

NEW CAR ASSESSMENT PROGRAM
SIDE IMPACT TESTING
PASSENGER CARS

1997 FORD ESCORT
4-DOOR SEDAN
NHTSA NO: MV0202

MGA PROVING GROUNDS
5000 WARREN ROAD
BURLINGTON, WI 53105



Test Date: December 2, 1996

Report Date: January 7, 1997

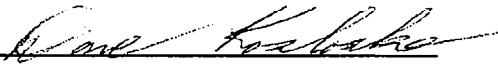
FINAL REPORT

Prepared For:

U.S. DEPARTMENT OF TRANSPORTATION
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OFFICE OF CRASHWORTHINESS STANDARDS
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Approved By: 
Dave Kosloske, Project Engineer

Approved By: _____
John Fleck, Facility Director

Approval Date: _____

FINAL REPORT ACCEPTED BY (OCWS):

Accepted By: _____
Contract Technical Manager

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				14. Sponsoring Agency Code NPS-10																			
15. Supplementary Notes																							
16. Abstract A 90° Moving Deformable Barrier NCAP side impact was conducted on the subject 1997 Ford Escort 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 December 2, 1996. The impact velocity of the Moving Deformable Barrier (MDB) was 61 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 394 mm at level 2. The test vehicle's performance follows: <table border="1"> <thead> <tr> <th></th> <th><u>DRIVER</u></th> <th><u>PASS.</u></th> </tr> </thead> <tbody> <tr> <td>Left Upper Rib (LUR) Accel., g</td> <td>78</td> <td>65</td> </tr> <tr> <td>Left Lower Rib (LLR) Accel., g</td> <td>99</td> <td>88</td> </tr> <tr> <td>Lower Spine (T₁₂) Accel., g</td> <td>77</td> <td>72</td> </tr> <tr> <td>Thoracic Trauma Index (TTI)</td> <td>88</td> <td>80</td> </tr> <tr> <td>Pelvis (PEV) Accel., g</td> <td>120</td> <td>89</td> </tr> </tbody> </table> The doors on the struck side of the vehicle did not separate from the body at the hinges or latches. The opposite doors did not open during the side impact event.							<u>DRIVER</u>	<u>PASS.</u>	Left Upper Rib (LUR) Accel., g	78	65	Left Lower Rib (LLR) Accel., g	99	88	Lower Spine (T ₁₂) Accel., g	77	72	Thoracic Trauma Index (TTI)	88	80	Pelvis (PEV) Accel., g	120	89
	<u>DRIVER</u>	<u>PASS.</u>																					
Left Upper Rib (LUR) Accel., g	78	65																					
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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 Telephone No. 202-366-4946 Attn: Robert Hornickle																			
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SECTION 1
PURPOSE AND TEST PROCEDURE

This side impact test is part of the FY97 NCAP Side Impact Program, sponsored by the National Highway Traffic Safety Administration (NHTSA), under Contract No. DTNH22-93-C-02047. The purpose of this test was to evaluate side impact protection of a 1997 Ford Escort 4-Door.

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

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

SECTION 2

SUMMARY OF SIDE IMPACT TEST

A 1997 Ford Escort 4-Door was impacted on the left or driver's side by a Moving Deformable Barrier (MDB) which was moving forward in a 27° crabbed position to the tow road guidance system at a velocity of 37.9 mph (61.0 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 December 2, 1996. Pre- and post-test photographs of the test vehicle, the MDB and the side impact dummies (SIDs) are included in Appendix A.

Two Side Impact Dummies (SIDs) were placed in the driver and left rear designated seating positions according to instructions specified in the New Car Assessment Program Side Impact Laboratory Test Procedure which is dated October 1996. The side impact event was documented by nine high speed cameras. Camera locations and other pertinent camera information can be found in this report.

The SIDs were instrumented with the following accelerometers.

1. Left Upper Rib (LUR) uniaxial accelerometer (Y-direction)
2. Left Lower Rib (LLR) uniaxial accelerometer (Y-direction)
3. Lower Thoracic Spine (T₁₂) uniaxial accelerometer (Y-direction)
4. Pelvic (PEV) section uniaxial accelerometer (Y-direction)

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

The following table summarizes the results of the test:

Injury Criteria	Front SID	Rear SID
TTI (g)	88	80
Pelvis (g)	120	89

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

DATA SHEET NO. 1

GENERAL VEHICLE TEST PARAMETER DATA

TEST VEHICLE INFORMATION:

Year/Make/Model/Body Style: 1997/Ford/Escort/4-Door

Vehicle NHTSA No.: MV0202 VIN: 1FALP13P4VW152946

Vehicle Body Color: Red Build Date: 6/96

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

Placement Longitudinal; X Lateral

Transmission: 5 Speed; X Manual; Automatic; Overdrive

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

Odometer Reading 50 miles

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

DATA FROM TIRE PLACARD:

Tire Pressure (at capacity): 32 Psi FRONT

 32 Psi REAR

Recommended Tire Size: P185/65R14

Tires on Test Vehicle: P185/65R14 Manufacturer: Uniroyal

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 = 376.5 kg (A)

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

Cargo Capacity (A-B) = 36.3 kg

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

WEIGHT OF TEST VEHICLE WITH MAXIMUM FLUIDS:

Right Front	=	<u>363.8</u> kg	Right Rear	=	<u>208.7</u> kg
Left Front	=	<u>347.4</u> kg	Left Rear	=	<u>216.8</u> kg
TOTAL FRONT	=	<u>711.2</u> kg	TOTAL REAR	=	<u>425.5</u> kg
% of Total Vehicle Weight		= <u>62.6</u> %;	% of Total Weight		= <u>37.4</u> %
TOTAL WEIGHT = <u>1136.7</u> kg					

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

Year/Make/Model/Body Style: 1997/Ford/Escort/4-Door

Vehicle NHTSA No.: MV0202 Test Date: December 2, 1996

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Test Vehicle Delivered Weight with Maximum Fluids	=	<u>1136.7</u> kg
Cargo Carrying Capacity of Test Vehicle	=	<u>36.3</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>1334.4</u> kg

ACTUAL WEIGHT OF TEST VEHICLE WITH 2 DUMMIES AND CARGO:

Right Front	=	<u>388.3</u> kg	Right Rear	=	<u>253.5</u> kg
Left Front	=	<u>405.5</u> kg	Left Rear	=	<u>280.8</u> kg
TOTAL FRONT	=	<u>793.8</u> kg	TOTAL REAR	=	<u>534.3</u> kg
% of Total Weight	=	<u>59.8</u> %	% of Total Weight	=	<u>40.2</u> %
TOTAL TEST WEIGHT	=	<u>1328.1</u> kg			

TEST VEHICLE ATTITUDE:

CURB WEIGHT ATTITUDE:

Right Front 670 mm Left Front 675 mm Right Rear 638 mm Left Rear 630 mm

FULLY LOADED WEIGHT ATTITUDE:

Right Front 666 mm Left Front 659 mm Right Rear 611 mm Left Rear 587 mm

TEST ATTITUDE:

Right Front 663 mm Left Front 658 mm Right Rear 614 mm Left Rear 597 mm

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

Test Vehicle Wheelbase: 2500 mm

C.G. = 1006 mm rearward of front wheel centerline

TOTAL VEHICLE LENGTH:

Right Side = 3964 mm

Centerline = 4336 mm

Left Side = 3964 mm

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

Year/Make/Model/Body Style: 1997/Ford/Escort/4-Door

Vehicle NHTSA No.: MV0202 Test Date: December 2, 1996

FRONT SEAT CUSHION PLACEMENT:

Test Position: 12th position from foremost locking position

FRONT SEAT BACK ADJUSTMENT POSITION:

Seat Back Angle = 5th 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: Non-adjustable

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

AMOUNT OF STODDARD SOLVENT IN FUEL TANK:

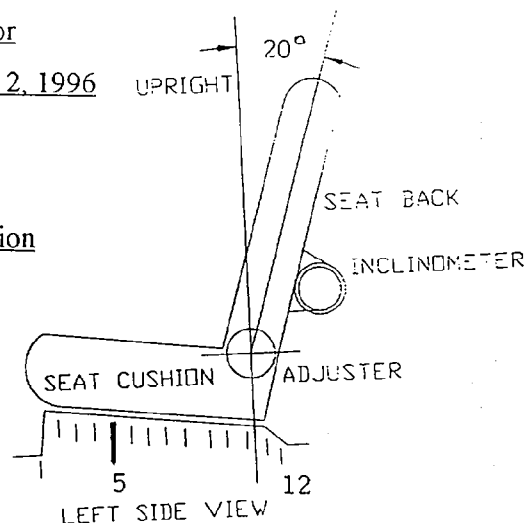
Fuel system usable capacity = 12.7 gallons

Test Volume: 11.8 gallons 93 % of capacity

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

Wheelbase: = 2500 mm

Impact Point is 310 mm rearward of front axle centerline



DATA SHEET NO. 2
TEST VEHICLE SUMMARY OF RESULTS

Year/Make/Model/Body Style: 1997/Ford/Escort/4-Door

Vehicle NHTSA No.: MV0202 Test Date: December 2, 1996

Overall Length = 4336 mm; Overall Width = 1710 mm

TEST WEIGHT:

Right Front = 388.3 kg Right Rear = 253.5 kg

Left Front = 405.5 kg Left Rear = 280.8 kg

TOTAL FRONT = 793.8 kg TOTAL REAR = 534.3 kg

% of Total Weight = 59.8 % % of Total Weight = 40.2 %

TOTAL VEHICLE WEIGHT = 1328.1 kg

Wheelbase = 2500 mm

Longitudinal C.G. from Center of Front Axle = 1006 mm

Impact Angle with Respect to Impactor = 90° degrees

MAXIMUM EXTERIOR STATIC CRUSH:

1. LEVEL 1 (255 mm above ground) = 268 mm

2. LEVEL 2 (452 mm above ground) = 394 mm

3. LEVEL 3 (593 mm above ground) = 378 mm

4. LEVEL 4 (838 mm above ground) = 285 mm

5. LEVEL 5 (1300 mm above ground) = 95 mm

Maximum Post-Test Intrusion = 394 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>with 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: 1997/Ford/Escort/4-Door

Vehicle NHTSA No.: MV0202 Test Date: December 2, 1996

POSITION OF IMPACT (MDB) ON MONORAIL:

Crabbed 27° to left

MDB DETAILS:

Overall Width of Framework Carriage	= <u>1252 mm</u>
Overall Length of MDB (incl. honeycomb impact face)	= <u>4115 mm</u>
Wheelbase of Framework Carriage	= <u>2591 mm</u>
Tread of Framework Carriage (Front & Rear)	= <u>1880 mm</u>
C.G. Location Rearward of Front Axle	= <u>1102 mm</u>
C.G. Location From Center Line	= <u>-8 mm</u>
C.G. Location Above Ground Level	= <u>488 mm</u>

MDB WEIGHT:

Left Front	= <u>496.7 kg</u>	Left Rear	= <u>187.3 kg</u>
Right Front	= <u>283.0 kg</u>	Right Rear	= <u>389.2 kg</u>
TOTAL FRONT	= <u>779.7 kg</u>	TOTAL REAR	= <u>576.5 kg</u>
TOTAL MDB WEIGHT = <u>1356.2 kg</u>			

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

Impact Speed = Primary: 37.9 mph (61.0 kph) Secondary: 38.0 mph (61.2 kph)

CRASH TEST SUMMARY FOR SIDE IMPACTOR (Cont'd)

MAXIMUM STATIC CRUSH OF HONEYCOMB IMPACT FACE:

1.	Row A Top of Stack (813 mm)	= <u>182</u> mm
2.	Row B Mid Stack (686 mm)	= <u>168</u> mm
3.	Row C Top of Bumper (533 mm)	= <u>107</u> mm
4.	Row D Center of Bumper (432 mm)	= <u>151</u> mm

INSTRUMENTATION:

Number of MDB Data Channels = 5

DATA SHEET NO. 4

POST-TEST OBSERVATIONS

Year/Make/Model/Body Style: 1997/Ford/Escort/4-Door

Vehicle NHTSA No.: MV0202 Test Date: December 2, 1996

VISIBLE DUMMY CONTACT POINTS:

	<u>LEFT FRONT SID</u>	<u>LEFT REAR SID</u>
Head	<u>to window sill and left</u> <u>shoulder</u>	<u>to C-Post and roof</u>
Arm	<u>to door</u>	<u>to door</u>
Pelvis	<u>to door</u>	<u>to door</u>
Left Knee	<u>to door</u>	<u>to door</u>
Right Knee	<u>to left knee</u>	<u>to left knee</u>

DOOR OPENING:

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

MDB DISTANCE FROM TARGET IMPACT POINT:

Horizontal: 2 mm forward Vertical: 12 mm high

ARM REST LOCATIONS:

Front: 196 mm from bottom of window

Rear: 212 mm from bottom of window

POST-TEST OBSERVATIONS (Cont'd)

SEAT CRUSH:

Front Seat Back: 25 mm Front Seat Cushion: 82 mm

Left Rear Seat Back: 37 mm Rear Seat Cushion: 187 mm

GLAZING DAMAGE:

Front and rear left door glass broken, windshield cracked

PILLAR FAILURE:

None noted

SILL SEPARATION:

None noted

OTHER NOTABLE IMPACT EFFECTS:

None noted

SECTION 4
OCCUPANT AND VEHICLE INFORMATION

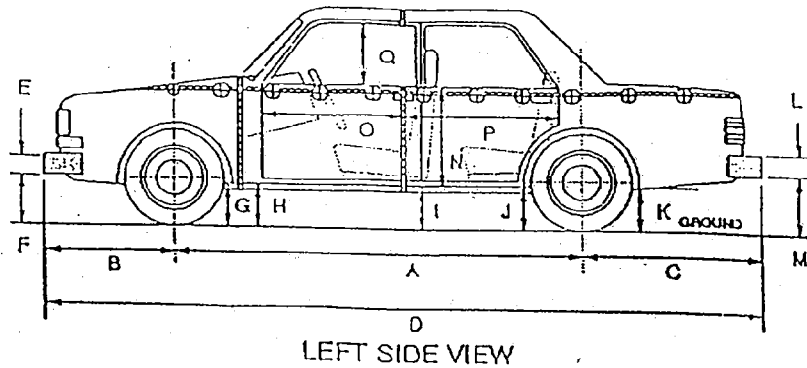
DATA SHEET NO. 5
SIDE IMPACT DUMMY (SID) INSTRUMENTATION DATA

Year/Make/Model/Body Style: 1997/Ford/Escort/4-Door
Vehicle NHTSA No.: MV0202 Test Date: December 2, 1996

	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	78.4	32	-21.3	74	65.5	45	-6.2	197
Left Lower Rib (LLR) Y	99.1	32	-15.9	73	88.2	33	-13.0	71
SPINE ACCELERATIONS								
Lower Lateral Y	77.2	35	-29.3	63	72.1	38	-19.9	61
PELVIS ACCELERATIONS								
Lateral Y	120.3	28	-18.5	68	89.3	30	-10.8	81

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	2500	2473	27
B	866	885	19
C	970	908	62
D	4336	4266	70
E	160	160	0
F	394	412	18
G	218	220	2
H	194	235	41
I	205	236	31
J1/J2	209/207	240/230	31/23
K	407	448	41
L*	---	---	---
M	397	431	34
N	594	522	72
O	685	660	25
P	1273	1164	109
Q	426	411	15
R	3964	4062	98
S	3964	4010	46
T	1710	1457	253

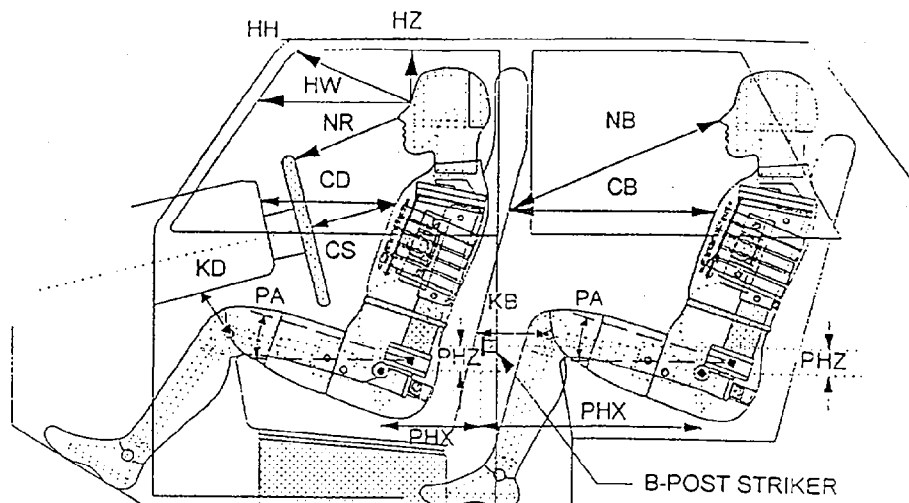
* Rear bumper removed for test.

DATA SHEET NO. 7

SIDE IMPACT DUMMY (SID) LONGITUDINAL CLEARANCE DIMENSIONS

Year/Make/Model/Body Style: 1997/Ford/Escort/4-Door

NHTSA NO.: MV0202 Test Date: December 2, 1996



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

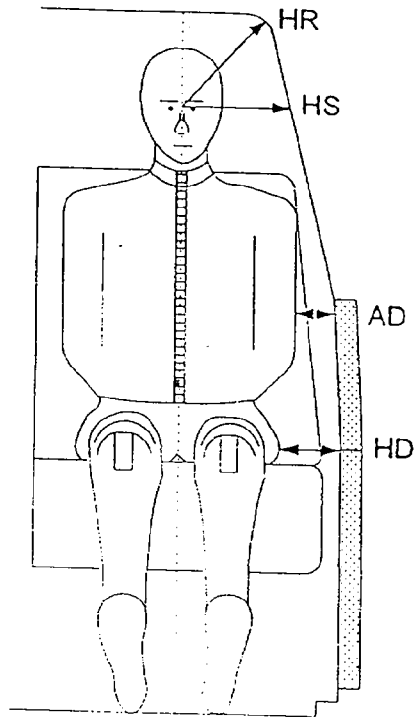
	FRONT SID ID # 271		REAR PASSENGER SID ID # 272
HH	330	HZ	130
HW	508	NB	551
HZ	142	CB	478
NR	425	KBL (KBA)	202 (0°)
CD	532	KBR (KBA)	204 (0°)
CS	330	PA°	23.9
KDL(KDA°)	188 (31°)	PHX	272
KDR(KDA°)	198 (24°)	PHZ	291
PA°	23.6°		
PHX	192		
PHZ	101		

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

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

Year/Make/Model/Body Style: 1997/Ford/Escort/4-Door

NHTSA NO.: MV0202 Test Date: December 2, 1996



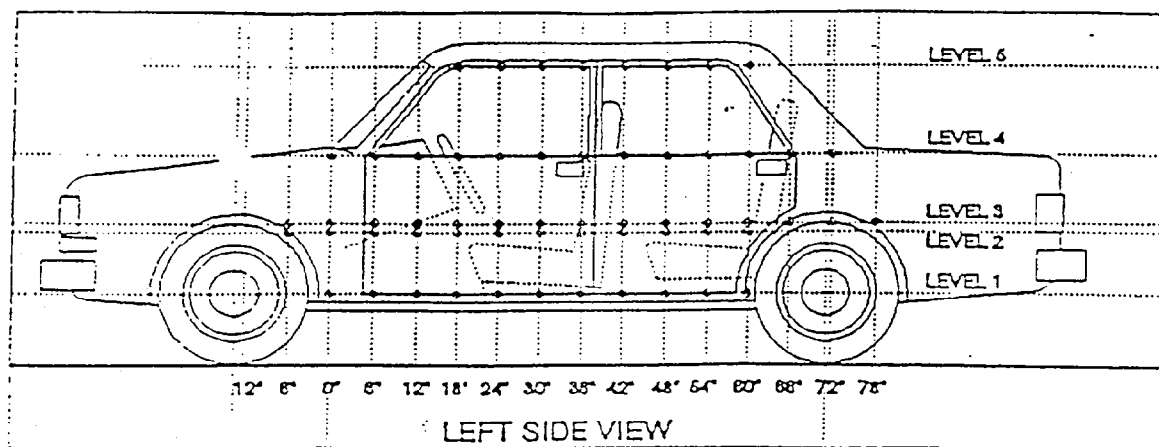
NOTE: All dimensions are in mm

	DRIVER ID # 271	LEFT REAR PASSENGER ID # 272
HR	207	70
HS	298	236
AD	76	87
HD	133	126

DATA SHEET NO. 9
VEHICLE SIDE MEASUREMENTS

Year/Make/Model/Body Style: 1997/Ford/Escort/4-Door

NHTSA NO.: MV0202 Test Date: December 2, 1996



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>1300</u> mm
Level 2 @ Occupant H-Point	= <u>838</u> mm
Level 3 @ Mid Door	= <u>593</u> mm
Level 4 @ Window Sill	= <u>452</u> mm
Level 5 @ Window Top	= <u>255</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	642	723	81
300	646	788	142
450	646	793	147
600	642	816	174
750	642	823	181
900	642	834	192
1050	642	895	253
1200	642	910	268
1350	644	826	182
1500	643	793	150
1650	640	760	120
1800	635	750	115
1950			

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

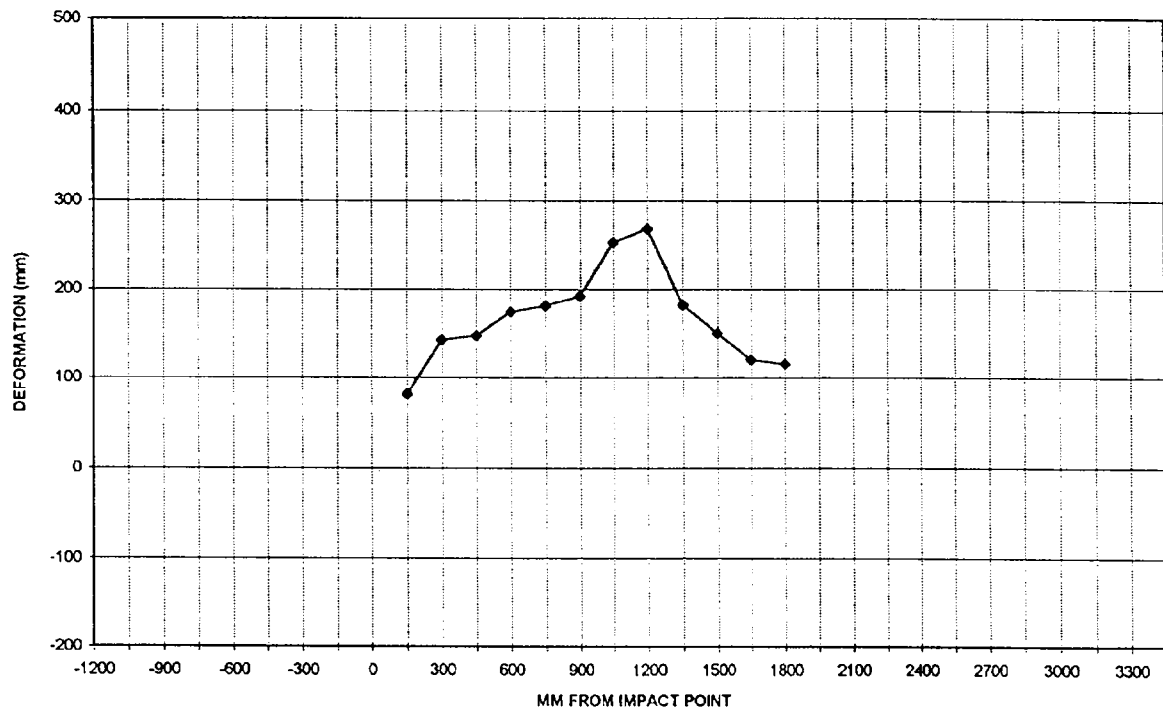
DATA SHEET NO. 10

VEHICLE EXTERIOR CRUSH PROFILES

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

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	640	642	2
-750	606	613	7
-600			
-450			
-300			
-150			
0 (impact point)			
150	568	770	202
300	568	867	299
450	567	896	329
600	566	911	345
750	565	925	360
900	565	931	366
1050	565	937	372
1200	566	960	394
1350	567	920	353
1500	565	868	303
1650	563	709	146
1800	561	706	145
1950			

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

DATA SHEET NO. 10

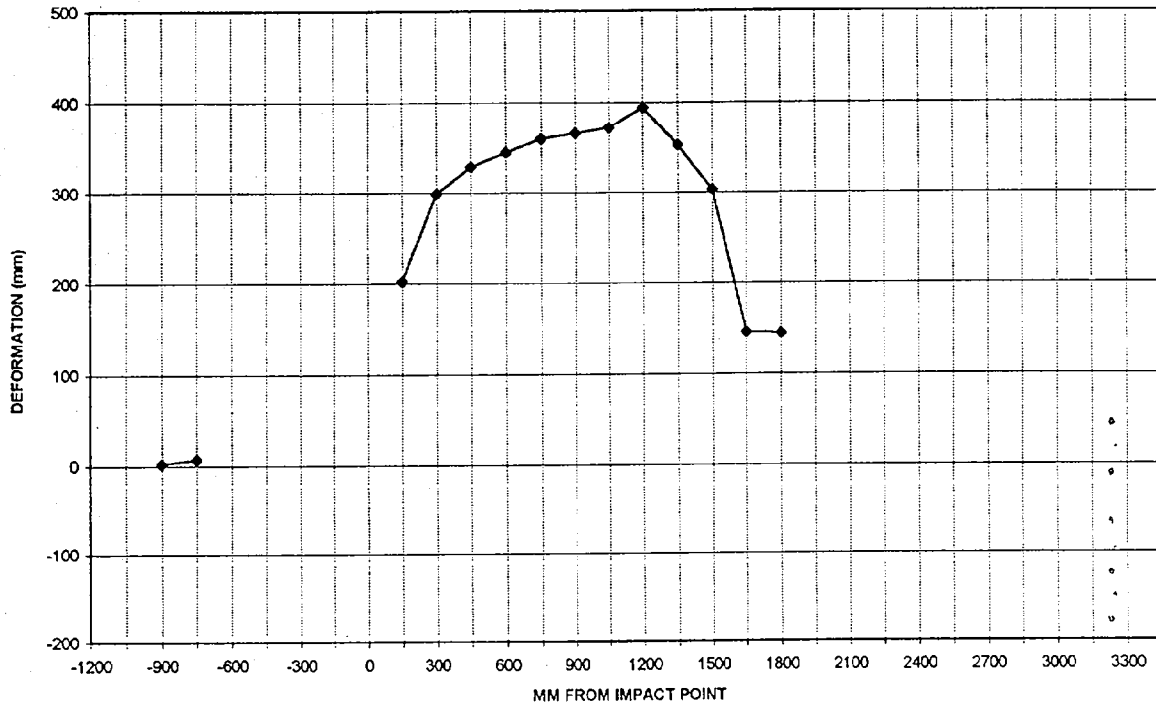
VEHICLE EXTERIOR CRUSH PROFILES

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

Reference plane is parallel to test vehicle longitudinal centerline.

Given dimensions = Reference plane to car body

VEHICLE EXTERIOR STATIC CRUSH



LEVEL 2 - OCCUPANT H-POINT

DATA SHEET NO. 10

VEHICLE EXTERIOR CRUSH PROFILES

Longitudinal Distance (mm)	Level 3 - Mid Door		
	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1800			
-1650			
-1500			
-1350			
-1200			
-1050			
-900	649	637	-12
-750	605	599	-6
-600	584	587	3
-450			
-300			
-150			
0 (impact point)	558	640	82
150	559	800	241
300	559	846	287
450	557	887	330
600	558	902	344
750	558	905	347
900	559	919	360
1050	559	924	365
1200	562	940	378
1350	561	928	367
1500	559	877	318
1650	557	822	265
1800	554	756	202
1950	556	628	72

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

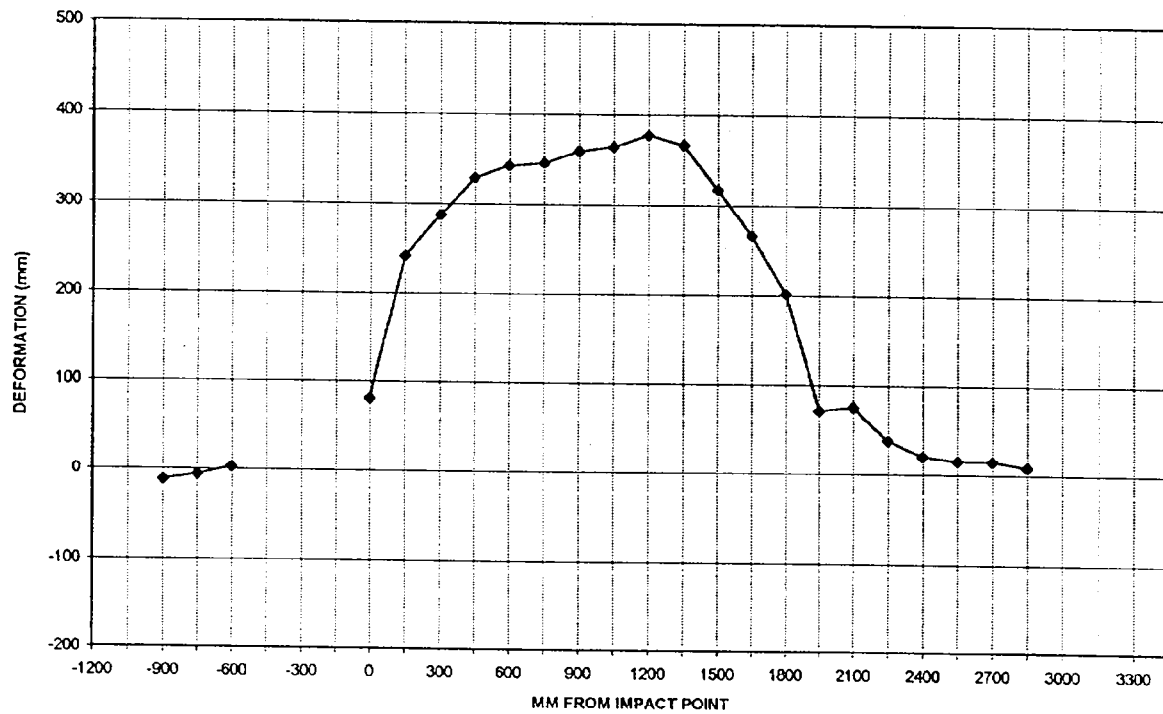
DATA SHEET NO. 10

VEHICLE EXTERIOR CRUSH PROFILES

	Level 3 - Mid Door		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
2100	560	636	76
2250	564	603	39
2400	572	593	21
2550	584	600	16
2700	603	618	15
2850	637	646	9
3000			
3150			
3300			

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			
-750	673	672	-1
-600	658	662	4
-450	650	660	10
-300	643	657	14
-150	636	654	18
0 (impact point)	632	650	18
150	630	661	31
300	628	775	147
450	626	834	208
600	630	867	237
750	632	870	238
900	632	879	247
1050	634	892	258
1200	632	917	285
1350	633	914	281
1500	632	905	273
1650	631	888	257
1800	628	800	172
1950	631	720	89

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

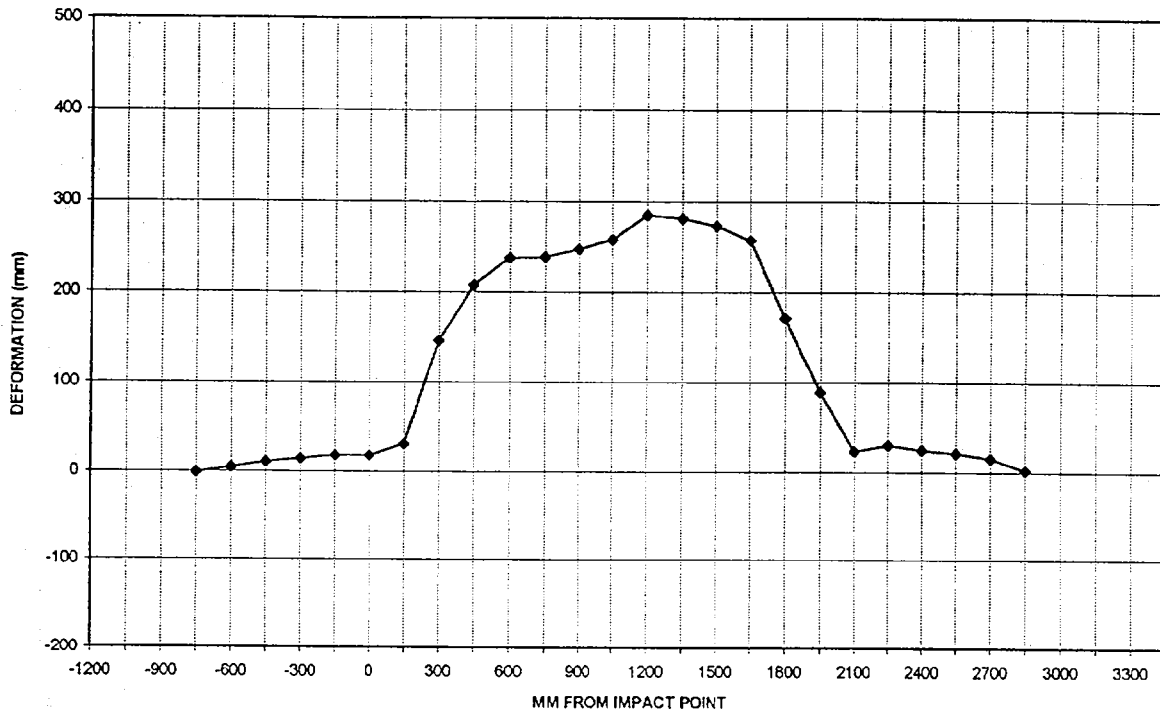
DATA SHEET No. 10

VEHICLE EXTERIOR CRUSH PROFILES

	Level 4 - Window Sill		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
2100	633	656	23
2250	637	667	30
2400	644	669	25
2550	656	677	21
2700	669	684	15
2850	692	694	2
3000			
3150			
3300			

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

VEHICLE EXTERIOR STATIC CRUSH



LEVEL 4 - WINDOW SILL

DATA SHEET NO. 10

VEHICLE EXTERIOR CRUSH PROFILES

Longitudinal Distance (mm)	Level 5 - Window Top		
	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1800			
-1650			
-1500			
-1350			
-1200			
-1050			
-900			
-750			
-600			
-450			
-300			
-150			
0 (impact point)			
150			
300			
450			
600			
750	864	902	38
900	852	905	53
1050	849	917	68
1200	845	940	95
1350	844	934	90
1500	845	920	75
1650	843	906	63
1800	845	890	45
1950	853	890	37

Reference plane is parallel to test vehicle longitudinal centerline.

Given dimensions = Reference plane to car body

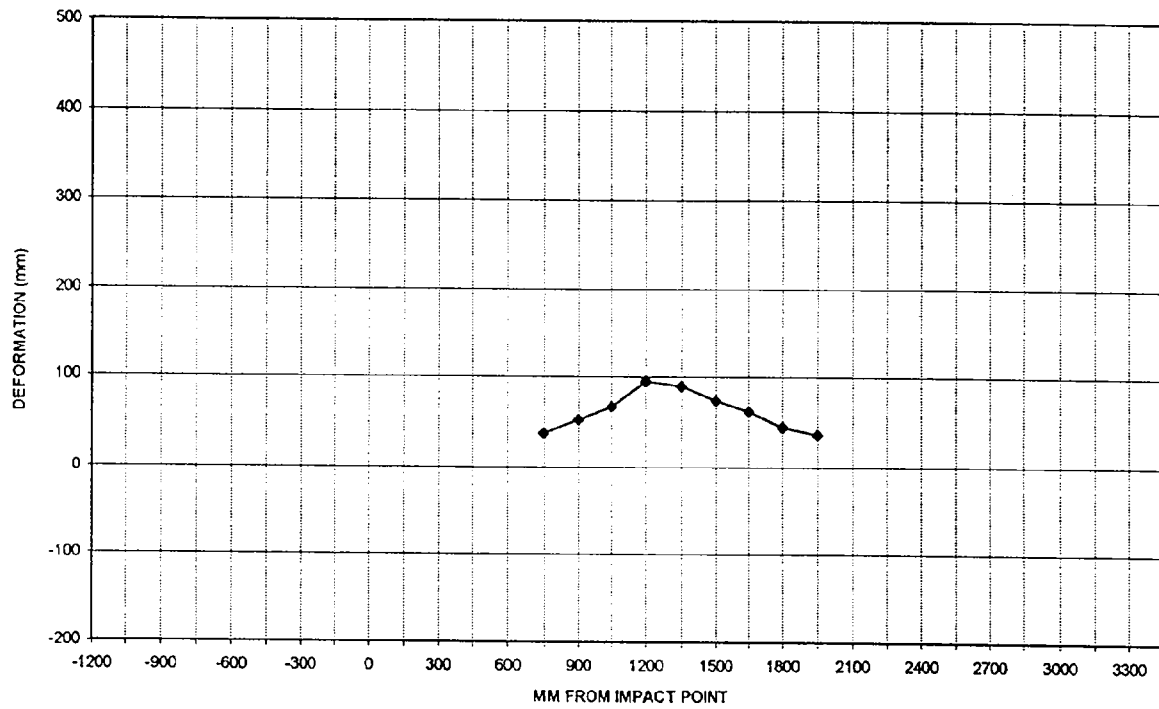
DATA SHEET NO. 10

VEHICLE EXTERIOR CRUSH PROFILES

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

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

VEHICLE EXTERIOR STATIC CRUSH



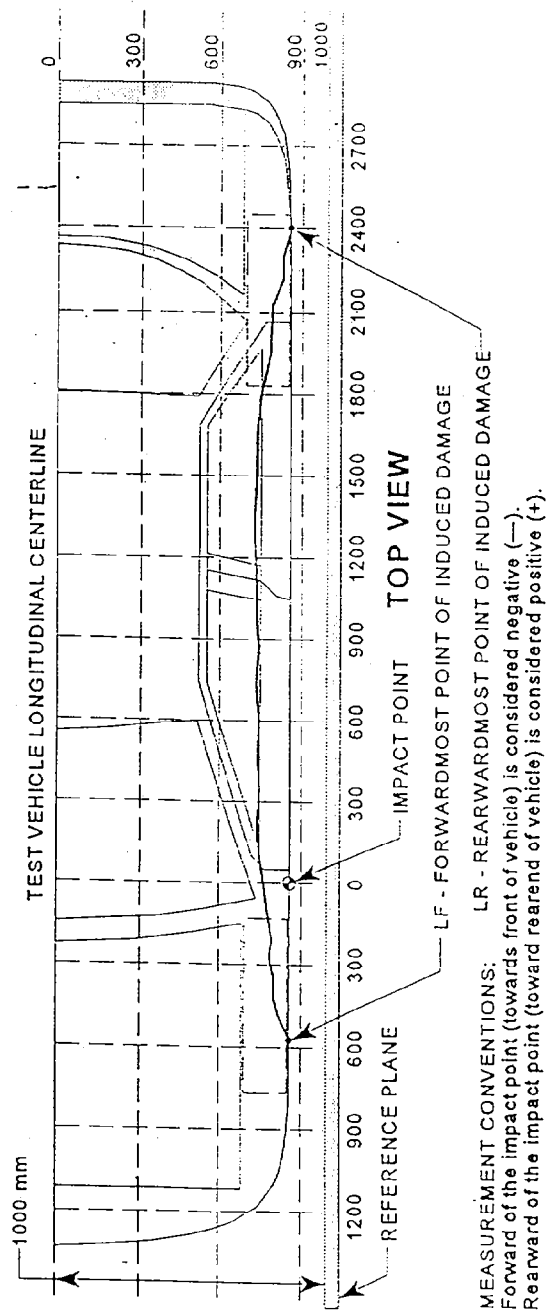
LEVEL 5 - WINDOW TOP

DATA SHEET NO. 11

VEHICLE DAMAGE PROFILE DISTANCES

Year/Make/Model/Body Style: 1997/Ford/Escort/4-Door

NHTSA NO.: MV0202 Test Date: December 2, 1996



DPD MEASUREMENTS	POST-TEST (mm)	PRE-TEST (mm)	STATIC CRUSH (mm)
1. (LF = <u>-750</u> mm)	672	672	0
2. <u>-30</u> mm	663	632	31
3. <u>690</u> mm	919	566	353
4. <u>1410</u> mm	931	567	364
5. <u>2130</u> mm	668	634	34
6. (LR = <u>2850</u> mm)	694	694	0

DATA SHEET NO. 12

EXTERIOR STATIC CRUSH FOR SIDE IMPACTOR

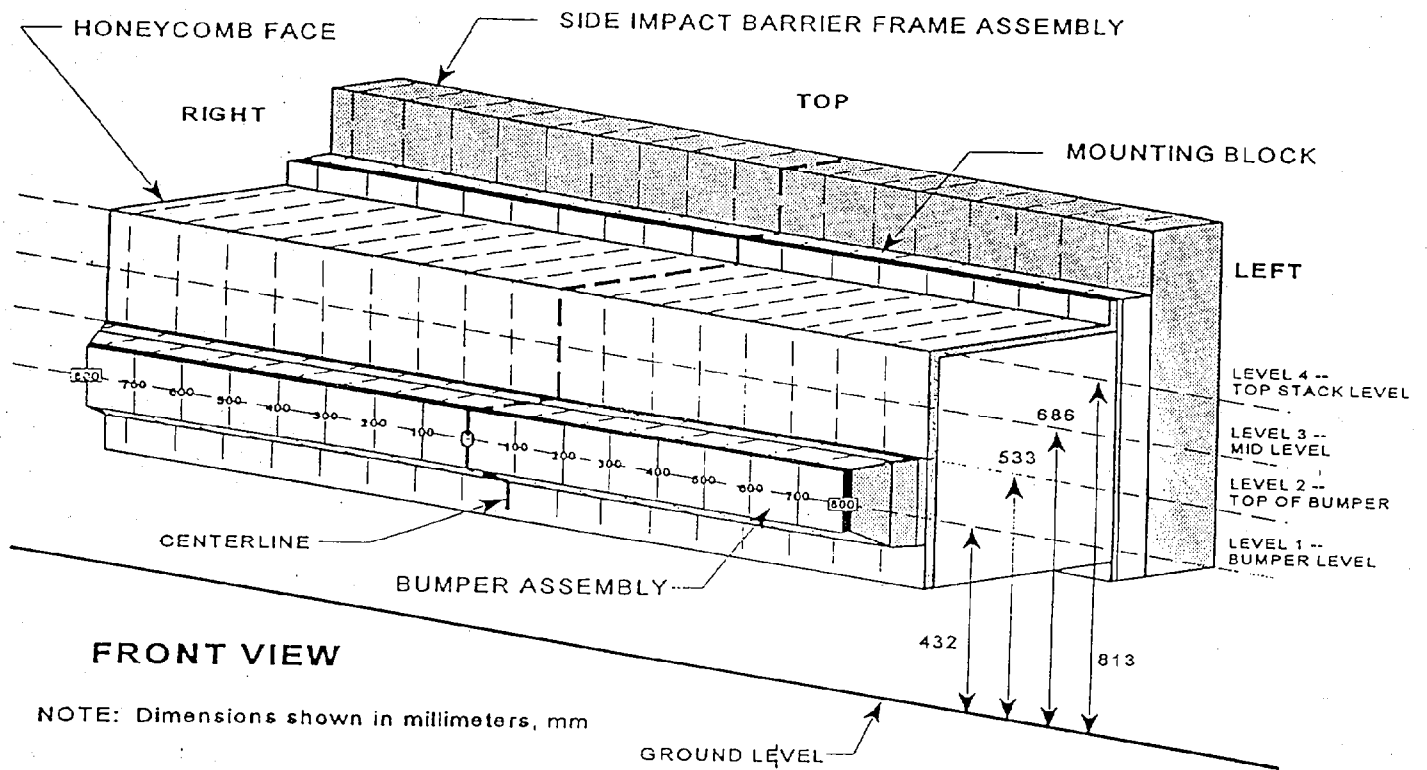
Year/Make/Model/Body Style: 1997/Ford/Escort/4-Door

Vehicle NHTSA No.: MV0202 Test Date: December 2, 1996

		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	71	9	1	1	4	5	7	9	11	13	17	20	40	79	117	162	182
Mid Level Level 3	686 mm	36	2	1	1	2	5	7	7	6	6	7	11	13	23	57	118	168
Top Bumper Level 2	533 mm	60	48	37	27	23	24	26	29	29	32	34	35	37	40	52	81	107
Mid Bumper Level 1	432 mm	87	70	54	43	36	37	39	40	41	43	45	47	50	58	83	125	151

See next page for Barrier Face Graphic

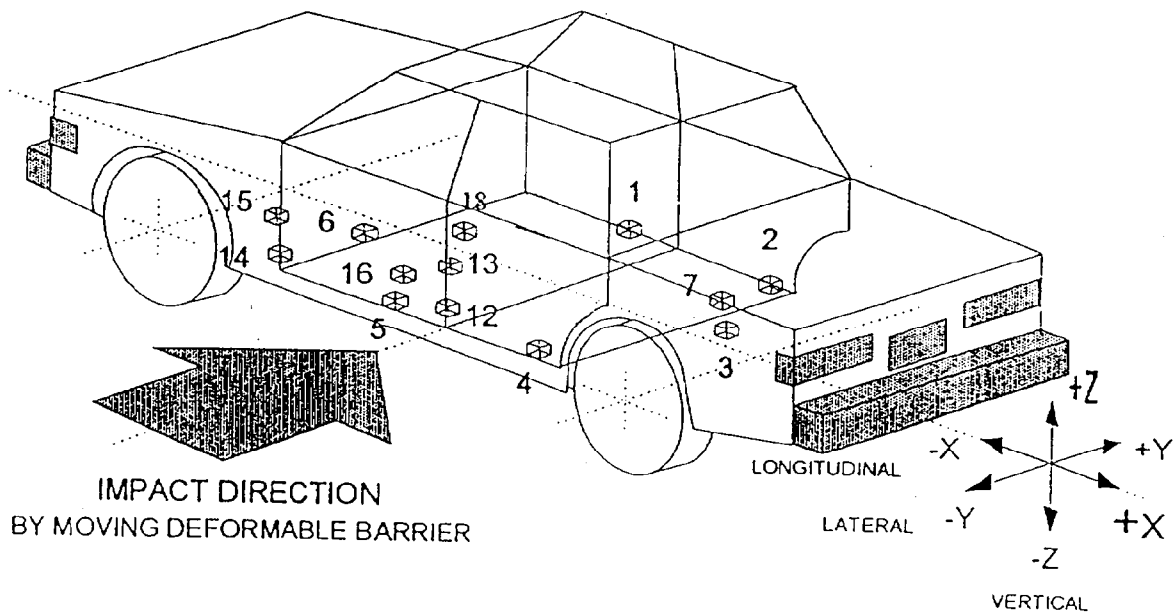
DATA SHEET NO. 12 (Cont'd)



DATA SHEET 13
TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Year/Make/Model/Body Style: 1997/Ford/Escort/4-Door

Vehicle NHTSA No.: MV0202 Test Date: December 2, 1996



- 1 - Right Front Sill
- 2 - Right Rear Sill
- 3 - Rear Floorpan Above Axle
- 4 - Left Rear Sill
- 5 - Left Front Sill
- 6 - Left Mid Door
- 7 - Right Rear Occ. Compartment

- 12 - Left Lower B-Post
- 13 - Left Middle B-Post
- 14 - Left Lower A-Post
- 15 - Left Middle A-Post
- 16 - Front Seat Track
- 18 - Vehicle C.G.

DATA SHEET NO. 13

TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Year/Make/Model/Body Style: 1997/Ford/Escort/4-Door

Vehicle NHTSA No.: MV0202 Test Date: December 2, 1996

Accel. No.	Description	Coordinates (mm)*			Long. (X) Maximums (g's)		Lat. (Y) Maximums (g's)		Vert. (Z) Maximums (g's)		Resultant (g's)
		X	Y	Z	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	
1	Rt. Side Sill @ Front Seat	2098	645	208	3.8	-4.5	22.5	-2.4	2.2	-4.6	22.5
2	Rt. Side Sill @ Rear Seat	1228	653	218	4.4	-4.3	31.9	-4.1	7.9	-5.6	32.7
3	Rr. Floorpan Above Axle	775	0	504	4.1	-11.7	28.2	-3.2	13.8	-19.6	28.3
4	Left Side Sill @ Rr. Seat	1210	-653	224			66.2	-20.5			
5	Left Side Sill @ Frt. Seat	2084	-645	210			38.8	-7.2			
6	Left Front Door on Centerline	2297	-724	736			218.0	-125.7			
7	Right Rear Occupant Compartment	1537	396	278			28.5	-3.2			
8	Mid Rear of Left Front Door	2116	-714	702			173.4	-102.6			
9	Left Front Door Upper Centerline	2296	-729	780			129.6	-52.4			
10	Mid Rear of Left Rear Door	1322	-710	716			112.8	-85.8			
11	Left Rear Door Upper Centerline	1339	-722	800			130.7	-54.5			
12	Left Lower B-Post**	1804	-646	286							
13	Left Mid B-Post	1816	-694	810			207.1	-112.4			
14	Left Lower A-Post	2772	-664	286			65.6	-30.6			
15	Left Mid A-Post	2788	-738	820			77.8	-27.3			
16	Driver Left Seat Track	2004	-570	290			69.8	-20.0			
18	Vehicle CG	1005	7	315	1.2	-10.0	24.2	-3.9	12.4	-8.8	24.4

*Reference: X - Rear Bumper (+ Forward) ** No valid data collected

Y - Vehicle Centerline (+ To right)

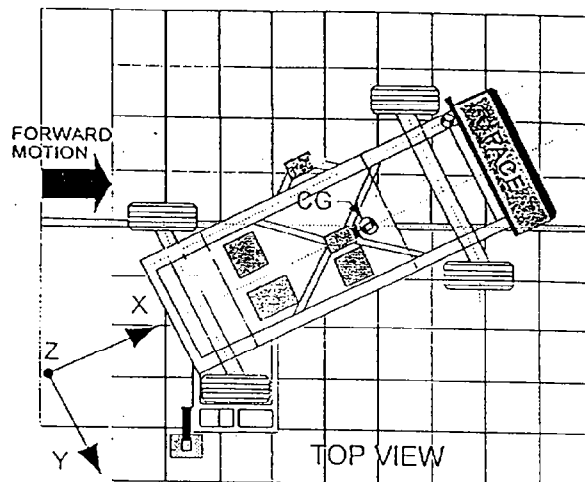
Z - Ground Level (+ Up)

DATA SHEET NO. 14

MOVING DEFORMABLE BARRIER (MDB) ACCELEROMETER LOCATIONS AND DATA SUMMARY

Year/Make/Model/Body Style: 1997/Ford/Escort/4-Door

Vehicle NHTSA No.: MV0202 Test Date: December 2, 1996



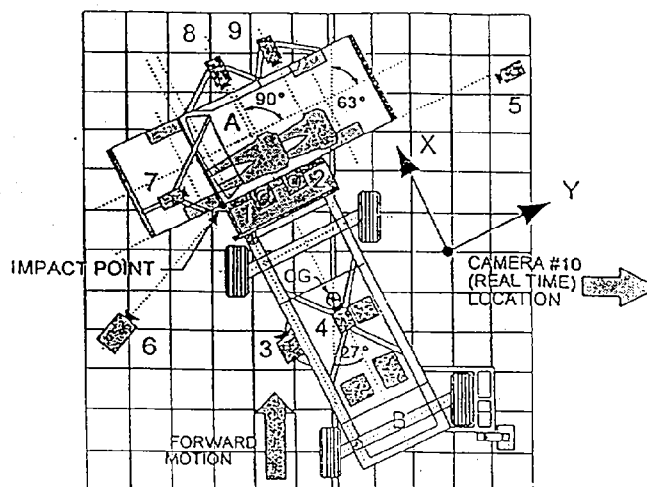
Accel. No.	Description	Coordinates (mm)*			(+) Positive		(-) Negative	
		X	Y	Z	Max. (g)	Time (msec)	Max. (g)	Time (msec)
1	MDB Center of Gravity	-1092	0	483				
	Longitudinal (X)	---	---	---	1.5	190	-17.6	41
	Lateral (Y)	---	---	---	0.9	72	-7.0	32
	Vertical (Z)	---	---	---	9.2	178	-7.7	41
	Resultant (R)	---	---	---	19.5	41	---	---
2	Rear Frame Member	-2591	-625	622				
	Longitudinal (X)	---	---	---	2.7	193	-21.3	34
	Lateral (Y)	---	---	---	5.1	20	-1.0	197

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

DATA SHEET NO. 15
HIGH SPEED CAMERA LOCATIONS AND DATA

Year/Make/Model/Body Style: 1997/Ford/Escort

Vehicle NHTSA No.: MV0202 Test Date: December 2, 1996



Camera No.	View	Coordinates (mm)*			Angle	Lens (mm)	Film Speed (fps)
		X	Y	Z			
	Real Time					13	
6	Left Impact	-1010	-2340	1640	90	13	1020
8	Onboard Driver					8	870
9	Onboard Passenger					8	820
7	Onboard Hood					13	1000
5	Rear Impact	-380	10460	1810	90	25	935
1	Top Overall	-150	1140	5000	90	8	1031
2	Top Impact	-120	50	5000	90	13	980
4	Cart Overall					13	1020
3	Cart Pointer					35	943

* Reference: (from point of impact)

+X = Forward

+Y = To Right

+Z = Upward

DATA SHEET 16
FUEL SYSTEM INTEGRITY POST IMPACT TEST DATA

Vehicle Year/Make/Model/Body Style: 1997/Ford/Escort/4-Door

Vehicle NHTSA No.: MV0202 Test Date: December 2, 1996

TEST REQUIREMENTS:

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

TEST VEHICLE IMPACT TYPE: X Side Impact MDB 37.9 mph (61.0 kph)

FUEL SPILLAGE MEASUREMENT:

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

FUEL SPILLAGE LOCATION(S): None

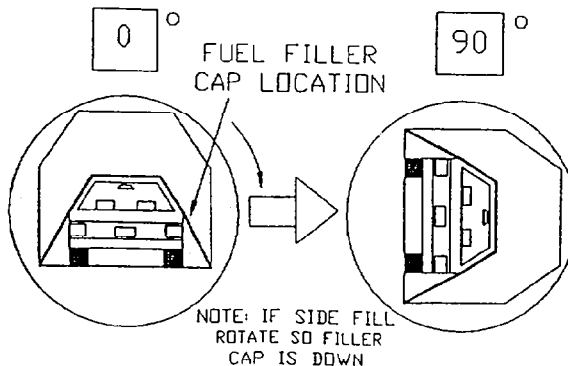
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA

Vehicle Year/Make/Model/Body Style: 1997/Ford/Escort/4-Door

Vehicle NHTSA No.: MV0202 Test Date: December 2, 1996

TEST PHASE: 0° - 90°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 55 seconds
(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 55 seconds

Next Whole Minute Interval = 8 minutes

FUEL SPILLAGE MEASUREMENT:

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

FUEL SPILLAGE LOCATIONS(S): None

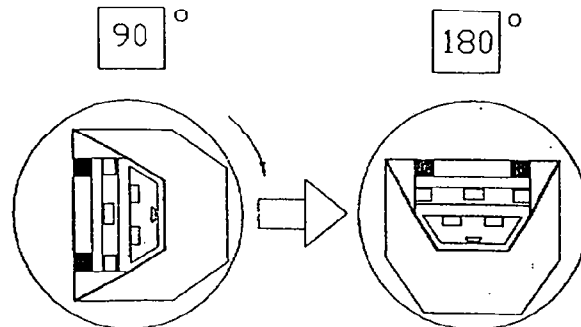
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA (Cont'd)

Vehicle Year/Make/Model/Body Style: 1997/Ford/Escort/4-Door

Vehicle NHTSA No.: MV0202 Test Date: December 2, 1996

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

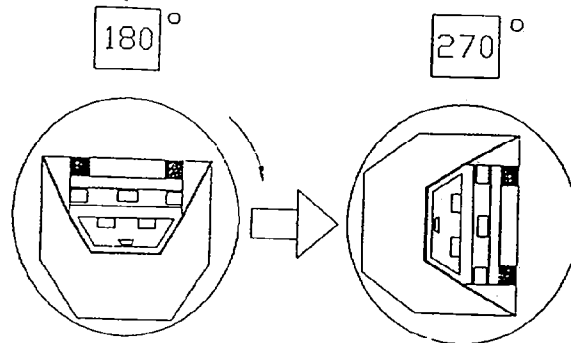
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA (Cont'd)

Vehicle Year/Make/Model/Body Style: 1997/Ford/Escort/4-Door

Vehicle NHTSA No.: MV0202 Test Date: December 2, 1996

TEST PHASE: 180° - 270°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 18 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 18 seconds

Next Whole Minute Interval = 8 minutes

FUEL SPILLAGE MEASUREMENT:

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

FUEL SPILLAGE LOCATIONS(S): None

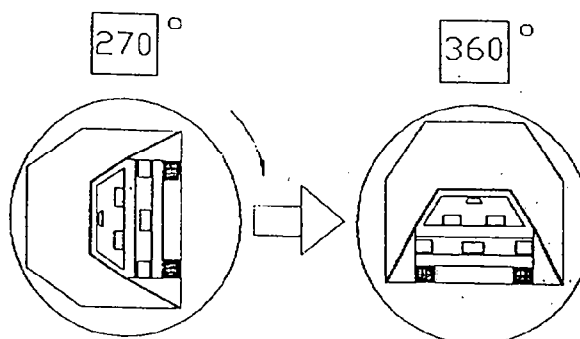
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA

Vehicle Year/Make/Model/Body Style: 1997/Ford/Escort/4-Door

Vehicle NHTSA No.: MV0202 Test Date: December 2, 1996

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

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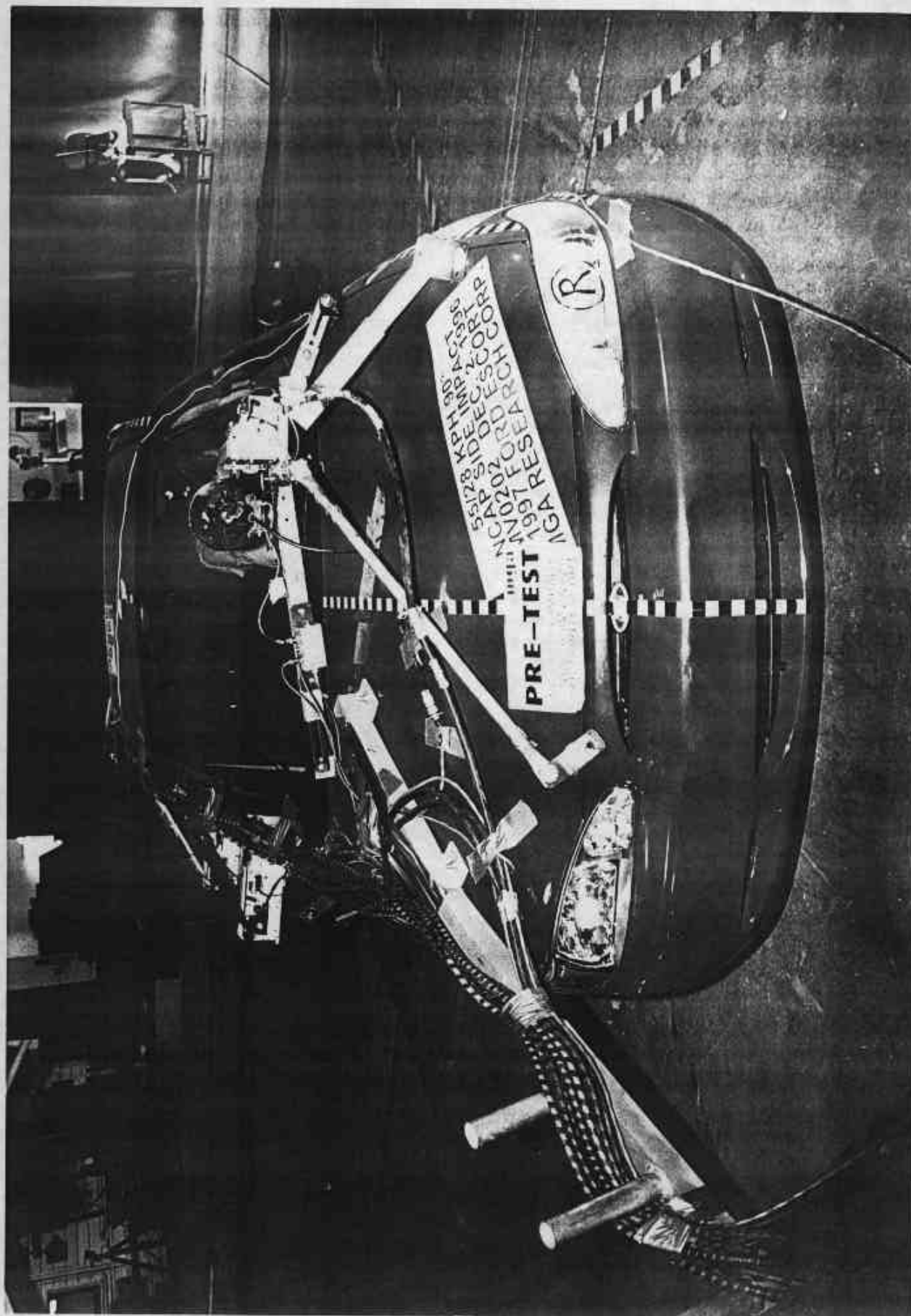


Photo No. A-1 - Pre-Test Front View of Test Vehicle

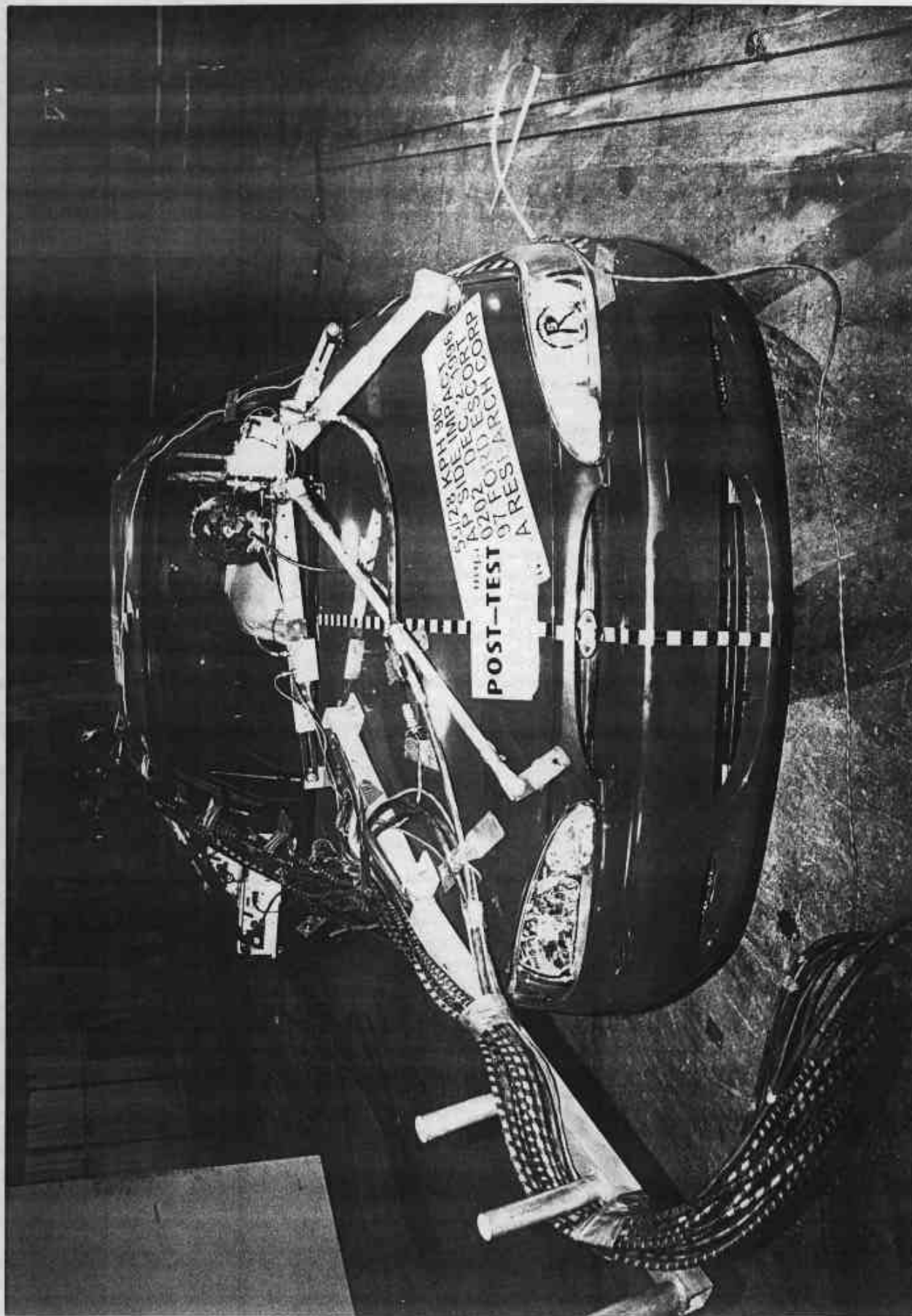


Photo No. A-2 - Post-Test Front View of Test Vehicle

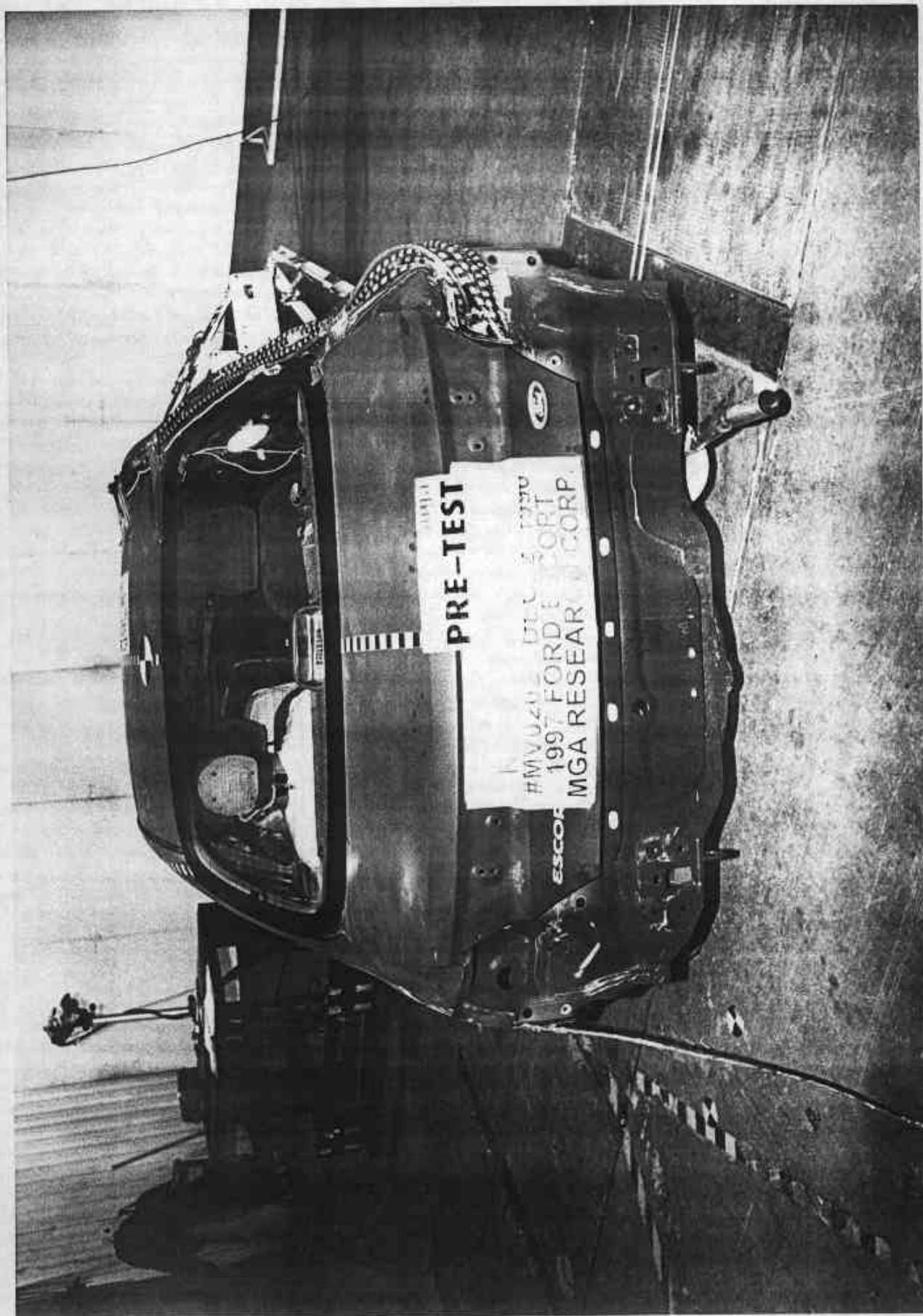


Photo No. A-3 - Pre-Test Rear View of Test Vehicle

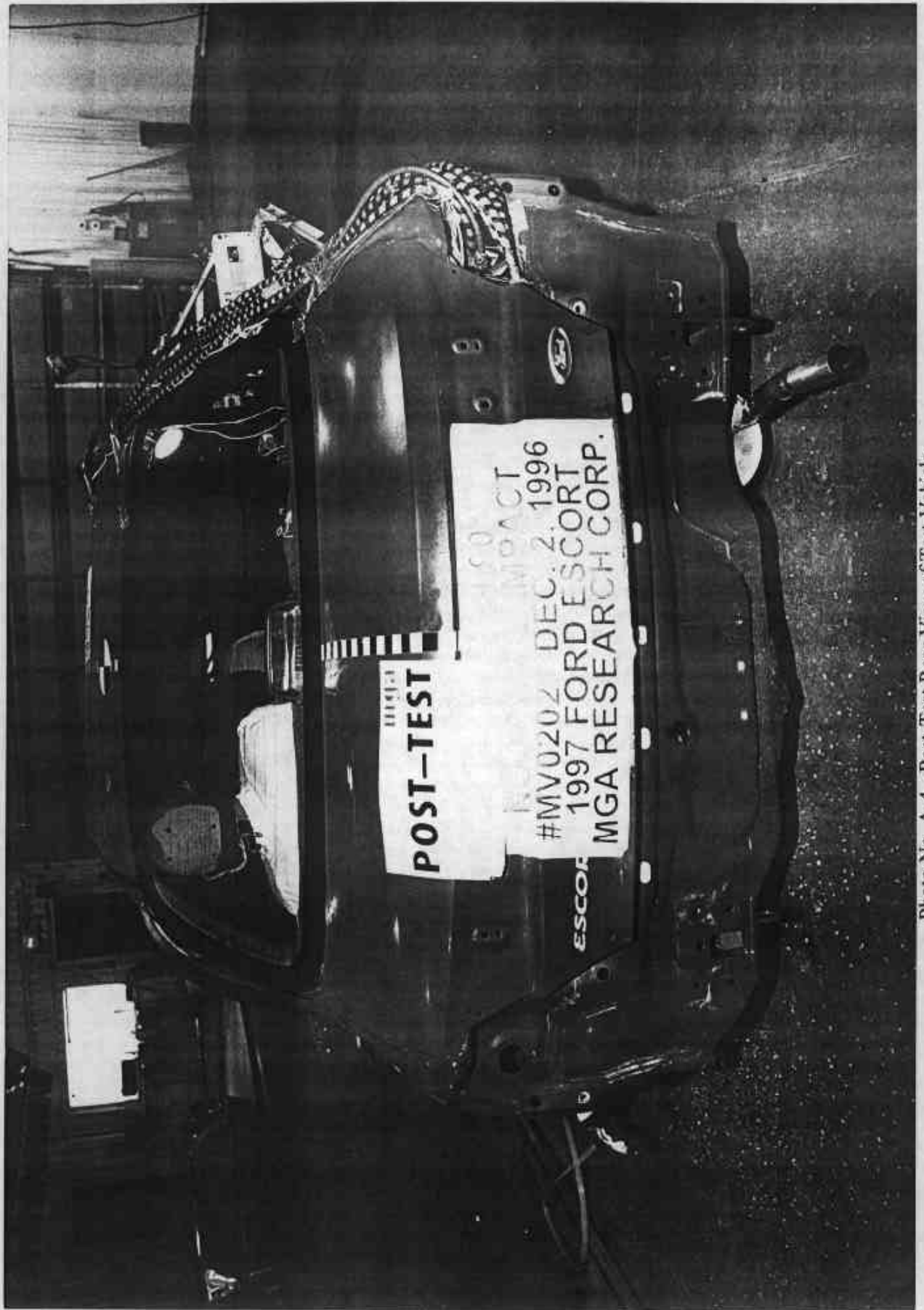


Photo No. A-4 - Post-Test Rear View of Test Vehicle

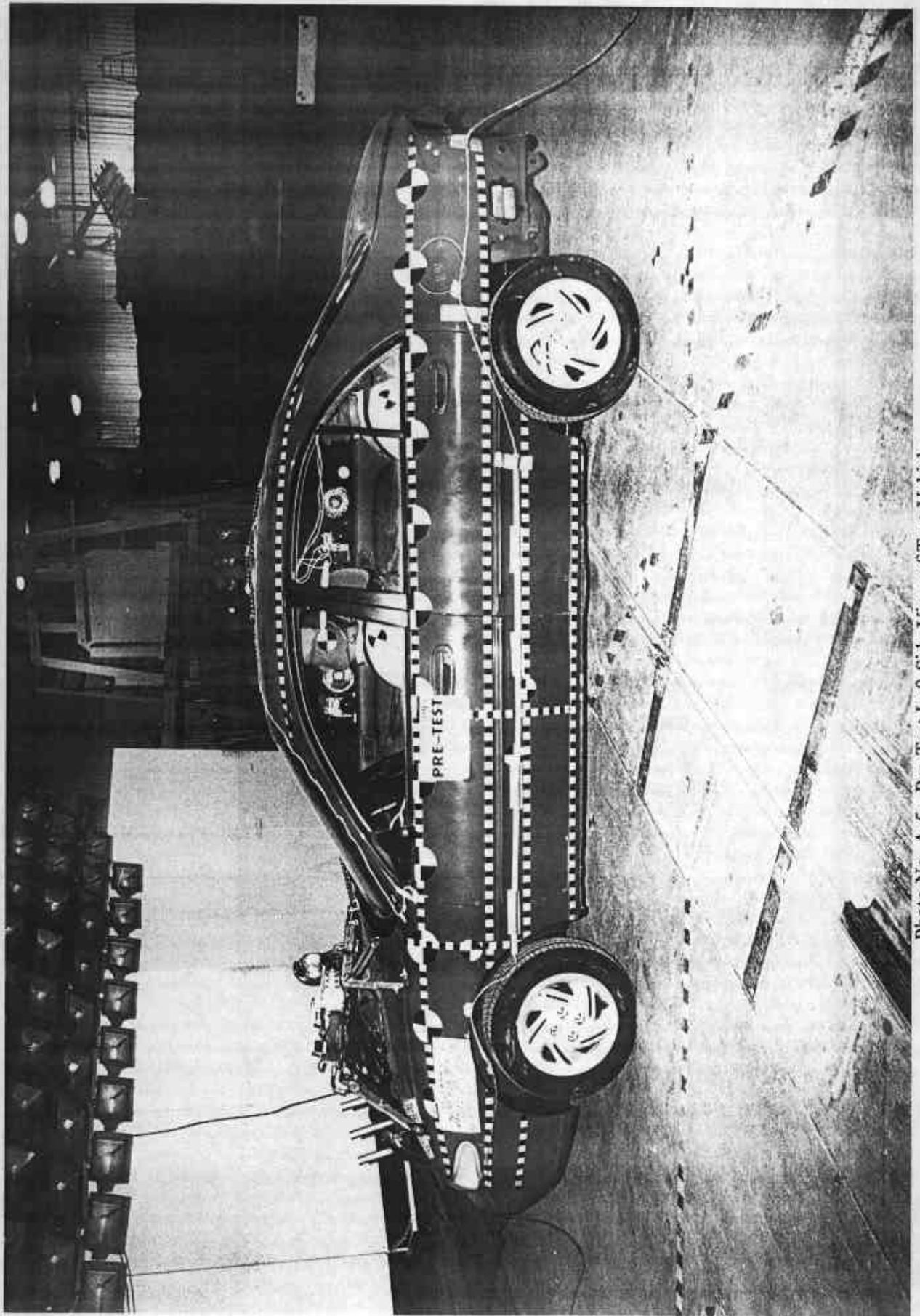


Photo No. A-5 - Pre-Test Left Side View of Test Vehicle

A-5

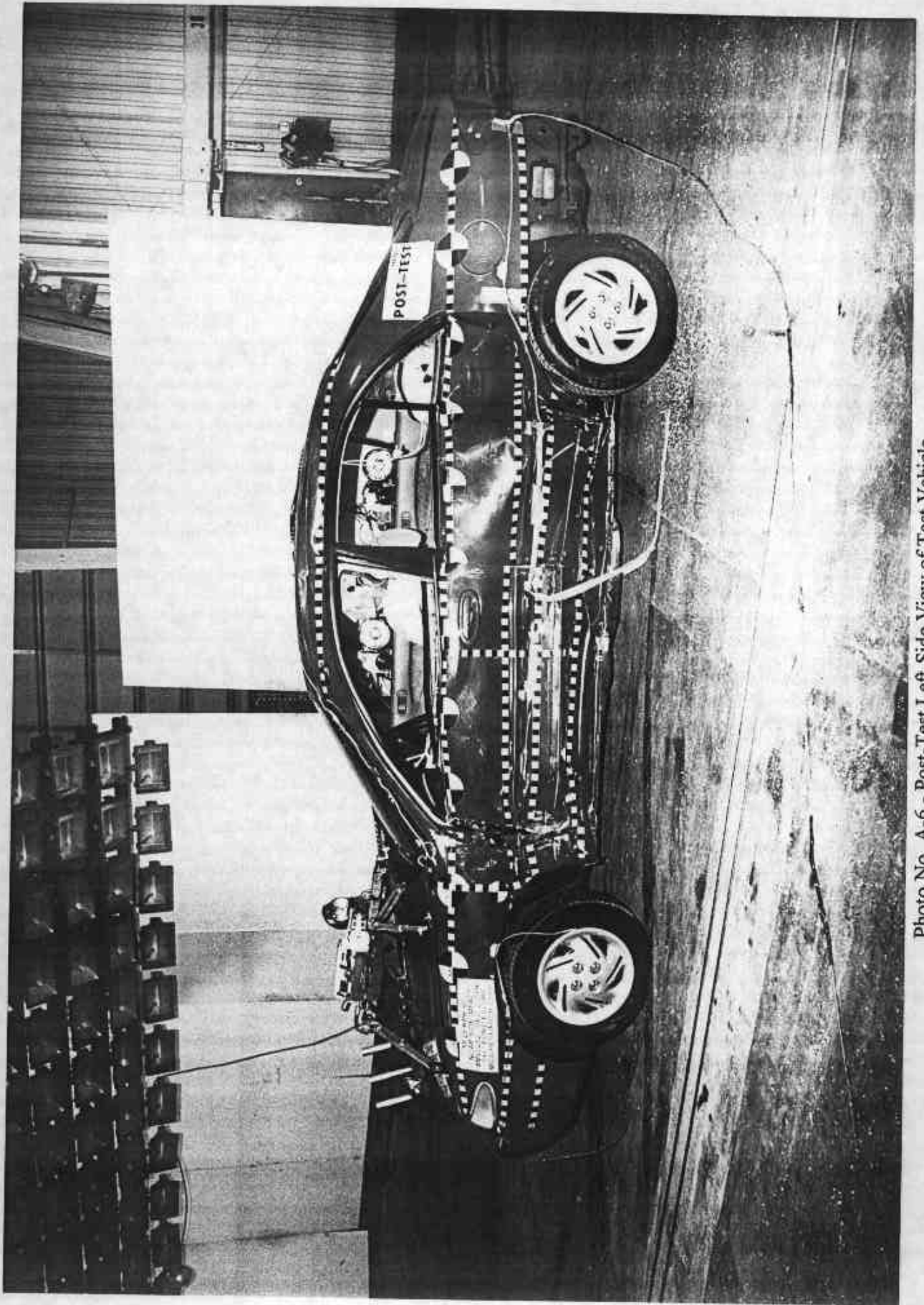


Photo No. A-6 - Post-Test Left Side View of Test Vehicle



A-7

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



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

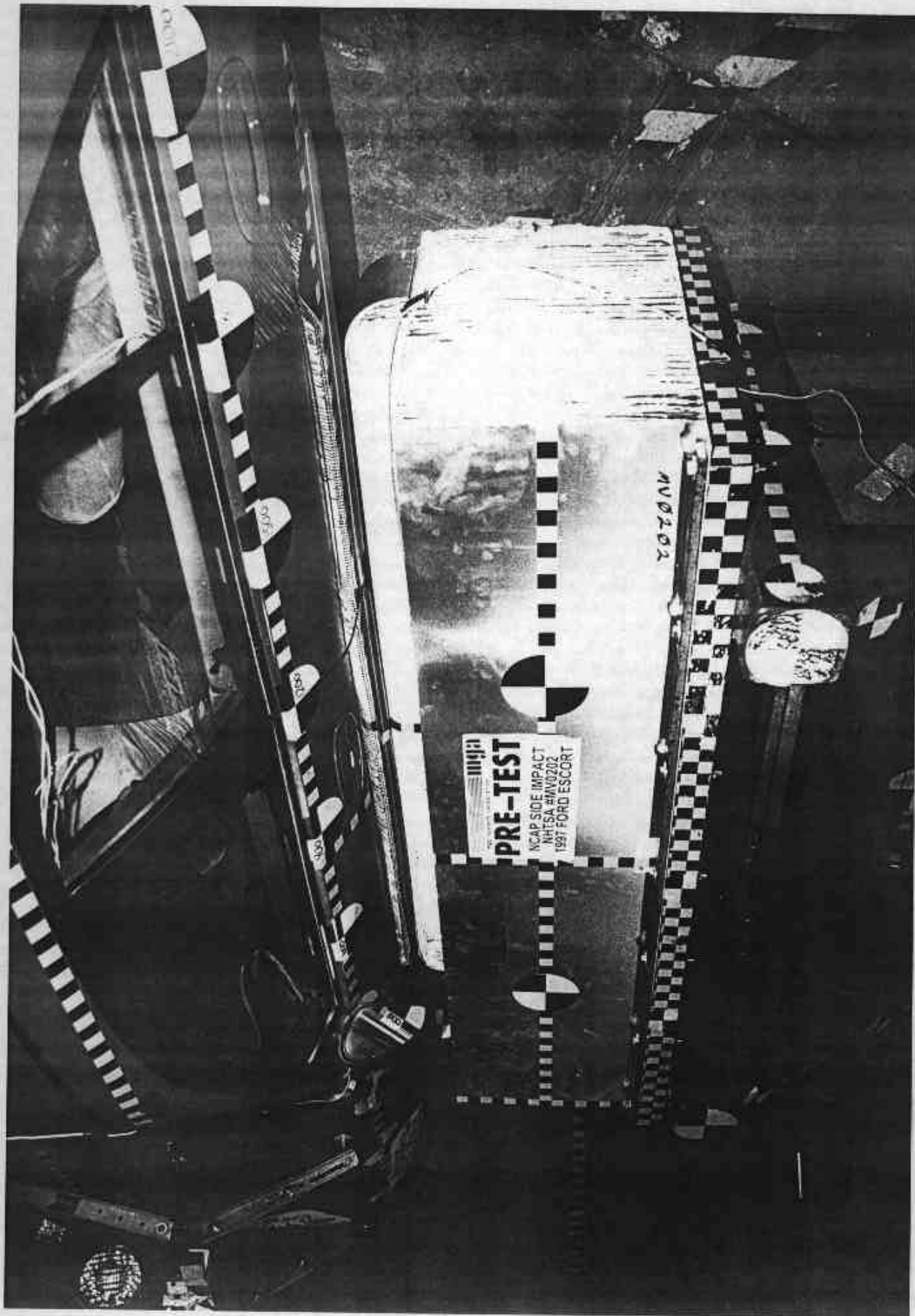
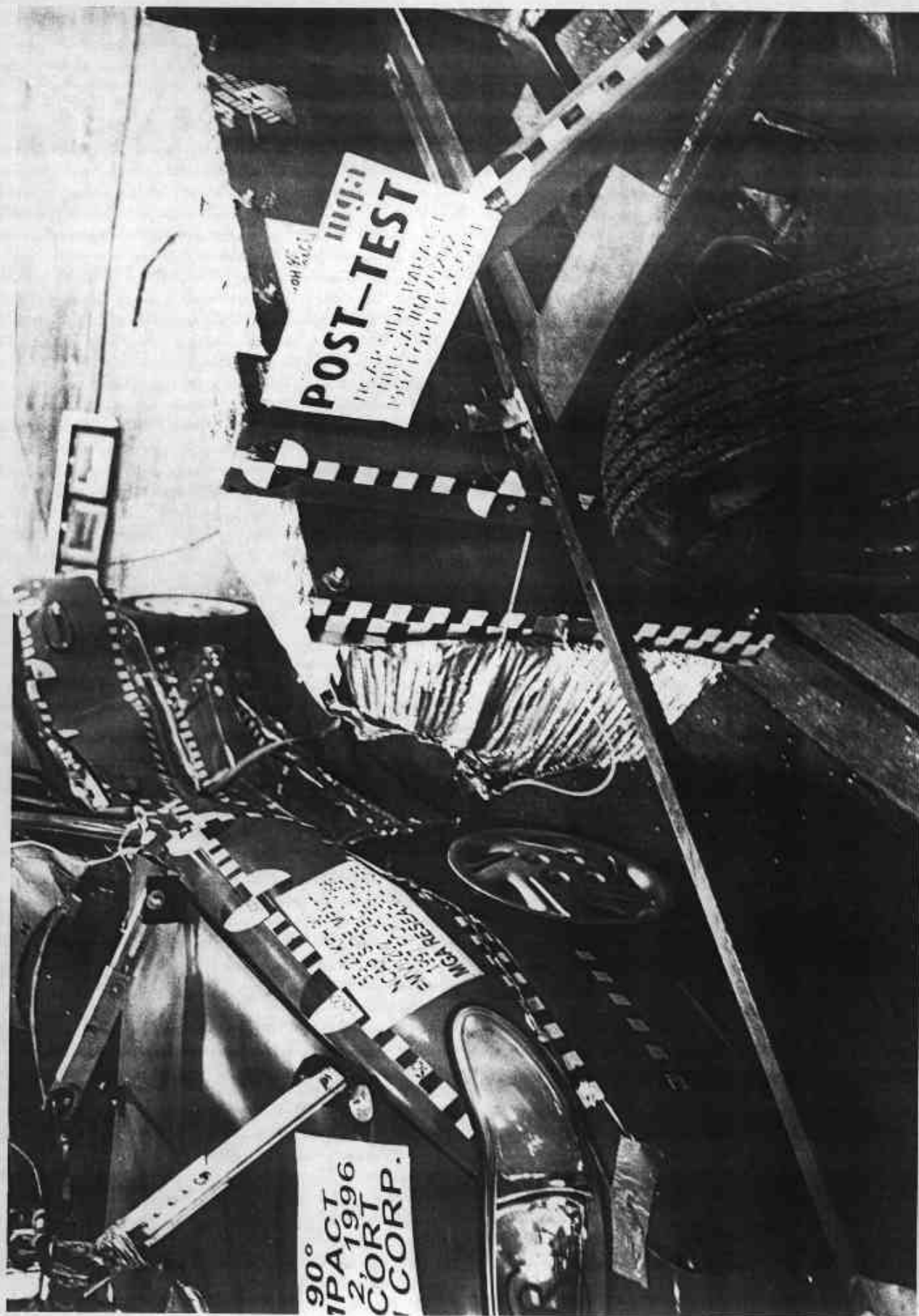
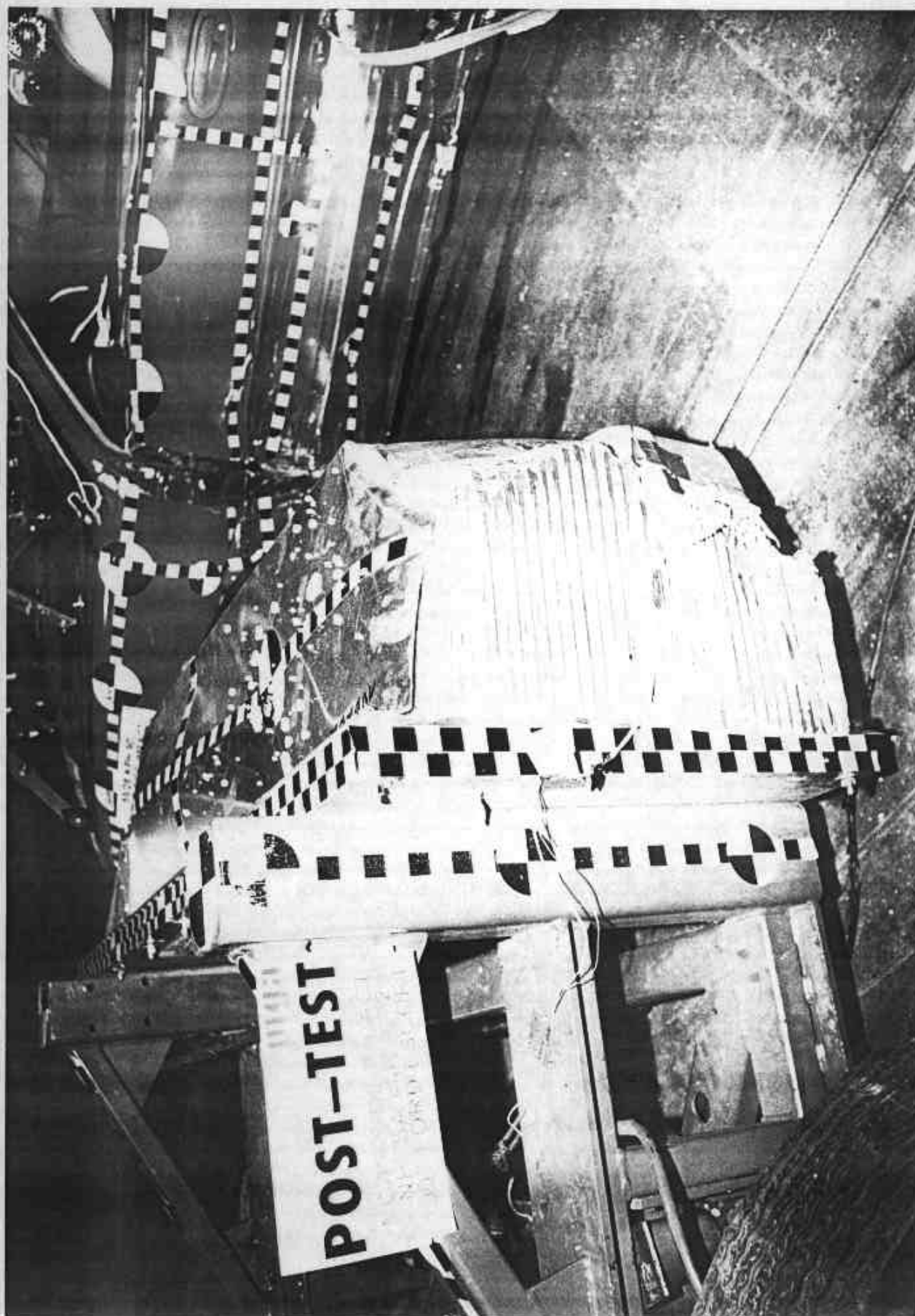


Photo No. A-9 - Pre-Test MDB Positioned Against Vehicle Overhead View



A-10

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



A-11

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

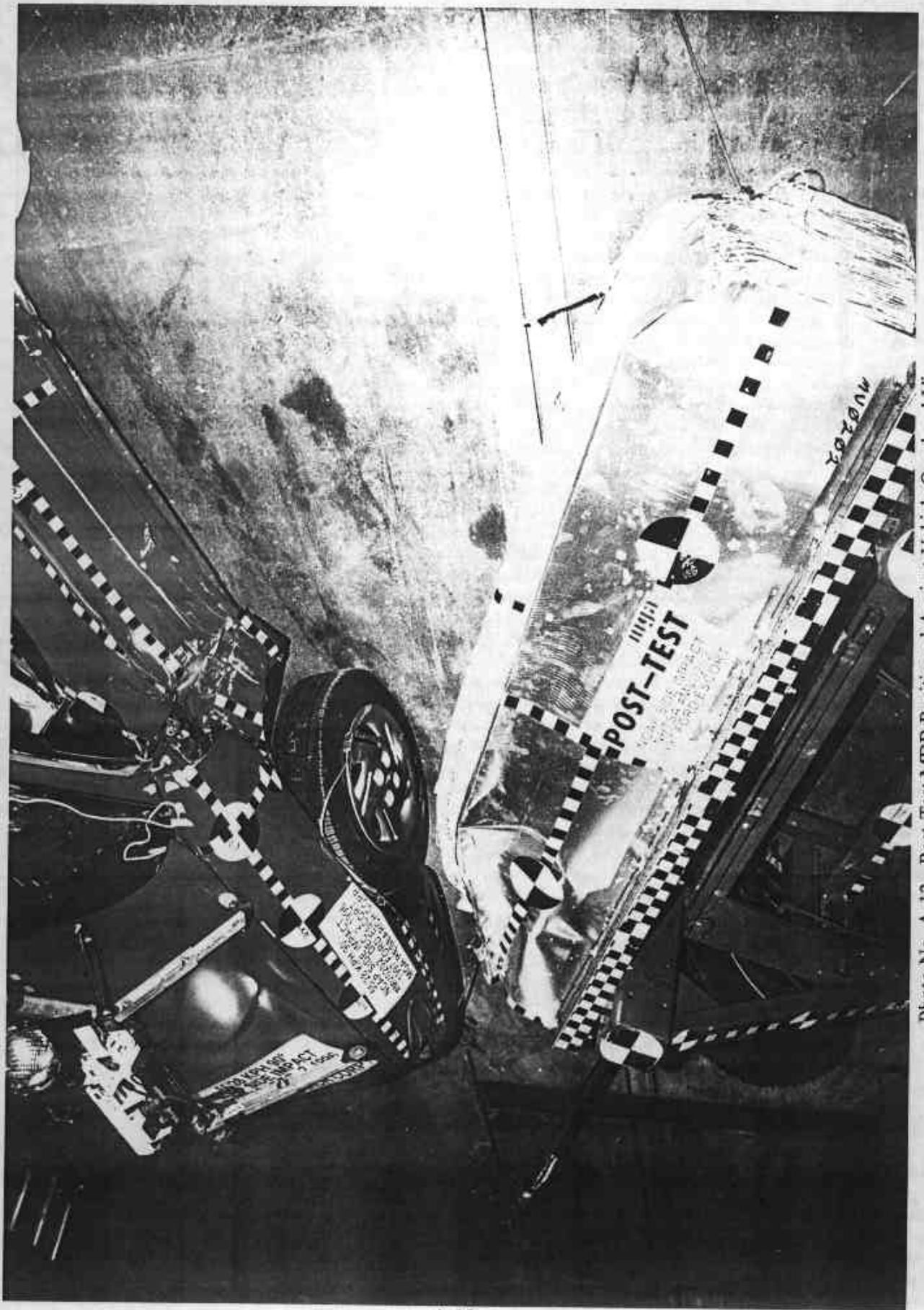
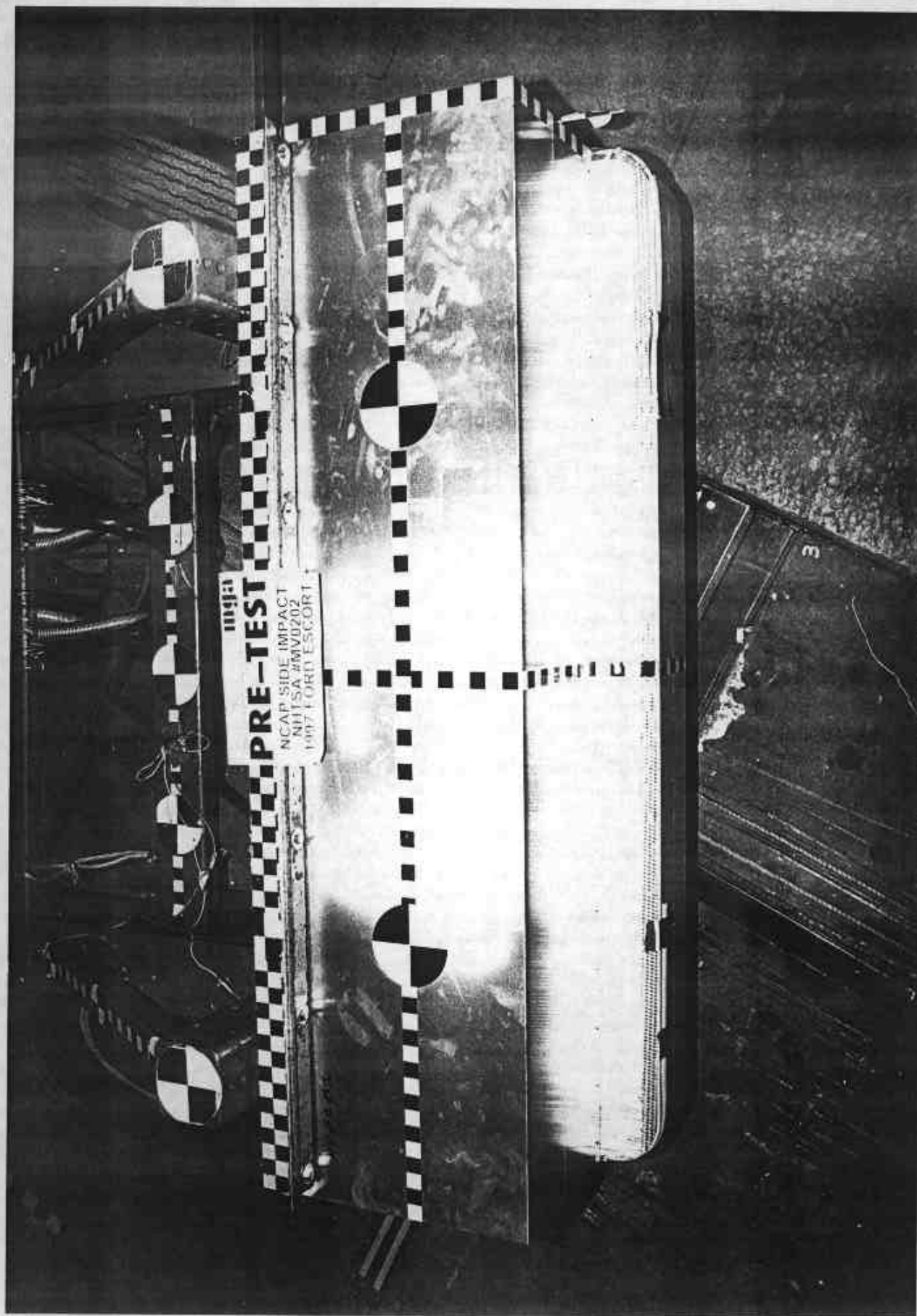


Photo No. A-12 - Post-Test MDB Positioned Against Vehicle Overhead View



A-13

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

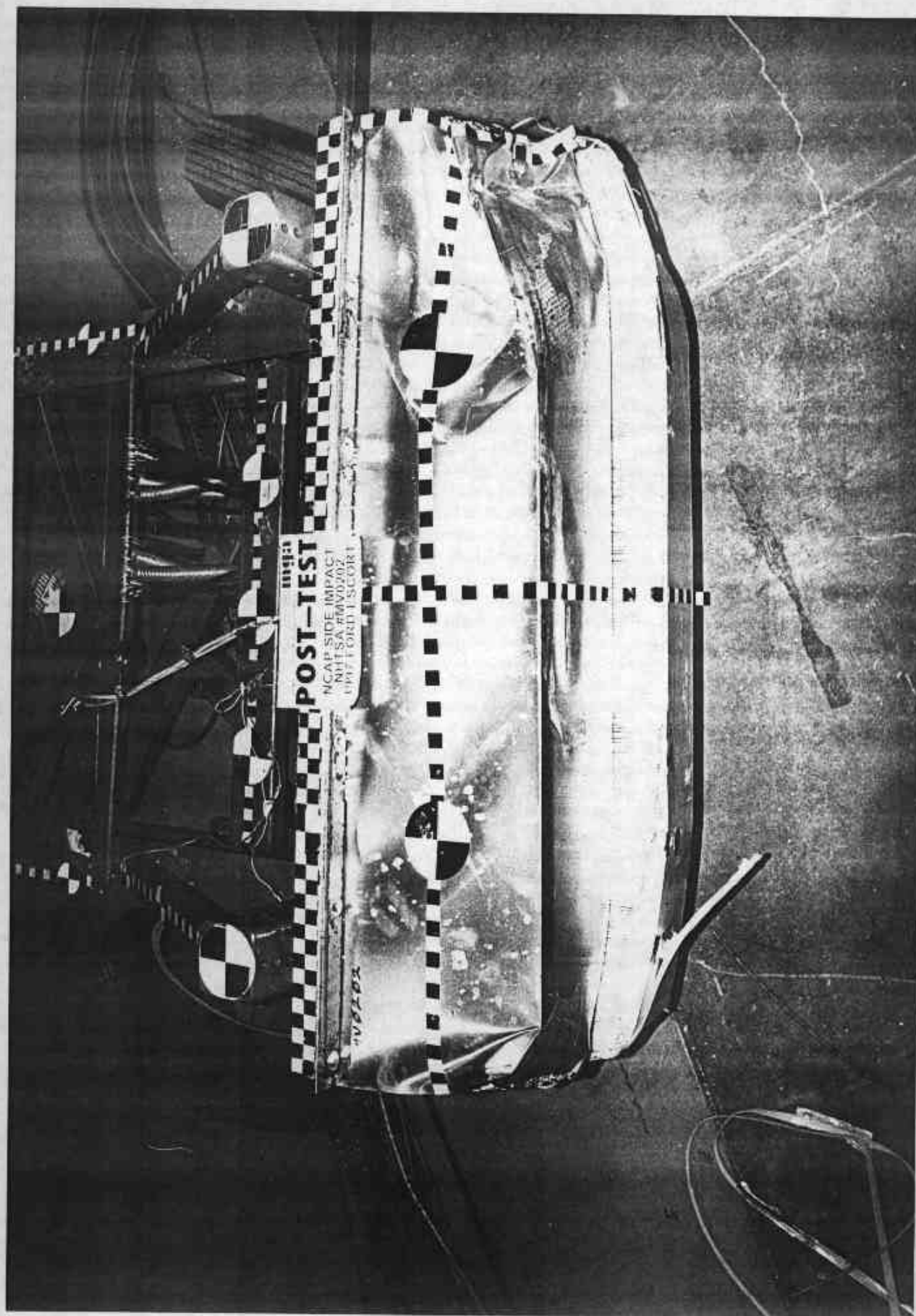


Photo No. A-14 - Post-Test MDB Top View

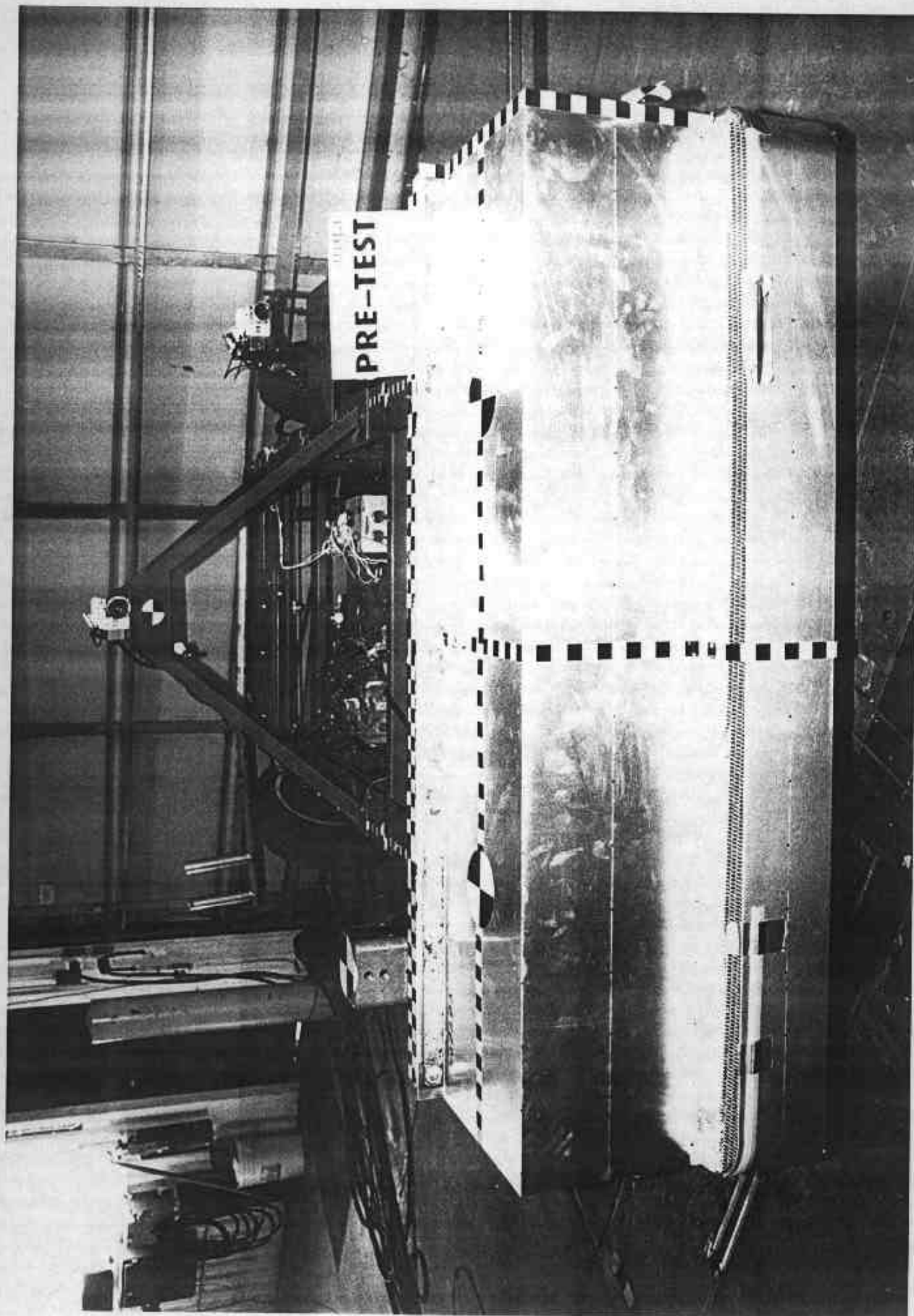
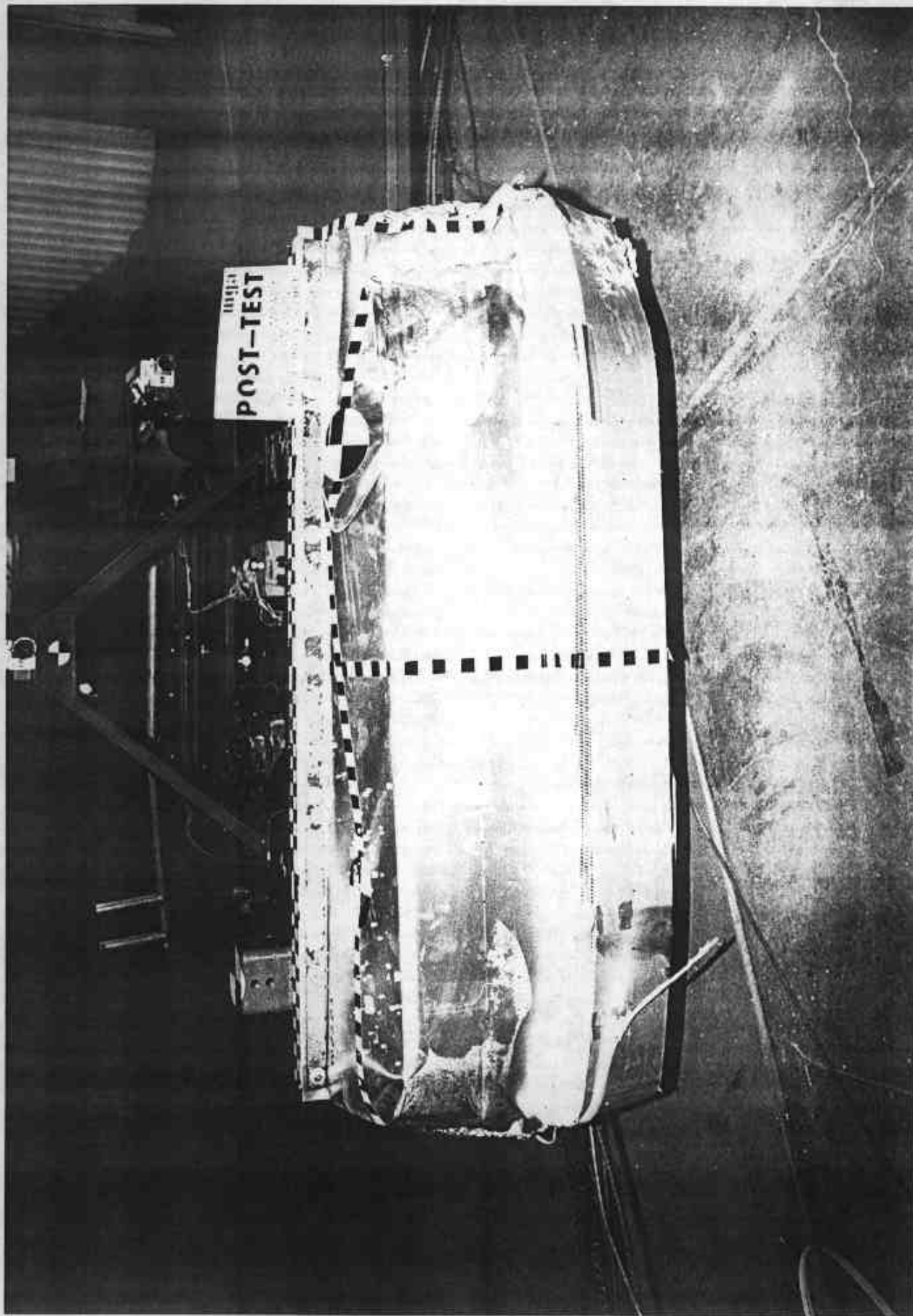


Photo No. A-15 - Pre-Test MDB Front View



A-16

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

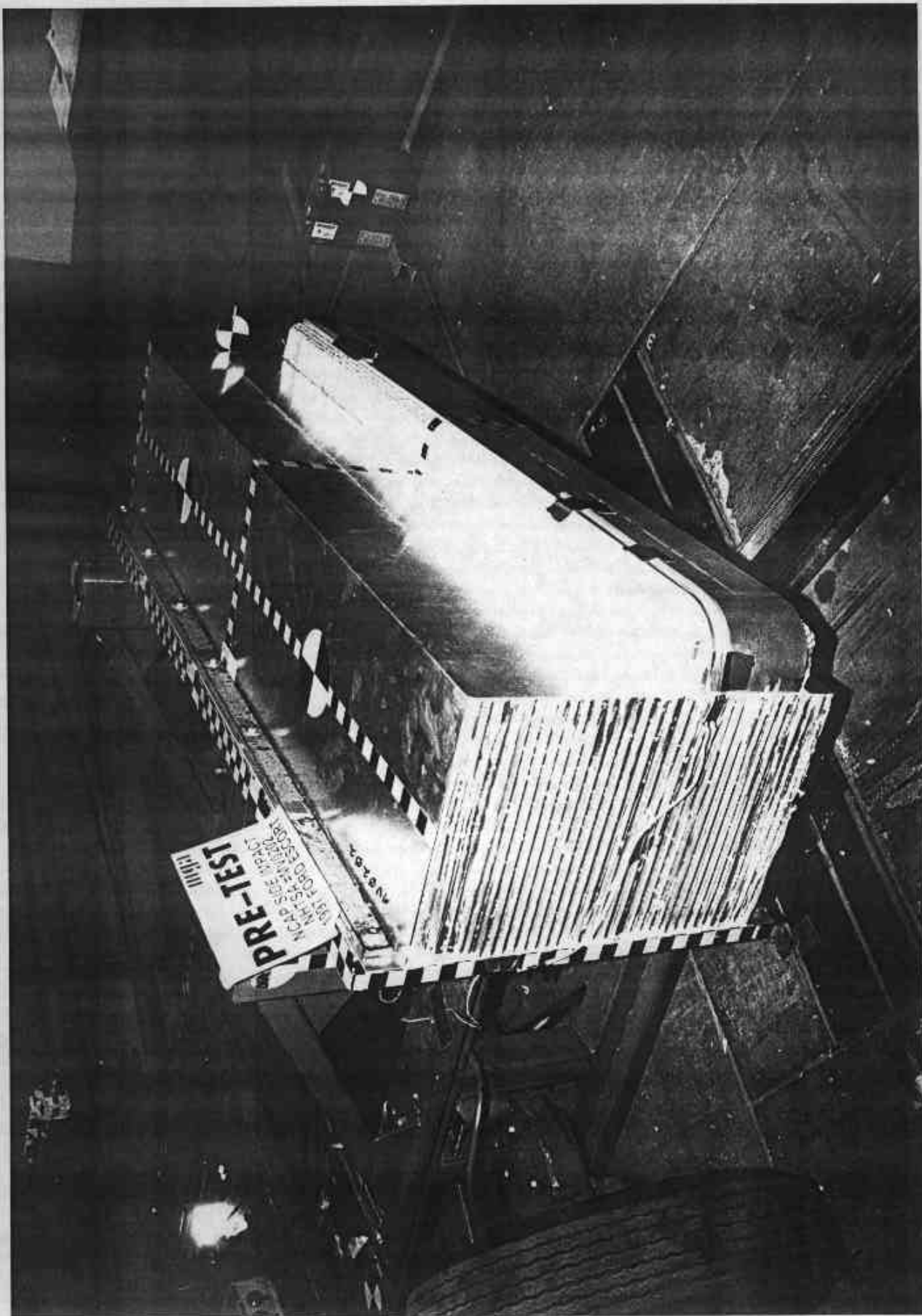


Photo No. A-17 - Pre-Test MDB Right Side View

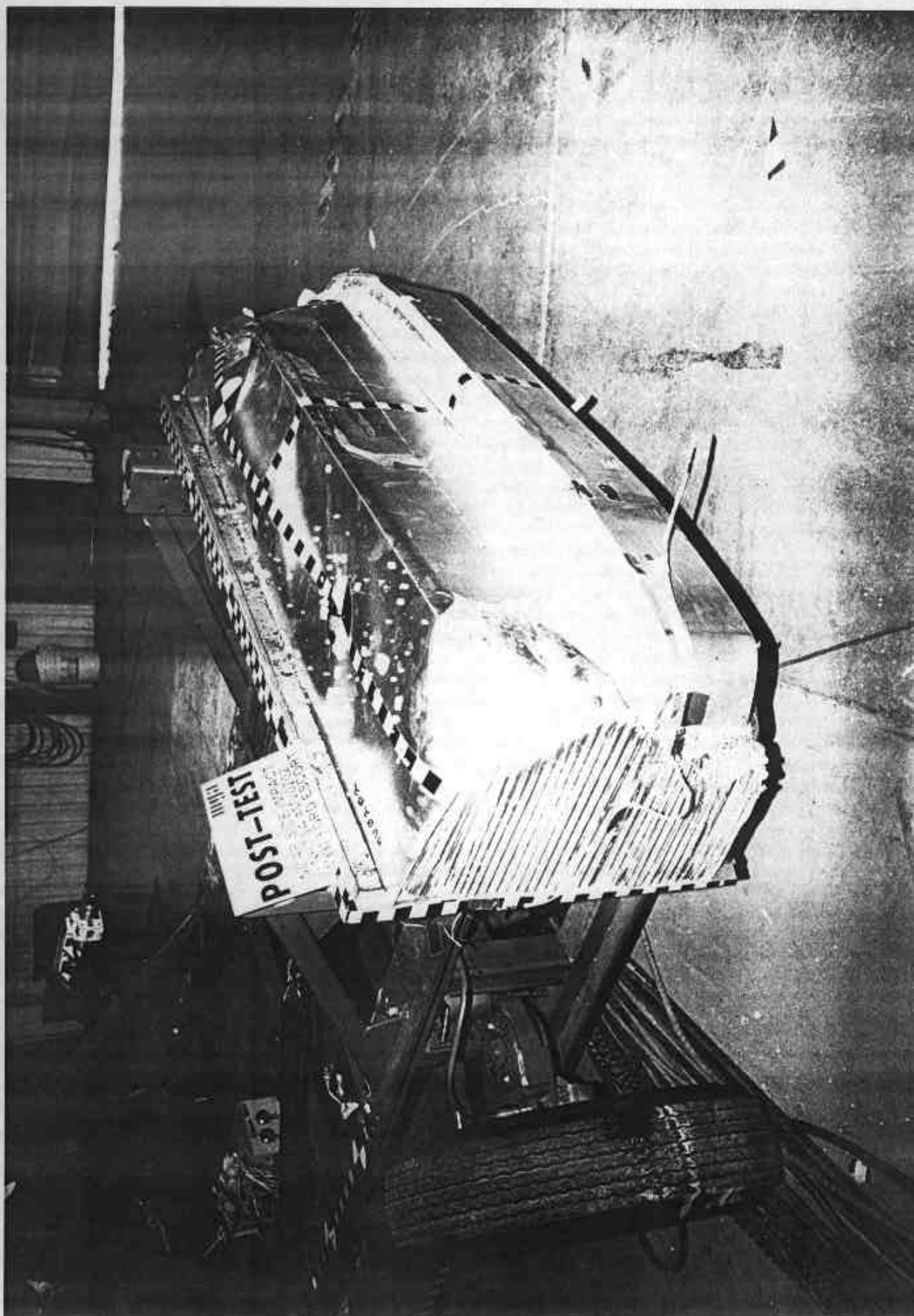


Photo No. A-18 - Post-Test MDB Right Side View

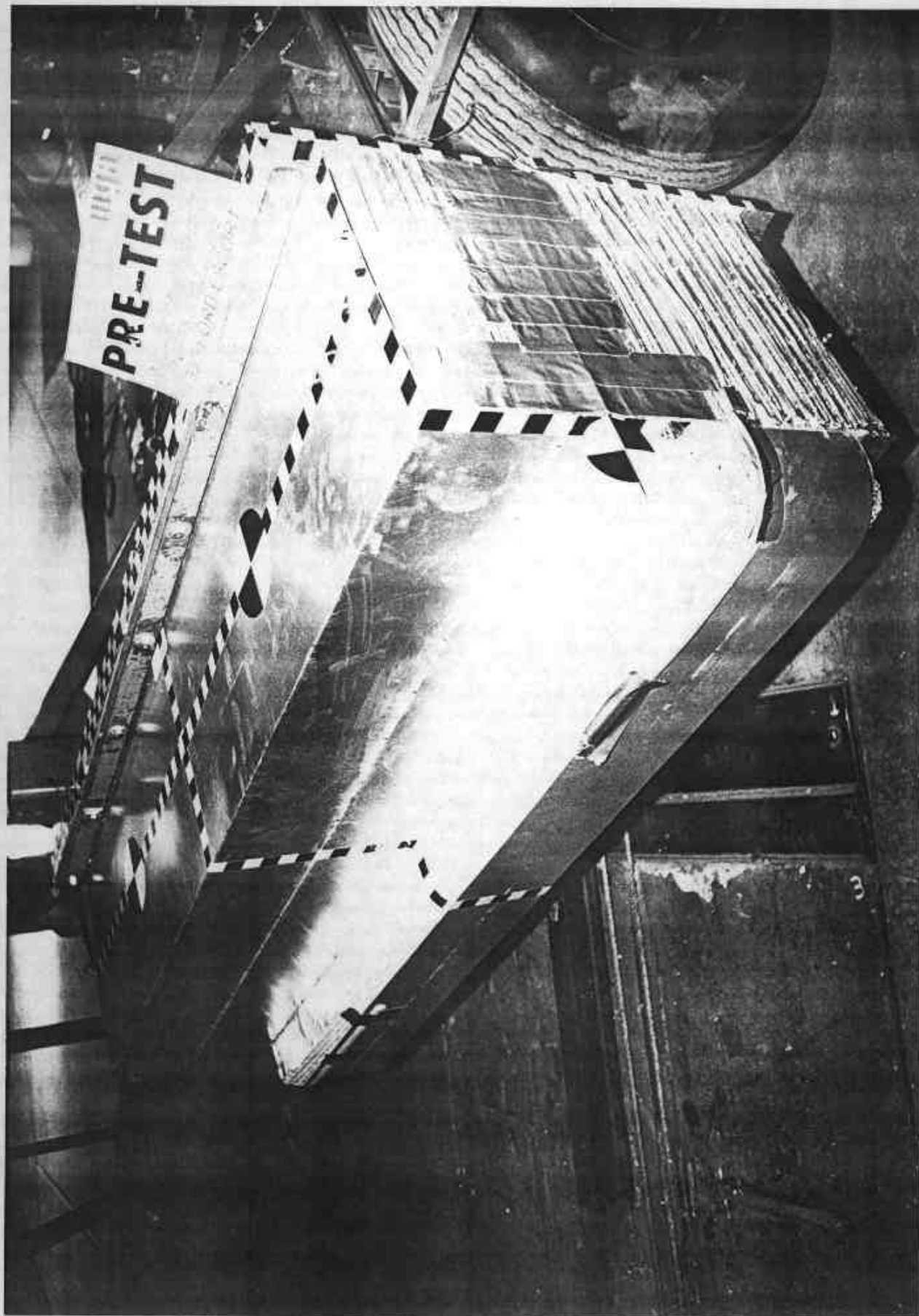


Photo No. A-19 - Pre-Test MDB Left Side View

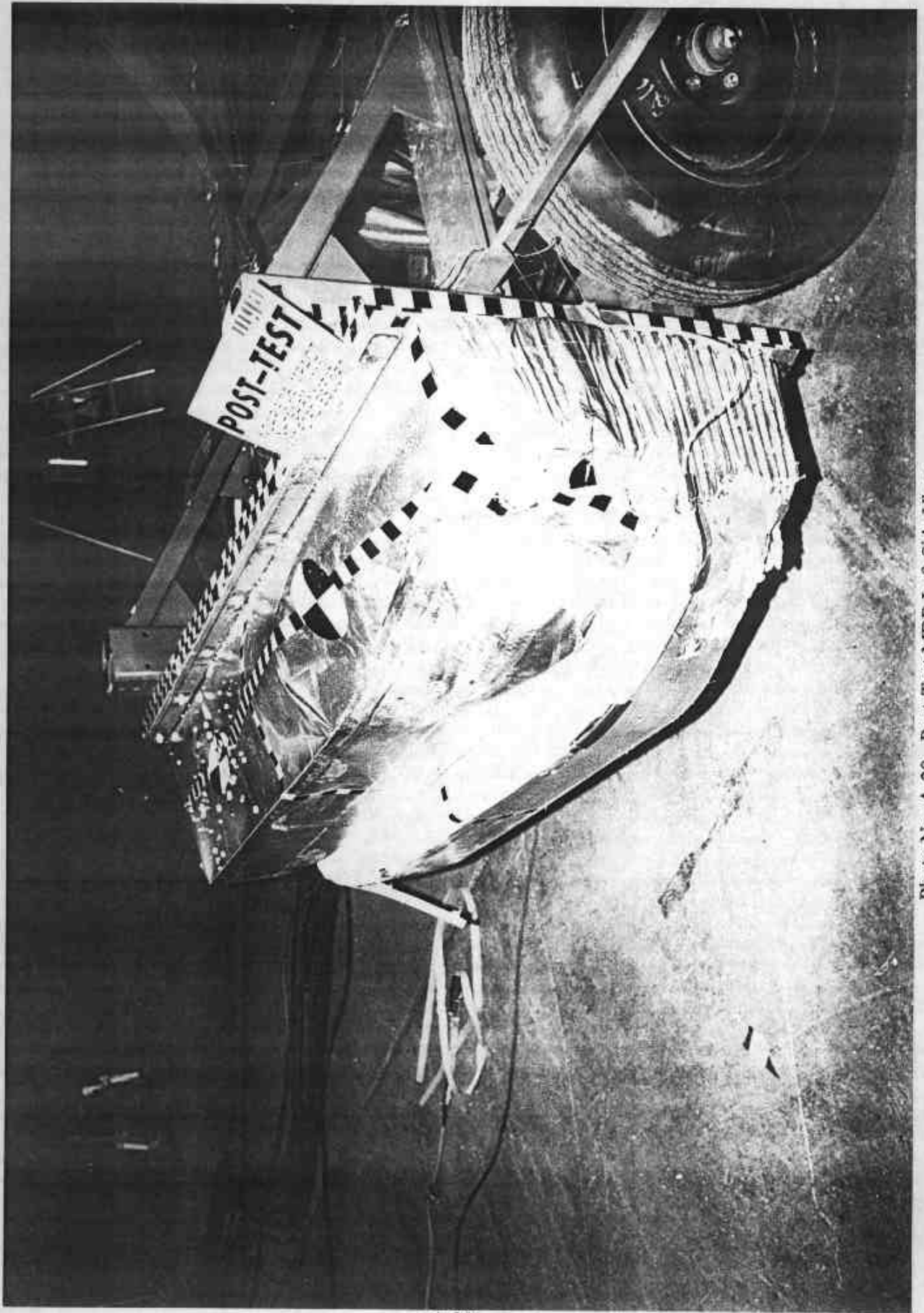


Photo No. A-20 - Post-Test MDB Left Side View

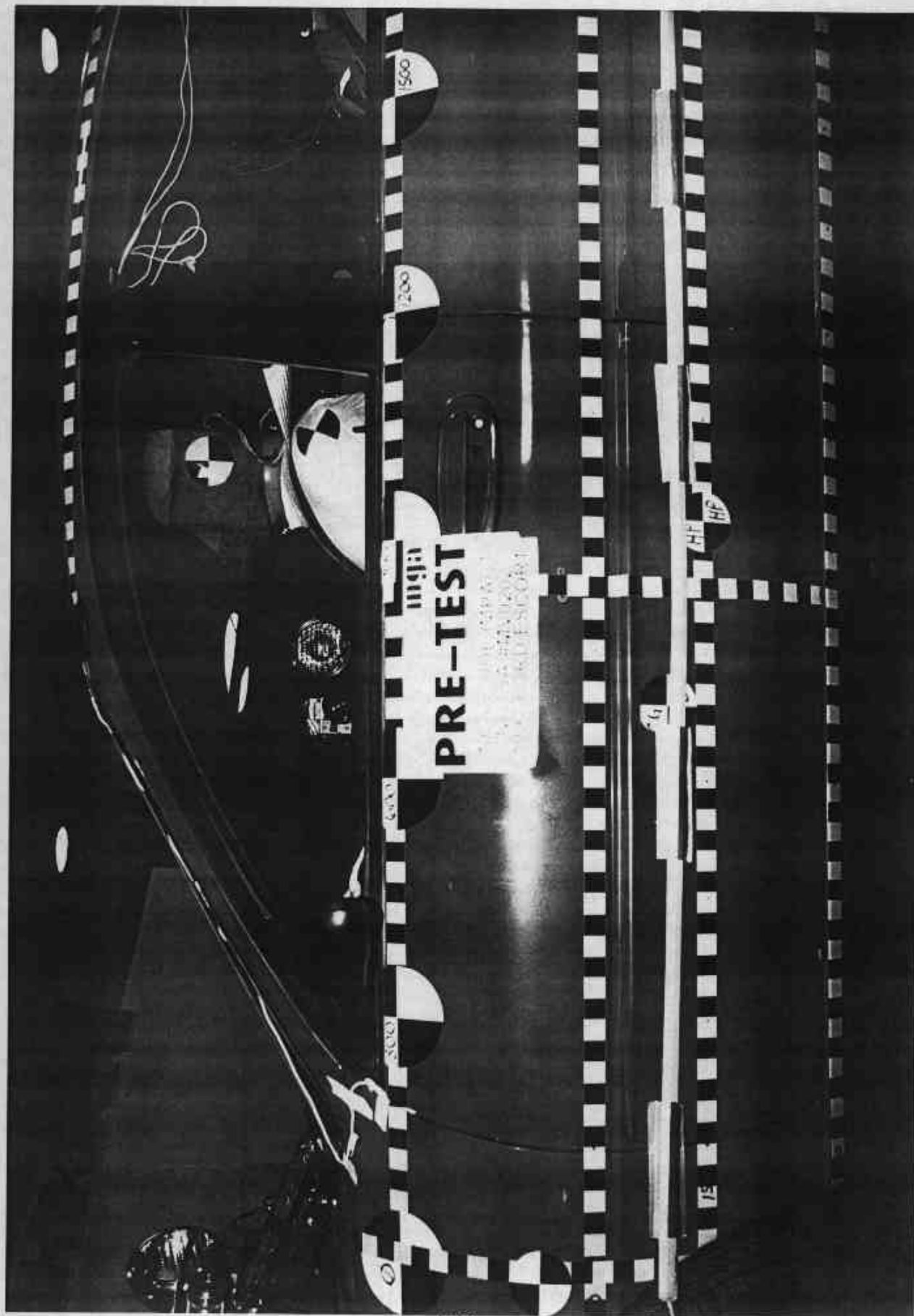
A-20



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

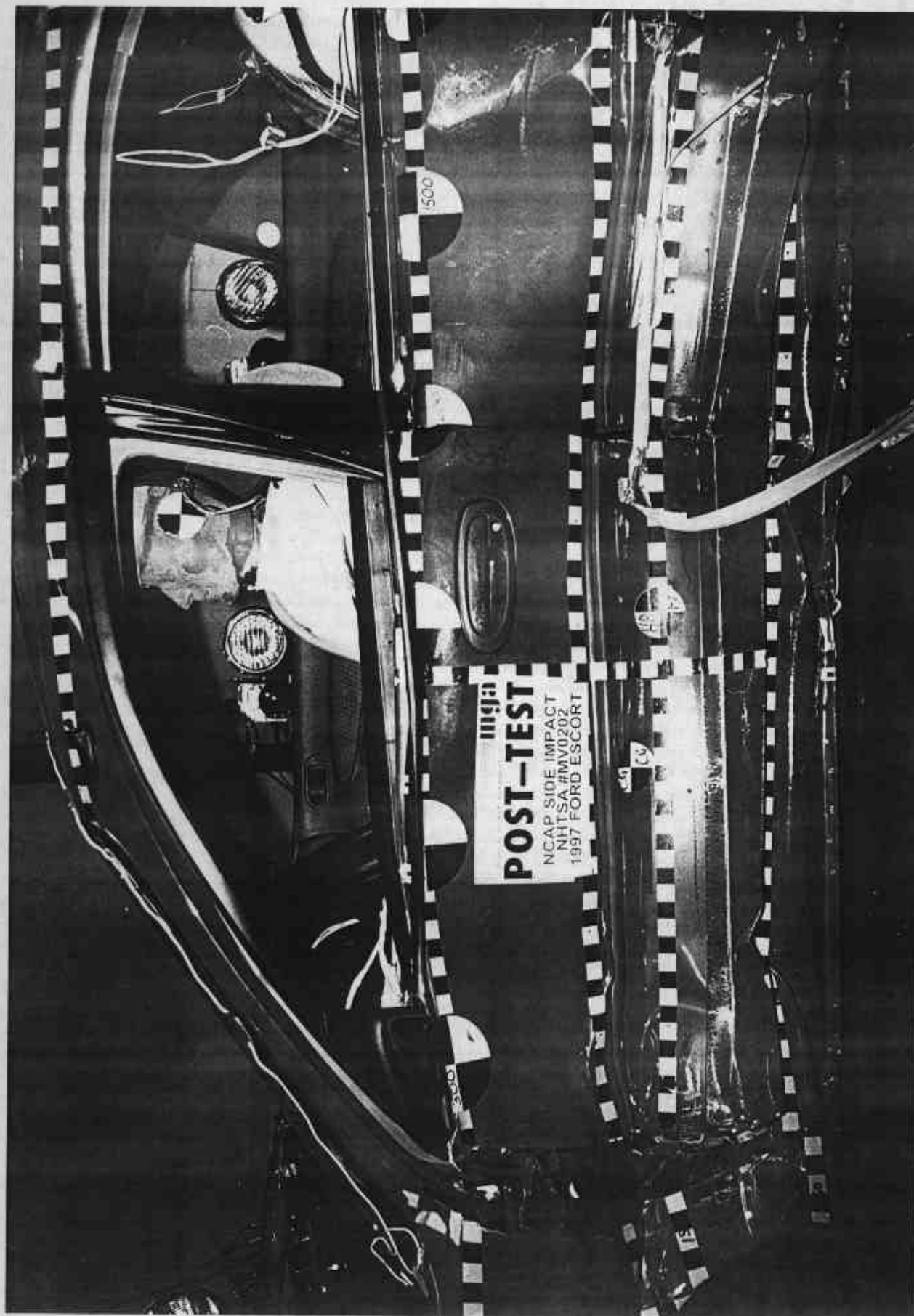


Photo No. A-22 - Post-Test Driver Dummy Right Side View



A-23

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



A-24

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

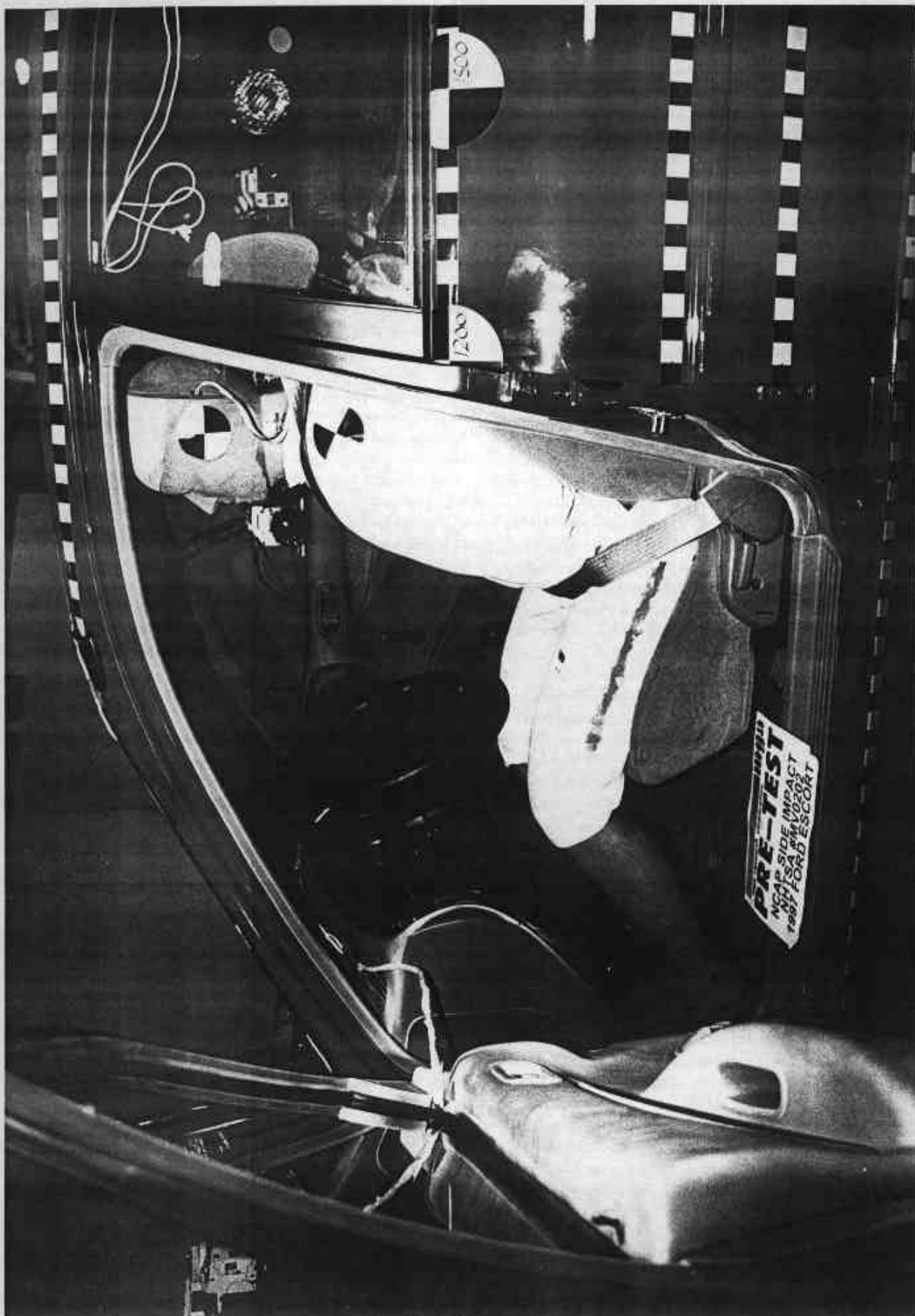


Photo No. A-25 - Pre-Test Driver Dummy Left Side View (Door Open)



A-26

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



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

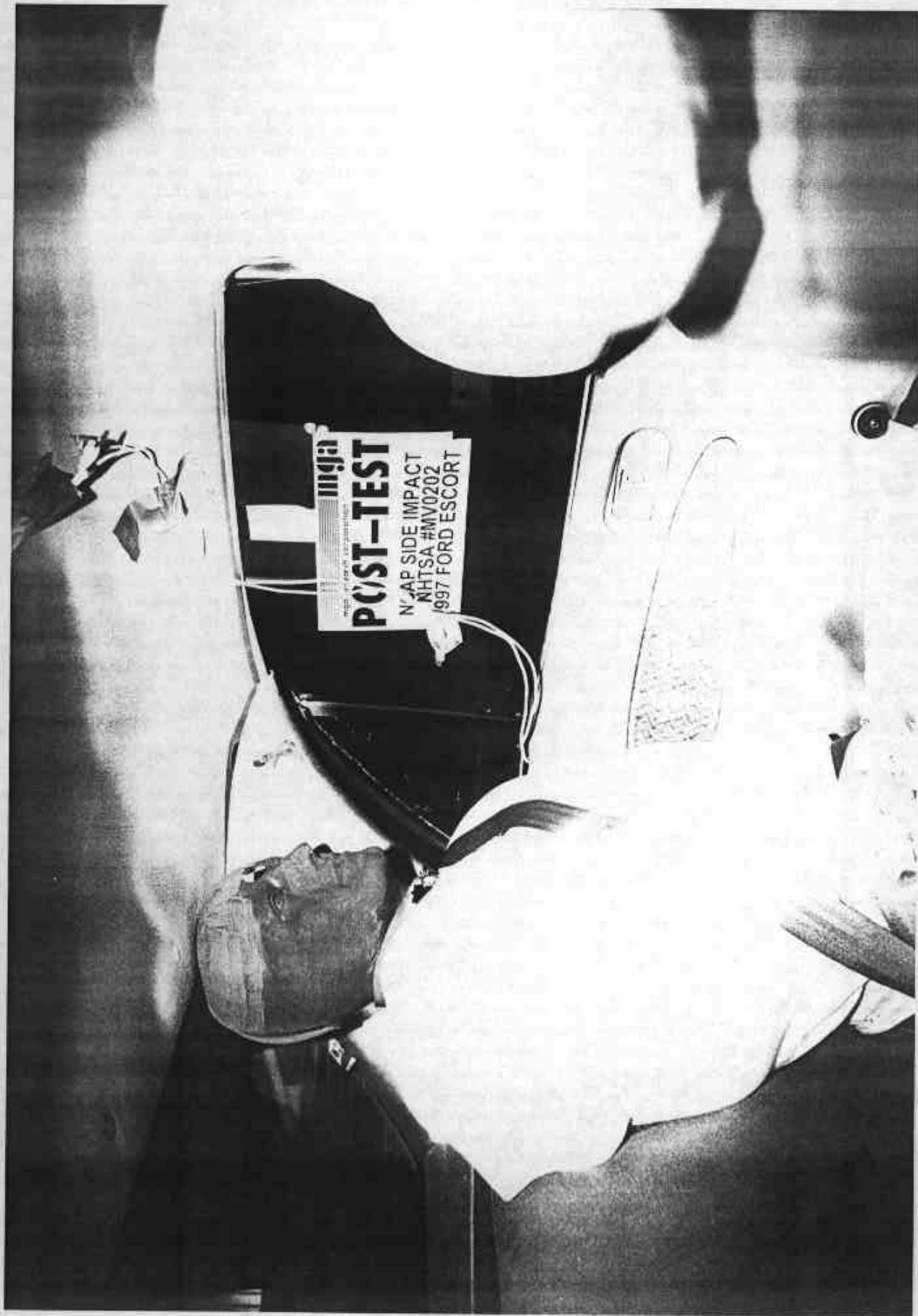
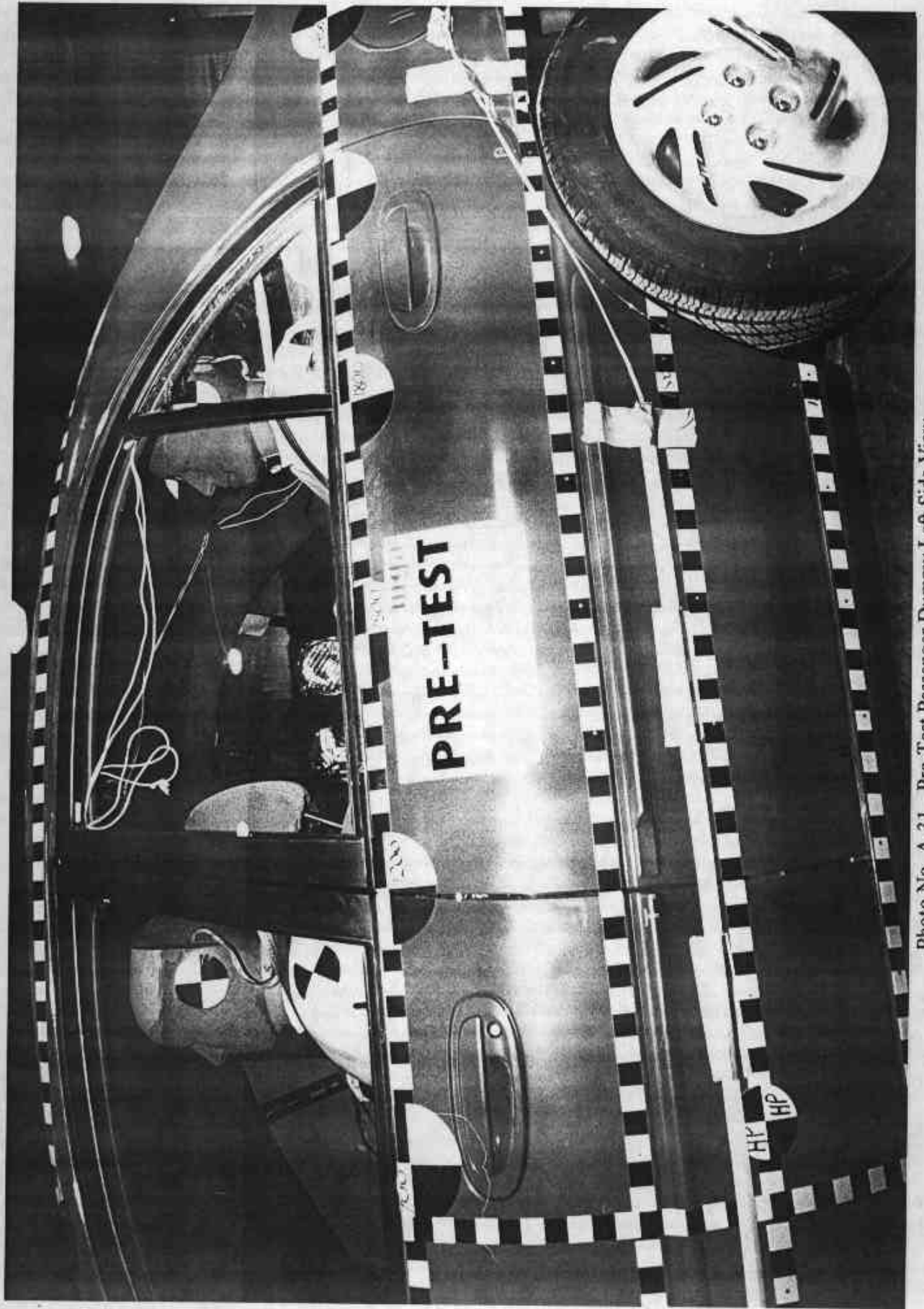
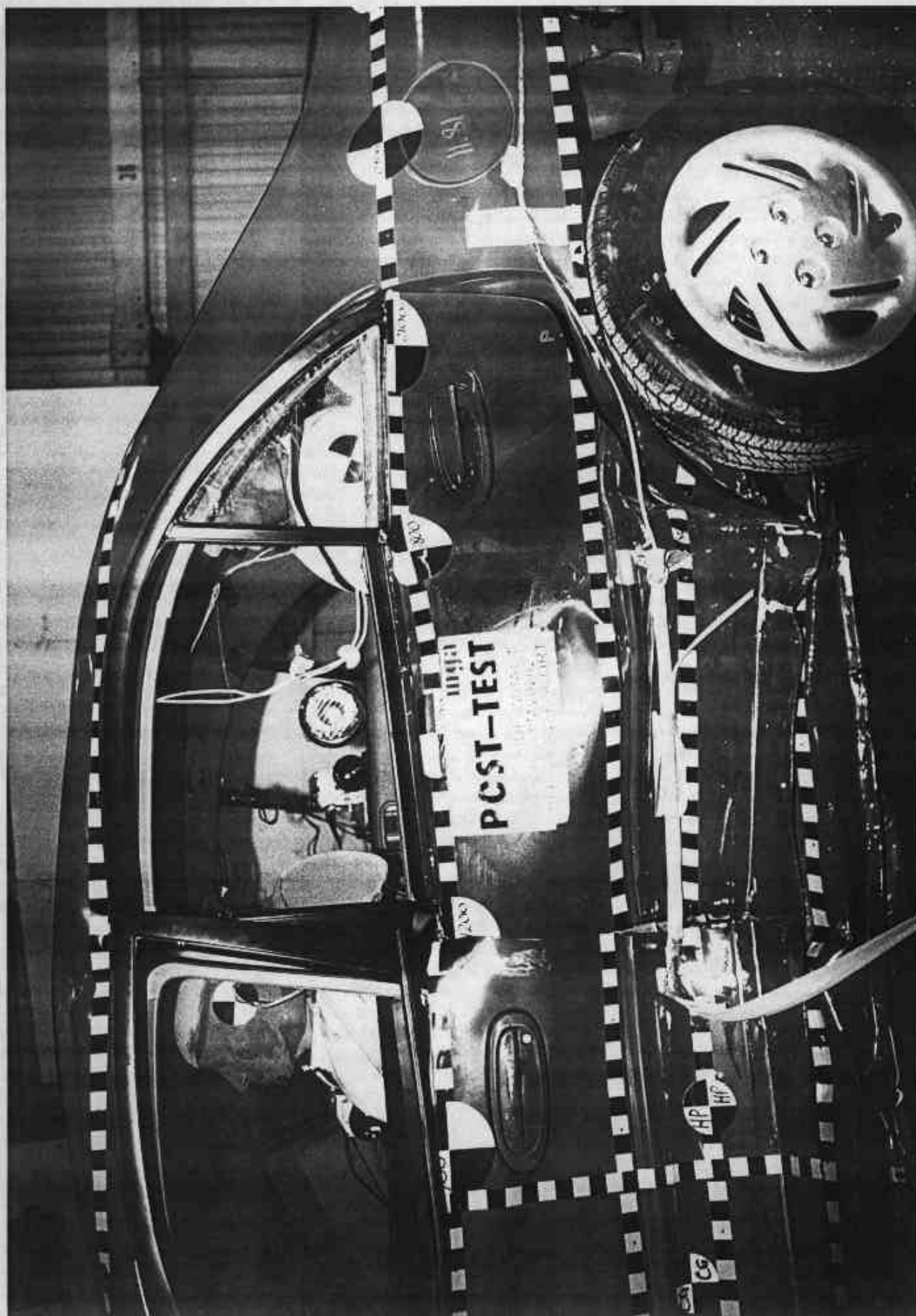


Photo No. A-30 - Post-Test Passenger Dummy Right Side View



A-31

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



A-32

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

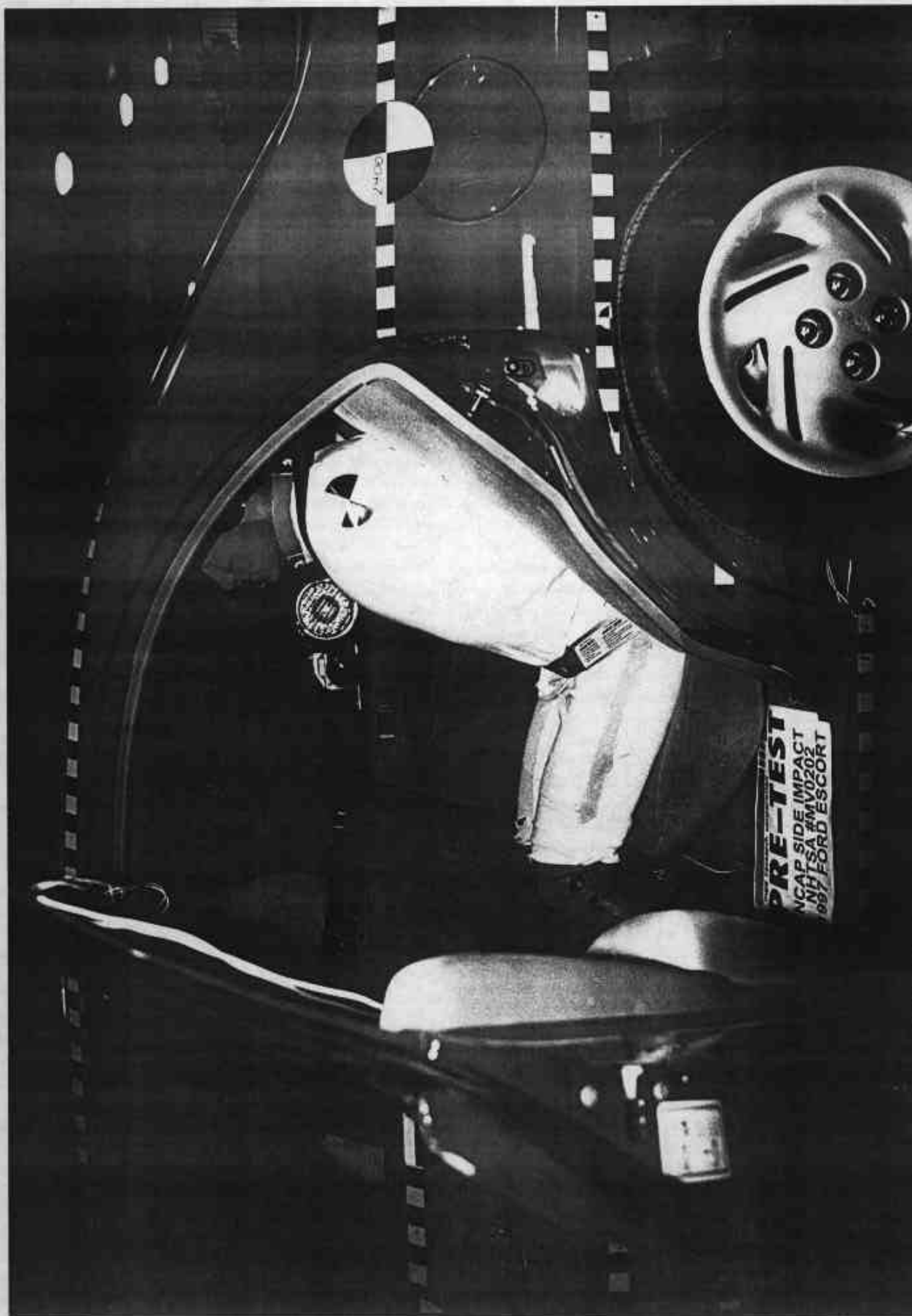


Photo No. A-33 - Pre-Test Passenger Dummy Left Side View (Door Open)

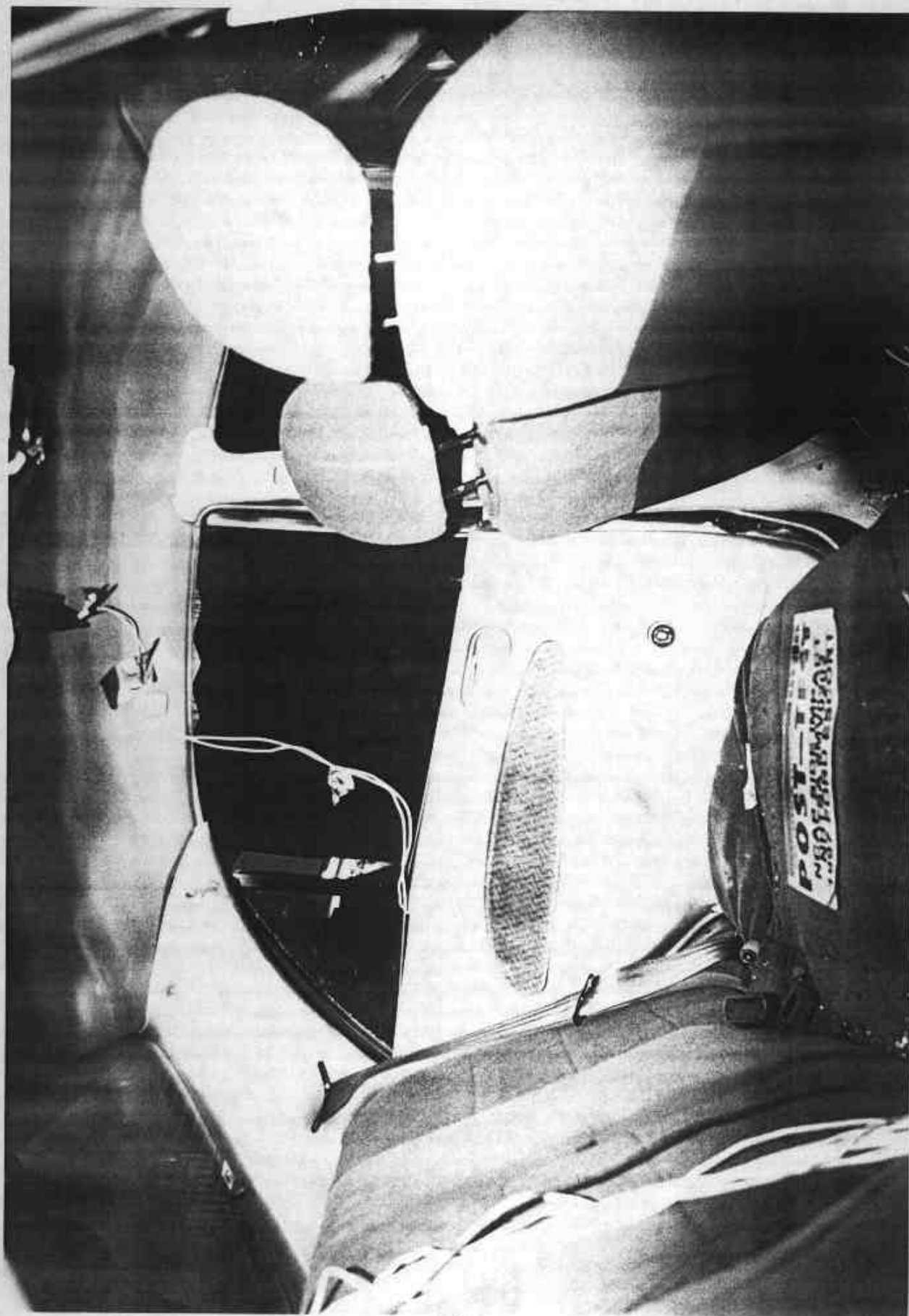


A-34

Photo No. A-34 - Pre-Test Passenger Dummy Shoulder and Door Top View



Photo No. A-35 - Post-Test Passenger Dummy Shoulder and Door Top View



A-36

Photo No. A-36 - Post-Test Passenger Dummy Contact

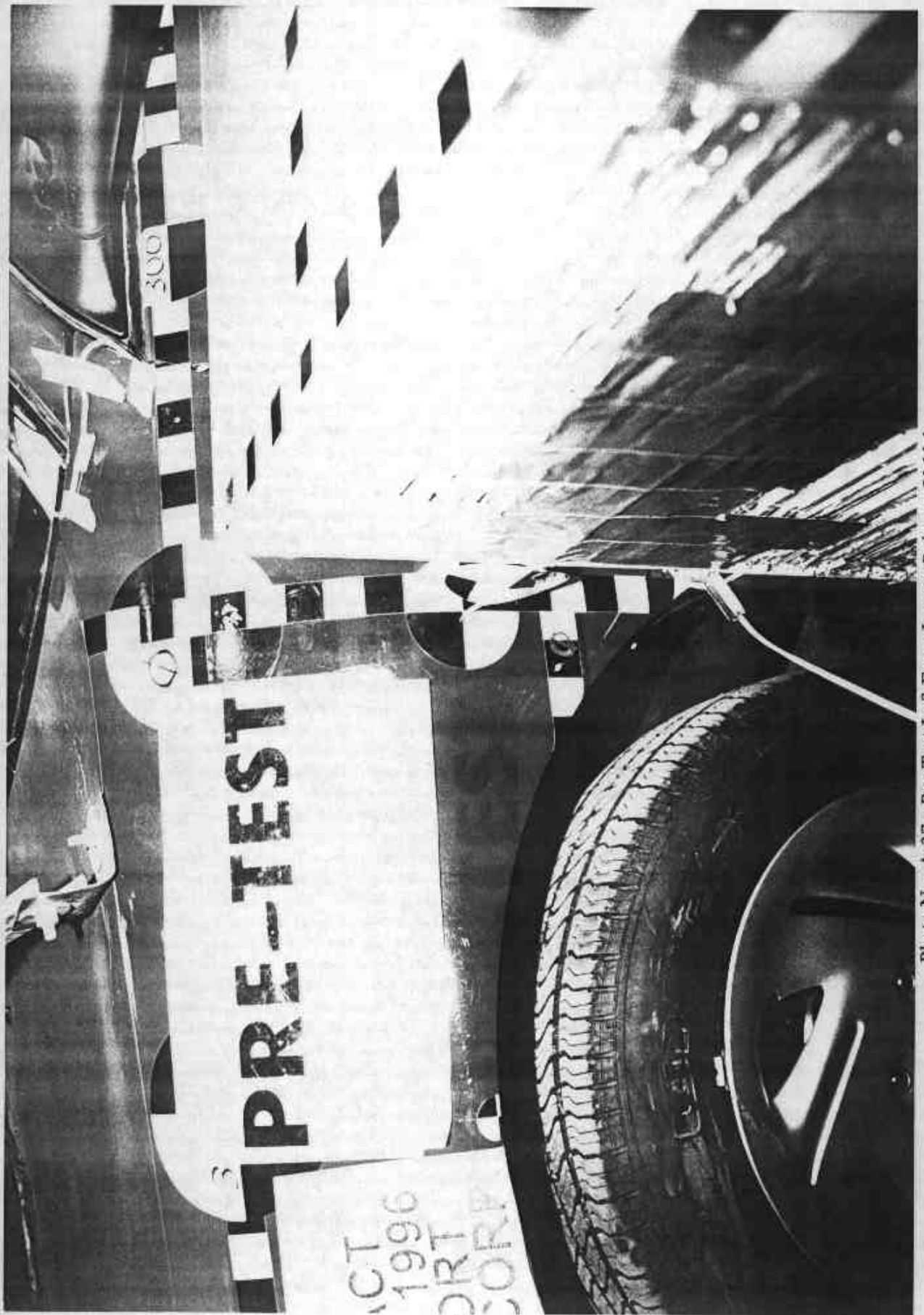
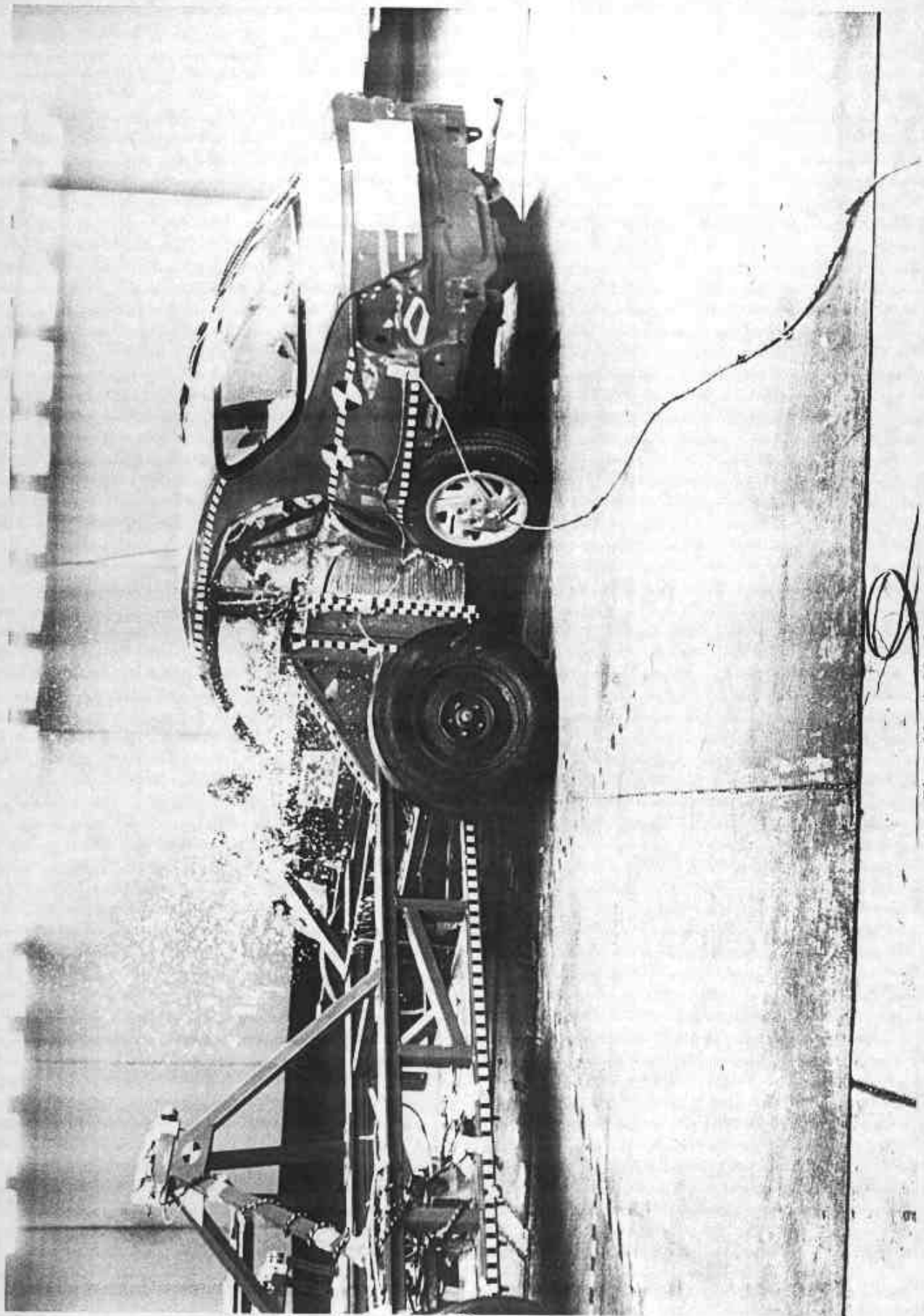


Photo No. A-37 - Pre-Test Left Front Impact Point on Vehicle



Photo No. A-38 - Post-Test Left Front Impact Point on Vehicle



A-39

Photo No. A-39 - Impact



FORD MOTOR CO., IN U.S.A.

GVW: 3485LB/1580KG

DATE: 12/1/86

FRONT AXLE: 1911LB

REAR AXLE: 1574LB

866KG

713KG

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR
VEHICLE SAFETY, BURGER, AND THEFT PREVENTION STANDARDS
IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.

VIN: 1FALP13P4VM152946

TYPE: PASSENGER

F0146

R0042



EX: 20124
LX A
RC 41 DSO
PSIRIAXLETR SPR
9 D M

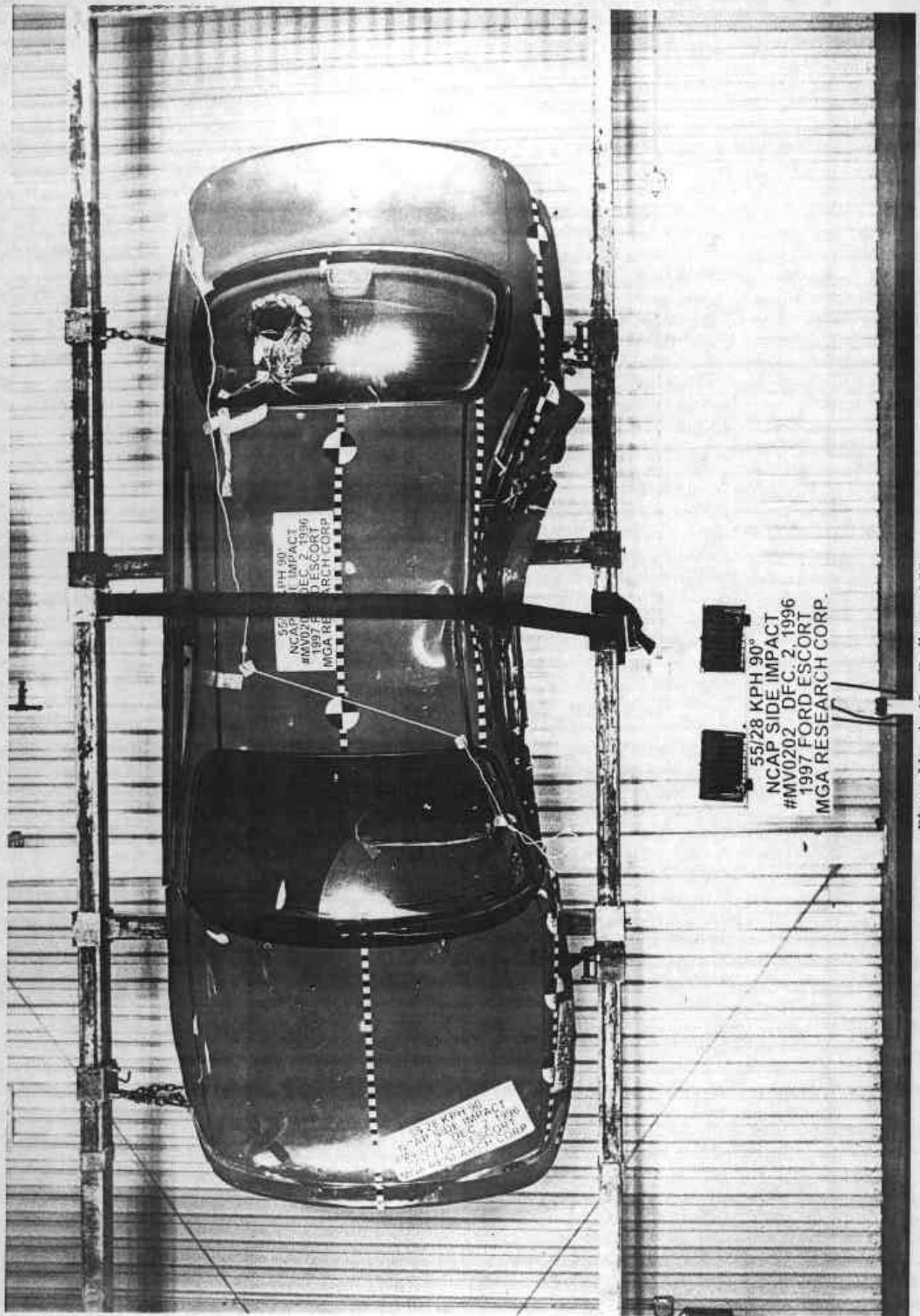
LPC 97608-242472-000

ESCORT/TRACER

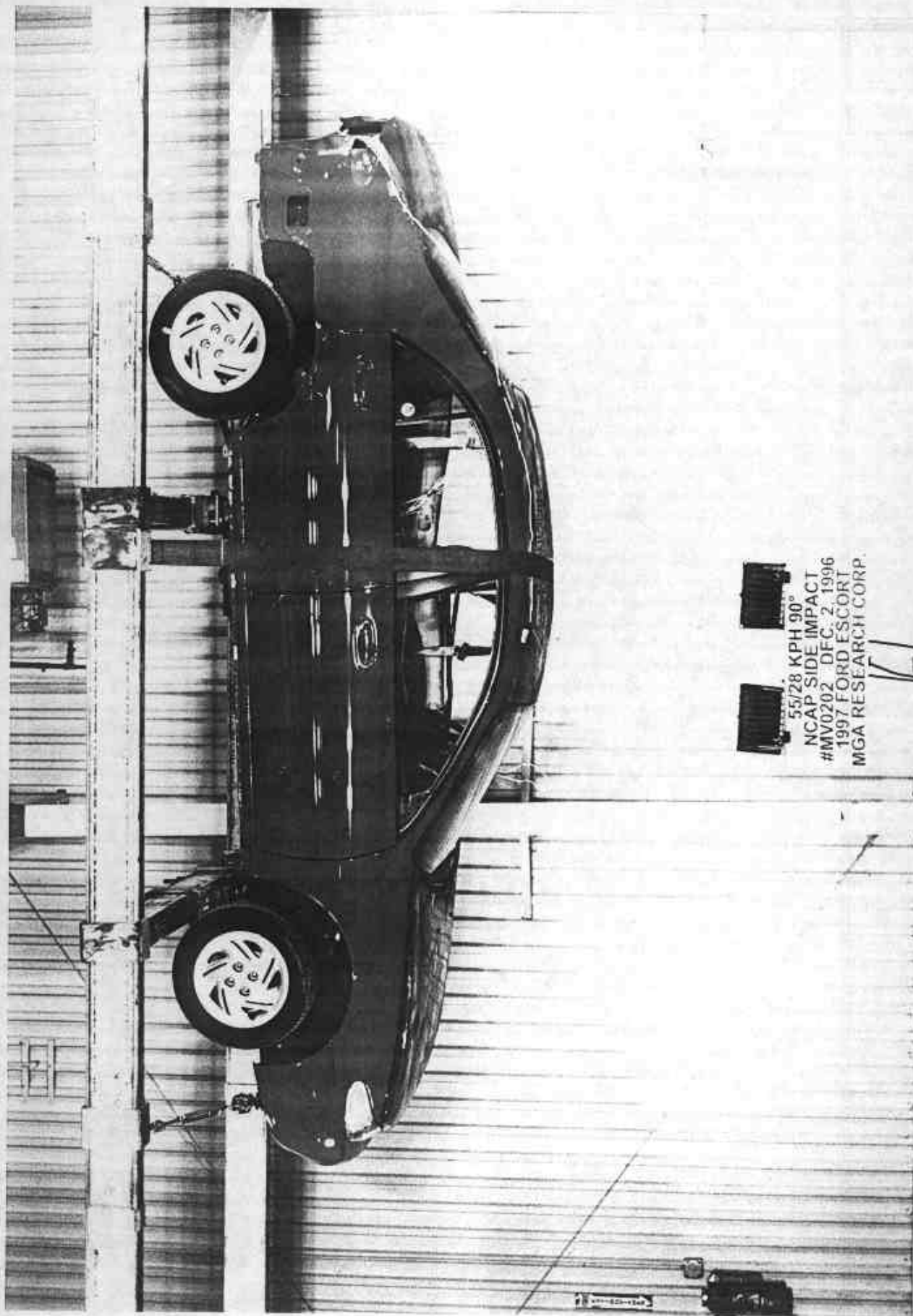
TIRE SIZE DIMENSIONS DES PNEUS	LOAD INDEX CHARGE INDICATEUR	FRONT	REAR
P185/65R14	STD	32 PSI 13/ps ² 221 kPa	30 PSI 13/ps ² 211 kPa
T115/70D14 TEMPORAL TYPE PNEU DE SECOURS PERMANENT	T	60 PSI 16/ps ² 415 kPa	60 PSI 16/ps ² 415 kPa
*MUST BE REPLACED WITH AN EQUIVALENT TYPE SPEED RATED TIRE. *NE REMPLACER QUE PAR UN PNEU DONT L'INDICE DE VITESSE EST LE MÊME			
TOTAL LOAD = OCCUPANTS PLUS LUGGAGE		CHARGE TOTALE = OCCUPANTS PLUS BAGAGES	
VEHICLE CAPACITY WEIGHT CAPACITÉ PORTÉE DU VÉHICULE	TOTAL OCCUPANTS NOMBRE TOTAL D'OCCUPANTS	FRONT	REAR
830 lb/377 kg	5	2	3

FOR HIGHER ROAD SPEED, TRAILER TOWING, RECREATIONAL ACTIVITIES OR TEMPORARY TYPE INSTALLATIONS - SEE OWNER'S MANUAL FOR INFORMATION ON TIRE PRESSURE ADJUSTMENT. PNEU DE SECOURS PERMANENT DE VITESSE MAXIMALE 115 km/h. CONSULTER LE GUIDE DU PROPRIÉTAIRE.

Photo No. A-41 - Tire Placard

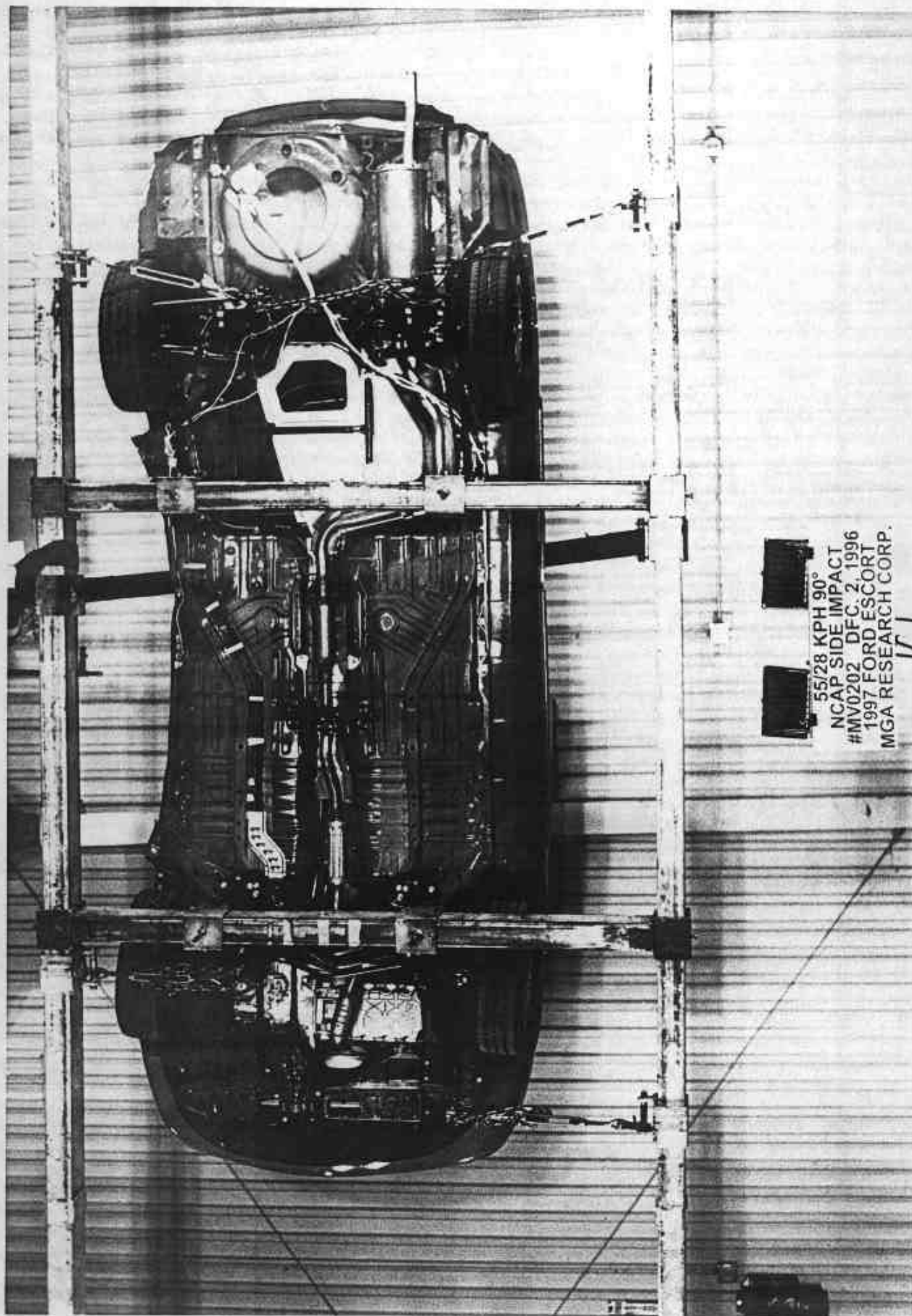


A-42



55/28 KPH 90°
NCAP SIDE IMPACT
#MV0202 DFC 2, 1996
1997 FORD ESCORT
MGA RESEARCH CORP.

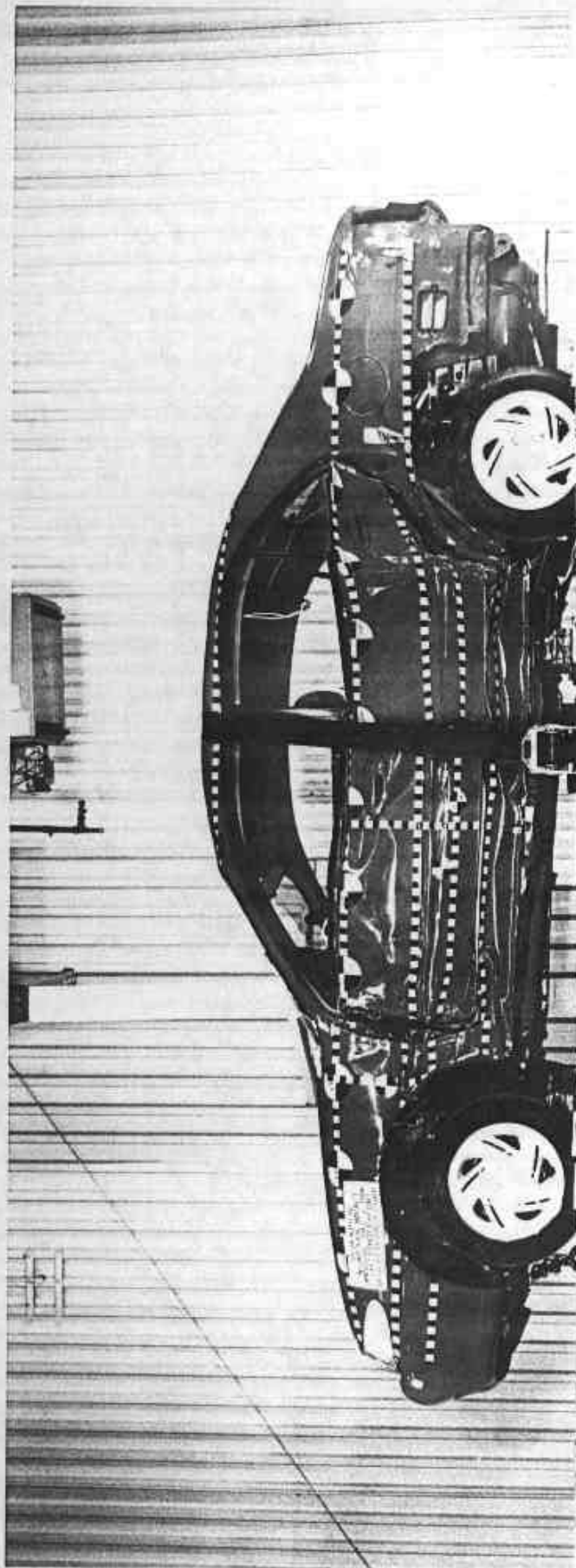
Photo No. A-43 - Rollover 180°



55/28 KPH 90°
NCAP SIDE IMPACT
#MV0202 DEC. 2 1996
1997 FORD ESCORT
MGA RESEARCH CORP.

171

Photo No. A-44 - Rollover 270°



A-45

Photo No. A-45 - Rollover 360°



Photo No. A-46 - Left Front Attitude Point

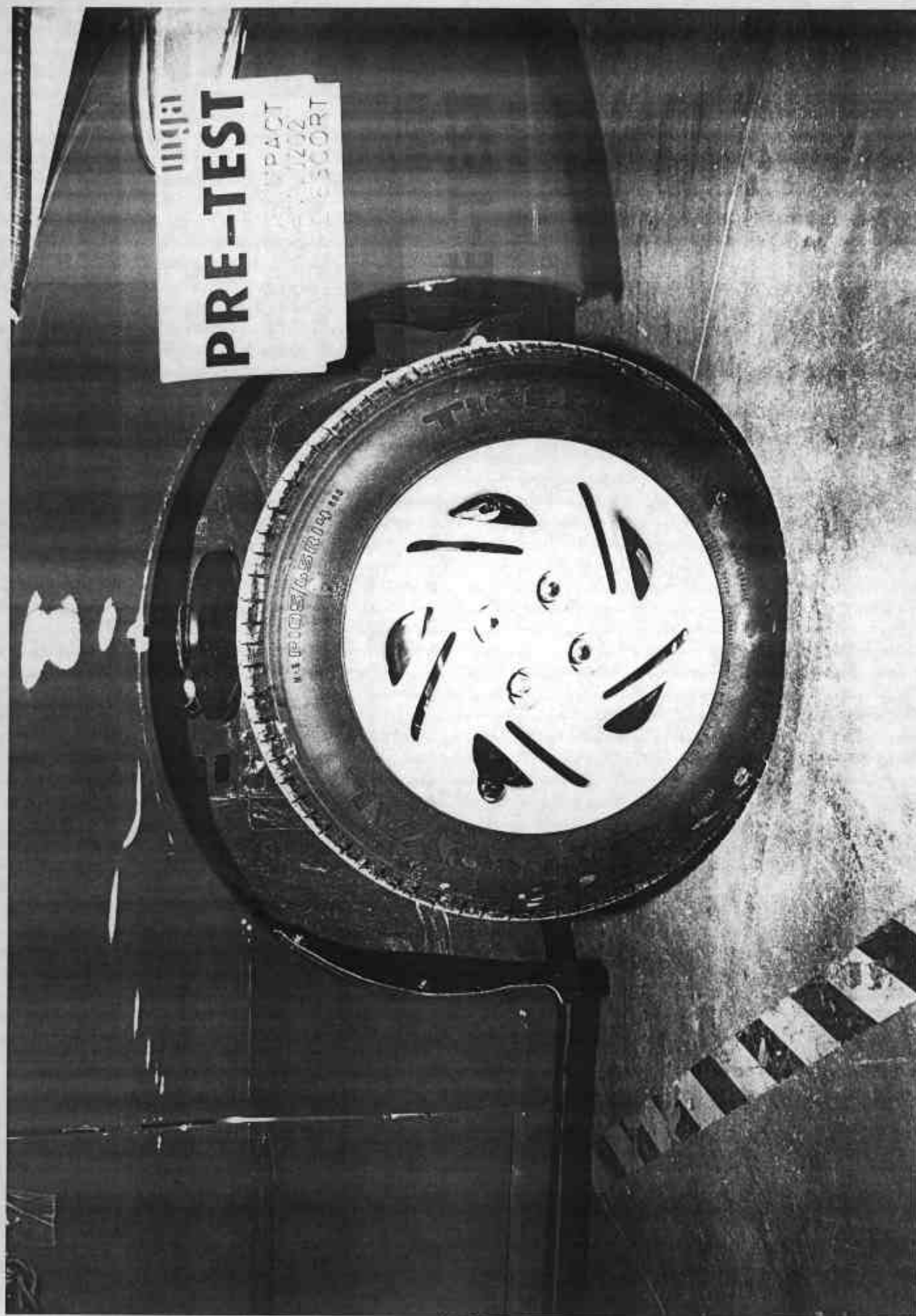


Photo No. A-47 - Right Front Attitude Point

A-47

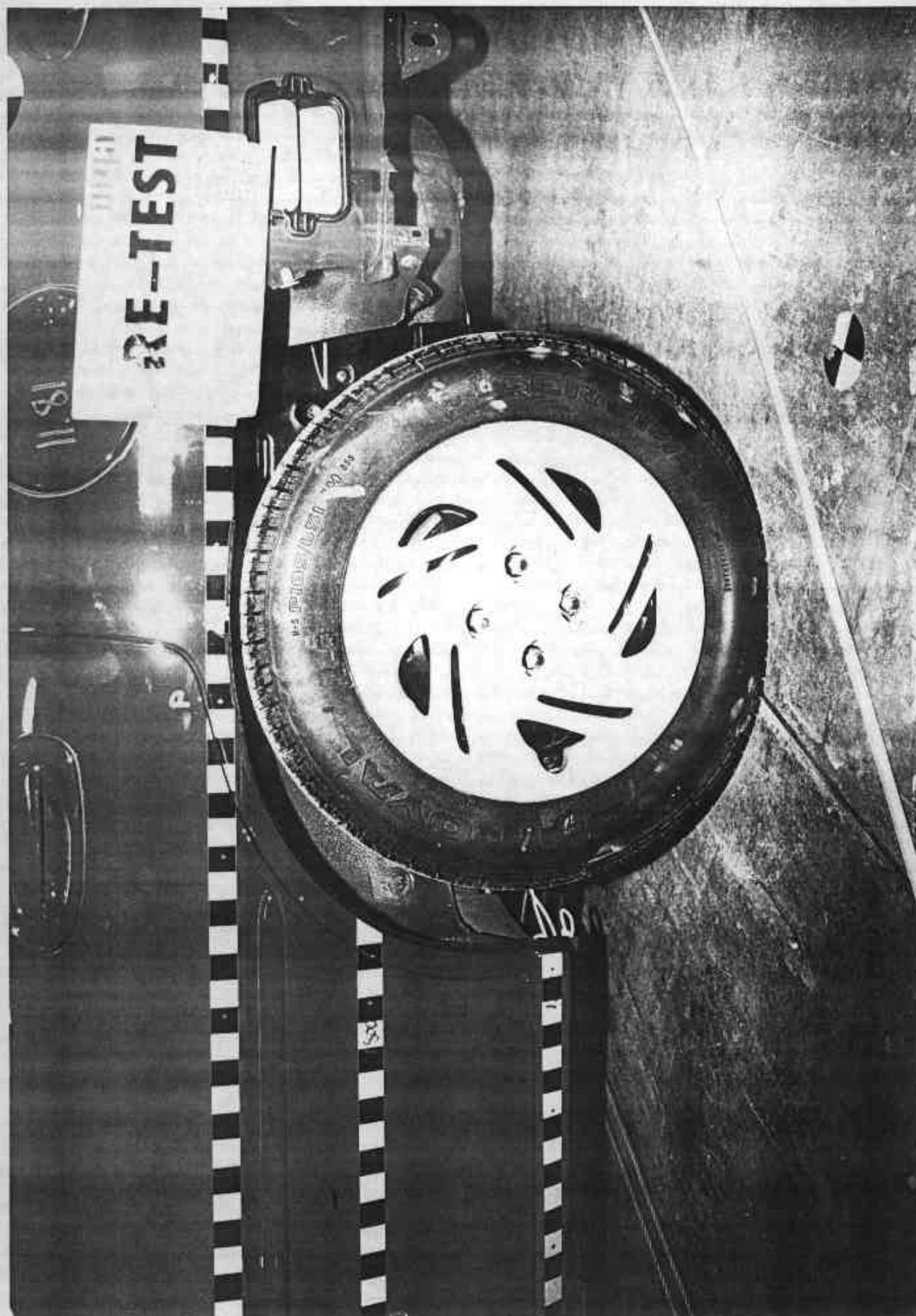


Photo No. A-48 - Left Rear Attitude Point

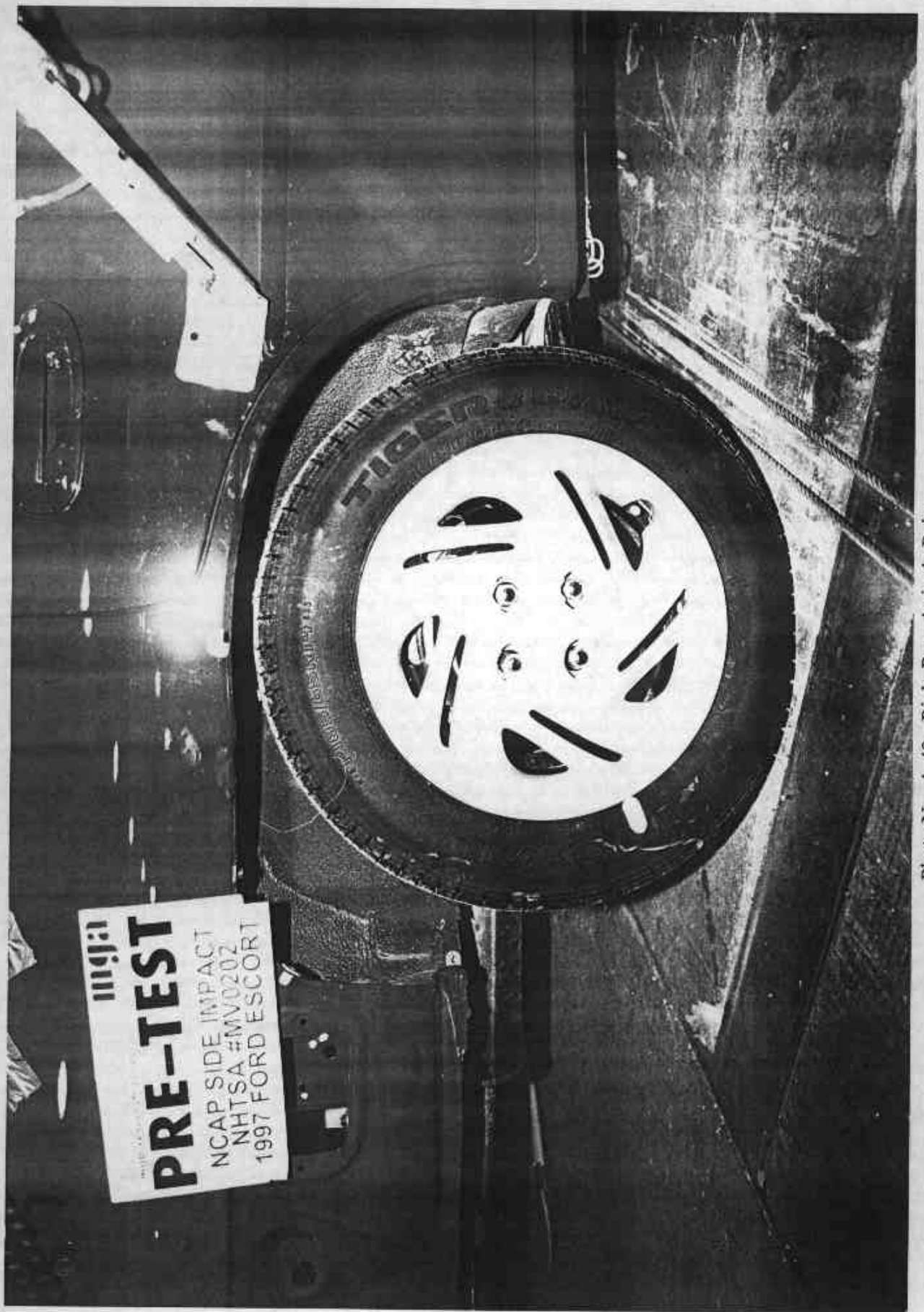


Photo No. A-49 - Right Rear Attitude Point

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* No Valid Data Collected

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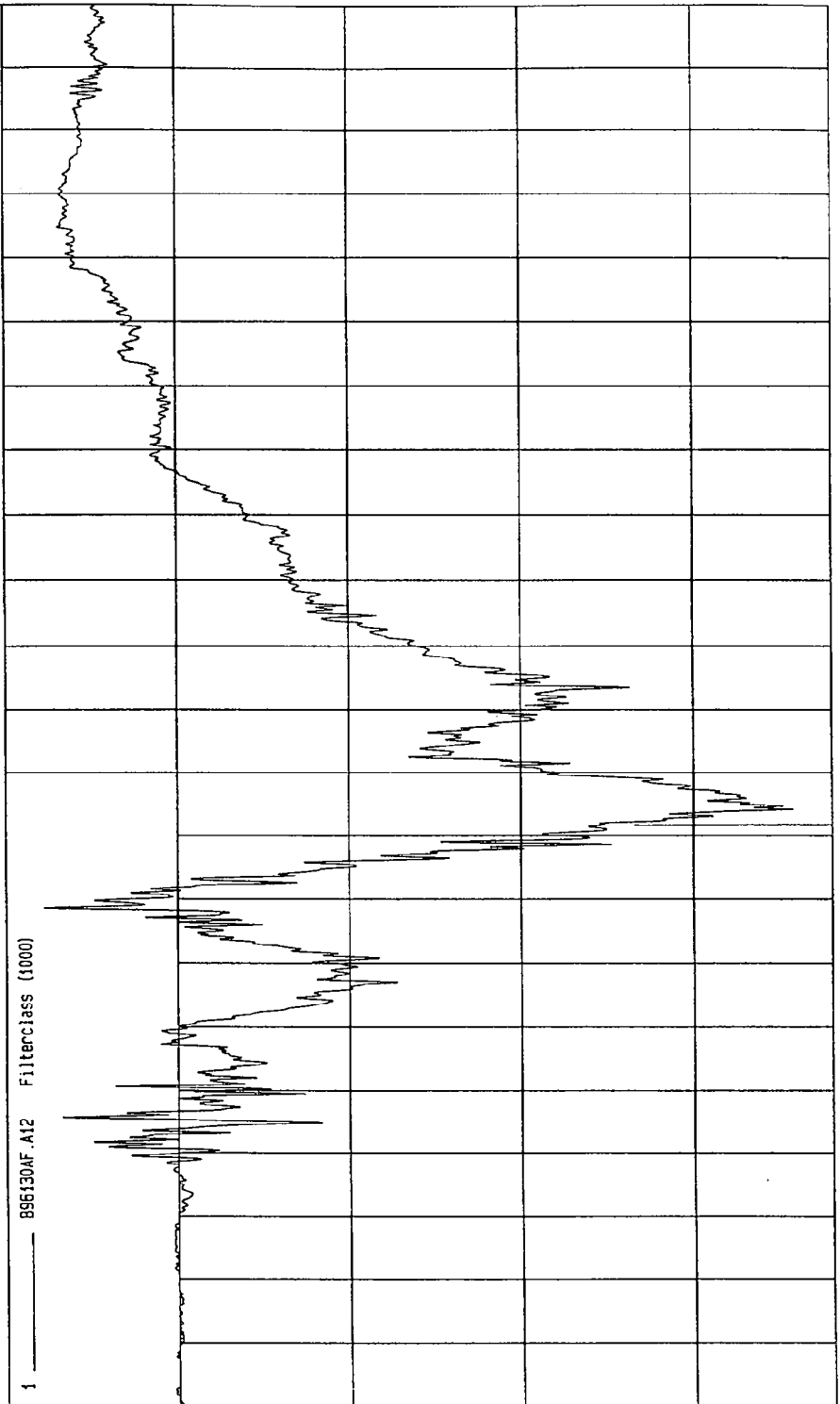
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TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996
COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH
YMIN=-35.70305 G'S at 74. msec YMAX= 7.74705 G'S at 58. msec

DRIVER HEAD X ACCELERATION



TIME (SECONDS)

MCA Research
12-15-1996 19:16

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST

TEST DATE: 12-02-1996

Speed: 37.9 MPH 61 KPH

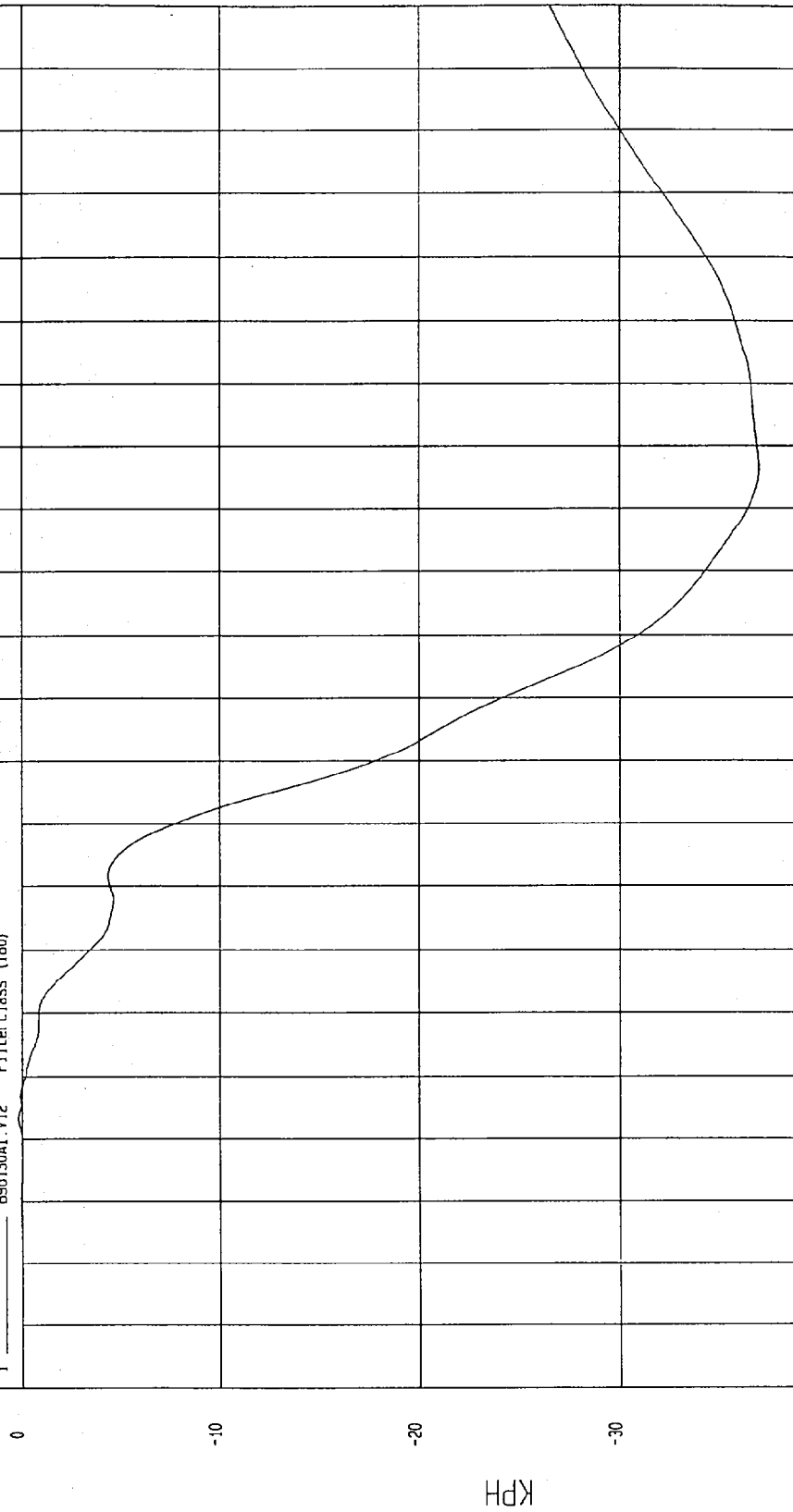
COMPONENT: 1997 FORD ESCORT (MV0202)

YMAX= .1736321 KPH at 23. msec

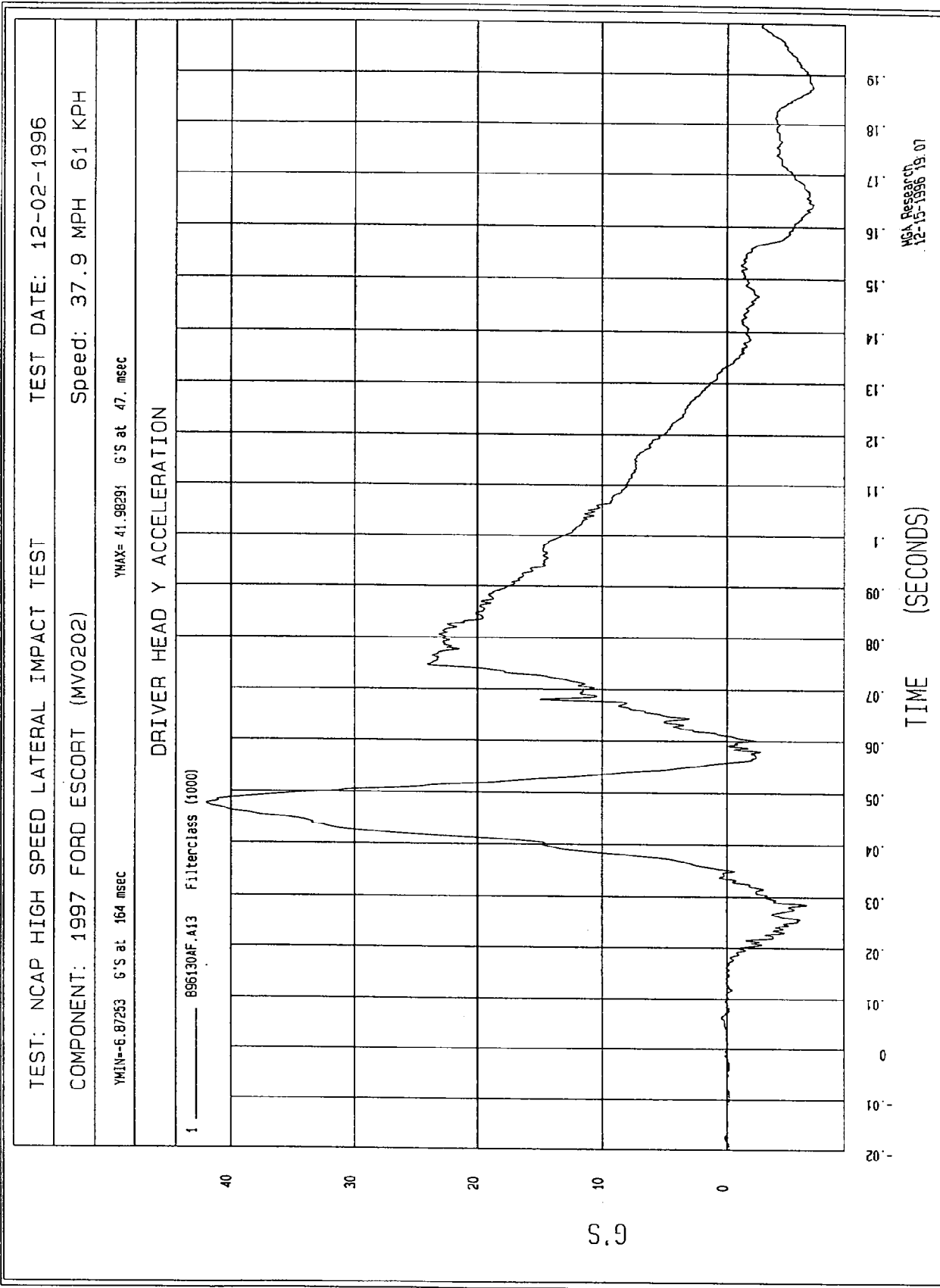
YMIN=-36.91962 KPH at 126 msec

DRIVER HEAD X VELOCITY

1 896130AI.V12 Filterclass (180)



MSA Research
12-19-1996 13.32



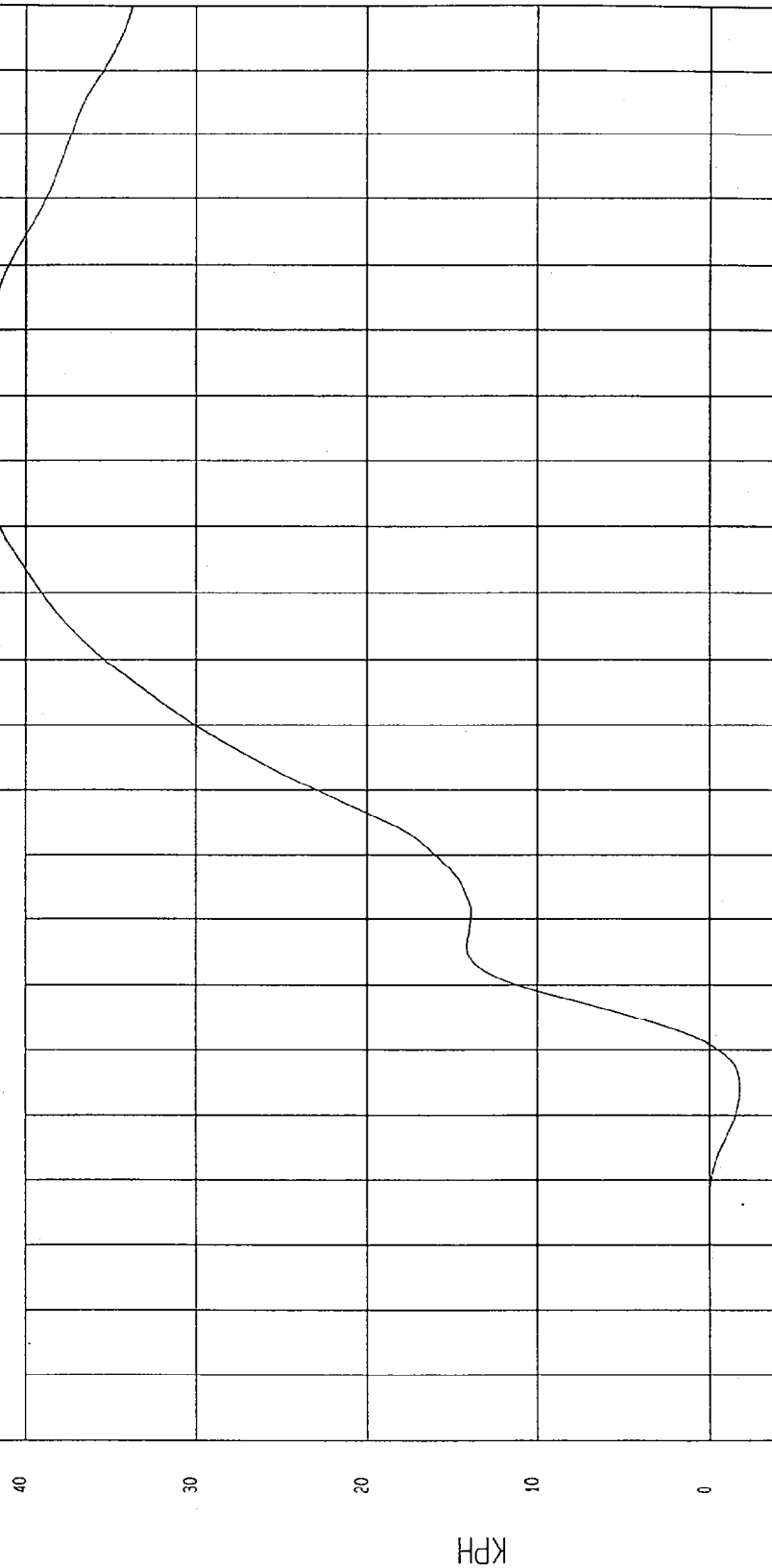
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COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

YMIN=-1.720013 KPH at 33. msec YMAX= 42.78208 KPH at 133 msec

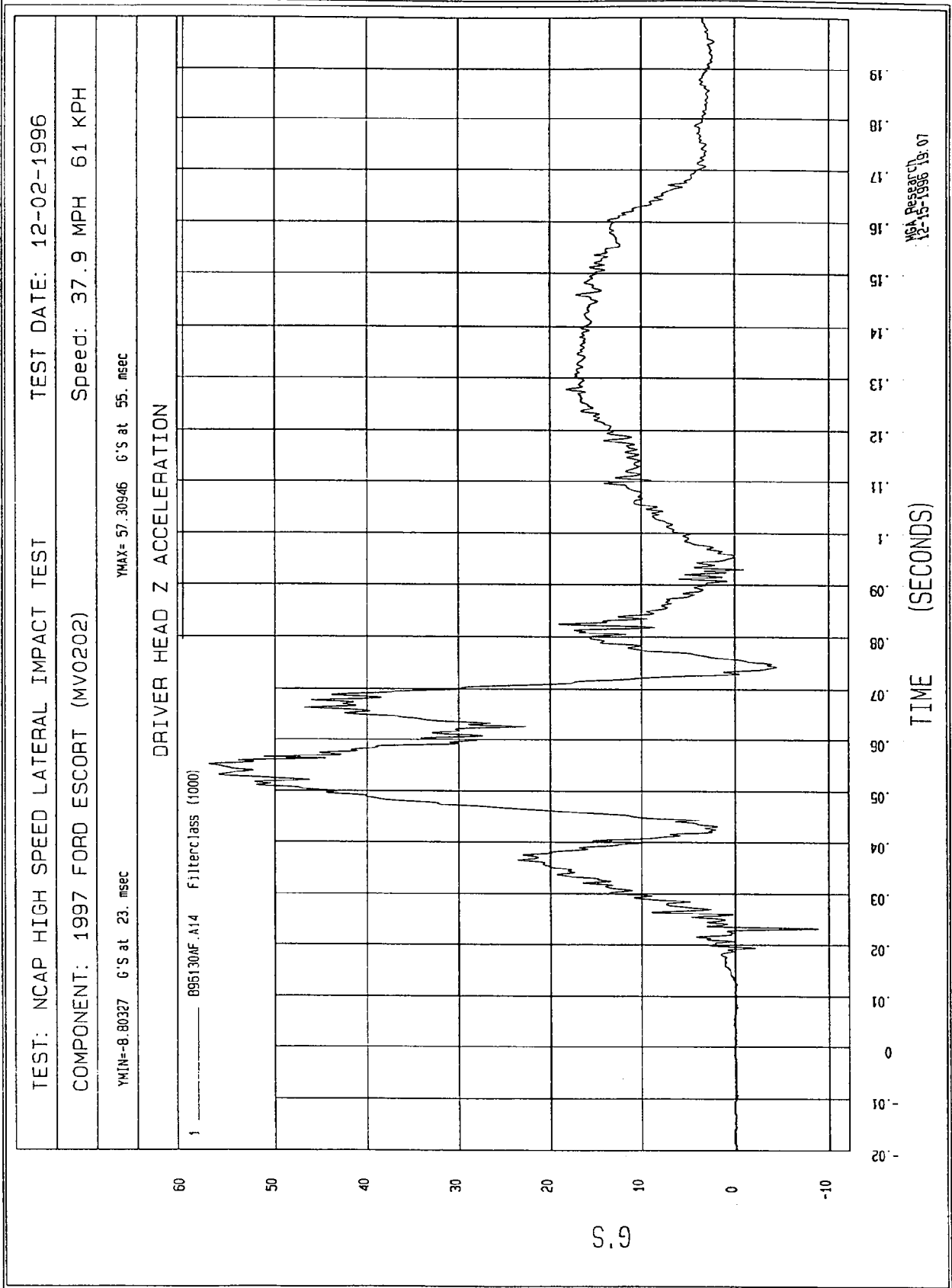
DRIVER HEAD Y VELOCITY

1 ——— 896130A1.V13 FilterClass (180)



MCA Research
12-19-1996 13:32

TIME Seconds



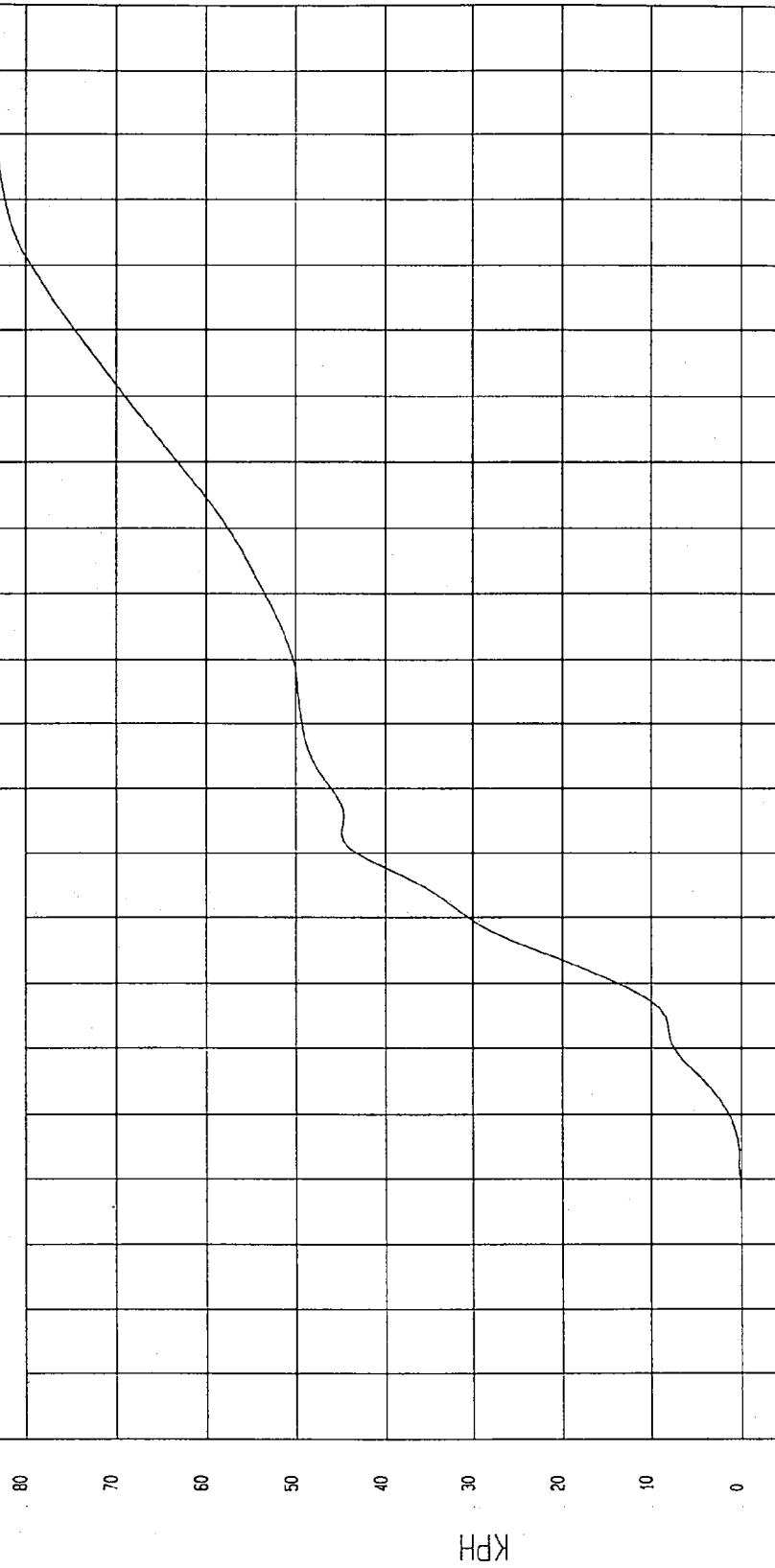
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COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

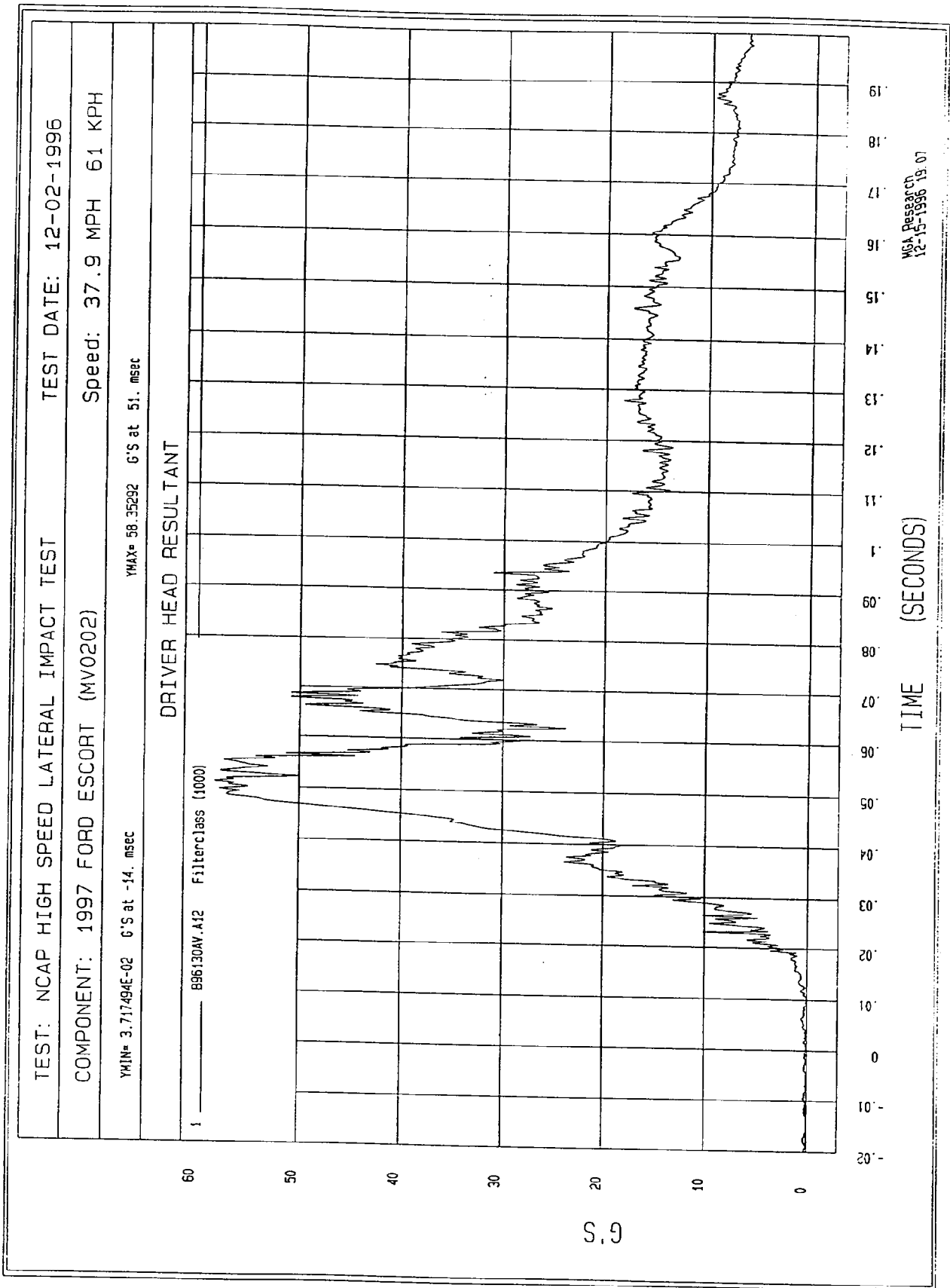
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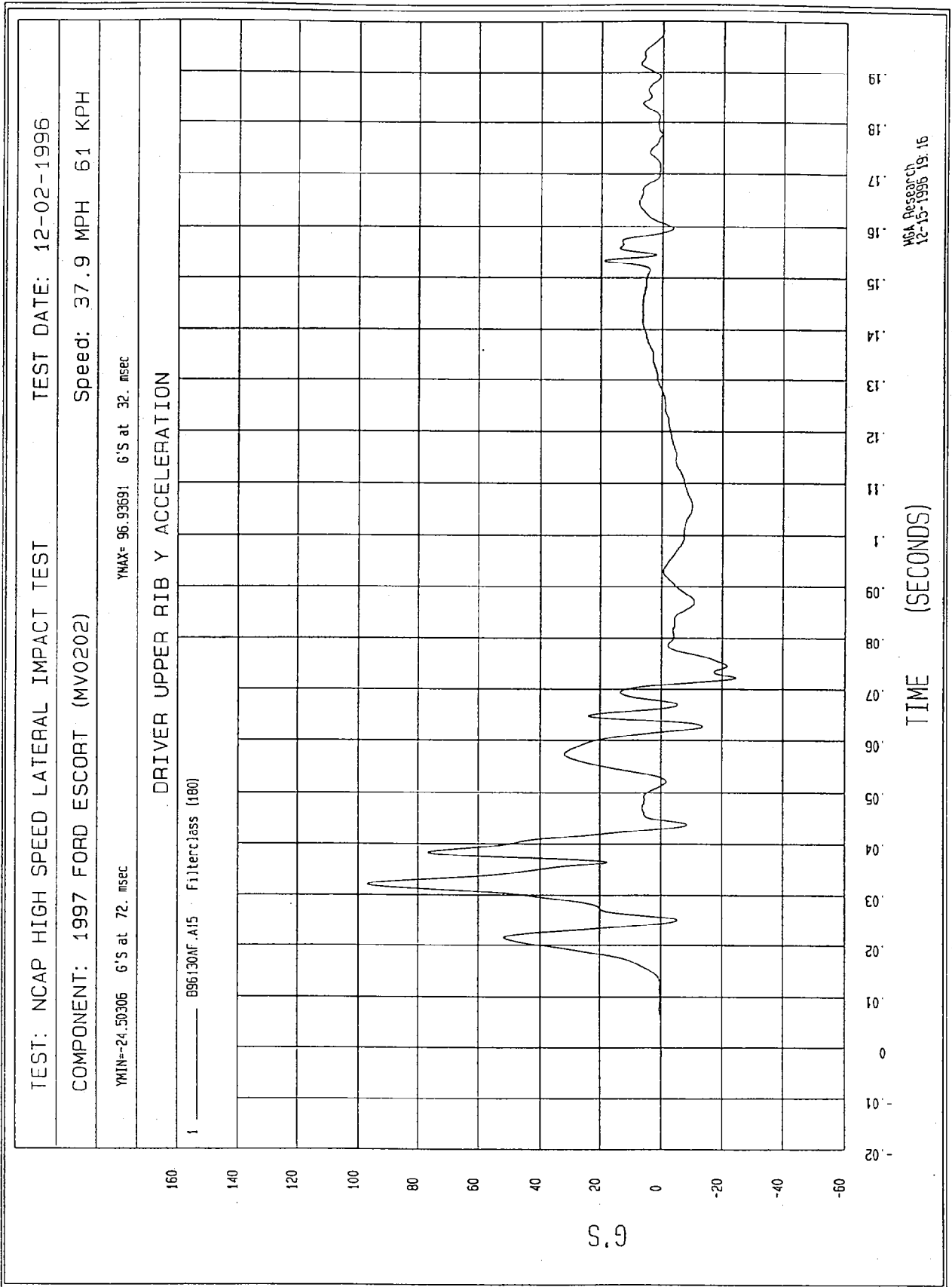
DRIVER HEAD Z VELOCITY

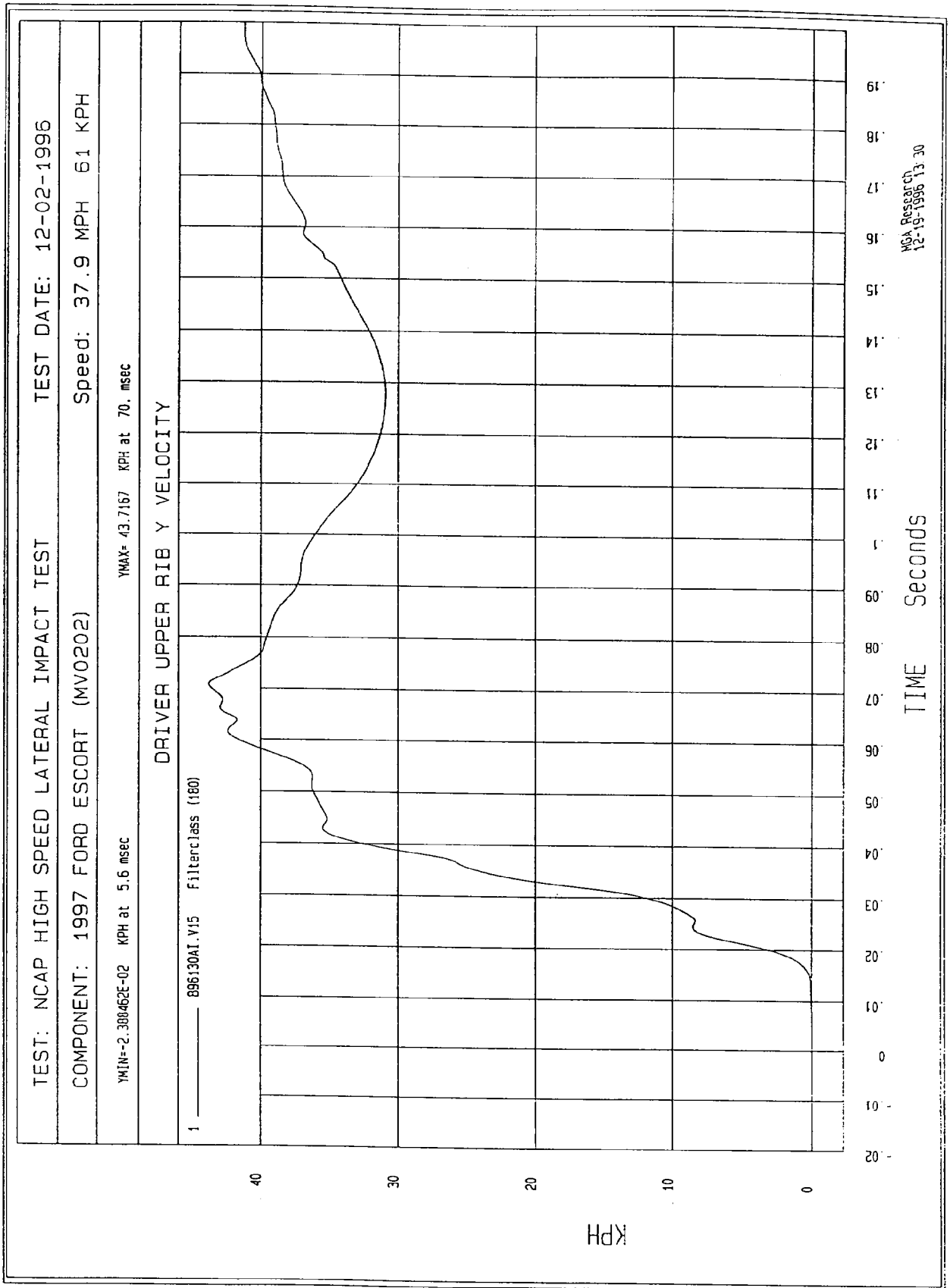
1 ——— B96130A1.V14 Filterclass (180)

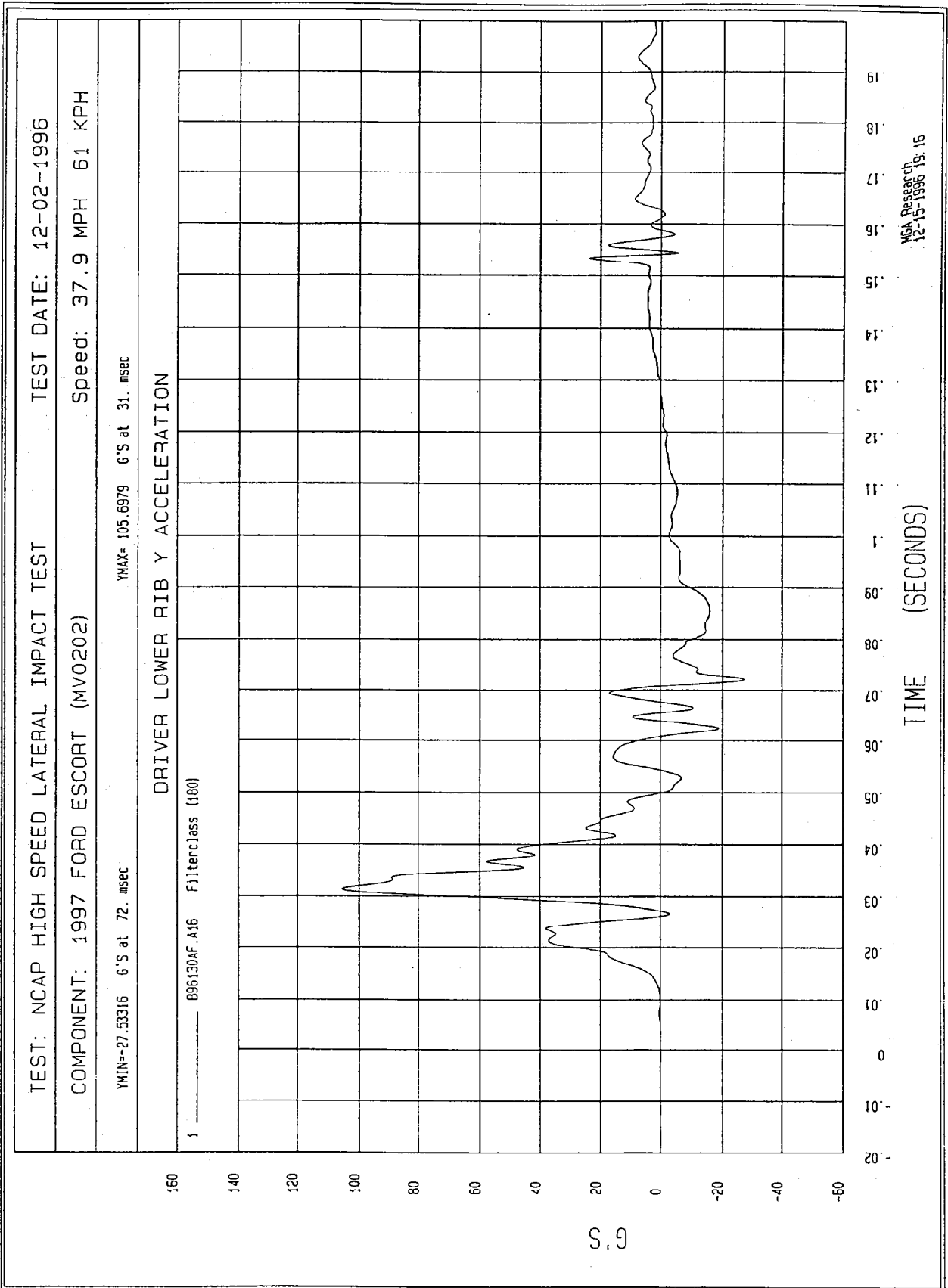


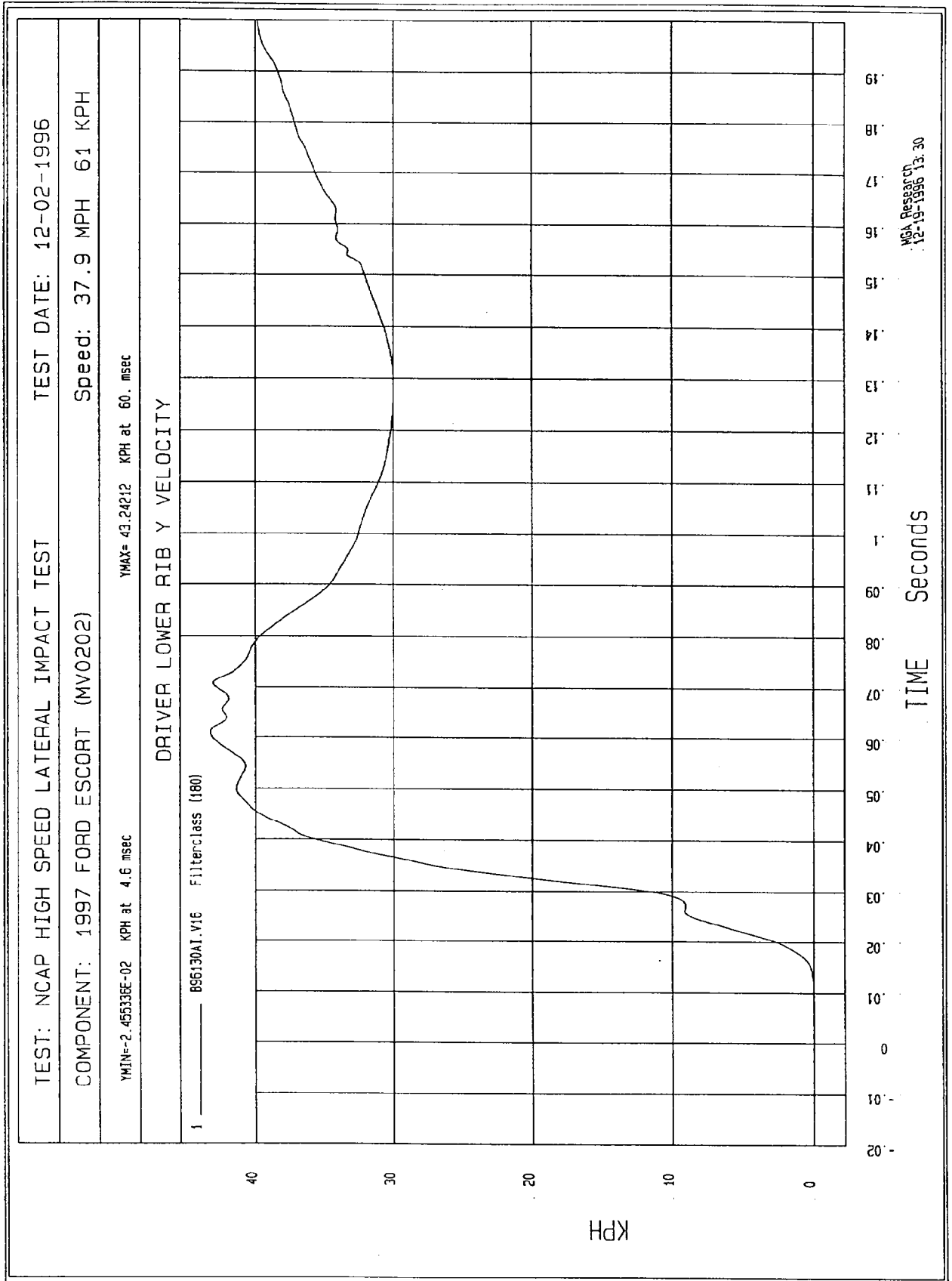
TIME Seconds
MCA Research
12-19-1996 13:32

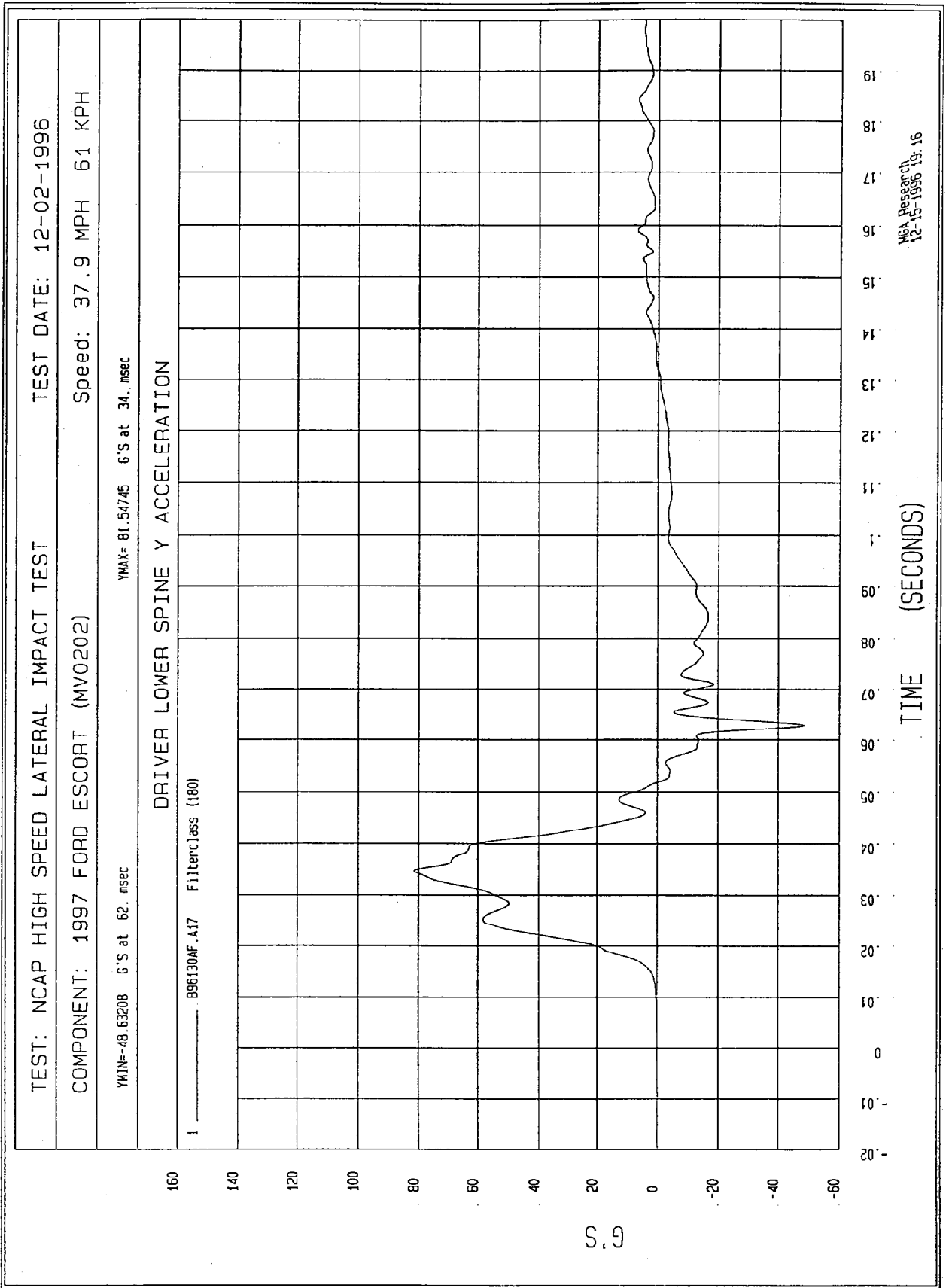


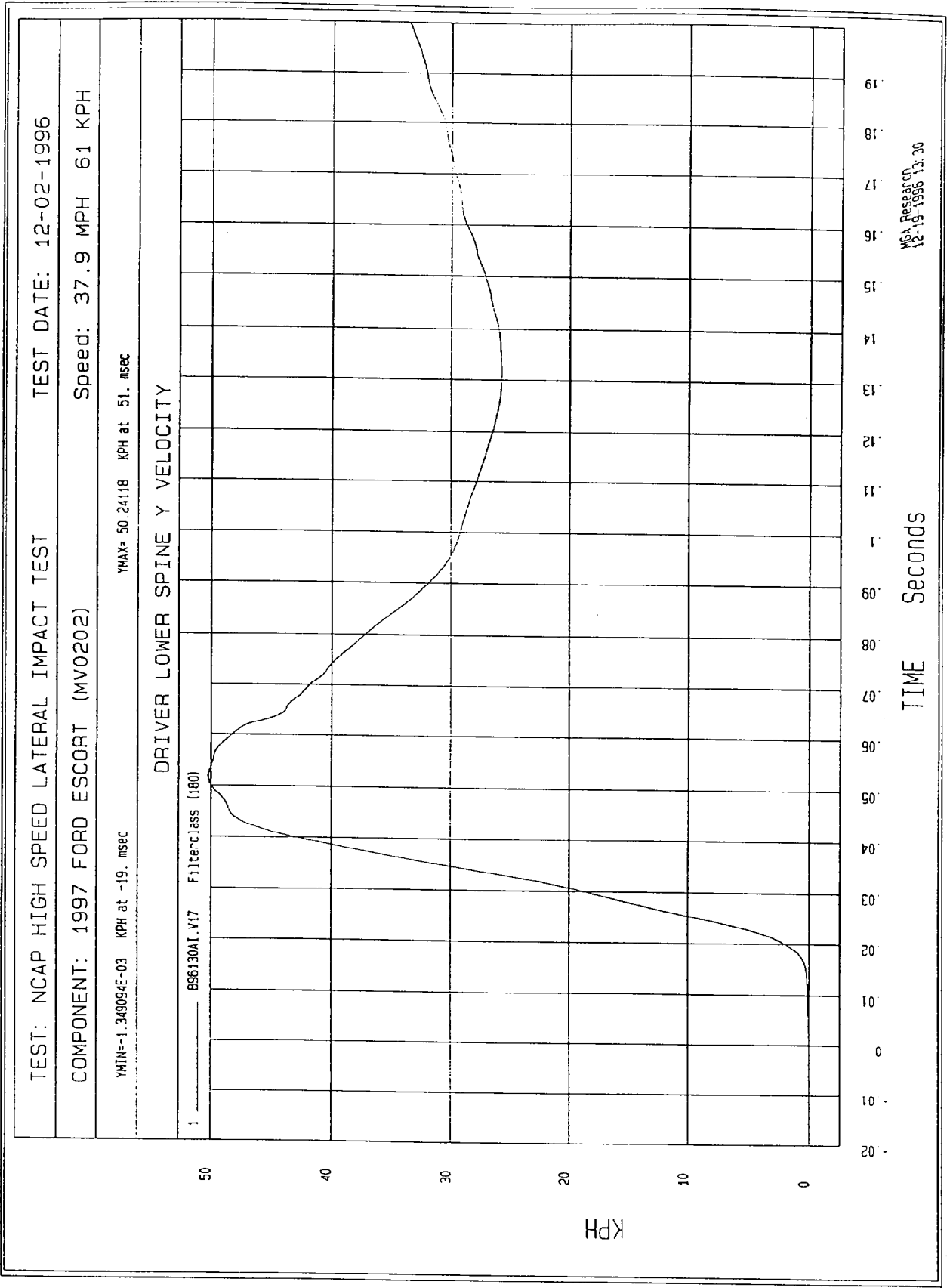










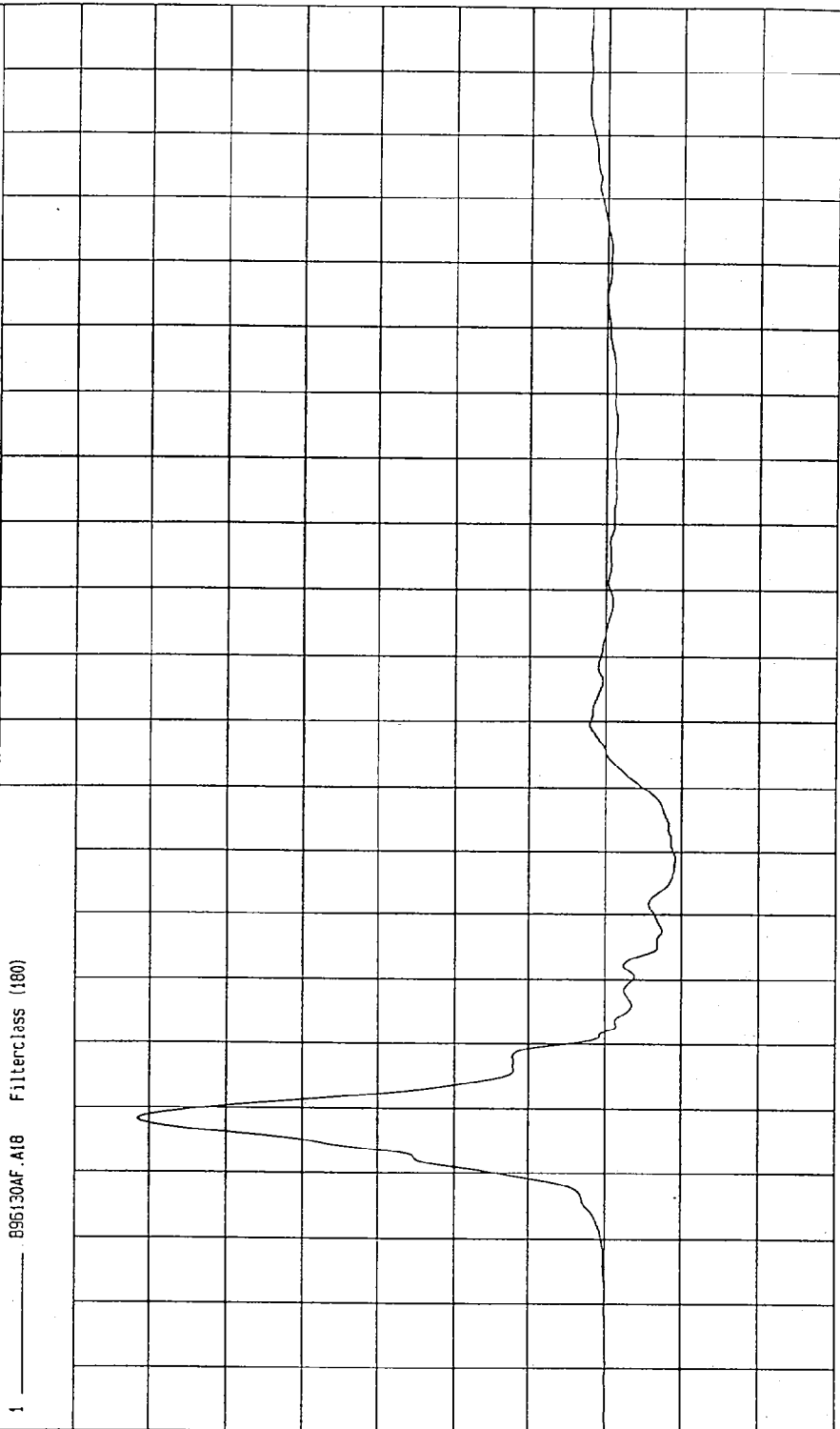


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

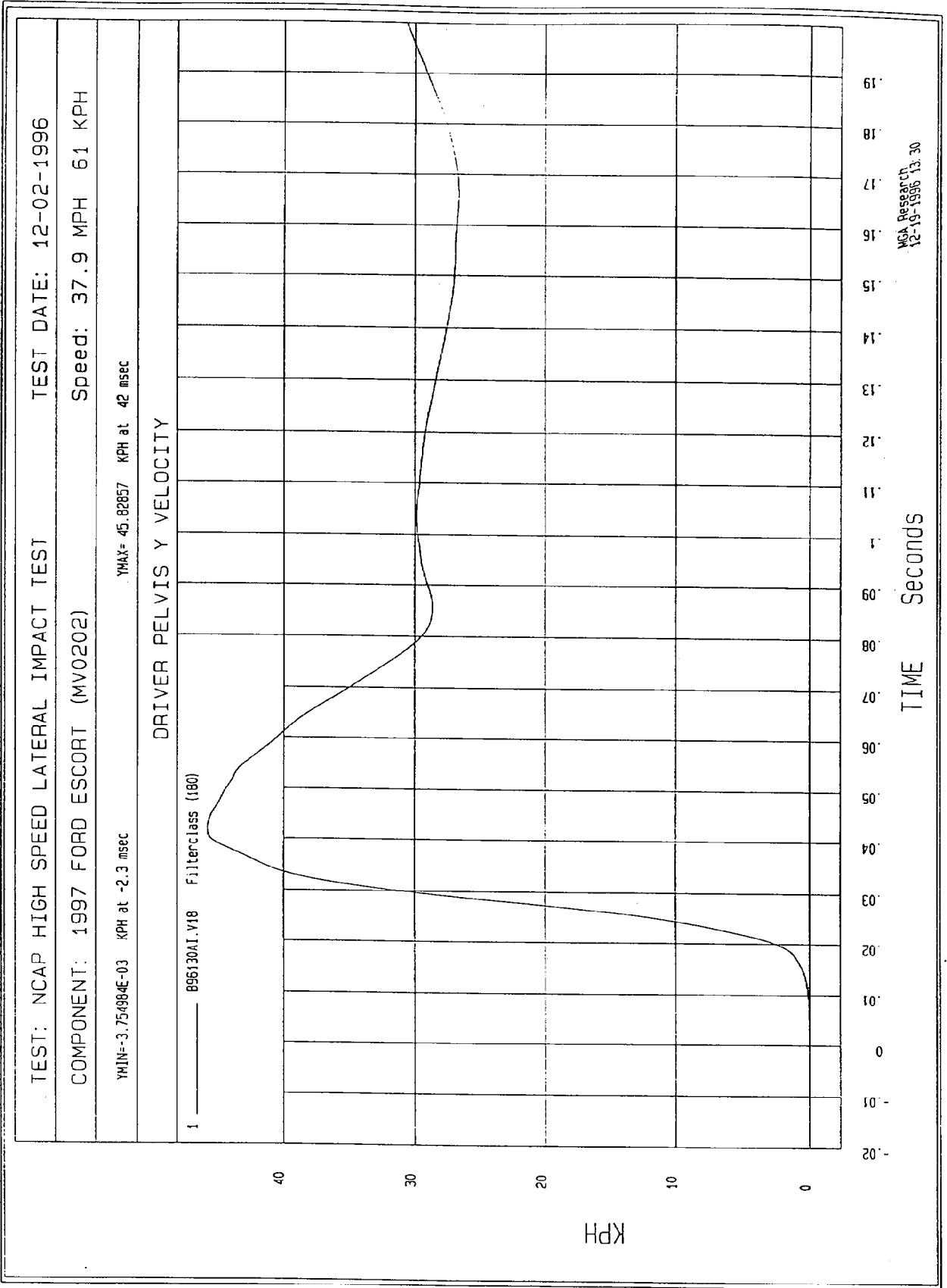
YMIN=-18.50958 G'S at 68. msec YMAX= 123.1443 G'S at 28. msec

DRIVER PELVIS Y ACCELERATION



TIME (SECONDS)

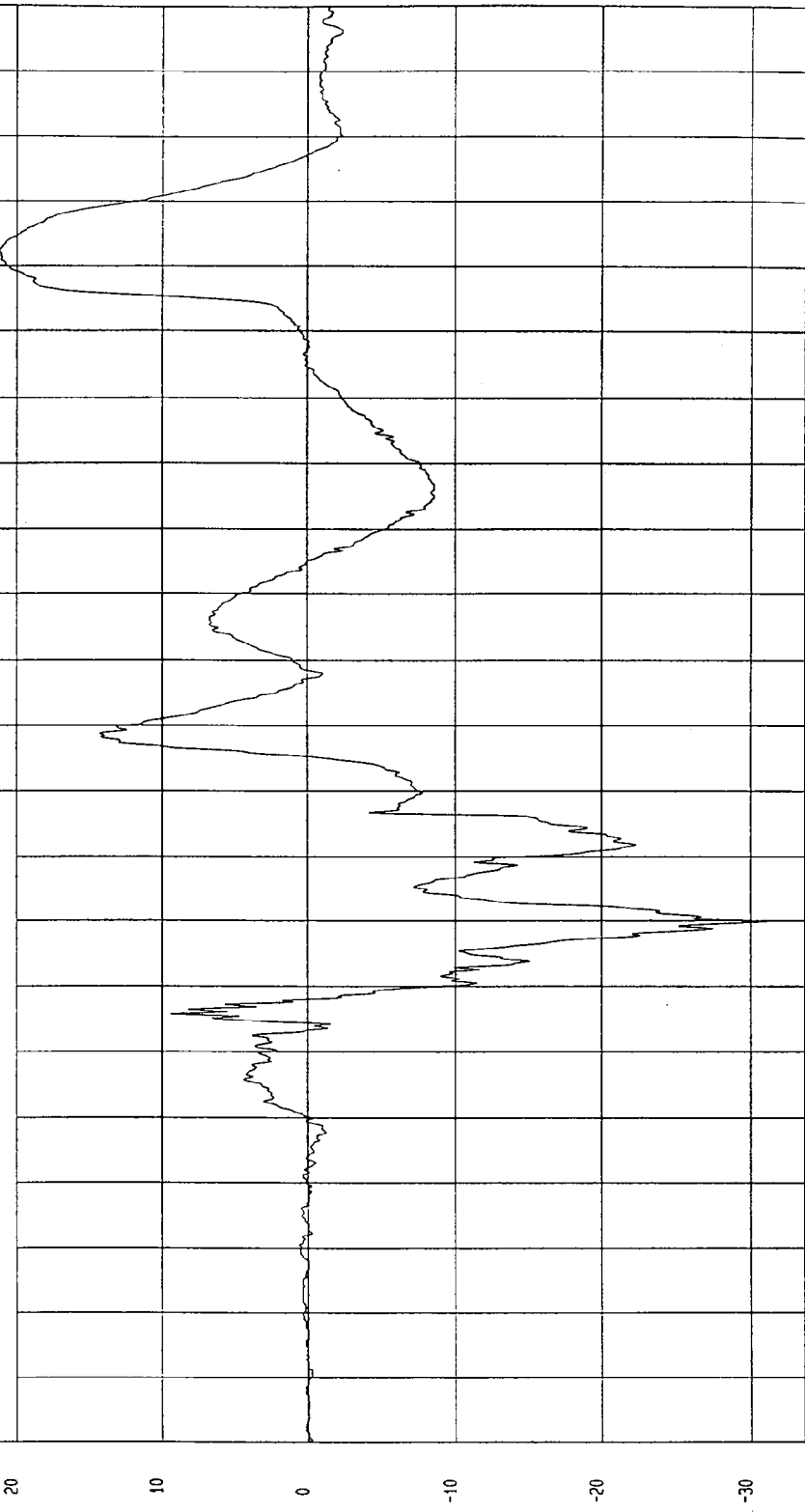
MSA Research
12-15-1996 19:16



TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996
COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

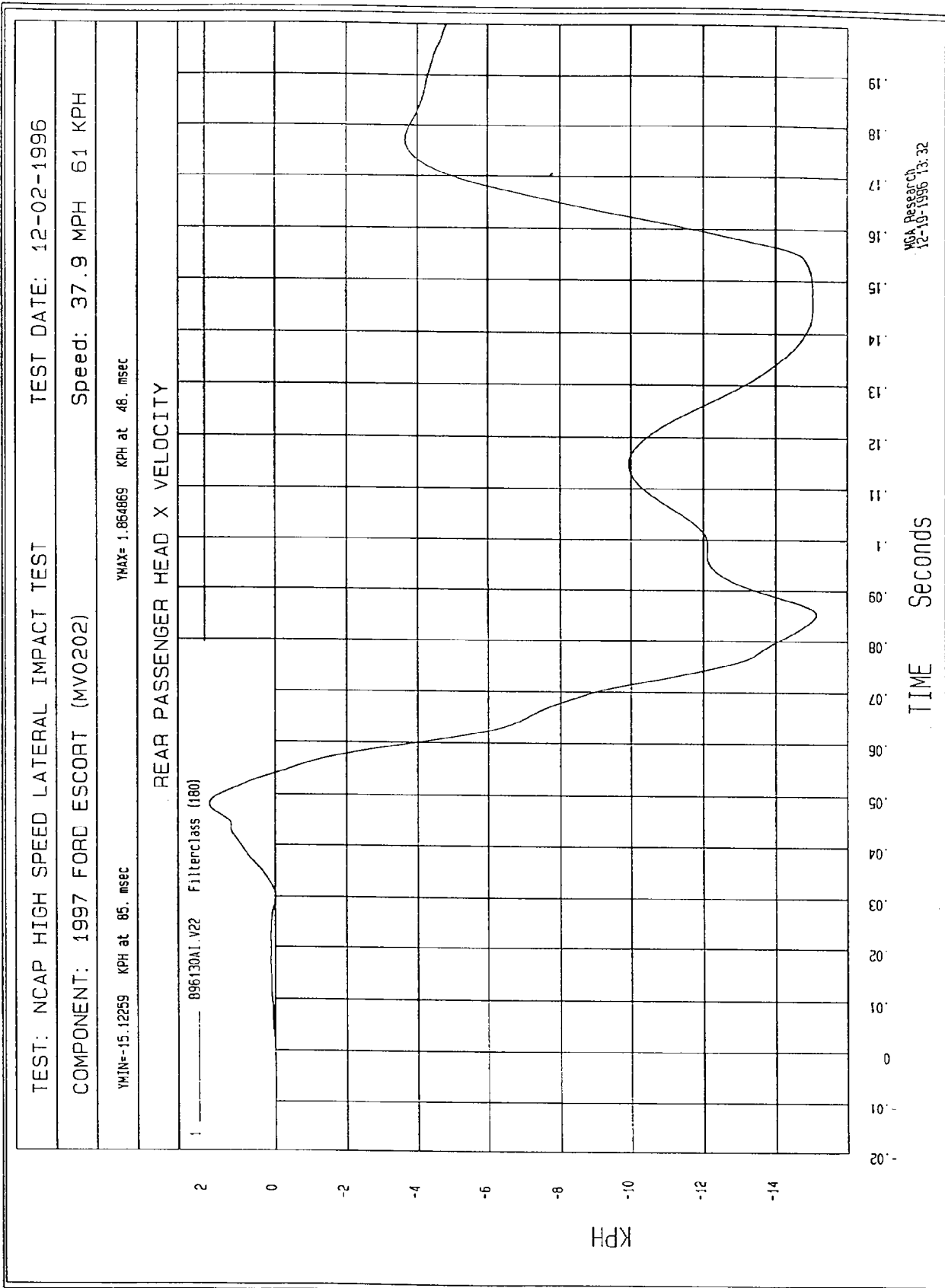
YMIN=-31.04228 G'S at 59. msec YMAX= 21.19309 G'S at 162 msec

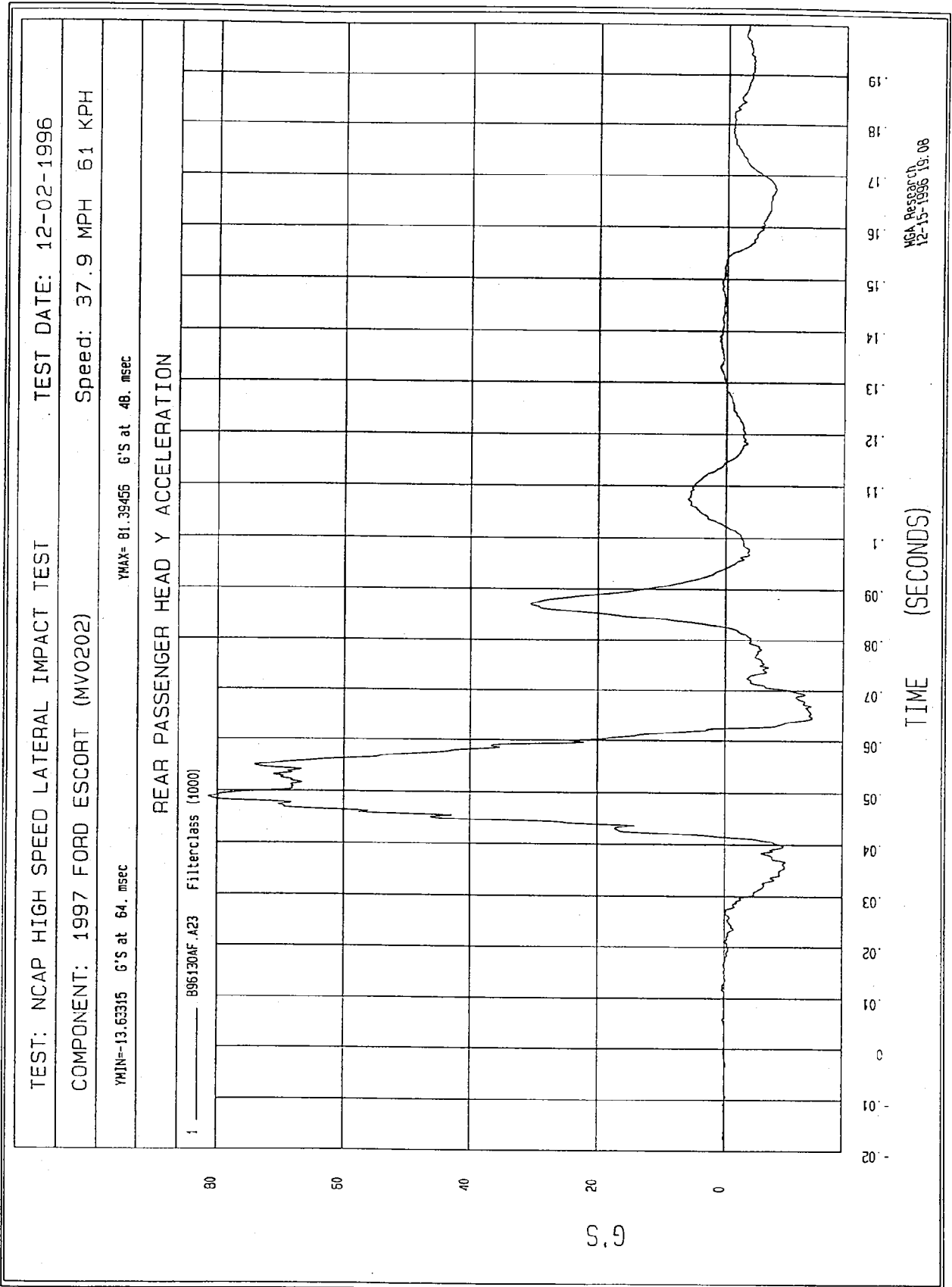
REAR PASSENGER HEAD X ACCELERATION
1 896130AF.A22 Filterclass (f1000)

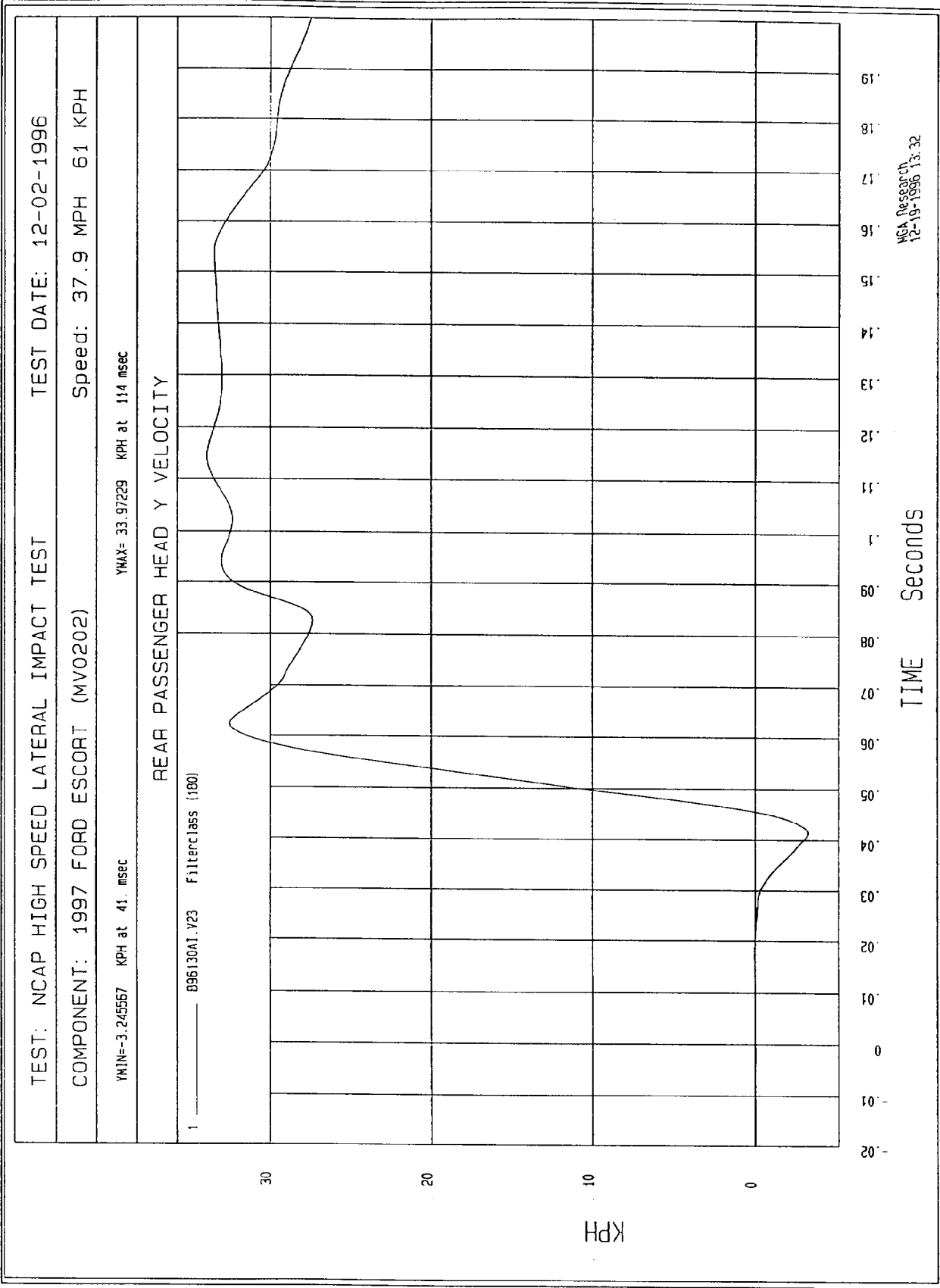


TIME (SECONDS)

MCA Research
12-15-1996 19: 07







TEST: NCAP HIGH SPEED LATERAL IMPACT TEST

TEST DATE: 12-02-1996

Speed: 37.9 MPH 61 KPH

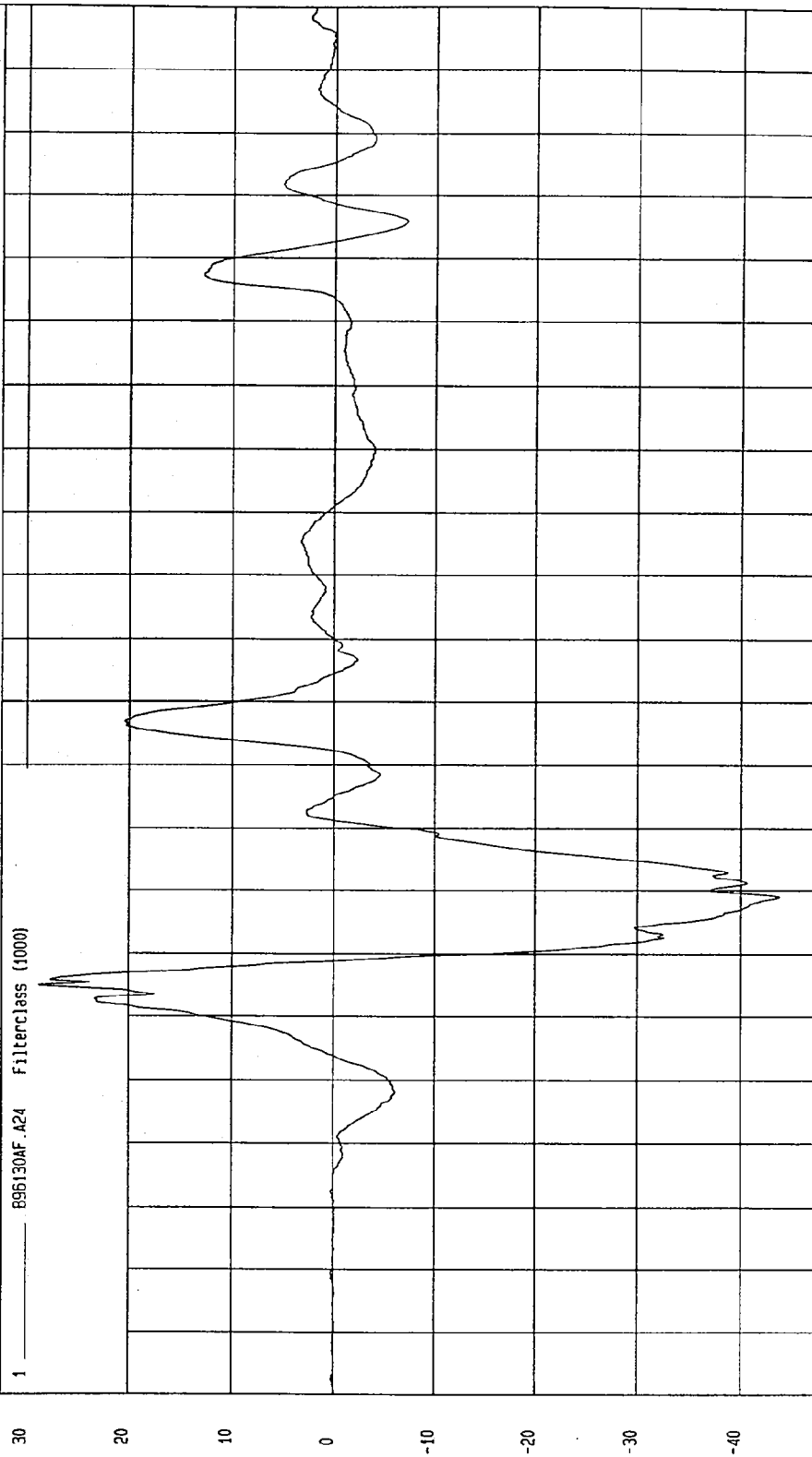
COMPONENT: 1997 FORD ESCORT (MV0202)

YMAX= 28.86746 G's at 45 msec

YMIN= -43.63836 G's at 59 msec

REAR PASSENGER HEAD Z ACCELERATION

1 896130AF.A24 Filterclass (1000)



MCA Research
12-15-1996 19.08

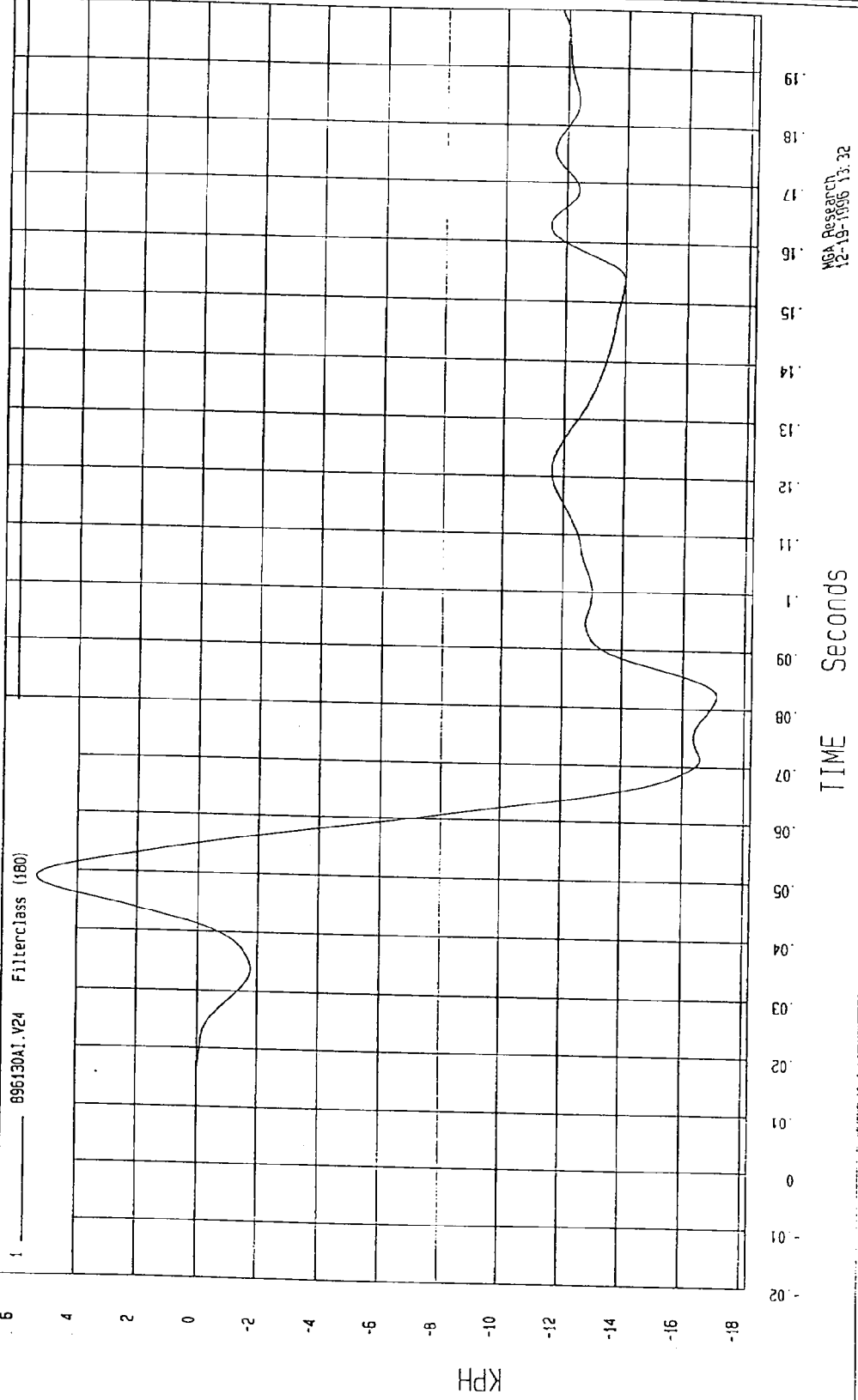
TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

YMIN=-17.05788 KPH at 82. msec

YMAX= 5.335309 KPH at 48. msec

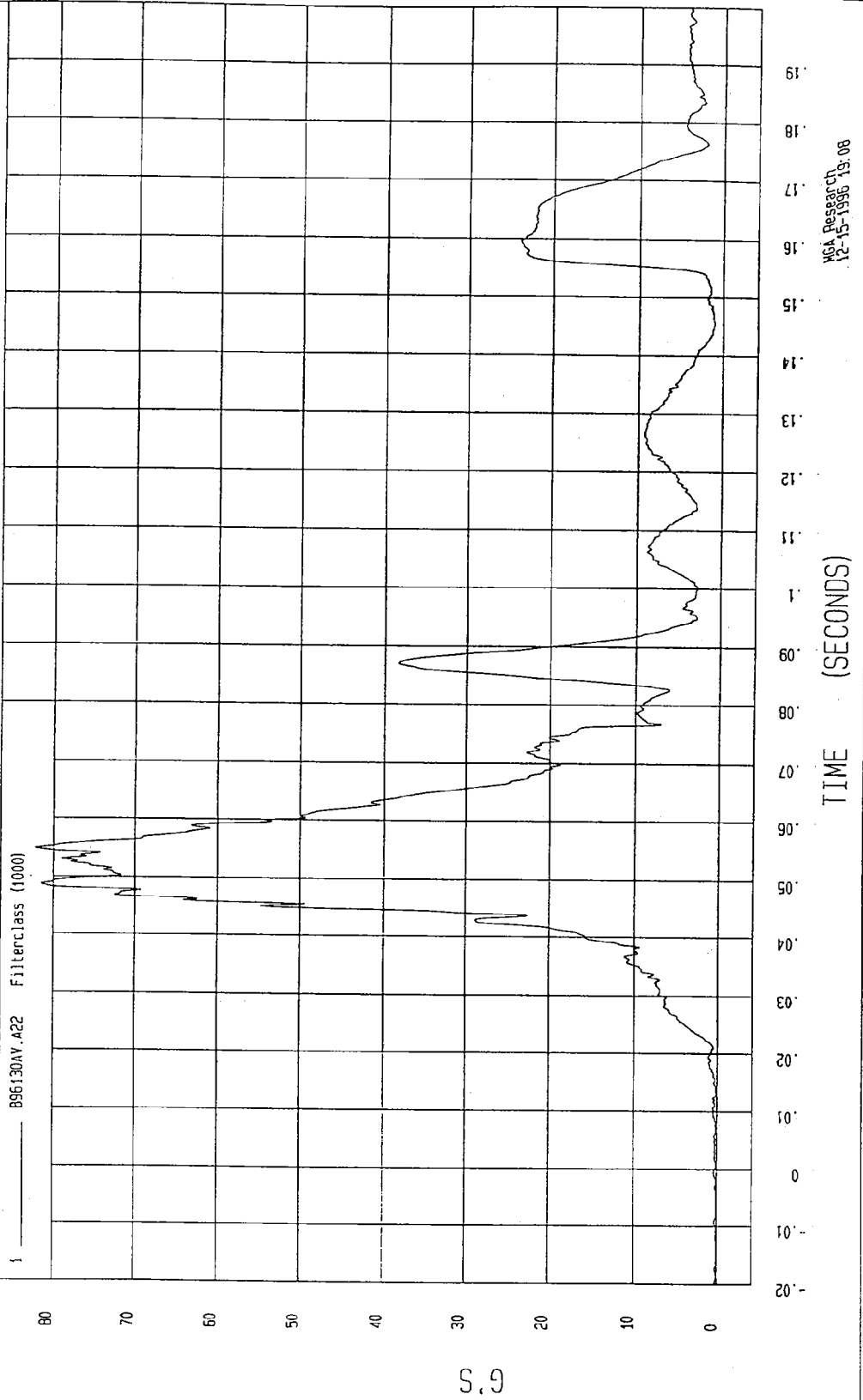
REAR PASSENGER HEAD Z VELOCITY

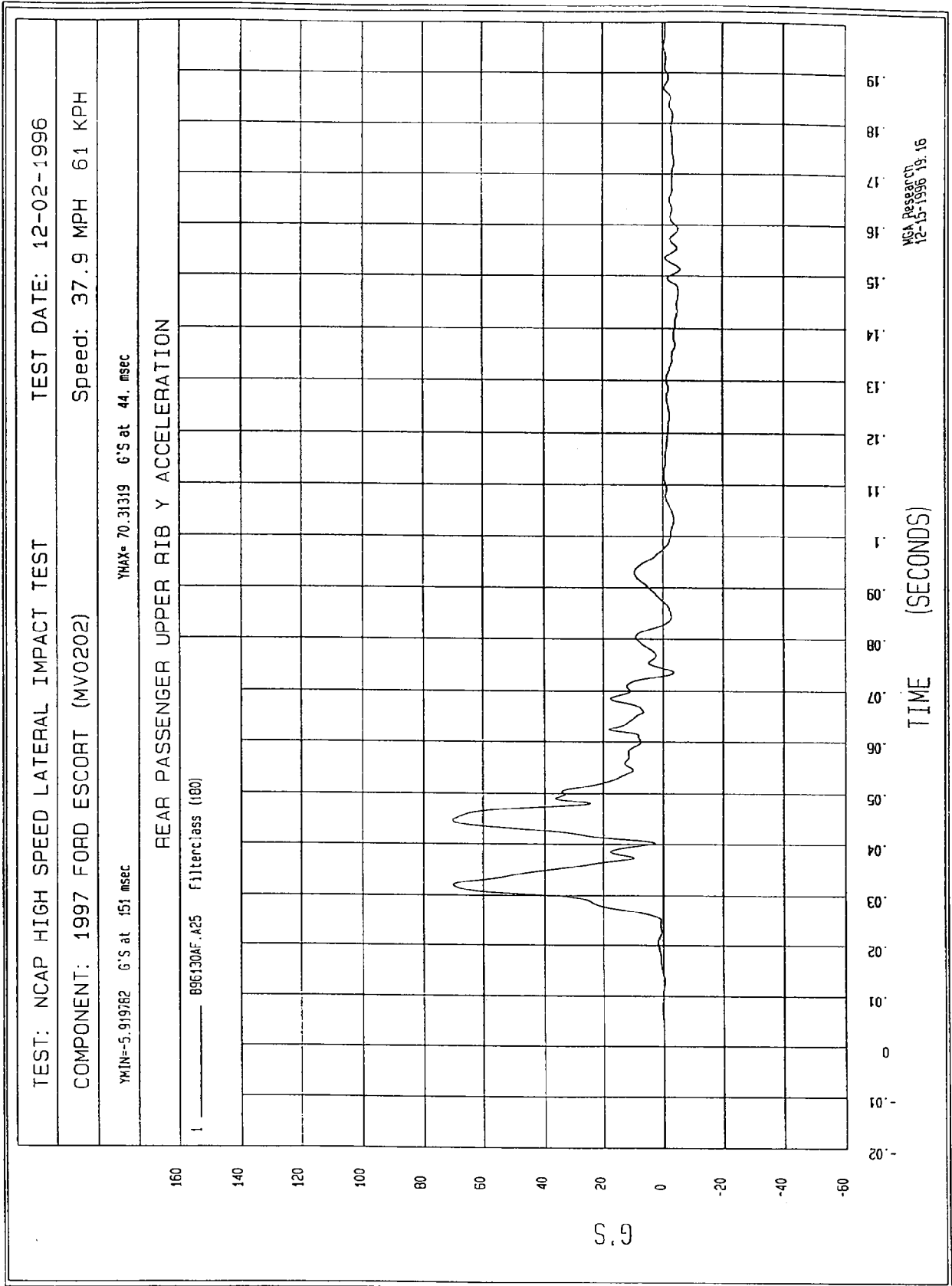


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996
COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

YMIN= 3.35324E-02 G'S at -15. msec YMAX= 82.192 G'S at 55 msec

REAR PASSENGER HEAD RESULTANT





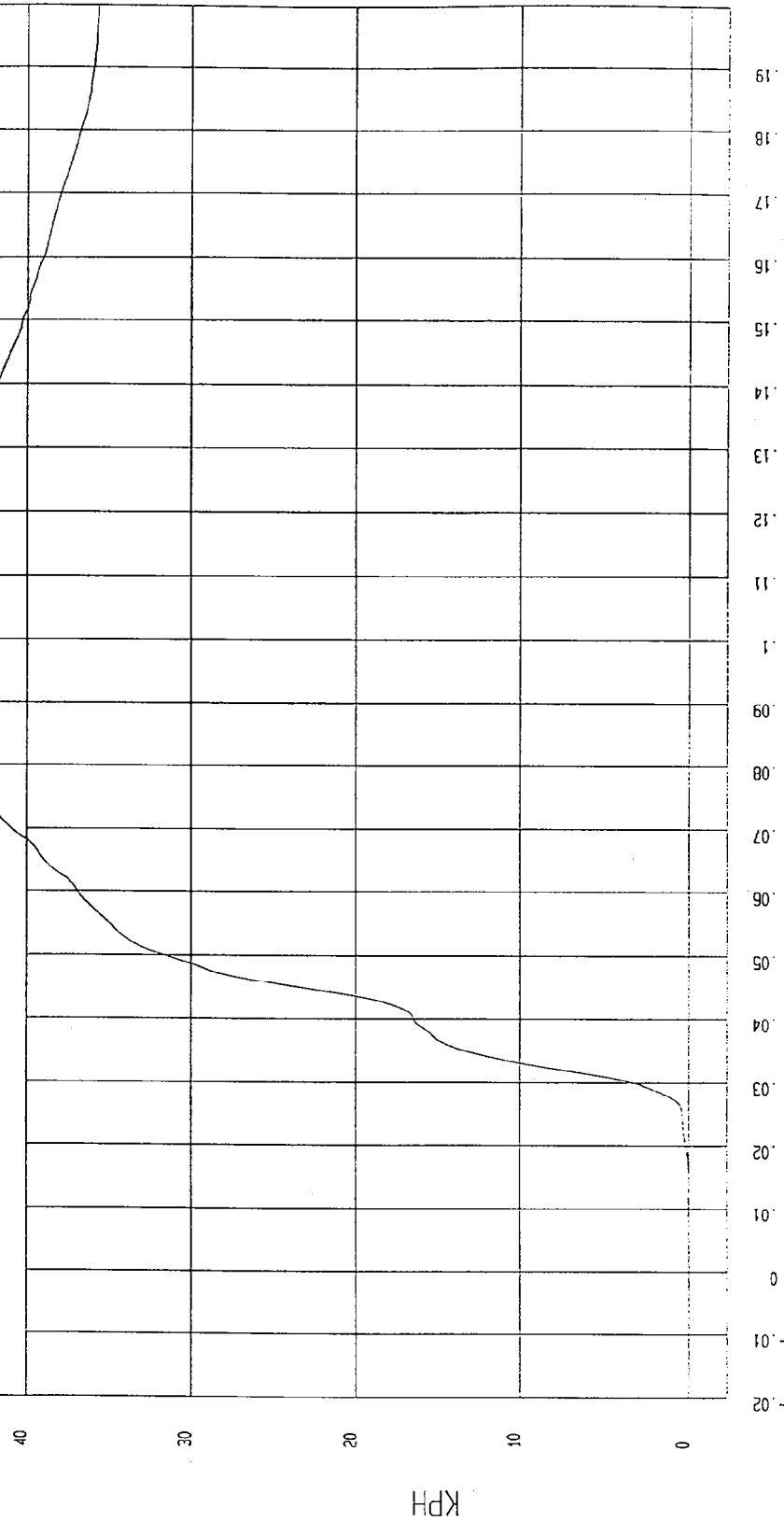
TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

YMIN=-1.740562E-02 KPH at 3.0 msec YMAX= 44.75768 KPH at 97. msec

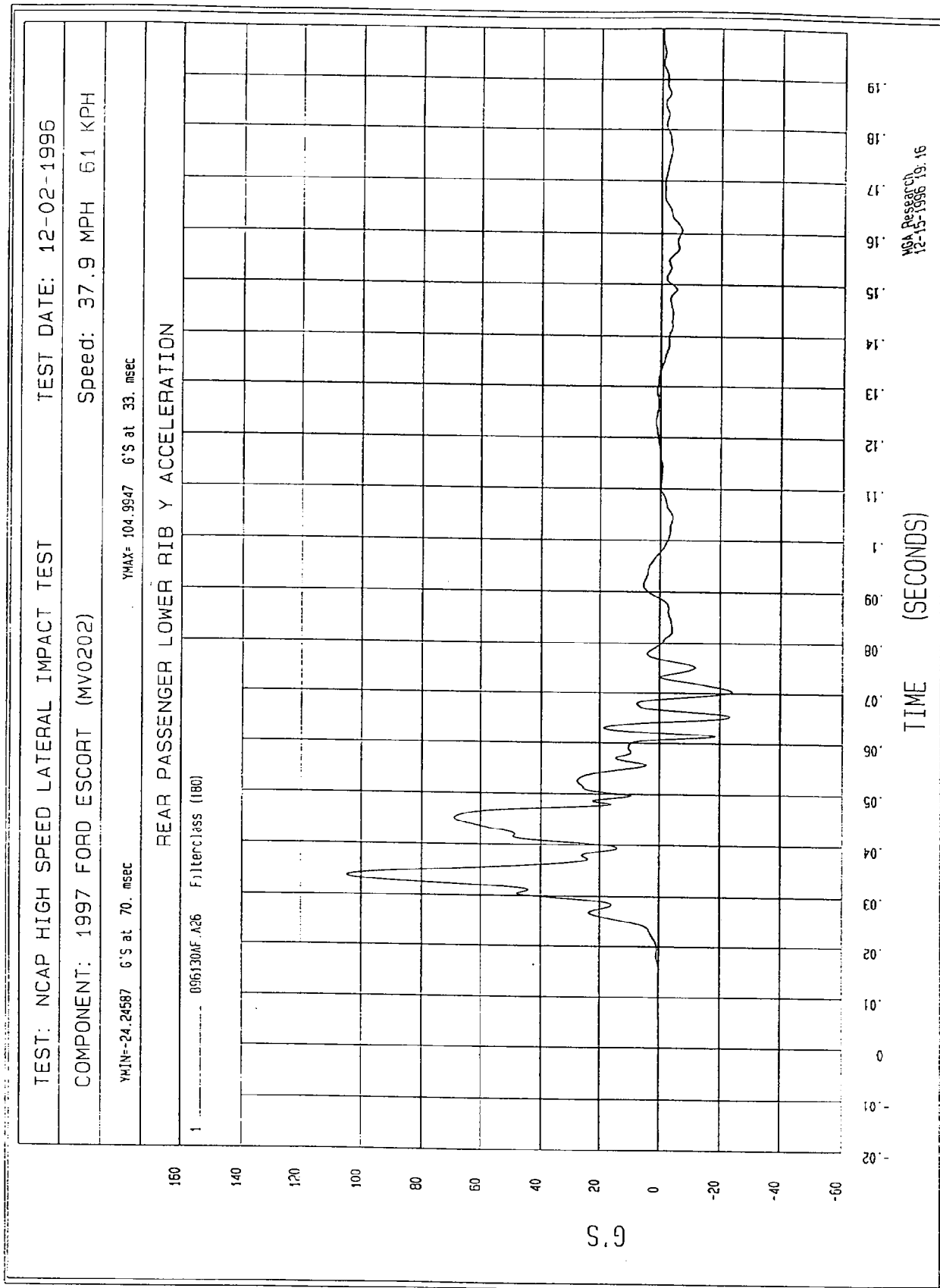
REAR PASSENGER UPPER RIB Y VELOCITY

1 B06130A1.V25 Filterclass (180)



MEA Research
12-19-1996 13:30

TIME Seconds

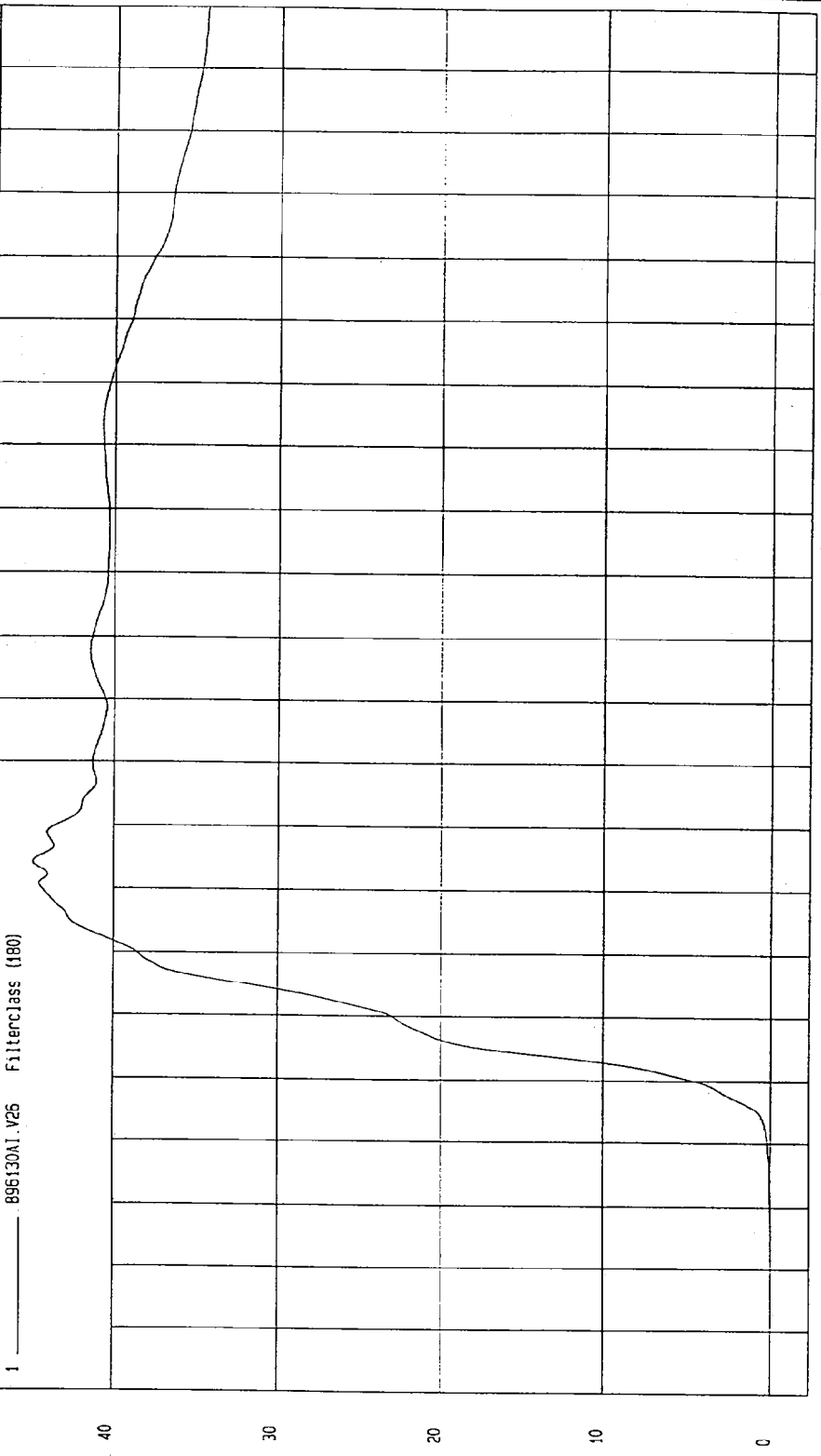


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

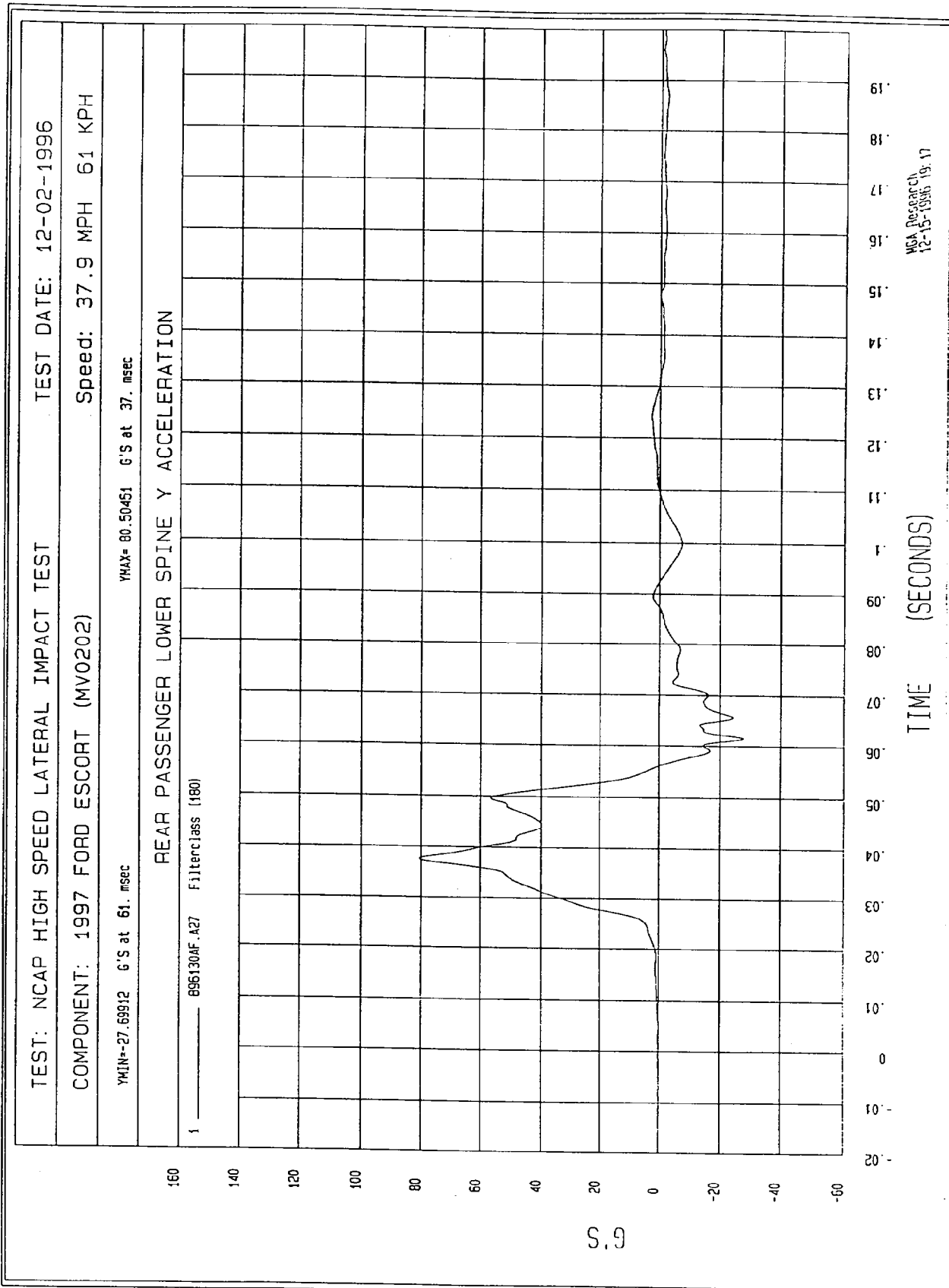
YMIN=-3.887233E-03 KPH at -10. msec YMAX= 44.9305 KPH at 64. msec

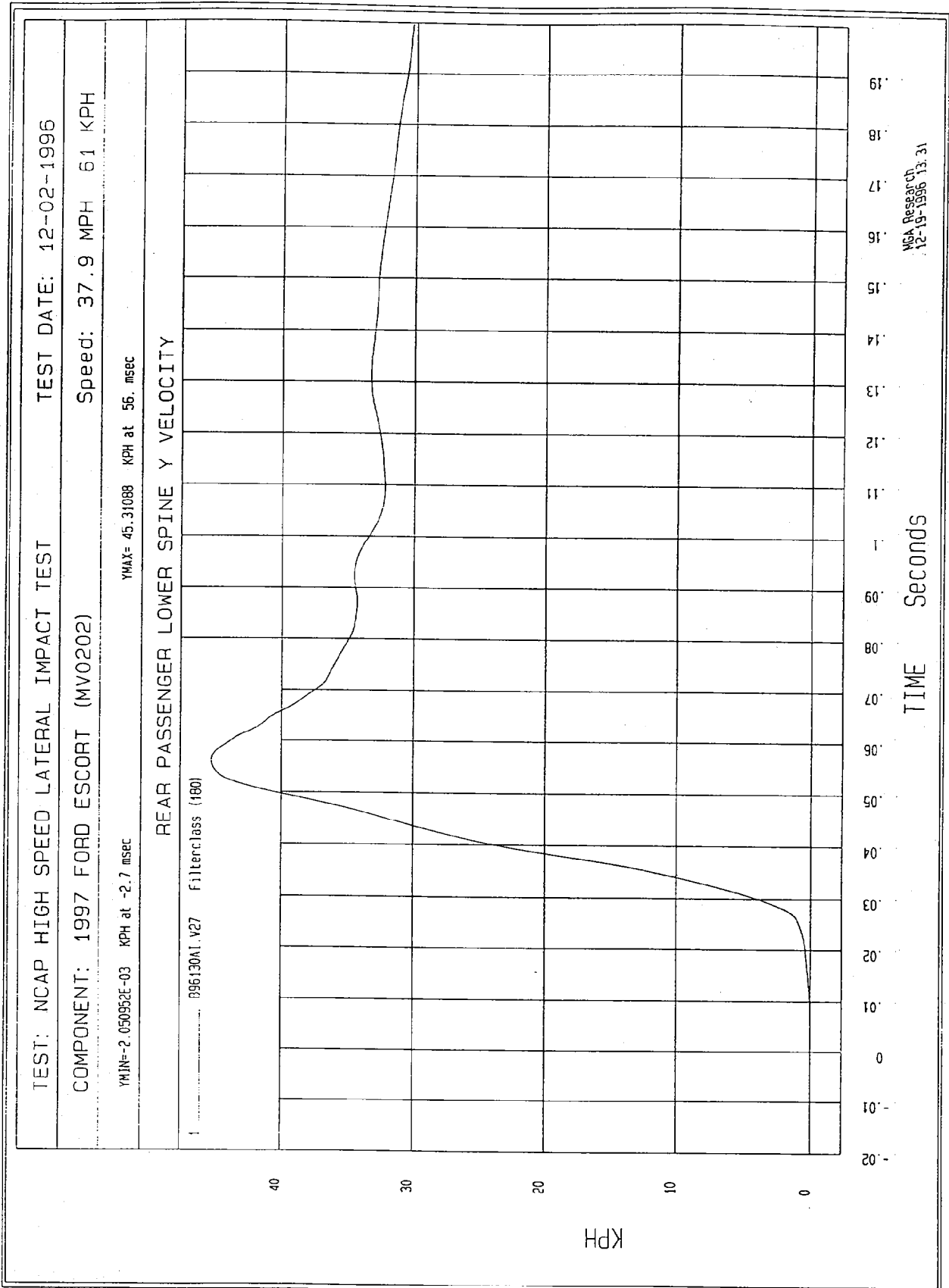
REAR PASSENGER LOWER RIB Y VELOCITY

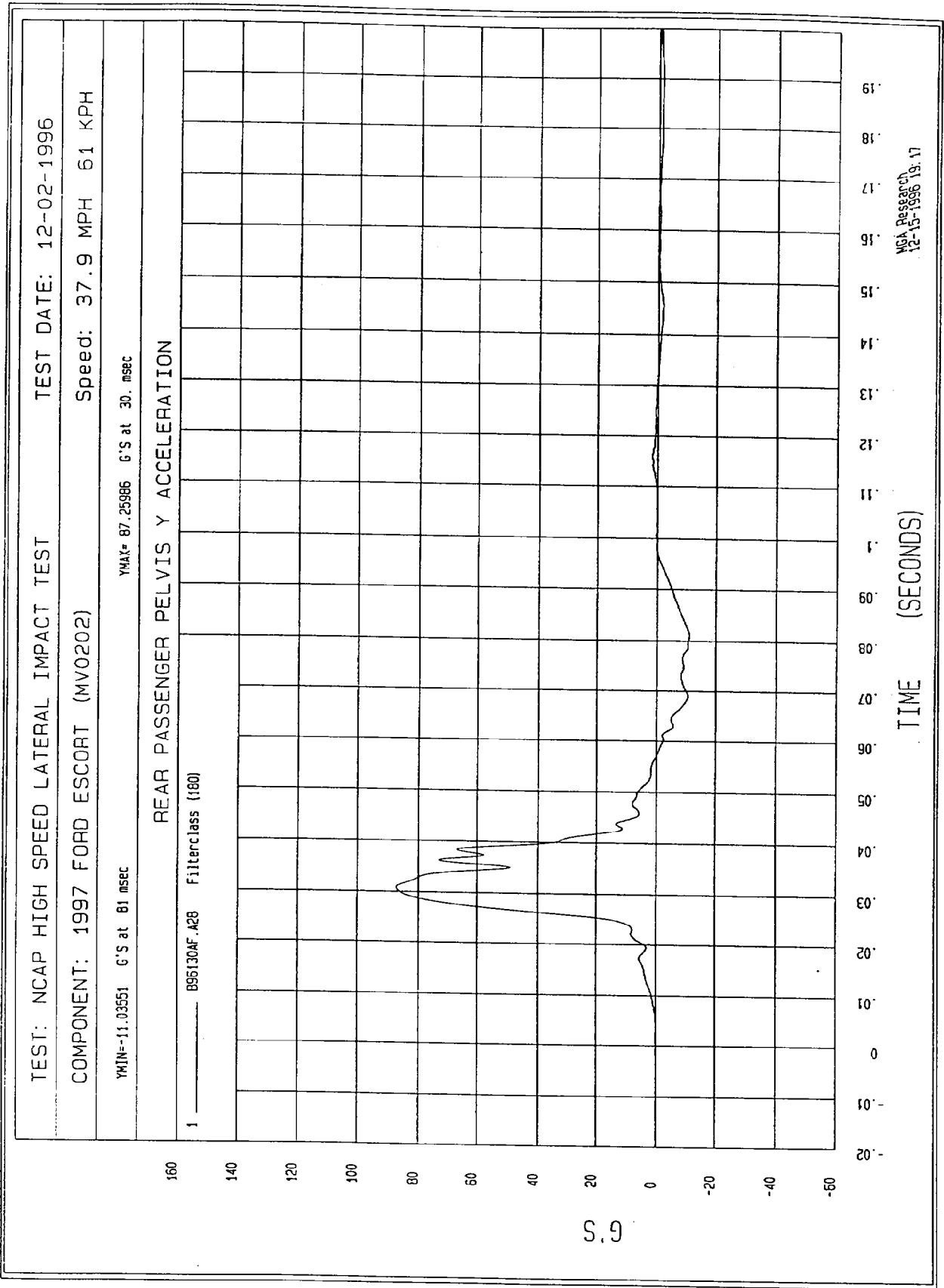


TIME Seconds

MSA Research
12-19-1996 13:31





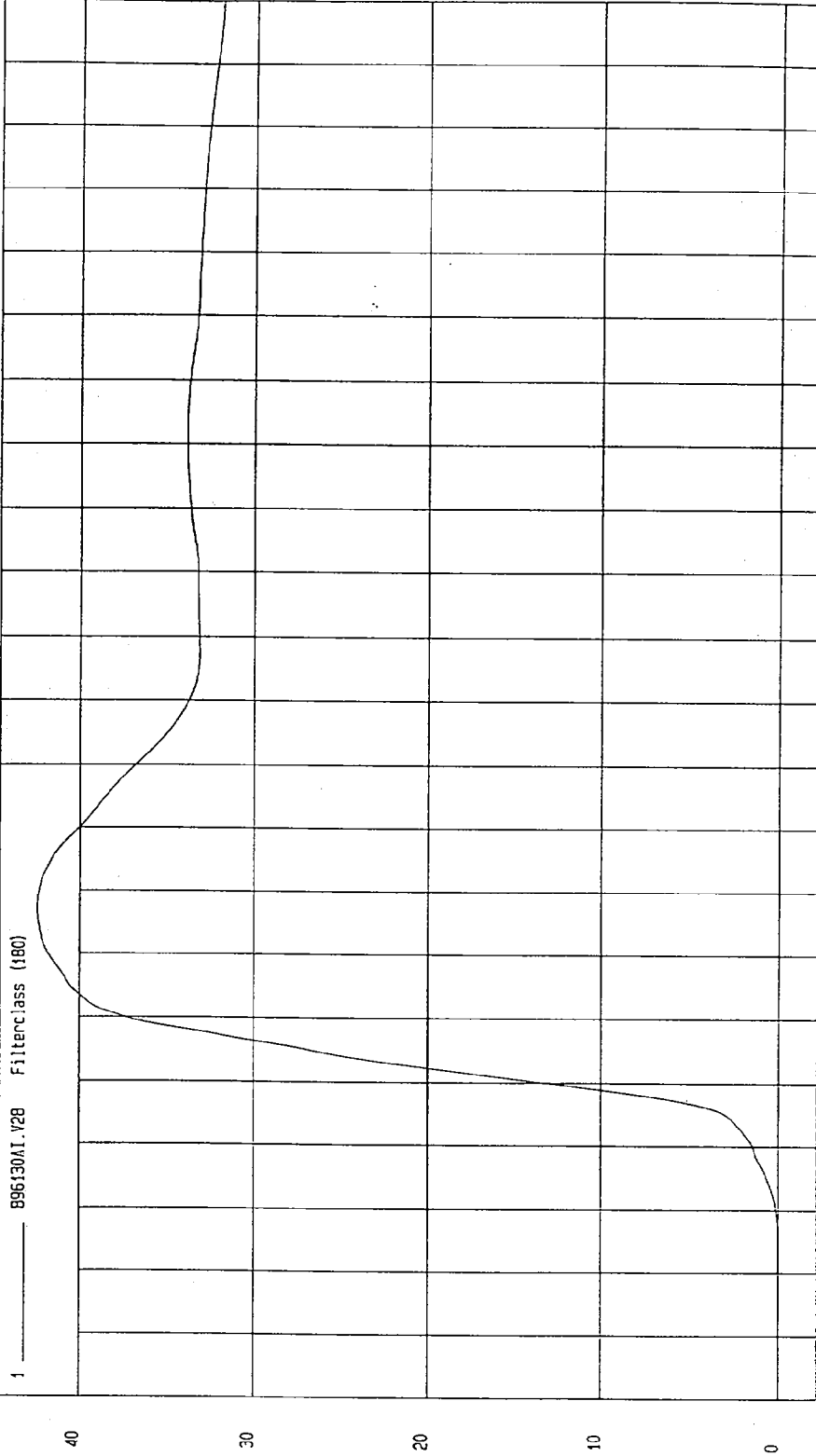


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

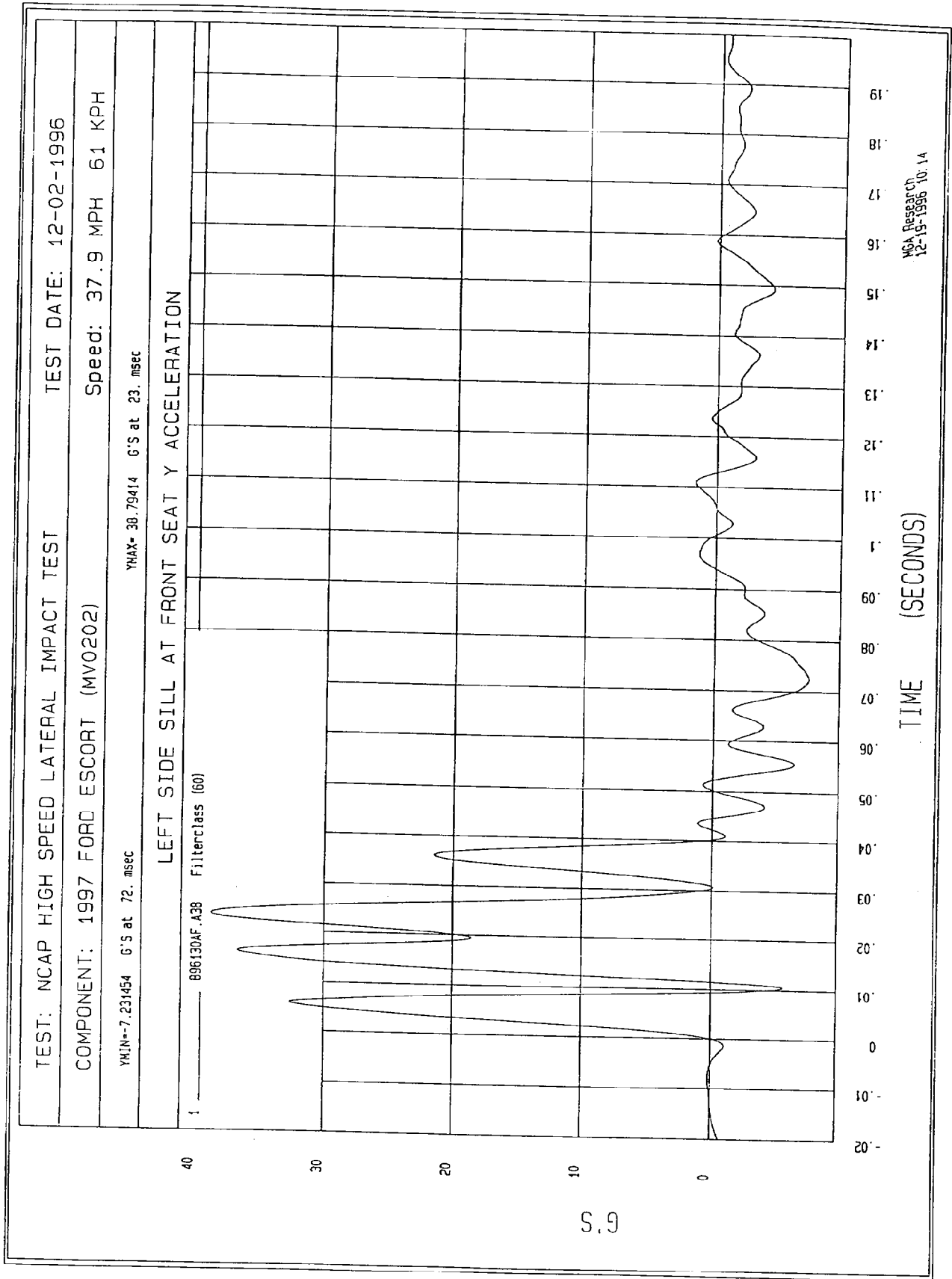
YMIN=-9.734184E-04 KPH at -19. msec YMAX= 42.36012 KPH at 57 msec

REAR PASSENGER PELVIS Y VELOCITY



TIME Seconds

MGA Research
12-19-1996 13:31



TEST: NCAP HIGH SPEED LATERAL IMPACT TEST

TEST DATE: 12-02-1996

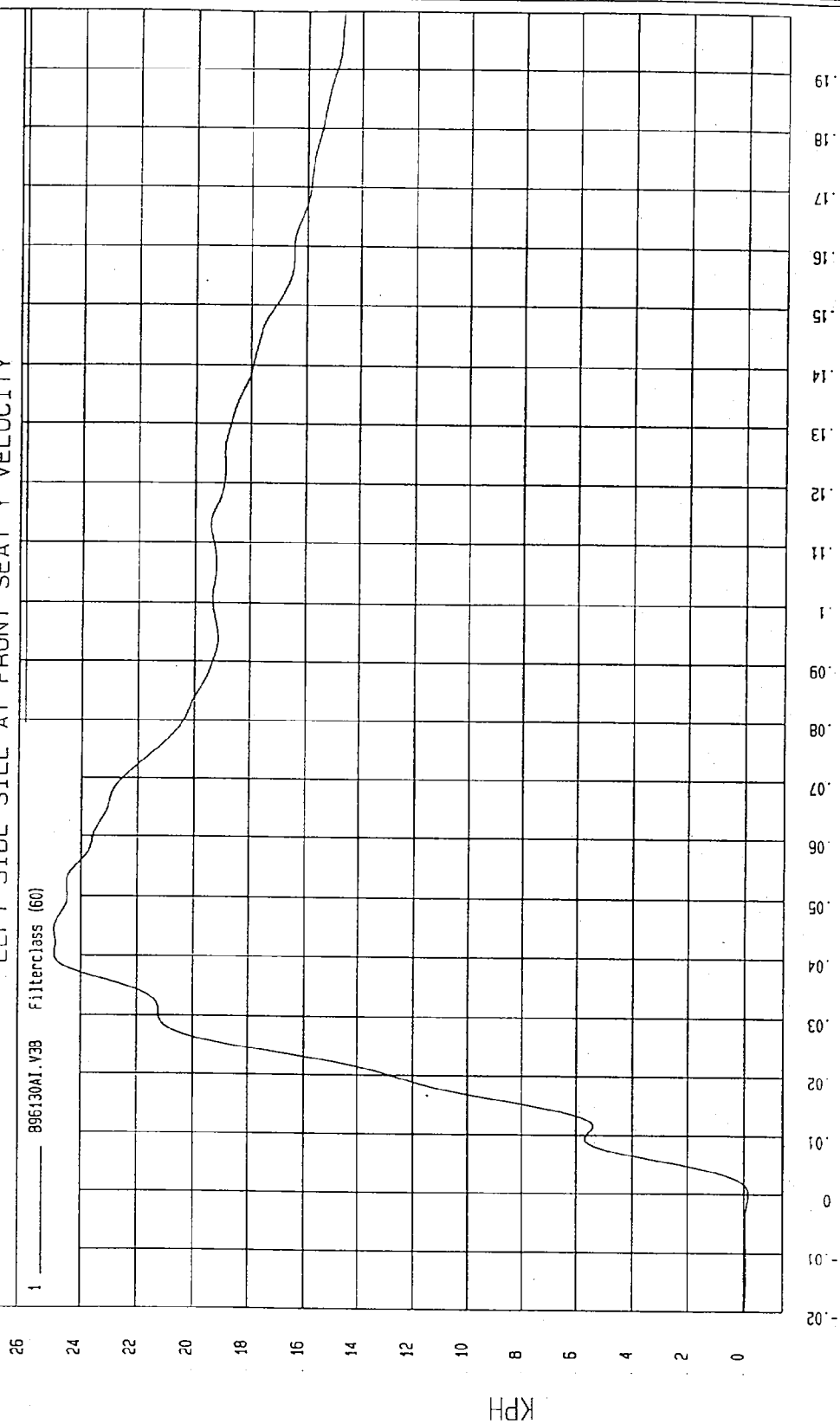
Speed: 37.9 MPH 61 KPH

COMPONENT: 1997 FORD ESCORT (MV0202)

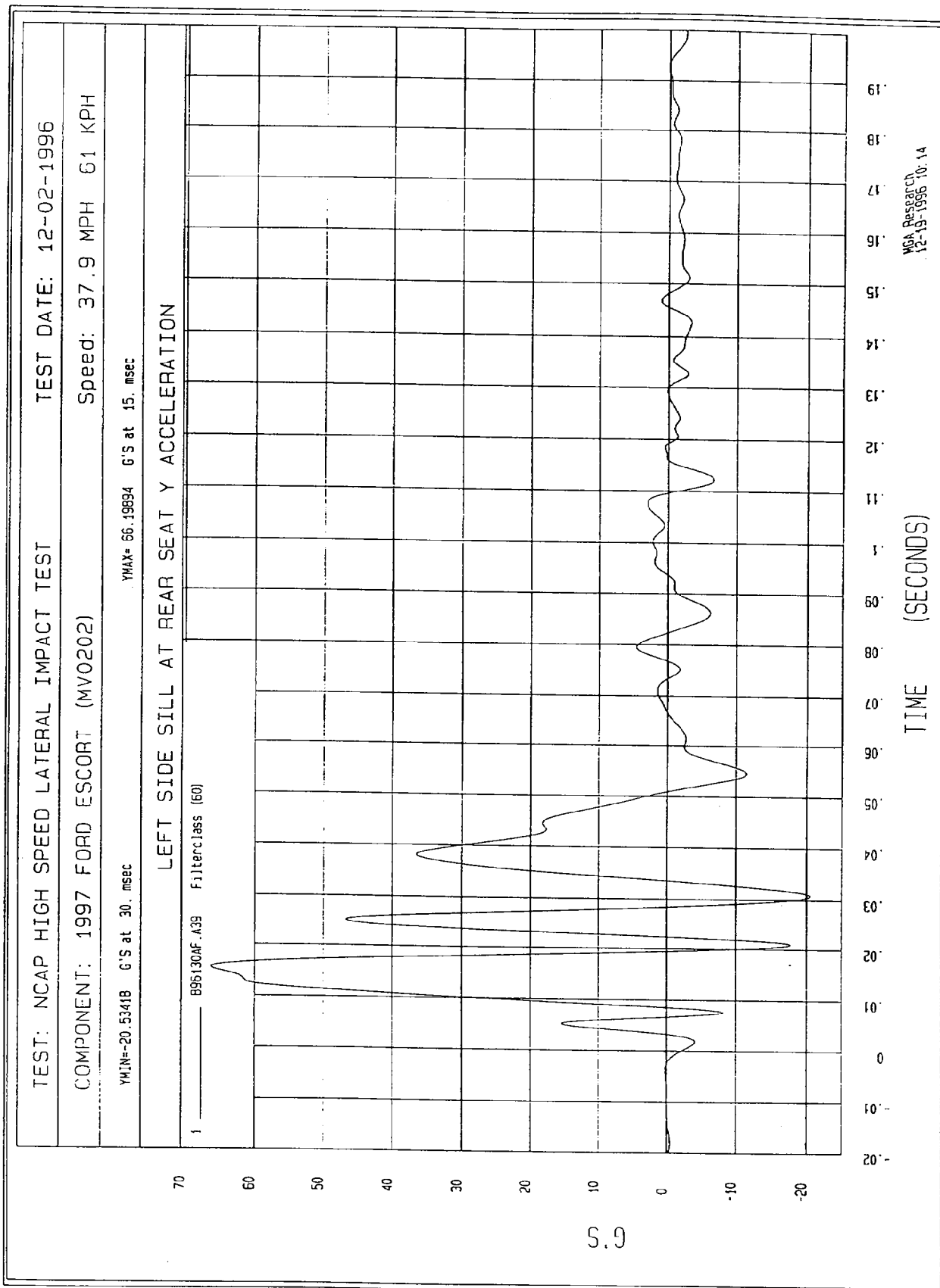
YMIN=-.1415832 KPH at 0 msec

YMAX= 24.97042 KPH at 44. msec

LEFT SIDE SILL AT FRONT SEAT Y VELOCITY



MCA Research
12-19-1996 13:55



TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

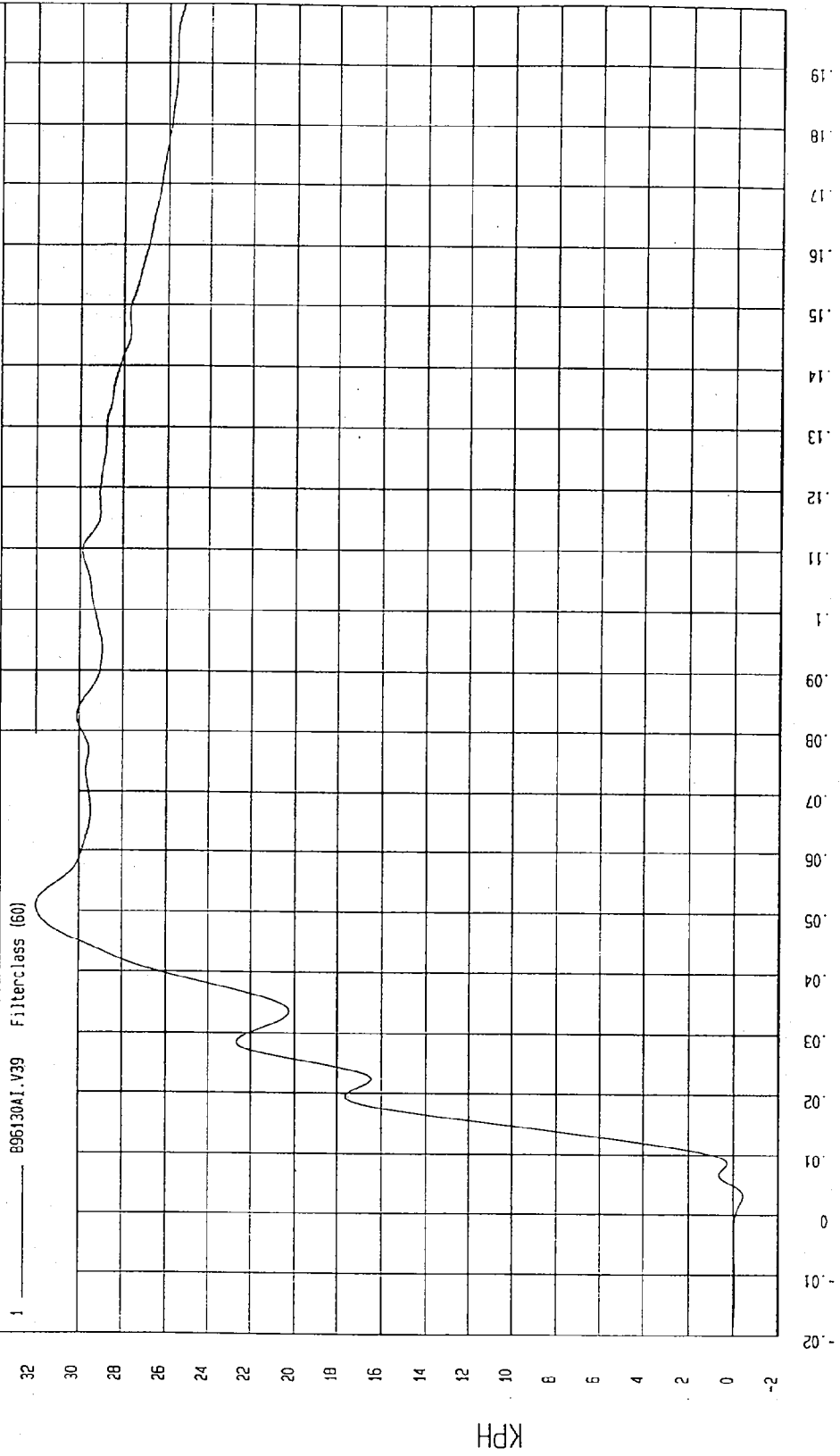
SPEED: 37.9 MPH 61 KPH

COMPONENT: 1997 FORD ESCORT (MV0202)

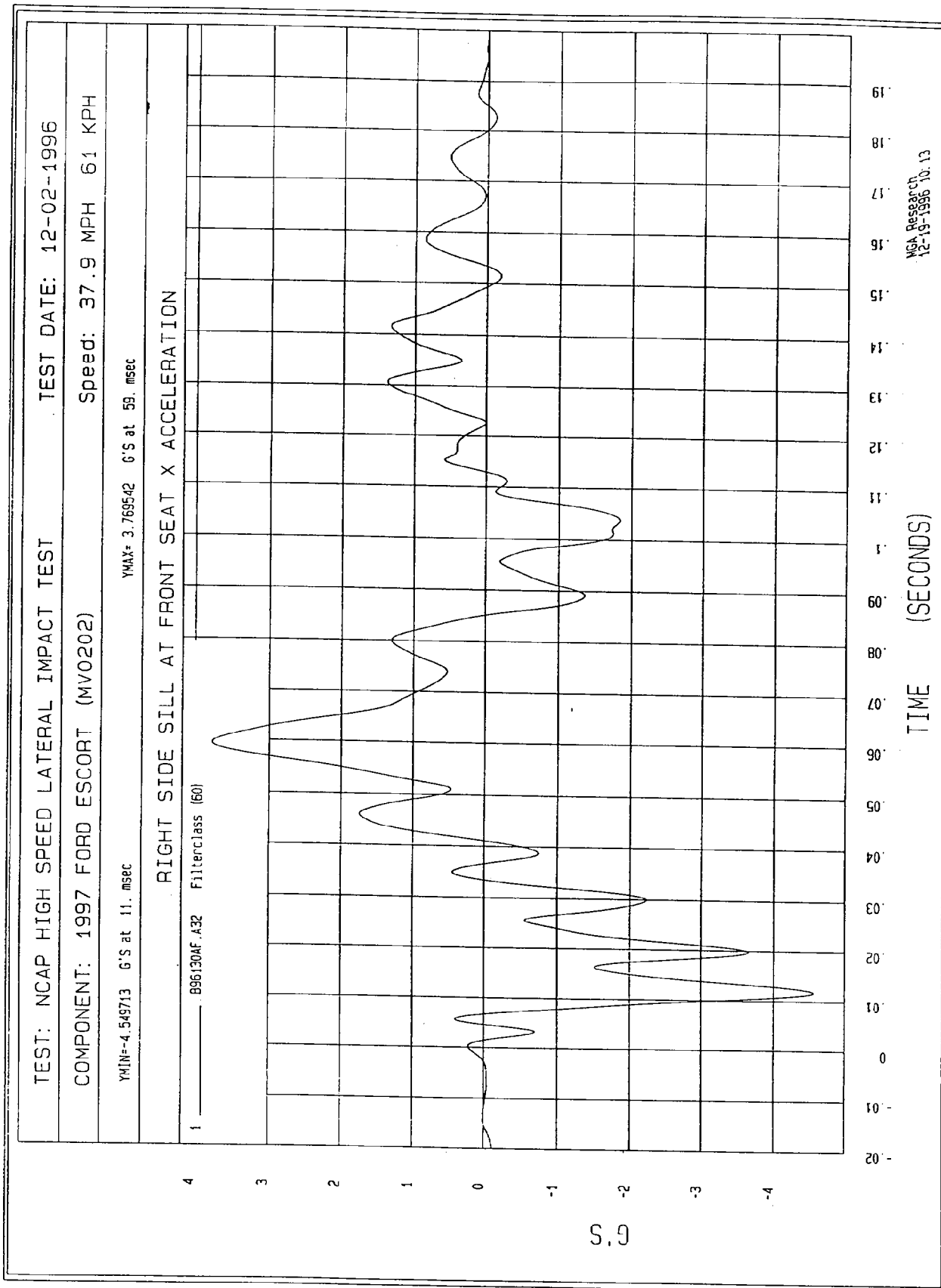
YMAX= 31.97759 KPH at 50. msec

YMIN=-.436426 KPH at 3.1 msec

LEFT SIDE SILL AT REAR SEAT Y VELOCITY



MCA Research
12-19-1996 13:55



TEST: NCAP HIGH SPEED LATERAL IMPACT TEST

TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202)

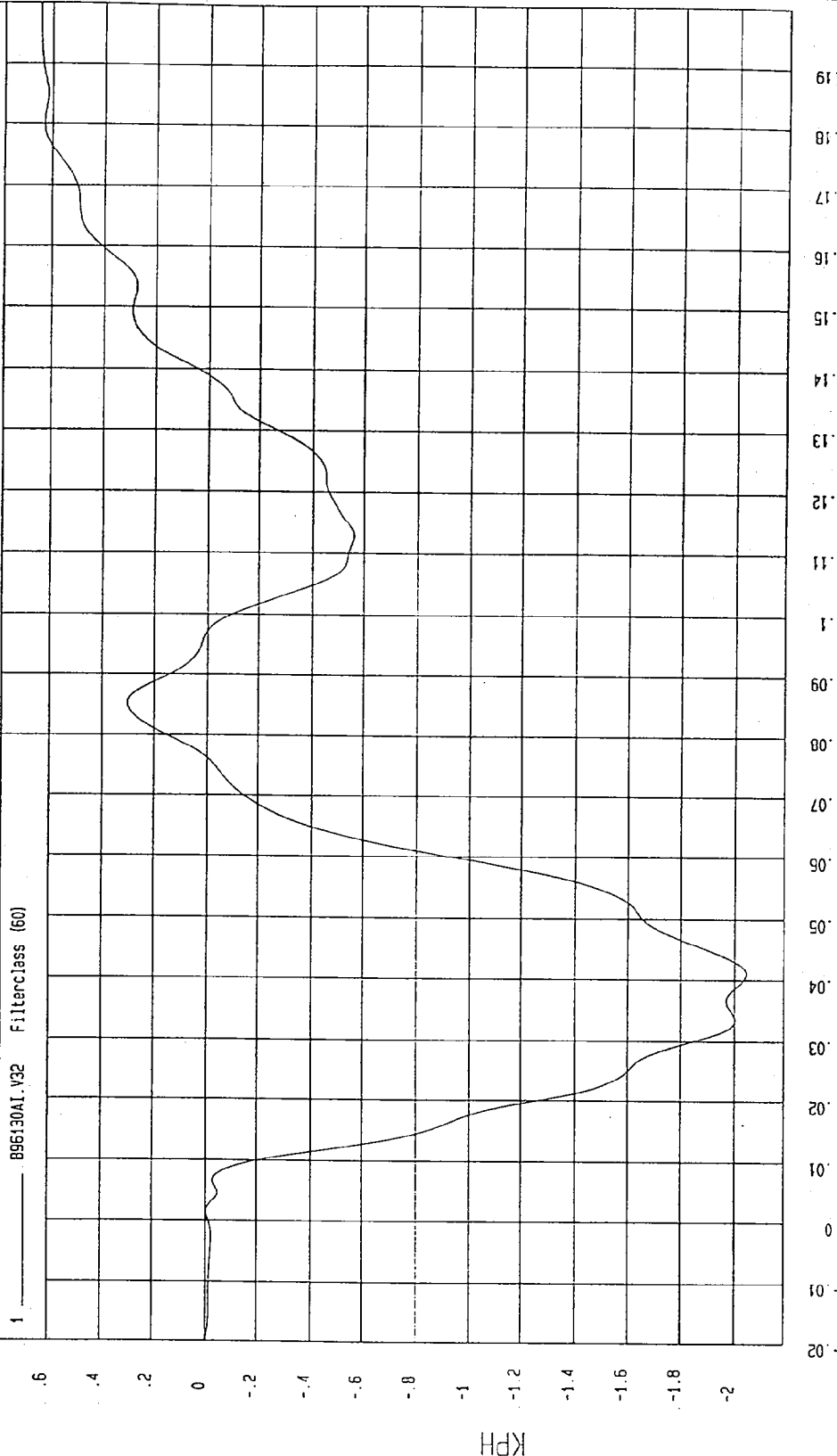
Speed: 37.9 MPH 61 KPH

YMIN=-2.042377 KPH at 41 msec

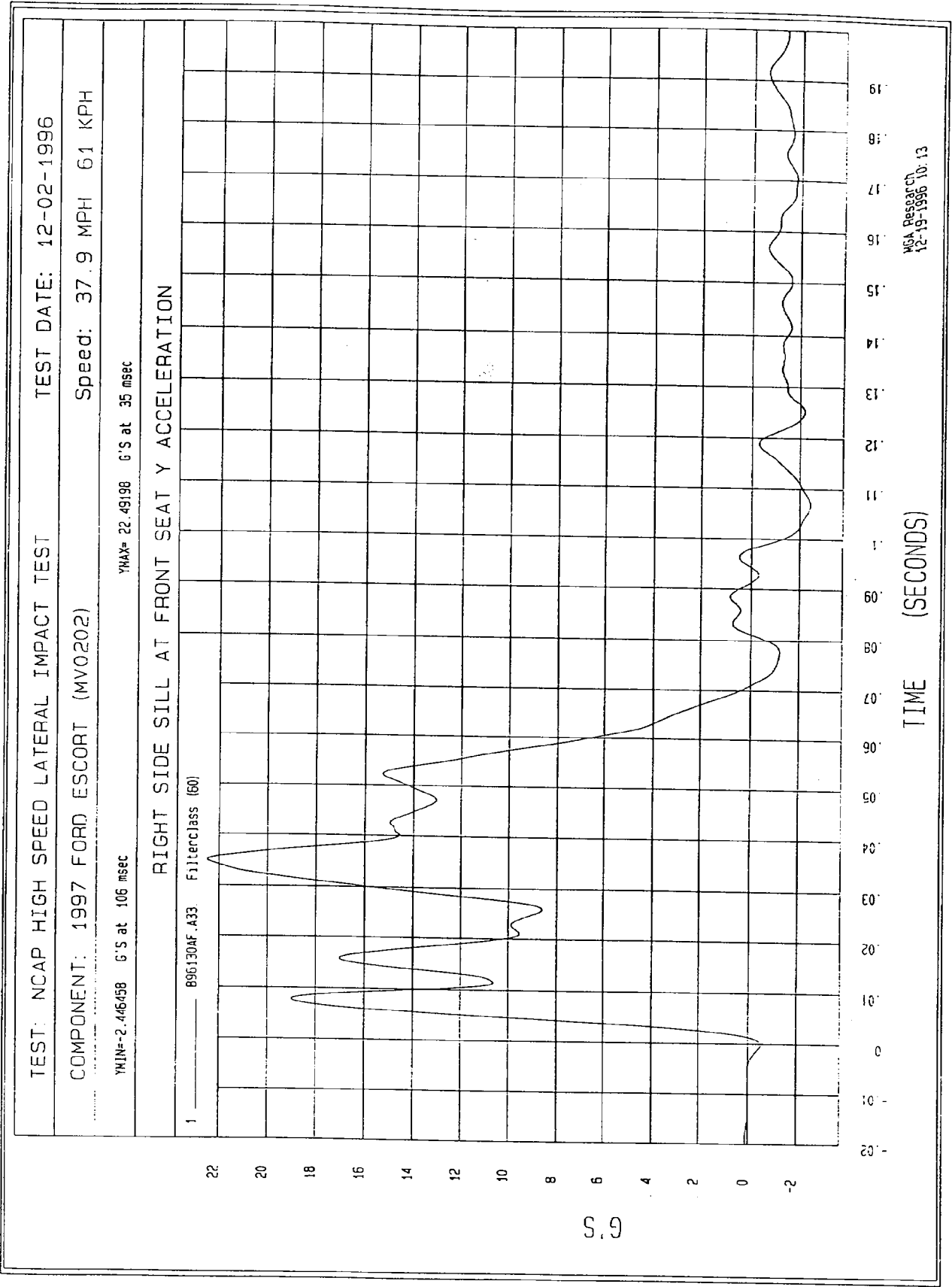
YMAX=.6435651 KPH at 198 msec

RIGHT SIDE SILL AT FRONT SEAT X VELOCITY

1 ——— B96130A1.V32 Filterclass (60)



WGA Research
12-19-1996 13:54

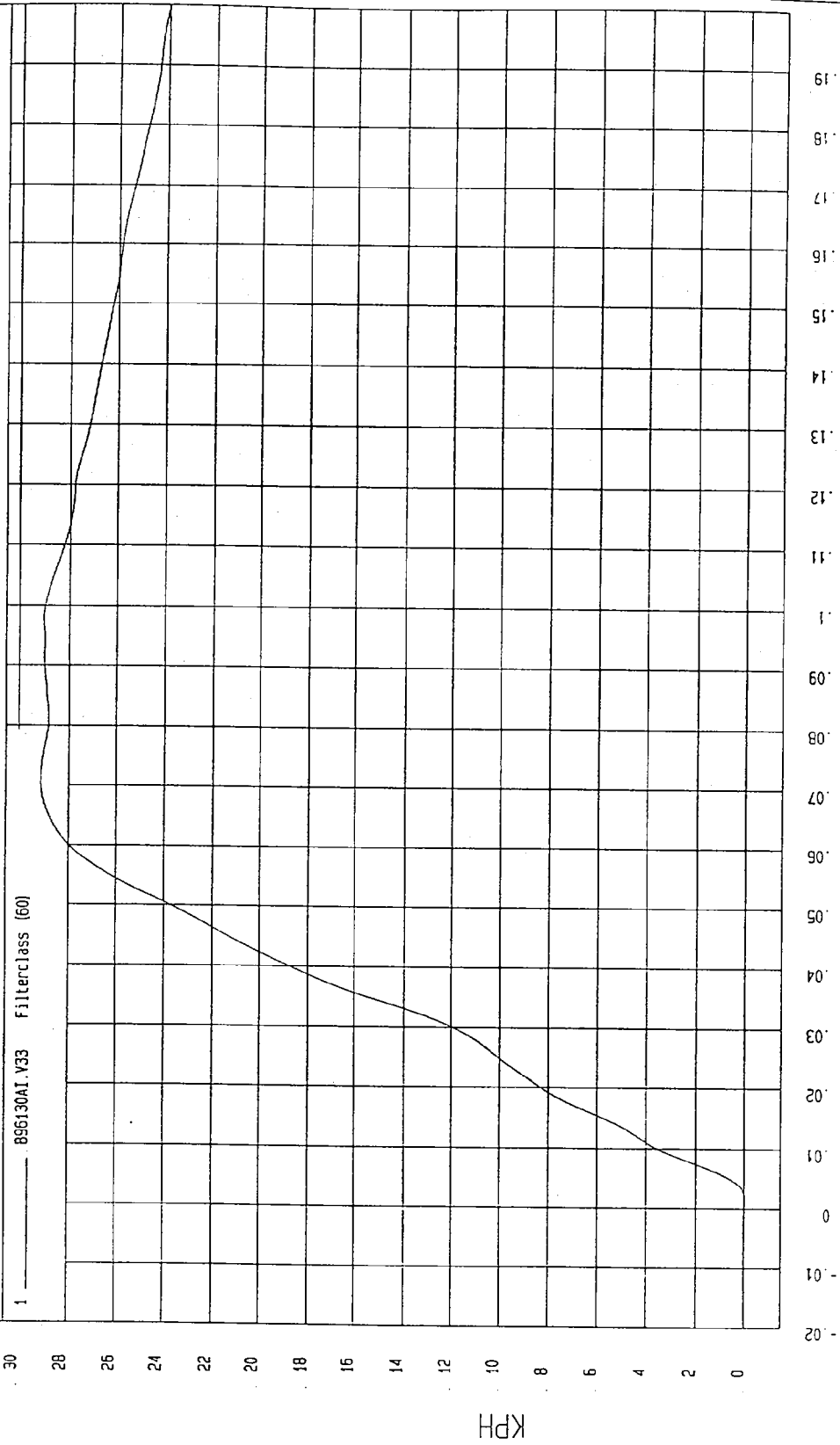


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

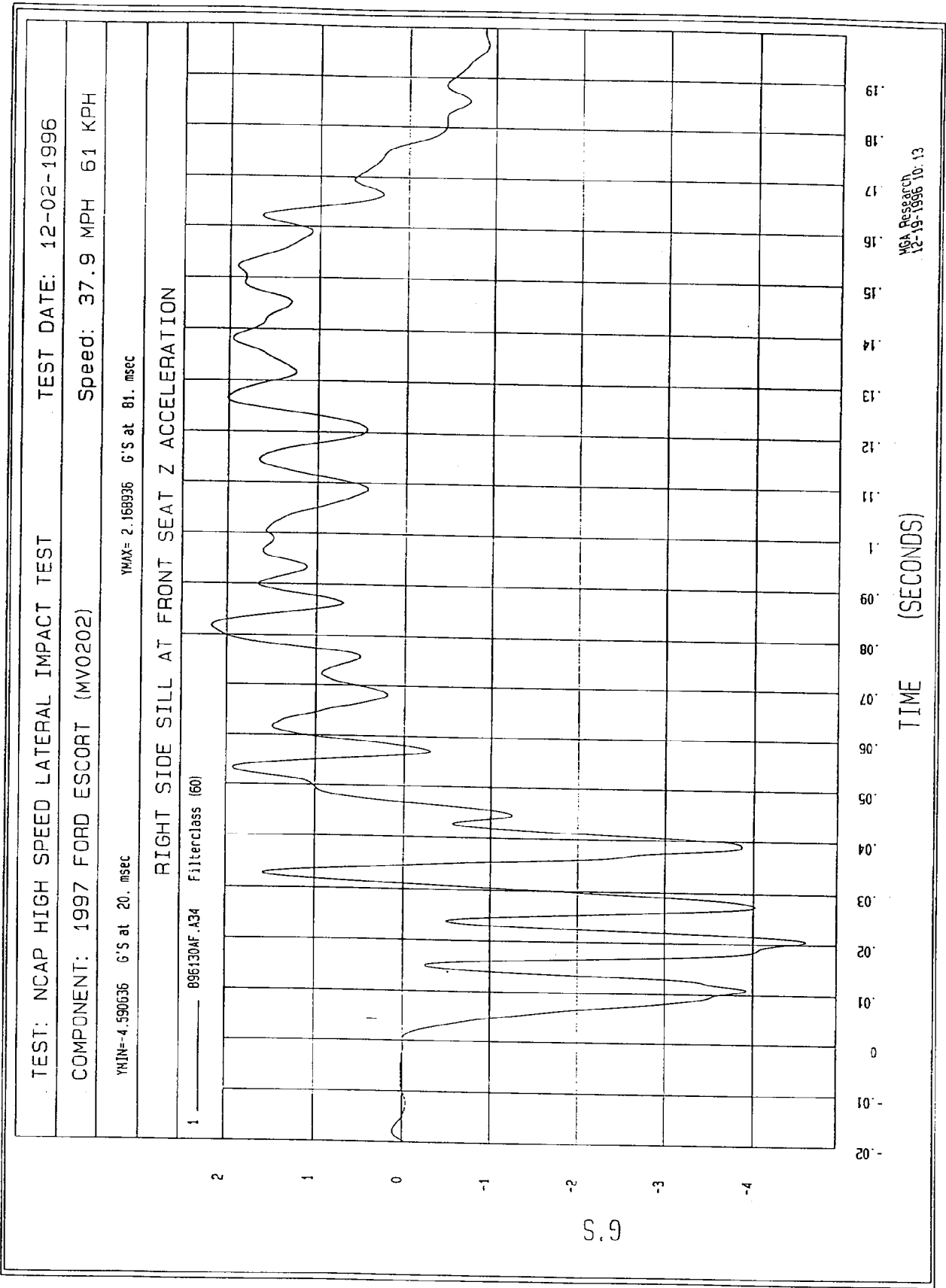
COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

YMIN=-2.413995E-02 KPH at 1.1 msec YMAX= 29.10915 KPH at 71. msec

RIGHT SIDE SILL AT FRONT SEAT Y VELOCITY



MCA Research
12-19-1996 13:55



HGA Research
12-19-1996 10:13

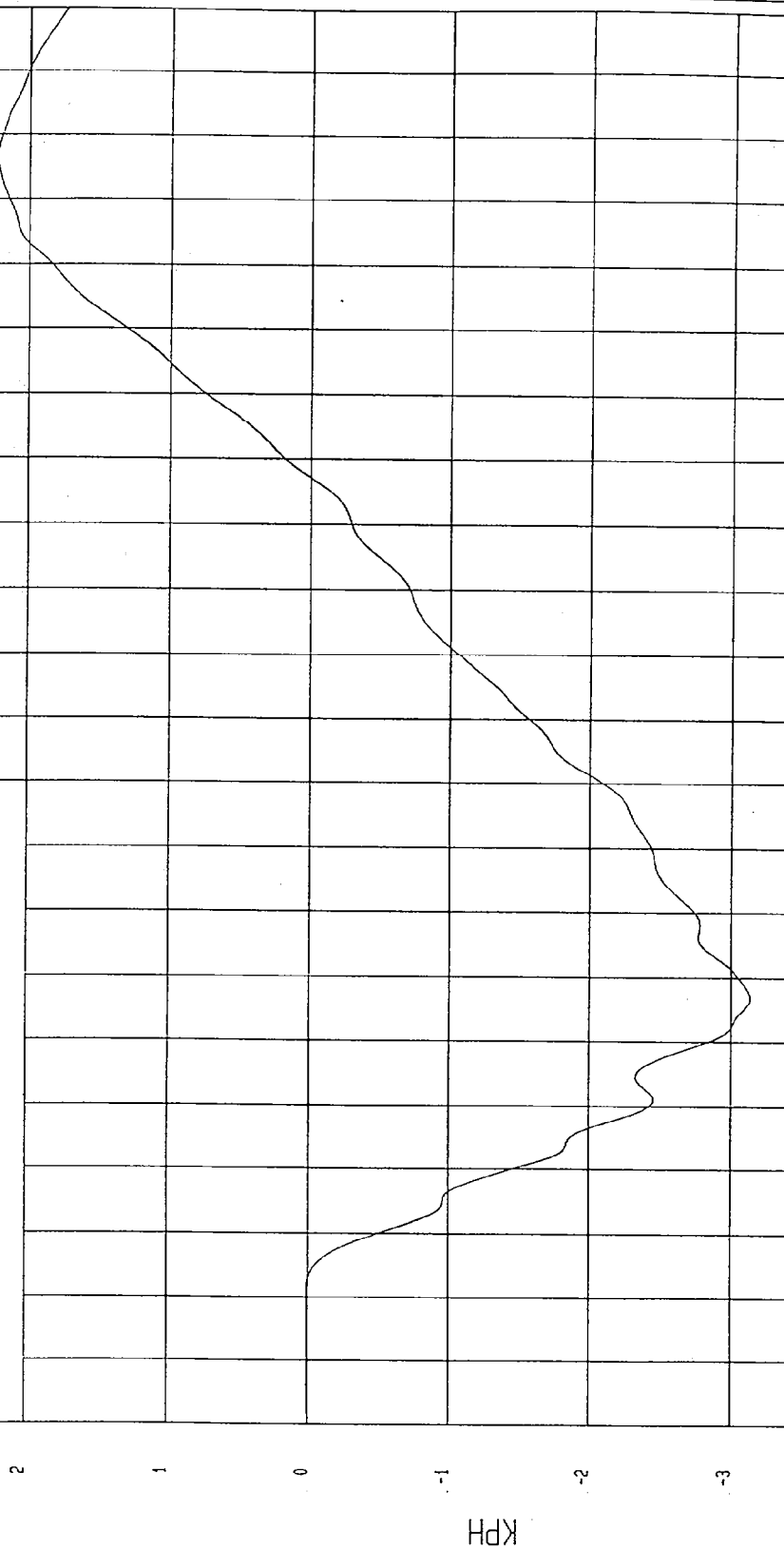
TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

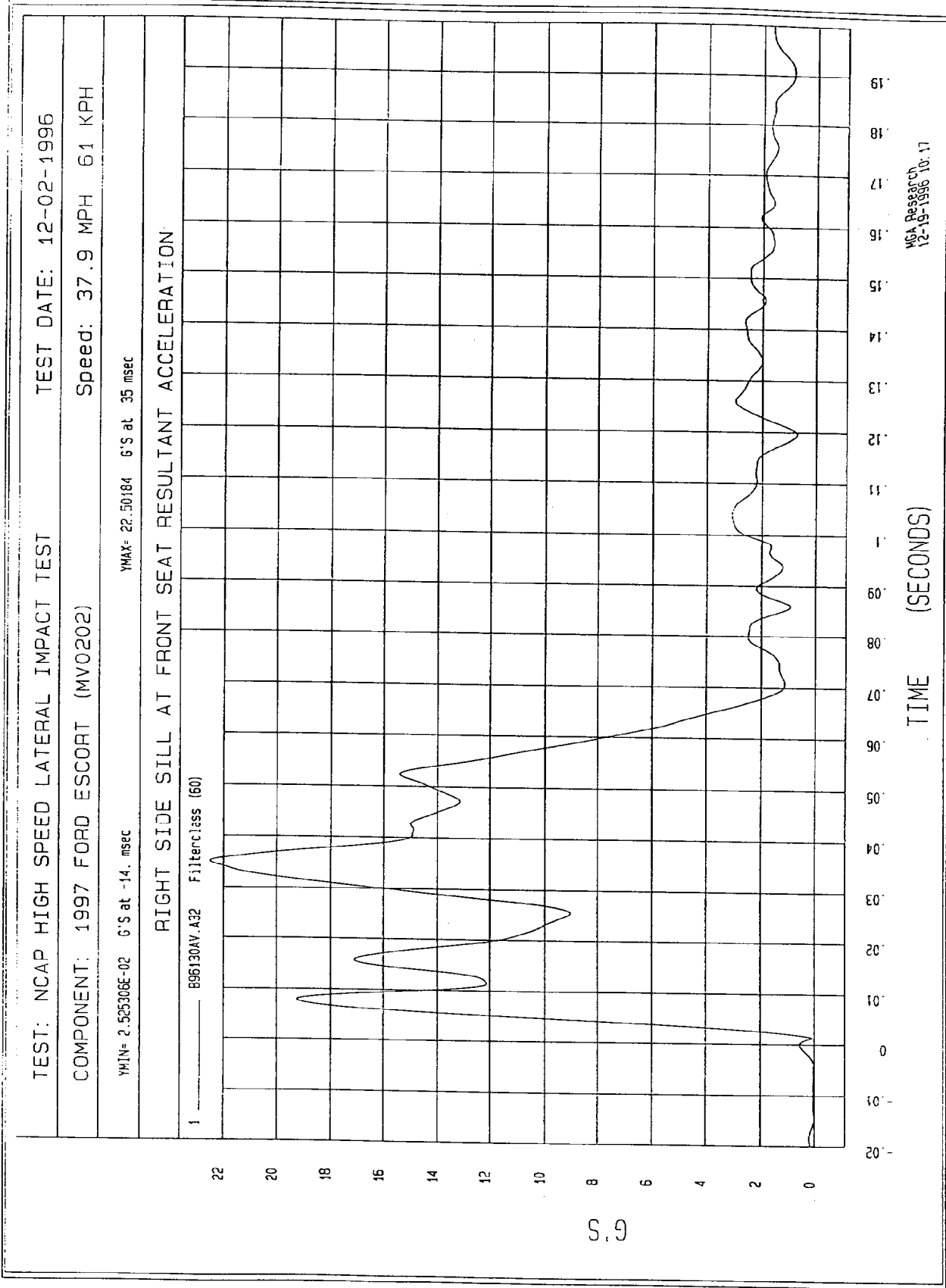
YMIN=-3.133562 KPH at 46. msec YMAX= 2.22158 KPH at 176 msec

RIGHT SIDE SILL AT FRONT SEAT Z VELOCITY

1 896130A1.V34 Filterclass (50)



TIME Seconds
12-19-1996 13:55
M&A Research

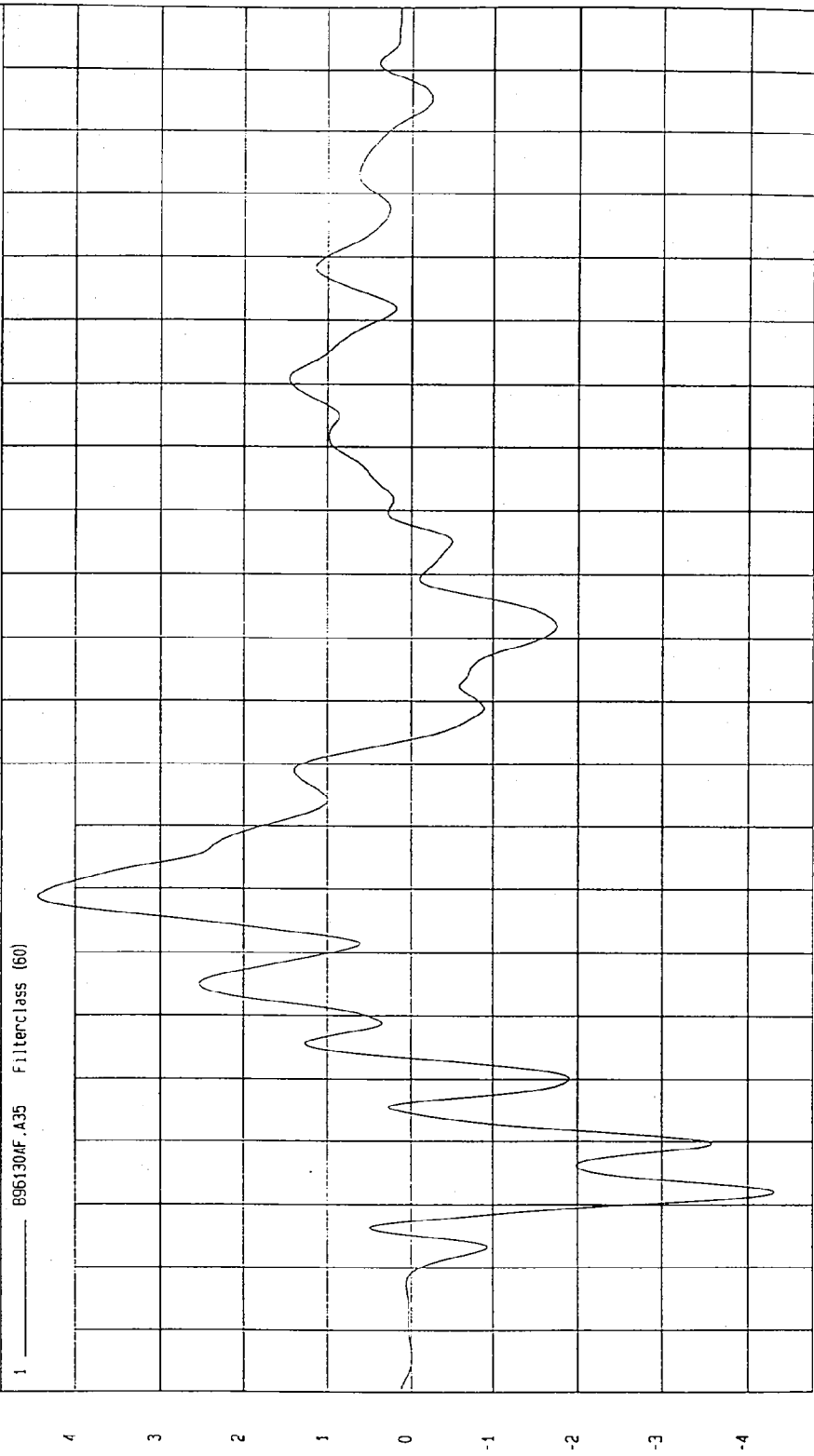


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

YMIN=-4.309881 G'S at 12 msec YMAX= 4.443893 G'S at 58. msec

RIGHT SIDE SILL AT REAR SEAT X ACCELERATION



TIME (SECONDS)

19. 18. 17. 16. 15. 14. 13. 12. 11. 10. 9. 8. 7. 6. 5. 4. 3. 2. 1. 0. -1. -2. -3. -4.

NGA Research
12-19-1996 10: 13

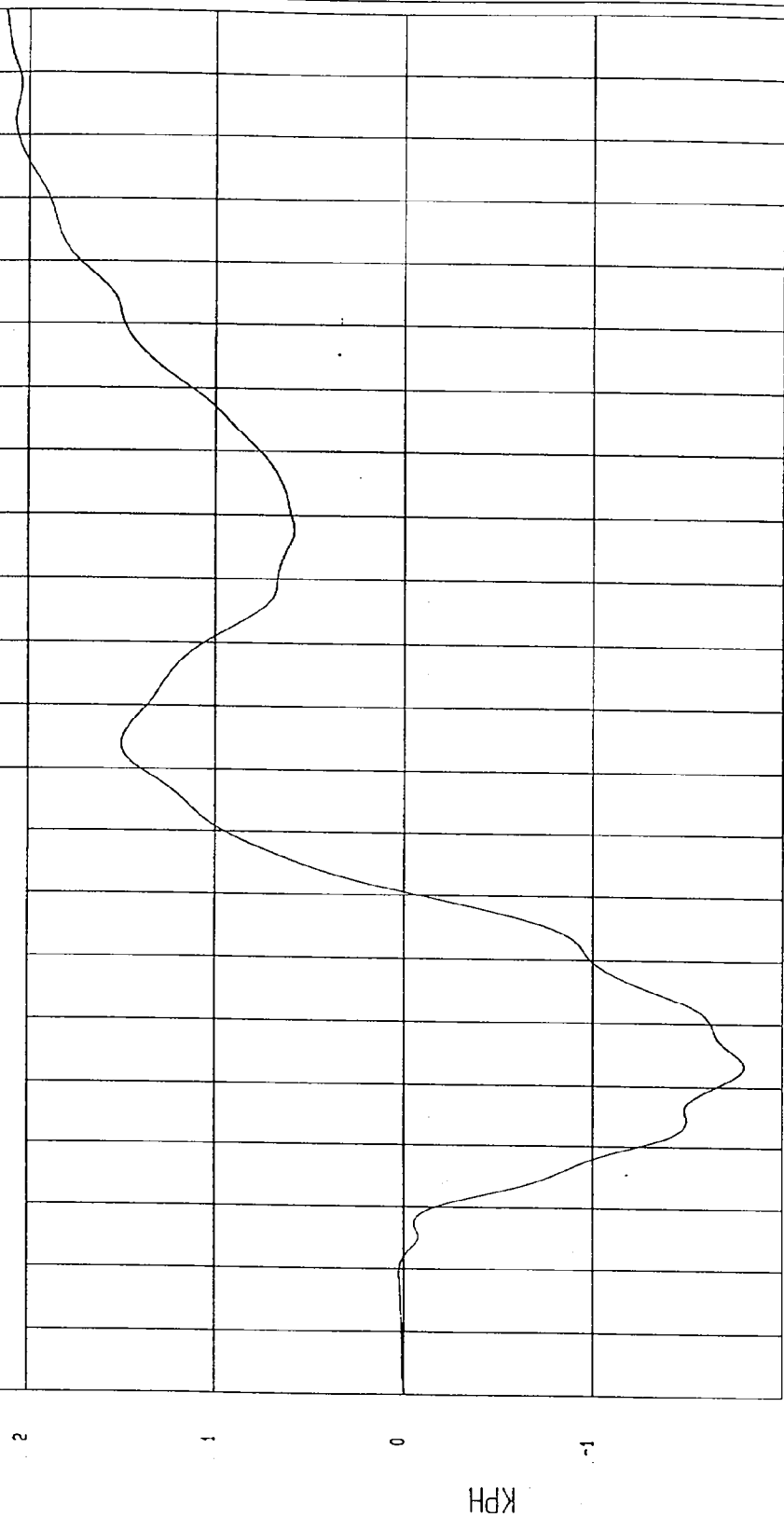
TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

YMIN=-1.793635 KPH at 33. msec YMAX= 2.120204 KPH at 199 msec

RIGHT SIDE SILL AT REAR SEAT X VELOCITY

1 ——— 896130A1.V25 Filterclass (60)



TIME Seconds
MCA Research
12-19-1996 13.55

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

YMIN=-4.081373 G'S at 102 msec YMAX= 31.85415 G'S at 32. msec

RIGHT SIDE SILL AT REAR SEAT Y ACCELERATION

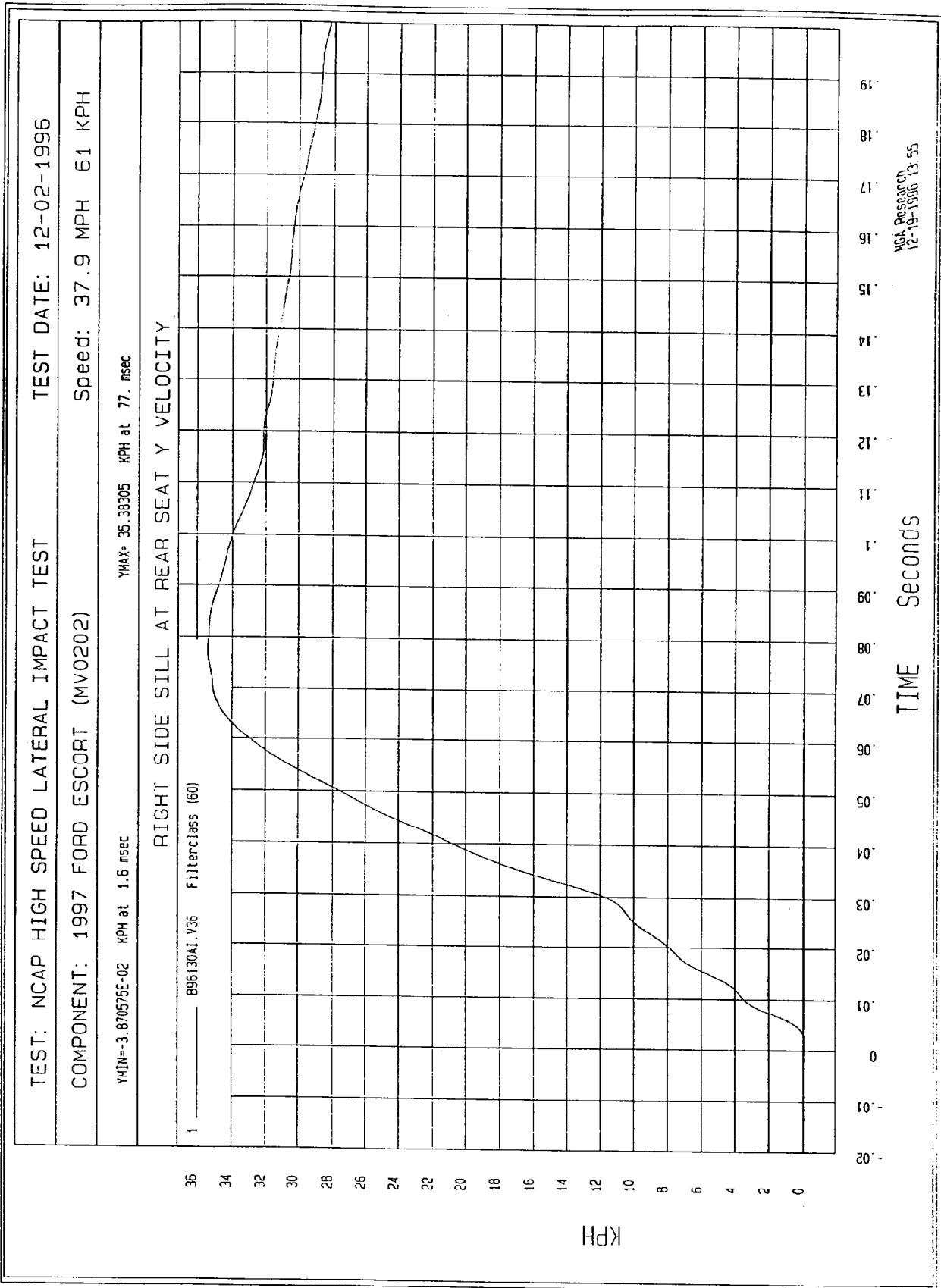
1 ——— 896130AF.A36 Filterclass (60)

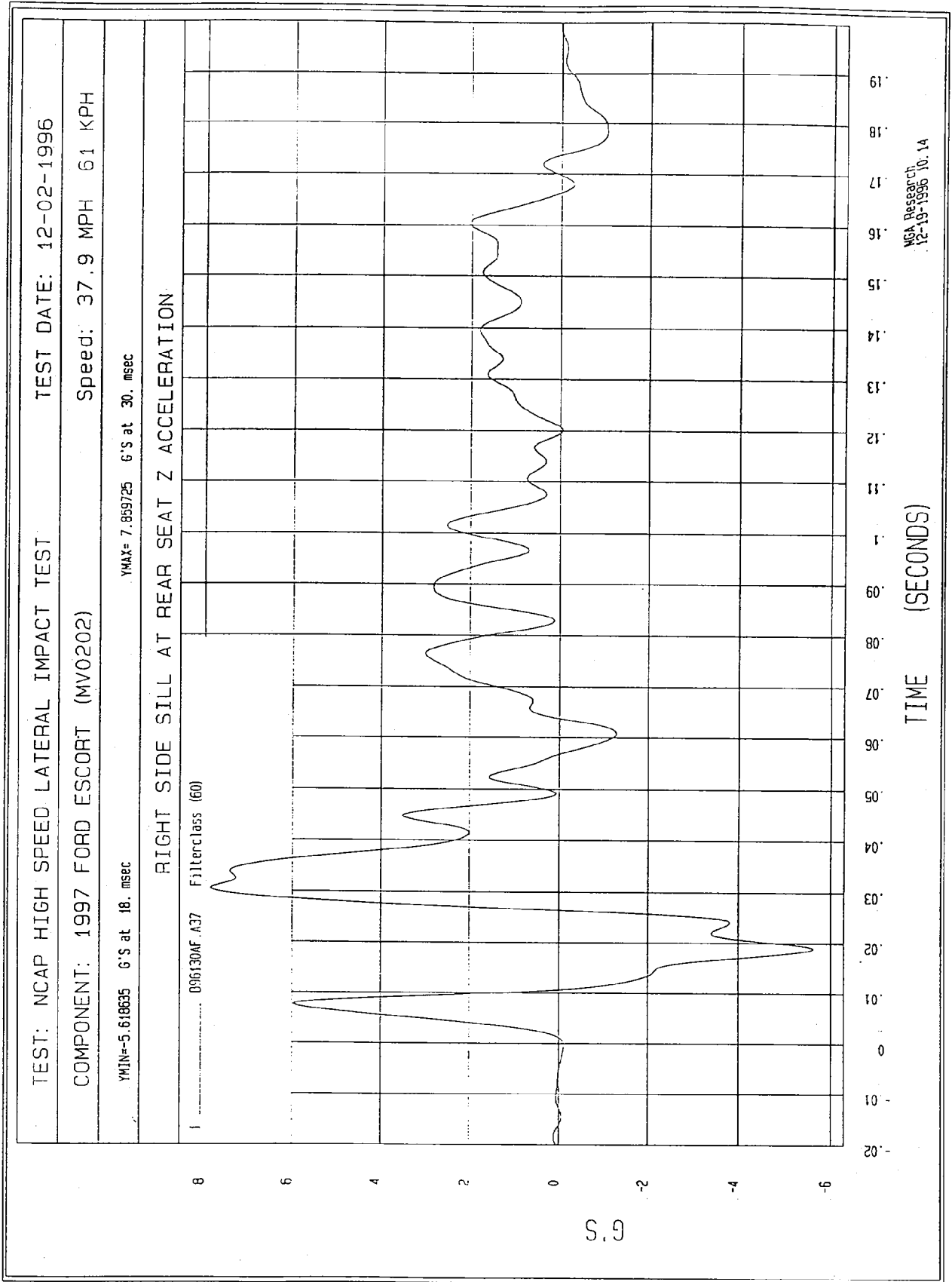


MCA Research
12-19-1996 10:14

TIME (SECONDS)

G's





TEST: NCAP HIGH SPEED LATERAL IMPACT TEST

TEST DATE: 12-02-1996

Speed: 37.9 MPH 61 KPH

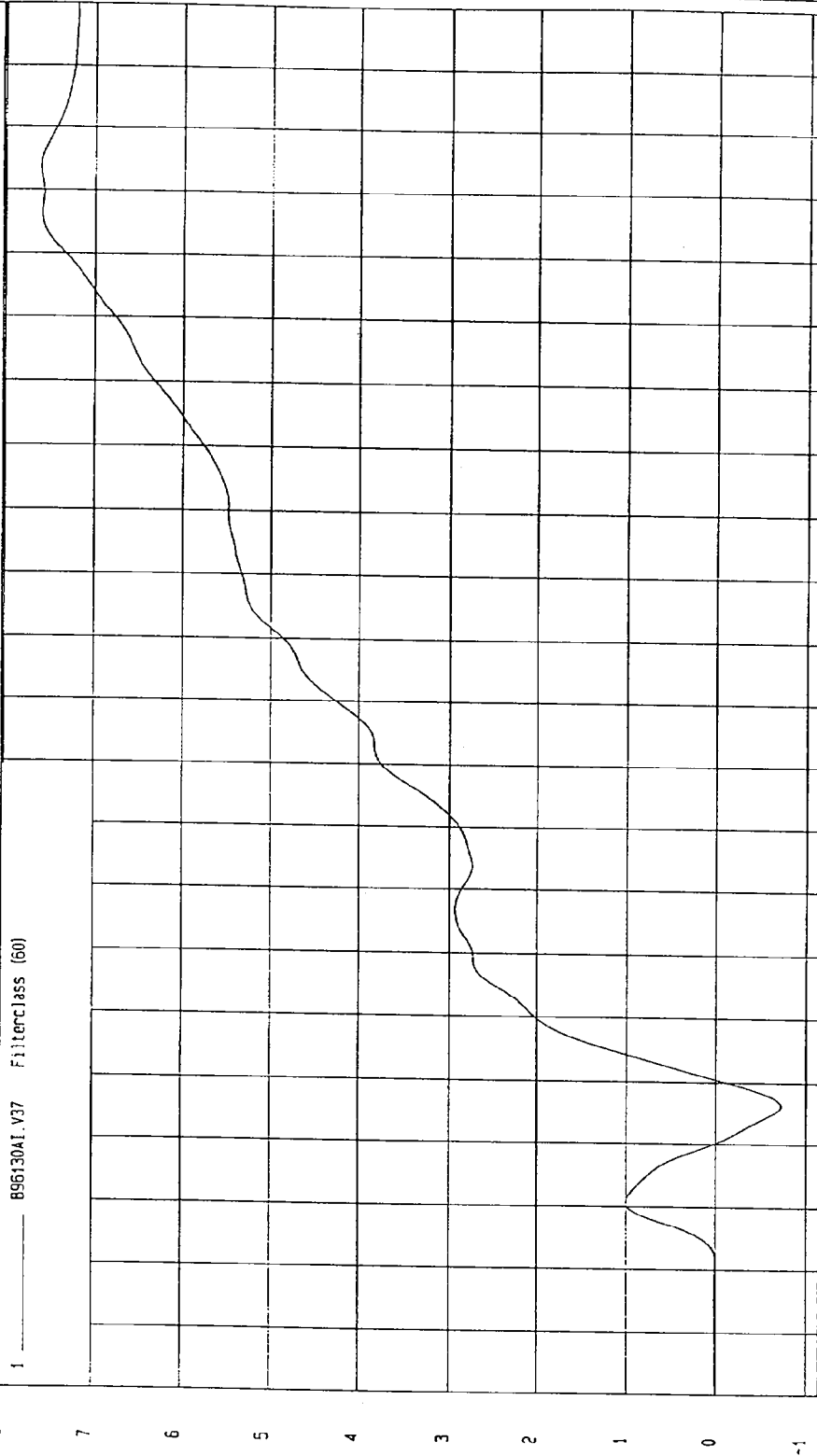
COMPONENT: 1997 FORD ESCORT (MV0202)

YMIN=-.7254805 KPH at 26. msec

YMAX= 7.609051 KPH at 173 msec

RIGHT SIDE SILL AT REAR SEAT Z VELOCITY

1 ——— B96130A1.V37 Filterclass (60)



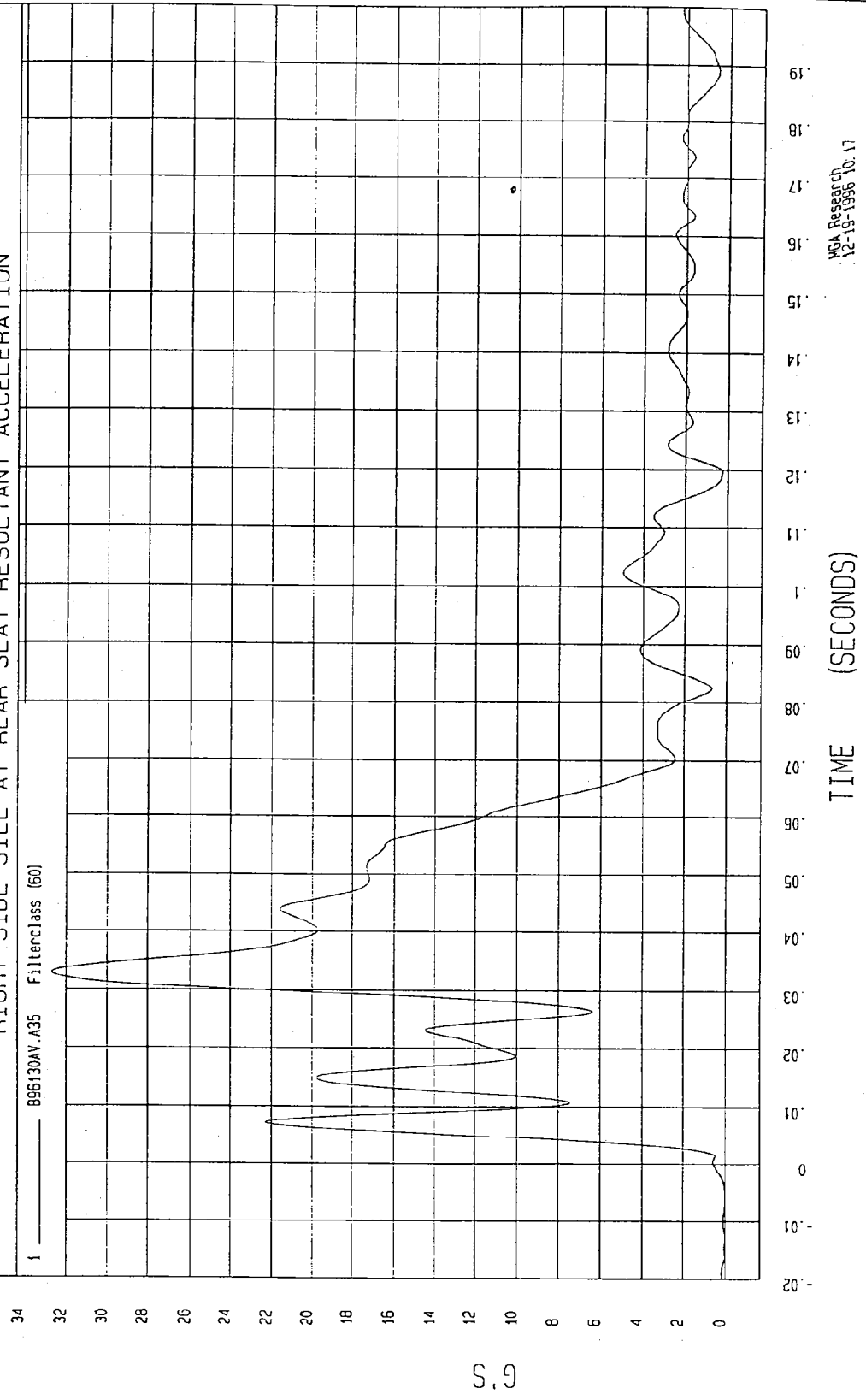
HGA Research
12-19-1996 13:55

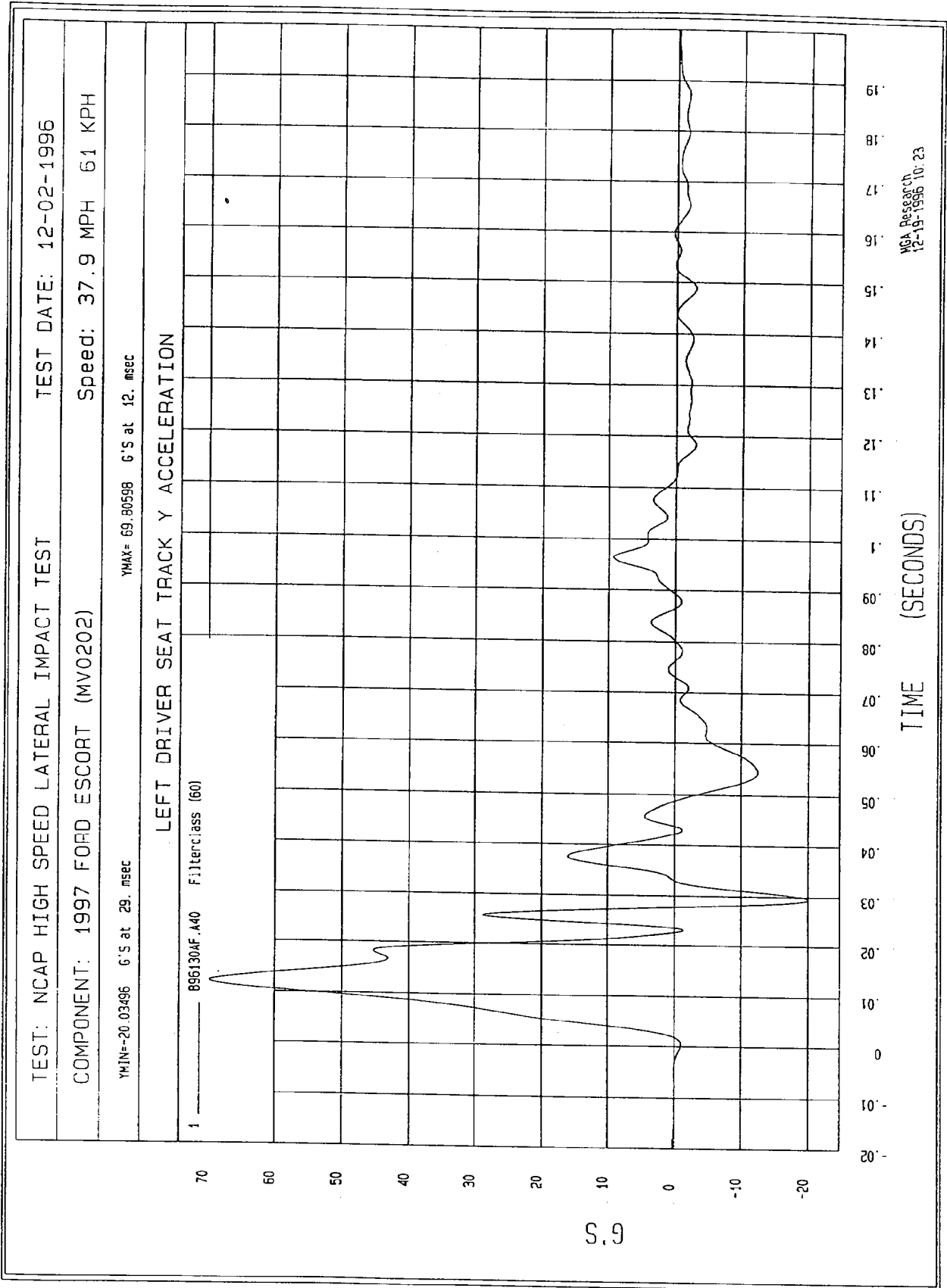
TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

YMIN= 1.718405E-02 G'S at -13 msec YMAX= 32.6877 G'S at 32. msec

RIGHT SIDE SILL AT REAR SEAT RESULTANT ACCELERATION



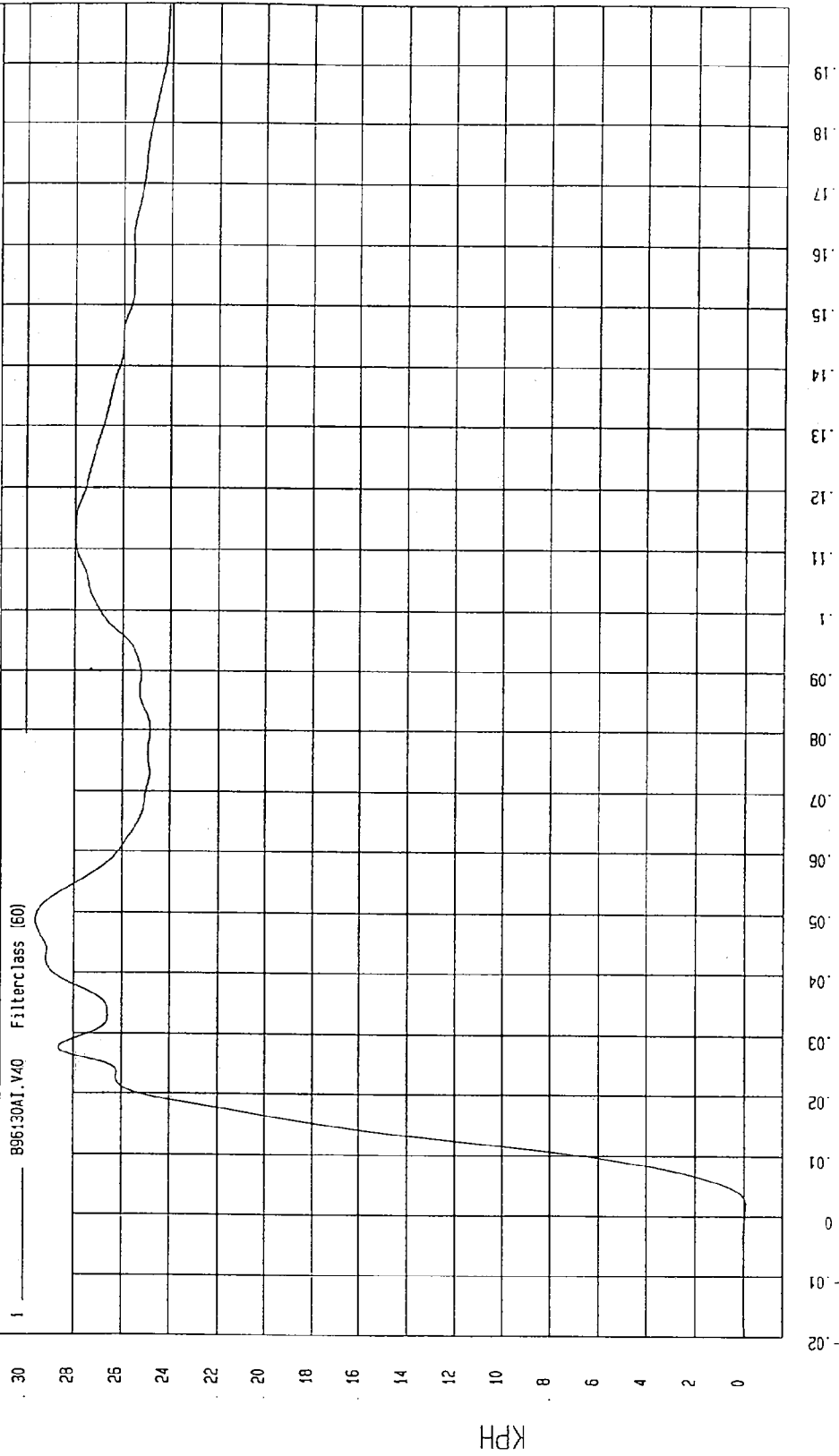


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

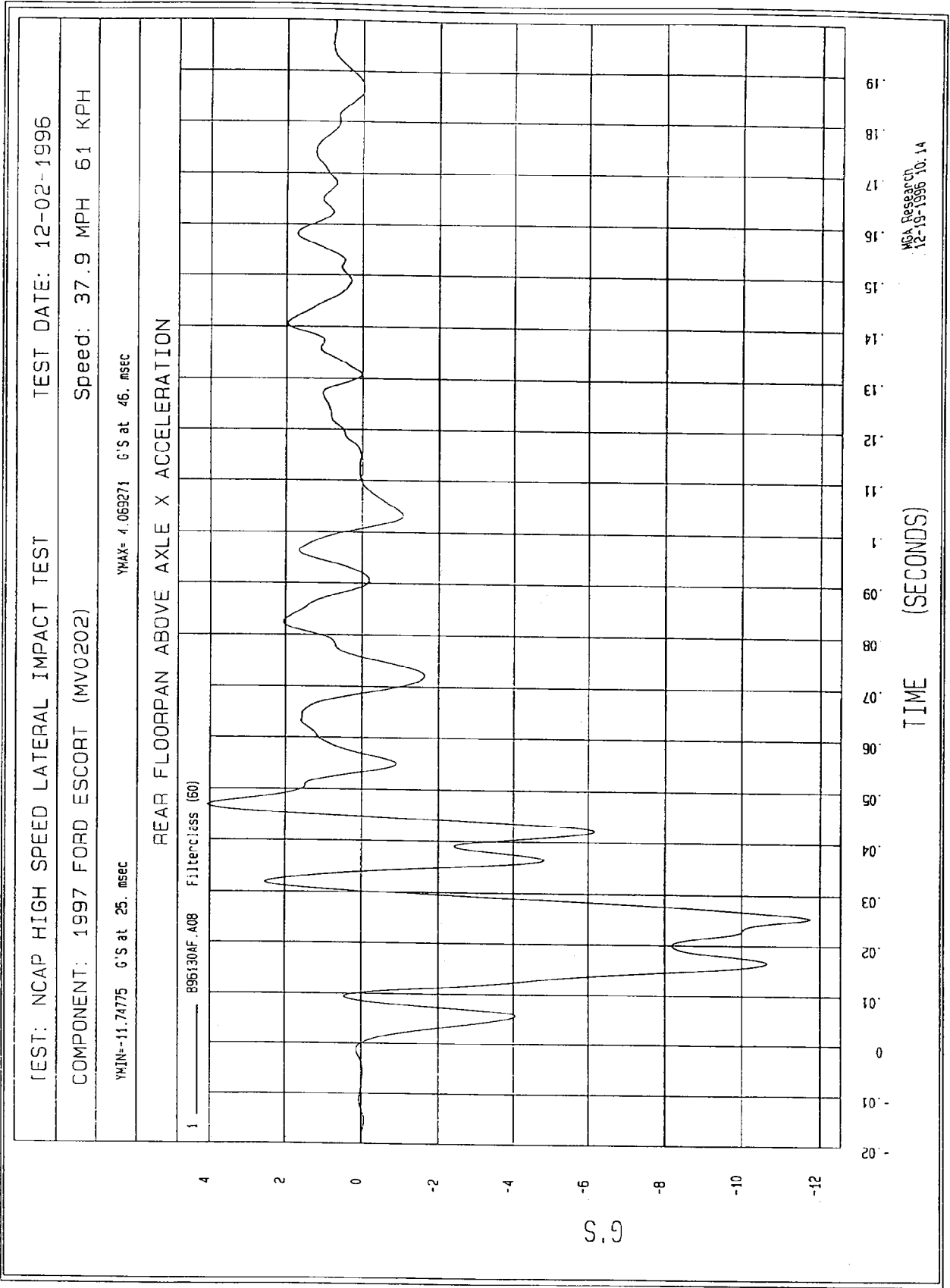
COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

YMIN=-7.28305E-02 KPH at 1.6 msec YMAX= 29.58941 KPH at 48. msec

LEFT DRIVER SEAT TRACK Y VELOCITY



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12-19-1996 13:56

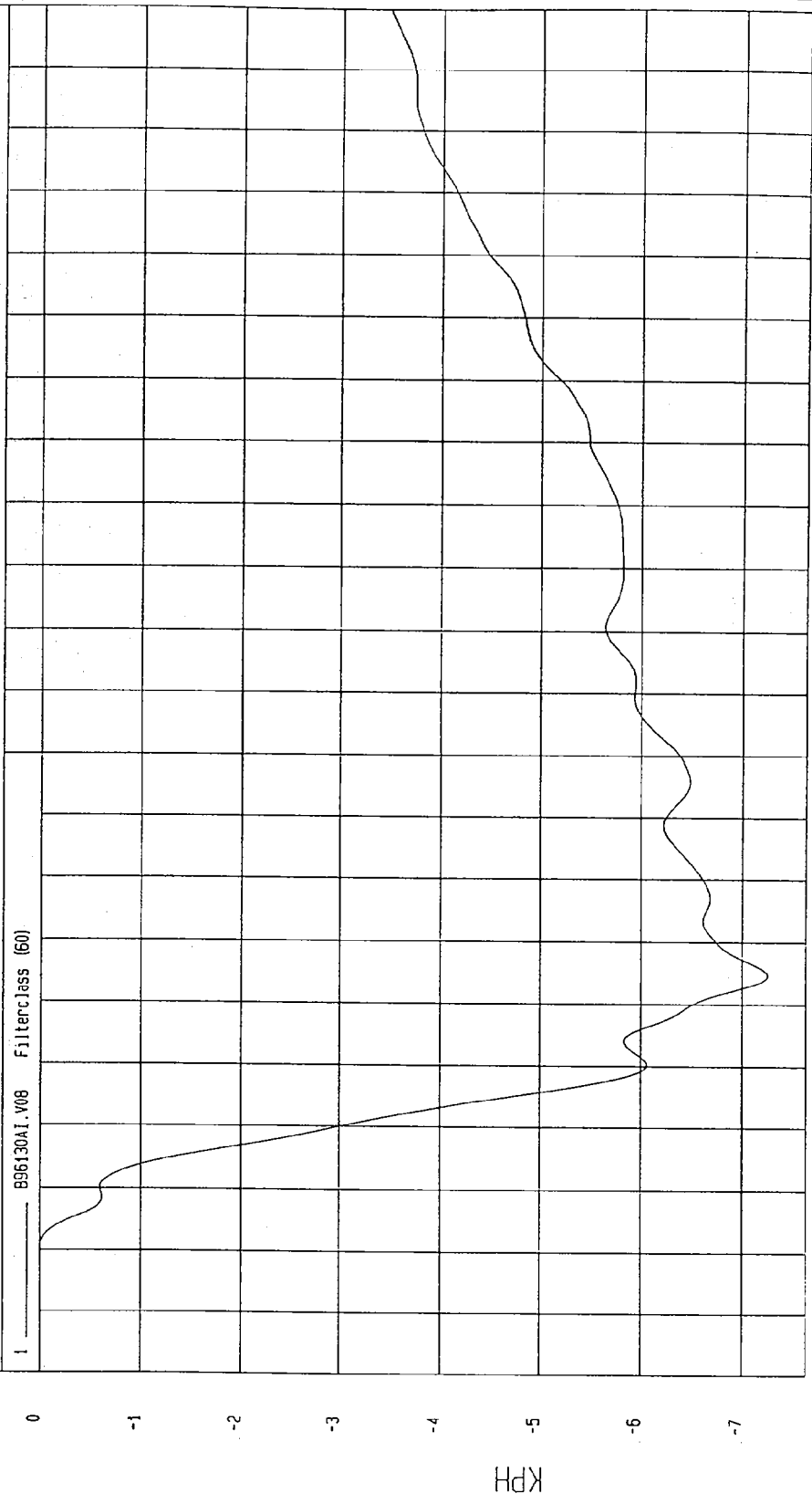


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

YMIN=-7.248747 KPH at 44. msec YMAX= 6.293346E-03 KPH at 0 msec

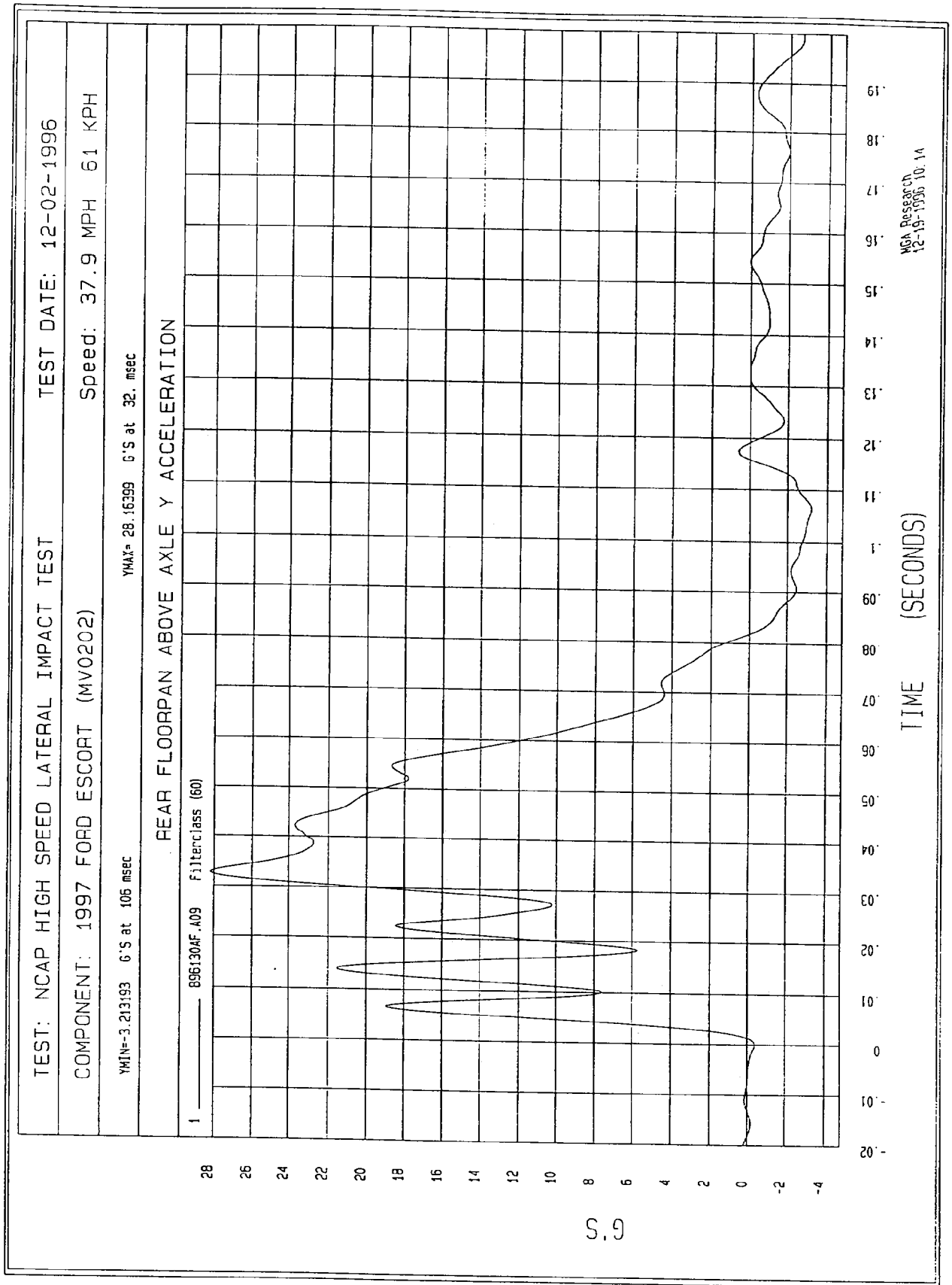
REAR FLOORPAN ABOVE AXLE X VELOCITY

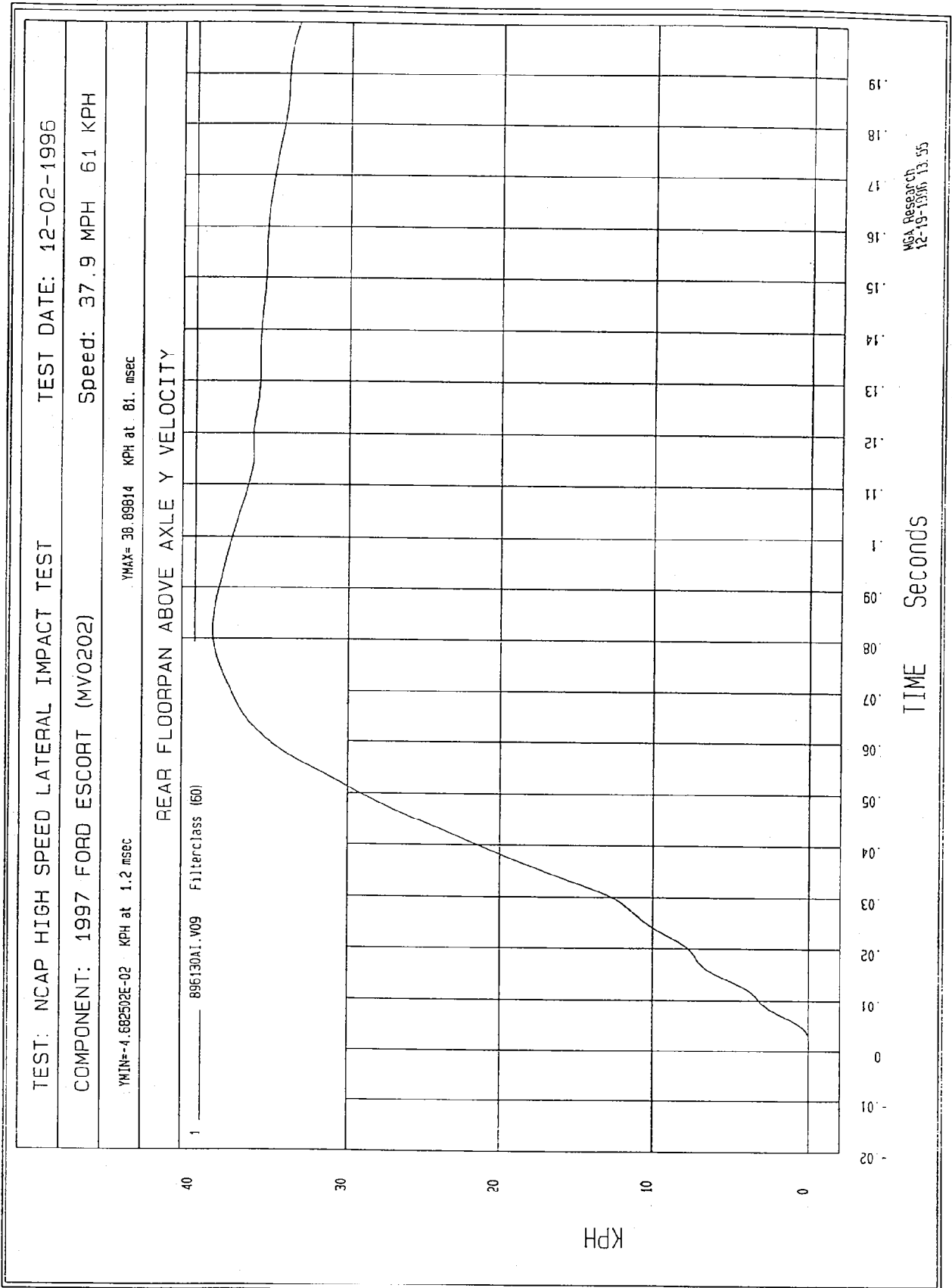


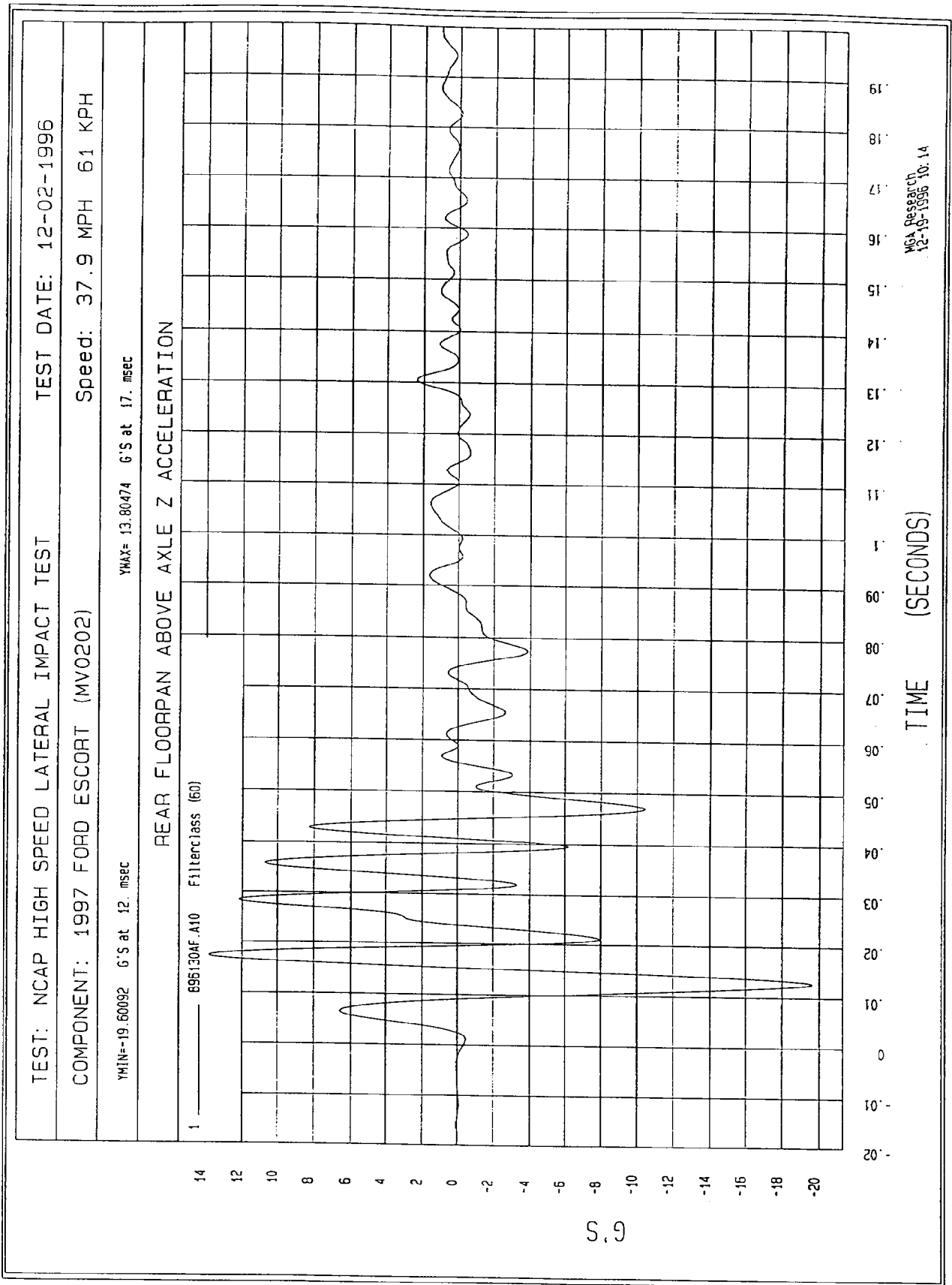
61
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TIME Seconds

MOA Research
12-19-1996 13:55



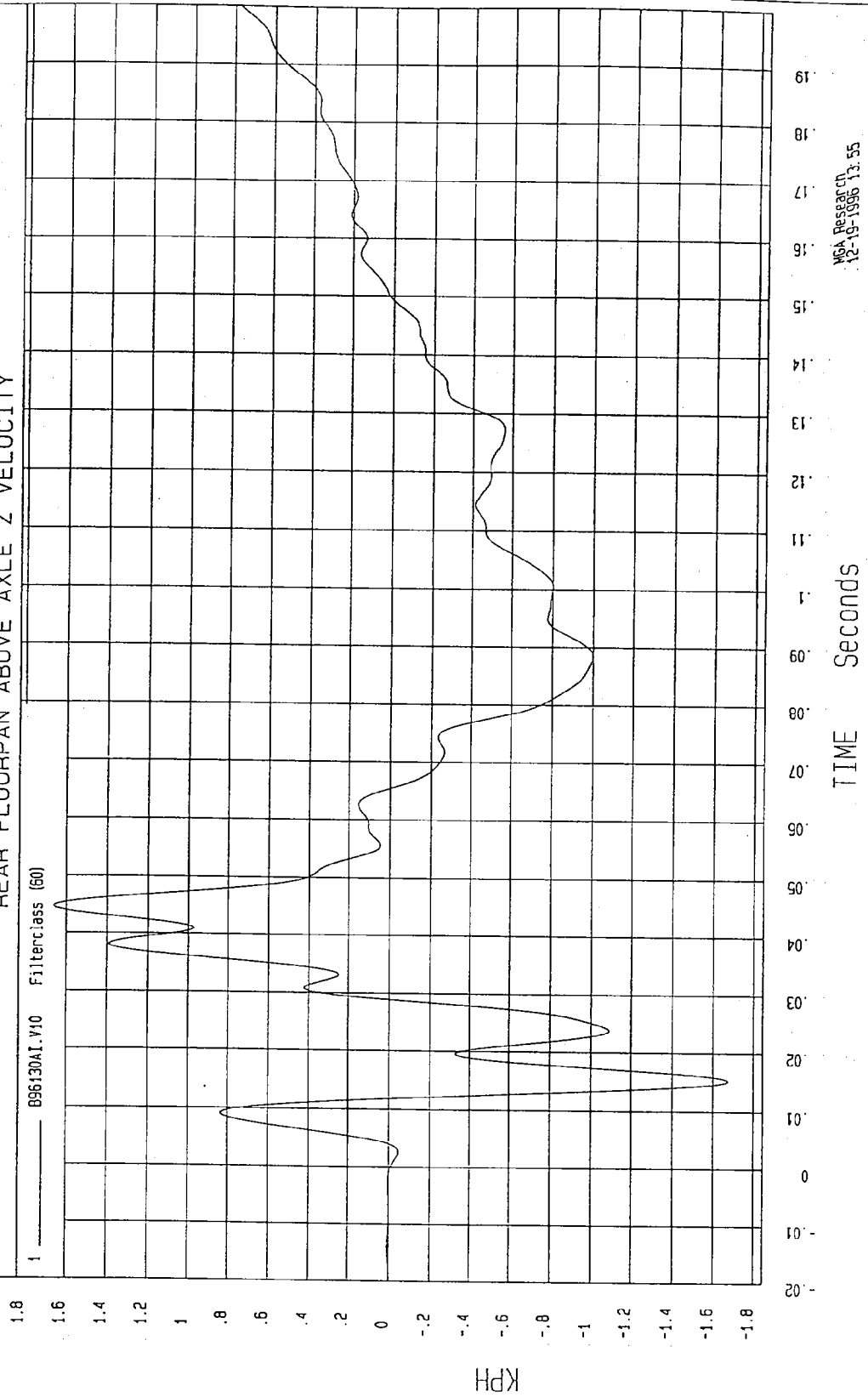




TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996
COMPONENT: 1997 FORD ESCORT (MVO202) Speed: 37.9 MPH 61 KPH

YMIN=-1.676847 KPH at 15. msec YMAX= 1.652899 KPH at 44. msec

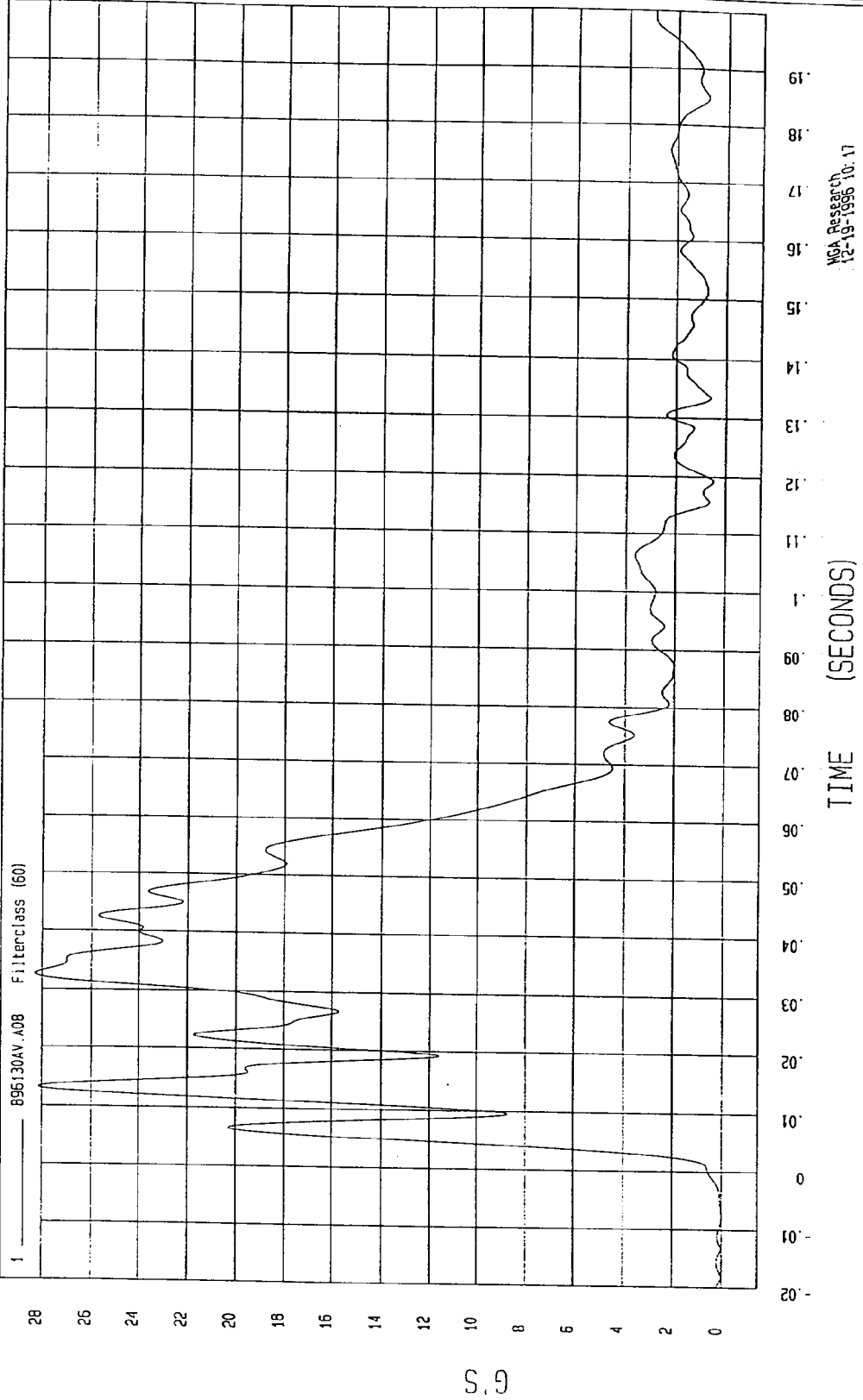
REAR FLOORPAN ABOVE AXLE Z VELOCITY



TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996
COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

YMIN= .0131126 G'S at -7.8 msec YMAX= 28.30209 G'S at 32. msec

REAR FLOORPAN ABOVE AXLE RESULTANT ACCELERATION

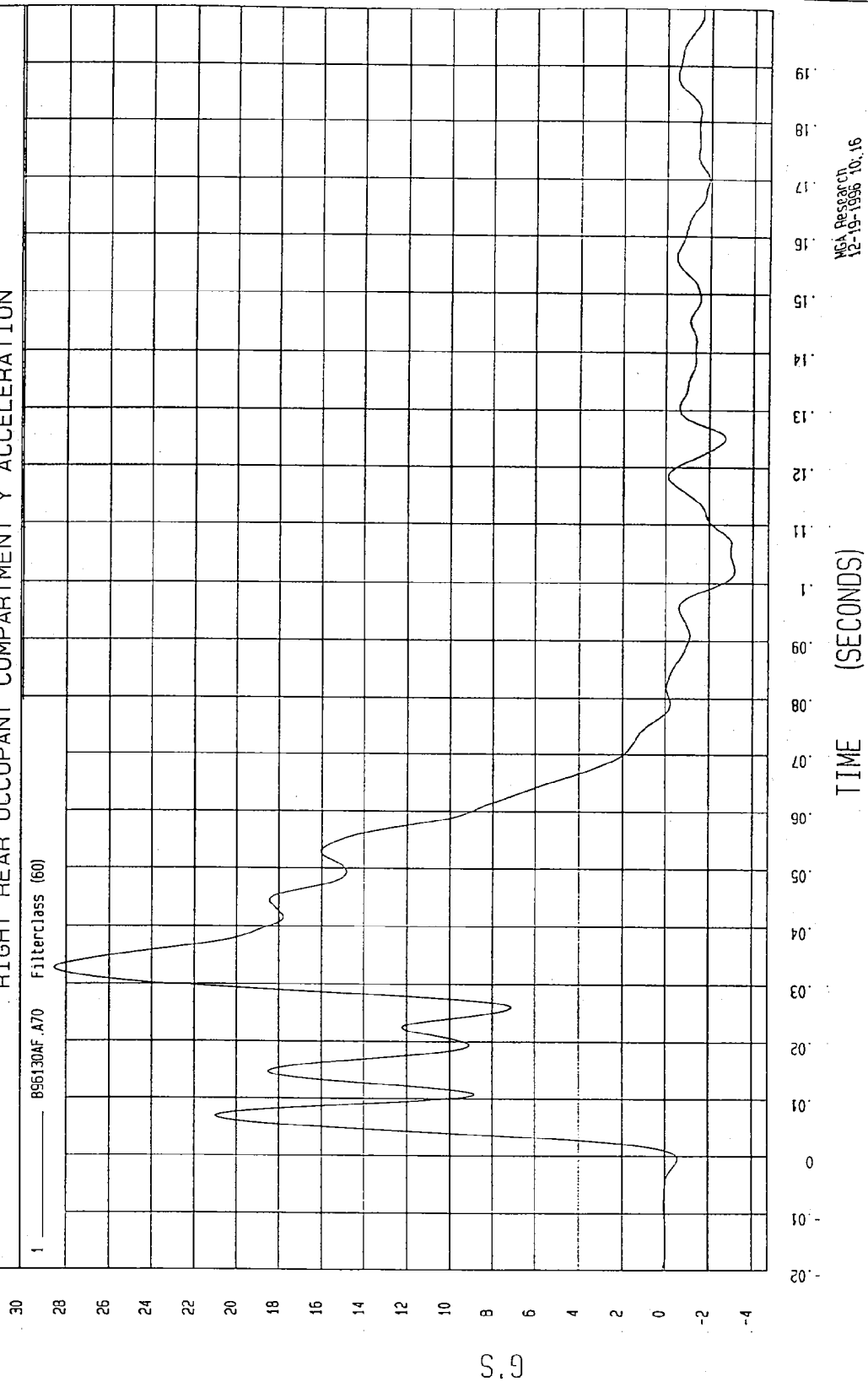


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

YMIN=-3.153332 G'S at 102 msec YMAX= 28.53084 G'S at 32. msec

RIGHT REAR OCCUPANT COMPARTMENT Y ACCELERATION

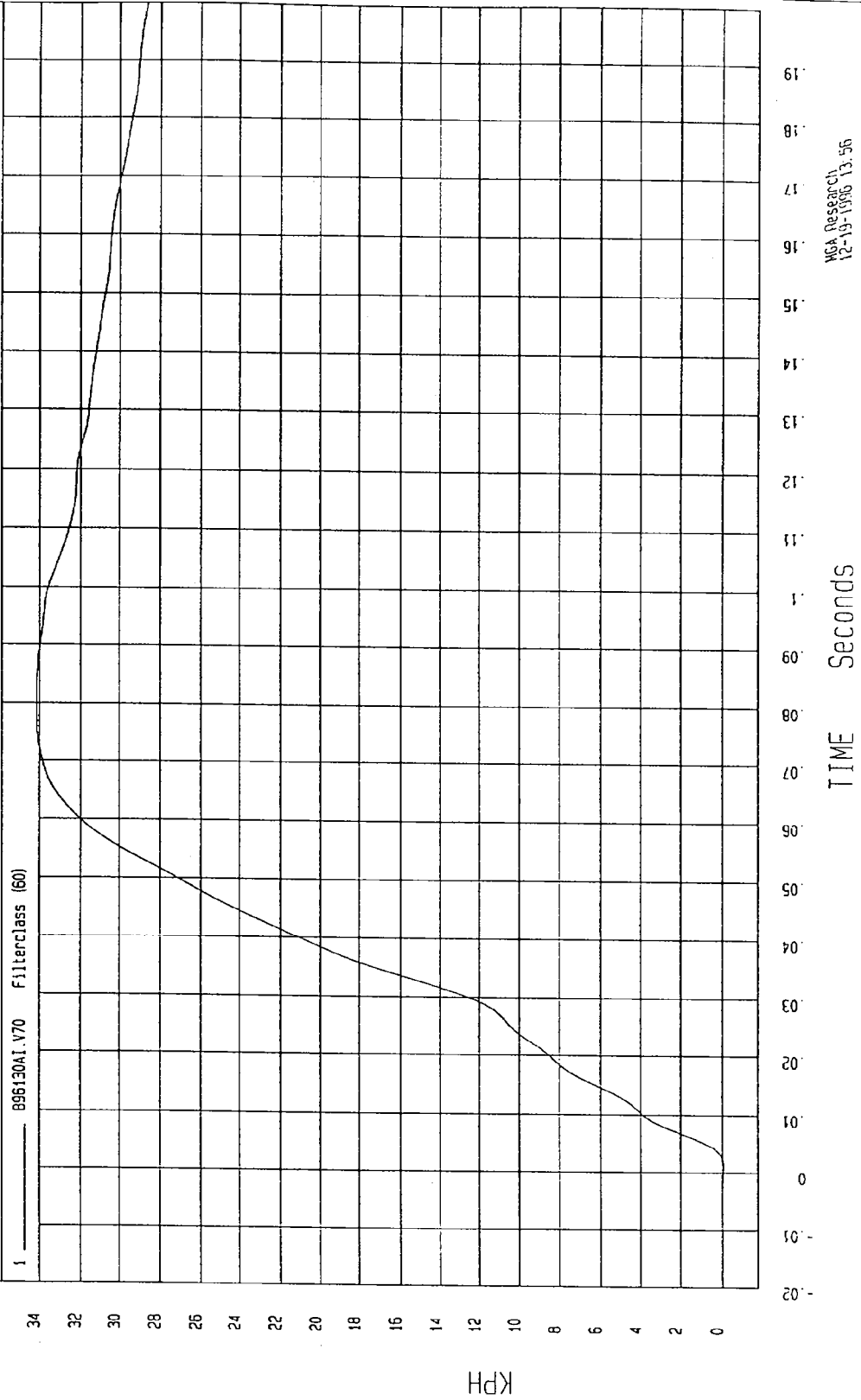


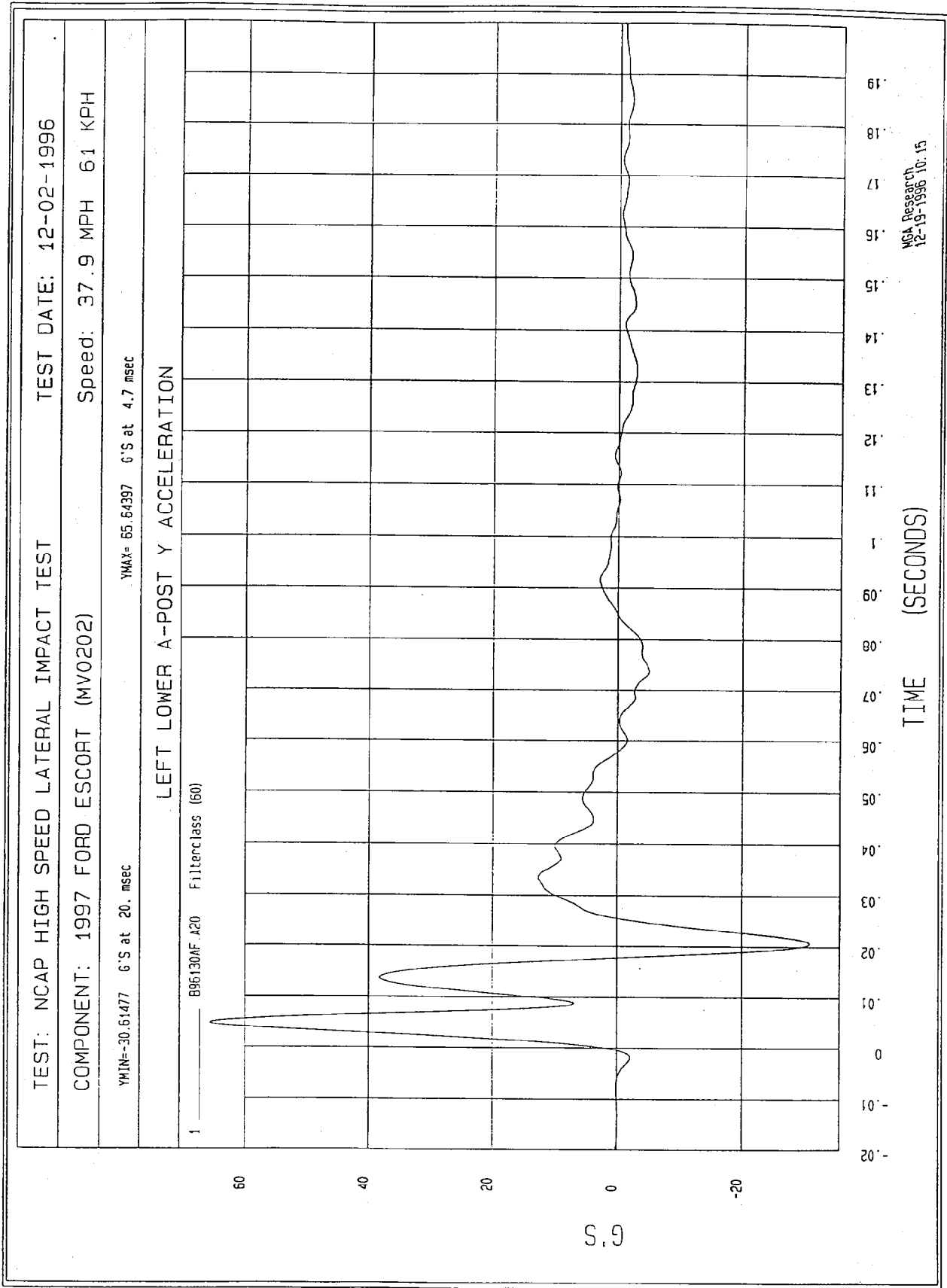
TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

YMIN=-5.863832E-02 KPH at 1 msec YMAX= 34.14985 KPH at 77. msec

RIGHT REAR OCCUPANT COMPARTMENT Y VELOCITY





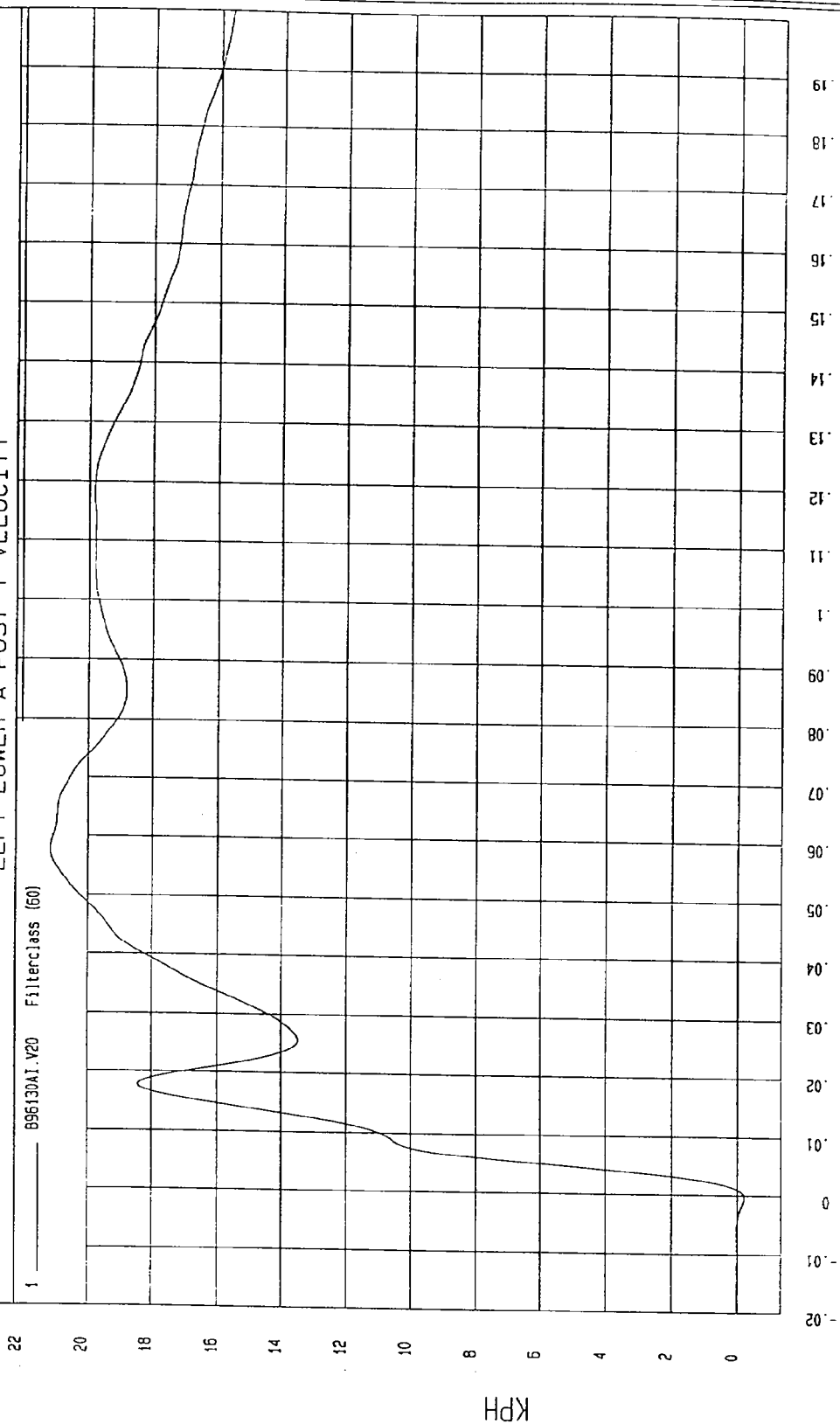
TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

YMIN=-.1998949 KPH at -.5 msec

YMAX= 21.13423 KPH at 57. msec

LEFT LOWER A-POST Y VELOCITY



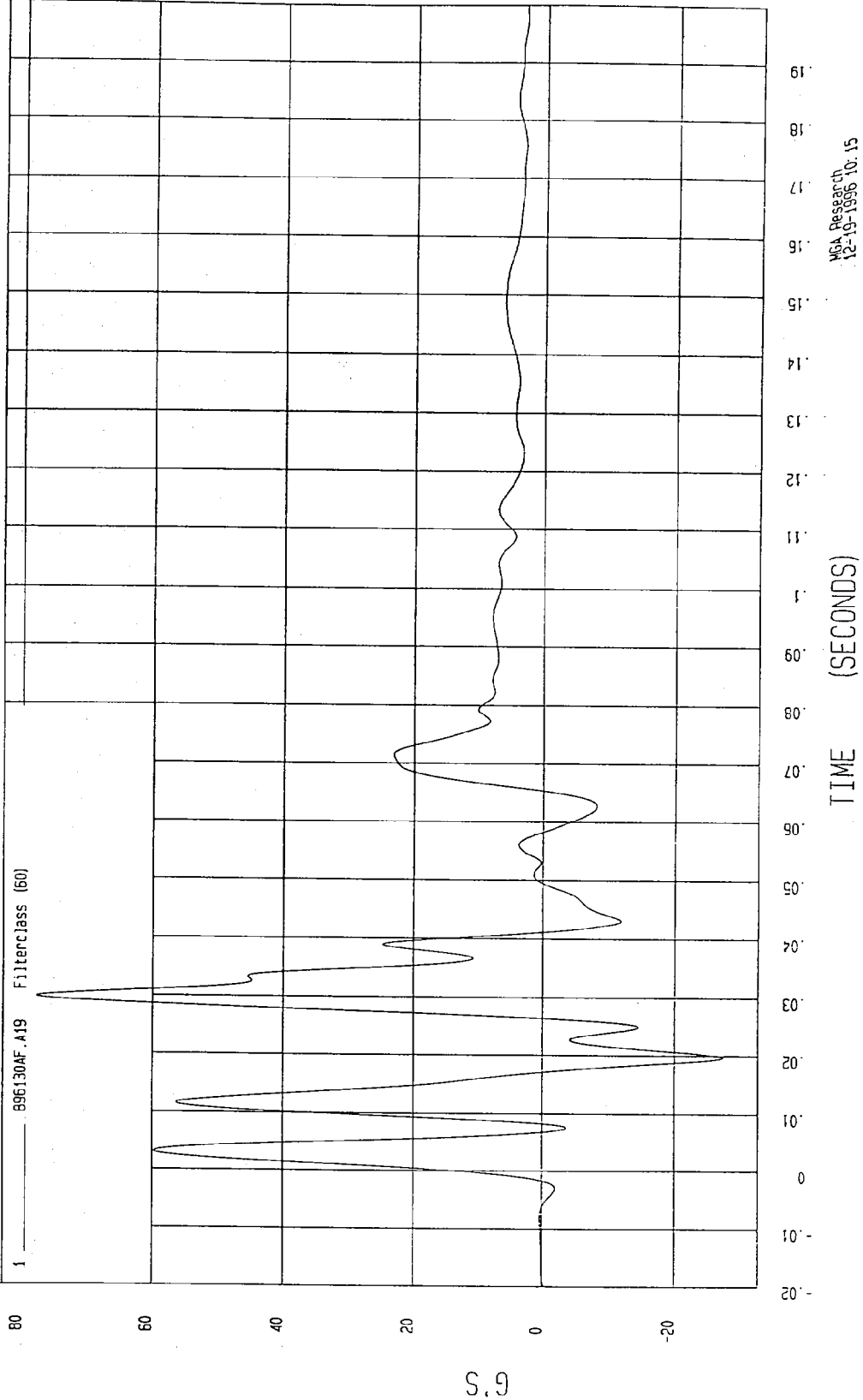
MGA Research
12-19-1996 13:56

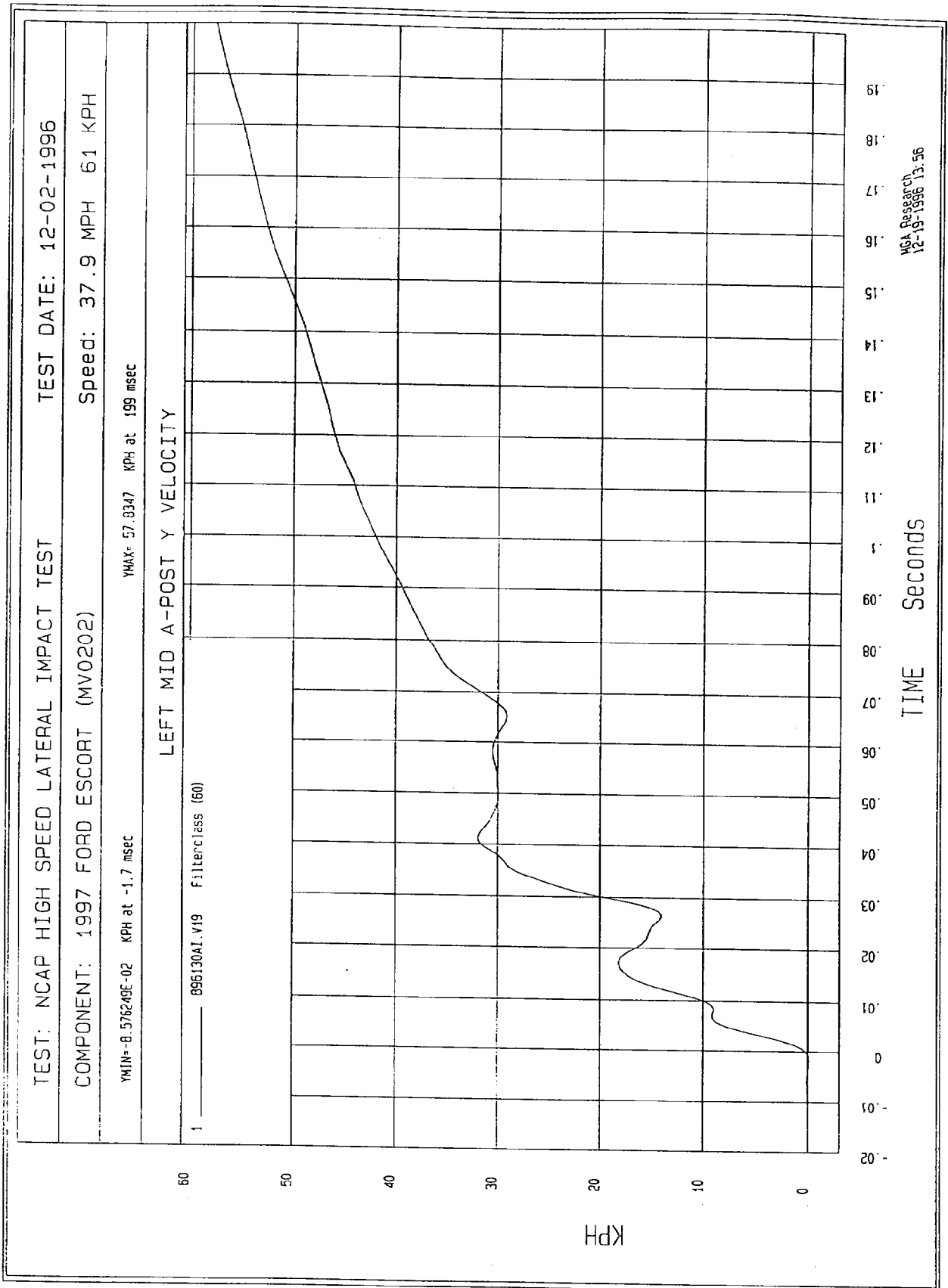
TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

YMIN=-27.26601 G'S at 19. msec YMAX= 77.75964 G'S at 29. msec

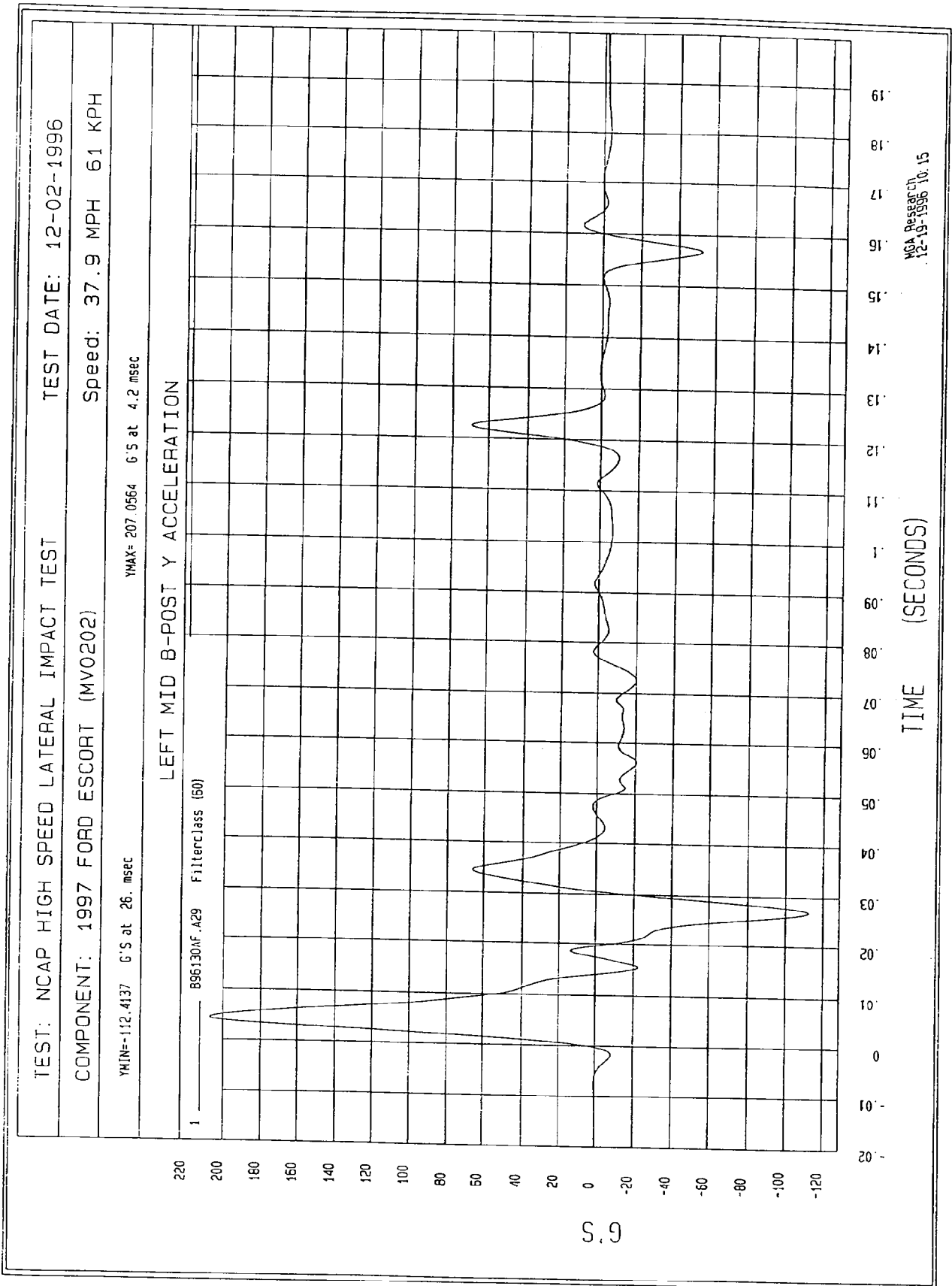
LEFT MID A-POST Y ACCELERATION

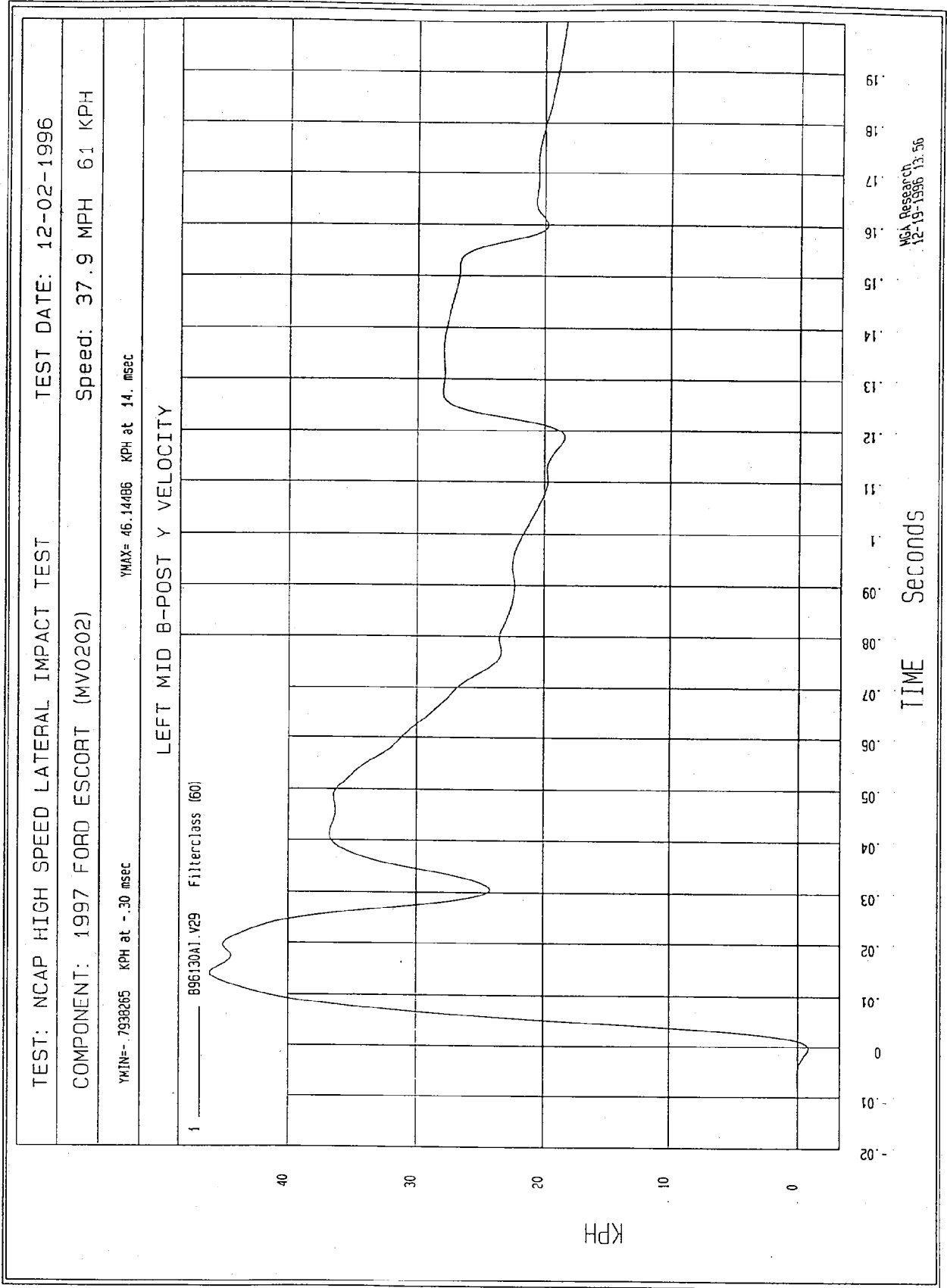


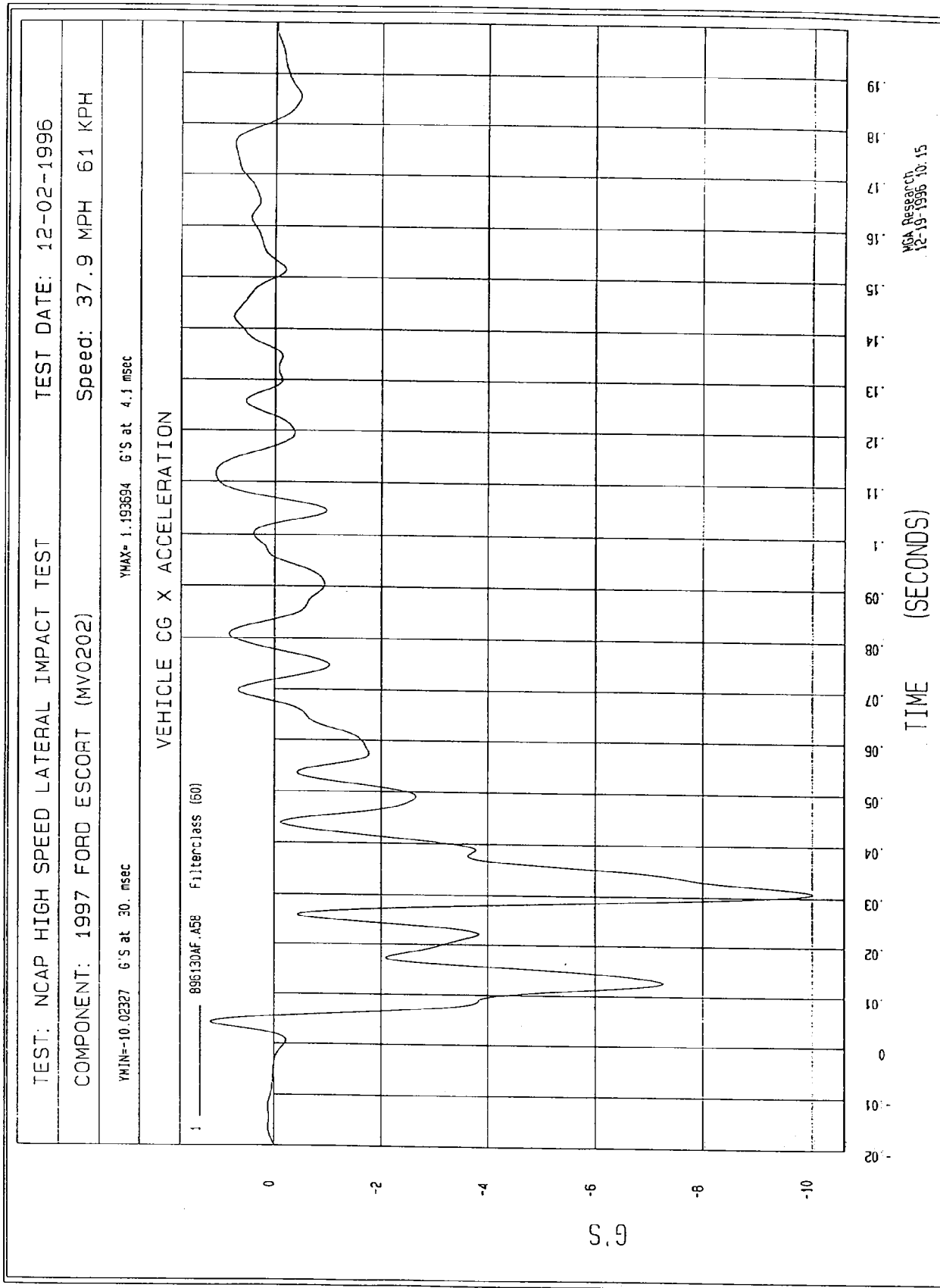


LEFT LOWER B-POST Y ACCELERATION VS. TIME

NO VALID DATA







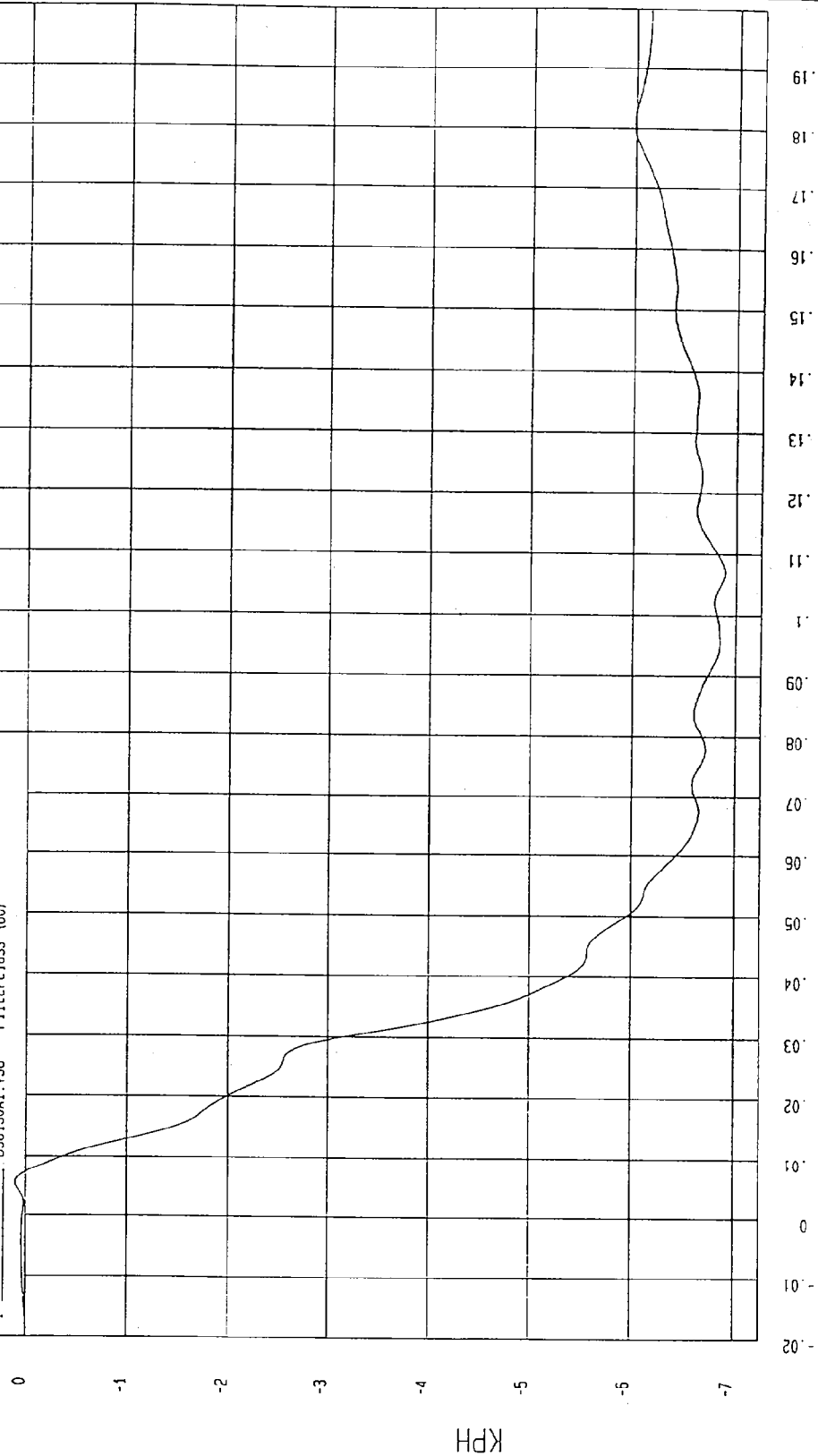
TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

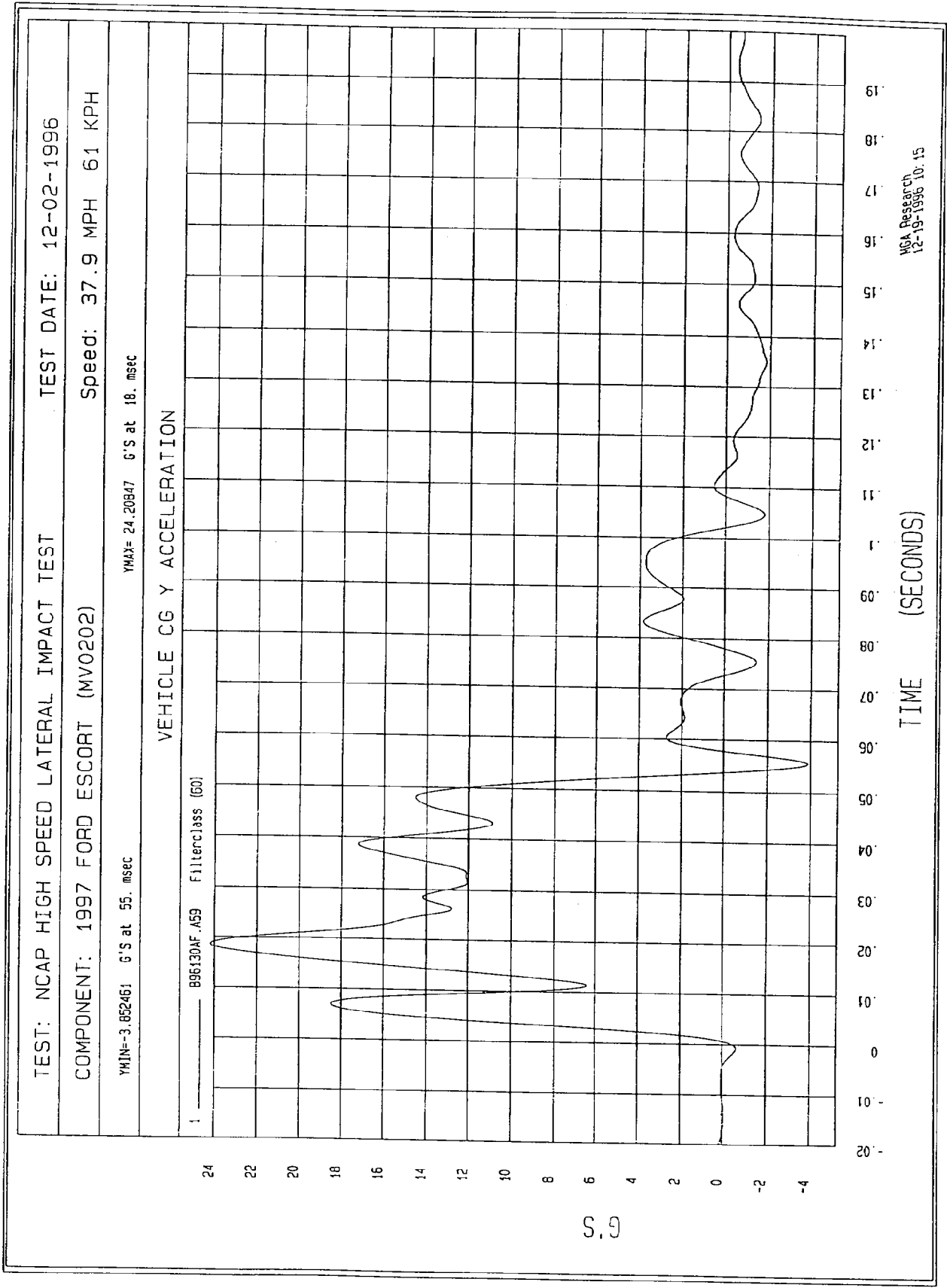
YMIN=-6.893271 KPH at 106 msec YMAX= .1041935 KPH at 5.5 msec

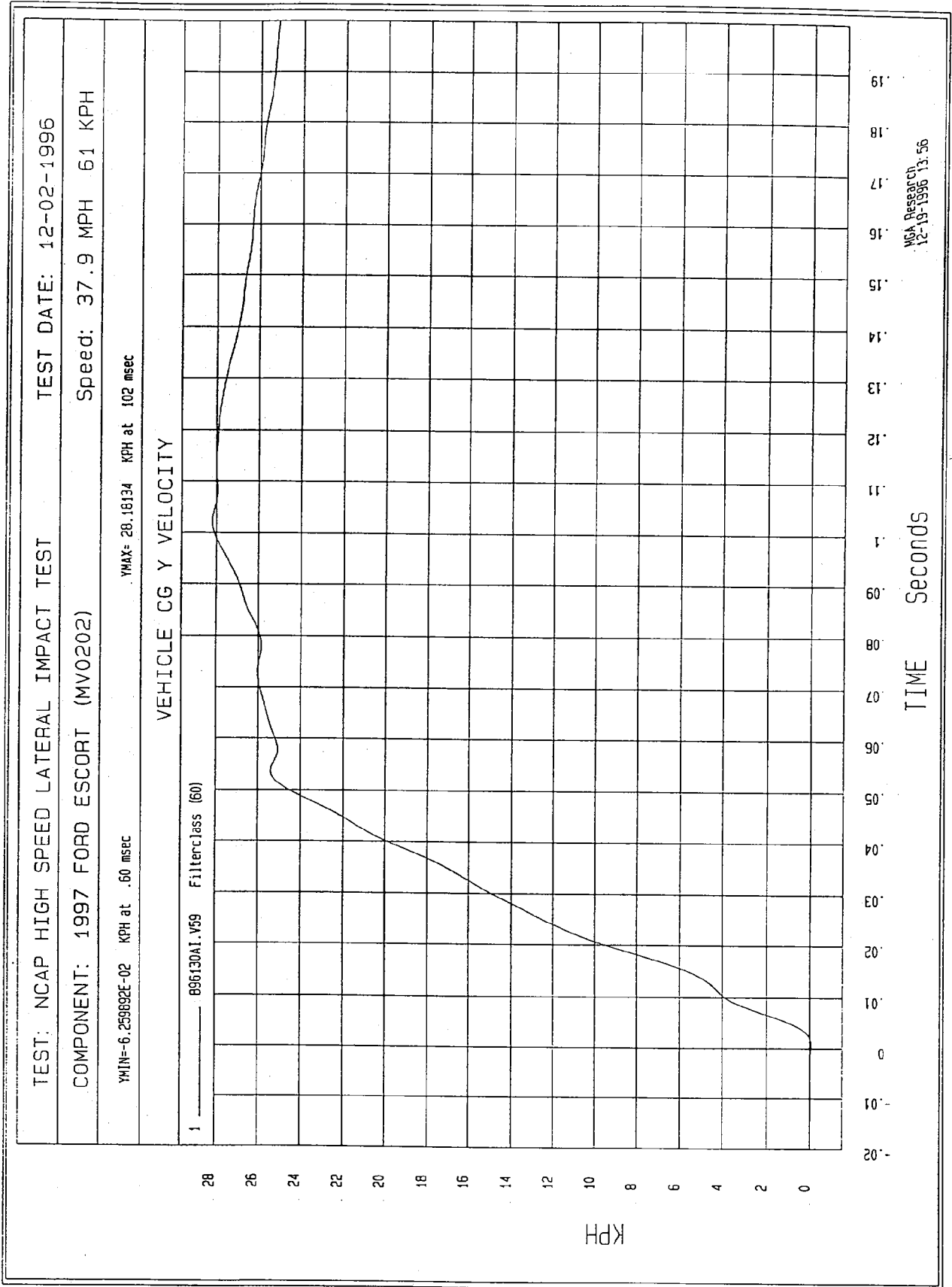
VEHICLE CG X VELOCITY

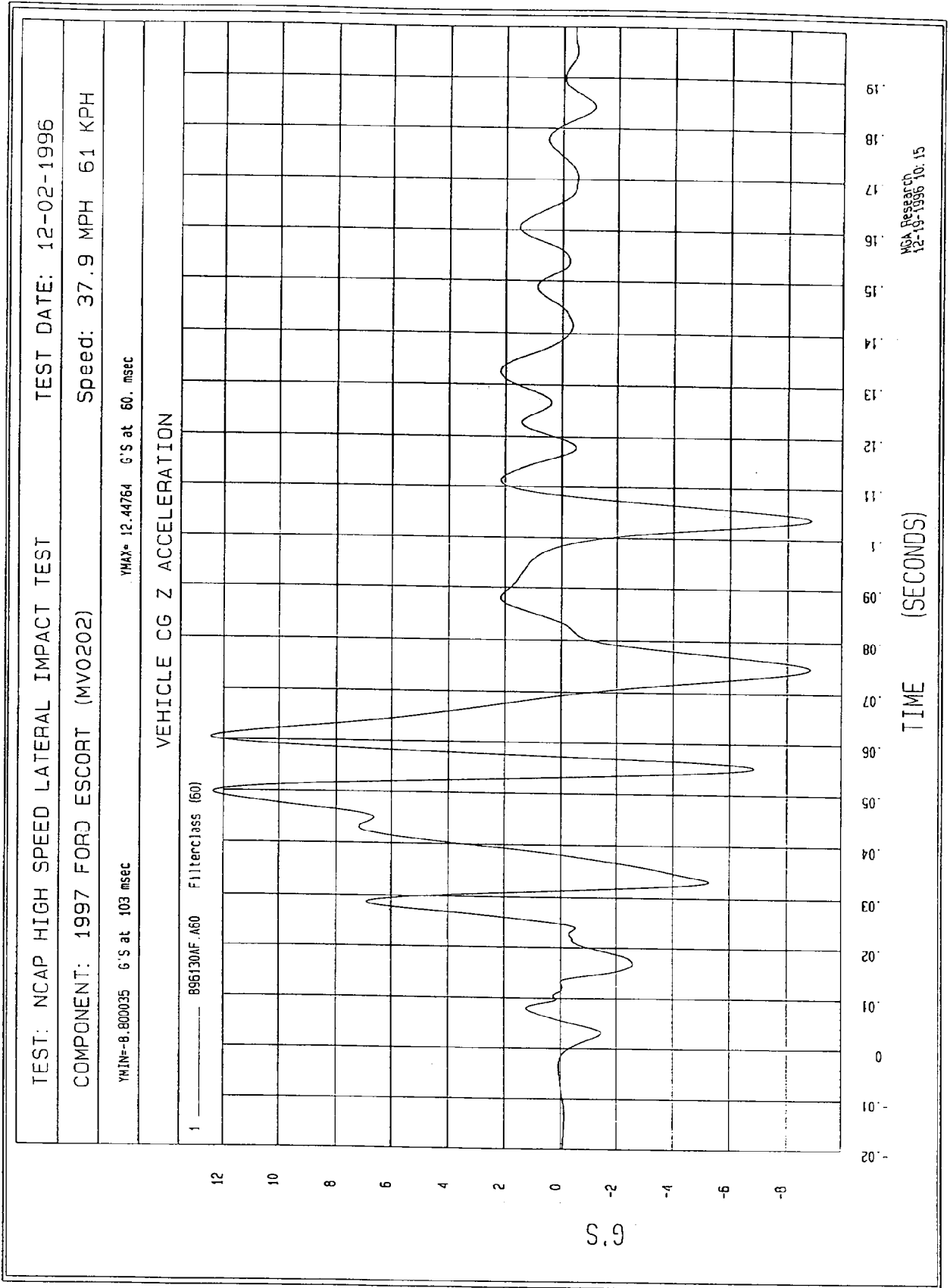
1 B96130A1.V58 Filterclass (60)



MCA Research
12-19-1996 13:56





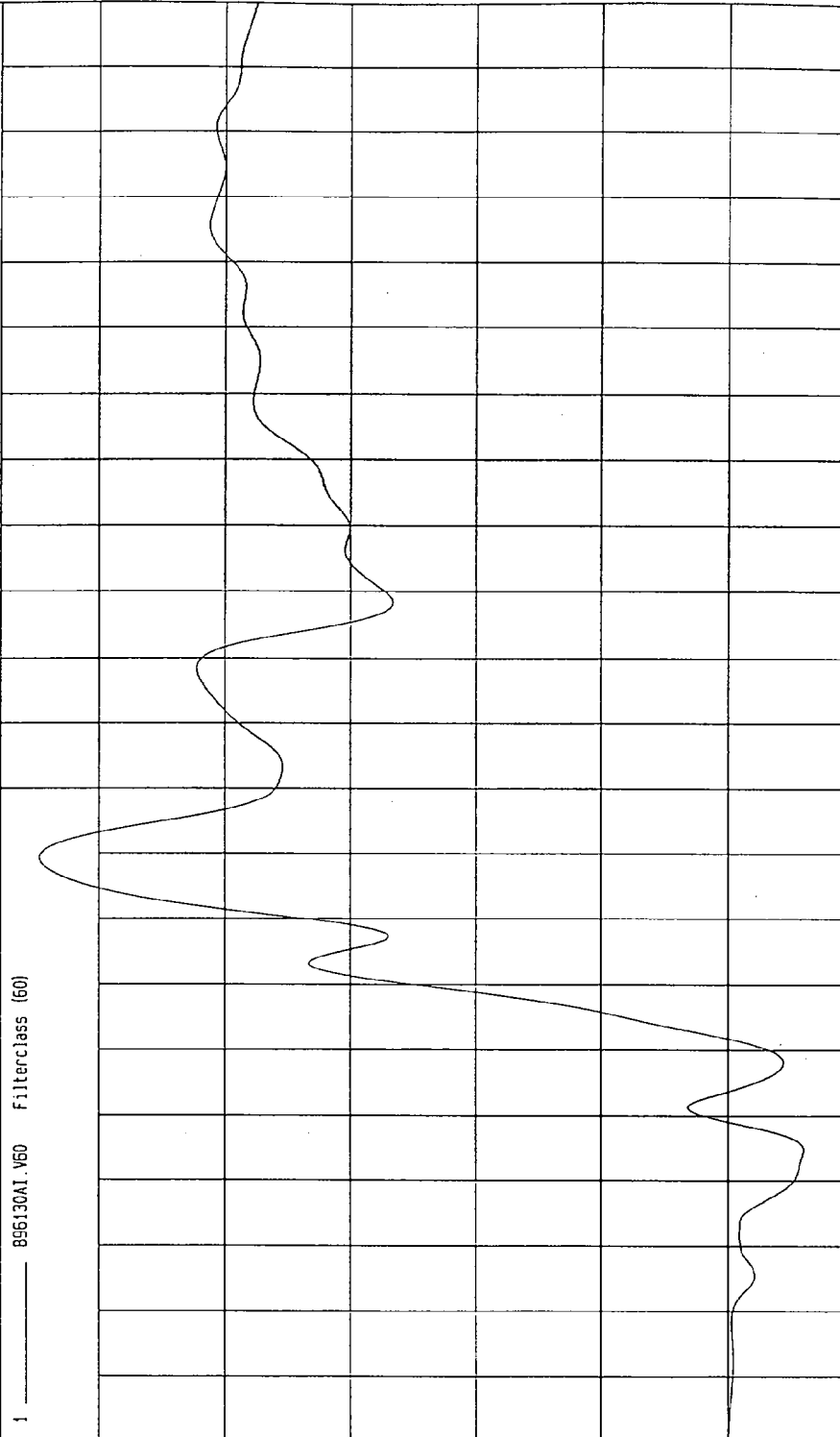


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

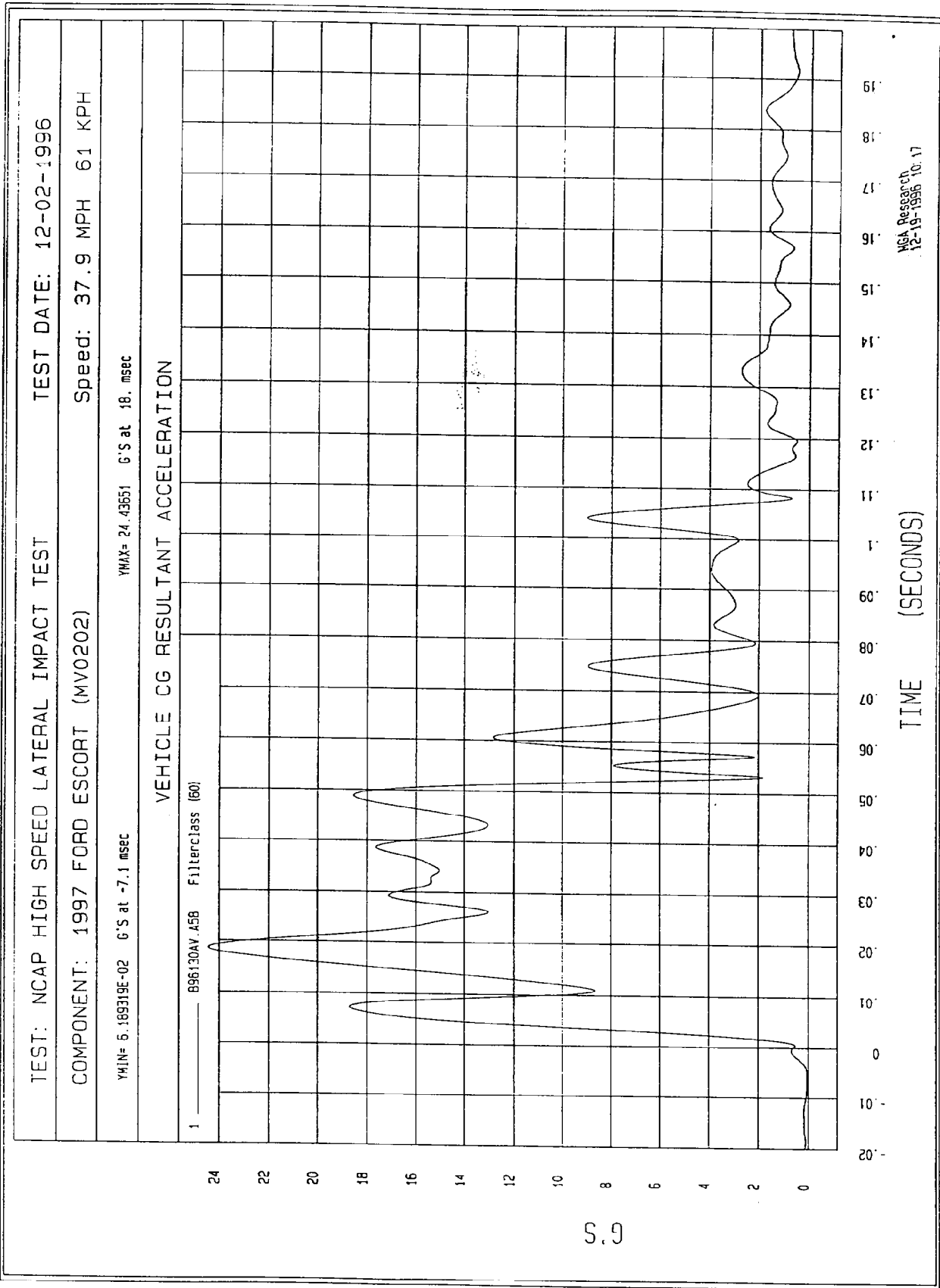
YMIN=-.584621 KPH at 24. msec YMAX= 5.461952 KPH at 69. msec

VEHICLE CG Z VELOCITY



TIME Seconds

MCA Research
12-19-1996 13:56

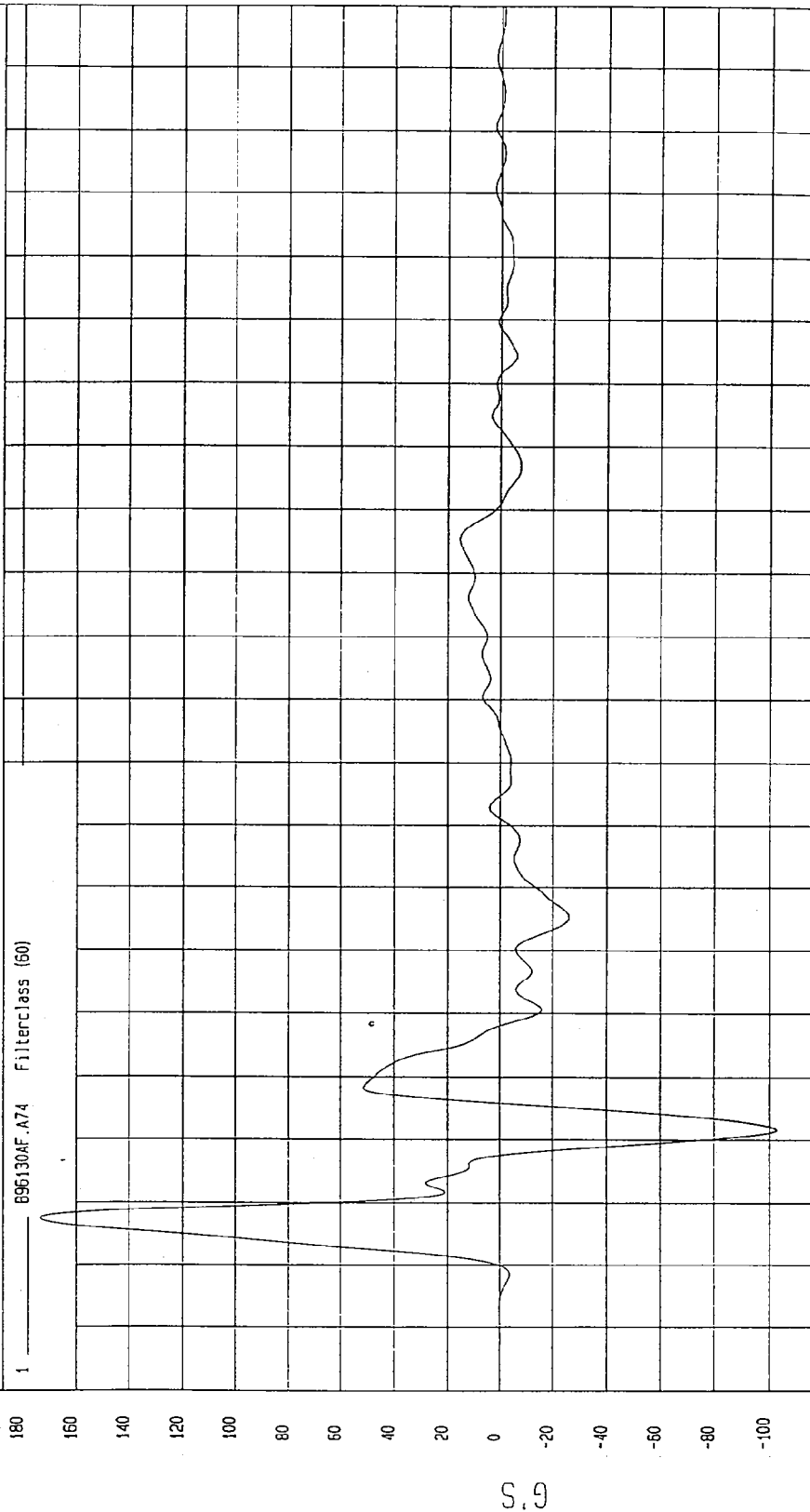


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

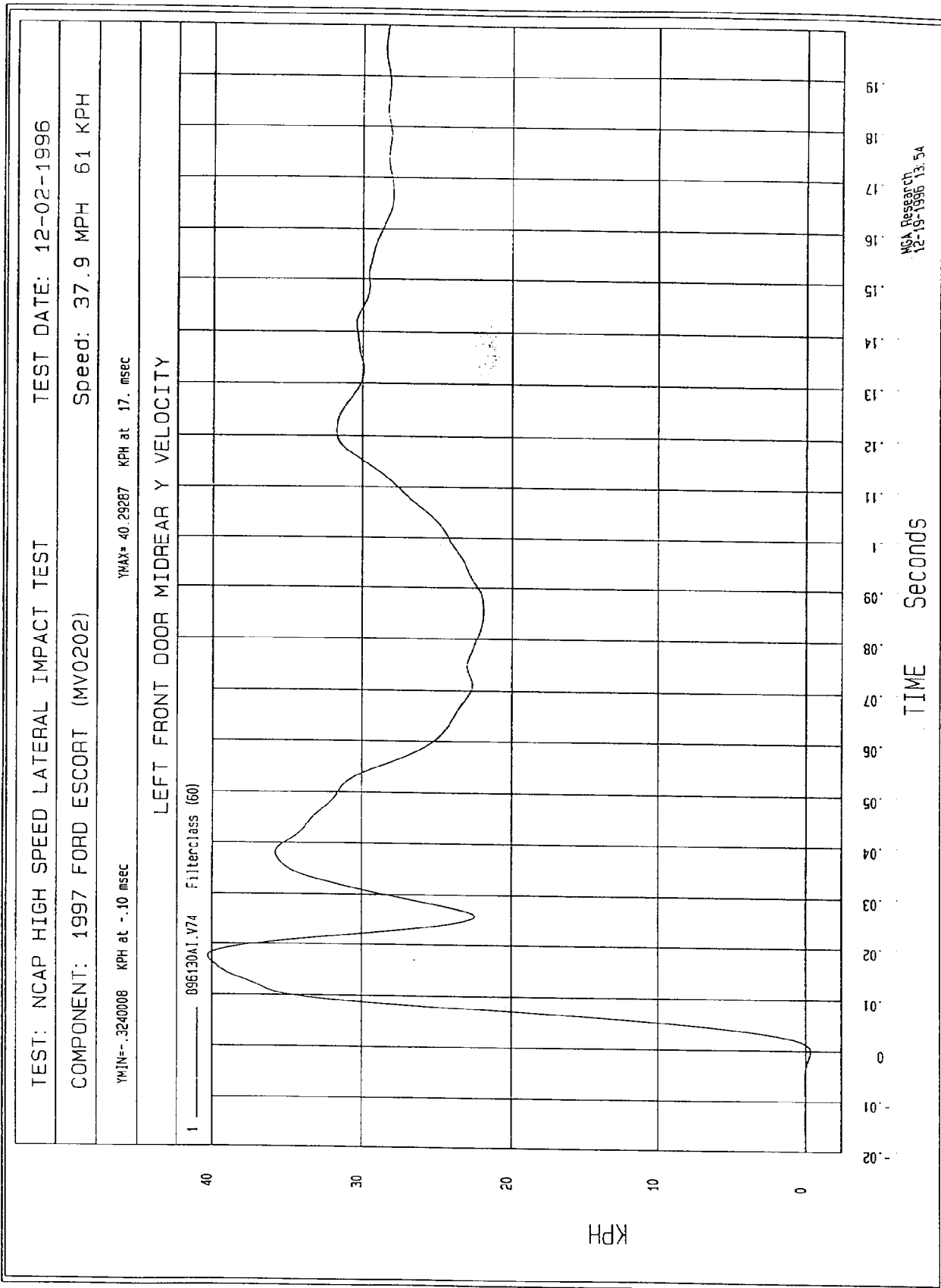
COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

YMIN=-102.6176 G'S at 21. msec YMAX= 173.4381 G'S at 7.4 msec

LEFT FRONT DOOR MIDREAR Y ACCELERATION



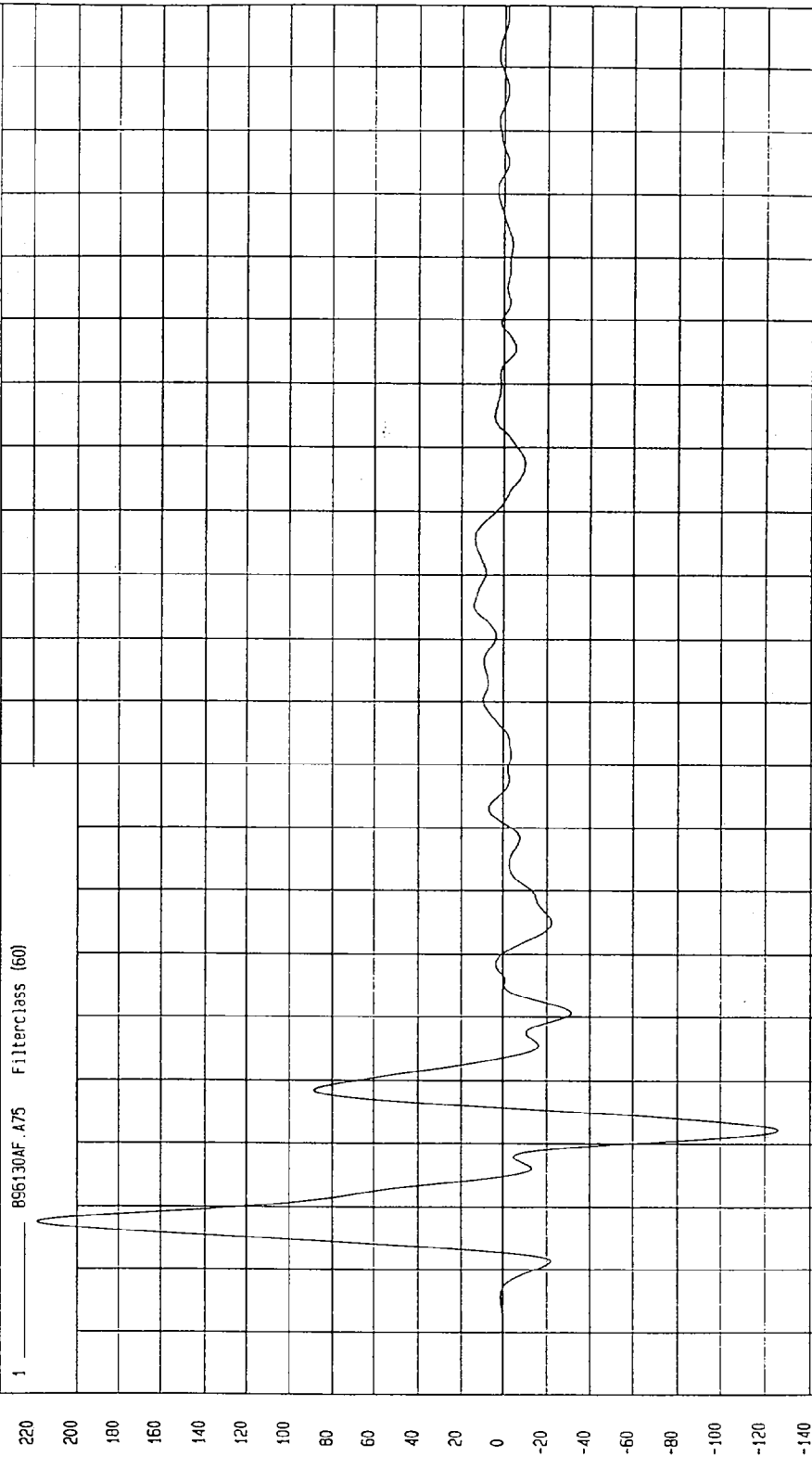
MSA Research
12-19-1996 10:12



TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996
COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

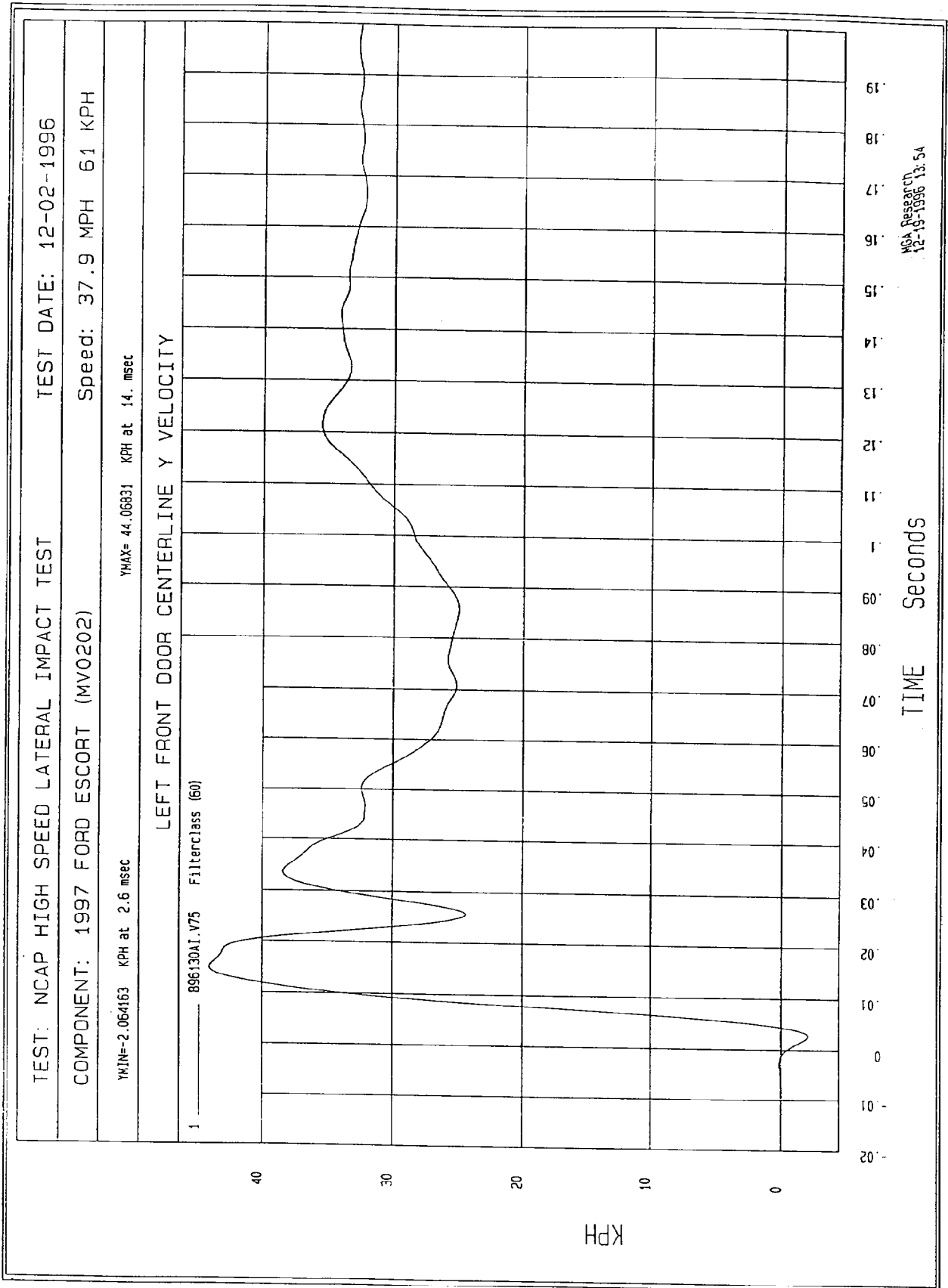
YMIN=-125.7182 G'S at 22. msec YMAX= 217.9081 G'S at 7.5 msec

LEFT FRONT DOOR CENTERLINE Y ACCELERATION



MSA Research
12-19-1996 10:12

TIME (SECONDS)

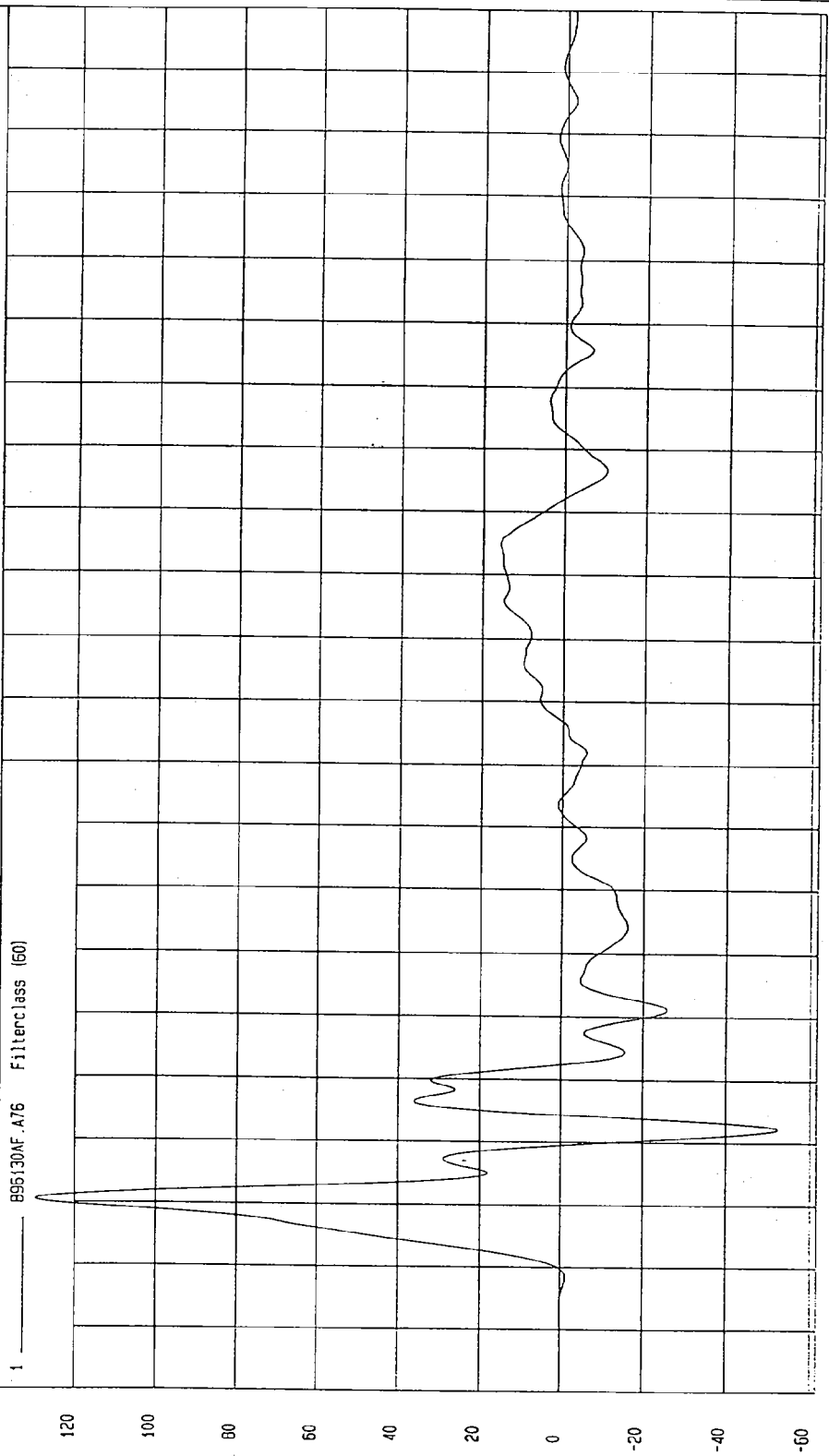


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

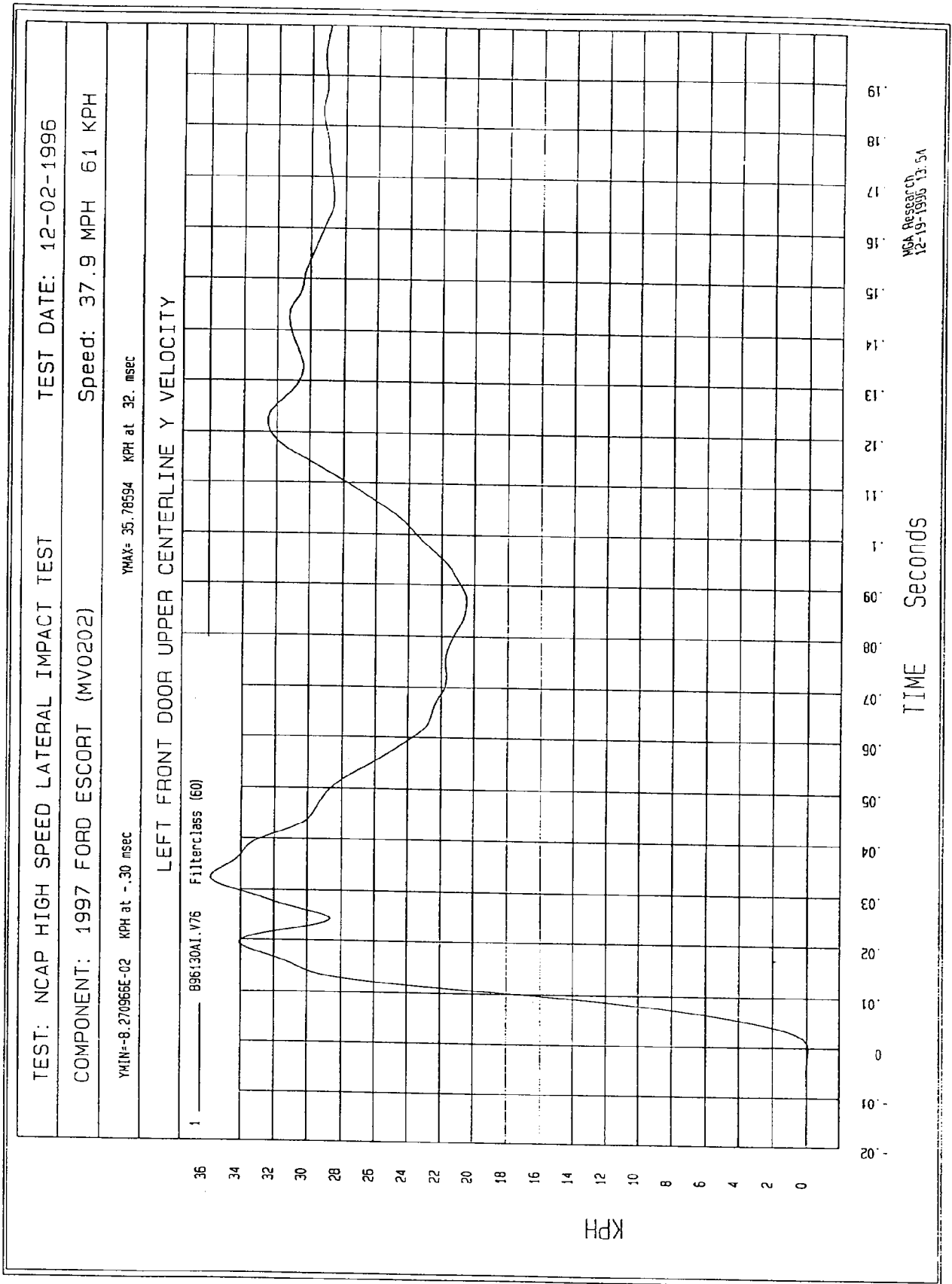
YMIN=-52.4263 G'S at 22. msec YMAX= 129.5998 G'S at 10. msec

LEFT FRONT DOOR UPPER CENTERLINE Y ACCELERATION



TIME (SECONDS)

NCA Research
12-19-1996 10:12



TEST: NCAP HIGH SPEED LATERAL IMPACT TEST

TEST DATE: 12-02-1996

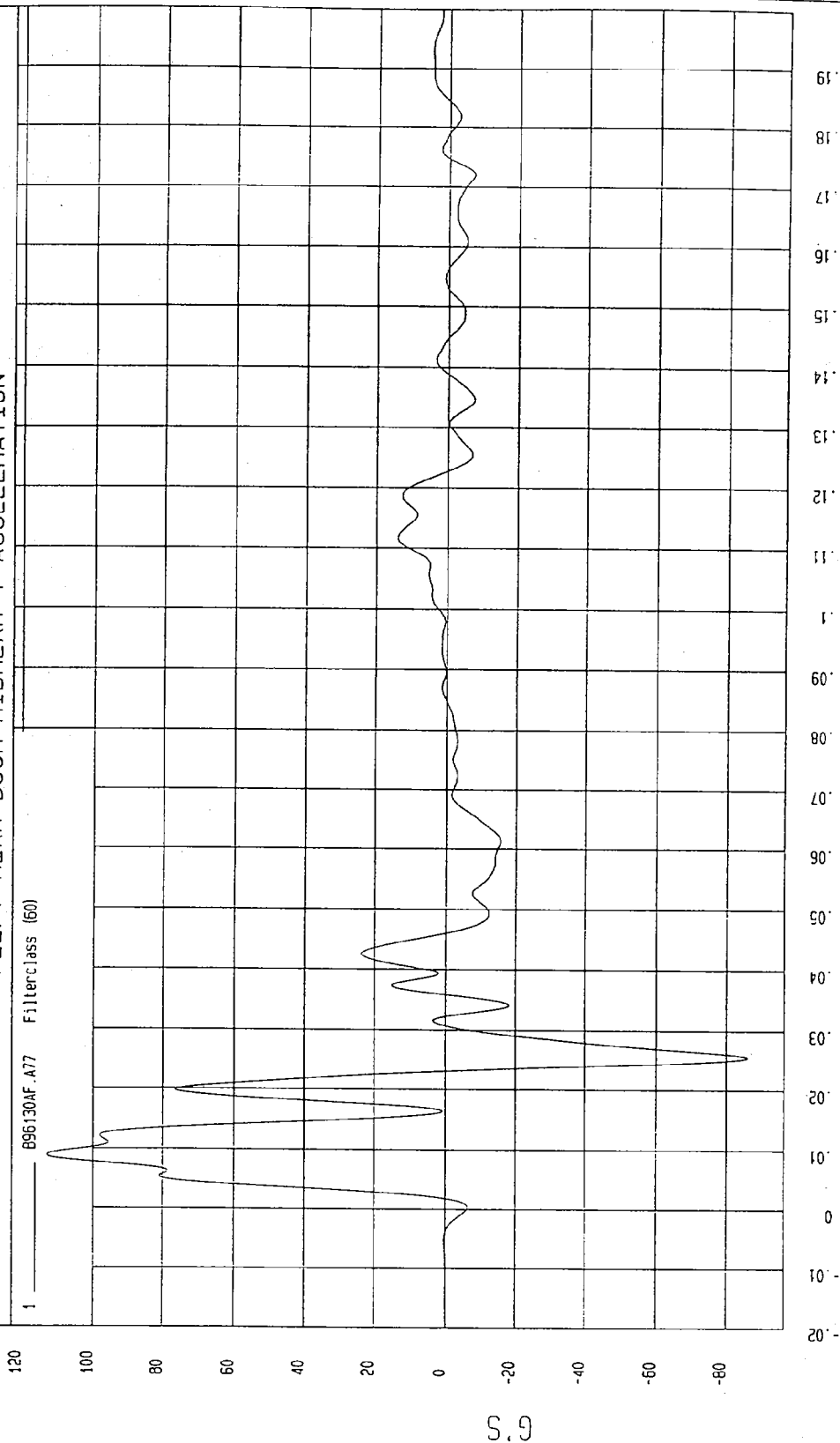
Speed: 37.9 MPH 61 KPH

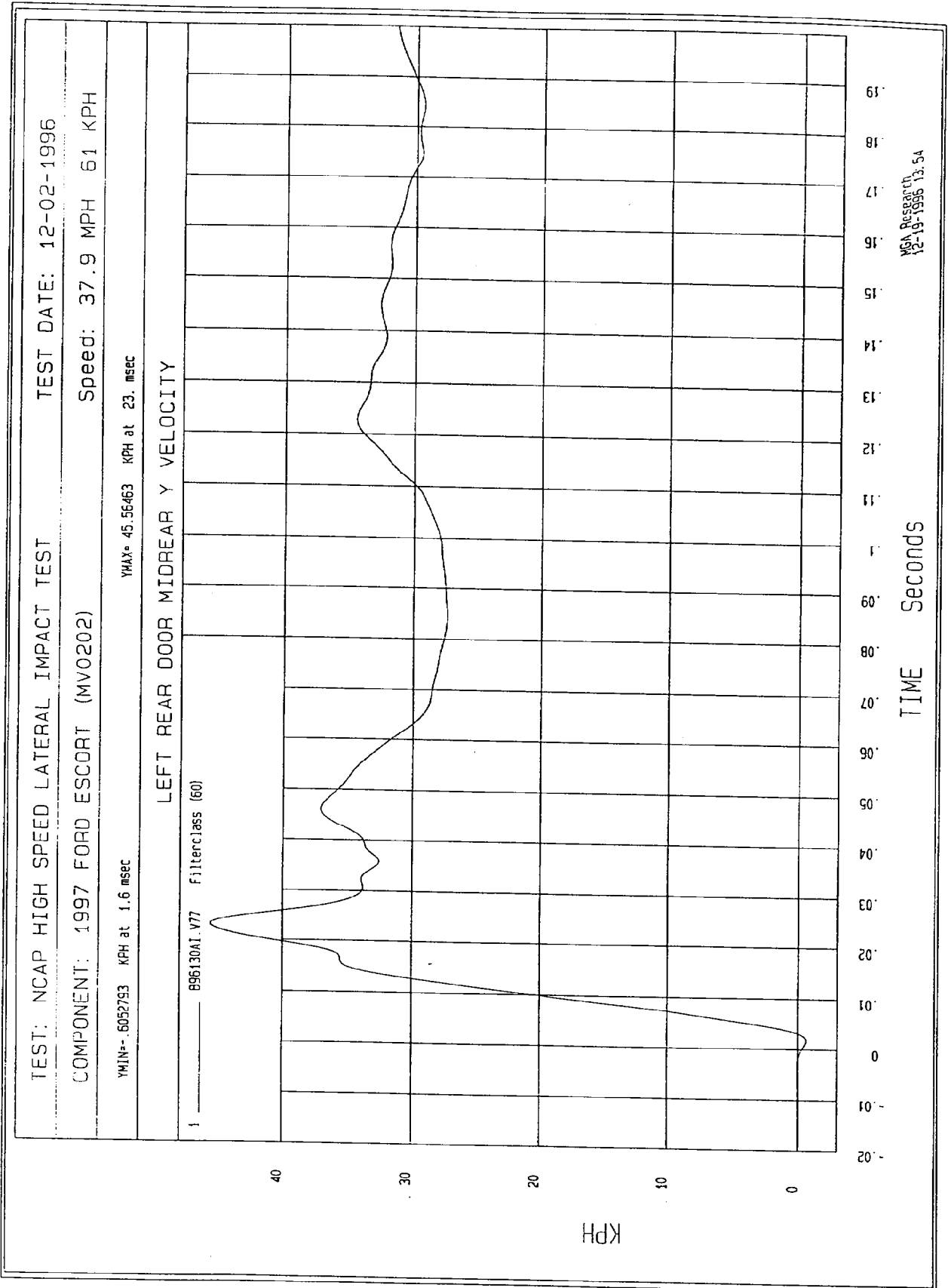
COMPONENT: 1997 FORD ESCORT (MV0202)

YMAX= 112.6263 G'S at 8.9 msec

YMIN=-85.77418 G'S at 25. msec

LEFT REAR DOOR MIDREAR Y ACCELERATION



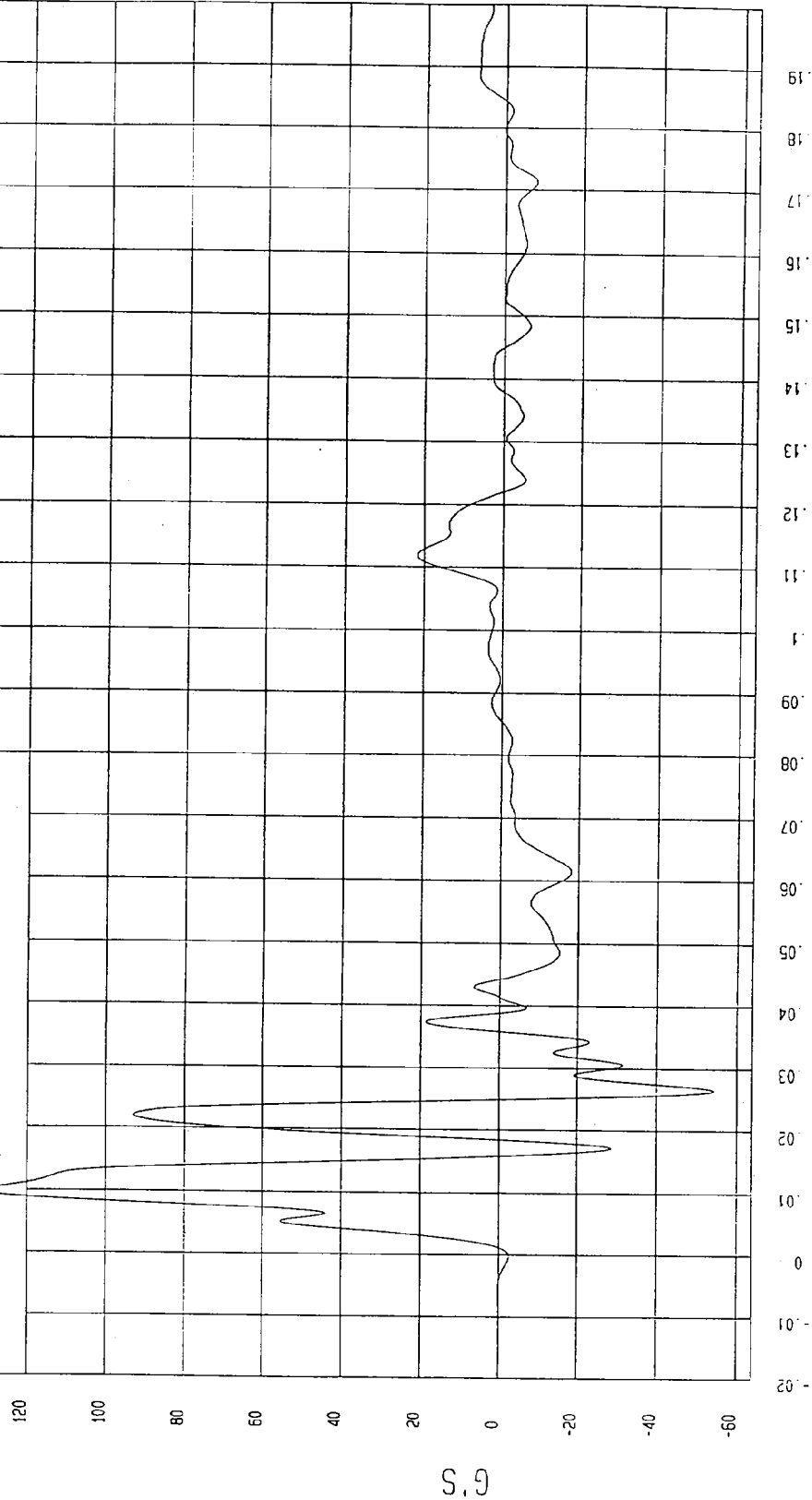


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996
COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

YMIN=-54.47258 G'S at 26. msec YMAX= 130.6745 G'S at 9.9 msec

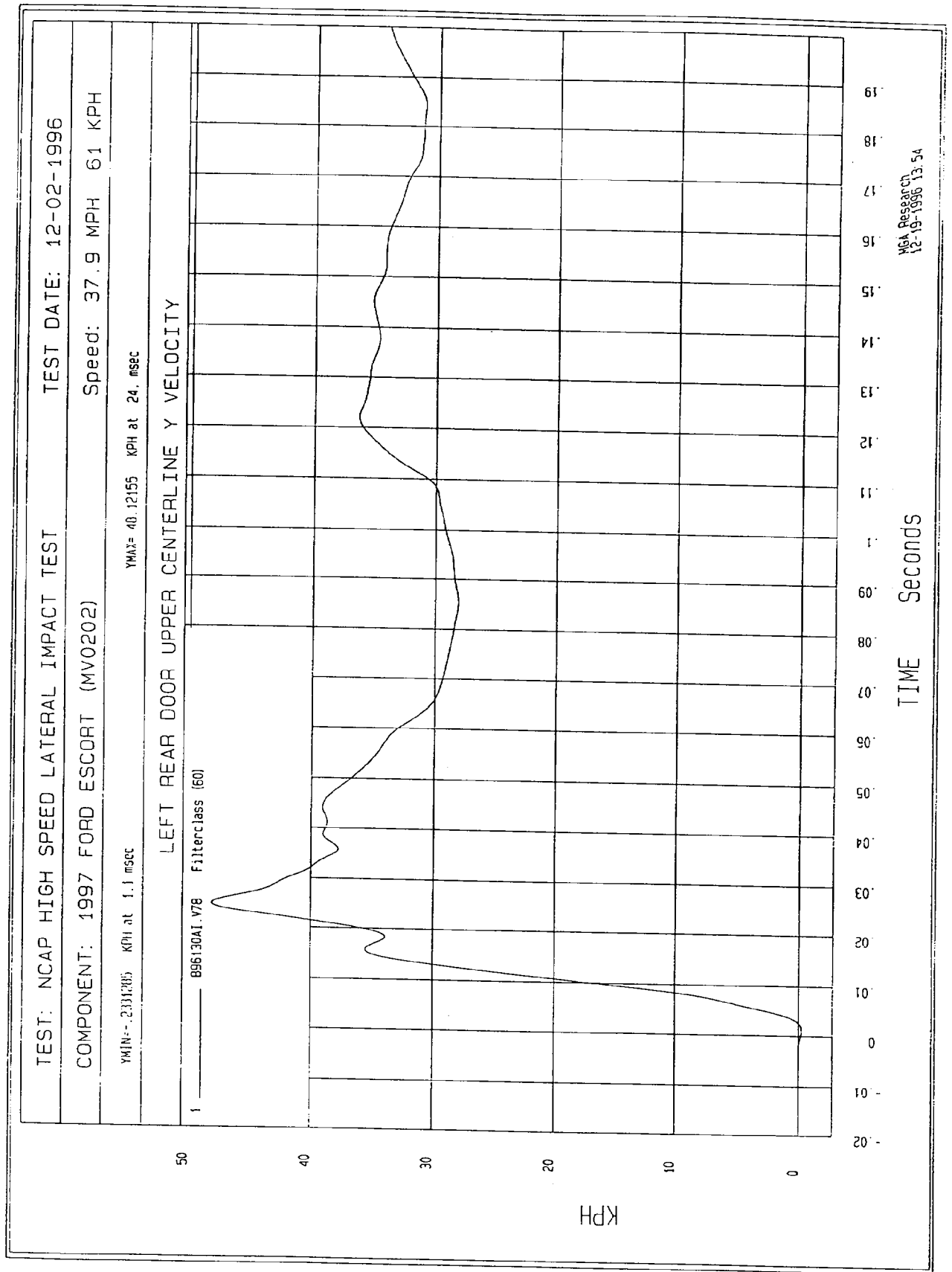
LEFT REAR DOOR UPPER CENTERLINE Y ACCELERATION

1 ——— BSE130AF.A78 Filterclass (50)



MCA Research
12-19-1996 10.13

TIME (SECONDS)

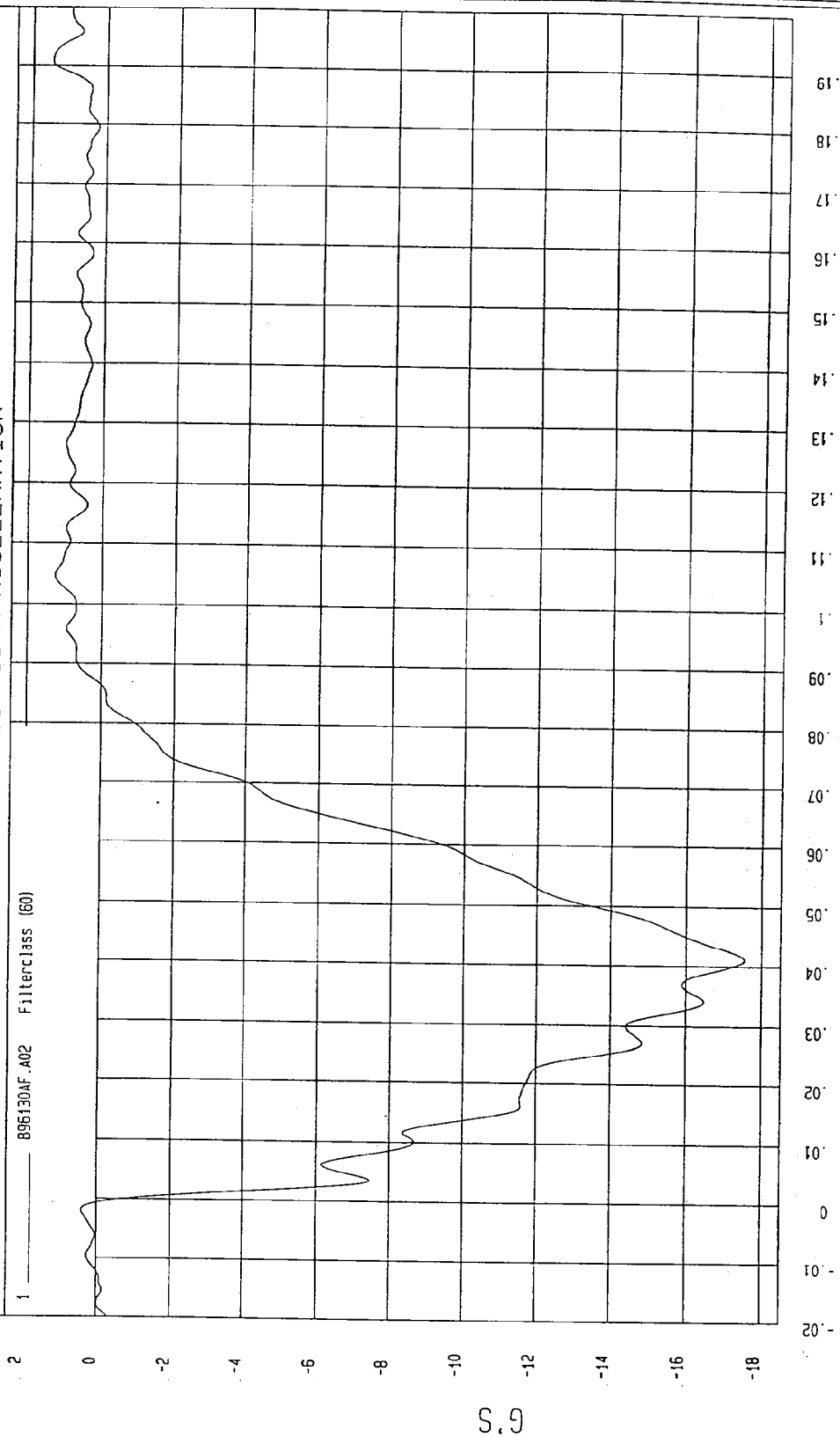


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996
COMPONENT: 1997 FORD ESCORT (MVO202) Speed: 37.9 MPH 61 KPH

YMIN=-17.55703 G'S at 41. msec YMAX= 1.476576 G'S at 190 msec

MOVING BARRIER CG X ACCELERATION

1 ——— B96130AF.A02 Filterclass (60)



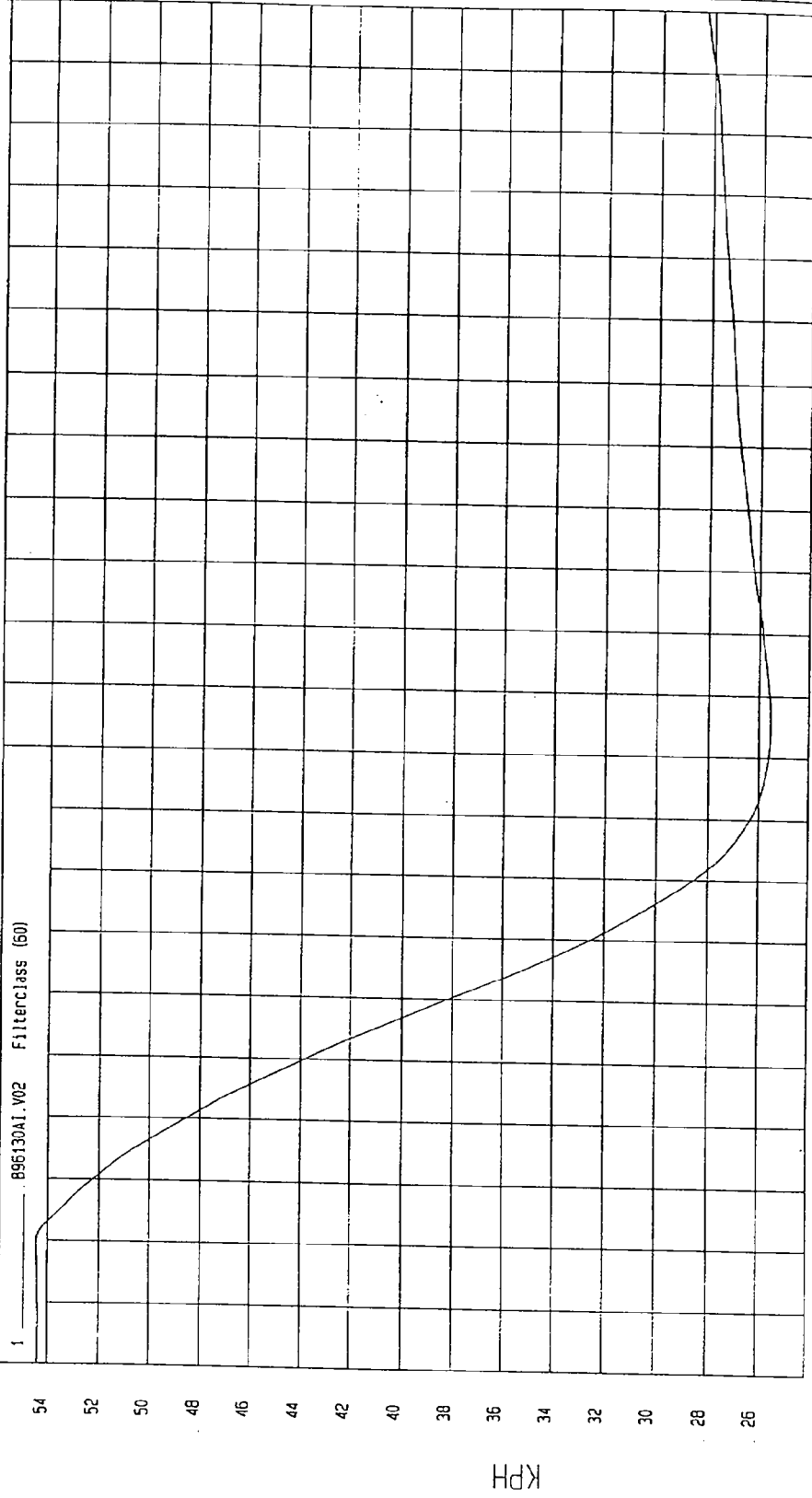
MCA Research
12-19-1996 10: 16

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

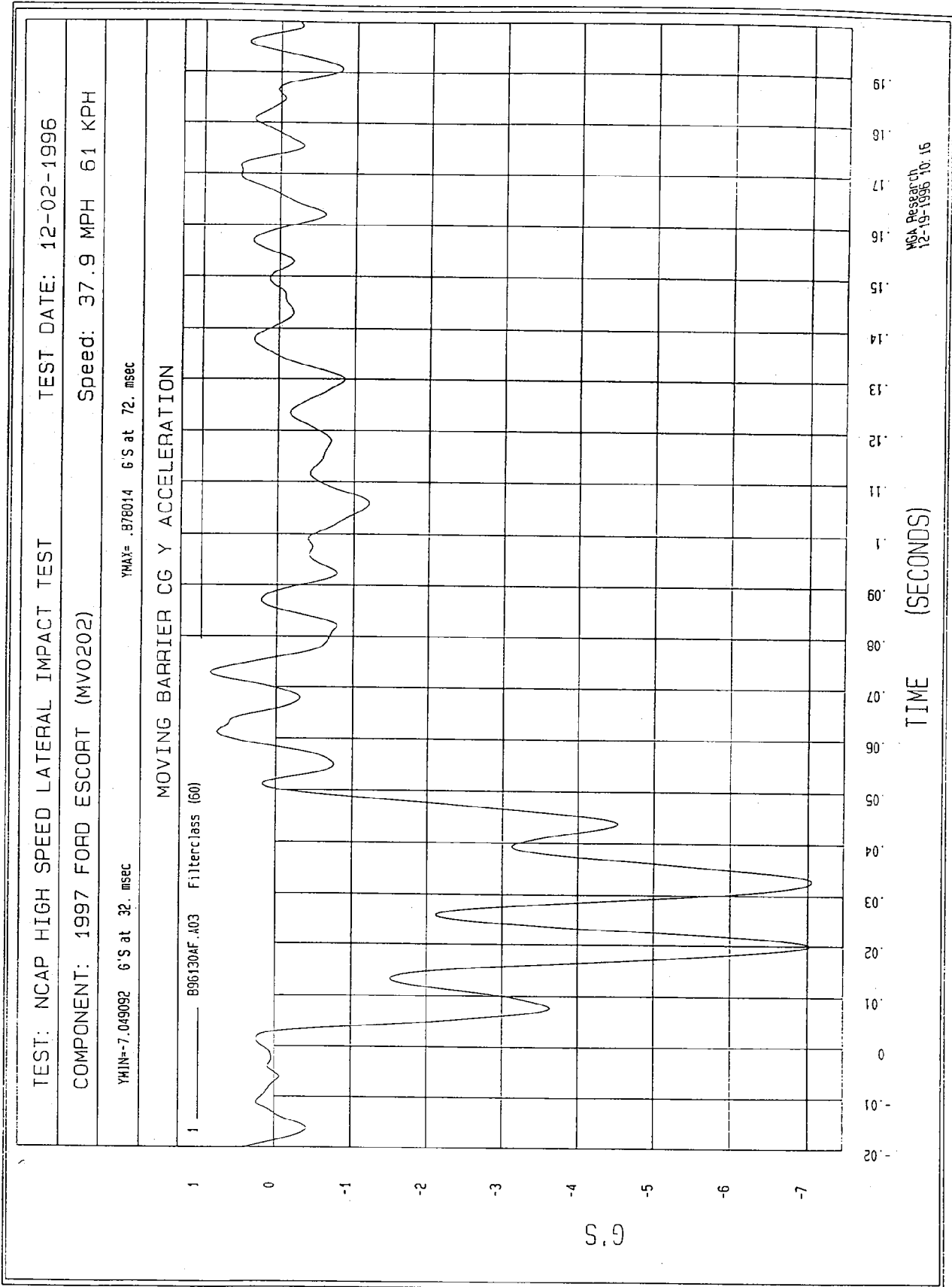
YMIN= 25.55336 KPH at 86. msec YMAX= 54.45182 KPH at -.60 msec

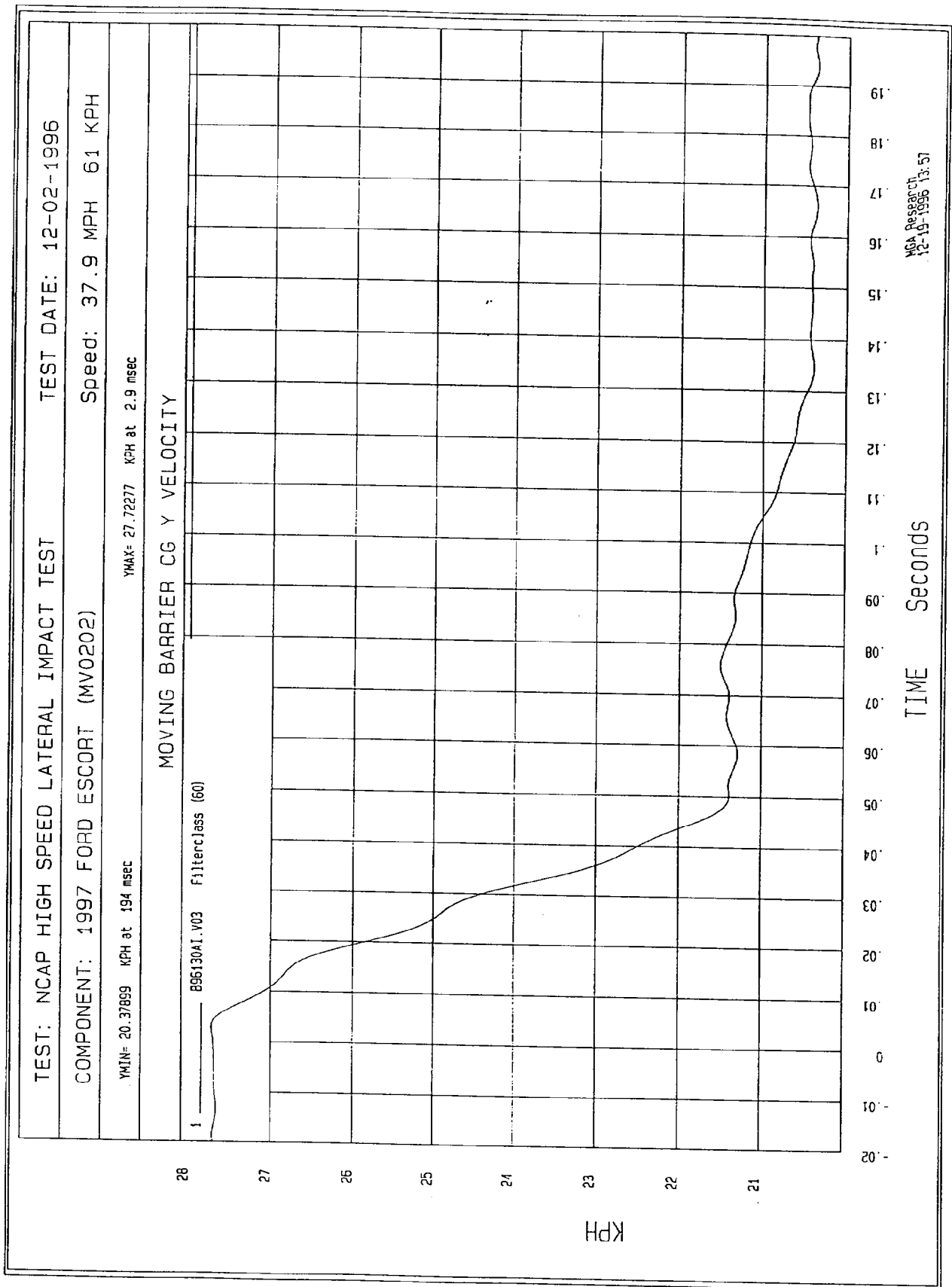
MOVING BARRIER CG X VELOCITY

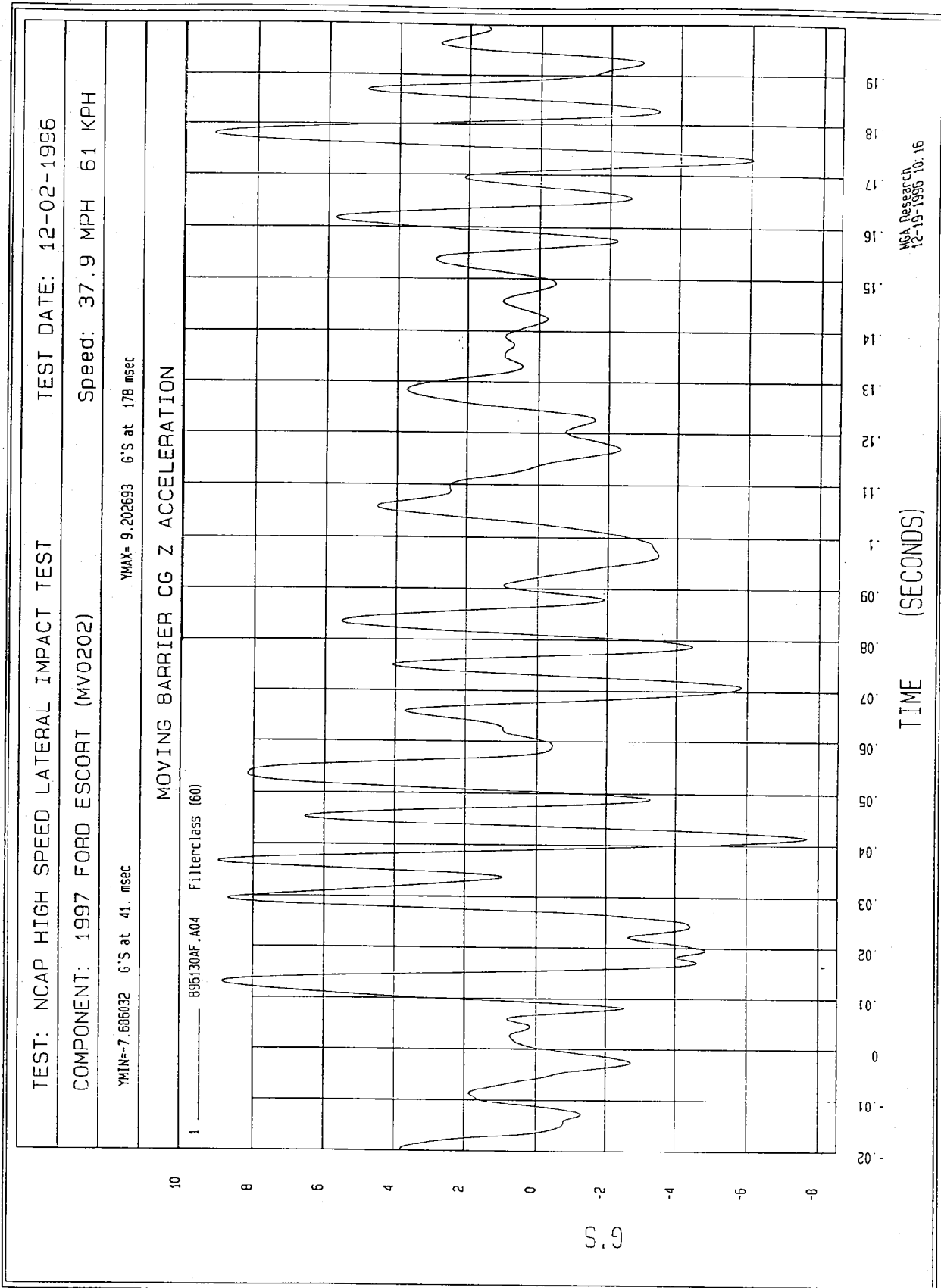


TIME Seconds

MCA Research
12-19-1996 13:56







MCA Research
12-19-1996 10.16

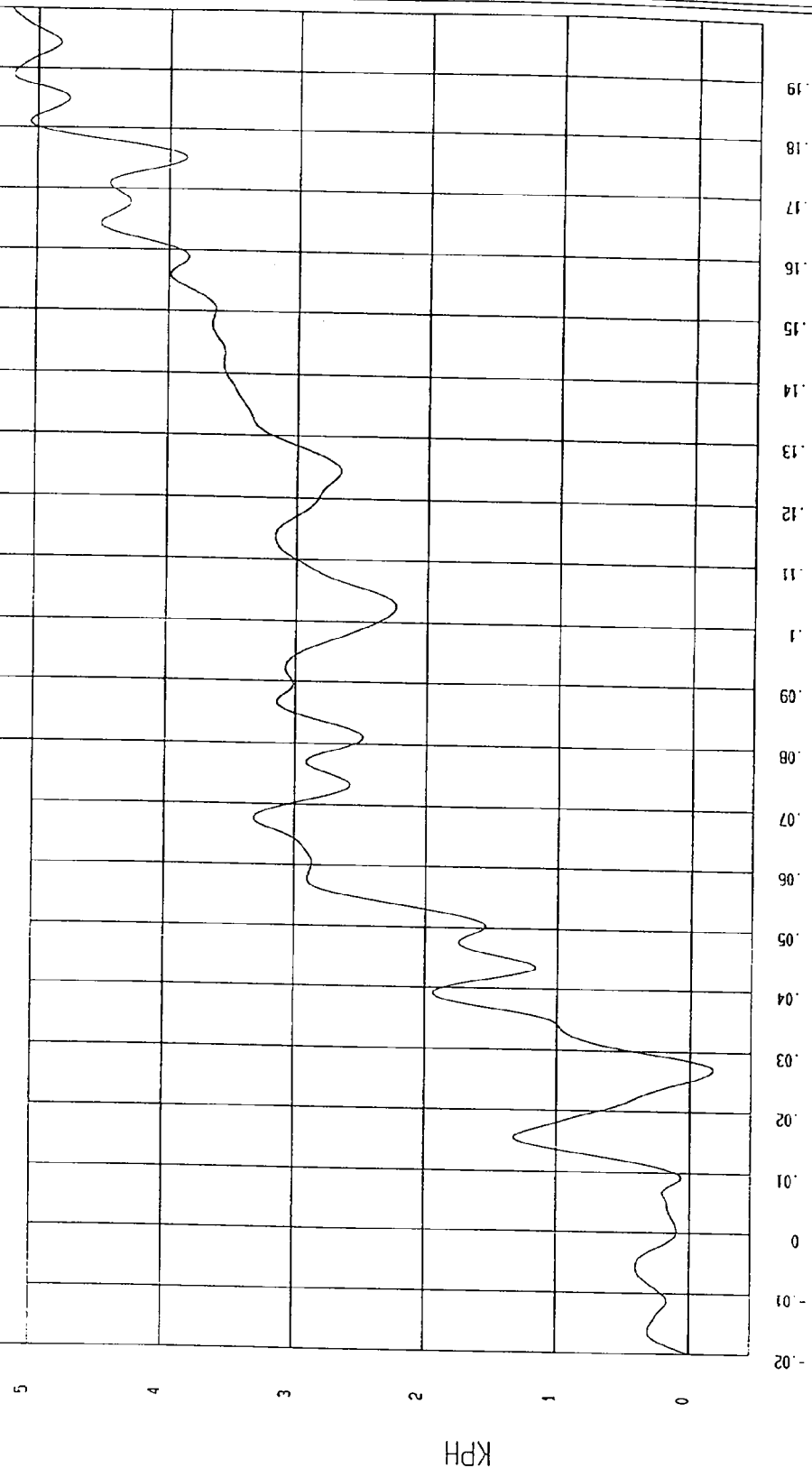
TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

YMIN=-.1687730 KPH at 27. msec YMAX= 5.20093 KPH at 199 msec

MOVING BARRIER CG Z VELOCITY

1 B96130AT.V04 Filterclass (60)



MGA Research
12-19-1996 13:57

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

YMIN= 8.294833E-02 G'S at -5.8 msec YMAX= 19.48665 G'S at 41. msec

MOVING BARRIER CG RESULTANT ACCELERATION

1 ——— B96130AV.A02 FilterClass (50)

20

18

16

14

12

10

8

6

4

2

0

G

-02

-01

0

01

02

03

04

05

06

07

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1

11

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19

TIME (SECONDS)

MCA Research
12-19-1996 10:17

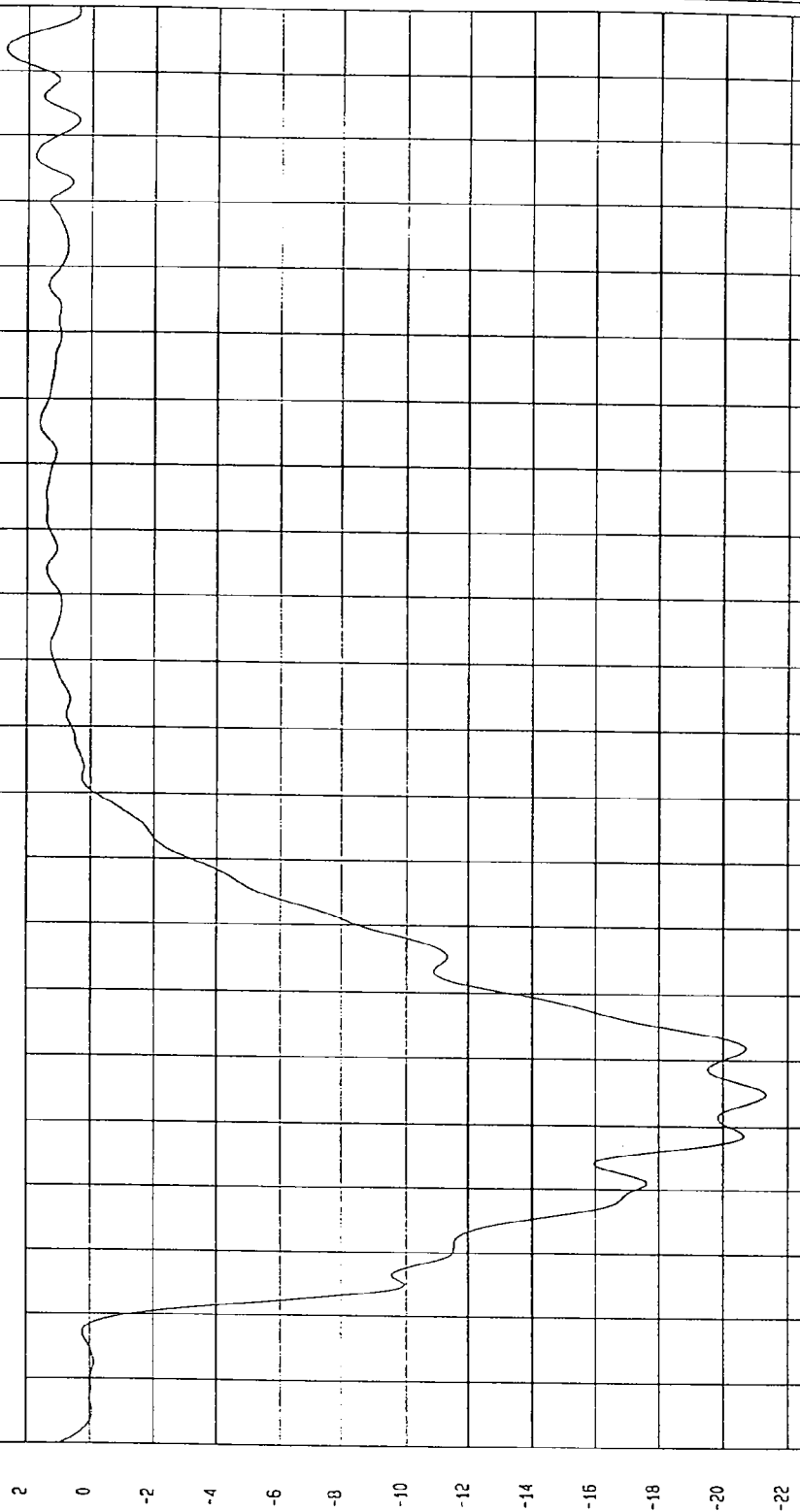
TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1995

COMPONENT: 1997 FORD ESCORT (MVO202) Speed: 37.9 MPH 61 KPH

YMIN=-21.34104 G'S at 34. msec YMAX= 2.701664 G'S at 193 msec

MOVING BARRIER REAR AXLE X ACCELERATION

1 ——— B96130AF.A05 Filterclass (60)



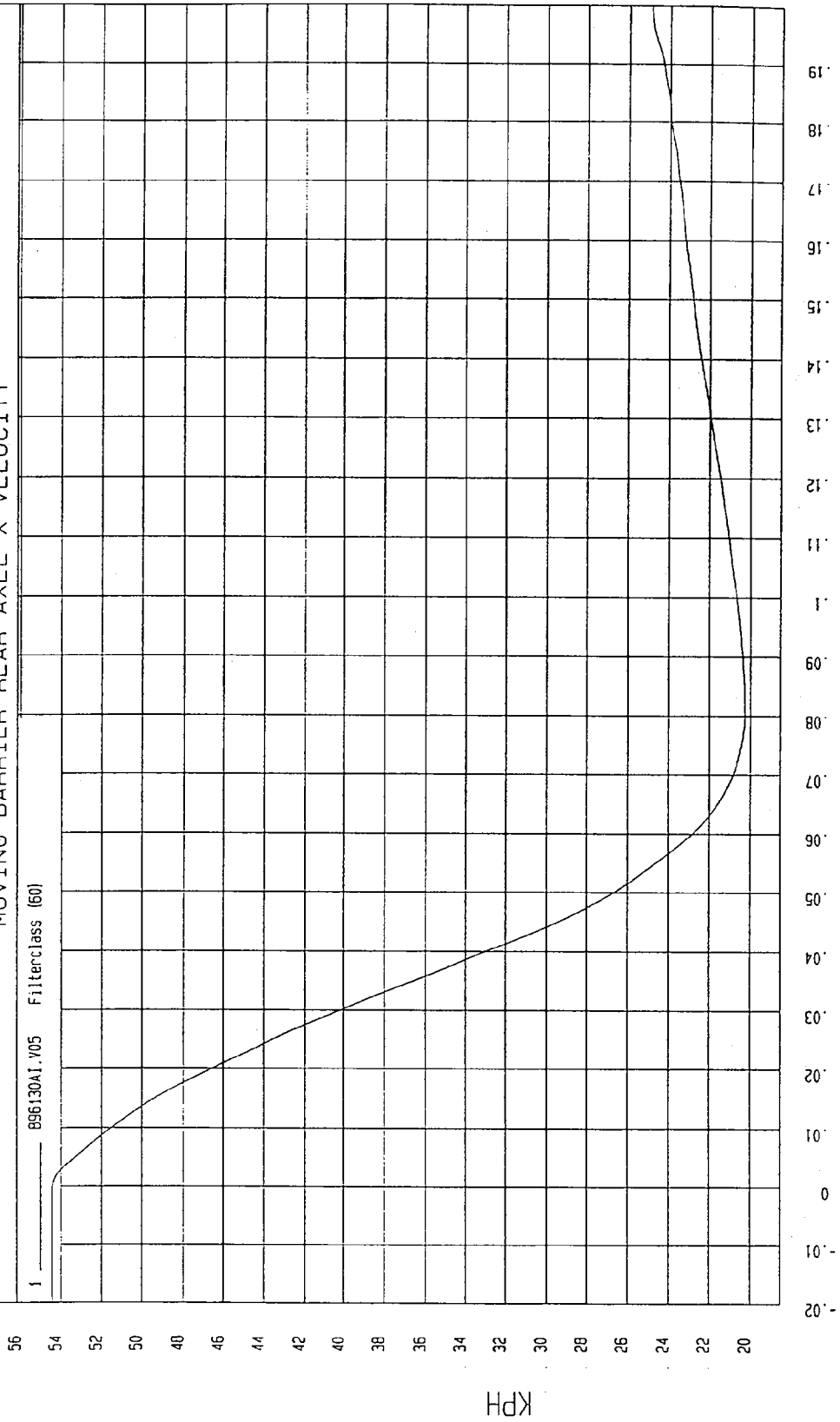
MGA Research
12-19-1996 10: 16

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

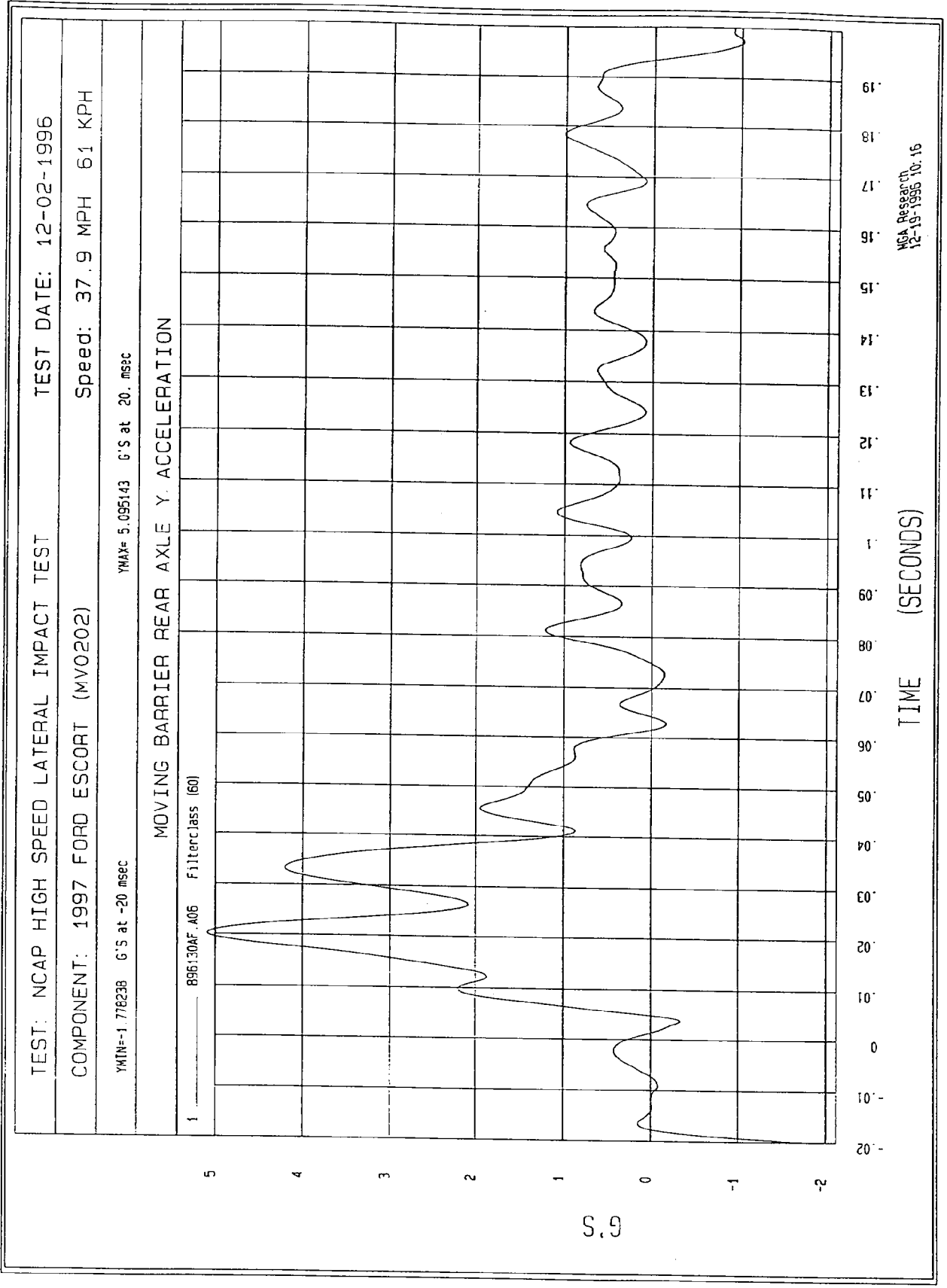
COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

YMIN= 20.2729 KPH at 80. msec YMAX= 54.44545 KPH at -1.6 msec

MOVING BARRIER REAR AXLE X VELOCITY



MOA Research
12-19-1996 13:51



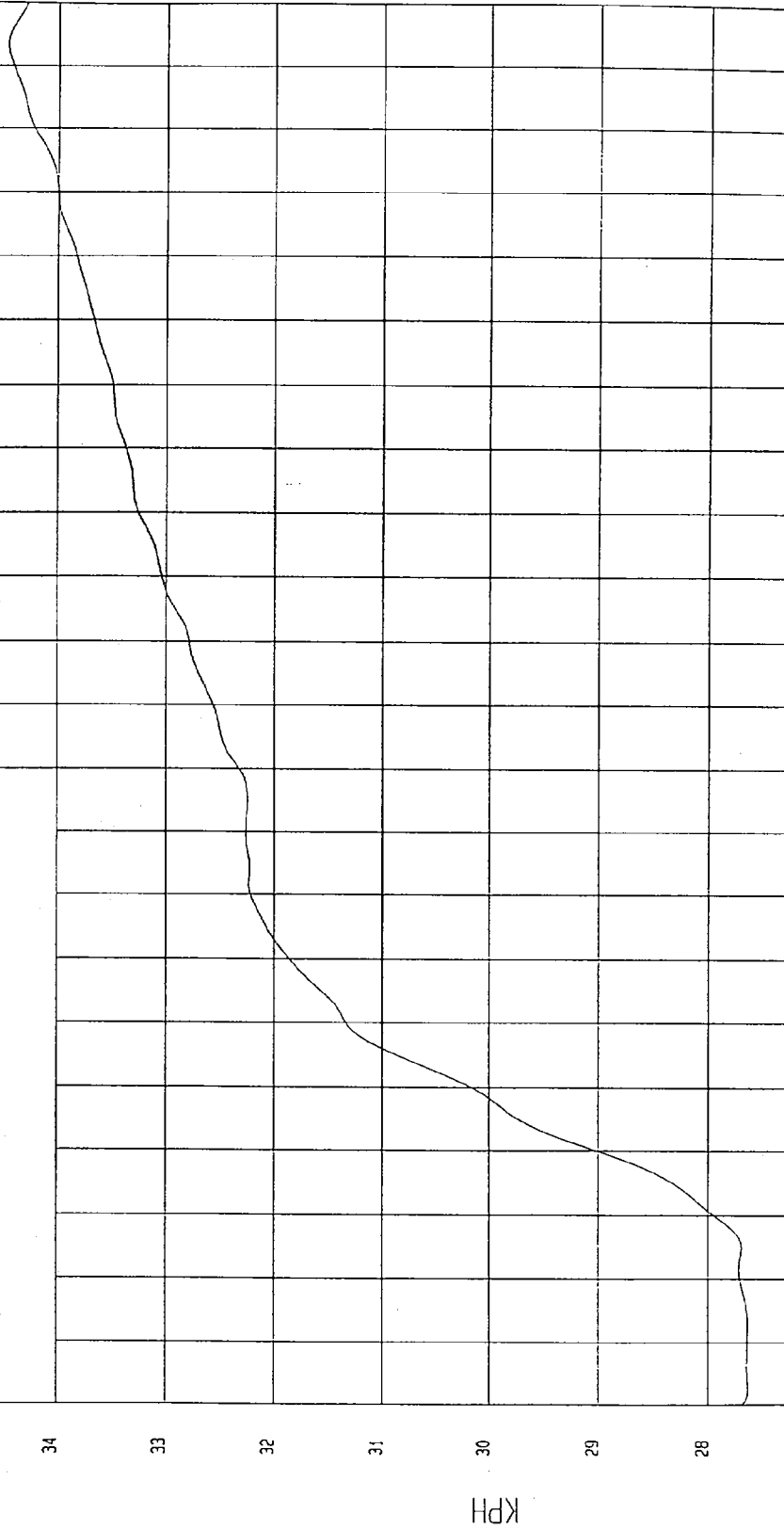
TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

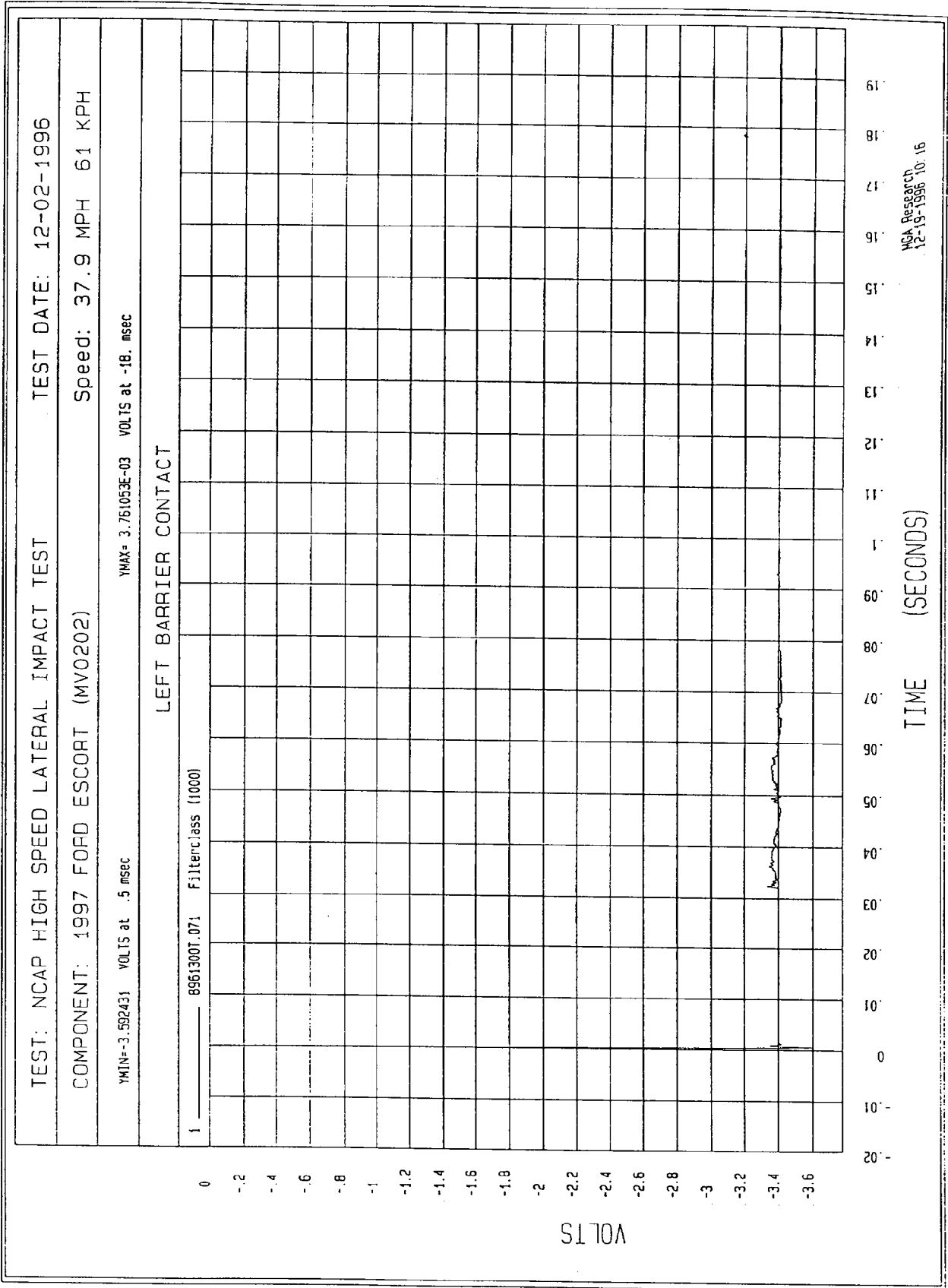
YMIN= 27.64365 KPH at -17. msec YMAX= 34.45203 KPH at 193 msec

MOVING BARRIER REAR AXLE Y VELOCITY

1 ——— 096130A1.V06 Filterclass (60)



TIME Seconds
MCA Research
12-19-1996 13:57

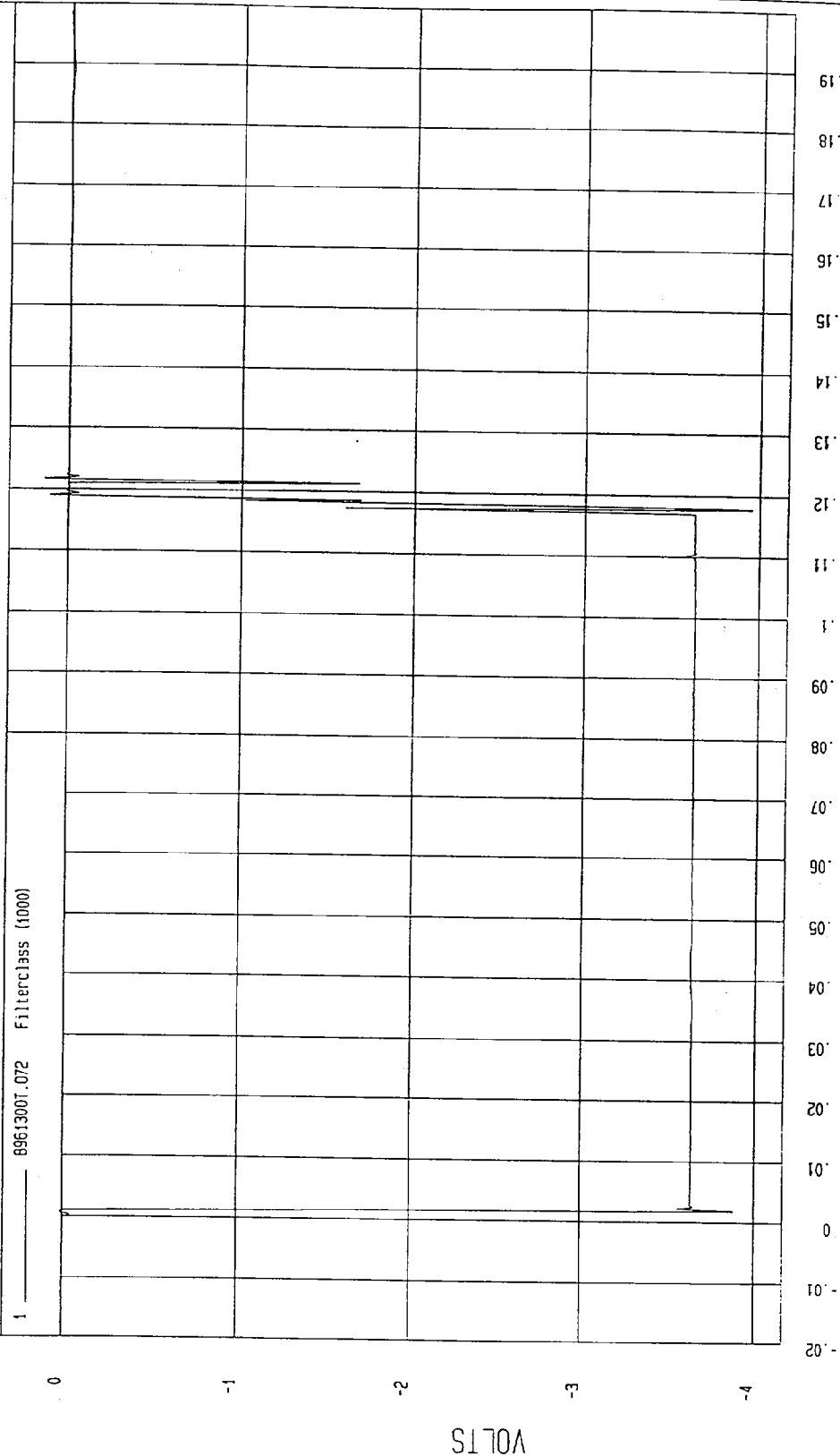


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

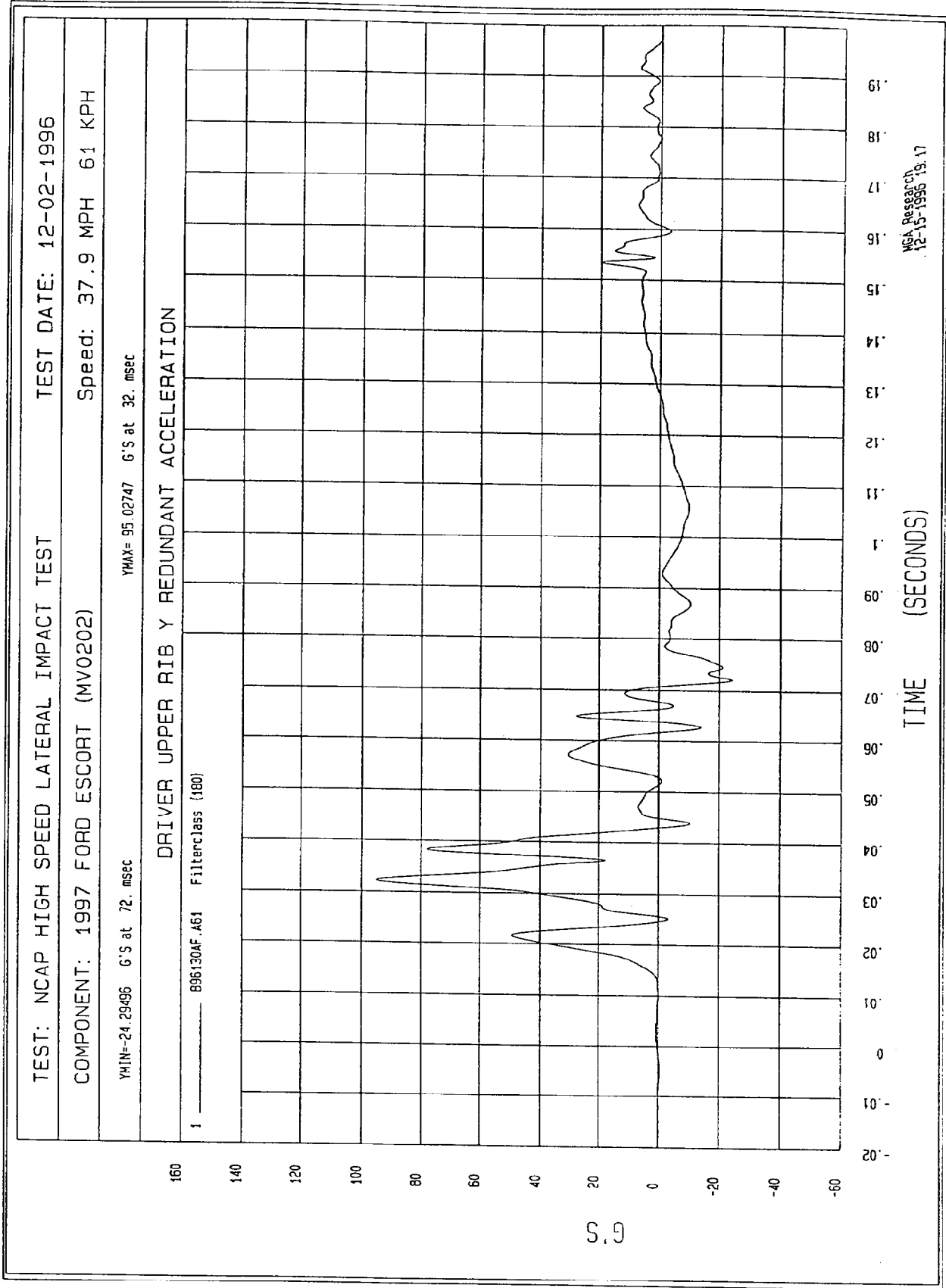
COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

YMIN=-3.955826 VOLTS at 117 msec YMAX=.1359708 VOLTS at 121 msec

RIGHT BARRIER CONTACT



WCA Research
12-19-1996 10:15



TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

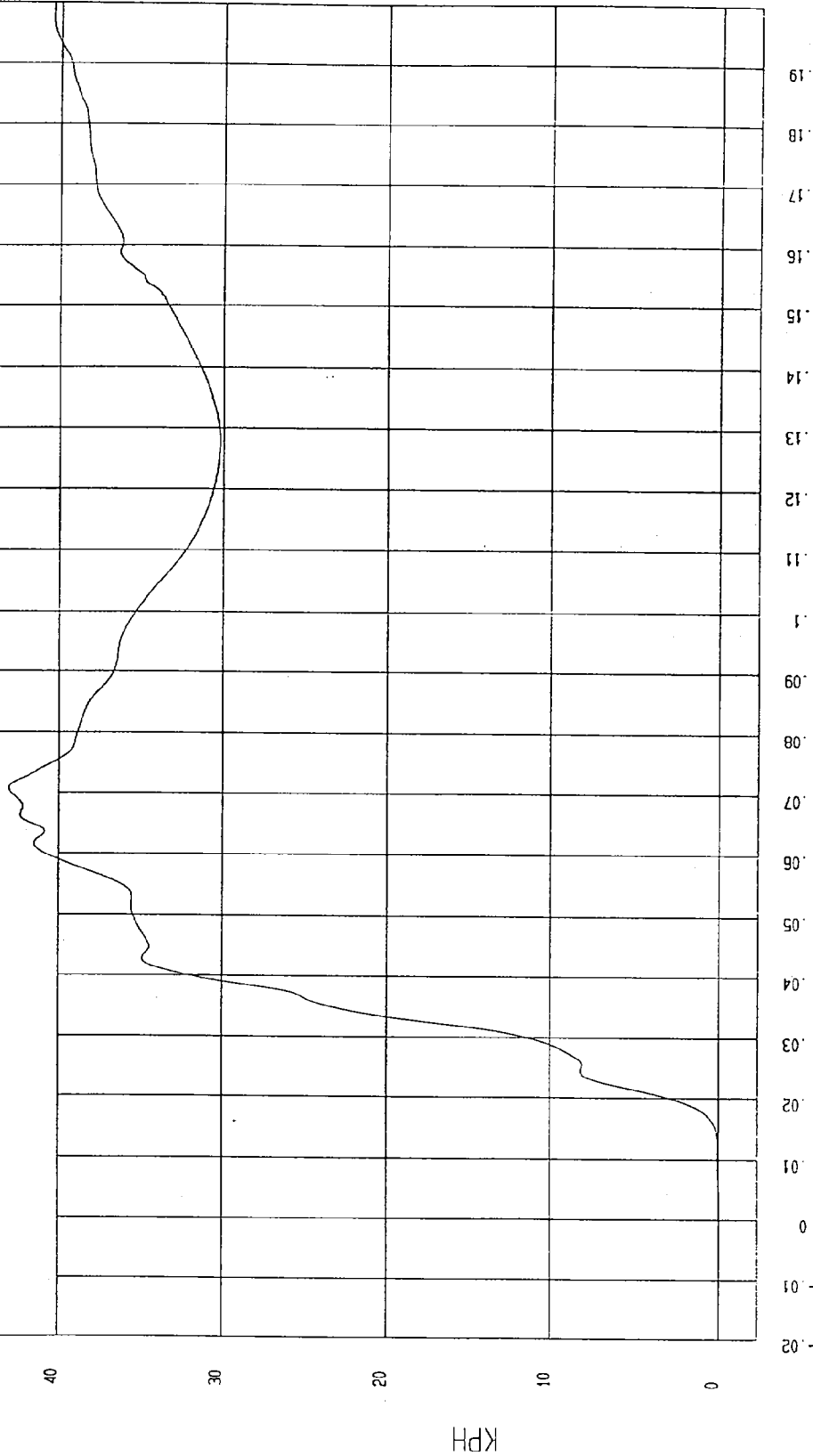
COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

YMIN=-8.717685E-02 KPH at -1.2 msec

YMAX= 42.94779 KPH at 70. msec

DRIVER UPPER RIB Y REDUNDANT VELOCITY

1 ——— 896130A1.V61 Filterclass (180)

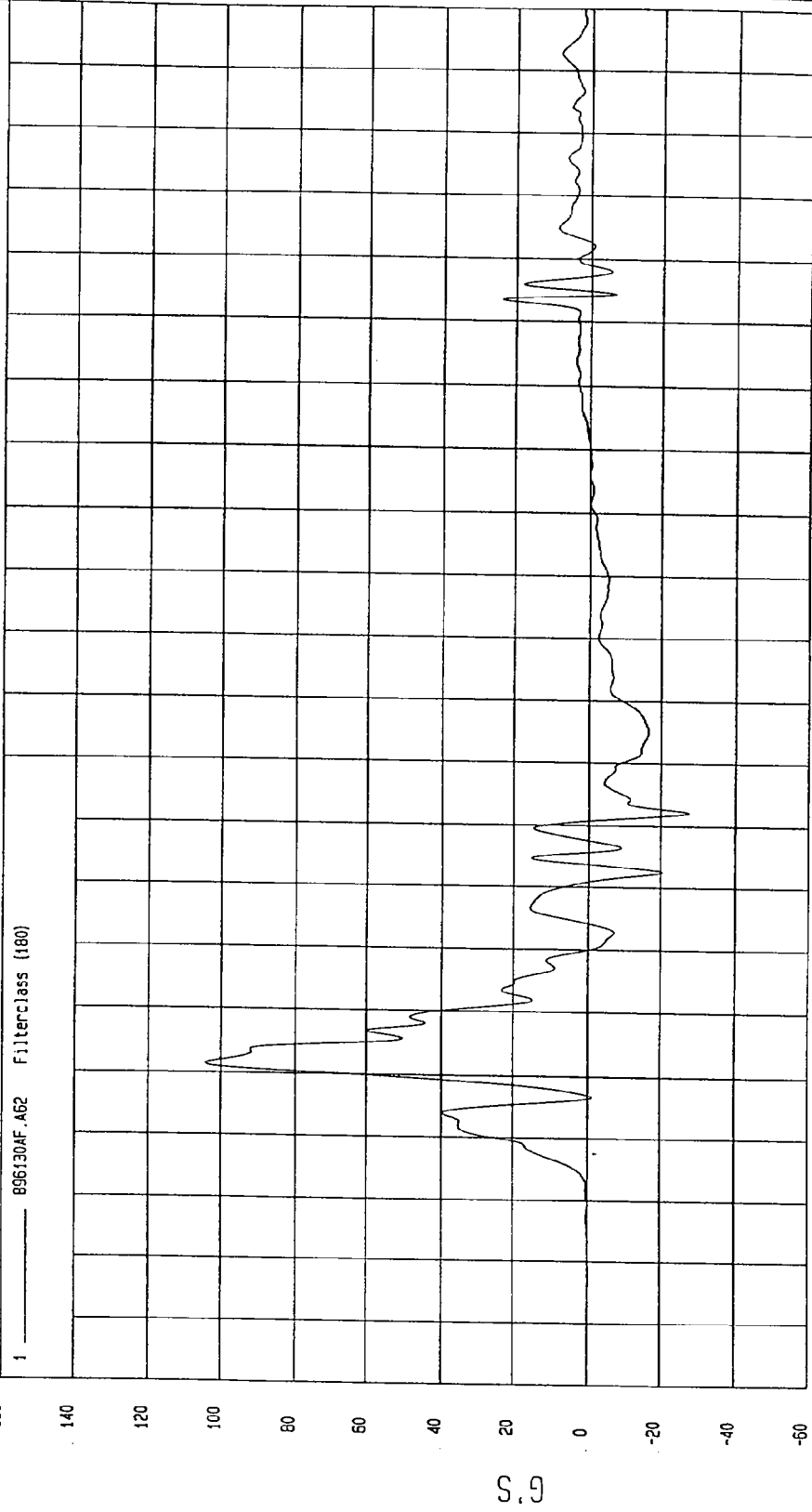


NSA Research
12-19-1996 13.31

TIME Seconds

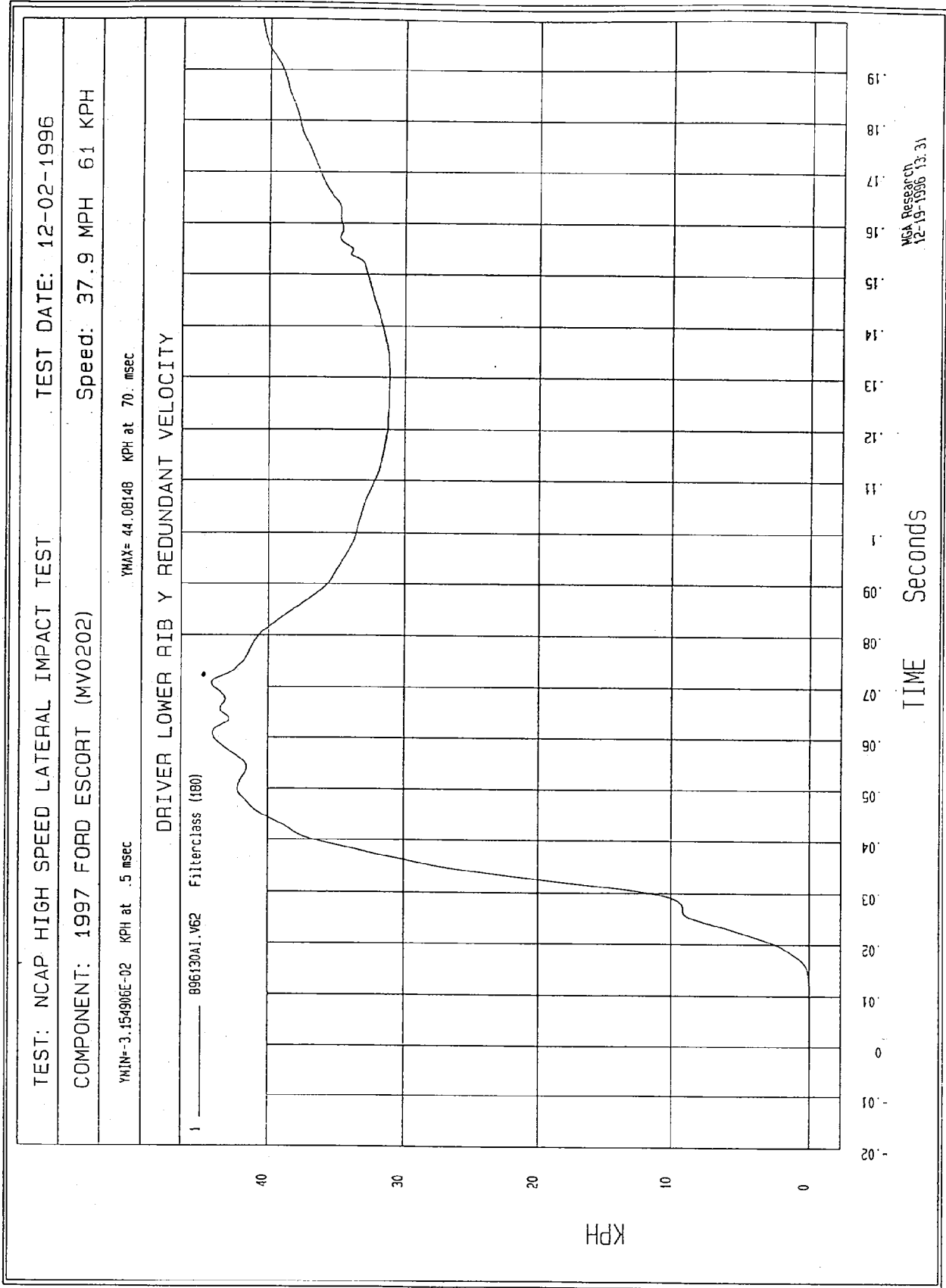
TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996
 COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH
 YMIN=-27.42091 G'S at 72. msec YMAX= 104.4018 G'S at 31. msec

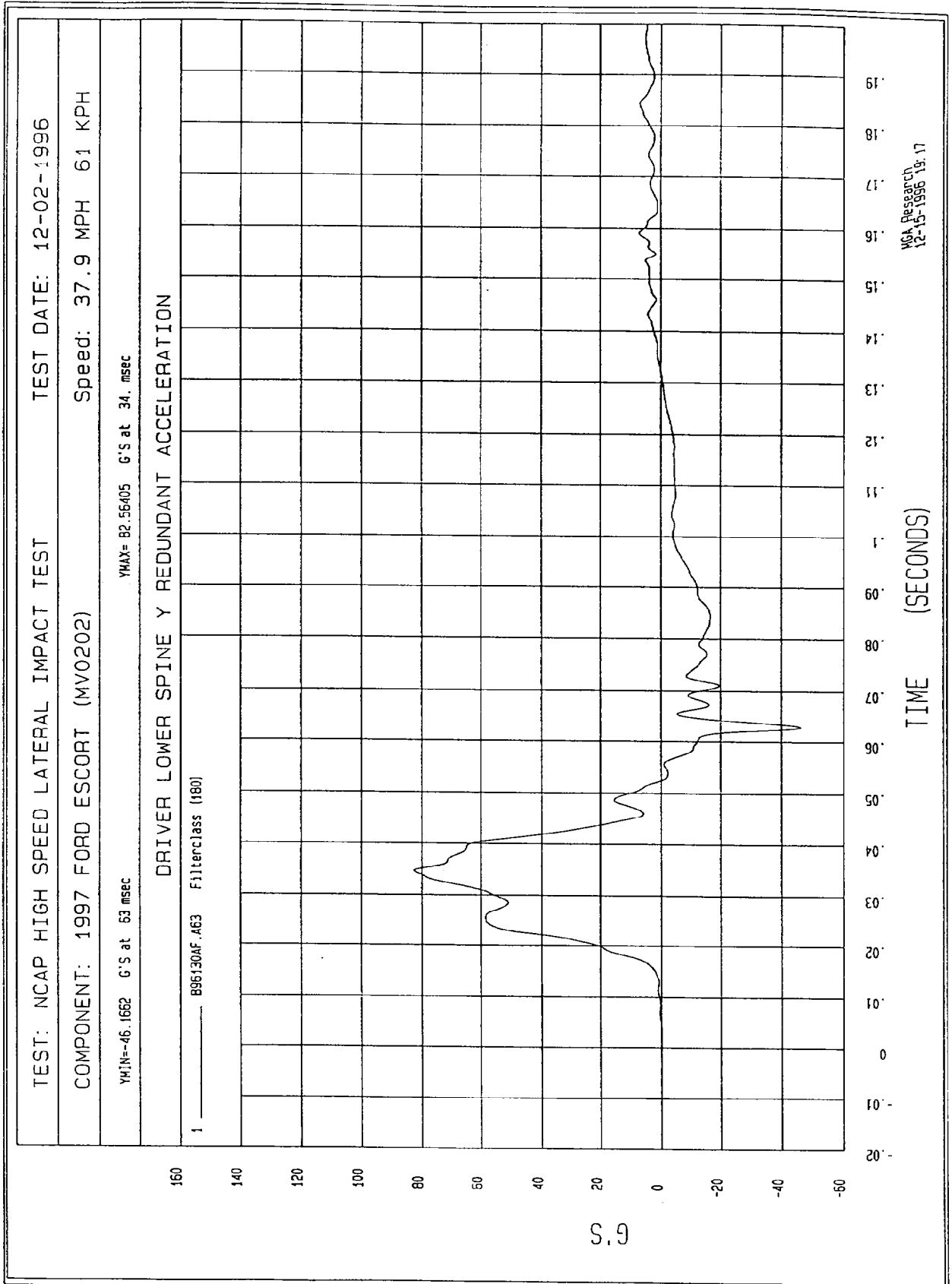
DRIVER LOWER RIB Y REDUNDANT ACCELERATION

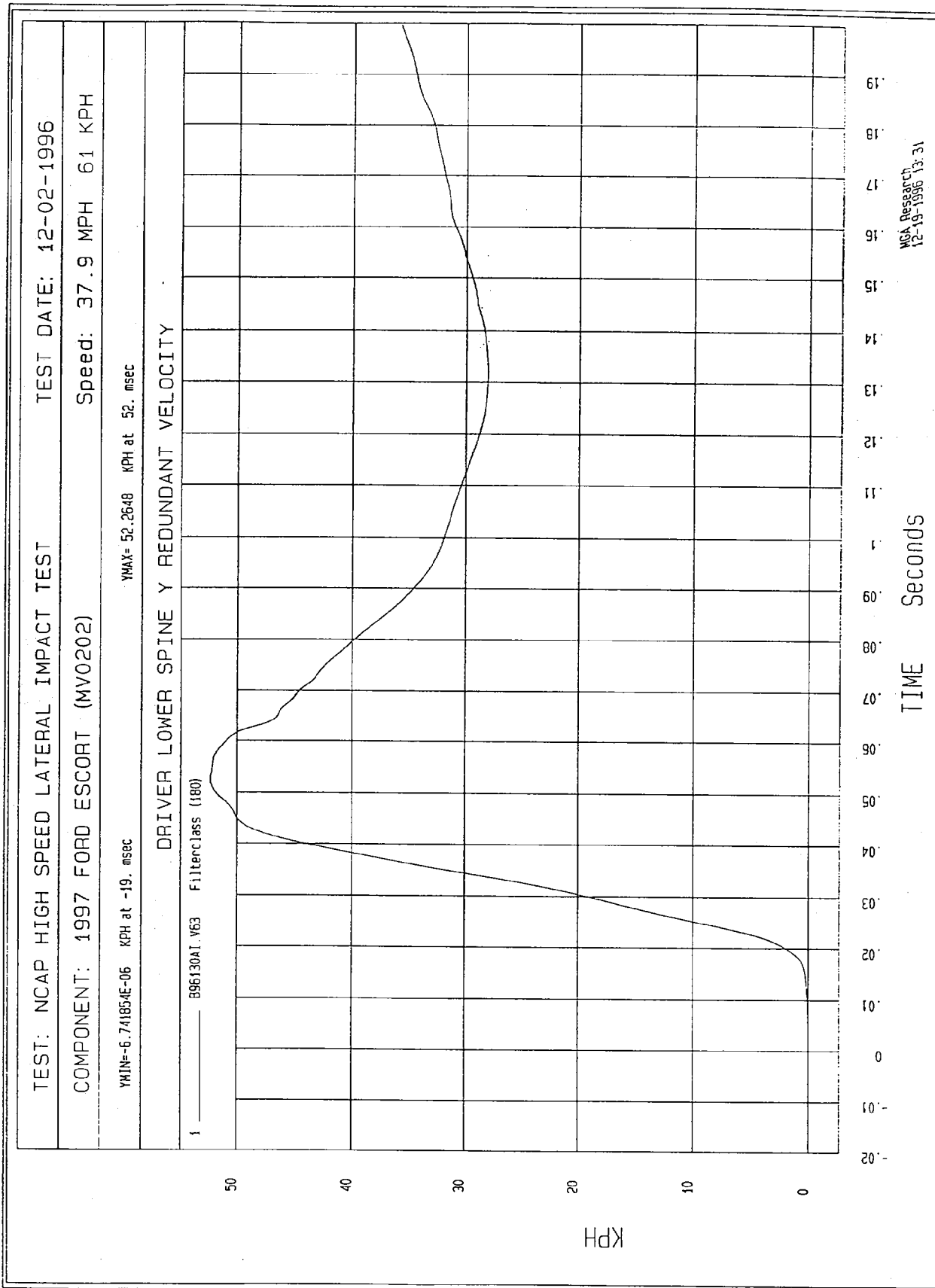


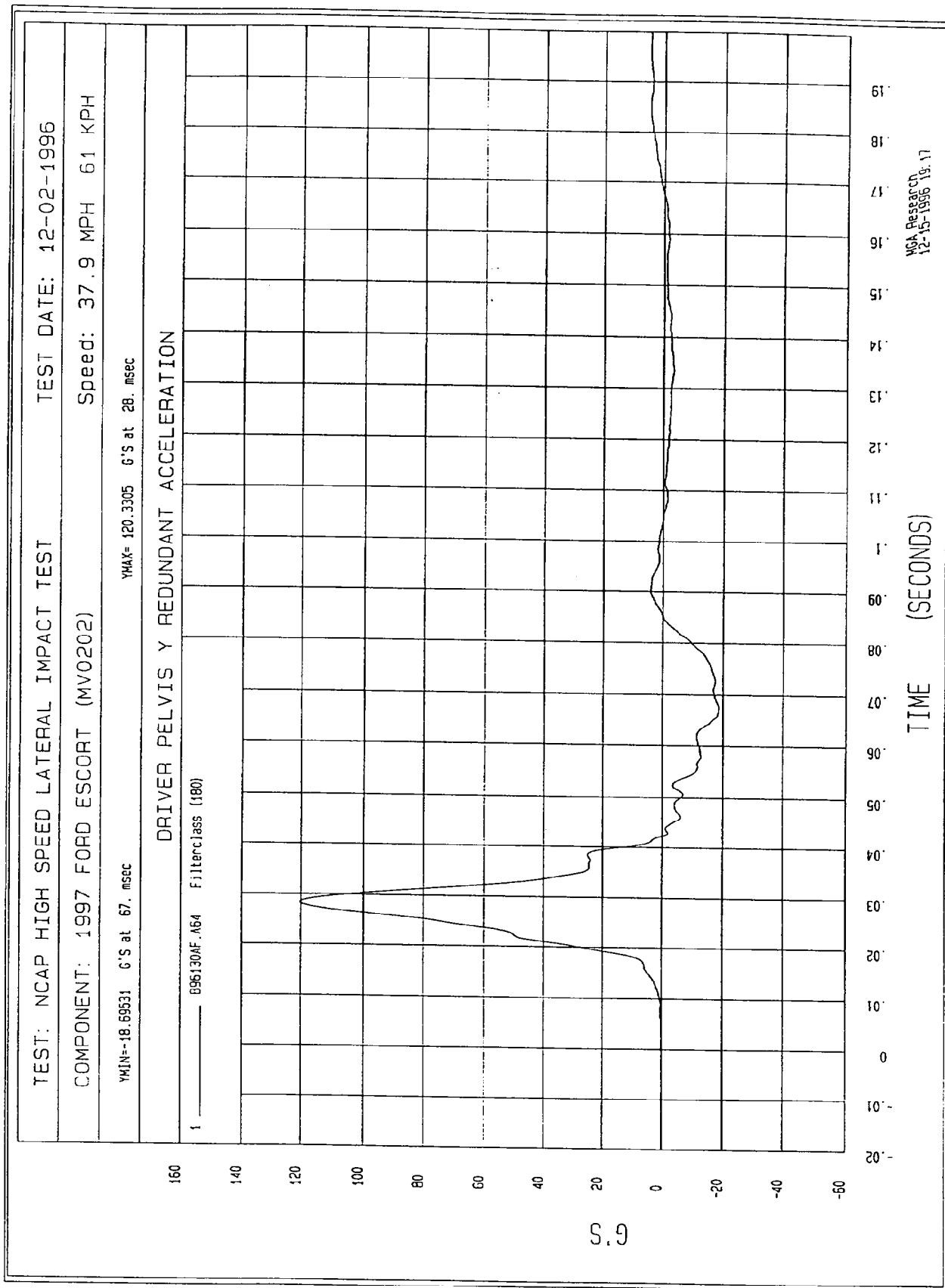
TIME (SECONDS)

MOA Research
12-15-1996 19: 17









TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

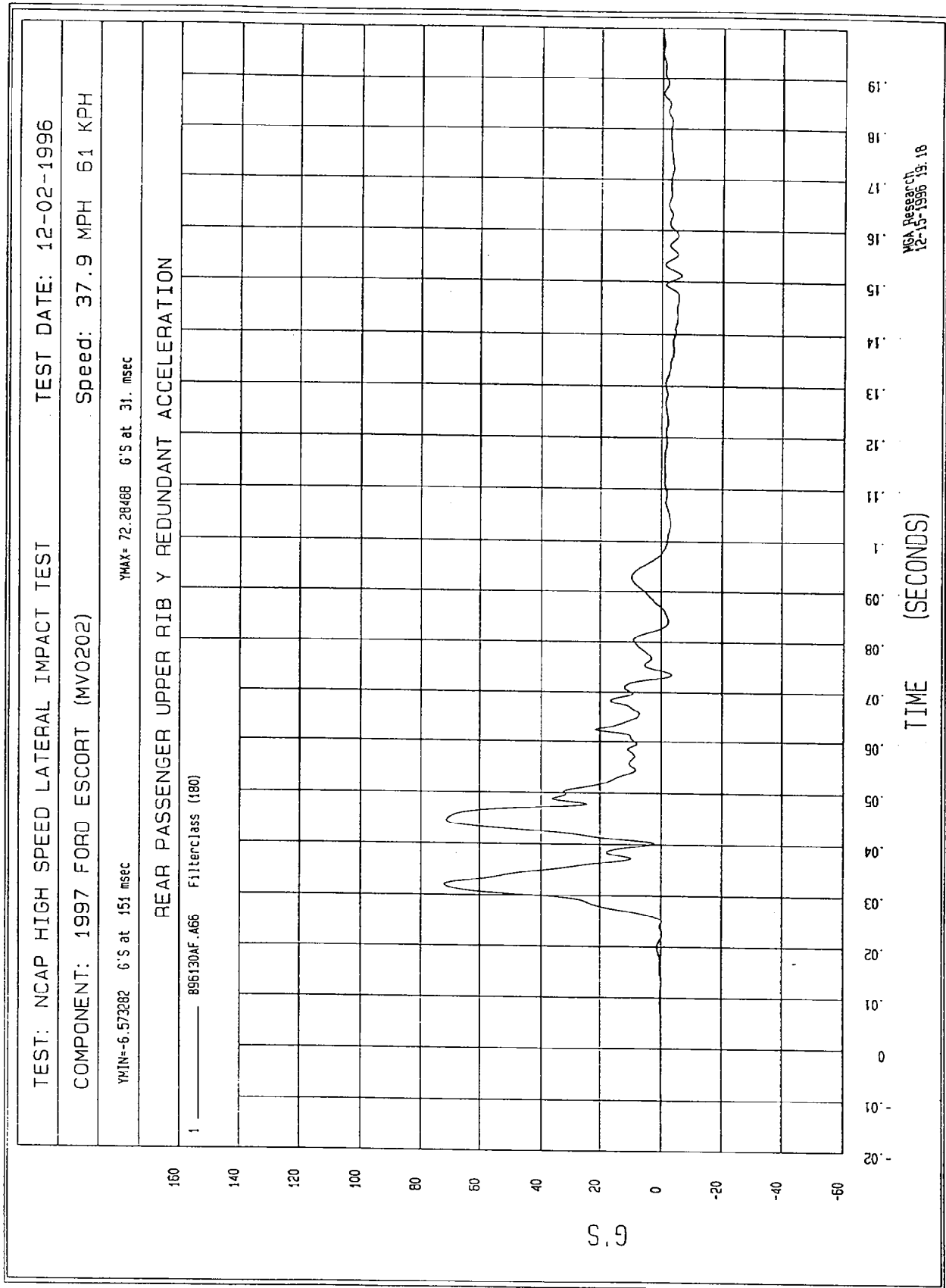
YMIN= 0 KPH at -20 msec YMAX= 45.32262 KPH at 42. msec

DRIVER PELVIS Y REDUNDANT VELOCITY

1 ——— 896130A1.V64 Filterclass (180)



MOA Research
12-19-1996 13: 31



TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

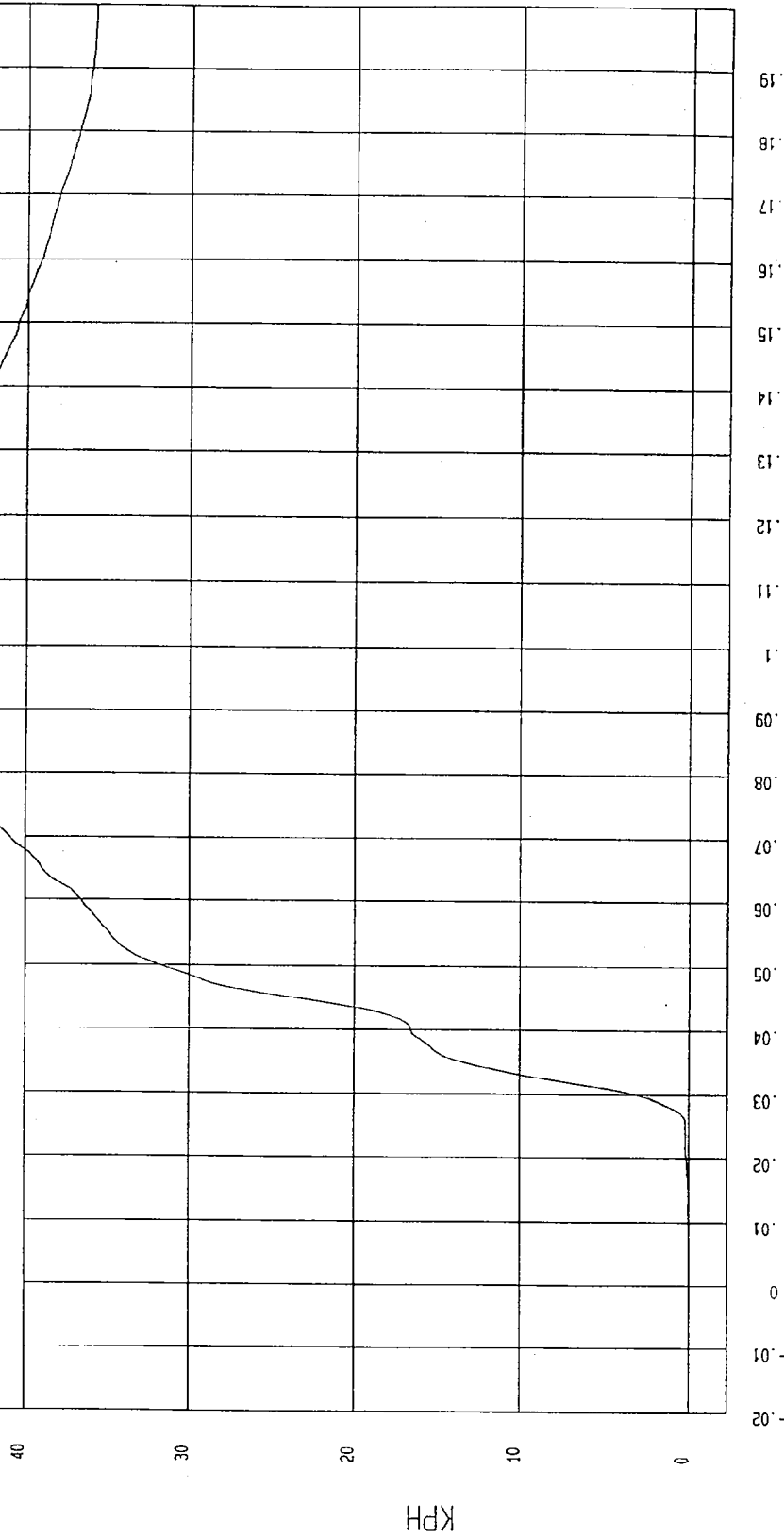
COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

YMIN=-1.008322E-02 KPH at -8.8 msec

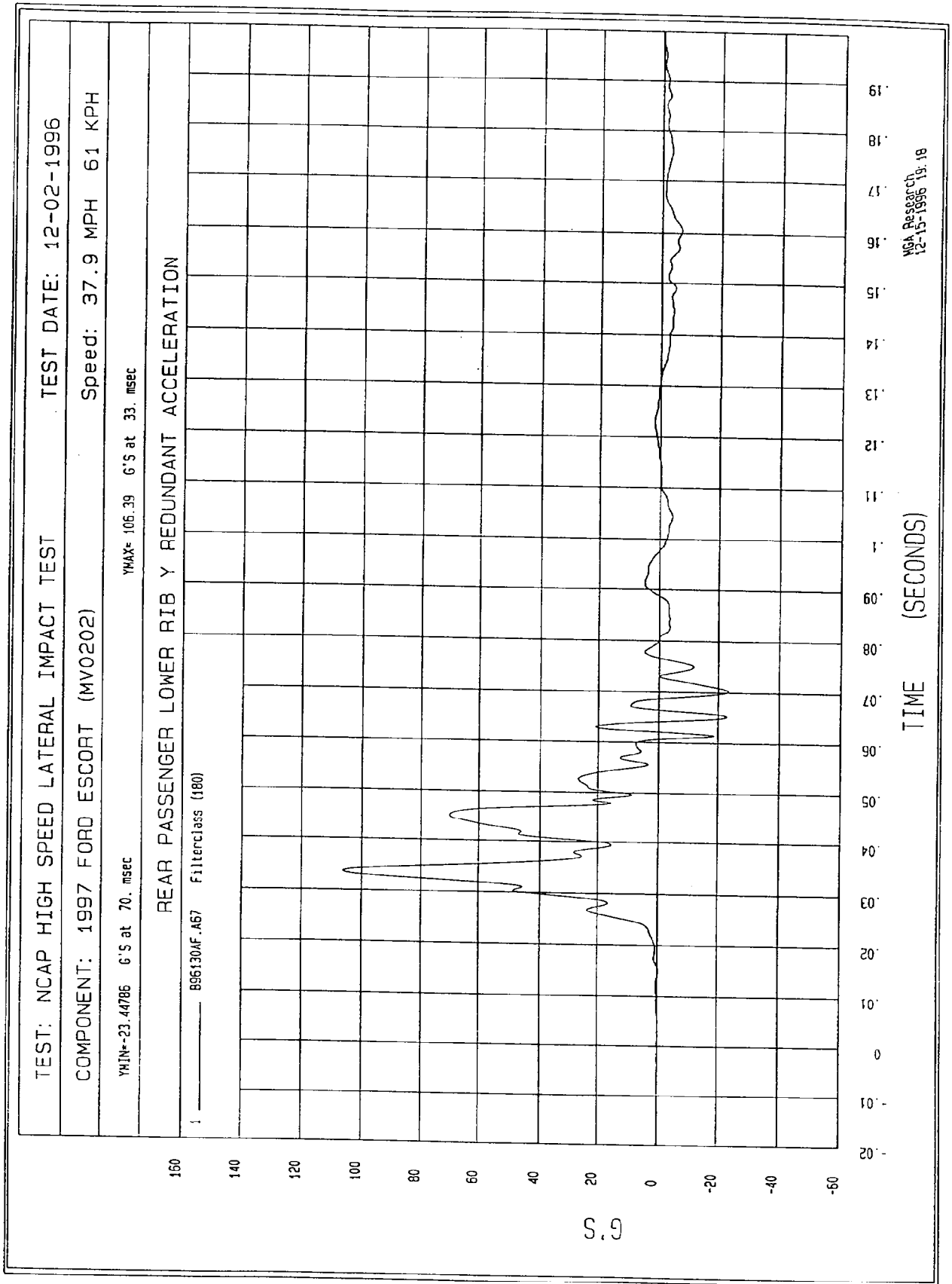
YMAX=45.24995 KPH at 97. msec

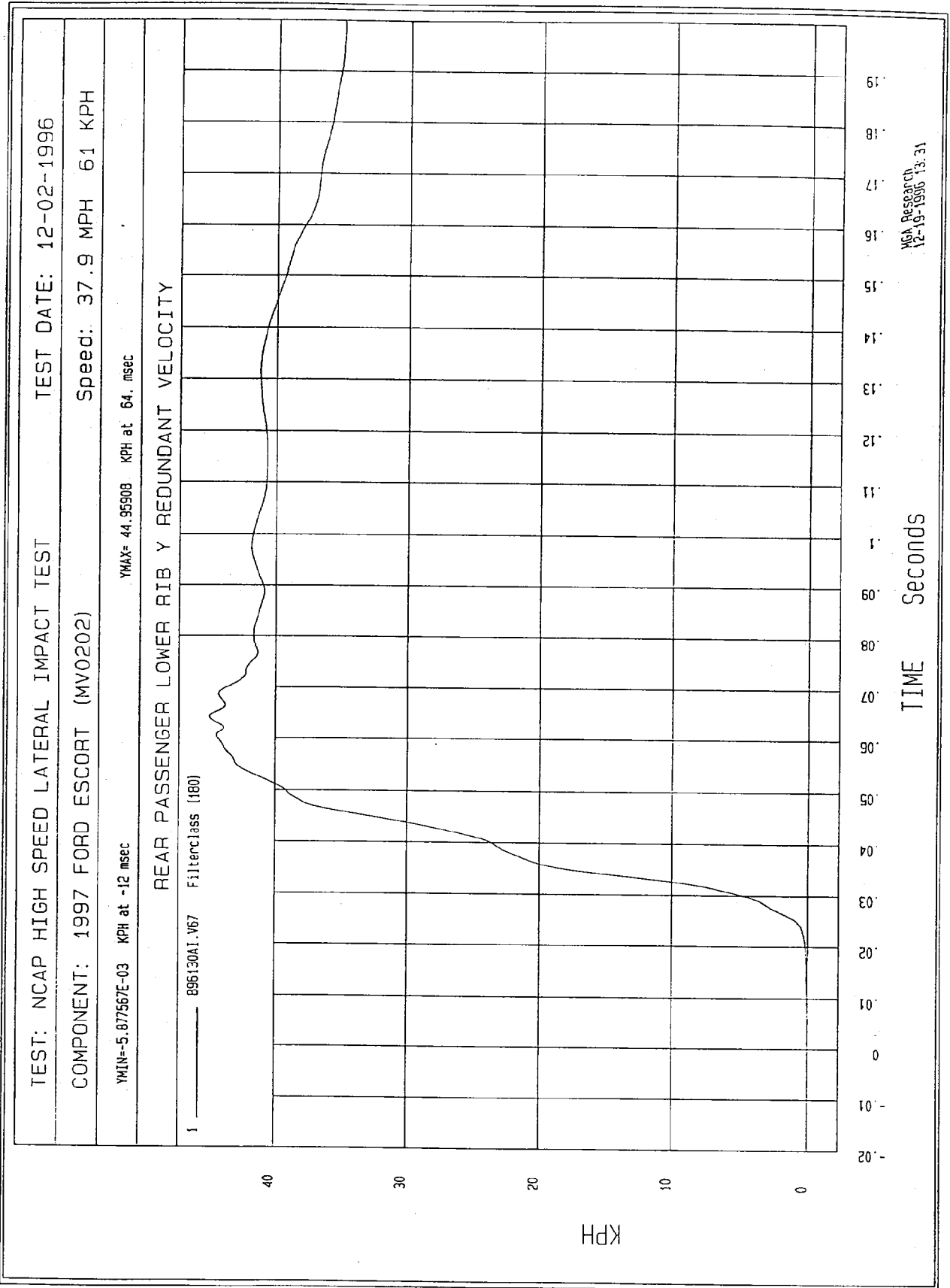
REAR PASSENGER UPPER RIB Y REDUNDANT VELOCITY

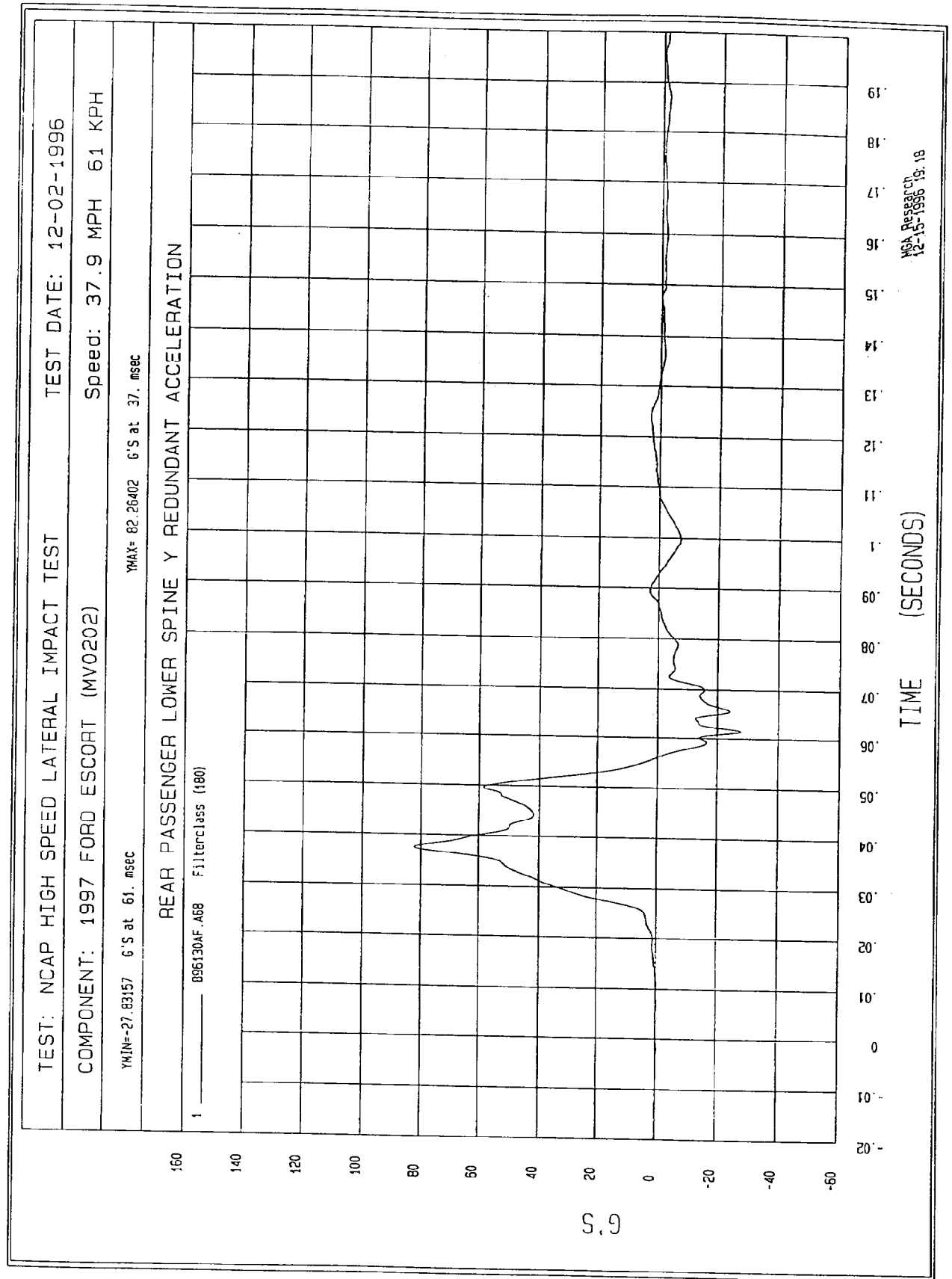
1 ——— B96130A1.V66 Filterclass (180)



MSA Research
12-19-1996 13:31







TEST: NCAP HIGH SPEED LATERAL IMPACT TEST

TEST DATE: 12-02-1996

Speed: 37.9 MPH 61 KPH

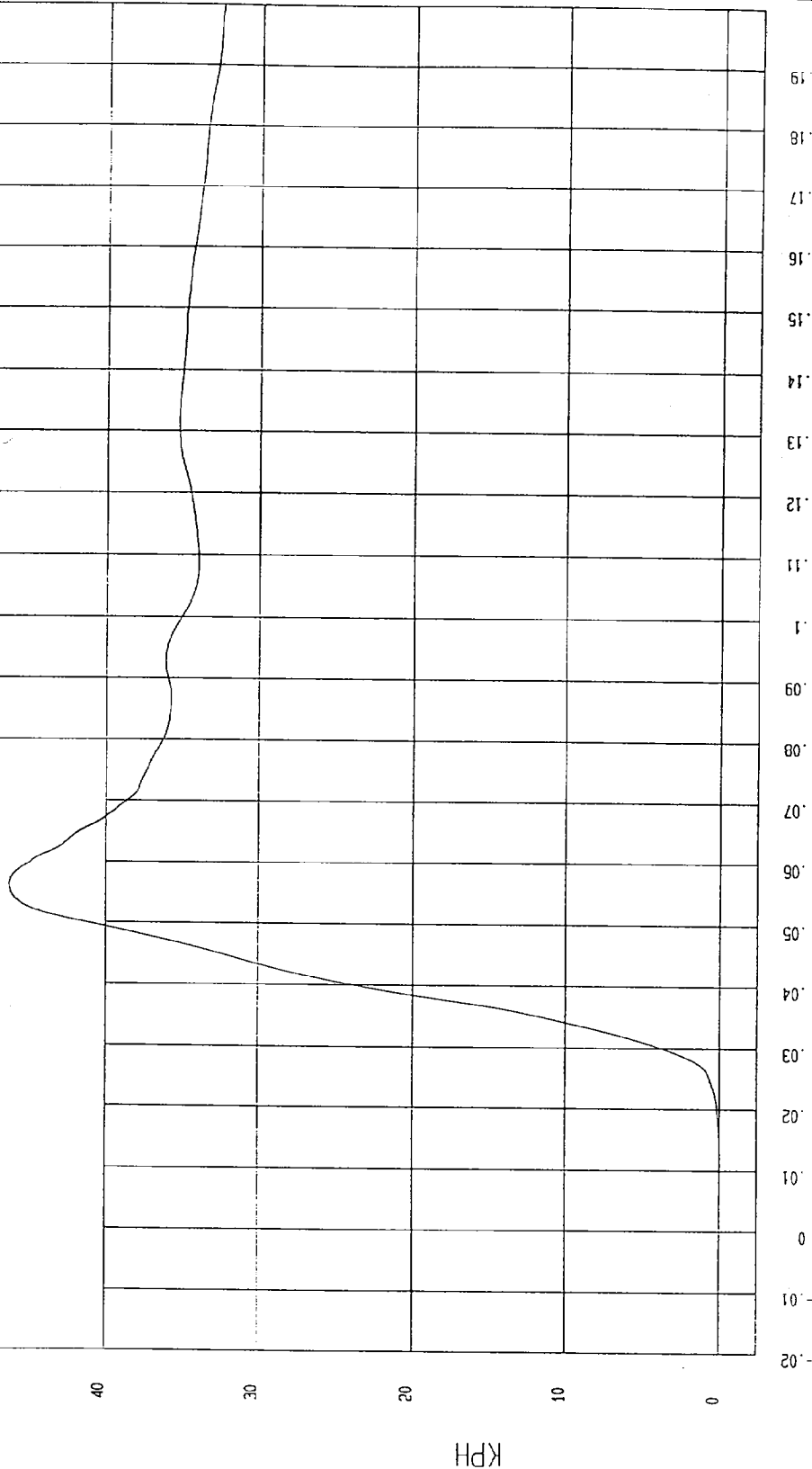
COMPONENT: 1997 FORD ESCORT (MV0202)

YMAX= 46.21957 KPH at 56. msec

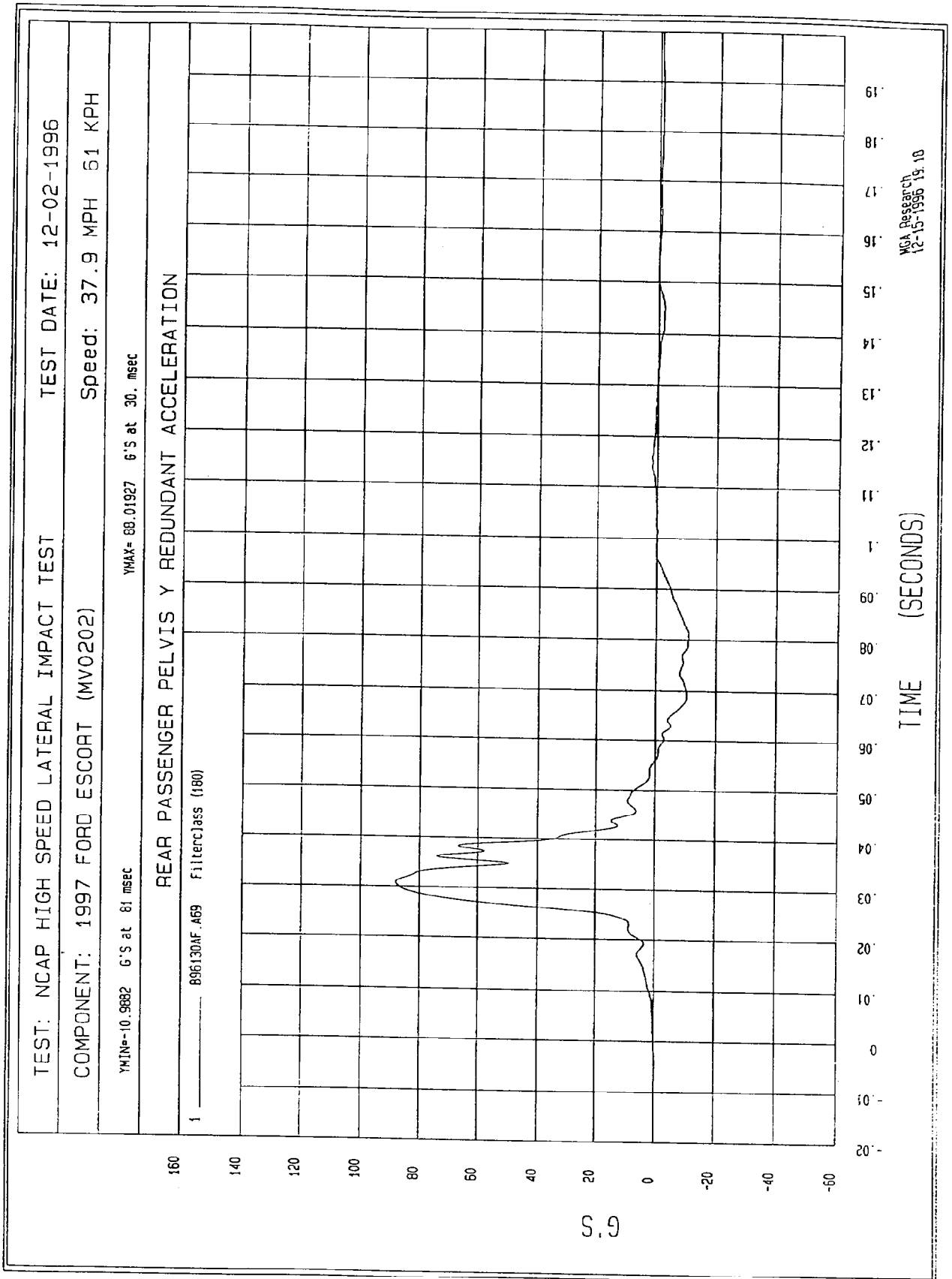
YMIN=-2.635253E-02 KPH at 12 msec

REAR PASSENGER LOWER SPINE Y REDUNDANT VELOCITY

1 — B96130A1.V68 FilterClass (180)



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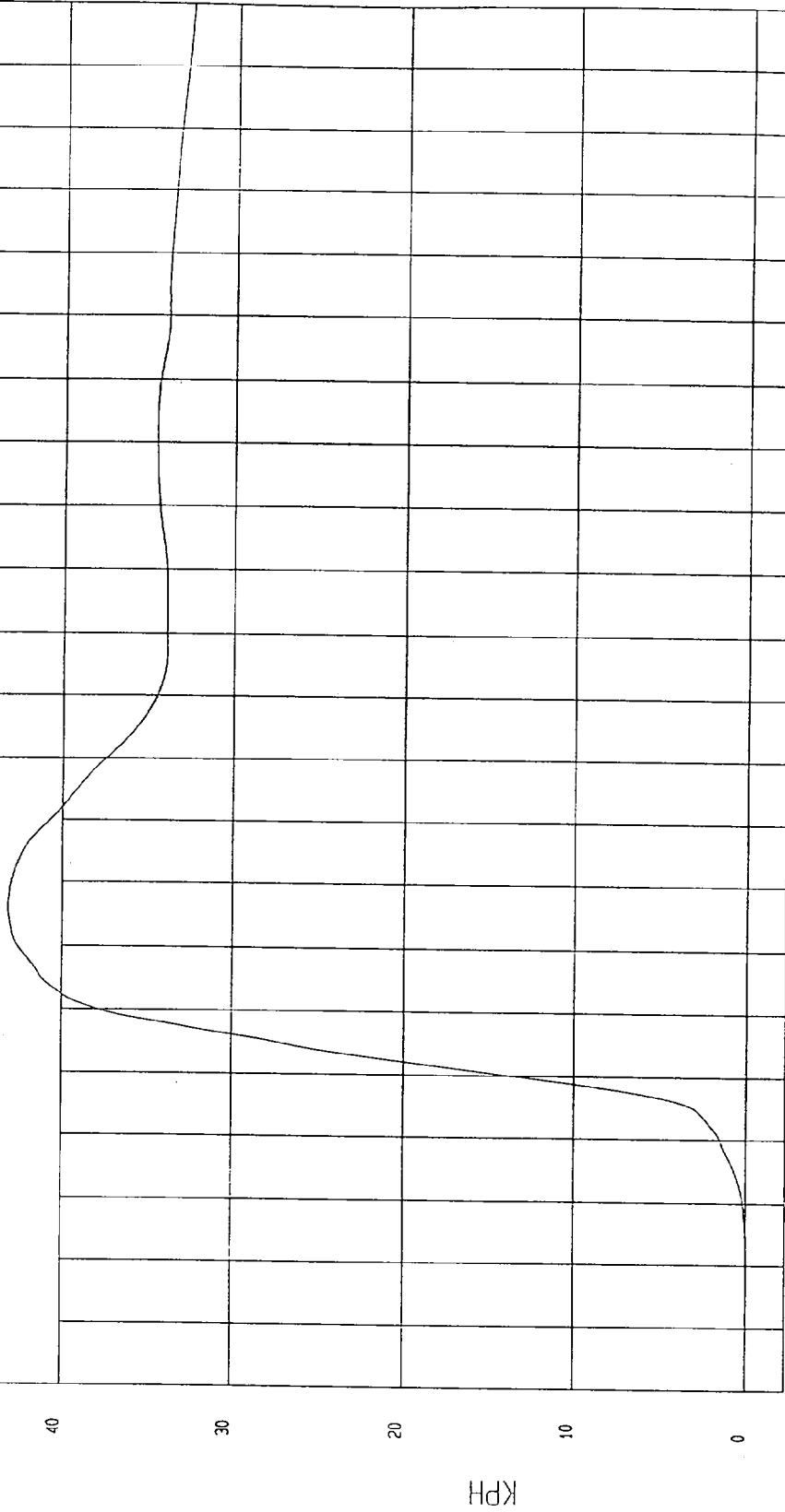
TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

YMIN=-5.18325/E-02 KPH at -1.8 msec
YMAX= 43.12167 KPH at 55. msec

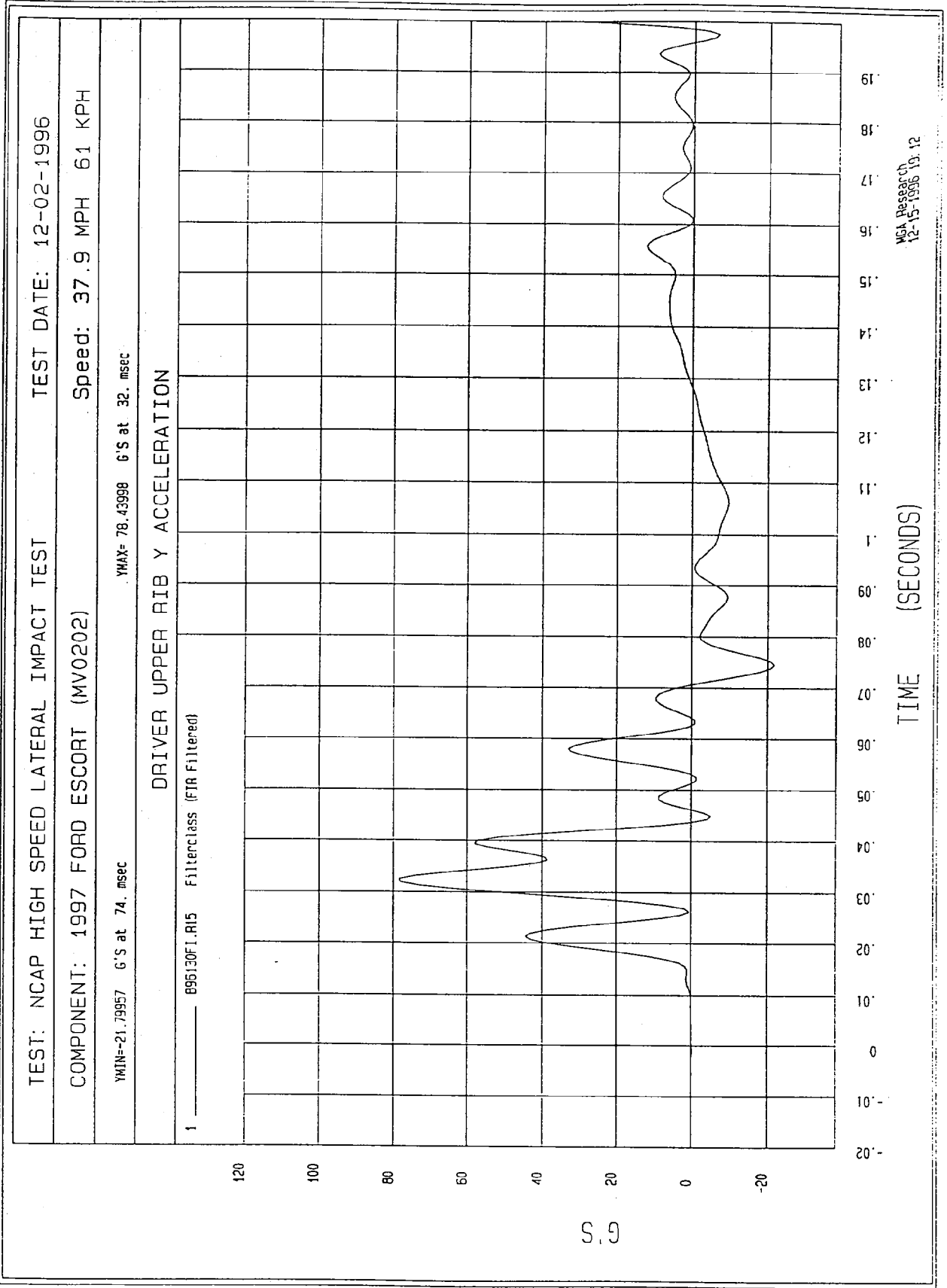
REAR PASSENGER PELVIS Y REDUNDANT VELOCITY

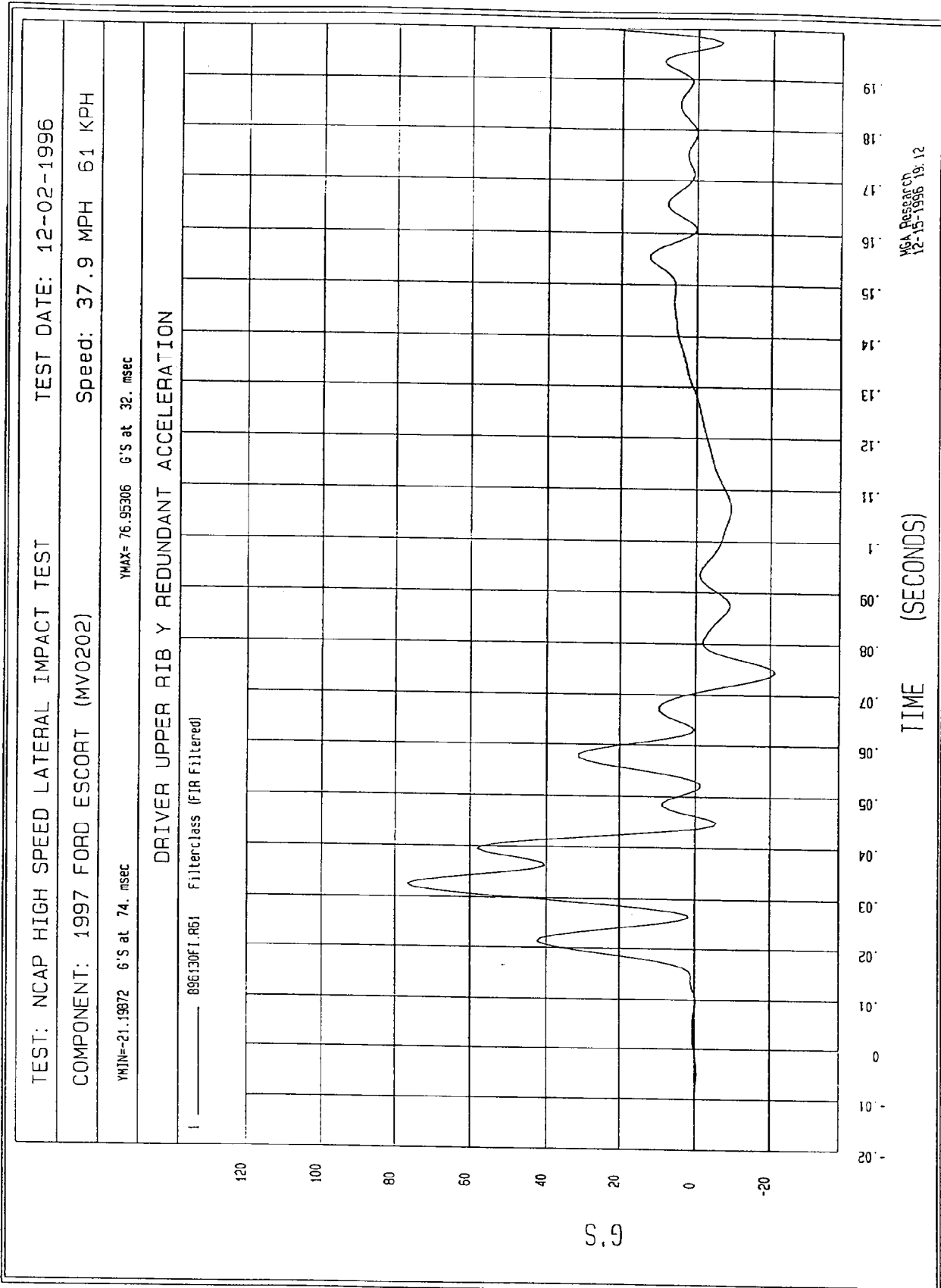
1 ——— B96130A1.V69 Filterclass (180)



MOA Research
12-19-1996 13:31

FINITE IMPULSE RESPONSE (FIR) FILTERED DATA





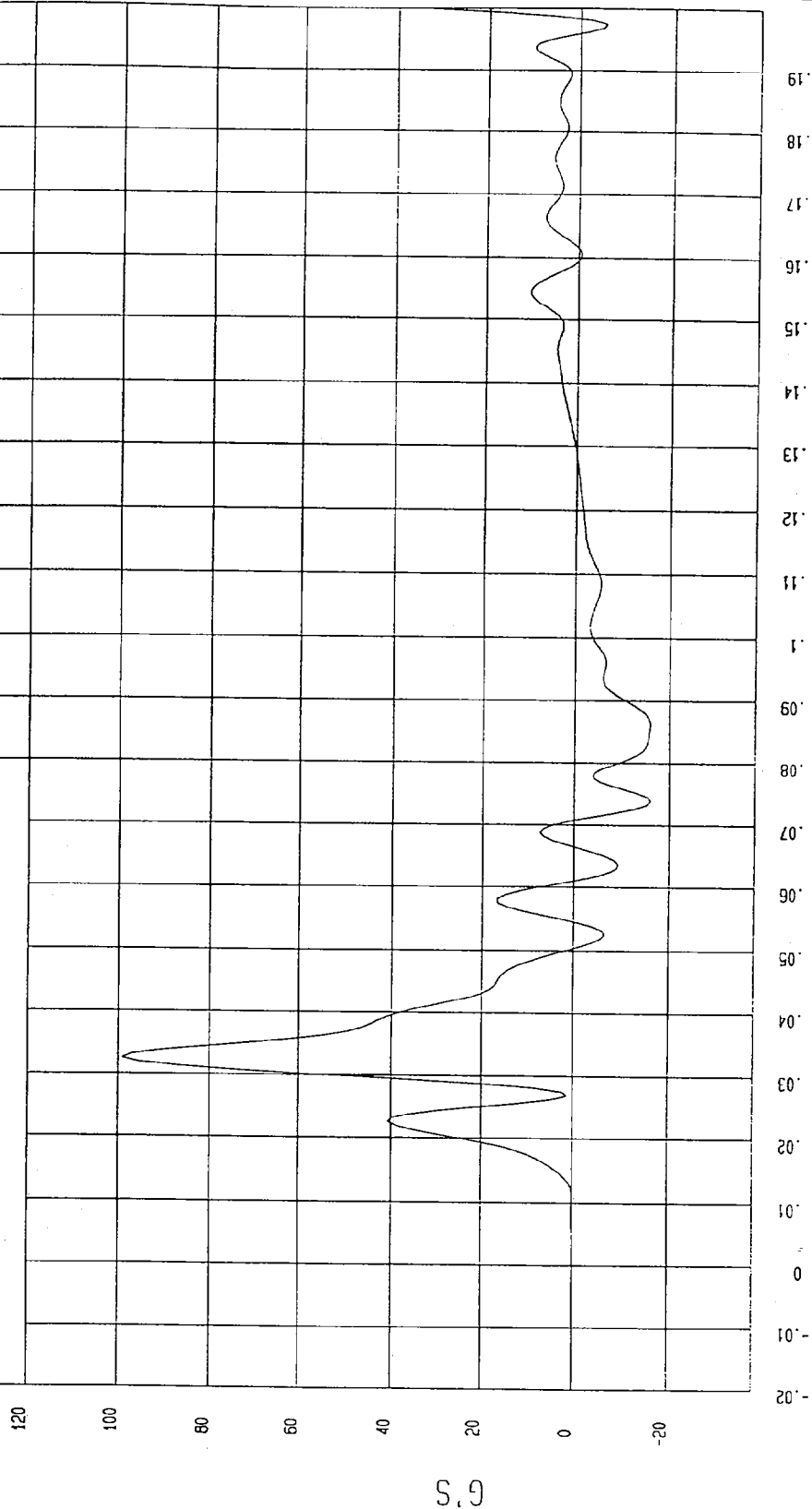
TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

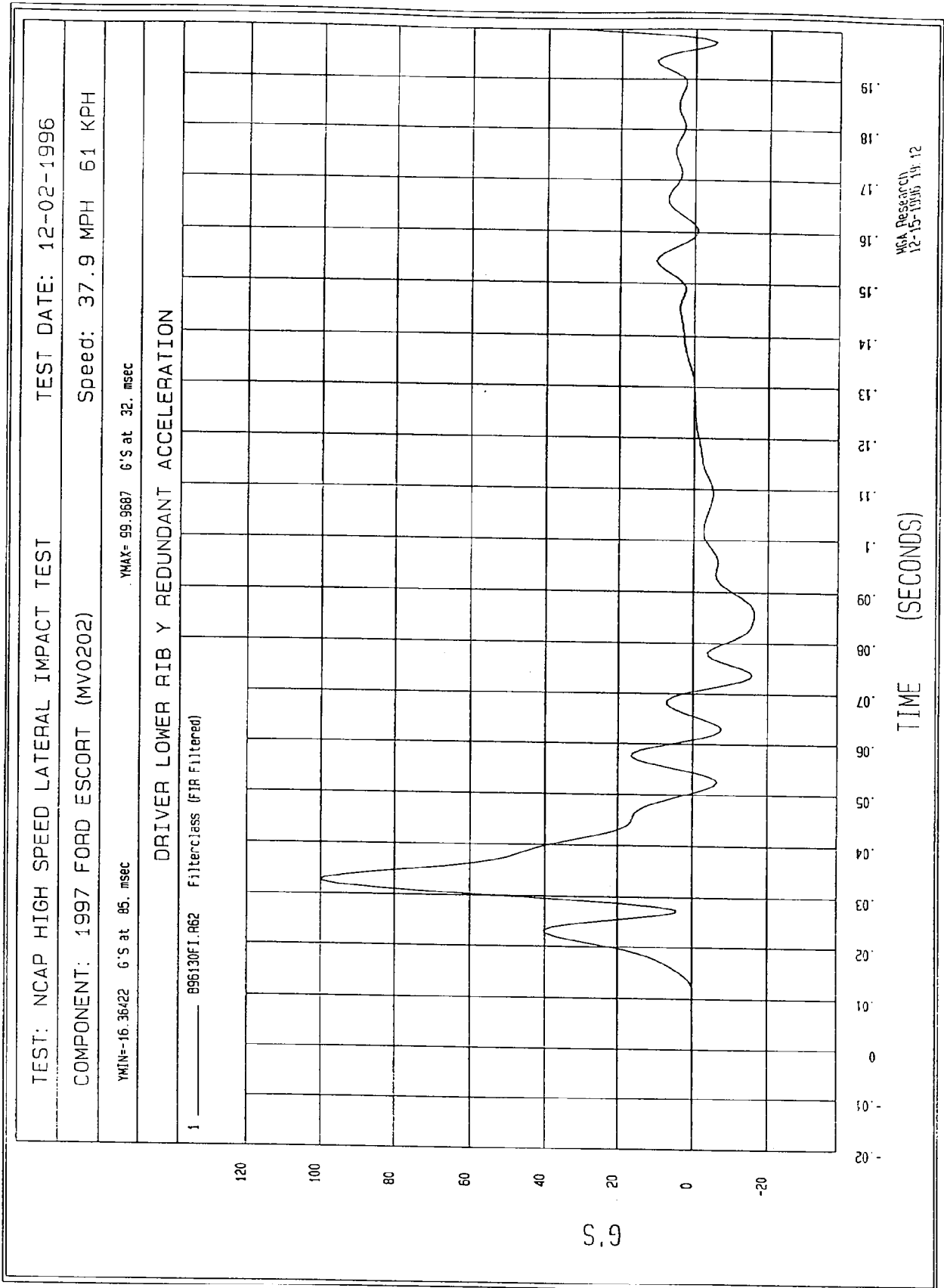
YMIN=-15.93078 G'S at 73. msec YMAX= 99.09215 G'S at 32. msec

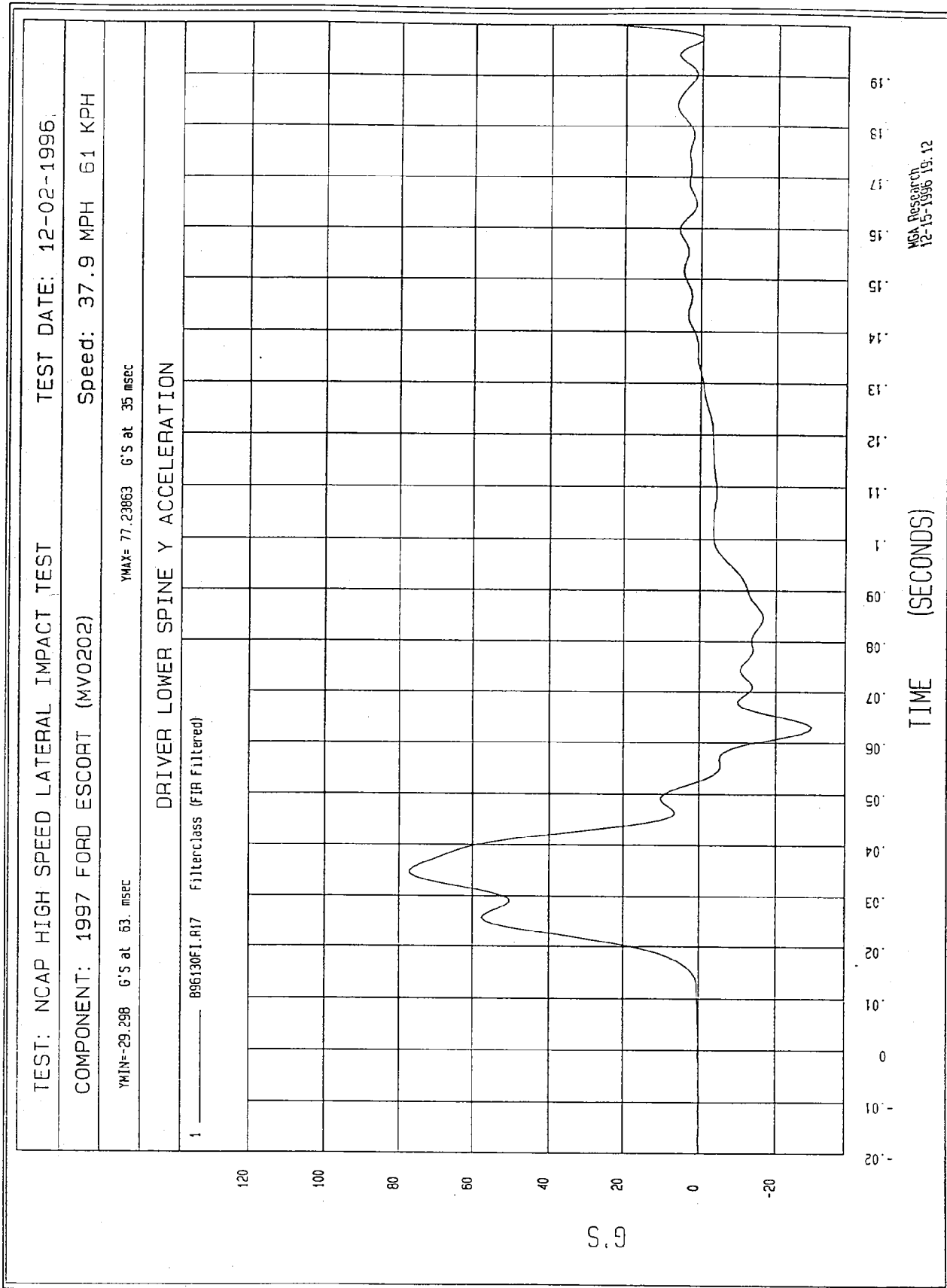
DRIVER LOWER RIB Y ACCELERATION

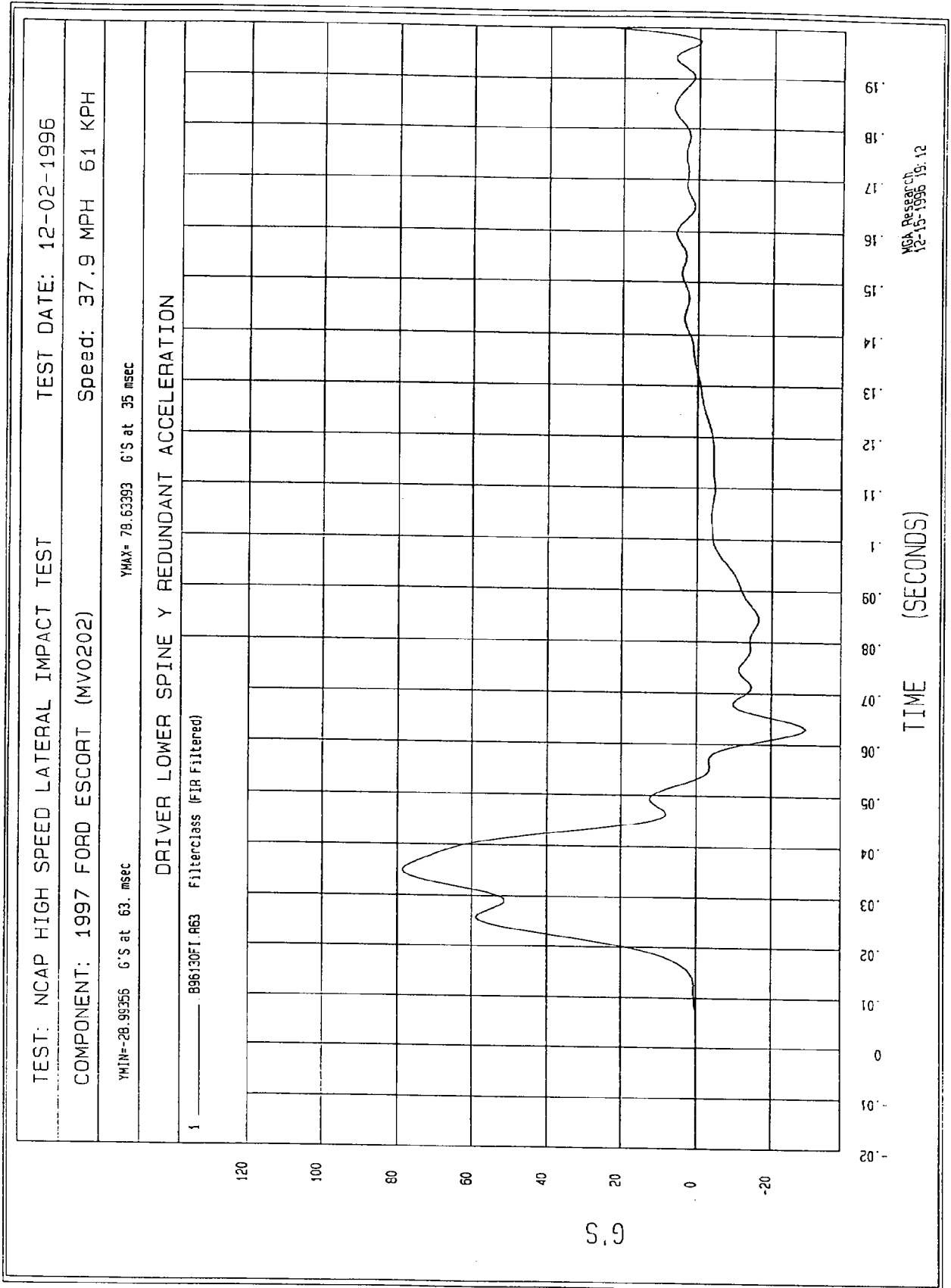
1 ——— B96130F1.R16 FilterClass (FIR Filtered)



NBA Research
12-15-1996 19:12







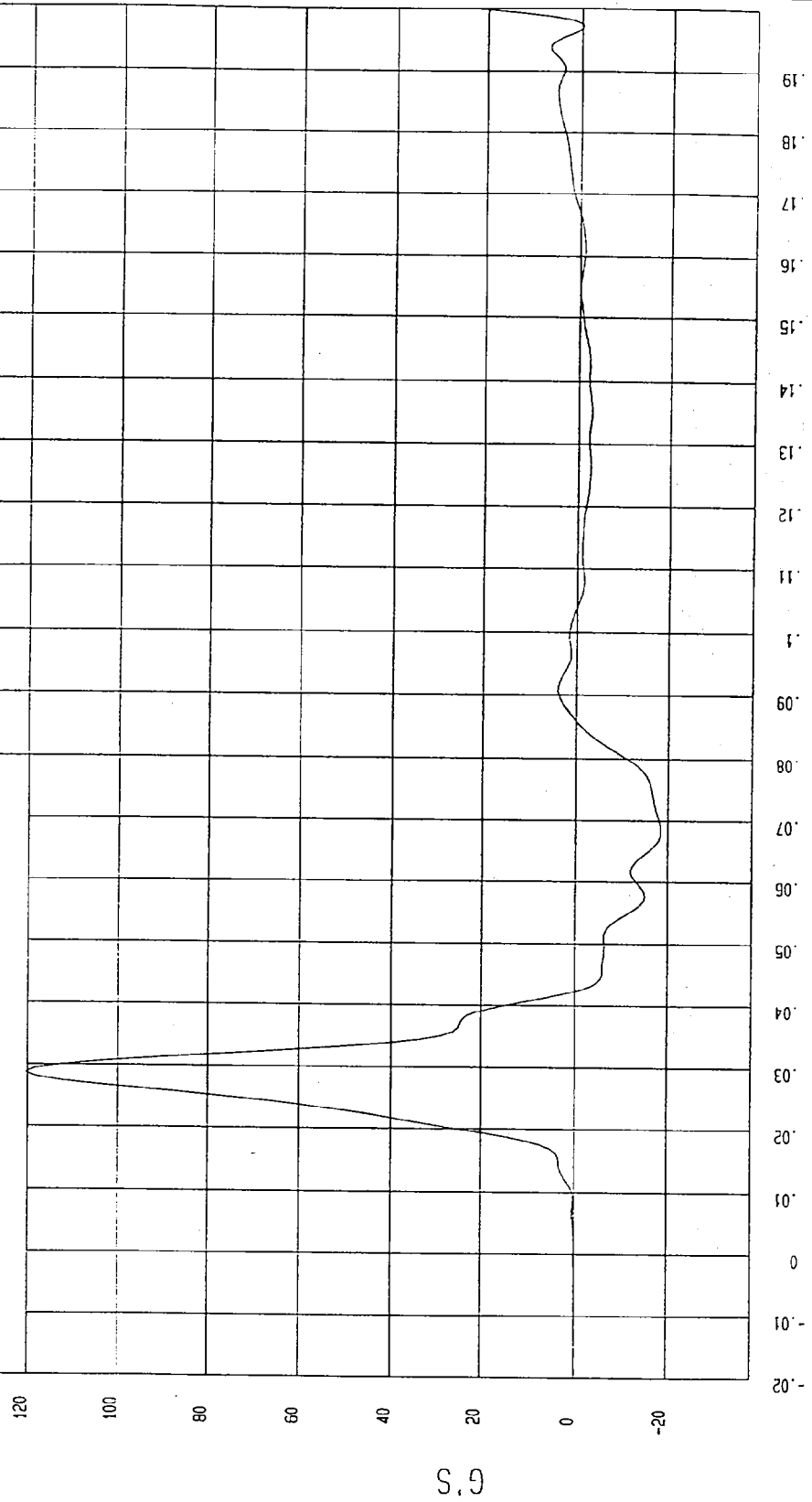
TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202) Speed: 37.9 MPH 61 KPH

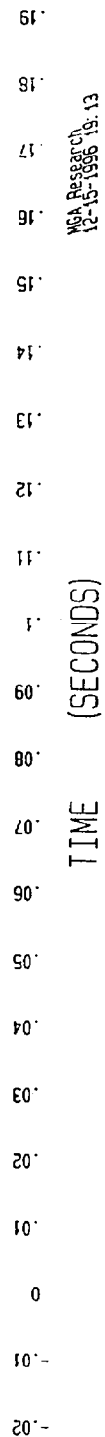
YMIN=-18.5113 G'S at 68. msec YMAX= 120.3499 G'S at 28. msec

DRIVER PELVIS Y ACCELERATION

1 09G130FI.R18 Filterclass (FIR Filtered)



MCA Research
12-15-1996 19.12



TEST: NCAP HIGH SPEED LATERAL IMPACT TEST

TEST DATE: 12-02-1996

Speed: 37.9 MPH 61 KPH

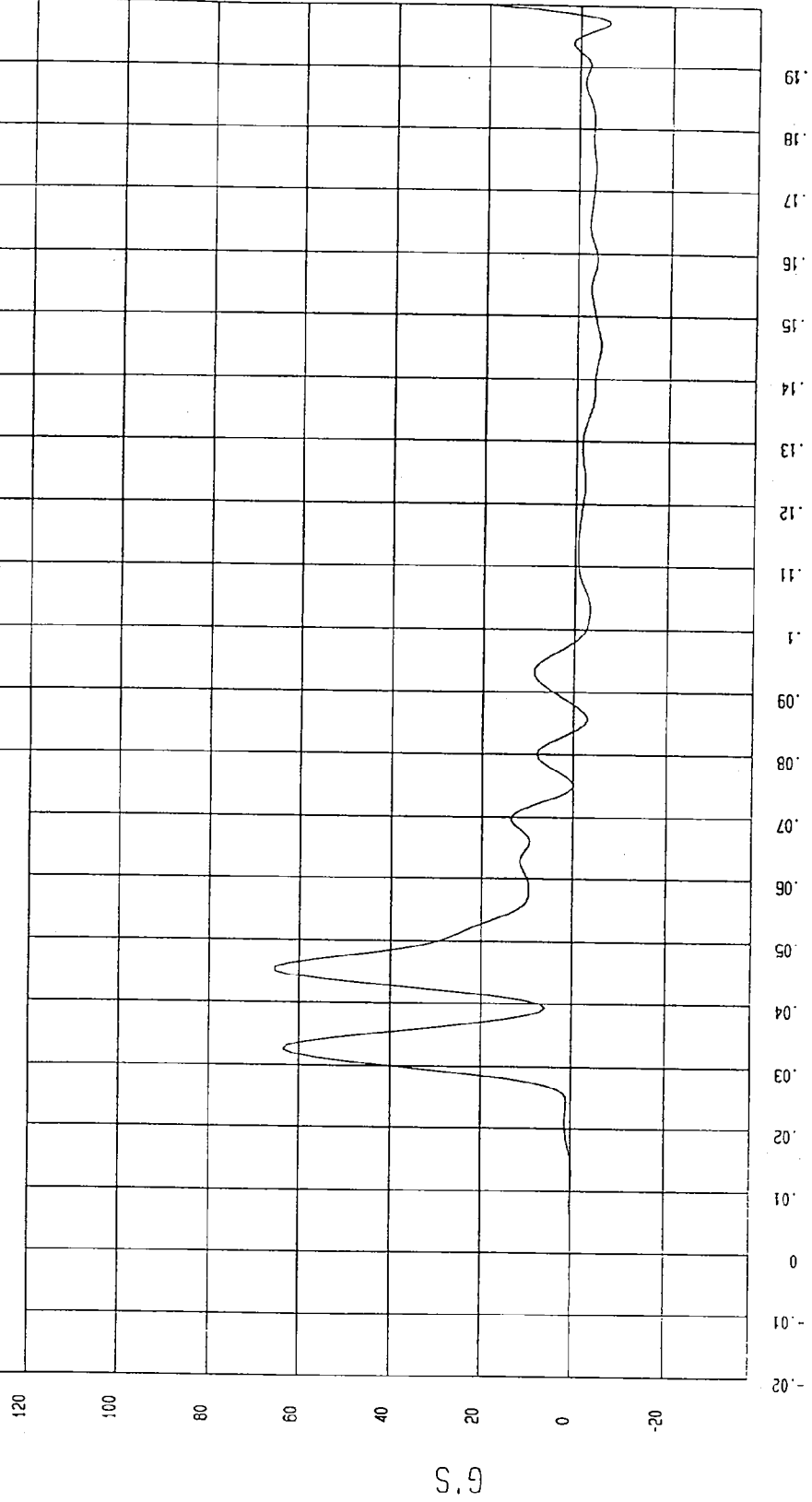
COMPONENT: 1997 FORD ESCORT (MV0202)

YMAX= 65.47091 G'S at 45 msec

YMIN= -6.171454 G'S at 197 msec

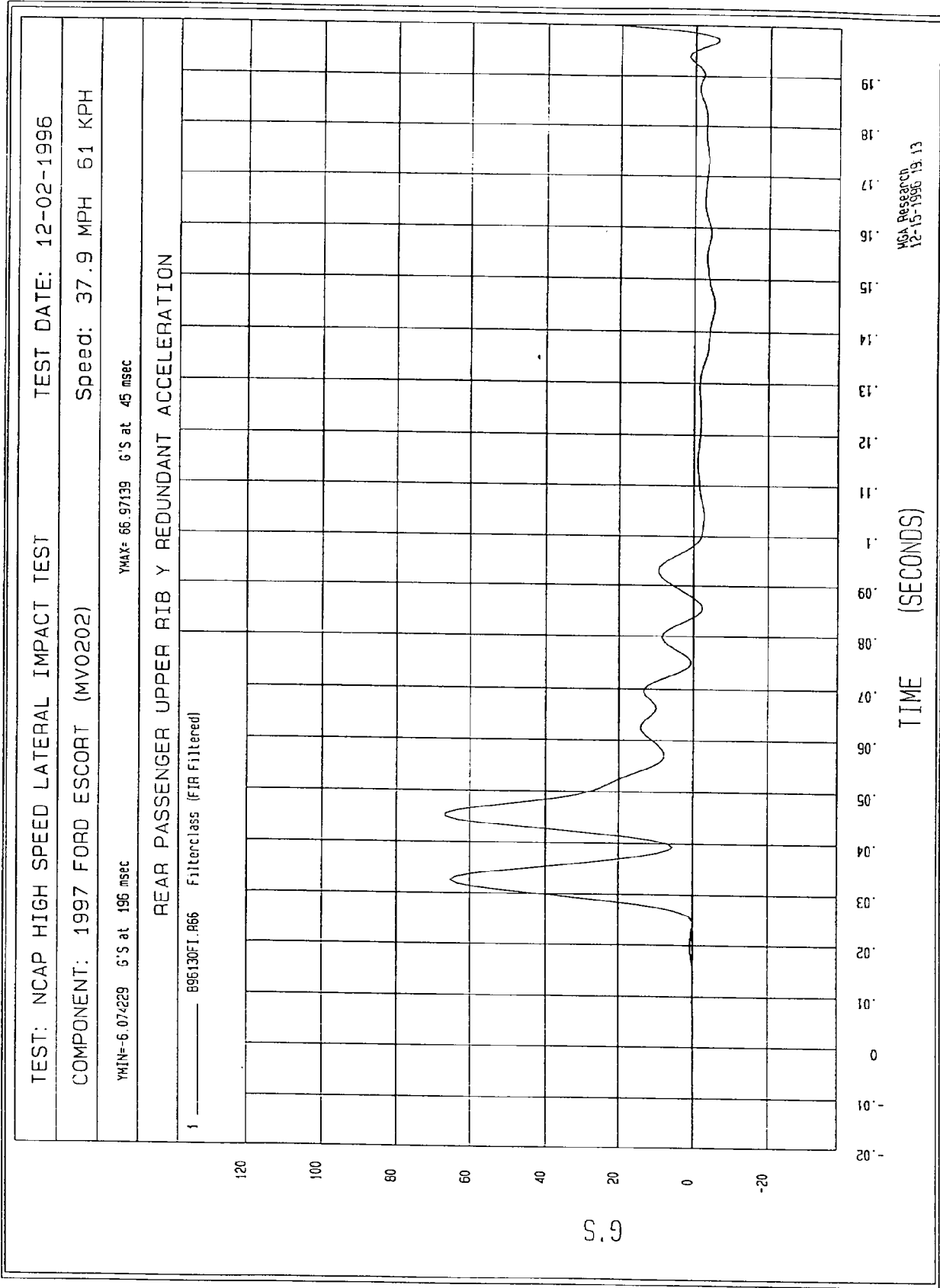
REAR PASSENGER UPPER RIB Y ACCELERATION

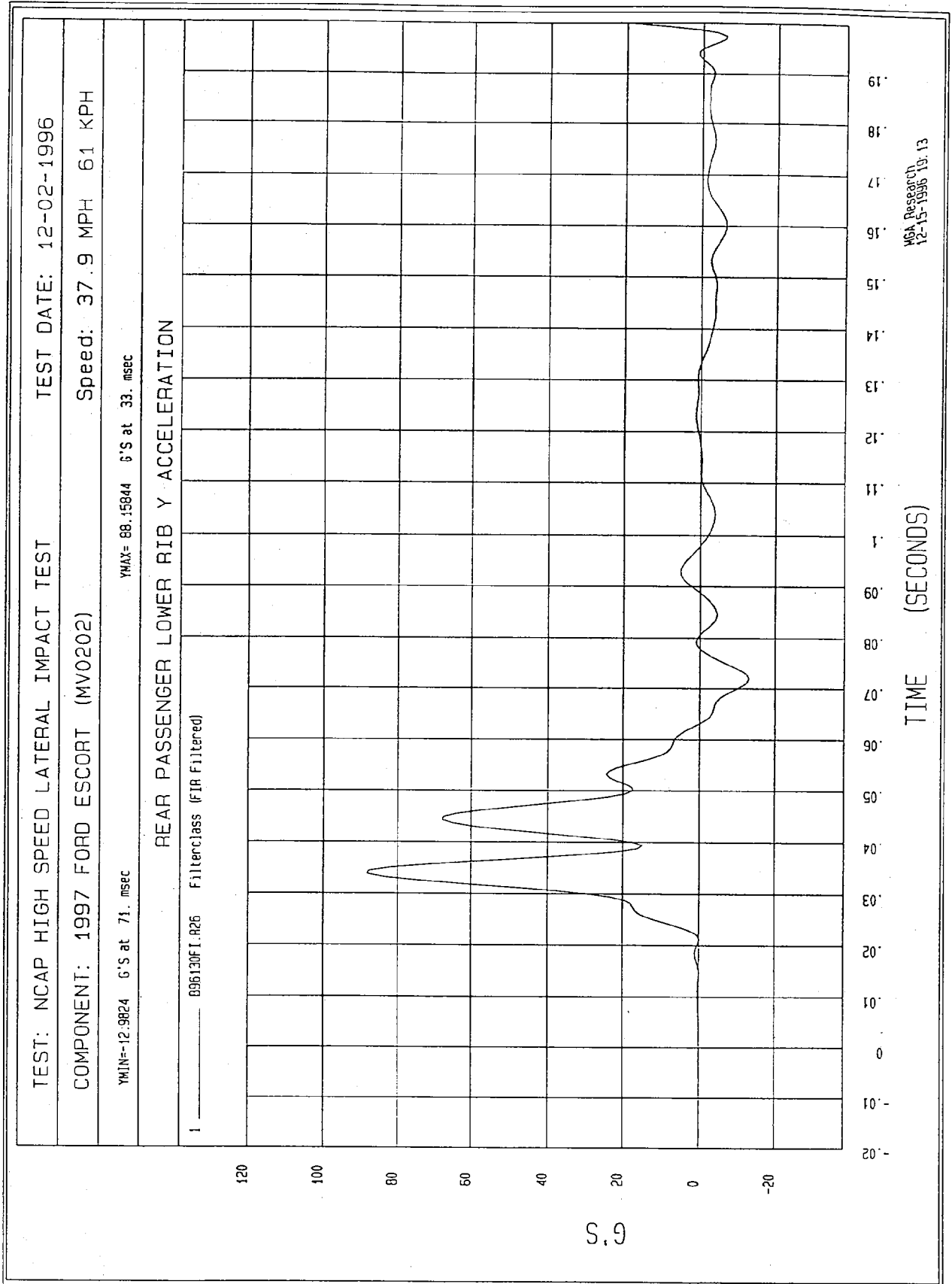
1 ——— 896130F1.R25 Filterclass (FIR Filtered)

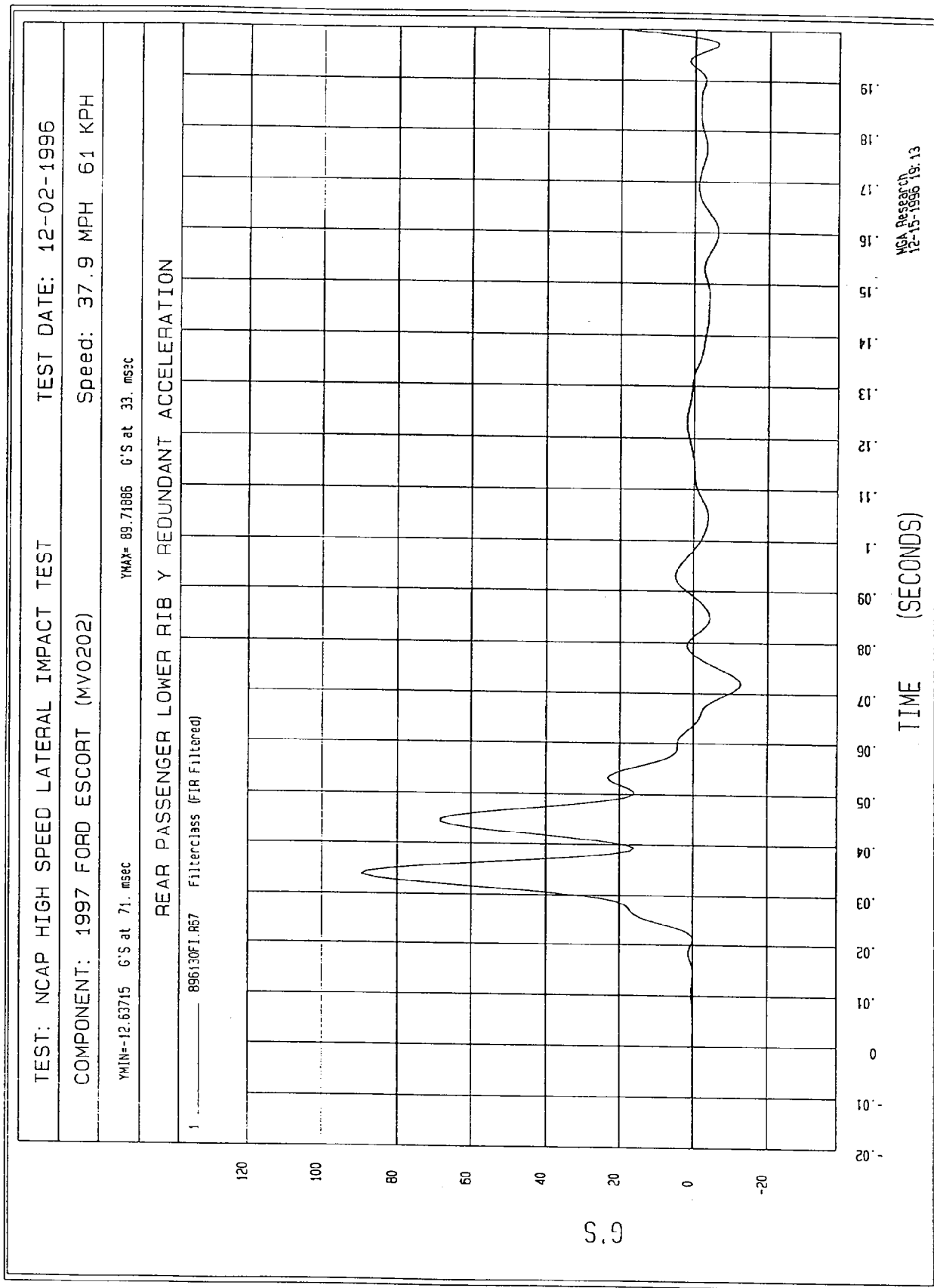


MSA Research
12-15-1996 19:13

TIME (SECONDS)







TEST: NCAP HIGH SPEED LATERAL IMPACT TEST

TEST DATE: 12-02-1996

COMPONENT: 1997 FORD ESCORT (MV0202)

Speed: 37.9 MPH 61 KPH

YMIN=-19.88456 G'S at 61. msec

YMAX= 72.12136 G'S at 38. msec

REAR PASSENGER LOWER SPINE Y ACCELERATION

1 ——— B96130FI.R27 FilterClass (FIR Filtered)

120

100

80

60

40

20

0

-20

G'S

19

18

17

16

15

14

13

12

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01

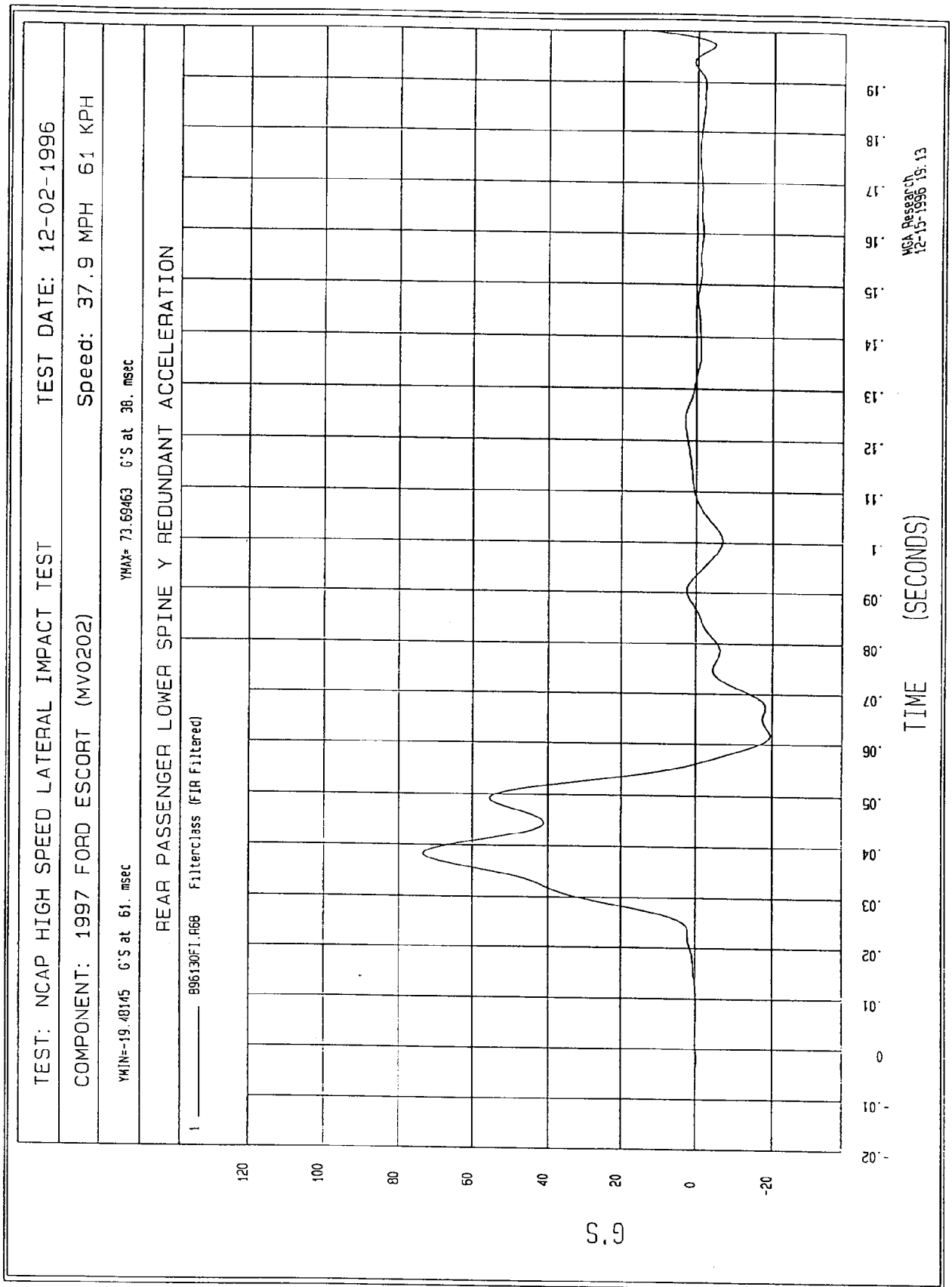
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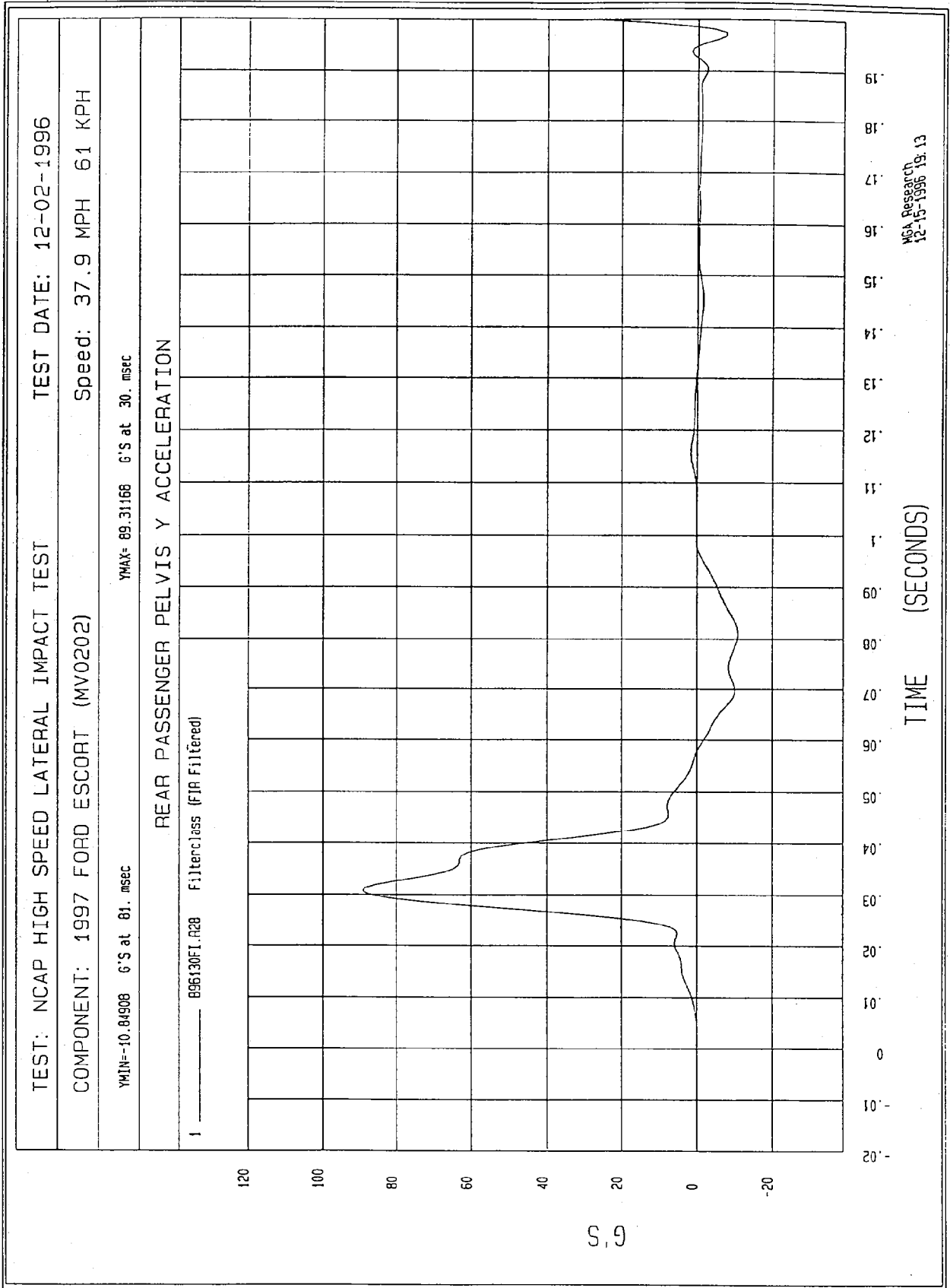
-01

-02

NCA Research
12-15-1996 19.13

TIME (SECONDS)





TEST: NCAP HIGH SPEED LATERAL IMPACT TEST

TEST DATE: 12-02-1996

Speed: 37.9 MPH 61 KPH

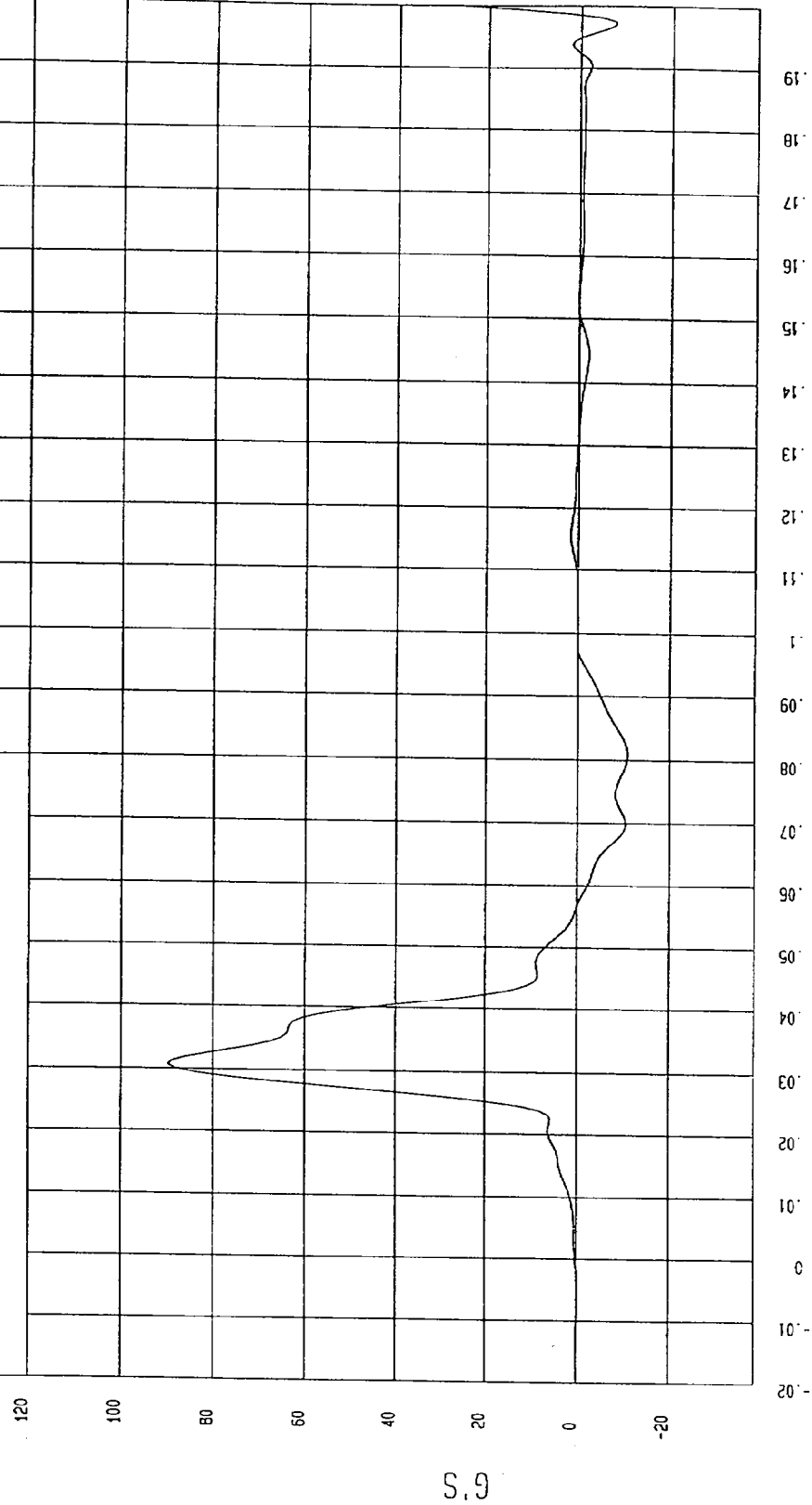
COMPONENT: 1997 FORD ESCORT (MVO202)

YMIN=-10.94712 G'S at 80. msec

YMAX= 90.01127 G'S at 30. msec

REAR PASSENGER PELVIS Y REDUNDANT ACCELERATION

1 ——— 896130F1.R69 Filterclass (FIR Filtered)



MGA Research
12-15-1996 19:13

APPENDIX C

SID CONFIGURATION AND PERFORMANCE VERIFICATION

REPORT NO. MGA-97-DC03

DUMMY PERFORMANCE CALIBRATIONS

NEW CAR ASSESSMENT PROGRAM
SIDE IMPACT TEST

1997 FORD ESCORT 4-DOOR
NHTSA NO. MV0202

MGA PROVING GROUNDS
5000 WARREN ROAD
BURLINGTON, WI 53105



Test Date: December 2, 1996

Report Date: January 7, 1997

FINAL REPORT

Prepared For:

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

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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: December 1, 1996

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: Tim Wilson

APPROVED BY: Paul Korbake

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: December 1, 1996

DUMMY NUMBER: 271

TEST NUMBER: D961942

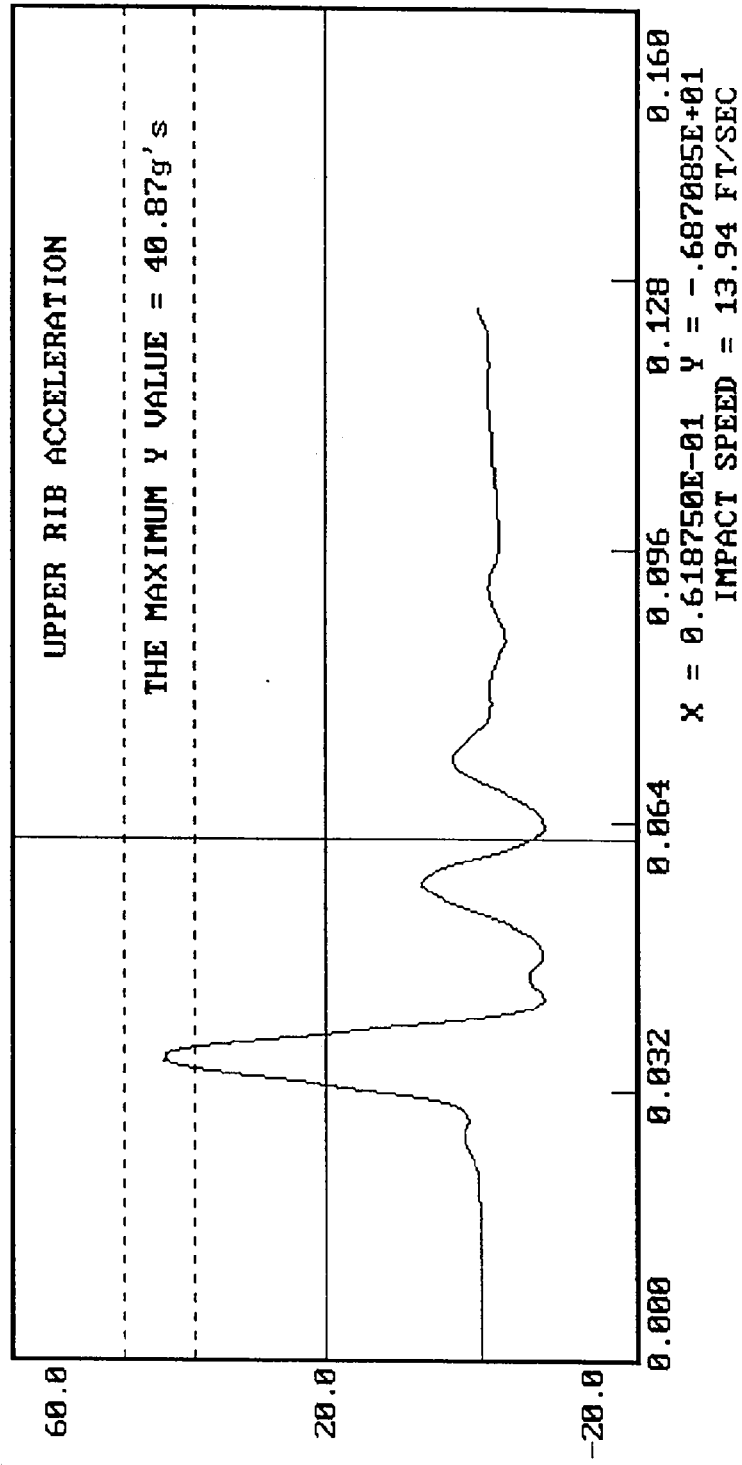
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	25%
PROBE SPEED	13.8 - 14.2 fps	13.9
UPPER RIB	37 - 46 g's	41
LOWER RIB	37 - 46 g's	42
LOWER SPINE	15 - 22 g's	20

TEST MEETS SPECIFICATIONS

TECHNICIAN Jim Wilson

APPROVED BY Dave Kabatake

DUMMY CALIBRATION - THORAX IMPACT
 DUMMY # 271
 12-01-1996 11:27
 ACCELERATION (G'S) VS. TIME ((SECONDS))

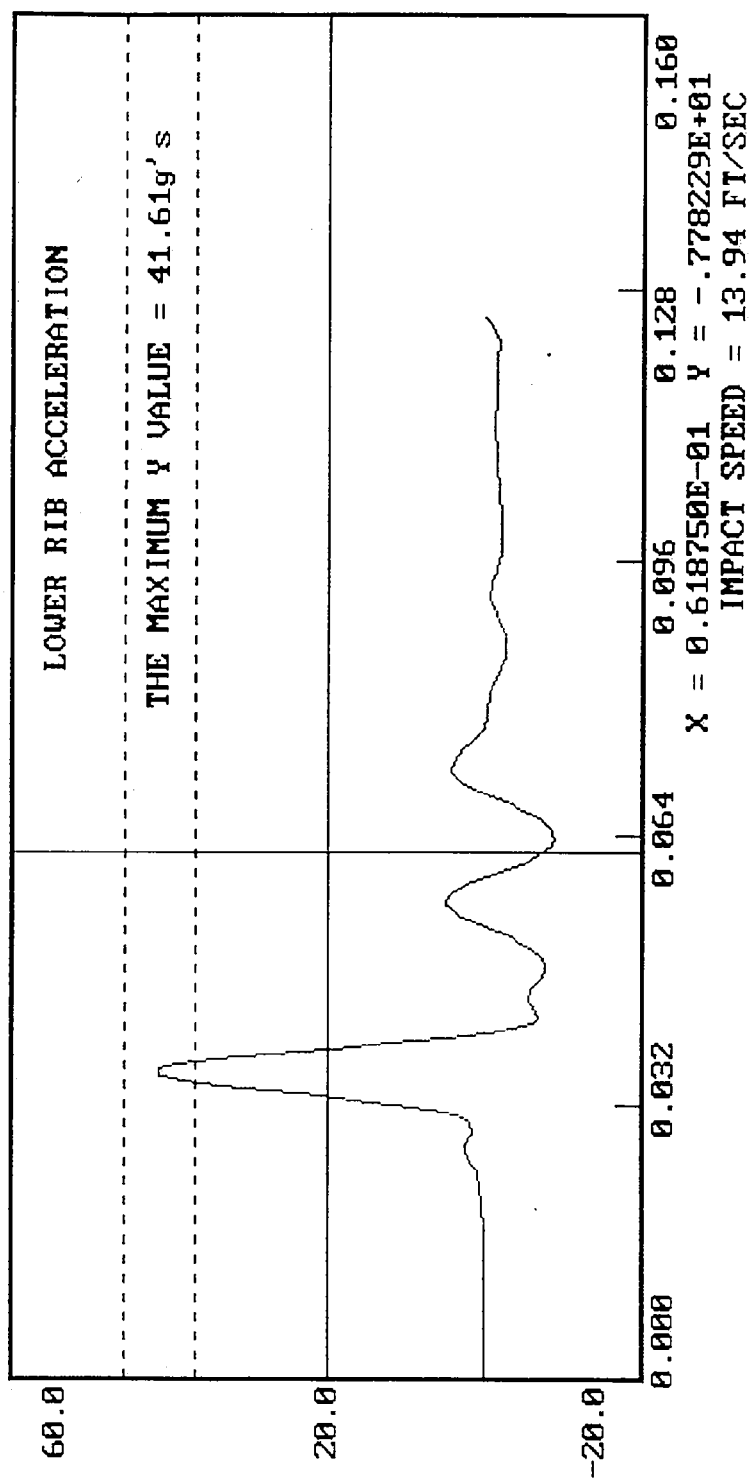


12-01-1996 11:27

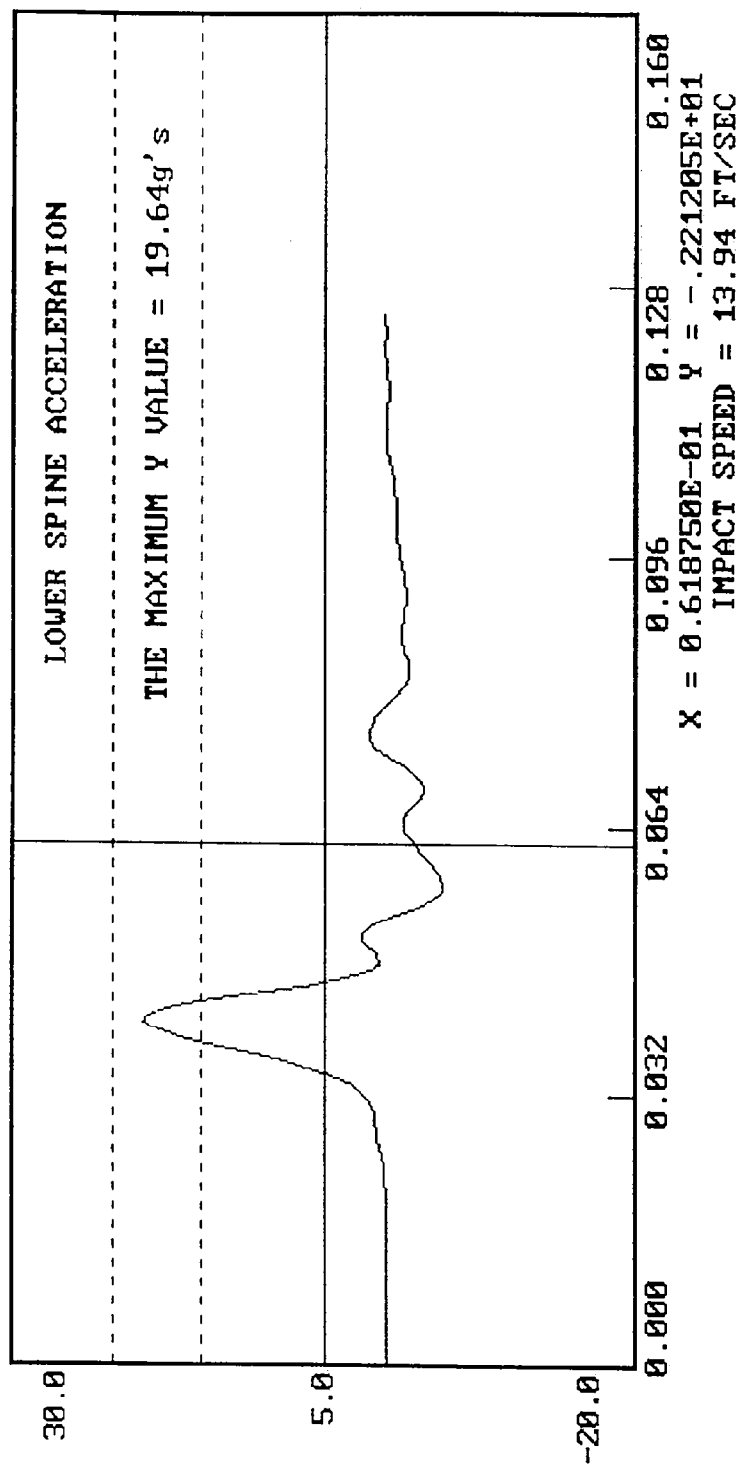
DUMMY CALIBRATION - THORAX IMPACT

DUMMY # 271

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



DUMMY CALIBRATION - THORAX IMPACT
 DUMMY # 271
 12-01-1996 11:29
 ACCELERATION (G'S) VS. TIME ((SECONDS))



MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: December 1, 1996

DUMMY NUMBER: 271

TEST NUMBER: D961943

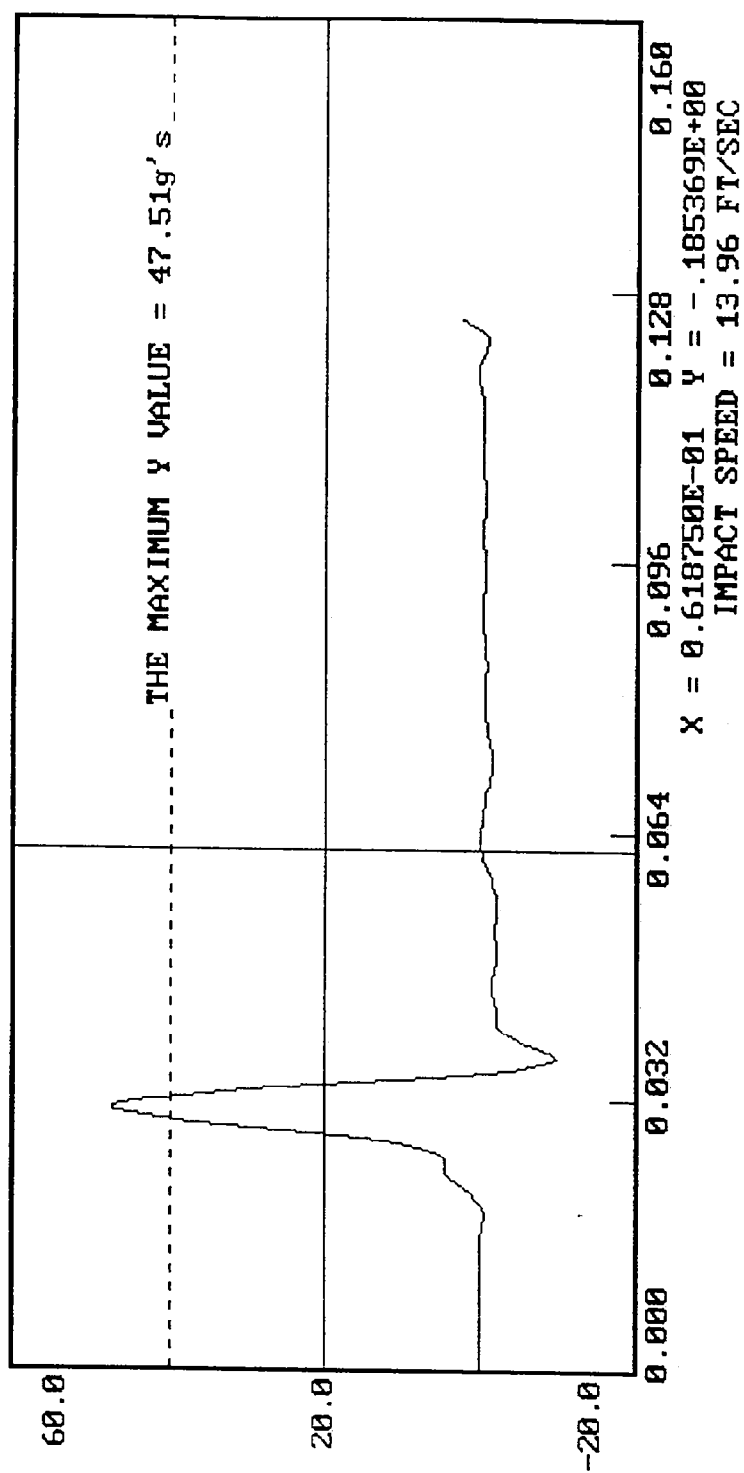
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	25%
PROBE SPEED	13.8 - 14.2 f/s	14.0
PELVIS ACCELERATION	40 - 60 g's	48

TEST MEETS SPECIFICATIONS

TECHNICIAN Jim Mahan

APPROVED BY Paul Kabaku

DUMMY CALIBRATION - PELVIS IMPACT
 DUMMY # 271
 12-01-1996 11:35
 ACCELERATION (G'S) VS. TIME ((SECONDS))



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

DATE: November 27, 1996

DUMMY NUMBER: 271

TEST NUMBER: D961944

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
FORCE @ 0.5 in	23.3 - 36.5 lbs	31.7
FORCE @ 0.75 in	36.7 - 49.8 lbs	44.7
FORCE @ 1.0 in	50 - 63 lbs	59
FORCE @ 1.3 in	73 - 88 lbs	80

TEST MEETS SPECIFICATIONS

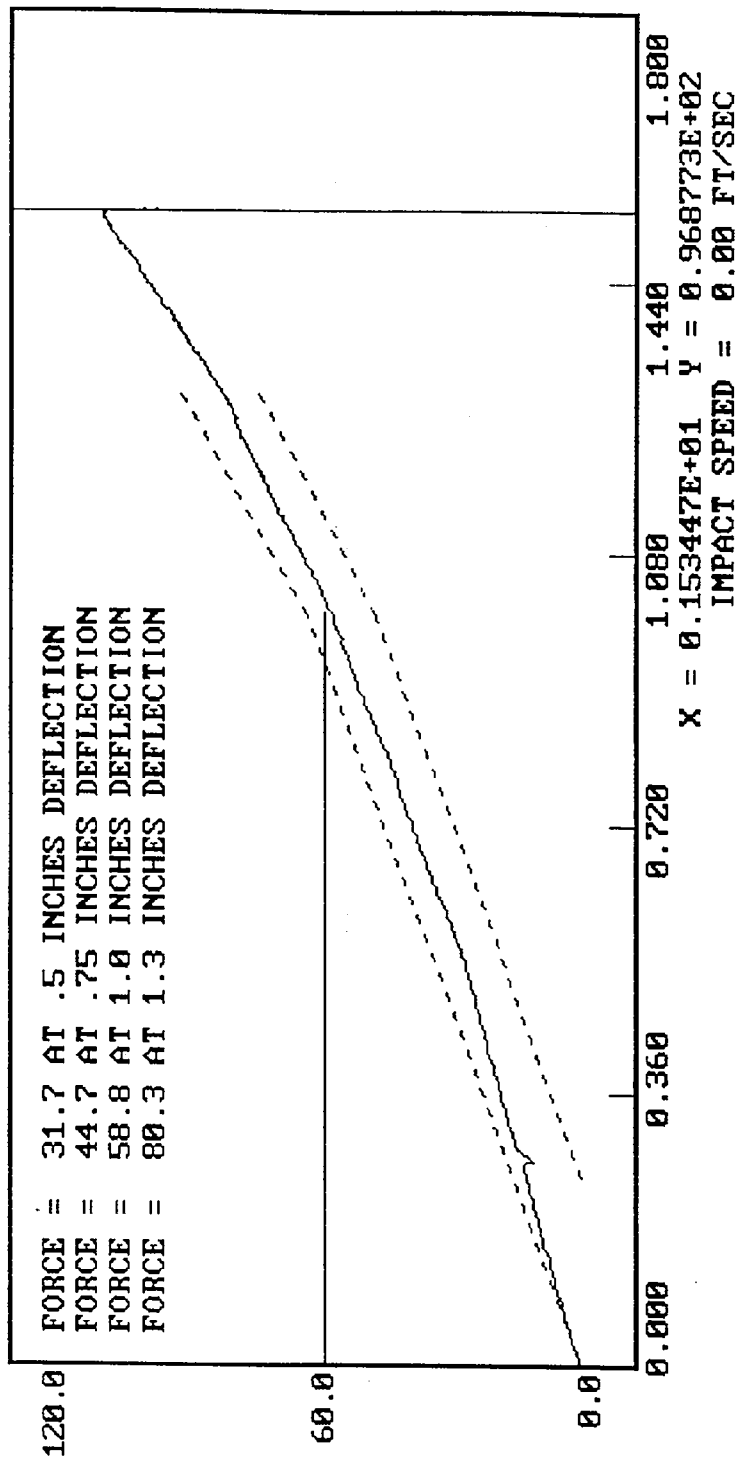
TECHNICIAN

Tim McLean

APPROVED BY

Dave Korbake

DUMMY CALIBRATION - ABDOMEN COMPRESSION
 DUMMY # 271
 11-27-1996 14:51
 ABDOMEN FORCE (LBS) VS. ABDOMEN DISPLACEMENT (INCHES)



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: November 27, 1996

DUMMY NUMBER: 271

TEST NUMBER: D961945

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	28
FORCE @ 30°	34 - 46 lbs	37
FORCE @ 40°	46 - 58 lbs	46
RETURN ANGLE	12° maximum	2°

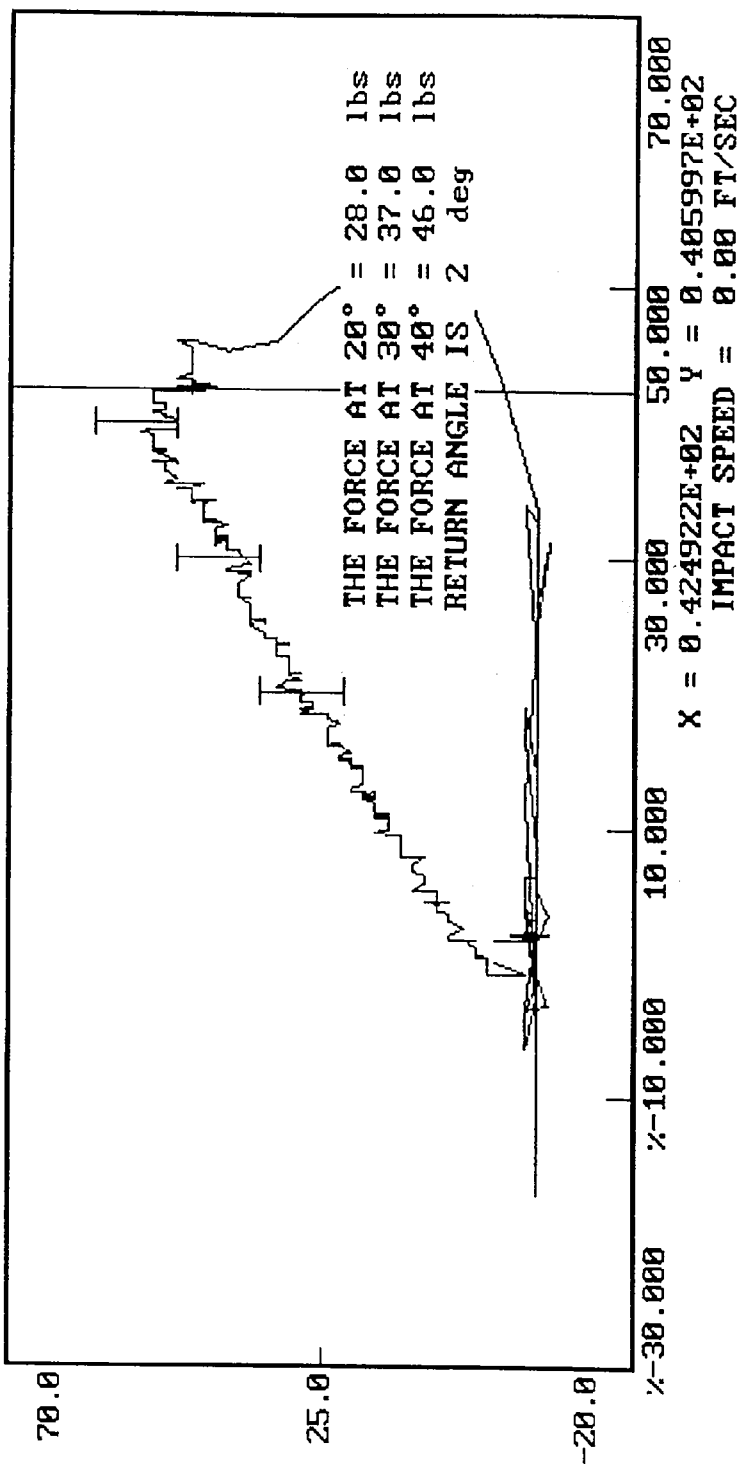
TEST MEETS SPECIFICATIONS

TECHNICIAN Tom Kellum

APPROVED BY Paul Kellum

11-27-1996 14:19

DUMMY CALIBRATION - LUMBAR FLEXION
DUMMY # 271
FORCE (LBS) VS. TORSO ROTATION (DEGREES)



PRE-TEST CERTIFICATION DATA

Rear Dummy Serial Number: 272

Calibration Test Results Summary

Passenger 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.

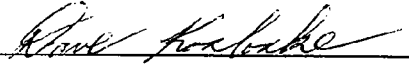
SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 272

DATE OF VERIFICATION: November 29, 1996

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)

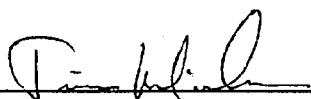
DATE: November 29, 1996

DUMMY NUMBER: 272

TEST NUMBER: D961952

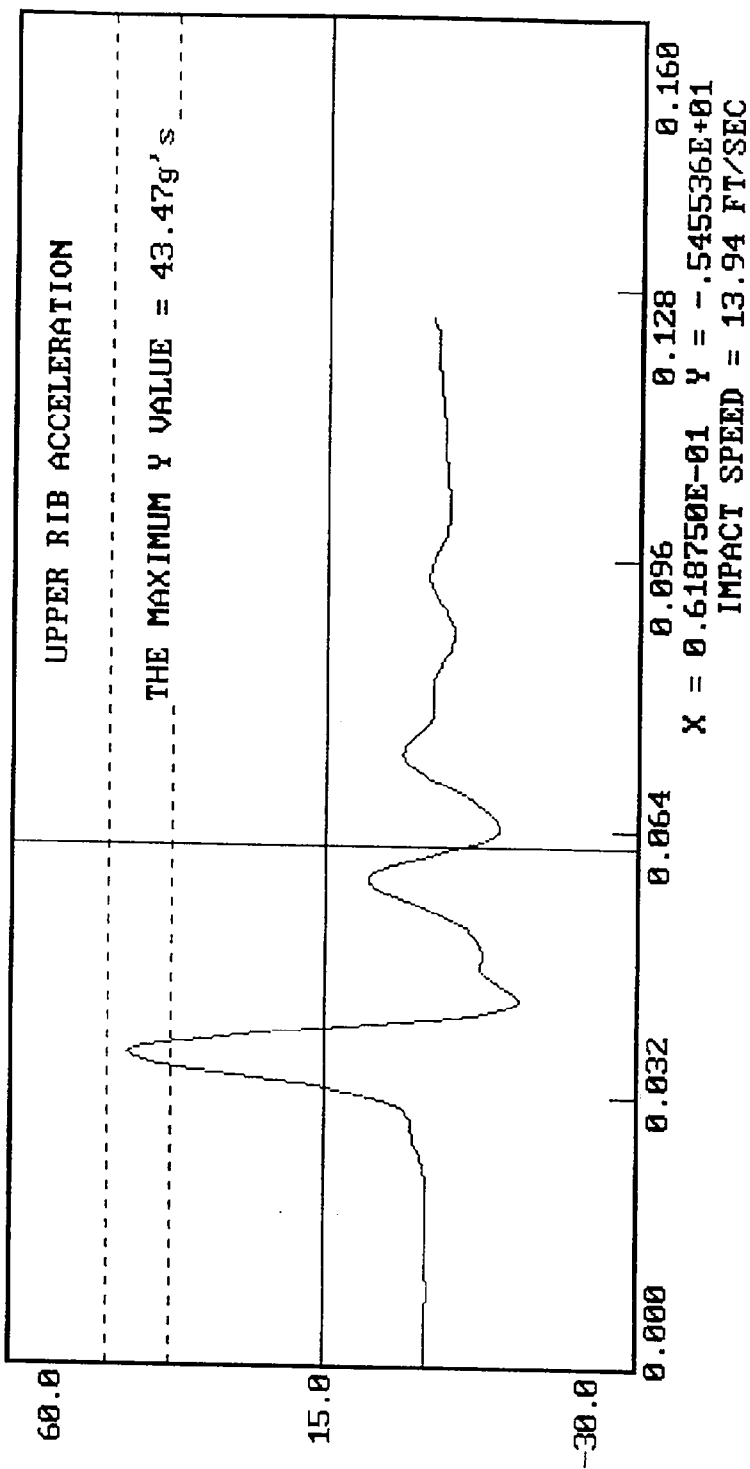
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
PROBE SPEED	13.8 - 14.2 fps	13.9
UPPER RIB	37 - 46 g's	43
LOWER RIB	37 - 46 g's	42
LOWER SPINE	15 - 22 g's	21

TEST MEETS SPECIFICATIONS

TECHNICIAN 

APPROVED BY 

DUMMY CALIBRATION - THORAX IMPACT
DUMMY # 272
11-29-1996 09:12
ACCELERATION (G'S) VS. TIME ((SECONDS))

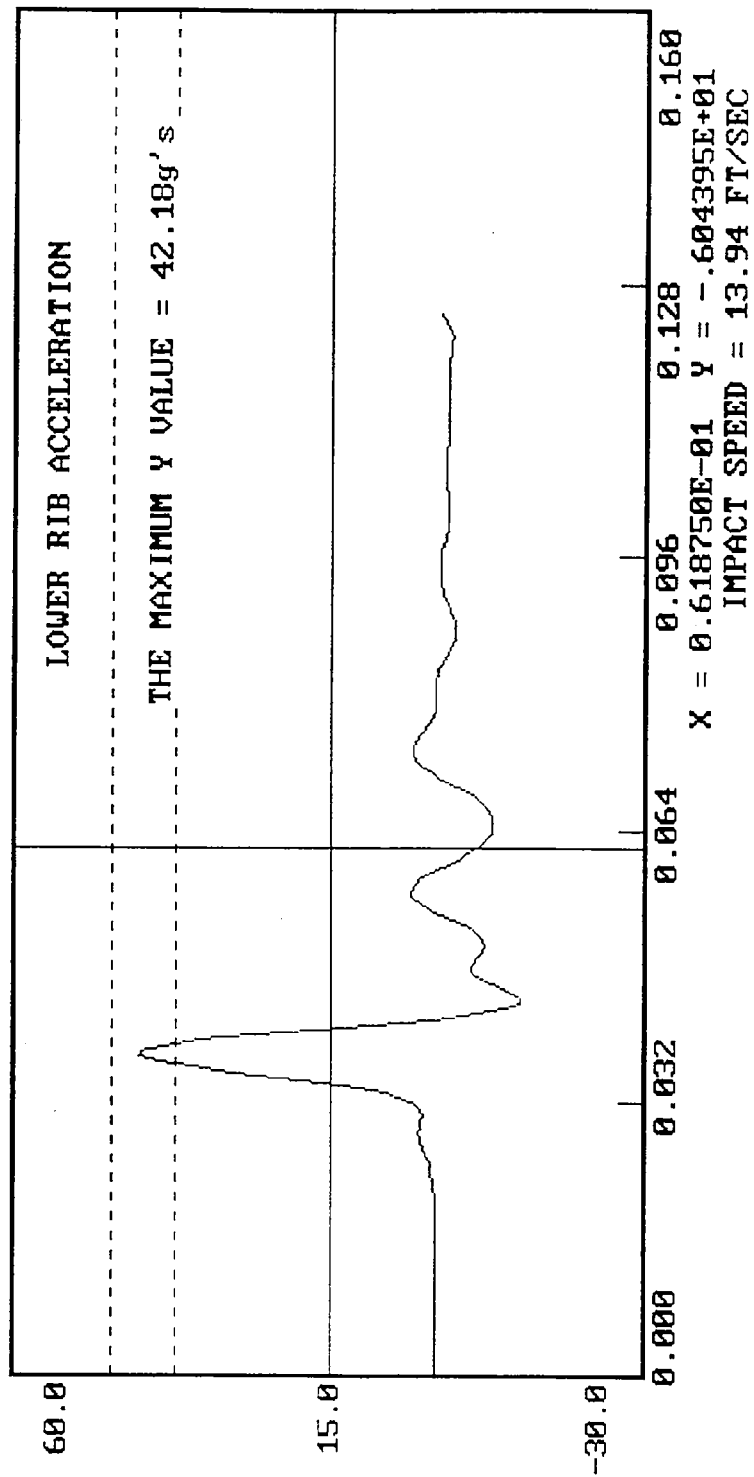


DUMMY CALIBRATION - THORAX IMPACT

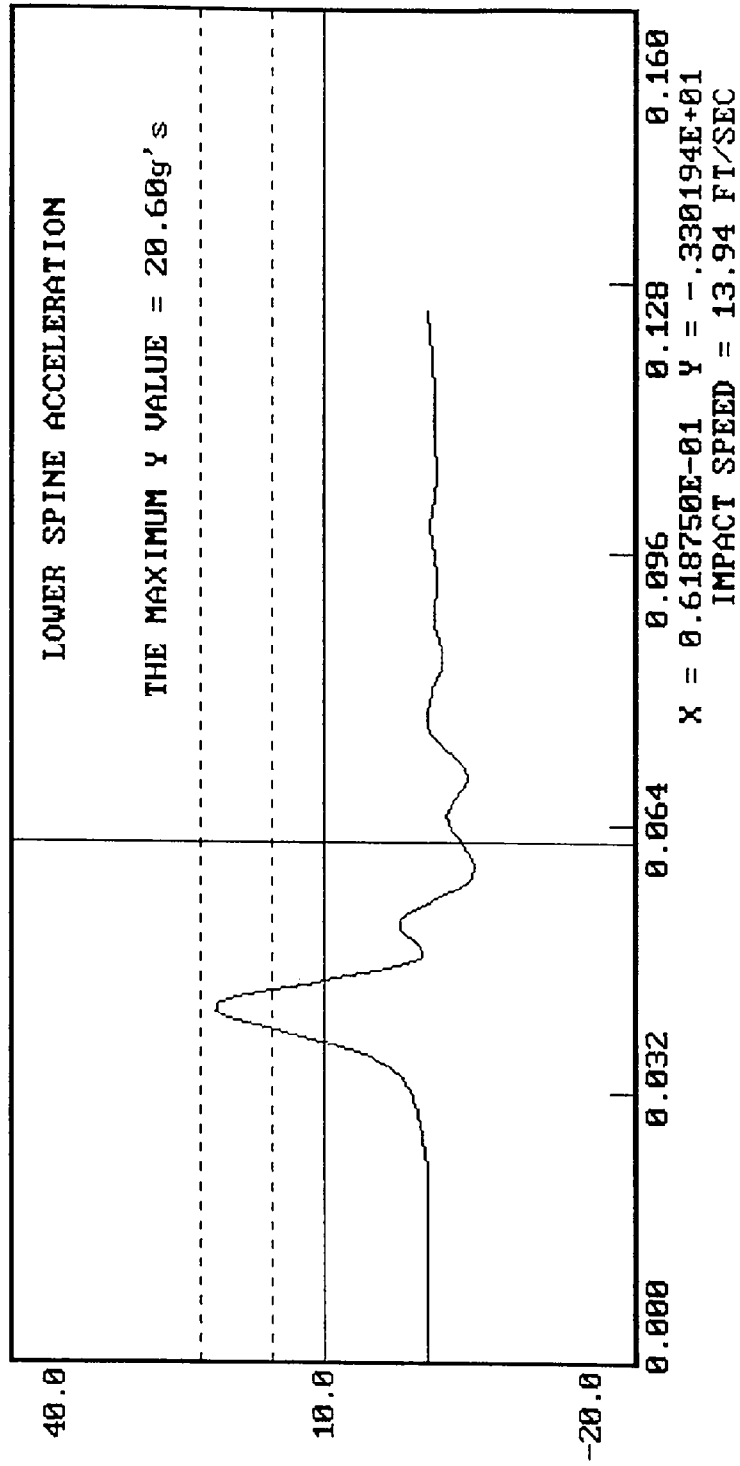
DUMMY # 272

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

11-29-1996 09:12



DUMMY CALIBRATION - THORAX IMPACT
 DUMMY # 272
 11-29-1996 09:15
 ACCELERATION (G'S) VS. TIME ((SECONDS))



MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: November 29, 1996

DUMMY NUMBER: 272

TEST NUMBER: D961953

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
PROBE SPEED	13.8 - 14.2 f/s	13.9
PELVIS ACCELERATION	40 - 60 g's	44

TEST MEETS SPECIFICATIONS

TECHNICIAN

Tim Wilson

APPROVED BY

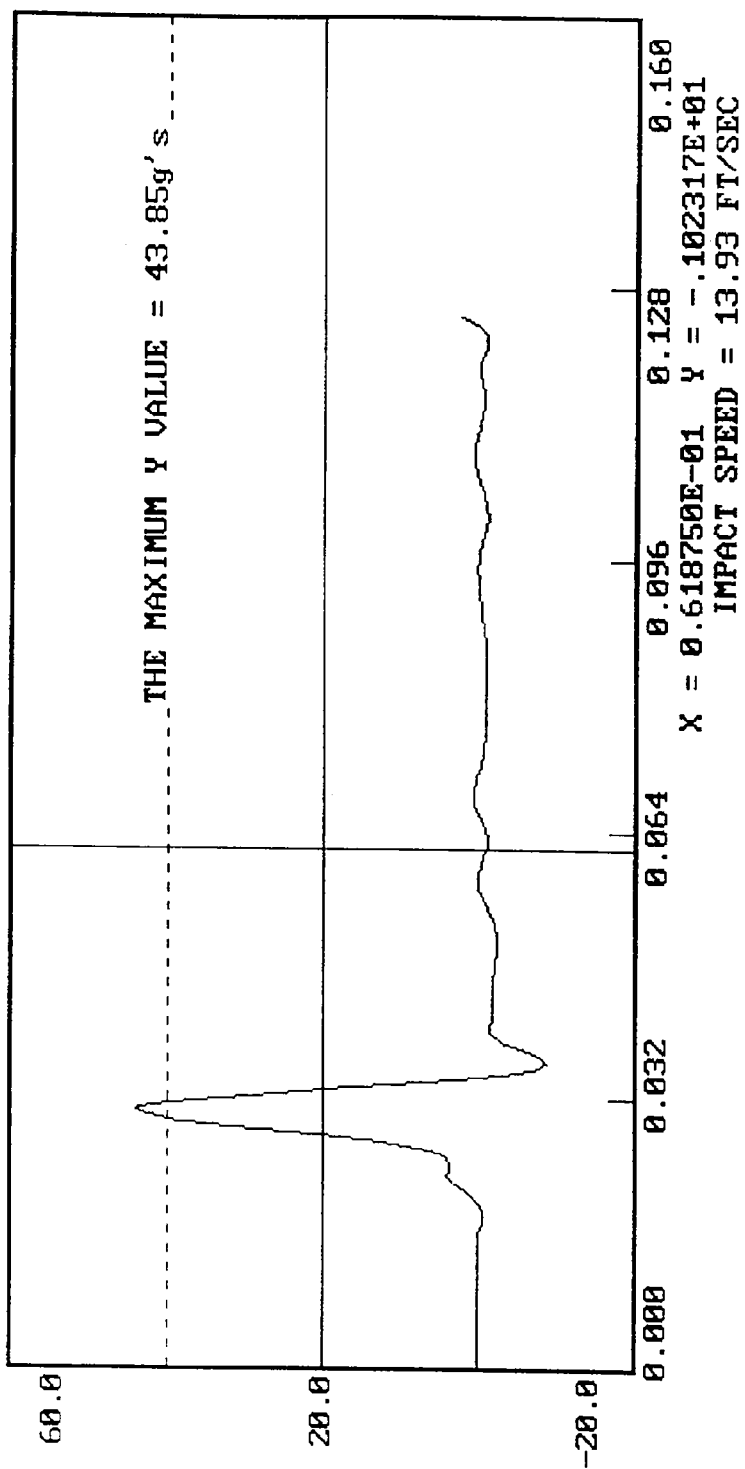
Paul Kraboke

11-29-1996 09:20

DUMMY CALIBRATION - PELVIS IMPACT

DUMMY # 272

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



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

DATE: November 27, 1996

DUMMY NUMBER: 272

TEST NUMBER: D961954

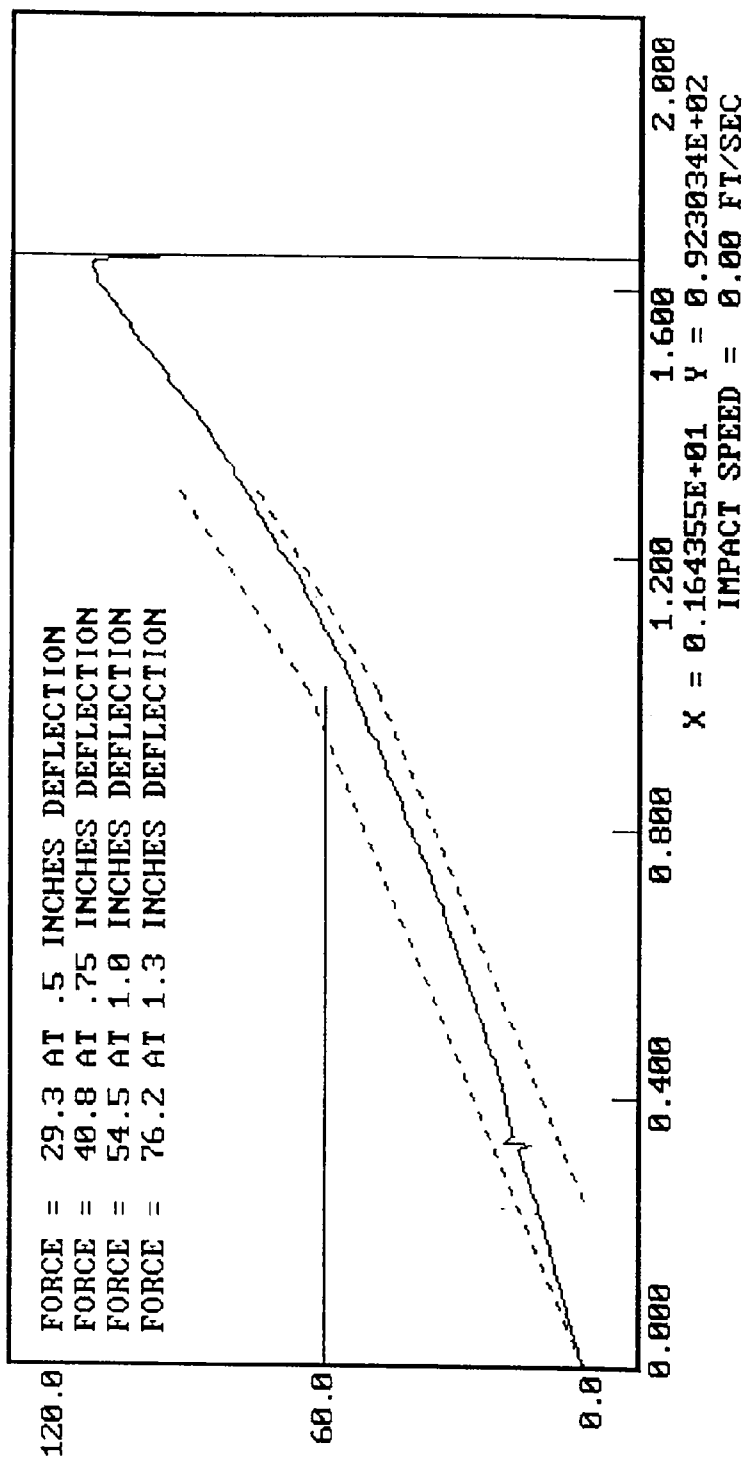
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
FORCE @ 0.5 in	23.3 - 36.5 lbs	29.3
FORCE @ 0.75 in	36.7 - 49.8 lbs	40.8
FORCE @ 1.0 in	50 - 63 lbs	55
FORCE @ 1.3 in	73 - 88 lbs	76

TEST MEETS SPECIFICATIONS

TECHNICIAN Tim Melton

APPROVED BY Steve Kurbak

DUMMY CALIBRATION - ABDOMEN COMPRESSION
 DUMMY # 272
 11-27-1996 14:57
 ABDOMEN FORCE (LBS) VS. ABDOMEN DISPLACEMENT (INCHES)



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: November 27, 1996

DUMMY NUMBER: 272

TEST NUMBER: D961955

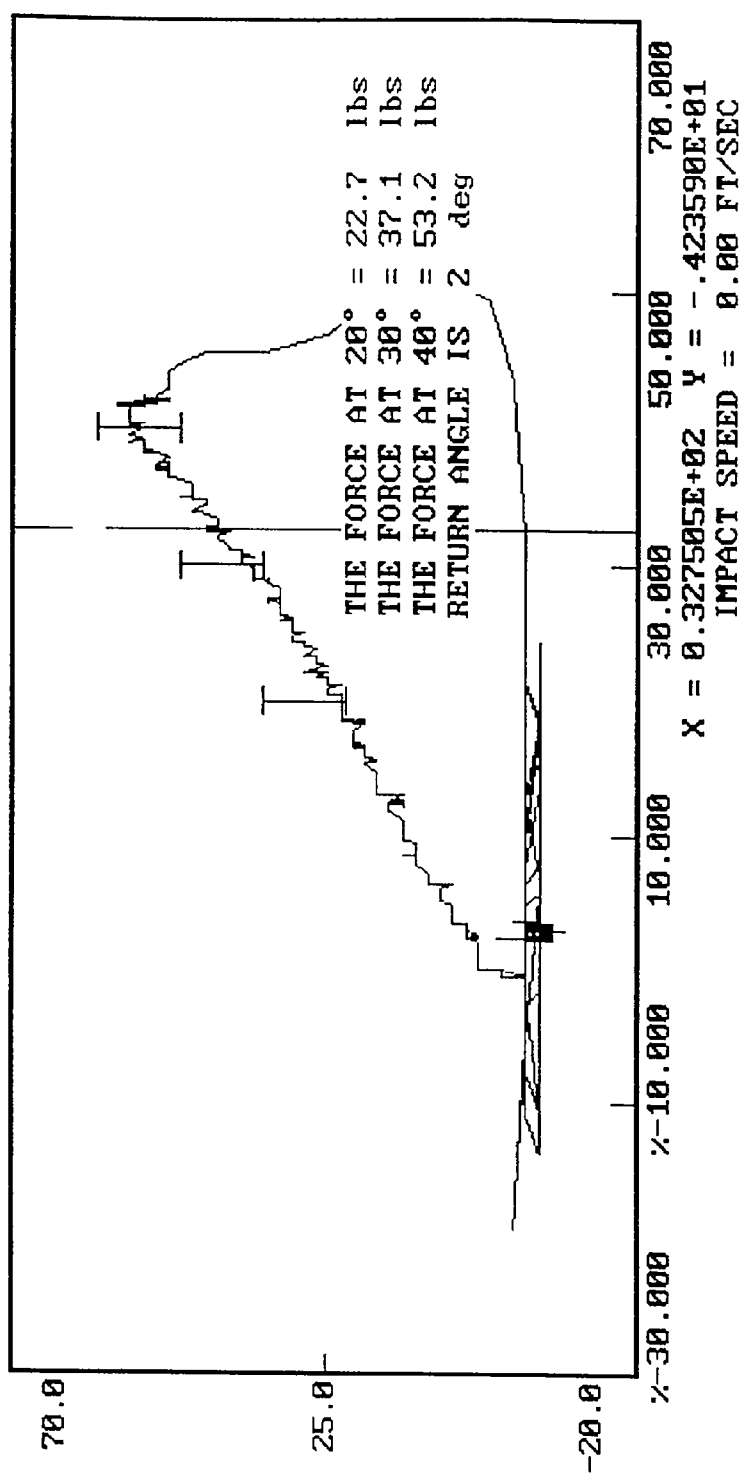
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	23
FORCE @ 30°	34 - 46 lbs	37
FORCE @ 40°	46 - 58 lbs	53
RETURN ANGLE	12° maximum	2°

TEST MEETS SPECIFICATIONS

TECHNICIAN Jim M. L.

APPROVED BY Steve Korboske

DUMMY CALIBRATION - LUMBAR FLEXION
 DUMMY # 272
 11-27-1996 14:33
 FORCE (LBS) VS. TORSO ROTATION (DEGREES)



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: December 3, 1996

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH - Seated Height	35.0" - 35.8"	35.4
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"	15.0

MEASUREMENTS BY: Tim McIl...

APPROVED BY: Rene Kabata

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: December 3, 1996

DUMMY NUMBER: 271

TEST NUMBER: D961982

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	25%
PROBE SPEED	13.8 - 14.2 fps	14.0
UPPER RIB	37 - 46 g's	43
LOWER RIB	37 - 46 g's	44
LOWER SPINE	15 - 22 g's	21

TEST MEETS SPECIFICATIONS

TECHNICIAN

Tim Hill

APPROVED BY

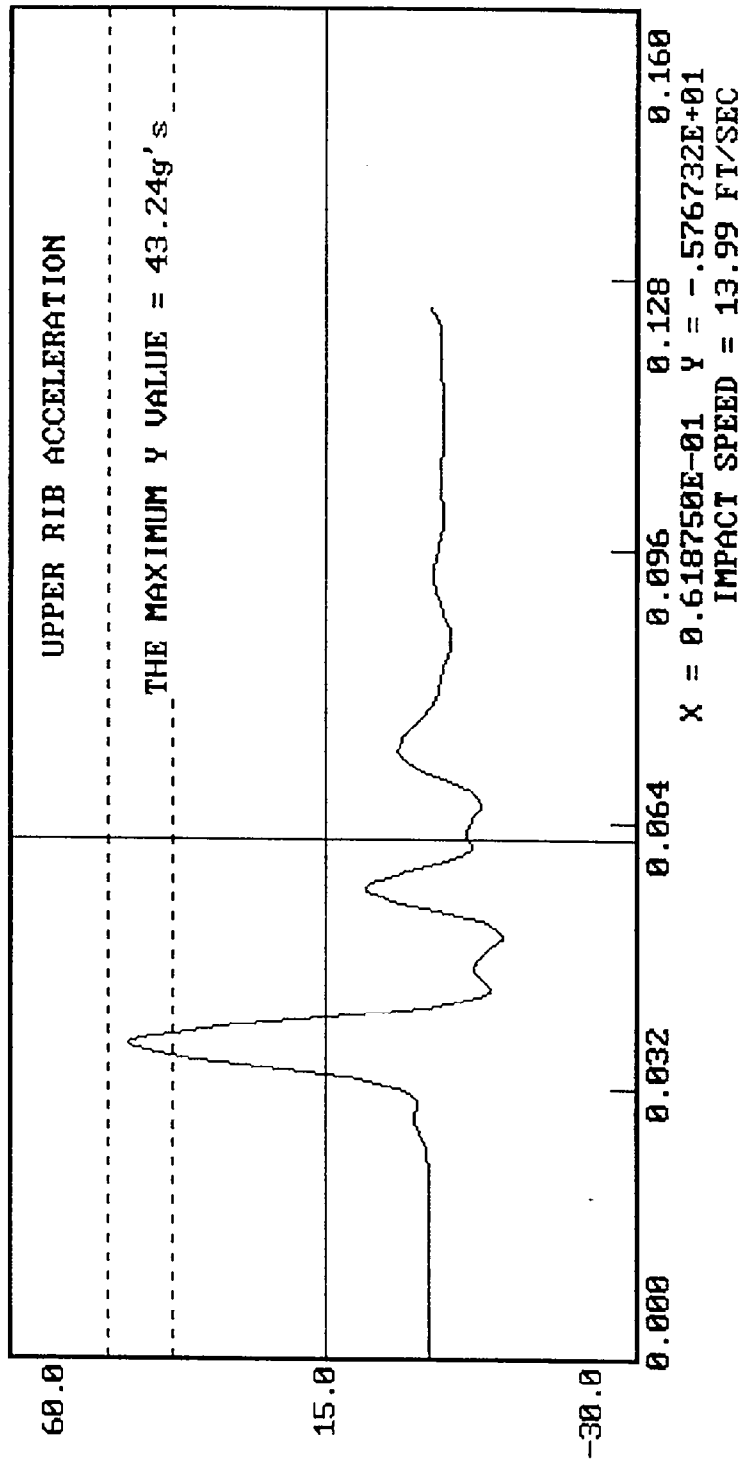
Gene Kabake

12-03-1996 12:18

DUMMY CALIBRATION - THORAX IMPACT

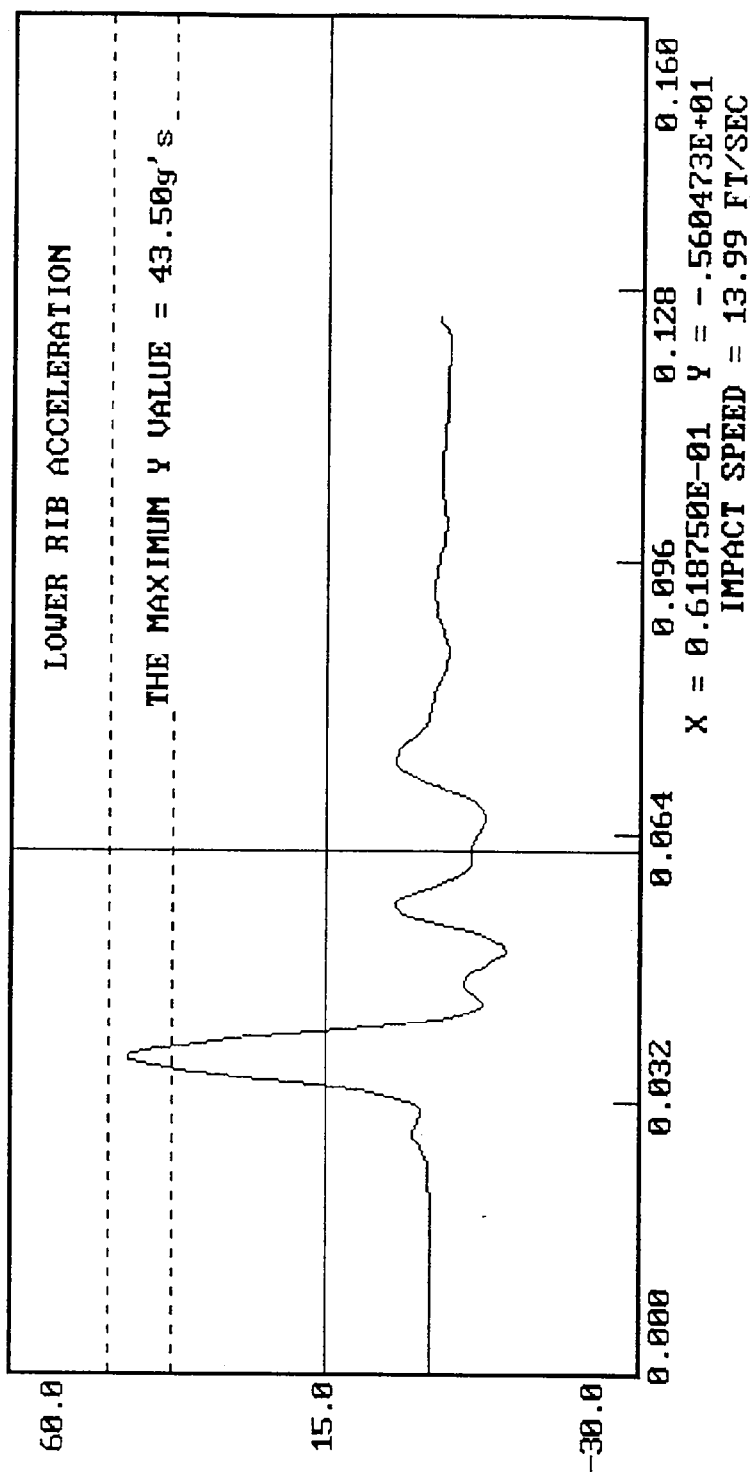
DUMMY # 271

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



DUMMY CALIBRATION - THORAX IMPACT
DUMMY # 271
12-03-1996 12:18

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

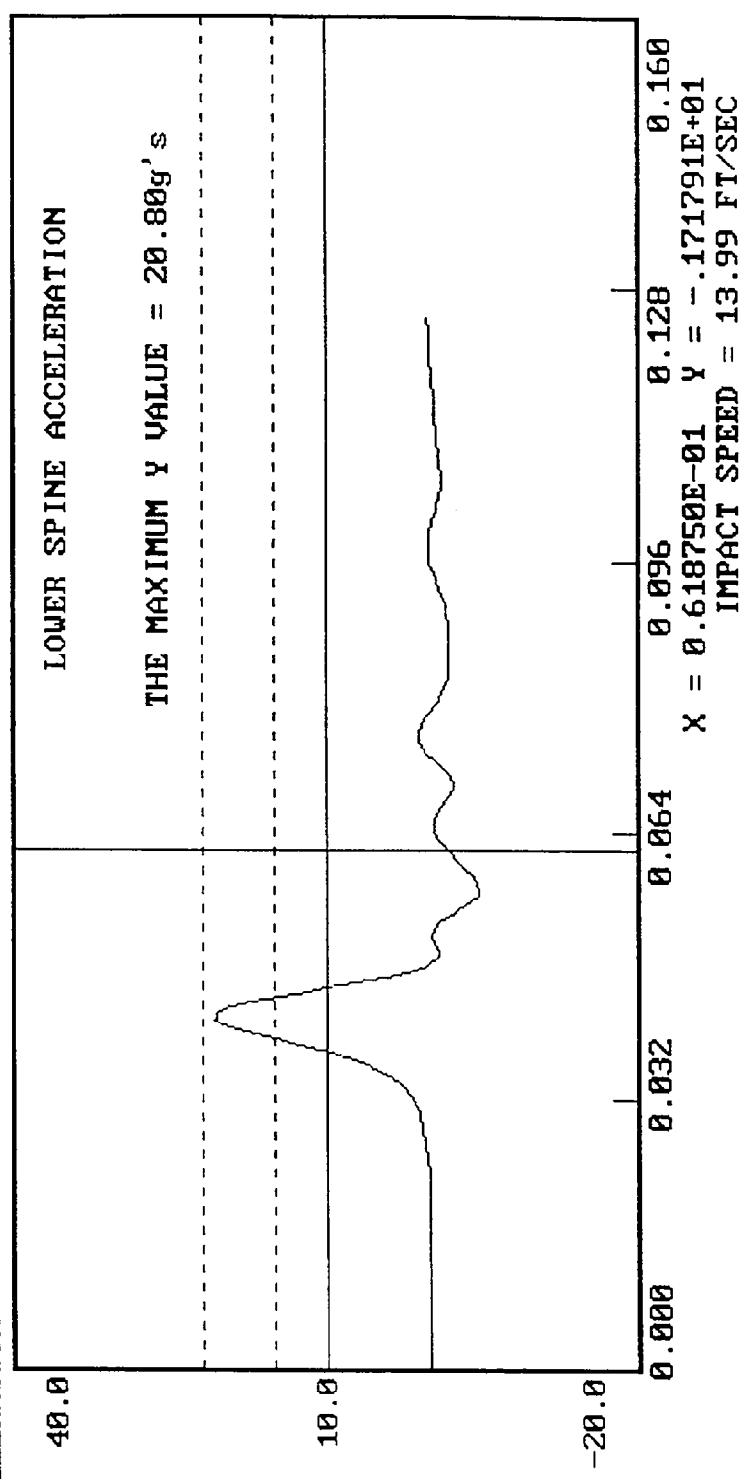


12-03-1996 12:28

DUMMY CALIBRATION - THORAX IMPACT

DUMMY # 271

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



MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: December 3, 1996

DUMMY NUMBER: 271

TEST NUMBER: D961983

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	25%
PROBE SPEED	13.8 - 14.2 f/s	14.0
PELVIS ACCELERATION	40 - 60 g's	48

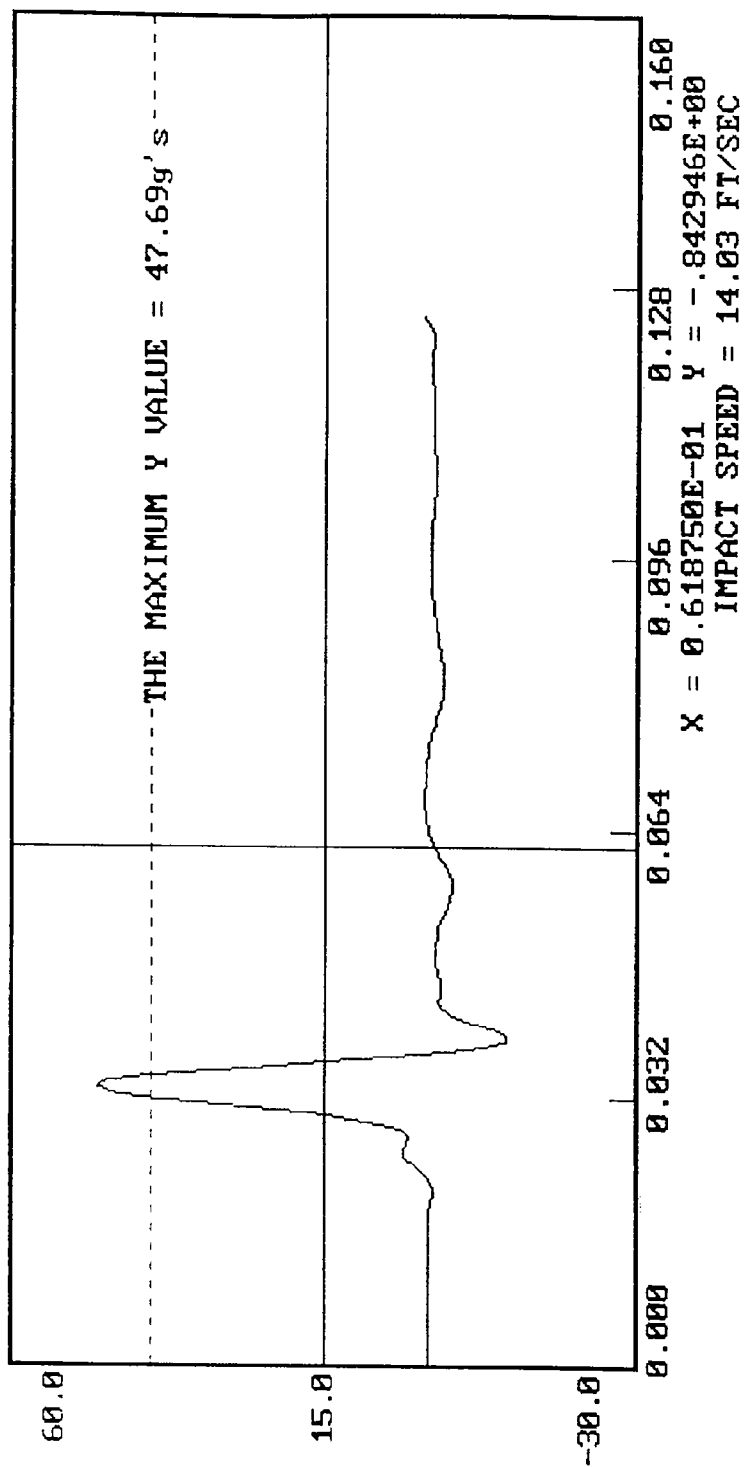
TEST MEETS SPECIFICATIONS

TECHNICIAN Tim McDaniel

APPROVED BY Paul Krabake

12-03-1996 12:25

DUMMY CALIBRATION - PELVIS IMPACT
DUMMY # 271
ACCELERATION (G'S) VS. TIME ((SECONDS))



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

DATE: December 3, 1996

DUMMY NUMBER: 271

TEST NUMBER: D961984

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
FORCE @ 0.5 in	23.3 - 36.5 lbs	30.0
FORCE @ 0.75 in	36.7 - 49.8 lbs	41.7
FORCE @ 1.0 in	50 - 63 lbs	54
FORCE @ 1.3 in	73 - 88 lbs	75

TEST MEETS SPECIFICATIONS

TECHNICIAN

Jim M. Hill

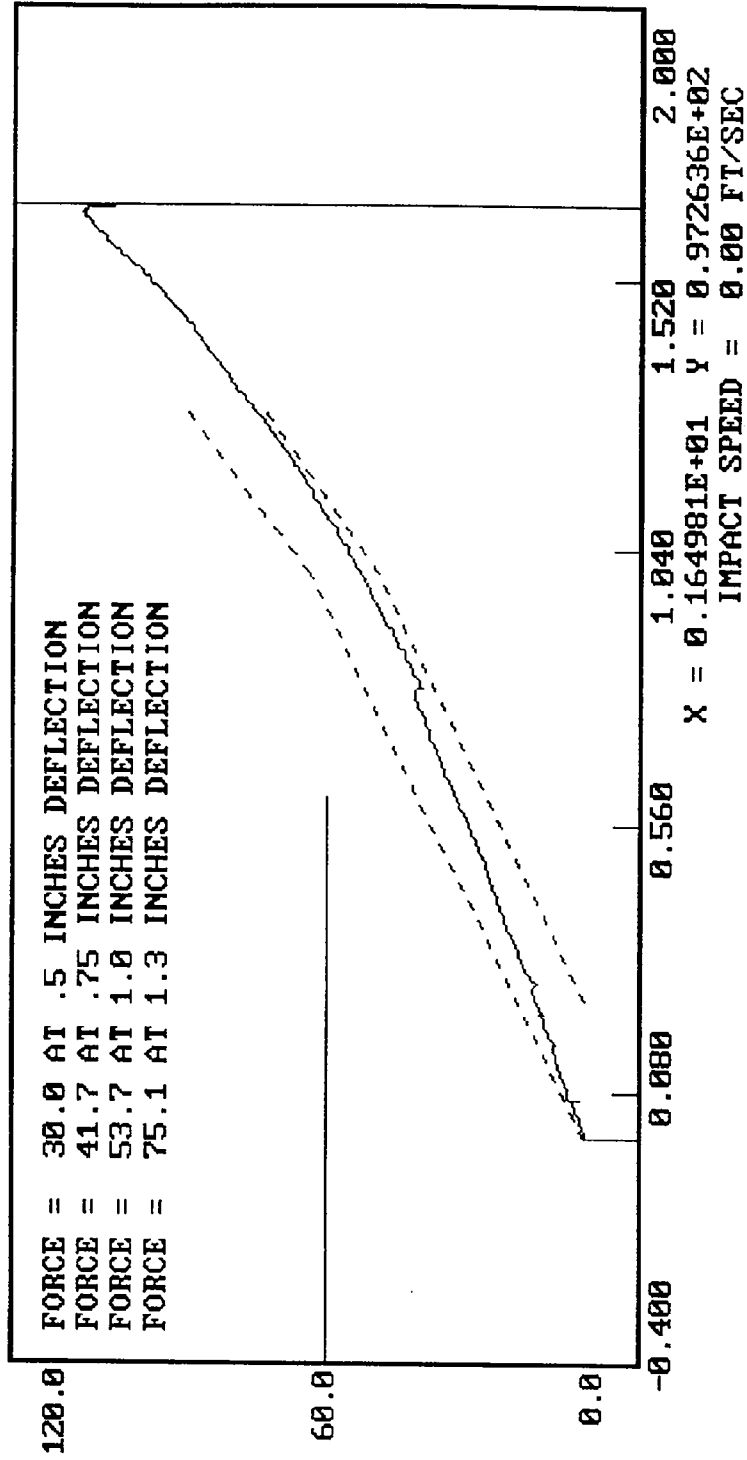
APPROVED BY

Dave Kuslaka

DUMMY CALIBRATION - ABDOMEN COMPRESSION
 DUMMY # 271

12-03-1996 10:48

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



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: December 3, 1996

DUMMY NUMBER: 271

TEST NUMBER: D961985

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	28
FORCE @ 30°	34 - 46 lbs	40
FORCE @ 40°	46 - 58 lbs	51
RETURN ANGLE	12° maximum	1°

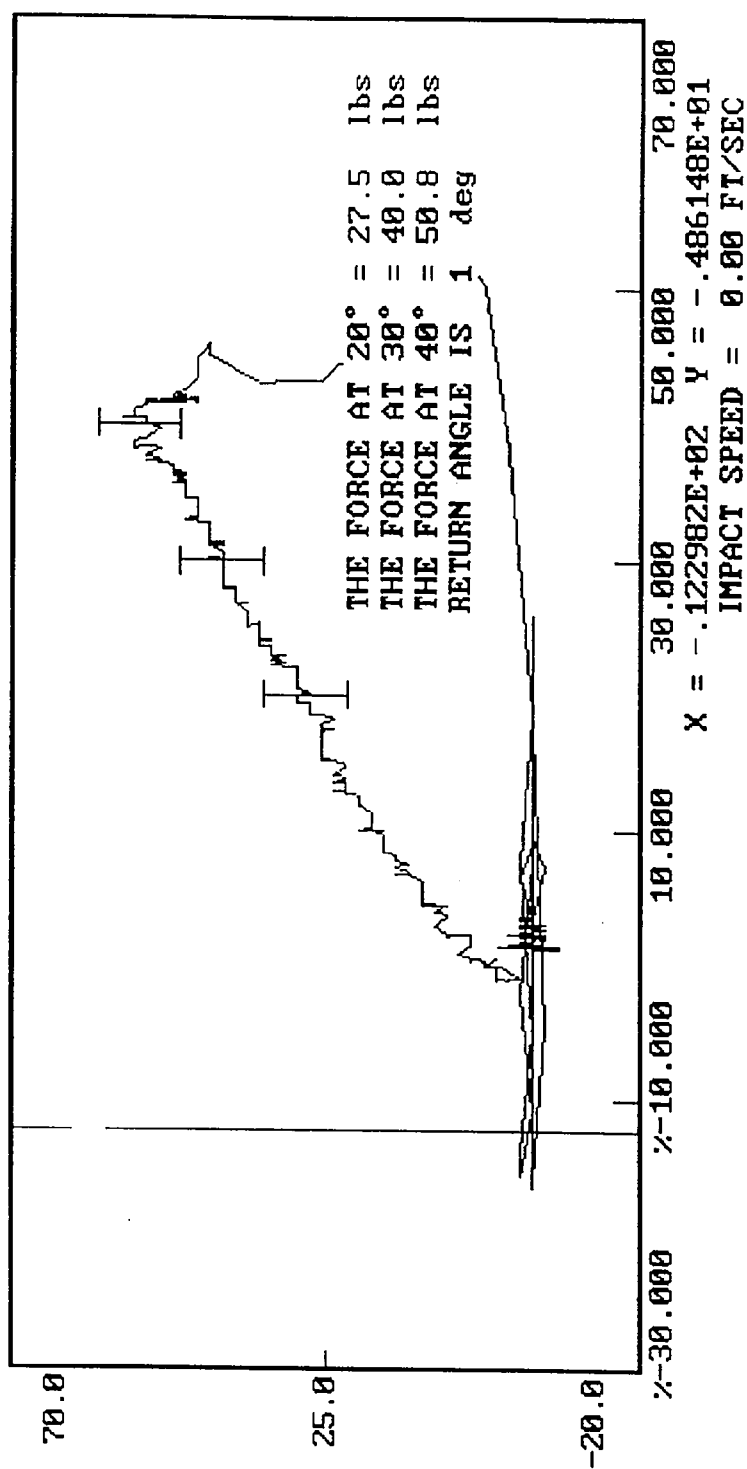
TEST MEETS SPECIFICATIONS

TECHNICIAN Tim McLean

APPROVED BY Gene Korbach

DUMMY CALIBRATION - LUMBAR FLEXION
 DUMMY # 271
 FORCE (LBS) VS. TORSO ROTATION (DEGREES)

12-03-1996 10:07



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.

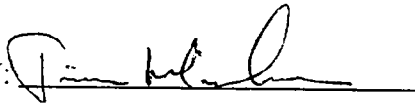
SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 272

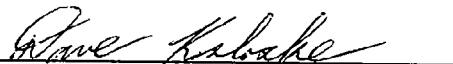
DATE OF VERIFICATION: December 3, 1996

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: December 3, 1996

DUMMY NUMBER: 272

TEST NUMBER: D961992

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
PROBE SPEED	13.8 - 14.2 fps	14.0
UPPER RIB	37 - 46 g's	44
LOWER RIB	37 - 46 g's	44
LOWER SPINE	15 - 22 g's	21

TEST MEETS SPECIFICATIONS

TECHNICIAN

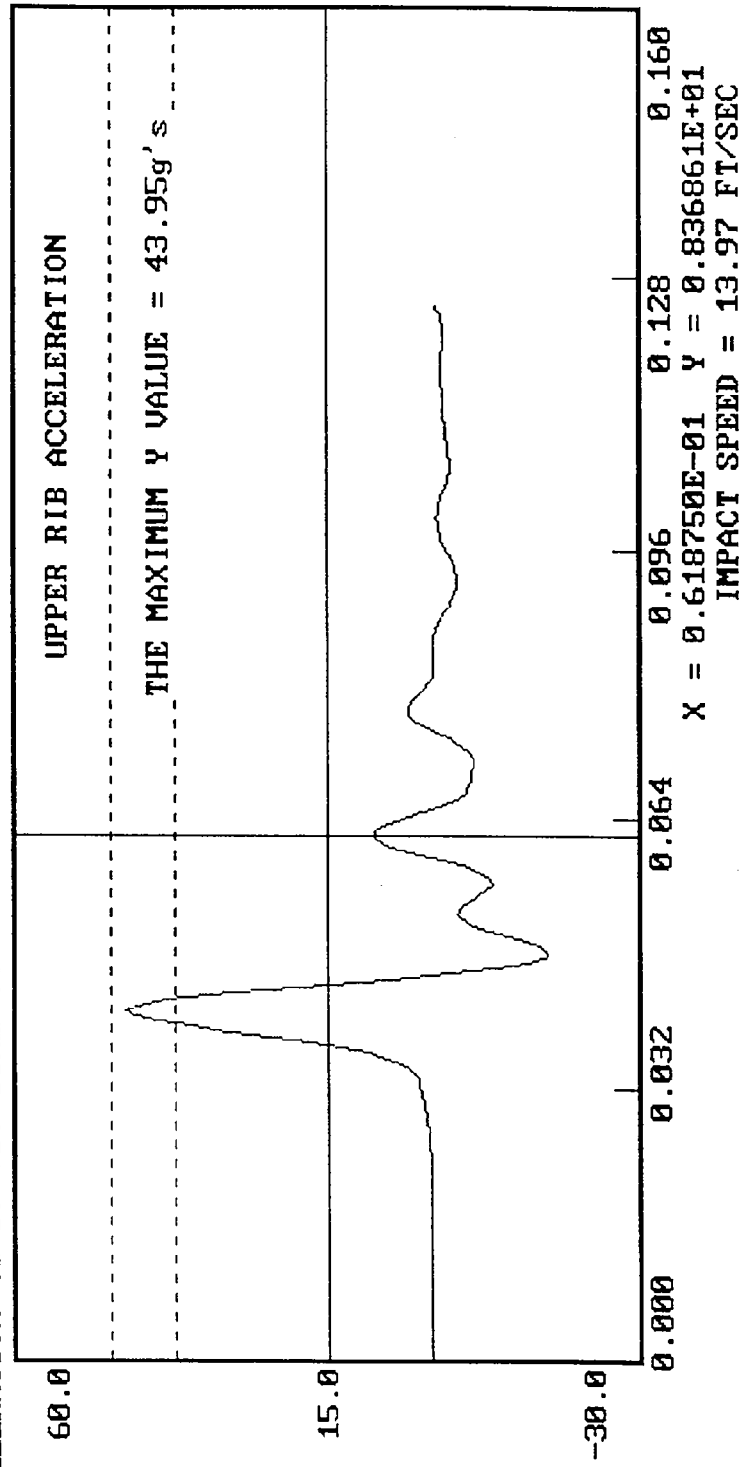
Tim M. L.

APPROVED BY

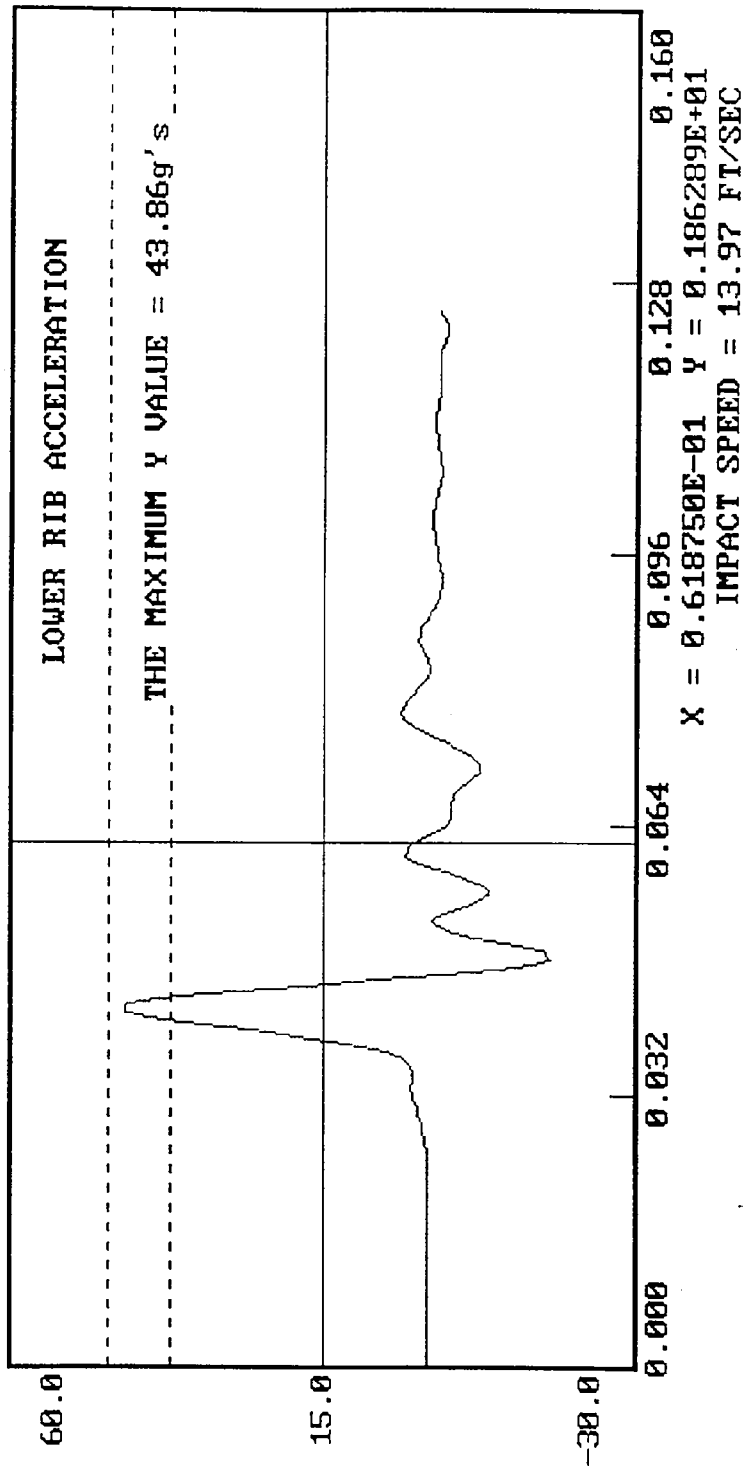
Paul H. H.

12-03-1996 11:41

DUMMY CALIBRATION - THORAX IMPACT
DUMMY # 272
ACCELERATION (G'S) VS. TIME ((SECONDS))

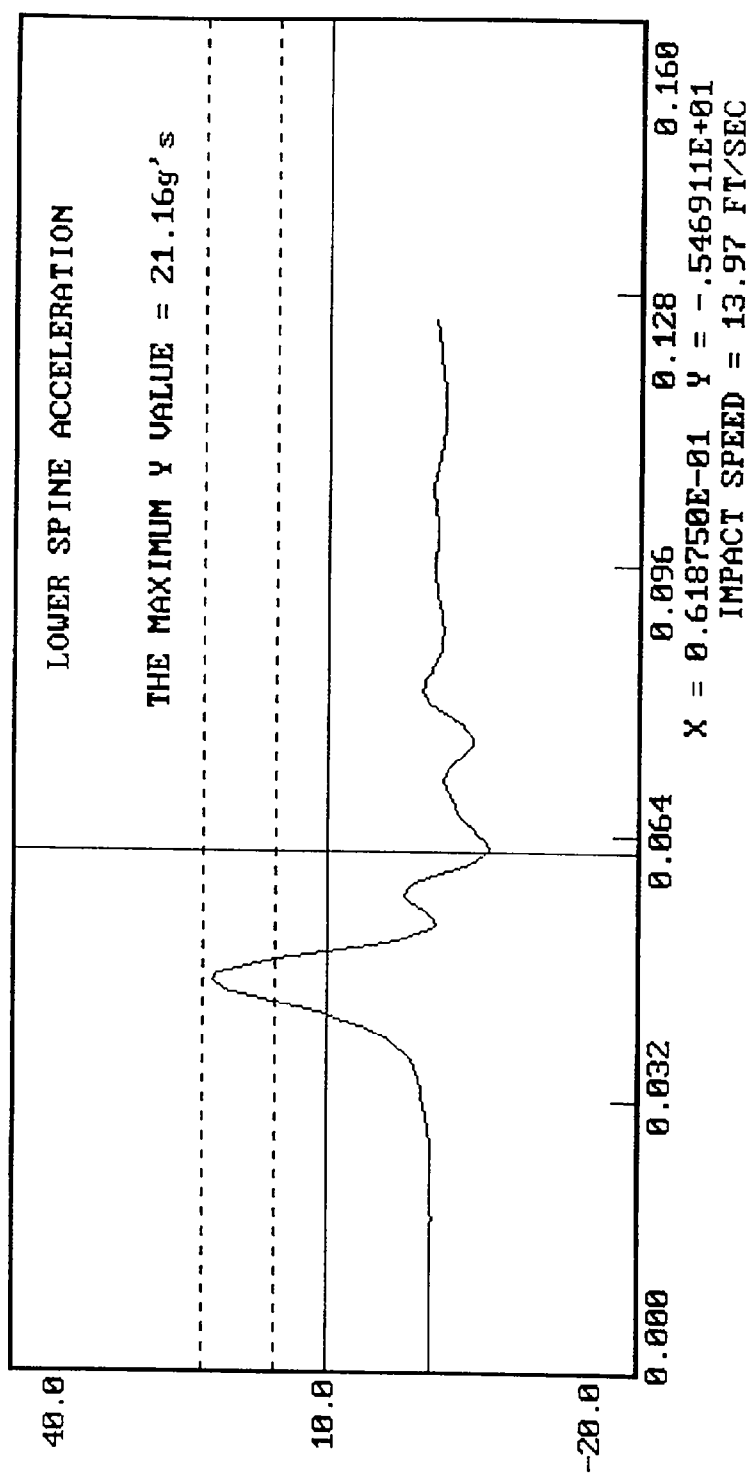


DUMMY CALIBRATION - THORAX IMPACT
 DUMMY # 272
 12-03-1996 11:41
 ACCELERATION (G'S) VS. TIME ((SECONDS))



DUMMY CALIBRATION - THORAX IMPACT
 DUMMY # 272
 ACCELERATION (G'S) VS. TIME ((SECONDS))

12-03-1996 11:49



MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: December 3, 1996

DUMMY NUMBER: 272

TEST NUMBER: D961993

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	25%
PROBE SPEED	13.8 - 14.2 f/s	14.0
PELVIS ACCELERATION	40 - 60 g's	48

TEST MEETS SPECIFICATIONS

TECHNICIAN

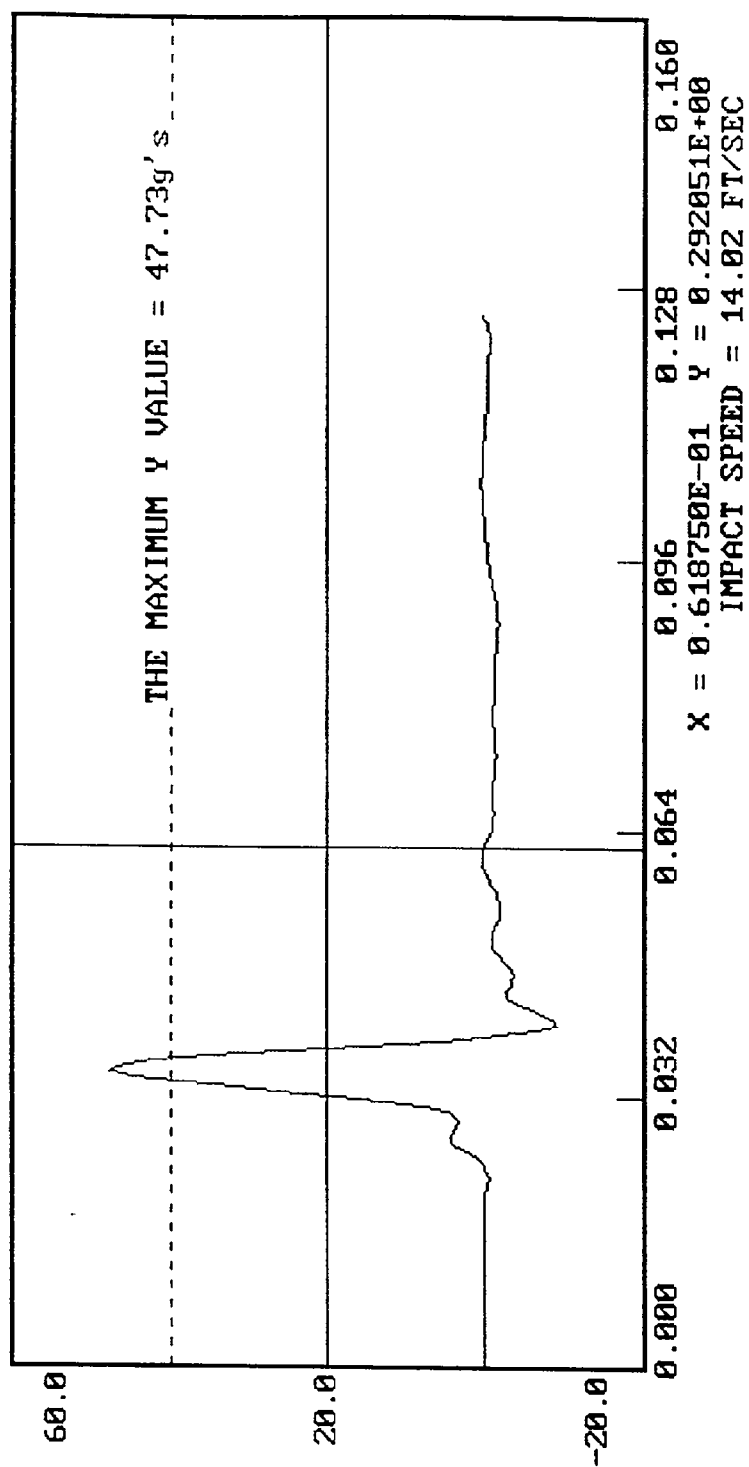
Tim Kukulski

APPROVED BY

Dore Kukulski

12-03-1996 11:57

DUMMY CALIBRATION - PELVIS IMPACT
DUMMY # 272
ACCELERATION (G'S) VS. TIME ((SECONDS))



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

DATE: December 3, 1996

DUMMY NUMBER: 272

TEST NUMBER: D961994

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
FORCE @ 0.5 in	23.3 - 36.5 lbs	30.6
FORCE @ 0.75 in	36.7 - 49.8 lbs	42.3
FORCE @ 1.0 in	50 - 63 lbs	56
FORCE @ 1.3 in	73 - 88 lbs	77

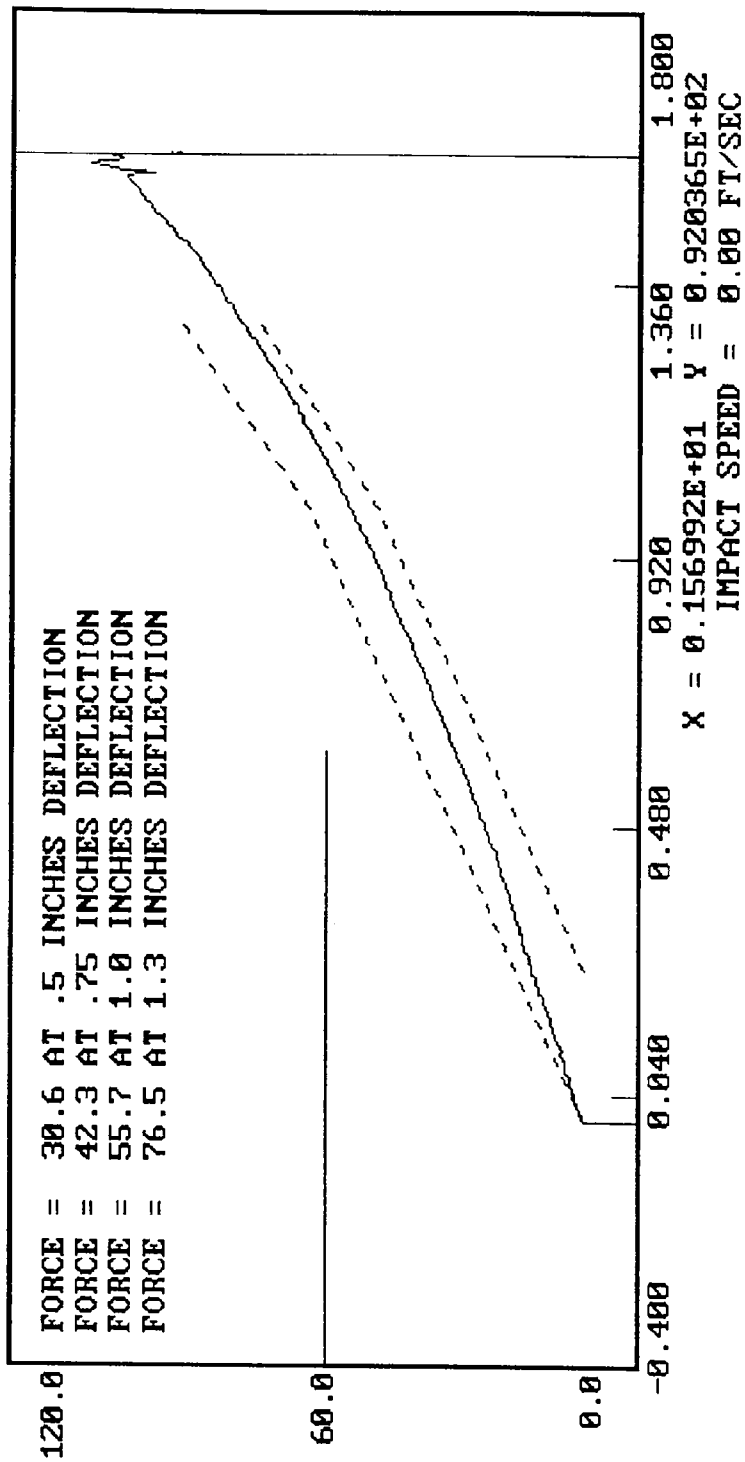
TEST MEETS SPECIFICATIONS

TECHNICIAN Jim Milh

APPROVED BY Gene Korbake

DUMMY CALIBRATION - ABDOMEN COMPRESSION
 DUMMY # 272
 12-03-1996 10:44

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



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

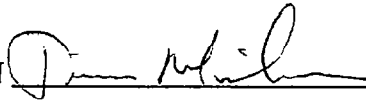
DATE: December 3, 1996

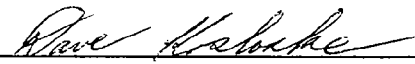
DUMMY NUMBER: 272

TEST NUMBER: D961995

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	26
FORCE @ 30°	34 - 46 lbs	35
FORCE @ 40°	46 - 58 lbs	53
RETURN ANGLE	12° maximum	1°

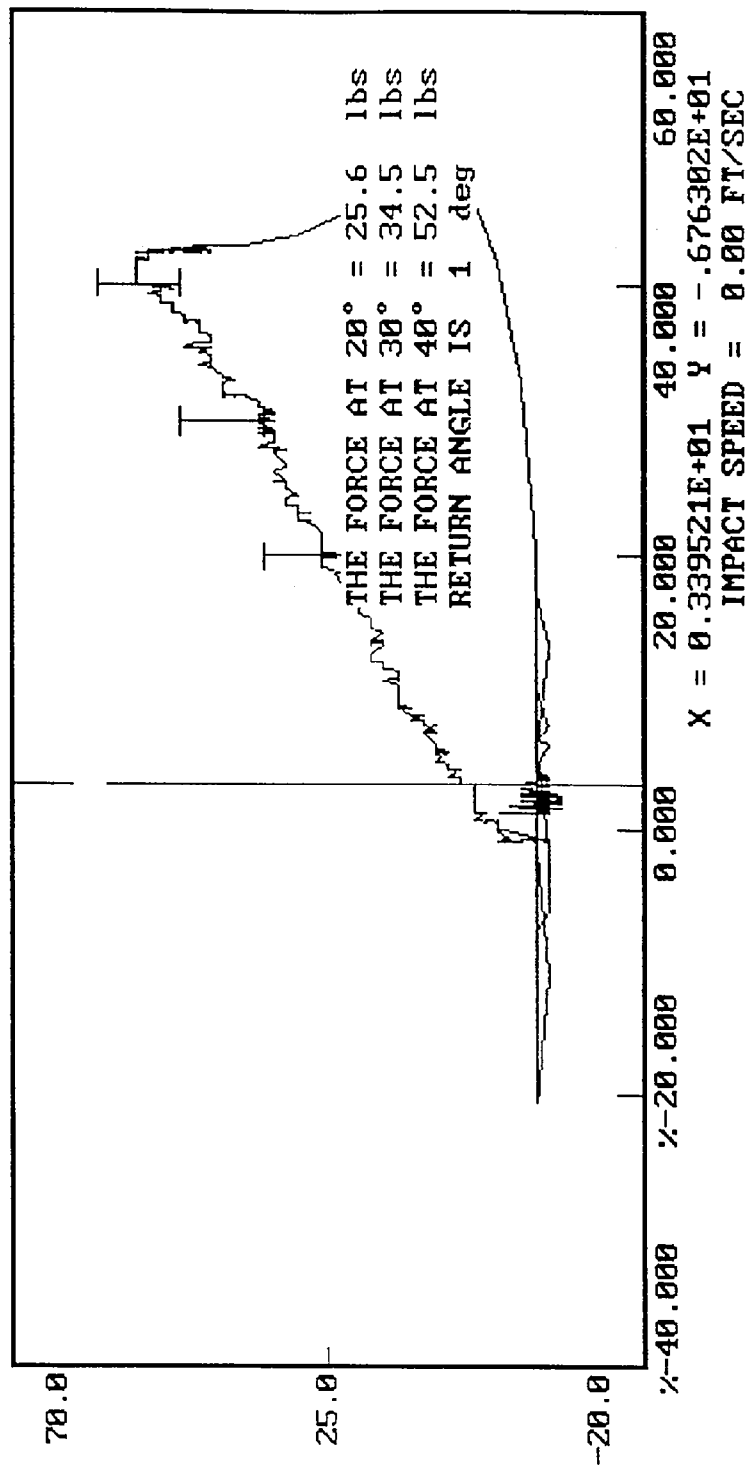
TEST MEETS SPECIFICATIONS

TECHNICIAN 

APPROVED BY 

12-03-1996 10:21

DUMMY CALIBRATION - LUMBAR FLEXION
DUMMY # 272
FORCE (LBS) VS. TORSO ROTATION (DEGREES)



POST-TEST DRIVER DUMMY INSPECTION CHECKLIST

Type: Side Impact Dummy

Serial Number: 271

Inspected By: Tim Michnay

Date: December 3, 1996

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

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

POST-TEST PASSENGER DUMMY INSPECTION CHECKLIST

Type: Side Impact Dummy

Serial Number: 272

Inspected By: Tim Michnay

Date: December 3, 1996

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

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

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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	9/16/96
Lower Rib Y	AP1B3	Endevco	9/16/96
Lower Spine Y	ANAP1	Endevco	9/16/96
Pelvis Y	AHTC3	Endevco	9/16/96
Upper Rib Redundant Y	AP2D8	Endevco	9/16/96
Lower Rib Redundant Y	AP1C6	Endevco	9/16/96
Lower Spine Redundant Y	ANAT6	Endevco	9/16/96
Pelvis Redundant Y	AGP53	Endevco	9/16/96

INSTRUMENTS FOR PASSENGER DUMMY NO. 272

	LEFT REAR PASSENGER		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Upper Rib Y	ALFJ7	Endevco	7/12/96
Lower Rib Y	APYN0	Endevco	6/07/96
Lower Spine Y	AP0G2	Endevco	7/12/96
Pelvis Y	APY15	Endevco	9/16/96
Upper Rib Redundant Y	ALDD6	Endevco	7/12/96
Lower Rib Redundant Y	APYN3	Endevco	6/07/96
Lower Spine Redundant Y	AP138	Endevco	7/12/96
Pelvis Redundant Y	APY16	Endevco	9/16/96

VEHICLE INSTRUMENT CALIBRATION

	VEHICLE ACCELEROMETERS		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Moving Barrier CG X	C14-Z10	Entran	7/12/96
Moving Barrier CG Y	B14-R01	Entran	7/15/96
Moving Barrier CG Z	B14-R16	Entran	7/11/96
Moving Barrier Rear Axle X	B14-R03	Entran	7/11/96
Moving Barrier Rear Axle Y	A10-G01	Entran	6/04/96
Left Mid A-Post Y	B14-R12	Entran	7/15/96
Left Lower A-Post Y	B13-Z03	Entran	7/15/96
Left Mid B-Post Y	A09-G10	Entran	7/12/96
Left Lower B-Post Y	A10-G09	Entran	7/15/96
Rear Floorpan Above Axle X	D06-A09	Entran	7/03/96
Rear Floorpan Above Axle Y	D05-R01	Entran	7/03/96
Rear Floorpan Above Axle Z	C14-Z07	Entran	7/11/96
Driver Seat Track Y	L15-G03	Entran	10/02/96
Right Side Sill at Front Seat X	C14-Z08	Entran	7/11/96
Right Side Sill at Front Seat Y	B14-R09	Entran	7/15/96
Right Side Sill at Front Seat Z	E25-G11	Entran	10/01/96
Right Side Sill at Rear Seat X	A10-G08	Entran	7/12/96
Right Side Sill at Rear Seat Y	A09-G04	Entran	7/03/96
Right Side Sill at Rear Seat Z	B14-R14	Entran	7/11/96
Left Side Sill at Front Seat Y	MGA-095	Entran	7/11/96

VEHICLE INSTRUMENT CALIBRATION

	VEHICLE ACCELEROMETERS		
	SERIAL NO	MANUFACTURER	CALIBRATION DATE
Left Side Sill at Rear Seat Y	D05-R13	Entran	6/04/96
Right Rear Occupant Compartment Y	C05-Z10	Entran	7/11/96
Vehicle CG X	A15-Z16	Entran	6/04/96
Vehicle CG Y	C14-Z01	Entran	7/11/96
Vehicle CG Z	J23-E04	Entran	7/11/96
Left Front Door on Centerline	A09-G06	Entran	7/11/96
Left Front Door Midrear	A09-G01	Entran	7/15/96
Left Front Door Upper Centerline	B13-Z05	Entran	7/11/96
Left Rear Door Midrear	H16-X11	Entran	6/04/96
Left Rear Door Upper Centerline	C20-J10	Entran	7/11/96

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