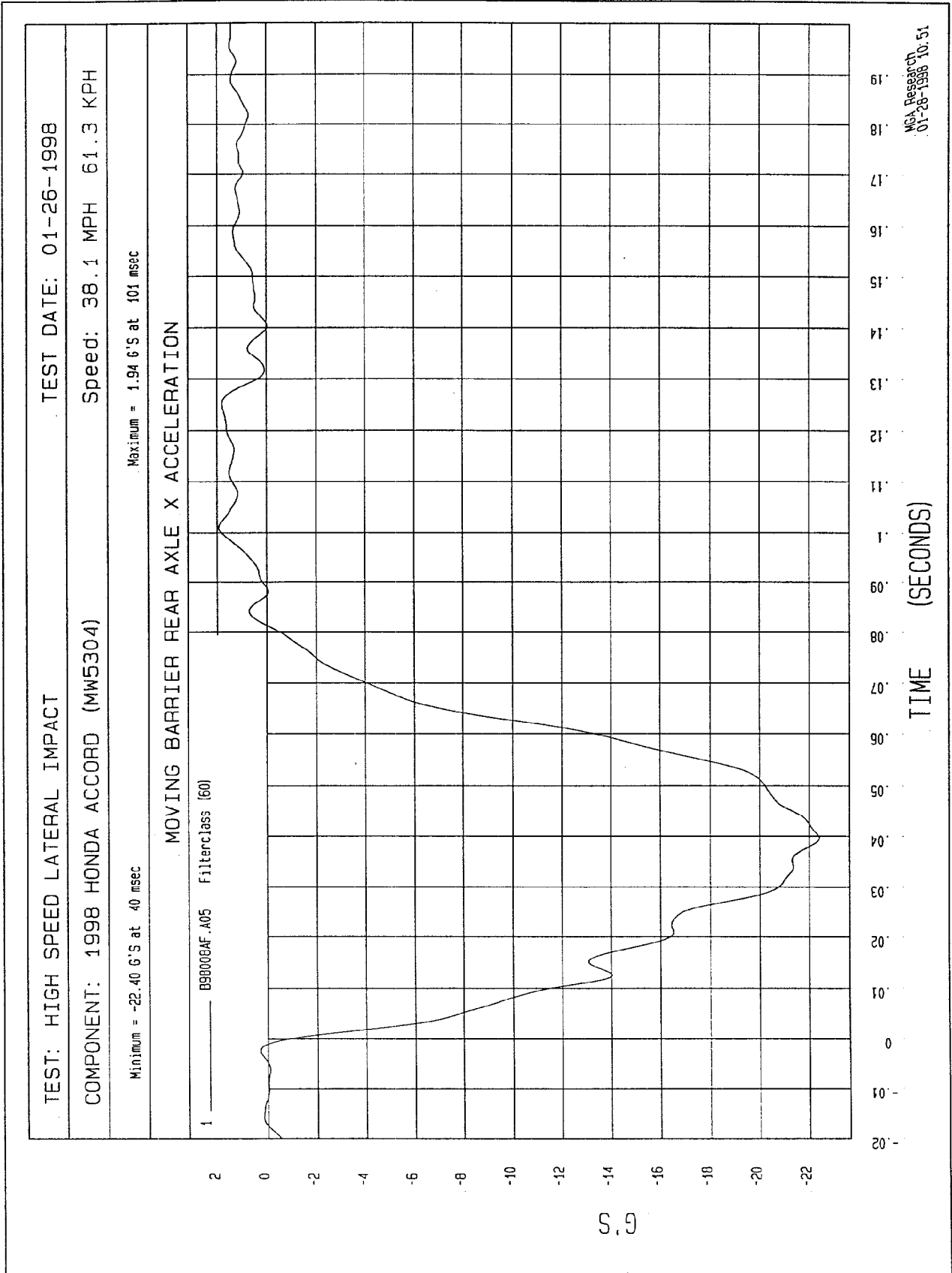
TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

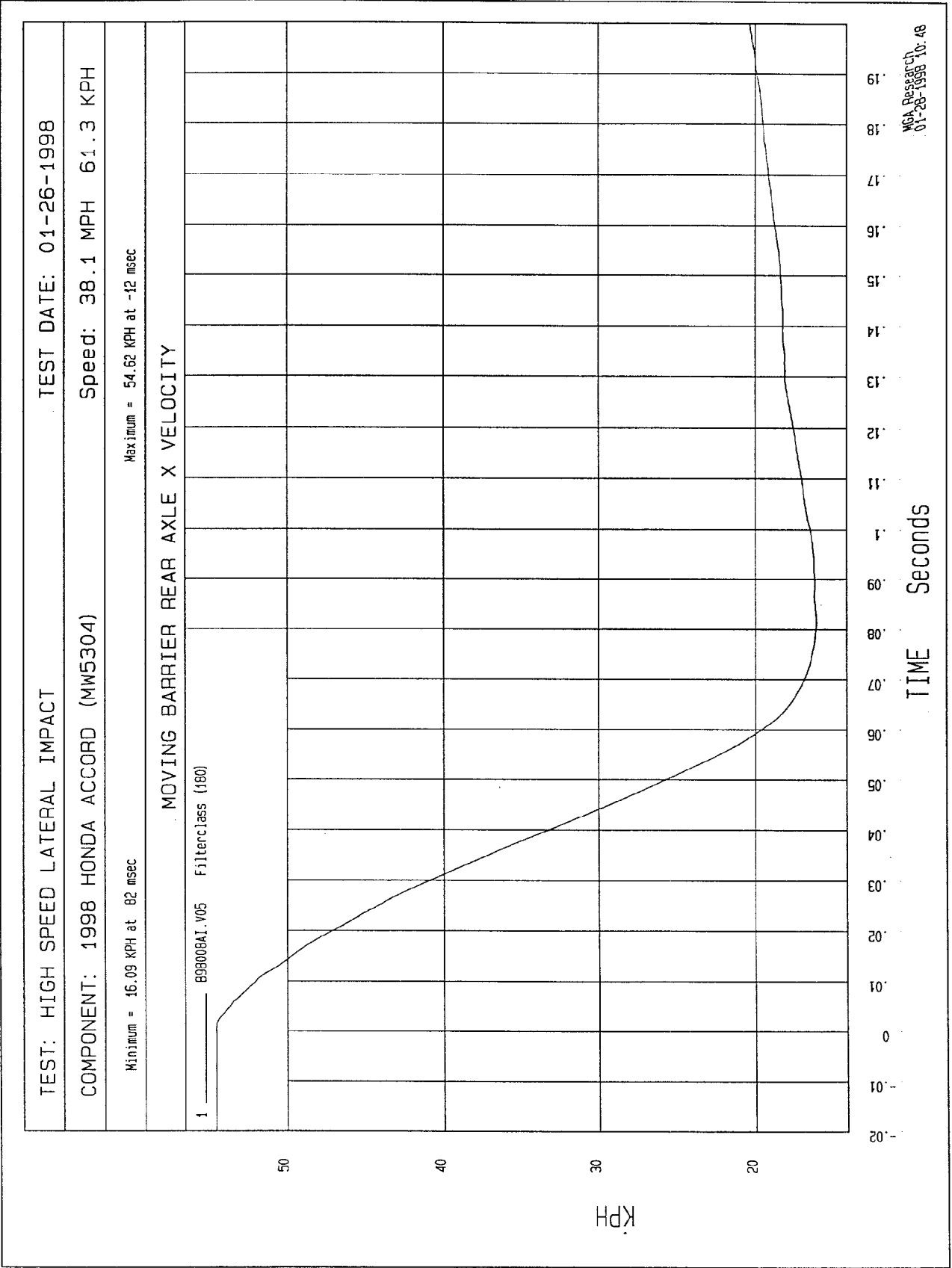
COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH

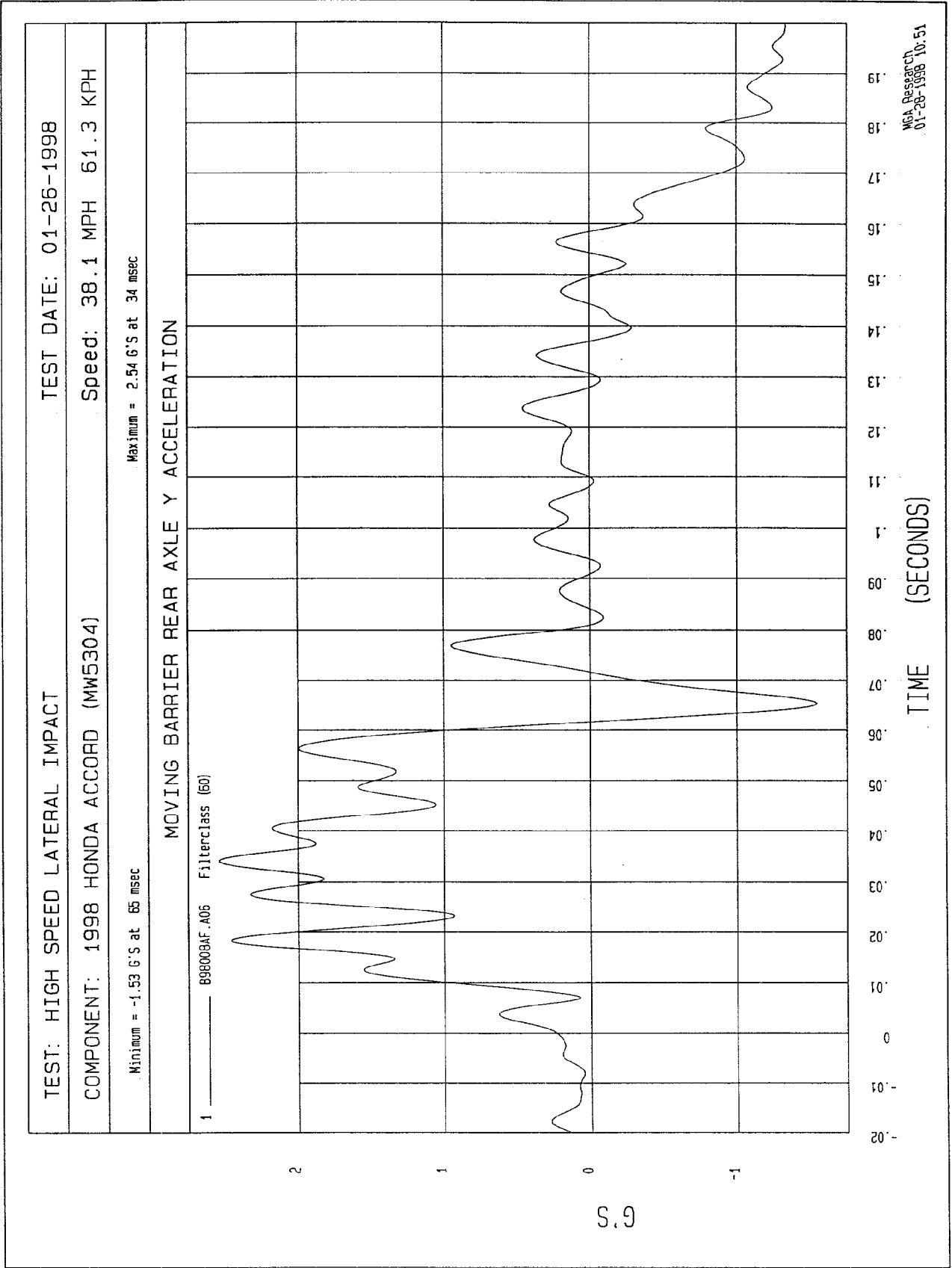
Minimum = .18 G'S at -16 msec Maximum = 25.54 G'S at 37 msec

MOVING BARRIER CG RESULTANT ACCELERATION



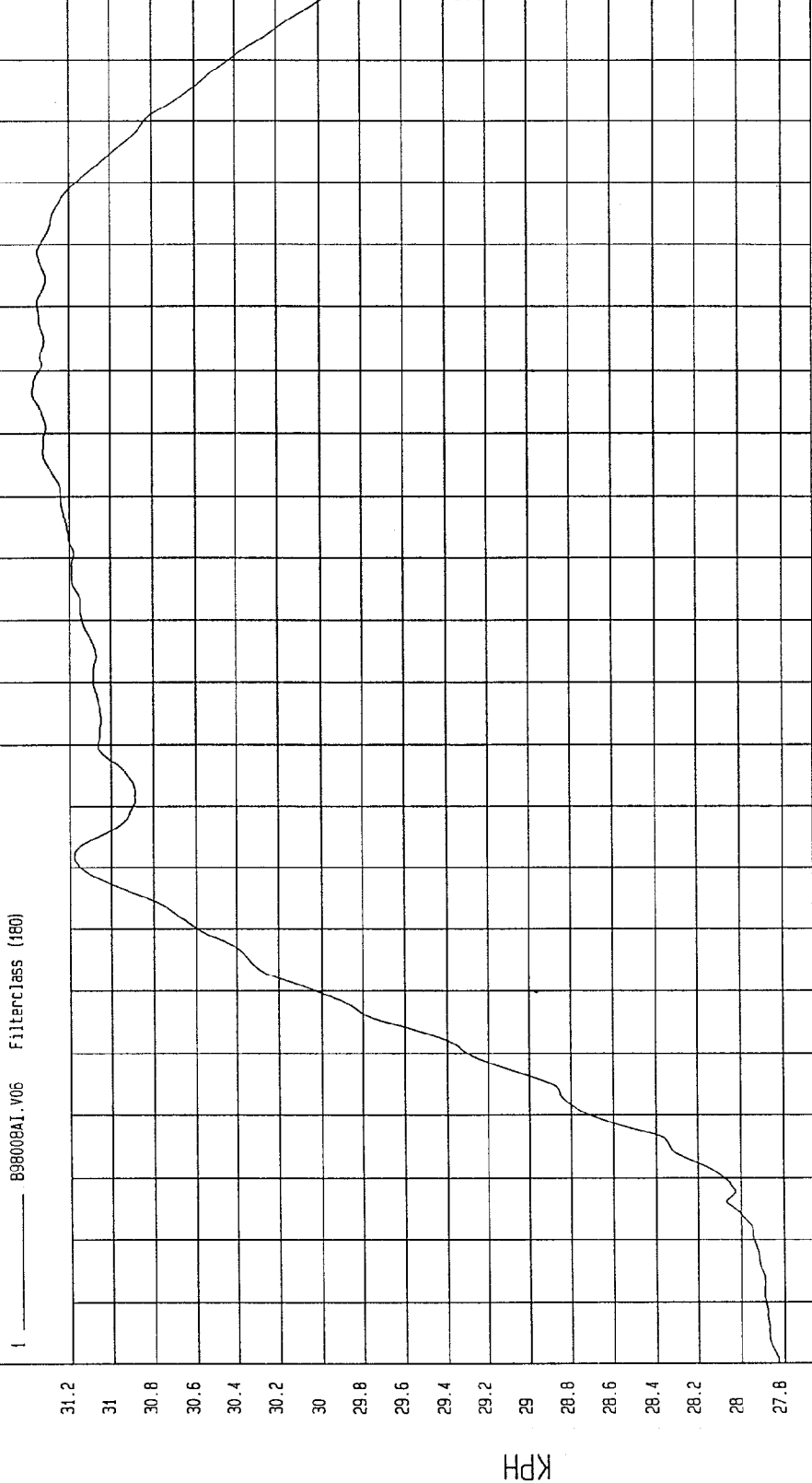






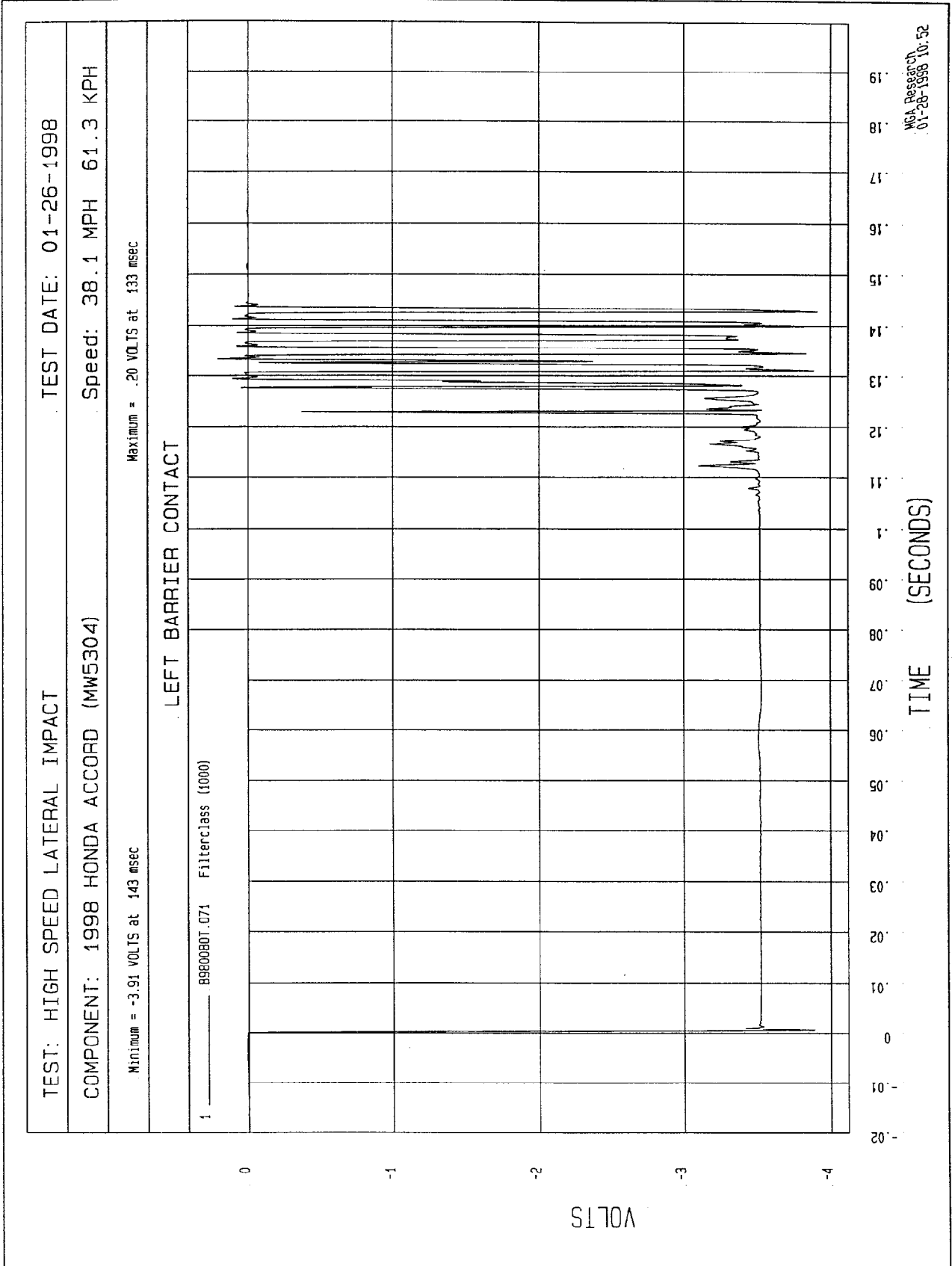
TEST: HIGH SPEED LATERAL IMPACT	TEST DATE: 01-26-1998
COMPONENT: 1998 HONDA ACCORD (MW5304)	Speed: 38.1 MPH 61.3 KPH
Minimum = 27.82 KPH at -20 msec	Maximum = 31.37 KPH at 137 msec

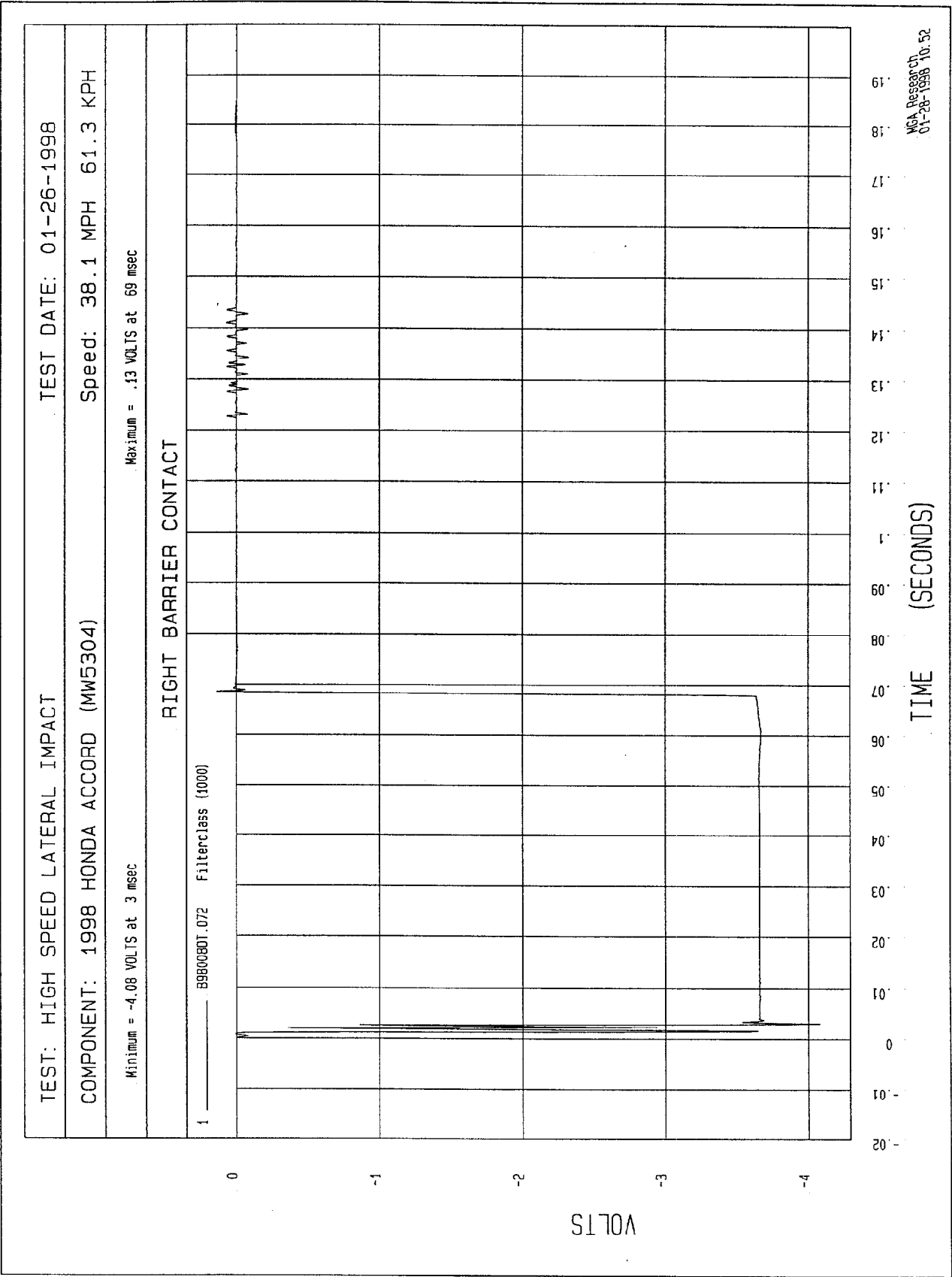
MOVING BARRIER REAR AXLE Y VELOCITY



TIME Seconds

NSA Research
01-28-1998 10:48



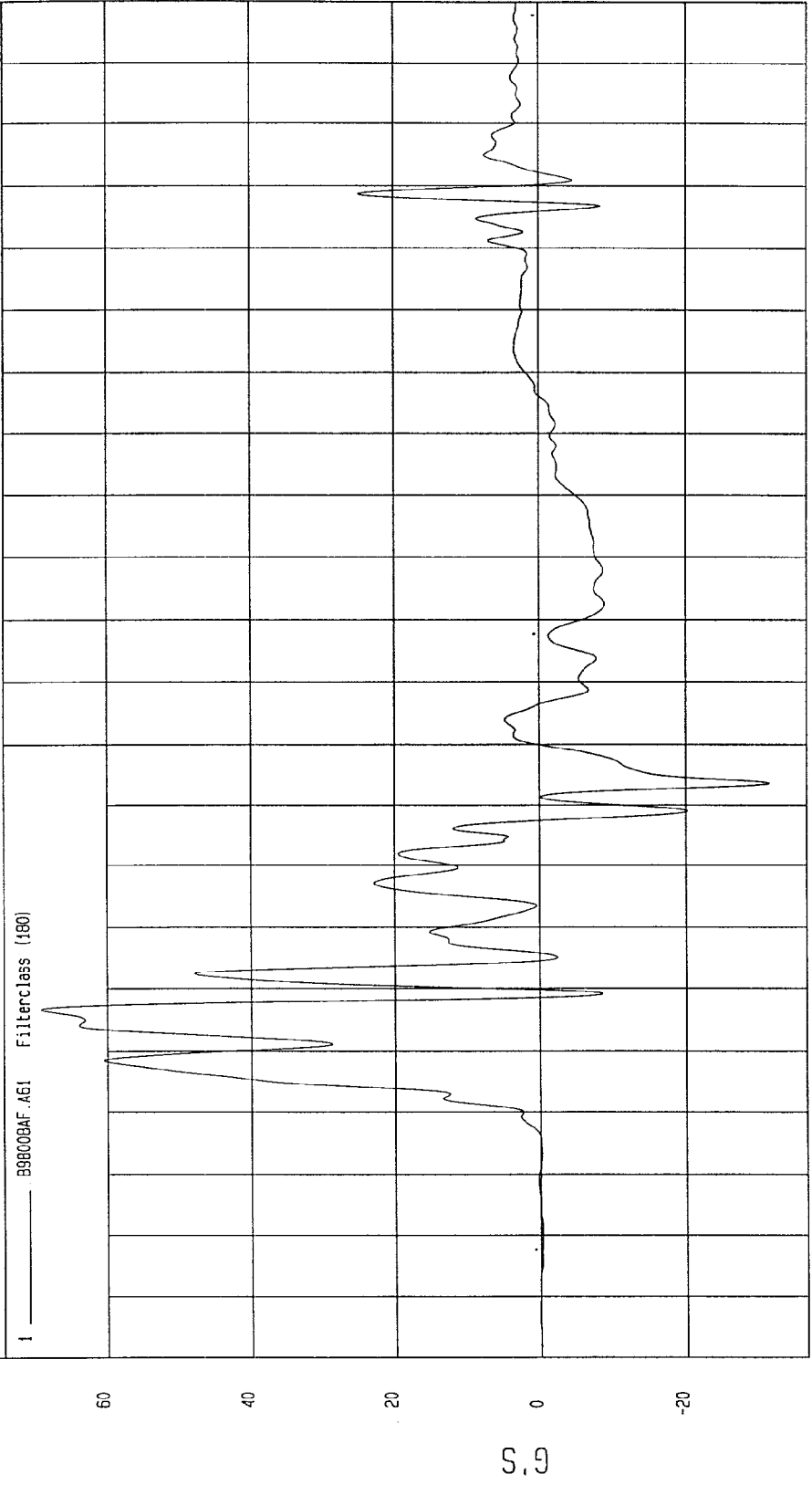


TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH

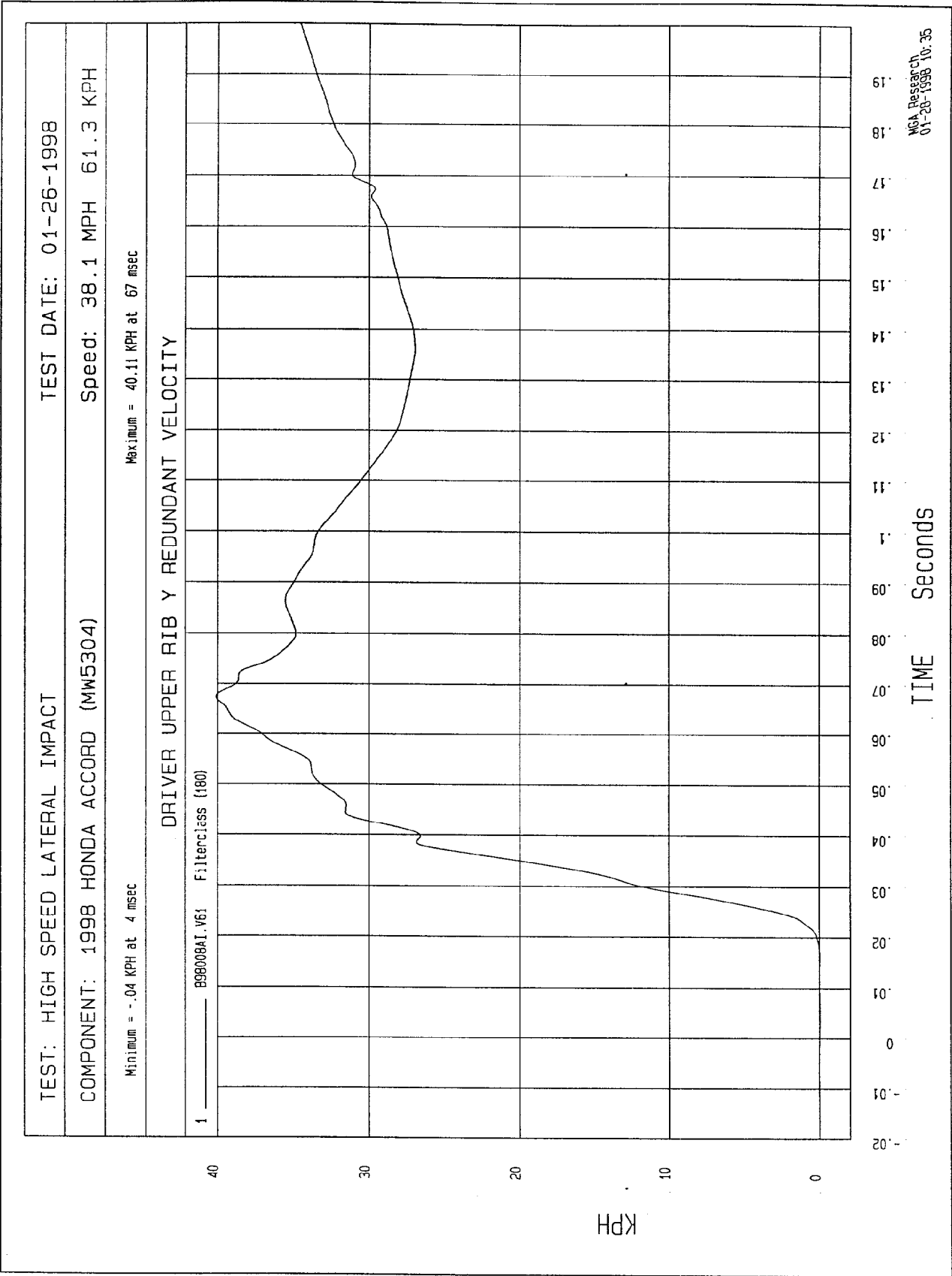
Minimum = -31.57 G'S at 74 msec Maximum = 69.16 G'S at 37 msec

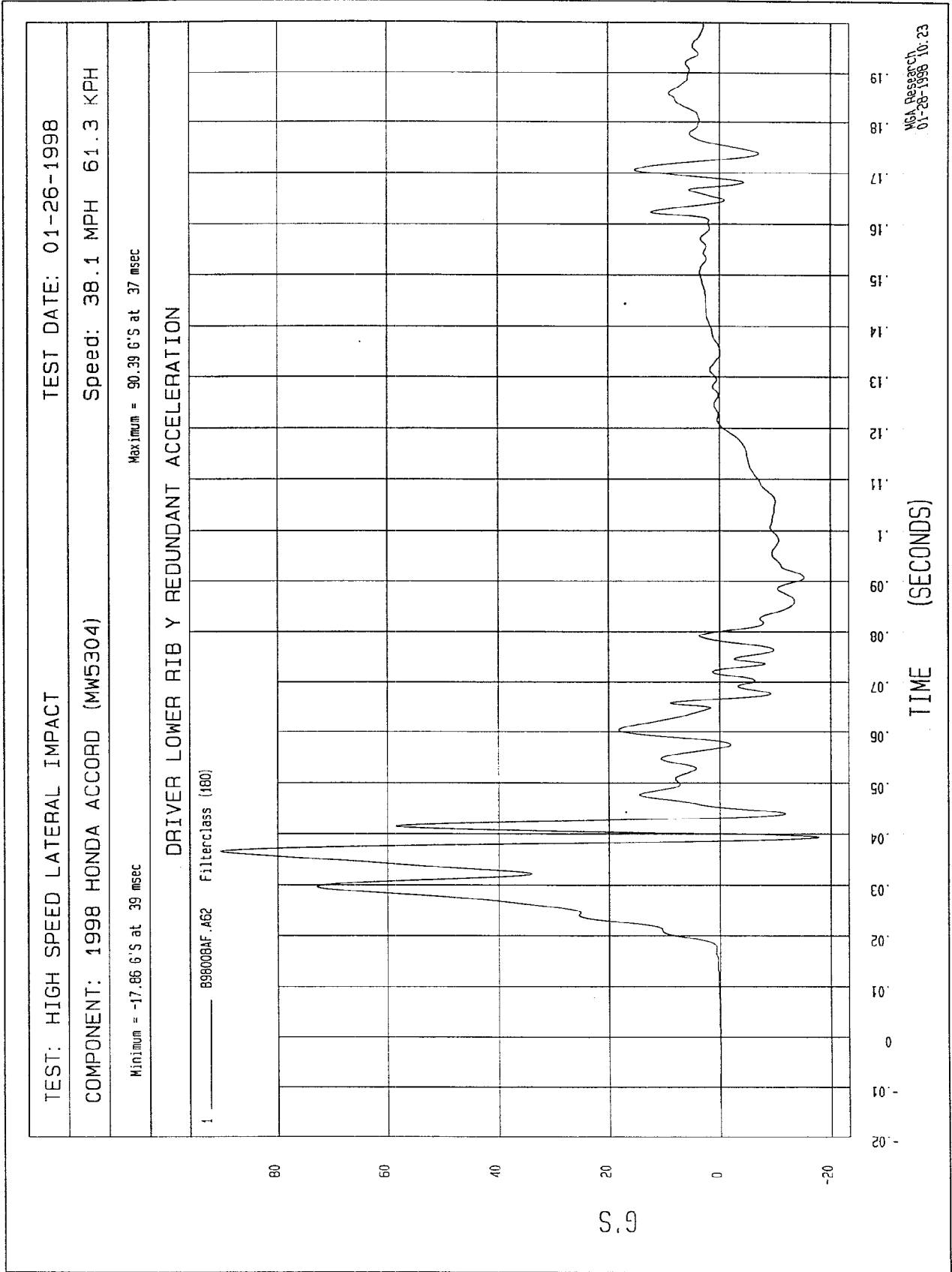
DRIVER UPPER RIB Y REDUNDANT ACCELERATION

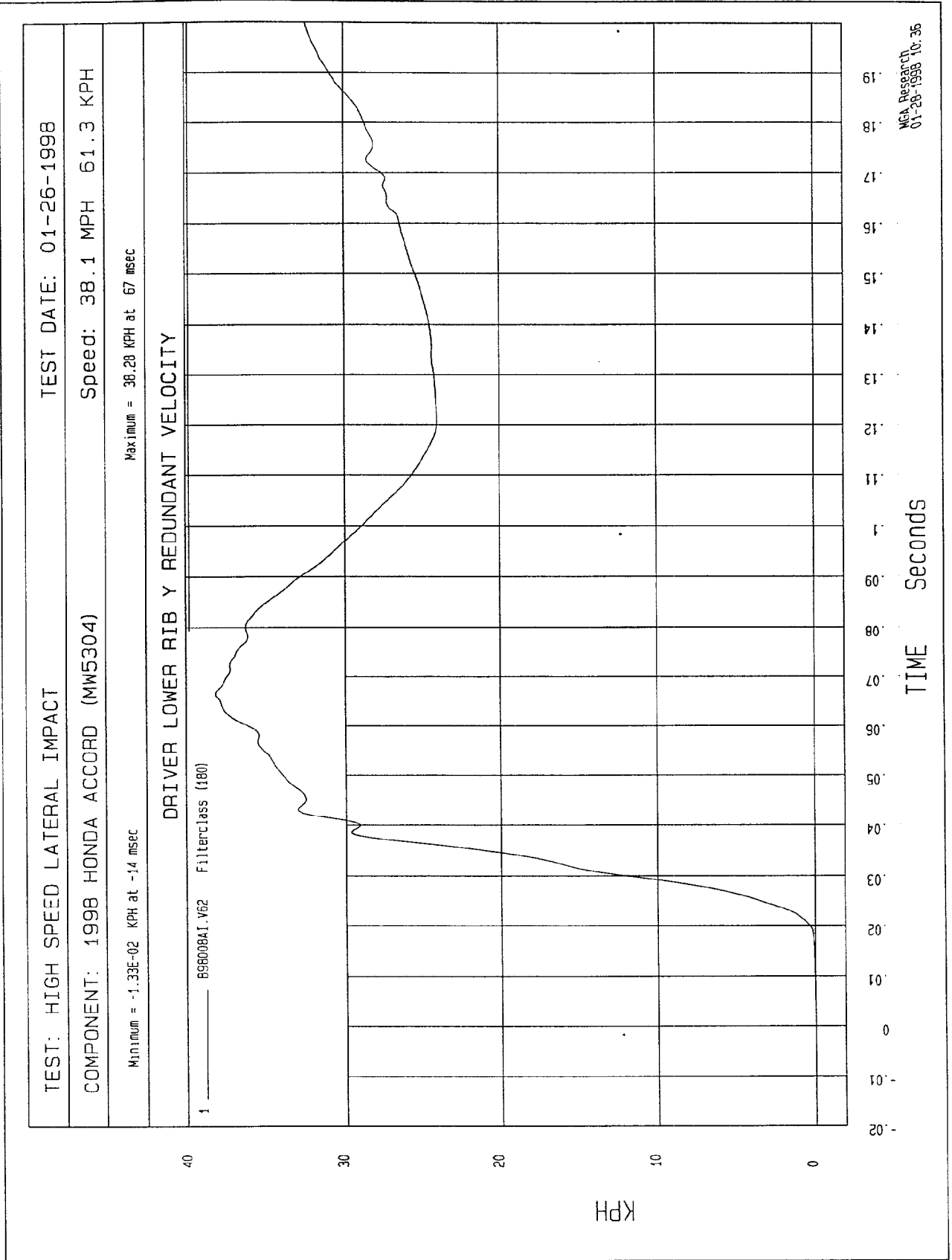


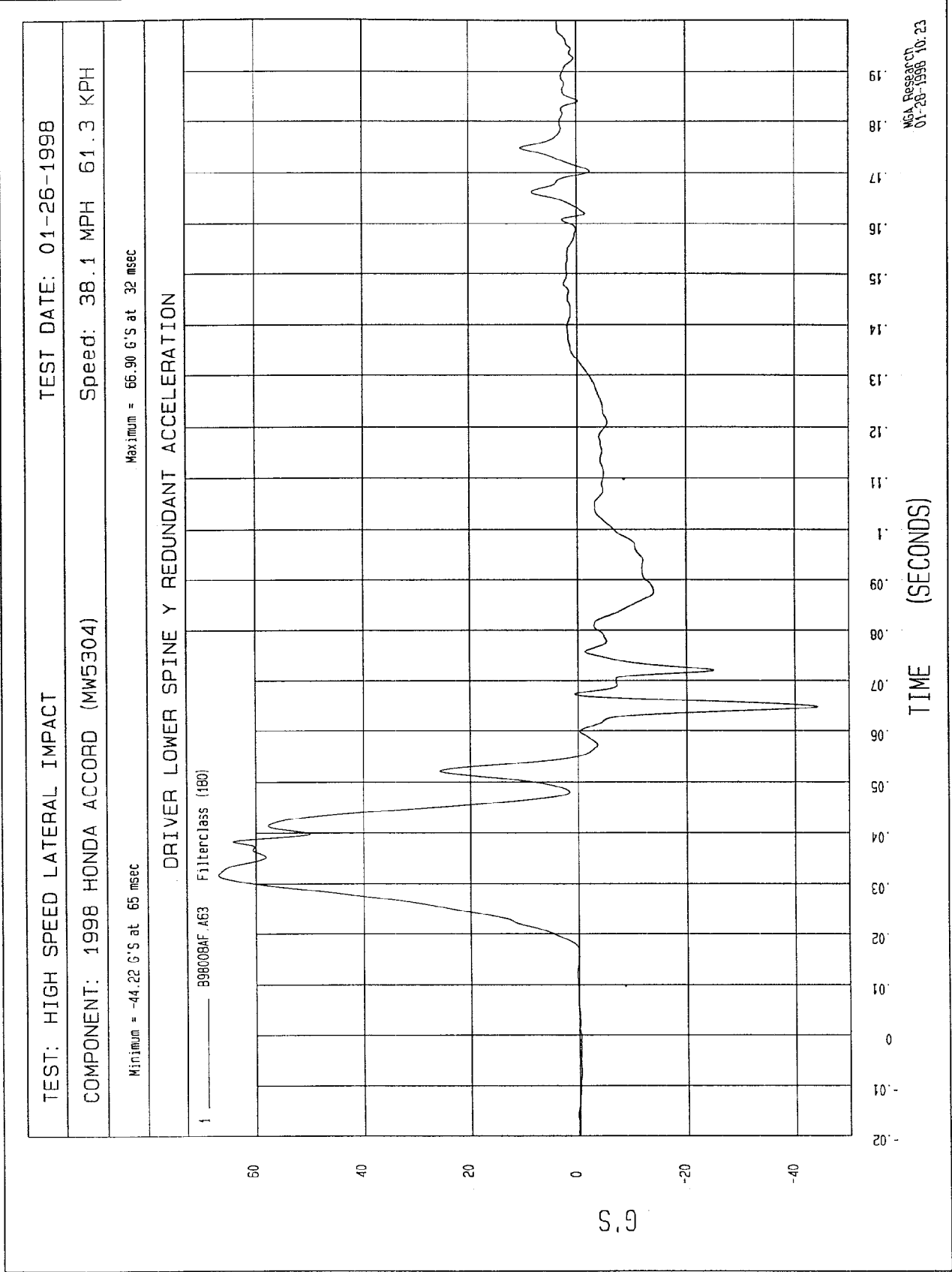
TIME (SECONDS)

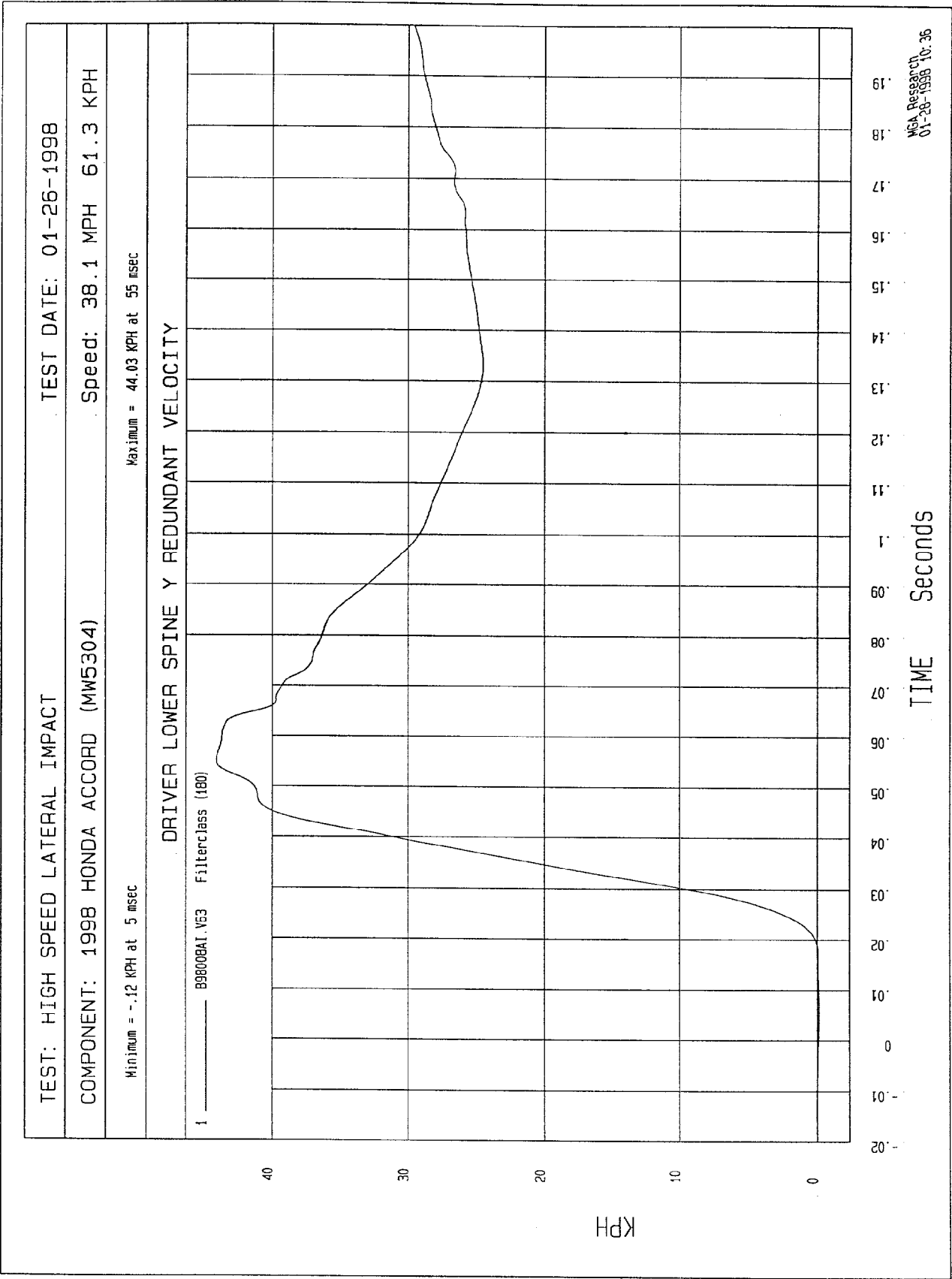
NGA Research
01-26-1998 10:23

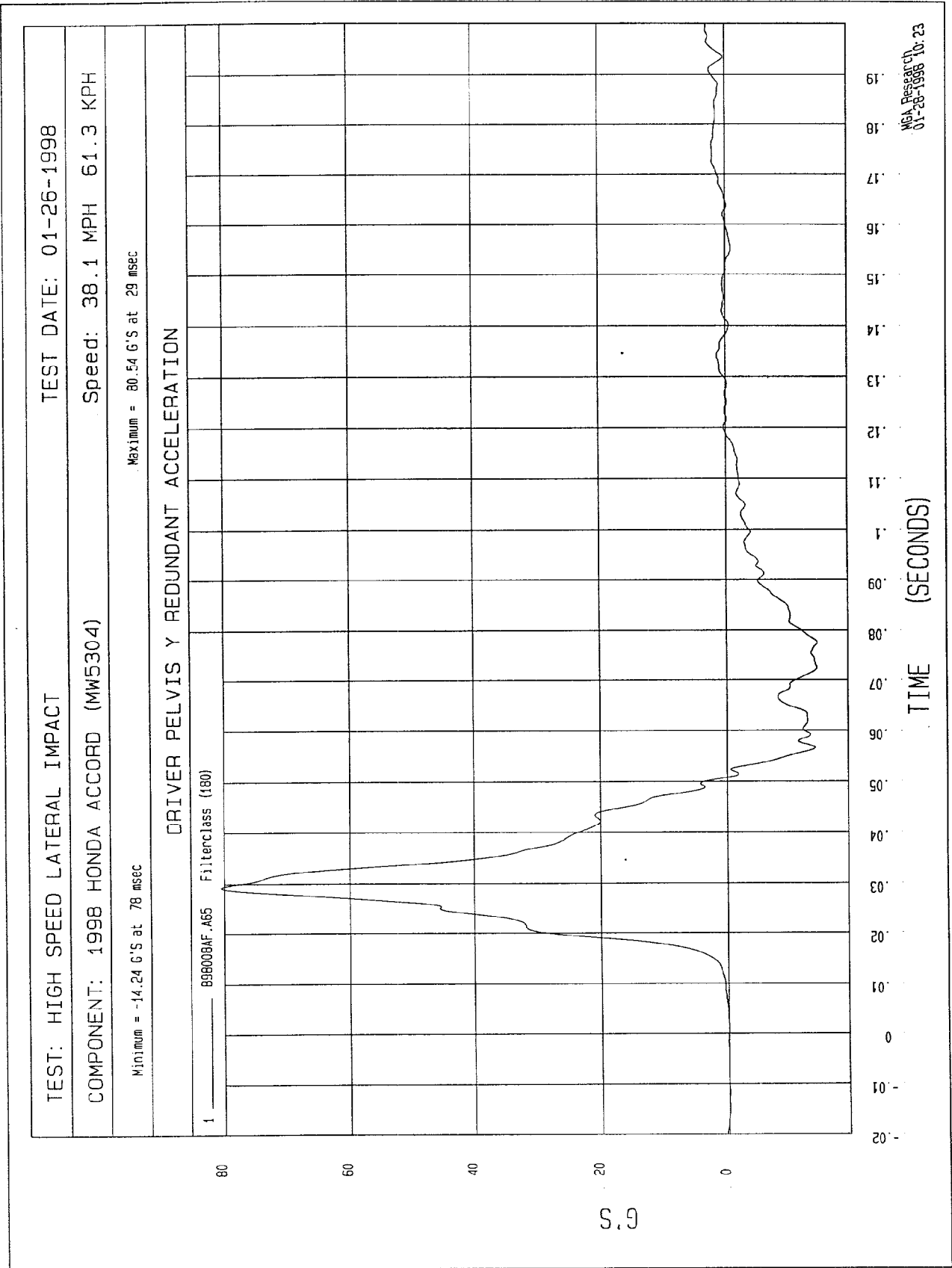










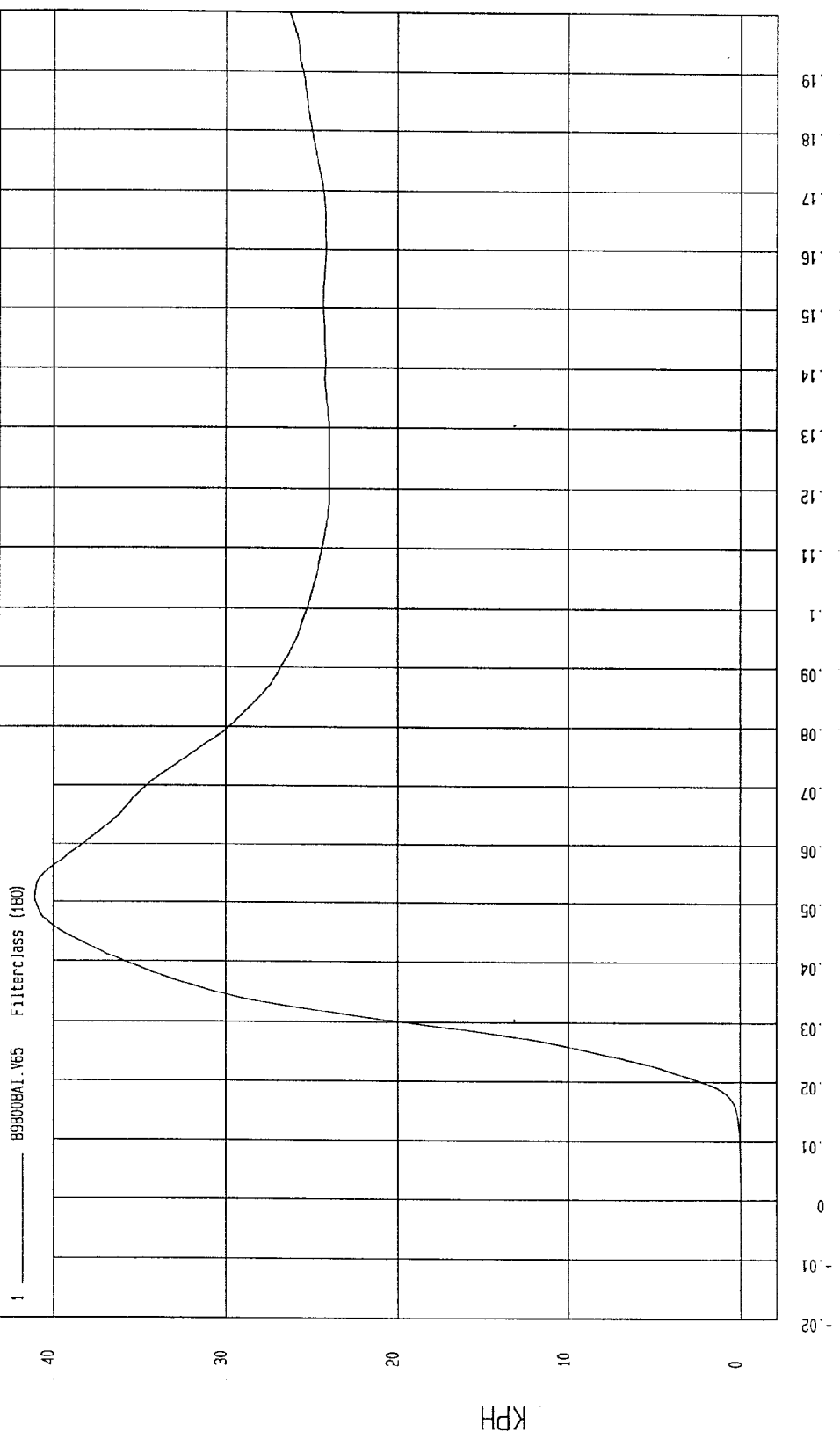


TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

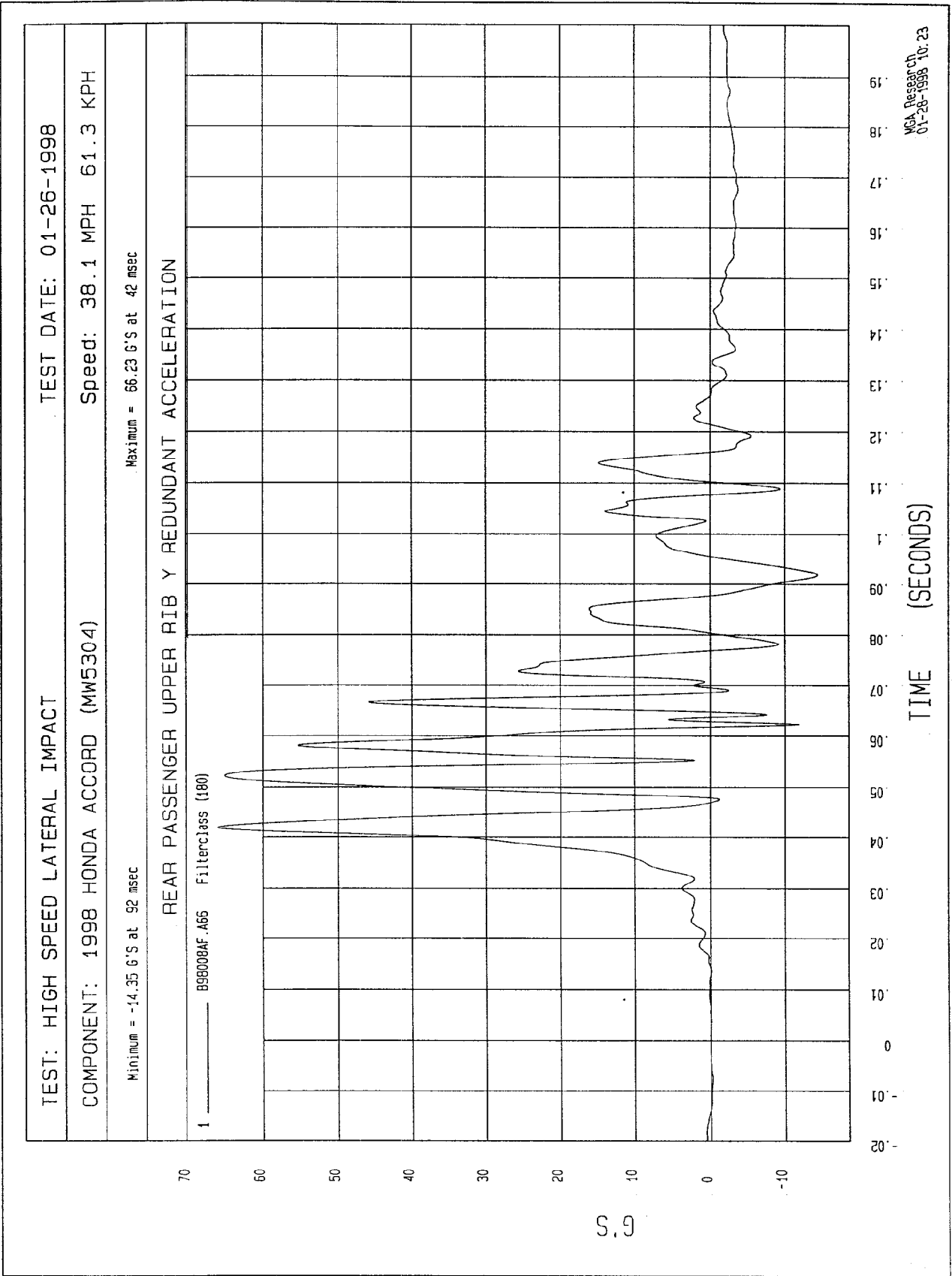
COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH

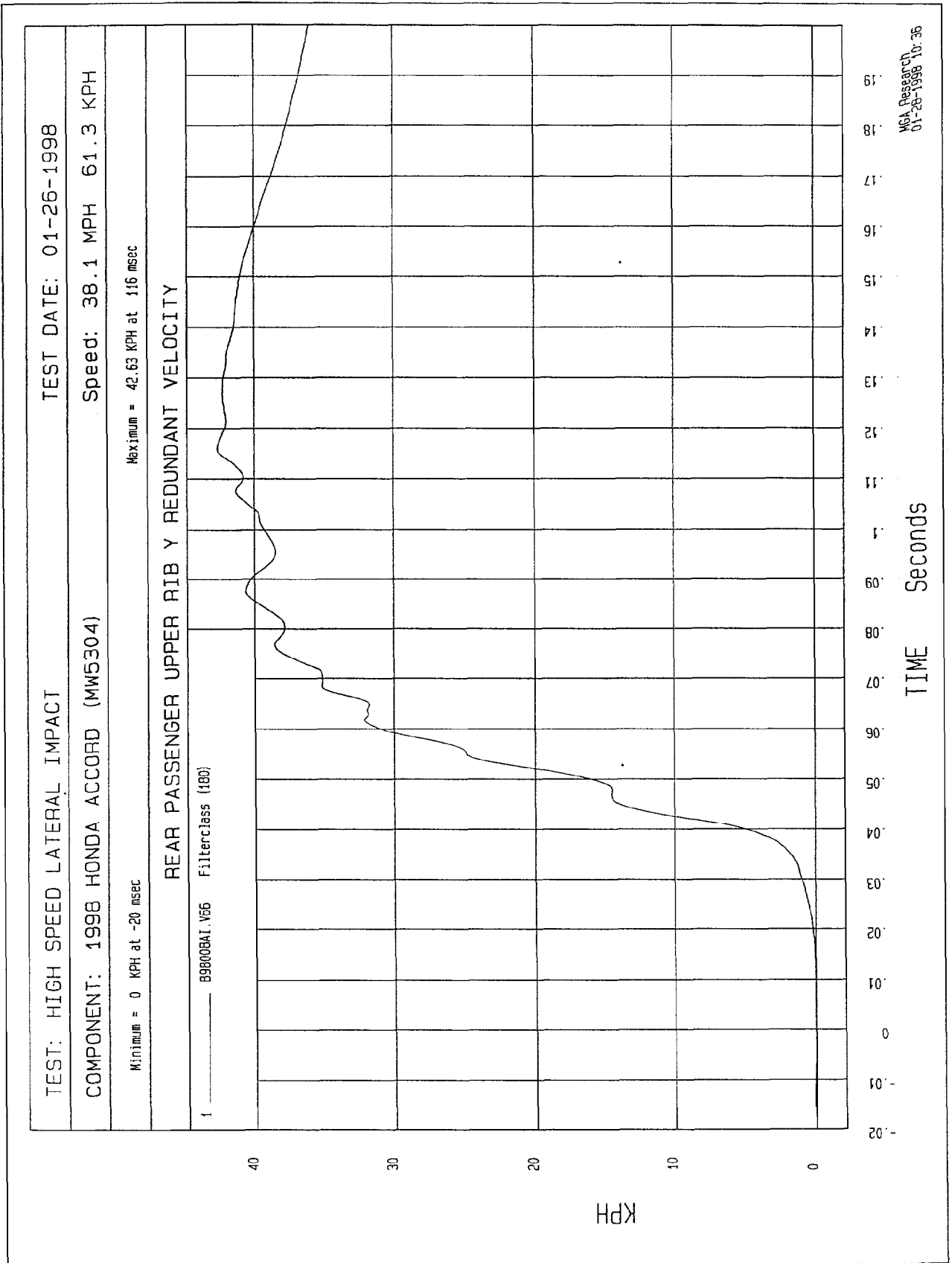
Minimum = -1.49E-02 KPH at -4 msec Maximum = 41.06 KPH at 51 msec

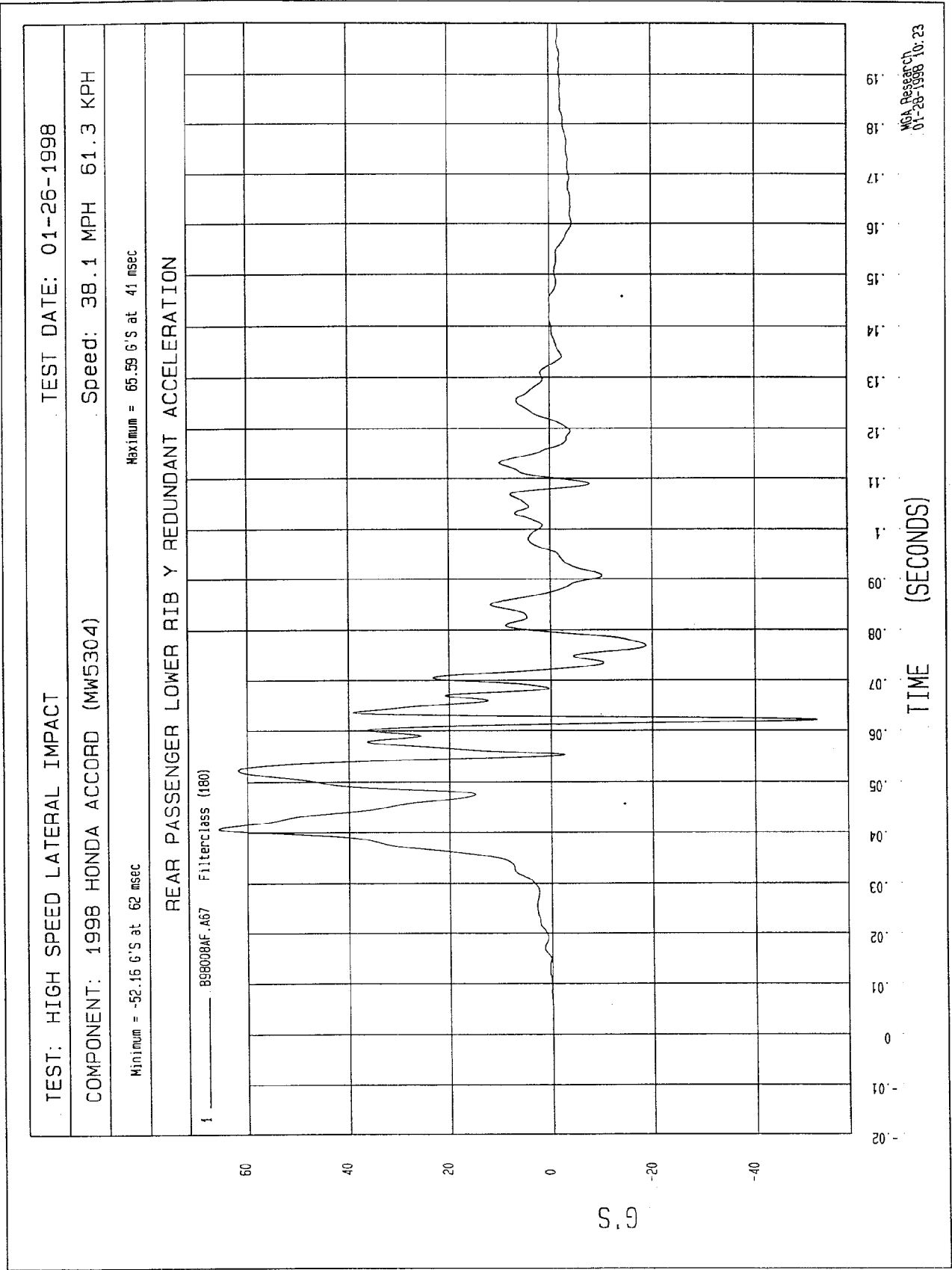
DRIVER PELVIS Y REDUNDANT VELOCITY

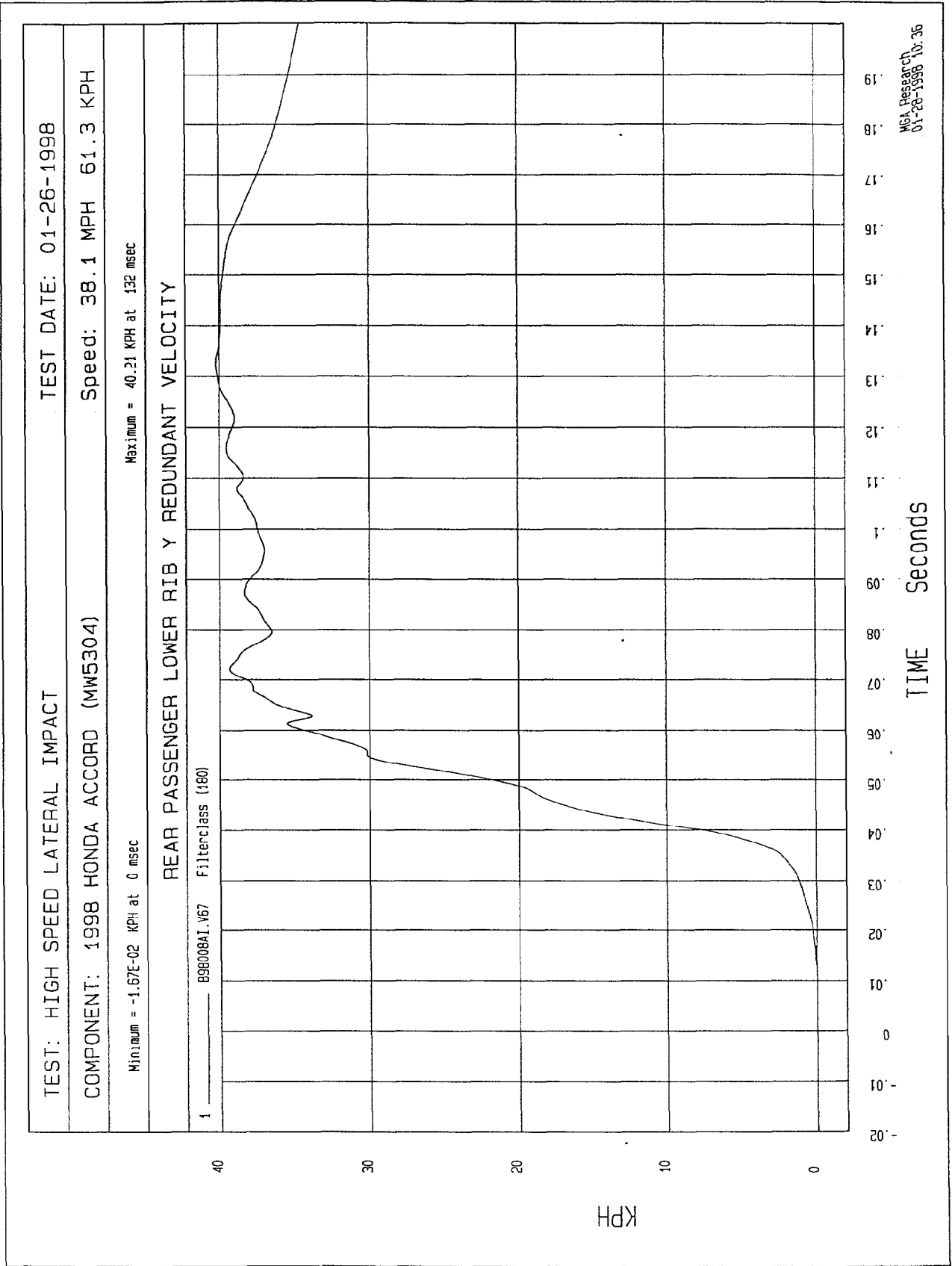


MCA Research
01-28-1998 10:36







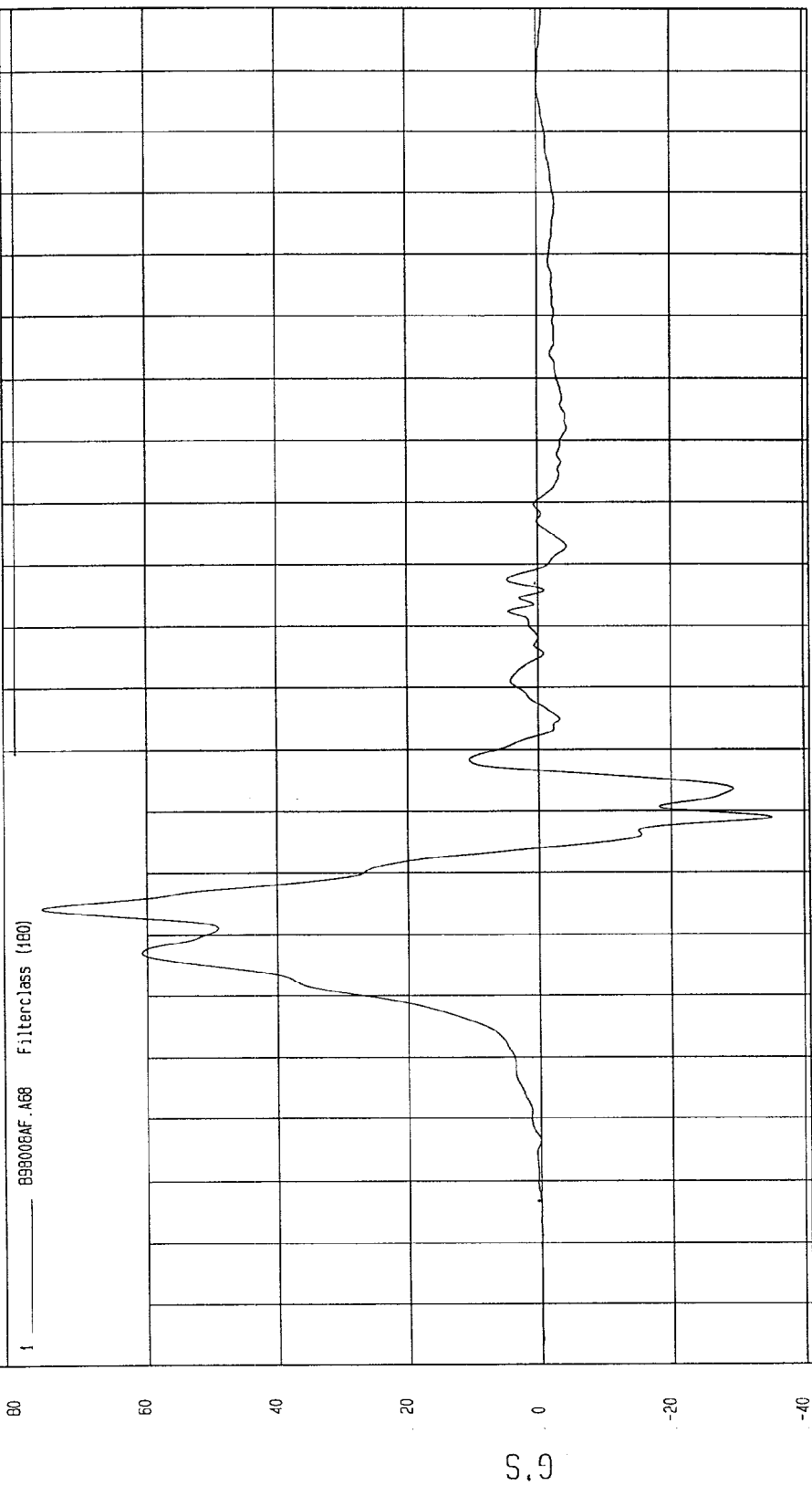


TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH

Minimum = -35.25 G'S at 69 msec Maximum = 76.16 G'S at 54 msec

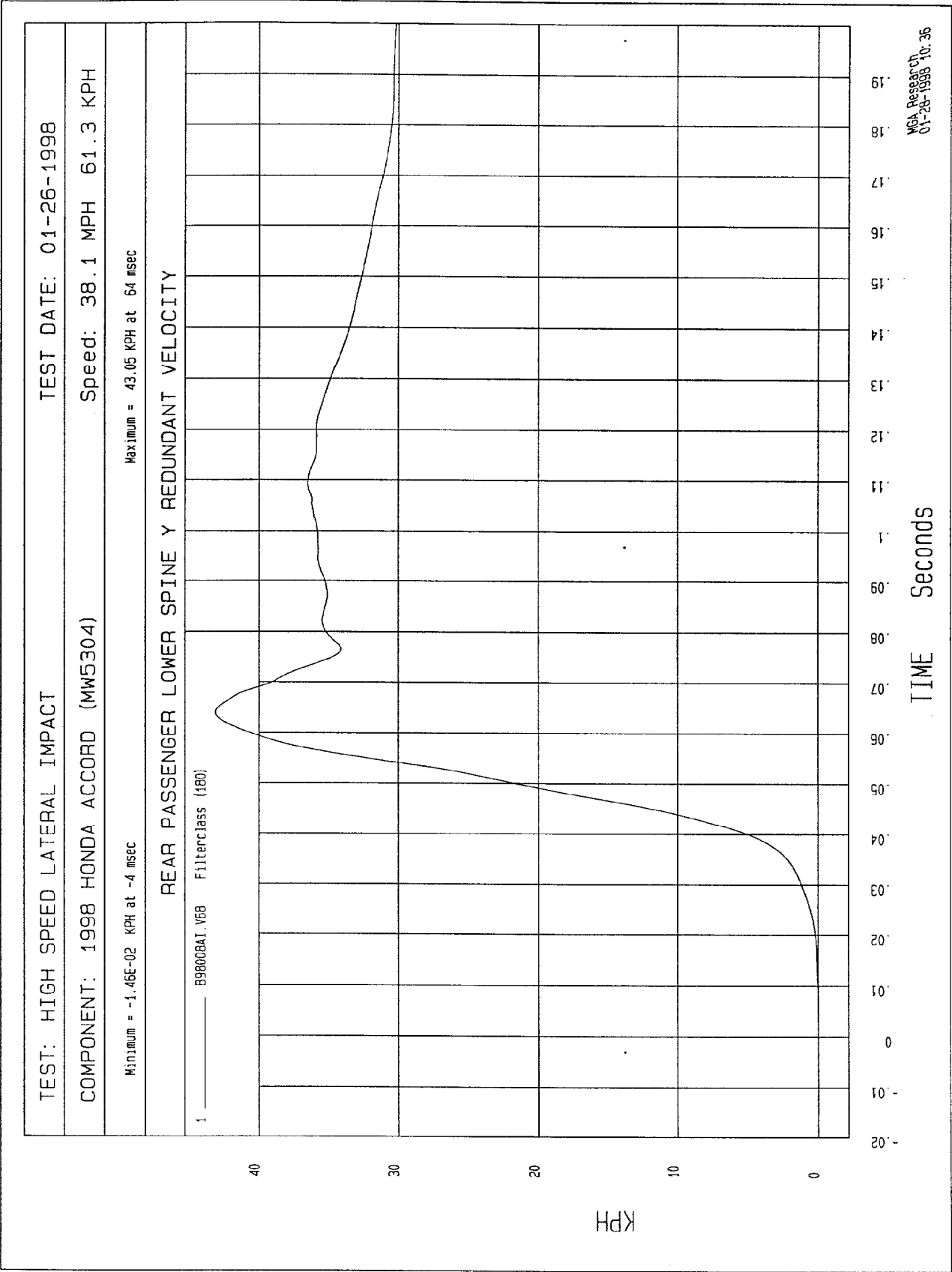
REAR PASSENGER LOWER SPINE Y REDUNDANT ACCELERATION

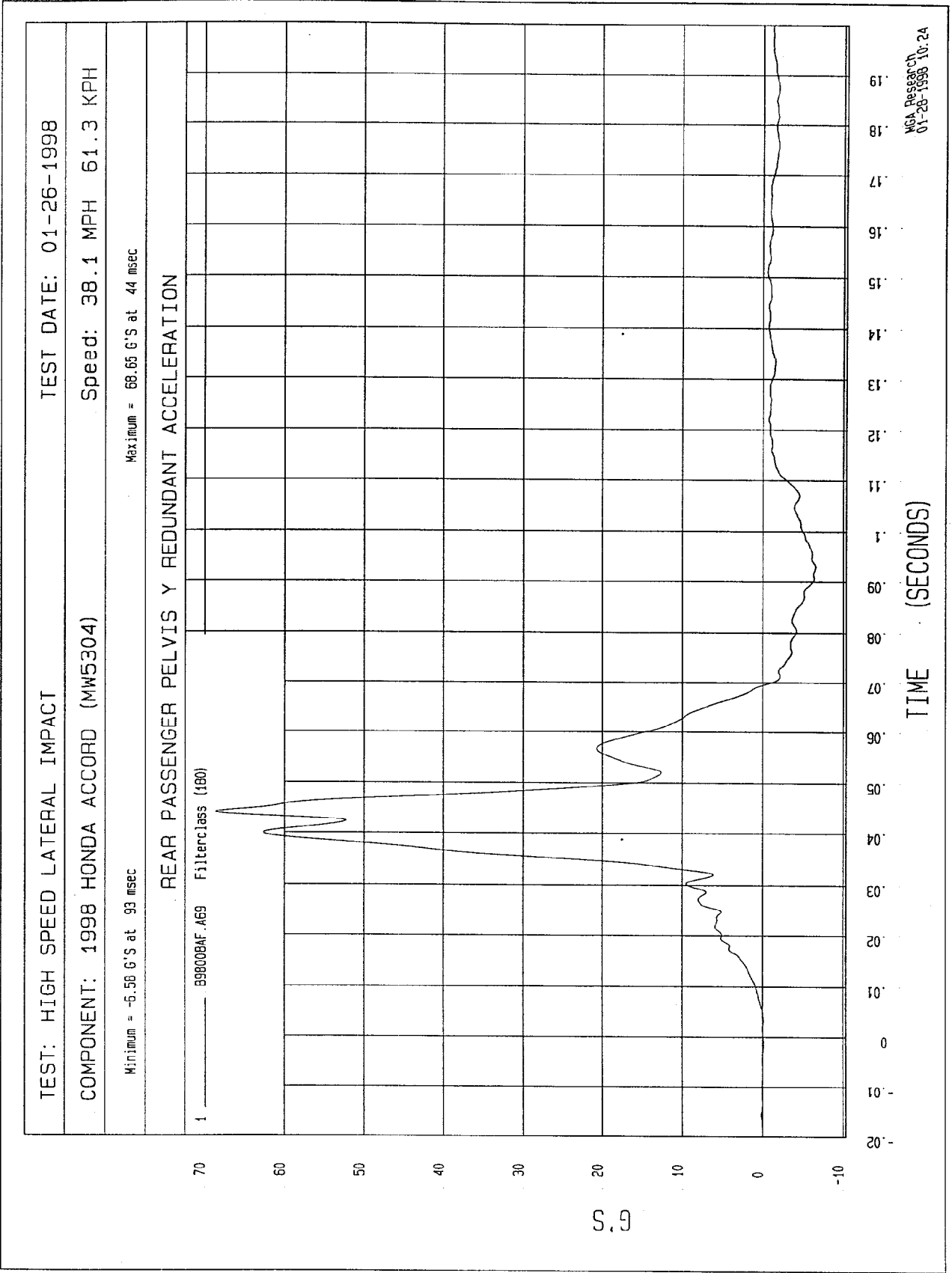


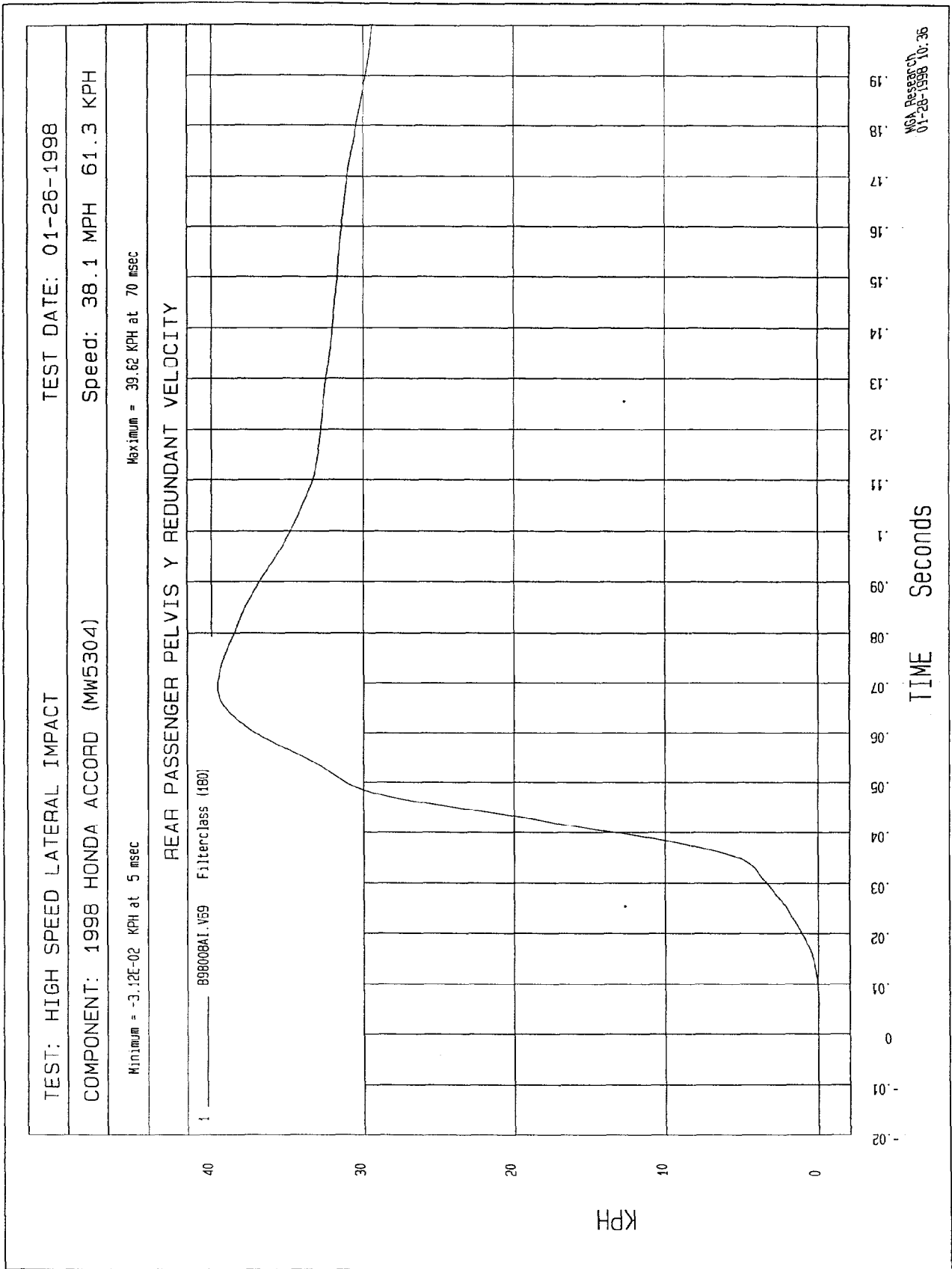
TIME (SECONDS)

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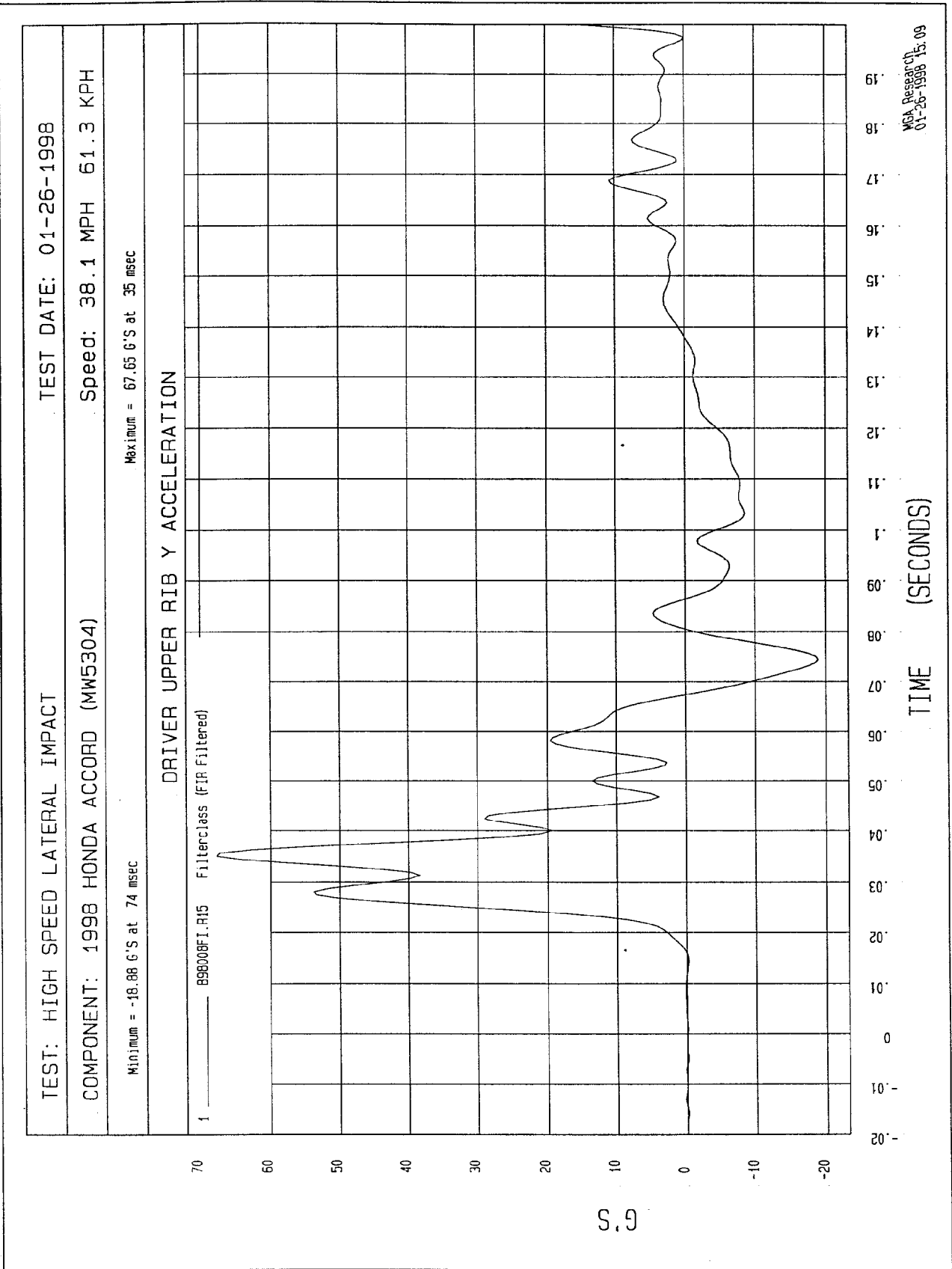
MECA Research
01-28-1998 10:24





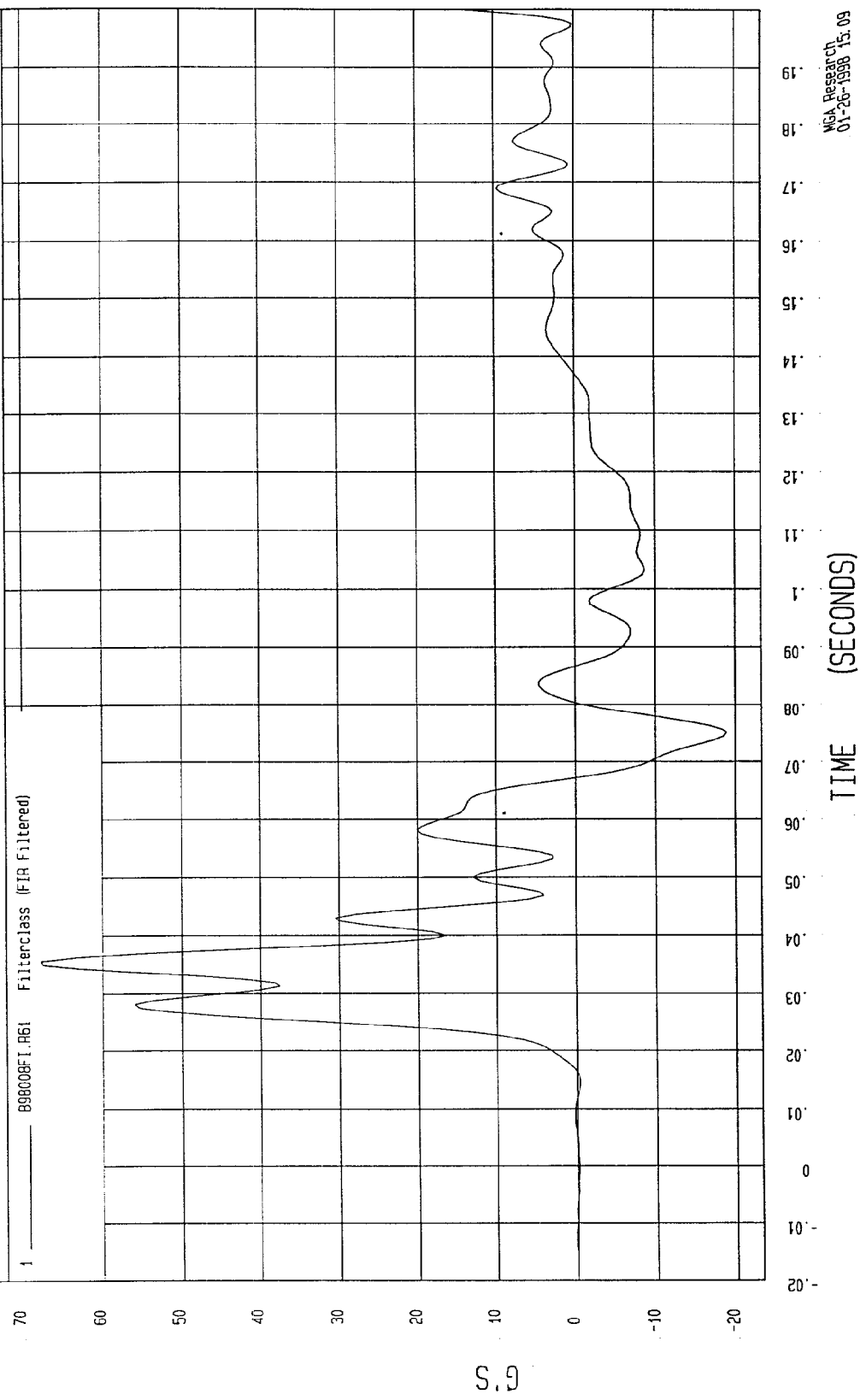


FINITE IMPULSE RESPONSE (FIR) FILTERED DATA



TEST: HIGH SPEED LATERAL IMPACT	TEST DATE: 01-26-1998
COMPONENT: 1998 HONDA ACCORD (MW5304)	Speed: 38.1 MPH 61.3 KPH
Minimum = -18.86 G'S at 75 msec	
Maximum = 67.76 G'S at 36 msec	

DRIVER UPPER RIB Y REDUNDANT ACCELERATION



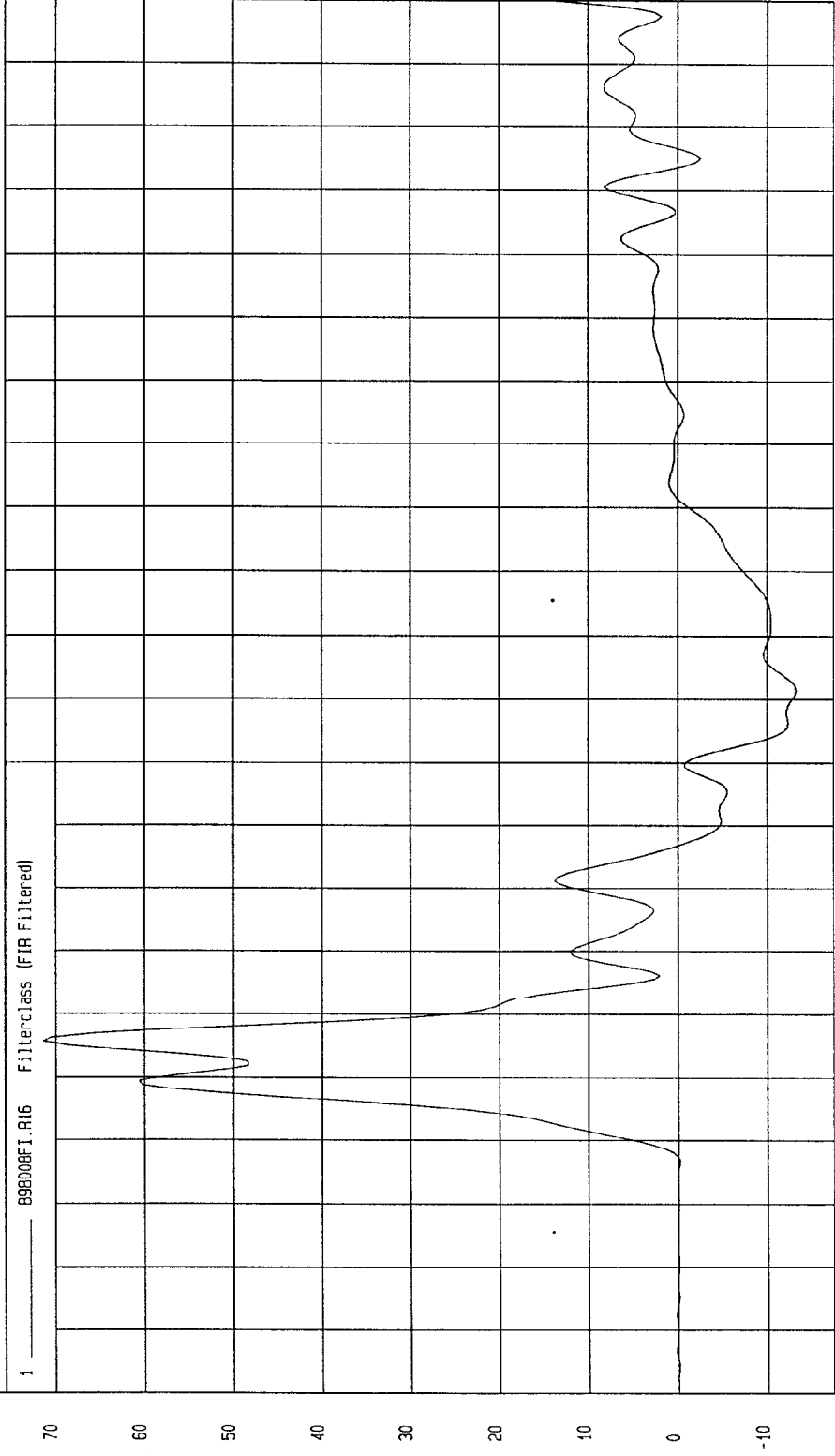
NGA Research
01-26-1998 15.09

TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH

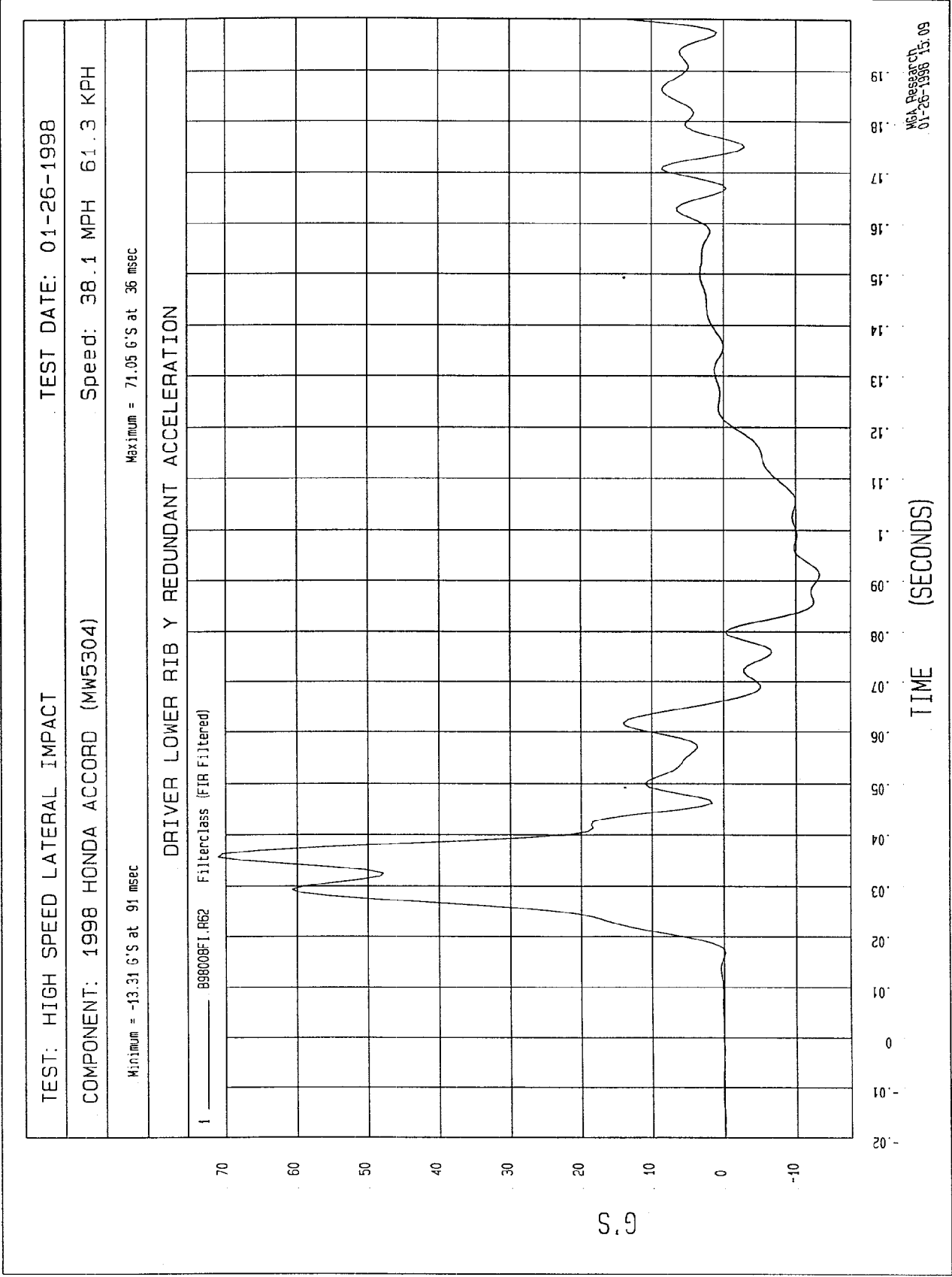
Minimum = -13.18 G'S at 91 msec Maximum = 71.35 G'S at 36 msec

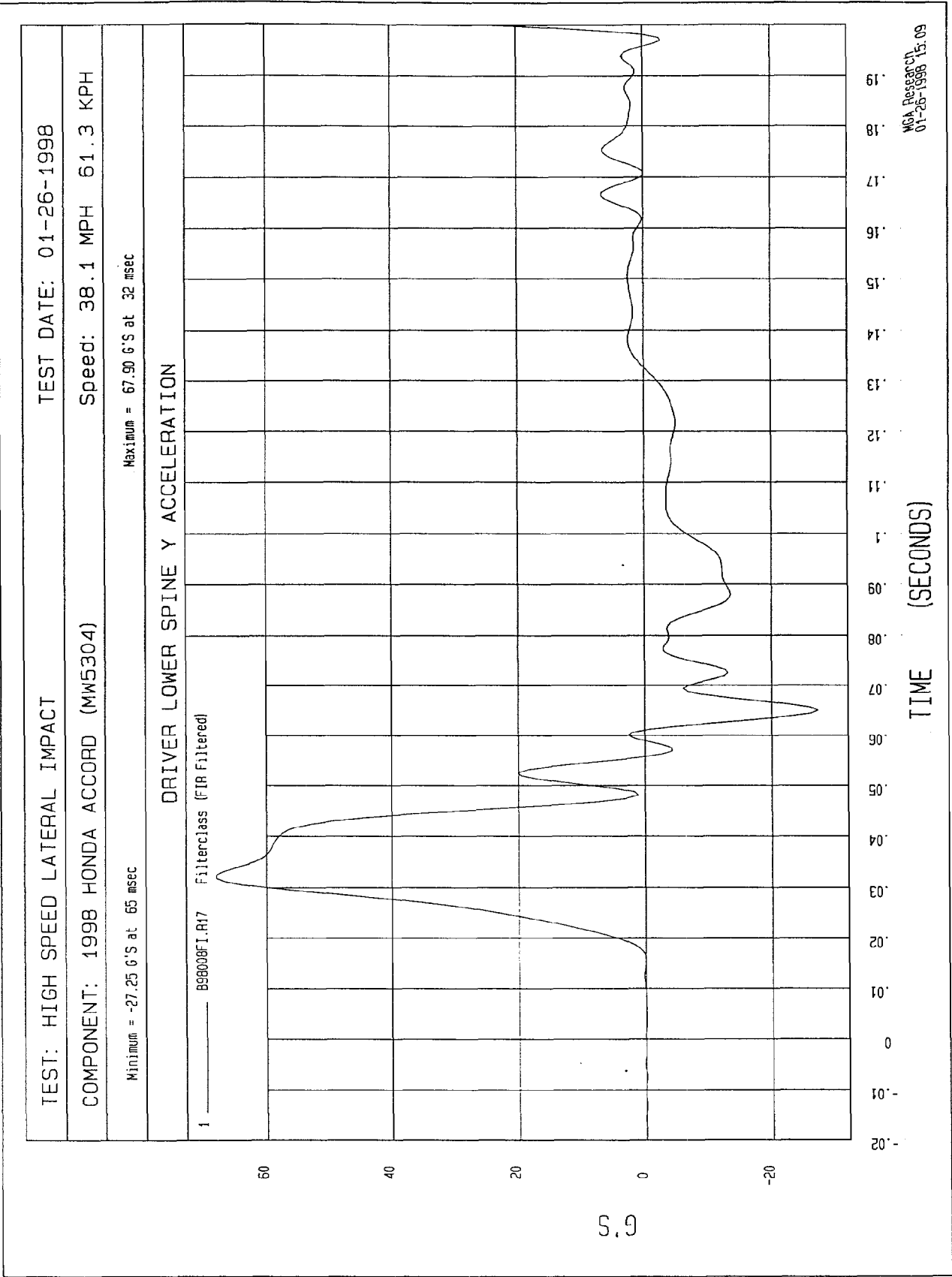
DRIVER LOWER RIB Y ACCELERATION

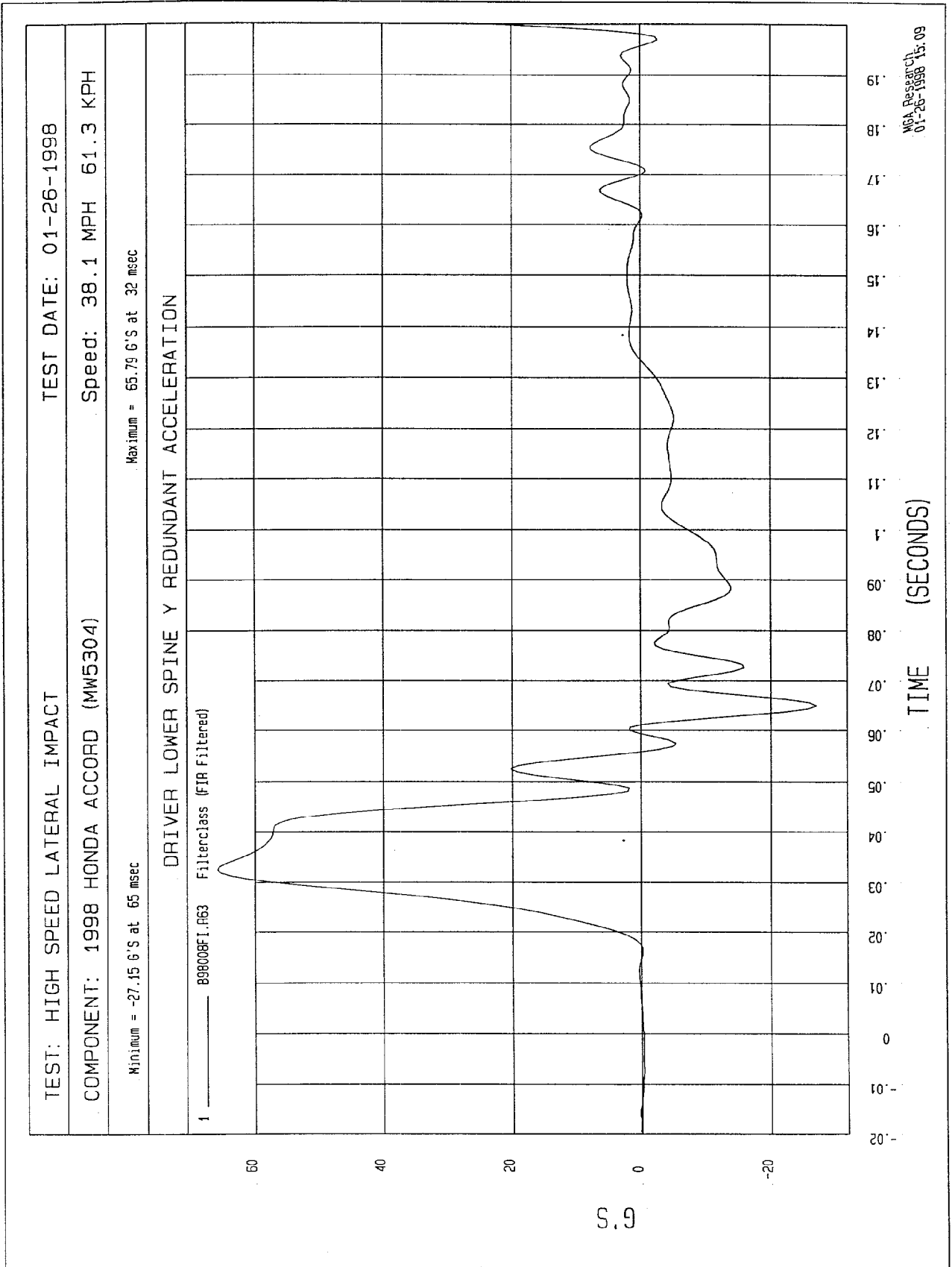


TIME (SECONDS)

MSA Research
01-26-1998 15:09





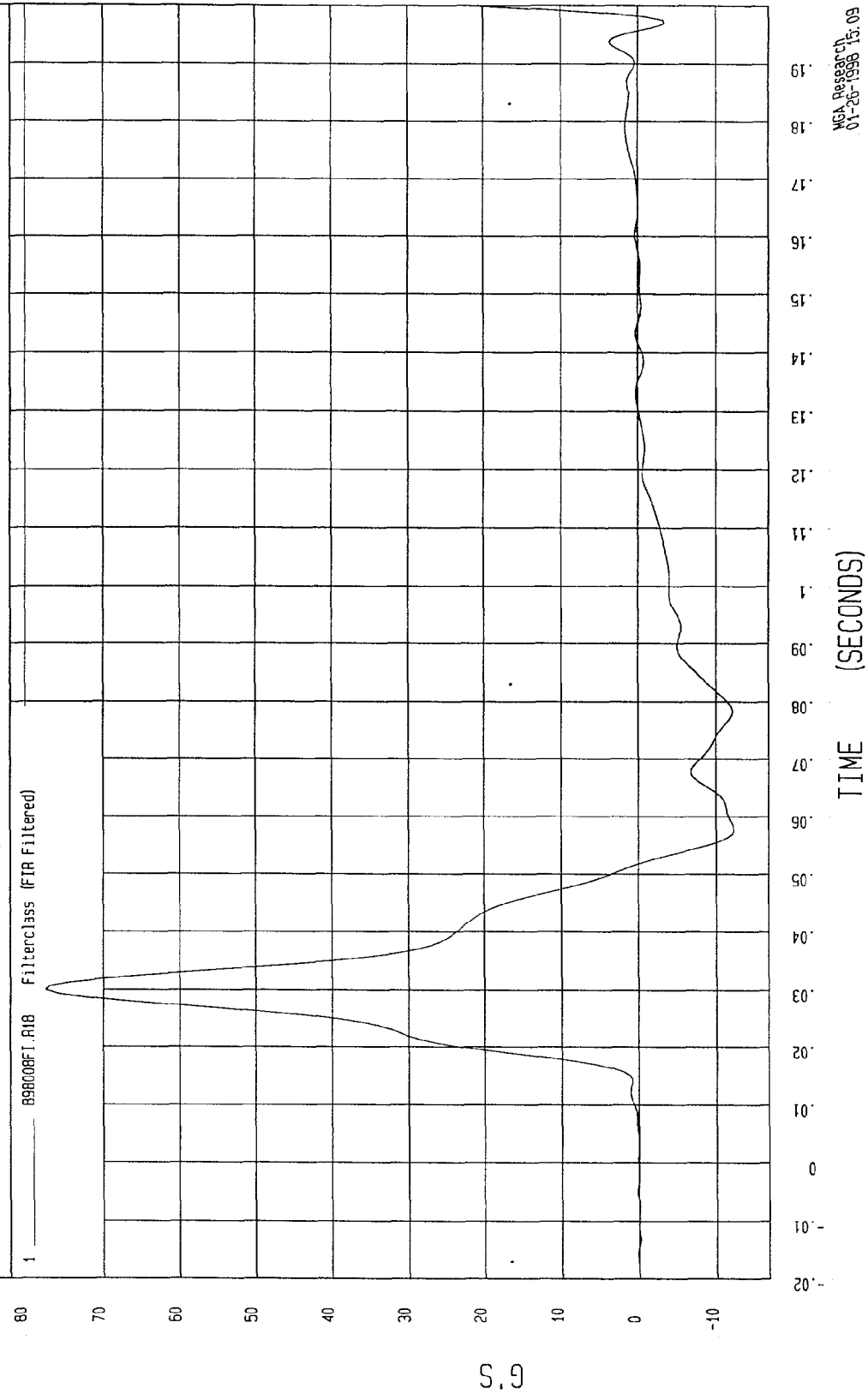


TEST: HIGH SPEED LATERAL IMPACT TEST DATE: 01-26-1998

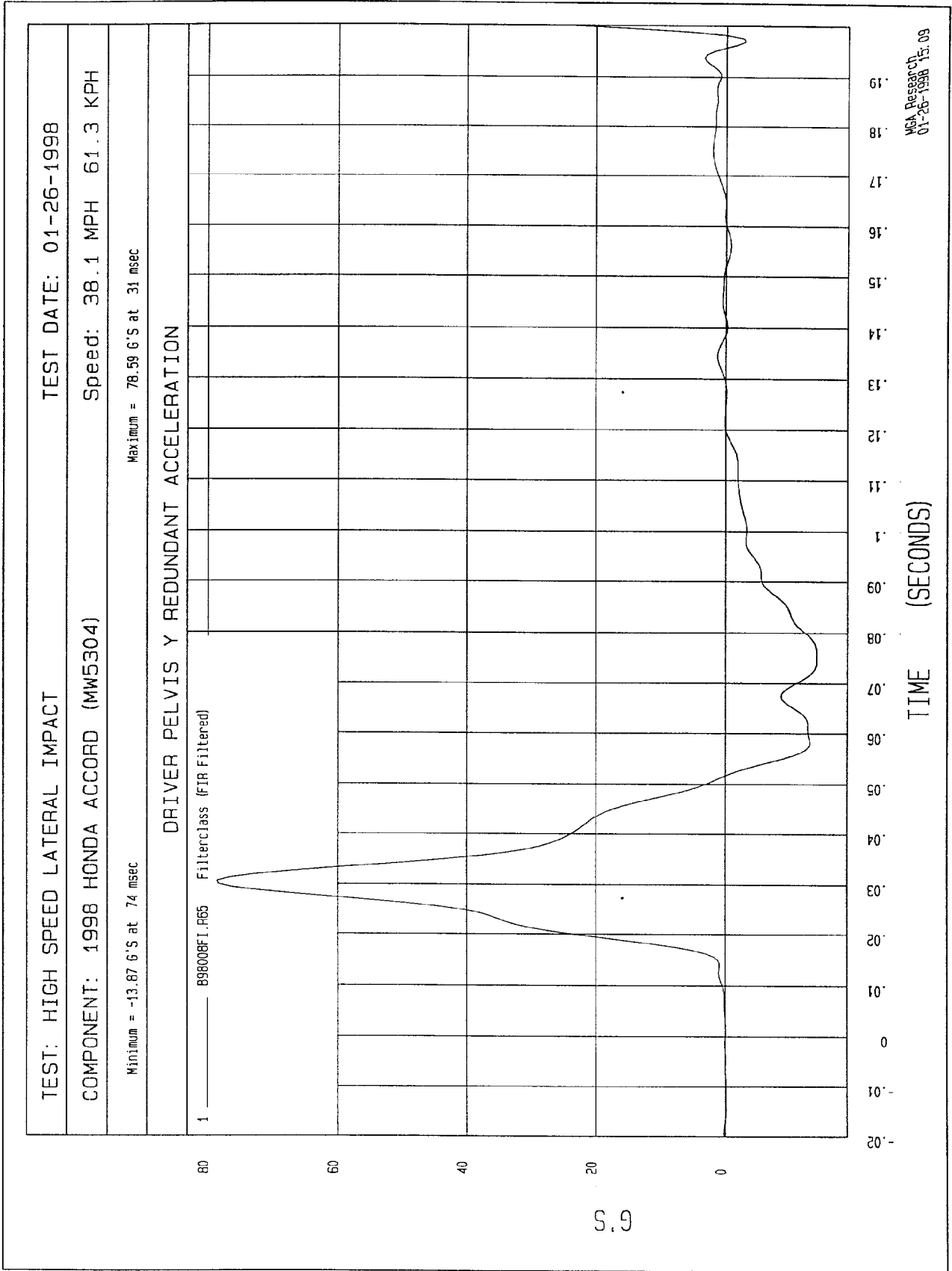
COMPONENT: 1998 HONDA ACCORD (MW5304) Speed: 38.1 MPH 61.3 KPH

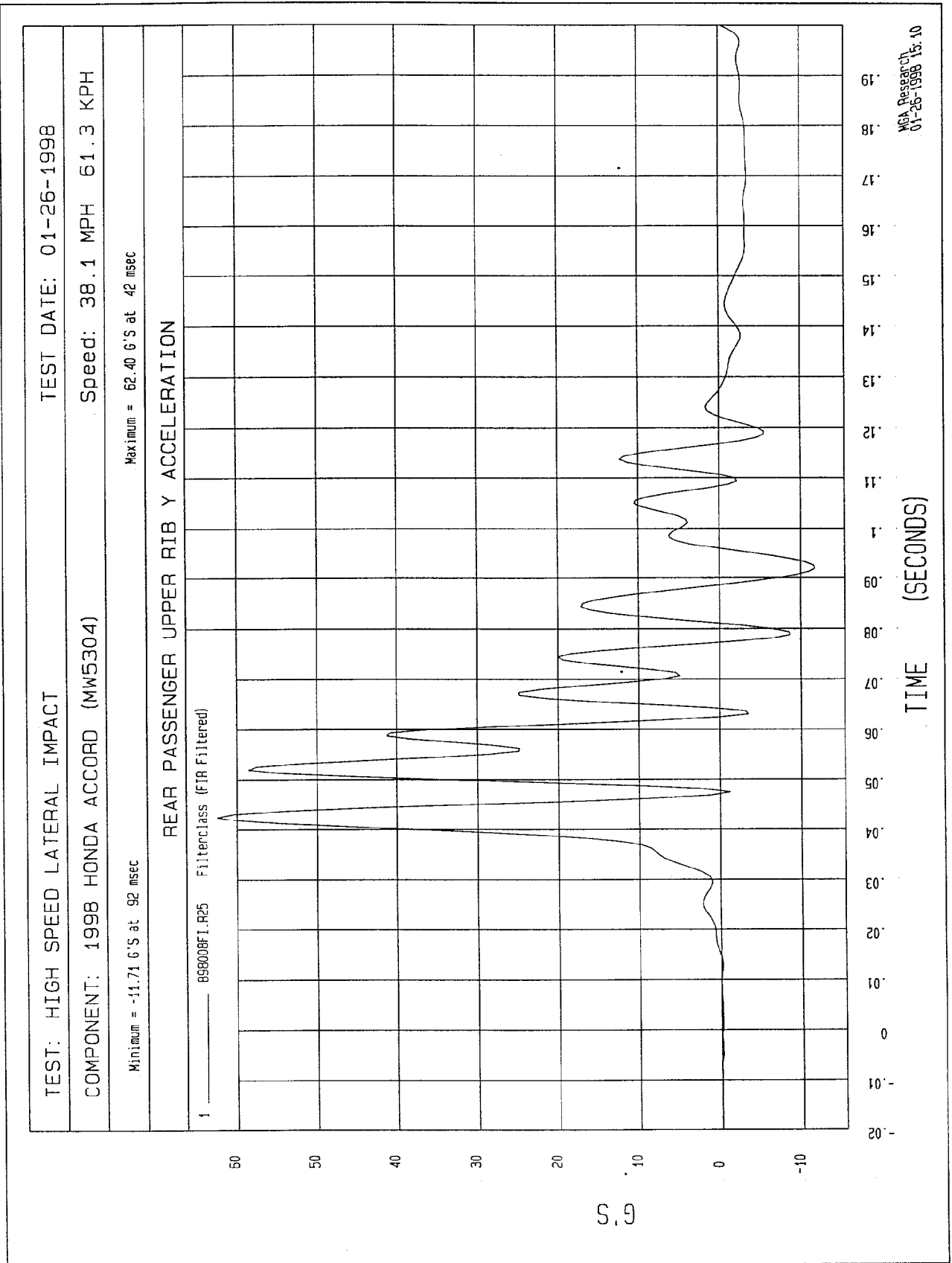
Minimum = -12.26 G'S at 58 msec Maximum = 77.44 G'S at 30 msec

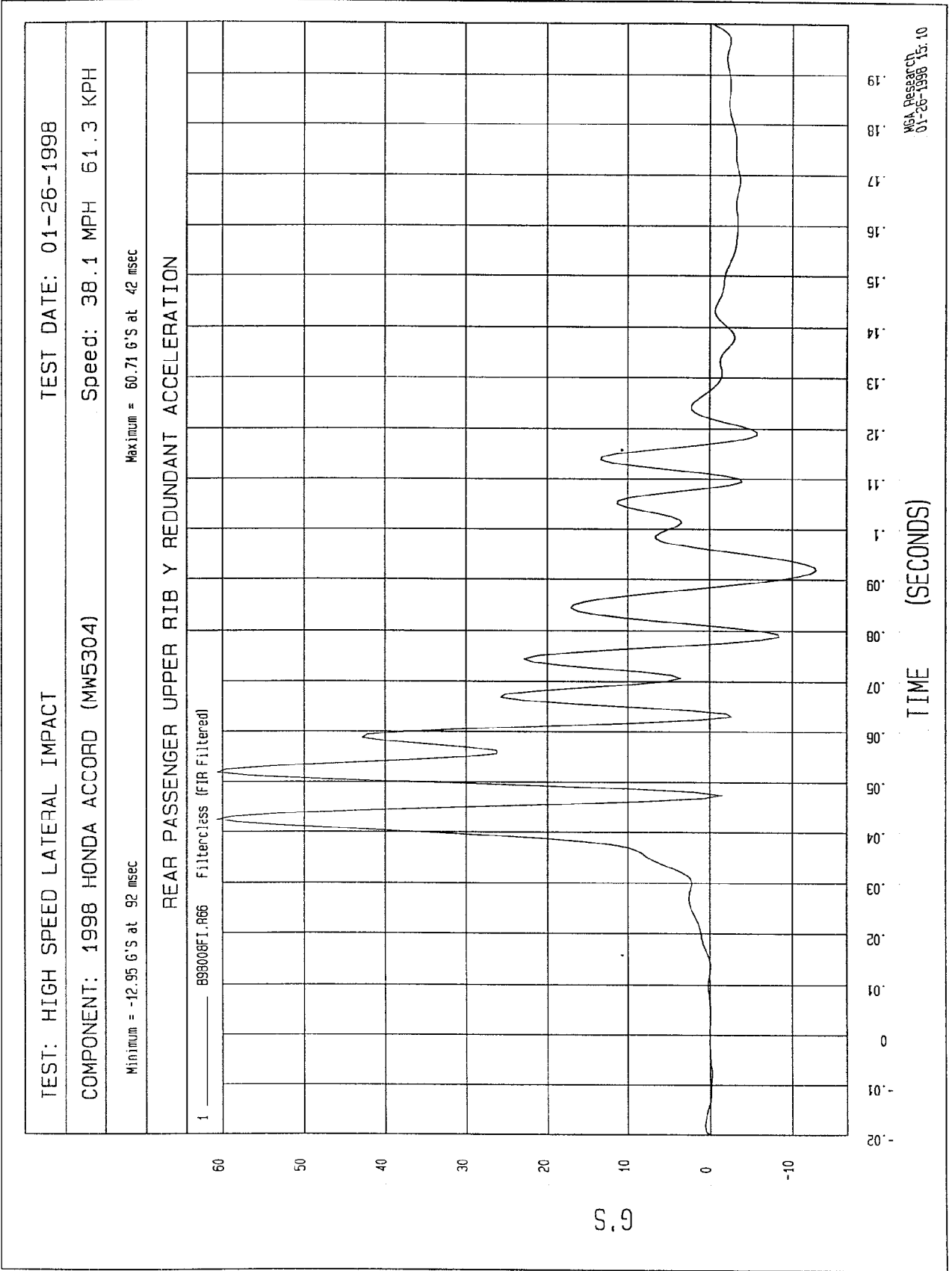
DRIVER PELVIS Y ACCELERATION

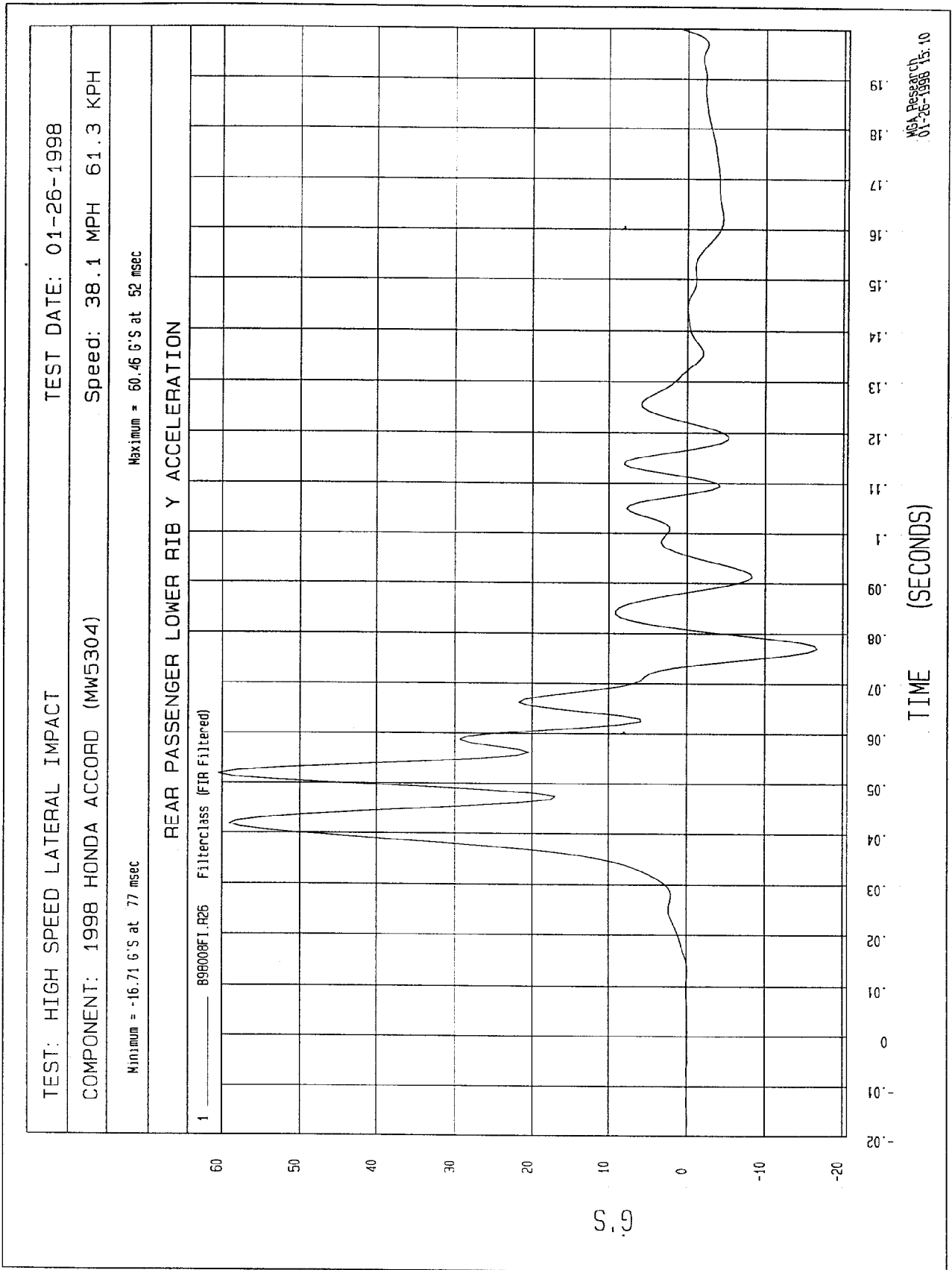


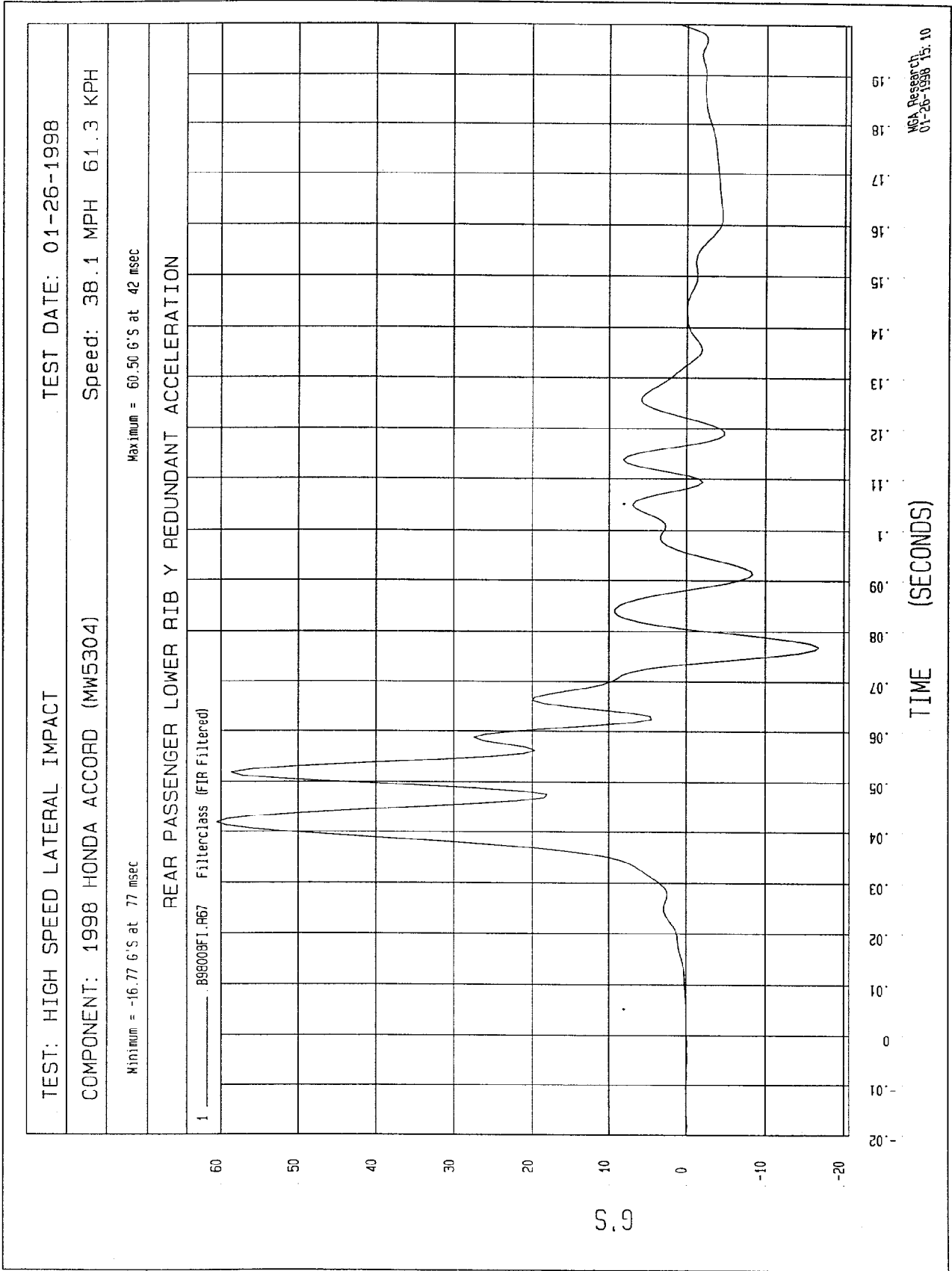
NCA Research
01-26-1998 13:09

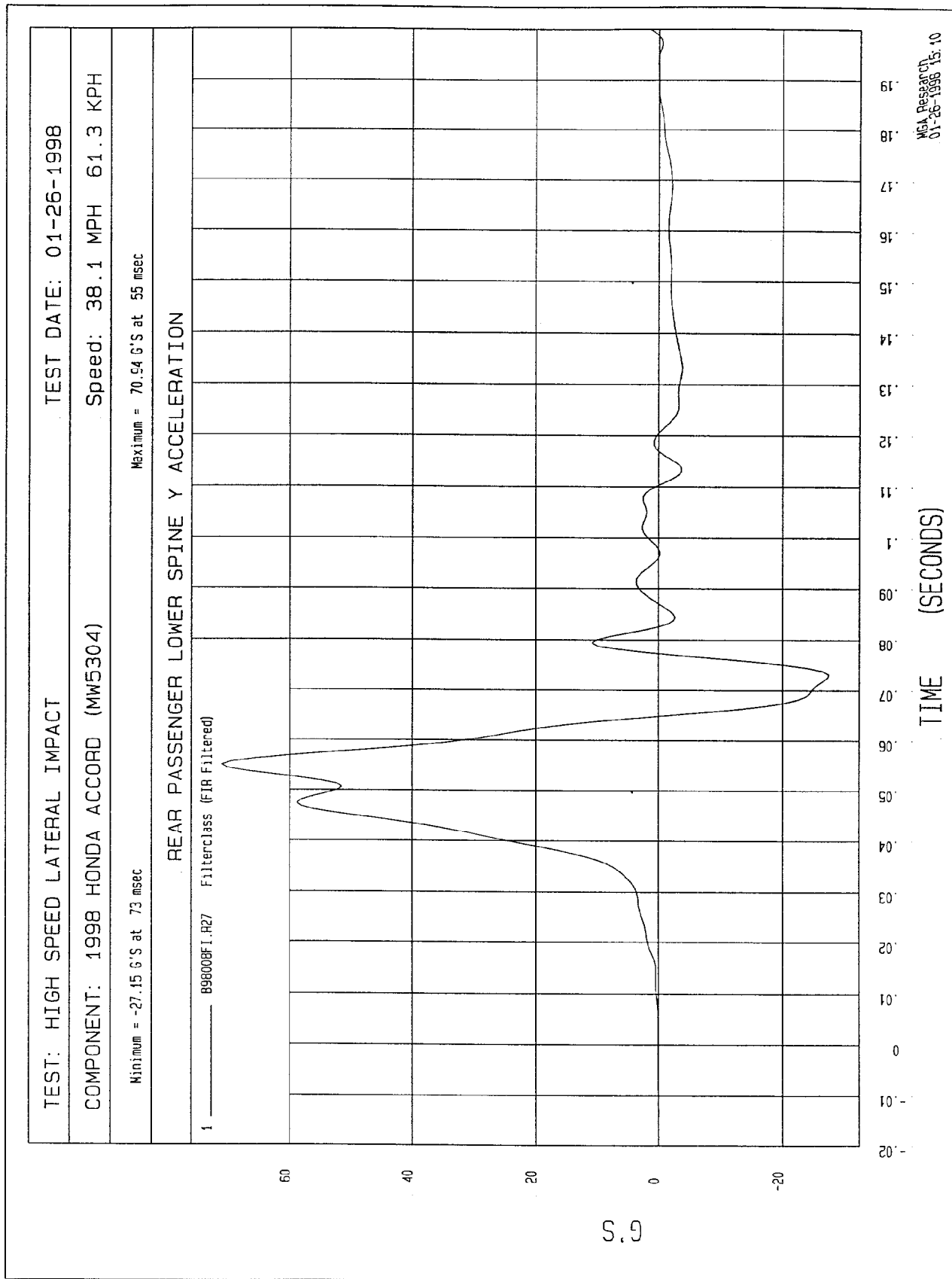


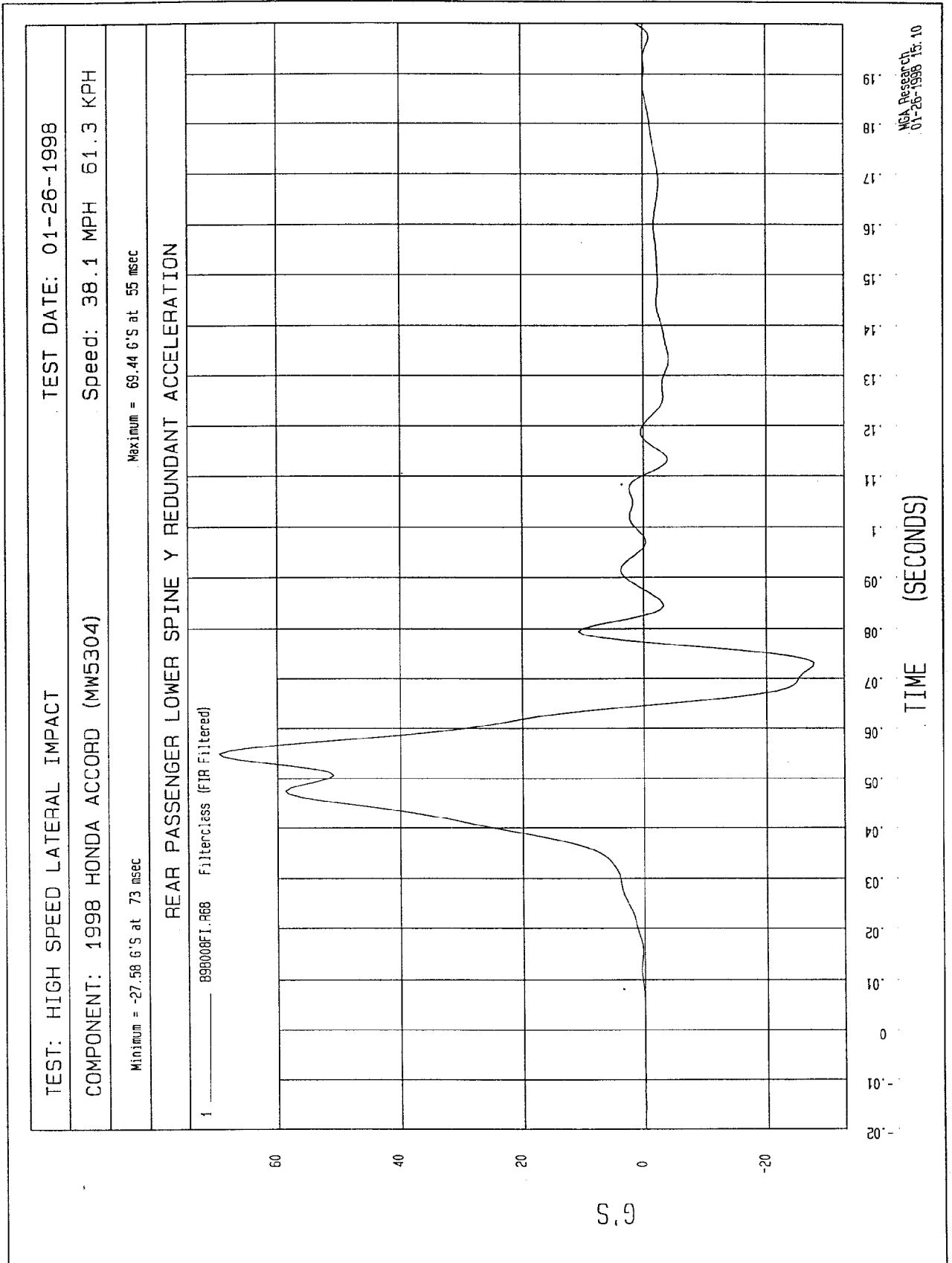


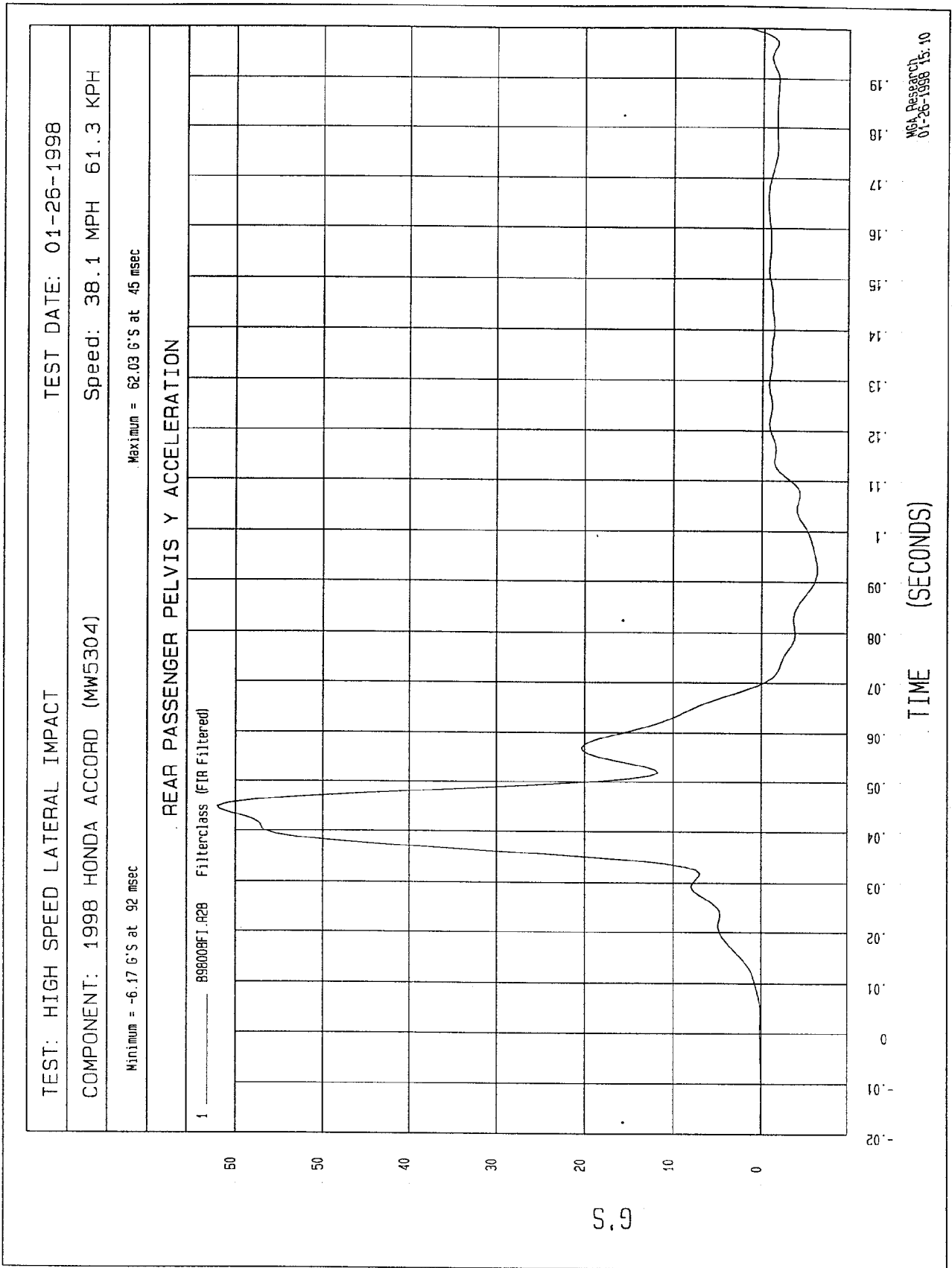


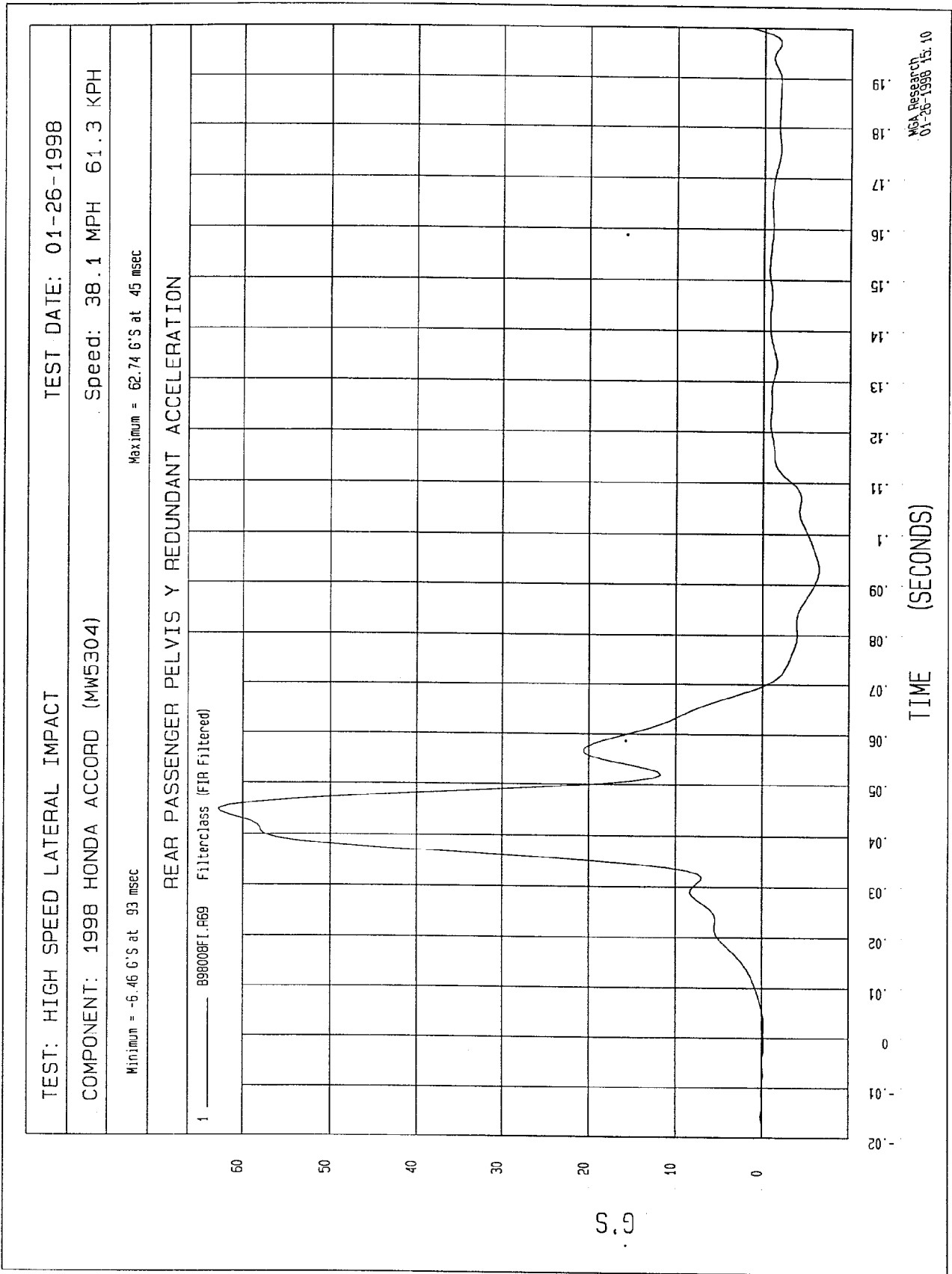












APPENDIX C
SID CONFIGURATION AND PERFORMANCE VERIFICATION

REPORT NO. MGA-98-DC018

DUMMY PERFORMANCE CALIBRATIONS

NEW CAR ASSESSMENT PROGRAM
SIDE IMPACT TEST

1998 HONDA ACCORD 4-DOOR
NHTSA NO. MW5304

MGA PROVING GROUNDS
5000 WARREN ROAD
BURLINGTON, WI 53105



Test Date: January 26, 1998

Report Date: February 2, 1998

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

TABLE OF CONTENTS

		<u>Page No.</u>
DUMMY S/N: 271	PRE-TEST CERTIFICATION DATA	1-1
DUMMY S/N: 272	PRE-TEST CERTIFICATION DATA	2-1
DUMMY S/N: 271	POST-TEST CERTIFICATION DATA	3-1
DUMMY S/N: 272	POST-TEST CERTIFICATION DATA	4-1
DUMMY S/N: 271	POST-TEST INSPECTION CHECKLIST	5-1
DUMMY S/N: 272	POST-TEST INSPECTION CHECKLIST	6-1
	VEHICLE AND DUMMY TEMPERATURE	7-1

PRE-TEST CERTIFICATION DATA

Front Dummy Serial Number: 271

Calibration Test Results Summary

Dummy Serial Number: 271

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.

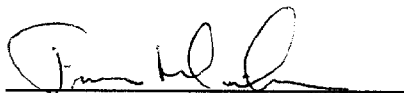
SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 271

DATE OF VERIFICATION: January 21, 1998

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH - Seated Height	35.0" - 35.8"	35.6
RH - Rib Height	19.75" - 20.50"	20.40
HP - Hip Pivot Height	3.9" ref.	3.9
RD - Rib From Back Line	9.0" to 9.5"	9.4
KV - Knee Pivot From Back Line	20.1" - 20.7"	20.4
SW - Knee Pivot to Floor	19.3" - 19.9"	19.5
HW - Hip Width	14.0" - 15.4"	15.1

MEASUREMENTS BY:



APPROVED BY:



MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: January 13, 1998

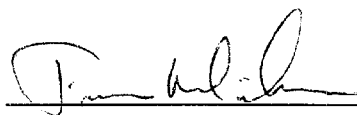
DUMMY NUMBER: 271

TEST NUMBER: D98072

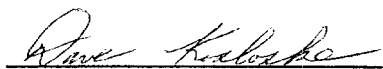
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	14%
PROBE SPEED	14.0 - 14.2 fps	14.0
UPPER RIB	37 - 46 g's	43
LOWER RIB	37 - 46 g's	41
LOWER SPINE	15 - 22 g's	19

TEST MEETS SPECIFICATIONS

TECHNICIAN



APPROVED BY



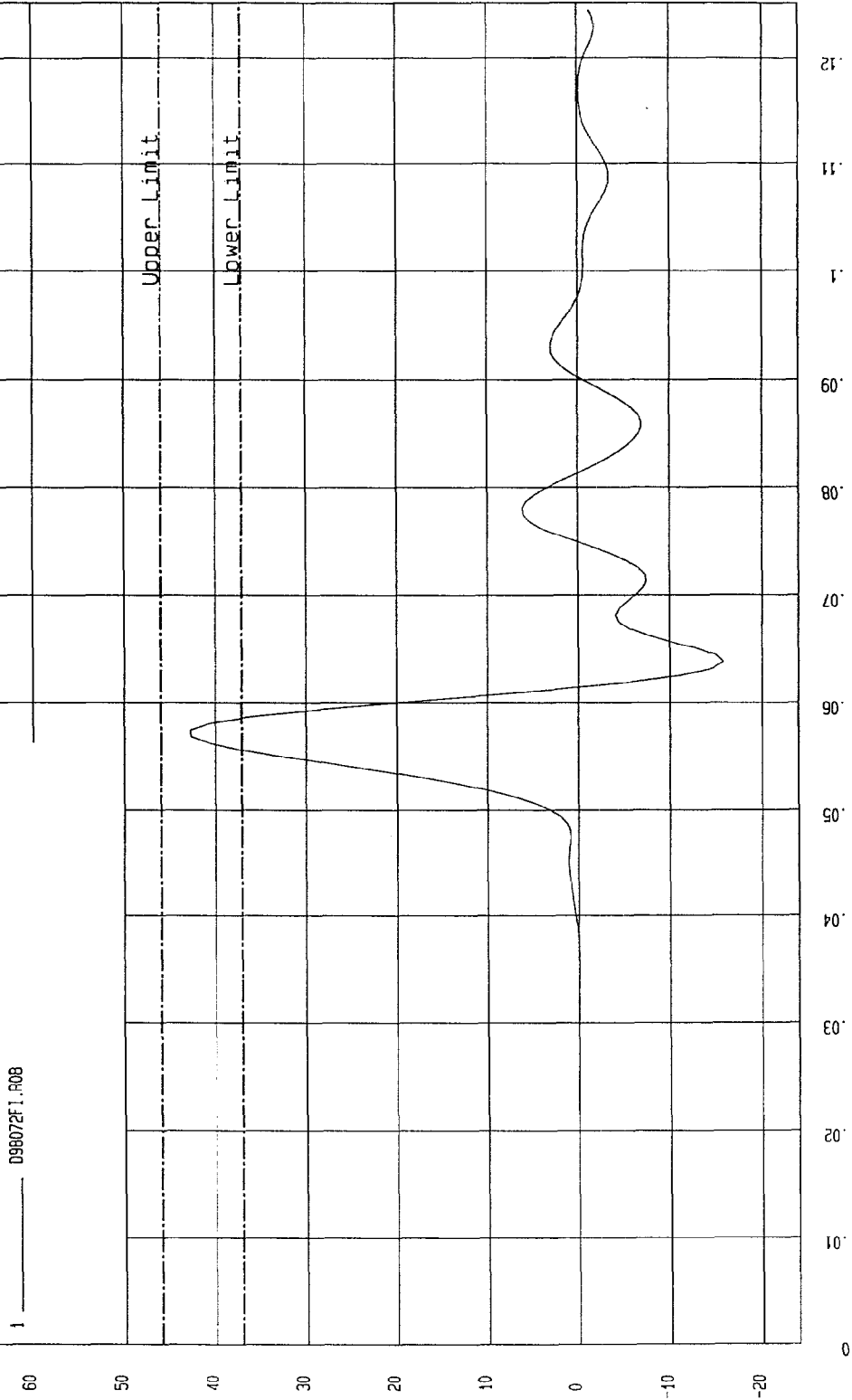
TEST: DUMMY CALIBRATION - THORAX IMPACT TEST DATE: 01-13-1998 - 14:28

COMPONENT: DUMMY # 271 Velocity: 14.019 FT/SEC 4.27 M/SEC

Minimum = -15.78 G'S at 63.7 msec

Maximum = 42.84 G'S at 57.5 msec

UPPER RIB ACCELERATION

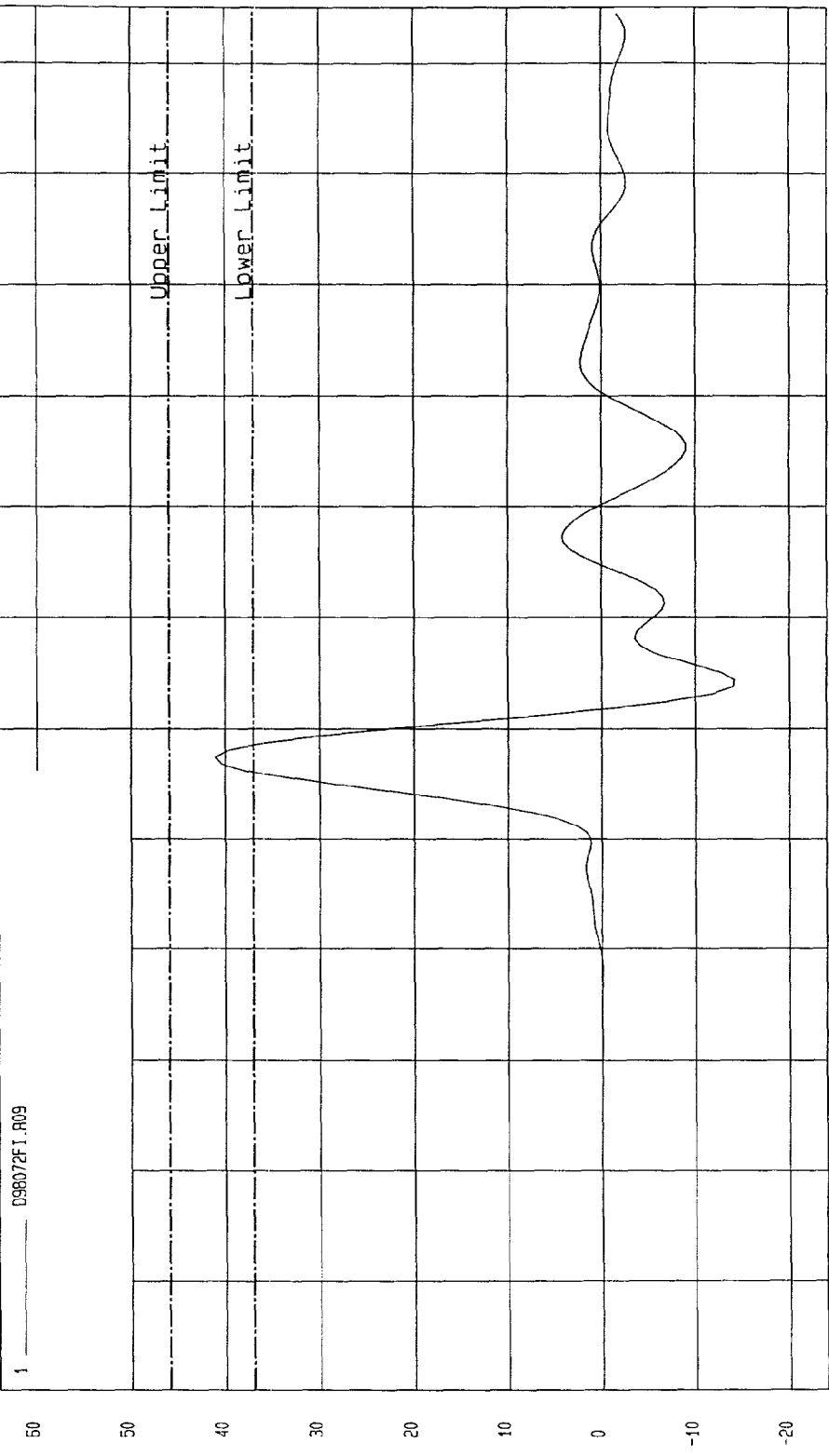


WGA Research
01-13-1998 14:45

TEST: DUMMY CALIBRATION - THORAX IMPACT TEST DATE: 01-13-1998 - 14:28
COMPONENT: DUMMY # 271 Velocity: 14.019 FT/SEC 4.27 M/SEC

Minimum = -14.08 G'S at 64.3 msec Maximum = 41.13 G'S at 57.5 msec

LOWER RIB ACCELERATION



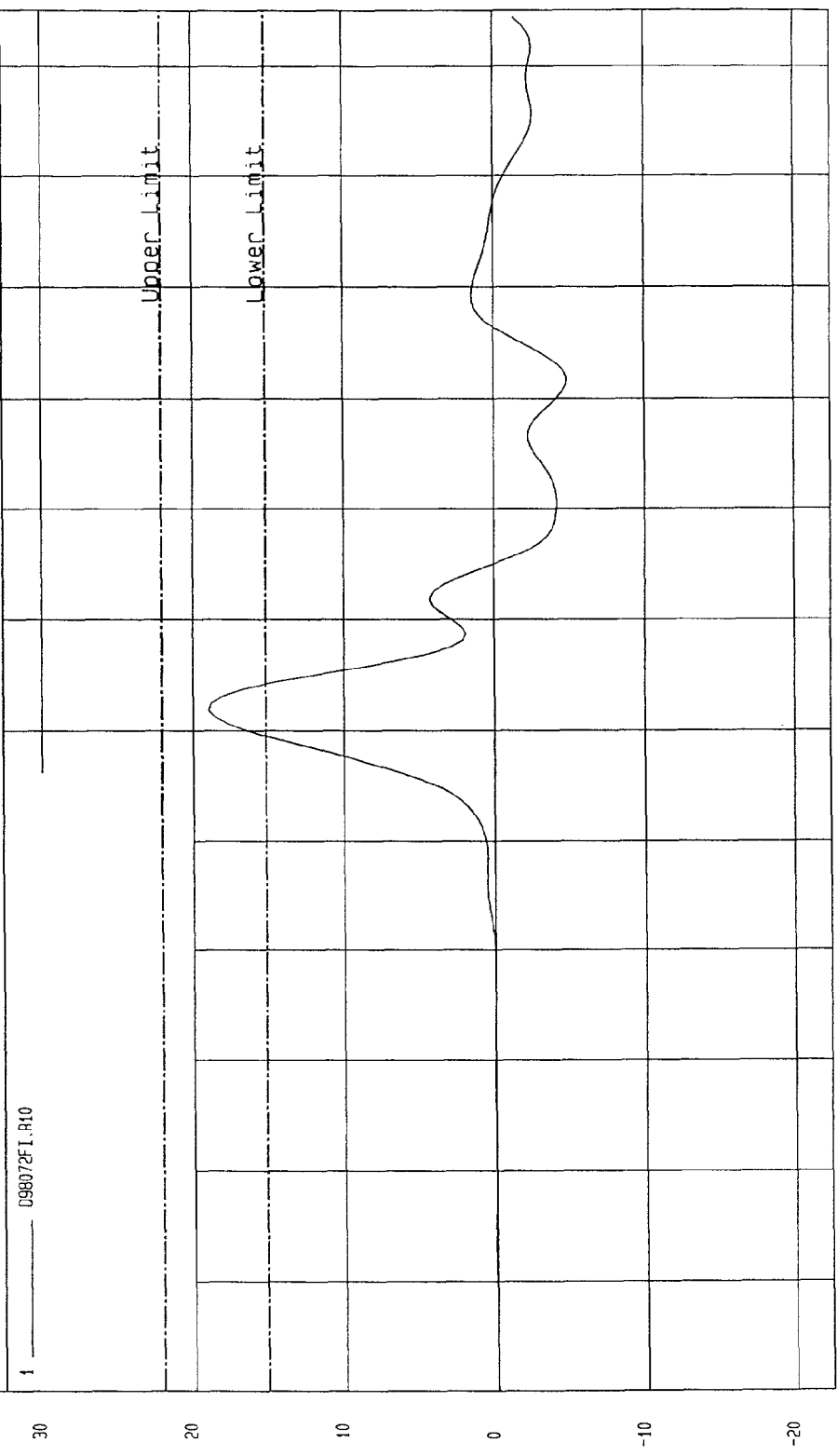
MGA Research
01-13-1998 14:46

TEST: DUMMY CALIBRATION - THORAX IMPACT TEST DATE: 01-13-1998 - 14:29:03

COMPONENT: DUMMY # 271 Velocity: 14.019 FT/SEC 4.27 M/SEC

Minimum = -4.90 G'S at 91.8 msec Maximum = 18.96 G'S at 51.8 msec

LOWER SPINE ACCELERATION



0 10 20 30

0 .01 .02 .03 .04 .05 .06 .07 .08 .09 .1 .11 .12

TIME (SECONDS)

WSA Research
01-13-1998 14:46

G.S

MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: January 13, 1998

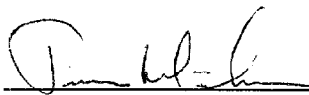
DUMMY NUMBER: 271

TEST NUMBER: D98073

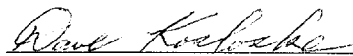
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	14%
PROBE SPEED	14.0 - 14.2 f/s	14.1
PELVIS ACCELERATION	40 - 60 g's	52

TEST MEETS SPECIFICATIONS

TECHNICIAN



APPROVED BY

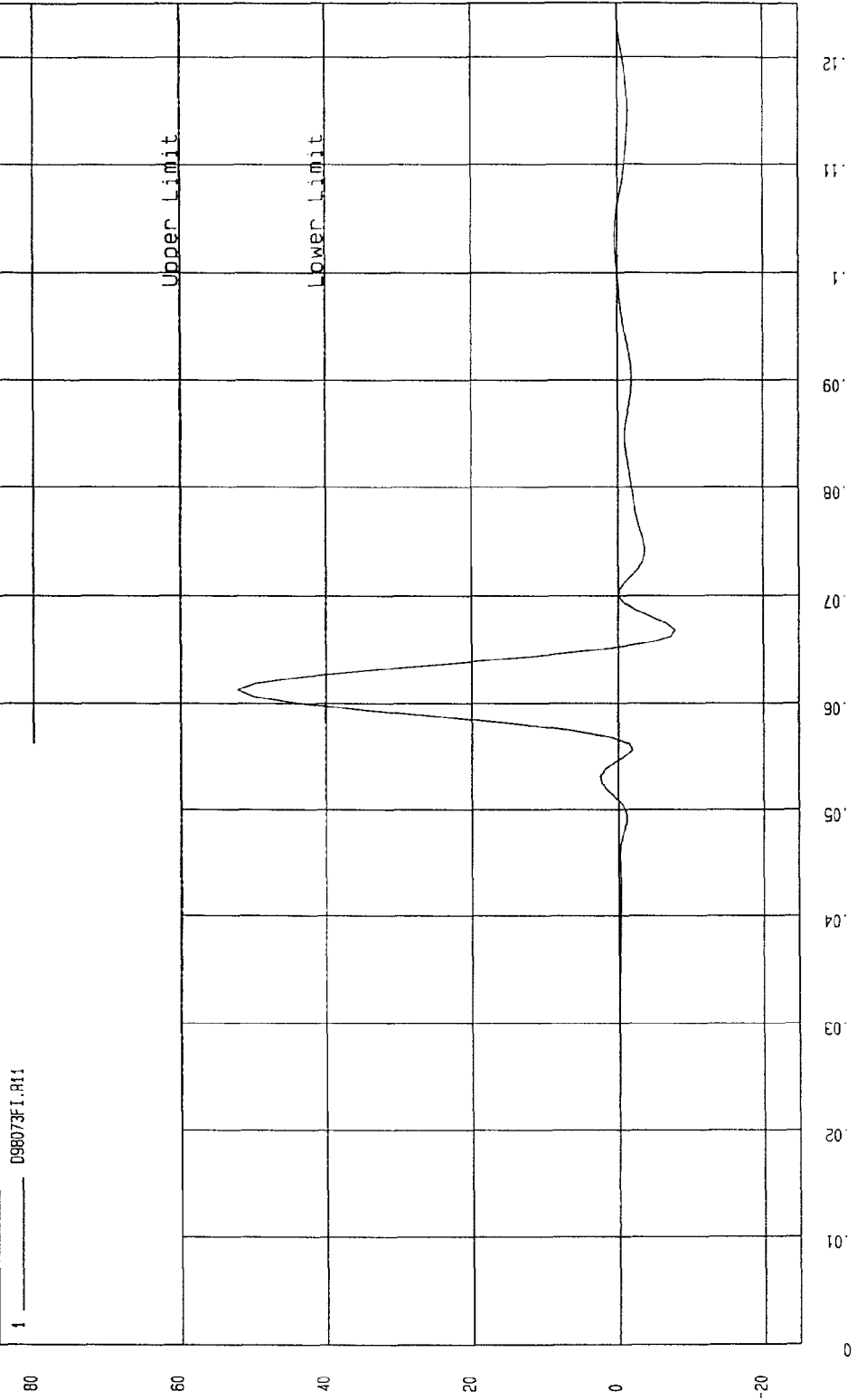


TEST: DUMMY CALIBRATION - PELVIS IMPACT TEST DATE: 01-13-1998 - 14:45

COMPONENT: DUMMY # 271 Velocity: 14.09 FT/SEC 4.29 M/SEC

Minimum = -8.01 G's at 66.8 msec Maximum = 52.06 G's at 61.2 msec

PELVIS ACCELERATION



MCA Research
01-13-1998 14:45

MGA RESEARCH CORPORATION

ABDOMINAL COMPRESSION TEST
(PRELOAD = 10 LBS)

SIDE IMPACT DUMMY (SID)

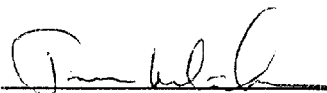
DATE: January 13, 1998

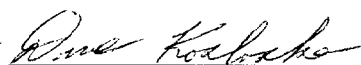
DUMMY NUMBER: 271

TEST NUMBER: D98074

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	12%
FORCE @ 0.5 in	23.3 - 36.5 lbs	33.0
FORCE @ 0.75 in	36.7 - 49.8 lbs	45.6
FORCE @ 1.0 in	50 - 63 lbs	60
FORCE @ 1.3 in	73 - 88 lbs	79

TEST MEETS SPECIFICATIONS

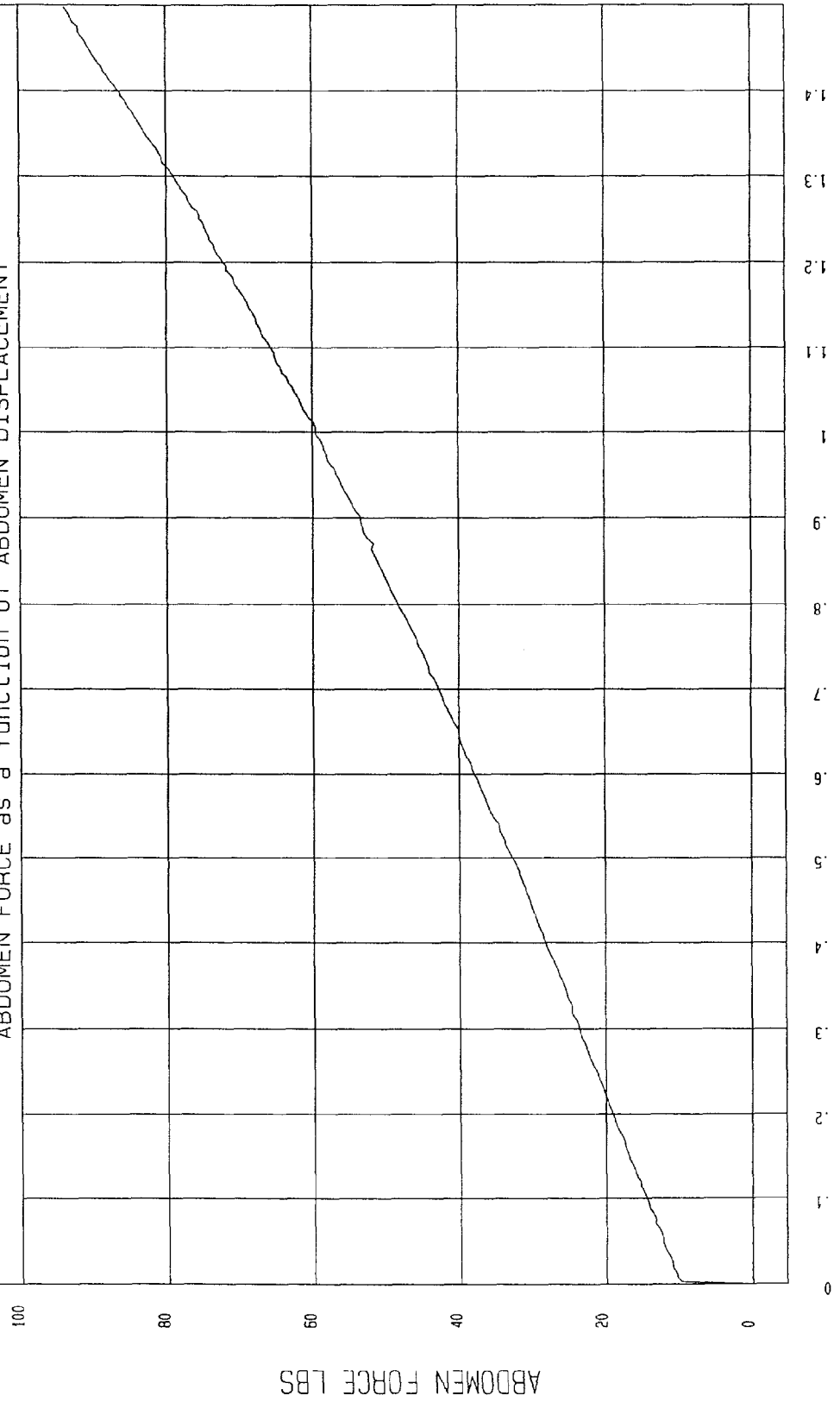
TECHNICIAN 

APPROVED BY 

TEST: DUMMY CALIBRATION - ABDOMEN COMPRESSION TEST DATE: 01-13-1998 - 17:43

COMPONENT: DUMMY # 271

ABDOMEN FORCE as a function of ABDOMEN DISPLACEMENT



NSA Research
01-13-1998 18:13

MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: January 21, 1998

DUMMY NUMBER: 271

TEST NUMBER: D98075

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	27
FORCE @ 30°	34 - 46 lbs	39
FORCE @ 40°	46 - 58 lbs	52
RETURN ANGLE	12° maximum	7°

TEST MEETS SPECIFICATIONS

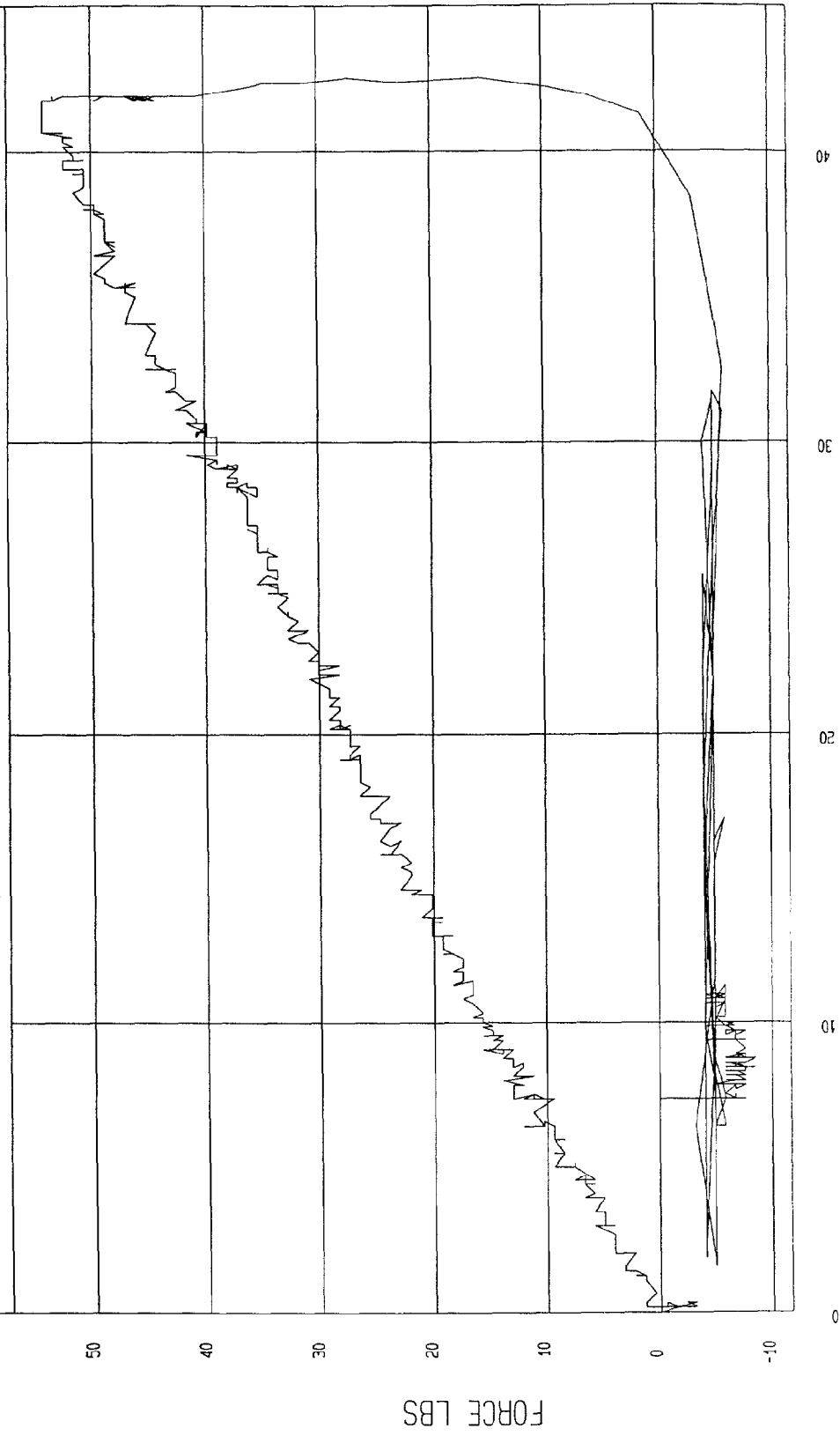
TECHNICIAN Tim H. L.

APPROVED BY Dave K. K.

TEST: DUMMY CALIBRATION - LUMBAR FLEXION TEST DATE: 01-21-1998 ~ 12:40

COMPONENT: DUMMY # 271

FORCE as a function of TORSO ROTATION



MGA Research
01-21-1998 13:19

PRE-TEST CERTIFICATION DATA

Rear Dummy Serial Number: 272

Calibration Test Results Summary

Dummy Serial Number: 272

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.

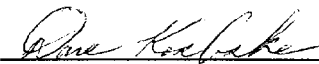
SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 272

DATE OF VERIFICATION: January 25, 1998

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH - Seated Height	35.0" - 35.8"	35.2
RH - Rib Height	19.75" - 20.50"	20.20
HP - Hip Pivot Height	3.9" ref.	3.9
RD - Rib From Back Line	9.0" to 9.5"	9.4
KV - Knee Pivot From Back Line	20.1" - 20.7"	20.7
SW - Knee Pivot to Floor	19.3" - 19.9"	19.6
HW - Hip Width	14.0" - 15.4"	15.0

MEASUREMENTS BY: 

APPROVED BY: 

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: January 25, 1998

DUMMY NUMBER: 272

TEST NUMBER: D98162

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	22%
PROBE SPEED	14.0 - 14.2 fps	14.1
UPPER RIB	37 - 46 g's	42
LOWER RIB	37 - 46 g's	38
LOWER SPINE	15 - 22 g's	21

TEST MEETS SPECIFICATIONS

TECHNICIAN Tim Wilkins

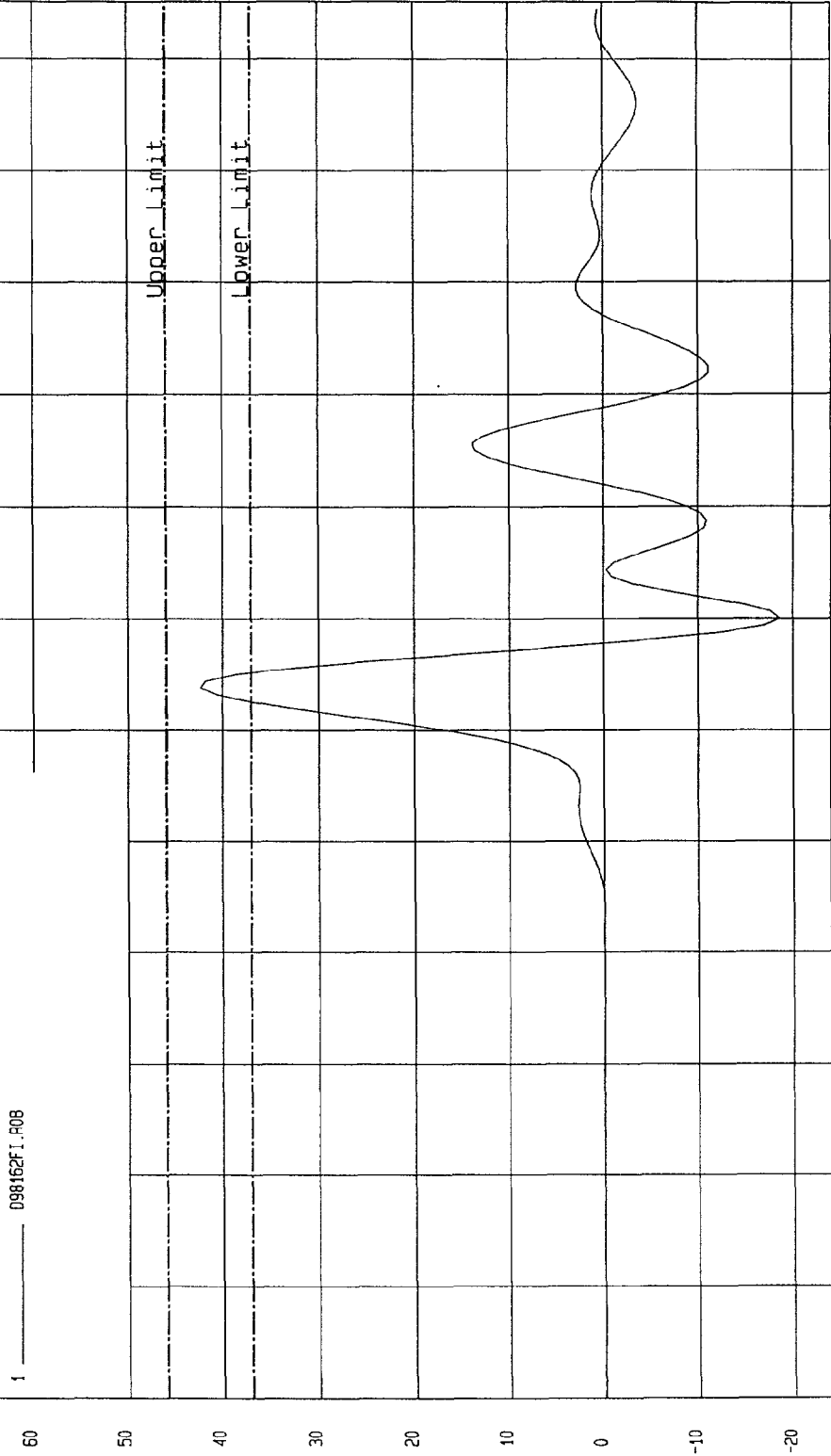
APPROVED BY Dave Kachuba

TEST: DUMMY CALIBRATION - THORAX IMPACT TEST DATE: 01-25-1998 - 11:16

COMPONENT: DUMMY # 272 Velocity: 14.055 FT/SEC 4.28 M/SEC

Minimum = -18.51 G'S at 70 msec Maximum = 42.33 G'S at 63.7 msec

UPPER RIB ACCELERATION



TIME (SECONDS)

MSA Research
01-25-1998 11:17

G

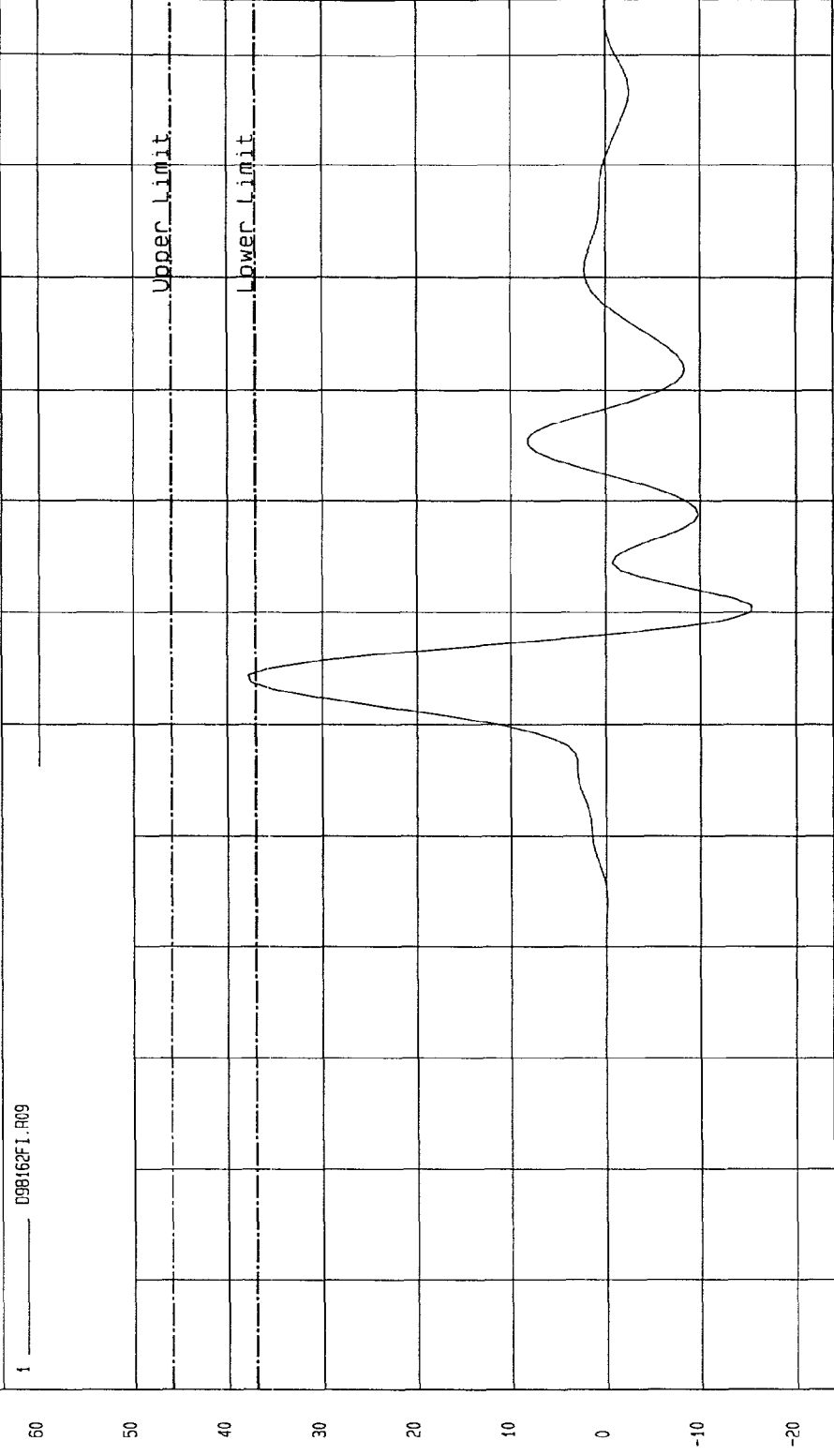
TEST: DUMMY CALIBRATION - THORAX IMPACT TEST DATE: 01-25-1998 - 11:16

COMPONENT: DUMMY # 272 Velocity: 14.055 FT/SEC 4.28 M/SEC

Minimum = -15.30 G'S at 70.6 msec

Maximum = 37.81 G'S at 64.3 msec

LOWER RIB ACCELERATION



TIME (SECONDS)

NSA Research
01-25-1998 11:17

TEST: DUMMY CALIBRATION - THORAX IMPACT TEST DATE: 01-25-1998 - 11:16

COMPONENT: DUMMY # 272 Velocity: 14.055 FT/SEC 4.28 M/SEC

Minimum = -5.65 G'S at 97.5 msec

Maximum = 20.69 G'S at 68.7 msec

LOWER SPINE ACCELERATION

1 ——— D9B162FI.R10

30

20

10

0

-10

-20

G'S

Upper Limit

Lower Limit

.12

.11

.1

.09

.08

.07

.06

.05

.04

.03

.02

.01

0

TIME (SECONDS)

MGA Research
01-25-1998 11:18

MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: January 13, 1998

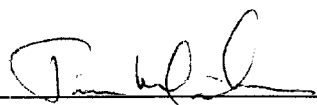
DUMMY NUMBER: 272

TEST NUMBER: D98163

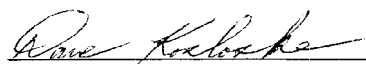
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	12%
PROBE SPEED	14.0 - 14.2 f/s	14.0
PELVIS ACCELERATION	40 - 60 g's	52

TEST MEETS SPECIFICATIONS

TECHNICIAN



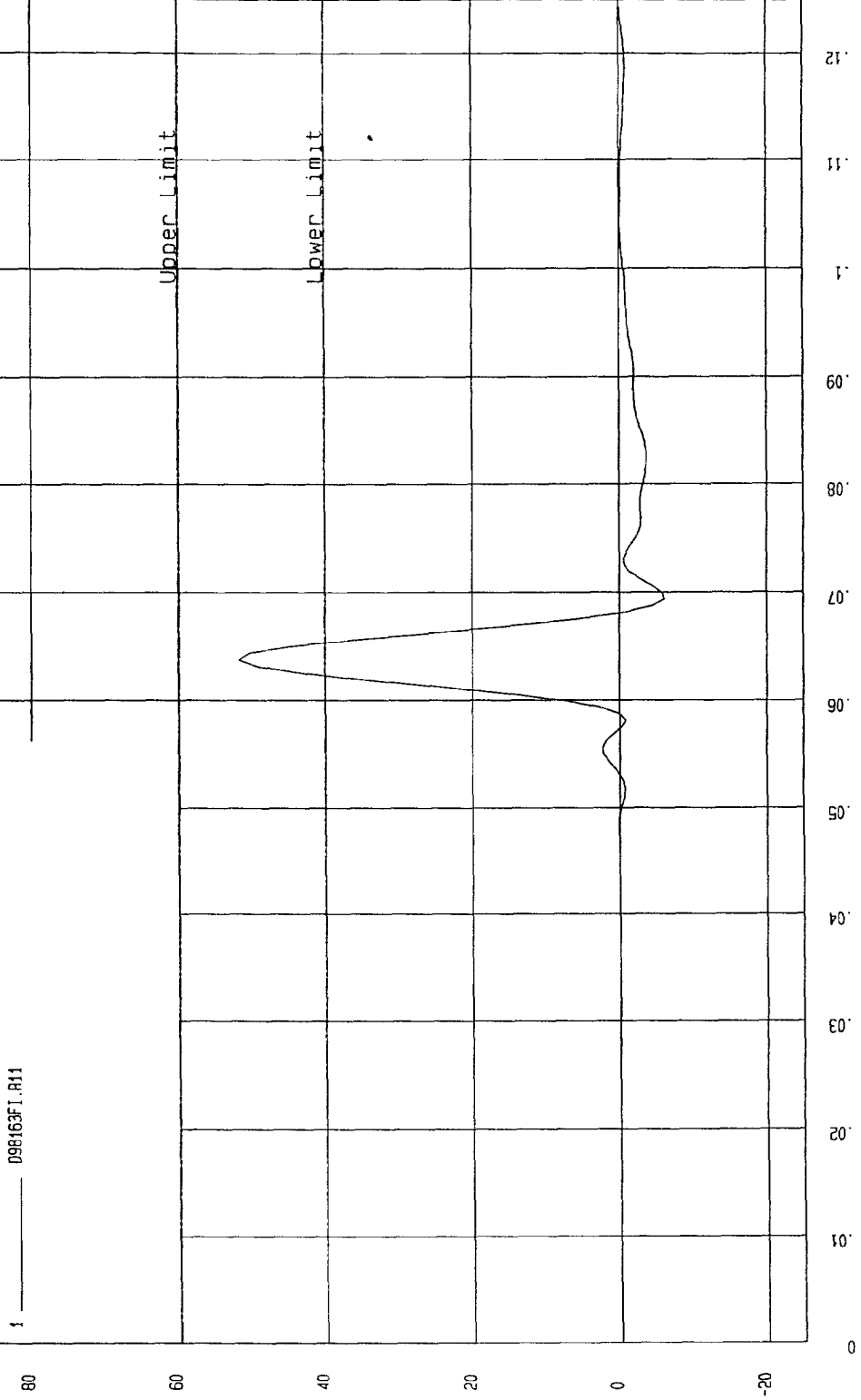
APPROVED BY



TEST: DUMMY CALIBRATION - PELVIS IMPACT TEST DATE: 01-13-1998 - 08:38:04
 COMPONENT: DUMMY # 272 Velocity: 14.041 FT/SEC 4.28 M/SEC

Minimum = -6.09 G'S at 69.3 msec Maximum = 51.68 G'S at 63.7 msec

PELVIS ACCELERATION



WSA Research
01-27-1998 13:15

MGA RESEARCH CORPORATION

ABDOMINAL COMPRESSION TEST
(PRELOAD = 10 LBS)

SIDE IMPACT DUMMY (SID)

DATE: January 13, 1998

DUMMY NUMBER: 272

TEST NUMBER: D98164

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	12%
FORCE @ 0.5 in	23.3 - 36.5 lbs	31.1
FORCE @ 0.75 in	36.7 - 49.8 lbs	42.8
FORCE @ 1.0 in	50 - 63 lbs	56
FORCE @ 1.3 in	73 - 88 lbs	76

TEST MEETS SPECIFICATIONS

TECHNICIAN

Tim White

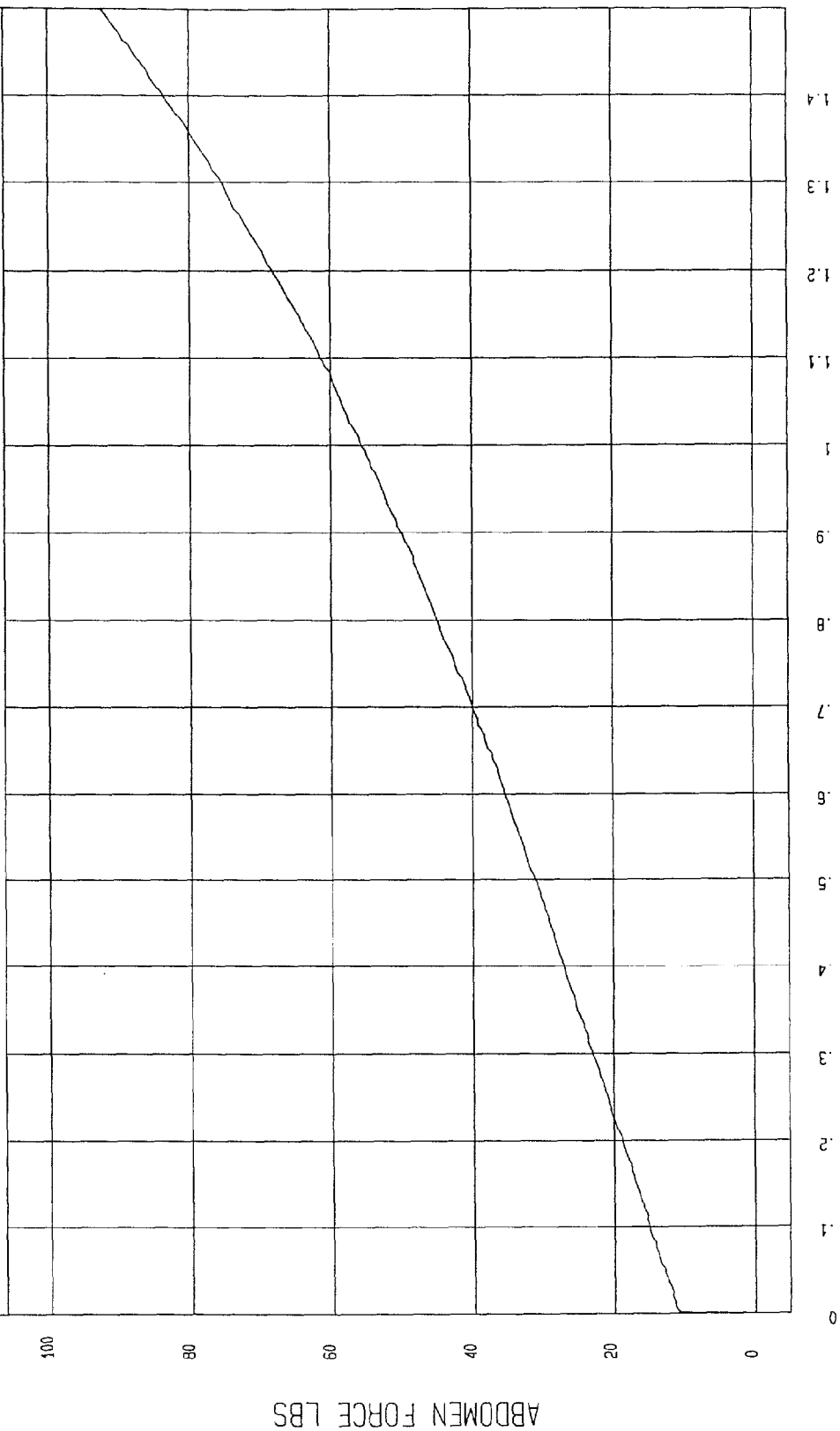
APPROVED BY

Paul K. K. K.

TEST: DUMMY CALIBRATION - ABDOMEN COMPRESSION TEST DATE: 01-13-1998 - 17:46

COMPONENT: DUMMY # 272

ABDOMEN FORCE as a function of ABDOMEN DISPLACEMENT



MCA Research
01-27-1998 13:20

MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: January 21, 1998

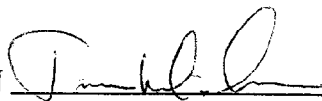
DUMMY NUMBER: 272

TEST NUMBER: D98165

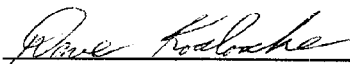
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	18%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	23
FORCE @ 30°	34 - 46 lbs	34
FORCE @ 40°	46 - 58 lbs	49
RETURN ANGLE	12° maximum	6°

TEST MEETS SPECIFICATIONS

TECHNICIAN



APPROVED BY



TEST: DUMMY CALIBRATION - LUMBAR FLEXION TEST DATE: 01-21-1998 - 11:03

COMPONENT: DUMMY # 272

FORCE as a function of TORSO ROTATION

FORCE LBS

50
40
30
20
10
0
-10

TORSO ROTATION DEGREES

40
30
20
10
0
-10
MECA Research
01-21-1998 13:19

POST-TEST CERTIFICATION DATA

Front Dummy Serial Number: 271

Calibration Test Results Summary

Dummy Serial Number: 271

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.

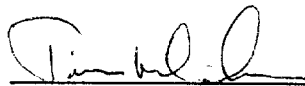
SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 271

DATE OF VERIFICATION: January 27, 1998

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH - Seated Height	35.0" - 35.8"	35.6
RH - Rib Height	19.75" - 20.50"	20.40
HP - Hip Pivot Height	3.9" ref.	3.9
RD - Rib From Back Line	9.0" to 9.5"	9.4
KV - Knee Pivot From Back Line	20.1" - 20.7"	20.4
SW - Knee Pivot to Floor	19.3" - 19.9"	19.5
HW - Hip Width	14.0" - 15.4"	15.1

MEASUREMENTS BY:



APPROVED BY:



MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

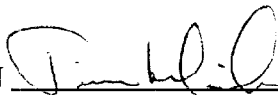
DATE: January 27, 1998

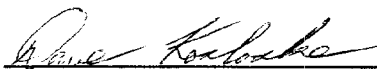
DUMMY NUMBER: 271

TEST NUMBER: D98172

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	24%
PROBE SPEED	14.0 - 14.2 fps	14.1
UPPER RIB	37 - 46 g's	45
LOWER RIB	37 - 46 g's	40
LOWER SPINE	15 - 22 g's	20

TEST MEETS SPECIFICATIONS

TECHNICIAN 

APPROVED BY 

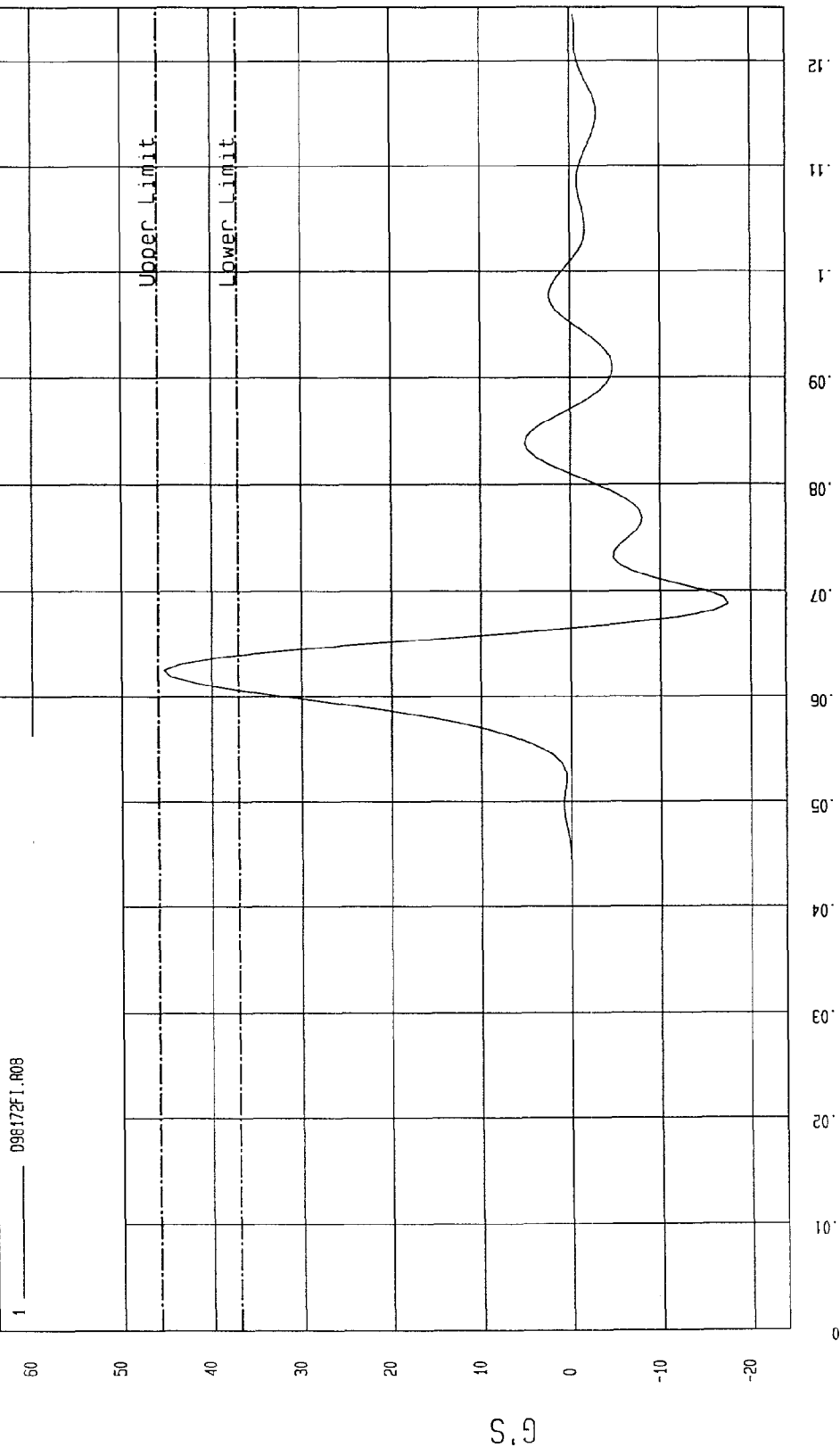
TEST: DUMMY CALIBRATION - THORAX IMPACT TEST DATE: 01-27-1998 - 19:55

COMPONENT: DUMMY # 271 Velocity: 14.066 FT/SEC 4.29 M/SEC

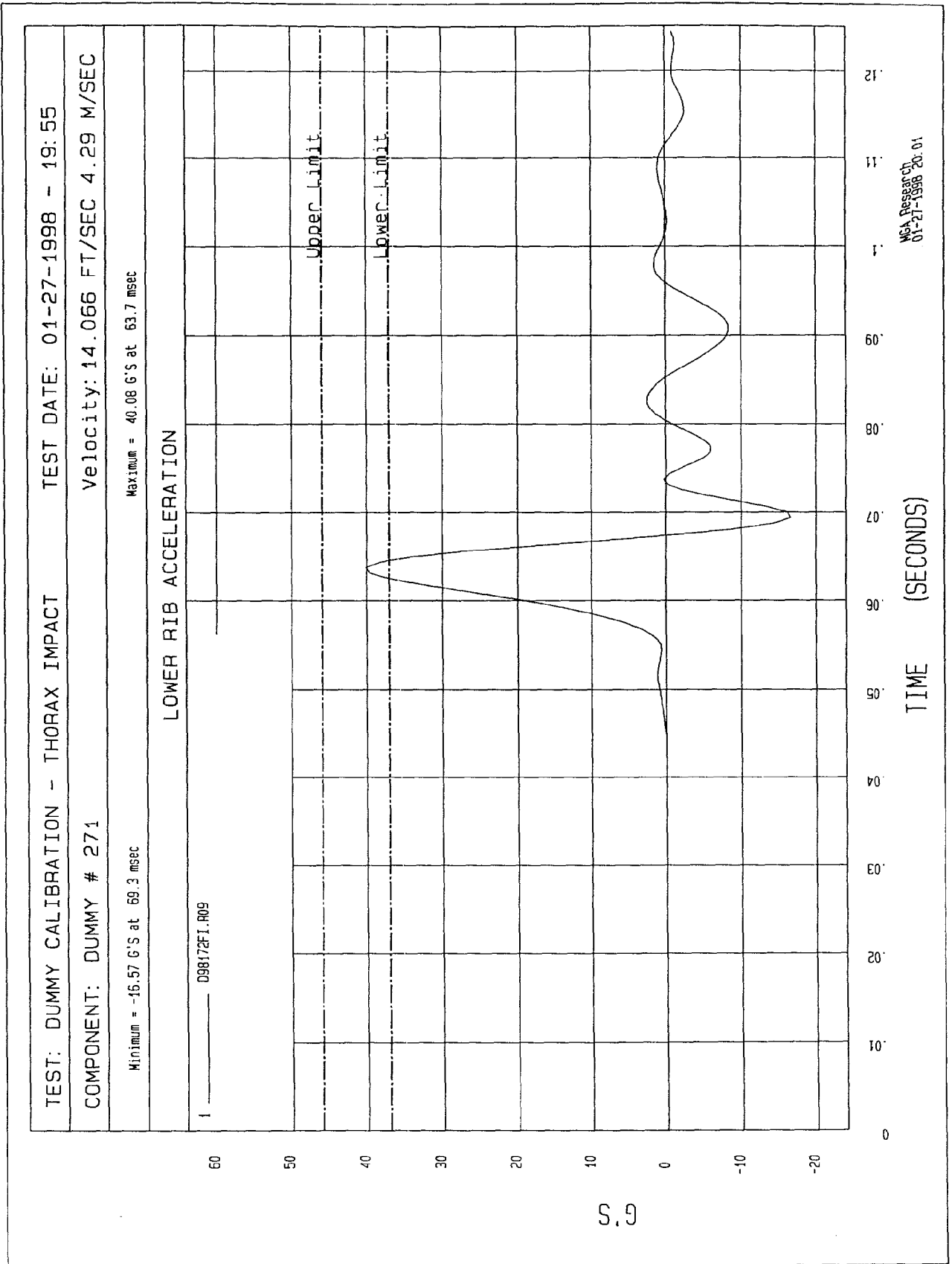
Minimum = -17.40 G'S at 68.7 msec

Maximum = 45.36 G'S at 62.5 msec

UPPER RIB ACCELERATION



WCA Research
01-27-1998 20:01



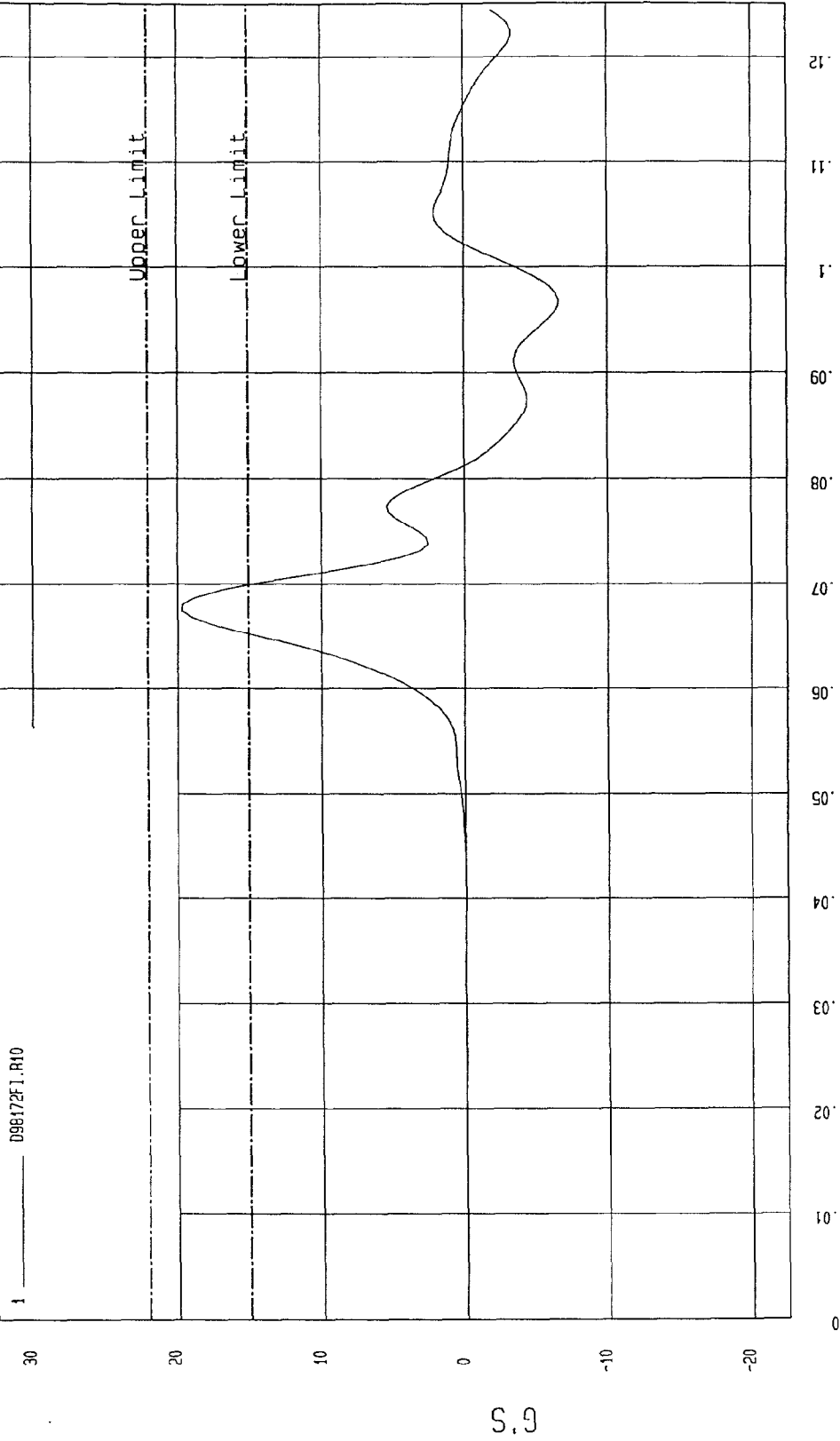
TEST: DUMMY CALIBRATION - THORAX IMPACT TEST DATE: 01-27-1998 - 19:56:29

COMPONENT: DUMMY # 271 Velocity: 14.066 FT/SEC 4.29 M/SEC

Minimum = -6.68 G'S at 96.8 msec

Maximum = 19.67 G'S at 67.5 msec

LOWER SPINE ACCELERATION



MCA Research
01-27-1998 20:04

MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

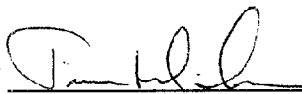
DATE: January 27, 1998

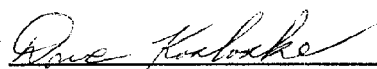
DUMMY NUMBER: 271

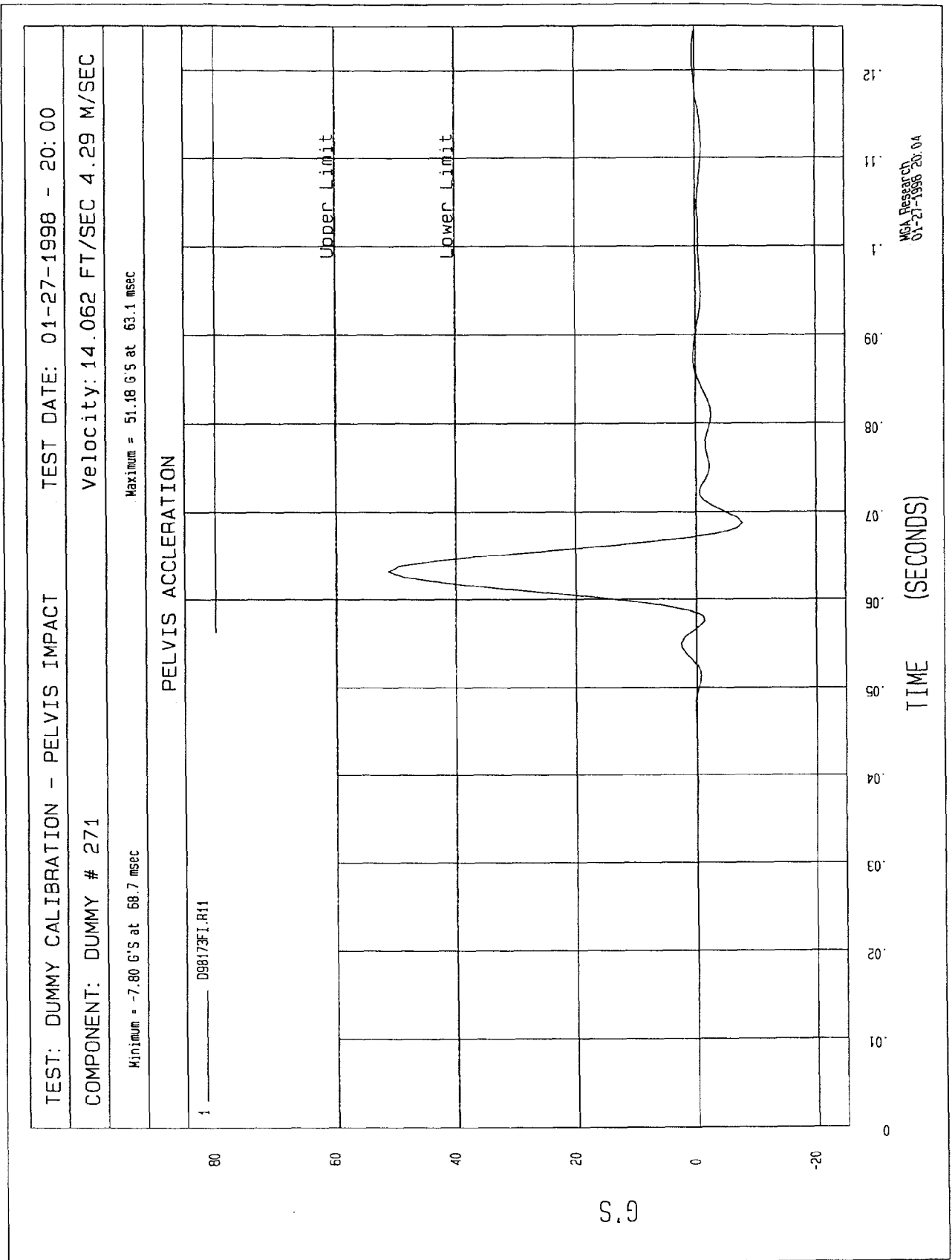
TEST NUMBER: D98173

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	24%
PROBE SPEED	14.0 - 14.2 f/s	14.1
PELVIS ACCELERATION	40 - 60 g's	51

TEST MEETS SPECIFICATIONS

TECHNICIAN 

APPROVED BY 



MGA RESEARCH CORPORATION

ABDOMINAL COMPRESSION TEST
(PRELOAD = 10 LBS)

SIDE IMPACT DUMMY (SID)

DATE: January 27, 1998

DUMMY NUMBER: 271

TEST NUMBER: D98174

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	24%
FORCE @ 0.5 in	23.3 - 36.5 lbs	32.3
FORCE @ 0.75 in	36.7 - 49.8 lbs	44.1
FORCE @ 1.0 in	50 - 63 lbs	58
FORCE @ 1.3 in	73 - 88 lbs	78

TEST MEETS SPECIFICATIONS

TECHNICIAN

Tim H. O.

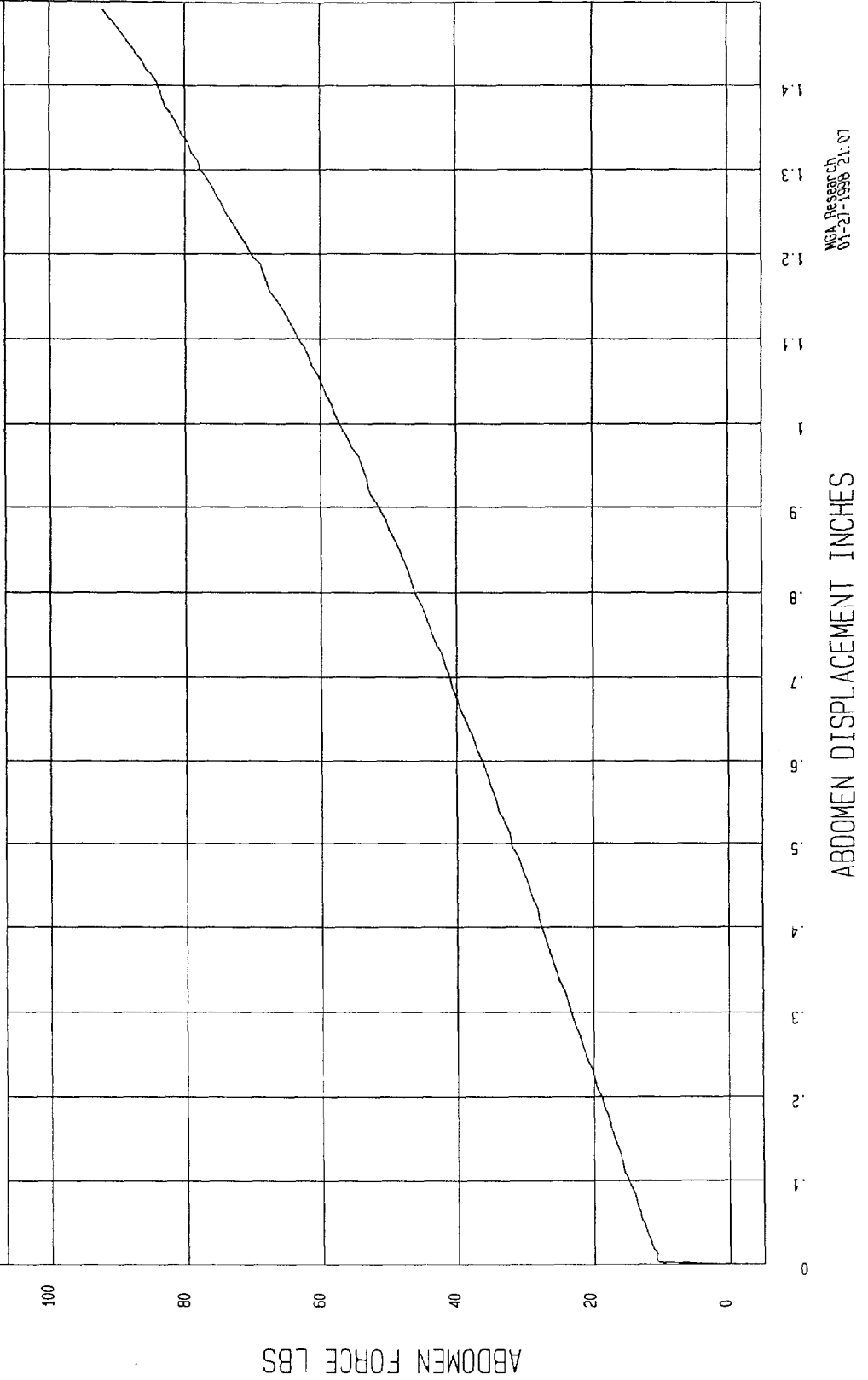
APPROVED BY

Russ K. K. K.

TEST: DUMMY CALIBRATION - ABDOMEN COMPRESSION TEST DATE: 01-27-1998 - 21:02

COMPONENT: DUMMY # 271

ABDOMEN FORCE as a function of ABDOMEN DISPLACEMENT



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: January 27, 1998

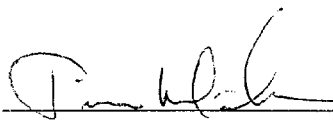
DUMMY NUMBER: 271

TEST NUMBER: D98175

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	24%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	27
FORCE @ 30°	34 - 46 lbs	39
FORCE @ 40°	46 - 58 lbs	50
RETURN ANGLE	12° maximum	6°

TEST MEETS SPECIFICATIONS

TECHNICIAN



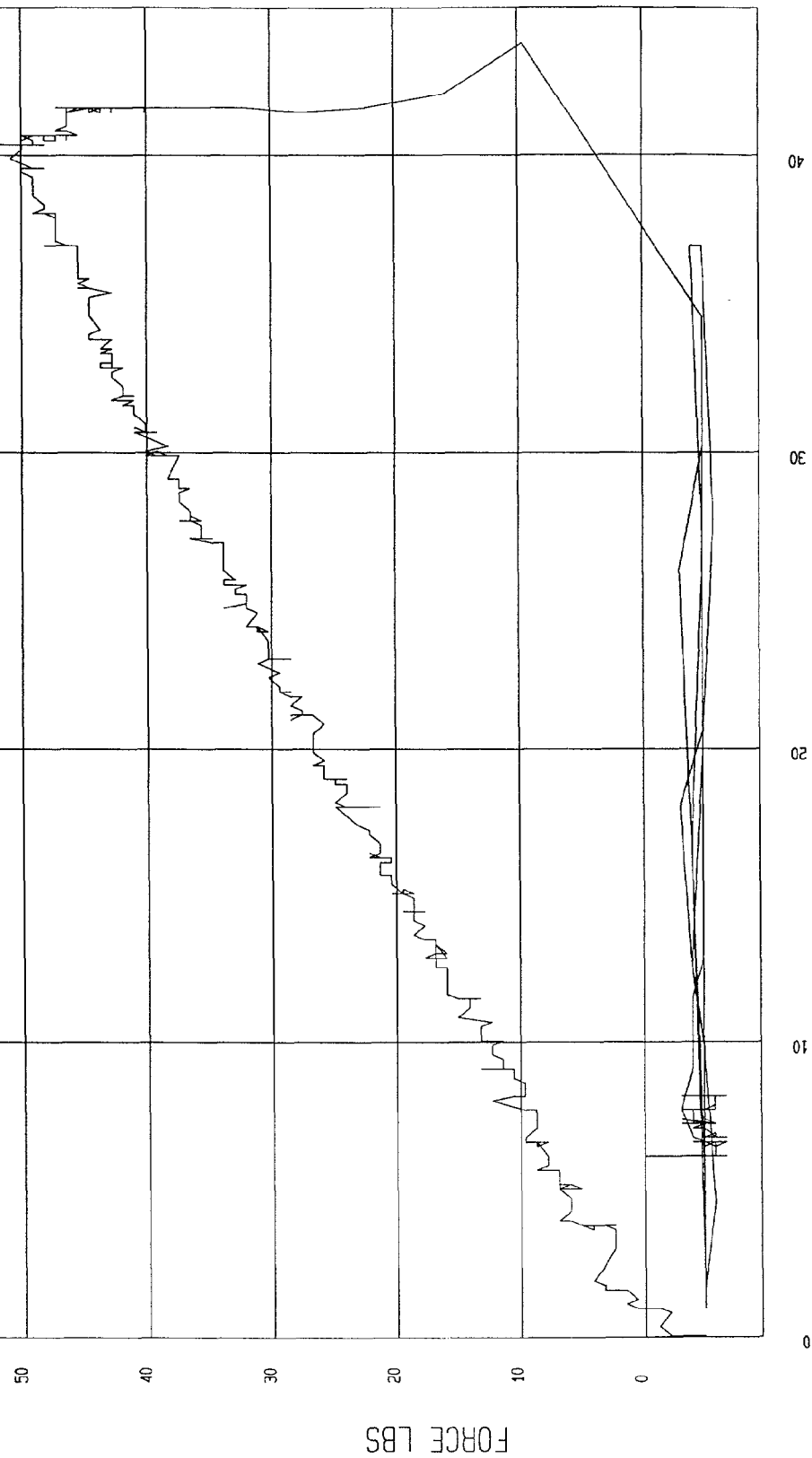
APPROVED BY



TEST: DUMMY CALIBRATION - LUMBAR FLEXION TEST DATE: 01-27-1998 - 20:37

COMPONENT: DUMMY # 271

FORCE as a function of TORSO ROTATION



WCA Research
01-27-1998 20:50

POST-TEST CERTIFICATION DATA

Rear Dummy Serial Number: 272

Calibration Test Results Summary

Dummy Serial Number: 272

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.

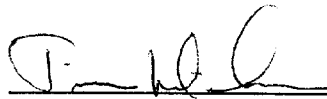
SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 272

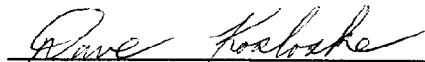
DATE OF VERIFICATION: January 27, 1998

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH - Seated Height	35.0" - 35.8"	35.2
RH - Rib Height	19.75" - 20.50"	20.20
HP - Hip Pivot Height	3.9" ref.	3.9
RD - Rib From Back Line	9.0" to 9.5"	9.4
KV - Knee Pivot From Back Line	20.1" - 20.7"	20.7
SW - Knee Pivot to Floor	19.3" - 19.9"	19.6
HW - Hip Width	14.0" - 15.4"	15.0

MEASUREMENTS BY:



APPROVED BY:



MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

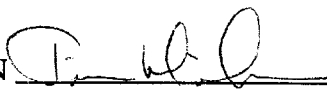
DATE: January 27, 1998

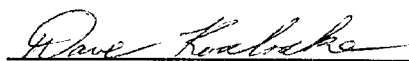
DUMMY NUMBER: 272

TEST NUMBER: D98182

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	24%
PROBE SPEED	14.0 - 14.2 fps	14.0
UPPER RIB	37 - 46 g's	40
LOWER RIB	37 - 46 g's	38
LOWER SPINE	15 - 22 g's	19

TEST MEETS SPECIFICATIONS

TECHNICIAN 

APPROVED BY 

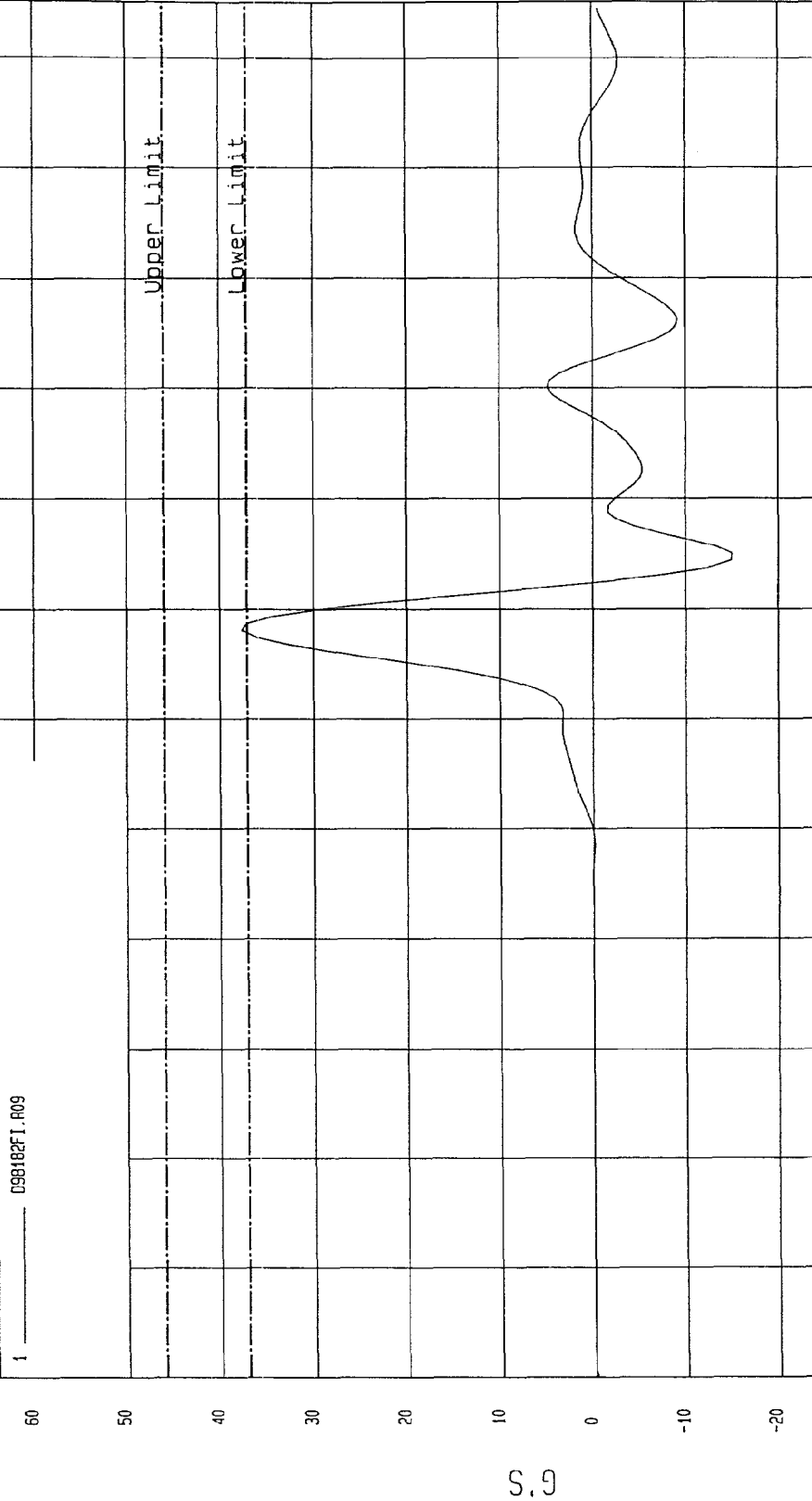
MGA Research
01-27-1998 18:02

TEST: DUMMY CALIBRATION - THORAX IMPACT TEST DATE: 01-27-1998 - 17:40

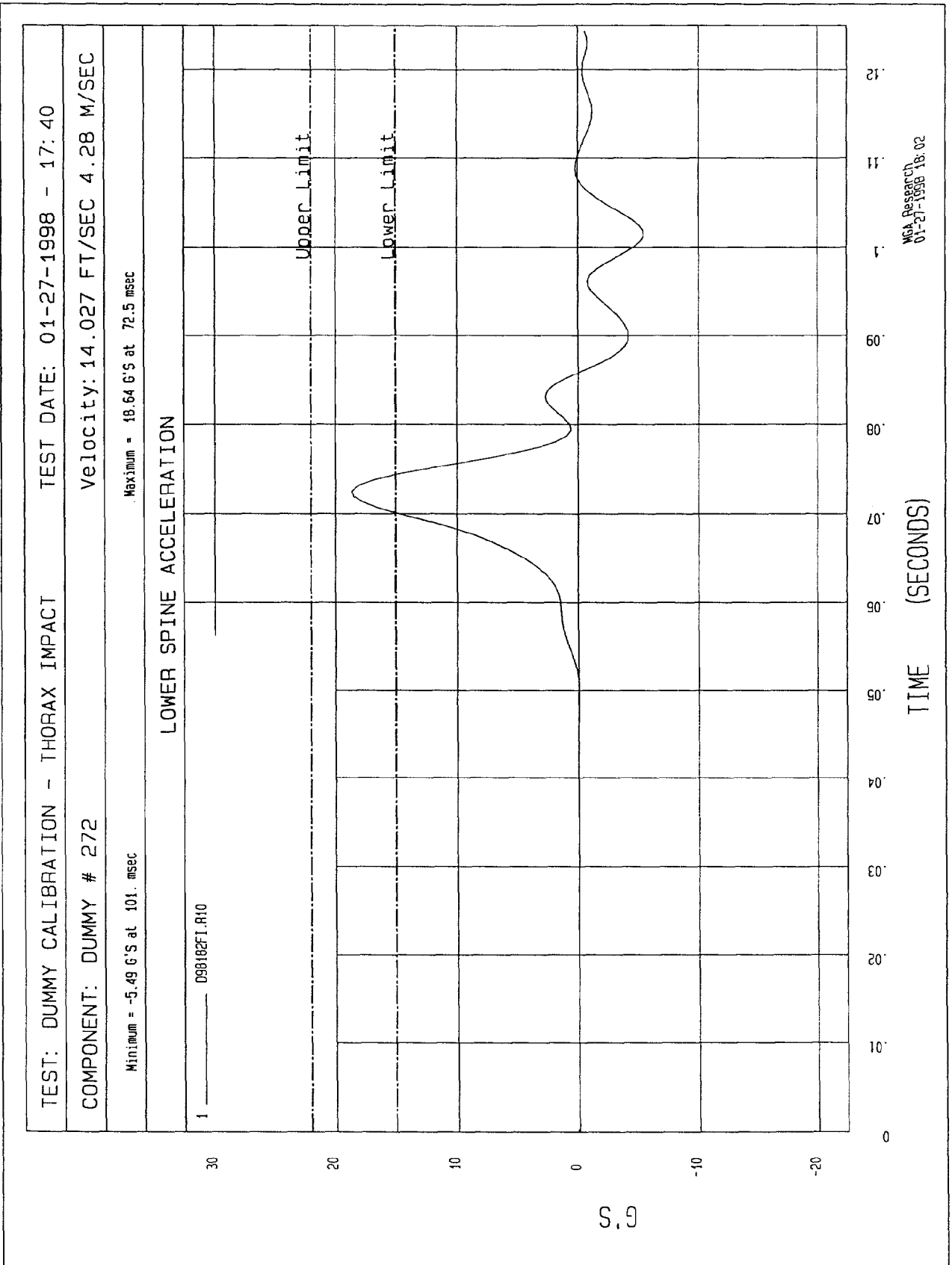
COMPONENT: DUMMY # 272 Velocity: 14.027 FT/SEC 4.28 M/SEC

Minimum = -45.01 G'S at 75 msec Maximum = 37.57 G'S at 68.1 msec

LOWER RIB ACCELERATION



MCA Research
01-27-1998 18:02



MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: January 27, 1998

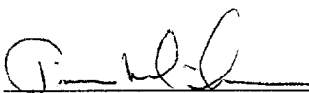
DUMMY NUMBER: 272

TEST NUMBER: D98183

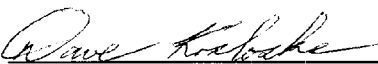
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	24%
PROBE SPEED	14.0 - 14.2 f/s	14.1
PELVIS ACCELERATION	40 - 60 g's	55

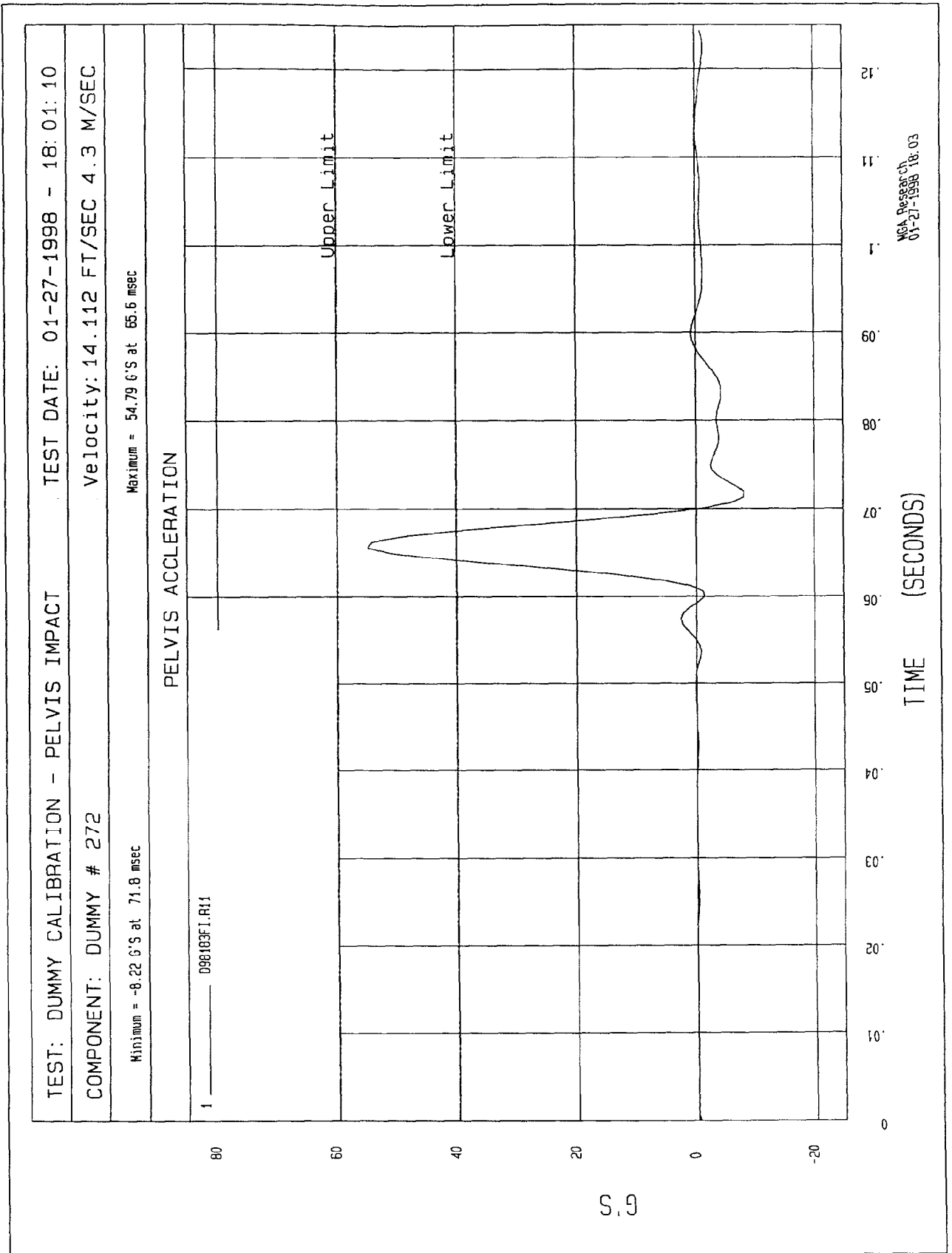
TEST MEETS SPECIFICATIONS

TECHNICIAN



APPROVED BY





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

DATE: January 27, 1998

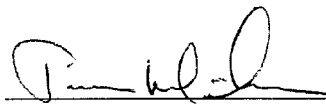
DUMMY NUMBER: 272

TEST NUMBER: D98184

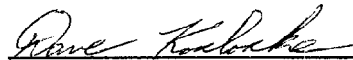
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	24%
FORCE @ 0.5 in	23.3 - 36.5 lbs	30.7
FORCE @ 0.75 in	36.7 - 49.8 lbs	42.7
FORCE @ 1.0 in	50 - 63 lbs	56
FORCE @ 1.3 in	73 - 88 lbs	75

TEST MEETS SPECIFICATIONS

TECHNICIAN



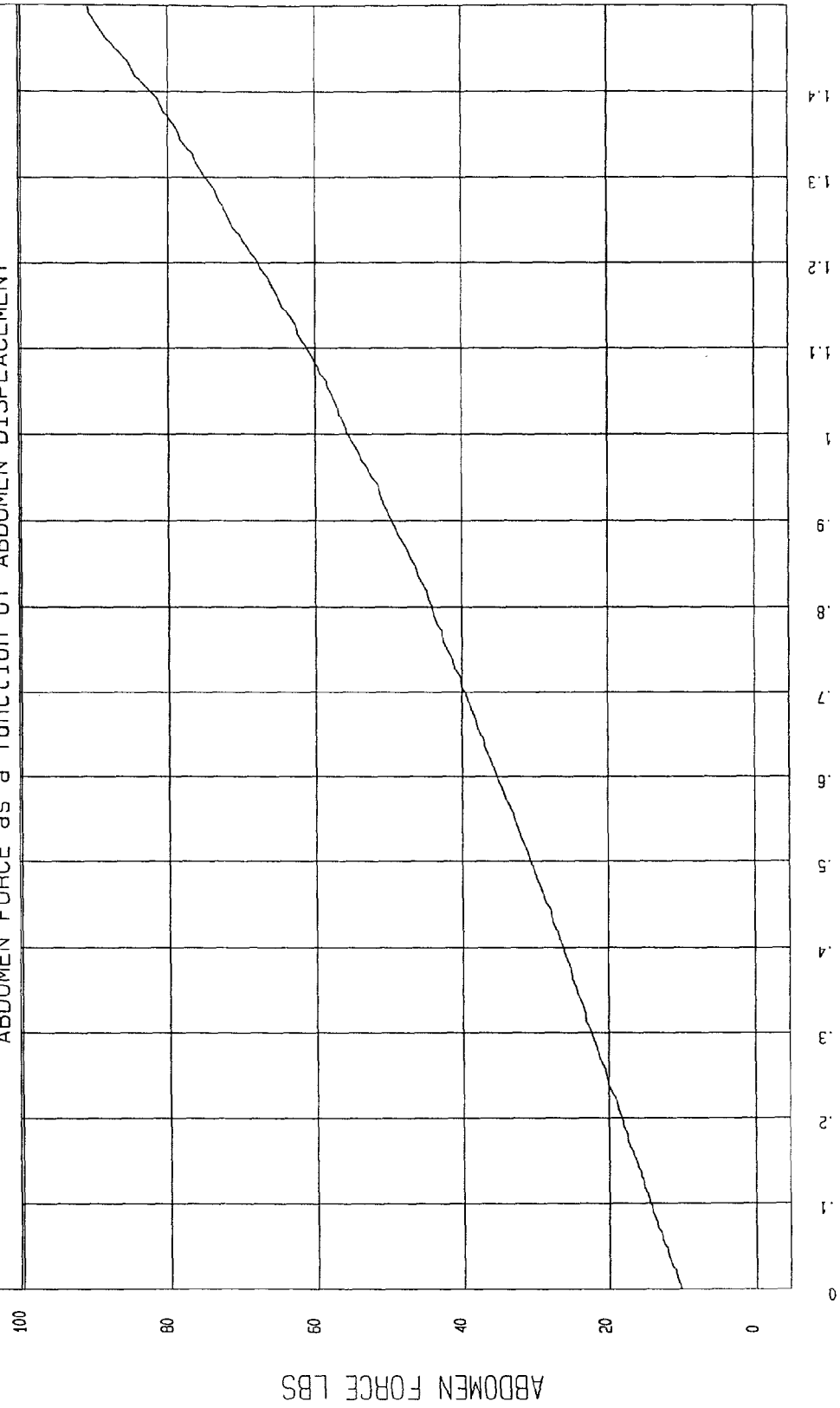
APPROVED BY



TEST: DUMMY CALIBRATION - ABDOMEN COMPRESSION TEST DATE: 01-27-1998 - 21:05

COMPONENT: DUMMY # 272

ABDOMEN FORCE as a function of ABDOMEN DISPLACEMENT



NCA Research
01-27-1998 21:05

MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: January 27, 1998

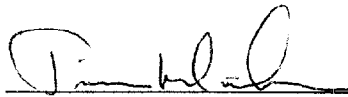
DUMMY NUMBER: 272

TEST NUMBER: D98185

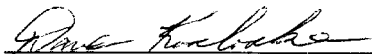
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	24%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	22
FORCE @ 30°	34 - 46 lbs	38
FORCE @ 40°	46 - 58 lbs	53
RETURN ANGLE	12° maximum	5°

TEST MEETS SPECIFICATIONS

TECHNICIAN



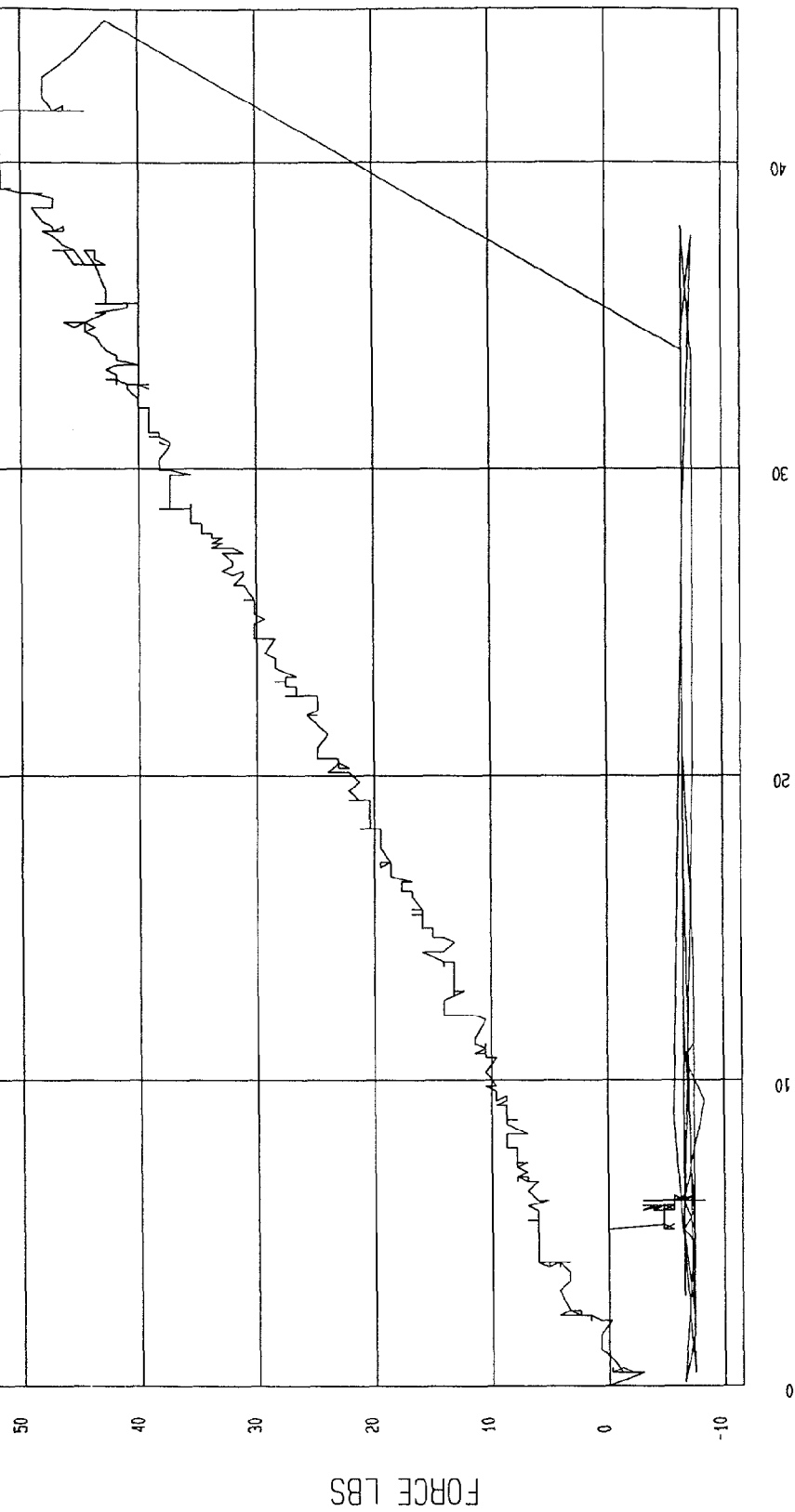
APPROVED BY



TEST: DUMMY CALIBRATION - LUMBAR FLEXION TEST DATE: 01-27-1998 - 20:47

COMPONENT: DUMMY # 272

FORCE as a function of TORSO ROTATION



MGA Research
01-27-1998 20:50

POST-TEST DRIVER DUMMY INSPECTION CHECKLIST

Type: Side Impact Dummy

Serial Number: 271

Inspected By: Tim Michnay

Date: January 27, 1998

<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: 272

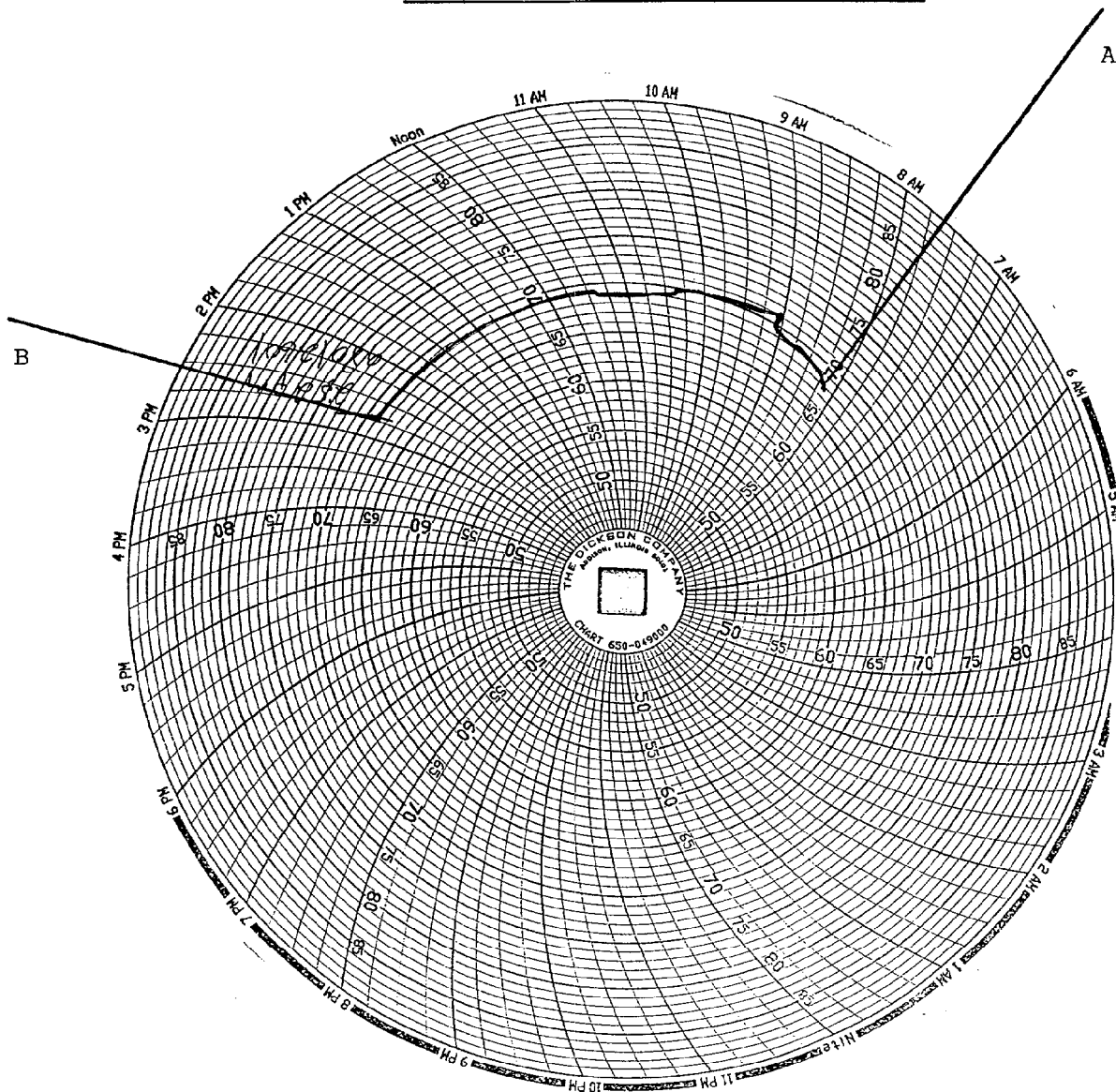
Inspected By: Tim Michnay

Date: January 27, 1998

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

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

VEHICLE AND DUMMY TEMPERATURE



A = dummies installed in vehicle

B = test conducted

APPENDIX D
TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

DUMMY AND VEHICLE CALIBRATION DATA
INSTRUMENTS FOR DRIVER DUMMY NO. 271

	DRIVER		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Upper Rib Y	AP2A4	Endevco	September 11, 1997
Lower Rib Y	AP1B3	Endevco	September 11, 1997
Lower Spine Y	ANAP1	Endevco	September 11, 1997
Pelvis Y	AHTC3	Endevco	September 11, 1997
Upper Rib Redundant Y	AP2D8	Endevco	September 11, 1997
Lower Rib Redundant Y	AP1C6	Endevco	September 11, 1997
Lower Spine Redundant Y	ANAT6	Endevco	September 11, 1997
Pelvis Redundant Y	AGP53	Endevco	September 11, 1997
Head Center of Gravity X	AMP95	Endevco	September 11, 1997
Head Center of Gravity Y	AALH1	Endevco	September 11, 1997
Head Center of Gravity Z	AM748	Endevco	September 11, 1997

INSTRUMENTS FOR PASSENGER DUMMY NO. 272

	LEFT REAR PASSENGER		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Upper Rib Y	A1FJ7	Endevco	September 11, 1997
Lower Rib Y	APYN0	Endevco	September 11, 1997
Lower Spine Y	AP0G2	Endevco	September 11, 1997
Pelvis Y	APY15	Endevco	September 11, 1997
Upper Rib Redundant Y	ALDD6	Endevco	September 11, 1997
Lower Rib Redundant Y	APYN3	Endevco	September 11, 1997
Lower Spine Redundant Y	AP138	Endevco	September 11, 1997
Pelvis Redundant Y	APY15	Endevco	September 11, 1997
Head Center of Gravity X	ALFL9	Endevco	September 11, 1997
Head Center of Gravity Y	AJ9N4	Endevco	September 11, 1997
Head Center of Gravity Z	AJ8D8	Endevco	September 11, 1997

VEHICLE INSTRUMENT CALIBRATION

VEHICLE ACCELEROMETERS			
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Moving Barrier CG X	J04-F10	Entran	August 7, 1997
Moving Barrier CG Y	F11-G04	Entran	August 7, 1997
Moving Barrier CG Z	J04-F12	Entran	August 7, 1997
Moving Barrier Rear Axle X	G13-B07	Entran	August 6, 1997
Moving Barrier Rear Axle Y	L14-D04	Entran	August 4, 1997
Left Mid A-Post Y	C25-A11	Entran	August 5, 1997
Left Lower A-Post Y	J06-D24	Entran	December 10, 1997
Left Mid B-Post Y	F18-G08	Entran	August 7, 1997
Left Lower B-Post Y	J13-F16	Entran	August 6, 1997
Rear Floorpan Above Axle X	J10-E12	Entran	November 5, 1997
Rear Floorpan Above Axle Y	C25-A06	Entran	November 5, 1997
Rear Floorpan Above Axle Z	D05-R12	Entran	July 2, 1997
Driver Seat Track Y	E24-G07	Entran	December 10, 1997
Right Side Sill at Front Seat X	F13-B12	Entran	August 7, 1997
Right Side Sill at Front Seat Y	F12-G06	Entran	January 12, 1998
Right Side Sill at Front Seat Z	D05-R10	Entran	January 12, 1998
Right Side Sill at Rear Seat X	G13-B14	Entran	January 12, 1998
Right Side Sill at Rear Seat Y	H02-J02	Entran	January 12, 1998
Right Side Sill at Rear Seat Z	E10-F14	Entran	January 12, 1998
Left Side Sill at Front Seat Y	G08-B03	Entran	January 12, 1998

VEHICLE INSTRUMENT CALIBRATION

	VEHICLE ACCELEROMETERS		
	SERIAL NO	MANUFACTURER	CALIBRATION DATE
Left Side Sill at Rear Seat Y	F10-D04	Entran	August 4, 1997
Right Rear Occupant Compartment Y	F20-G05	Entran	August 7, 1997
Vehicle CG X	F11-G07	Entran	January 8, 1998
Vehicle CG Y	G13-B03	Entran	August 7, 1997
Vehicle CG Z	E10-F19	Entran	January 8, 1998
Left Front Door on Centerline	F12-G09	Entran	August 7, 1997
Midrear of Left Front Door	E13-D18	Entran	December 10, 1997
Left Front Door Upper Centerline	E10-F06	Entran	August 6, 1997
Midrear of Left Rear Door	I25-J10	Entran	August 7, 1997
Left Rear Door Upper Centerline	J23-E07	Entran	November 5, 1997

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