V2363

REPORT NO.: 214-MGA-96-008
SAFETY COMPLIANCE TESTING FOR
FMVSS 214 "SIDE IMPACT PROTECTION -
PASSENGER CARS"

NISSAN MOTOR CORPORATION
1996 NISSAN 200 SX 2 DOOR
NHTSA NO: CT5202

MGA PROVING GROUNDS
5000 WARREN ROAD
BURLINGTON, WI 53105

Test Date: December 12, 1995

Report Date: December 21, 1995

FINAL REPORT

Prepared For:

U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
ENFORCEMENT
OFFICE OF VEHICLE SAFETY COMPLIANCE
MAIL CODE: NSA-30
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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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Acceptance Date: 2/6/96

TECHNICAL REPORT STANDARD TITLE PAGE

1. Report No. 214-MGA-96-008	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle Final Report of FMVSS No.214 Compliance Side Impact Protection Testing of a 1996 Nissan 200 SX 2 Door NHTSA No. CT5202		5. Report Date December 21, 1995 6. Performing Organization Code MGA	
7. Author(s) John Fleck, Project Manager David Winkelbauer, Project Engineer		8. Performing Organization Report No. MGA-DOT-214-008	
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 Vehicle Safety Compliance (Mail Code: NSA-30) 400 Seventh St., S.W., Room 6115 Washington, D.C. 20590		13. Type of Report and Period Covered Final Test Report December 12 to December 21, 1995 14. Sponsoring Agency Code NSA-30	

15. Supplementary Notes

16. Abstract

A 48/24 kph 90° Impact (Moving Deformable Barrier) Compliance Test was conducted on the subject 1996 Nissan 200 SX 2 Door in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-214D-04 for the determination of FMVSS No. 214 Side Impact Protection compliance. The test was conducted at MGA Research Corporation in Burlington, Wisconsin, on December 12, 1995.

The impact velocity of the Moving Deformable Barrier (MDB) was 52.8 kph, and the ambient temperature at the struck side (driver's) of the target vehicle at the time of impact was 21°C. The target vehicle post test maximum crush was 317 mm at level 2. The test vehicle's performance follows:

	DRIVER	PASS.
Left Upper Rib (LUR) Accel., g	74	53
Left Lower Rib (LLR) Accel., g	79	60
Lower Spine (T_{12}) Accel., g	61	54
Thoracic Trauma Index (TTI)	70	57
Pelvis (PEV) Accel., g	90	69

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

17. Key Words Compliance Testing Side Impact Protection FMVSS 214 Side Impact Dummy (SID)	18. Distribution Statement Copies of this report are available from: National Highway Traffic Safety Adm. Technical Ref. Division, Room 5108 (NAD-52) 400 Seventh Street, S.W. Washington, D.C. 20590 Telephone No. 202-366-4946 Attn: Robert Hornickle		
19. Security Classif. (of this report) Unclassified	20. Security Classif. (of this page) Unclassified	21. No. of Pages	22. Price

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 FY 96 FMVSS 214 Side Impact Protection Compliance Test 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 in a 1996 Nissan 200 SX 2 Door.

This side impact test was conducted in accordance with the Vehicle Safety Compliance's FMVSS 214 test procedure (TP-214D-04, dated September 1, 1995).

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 1996 Nissan 200 SX 2 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 32.8 mph (52.8 kph). The target vehicle was stationary and was positioned at an angle of 63° to the line of forward motion. The side impact test was conducted by MGA Research Corporation in Burlington, Wisconsin, on December 12, 1995. 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 OVSC Side Impact Laboratory Test Procedure which is dated September 1, 1995. 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)	70	57
Pelvis (g)	90	69

TEST NOTES

The following accelerometers were not used for this test:

Left Front Door on Centerline

Midrear of Left Front Door

Left Front Door Upper Centerline

Midrear of Left Rear Door

Left Rear Door Upper Centerline

Rear Seat Track

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: 1996/Nissan/200 SX/2 Door

Vehicle NHTSA No.: CT5202 VIN: 1N4AB42DXTC503257

Vehicle Body Color: black Build Date: 9/95

Engine Data: 4 Cylinders; __ CID; 1.6 Liter; ___cc

Placement __ Longitudinal; X Lateral

Transmission: 5 speed; X Manual; _ Automatic; _ Overdrive

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

Odometer Reading 140 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): 33 Psi FRONT

29 Psi REAR

Recommended Tire Size: P175/70R13

Tires on Test Vehicle: P175/70R13 Manufacturer: General

Vehicle Capacity Data:

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

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

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

Vehicle Maximum Capacity Loading = 369 kg (A)

No. of Occupants x 68.04 kg. = 340 kg (B)

Cargo Capacity (A-B) = 29 kg

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

WEIGHT OF TEST VEHICLE WITH MAXIMUM FLUIDS:

Right Front = 337.5 kg Right Rear = 200.0 kg

Left Front = 333.4 kg Left Rear = 194.1 kg

TOTAL FRONT = 670.9 kg TOTAL REAR = 394.1 kg

% of Total Vehicle Weight = 63.0 %; % of Total Weight = 37.0 %

TOTAL WEIGHT = 1065.0 kg

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

Year/Make/Model/Body Style: 1996/Nissan/200 SX/2 Door

Vehicle NHTSA No.: CT5202 Test Date: December 12, 1995

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Test Vehicle Delivered Weight with Maximum Fluids	= 1065.0 kg
Cargo Carrying Capacity of Test Vehicle	= 29.0 kg
Weight of 2 Side Impact Dummies (2 x 80.7 kg.)	= 161.4 kg
TEST VEHICLE TARGET WEIGHT	= 1255.4 kg

ACTUAL WEIGHT OF TEST VEHICLE WITH 2 DUMMIES AND CARGO:

Right Front	= 361.1 kg	Right Rear	= 241.8 kg
Left Front	= 384.2 kg	Left Rear	= 261.7 kg
TOTAL FRONT	= 745.3 kg	TOTAL REAR	= 503.5 kg
% of Total Weight	= 59.7 %	% of Total Weight	= 40.3 %

TOTAL TEST WEIGHT = 1248.8 kg

TEST VEHICLE ATTITUDE:

CURB WEIGHT ATTITUDE:

Right Front 650 mm Left Front 648 mm Right Rear 650 mm Left Rear 649 mm

FULLY LOADED WEIGHT ATTITUDE:

Right Front 645 mm Left Front 627 mm Right Rear 621 mm Left Rear 603 mm

TEST ATTITUDE:

Right Front 640 mm Left Front 635 mm Right Rear 626 mm Left Rear 612 mm

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

Test Vehicle Wheelbase: 2536 mm

C.G. = 1022 mm rearward of front wheel centerline

TOTAL VEHICLE LENGTH:

Right Side = 4092 mm

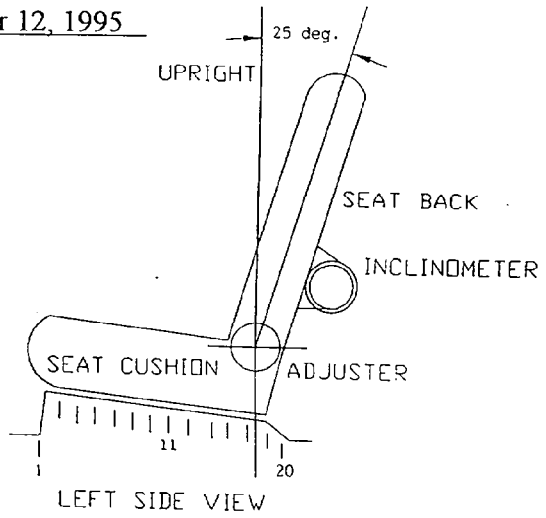
Centerline = 4269 mm

Left Side = 4092 mm

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

Year/Make/Model/Body Style: 1996/Nissan/200 SX/2 Door

Vehicle NHTSA No.: CT5202 Test Date: December 12, 1995



FRONT SEAT CUSHION PLACEMENT:

Total Length of Adjustment Travel: 230 mm

Test Position: 11th detent rearward out of 20 total

FRONT SEAT BACK ADJUSTMENT POSITION:

Seat Back Angle = 25° degrees

SECOND POSITION SEAT:

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

Seat Back Adjustment Position: Non-Adjustable

ADJUSTABLE STEERING COLUMN POSITION: Mid-Position

WINDOW POSITIONS: Left Front Closed Left Rear Closed

Right Front Open Right Rear Open

AMOUNT OF STODDARD SOLVENT IN FUEL TANK:

Fuel system usable capacity = 50 liters

Test Volume: 46.6 liters 93 % of capacity

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

Wheelbase: = 2536 mm

Impact Point is 328 mm rearward of front axle centerline

DATA SHEET NO. 2

TEST VEHICLE SUMMARY OF RESULTS

Year/Make/Model/Body Style: 1996/Nissan/200 SX/2 Door

Vehicle NHTSA No.: CT5202 Test Date: December 12, 1995

Overall Length = 4296 mm; Overall Width = 1671 mm

TEST WEIGHT:

Right Front = 361.1 kg Right Rear = 241.8 kg

Left Front = 384.2 kg Left Rear = 261.7 kg

TOTAL FRONT = 745.3 kg TOTAL REAR = 503.5 kg

% of Total Weight = 59.7 % % of Total Weight = 40.3 %

TOTAL VEHICLE WEIGHT = 1248.8 kg

Wheelbase = 2536 mm

Longitudinal C.G. from Center of Front Axle = 1022 mm

Impact Angle with Respect to Impactor = 90° degrees

MAXIMUM EXTERIOR STATIC CRUSH:

1. LEVEL 1 (280 mm above ground) = 178 mm
2. LEVEL 2 (475 mm above ground) = 317 mm
3. LEVEL 3 (585 mm above ground) = 304 mm
4. LEVEL 4 (865 mm above ground) = 247 mm
5. LEVEL 5 (1290 mm above ground) = 80 mm

Maximum Post-Test Intrusion = 317 mm

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

TEST VEHICLE SUMMARY OF RESULTS (Cont'd)

INSTRUMENTATION:

Number of Vehicle Data Channels:		= 19
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: 1996/Nissan/200 SX/2 Door

Vehicle NHTSA No.: CT5202 Test Date: December 12, 1995

POSITION OF IMPACT (MDB) ON MONORAIL:

Crabbed 27° to left

MDB DETAILS:

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

MDB WEIGHT:

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

TOTAL MDB WEIGHT = 1356.2 kg

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

Impact Speed = Primary: 32.8 mph (52.8 kph) Secondary: 32.9 mph (52.9 kph)

CRASH TEST SUMMARY FOR SIDE IMPACTOR (Cont'd)

MAXIMUM STATIC CRUSH OF HONEYCOMB IMPACT FACE:

1. Row A Top of Stack (813 mm) = 107 mm
2. Row B Mid Stack (686 mm) = 90 mm
3. Row C Top of Bumper (533 mm) = 42 mm
4. Row D Center of Bumper (432 mm) = 75 mm

INSTRUMENTATION:

Number of MDB Data Channels = 7

DATA SHEET NO. 4

POST-TEST OBSERVATIONS

Year/Make/Model/Body Style: 1996/Nissan/200 SX/2 Door

Vehicle NHTSA No.: CT5202 Test Date: December 12, 1995

VISIBLE DUMMY CONTACT POINTS:

	LEFT FRONT SID	LEFT REAR SID
Head	to door, headrest	to C Post, rear window
Arm	to door	to trim
Pelvis	to door	to trim
Left Knee	to door	to trim
Right Knee	to left knee	to left knee

DOOR OPENING:

	LEFT SIDE	RIGHT SIDE
Front	remained closed	remained closed
Rear	N/A	N/A

MDB DISTANCE FROM TARGET IMPACT POINT:

Horizontal: 5 mm forward Vertical: 7 mm high

ARM REST LOCATIONS:

Front: 210 mm Below window opening

Rear: 208 mm Below window opening

POST-TEST OBSERVATIONS (Cont'd)

SEAT CRUSH:

Front Seat Back: 59 mm Front Seat Cushion: 40 mm

Left Rear Seat Back: 118 mm Rear Seat Cushion: 242 mm

GLAZING DAMAGE:

Both left side windows broke, windshield cracked

PILLAR PERFORMANCE:

No failure noted

SILL SEPARATION:

No failure noted

OTHER NOTABLE IMPACT EFFECTS:

Battery came out of its brackets

SECTION 4

OCCUPANT AND VEHICLE INFORMATION

DATA SHEET NO. 5

SIDE IMPACT DUMMY (SID) INSTRUMENTATION DATA

Year/Make/Model/Body Style: 1996/Nissan/200 SX/2 Door

Vehicle NHTSA No.: CT5202 Test Date: December 12, 1995

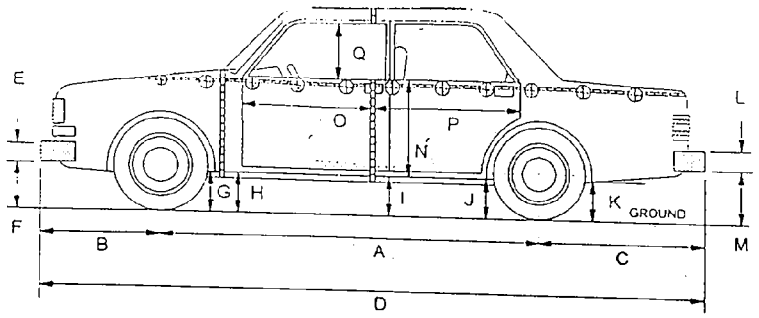
	Front Dummy ID #269				Rear Dummy ID #272			
	Pos. Direct.		Neg. Direct		Pos. Direct.		Neg. Direct	
	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)
RIB ACCELERATIONS								
Left Upper Rib (LUR) Y	73.7	38	13.7	83	53.2	45	4.0	160
Left Lower Rib (LLR) Y	79.3	38	9.2	94	59.6	45	8.1	71
SPINE ACCELERATIONS								
Lower Lateral Y	61.4	41	9.5	90	54.3	48	7.4	68
PELVIS ACCELERATIONS								
Lateral Y	89.7	30	13.3	53	69.4	38	6.4	198

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

Negative Direction - Longitudinal (X) = rearward
Lateral (Y) = to left
Vertical (Z) = up

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)

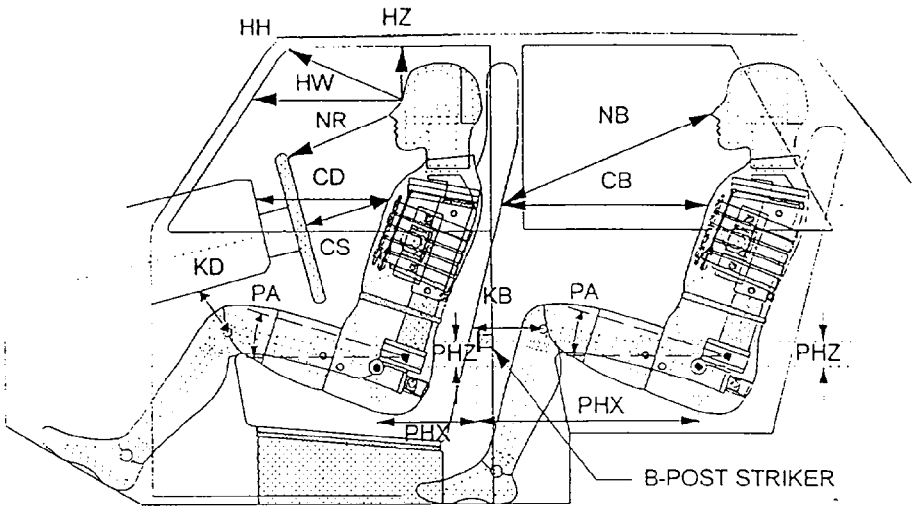
	PRE-TEST	POST-TEST	Δ CHANGE
A	2537	2516	21
B	781	845	64
C	951	875	76
D	4269	4236	33
E	140	140	0
F	366	382	16
G	204	220	16
H	181	204	23
I	182	208	26
J1/J2	185/180	190/206	5/26
K	235	248	13
L	234	235	1
M	276	293	17
N	615	516	99
O	750	720	30
P	597	580	17
Q	464	446	18
R	4092	4055	37
S	4092	4135	43
T	1671	1400	271

DATA SHEET NO. 7

SIDE IMPACT DUMMY (SID) LONGITUDINAL CLEARANCE DIMENSIONS

Year/Make/Model/Body Style: 1996/Nissan/200 SX/2 Door

NHTSA NO.: CT5202 Test Date: December 12, 1995



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

	FRONT SID ID #269
HH	424
HW	648
HZ	177
NR	498
CD	565
CS	371
KDL(KDA°)	163 (1.4)
KDR(KDA°)	175 (7.2)
PA°	24.4
PHX	482
PHZ	180

	REAR PASSENGER SID ID #272
HZ	122
NB	580
CB	482
KBL (KBA)	157 (10.1)
KBR (KBA)	158 (4.9)
PA°	24.8
PHX	406
PHZ	167

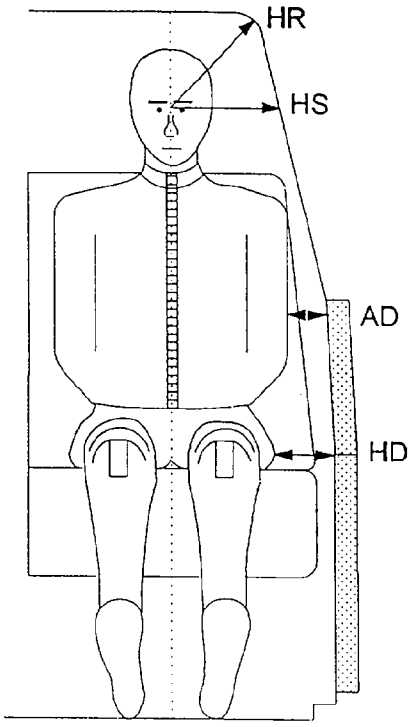
NOTE: 2-door vehicle shown. Rear dummy PHX & PHZ measurements for 4-door vehicle would use the C-post striker as reference point.

DATA SHEET NO. 8

SIDE IMPACT DUMMY (SID) LATERAL CLEARANCE DIMENSIONS

Year/Make/Model/Body Style: 1996/Nissan/200 SX/2 Door

NHTSA NO.: CT5202 Test Date: December 12, 1995



NOTE: All dimensions are in mm

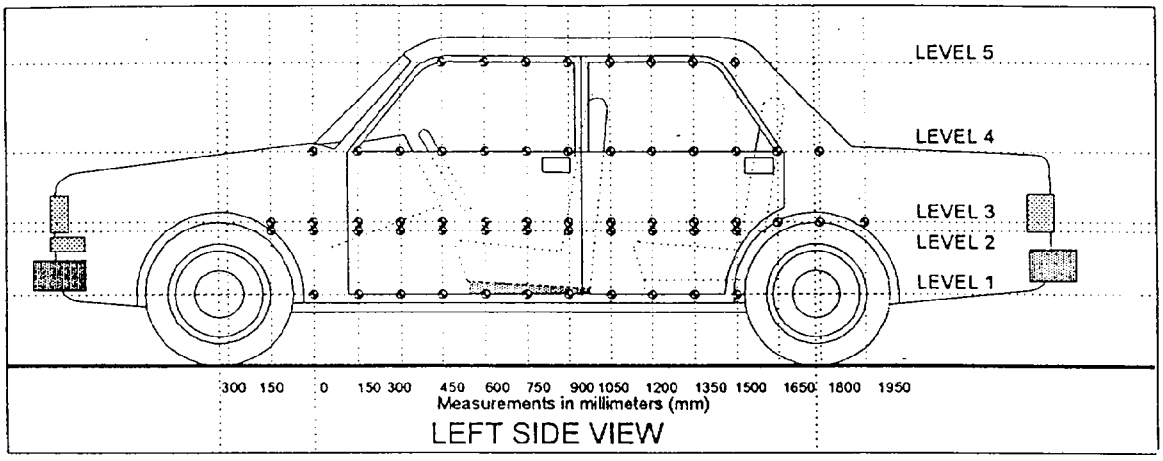
	DRIVER ID #269	LEFT REAR PASSENGER ID #272
HR	253	232
HS	336	250
AD	113	118
HD	168	173

DATA SHEET NO. 9

VEHICLE SIDE MEASUREMENTS

Year/Make/Model/Body Style: 1996/Nissan/200 SX/2 Door

NHTSA NO.: CT5202 Test Date: December 12, 1995



LEVEL 5 - WINDOW TOP
LEVEL 4 - WINDOW SILL
LEVEL 3 - MID-DOOR
LEVEL 2 - OCCUPANT H-POINT
LEVEL 1 - AXLE CENTERLINE HEIGHT or SILL TOP HEIGHT

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

MEASUREMENTS ALONG THE VERTICAL 750 mm. LINE SHOWN ABOVE

Level 5 @ Window Top	= 1290	mm
Level 4 @ Window Sill	= 865	mm
Level 3 @ Mid Door	= 585	mm
Level 2 @ Occupant H-Point	= 475	mm
Level 1 @ Axle Centerline Height (or Sill Top Height)	= 280	mm

DATA SHEET NO. 10

VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

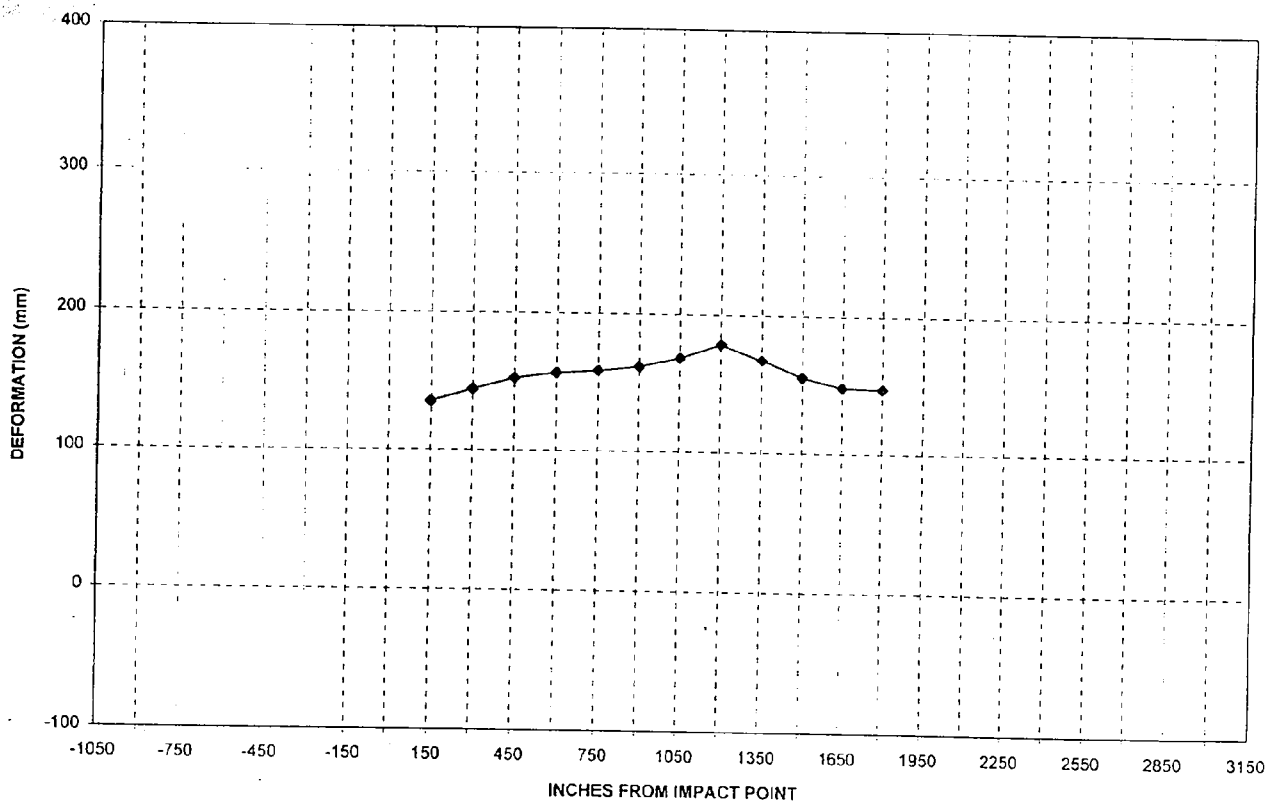
Year/Make/Model/Body Style: 1996/Nissan/200 SX/2 Door

NHTSA NO.: CT5202 Test Date: December 12, 1995

	Level 1 - Axle Centerline		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1050			
-900			
-750			
-600			
-450			
-300			
-150			
0 (impact point)			
150	667	802	135
300	669	813	144
450	668	820	152
600	667	823	156
750	667	825	158
900	665	826	161
1050	667	835	168
1200	667	845	178
1350	668	835	167
1500	667	822	155
1650	667	815	148
1800	669	816	147
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 - ALL LEVELS

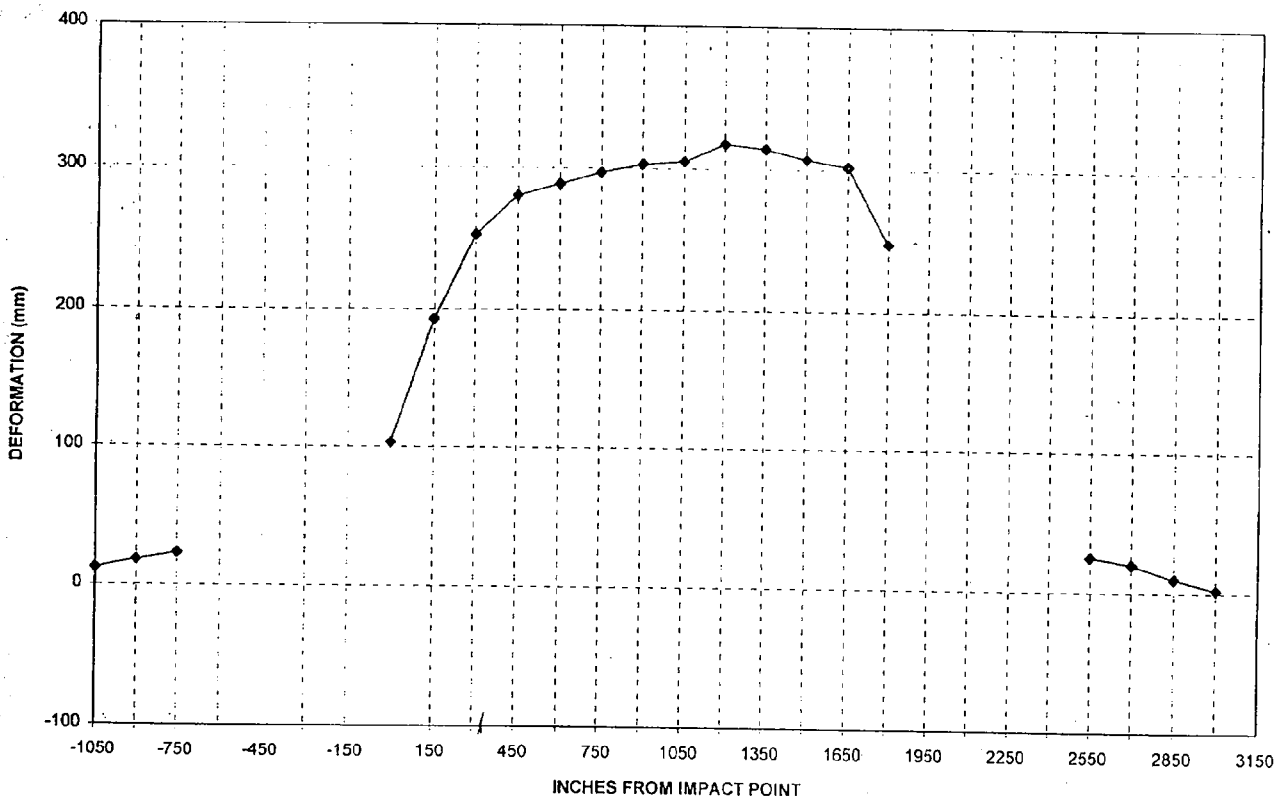
Year/Make/Model/Body Style: 1996/Nissan/200 SX/2 Door

NHTSA NO.: CT5202 Test Date: December 12, 1995

	Level 2 - Occupant H-Point		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1050	702	714	12
-900	656	674	18
-750	625	648	23
-600			
-450			
-300			
-150			
0 (impact point)	601	704	103
150	605	798	193
300	607	861	254
450	606	887	281
600	607	896	289
750	607	904	297
900	607	910	303
1050	608	913	305
1200	607	924	317
1350	607	921	314
1500	609	916	307
1650	609	911	302
1800	607	856	249
1950			
2100			
2250			
2400			
2550	623	648	25
2700	640	660	20
2850	672	682	10
3000	712	714	2

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

VEHICLE EXTERIOR STATIC CRUSH



LEVEL 2 - OCCUPANT H-POINT

DATA SHEET NO. 10

VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

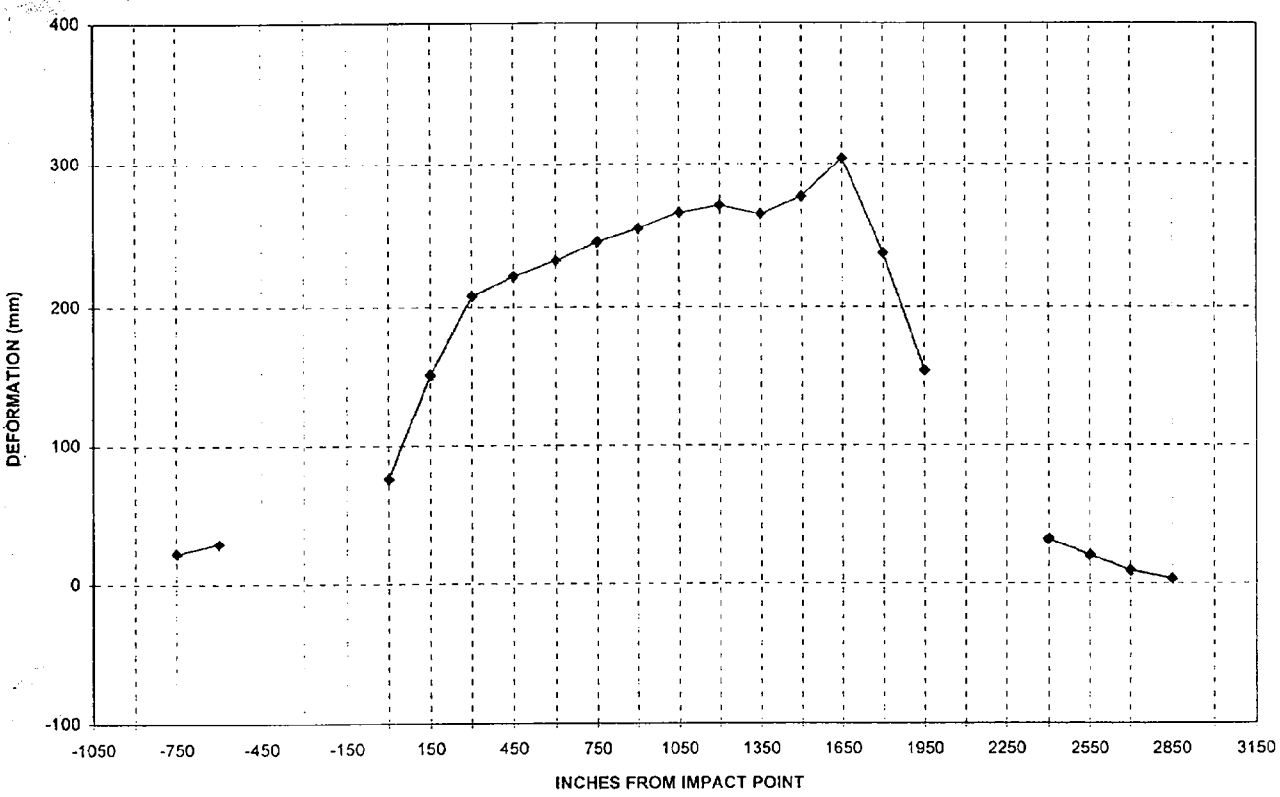
Year/Make/Model/Body Style: 1996/Nissan/200 SX/2 Door

NHTSA NO.: CT5202 Test Date: December 12, 1995

	Level 3 - Mid Door		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1050			
-900			
-750	632	654	22
-600	605	634	29
-450			
-300			
-150			
0 (impact point)	591	667	76
150	599	751	152
300	599	807	208
450	599	821	222
600	599	832	233
750	598	844	246
900	598	853	255
1050	597	863	266
1200	597	868	271
1350	597	862	265
1500	600	877	277
1650	600	904	304
1800	600	838	238
1950	596	751	155
2100			
2250			
2400	600	632	32
2550	622	642	20
2700	649	658	9
2850	690	693	3
3000			

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

VEHICLE EXTERIOR STATIC CRUSH



LEVEL 3 - MID DOOR

DATA SHEET NO. 10

VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

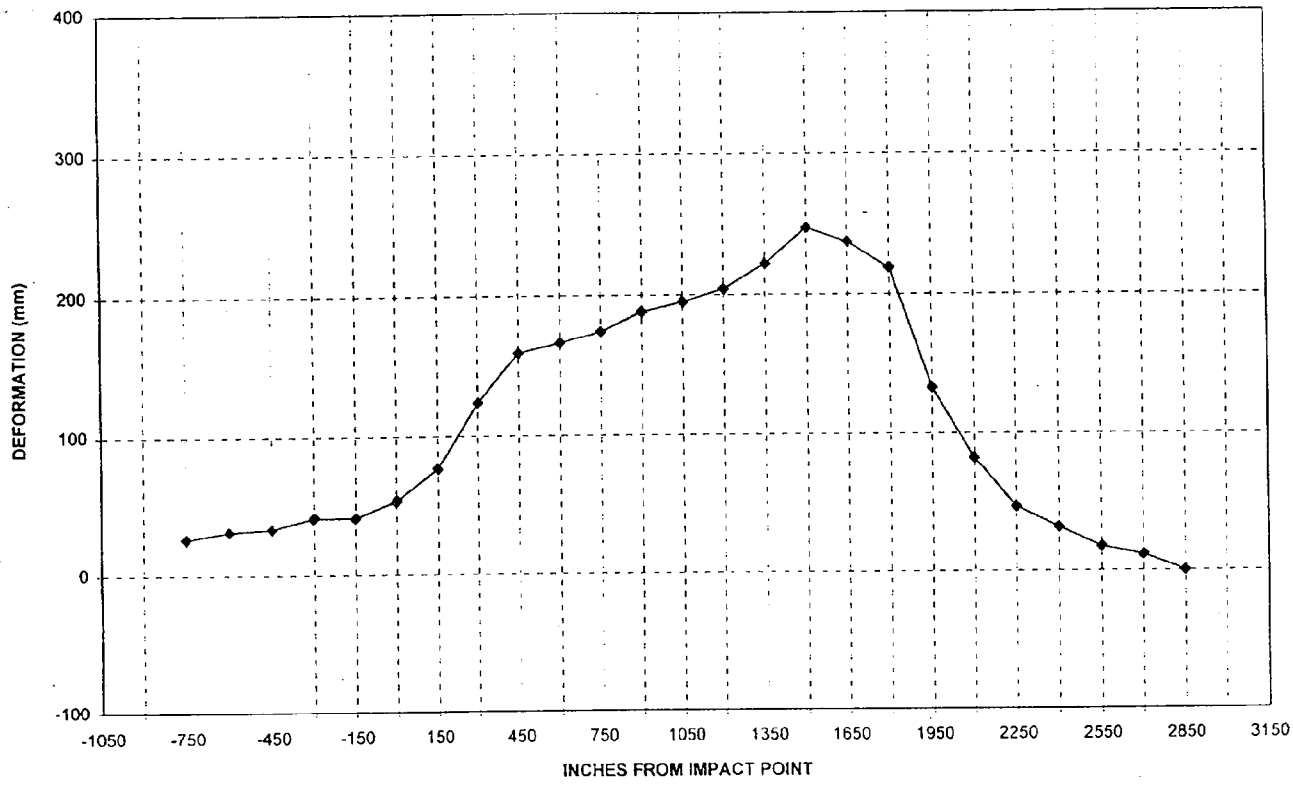
Year/Make/Model/Body Style: 1996/Nissan/200 SX/2 Door

NHTSA NO.: CT5202 Test Date: December 12, 1995

	Level 4 - Window Sill		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1050			
-900			
-750	742	768	26
-600	721	752	31
-450	701	734	33
-300	680	721	41
-150	671	712	41
0 (impact point)	664	717	53
150	660	736	76
300	665	789	124
450	659	818	159
600	660	826	166
750	654	828	174
900	647	835	188
1050	647	842	195
1200	645	849	204
1350	641	863	222
1500	638	885	247
1650	635	872	237
1800	637	856	219
1950	635	768	133
2100	634	716	82
2250	632	678	46
2400	637	668	31
2550	653	670	17
2700	672	683	11
2850	711	711	0
3000			

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

VEHICLE EXTERIOR STATIC CRUSH



LEVEL 4 - WINDOW SILL

DATA SHEET NO. 10

VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

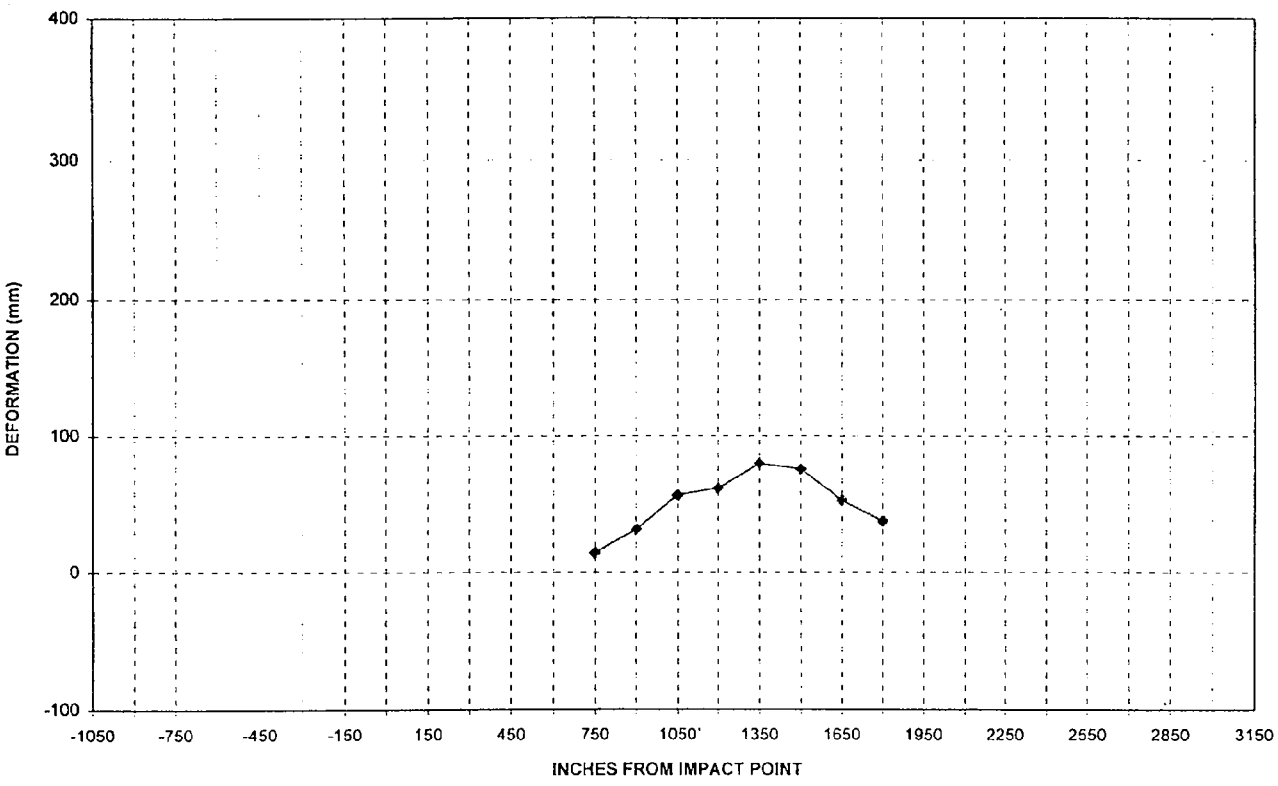
Year/Make/Model/Body Style: 1996/Nissan/200 SX/2 Door

NHTSA NO.: CT5202 Test Date: December 12, 1995

	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	869	883	14
900	865	896	31
1050	862	918	56
1200	862	923	61
1350	857	937	80
1500	859	935	76
1650	865	917	52
1800	880	917	37
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



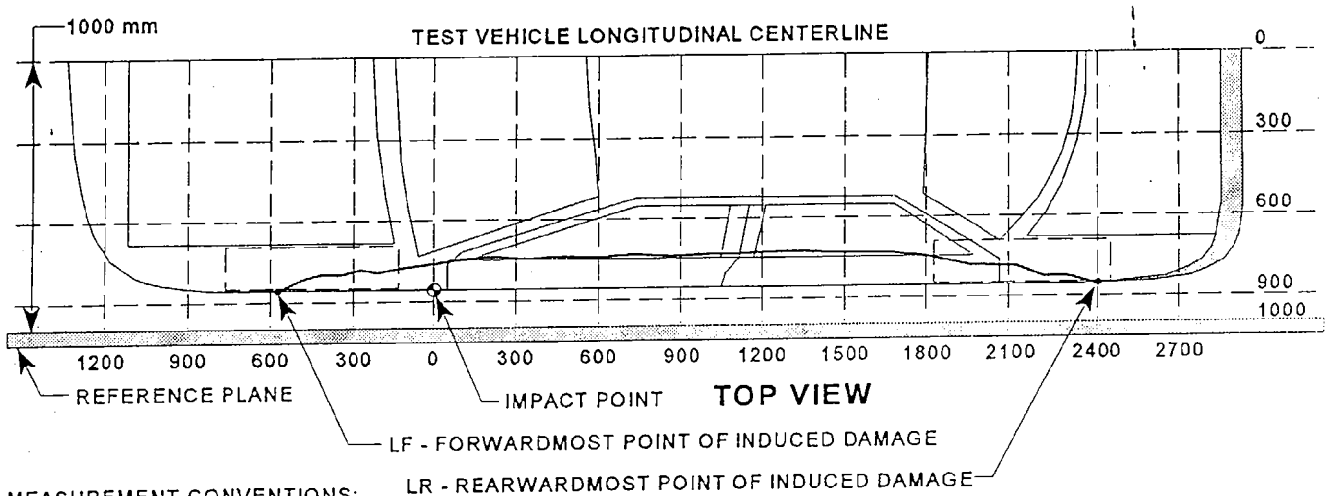
LEVEL 5 - WINDOW TOP

DATA SHEET NO. 11

VEHICLE DAMAGE PROFILE DISTANCES

Year/Make/Model/Body Style: 1996/Nissan/200 SX/2 Door

NHTSA NO.: CT5202 Test Date: December 12, 1995



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 = -10 mm)	605	605	0.0
2. 310 mm	858	607	251
3. 682 mm	901	607	294
4. 850 mm	913	607	306
5. 1421 mm	912	608	304
6. (LR = 1790 mm)	604	604	0.0

DATA SHEET NO. 12

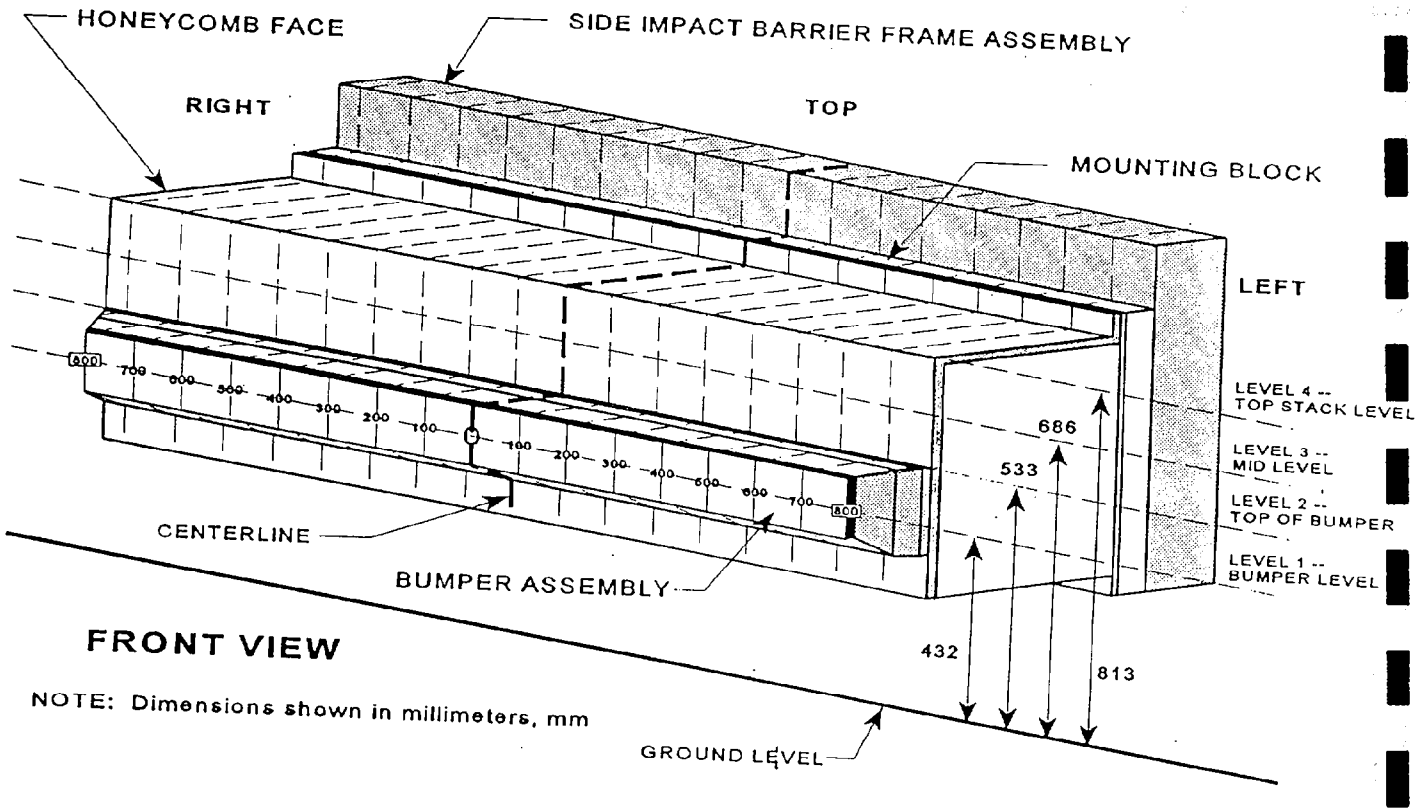
EXTERIOR STATIC CRUSH FOR SIDE IMPACTOR

Year/Make/Model/Body Style: 1996/Nissan/200 SX/2 Door

Vehicle NHTSA No.: CT5202. Test Date: December 12, 1995

		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	12	-6	-6	-5	-5	-4	-3	-3	-2	-2	-3	-3	-1	10	33	59	107
Mid Level Level 3	686 mm	4	0	-7	-8	-8	-7	-8	-7	-7	-7	-7	-6	-5	-5	3	25	90
Top Bumper Level 2	533 mm	22	17	12	6	1	-1	-1	0	-1	-1	-1	-1	-2	0	6	23	42
Mid Bumper Level 1	432 mm	45	38	32	29	20	13	11	11	11	10	10	11	11	11	23	45	75

See next page for Barrier Face Graphic

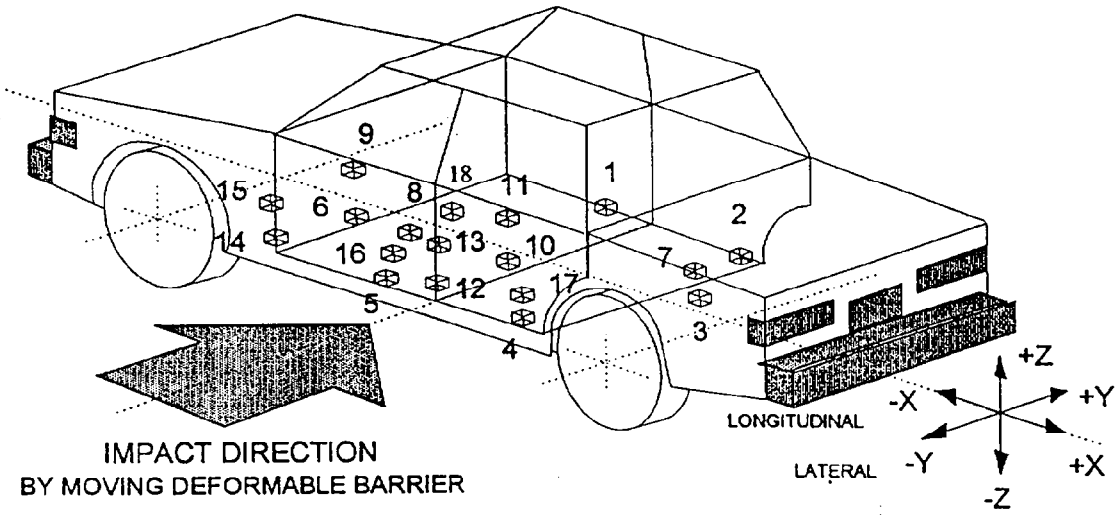

HONEYCOMB FACE
SIDE IMPACT BARRIER FRAME ASSEMBLY
RIGHT
TOP
MOUNTING BLOCK
LEFT
LEVEL 4 -- TOP STACK LEVEL
LEVEL 3 -- MID LEVEL
LEVEL 2 -- TOP OF BUMPER
LEVEL 1 -- BUMPER LEVEL
686
533
432
813
CENTERLINE
BUMPER ASSEMBLY
GROUND LEVEL
FRONT VIEW
NOTE: Dimensions shown in millimeters, mm

DATA SHEET 13

TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Year/Make/Model/Body Style: 1996/Nissan/200 SX/2 Door

Vehicle NHTSA No.: CT5202 Test Date: December 12, 1995



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: 1996/Nissan/200 SX/2 Door

Vehicle NHTSA No.: CT5202 Test Date: December 12, 1995

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	2422	637	210	4.7	4.4	24.1	3.5	5.4	6.6	25.2
2	Rt. Side Sill @ Rear Seat	1721	637	220	4.6	4.0	18.9	3.2	3.7	6.2	19.9
3	Rr. Floorpan Above Axle	812	-30	500	8.2	9.7	26.1	4.1	13.7	15.5	30.0
4	Left Side Sill @ Rr. Seat	1691	-640	235	---	---	43.1	10.8	---	---	---
5	Left Side Sill @ Frt. Seat	2381	-640	225	---	---	33.1	5.1	---	---	---
7	Right Rear Occupant Compartment	1685	353	415	---	---	24.9	3.2	---	---	---
12	Left Lower B-Post	1715	-655	312	---	---	80.5	11.7	---	---	---
14	Left Lower A-Post	2934	-645	340	---	---	**	**	---	---	---
15	Left Mid A-Post	3004	-759	695	---	---	61.3	20.4	---	---	---
16	Driver Left Seat Track	2035	-552	300	---	---	79.0	44.0	---	---	---
18	Vehicle CG	2365	0	320	2.6	7.8	21.2	3.1	**	**	---

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

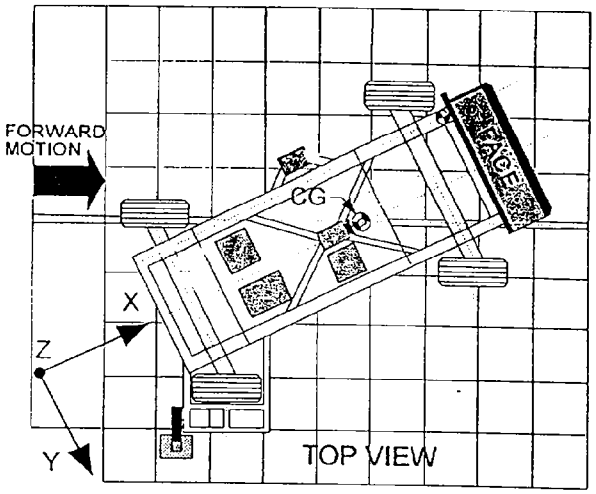
** No valid data collected

DATA SHEET NO. 14

MOVING DEFORMABLE BARRIER (MDB) ACCELEROMETER LOCATIONS AND DATA SUMMARY

Year/Make/Model/Body Style: 1996/Nissan/200 SX/2 Door

Vehicle NHTSA No.: CT5202 Test Date: December 12, 1995



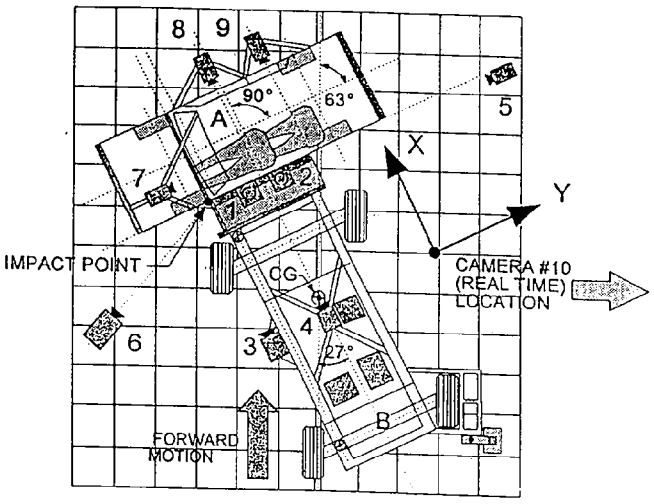
Accel. No.	Description	Coordinates (mm)*			(+) Positive		(-) Negative	
		X	Y	Z	Max. (g)	Time (msec)	Max. (g)	Time (msec)
1	MDB Center of Gravity	-1092	0	483				
	Longitudinal (X)	---	---	---	1.1	99	15.1	32
	Lateral (Y)	---	---	---	2.2	55	7.4	37
	Vertical (Z)	---	---	---	11.5	70	12.2	74
	Resultant (R)	---	---	---	18.6	37	---	---
2	Rear Frame Member	-2591	-625	622				
	Longitudinal (X)	---	---	---	2.0	179	21.0	31
	Lateral (Y)	---	---	---	4.4	36	1.1	197

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

DATA SHEET NO. 15
HIGH SPEED CAMERA LOCATIONS AND DATA

Year/Make/Model/Body Style: 1996/Nissan/200 SX/2 Door

Vehicle NHTSA No.: CT5202 Test Date: December 12, 1995



Camera No.	View	Coordinates (mm)*			Angle	Lens (mm)	Film Speed (fps)
		X	Y	Z			
	Real Time					13	24
1	Top Impact	-350	850	5400		13	966
2	Top Wide	-700	0	5130		8	1176
3	Cart Pointer					35	1020
4	Cart					13	1026
5	Right Impact	3385	8080	1835	90°	25	1111
6	Left Overall	3210	2345	1890	90°	13	1015
7	Onboard Driver					8	976
8	Onboard Hood					8	1031
9	Onboard Passenger					13	NT

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

NT = No Timing Available

DATA SHEET 16

FUEL SYSTEM INTEGRITY POST IMPACT TEST DATA

Vehicle Year/Make/Model/Body Style: 1996/Nissan/200 SX/2 Door

Vehicle NHTSA No.: CT5202 Test Date: December 12, 1995

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 32.8 mph (52.8 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

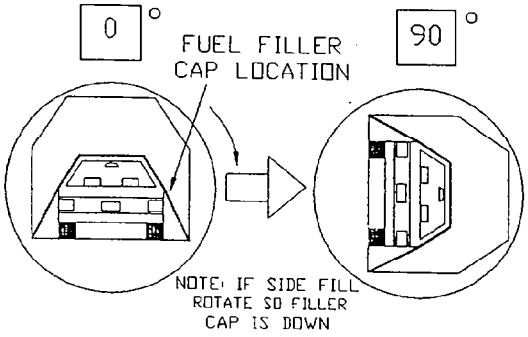
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA

Vehicle Year/Make/Model/Body Style: 1996/Nissan/200 SX/2 Door

Vehicle NHTSA No.: CT5202 Test Date: December 12, 1995

TEST PHASE: 0° - 90°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 50 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 50 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	N/R	1 oz

FUEL SPILLAGE LOCATIONS(S): None

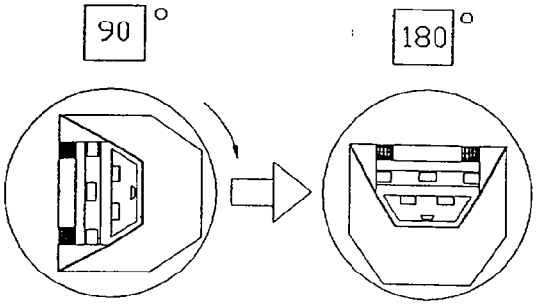
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA (Cont'd)

Vehicle Year/Make/Model/Body Style: 1996/Nissan/200 SX/2 Door

Vehicle NHTSA No.: CT5202 Test Date: December 12, 1995

TEST PHASE: 90° - 180°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 31 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 31 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	N/R	1 oz

FUEL SPILLAGE LOCATIONS(S): None

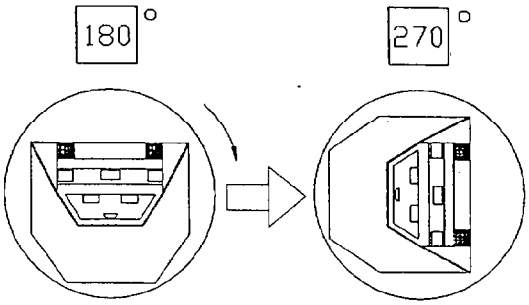
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA (Cont'd)

Vehicle Year/Make/Model/Body Style: 1996/Nissan/200 SX/2 Door

Vehicle NHTSA No.: CT5202 Test Date: December 12, 1995

TEST PHASE: 180° - 270°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 17 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 17 seconds

Next Whole Minute Interval = 8 minutes

FUEL SPILLAGE MEASUREMENT:

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

FUEL SPILLAGE LOCATIONS(S): None

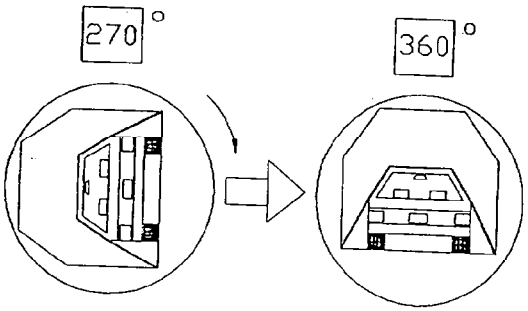
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA

Vehicle Year/Make/Model/Body Style: 1996/Nissan/200 SX/2 Door

Vehicle NHTSA No.: CT5202 Test Date: December 12, 1995

TEST PHASE: 270° - 360°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 38 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 38 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	N/R	1 oz

FUEL SPILLAGE LOCATIONS(S): None

APPENDIX A - PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

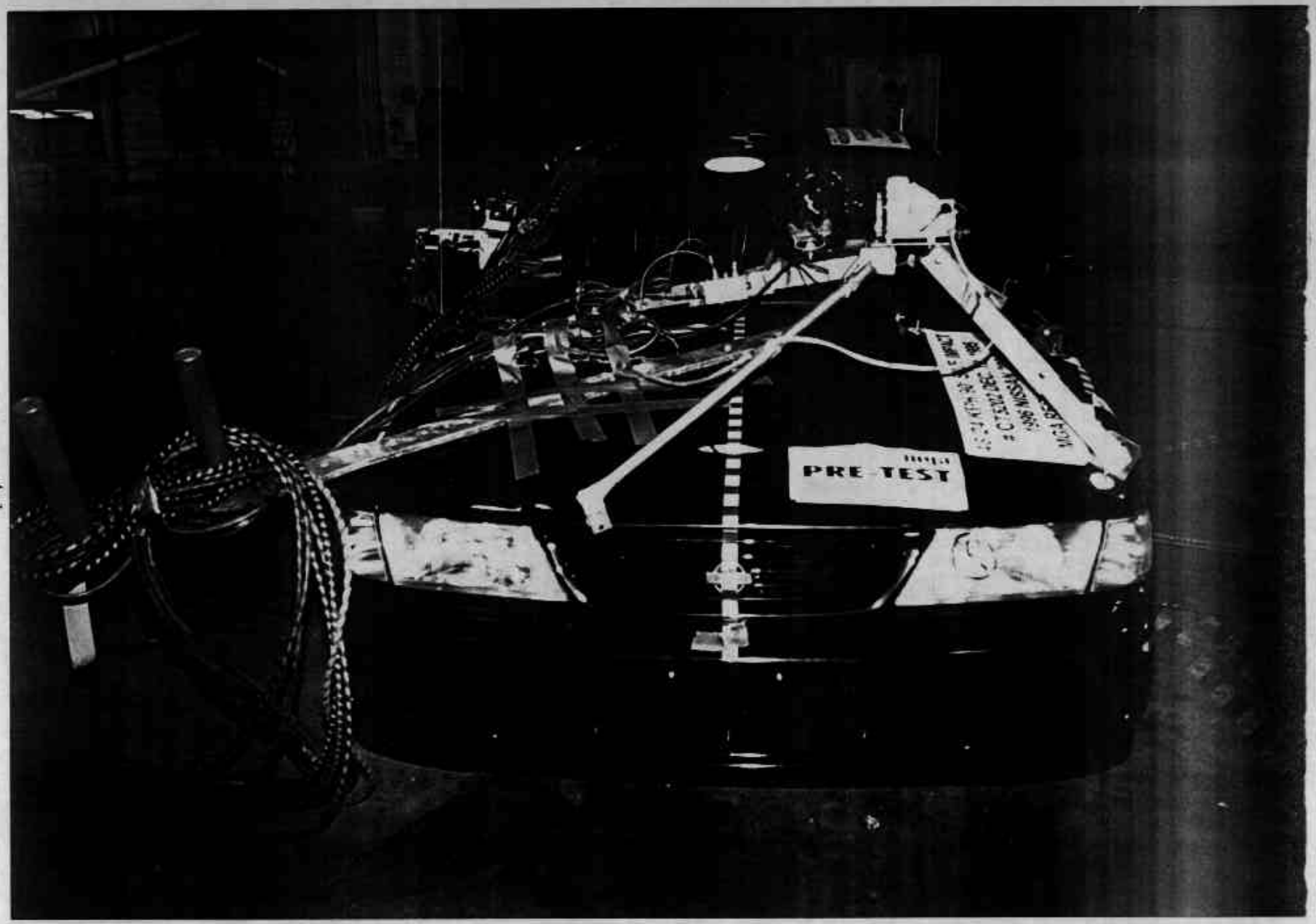


Photo No. A-1 - Pre-Test Front View of Test Vehicle

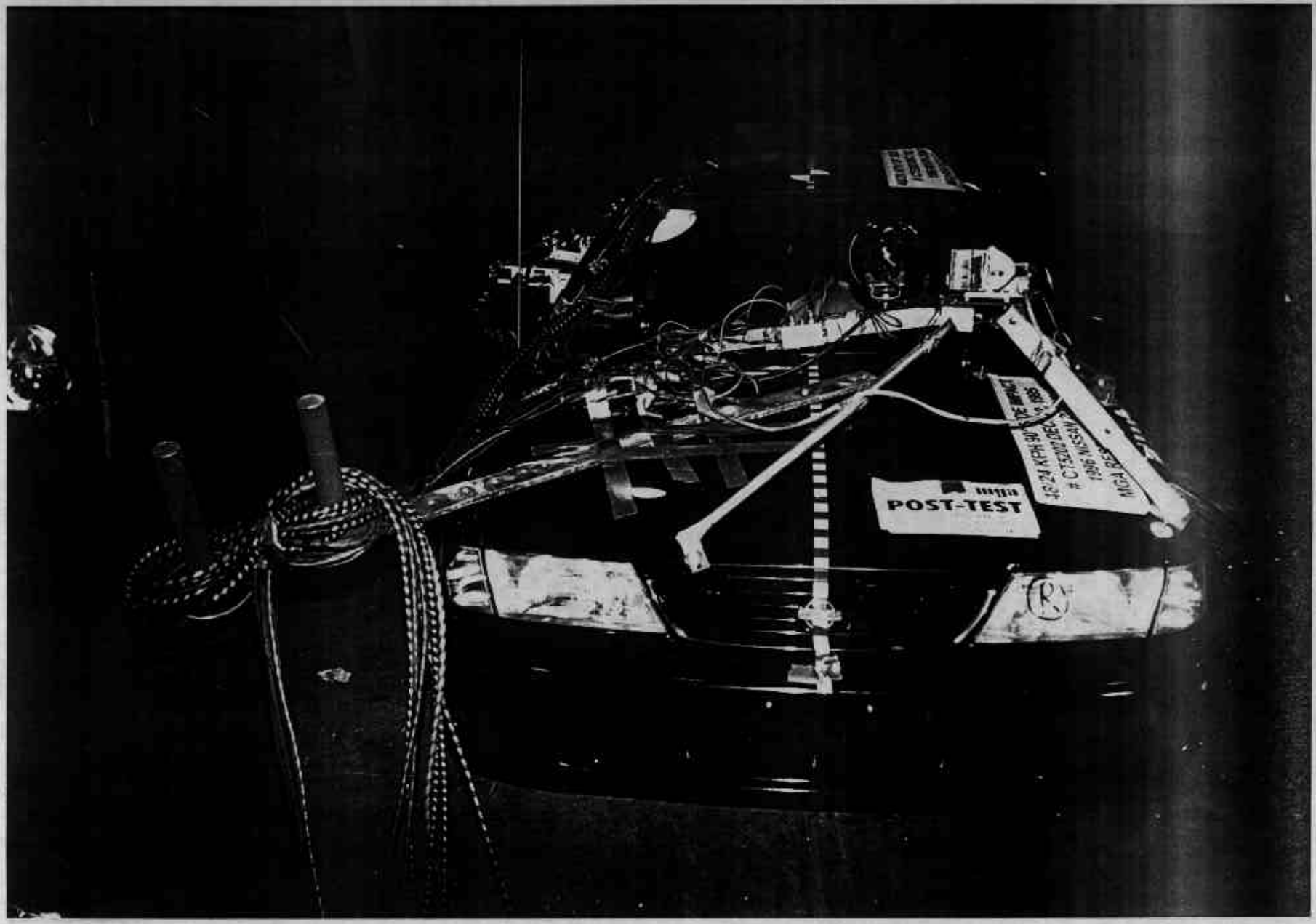


Photo No. A-2 - Post-Test Front View of Test Vehicle

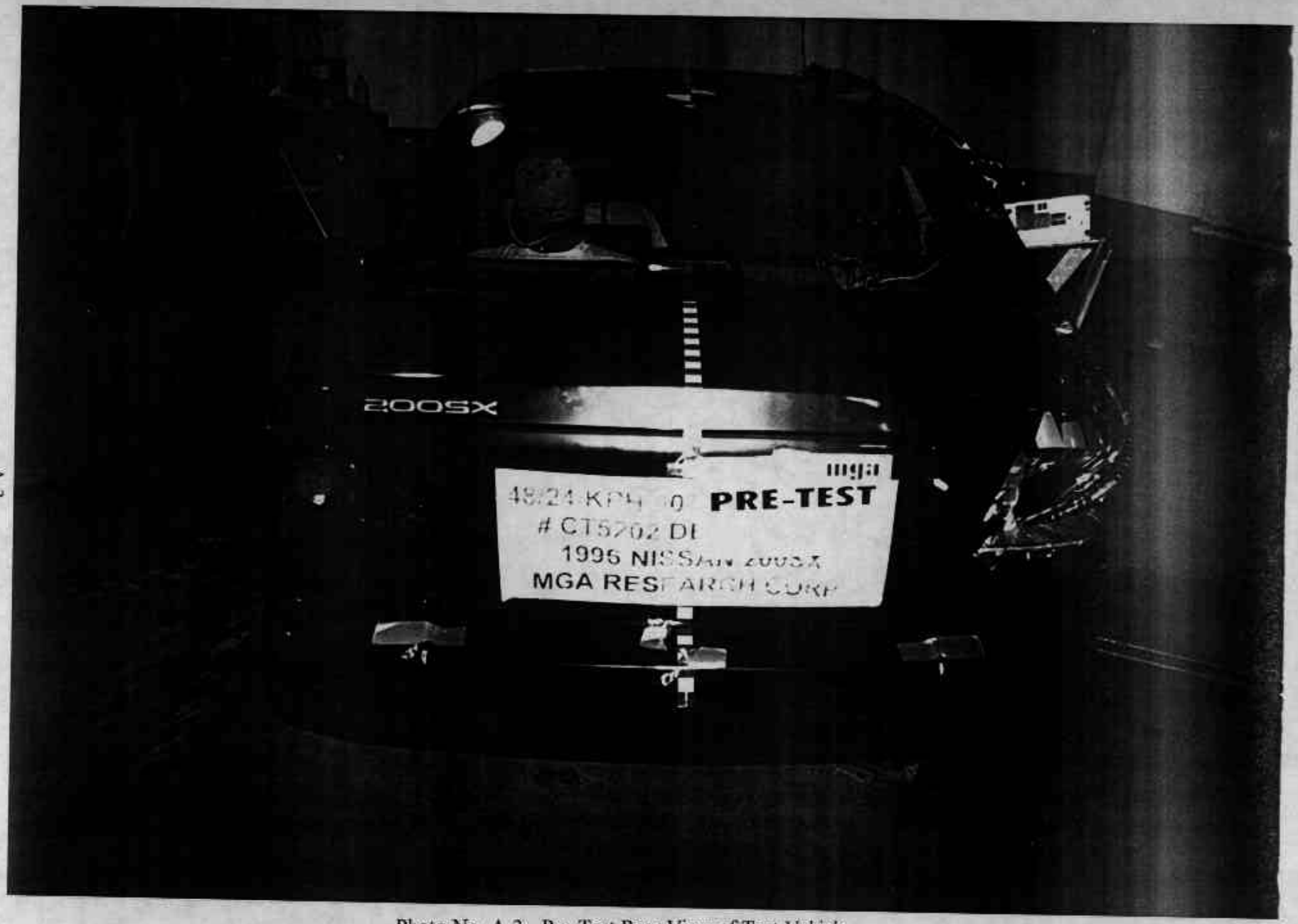


Photo No. A-3 - Pre-Test Rear View of Test Vehicle

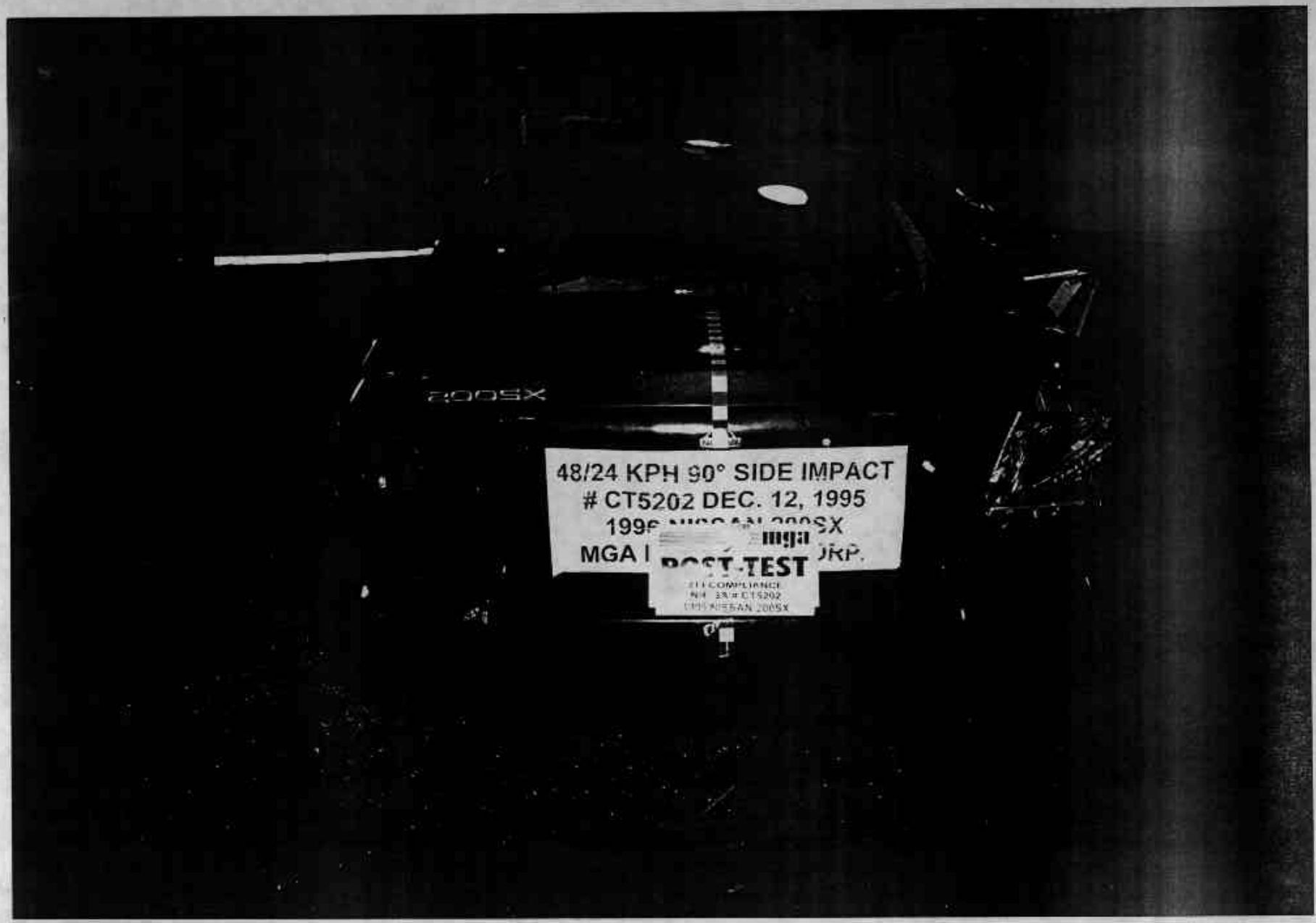


Photo No. A-4 - Post-Test Rear View of Test Vehicle

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

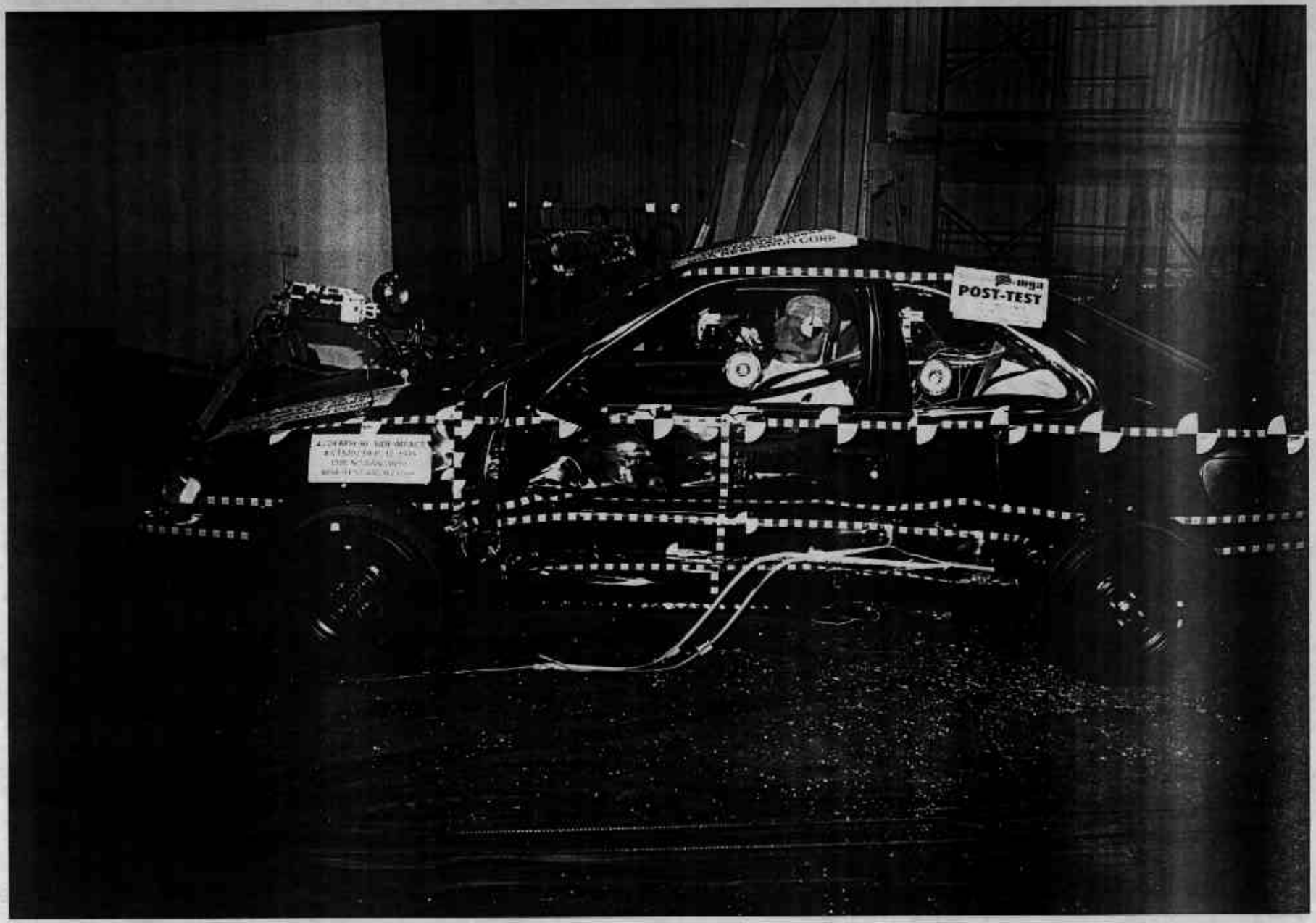


Photo No. A-6 - Post-Test Left Side View of Test Vehicle

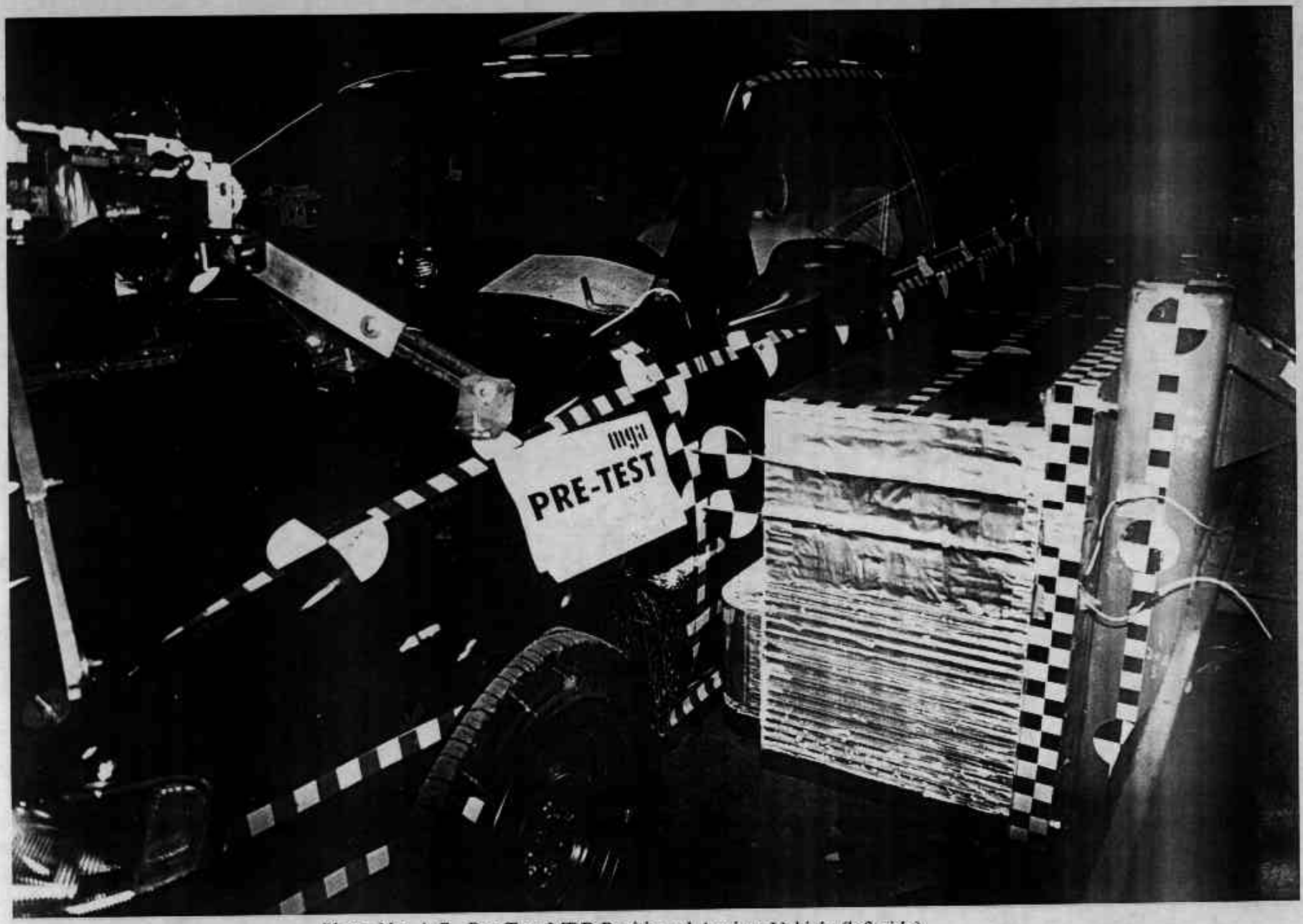


Photo No. A-7 - Pre-Test MDB Positioned Against Vehicle (left side)

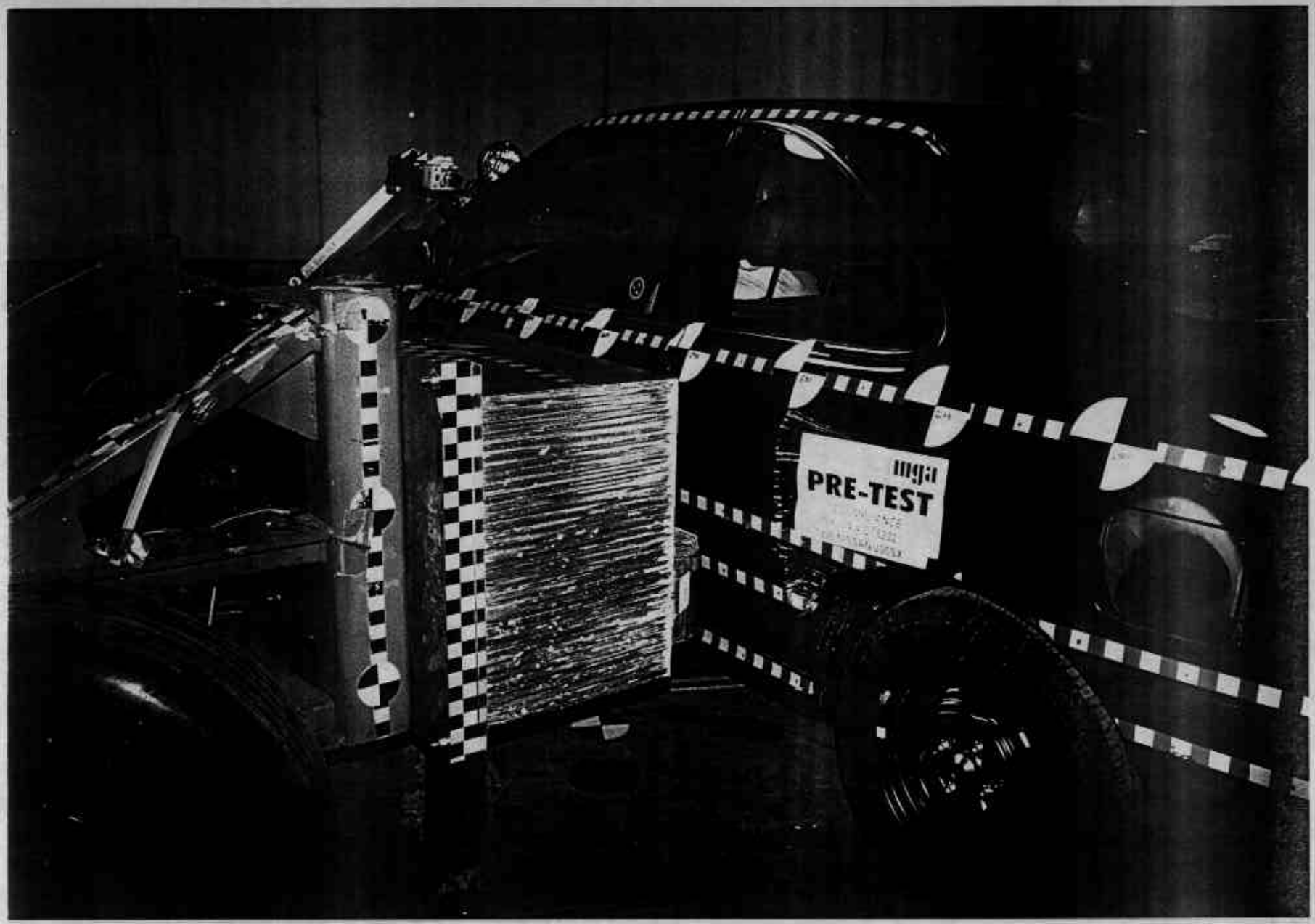


Photo No. A-8 - Pre-Test MDB Positioned Against Vehicle (right side)

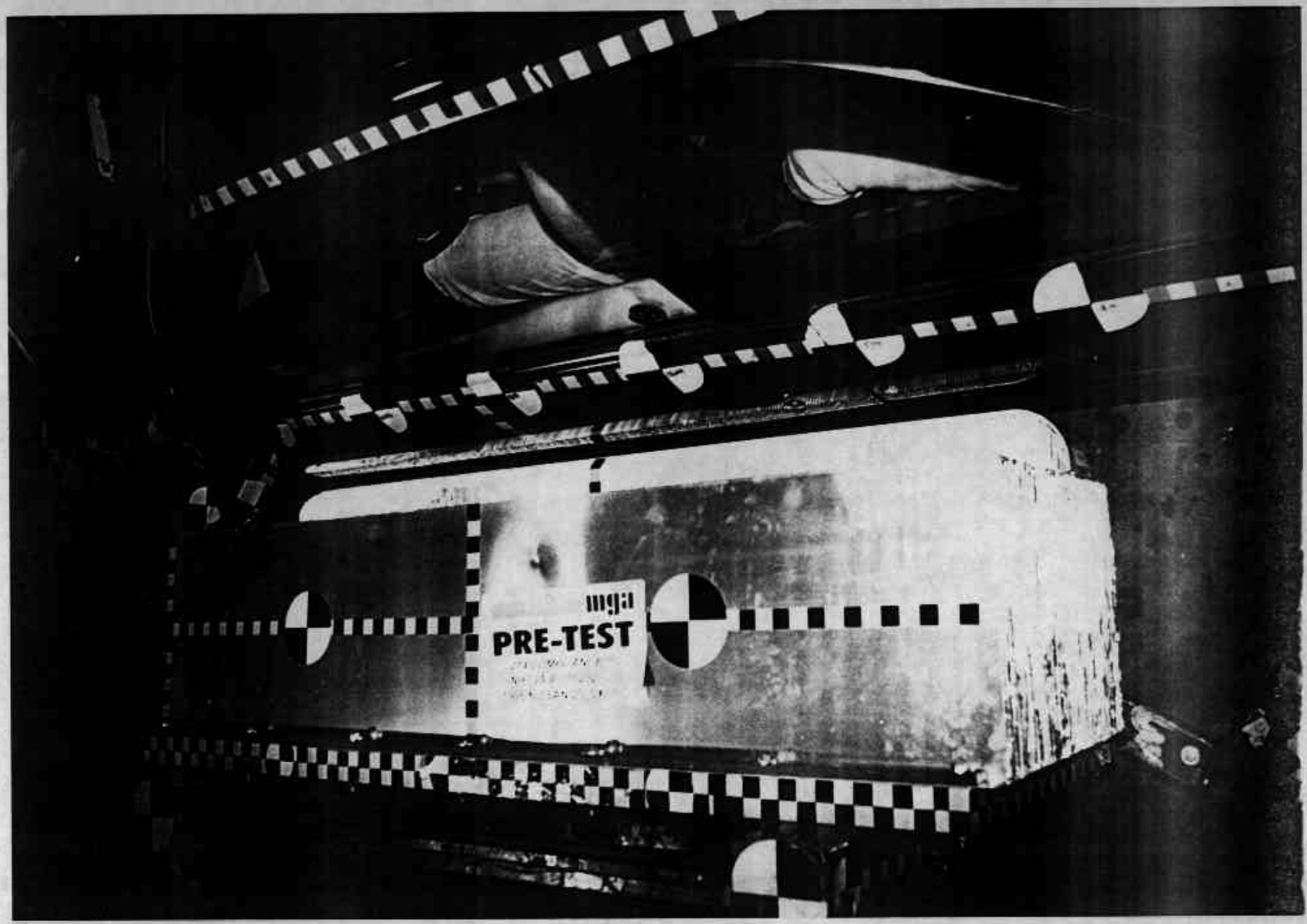


Photo No. A-9 - Pre-Test MDB Positioned Against Vehicle Overhead View

A-10

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

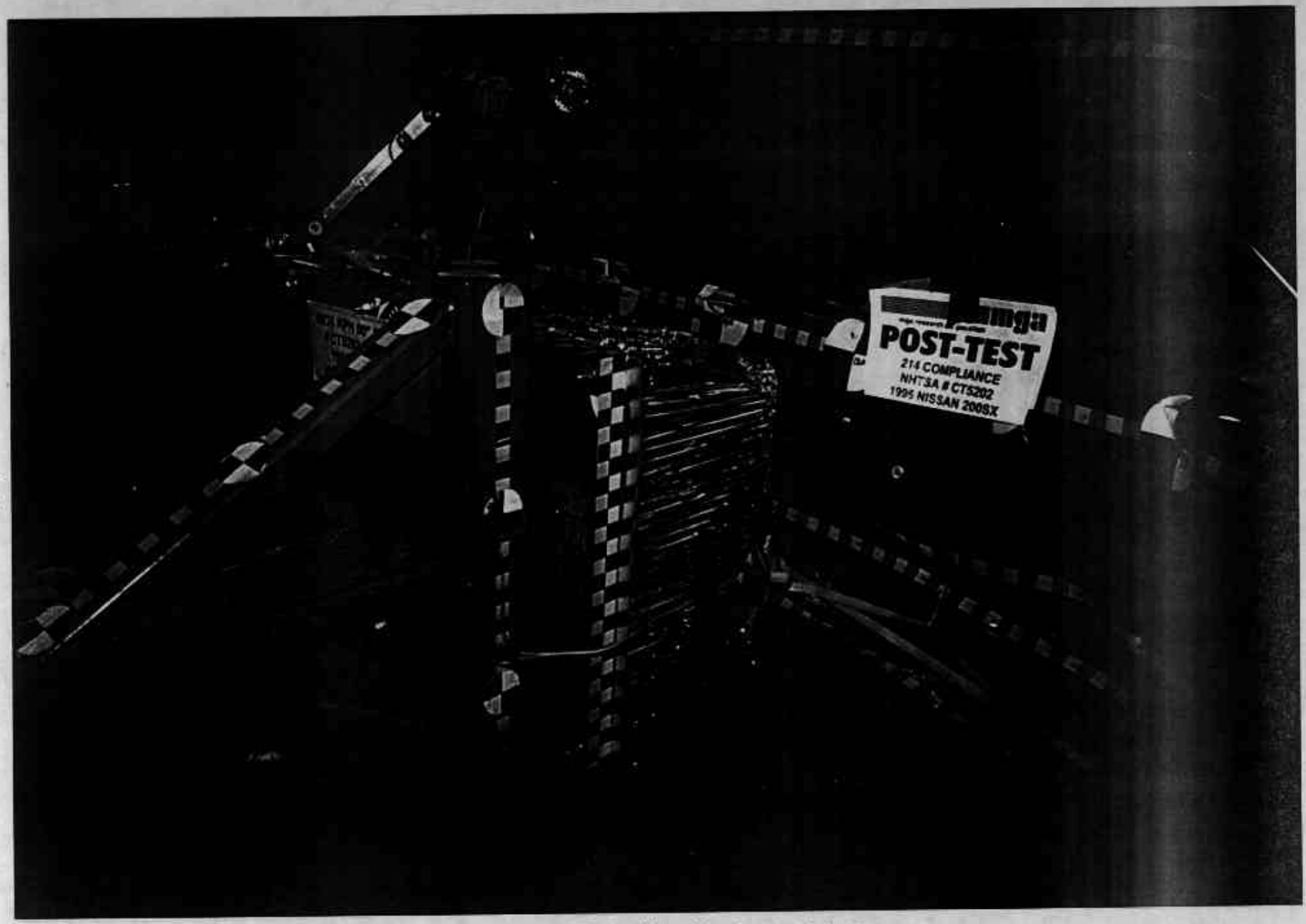


Photo No. A-11 - Post-Test MDB Positioned Against Vehicle (right side)

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

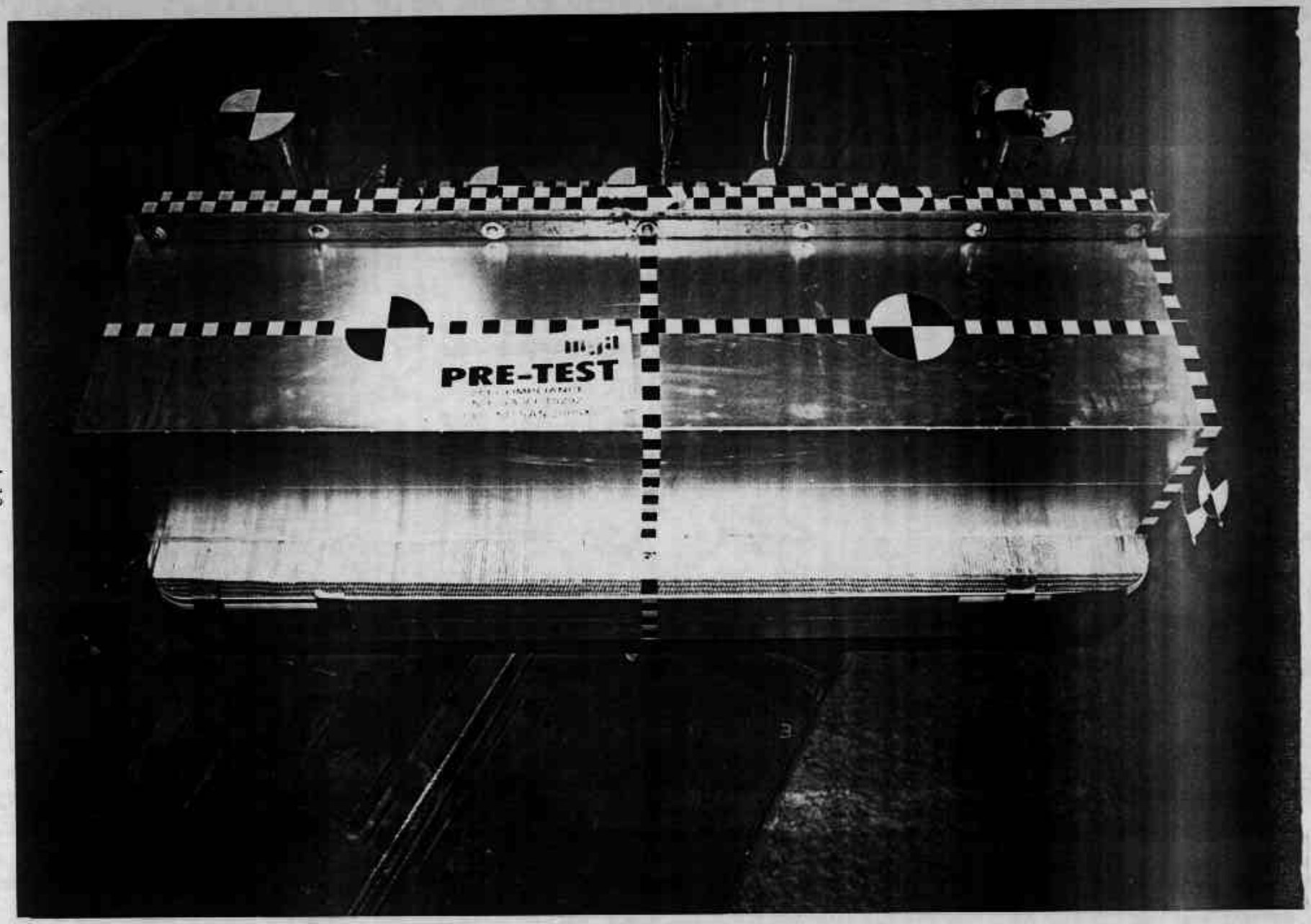


Photo No. A-13 - Pre-Test MDB Top View

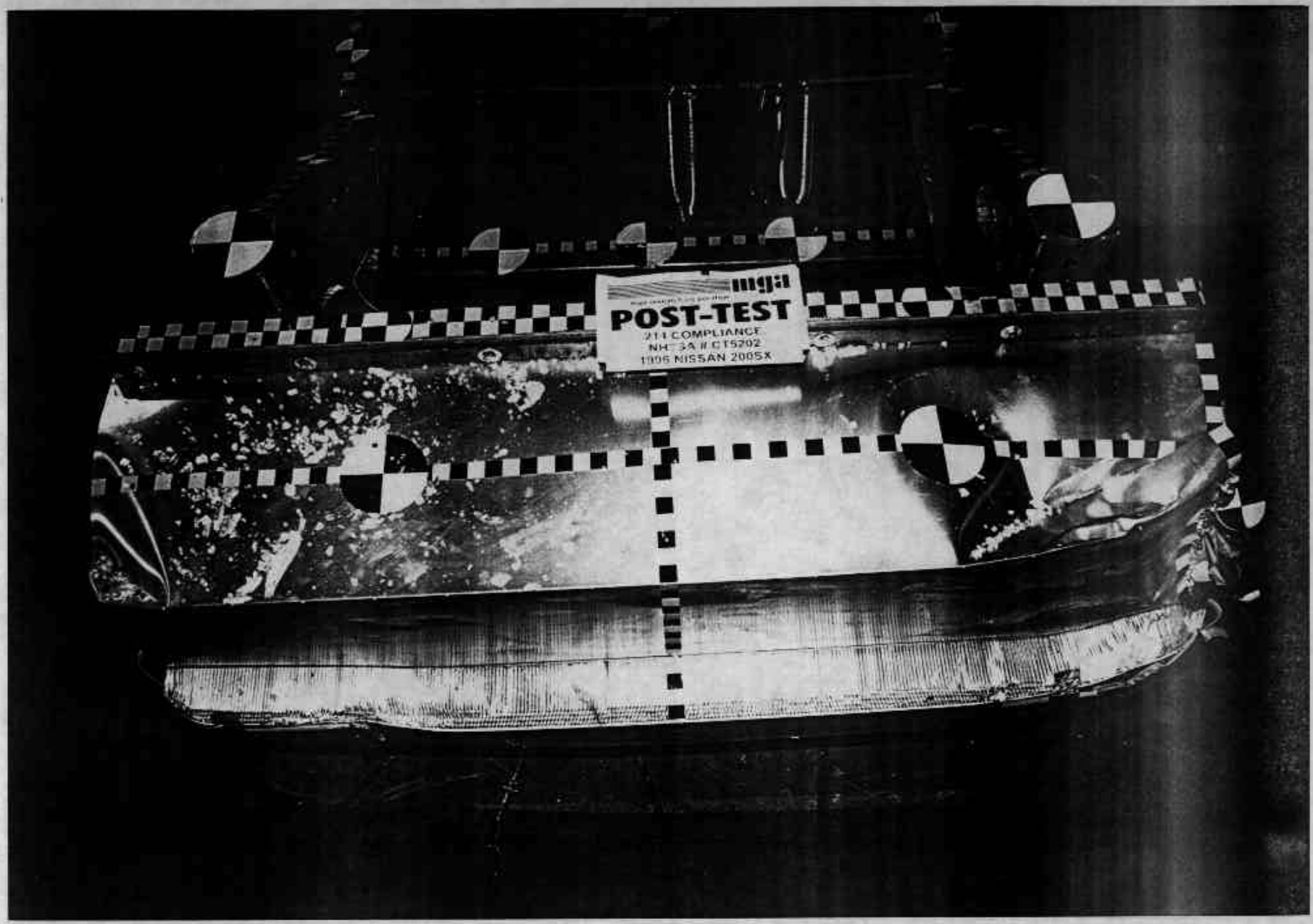


Photo No. A-14 - Post-Test MDB Top View

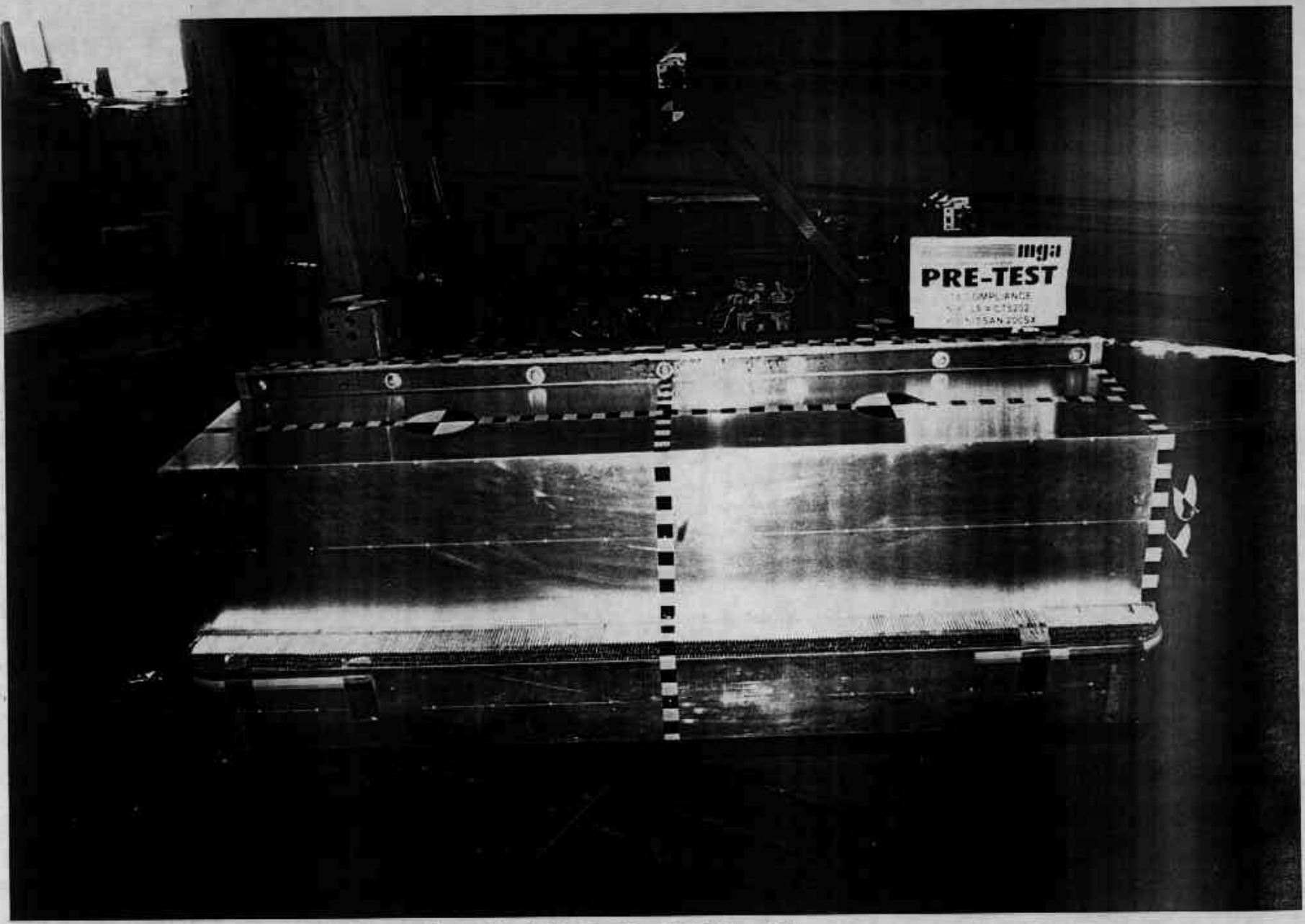


Photo No. A-15 - Pre-Test MDB Front View

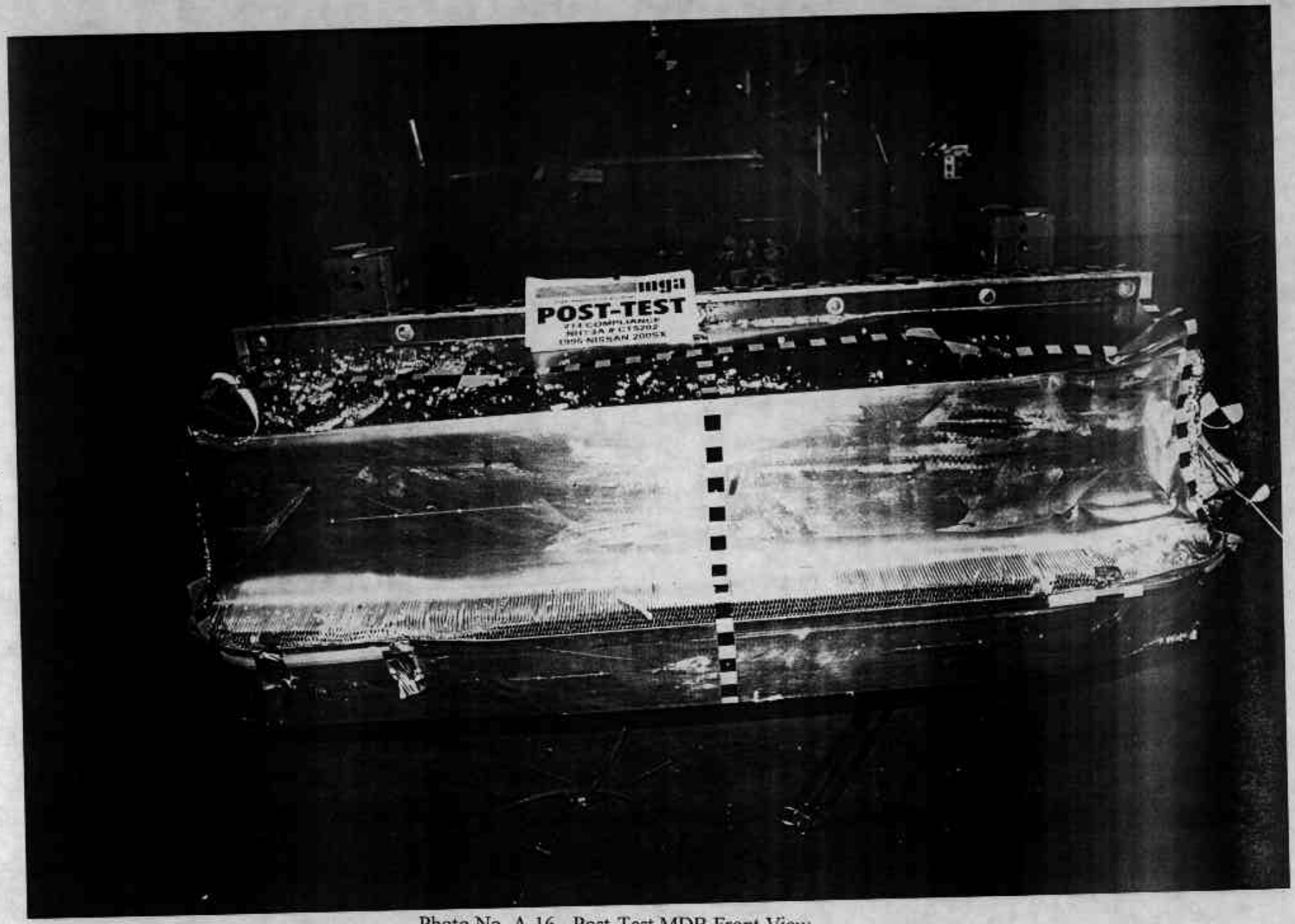


Photo No. A-16 - Post-Test MDB Front View

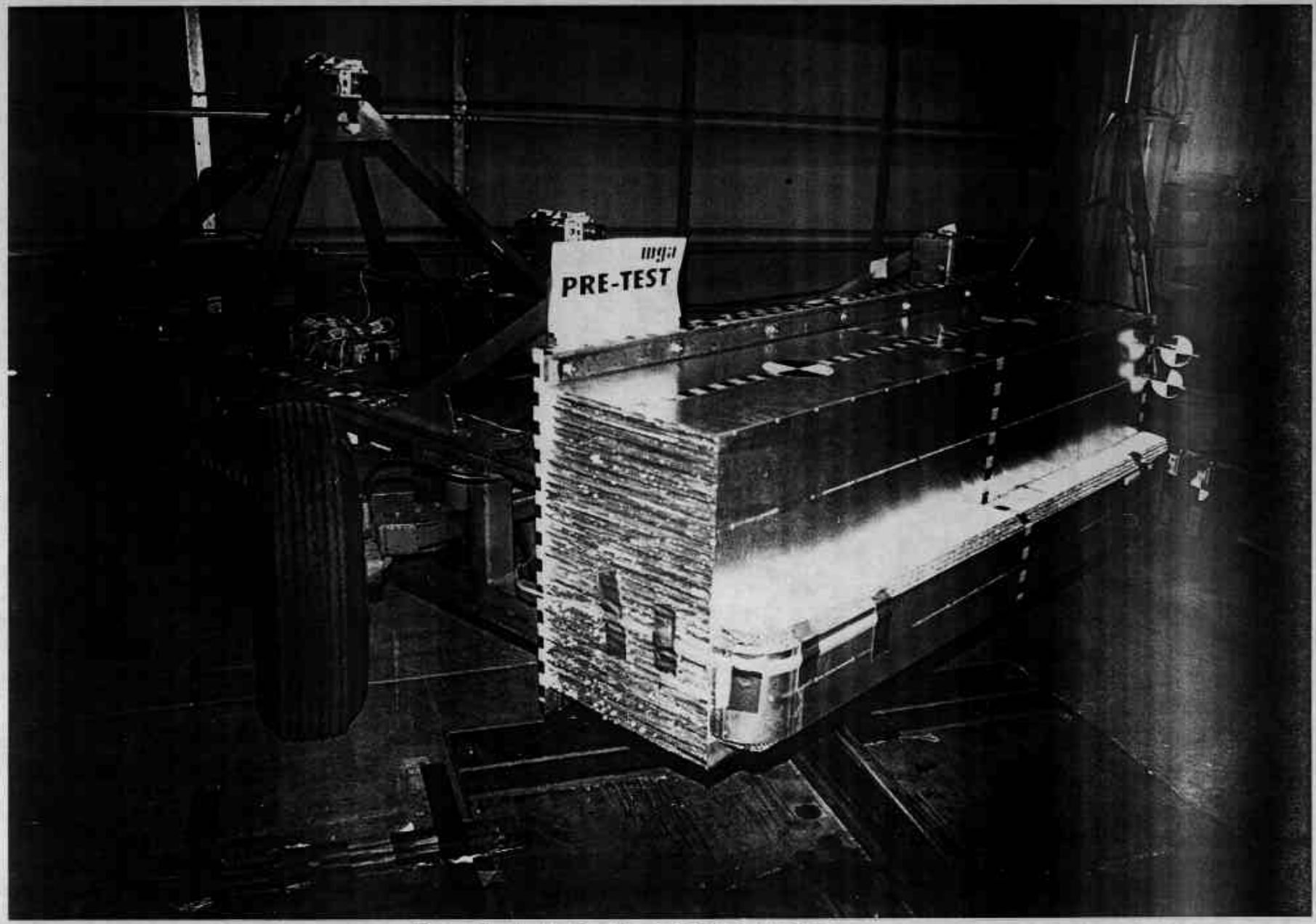


Photo No. A-17 - Pre-Test MDB Right Side View

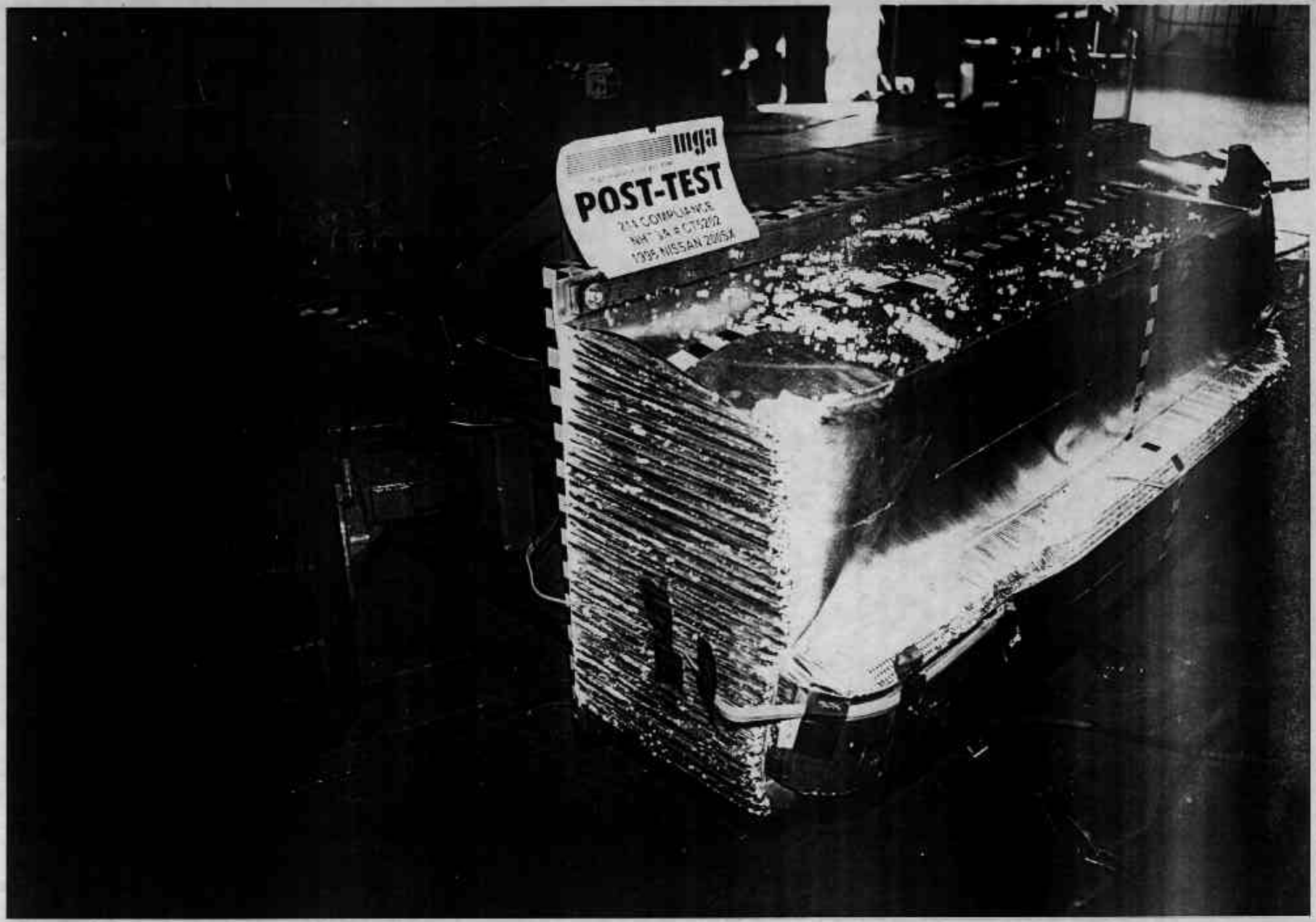


Photo No. A-18 - Post-Test MDB Right Side View

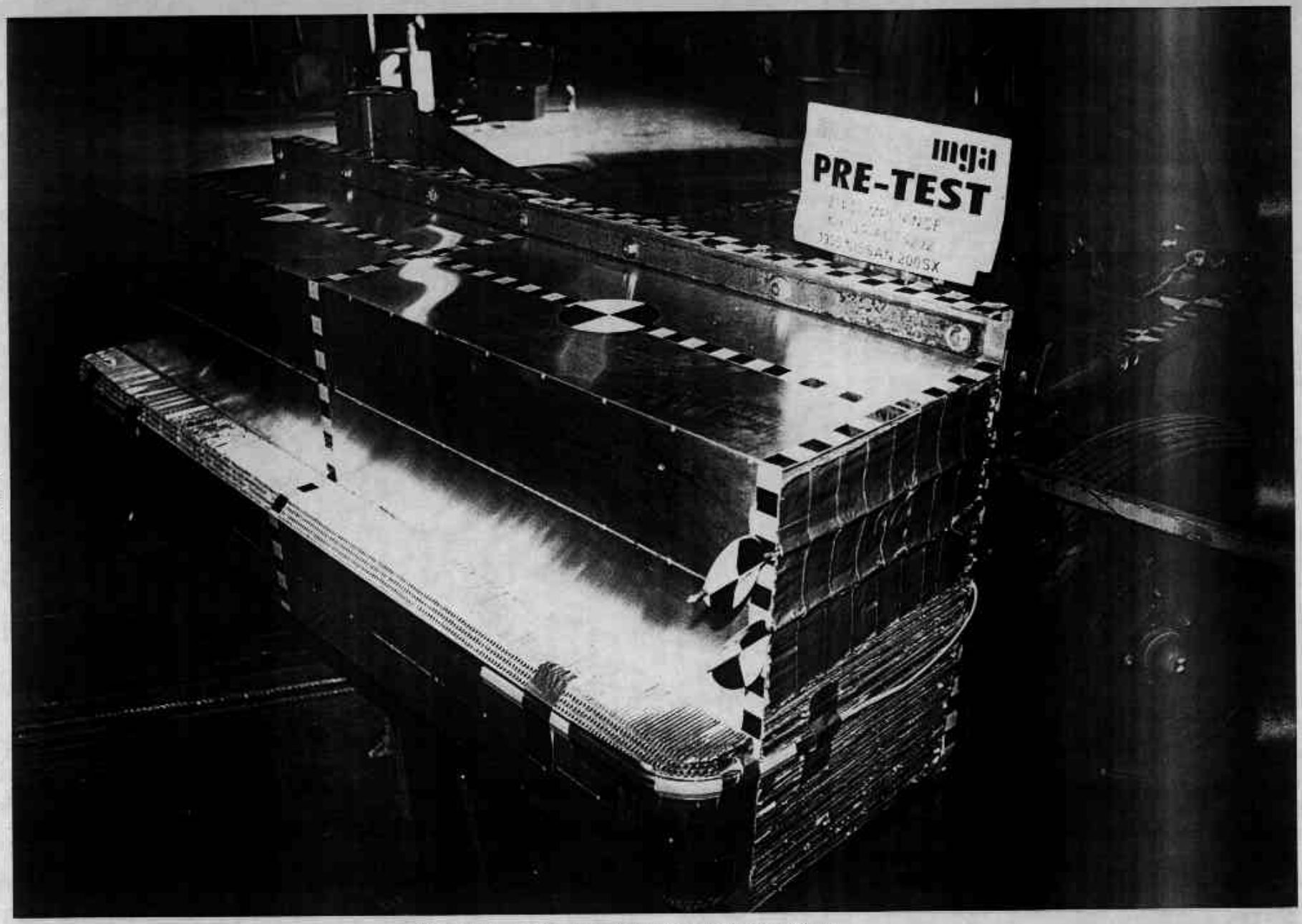


Photo No. A-19 - Pre-Test MDB Left Side View

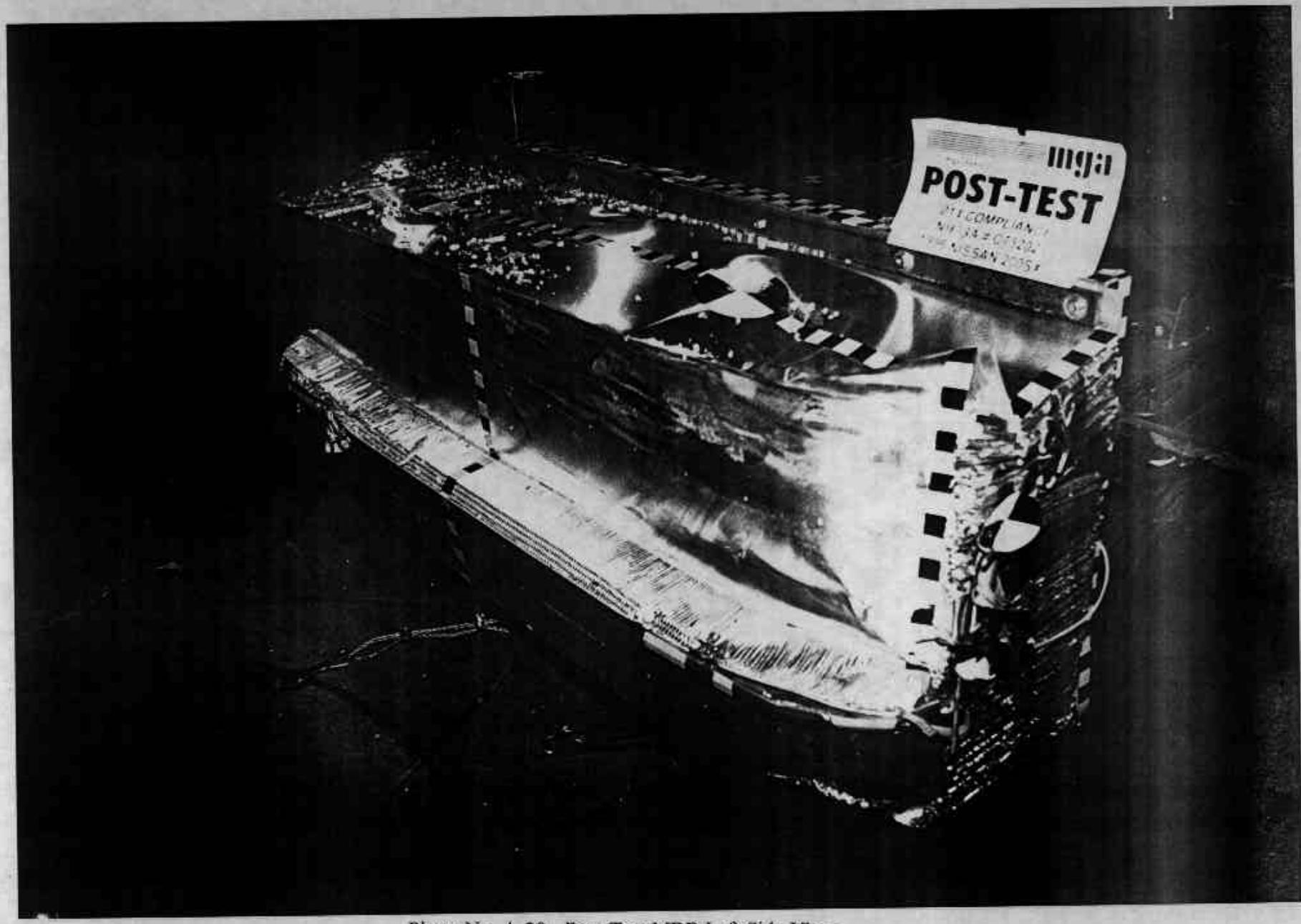


Photo No. A-20 - Post-Test MDB Left Side View

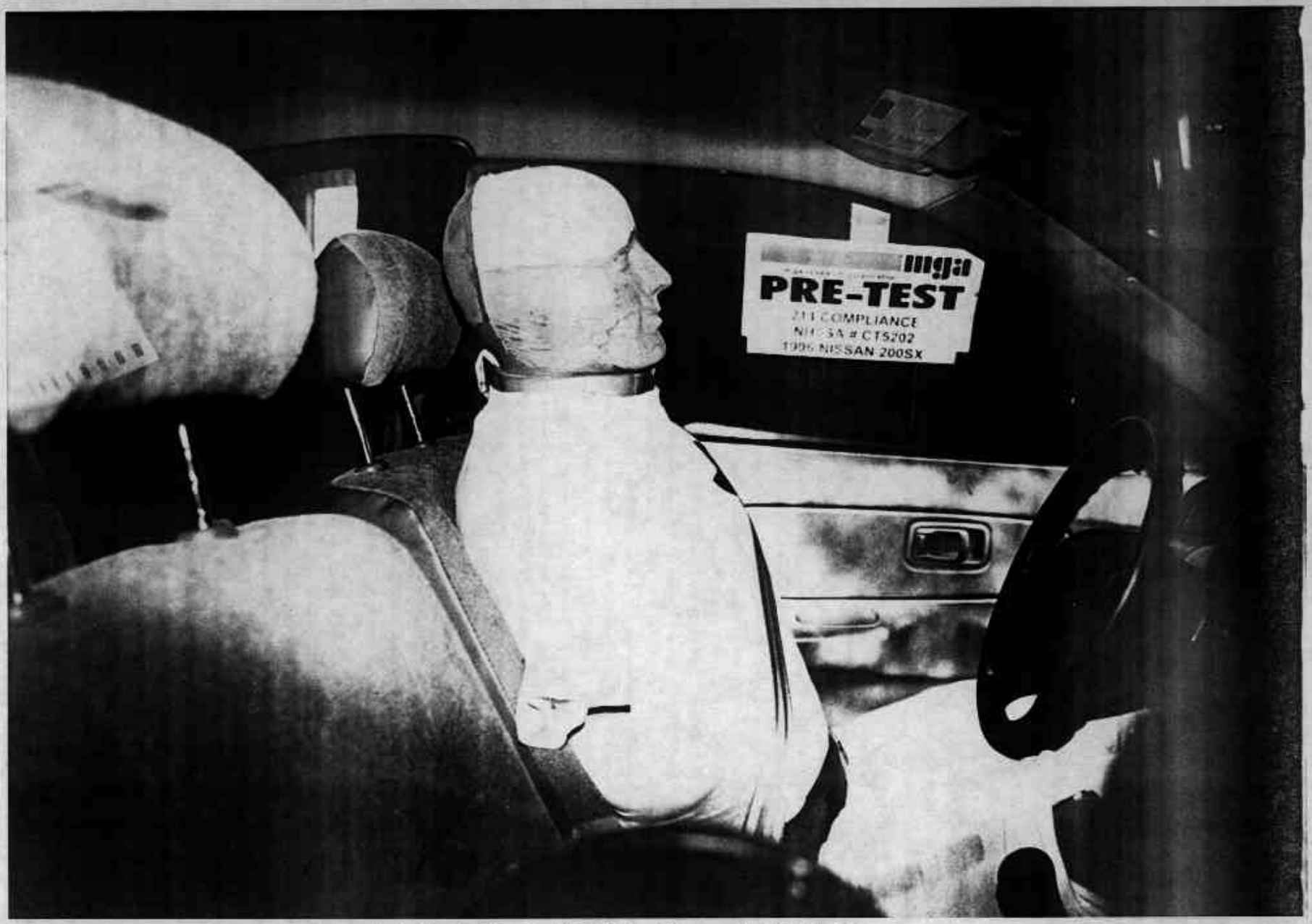


Photo No. A-21 - Pre-Test Driver Dummy Right Side View

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

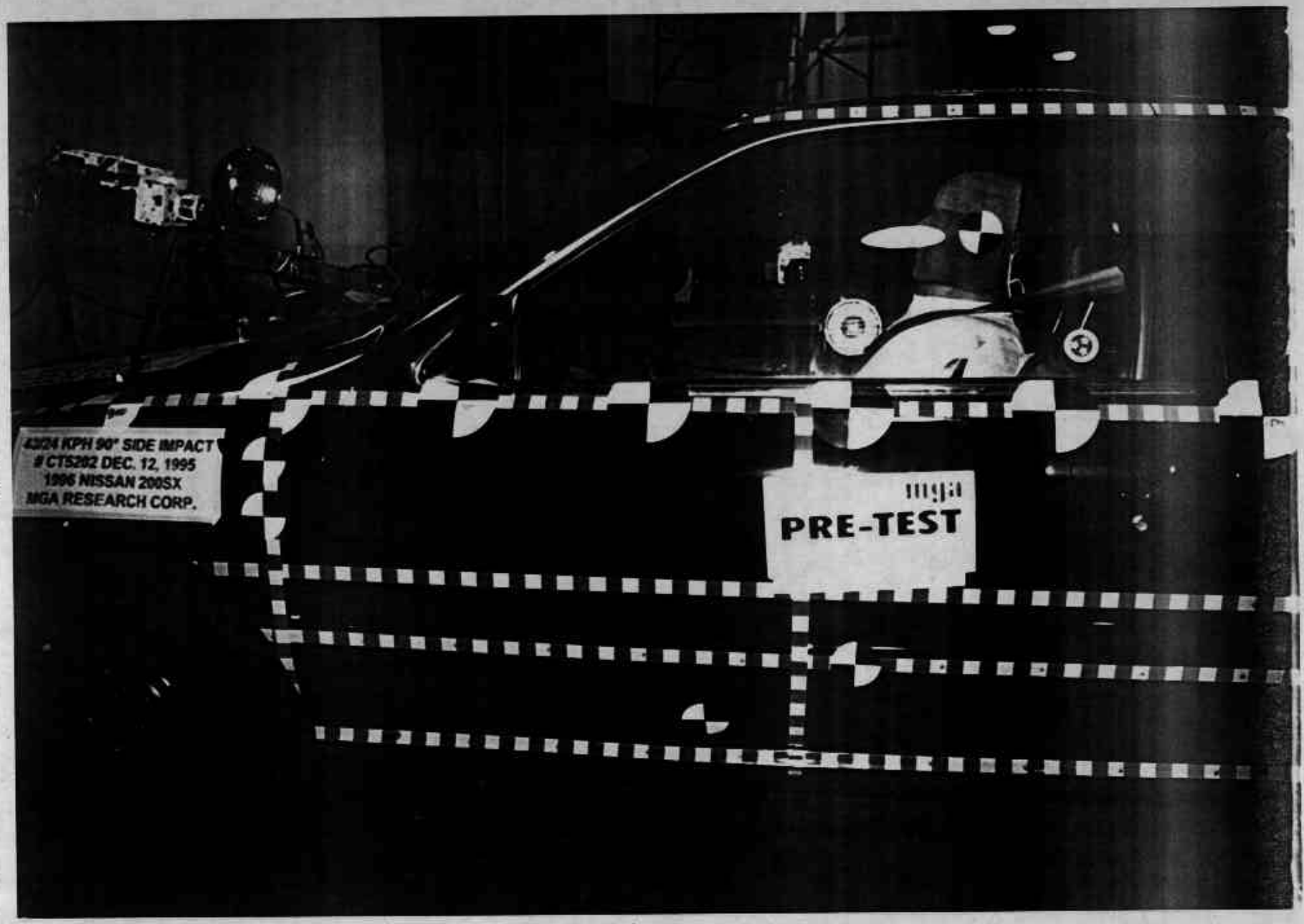


Photo No. A-23 - Pre-Test Driver Dummy Left Side View

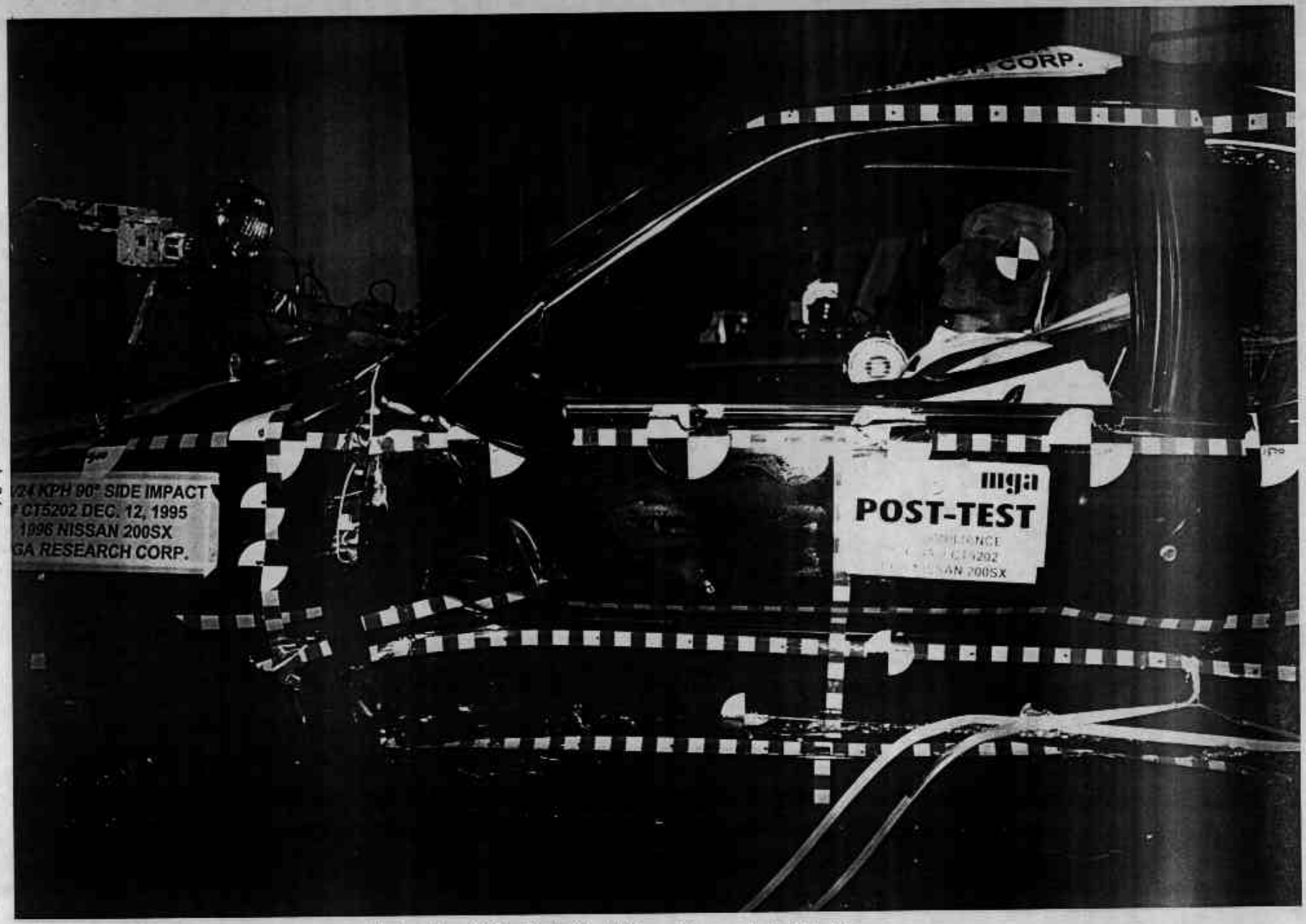


Photo No. A-24 - Post-Test Driver Dummy Left Side View

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

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

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

A-28

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

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

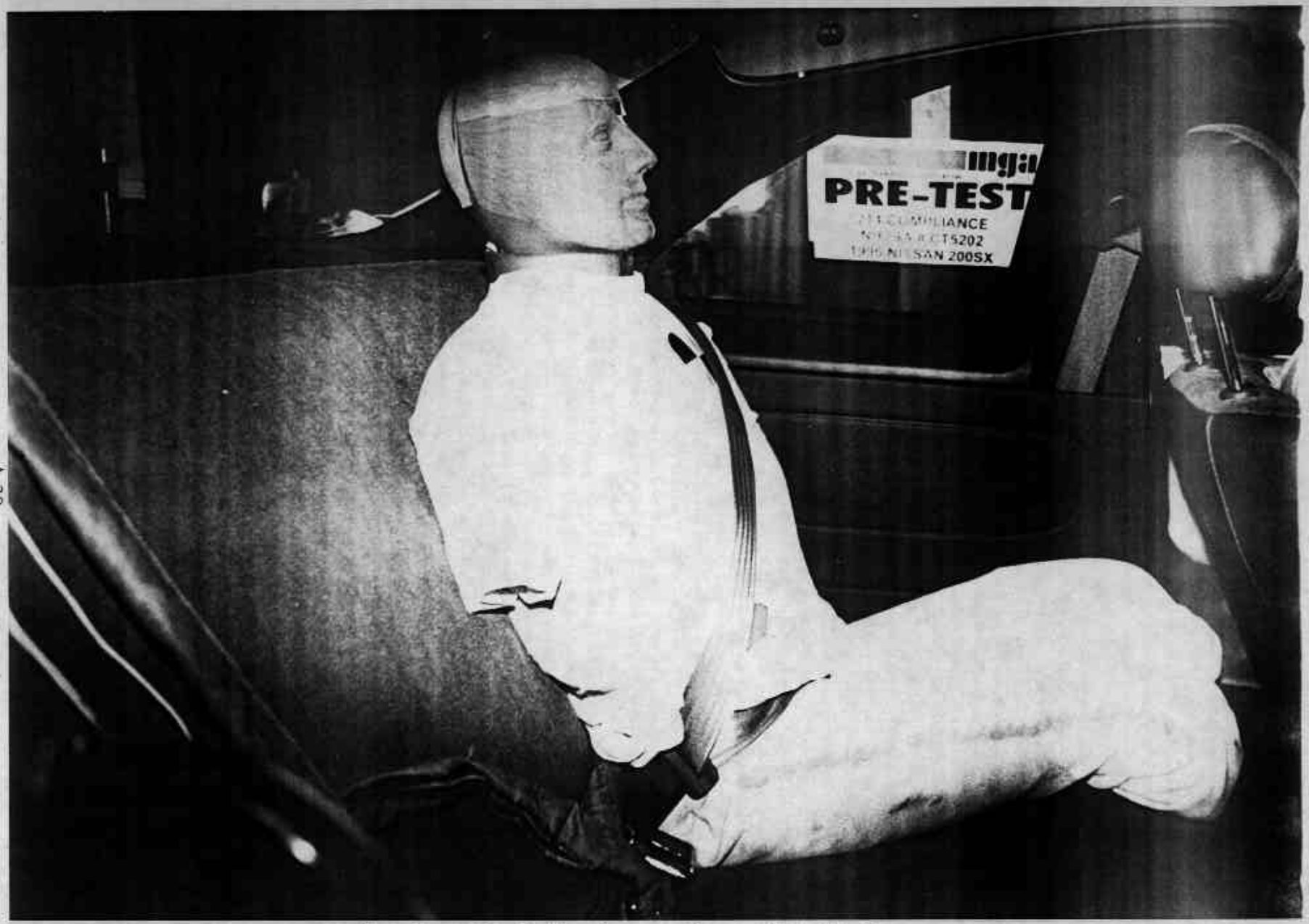


Photo No. A-30 - Pre-Test Passenger Dummy Right Side View

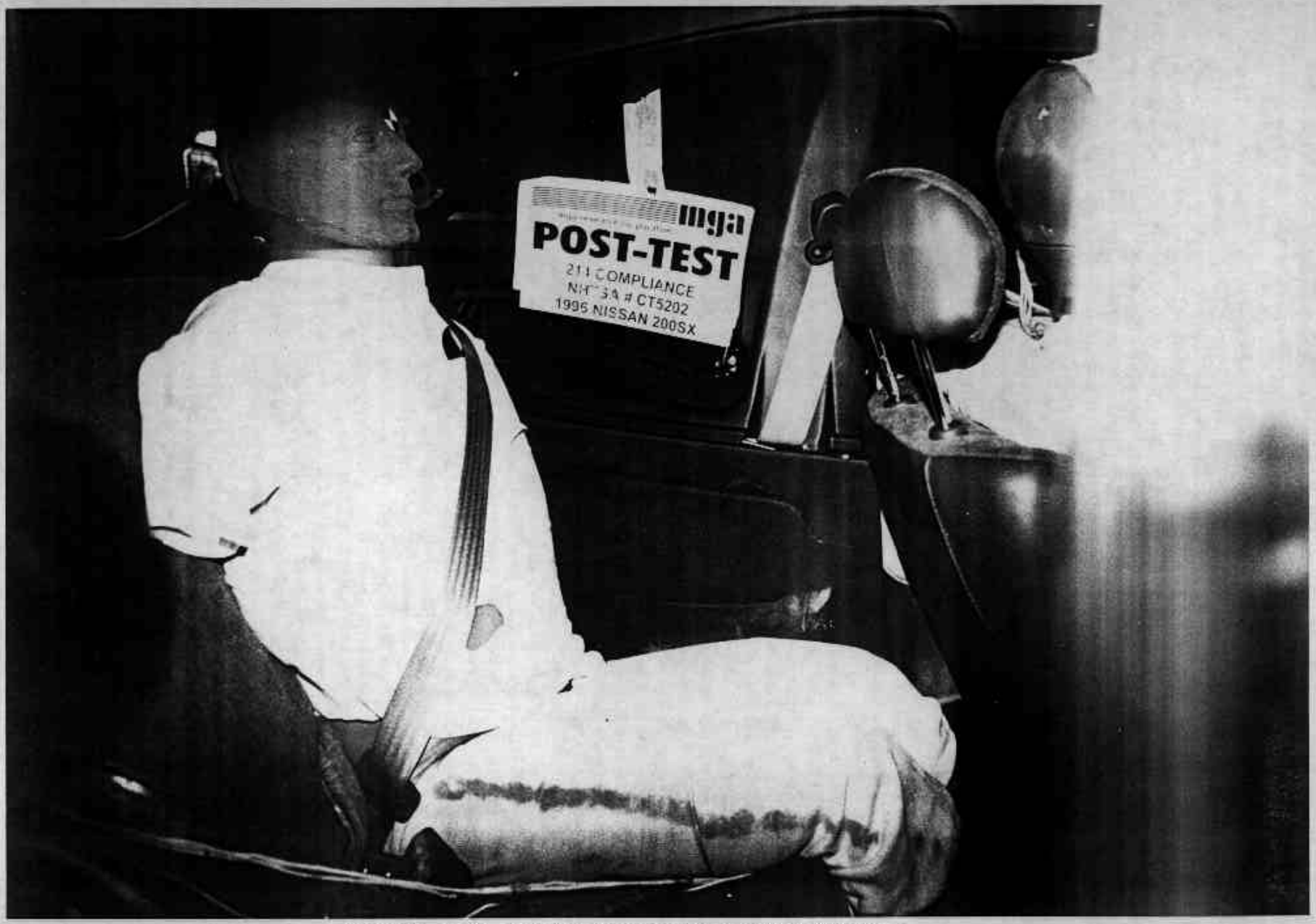


Photo No. A-31 - Post-Test Passenger Dummy Right Side View

A-32

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

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

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

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

A-36

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

Photo No. A-37 - Post-Test Passenger Dummy Head Contact

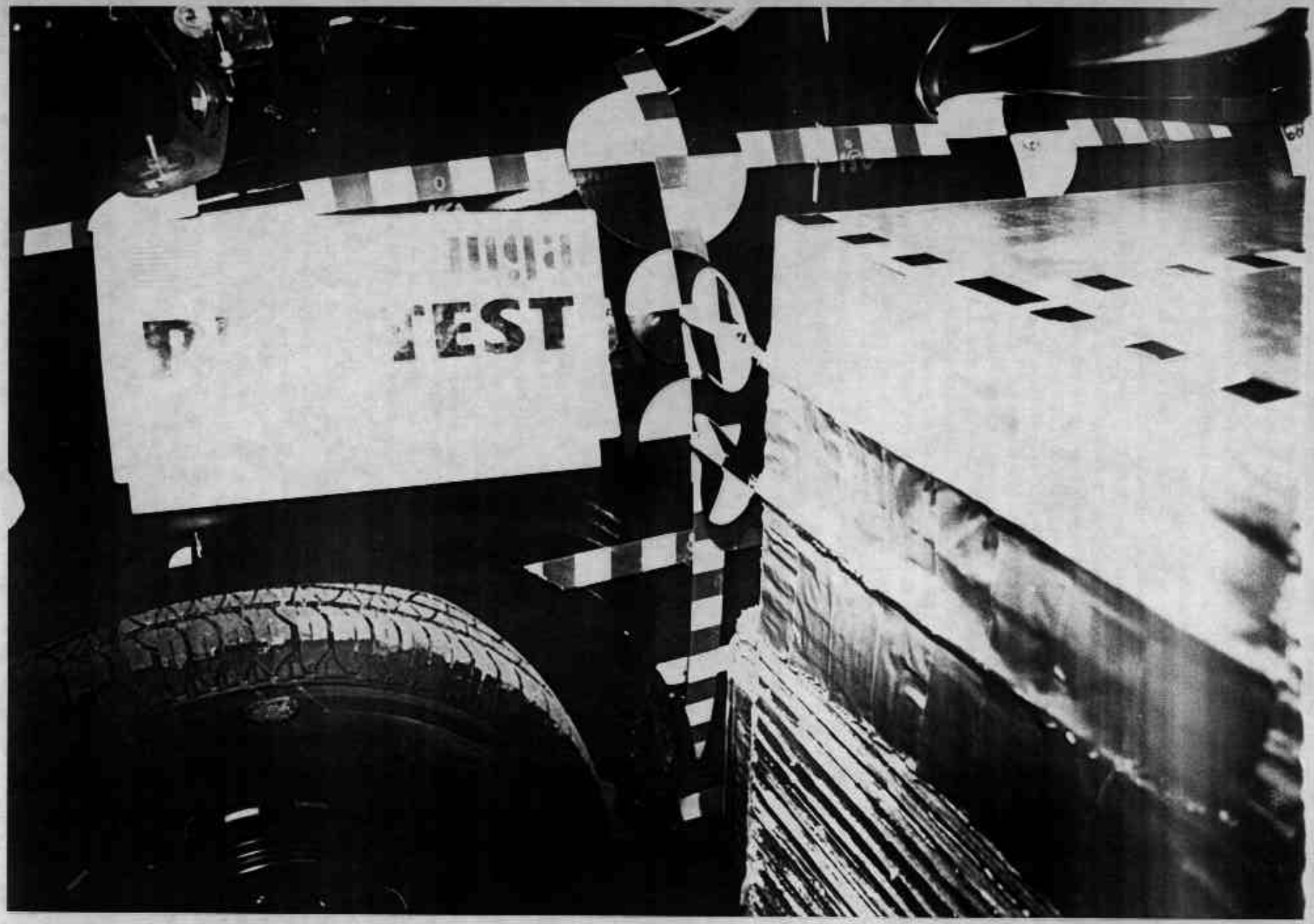


Photo No. A-38 - Pre-Test Left Front Impact Point on Vehicle

Photo No. A-39 - Post-Test Left Front Impact Point on Vehicle

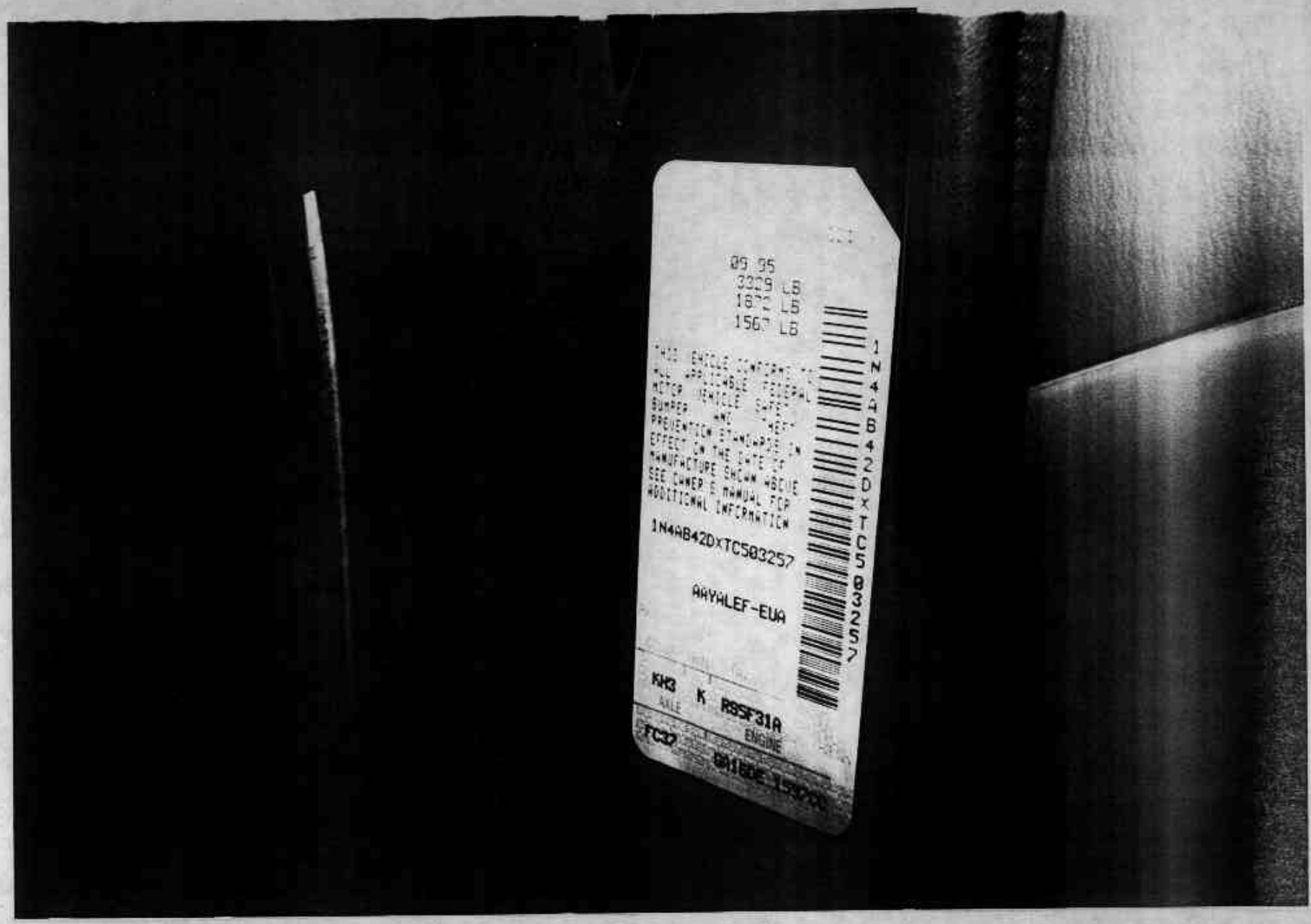


Photo No. A-40 - Vehicle Certification Label

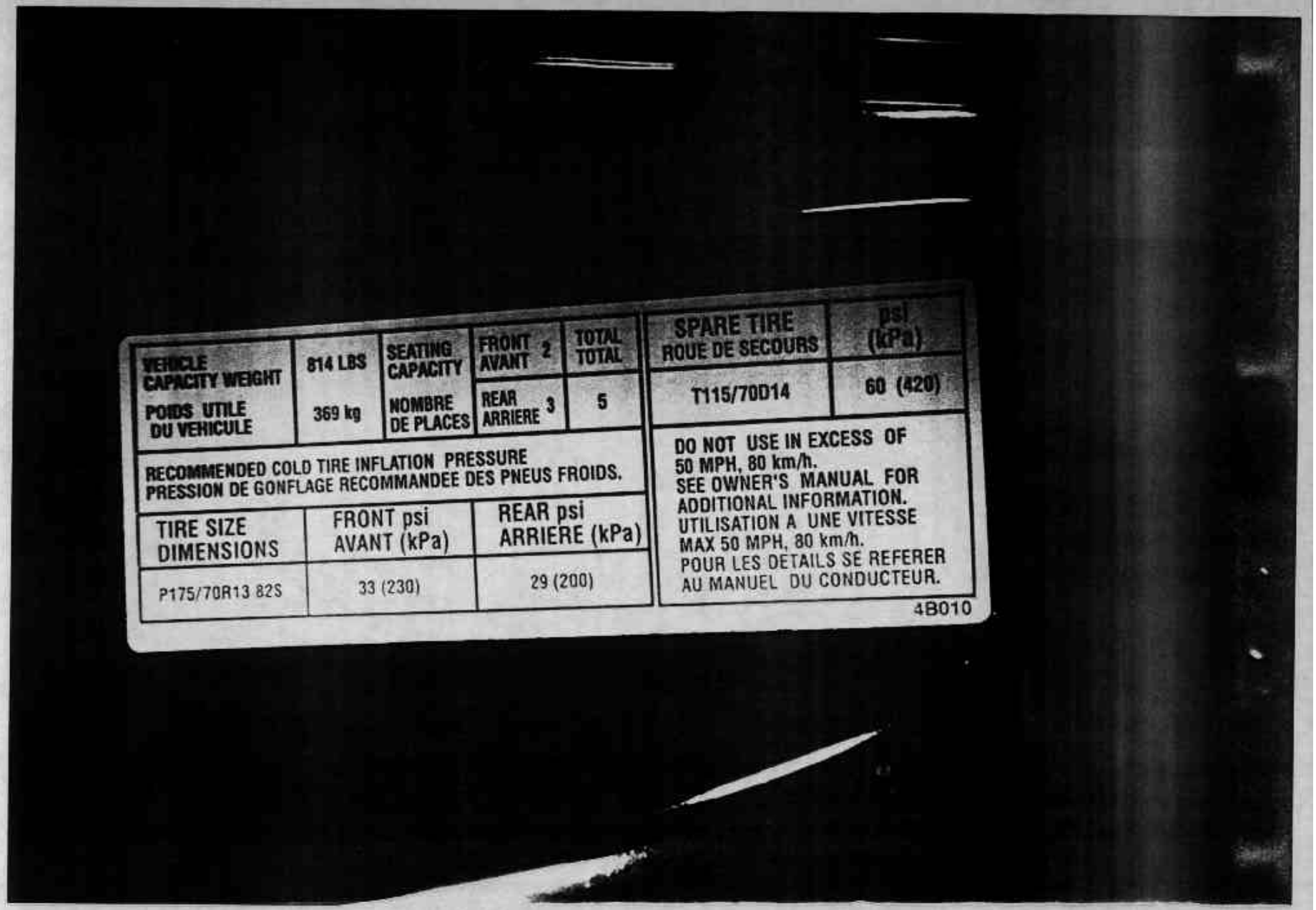


Photo No. A-41 - Tire Placard

Photo No. A-42 - Rollover 90°

Photo No. A-43 - Rollover 180°

Photo No. A-44 - Rollover 270°

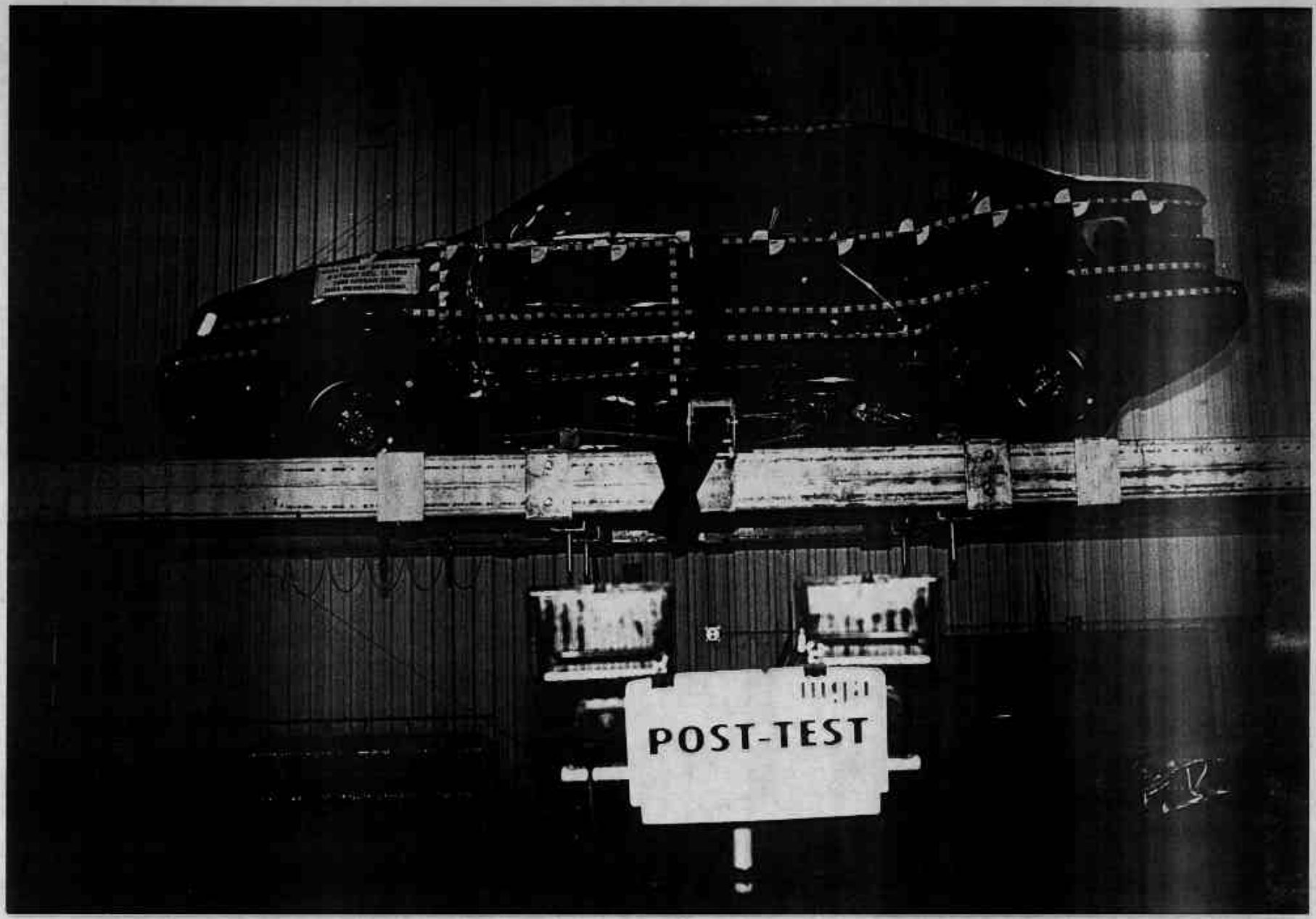


Photo No. A-45 - Rollover 360°

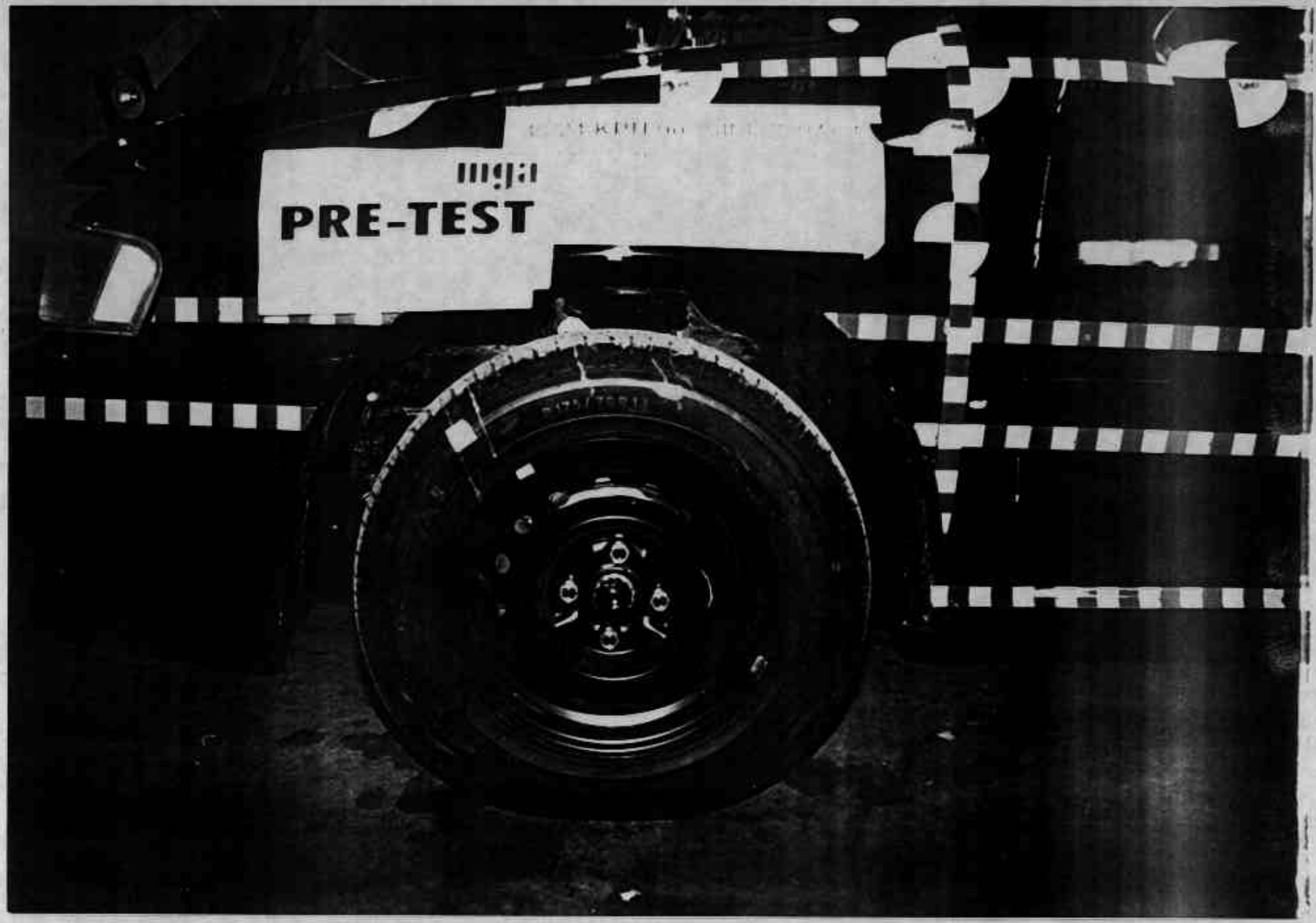


Photo No. A-46 - Left Front Attitude Point

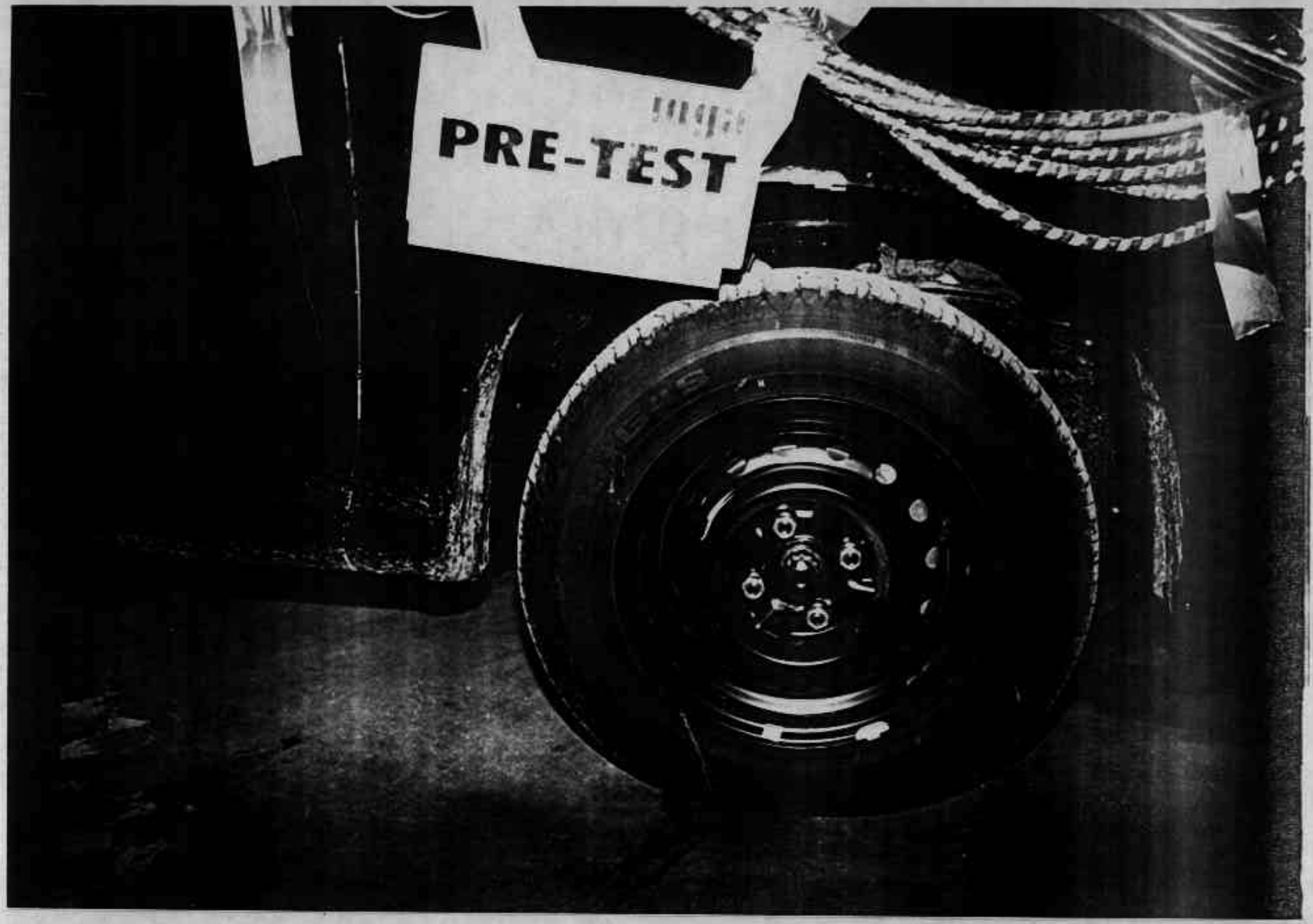


Photo No. A-47 - Right Front Attitude Point

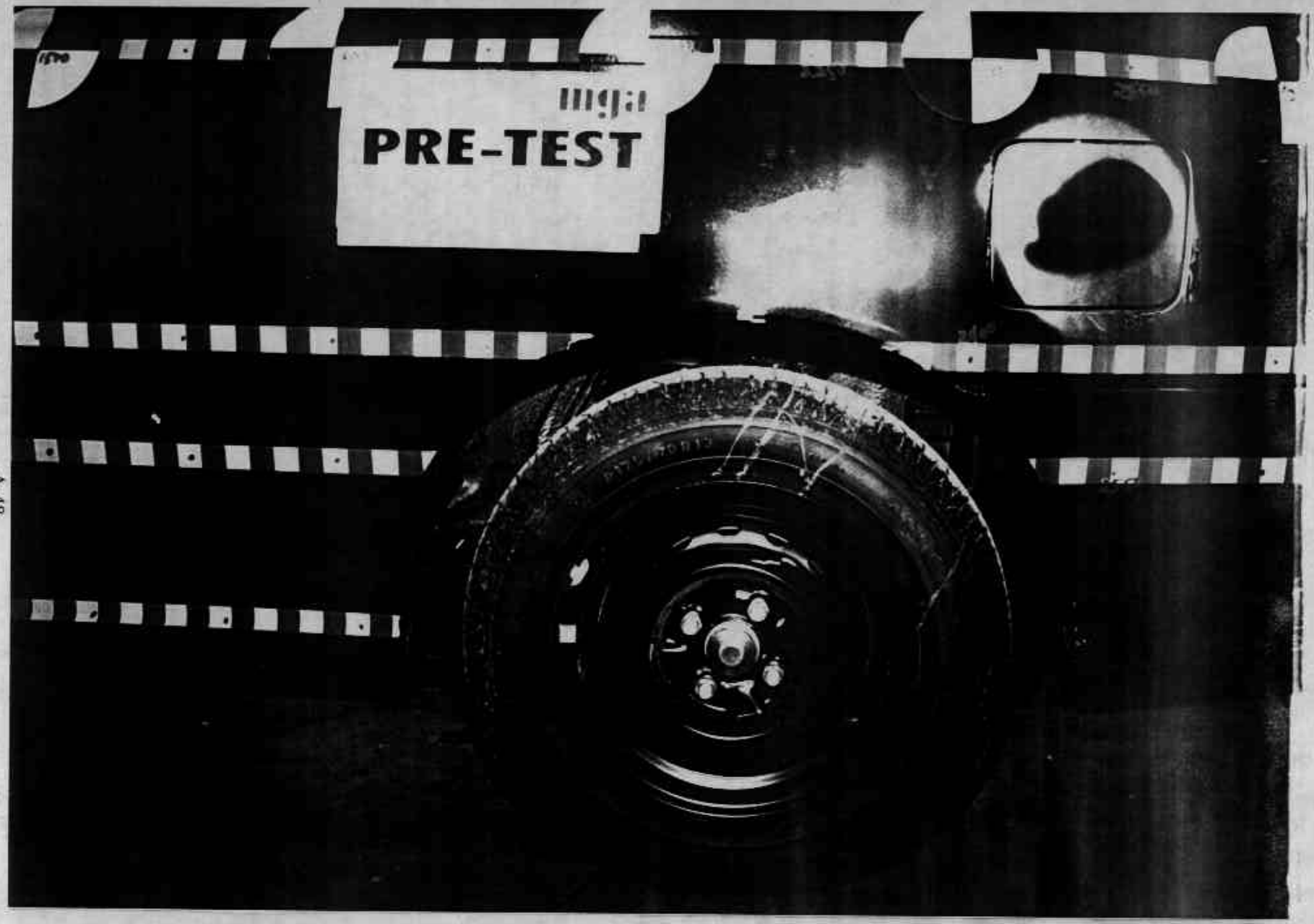


Photo No. A-48 - Left Rear Attitude Point

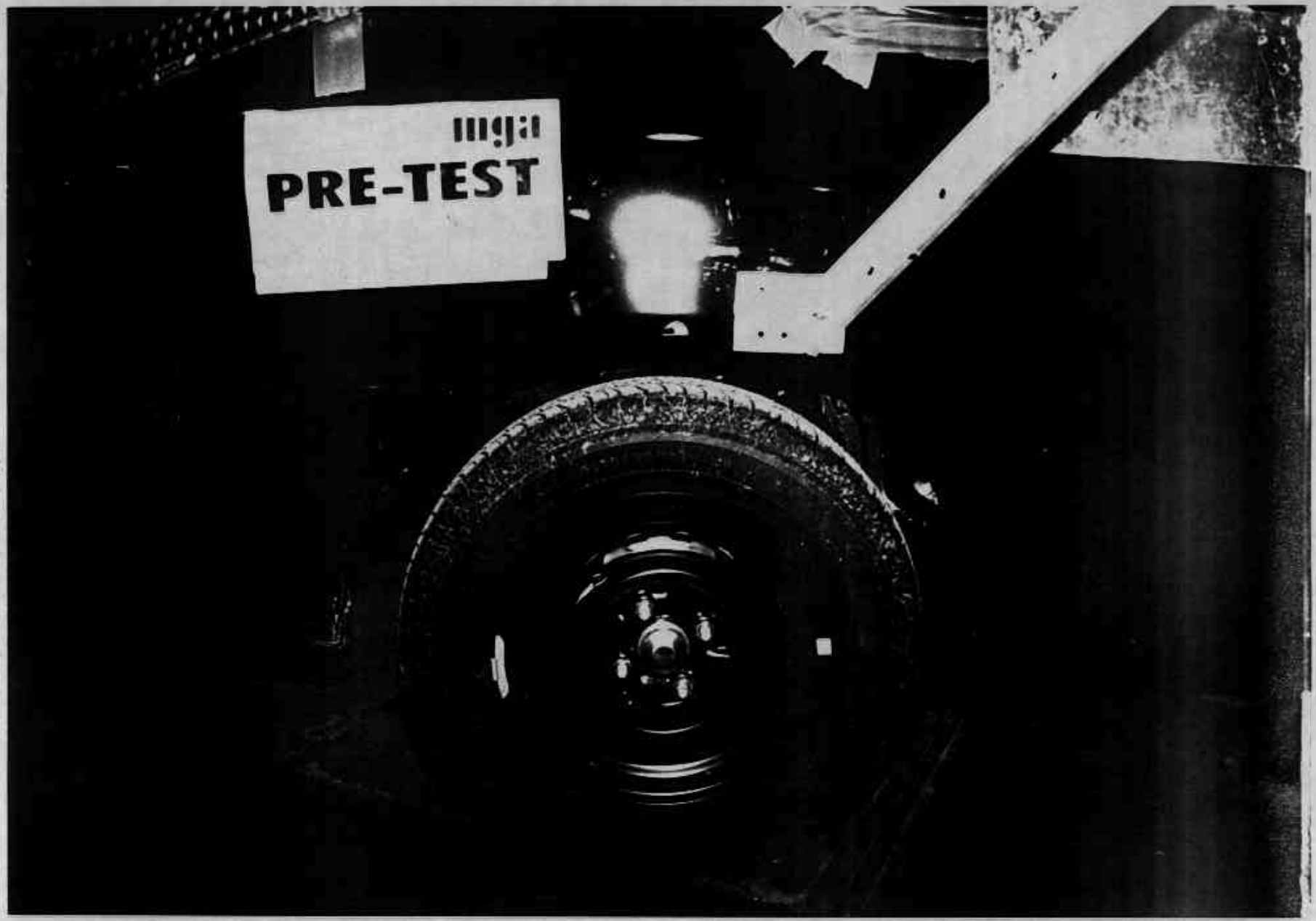


Photo No. A-49 - Right Rear Attitude Point

APPENDIX B - VEHICLE AND SID RESPONSE DATA

Table of Data Plots

Table of Data Plots

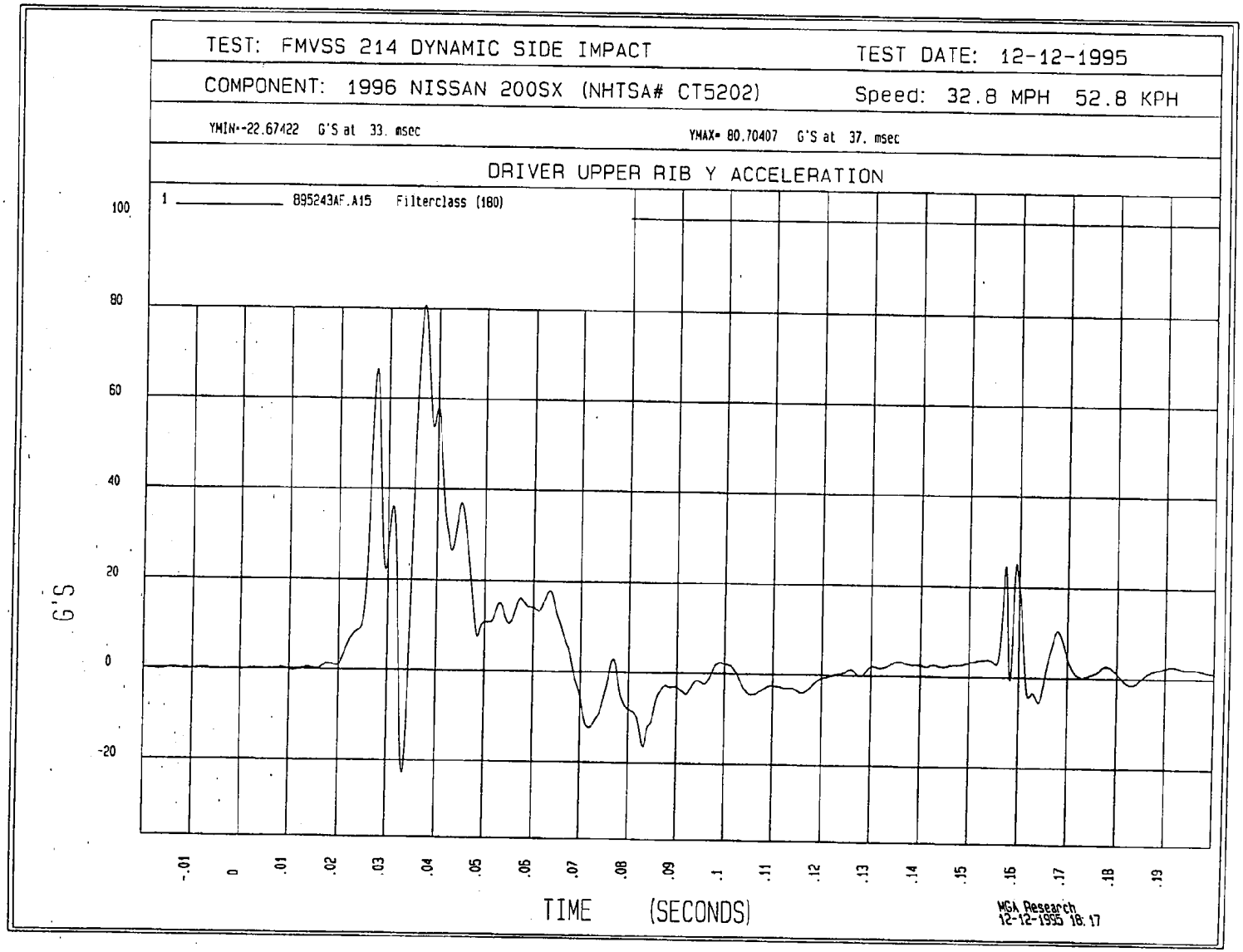
* No valid data collected

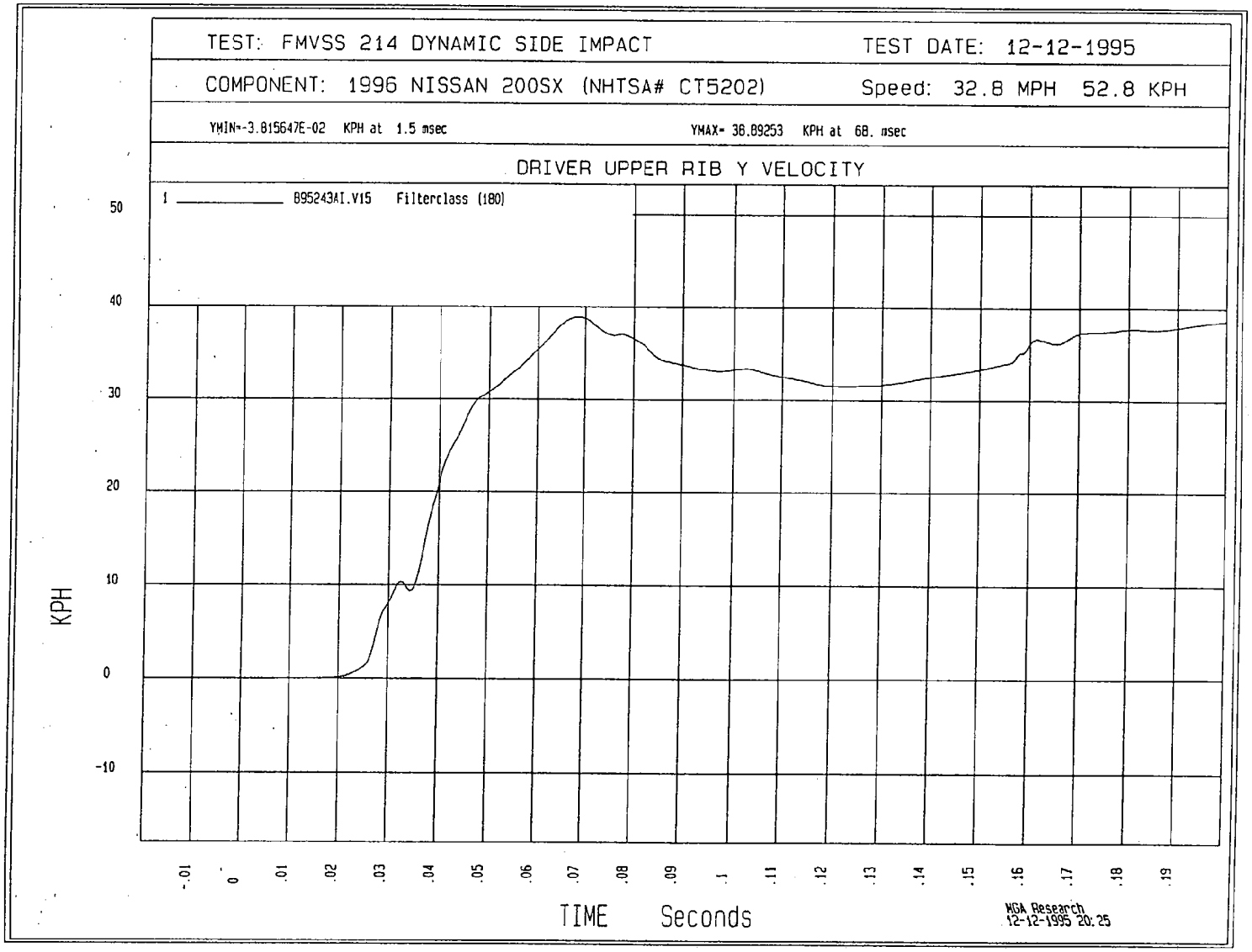
Table of Data Plots

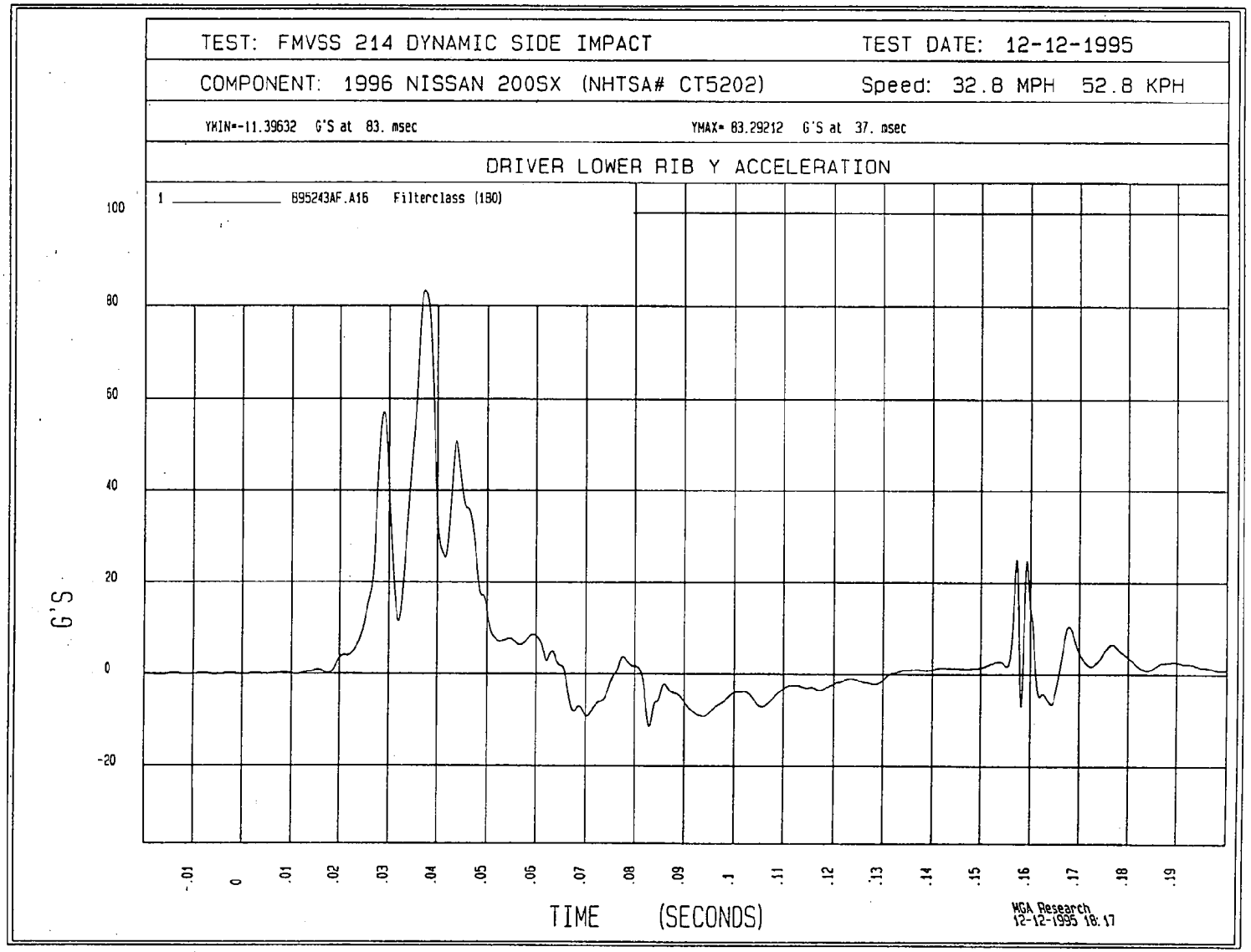
* No valid data collected

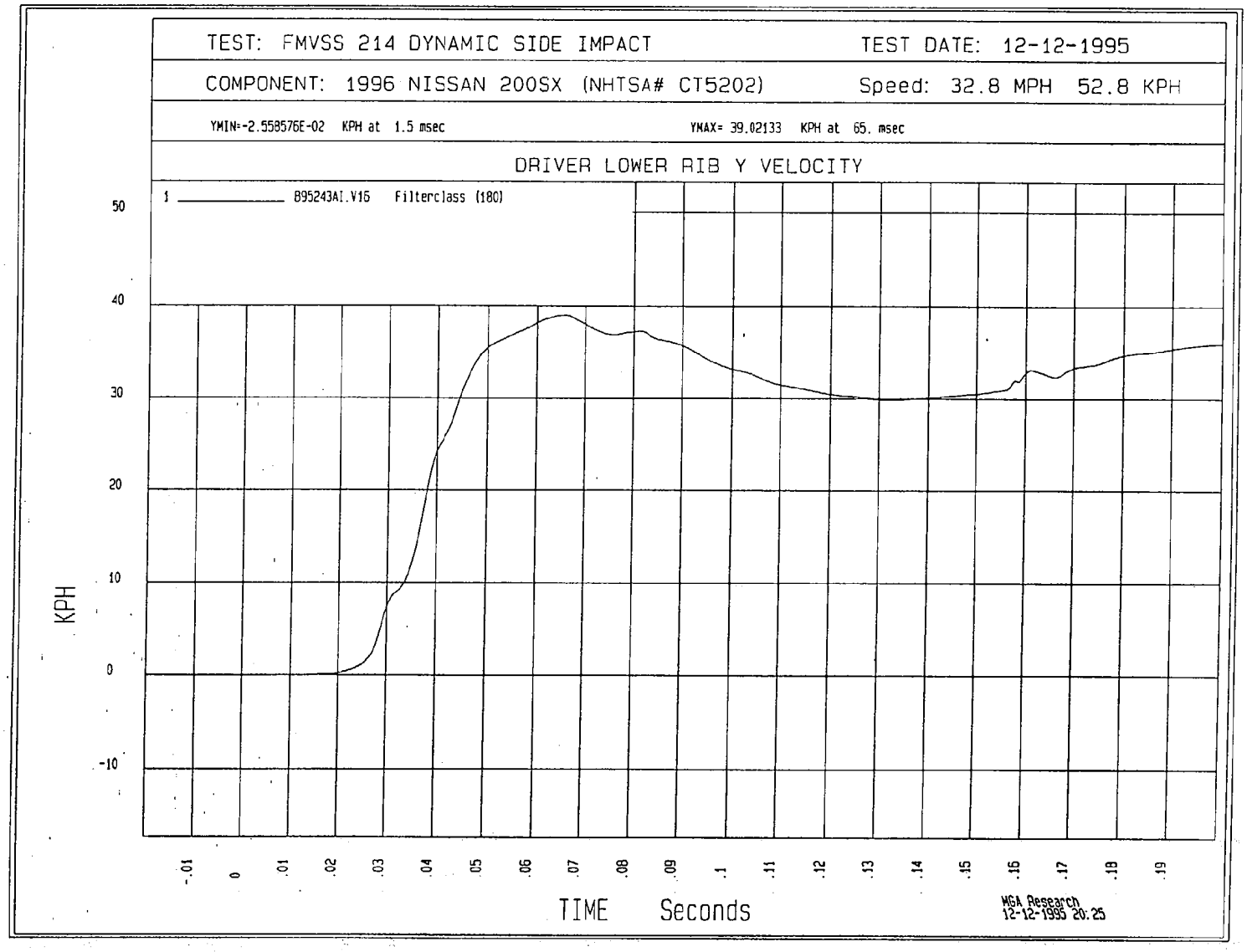
Table of Data Plots

* No valid data collected


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-22.67422 G'S at 33. msec
YMAX= 80.70407 G'S at 37. msec
DRIVER UPPER RIB Y ACCELERATION
1 895243AF.A15 Filterclass (180)
100
80
60
40
20
0
-20
G'S
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-12-1995 18:17


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-3.815647E-02 KPH at 1.5 msec
YMAX= 38.89253 KPH at 68. msec
DRIVER UPPER RIB Y VELOCITY
1 B95243AI.V15 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
NGA Research
12-12-1995 20:25


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-11.39632 G'S at 83. msec
YMAX= 83.29212 G'S at 37. msec
DRIVER LOWER RIB Y ACCELERATION
1 B95243AF.A16 Filterclass (180)
100
80
60
40
20
0
-20
G'S
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
12-12-1995 18:17


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-2.558576E-02 KPH at 1.5 msec
YMAX= 39.02133 KPH at 65. msec
DRIVER LOWER RIB Y VELOCITY
1 B95243AI.V16 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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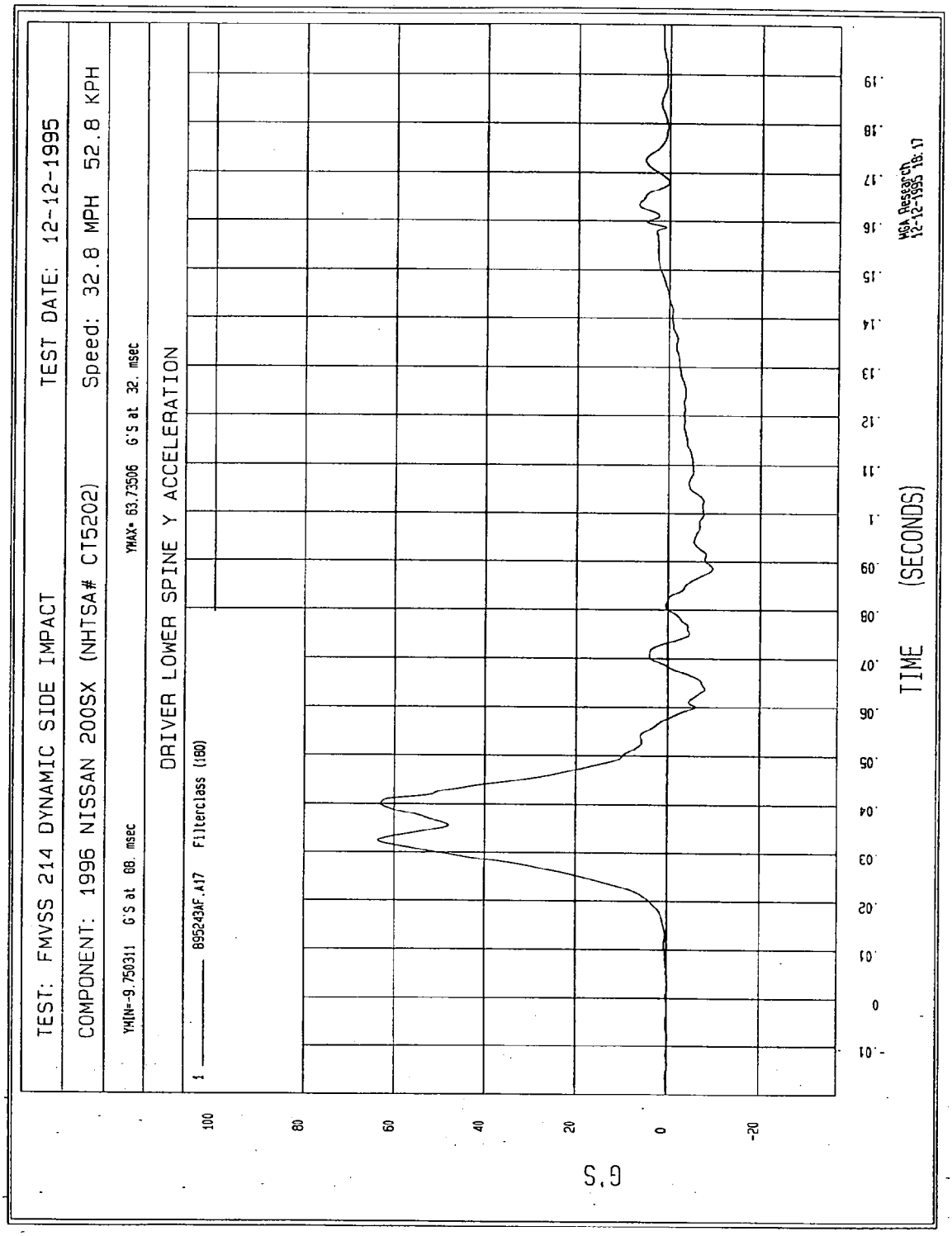
.19
TIME Seconds
MGA Research
12-12-1995 20:25


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-9.750311 G'S at 68. msec
YMAX= 63.73506 G'S at 32. msec
DRIVER LOWER SPINE Y ACCELERATION
1 895243AF.A17 Filterclass (180)
100
80
60
40
20
0
-20
G'S
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
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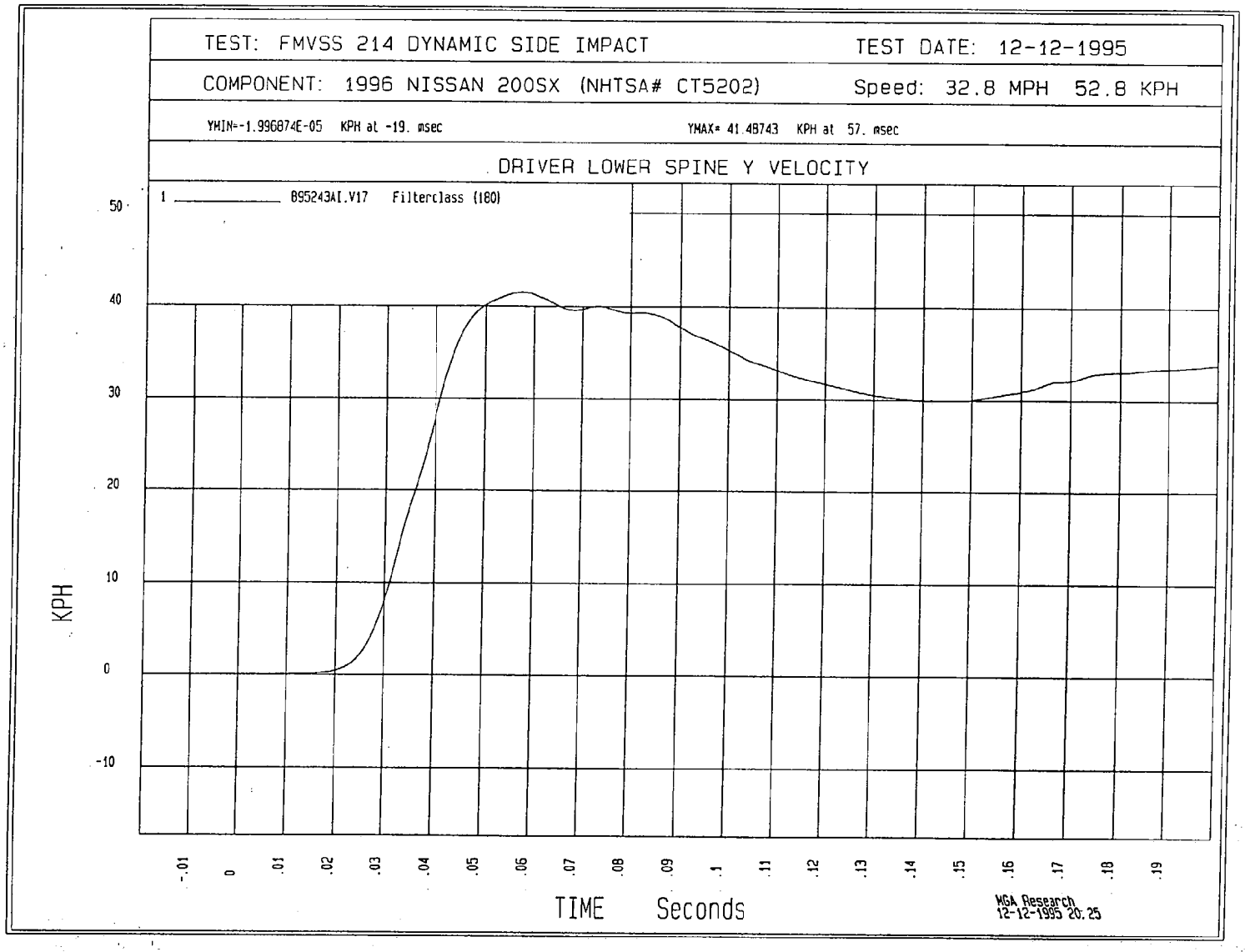
TIME (SECONDS)
MGA Research
12-12-1995 18:17


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-1.996874E-05 KPH at -19. msec
YMAX= 41.48743 KPH at 57. msec
DRIVER LOWER SPINE Y VELOCITY
1 B95243AI.V17 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.01
0
.01
.02
.03
.04
.05
.06
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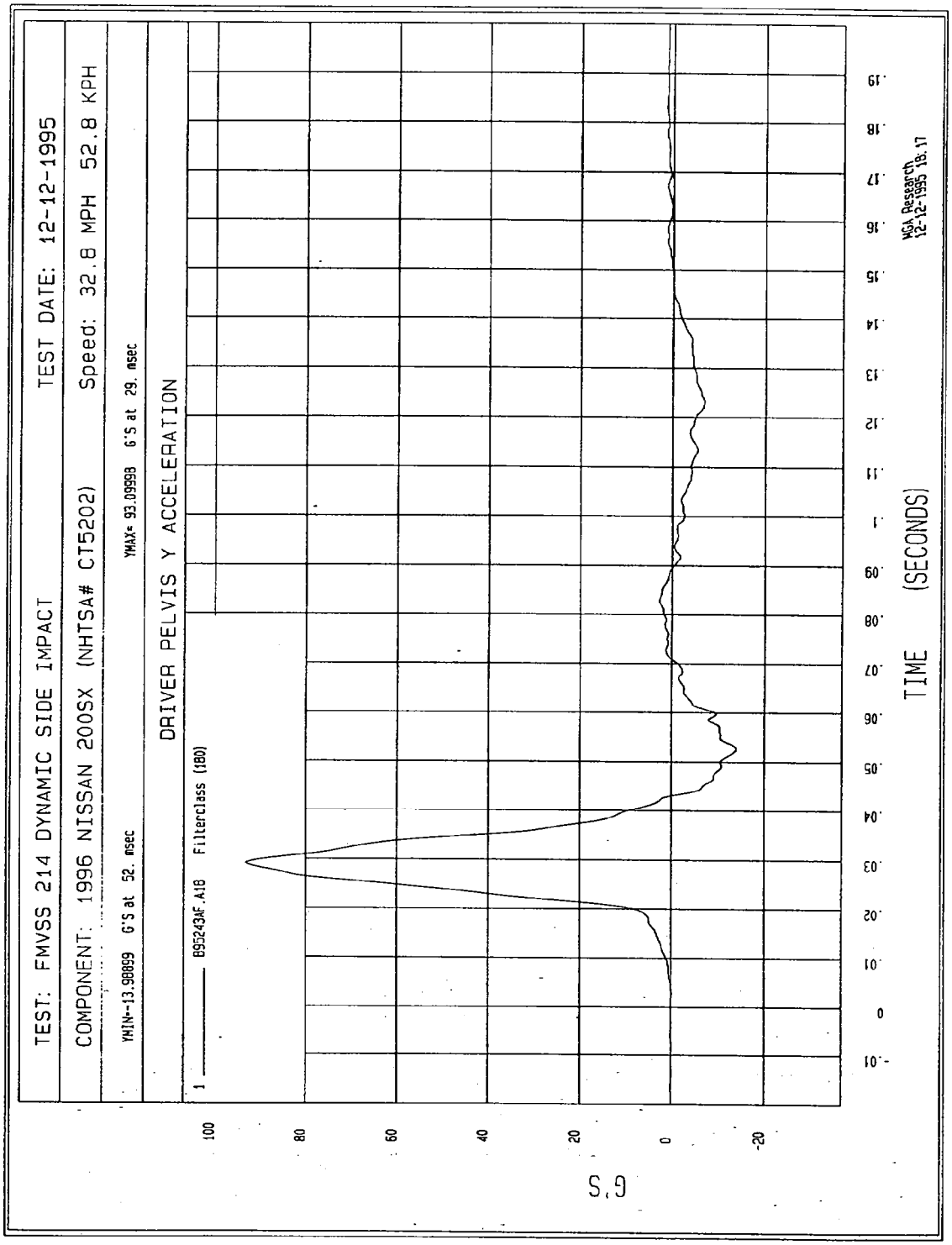
TIME Seconds
MGA Research
12-12-1995 20:25


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-13.98899 G'S at 52. msec
YMAX= 93.09998 G'S at 29. msec
DRIVER PELVIS Y ACCELERATION
1 B95243AF.A1B Filterclass (180)
100
80
60
40
20
0
-20
G'S
TIME (SECONDS)
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
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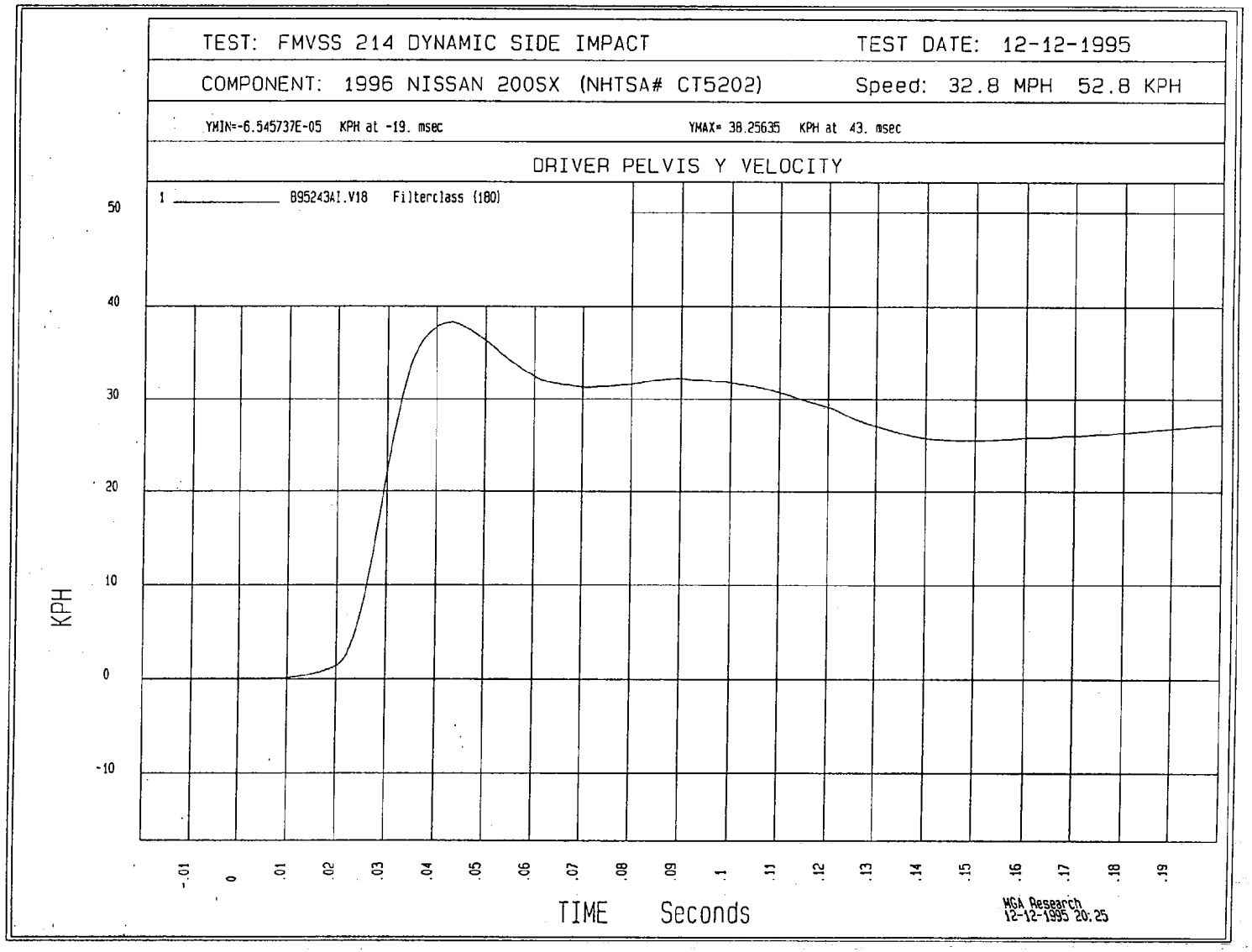
MGA Research
12-12-1995 18:17


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-6.545737E-05 KPH at -19. msec
YMAX= 38.25635 KPH at 43. msec
DRIVER PELVIS Y VELOCITY
1 B95243AI.V18 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
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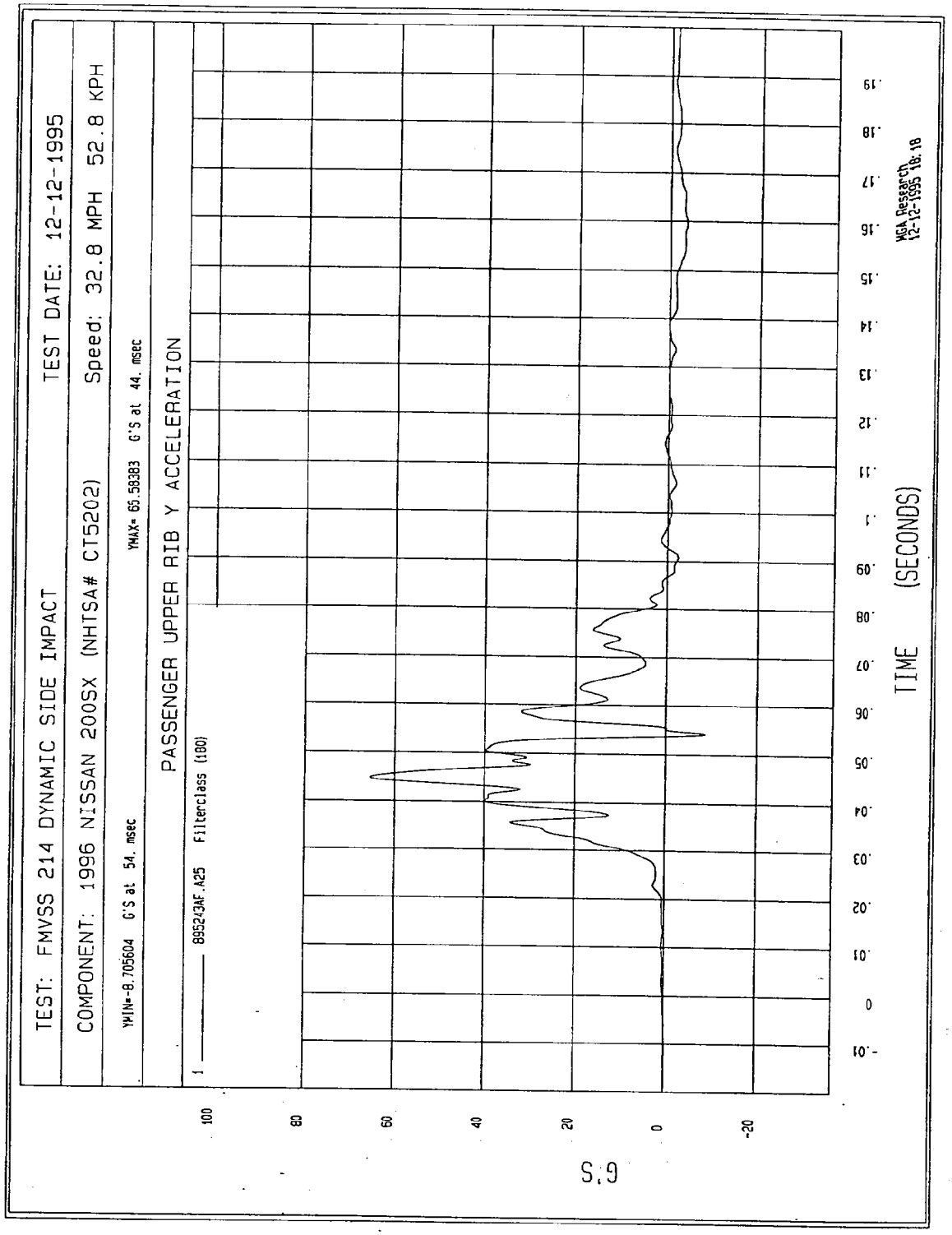
TIME Seconds
MGA Research
12-12-1995 20:25


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-8.705604 G'S at 54. msec
YMAX= 65.58383 G'S at 44. msec
PASSENGER UPPER RIB Y ACCELERATION
1 ——— 895213AF.A25 Filterclass (180)
100
80
60
40
20
0
-20
G'S
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
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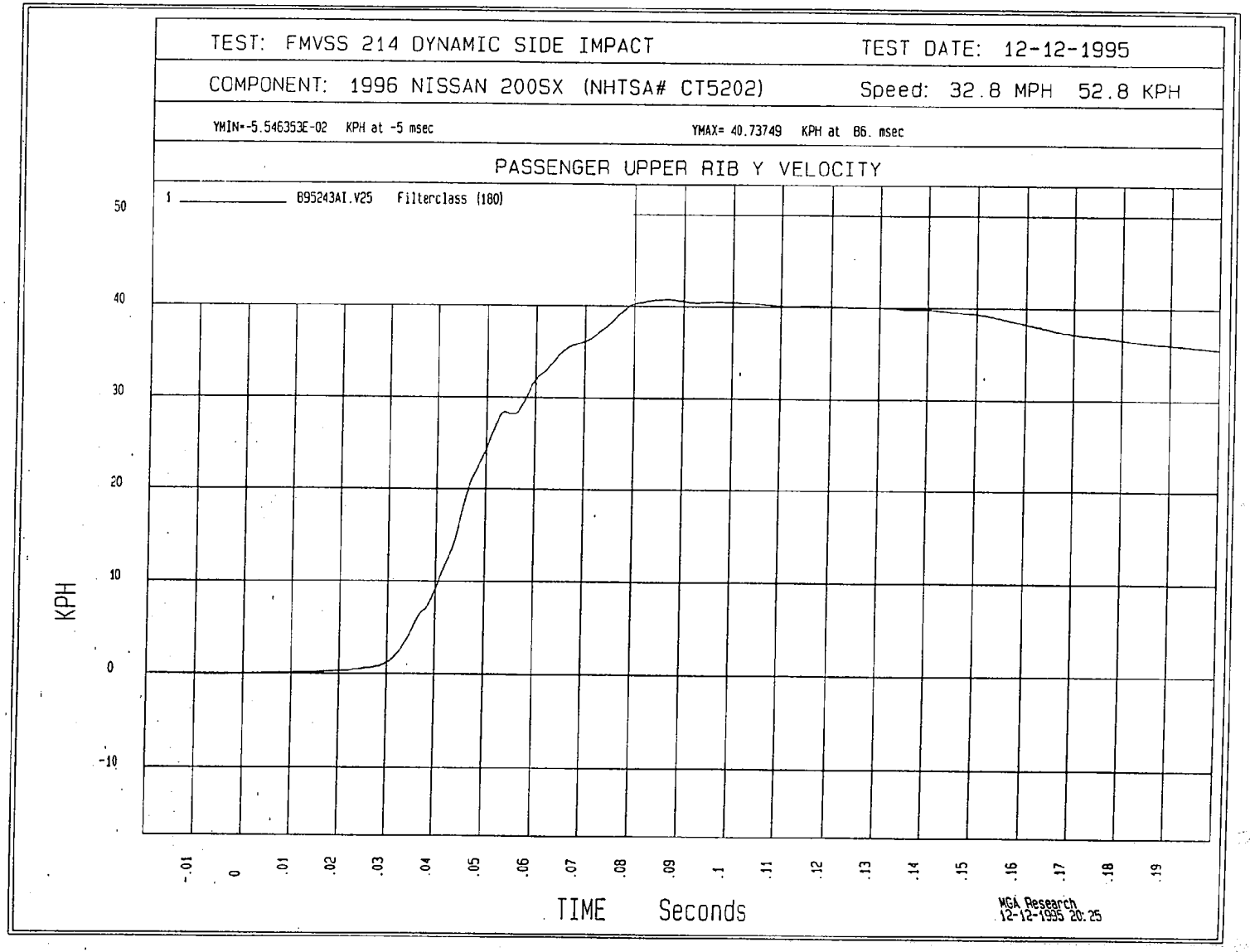
.17
.18
.19
TIME (SECONDS)
MGA Research
12-12-1995 18:18


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-5.546353E-02 KPH at -5 msec
YMAX= 40.73749 KPH at 86. msec
PASSENGER UPPER RIB Y VELOCITY
1 B95243AI.V25 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.01
0
.01
.02
.03
.04
.05
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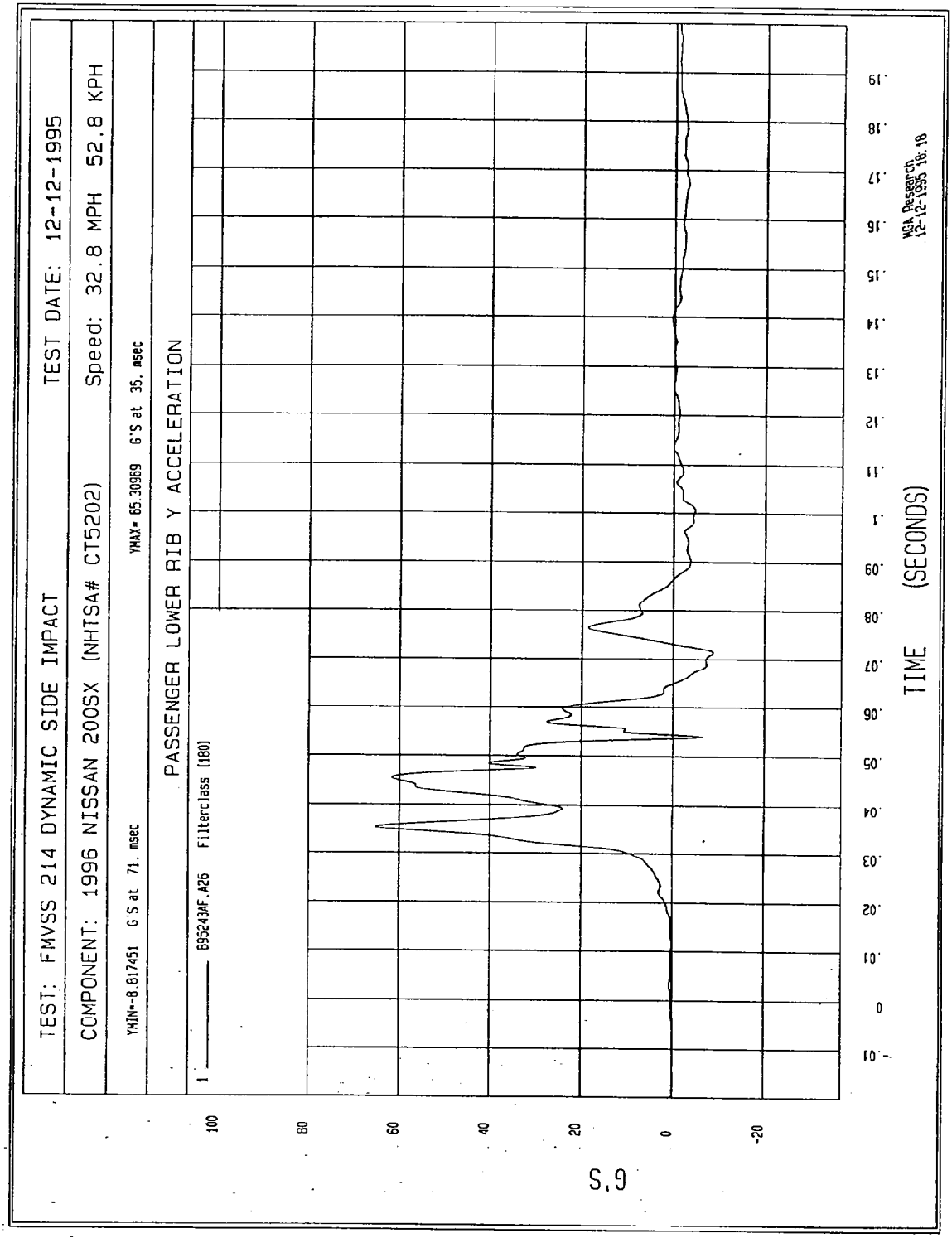
TIME Seconds
MGA Research
12-12-1995 20:25


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-8.817451 G'S at 71. msec
YMAX= 65.30969 G'S at 35. msec
PASSENGER LOWER RIB Y ACCELERATION
1 B95243AF.A26 Filterclass (180)
100
80
60
40
20
0
-20
G's
TIME (SECONDS)
-.01
0
.01
.02
.03
.04
.05
.06
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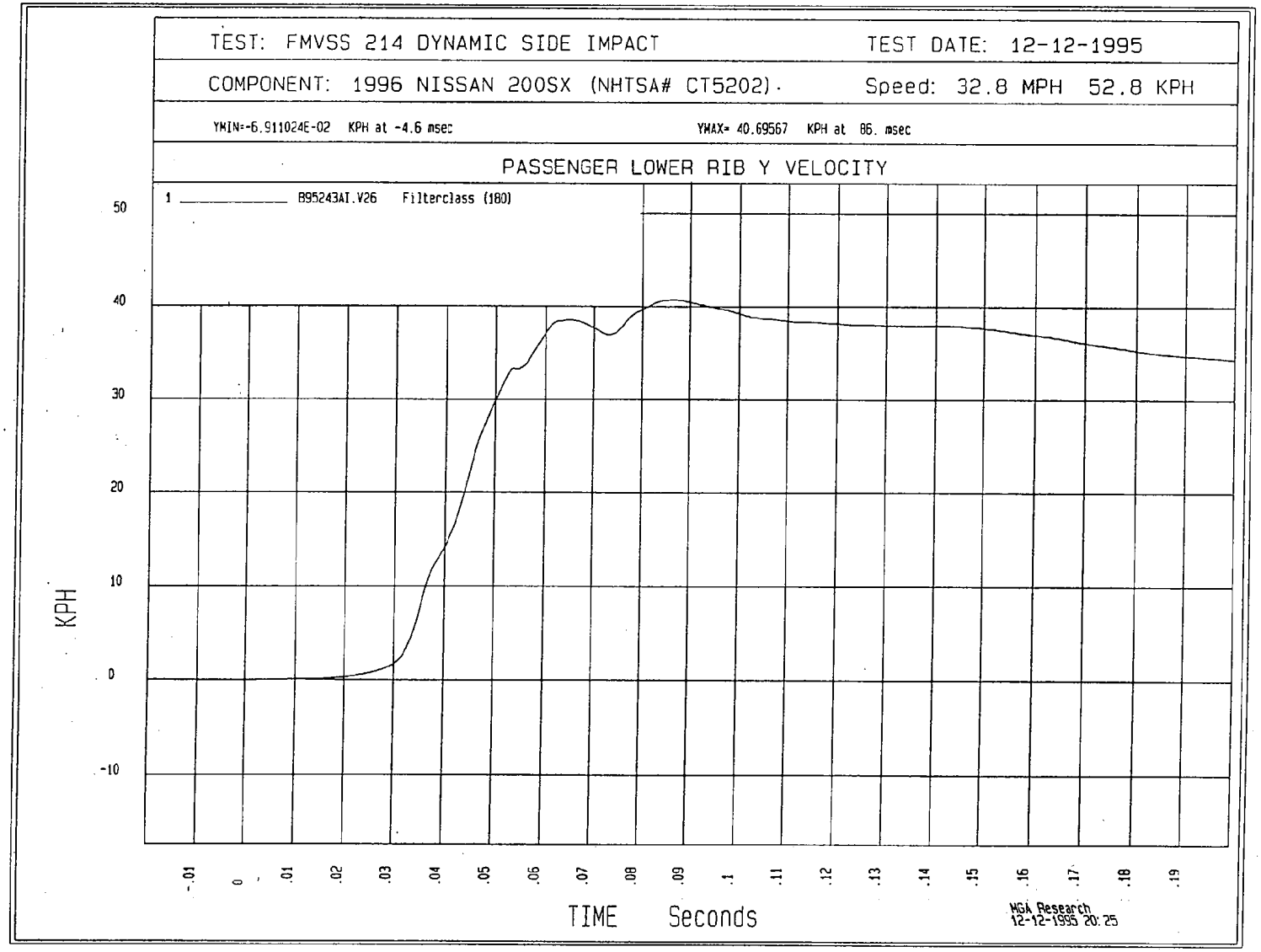
NGA Research
12-12-1995 18:18


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202).
Speed: 32.8 MPH 52.8 KPH
YMIN=-6.911024E-02 KPH at -4.6 msec
YMAX= 40.69567 KPH at 86. msec
PASSENGER LOWER RIB Y VELOCITY
1 B95243AI.V26 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.01
0
.01
.02
.03
.04
.05
.06
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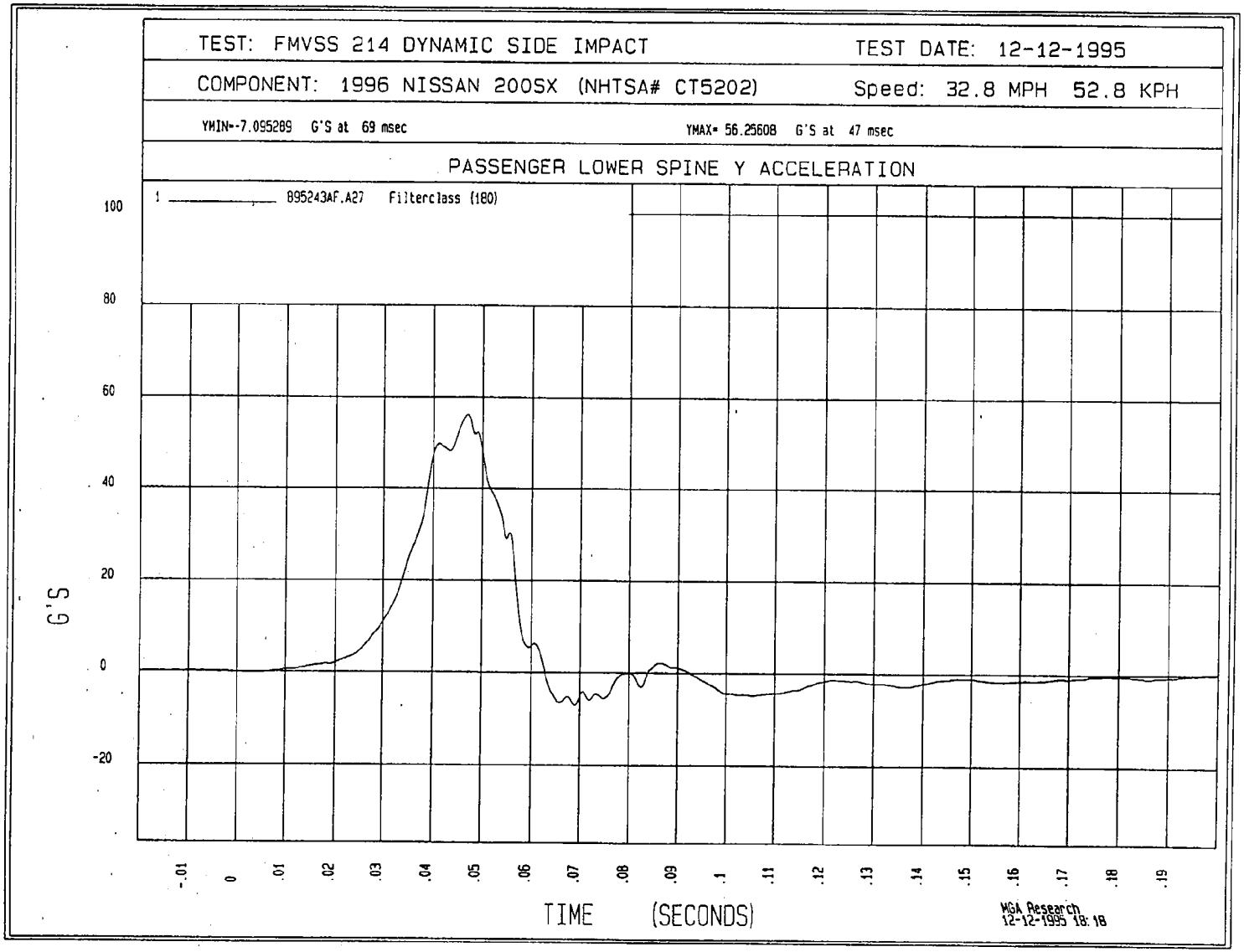
.19
TIME Seconds
HGA Research
12-12-1995 20:25


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-7.095289 G'S at 69 msec
YMAX= 56.25608 G'S at 47 msec
PASSENGER LOWER SPINE Y ACCELERATION
1 895243AF.A27 Filterclass (180)
100
80
60
40
20
0
-20
G'S
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
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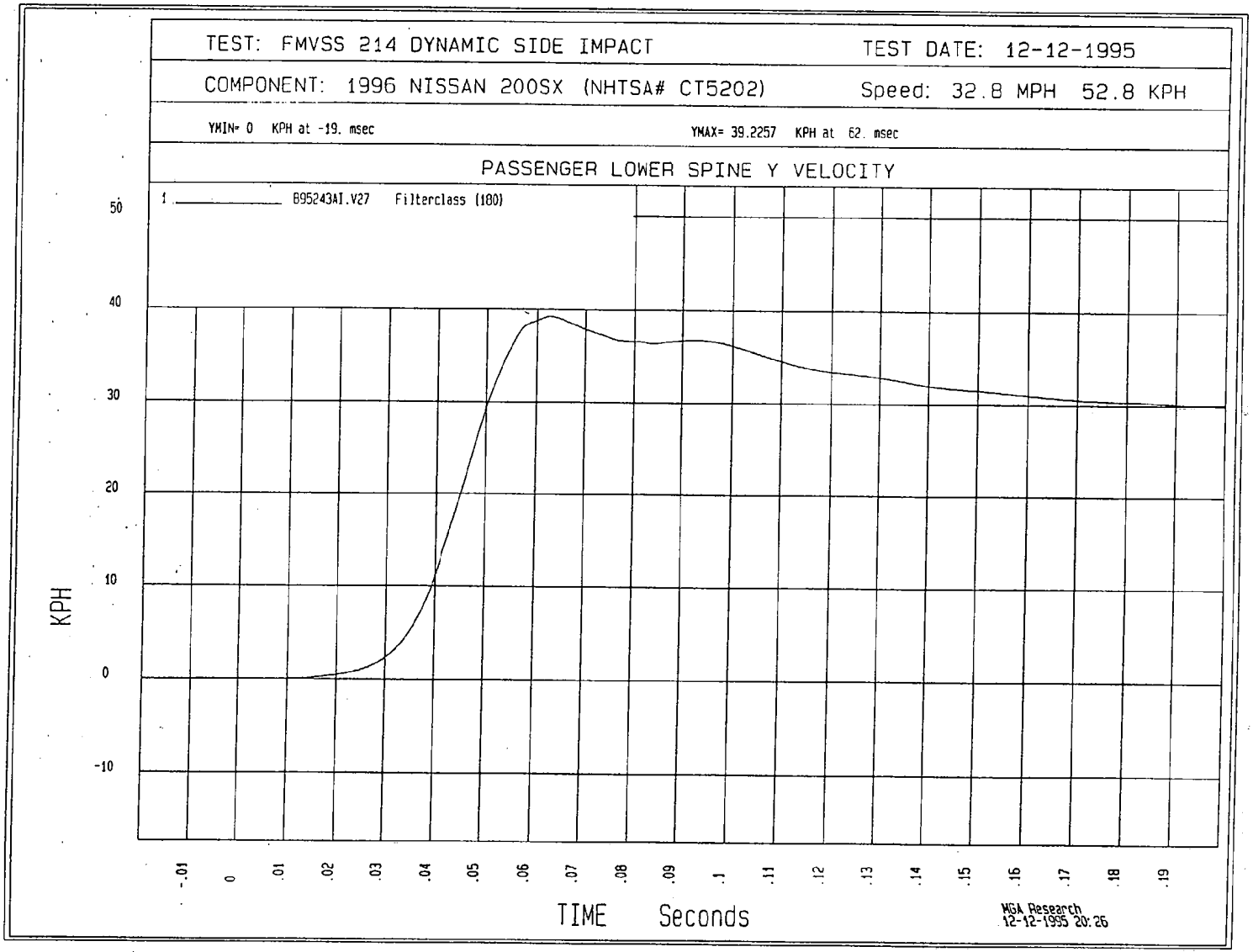
TIME (SECONDS)
MGA Research
12-12-1995 18:18


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN= 0 KPH at -19. msec
YMAX= 39.2257 KPH at 62. msec
PASSENGER LOWER SPINE Y VELOCITY
1 B95243AI.V27 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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.13
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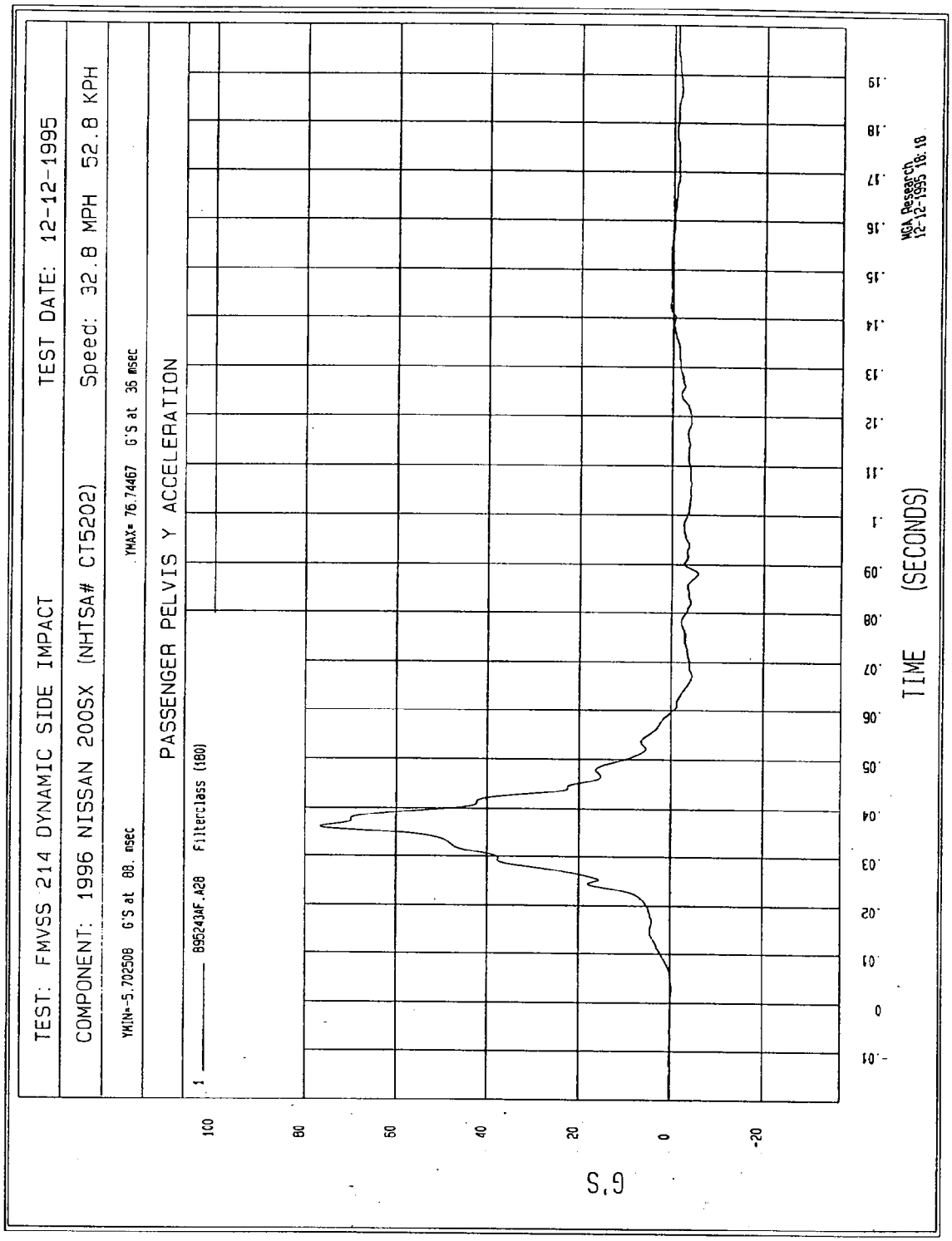
.17
.18
.19
TIME Seconds
MGA Research
12-12-1995 20:26


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-5.70250B G'S at 88. msec
YMAX= 76.74467 G'S at 36 msec
PASSENGER PELVIS Y ACCELERATION
1 B95243AF.A28 Filterclass (180)
100
80
60
40
20
0
-20
G'S
TIME (SECONDS)
-.01
0
.01
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.03
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.06
.07
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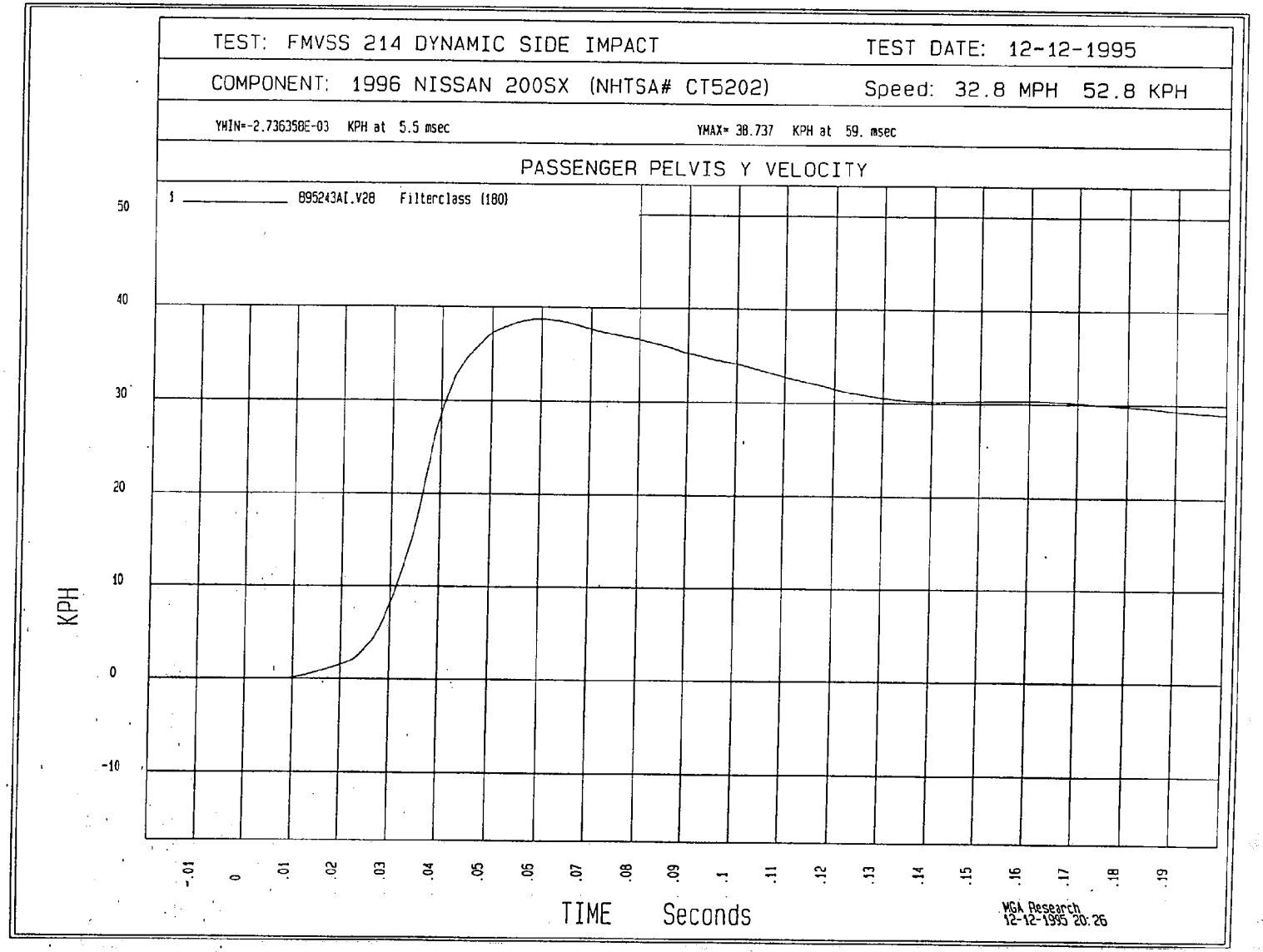
MGA Research
12-12-1995 18:18


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-2.736358E-03 KPH at 5.5 msec
YMAX= 38.737 KPH at 59. msec
PASSENGER PELVIS Y VELOCITY
1 B95243AI.V28 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.01
0
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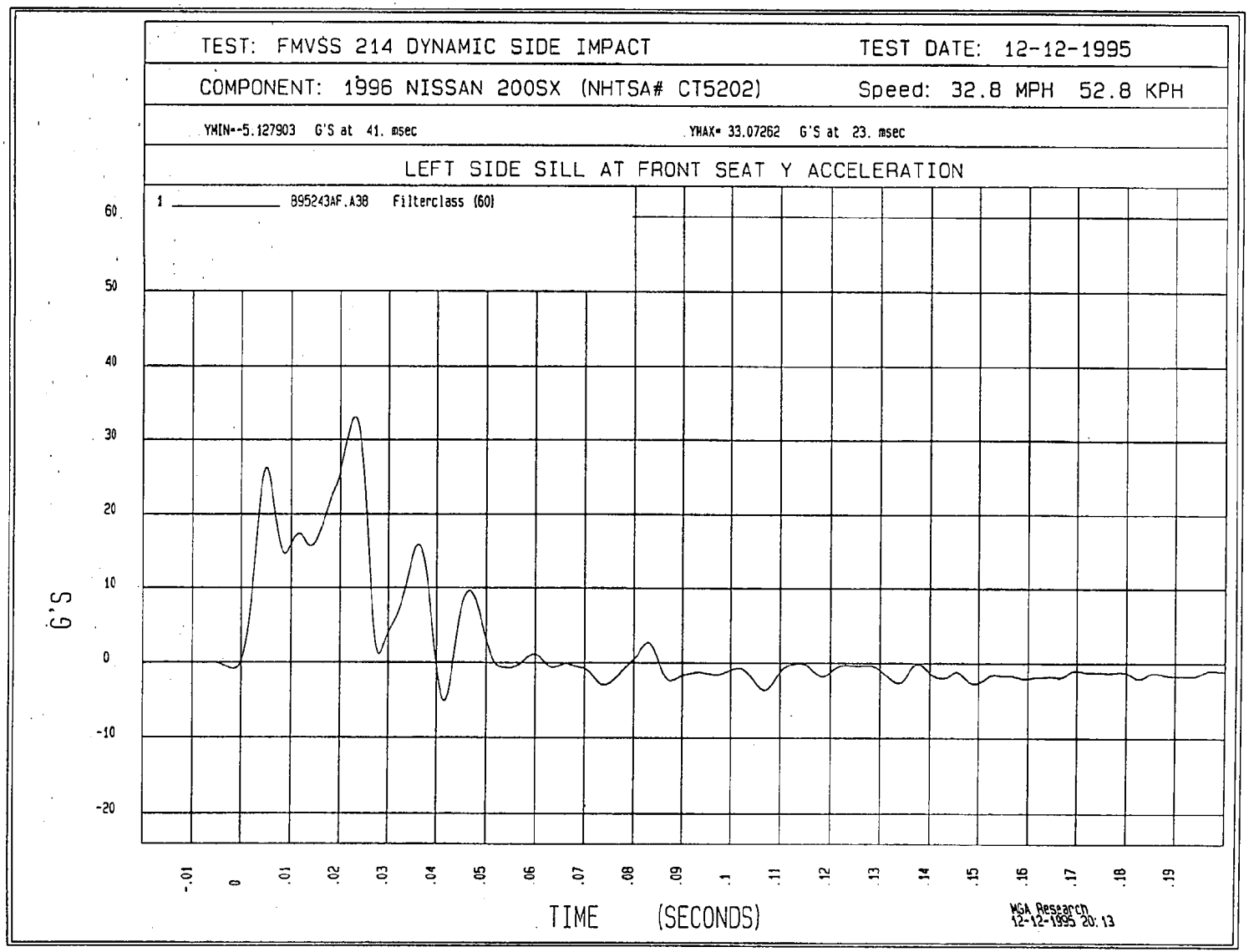
TIME Seconds
MGA Research
12-12-1995 20:26


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-5.127903 G'S at 41. msec
YMAX= 33.07262 G'S at 23. msec
LEFT SIDE SILL AT FRONT SEAT Y ACCELERATION
1 895243AF.A38 Filterclass (60)
60
50
40
30
20
10
0
-10
-20
G'S
-.01
0
.01
.02
.03
.04
.05
.06
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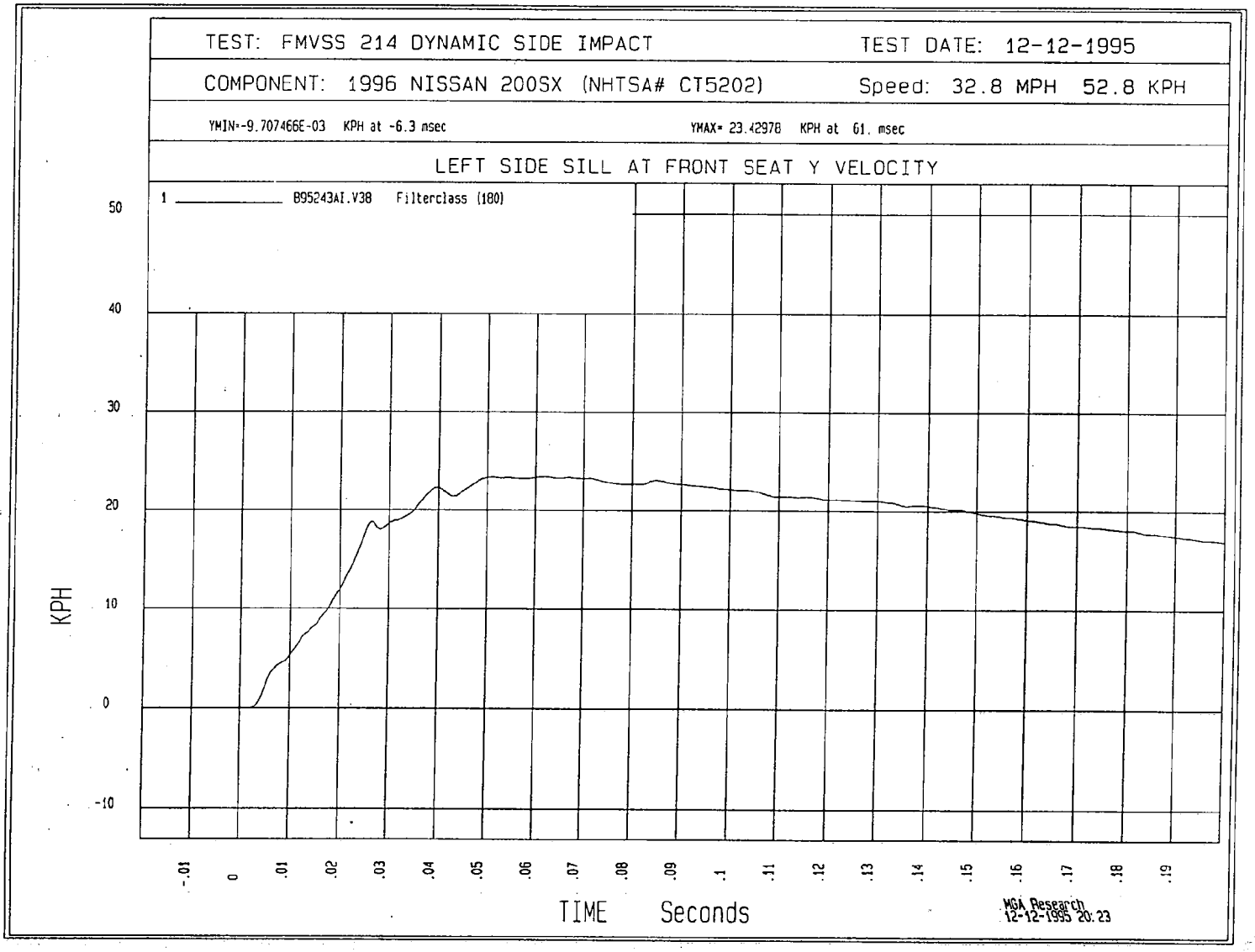
TIME (SECONDS)
MGA Research
12-12-1995 20:13


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-9.707466E-03 KPH at -6.3 msec
YMAX= 23.42978 KPH at 61. msec
LEFT SIDE SILL AT FRONT SEAT Y VELOCITY
1 B95243AI.V38 Filterclass (180)
50
40
30
20
10
0
-10
KPH
-.01
0
.01
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.03
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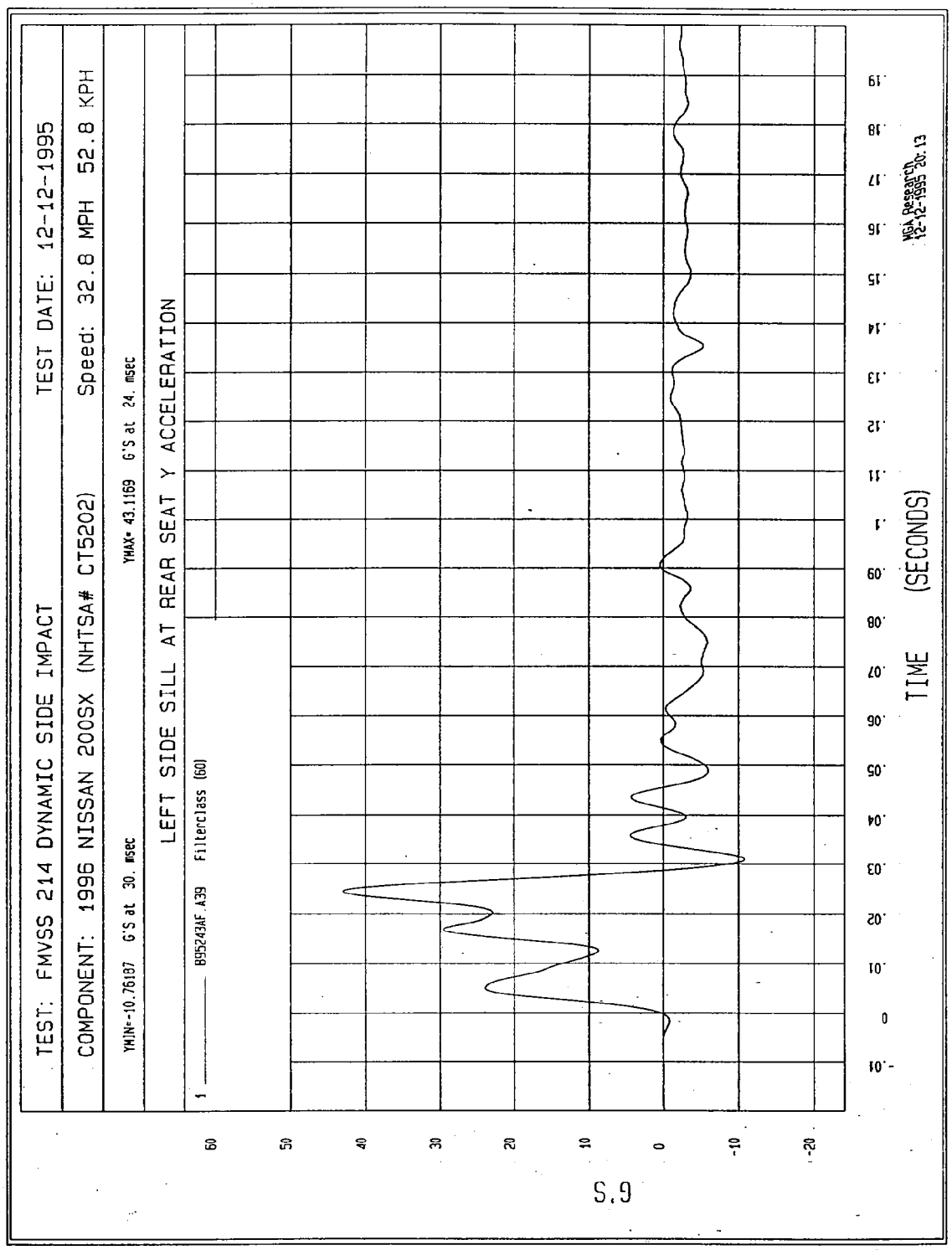
TIME Seconds
MGA Research
12-12-1995 20:23


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-10.76187 G'S at 30. msec
YMAX= 43.1169 G'S at 24. msec
LEFT SIDE SILL AT REAR SEAT Y ACCELERATION
1 B95243AF A39 Filterclass (60)
60
50
40
30
20
10
0
-10
-20
G's
-.01
0
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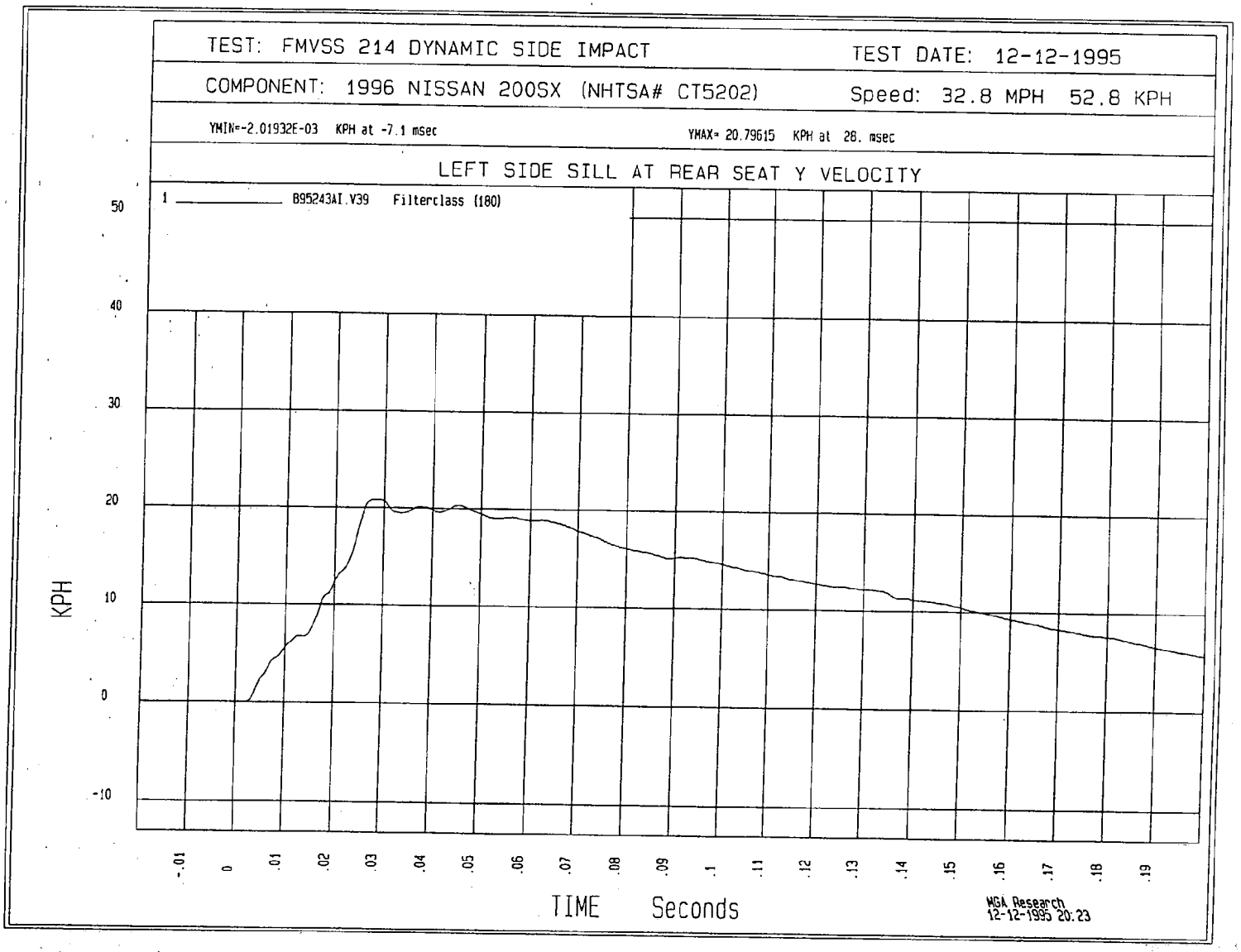
TIME (SECONDS)
MGA Research
12-12-1995 20:13


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-2.01932E-03 KPH at -7.1 msec
YMAX= 20.79615 KPH at 28. msec
LEFT SIDE SILL AT REAR SEAT Y VELOCITY
1 B95243AI.V39 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.01
0
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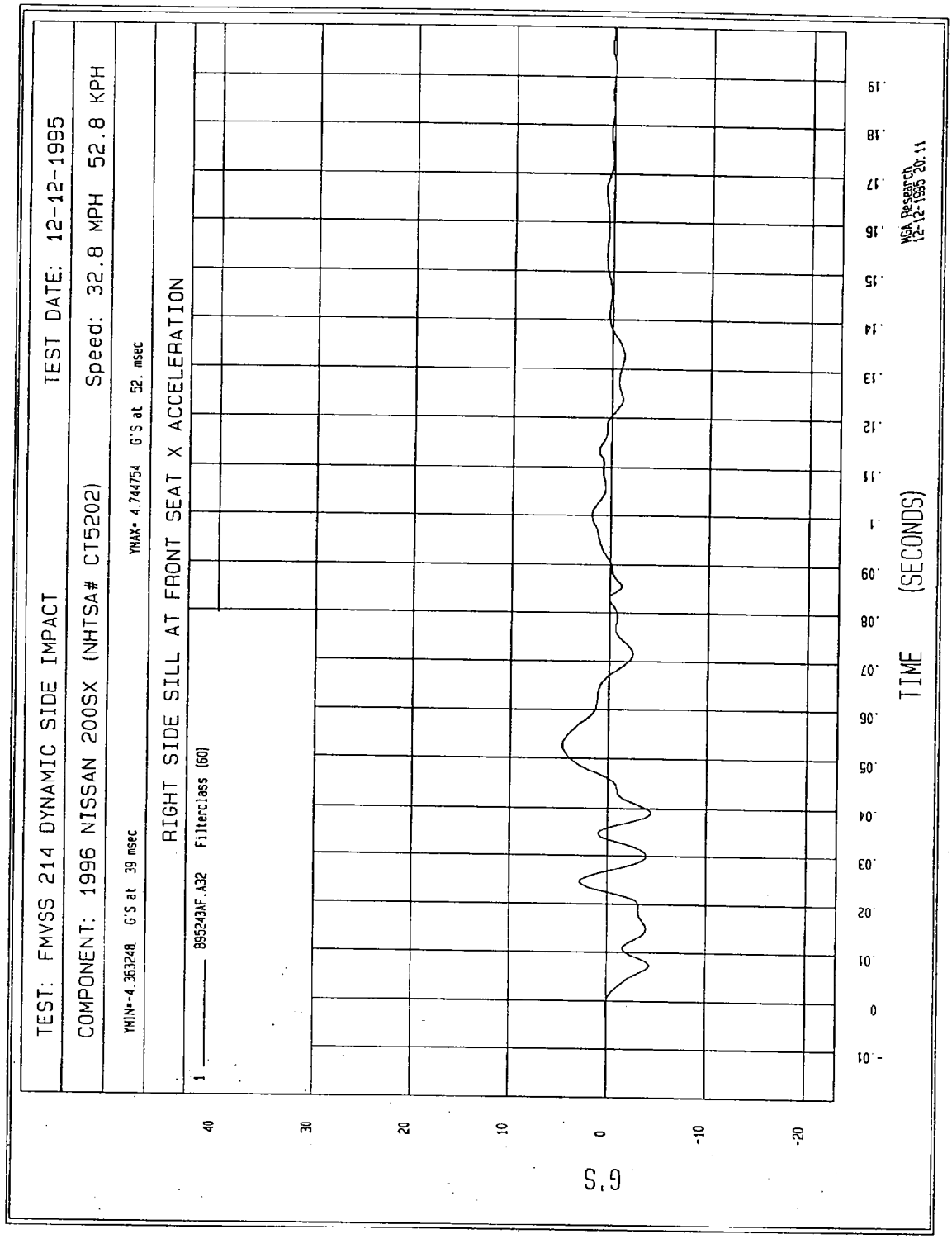
TIME Seconds
MGA Research
12-12-1995 20:23


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-4.363248 G'S at 39 msec
YMAX= 4.744754 G'S at 52. msec
RIGHT SIDE SILL AT FRONT SEAT X ACCELERATION
1 ——— 895243AF.A32 Filterclass (60)
40
30
20
10
0
-10
-20
G'S
-.01
0
.01
.02
.03
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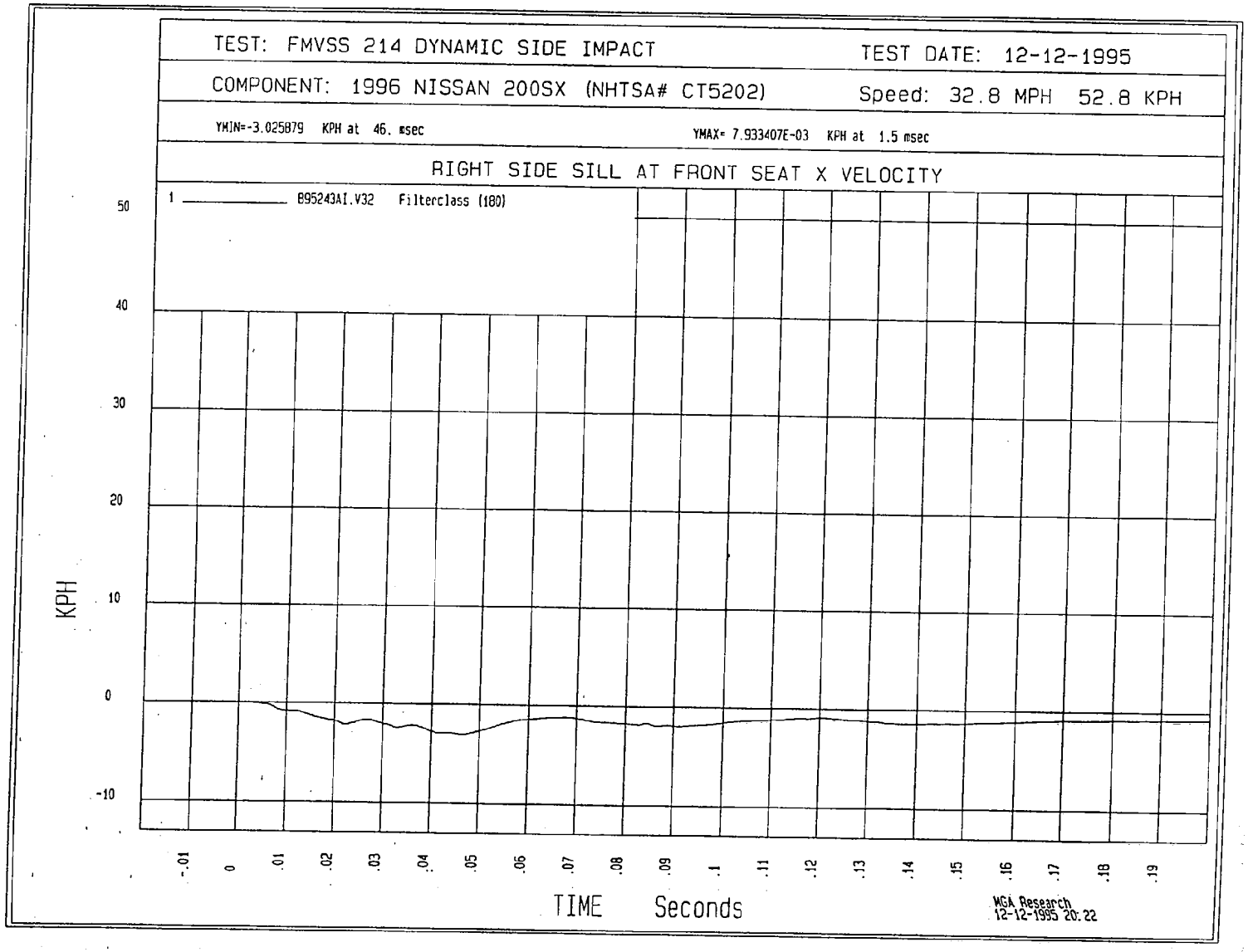
TIME (SECONDS)
MGA Research
12-12-1995 20:11


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-3.025879 KPH at 46. msec
YMAX= 7.933407E-03 KPH at 1.5 msec
RIGHT SIDE SILL AT FRONT SEAT X VELOCITY
1 B95243AI.V32 Filterclass (180)
KPH
50
40
30
20
10
0
-10
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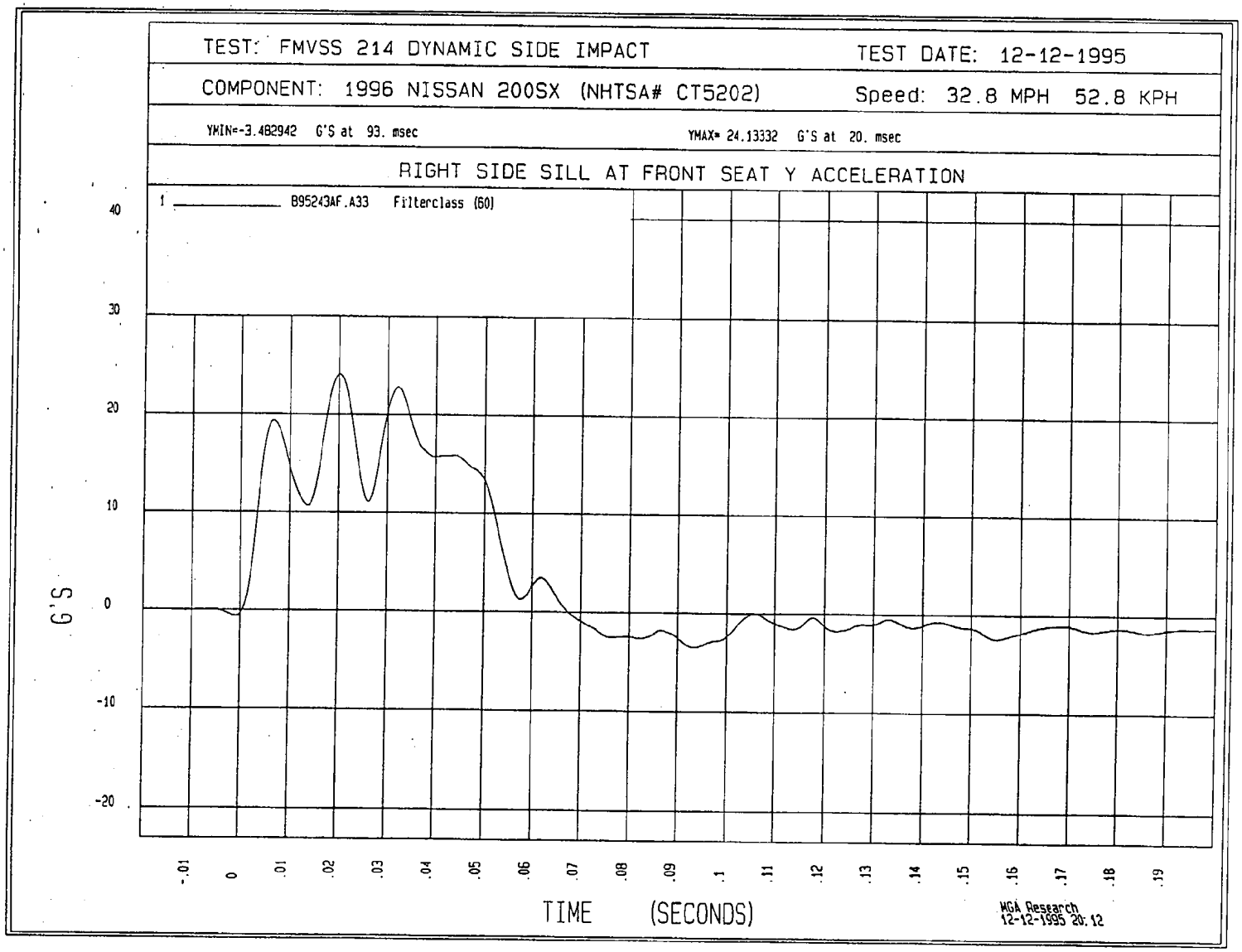
TIME Seconds
MGA Research
12-12-1995 20:22


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-3.482942 G'S at 93. msec
YMAX= 24.13332 G'S at 20. msec
RIGHT SIDE SILL AT FRONT SEAT Y ACCELERATION
1 B95243AF.A33 Filterclass (60)
40
30
20
10
0
-10
-20
G'S
-.01
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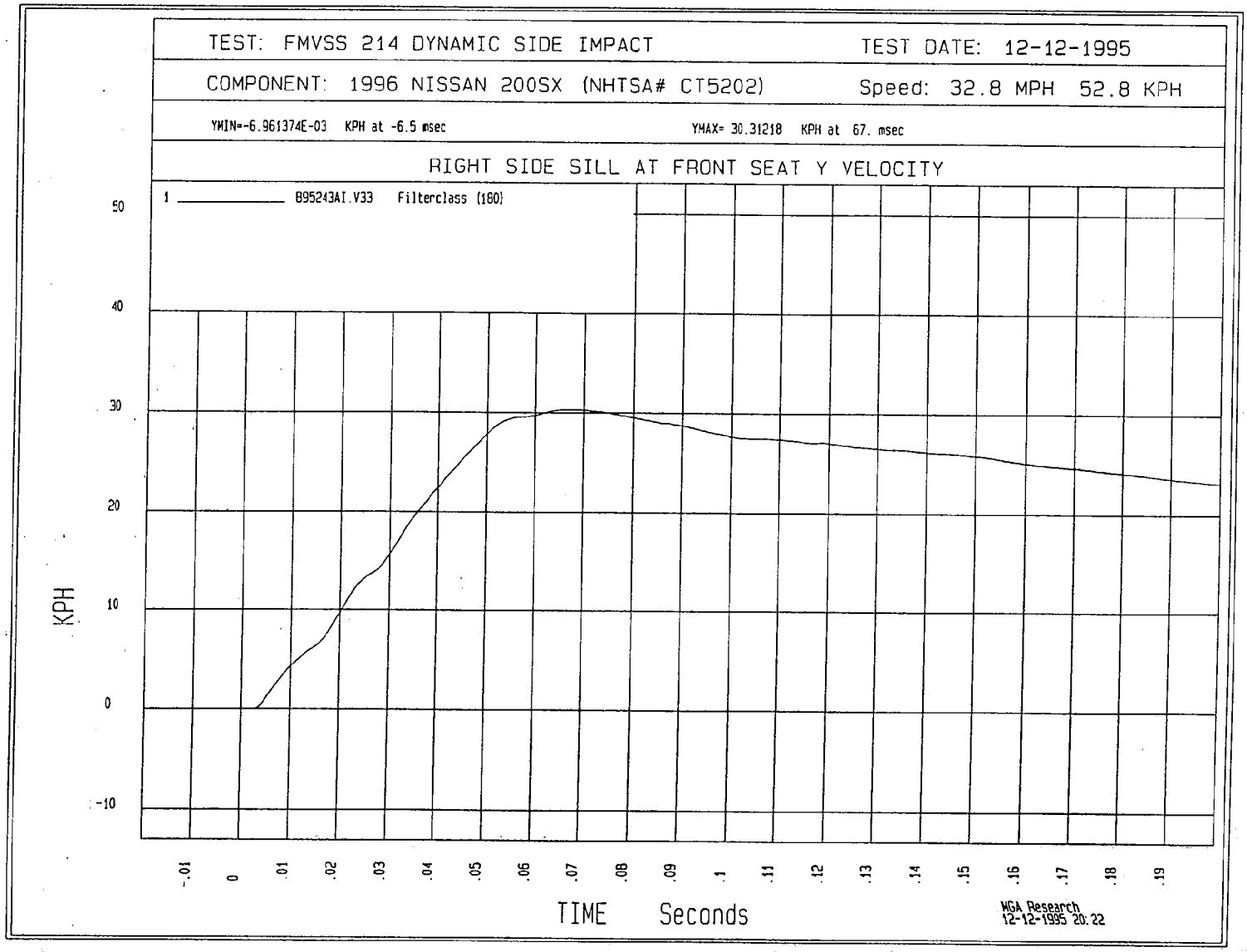
TIME (SECONDS)
MGA Research
12-12-1995 20:12


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-6.961374E-03 KPH at -6.5 msec
YMAX= 30.31218 KPH at 67. msec
RIGHT SIDE SILL AT FRONT SEAT Y VELOCITY
1 B95243AI.V33 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.01
0
.01
.02
.03
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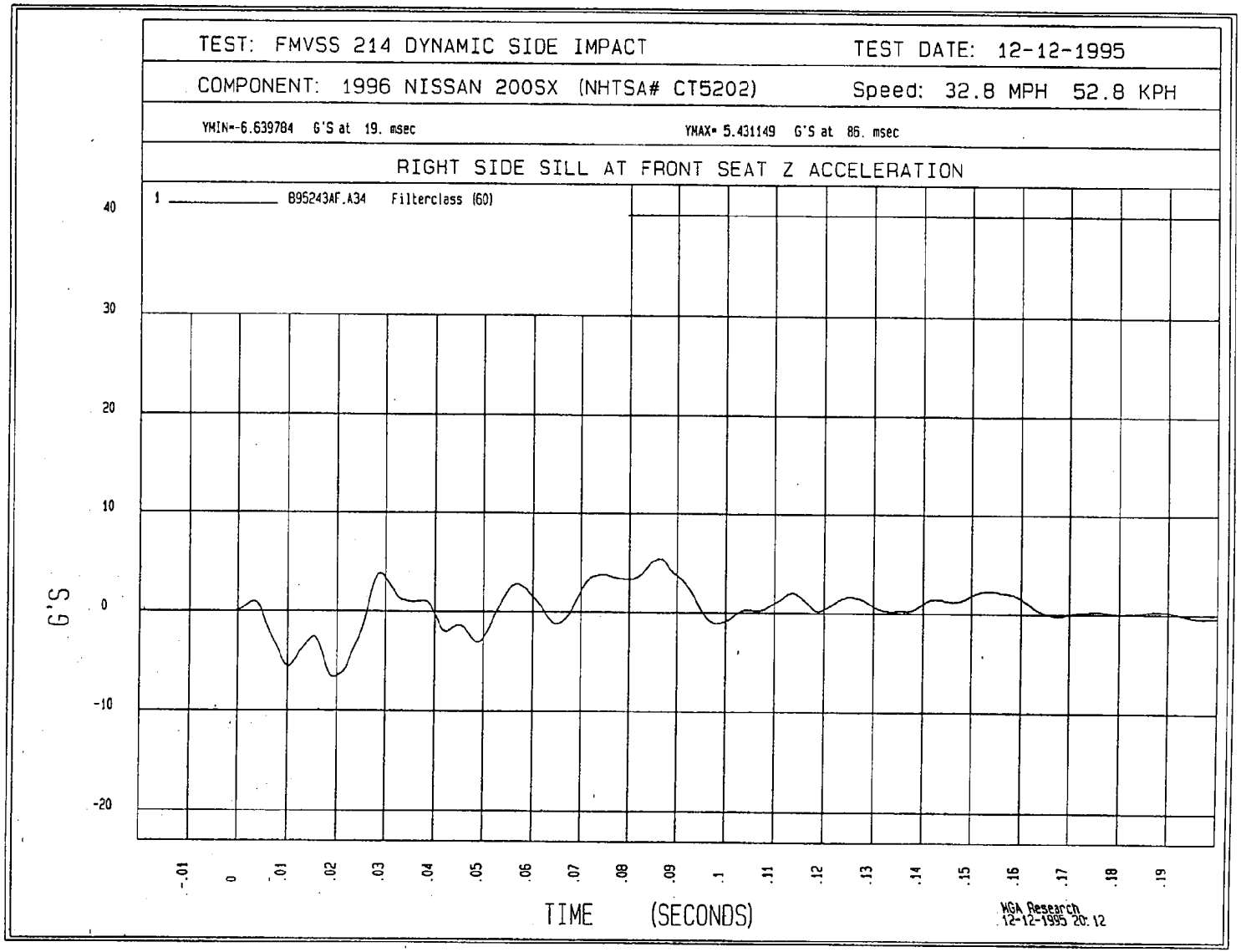
TIME Seconds
MGA Research
12-12-1995 20:22


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-6.639784 G'S at 19. msec
YMAX= 5.431149 G'S at 86. msec
RIGHT SIDE SILL AT FRONT SEAT Z ACCELERATION
1 B95243AF.A34 Filterclass (60)
40
30
20
10
0
-10
-20
G'S
-.01
0
.01
.02
.03
.04
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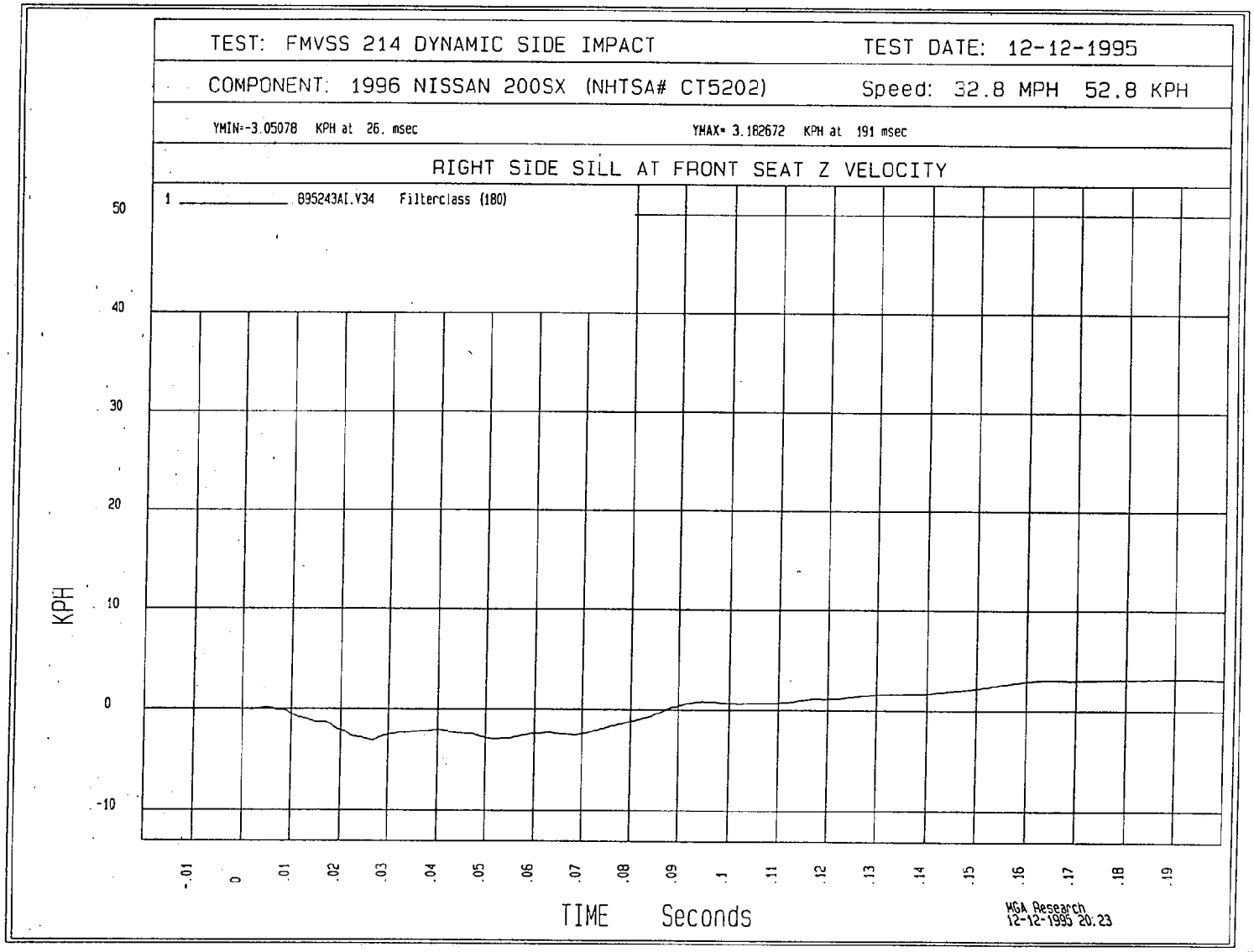
TIME (SECONDS)
MGA Research
12-12-1995 20:12


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-3.05078 KPH at 26. msec
YMAX= 3.182672 KPH at 191 msec
RIGHT SIDE SILL AT FRONT SEAT Z VELOCITY
1 B95243AI.V34 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.01
0
.01
.02
.03
.04
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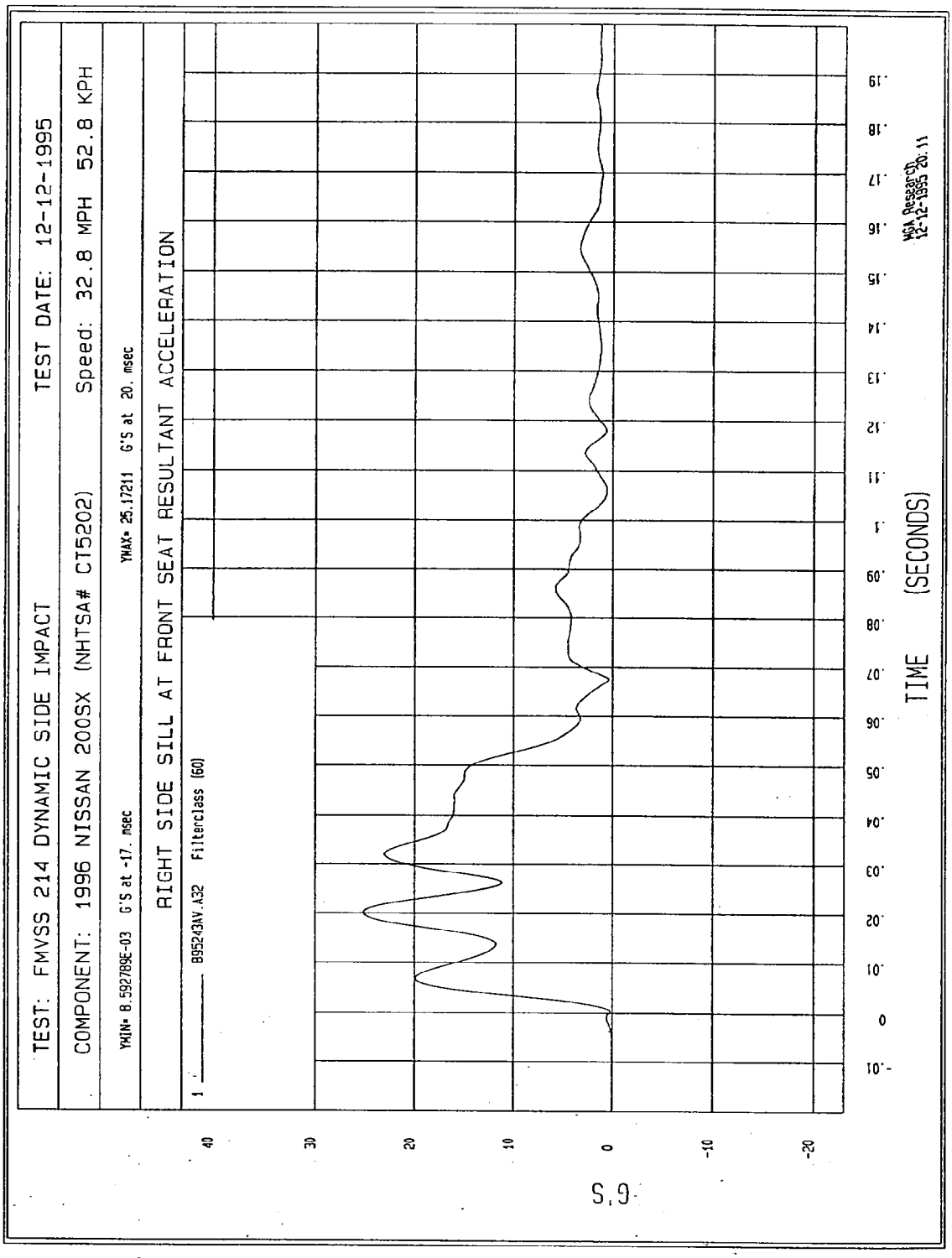
TIME Seconds
MGA Research
12-12-1995 20:23


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN= 8.592789E-03 G'S at -17. msec
YMAX= 25.17211 G'S at 20. msec
RIGHT SIDE SILL AT FRONT SEAT RESULTANT ACCELERATION
1 B95243AV.A32 Filterclass (60)
40
30
20
10
0
-10
-20
G'S
-.01
0
.10
.20
.30
.40
.50
.60
.70
.80
.90
1
1.1
1.2
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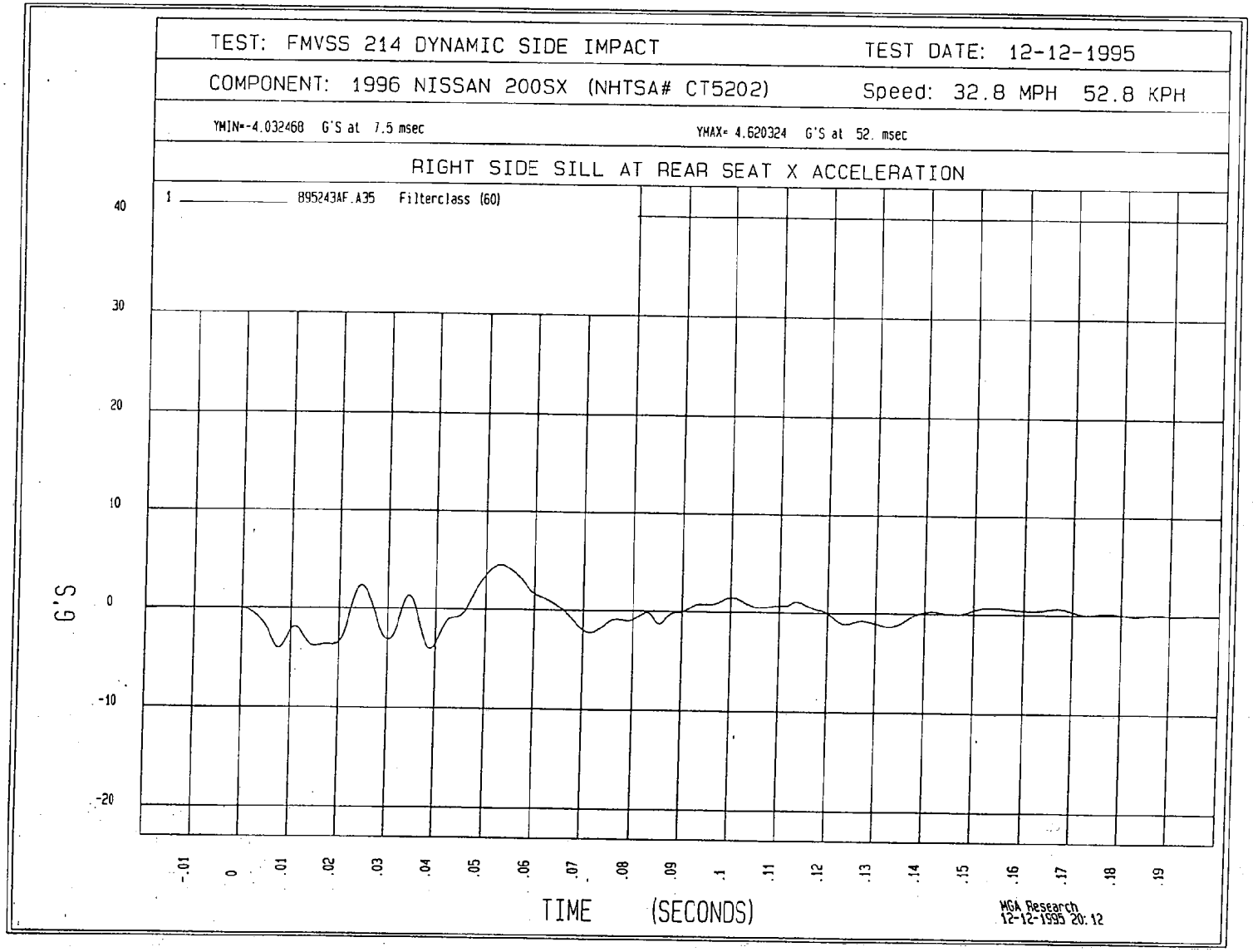
1.7
1.8
1.9
TIME (SECONDS)
MGA Research
12-12-1995 20.11


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-4.032468 G'S at 7.5 msec
YMAX= 4.620324 G'S at 52. msec
RIGHT SIDE SILL AT REAR SEAT X ACCELERATION
1 B95243AF.A35 Filterclass (60)
40
30
20
10
0
-10
-20
G'S
-.01
0
.01
.02
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.04
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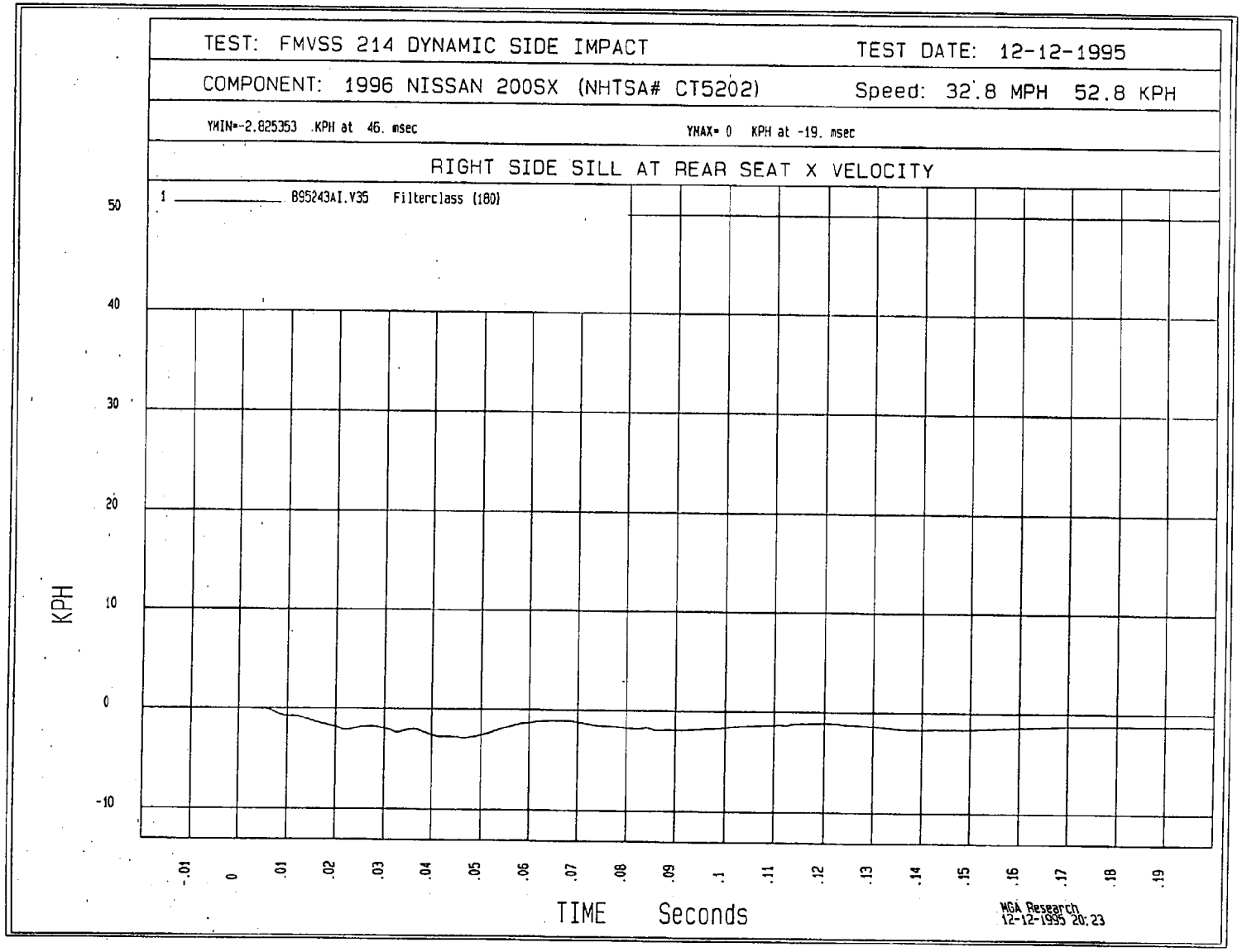
TIME (SECONDS)
MGA Research
12-12-1995 20:12


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-2.825353 .KPH at 46. msec
YMAX= 0 KPH at -19. msec
RIGHT SIDE SILL AT REAR SEAT X VELOCITY
1 B95243AI.V35 Filterclass (180)
50
40
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0
-10
KPH
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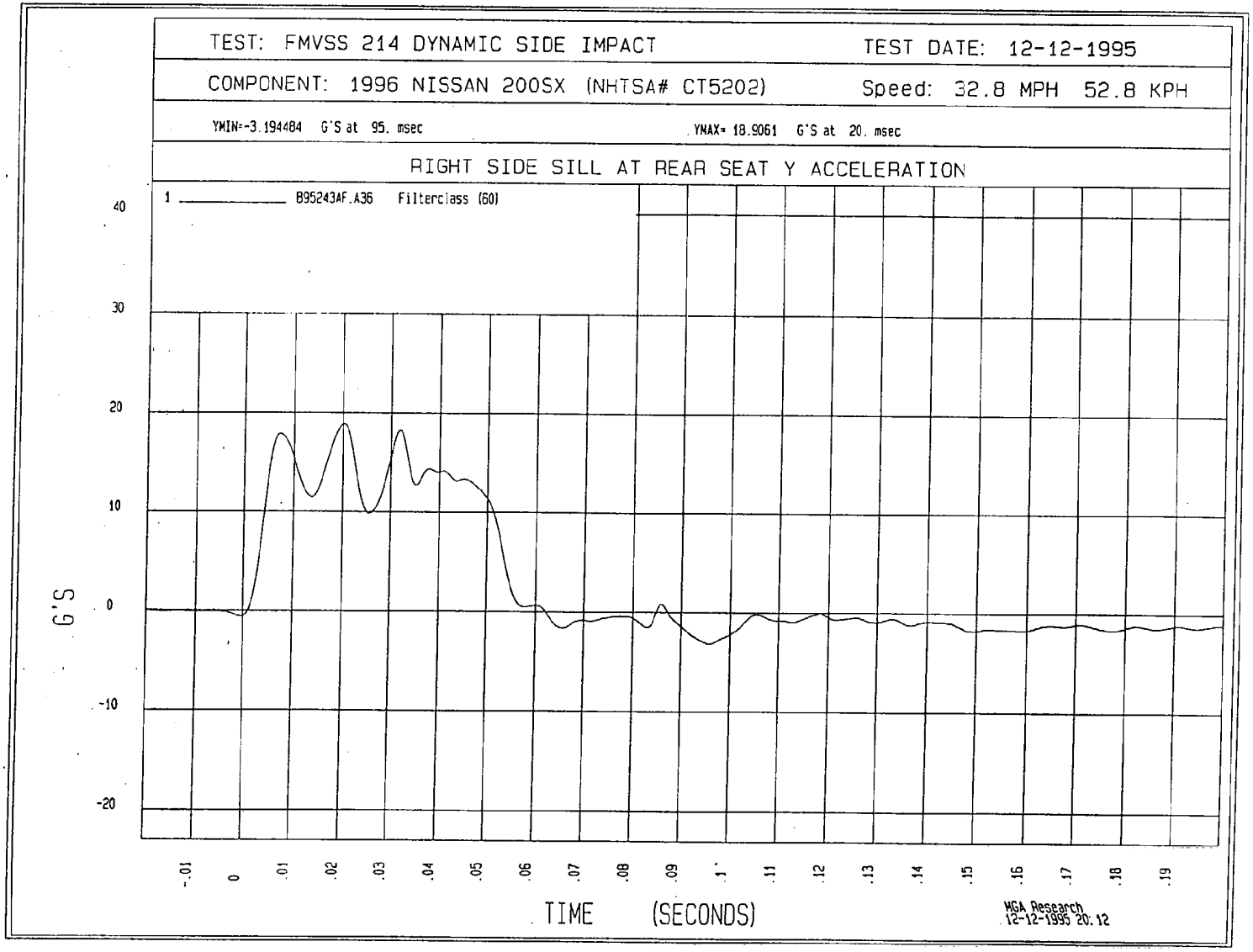
TIME Seconds
MGA Research
12-12-1995 20:23


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-3.194484 G'S at 95. msec
YMAX= 18.9061 G'S at 20. msec
RIGHT SIDE SILL AT REAR SEAT Y ACCELERATION
1 B95243AF.A36 Filterclass (60)
40
30
20
10
0
-10
-20
G'S
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0
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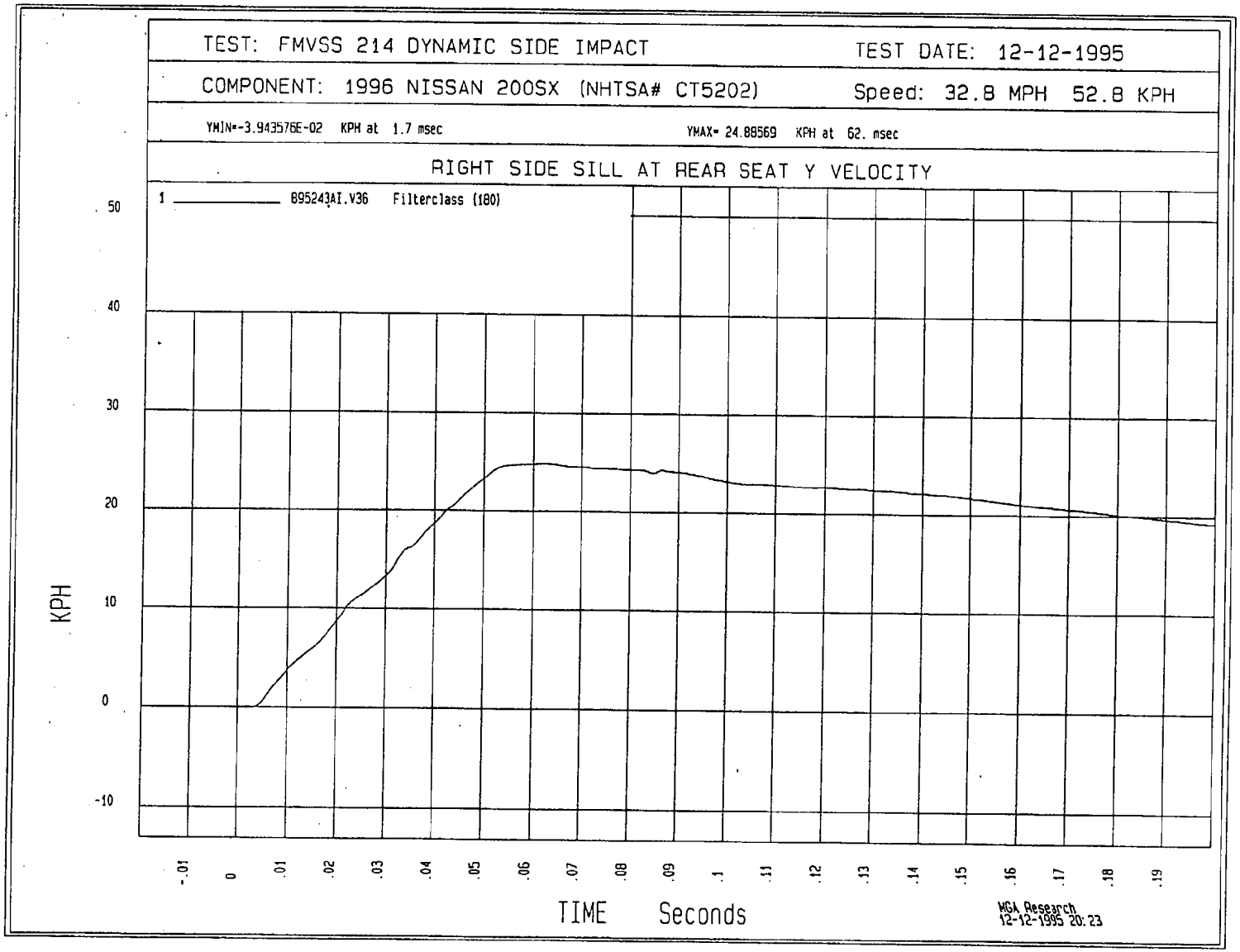
TIME (SECONDS)
MGA Research
12-12-1995 20:12


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-3.943576E-02 KPH at 1.7 msec
YMAX= 24.88569 KPH at 62. msec
RIGHT SIDE SILL AT REAR SEAT Y VELOCITY
1 B95243AI.V36 Filterclass (180)
KPH
50
40
30
20
10
0
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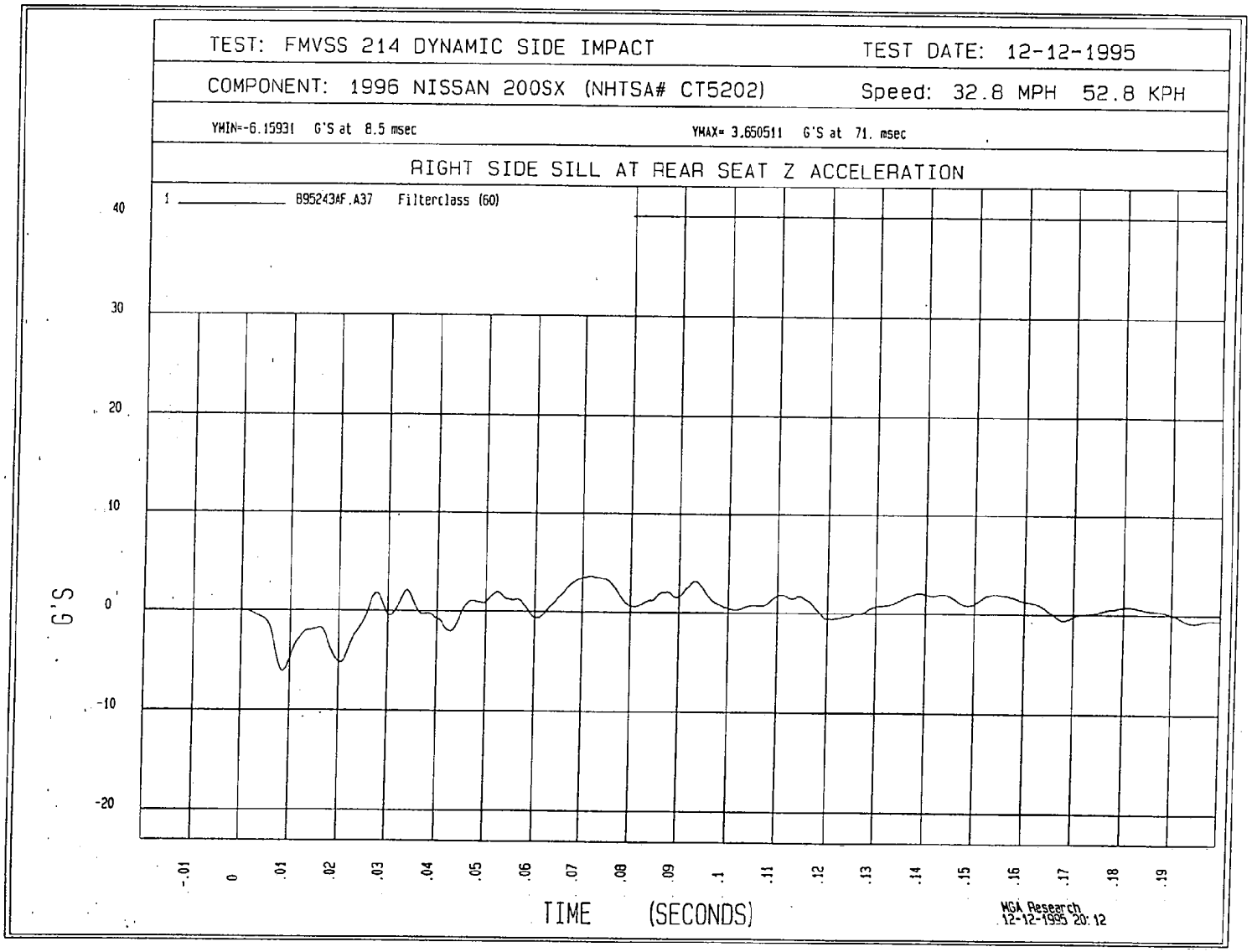
TIME Seconds
MGA Research
12-12-1995 20:23


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-6.15931 G'S at 8.5 msec
YMAX= 3.650511 G'S at 71. msec
RIGHT SIDE SILL AT REAR SEAT Z ACCELERATION
1 B95243AF.A37 Filterclass (60)
40
30
20
10
0
-10
-20
G'S
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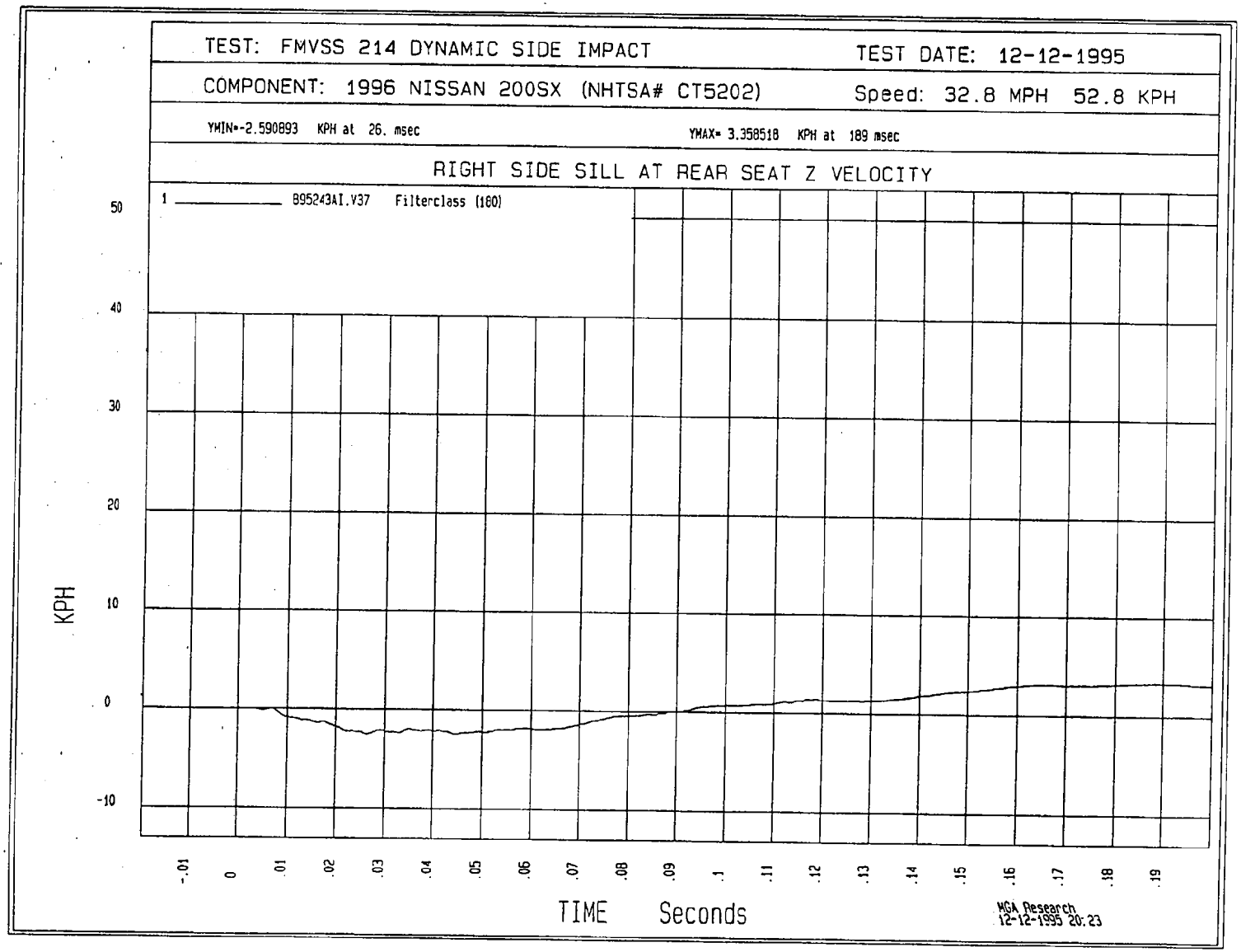
TIME (SECONDS)
MGA Research
12-12-1995 20:12


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-2.590893 KPH at 26. msec
YMAX= 3.358518 KPH at 189 msec
RIGHT SIDE SILL AT REAR SEAT Z VELOCITY
1 B95243AI.V37 Filterclass (180)
KPH
50
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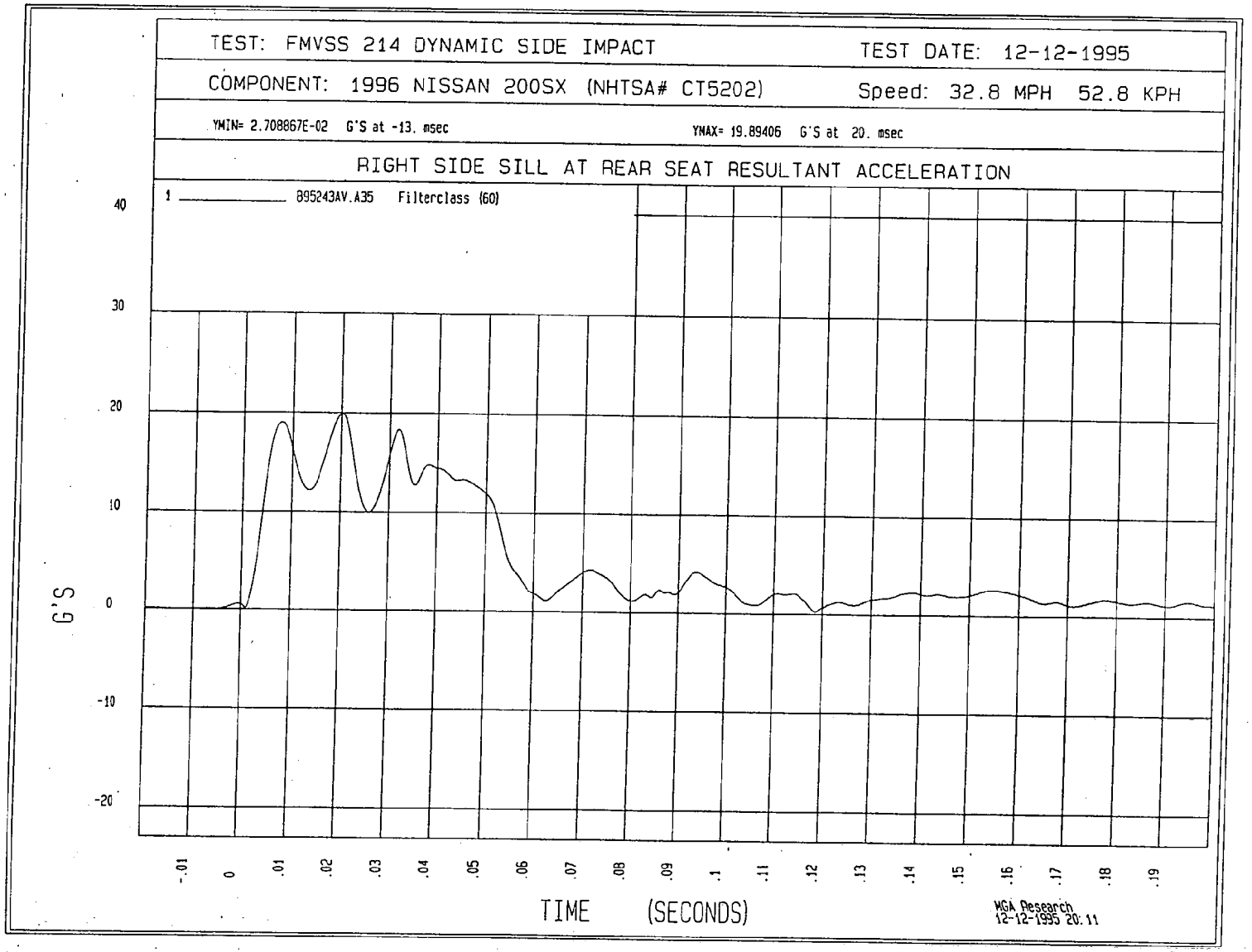
TIME Seconds
NGA Research
12-12-1995 20:23


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN= 2.708867E-02 G'S at -13. msec
YMAX= 19.89406 G'S at 20. msec
RIGHT SIDE SILL AT REAR SEAT RESULTANT ACCELERATION
1 895243AV.A35 Filterclass (60)
40
30
20
10
0
-10
-20
G'S
-.01
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.01
.02
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.04
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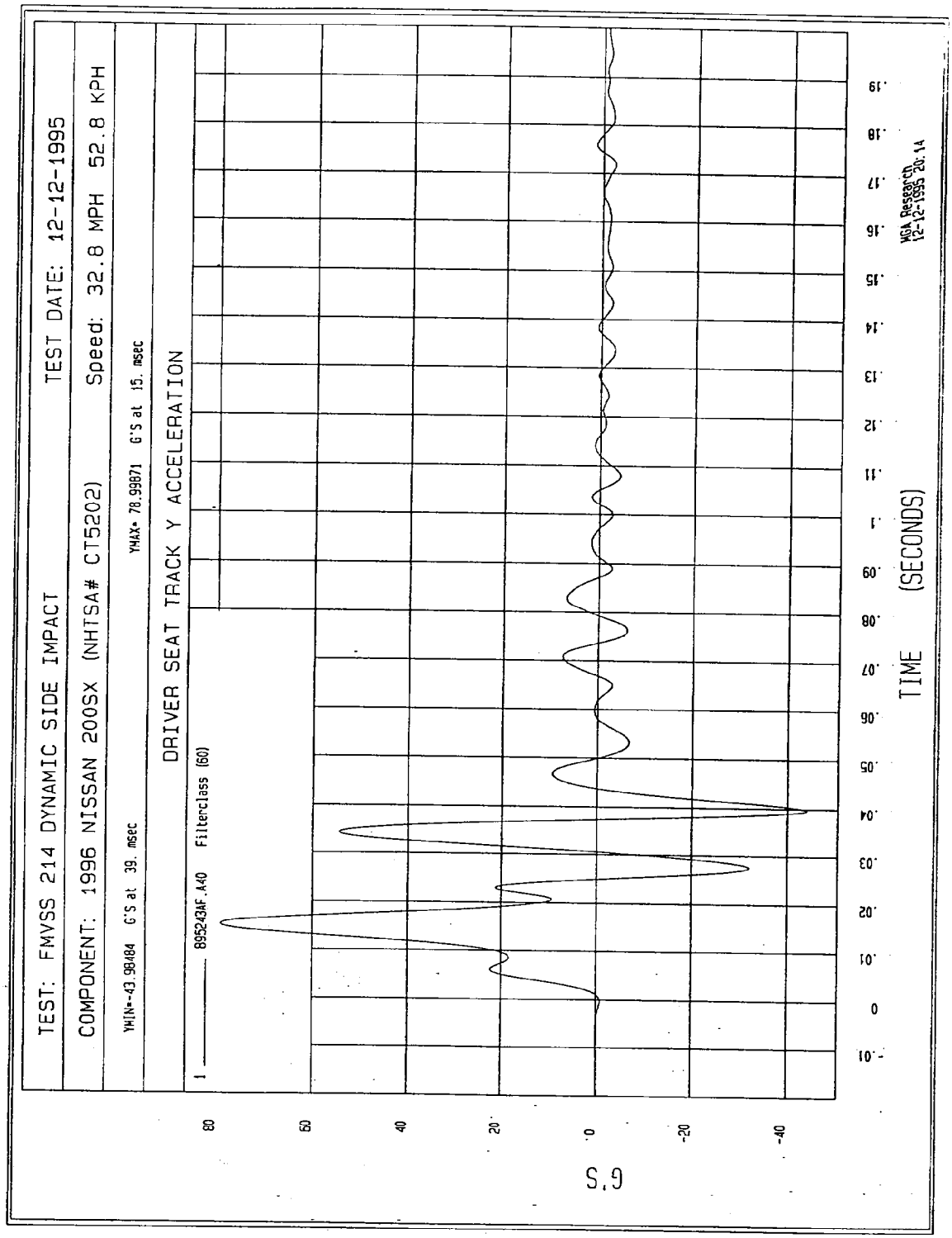
TIME (SECONDS)
MGA Research
12-12-1995 20:11


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-43.98484 G'S at 39. msec
YMAX= 78.99871 G'S at 15. msec
DRIVER SEAT TRACK Y ACCELERATION
1 895243AF.A40 Filterclass (60)
80
60
40
20
0
-20
-40
G'S
-.01
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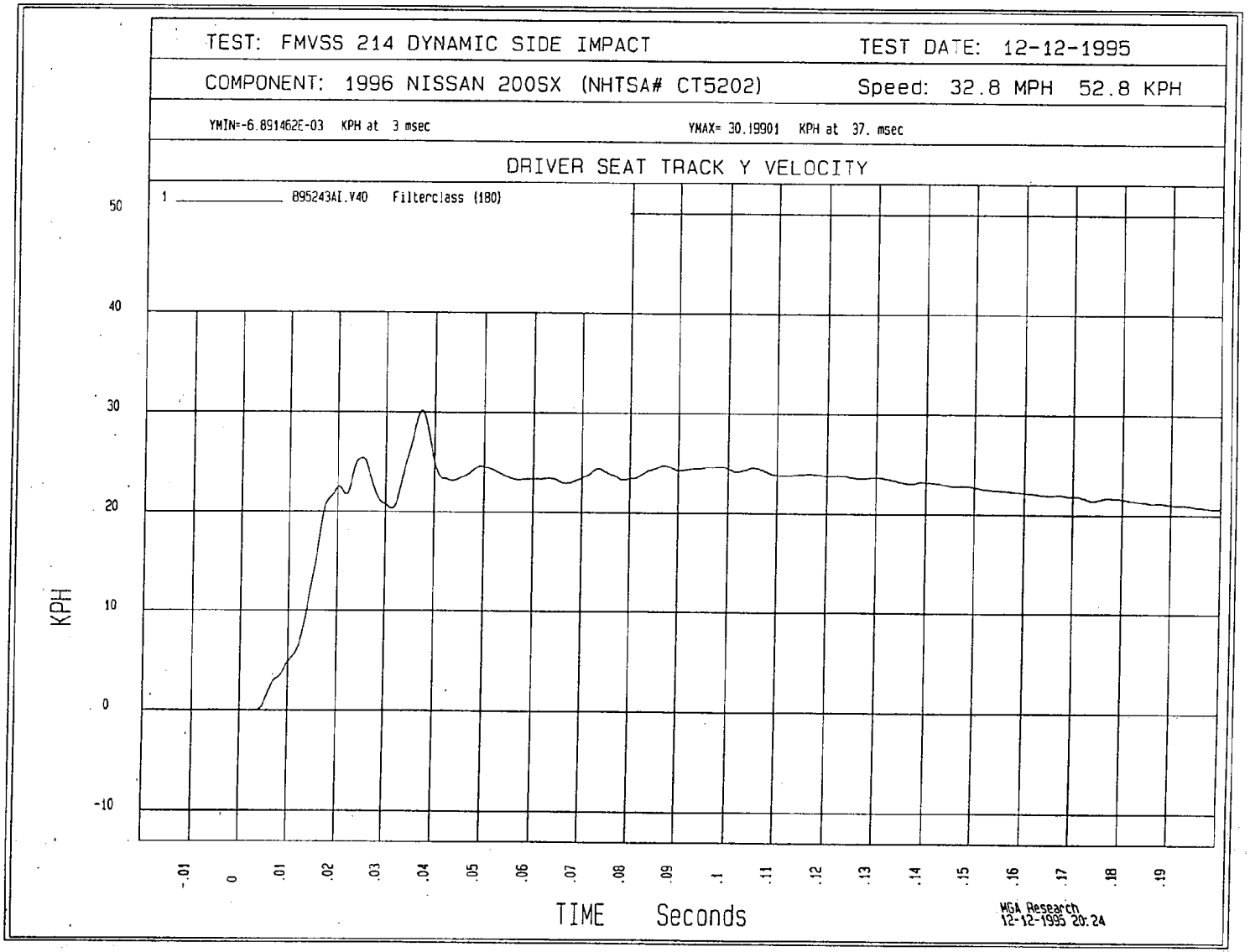
TIME (SECONDS)
MGA Research
12-12-1995 20:14


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-6.891462E-03 KPH at 3 msec
YMAX= 30.19901 KPH at 37. msec
DRIVER SEAT TRACK Y VELOCITY
1 B95243AI.V40 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.01
0
.01
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.04
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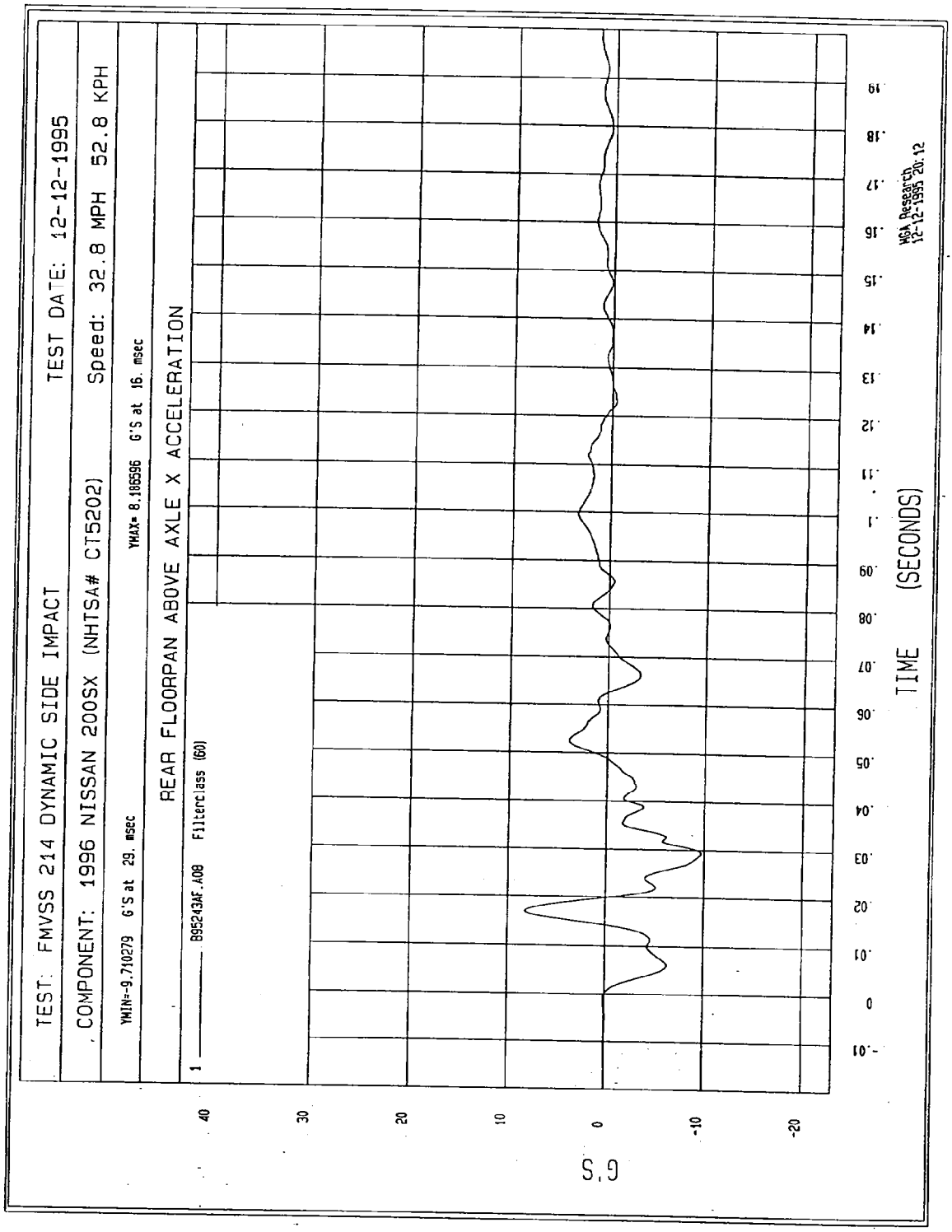
TIME Seconds
MGA Research
12-12-1995 20:24


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-9.710279 G'S at 29. msec
YMAX= 8.186596 G'S at 16. msec
REAR FLOORPAN ABOVE AXLE X ACCELERATION
1 B95243AF.A08 Filterclass (60)
40
30
20
10
0
-10
-20
-.01
0
.01
.02
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.04
.05
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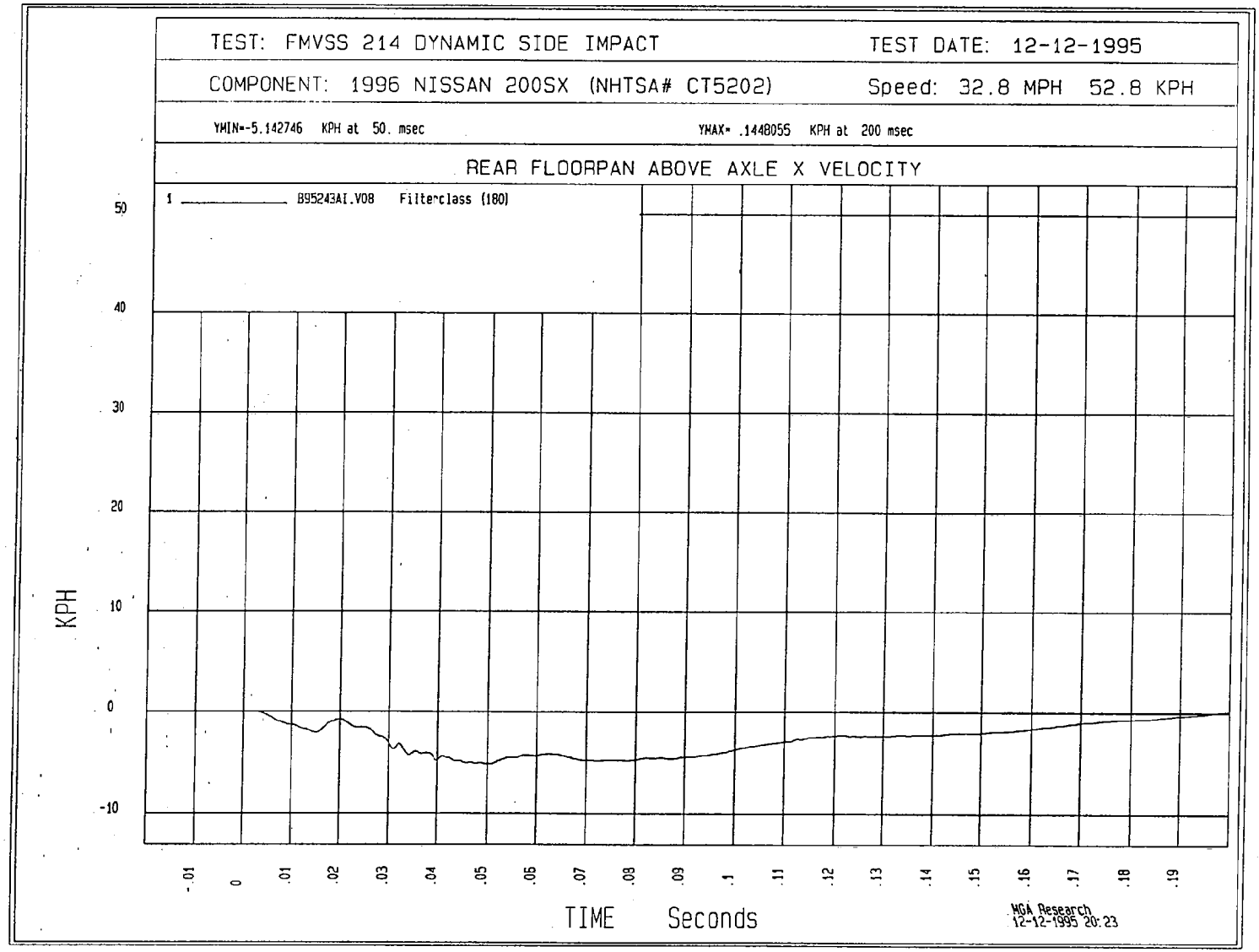
TIME (SECONDS)
MGA Research
12-12-1995 20:12

S.9


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-5.142746 KPH at 50. msec
YMAX= .1448055 KPH at 200 msec
REAR FLOORPAN ABOVE AXLE X VELOCITY
1 B95243AI.V08 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.01
0
.01
.02
.03
.04
.05
.06
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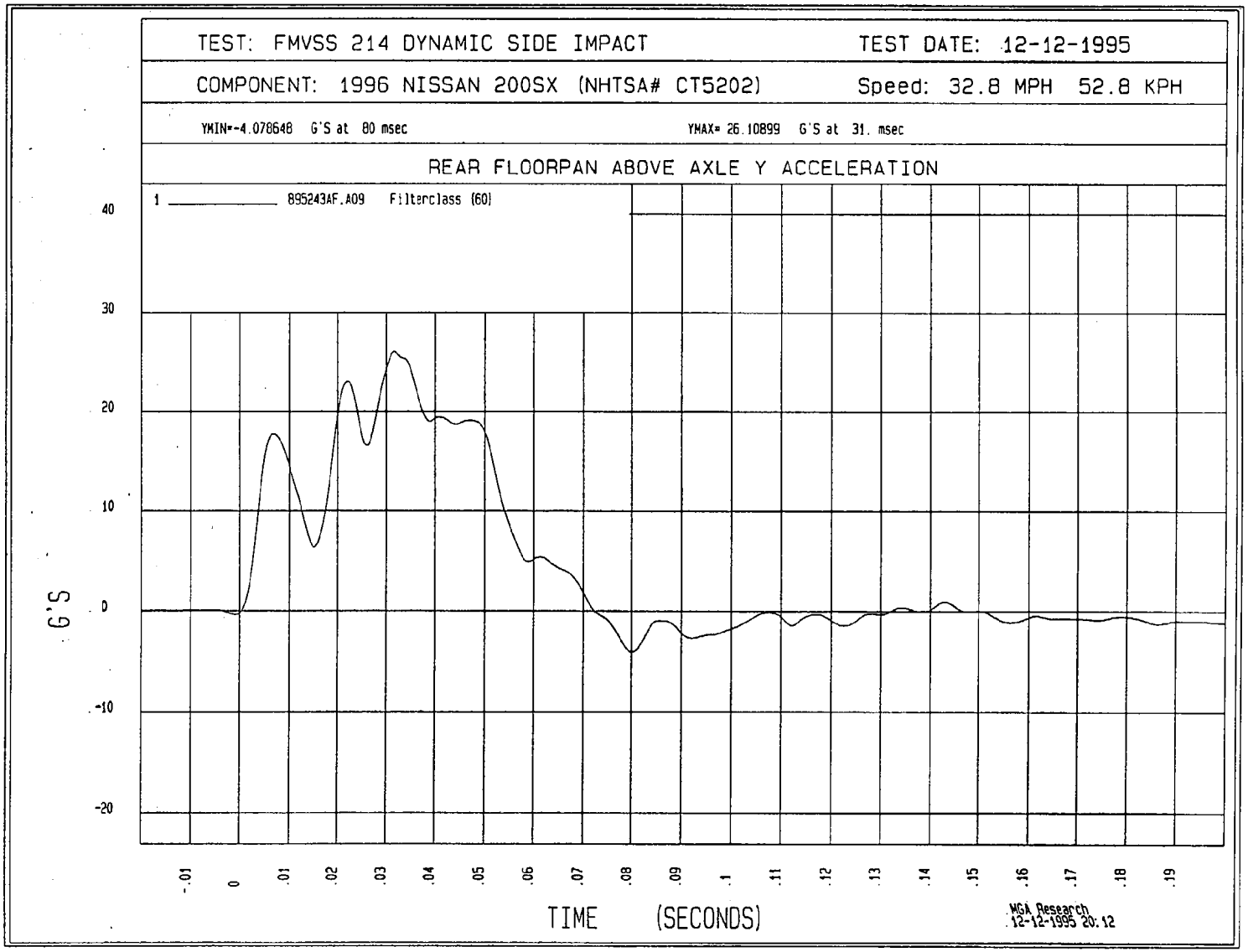
TIME Seconds
MGA Research
12-12-1995 20:23


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-4.078648 G'S at 80 msec
YMAX= 26.10899 G'S at 31. msec
REAR FLOORPAN ABOVE AXLE Y ACCELERATION
1 895243AF.A09 Filterclass (60)
40
30
20
10
0
-10
-20
G'S
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
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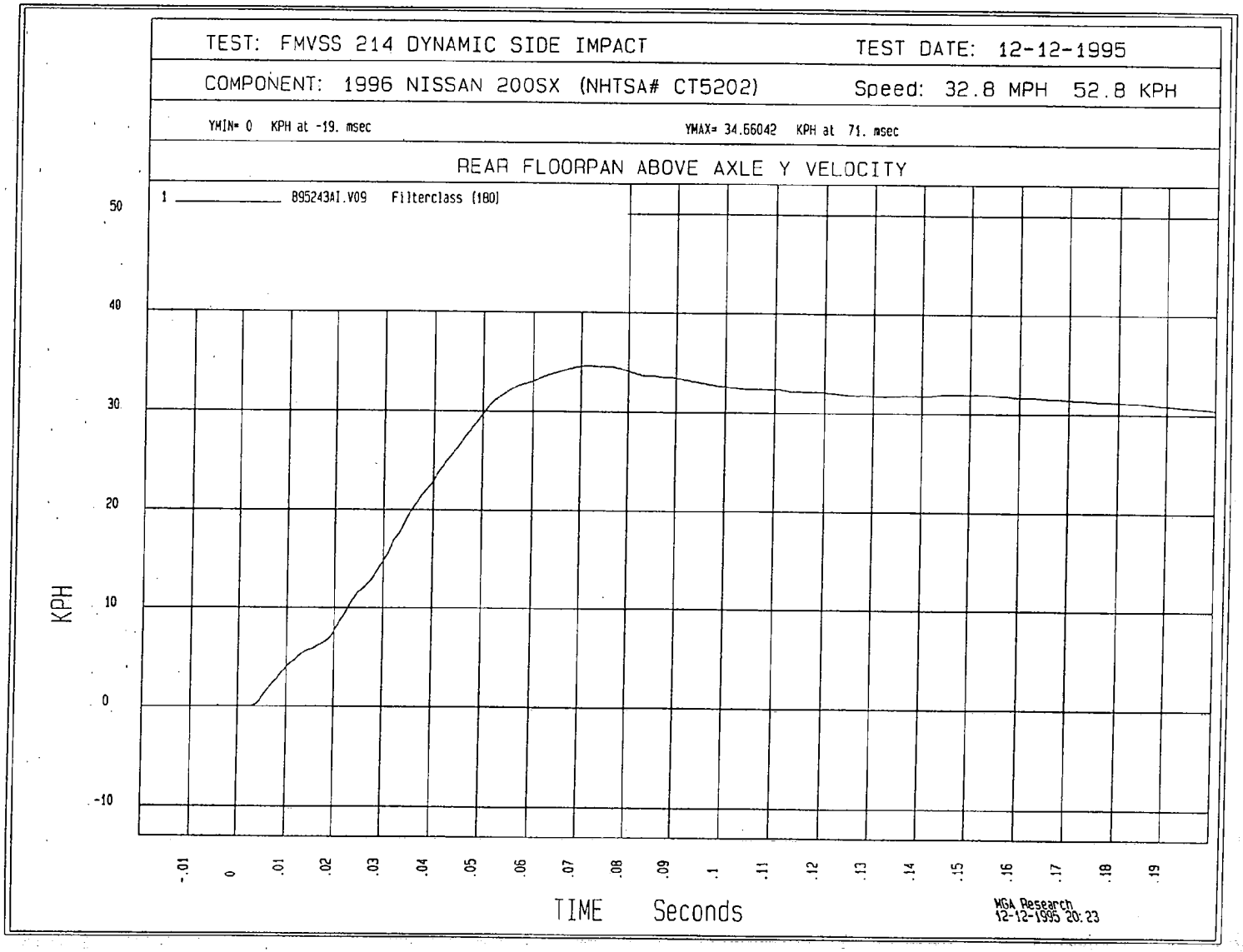
TIME (SECONDS)
MGA Research
12-12-1995 20:12


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN= 0 KPH at -19. msec
YMAX= 34.66042 KPH at 71. msec
REAR FLOORPAN ABOVE AXLE Y VELOCITY
1 895243AI.V09 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.01
0
.01
.02
.03
.04
.05
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.08
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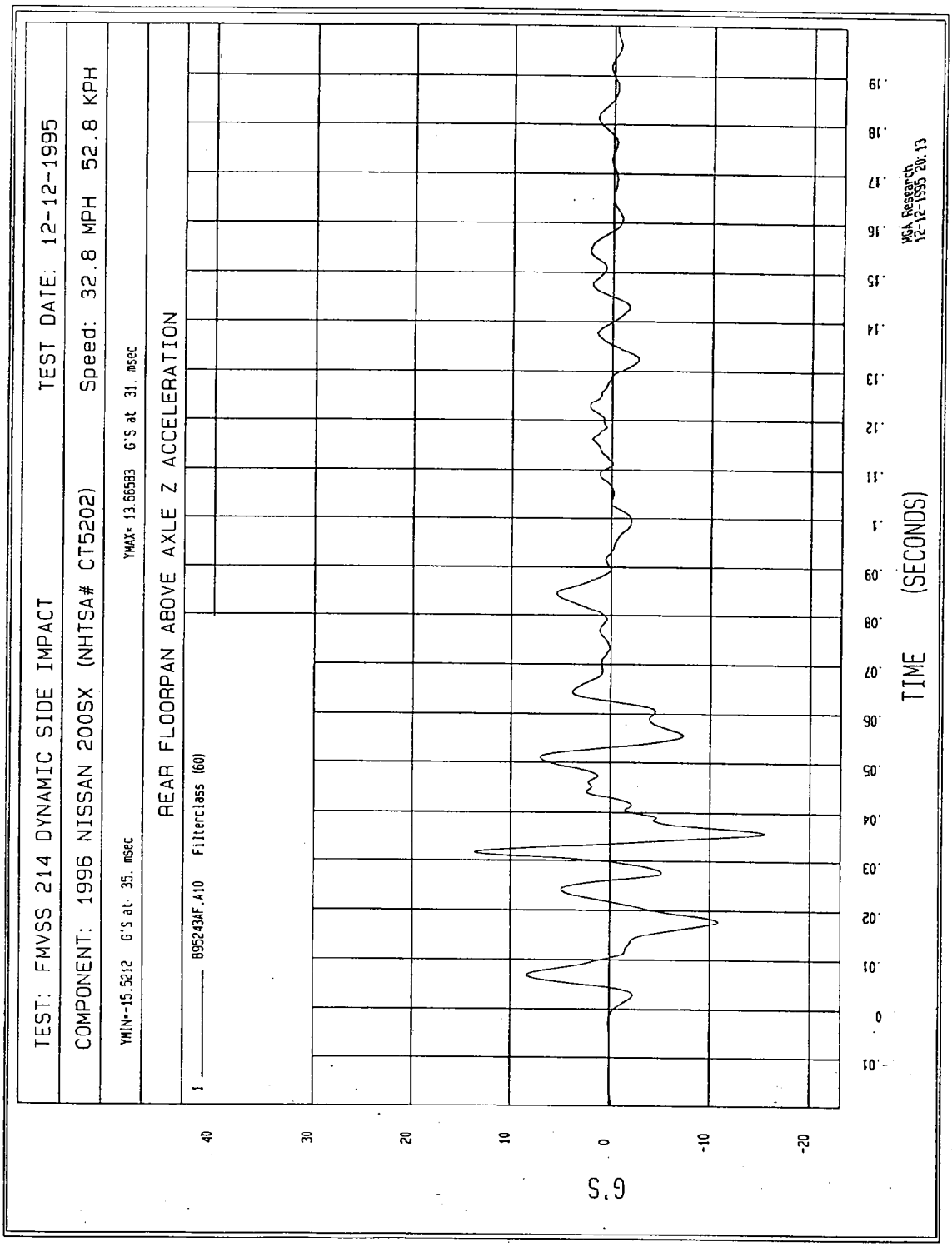
TIME Seconds
MGA Research
12-12-1995 20:23


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-15.5212 G'S at 35. msec
YMAX= 13.66583 G'S at 31. msec
REAR FLOORPAN ABOVE AXLE Z ACCELERATION
1 B95243AF.A10 Filterclass (60)
40
30
20
10
0
-10
-20
G'S
.01
0
.01
.02
.03
.04
.05
.06
.07
.08
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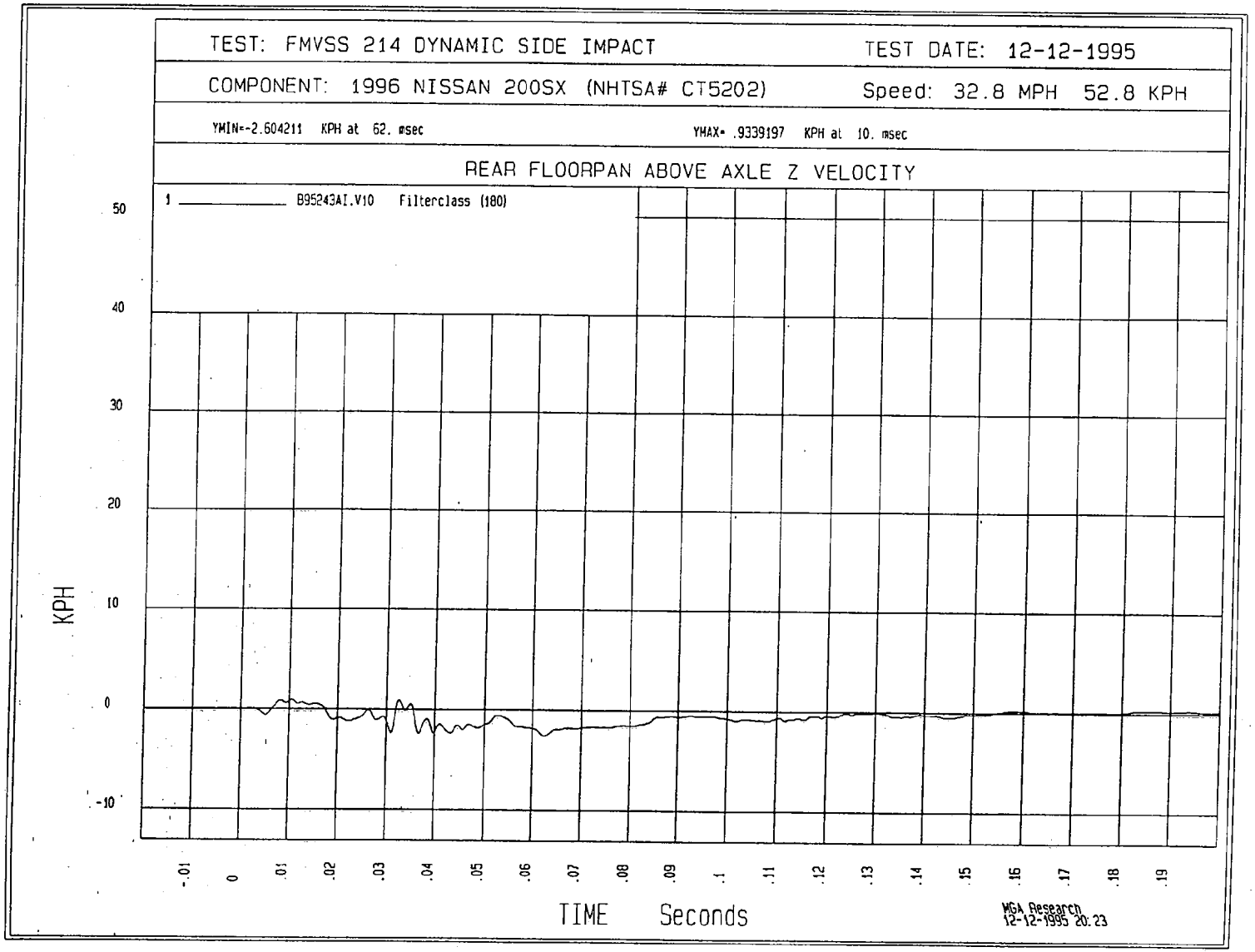
TIME (SECONDS)
MGA Research
12-12-1995 20:13


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-2.604211 KPH at 62. msec
YMAX= .9339197 KPH at 10. msec
REAR FLOORPAN ABOVE AXLE Z VELOCITY
1 B95243AI.V10 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
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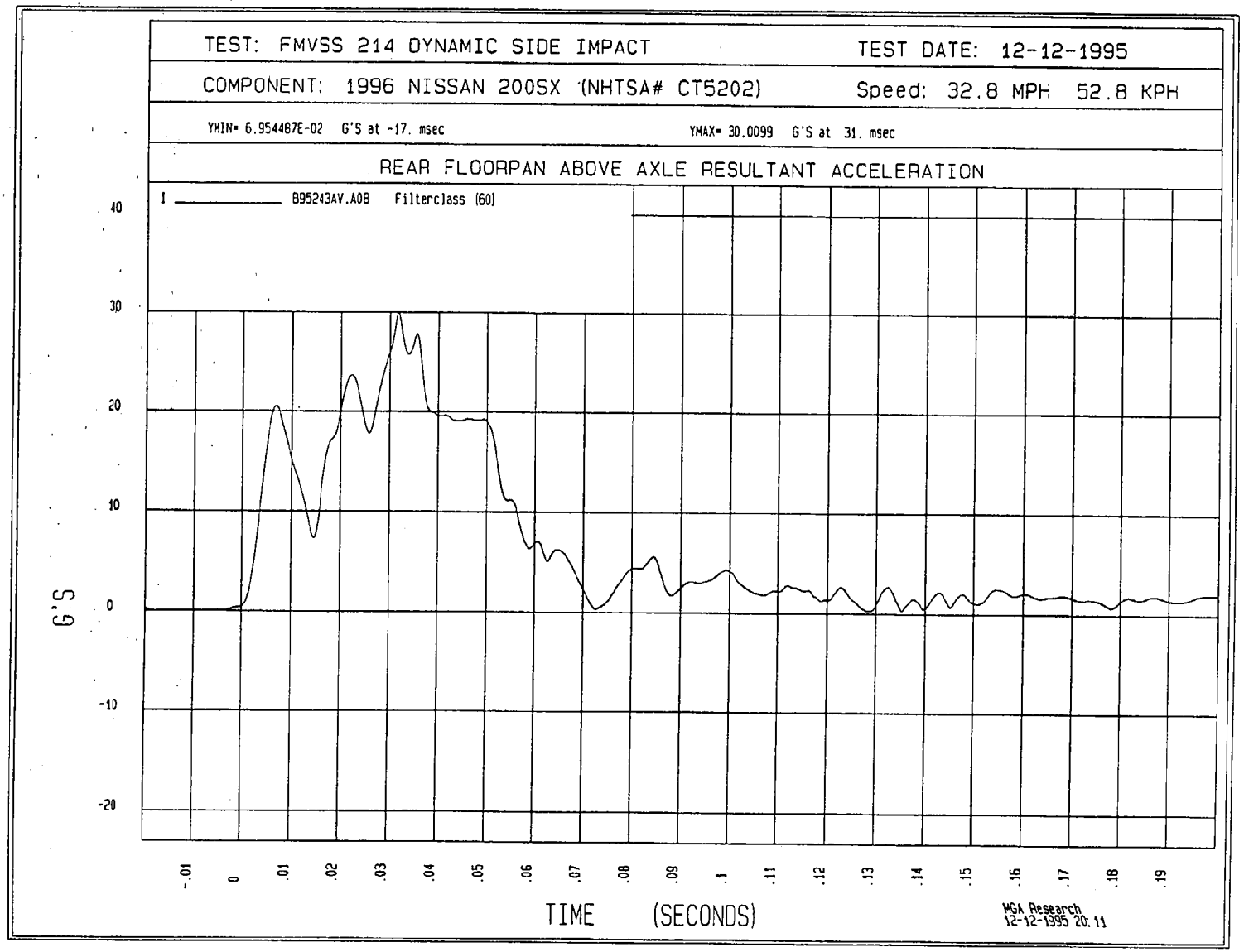
TIME Seconds
MGA Research
12-12-1995 20:23


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN= 6.954487E-02 G'S at -17. msec
YMAX= 30.0099 G'S at 31. msec
REAR FLOORPAN ABOVE AXLE RESULTANT ACCELERATION
1 B95243AV.A08 Filterclass (60)
40
30
20
10
0
-10
-20
G'S
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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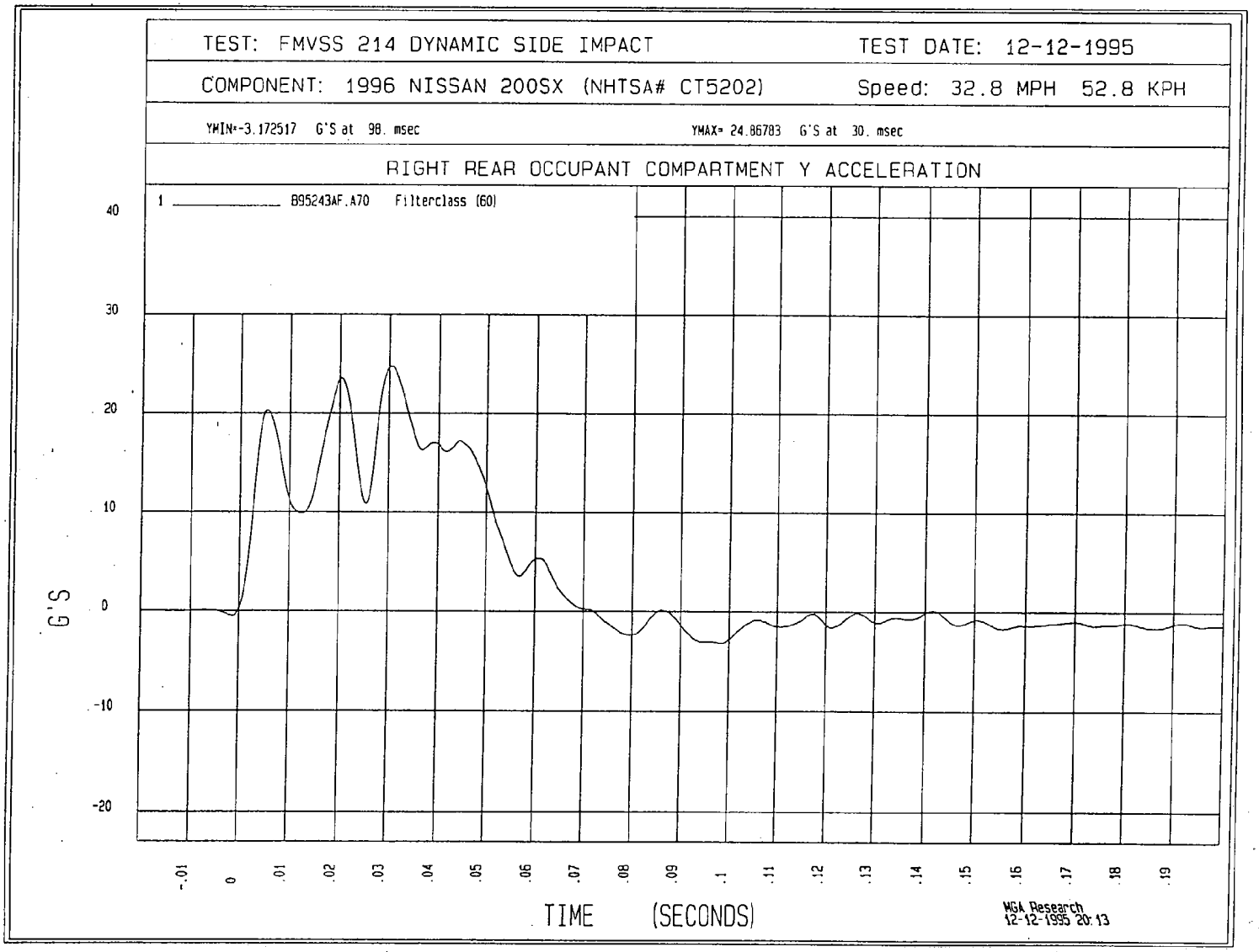
TIME (SECONDS)
MGA Research
12-12-1995 20:11


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-3.172517 G'S at 98. msec
YMAX= 24.86783 G'S at 30. msec
RIGHT REAR OCCUPANT COMPARTMENT Y ACCELERATION
1 B95243AF.A70 Filterclass (60)
40
30
20
10
0
-10
-20
G'S
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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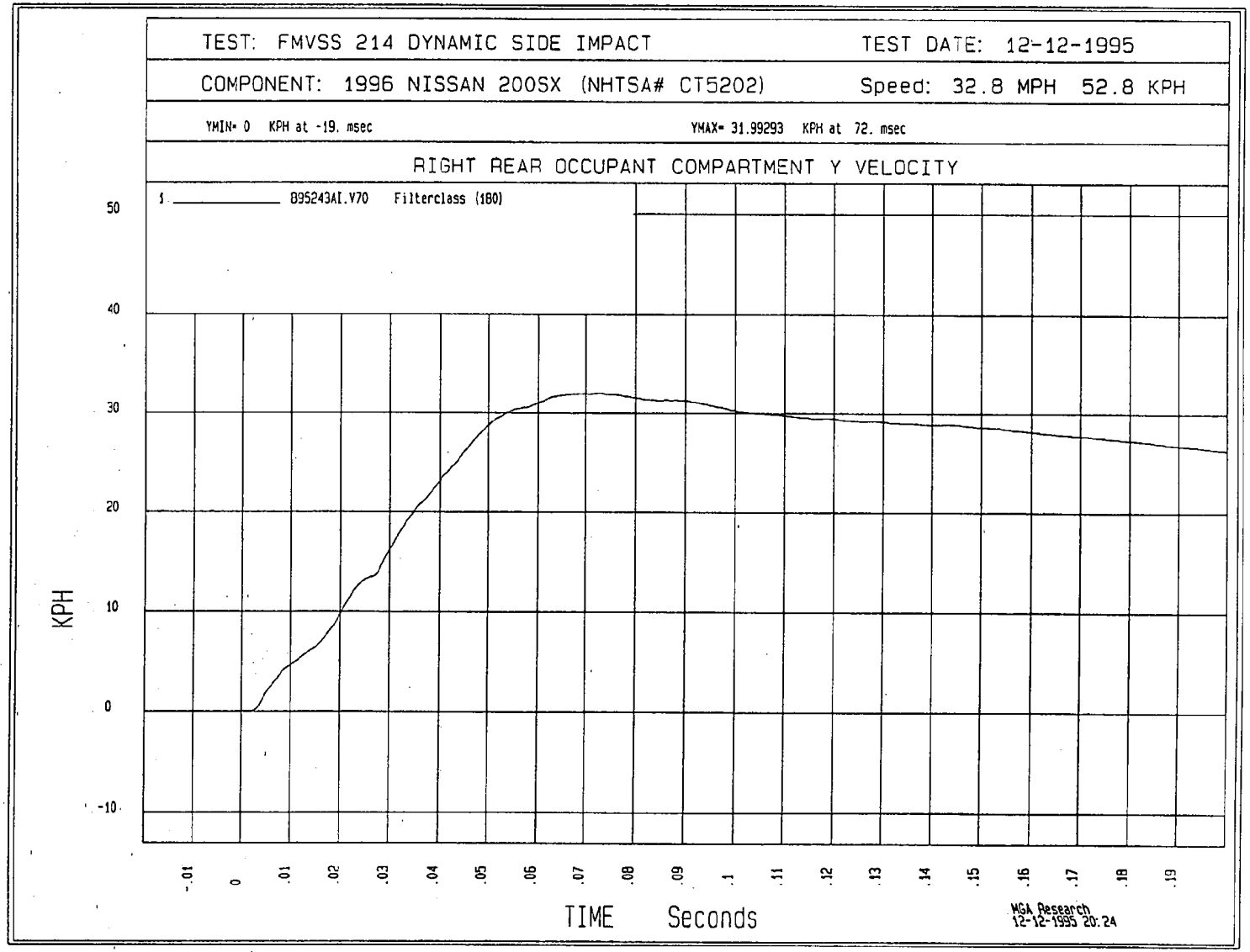
TIME (SECONDS)
MGA Research
12-12-1995 20:13


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN= 0 KPH at -19. msec
YMAX= 31.99293 KPH at 72. msec
RIGHT REAR OCCUPANT COMPARTMENT Y VELOCITY
1 B95243AI.V70 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.01
0
.01
.02
.03
.04
.05
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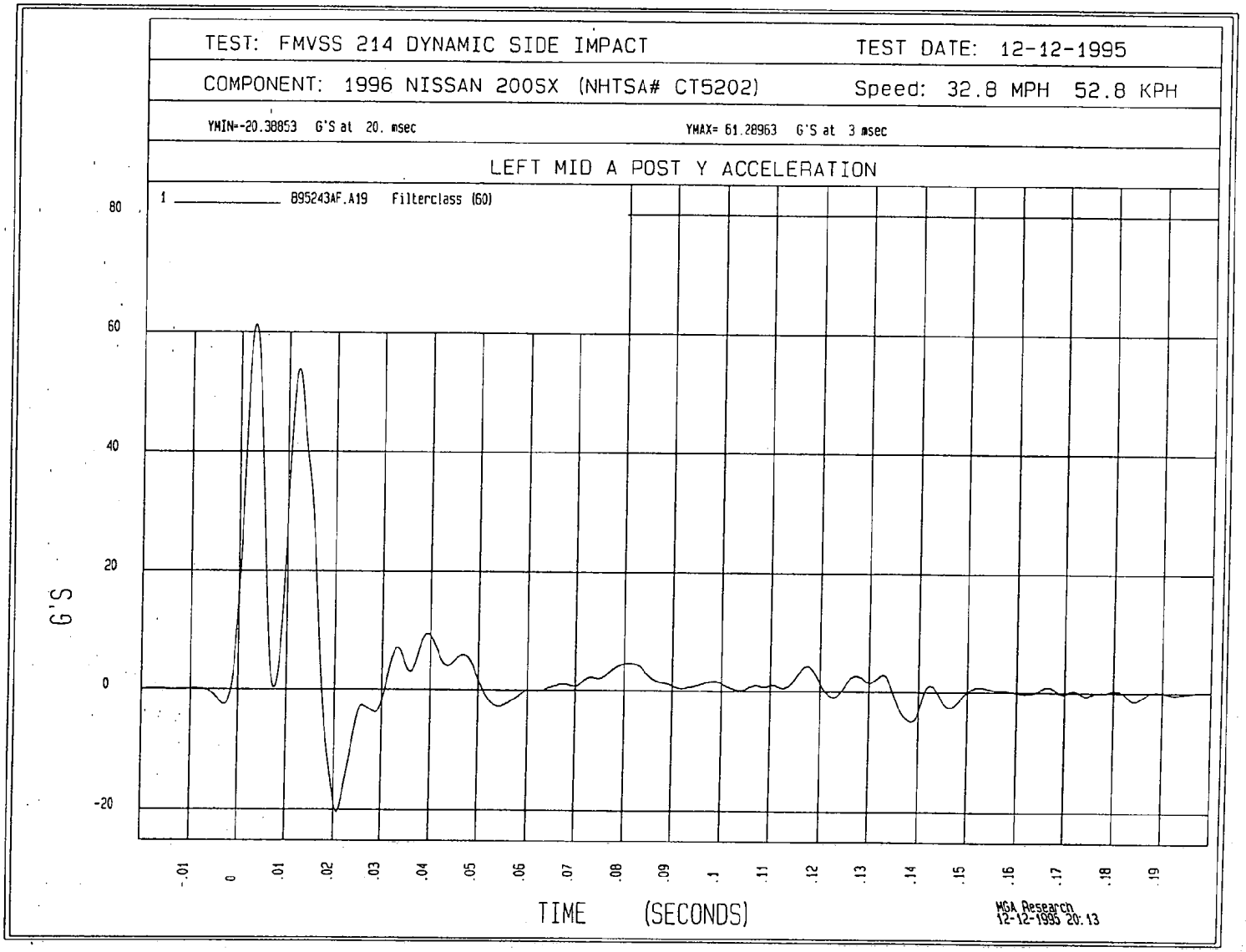
TIME Seconds
MGA Research
12-12-1995 20:24


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-20.38853 G'S at 20. msec
YMAX= 61.28963 G'S at 3 msec
LEFT MID A POST Y ACCELERATION
1 B95243AF.A19 Filterclass (60)
80
60
40
20
0
-20
G'S
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
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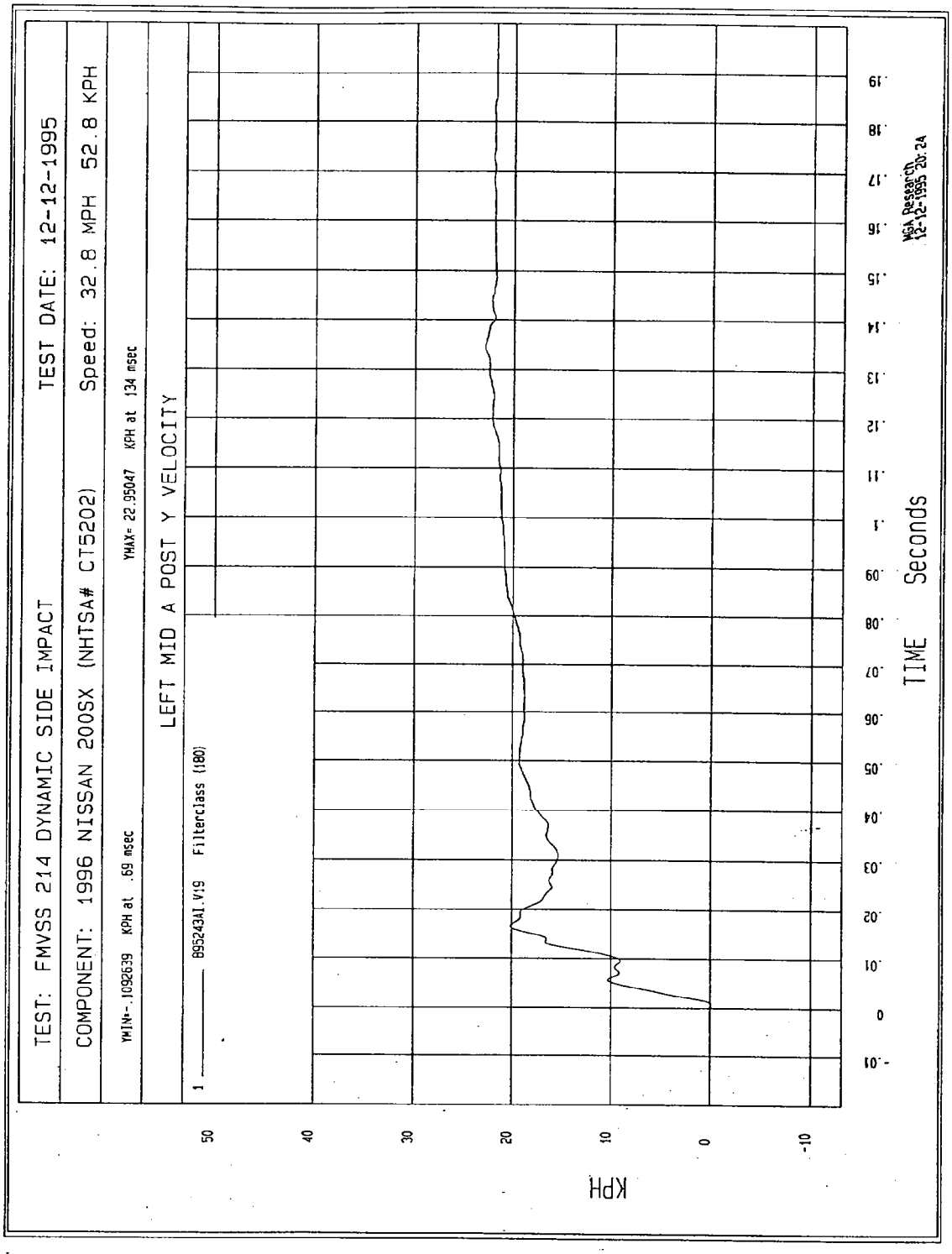
TIME (SECONDS)
MGA Research
12-12-1995 20:13


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-.1092639 KPH at .69 msec
YMAX= 22.95047 KPH at 134 msec
LEFT MID A POST Y VELOCITY
1 B95243AI.V19 Filterclass (180)
KPH
50
40
30
20
10
0
-10
TIME Seconds
-.01
0
.01
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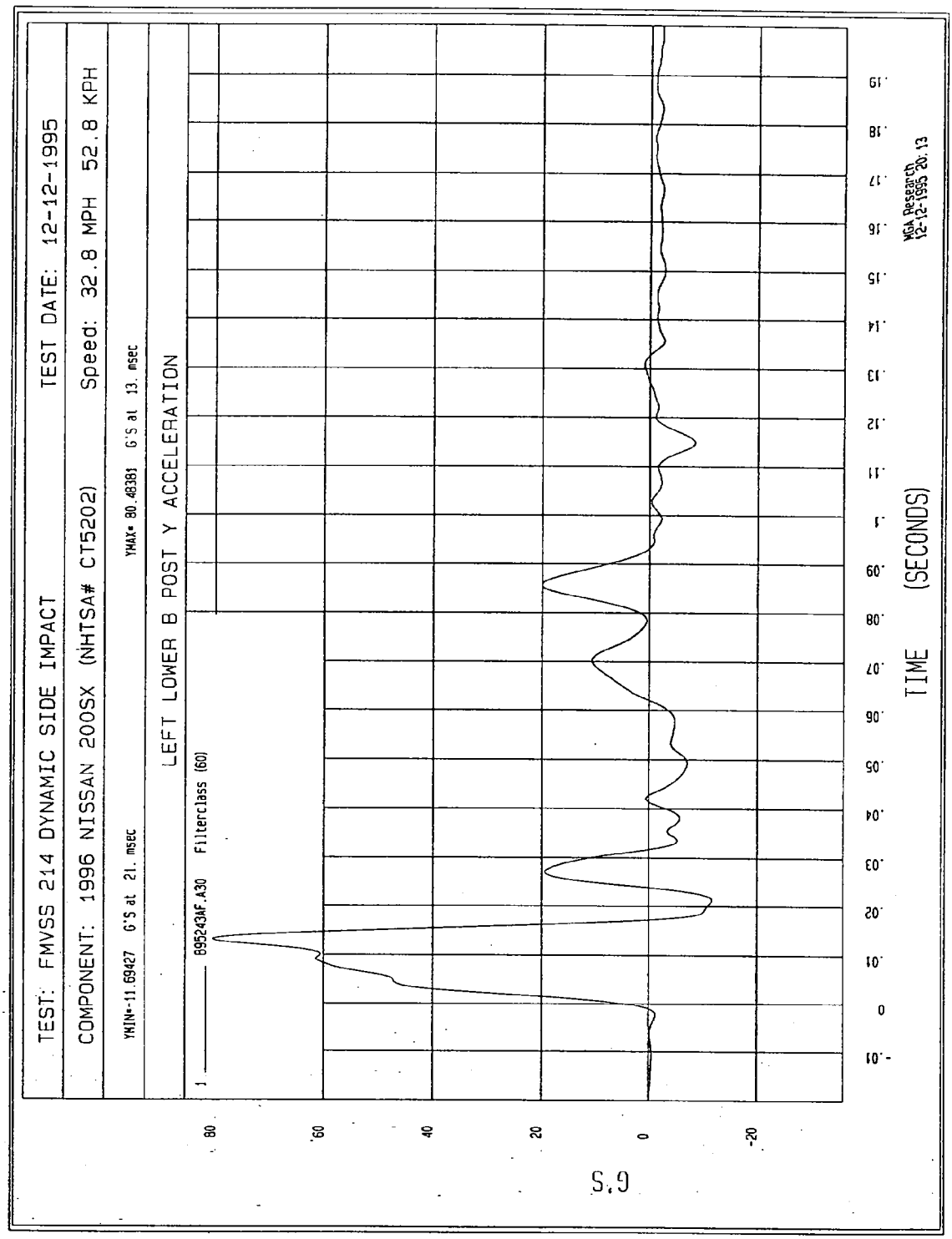
MGA Research
12-12-1995 20:24

LEFT LOWER A POST Y ACCELERATION VS. TIME

NO VALID DATA COLLECTED


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-11.69427 G'S at 21. msec
YMAX= 80.48381 G'S at 13. msec
LEFT LOWER B POST Y ACCELERATION
1 _____ 895243AF.A30 Filterclass (60)
80
60
40
20
0
-20
G's
-.01
0
.01
.02
.03
.04
.05
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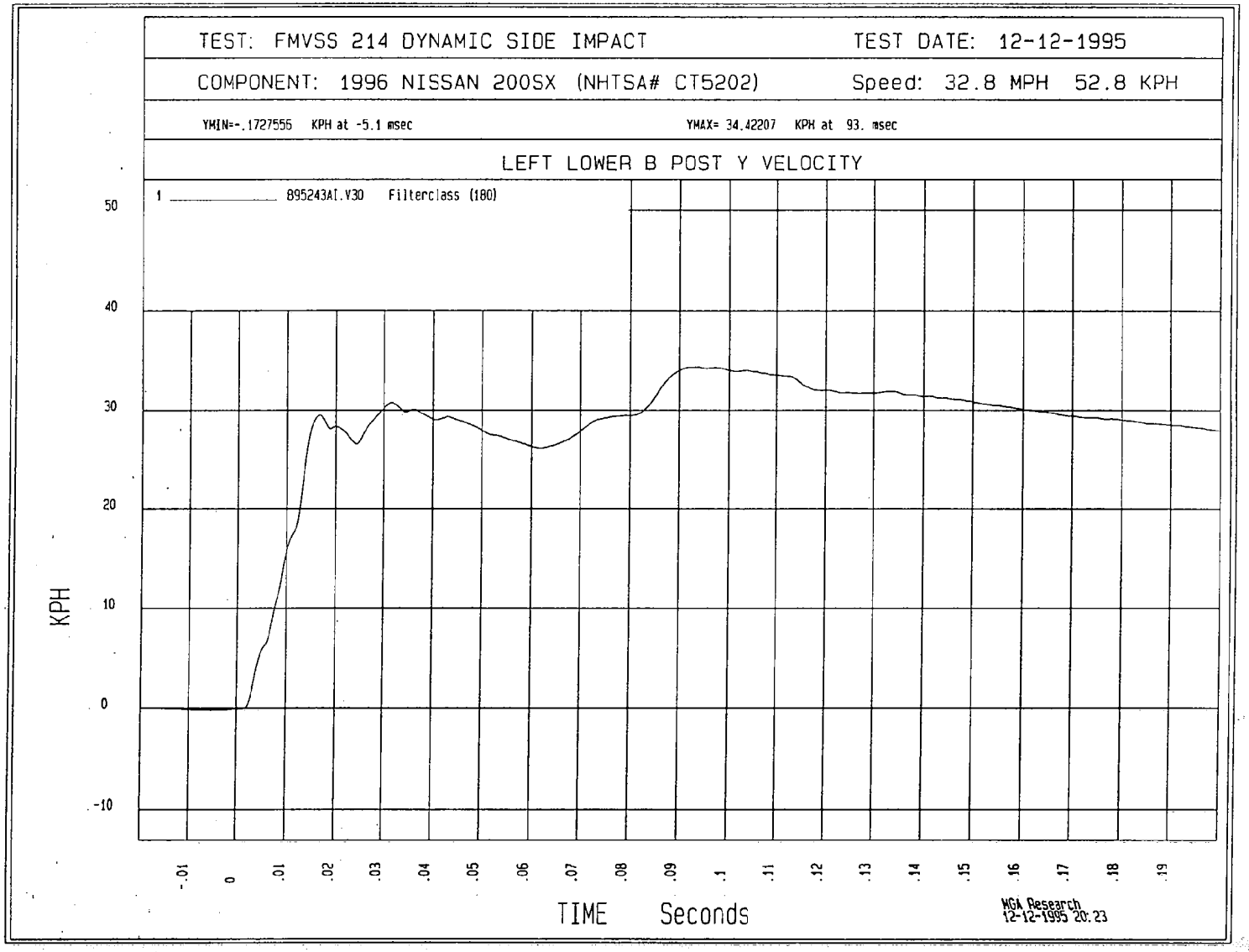
TIME (SECONDS)
MGA Research
12-12-1995 20:13


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-.1727555 KPH at -5.1 msec
YMAX= 34.42207 KPH at 93. msec
LEFT LOWER B POST Y VELOCITY
1 895243AI.Y30 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.01
0
.01
.02
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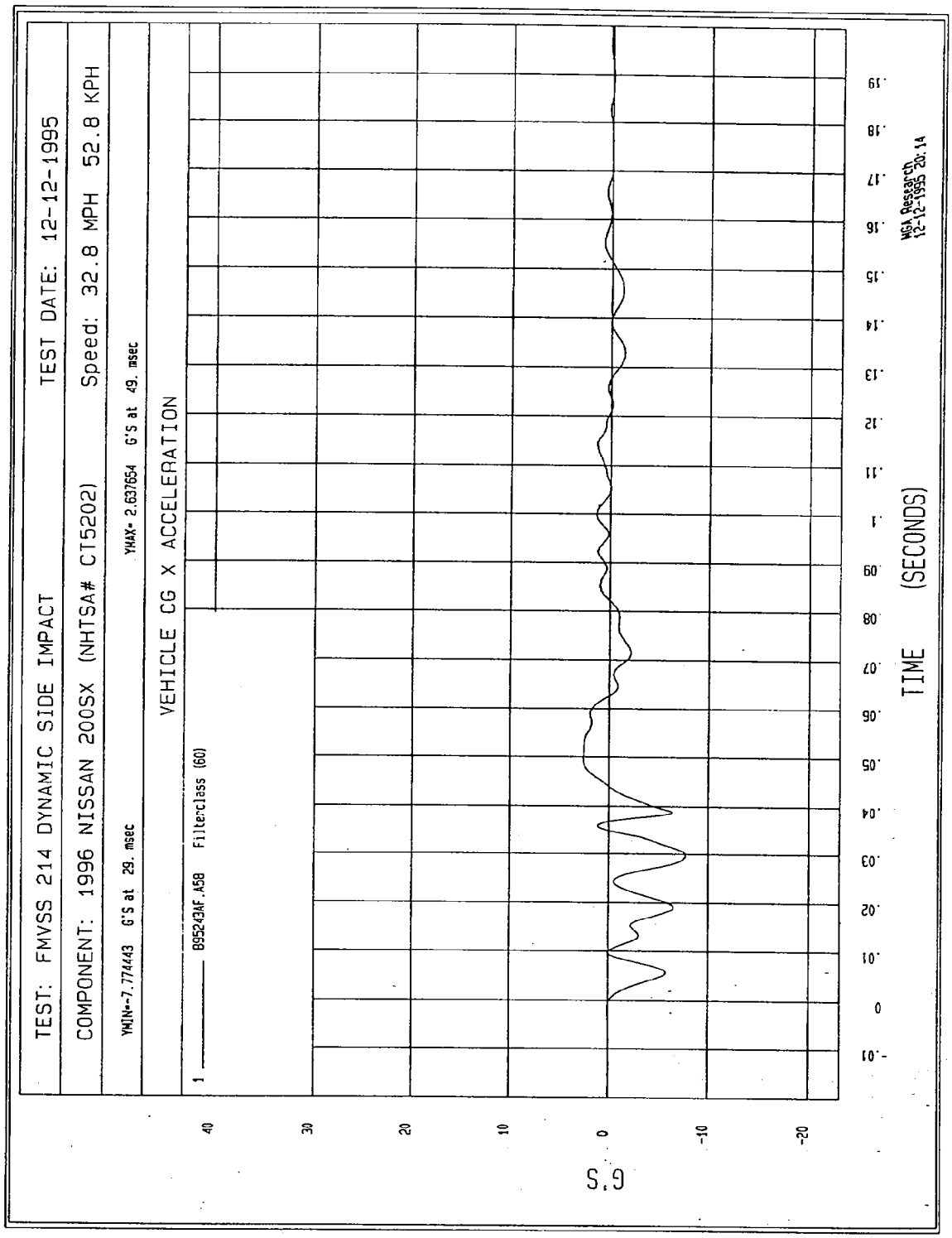
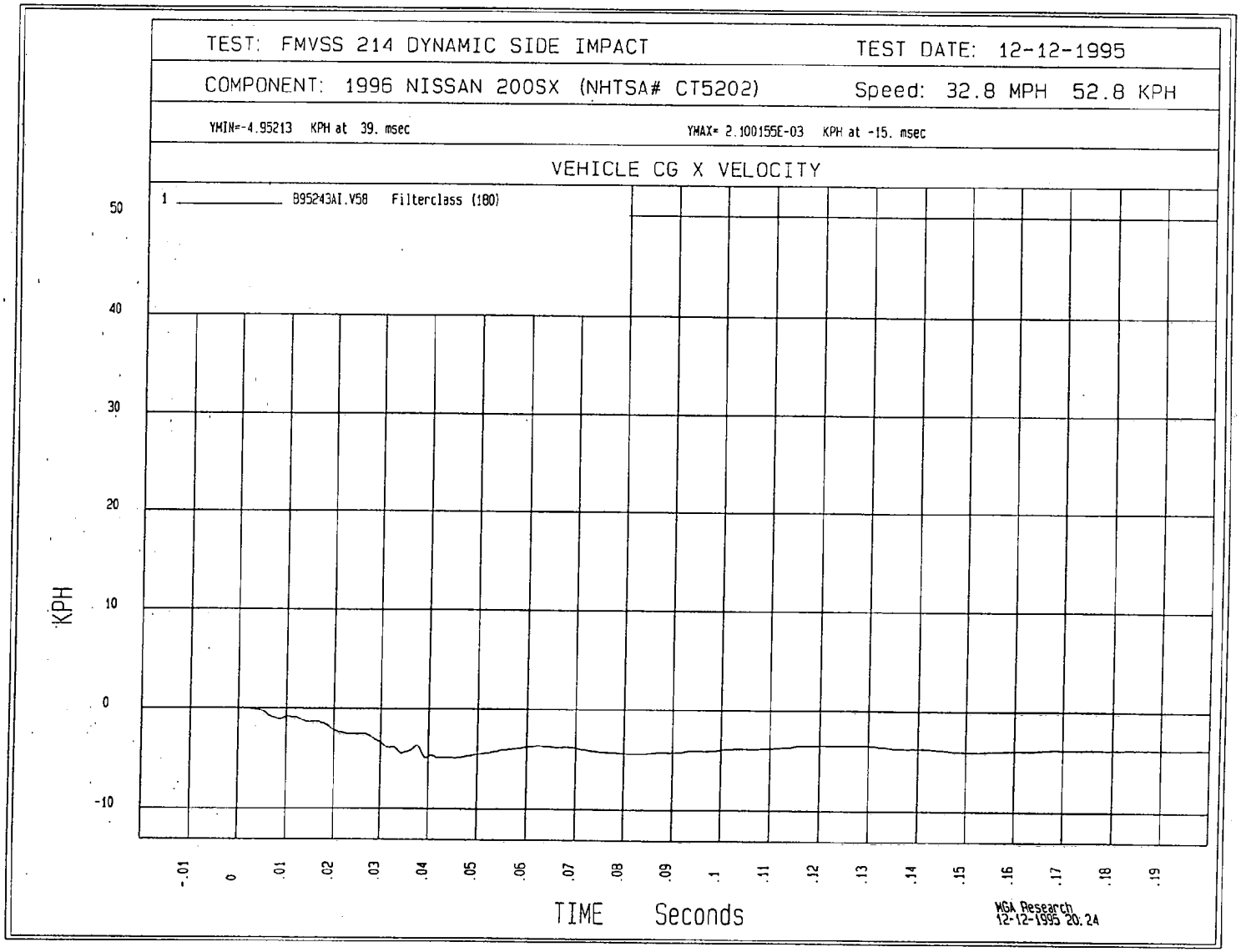
TIME Seconds
NGA Research
12-12-1995 20:23


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-7.774443 G'S at 29. msec
YMAX= 2.637654 G'S at 49. msec
VEHICLE CG X ACCELERATION
1 B95243AF.A5B Filterclass (60)
G'S
TIME (SECONDS)
MGA Research
12-12-1995 20:14


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-4.95213 KPH at 39. msec
YMAX= 2.100155E-03 KPH at -15. msec
VEHICLE CG X VELOCITY
1 B95243AI.V58 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.01
0
.01
.02
.03
.04
.05
.06
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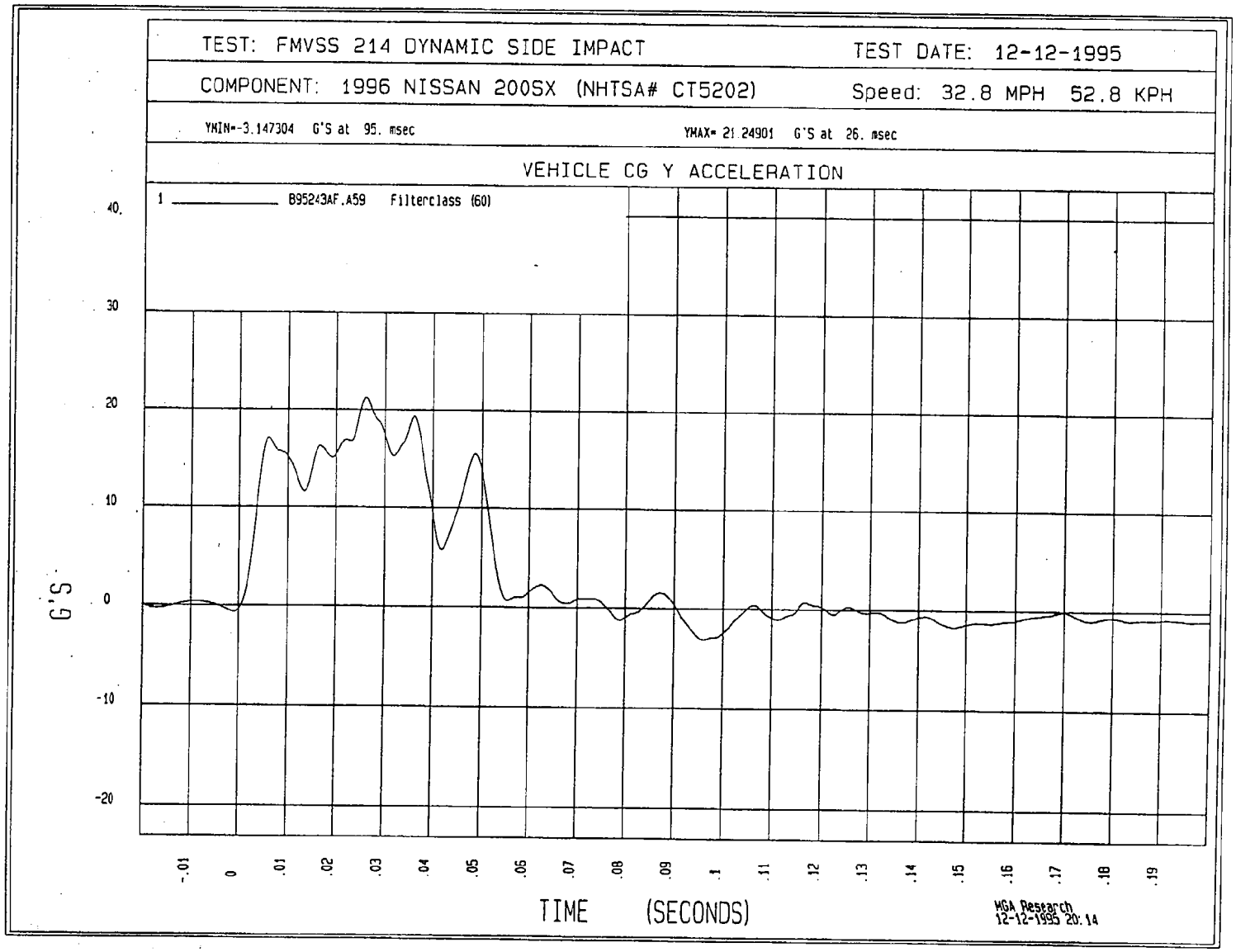
TIME Seconds
MGA Research
12-12-1995 20.24


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-3.147304 G'S at 95. msec
YMAX= 21.24901 G'S at 26. msec
VEHICLE CG Y ACCELERATION
1 B95243AF.A59 Filterclass (60)
40.
30
20
10
0
-10
-20
G'S
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
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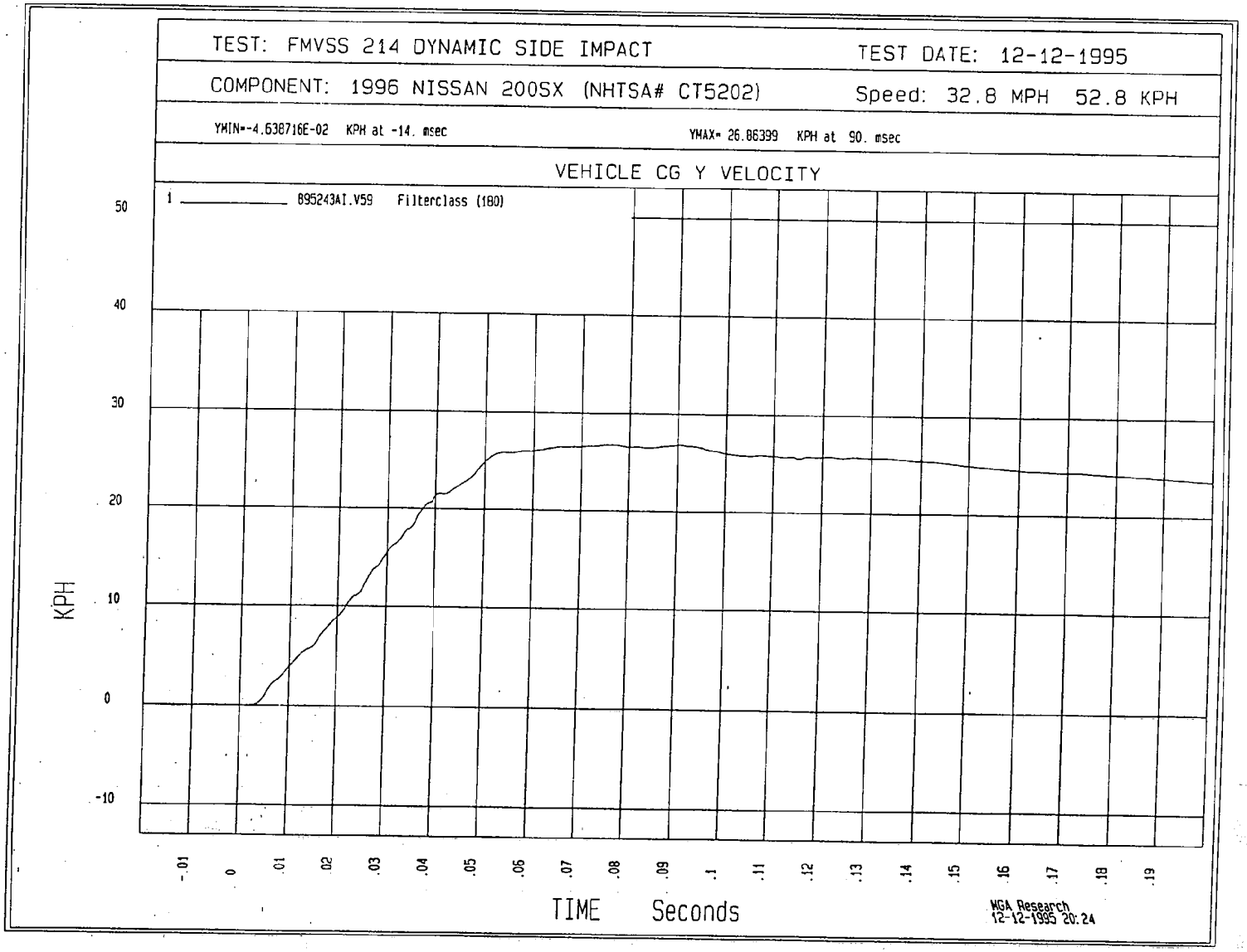
TIME (SECONDS)
MGA Research
12-12-1995 20:14


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-4.638716E-02 KPH at -14. msec
YMAX= 26.86399 KPH at 90. msec
VEHICLE CG Y VELOCITY
1 895243AI.V59 Filterclass (180)
50
40
30
20
10
0
-10
KPH
-.01
0
.01
.02
.03
.04
.05
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.09
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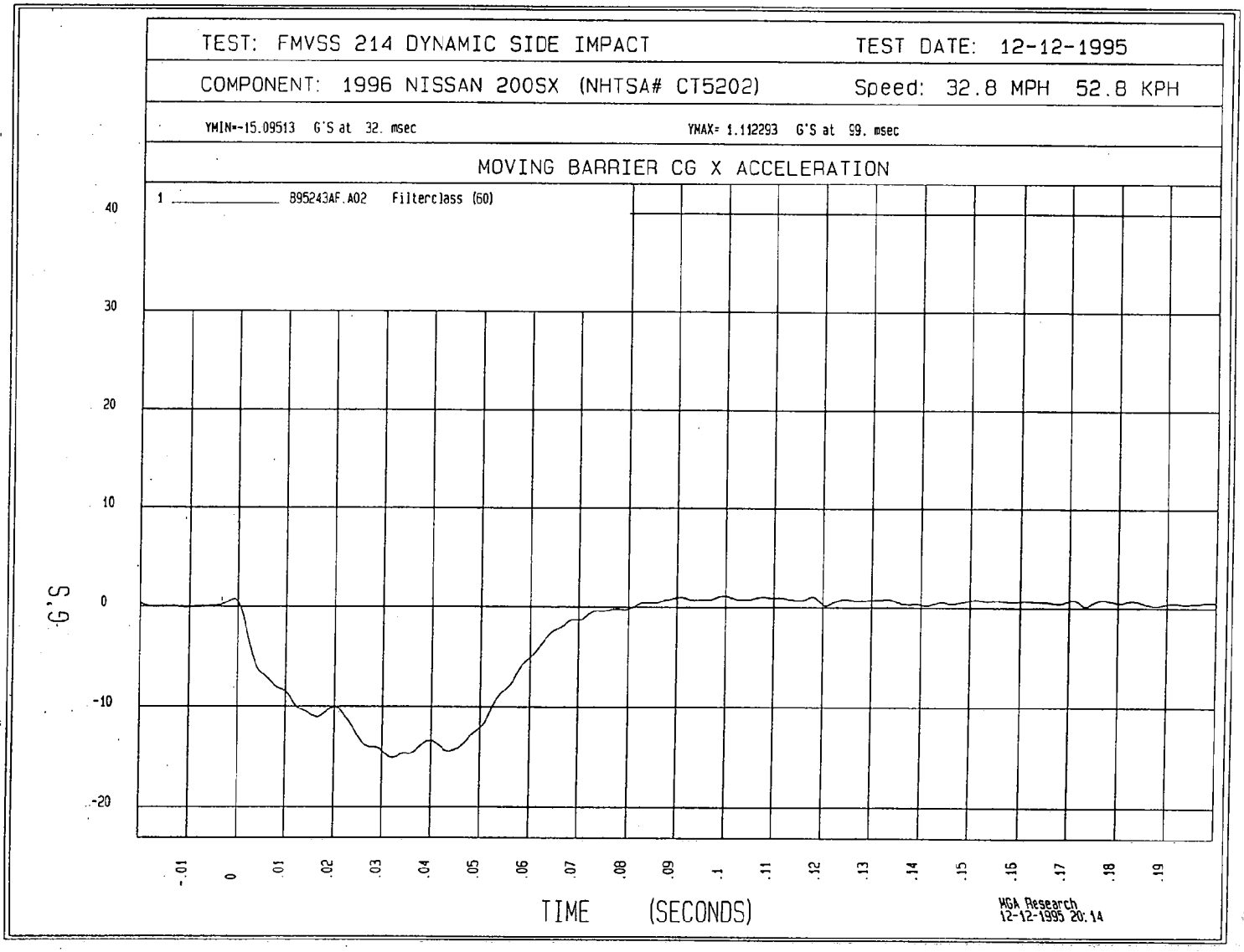
TIME Seconds
MGA Research
12-12-1995 20:24

VEHICLE CENTER OF GRAVITY Z ACCELERATION VS. TIME

NO VALID DATA COLLECTED


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-15.09513 G'S at 32. msec
YMAX= 1.112293 G'S at 99. msec
MOVING BARRIER CG X ACCELERATION
1 895243AF.A02 Filterclass (60)
40
30
20
10
0
-10
-20
G'S
-.01
0
.01
.02
.03
.04
.05
.06
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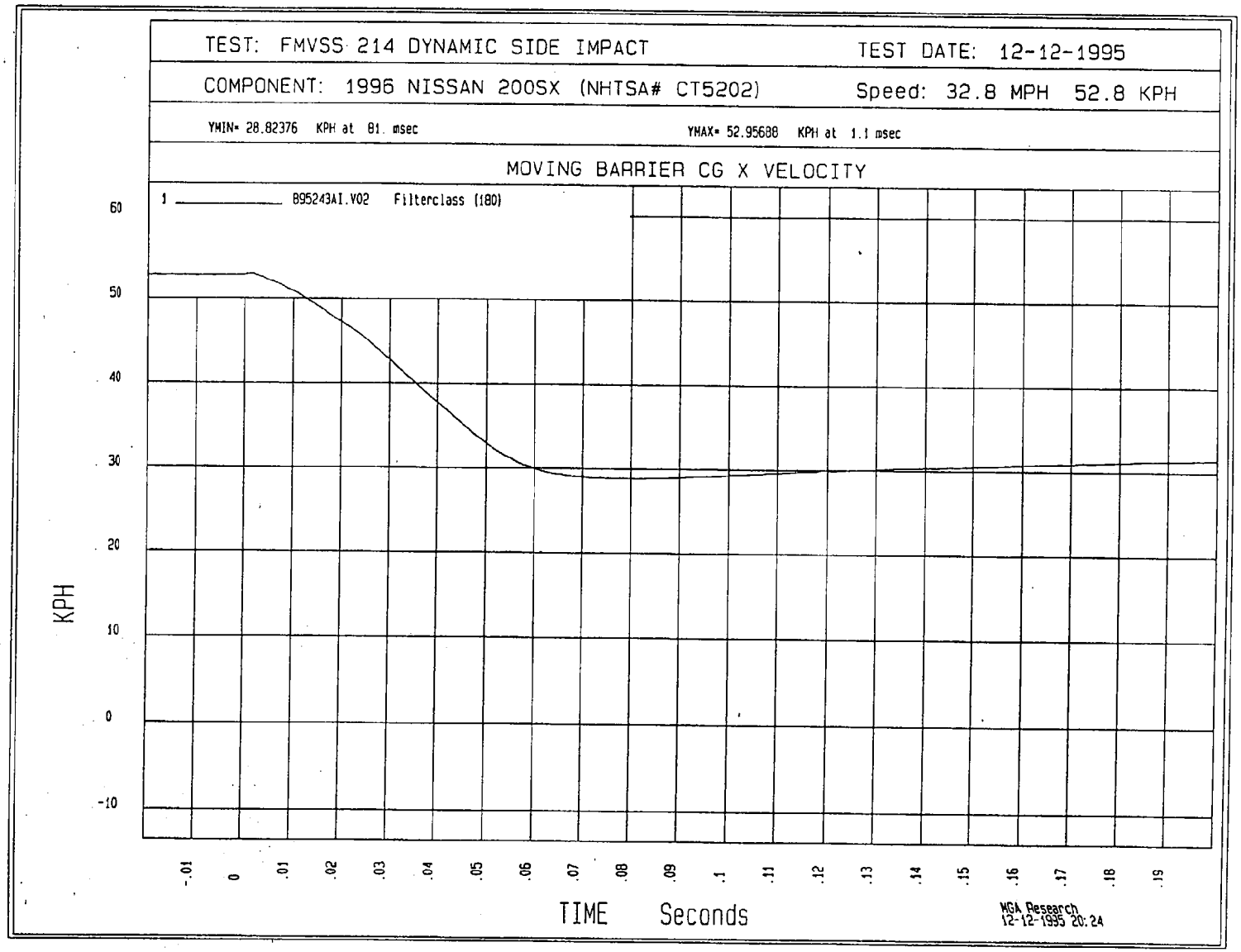
TIME (SECONDS)
MGA Research
12-12-1995 20:14


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN= 28.82376 KPH at 81. msec
YMAX= 52.95688 KPH at 1.1 msec
MOVING BARRIER CG X VELOCITY
1 B95243AI.V02 Filterclass (180)
KPH
60
50
40
30
20
10
0
-10
-.01
0
.01
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.04
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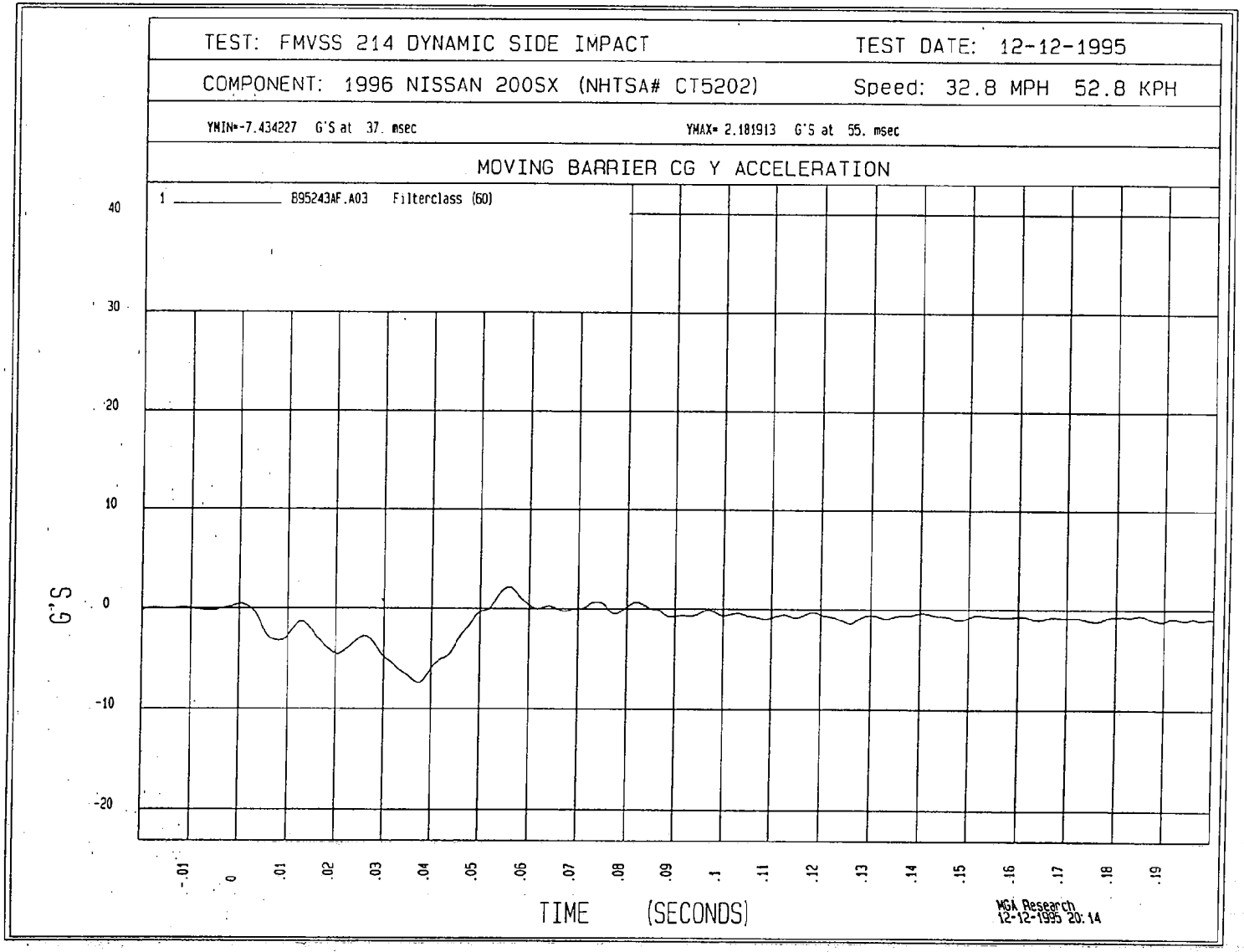
TIME Seconds
MGA Research
12-12-1995 20:24


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-7.434227 G'S at 37. msec
YMAX= 2.181913 G'S at 55. msec
MOVING BARRIER CG Y ACCELERATION
1 B95243AF.A03 Filterclass (60)
40
30
20
10
0
-10
-20
G'S
-.01
0
.01
.02
.03
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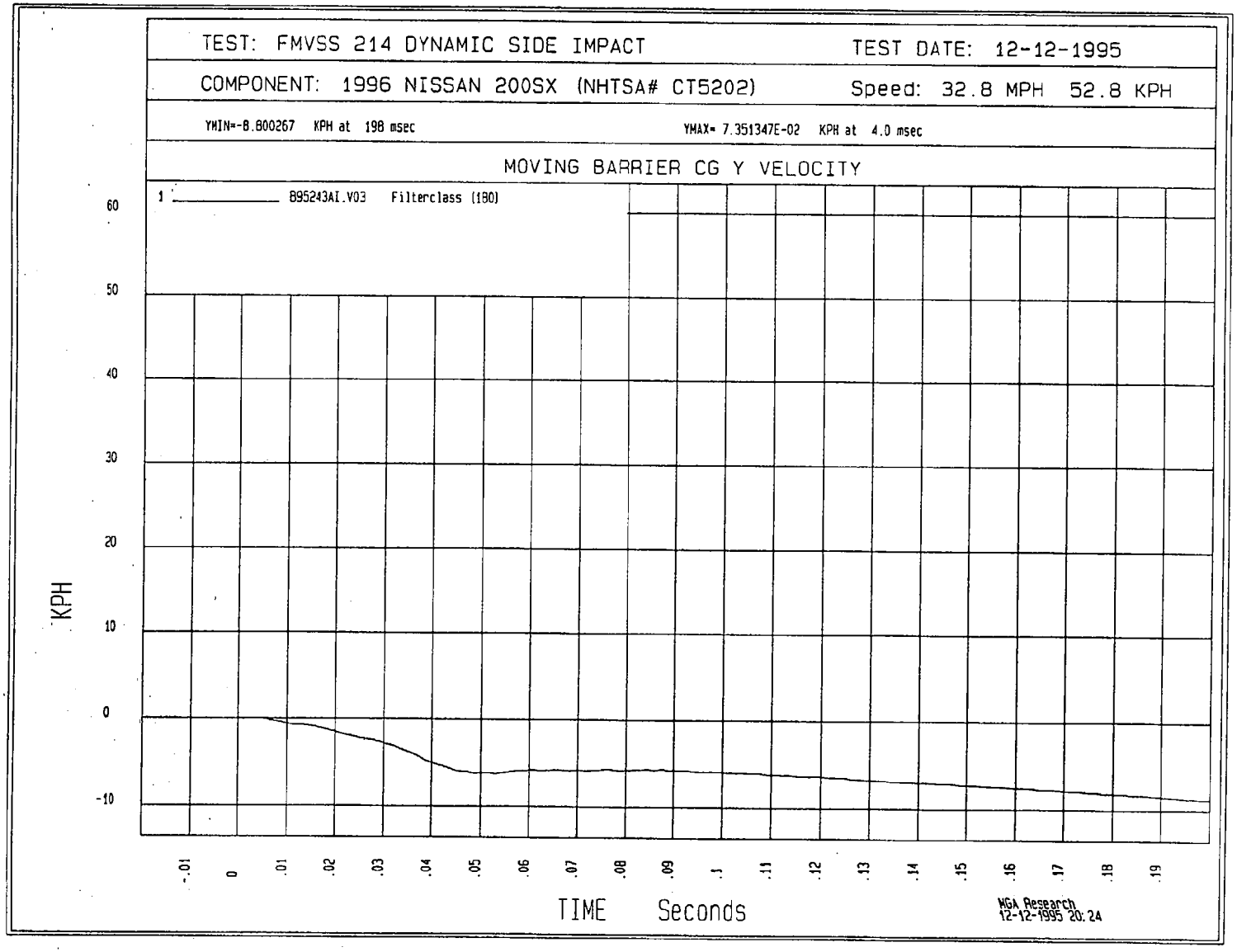
TIME (SECONDS)
MGA Research
12-12-1995 20:14


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-8.800267 KPH at 198 msec
YMAX= 7.351347E-02 KPH at 4.0 msec
MOVING BARRIER CG Y VELOCITY
1 B95243AI.V03 Filterclass (180)
60
50
40
30
20
10
0
-10
KPH
-.01
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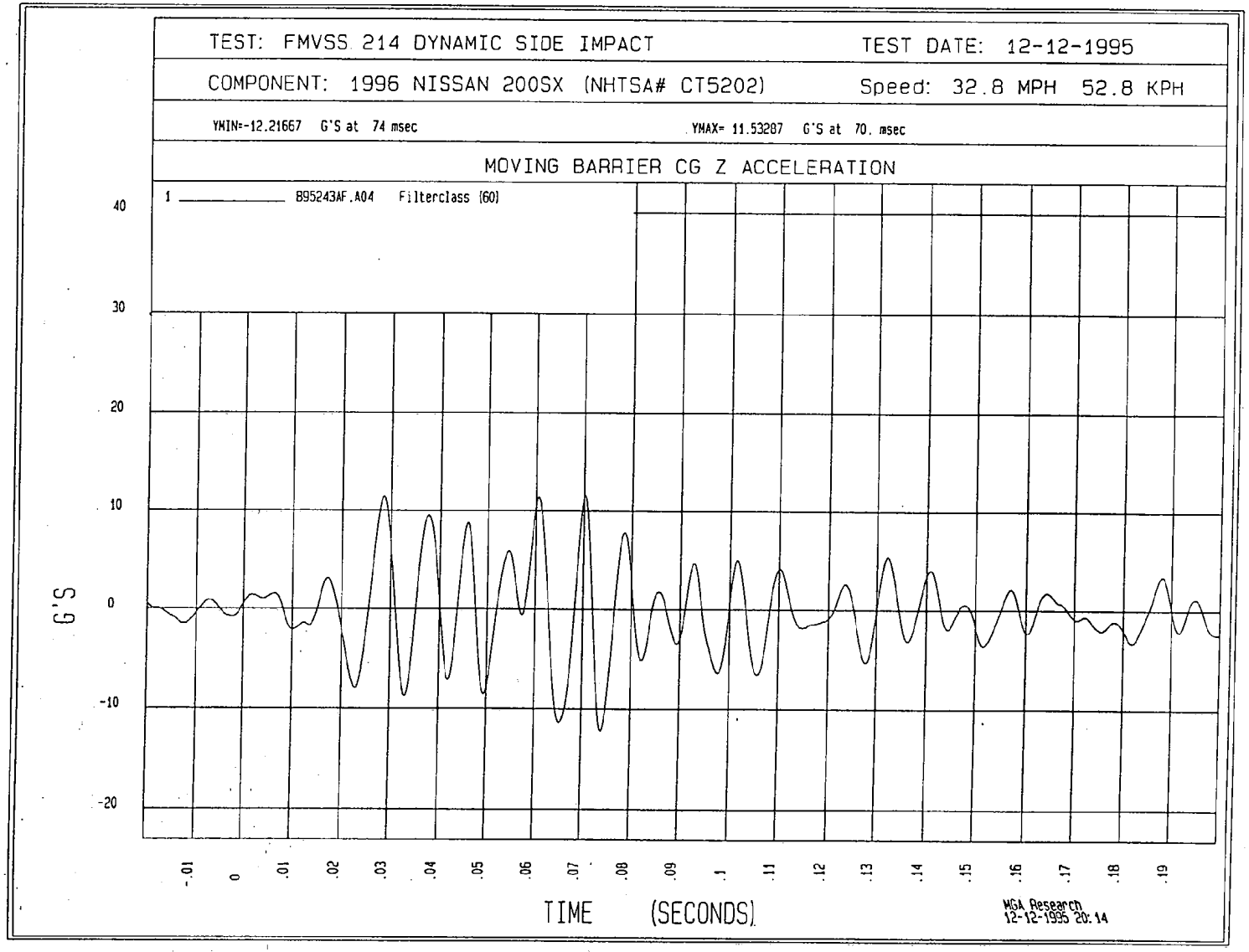
TIME Seconds
MGA Research
12-12-1995 20:24


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-12.21667 G'S at 74 msec
YMAX= 11.53287 G'S at 70. msec
MOVING BARRIER CG Z ACCELERATION
1 B95243AF.A04 Filterclass (60)
40
30
20
10
0
-10
-20
G'S
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
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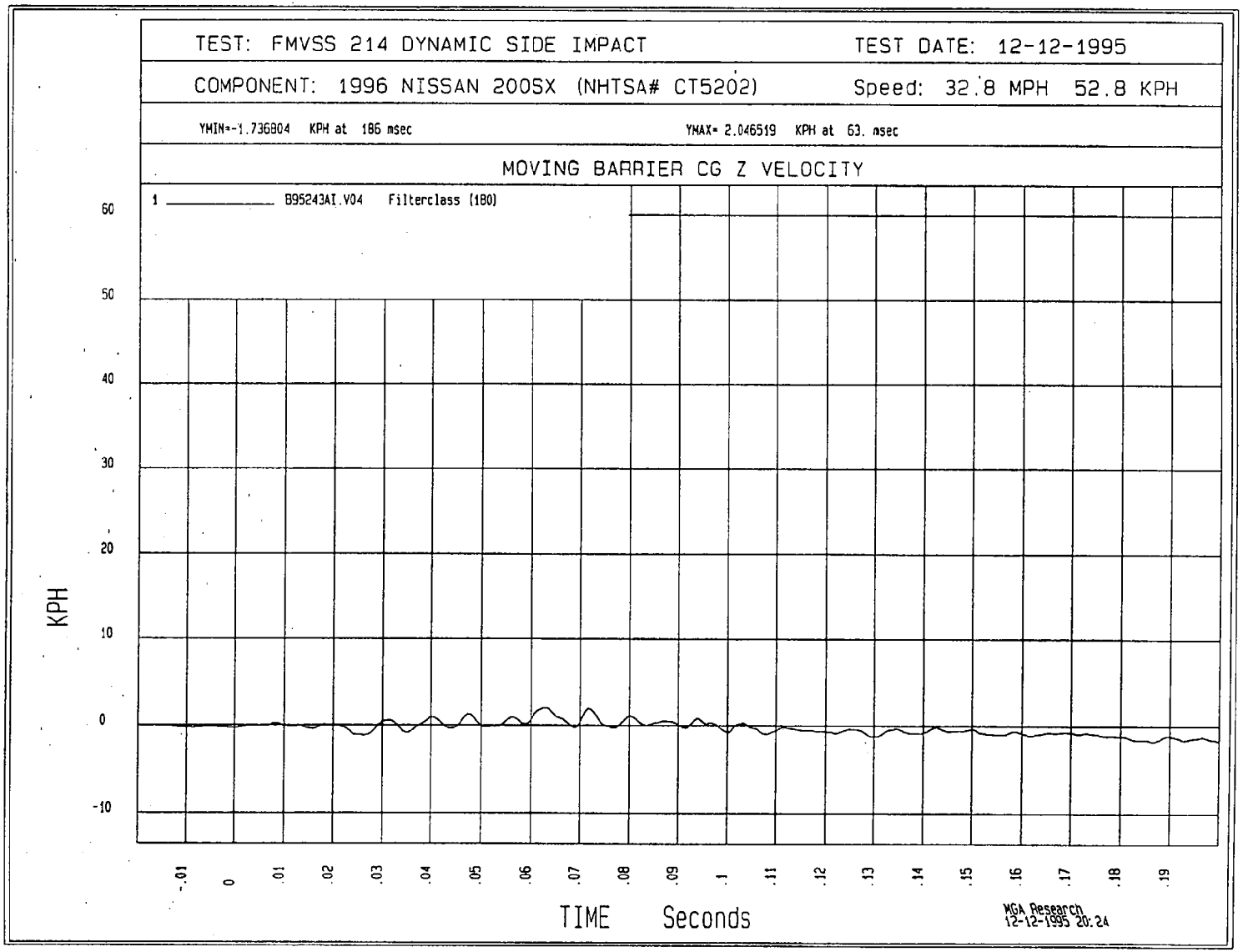
TIME (SECONDS)
MGA Research
12-12-1995 20:14


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-1.736804 KPH at 186 msec
YMAX= 2.046519 KPH at 63. msec
MOVING BARRIER CG Z VELOCITY
1 B95243AI.V04 Filterclass (180)
KPH
60
50
40
30
20
10
0
-10
-.01
0
.01
.02
.03
.04
.05
.06
.07
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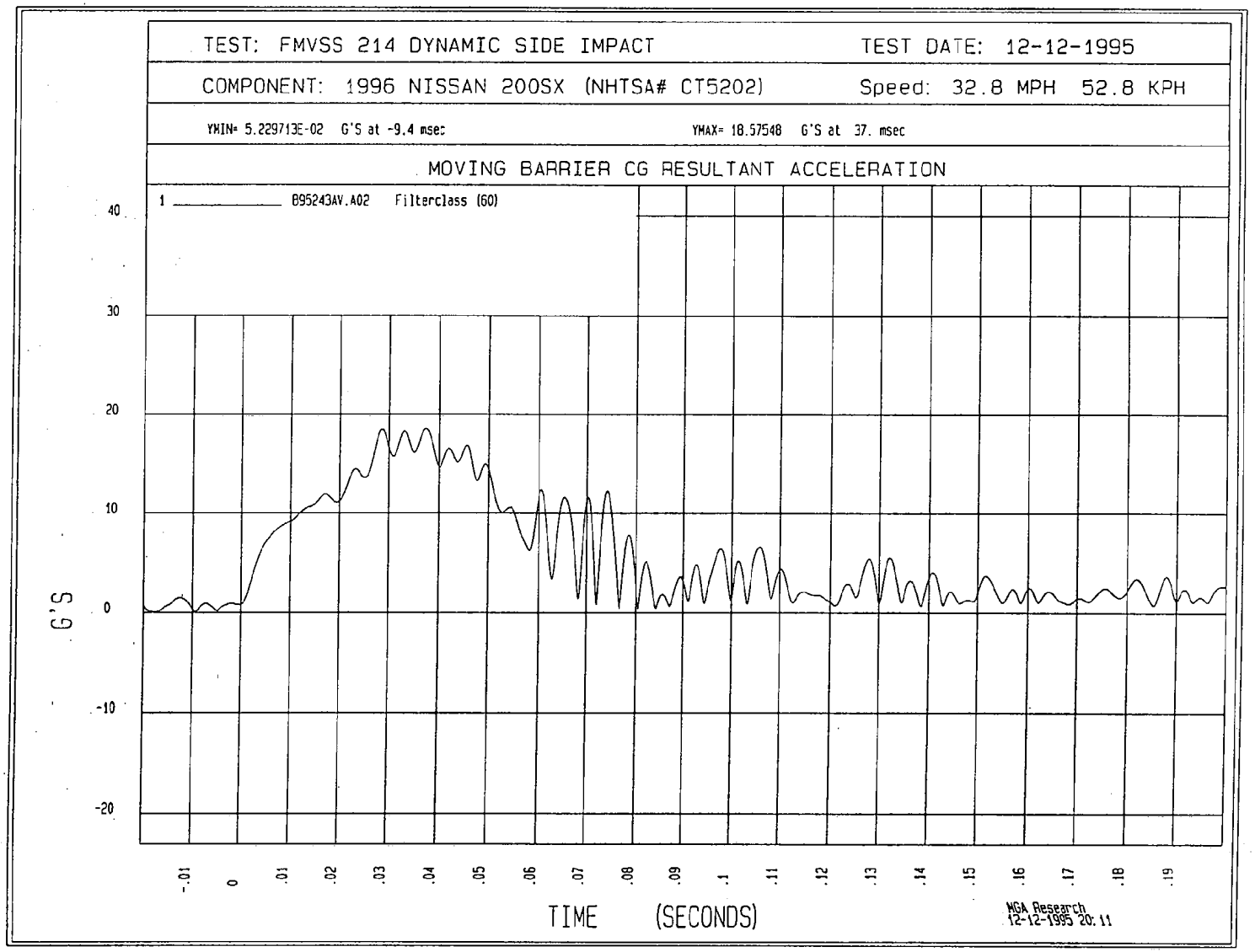
TIME Seconds
MGA Research
12-12-1995 20:24


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN= 5.229713E-02 G'S at -9.4 msec
YMAX= 18.57548 G'S at 37. msec
MOVING BARRIER CG RESULTANT ACCELERATION
1 B95243AV.A02 Filterclass (60)
40
30
20
10
0
-10
-20
G'S
-.01
0
.01
.02
.03
.04
.05
.06
.07
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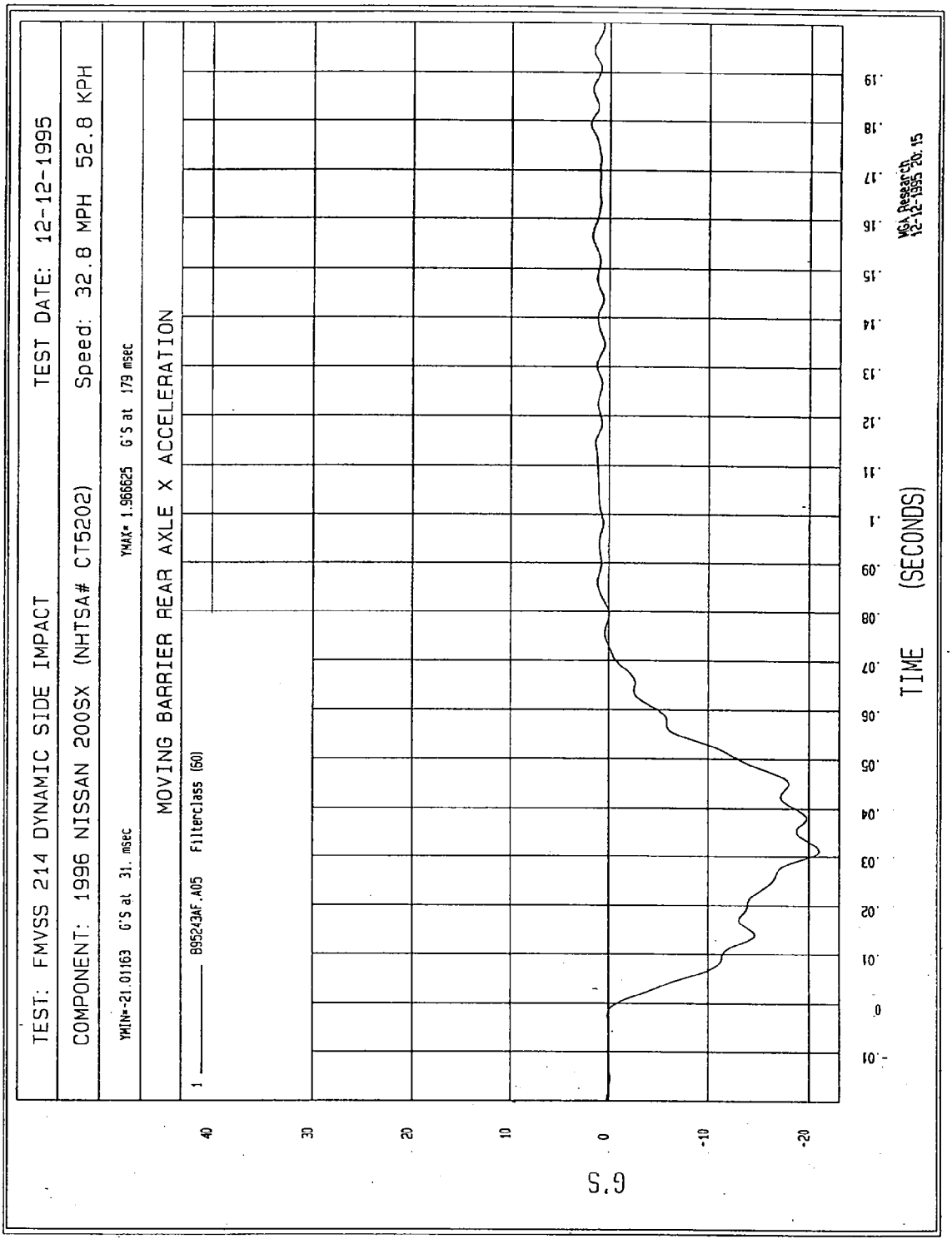
TIME (SECONDS)
MGA Research
12-12-1995 20:11


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-21.01163 G'S at 31. msec
YMAX= 1.966625 G'S at 179 msec
MOVING BARRIER REAR AXLE X ACCELERATION
1 B95213AF.A05 Filterclass (60)
40
30
20
10
0
-10
-20
G'S
.01
0
.02
.03
.04
.05
.06
.07
.08
.09
.1
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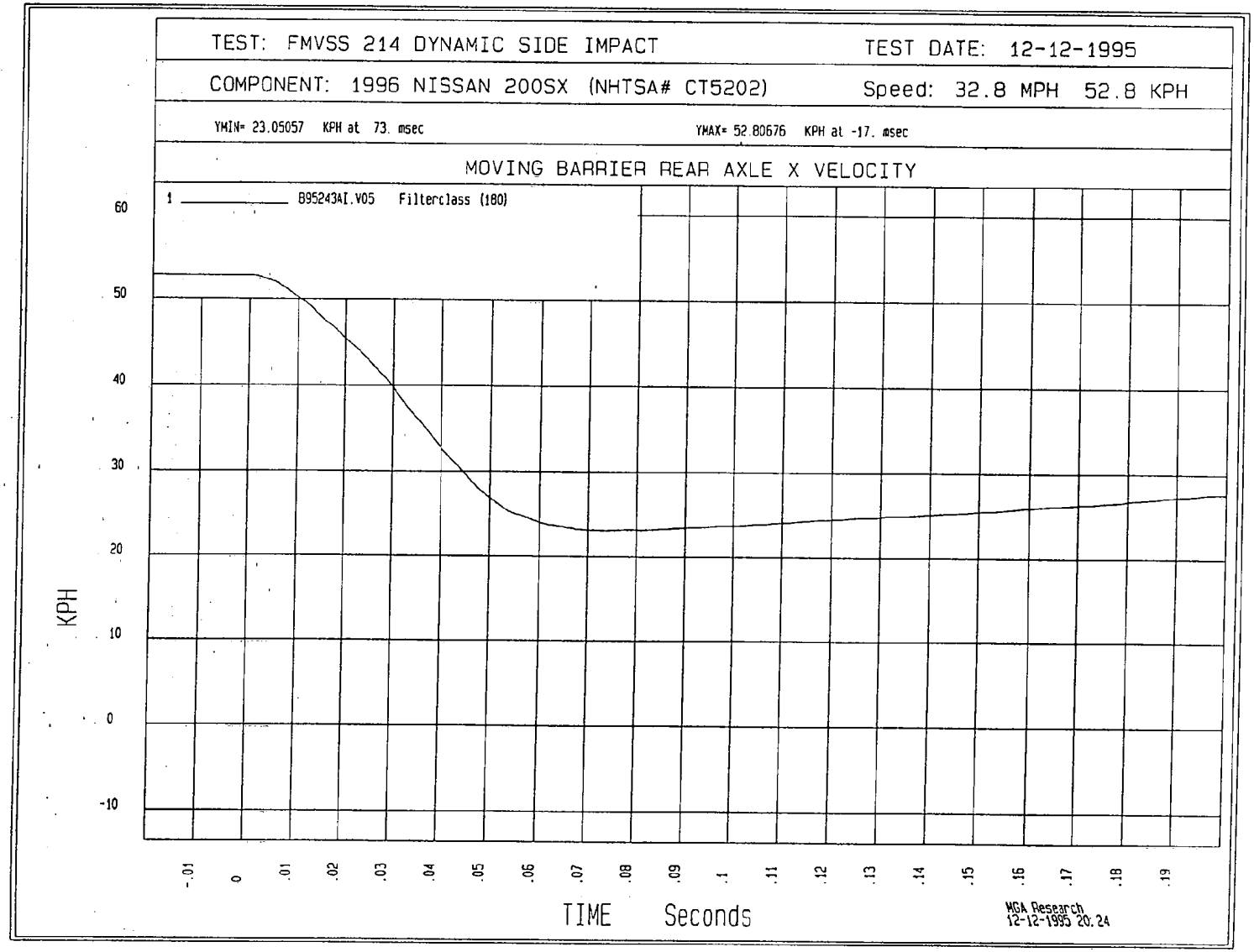
TIME (SECONDS)
MGA Research
12-12-1995 20:15


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN= 23.05057 KPH at 73. msec
YMAX= 52.80676 KPH at -17. msec
MOVING BARRIER REAR AXLE X VELOCITY
1 B95243AI.V05 Filterclass (180)
60
50
40
30
20
10
0
-10
KPH
-.01
0
.01
.02
.03
.04
.05
.06
.07
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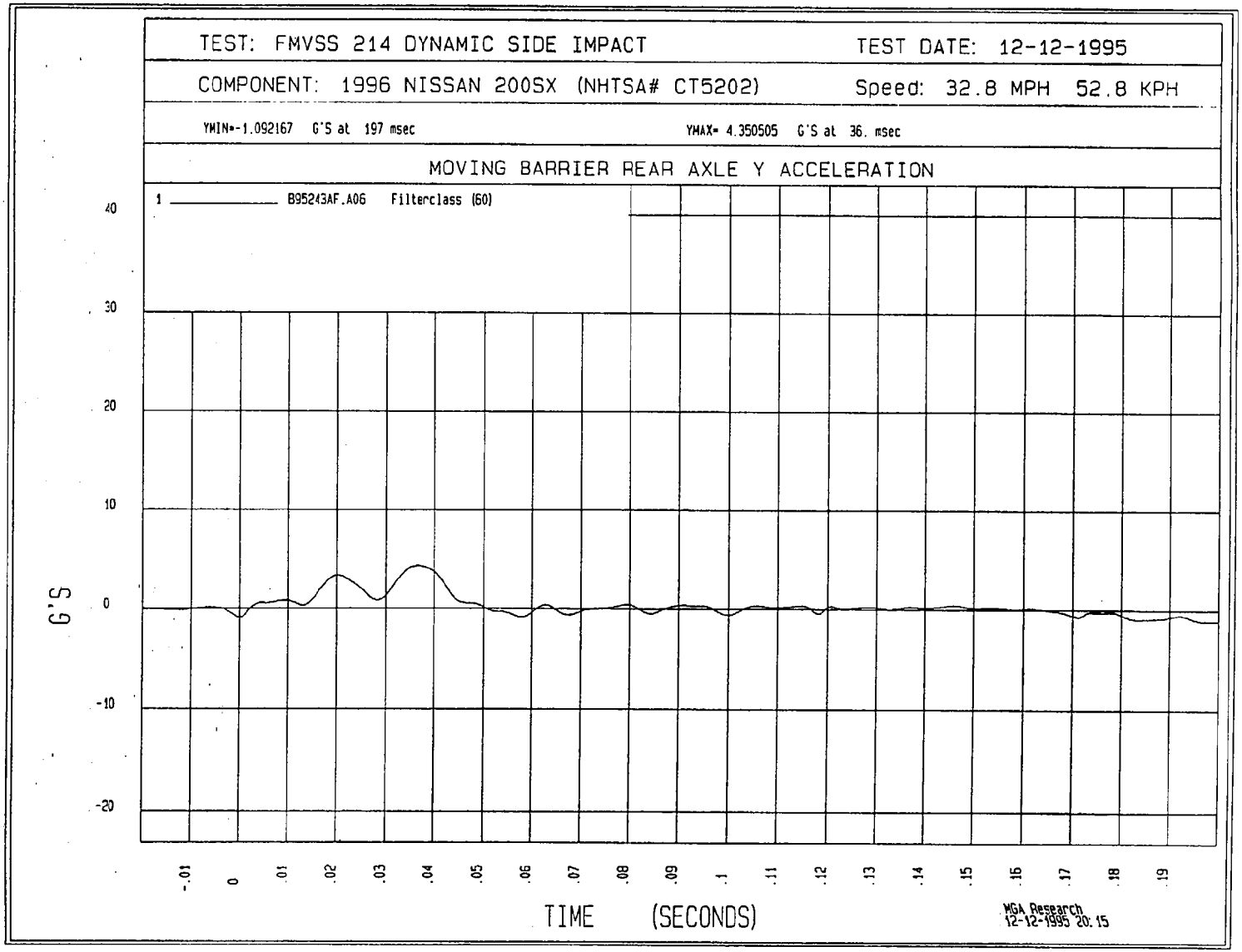
TIME Seconds
MGA Research
12-12-1995 20:24


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-1.092167 G'S at 197 msec
YMAX= 4.350505 G'S at 36. msec
MOVING BARRIER REAR AXLE Y ACCELERATION
1 B95243AF.A06 Filterclass (60)
40
30
20
10
0
-10
-20
G'S
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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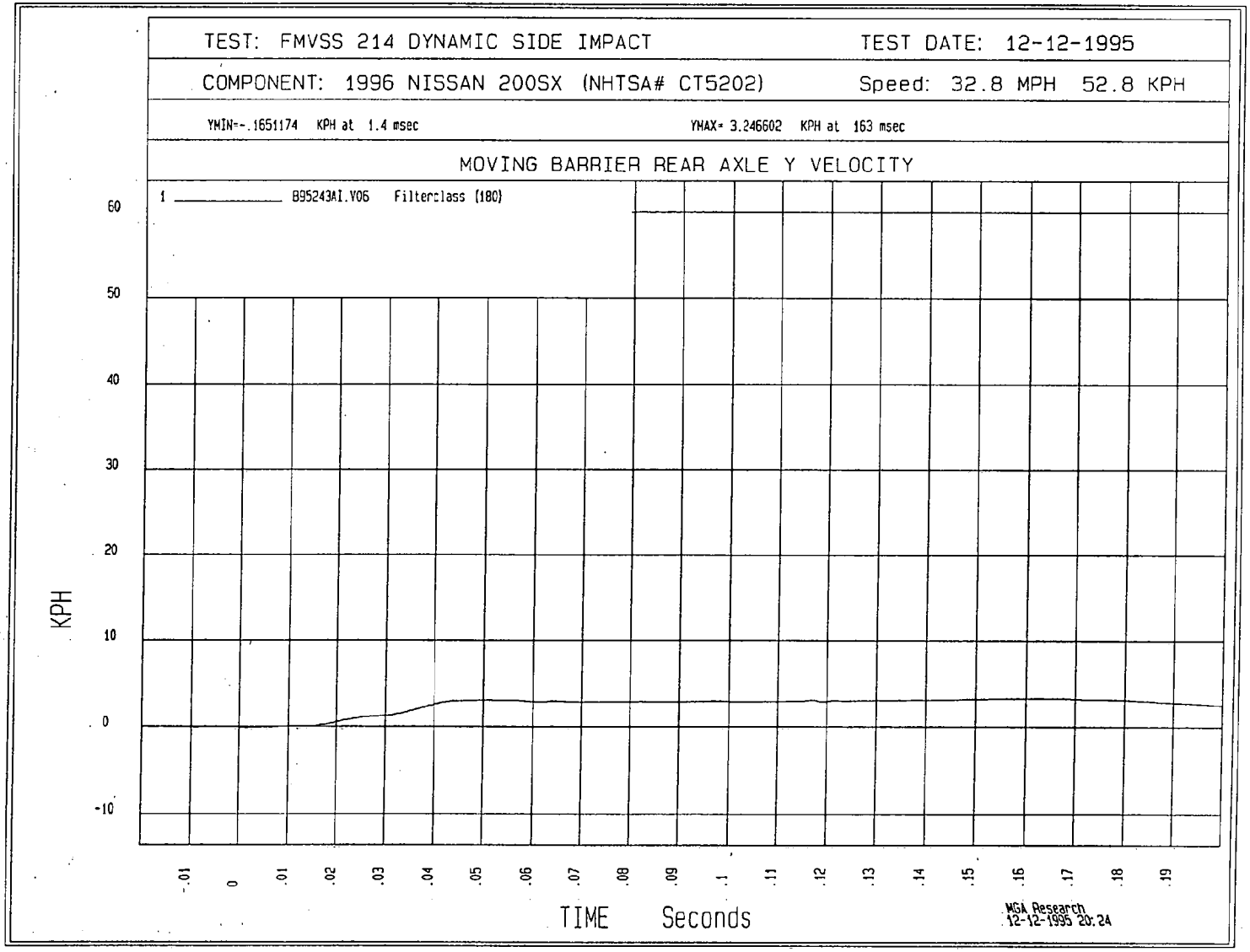
TIME (SECONDS)
MGA Research
12-12-1995 20:15


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-.1651174 KPH at 1.4 msec
YMAX= 3.246602 KPH at 163 msec
MOVING BARRIER REAR AXLE Y VELOCITY
1 B95243AI.Y06 Filterclass (180)
60
50
40
30
20
10
0
-10
KPH
-.01
0
.01
.02
.03
.04
.05
.06
.07
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.1
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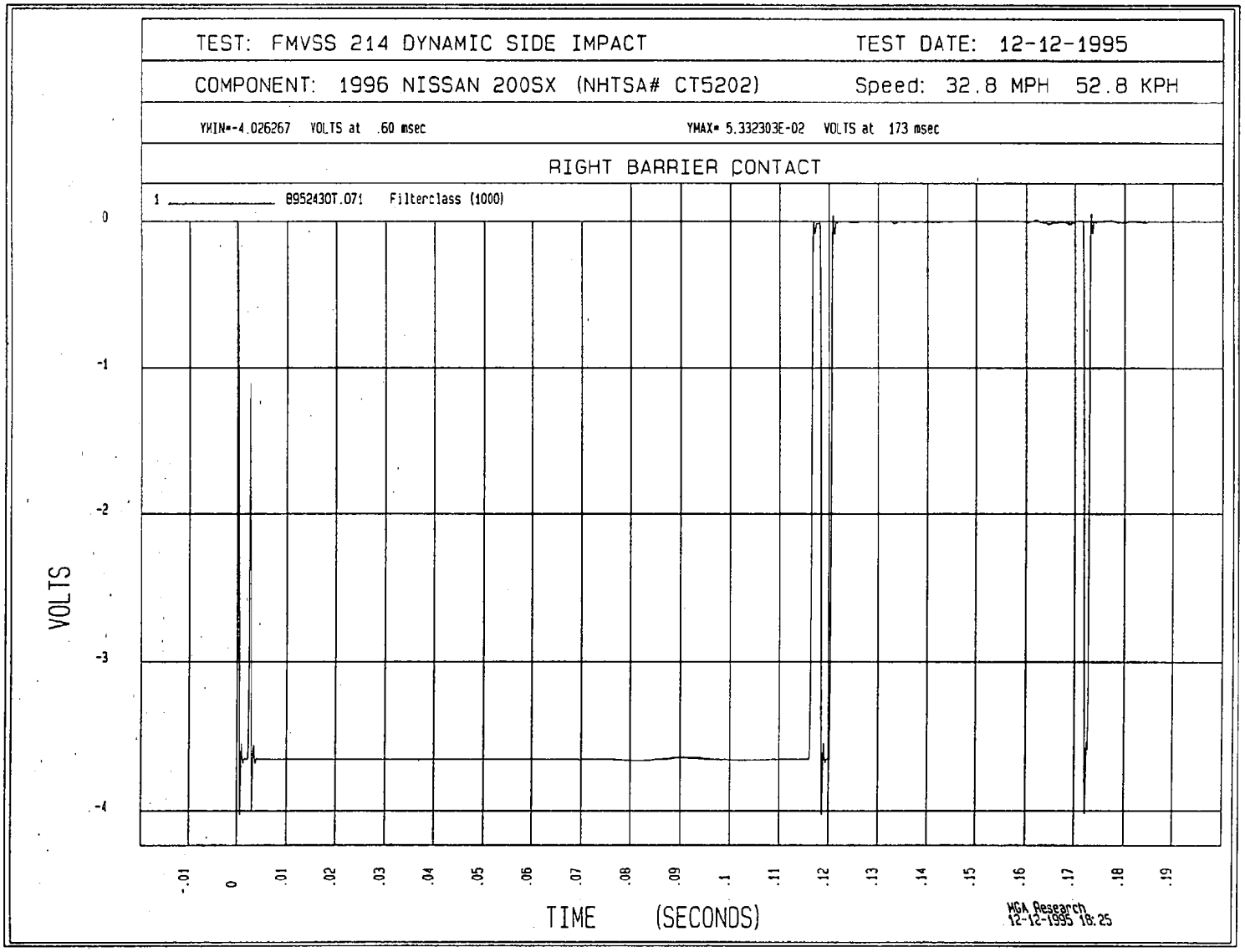
TIME Seconds
NGA Research
12-12-1995 20:24


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-4.026267 VOLTS at .60 msec
YMAX= 5.332303E-02 VOLTS at 173 msec
RIGHT BARRIER CONTACT
1 B952430T.07: Filterclass (1000)
VOLTS
0
-1
-2
-3
-4
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
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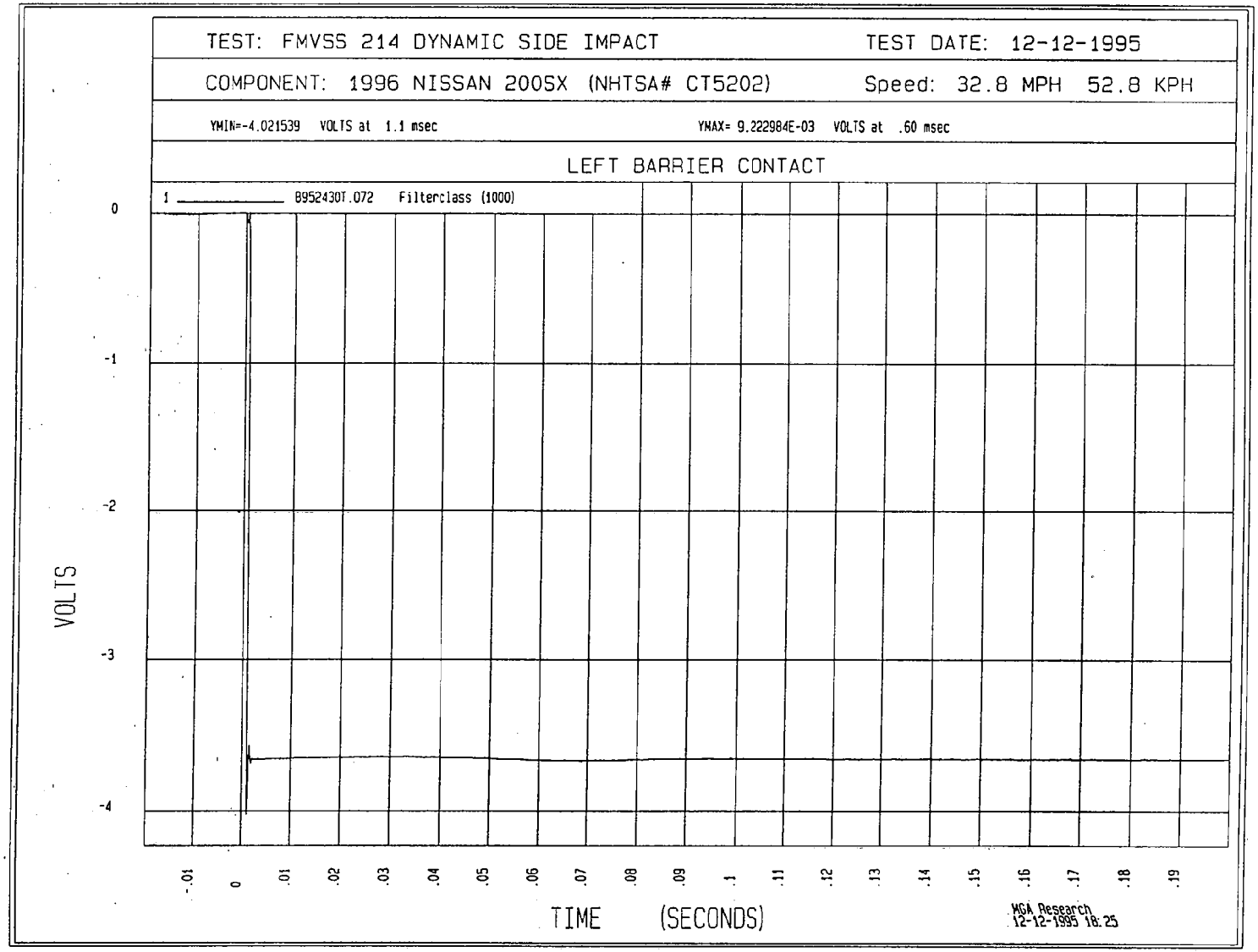
TIME (SECONDS)
MGA Research
12-12-1995 18:25


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-4.021539 VOLTS at 1.1 msec
YMAX= 9.222984E-03 VOLTS at .60 msec
LEFT BARRIER CONTACT
1 B952430T.072 Filterclass (1000)
VOLTS
0
-1
-2
-3
-4
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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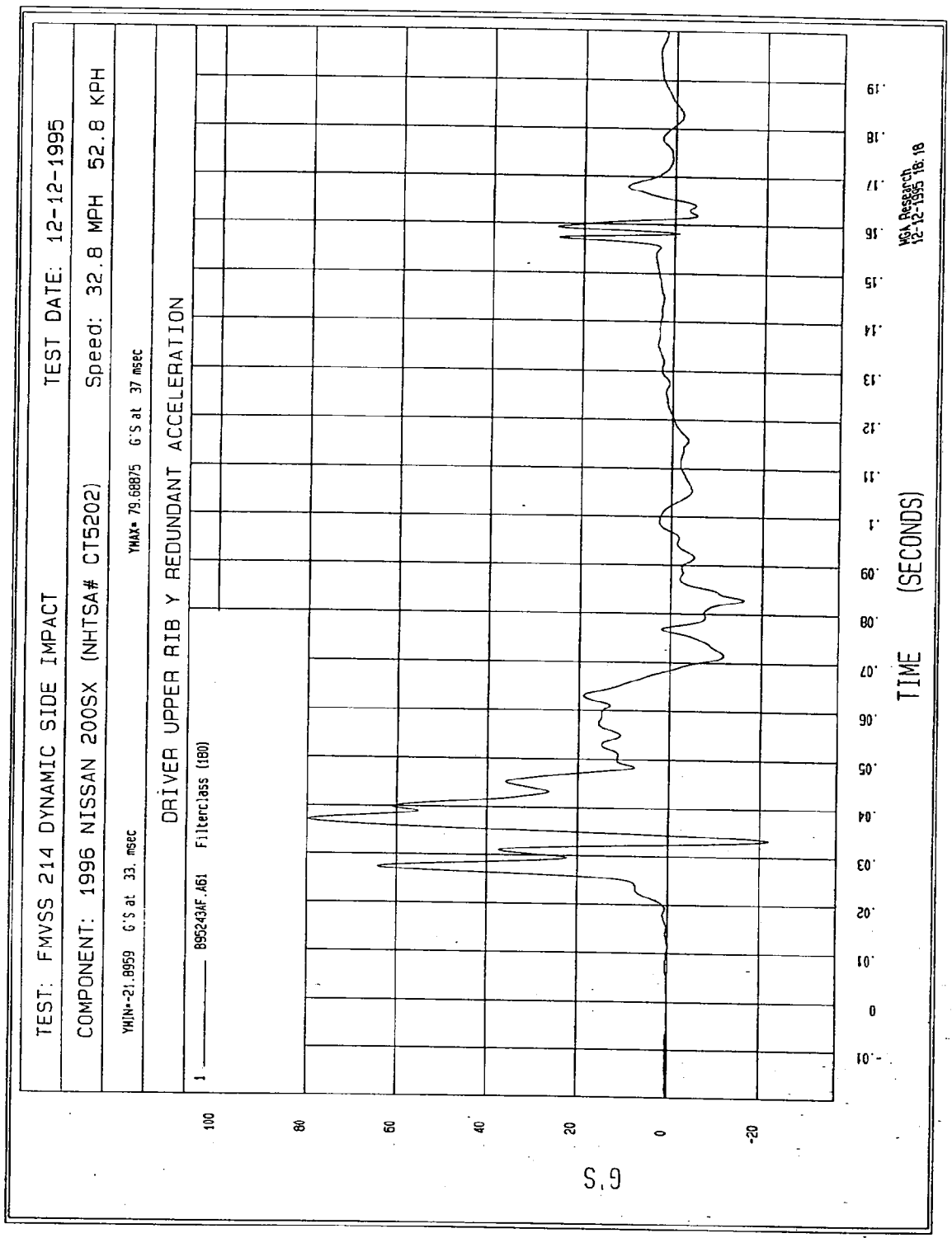
TIME (SECONDS)
MGA Research
12-12-1995 18:25


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-21.8959 G'S at 33. msec
YMAX= 79.68875 G'S at 37 msec
DRIVER UPPER RIB Y REDUNDANT ACCELERATION
1 895243AF.A61 Filterclass (180)
100
80
60
40
20
0
-20
G's
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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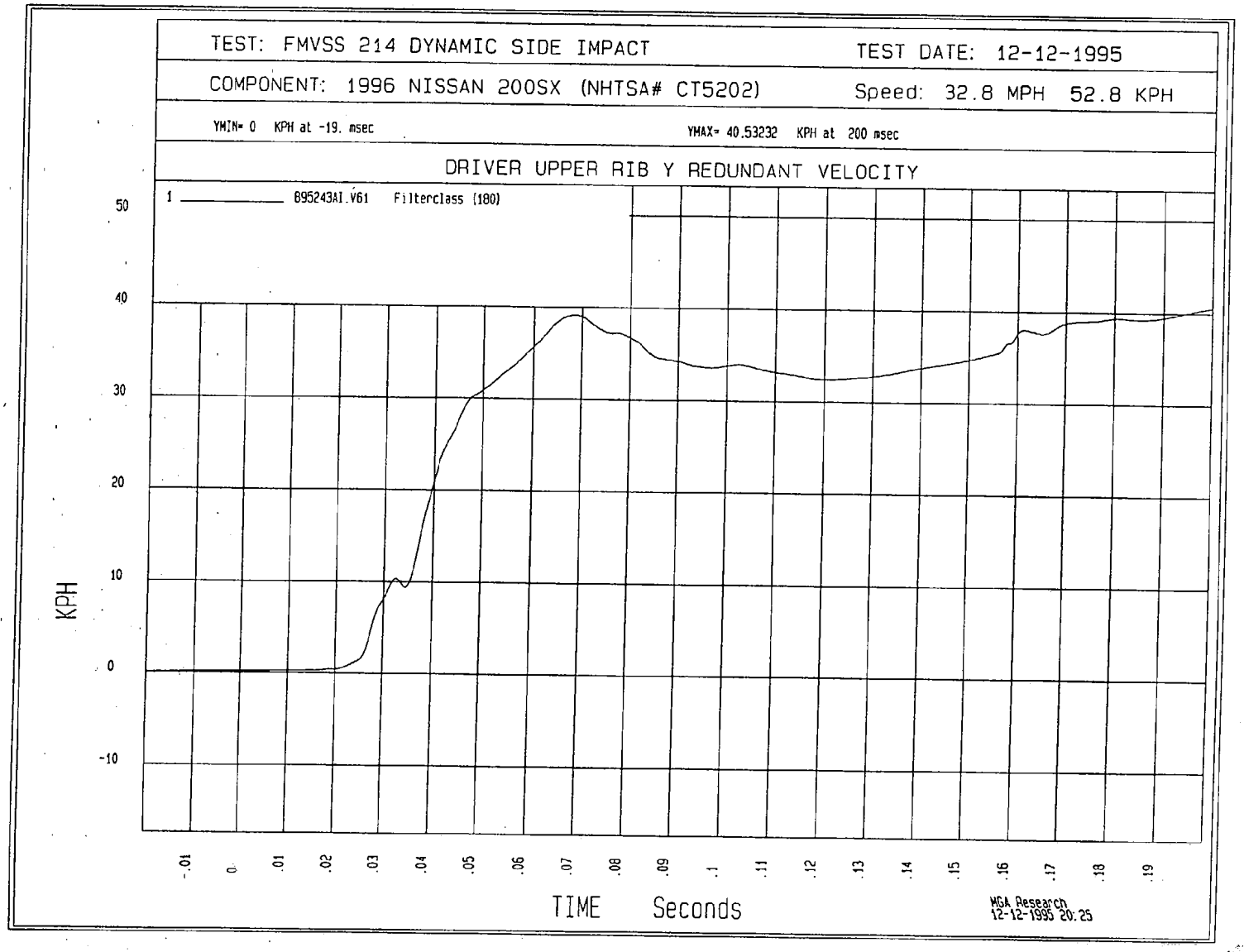
.18
.19
TIME (SECONDS)
MGA Research
12-12-1995 18:18


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN= 0 KPH at -19. msec
YMAX= 40.53232 KPH at 200 msec
DRIVER UPPER RIB Y REDUNDANT VELOCITY
1 895243AI.V61 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
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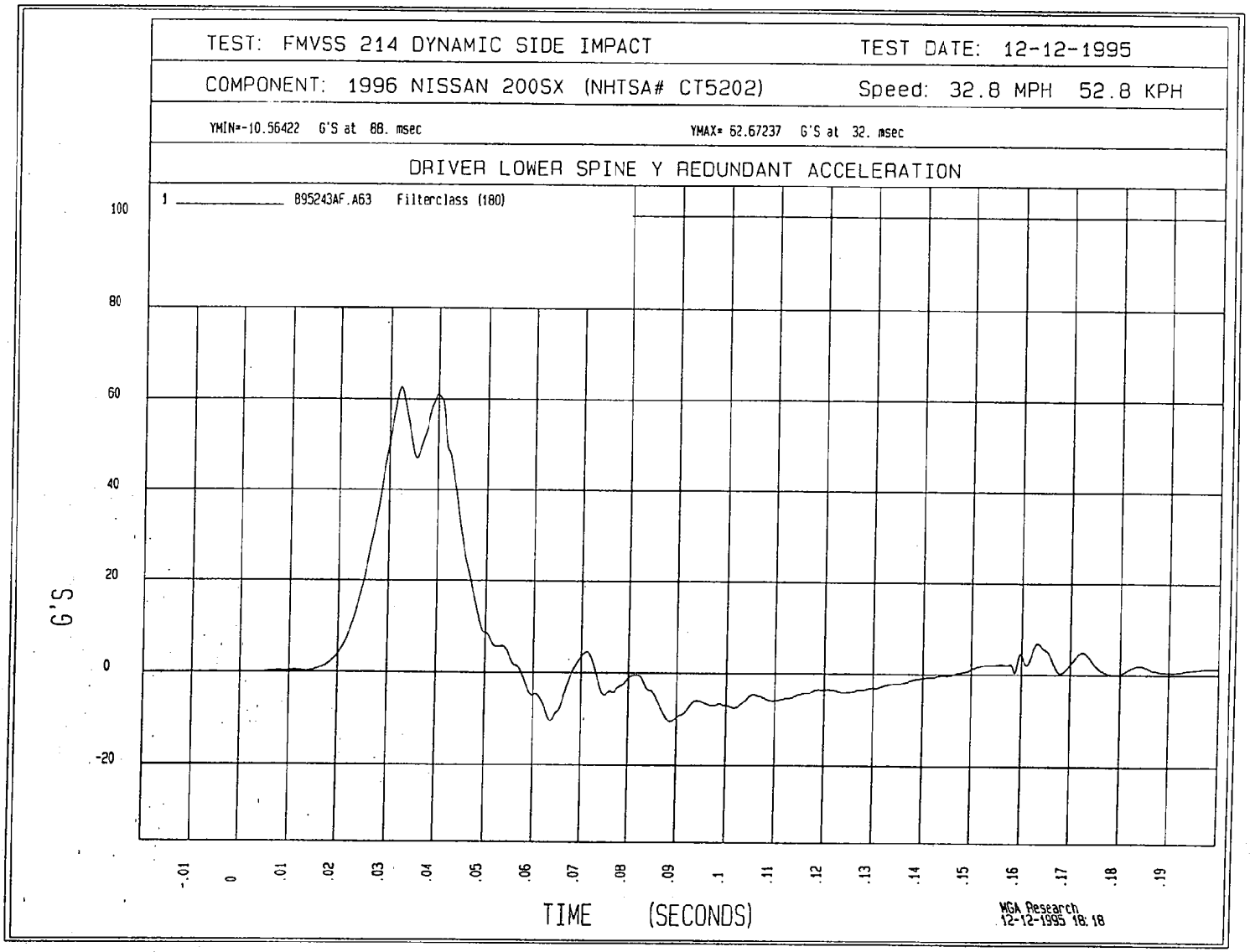
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
12-12-1995 20:25

DRIVER LOWER RIB Y ACCELERATION VS. TIME

NO VALID DATA COLLECTED


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-10.56422 G'S at 88. msec
YMAX= 62.67237 G'S at 32. msec
DRIVER LOWER SPINE Y REDUNDANT ACCELERATION
1 895243AF.A63 Filterclass (180)
100
80
60
40
20
0
-20
G'S
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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.14
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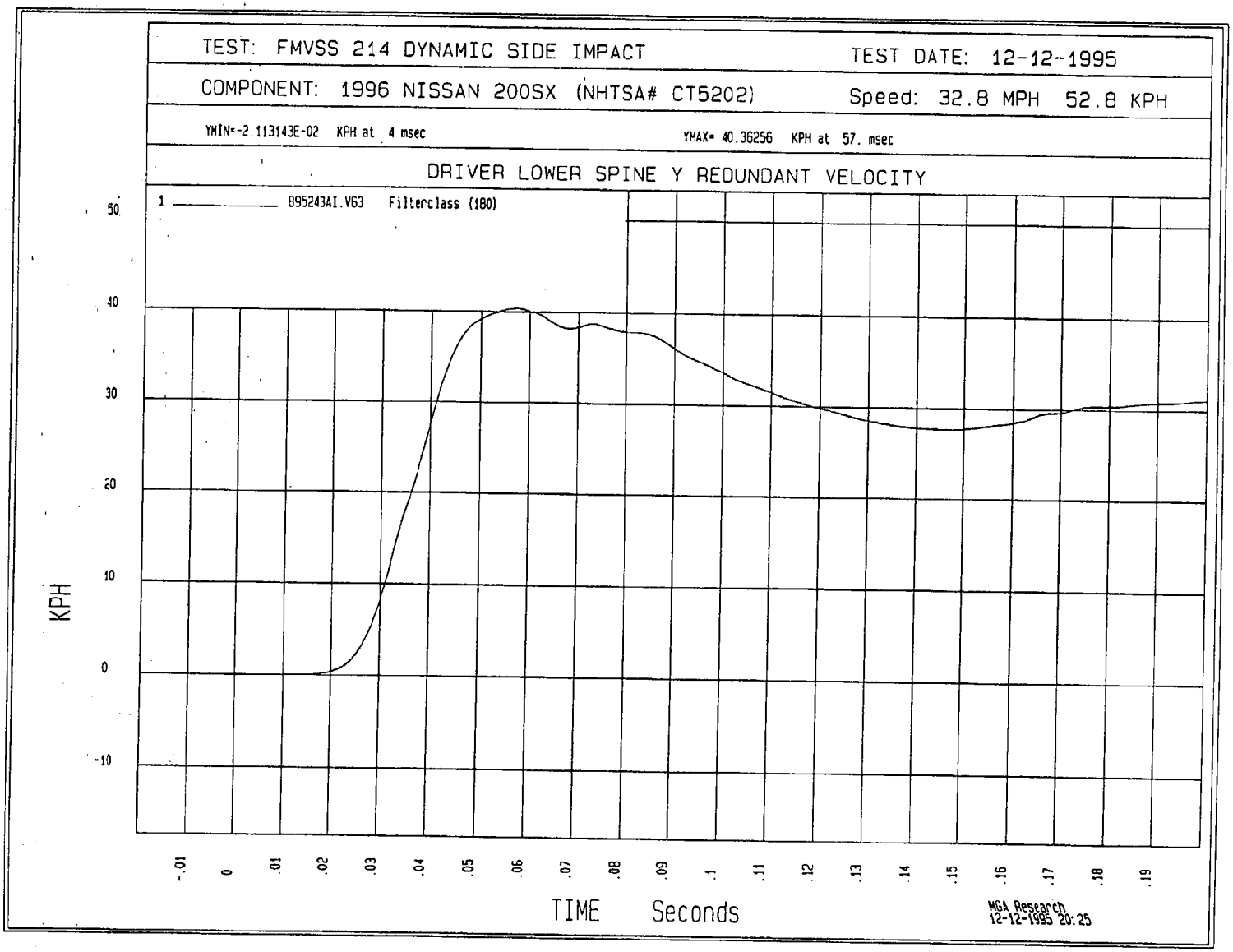
TIME (SECONDS)
MGA Research
12-12-1995 18:18


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-2.113143E-02 KPH at 4 msec
YMAX= 40.36256 KPH at 57. msec
DRIVER LOWER SPINE Y REDUNDANT VELOCITY
1 B95243AI.V63 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
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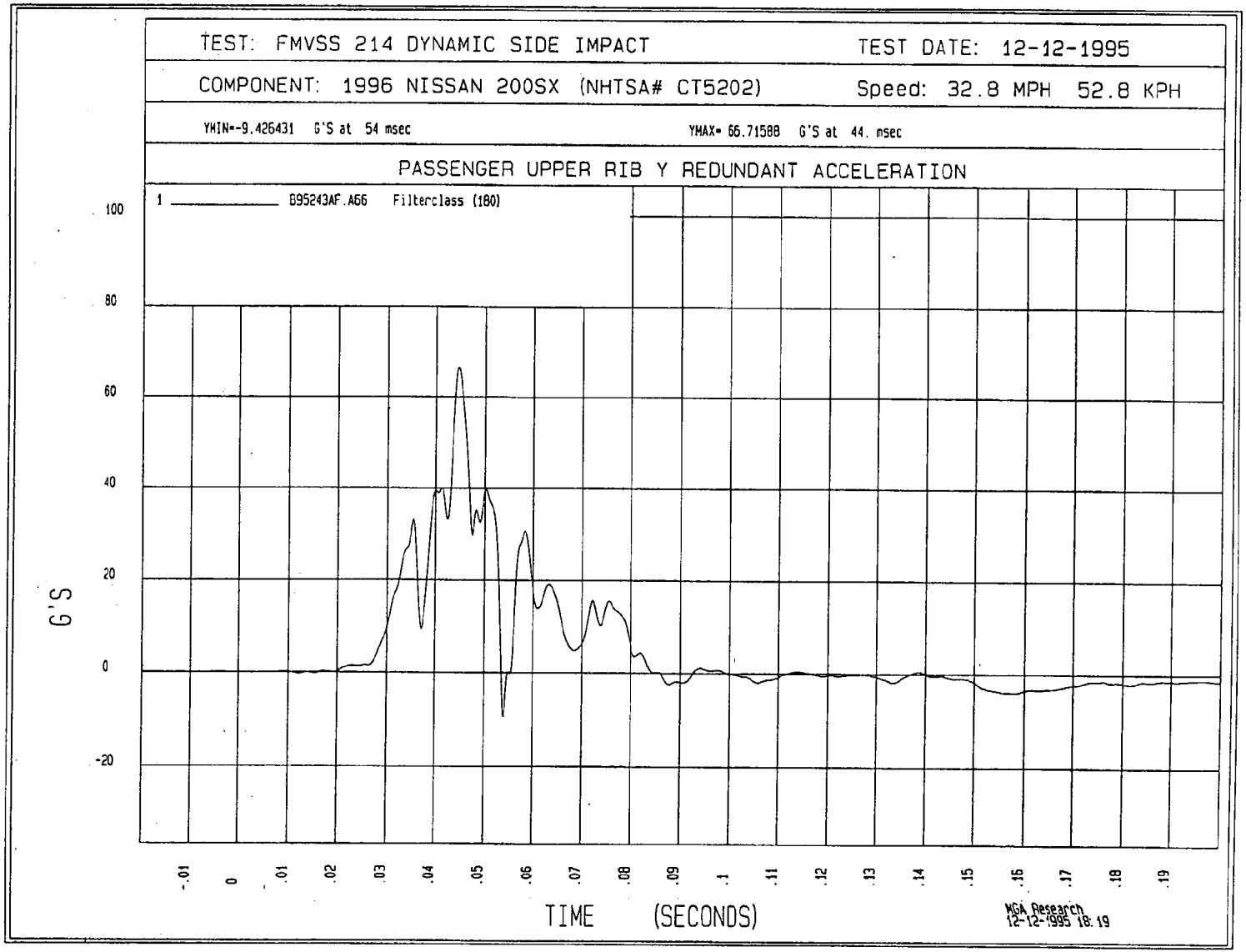
TIME Seconds
MGA Research
12-12-1995 20:25

DRIVER PELVIS Y ACCELERATION VS. TIME

NO VALID DATA COLLECTED


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-9.426431 G'S at 54 msec
YMAX= 66.71588 G'S at 44. msec
PASSENGER UPPER RIB Y REDUNDANT ACCELERATION
1 B95243AF.A66 Filterclass (180)
100
80
60
40
20
0
-20
G'S
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
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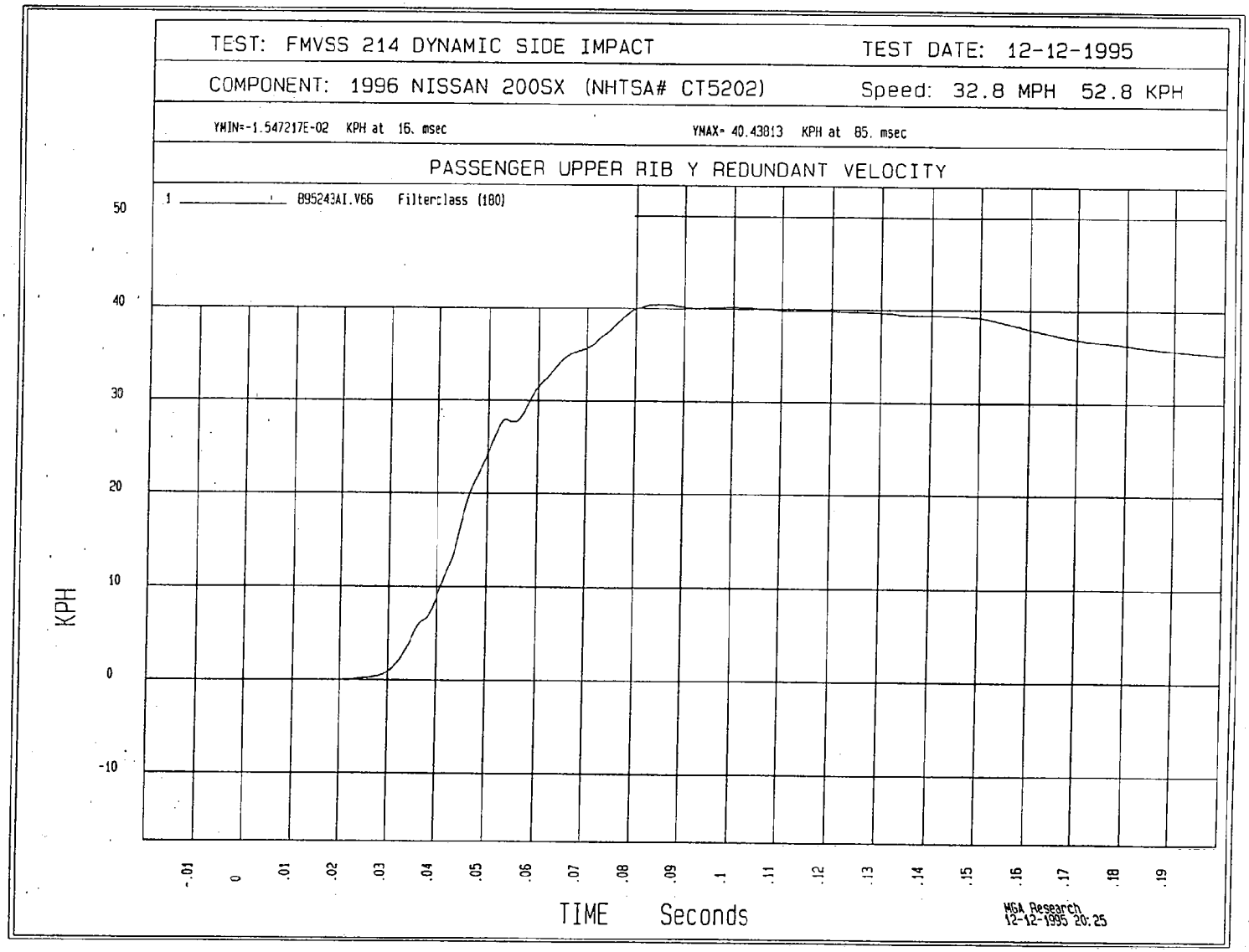
TIME (SECONDS)
MGA Research
12-12-1995 18:19


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-1.547217E-02 KPH at 16. msec
YMAX= 40.43813 KPH at 85. msec
PASSENGER UPPER RIB Y REDUNDANT VELOCITY
1 B95243AI.V66 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
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.14
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.16
.17
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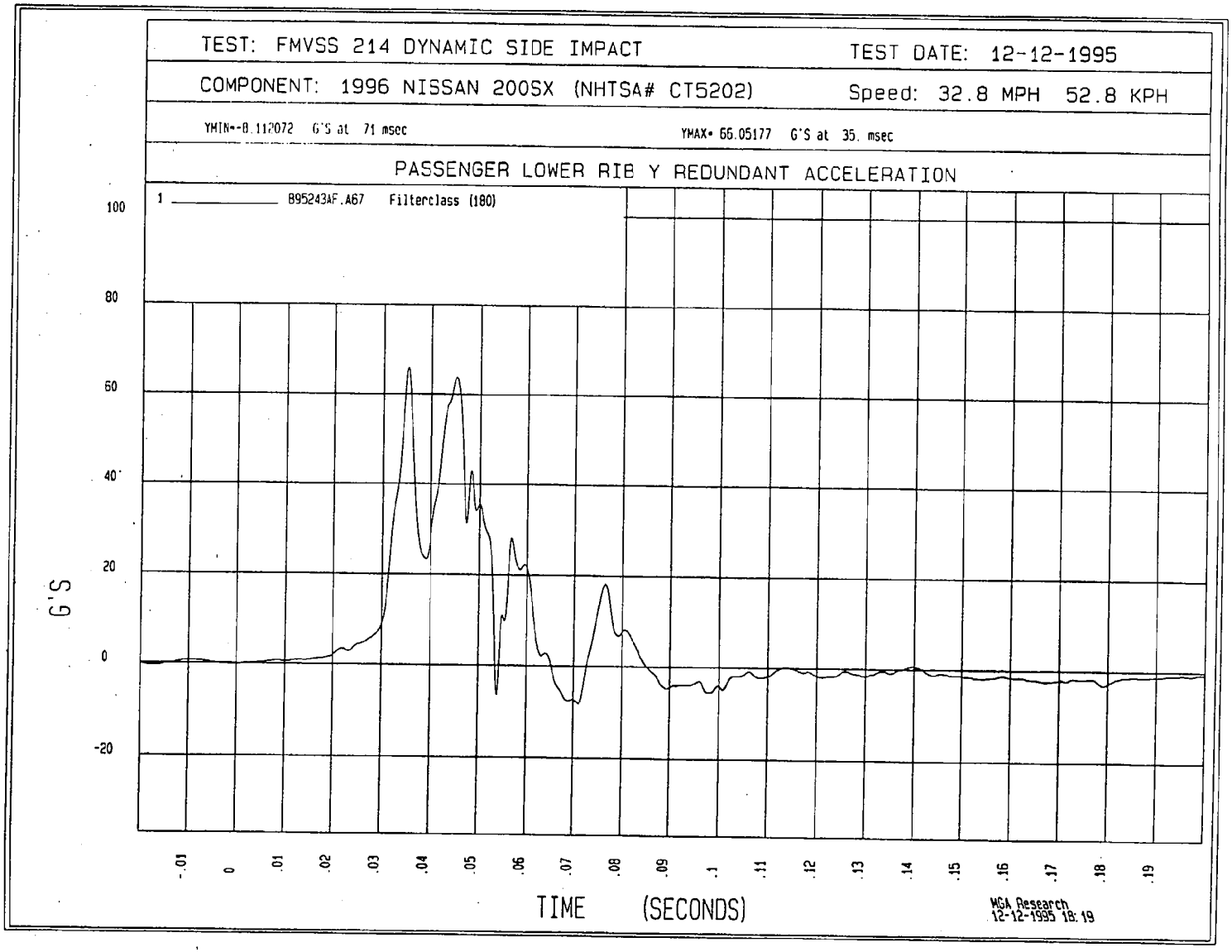
TIME Seconds
MGA Research
12-12-1995 20:25


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-8.112072 G'S at 71 msec
YMAX= 66.05177 G'S at 35. msec
PASSENGER LOWER RIB Y REDUNDANT ACCELERATION
1 B95243AF.A67 Filterclass (180)
100
80
60
40
20
0
-20
G'S
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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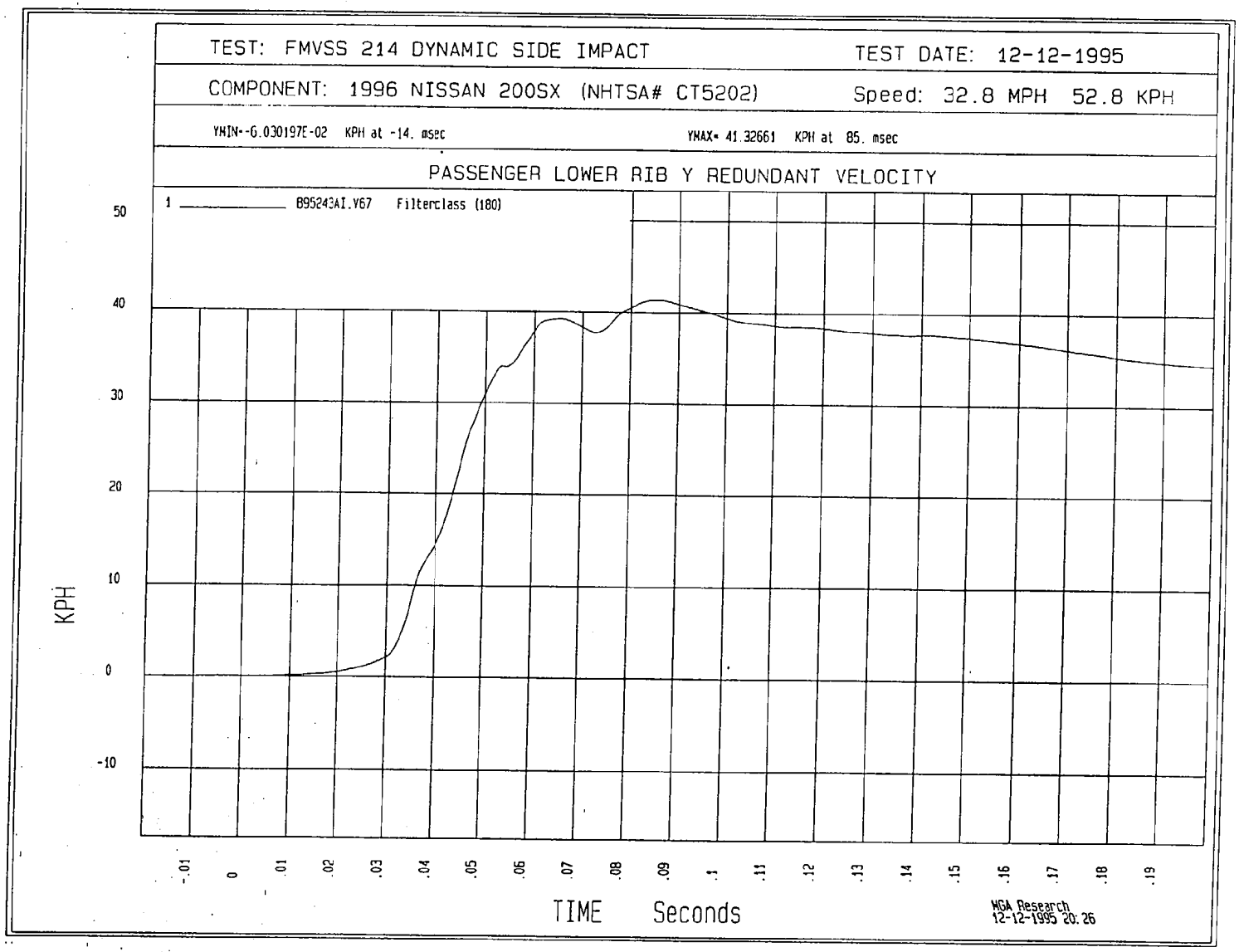
TIME (SECONDS)
MGA Research
12-12-1995 18:19


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-6.030197E-02 KPH at -14. msec
YMAX= 41.32661 KPH at 85. msec
PASSENGER LOWER RIB Y REDUNDANT VELOCITY
1 B95243AI.V67 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.01
0
.01
.02
.03
.04
.05
.06
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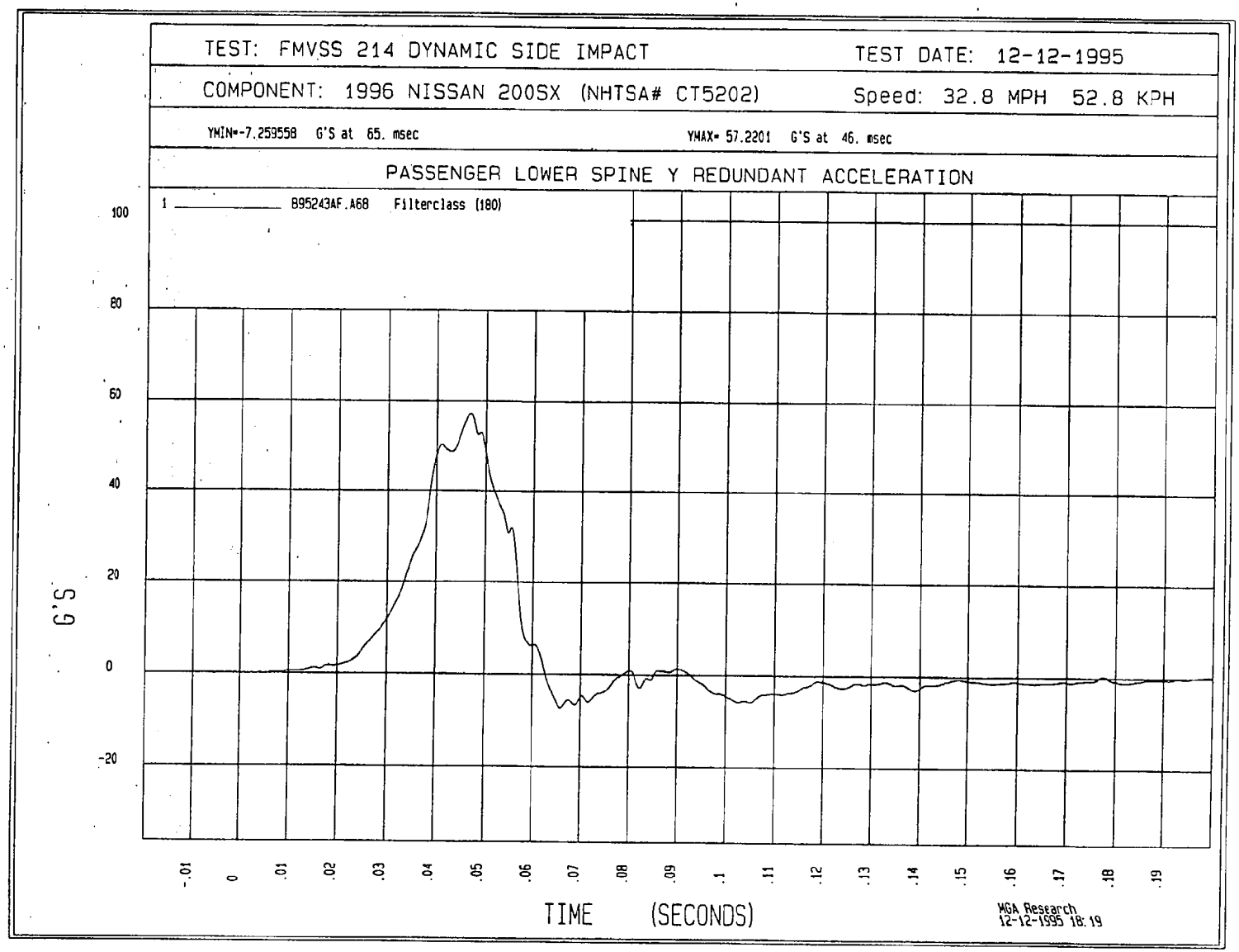
TIME Seconds
MGA Research
12-12-1995 20:26


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-7.259558 G'S at 65. msec
YMAX= 57.2201 G'S at 46. msec
PASSENGER LOWER SPINE Y REDUNDANT ACCELERATION
1 B95243AF.A68 Filterclass (180)
100
80
60
40
20
0
-20
G'S
-.01
0
.01
.02
.03
.04
.05
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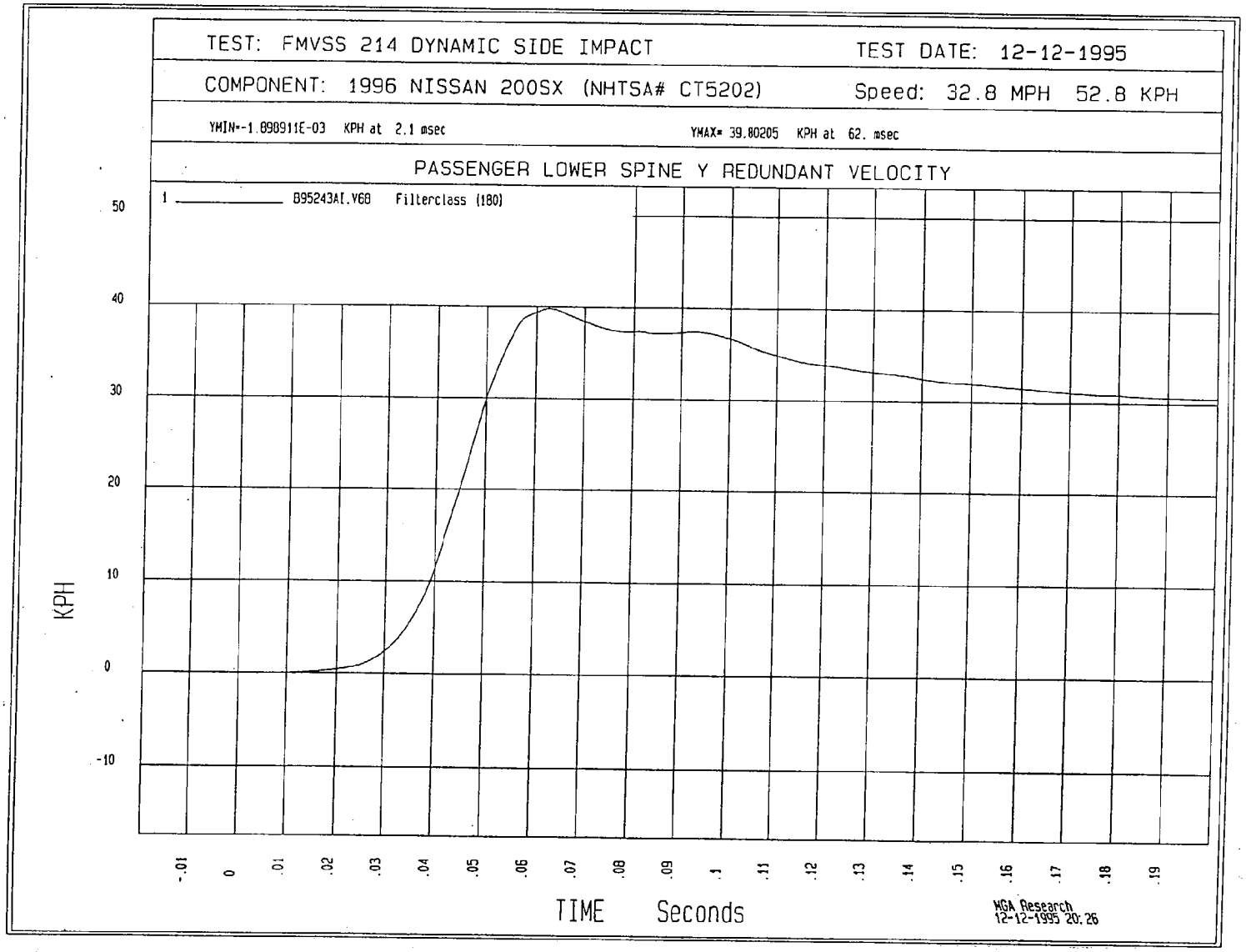
TIME (SECONDS)
MGA Research
12-12-1995 18:19


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-1.898911E-03 KPH at 2.1 msec
YMAX= 39.80205 KPH at 62. msec
PASSENGER LOWER SPINE Y REDUNDANT VELOCITY
1 B95243AI.V68 Filterclass (180)
KPH
50
40
30
20
10
0
-10
-.01
0
.01
.02
.03
.04
.05
.06
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.08
.09
.1
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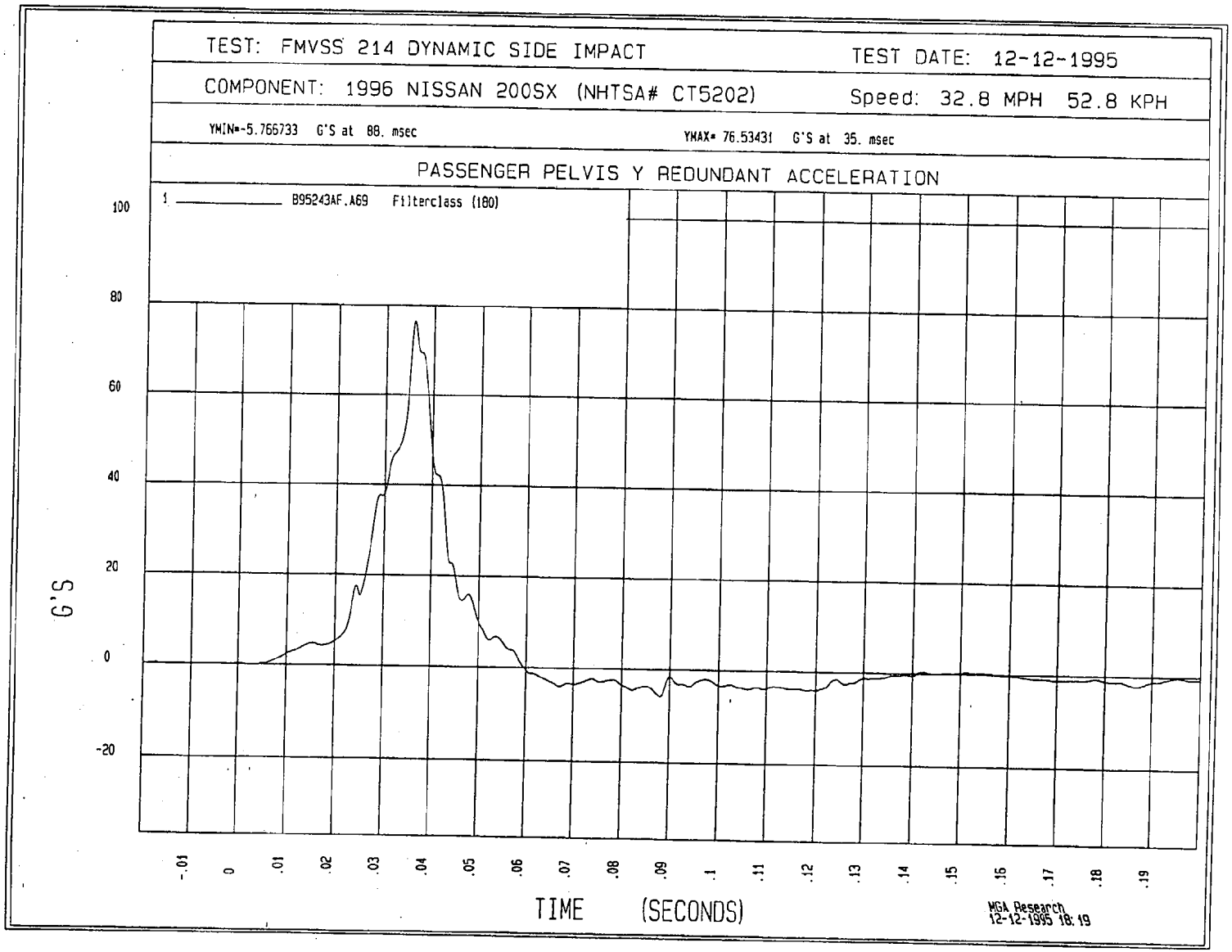
TIME Seconds
MGA Research
12-12-1995 20:26


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-5.766733 G'S at 88. msec
YMAX= 76.53431 G'S at 35. msec
PASSENGER PELVIS Y REDUNDANT ACCELERATION
1 B95243AF.A69 Filterclass (180)
100
80
60
40
20
0
-20
G'S
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
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.16
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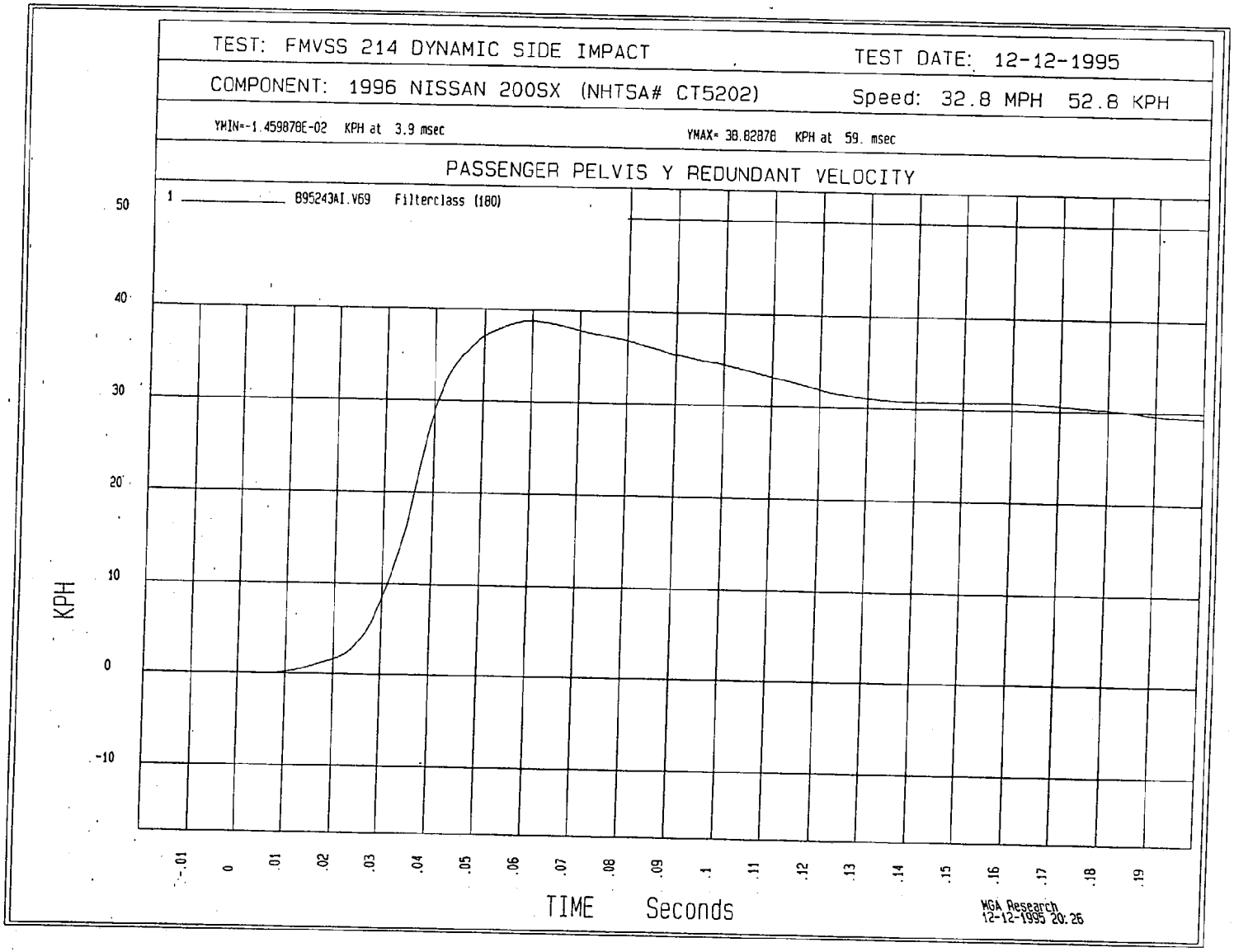
.19
TIME (SECONDS)
MGA Research
12-12-1995 18:19


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-1.459878E-02 KPH at 3.9 msec
YMAX= 38.82878 KPH at 59. msec
PASSENGER PELVIS Y REDUNDANT VELOCITY
1 B95243AI.V69 Filterclass (180)
50
40
30
20
10
0
-10
KPH
-.01
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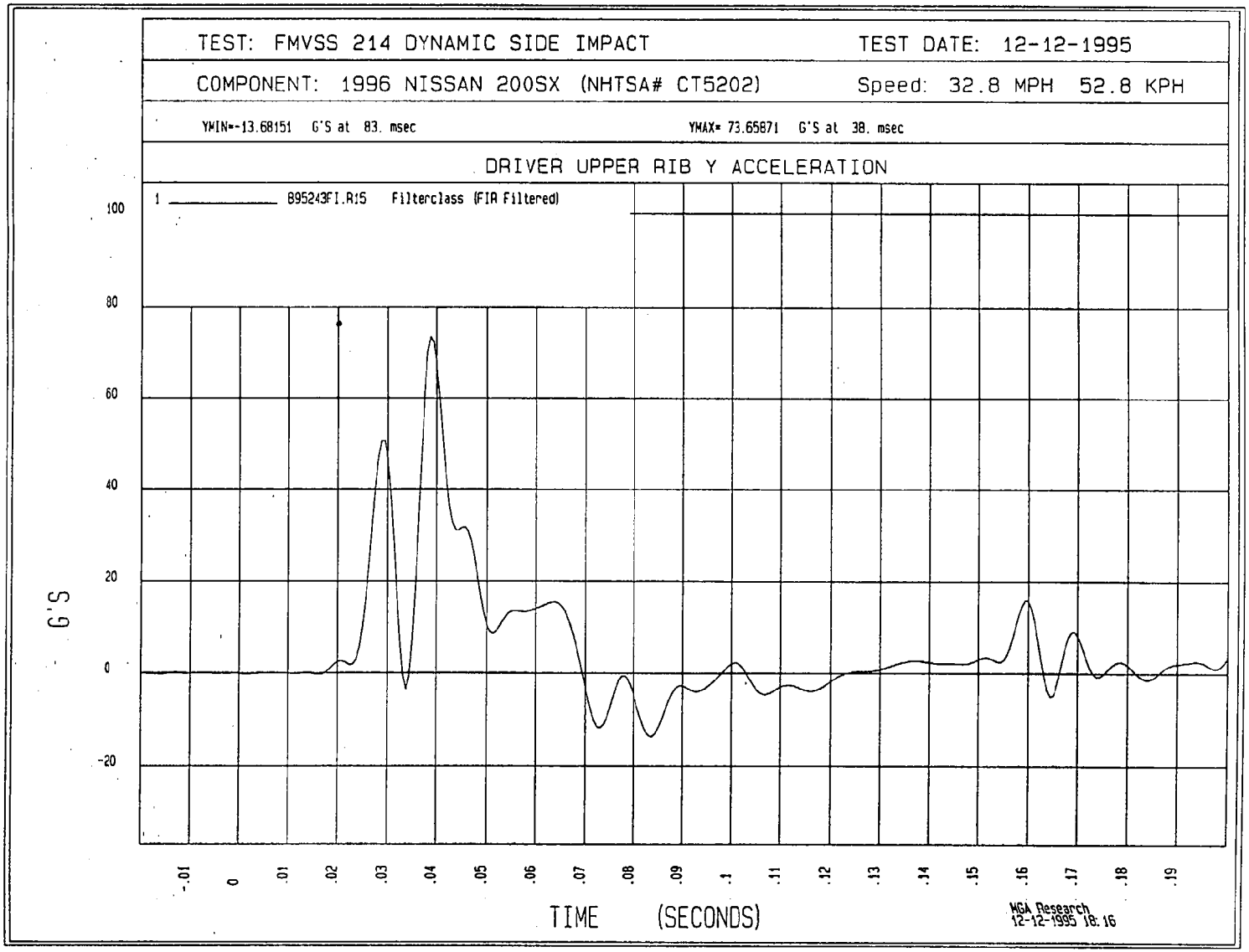
TIME Seconds
MGA Research
12-12-1995 20:26


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-13.68151 G'S at 83. msec
YMAX= 73.65871 G'S at 38. msec
DRIVER UPPER RIB Y ACCELERATION
1 895243FI.R15 Filterclass (FIR Filtered)
100
80
60
40
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0
-20
G'S
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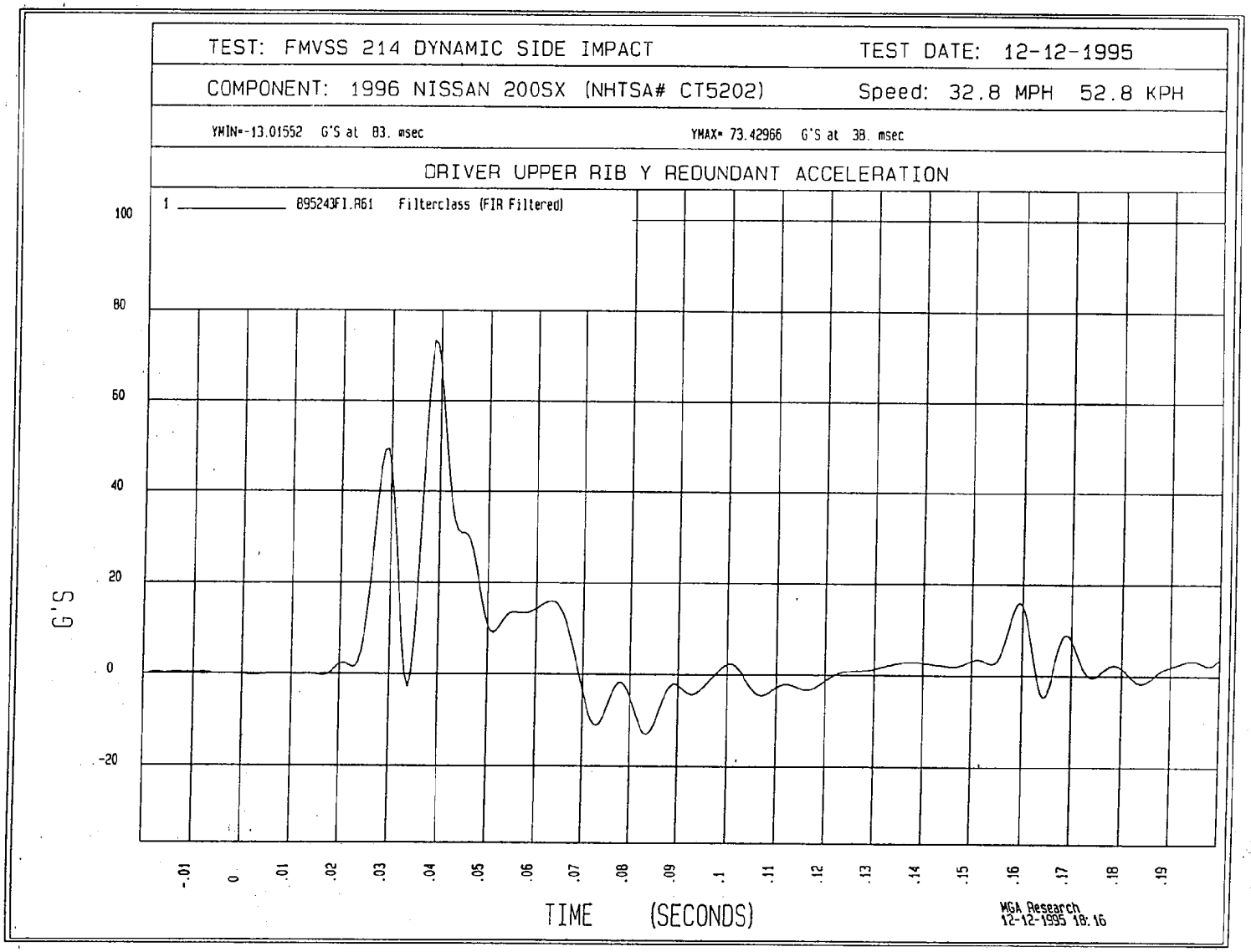
TIME (SECONDS)
MGA Research
12-12-1995 18:16


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-13.01552 G'S at 83. msec
YMAX= 73.42966 G'S at 38. msec
DRIVER UPPER RIB Y REDUNDANT ACCELERATION
1 895243FI.A61 Filterclass (FIR Filtered)
100
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-20
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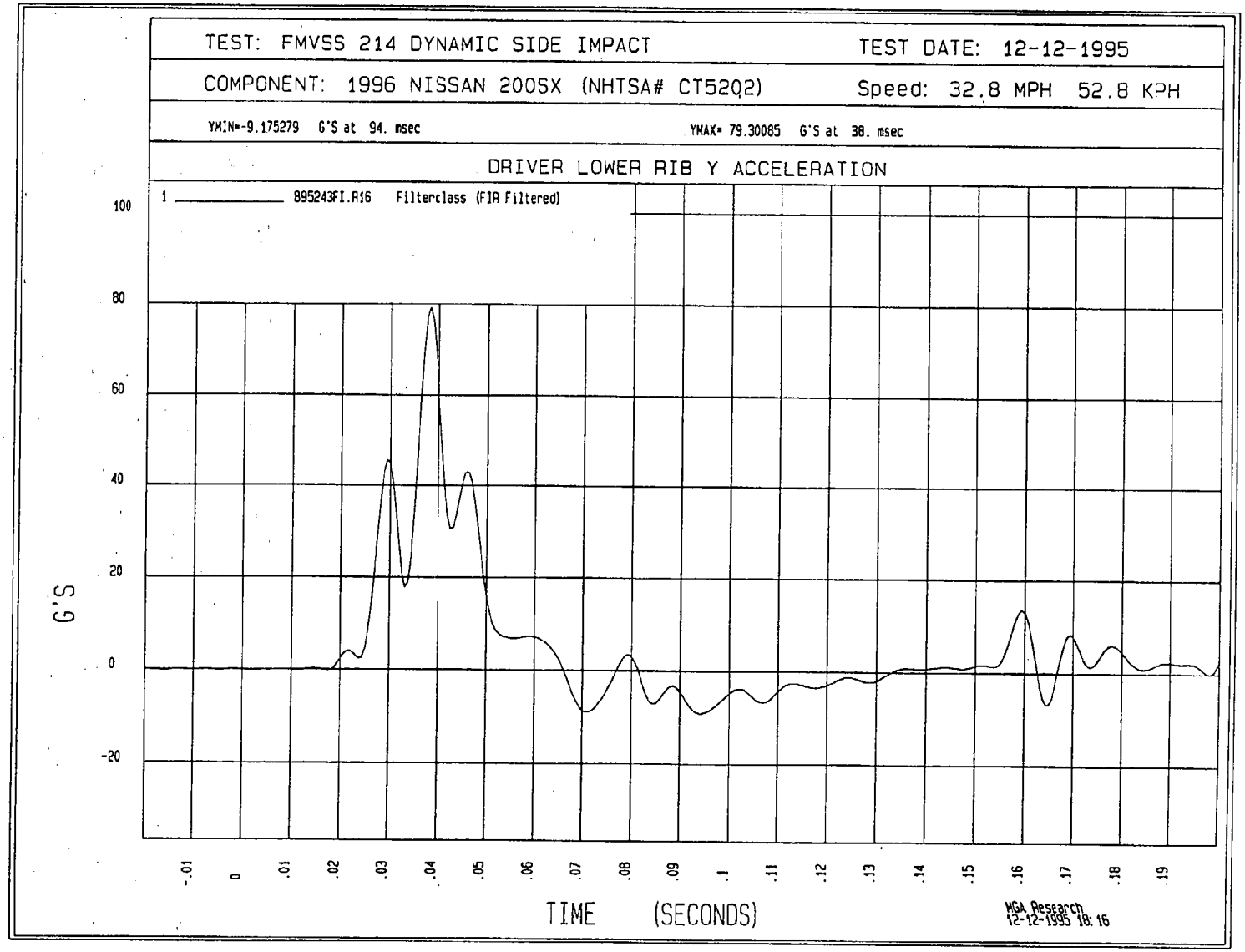
TIME (SECONDS)
MGA Research
12-12-1995 18:16


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-9.175279 G'S at 94. msec
YMAX= 79.30085 G'S at 38. msec
DRIVER LOWER RIB Y ACCELERATION
1 895243FI.R16 Filterclass (FIR Filtered)
100
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G'S
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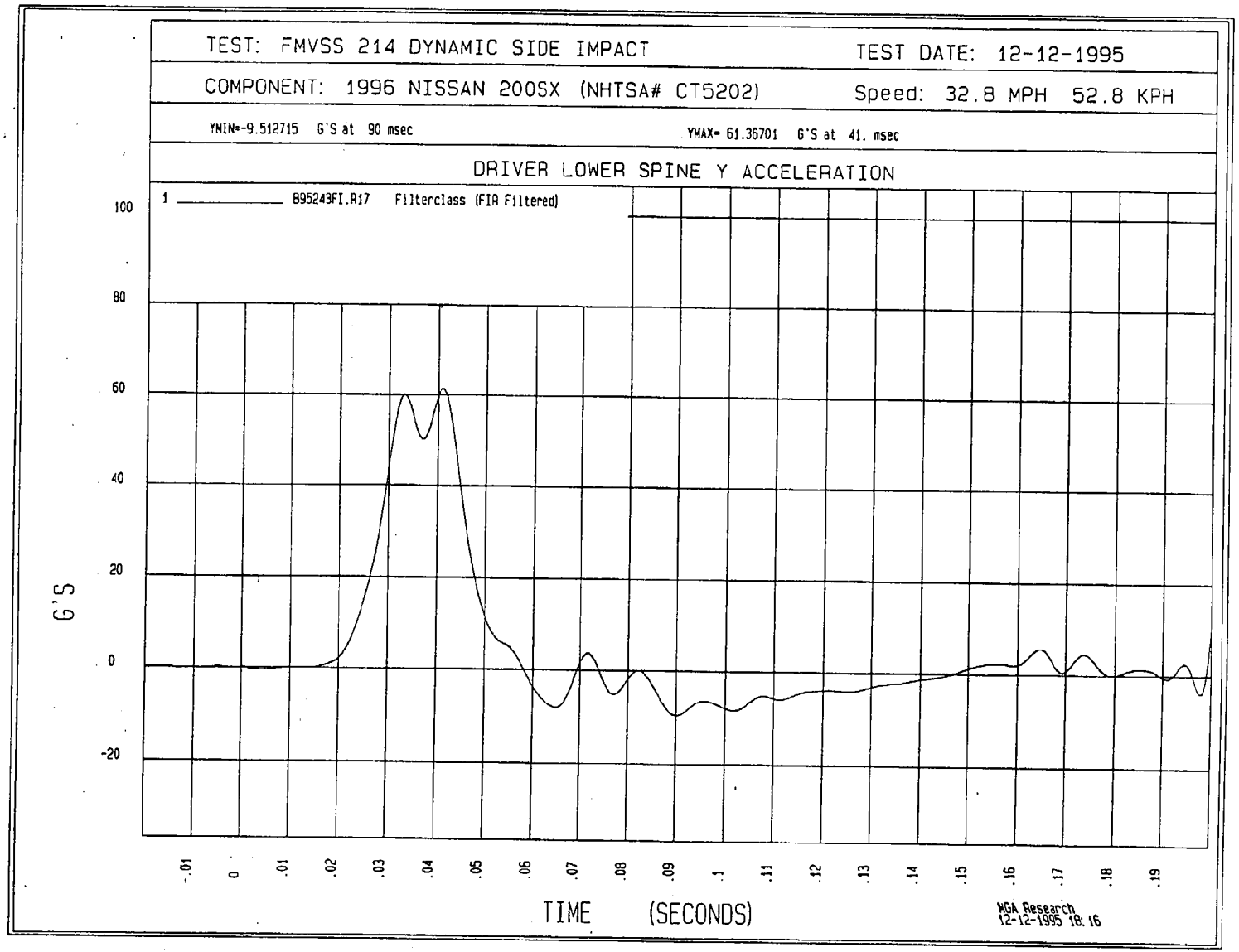
TIME (SECONDS)
MGA Research
12-12-1995 18:16

DRIVER LOWER RIB Y REDUNDANT ACCELERATION VS. TIME

NO VALID DATA COLLECTED


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-9.512715 G'S at 90 msec
YMAX= 61.36701 G'S at 41. msec
DRIVER LOWER SPINE Y ACCELERATION
1 B95243FI.R17 Filterclass (FIR Filtered)
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TIME (SECONDS)
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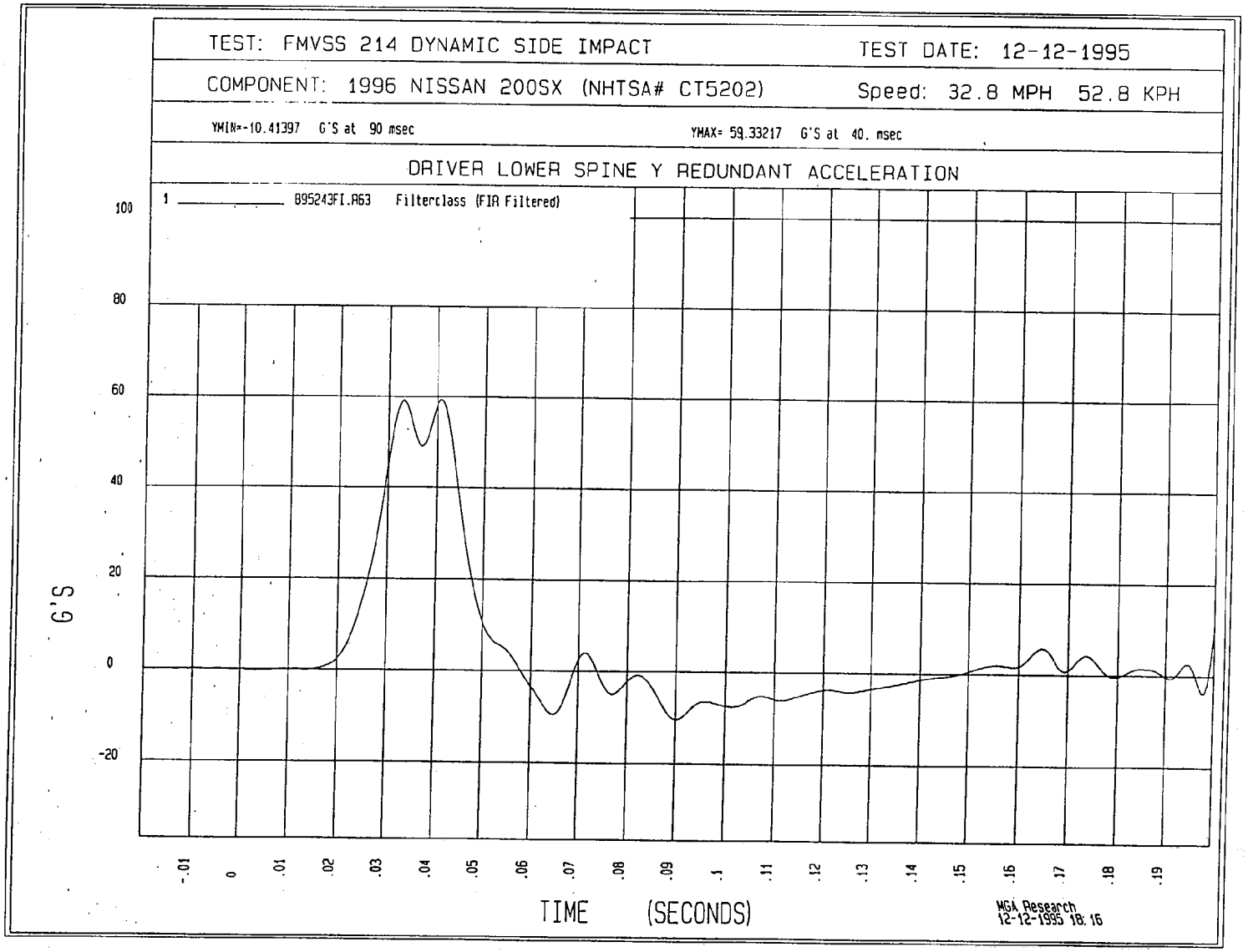
12-12-1995 10:16


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-10.41397 G'S at 90 msec
YMAX= 59.33217 G'S at 40. msec
DRIVER LOWER SPINE Y REDUNDANT ACCELERATION
1 B95243FI.A63 Filterclass (FIR Filtered)
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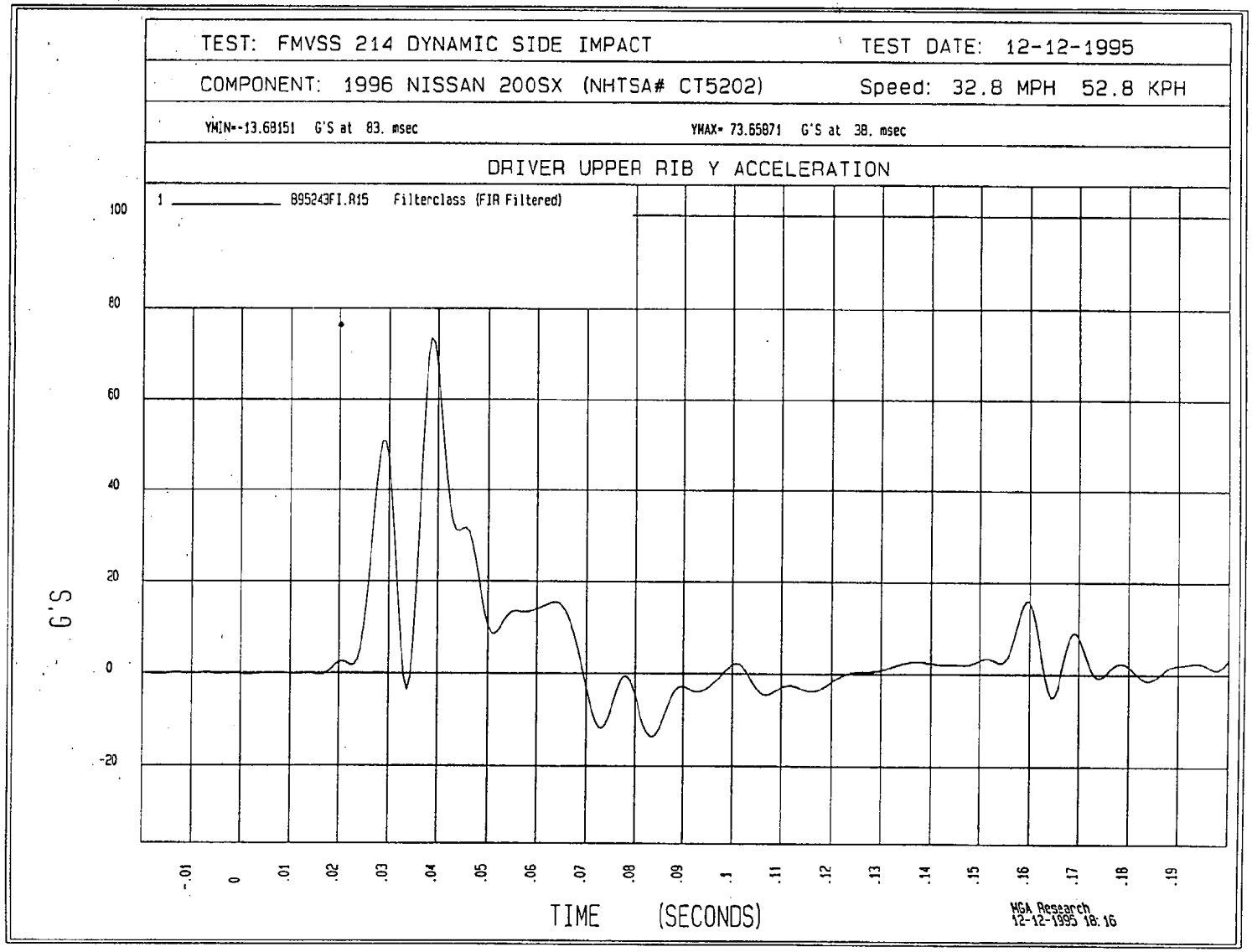
TIME (SECONDS)
MGA Research
12-12-1995 18:16

FINITE IMPULSE RESPONSE (FIR) FILTERED DATA


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-13.68151 G'S at 83. msec
YMAX= 73.65871 G'S at 38. msec
DRIVER UPPER RIB Y ACCELERATION
1 B95243FI.A15 Filterclass (FIR Filtered)
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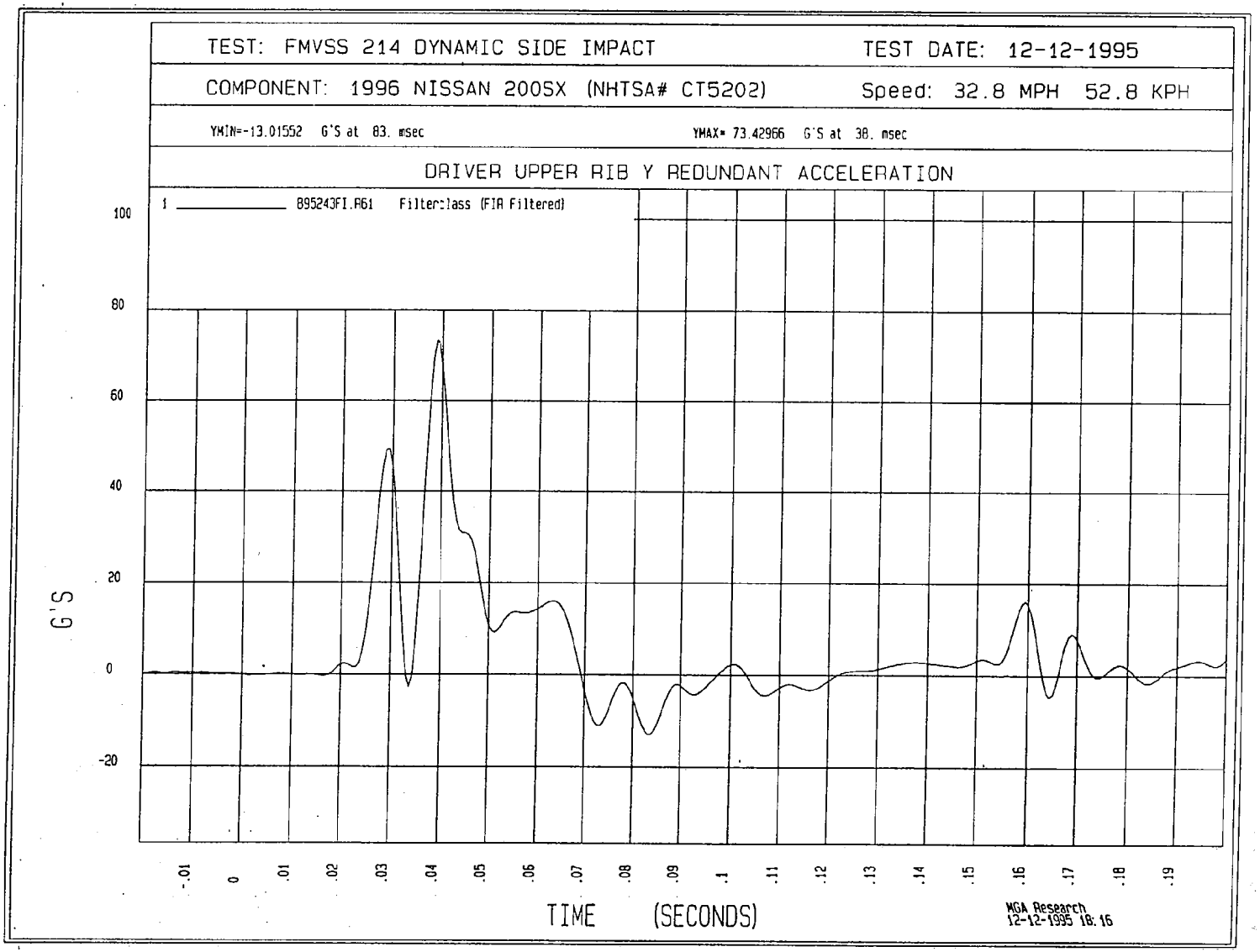
TIME (SECONDS)
MGA Research
12-12-1995 18:16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TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-13.01552 G'S at 83. msec
YMAX= 73.42966 G'S at 38. msec
DRIVER UPPER RIB Y REDUNDANT ACCELERATION
1 895243FI.R61 Filter:lass (FIR Filtered)
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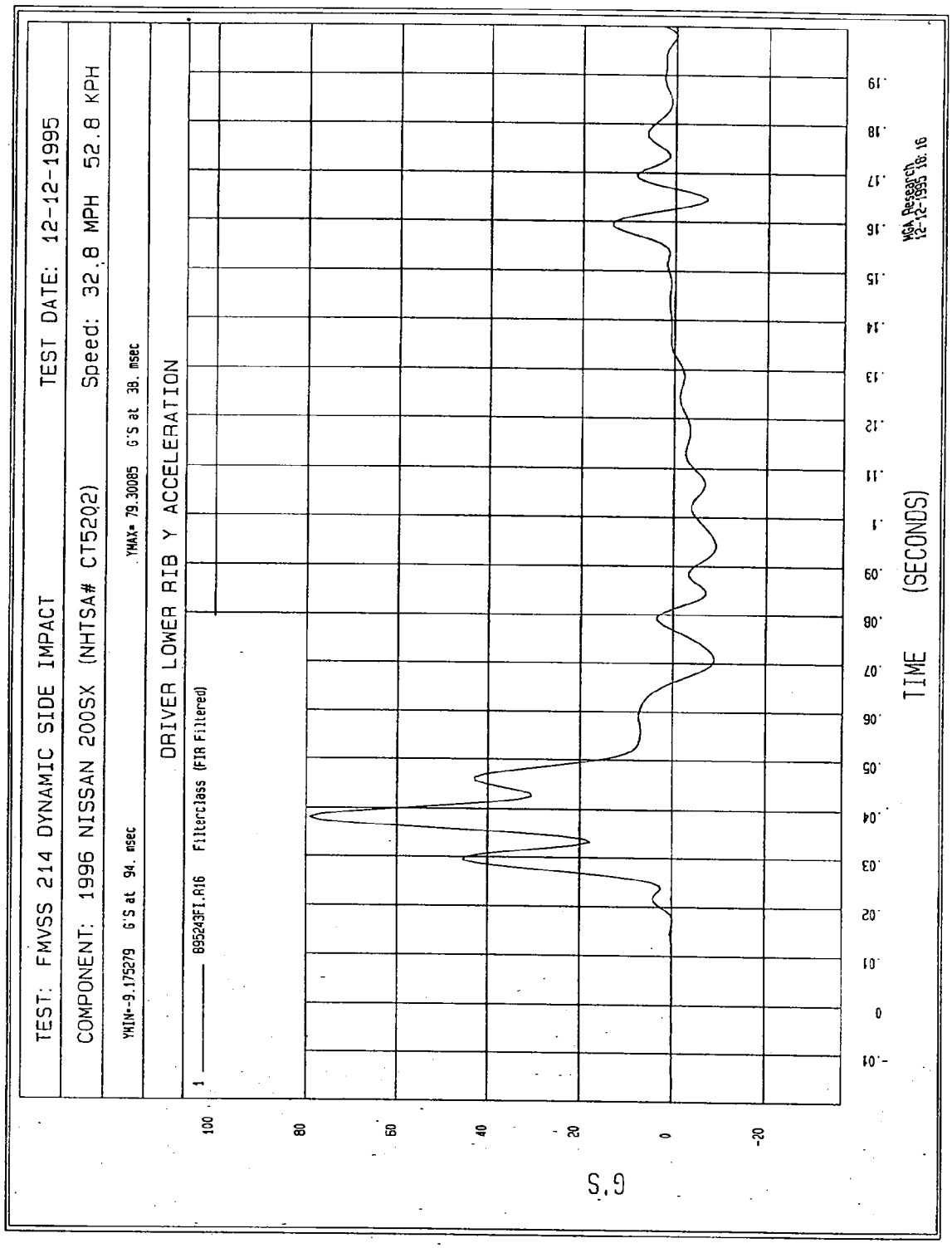
TIME (SECONDS)
MGA Research
12-12-1995 18:16


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-9.175279 G'S at 94. msec
YMAX= 79.30085 G'S at 38. msec
DRIVER LOWER RIB Y ACCELERATION
1 895243FI.R16 FilterClass (FIR Filtered)
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G'S
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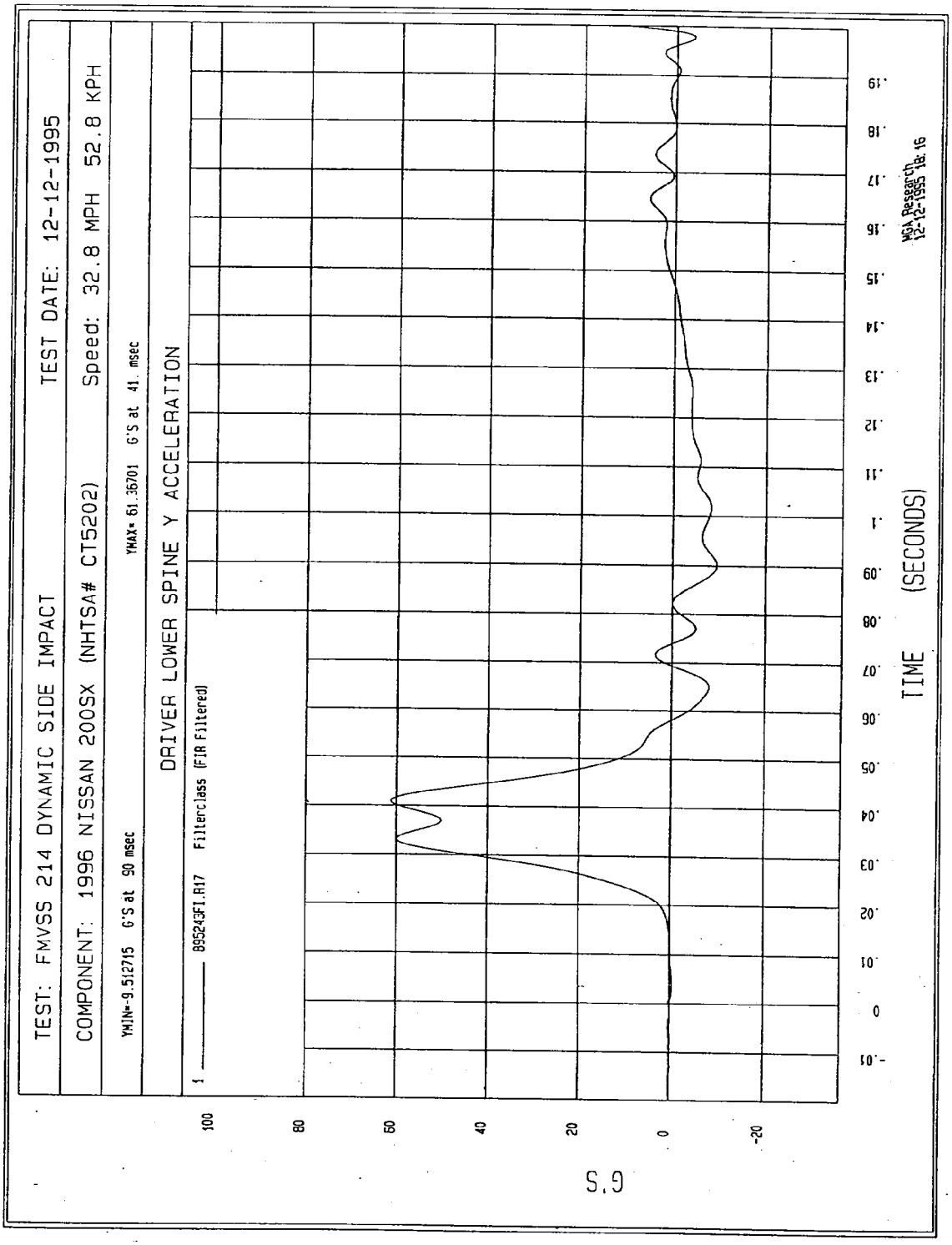
TIME (SECONDS)
MGA Research
12-12-1995 10:16

DRIVER LOWER RIB Y REDUNDANT ACCELERATION VS. TIME

NO VALID DATA COLLECTED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TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-9.512715 G'S at 90 msec
YMAX= 61.36701 G'S at 41 msec
DRIVER LOWER SPINE Y ACCELERATION
1 ——— 895243FI.R17 Filterclass (FIR Filtered)
100
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G'S
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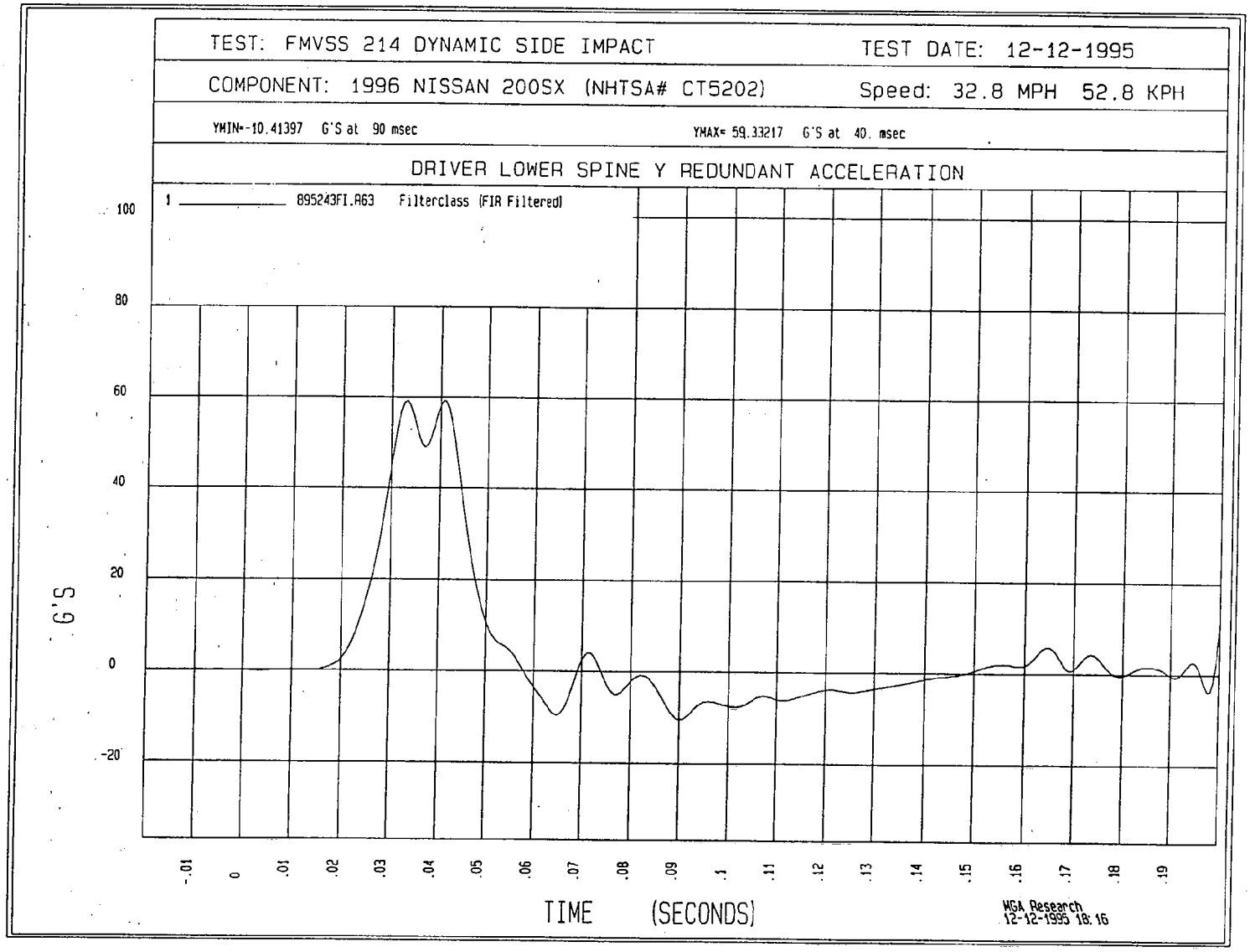
TIME (SECONDS)
MGA Research
12-12-1995 18: 16


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-10.41397 G'S at 90 msec
YMAX= 59.33217 G'S at 40. msec
DRIVER LOWER SPINE Y REDUNDANT ACCELERATION
1 895243FI.A63 Filterclass (FIR Filtered)
100
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G'S
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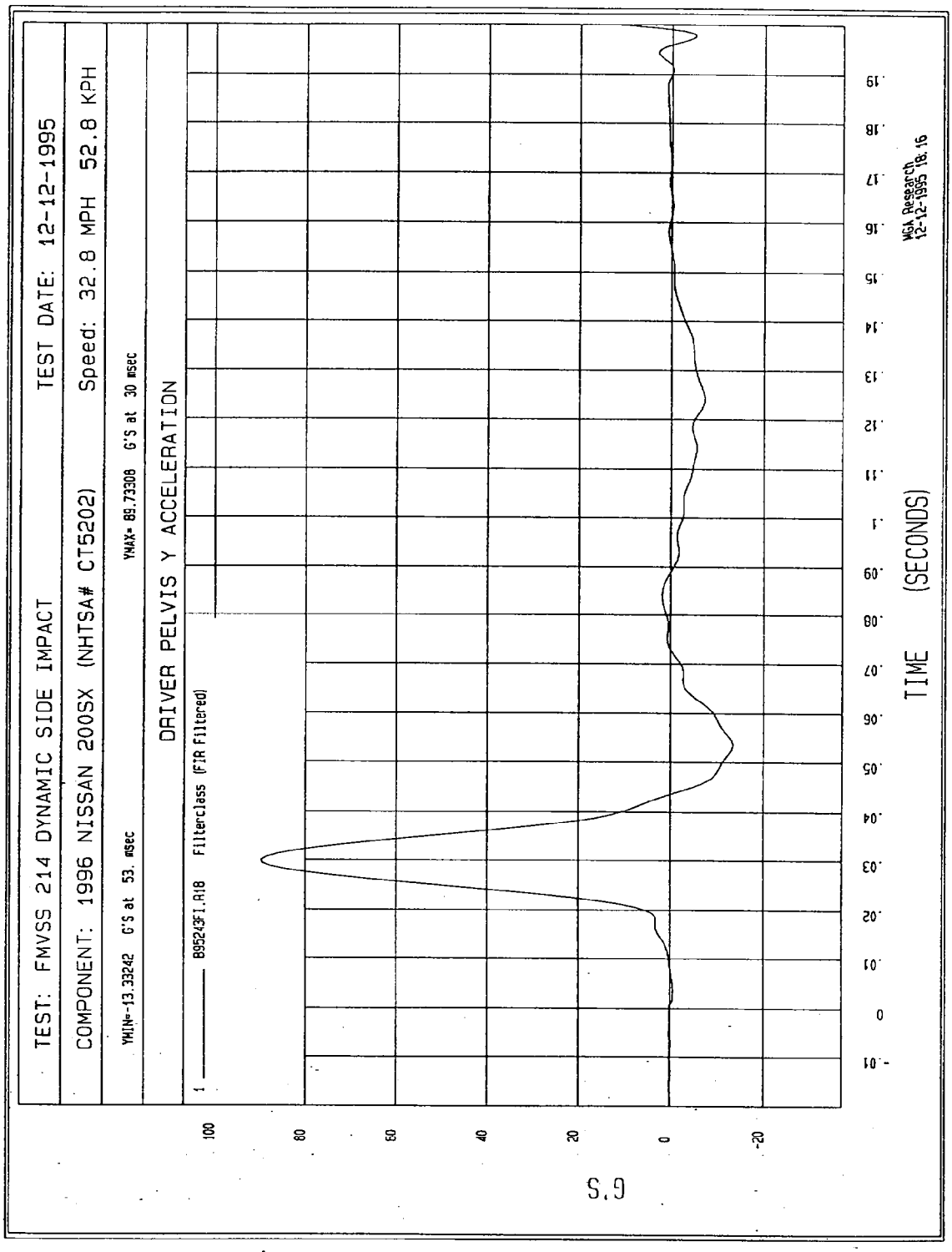
TIME (SECONDS)
MGA Research
12-12-1995 18:16


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-13.33242 G'S at 53. msec
YMAX= 85.73308 G'S at 30 msec
DRIVER PELVIS Y ACCELERATION
1 B9524SFI.A18 Filterclass (FIR Filtered)
100
80
60
40
20
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-20
G'S
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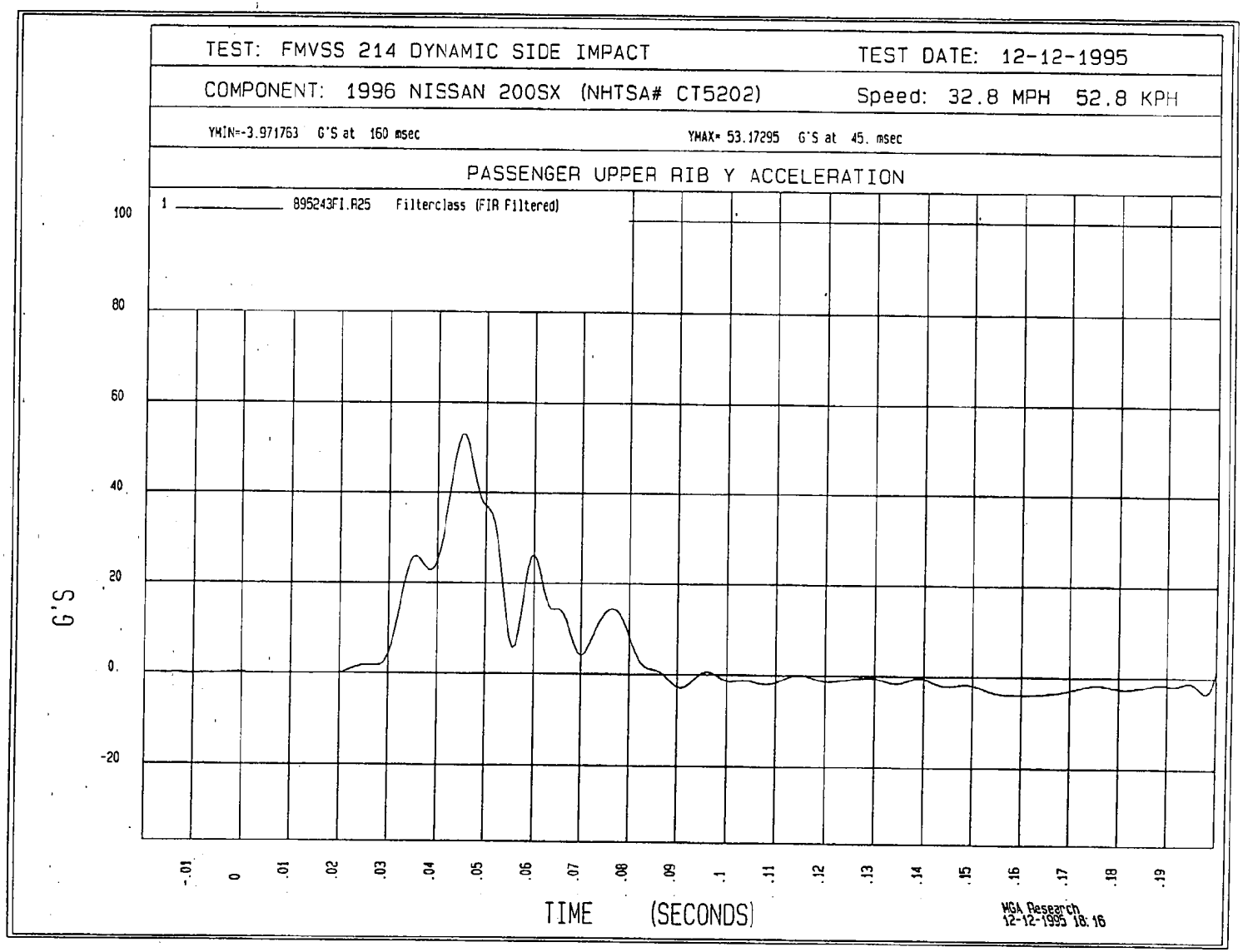
TIME (SECONDS)
MGA Research
12-12-1995 18:16

DRIVER PELVIS Y REDUNDANT ACCELERATION VS. TIME

NO VALID DATA COLLECTED


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-3.971763 G'S at 160 msec
YMAX= 53.17295 G'S at 45. msec
PASSENGER UPPER RIB Y ACCELERATION
1 895243FI.R25 Filterclass (FIR Filtered)
100
80
60
40
20
0.
-20
G'S
-.01
0
.01
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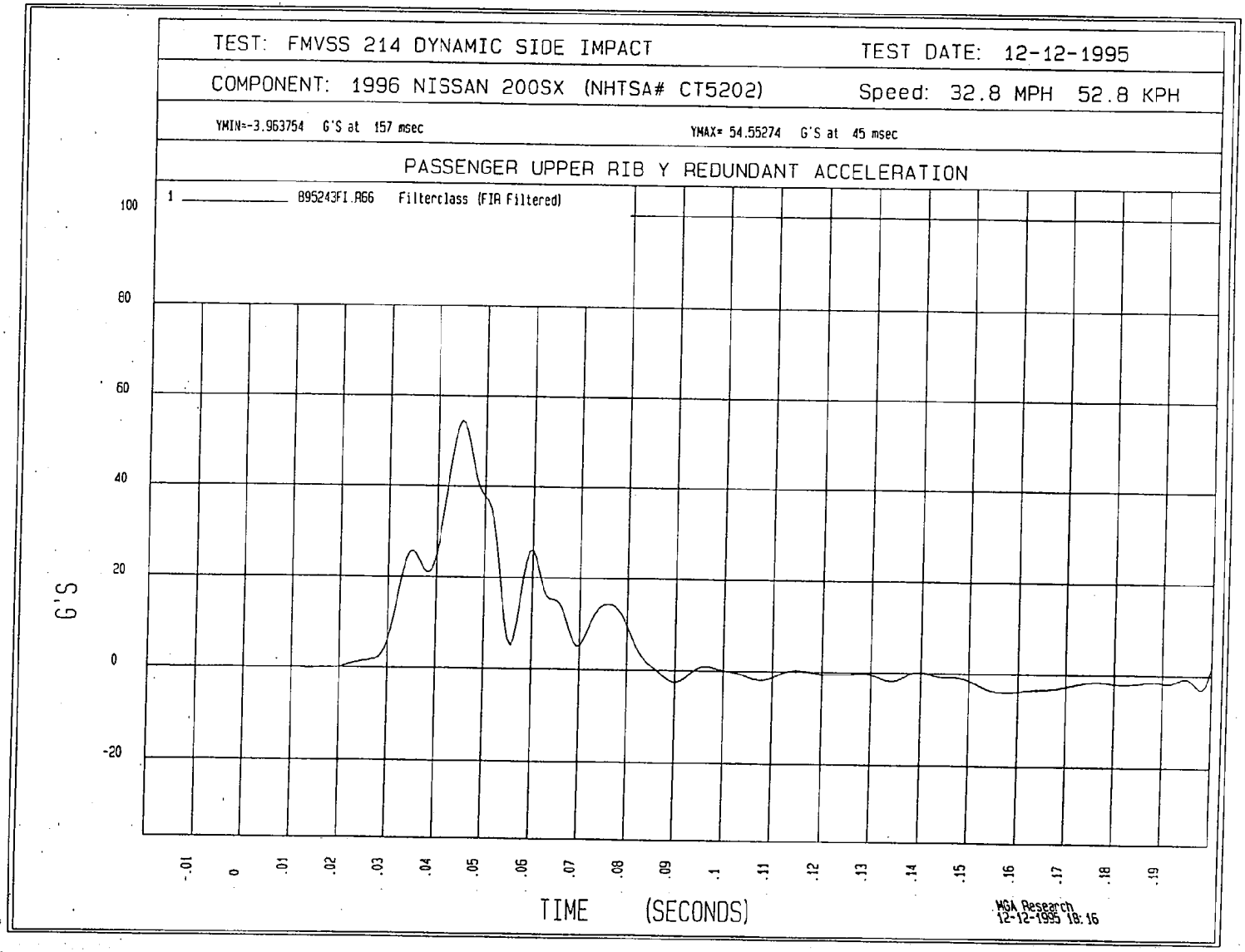
TIME (SECONDS)
MGA Research
12-12-1995 18:16


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-3.963754 G'S at 157 msec
YMAX= 54.55274 G'S at 45 msec
PASSENGER UPPER RIB Y REDUNDANT ACCELERATION
1 B95243FI.A66 Filterclass (FIR Filtered)
100
80
60
40
20
0
-20
G'S
-.01
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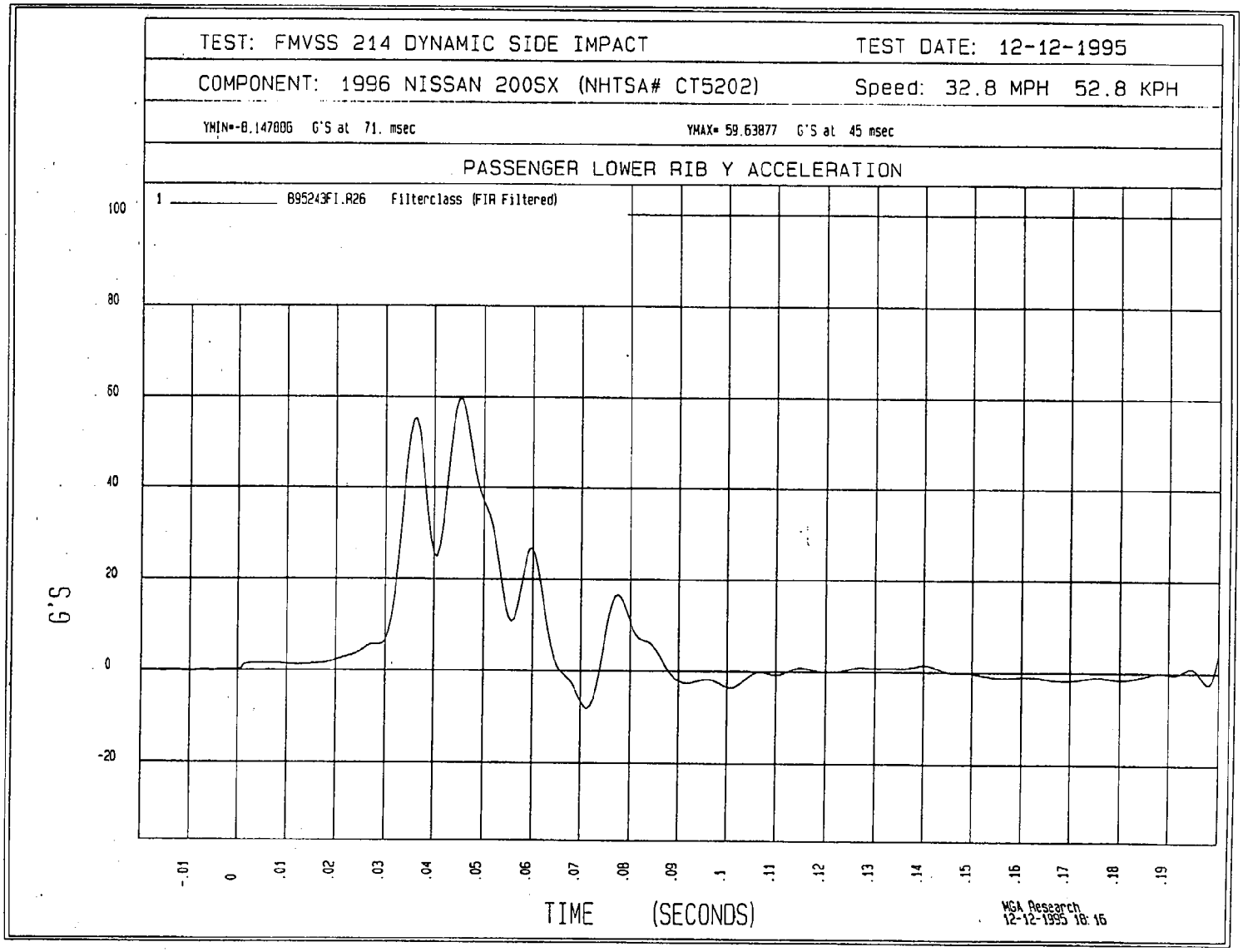
TIME (SECONDS)
MGA Research
12-12-1995 18:16


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-8.147006 G'S at 71. msec
YMAX= 59.63877 G'S at 45 msec
PASSENGER LOWER RIB Y ACCELERATION
1 B95243FI.A26 Filterclass (FIR Filtered)
100
80
60
40
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0
-20
G'S
-.01
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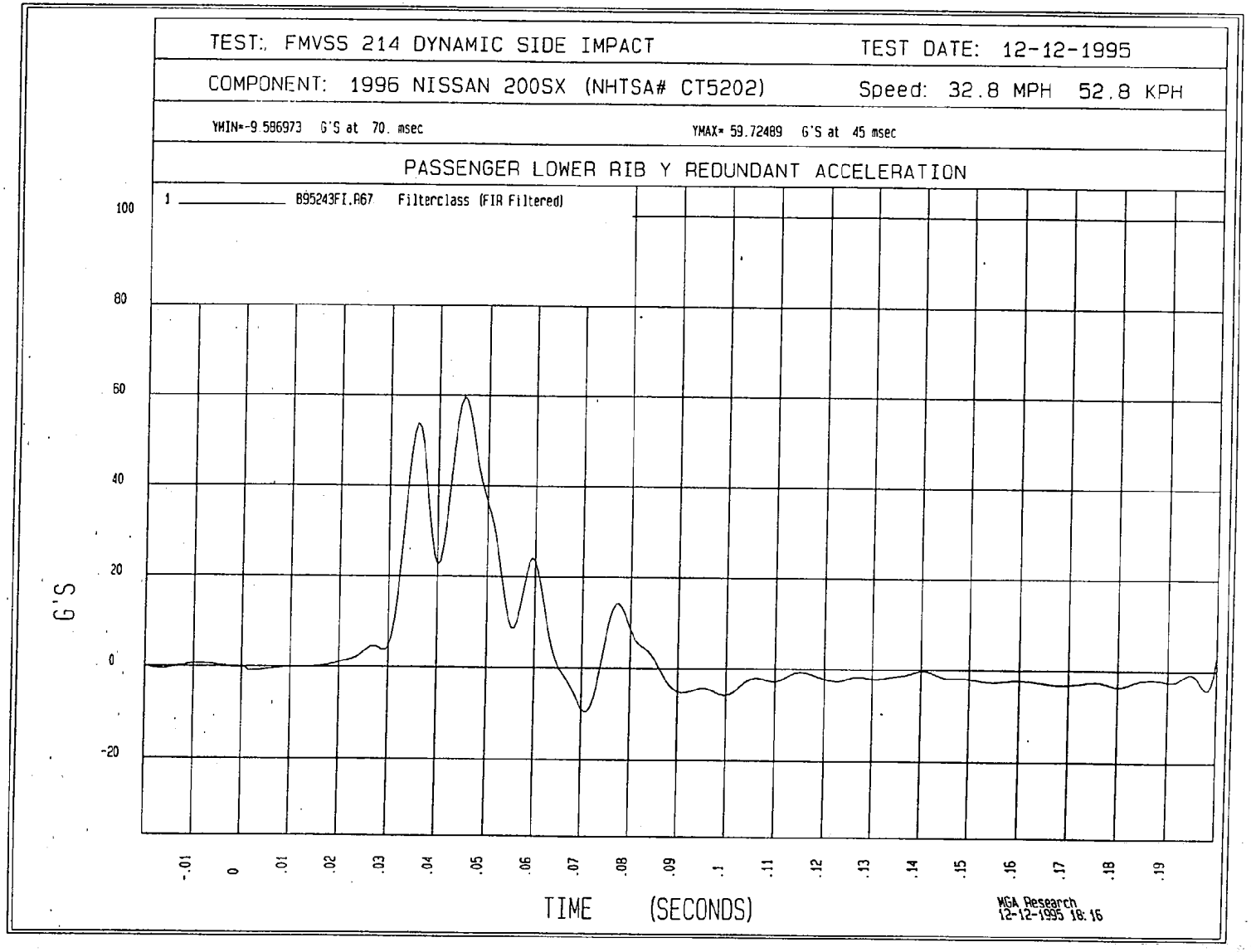
TIME (SECONDS)
MGA Research
12-12-1995 18:16


TEST:, FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-9.586973 G'S at 70. msec
YMAX= 59.72489 G'S at 45 msec
PASSENGER LOWER RIB Y REDUNDANT ACCELERATION
1 B95243FI.A67 Filterclass (FIR Filtered)
100
80
60
40
20
0
-20
G'S
-.01
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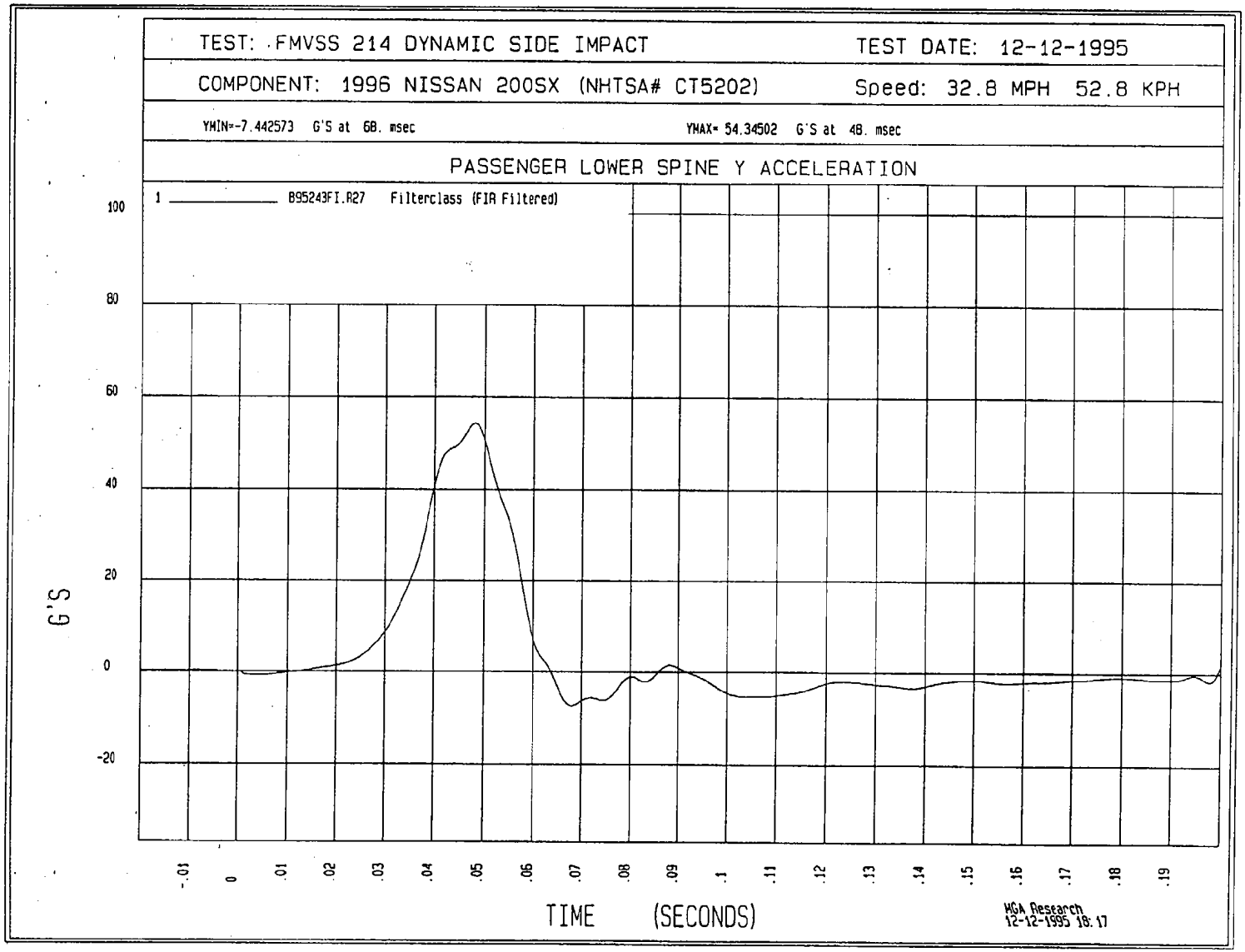
TIME (SECONDS)
MGA Research
12-12-1995 18:16


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-7.442573 G'S at 68. msec
YMAX= 54.34502 G'S at 48. msec
PASSENGER LOWER SPINE Y ACCELERATION
1 B95243FI.R27 Filterclass (FIR Filtered)
100
80
60
40
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0
-20
G'S
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TIME (SECONDS)
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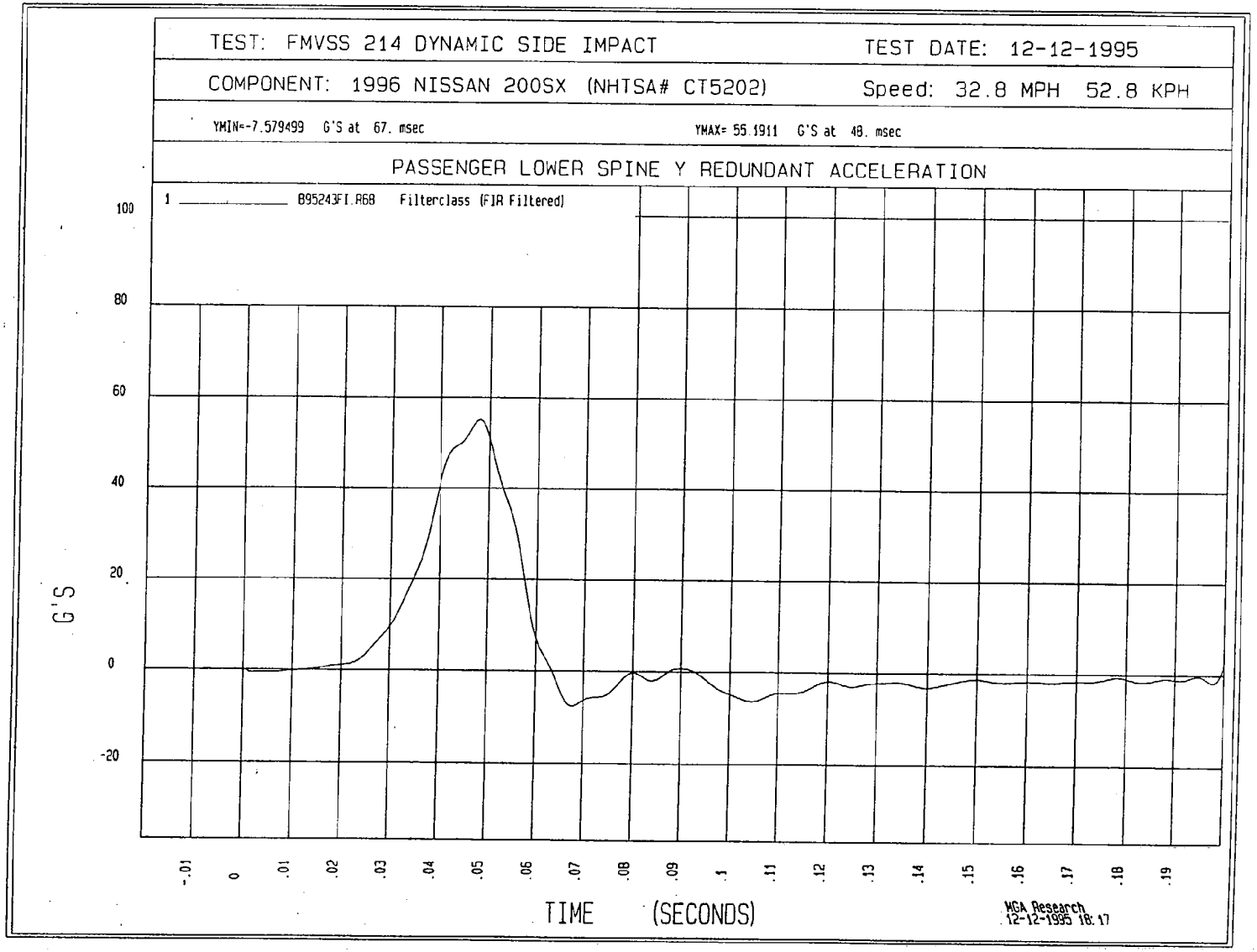
12-12-1995 18:17


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-7.579499 G'S at 67. msec
YMAX= 55.1911 G'S at 48. msec
PASSENGER LOWER SPINE Y REDUNDANT ACCELERATION
1 B95243FI.R68 Filterclass (FIR Filtered)
100
80
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G'S
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TIME (SECONDS)
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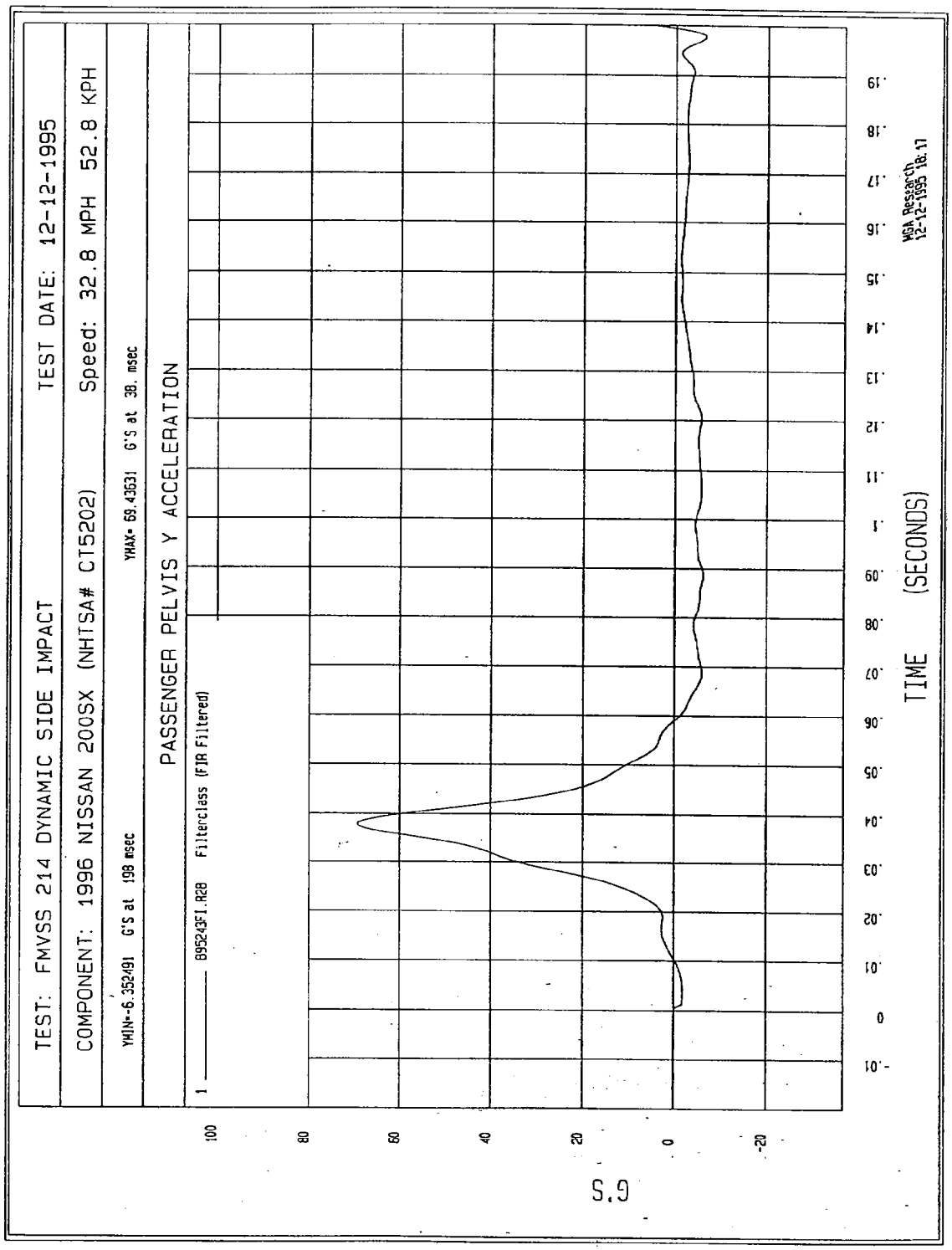
12-12-1995 18:17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TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-6.352491 G'S at 198 msec
YMAX= 69.43631 G'S at 38. msec
PASSENGER PELVIS Y ACCELERATION
1 B95243FI.R2B Filterclass (FIR Filtered)
100
80
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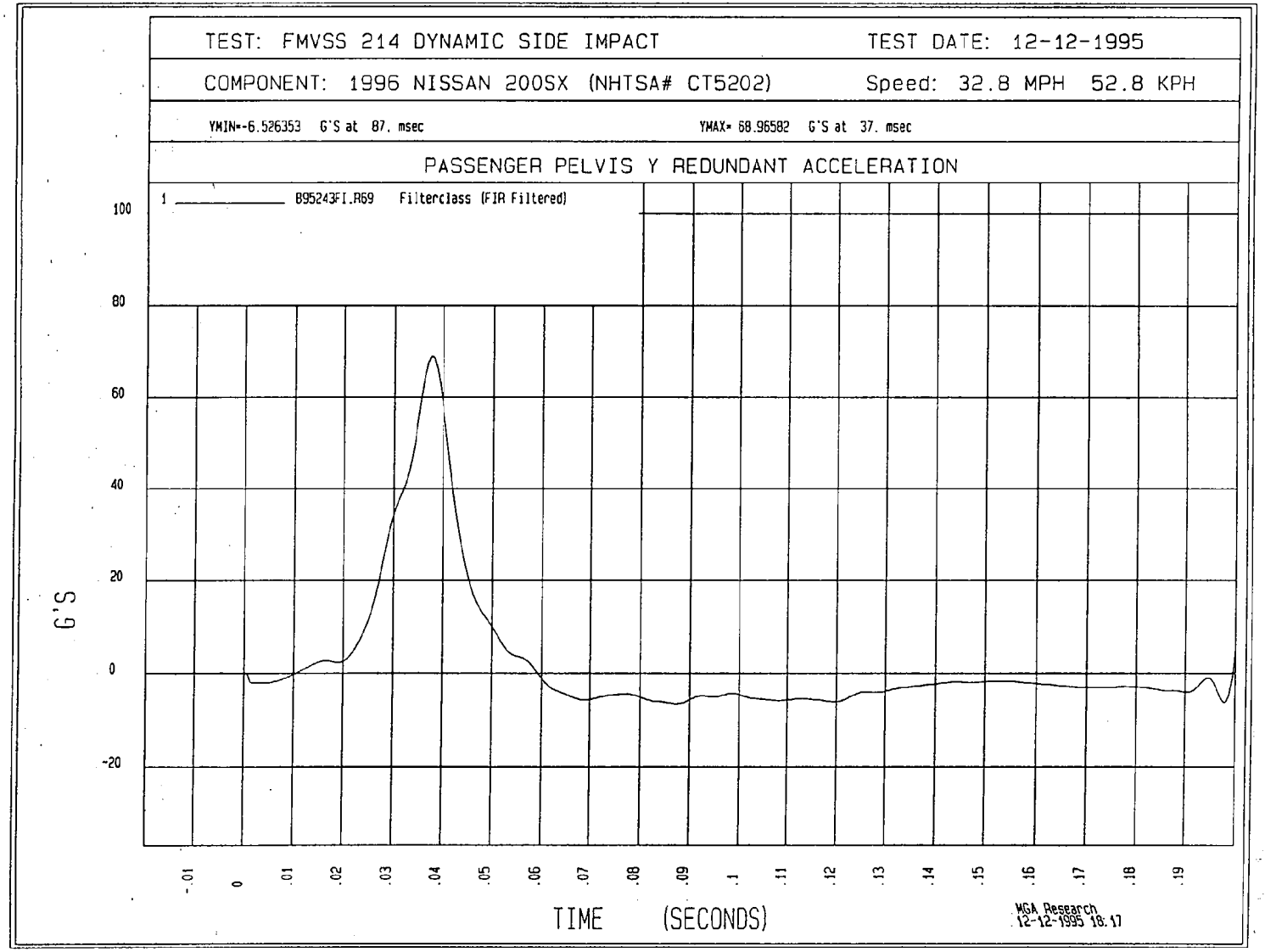
12-12-1995 18:17


TEST: FMVSS 214 DYNAMIC SIDE IMPACT
TEST DATE: 12-12-1995
COMPONENT: 1996 NISSAN 200SX (NHTSA# CT5202)
Speed: 32.8 MPH 52.8 KPH
YMIN=-6.526353 G'S at 87. msec
YMAX= 68.96582 G'S at 37. msec
PASSENGER PELVIS Y REDUNDANT ACCELERATION
1 B95243FI.R69 Filterclass (FIR Filtered)
100
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G'S
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TIME (SECONDS)
MGA Research
12-12-1995 18:17

APPENDIX C

SID CONFIGURATION AND PERFORMANCE VERIFICATION

REPORT NO. MGA-96-DC08

DUMMY PERFORMANCE CALIBRATIONS

FMVSS 214 - SIDE IMPACT TEST

NISSAN MOTOR CORPORATION
1996 NISSAN 200 SX 2-DOOR
NHTSA NO. CT5202

MGA PROVING GROUNDS
5000 WARREN ROAD
BURLINGTON, WI 53105

Test Date: December 12, 1995

Report Date: December 21, 1995

FINAL REPORT

Prepared For:

U. S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
ENFORCEMENT
OFFICE OF VEHICLE SAFETY COMPLIANCE
MAIL CODE: NSA-30
400 SEVENTH STREET, S.W., ROOM 6115
WASHINGTON, D.C. 20590

TABLE OF CONTENTS

PRE-TEST CERTIFICATION DATA

Driver Dummy Serial Number: 269

Calibration Test Results Summary

Dummy Serial Number: 269

Pre-Test Calibration

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

SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 269 DATE OF VERIFICATION: December 7, 1995

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH - Seated Height	35.0" - 35.8"	35.1
RH - Rib Height	19.75" - 20.50"	20.10
HP - Hip Pivot Height	3.9" ref.	3.9
RD - Rib From Back Line	9.0" to 9.5"	9.3
KV - Knee Pivot From Back Line	20.1" - 20.7"	20.5
SW - Knee Pivot to Floor	19.3" - 19.9"	19.4
HW - Hip Width	14.0" - 15.4"	15.1

MEASUREMENTS BY: _____

APPROVED BY: _____

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: December 5, 1995

DUMMY NUMBER: 269 TEST NUMBER: D951992

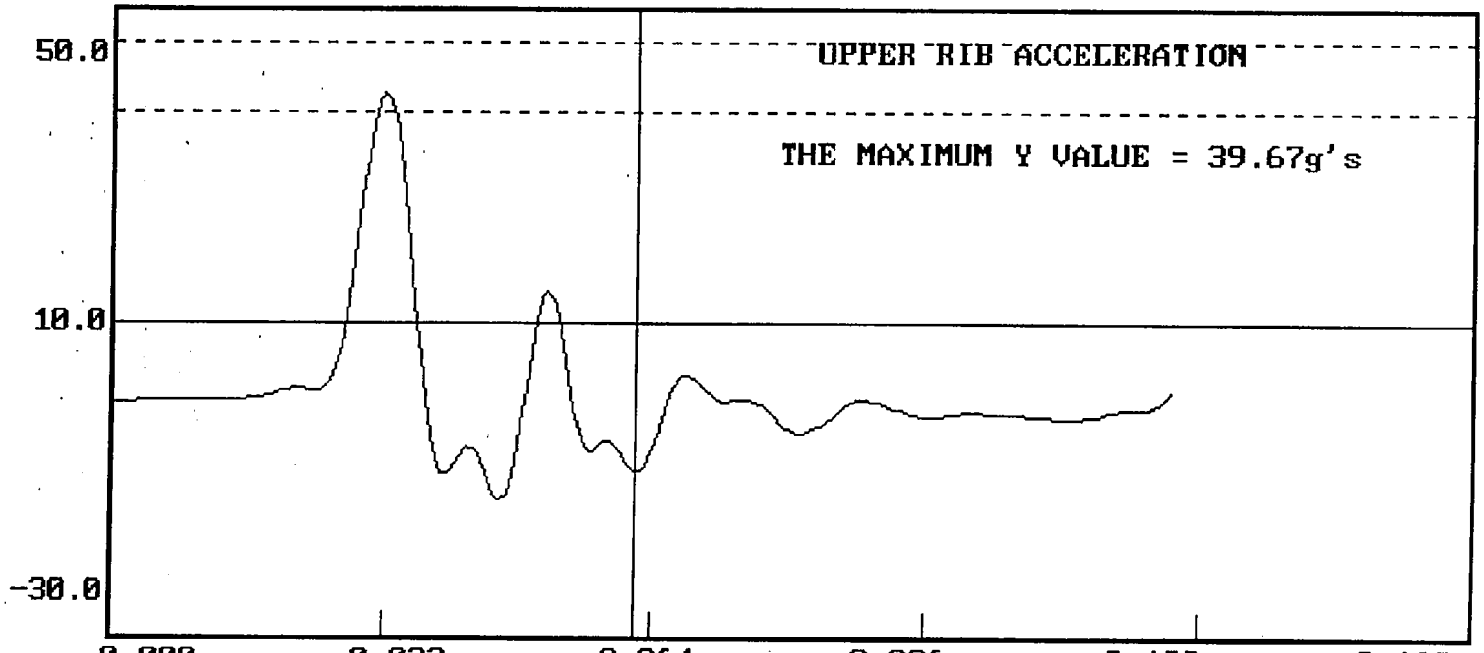
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	12%
PROBE SPEED	13.8 - 14.2 fps	14.0
UPPER RIB	37 - 46 g's	40
LOWER RIB	37 - 46 g's	39
LOWER SPINE	15 - 22 g's	21

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

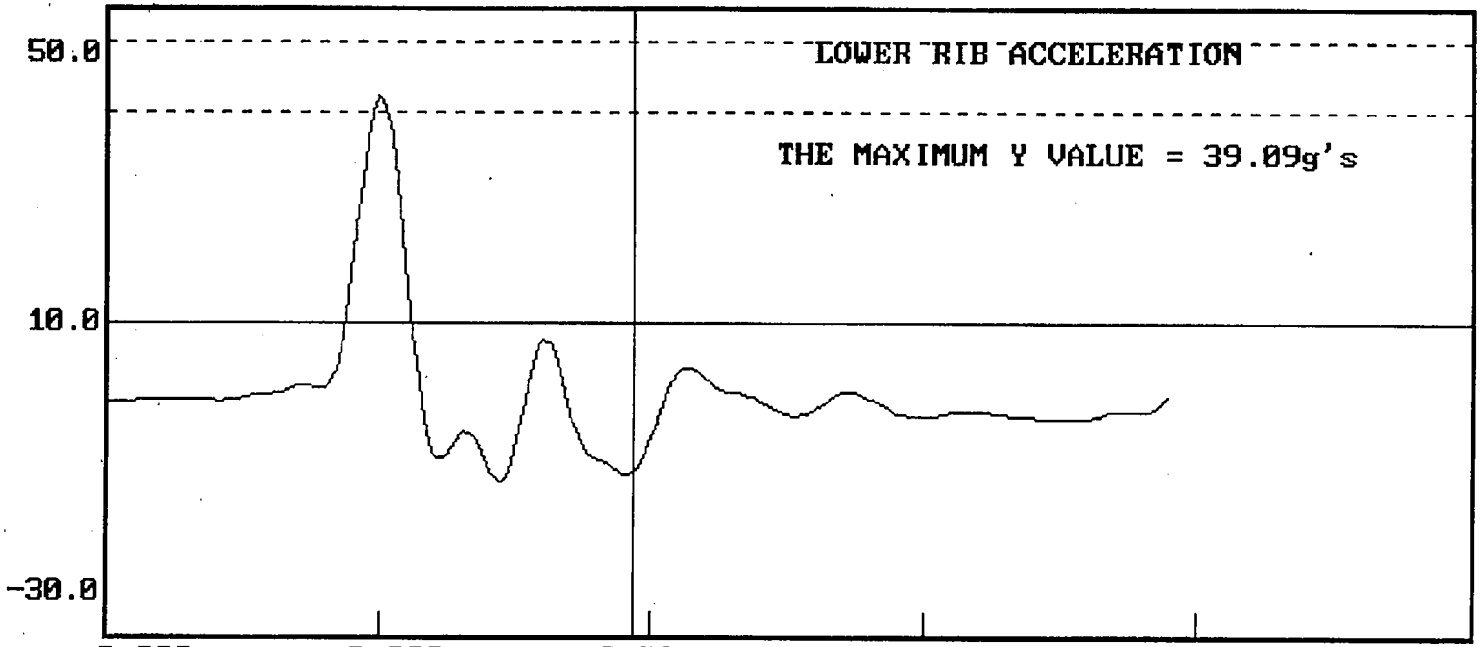
APPROVED BY _____

DUMMY CALIBRATION - THORAX IMPACT 12-05-1995 16:23
DUMMY # 269
ACCELERATION (G'S) VS. TIME ((SECONDS))



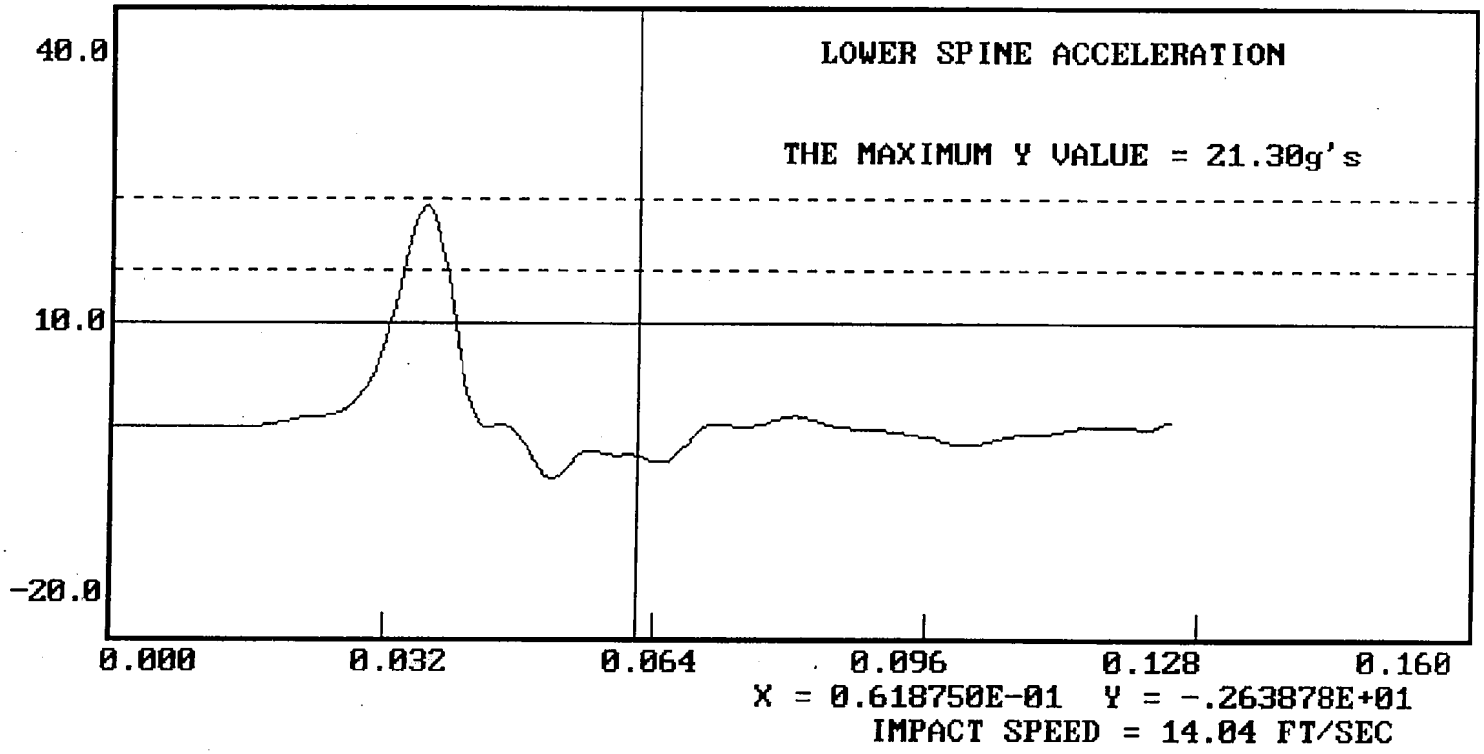
X = 0.618750E-01 Y = -.897517E+01
IMPACT SPEED = 14.04 FT/SEC

DUMMY CALIBRATION - THORAX IMPACT 12-05-1995 16:23
DUMMY # 269
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.907843E+01
IMPACT SPEED = 14.04 FT/SEC

DUMMY CALIBRATION - THORAX IMPACT 12-05-1995 16:23
DUMMY # 269
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.263878E+01
IMPACT SPEED = 14.04 FT/SEC

MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: December 5, 1995

DUMMY NUMBER: 269 TEST NUMBER: D951993

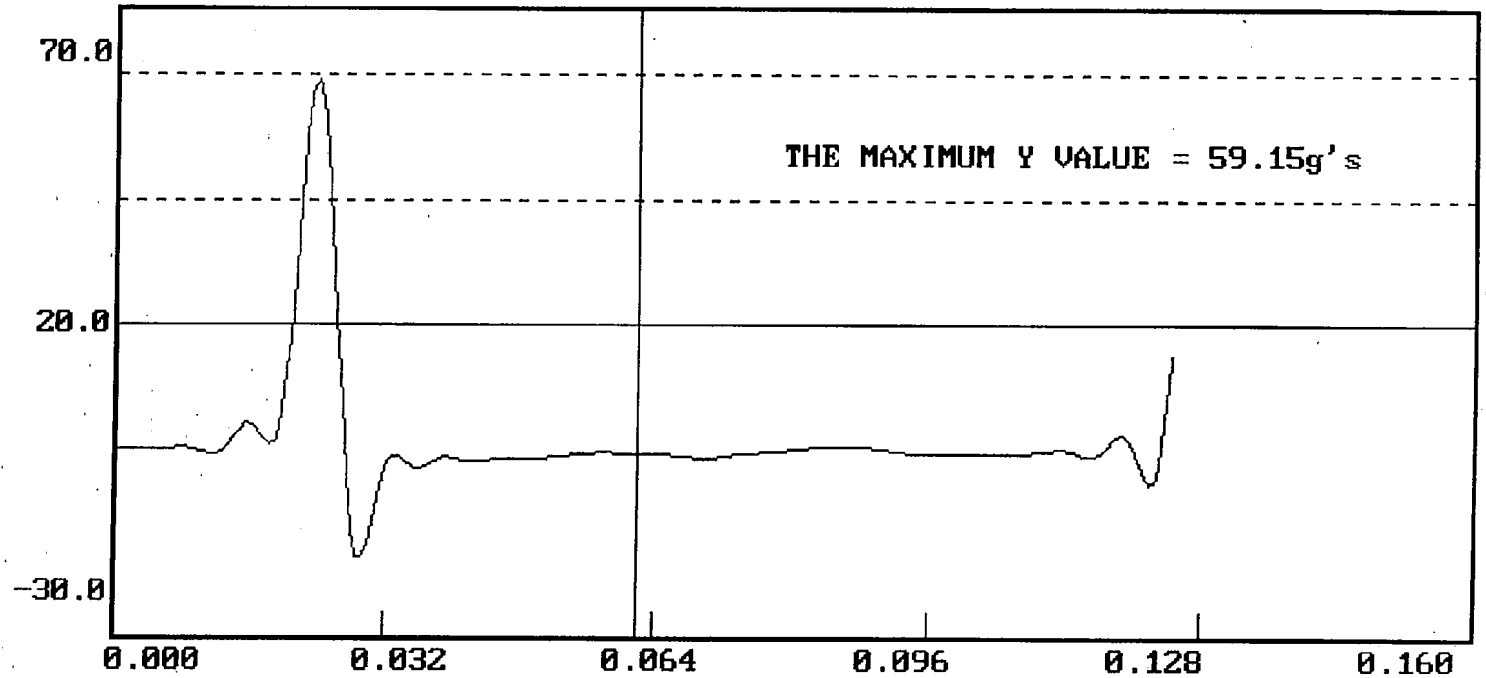
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	12%
PROBE SPEED	13.8 - 14.2 f/s	13.9
PELVIS ACCELERATION	40 - 60 g's	59

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

DUMMY CALIBRATION - PELVIS IMPACT 12-05-1995 16:40
DUMMY # 269
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.780352E+00
IMPACT SPEED = 13.94 FT/SEC

MGA RESEARCH CORPORATION

ABDOMINAL COMPRESSION TEST
(PRELOAD = 10 LBS)

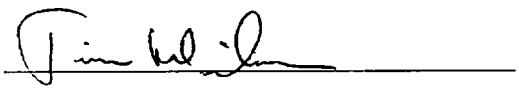
SIDE IMPACT DUMMY (SID)

DATE: December 7, 1995

DUMMY NUMBER: 269 TEST NUMBER: D951994

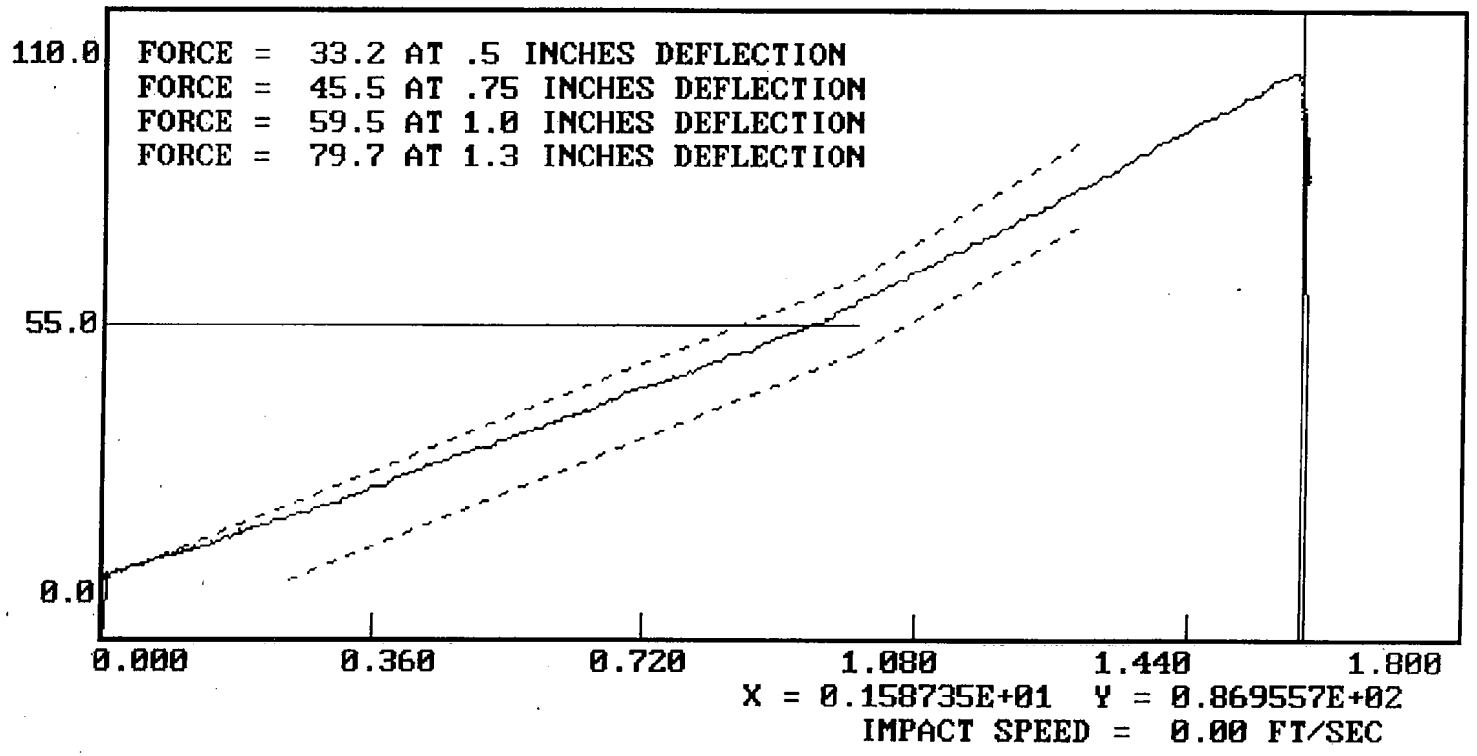
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	12%
FORCE @ 0.5 in	23.3 - 36.5 lbs	33.2
FORCE @ 0.75 in	36.7 - 49.8 lbs	45.5
FORCE @ 1.0 in	50 - 63 lbs	60
FORCE @ 1.3 in	73 - 88 lbs	80

TEST MEETS SPECIFICATIONS

TECHNICIAN 

APPROVED BY 

DUMMY CALIBRATION - ABDOMEN COMPRESSION 12-07-1995 16:35
DUMMY # 269
ABDOMEN FORCE (LBS) VS. ABDOMEN DISPLACEMENT (INCHES)



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

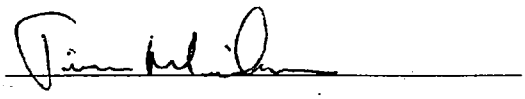
SIDE IMPACT DUMMY (SID)

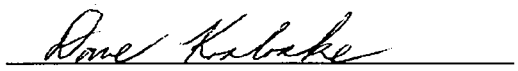
DATE: December 6, 1995

DUMMY NUMBER: 269 TEST NUMBER: D951995

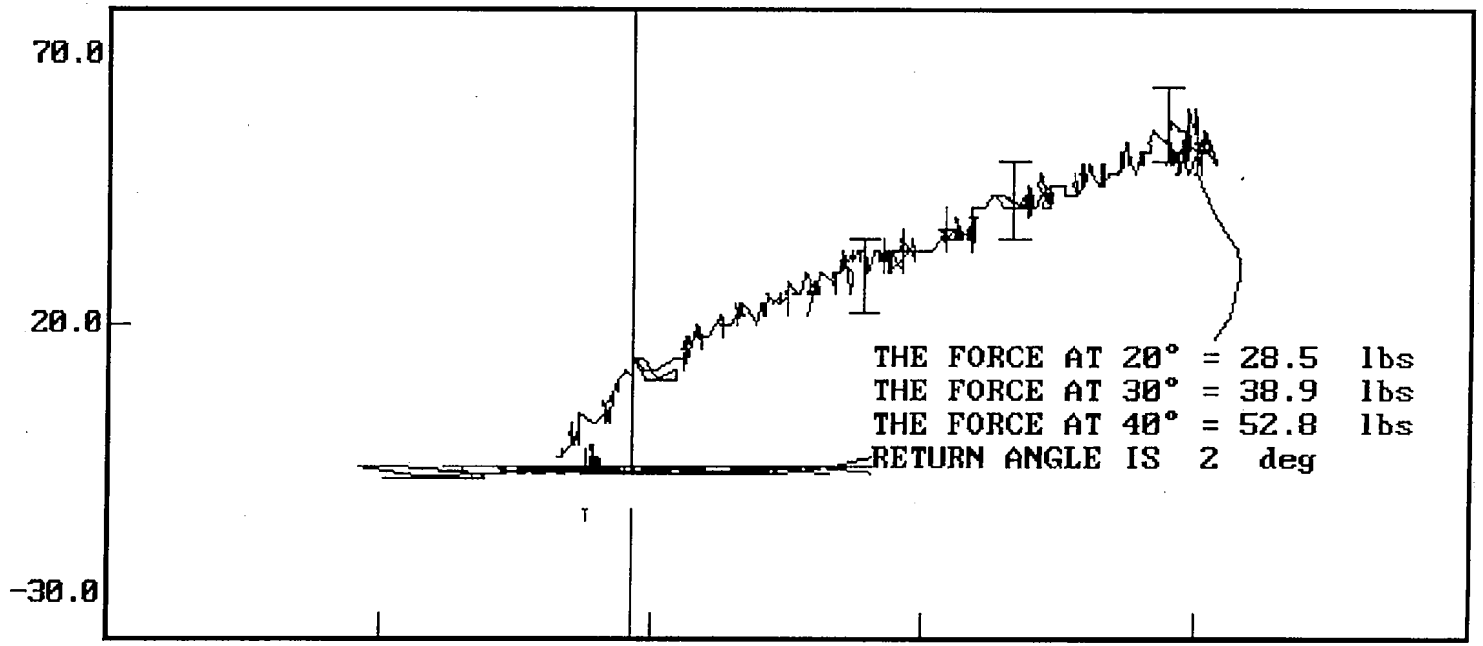
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	12%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	29
FORCE @ 30°	34 - 46 lbs	39
FORCE @ 40°	46 - 58 lbs	53
RETURN ANGLE	12° maximum	2°

TEST MEETS SPECIFICATIONS

TECHNICIAN 

APPROVED BY 

DUMMY CALIBRATION - LUMBAR FLEXION 12-06-1995 08:24
DUMMY # 269
FORCE (LBS) VS. TORSO ROTATION (DEGREES)



X = 0.464489E+01 Y = -.277299E+01
IMPACT SPEED = 0.00 FT/SEC

PRE-TEST CERTIFICATION DATA

Passenger Dummy Serial Number: 272

Calibration Test Results Summary

Passenger Serial Number: 272

Pre-Test Calibration

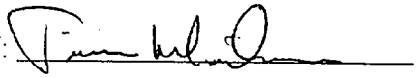
External Dimensions:	The dummy passed all external dimension requirements.
Thorax Impact Test:	The thorax passed all impact test requirements.
Pelvic Impact Test:	The pelvis passed all impact test requirements.
Abdominal Compression Test:	The abdomen passed all compression test requirements.
Lumbar Flexion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

SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 272

DATE OF VERIFICATION: December 7, 1995

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH - Seated Height	35.0" - 35.8"	35.3
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"	9.5
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: Dave Kodlake

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: December 6, 1995

DUMMY NUMBER: 272

TEST NUMBER: D952022

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	12%
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	21

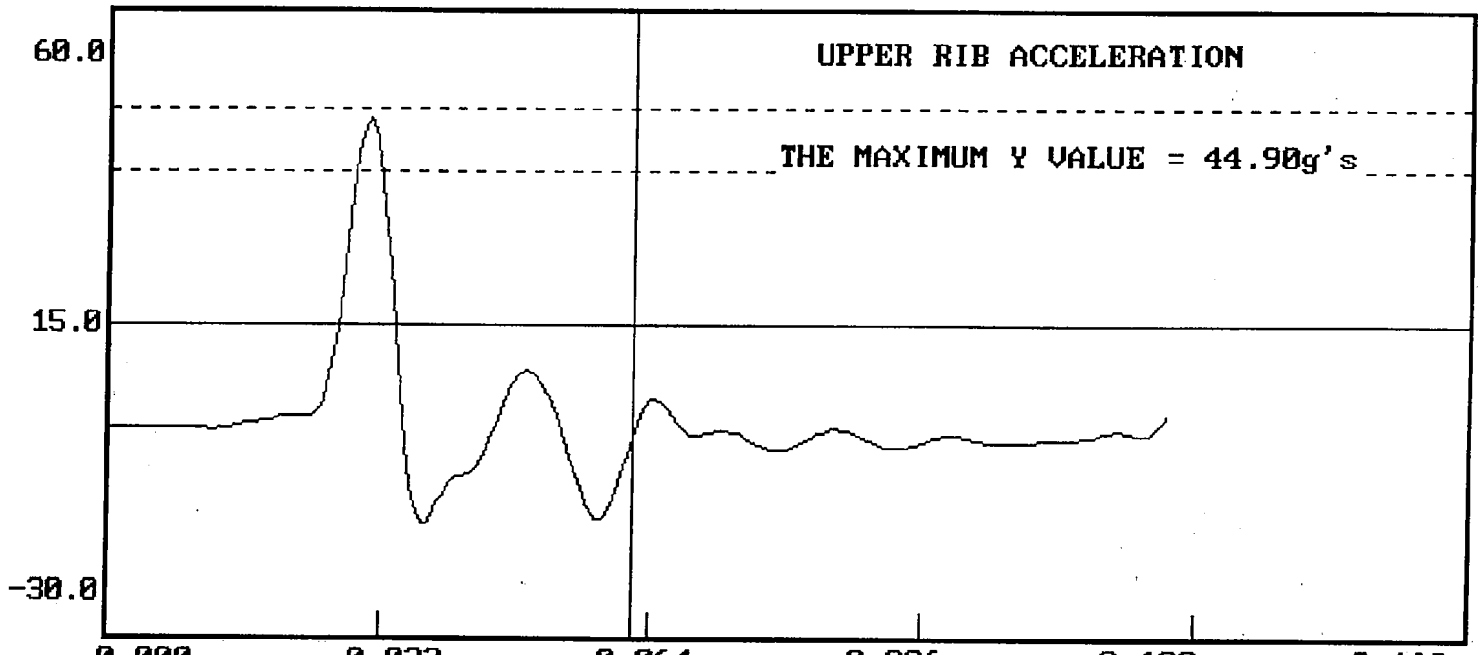
TEST MEETS SPECIFICATIONS

TECHNICIAN

APPROVED BY

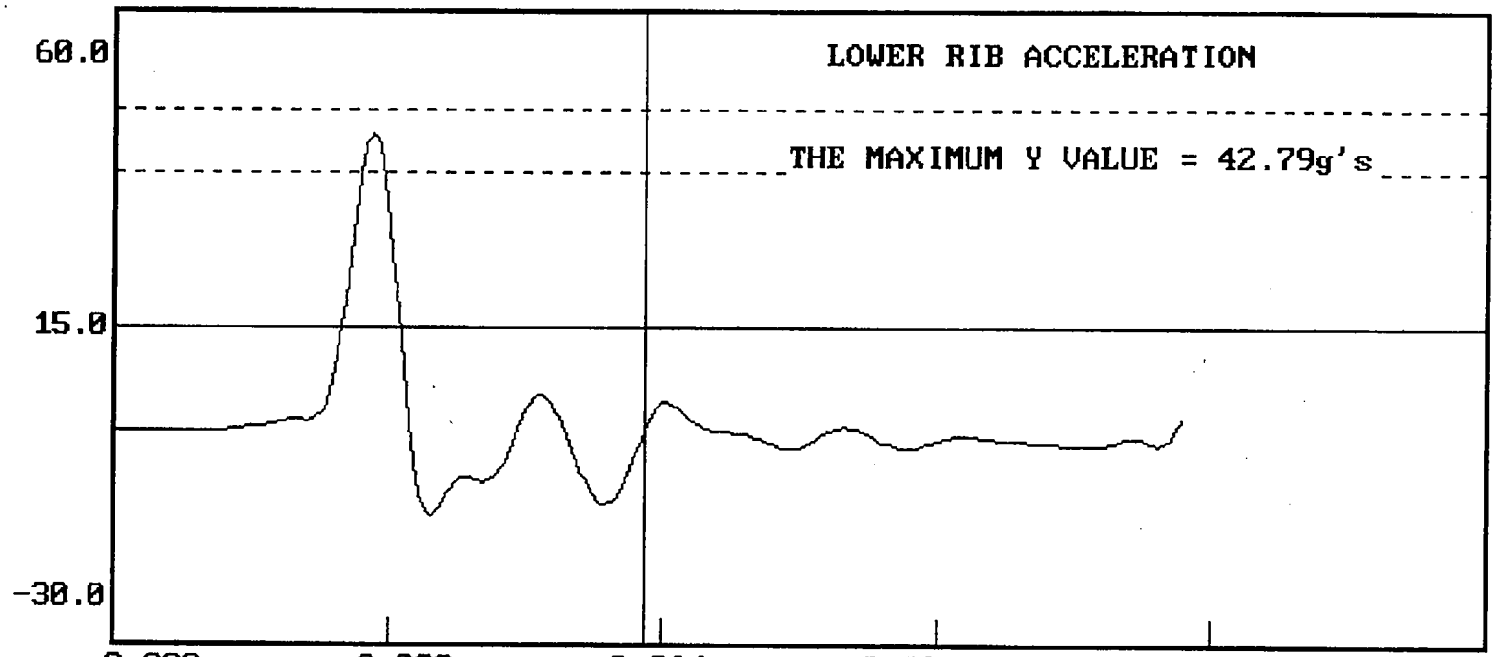
DUMMY CALIBRATION - THORAX IMPACT
DUMMY # 272
ACCELERATION (G'S) VS. TIME ((SECONDS))

12-06-1995 10:44



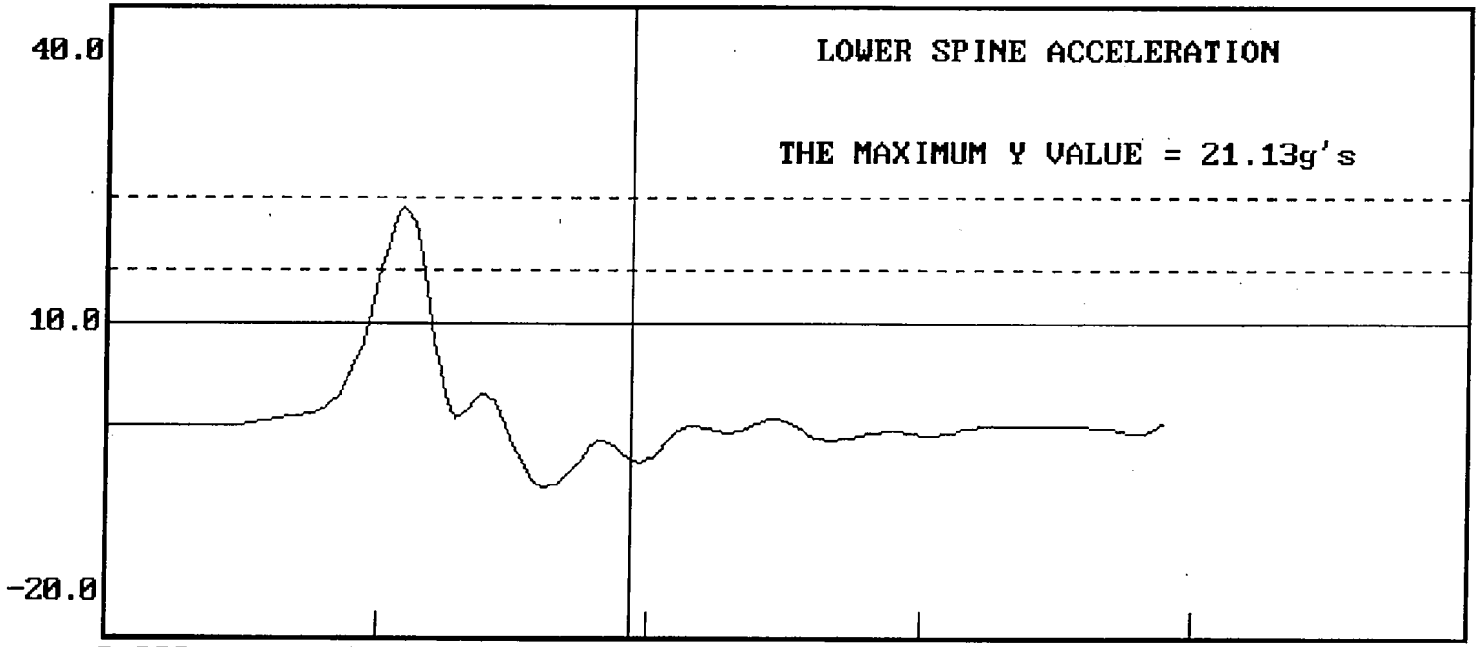
X = 0.618750E-01 Y = -.900555E+00
IMPACT SPEED = 13.95 FT/SEC

DUMMY CALIBRATION - THORAX IMPACT 12-06-1995 10:44
DUMMY # 272
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = 0.417776E+00
IMPACT SPEED = 13.95 FT/SEC

DUMMY CALIBRATION - THORAX IMPACT 12-06-1995 10:44
DUMMY # 272
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.301107E+01
IMPACT SPEED = 13.95 FT/SEC

MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: December 6, 1995

DUMMY NUMBER: 272 TEST NUMBER: D952023

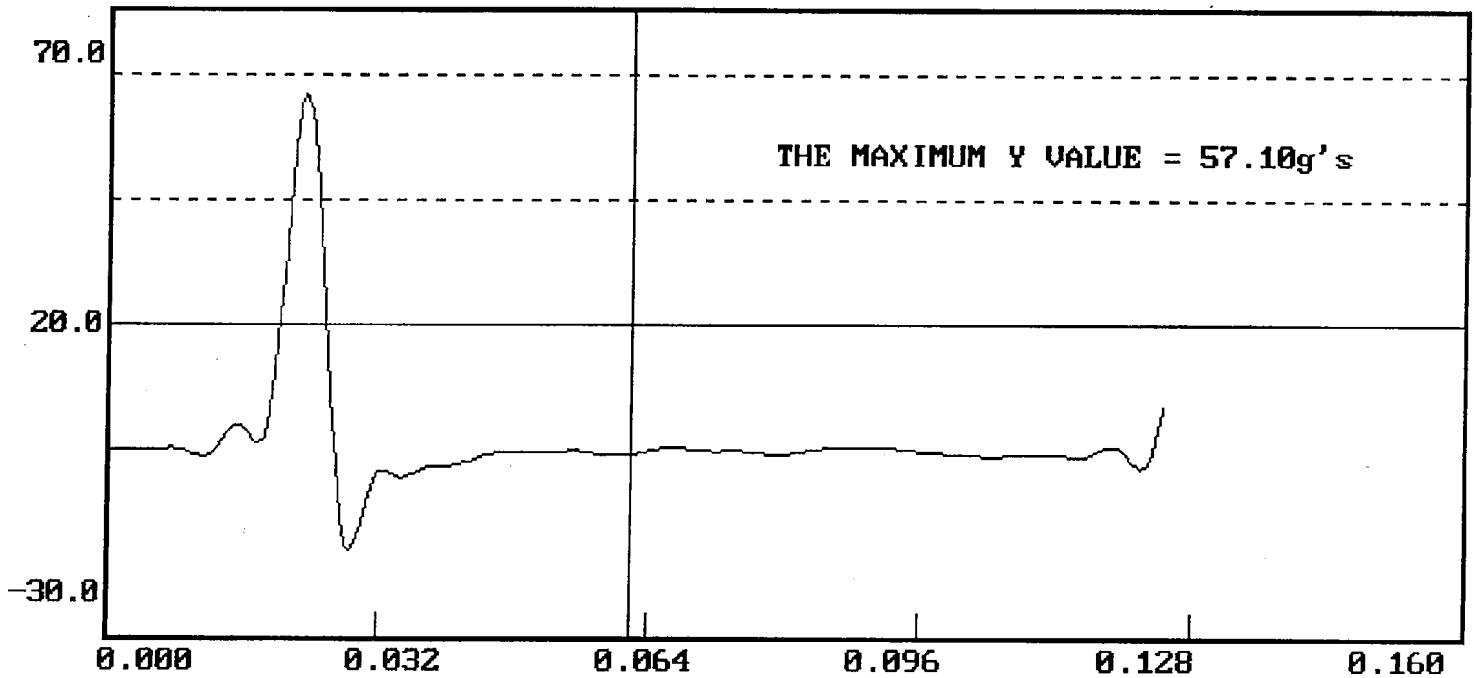
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	12%
PROBE SPEED	13.8 - 14.2 f/s	14.0
PELVIS ACCELERATION	40 - 60 g's	57

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

DUMMY CALIBRATION - PELVIS IMPACT 12-06-1995 11:16
DUMMY # 272
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.809648E+00
IMPACT SPEED = 13.95 FT/SEC

MGA RESEARCH CORPORATION

ABDOMINAL COMPRESSION TEST
(PRELOAD = 10 LBS)

SIDE IMPACT DUMMY (SID)

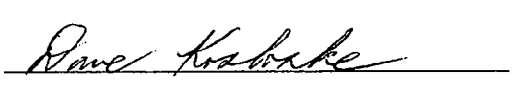
DATE: December 7, 1995

DUMMY NUMBER: 272 TEST NUMBER: D952024

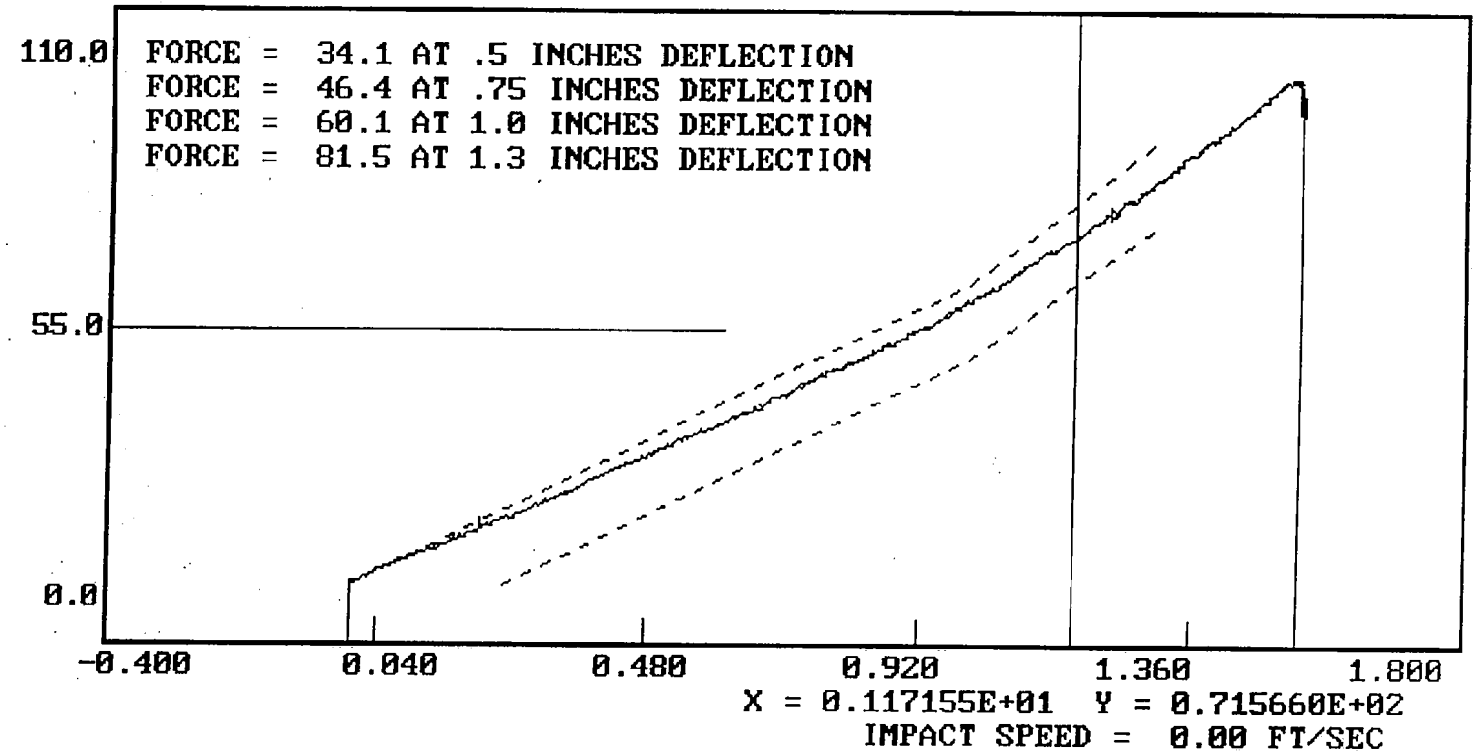
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	12%
FORCE @ 0.5 in	23.3 - 36.5 lbs	34.1
FORCE @ 0.75 in	36.7 - 49.8 lbs	46.4
FORCE @ 1.0 in	50 - 63 lbs	60
FORCE @ 1.3 in	73 - 88 lbs	82

TEST MEETS SPECIFICATIONS

TECHNICIAN 

APPROVED BY 

DUMMY CALIBRATION - ABDOMEN COMPRESSION 12-07-1995 16:53
DUMMY # 272
ABDOMEN FORCE (LBS) VS. ABDOMEN DISPLACEMENT (INCHES)



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: December 7, 1995

DUMMY NUMBER: 272 TEST NUMBER: D952025

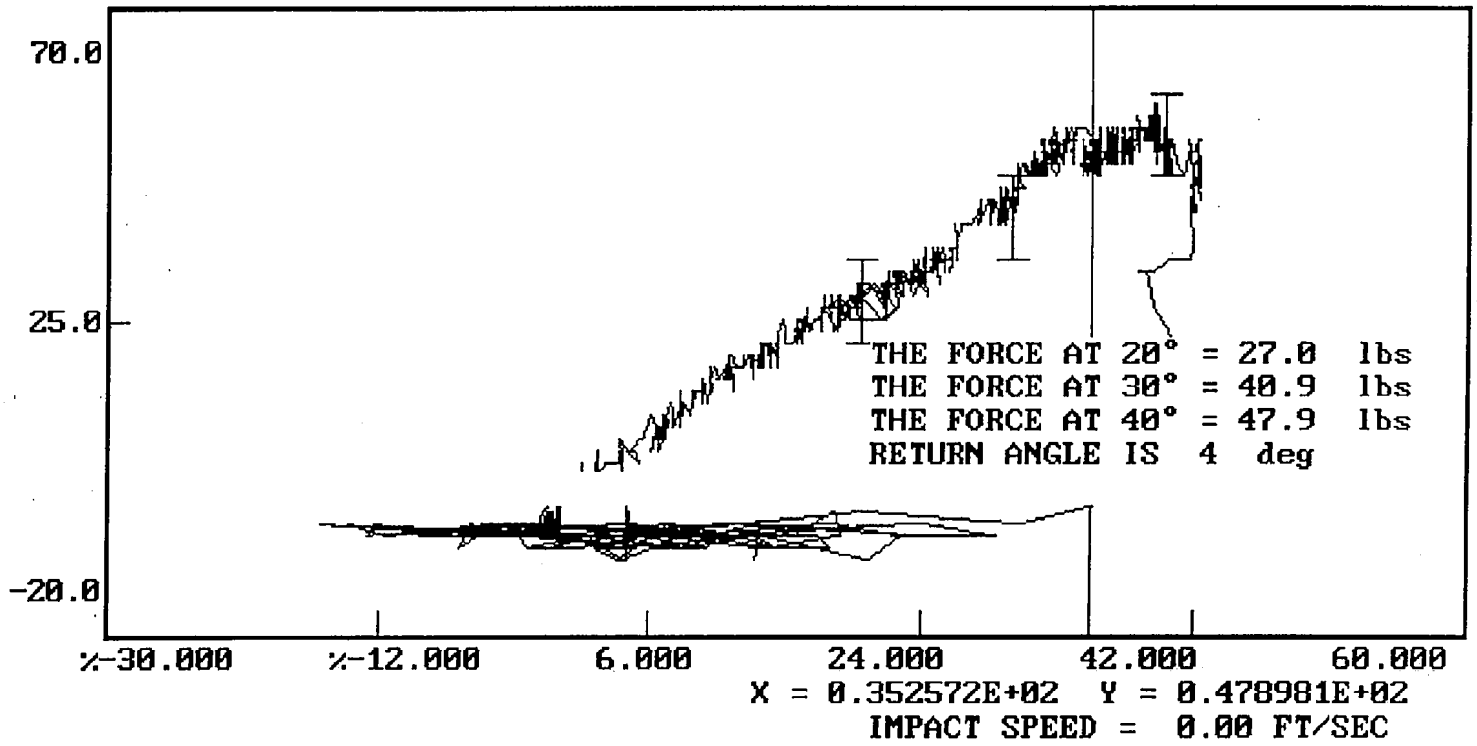
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	15%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	27
FORCE @ 30°	34 - 46 lbs	41
FORCE @ 40°	46 - 58 lbs	48
RETURN ANGLE	12° maximum	4°

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

DUMMY CALIBRATION - LUMBAR FLEXION 12-07-1995 08:07
DUMMY # 272
FORCE (LBS) VS. TORSO ROTATION (DEGREES)



POST-TEST CERTIFICATION DATA

Driver Dummy Serial Number: 269

Calibration Test Results Summary

Dummy Serial Number: 269

Post-Test Calibration

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

SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 269

DATE OF VERIFICATION: December 15, 1995

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH - Seated Height	35.0" - 35.8"	35.1
RH - Rib Height	19.75" - 20.50"	20.10
HP - Hip Pivot Height	3.9" ref.	3.9
RD - Rib From Back Line	9.0" to 9.5"	9.3
KV - Knee Pivot From Back Line	20.1" - 20.7"	20.5
SW - Knee Pivot to Floor	19.3" - 19.9"	19.4
HW - Hip Width	14.0" - 15.4"	15.1

MEASUREMENTS BY: _____

APPROVED BY: _____

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: December 15, 1995

DUMMY NUMBER: 269 TEST NUMBER: D952112

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

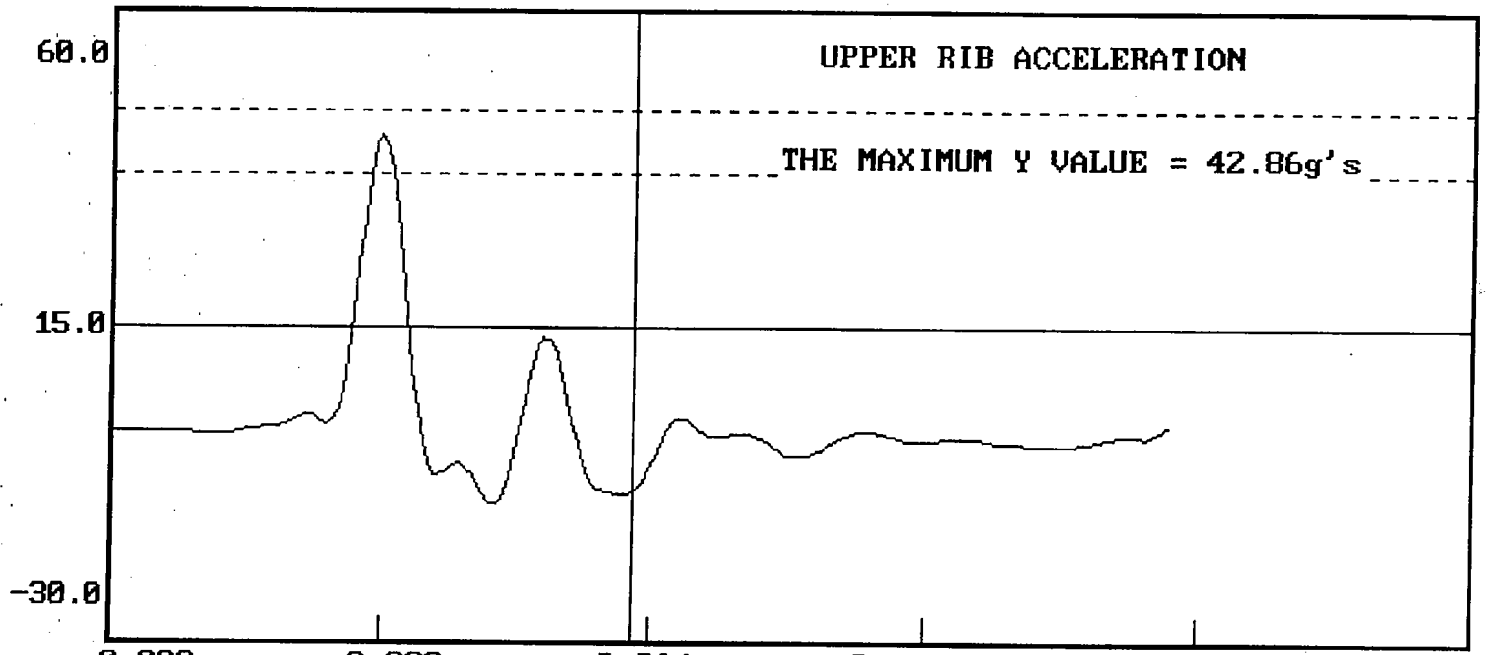
TEST MEETS SPECIFICATIONS

TECHNICIAN

APPROVED BY

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

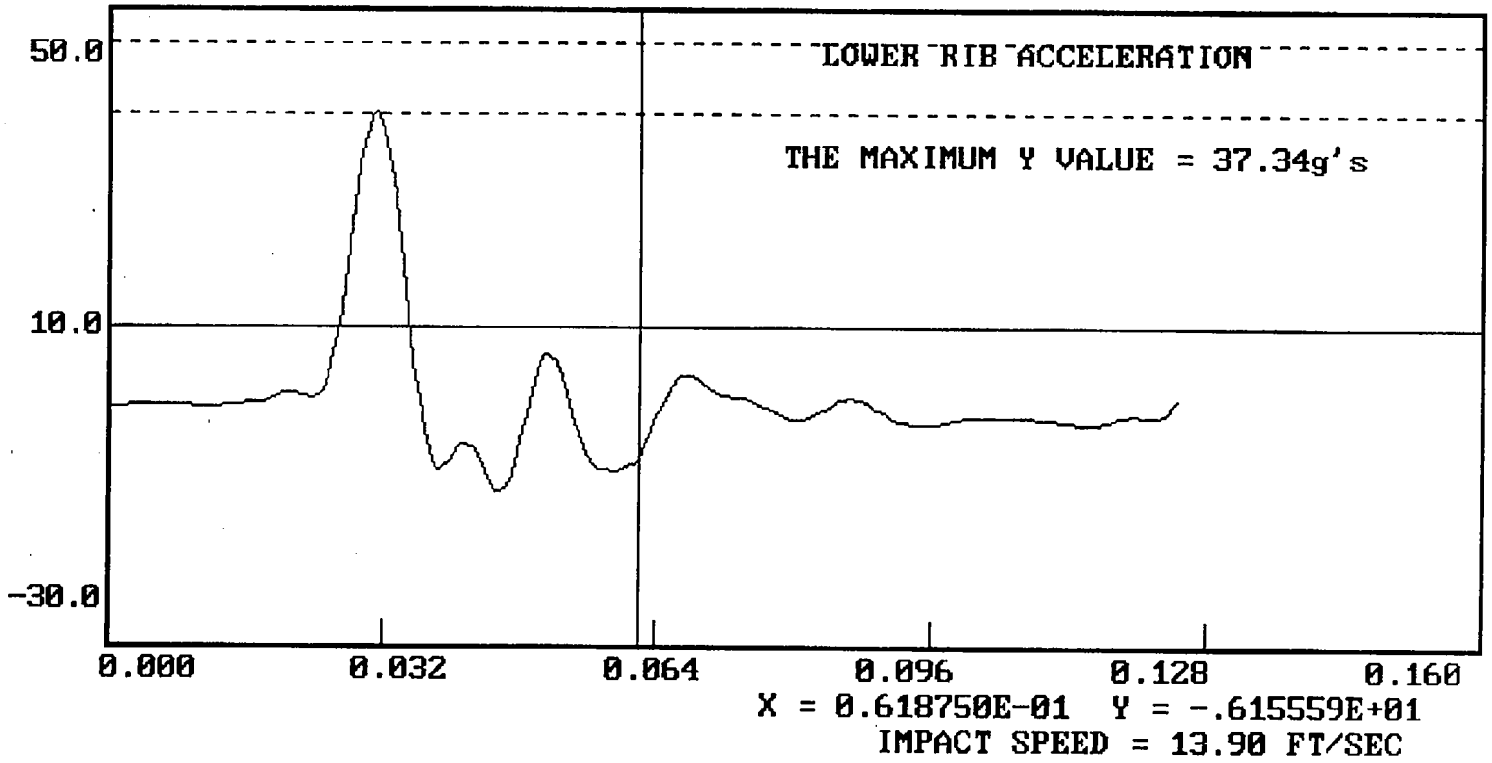
12-15-1995 15:23



X = 0.618750E-01 Y = -.856899E+01
IMPACT SPEED = 13.90 FT/SEC

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

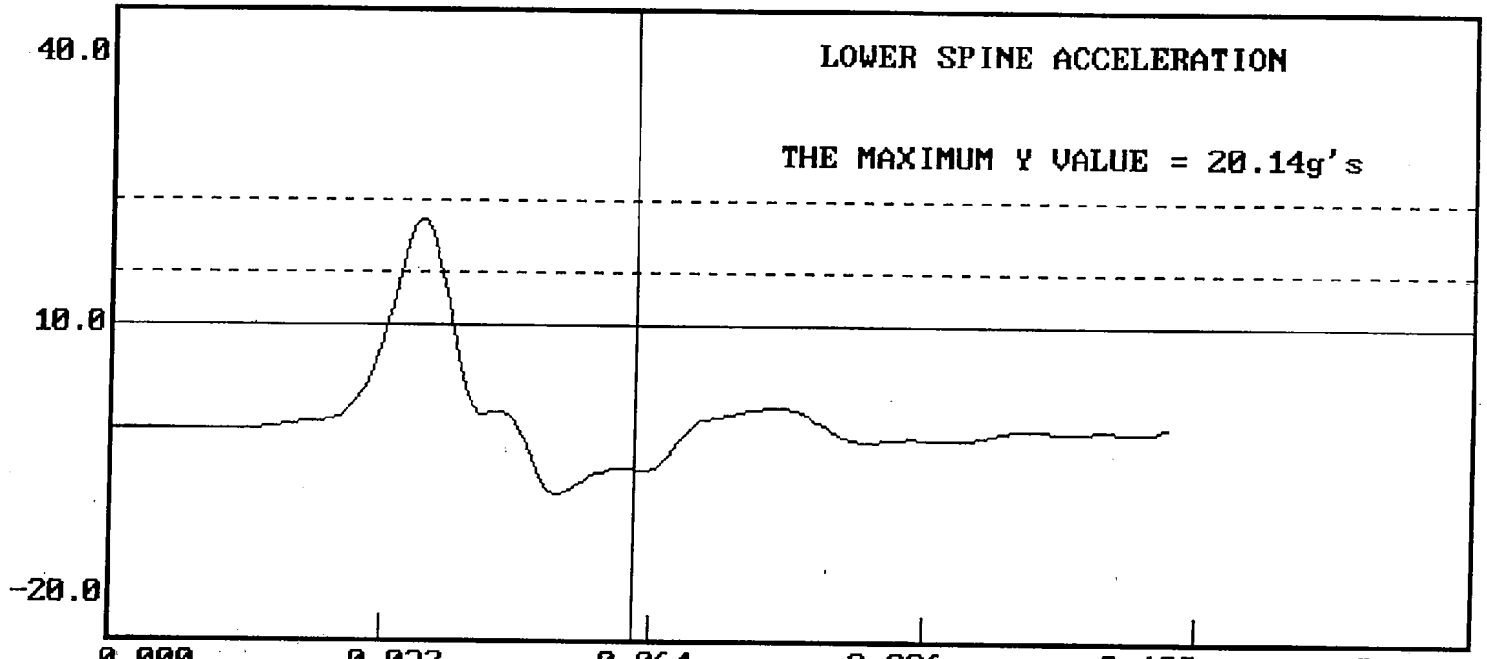
12-15-1995 15:23



X = 0.618750E-01 Y = -.615559E+01
IMPACT SPEED = 13.90 FT/SEC

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

12-15-1995 15:23



X = 0.618750E-01 Y = -.367026E+01
IMPACT SPEED = 13.90 FT/SEC

MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: December 15, 1995

DUMMY NUMBER: 269 TEST NUMBER: D952113

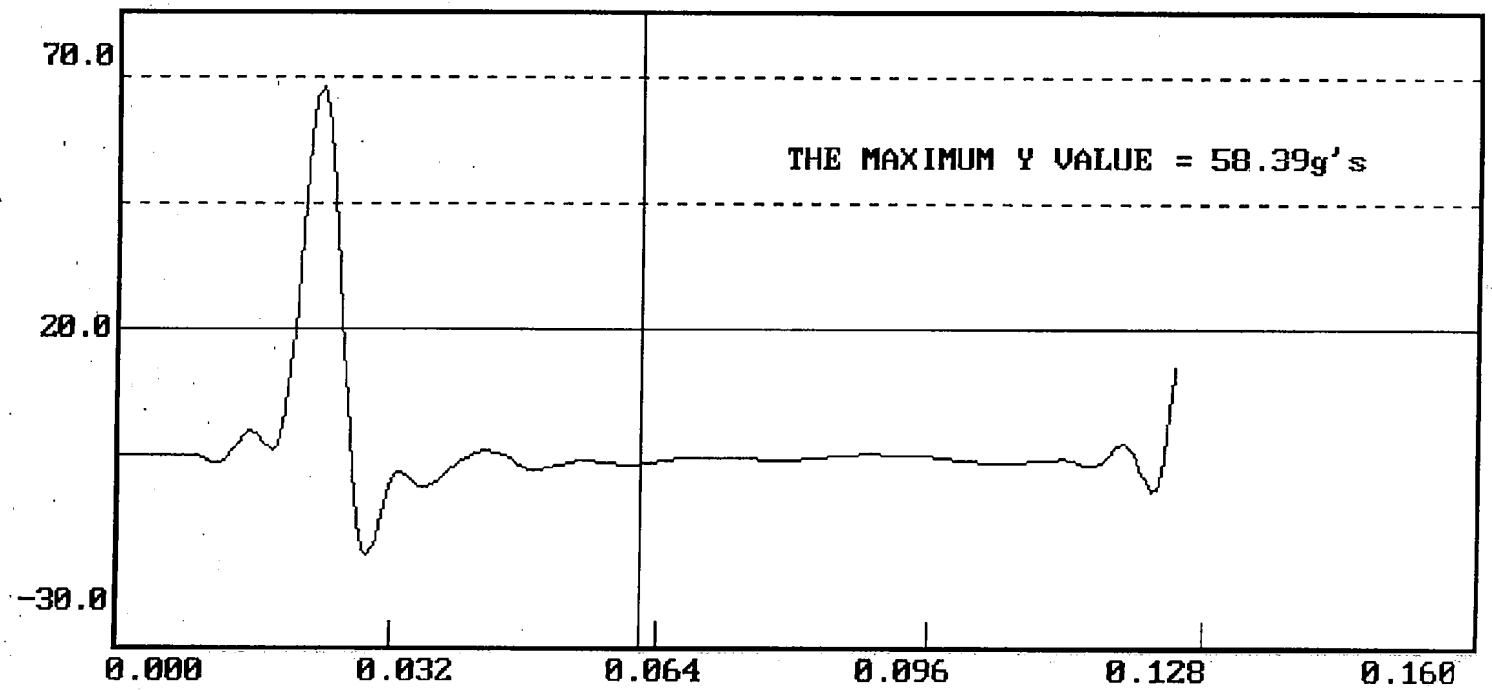
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
PROBE SPEED	13.8 - 14.2 f/s	14.0
PELVIS ACCELERATION	40 - 60 g's	58

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

DUMMY CALIBRATION - PELVIS IMPACT 12-15-1995 15:49
DUMMY # 269
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.139130E+01
IMPACT SPEED = 13.97 FT/SEC

MGA RESEARCH CORPORATION

ABDOMINAL COMPRESSION TEST
(PRELOAD = 10 LBS)

SIDE IMPACT DUMMY (SID)

DATE: December 15, 1995

DUMMY NUMBER: 269 TEST NUMBER: D952114

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
FORCE @ 0.5 in	23.3 - 36.5 lbs	35.6
FORCE @ 0.75 in	36.7 - 49.8 lbs	47.8
FORCE @ 1.0 in	50 - 63 lbs	61
FORCE @ 1.3 in	73 - 88 lbs	82

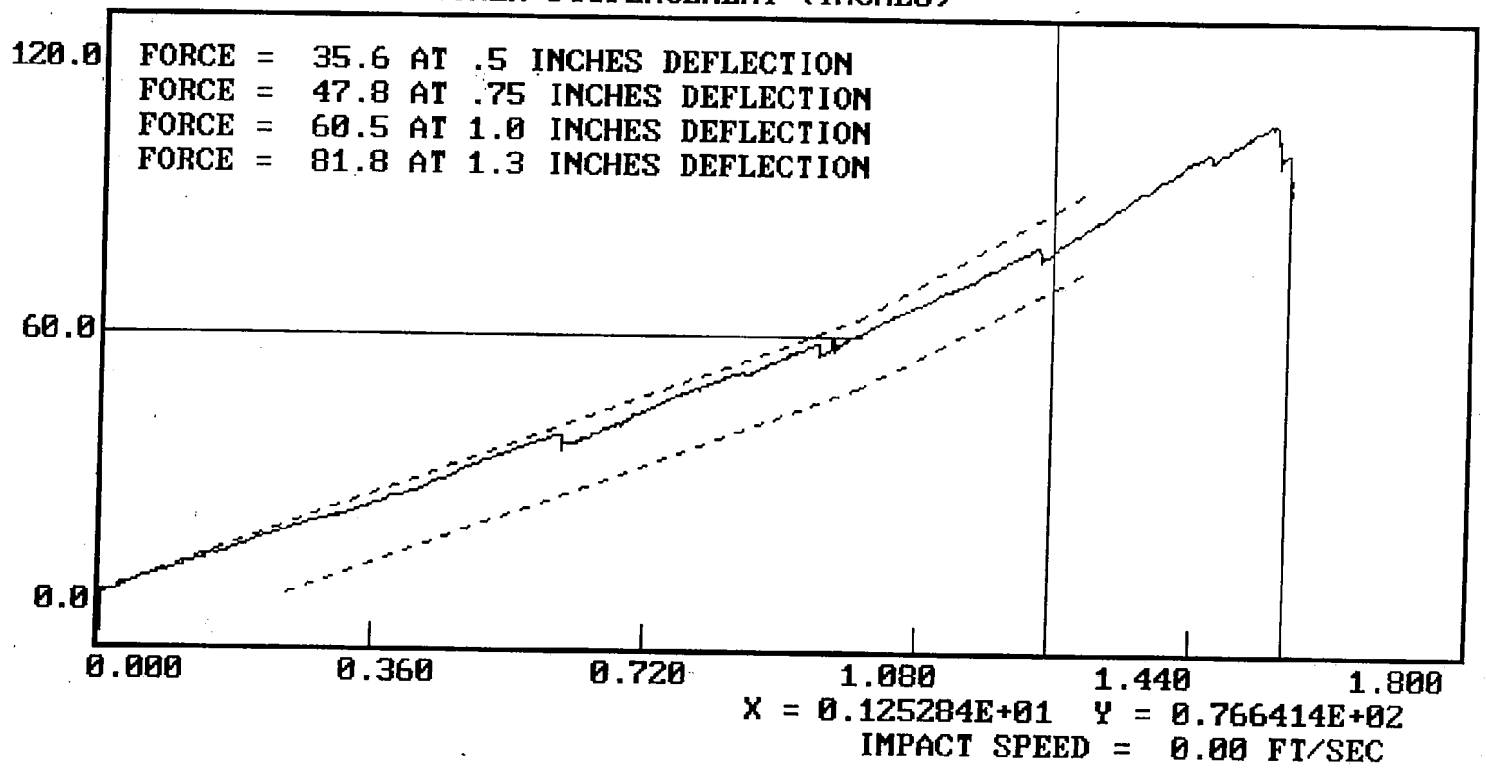
TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

DUMMY CALIBRATION - ABDOMEN COMPRESSION
DUMMY # 269
ABDOMEN FORCE (LBS) VS. ABDOMEN DISPLACEMENT (INCHES)

12-15-1995 09:21



X = 0.125284E+01 Y = 0.766414E+02
IMPACT SPEED = 0.00 FT/SEC

MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: December 15, 1995

DUMMY NUMBER: 269 TEST NUMBER: D952115

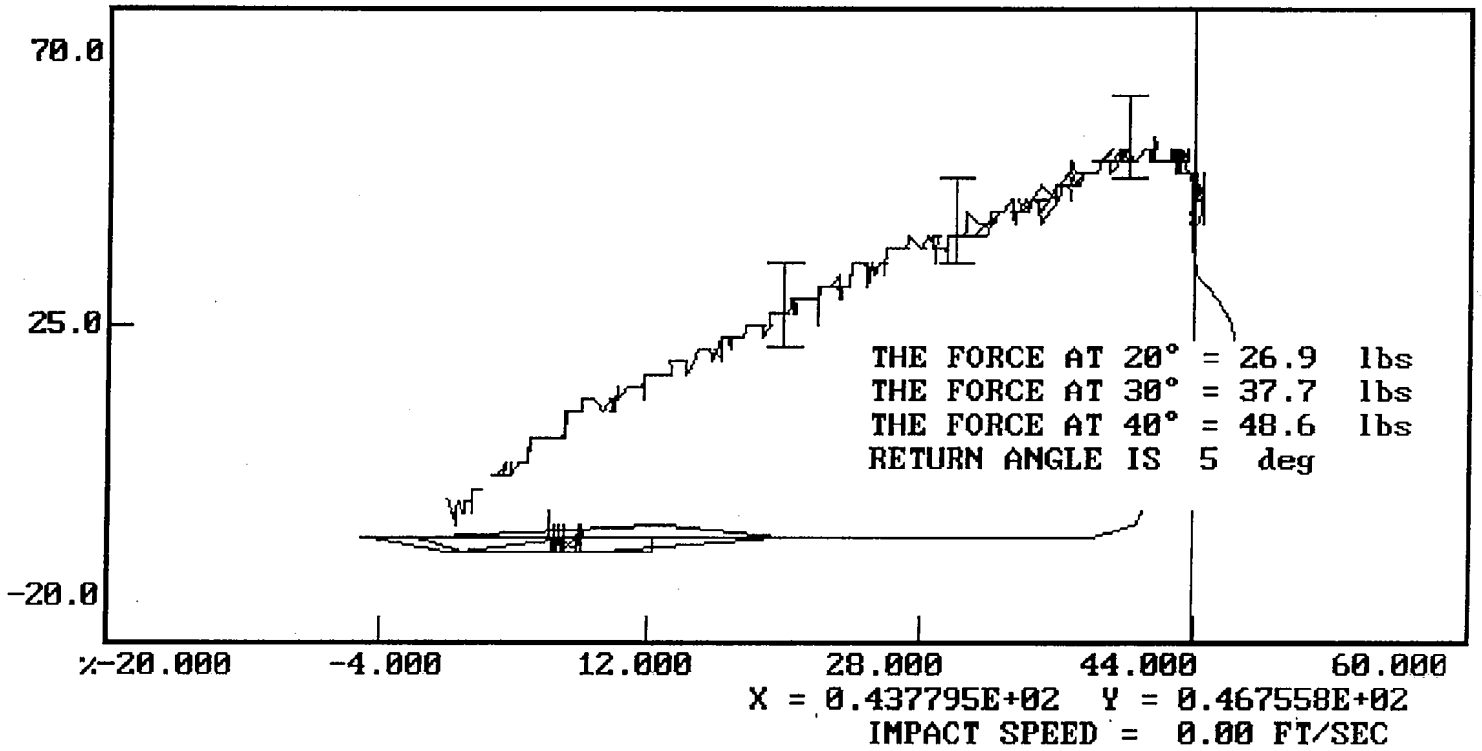
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	27
FORCE @ 30°	34 - 46 lbs	38
FORCE @ 40°	46 - 58 lbs	49
RETURN ANGLE	12° maximum	5°

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

DUMMY CALIBRATION - LUMBAR FLEXION 12-15-1995 14:17
DUMMY # 269
FORCE (LBS) VS. TORSO ROTATION (DEGREES)



X = 0.437795E+02 Y = 0.467558E+02
IMPACT SPEED = 0.00 FT/SEC

POST-TEST CERTIFICATION DATA

Passenger Dummy Serial Number: 272

Calibration Test Results Summary

Dummy Serial Number: 272

Post-Test Calibration

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

SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 272 DATE OF VERIFICATION: December 15, 1995

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH - Seated Height	35.0" - 35.8"	35.3
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"	9.5
KV - Knee Pivot From Back Line	20.1" - 20.7"	20.7
SW - Knee Pivot to Floor	19.3" - 19.9"	19.6
HW - Hip Width	14.0" - 15.4"	15.0

MEASUREMENTS BY: _____

APPROVED BY: _____

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: December 15, 1995

DUMMY NUMBER: 272 TEST NUMBER: D952122

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	12%
PROBE SPEED	13.8 - 14.2 fps	14.0
UPPER RIB	37 - 46 g's	45
LOWER RIB	37 - 46 g's	44
LOWER SPINE	15 - 22 g's	22

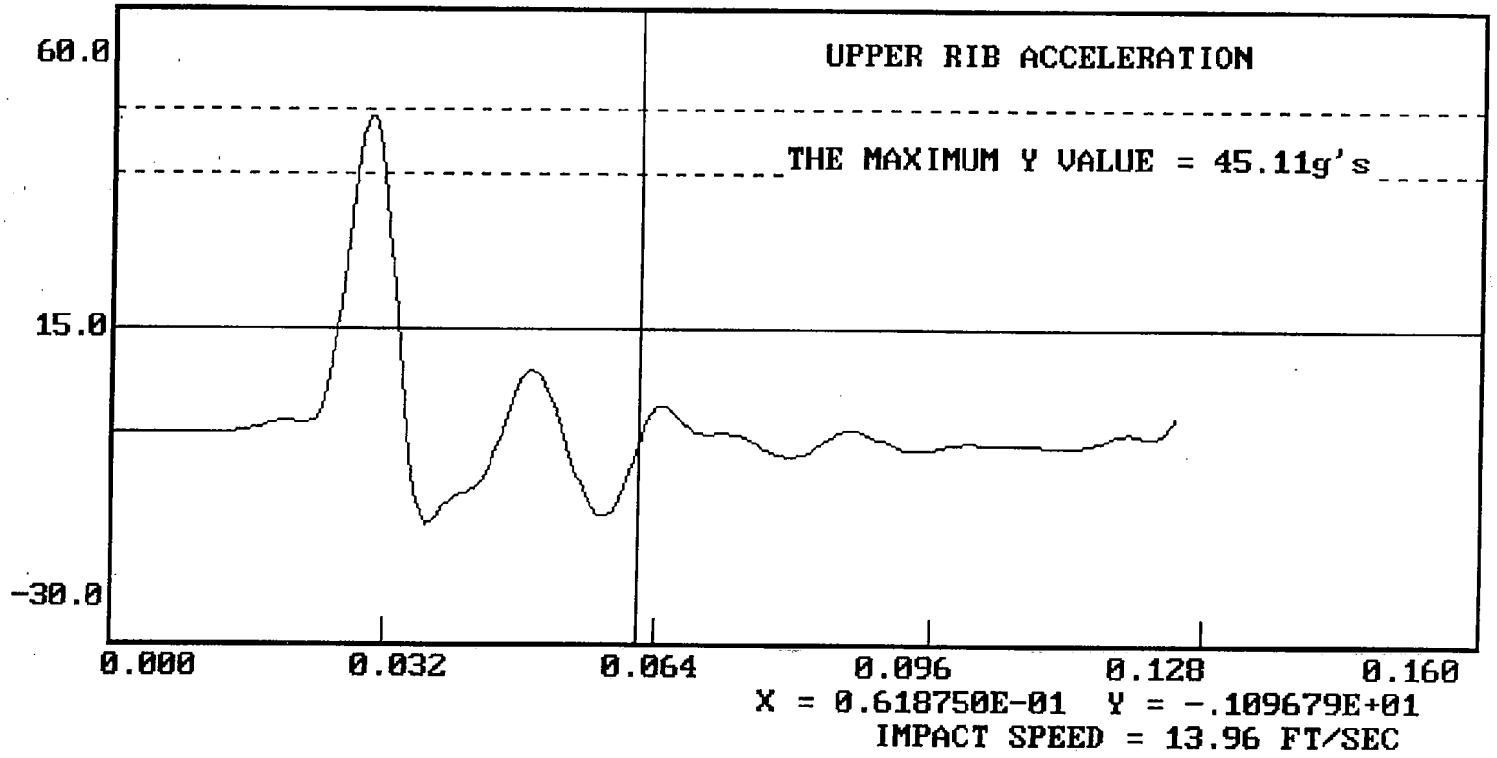
TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

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

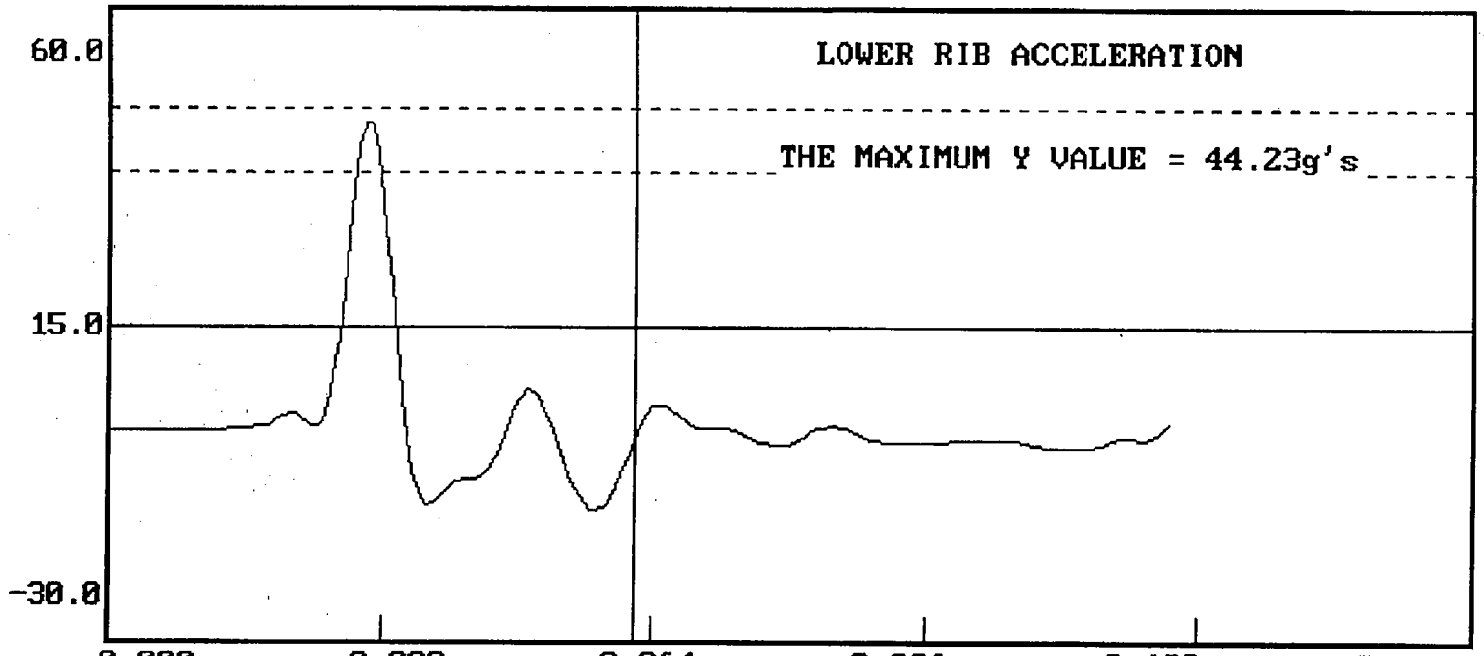
12-15-1995 16:19



X = 0.618750E-01 Y = -.109679E+01
IMPACT SPEED = 13.96 FT/SEC

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

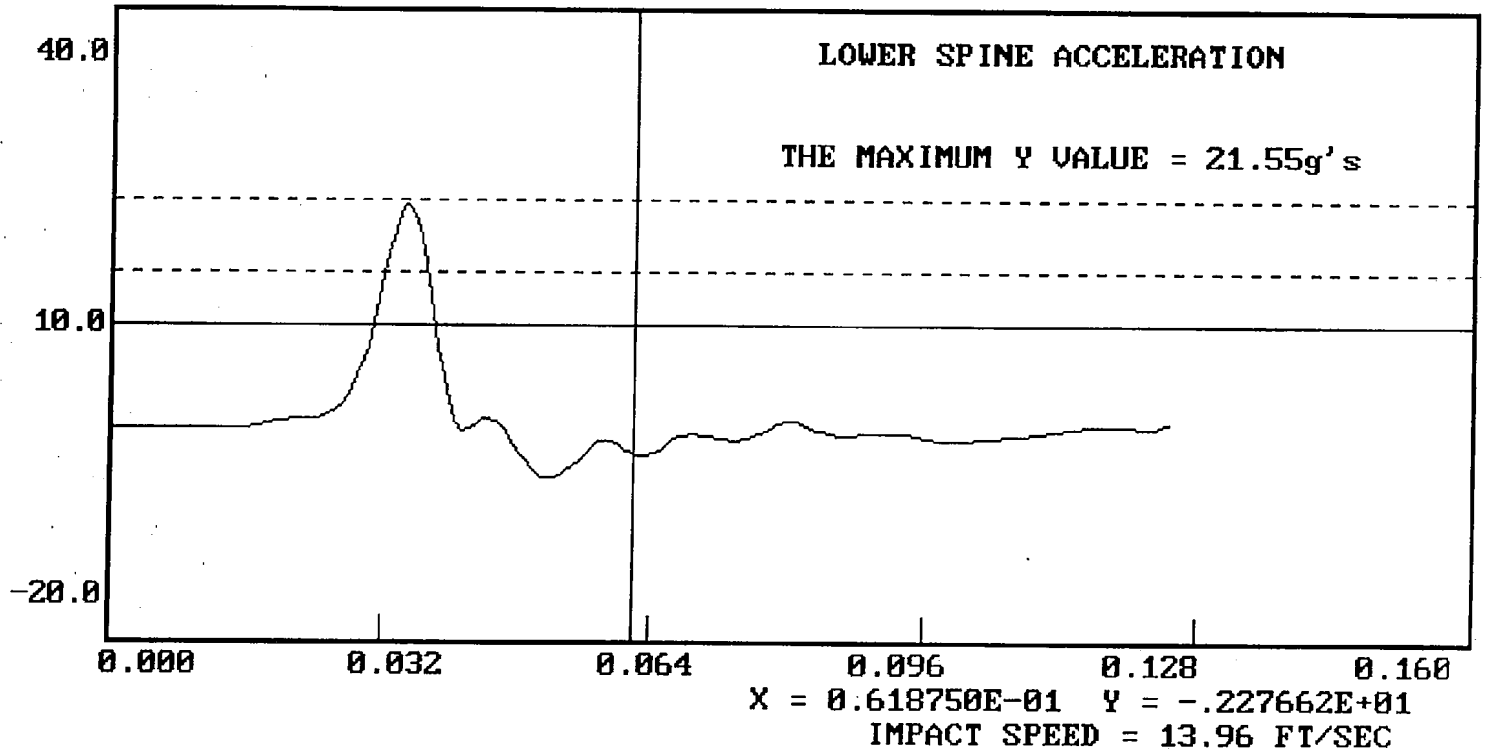
12-15-1995 16:19



X = 0.618750E-01 Y = -.934773E+00
IMPACT SPEED = 13.96 FT/SEC

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

12-15-1995 16:19



X = 0.618750E-01 Y = -.227662E+01
IMPACT SPEED = 13.96 FT/SEC

MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: December 15, 1995

DUMMY NUMBER: 272 TEST NUMBER: D952123

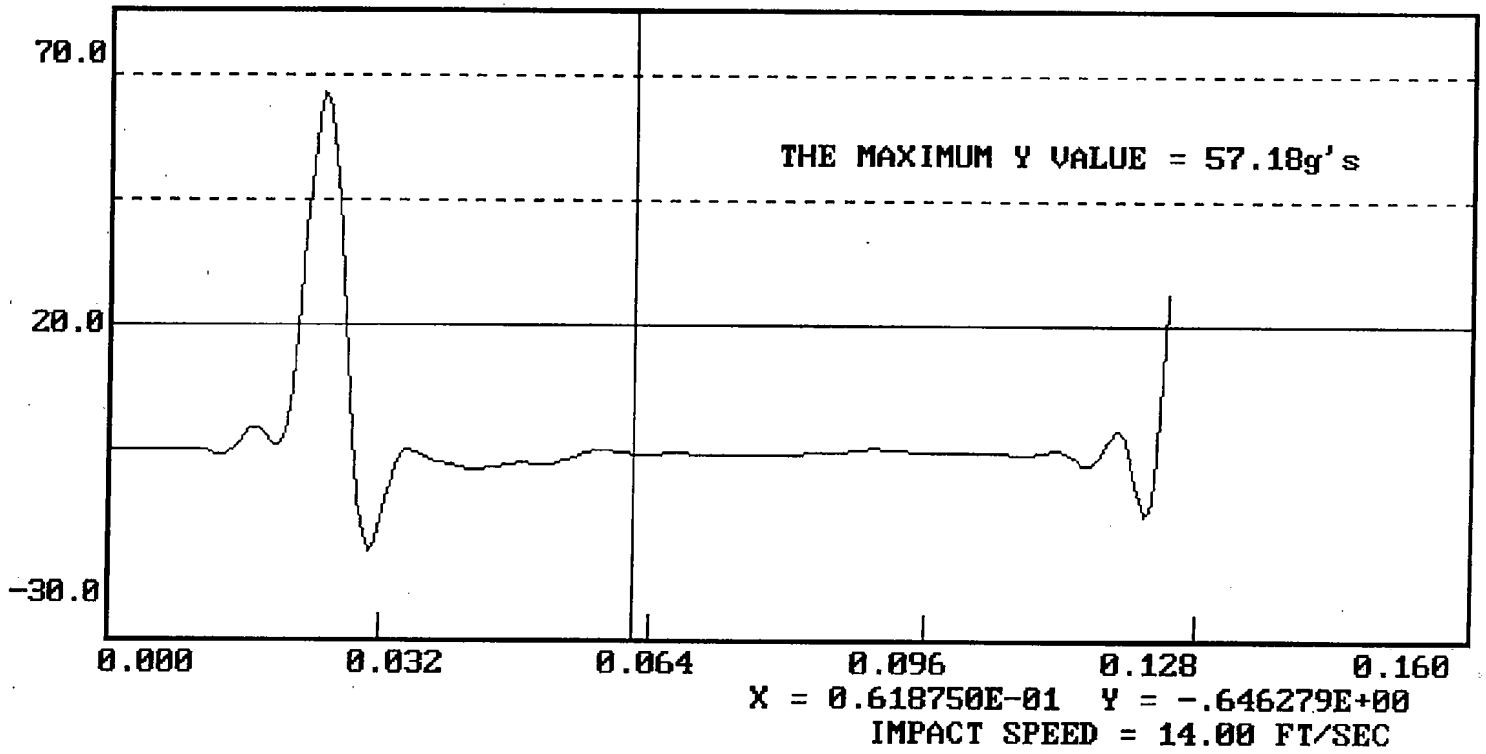
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
PROBE SPEED	13.8 - 14.2 f/s	14.0
PELVIS ACCELERATION	40 - 60 g's	57

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

DUMMY CALIBRATION - PELVIS IMPACT 12-15-1995 16:31
DUMMY # 272
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.646279E+00
IMPACT SPEED = 14.00 FT/SEC

MGA RESEARCH CORPORATION

ABDOMINAL COMPRESSION TEST
(PRELOAD = 10 LBS)

SIDE IMPACT DUMMY (SID)

DATE: December 15, 1995

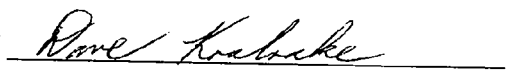
DUMMY NUMBER: 272

TEST NUMBER: D952124

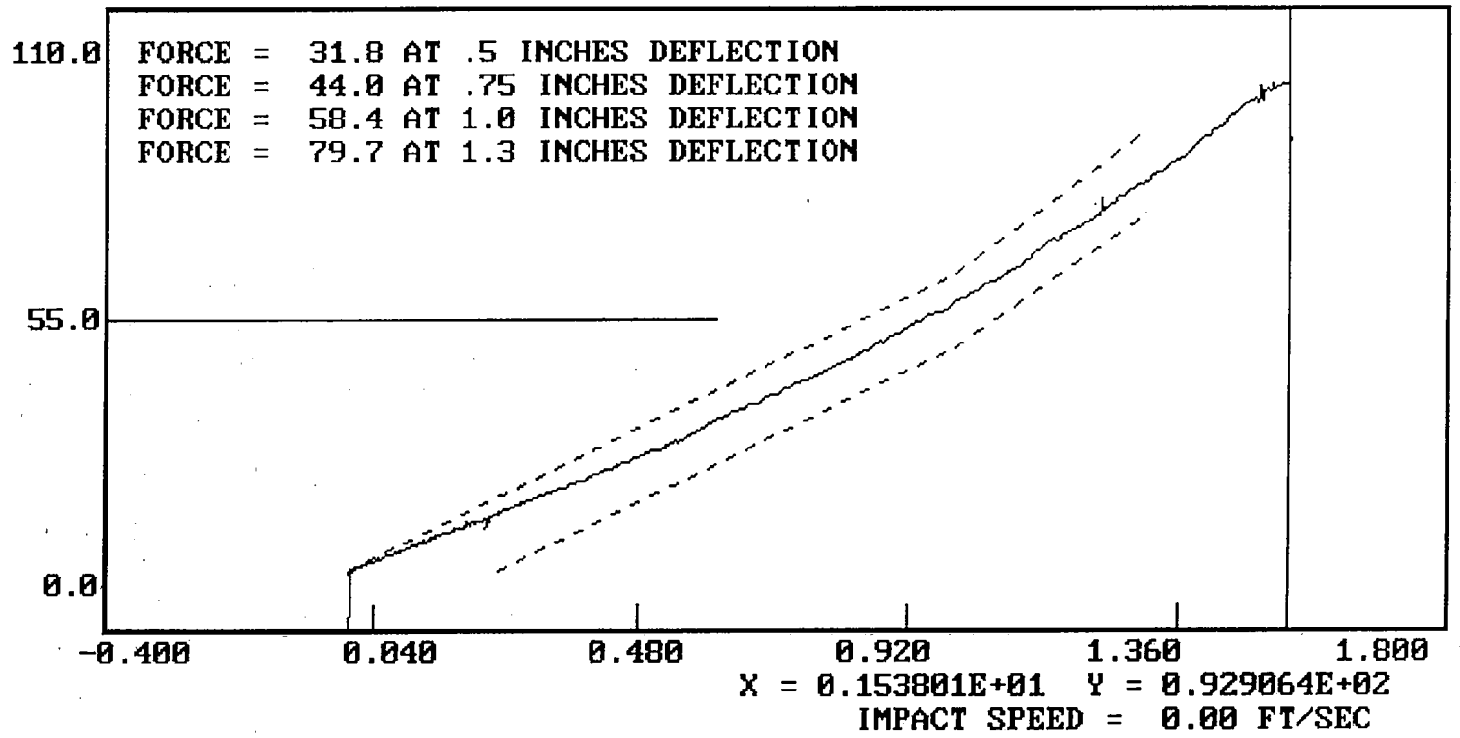
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
FORCE @ 0.5 in	23.3 - 36.5 lbs	31.8
FORCE @ 0.75 in	36.7 - 49.8 lbs	44.0
FORCE @ 1.0 in	50 - 63 lbs	58
FORCE @ 1.3 in	73 - 88 lbs	80

TEST MEETS SPECIFICATIONS

TECHNICIAN 

APPROVED BY 

DUMMY CALIBRATION - ABDOMEN COMPRESSION 12-15-1995 09:30
DUMMY # 272
ABDOMEN FORCE (LBS) VS. ABDOMEN DISPLACEMENT (INCHES)



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: December 15, 1995

DUMMY NUMBER: 272 TEST NUMBER: D952125

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	23
FORCE @ 30°	34 - 46 lbs	38
FORCE @ 40°	46 - 58 lbs	47
RETURN ANGLE	12° maximum	6°

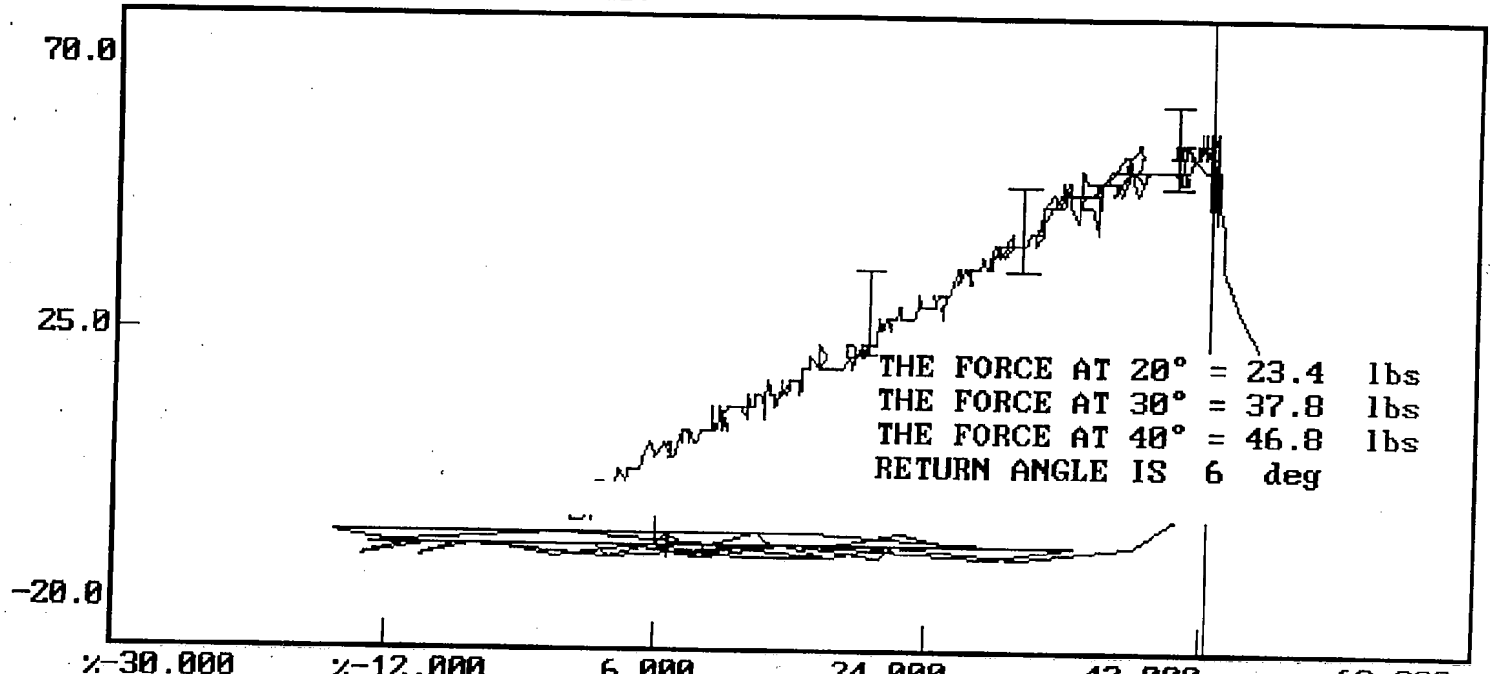
TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

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

12-15-1995 13:41



X = 0.424836E+02 Y = 0.468330E+02
IMPACT SPEED = 0.00 FT/SEC

POST-TEST DRIVER DUMMY INSPECTION CHECKLIST

Type: Side Impact Dummy

Serial Number: 269

Inspected By: Al Chalmers

Date: December 15, 1995

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

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

POST-TEST PASSENGER DUMMY INSPECTION CHECKLIST

Type: Side Impact Dummy

Serial Number: 272

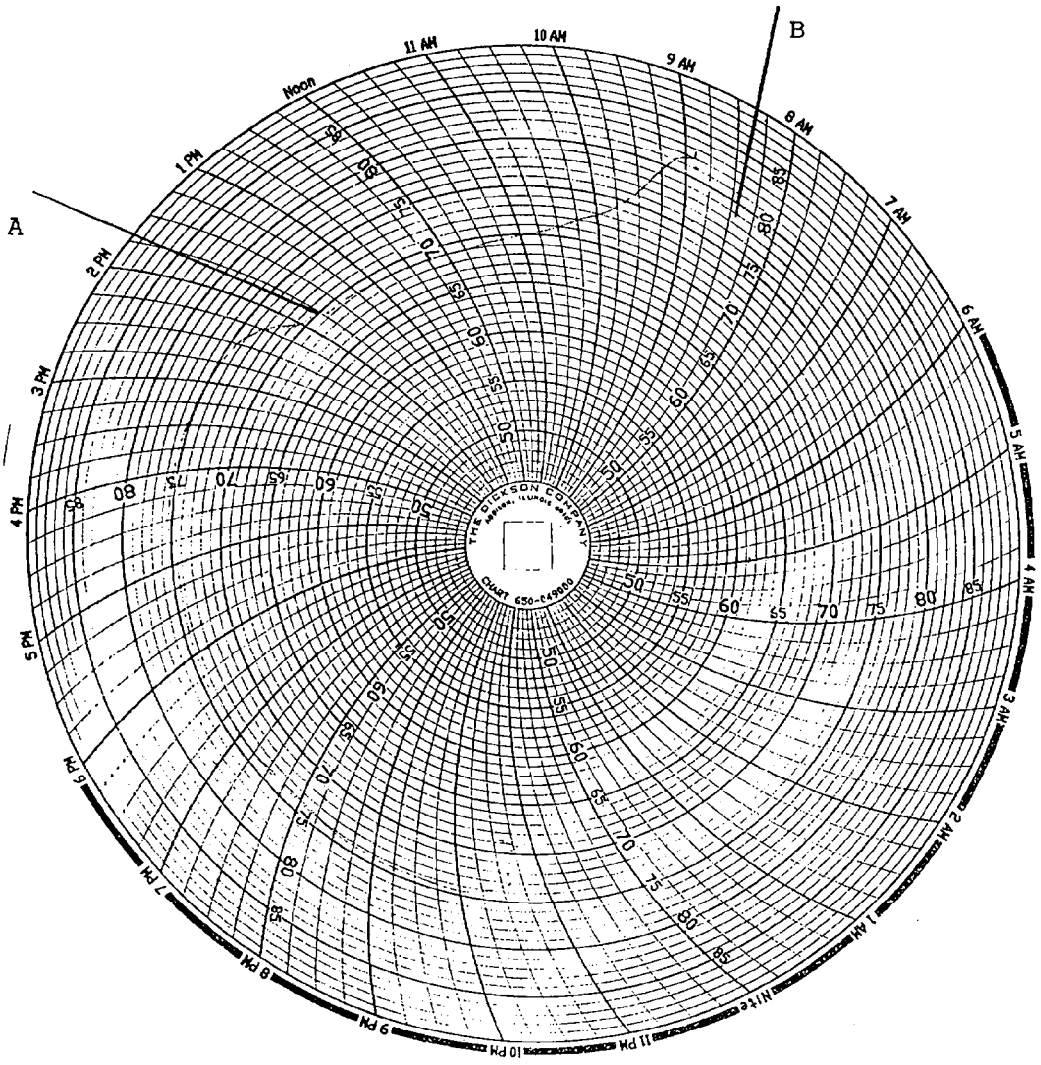
Inspected By: Al Chalmers

Date: December 15, 1995

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 = Test conducted

B = Dummies placed in vehicle

APPENDIX D

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

DUMMY AND VEHICLE CALIBRATION DATA

INSTRUMENTS FOR DRIVER DUMMY NO. 269

	DRIVER		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Upper Rib Y	AGTM2	Endevco	August 23, 1995
Lower Rib Y	ALEC1	Endevco	November 22, 1995
Lower Spine Y	AH1G2	Endevco	November 22, 1995
Pelvis Y	ALCN9	Endevco	August 08, 1995
Upper Rib Redundant Y	AGTB5	Endevco	August 23, 1995
Lower Rib Redundant Y	10411	Endevco	November 22, 1995
Lower Spine Redundant Y	AM751	Endevco	August 08, 1995
Pelvis Redundant Y	AKAF3	Endevco	August 08, 1995

INSTRUMENTS FOR PASSENGER DUMMY NO. 272

	LEFT REAR PASSENGER		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Upper Rib Y	AGTM8	Endevco	August 23, 1995
Lower Rib Y	APYR7	Endevco	September 06, 1995
Lower Spine Y	AP0H4	Endevco	September 06, 1995
Pelvis Y	APY15	Endevco	September 06, 1995
Upper Rib Redundant Y	AJ411	Endevco	August 23, 1995
Lower Rib Redundant Y	AJ8T5	Endevco	July 27, 1995
Lower Spine Redundant Y	AP0F6	Endevco	September 06, 1995
Pelvis Redundant Y	APY16	Endevco	September 06, 1995

VEHICLE INSTRUMENT CALIBRATION

	VEHICLE ACCELEROMETERS		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Moving Barrier CG X	L14-D14	Entran	October 24, 1995
Moving Barrier CG Y	L18-E07	Entran	October 23, 1995
Moving Barrier CG Z	C27-B02	Entran	September 28, 1995
Moving Barrier Rear Axle X	H07-A24	Entran	September 15, 1995
Moving Barrier Rear Axle Y	C06-G19	Entran	September 05, 1995
Left Mid A-Post Y	L14-D19	Entran	October 24, 1995
Left Lower A-Post Y	C25-A03	Entran	October 19, 1995
Left Lower B-Post Y	E13-D03	Entran	June 08, 1995
Rear Floorpan Above Axle X	D06-A19	Entran	June 09, 1995
Rear Floorpan Above Axle Y	C06-G19	Entran	September 05, 1995
Rear Floorpan Above Axle Z	E13-D18	Entran	Octomber 23, 1995
Driver Seat Track Y	H07-A17	Entran	September 29, 1995
Right Side Sill at Front Seat X	E13-D01	Entran	September 28, 1995
Right Side Sill at Front Seat Y	B02-G05	Entran	October 19, 1995
Right Side Sill at Front Seat Z	H07-A06	Entran	September 05, 1995
Right Side Sill at Rear Seat X	B12-G08	Entran	October 19, 1995
Right Side Sill at Rear Seat Y	E24-G10	Entran	June 28, 1995
Right Side Sill at Rear Seat Z	F07-A14	Entran	August 02, 1995
Left Side Sill at Front Seat Y	L18-F03	Entran	October 19, 1995

VEHICLE INSTRUMENT CALIBRATION

	VEHICLE ACCELEROMETERS		
	SERIAL NO	MANUFACTURER	CALIBRATION DATE
Left Side Sill at Rear Seat Y	H07-A15	Entran	September 05, 1995
Right Rear Occupant Compartment Y	C25-A07	Entran	September 01, 1995
Vehicle CG X	H16-X14	Entran	September 21, 1995
Vehicle CG Y	D06-A02	Entran	June 09, 1995
Vehicle CG Z	H16-X13	Entran	September 21, 1995

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