REPORT NO.: 214D-MGA-97-06

2481

NEW CAR ASSESSMENT PROGRAM
SIDE IMPACT TESTING
PASSENGER CARS

1997 FORD CROWN VICTORIA
4-DOOR SEDAN
NHTSA NO: MV0204

MGA PROVING GROUNDS
5000 WARREN ROAD
BURLINGTON, WI 53105

Test Date: December 5, 1996

Report Date: December 31, 1996

FINAL REPORT

Prepared For:

U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
SAFETY PERFORMANCE STANDARDS
OFFICE OF CRASHWORTHINESS STANDARDS
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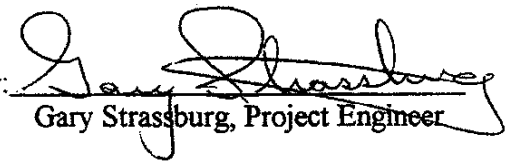
Prepared By: 
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Accepted By:_____
Contract Technical Manager

Acceptance Date:_____

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15. Supplementary Notes

16. Abstract

A 90° Moving Deformable Barrier NCAP side impact was conducted on the subject 1997 Ford Crown Victoria 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 5, 1996.

The impact velocity of the Moving Deformable Barrier (MDB) was 61.2 kph, and the ambient temperature at the struck side (driver's) of the target vehicle at the time of impact was 19.3 °C. The target vehicle post test maximum crush was 437 mm at level 2. The test vehicle's performance follows:

	DRIVER	PASS.
Left Upper Rib (LUR) Accel., g	69.3	57.4
Left Lower Rib (LLR) Accel., g	65.5	64.8
Lower Spine (T_{12}) Accel., g	67.8	60.6
Thoracic Trauma Index (TTI)	68.6	62.7
Pelvis (PEV) Accel., g	80.9	97.6

The doors on the struck side of the vehicle did not separate from the body at the hinges or latches and the opposite doors did not open during the side impact event.

17. Key Words New Car Assessment Program (NCAP) FMVSS No. 214D Side Impact Dummy (SID) Occupant Side Impact Protection	18. Distribution Statement Copies of this report are available from: National Highway Traffic Safety Adm. Technical Ref. Division, Room 5108 (NAD-52) 400 Seventh Street, S.W. Washington, D.C. 20590 Telephone No. 202-366-4946 Attn: Robert Hornickle		
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SECTION 1

PURPOSE AND TEST PROCEDURE

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

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 Crown Victoria was impacted on the left or driver's side by a Moving Deformable Barrier (MDB) which was moving forward in a 27° crabbed position to the tow road guidance system at a velocity of 38.0 mph (61.2 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 5, 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 (T_{12}) 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)	68.6	62.7
Pelvis (g)	80.9	97.6

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/Crown Victoria

Vehicle NHTSA No.: MV0204 VIN: 2FALP73W4VX107486

Vehicle Body Color: Blue Build Date: Unknown

Engine Data: 8 Cylinders; ___ CID; 4.6 Liter; ___cc

Placement X Longitudinal; ___ Lateral

Transmission: 3 Speed; _ Manual; X Automatic; X Overdrive

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

Odometer Reading 65 miles

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

DATA FROM TIRE PLACARD:

Tire Pressure (at capacity): 32 Psi FRONT
35 Psi REAR

Recommended Tire Size: P215/70/R15

Tires on Test Vehicle: P215/70/R15 Manufacturer: Michelin

Vehicle Capacity Data:

Number of Occupants: 3 Front; 3 Rear; ___ 3rd Seat, 6 Total

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

Type of Front Seat Back: ___ Fixed; X Adjustable with_ Lever X Power

Vehicle Maximum Capacity Loading = 499 kg (A)

No. of Occupants x 68.04 kg. = 408.2 kg (B)

Cargo Capacity (A-B) = 90.8 kg

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

WEIGHT OF TEST VEHICLE WITH MAXIMUM FLUIDS:

Right Front	= 482.2 kg	Right Rear	= 395.5 kg
Left Front	= 498.5 kg	Left Rear	= 372.4 kg
TOTAL FRONT =	908.7 kg	TOTAL REAR =	767.9 kg
% of Total Vehicle Weight =	56.1 %;	% of Total Weight =	43.9 %

TOTAL WEIGHT = 1748.6 kg

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

Year/Make/Model/Body Style: 1997/Ford/Crown Victoria

Vehicle NHTSA No.: MV0204 Test Date: December 5, 1996

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Test Vehicle Delivered Weight with Maximum Fluids	= 1748.6 kg
Cargo Carrying Capacity of Test Vehicle	= 90.8 kg
Weight of 2 Side Impact Dummies (2 x 80.7 kg.)	= 161.4 kg
TEST VEHICLE TARGET WEIGHT	= 2000.8 kg

ACTUAL WEIGHT OF TEST VEHICLE WITH 2 DUMMIES AND CARGO:

Right Front	= 503.0 kg	Right Rear	= 460.9 kg
Left Front	= 548.9 kg	Left Rear	= 482.2 kg
TOTAL FRONT	= 1051.9 kg	TOTAL REAR	= 943.1 kg
% of Total Weight	= 52.7 %	% of Total Weight	= 47.3 %

TOTAL TEST WEIGHT = 1995.0 kg

TEST VEHICLE ATTITUDE:

CURB WEIGHT ATTITUDE:

Right Front 745 mm Left Front 755 mm Right Rear 750 mm Left Rear 741 mm

FULLY LOADED WEIGHT ATTITUDE:

Right Front 742 mm Left Front 740 mm Right Rear 709 mm Left Rear 685 mm

TEST ATTITUDE:

Right Front 743 mm Left Front 740 mm Right Rear 717 mm Left Rear 695 mm

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

Test Vehicle Wheelbase: 2908 mm

C.G. = 1375 mm rearward of front wheel centerline

TOTAL VEHICLE LENGTH:

Right Side = 5146 mm

Centerline = 5308 mm

Left Side = 5146 mm

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

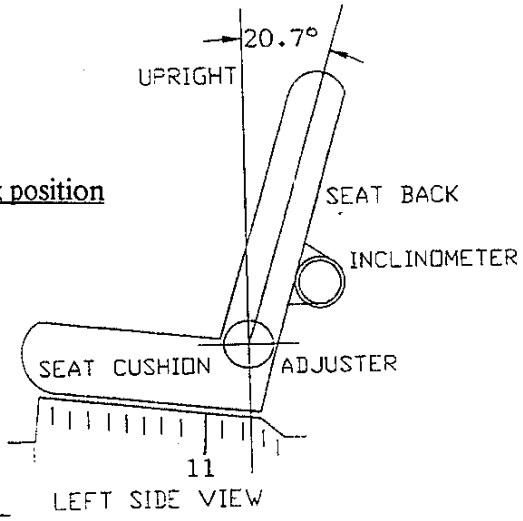
Year/Make/Model/Body Style: 1997/Ford/Crown Victoria

Vehicle NHTSA No.: MV0204 Test Date: December 5, 1996

FRONT SEAT CUSHION PLACEMENT:

Total Length of Adjustment Travel: 260 mm

Test Position: 11th notch from foremost locking position



FRONT SEAT BACK ADJUSTMENT POSITION:

Seat Back Angle = 20.7°

SECOND POSITION SEAT:

Total Length of Fore/Aft Adjustment Travel: 0

Seat Back Adjustment Position: N/A

ADJUSTABLE STEERING COLUMN POSITION:

3rd position out of 5 positions

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 = 75.7 gallons

Test Volume: 70.4 liters 93 % of capacity

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

Wheelbase: = 2908 mm

Impact Point is 508 mm rearward of front axle centerline

DATA SHEET NO. 2

TEST VEHICLE SUMMARY OF RESULTS

Year/Make/Model/Body Style: 1997/Ford/Crown Victoria

Vehicle NHTSA No.: MV0204 Test Date: December 5, 1996

Overall Length = 5308 mm; Overall Width = 1982 mm

TEST WEIGHT:

Right Front	= 503.0 kg	Right Rear	= 460.9 kg
Left Front	= 548.9 kg	Left Rear	= 482.2 kg
TOTAL FRONT	= 1051.9 kg	TOTAL REAR	= 943.1 kg
% of Total Weight =	52.7 %	% of Total Weight =	47.3 %

TOTAL VEHICLE WEIGHT = 1995.0 kg

Wheelbase = 2908 mm

Longitudinal C.G. from Center of Front Axle = 1375 mm

Impact Angle with Respect to Impactor = 90 ° degrees

MAXIMUM EXTERIOR STATIC CRUSH:

1. LEVEL 1 (289 mm above ground) = 337 mm
2. LEVEL 2 (533 mm above ground) = 437 mm
3. LEVEL 3 (608 mm above ground) = 435 mm
4. LEVEL 4 (920 mm above ground) = 371 mm
5. LEVEL 5 (1392 mm above ground) = 135 mm

Maximum Post-Test Intrusion = 437 mm

OCCUPANTS:	Left Front Passenger	Left Rear Passenger
Type of Dummy	SID	SID
Restraints Used	type II belt and airbag	type II belt and airbag

TEST VEHICLE SUMMARY OF RESULTS (Cont'd)

INSTRUMENTATION:

Number of Vehicle Data Channels:		= 26
Number of Cameras:	Onboard Vehicle	= 3
	Offboard Vehicle	= 4
	Deformable Barrier	= 2
	TOTAL	= 9

DATA SHEET NO. 3

MOVING DEFORMABLE BARRIER (MDB) SUMMARY OF RESULTS

Year/Make/Model/Body Style: 1997/Ford/Crown Victoria

Vehicle NHTSA No.: MV0204 Test Date: December 5, 1996

POSITION OF IMPACT (MDB) ON MONORAIL:

Crabbed 27° to left

MDB DETAILS:

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

MDB WEIGHT:

Left Front	= 496.7 kg	Left Rear	= 187.3 kg
Right Front	= 283.0 kg	Right Rear	= 389.2 kg
TOTAL FRONT = 779.7 kg		TOTAL REAR = 576.5 kg	

TOTAL MDB WEIGHT = 1356.2 kg

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

Impact Speed = Primary: 38.04 mph (61.2 kph) Secondary: 38.07 mph (61.3 kph)

CRASH TEST SUMMARY FOR SIDE IMPACTOR (Cont'd)

MAXIMUM STATIC CRUSH OF HONEYCOMB IMPACT FACE:

1. Row A Top of Stack (813 mm) = 135 mm
2. Row B Mid Stack (686 mm) = 127 mm
3. Row C Top of Bumper (533 mm) = 113 mm
4. Row D Center of Bumper (432 mm) = 161 mm

INSTRUMENTATION:

Number of MDB Data Channels = 5

DATA SHEET NO. 4

POST-TEST OBSERVATIONS

Year/Make/Model/Body Style: 1997/Ford/Crown Victoria

Vehicle NHTSA No.: MV0204 Test Date: December 5, 1996

VISIBLE DUMMY CONTACT POINTS:

	LEFT FRONT SID	LEFT REAR SID
Head	to window sill	to C-Post, D-post
Arm	to door and armrest	to door
Pelvis	to door and armrest	to armrest
Left Knee	to door	to door
Right Knee	to left knee	to left knee

DOOR OPENING:

	LEFT SIDE	RIGHT SIDE
Front	Remained closed	Remained closed
Rear	Remained closed	Remained closed

MDB DISTANCE FROM TARGET IMPACT POINT:

Horizontal: 6 mm rearward Vertical: 11 mm high

ARM REST LOCATIONS:

Front: 250 mm from bottom of window

Rear: 260 mm from bottom of window

POST-TEST OBSERVATIONS (Cont'd)

SEAT CRUSH:

Front Seat Back: 165 mm Front Seat Cushion: 97 mm

Left Rear Seat Back: 225 mm Rear Seat Cushion: 210 mm

GLAZING DAMAGE:

Left windows broke, windshield cracked

PILLAR PERFORMANCE:

No separation noted

SILL SEPARATION:

None noted

OTHER NOTABLE IMPACT EFFECTS:

SECTION 4
OCCUPANT AND VEHICLE INFORMATION

DATA SHEET NO. 5

SIDE IMPACT DUMMY (SID) INSTRUMENTATION DATA

Year/Make/Model/Body Style: 1997/Ford/Crown Victoria

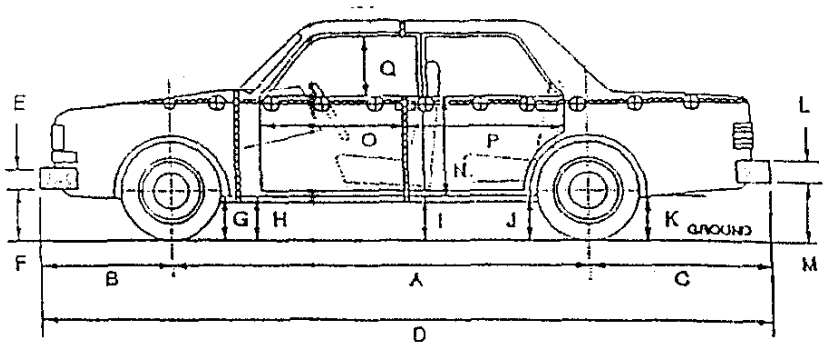
Vehicle NHTSA No.: MV0204 Test Date: December 5, 1996

	Front Dummy ID # 269				Rear Dummy ID # 270			
	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	69.3	41	-11.7	85	57.4	51	-7.6	100
Left Lower Rib (LLR) Y	65.5	40	-10.9	100	64.8	49	-19.5	76
SPINE ACCELERATIONS								
Lower Lateral Y	67.8	42	-21.4	76	60.6	46	-24.2	72
PELVIS ACCELERATIONS								
Lateral Y	80.9	35	-27.3	96	97.6	40	-17.0	89

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

DATA SHEET NO. 6

VEHICLE PRE AND POST-TEST MEASUREMENTS



LEFT SIDE VIEW

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	2908	2904	4
B	1022	1034	-12
C	1378	1320	-58
D	5308	5258	50
E	230	232	-2
F	353	374	-21
G	247	241	6
H	202	187	15
I	202	191	11
J1/J2	212/200	197/190	15/10
K	266	290	-24
L	268	270	-2
M	293	311	-18
N	695	650	45
O	715	695	20
P	1230	1035	195
Q	480	460	20
R	5146	5052	94
S	5146	5070	76
T	1982	1647	335

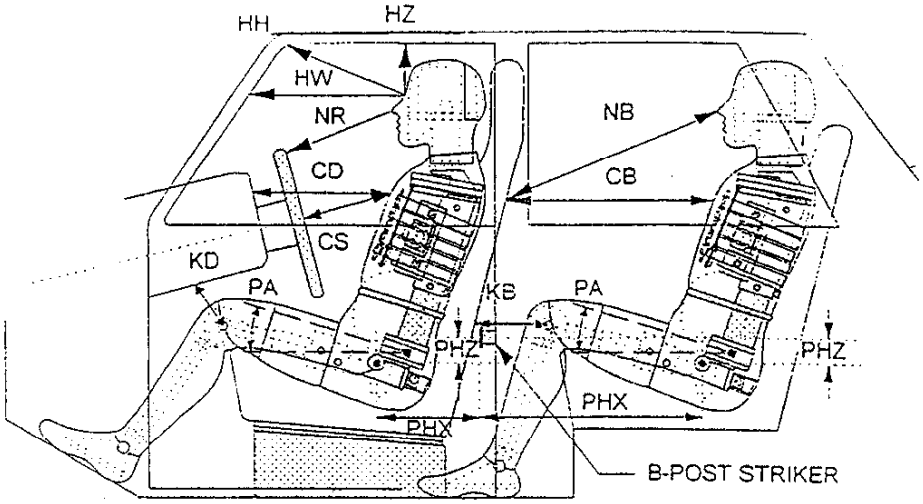
* Trim (measurement point) detached during impact.

DATA SHEET NO. 7

SIDE IMPACT DUMMY (SID) LONGITUDINAL CLEARANCE DIMENSIONS

Year/Make/Model/Body Style: 1997/Ford/Crown Victoria

NHTSA NO.: MV0204 Test Date: December 5, 1996



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

	DRIVER SID ID # 269
HH	361
HW	596
HZ	184
NR	385
CD	531
CS	290
KDL(KDA°)	148 (26.1°)
KDR(KDA°)	151 (27.9°)
PA°	23.9°
PHX	185
PHZ	116

	LEFT REAR PASSENGER SID ID # 270
HZ	178
NB	631
CB	558
KBL (KBA)	242 (0°)
KBR (KBA)	264 (0°)
PA°	24.5°
PHX	198
PHZ	301

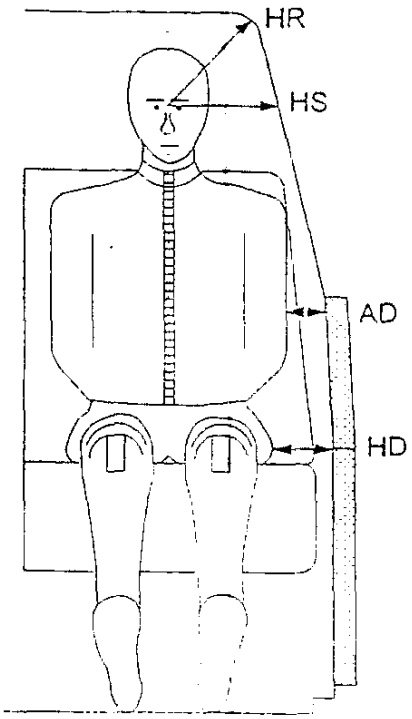
NOTE: 2-door vehicle shown. Rear dummy PHX & PHZ measurements for 4-door vehicle would use the C-post striker as reference point.

DATA SHEET NO. 8

SIDE IMPACT DUMMY (SID) LATERAL CLEARANCE DIMENSIONS

Year/Make/Model/Body Style: 1997/Ford/Crown Victoria

NHTSA NO.: MV0204 Test Date: December 5, 1996



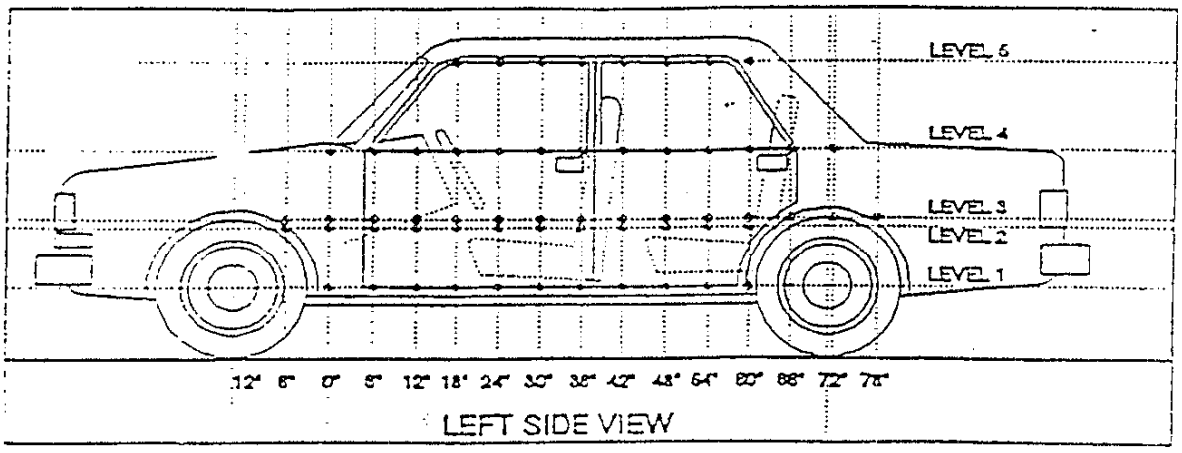
NOTE: All dimensions are in mm

	DRIVER SID ID # 269	LEFT REAR PASSENGER SID ID # 270
HR	209	216
HS	344	265
AD	135	117
HD	179	187

DATA SHEET NO. 9
VEHICLE SIDE MEASUREMENTS

Year/Make/Model/Body Style: 1997/Ford/Crown Victoria

NHTSA NO.: MV0204 Test Date: December 5, 1996



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

MEASUREMENTS ALONG THE VERTICAL 750 mm. LINE SHOWN ABOVE

Level 5 @ Window Top	= 1392 mm
Level 4 @ Window Sill	= 920 mm
Level 3 @ Mid Door	= 608 mm
Level 2 @ Occupant H-Point	= 533 mm
Level 1 @ Axle Centerline Height (or Sill Top Height)	= 289 mm

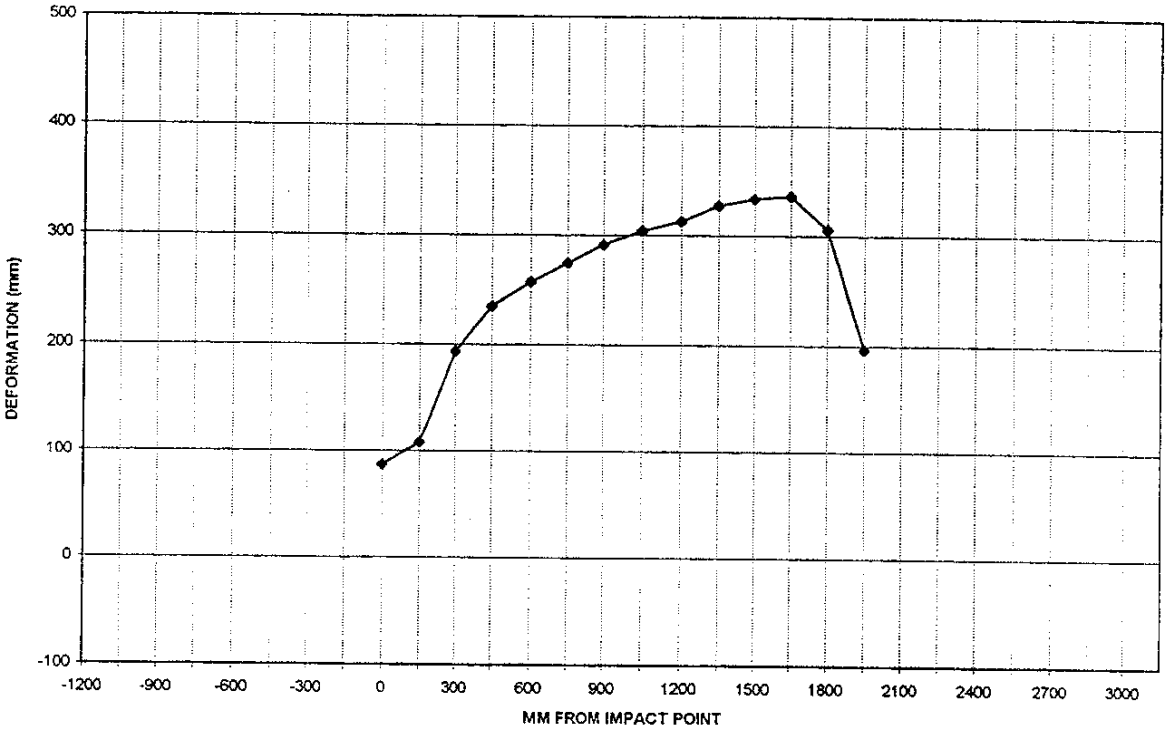
DATA SHEET NO. 10

VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

	Level 1 - Axle Centerline		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1050			
-900			
-750			
-600			
-450			
-300			
-150			
0 (impact point)	591	678	87
150	588	696	108
300	584	777	193
450	576	811	235
600	575	832	257
750	574	848	274
900	573	864	291
1050	572	876	304
1200	572	885	313
1350	574	902	328
1500	576	910	334
1650	576	913	337
1800	578	884	306
1950	578	774	196
2100			
2250			
2400			
2550			
2700			
2850			
3000			

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

VEHICLE EXTERIOR STATIC CRUSH



LEVEL 1 - AXLE CENTERLINE

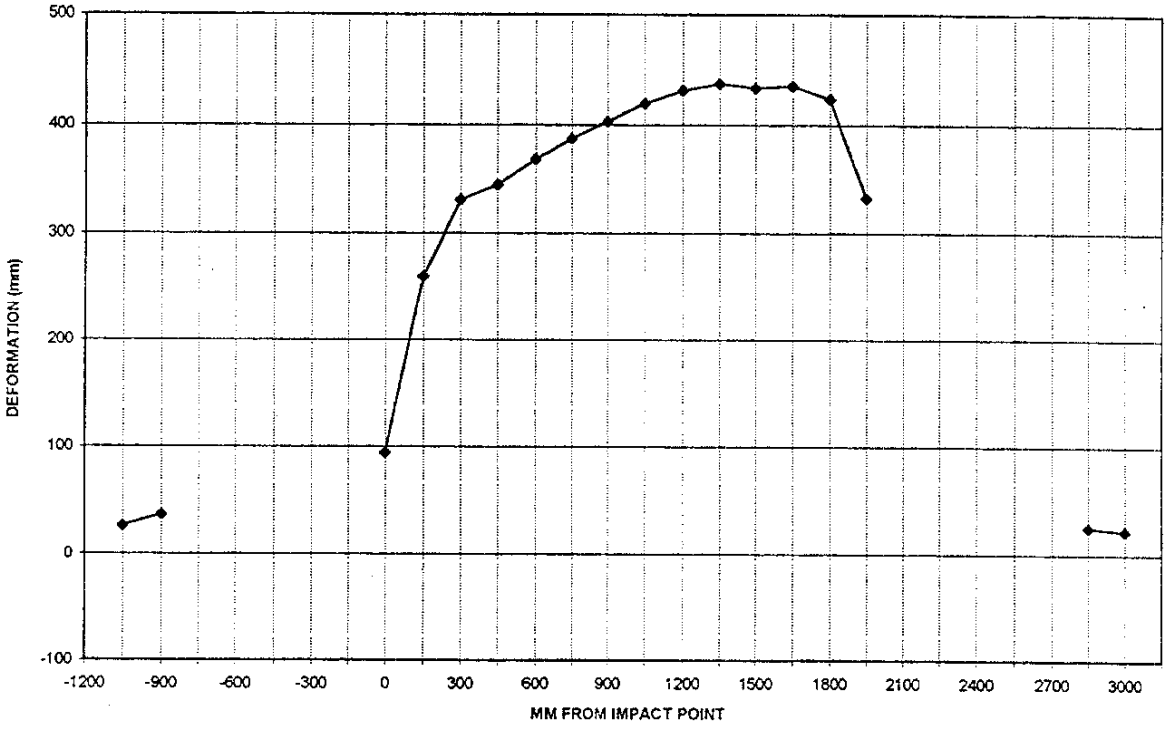
DATA SHEET NO. 10

VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

	Level 2 - Occupant H Point		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1050	582	608	26
-900	563	599	36
-750			
-600			
-450			
-300			
-150			
0 (impact point)	514	608	94
150	510	770	260
300	505	835	330
450	502	846	344
600	498	866	368
750	495	882	387
900	491	894	403
1050	488	907	419
1200	487	918	431
1350	487	924	437
1500	488	921	433
1650	490	925	435
1800	490	913	423
1950	491	823	332
2100			
2250			
2400			
2550			
2700			
2850	520	545	25
3000	532	554	22

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

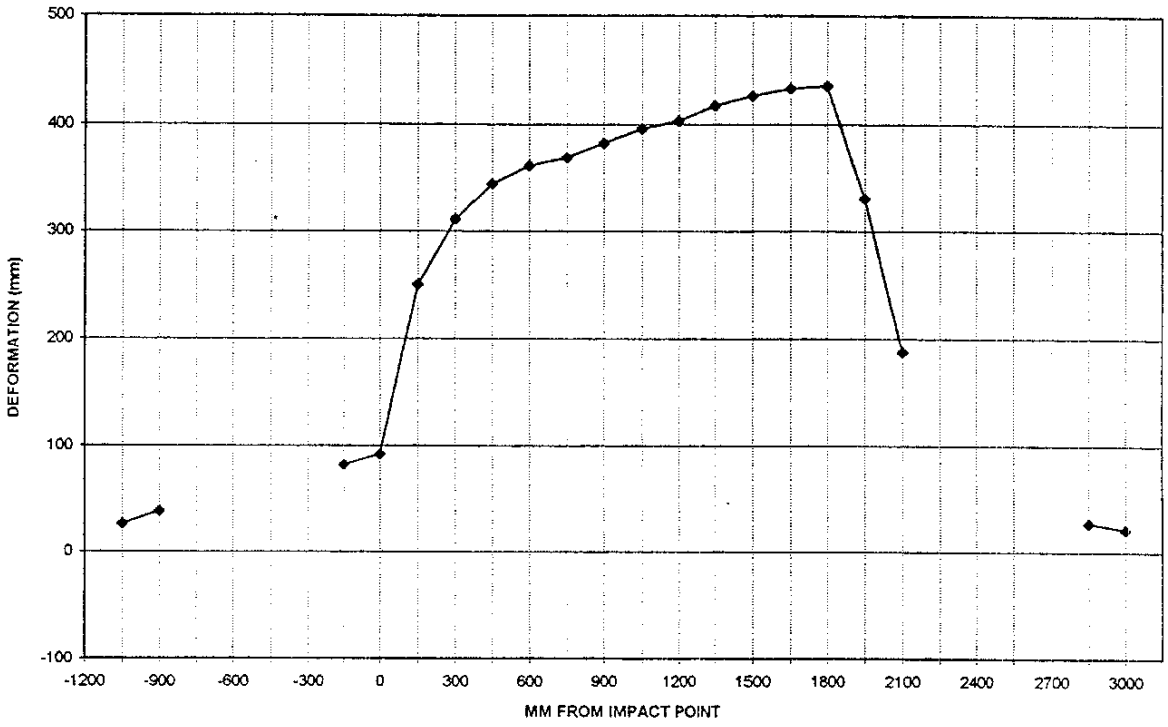
DATA SHEET NO. 10

VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

	Level 3 - Mid Door		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1050	595	621	26
-900	573	611	38
-750			
-600			
-450			
-300			
-150	530	612	82
0 (impact point)	522	614	92
150	517	768	251
300	510	821	311
450	506	851	345
600	502	864	362
750	498	868	370
900	495	878	383
1050	493	889	396
1200	491	894	403
1350	490	907	417
1500	490	916	426
1650	493	926	433
1800	494	929	435
1950	494	825	331
2100	494	681	187
2250			
2400			
2550			
2700			
2850	519	546	27
3000	530	551	21

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

VEHICLE EXTERIOR STATIC CRUSH



LEVEL 3 - MID DOOR

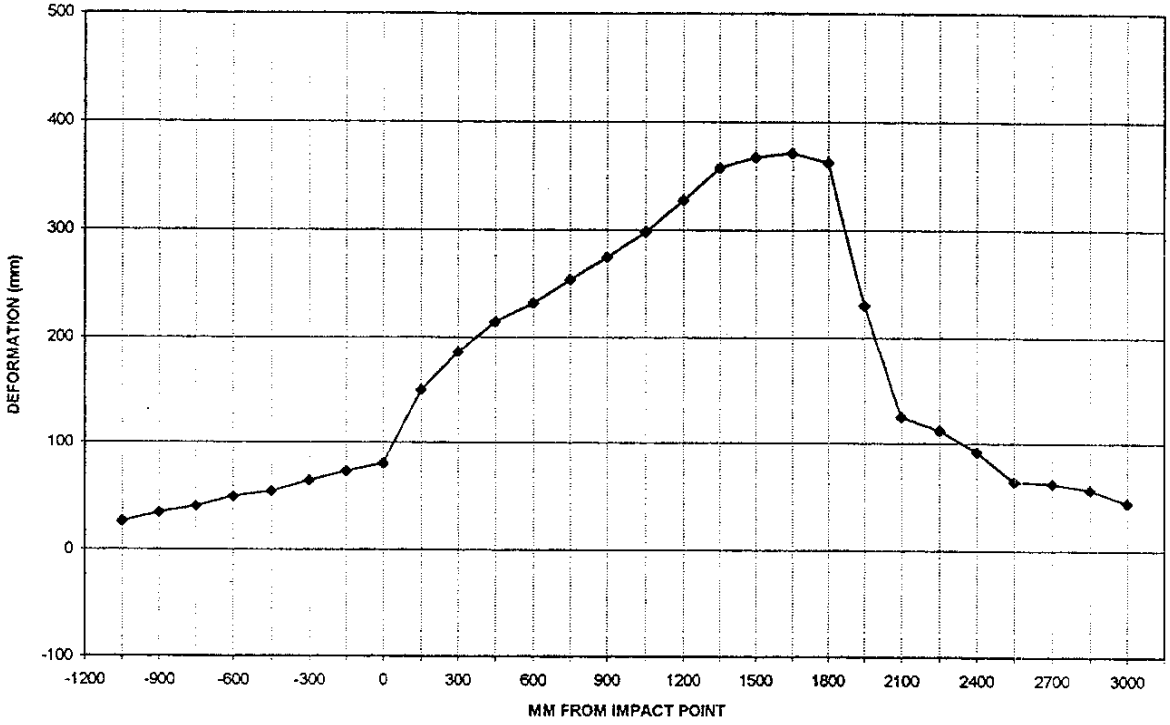
DATA SHEET NO. 10

VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

	Level 4 - Window Sill		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1050	659	685	26
-900	639	673	34
-750	624	664	40
-600	610	659	49
-450	598	652	54
-300	588	652	64
-150	580	653	73
0 (impact point)	576	656	80
150	571	721	150
300	569	755	186
450	565	779	214
600	560	792	232
750	558	812	254
900	557	832	275
1050	556	854	298
1200	553	880	327
1350	554	911	357
1500	554	921	367
1650	555	926	371
1800	555	917	362
1950	554	784	230
2100	551	676	125
2250	558	670	112
2400	563	655	92
2550	572	636	64
2700	578	640	62
2850	588	644	56
3000	603	647	44

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

VEHICLE EXTERIOR STATIC CRUSH



LEVEL 4 - WINDOW SILL

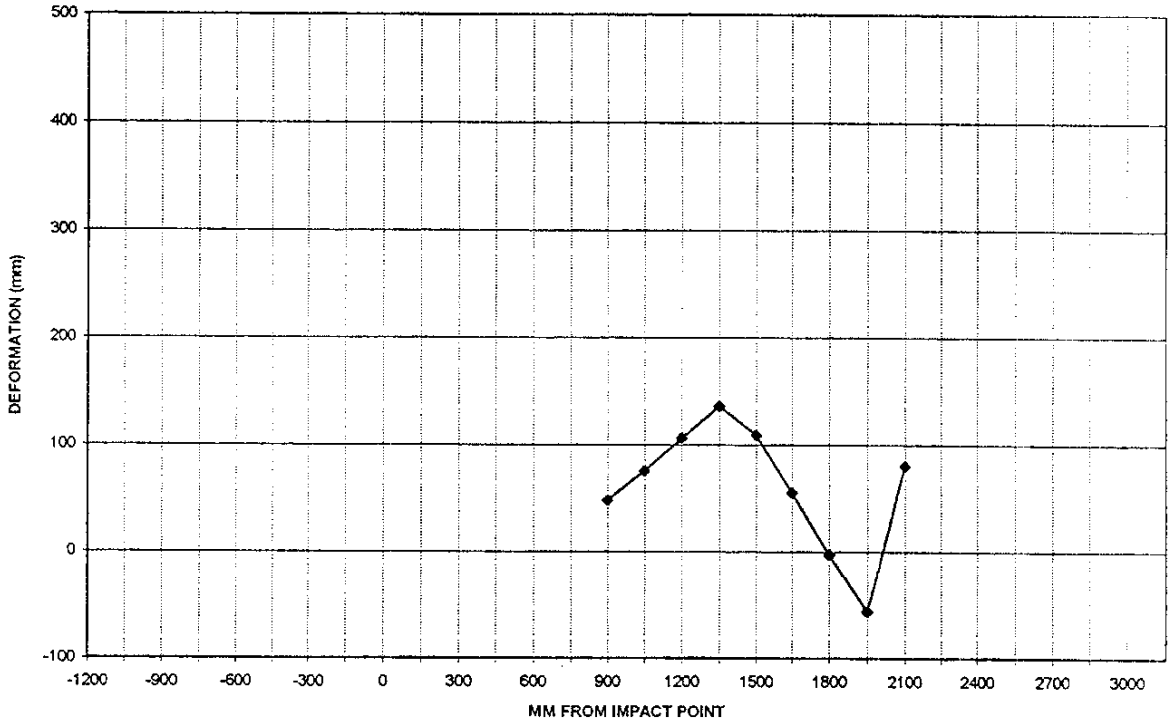
DATA SHEET NO. 10

VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

	Level 5 - Window Top		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1050			
-900			
-750			
-600			
-450			
-300			
-150			
0 (impact point)			
150			
300			
450			
600			
750			
900	845	892	47
1050	843	918	75
1200	842	948	106
1350	842	977	135
1500	841	950	109
1650	841	895	54
1800	842	839	-3
1950	846	790	-56
2100	862	942	80
2250			
2400			
2550			
2700			
2850			
3000			

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

VEHICLE EXTERIOR STATIC CRUSH



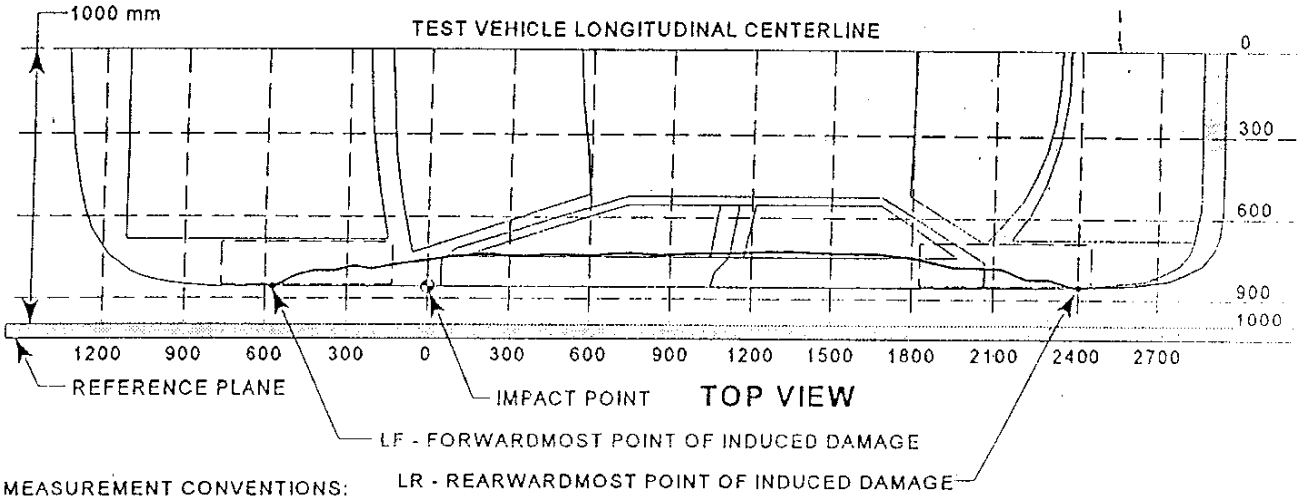
LEVEL 5 - WINDOW TOP

DATA SHEET NO. 11

VEHICLE DAMAGE PROFILE DISTANCES

Year/Make/Model/Body Style: 1997/Ford/Crown Victoria

NHTSA NO.: MV0204 Test Date: December 5, 1996



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

DPD MEASUREMENTS	POST-TEST (mm)	PRE-TEST (mm)	STATIC CRUSH (mm)
1. (LF = -1350 mm)	642	642	0
2. -360 mm	*	*	---
3. 630 mm	866	498	368
4. 1620 mm	925	490	435
5. 2610 mm	*	*	---
6. (LR = 3600 mm)	608	608	0

* The measurement was at the wheel.

DATA SHEET NO. 12

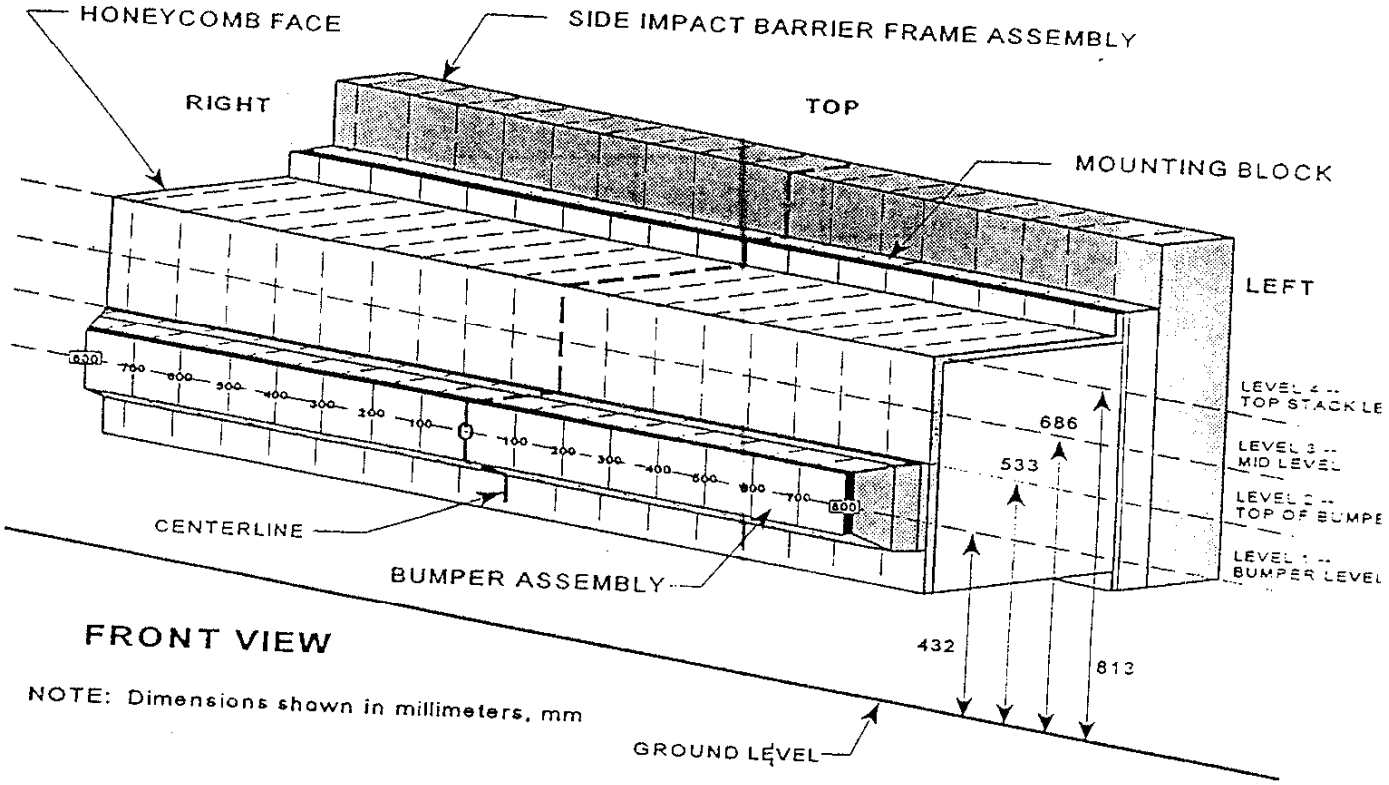
EXTERIOR STATIC CRUSH FOR SIDE IMPACTOR

Year/Make/Model/Body Style: 1997/Ford/Crown Victoria

Vehicle NHTSA No.: MV0204 Test Date: December 5, 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	21	0	0	1	6	21	20	71	12	17	19	24	32	38	48	61	135
Mid Level Level 3	686 mm	2	-1	-1	1	2	9	6	5	5	7	9	9	12	15	27	69	127
Top Bumper Level 2	533 mm	29	26	22	20	22	22	23	26	26	32	36	43	47	52	67	89	113
Mid Bumper Level 1	432 mm	45	30	22	19	22	23	26	28	32	36	42	48	55	67	89	126	161

See next page for Barrier Face Graphic

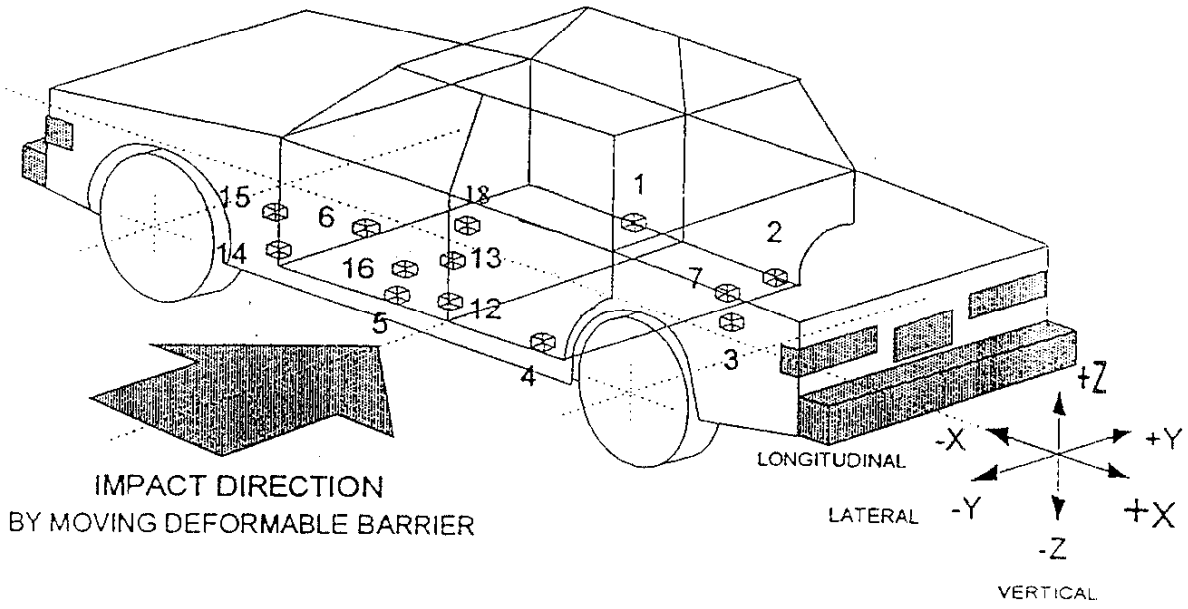

HONEYCOMB FACE
SIDE IMPACT BARRIER FRAME ASSEMBLY
RIGHT
TOP
MOUNTING BLOCK
LEFT
686
533
432
813
CENTERLINE
BUMPER ASSEMBLY
GROUND LEVEL
FRONT VIEW
NOTE: Dimensions shown in millimeters, mm

DATA SHEET 13

TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Year/Make/Model/Body Style: 1997/Ford/Crown Victoria

Vehicle NHTSA No.: MV0204 Test Date: December 5, 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/Crown Victoria

Vehicle NHTSA No.: MV0204 Test Date: December 5, 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.	Max.
1	Rt. Side Sill @ Front Seat	3127	777	243	3.0	-5.4	24.7	-3.3	3.8	-2.7	24.8
2	Rt. Side Sill @ Rear Seat	1945	757	255	3.5	-5.9	21.0	-13.1	4.4	-4.4	21.2
3	Rr. Floorpan Above Axle	1356	0	730	8.6	-9.2	16.6	-2.0	16.4	-15.0	19.9
4	Left Side Sill @ Rr. Seat	1988	-757	238			75.8	-31.2			
5	Left Side Sill @ Frt. Seat	3124	-777	236			94.9	-31.3			
6	Left Front Door Centerline	2960	-831	765			135.0	-102.9			
7	Right Rear Occupant Compartment	2214	380	322			16.5	-3.2			
8	Mid Rear of Left Front Door	2716	-835	654			172.7	-59.4			
9	Left Front Door Upper Centerline	2944	-834	902			96.3	-98.7			
10	Left Rear Door Mid Front	2092	-829	657			**	**			
11	Left Rear Door Upper Centerline	2058	-831	926			73.8	-69.5			
12	Left Lower B-Post	2441	-784	402			100.1	-122.6			
13	Left Mid B-Post	2476	-806	930			113.9	-43.6			
14	Left Lower A-Post	3539	-756	426			*	*			
15	Left Mid A-Post	3609	-832	870			115.3	-35.9			
16	Driver Left Seat Track	2630	-570	355			67.4	-18.0			
18	Vehicle CG	2966	0	392	13.8	-12.9	60.6	-10.0	33.4	-40.4	61.5

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

* Data is not valid after 25 msec.

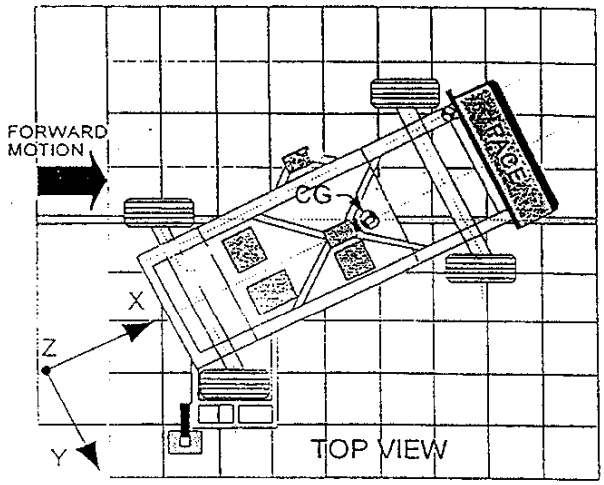
** Data is not valid after 30 msec.

DATA SHEET NO. 14

MOVING DEFORMABLE BARRIER (MDB) ACCELEROMETER LOCATIONS AND DATA SUMMARY

Year/Make/Model/Body Style: 1997/Ford/Crown Victoria

Vehicle NHTSA No.: MV0204 Test Date: December 5, 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)	---	---	---	1.1	182	-16.9	32
	Lateral (Y)	---	---	---	.7	192	-6.6	35
	Vertical (Z)	---	---	---	21.6	54	-20.9	59
	Resultant (R)	---	---	---	24.8	13		
2	Rear Frame Member	-2591	-625	622				
	Longitudinal (X)	---	---	---	1.6	161	-21.8	31
	Lateral (Y)	---	---	---	4.2	35	-1.3	73

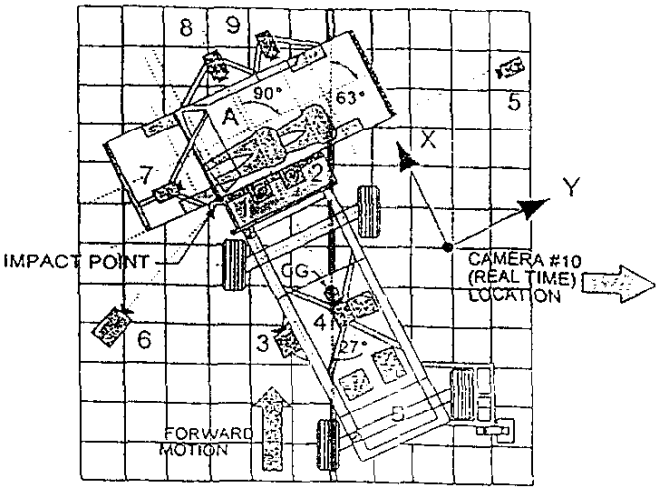
*Reference: X - Front Axle (+ Forward)
Y - Vehicle Centerline (+ To right)
Z - Ground Level (+ Up)

DATA SHEET NO. 15

HIGH SPEED CAMERA LOCATIONS AND DATA

Year/Make/Model/Body Style: 1997/Ford/Crown Victoria

Vehicle NHTSA No.: MV0204 Test Date: December 5, 1996



Camera No.	View	Coordinates (mm)*			Angle	Lens (mm)	Film Speed (fps)
		X	Y	Z			
	Real Time						
6	Left Impact	-990	-220	1640	90	13	1015
8	Onboard Driver						
9	Onboard Passenger						
7	Onboard Hood						
5	Right Impact	-220	10500	1820	90	25	966
1	Top Overall	-150	1140	5000	90	8	1026
2	Top Impact	-120	50	5000	90	13	870
4	Cart Overall					13	1015
3	Cart Pointer					35	952

* 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/Crown Victoria

Vehicle NHTSA No.: MV0204 Test Date: December 5, 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 38.0 mph (61.2 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

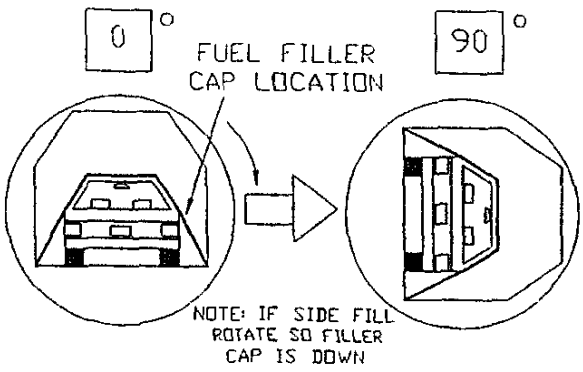
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA

Vehicle Year/Make/Model/Body Style: 1997/Ford/Crown Victoria

Vehicle NHTSA No.: MV0204 Test Date: December 5, 1996

TEST PHASE: 0° - 90°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 41 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 41 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

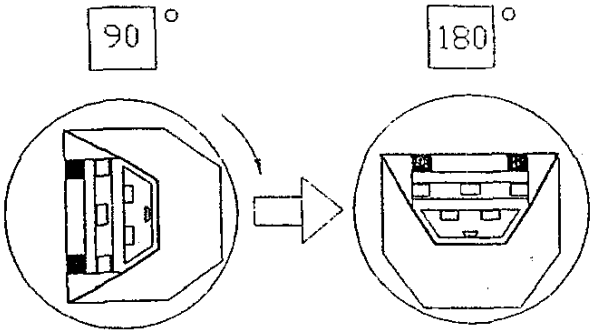
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA (Cont'd)

Vehicle Year/Make/Model/Body Style: 1997/Ford/Crown Victoria

Vehicle NHTSA No.: MV0204 Test Date: December 5, 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

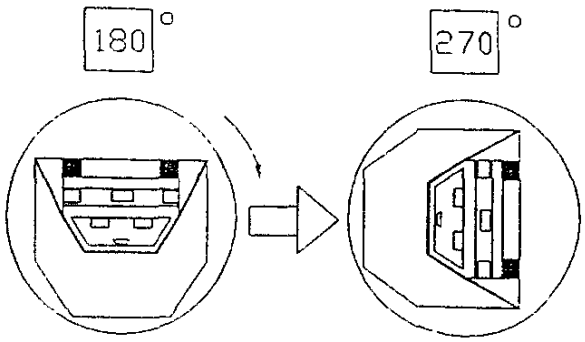
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA (Cont'd)

Vehicle Year/Make/Model/Body Style: 1997/Ford/Crown Victoria

Vehicle NHTSA No.: MV0204 Test Date: December 5, 1996

TEST PHASE: 180° - 270°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 17 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 17 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

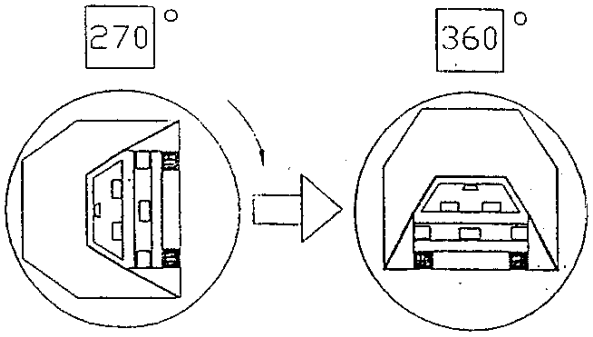
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA

Vehicle Year/Make/Model/Body Style: 1997/Ford/Crown Victoria

Vehicle NHTSA No.: MV0204 Test Date: December 5, 1996

TEST PHASE: 270° - 360°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 42 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 42 seconds

Next Whole Minute Interval = 8 minutes

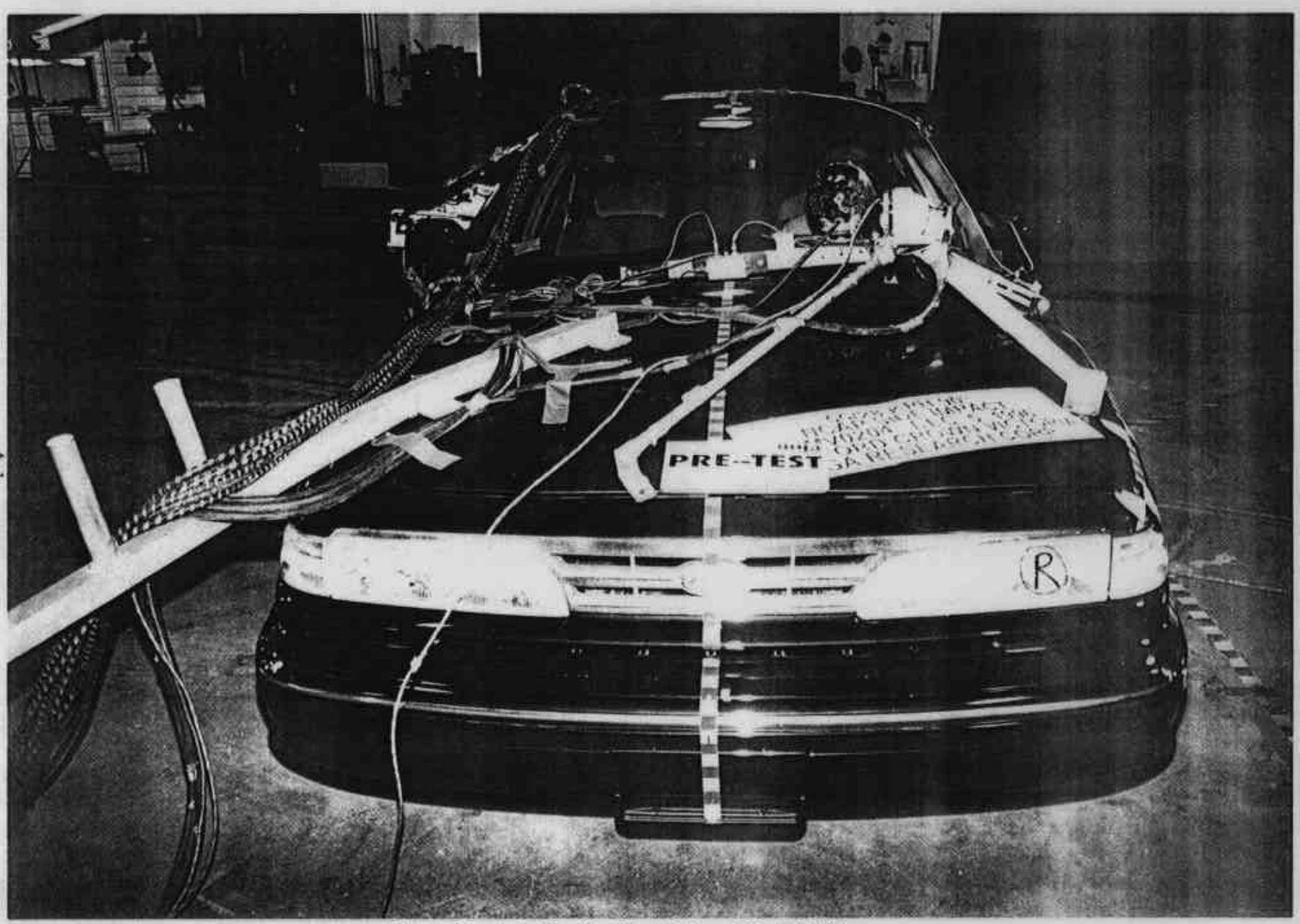
FUEL SPILLAGE MEASUREMENT:

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

TABLE OF PHOTOGRAPHS

TABLE OF PHOTOGRAPHS



A-1

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

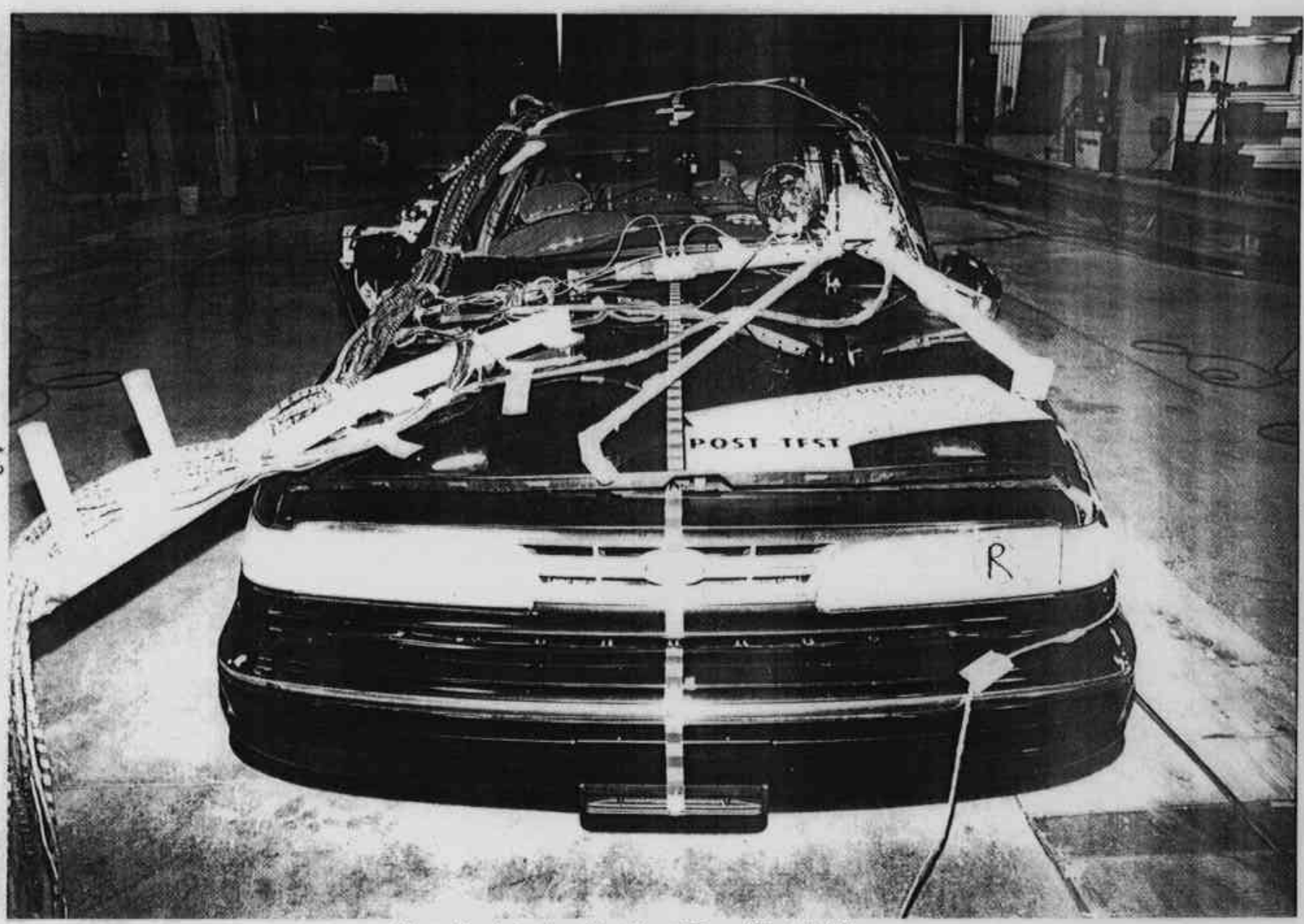
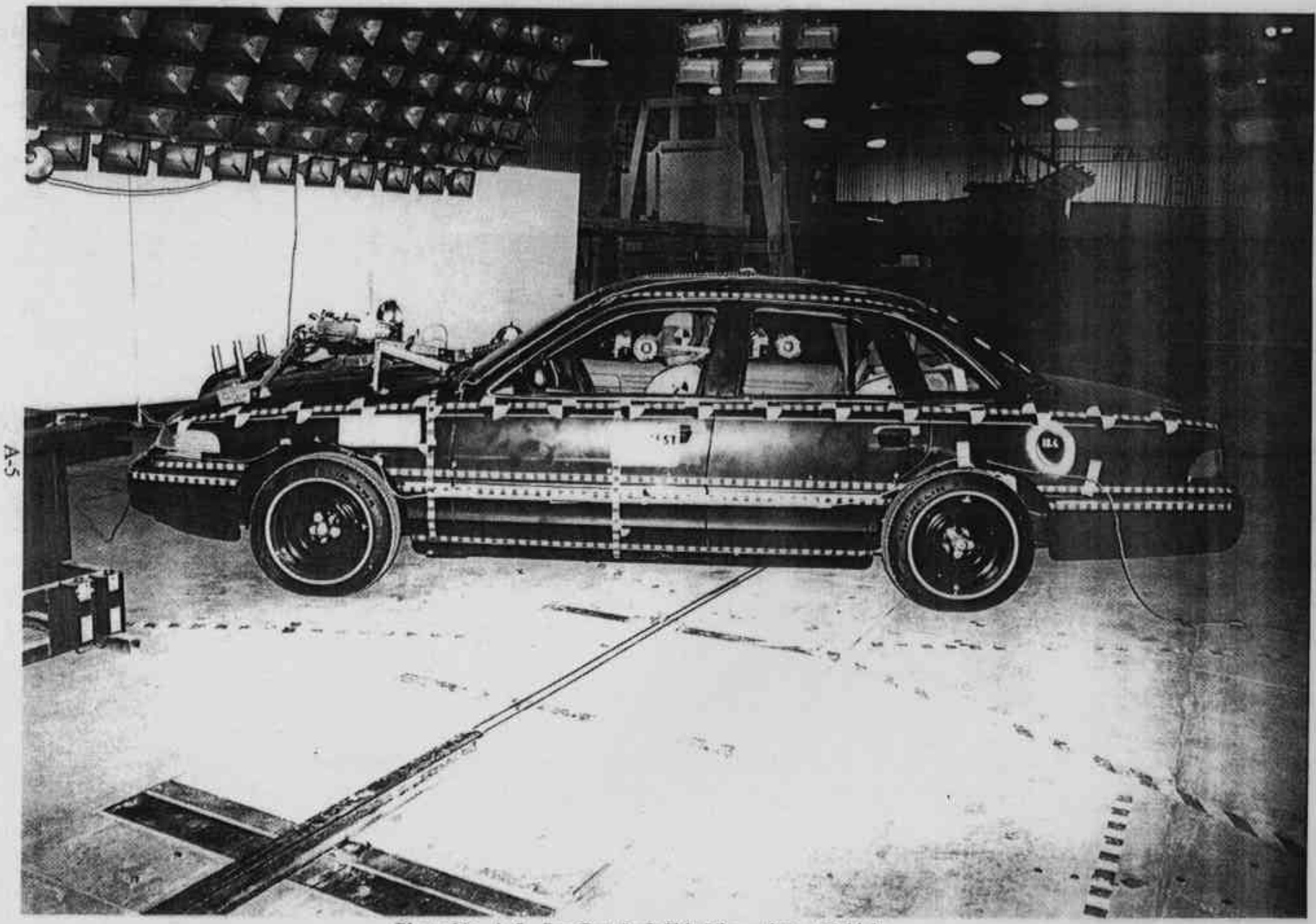


Photo No. A-2 - Post-Test Front View of Test Vehicle

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

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



A-5

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

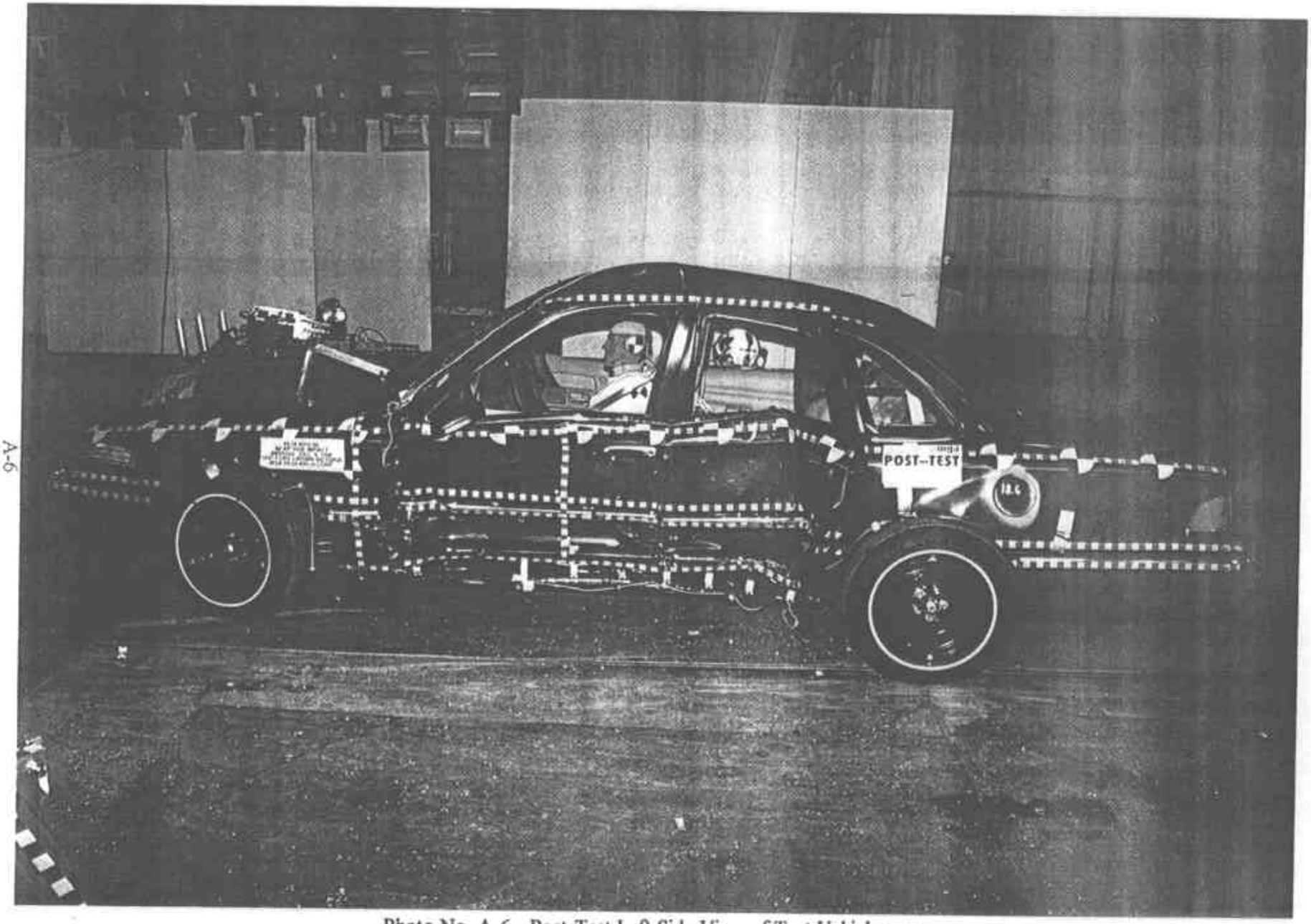
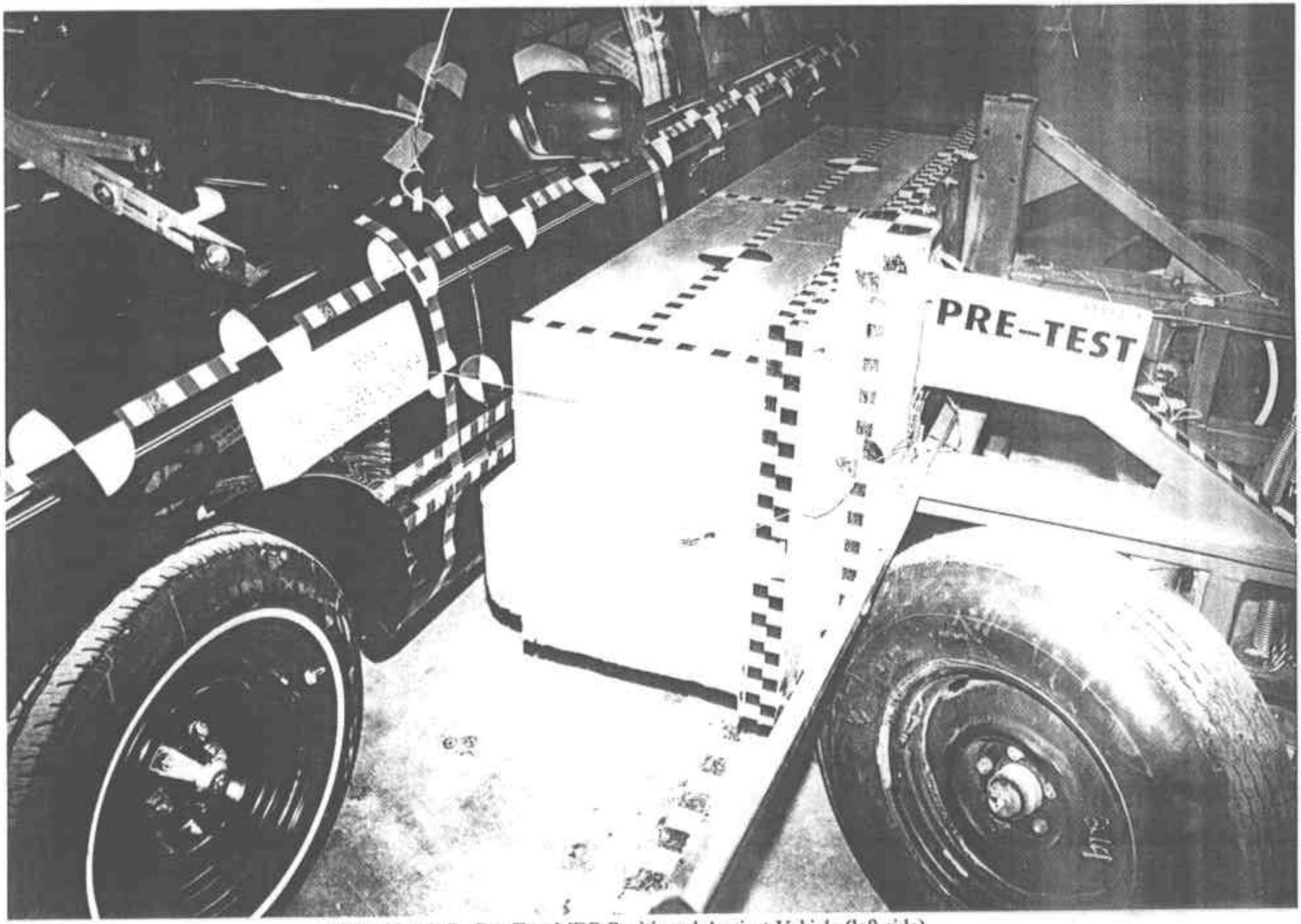


Photo No. A-6 - Post-Test Left Side View of Test Vehicle



A-7

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

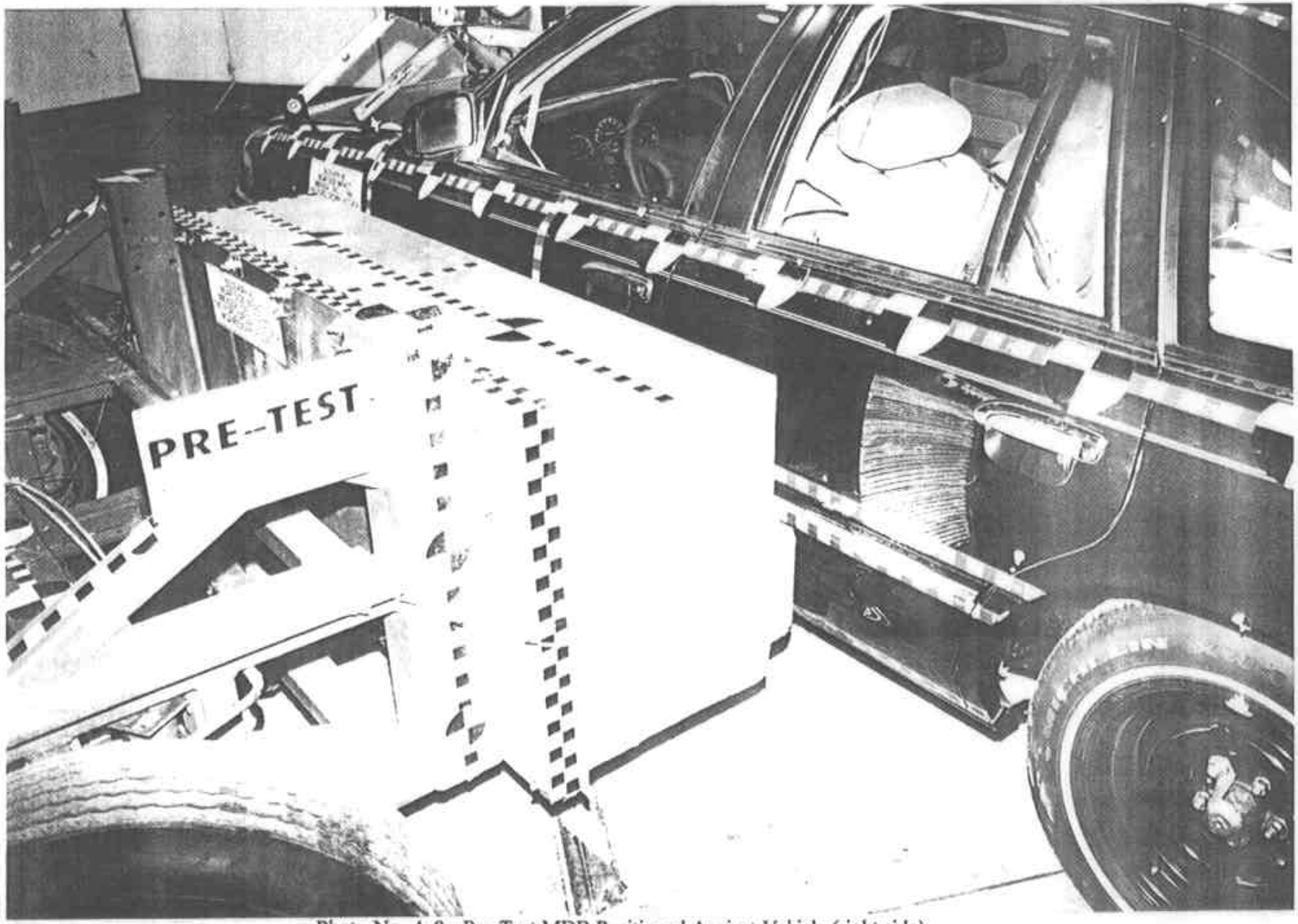


Photo No. A-8 - Pre-Test MDB Positioned Against Vehicle (right side)

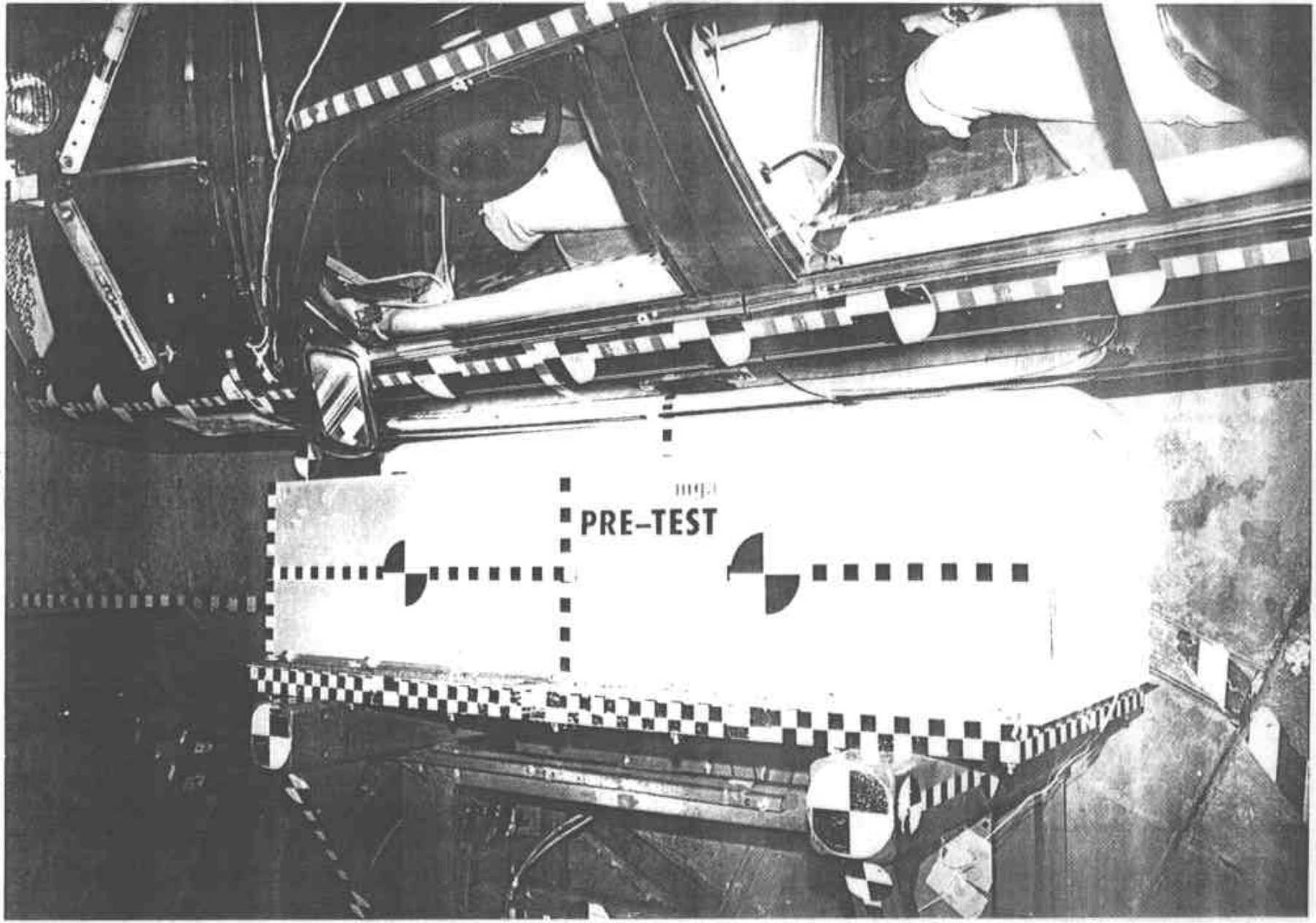


Photo No. A-9 - Pre-Test MDB Positioned Against Vehicle Overhead View

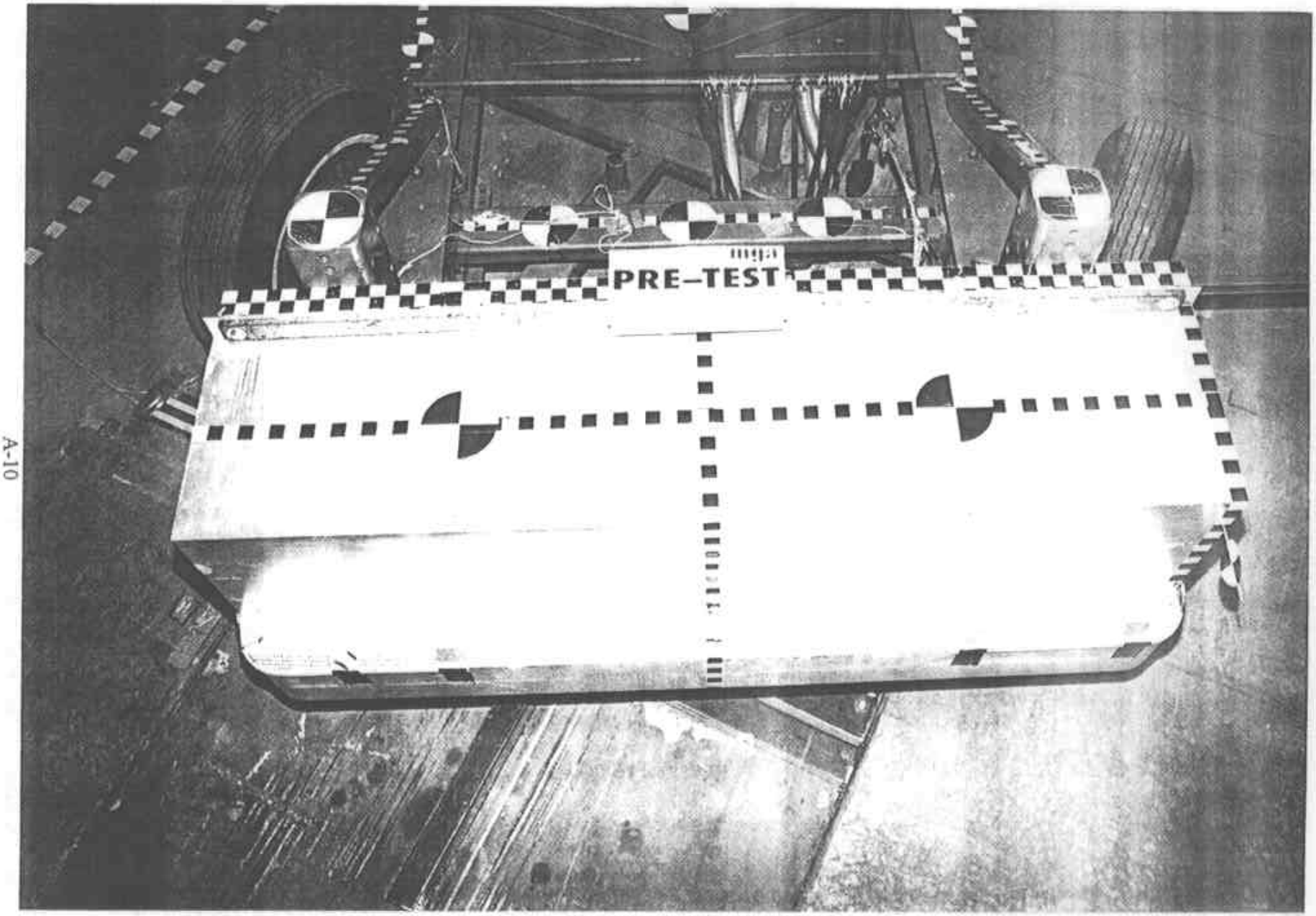


Photo No. A-10 - Pre-Test MDB Top View

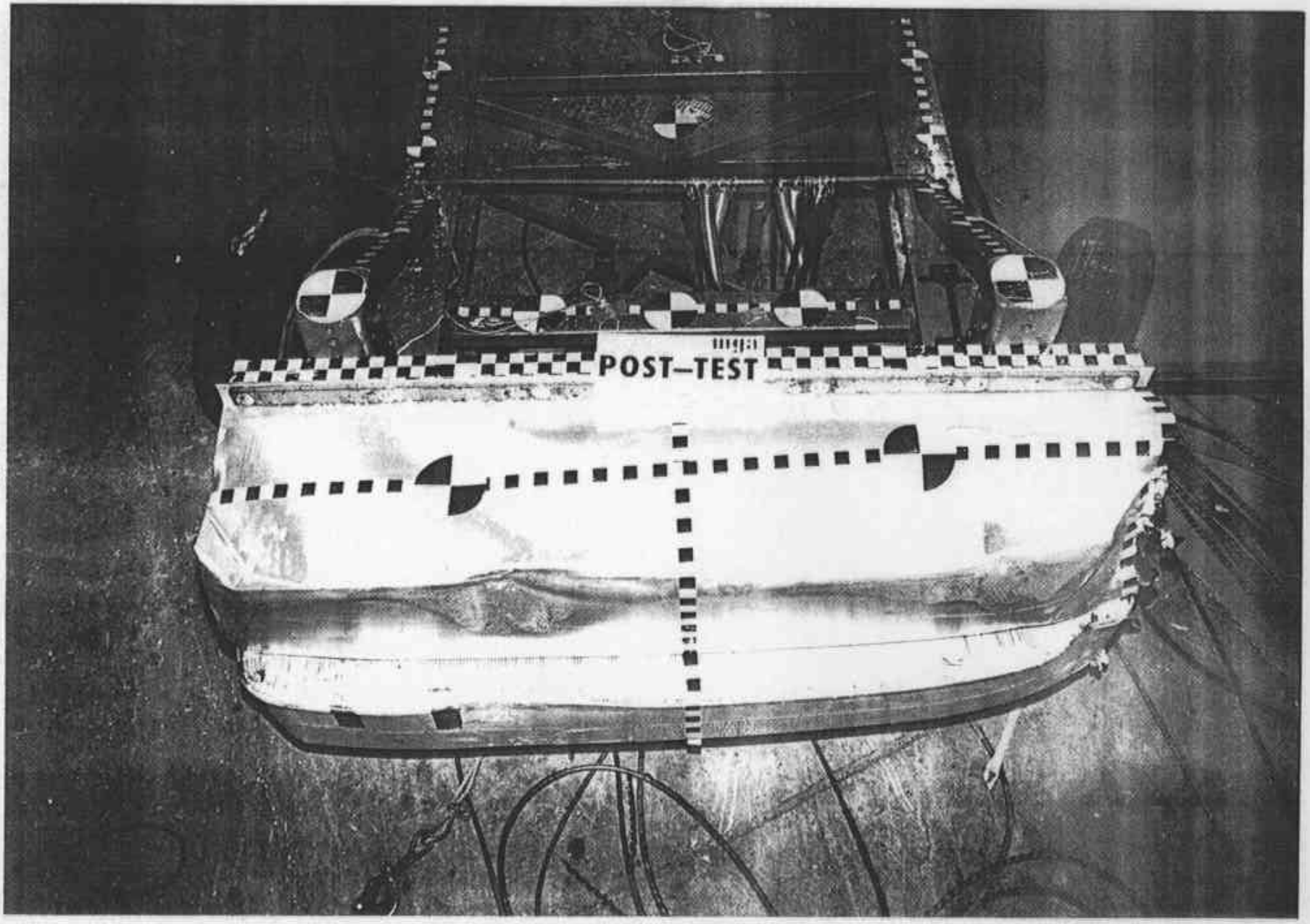


Photo No. A-11 - Post-Test MDB Top View

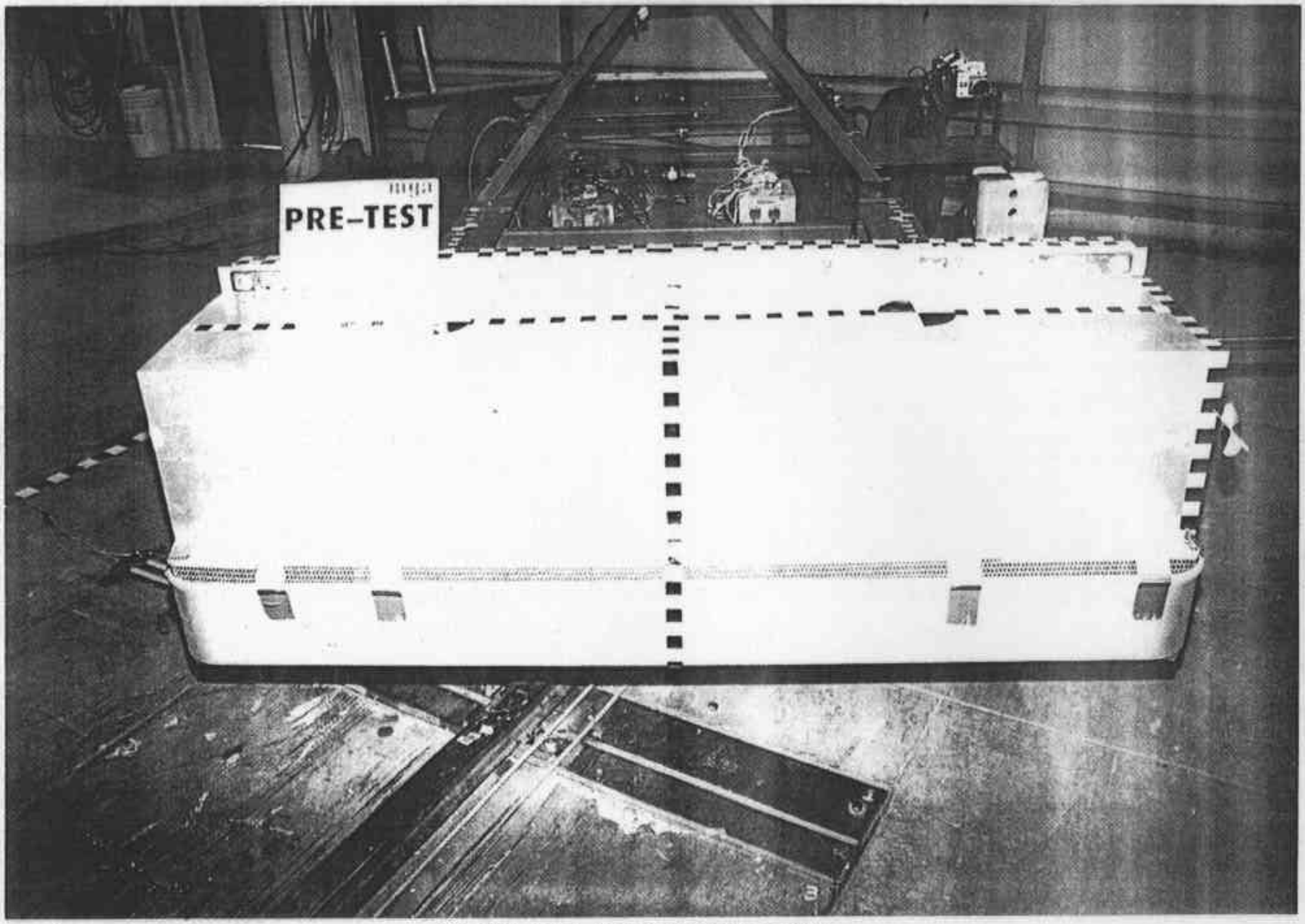


Photo No. A-12 - Pre-Test MDB Front View

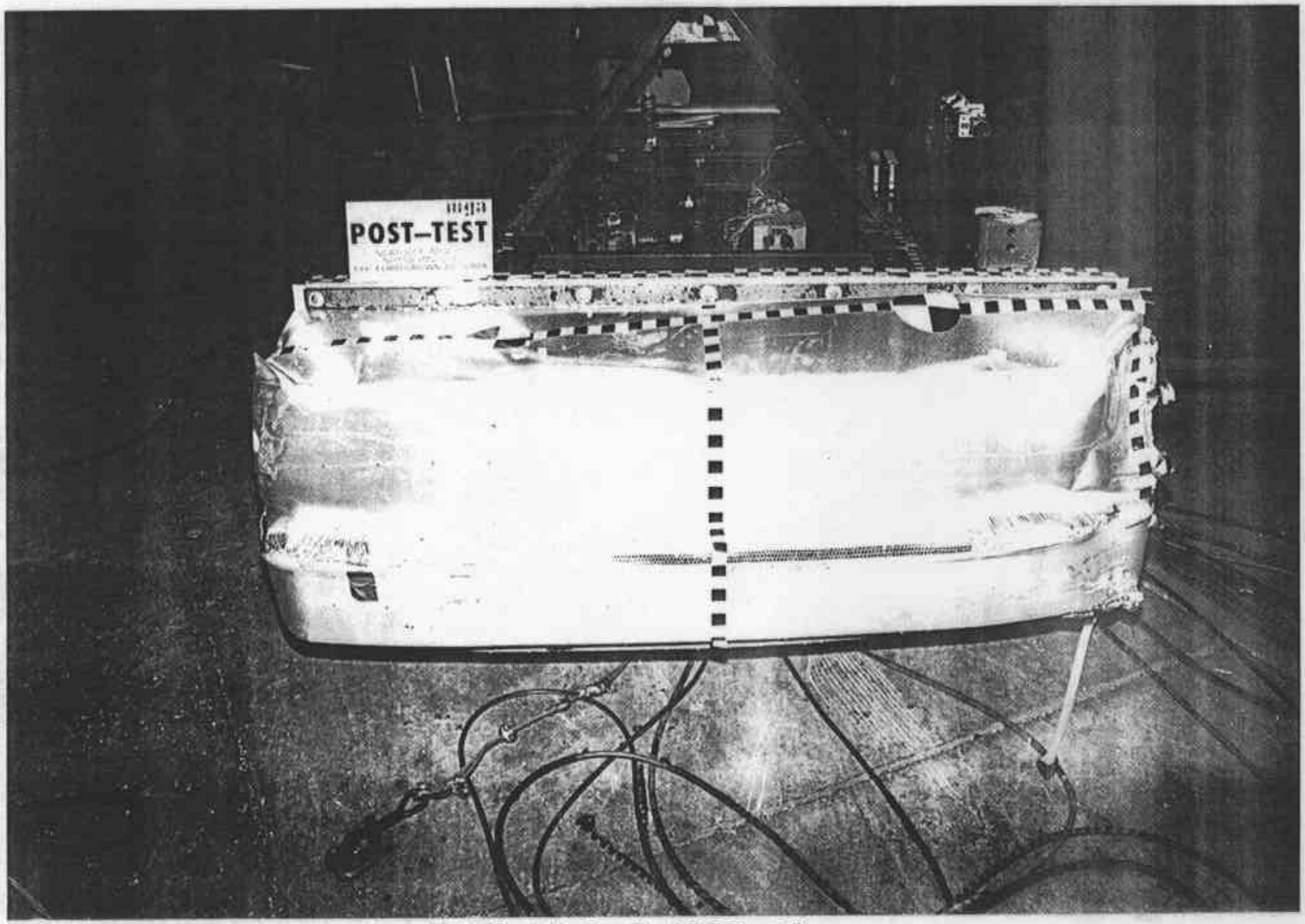


Photo No. A-13 - Post-Test MDB Front View

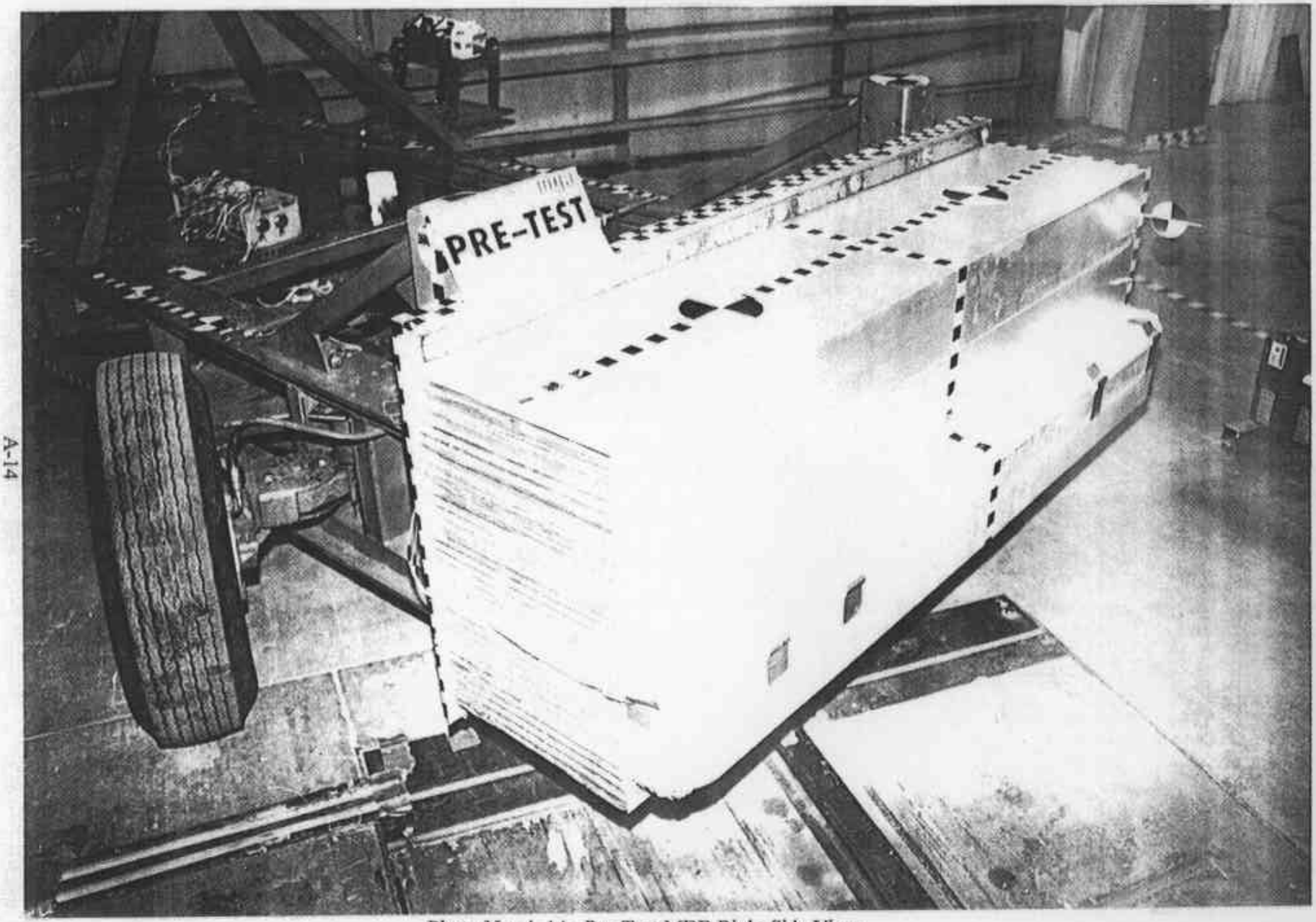


Photo No. A-14 - Pre-Test MDB Right Side View

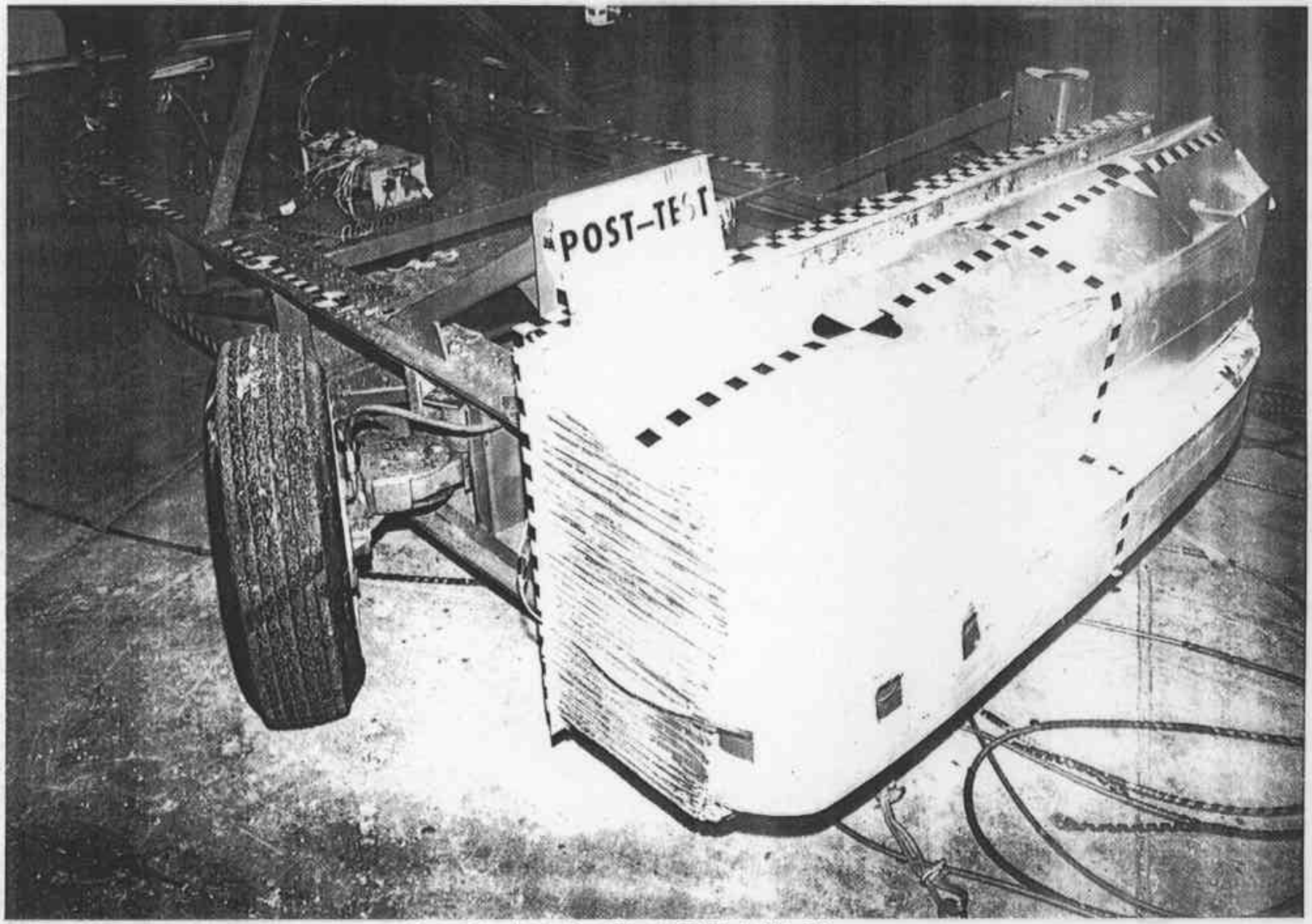


Photo No. A-15 - Post-Test MDB Right Side View

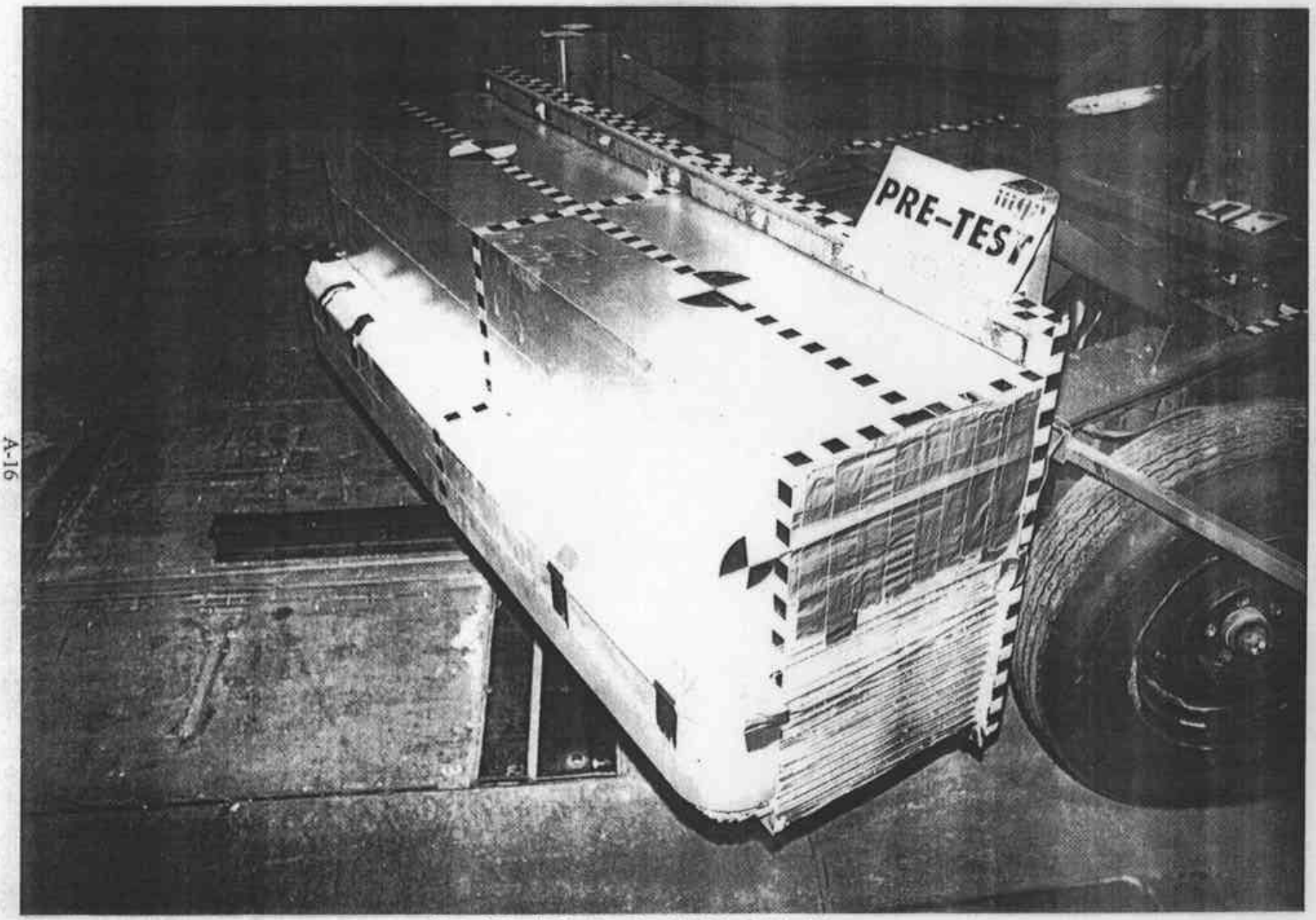


Photo No. A-16 - Pre-Test MDB Left Side View

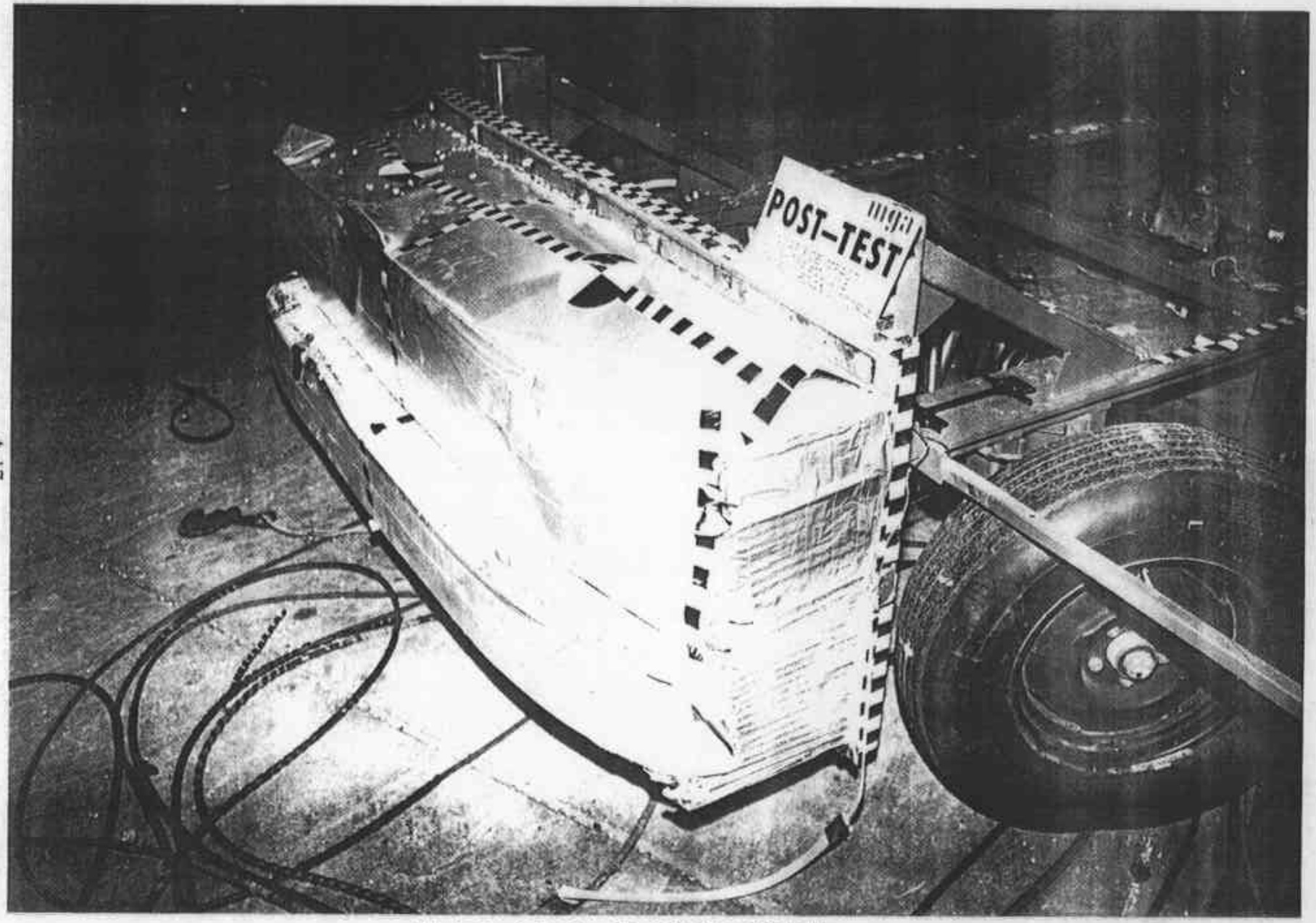


Photo No. A-17 - Post-Test MDB Left Side View

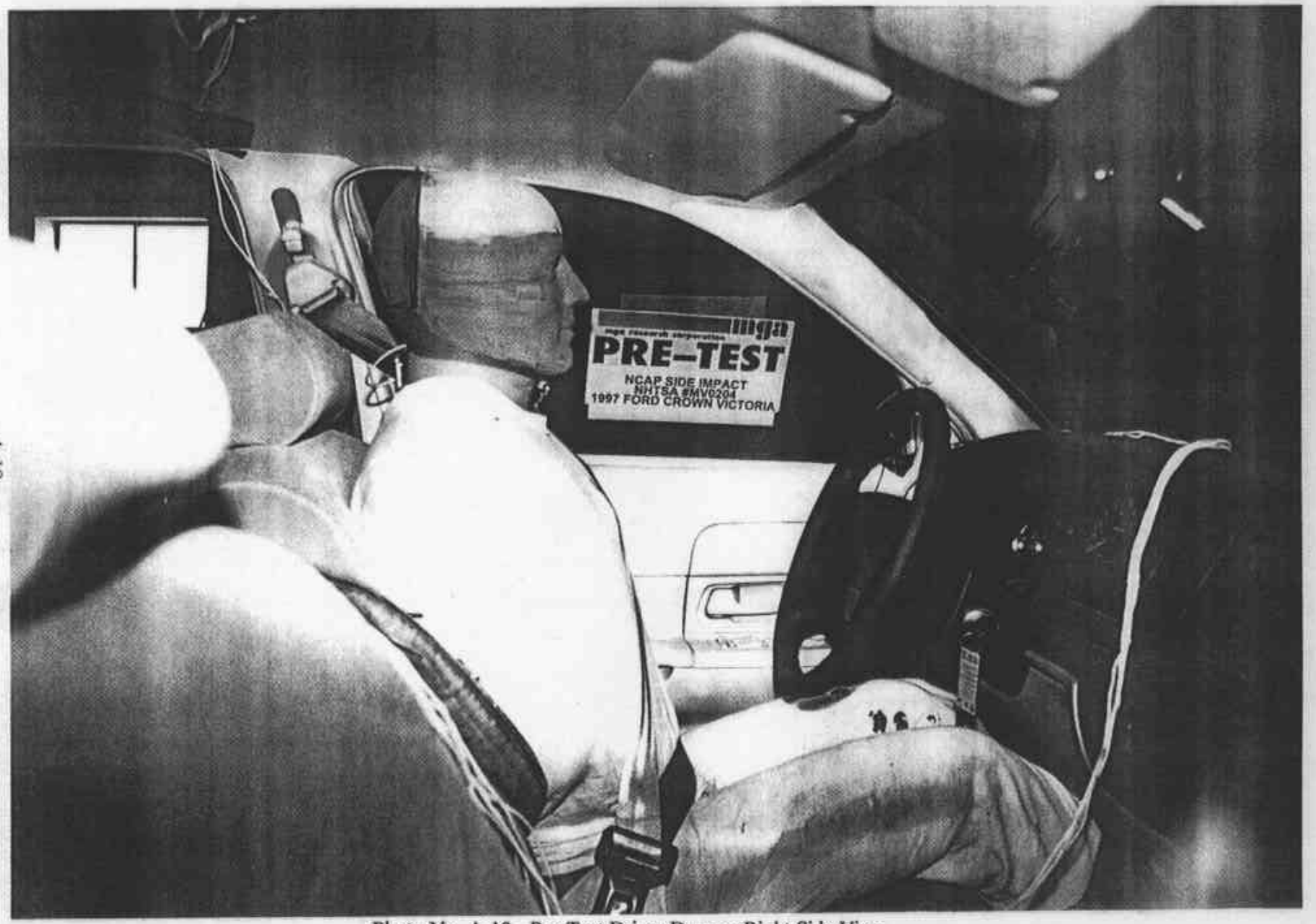
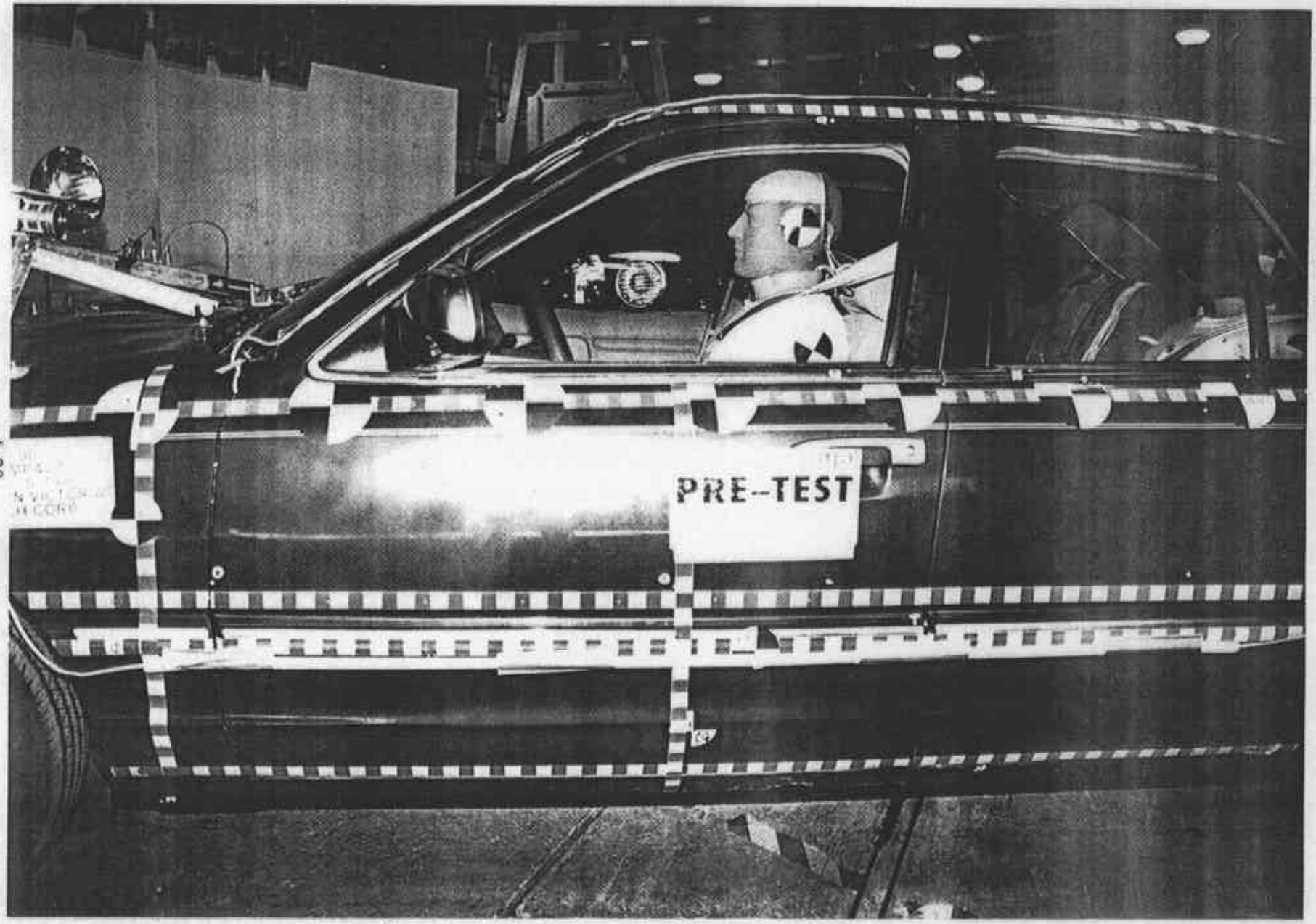


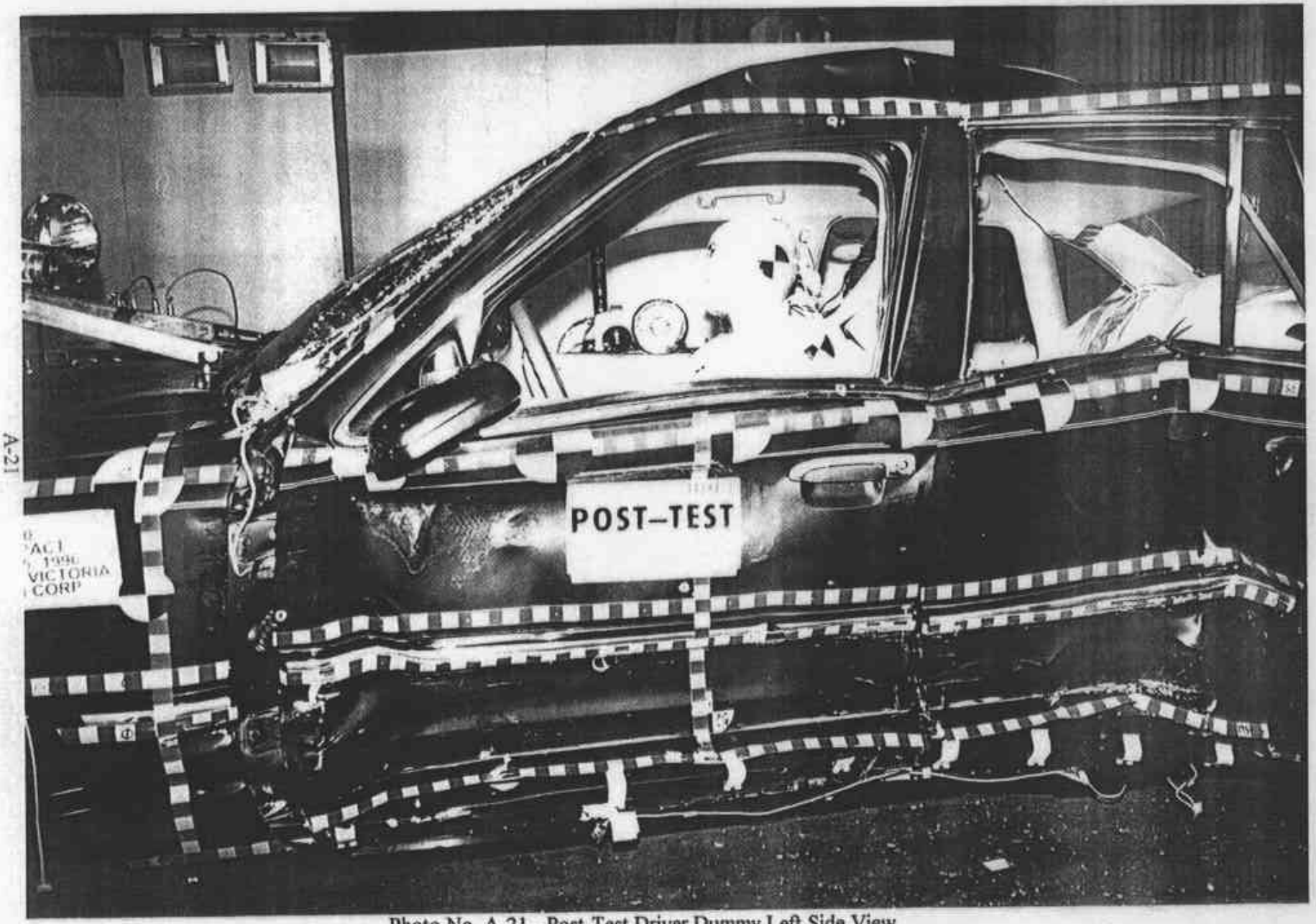
Photo No. A-18 - Pre-Test Driver Dummy Right Side View

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



A-20

Photo No. A-20 - Pre-Test Driver Dummy Left Side View



A-21

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

Photo No. A-22 - Pre-Test Driver Dummy Left Side View (Door Open)

Photo No. A-23 - Pre-Test Driver Dummy Shoulder and Door Top View

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

Photo No. A-25 - Post-Test Driver Dummy Contact

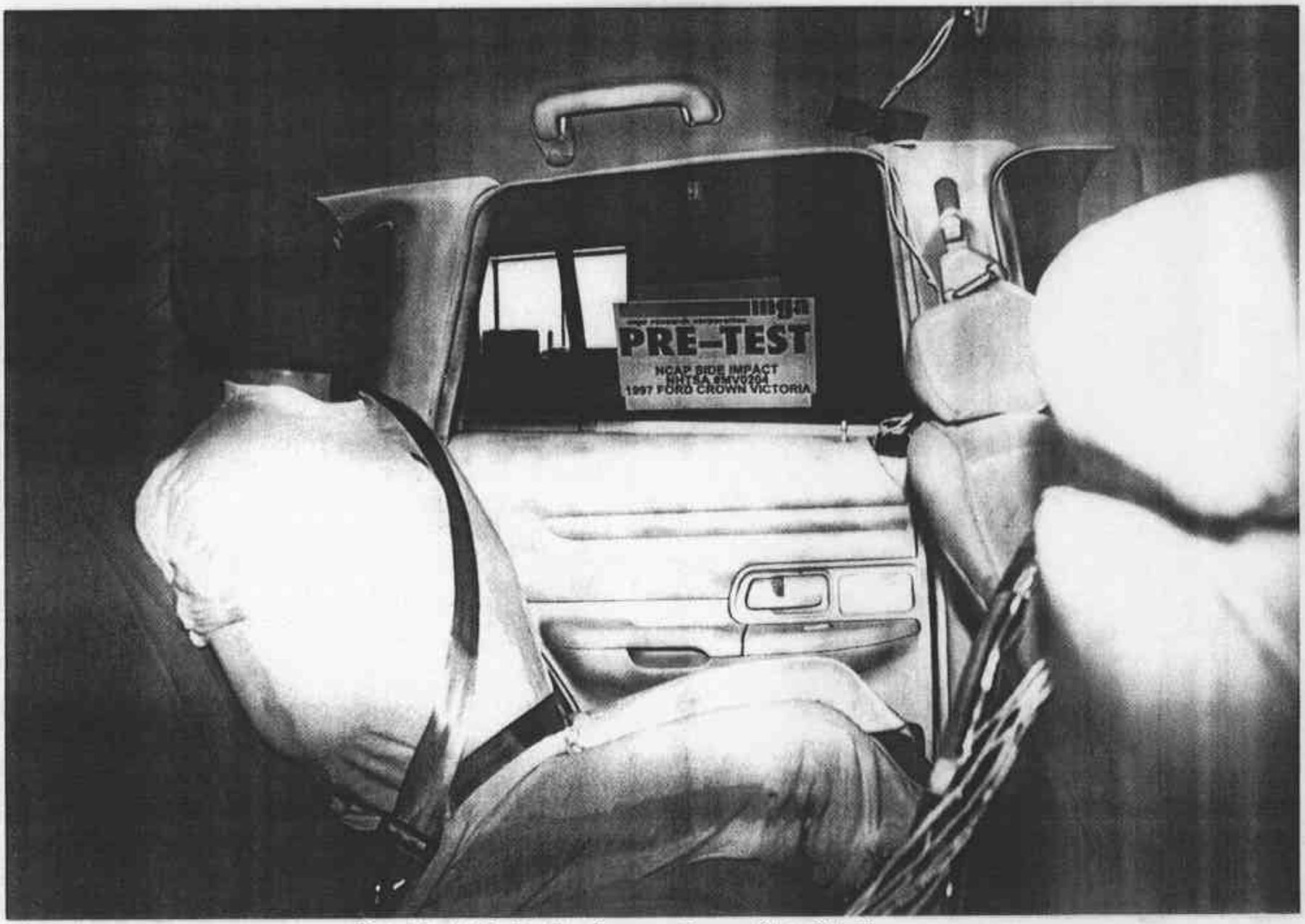


Photo No. A-26 - Pre-Test Passenger Dummy Right Side View

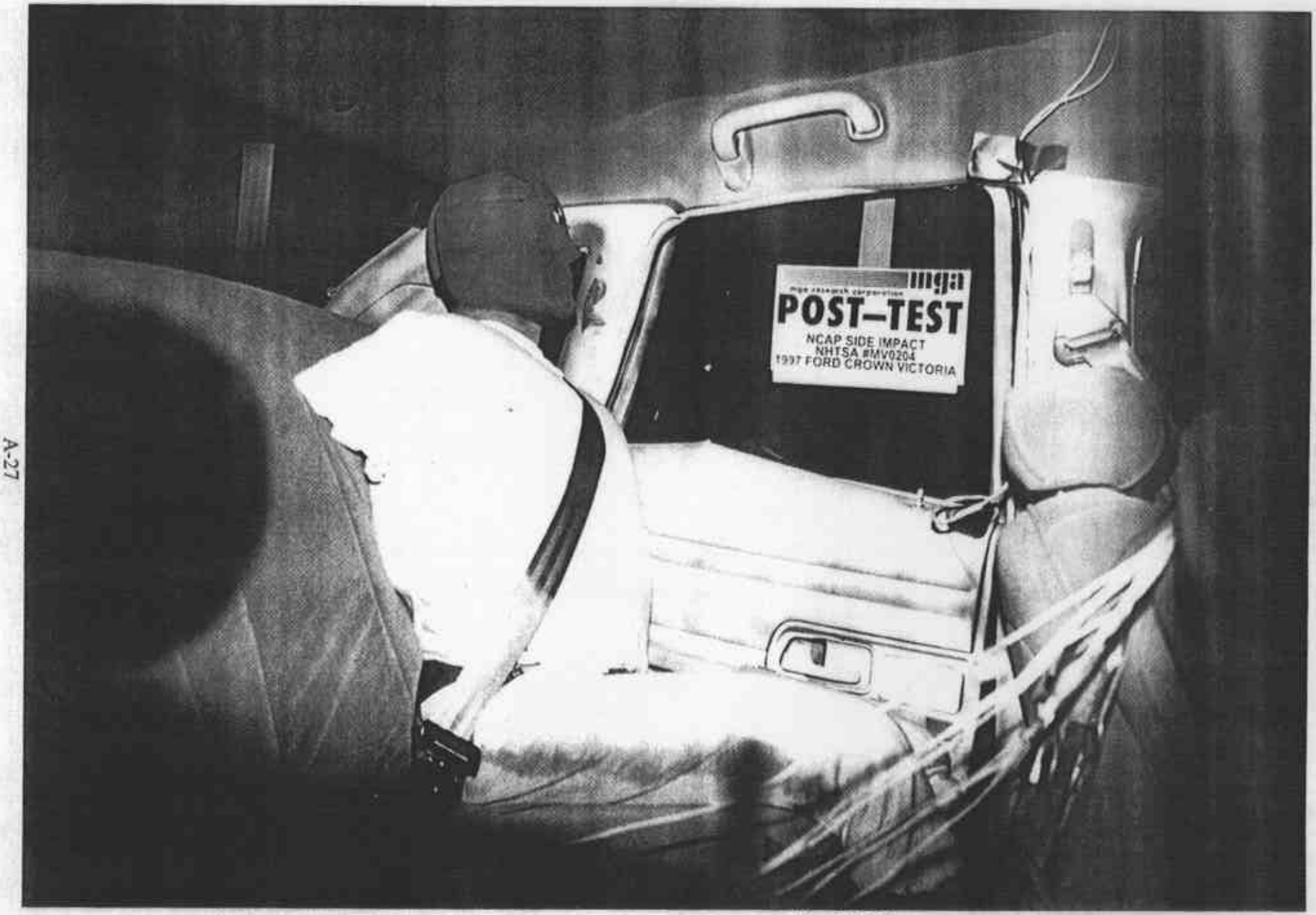


Photo No. A-27 - Post-Test Passenger Dummy Right Side View

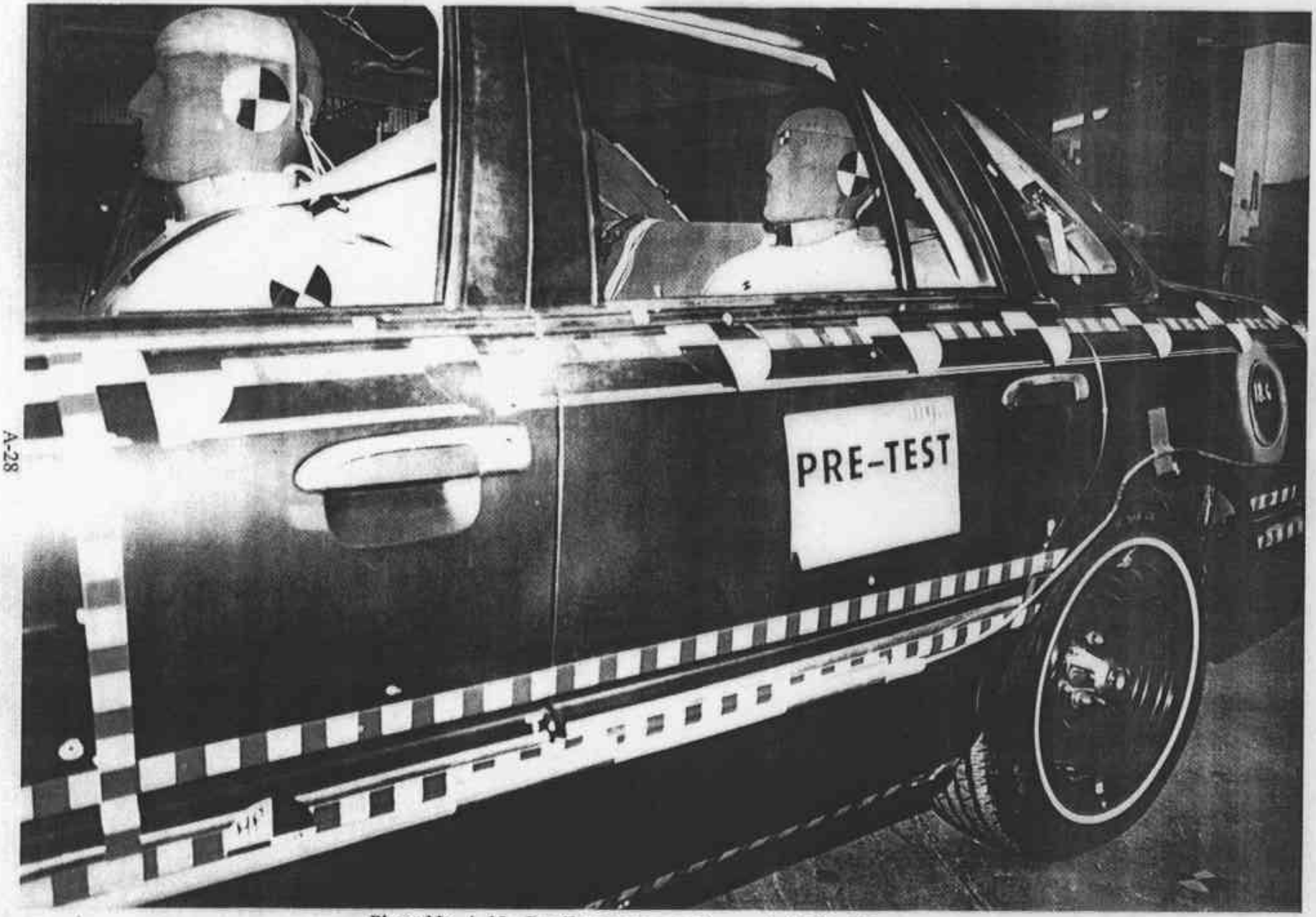


Photo No. A-28 - Pre-Test Passenger Dummy Left Side View

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

Photo No. A-30 - Pre-Test Passenger Dummy Left Side View (Door Open)

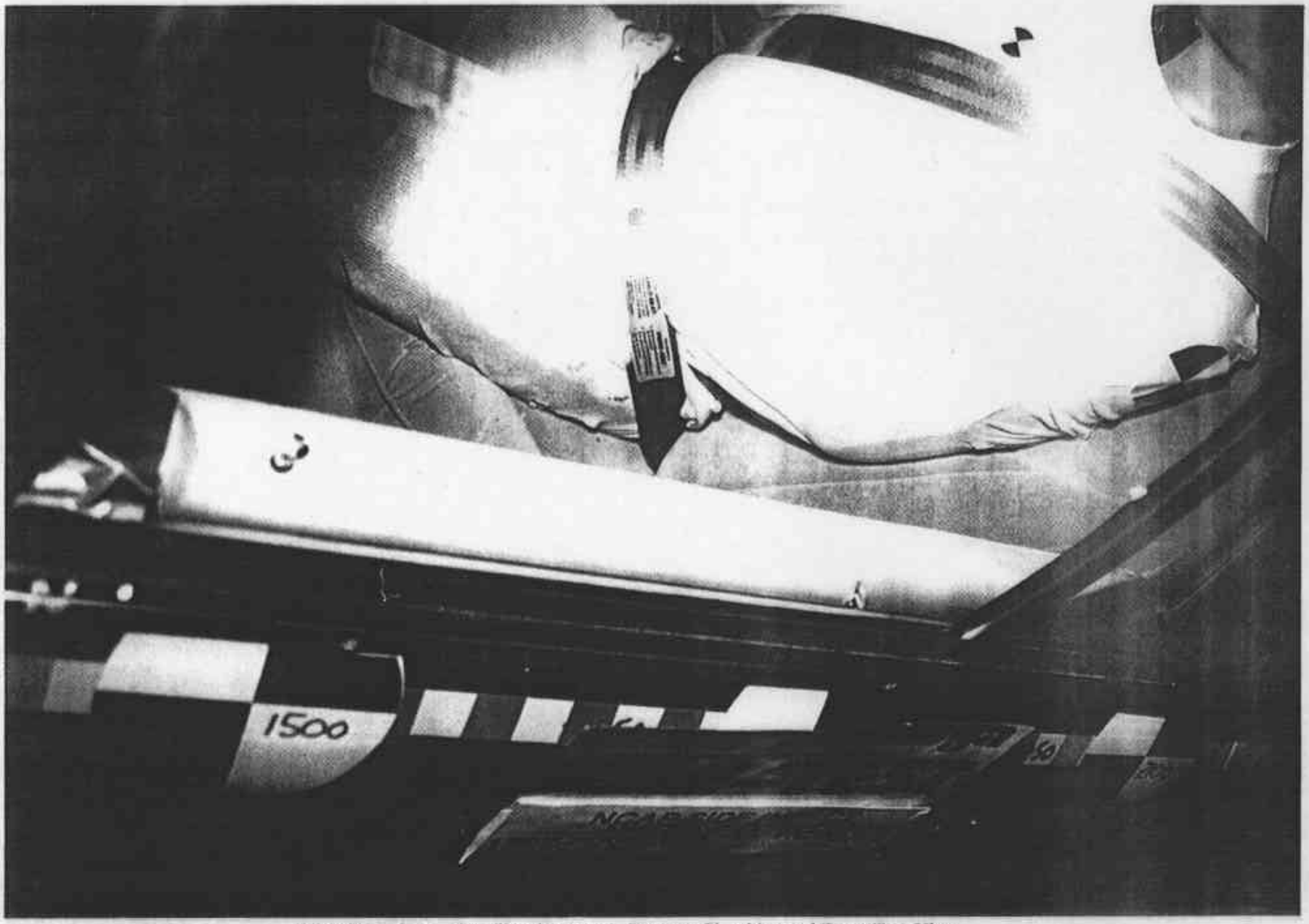


Photo No. A-31 - Pre-Test Passenger Dummy Shoulder and Door Top View

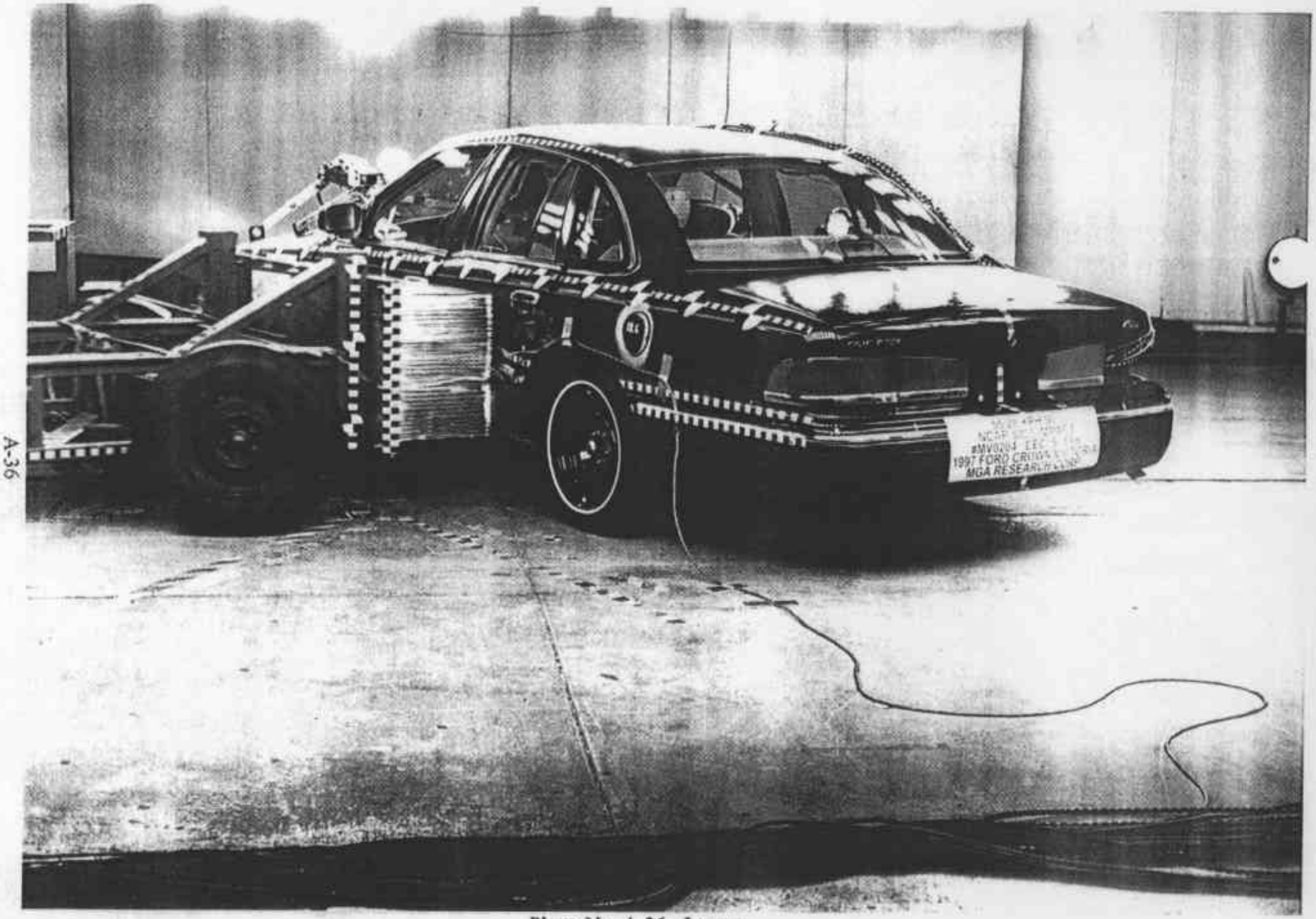
Photo No. A-32 - Post-Test Passenger Dummy Shoulder and Door Top View

Photo No. A-33 - Post-Test Passenger Dummy Contact

Photo No. A-34 - Pre-Test Left Front Impact Point on Vehicle

A-35

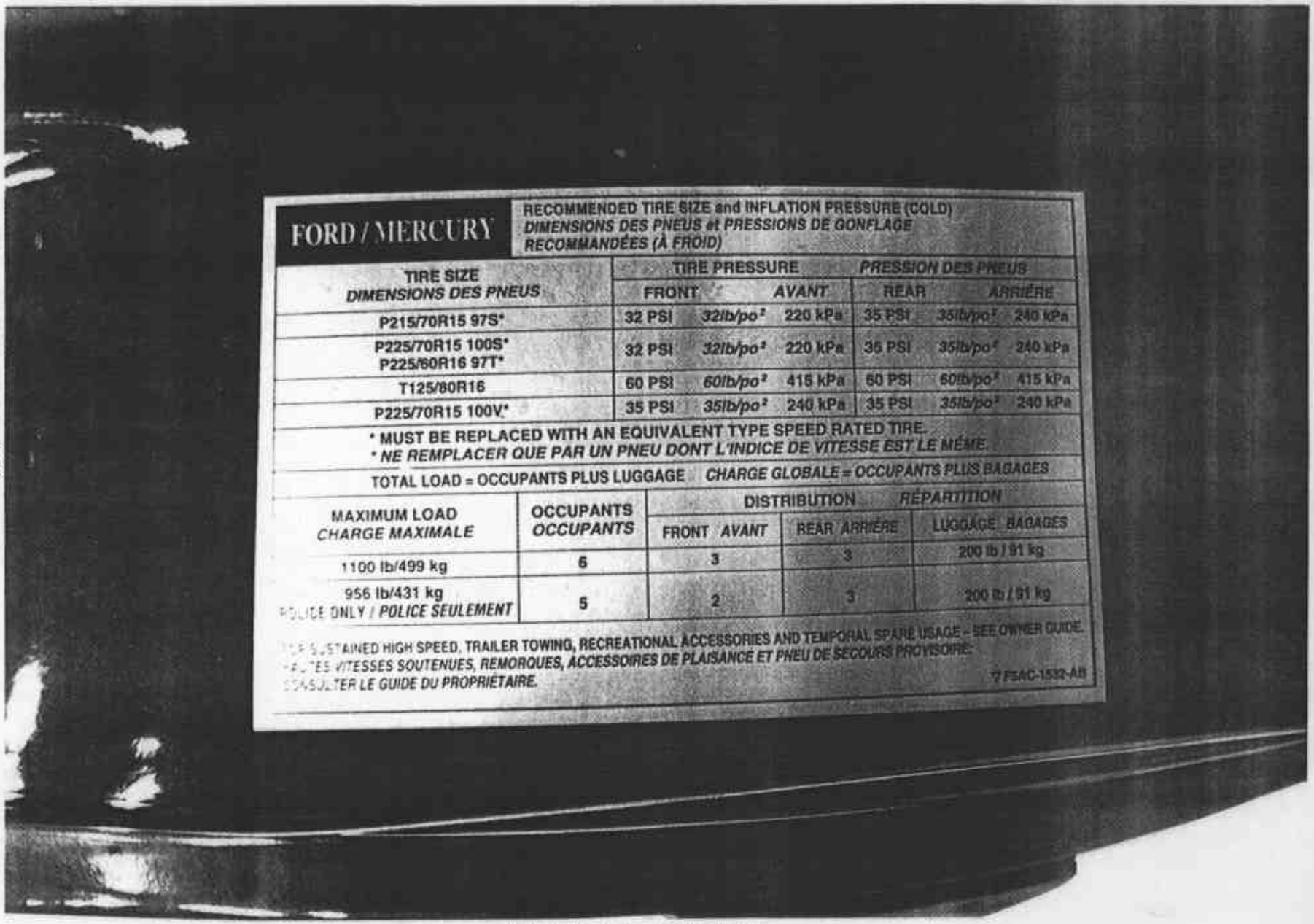
Photo No. A-35 - Post-Test Left Front Impact Point on Vehicle



A-36

Photo No. A-36 - Impact

Photo No. A-37 - Vehicle Certification Label



A-38

Photo No. A-38 - Tire Placard

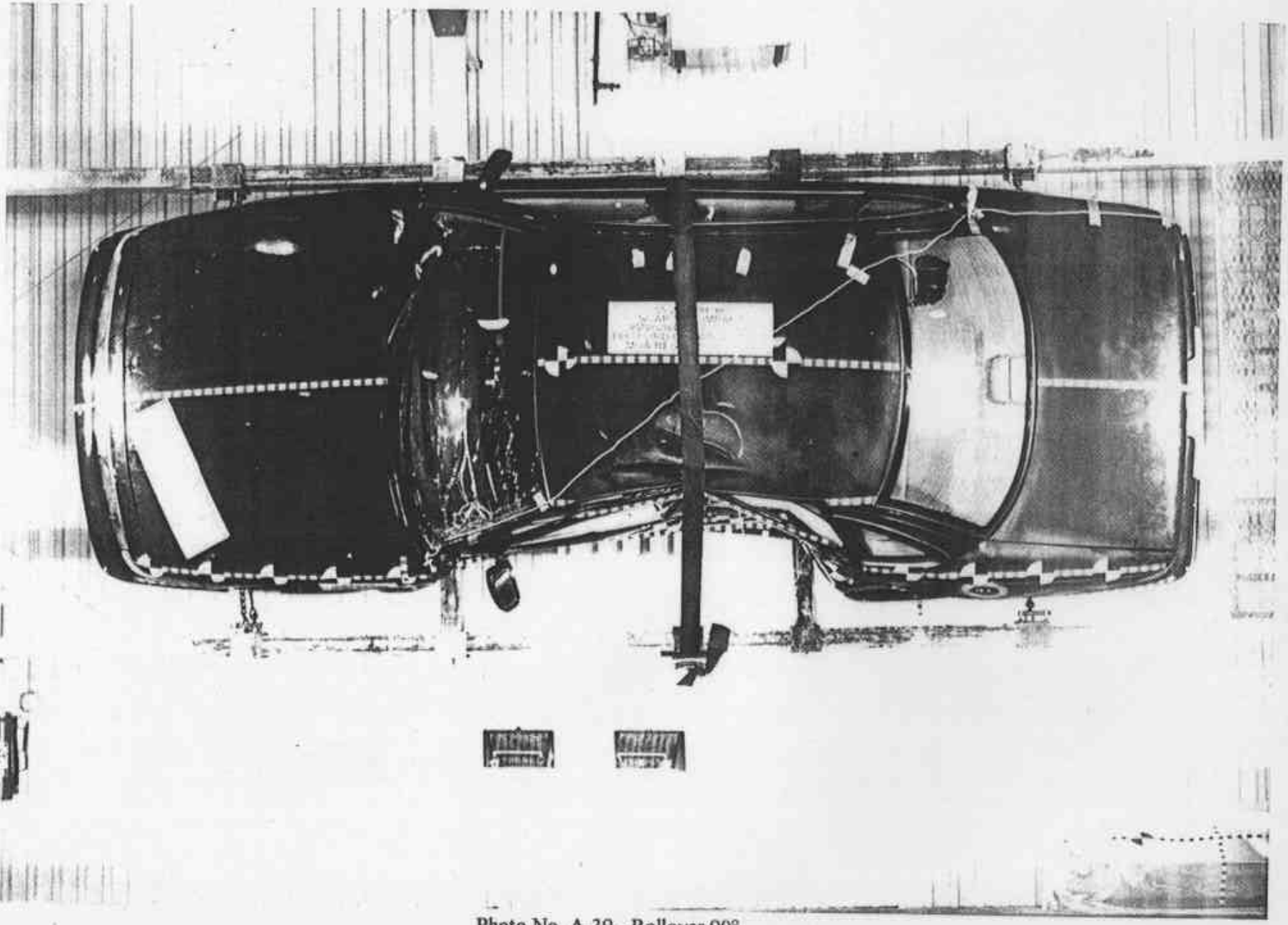
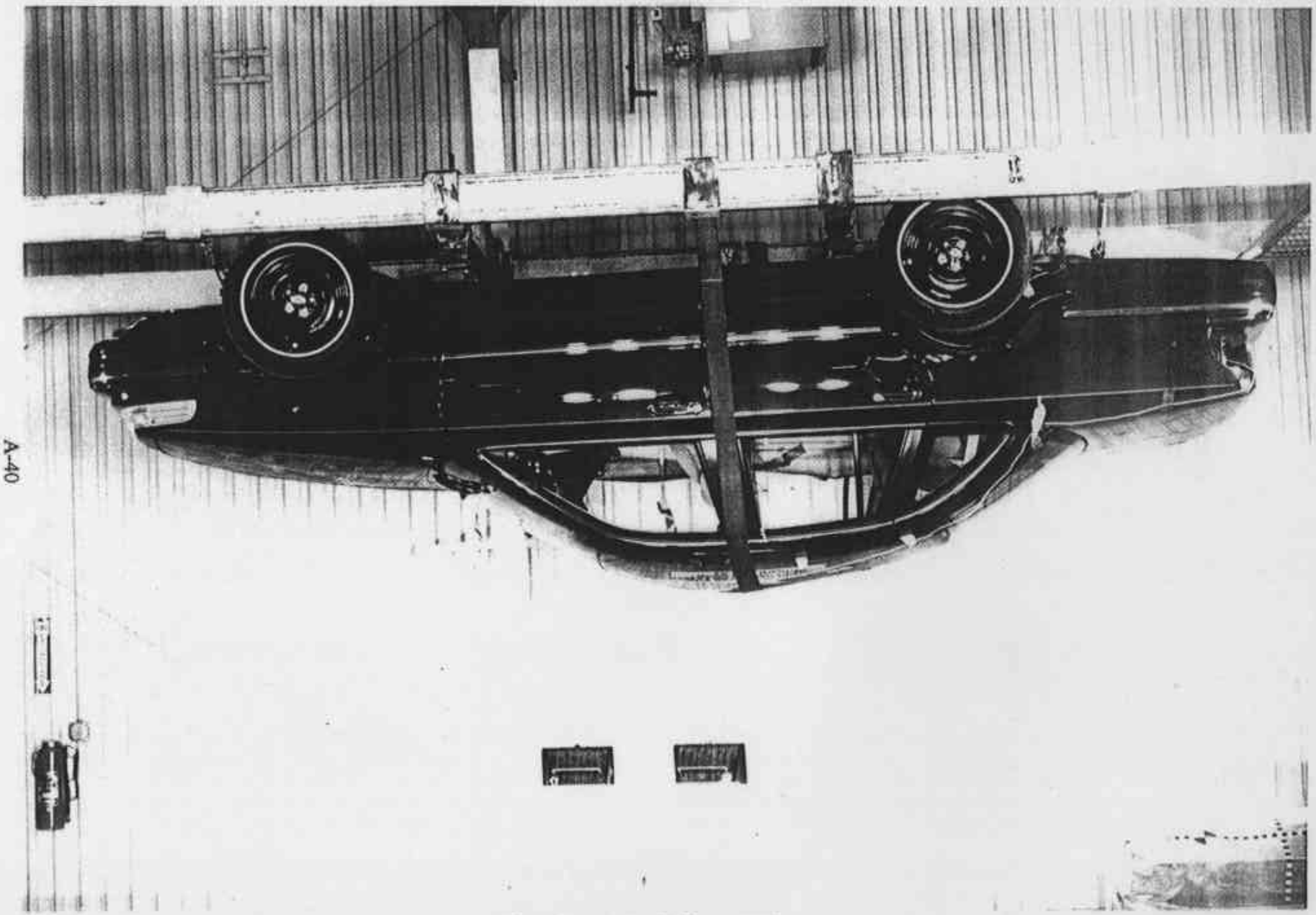


Photo No. A-39 - Rollover 90°



A-40

Photo No. A-40 - Rollover 180°

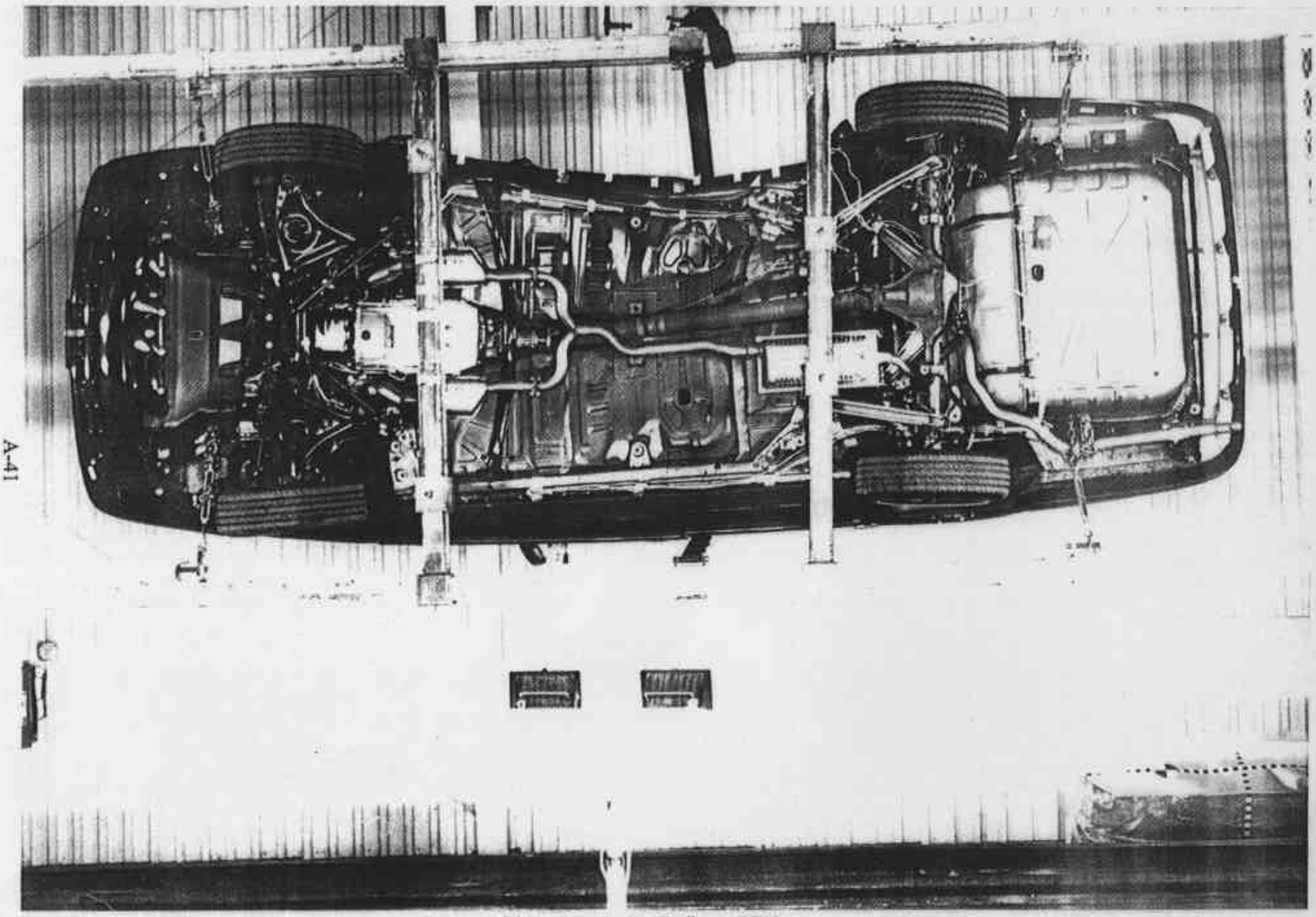
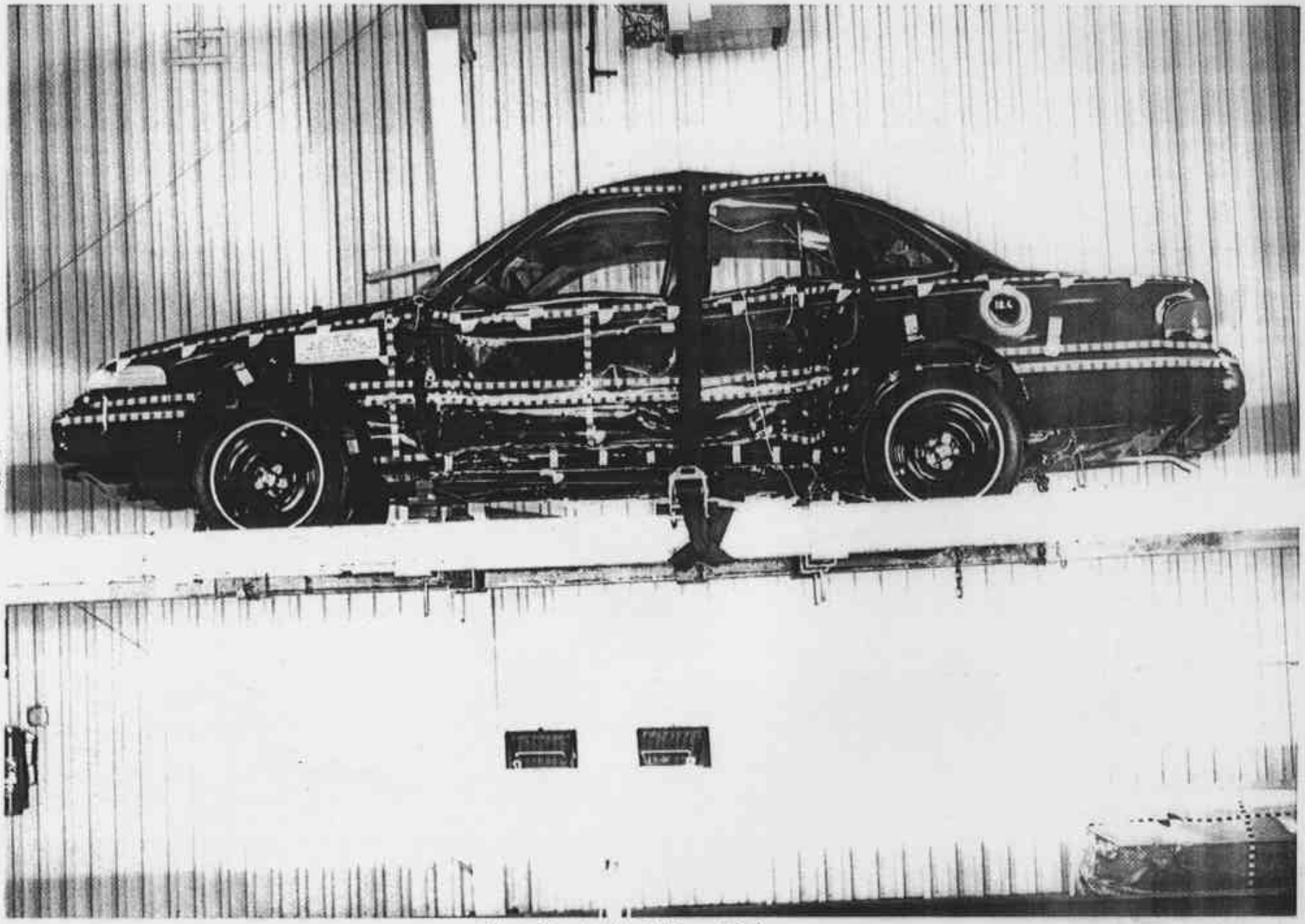


Photo No. A-41 - Rollover 270°



A-42

Photo No. A-42 - Rollover 360°

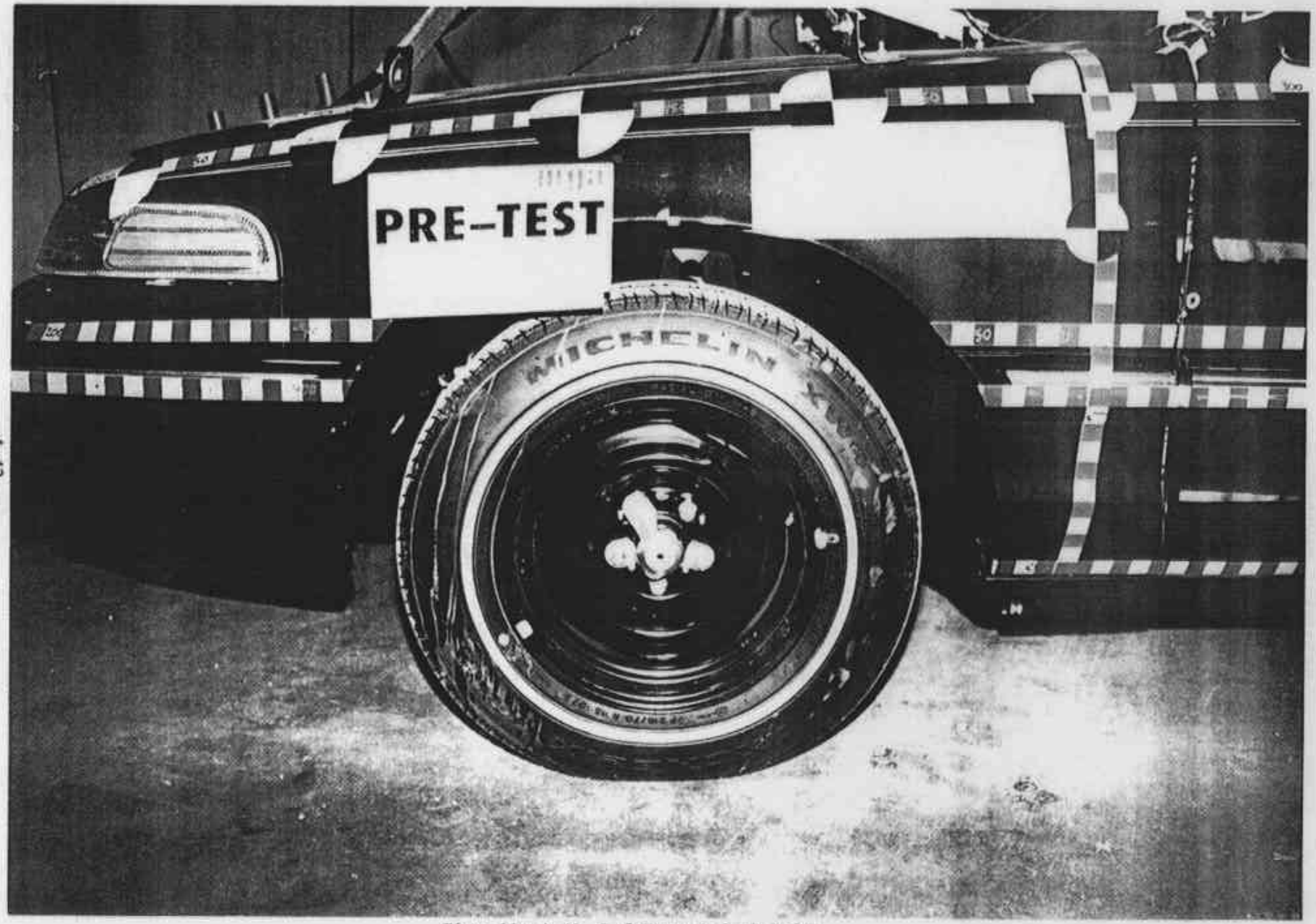


Photo No. A-43 - Left Front Attitude Point

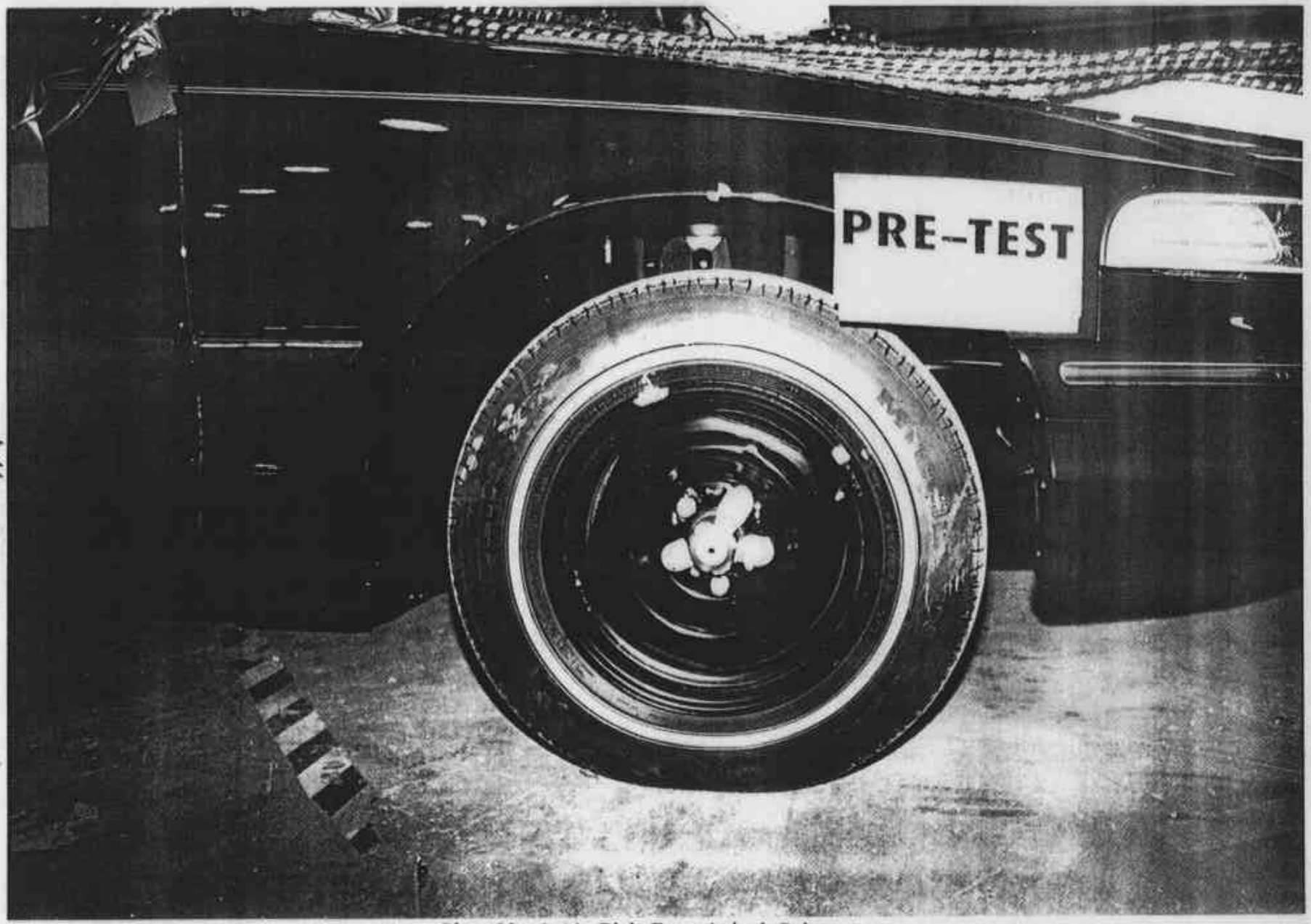


Photo No. A-44 - Right Front Attitude Point

Photo No. A-45 - Left Rear Attitude Point

Photo No. A-46 - Right Rear Attitude Point

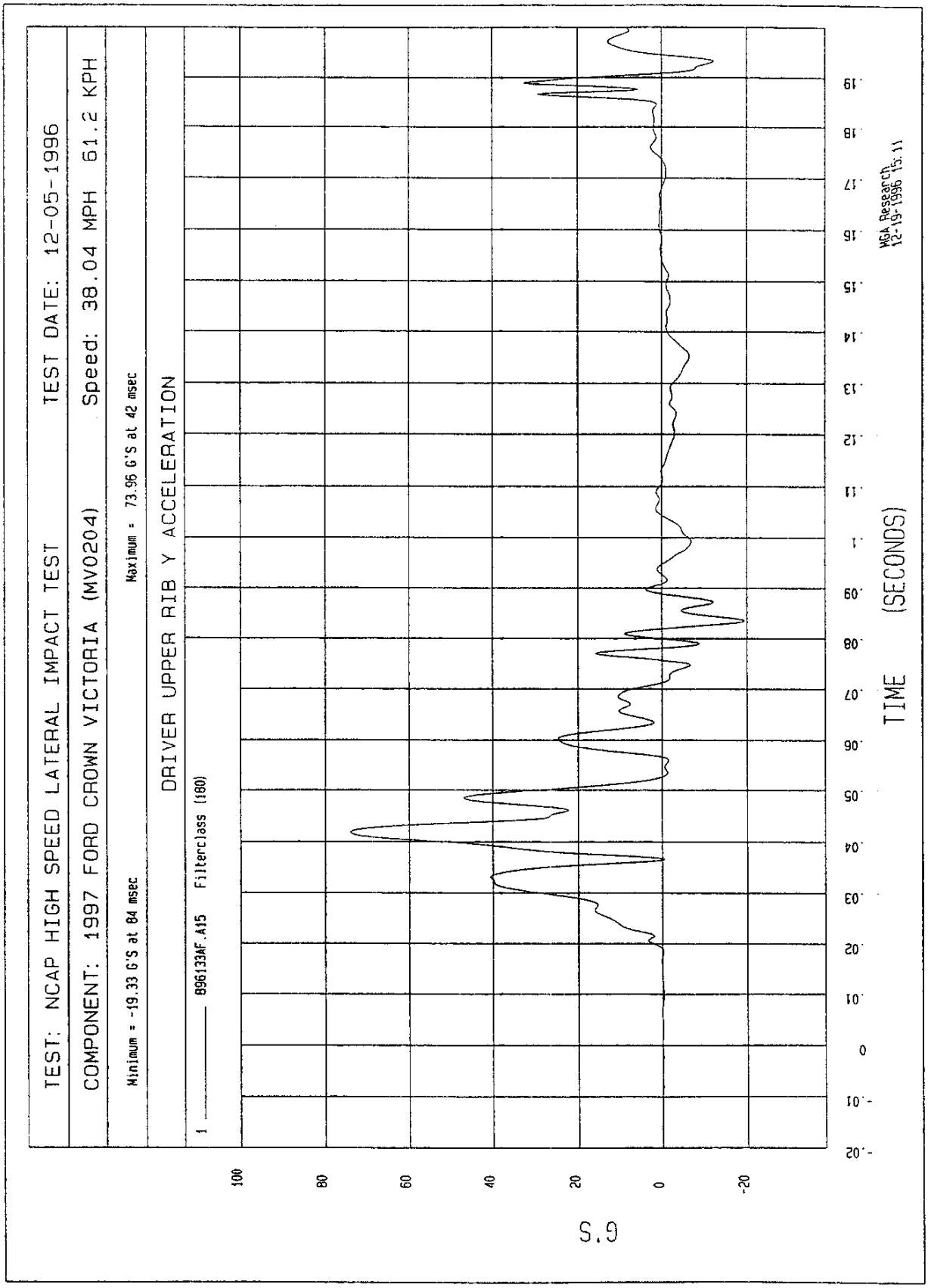
Table of Data Plots

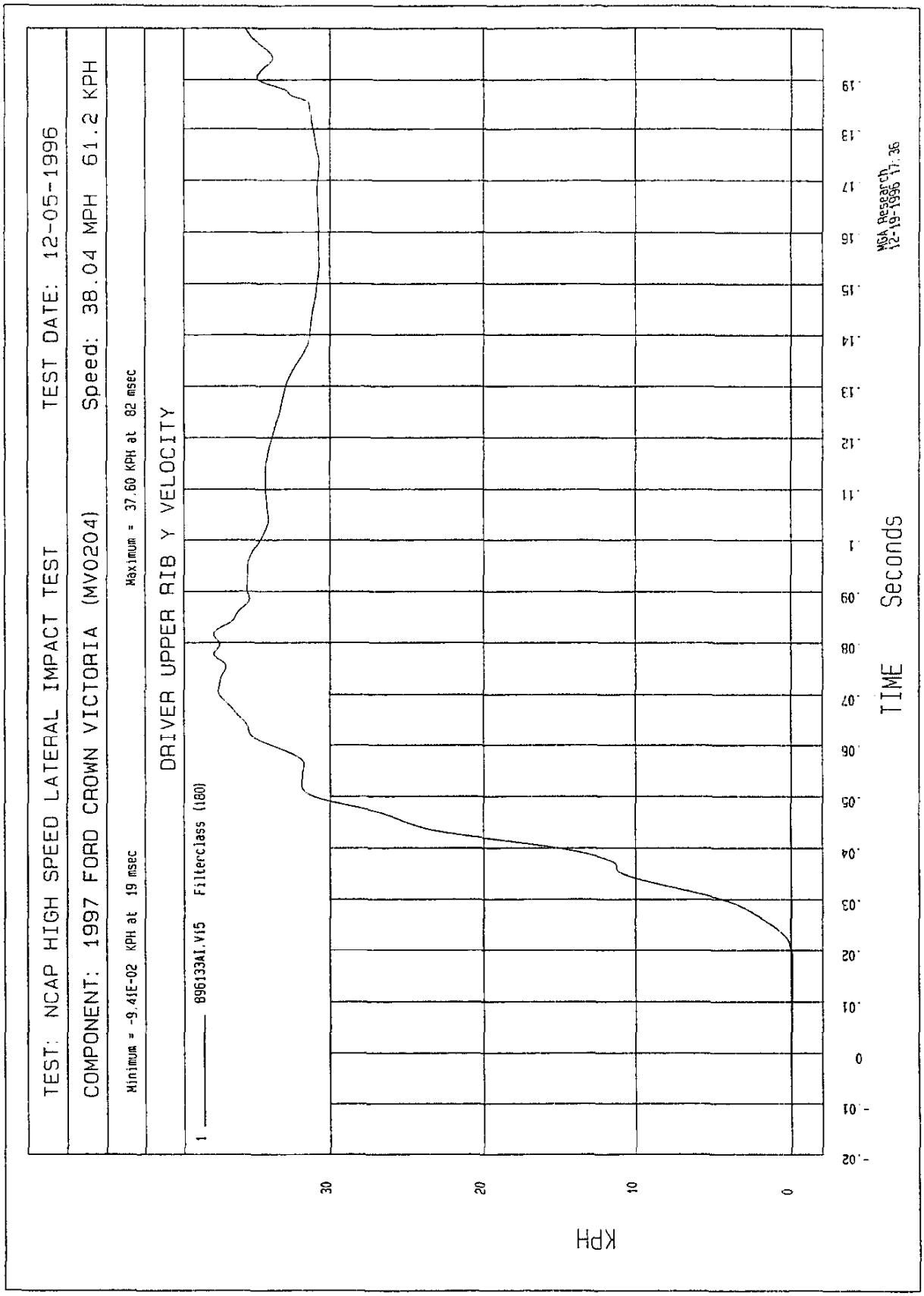
Table of Data Plots

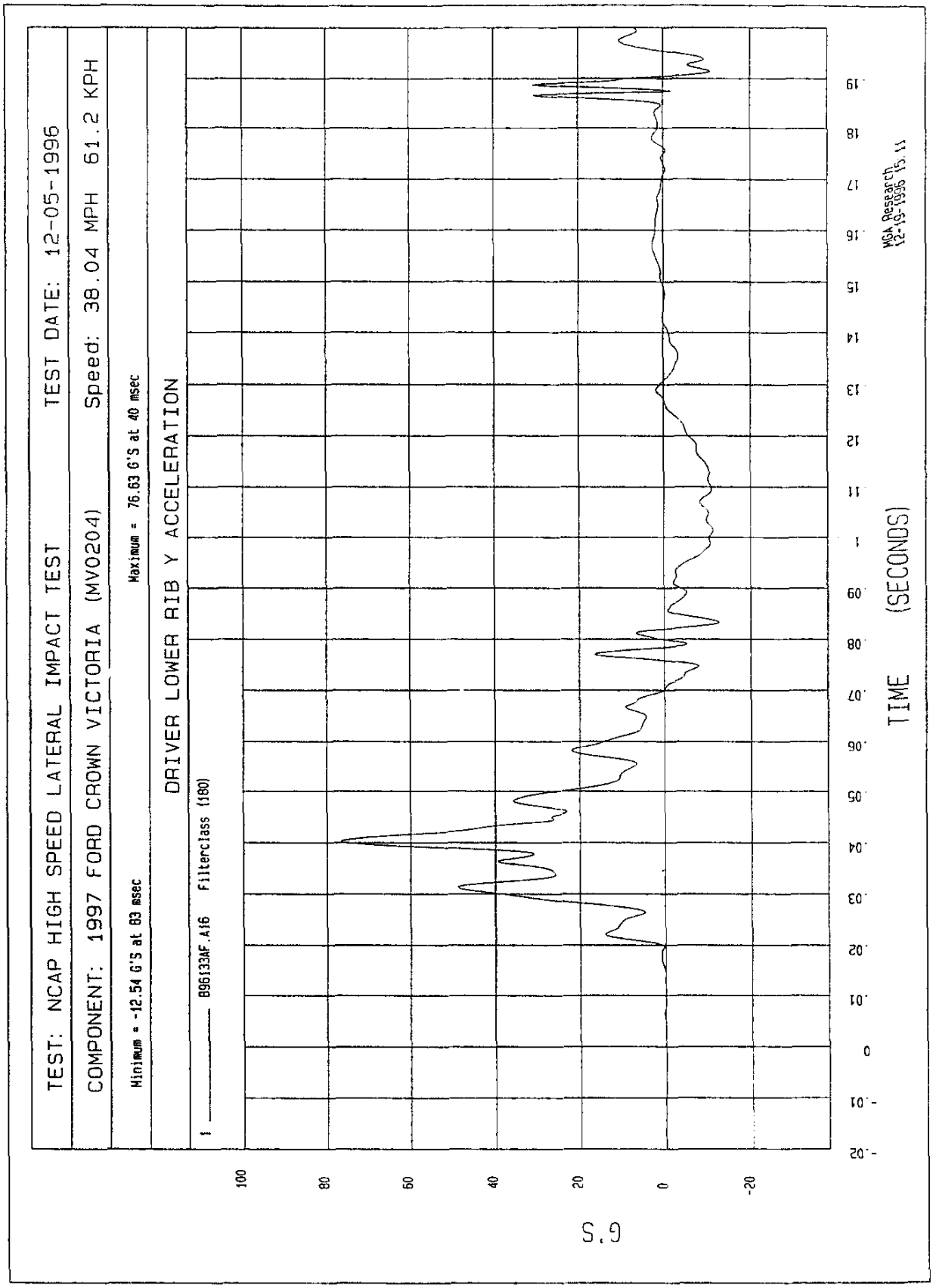
Table of Data Plots

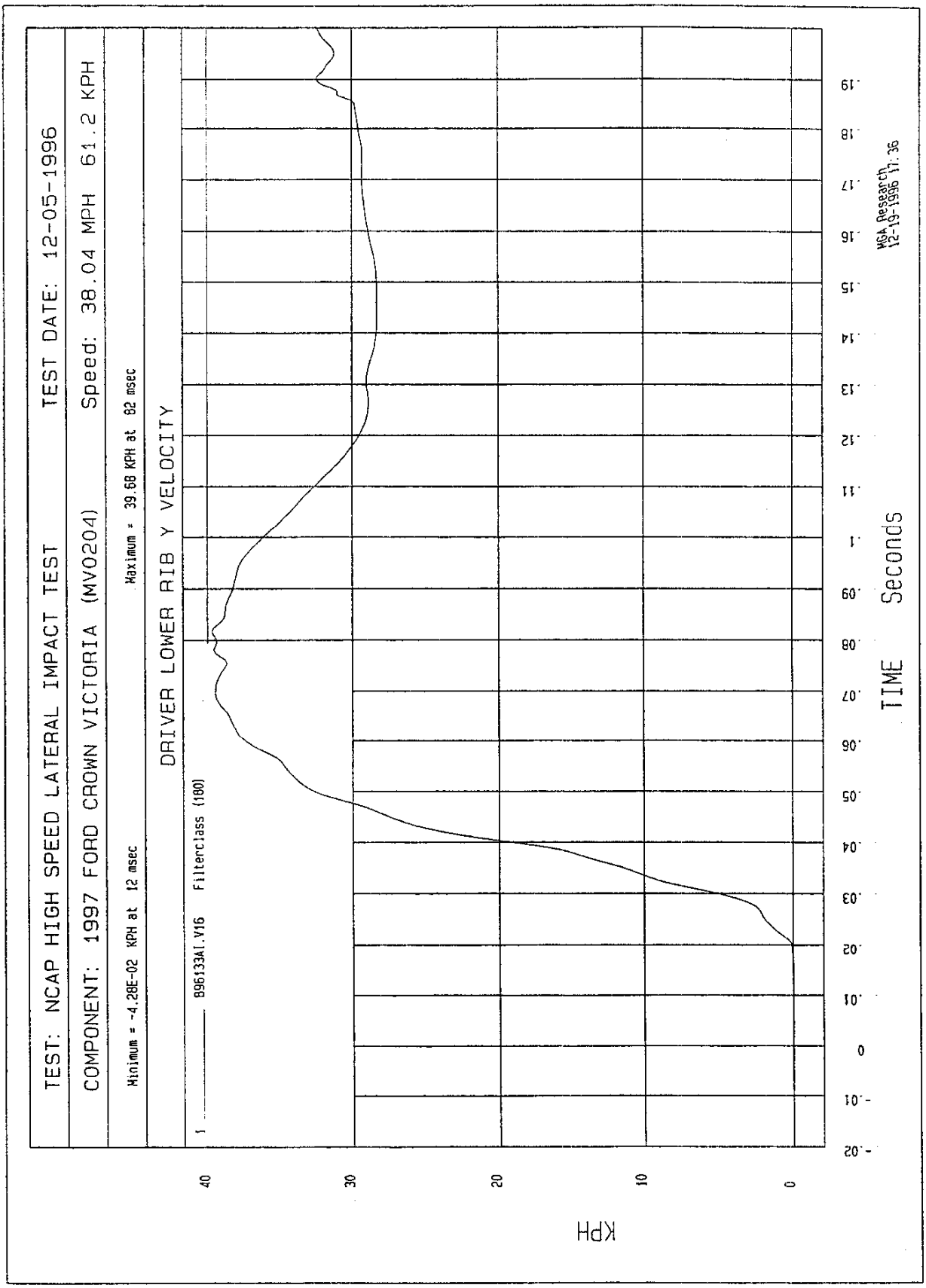
Table of Data Plots

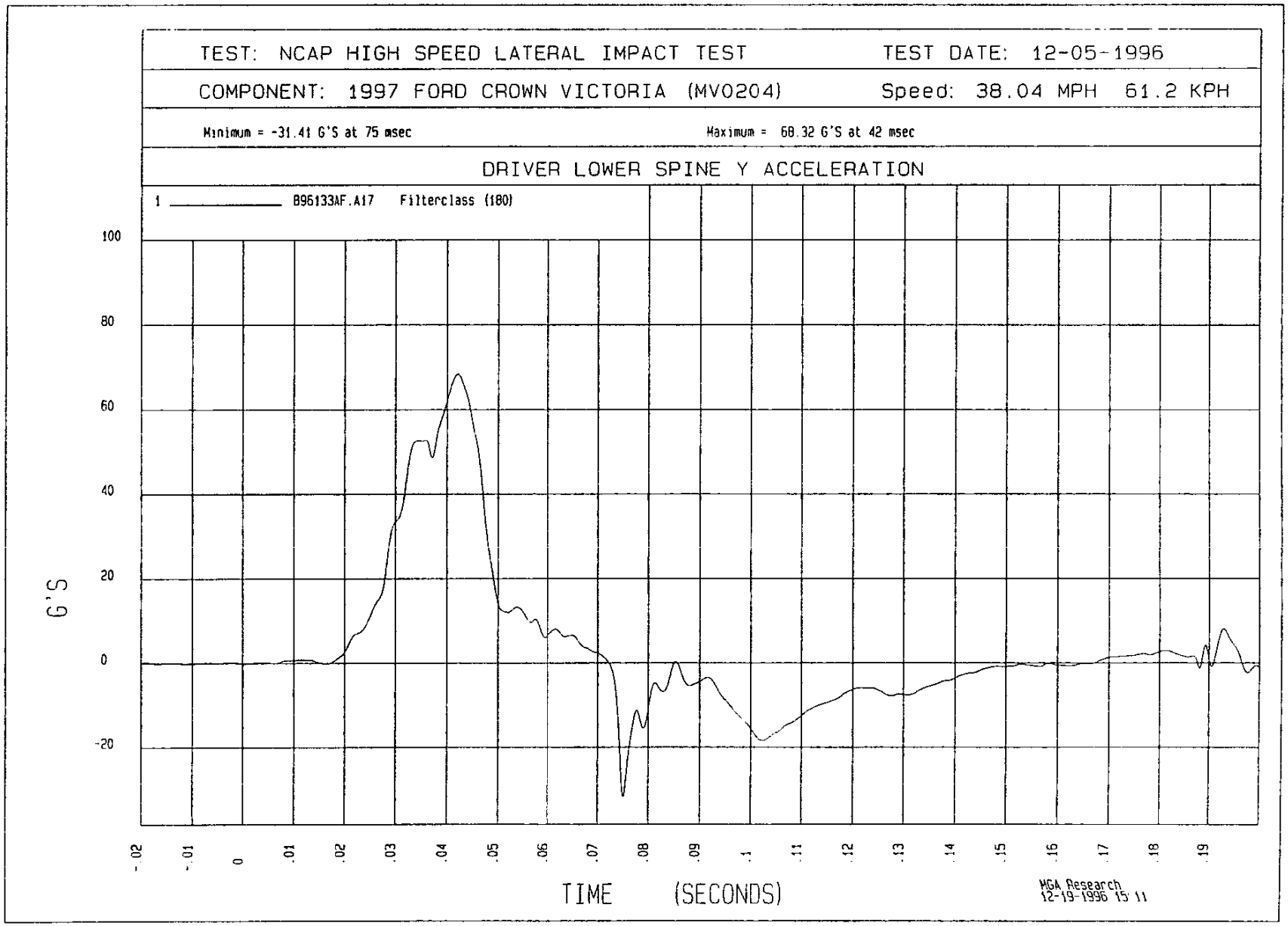
Table of Data Plots

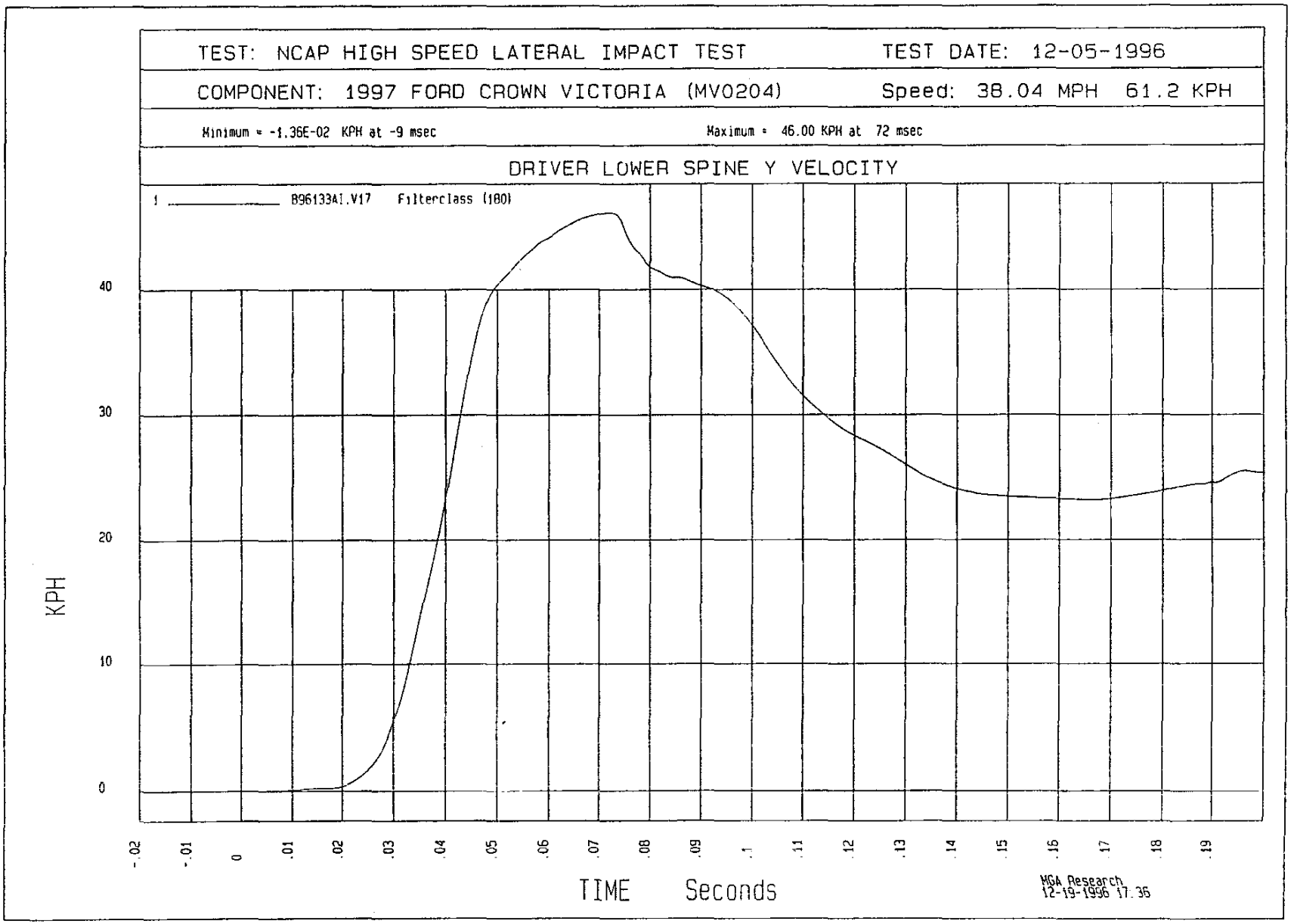

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -19.33 G'S at 84 msec
Maximum = 73.96 G'S at 42 msec
DRIVER UPPER RIB Y ACCELERATION
1 B96133AF.A15 Filterclass (180)
100
80
60
40
20
0
-20
G'S
.19
.18
.17
.16
.15
.14
.13
.12
.11
.1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
-.01
-.02
TIME (SECONDS)
MGA Research
12-19-1996 15:11

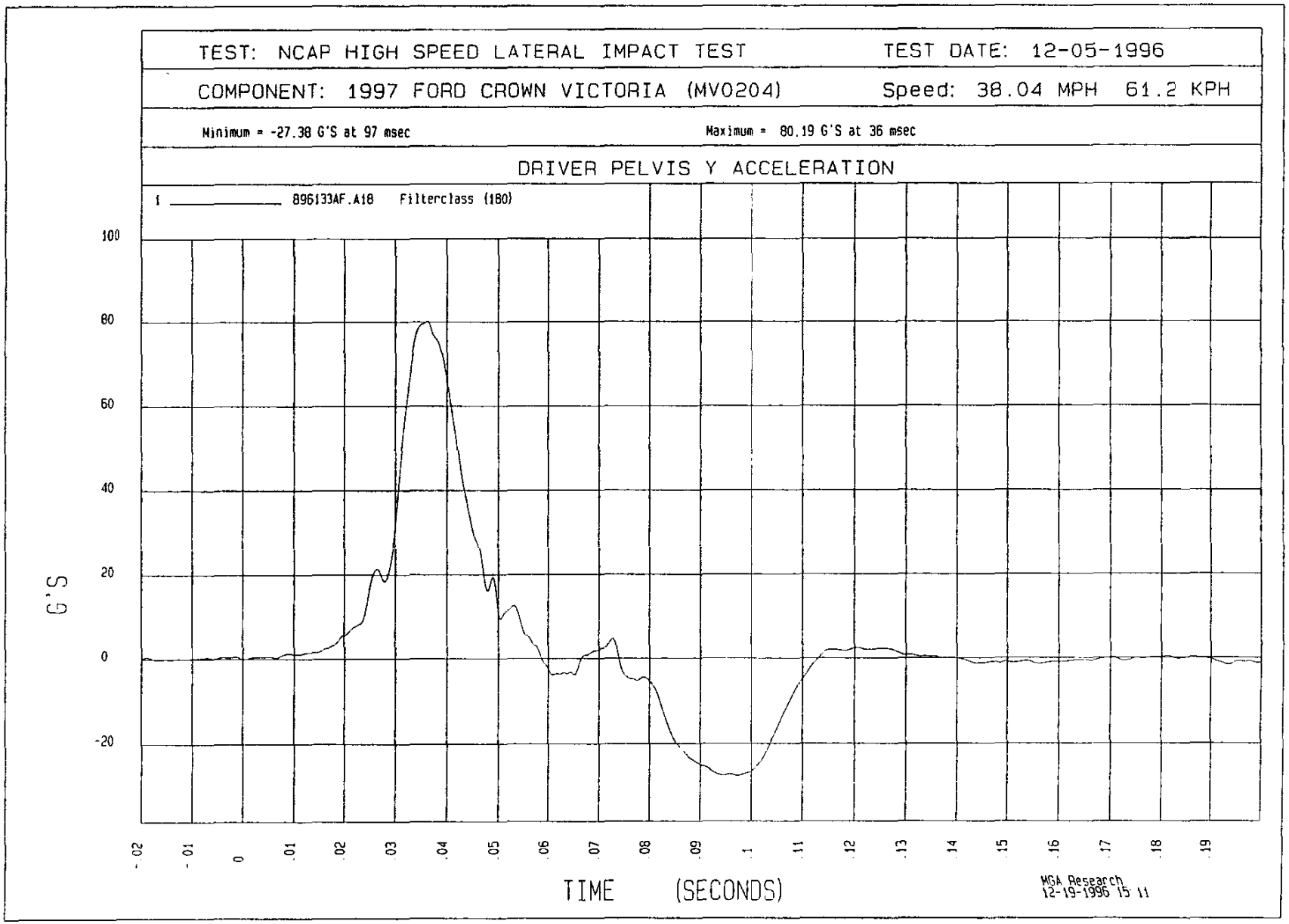

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -9.41E-02 KPH at 19 msec
Maximum = 37.60 KPH at 82 msec
DRIVER UPPER RIB Y VELOCITY
1 _____ 896133AI.V15 Filterclass (180)
KPH
30
20
10
0
TIME Seconds
MGA Research
12-19-1996 17:36

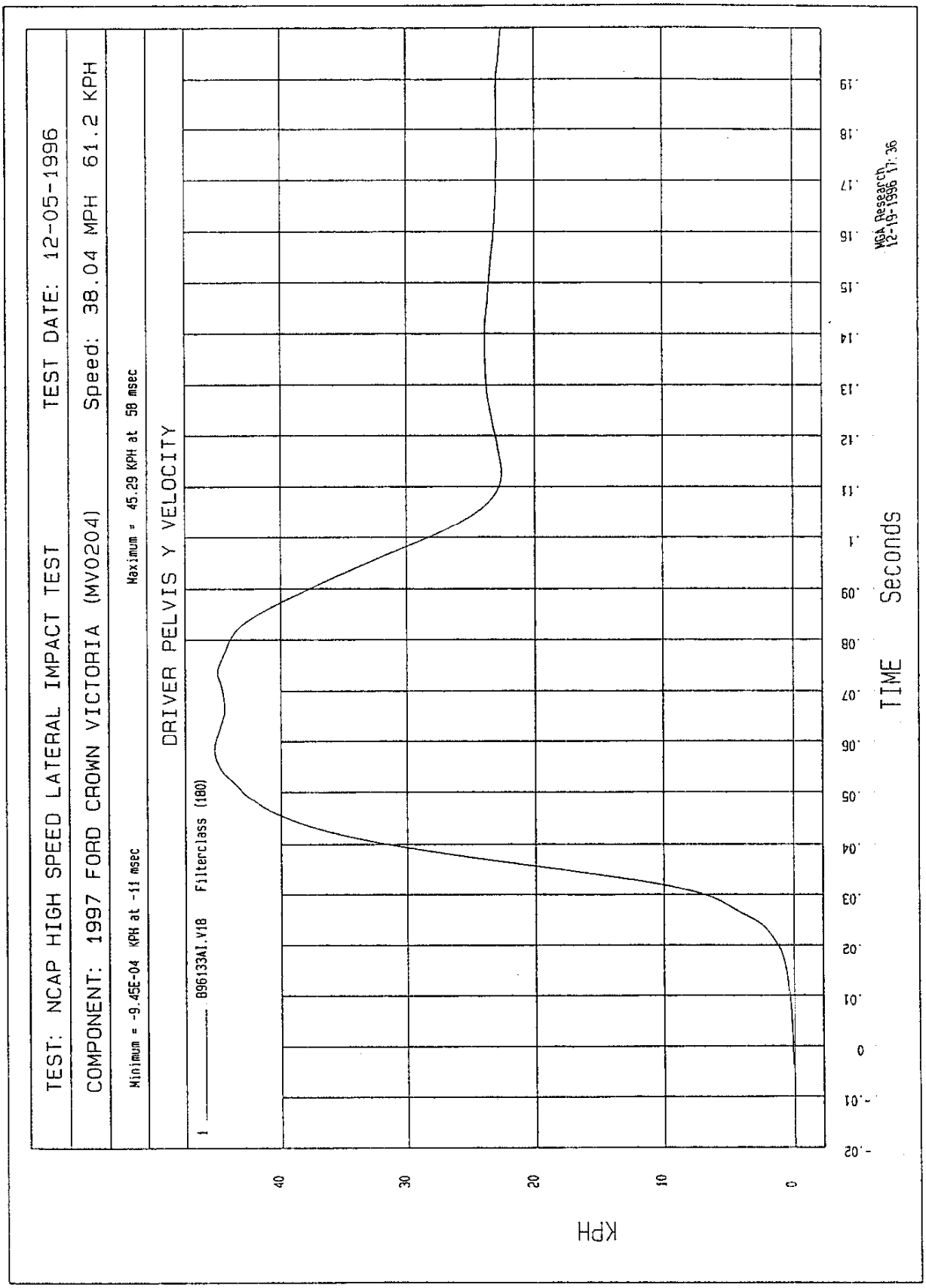

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -12.54 G'S at 03 msec
Maximum = 76.63 G'S at 40 msec
DRIVER LOWER RIB Y ACCELERATION
1 B96133AF.A16 Filterclass (180)
100
80
60
40
20
0
-20
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-19-1996 15:11
S.9

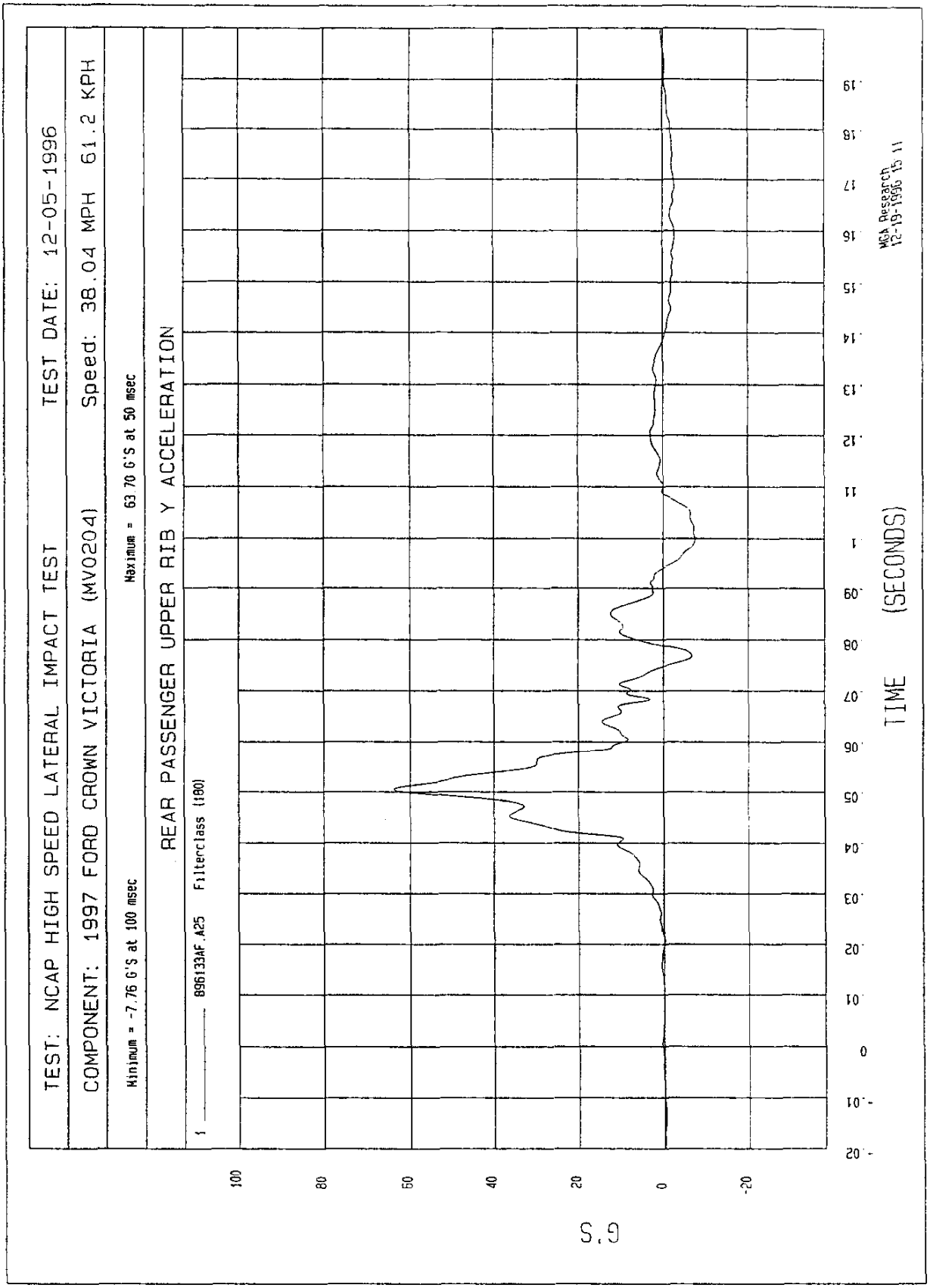

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -4.28E-02 KPH at 12 msec
Maximum = 39.68 KPH at 82 msec
DRIVER LOWER RIB Y VELOCITY
1 B96133AI.V16 Filterclass (180)
KPH
40
30
20
10
0
-10
-20
TIME Seconds
0
10
20
03
04
05
06
07
08
09
10
11
12
13
14
15
16
17
18
19
MGA Research
12-19-1996 11:36

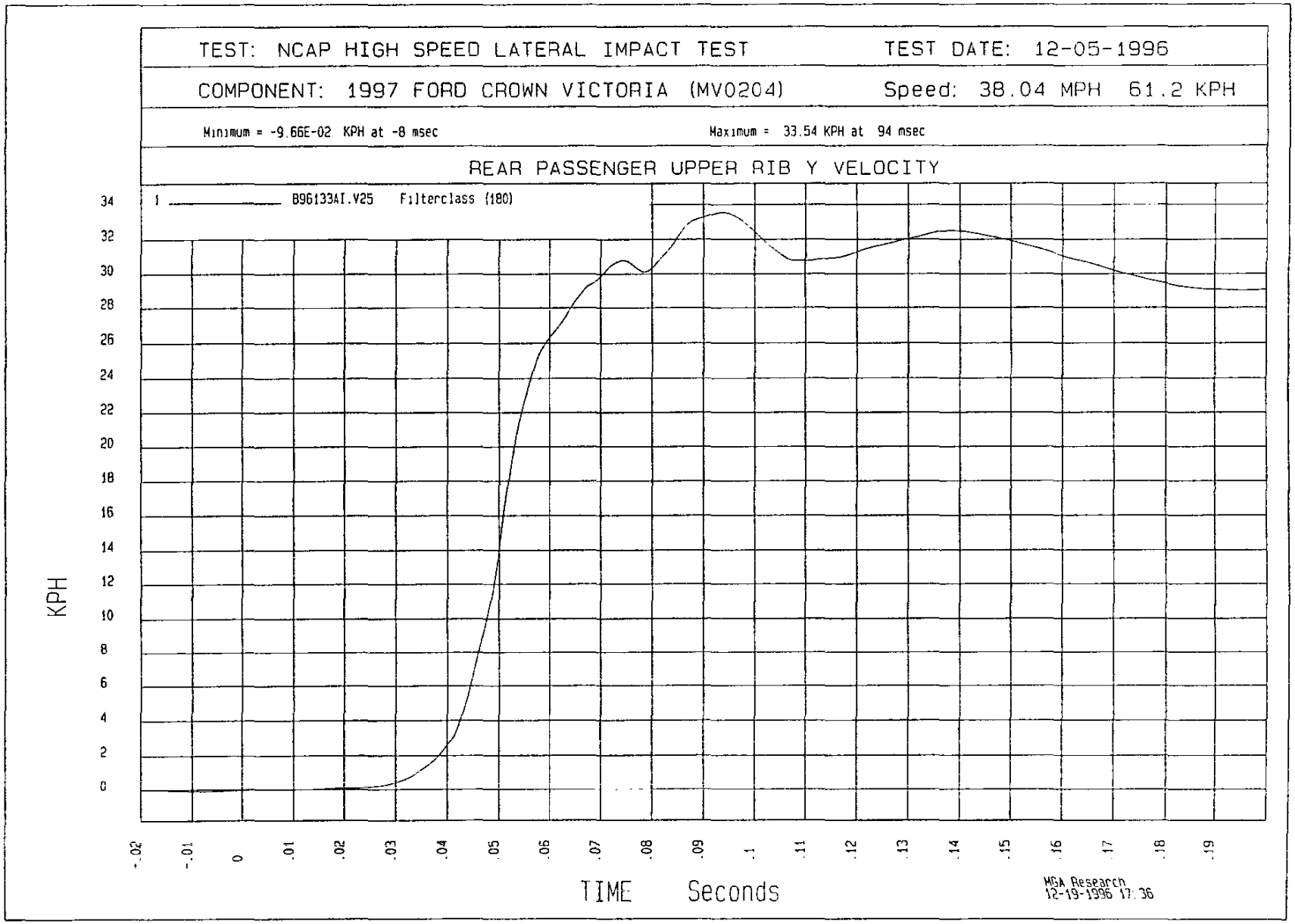

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -31.41 G'S at 75 msec
Maximum = 68.32 G'S at 42 msec
DRIVER LOWER SPINE Y ACCELERATION
1 B96133AF.A17 Filterclass (180)
100
80
60
40
20
0
-20
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-19-1996 15:11

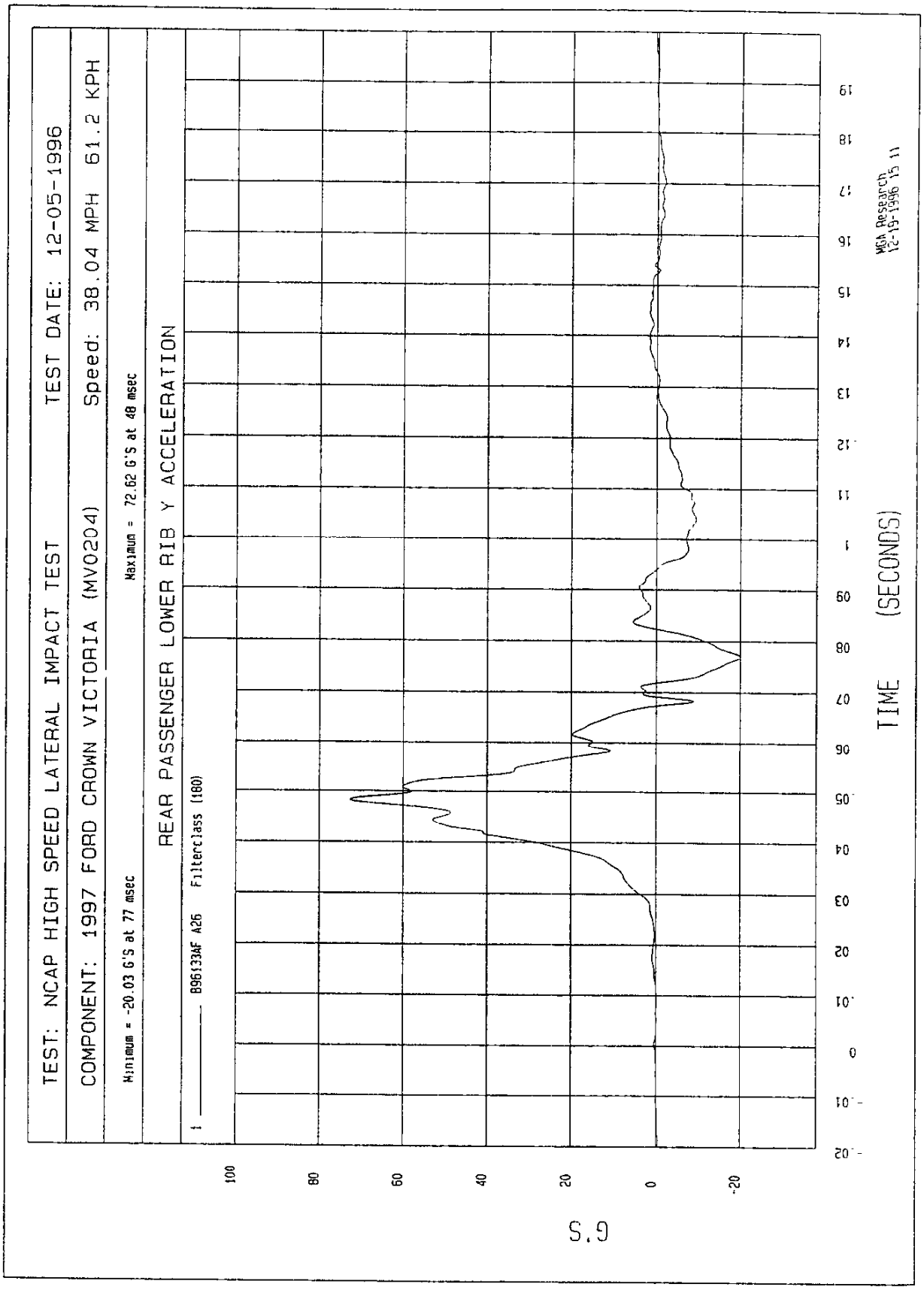

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -1.36E-02 KPH at -9 msec
Maximum = 46.00 KPH at 72 msec
DRIVER LOWER SPINE Y VELOCITY
1 B96133A1.V17 Filterclass (180)
KPH
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
12-19-1996 17:36

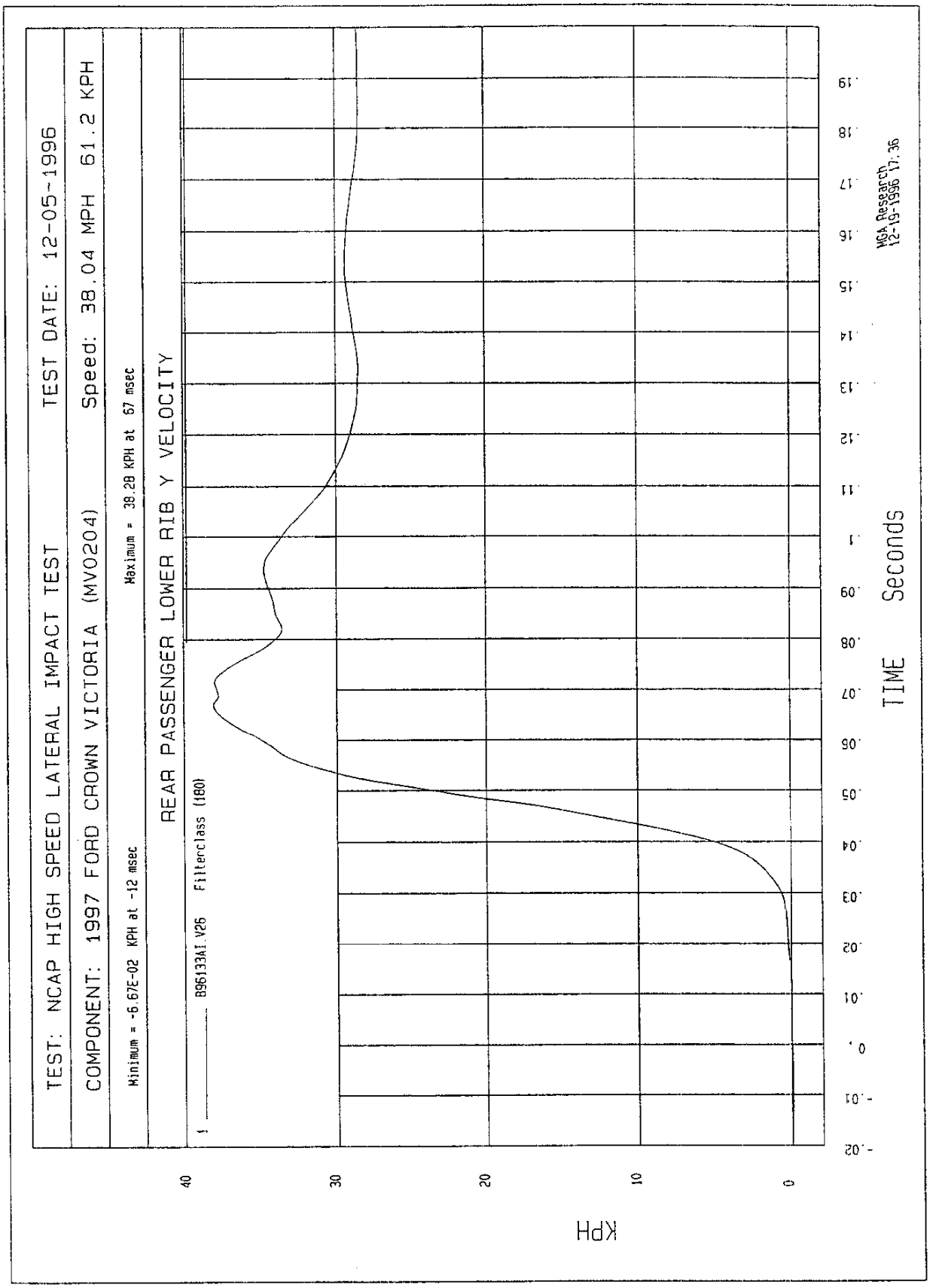

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -27.38 G'S at 97 msec
Maximum = 80.19 G'S at 36 msec
DRIVER PELVIS Y ACCELERATION
1 896133AF.A18 Filterclass (180)
100
80
60
40
20
0
-20
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-19-1996 15 11

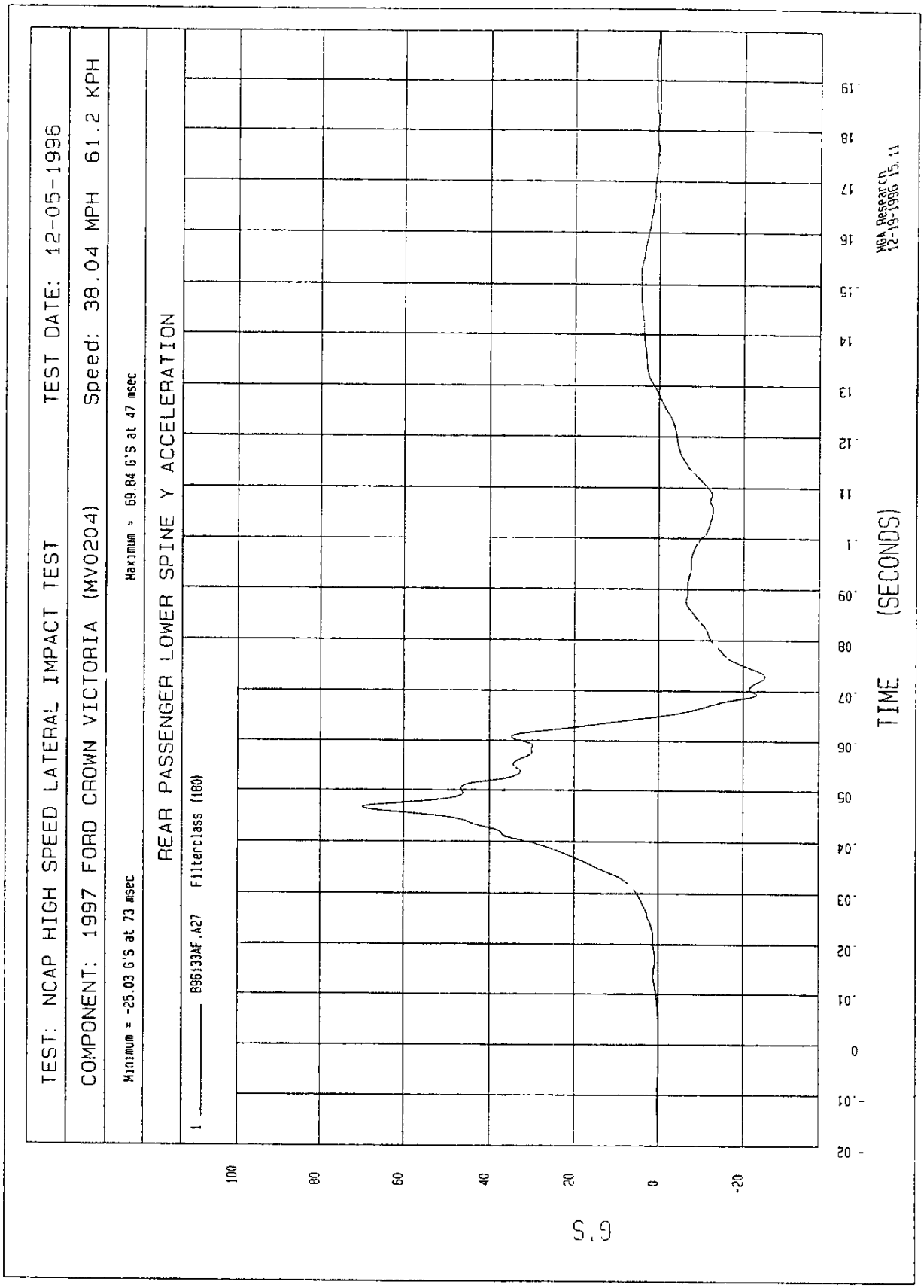

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -9.45E-04 KPH at -11 msec
Maximum = 45.29 KPH at 58 msec
DRIVER PELVIS Y VELOCITY
1 _____ 896133AI.V18 Filterclass (180)
KPH
TIME Seconds
MGA Research
12-19-1996 17:36

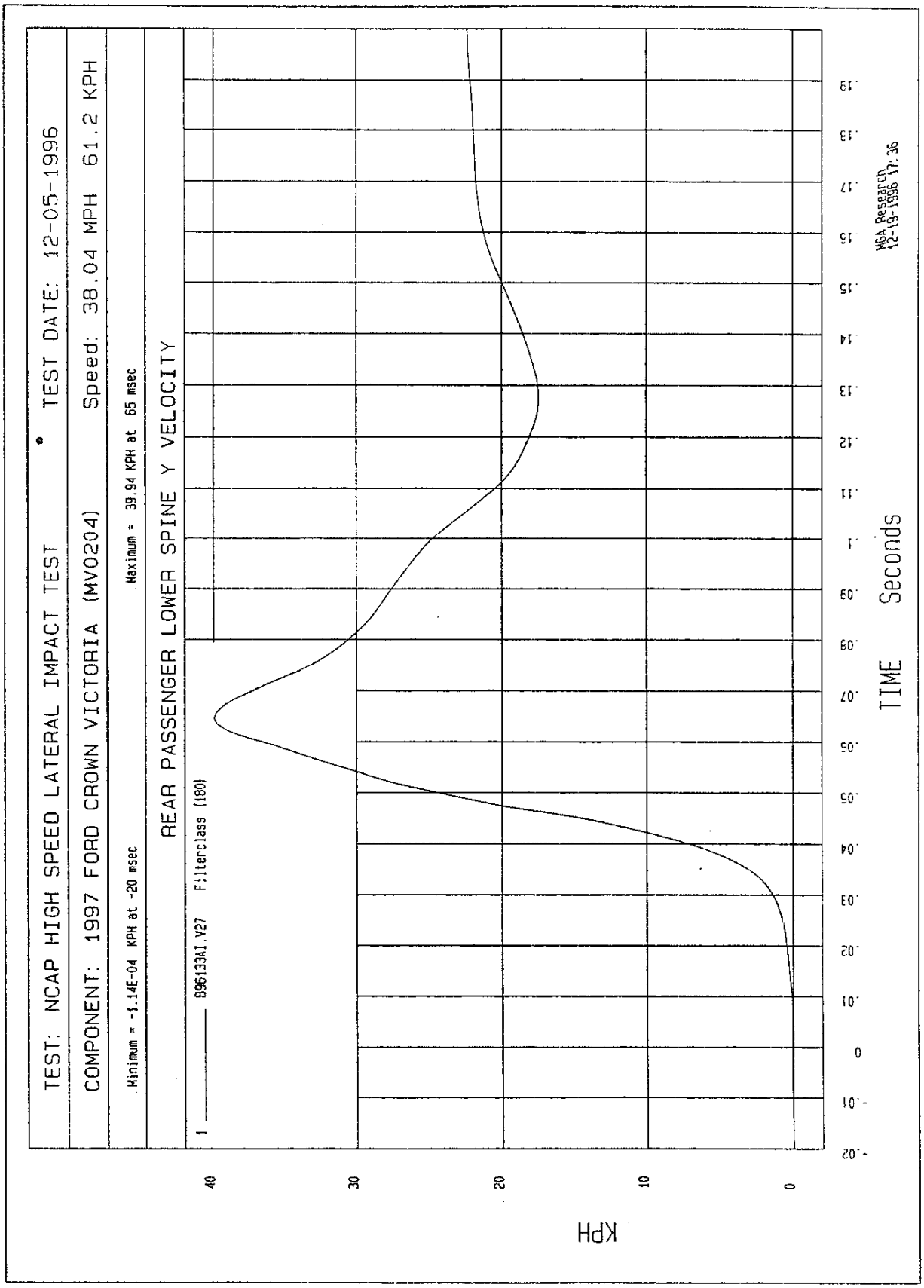

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204) Speed: 38.04 MPH 61.2 KPH
Minimum = -7.76 G'S at 100 msec
Maximum = 63.70 G'S at 50 msec
REAR PASSENGER UPPER RIB Y ACCELERATION
1 896133AF.A25 Filterclass (180)
100
80
60
40
20
0
-20
G'S
TIME (SECONDS)
MGA Research
12-19-1996 15:11

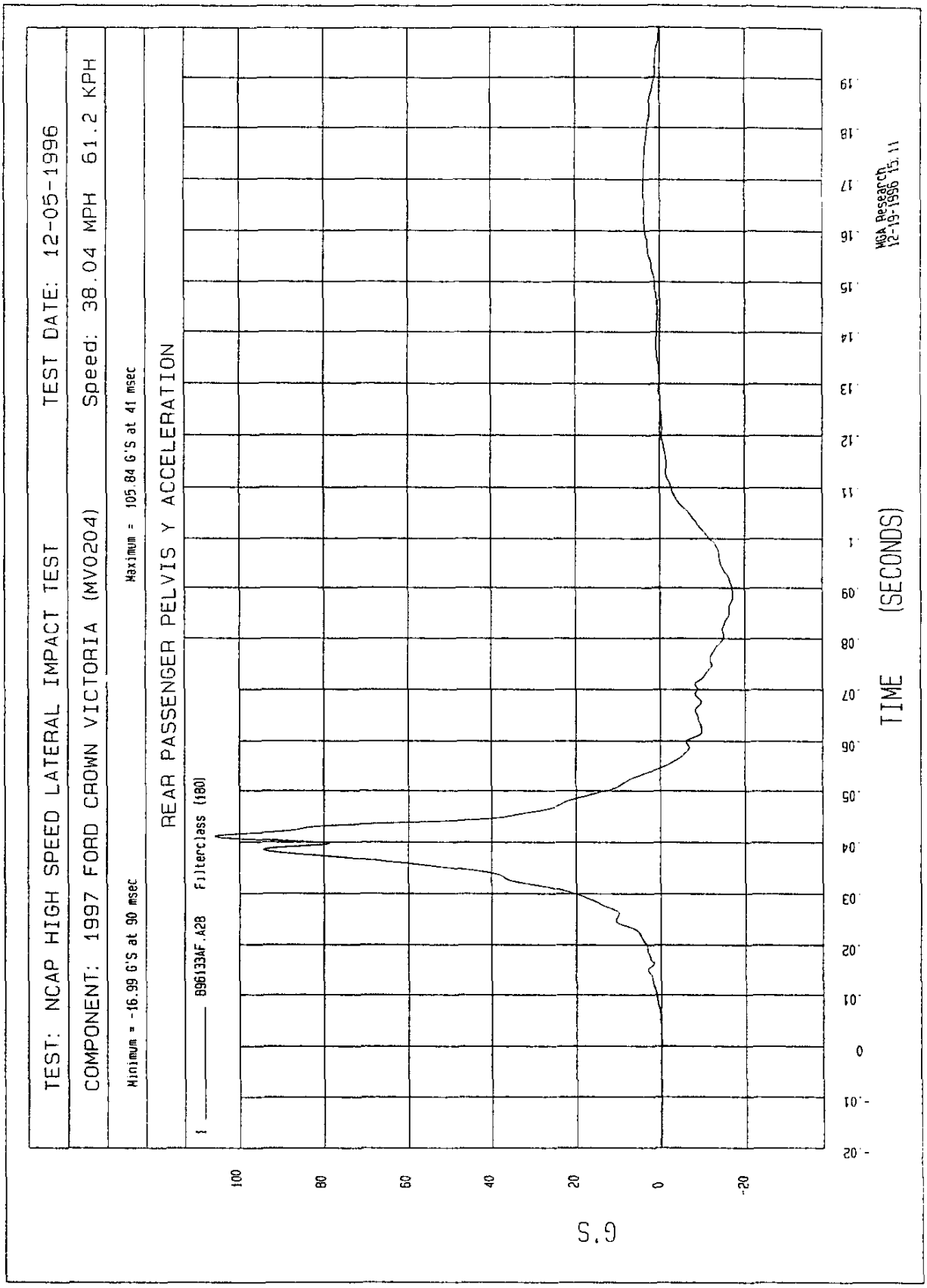

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -9.66E-02 KPH at -8 msec
Maximum = 33.54 KPH at 94 msec
REAR PASSENGER UPPER RIB Y VELOCITY
1 B96133AI.V25 Filterclass (180)
KPH
34
32
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
12-19-1996 17:36

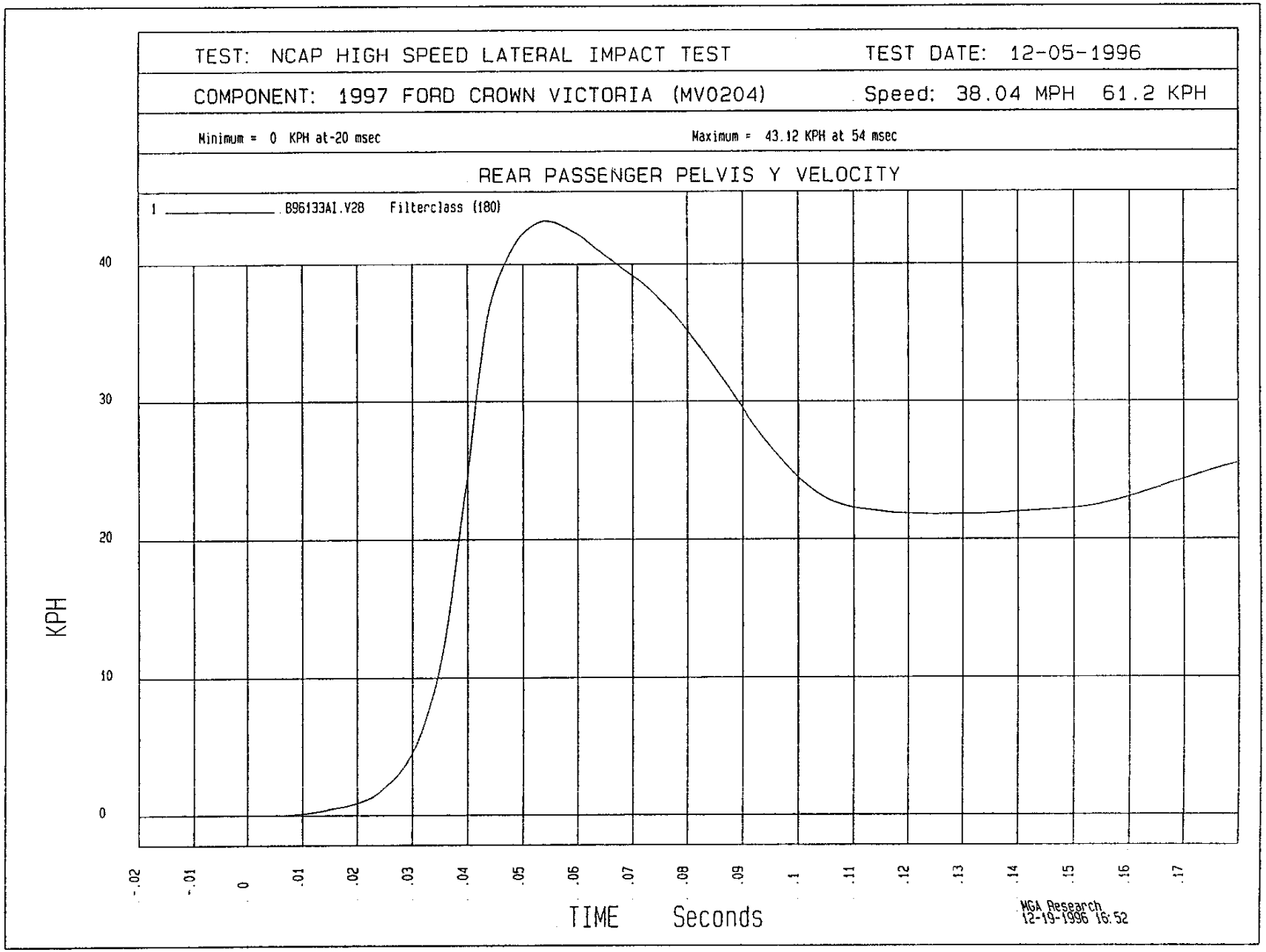

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -20.03 G'S at 77 msec
Maximum = 72.62 G'S at 48 msec
REAR PASSENGER LOWER RIB Y ACCELERATION
1 B961334F A26 Filterclass (180)
100
80
60
40
20
0
-20
-02
-01
0
01
02
03
04
05
06
07
08
09
1
11
12
13
14
15
16
17
18
19
TIME (SECONDS)
MGA Research
12-19-1996 15 11
6.5
5.9

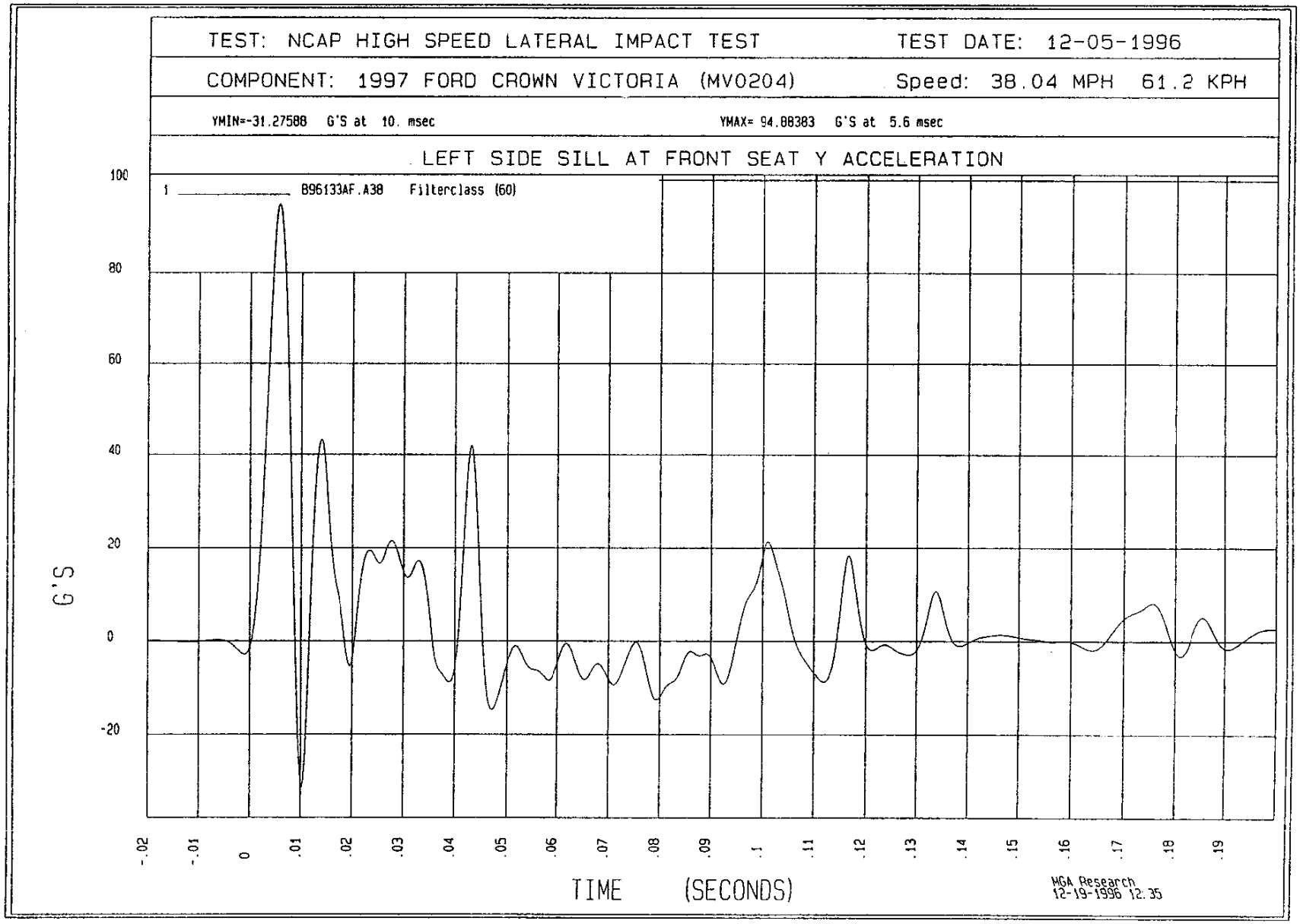

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -6.67E-02 KPH at -12 msec
Maximum = 38.29 KPH at 67 msec
REAR PASSENGER LOWER RIB Y VELOCITY
1 B96133Af.V26 Filterclass (180)
KPH
40
30
20
10
0
-02
-01
0
01
02
03
04
05
06
07
08
09
10
11
12
13
14
15
16
17
18
19
TIME Seconds
MGA Research
12-19-1996 17:36

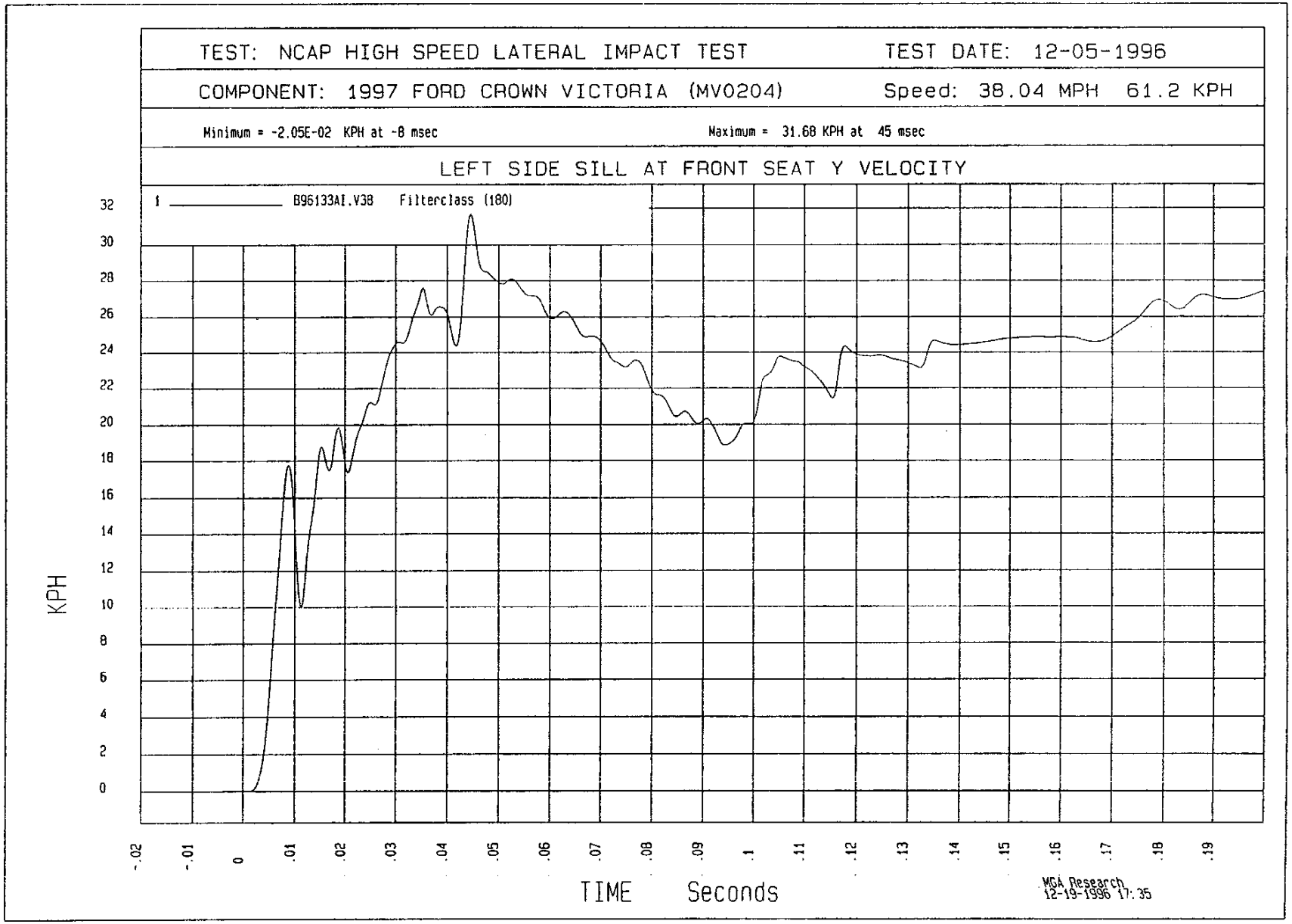

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -25.03 G'S at 73 msec
Maximum = 69.84 G'S at 47 msec
REAR PASSENGER LOWER SPINE Y ACCELERATION
1 B96133AF.A27 Filterclass (180)
100
80
60
40
20
0
-20
TIME (SECONDS)
MGA Research
12-19-1996 15:11
6.9

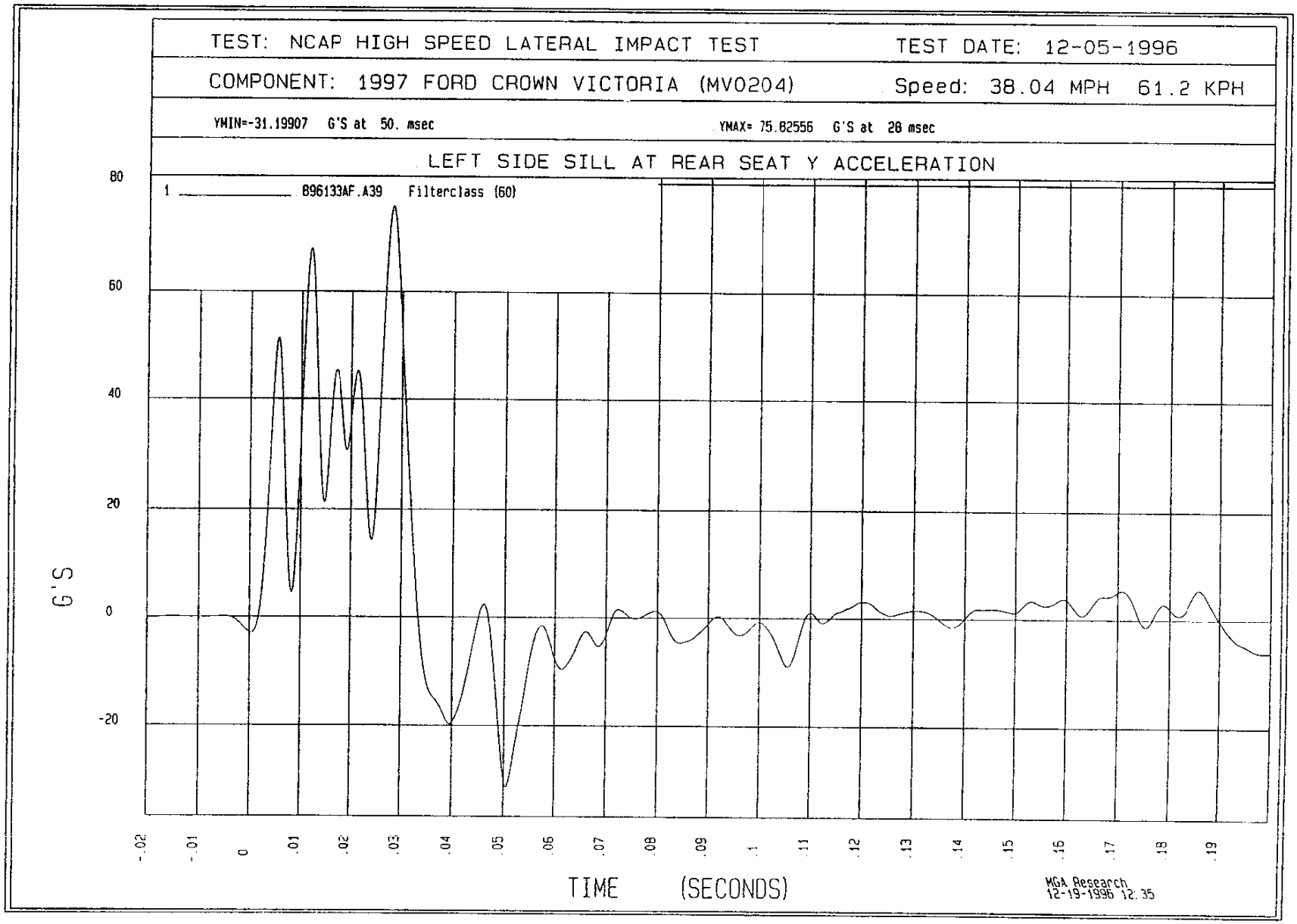

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -1.14E-04 KPH at -20 msec
Maximum = 39.94 KPH at 65 msec
REAR PASSENGER LOWER SPINE Y VELOCITY
1 ——— 896133AI.V27 Filterclass (180)
KPH
TIME Seconds
MGA Research
12-19-1996 17:36


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -16.99 G'S at 90 msec
Maximum = 105.84 G'S at 41 msec
REAR PASSENGER PELVIS Y ACCELERATION
1 _____ 896133AF.A2B Filterclass (180)
100
80
60
40
20
0
-20
20
10
0
10
20
30
40
50
60
70
80
90
01
11
12
13
14
15
16
17
18
19
TIME (SECONDS)
MGA Research
12-19-1996 15:11
G's


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = 0 KPH at-20 msec
Maximum = 43.12 KPH at 54 msec
REAR PASSENGER PELVIS Y VELOCITY
1 B96133AI.V28 Filterclass (180)
KPH
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
TIME Seconds
MGA Research
12-19-1996 16:52


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-31.27588 G'S at 10. msec
YMAX= 94.88383 G'S at 5.6 msec
LEFT SIDE SILL AT FRONT SEAT Y ACCELERATION
1 B96133AF.A38 Filterclass (60)
100
80
60
40
20
0
-20
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
NGA Research
12-19-1996 12:35


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -2.05E-02 KPH at -8 msec
Maximum = 31.68 KPH at 45 msec
LEFT SIDE SILL AT FRONT SEAT Y VELOCITY
1 B96133AI.V38 Filterclass (180)
KPH
32
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
12-19-1996 17:35


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-31.19907 G'S at 50. msec
YMAX= 75.82556 G'S at 28 msec
LEFT SIDE SILL AT REAR SEAT Y ACCELERATION
1 B96133AF.A39 Filterclass (60)
80
60
40
20
0
-20
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
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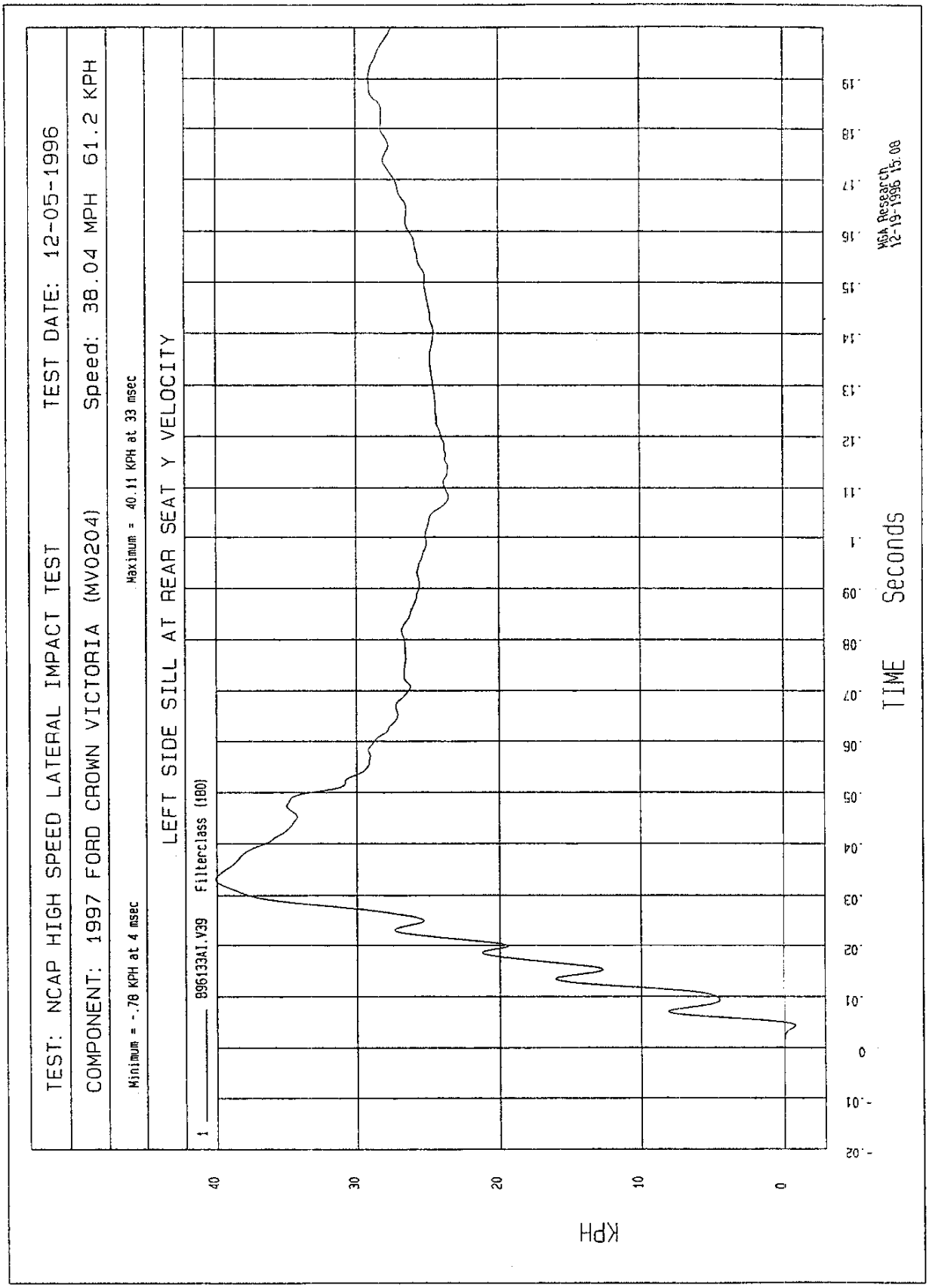
.17
.18
.19
TIME (SECONDS)
MGA Research
12-19-1996 12:35


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -.78 KPH at 4 msec
Maximum = 40.11 KPH at 33 msec
LEFT SIDE SILL AT REAR SEAT Y VELOCITY
1 _____ 896133A1.V39 Filterclass (180)
KPH
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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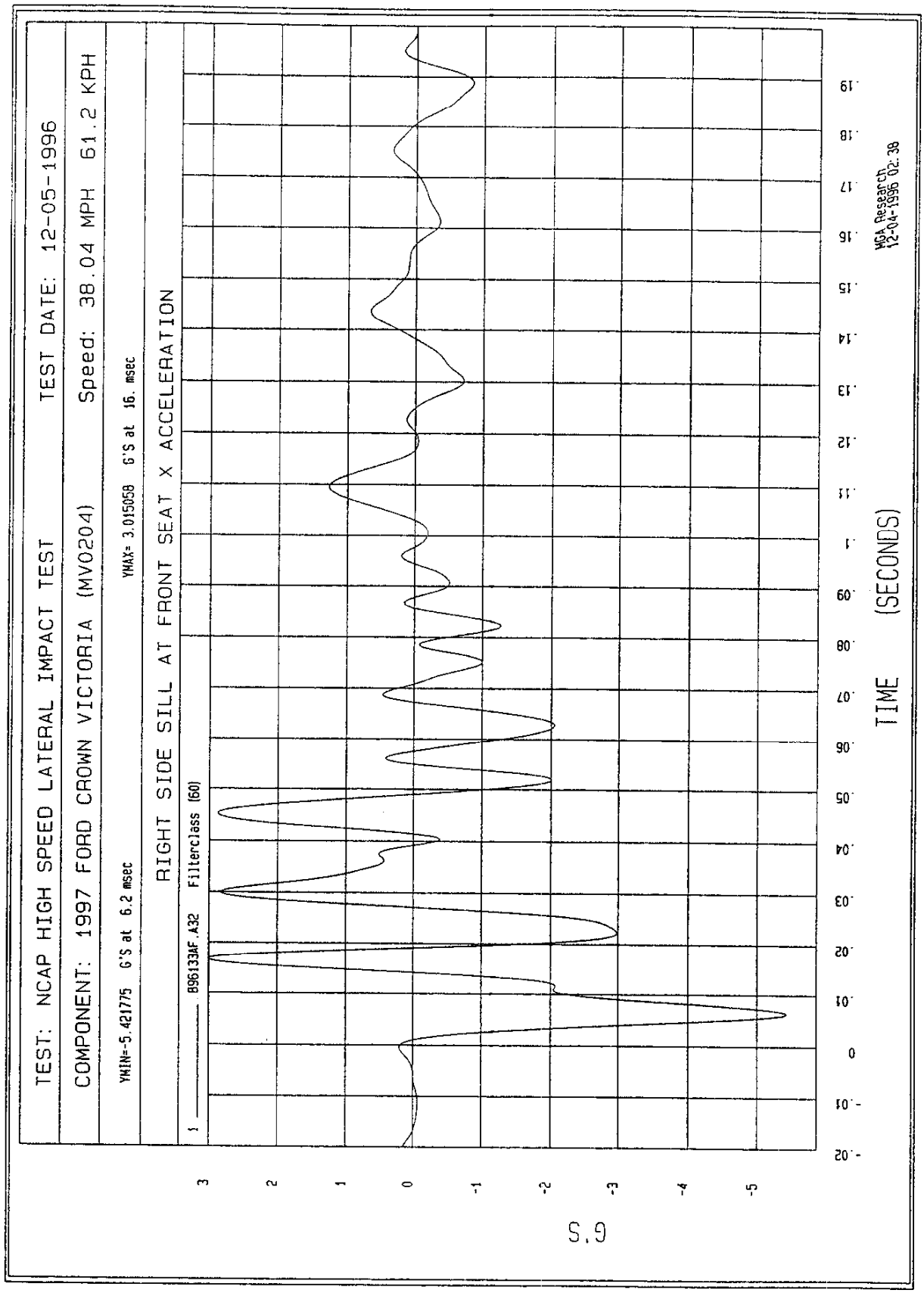
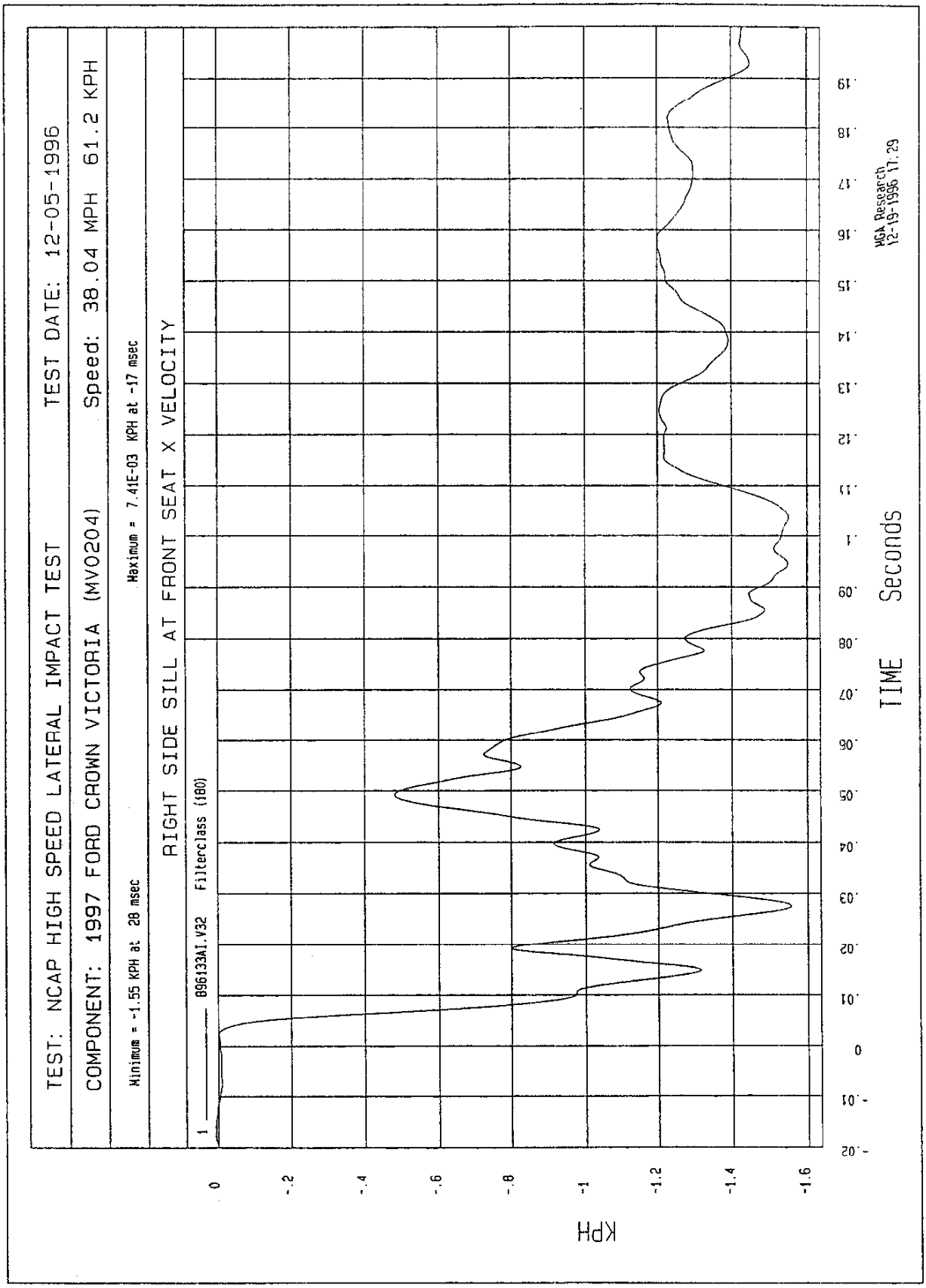
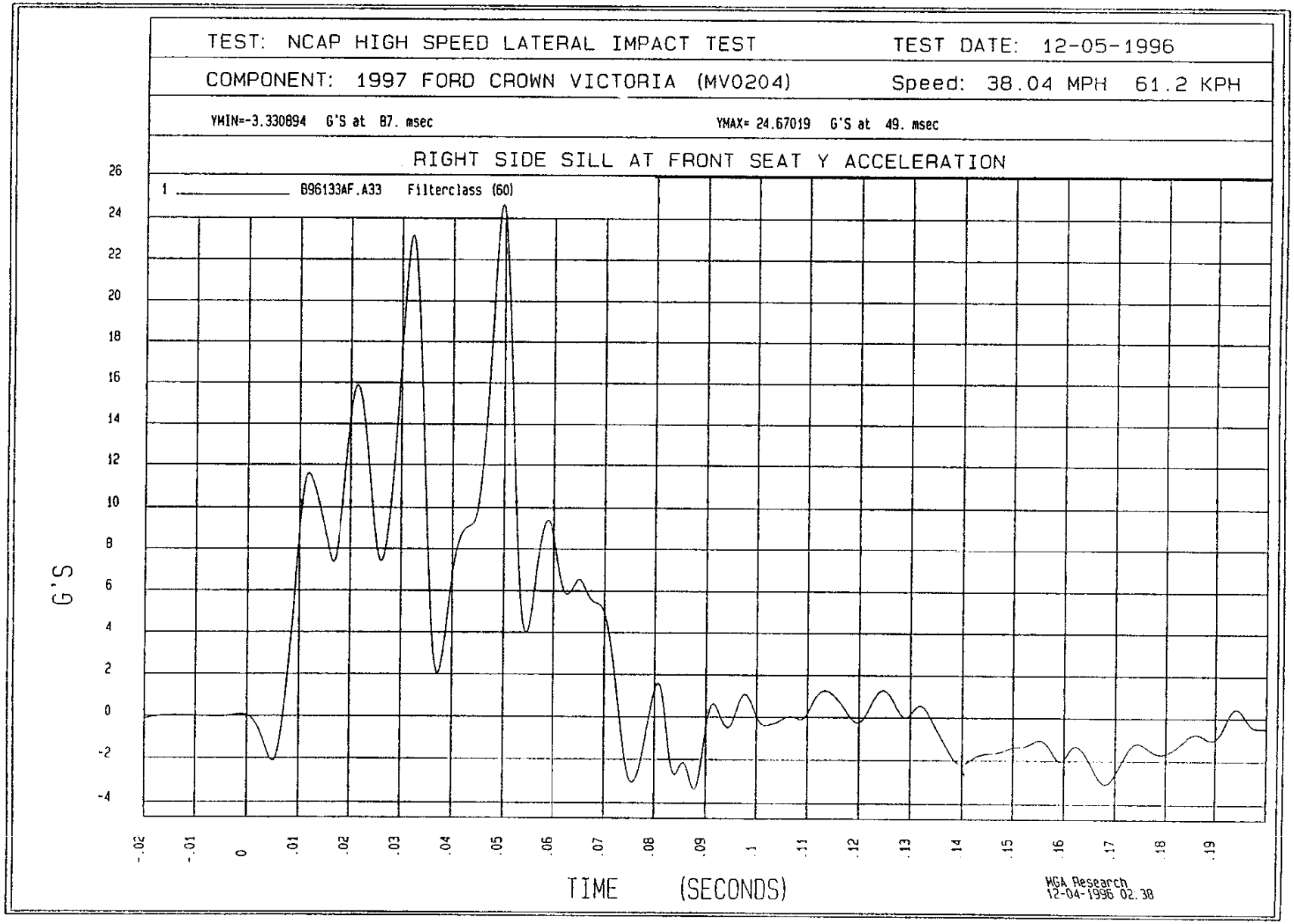
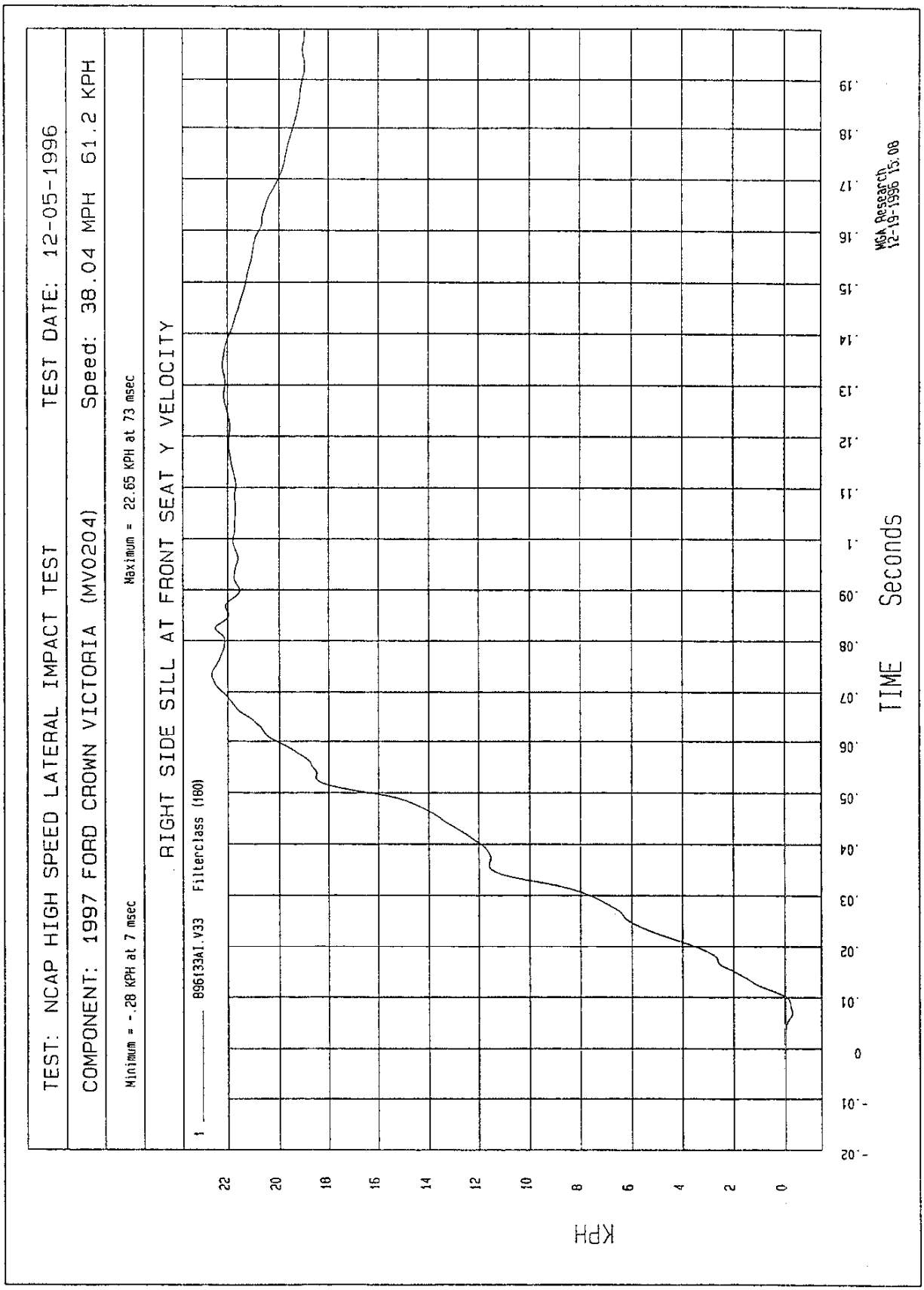
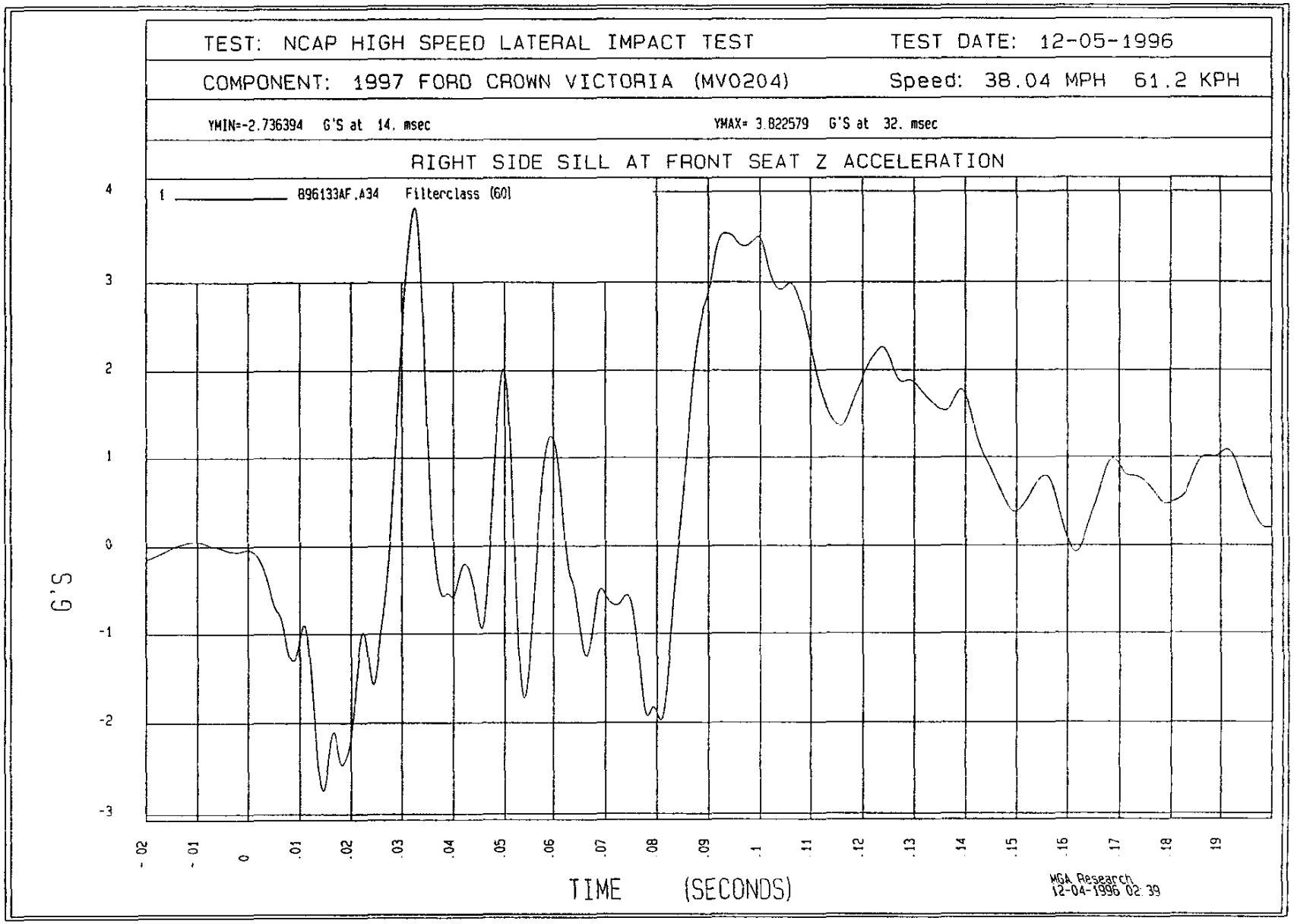
.16
.17
.18
.19
TIME Seconds
MGA Research
12-19-1996 15:08

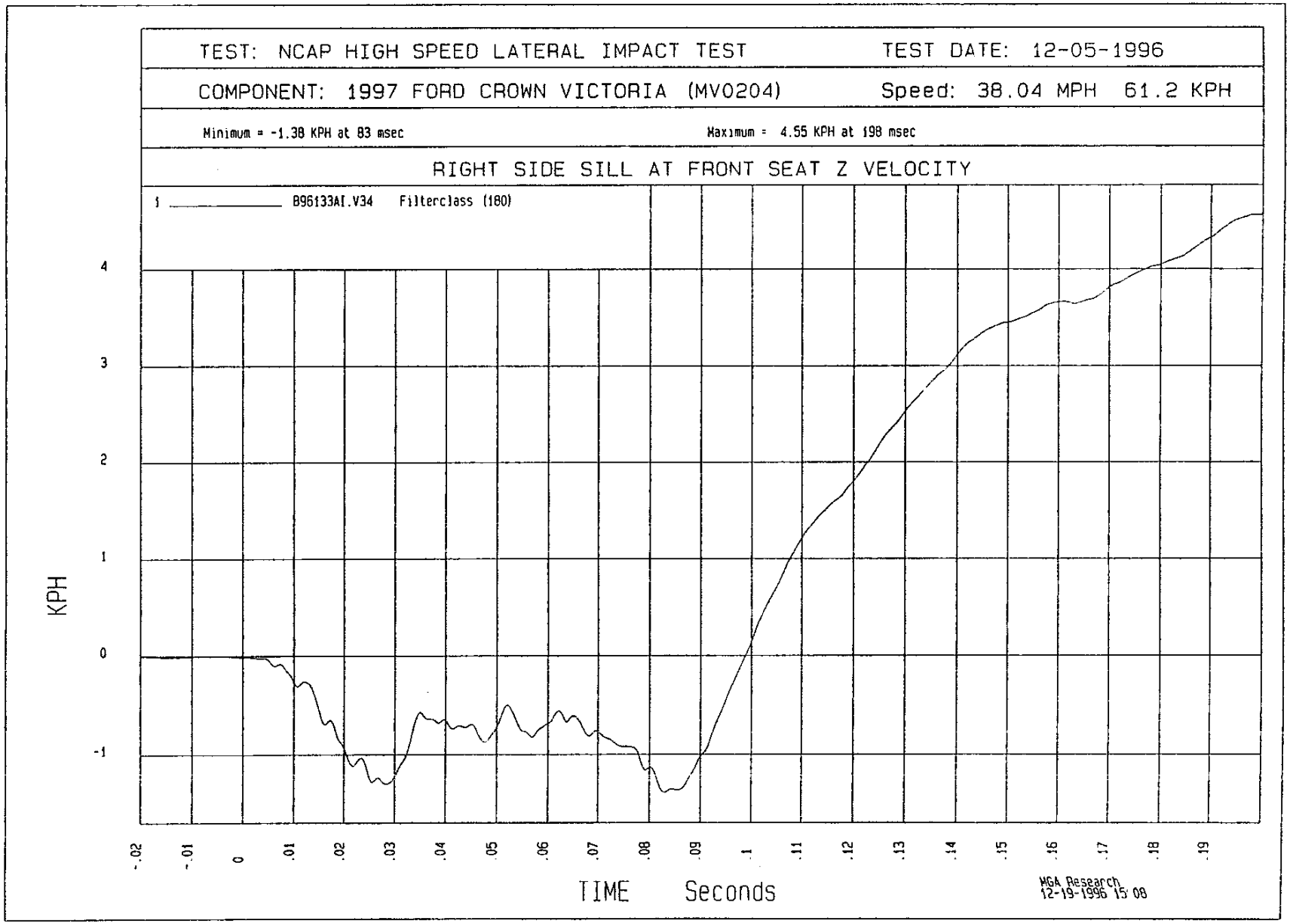

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-5.421775 G'S at 6.2 msec
YMAX= 3.015058 G'S at 16. msec
RIGHT SIDE SILL AT FRONT SEAT X ACCELERATION
1 896133AF.A32 Filterclass (60)
MGA Research
12-04-1996 02:38
TIME (SECONDS)
G'S

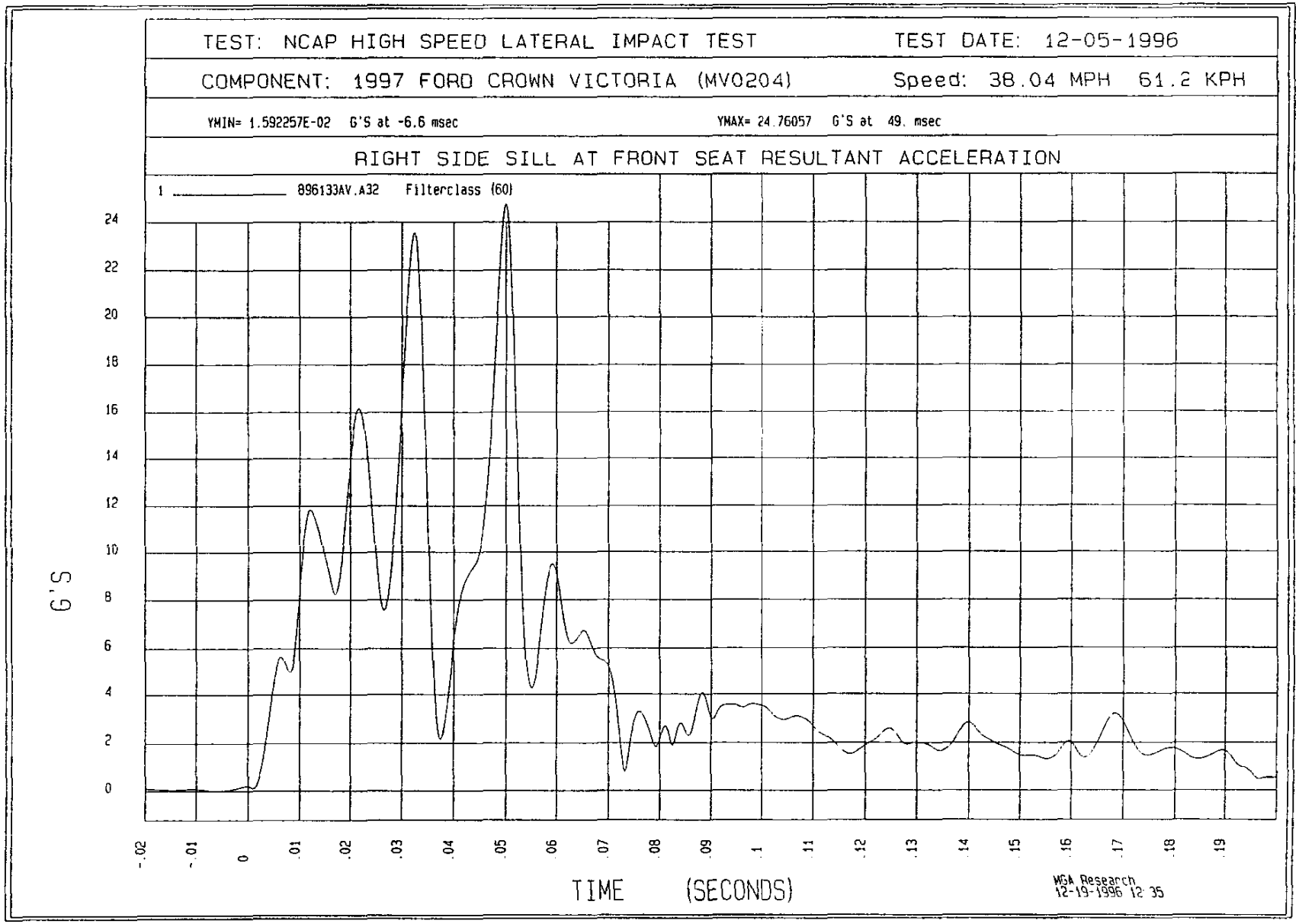

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -1.55 KPH at 28 msec
Maximum = 7.41E-03 KPH at -17 msec
RIGHT SIDE SILL AT FRONT SEAT X VELOCITY
1 B96133AI.V32 Filterclass (180)
KPH
TIME Seconds
MGA Research
12-19-1996 17:29

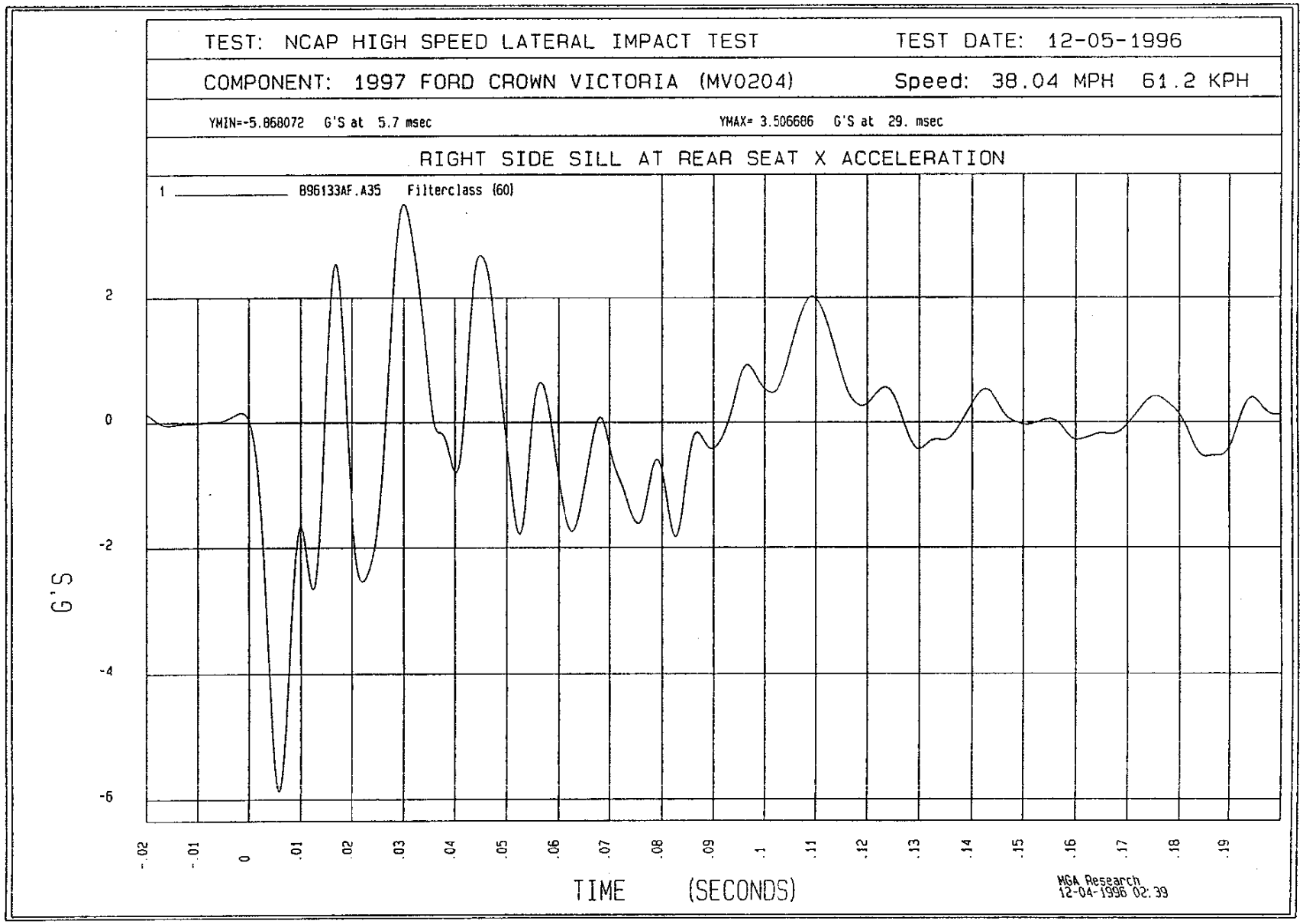

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-3.330894 G'S at 87. msec
YMAX= 24.67019 G'S at 49. msec
RIGHT SIDE SILL AT FRONT SEAT Y ACCELERATION
1 B96133AF.A33 Filterclass (60)
G'S
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-04-1996 02.38

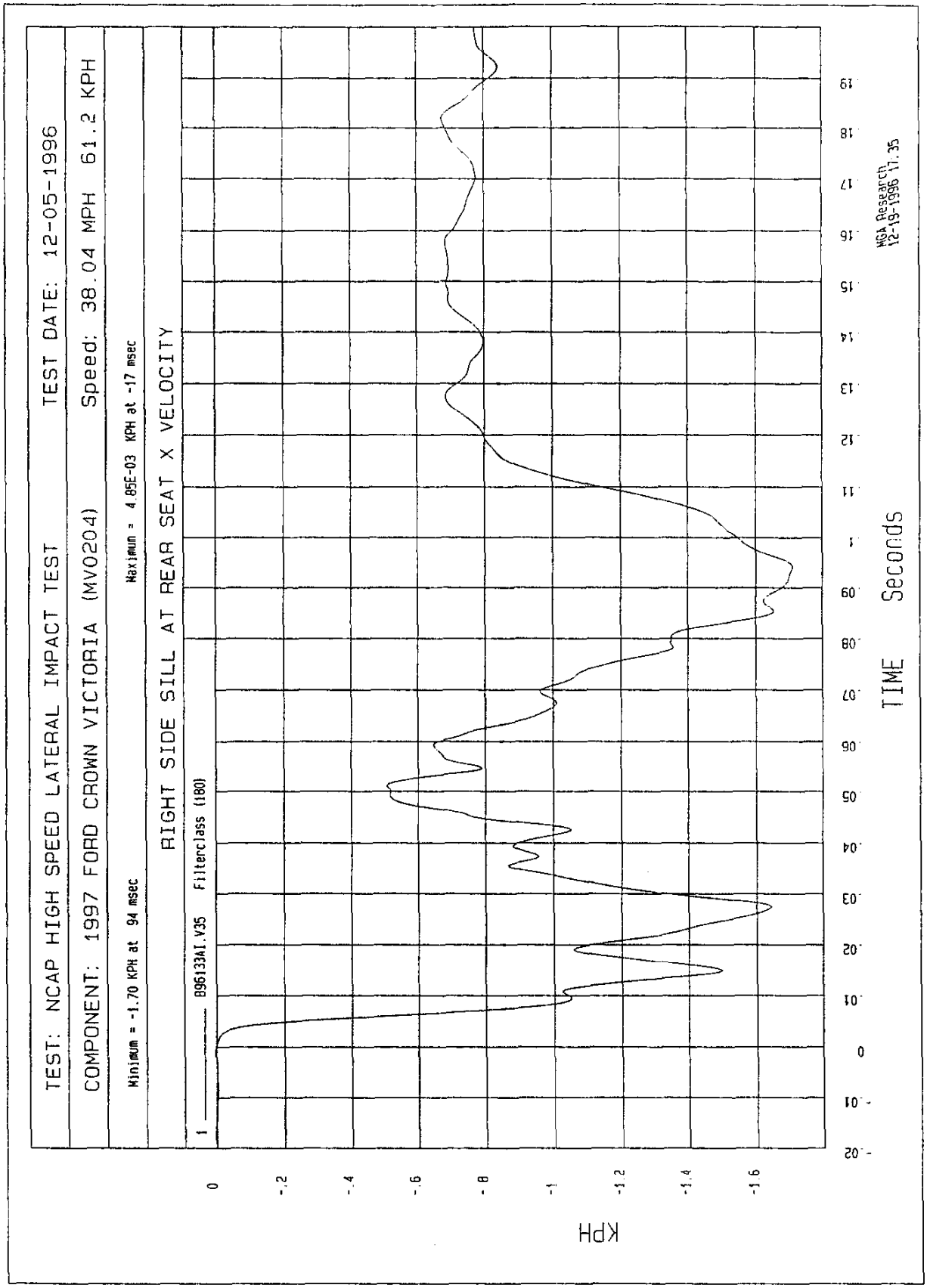

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -.28 KPH at 7 msec
Maximum = 22.65 KPH at 73 msec
RIGHT SIDE SILL AT FRONT SEAT Y VELOCITY
1 _____ 896133AI.V33 Filterclass (180)
KPH
TIME Seconds
MGA Research
12-19-1996 15:08

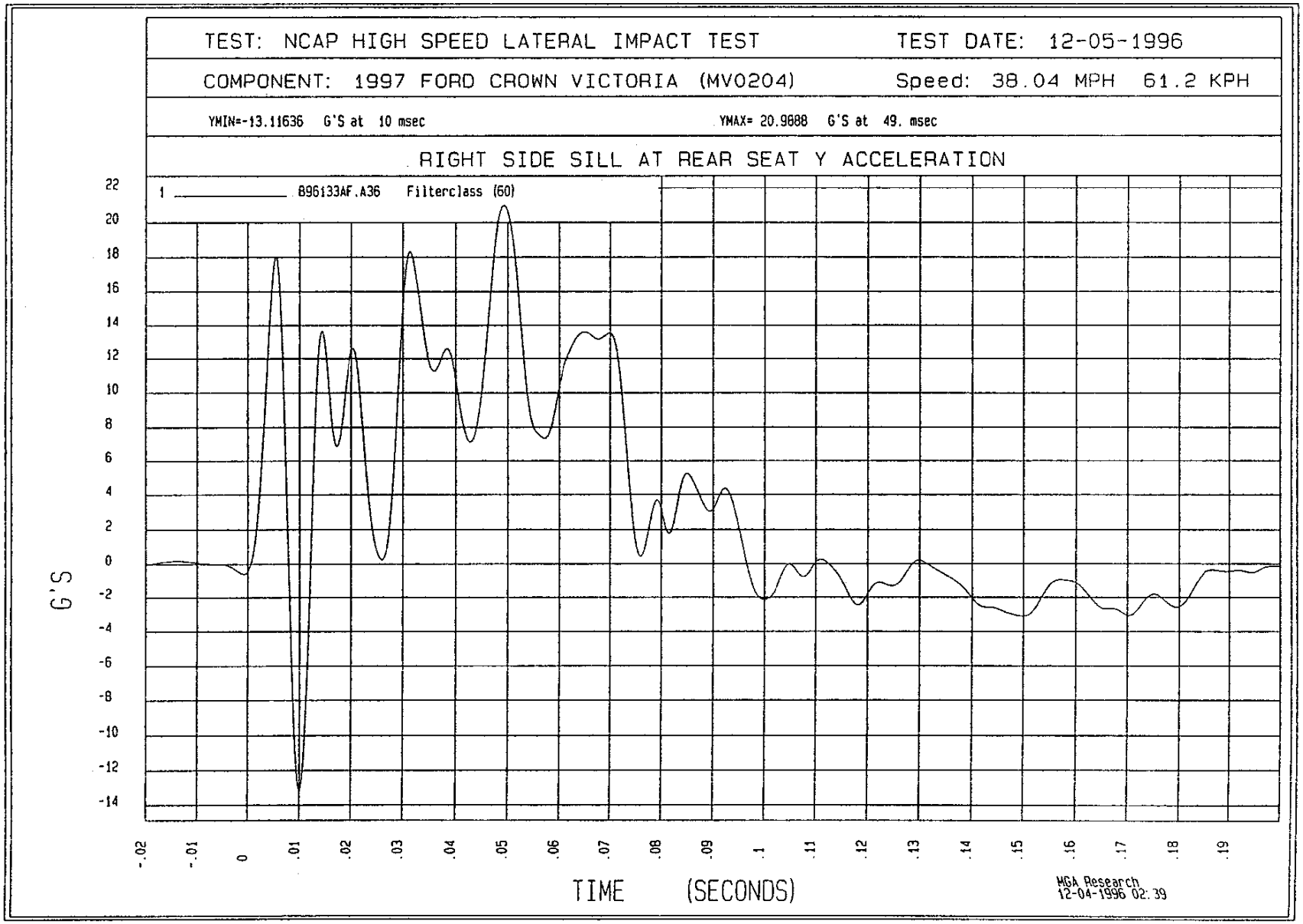

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-2.736394 G'S at 14. msec
YMAX= 3.822579 G'S at 32. msec
RIGHT SIDE SILL AT FRONT SEAT Z ACCELERATION
1 B96133AF.A34 Filterclass (60)
G'S
4
3
2
1
0
-1
-2
-3
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-04-1996 02:39

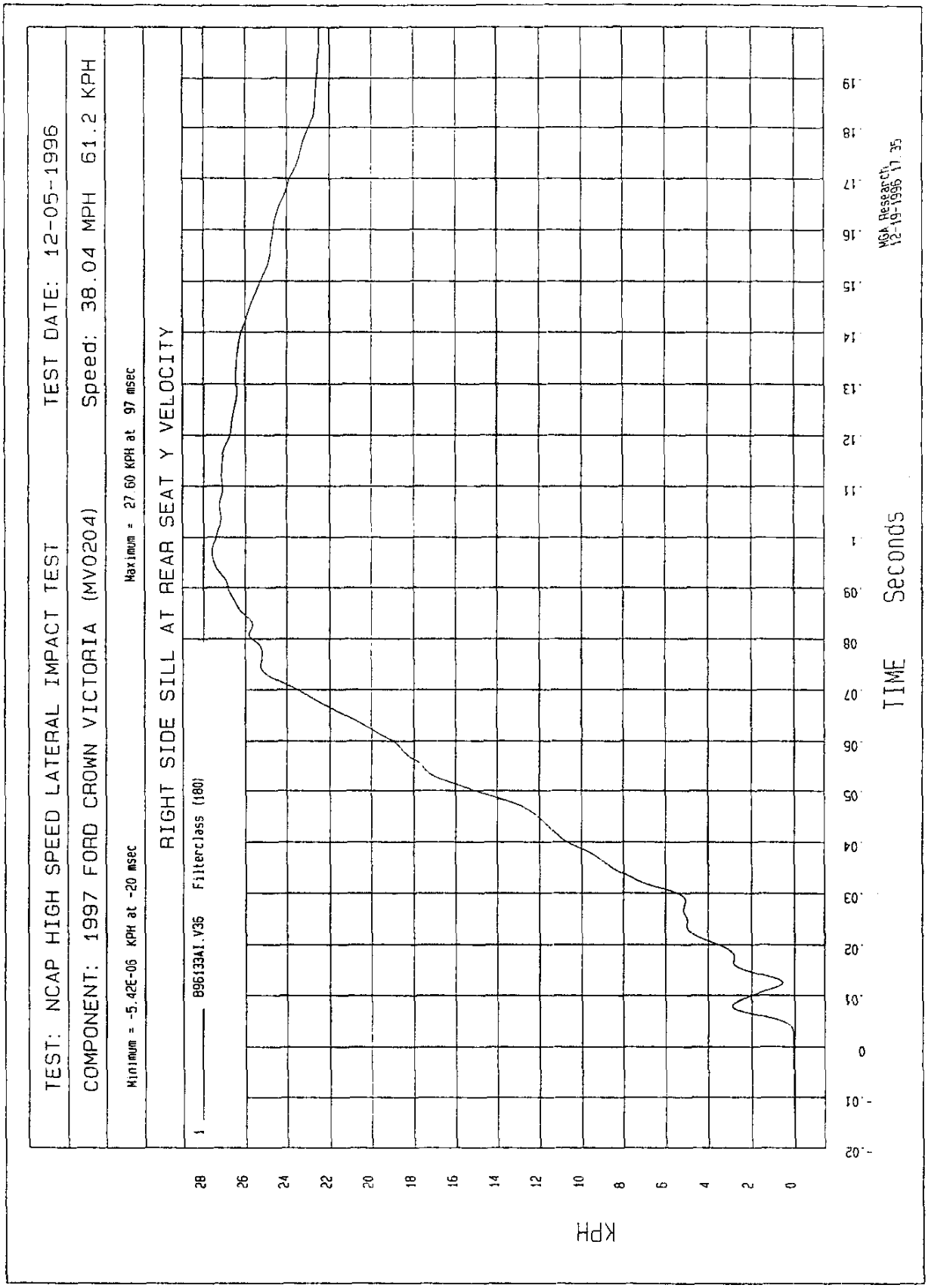

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -1.38 KPH at 83 msec
Maximum = 4.55 KPH at 198 msec
RIGHT SIDE SILL AT FRONT SEAT Z VELOCITY
1 B96133AI.V34 Filterclass (180)
KPH
4
3
2
1
0
-1
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
12-19-1996 15:08

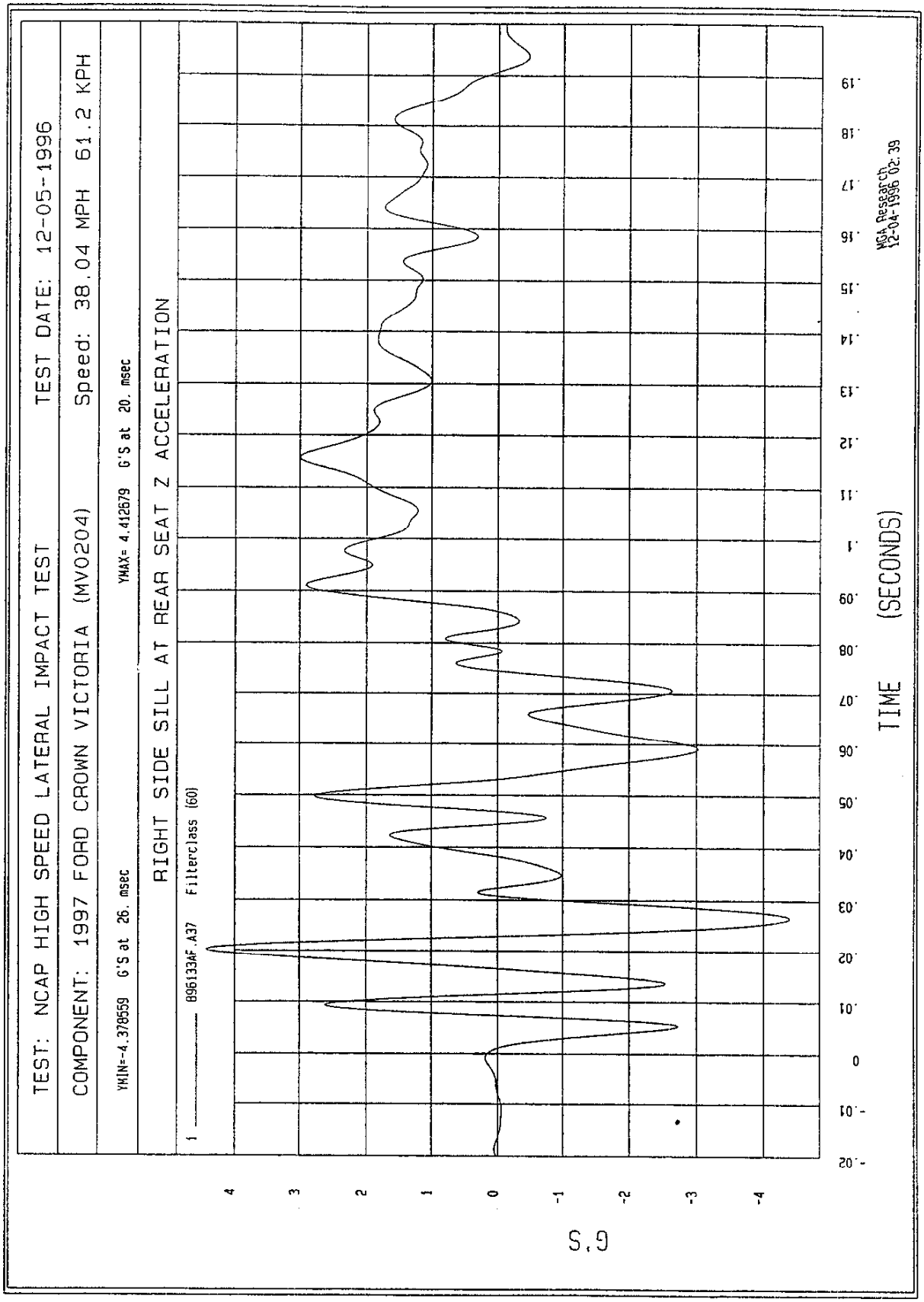

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN= 1.592257E-02 G'S at -6.6 msec
YMAX= 24.76057 G'S at 49. msec
RIGHT SIDE SILL AT FRONT SEAT RESULTANT ACCELERATION
1 896133AV.A32 Filterclass (60)
G'S
24
22
20
18
16
14
12
10
8
6
4
2
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-19-1996 12:35

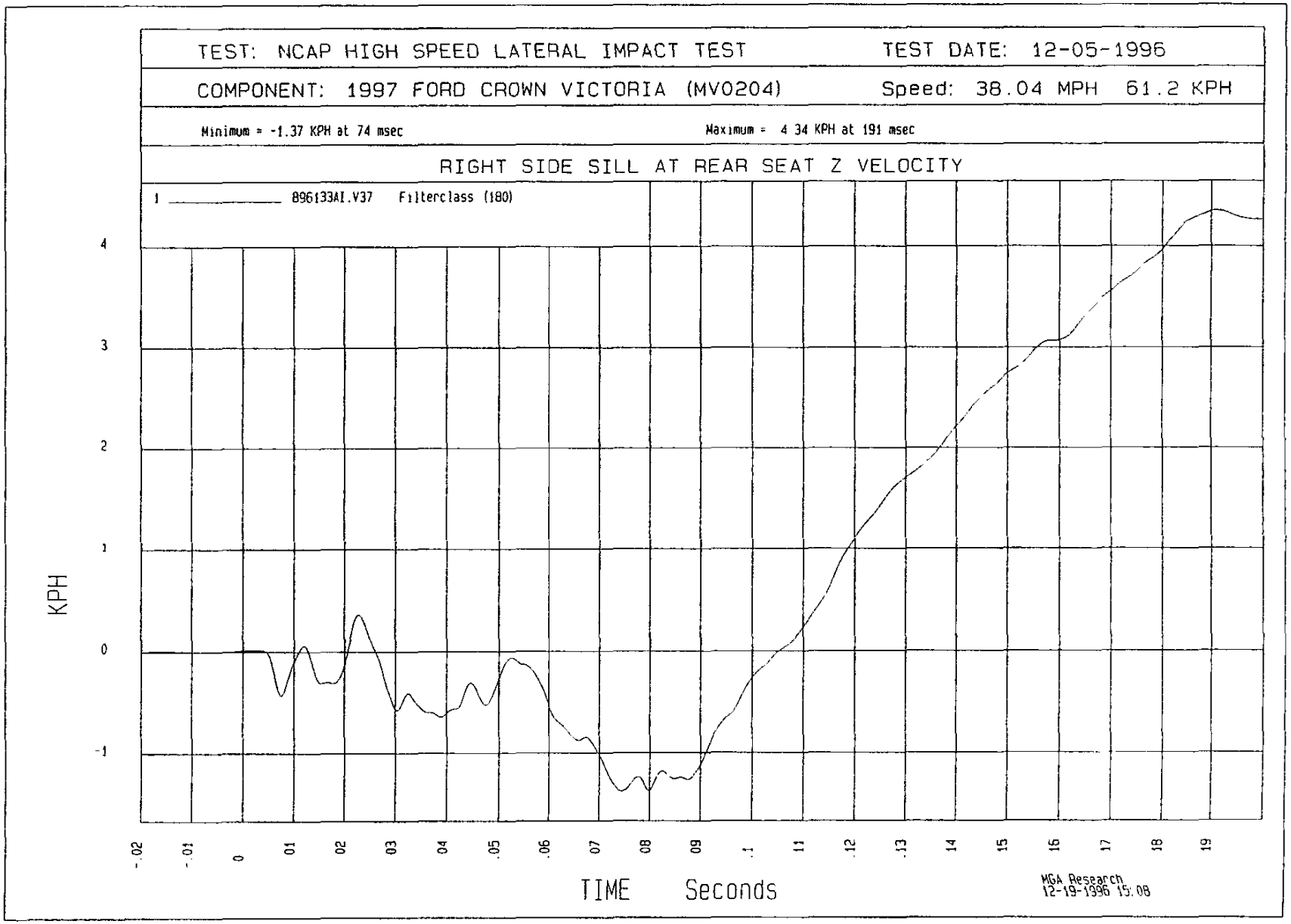

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-5.868072 G'S at 5.7 msec
YMAX= 3.506686 G'S at 29. msec
RIGHT SIDE SILL AT REAR SEAT X ACCELERATION
1 B96133AF.A35 Filterclass (60)
2
0
-2
-4
-6
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-04-1996 02:39

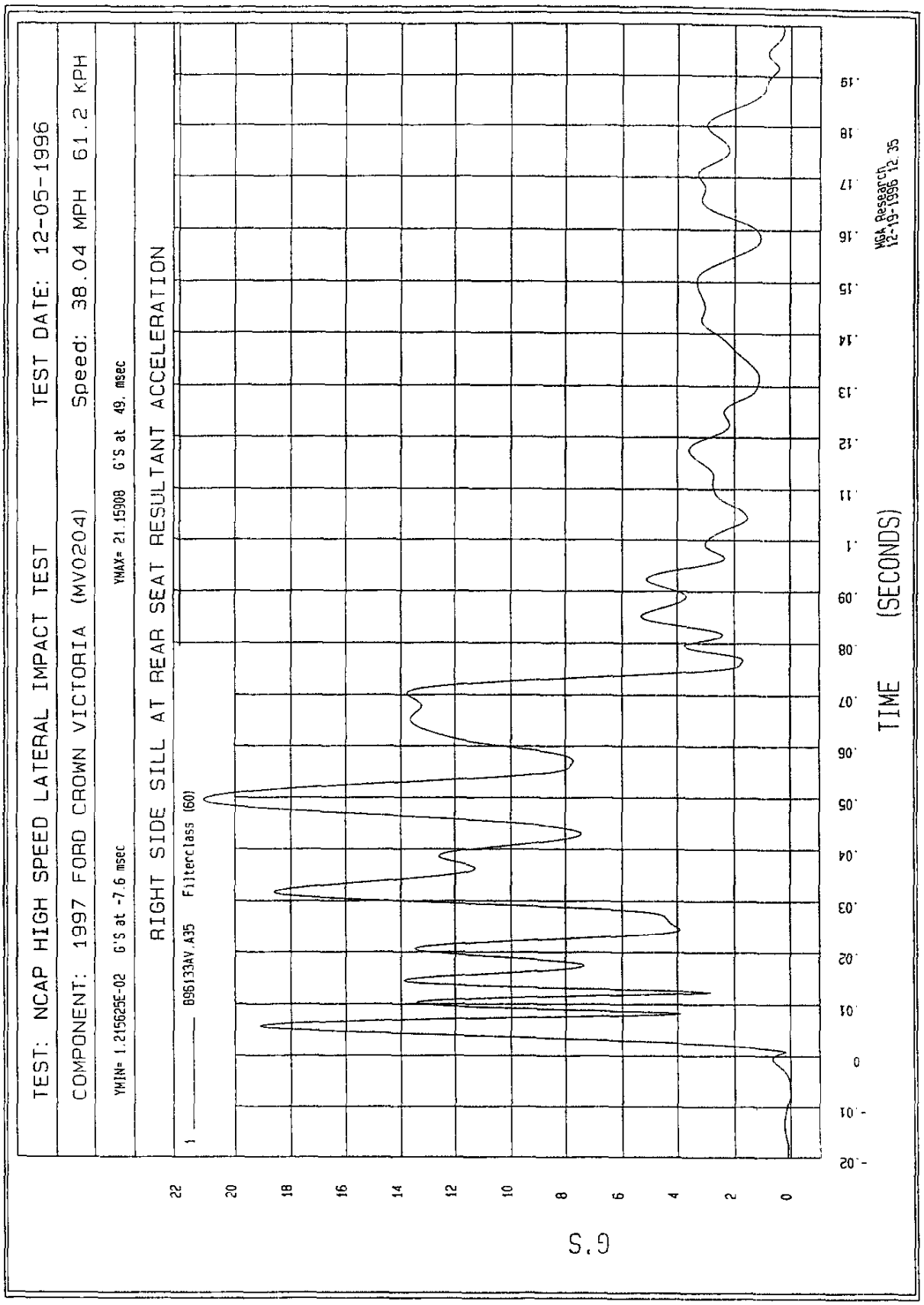

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -1.70 KPH at 94 msec
Maximum = 4.85E-03 KPH at -17 msec
RIGHT SIDE SILL AT REAR SEAT X VELOCITY
1 _____ B96133AI.V35 Filterclass (180)
KPH
0
-.2
-.4
-.6
-.8
-1
-1.2
-1.4
-1.6
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
1
11
12
13
14
15
16
17
18
19
TIME Seconds
MGA Research
12-19-1996 17.35

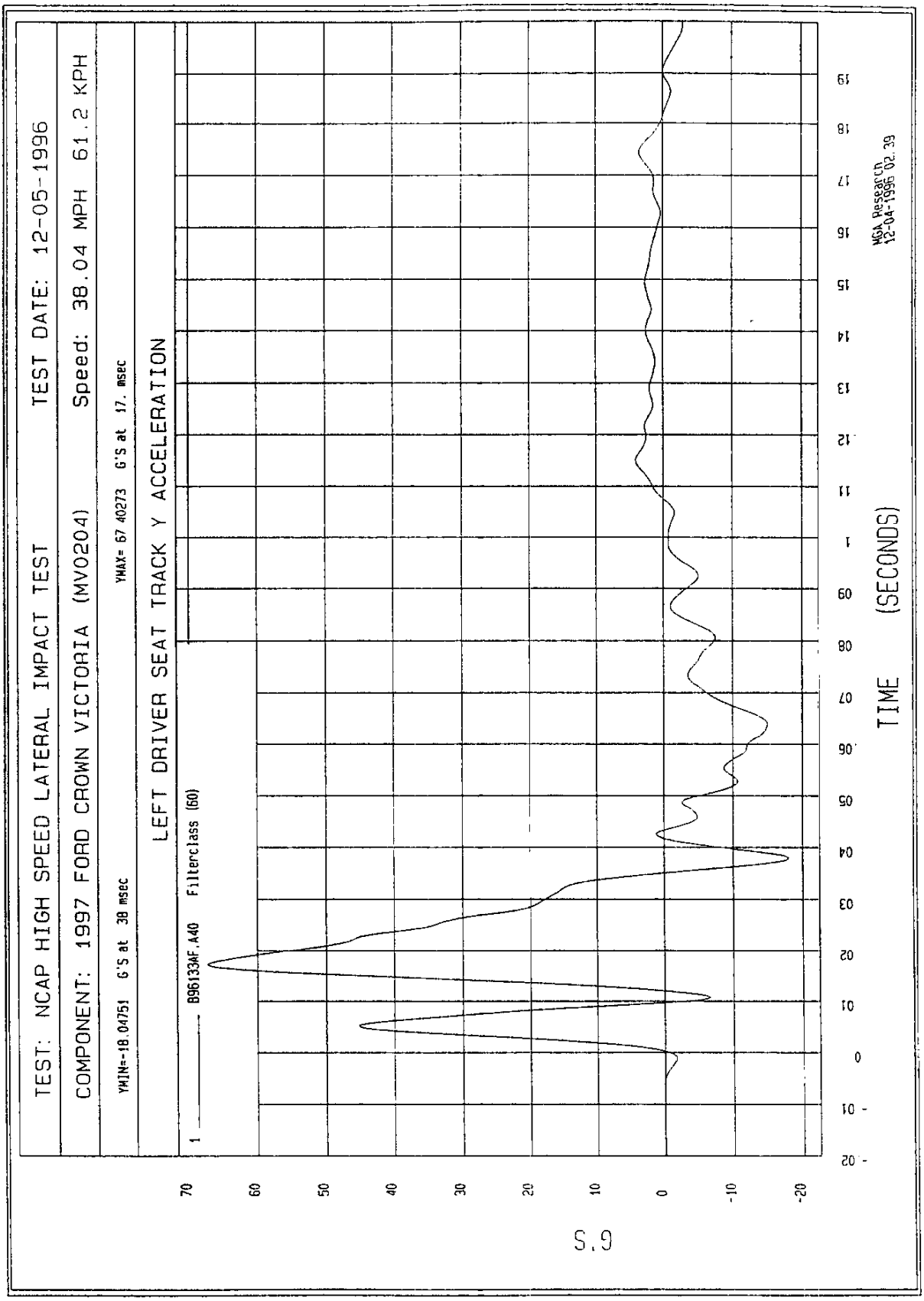

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-13.11636 G'S at 10 msec
YMAX= 20.9888 G'S at 49. msec
RIGHT SIDE SILL AT REAR SEAT Y ACCELERATION
1 B96133AF.A36 Filterclass (60)
G'S
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-04-1996 02:39

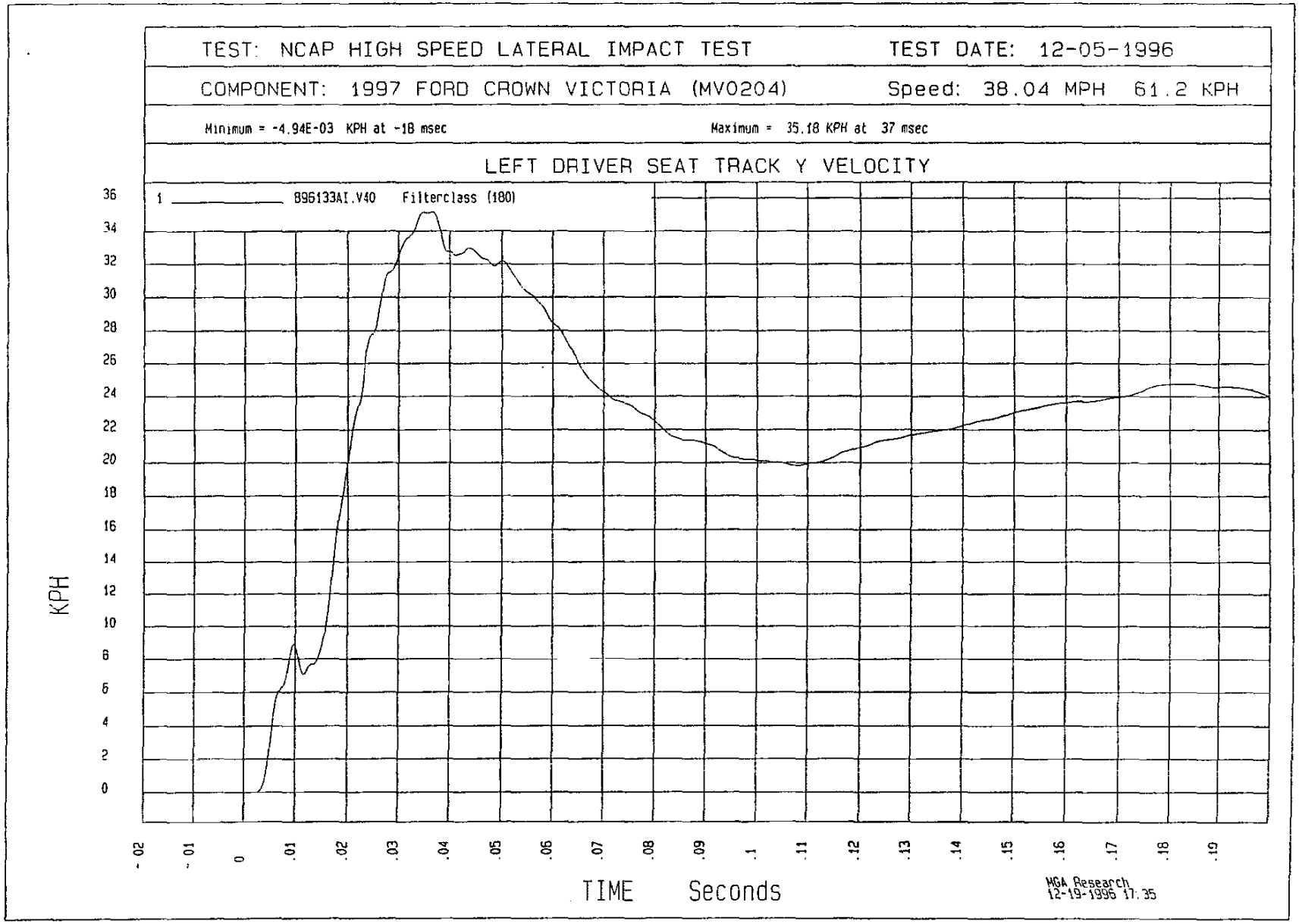

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -5.42E-06 KPH at -20 msec
Maximum = 27.60 KPH at 97 msec
RIGHT SIDE SILL AT REAR SEAT Y VELOCITY
1 B96133AI.V36 Filterclass (180)
KPH
TIME Seconds
MGA Research
12-19-1996 17:35


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-4.378559 G'S at 26. msec
YMAX= 4.412679 G'S at 20. msec
RIGHT SIDE SILL AT REAR SEAT Z ACCELERATION
1 896133AF.A37 Filterclass (60)
4
3
2
1
0
-1
-2
-3
-4
G'S
.19
.18
.17
.16
.15
.14
.13
.12
.11
.1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
-.01
-.02
TIME (SECONDS)
MGA Research
12-04-1996 02:39


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -1.37 KPH at 74 msec
Maximum = 4.34 KPH at 191 msec
RIGHT SIDE SILL AT REAR SEAT Z VELOCITY
1 896133AI.V37 Filterclass (180)
KPH
4
3
2
1
0
-1
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
12-19-1996 15:08


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN= 1.215625E-02 G'S at -7.6 msec
YMAX= 21.1590 G'S at 49. msec
RIGHT SIDE SILL AT REAR SEAT RESULTANT ACCELERATION
1 B96133AV.A35 Filterclass (60)
G'S
TIME (SECONDS)
MGA Research
12-19-1996 12:35


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-18.04751 G'S at 38 msec
YMAX= 67.40273 G'S at 17. msec
LEFT DRIVER SEAT TRACK Y ACCELERATION
1 B96133AF.A40 Filterclass (60)
70
60
50
40
30
20
10
0
-10
-20
19
18
17
16
15
14
13
12
11
1
09
08
07
06
05
04
03
02
01
00
01 -
02 -
TIME (SECONDS)
MGA Research
12-04-1996 02:39
G'S


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -4.94E-03 KPH at -18 msec
Maximum = 35.18 KPH at 37 msec
LEFT DRIVER SEAT TRACK Y VELOCITY
1 896133AI.V40 Filterclass (180)
KPH
36
34
32
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
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.11
.12
.13
.14
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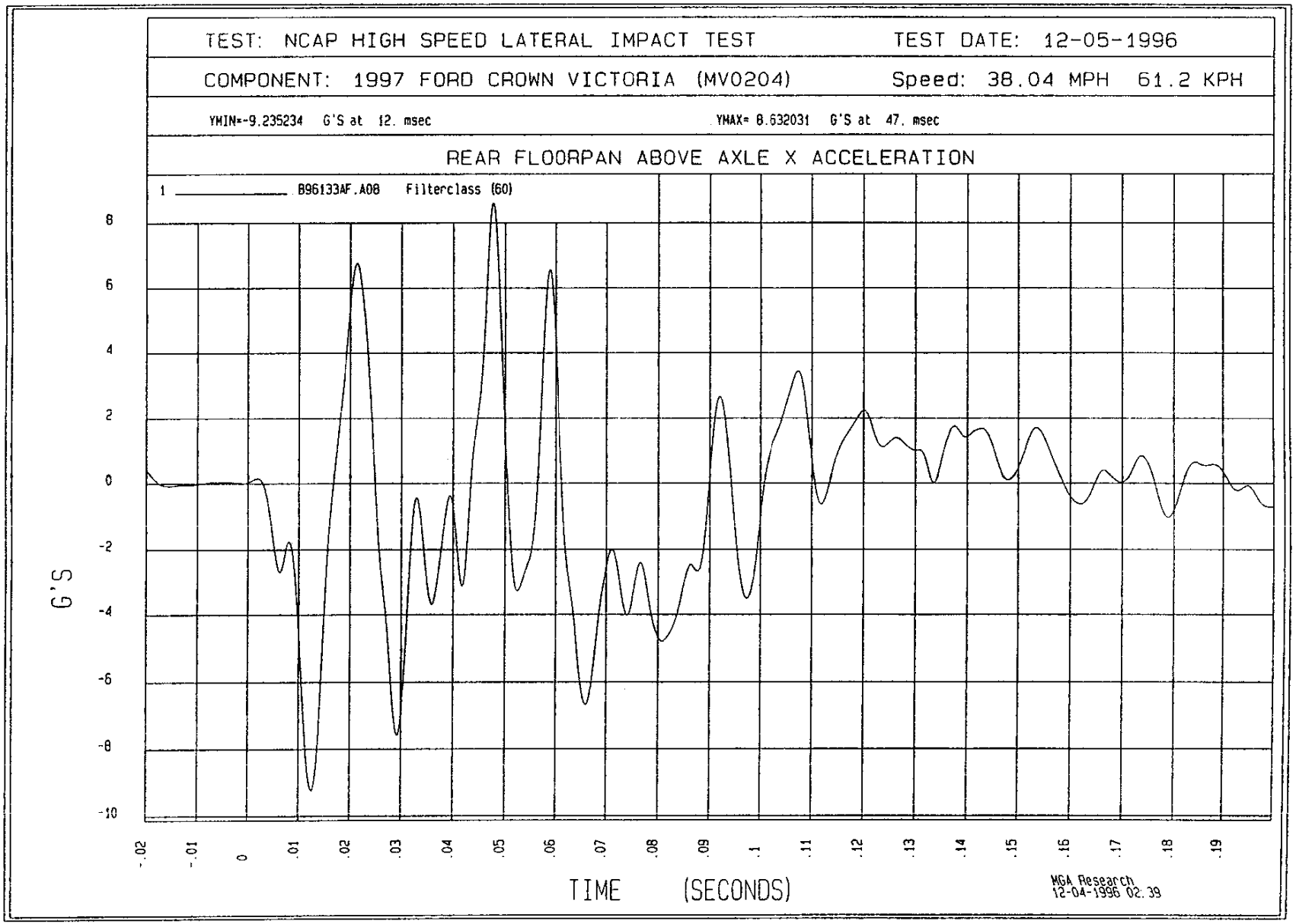
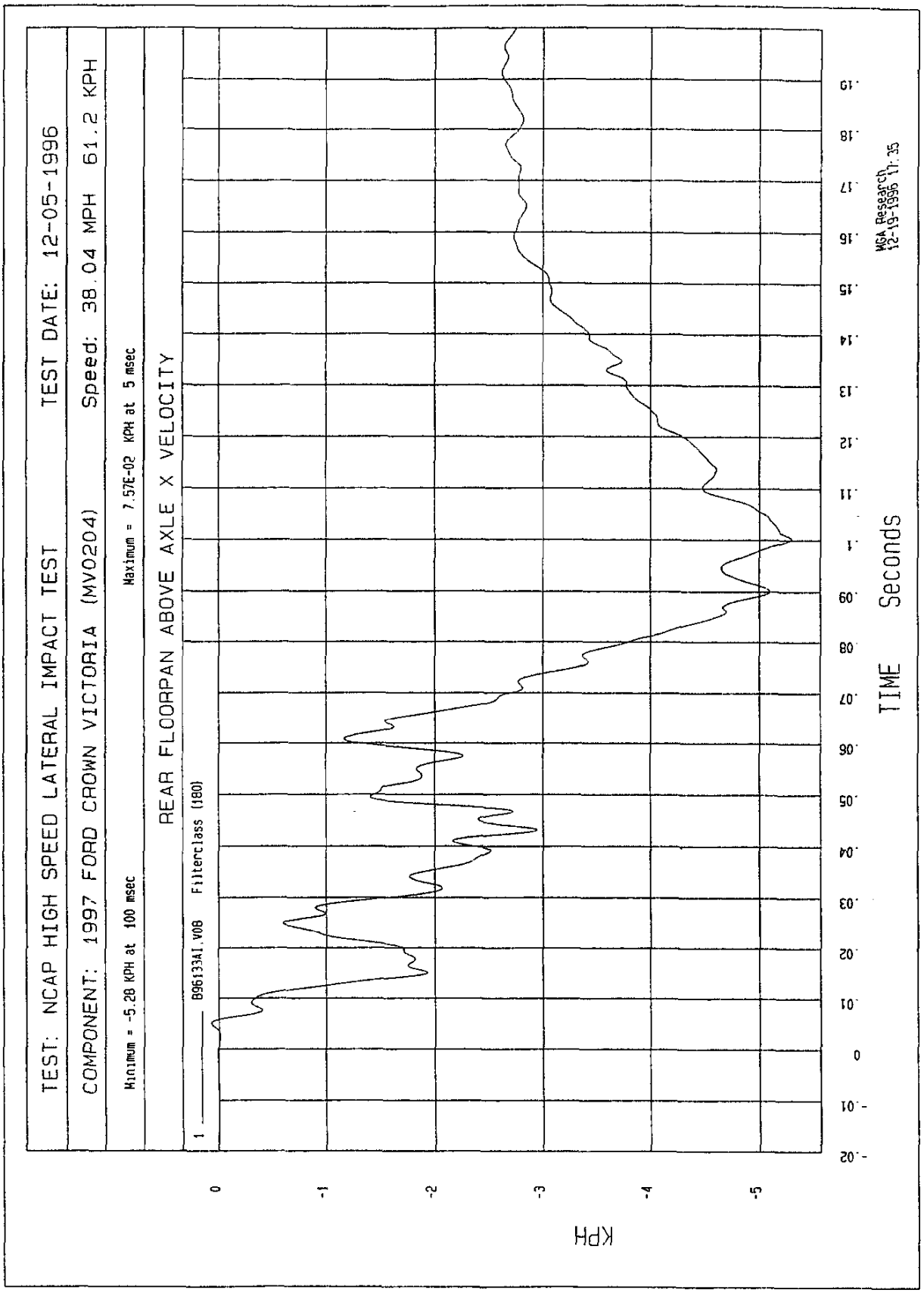
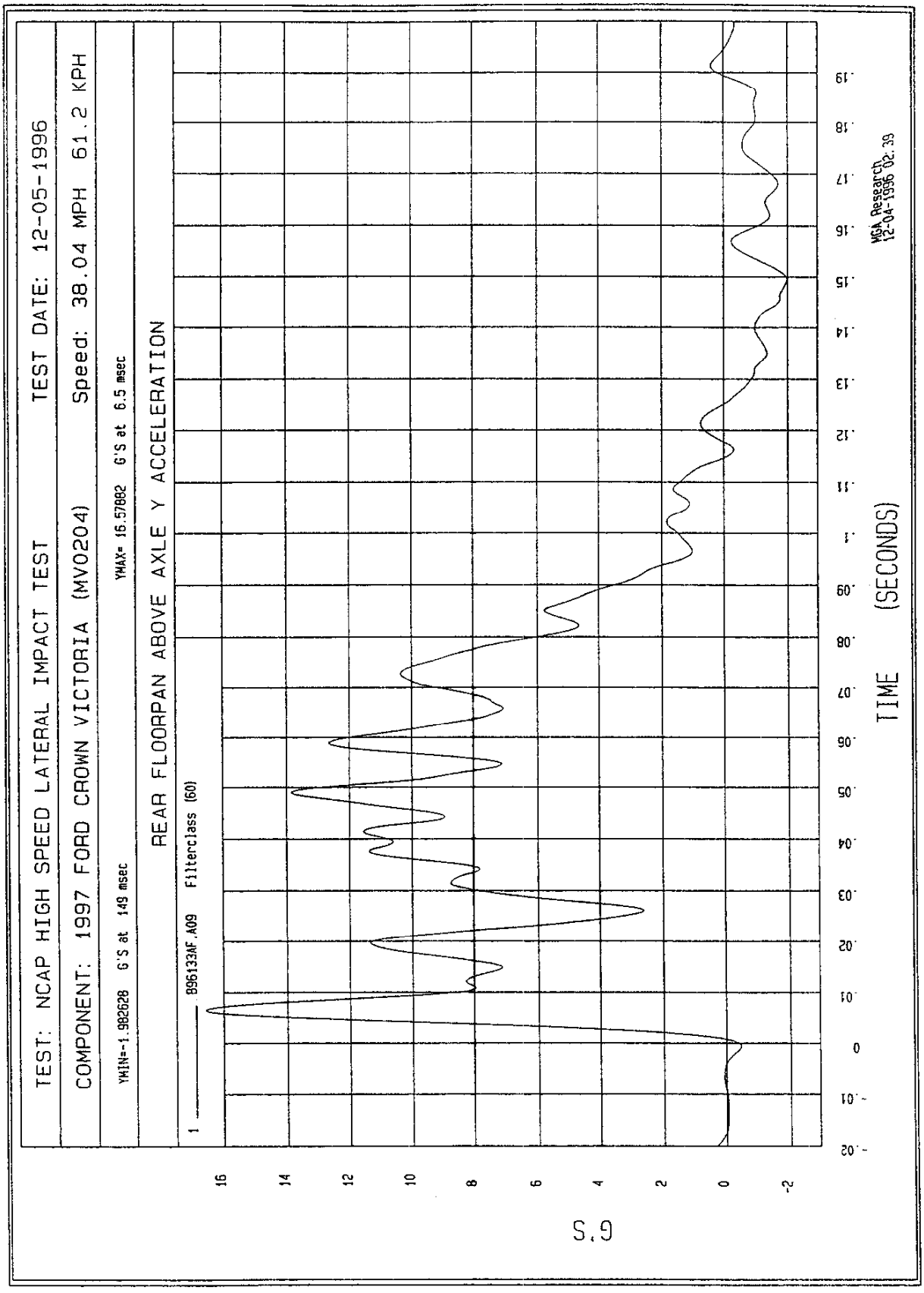
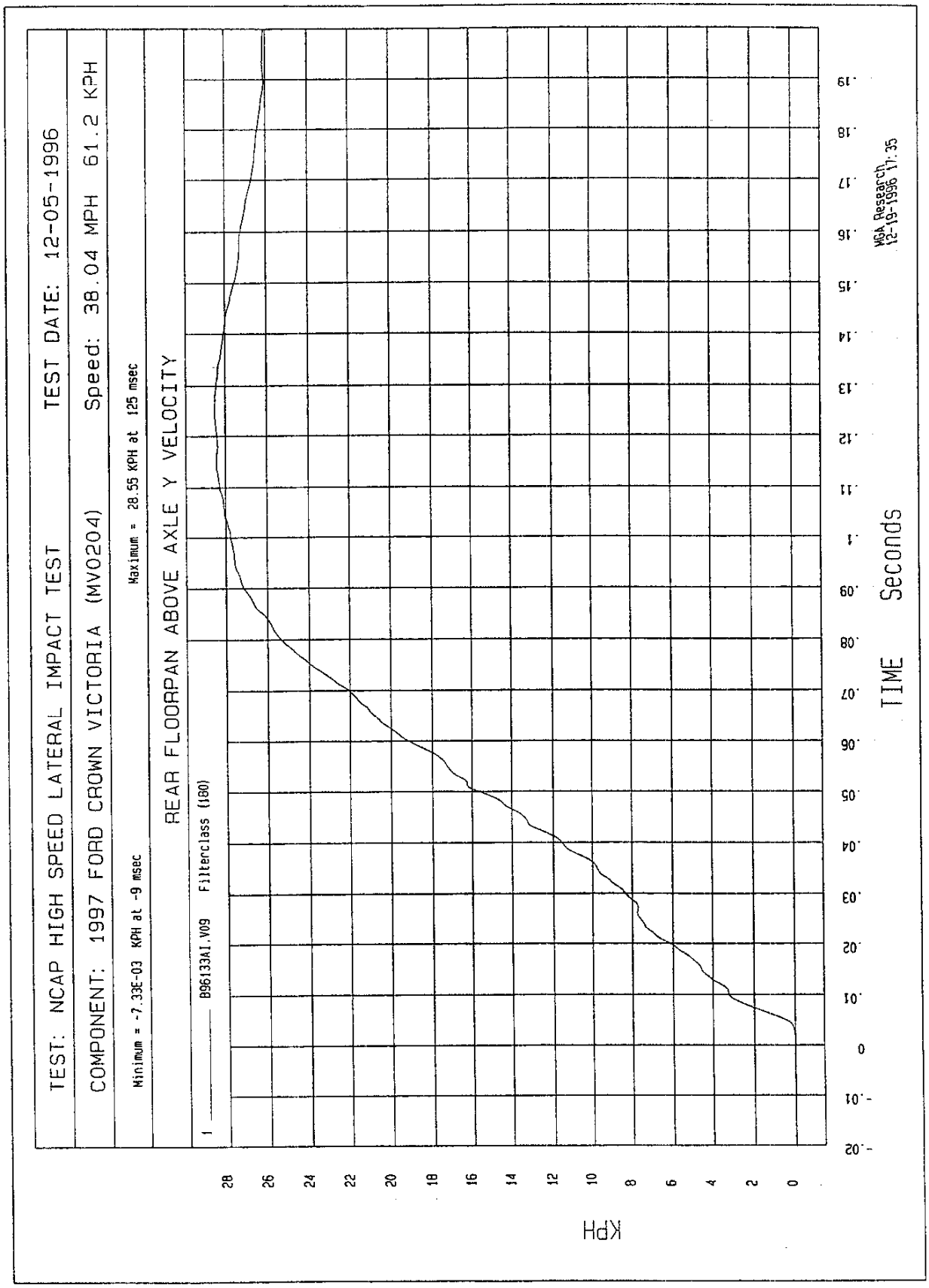
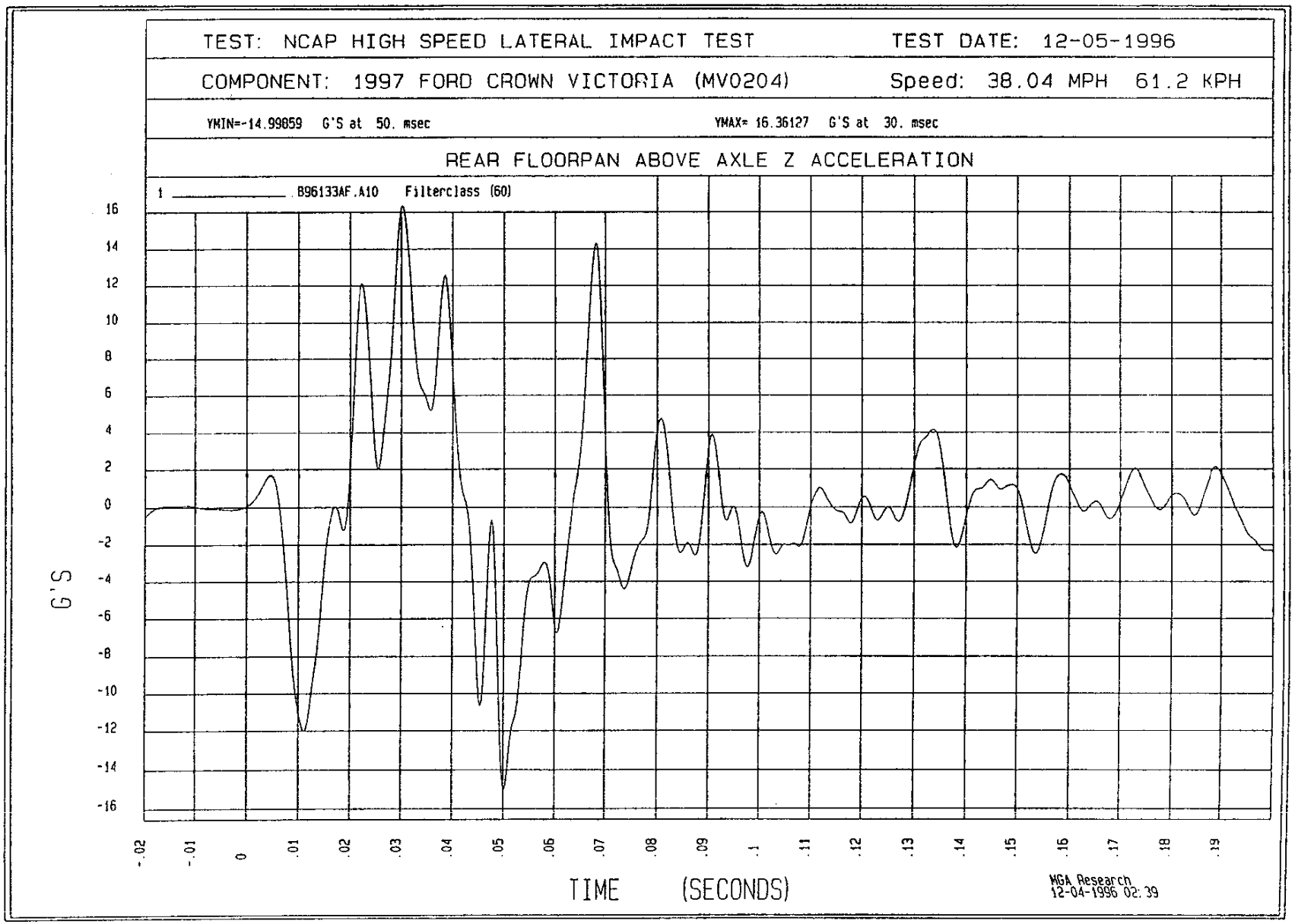
.17
.18
.19
TIME Seconds
MGA Research
12-19-1995 17:35

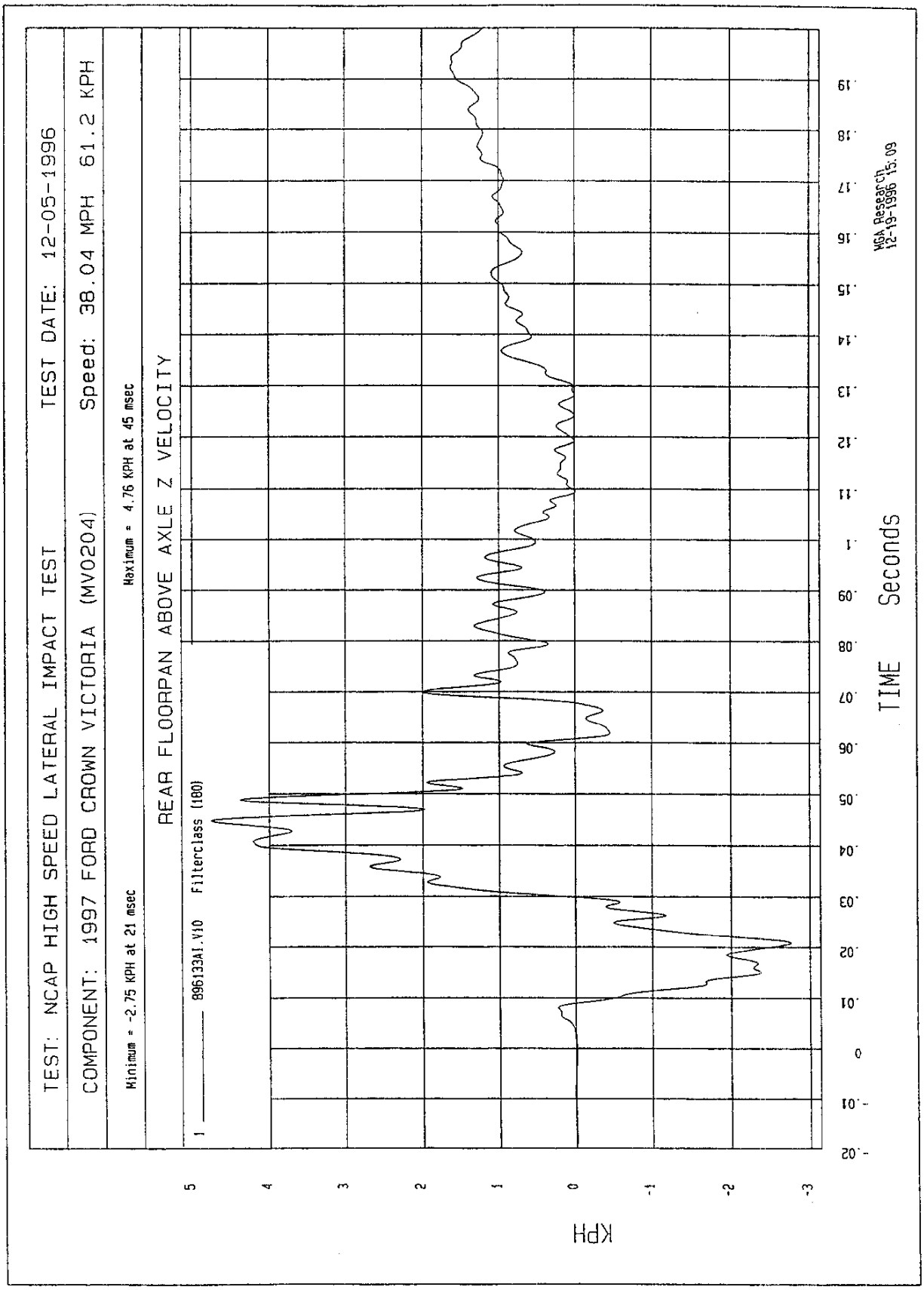

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-9.235234 G'S at 12. msec
YMAX= 8.632031 G'S at 47. msec
REAR FLOORPAN ABOVE AXLE X ACCELERATION
1 B96133AF.A08 Filterclass (60)
G'S
8
6
4
2
0
-2
-4
-6
-8
-10
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-04-1996 02.39

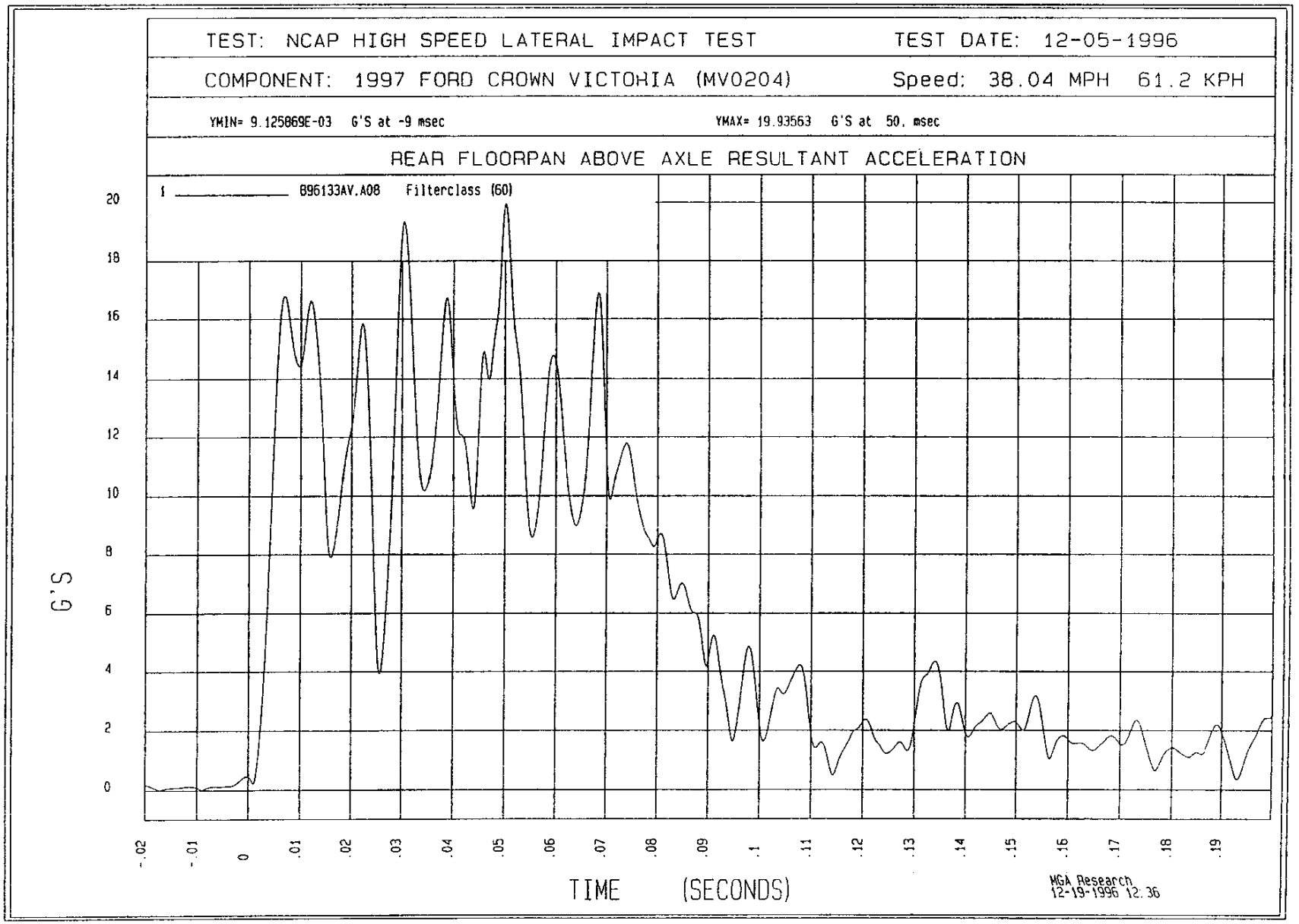

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -5.28 KPH at 100 msec
Maximum = 7.57E-02 KPH at 5 msec
REAR FLOORPAN ABOVE AXLE X VELOCITY
1 B961334I.V0B Filterclass (180)
KPH
TIME Seconds
MGA Research
12-19-1996 11:35

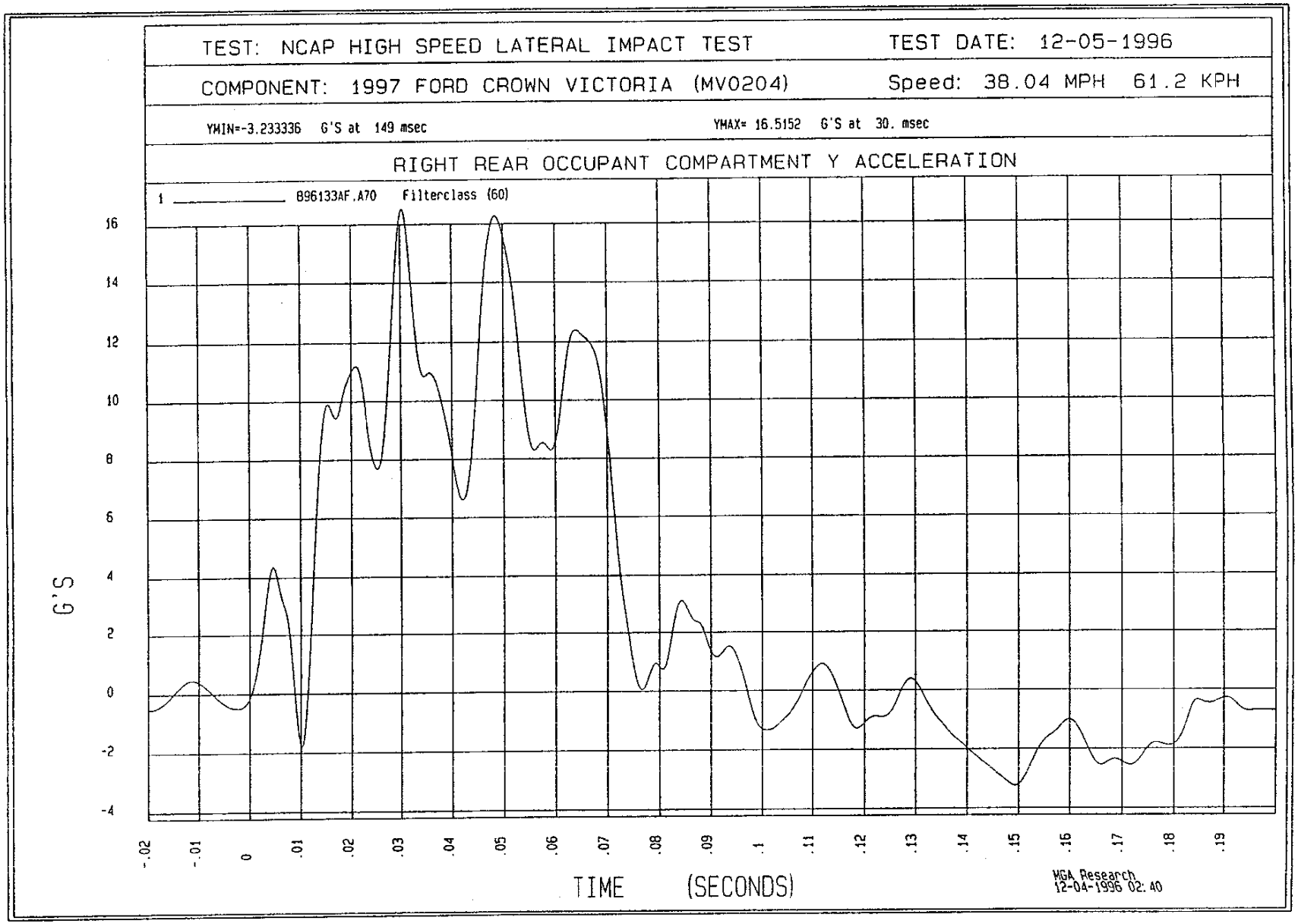

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-1.982628 G'S at 149 msec
YMAX= 16.57882 G'S at 6.5 msec
REAR FLOORPAN ABOVE AXLE Y ACCELERATION
1 B96133AF.A09 Filterclass (60)
16
14
12
10
8
6
4
2
0
-2
.19
.18
.17
.16
.15
.14
.13
.12
.11
.1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
-.01
-.02
TIME (SECONDS)
MGA Research
12-04-1996 02:39
G's

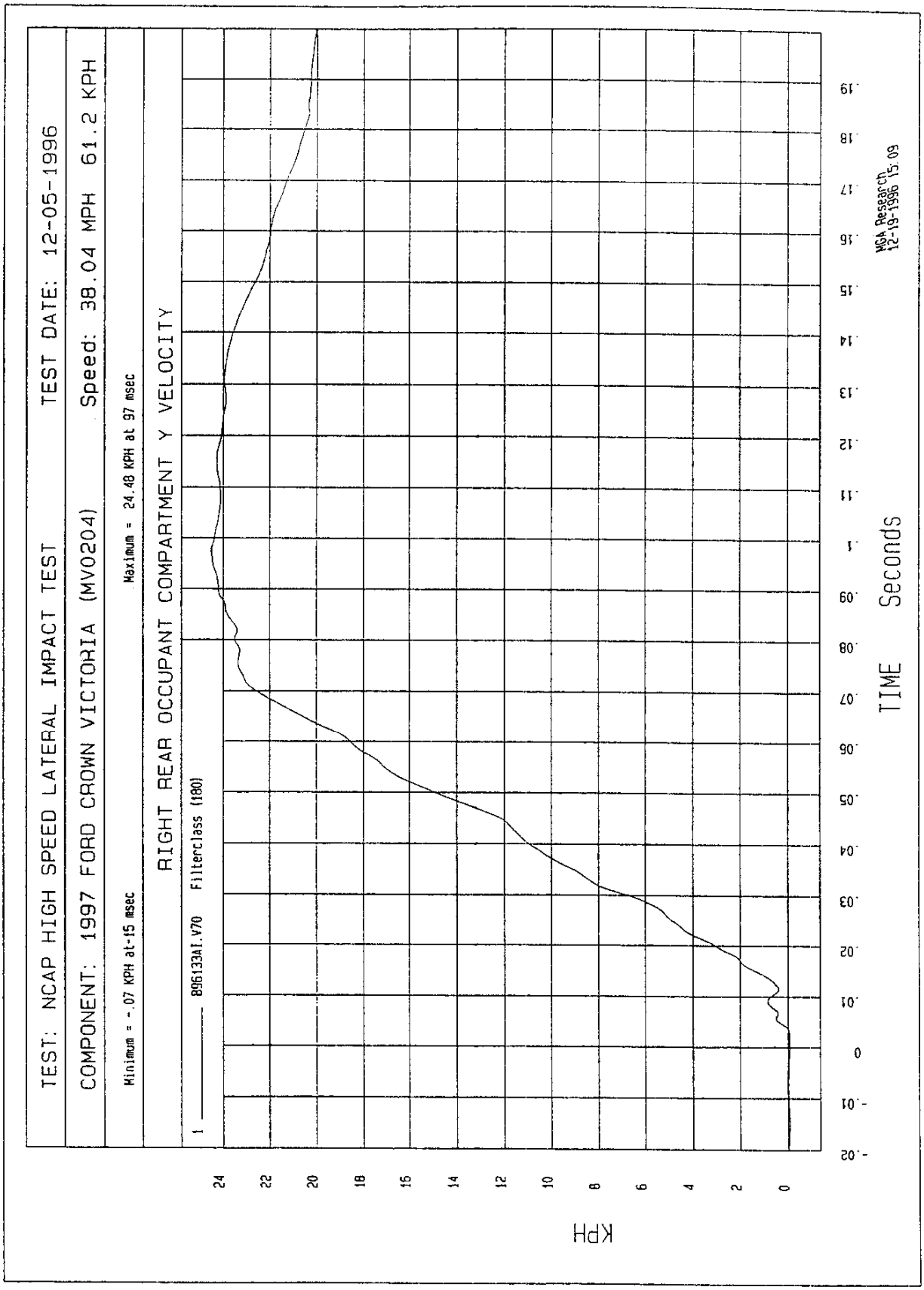

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -7.33E-03 KPH at -9 msec
Maximum = 28.55 KPH at 125 msec
REAR FLOORPAN ABOVE AXLE Y VELOCITY
1 B96133A1.V09 Filterclass (180)
KPH
TIME Seconds
MGA Research
12-19-1996 11:35

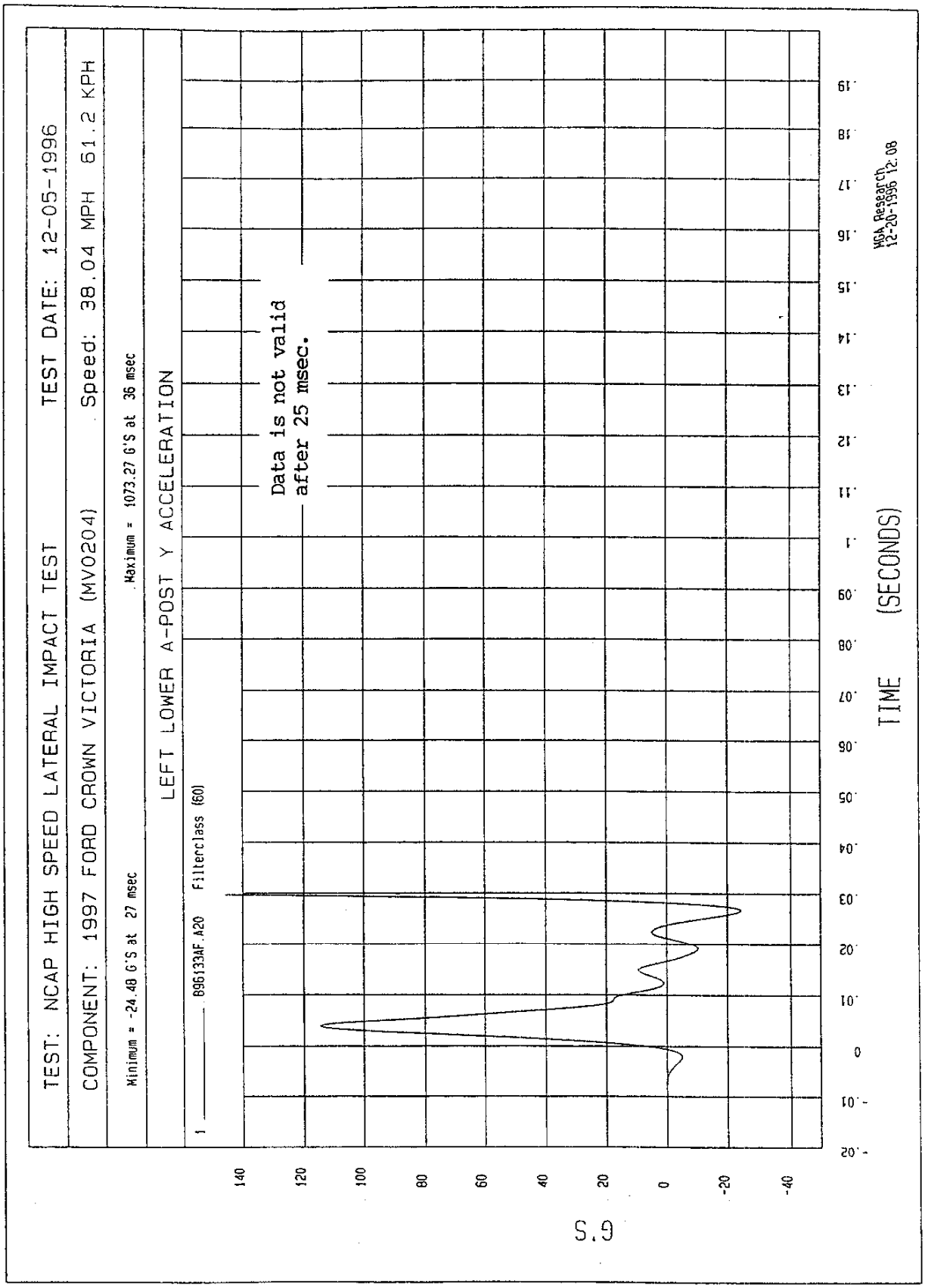

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-14.99859 G'S at 50. msec
YMAX= 16.36127 G'S at 30. msec
REAR FLOORPAN ABOVE AXLE Z ACCELERATION
B96133AF.A10 Filterclass (60)
G'S
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-04-1996 02:39

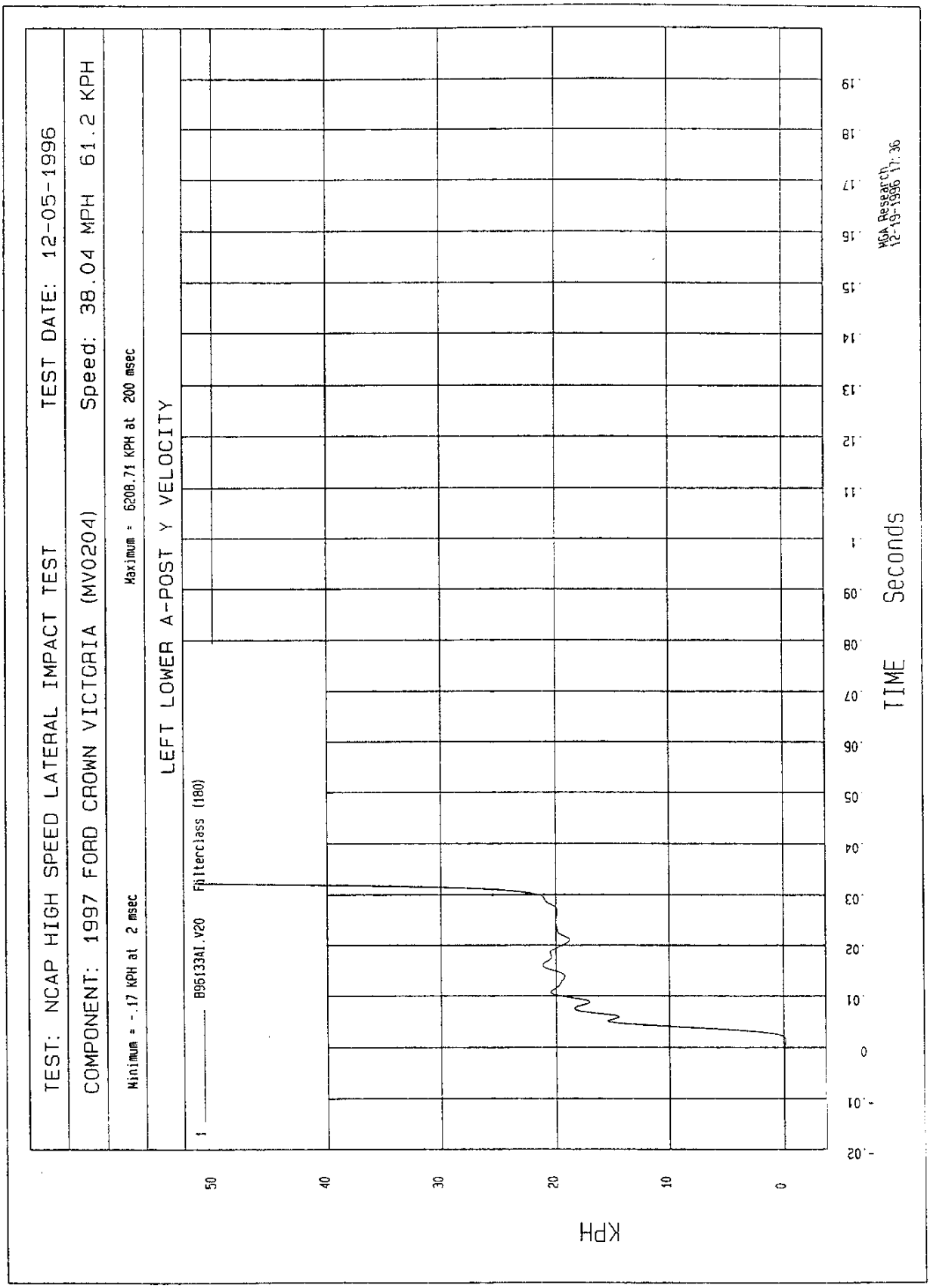

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -2.75 KPH at 21 msec
Maximum = 4.76 KPH at 45 msec
REAR FLOORPAN ABOVE AXLE Z VELOCITY
1 896133AI.V10 Filterclass (180)
KPH
TIME Seconds
MGA Research
12-19-1996 15:09

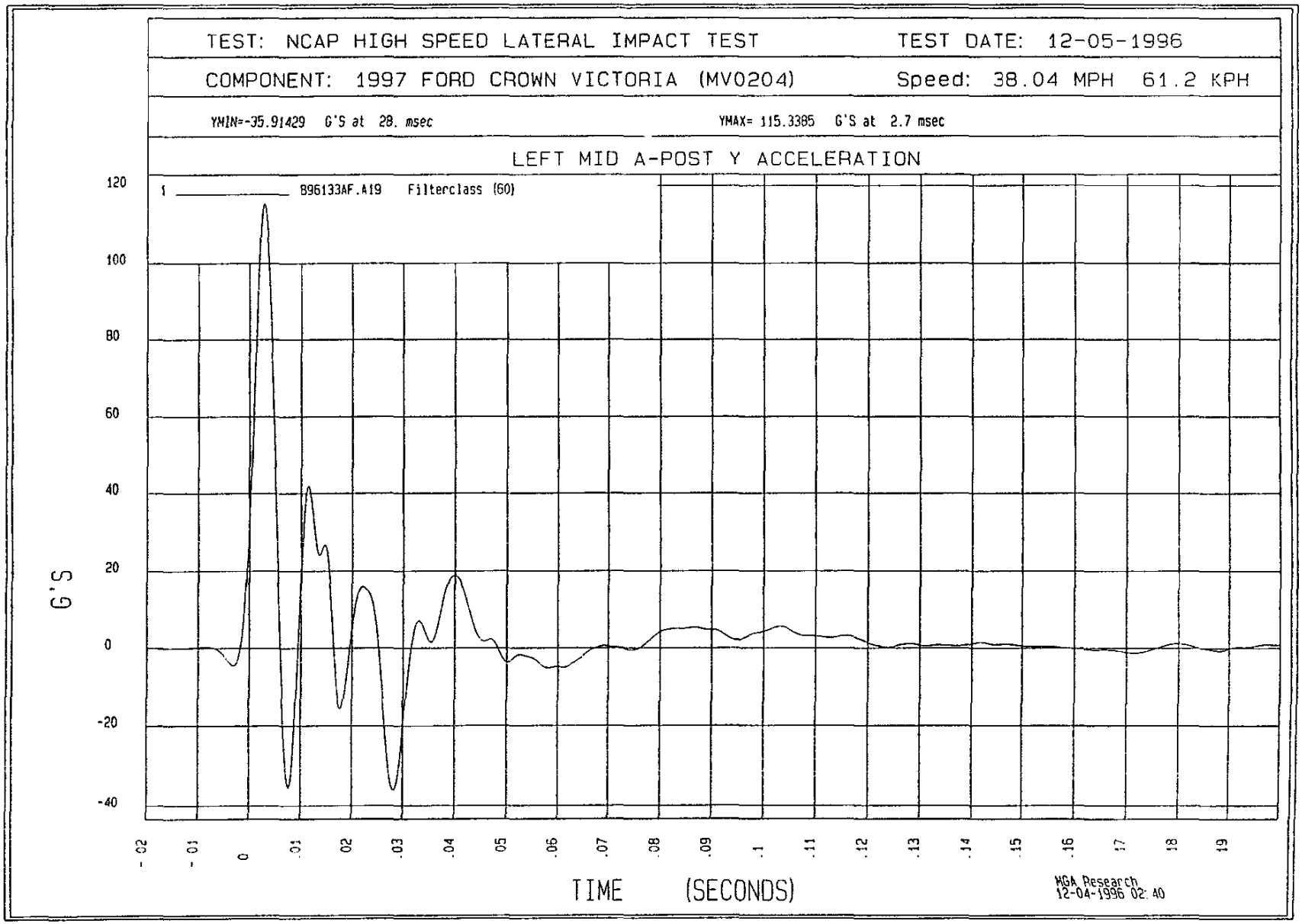

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN= 9.125869E-03 G'S at -9 msec
YMAX= 19.93563 G'S at 50. msec
REAR FLOORPAN ABOVE AXLE RESULTANT ACCELERATION
1 896133AV.A08 Filterclass (60)
G'S
20
18
16
14
12
10
8
6
4
2
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-19-1996 12:36


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-3.233336 G'S at 149 msec
YMAX= 16.5152 G'S at 30. msec
RIGHT REAR OCCUPANT COMPARTMENT Y ACCELERATION
1 896133AF.A70 Filterclass (60)
G'S
16
14
12
10
8
6
4
2
0
-2
-4
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-04-1996 02:40

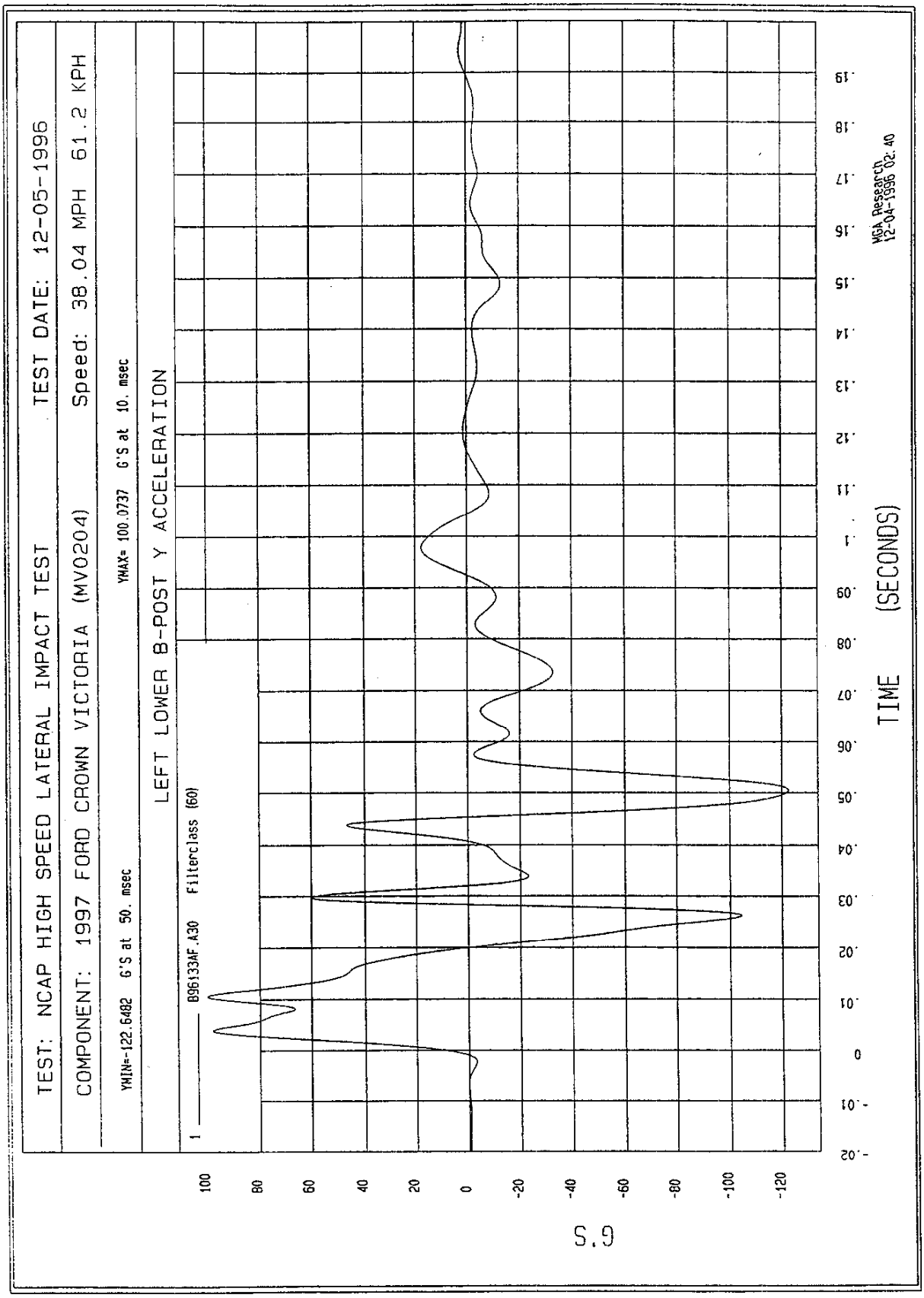

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -.07 KPH at-15 msec
Maximum = 24.48 KPH at 97 msec
RIGHT REAR OCCUPANT COMPARTMENT Y VELOCITY
1 _____ B96133AI.V70 Filterclass (180)
KPH
TIME Seconds
NGA Research
12-19-1996 15:09

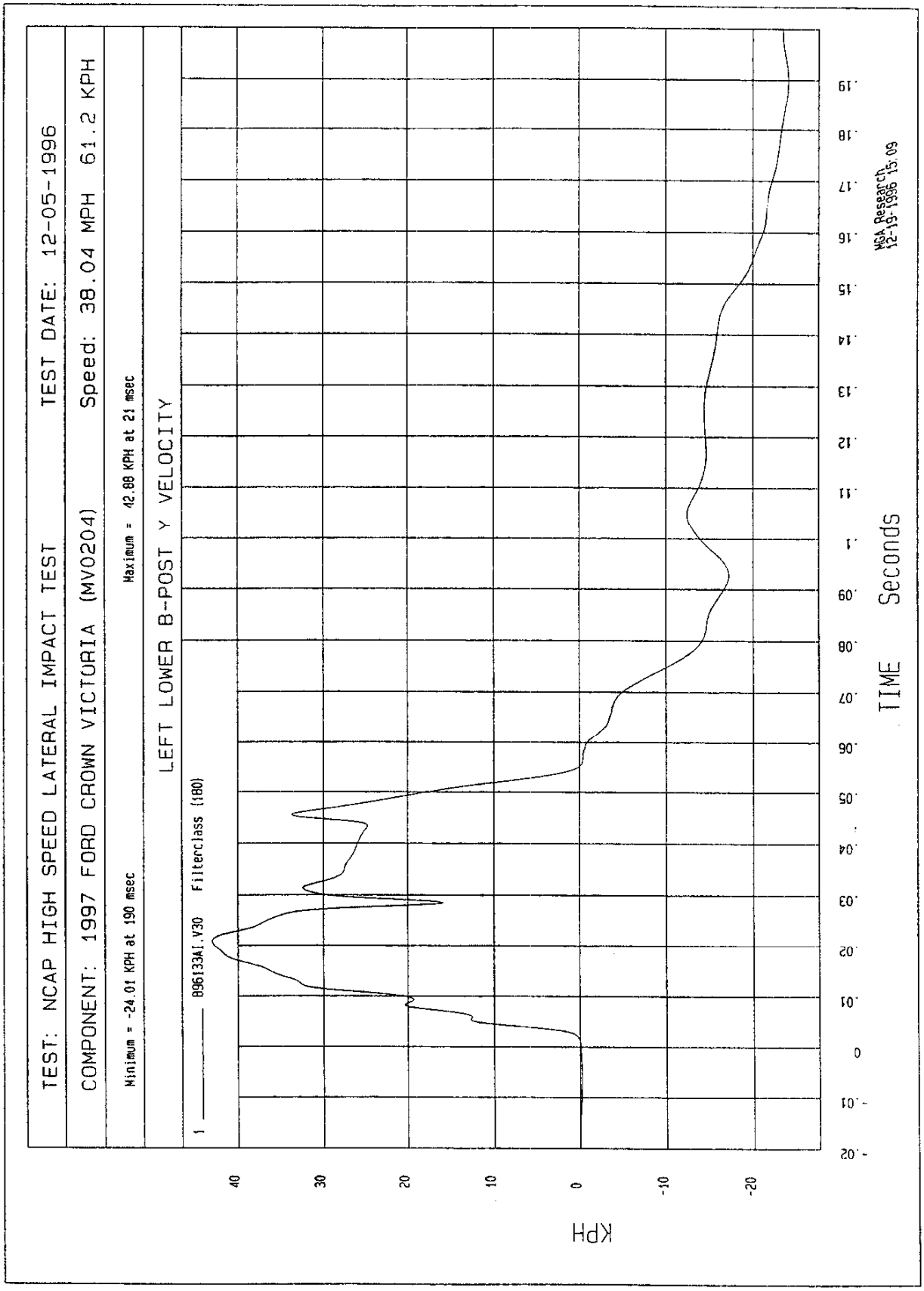

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -24.48 G'S at 27 msec
Maximum = 1073.27 G'S at 36 msec
LEFT LOWER A-POST Y ACCELERATION
1 B96133AF.A20 Filterclass (60)
Data is not valid after 25 msec.
140
120
100
80
60
40
20
0
-20
-40
G'S
.19
.18
.17
.16
.15
.14
.13
.12
.11
1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
-.01
-.02
TIME (SECONDS)
MGA Research
12-20-1996 12:08

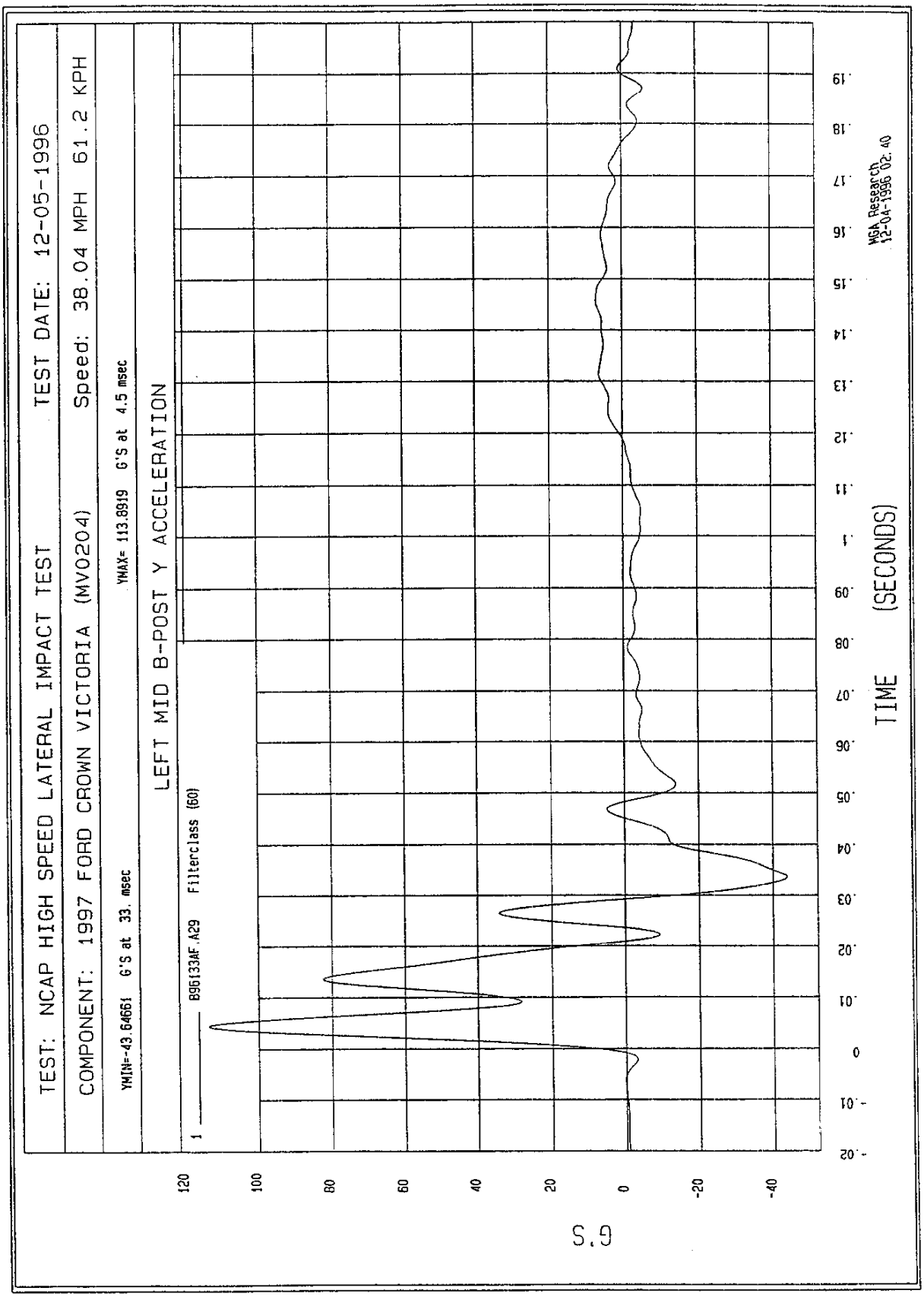

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -.17 KPH at 2 msec
Maximum = 6208.71 KPH at 200 msec
LEFT LOWER A-POST Y VELOCITY
1 B96133A1.V20 Filterclass (180)
KPH
TIME Seconds
MGA Research
12-19-1996 17:36

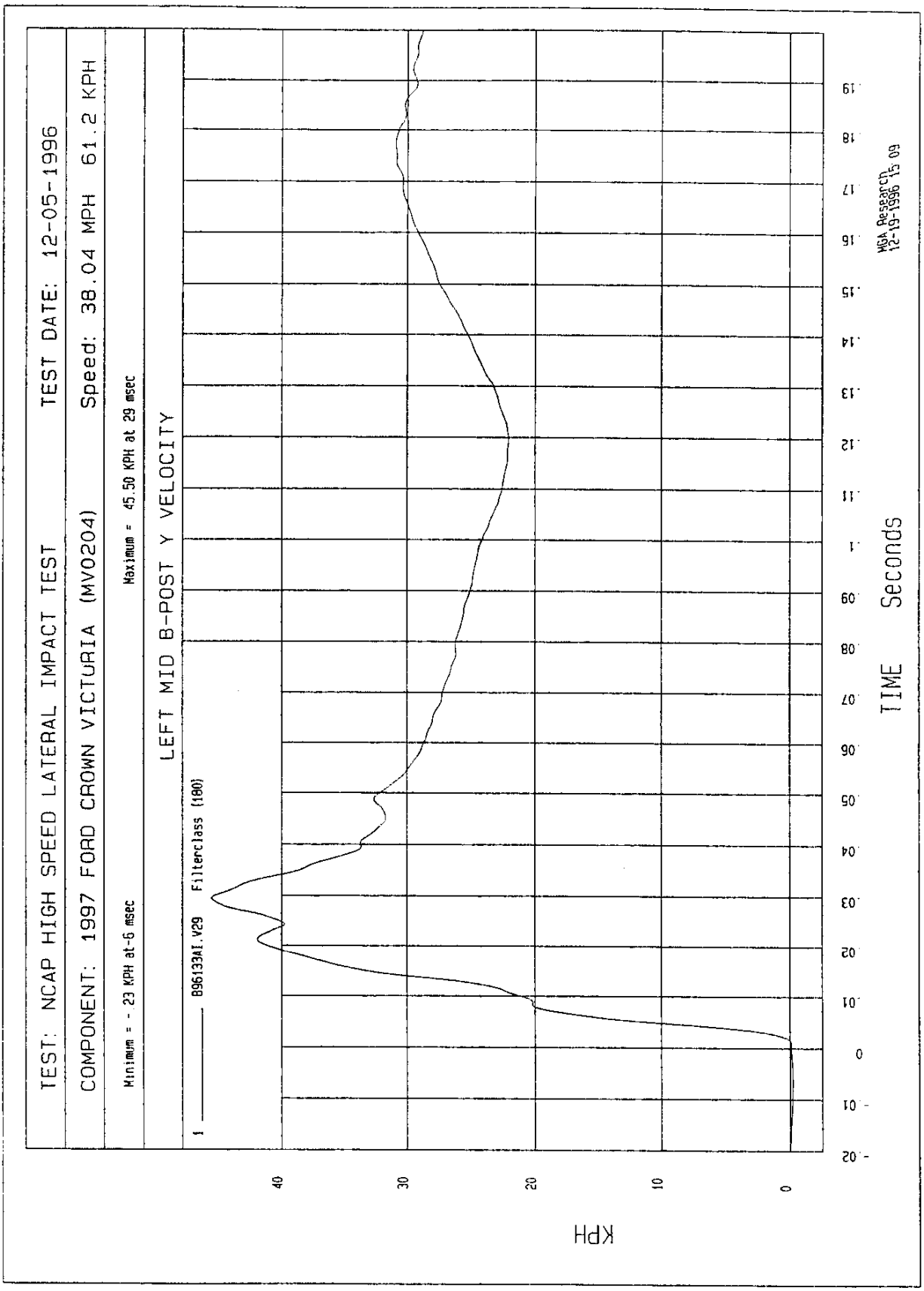

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-35.91429 G'S at 28. msec
YMAX= 115.3385 G'S at 2.7 msec
LEFT MID A-POST Y ACCELERATION
1 B96133AF.A19 Filterclass (60)
120
100
80
60
40
20
0
-20
-40
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-04-1996 02:40

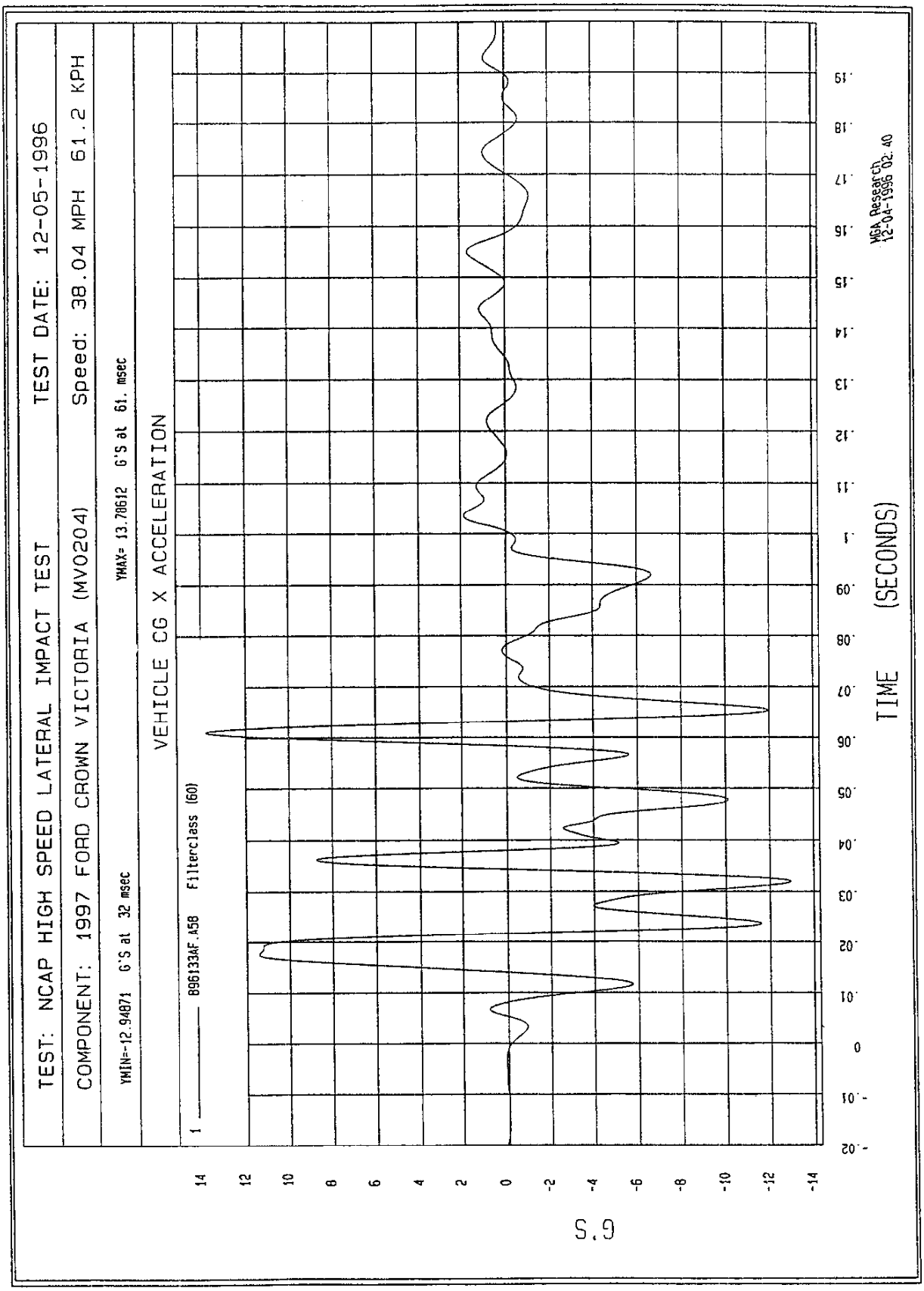

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -.14 KPH at 1 msec
Maximum = 25.11 KPH at 157 msec
LEFT MID A-POST Y VELOCITY
1 896133AI.V19 Filterclass (180)
KPH
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
12-19-1996 15:09

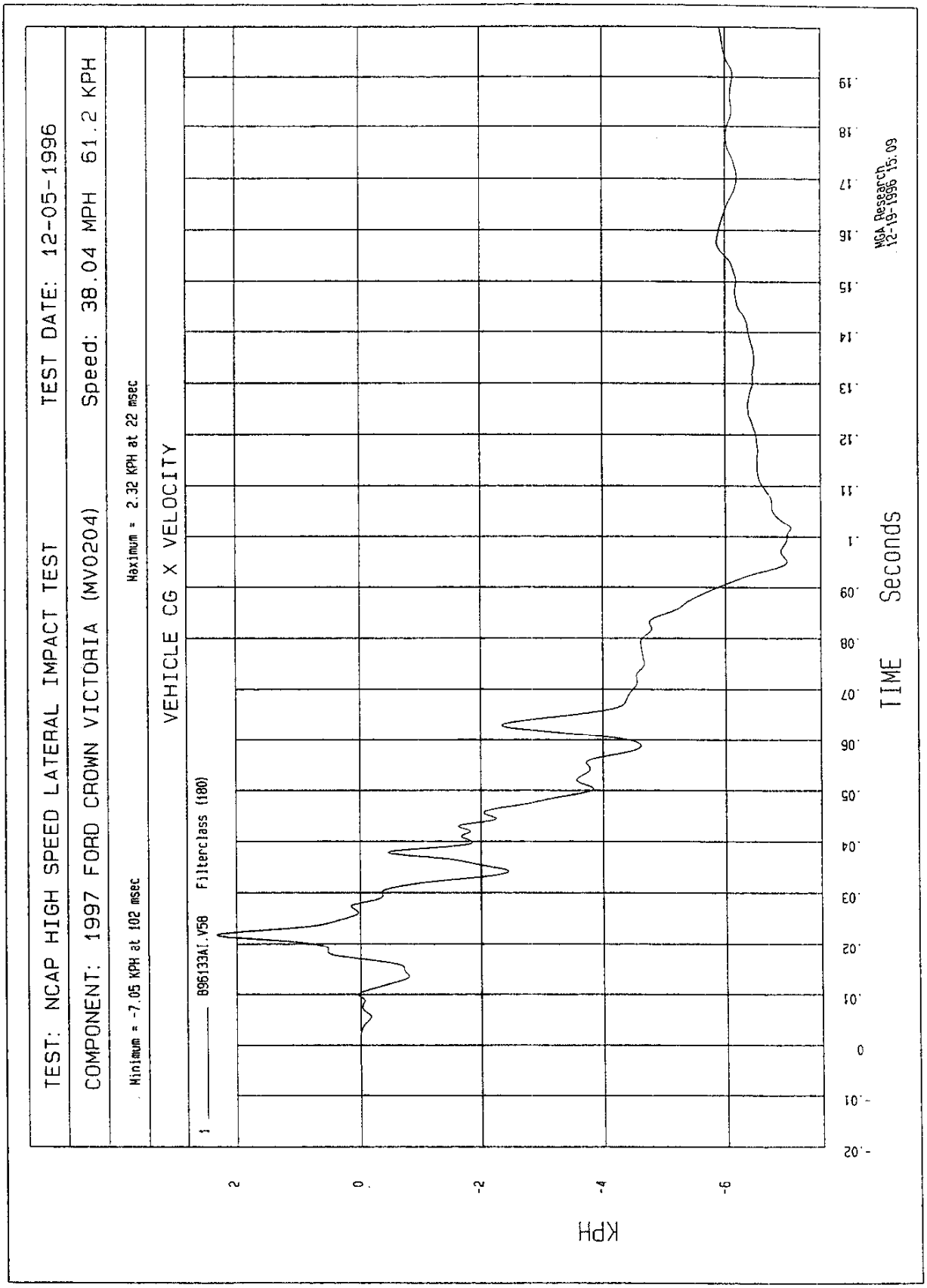

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-122.6482 G'S at 50. msec
YMAX= 100.0737 G'S at 10. msec
LEFT LOWER B-POST Y ACCELERATION
1 B96133AF.A30 Filterclass (60)
100
80
60
40
20
0
-20
-40
-60
-80
-100
-120
.19
.18
.17
.16
.15
.14
.13
.12
.11
1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
-.01
-.02
TIME (SECONDS)
MGA Research
12-04-1996 02:40
6'S
S.9

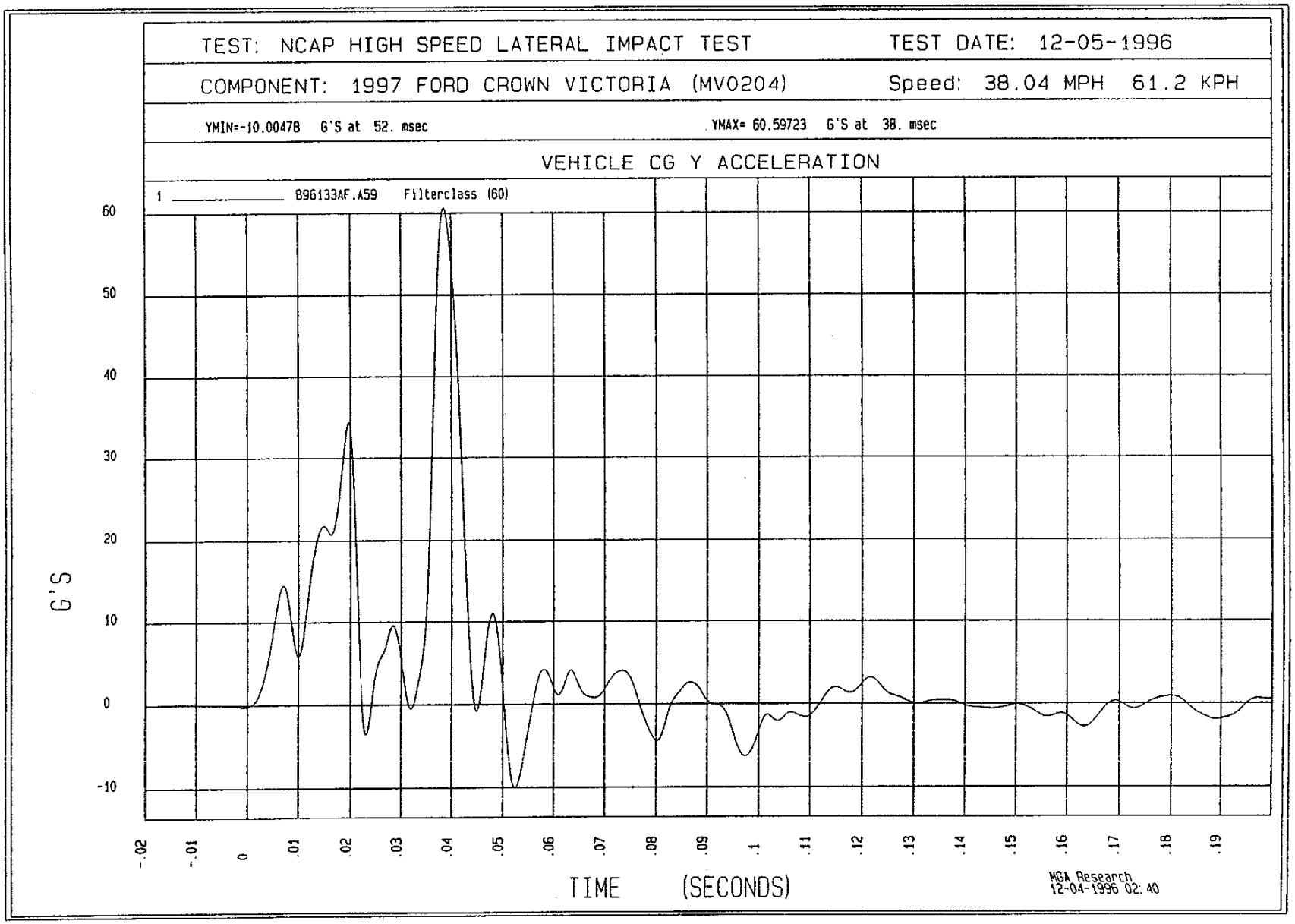

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -24.01 KPH at 190 msec
Maximum = 42.88 KPH at 21 msec
LEFT LOWER B-POST Y VELOCITY
1 B96133AI.V30 Filterclass (180)
KPH
TIME Seconds
MGA Research
12-19-1996 15:09

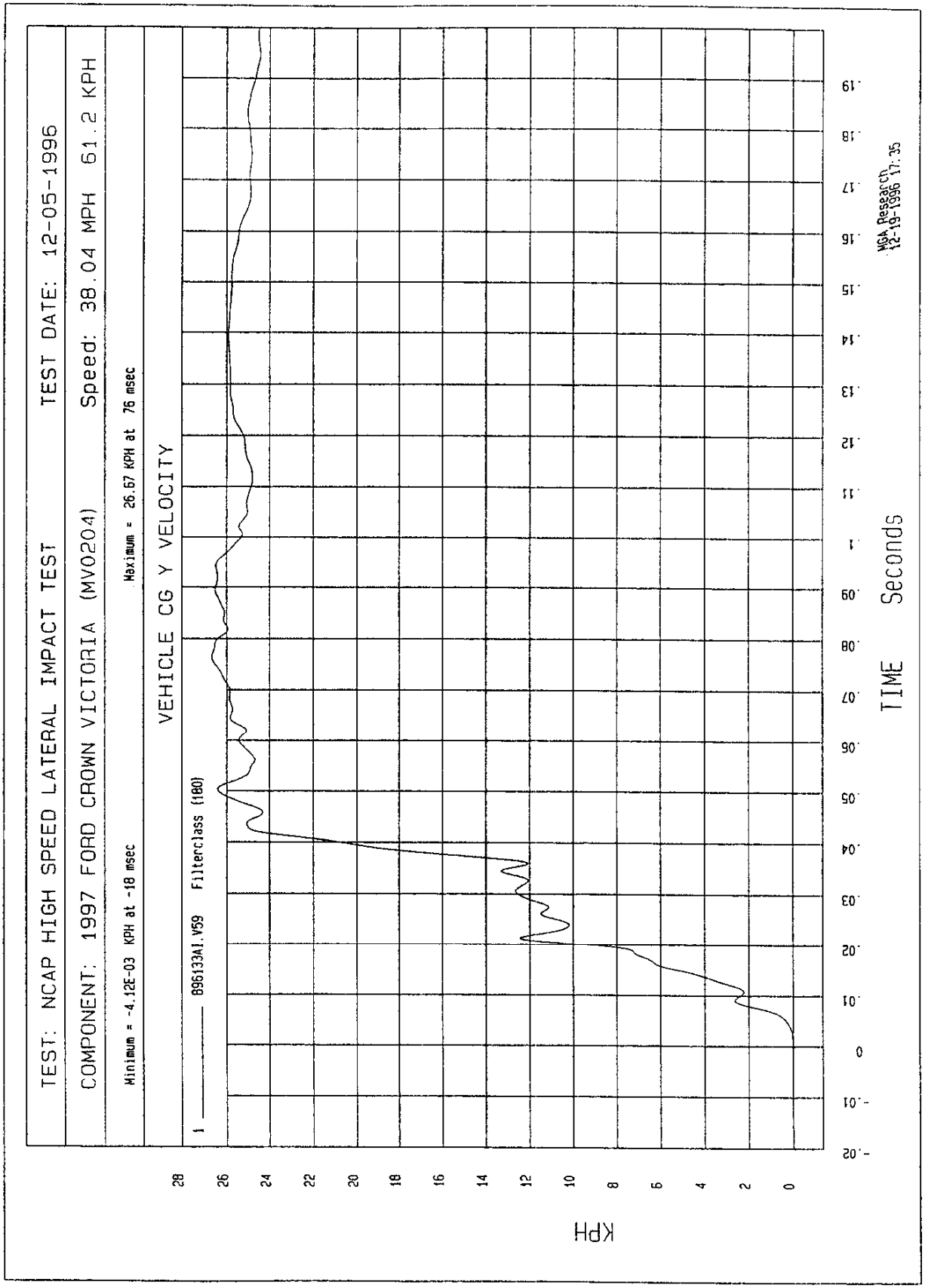

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204) Speed: 38.04 MPH 61.2 KPH
YMIN=-43.64661 G'S at 33. msec YMAX= 113.8919 G'S at 4.5 msec
LEFT MID B-POST Y ACCELERATION
1 B9G133AF.A29 Filterclass (60)
120
100
80
60
40
20
0
-20
-40
G'S
.19
.18
.17
.16
.15
.14
.13
.12
.11
.1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
-.01
-.02
TIME (SECONDS)
MGA Research
12-04-1996 02:40

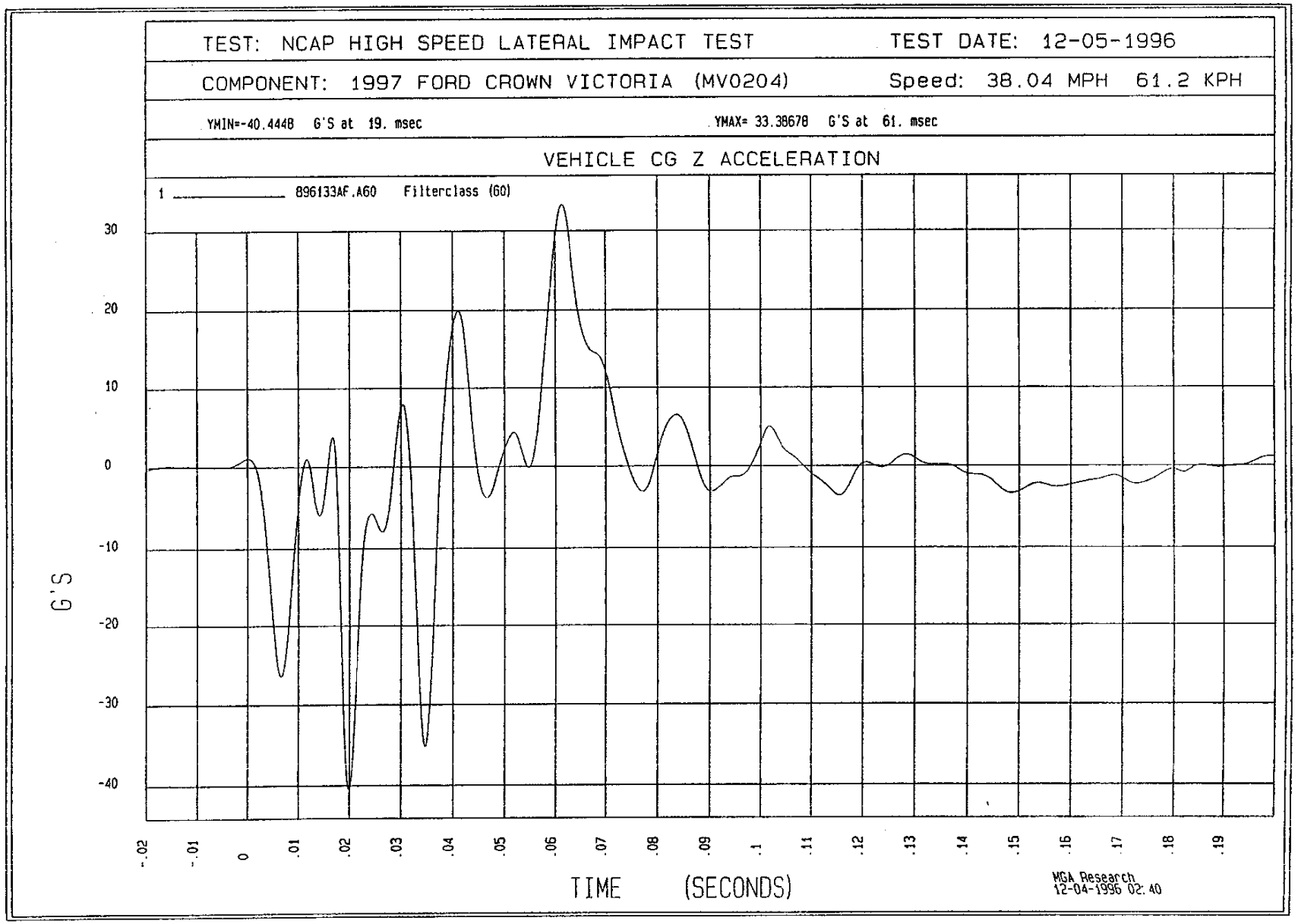

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTURIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = - 23 KPH at-6 msec
Maximum = 45.50 KPH at 29 msec
LEFT MID B-POST Y VELOCITY
1 B96133AI.V29 Filterclass (180)
KPH
40
30
20
10
0
TIME Seconds
MGA Research
12-19-1996 15 09

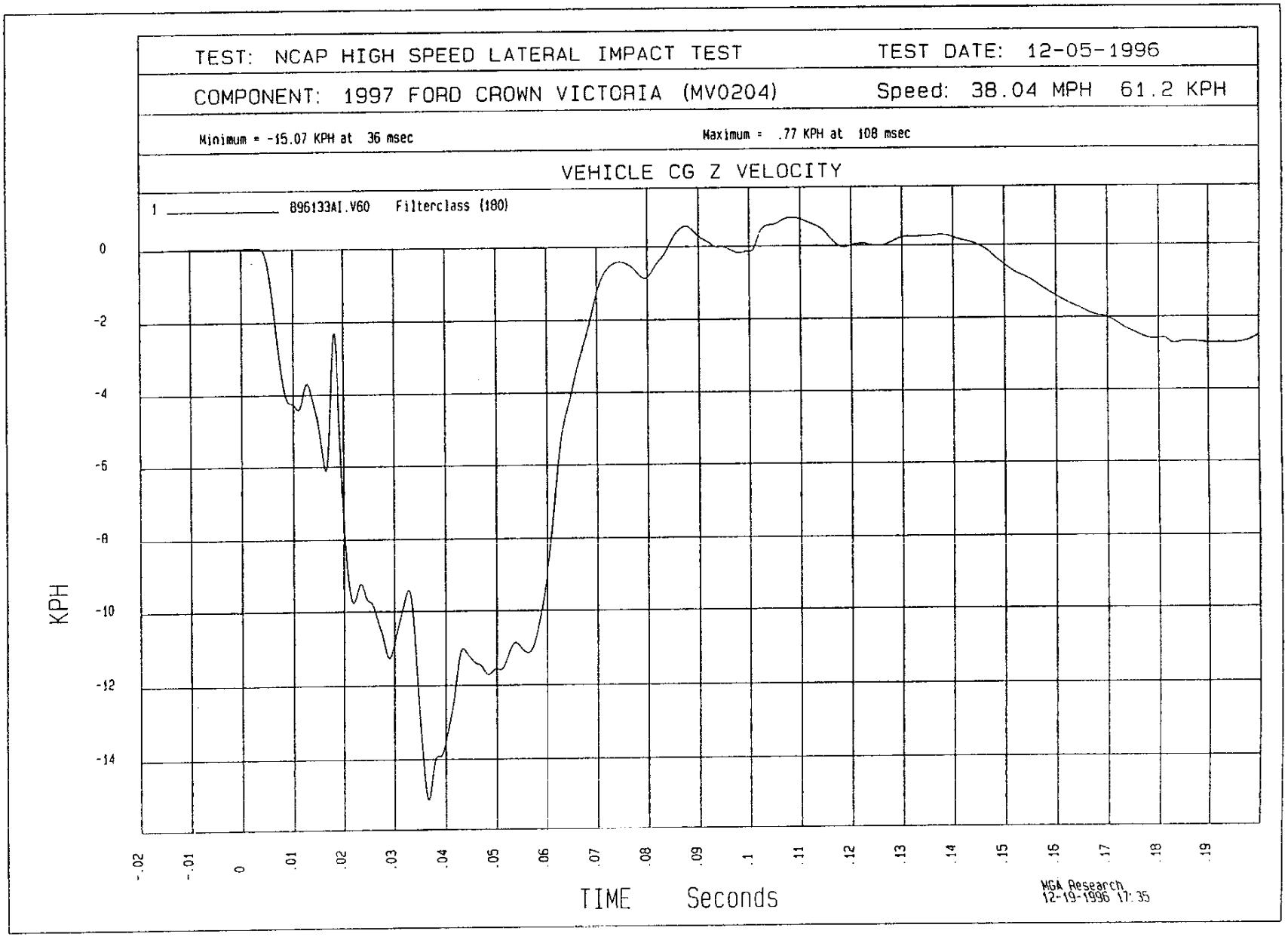

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-12.94871 G'S at 32 msec
YMAX= 13.78612 G'S at 61. msec
VEHICLE CG X ACCELERATION
1 896133AF.A5B Filterclass (60)
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
G'S
.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-04-1996 02:40

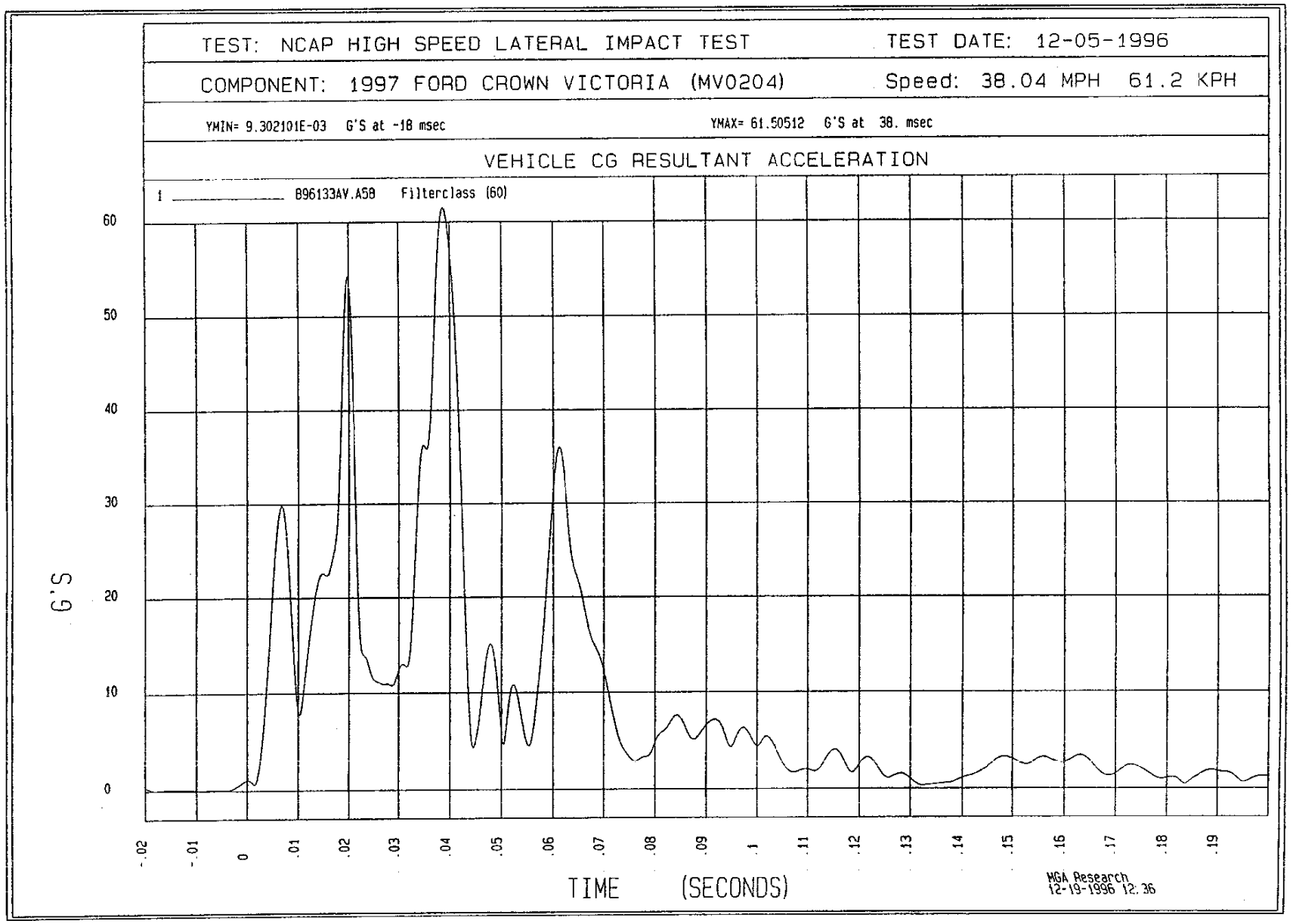

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -7.05 KPH at 102 msec
Maximum = 2.32 KPH at 22 msec
VEHICLE CG X VELOCITY
1 B96133AI.V58 Filterclass (180)
KPH
2
0
-2
-4
-6
TIME Seconds
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
NGA Research
12-19-1996 15:09

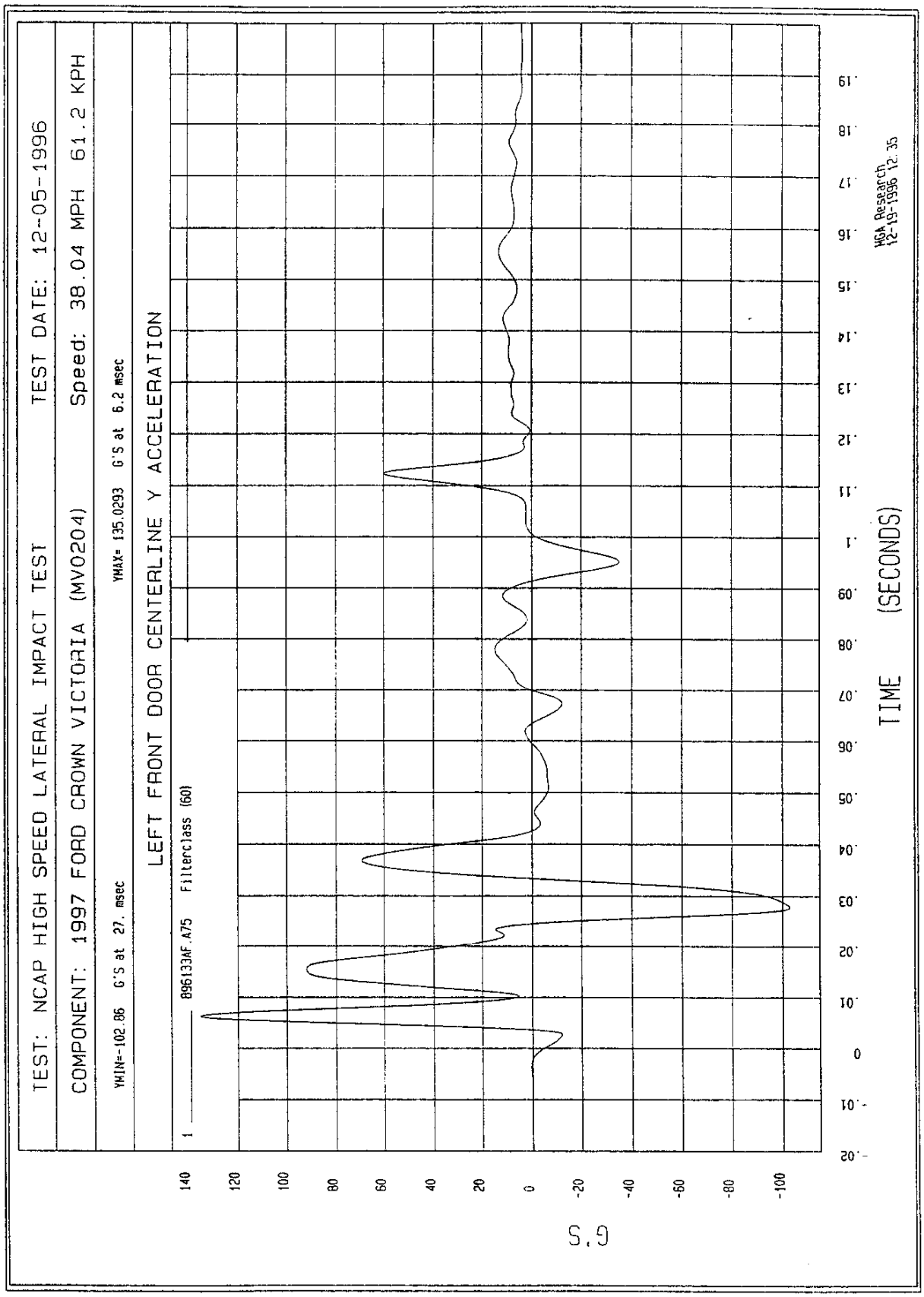

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-10.00478 G'S at 52. msec
YMAX= 60.59723 G'S at 38. msec
VEHICLE CG Y ACCELERATION
1 B96133AF.A59 Filterclass (60)
G'S
60
50
40
30
20
10
0
-10
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-04-1996 02:40

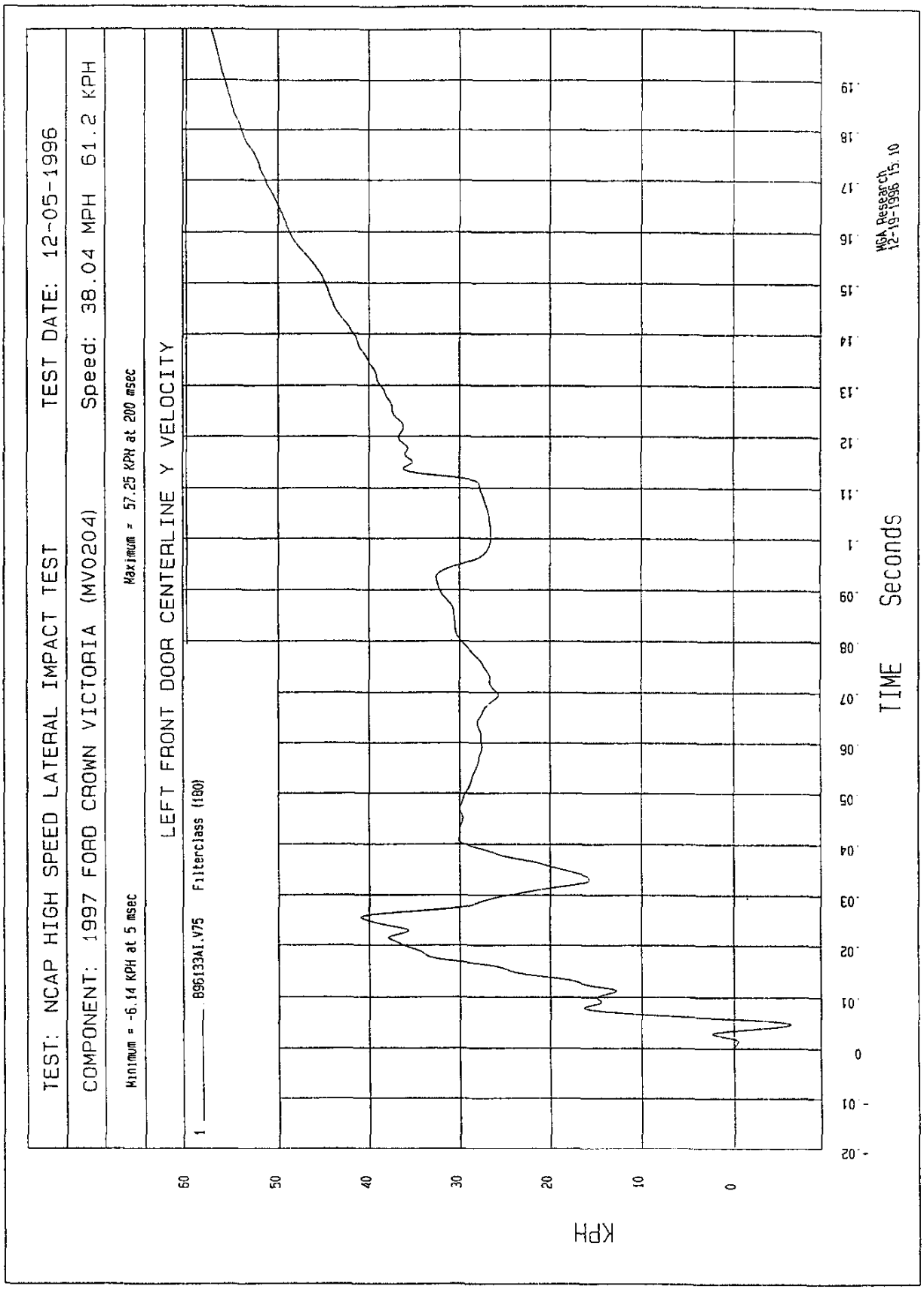

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -4.12E-03 KPH at -18 msec
Maximum = 26.67 KPH at 76 msec
VEHICLE CG Y VELOCITY
1 ——— 896133A1.V59 Filterclass (180)
KPH
TIME Seconds
MGA Research
12-19-1996 17:35

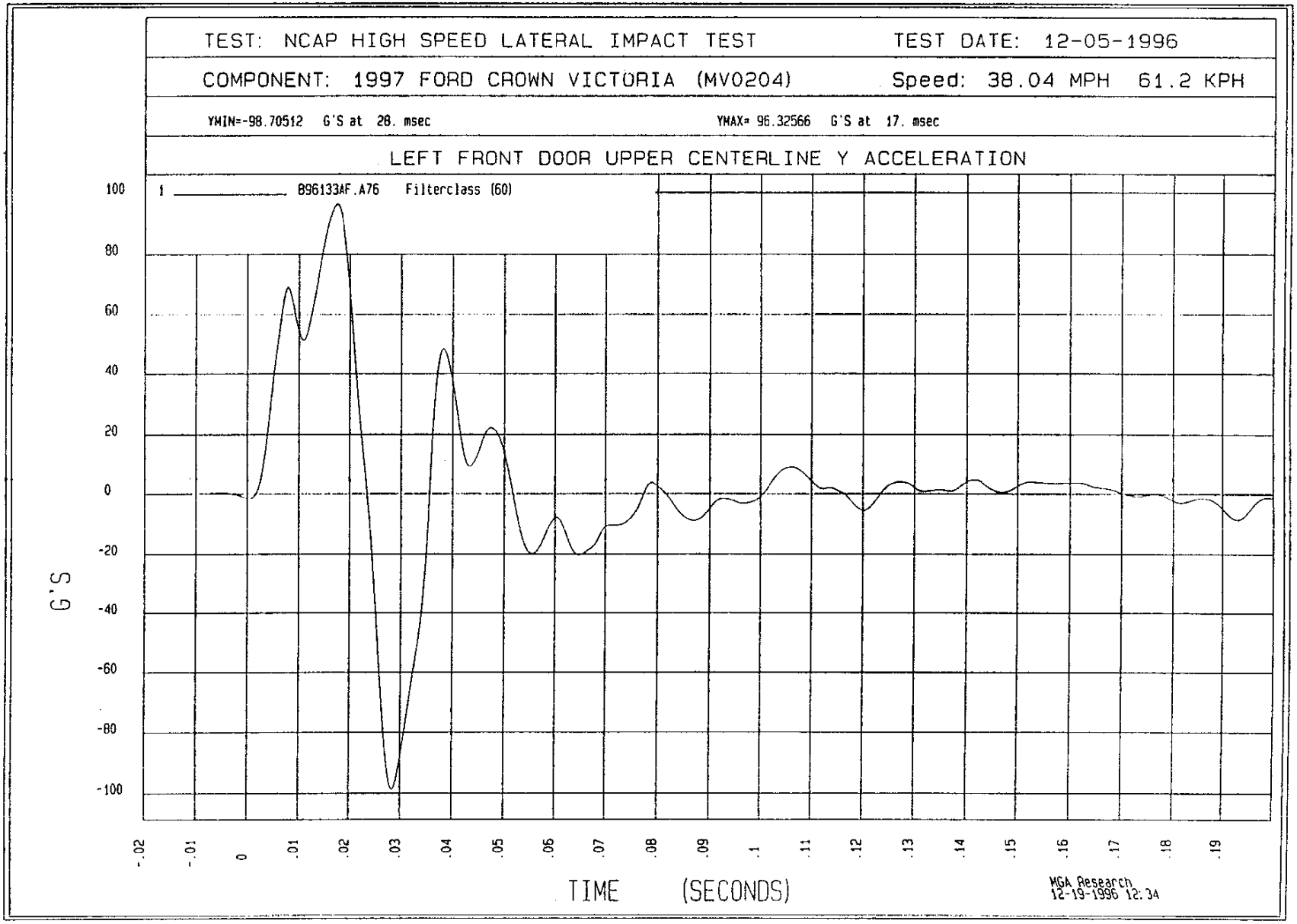

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-40.4448 G'S at 19. msec
YMAX= 33.38678 G'S at 61. msec
VEHICLE CG Z ACCELERATION
1 896133AF.A60 Filterclass (60)
G'S
30
20
10
0
-10
-20
-30
-40
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-04-1996 02:40

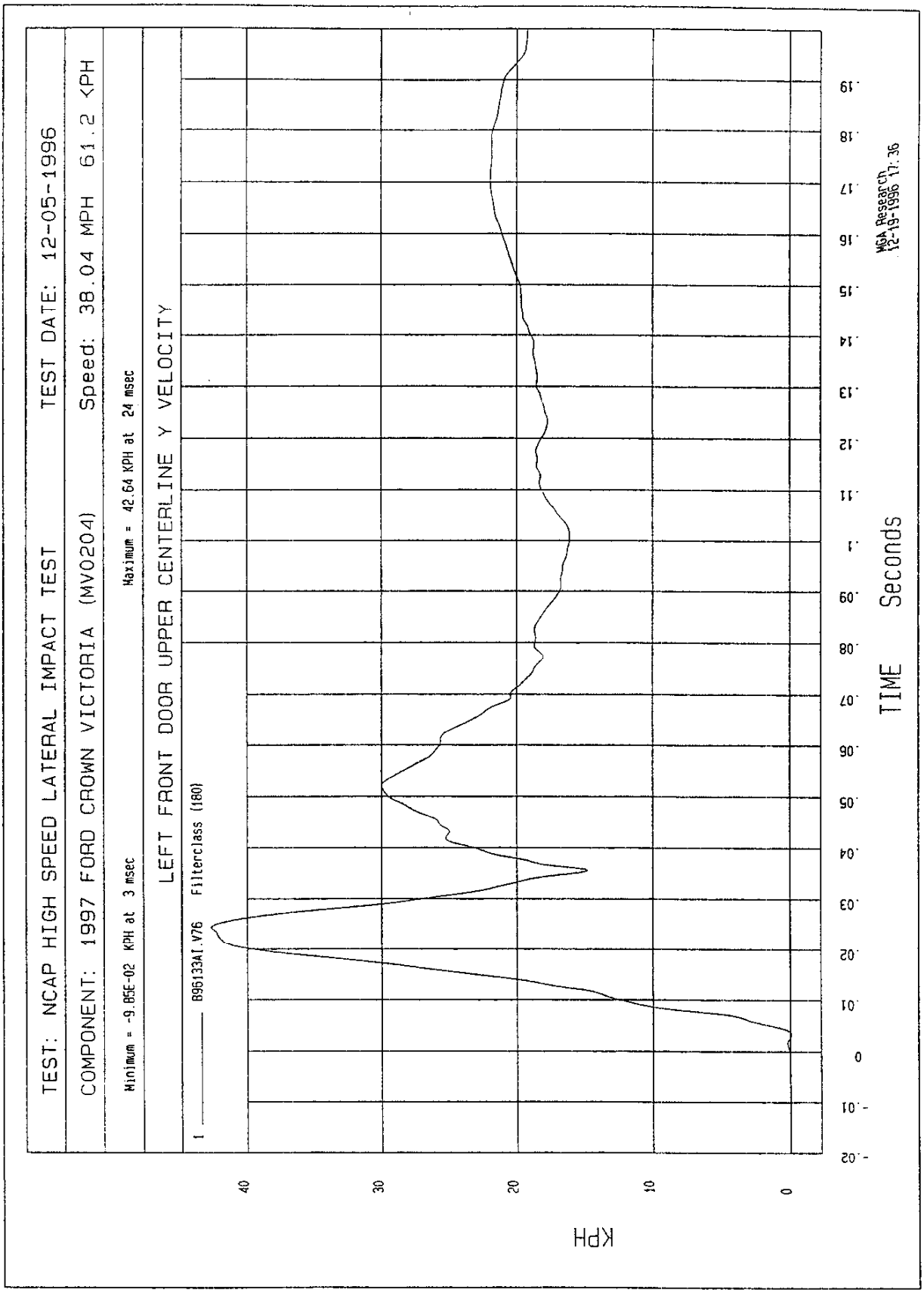

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -15.07 KPH at 36 msec
Maximum = .77 KPH at 108 msec
VEHICLE CG Z VELOCITY
1 896133AI.V60 Filterclass (180)
KPH
0
-2
-4
-6
-8
-10
-12
-14
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
12-19-1996 17:35

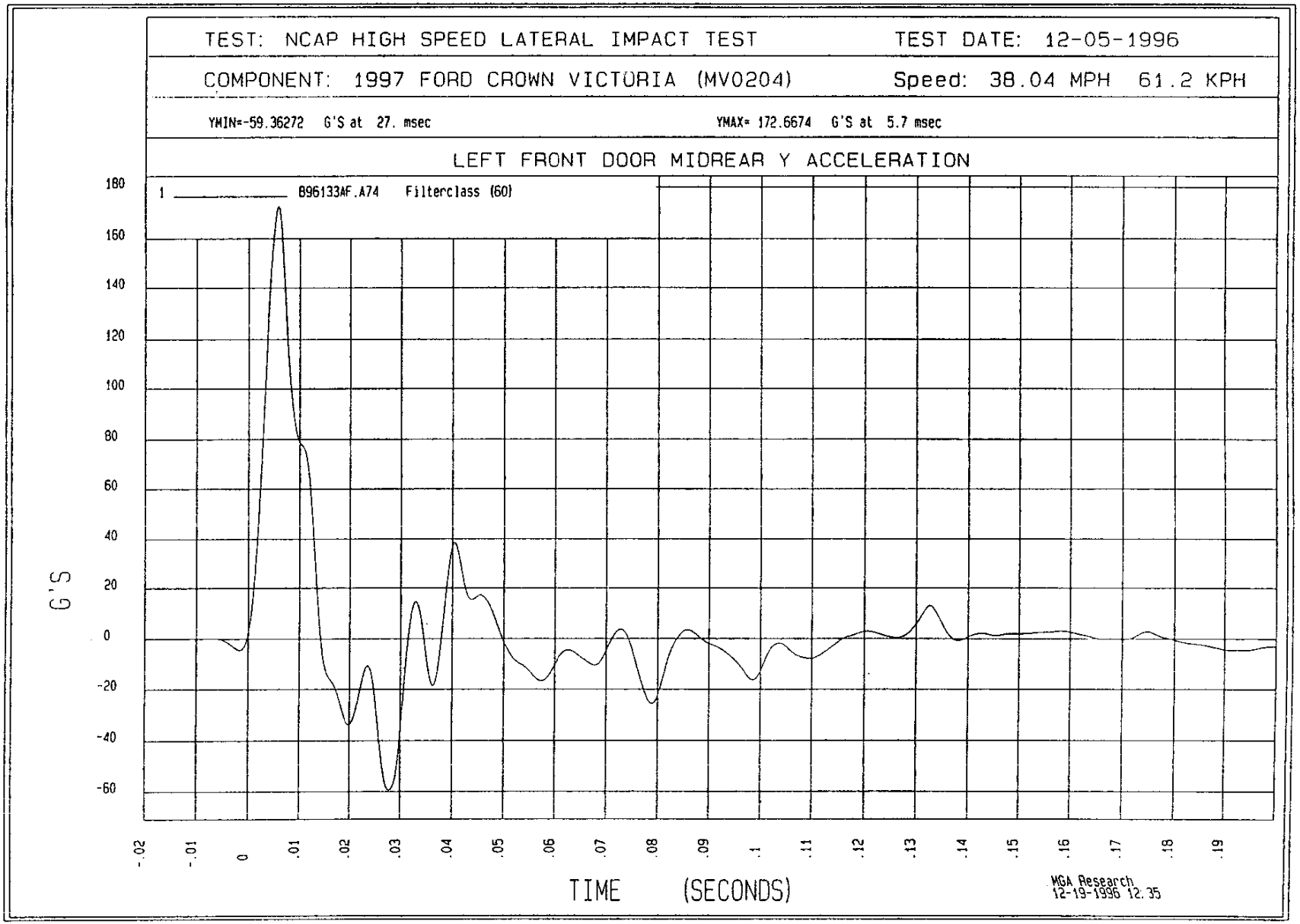

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN= 9.302101E-03 G'S at -18 msec
YMAX= 61.50512 G'S at 38. msec
VEHICLE CG RESULTANT ACCELERATION
1 B96133AV.A58 Filterclass (60)
G'S
60
50
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-19-1996 12:36

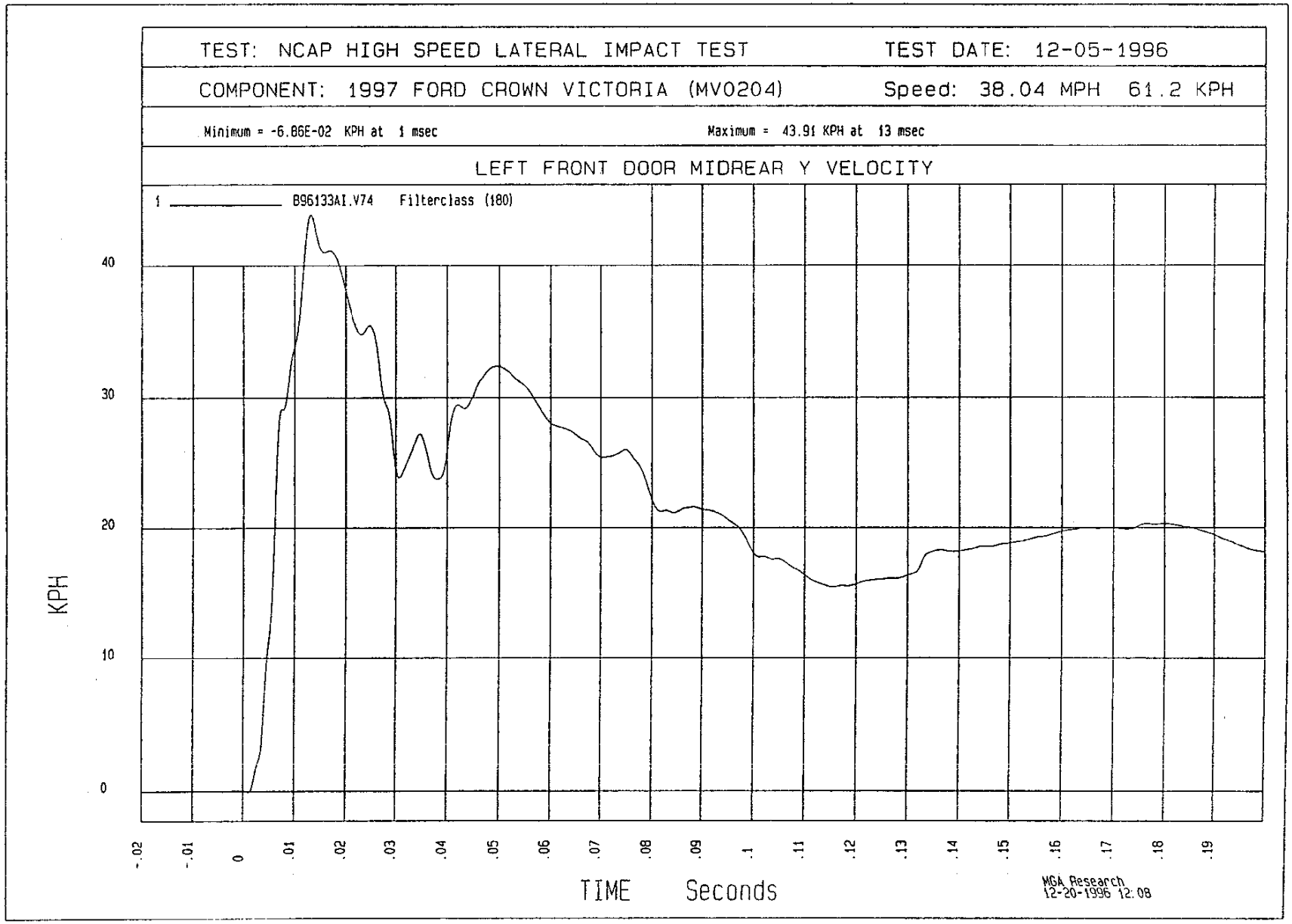

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-102.86 G'S at 27. msec
YMAX= 135.0293 G'S at 6.2 msec
LEFT FRONT DOOR CENTERLINE Y ACCELERATION
1 896133AF.A75 Filterclass (60)
140
120
100
80
60
40
20
0
-20
-40
-60
-80
-100
G'S
.19
.18
.17
.16
.15
.14
.13
.12
.11
.1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
-.01
-.02
TIME (SECONDS)
MGA Research
12-19-1996 12:35


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204) Speed: 38.04 MPH 61.2 KPH
Minimum = -6.14 KPH at 5 msec
Maximum = 57.25 KPH at 200 msec
LEFT FRONT DOOR CENTERLINE Y VELOCITY
1 ——— 896133AI.V75 Filterclass (180)
KPH
TIME Seconds
MGA Research 12-19-1996 15:10


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-98.70512 G'S at 28. msec
YMAX= 96.32566 G'S at 17. msec
LEFT FRONT DOOR UPPER CENTERLINE Y ACCELERATION
1 B96133AF.A76 Filterclass (60)
100
80
60
40
20
0
-20
-40
-60
-80
-100
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-19-1996 12:34


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -9.85E-02 KPH at 3 msec
Maximum = 42.64 KPH at 24 msec
LEFT FRONT DOOR UPPER CENTERLINE Y VELOCITY
1 B96133A1.V76 Filterclass (180)
KPH
TIME Seconds
MGA Research
12-19-1996 17:36


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-59.36272 G'S at 27. msec
YMAX= 172.6674 G'S at 5.7 msec
LEFT FRONT DOOR MIDREAR Y ACCELERATION
1 B96133AF.A74 Filterclass (60)
G'S
180
160
140
120
100
80
60
40
20
0
-20
-40
-60
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-19-1996 12:35


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -6.86E-02 KPH at 1 msec
Maximum = 43.91 KPH at 13 msec
LEFT FRONT DOOR MIDREAR Y VELOCITY
1 B96133AI.V74 Filterclass (180)
KPH
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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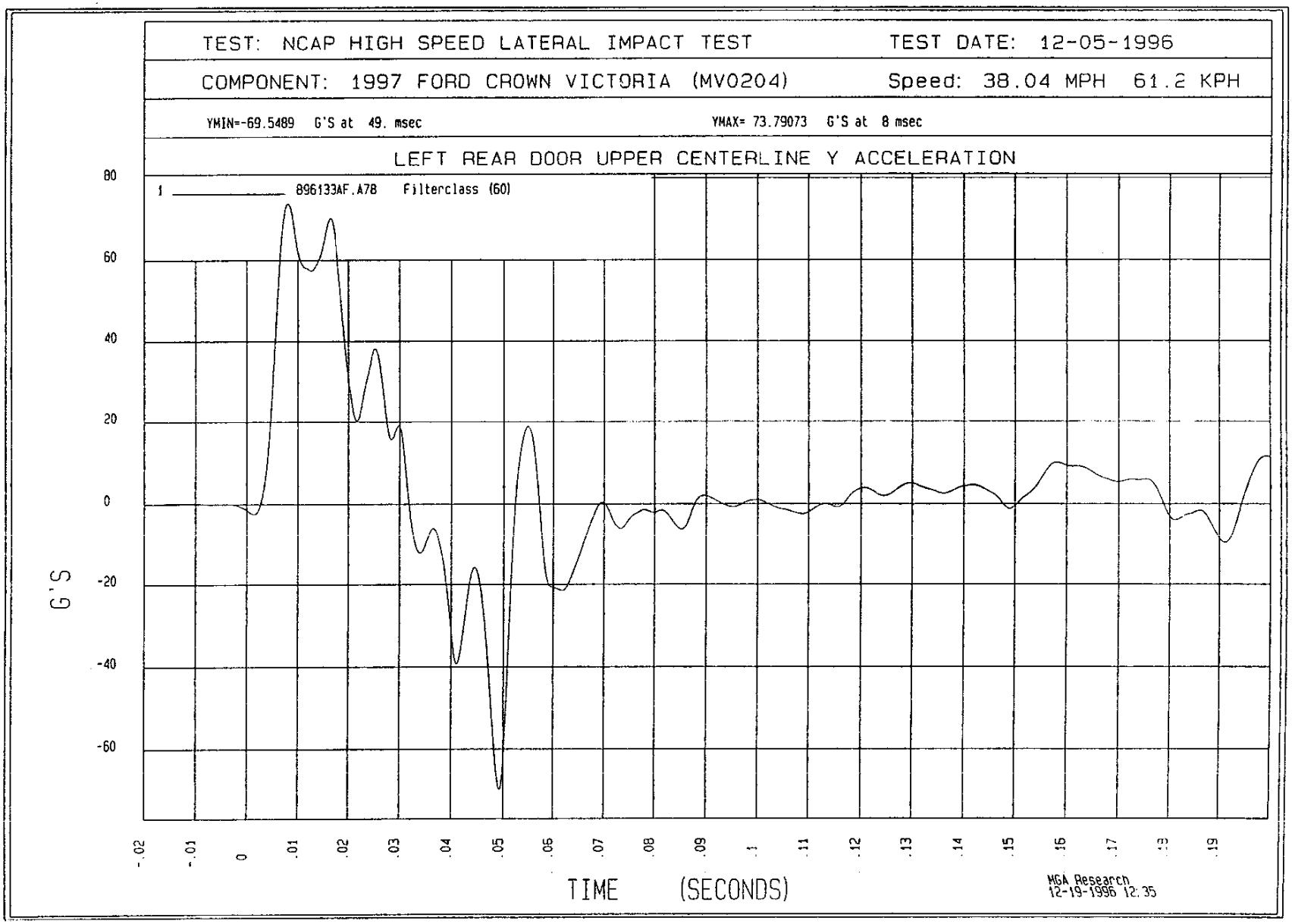
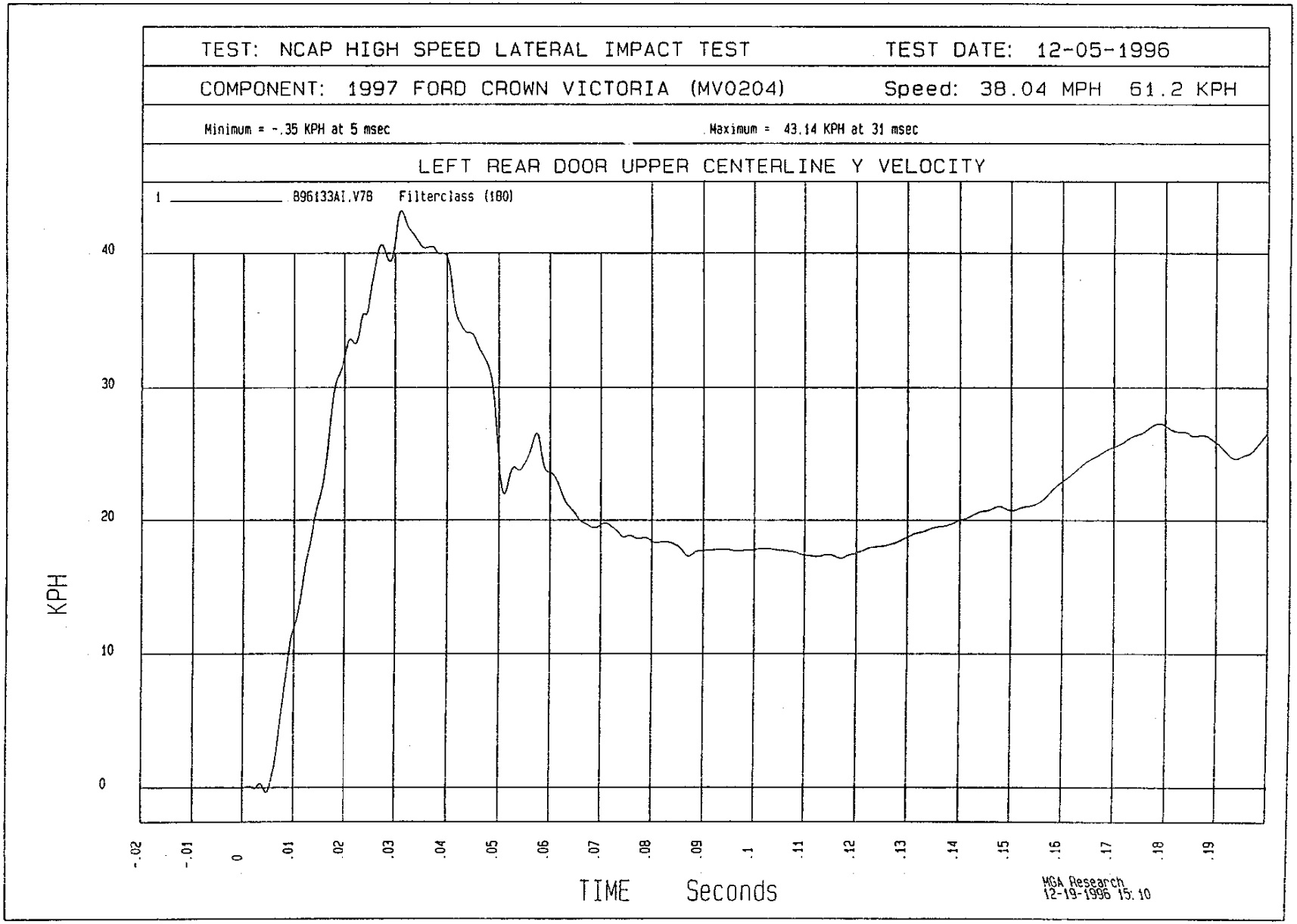
.16
.17
.18
.19
TIME Seconds
MGA Research
12-20-1996 12:08


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-69.5489 G'S at 49. msec
YMAX= 73.79073 G'S at 8 msec
LEFT REAR DOOR UPPER CENTERLINE Y ACCELERATION
1 896133AF.A78 Filterclass (60)
80
60
40
20
0
-20
-40
-60
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-19-1996 12:35


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -.35 KPH at 5 msec
Maximum = 43.14 KPH at 31 msec
LEFT REAR DOOR UPPER CENTERLINE Y VELOCITY
1 B96133AI.V78 Filterclass (180)
KPH
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
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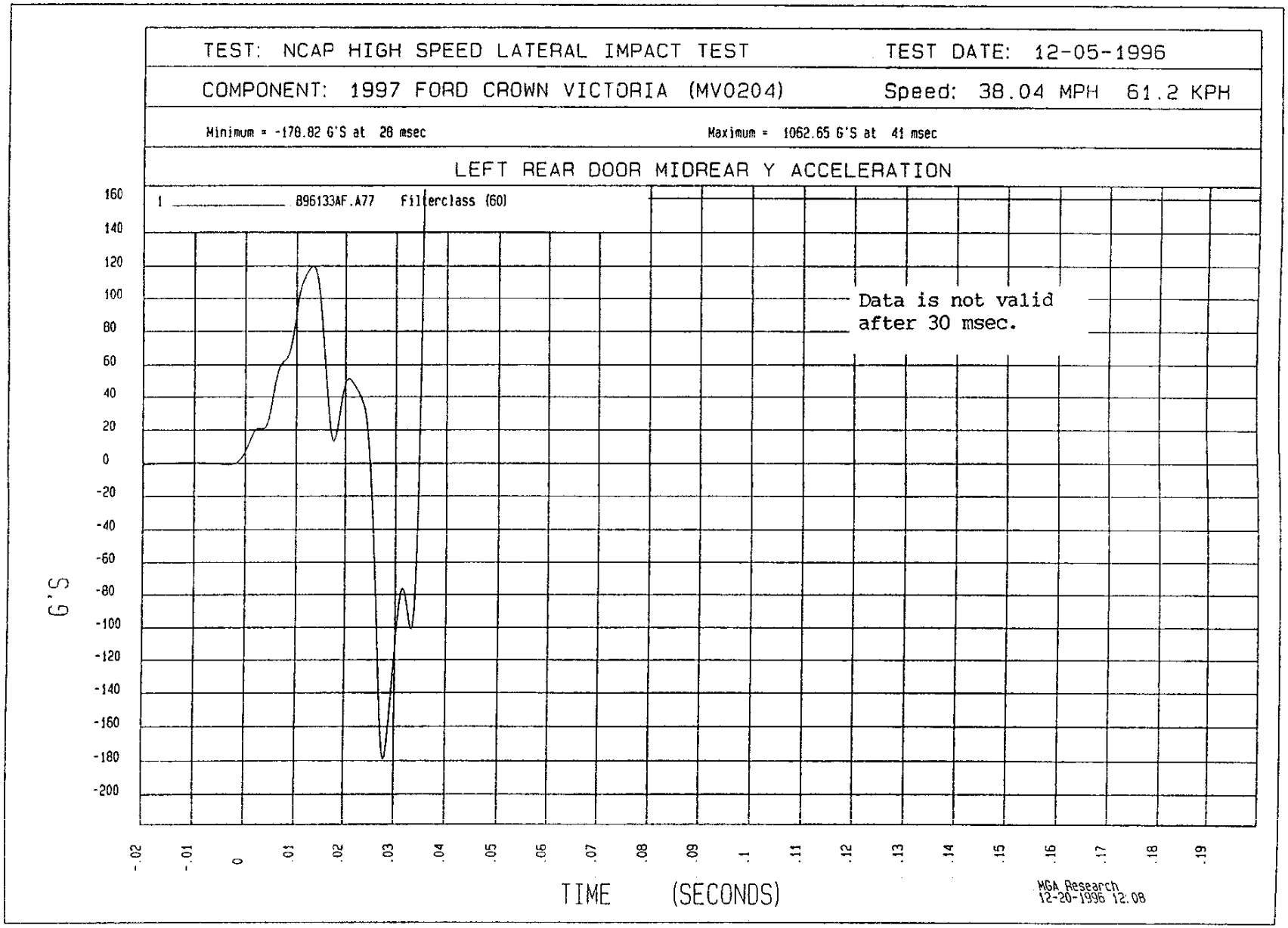
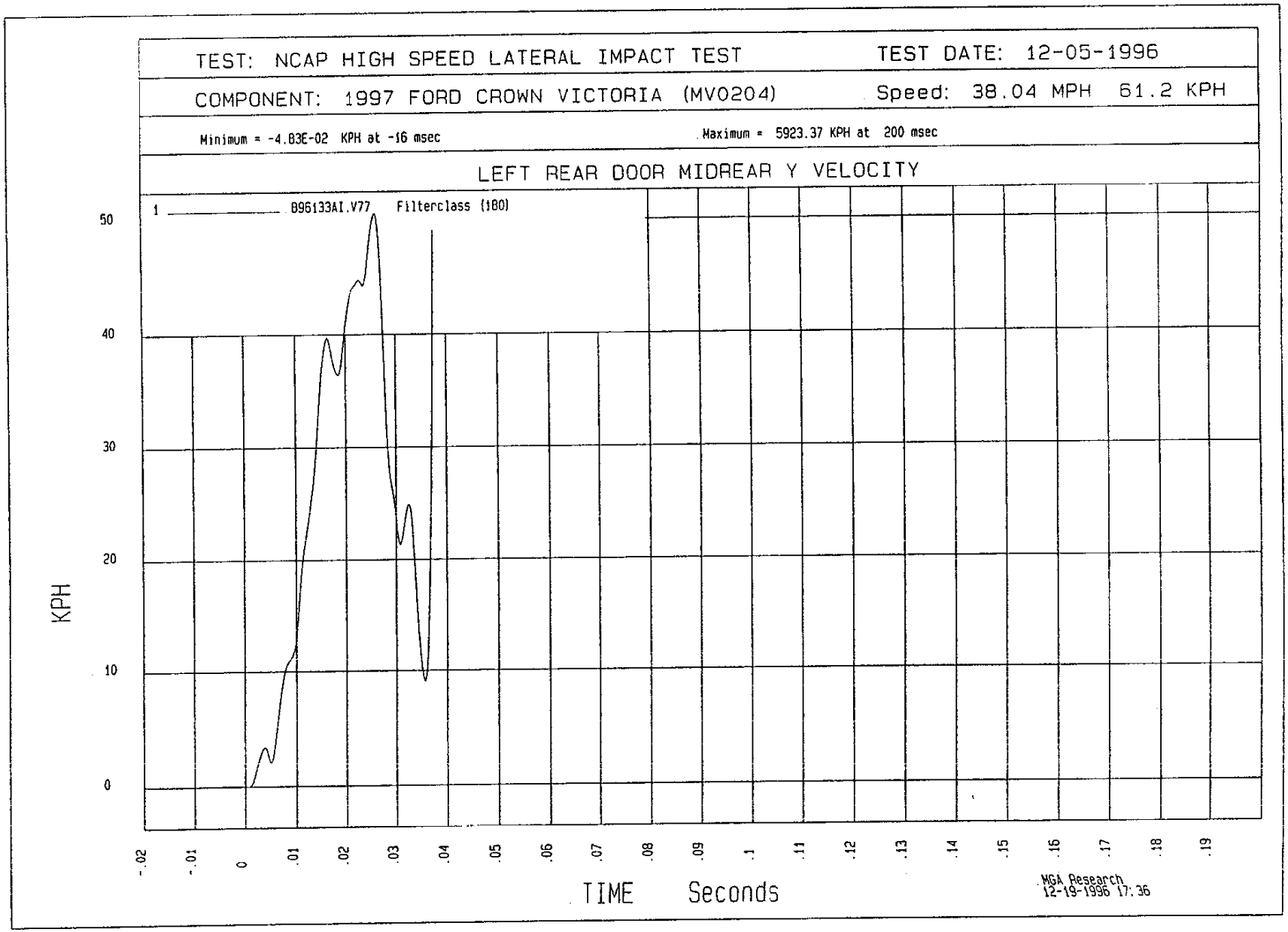
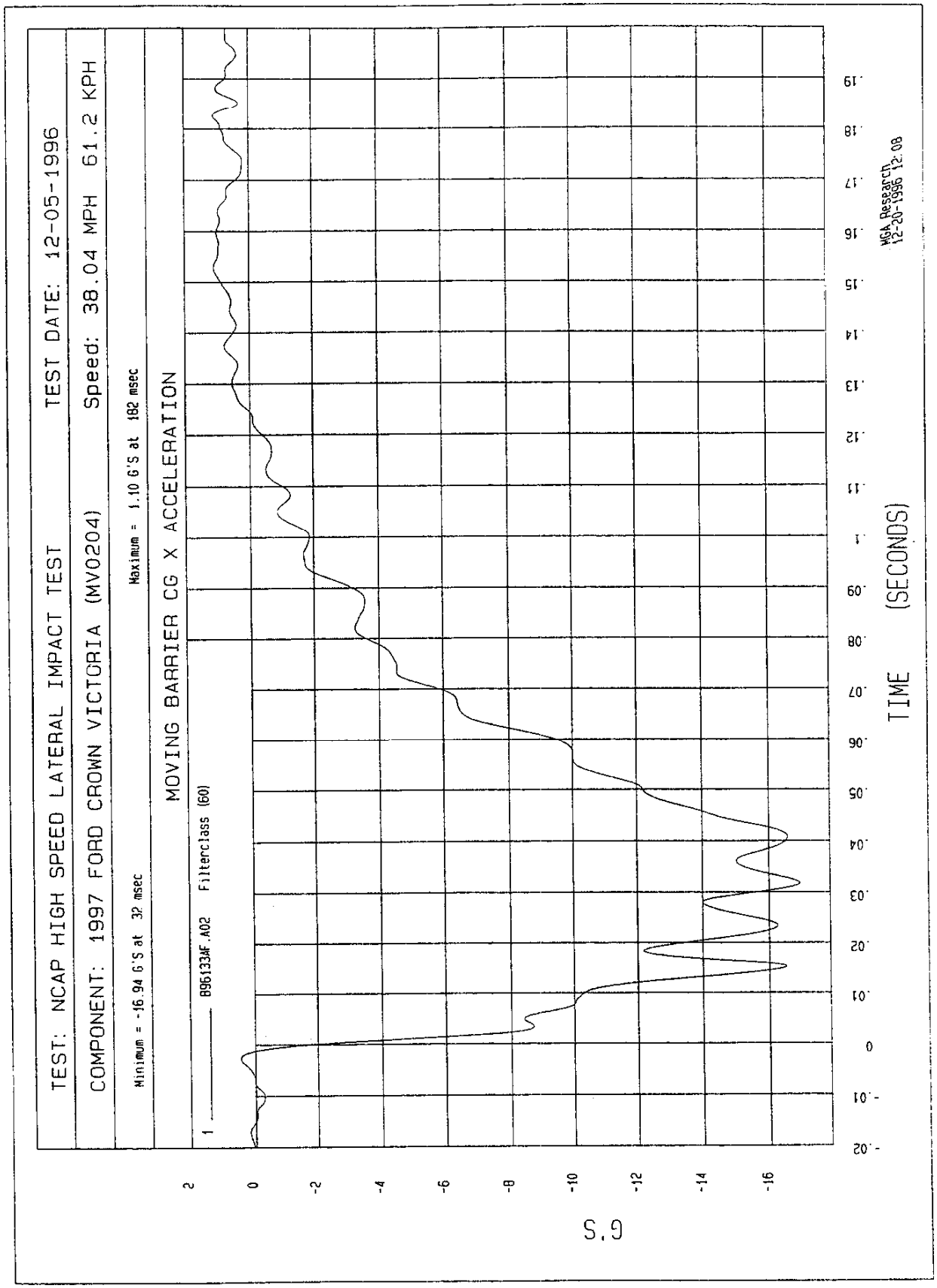
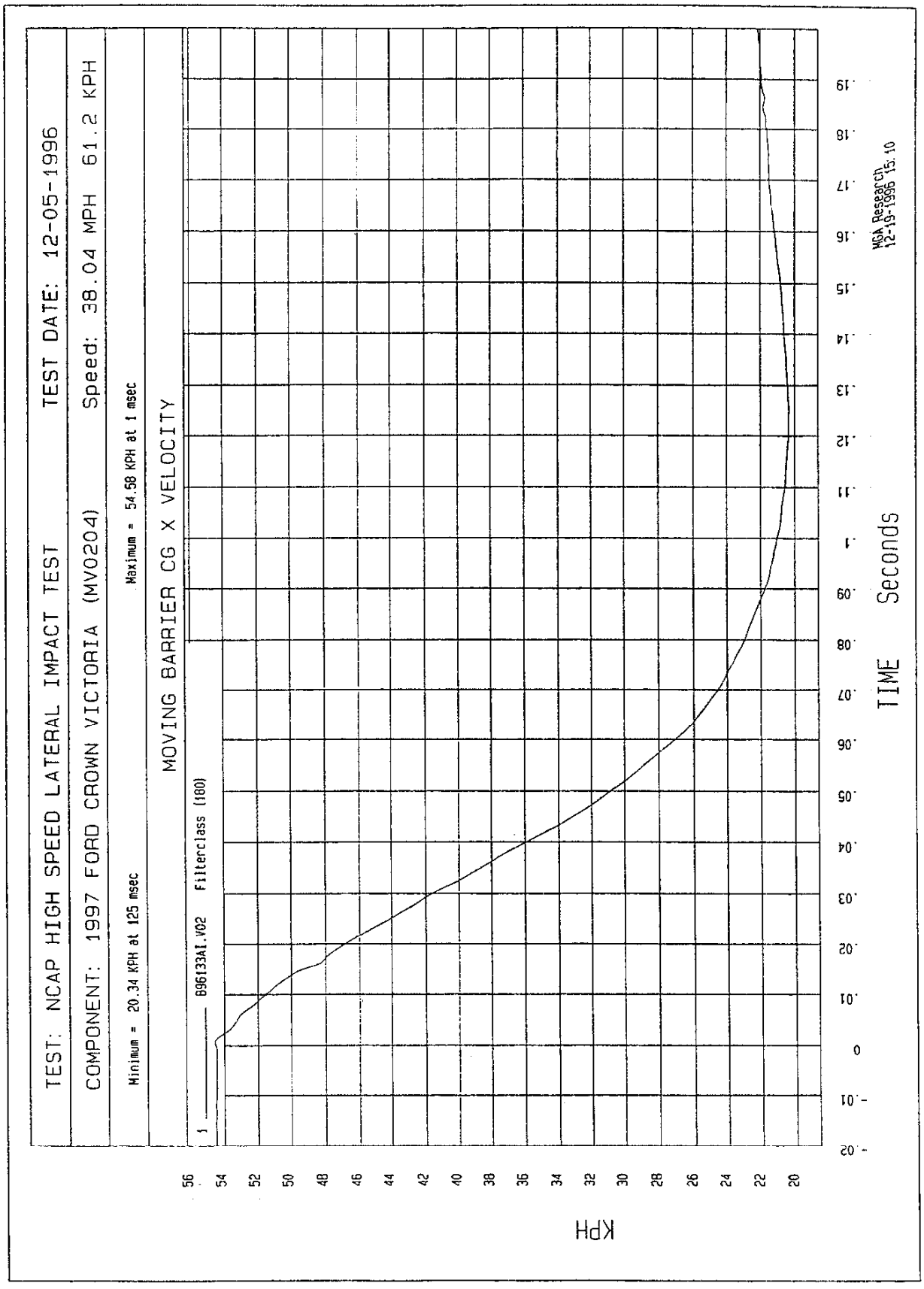
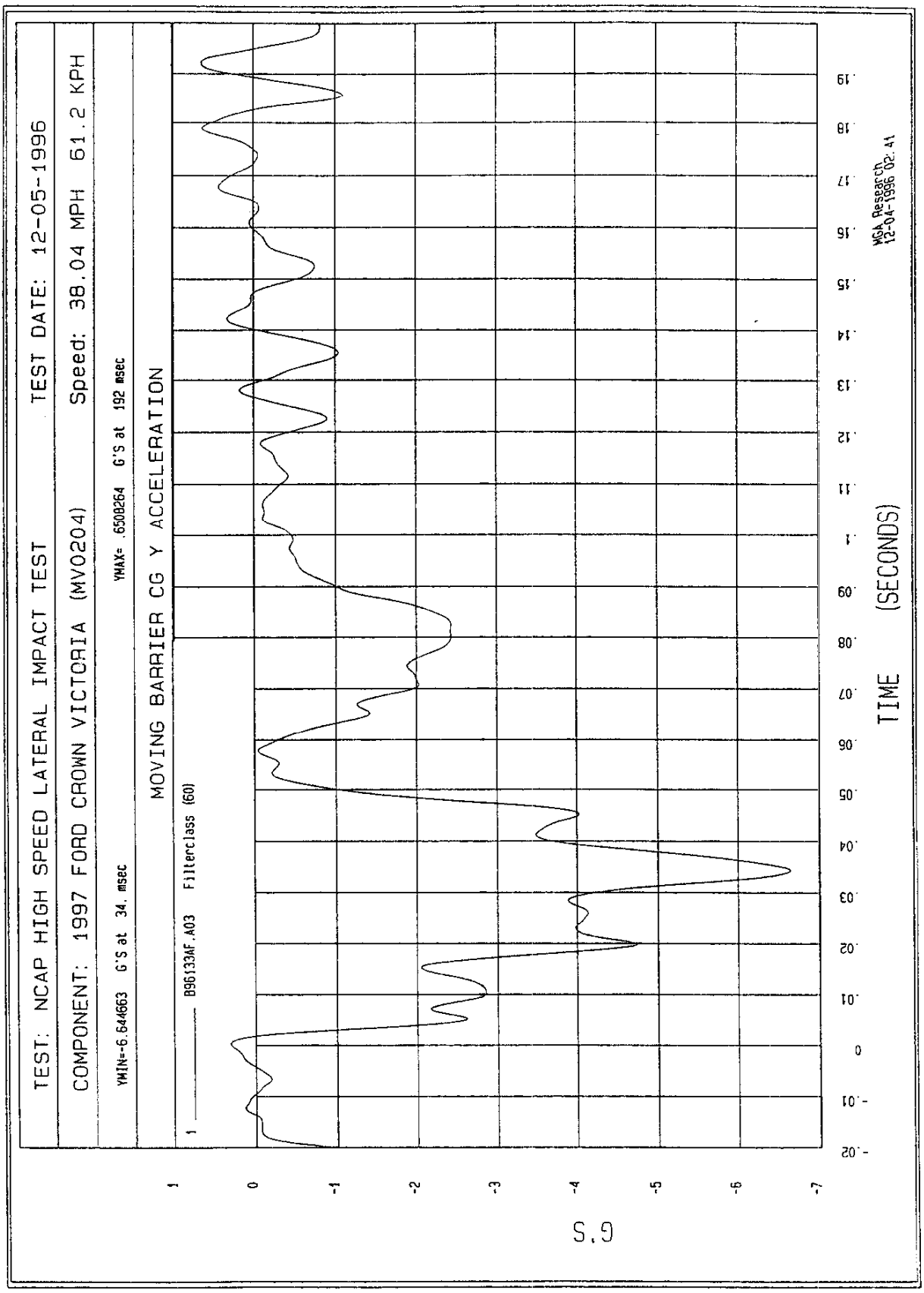
.18
.19
TIME Seconds
MGA Research
12-19-1996 15:10

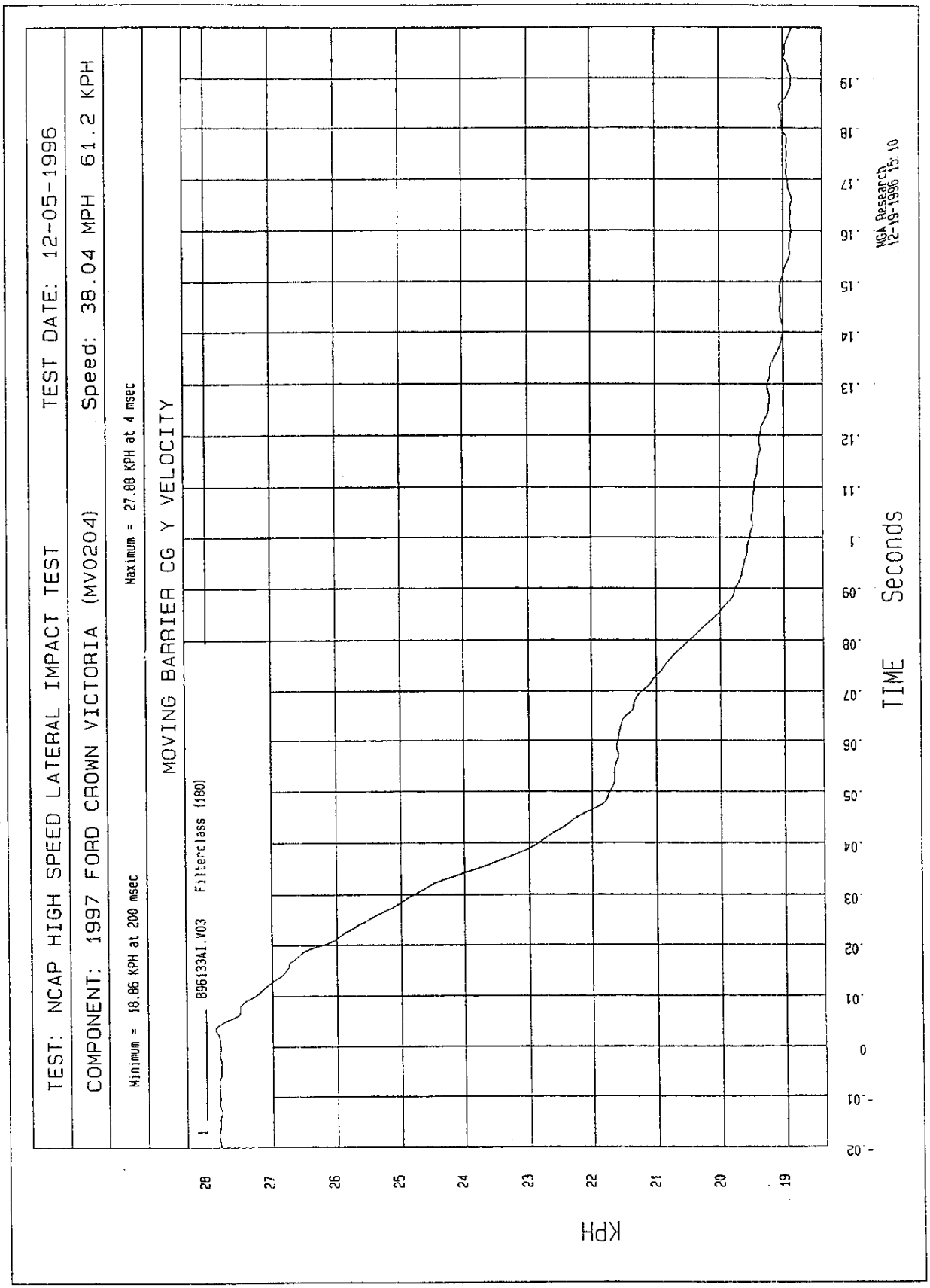

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -178.82 G'S at 28 msec
Maximum = 1062.65 G'S at 41 msec
LEFT REAR DOOR MIDREAR Y ACCELERATION
1 896133AF.A77 Filterclass (60)
Data is not valid after 30 msec.
G'S
160
140
120
100
80
60
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-20-1996 12:08

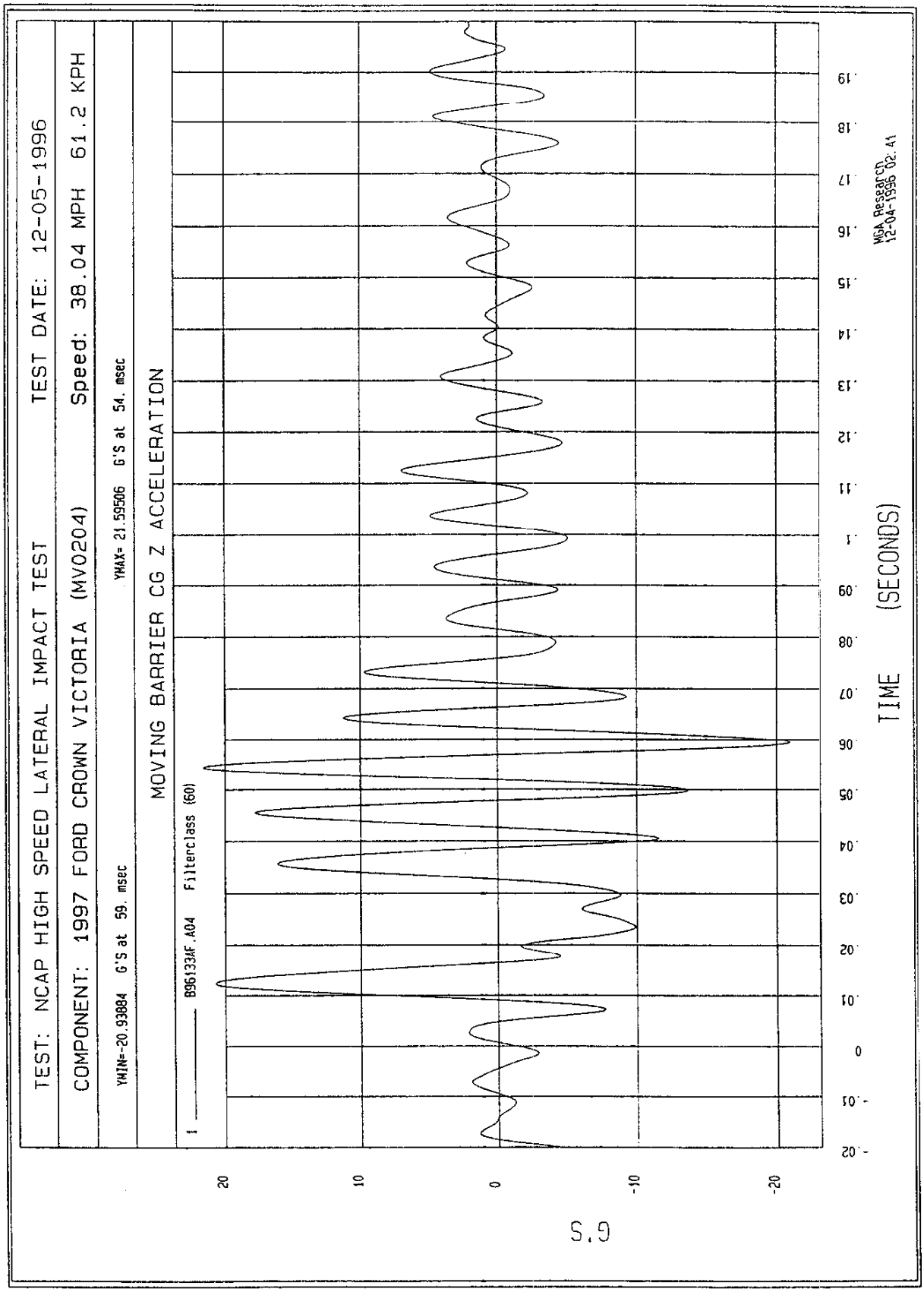

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -4.83E-02 KPH at -16 msec
Maximum = 5923.37 KPH at 200 msec
LEFT REAR DOOR MIDREAR Y VELOCITY
1 B96133AI.V77 Filterclass (180)
KPH
50
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
12-19-1996 17:36

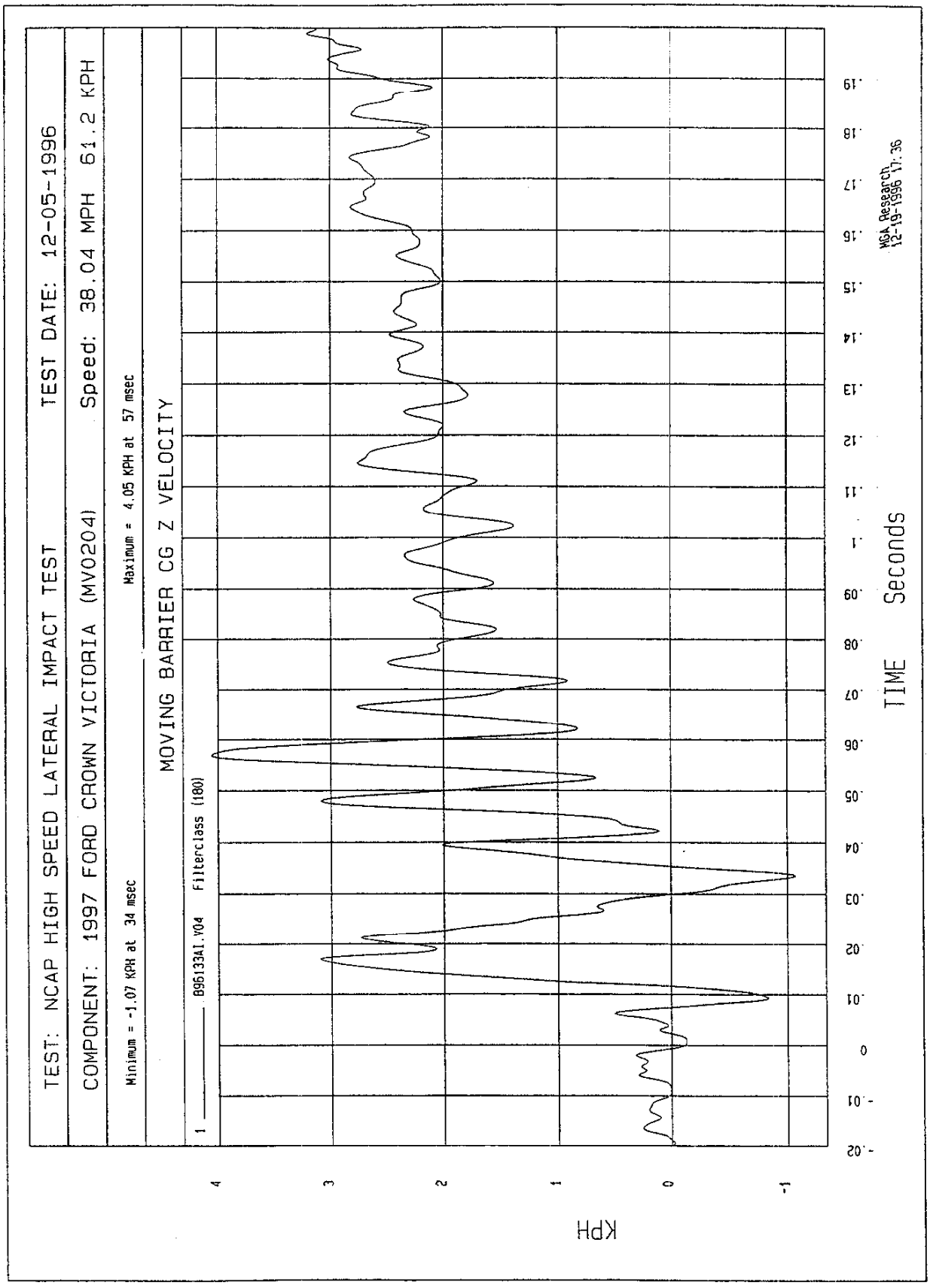

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -16.94 G'S at 32 msec
Maximum = 1.10 G'S at 182 msec
MOVING BARRIER CG X ACCELERATION
1 B96133AF.A02 Filterclass (60)
G'S
TIME (SECONDS)
MGA Research
12-20-1996 12:08

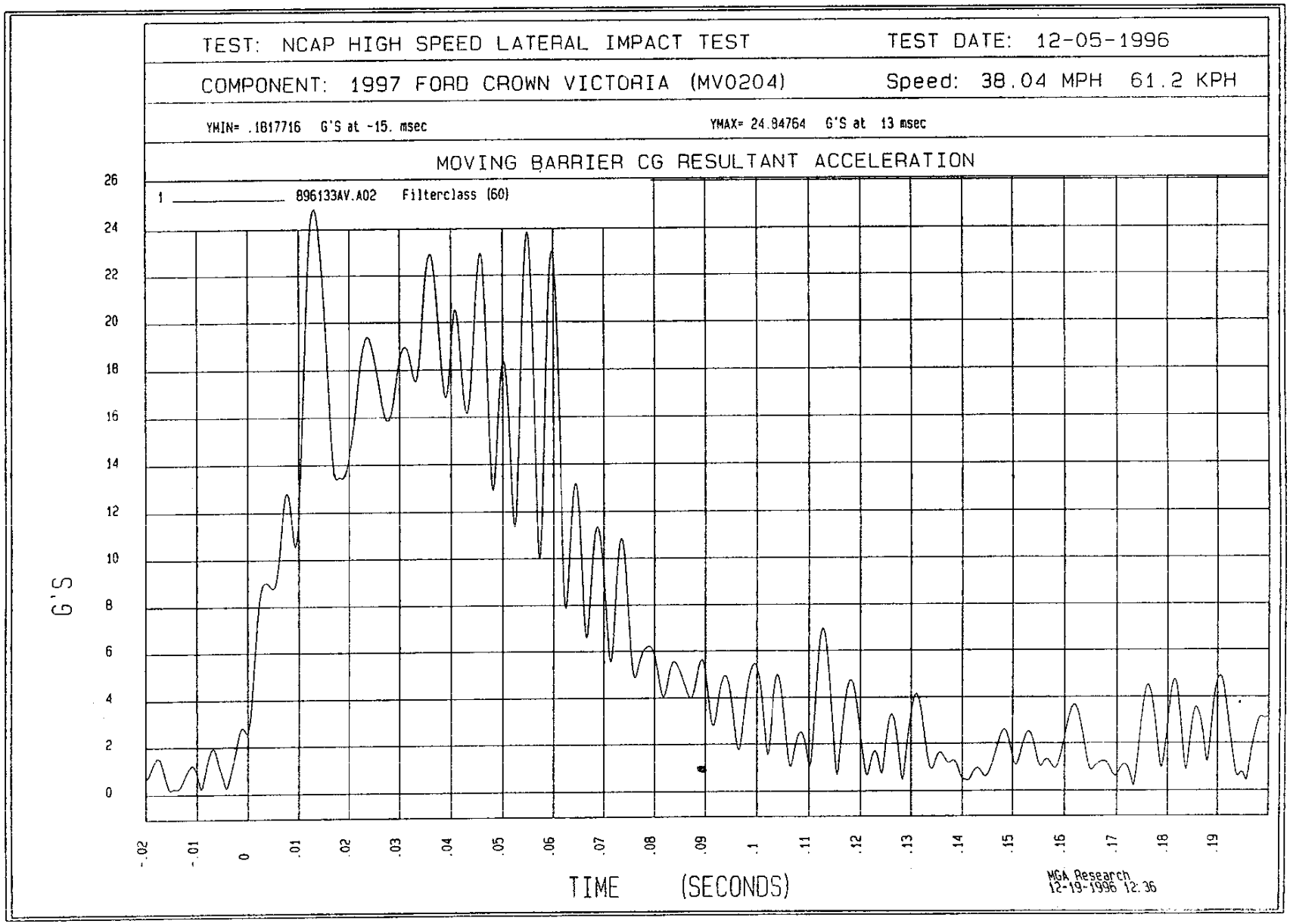

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = 20.34 KPH at 125 msec
Maximum = 54.58 KPH at 1 msec
MOVING BARRIER CG X VELOCITY
1 B96133AI.V02 Filterclass (180)
KPH
TIME Seconds
MGA Research
12-19-1996 15:10

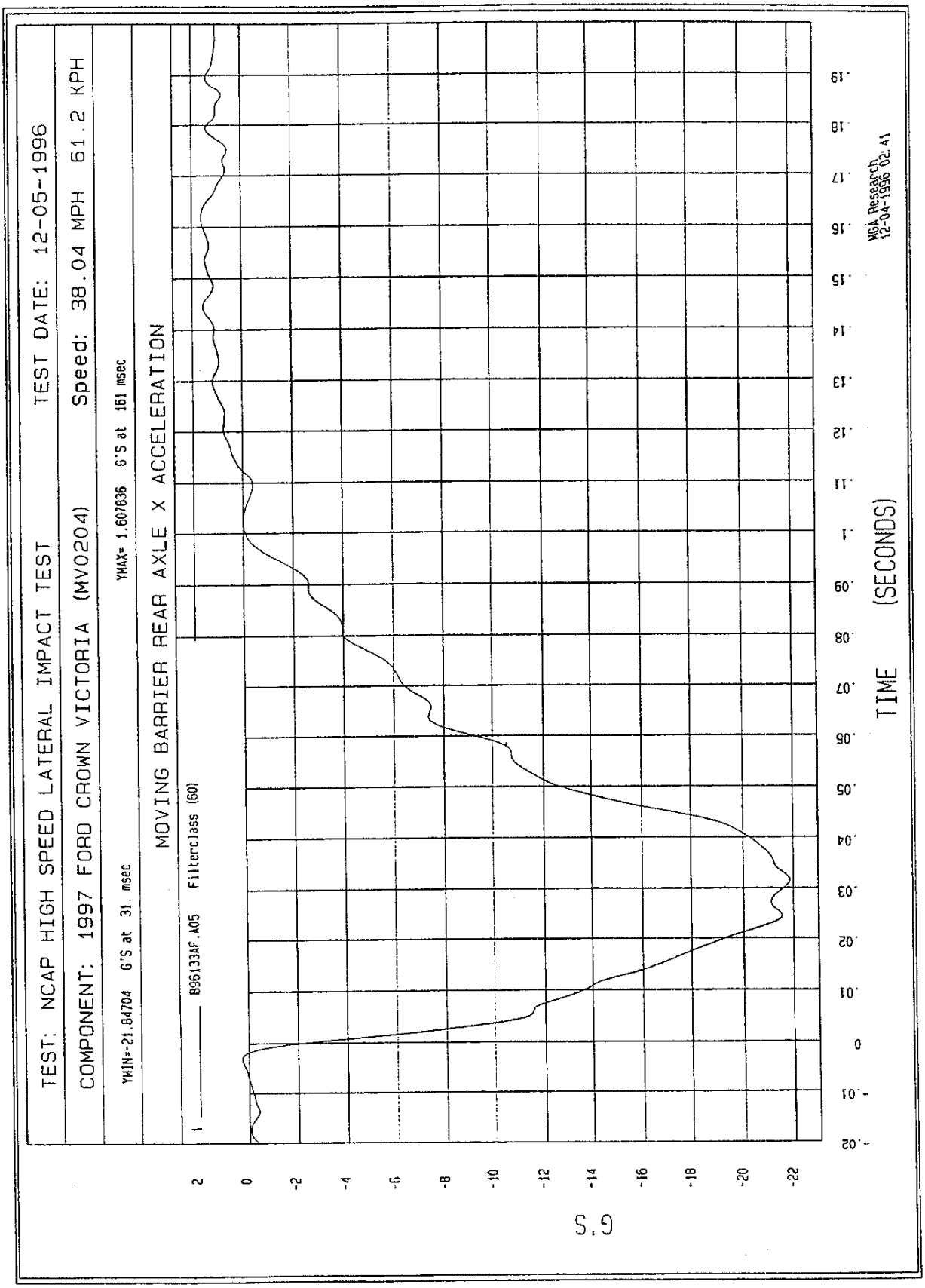

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-6.644663 G'S at 34. msec
YMAX= .6508264 G'S at 192 msec
MOVING BARRIER CG Y ACCELERATION
1 B96133AF.A03 Filterclass (60)
MGA Research
12-04-1996 02:41
TIME (SECONDS)
G'S

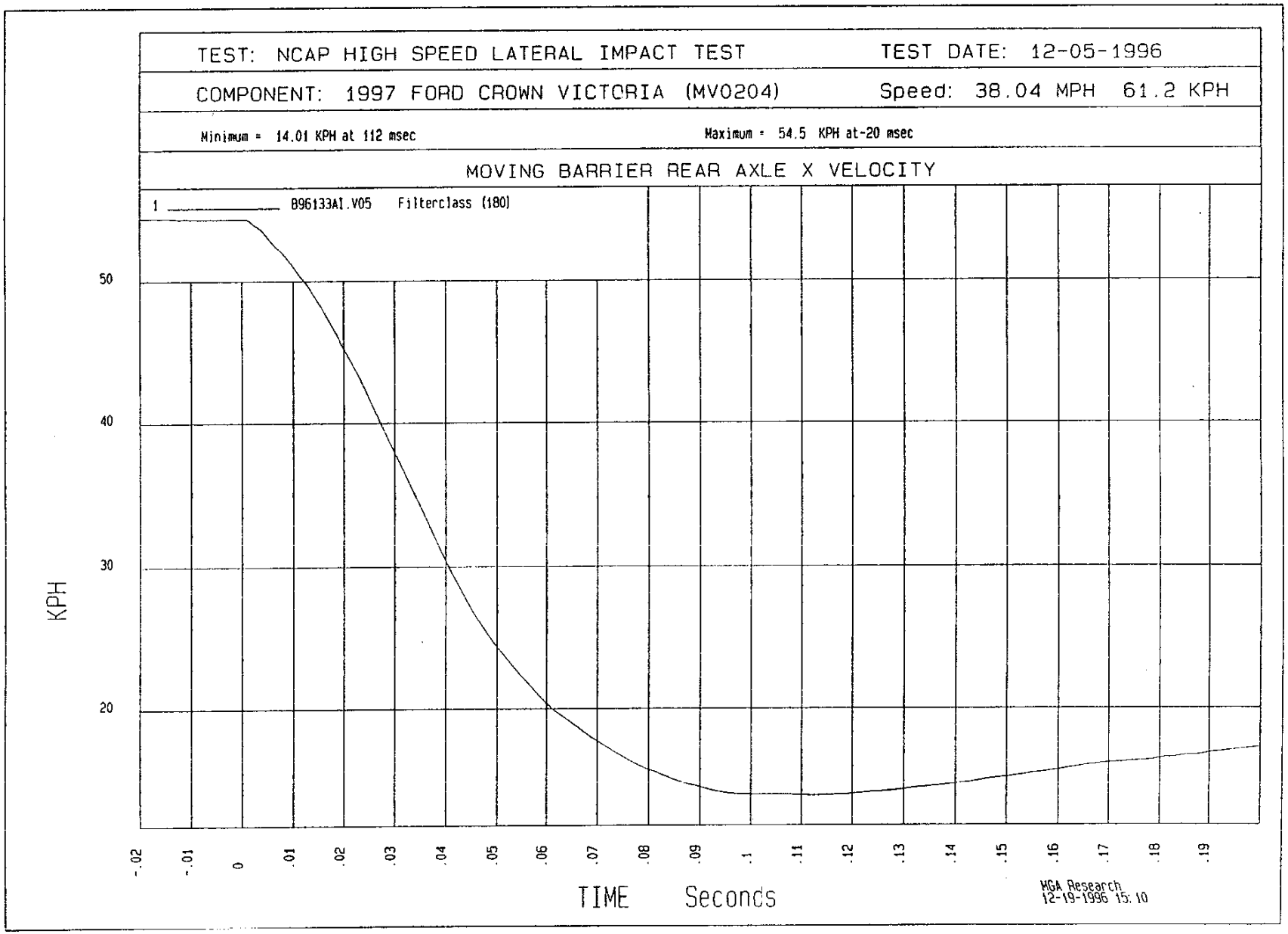

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = 18.86 KPH at 200 msec
Maximum = 27.88 KPH at 4 msec
MOVING BARRIER CG Y VELOCITY
1 ——— 896133A1.W03 Filterclass (180)
KPH
TIME Seconds
MGA Research
12-19-1996 15:10

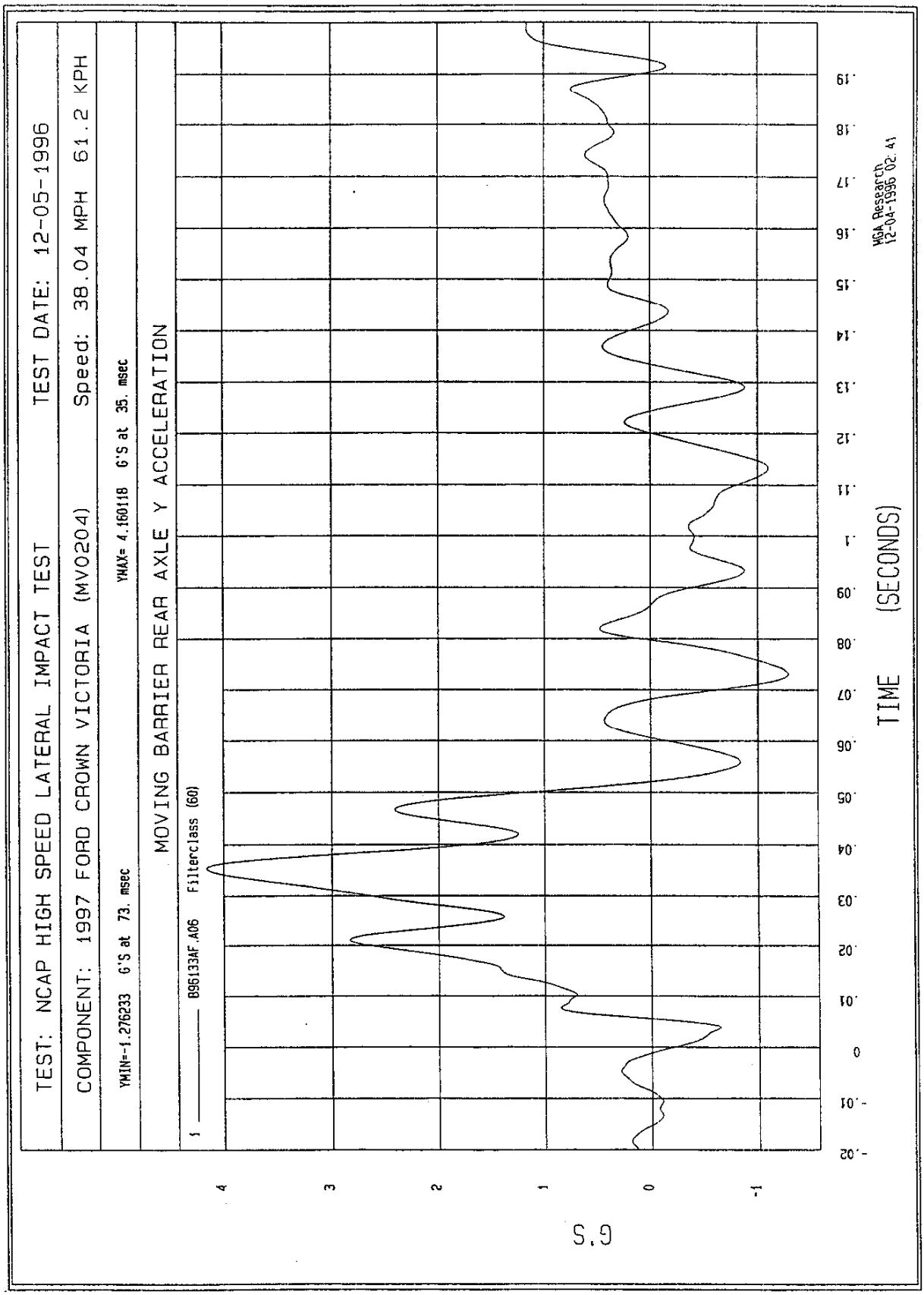

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-20.93884 G'S at 59. msec
YMAX= 21.59506 G'S at 54. msec
MOVING BARRIER CG Z ACCELERATION
1 B96133AF.A04 Filterclass (60)
20
10
0
-10
-20
TIME (SECONDS)
MGA Research
12-04-1996 02:41
6.5.9

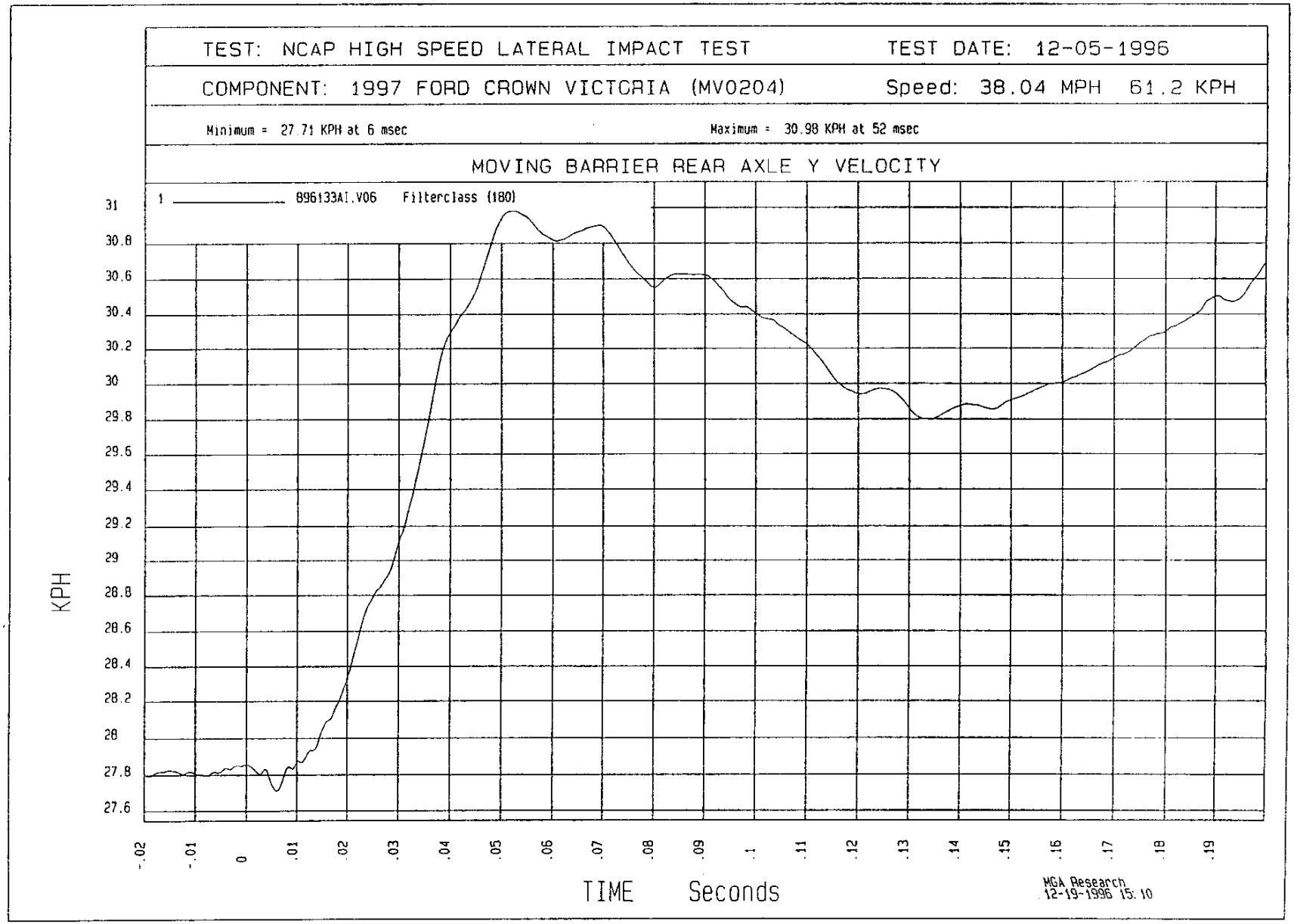

TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -1.07 KPH at 34 msec
Maximum = 4.05 KPH at 57 msec
MOVING BARRIER CG Z VELOCITY
1 B96133A1.V04 Filterclass (180)
KPH
TIME Seconds
MGA Research
12-19-1996 17:36


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN= .1817716 G'S at -15. msec
YMAX= 24.84764 G'S at 13 msec
MOVING BARRIER CG RESULTANT ACCELERATION
1 896133AV.A02 Filterclass (60)
G'S
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-19-1996 12:36


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-21.84704 G'S at 31. msec
YMAX= 1.607836 G'S at 161 msec
MOVING BARRIER REAR AXLE X ACCELERATION
1 B96133AF.A05 Filterclass (60)
2 0 -2 -4 -6 -8 -10 -12 -14 -16 -18 -20 -22
G'S
-.02 -.01 0 .01 .02 .03 .04 .05 .06 .07 .08 .09 .1 .11 .12 .13 .14 .15 .16 .17 .18 .19
TIME (SECONDS)
MGA Research
12-04-1996 02:41


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = 14.01 KPH at 112 msec
Maximum = 54.5 KPH at-20 msec
MOVING BARRIER REAR AXLE X VELOCITY
1 B96133AI.V05 Filterclass (180)
KPH
50
40
30
20
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
12-19-1996 15:10


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-1.276233 G'S at 73. msec
YMAX= 4.160118 G'S at 35. msec
MOVING BARRIER REAR AXLE Y ACCELERATION
1 B96133AF.A06 Filterclass (60)
G'S
TIME (SECONDS)
MGA Research
12-04-1996 02:41


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = 27.71 KPH at 6 msec
Maximum = 30.98 KPH at 52 msec
MOVING BARRIER REAR AXLE Y VELOCITY
1 896133AI.V06 Filterclass (180)
KPH
31
30.8
30.6
30.4
30.2
30
29.8
29.6
29.4
29.2
29
28.8
28.6
28.4
28.2
28
27.8
27.6
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
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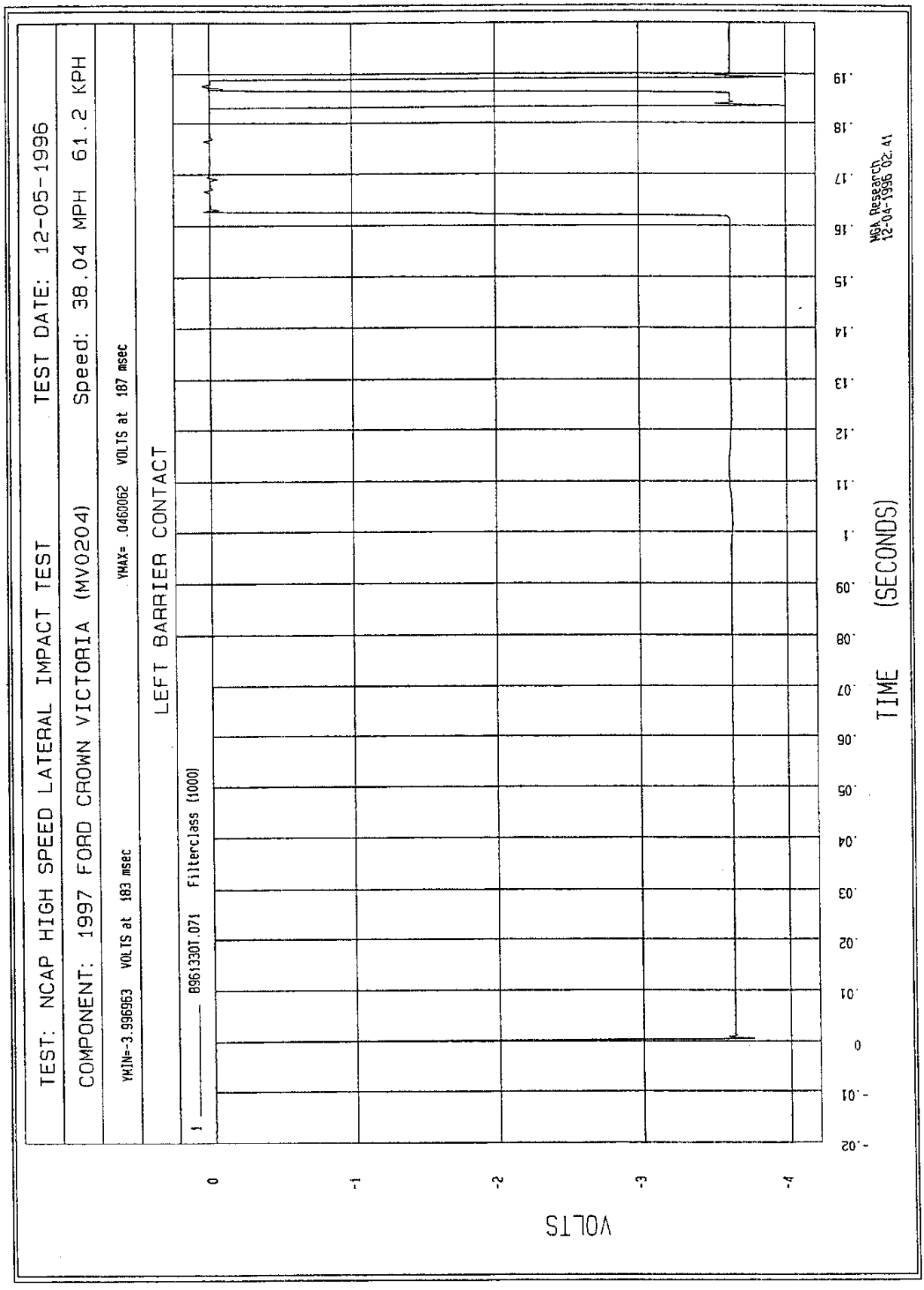
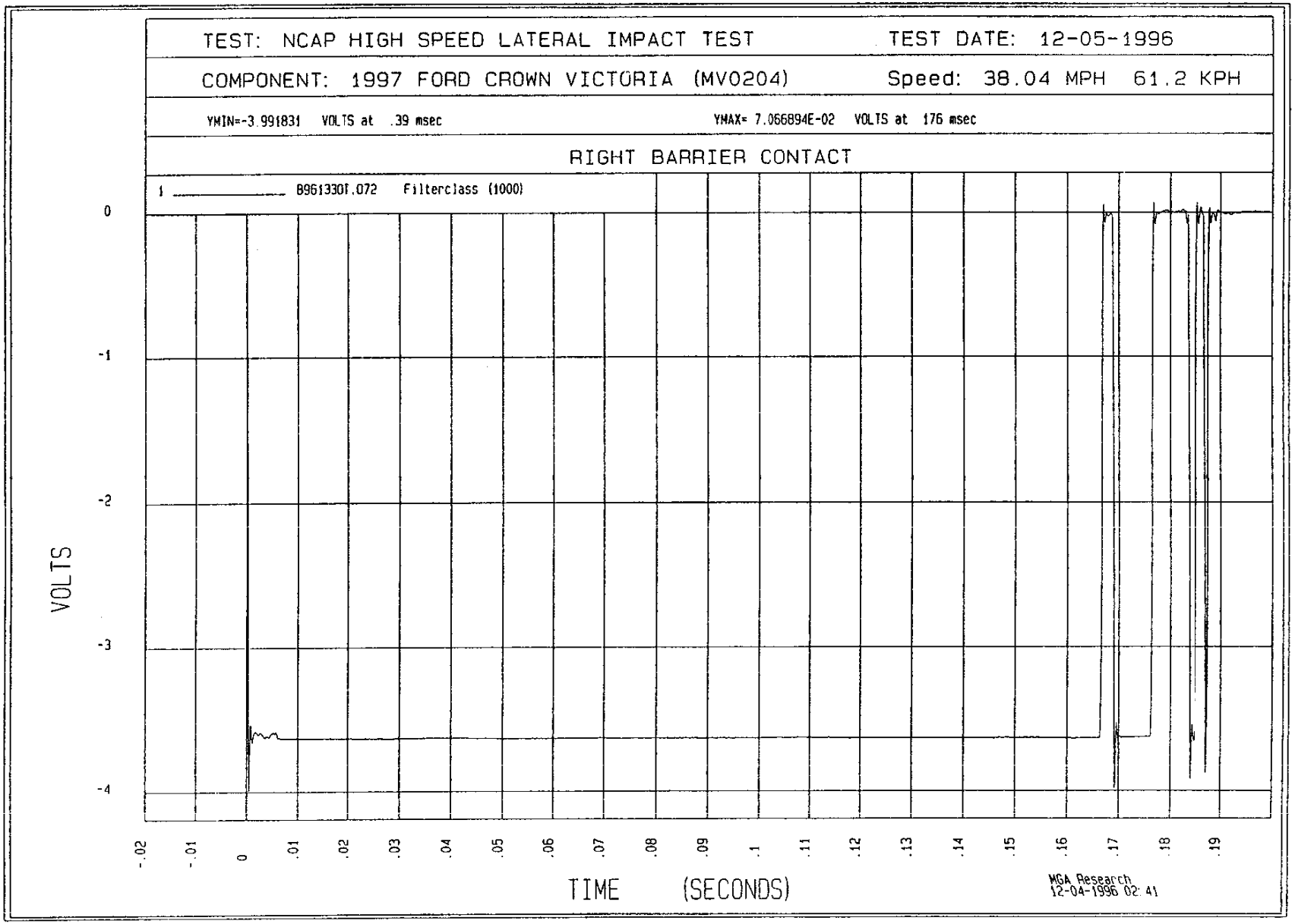
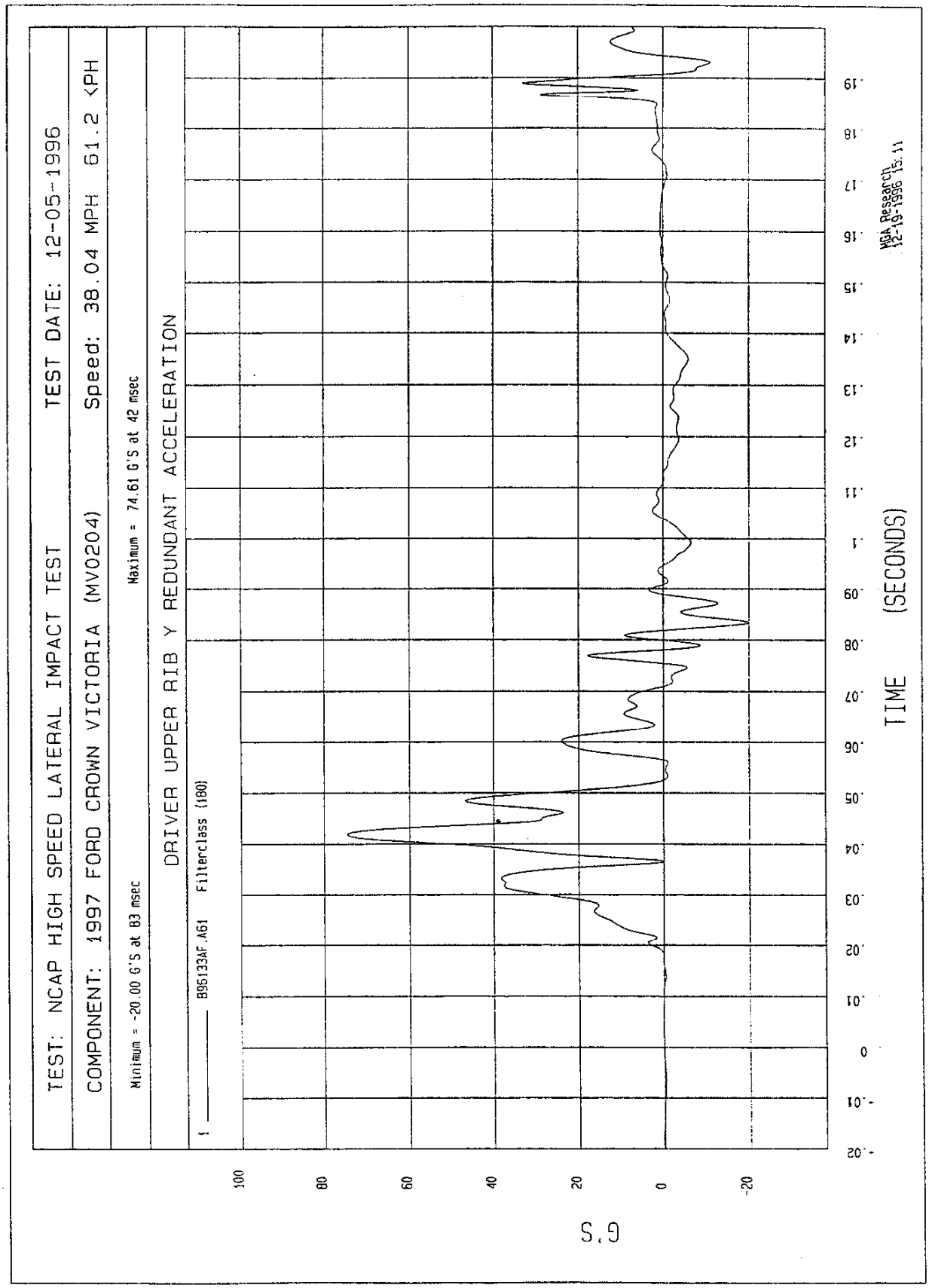
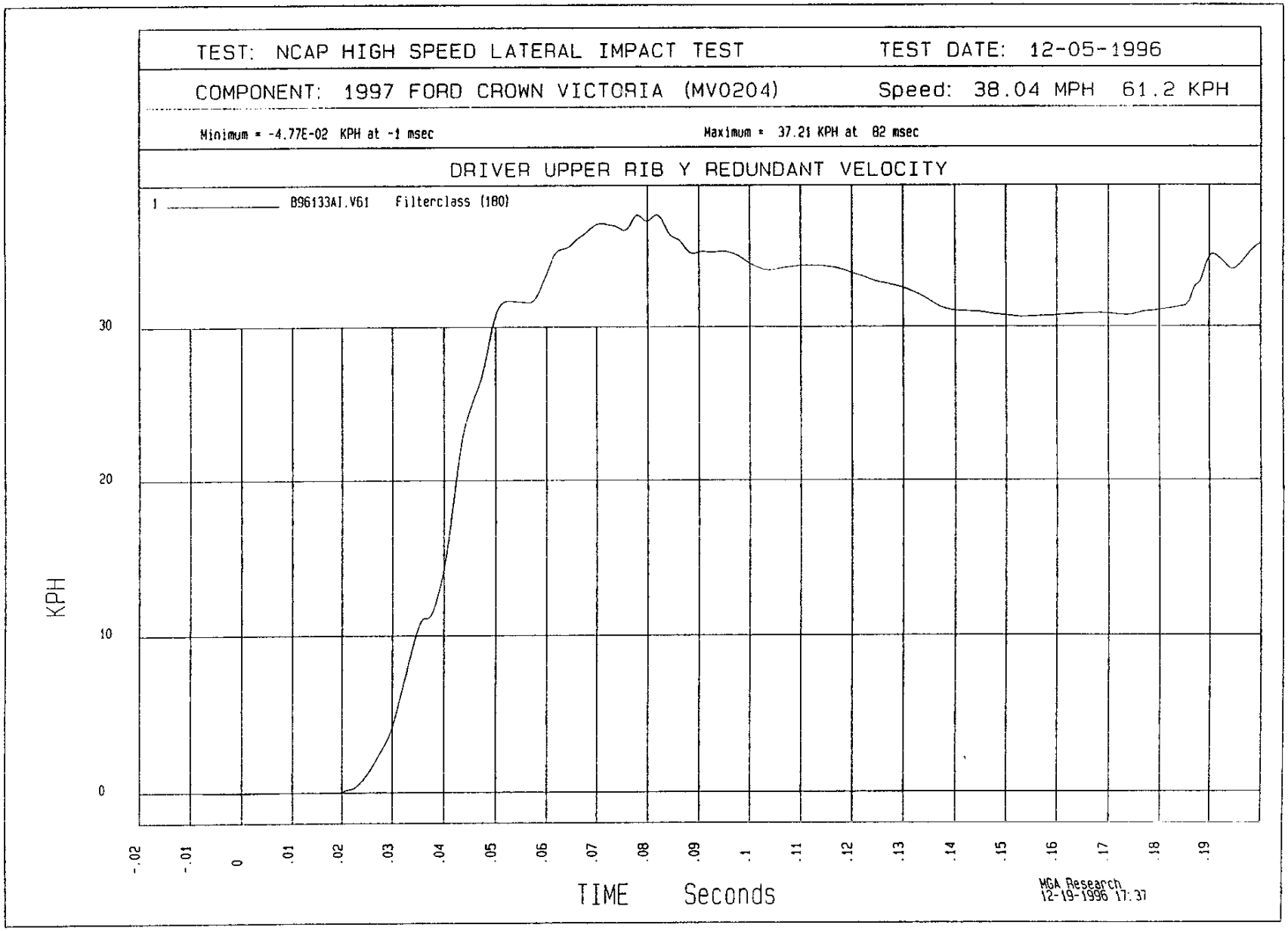
.19
TIME Seconds
MGA Research
12-19-1996 15:10


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-3.996963 VOLTS at 183 msec
YMAX= .0460062 VOLTS at 187 msec
LEFT BARRIER CONTACT
1 B9613301.071 Filterclass (1000)
VOLTS
0
-1
-2
-3
-4
TIME (SECONDS)
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
MGA Research
12-04-1996 02:41


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-3.991831 VOLTS at .39 msec
YMAX= 7.066894E-02 VOLTS at 176 msec
RIGHT BARRIER CONTACT
1 B9613301.072 Filterclass (1000)
VOLTS
0
-1
-2
-3
-4
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-04-1996 02:41


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -20.00 G'S at 83 msec
Maximum = 74.61 G'S at 42 msec
DRIVER UPPER RIB Y REDUNDANT ACCELERATION
1 B96133AF.AG1 Filterclass (180)
MGA Research
12-19-1996 15:11
G'S
TIME (SECONDS)


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -4.77E-02 KPH at -1 msec
Maximum = 37.21 KPH at 82 msec
DRIVER UPPER RIB Y REDUNDANT VELOCITY
1 B96133AI.V61 Filterclass (180)
KPH
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
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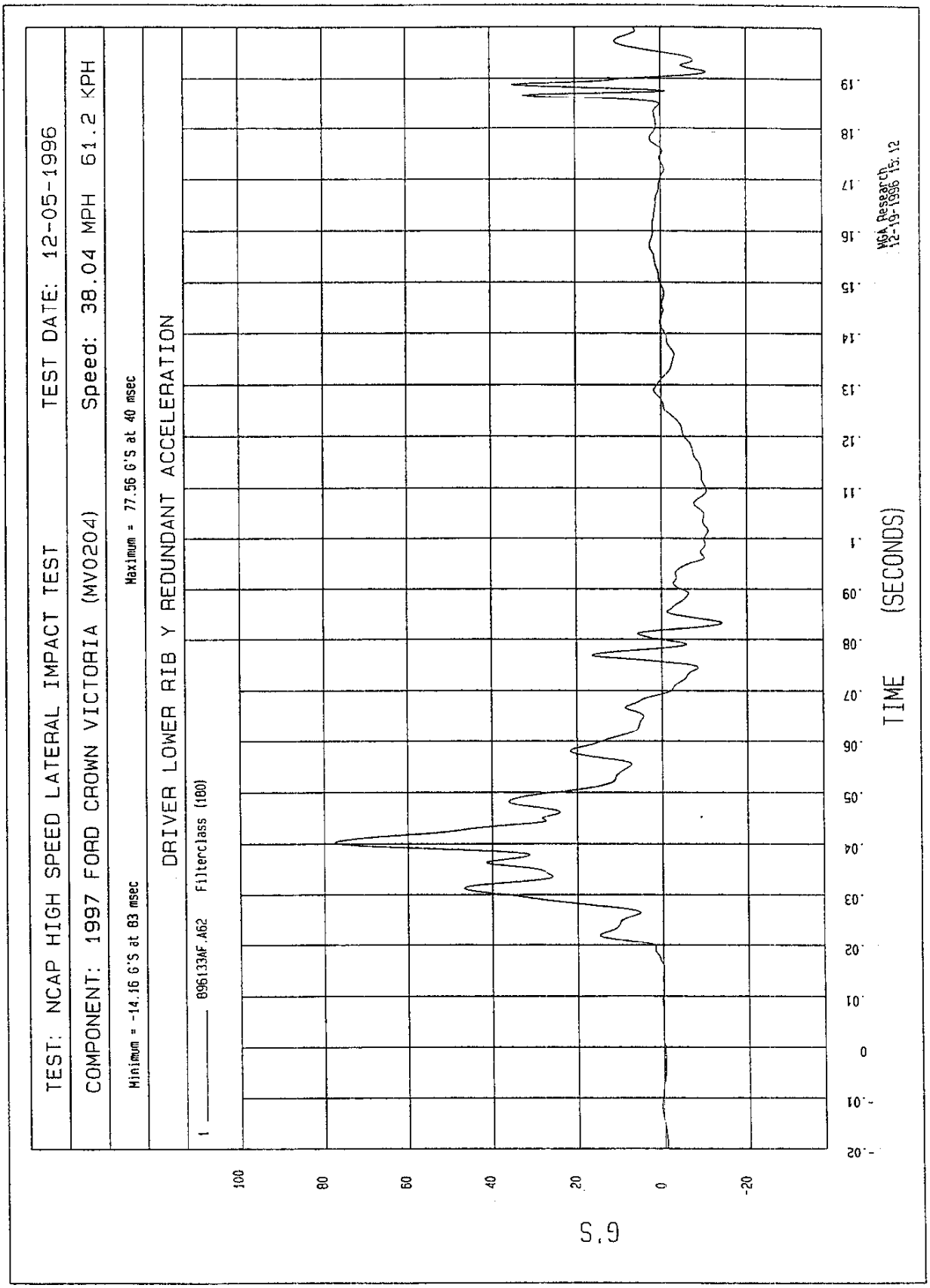
.19
TIME Seconds
MGA Research
12-19-1996 17:37


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -14.16 G'S at 83 msec
Maximum = 77.56 G'S at 40 msec
DRIVER LOWER RIB Y REDUNDANT ACCELERATION
1 _____ 896133AF.A62 Filterclass (180)
100
80
60
40
20
0
-20
G'S
.02
.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
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.17
.18
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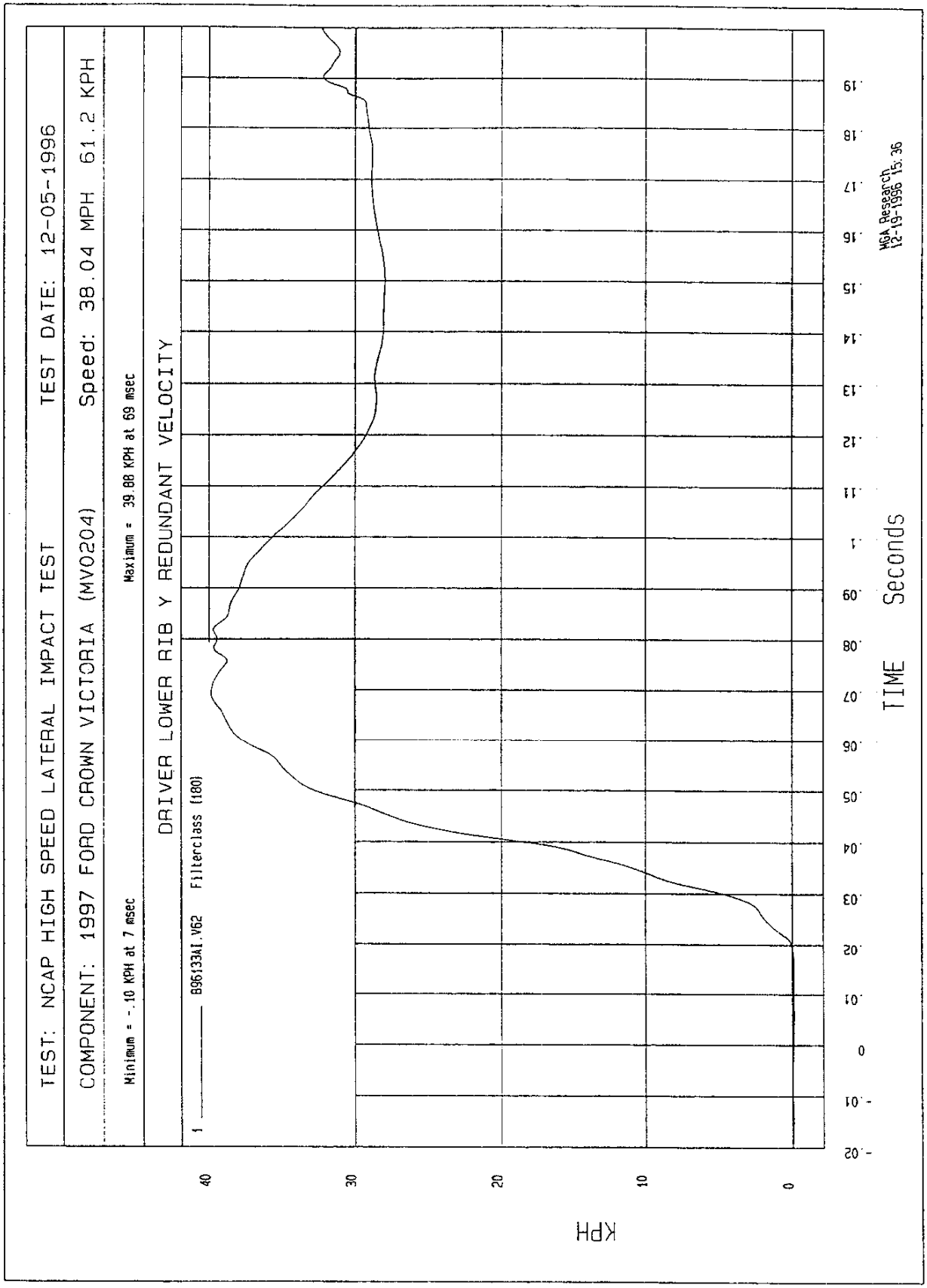
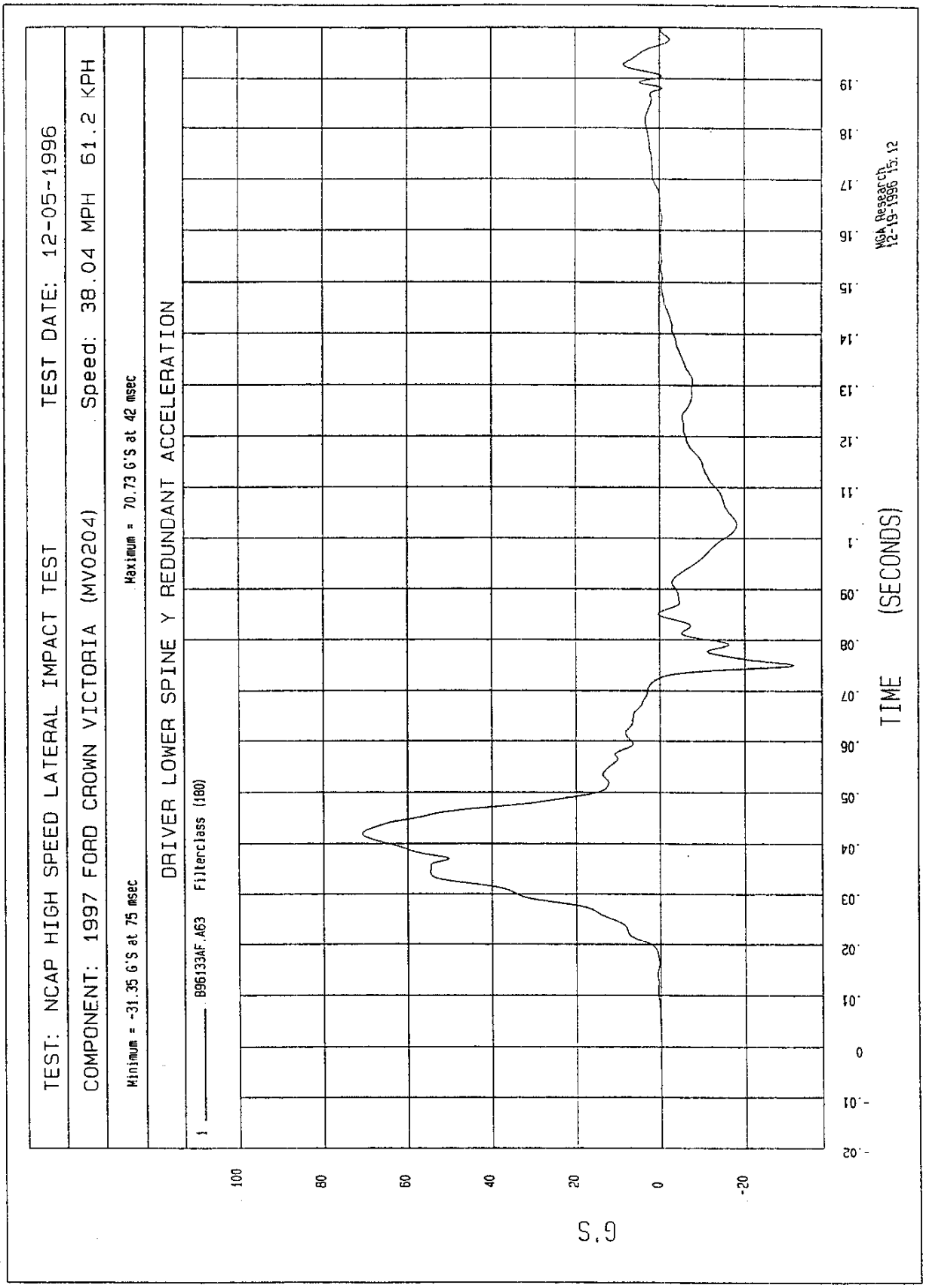
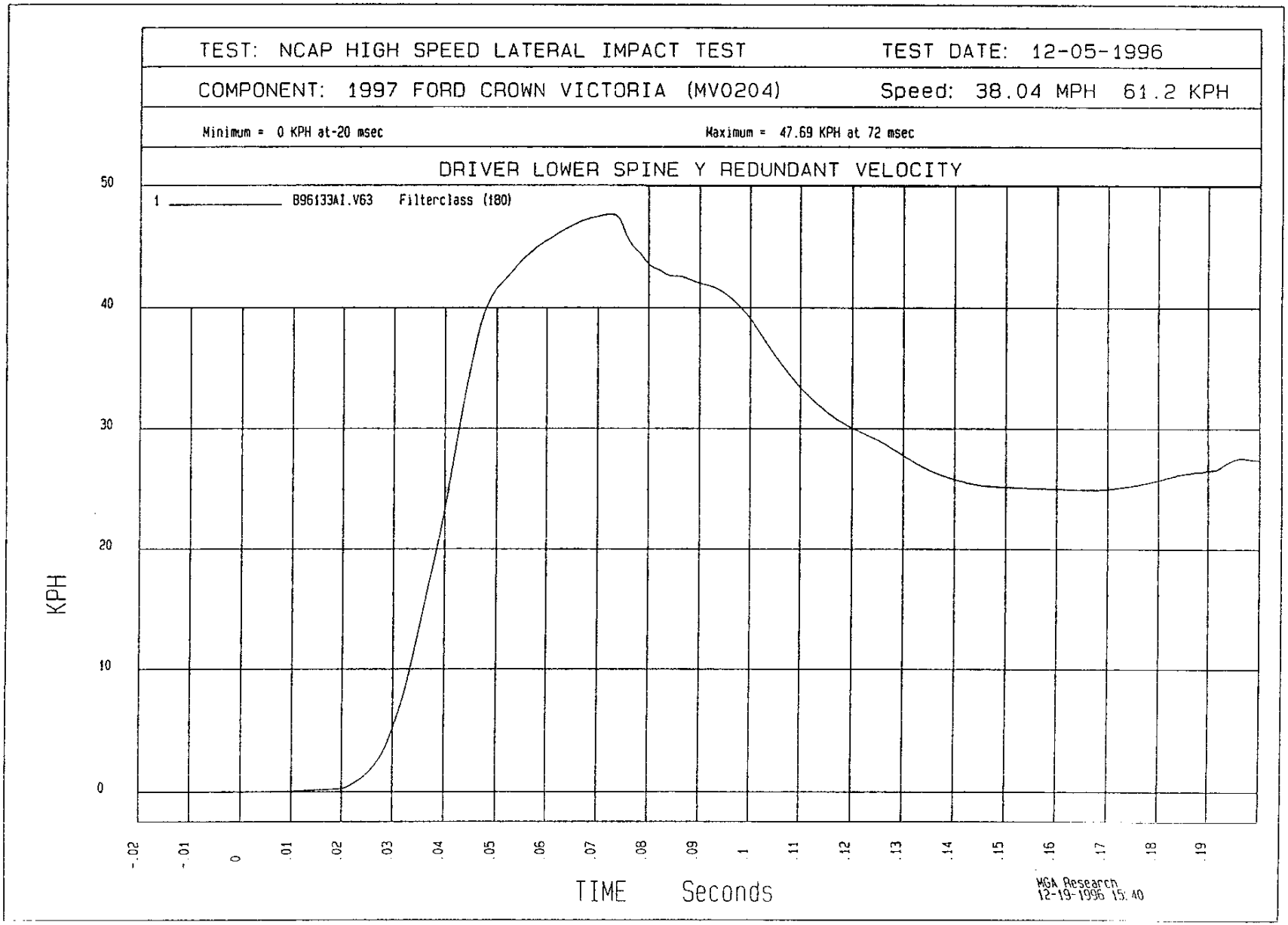
TIME (SECONDS)
MGA Research
12-19-1996 15:12


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -.10 KPH at 7 msec
Maximum = 39.88 KPH at 69 msec
DRIVER LOWER RIB Y REDUNDANT VELOCITY
1 B96133a1.V62 Filterclass (180)
KPH
TIME Seconds
MGA Research
12-19-1996 15:36


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -31.35 G'S at 75 msec
Maximum = 70.73 G'S at 42 msec
DRIVER LOWER SPINE Y REDUNDANT ACCELERATION
1 B96133AF.A63 Filterclass (180)
100
80
60
40
20
0
-20
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-19-1996 15:12


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = 0 KPH at-20 msec
Maximum = 47.69 KPH at 72 msec
DRIVER LOWER SPINE Y REDUNDANT VELOCITY
1 B96133A1.V63 Filterclass (180)
KPH
50
40
30
20
10
0
-.02
-.01
0
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.04
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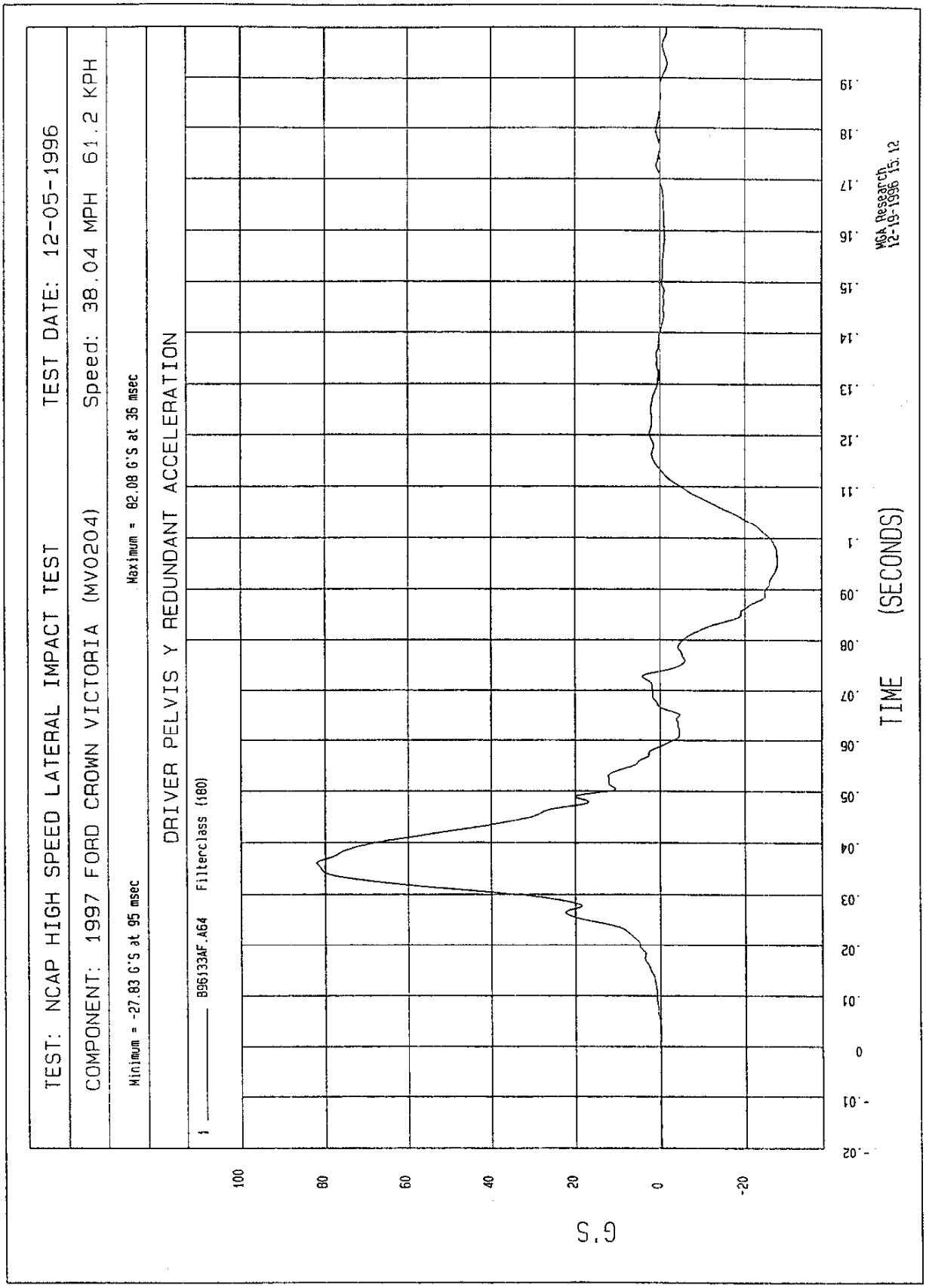
TIME Seconds
MGA Research
12-19-1996 15:40


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204) Speed: 38.04 MPH 61.2 KPH
Minimum = -27.83 G'S at 95 msec Maximum = 82.08 G'S at 36 msec
DRIVER PELVIS Y REDUNDANT ACCELERATION
1 B96133AF.A64 Filterclass (180)
100
80
60
40
20
0
-20
G'S
.02 -
.01 -
0
.01
.02
.03
.04
.05
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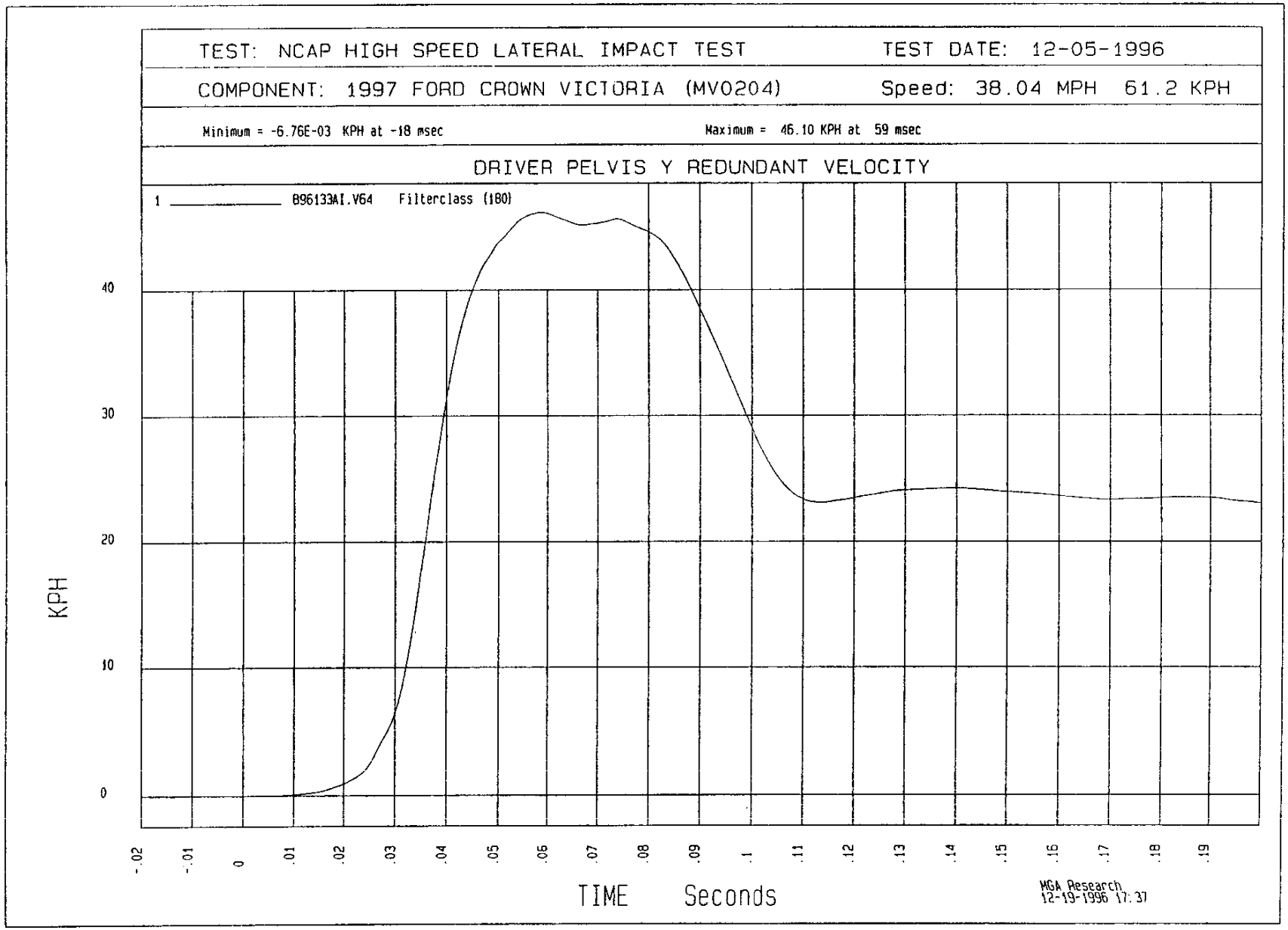
TIME (SECONDS)
MGA Research
12-19-1996 15:12


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -6.76E-03 KPH at -18 msec
Maximum = 46.10 KPH at 59 msec
DRIVER PELVIS Y REDUNDANT VELOCITY
1 B96133AI.V64 Filterclass (180)
KPH
40
30
20
10
0
-.02
-.01
0
.01
.02
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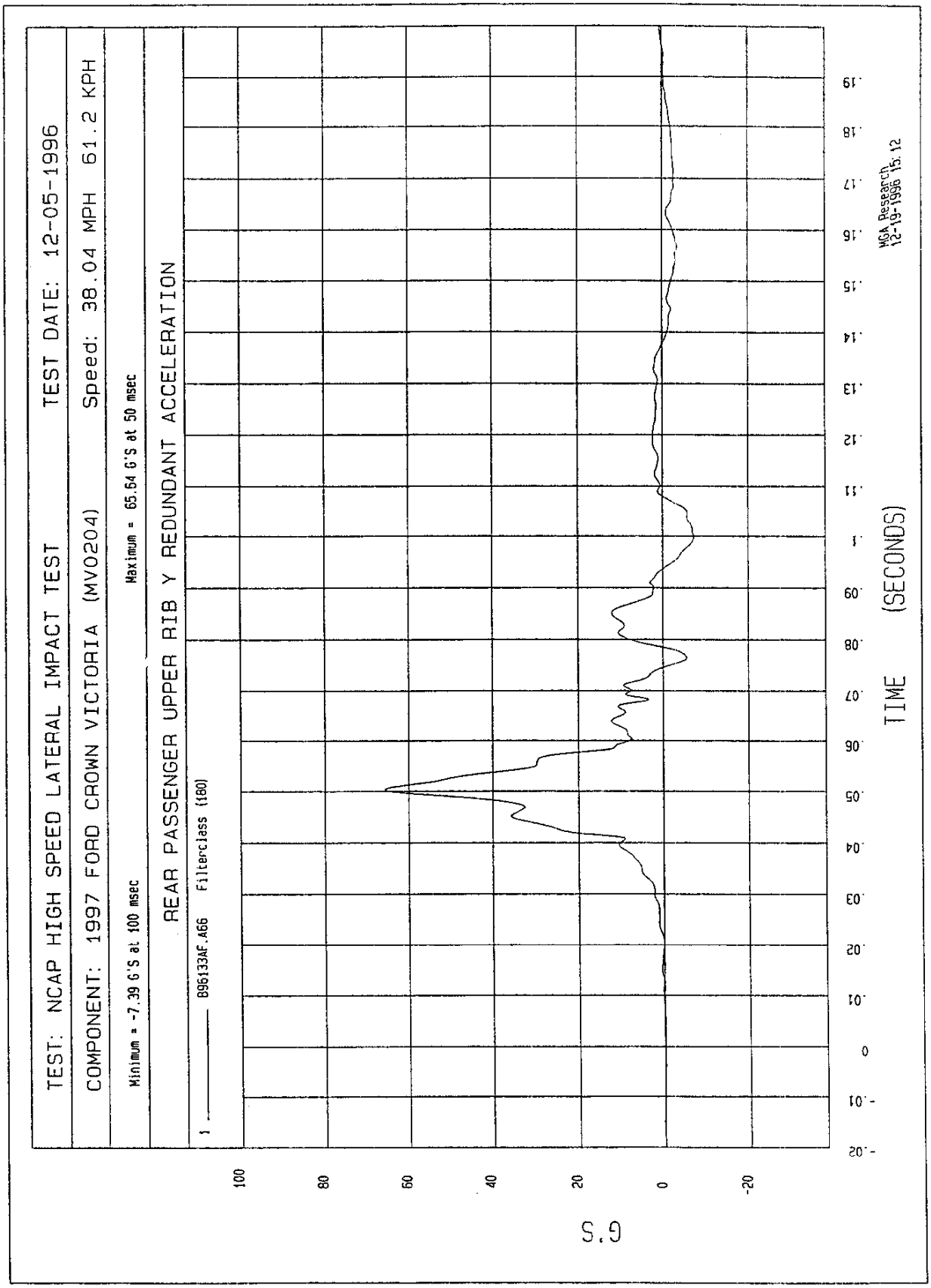
TIME Seconds
MGA Research
12-19-1996 17:37


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -7.39 G'S at 100 msec
Maximum = 65.64 G'S at 50 msec
REAR PASSENGER UPPER RIB Y REDUNDANT ACCELERATION
1 B96133AF.A66 Filterclass (180)
100
80
60
40
20
0
-20
G'S
.19
.18
.17
.16
.15
.14
.13
.12
.11
.1
.09
.08
.07
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.04
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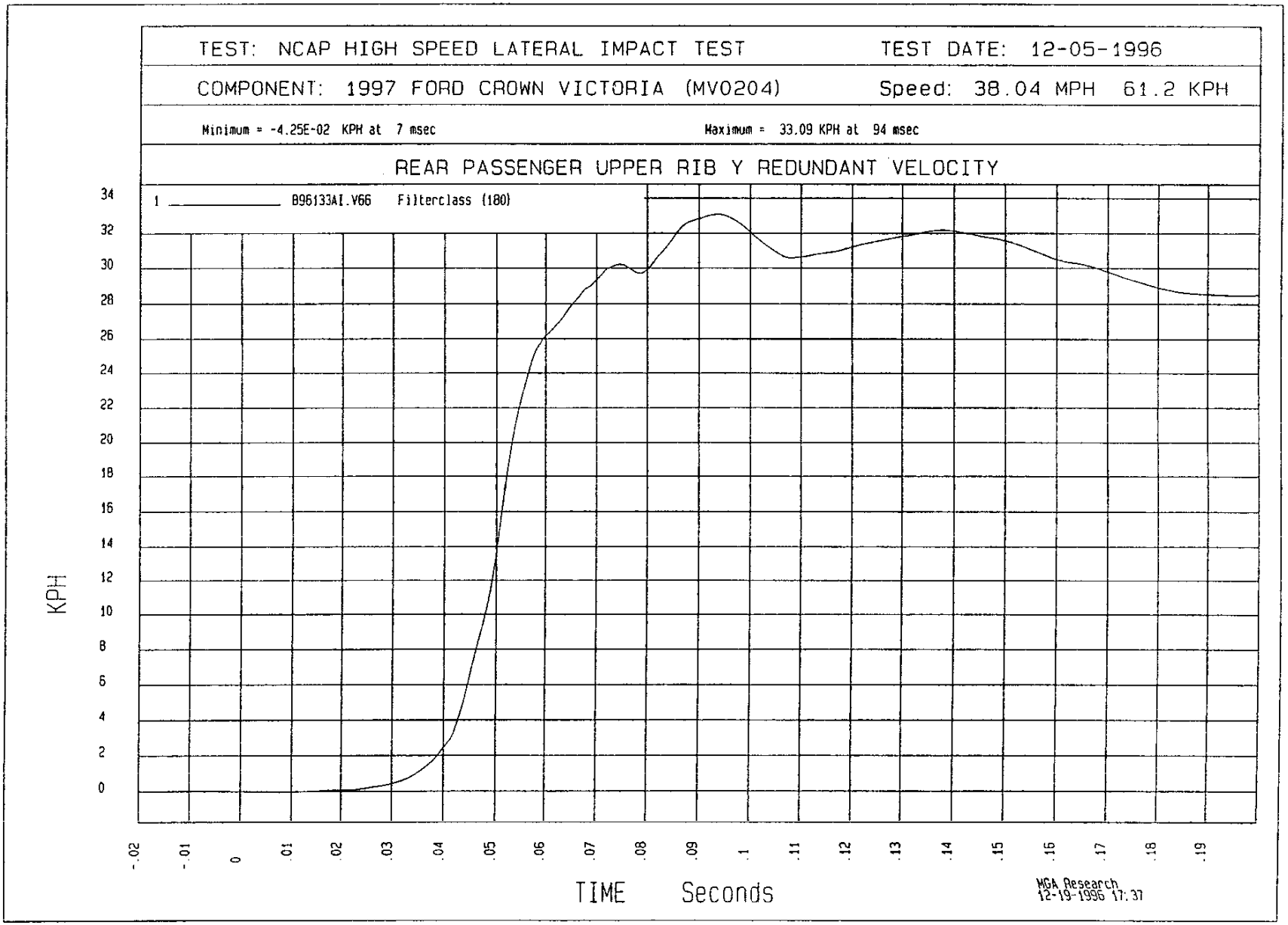
.02
.01
0
-.01
-.02
TIME (SECONDS)
MGA Research
12-19-1996 15:12


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -4.25E-02 KPH at 7 msec
Maximum = 33.09 KPH at 94 msec
REAR PASSENGER UPPER RIB Y REDUNDANT VELOCITY
1 B96133AI.V66 Filterclass (180)
KPH
34
32
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-.02
-.01
0
.01
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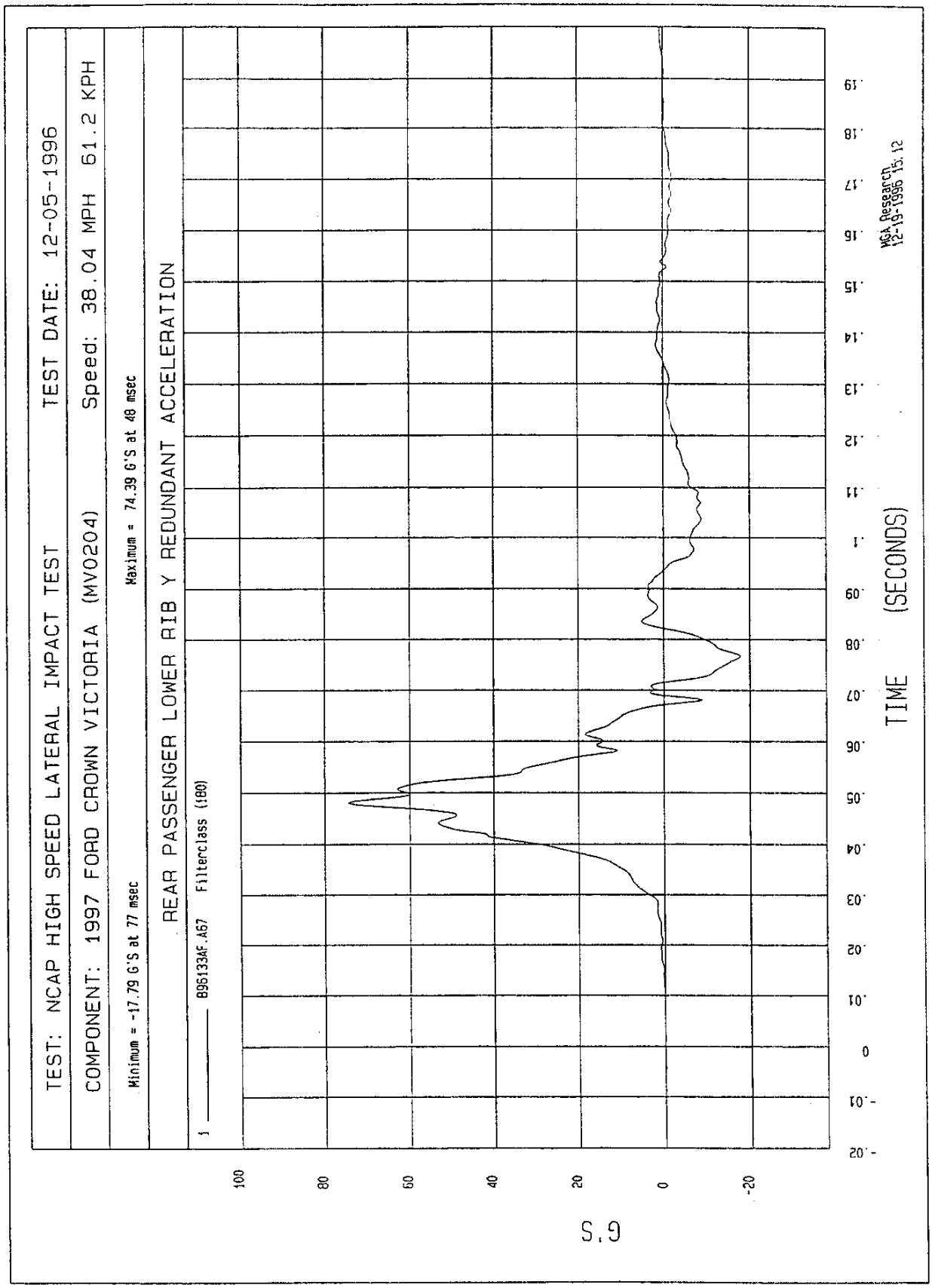
TIME Seconds
MGA Research
12-19-1996 17:37


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -17.79 G'S at 77 msec
Maximum = 74.39 G'S at 48 msec
REAR PASSENGER LOWER RIB Y REDUNDANT ACCELERATION
1 896133AF.A67 Filterclass (180)
100
80
60
40
20
0
-20
G'S
-.02
-.01
0
.01
.02
.03
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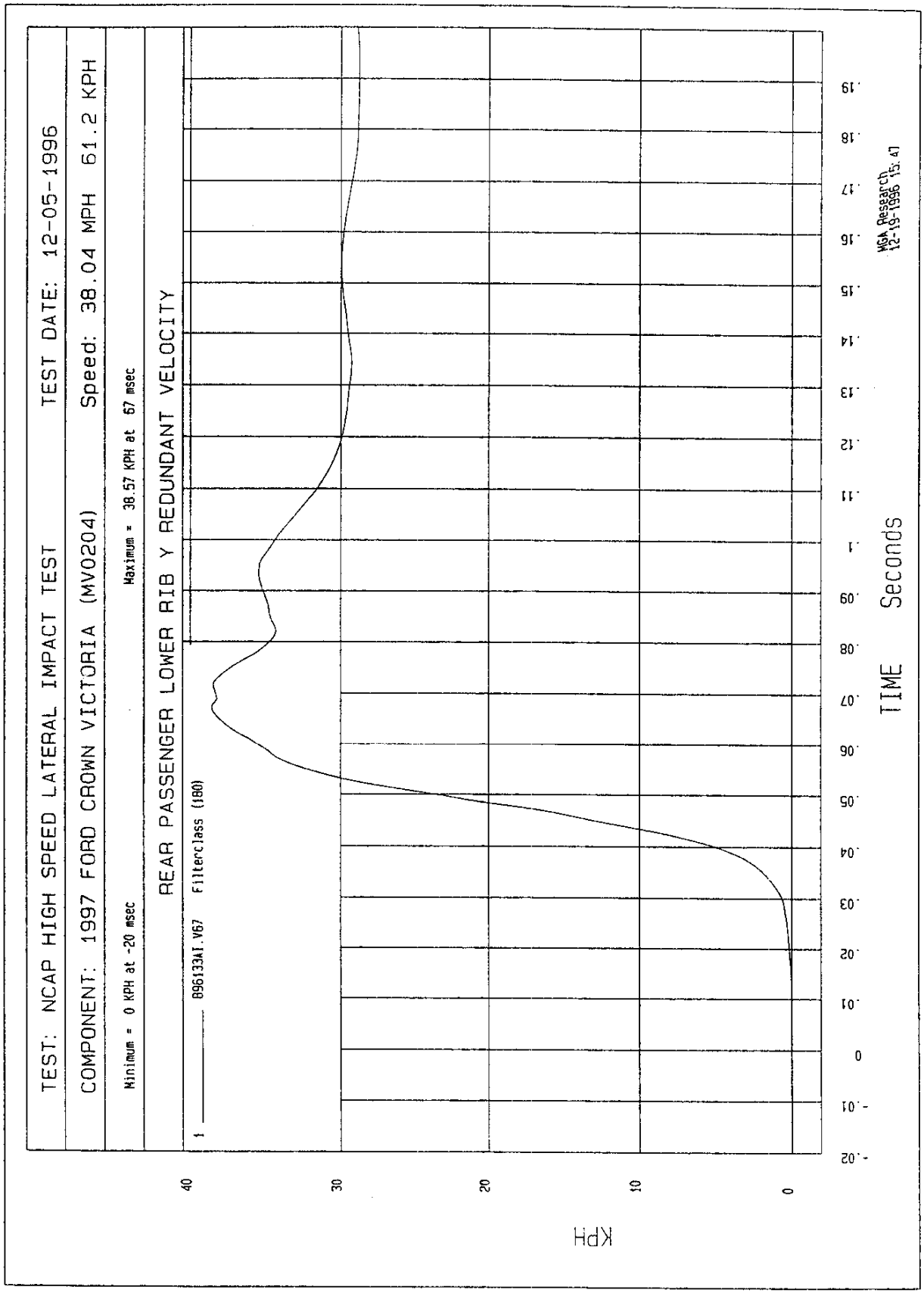
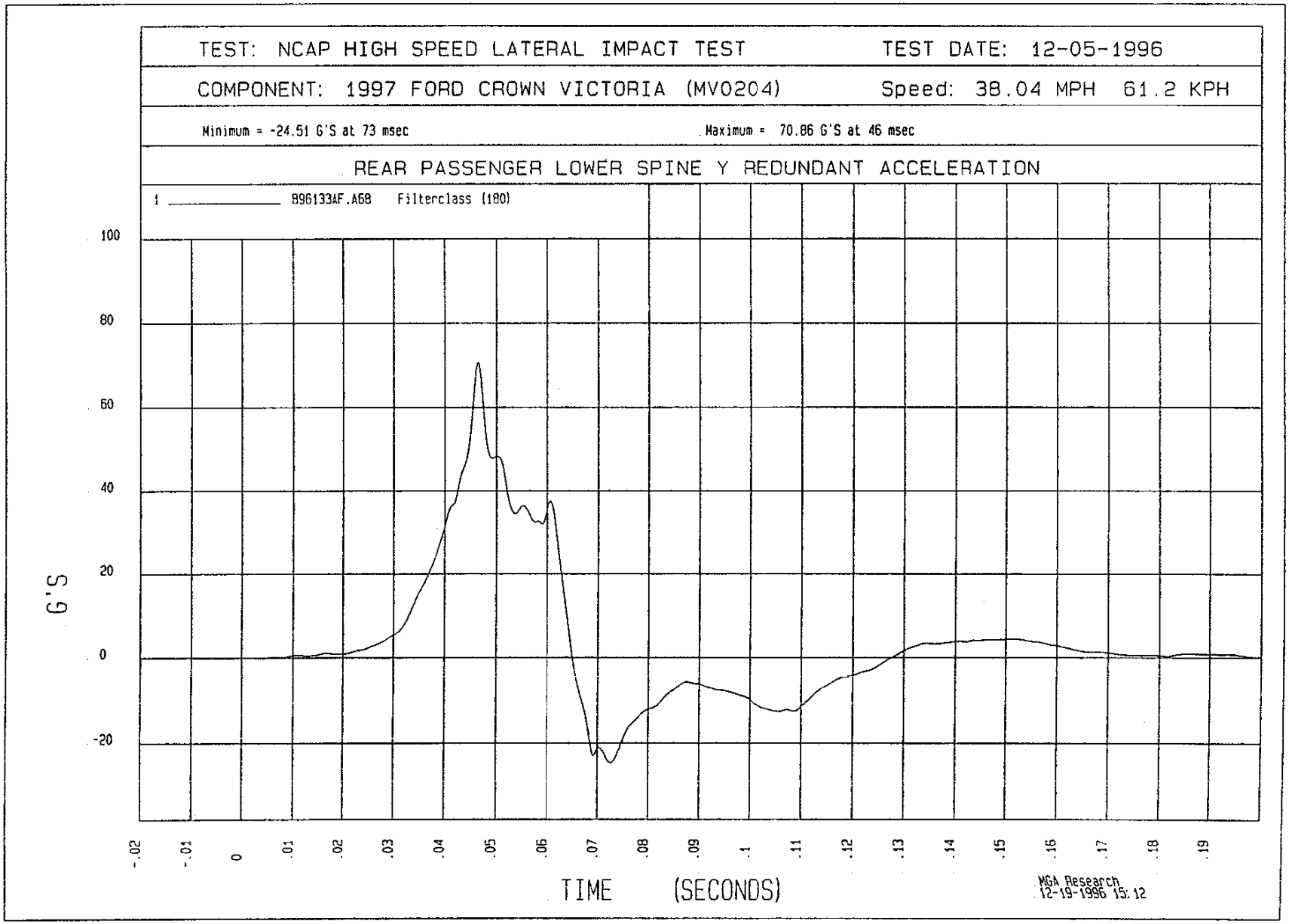
TIME (SECONDS)
MGA Research
12-19-1996 15:12


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = 0 KPH at -20 msec
Maximum = 38.57 KPH at 67 msec
REAR PASSENGER LOWER RIB Y REDUNDANT VELOCITY
1 _____ 896133AI.V67 Filterclass (180)
KPH
TIME Seconds
MGA Research
12-19-1996 15:47


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -24.51 G'S at 73 msec
Maximum = 70.86 G'S at 46 msec
REAR PASSENGER LOWER SPINE Y REDUNDANT ACCELERATION
1 B96133AF.A68 Filterclass (180)
G'S
100
80
60
40
20
0
-20
-.02
-.01
0
.01
.02
.03
.04
.05
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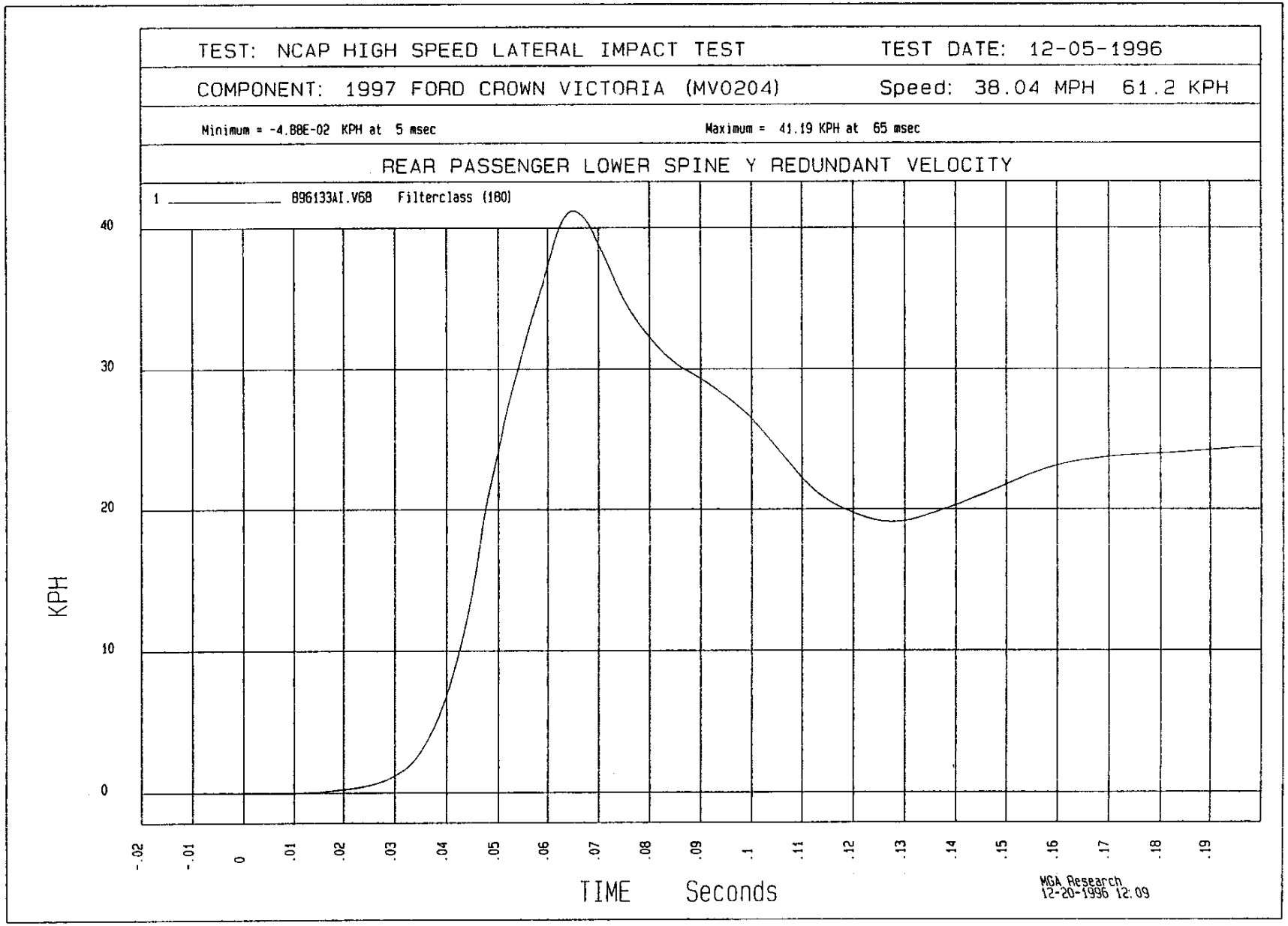
TIME (SECONDS)
MGA Research
12-19-1996 15:12


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -4.88E-02 KPH at 5 msec
Maximum = 41.19 KPH at 65 msec
REAR PASSENGER LOWER SPINE Y REDUNDANT VELOCITY
1 896133AI.V68 Filterclass (180)
KPH
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
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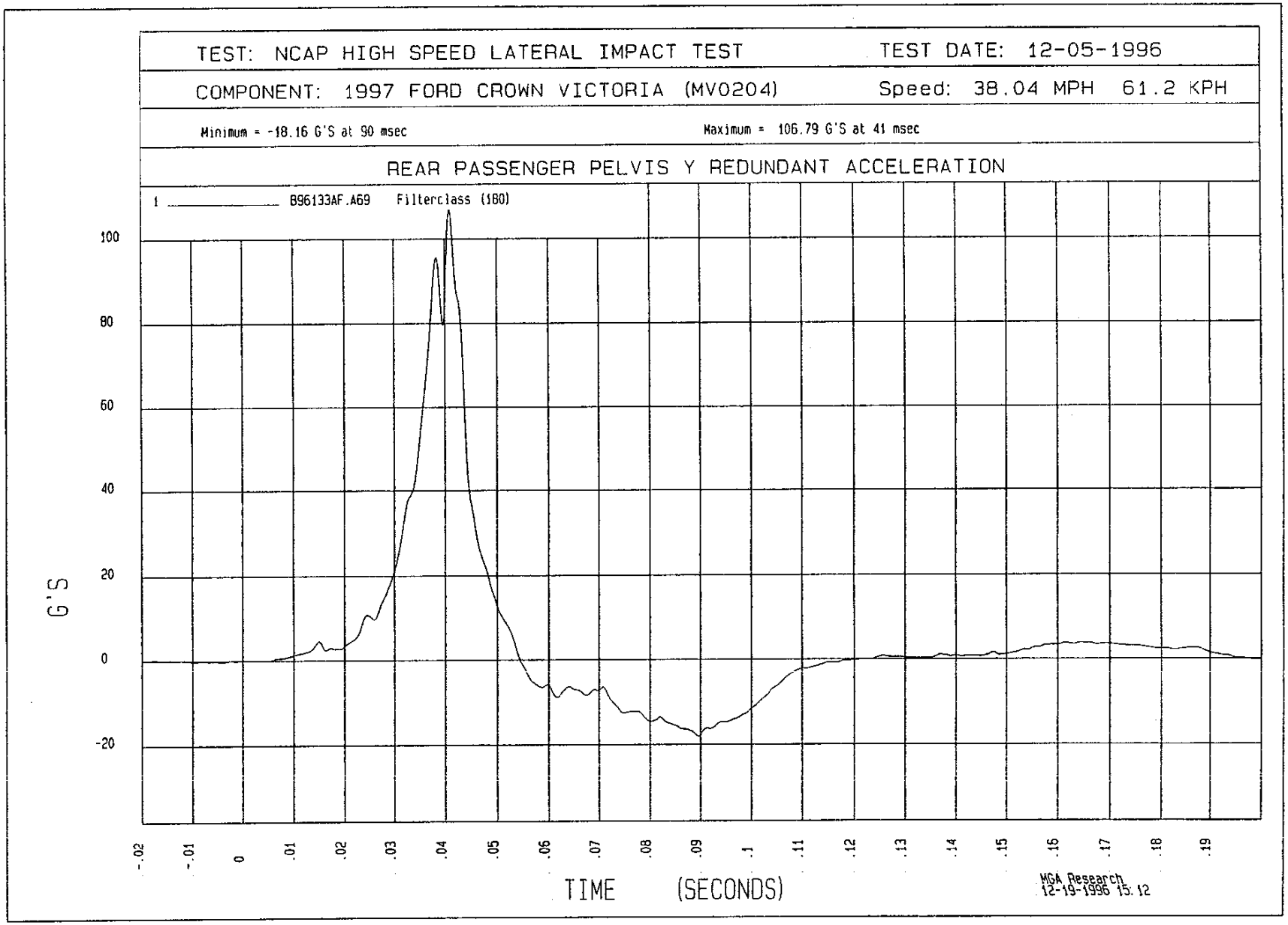
TIME Seconds
MGA Research
12-20-1996 12:09


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -18.16 G'S at 90 msec
Maximum = 106.79 G'S at 41 msec
REAR PASSENGER PELVIS Y REDUNDANT ACCELERATION
1 B96133AF.A69 Filterclass (180)
100
80
60
40
20
0
-20
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
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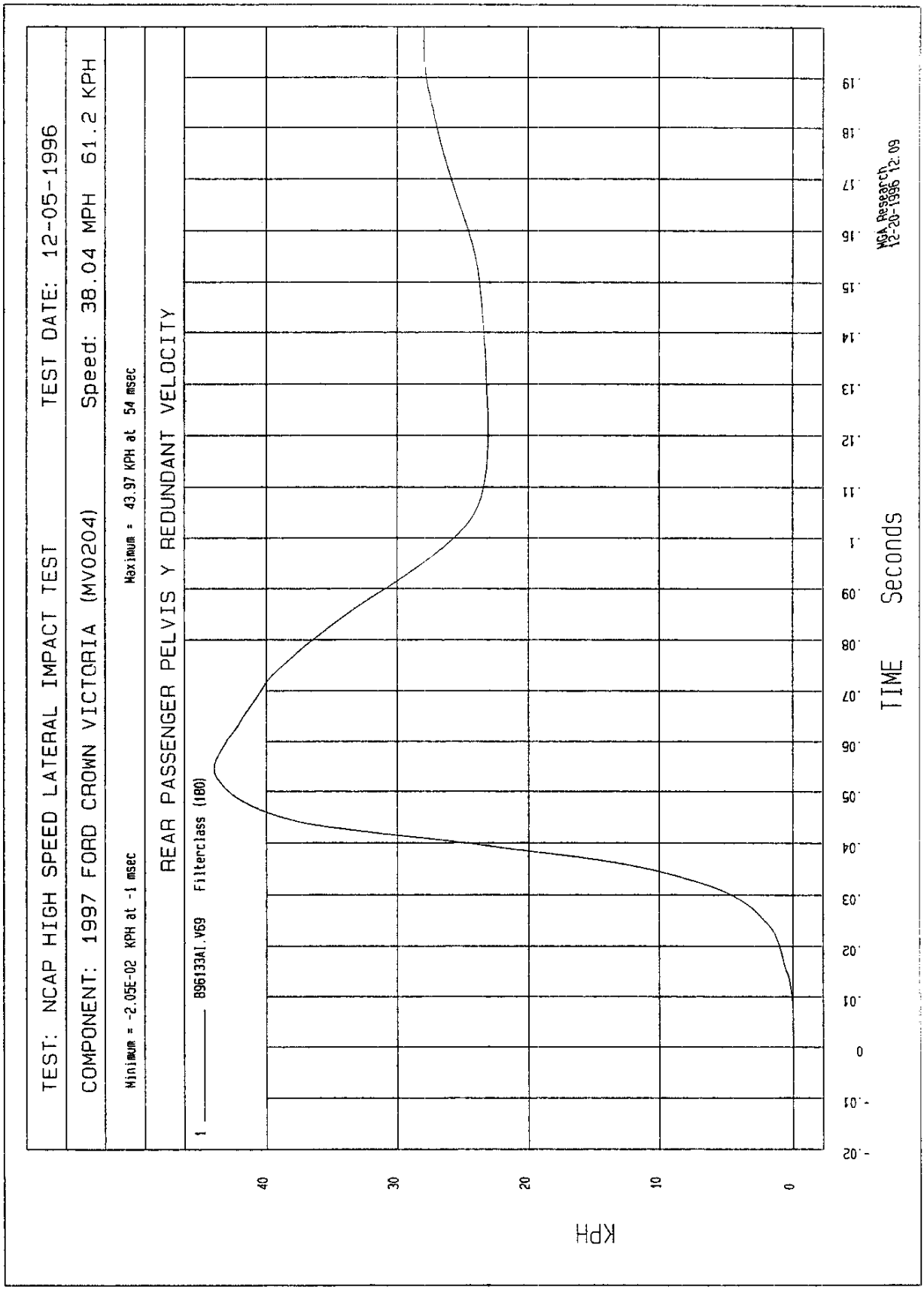
TIME (SECONDS)
MGA Research
12-19-1996 15:12


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
Minimum = -2.05E-02 KPH at -1 msec
Maximum = 43.97 KPH at 54 msec
REAR PASSENGER PELVIS Y REDUNDANT VELOCITY
1 _____ B96133AI.V69 Filterclass (180)
KPH
40
30
20
10
0
-02
-01
0
01
02
03
04
05
06
07
08
09
1
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12
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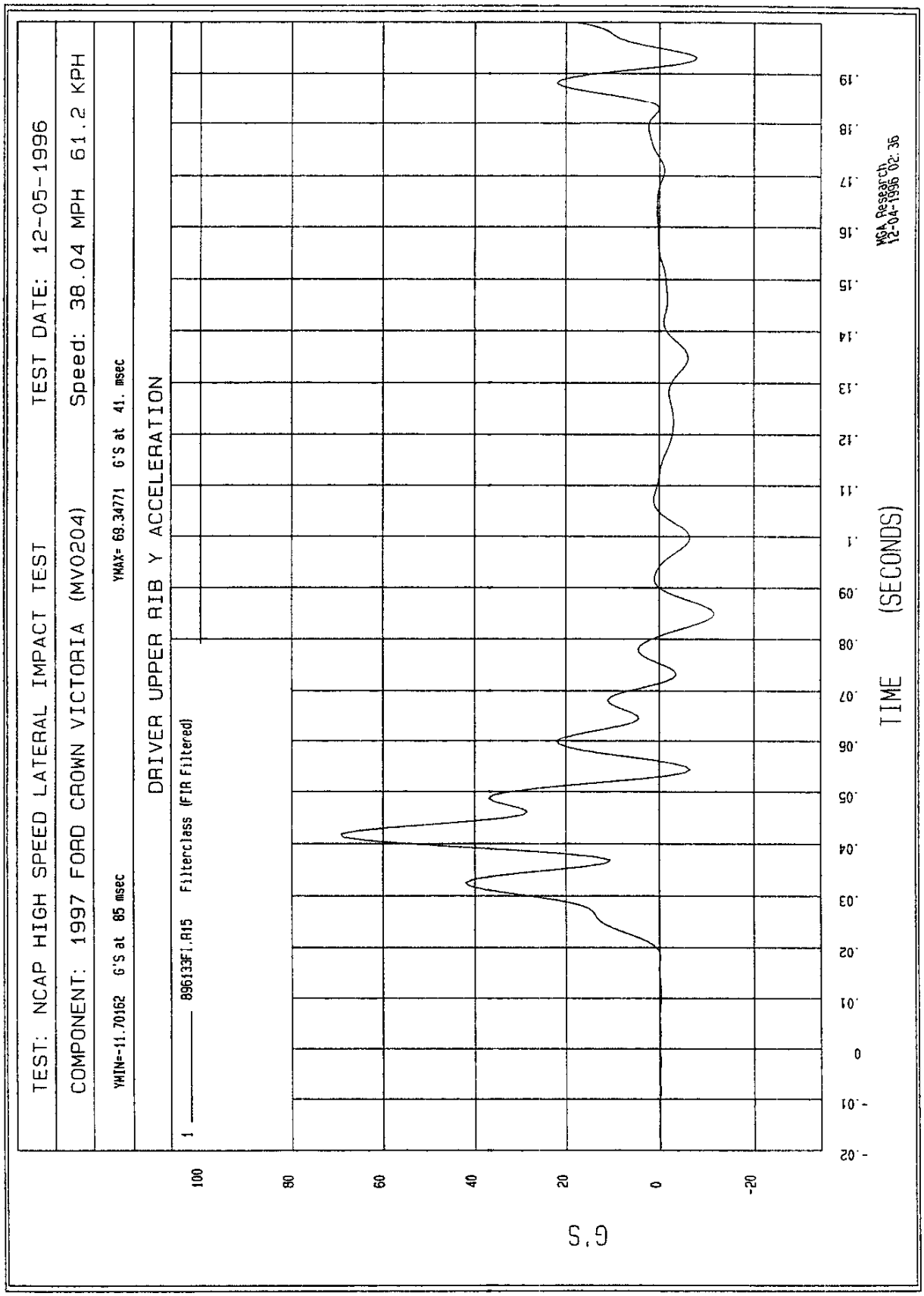
TIME Seconds
MGA Research
12-20-1996 12:09


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-11.70162 G'S at 85 msec
YMAX= 69.34771 G'S at 41. msec
DRIVER UPPER RIB Y ACCELERATION
1 _____ 896133F1.A15 Filterclass (FIR Filtered)
100
80
60
40
20
0
-20
G'S
.19
.18
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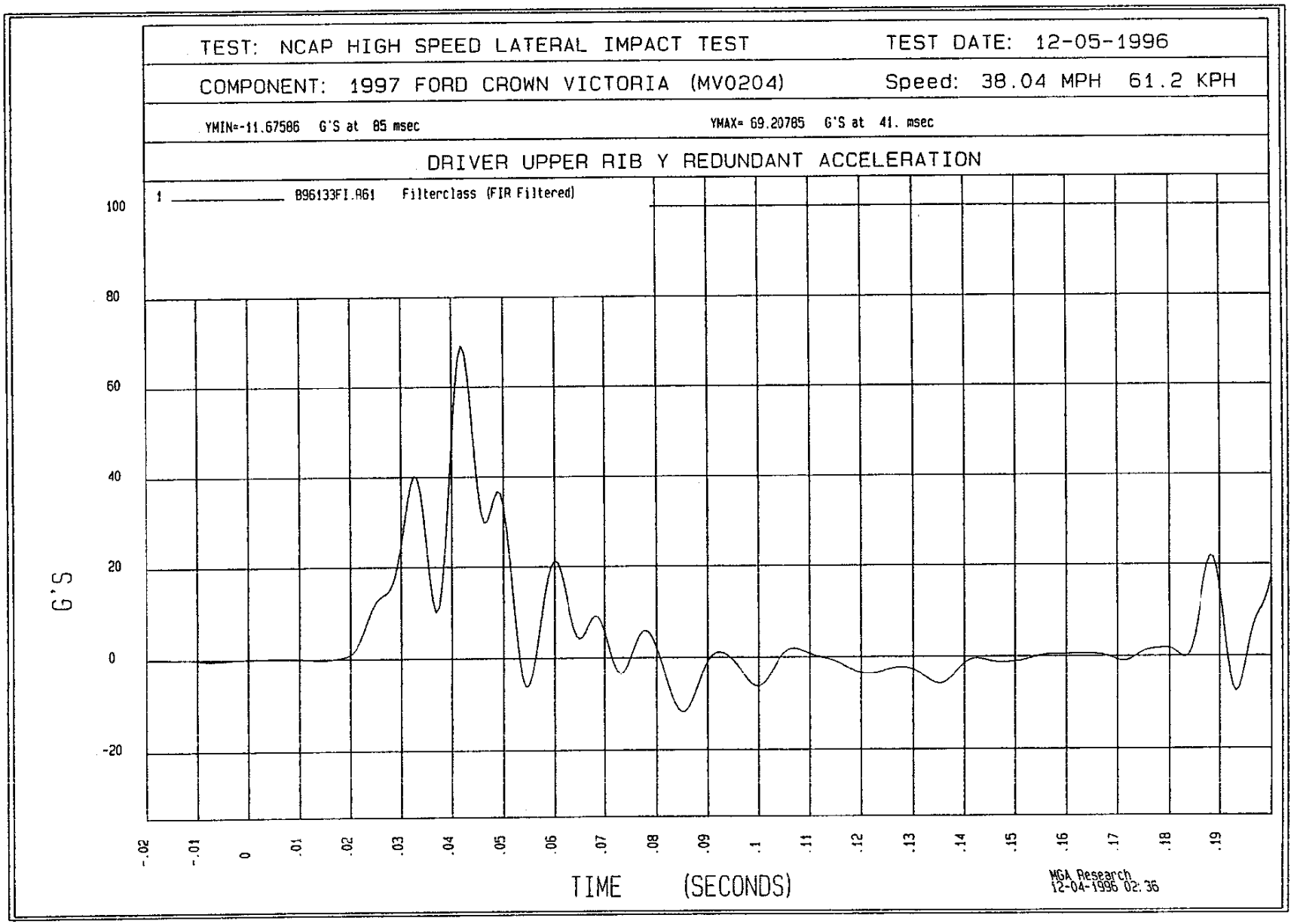
TIME (SECONDS)
MGA Research
12-04-1996 02:36


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-11.67586 G'S at 85 msec
YMAX= 69.20785 G'S at 41. msec
DRIVER UPPER RIB Y REDUNDANT ACCELERATION
1 B96133FI.A61 Filterclass (FIR Filtered)
100
80
60
40
20
0
-20
G'S
-.02
-.01
0
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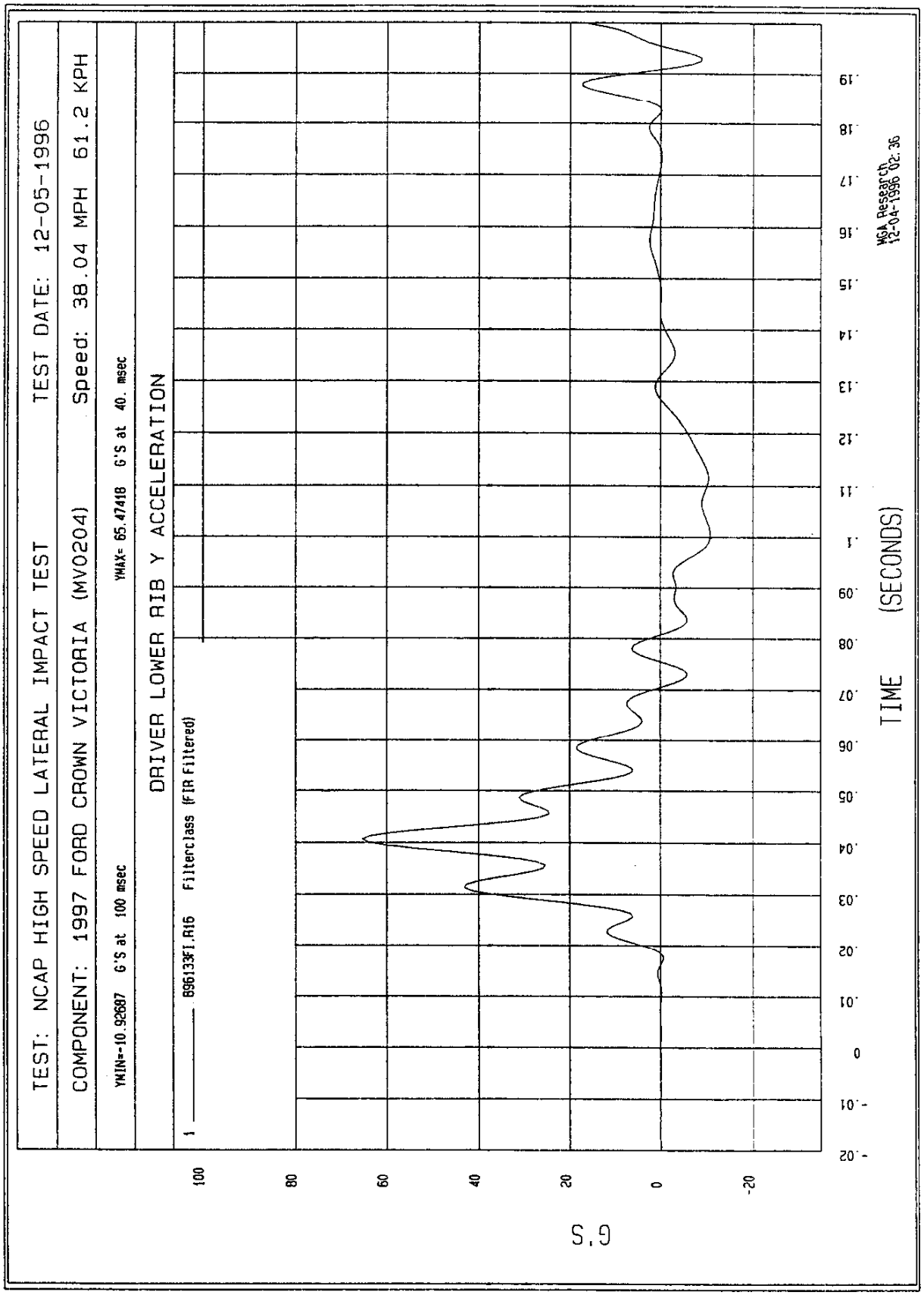
TIME (SECONDS)
MGA Research
12-04-1996 02:36


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-10.92687 G'S at 100 msec
YMAX= 65.47418 G'S at 40. msec
DRIVER LOWER RIB Y ACCELERATION
1 _____ B96133F1.R16 Filterclass (FIR Filtered)
100
80
60
40
20
0
-20
G'S
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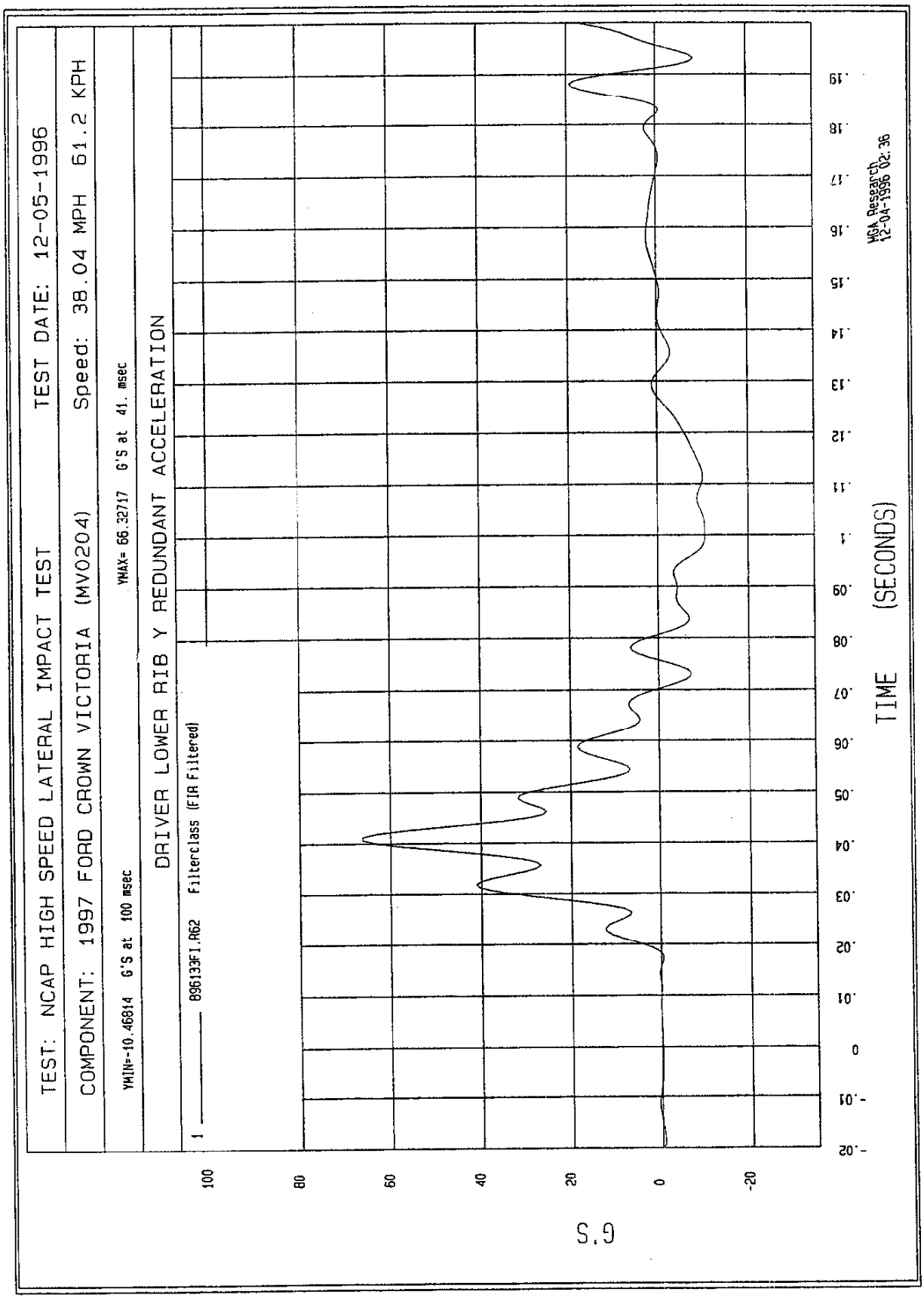
TIME (SECONDS)
MGA Research
12-04-1996 02:36


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-10.46814 G'S at 100 msec
YMAX= 66.32717 G'S at 41. msec
DRIVER LOWER RIB Y REDUNDANT ACCELERATION
1 B96133F1.A62 Filterclass (FIA Filtered)
100
80
60
40
20
0
-20
G'S
TIME (SECONDS)
-.02
-.01
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.02
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.04
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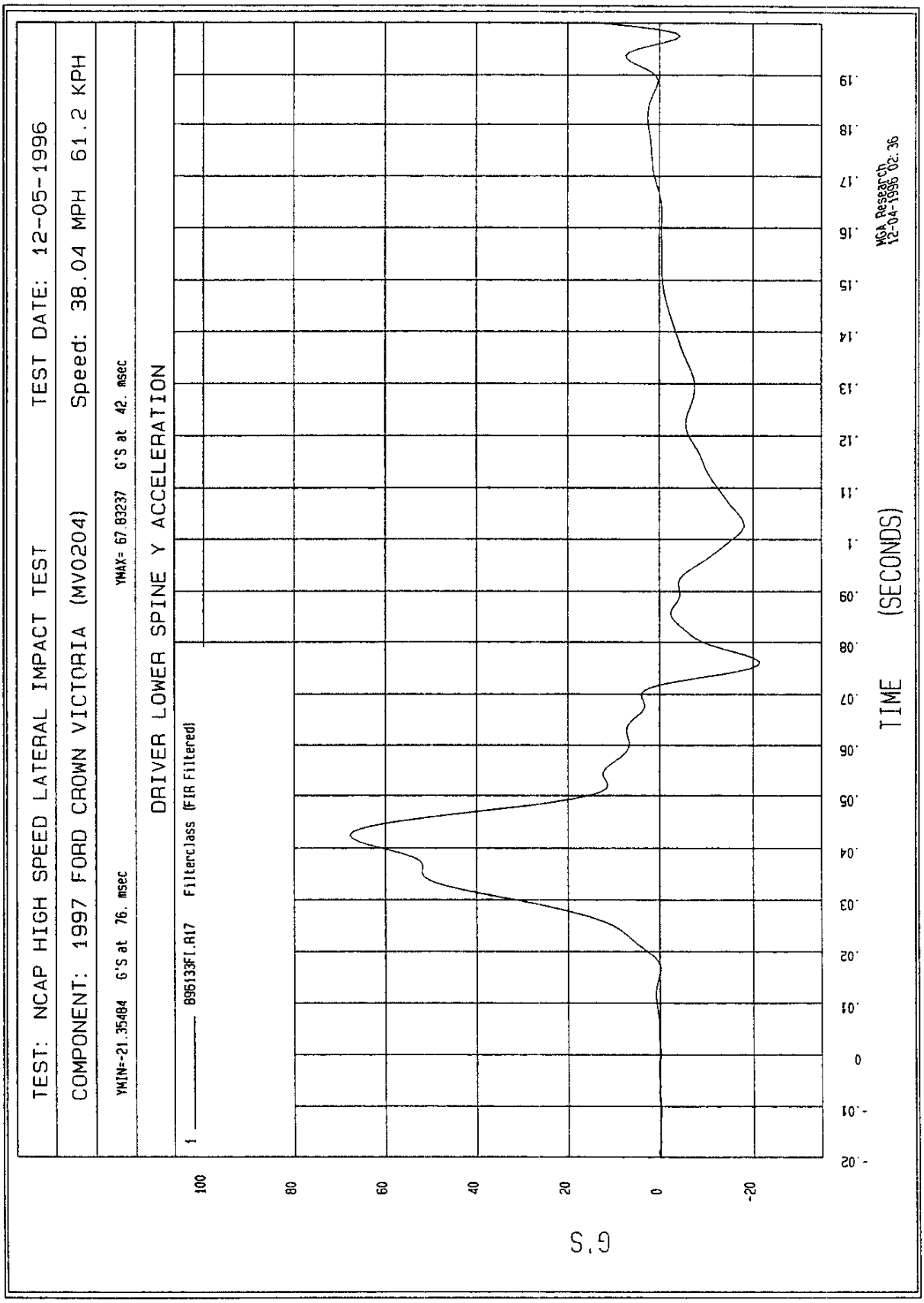
MGA Research
12-04-1996 02:36


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-21.35484 G'S at 76. msec
YMAX= 67.83237 G'S at 42. msec
DRIVER LOWER SPINE Y ACCELERATION
1 ——— 896133FI.A17 Filterclass (FIR Filtered)
100
80
60
40
20
0
-20
G'S
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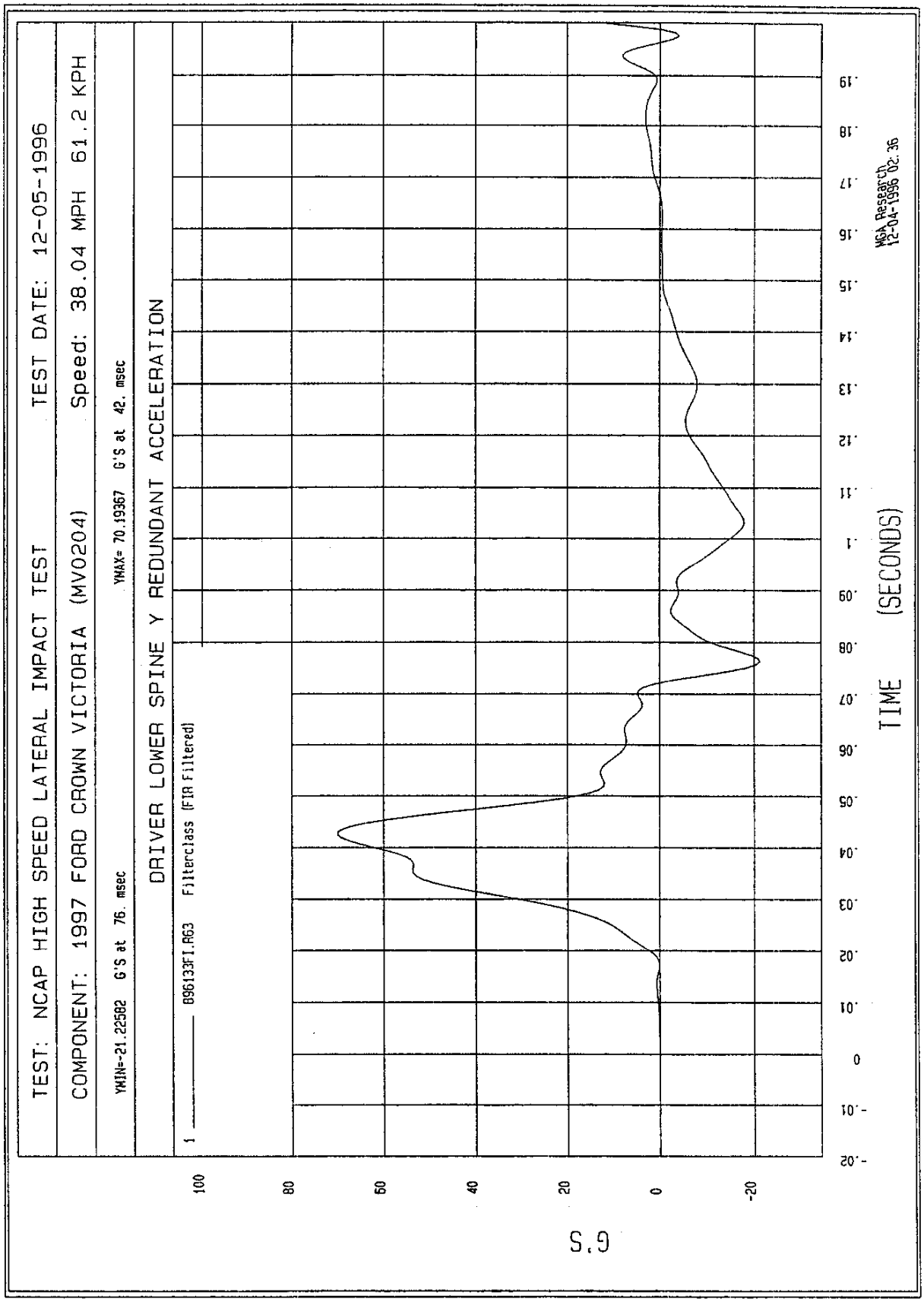
-.01
-.02
TIME (SECONDS)
MGA Research
12-04-1996 02:36


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-21.22582 G'S at 76. msec
YMAX= 70.19367 G'S at 42. msec
DRIVER LOWER SPINE Y REDUNDANT ACCELERATION
1 B96133F1.R63 Filterclass (FIR Filtered)
100
80
60
40
20
0
-20
G's
-.02
-.01
0
.01
.02
.03
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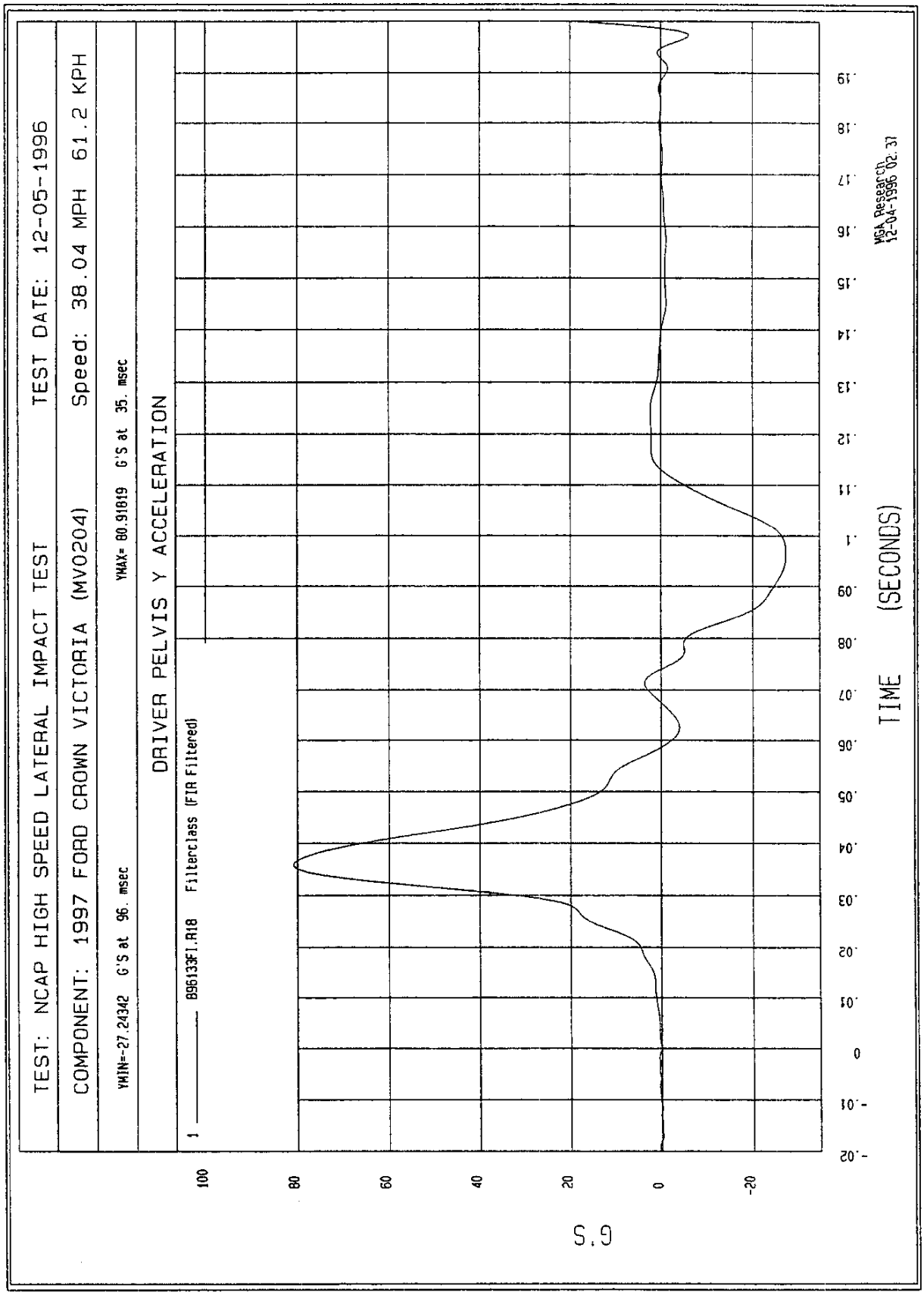
TIME (SECONDS)
MGA Research
12-04-1996 02:36


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-27.24342 G'S at 96. msec
YMAX= 80.91619 G'S at 35. msec
DRIVER PELVIS Y ACCELERATION
1 896133FI.R18 Filterclass (FIR Filtered)
100
80
60
40
20
0
-20
G'S
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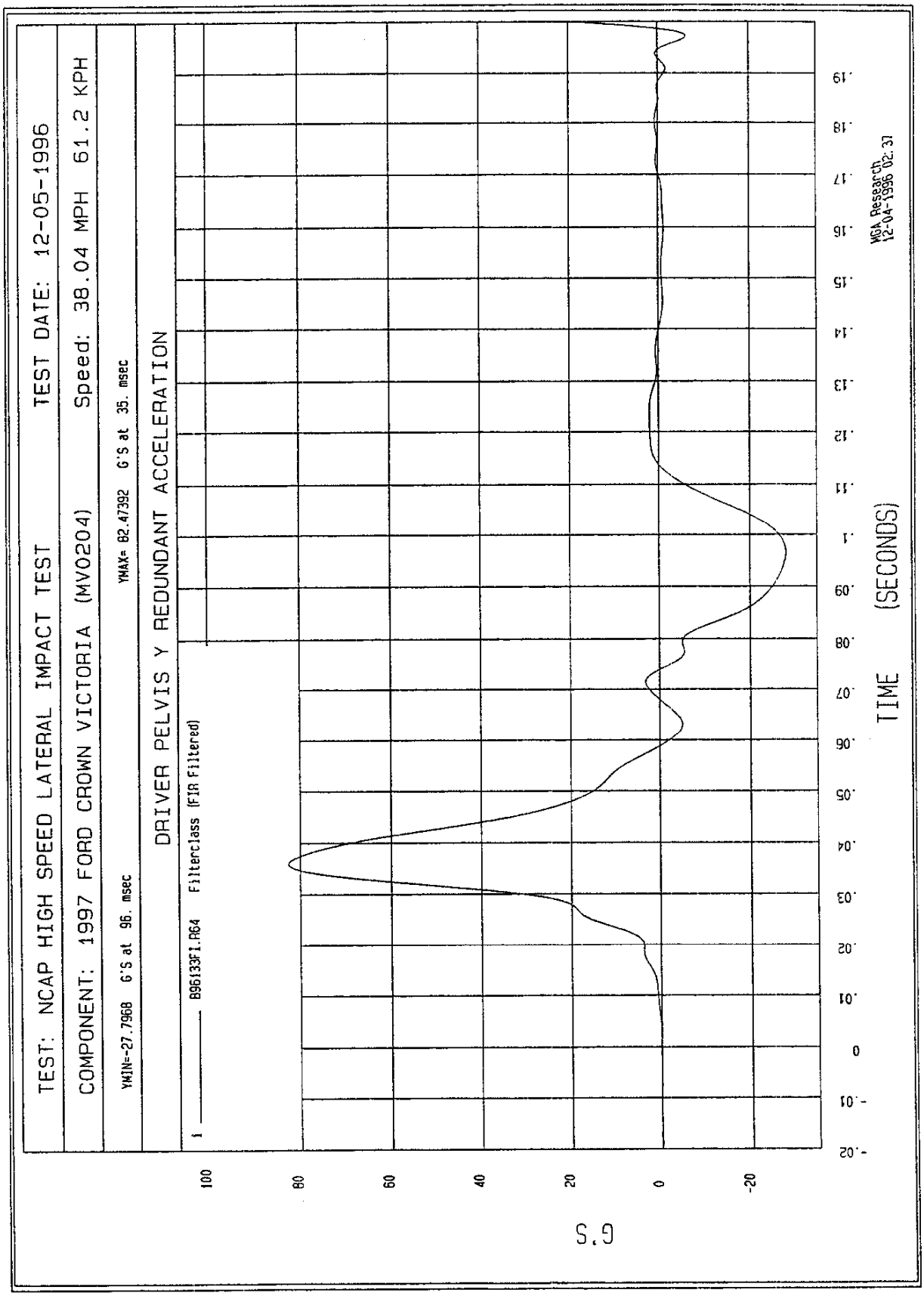
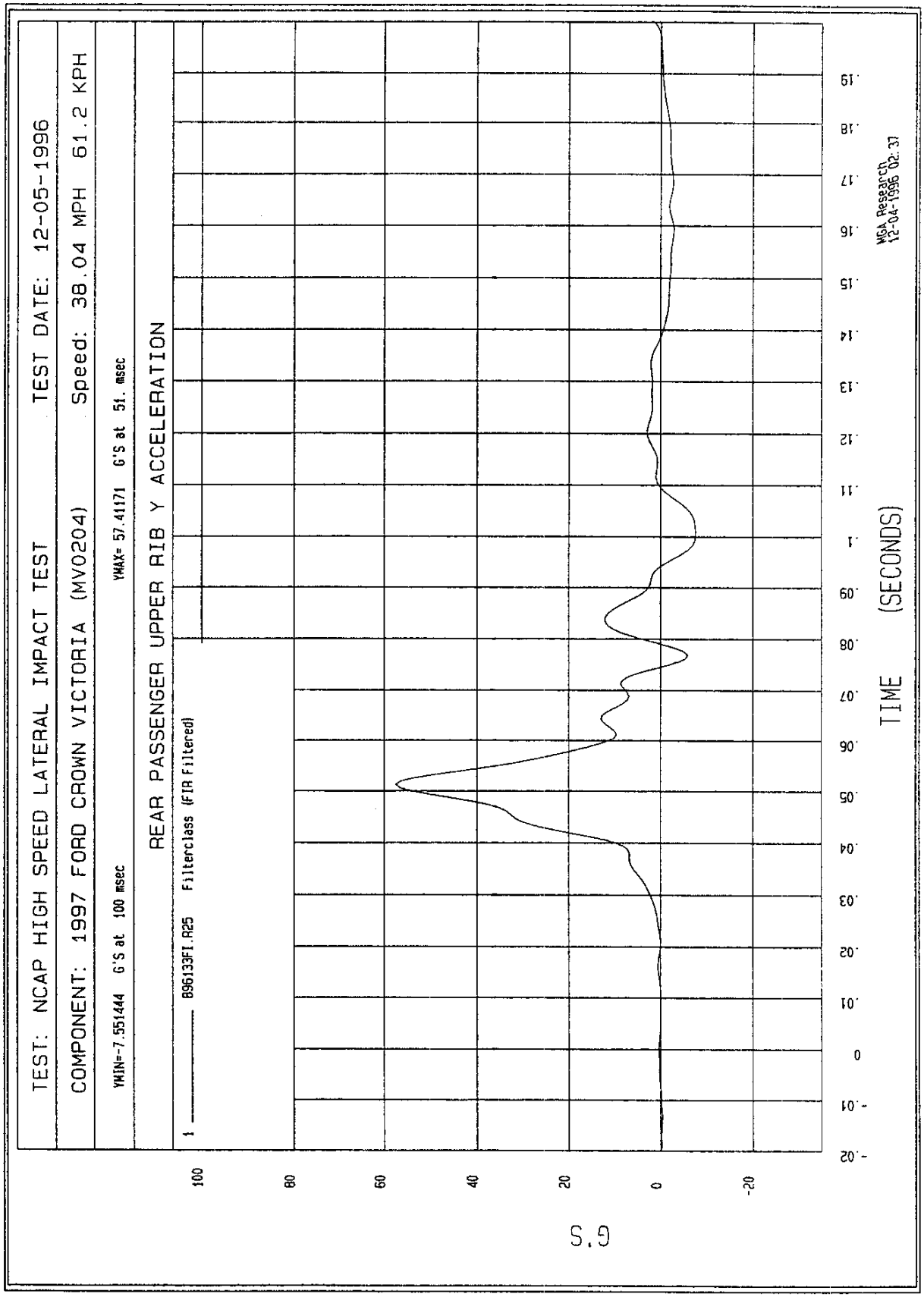
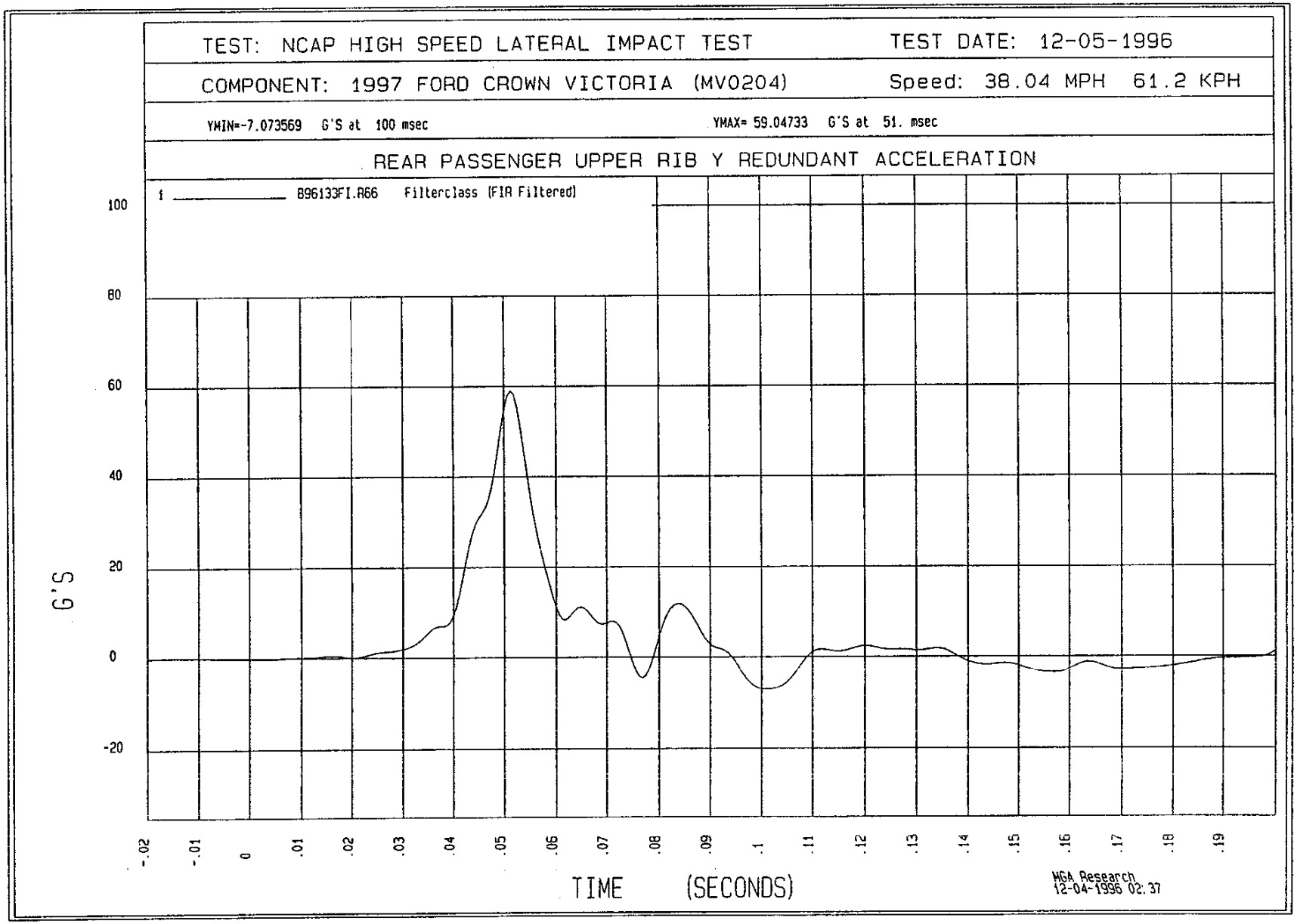
-.01
-.02
TIME (SECONDS)
MGA Research
12-04-1996 02:37


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-27.7968 G'S at 96. msec
YMAX= 82.47392 G'S at 35. msec
DRIVER PELVIS Y REDUNDANT ACCELERATION
1 B96133F1.R64 Filterclass (FIR Filtered)
G'S
TIME (SECONDS)
MGA Research
12-04-1996 02:37


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-7.551444 G'S at 100 msec
YMAX= 57.41171 G'S at 51. msec
REAR PASSENGER UPPER RIB Y ACCELERATION
1 B96133FI.R25 Filterclass (FIR Filtered)
100
80
60
40
20
0
-20
G'S
TIME (SECONDS)
MGA Research
12-04-1996 02:37


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-7.073569 G'S at 100 msec
YMAX= 59.04733 G'S at 51. msec
REAR PASSENGER UPPER RIB Y REDUNDANT ACCELERATION
1 B96133FI.R66 Filterclass (FIR Filtered)
100
80
60
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-20
G'S
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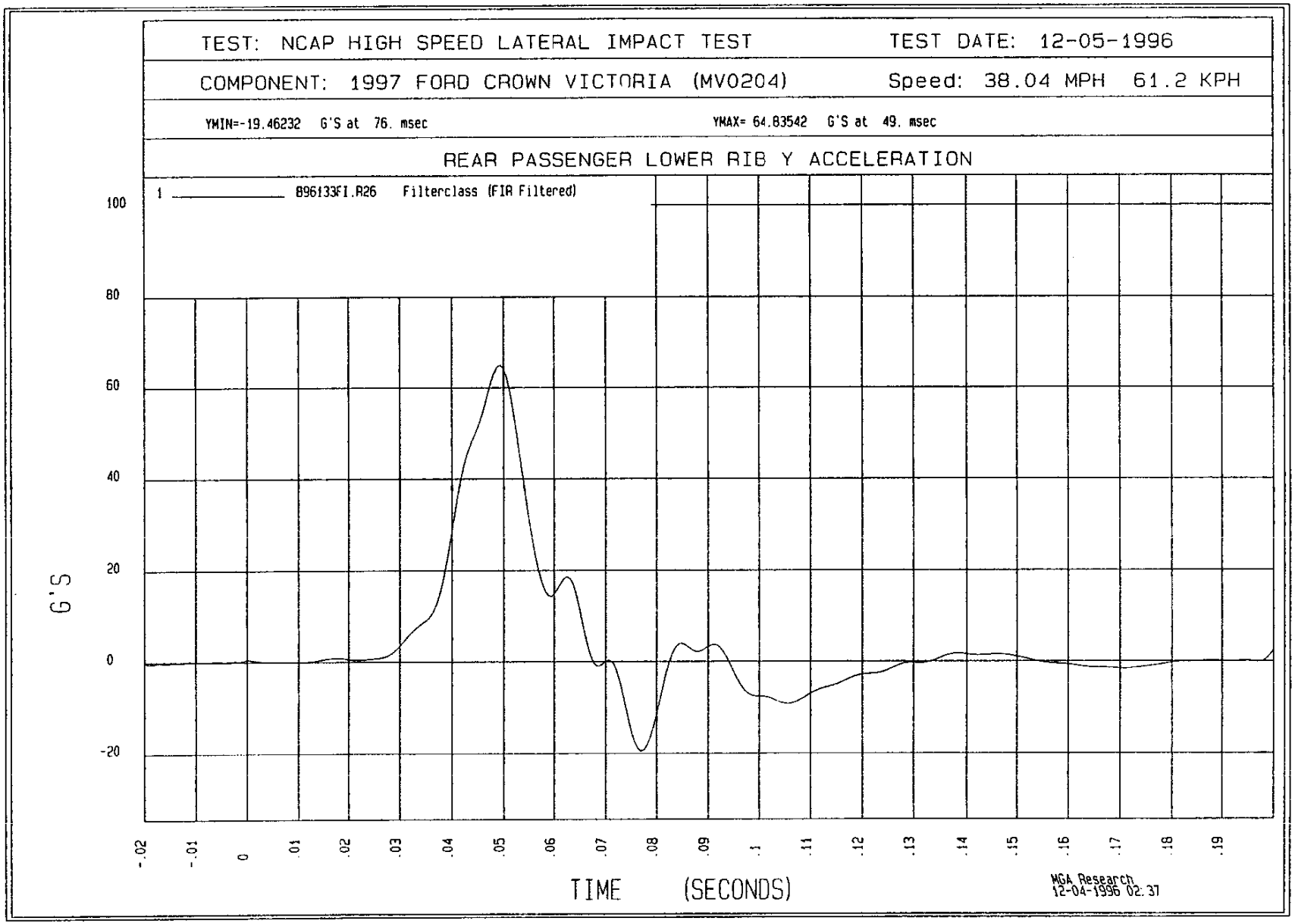
TIME (SECONDS)
MGA Research
12-04-1996 02:37


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-19.46232 G'S at 76. msec
YMAX= 64.83542 G'S at 49. msec
REAR PASSENGER LOWER RIB Y ACCELERATION
1 B96133FI.R26 Filterclass (FIA Filtered)
100
80
60
40
20
0
-20
G'S
-.02
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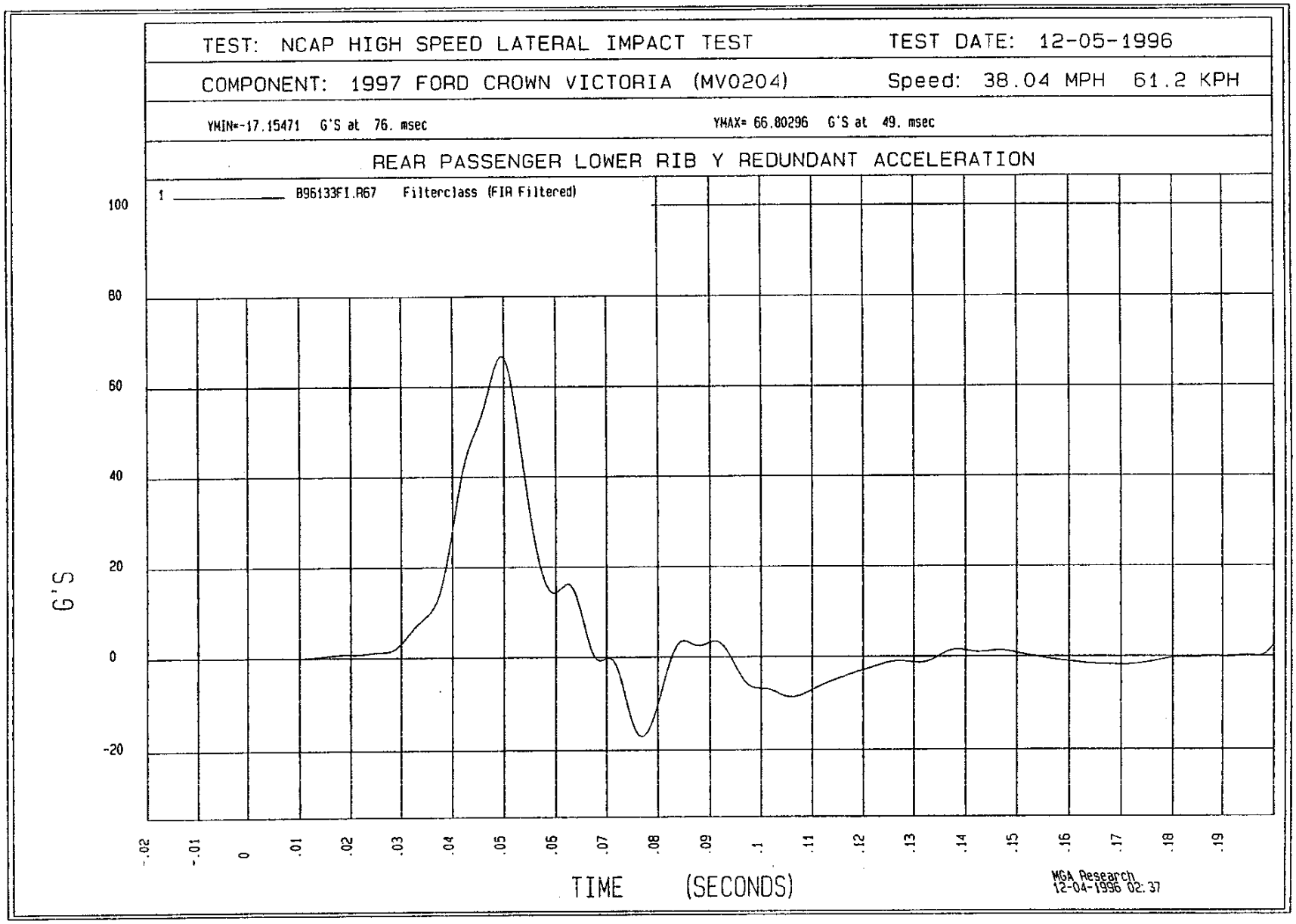
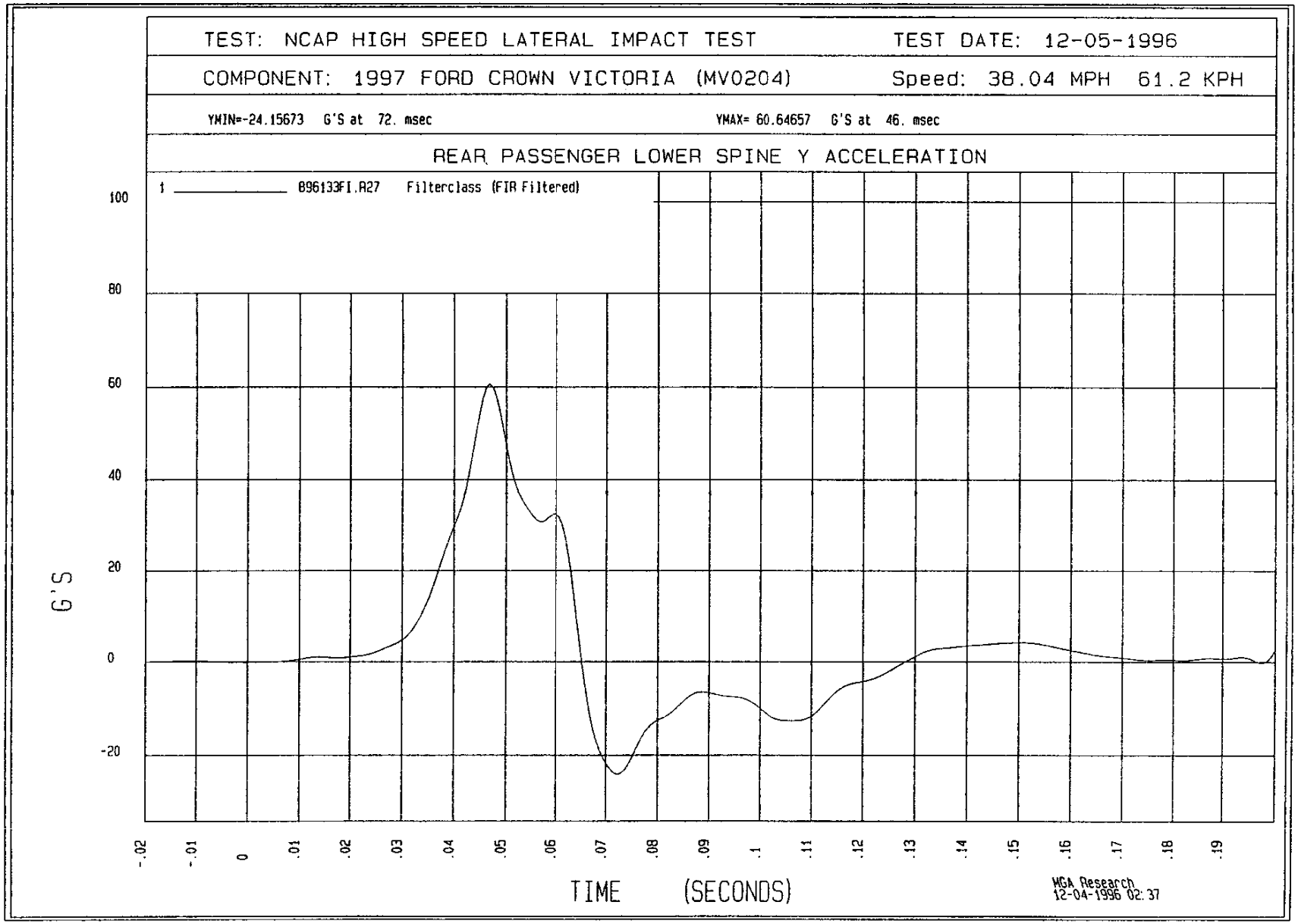
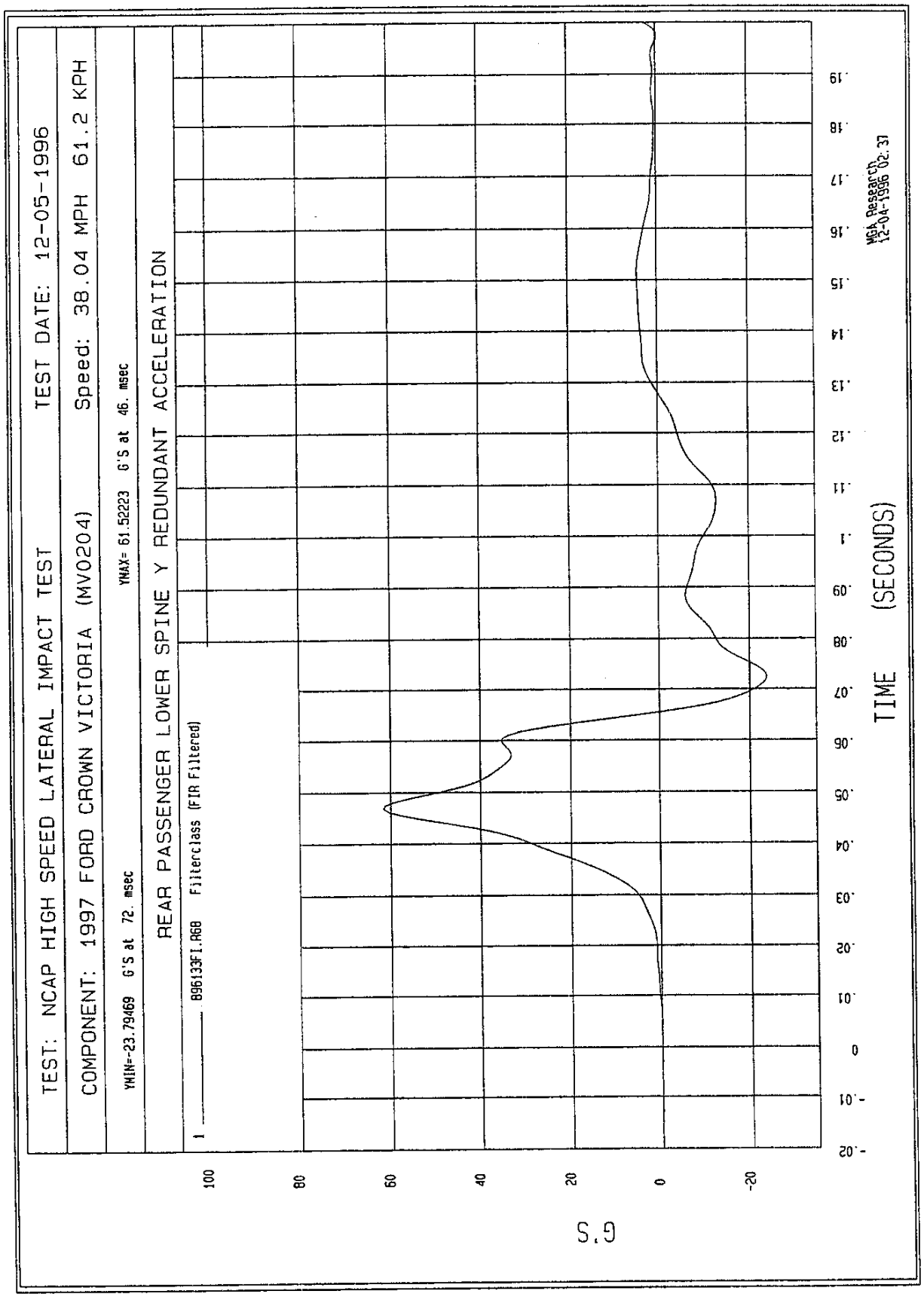
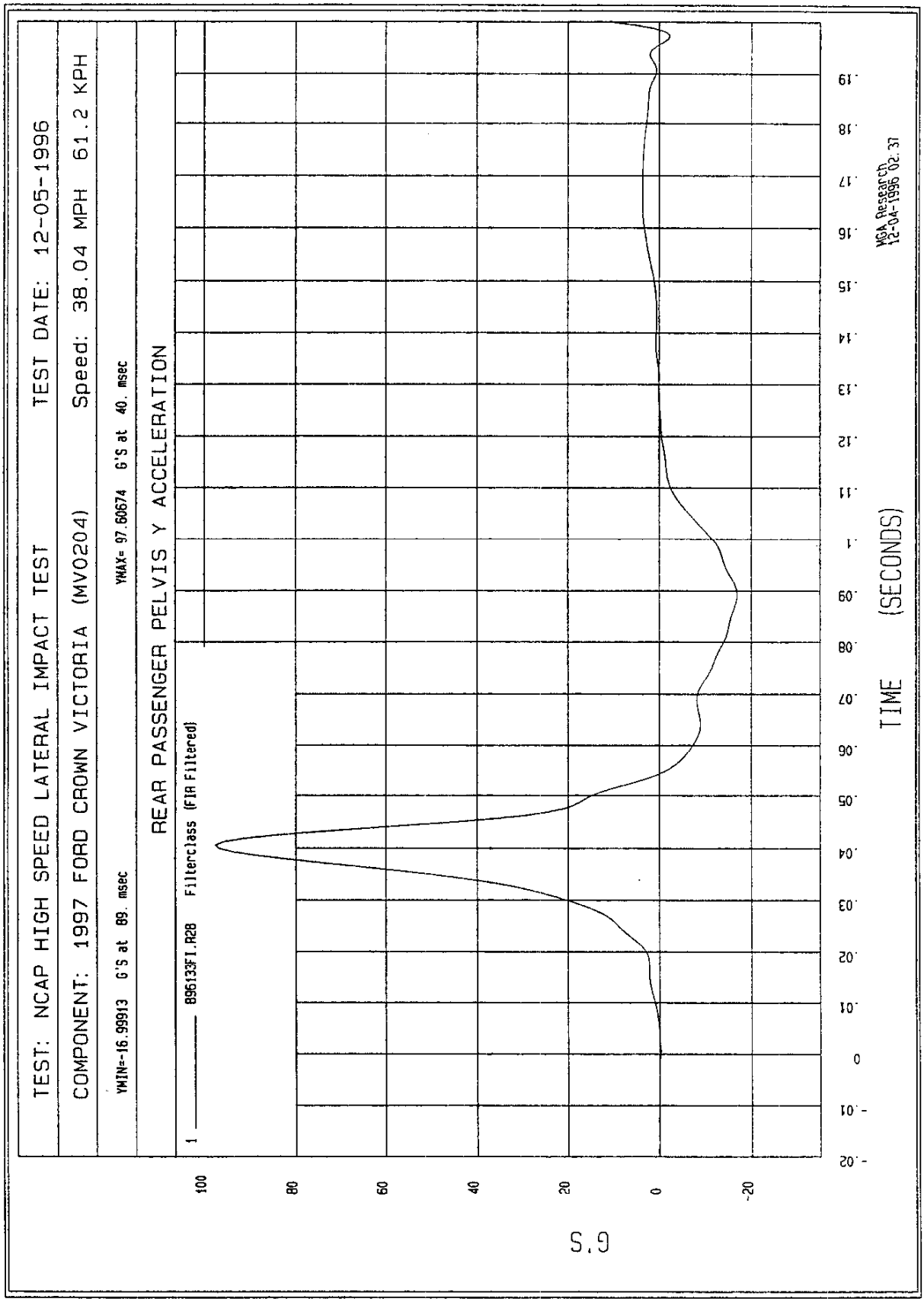
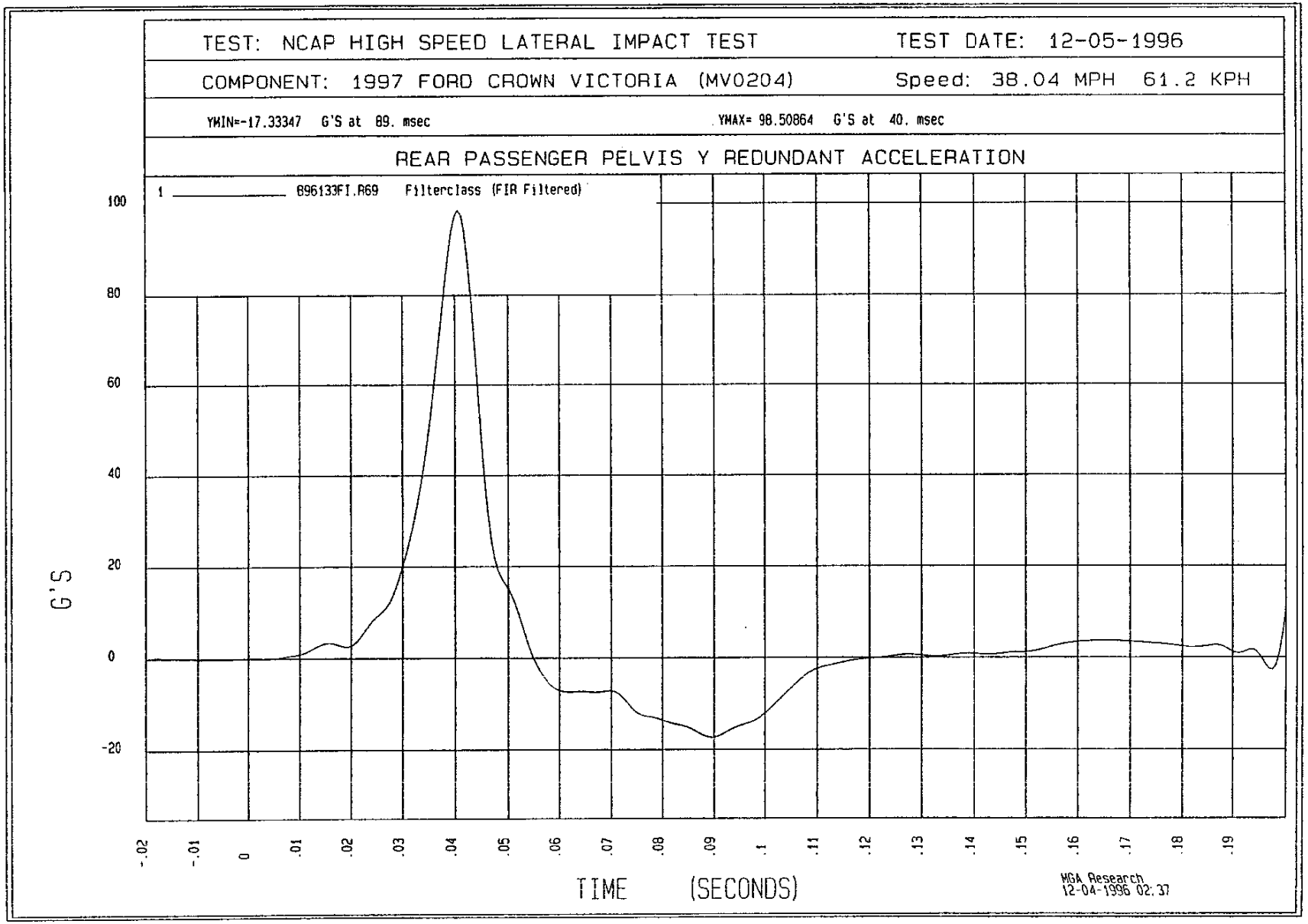
TIME (SECONDS)
MGA Research
12-04-1996 02:37


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-17.15471 G'S at 76. msec
YMAX= 66.80296 G'S at 49. msec
REAR PASSENGER LOWER RIB Y REDUNDANT ACCELERATION
1 B96133FI.R67 Filterclass (FIA Filtered)
100
80
60
40
20
0
-20
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-04-1996 02:37


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-24.15673 G'S at 72. msec
YMAX= 60.64657 G'S at 46. msec
REAR PASSENGER LOWER SPINE Y ACCELERATION
1 B96133FI.A27 Filterclass (FIR Filtered)
100
80
60
40
20
0
-20
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-04-1996 02:37


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-23.79469 G'S at 72. msec
YMAX= 61.52223 G'S at 46. msec
REAR PASSENGER LOWER SPINE Y REDUNDANT ACCELERATION
1 B96133FI.R6B Filterclass (FIR Filtered)
100
80
60
40
20
0
-20
G'S
.19
.18
.17
.16
.15
.14
.13
.12
.11
.1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
-.01
-.02
TIME (SECONDS)
MGA Research
12-04-1996 02:37


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-16.99913 G'S at 89. msec
YMAX= 97.60674 G'S at 40. msec
REAR PASSENGER PELVIS Y ACCELERATION
1 896133F1.R28 Filterclass (FIR Filtered)
100
80
60
40
20
0
-20
.19
.18
.17
.16
.15
.14
.13
.12
.11
.1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
-.01
-.02
TIME (SECONDS)
MGA Research
12-04-1996 02:37
G'S


TEST: NCAP HIGH SPEED LATERAL IMPACT TEST
TEST DATE: 12-05-1996
COMPONENT: 1997 FORD CROWN VICTORIA (MV0204)
Speed: 38.04 MPH 61.2 KPH
YMIN=-17.33347 G'S at 89. msec
YMAX= 98.50864 G'S at 40. msec
REAR PASSENGER PELVIS Y REDUNDANT ACCELERATION
1 _____ 896133FI.R69 Filterclass (FIR Filtered)
100
80
60
40
20
0
-20
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-04-1996 02:37

APPENDIX C

SID CONFIGURATION AND PERFORMANCE VERIFICATION

REPORT NO. MGA-97-DC06

DUMMY PERFORMANCE CALIBRATIONS

NEW CAR ASSESSMENT PROGRAM
SIDE IMPACT TEST

1997 FORD CROWN VICTORIA
NHTSA NO. MV0204

MGA PROVING GROUNDS
5000 WARREN ROAD
BURLINGTON, WI 53105

Test Date: December 5, 1996

Report Date: December 31, 1996

FINAL REPORT

Prepared For:

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

TABLE OF CONTENTS

PRE-TEST CERTIFICATION DATA

Front Dummy Serial Number: 269

Calibration Test Results Summary

Dummy Serial Number: 269

Pre-Test Calibration

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

SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 269 DATE OF VERIFICATION: December 4, 1996

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

MEASUREMENTS BY: _____

APPROVED BY: _____

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: December 4, 1996

DUMMY NUMBER: 269 TEST NUMBER: D962002

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	46
LOWER RIB	37 - 46 g's	44
LOWER SPINE	15 - 22 g's	20

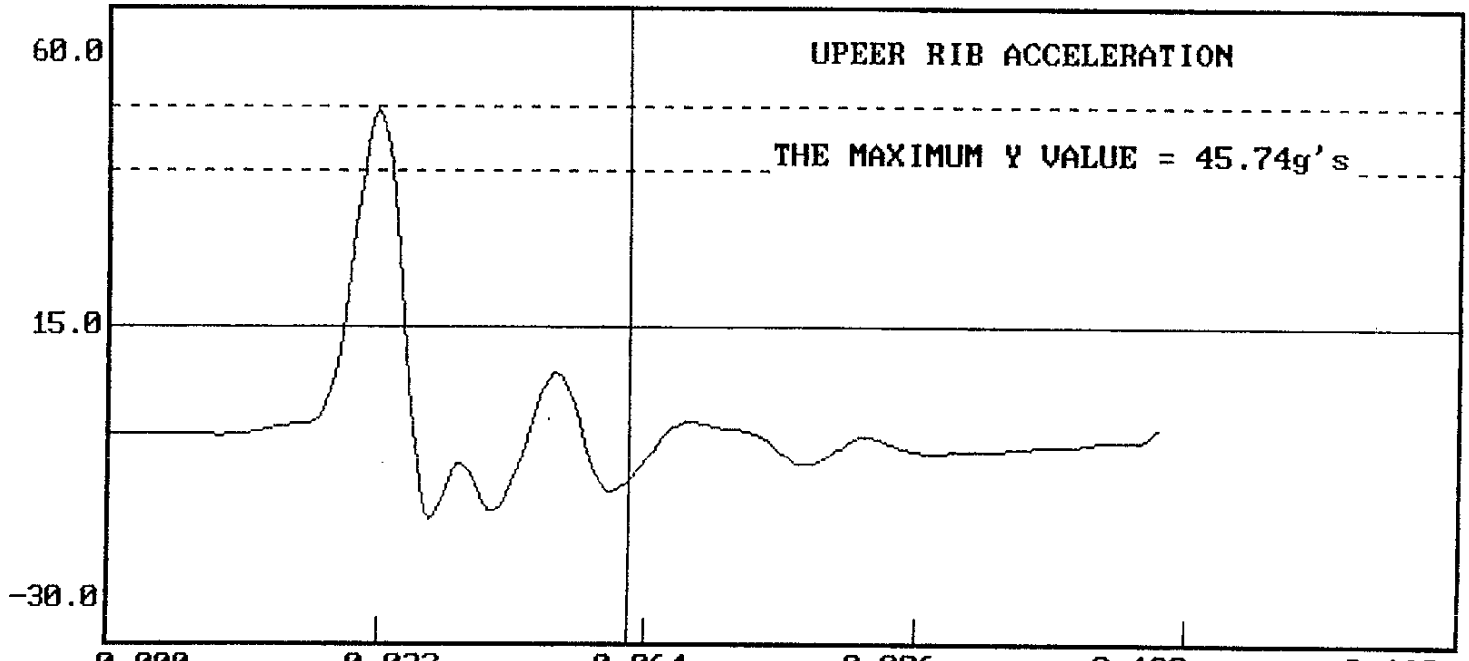
TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

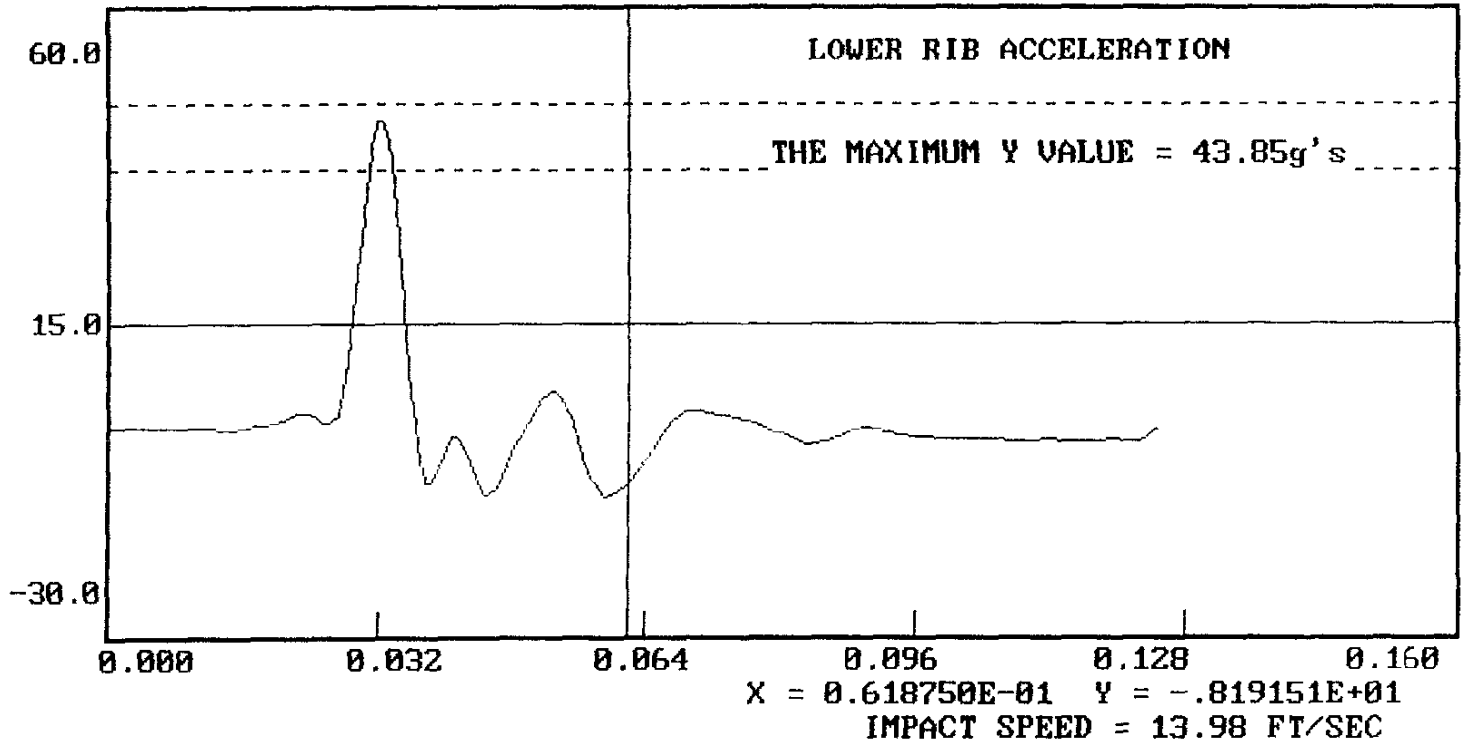
DUMMY CALIBRATION - THORAX IMPACT
DUMMY # 269
ACCELERATION (G'S) VS. TIME ((SECONDS))

12-04-1996 11:25

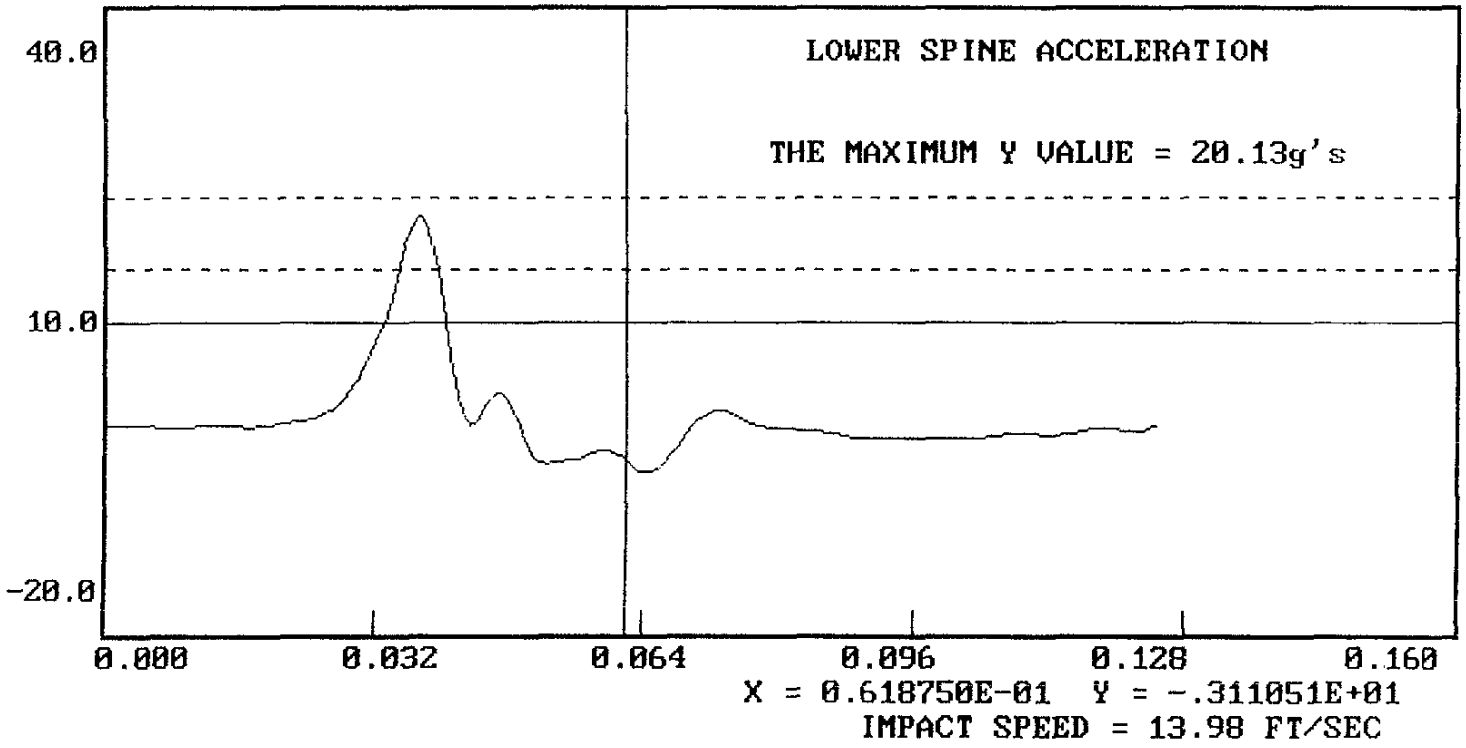


X = 0.618750E-01 Y = -.643900E+01
IMPACT SPEED = 13.98 FT/SEC

DUMMY CALIBRATION - THORAX IMPACT 12-04-1996 11:25
DUMMY # 269
ACCELERATION (G'S) VS. TIME ((SECONDS))



DUMMY CALIBRATION - THORAX IMPACT 12-04-1996 11:26
DUMMY # 269
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.311051E+01
IMPACT SPEED = 13.98 FT/SEC

MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: December 4, 1996

DUMMY NUMBER: 269 TEST NUMBER: D962003

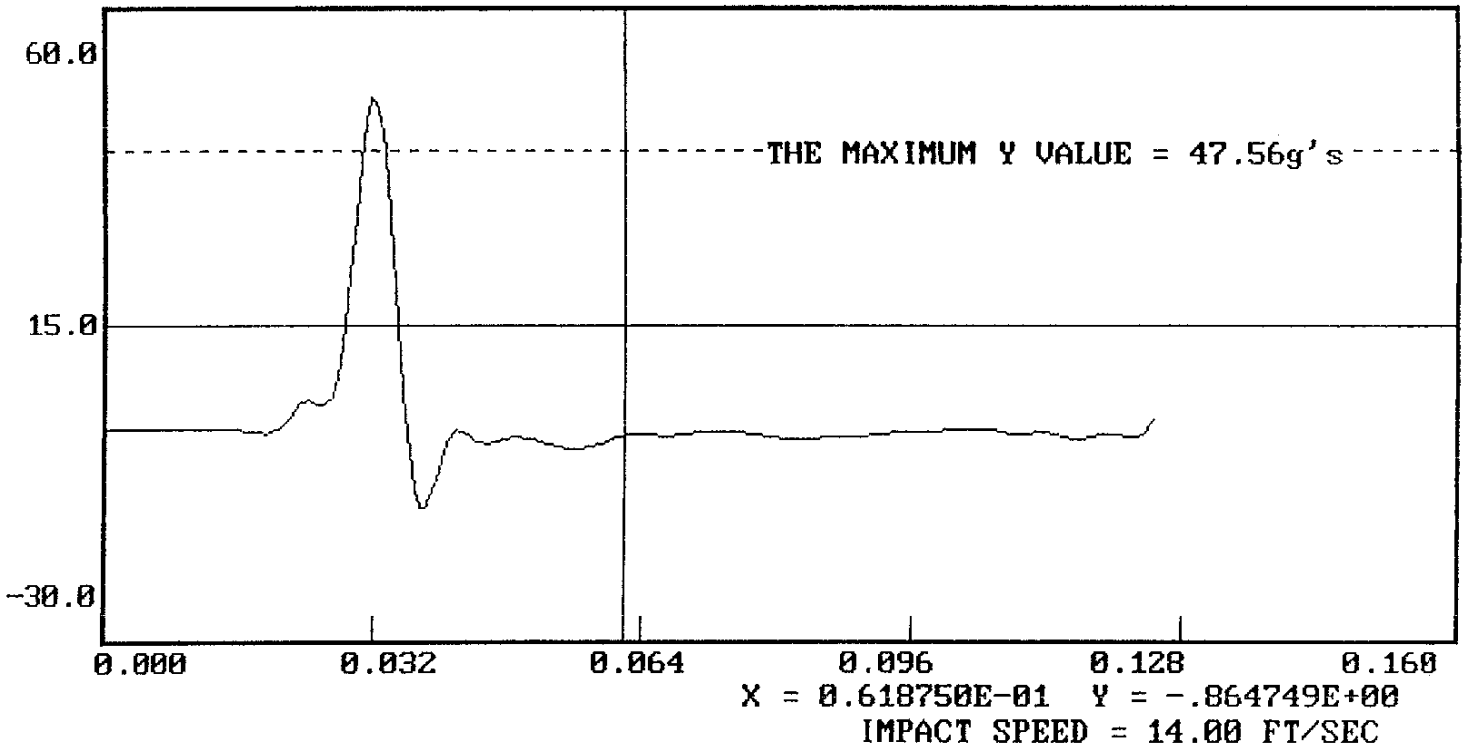
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	25%
PROBE SPEED	13.8 - 14.2 f/s	14.0
PELVIS ACCELERATION	40 - 60 g's	48

TEST MEETS SPECIFICATIONS

TECHNICIAN

APPROVED BY

DUMMY CALIBRATION - PELVIS IMPACT 12-04-1996 11:31
DUMMY # 269
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.864749E+00
IMPACT SPEED = 14.00 FT/SEC

MGA RESEARCH CORPORATION

ABDOMINAL COMPRESSION TEST
(PRELOAD = 10 LBS)

SIDE IMPACT DUMMY (SID)

DATE: December 4, 1996

DUMMY NUMBER: 269 TEST NUMBER: D962004

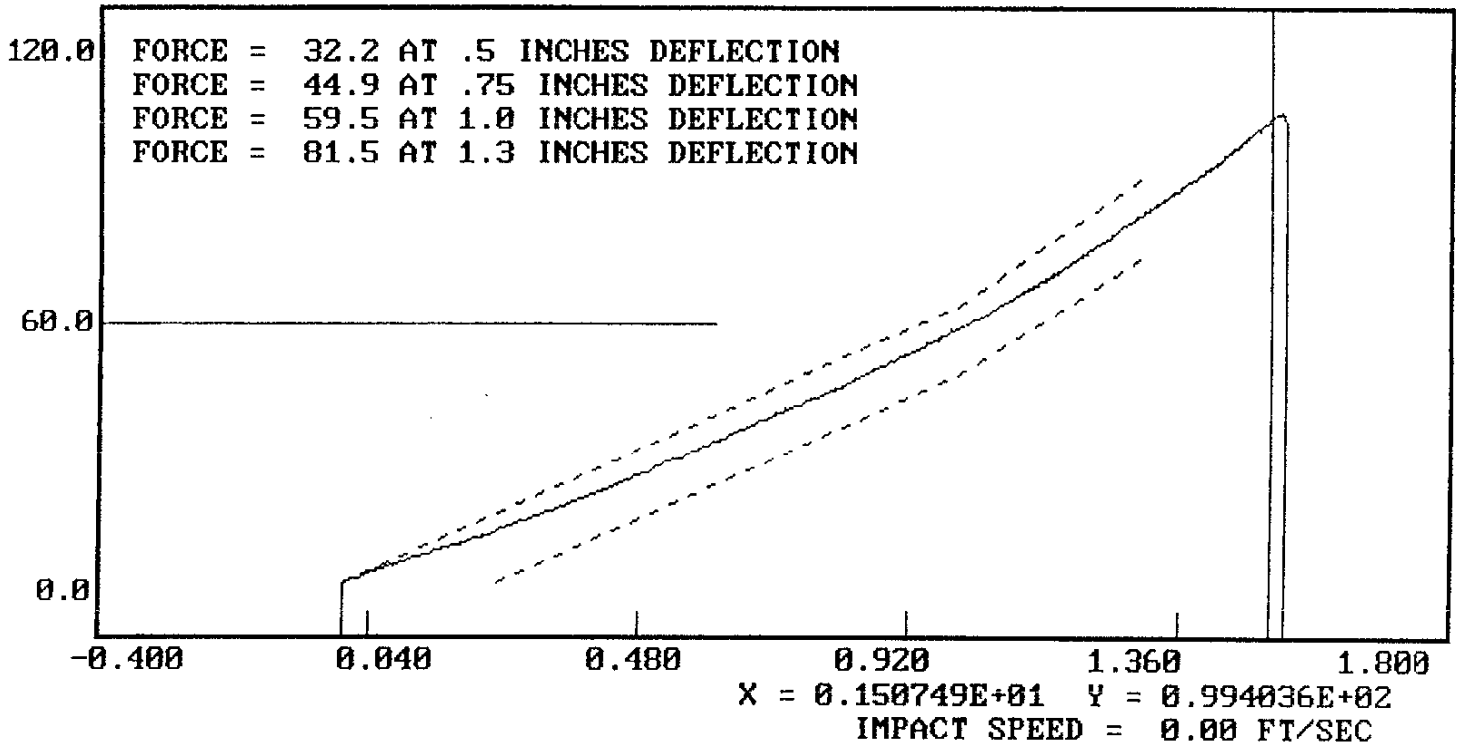
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	30%
FORCE @ 0.5 in	23.3 - 36.5 lbs	32.2
FORCE @ 0.75 in	36.7 - 49.8 lbs	44.9
FORCE @ 1.0 in	50 - 63 lbs	60
FORCE @ 1.3 in	73 - 88 lbs	82

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

DUMMY CALIBRATION - ABDOMEN COMPRESSION 12-04-1996 15:20
DUMMY # 269
ABDOMEN FORCE (LBS) VS. ABDOMEN DISPLACEMENT (INCHES)



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: December 4, 1996

DUMMY NUMBER: 269 TEST NUMBER: D962005

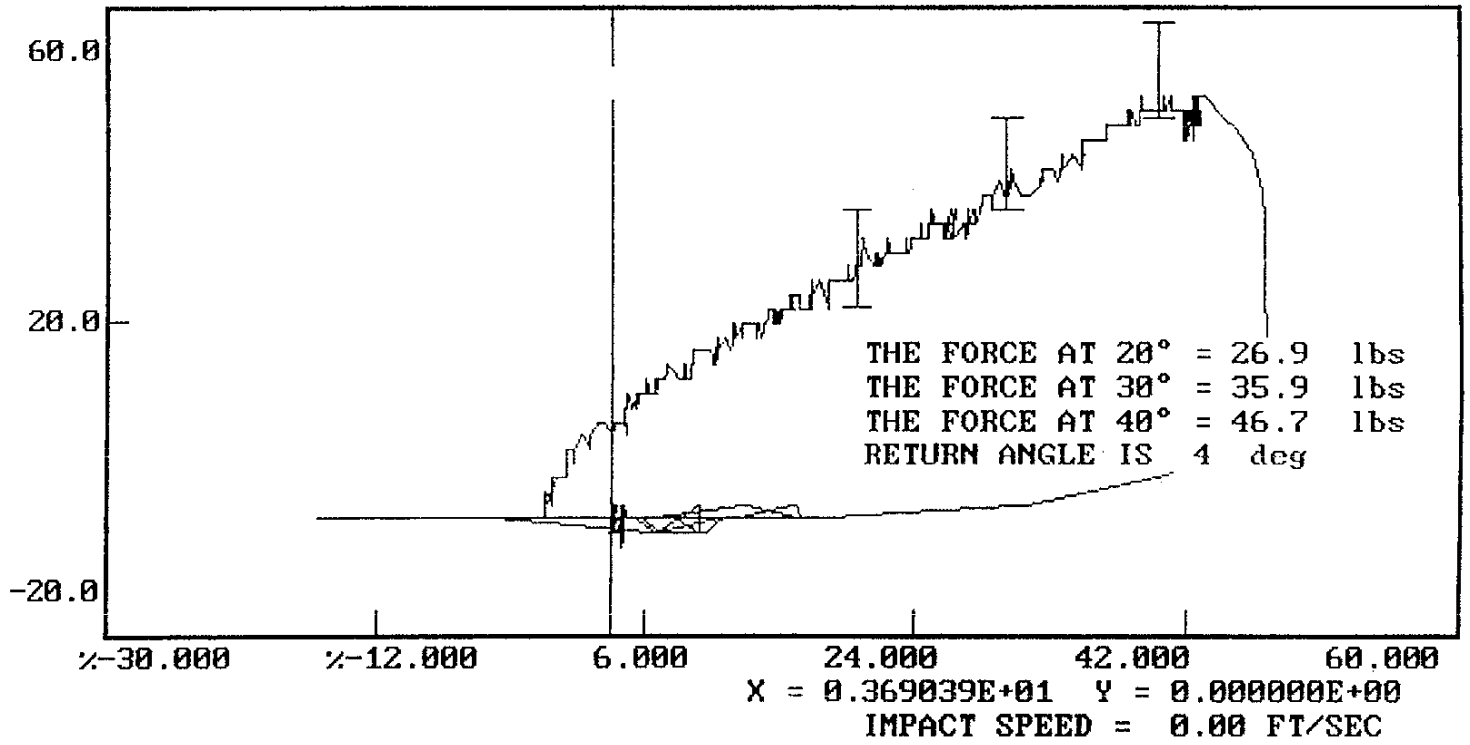
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	30%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	27
FORCE @ 30°	34 - 46 lbs	36
FORCE @ 40°	46 - 58 lbs	47
RETURN ANGLE	12° maximum	4°

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

DUMMY CALIBRATION - LUMBAR FLEXION 12-04-1996 15:57
DUMMY # 269
FORCE (LBS) VS. TORSO ROTATION (DEGREES)



X = 0.369039E+01 Y = 0.000000E+00
IMPACT SPEED = 0.00 FT/SEC

PRE-TEST CERTIFICATION DATA

Rear Dummy Serial Number: 270

Calibration Test Results Summary

Passenger Serial Number: 270

Pre-Test Calibration

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

SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 270 DATE OF VERIFICATION: December 4, 1996

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

MEASUREMENTS BY: _____

APPROVED BY: _____

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: December 4, 1996

DUMMY NUMBER: 270 TEST NUMBER: D962012

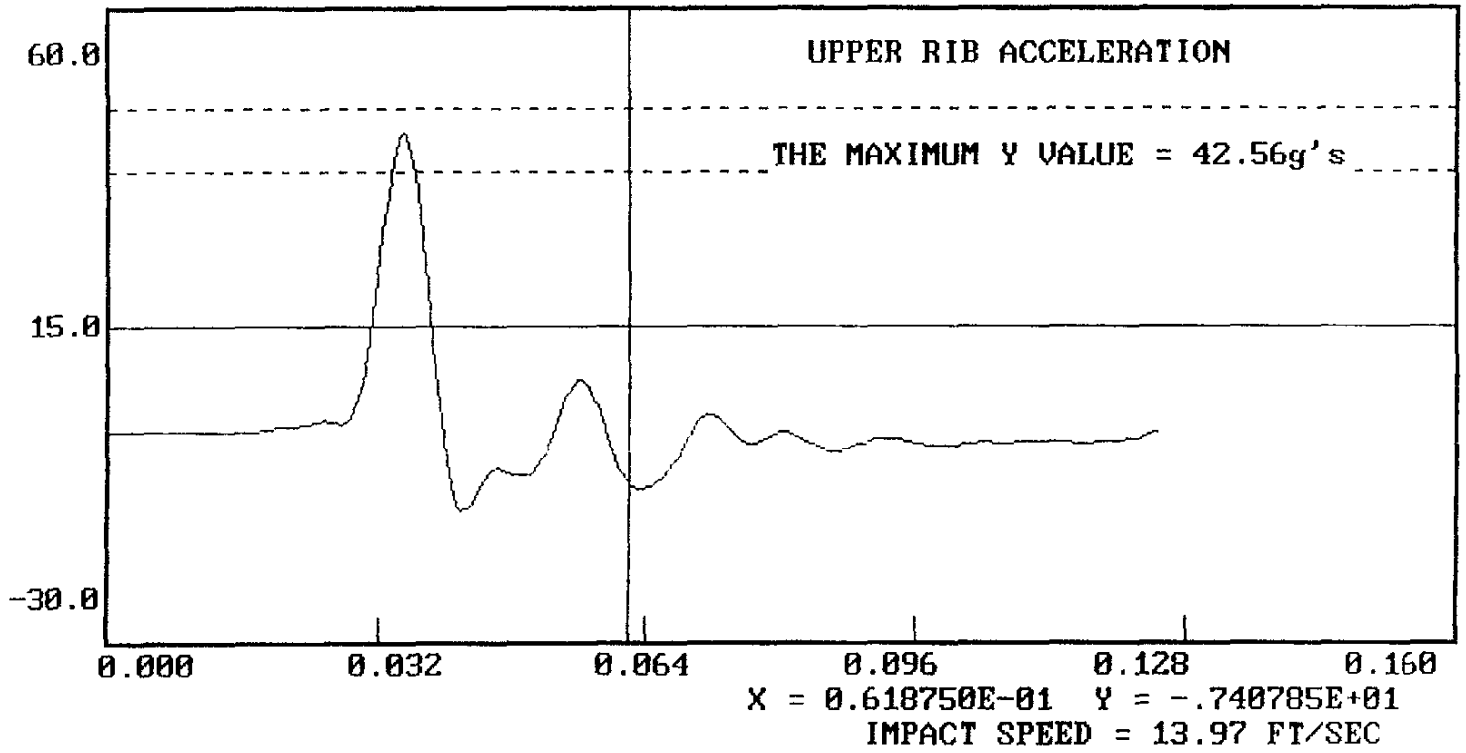
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	25%
PROBE SPEED	13.8 - 14.2 fps	14.0
UPPER RIB	37 - 46 g's	43
LOWER RIB	37 - 46 g's	43
LOWER SPINE	15 - 22 g's	21

TEST MEETS SPECIFICATIONS

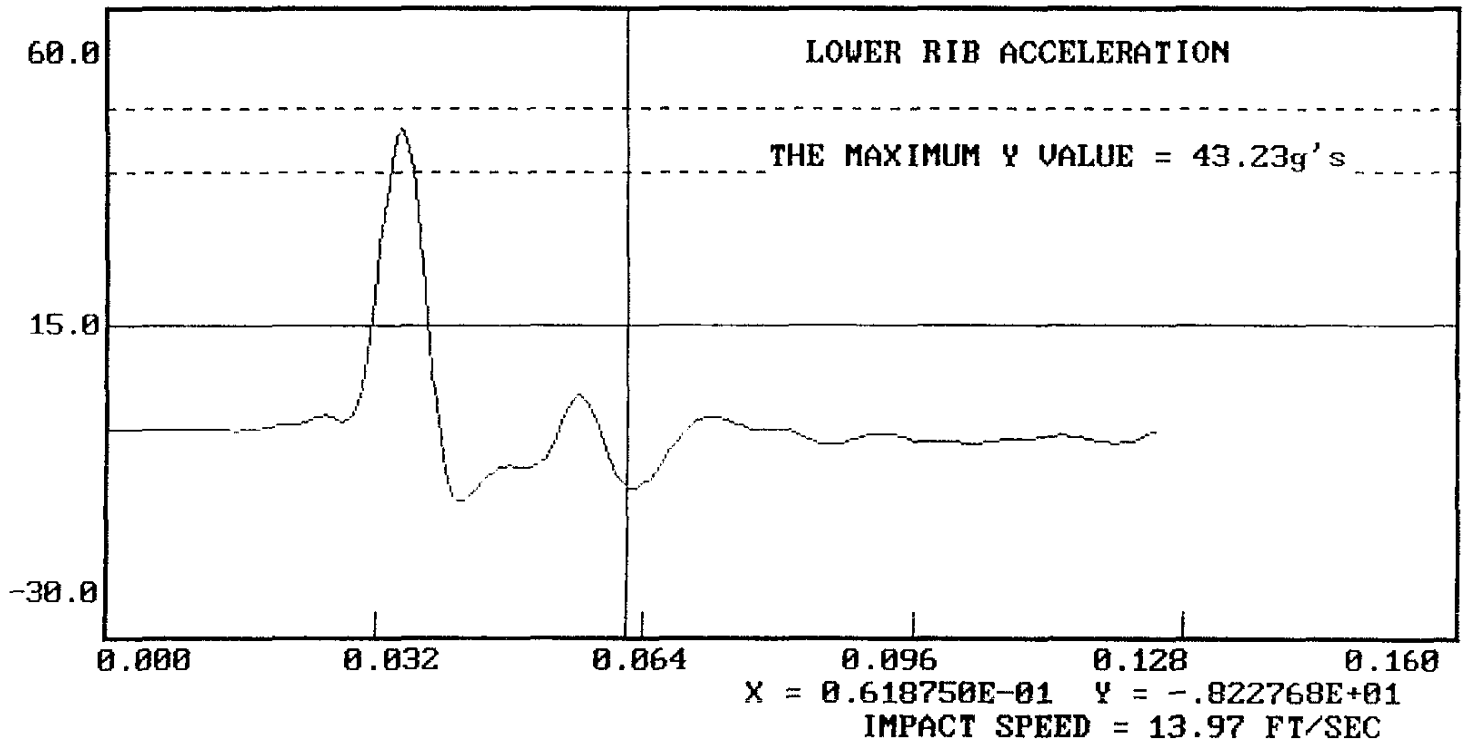
TECHNICIAN _____

APPROVED BY _____

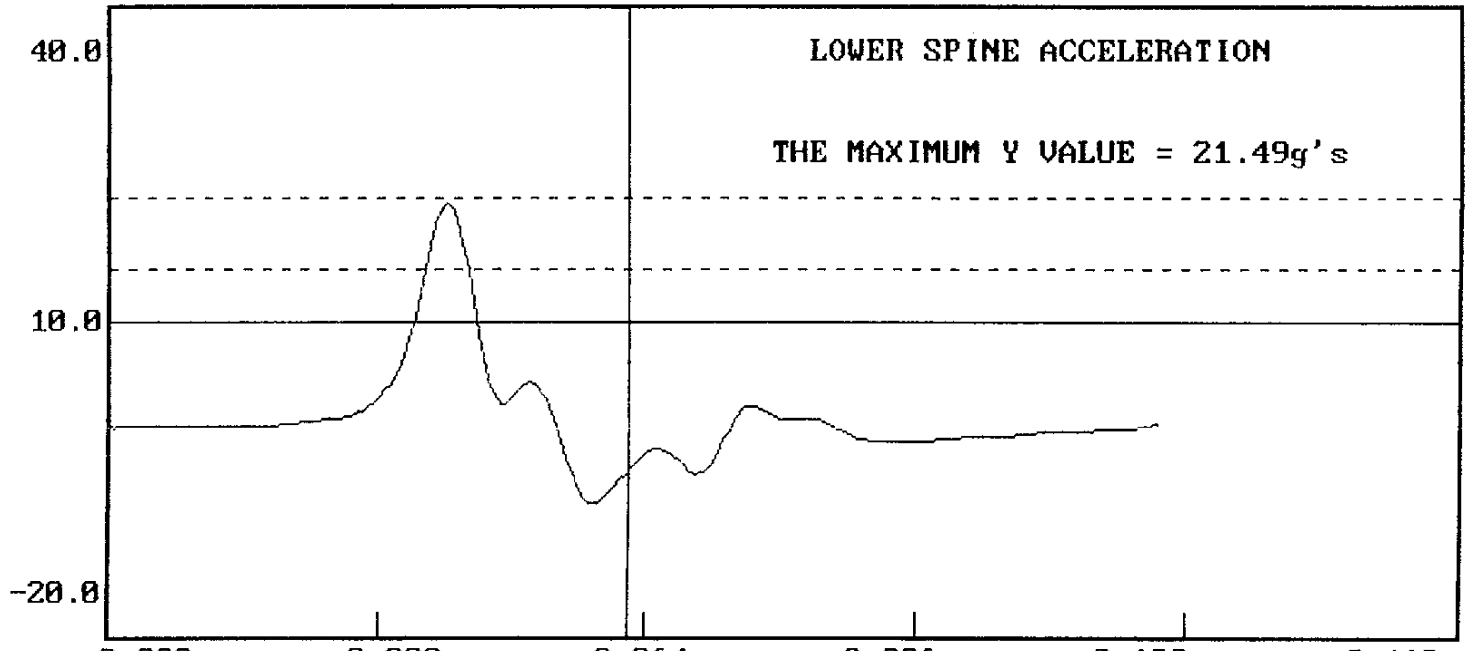
DUMMY CALIBRATION - THORAX IMPACT 12-04-1996 12:44
DUMMY # 270
ACCELERATION (G'S) VS. TIME ((SECONDS))



DUMMY CALIBRATION - THORAX IMPACT 12-04-1996 12:44
DUMMY # 270
ACCELERATION (G'S) VS. TIME ((SECONDS))



DUMMY CALIBRATION - THORAX IMPACT 12-04-1996 12:45
DUMMY # 270
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.407939E+01
IMPACT SPEED = 13.97 FT/SEC

MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: December 4, 1996

DUMMY NUMBER: 270 TEST NUMBER: D962013

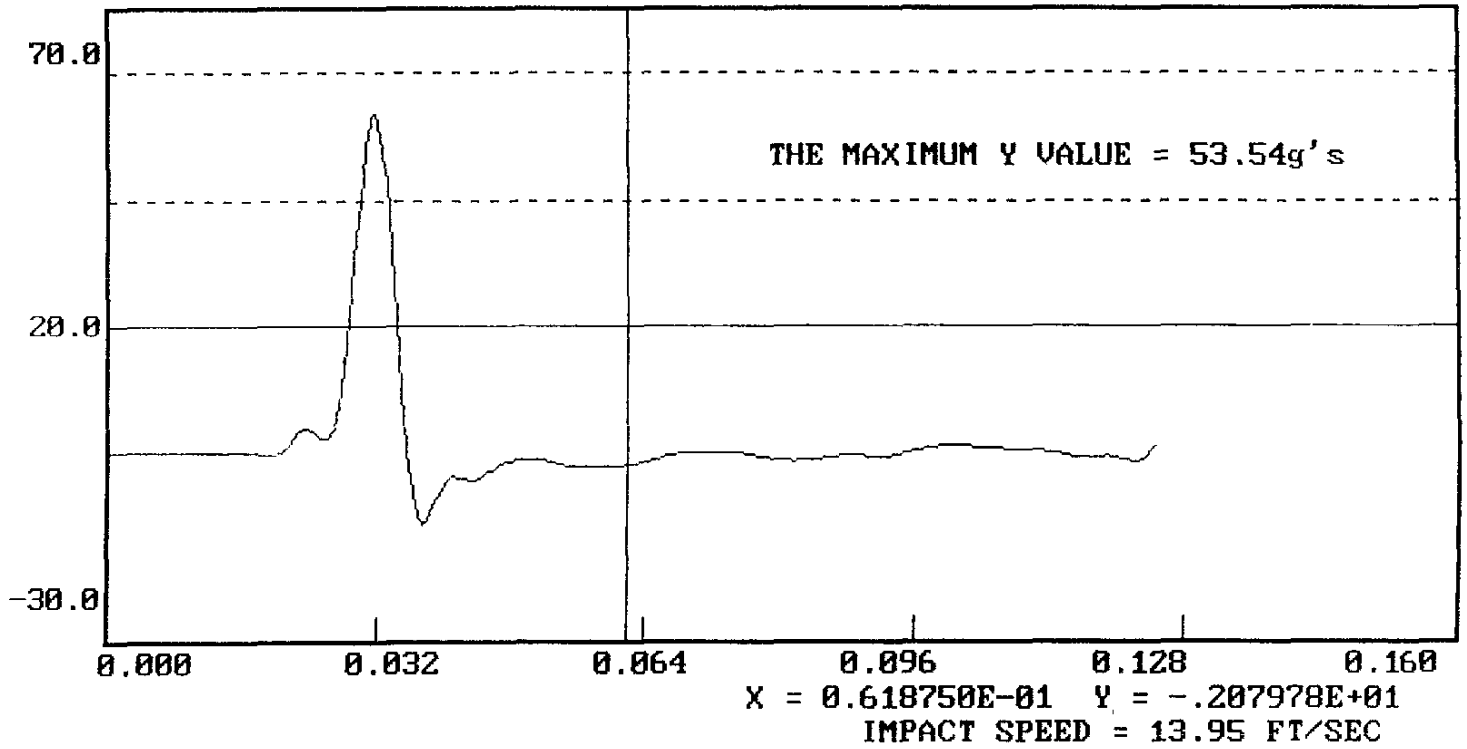
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	30%
PROBE SPEED	13.8 - 14.2 f/s	14.0
PELVIS ACCELERATION	40 - 60 g's	54

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

DUMMY CALIBRATION - PELVIS IMPACT 12-04-1996 12:55
DUMMY # 270
ACCELERATION (G'S) VS. TIME ((SECONDS))



MGA RESEARCH CORPORATION

ABDOMINAL COMPRESSION TEST
(PRELOAD = 10 LBS)

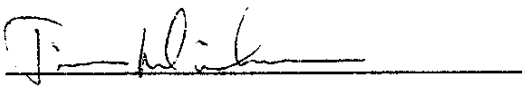
SIDE IMPACT DUMMY (SID)

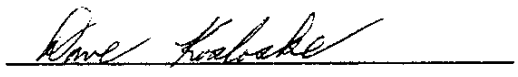
DATE: December 4, 1996

DUMMY NUMBER: 270 TEST NUMBER: D962014

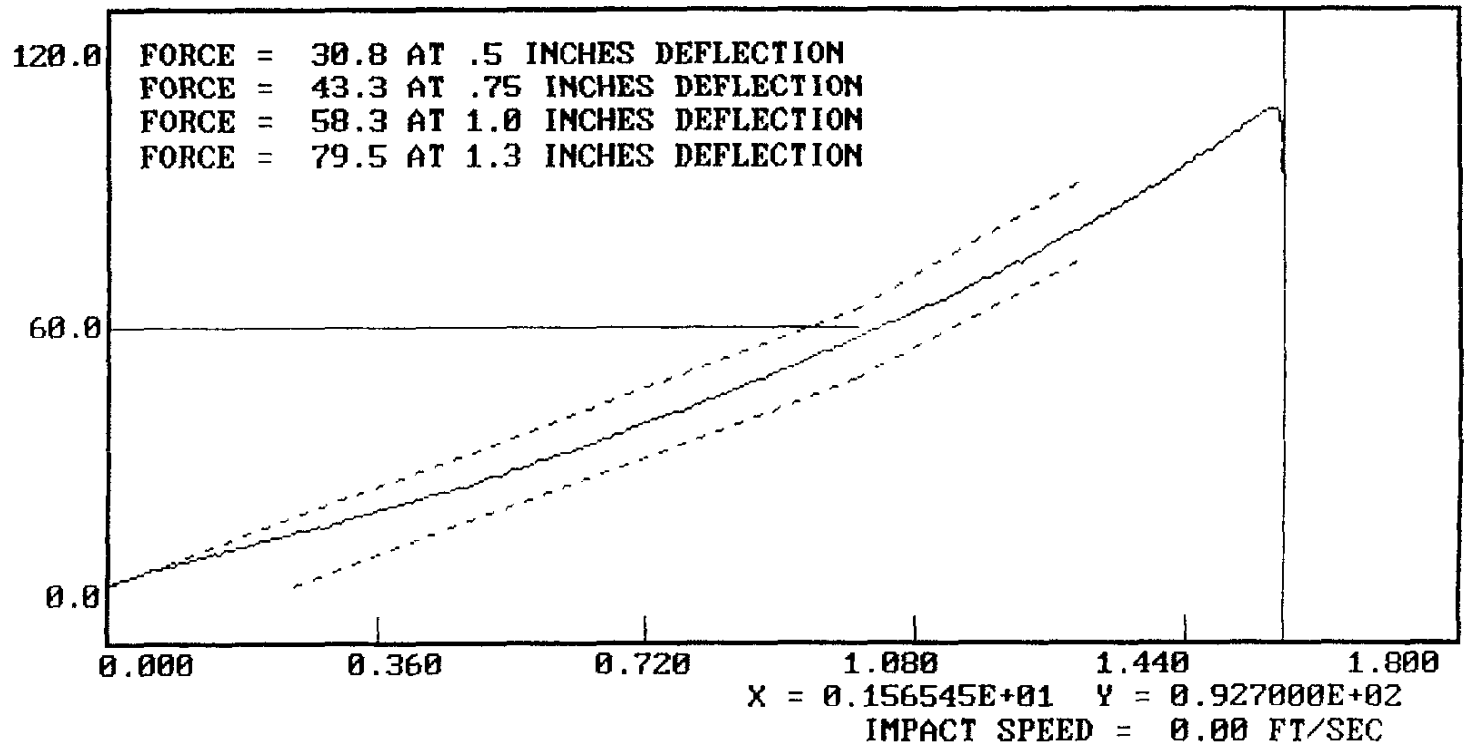
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	30%
FORCE @ 0.5 in	23.3 - 36.5 lbs	30.8
FORCE @ 0.75 in	36.7 - 49.8 lbs	43.3
FORCE @ 1.0 in	50 - 63 lbs	58
FORCE @ 1.3 in	73 - 88 lbs	80

TEST MEETS SPECIFICATIONS

TECHNICIAN 

APPROVED BY 

DUMMY CALIBRATION - ABDOMEN COMPRESSION 12-04-1996 15:25
DUMMY # 270
ABDOMEN FORCE (LBS) VS. ABDOMEN DISPLACEMENT (INCHES)



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

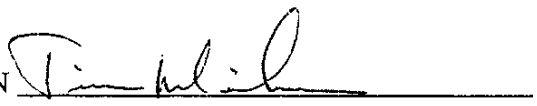
SIDE IMPACT DUMMY (SID)

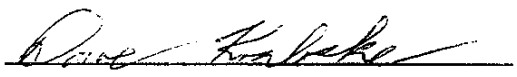
DATE: December 4, 1996

DUMMY NUMBER: 270 TEST NUMBER: D962015

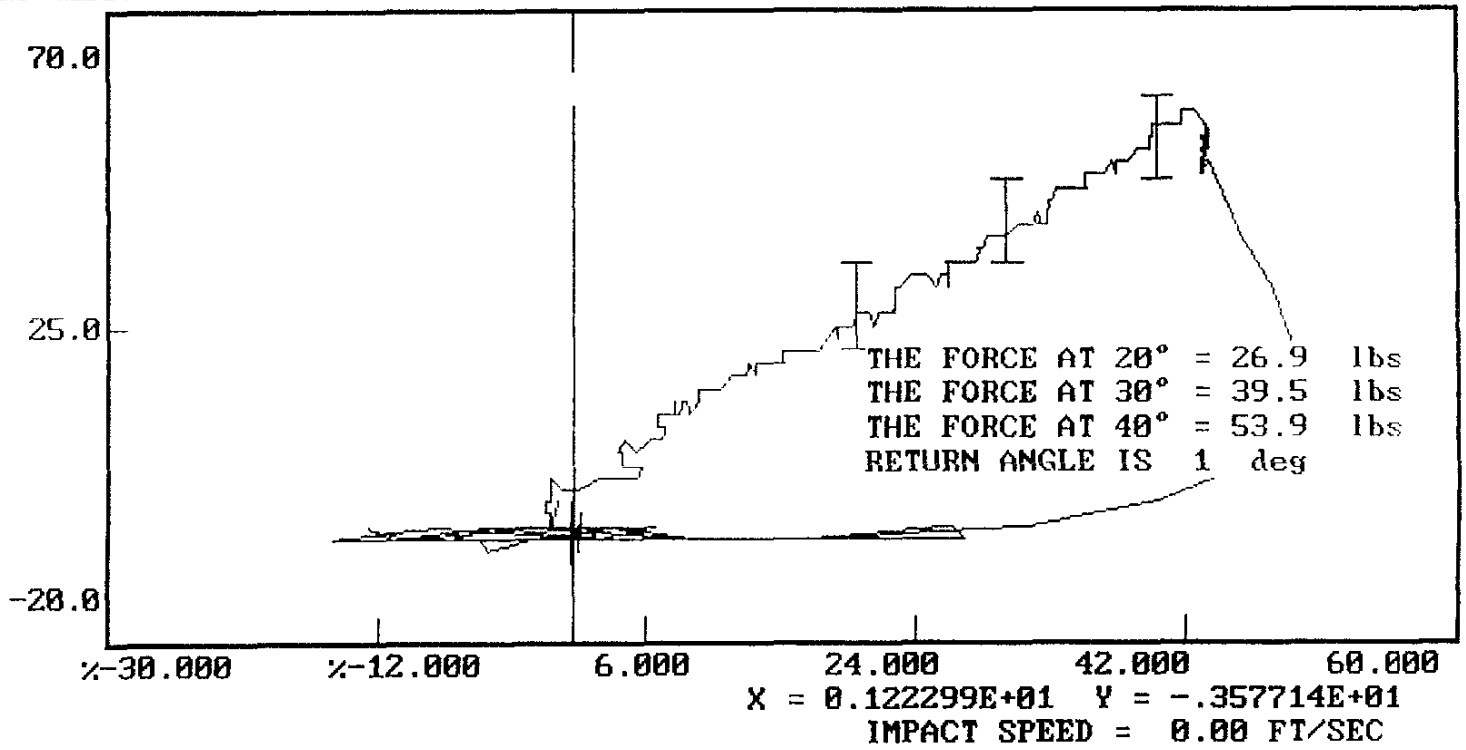
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	30%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	27
FORCE @ 30°	34 - 46 lbs	40
FORCE @ 40°	46 - 58 lbs	54
RETURN ANGLE	12° maximum	1°

TEST MEETS SPECIFICATIONS

TECHNICIAN 

APPROVED BY 

DUMMY CALIBRATION - LUMBAR FLEXION 12-04-1996 15:45
DUMMY # 270
FORCE (LBS) VS. TORSO ROTATION (DEGREES)



POST-TEST CERTIFICATION DATA

Front Dummy Serial Number: 269

Calibration Test Results Summary

Dummy Serial Number: 269

Post-Test Calibration

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

SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 269 DATE OF VERIFICATION: December 8, 1996

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

MEASUREMENTS BY: _____

APPROVED BY: _____

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: December 8, 1996

DUMMY NUMBER: 269 TEST NUMBER: D962022

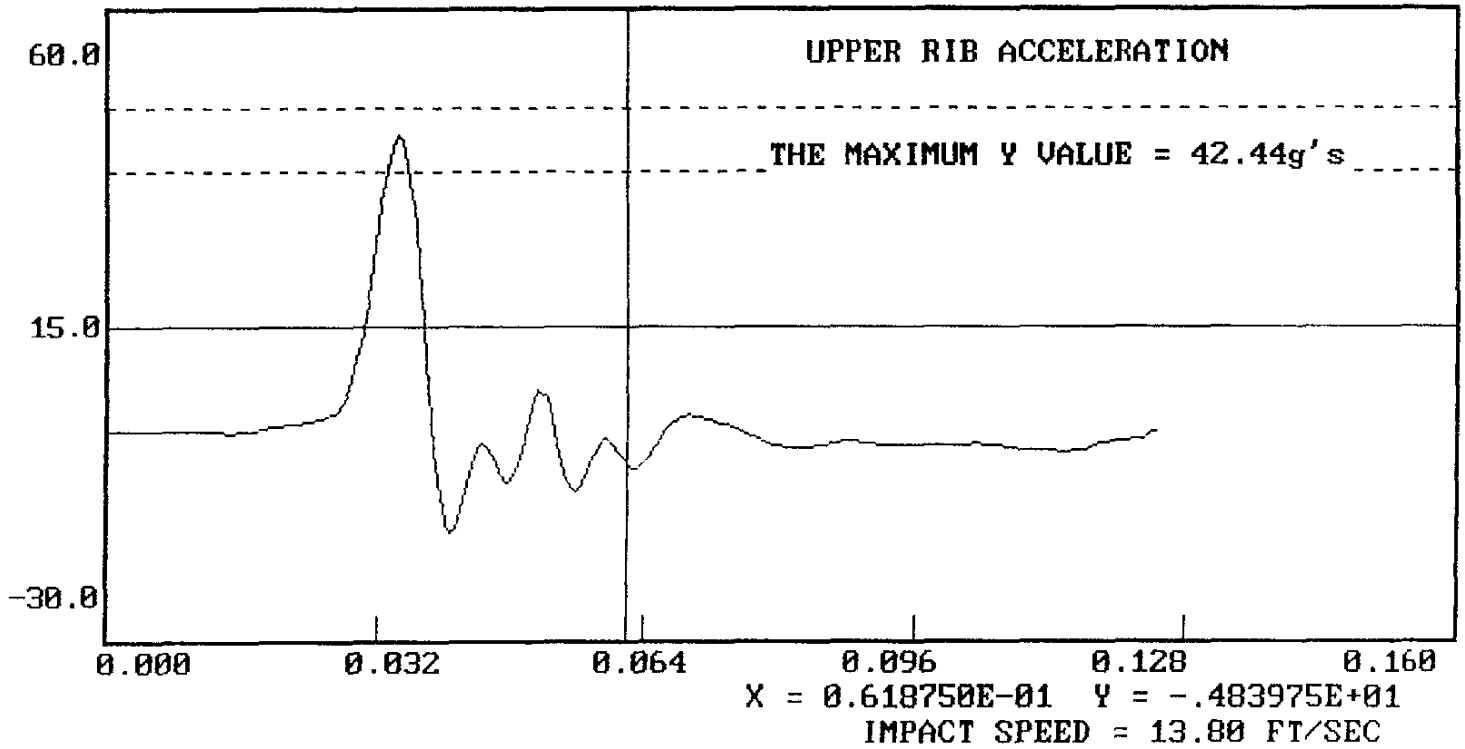
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	22%
PROBE SPEED	13.8 - 14.2 fps	13.8
UPPER RIB	37 - 46 g's	42
LOWER RIB	37 - 46 g's	43
LOWER SPINE	15 - 22 g's	17

TEST MEETS SPECIFICATIONS

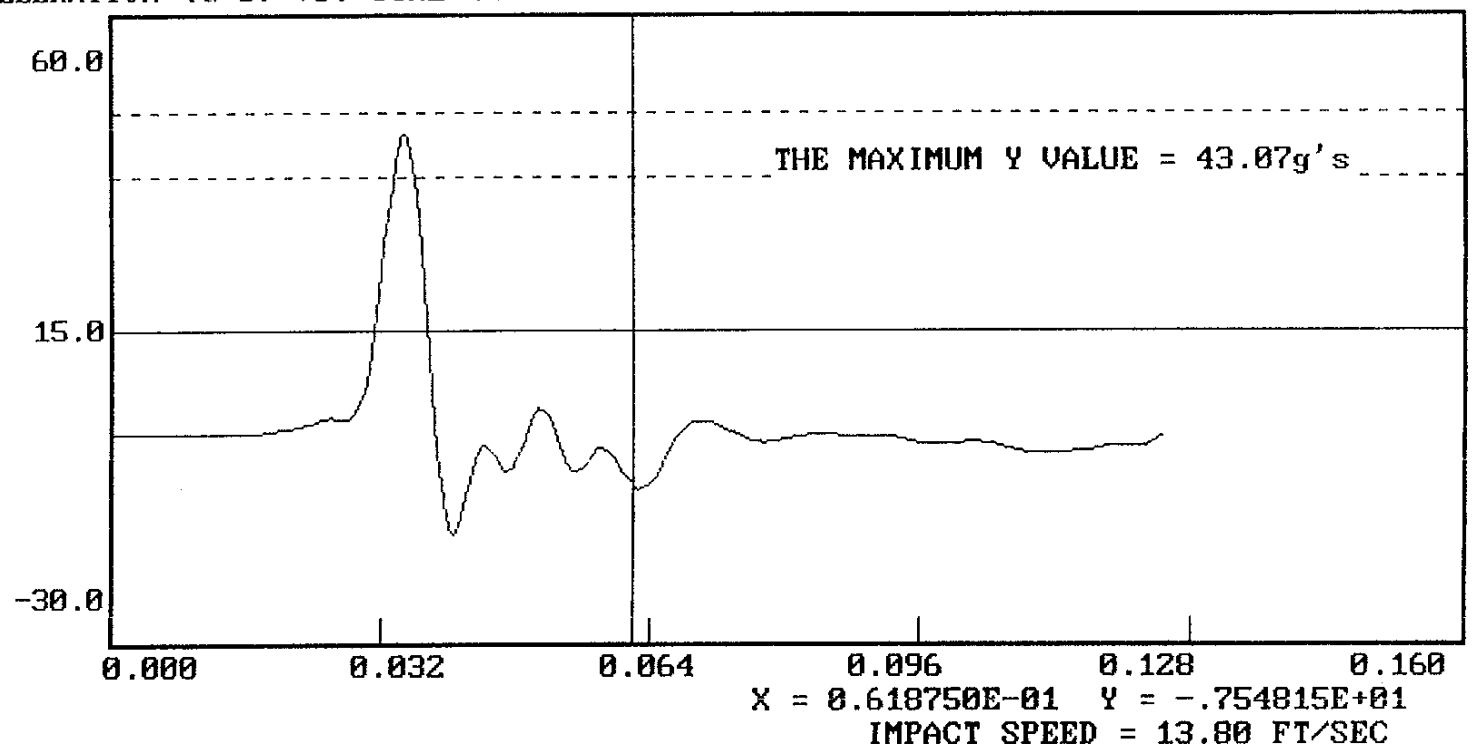
TECHNICIAN _____

APPROVED BY _____

DUMMY CALIBRATION - THORAX IMPACT 12-08-1996 12:06
DUMMY # 269
ACCELERATION (G'S) VS. TIME ((SECONDS))

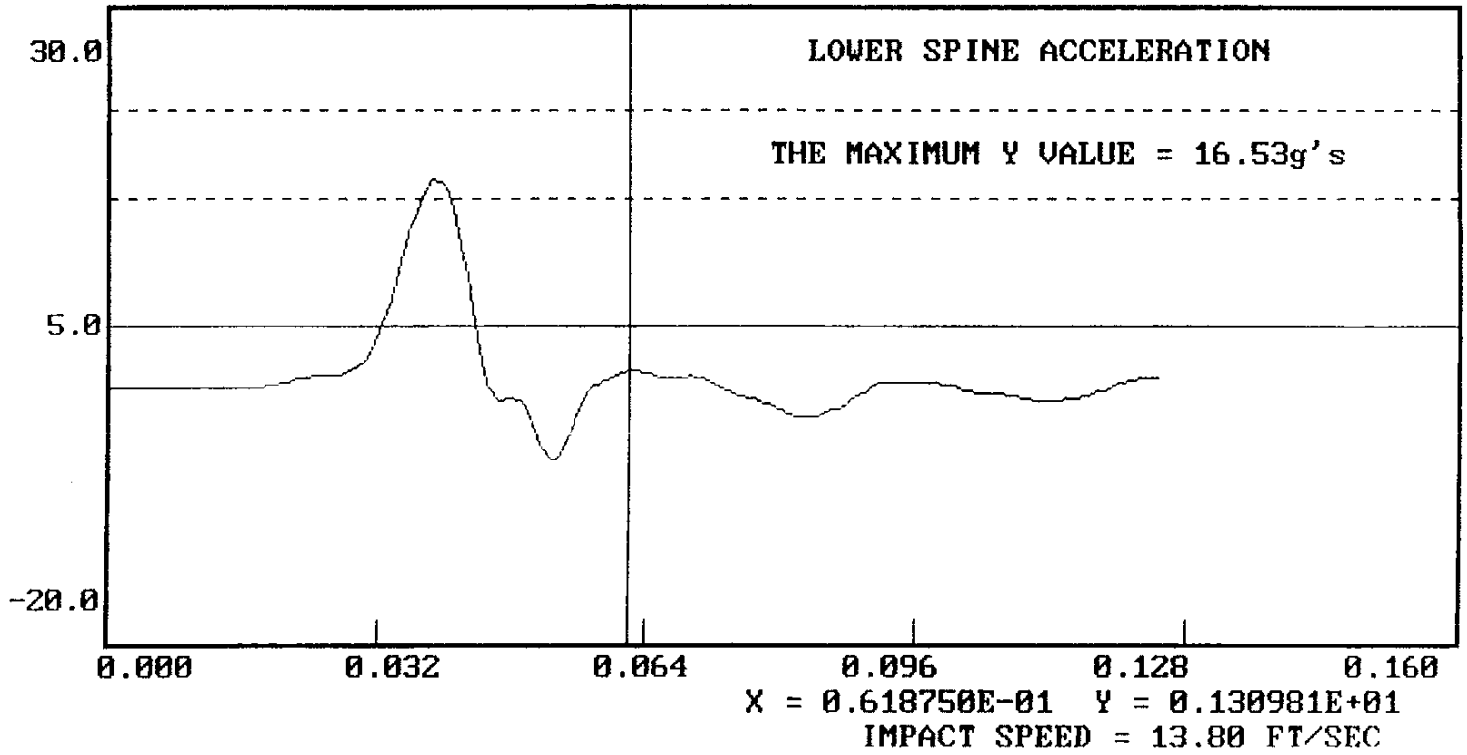


DUMMY CALIBRATION - THORAX IMPACT 12-08-1996 12:06
DUMMY # 269
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.754815E+01
IMPACT SPEED = 13.80 FT/SEC

DUMMY CALIBRATION - THORAX IMPACT 12-08-1996 12:06
DUMMY # 269
G'S (ACCELERATION) VS. TIME ((SECONDS))



MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: December 8, 1996

DUMMY NUMBER: 269 TEST NUMBER: D962023

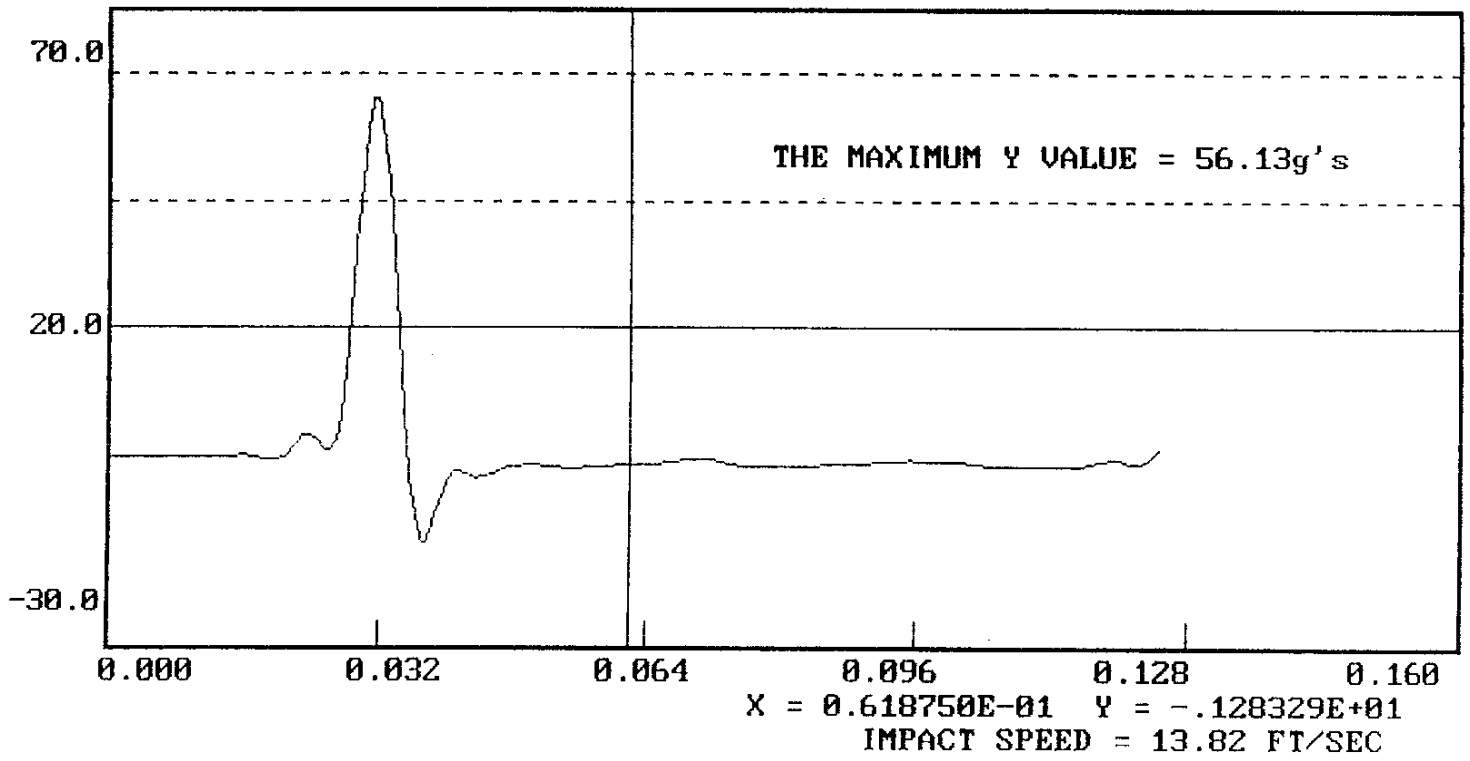
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	22%
PROBE SPEED	13.8 - 14.2 f/s	13.8
PELVIS ACCELERATION	40 - 60 g's	56

TEST MEETS SPECIFICATIONS

TECHNICIAN

APPROVED BY

DUMMY CALIBRATION - PELVIS IMPACT 12-08-1996 12:14
DUMMY # 269
G'S (ACCELERATION) VS. TIME ((SECONDS))



MGA RESEARCH CORPORATION

ABDOMINAL COMPRESSION TEST
(PRELOAD = 10 LBS)

SIDE IMPACT DUMMY (SID)

DATE: December 8, 1996

DUMMY NUMBER: 269 TEST NUMBER: D962024

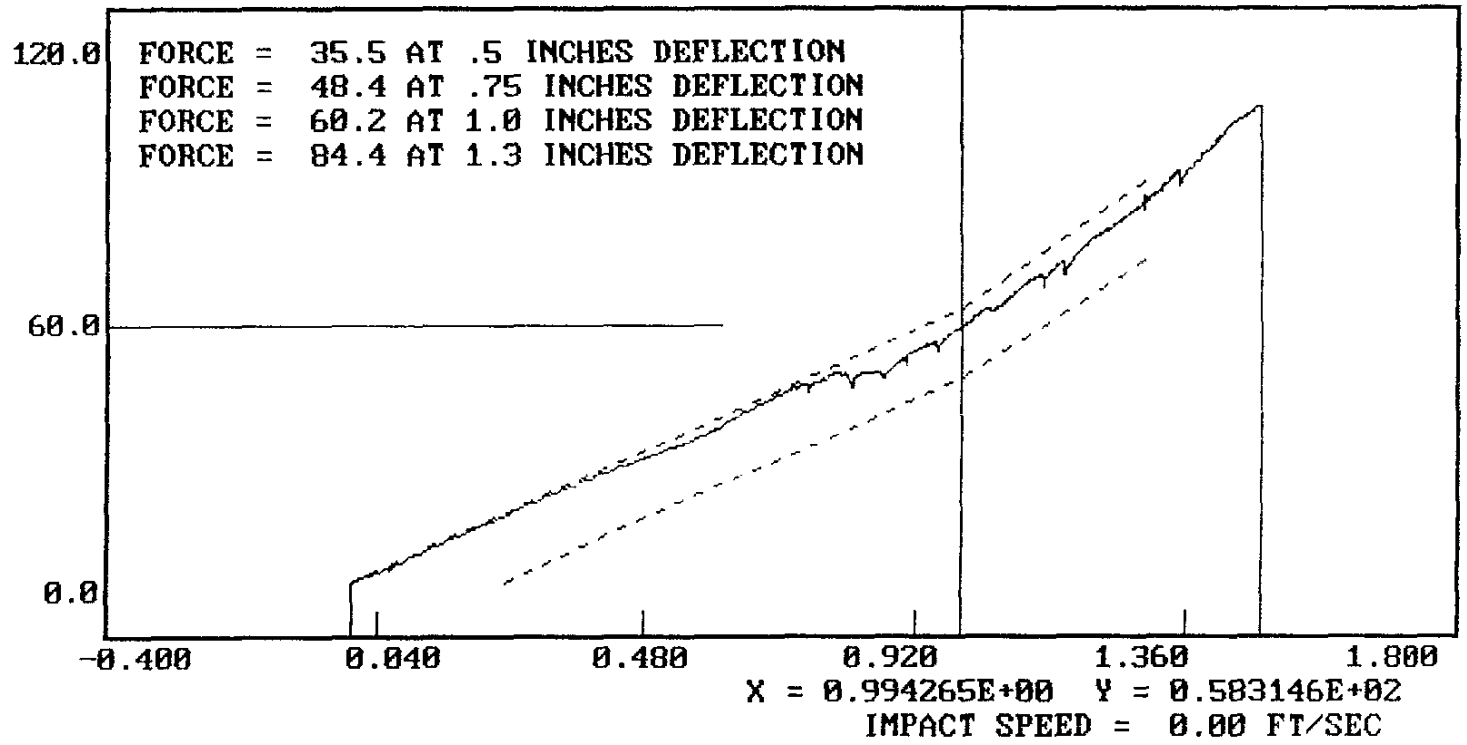
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	22%
FORCE @ 0.5 in	23.3 - 36.5 lbs	35.5
FORCE @ 0.75 in	36.7 - 49.8 lbs	48.4
FORCE @ 1.0 in	50 - 63 lbs	60
FORCE @ 1.3 in	73 - 88 lbs	84

TEST MEETS SPECIFICATIONS

TECHNICIAN 

APPROVED BY 

DUMMY CALIBRATION - ABDOMEN COMPRESSION 12-08-1996 10:41
DUMMY # 269
ABDOMEN FORCE (LBS) VS. ABDOMEN DISPLACEMENT (INCHES)



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: December 8, 1996

DUMMY NUMBER: 269 TEST NUMBER: D962025

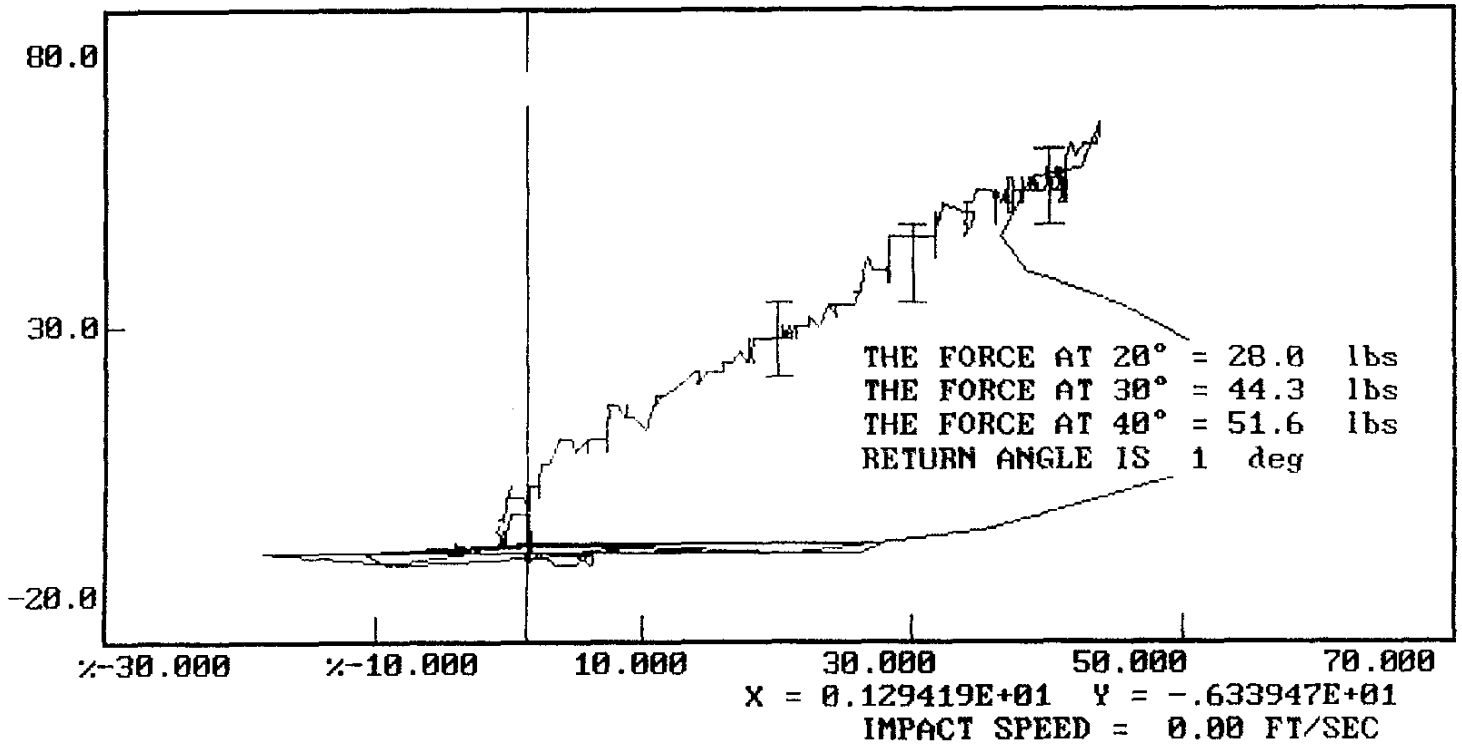
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	22%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	28
FORCE @ 30°	34 - 46 lbs	44
FORCE @ 40°	46 - 58 lbs	52
RETURN ANGLE	12° maximum	1°

TEST MEETS SPECIFICATIONS

TECHNICIAN

APPROVED BY

DUMMY CALIBRATION - LUMBAR FLEXION 12-08-1996 10:31
DUMMY # 269
FORCE (LBS) VS. TORSO ROTATION (DEGREES)



POST-TEST CERTIFICATION DATA

Rear Dummy Serial Number: 270

Calibration Test Results Summary

Dummy Serial Number: 270

Post-Test Calibration

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

SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 270 DATE OF VERIFICATION: December 8, 1996

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

MEASUREMENTS BY: _____

APPROVED BY: _____

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: December 8, 1996

DUMMY NUMBER: 270 TEST NUMBER: D962032

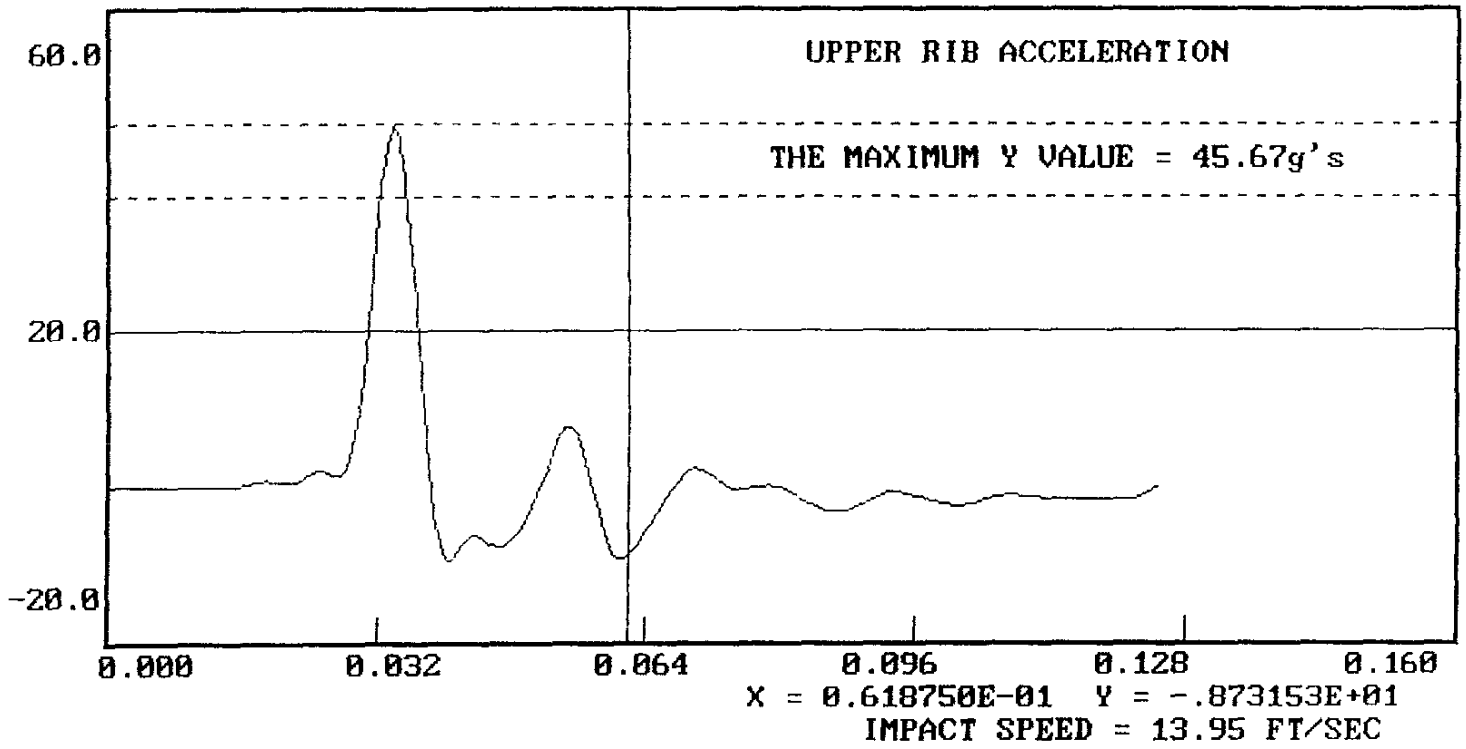
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	22%
PROBE SPEED	13.8 - 14.2 fps	14.0
UPPER RIB	37 - 46 g's	46
LOWER RIB	37 - 46 g's	44
LOWER SPINE	15 - 22 g's	22

TEST MEETS SPECIFICATIONS

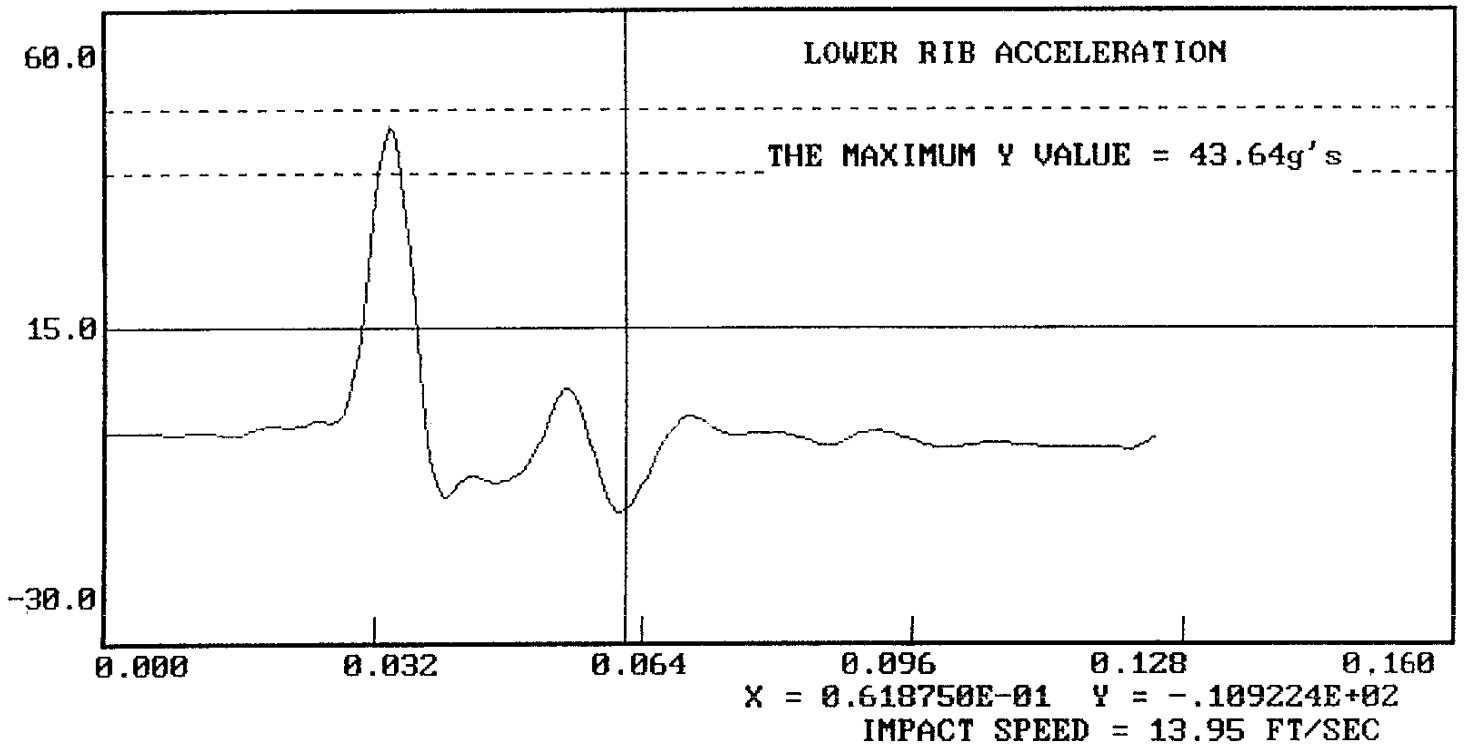
TECHNICIAN

APPROVED BY

DUMMY CALIBRATION - THORAX IMPACT 12-08-1996 11:41
DUMMY # 270
ACCELERATION (G'S) VS. TIME ((SECONDS))

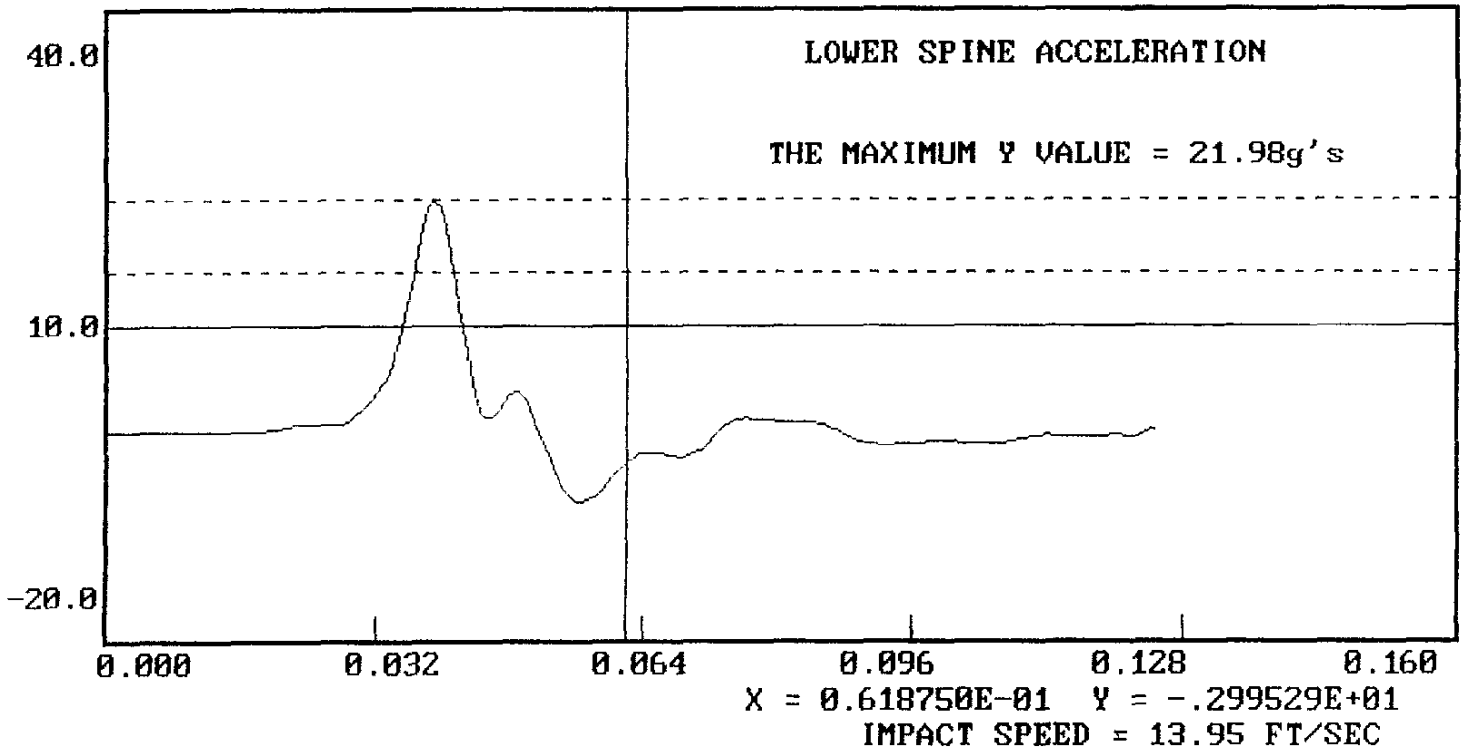


DUMMY CALIBRATION - THORAX IMPACT 12-08-1996 11:41
DUMMY # 270
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.109224E+02
IMPACT SPEED = 13.95 FT/SEC

DUMMY CALIBRATION - THORAX IMPACT 12-08-1996 11:42
DUMMY # 270
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.299529E+01
IMPACT SPEED = 13.95 FT/SEC

MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

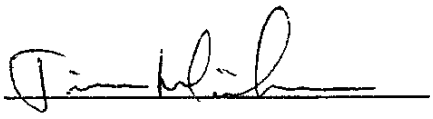
SIDE IMPACT DUMMY (SID)

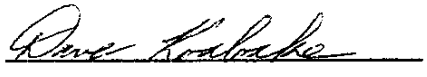
DATE: December 8, 1996

DUMMY NUMBER: 270 TEST NUMBER: D962033

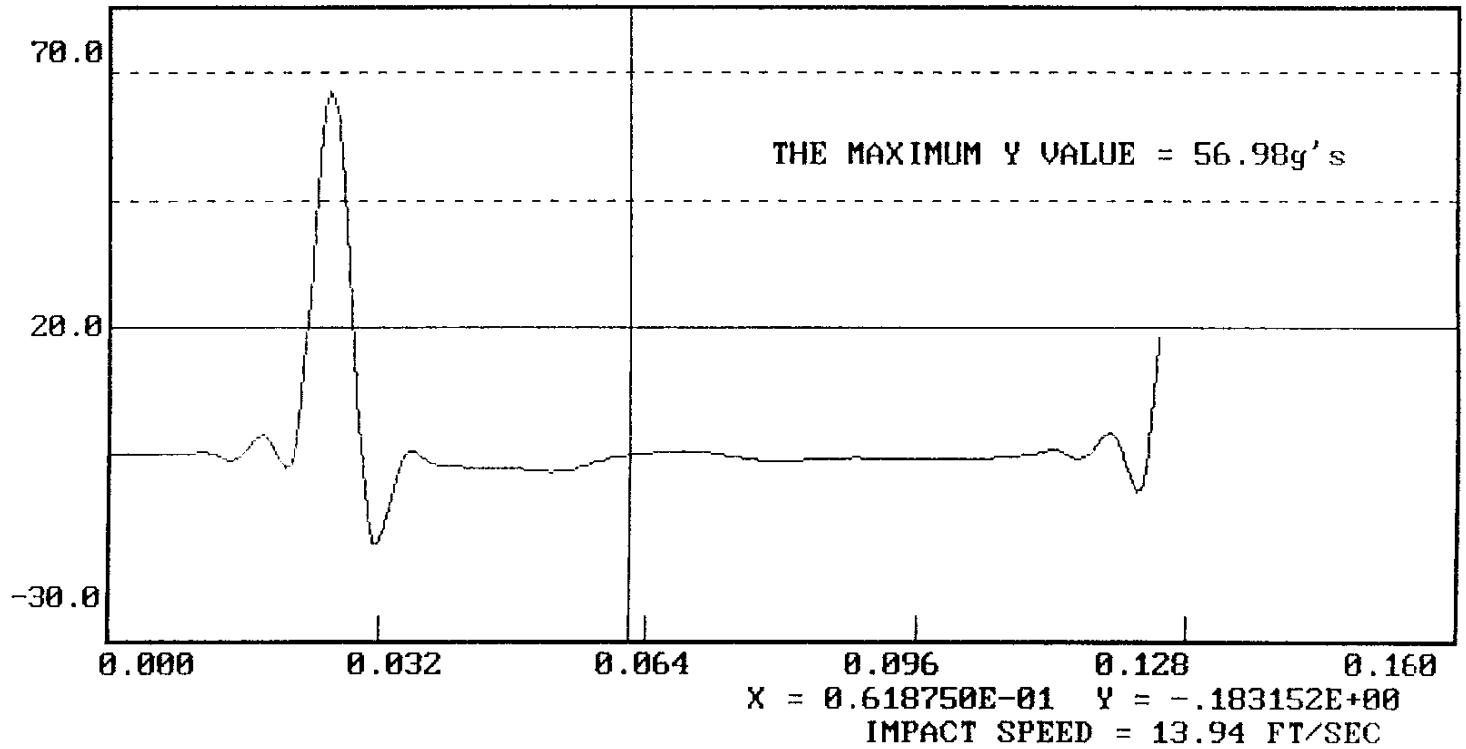
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	22%
PROBE SPEED	13.8 - 14.2 f/s	13.9
PELVIS ACCELERATION	40 - 60 g's	57

TEST MEETS SPECIFICATIONS

TECHNICIAN 

APPROVED BY 

DUMMY CALIBRATION - PELVIS IMPACT 12-08-1996 11:25
DUMMY # 270
ACCELERATION (G'S) VS. TIME ((SECONDS))



MGA RESEARCH CORPORATION

ABDOMINAL COMPRESSION TEST
(PRELOAD = 10 LBS)

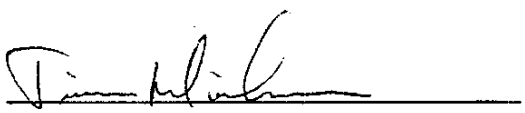
SIDE IMPACT DUMMY (SID)

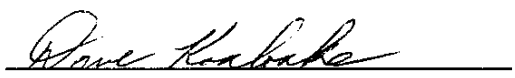
DATE: December 8, 1996

DUMMY NUMBER: 270 TEST NUMBER: D962034

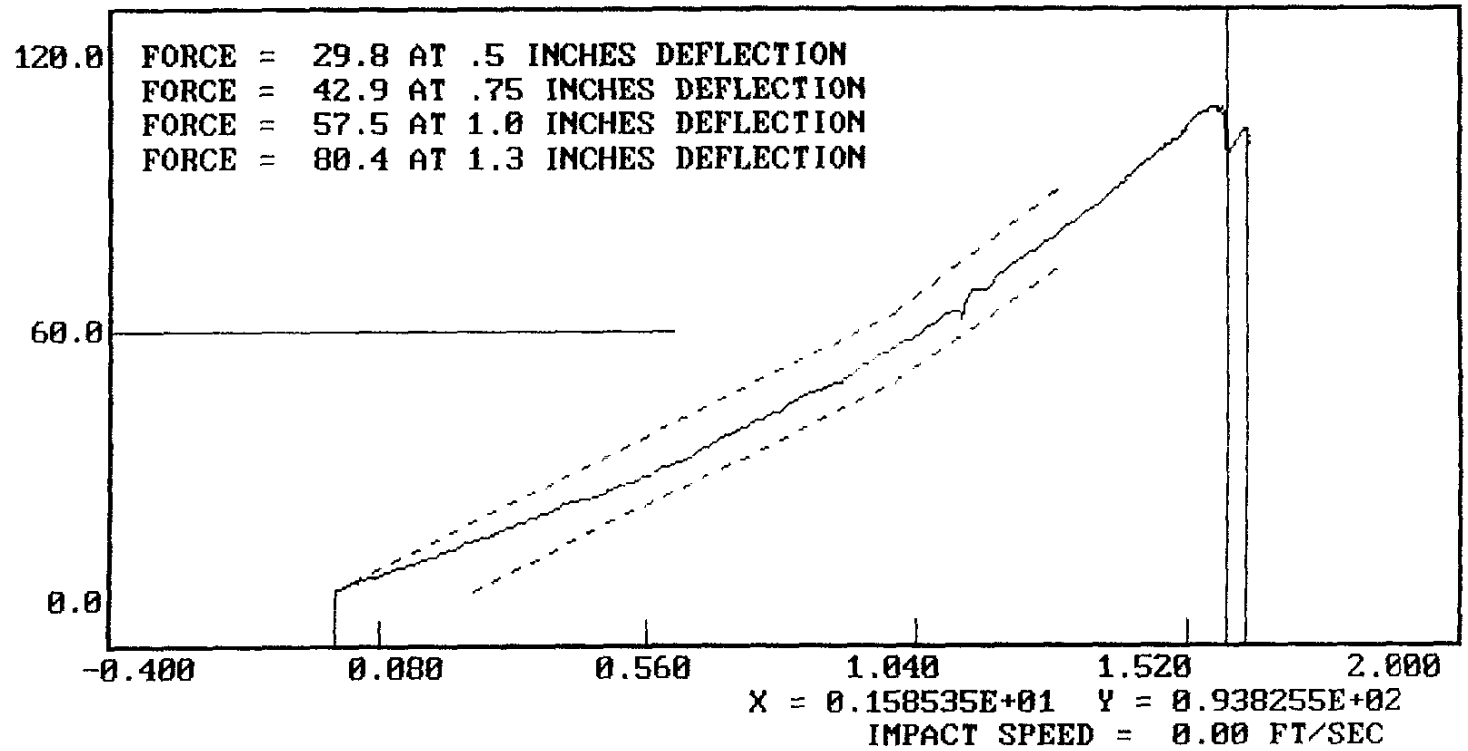
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	22%
FORCE @ 0.5 in	23.3 - 36.5 lbs	29.8
FORCE @ 0.75 in	36.7 - 49.8 lbs	42.9
FORCE @ 1.0 in	50 - 63 lbs	58
FORCE @ 1.3 in	73 - 88 lbs	80

TEST MEETS SPECIFICATIONS

TECHNICIAN 

APPROVED BY 

DUMMY CALIBRATION - ABDOMEN COMPRESSION 12-08-1996 10:46
DUMMY # 270
ABDOMEN FORCE (LBS) VS. ABDOMEN DISPLACEMENT (INCHES)



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: December 8, 1996

DUMMY NUMBER: 270 TEST NUMBER: D962035

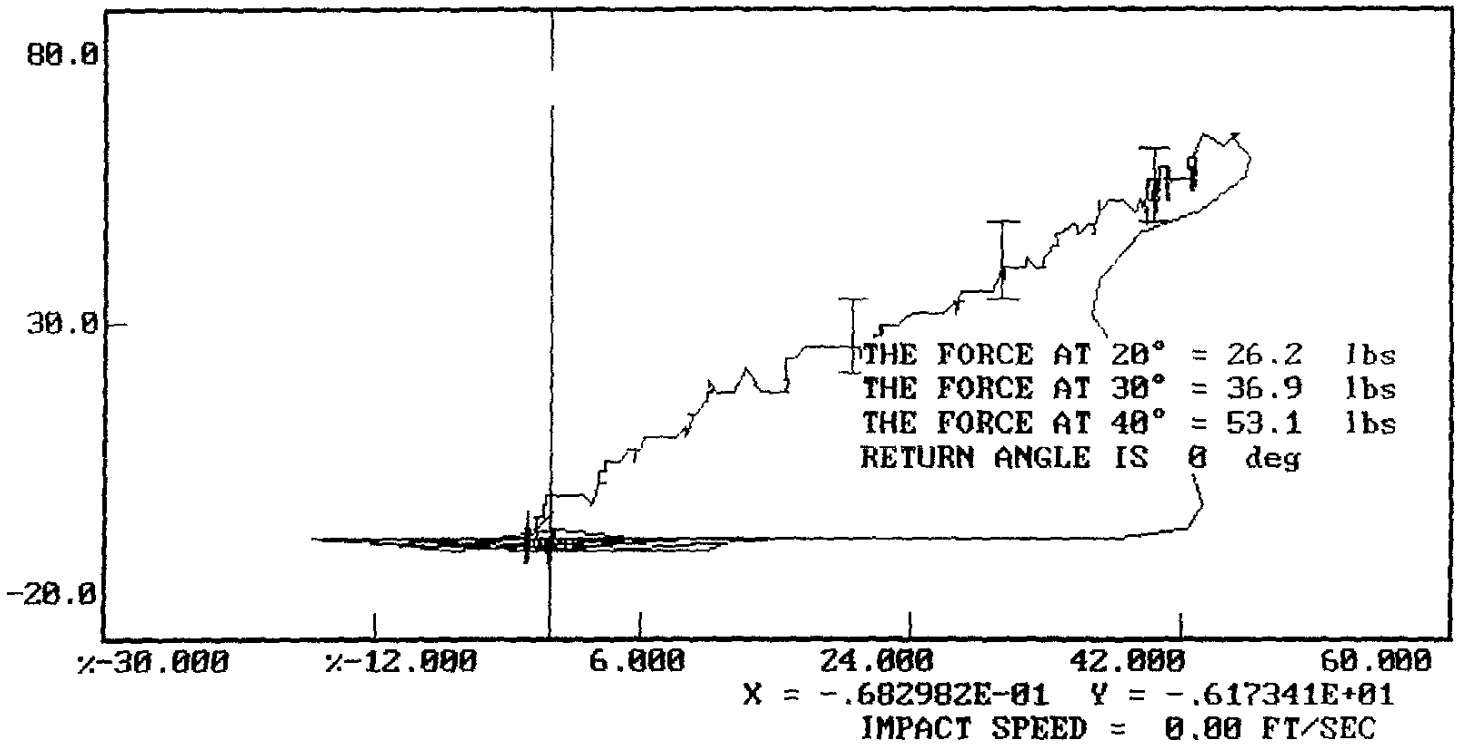
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	22%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	26
FORCE @ 30°	34 - 46 lbs	37
FORCE @ 40°	46 - 58 lbs	53
RETURN ANGLE	12° maximum	0°

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

DUMMY CALIBRATION - LUMBAR FLEXION 12-08-1996 10:12
DUMMY # 270
FORCE (LBS) VS. TORSO ROTATION (DEGREES)



POST-TEST DRIVER DUMMY INSPECTION CHECKLIST

Type: Side Impact Dummy

Serial Number: 269

Inspected By: Tim Michnay

Date: December 8, 1996

Part	Items Checked	Comments
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: 270

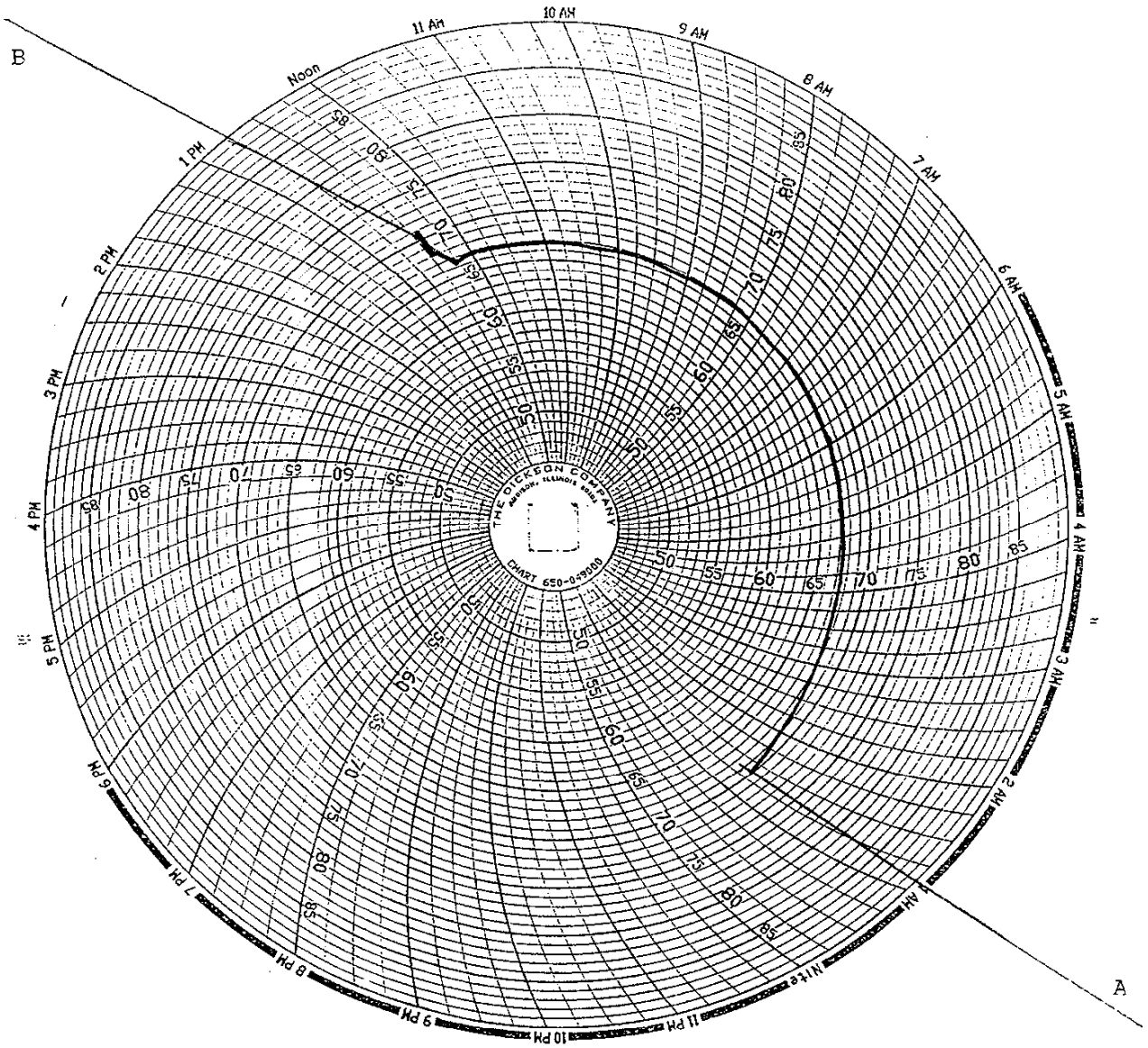
Inspected By: Tim Michnay

Date: December 8, 1996

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

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

VEHICLE AND DUMMY TEMPERATURE



A = dummies installed in vehicle
B = test conducted

APPENDIX D

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

DUMMY AND VEHICLE CALIBRATION DATA

INSTRUMENTS FOR DRIVER DUMMY NO. 269

	DRIVER		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Upper Rib Y	AGTM2	Endevco	9/10/96
Lower Rib Y	ALEC1	Endevco	9/11/96
Lower Spine Y	AH1G2	Endevco	9/11/96
Pelvis Y	ALCN9	Endevco	9/10/96
Upper Rib Redundant Y	AGTB5	Endevco	9/10/96
Lower Rib Redundant Y	J10411	Endevco	9/11/96
Lower Spine Redundant Y	AM751	Endevco	9/11/96
Pelvis Redundant Y	AKAF3	Endevco	9/10/96

INSTRUMENTS FOR PASSENGER DUMMY NO. 270

	LEFT REAR PASSENGER		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Upper Rib Y	AP1H2	Endevco	9/10/96
Lower Rib Y	AJ9C2	Endevco	9/09/96
Lower Spine Y	AP2D7	Endevco	9/10/96
Pelvis Y	ALCH7	Endevco	9/09/96
Upper Rib Redundant Y	AGTB5	Endevco	9/10/96
Lower Rib Redundant Y	J10411	Endevco	9/11/96
Lower Spine Redundant Y	AM751	Endevco	9/11/96
Pelvis Redundant Y	AKAF3	Endevco	9/10/96

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	B14-R13	Entran	7/15/96
Left Mid A-Post Y	L14-D17	Entran	12/03/96
Left Lower A-Post Y	F07-A06	Entran	12/03/96
Left Mid B-Post Y	A09-G05	Entran	12/02/96
Left Lower B-Post Y	C25-A11	Entran	12/03/96
Rear Floorpan Above Axle X	A09-G08	Entran	7/11/96
Rear Floorpan Above Axle Y	J06-D23	Entran	7/03/96
Rear Floorpan Above Axle Z	D05-R14	Entran	7/11/96
Driver Seat Track Y	C06-G12	Entran	12/03/96
Right Side Sill at Front Seat X	A10-G04	Entran	7/11/96
Right Side Sill at Front Seat Y	B28-B03	Entran	7/11/96
Right Side Sill at Front Seat Z	C14-Z15	Entran	7/11/96
Right Side Sill at Rear Seat X	B13-Z02	Entran	7/11/96
Right Side Sill at Rear Seat Y	E13-D07	Entran	7/10/96
Right Side Sill at Rear Seat Z	L22-G05	Entran	7/11/96
Left Side Sill at Front Seat Y	C25-A22	Entran	12/03/96

VEHICLE INSTRUMENT CALIBRATION

	VEHICLE ACCELEROMETERS		
	SERIAL NO	MANUFACTURER	CALIBRATION DATE
Left Side Sill at Rear Seat Y	B28-B01	Entran	7/15/96
Right Rear Occupant Compartment Y	A09-G03	Entran	12/03/96
Vehicle CG X	J06-D19	Entran	7/11/96
Vehicle CG Y	J10-E16	Entran	7/10/96
Vehicle CG Z	D05-R25	Entran	7/12/96

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