2507

REPORT NO.: 214D-MGA-97-19

NEW CAR ASSESSMENT PROGRAM
SIDE IMPACT TESTING
PASSENGER CARS

1997 FORD CONTOUR
4 -DOOR SEDAN
NHTSA NO: MV0208

MGA PROVING GROUNDS
5000 WARREN ROAD
BURLINGTON, WI 53105

Test Date: February 14, 1997

Report Date: March 10, 1997

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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WASHINGTON, D.C. 20590

This Final Report was prepared for the U.S. Department of Transportation, National Highway Traffic Safety Administration, under Contract No. DTNH22-93-C-02047.

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Approval Date: 3-26-97

FINAL REPORT ACCEPTED BY (OCWS):

Accepted By: _____
Contract Technical Manager

Acceptance Date: _____

TECHNICAL REPORT STANDARD TITLE PAGE

1. Report No. 214D-MGA-97-19	2. Government Accession No.	3. Recipient's Catalog No.
4. Title and Subtitle New Car Assessment Program Side Impact Test of a 1997 Ford Contour 4-Door Sedan NHTSA No. MV0208		5. Report Date March 10, 1997 6. Performing Organization Code MGA
7. Author(s) Gary Strassburg, Project Engineer		8. Performing Organization Report No. MGA-DOT-214-0
9. Performing Organization Name and Address MGA Research Corporation 5000 Warren Road Burlington, WI 53105		10. Work Unit No. 11. Contract or Grant No. DTNH22-93-C-02047
12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration Office of Crashworthiness Standards 400 Seventh St., S.W. Washington, D.C. 20590		13. Type of Report and Period Covered Final Test Report February 14, 1997 to March 10, 1997 14. Sponsoring Agency Code NPS-10
15. Supplementary Notes		

16. Abstract

A 90° Moving Deformable Barrier NCAP side impact was conducted on the subject 1997 Ford Contour 4 -Door to obtain new car assessment and research data indicant of FMVSS No. 214D performance. The test was conducted at MGA Research Corporation in Burlington, Wisconsin, on February 14, 1997.

The impact velocity of the Moving Deformable Barrier (MDB) was 61.4 kph, and the ambient temperature at the struck side (driver's) of the target vehicle at the time of impact was 21.1°C. The target vehicle post test maximum crush was 396 mm at level 2. The test vehicle's performance follows:

	DRIVER	PASS.
Left Upper Rib (LUR) Accel., g	63.9	55.2
Left Lower Rib (LLR) Accel., g	69.5	62.8
Lower Spine (T_{12}) Accel., g	76.4	56.9
Thoracic Trauma Index (TTI)	73.0	59.9
Pelvis (PEV) Accel., g	82.0	88.0

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	18. Distribution Statement
New Car Assessment Program (NCAP) FMVSS No. 214D Side Impact Dummy (SID) Occupant Side Impact Protection	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

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price
Unclassified	Unclassified	283	

Form DOT F 1700.7 (8-69)

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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 Contour 4-Door.

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

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

SECTION 2

SUMMARY OF SIDE IMPACT TEST

A 1997 Ford Contour 4-Door was impacted on the left or driver's side by a Moving Deformable Barrier (MDB) which was moving forward in a 27° crabbed position to the tow road guidance system at a velocity of 38.15 mph (61.4 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 February 14, 1997. Pre- and post-test photographs of the test vehicle, the MDB and the side impact dummies (SIDs) are included in Appendix A.

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

The SIDs were instrumented with the following accelerometers.

1. Left Upper Rib (LUR) uniaxial accelerometer (Y-direction)
2. Left Lower Rib (LLR) uniaxial accelerometer (Y-direction)
3. Lower Thoracic Spine (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)	73.0	59.9
Pelvis (g)	82.0	88.0

* Passenger TTI calculated using lower spine redundant acceleration.

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/Contour/4-Door

Vehicle NHTSA No.: MV0208 VIN: 1FALP6539VK149393

Vehicle Body Color: White Build Date: 11/96

Engine Data: 4 Cylinders; ___ CID; 2.0 Liter; ___cc

Placement ____ Longitudinal; X Lateral

Transmission: 4 Speed; __ Manual; X Automatic; X Overdrive

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

Odometer Reading: 45 miles

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

____Cruise Control; X Tilt Wheel; ___Power Door Locks;

DATA FROM TIRE PLACARD:

Tire Pressure (at capacity): 34 Psi FRONT

34 Psi REAR

Recommended Tire Size: P185/70R/14

Tires on Test Vehicle: P185/70R/14 Manufacturer: Goodyear

Vehicle Capacity Data:

Number of Occupants: 2 Front; 3 Rear; ___ 3rd Seat, 5 Total

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

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

Vehicle Maximum Capacity Loading = 399.2 kg (A)

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

Cargo Capacity (A-B) = 59.0 kg

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

WEIGHT OF TEST VEHICLE WITH MAXIMUM FLUIDS:

Right Front	= 411.4 kg	Right Rear	= 231.3 kg
Left Front	= 419.6 kg	Left Rear	= 230.4 kg
TOTAL FRONT =	831.0 kg	TOTAL REAR =	461.7 kg
% of Total Vehicle Weight =	64.3 %;	% of Total Weight =	35.7 %

TOTAL WEIGHT = 1292.7 kg

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

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

Vehicle NHTSA No.: MV0208 Test Date: February 14, 1997

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Test Vehicle Delivered Weight with Maximum Fluids	= 1292.7 kg
Cargo Carrying Capacity of Test Vehicle	= 59.0 kg
Weight of 2 Side Impact Dummies (2 x 80.7 kg.)	= 161.4 kg
TEST VEHICLE TARGET WEIGHT	= 1513.1 kg

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

Right Front	= 414.1 kg	Right Rear	= 292.6 kg
Left Front	= 473.6 kg	Left Rear	= 326.1 kg
TOTAL FRONT	= 887.7 kg	TOTAL REAR	= 618.7 kg
% of Total Weight	= 58.9 %	% of Total Weight	= 41.1 %

TOTAL TEST WEIGHT = 1506.4 kg

TEST VEHICLE ATTITUDE:

CURB WEIGHT ATTITUDE:

Right Front 688 mm Left Front 693 mm Right Rear 685 mm Left Rear 682 mm

FULLY LOADED WEIGHT ATTITUDE:

Right Front 678 mm Left Front 676 mm Right Rear 645 mm Left Rear 633 mm

TEST ATTITUDE:

Right Front 675 mm Left Front 677 mm Right Rear 647 mm Left Rear 636 mm

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

Test Vehicle Wheelbase: 2702 mm

C.G. = 1067 mm rearward of front wheel centerline

TOTAL VEHICLE LENGTH:

Right Side = 4360 mm

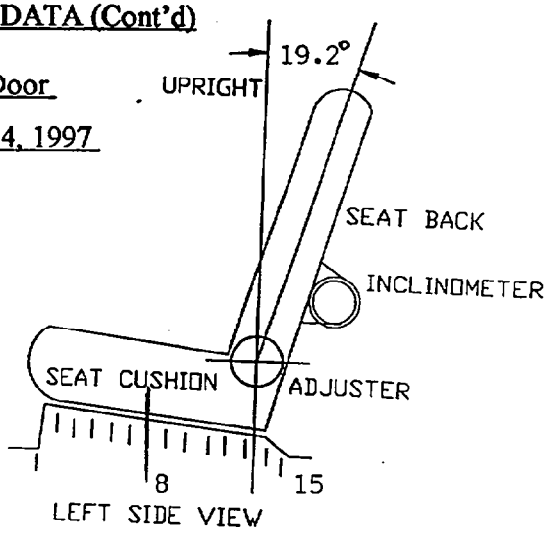
Centerline = 4656 mm

Left Side = 4360 mm

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

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

Vehicle NHTSA No.: MV0208 Test Date: February 14, 1997



FRONT SEAT CUSHION PLACEMENT:

Total Length of Adjustment Travel: 208 mm

Test Position: 8th notch rearward out of 15

FRONT SEAT BACK ADJUSTMENT POSITION:

Seat Back Angle = 19.2° measured at headrest supports

SECOND POSITION SEAT:

Total Length of Fore/Aft Adjustment Travel: 0

Seat Back Adjustment Position: N/A

ADJUSTABLE STEERING COLUMN POSITION:

WINDOW POSITIONS: Left Front Up Left Rear Down

Right Front Up Right Rear Down

AMOUNT OF STODDARD SOLVENT IN FUEL TANK:

Fuel system usable capacity = 14.5 gallons

Test Volume: 13.5 gallons 93 % of capacity

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

Wheelbase: = 2702 mm

Impact Point is 411 mm rearward of front axle centerline

DATA SHEET NO. 2

TEST VEHICLE SUMMARY OF RESULTS

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

Vehicle NHTSA No.: MV0208 Test Date: February 14, 1997

Overall Length = 4656 mm; Overall Width = 1750 mm

TEST WEIGHT:

Right Front	= 435.5 kg	Right Rear	= 290.7 kg
Left Front	= 475.8 kg	Left Rear	= 304.4 kg
TOTAL FRONT	= 911.3 kg	TOTAL REAR	= 595.1 kg
% of Total Weight	= 60.5 %	% of Total Weight	= 39.5 %

TOTAL VEHICLE WEIGHT = 1506.4 kg

Wheelbase = 2702 mm

Longitudinal C.G. from Center of Front Axle = 1067 mm

Impact Angle with Respect to Impactor = 90 ° degrees

MAXIMUM EXTERIOR STATIC CRUSH:

1. LEVEL 1 (251 mm above ground) = 216 mm
2. LEVEL 2 (514 mm above ground) = 396 mm
3. LEVEL 3 (581 mm above ground) = 357 mm
4. LEVEL 4 (880 mm above ground) = 293 mm
5. LEVEL 5 (1314 mm above ground) = 96 mm

Maximum Post-Test Intrusion = 396 mm

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

TEST VEHICLE SUMMARY OF RESULTS (Cont'd)

INSTRUMENTATION:

Number of Vehicle Data Channels:		= 25
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/Contour/4-Door

Vehicle NHTSA No.: MV0208 Test Date: February 14, 1997

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	= -23 mm
C.G. Location Above Ground Level	= 508 mm

MDB WEIGHT:

Left Front	= 396.1 kg	Left Rear	= 284.4 kg
Right Front	= 383.4 kg	Right Rear	= 293.8 kg
TOTAL FRONT = 779.5 kg		TOTAL REAR = 578.2 kg	

TOTAL MDB WEIGHT = 1357.7 kg

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

Impact Speed = Primary: 38.24 mph (61.5 kph) Secondary: 38.2 mph (61.5 kph)

CRASH TEST SUMMARY FOR SIDE IMPACTOR (Cont'd)

MAXIMUM STATIC CRUSH OF HONEYCOMB IMPACT FACE:

1. Row A Top of Stack (813 mm) = 188 mm
2. Row B Mid Stack (686 mm) = 138 mm
3. Row C Top of Bumper (533 mm) = 109 mm
4. Row D Center of Bumper (432 mm) = 130 mm

INSTRUMENTATION:

Number of MDB Data Channels = 5

DATA SHEET NO. 4

POST-TEST OBSERVATIONS

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

Vehicle NHTSA No.: MV0208 Test Date: February 14, 1997

VISIBLE DUMMY CONTACT POINTS:

	LEFT FRONT SID	LEFT REAR SID
Head	to headrest	to C-post
Arm	to door	to door
Pelvis	to armrest	to armrest
Left Knee	to door	to door
Right Knee	to left knee	to left knee

DOOR OPENING:

	LEFT SIDE	RIGHT SIDE
Front	No	No
Rear	No	No

MDB DISTANCE FROM TARGET IMPACT POINT:

Horizontal: 3 mm rearward Vertical: 3 mm high

ARM REST LOCATIONS:

Front: 215 mm from bottom of window

Rear: 225 mm from bottom of window

POST-TEST OBSERVATIONS (Cont'd)

SEAT CRUSH:

Front Seat Back: 123 mm Front Seat Cushion: 72 mm

Left Rear Seat Back: 96 mm Rear Seat Cushion: 185 mm

GLAZING DAMAGE:

Driver side windows broke, windshield cracked

PILLAR PERFORMANCE:

No separation noted

SILL SEPARATION:

None noted

OTHER NOTABLE IMPACT EFFECTS:

Driver and passenger airbags did not deploy.

SECTION 4
OCCUPANT AND VEHICLE INFORMATION

DATA SHEET NO. 5

SIDE IMPACT DUMMY (SID) INSTRUMENTATION DATA

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

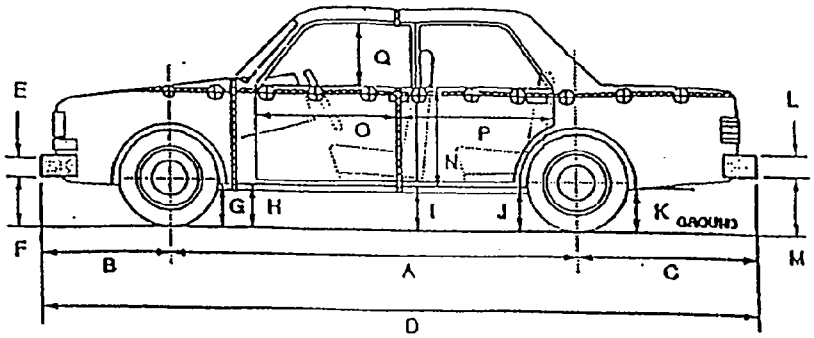
Vehicle NHTSA No.: MV0208 Test Date: February 14, 1997

	Front Dummy ID # 272				Rear Dummy ID # 271			
	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	63.9	26	-21.8	75	55.2	38	-7.5	98
Left Lower Rib (LLR) Y	69.5	34	-17.9	83	62.8	38	-8.3	70
SPINE ACCELERATIONS								
Lower Lateral Y	76.4	29	-17.6	66	56.9	43	-9.0	71
PELVIS ACCELERATIONS								
Lateral Y	82.0	30	-20.0	78	88.0	35	-9.6	68

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

* No valid data was collected from rear passenger lower spine Y primary accelerometer. The redundant acceleometer data is presented here.

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)

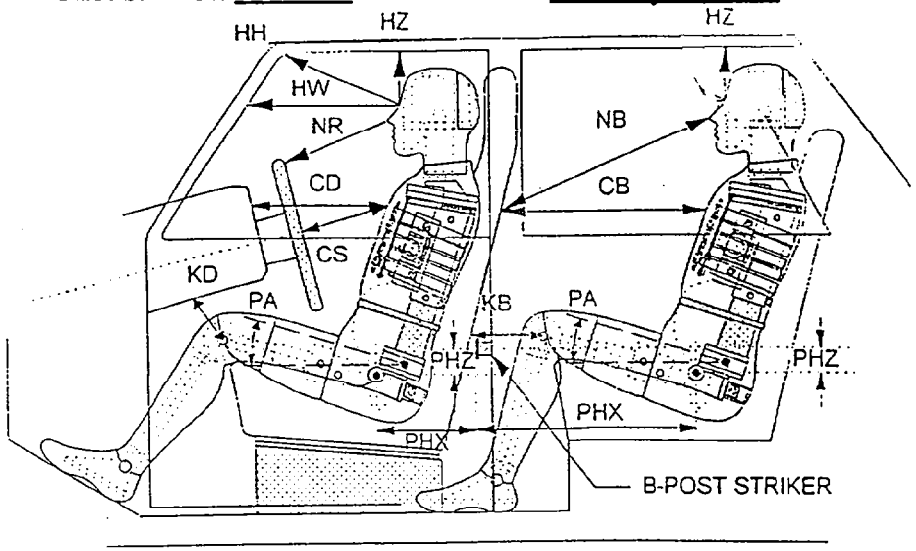
	PRE-TEST	POST-TEST	Δ CHANGE
A	2692	2659	33
B	932	952	-20
C	1032	1032	0
D	4656	4643	13
E	200	200	0
F	383	303	80
G	184	185	-1
H	186	193	-7
I	180	183	-3
J1/J2	179/181	182/184	-3/-3
K	230	243	-13
L	272	272	0
M	313	328	-15
N	630	542	88
O	757	744	13
P	1226	1158	68
Q	439	415	24
R	4360	4381	-21
S	4360	4307	53
T	1750	1566	184

DATA SHEET NO. 7

SIDE IMPACT DUMMY (SID) LONGITUDINAL CLEARANCE DIMENSIONS

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

NHTSA NO.: MV0208 Test Date: February 14, 1997



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

	DRIVER SID ID # 272
HH	363
HW	600
HZ	143
NR	420
CD	535
CS	303
KDL(KDA°)	153 (15.1°)
KDR(KDA°)	166 (19.2°)
PA°	23.6
PHX	216
PHZ	125

	LEFT REAR PASSENGER SID ID # 271
HZ	113
NB	612
CB	528
KBL (KBA)	244 (0°)
KBR (KBA)	254 (3.5°)
PA°	24.2
PHX	225
PHZ	291

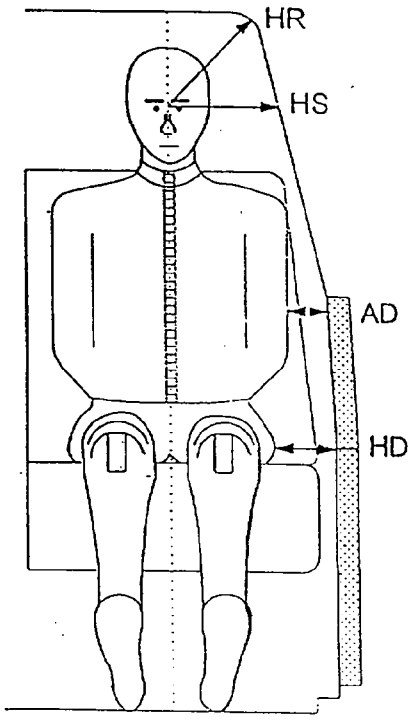
NOTE: 2-door vehicle shown. Rear dummy PHX & PHZ measurements for 4-door vehicle would use the C-post striker as reference point.

DATA SHEET NO. 8

SIDE IMPACT DUMMY (SID) LATERAL CLEARANCE DIMENSIONS

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

NHTSA NO.: MV0208 Test Date: February 14, 1997



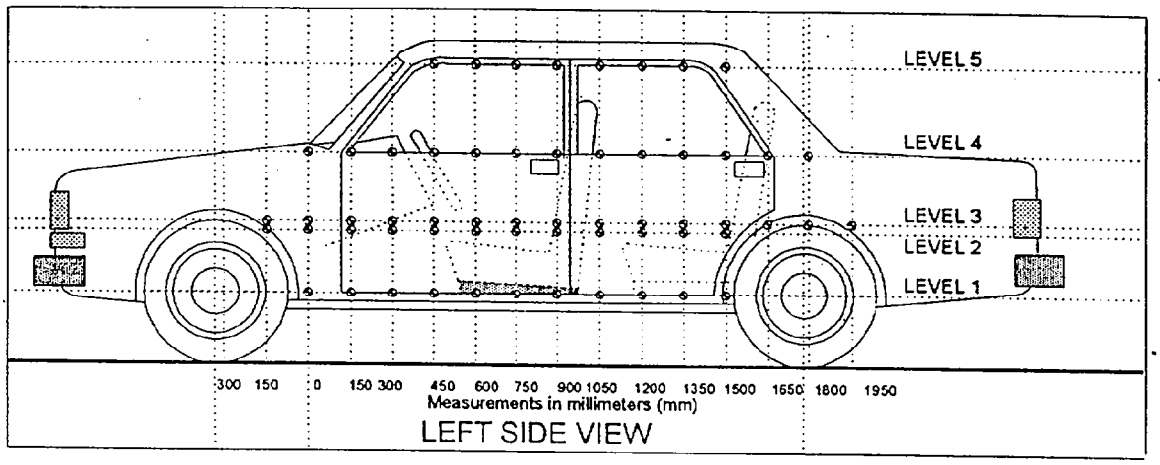
NOTE: All dimensions are in mm

	DRIVER SID ID # 272	LEFT REAR PASSENGER SID ID # 271
HR	204	165
HS	318	200
AD	101	93
HD	128	118

DATA SHEET NO. 9
VEHICLE SIDE MEASUREMENTS

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

NHTSA NO.: MV0208 Test Date: February 14, 1997



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

MEASUREMENTS ALONG THE VERTICAL 750 mm. LINE SHOWN ABOVE

Level 1 @ Axle Centerline Height (or Sill Top Height)	= 251 mm
Level 2 @ Occupant H-Point	= 514 mm
Level 3 @ Mid Door	= 581 mm
Level 4 @ Window Sill	= 880 mm
Level 5 @ Window Top	= 1314 mm

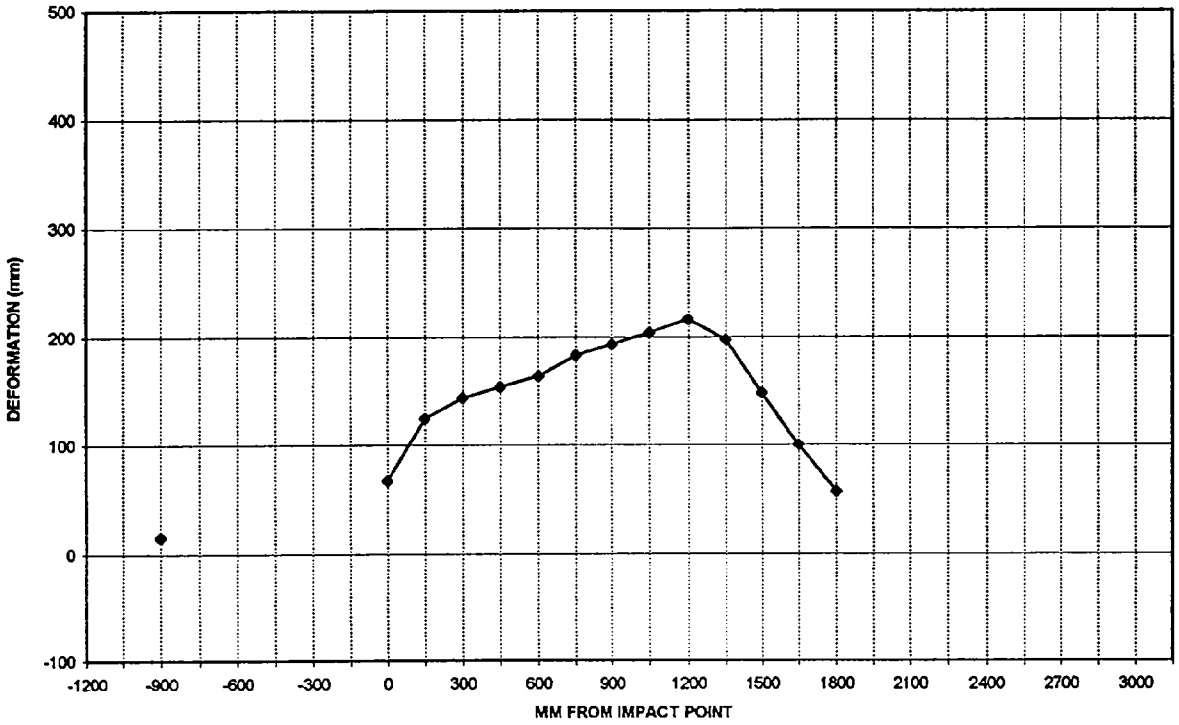
DATA SHEET NO. 10

VEHICLE EXTERIOR CRUSH PROFILES

	Level 1 - Axle Centerline		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1050			
-900	743	758	15
-750			
-600			
-450			
-300			
-150			
0 (impact point)	714	781	67
150	720	845	125
300	719	863	144
450	722	876	154
600	724	888	164
750	720	903	183
900	719	912	193
1050	720	924	204
1200	716	932	216
1350	717	914	197
1500	714	862	148
1650	712	812	100
1800	714	771	57
1950			
2100			
2250			
2400			
2550			
2700			
2850			
3000			

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

VEHICLE EXTERIOR STATIC CRUSH



LEVEL 1 - AXLE CENTERLINE

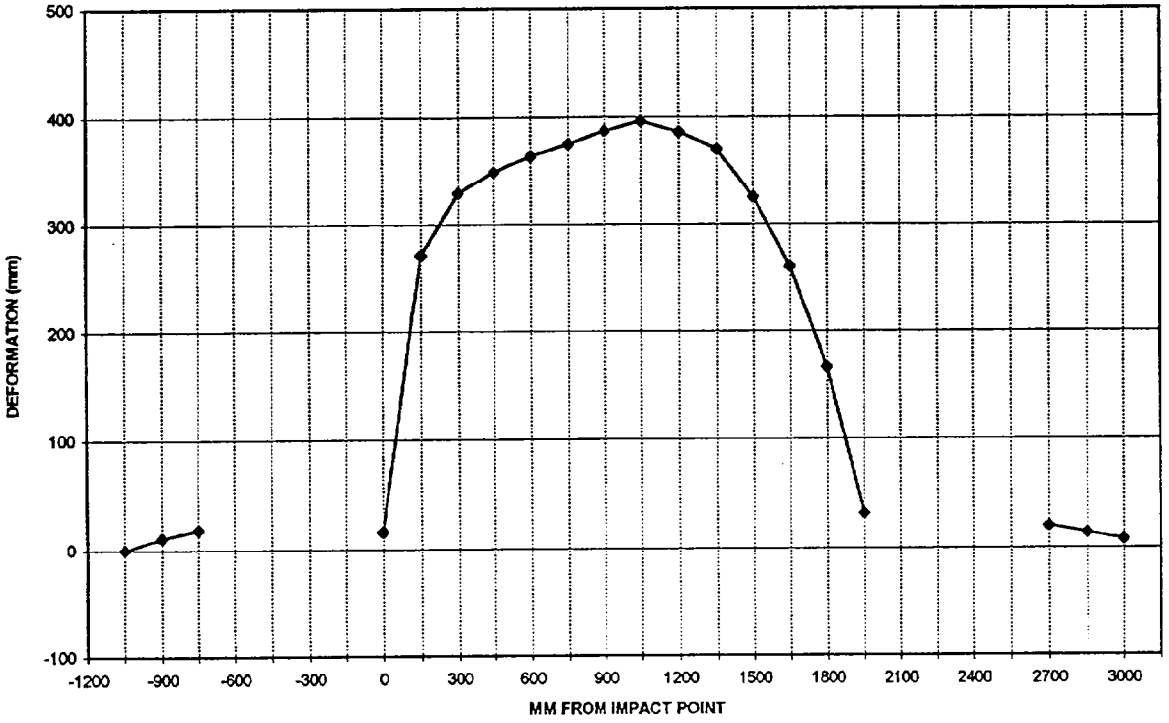
DATA SHEET NO. 10

VEHICLE EXTERIOR CRUSH PROFILES

	Level 2 - Occupant H Point		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1050	718	718	0
-900	678	689	11
-750	660	678	18
-600			
-450			
-300			
-150			
0 (impact point)	648	764	16
150	647	919	272
300	645	974	329
450	642	991	349
600	640	1004	364
750	640	1015	375
900	639	1026	387
1050	639	1035	396
1200	640	1026	386
1350	639	1009	370
1500	639	964	325
1650	639	900	261
1800	640	807	167
1950	642	674	32
2100			
2250			
2400			
2550			
2700	650	670	20
2850	665	679	14
3000	688	696	8

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

VEHICLE EXTERIOR STATIC CRUSH



LEVEL 2 - OCCUPANT H-POINT

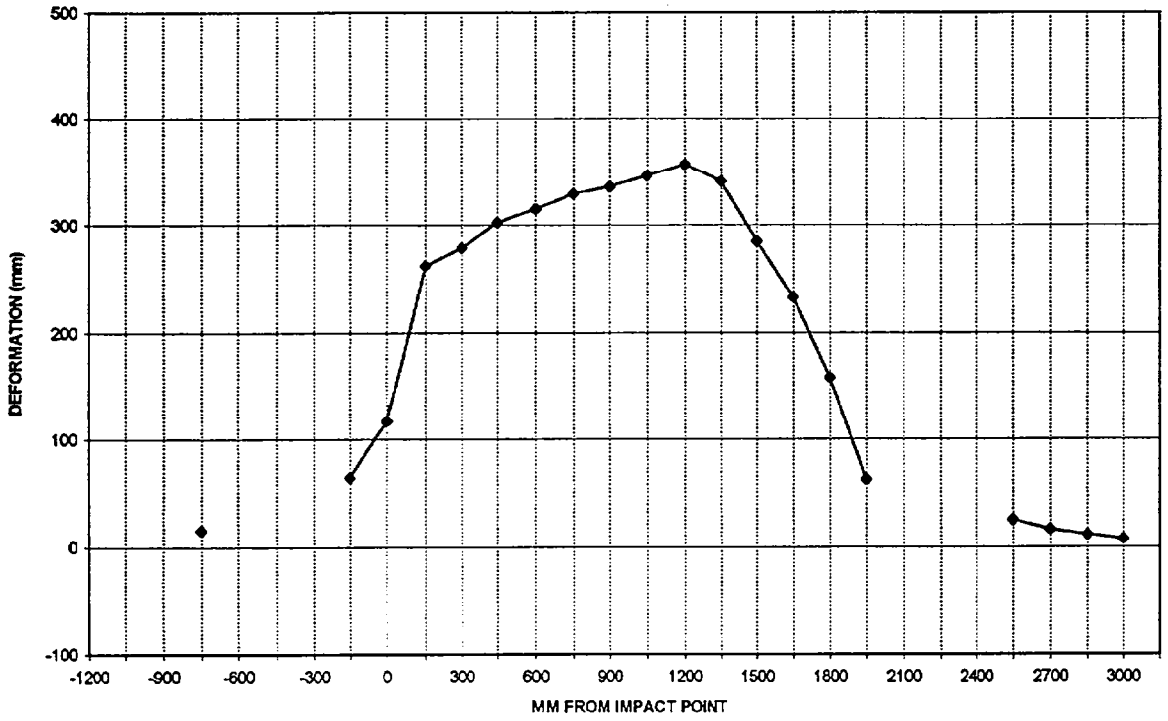
DATA SHEET NO. 10

VEHICLE EXTERIOR CRUSH PROFILES

	Level 3 - Mid Door		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1050			
-900			
-750	676	692	16
-600			
-450			
-300			
-150	639	704	65
0 (impact point)	643	760	117
150	642	904	262
300	640	919	279
450	639	941	302
600	637	952	315
750	635	964	329
900	635	971	336
1050	635	981	346
1200	635	992	357
1350	635	976	341
1500	634	919	285
1650	633	866	233
1800	635	793	158
1950	637	700	63
2100			
2250			
2400			
2550	645	671	26
2700	661	678	17
2850	679	691	12
3000	707	715	8

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

VEHICLE EXTERIOR STATIC CRUSH



LEVEL 3 - MID DOOR

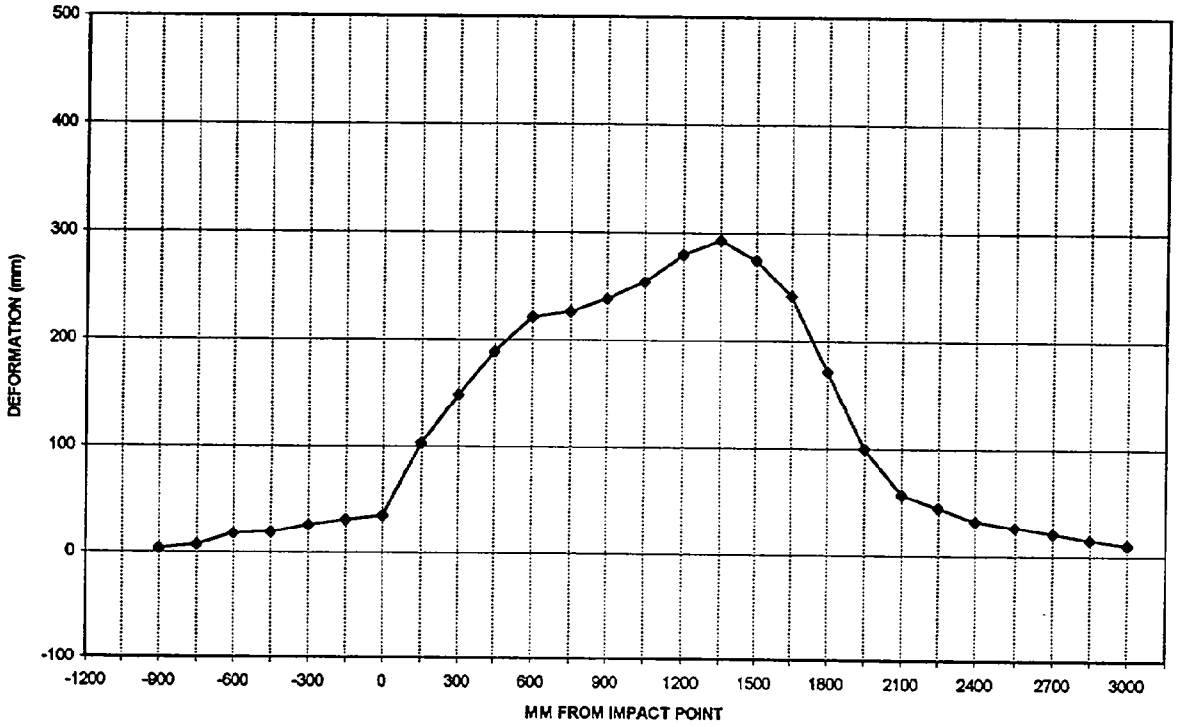
DATA SHEET NO. 10

VEHICLE EXTERIOR CRUSH PROFILES

	Level 4 - Window Sill		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1050			
-900	774	777	3
-750	762	769	7
-600	749	767	18
-450	740	759	19
-300	730	756	26
-150	724	755	31
0 (impact point)	714	749	35
150	708	811	103
300	704	853	149
450	702	891	189
600	702	923	221
750	706	932	226
900	707	945	238
1050	708	962	254
1200	708	988	280
1350	707	1000	293
1500	704	979	275
1650	707	948	241
1800	708	880	172
1950	710	810	100
2100	712	769	57
2250	718	763	45
2400	728	761	33
2550	737	764	27
2700	749	770	21
2850	764	779	15
3000	787	797	10

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

VEHICLE EXTERIOR STATIC CRUSH



LEVEL 4 - WINDOW SILL

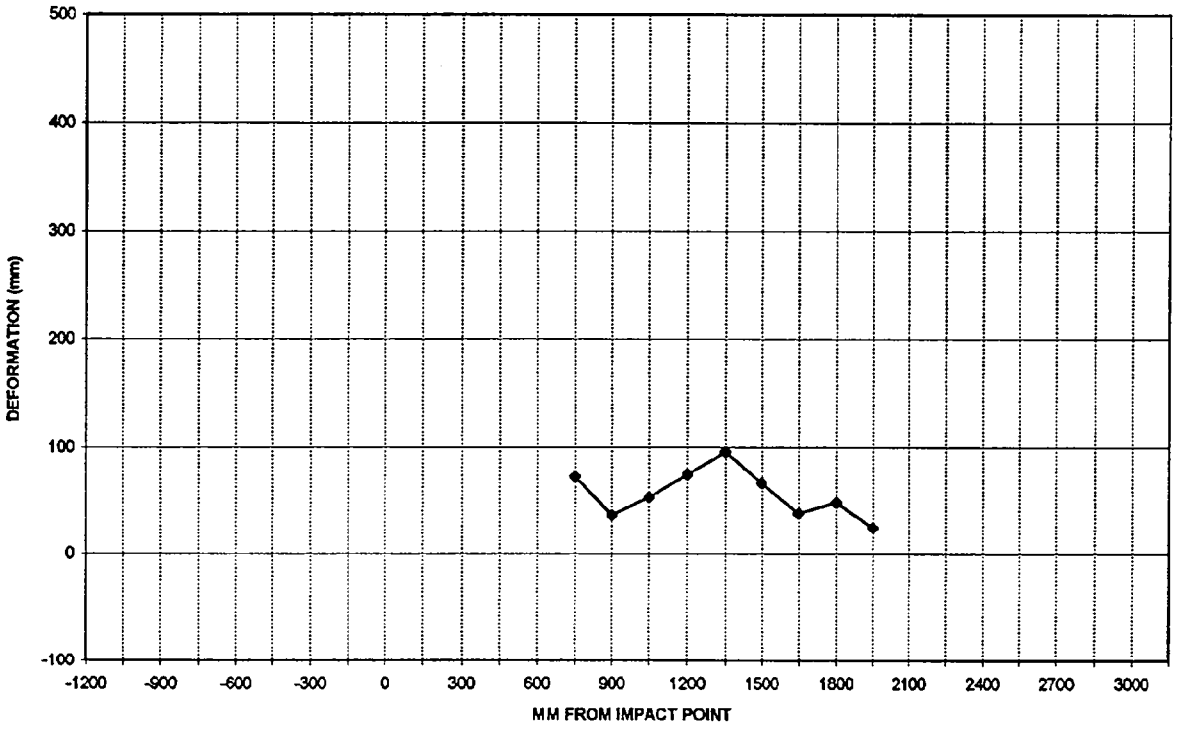
DATA SHEET NO. 10

VEHICLE EXTERIOR CRUSH PROFILES

	Level 5 - Window Top		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1050			
-900			
-750			
-600			
-450			
-300			
-150			
0 (impact point)			
150			
300			
450			
600			
750	906	979	73
900	924	961	37
1050	933	987	54
1200	933	1008	75
1350	933	1029	96
1500	933	1000	67
1650	934	973	39
1800	942	991	49
1950	967	992	25
2100			
2250			
2400			
2550			
2700			
2850			
3000			

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

VEHICLE EXTERIOR STATIC CRUSH



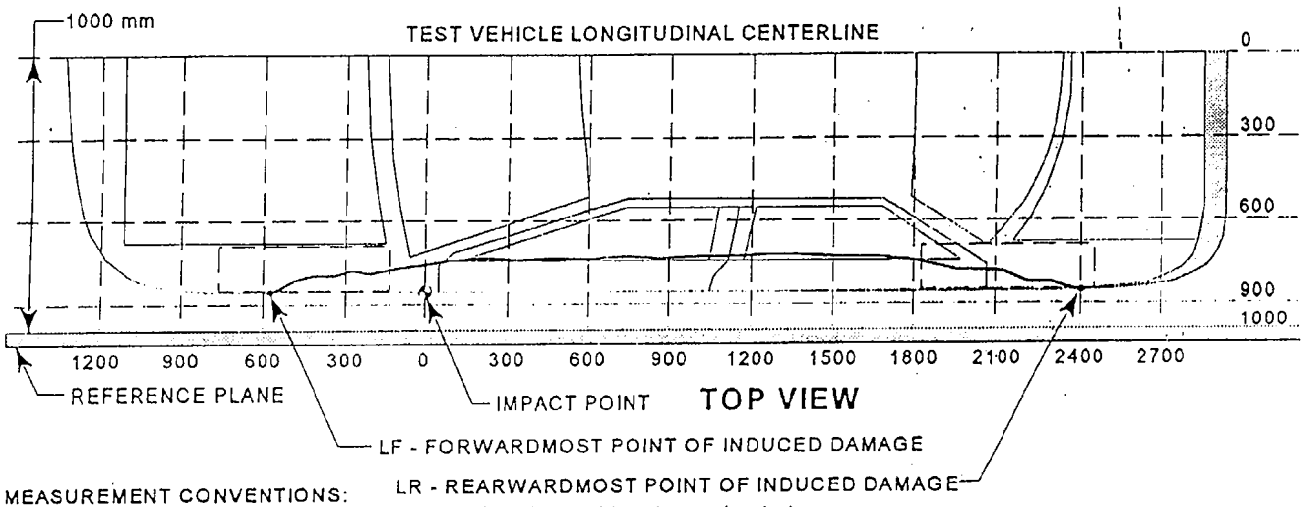
LEVEL 5 - WINDOW TOP

DATA SHEET NO. 11

VEHICLE DAMAGE PROFILE DISTANCES

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

NHTSA NO.: MV0208 Test Date: February 14, 1997



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 = -1050 mm)	718	718	0
2. -222 mm	760	727	33
3. 587 mm	1000	641	359
4. 1398 mm	967	639	328
5. 2472 mm	759	730	29
6. (LR = 3150 mm)	735	727	8

DATA SHEET NO. 12

EXTERIOR STATIC CRUSH FOR SIDE IMPACTOR

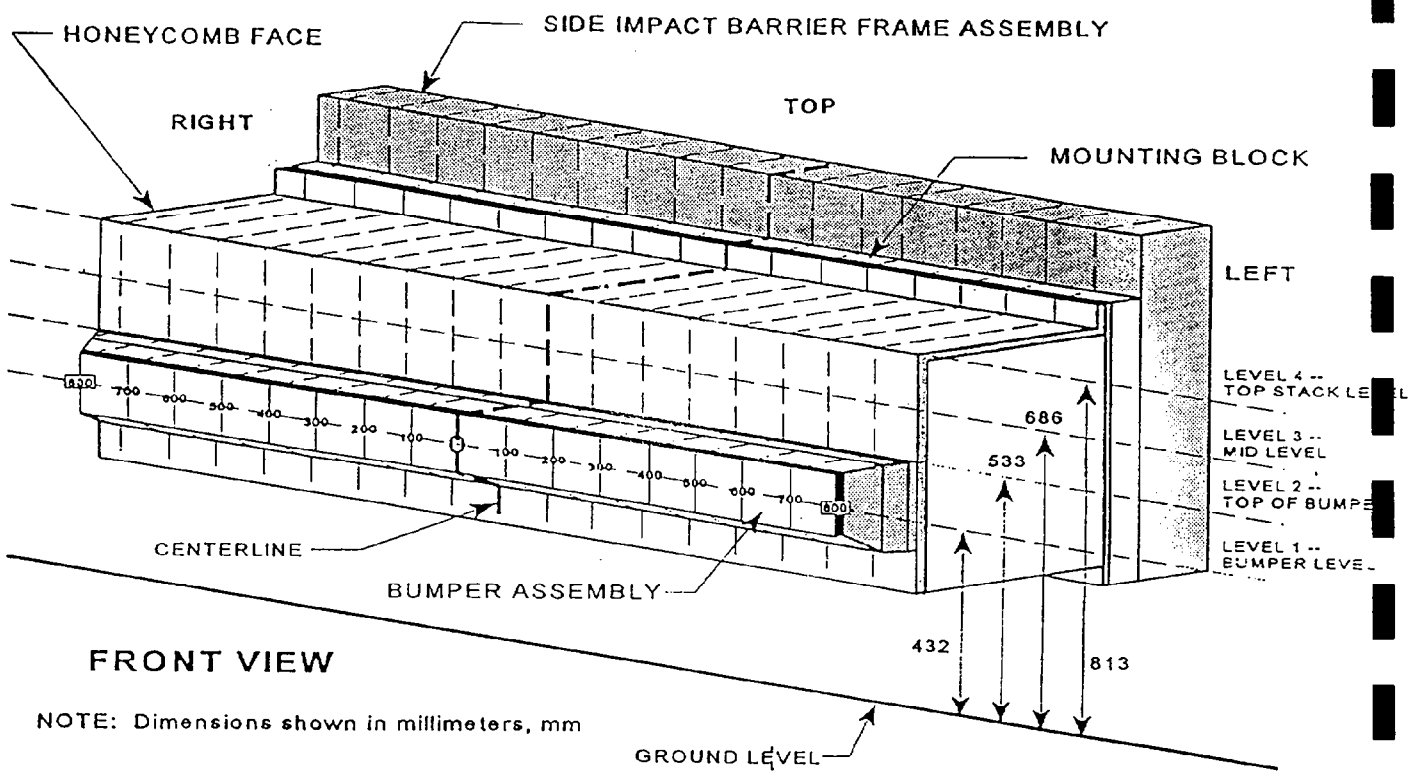
Year/Make/Model/Body Style: 1997/Ford/Contour/4-Door

Vehicle NHTSA No.: MV0208 Test Date: February 14, 1997

		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	102	48	8	1	6	9	12	13	19	25	26	28	35	63	103	131	188
Mid Level Level 3	686 mm	101	55	22	6	7	3	10	4	6	8	10	13	16	26	45	76	138
Top Bumper Level 2	533 mm	109	65	30	13	11	12	13	14	20	22	27	33	35	45	54	74	96
Mid Bumper Level 1	432 mm	129	96	61	39	29	29	29	33	39	42	46	51	56	63	78	99	130

See next page for Barrier Face Graphic

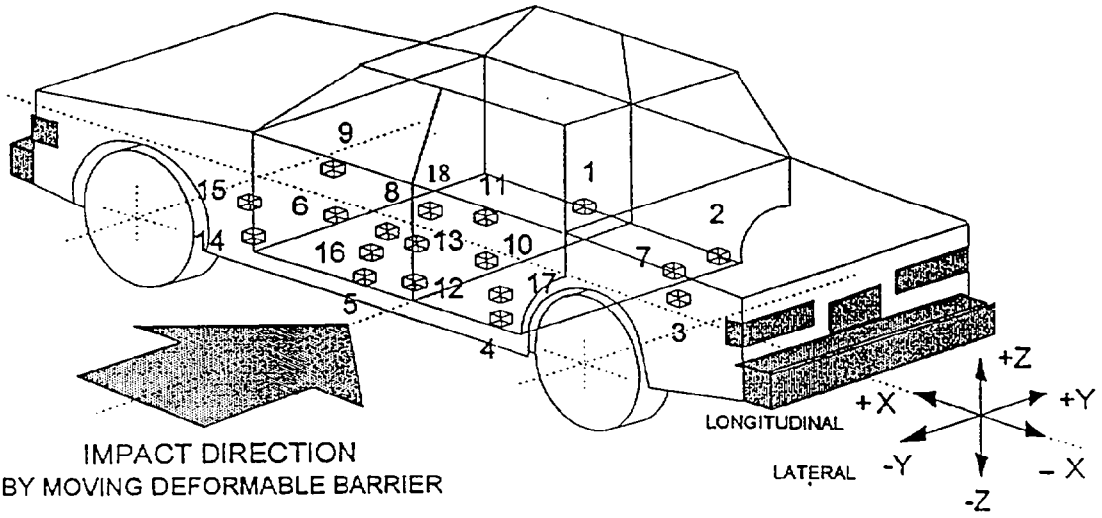
DATA SHEET NO. 12 (Cont'd)



DATA SHEET 13
TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

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

Vehicle NHTSA No.: MV0208 **Test Date:** February 14, 1997



IMPACT DIRECTION
BY MOVING DEFORMABLE BARRIER

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

DATA SHEET NO. 13

TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

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

Vehicle NHTSA No.: MV0208 Test Date: February 14, 1997

Accel. No.	Description	Coordinates (mm)*			Long. (X) Maximums (g's)		Lat. (Y) Maximums (g's)		Vert. (Z) Maximums (g's)		Resultant (g's)
		X	Y	Z	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Max.
1	Rt. Side Sill @ Front Seat	1626	630	220	5.4	-3.7	22.9	-3.2	3.9	-5.2	23.2
2	Rt. Side Sill @ Rear Seat	2682	670	230	4.8	-4.5	24.0	-3.0	5.3	-5.2	24.4
3	Rr. Floorpan Above Axle	1220	0	432	4.6	-9.4	25.6	-3.1	6.6	-7.5	26.1
4	Left Side Sill @ Rr. Seat	1599	-676	232	---	---	43.7	-9.6	---	---	---
5	Left Side Sill @ Frt. Seat	2678	-644	220	---	---	41.2	-6.3	---	---	---
6	Left Front Door Centerline	2593	-700	637	---	---	243.7	-117.6	---	---	---
7	Right Rear Occupant Compartment	1853	315	348	---	---	22.7	-6.9	---	---	---
8	Mid Rear of Left Front Door	2275	-695	593	---	---	184.8	-75.4	---	---	---
9	Left Front Door Upper Centerline	2589	-695	860	---	---	208.4	-133.1	---	---	---
10	Left Rear Door Mid Rear	1757	-730	780	---	---	158.3	121.0	---	---	---
11	Left Rear Door Upper Centerline	1761	-716	895	---	---	127.9	-56.5	---	---	---
12	Left Lower B-Post	2104	-691	324	---	---	90.8	-18.5	---	---	---
13	Left Mid B-Post	2057	-712	888	---	---	136.7	-59.0	---	---	---
14	Left Lower A-Post	3091	-630	292	---	---	**	**	---	---	---
15	Left Mid A-Post	3220	-760	872	---	---	28.6	-.7	---	---	---
16	Driver Left Seat Track	3295	-592	232	---	---	66.6	-16.8	---	---	---
18	Vehicle CG	2563	-25	395	17.4	-13.8	68.3	-36.5	15.7	-12.9	68.9

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

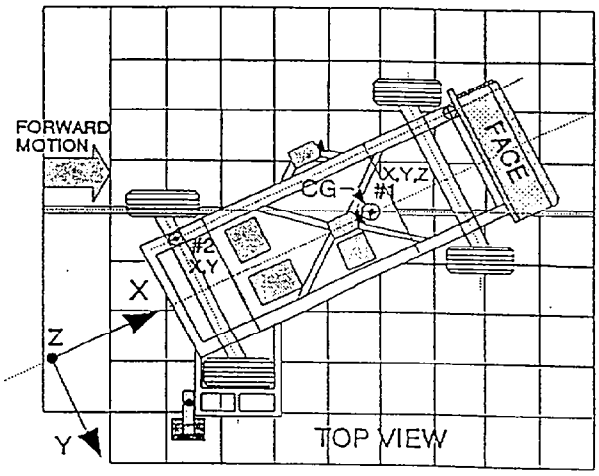
** Data not valid after 25 msec.

DATA SHEET NO. 14

MOVING DEFORMABLE BARRIER (MDB) ACCELEROMETER LOCATIONS AND DATA SUMMARY

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

Vehicle NHTSA No.: MV0208 Test Date: February 14, 1997



Accel. No.	Description	Coordinates (mm)*			(+) Positive		(-) Negative	
		X	Y	Z	Max. (g)	Time (msec)	Max. (g)	Time (msec)
1	MDB Center of Gravity	-1092	0	483				
	Longitudinal (X)	---	---	---	1.4	117	-18.2	40
	Lateral (Y)	---	---	---	1.1	64	-7.3	22
	Vertical (Z)	---	---	---	15.9	55	-14.3	19
	Resultant (R)	---	---	---	22.3	32	---	---
2	Rear Frame Member	-2591	-625	622				
	Longitudinal (X)	---	---	---	2.4	196	-23.6	33
	Lateral (Y)	---	---	---	5.9	22	-1.5	171

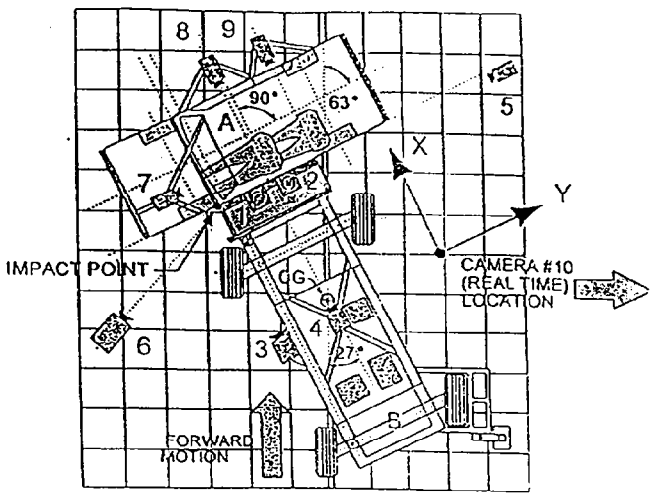
*Reference: X - Front Axle (+ Forward)
Y - Vehicle Centerline (+ To right)
Z - Ground Level (+ Up)

DATA SHEET NO. 15

HIGH SPEED CAMERA LOCATIONS AND DATA

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

Vehicle NHTSA No.: MV0208 Test Date: February 14, 1997



Camera No.	View	Coordinates (mm)*			Angle	Lens (mm)	Film Speed (fps)
		X	Y	Z			
	Real Time						
6	Left Impact	-810	-2240	1680		13	NR
8	Onboard Driver					8	877
9	Onboard Passenger					8	1015
7	Onboard Hood					13	1010
5	Right Impact	-290	10620	1665		25	943
1	Top Overall	-295	1210	5000		8	1031
2	Top Impact	-250	40	5000		13	803
4	Cart Overall					13	1026
3	Cart Pointer					35	1020

* 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/Contour/4-Door

Vehicle NHTSA No.: MV0208 Test Date: February 14, 1997

TEST REQUIREMENTS:

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

TEST VEHICLE IMPACT TYPE: X Side Impact MDB 38.15 mph (61.4 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

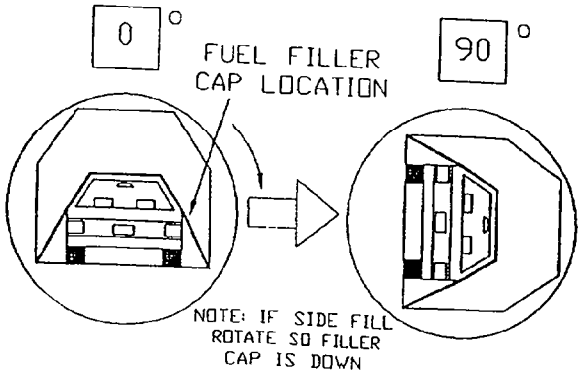
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA

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

Vehicle NHTSA No.: MV0208 Test Date: February 14, 1997

TEST PHASE: 0° - 90°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 46 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 46 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

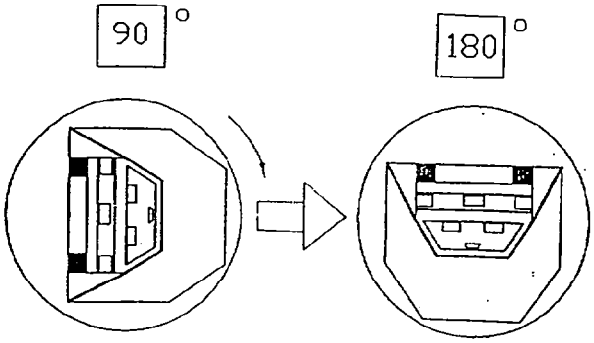
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA (Cont'd)

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

Vehicle NHTSA No.: MV0208 Test Date: February 14, 1997

TEST PHASE: 90° - 180°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 26 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 26 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

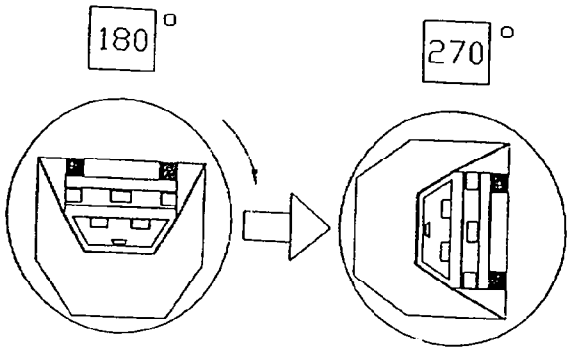
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA (Cont'd)

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

Vehicle NHTSA No.: MV0208 Test Date: February 14, 1997

TEST PHASE: 180° - 270°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 23 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 23 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

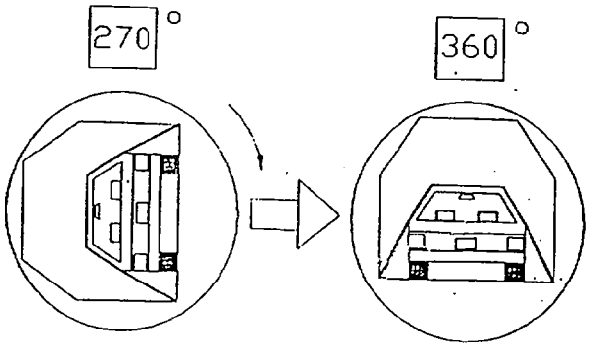
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA

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

Vehicle NHTSA No.: MV0208 Test Date: February 14, 1997

TEST PHASE: 270° - 360°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 48 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 48 seconds

Next Whole Minute Interval = 8 minutes

FUEL SPILLAGE MEASUREMENT:

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

FUEL SPILLAGE LOCATIONS(S): None

APPENDIX A - PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

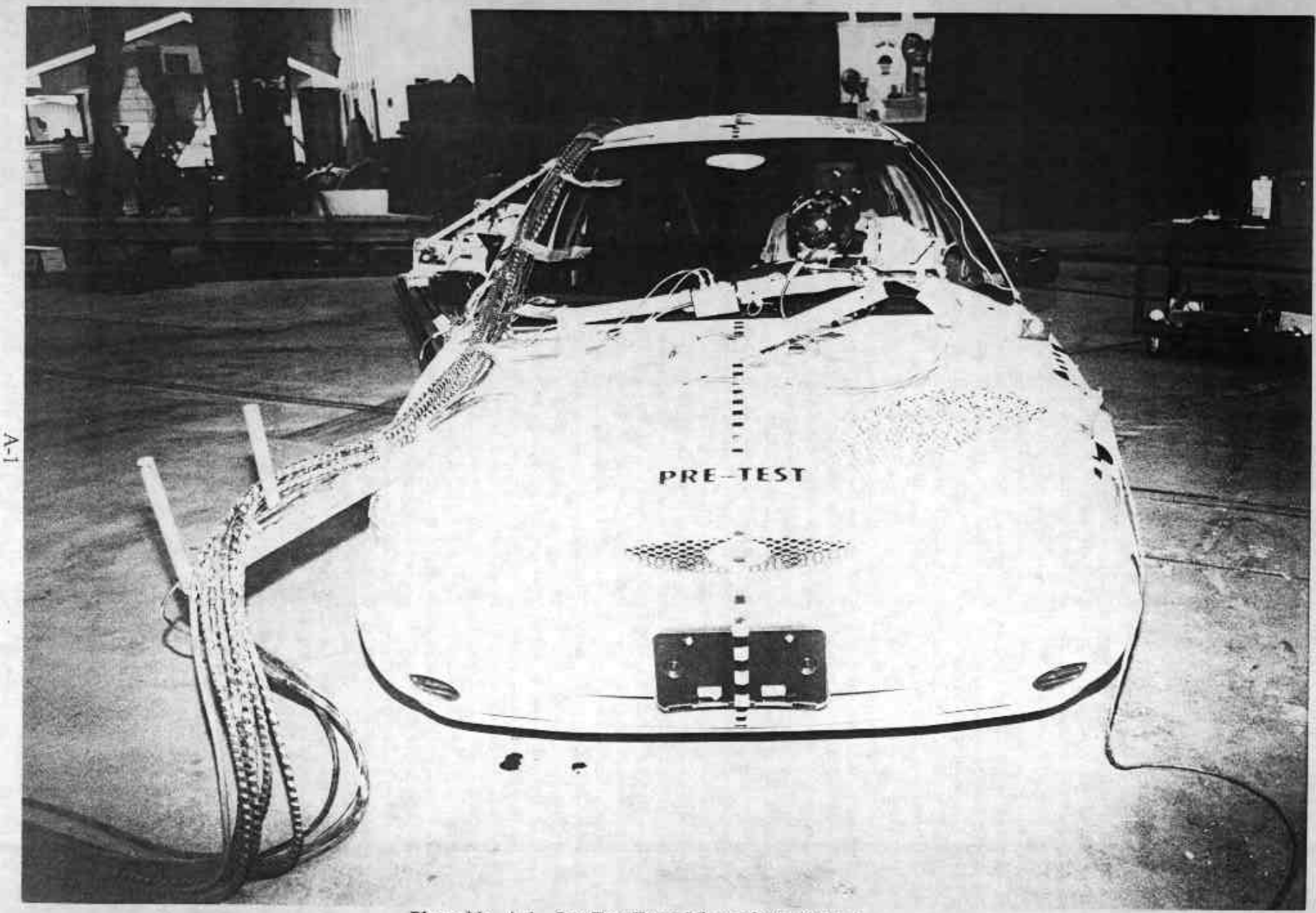


Photo No. A-1 - Pre-Test Front View of Test Vehicle

A-2

Photo No. A-2 - Pre-Test Rear View of Test Vehicle

Photo No. A-3 - Pre-Test Left Side View of Test Vehicle

A-4

Photo No. A-4 - Post-Test Left Side View of Test Vehicle

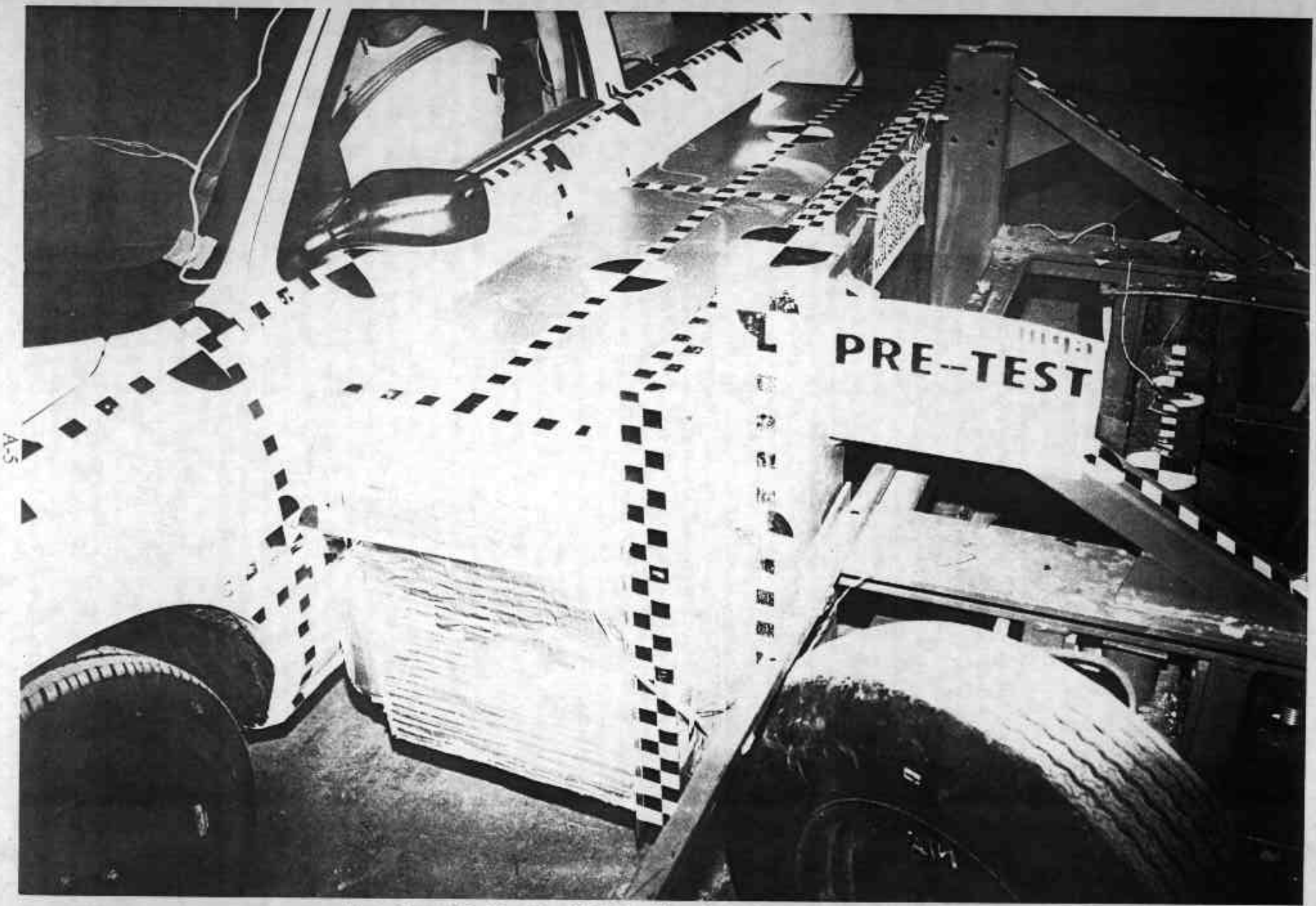


Photo No. A-5 - Pre-Test MDB Positioned Against Vehicle (left side)

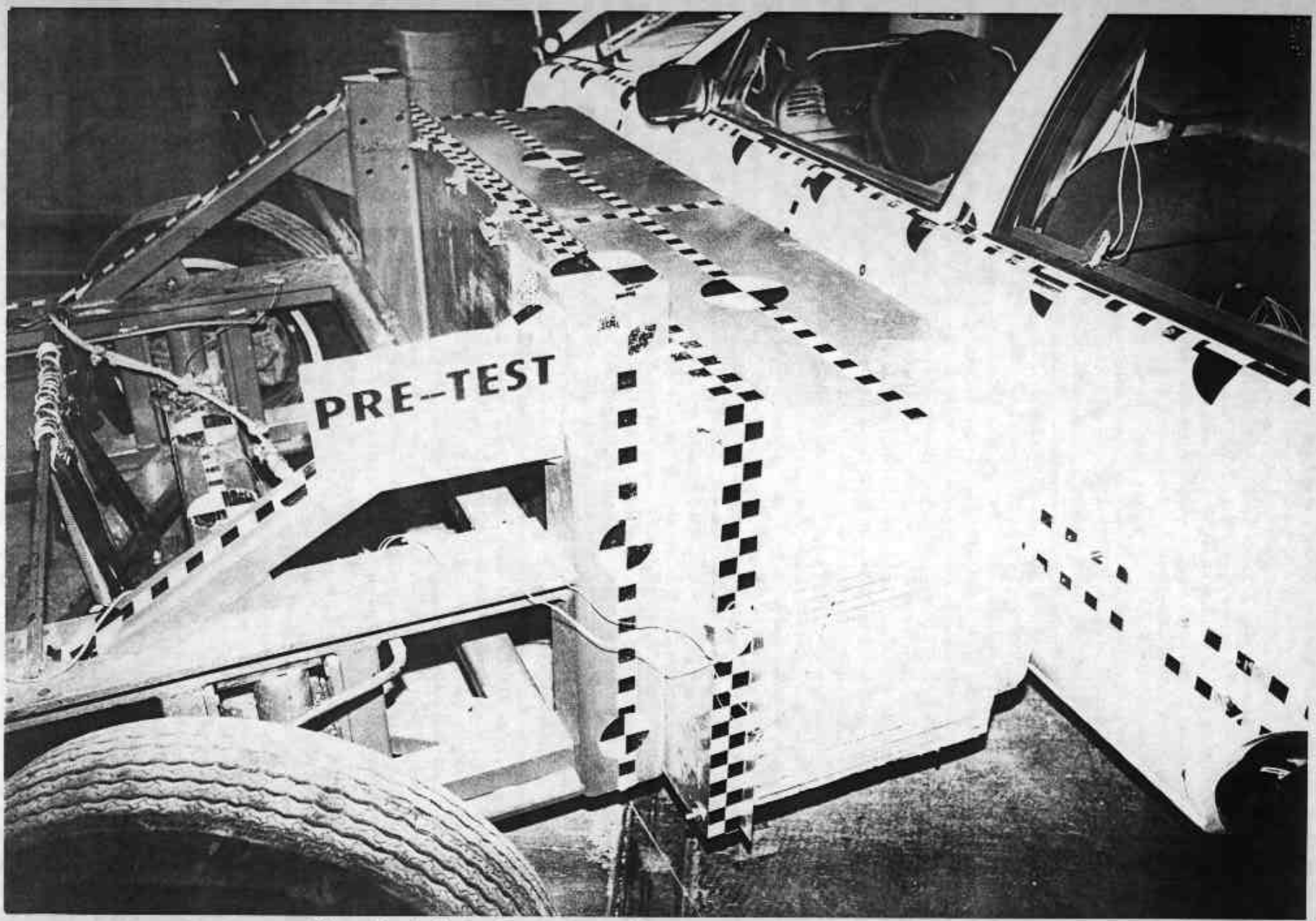


Photo No. A-6 - Pre-Test MDB Positioned Against Vehicle (right side)

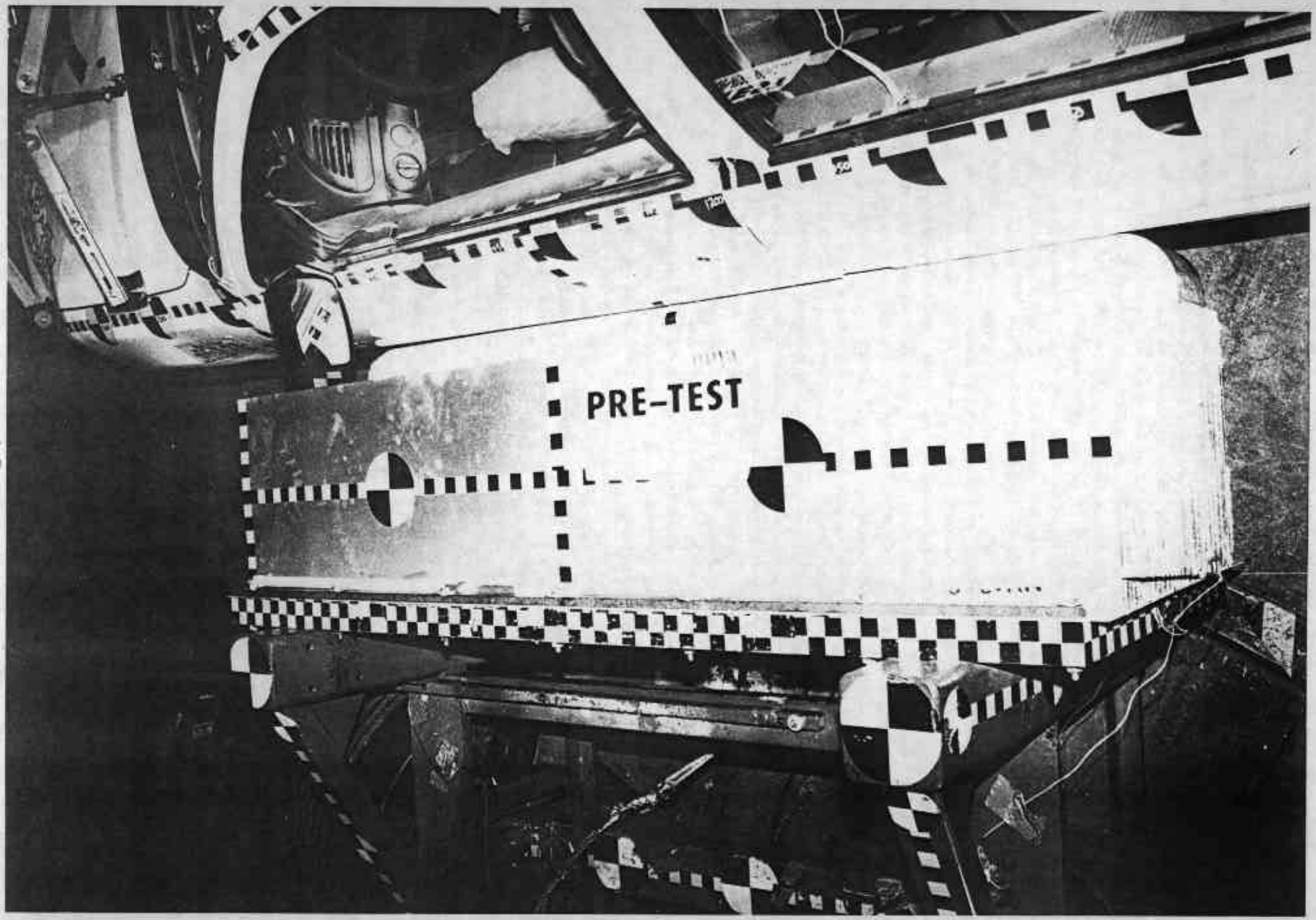


Photo No. A-7 - Pre-Test MDB Positioned Against Vehicle Overhead View

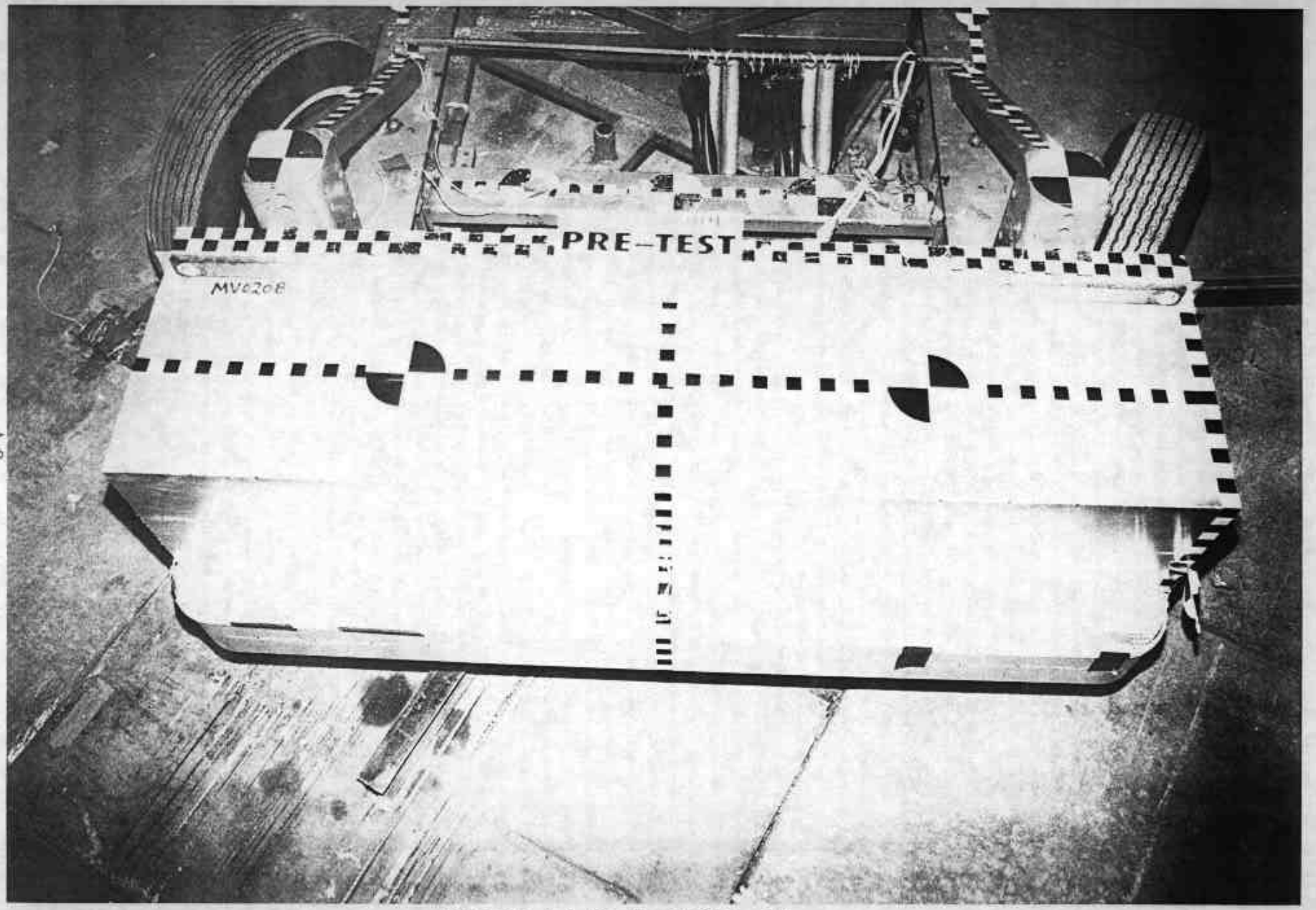


Photo No. A-8 - Pre-Test MDB Top View

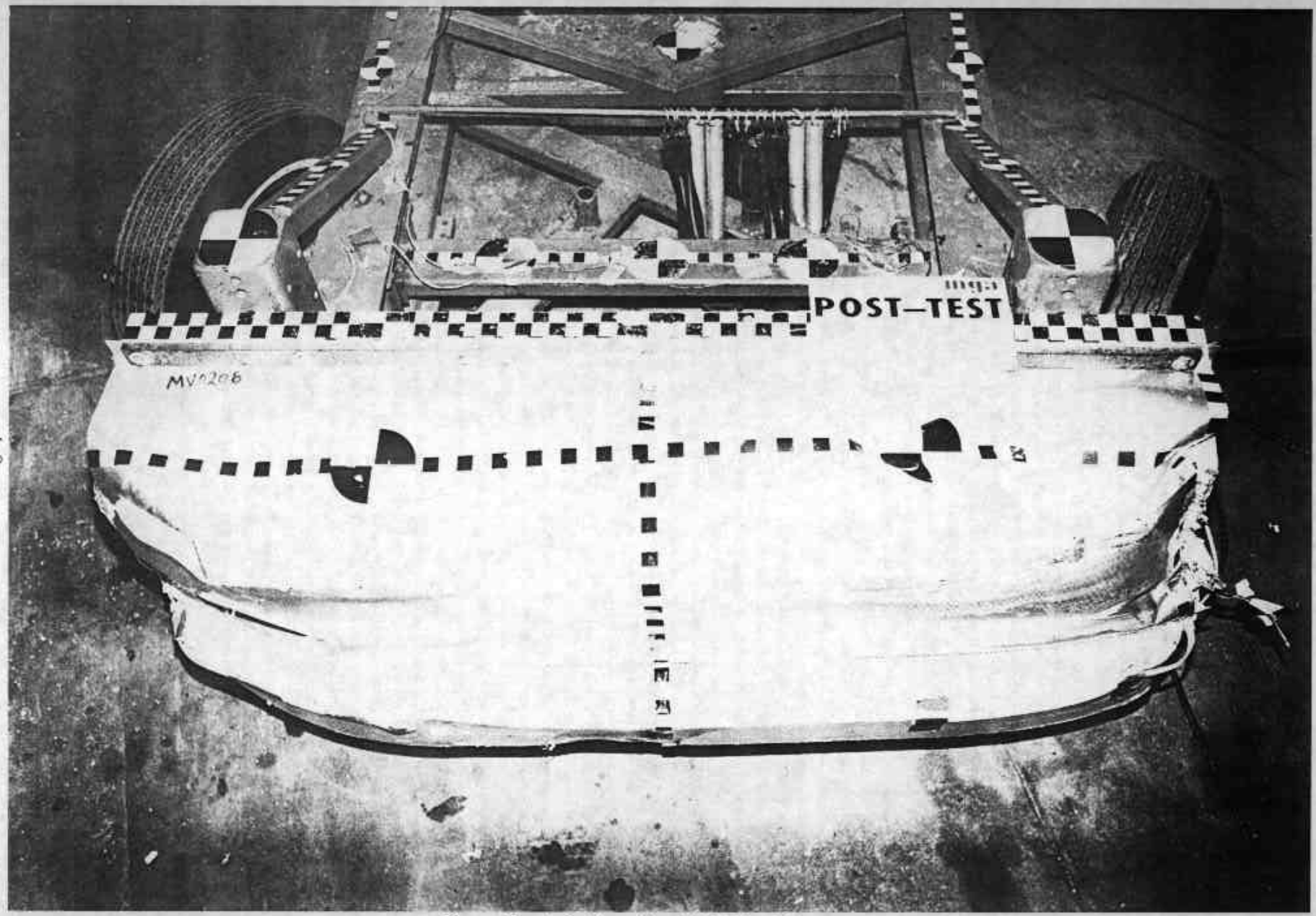


Photo No. A-9 - Post-Test MDB Top View

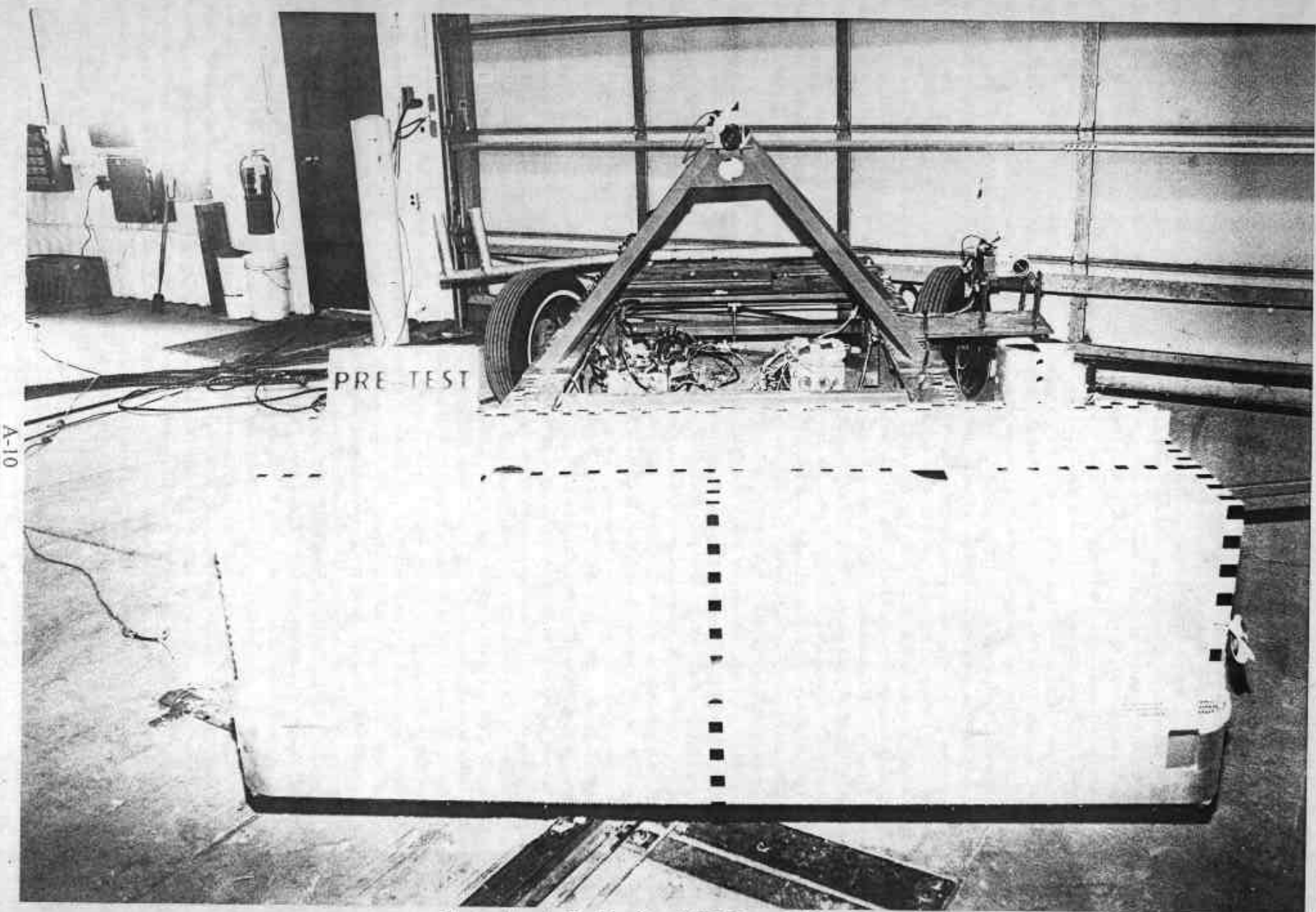


Photo No. A-10 - Pre-Test MDB Front View

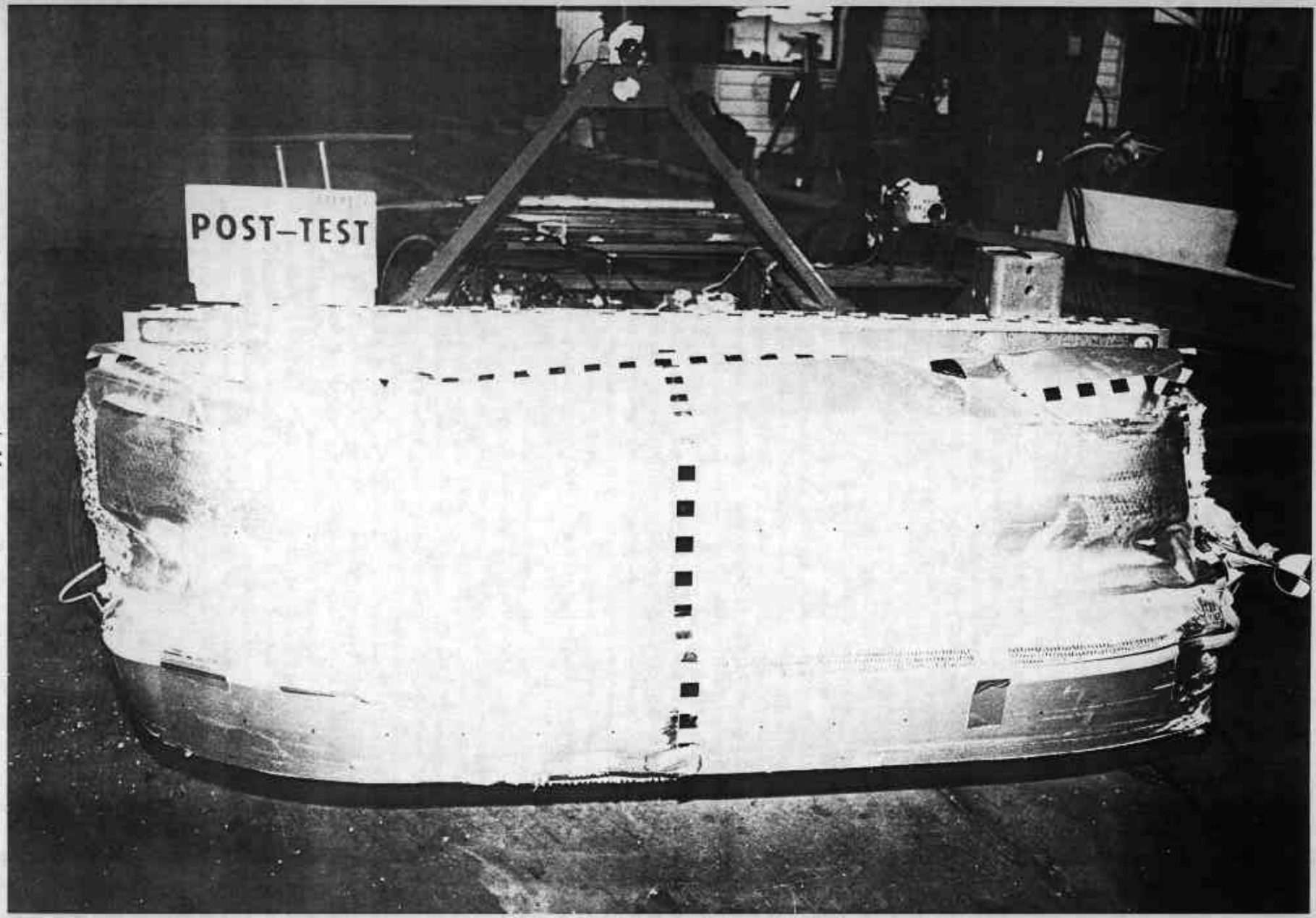


Photo No. A-11 - Post-Test MDB Front View

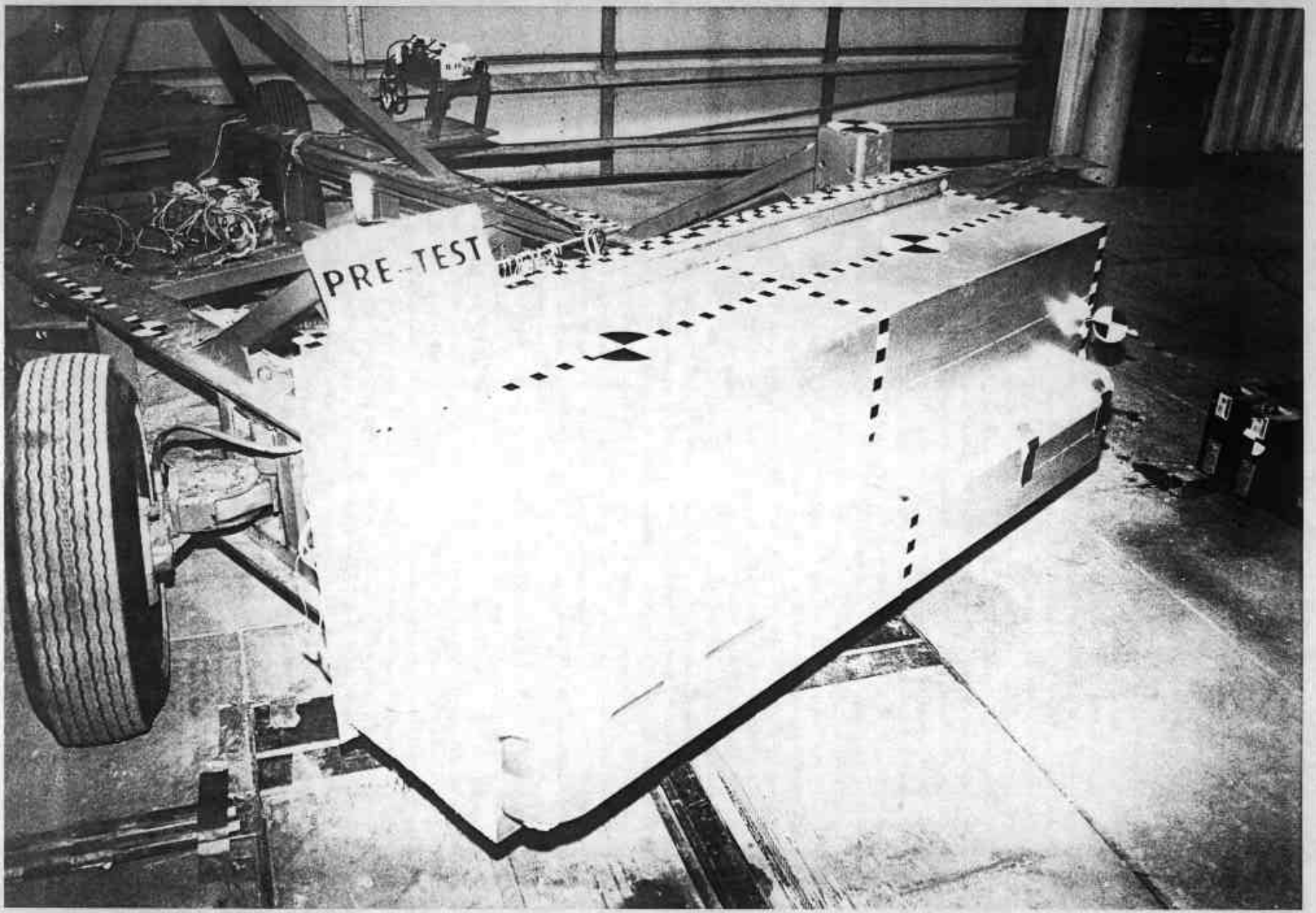


Photo No. A-12 - Pre-Test MDB Right Side View

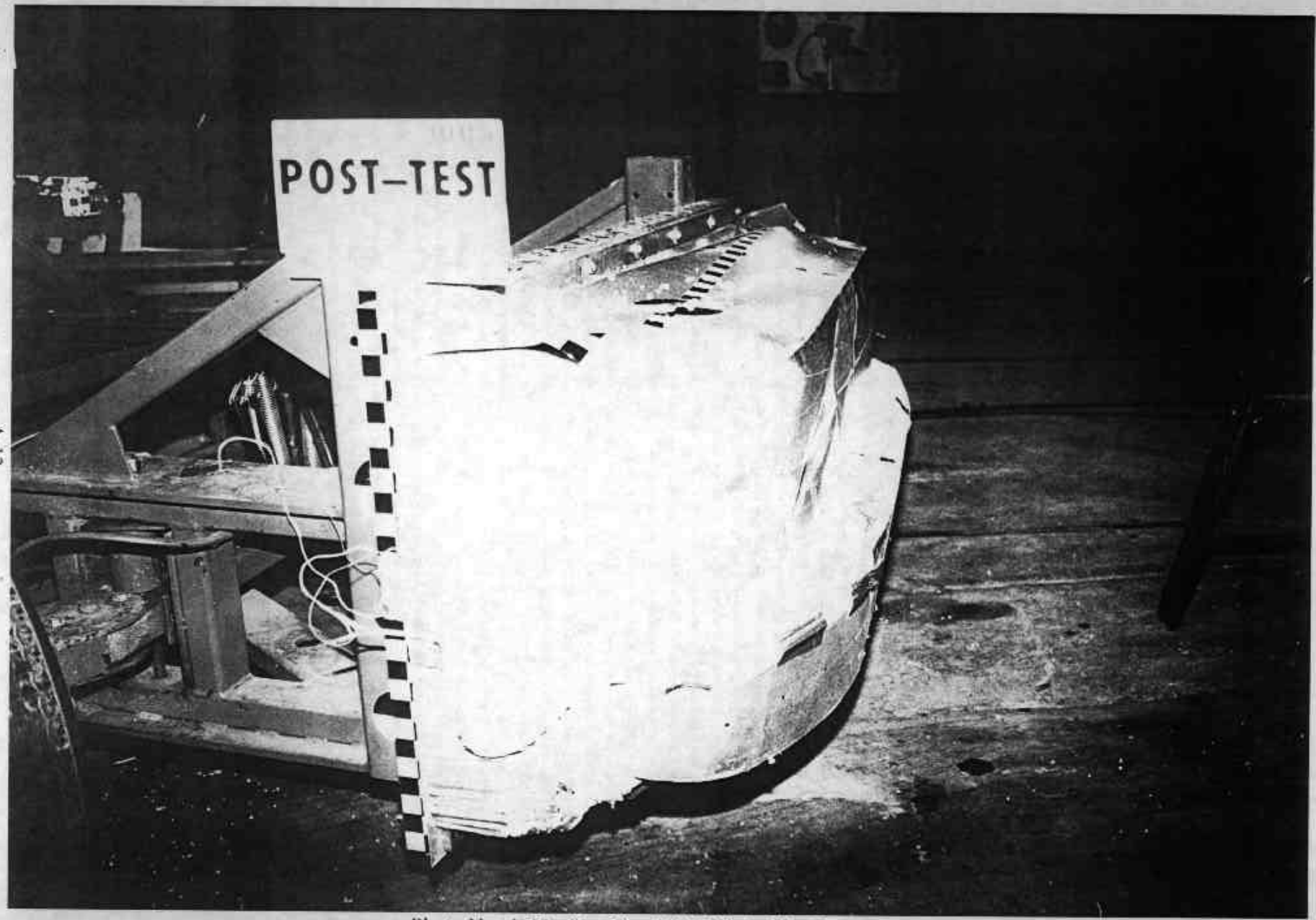


Photo No. A-13 - Post-Test MDB Right Side View

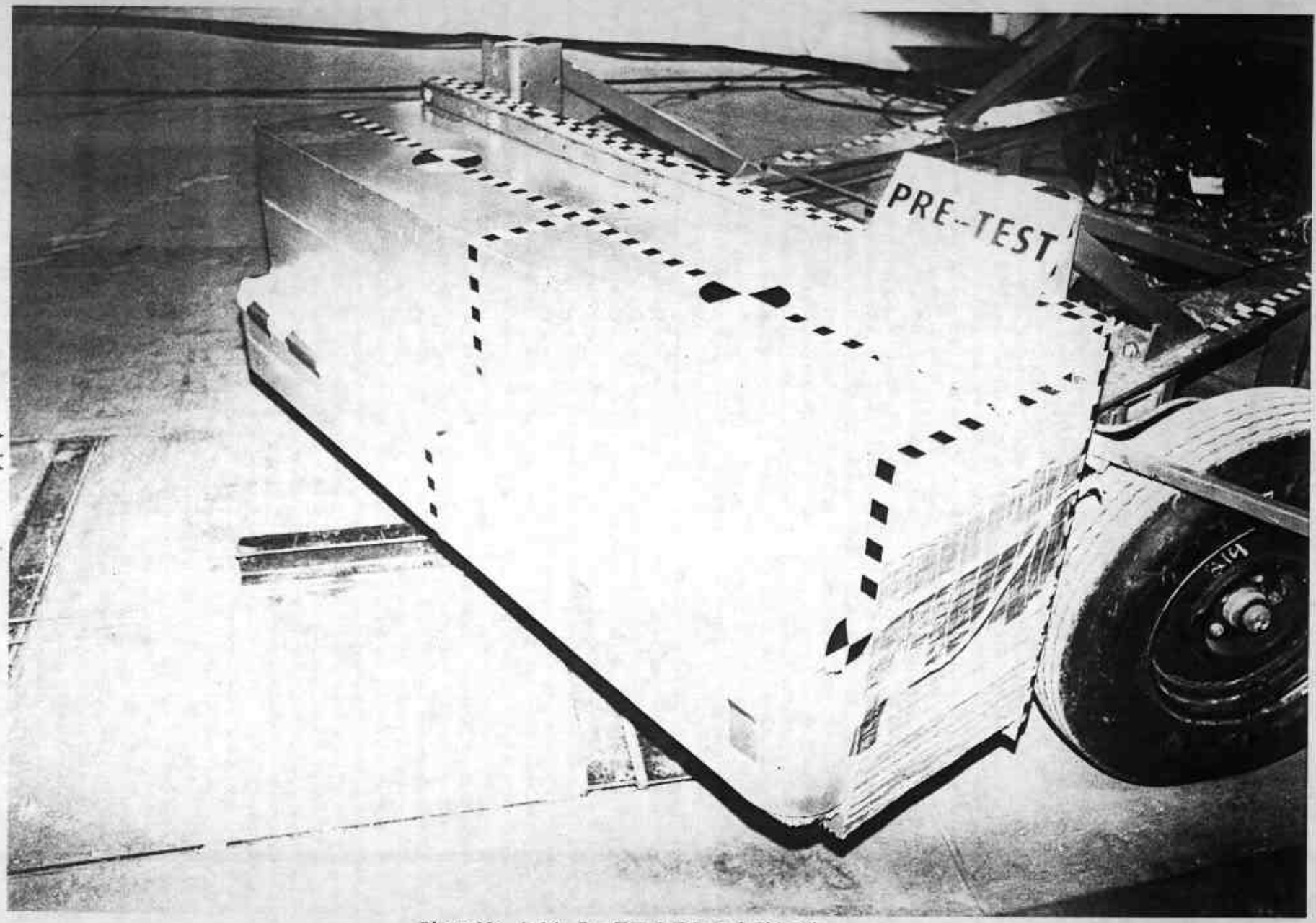


Photo No. A-14 - Pre-Test MDB Left Side View

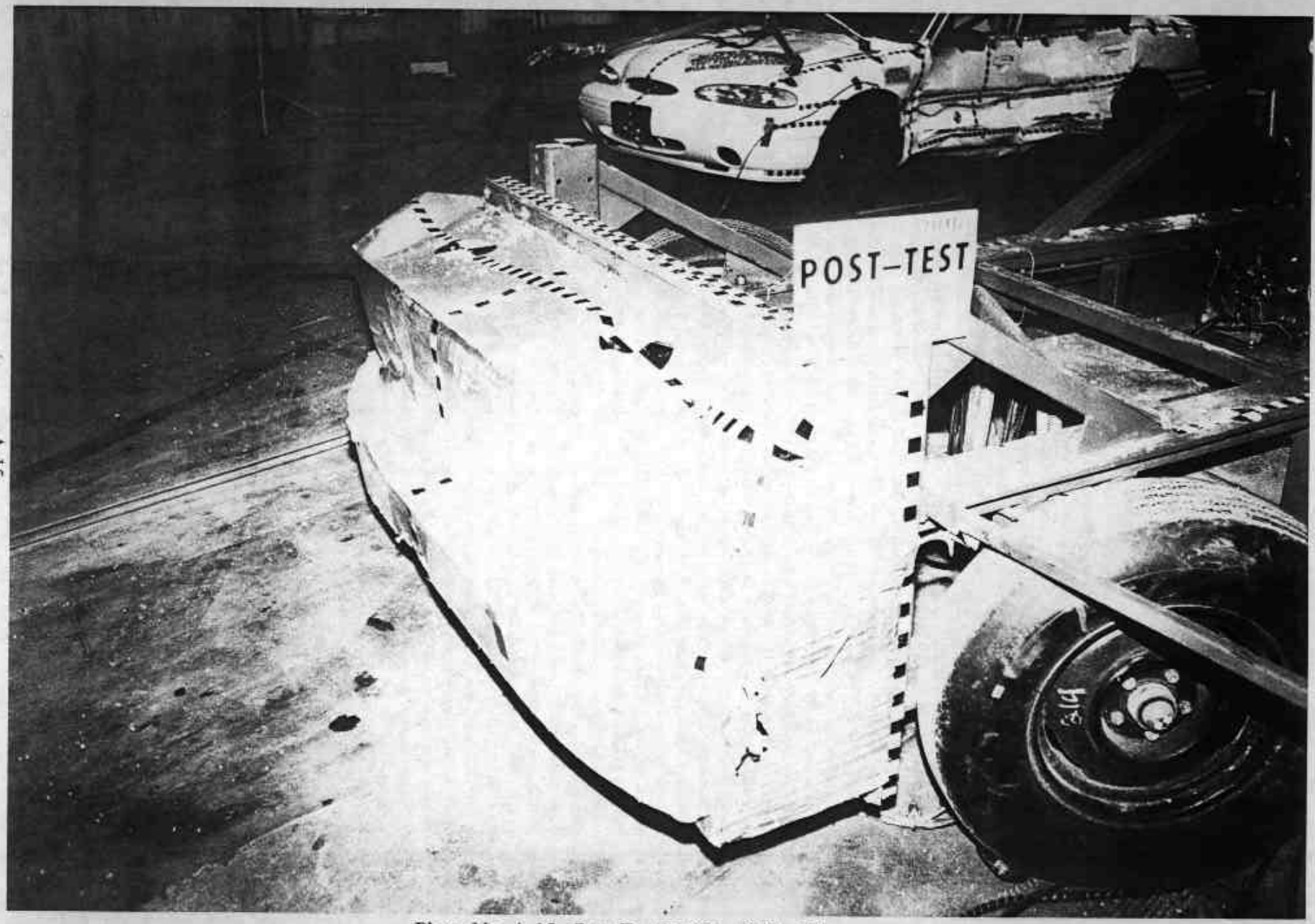


Photo No. A-15 - Post-Test MDB Left Side View

A-16

Photo No. A-16 - Pre-Test Driver Dummy Right Side View

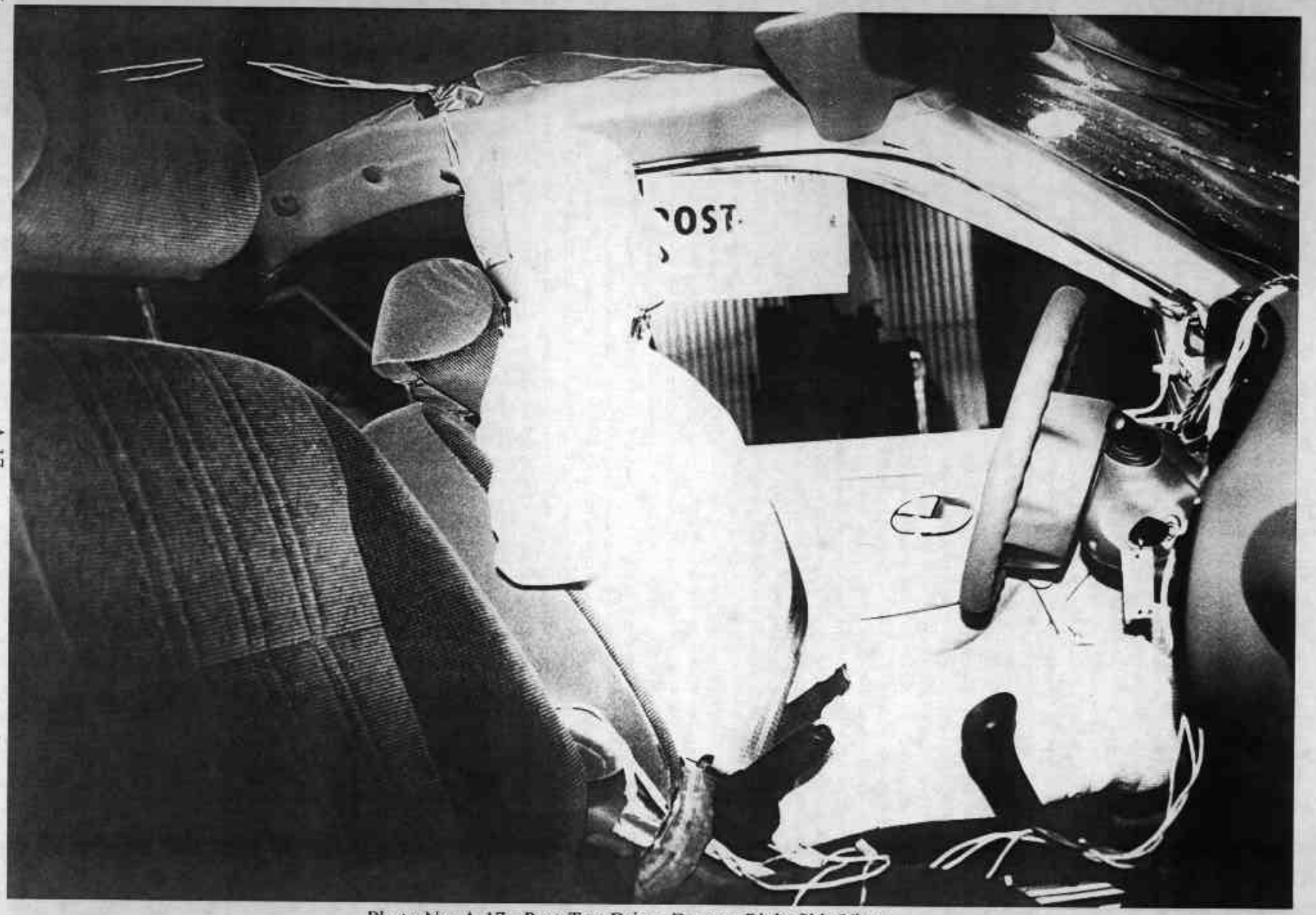
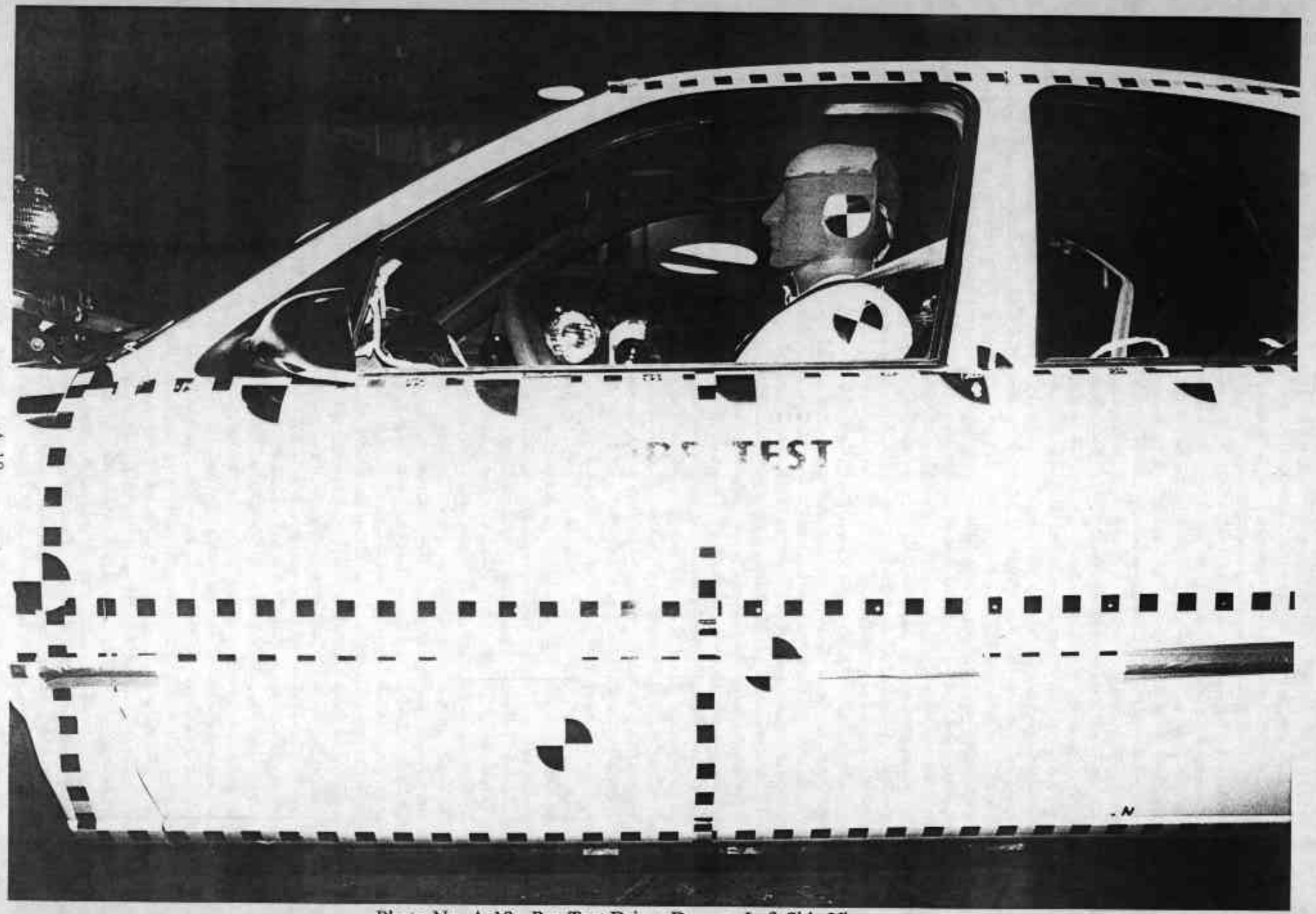


Photo No. A-17 - Post-Test Driver Dummy Right Side View



A-18

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

A-19

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

A-20

Photo No. A-20 - Pre-Test Driver Dummy Left Side View (Door Open)

A-21

Photo No. A-21 - Pre-Test Driver Dummy Shoulder and Door Top View

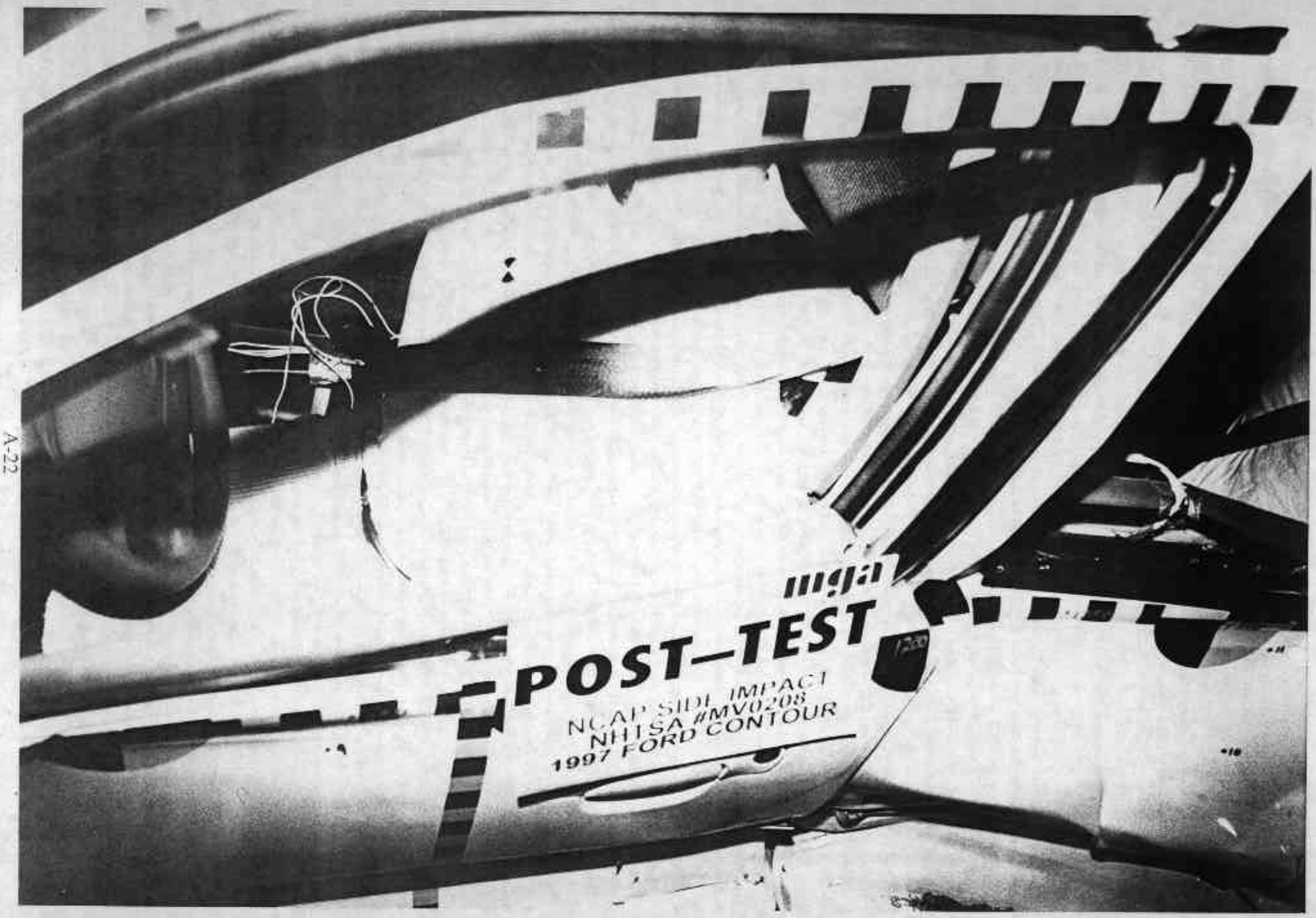


Photo No. A-22 - Post-Test Driver Dummy Shoulder and Door Top View

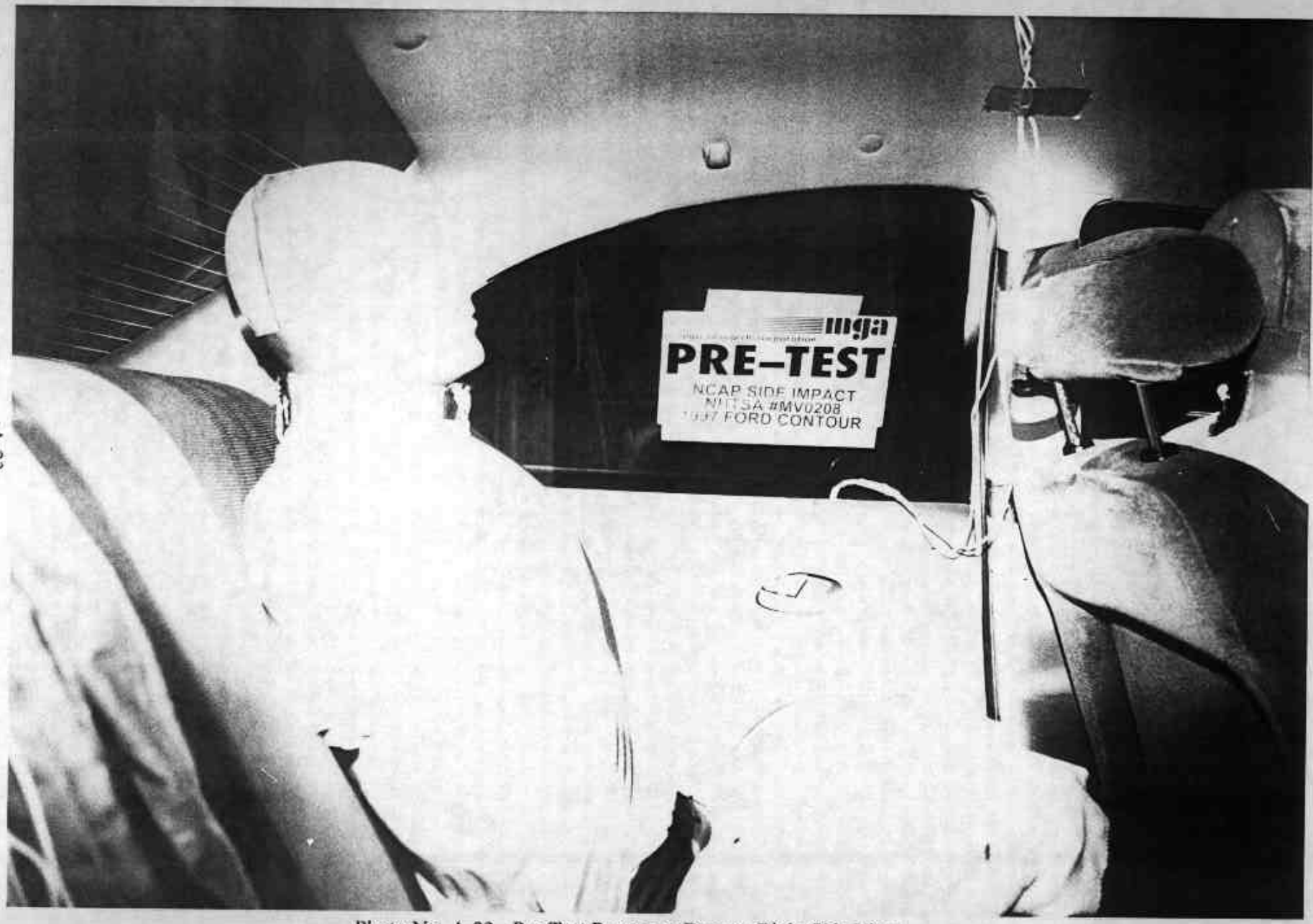
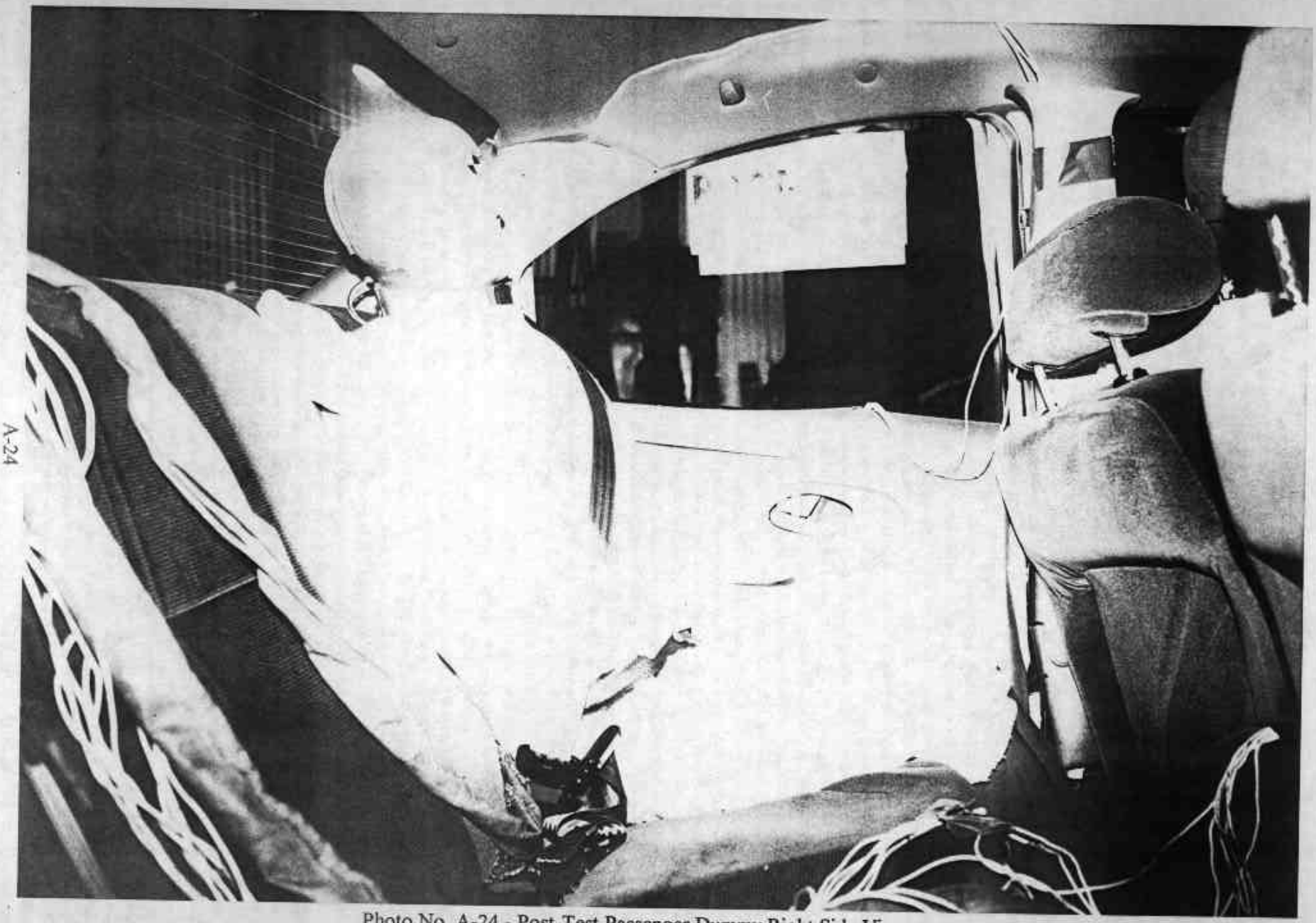
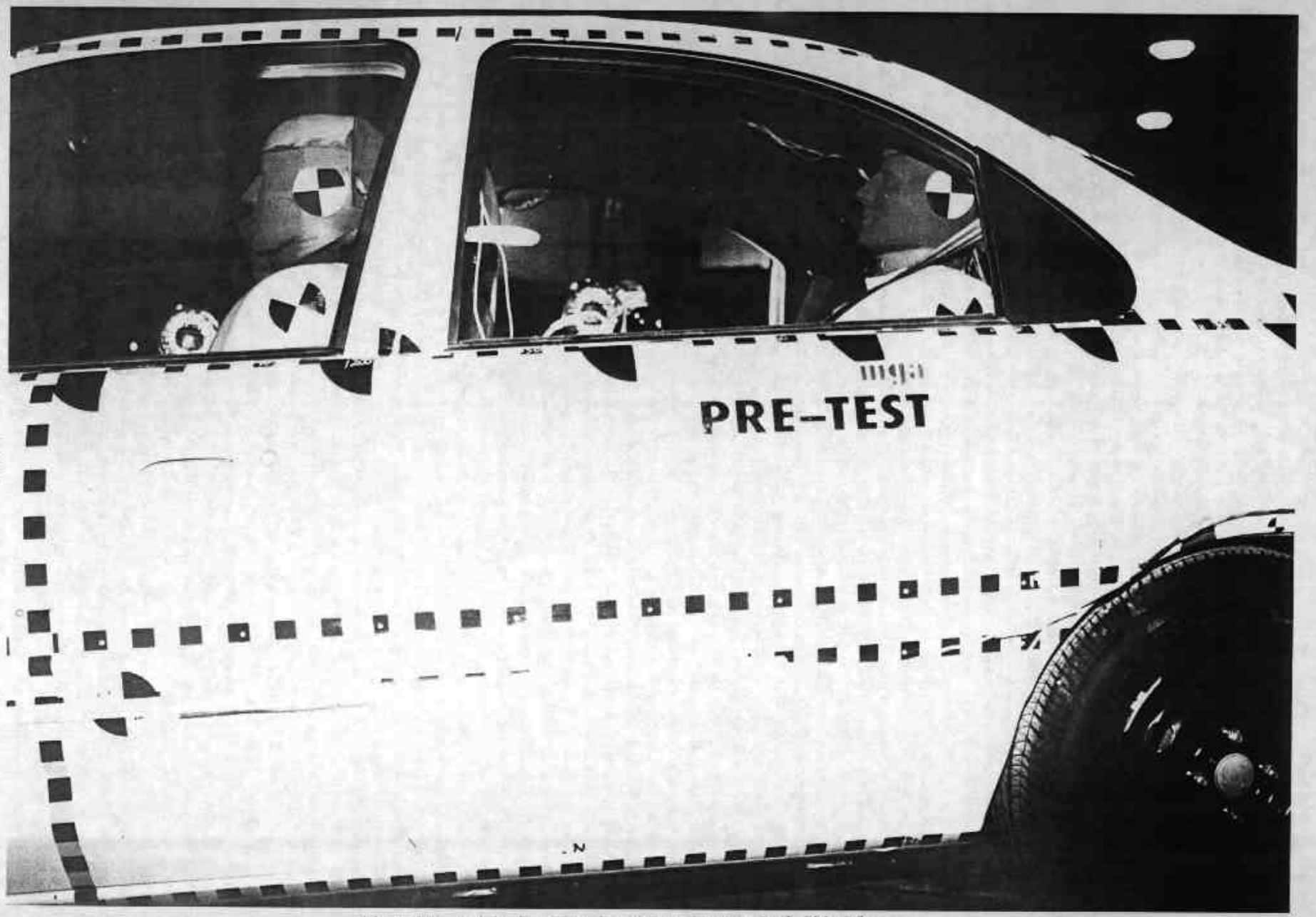


Photo No. A-23 - Pre-Test Passenger Dummy Right Side View



A-24

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



A-25

Photo No. A-25 - Pre-Test Passenger Dummy Left Side View

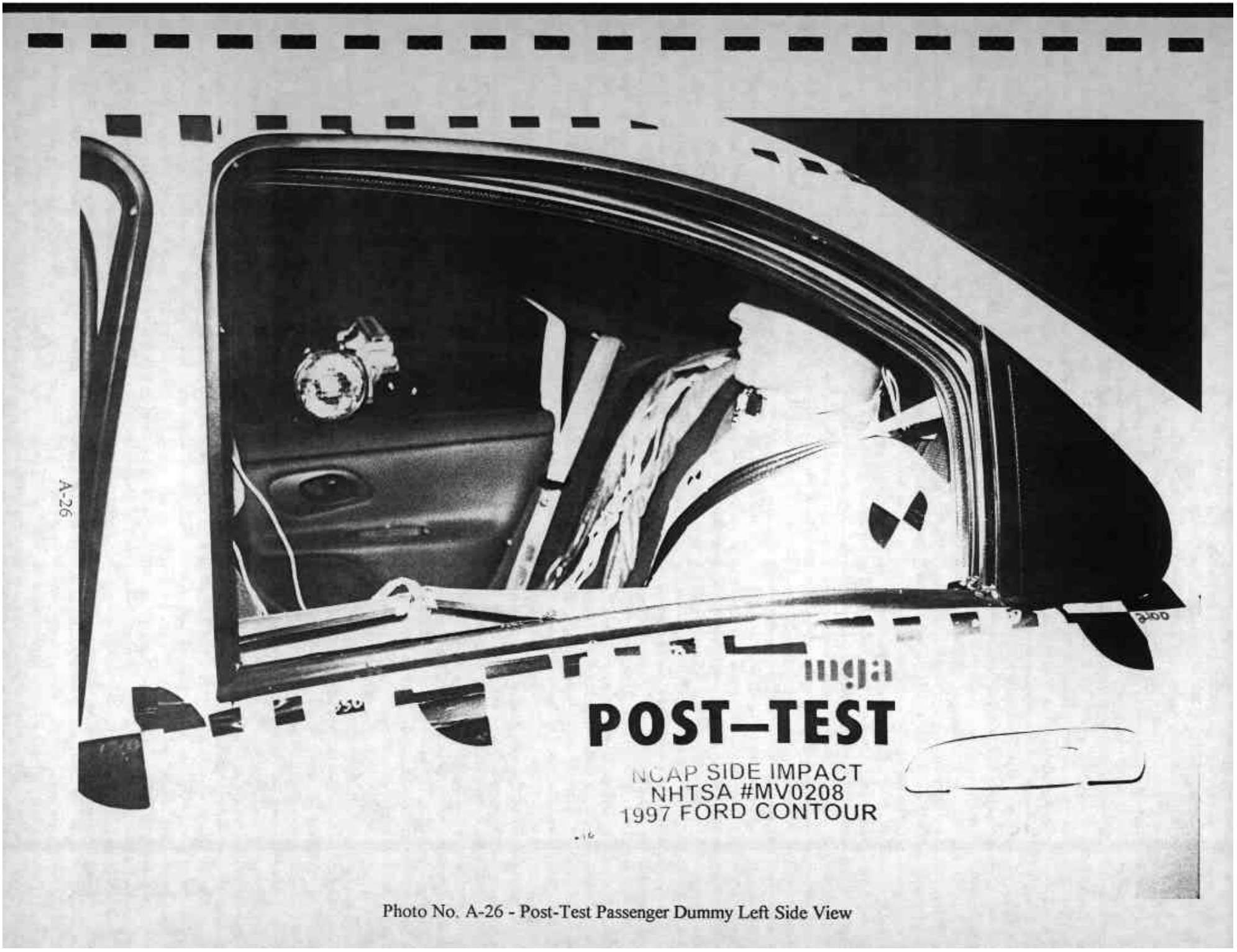
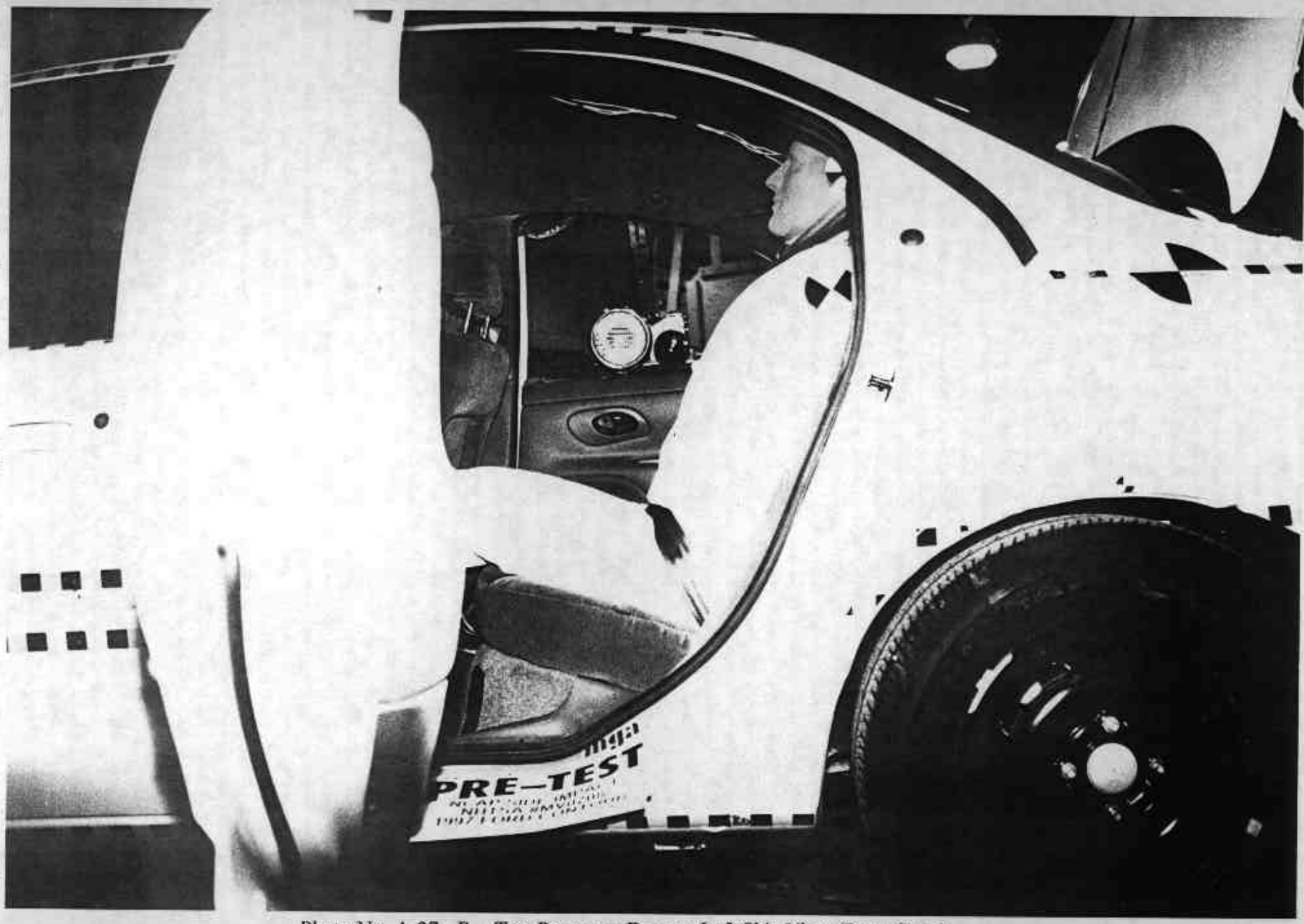
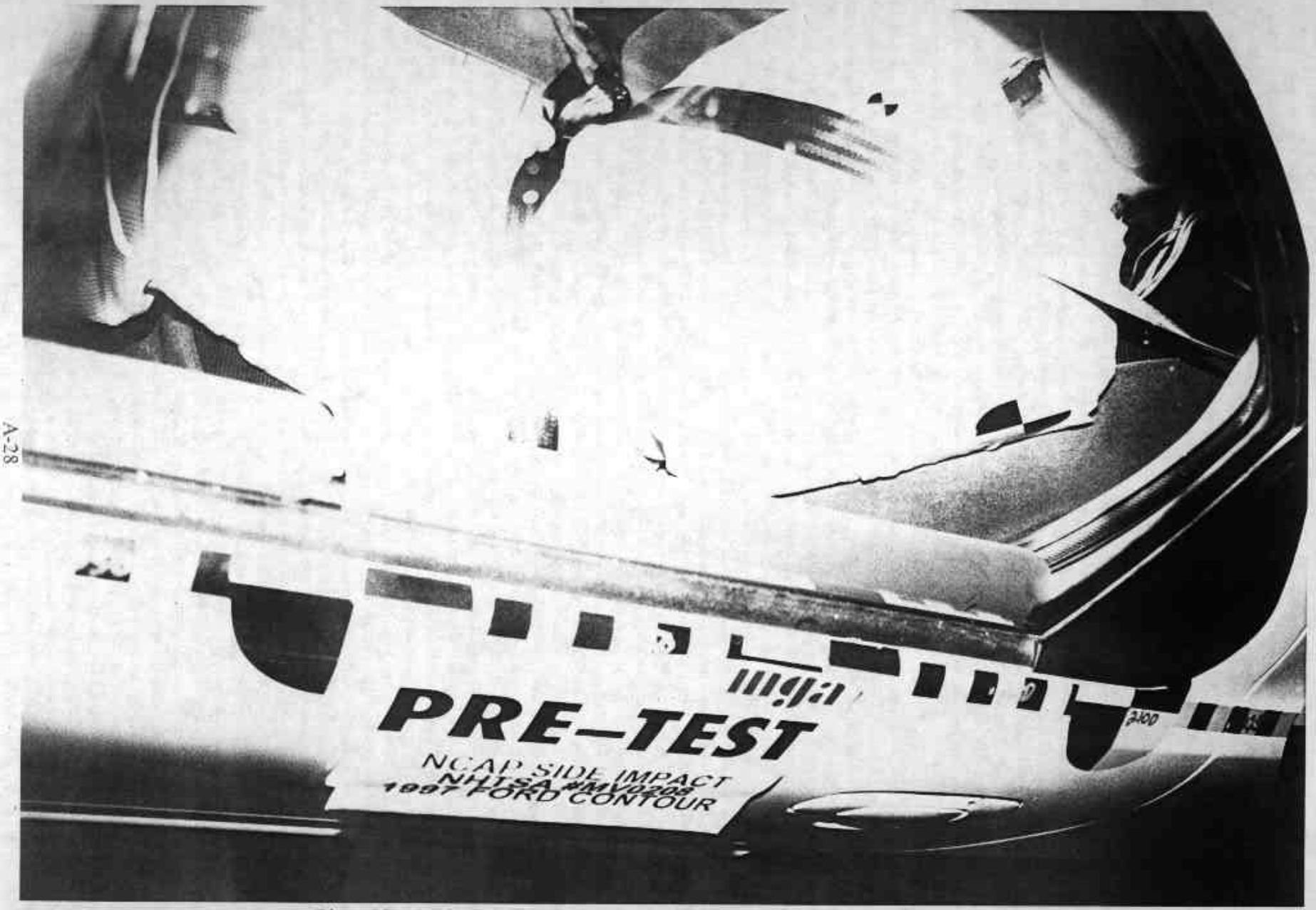


Photo No. A-26 - Post-Test Passenger Dummy Left Side View



A-27

Photo No. A-27 - Pre-Test Passenger Dummy Left Side View (Door Open)

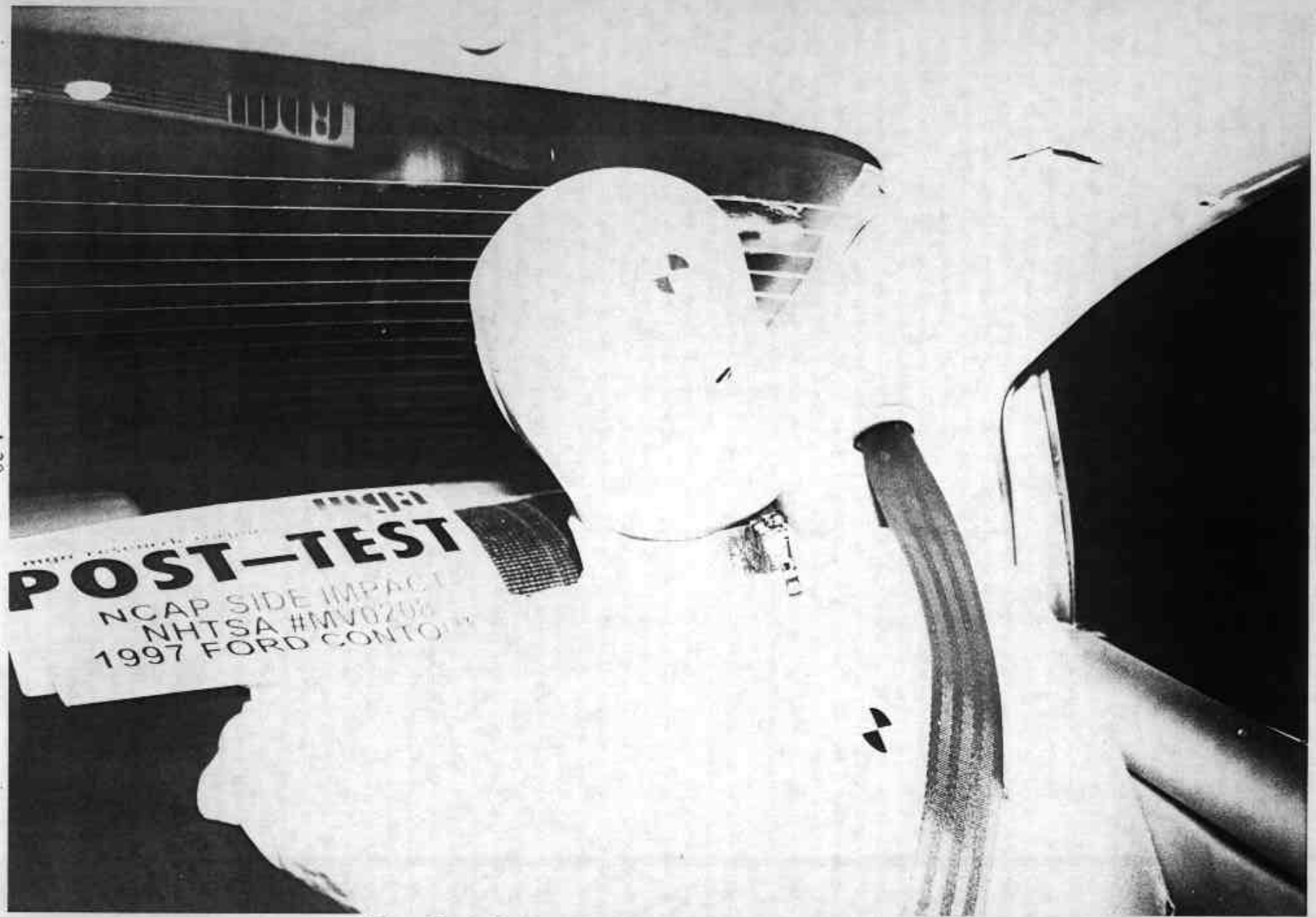


A-28

Photo No. A-28 - Pre-Test Passenger Dummy Shoulder and Door Top View

A-29

Photo No. A-29 - Post-Test Passenger Dummy Shoulder and Door Top View



A-30

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

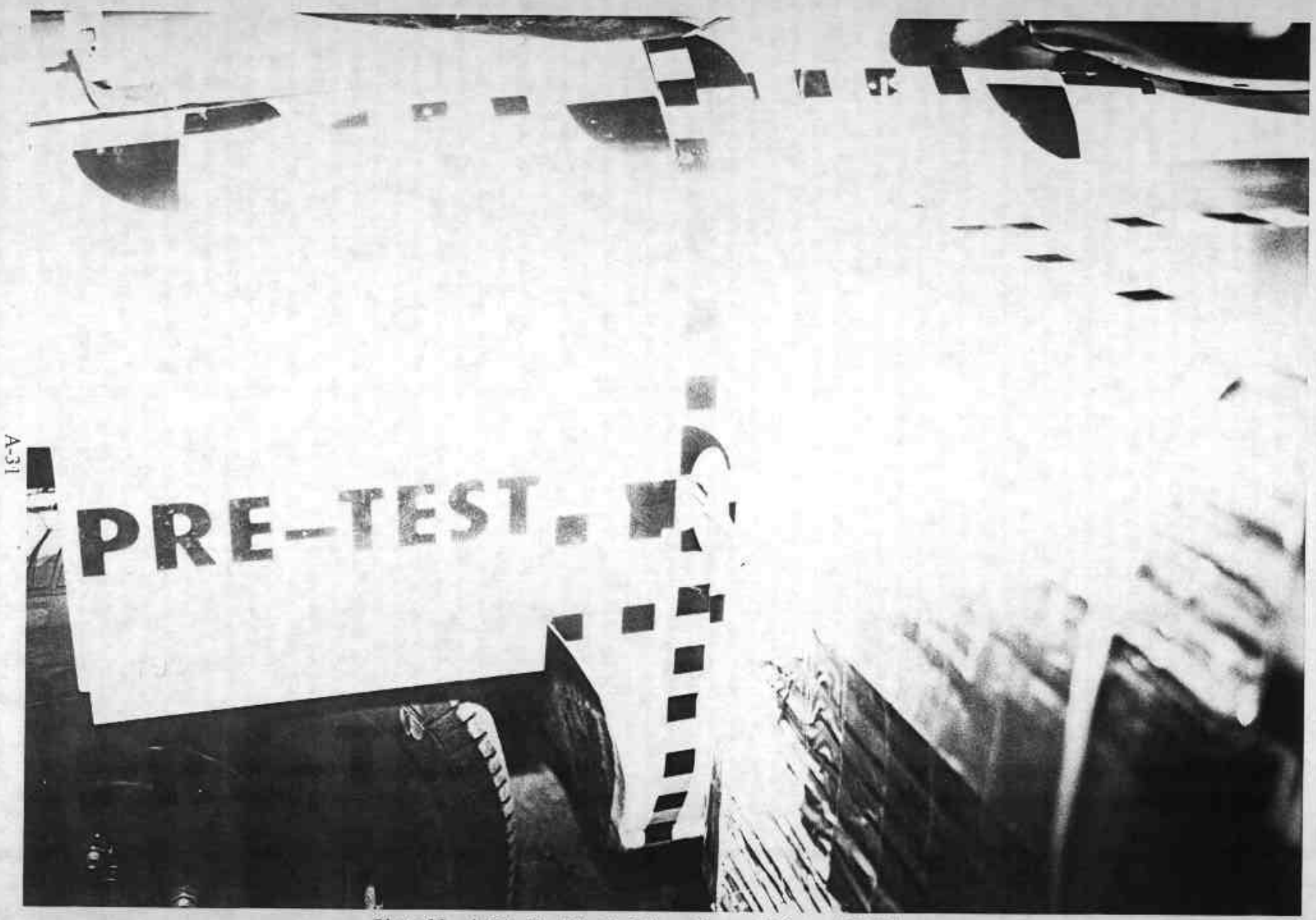


Photo No. A-31 - Pre-Test Left Front Impact Point on Vehicle

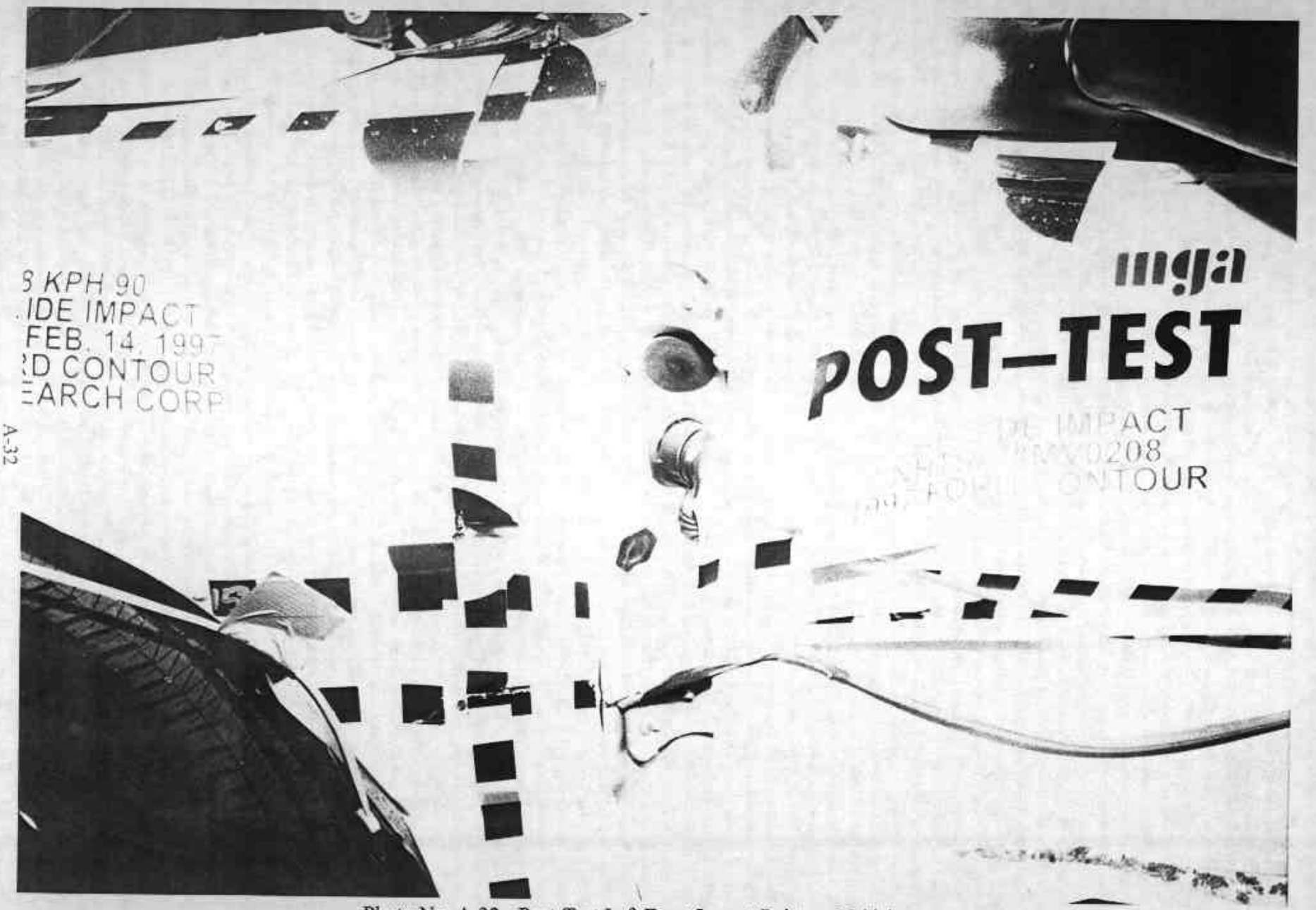
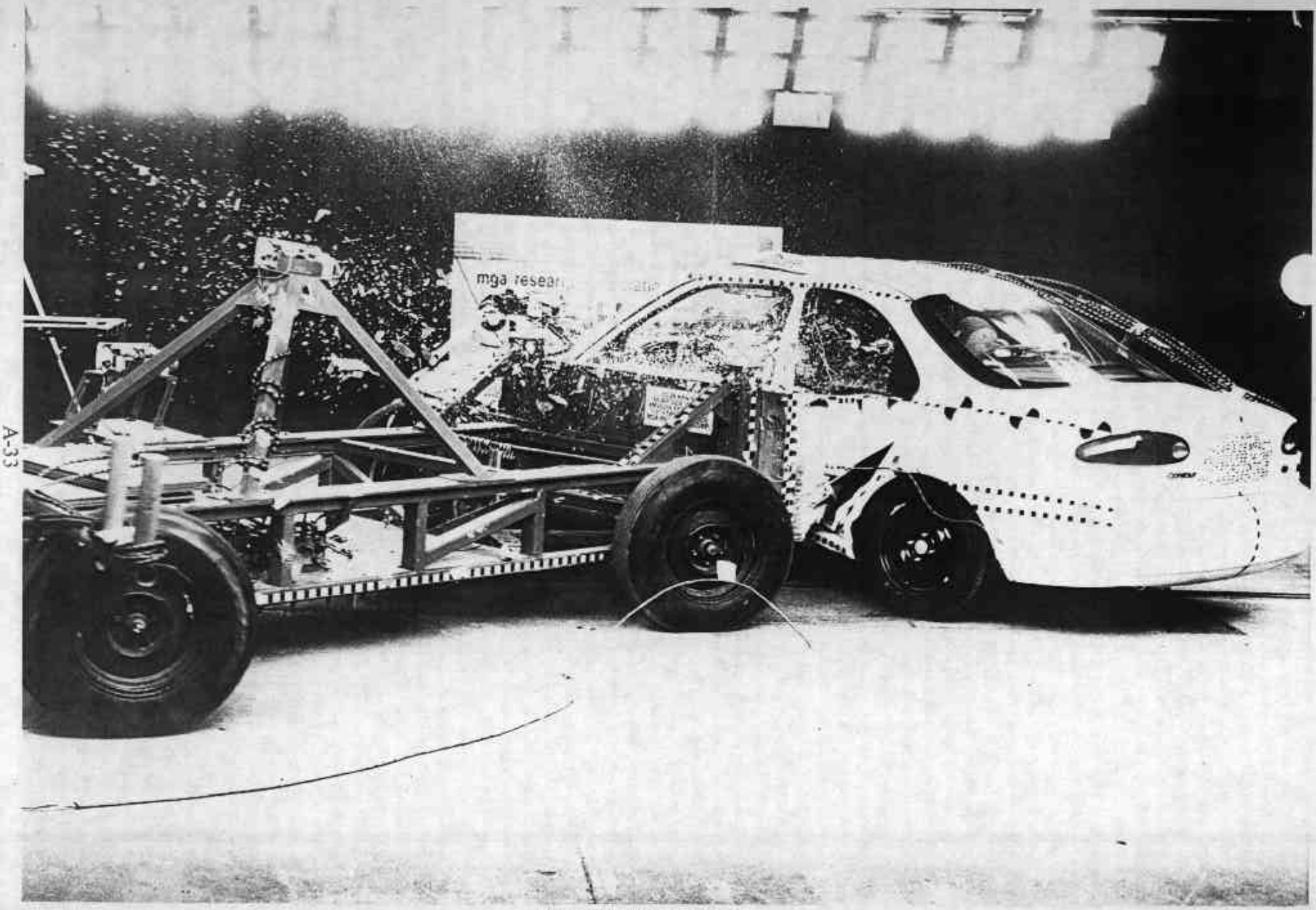
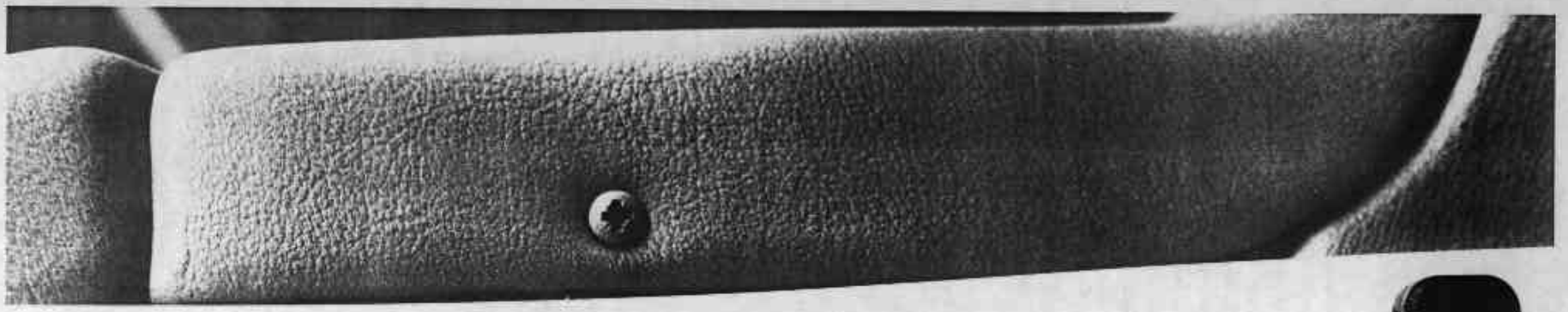


Photo No. A-32 - Post-Test Left Front Impact Point on Vehicle



A-33

Photo No. A-33 - Impact



MFD. BY FORD MOTOR CO. IN U.S.A.
DATE: 11/96 GVWR: 4079LB/1850KG
FRONT GAWR: 2200LB 997KG
REAR GAWR: 1955LB 886KG
THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY, BUMPER, AND THEFT PREVENTION STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.
VIN: 1FALP6539VK149393 F0123 R0203
TYPE:PASSENGER

EXT PNT: WT |RC: 41|DSO:
BRK|INT TR|TP/PS|R|AXLE|TR|SPR
A U6 H 1A Y MSST
UPC

A-34

Photo No. A-34 - Vehicle Certification Label

CONTOUR/MYSTIQUE

RECOMMENDED TIRE SIZE AND INFLATION PRESSURE (COLD)
DIMENSIONS DES PNEUS et PRESSIONS DE GONFLAGE RECOMMANDÉES (À FROID)

A

TIRE SIZE *DIMENSIONS DES PNEUS*	LOAD RANGE *CHARGE NOMINALE*	PRESSURE *PRESSION* FRONT *AVANT*	REAR *ARRIÈRE*
P185/70R14 87T *	ALL	34 psi 235kPa	34 psi 235kPa
P195/65R14 88T *	ALL	34 psi 235kPa	34 psi 235kPa
P205/60R15 90T *	ALL	31 psi 214kPa	34 psi 235kPa
T135/80R15 100M TEMPORAL SPARE *PNEU DE SECOURS PROVISOIRE*	ALL	60 psi 415kPa	60 psi 415kPa

* MUST BE REPLACED WITH AN EQUIVALENT TYPE SPEED TIRE.
* NE REMPLACER QUE PAR UN PNEU DONT INDICE DE VITESSE EST LE MEME.

TOTAL LOAD = OCCUPANTS PLUS LUGGAGE — *CHARGE TOTALE = OCCUPANTS PLUS BAGAGES*

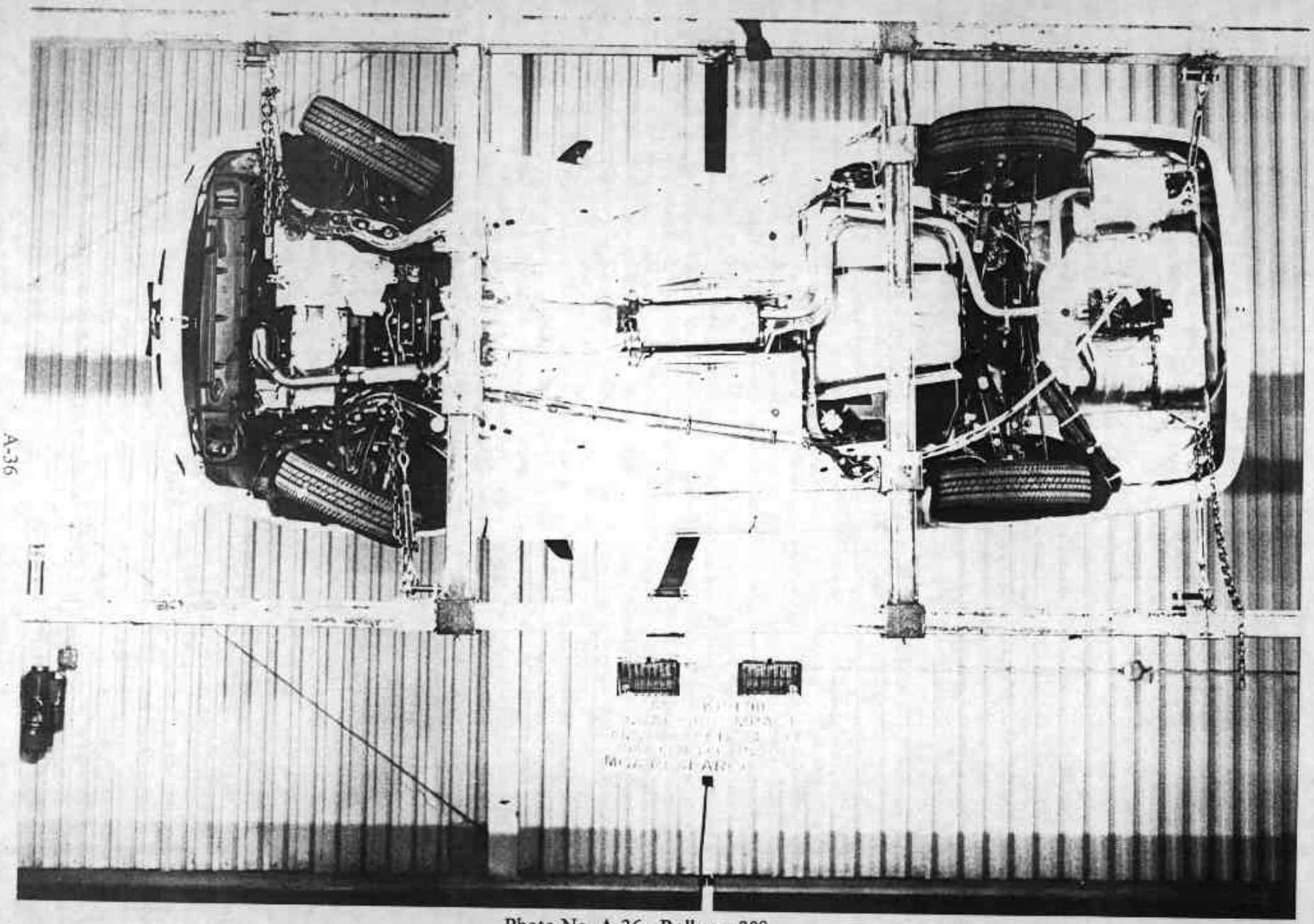
MAXIMUM LOAD *CHARGE MAXIMALE*	TOTAL OCCUPANTS *NOMBRE TOTAL D'OCCUPANTS*	DISTRIBUTION *RÉPARTITION* FRONT *AVANT*	REAR *ARRIÈRE*	LUGGAGE *BAGAGES*
880 lb. / 400kg	5	2	3	130 lb. 60kg

FOR SUSTAINED HIGH SPEED, TRAILER TOWING, RECREATIONAL ACCESSORIES, OR TEMPORAL SPARE TIRE INFORMAITON - SEE OWNER GUIDE.
HAUTES VITESSES SOUTENUES, TRACTION D'UNE REMORQUE, PNEU DE SECOURS PROVISOIRE OU ACCESSOIRES DE PLAISANCE:
CONSULTER LE GUIDE DU PROPRIÉTAIRE.

▽ 93BG-F06098-AD

A-35

Photo No. A-35 - Tire Placard



A-36

Photo No. A-36 - Rollover 90°

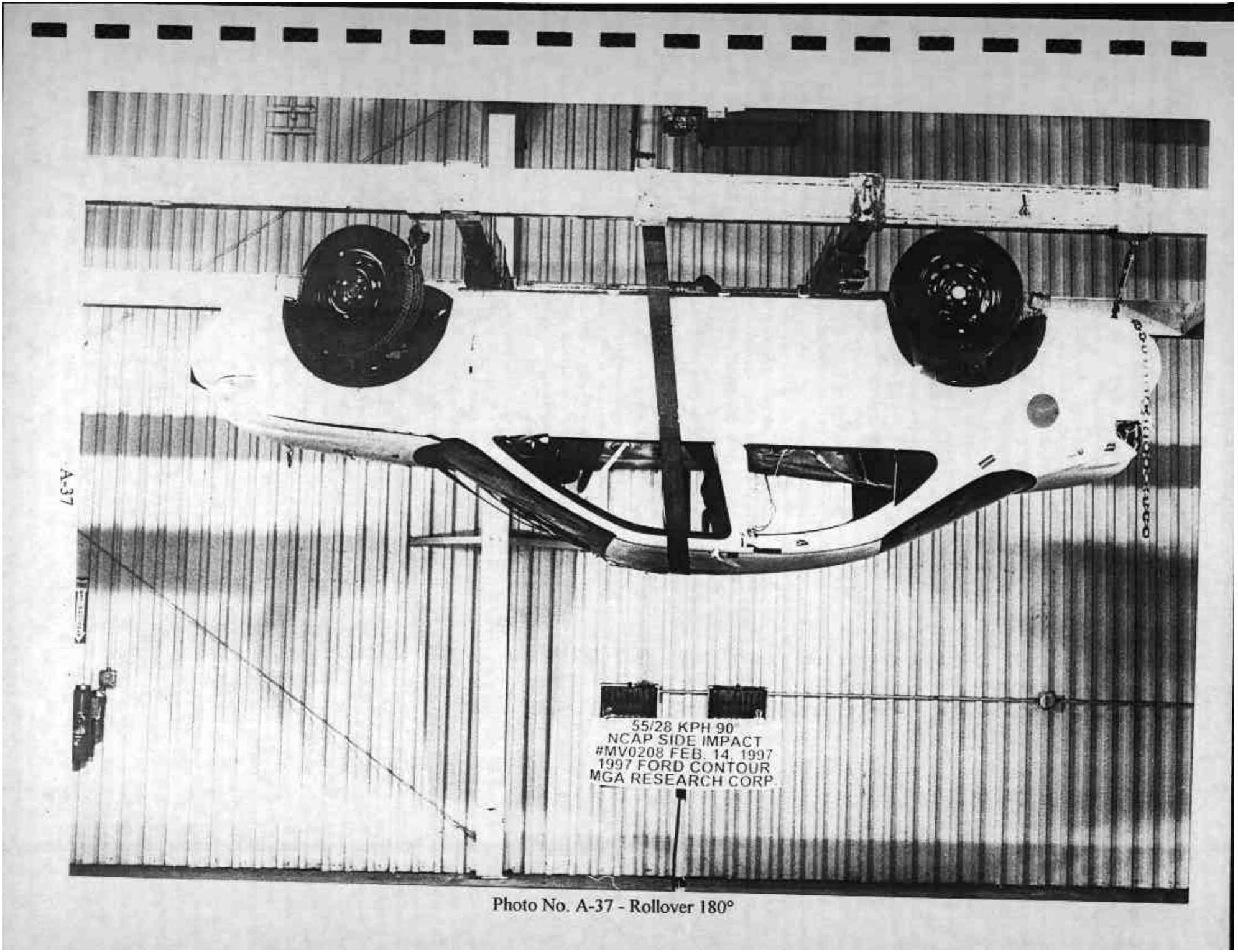
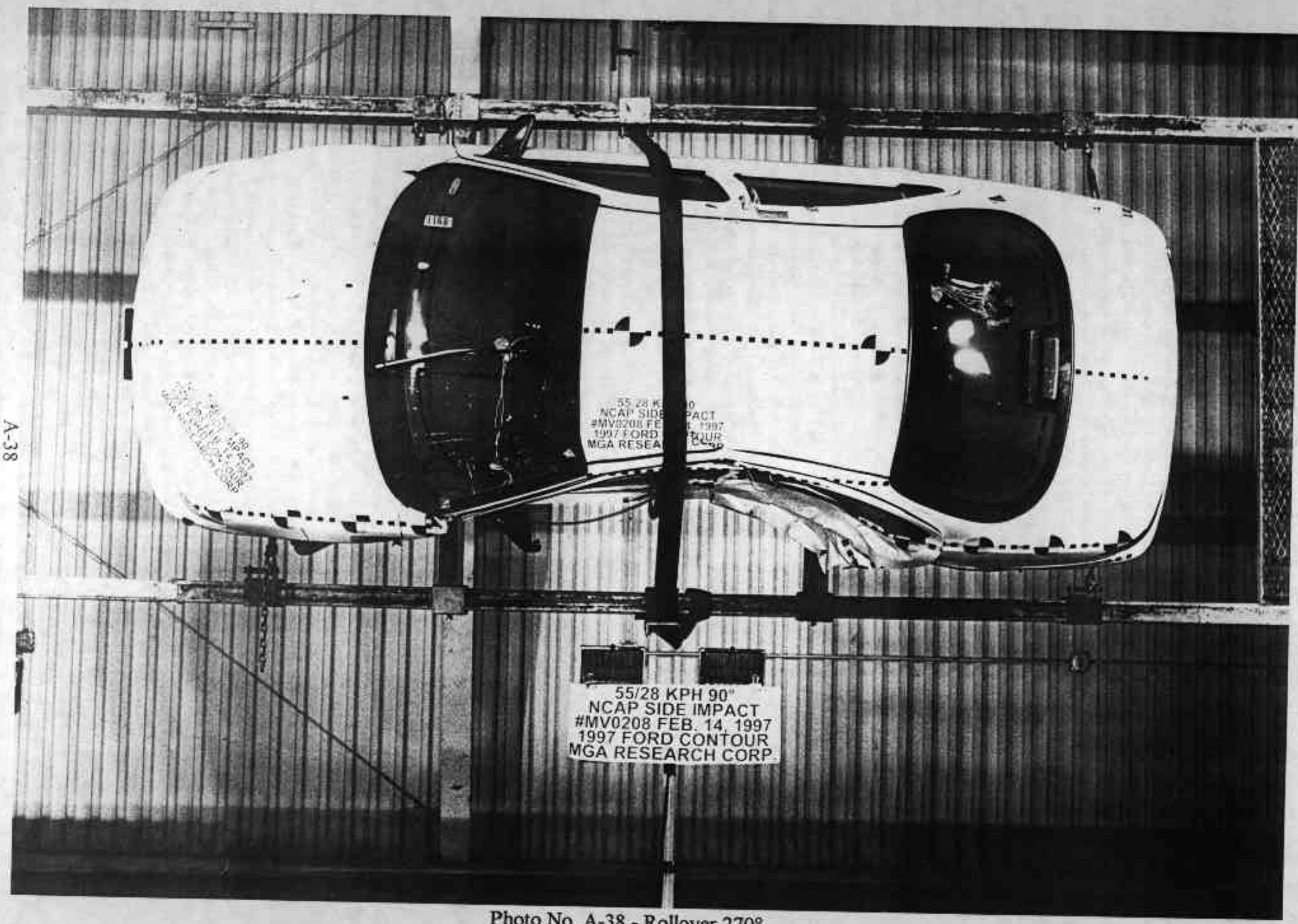
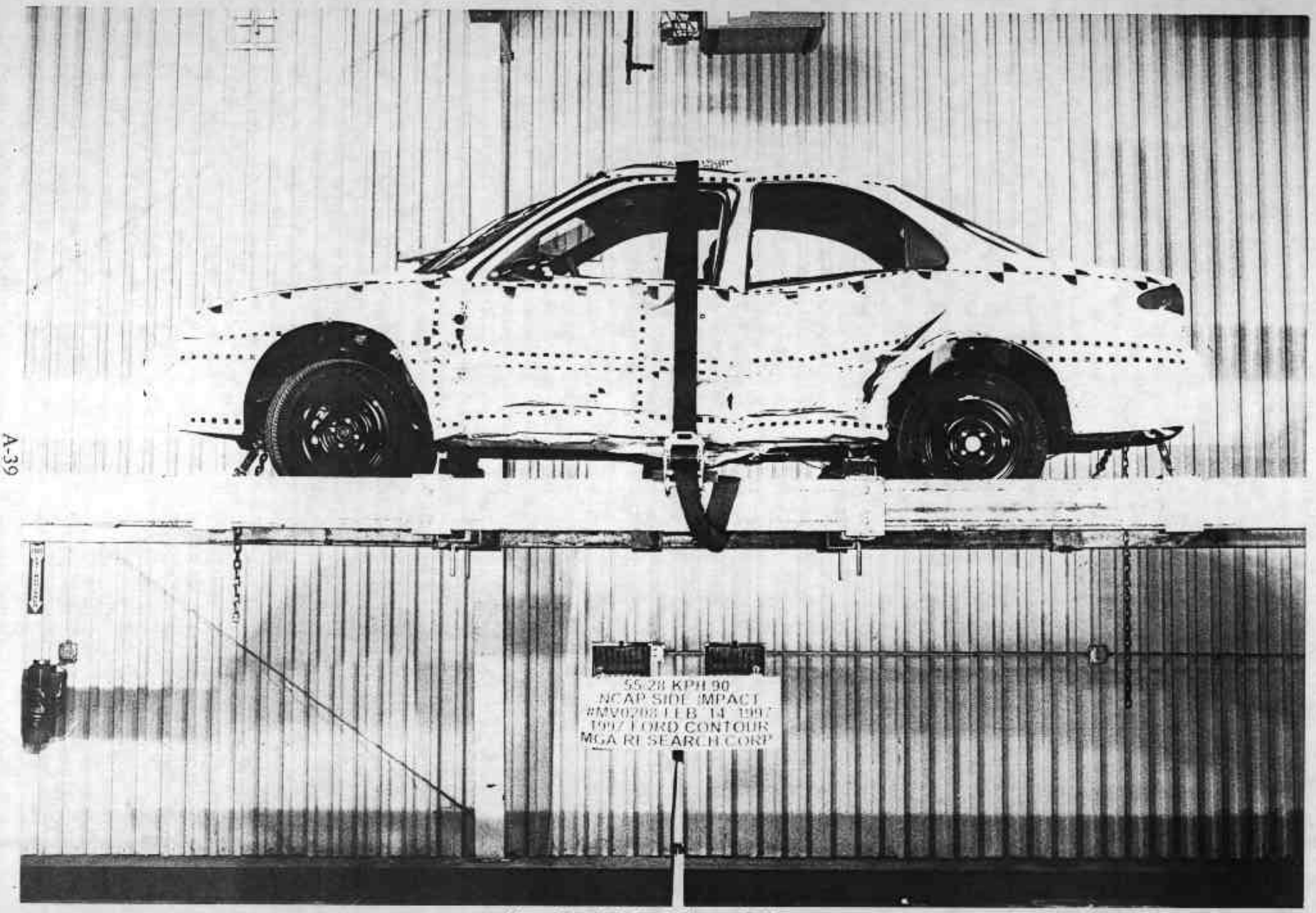


Photo No. A-37 - Rollover 180°



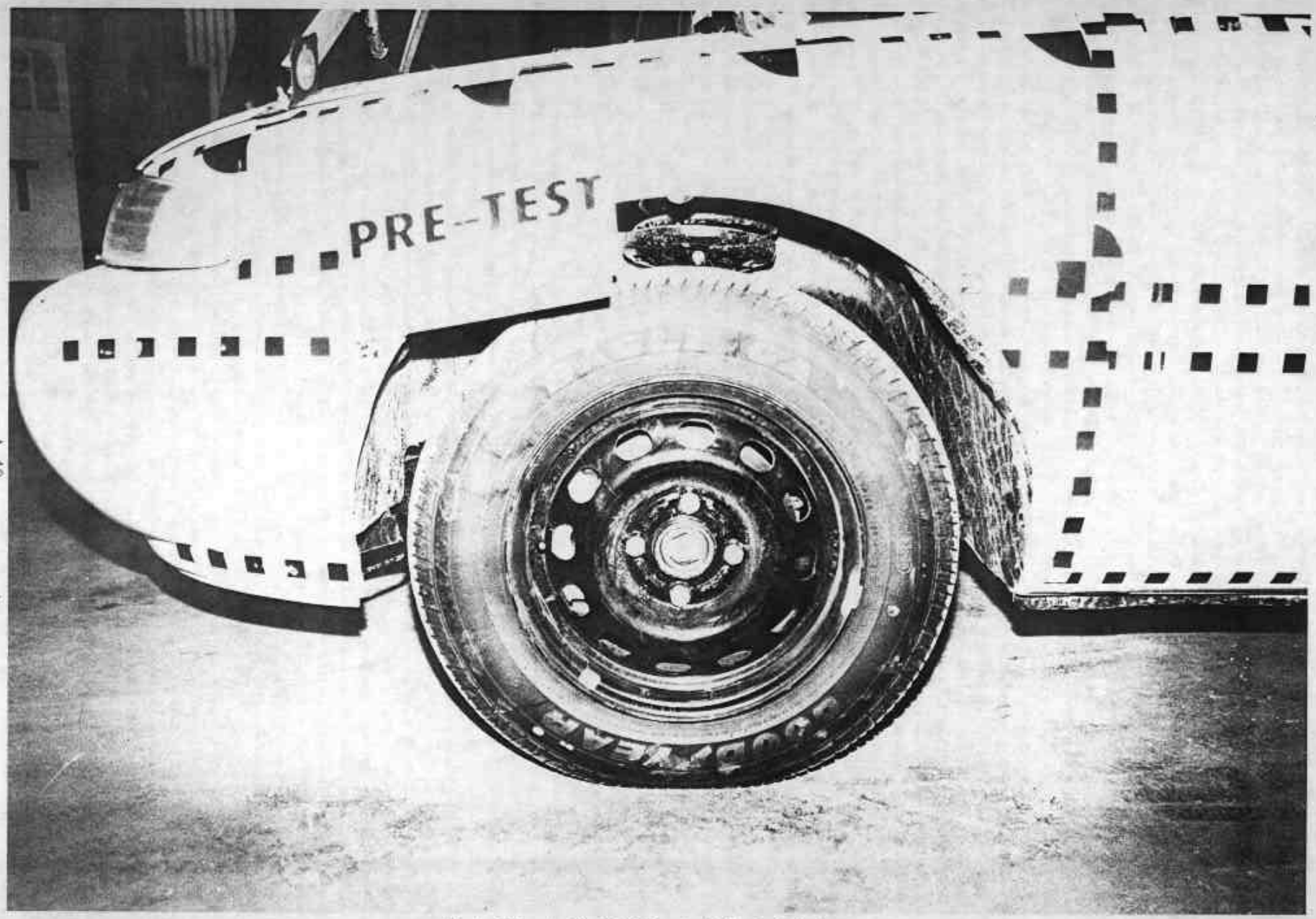
A-38

Photo No. A-38 - Rollover 270°



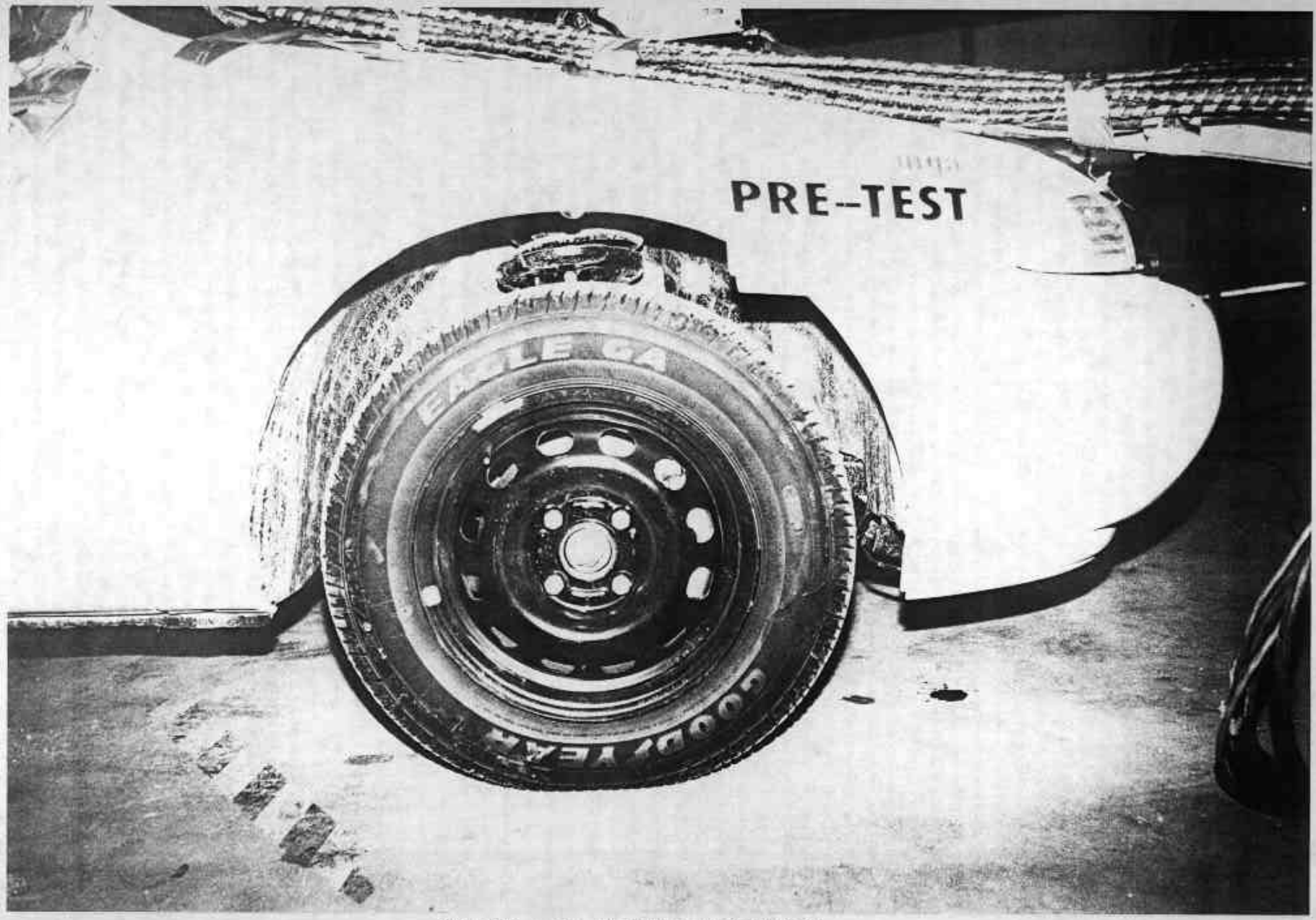
A-39

Photo No. A-39 - Rollover 360°



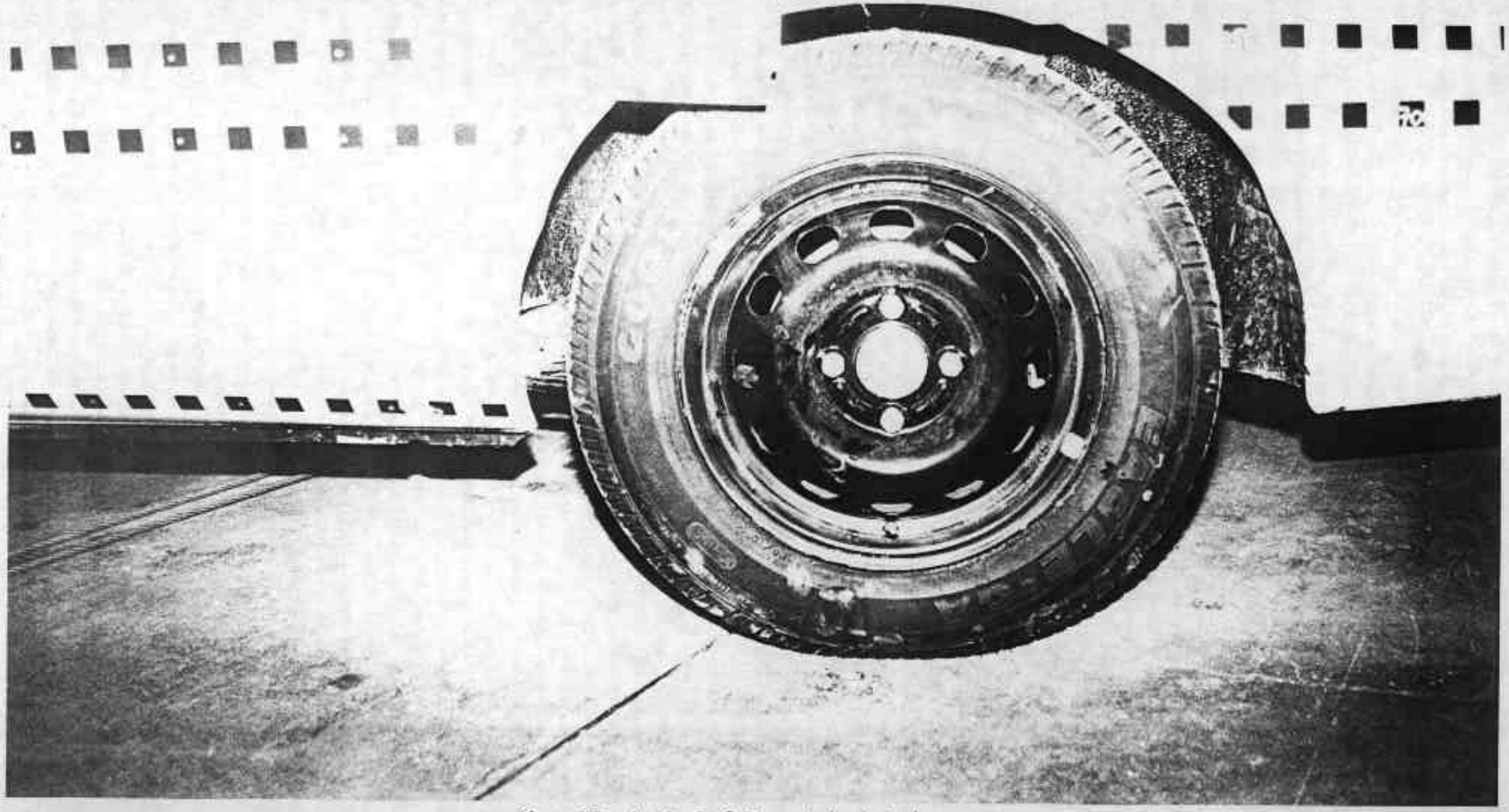
A-40

Photo No. A-40 - Left Front Attitude Point



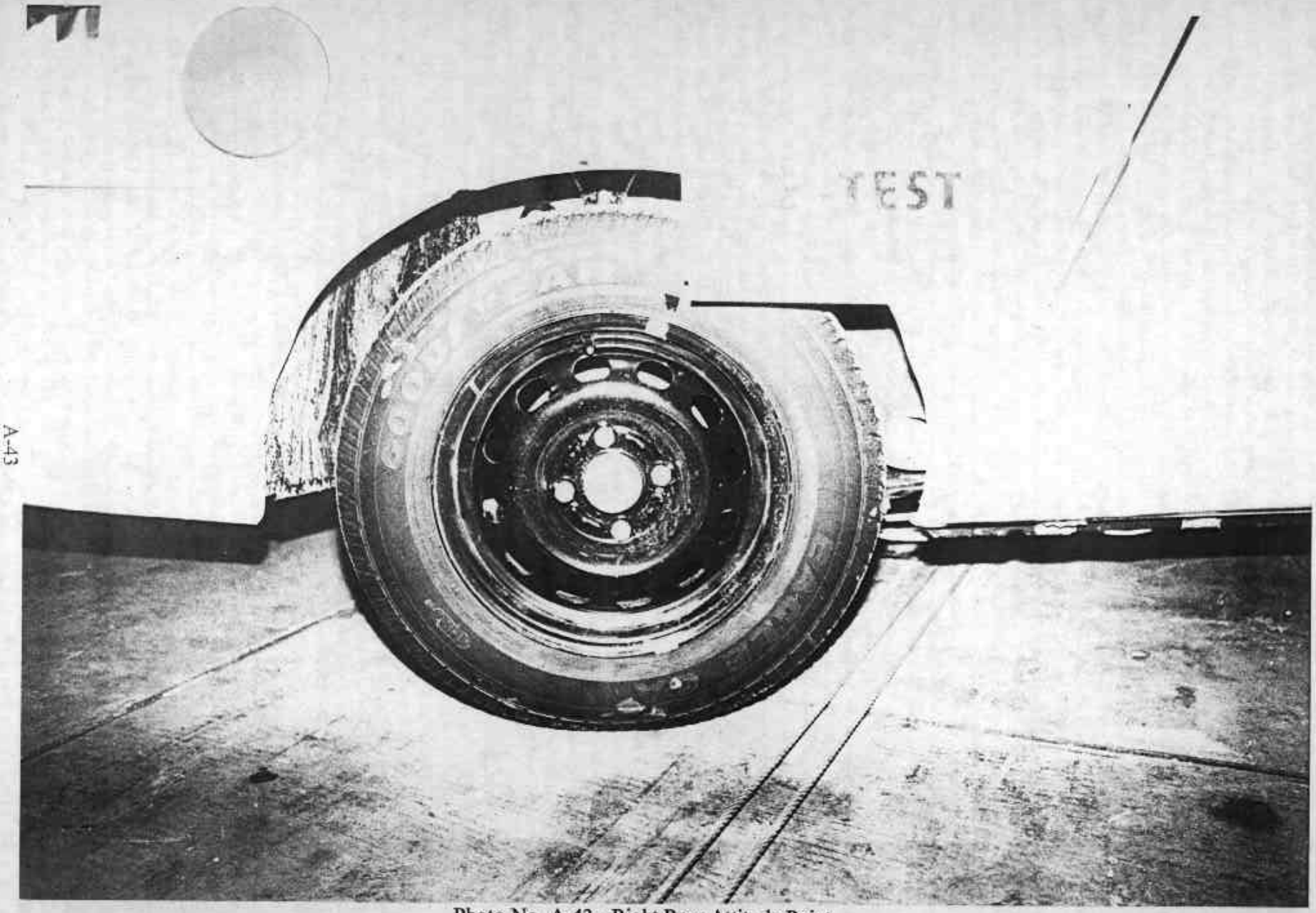
A-41

Photo No. A-41 - Right Front Attitude Point



A-42

Photo No. A-42 - Left Rear Attitude Point



A-43

Photo No. A-43 - Right Rear Attitude Point

APPENDIX B - VEHICLE AND SID RESPONSE DATA

Table of Data Plots

* No Valid Data Collected

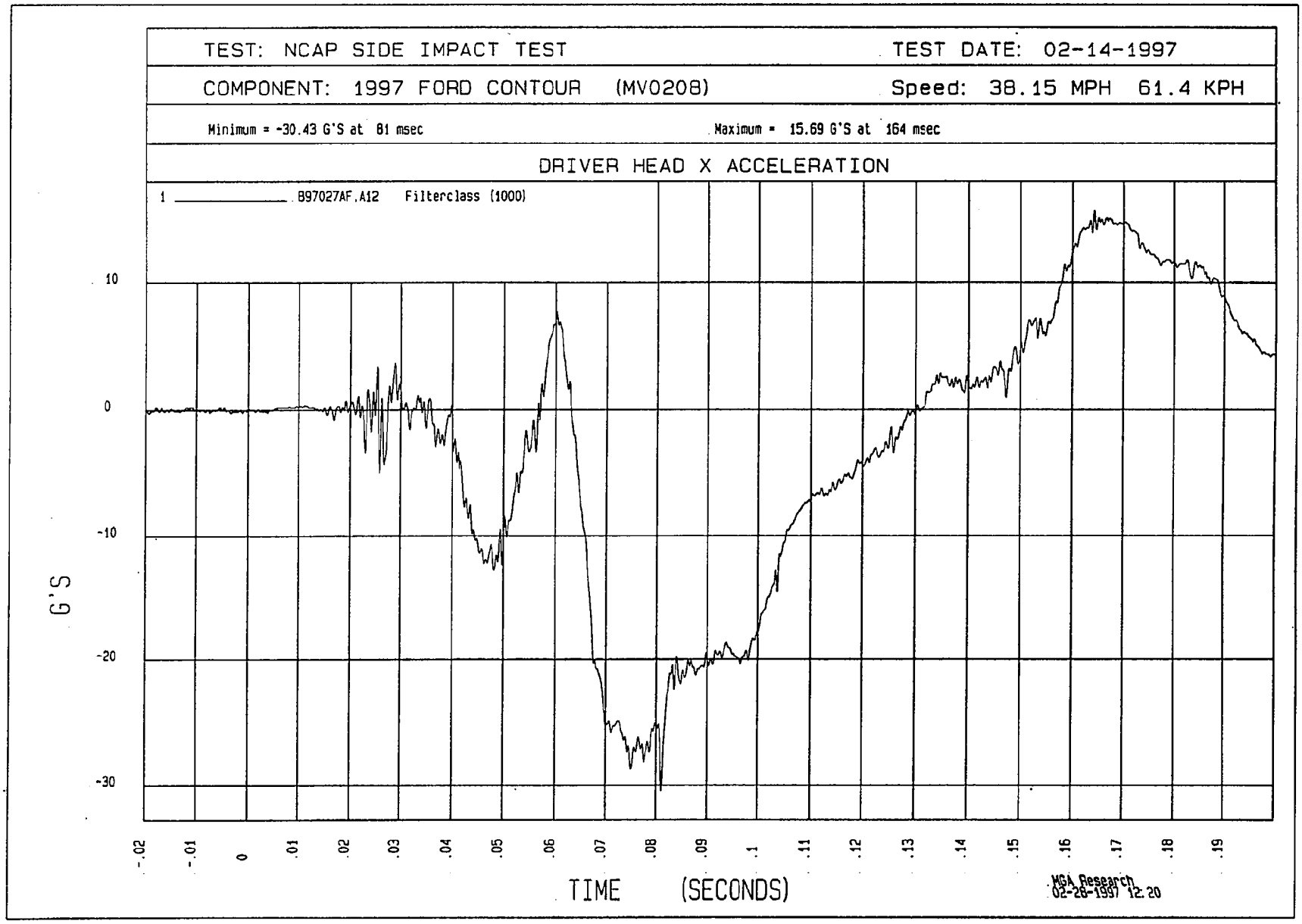
Table of Data Plots

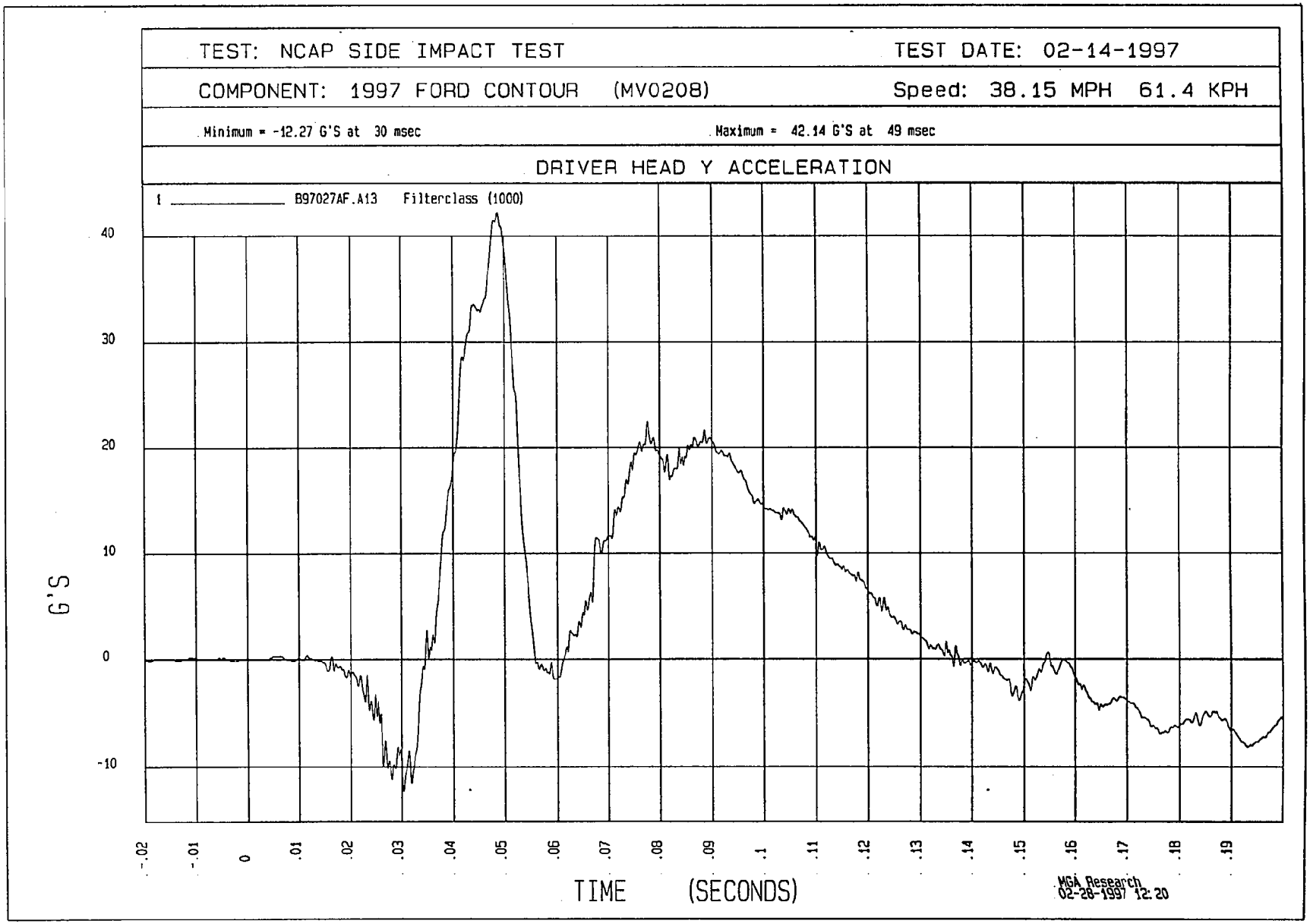
Table of Data Plots

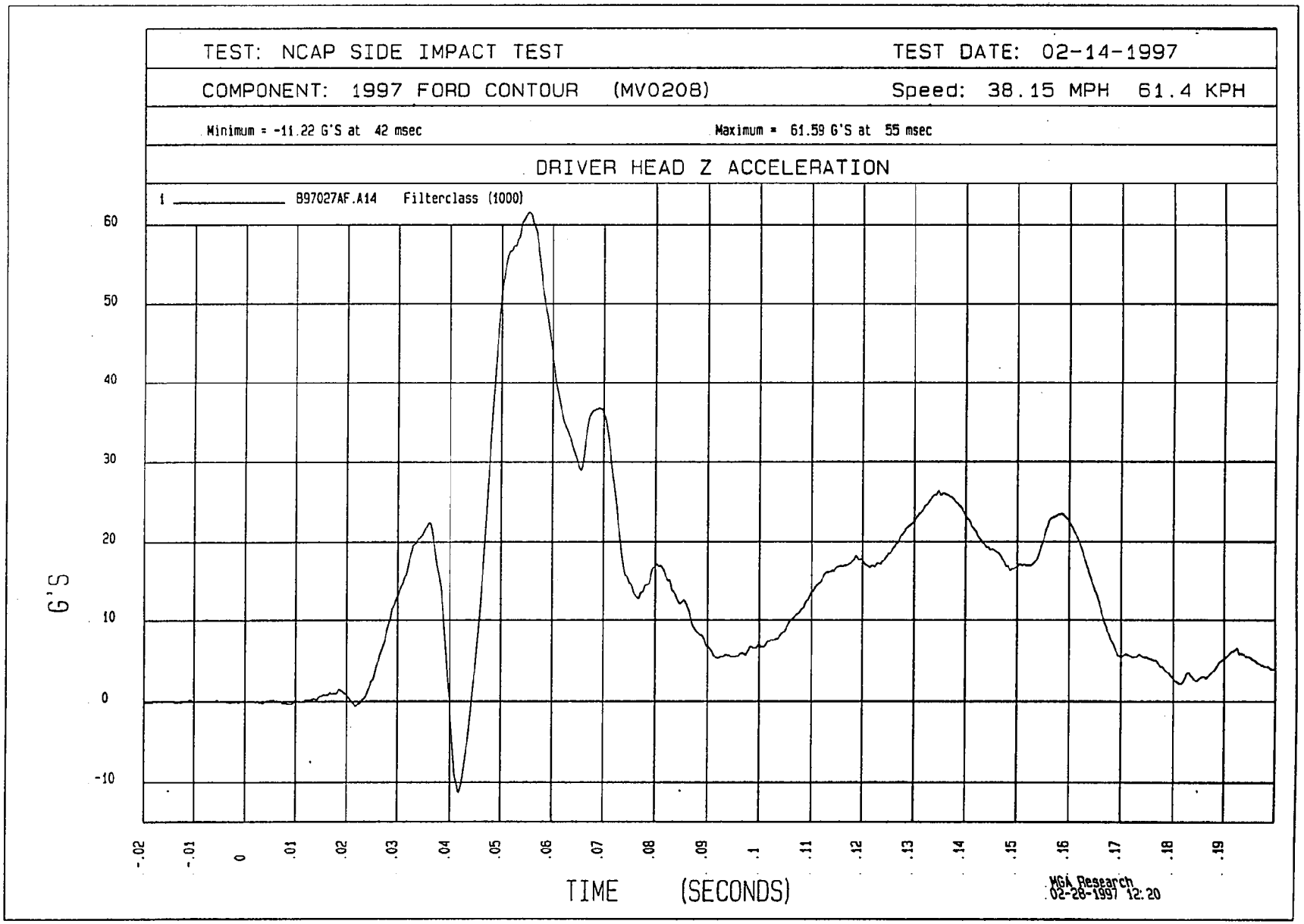
Table of Data Plots

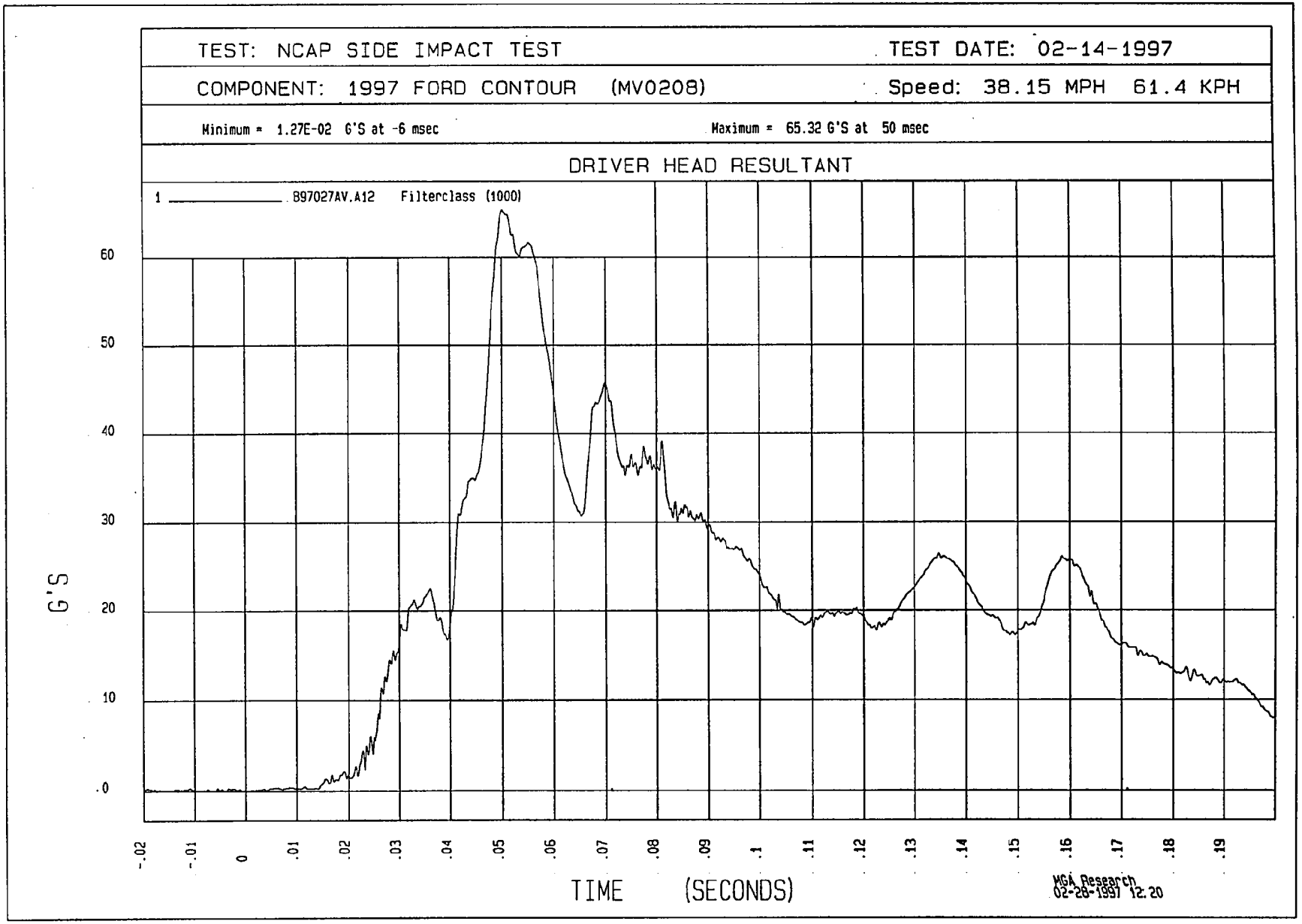
Table of Data Plots

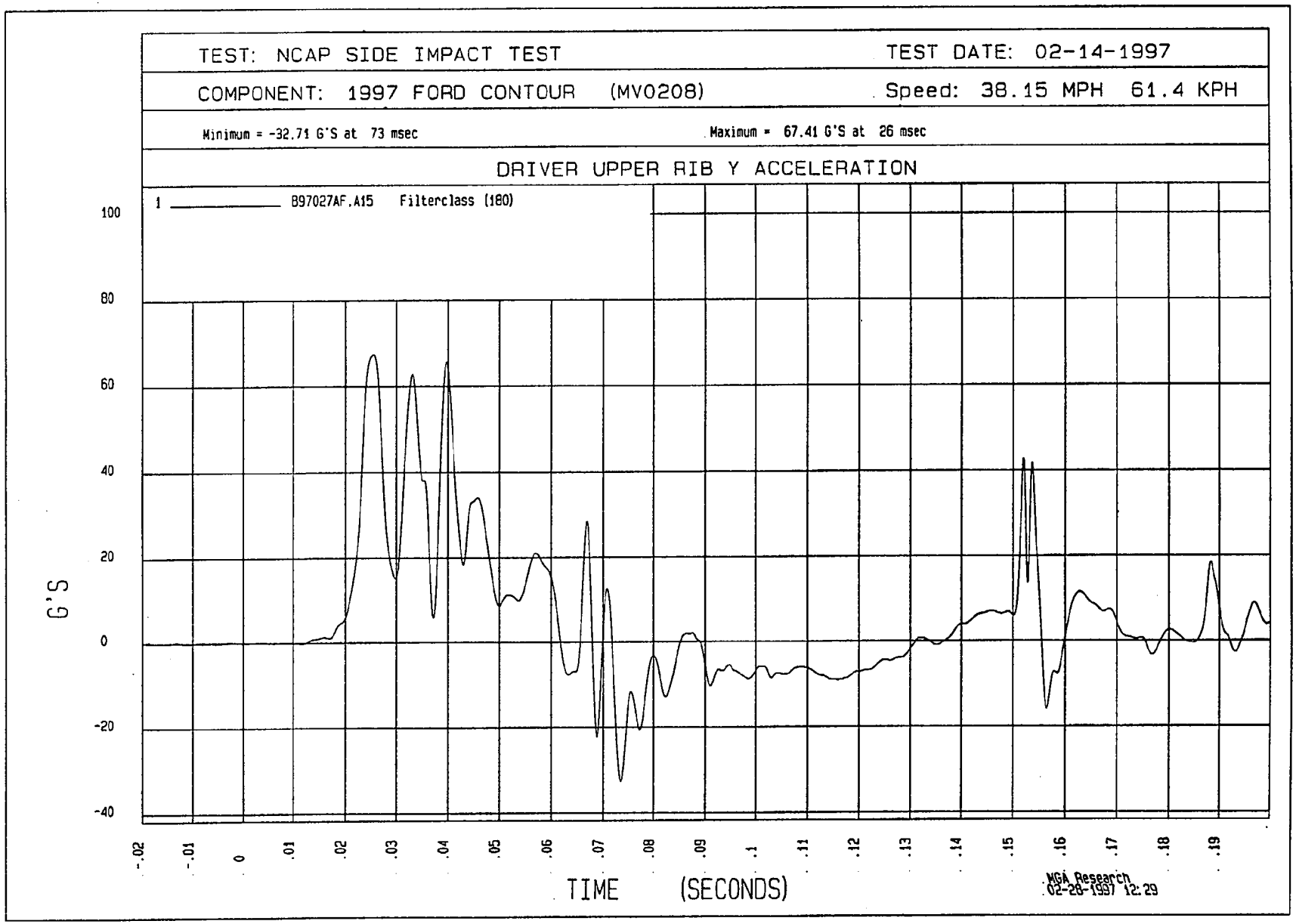
* No Valid Data Collected

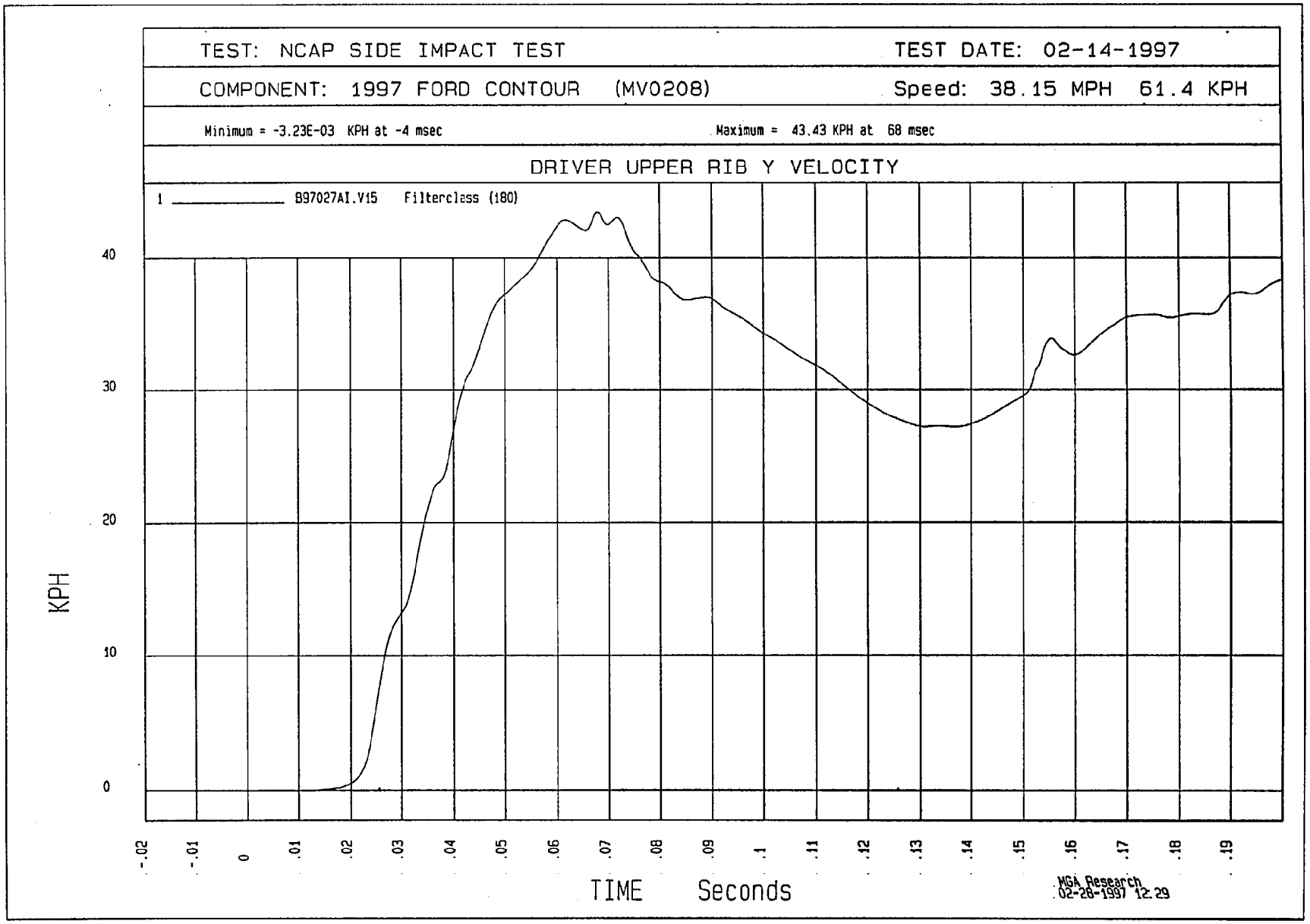

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -30.43 G'S at 81 msec
Maximum = 15.69 G'S at 164 msec
DRIVER HEAD X ACCELERATION
1 B97027AF.A12 Filterclass (1000)
10
0
-10
-20
-30
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-28-1997 12:20

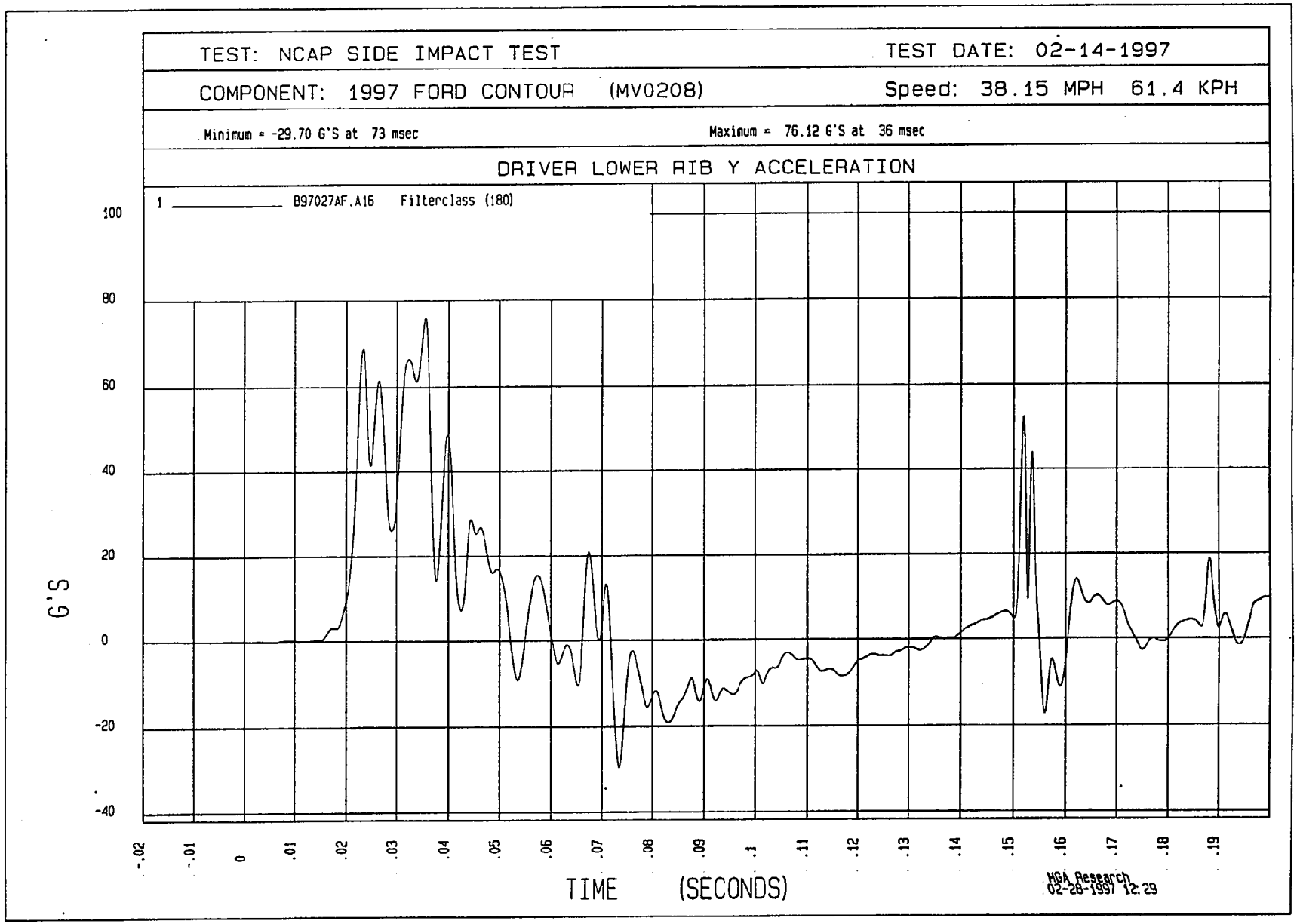

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -12.27 G'S at 30 msec
Maximum = 42.14 G'S at 49 msec
DRIVER HEAD Y ACCELERATION
1 B97027AF.A13 Filterclass (1000)
G'S
40
30
20
10
0
-10
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-28-1997 12:20

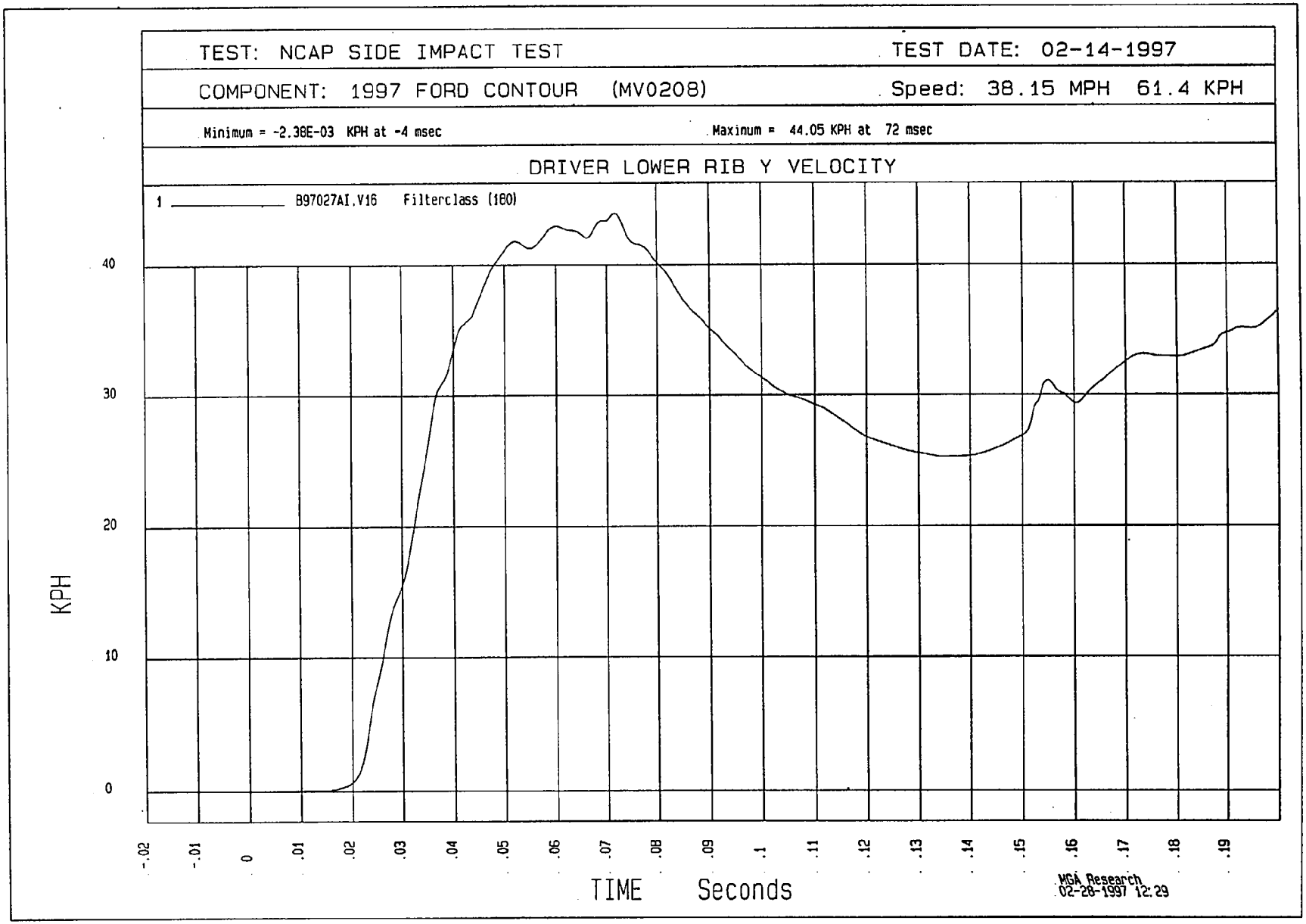

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -11.22 G'S at 42 msec
Maximum = 61.59 G'S at 55 msec
DRIVER HEAD Z ACCELERATION
1 B97027AF.A14 Filterclass (1000)
60
50
40
30
20
10
0
-10
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-28-1997 12:20

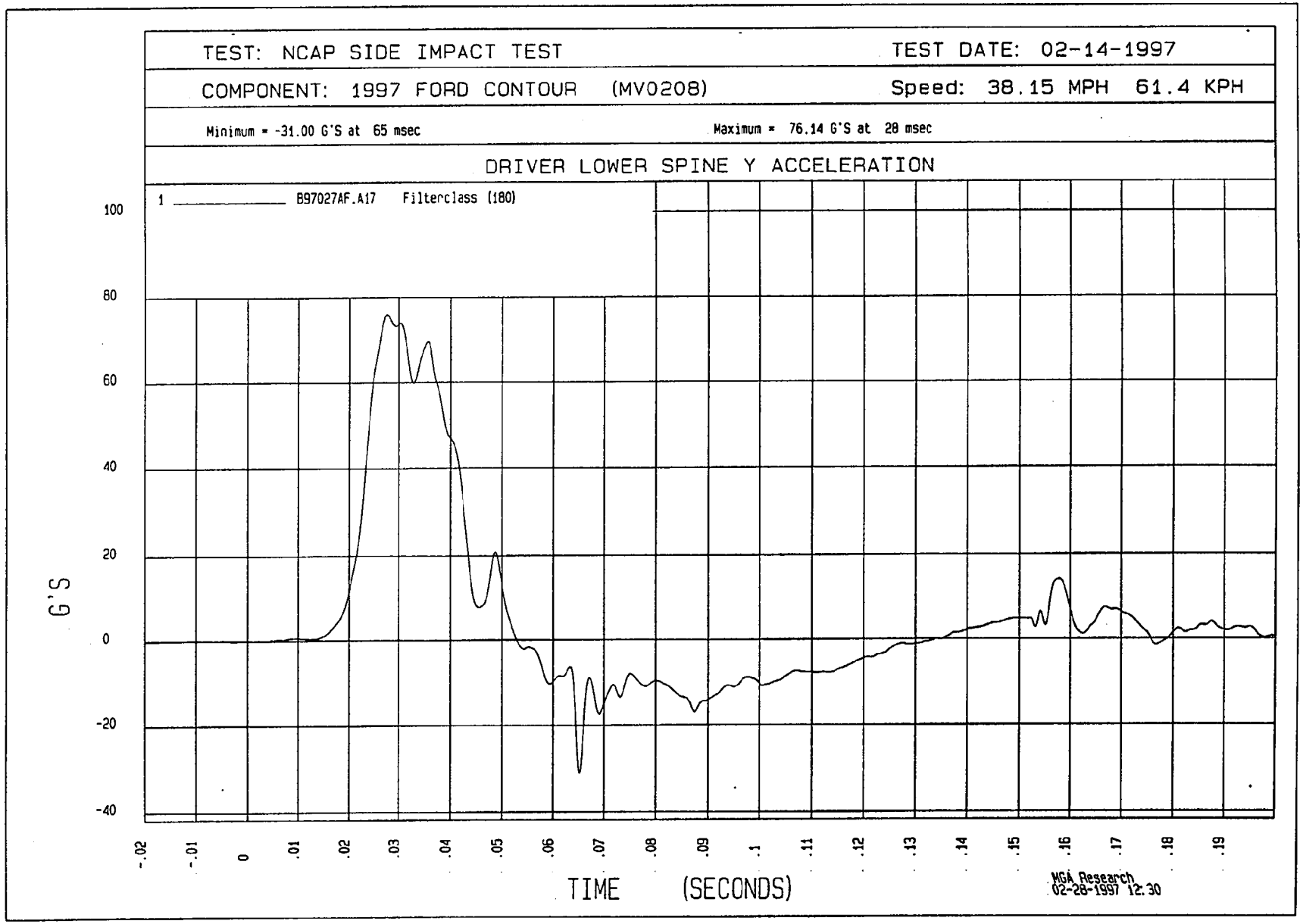

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = 1.27E-02 G'S at -6 msec
Maximum = 65.32 G'S at 50 msec
DRIVER HEAD RESULTANT
1 897027AV.A12 Filterclass (1000)
G'S
60
50
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-28-1997 12:20

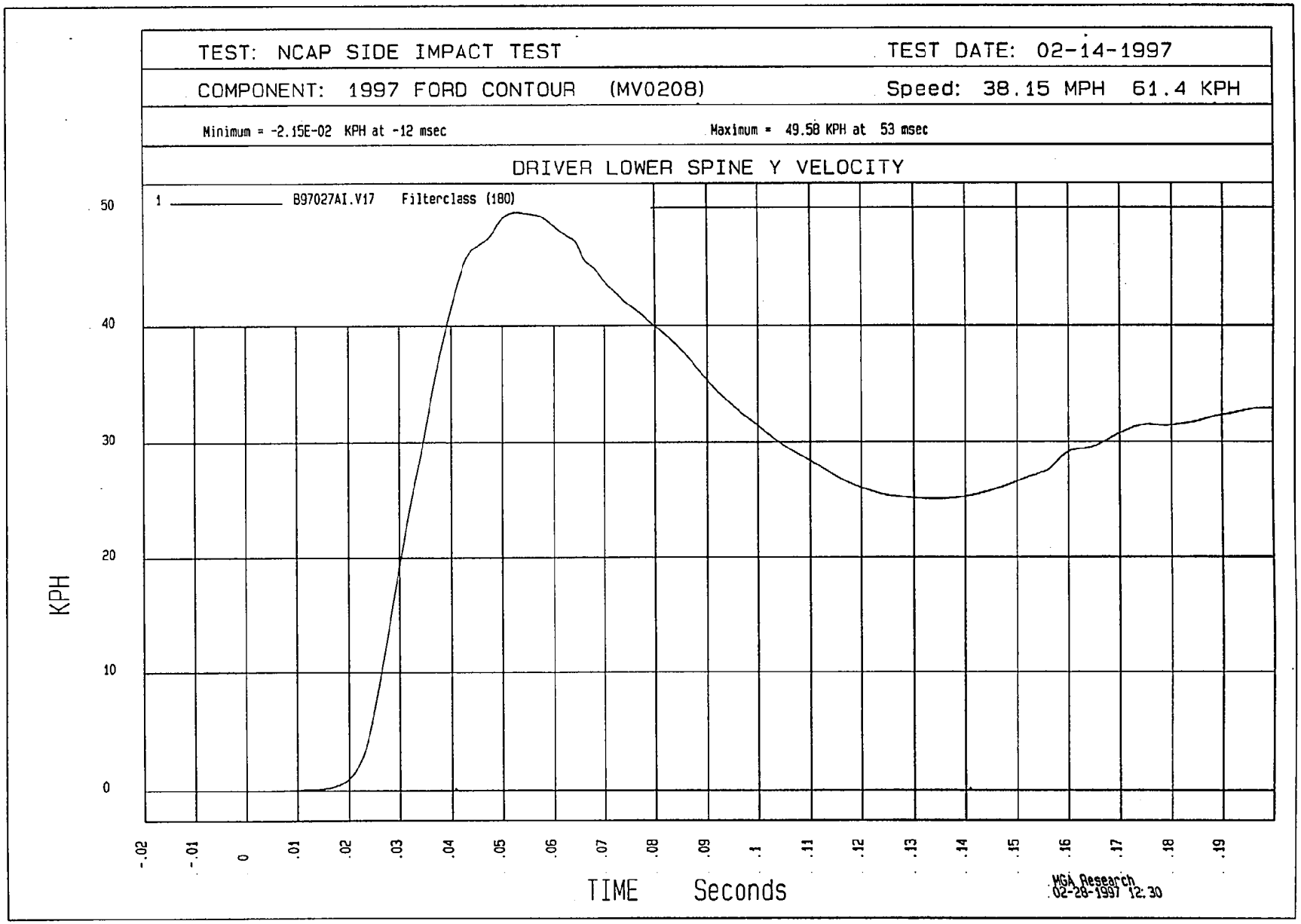

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -32.71 G'S at 73 msec
Maximum = 67.41 G'S at 26 msec
DRIVER UPPER RIB Y ACCELERATION
1 B97027AF.A15 Filterclass (180)
100
80
60
40
20
0
-20
-40
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-28-1997 12:29

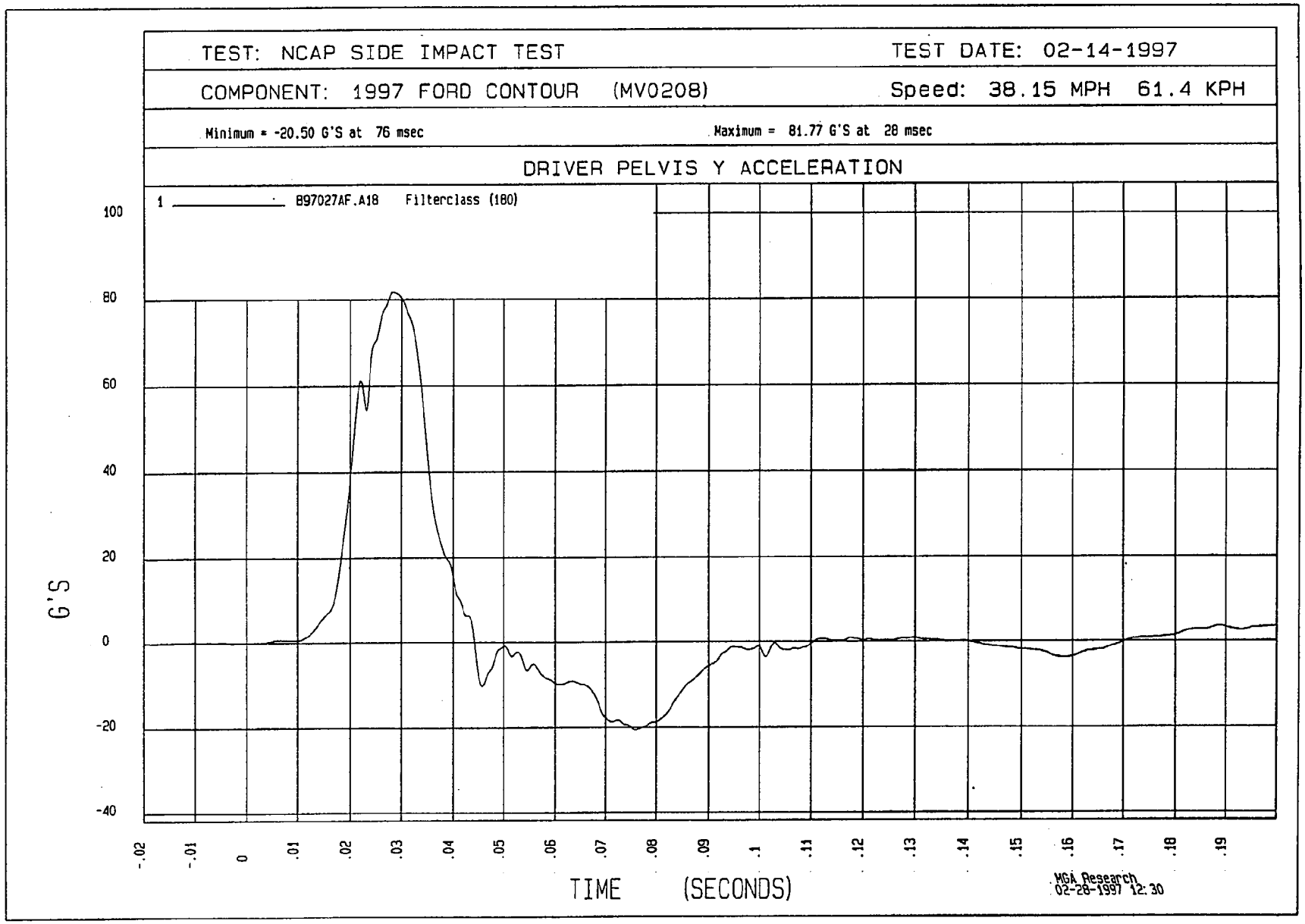

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -3.23E-03 KPH at -4 msec
Maximum = 43.43 KPH at 68 msec
DRIVER UPPER RIB Y VELOCITY
1 B97027AI.V15 Filterclass (180)
KPH
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
02-28-1997 12:29

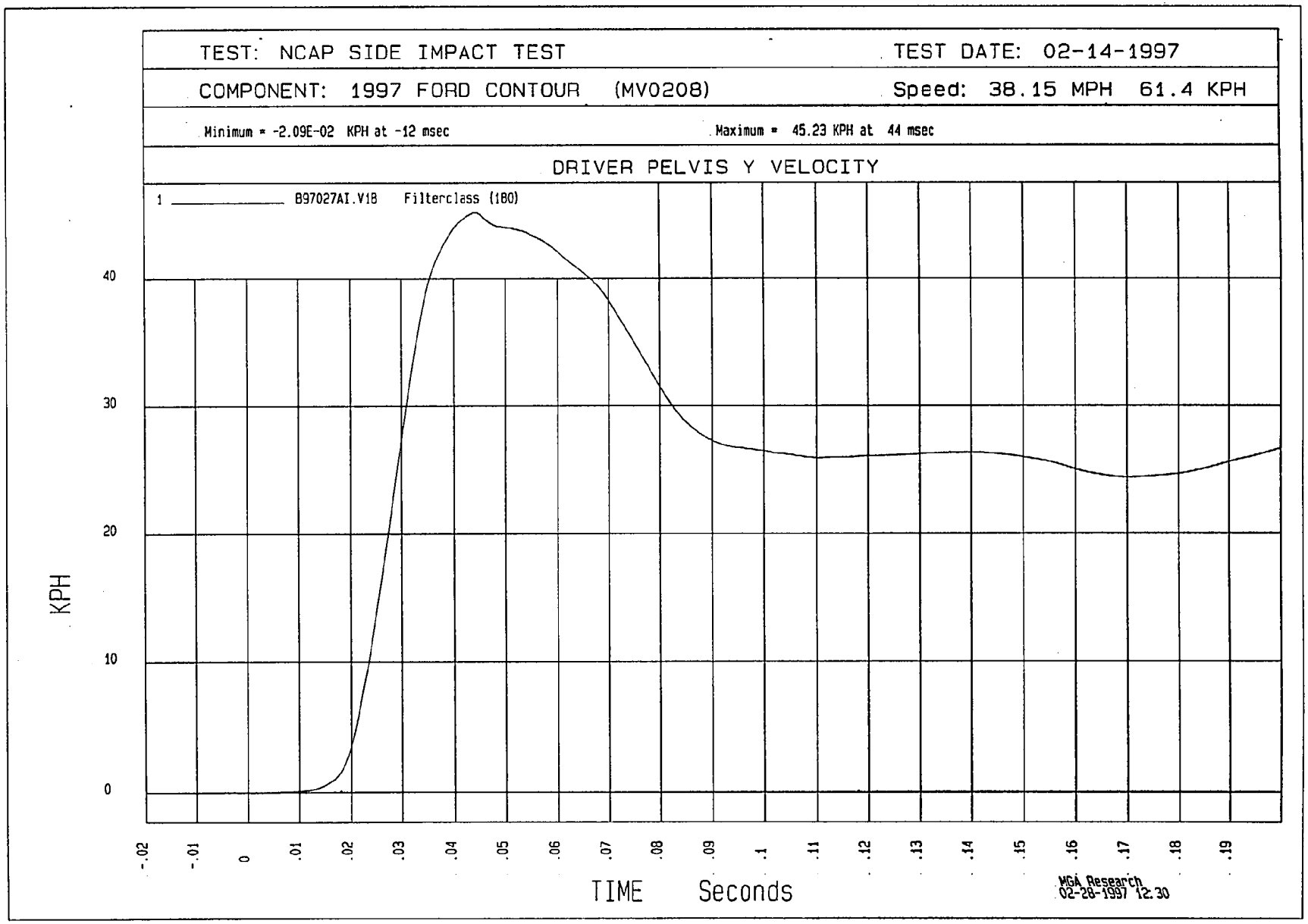

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -29.70 G'S at 73 msec
Maximum = 76.12 G'S at 36 msec
DRIVER LOWER RIB Y ACCELERATION
1 B97027AF.A16 Filterclass (180)
100
80
60
40
20
0
-20
-40
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-28-1997 12:29

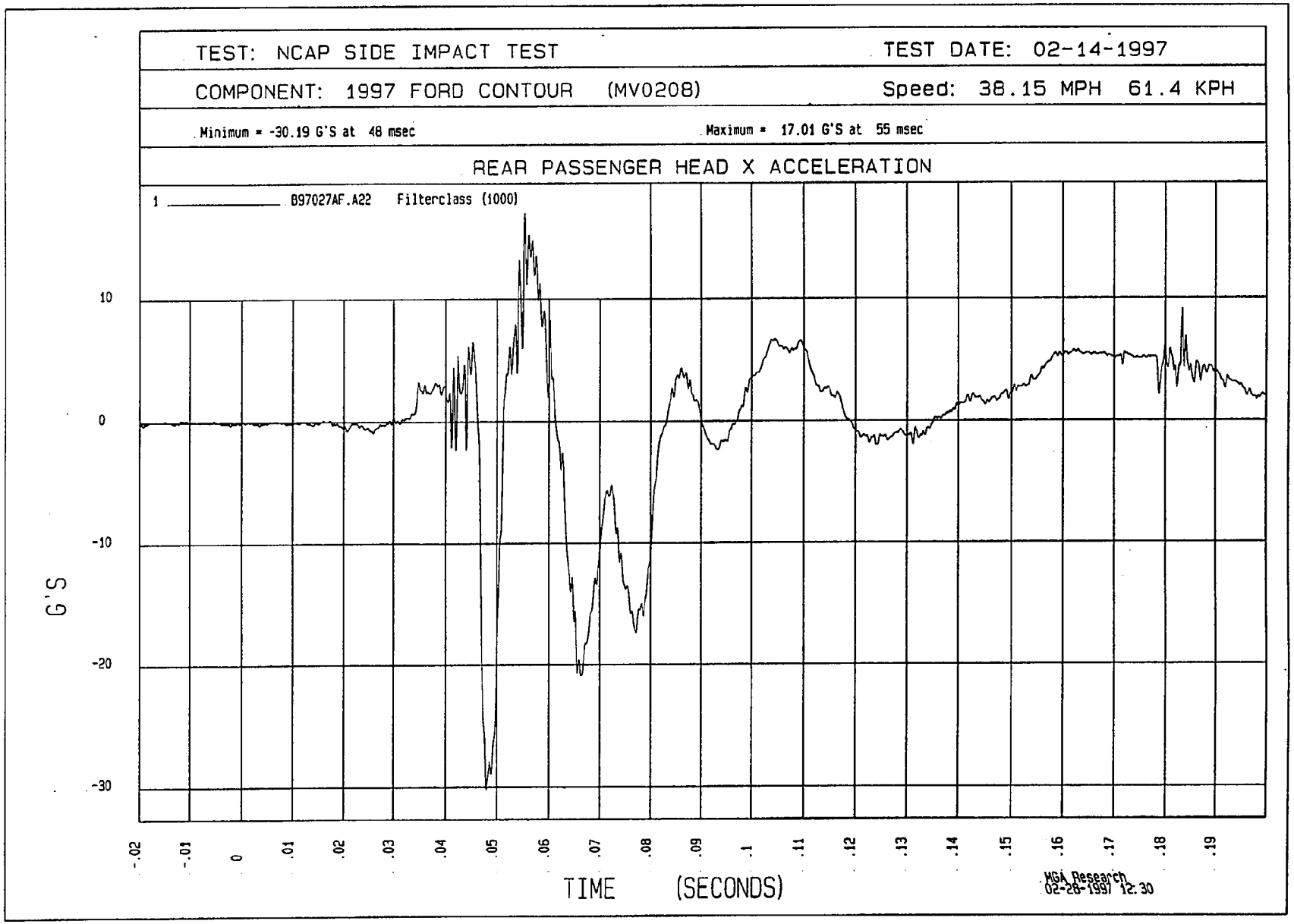

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -2.38E-03 KPH at -4 msec
Maximum = 44.05 KPH at 72 msec
DRIVER LOWER RIB Y VELOCITY
1 B97027AI.V16 Filterclass (180)
KPH
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
02-28-1997 12:29

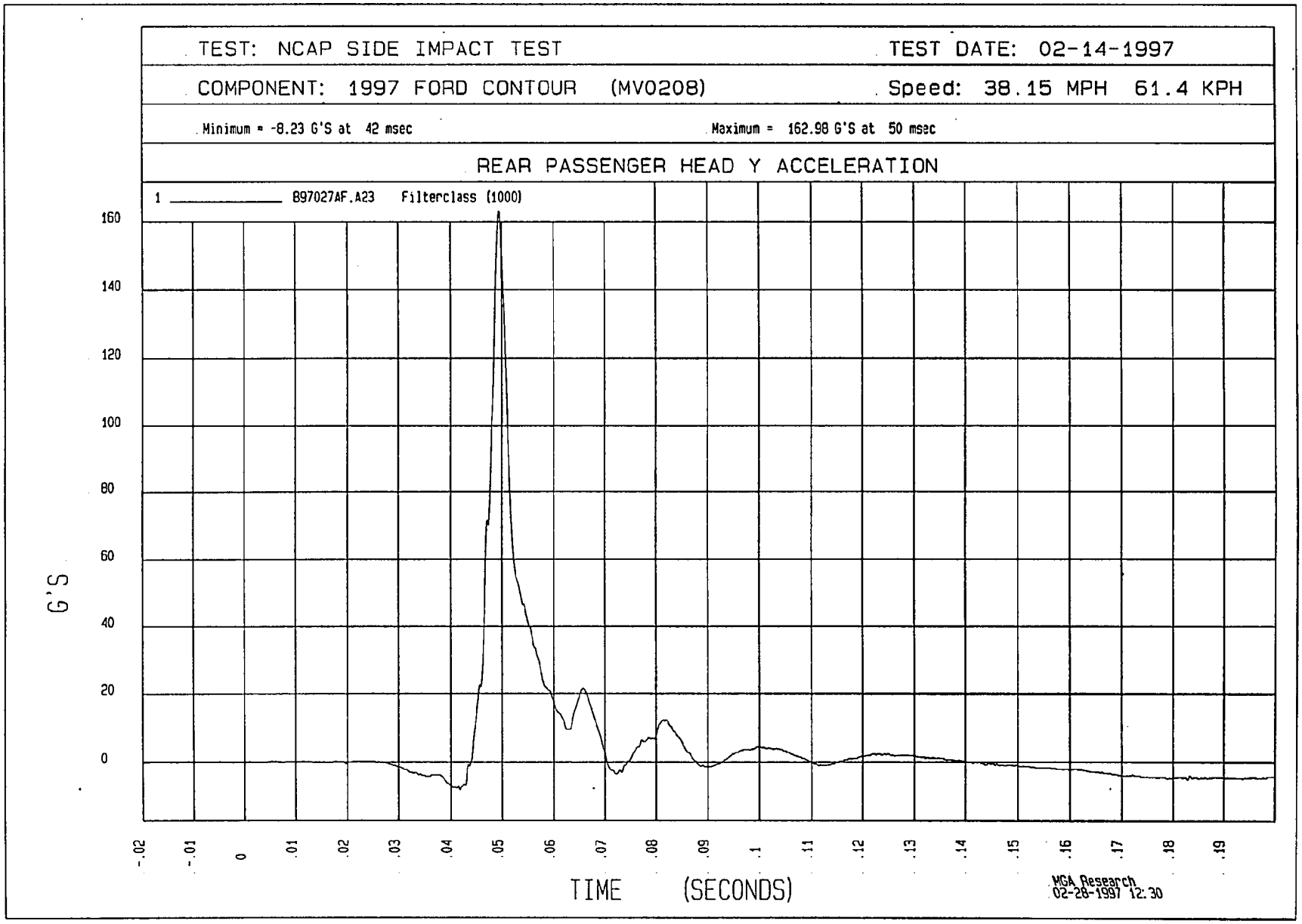

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -31.00 G'S at 65 msec
Maximum = 76.14 G'S at 28 msec
DRIVER LOWER SPINE Y ACCELERATION
1 B97027AF.A17 Filterclass (180)
100
80
60
40
20
0
-20
-40
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-28-1997 12:30

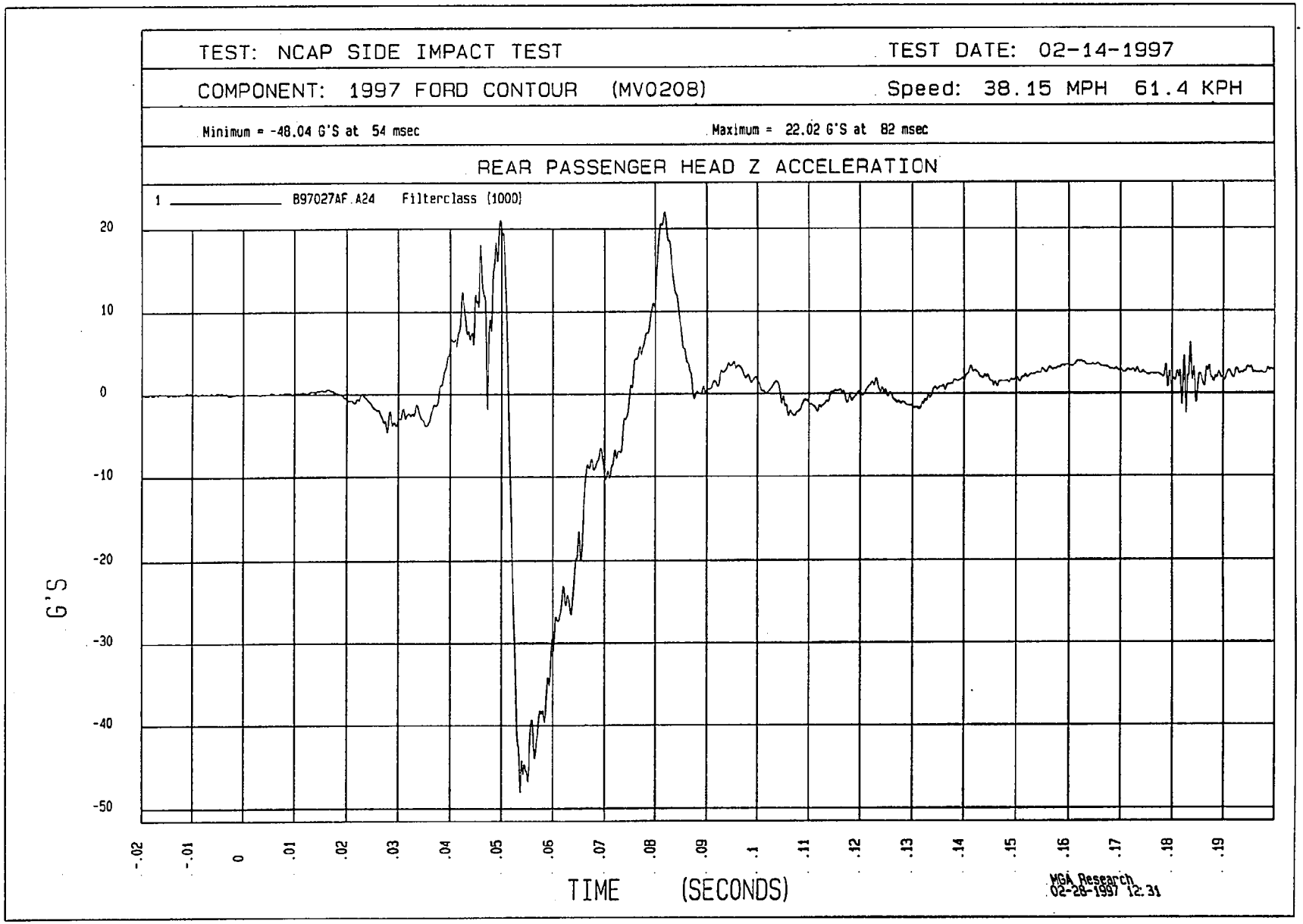

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -2.15E-02 KPH at -12 msec
Maximum = 49.58 KPH at 53 msec
DRIVER LOWER SPINE Y VELOCITY
1 B97027AI.V17 Filterclass (180)
KPH
50
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
02-28-1997 12:30

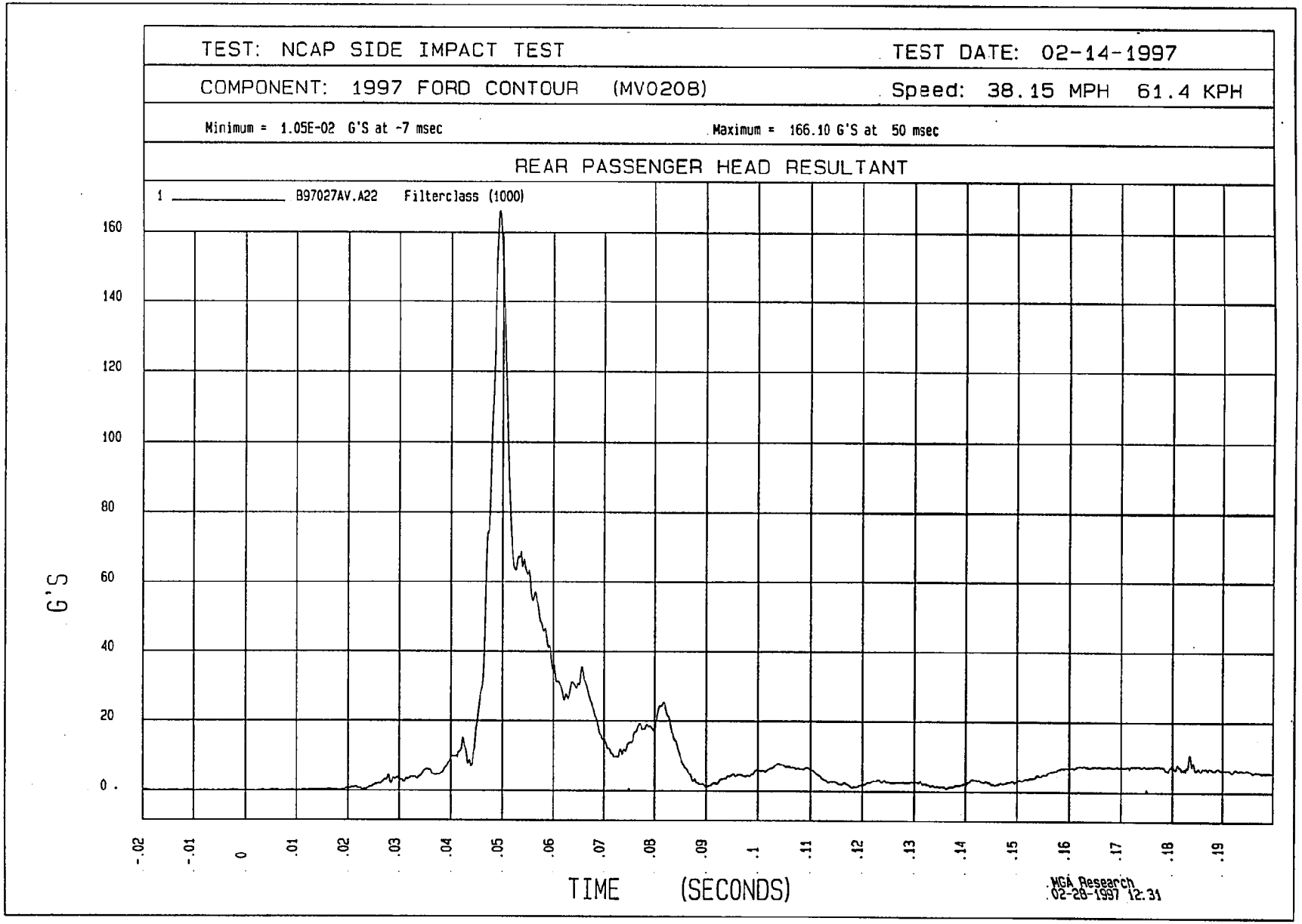

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -20.50 G'S at 76 msec
Maximum = 81.77 G'S at 28 msec
DRIVER PELVIS Y ACCELERATION
1 B97027AF.A18 Filterclass (180)
100
80
60
40
20
0
-20
-40
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-28-1997 12:30


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -2.09E-02 KPH at -12 msec
Maximum = 45.23 KPH at 44 msec
DRIVER PELVIS Y VELOCITY
1 B97027AI.V18 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
02-28-1997 12:30


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -30.19 G'S at 48 msec
Maximum = 17.01 G'S at 55 msec
REAR PASSENGER HEAD X ACCELERATION
1 B97027AF.A22 Filterclass (1000)
10
0
-10
-20
-30
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
02-26-1997 12:30


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -8.23 G'S at 42 msec
Maximum = 162.98 G'S at 50 msec
REAR PASSENGER HEAD Y ACCELERATION
1 B97027AF.A23 Filterclass (1000)
G'S
160
140
120
100
80
60
40
20
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
02-28-1997 12:30


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -48.04 G'S at 54 msec
Maximum = 22.02 G'S at 82 msec
REAR PASSENGER HEAD Z ACCELERATION
1 B97027AF.A24 Filterclass (1000)
20
10
0
-10
-20
-30
-40
-50
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
02-28-1997 12:31


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = 1.05E-02 G'S at -7 msec
Maximum = 166.10 G'S at 50 msec
REAR PASSENGER HEAD RESULTANT
1 B97027AV.A22 Filterclass (1000)
160
140
120
100
80
60
40
20
0 .
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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.12
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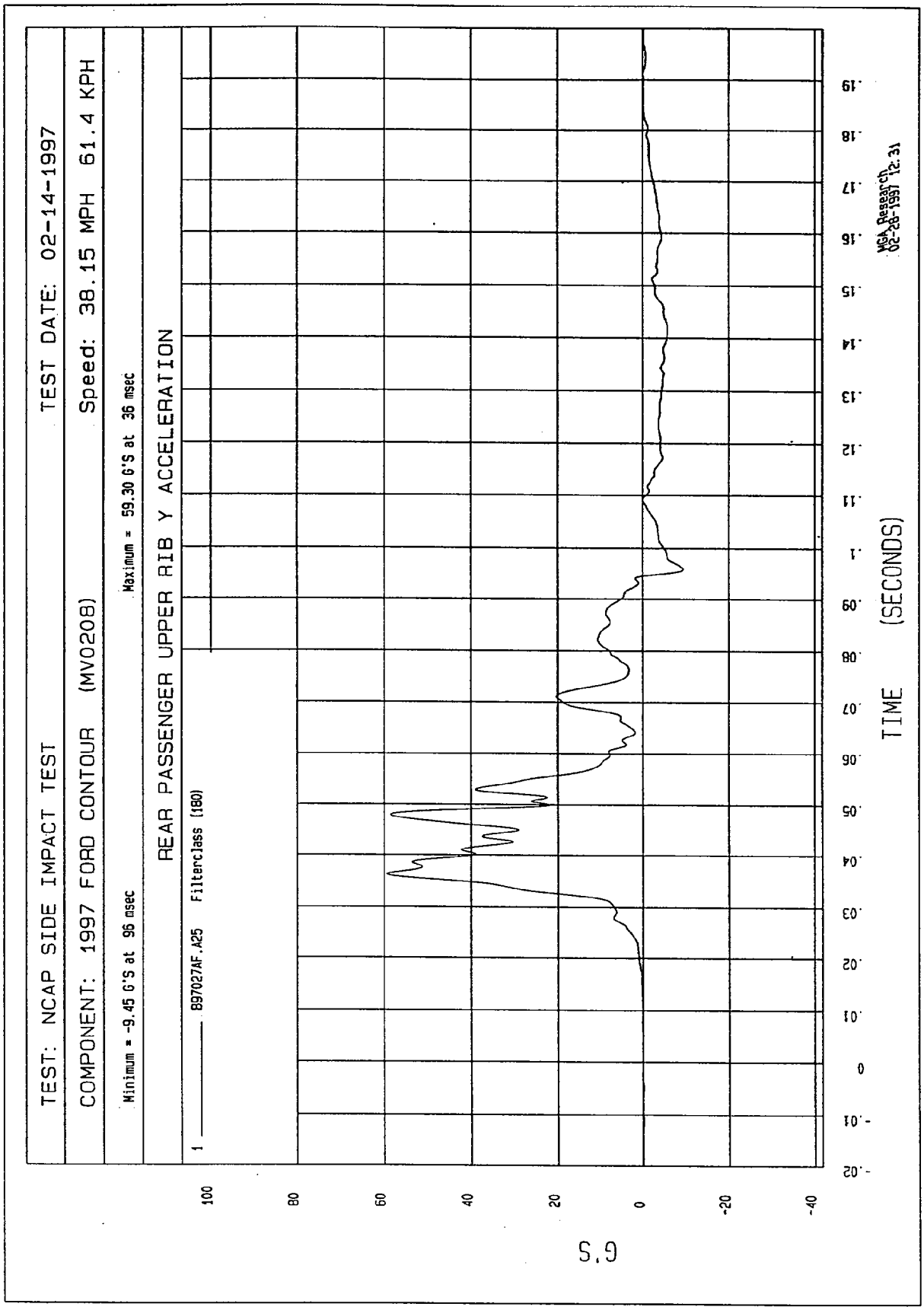
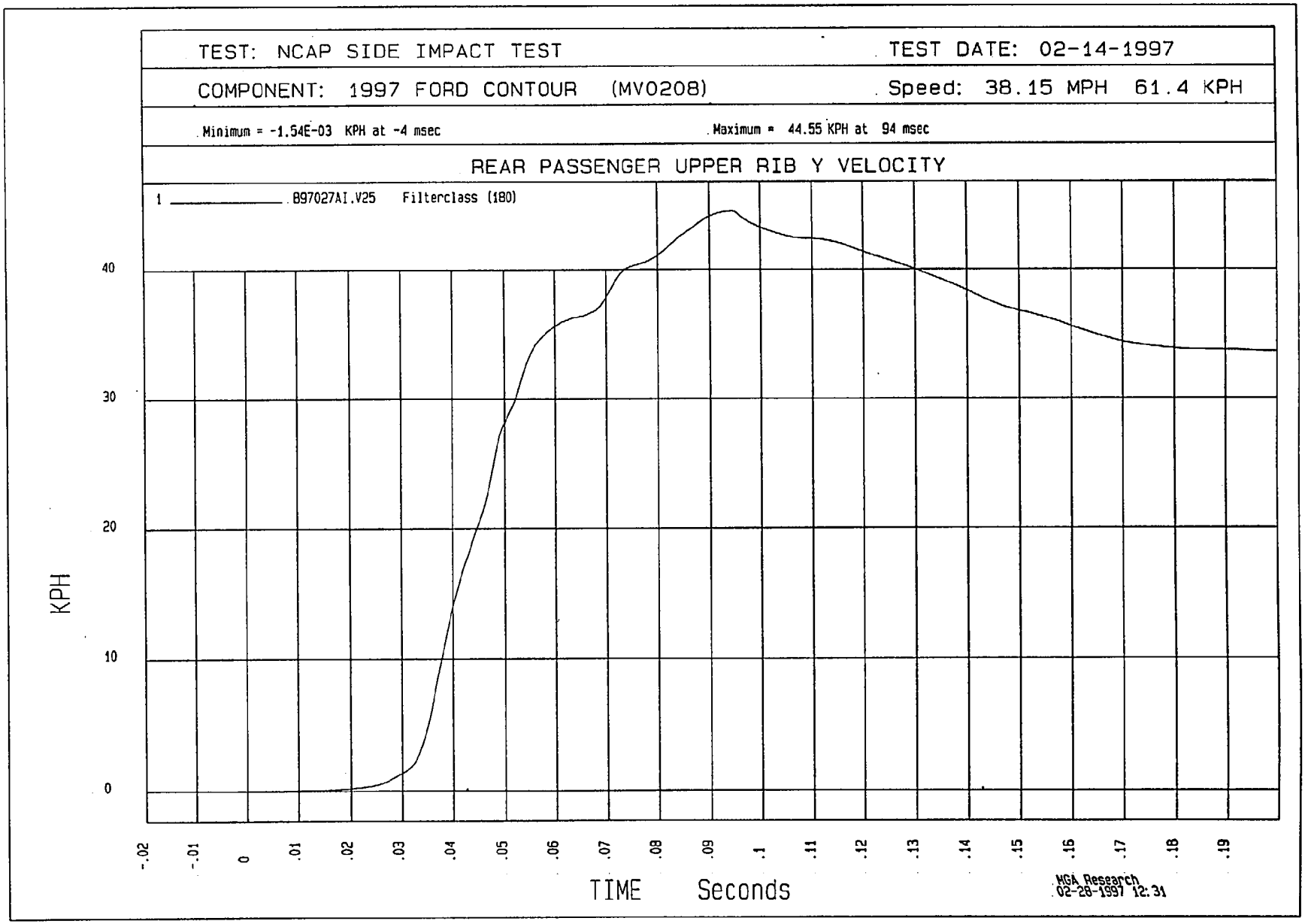
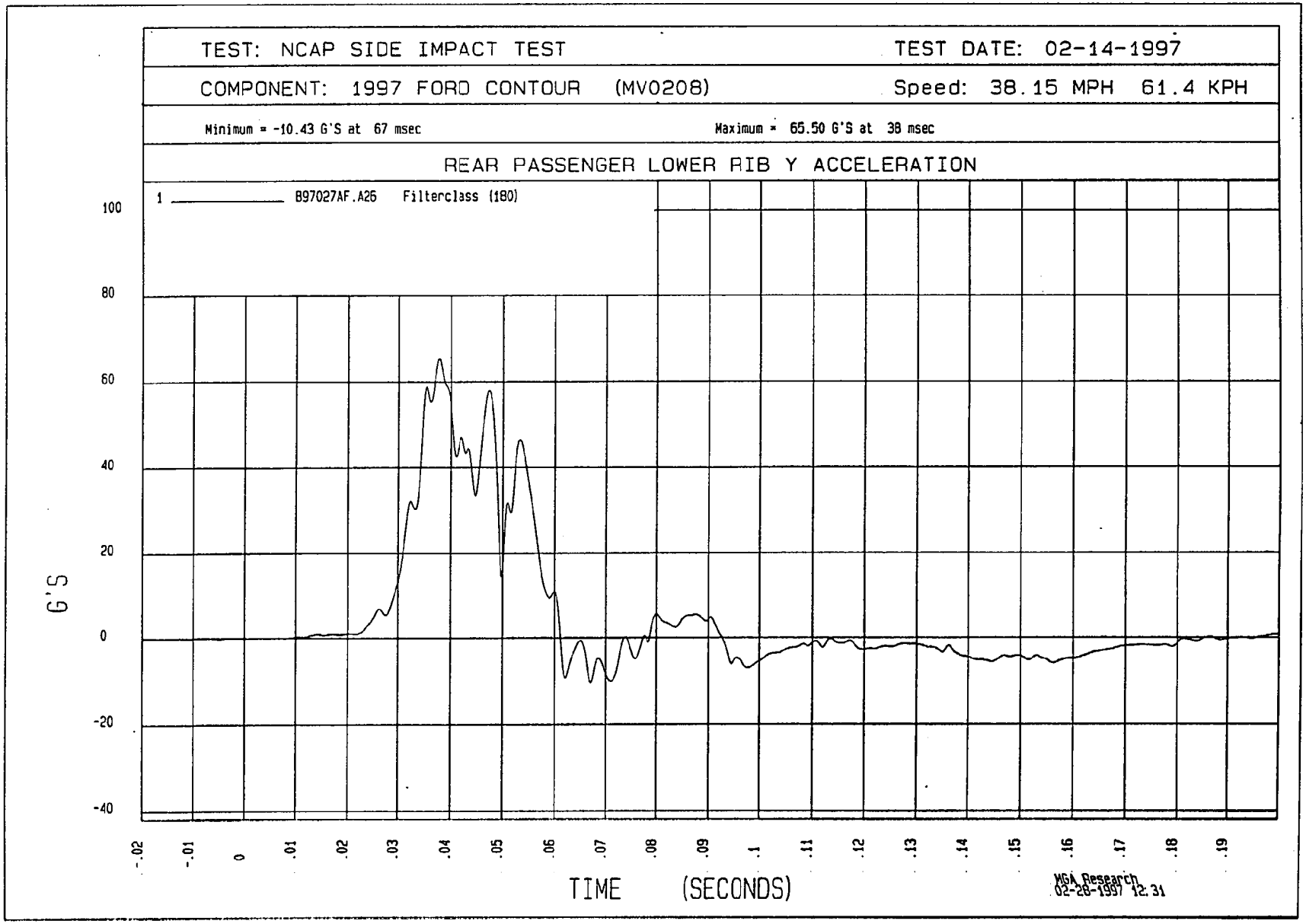
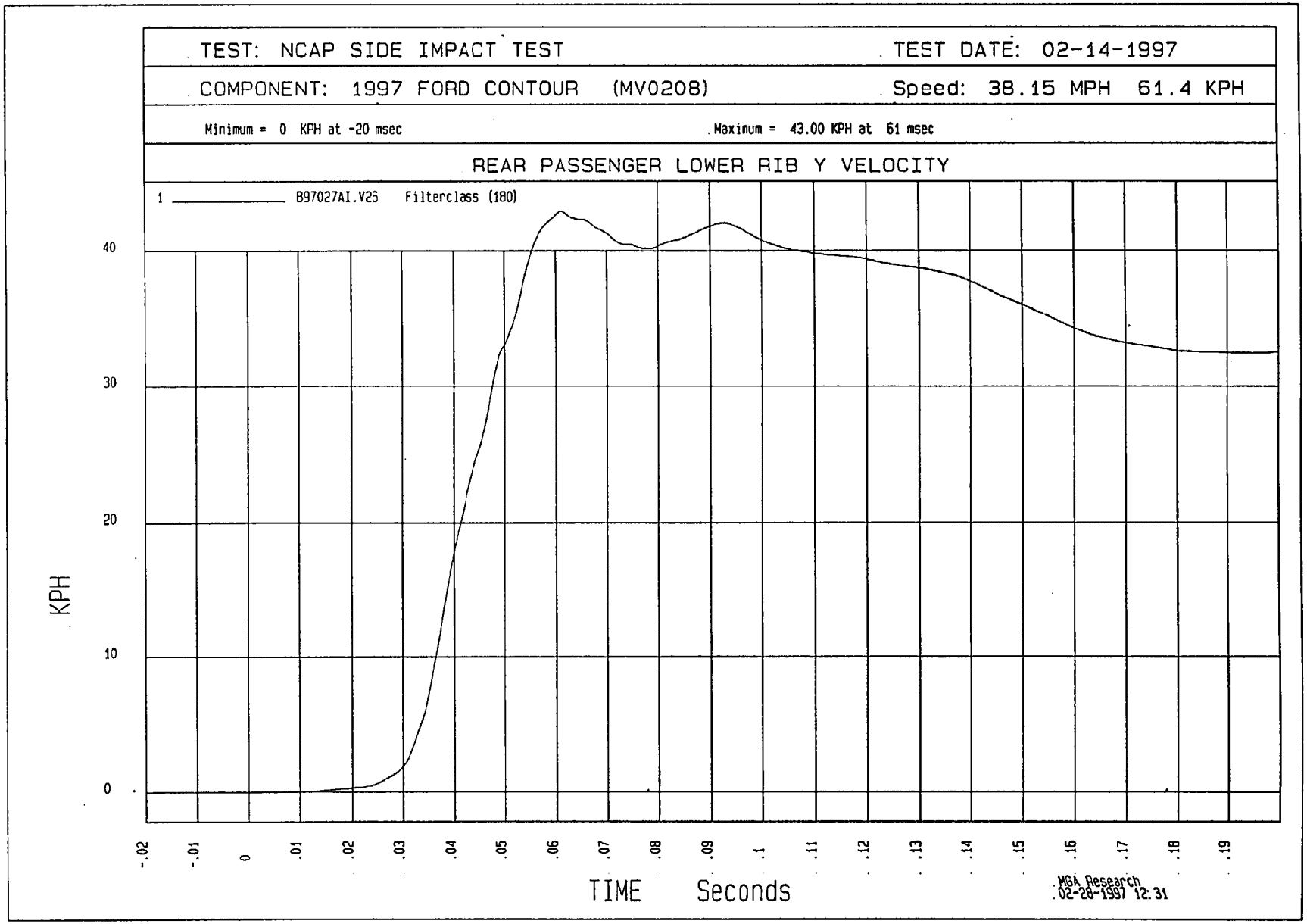
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-28-1997 12:31


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -9.45 G'S at 96 msec
Maximum = 59.30 G'S at 36 msec
REAR PASSENGER UPPER RIB Y ACCELERATION
1 B97027AF.A25 Filterclass (180)
100
80
60
40
20
0
-20
-40
G'S
TIME (SECONDS)
MGA Research
02-28-1997 12:31


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -1.54E-03 KPH at -4 msec
Maximum = 44.55 KPH at 94 msec
REAR PASSENGER UPPER RIB Y VELOCITY
1 B97027AI.V25 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
02-28-1997 12:31


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -10.43 G'S at 67 msec
Maximum = 65.50 G'S at 38 msec
REAR PASSENGER LOWER RIB Y ACCELERATION
1 B97027AF.A26 Filterclass (180)
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
02-28-1997 12:31

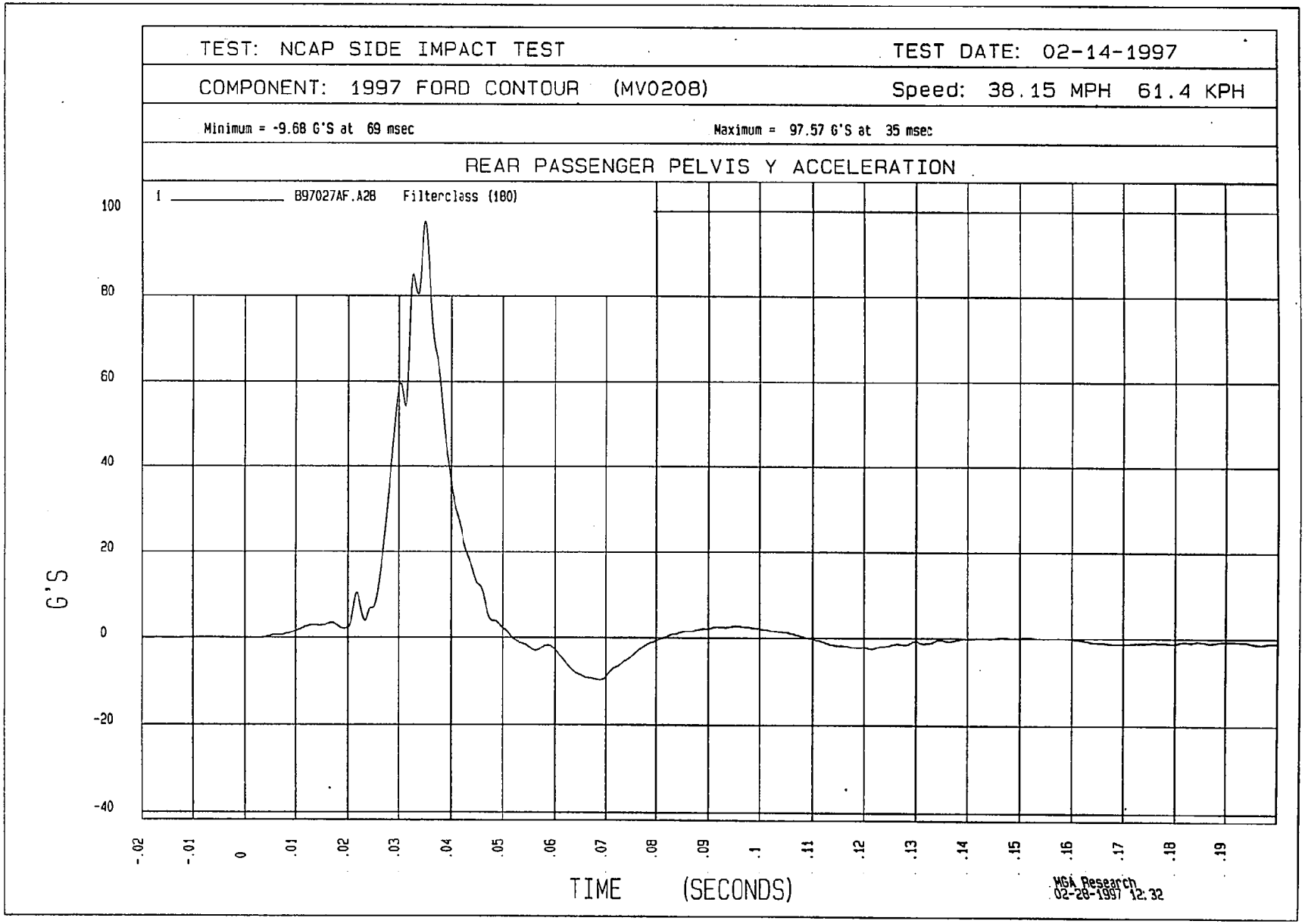

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = 0 KPH at -20 msec
Maximum = 43.00 KPH at 61 msec
REAR PASSENGER LOWER RIB Y VELOCITY
1 B97027AI.V26 Filterclass (180)
KPH
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
02-28-1997 12:31

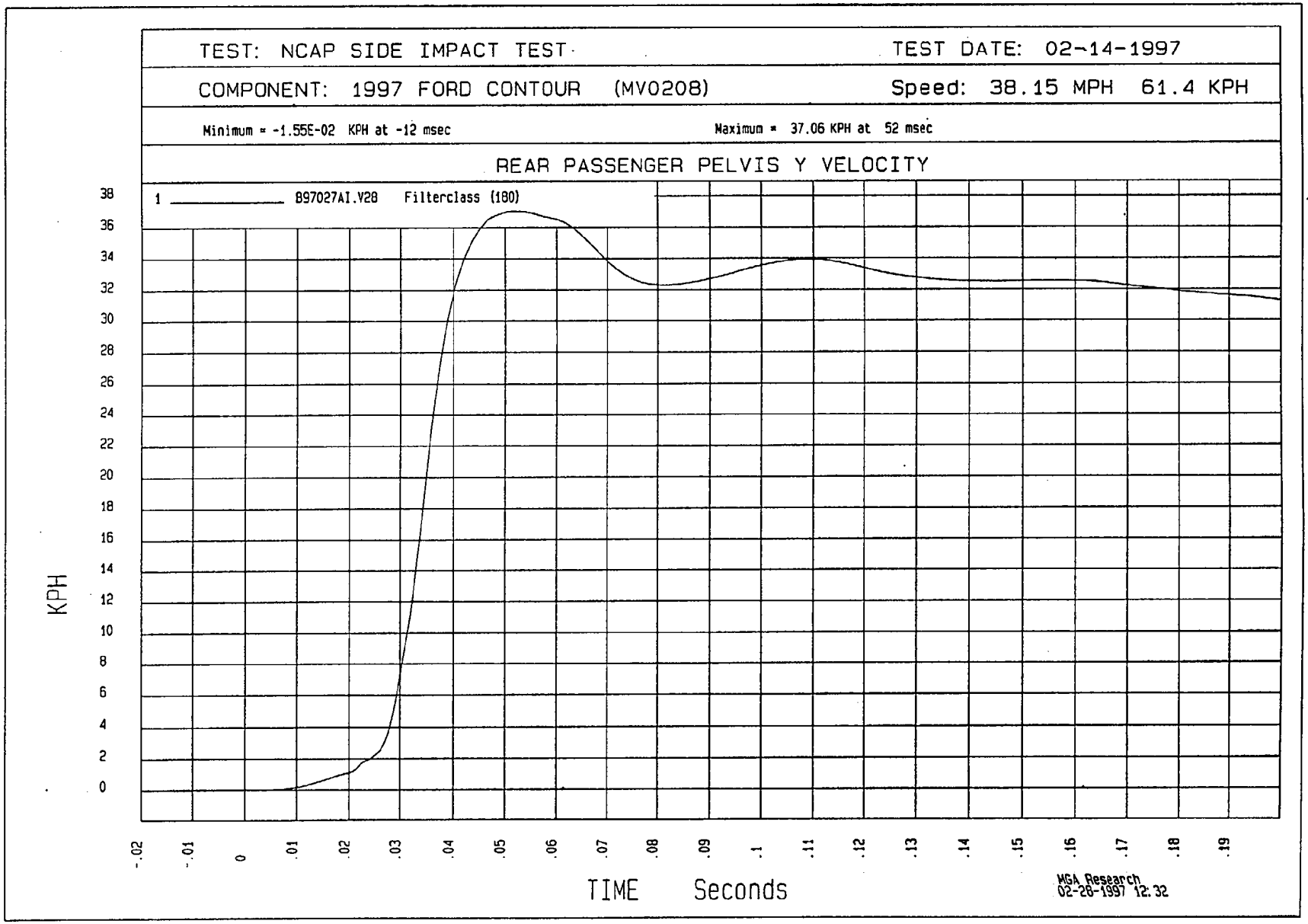
REAR PASSENGER LOWER SPINE Y ACCELERATION VS. TIME

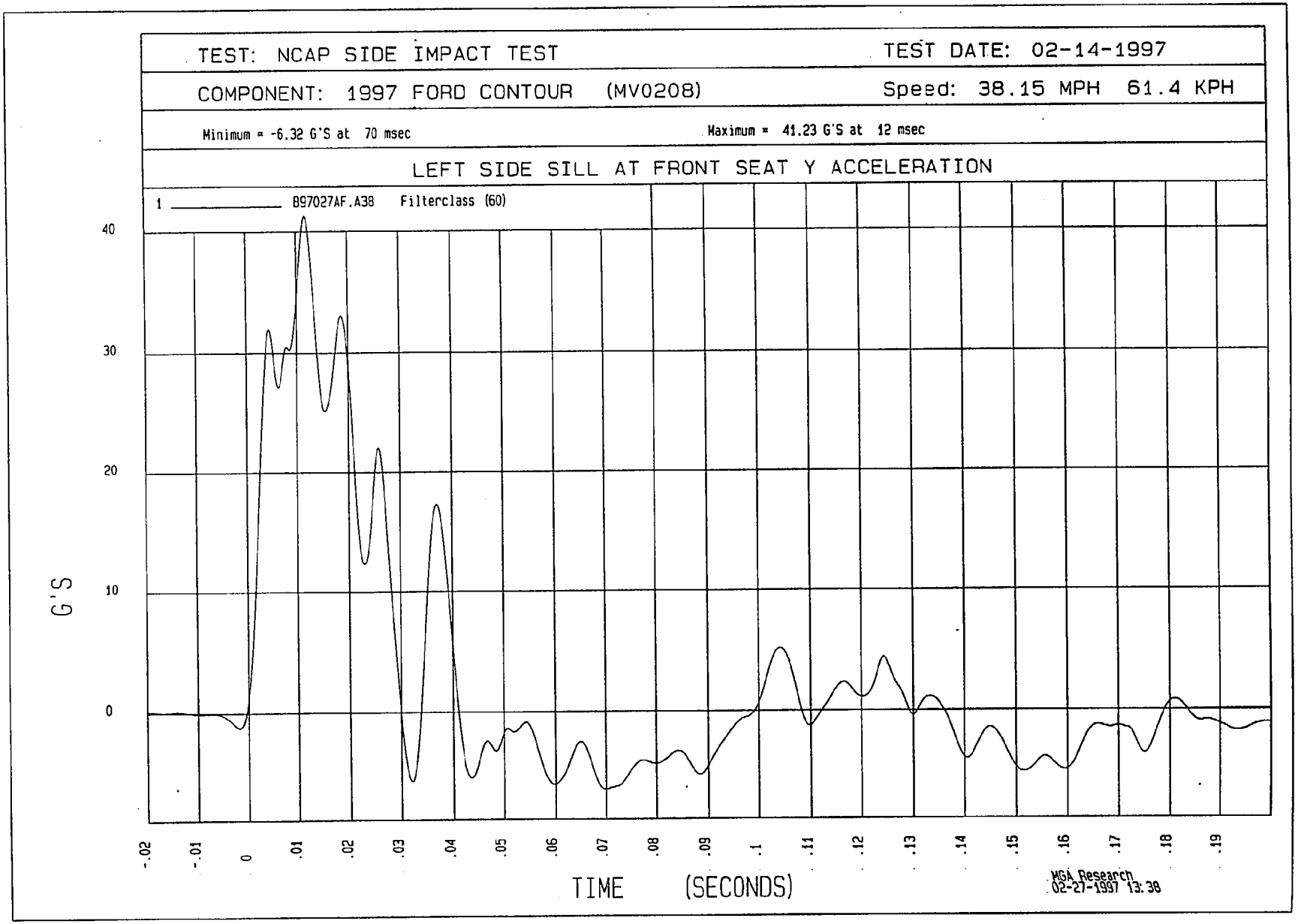
NO VALID DATA COLLECTED

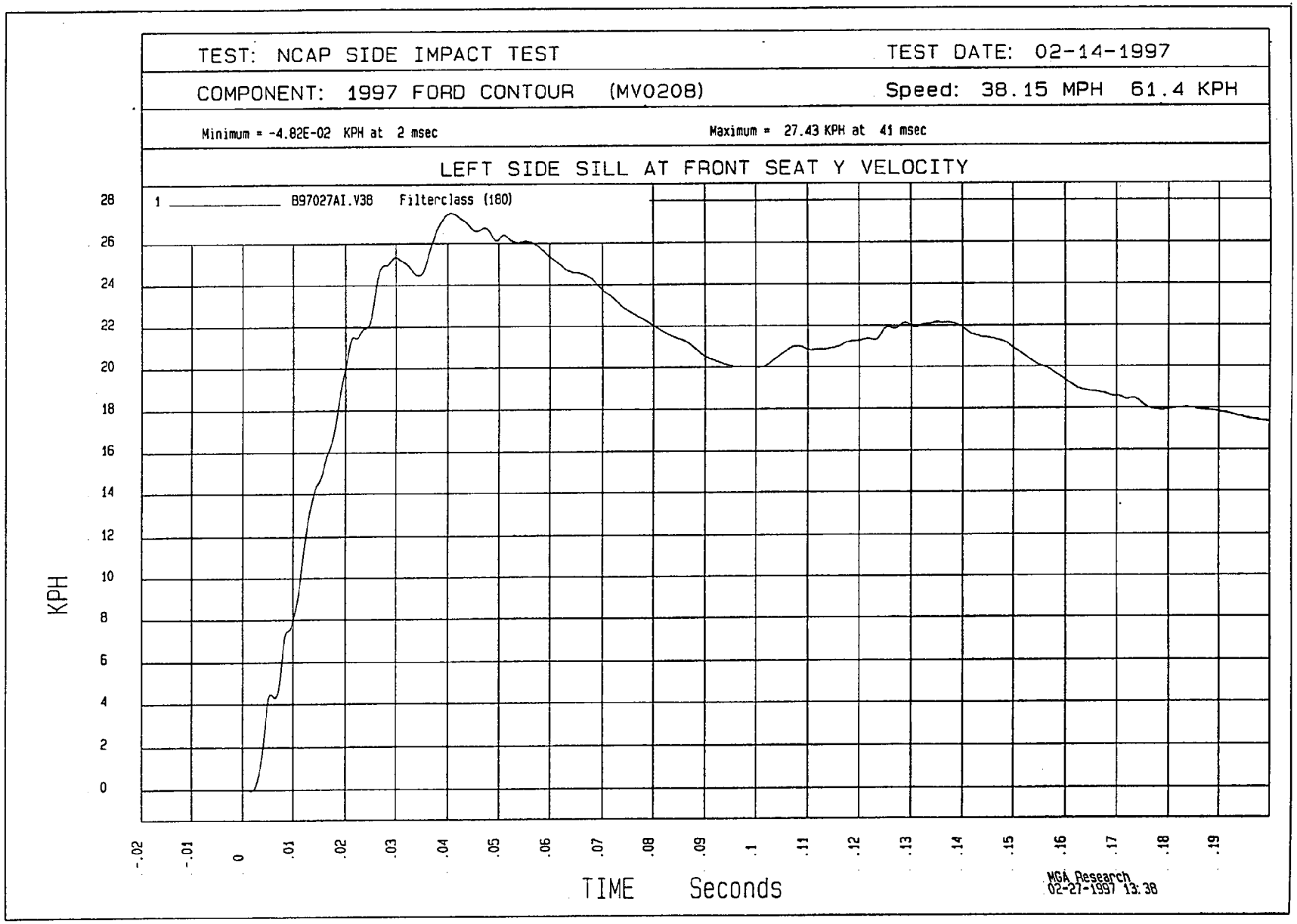
THE REDUNDANT DATA WAS USED FOR INJURY VALUE CALCULATIONS.

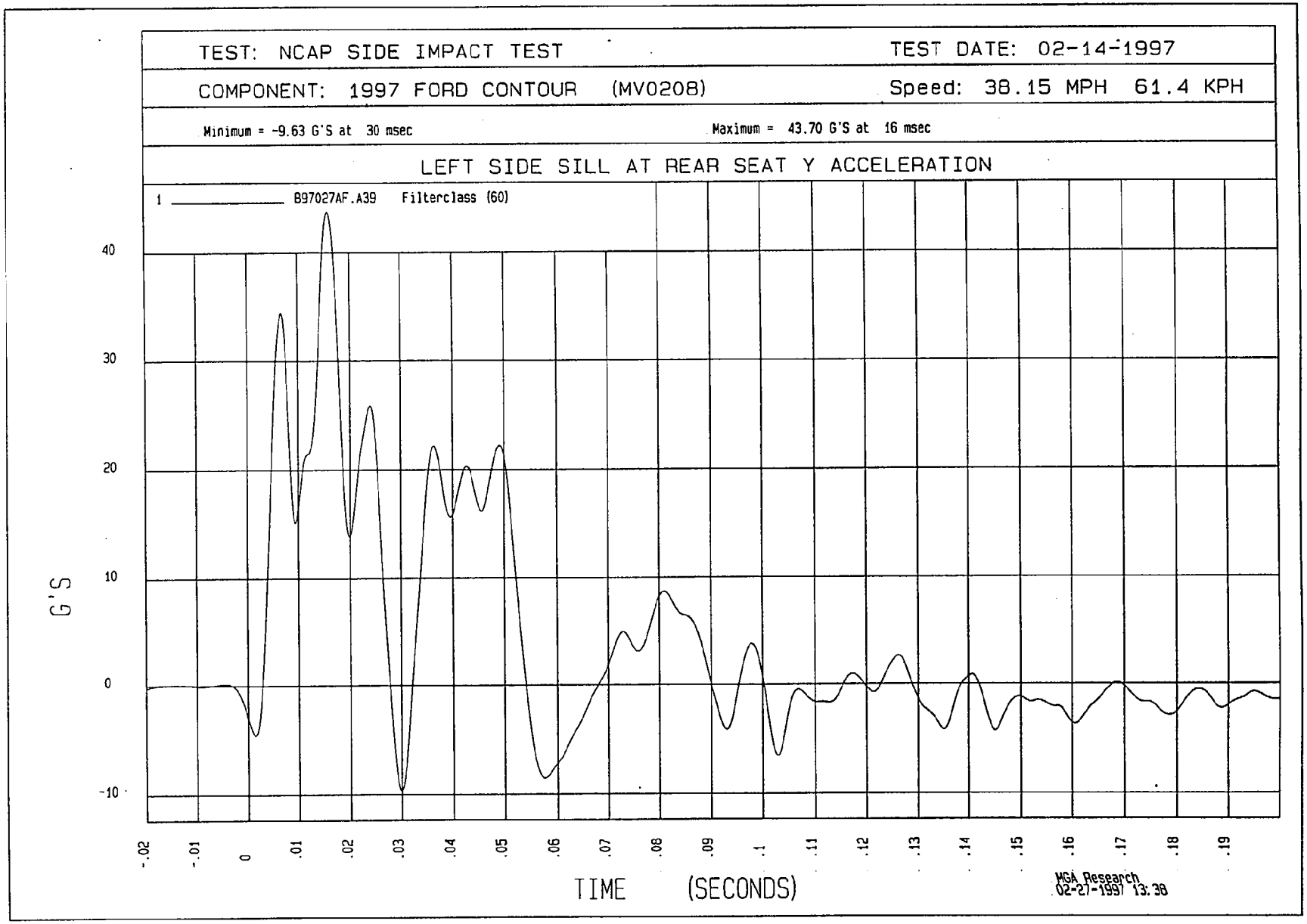
THE REDUNDANT DATA CAN BE FOUND ON B-103.

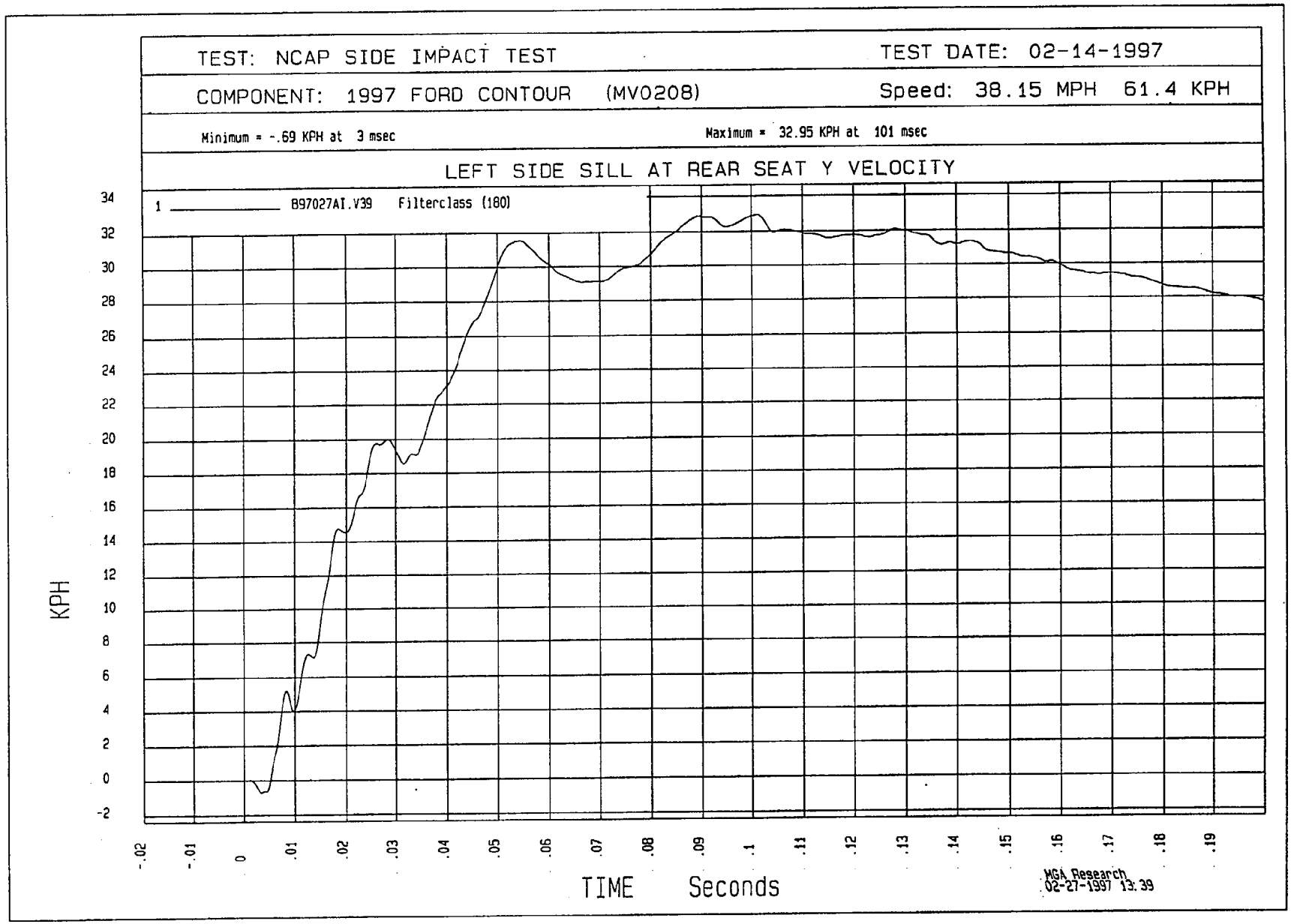

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -9.68 G'S at 69 msec
Maximum = 97.57 G'S at 35 msec
REAR PASSENGER PELVIS Y ACCELERATION
1 B97027AF.A2B Filterclass (180)
100
80
60
40
20
0
-20
-40
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-28-1997 12:32

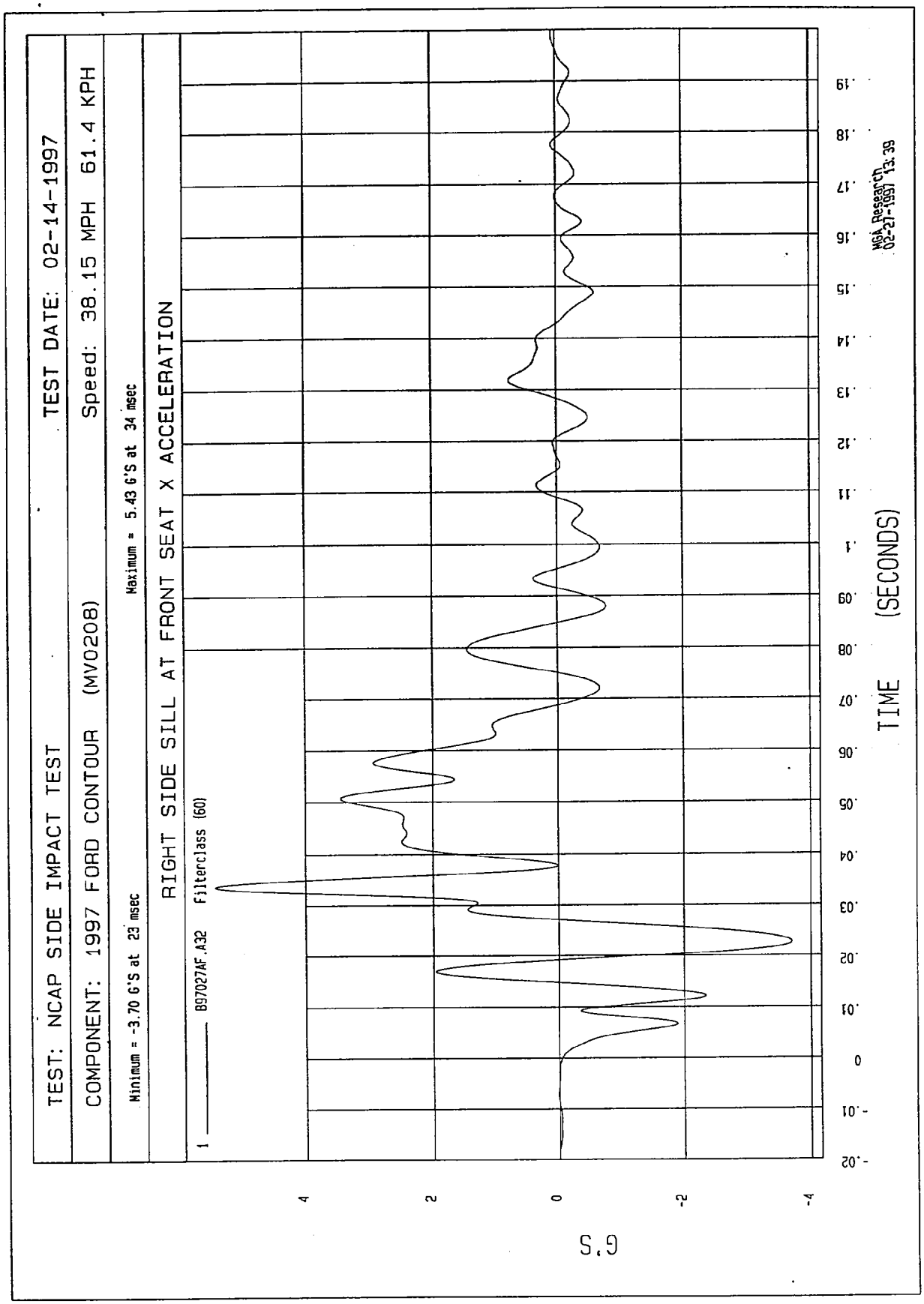

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -1.55E-02 KPH at -12 msec
Maximum = 37.06 KPH at 52 msec
REAR PASSENGER PELVIS Y VELOCITY
1 897027AI.V28 Filterclass (180)
KPH
38
36
34
32
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
02-28-1997 12:32

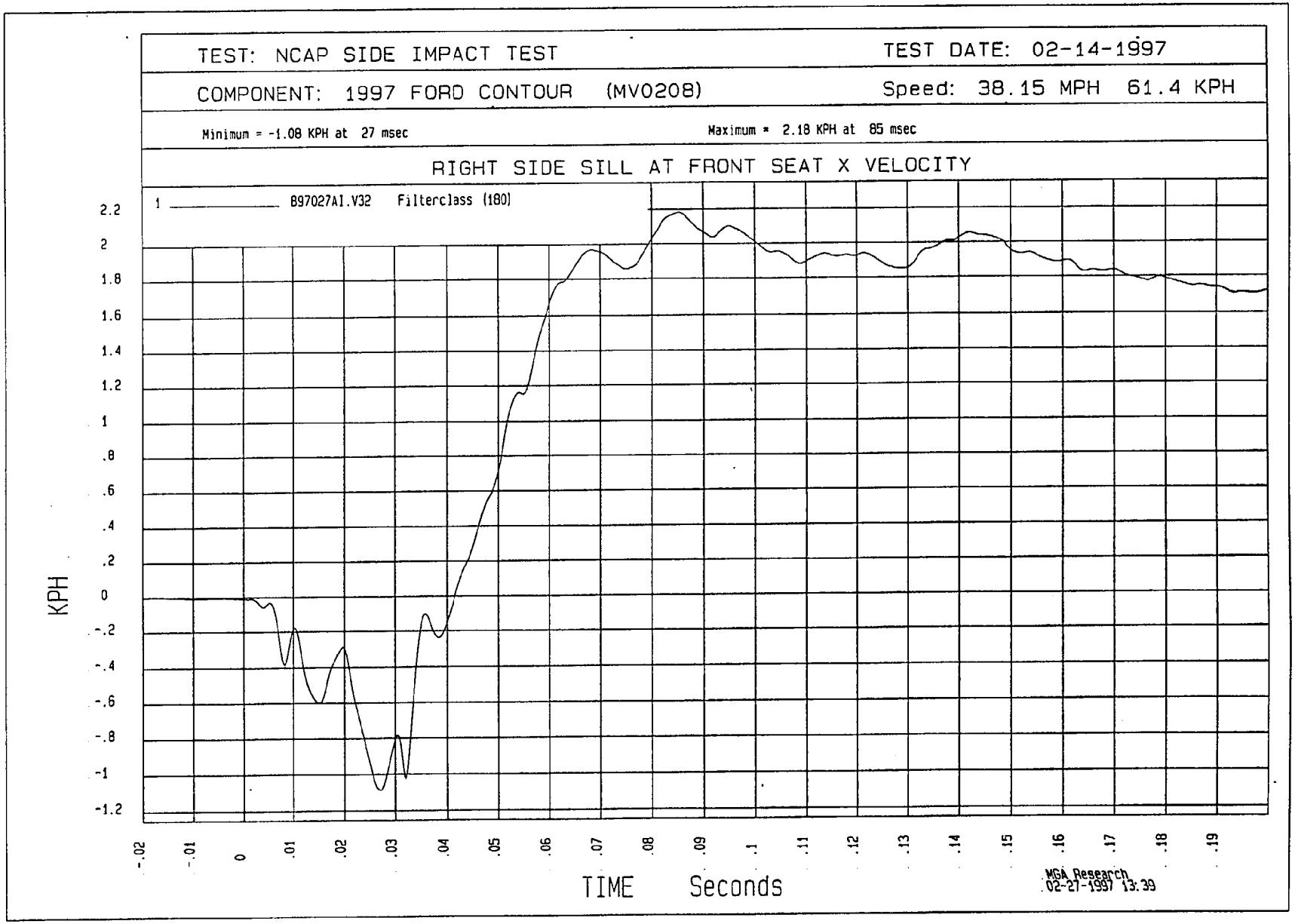

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -6.32 G'S at 70 msec
Maximum = 41.23 G'S at 12 msec
LEFT SIDE SILL AT FRONT SEAT Y ACCELERATION
1 B97027AF.A38 Filterclass (60)
G'S
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-27-1997 13:38

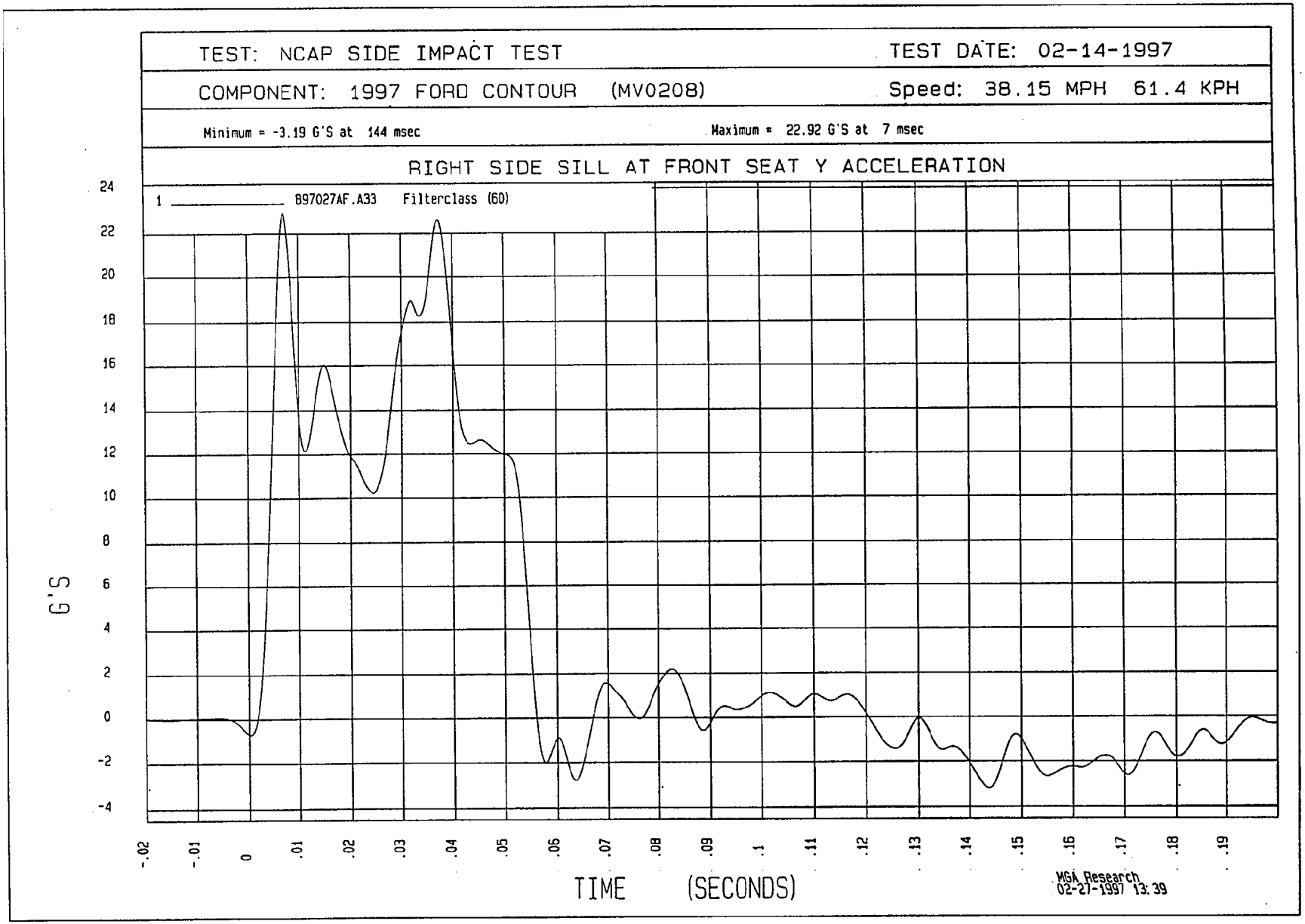

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -4.82E-02 KPH at 2 msec
Maximum = 27.43 KPH at 41 msec
LEFT SIDE SILL AT FRONT SEAT Y VELOCITY
1 B97027AI.V38 Filterclass (180)
KPH
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-.02
-.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
02-27-1997 13:38

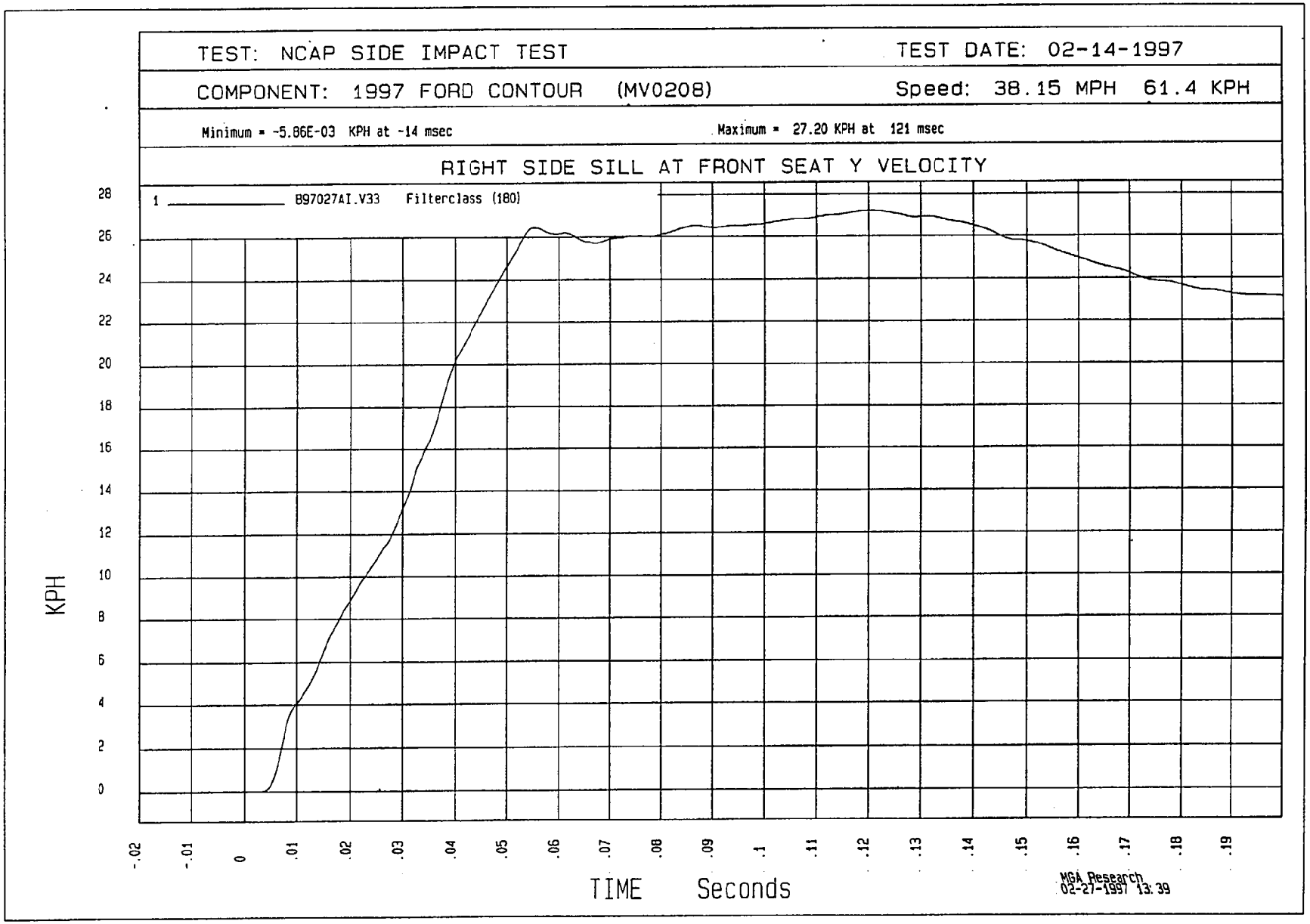

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -9.63 G'S at 30 msec
Maximum = 43.70 G'S at 16 msec
LEFT SIDE SILL AT REAR SEAT Y ACCELERATION
1 B97027AF.A39 Filterclass (60)
40
30
20
10
0
-10
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-27-1997 13:38

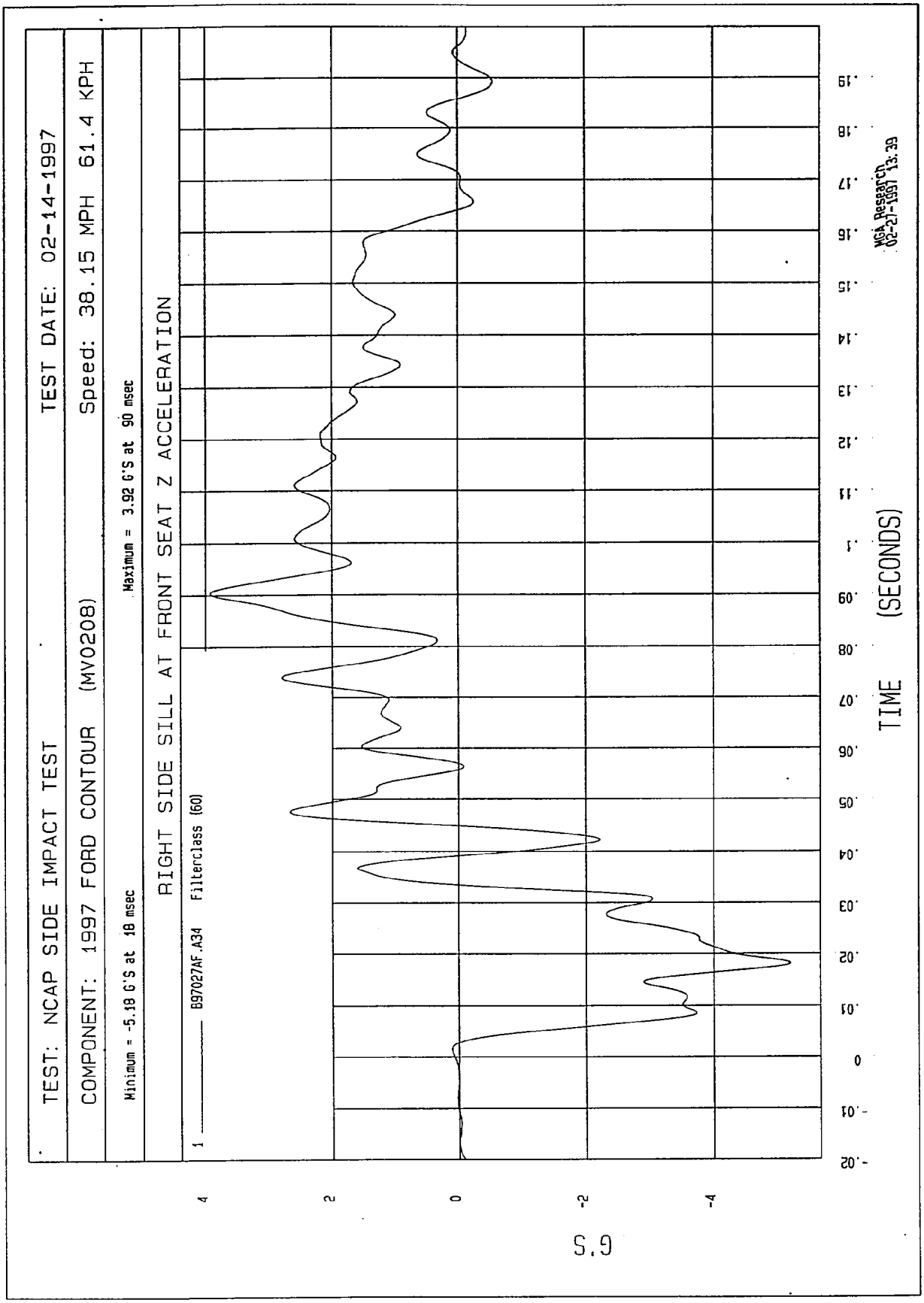

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -.69 KPH at 3 msec
Maximum = 32.95 KPH at 101 msec
LEFT SIDE SILL AT REAR SEAT Y VELOCITY
1 B97027AI.V39 Filterclass (180)
KPH
34
32
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-.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
02-27-1997 13:39

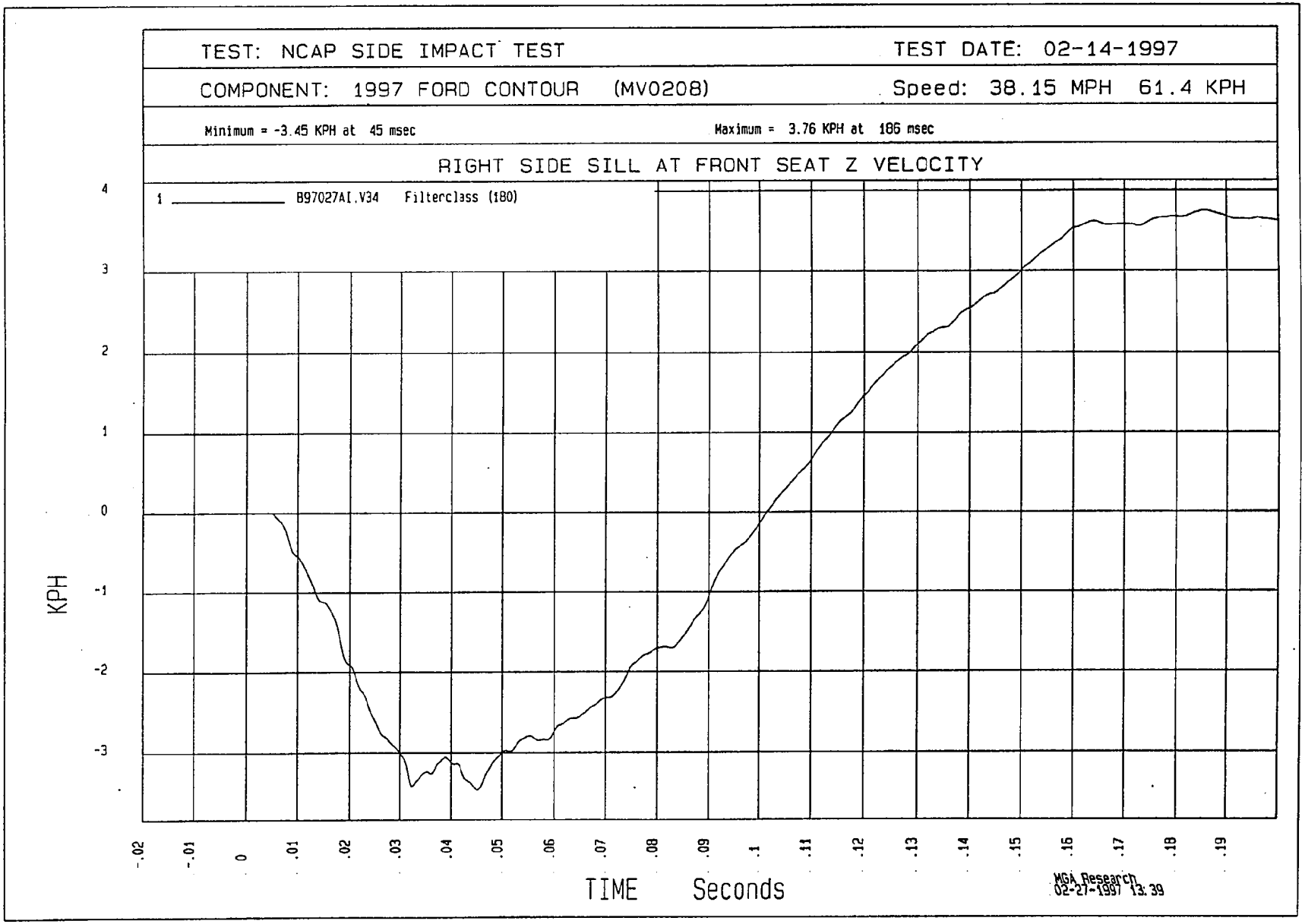

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -3.70 G'S at 23 msec
Maximum = 5.43 G'S at 34 msec
RIGHT SIDE SILL AT FRONT SEAT X ACCELERATION
1 B97027AF.A32 Filterclass (60)
MGA Research
02-27-1997 13:39
4
2
0
-2
-4
G'S
.02
.01
0
-.01
-.02
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
1
11
12
13
14
15
16
17
18
19
TIME (SECONDS)

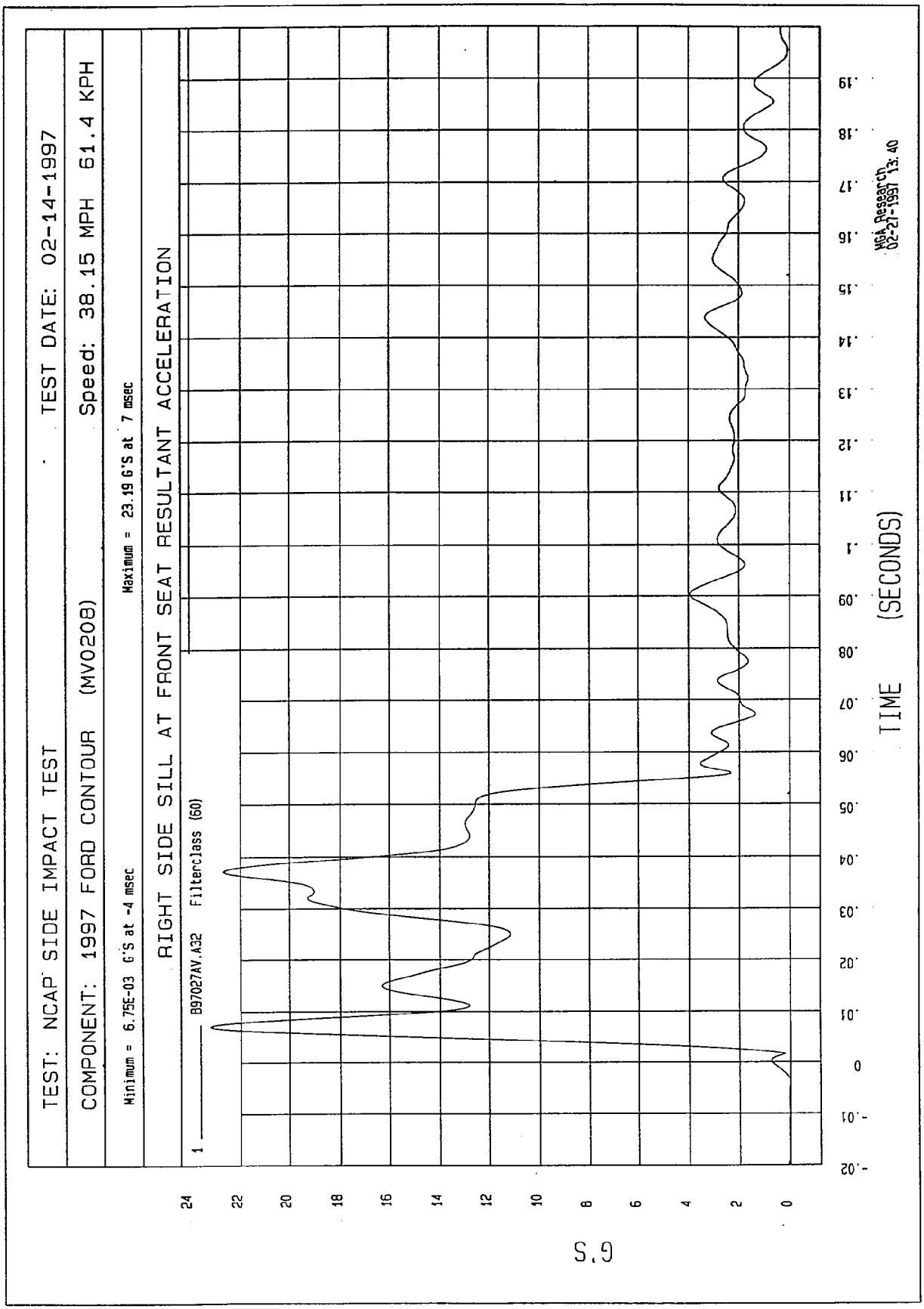

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -1.08 KPH at 27 msec
Maximum = 2.18 KPH at 85 msec
RIGHT SIDE SILL AT FRONT SEAT X VELOCITY
1 B97027A1.V32 Filterclass (180)
KPH
2.2
2
1.8
1.6
1.4
1.2
1
.8
.6
.4
.2
0
-.2
-.4
-.6
-.8
-1
-1.2
-.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
02-27-1997 13:39

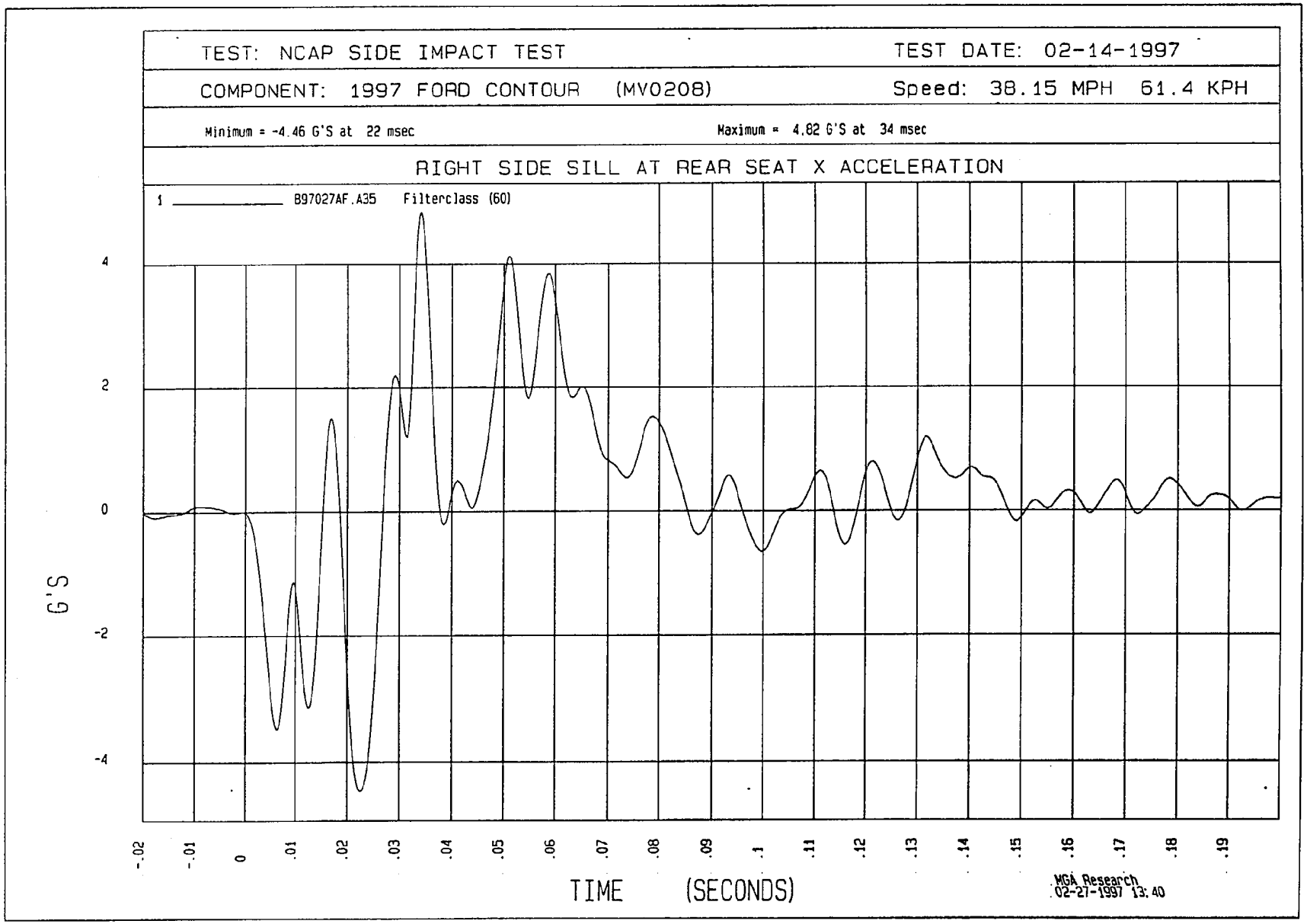

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -3.19 G'S at 144 msec
Maximum = 22.92 G'S at 7 msec
RIGHT SIDE SILL AT FRONT SEAT Y ACCELERATION
1 B97027AF.A33 Filterclass (60)
G'S
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-.02
-.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
02-27-1997 13:39


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -5.86E-03 KPH at -14 msec
Maximum = 27.20 KPH at 121 msec
RIGHT SIDE SILL AT FRONT SEAT Y VELOCITY
1 B97027AI.V33 Filterclass (180)
KPH
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
02-27-1997 13:39


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -5.18 G'S at 18 msec
Maximum = 3.92 G'S at 90 msec
RIGHT SIDE SILL AT FRONT SEAT Z ACCELERATION
1 B97027AF.A34 Filterclass (60)
MGA Research 02-27-1997 13:39
TIME (SECONDS)
G'S


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -3.45 KPH at 45 msec
Maximum = 3.76 KPH at 186 msec
RIGHT SIDE SILL AT FRONT SEAT Z VELOCITY
1 B97027AI.V34 Filterclass (180)
KPH
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
02-27-1997 13:39


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = 6.75E-03 G'S at -4 msec
Maximum = 23.19 G'S at 7 msec
RIGHT SIDE SILL AT FRONT SEAT RESULTANT ACCELERATION
1 B97027AV.A32 Filterclass (60)
G'S
TIME (SECONDS)
MGA Research
02-27-1997 13:40


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -4.46 G'S at 22 msec
Maximum = 4.82 G'S at 34 msec
RIGHT SIDE SILL AT REAR SEAT X ACCELERATION
1 B97027AF.A35 Filterclass (60)
G'S
4
2
0
-2
-4
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
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.14
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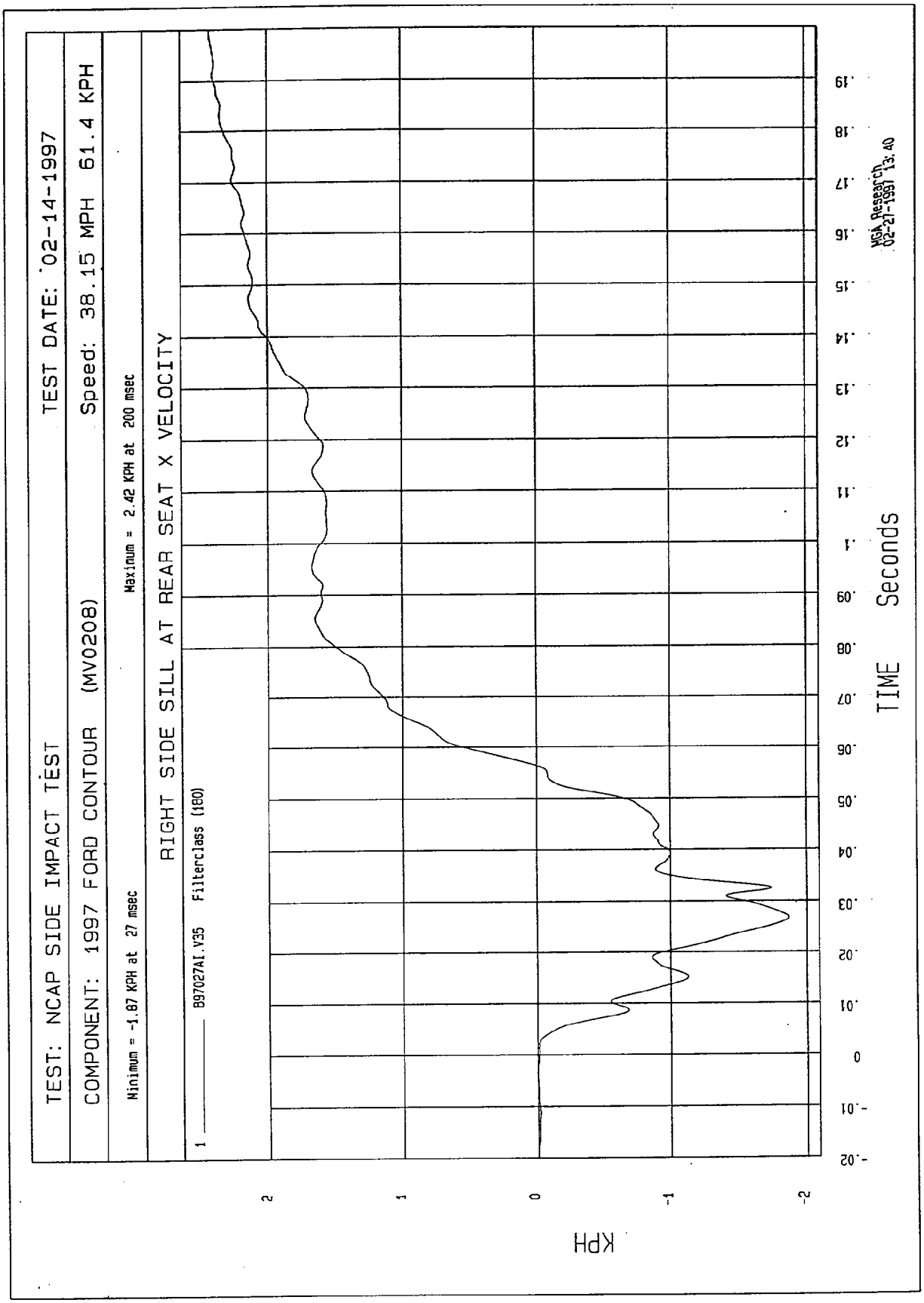
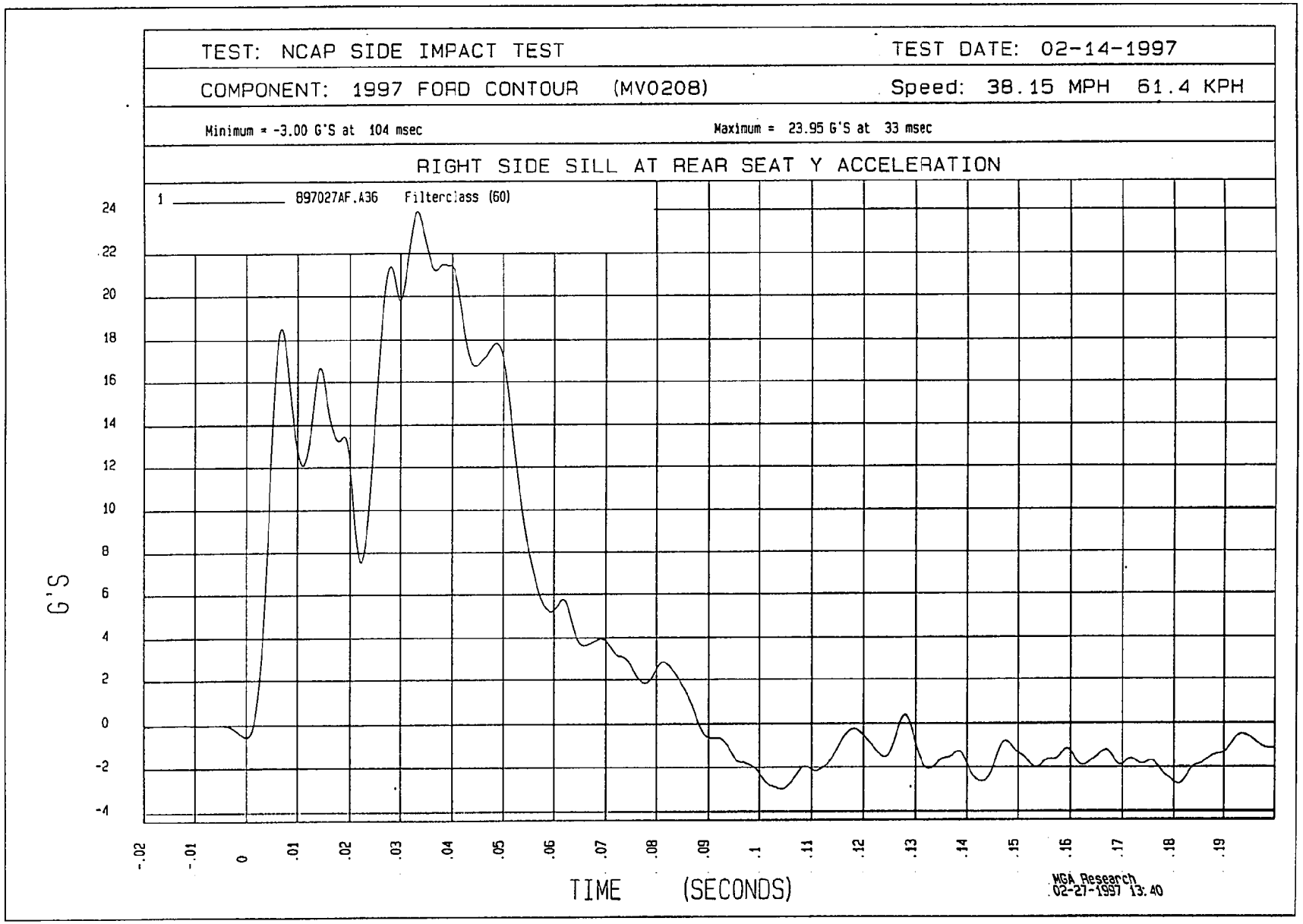
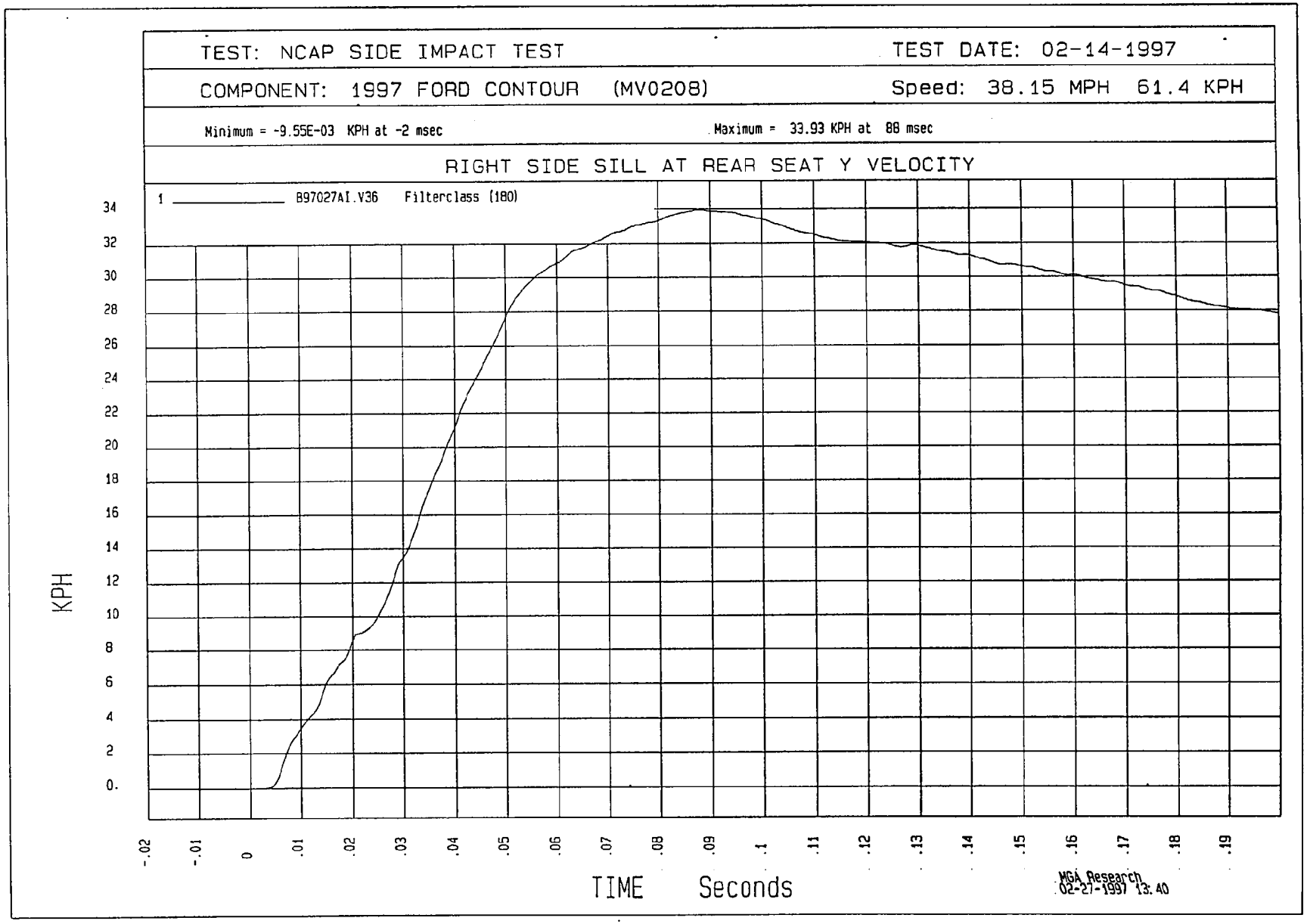
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-27-1997 13:40


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -1.87 KPH at 27 msec
Maximum = 2.42 KPH at 200 msec
RIGHT SIDE SILL AT REAR SEAT X VELOCITY
1 B97027AI.V35 Filterclass (180)
KPH
TIME Seconds
MGA Research
02-21-1997 13:40


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -3.00 G'S at 104 msec
Maximum = 23.95 G'S at 33 msec
RIGHT SIDE SILL AT REAR SEAT Y ACCELERATION
1 897027AF.A36 Filterclass (60)
G'S
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
02-27-1997 13:40


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -9.55E-03 KPH at -2 msec
Maximum = 33.93 KPH at 88 msec
RIGHT SIDE SILL AT REAR SEAT Y VELOCITY
1 B97027AI.V36 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
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.09
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.14
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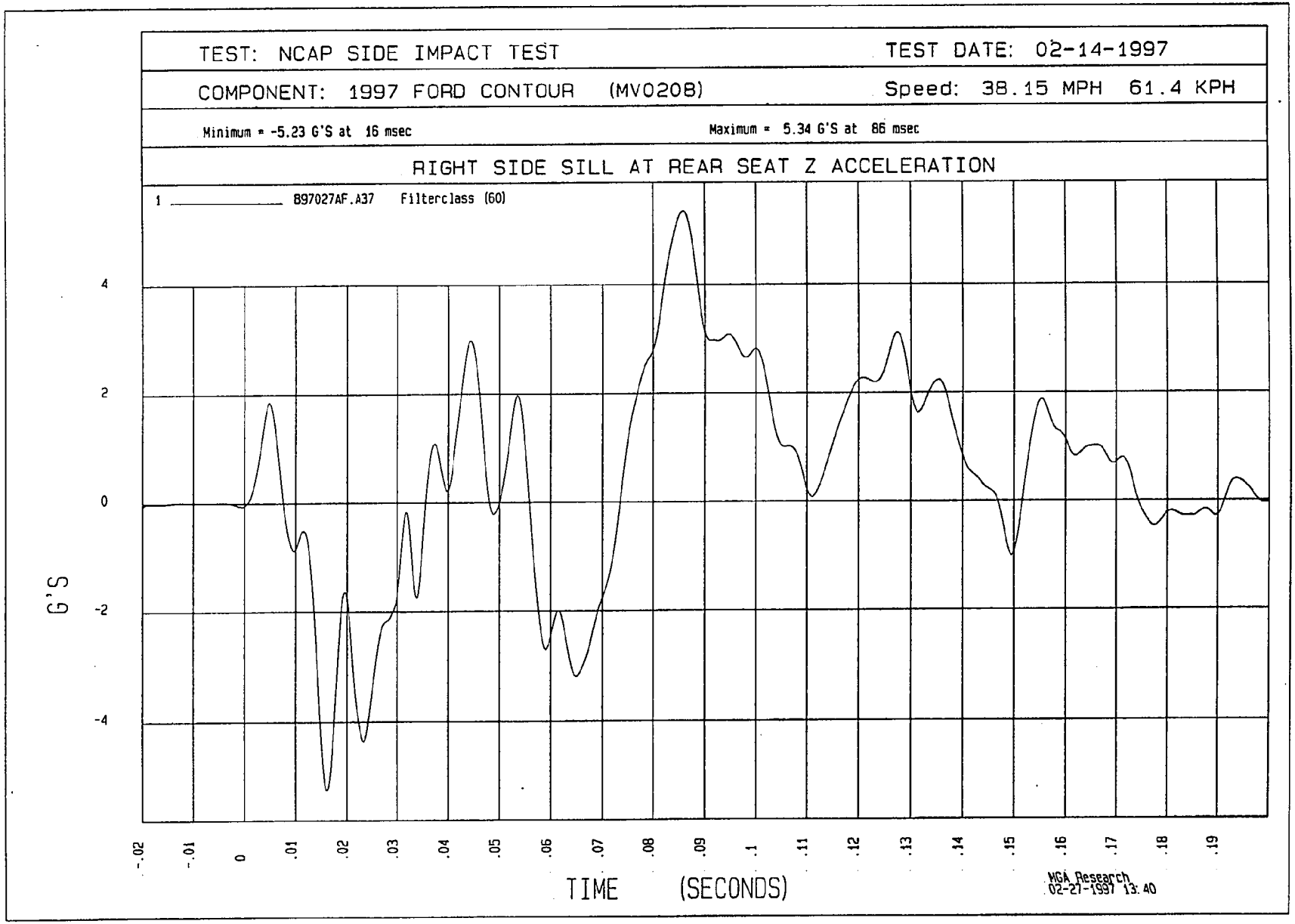
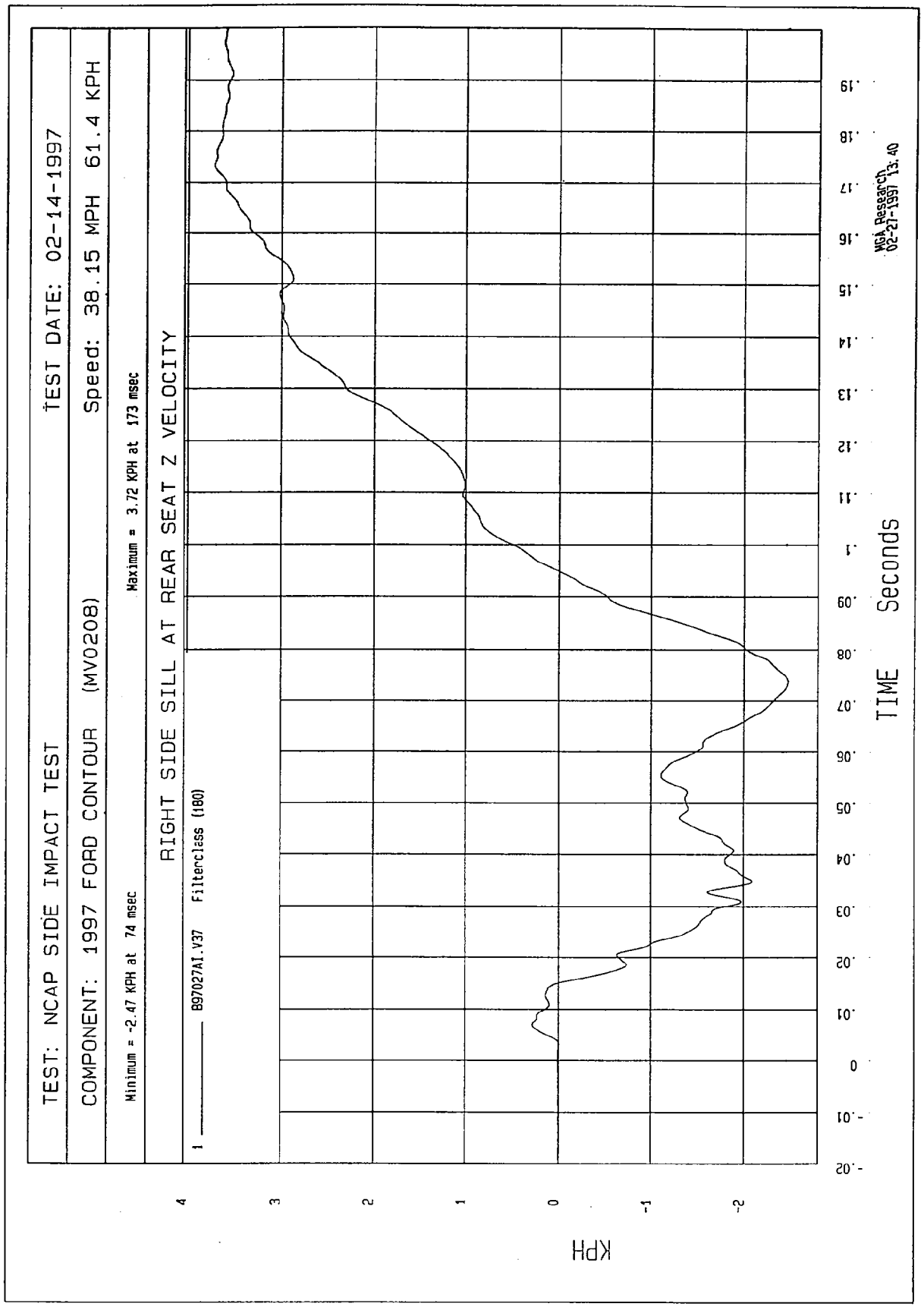
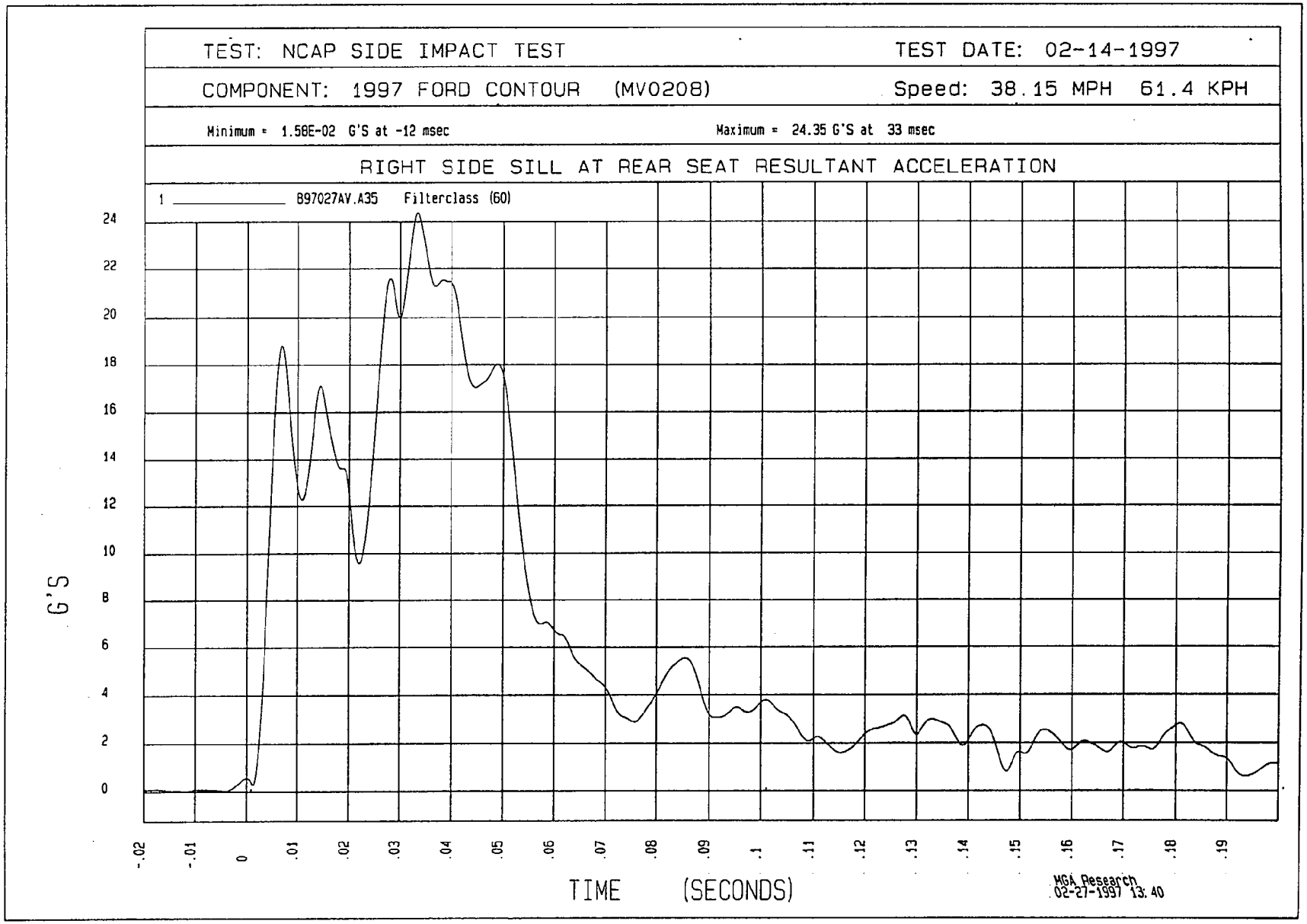
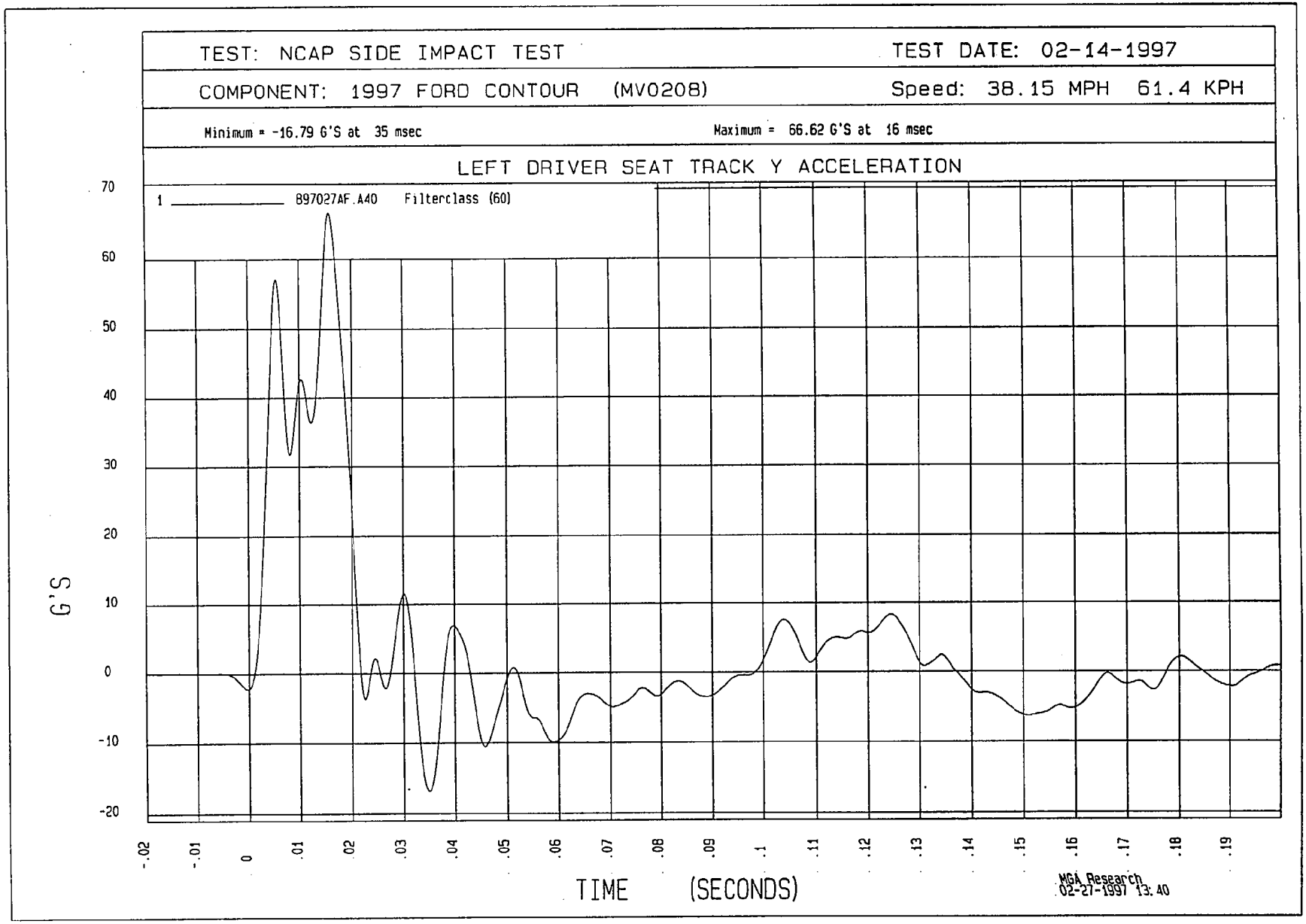
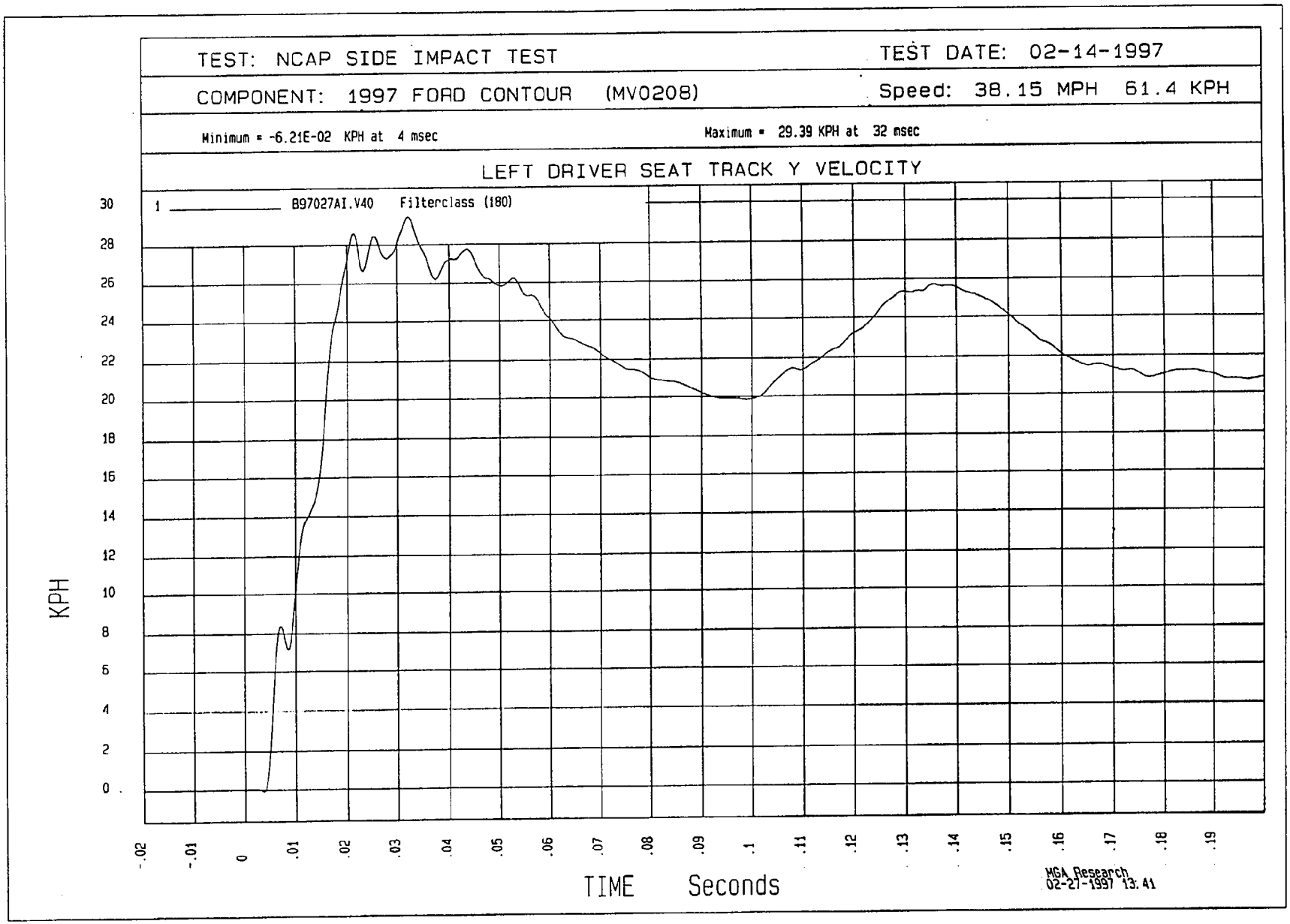
.16
.17
.18
.19
TIME Seconds
MGA Research
02-27-1997 13:40

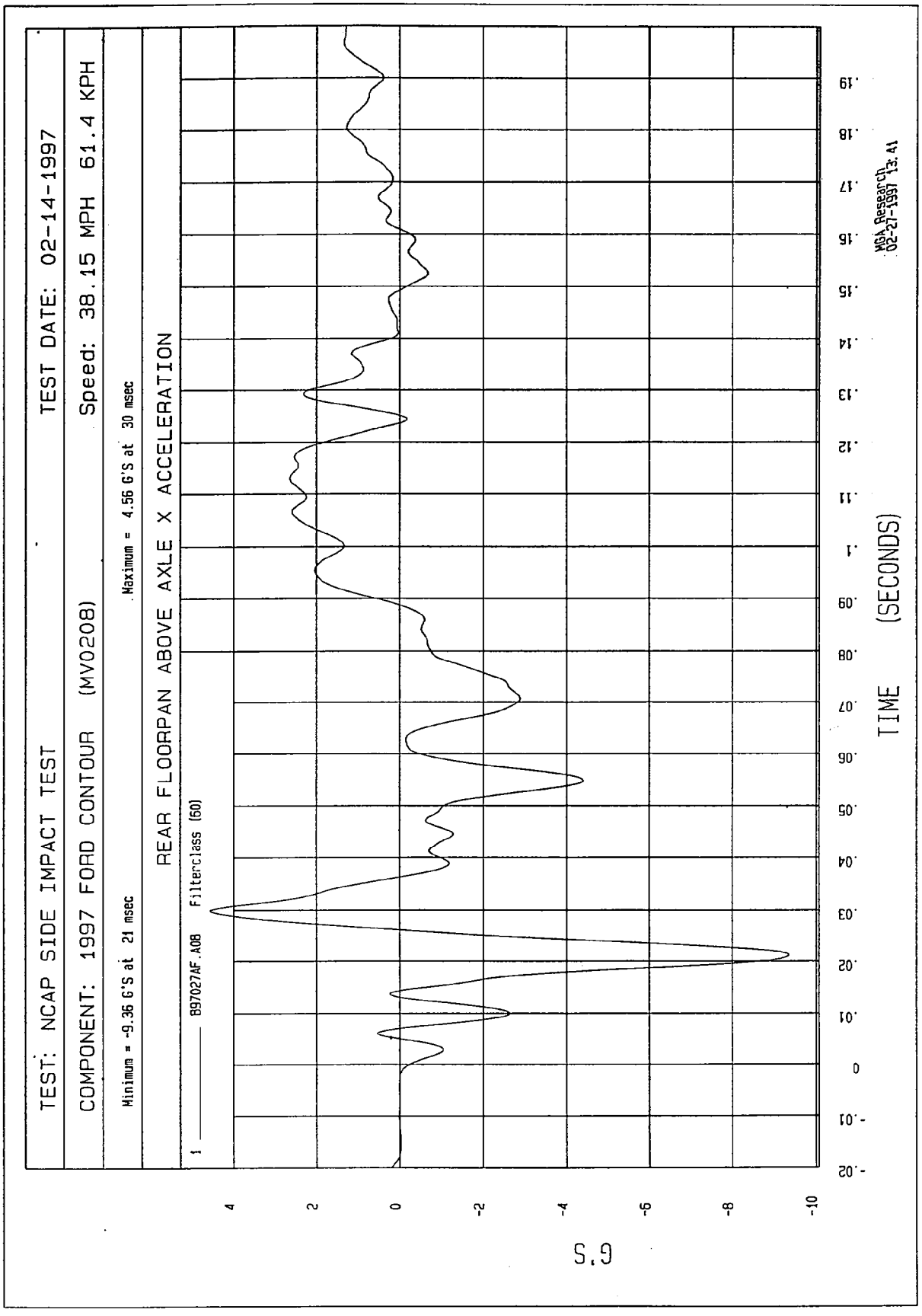

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -5.23 G'S at 16 msec
Maximum = 5.34 G'S at 86 msec
RIGHT SIDE SILL AT REAR SEAT Z ACCELERATION
1 B97027AF.A37 Filterclass (60)
G'S
4
2
0
-2
-4
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-27-1997 13:40

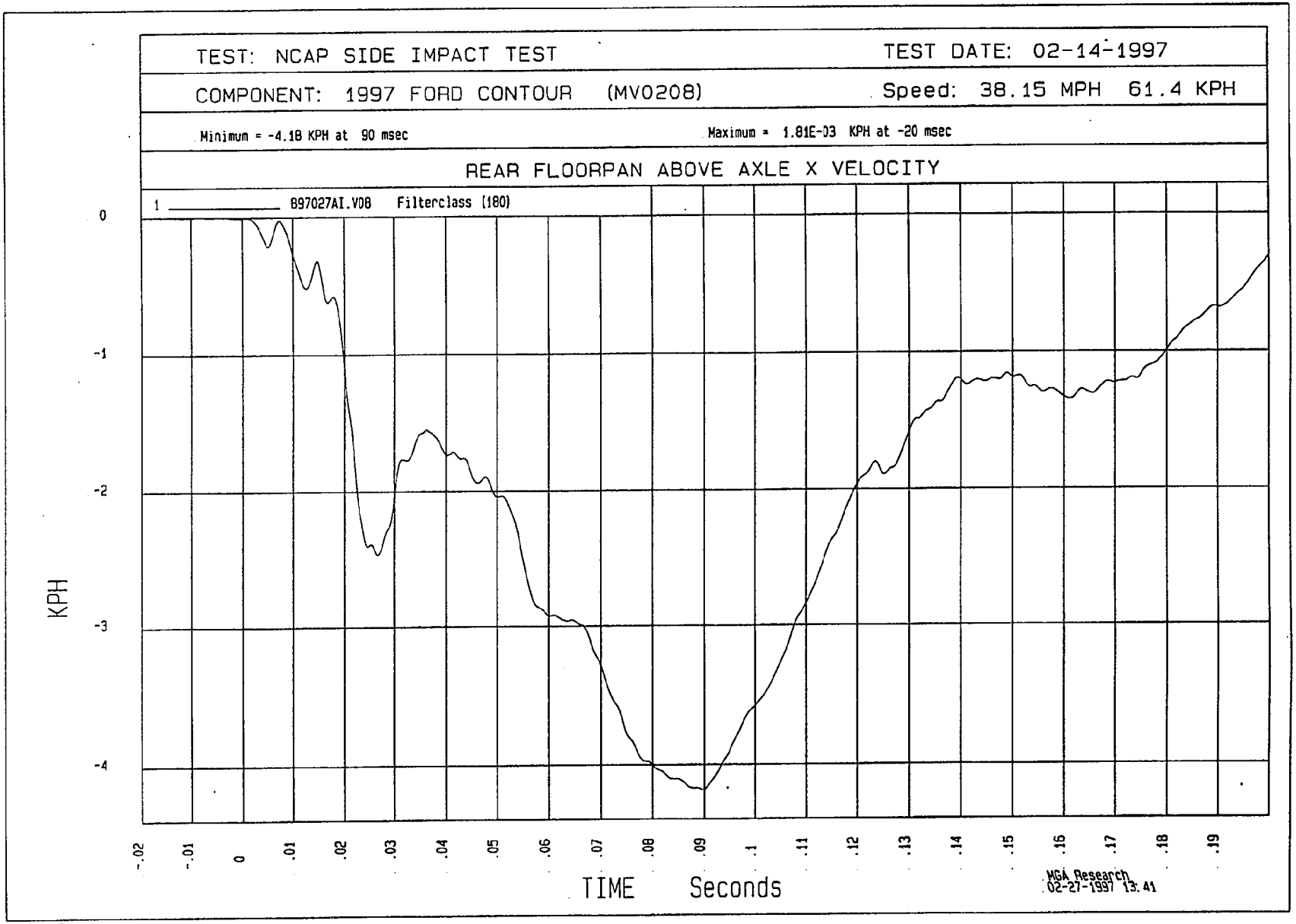

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -2.47 KPH at 74 msec
Maximum = 3.72 KPH at 173 msec
RIGHT SIDE SILL AT REAR SEAT Z VELOCITY
1 B97027AI.V37 Filterclass (180)
KPH
TIME Seconds
MGA Research
02-27-1997 13:40

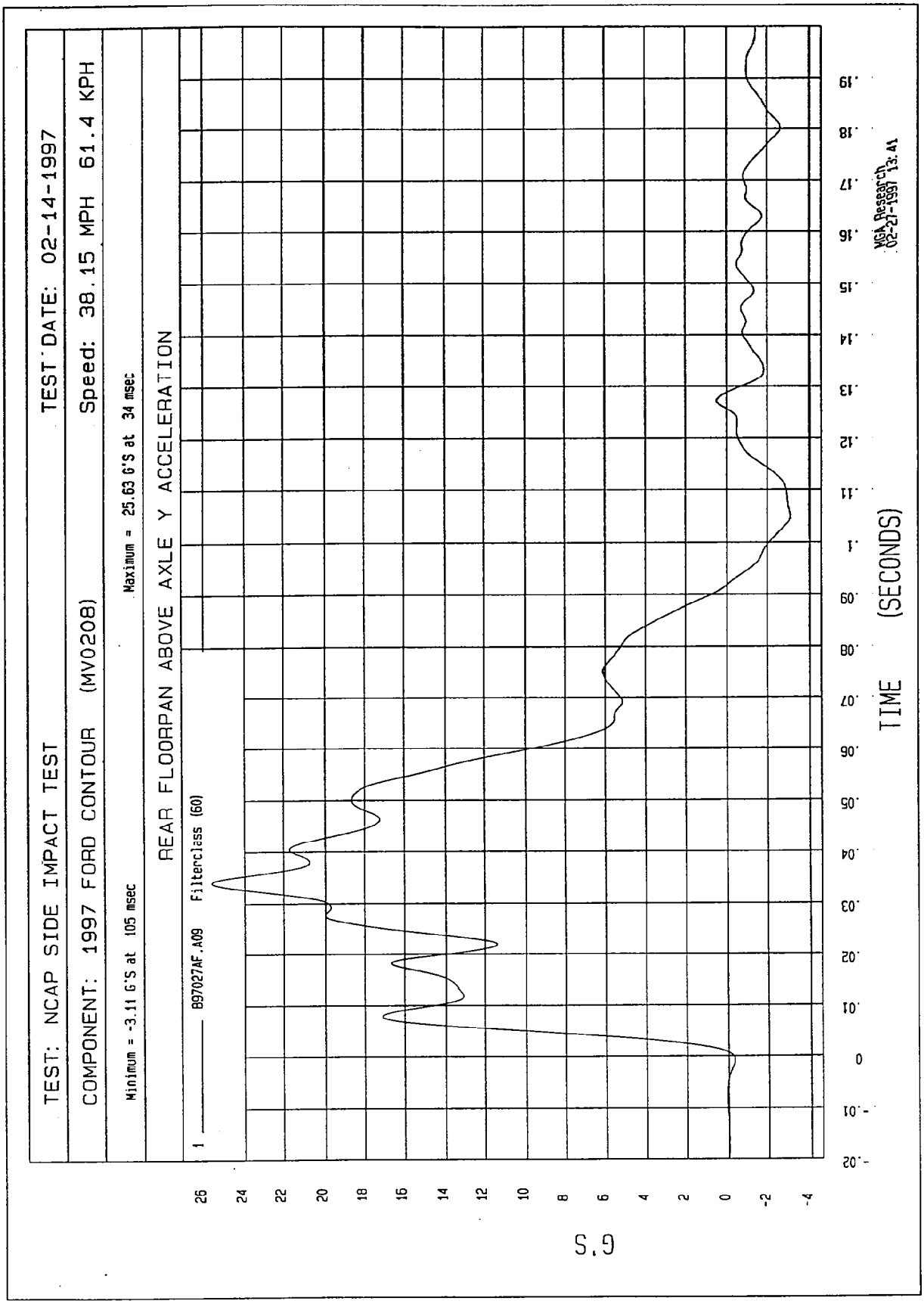

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = 1.58E-02 G'S at -12 msec
Maximum = 24.35 G'S at 33 msec
RIGHT SIDE SILL AT REAR SEAT RESULTANT ACCELERATION
1 B97027AV.A35 Filterclass (60)
G'S
24
22
20
18
16
14
12
10
8
6
4
2
0
-.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
02-27-1997 13:40

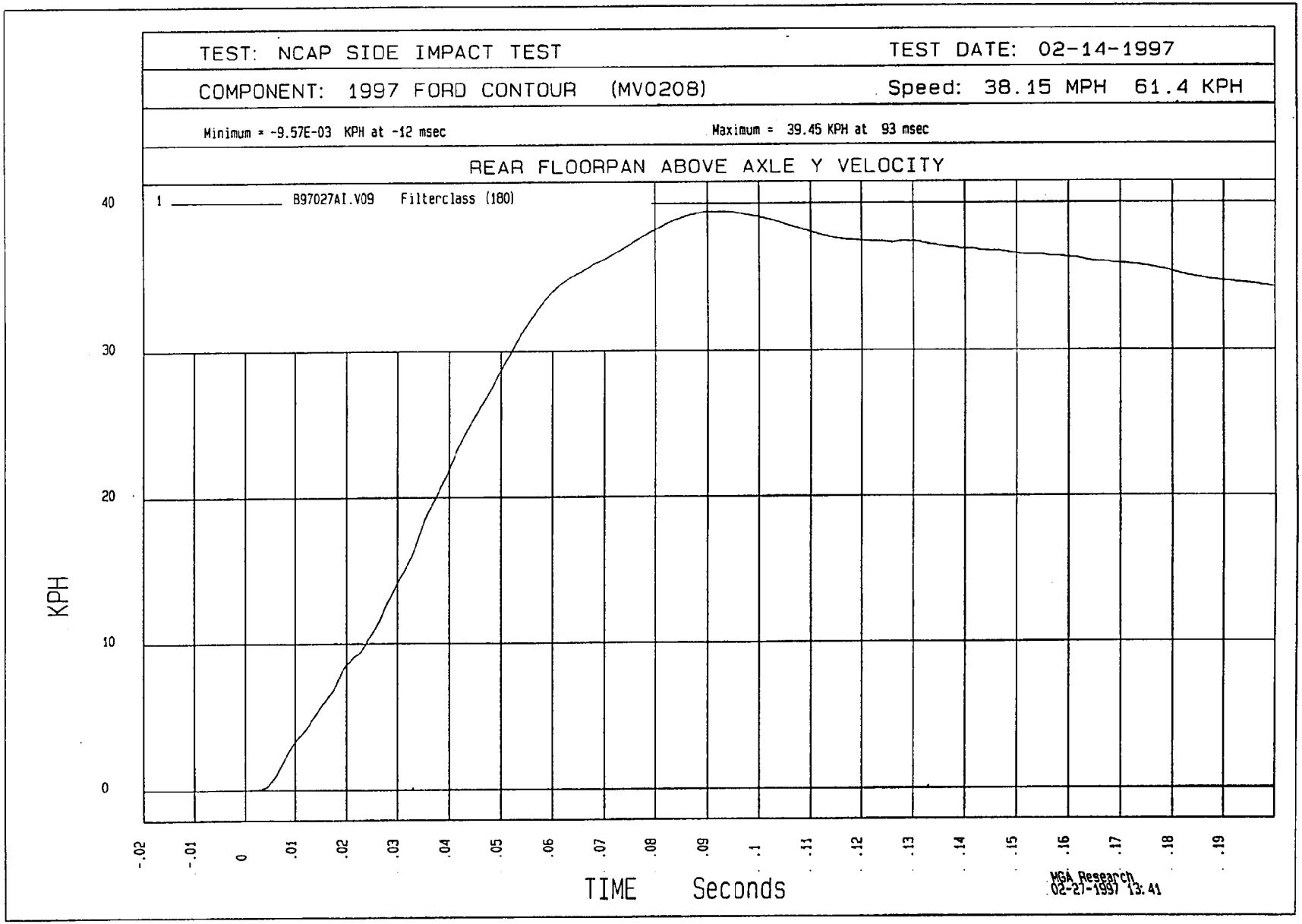

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -16.79 G'S at 35 msec
Maximum = 66.62 G'S at 16 msec
LEFT DRIVER SEAT TRACK Y ACCELERATION
1 897027AF.A40 Filterclass (60)
70
60
50
40
30
20
10
0
-10
-20
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-27-1997 13:40

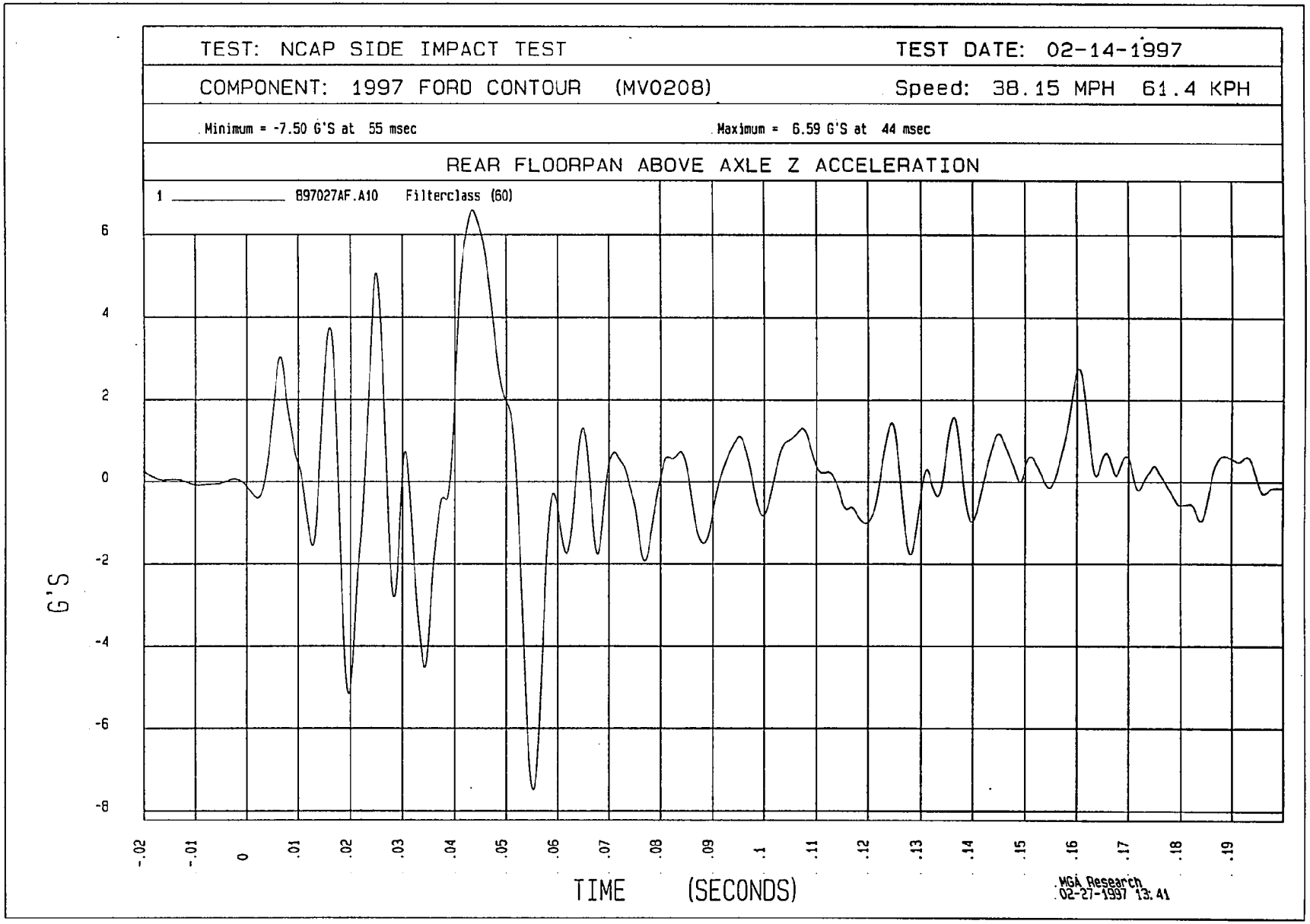

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -6.21E-02 KPH at 4 msec
Maximum = 29.39 KPH at 32 msec
LEFT DRIVER SEAT TRACK Y VELOCITY
1 B97027AI.V40 Filterclass (180)
KPH
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
02-27-1997 13:41

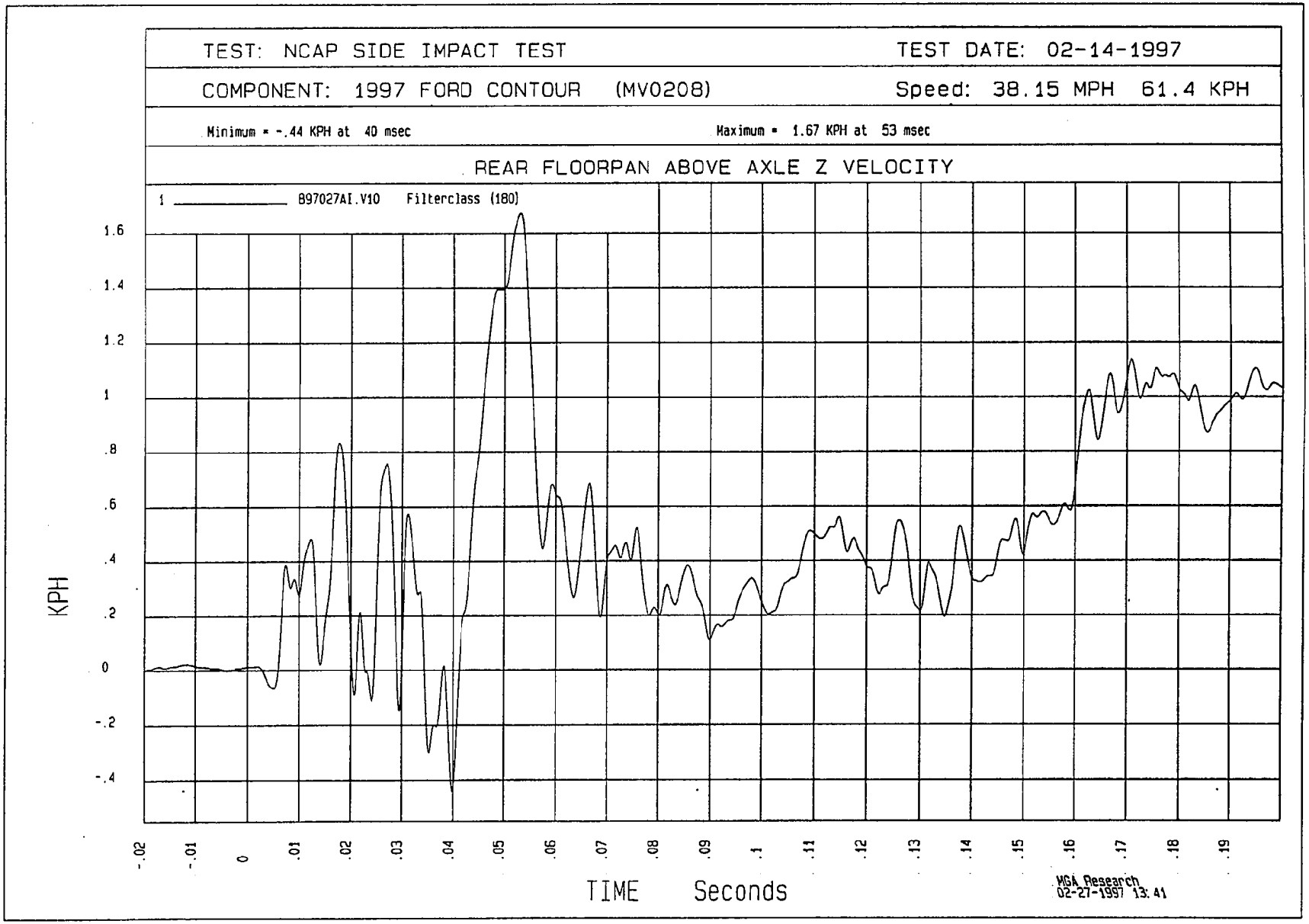

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -9.36 G'S at 21 msec
Maximum = 4.56 G'S at 30 msec
REAR FLOORPAN ABOVE AXLE X ACCELERATION
1 ——— 897027AF.A0B Filterclass (60)
MGA Research
02-27-1997 13:41
TIME (SECONDS)
6'S
4
2
0
-2
-4
-6
-8
-10
.19
.18
.17
.16
.15
.14
.13
.12
.11
.1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
-.01
-.02

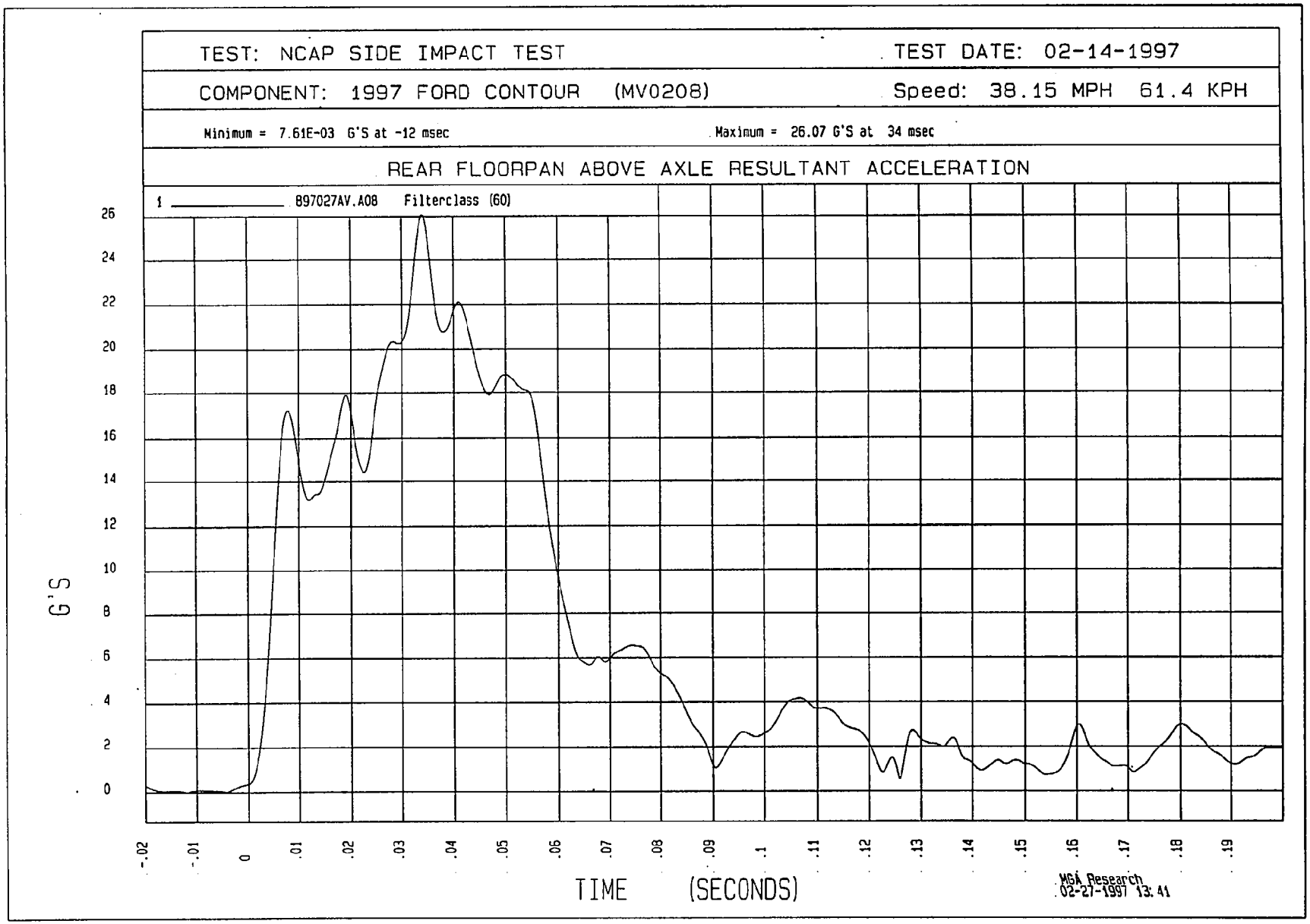

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -4.18 KPH at 90 msec
Maximum = 1.81E-03 KPH at -20 msec
REAR FLOORPAN ABOVE AXLE X VELOCITY
1 B97027AI.V08 Filterclass (180)
KPH
0
-1
-2
-3
-4
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
02-27-1997 13:41

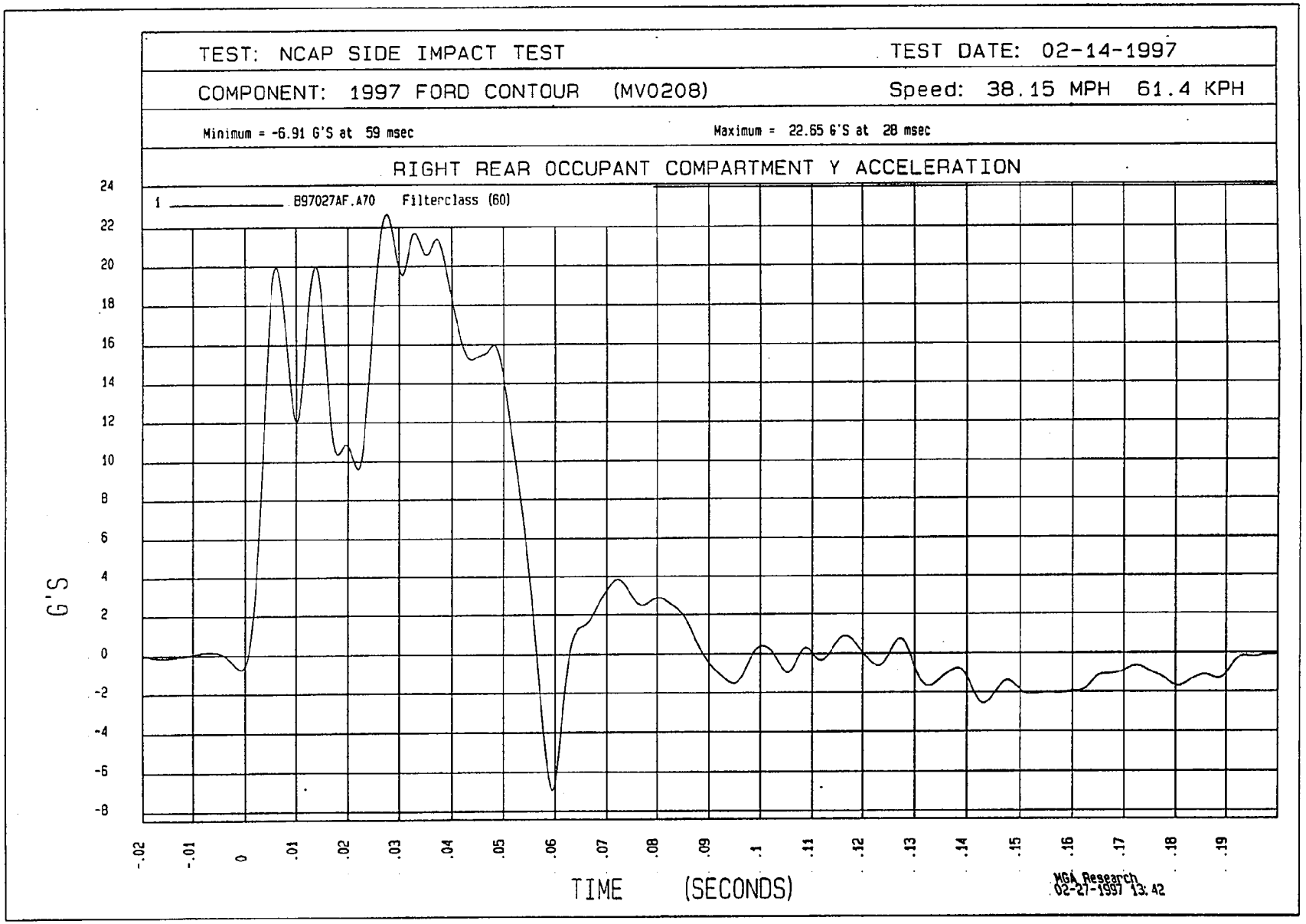

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -3.11 G'S at 105 msec
Maximum = 25.63 G'S at 34 msec
REAR FLOORPAN ABOVE AXLE Y ACCELERATION
1 B97027AF.A09 Filterclass (60)
MGA Research
02-27-1997 13:41
TIME (SECONDS)
G's

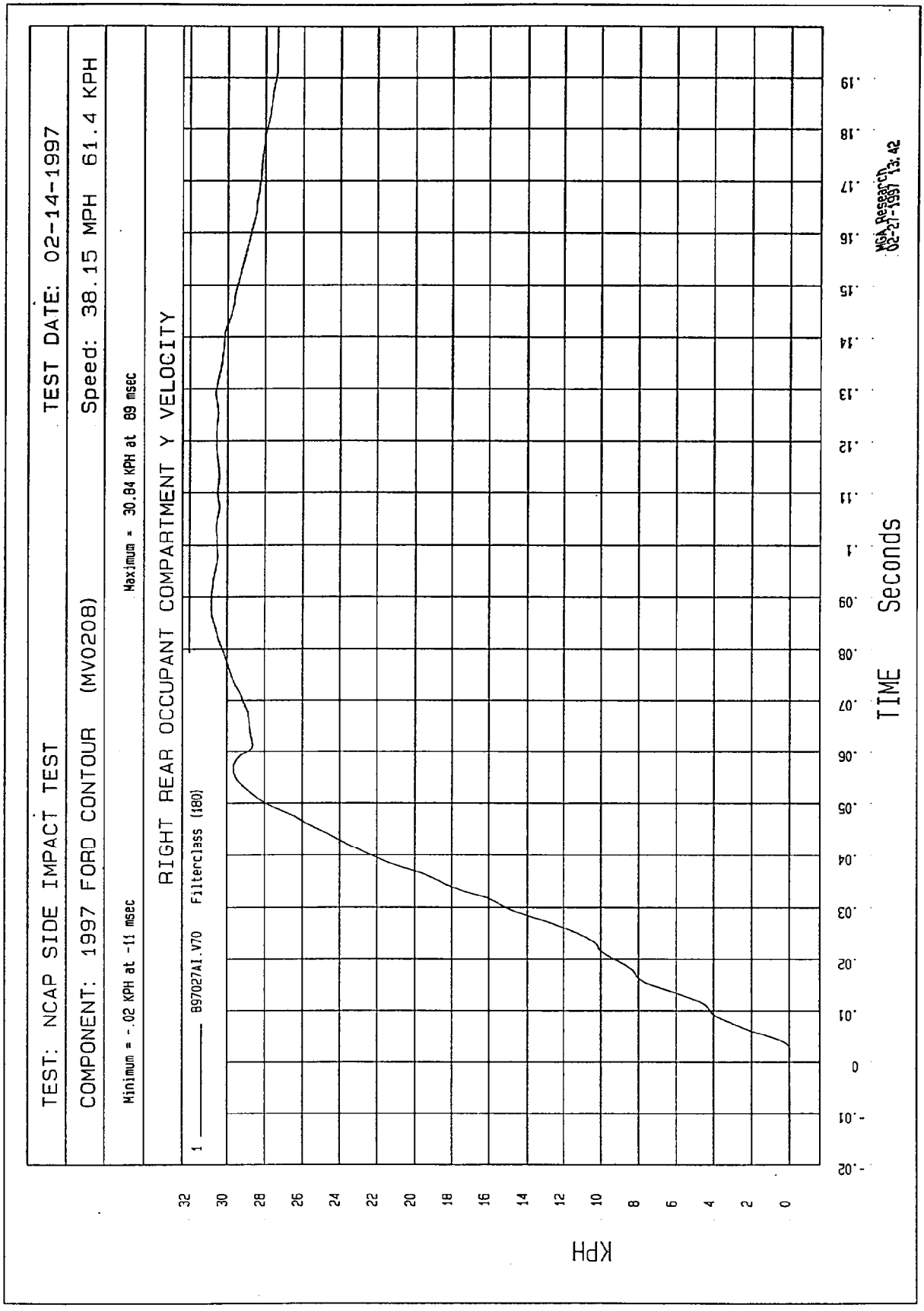

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -9.57E-03 KPH at -12 msec
Maximum = 39.45 KPH at 93 msec
REAR FLOORPAN ABOVE AXLE Y VELOCITY
1 B97027AI.V09 Filterclass (180)
KPH
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
02-27-1997 13:41

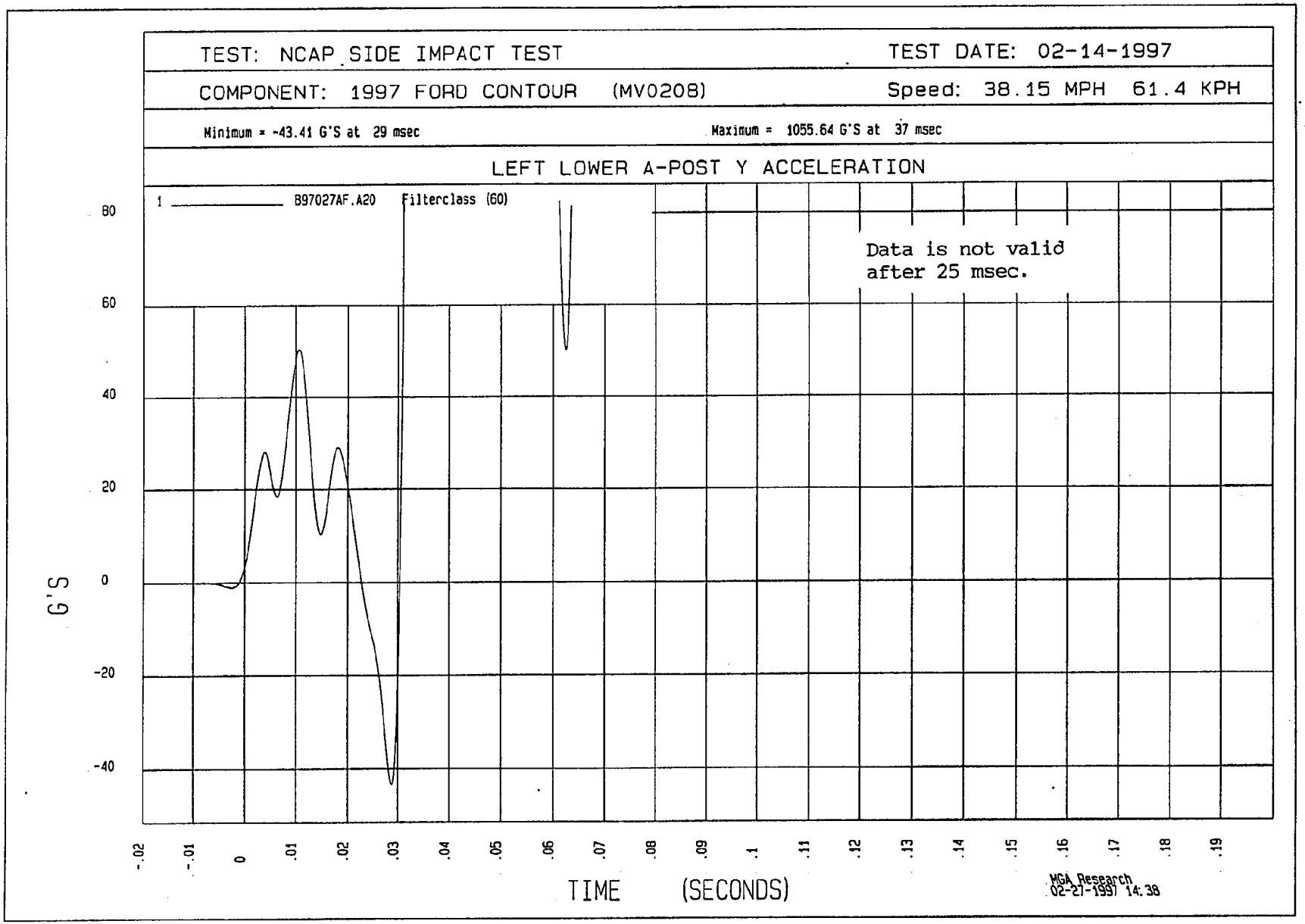

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -7.50 G'S at 55 msec
Maximum = 6.59 G'S at 44 msec
REAR FLOORPAN ABOVE AXLE Z ACCELERATION
1 B97027AF.A10 Filterclass (60)
6
4
2
0
-2
-4
-6
-8
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-27-1997 13:41

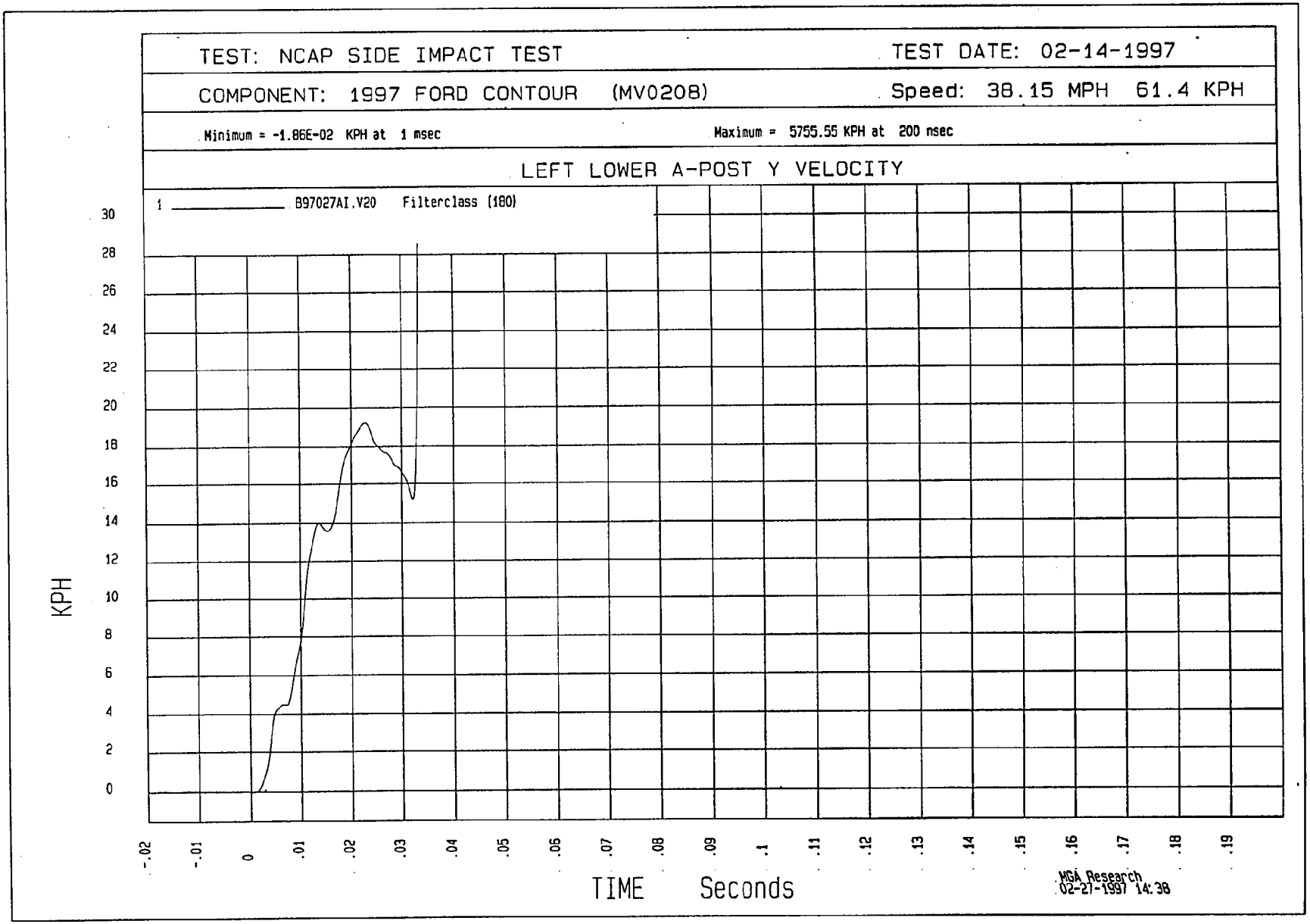

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -.44 KPH at 40 msec
Maximum = 1.67 KPH at 53 msec
REAR FLOORPAN ABOVE AXLE Z VELOCITY
1 897027AI.V10 Filterclass (180)
KPH
1.6
1.4
1.2
1
.8
.6
.4
.2
0
-.2
-.4
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
02-27-1997 13:41

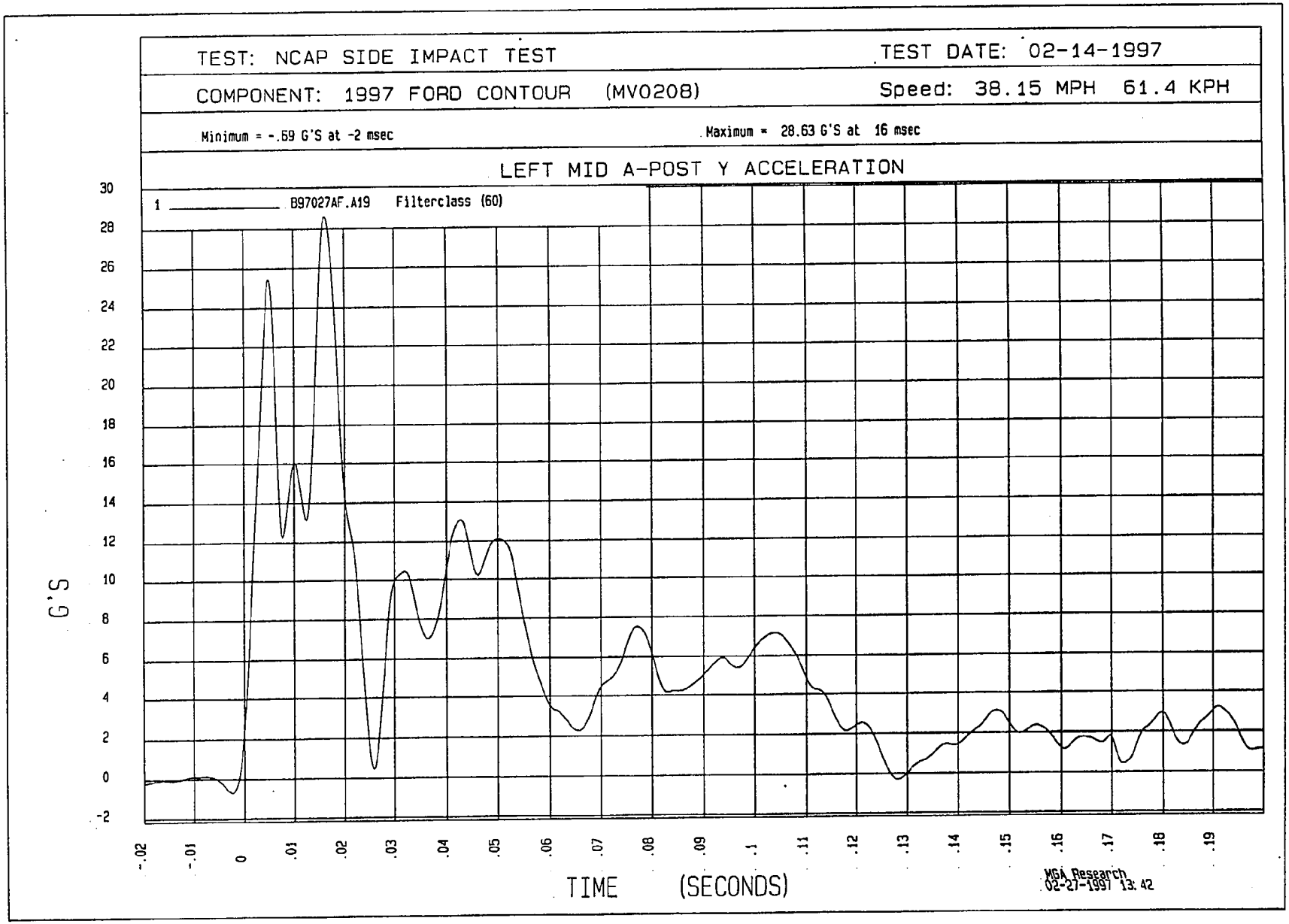

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = 7.61E-03 G'S at -12 msec
Maximum = 26.07 G'S at 34 msec
REAR FLOORPAN ABOVE AXLE RESULTANT ACCELERATION
1 897027AV.A08 Filterclass (60)
G'S
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-.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
02-27-1997 13:41

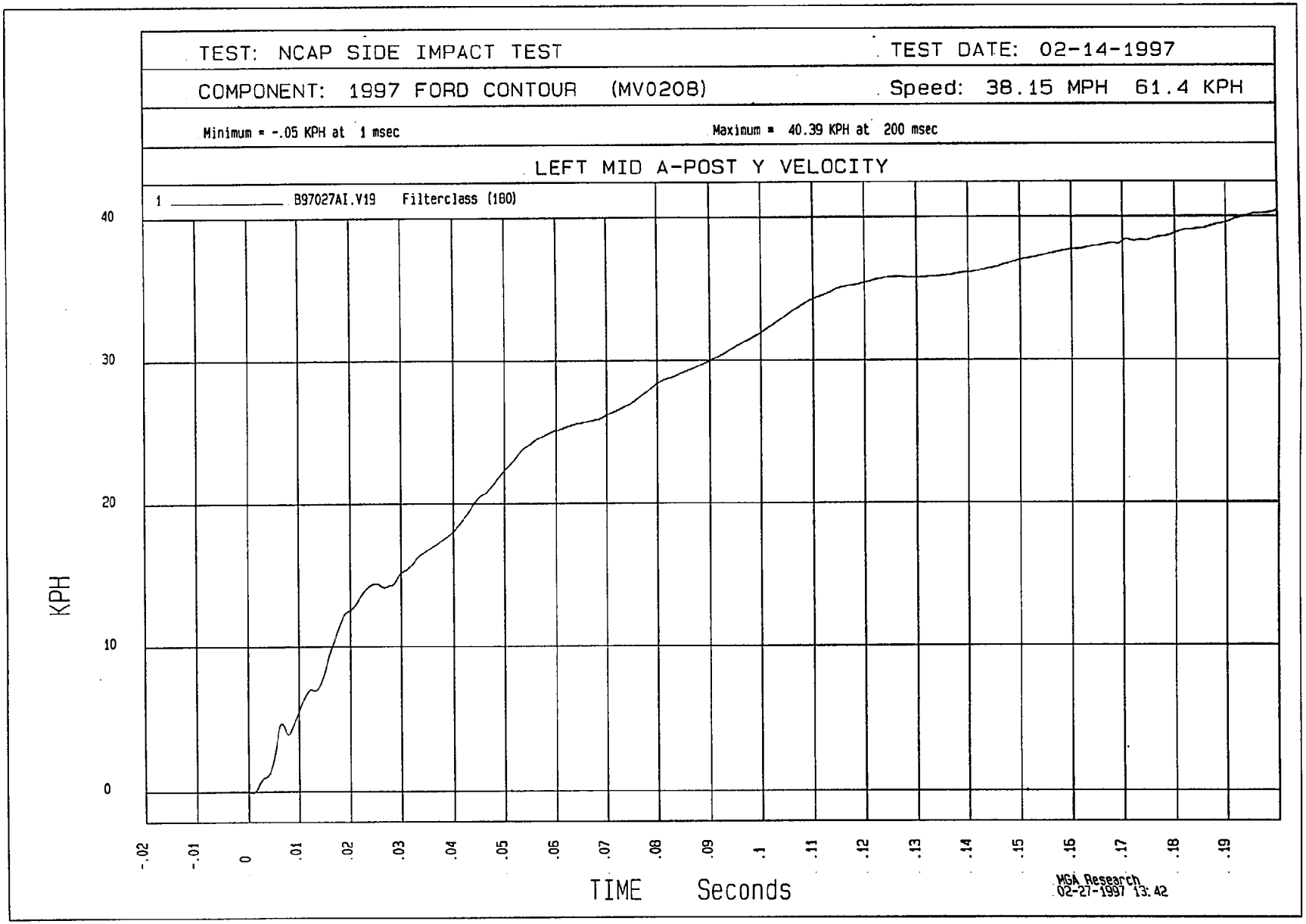

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -6.91 G'S at 59 msec
Maximum = 22.65 G'S at 28 msec
RIGHT REAR OCCUPANT COMPARTMENT Y ACCELERATION
1 B97027AF.A70 Filterclass (60)
G'S
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-.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
02-27-1997 13:42

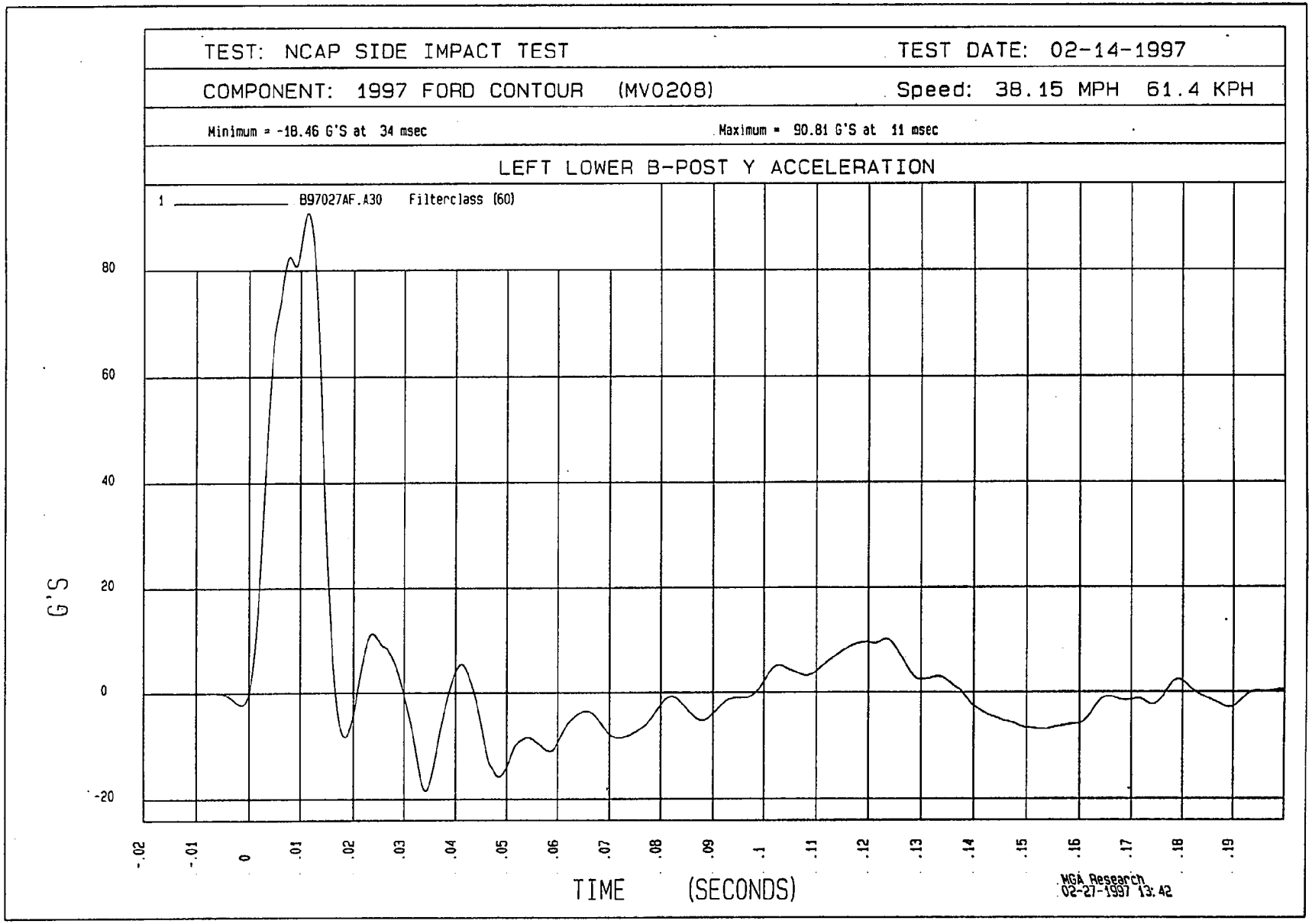

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -.02 KPH at -11 msec
Maximum = 30.84 KPH at 89 msec
RIGHT REAR OCCUPANT COMPARTMENT Y VELOCITY
1 B97027A1.V70 Filterclass (180)
KPH
TIME Seconds
MGA Research
02-27-1997 13:42

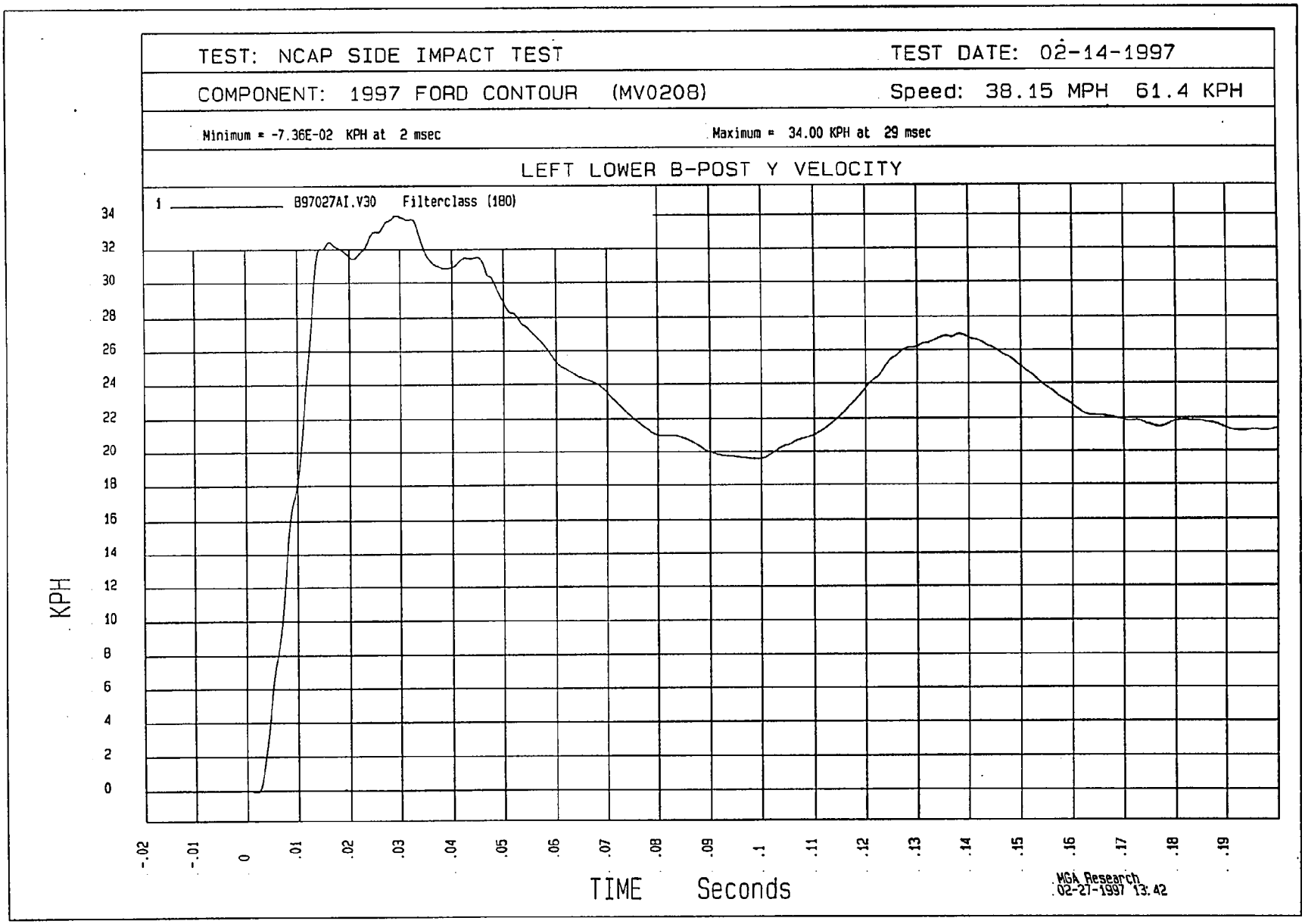

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -43.41 G'S at 29 msec
Maximum = 1055.64 G'S at 37 msec
LEFT LOWER A-POST Y ACCELERATION
1 B97027AF.A20 Filterclass (60)
Data is not valid after 25 msec.
80
60
40
20
0
-20
-40
G'S
-.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
02-27-1997 14:38

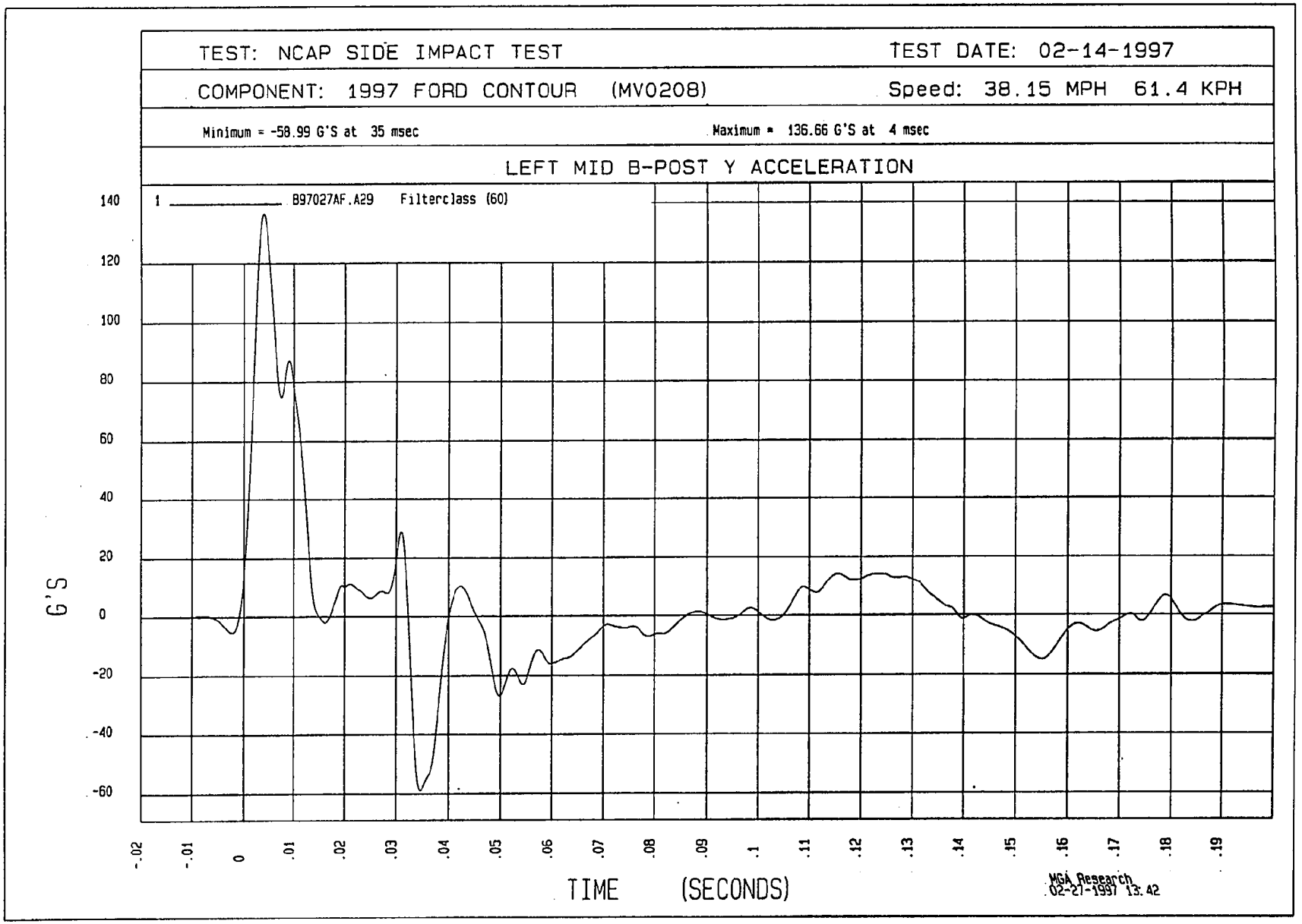

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -1.86E-02 KPH at 1 msec
Maximum = 5755.55 KPH at 200 msec
LEFT LOWER A-POST Y VELOCITY
1 B97027AI.V20 Filterclass (180)
KPH
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
02-27-1997 14:38

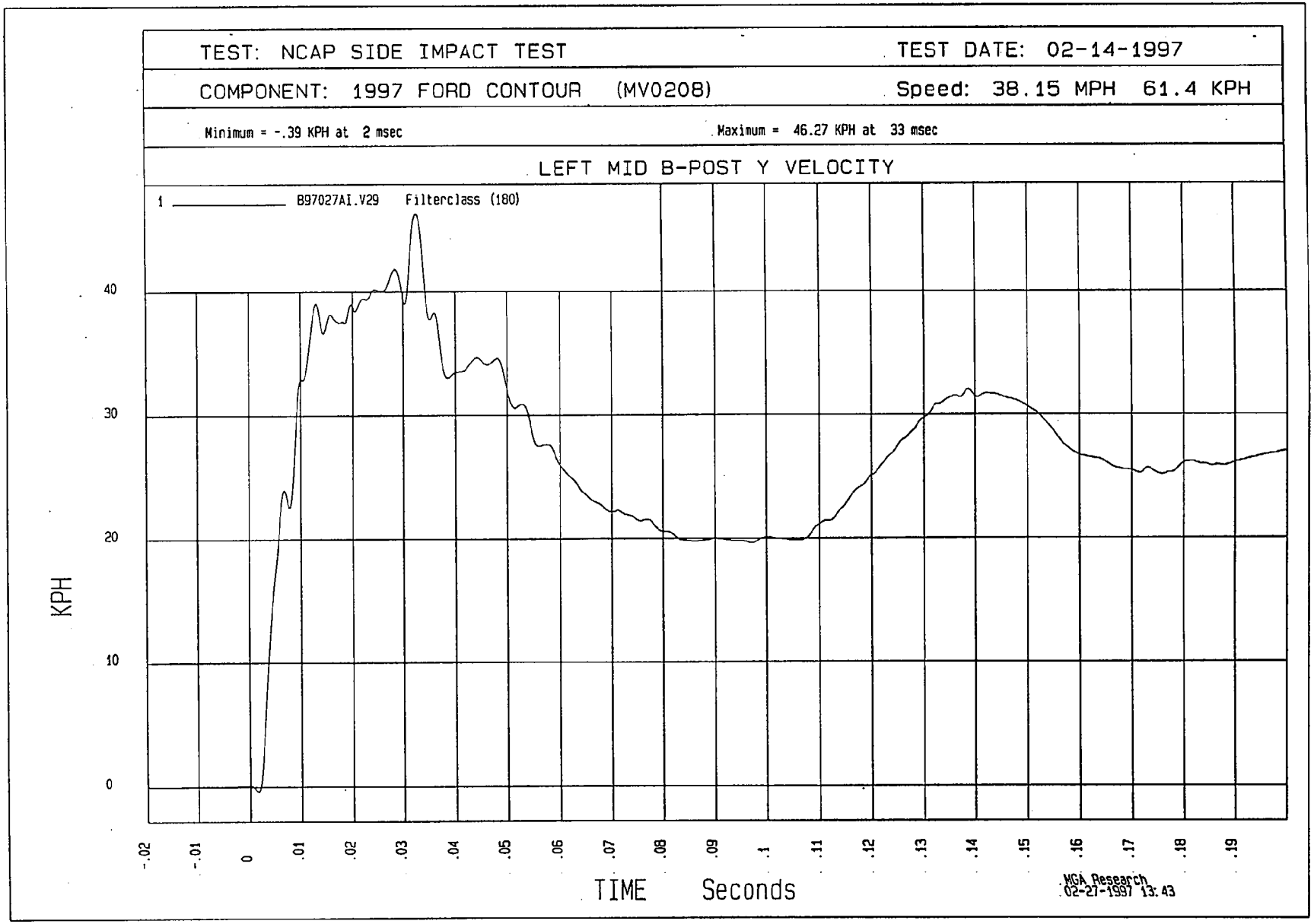

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -.69 G'S at -2 msec
Maximum = 28.63 G'S at 16 msec
LEFT MID A-POST Y ACCELERATION
1 B97027AF.A19 Filterclass (60)
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-27-1997 13:42

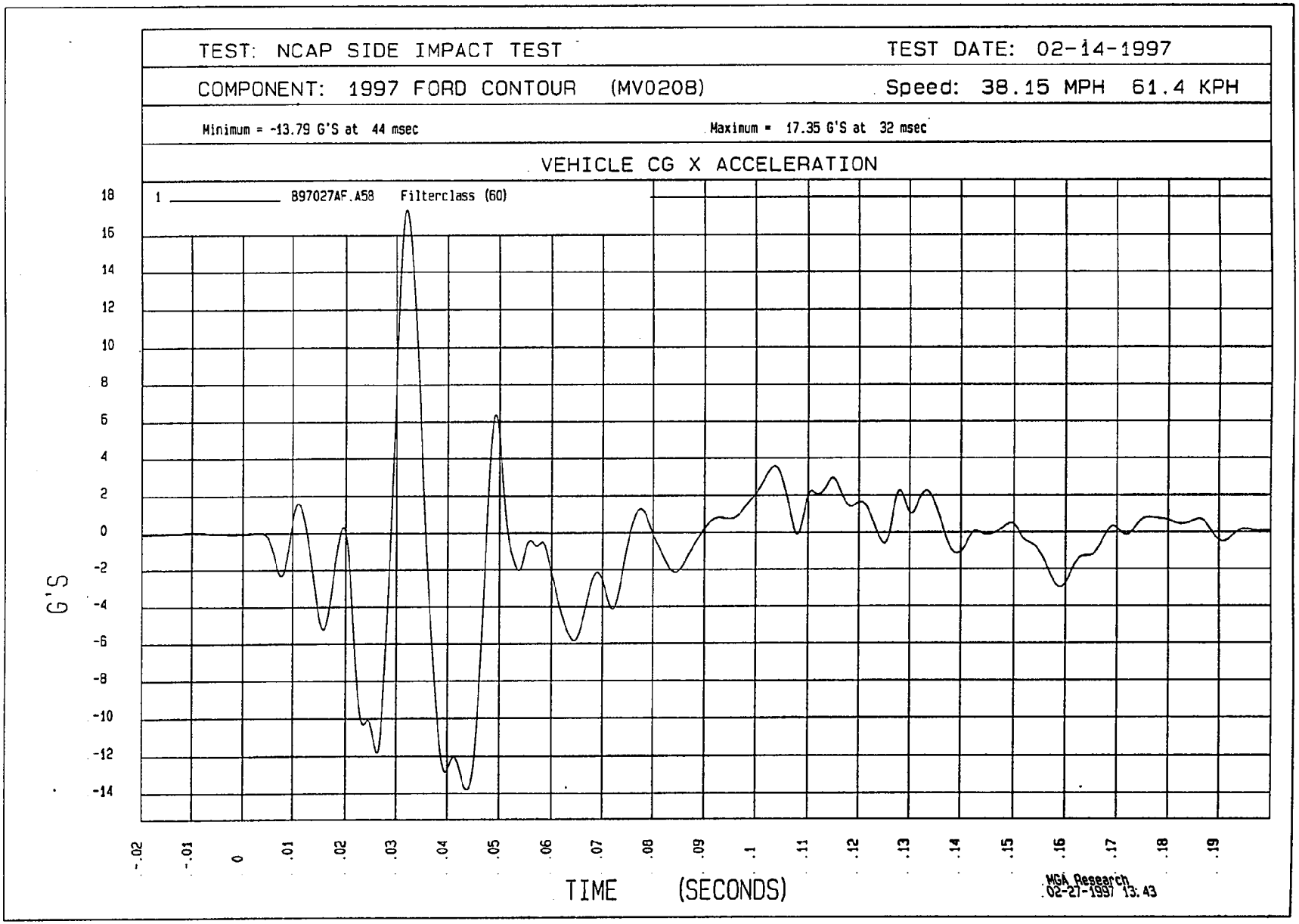

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -.05 KPH at 1 msec
Maximum = 40.39 KPH at 200 msec
LEFT MID A-POST Y VELOCITY
1 B97027AI.V19 Filterclass (180)
KPH
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
02-27-1997 13:42

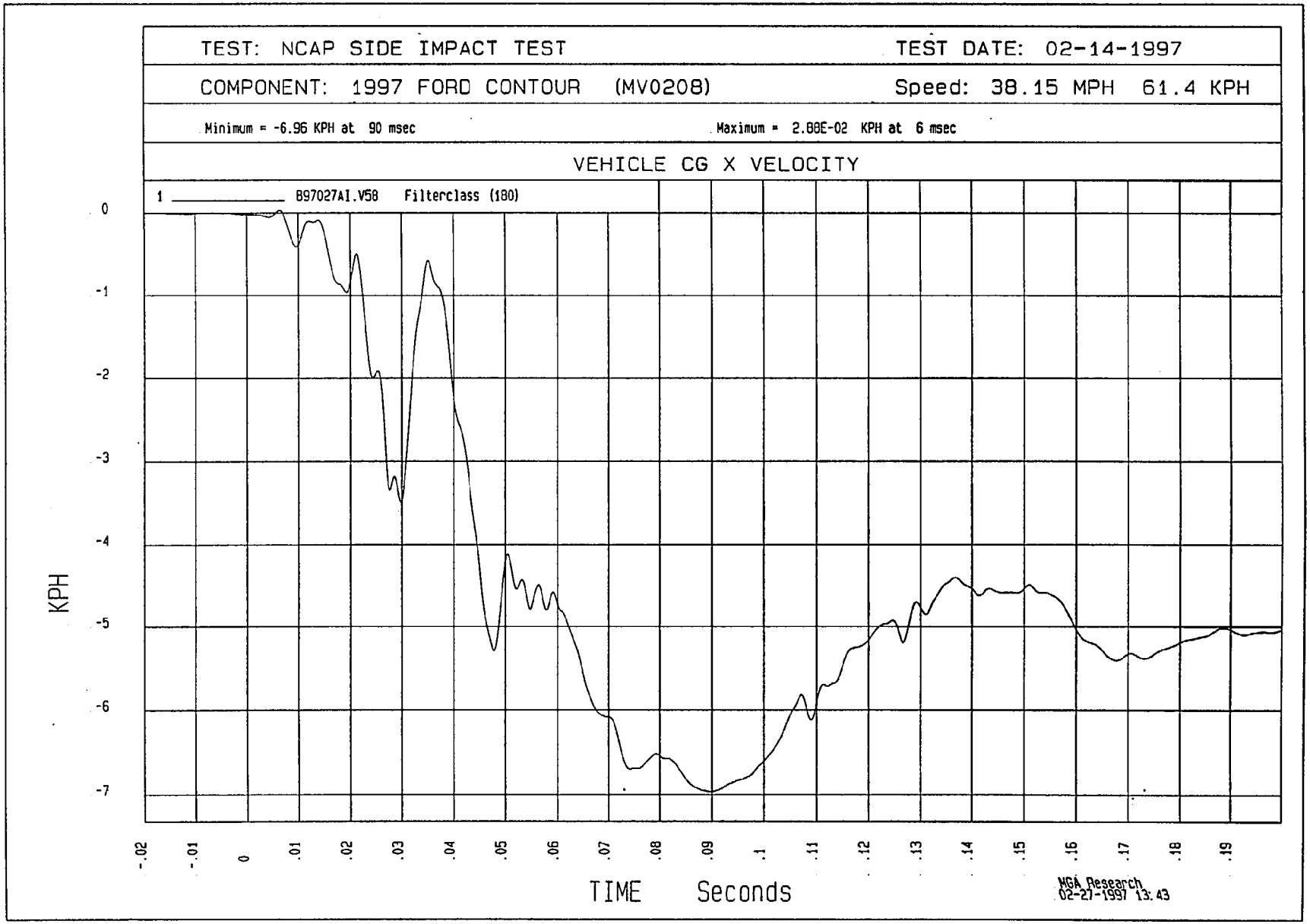

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -18.46 G'S at 34 msec
Maximum = 90.81 G'S at 11 msec
LEFT LOWER B-POST Y ACCELERATION
1 B97027AF.A30 Filterclass (60)
80
60
40
20
0
-20
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-27-1997 13:42

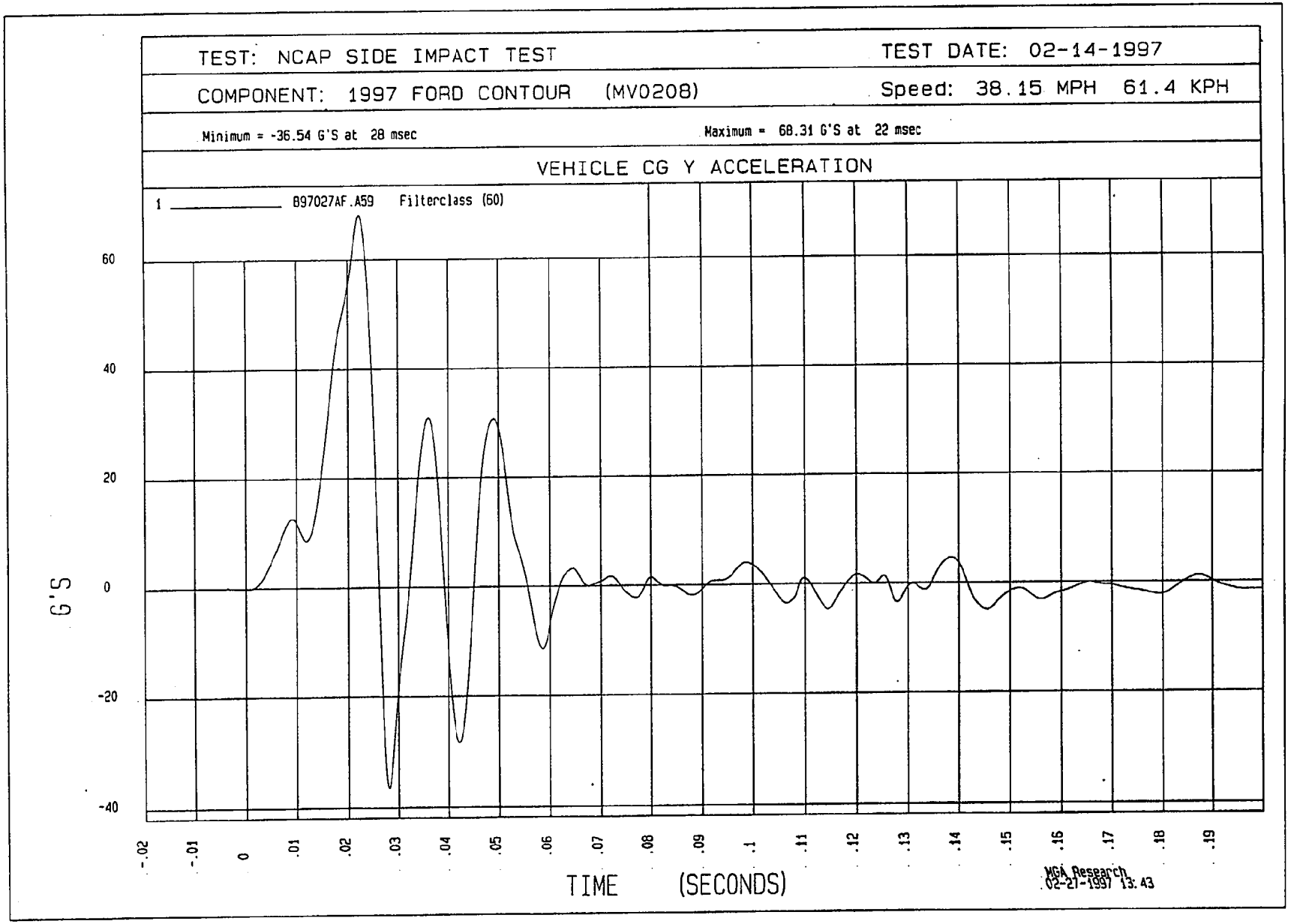

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -7.36E-02 KPH at 2 msec
Maximum = 34.00 KPH at 29 msec
LEFT LOWER B-POST Y VELOCITY
1 B97027AI.V30 Filterclass (180)
KPH
34
32
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
02-27-1997 13:42

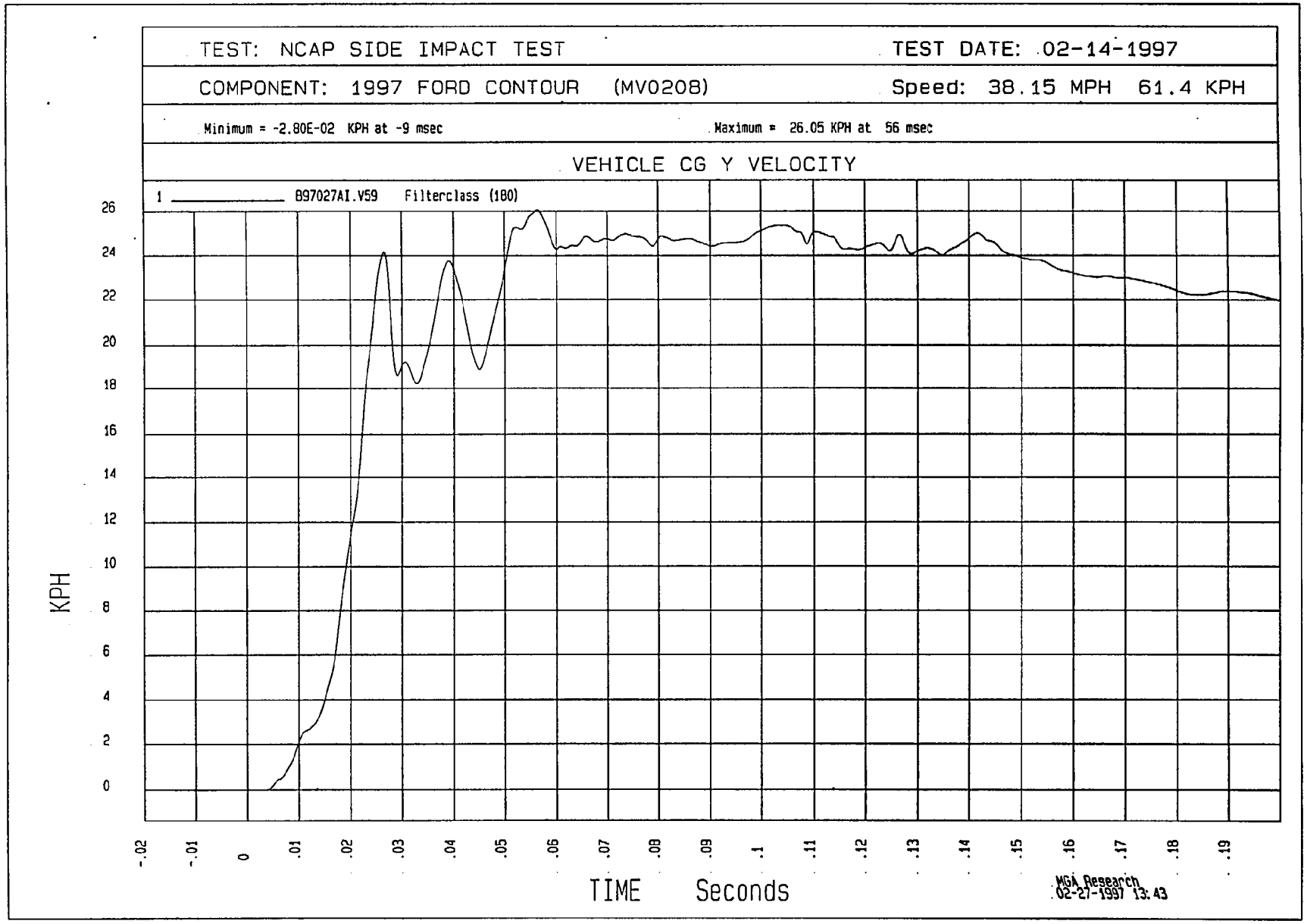

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -58.99 G'S at 35 msec
Maximum = 136.66 G'S at 4 msec
LEFT MID B-POST Y ACCELERATION
1 B97027AF.A29 Filterclass (60)
140
120
100
80
60
40
20
0
-20
-40
-60
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-27-1997 13:42

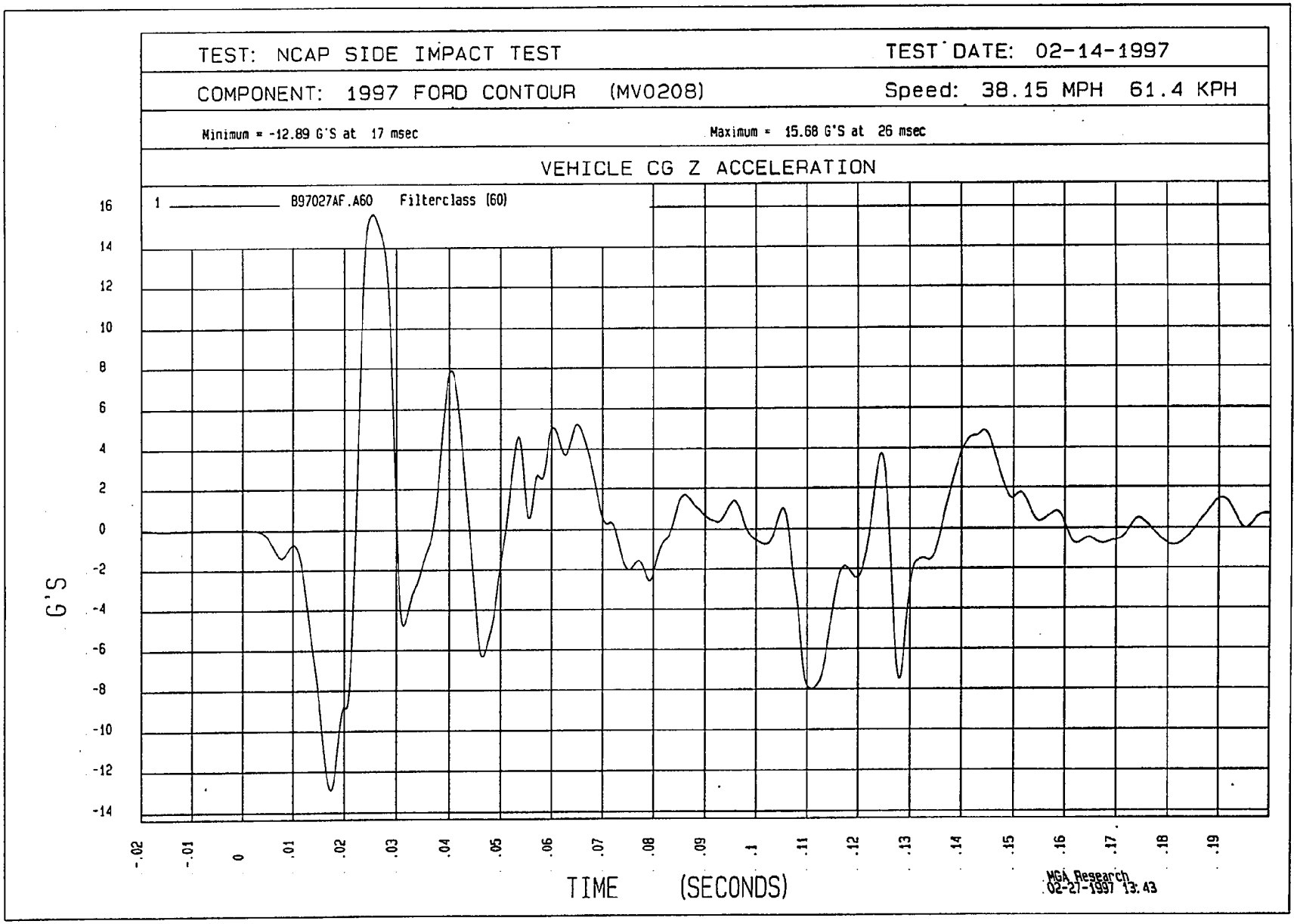

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -.39 KPH at 2 msec
Maximum = 46.27 KPH at 33 msec
LEFT MID B-POST Y VELOCITY
1 B97027AI.V29 Filterclass (180)
KPH
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
02-27-1997 13:43

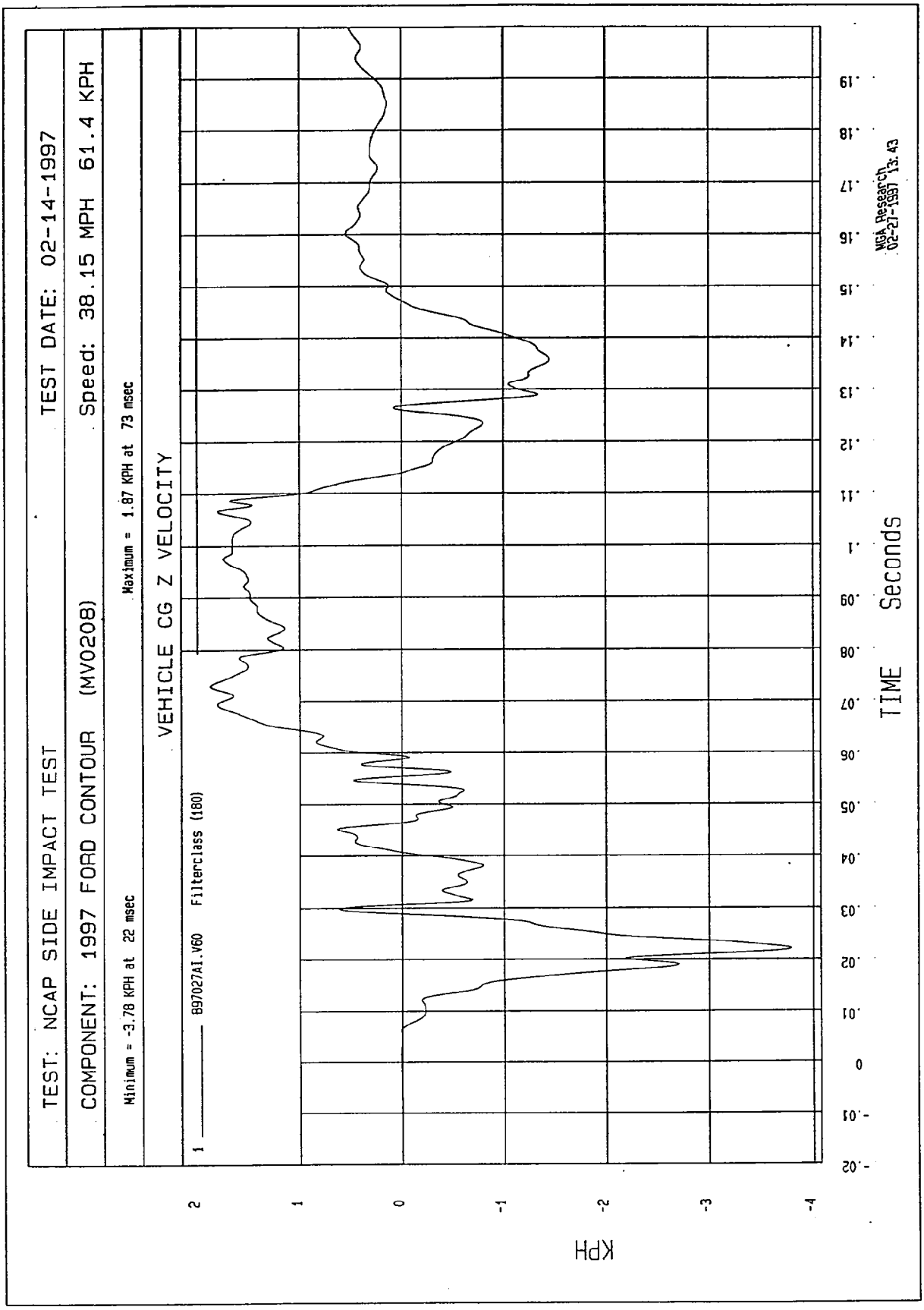

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -13.79 G'S at 44 msec
Maximum = 17.35 G'S at 32 msec
VEHICLE CG X ACCELERATION
1 B97027AF.A58 Filterclass (60)
G'S
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-27-1997 13:43

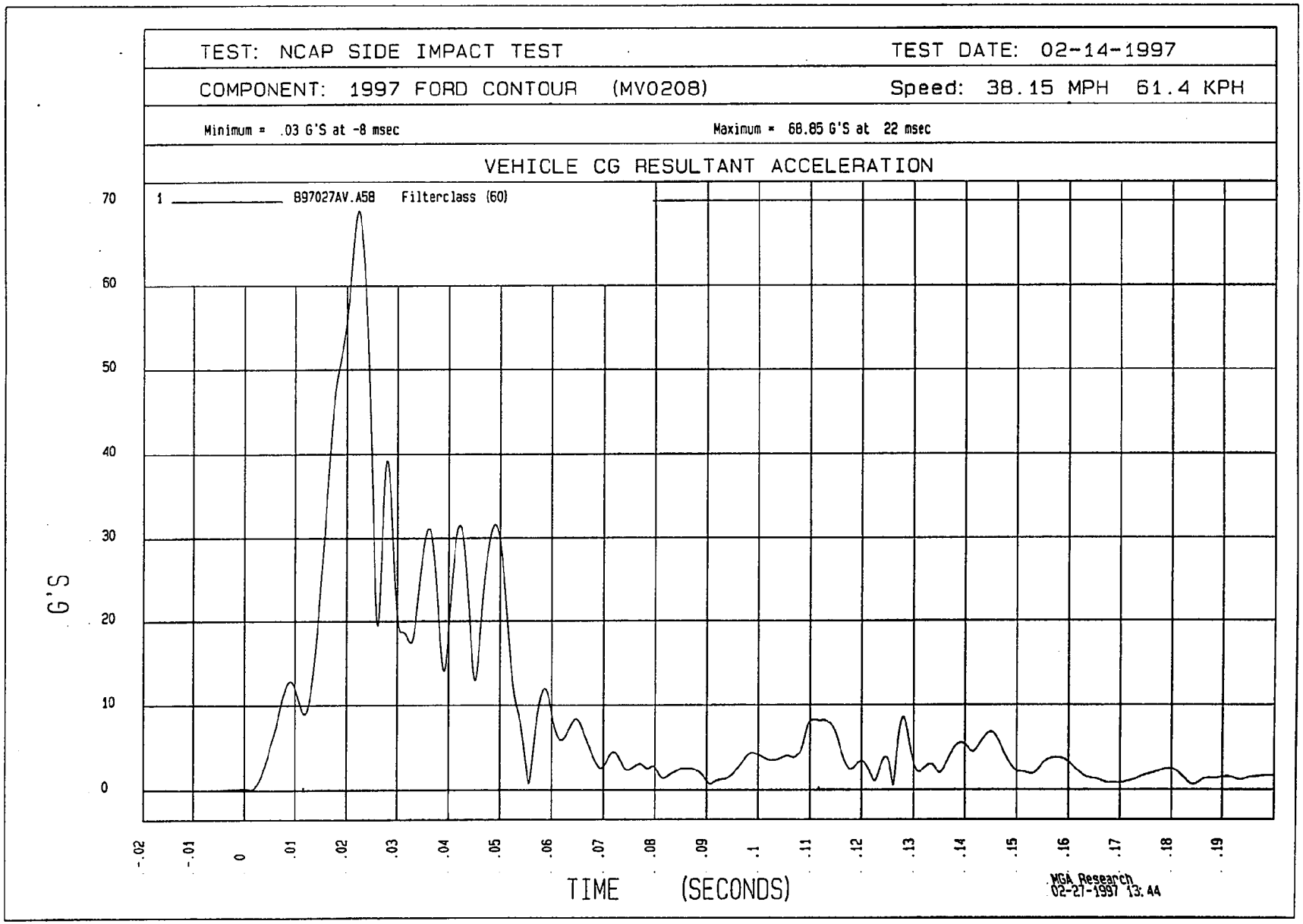

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -6.96 KPH at 90 msec
Maximum = 2.88E-02 KPH at 6 msec
VEHICLE CG X VELOCITY
1 B97027A1.V58 Filterclass (180)
KPH
0
-1
-2
-3
-4
-5
-6
-7
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
NGA Research
02-27-1997 13:43

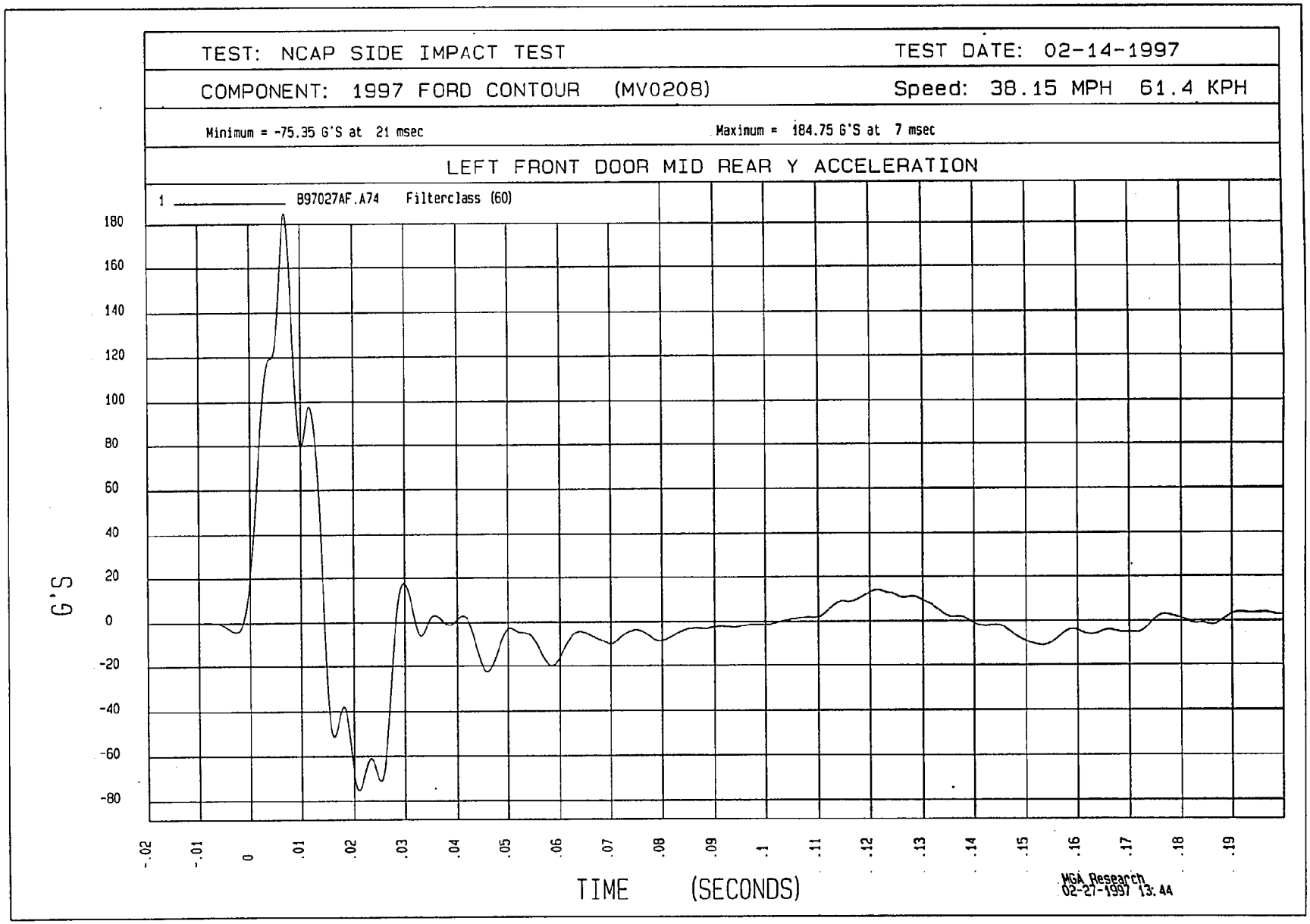

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -36.54 G'S at 28 msec
Maximum = 68.31 G'S at 22 msec
VEHICLE CG Y ACCELERATION
1 897027AF.A59 Filterclass (60)
60
40
20
0
-20
-40
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-27-1997 13:43

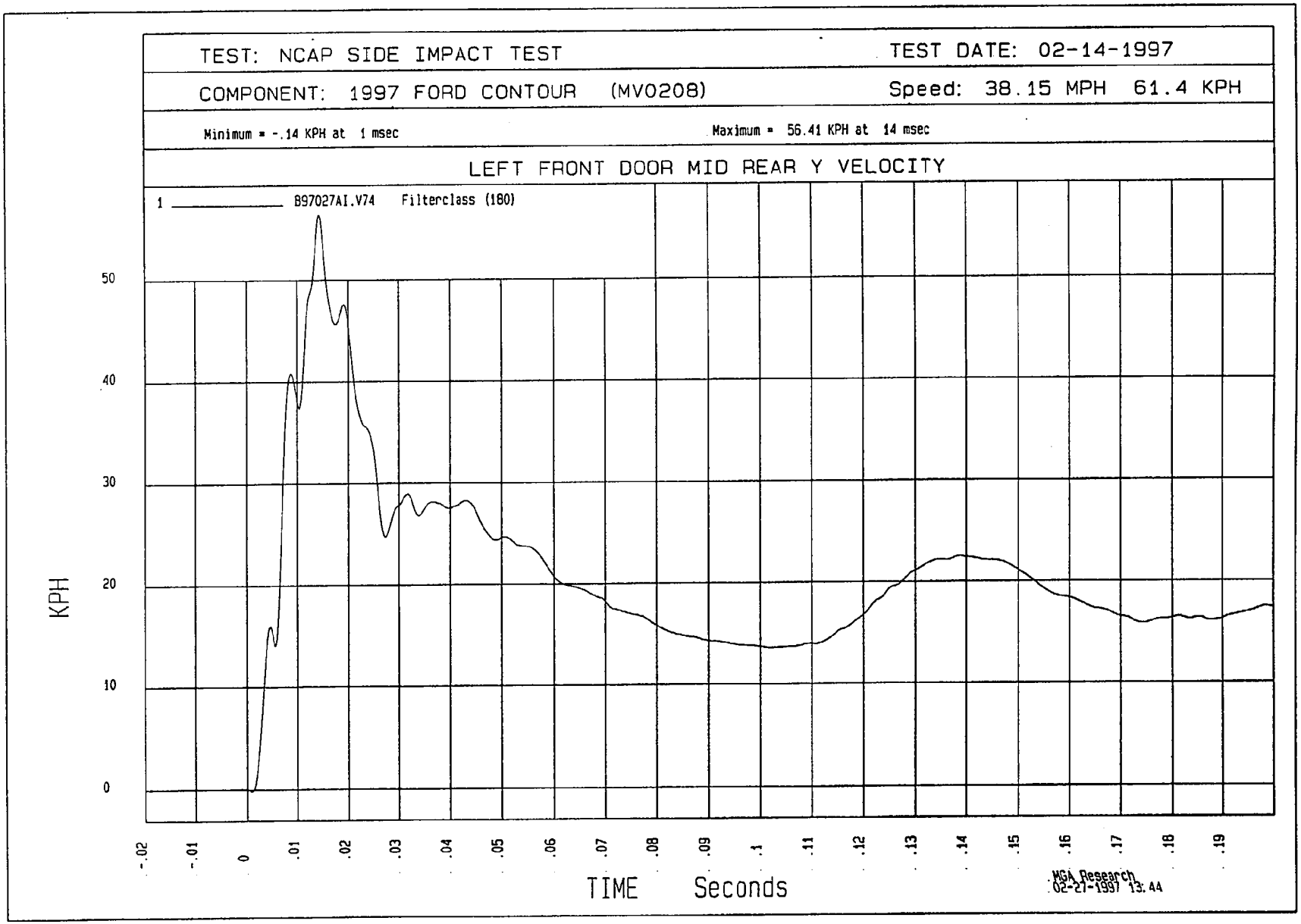

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -2.80E-02 KPH at -9 msec
Maximum = 26.05 KPH at 56 msec
VEHICLE CG Y VELOCITY
1 B97027AI.V59 Filterclass (180)
KPH
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
02-27-1997 13:43

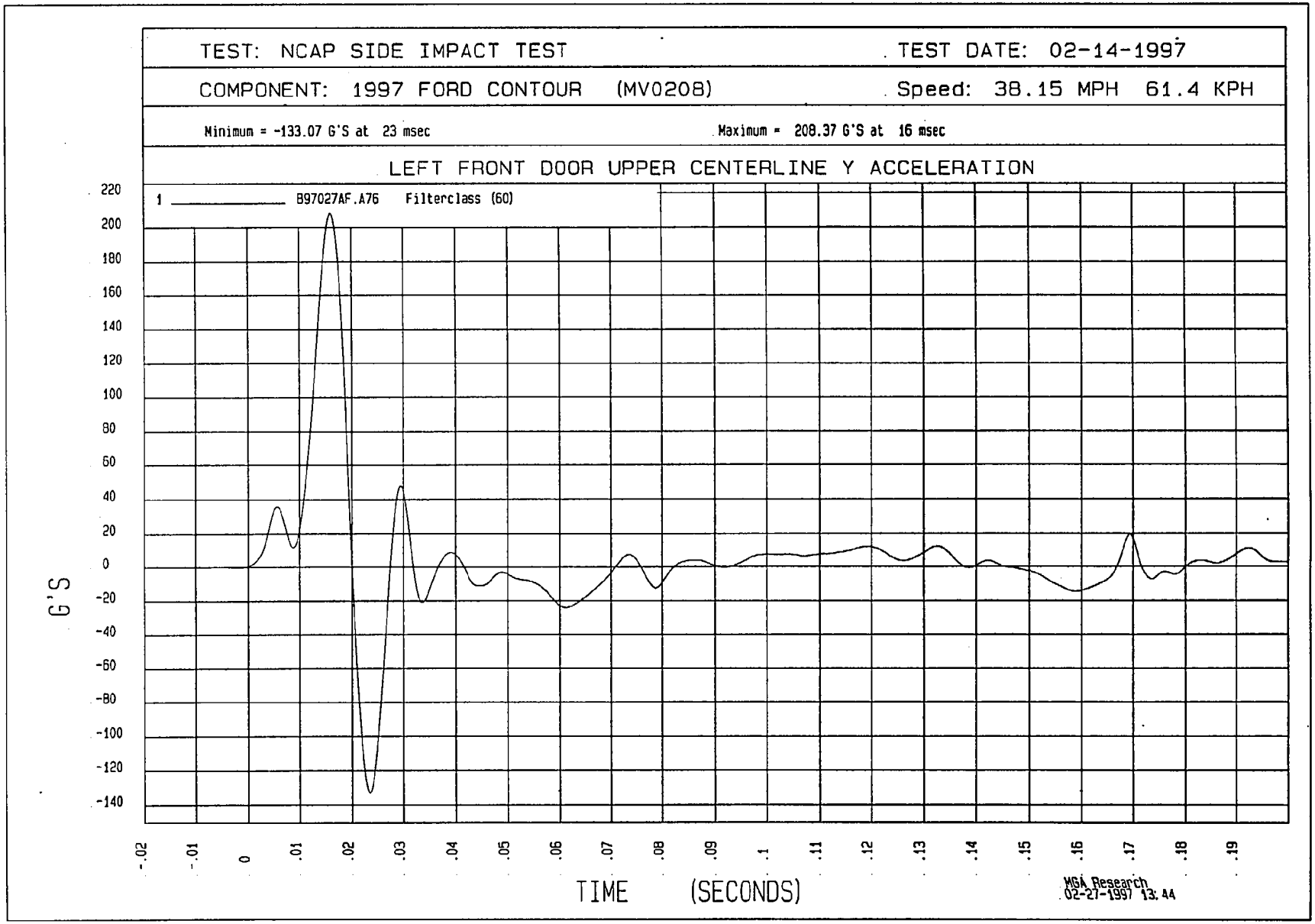

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -12.89 G'S at 17 msec
Maximum = 15.68 G'S at 26 msec
VEHICLE CG Z ACCELERATION
1 B97027AF.A60 Filterclass (60)
G'S
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-27-1997 13:43

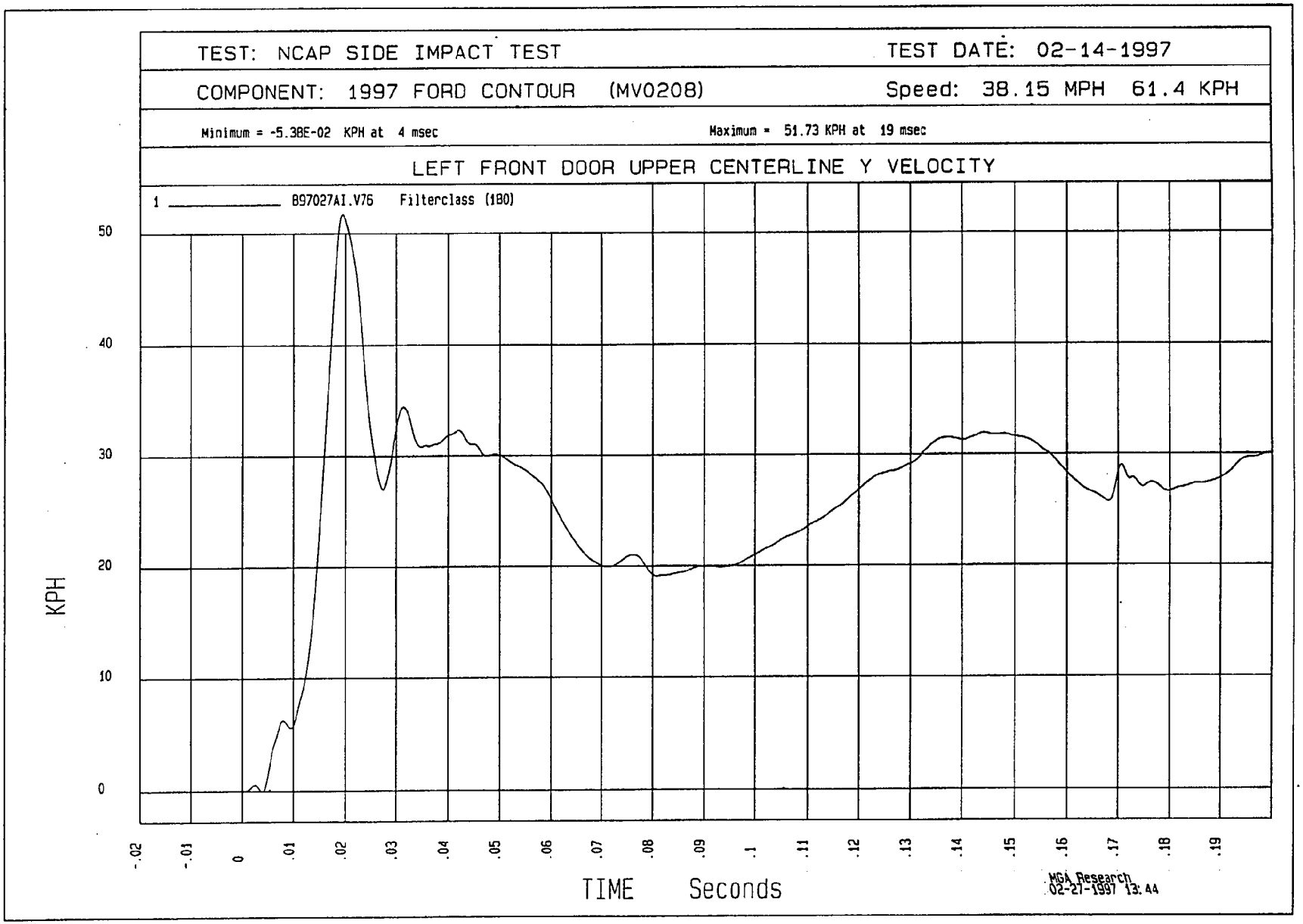

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -3.78 KPH at 22 msec
Maximum = 1.87 KPH at 73 msec
VEHICLE CG Z VELOCITY
1 B97027A1.V60 Filterclass (180)
KPH
TIME Seconds
NGA Research
02-27-1997 13:43

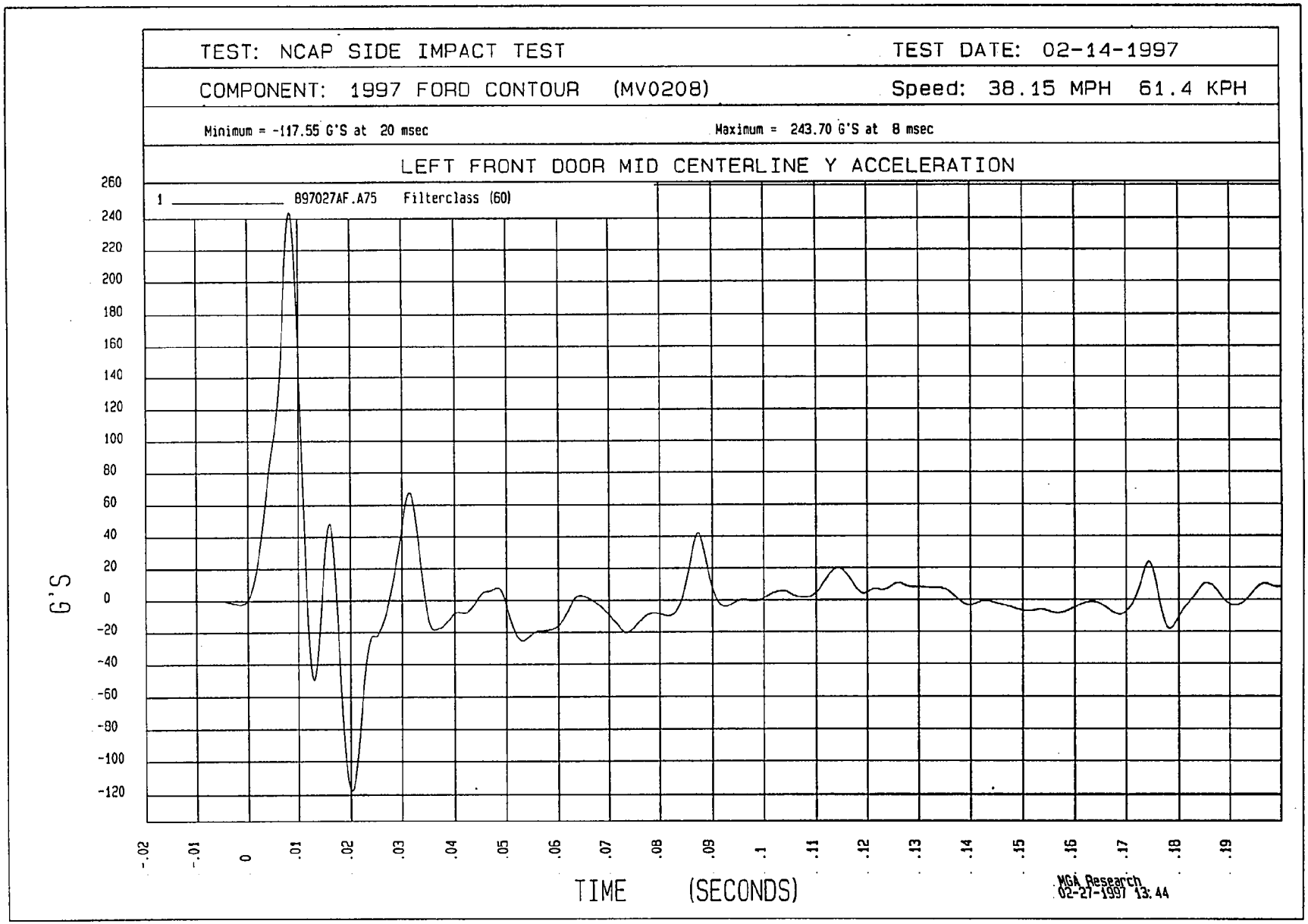

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = .03 G'S at -8 msec
Maximum = 68.85 G'S at 22 msec
VEHICLE CG RESULTANT ACCELERATION
1 B97027AV.A58 Filterclass (60)
G'S
70
60
50
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-27-1997 13:44

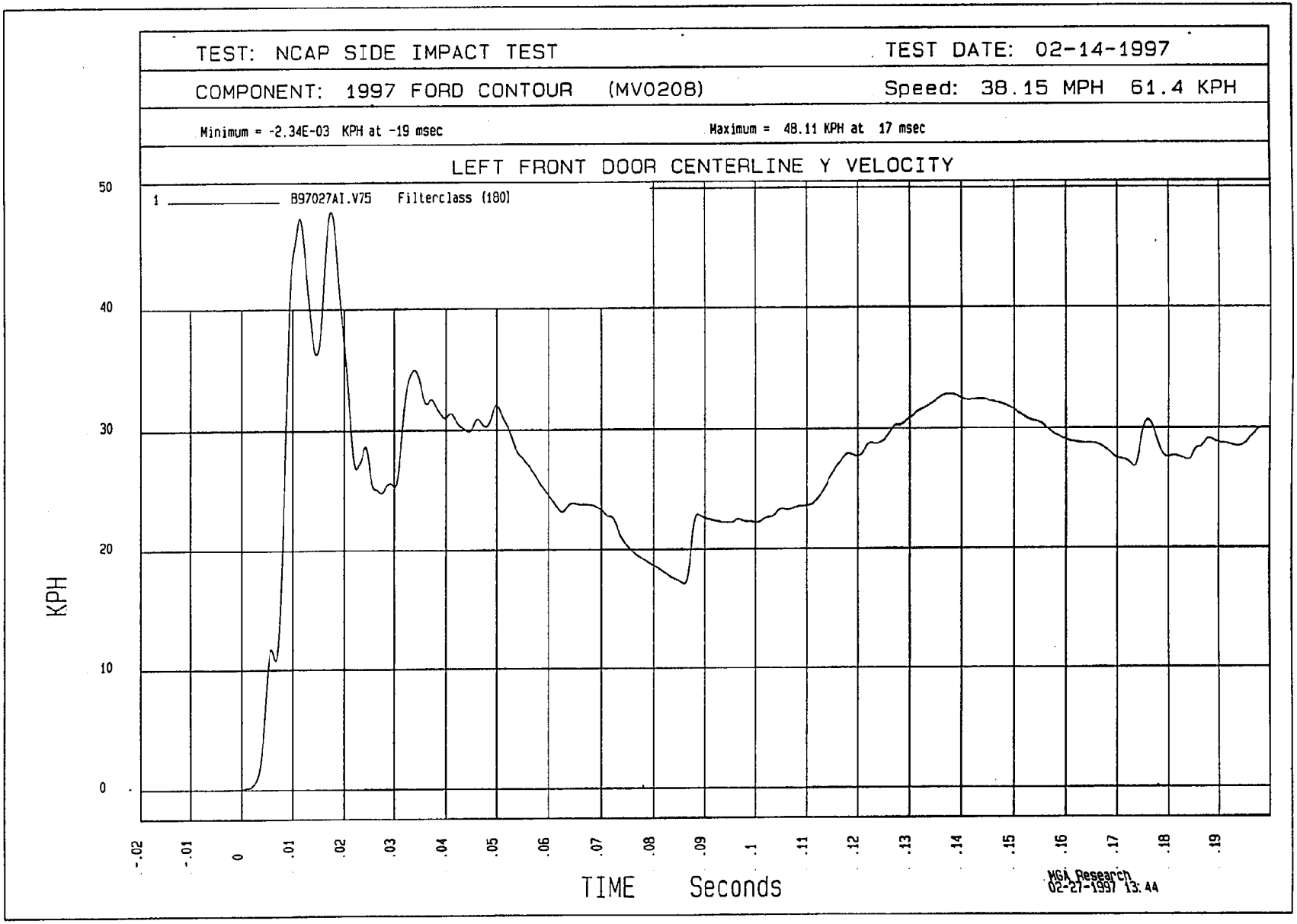

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -75.35 G'S at 21 msec
Maximum = 184.75 G'S at 7 msec
LEFT FRONT DOOR MID REAR Y ACCELERATION
1 B97027AF.A74 Filterclass (60)
G'S
180
160
140
120
100
80
60
40
20
0
-20
-40
-60
-80
-.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
02-21-1997 13:44

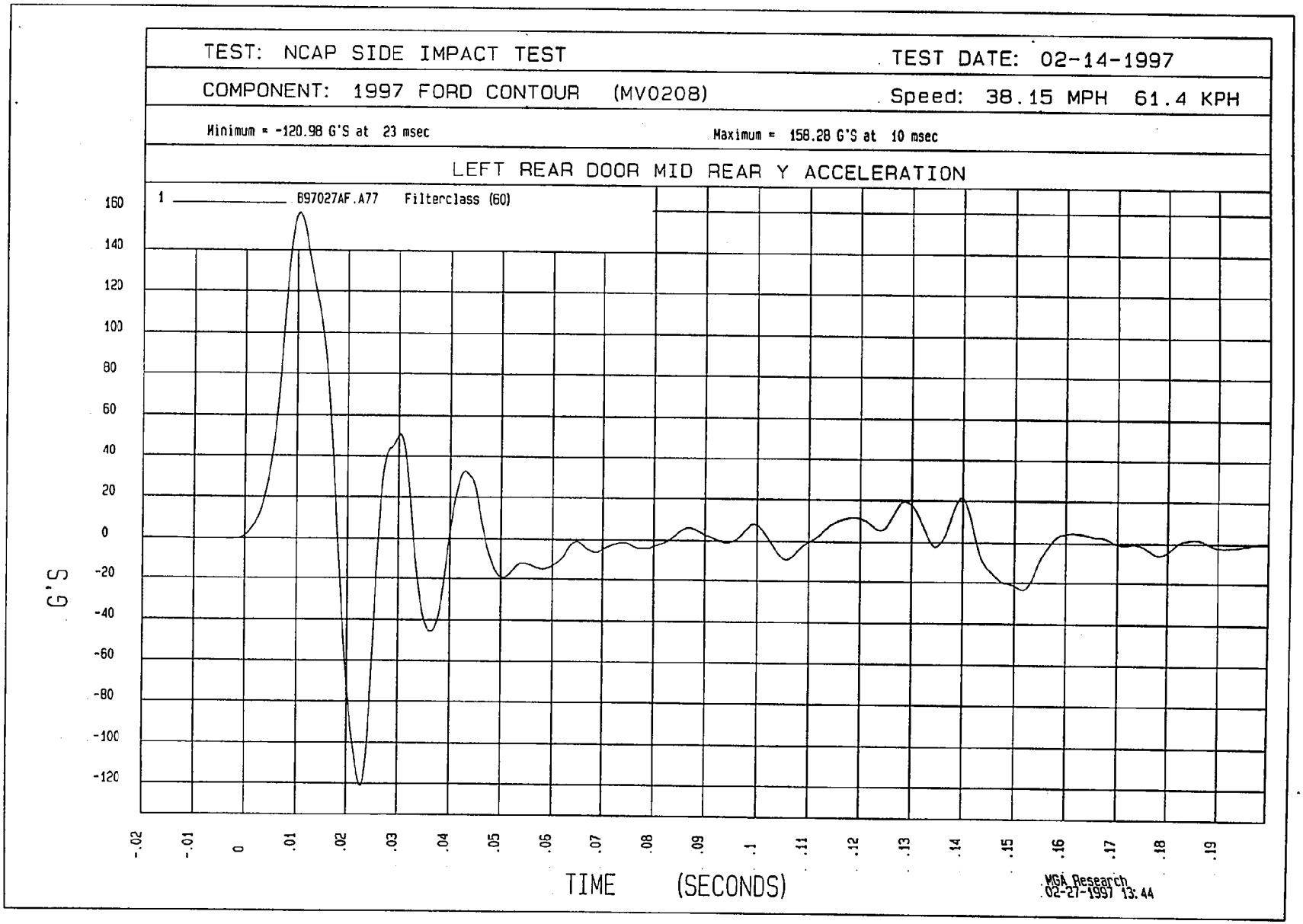

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -.14 KPH at 1 msec
Maximum = 56.41 KPH at 14 msec
LEFT FRONT DOOR MID REAR Y VELOCITY
1 B97027AI.V74 Filterclass (180)
KPH
50
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
02-27-1997 13:44

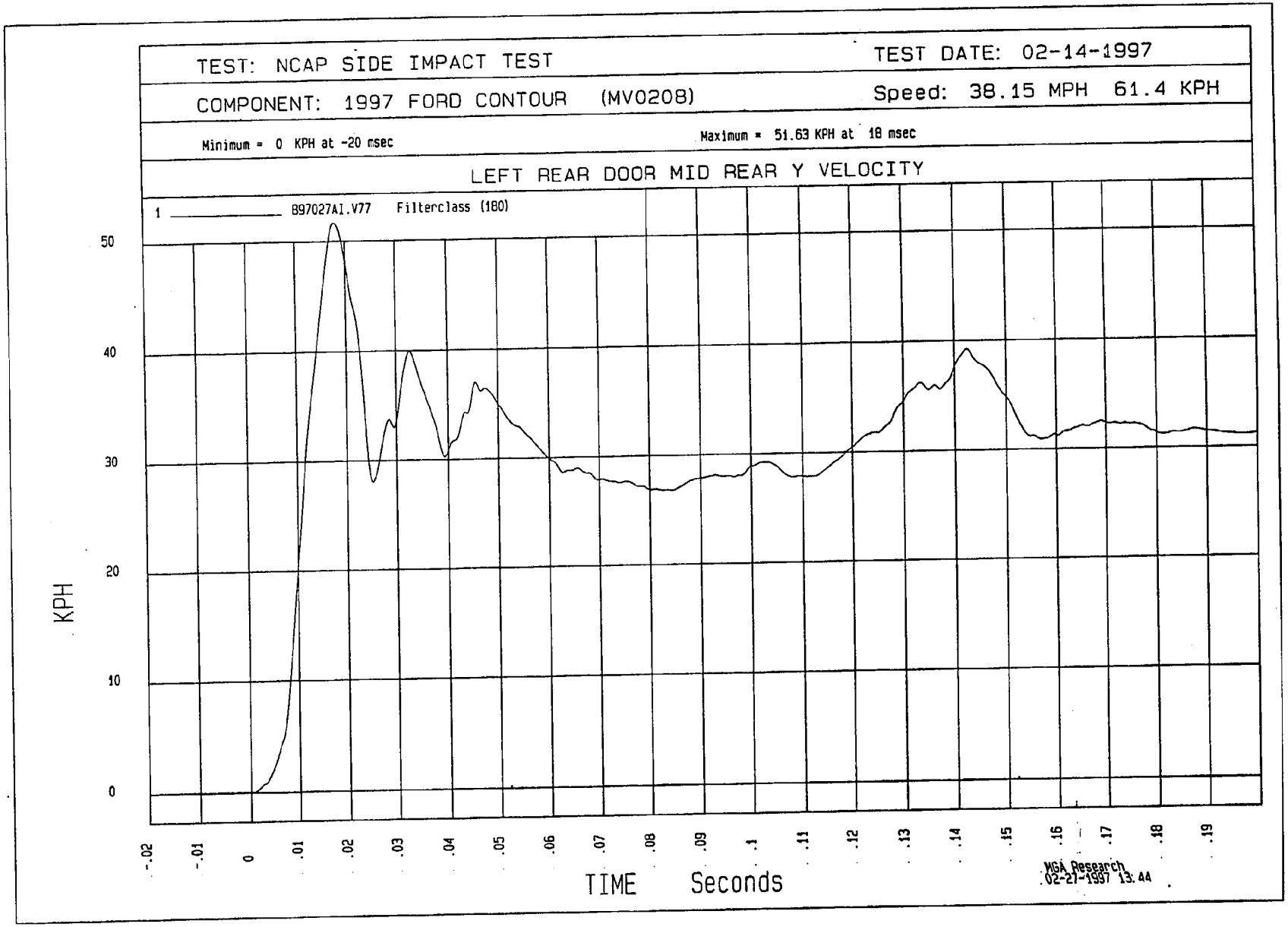

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -133.07 G'S at 23 msec
Maximum = 208.37 G'S at 16 msec
LEFT FRONT DOOR UPPER CENTERLINE Y ACCELERATION
1 B97027AF.A76 Filterclass (60)
220
200
180
160
140
120
100
80
60
40
20
0
-20
-40
-60
-80
-100
-120
-140
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
02-27-1997 13:44


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -5.38E-02 KPH at 4 msec
Maximum = 51.73 KPH at 19 msec
LEFT FRONT DOOR UPPER CENTERLINE Y VELOCITY
1 B97027AI.V76 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
02-27-1997 13:44


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -117.55 G'S at 20 msec
Maximum = 243.70 G'S at 8 msec
LEFT FRONT DOOR MID CENTERLINE Y ACCELERATION
1 B97027AF.A75 Filterclass (60)
260
240
220
200
180
160
140
120
100
80
60
40
20
0
-20
-40
-60
-80
-100
-120
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
02-27-1997 13:44


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -2.34E-03 KPH at -19 msec
Maximum = 48.11 KPH at 17 msec
LEFT FRONT DOOR CENTERLINE Y VELOCITY
1 B97027AI.V75 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
02-27-1997 13:44


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -120.98 G'S at 23 msec
Maximum = 158.28 G'S at 10 msec
LEFT REAR DOOR MID REAR Y ACCELERATION
1 B97027AF.A77 Filterclass (60)
160
140
120
100
80
60
40
20
0
-20
-40
-60
-80
-100
-120
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
02-27-1997 13:44


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = 0 KPH at -20 msec
Maximum = 51.63 KPH at 18 msec
LEFT REAR DOOR MID REAR Y VELOCITY
1 B97027AI.V77 Filterclass (180)
KPH
50
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
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.14
.15
.16
.17
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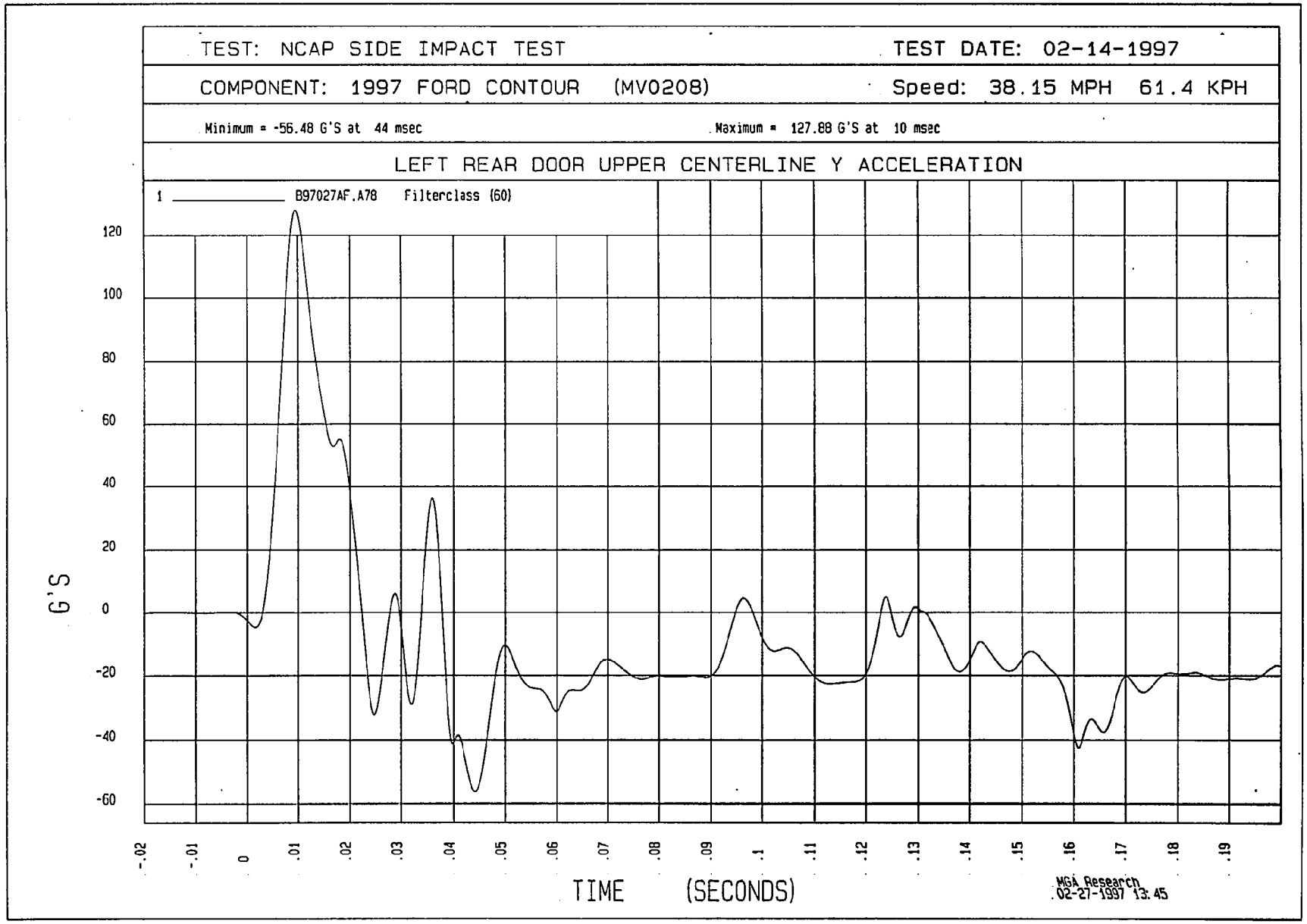
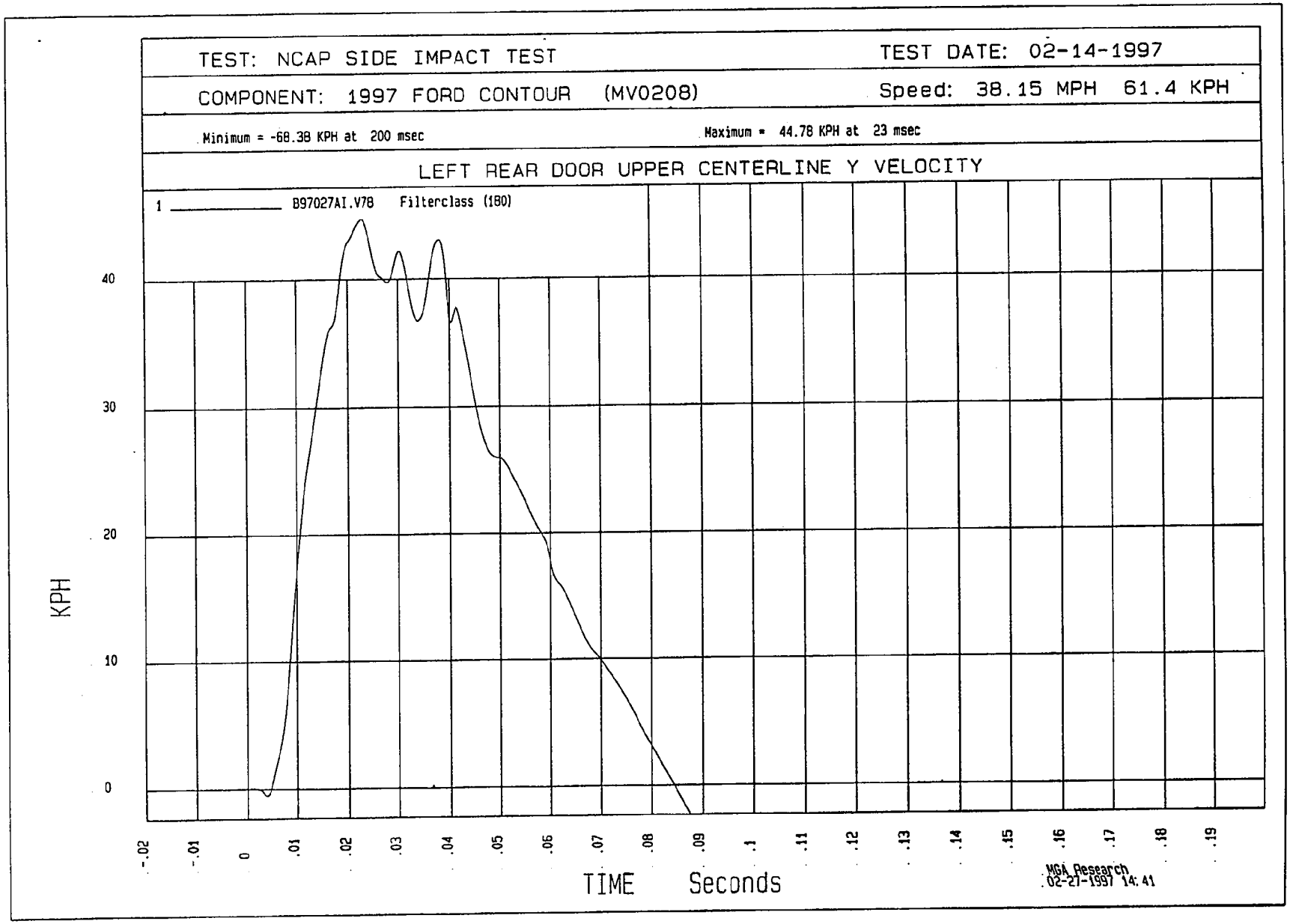
.19
TIME Seconds
MGA Research
02-27-1997 13:44


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -56.48 G'S at 44 msec
Maximum = 127.88 G'S at 10 msec
LEFT REAR DOOR UPPER CENTERLINE Y ACCELERATION
1 B97027AF.A78 Filterclass (60)
120
100
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
02-27-1997 13:45


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -68.38 KPH at 200 msec
Maximum = 44.78 KPH at 23 msec
LEFT REAR DOOR UPPER CENTERLINE Y VELOCITY
1 B97027AI.V78 Filterclass (180)
KPH
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
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.09
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.16
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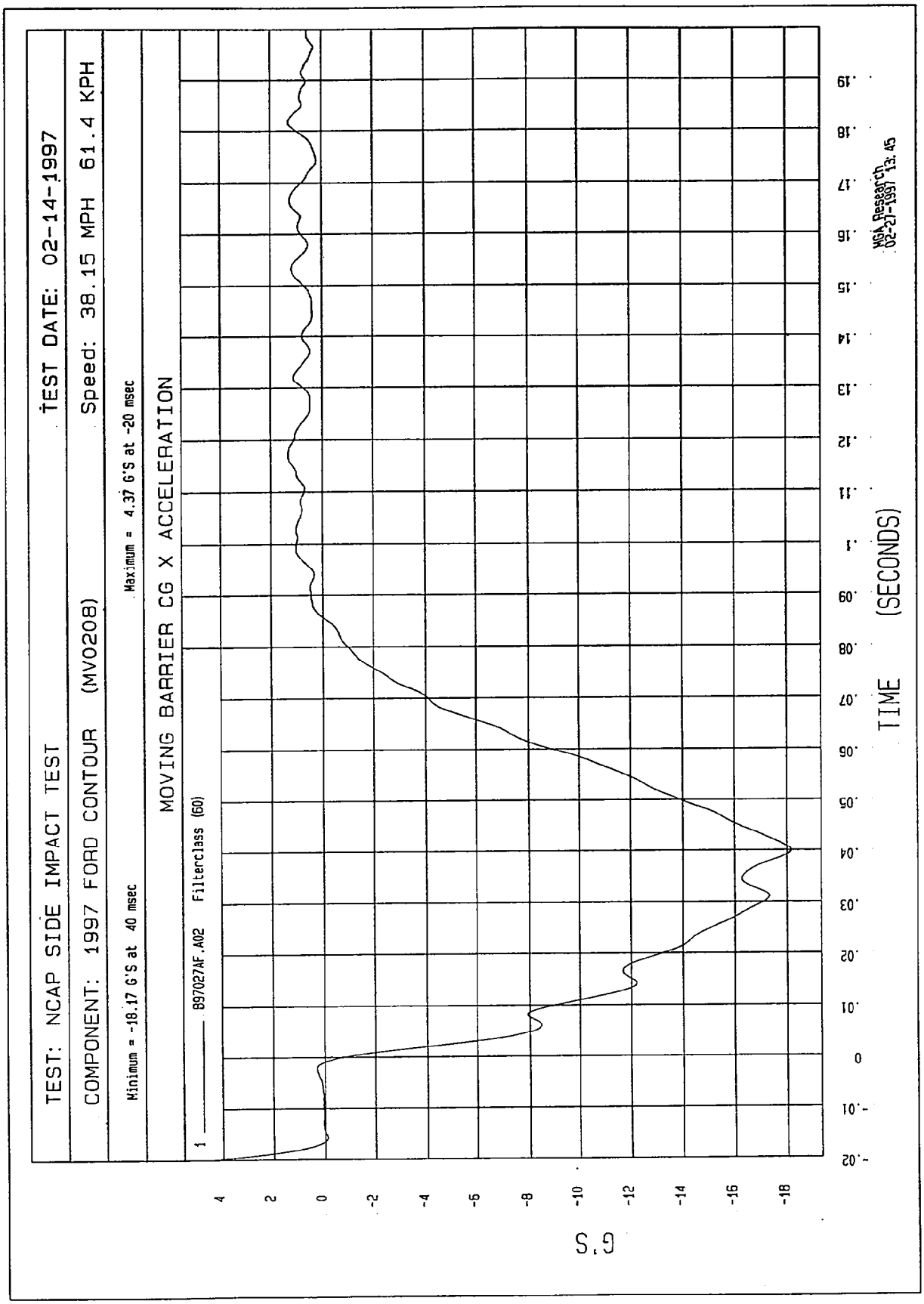
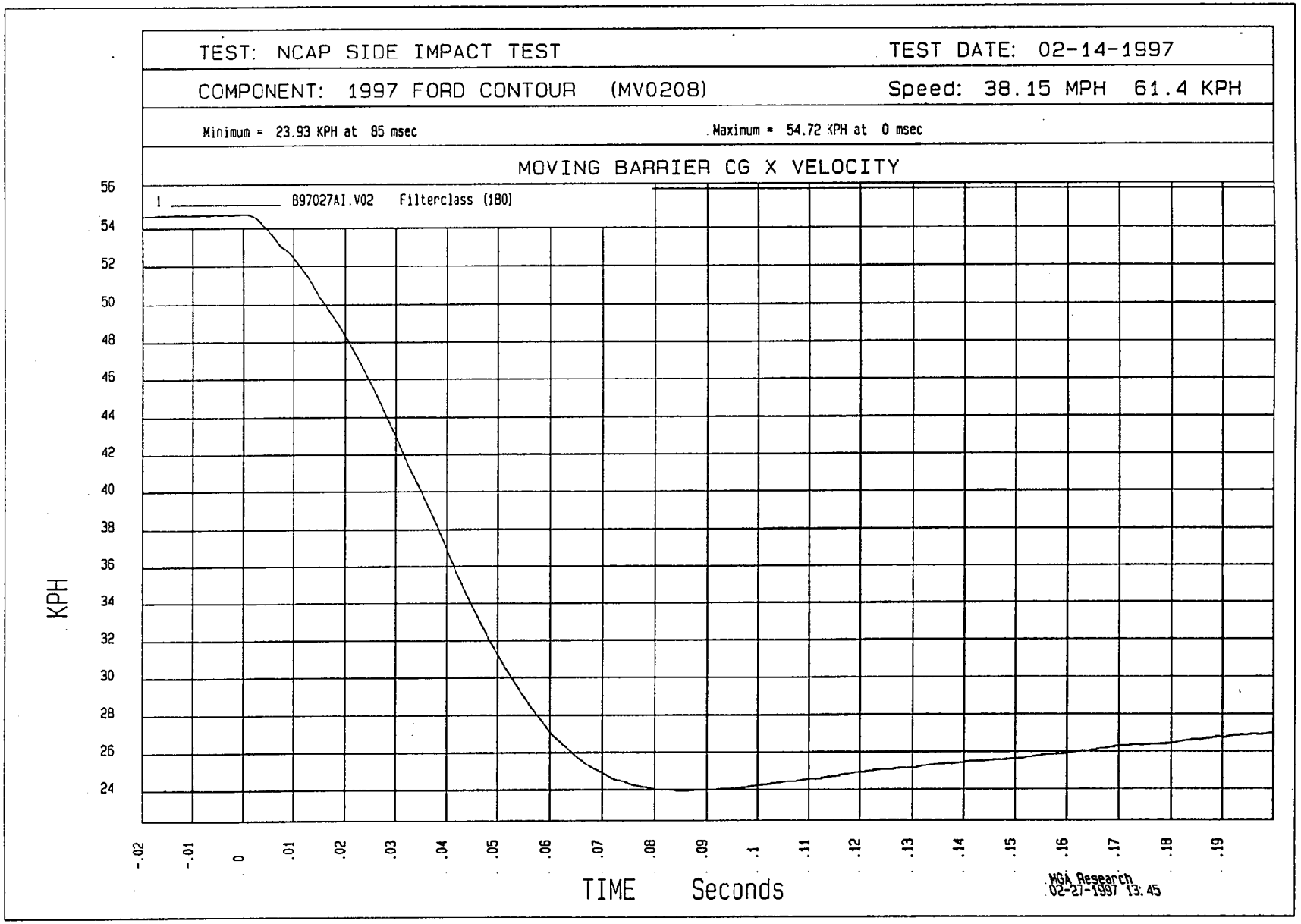
TIME Seconds
MGA Research
02-27-1997 14:41


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -18.17 G'S at 40 msec
Maximum = 4.37 G'S at -20 msec
MOVING BARRIER CG X ACCELERATION
1 _____ 897027AF.A02 Filterclass (60)
MGA Research 02-27-1997 13:45
G'S
TIME (SECONDS)


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = 23.93 KPH at 85 msec
Maximum = 54.72 KPH at 0 msec
MOVING BARRIER CG X VELOCITY
1 B97027AI.V02 Filterclass (180)
KPH
56
54
52
50
48
46
44
42
40
38
36
34
32
30
28
26
24
-.02
-.01
0
.01
.02
.03
.04
.05
.06
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.09
.1
.11
.12
.13
.14
.15
.16
.17
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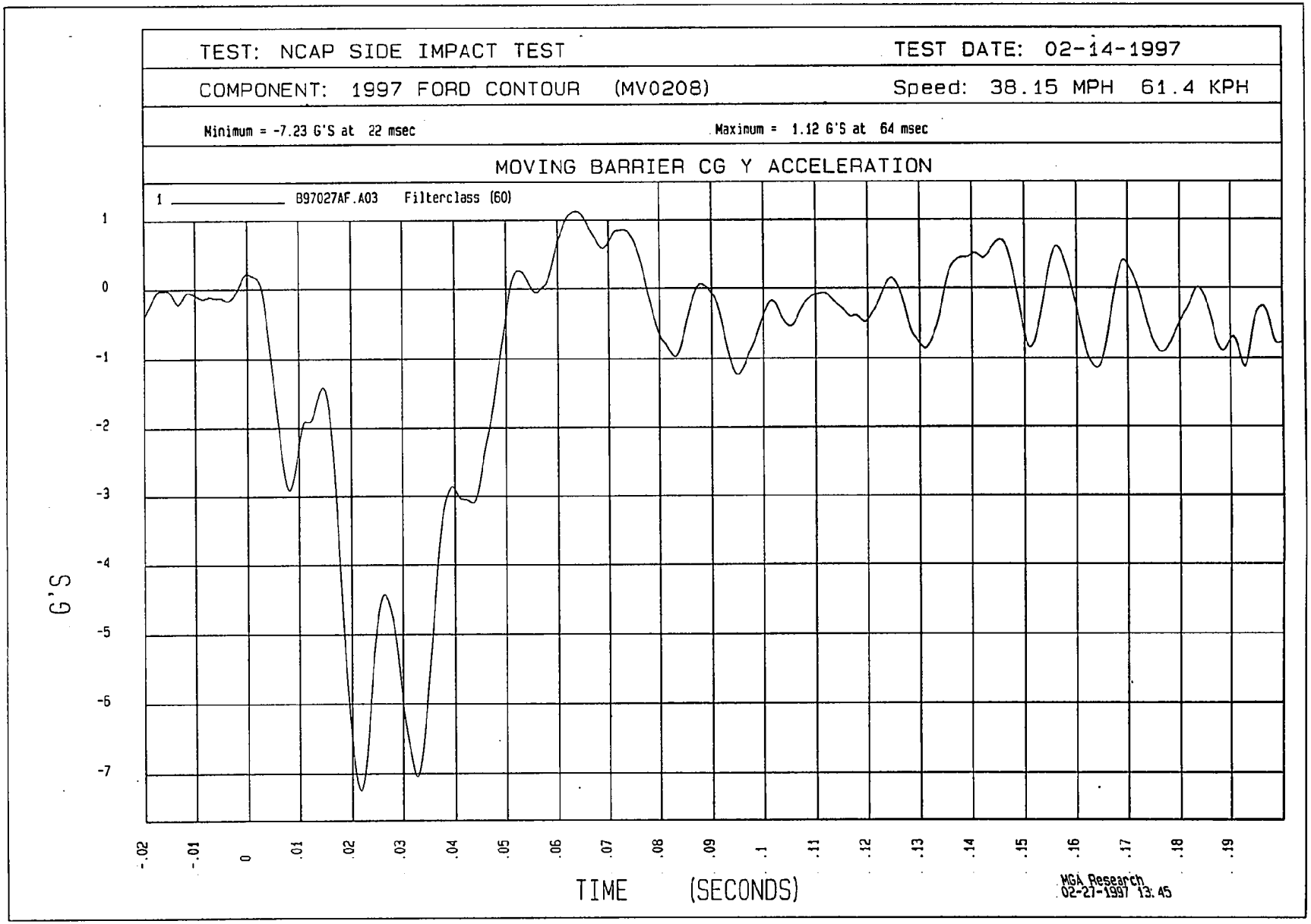
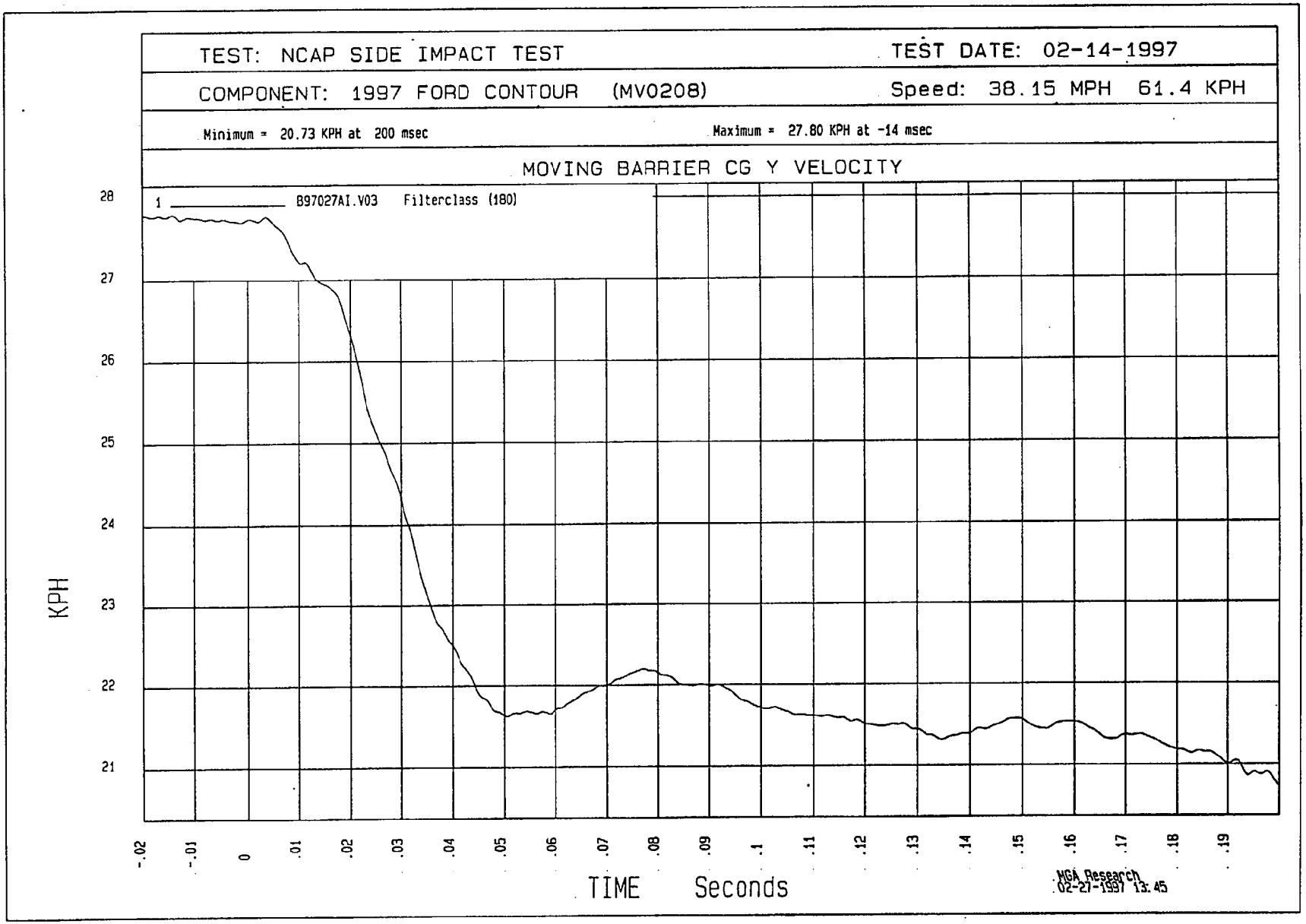
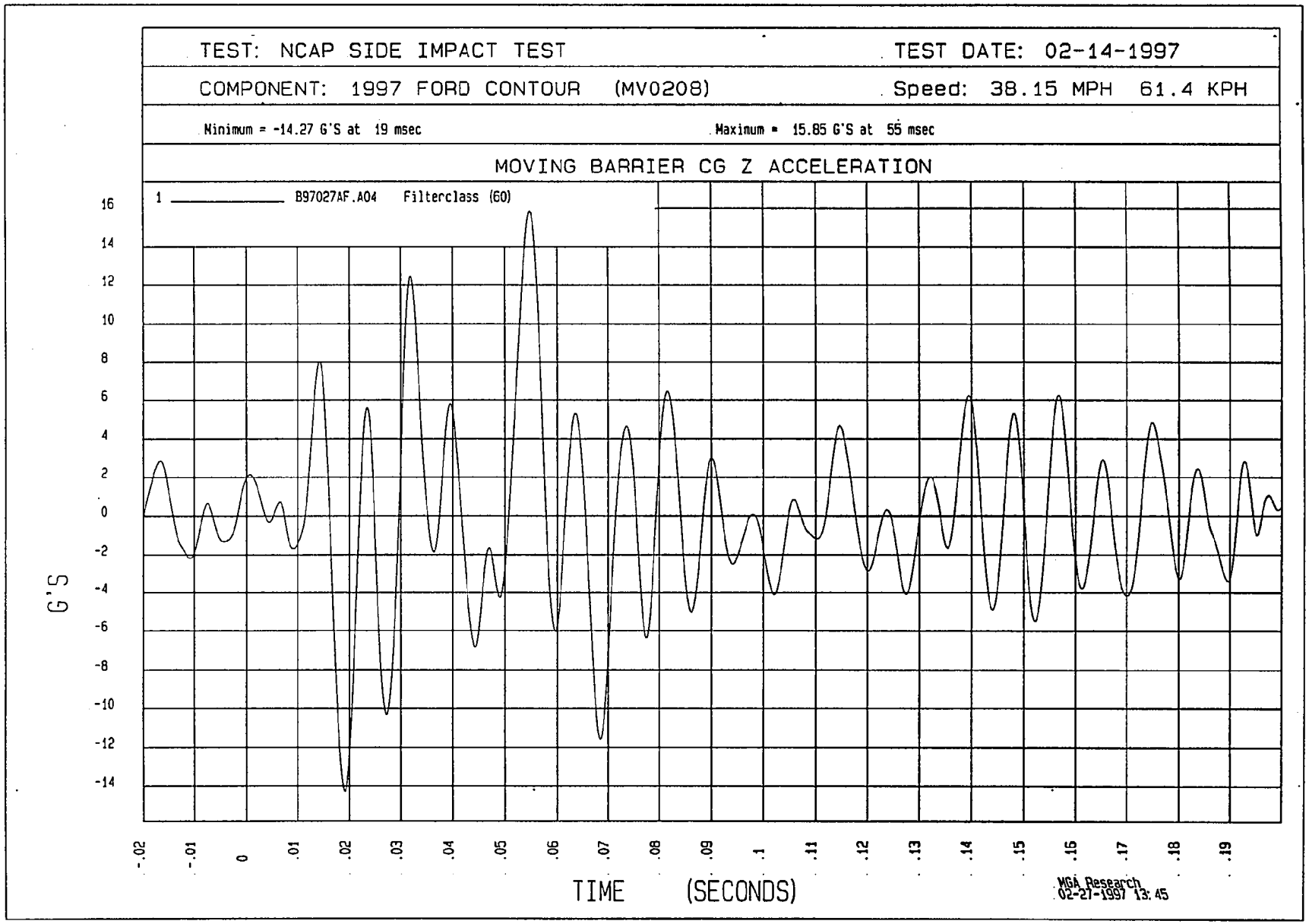
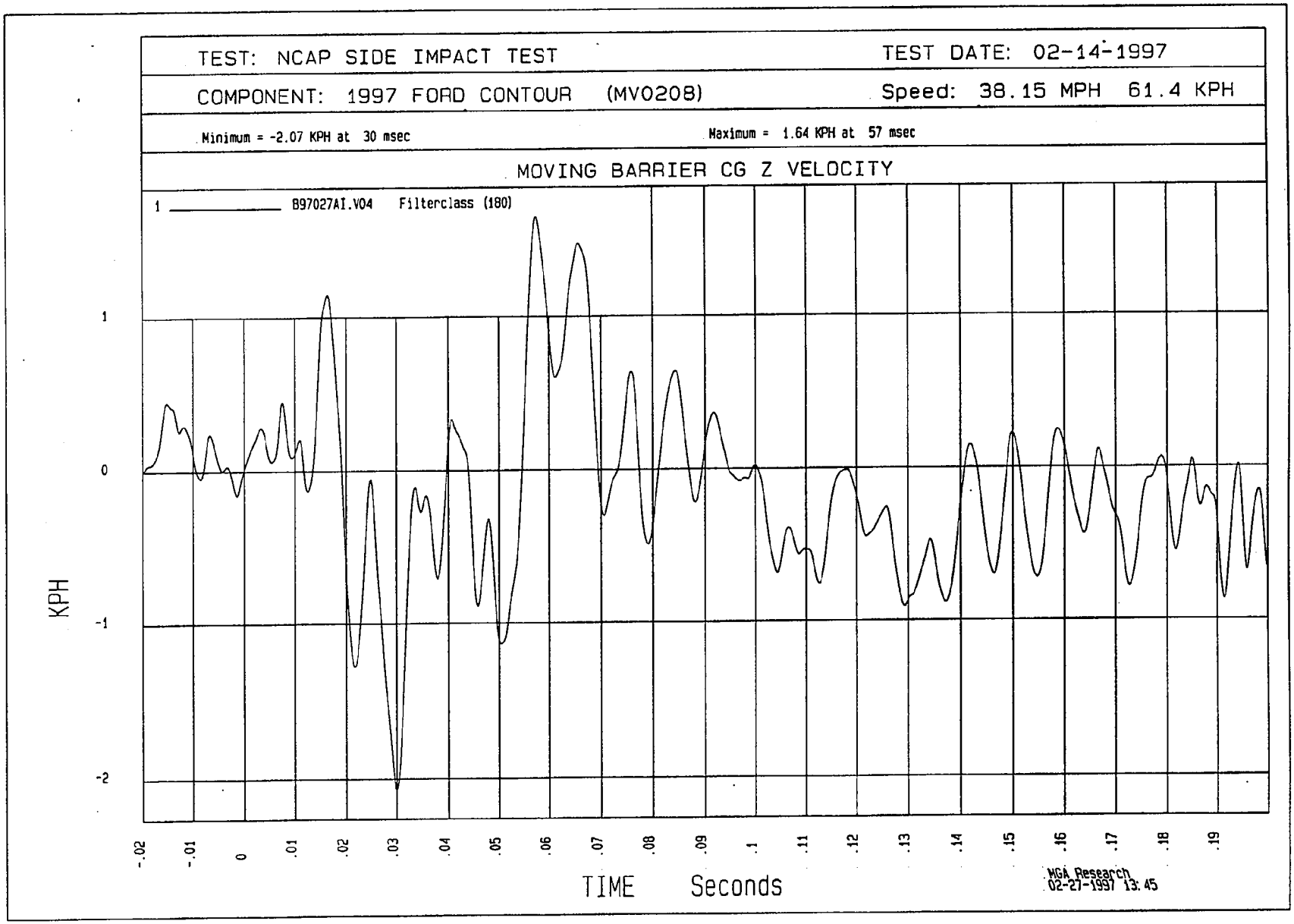
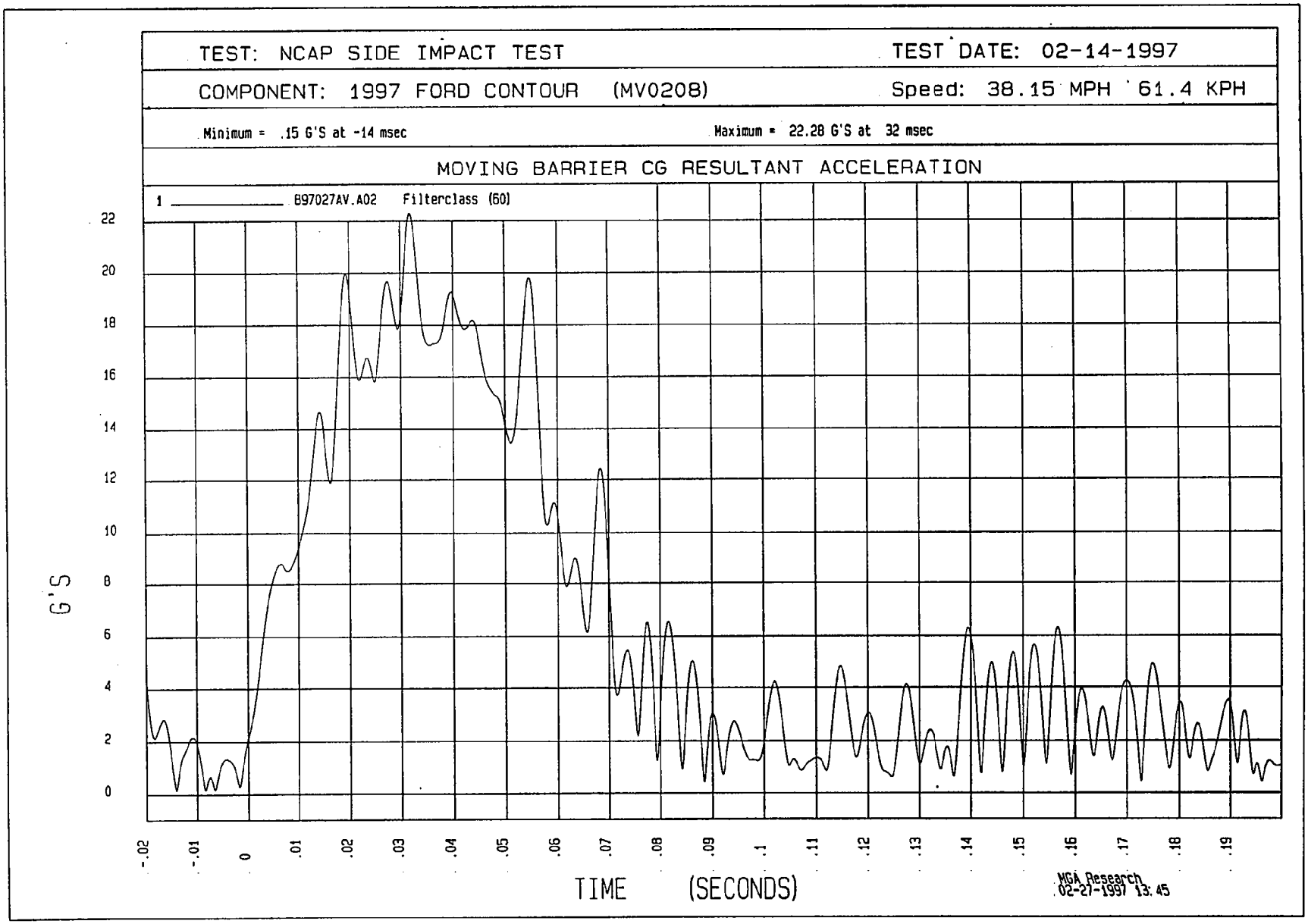
.19
TIME Seconds
MGA Research
02-27-1997 13:45

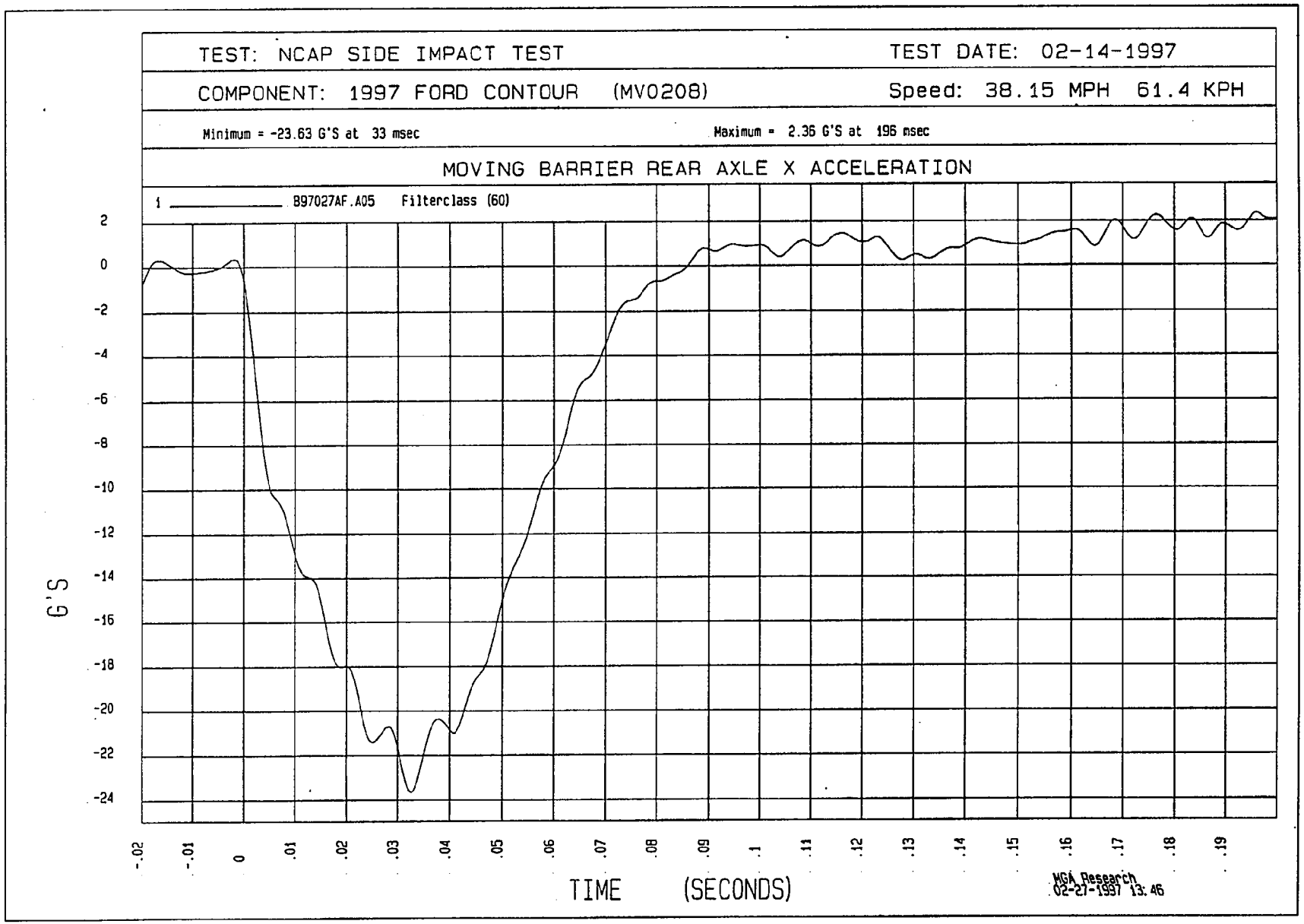

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -7.23 G'S at 22 msec
Maximum = 1.12 G'S at 64 msec
MOVING BARRIER CG Y ACCELERATION
1 B97027AF.A03 Filterclass (60)
G'S
1
0
-1
-2
-3
-4
-5
-6
-7
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-27-1997 13:45

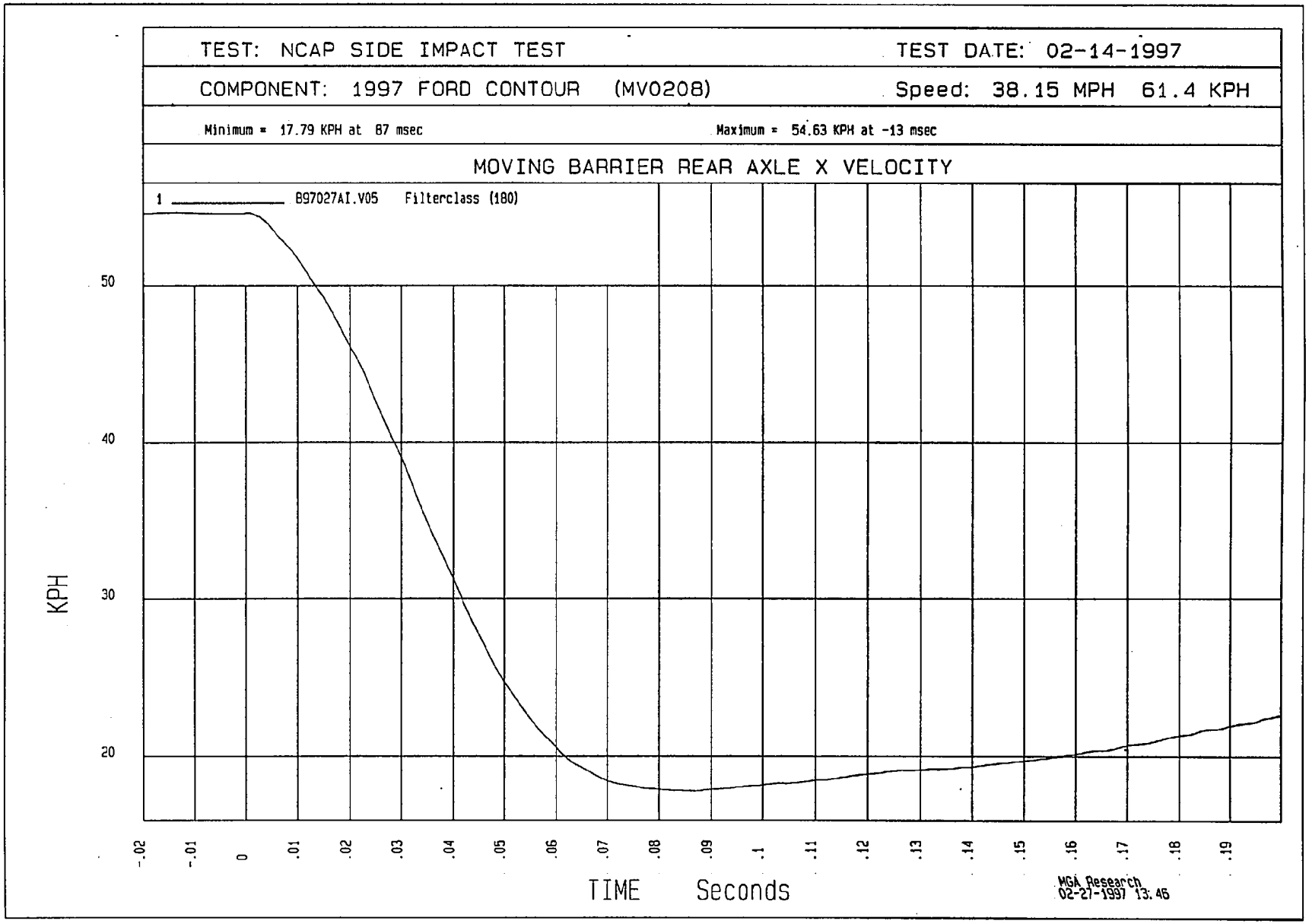

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = 20.73 KPH at 200 msec
Maximum = 27.80 KPH at -14 msec
MOVING BARRIER CG Y VELOCITY
1 B97027AI.V03 Filterclass (180)
KPH
28
27
26
25
24
23
22
21
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
02-27-1997 13:45

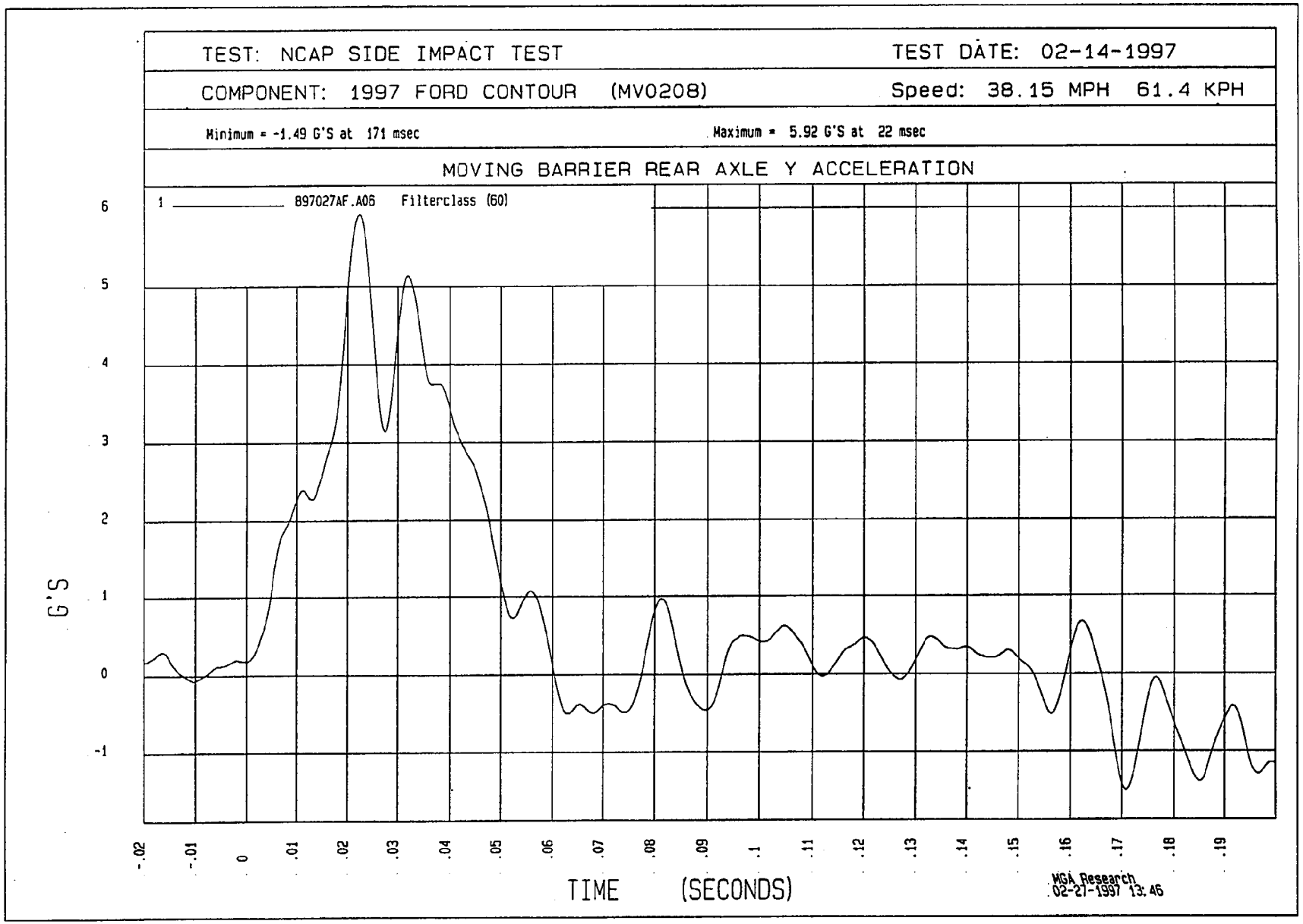

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -14.27 G'S at 19 msec
Maximum = 15.85 G'S at 55 msec
MOVING BARRIER CG Z ACCELERATION
1 B97027AF.A04 Filterclass (60)
16
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-27-1997 13:45

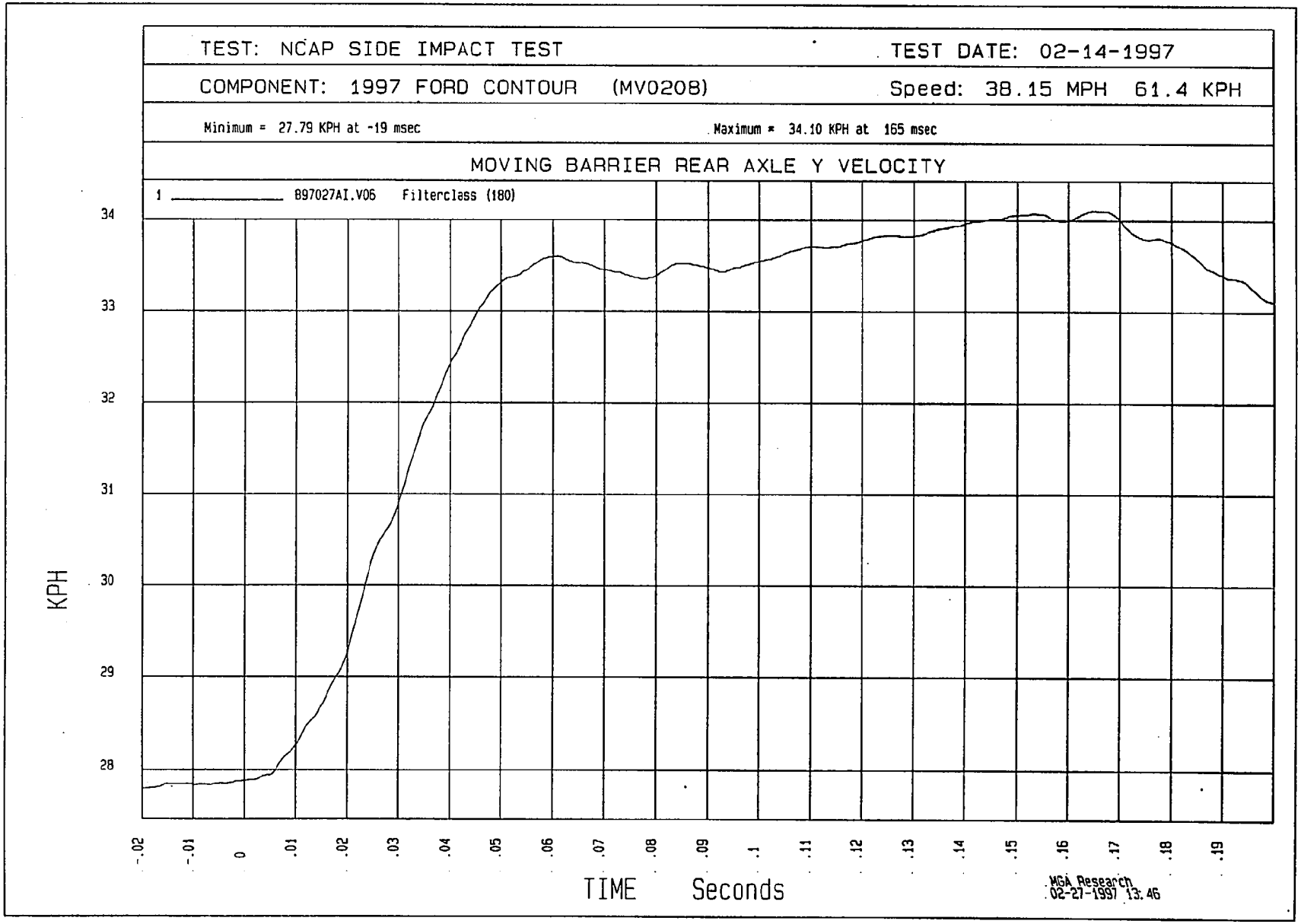

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -2.07 KPH at 30 msec
Maximum = 1.64 KPH at 57 msec
MOVING BARRIER CG Z VELOCITY
1 B97027AI.V04 Filterclass (180)
KPH
1
0
-1
-2
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
02-27-1997 13:45

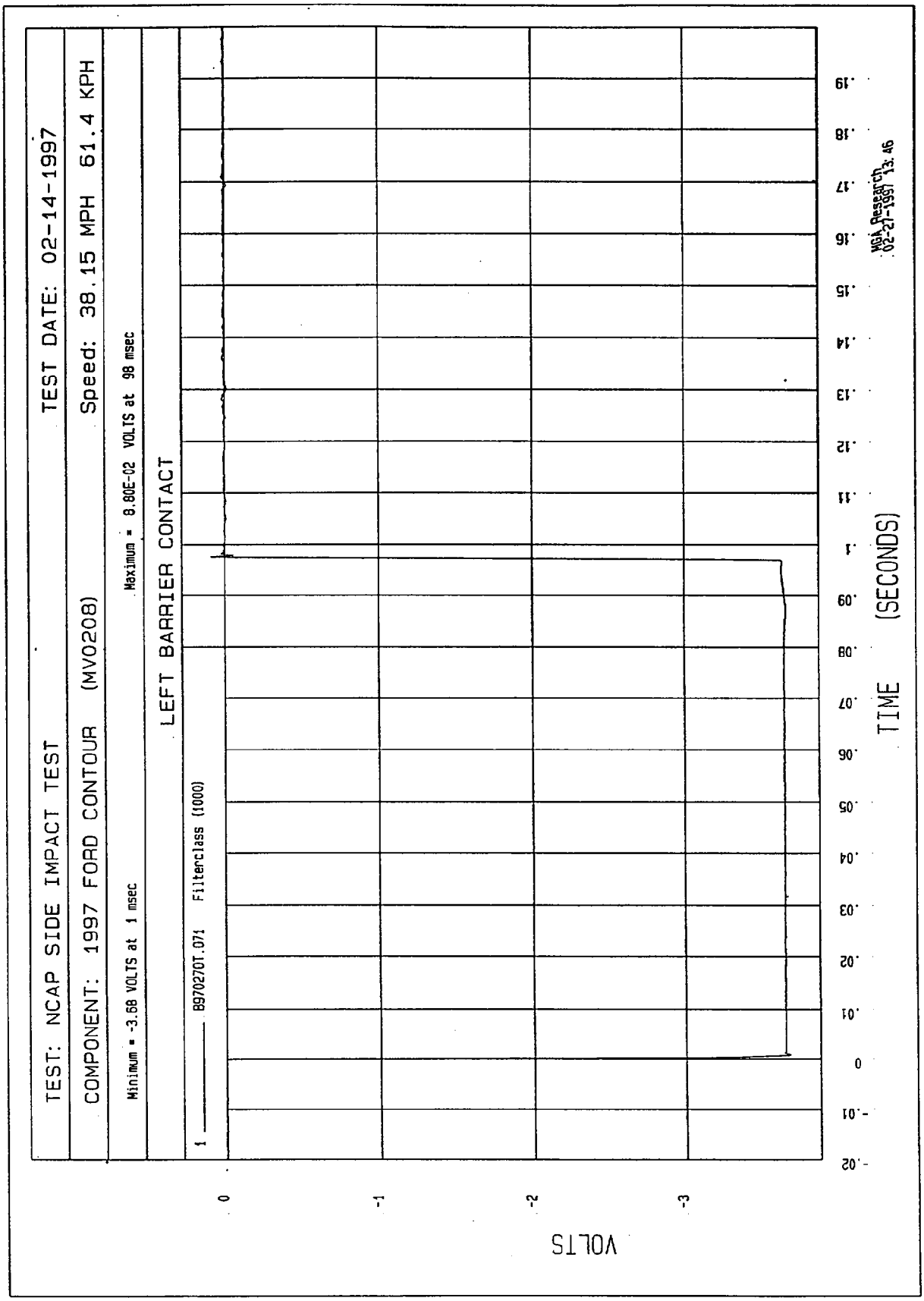

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = .15 G'S at -14 msec
Maximum = 22.28 G'S at 32 msec
MOVING BARRIER CG RESULTANT ACCELERATION
1 B97027AV.A02 Filterclass (60)
G'S
22
20
18
16
14
12
10
8
6
4
2
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-27-1997 13:45

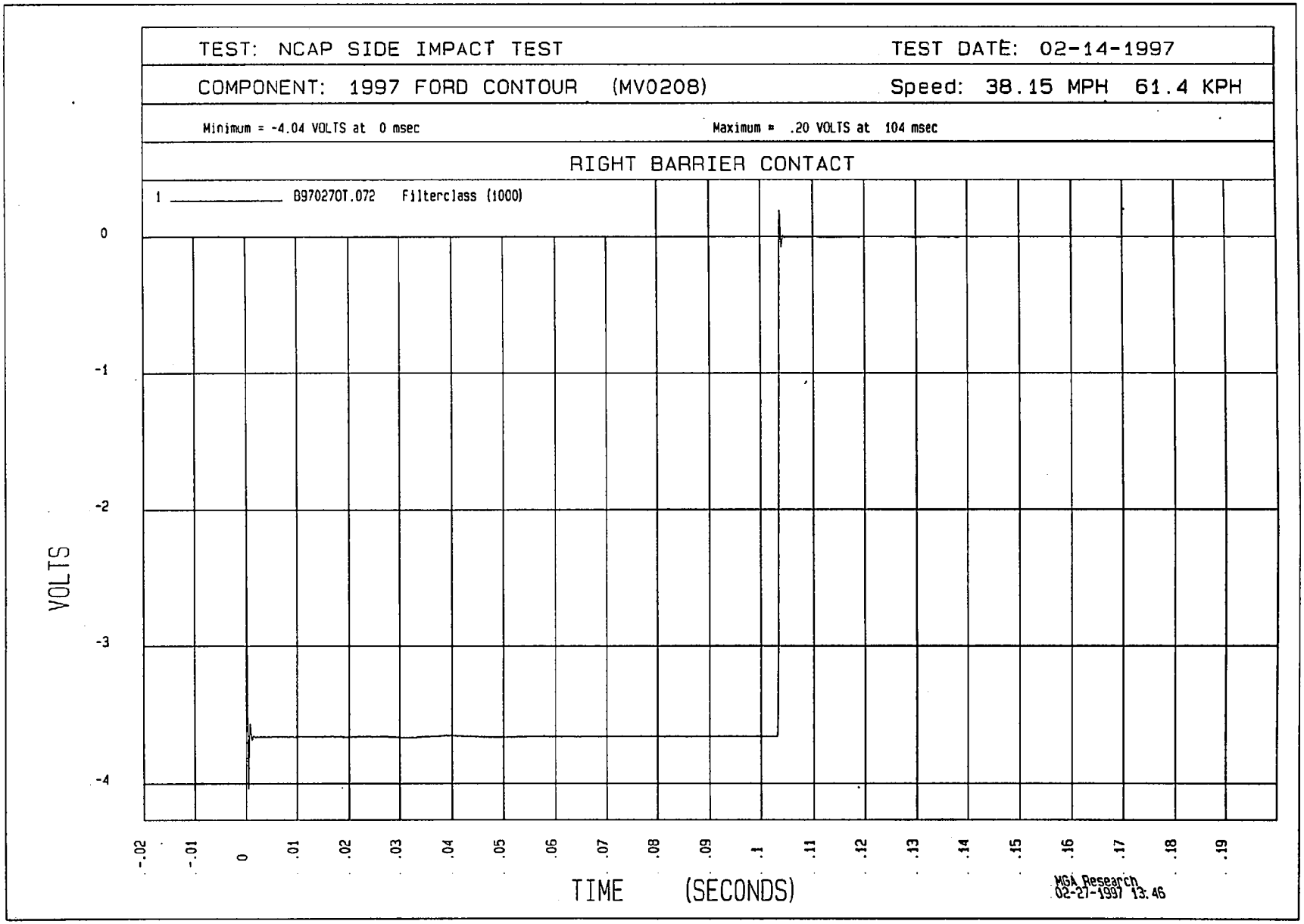

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -23.63 G'S at 33 msec
Maximum = 2.36 G'S at 196 msec
MOVING BARRIER REAR AXLE X ACCELERATION
1 B97027AF.A05 Filterclass (60)
G'S
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-.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
02-27-1997 13:46

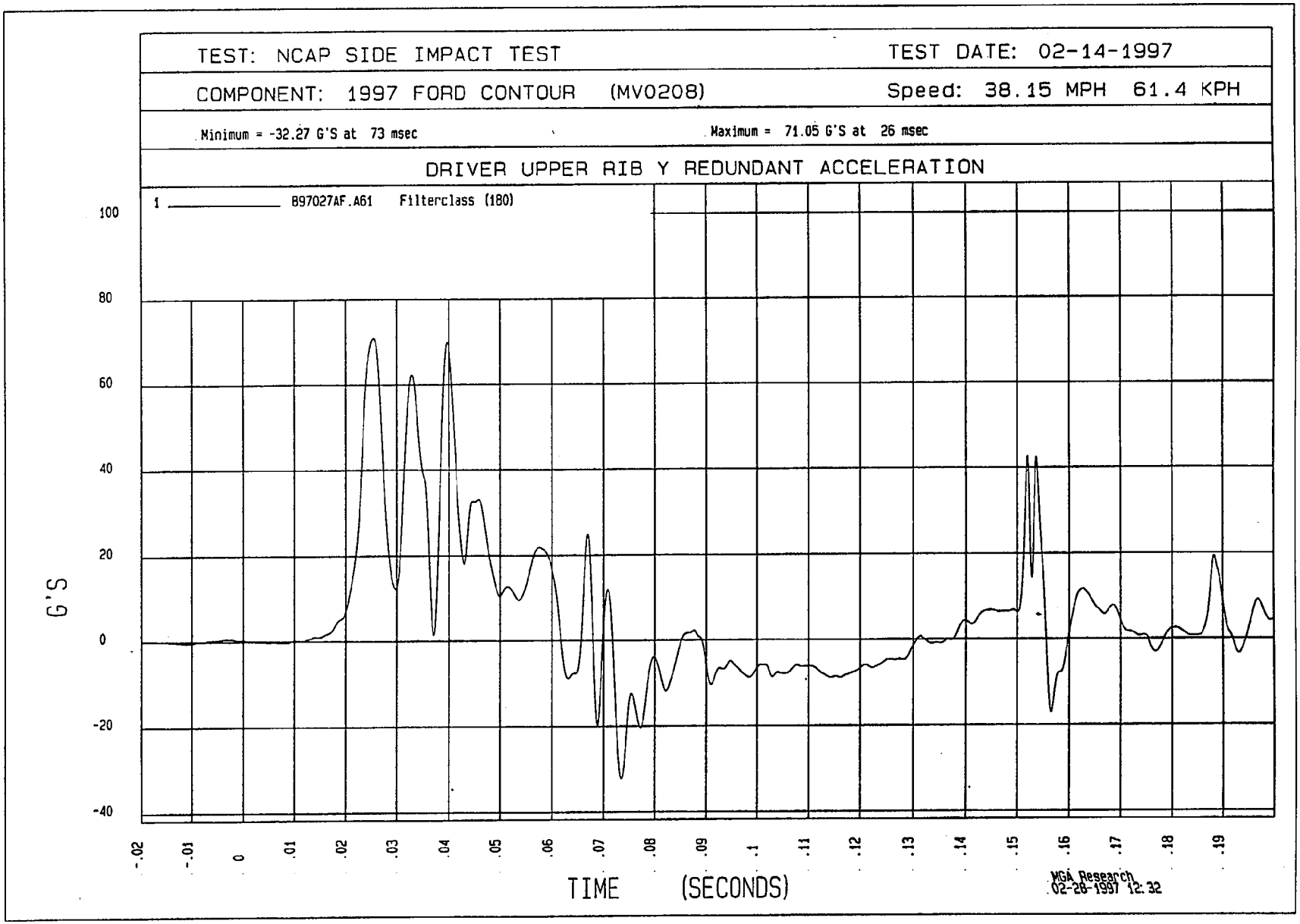

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = 17.79 KPH at 87 msec
Maximum = 54.63 KPH at -13 msec
MOVING BARRIER REAR AXLE X VELOCITY
1 B97027AI.V05 Filterclass (180)
KPH
50
40
30
20
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
02-27-1997 13:46

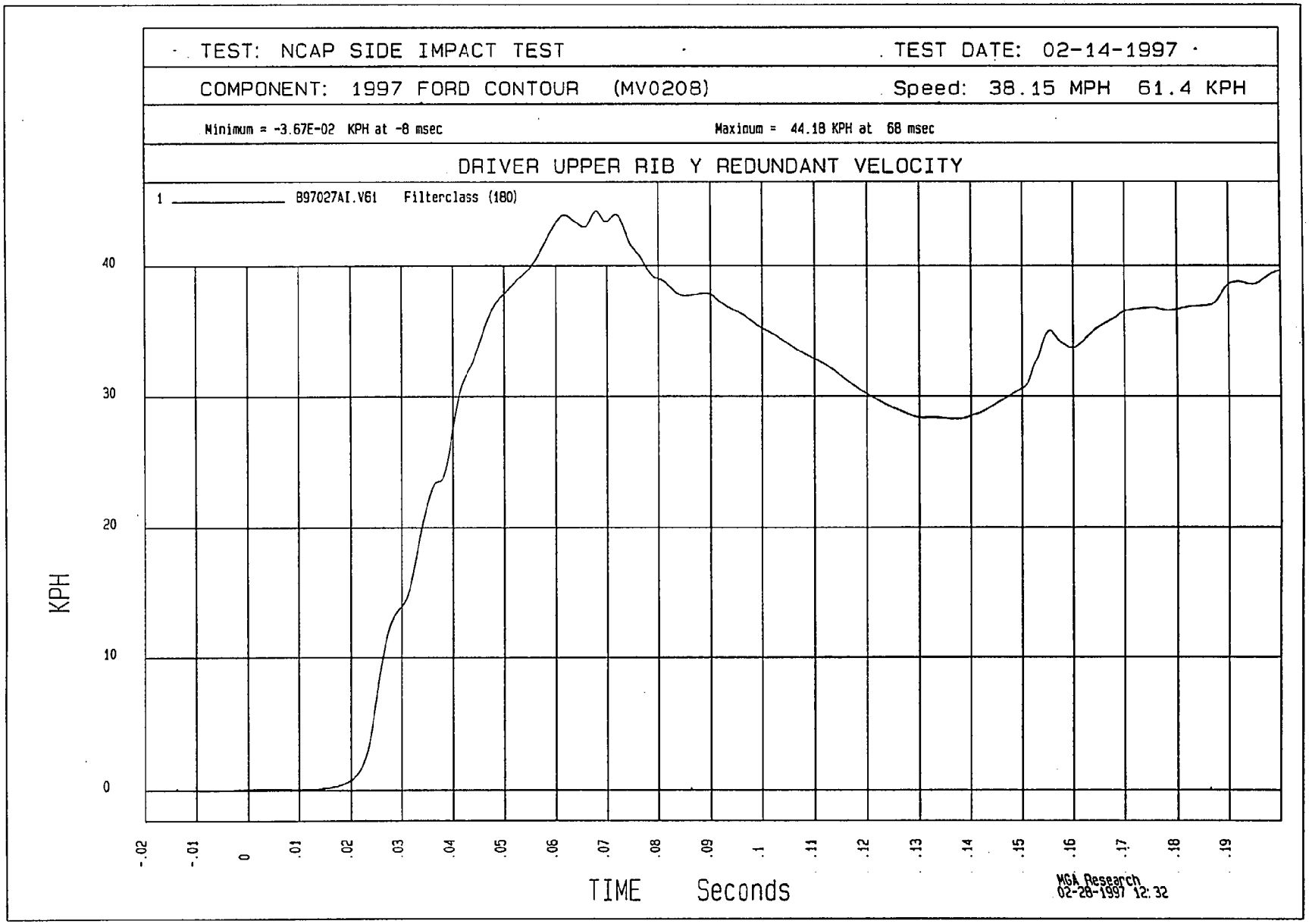

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -1.49 G'S at 171 msec
Maximum = 5.92 G'S at 22 msec
MOVING BARRIER REAR AXLE Y ACCELERATION
1 897027AF.A05 Filterclass (60)
G'S
6
5
4
3
2
1
0
-1
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-27-1997 13:46

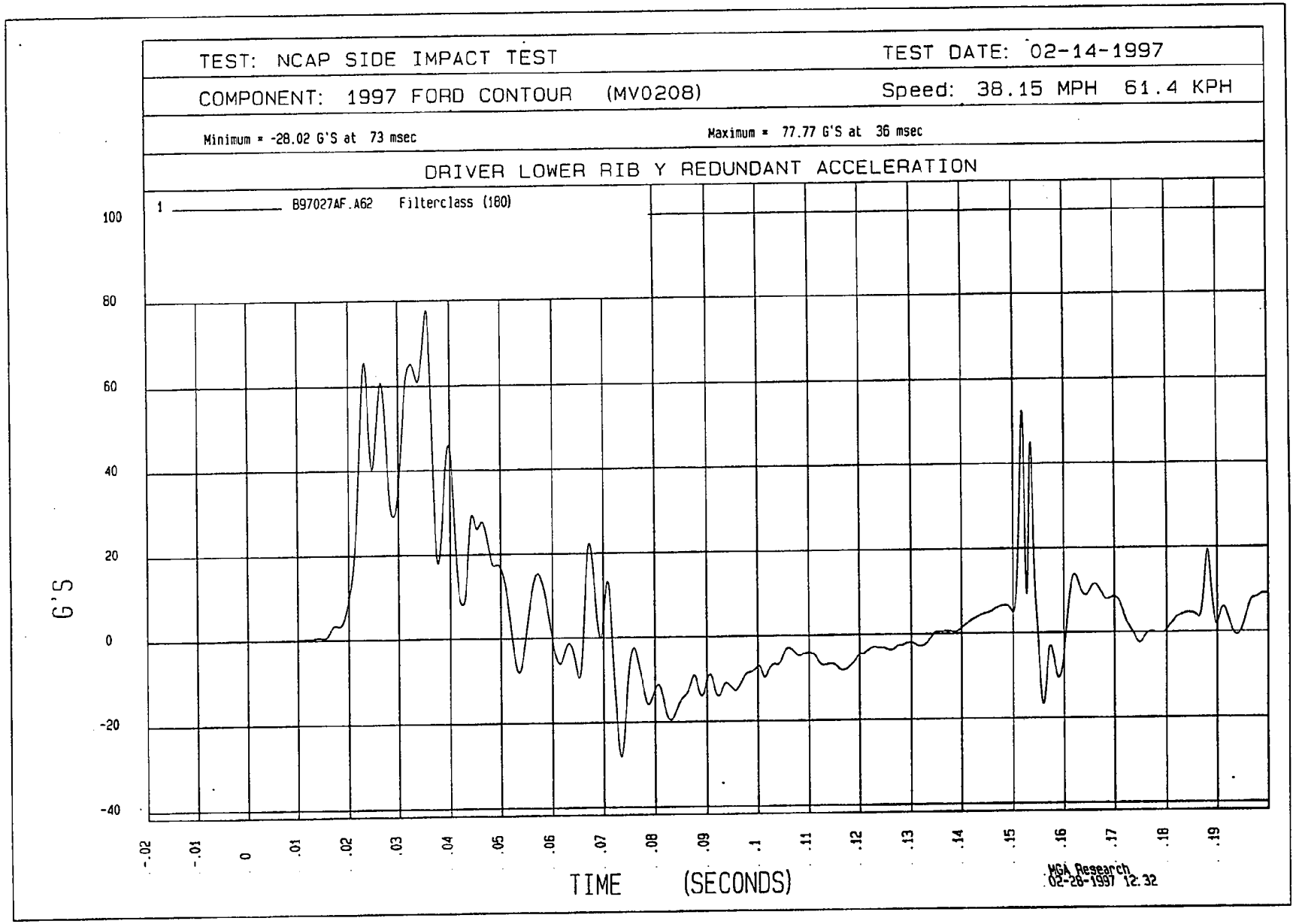

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = 27.79 KPH at -19 msec
Maximum = 34.10 KPH at 165 msec
MOVING BARRIER REAR AXLE Y VELOCITY
1 B97027AI.V06 Filterclass (180)
KPH
34
33
32
31
30
29
28
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
02-27-1997 13:46

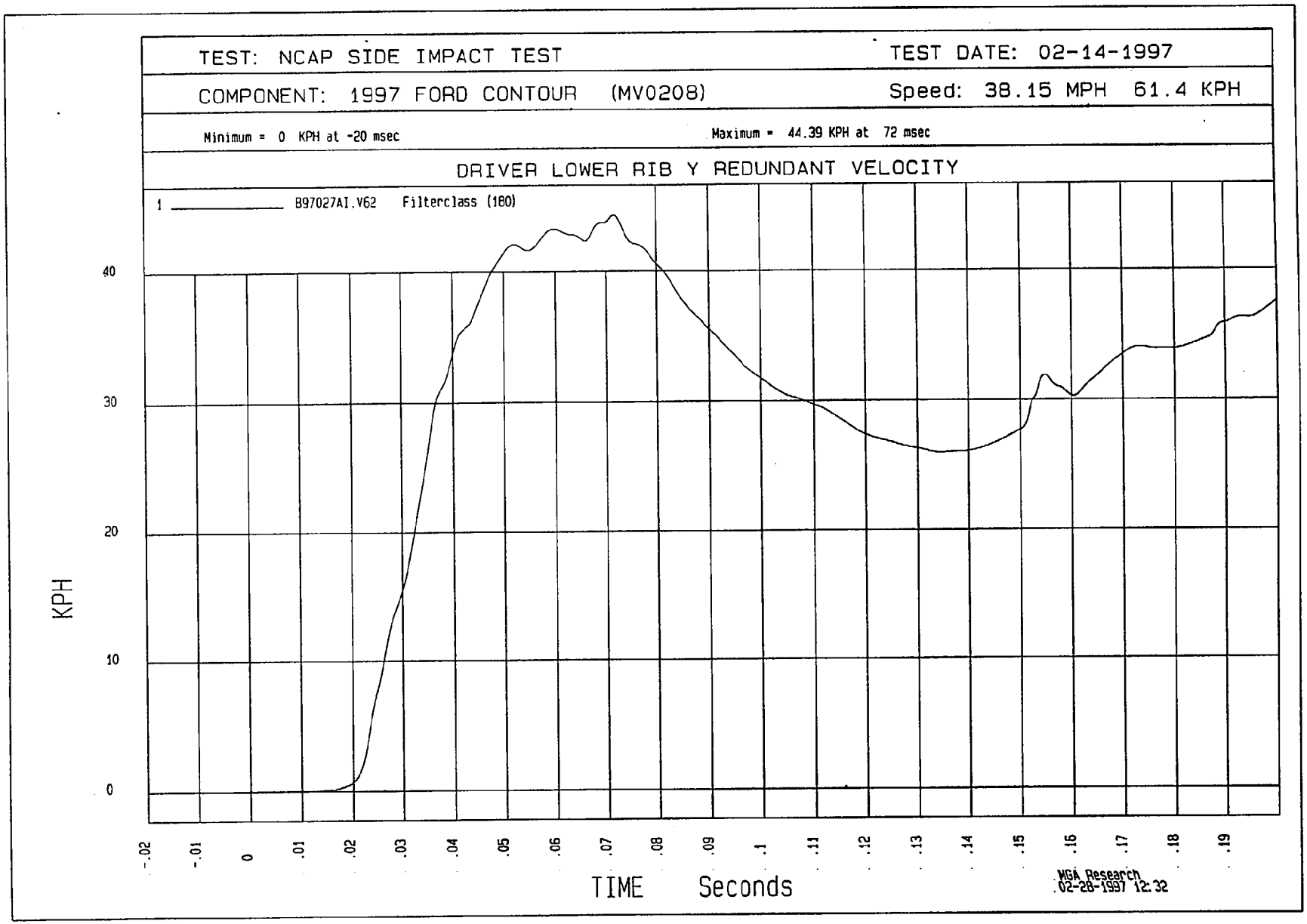

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -3.68 VOLTS at 1 msec
Maximum = 8.80E-02 VOLTS at 98 msec
LEFT BARRIER CONTACT
1 B9702707.071 Filterclass (1000)
VOLTS
0
-1
-2
-3
TIME (SECONDS)
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
MGA Research
02-27-1997 13:46

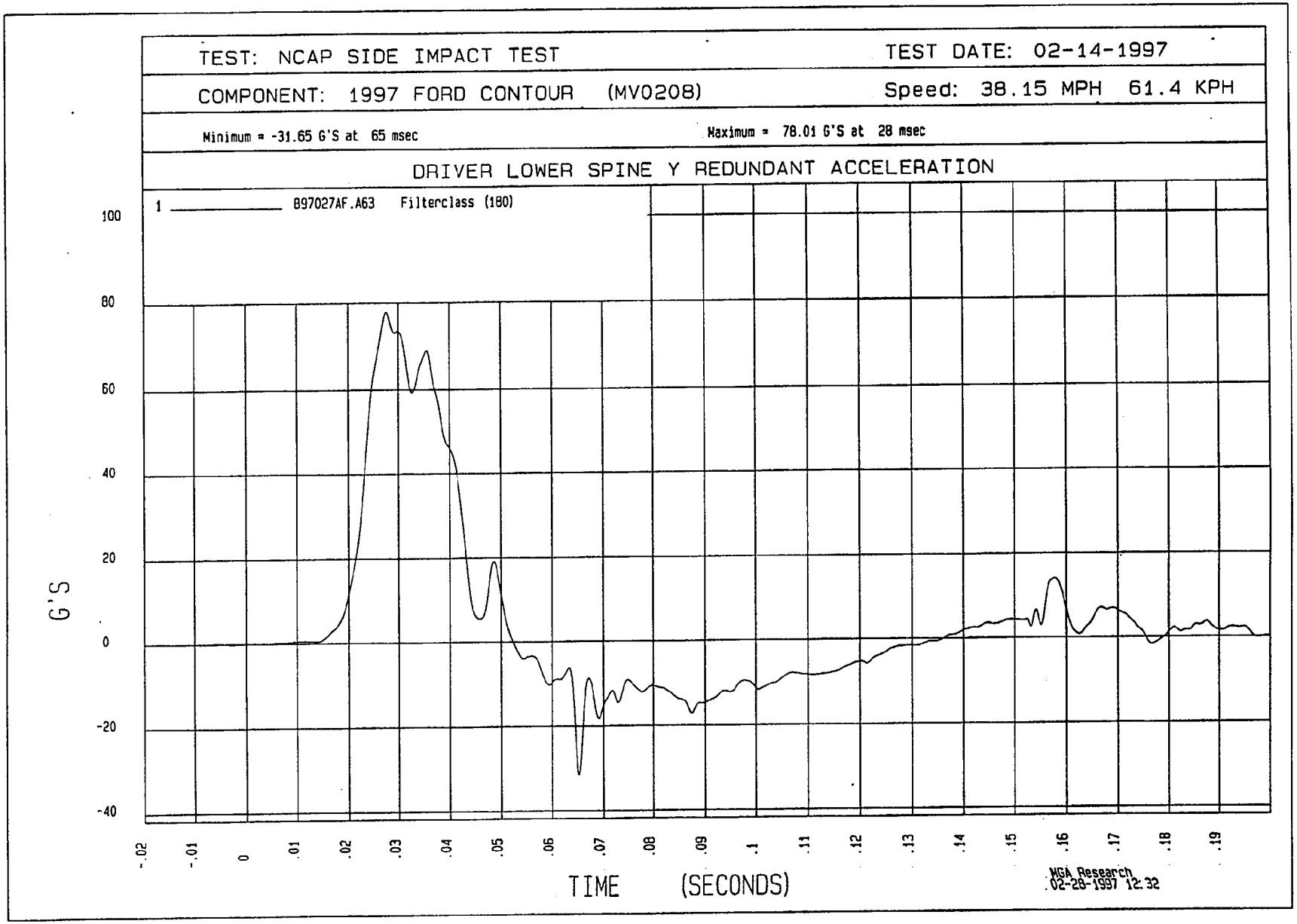

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -4.04 VOLTS at 0 msec
Maximum = .20 VOLTS at 104 msec
RIGHT BARRIER CONTACT
1 B970270T.072 Filterclass (1000)
VOLTS
0
-1
-2
-3
-4
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-27-1997 13:46

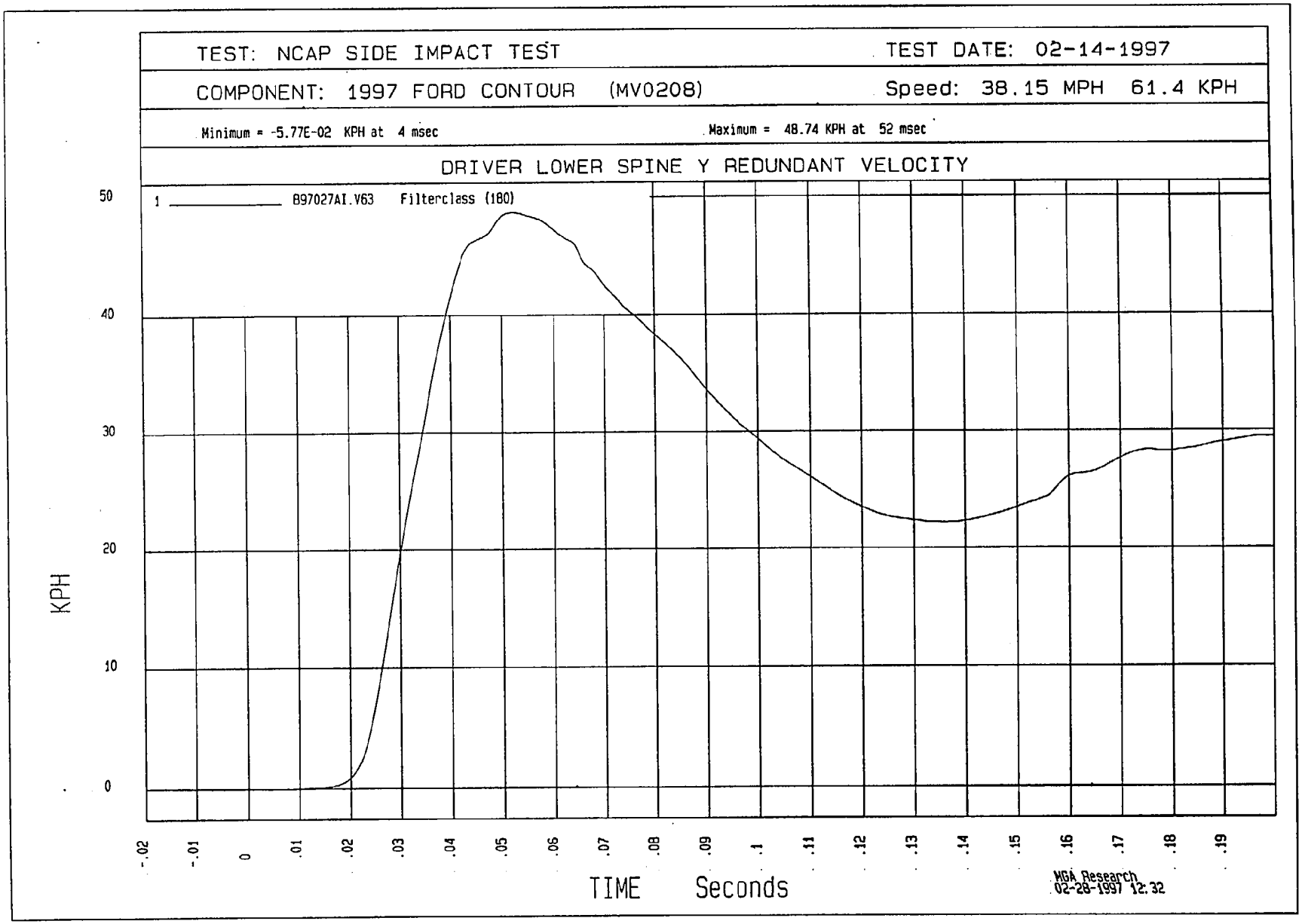

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -32.27 G'S at 73 msec
Maximum = 71.05 G'S at 26 msec
DRIVER UPPER RIB Y REDUNDANT ACCELERATION
1 B97027AF.A61 Filterclass (180)
100
80
60
40
20
0
-20
-40
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-28-1997 12:32

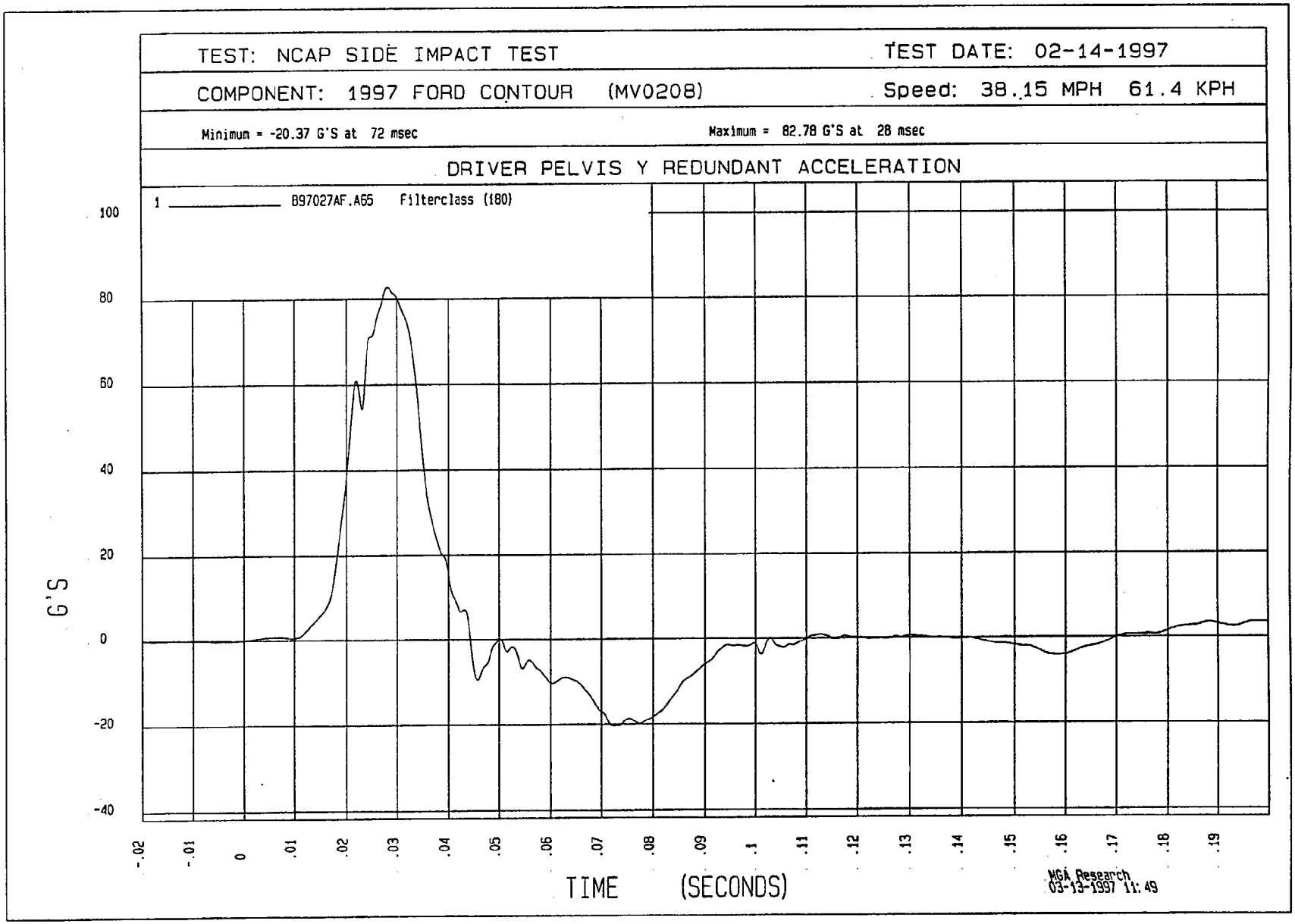

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -3.67E-02 KPH at -8 msec
Maximum = 44.18 KPH at 68 msec
DRIVER UPPER RIB Y REDUNDANT VELOCITY
1 B97027AI.V61 Filterclass (180)
KPH
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
02-28-1997 12:32

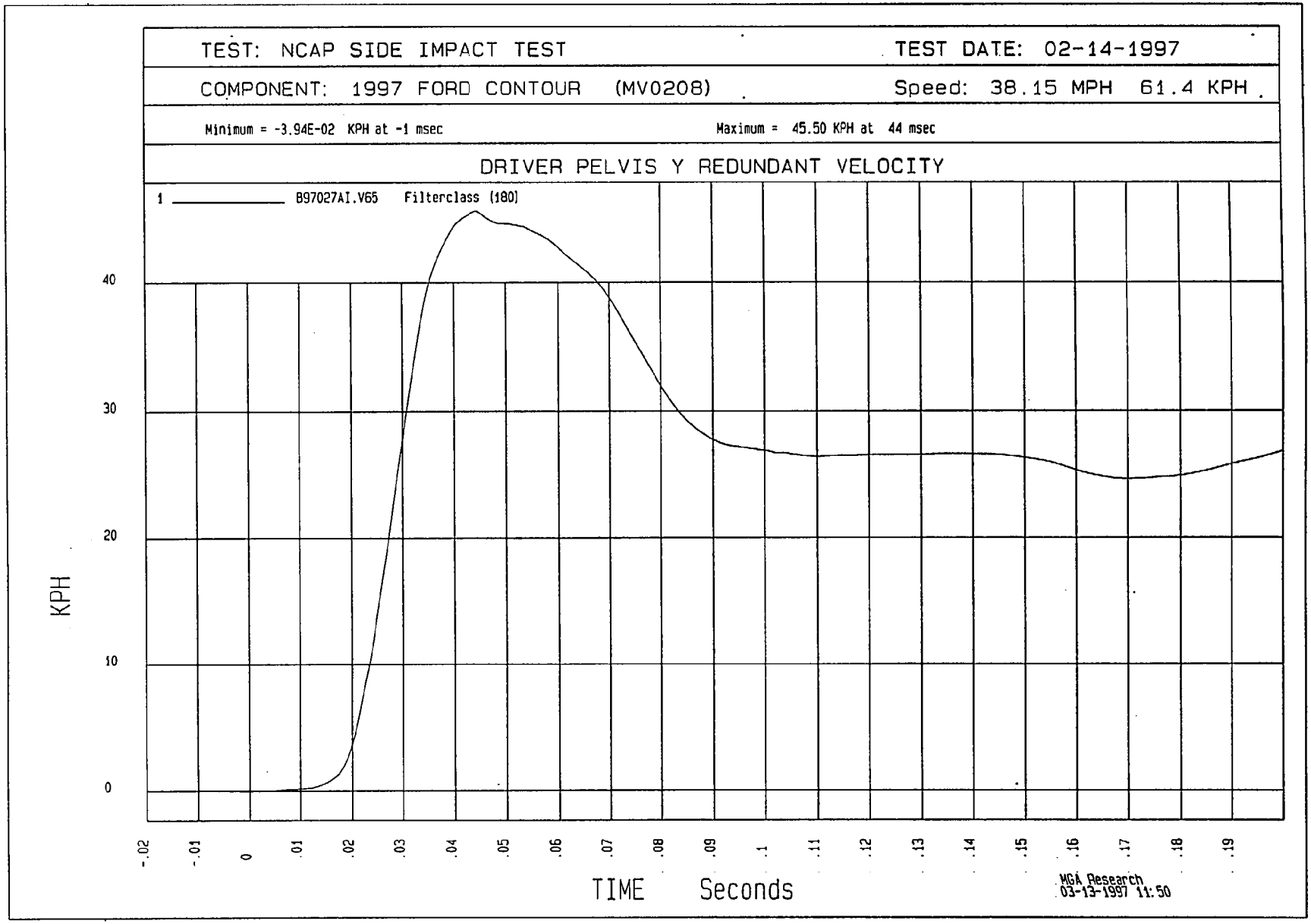

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -28.02 G'S at 73 msec
Maximum = 77.77 G'S at 36 msec
DRIVER LOWER RIB Y REDUNDANT ACCELERATION
1 B97027AF.A62 Filterclass (180)
100
80
60
40
20
0
-20
-40
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-28-1997 12:32

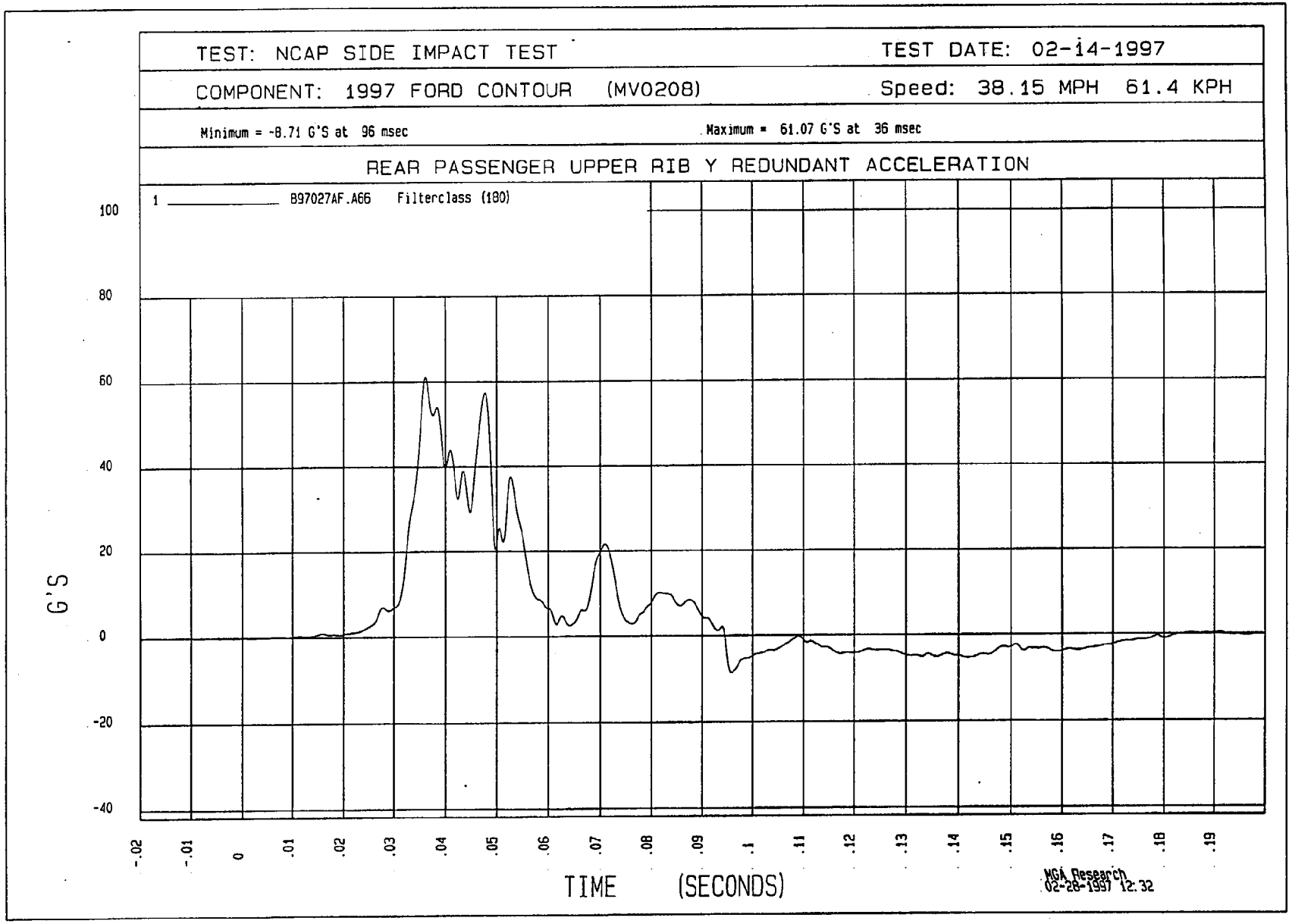

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = 0 KPH at -20 msec
Maximum = 44.39 KPH at 72 msec
DRIVER LOWER RIB Y REDUNDANT VELOCITY
1 B97027AI.V62 Filterclass (180)
KPH
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
02-28-1997 12:32

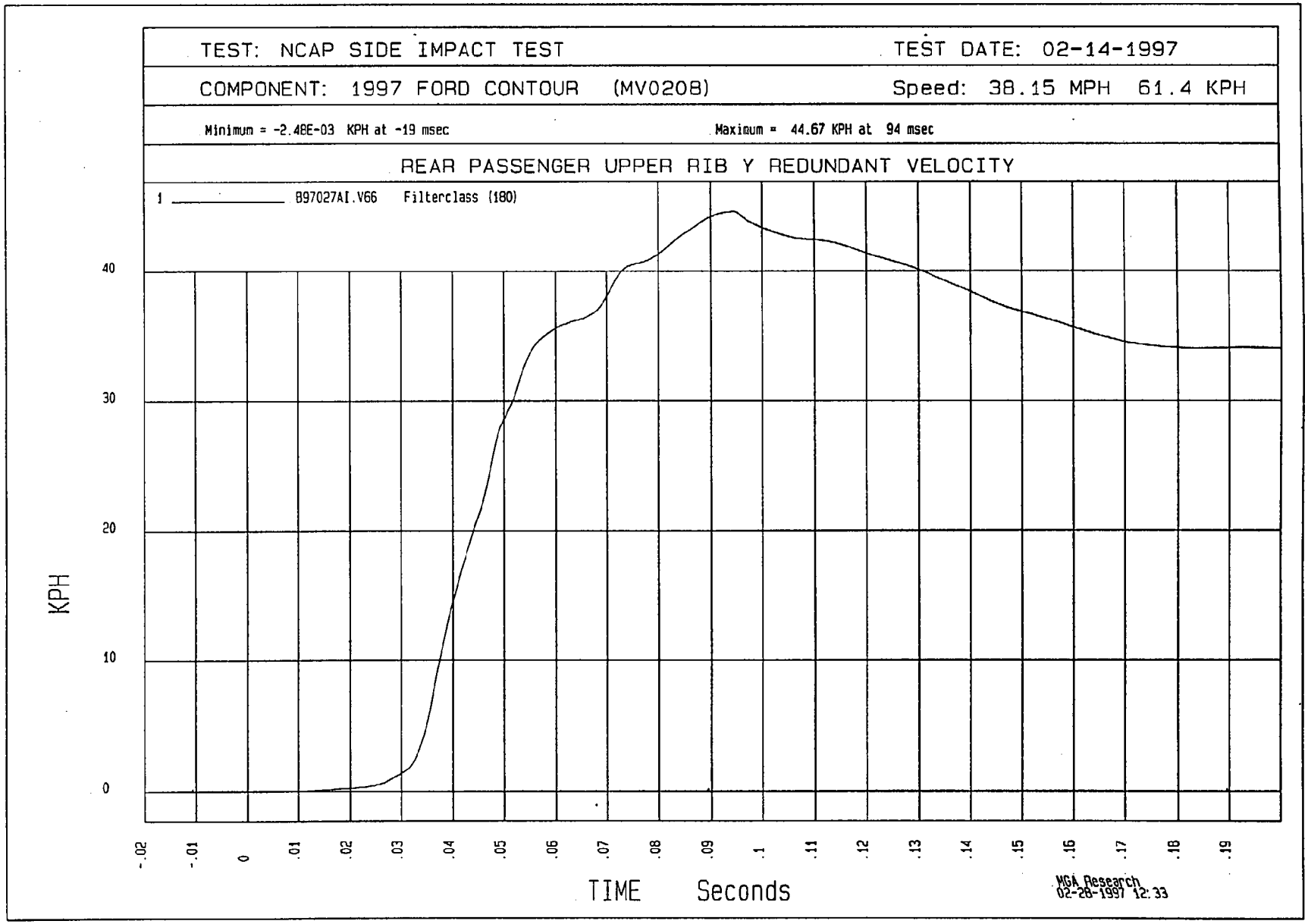

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -31.65 G'S at 65 msec
Maximum = 78.01 G'S at 28 msec
DRIVER LOWER SPINE Y REDUNDANT ACCELERATION
1 B97027AF.A63 Filterclass (180)
100
80
60
40
20
0
-20
-40
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-28-1997 12:32

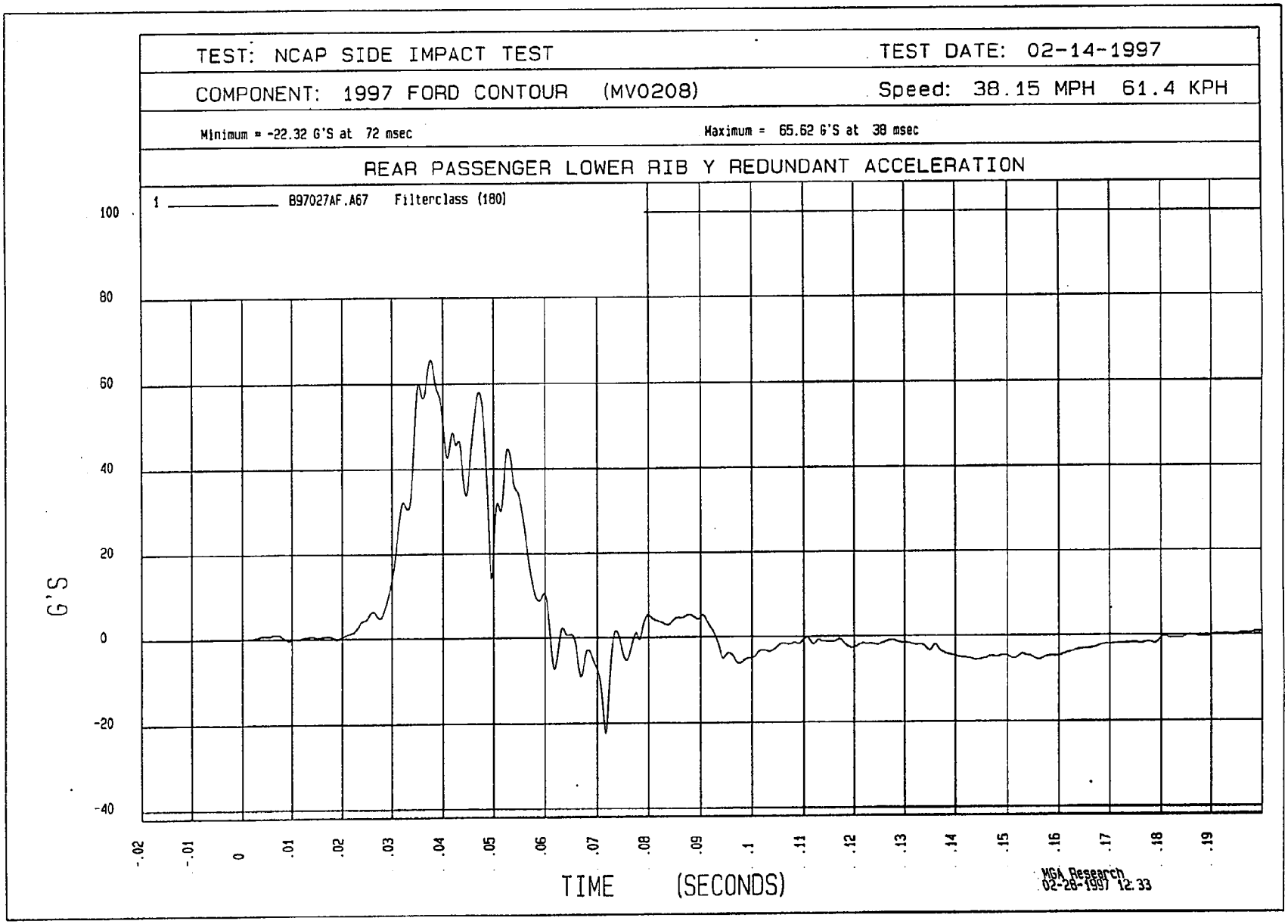

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -5.77E-02 KPH at 4 msec
Maximum = 48.74 KPH at 52 msec
DRIVER LOWER SPINE Y REDUNDANT VELOCITY
1 B97027AI.V63 Filterclass (180)
KPH
50
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
02-28-1997 12:32

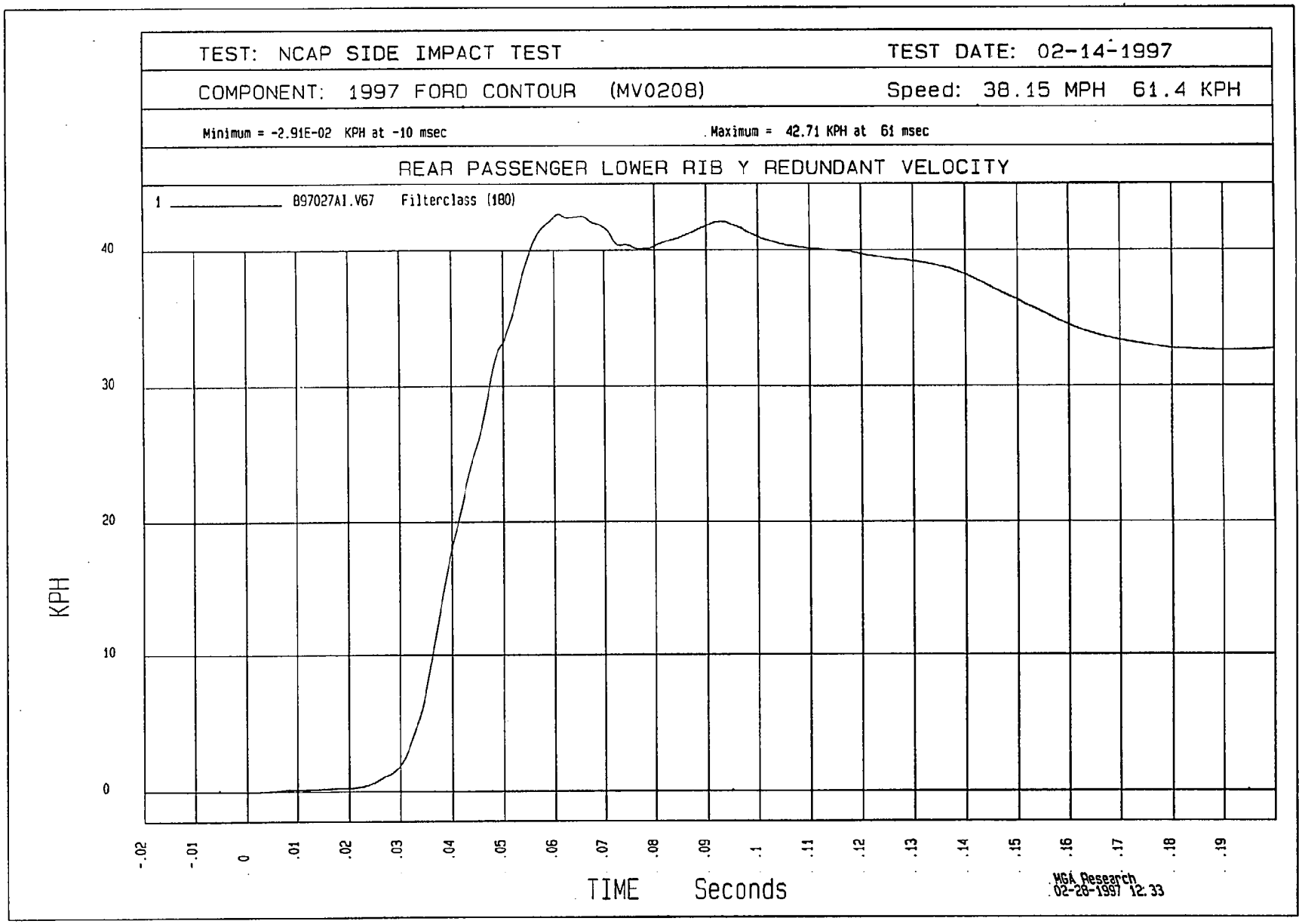

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -20.37 G'S at 72 msec
Maximum = 82.78 G'S at 28 msec
DRIVER PELVIS Y REDUNDANT ACCELERATION
1 B97027AF.A65 Filterclass (180)
100
80
60
40
20
0
-20
-40
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
03-13-1997 11:49


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -3.94E-02 KPH at -1 msec
Maximum = 45.50 KPH at 44 msec
DRIVER PELVIS Y REDUNDANT VELOCITY
1 B97027AI.V65 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
03-13-1997 11:50


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -8.71 G'S at 96 msec
Maximum = 61.07 G'S at 36 msec
REAR PASSENGER UPPER RIB Y REDUNDANT ACCELERATION
1 B97027AF.A66 Filterclass (180)
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)
NGA Research
02-28-1997 12:32


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -2.48E-03 KPH at -19 msec
Maximum = 44.67 KPH at 94 msec
REAR PASSENGER UPPER RIB Y REDUNDANT VELOCITY
1 B97027AI.V66 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
02-28-1997 12:33


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -22.32 G'S at 72 msec
Maximum = 65.62 G'S at 38 msec
REAR PASSENGER LOWER RIB Y REDUNDANT ACCELERATION
1 B97027AF.A67 Filterclass (180)
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
02-28-1997 12:33


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -2.91E-02 KPH at -10 msec
Maximum = 42.71 KPH at 61 msec
REAR PASSENGER LOWER RIB Y REDUNDANT VELOCITY
1 B97027AI.V67 Filterclass (180)
KPH
40
30
20
10
0
-.02
-.01
0
.01
.02
.03
.04
.05
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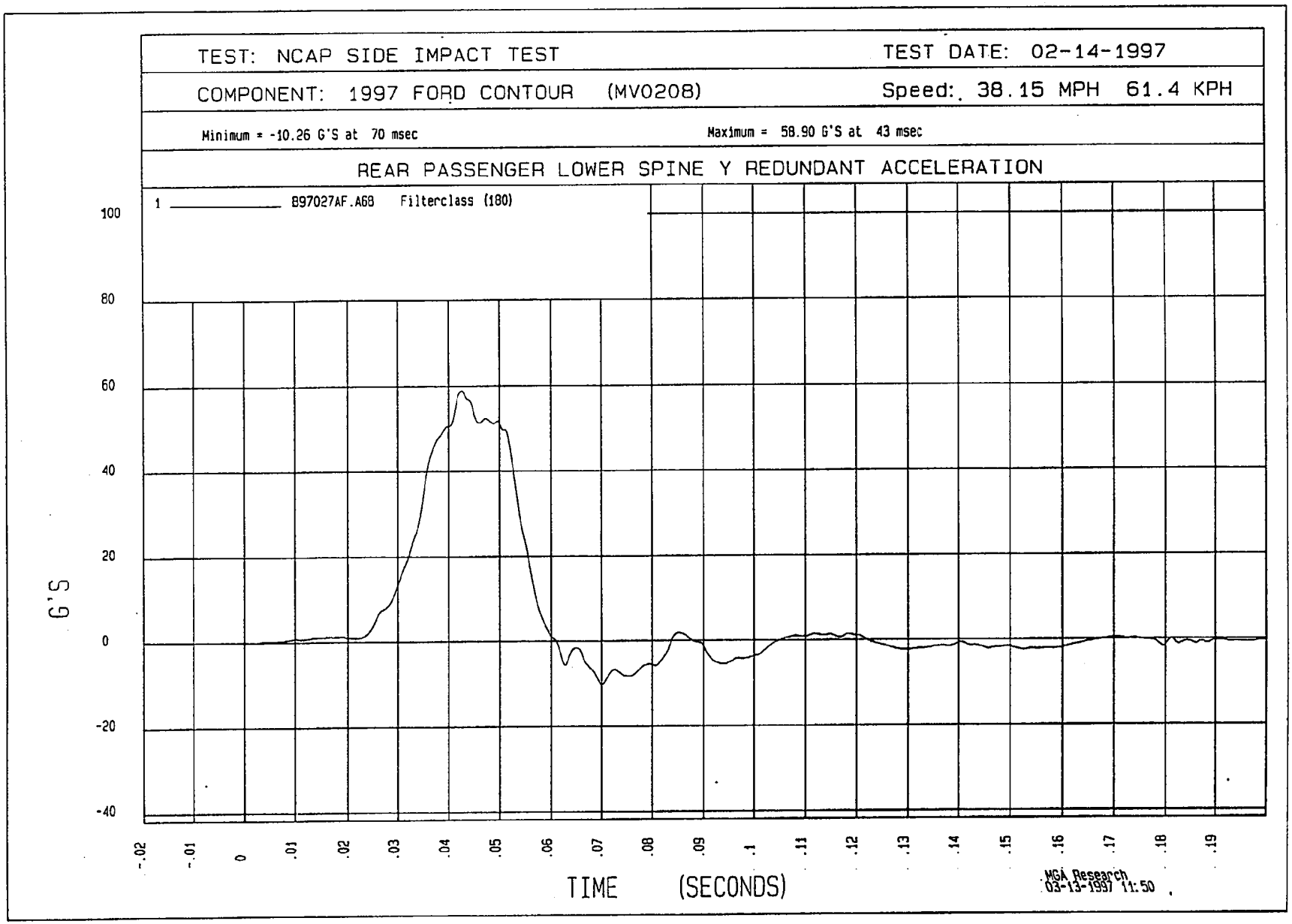
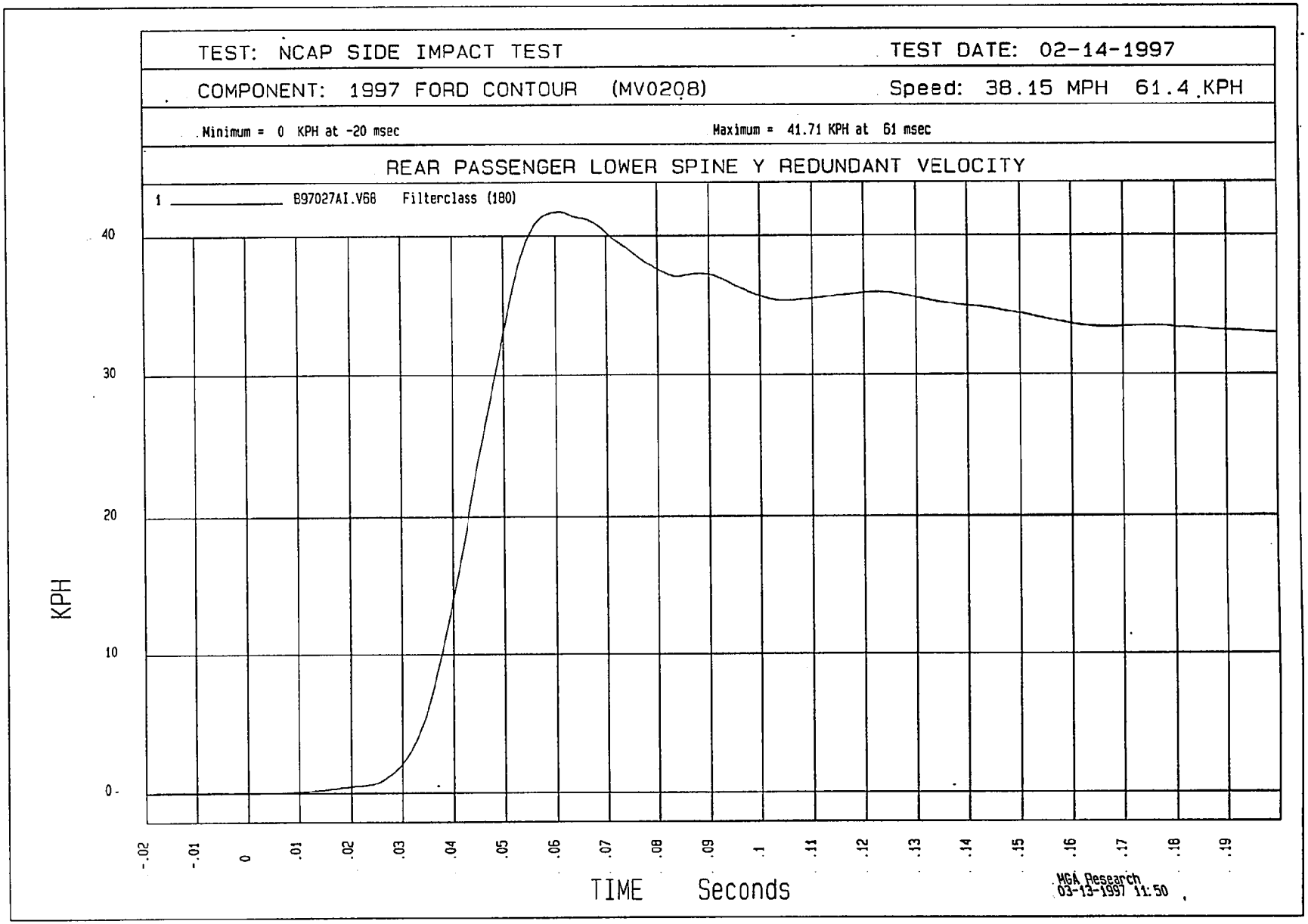
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
02-28-1997 12:33


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -10.26 G'S at 70 msec
Maximum = 58.90 G'S at 43 msec
REAR PASSENGER LOWER SPINE Y REDUNDANT ACCELERATION
1 B97027AF.A68 Filterclass (180)
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
03-13-1997 11:50


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = 0 KPH at -20 msec
Maximum = 41.71 KPH at 61 msec
REAR PASSENGER LOWER SPINE Y REDUNDANT VELOCITY
1 B97027AI.V68 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
.13
.14
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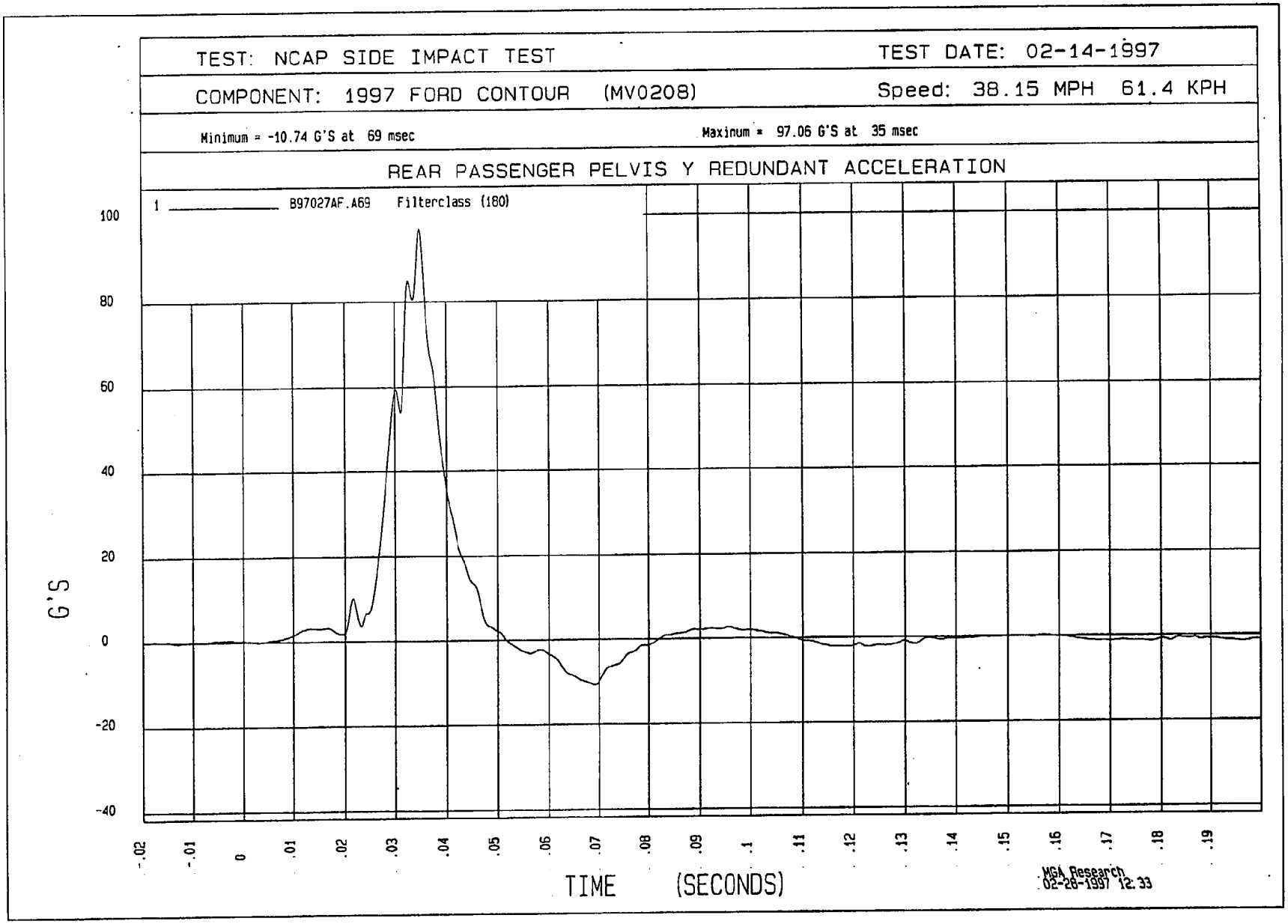
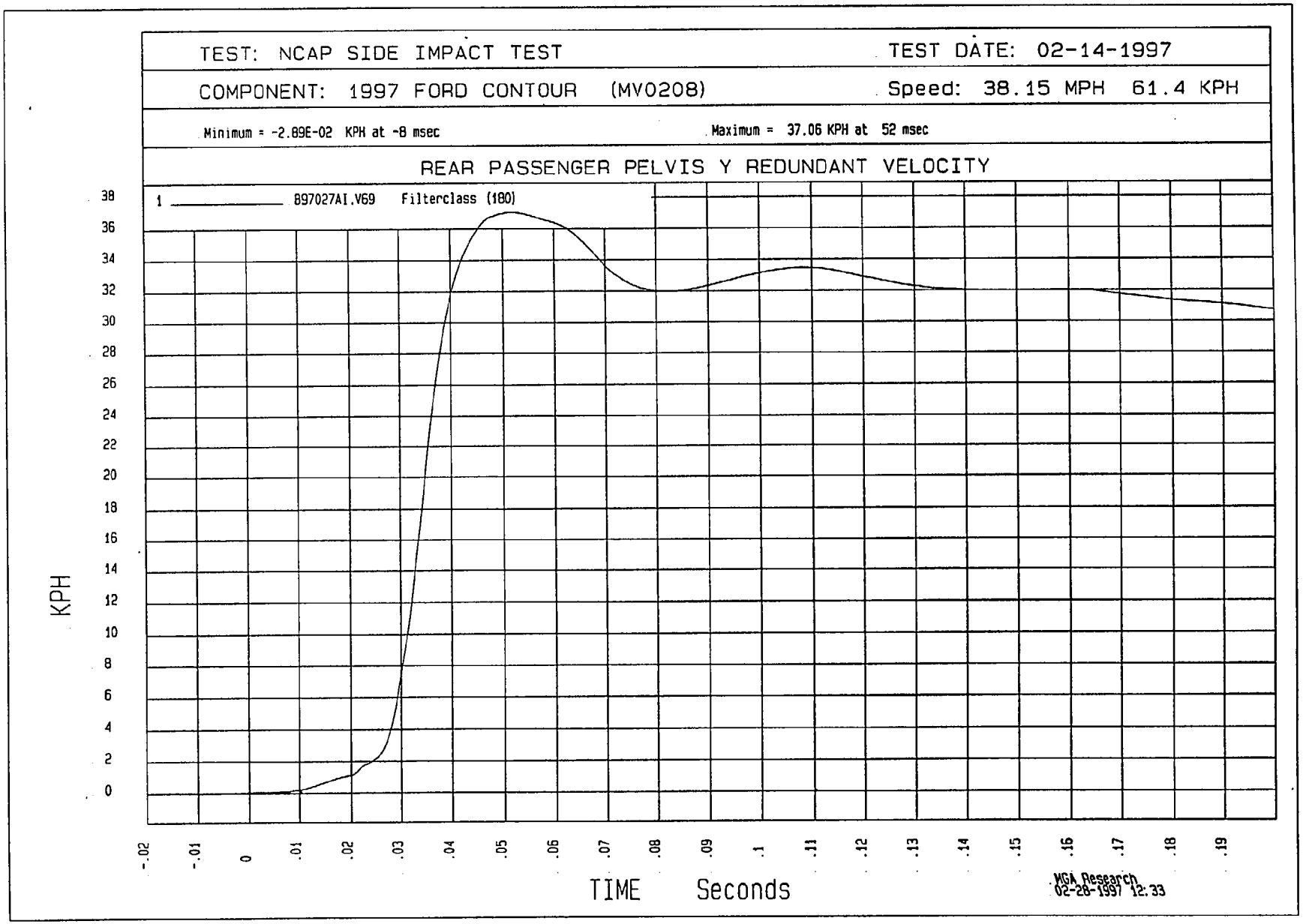
.16
.17
.18
.19
TIME Seconds
MGA Research
03-13-1997 11:50


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -10.74 G'S at 69 msec
Maximum = 97.06 G'S at 35 msec
REAR PASSENGER PELVIS Y REDUNDANT ACCELERATION
1 B97027AF.A69 Filterclass (180)
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
02-28-1997 12:33


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -2.89E-02 KPH at -8 msec
Maximum = 37.06 KPH at 52 msec
REAR PASSENGER PELVIS Y REDUNDANT VELOCITY
1 B97027AI.V69 Filterclass (180)
KPH
38
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
.1
.11
.12
.13
.14
.15
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.17
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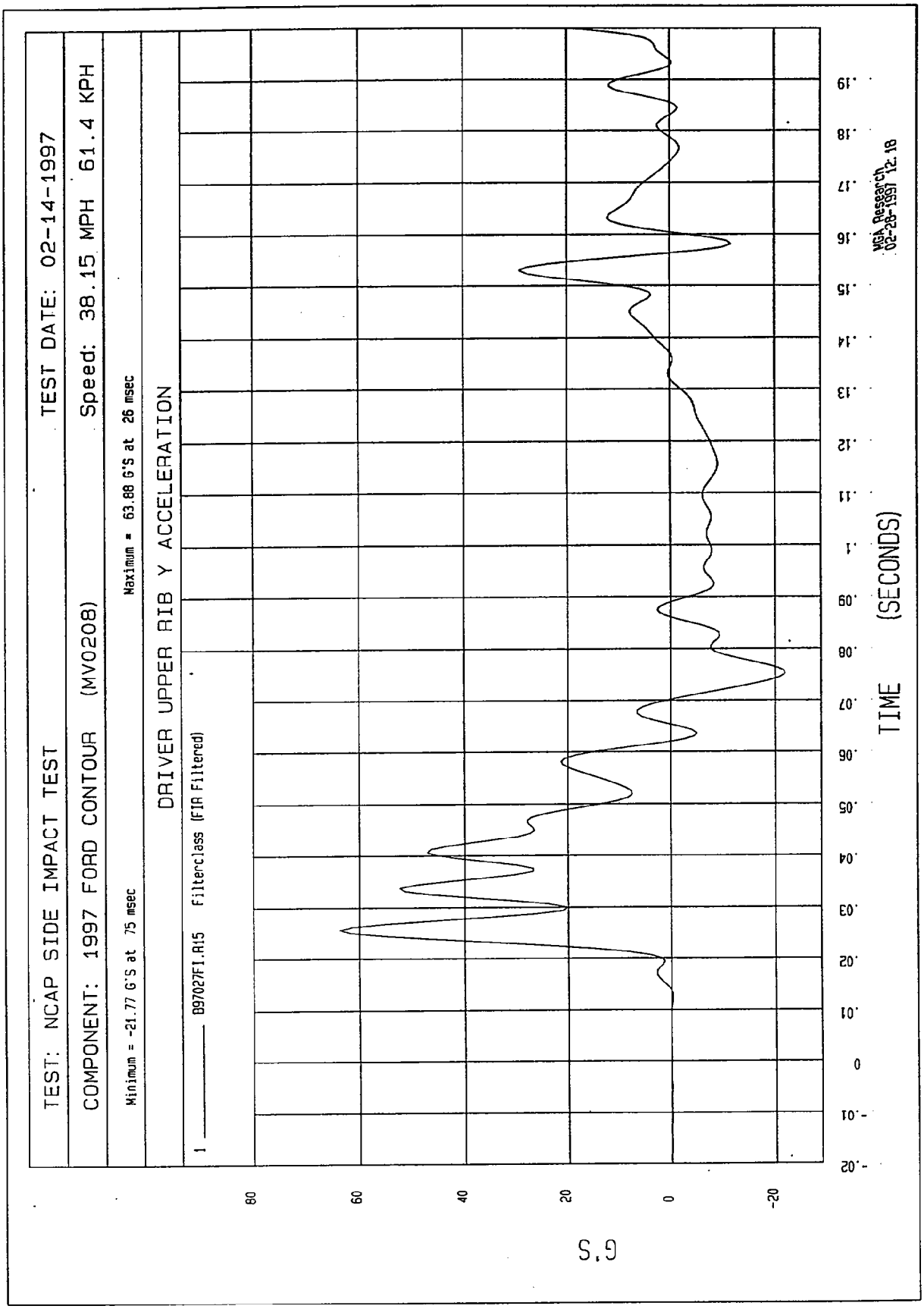
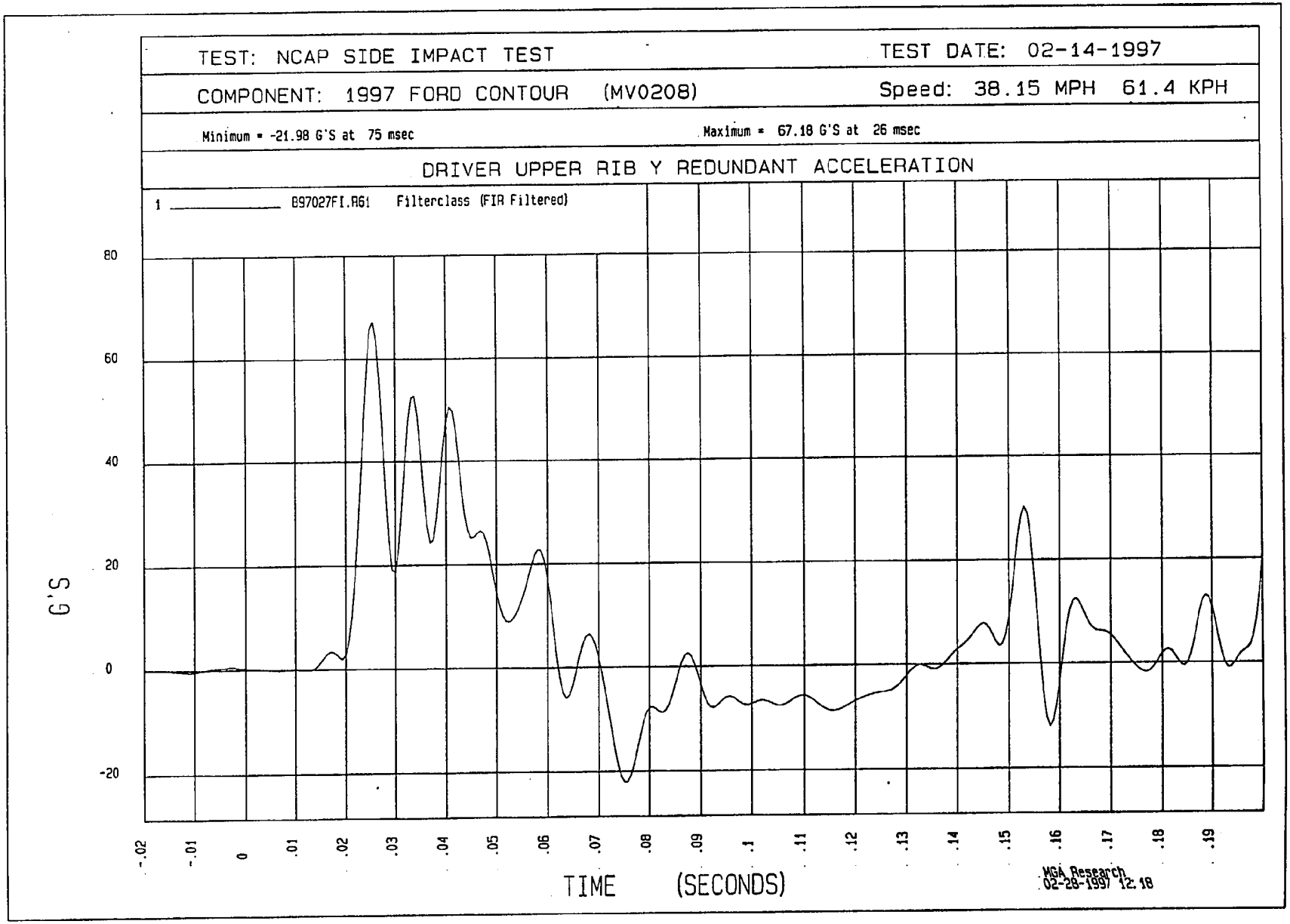
TIME Seconds
MGA Research
02-28-1997 12:33

FINITE IMPULSE RESPONSE (FIR) FILTERED DATA


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -21.77 G'S at 75 msec
Maximum = 63.88 G'S at 26 msec
DRIVER UPPER RIB Y ACCELERATION
1 B97027FI.A15 Filterclass (FIR Filtered)
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
02-28-1997 12:18


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -21.98 G'S at 75 msec
Maximum = 67.18 G'S at 26 msec
DRIVER UPPER RIB Y REDUNDANT ACCELERATION
1 B97027FI.A61 Filterclass (FIR Filtered)
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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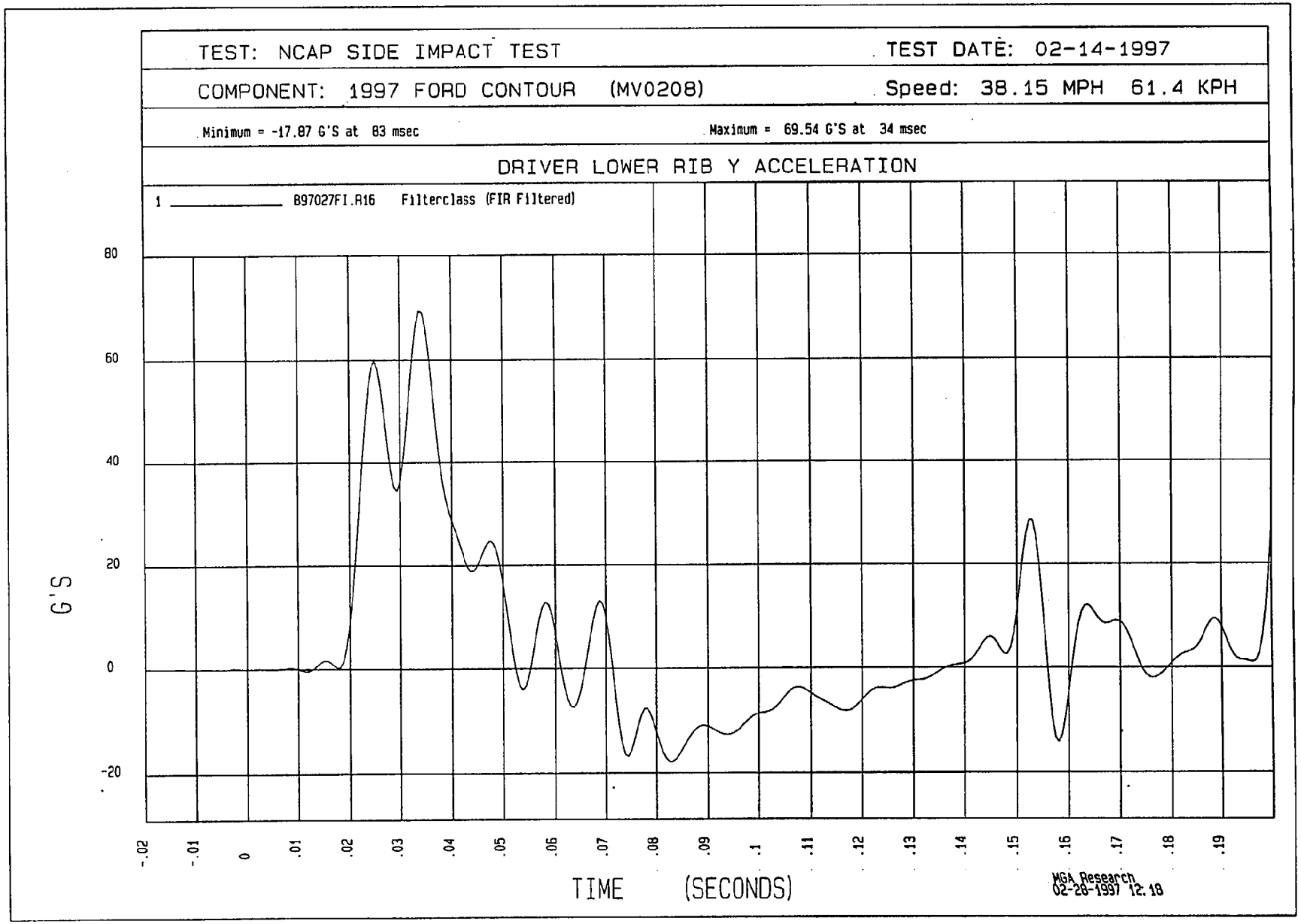
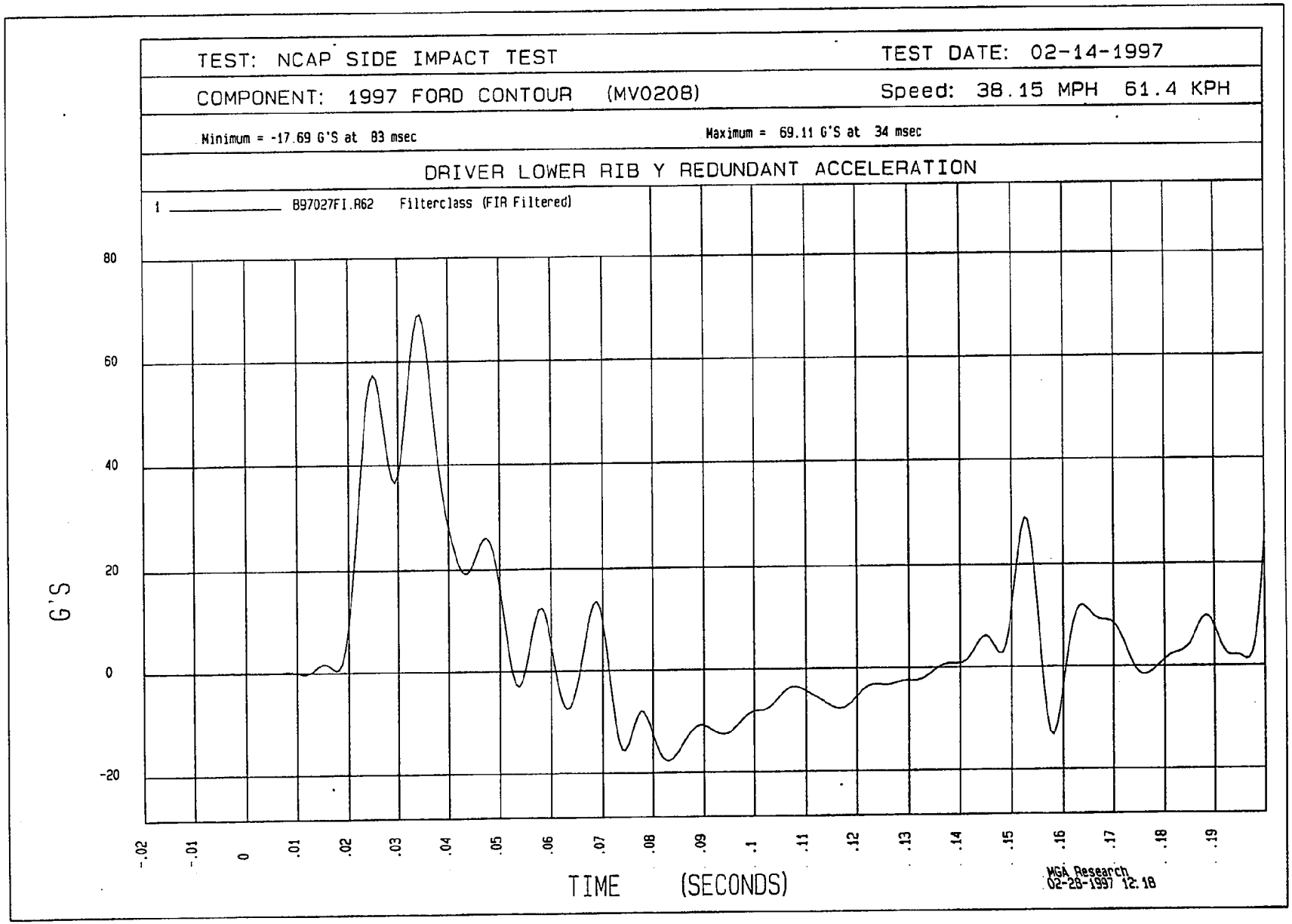
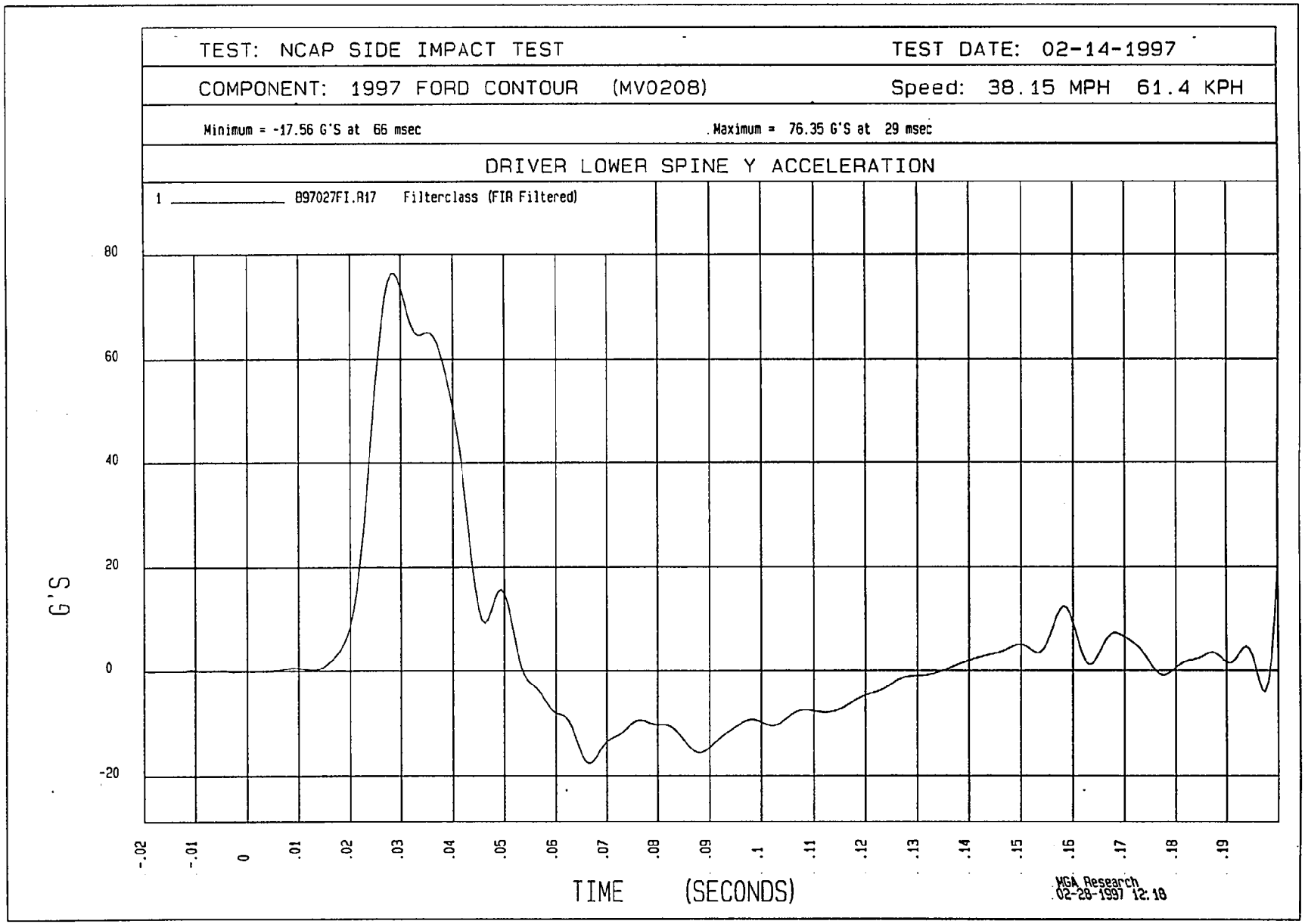
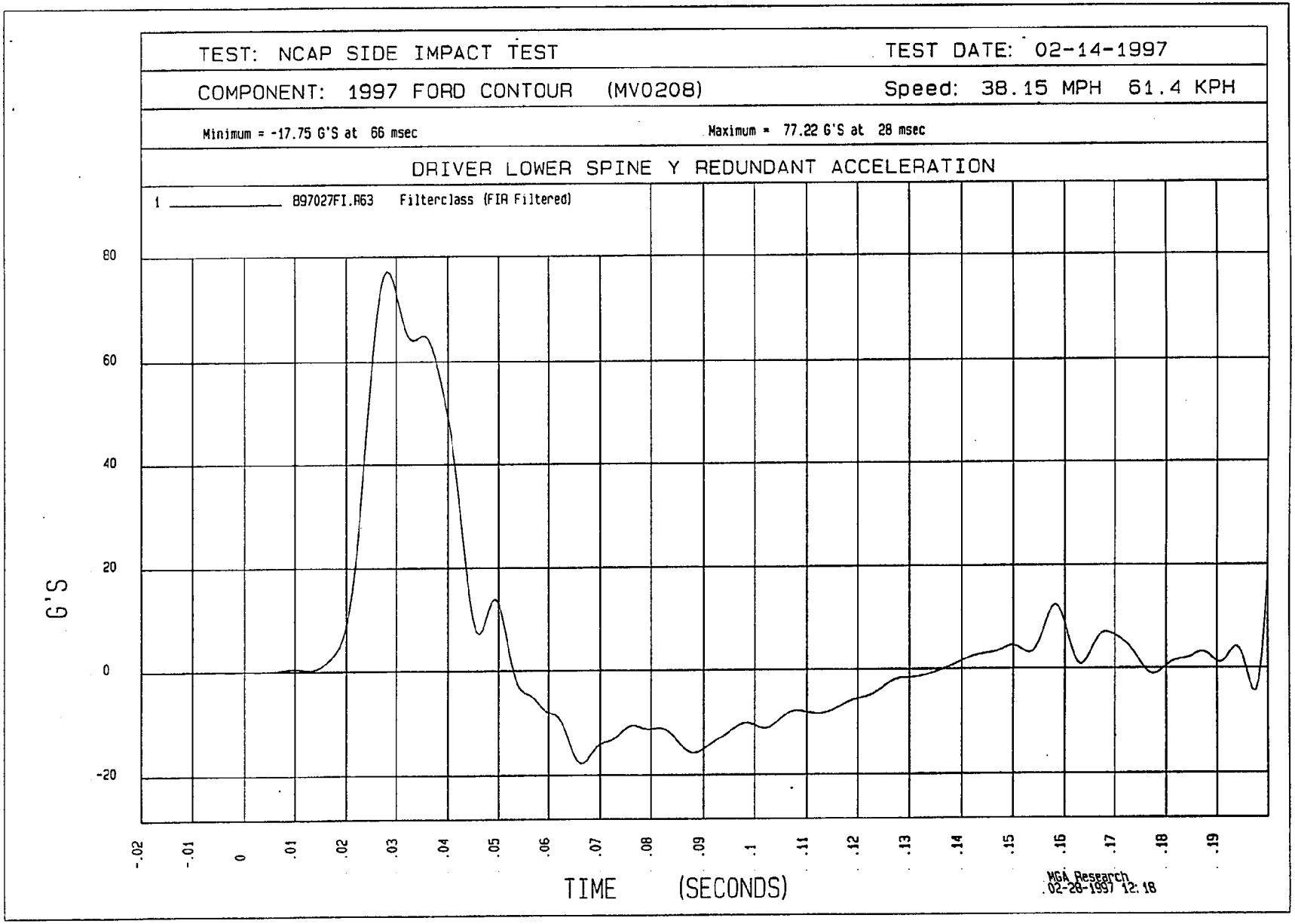
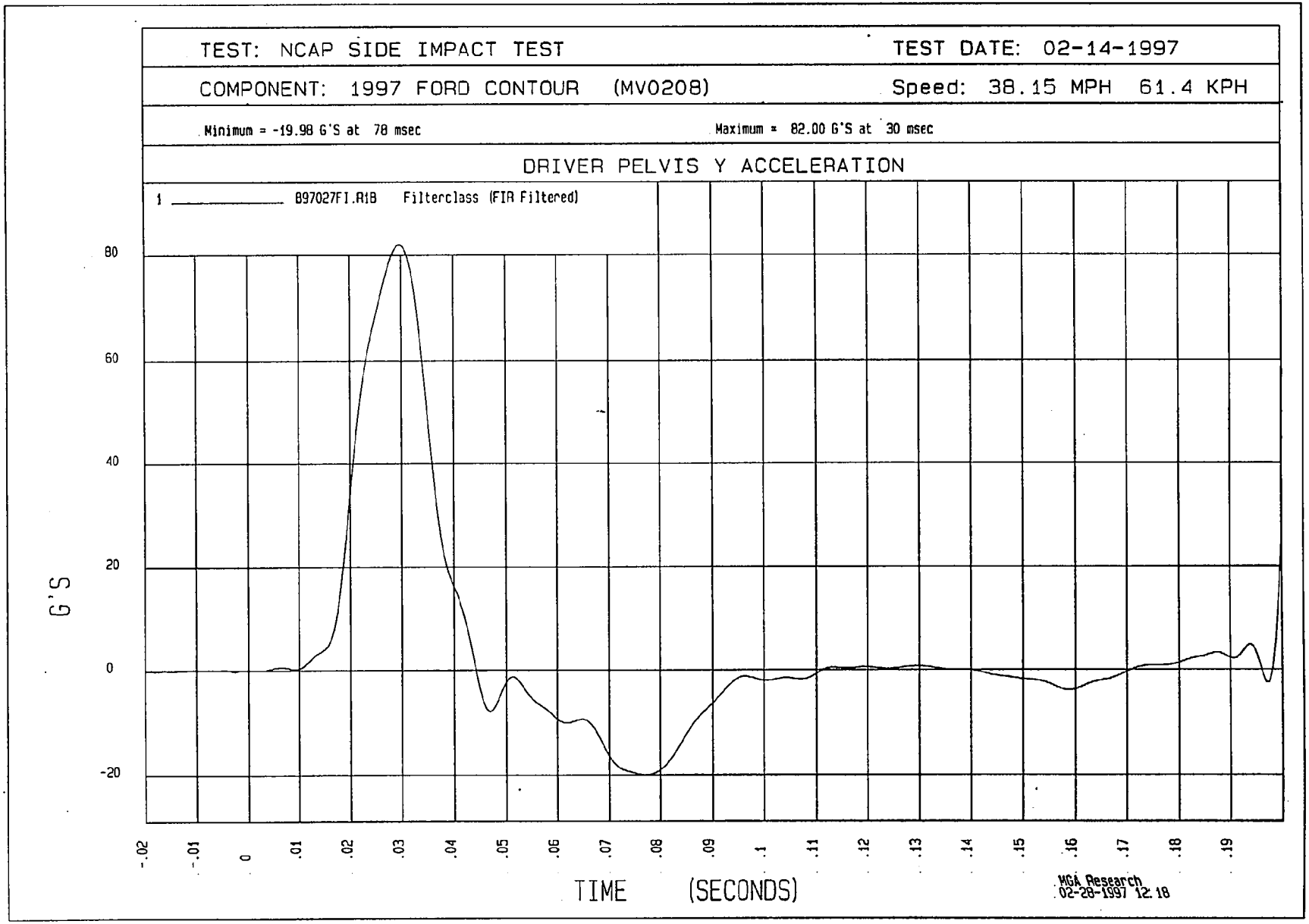
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-28-1997 12:18

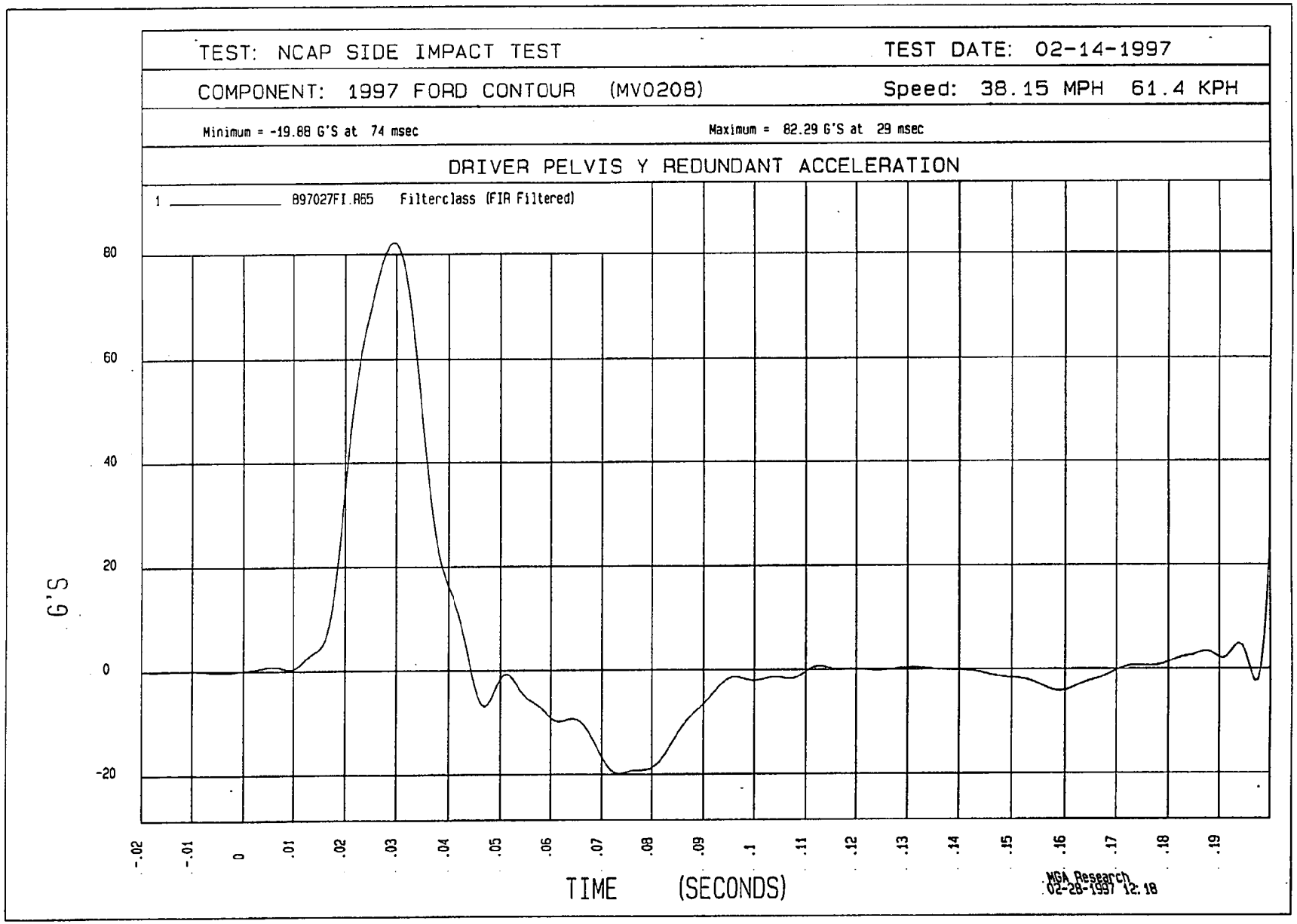

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -17.87 G'S at 83 msec
Maximum = 69.54 G'S at 34 msec
DRIVER LOWER RIB Y ACCELERATION
1 B97027FI.R16 Filterclass (FIR Filtered)
80
60
40
20
0
-20
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-28-1997 12:18

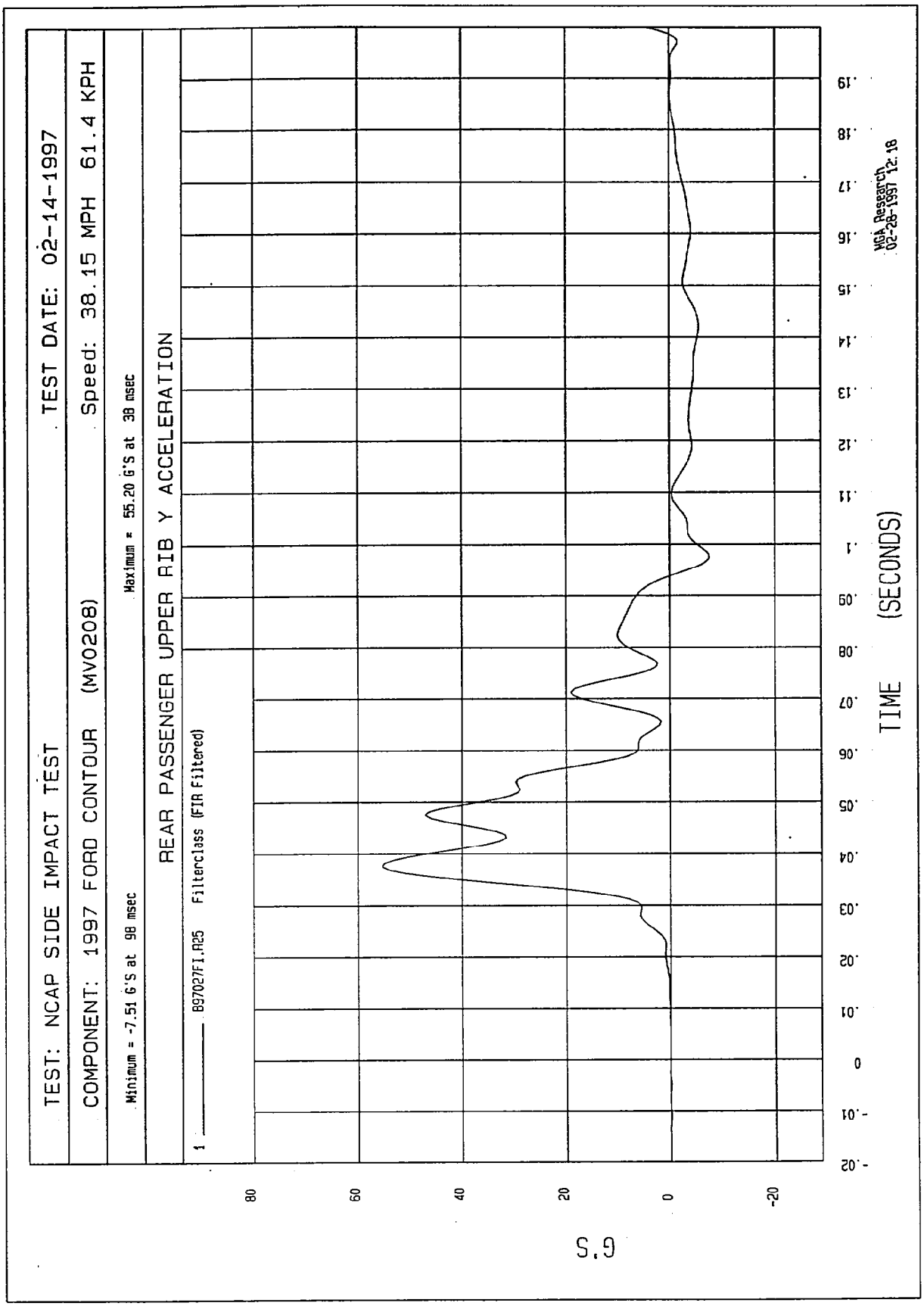

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -17.69 G'S at 83 msec
Maximum = 69.11 G'S at 34 msec
DRIVER LOWER RIB Y REDUNDANT ACCELERATION
1 B97027FI.R62 Filterclass (FIR Filtered)
80
60
40
20
0
-20
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-28-1997 12:18

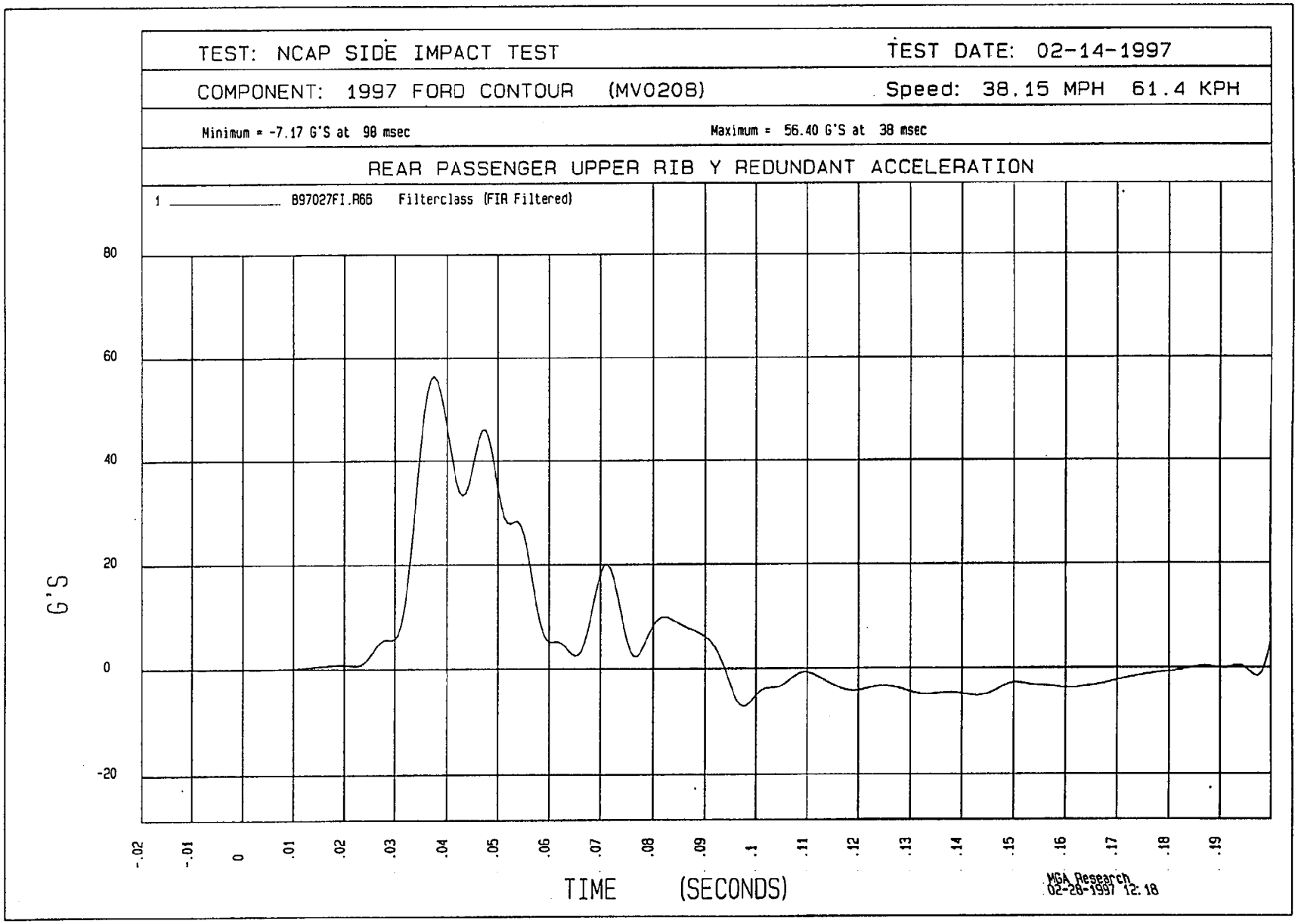

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -17.56 G'S at 66 msec
Maximum = 76.35 G'S at 29 msec
DRIVER LOWER SPINE Y ACCELERATION
1 B97027FI.A17 Filterclass (FIR Filtered)
80
60
40
20
0
-20
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-28-1997 12:18

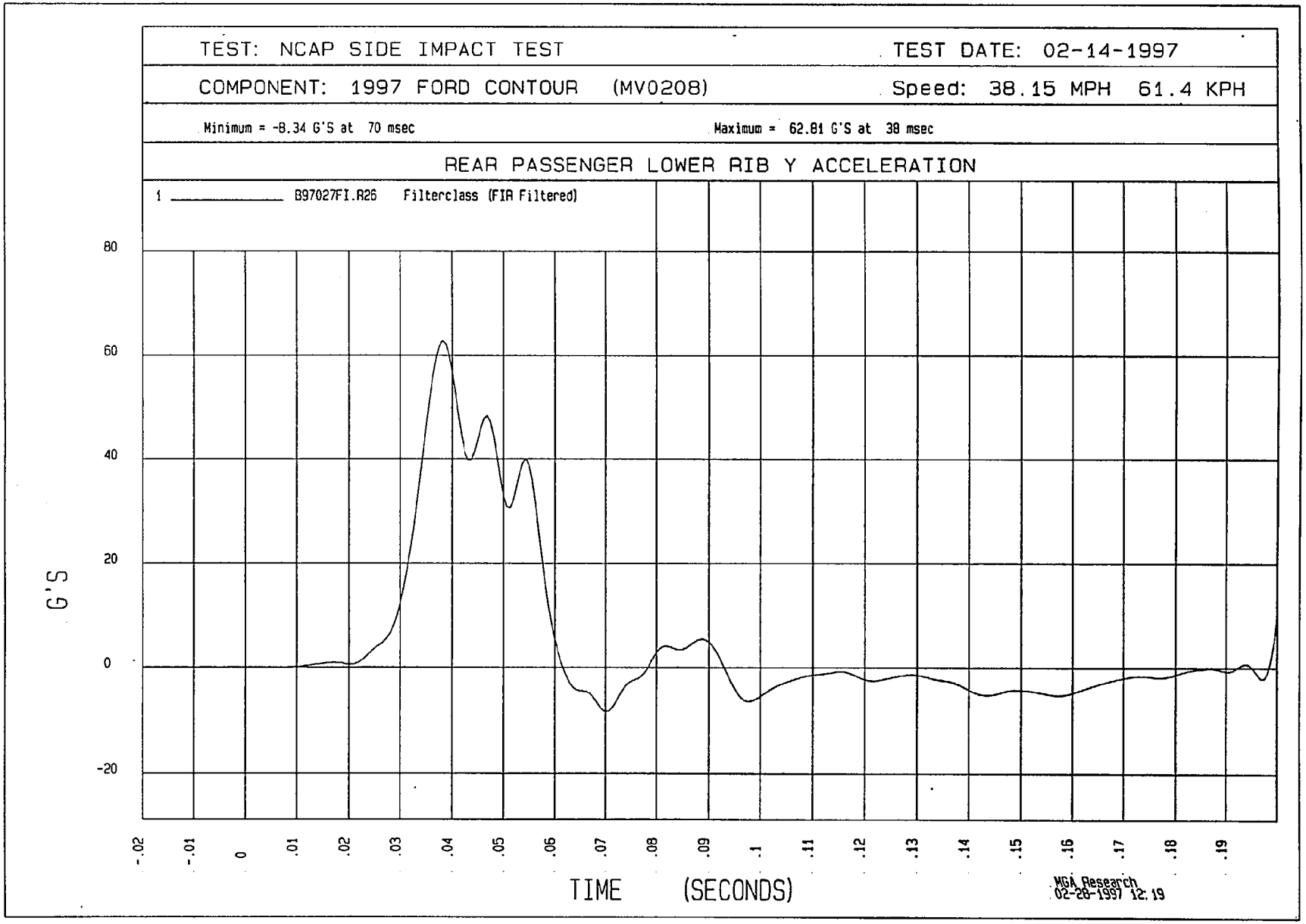

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -17.75 G'S at 66 msec
Maximum = 77.22 G'S at 28 msec
DRIVER LOWER SPINE Y REDUNDANT ACCELERATION
1 897027FI.A63 Filterclass (FIA Filtered)
80
60
40
20
0
-20
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-28-1997 12:18

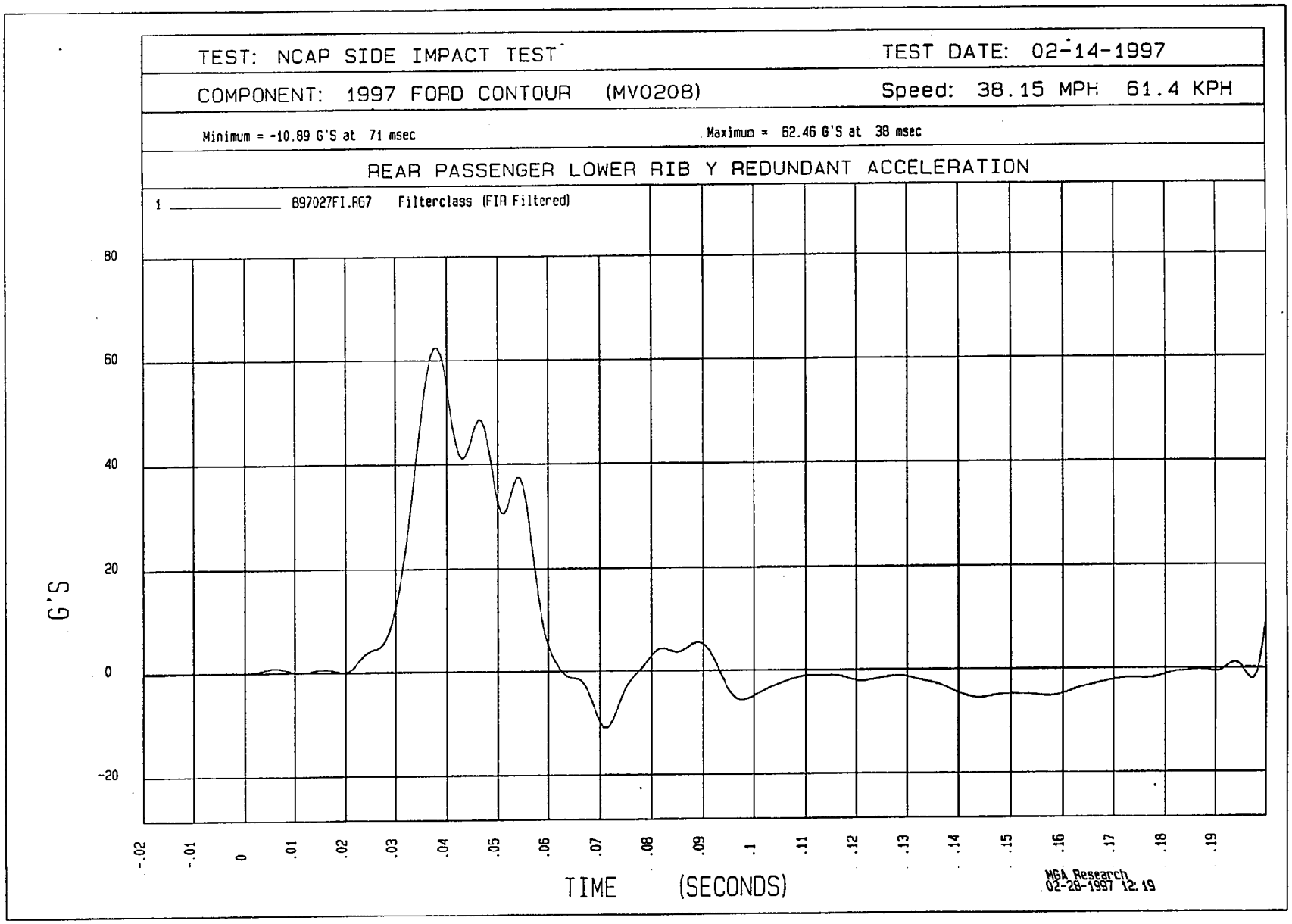

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -19.98 G'S at 78 msec
Maximum = 82.00 G'S at 30 msec
DRIVER PELVIS Y ACCELERATION
1 B97027FI.A1B Filterclass (FIR Filtered)
80
60
40
20
0
-20
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-28-1997 12:18


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -19.88 G'S at 74 msec
Maximum = 82.29 G'S at 29 msec
DRIVER PELVIS Y REDUNDANT ACCELERATION
1 B97027FI.A65 Filterclass (FIR Filtered)
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
02-28-1997 12:18


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -7.51 G'S at 98 msec
Maximum = 55.20 G'S at 38 msec
REAR PASSENGER UPPER RIB Y ACCELERATION
1 B97027FI.A25 Filterclass (FIR Filtered)
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
02-28-1997 12:18
S.9
6'S

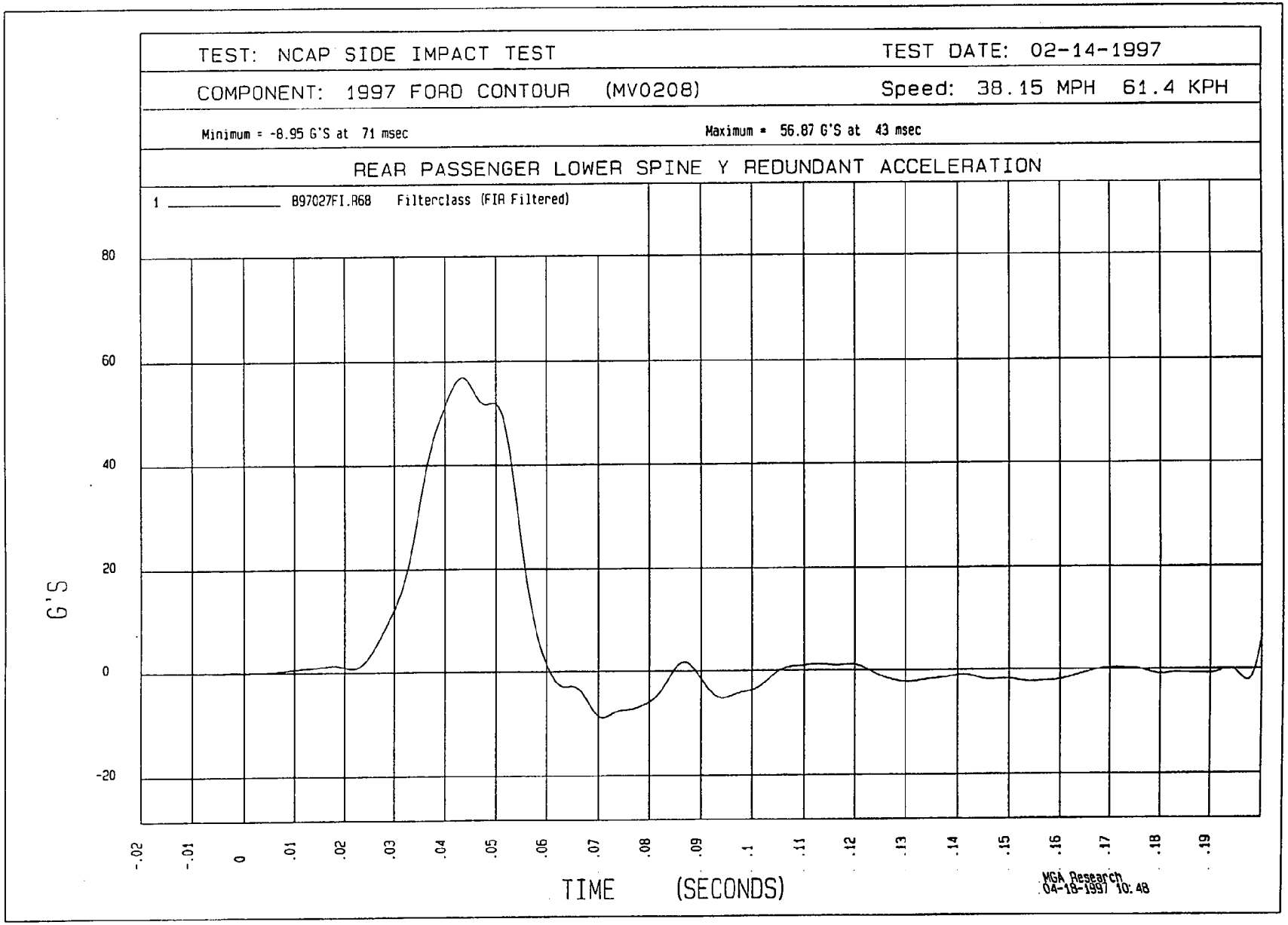

TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -7.17 G'S at 98 msec
Maximum = 56.40 G'S at 38 msec
REAR PASSENGER UPPER RIB Y REDUNDANT ACCELERATION
1 B97027FI.R66 Filterclass (FIR Filtered)
80
60
40
20
0
-20
G's
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
02-28-1997 12:18


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -8.34 G'S at 70 msec
Maximum = 62.81 G'S at 38 msec
REAR PASSENGER LOWER RIB Y ACCELERATION
1 B97027FI.R26 Filterclass (FIR Filtered)
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
02-26-1997 12:19


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -10.89 G'S at 71 msec
Maximum = 62.46 G'S at 38 msec
REAR PASSENGER LOWER RIB Y REDUNDANT ACCELERATION
1 B97027FI.R67 Filterclass (FIR Filtered)
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
02-28-1997 12:19

REAR PASSENGER LOWER SPINE Y ACCELERATION VS. TIME

NO VALID DATA COLLECTED


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -8.95 G'S at 71 msec
Maximum = 56.87 G'S at 43 msec
REAR PASSENGER LOWER SPINE Y REDUNDANT ACCELERATION
1 B97027FI.R68 Filterclass (FIR Filtered)
80
60
40
20
0
-20
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
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.16
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.18
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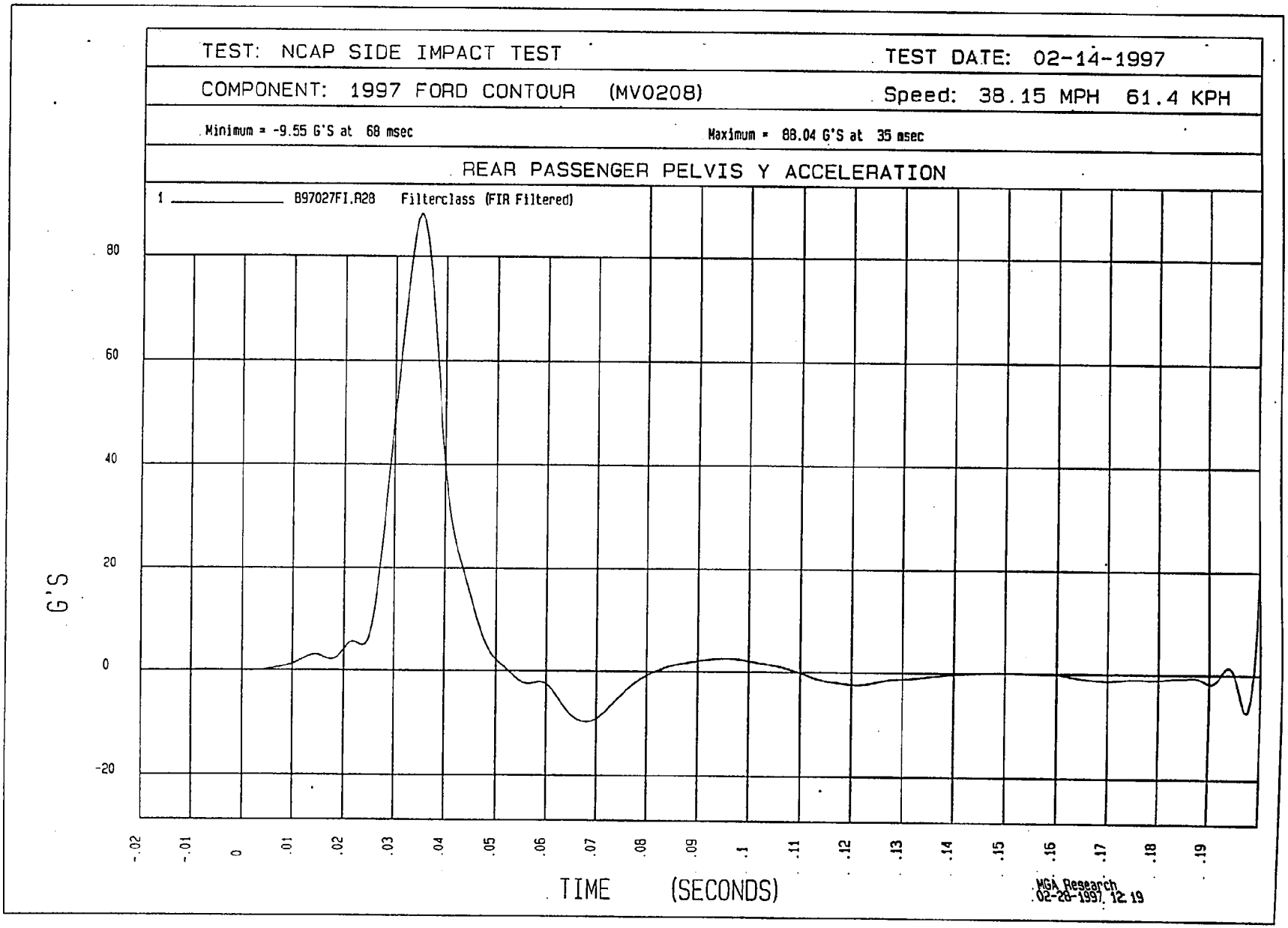
TIME (SECONDS)
MGA Research
04-18-1997 10:48


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -9.55 G'S at 68 msec
Maximum = 88.04 G'S at 35 msec
REAR PASSENGER PELVIS Y ACCELERATION
1 B97027FI.A28 Filterclass (FIR Filtered)
80
60
40
20
0
-20
G's
-.02
-.01
0
.01
.02
.03
.04
.05
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.07
.08
.09
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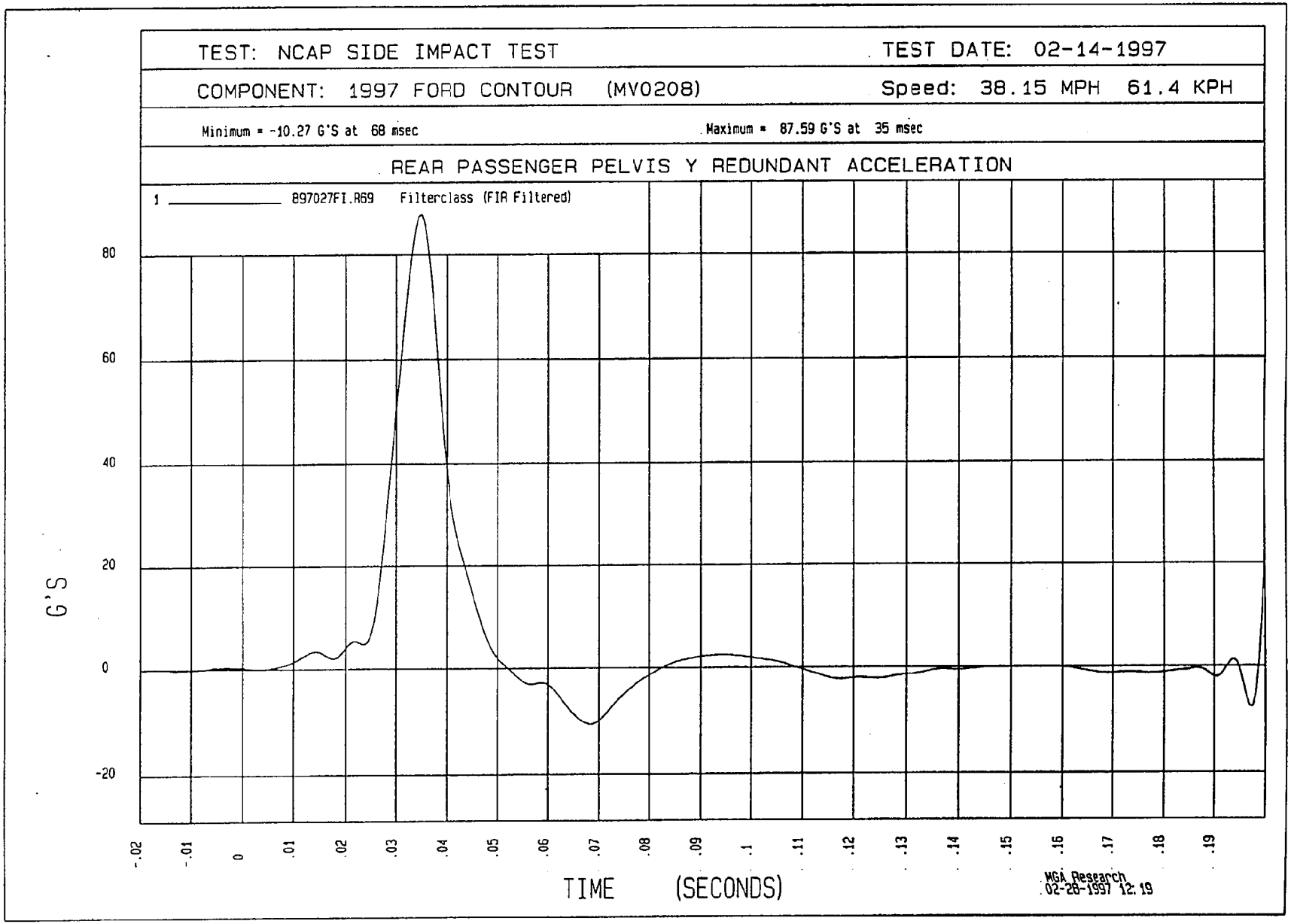
TIME (SECONDS)
MGA Research
02-28-1997 12:19


TEST: NCAP SIDE IMPACT TEST
TEST DATE: 02-14-1997
COMPONENT: 1997 FORD CONTOUR (MV0208)
Speed: 38.15 MPH 61.4 KPH
Minimum = -10.27 G'S at 68 msec
Maximum = 87.59 G'S at 35 msec
REAR PASSENGER PELVIS Y REDUNDANT ACCELERATION
1 897027FI.R69 Filterclass (FIA Filtered)
80
60
40
20
0
-20
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
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TIME (SECONDS)
MGA Research
02-28-1997 12:19

APPENDIX C

SID CONFIGURATION AND PERFORMANCE VERIFICATION

REPORT NO. MGA-97-DC19

DUMMY PERFORMANCE CALIBRATIONS

NEW CAR ASSESSMENT PROGRAM
SIDE IMPACT TEST

1997 FORD CONTOUR 4 DOOR
NHTSA NO. MV0208

MGA PROVING GROUNDS
5000 WARREN ROAD
BURLINGTON, WI 53105

Test Date: February 14, 1997

Report Date: March 10, 1997

FINAL REPORT

Prepared For:

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

TABLE OF CONTENTS

PRE-TEST CERTIFICATION DATA

Front Dummy Serial Number: 272

Calibration Test Results Summary

Dummy Serial Number: 272

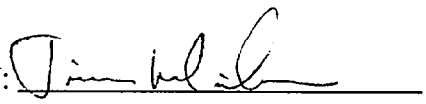
Pre-Test Calibration

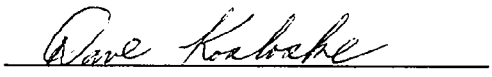
External Dimensions:	The dummy passed all external dimension requirements.
Thorax Impact Test:	The thorax passed all impact test requirements.
Pelvic Impact Test:	The pelvis passed all impact test requirements.
Abdominal Compression Test:	The abdomen passed all compression test requirements.
Lumbar Flexion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

SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 272 DATE OF VERIFICATION: February 13, 1997

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

MEASUREMENTS BY: 

APPROVED BY: 

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: February 13, 1997

DUMMY NUMBER: 272 TEST NUMBER: D97422

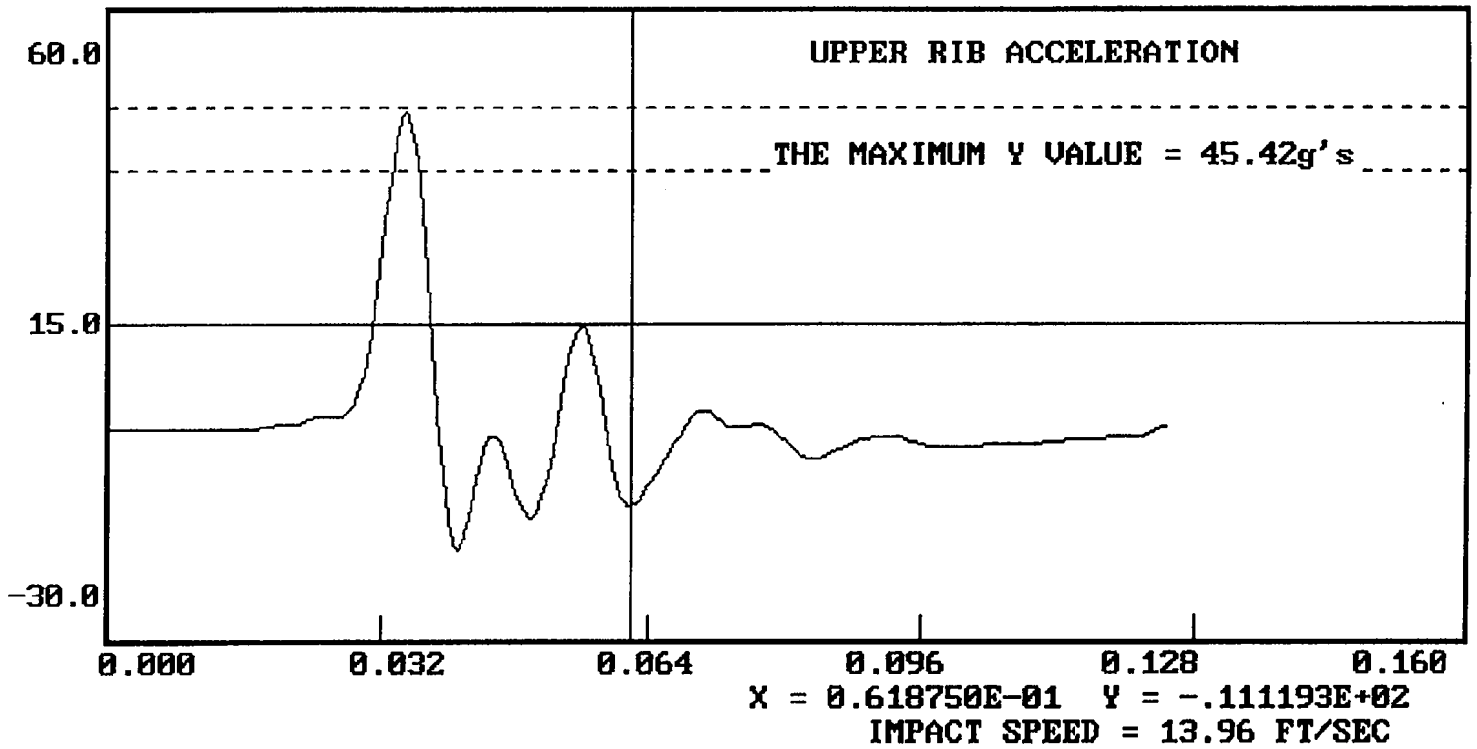
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	11%
PROBE SPEED	13.8 - 14.2 fps	14.0
UPPER RIB	37 - 46 g's	45
LOWER RIB	37 - 46 g's	43
LOWER SPINE	15 - 22 g's	20

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

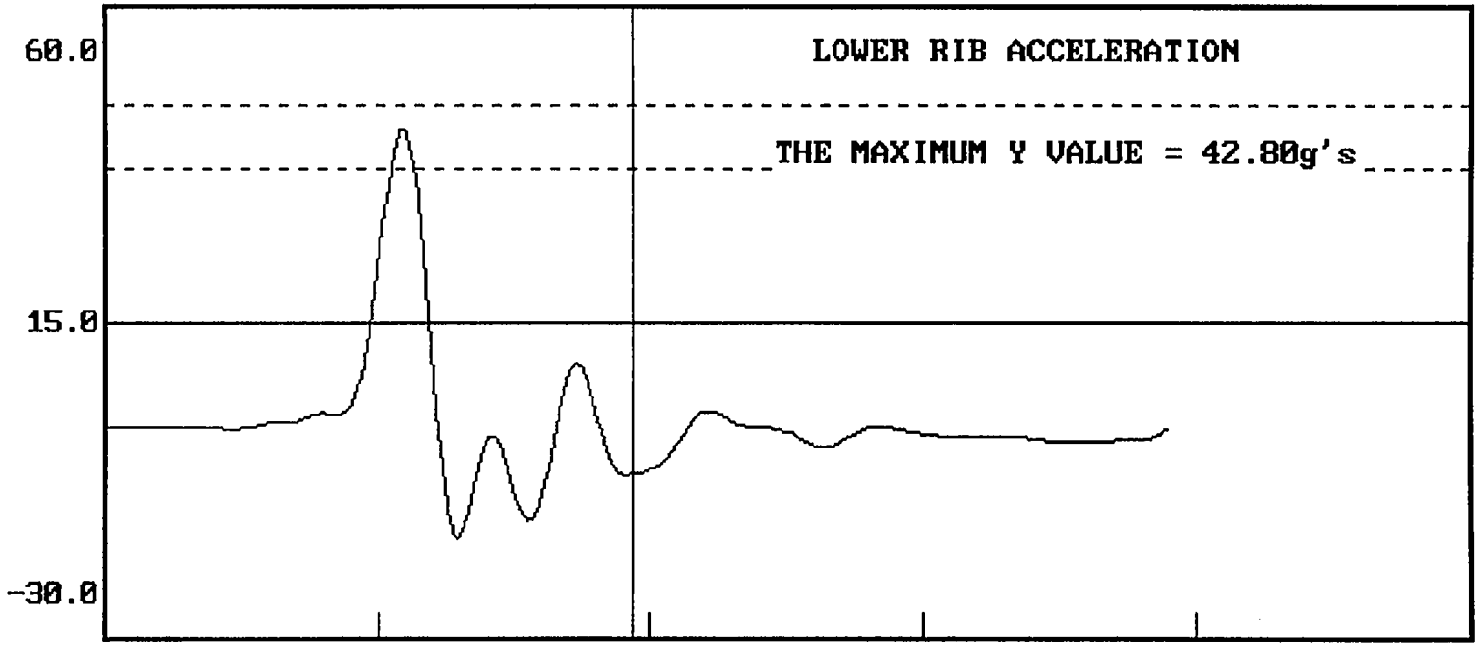
APPROVED BY _____

DUMMY CALIBRATION - THORAX IMPACT 02-13-1997 10:52
DUMMY # 272
ACCELERATION (G'S) VS. TIME ((SECONDS))



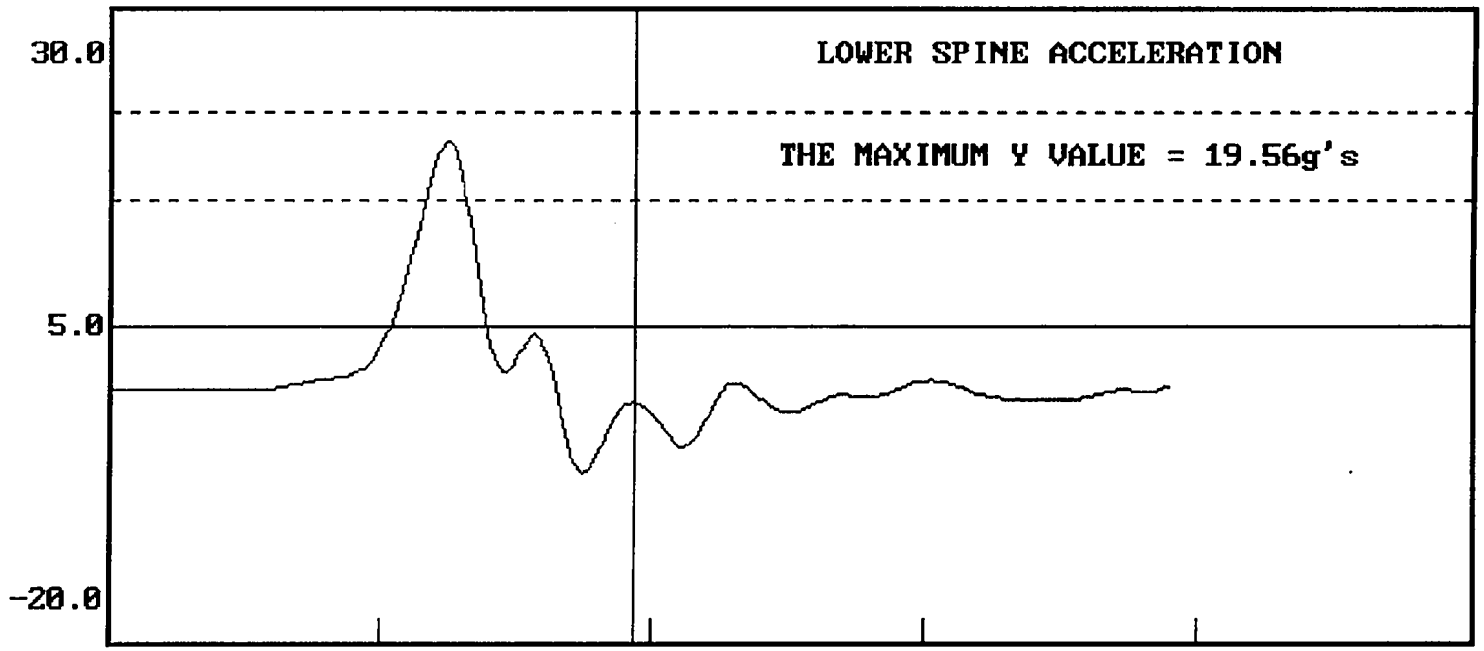
X = 0.618750E-01 Y = -.111193E+02
IMPACT SPEED = 13.96 FT/SEC

DUMMY CALIBRATION - THORAX IMPACT 02-13-1997 10:52
DUMMY # 272
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.661834E+01
IMPACT SPEED = 13.96 FT/SEC

DUMMY CALIBRATION - THORAX IMPACT 02-13-1997 10:54
DUMMY # 272
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.105000E+01
IMPACT SPEED = 13.96 FT/SEC

MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

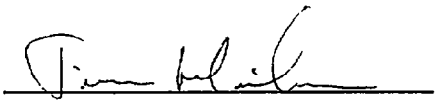
SIDE IMPACT DUMMY (SID)

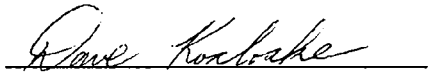
DATE: February 13, 1997

DUMMY NUMBER: 272 TEST NUMBER: D97423

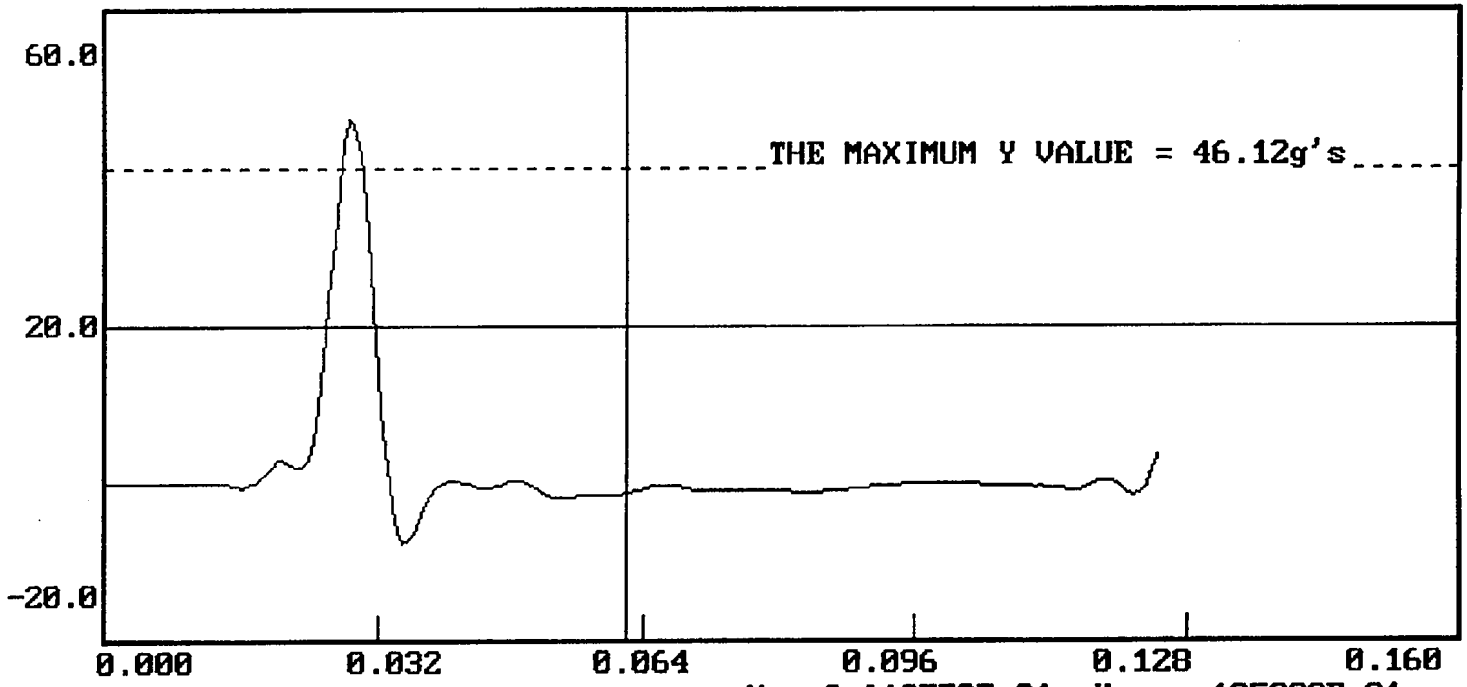
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	11%
PROBE SPEED	13.8 - 14.2 f/s	13.9
PELVIS ACCELERATION	40 - 60 g's	46

TEST MEETS SPECIFICATIONS

TECHNICIAN 

APPROVED BY 

DUMMY CALIBRATION - PELVIS IMPACT 02-13-1997 11:03
DUMMY # 272
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.135082E+01
IMPACT SPEED = 13.91 FT/SEC

MGA RESEARCH CORPORATION

ABDOMINAL COMPRESSION TEST
(PRELOAD = 10 LBS)

SIDE IMPACT DUMMY (SID)

DATE: February 13, 1997

DUMMY NUMBER: 272 TEST NUMBER: D97424

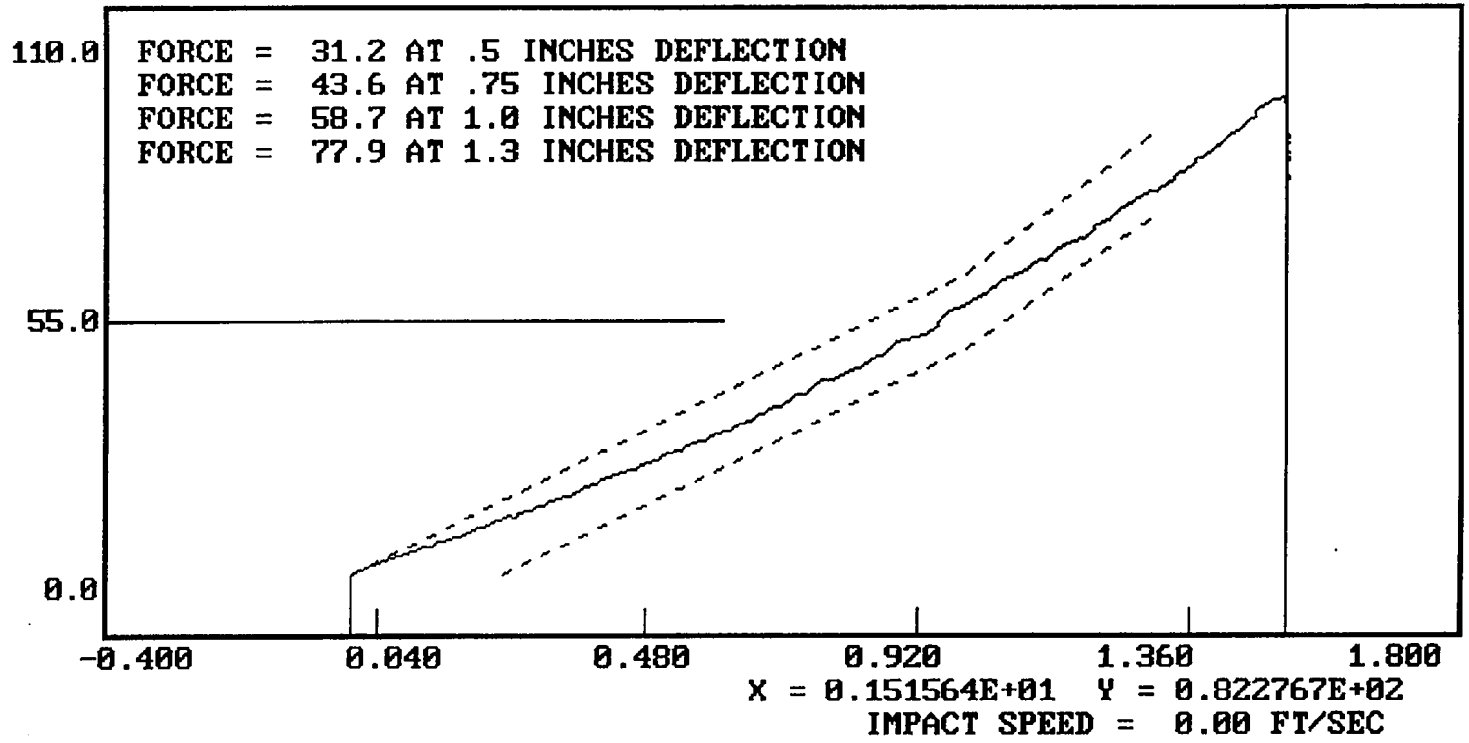
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	14%
FORCE @ 0.5 in	23.3 - 36.5 lbs	31.2
FORCE @ 0.75 in	36.7 - 49.8 lbs	43.6
FORCE @ 1.0 in	50 - 63 lbs	59
FORCE @ 1.3 in	73 - 88 lbs	78

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

DUMMY CALIBRATION - ABDOMEN COMPRESSION 02-13-1997 18:02
DUMMY # 272
ABDOMEN FORCE (LBS) VS. ABDOMEN DISPLACEMENT (INCHES)



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

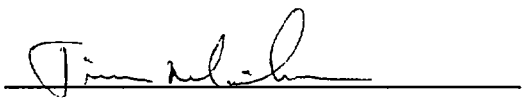
SIDE IMPACT DUMMY (SID)

DATE: February 13, 1997

DUMMY NUMBER: 272 TEST NUMBER: D97425

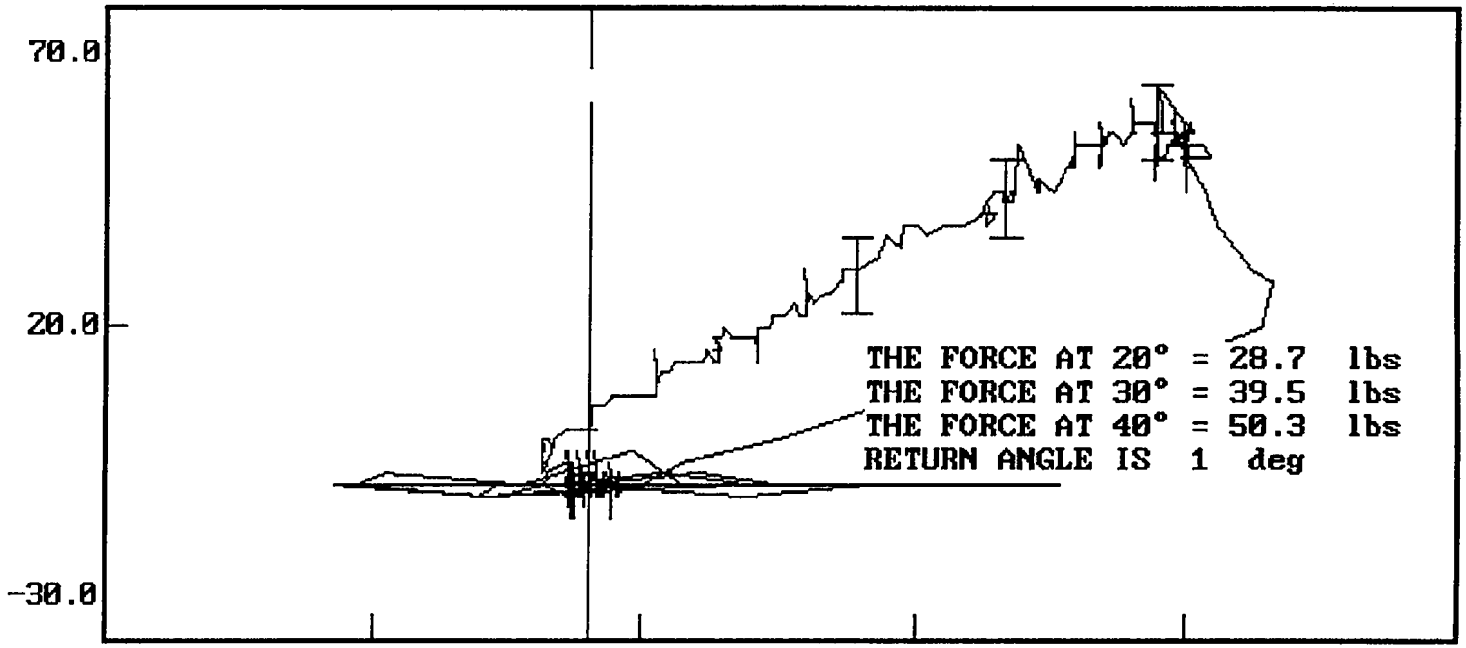
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	14%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	29
FORCE @ 30°	34 - 46 lbs	40
FORCE @ 40°	46 - 58 lbs	50
RETURN ANGLE	12° maximum	1°

TEST MEETS SPECIFICATIONS

TECHNICIAN 

APPROVED BY 

DUMMY CALIBRATION - LUMBAR FLEXION 02-13-1997 17:37
DUMMY # 272
FORCE (LBS) VS. TORSO ROTATION (DEGREES)



X = 0.266187E+01 Y = -.538537E+01
IMPACT SPEED = 0.00 FT/SEC

PRE-TEST CERTIFICATION DATA

Rear Dummy Serial Number: 271

Calibration Test Results Summary

Dummy Serial Number: 271

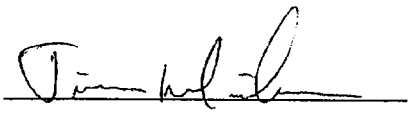
Pre-Test Calibration

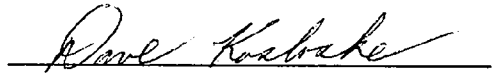
External Dimensions:	The dummy passed all external dimension requirements.
Thorax Impact Test:	The thorax passed all impact test requirements.
Pelvic Impact Test:	The pelvis passed all impact test requirements.
Abdominal Compression Test:	The abdomen passed all compression test requirements.
Lumbar Flexion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

SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 271 DATE OF VERIFICATION: February 13, 1997

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

MEASUREMENTS BY: 

APPROVED BY: 

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

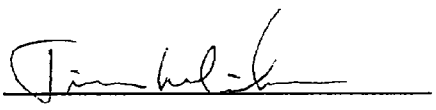
SIDE IMPACT DUMMY (SID)

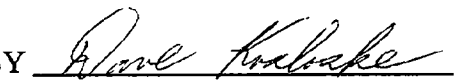
DATE: February 12, 1997

DUMMY NUMBER: 271 TEST NUMBER: D97412

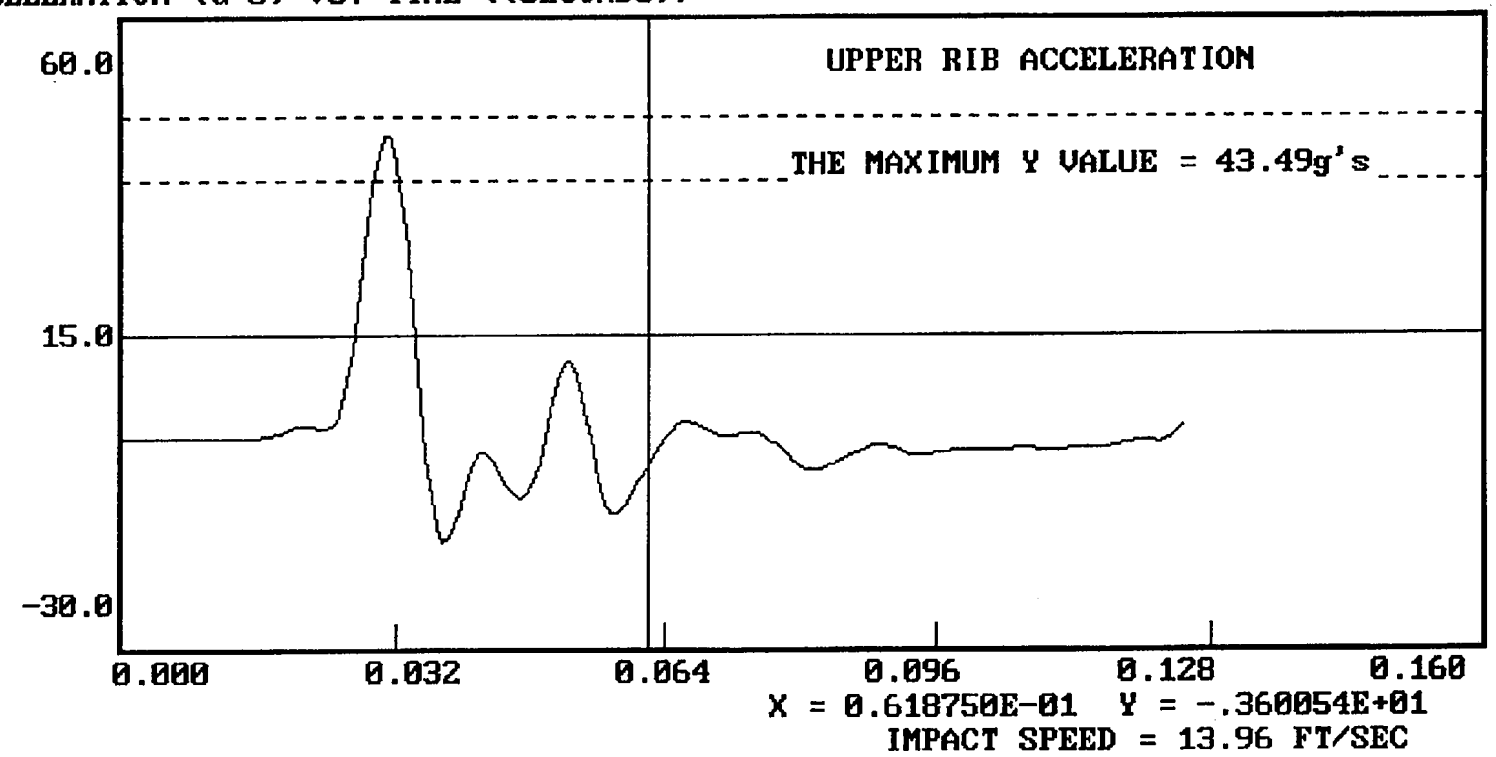
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	14%
PROBE SPEED	13.8 - 14.2 fps	14.0
UPPER RIB	37 - 46 g's	43
LOWER RIB	37 - 46 g's	45
LOWER SPINE	15 - 22 g's	20

TEST MEETS SPECIFICATIONS

TECHNICIAN 

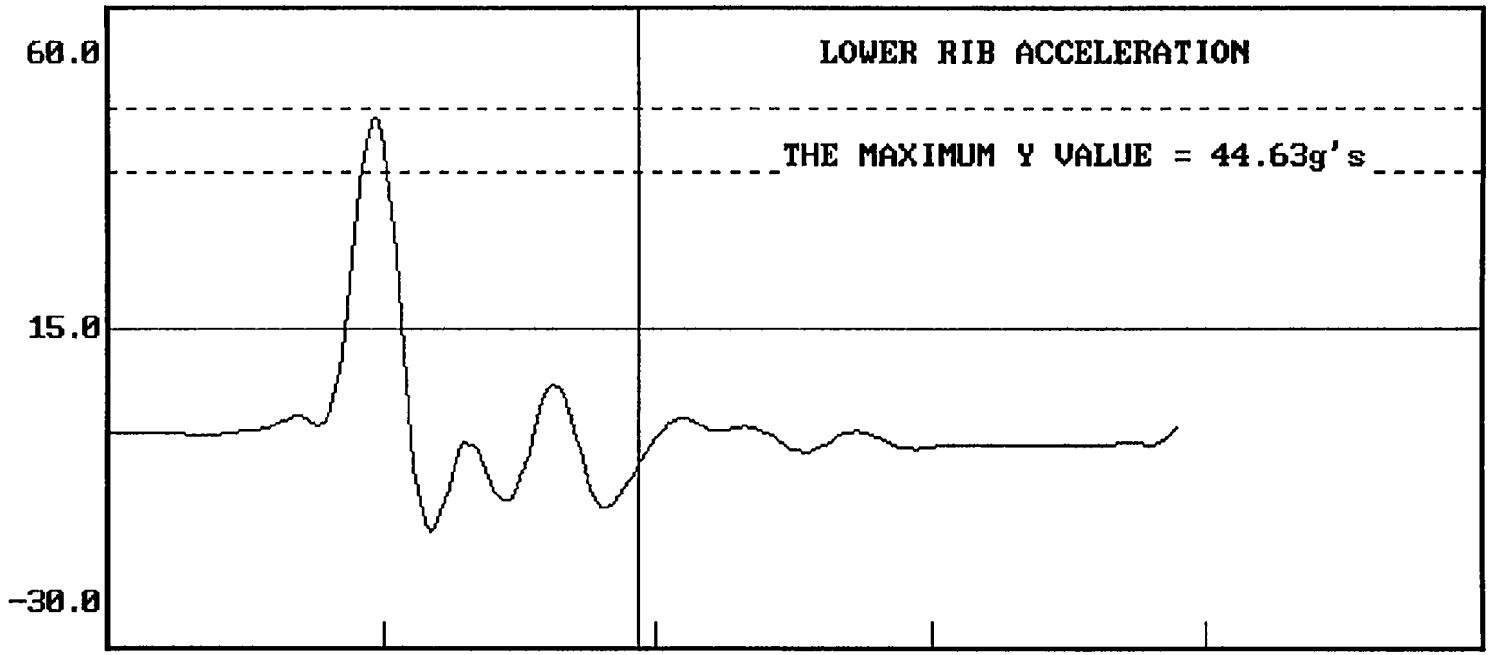
APPROVED BY 

DUMMY CALIBRATION - THORAX IMPACT 02-12-1997 15:12
DUMMY # 271
ACCELERATION (G'S) VS. TIME ((SECONDS))



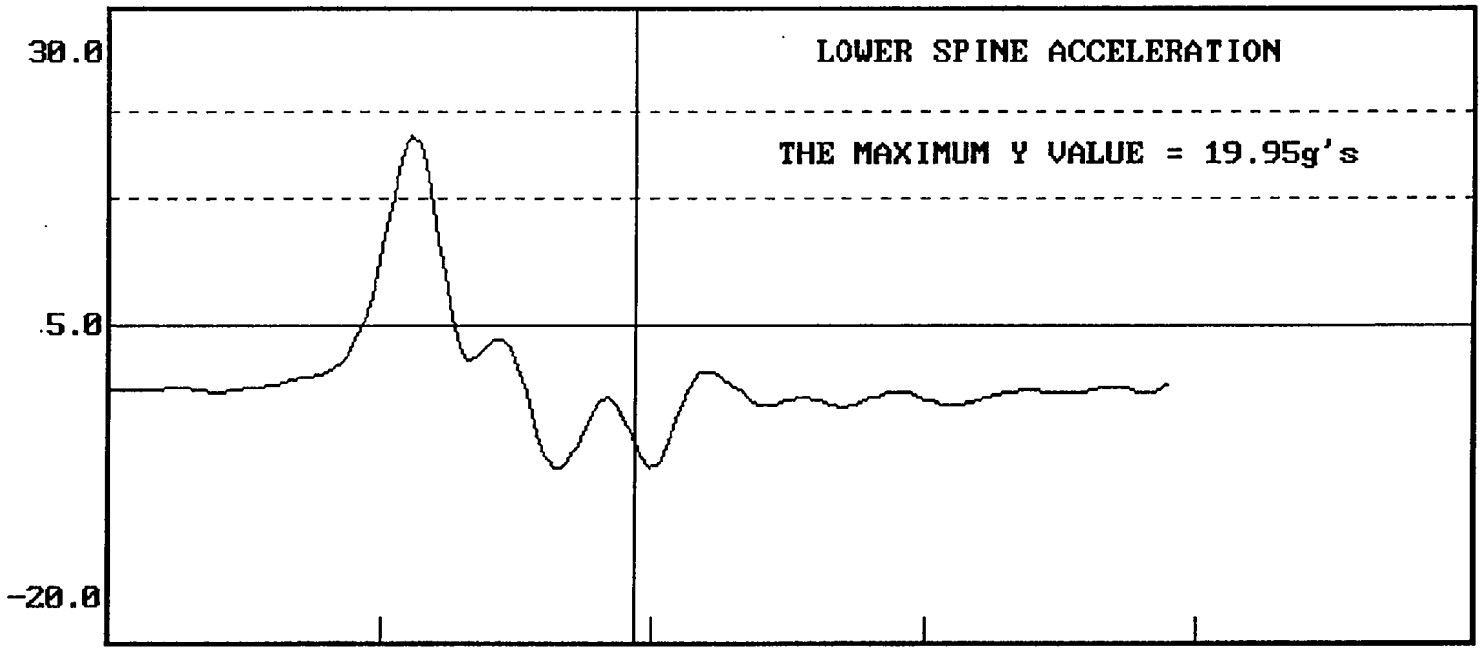
X = 0.618750E-01 Y = -.360054E+01
IMPACT SPEED = 13.96 FT/SEC

DUMMY CALIBRATION - THORAX IMPACT 02-12-1997 15:12
DUMMY # 271
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.418720E+01
IMPACT SPEED = 13.96 FT/SEC

DUMMY CALIBRATION - THORAX IMPACT 02-12-1997 15:14
DUMMY # 271
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.432519E+01
IMPACT SPEED = 13.96 FT/SEC

MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: February 12, 1997

DUMMY NUMBER: 271 TEST NUMBER: D97413

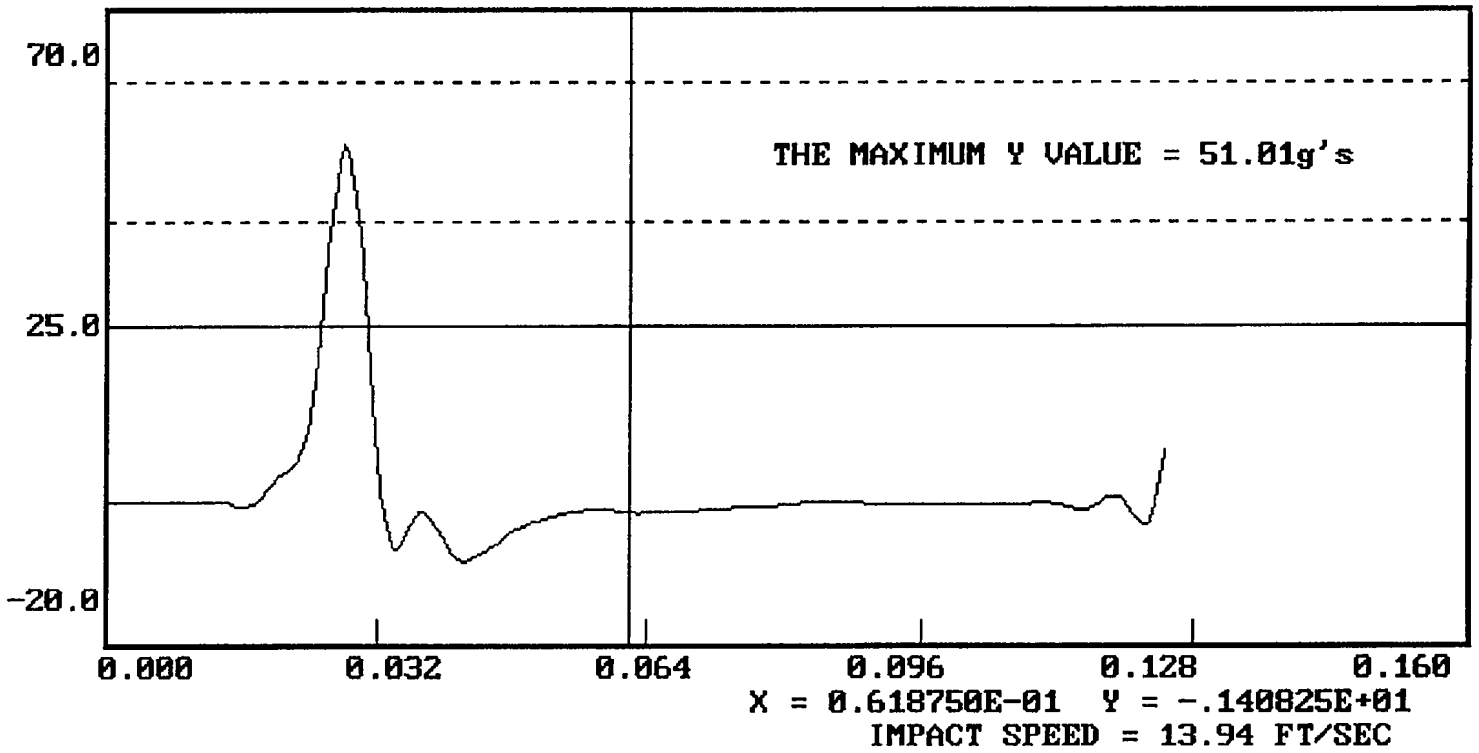
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	14%
PROBE SPEED	13.8 - 14.2 f/s	13.9
PELVIS ACCELERATION	40 - 60 g's	51

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

DUMMY CALIBRATION - PELVIS IMPACT 02-12-1997 15:36
DUMMY # 271
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.140825E+01
IMPACT SPEED = 13.94 FT/SEC

MGA RESEARCH CORPORATION

ABDOMINAL COMPRESSION TEST
(PRELOAD = 10 LBS)

SIDE IMPACT DUMMY (SID)

DATE: February 13, 1997

DUMMY NUMBER: 271 TEST NUMBER: D97414

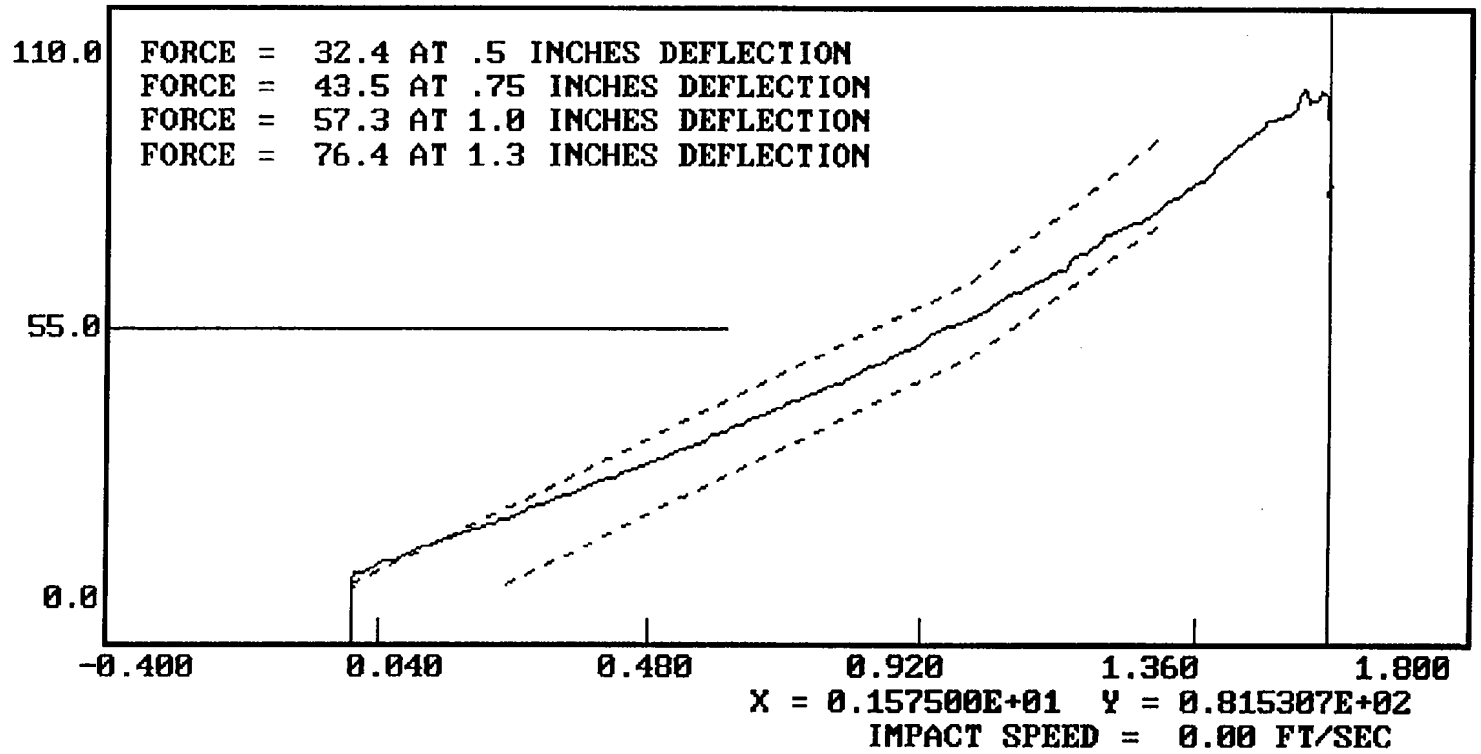
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	14%
FORCE @ 0.5 in	23.3 - 36.5 lbs	32.4
FORCE @ 0.75 in	36.7 - 49.8 lbs	43.5
FORCE @ 1.0 in	50 - 63 lbs	57
FORCE @ 1.3 in	73 - 88 lbs	76

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

DUMMY CALIBRATION - ABDOMEN COMPRESSION 02-13-1997 17:57
DUMMY # 271
ABDOMEN FORCE (LBS) VS. ABDOMEN DISPLACEMENT (INCHES)



X = 0.157500E+01 Y = 0.815307E+02
IMPACT SPEED = 0.00 FT/SEC

MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: February 13, 1997

DUMMY NUMBER: 271 TEST NUMBER: D97415

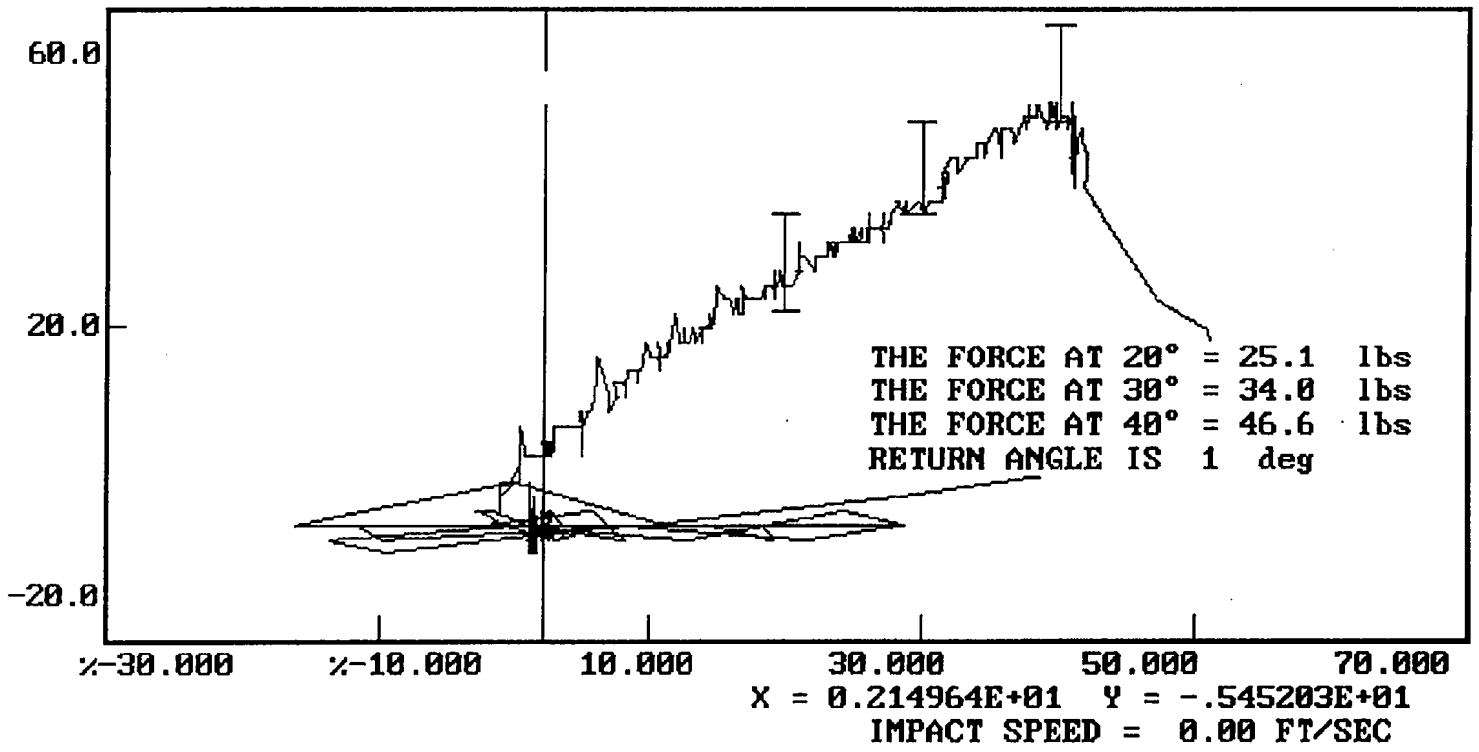
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	14%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	25
FORCE @ 30°	34 - 46 lbs	34
FORCE @ 40°	46 - 58 lbs	47
RETURN ANGLE	12° maximum	1°

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

DUMMY CALIBRATION - LUMBAR FLEXION 02-13-1997 17:13
DUMMY # 271
FORCE (LBS) VS. TORSO ROTATION (DEGREES)



POST-TEST CERTIFICATION DATA

Front Dummy Serial Number: 272

Calibration Test Results Summary

Dummy Serial Number: 272

Post-Test Calibration

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

SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 272 DATE OF VERIFICATION: March 3, 1997

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

MEASUREMENTS BY: _____

APPROVED BY: _____

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: February 26, 1997

DUMMY NUMBER: 272 TEST NUMBER: D97542

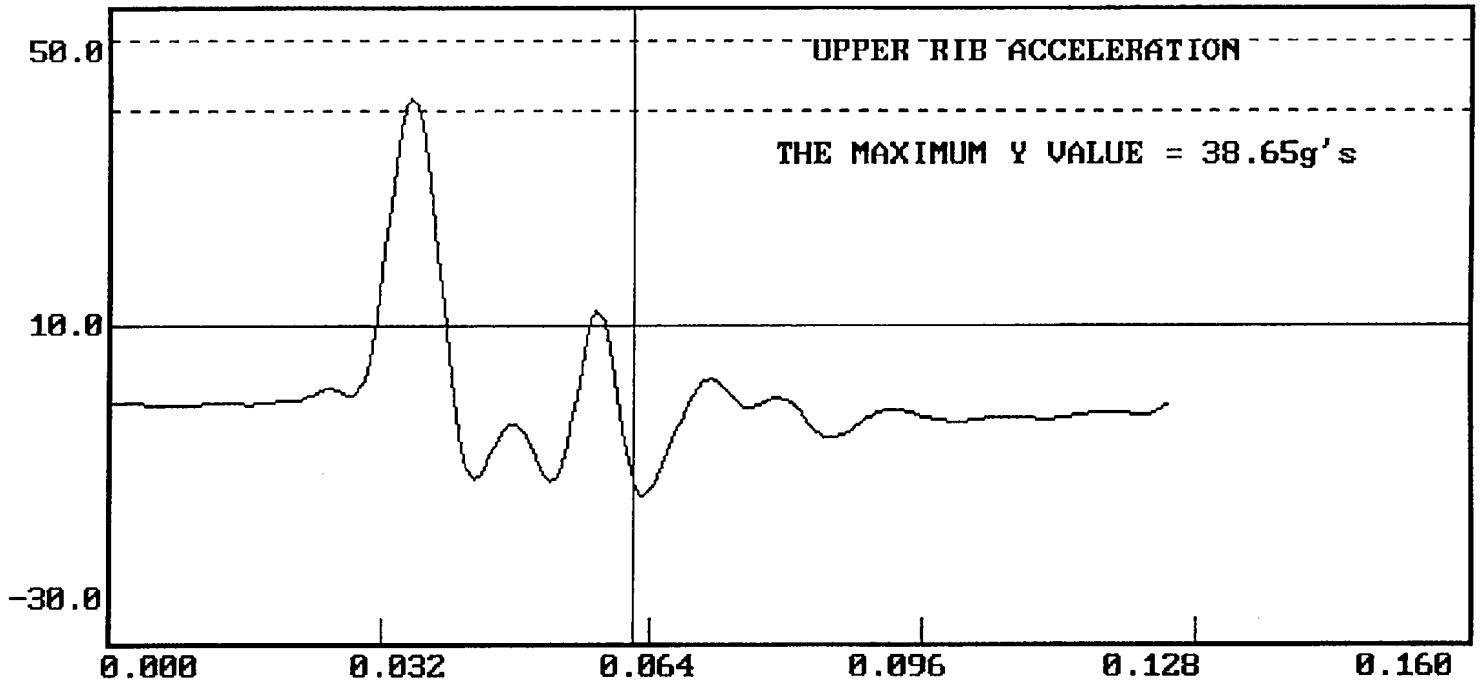
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	22%
PROBE SPEED	13.8 - 14.2 fps	14.0
UPPER RIB	37 - 46 g's	39
LOWER RIB	37 - 46 g's	39
LOWER SPINE	15 - 22 g's	18

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

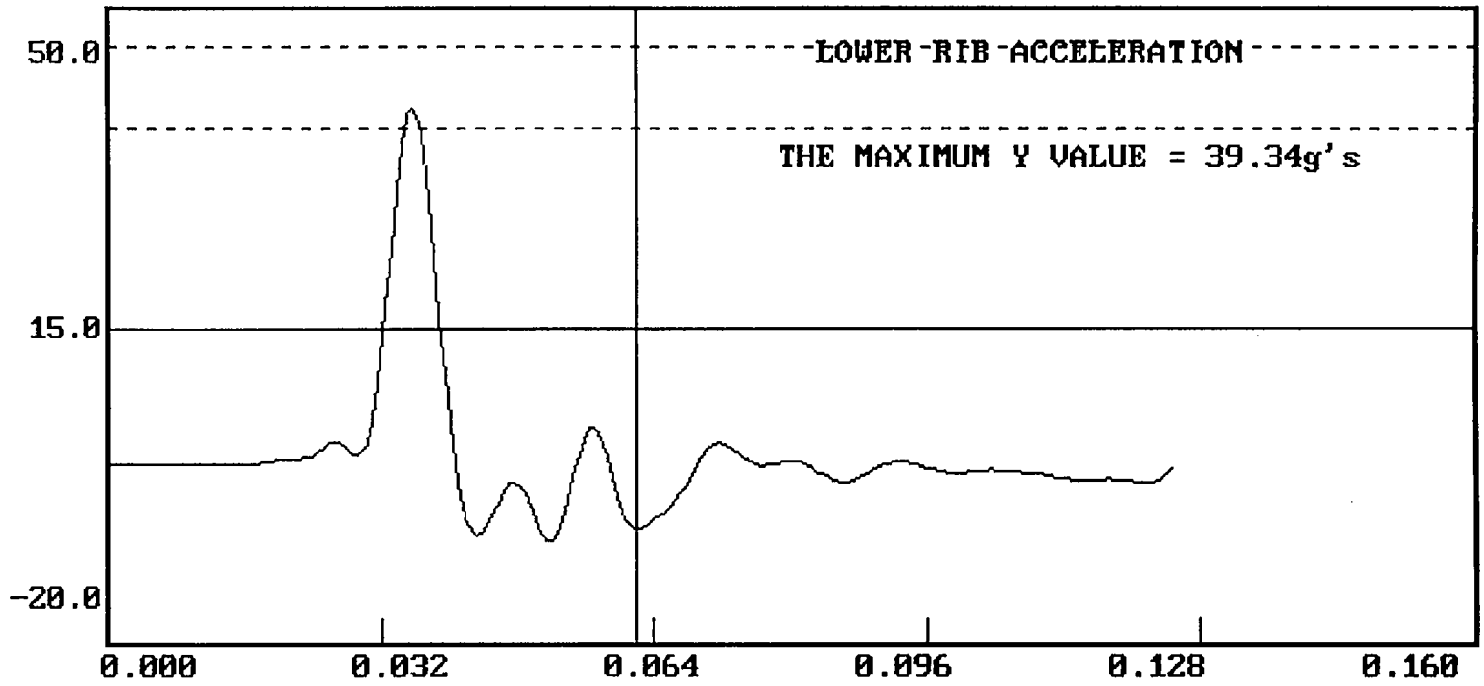
APPROVED BY _____

DUMMY CALIBRATION - THORAX IMPACT 02-26-1997 15:36
DUMMY # 272
ACCELERATION (G'S) VS. TIME ((SECONDS))



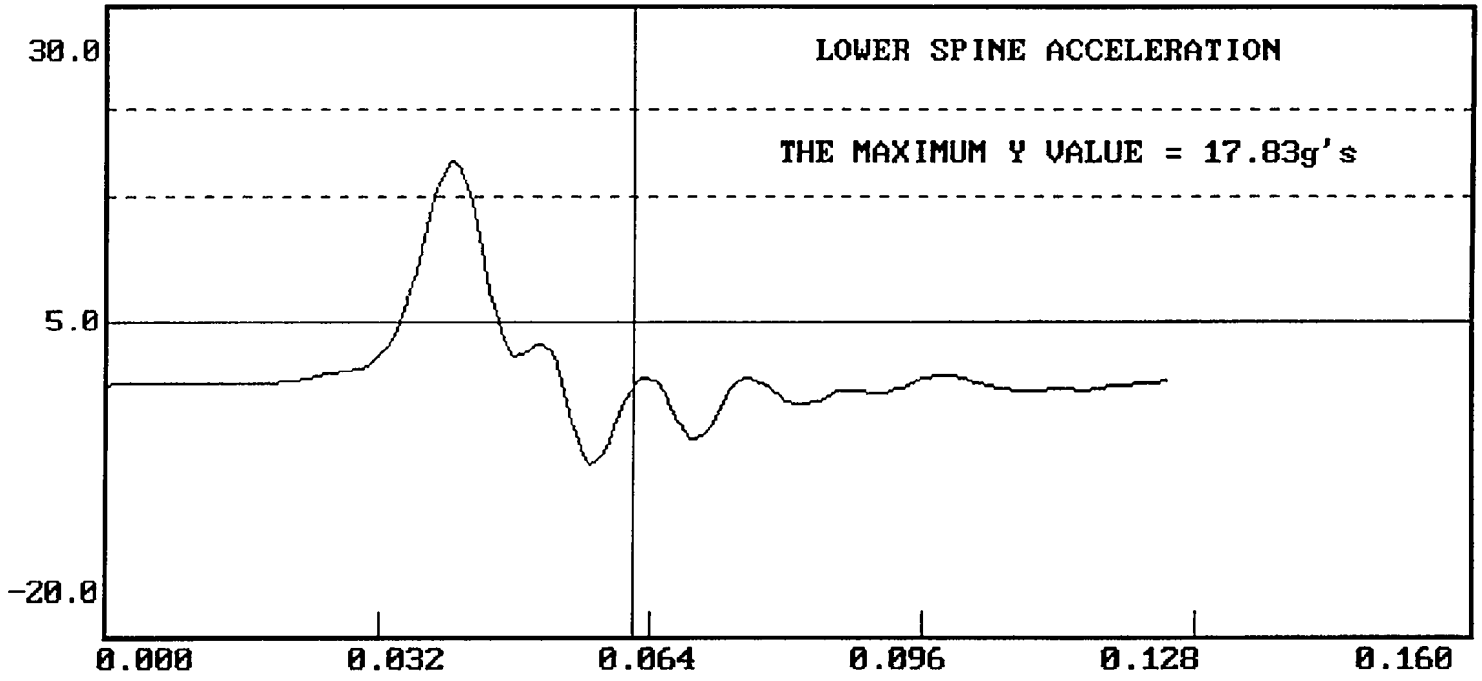
IMPACT SPEED = 14.01 FT/SEC

DUMMY CALIBRATION - THORAX IMPACT 02-26-1997 15:36
DUMMY # 272
ACCELERATION (G'S) VS. TIME ((SECONDS))



IMPACT SPEED = 14.01 FT/SEC

DUMMY CALIBRATION - THORAX IMPACT 02-26-1997 15:38
DUMMY # 272
ACCELERATION (G'S) VS. TIME ((SECONDS))



IMPACT SPEED = 14.01 FT/SEC

MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: February 27, 1997

DUMMY NUMBER: 272 TEST NUMBER: D97543

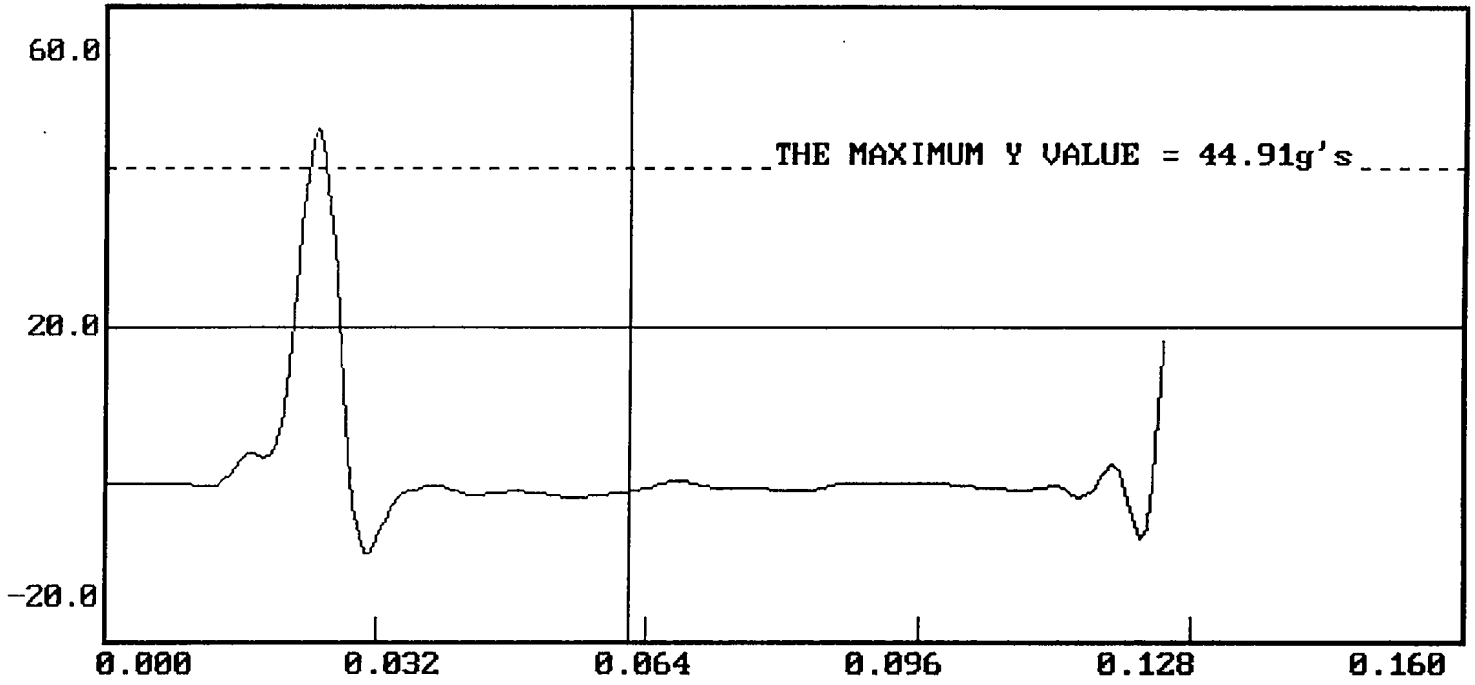
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	21%
PROBE SPEED	13.8 - 14.2 f/s	14.1
PELVIS ACCELERATION	40 - 60 g's	45

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

DUMMY CALIBRATION - PELVIS IMPACT 02-27-1997 08:30
DUMMY # 272
ACCELERATION (G'S) VS. TIME ((SECONDS))



IMPACT SPEED = 14.06 FT/SEC

MGA RESEARCH CORPORATION

ABDOMINAL COMPRESSION TEST
(PRELOAD = 10 LBS)

SIDE IMPACT DUMMY (SID)

DATE: March 3, 1997

DUMMY NUMBER: 272 TEST NUMBER: D97554

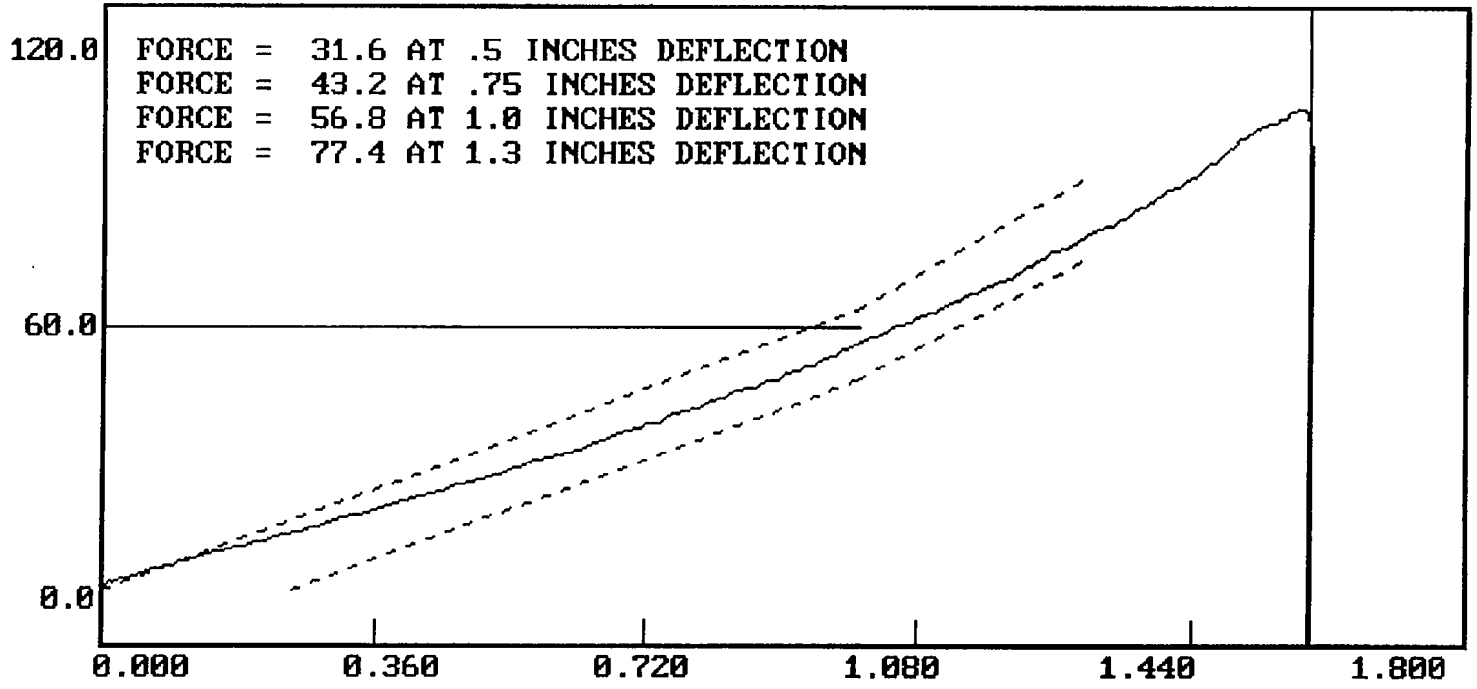
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
FORCE @ 0.5 in	23.3 - 36.5 lbs	31.6
FORCE @ 0.75 in	36.7 - 49.8 lbs	43.2
FORCE @ 1.0 in	50 - 63 lbs	57
FORCE @ 1.3 in	73 - 88 lbs	77

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

DUMMY CALIBRATION - ABDOMEN COMPRESSION 03-03-1997 11:16
DUMMY # 272
ABDOMEN FORCE (LBS) VS. ABDOMEN DISPLACEMENT (INCHES)



IMPACT SPEED = 0.00 FT/SEC

MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: February 28, 1997

DUMMY NUMBER: 272 TEST NUMBER: D97545

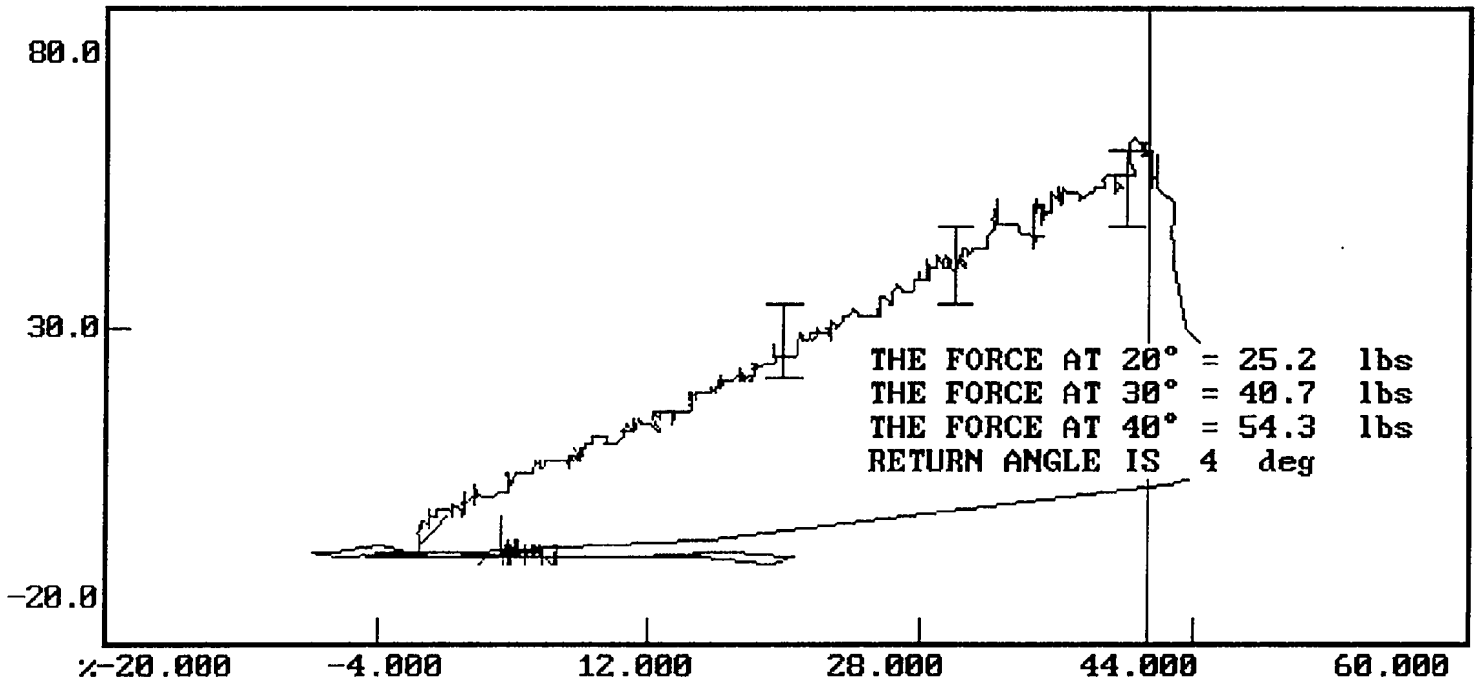
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	25
FORCE @ 30°	34 - 46 lbs	41
FORCE @ 40°	46 - 58 lbs	54
RETURN ANGLE	12° maximum	4°

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

DUMMY CALIBRATION - LUMBAR FLEXION 02-28-1997 16:25
DUMMY # 272
FORCE (LBS) VS. TORSO ROTATION (DEGREES)



IMPACT SPEED = 0.00 FT/SEC

POST-TEST CERTIFICATION DATA

Rear Dummy Serial Number: 271

Calibration Test Results Summary

Dummy Serial Number: 271

Post-Test Calibration

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

SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 271 DATE OF VERIFICATION: March 3, 1997

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

MEASUREMENTS BY: _____

APPROVED BY: _____

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

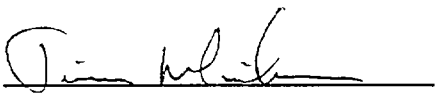
SIDE IMPACT DUMMY (SID)

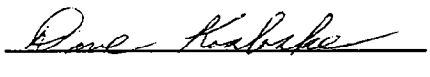
DATE: February 26, 1997

DUMMY NUMBER: 271 TEST NUMBER: D97532

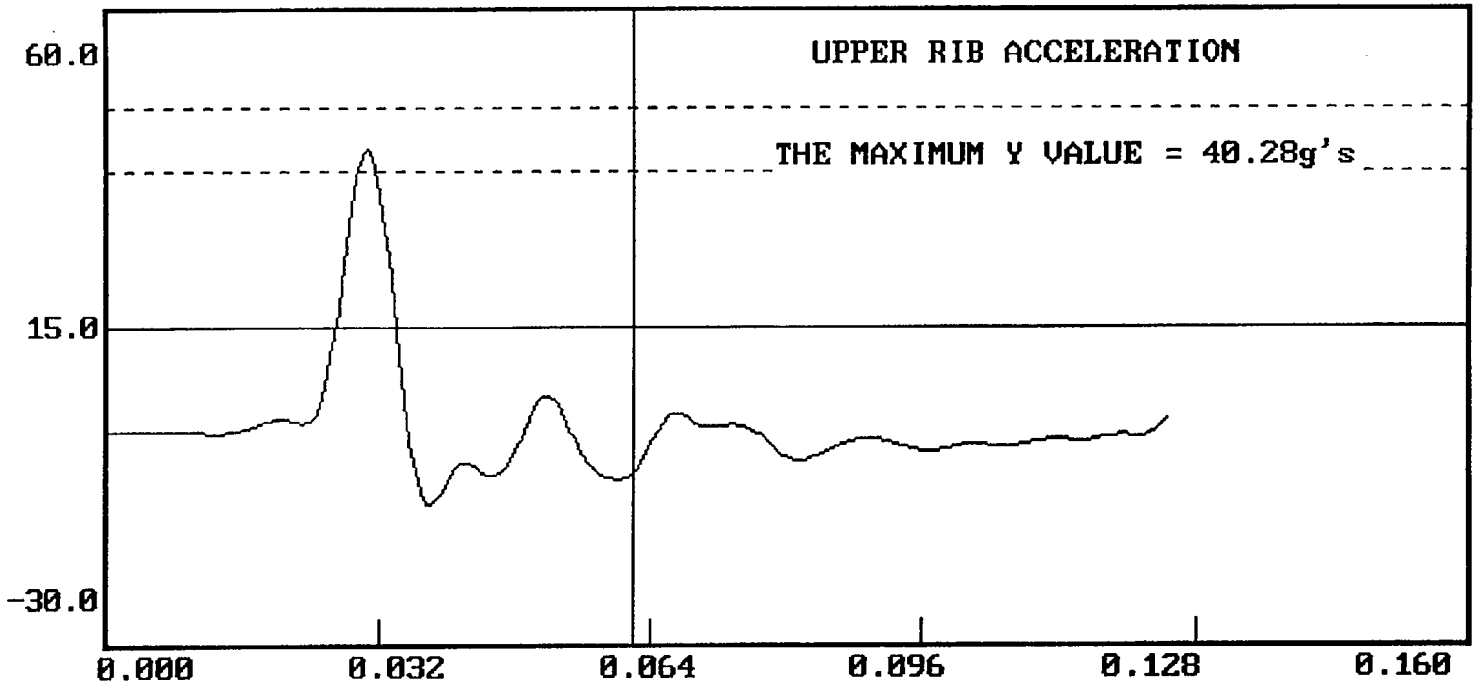
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	18%
PROBE SPEED	13.8 - 14.2 fps	14.1
UPPER RIB	37 - 46 g's	40
LOWER RIB	37 - 46 g's	40
LOWER SPINE	15 - 22 g's	21

TEST MEETS SPECIFICATIONS

TECHNICIAN 

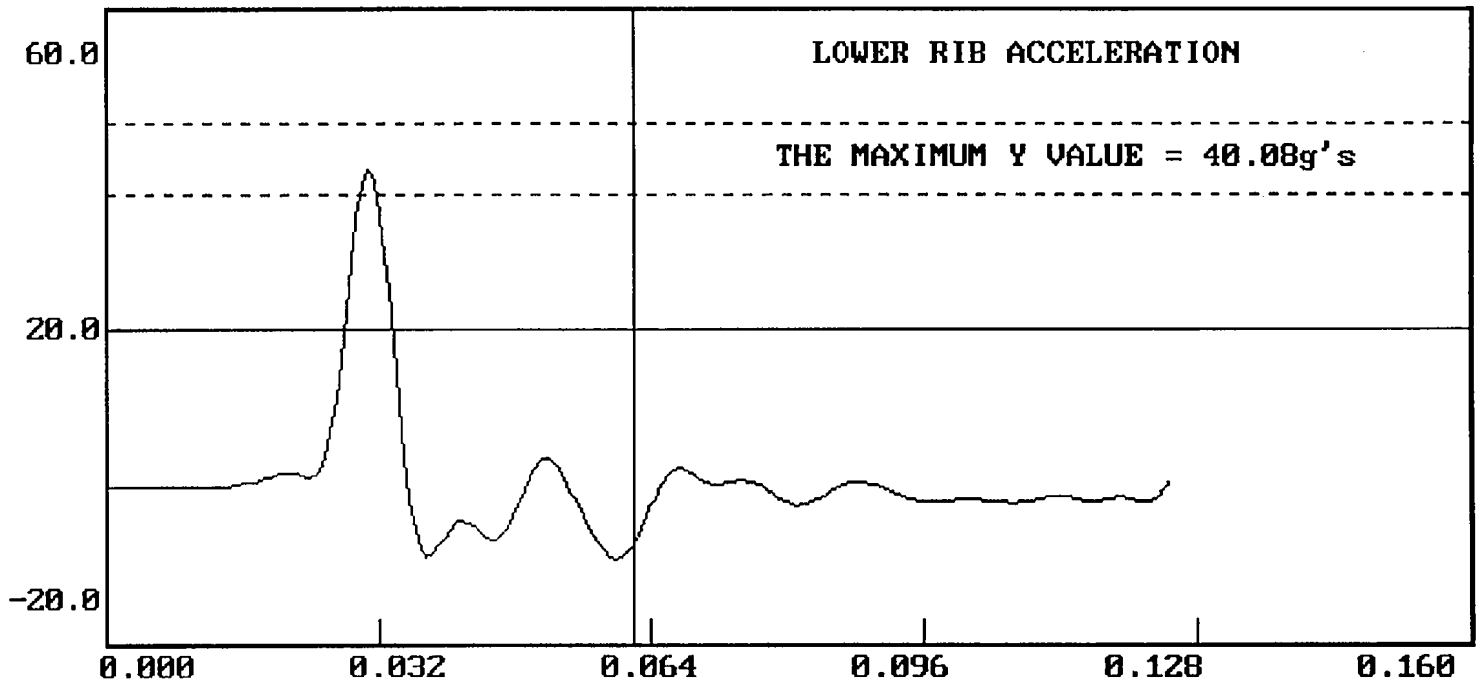
APPROVED BY 

DUMMY CALIBRATION - THORAX IMPACT 02-26-1997 09:34
DUMMY # 271
ACCELERATION (G'S) VS. TIME ((SECONDS))



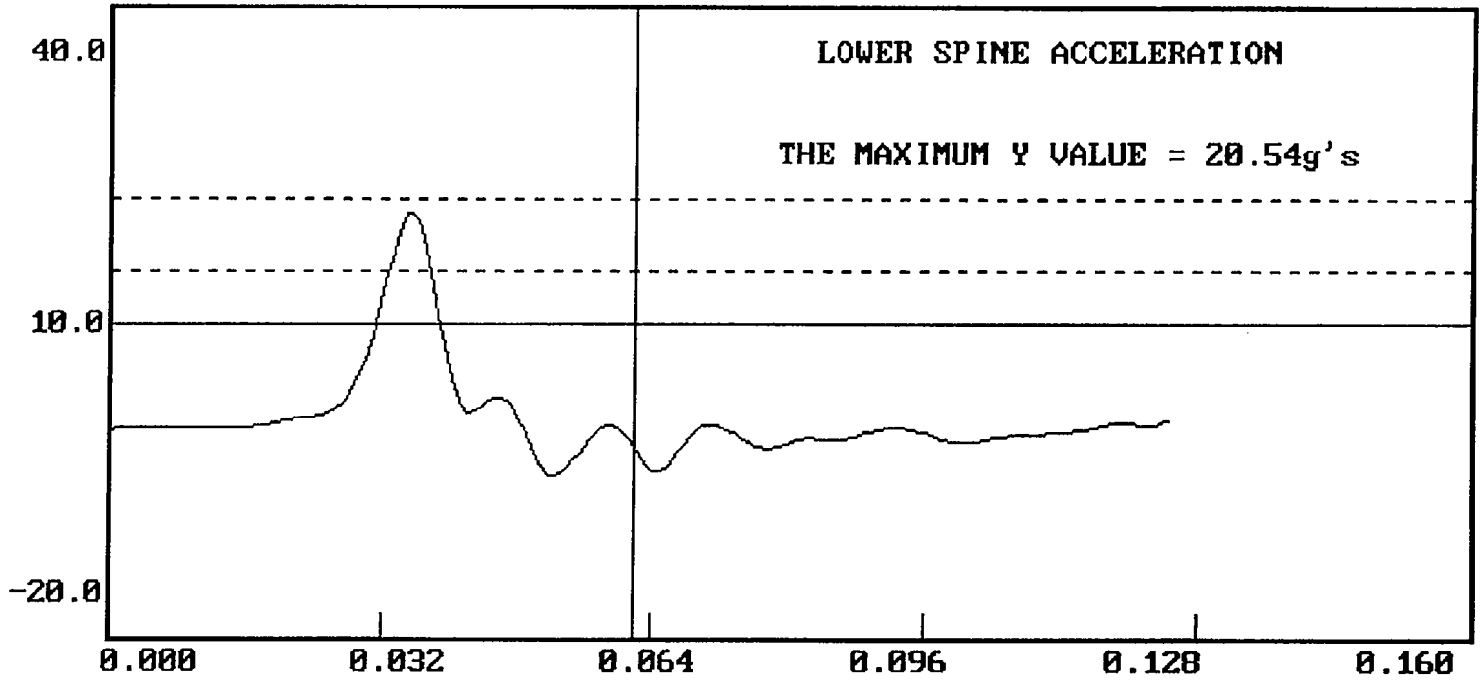
IMPACT SPEED = 14.07 FT/SEC

DUMMY CALIBRATION - THORAX IMPACT 02-26-1997 09:34
DUMMY # 271
ACCELERATION (G'S) VS. TIME ((SECONDS))



IMPACT SPEED = 14.07 FT/SEC

DUMMY CALIBRATION - THORAX IMPACT 02-26-1997 09:34
DUMMY # 271
ACCELERATION (G'S) VS. TIME ((SECONDS))



IMPACT SPEED = 14.07 FT/SEC

MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: February 26, 1997

DUMMY NUMBER: 271 TEST NUMBER: D97533

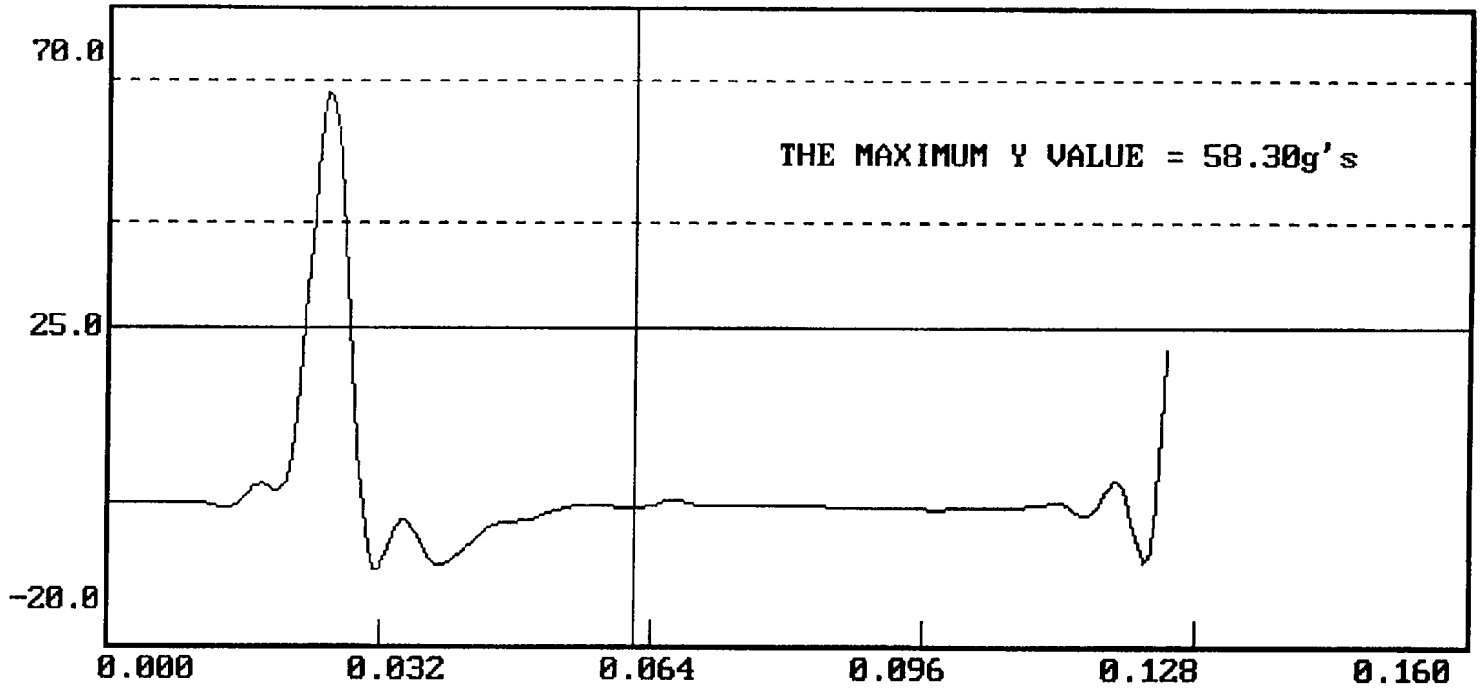
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	18%
PROBE SPEED	13.8 - 14.2 f/s	14.1
PELVIS ACCELERATION	40 - 60 g's	58

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

DUMMY CALIBRATION - PELVIS IMPACT 02-26-1997 10:14
DUMMY # 271
ACCELERATION (G'S) VS. TIME ((SECONDS))



IMPACT SPEED = 14.09 FT/SEC

MGA RESEARCH CORPORATION

ABDOMINAL COMPRESSION TEST
(PRELOAD = 10 LBS)

SIDE IMPACT DUMMY (SID)

DATE: March 3, 1997

DUMMY NUMBER: 271 TEST NUMBER: D97534

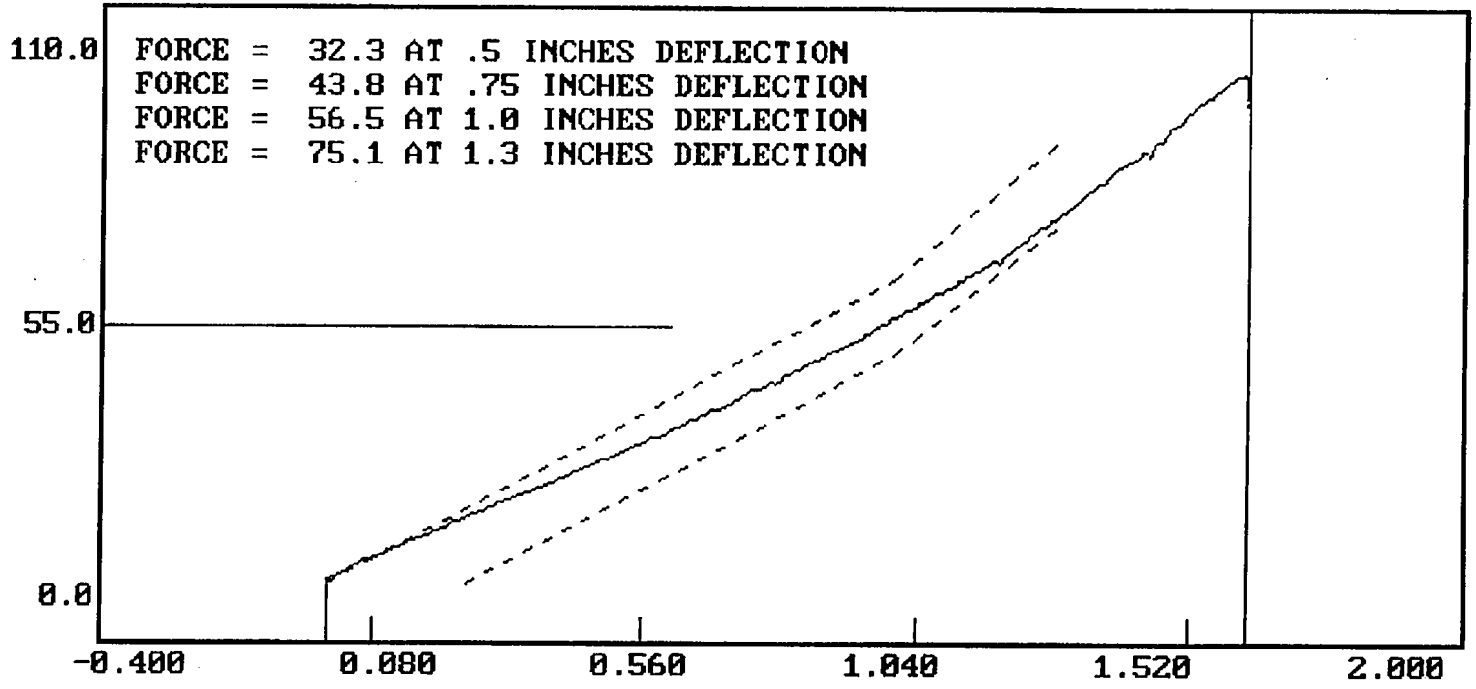
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
FORCE @ 0.5 in	23.3 - 36.5 lbs	32.3
FORCE @ 0.75 in	36.7 - 49.8 lbs	43.8
FORCE @ 1.0 in	50 - 63 lbs	57
FORCE @ 1.3 in	73 - 88 lbs	75

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

DUMMY CALIBRATION - ABDOMEN COMPRESSION 03-03-1997 11:21
DUMMY # 271
ABDOMEN FORCE (LBS) VS. ABDOMEN DISPLACEMENT (INCHES)



IMPACT SPEED = 0.00 FT/SEC

MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: February 28, 1997

DUMMY NUMBER: 271 TEST NUMBER: D97535

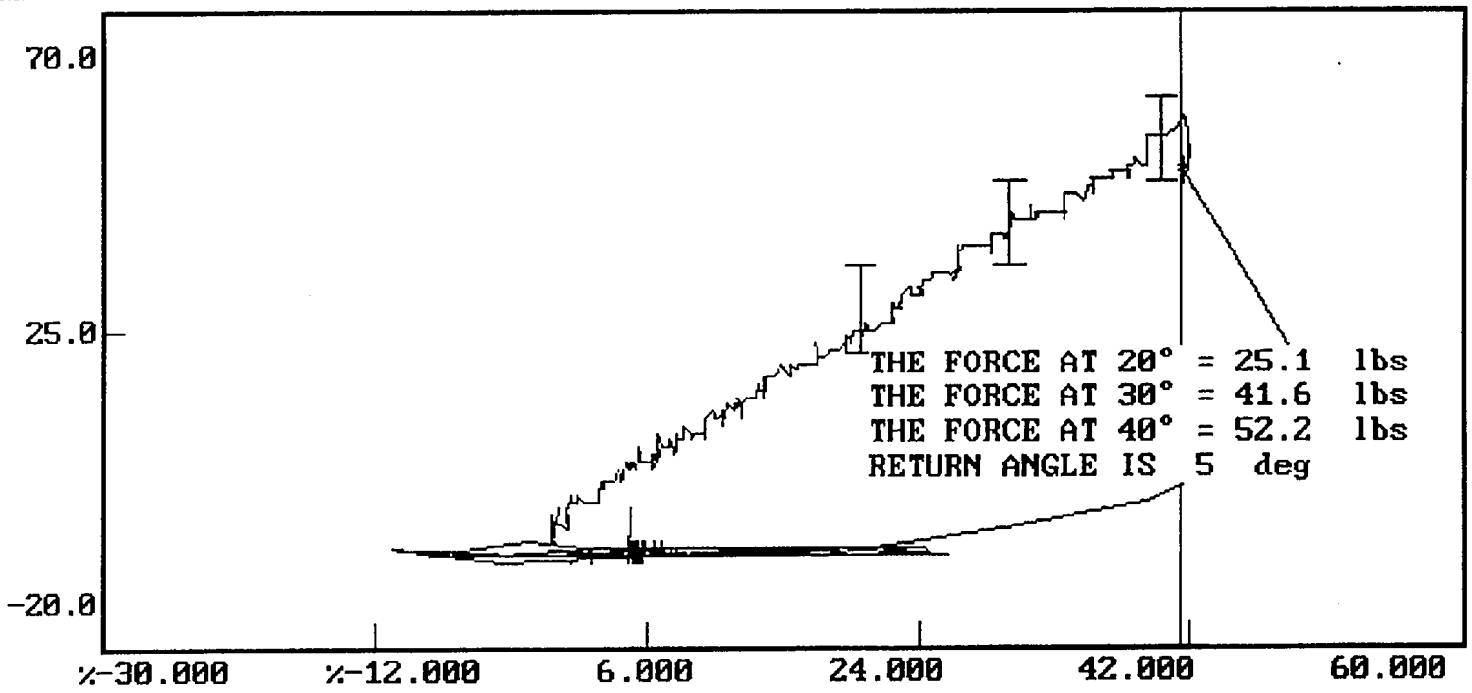
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	25
FORCE @ 30°	34 - 46 lbs	42
FORCE @ 40°	46 - 58 lbs	52
RETURN ANGLE	12° maximum	5°

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

DUMMY CALIBRATION - LUMBAR FLEXION 02-28-1997 16:14
DUMMY # 271
FORCE (LBS) VS. TORSO ROTATION (DEGREES)



IMPACT SPEED = 0.00 FT/SEC

POST-TEST DRIVER DUMMY INSPECTION CHECKLIST

Type: Side Impact Dummy

Serial Number: 272

Inspected By: Tim Michnay

Date: February 28, 1997

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	Rib wrap torn on impact side--Replaced.	

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

POST-TEST PASSENGER DUMMY INSPECTION CHECKLIST

Type: Side Impact Dummy

Serial Number: 271

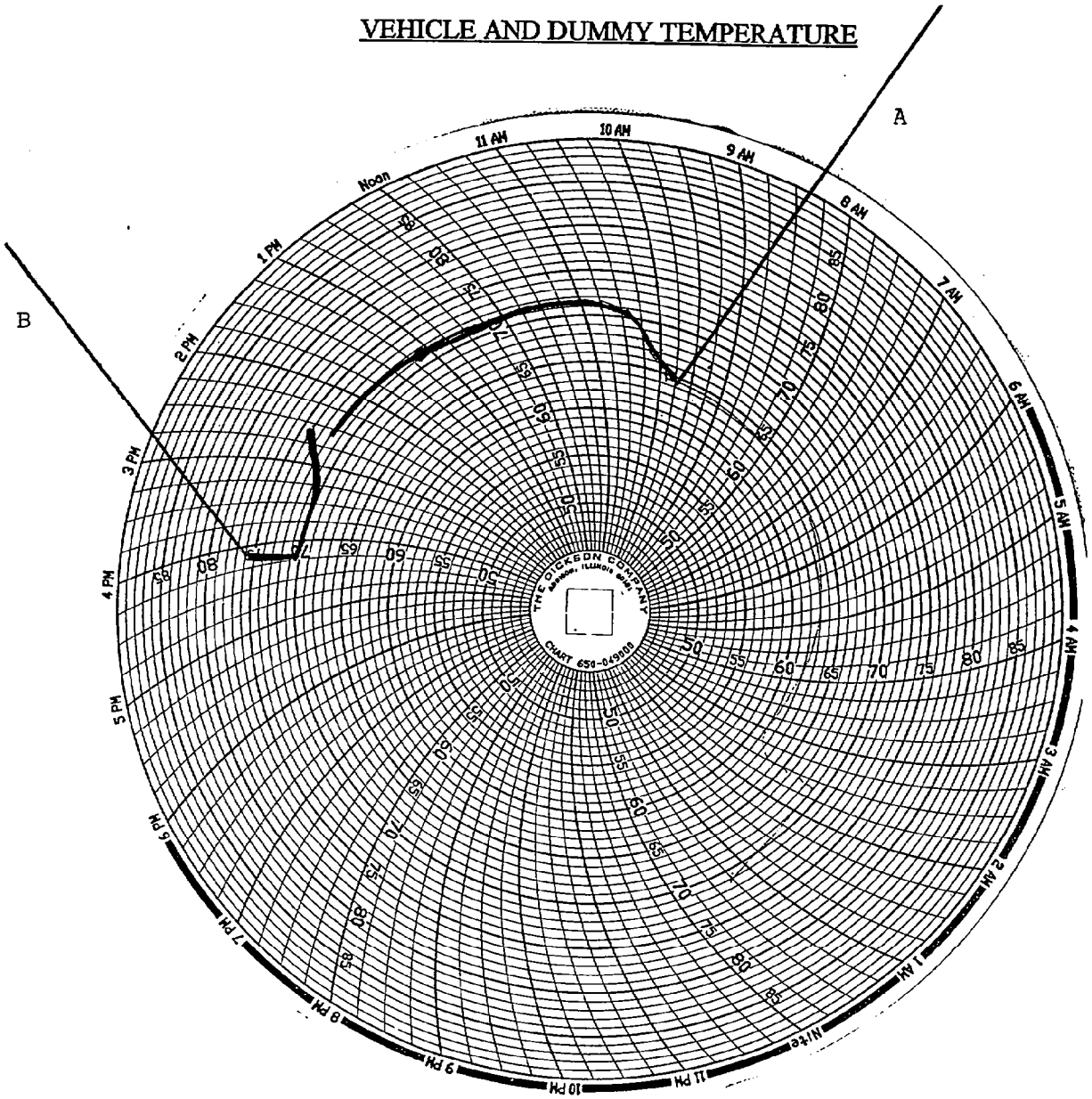
Inspected By: Tim Michnay

Date: February 28, 1997

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. 272

	DRIVER		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Upper Rib Y	ALFJ7	Endevco	12/09/96
Lower Rib Y	APYN0	Endevco	12/09/96
Lower Spine Y	APOG2	Endevco	12/09/96
Pelvis Y	APY15	Endevco	12/09/96
Upper Rib Redundant Y	ALDD6	Endevco	12/09/96
Lower Rib Redundant Y	APYN3	Endevco	12/09/96
Lower Spine Redundant Y	AP138	Endevco	12/09/96
Pelvis Redundant Y	APY16	Endevco	12/09/96

INSTRUMENTS FOR PASSENGER DUMMY NO. 271

	LEFT REAR PASSENGER		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Upper Rib Y	AP2A4	Endevco	9/16/96
Lower Rib Y	AP1B3	Endevco	9/16/96
Lower Spine Y	ANAP1	Endevco	9/16/96
Pelvis Y	AHTC3	Endevco	9/16/96
Upper Rib Redundant Y	AP2D8	Endevco	9/16/96
Lower Rib Redundant Y	AP1C6	Endevco	9/16/96
Lower Spine Redundant Y	ANAT6	Endevco	9/16/96
Pelvis Redundant Y	AGP53	Endevco	9/16/96

VEHICLE INSTRUMENT CALIBRATION

	VEHICLE ACCELEROMETERS		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Moving Barrier CG X	C25-A04	Entran	1/06/97
Moving Barrier CG Y	C25-A06	Entran	1/07/97
Moving Barrier CG Z	B13-Z02	Entran	7/11/96
Moving Barrier Rear Axle X	D05-R19	Entran	1/02/97
Moving Barrier Rear Axle Y	D05-R20	Entran	1/02/97
Left Mid A-Post Y	J10-E08	Entran	1/03/97
Left Lower A-Post Y	E25-G07	Entran	1/03/97
Left Mid B-Post Y	D05-R12	Entran	1/03/97
Left Lower B-Post Y	L14-D07	Entran	1/06/97
Rear Floorpan Above Axle X	A09-G05	Entran	12/03/96
Rear Floorpan Above Axle Y	L18-E02	Entran	1/03/97
Rear Floorpan Above Axle Z	J10-E03	Entran	1/07/97
Driver Seat Track Y	C25-A22	Entran	1/08/97
Right Side Sill at Front Seat X	L14-D16	Entran	12/03/96
Right Side Sill at Front Seat Y	L18-E13	Entran	1/03/97
Right Side Sill at Front Seat Z	F10-D04	Entran	1/07/97
Right Side Sill at Rear Seat X	MGA095	Entran	1/02/97
Right Side Sill at Rear Seat Y	C20-J10	Entran	1/02/97
Right Side Sill at Rear Seat Z	D06-A09	Entran	1/02/97
Left Side Sill at Front Seat Y	J10-E13	Entran	1/07/97

VEHICLE INSTRUMENT CALIBRATION

	VEHICLE ACCELEROMETERS		
	SERIAL NO	MANUFACTURER	CALIBRATION DATE
Left Side Sill at Rear Seat Y	A10-G05	Entran	1/03/97
Right Rear Occupant Compartment Y	H07-A05	Entran	1/03/97
Vehicle CG X	L14-D10	Entran	1/07/97
Vehicle CG Y	C25-A17	Entran	1/02/97
Vehicle CG Z	A10-G07	Entran	1/03/97

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