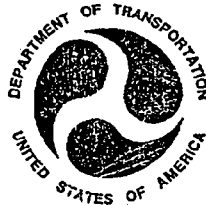


V2389

REPORT NO.: 214-MGA-96-013
SAFETY COMPLIANCE TESTING FOR
FMVSS 214 "SIDE IMPACT PROTECTION -
PASSENGER CARS"

HONDA MOTOR COMPANY
1996 HONDA ACCORD 2 DOOR
NHTSA NO: CT5306

MGA PROVING GROUNDS
5000 WARREN ROAD
BURLINGTON, WI 53105



Test Date: February 14, 1996

Report Date: February 16, 1996

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, SW ROOM 6115
WASHINGTON, D.C. 20590

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

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Approval Date: 3-11-96

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Acceptance Date: 3/19/96

TECHNICAL REPORT STANDARD TITLE PAGE

1. Report No. 214-MGA-96-013		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 Honda Accord 2 Door NHTSA No. CT5306				5. Report Date February 16, 1996																			
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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 February 14 to February 16, 1996																			
				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 Honda Accord 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 February 14, 1996. The impact velocity of the Moving Deformable Barrier (MDB) was 53.3 kph, and the ambient temperature at the struck side (driver's) of the target vehicle at the time of impact was 20°C. The target vehicle post test maximum crush was 382 mm at level 2. The test vehicle's performance follows: <table border="1"> <thead> <tr> <th></th> <th><u>DRIVER</u></th> <th><u>PASS.</u></th> </tr> </thead> <tbody> <tr> <td>Left Upper Rib (LUR) Accel., g</td> <td>58</td> <td>42</td> </tr> <tr> <td>Left Lower Rib (LLR) Accel., g</td> <td>62</td> <td>62</td> </tr> <tr> <td>Lower Spine (T₁₂) Accel., g</td> <td>81</td> <td>59</td> </tr> <tr> <td>Thoracic Trauma Index (TTI)</td> <td>71</td> <td>60</td> </tr> <tr> <td>Pelvis (PEV) Accel., g</td> <td>80</td> <td>66</td> </tr> </tbody> </table> 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.							<u>DRIVER</u>	<u>PASS.</u>	Left Upper Rib (LUR) Accel., g	58	42	Left Lower Rib (LLR) Accel., g	62	62	Lower Spine (T ₁₂) Accel., g	81	59	Thoracic Trauma Index (TTI)	71	60	Pelvis (PEV) Accel., g	80	66
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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																			
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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 Honda Accord 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 Honda Accord 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 33.15 mph (53.3 kph). The target vehicle was stationary and was positioned at an angle of 63° to the line of forward motion. The side impact test was conducted by MGA Research Corporation in Burlington, Wisconsin, on February 14, 1996. Pre- and post-test photographs of the test vehicle, the MDB and the side impact dummies (SIDs) are included in Appendix A.

Two Side Impact Dummies (SIDs) were placed in the driver and left rear designated seating positions according to instructions specified in the 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 (T₁₂) uniaxial accelerometer (Y-direction)
4. Pelvic (PEV) section uniaxial accelerometer (Y-direction)

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

The following table summarizes the results of the test:

Injury Criteria	Front SID	Rear SID
TTI (g)	71	60
Pelvis (g)	80	66

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/Honda/Accord/2 Door
Vehicle NHTSA No.: CT5306 VIN: 1HGCD7139TA012652
Vehicle Body Color: Green Build Date: 11-95
Engine Data: 4 Cylinders; CID; 2.2 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 47 miles
Options: X A/C; X Pwr. Steering; X Pwr. Brakes; X Pwr. Windows;
X Cruise Control; X Tilt Wheel; X Power Door Locks;

DATA FROM TIRE PLACARD:

Tire Pressure (at capacity): 32 Psi FRONT
32 Psi REAR
Recommended Tire Size: P185/65R15
Tires on Test Vehicle: P185/65R15 Manufacturer: Bridgestone

Vehicle Capacity Data:

Number of Occupants: 2 Front; 3 Rear; 3rd Seat 5 Total
Type of Front Seats: X Bucket; Bench; Split Bench
Type of Front Seat Back: Fixed; X Adjustable with X Lever
Vehicle Maximum Capacity Loading = 385 kg (A)
No. of Occupants x 68.04 kg. = 340 kg (B)
Cargo Capacity (A-B) = 45 kg

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

WEIGHT OF TEST VEHICLE WITH MAXIMUM FLUIDS:

Right Front	=	<u>397.8</u>	kg	Right Rear	=	<u>245.4</u>	kg
Left Front	=	<u>407.8</u>	kg	Left Rear	=	<u>244.9</u>	kg
TOTAL FRONT	=	<u>805.6</u>	kg	TOTAL REAR	=	<u>490.3</u>	kg
% of Total Vehicle Weight = <u>62.2</u> %;				% of Total Weight = <u>37.8</u> %			
TOTAL WEIGHT = <u>1295.9</u> kg							

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

Year/Make/Model/Body Style: 1996/Honda/Accord/2 Door

Vehicle NHTSA No.: CT5306 Test Date: February 14, 1996

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Test Vehicle Delivered Weight with Maximum Fluids = 1295.9 kg

Cargo Carrying Capacity of Test Vehicle = 45.0 kg

Weight of 2 Side Impact Dummies (2 x 80.7 kg.) = 161.4 kg

TEST VEHICLE TARGET WEIGHT = 1502.3 kg

ACTUAL WEIGHT OF TEST VEHICLE WITH 2 DUMMIES AND CARGO:

Right Front = 414.1 kg Right Rear = 311.6 kg

Left Front = 447.2 kg Left Rear = 324.8 kg

TOTAL FRONT = 861.3 kg TOTAL REAR = 636.4 kg

% of Total Weight = 57.5 % % of Total Weight = 42.5 %

TOTAL TEST WEIGHT = 1497.7 kg

TEST VEHICLE ATTITUDE:

CURB WEIGHT ATTITUDE:

Right Front 700 mm Left Front 695 mm Right Rear 694 mm Left Rear 689 mm

FULLY LOADED WEIGHT ATTITUDE:

Right Front 694 mm Left Front 677 mm Right Rear 666 mm Left Rear 642 mm

TEST ATTITUDE:

Right Front 688 mm Left Front 684 mm Right Rear 666 mm Left Rear 650 mm

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

Test Vehicle Wheelbase: 2710 mm

C.G. = 1152 mm rearward of front wheel centerline

TOTAL VEHICLE LENGTH:

Right Side = 4345 mm

Centerline = 4541 mm

Left Side = 4345 mm

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

Year/Make/Model/Body Style: 1996/Honda/Accord/2 Door

Vehicle NHTSA No.: CT5306 Test Date: February 14, 1996

FRONT SEAT CUSHION PLACEMENT:

Total Length of Adjustment Travel: 200 mm

Test Position: 11th detent forward out of 21 total

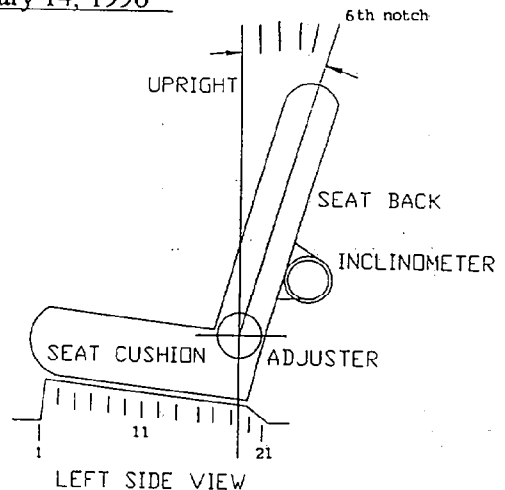
FRONT SEAT BACK ADJUSTMENT POSITION:

Seat Back Angle = 6th notch

SECOND POSITION SEAT:

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

Seat Back Adjustment Position: Non-Adjustable



ADJUSTABLE STEERING COLUMN POSITION: Non-Adjustable

WINDOW POSITIONS: Left Front Closed Left Rear Closed
Right Front Open Right Rear Open

AMOUNT OF STODDARD SOLVENT IN FUEL TANK:

Fuel system usable capacity = 64 liters

Test Volume: 60 liters 94 % of capacity

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

Wheelbase: = 2710 mm

Impact Point is 415 mm rearward of front axle centerline

DATA SHEET NO. 2

TEST VEHICLE SUMMARY OF RESULTS

Year/Make/Model/Body Style: 1996/Honda/Accord/2 Door

Vehicle NHTSA No.: CT5306 Test Date: February 14, 1996

Overall Length = 4541 mm; Overall Width = 1773 mm

TEST WEIGHT:

Right Front = 414.1 kg Right Rear = 311.6 kg

Left Front = 447.2 kg Left Rear = 324.8 kg

TOTAL FRONT = 861.3 kg TOTAL REAR = 636.4 kg

% of Total Weight = 57.5 % % of Total Weight = 42.5 %

TOTAL VEHICLE WEIGHT = 1497.7 kg

Wheelbase = 2710 mm

Longitudinal C.G. from Center of Front Axle = 1152 mm

Impact Angle with Respect to Impactor = 90° degrees

MAXIMUM EXTERIOR STATIC CRUSH:

1. LEVEL 1 (280 mm above ground) = 271 mm

2. LEVEL 2 (445 mm above ground) = 382 mm

3. LEVEL 3 (605 mm above ground) = 346 mm

4. LEVEL 4 (850 mm above ground) = 274 mm

5. LEVEL 5 (1300 mm above ground) = 96 mm

Maximum Post-Test Intrusion = 382 mm

OCCUPANTS:

Left Front Passenger Left Rear Passenger

Type of Dummy SID SID

Restraints Used type II belt type II belt

system system

TEST VEHICLE SUMMARY OF RESULTS (Cont'd)

INSTRUMENTATION:

Number of Vehicle Data Channels:	=	<u>20</u>
Number of Cameras: Onboard Vehicle	=	<u>3</u>
Offboard Vehicle	=	<u>4</u>
Deformable Barrier	=	<u>2</u>
TOTAL	=	<u>9</u>

DATA SHEET NO. 3

MOVING DEFORMABLE BARRIER (MDB) SUMMARY OF RESULTS

Year/Make/Model/Body Style: 1996/Honda/Accord/2 Door

Vehicle NHTSA No.: CT5306 Test Date: February 14, 1996

POSITION OF IMPACT (MDB) ON MONORAIL:

Crabbed 27° to left

MDB DETAILS:

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

MDB WEIGHT:

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

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

Impact Speed = Primary: 33.15 mph (53.3 kph) Secondary: 33.3 mph (53.4 kph)

CRASH TEST SUMMARY FOR SIDE IMPACTOR (Cont'd)

MAXIMUM STATIC CRUSH OF HONEYCOMB IMPACT FACE:

- | | | | | |
|----|---------------------------------|---|------------|----|
| 1. | Row A Top of Stack (813 mm) | = | <u>138</u> | mm |
| 2. | Row B Mid Stack (686 mm) | = | <u>77</u> | mm |
| 3. | Row C Top of Bumper (533 mm) | = | <u>46</u> | mm |
| 4. | Row D Center of Bumper (432 mm) | = | <u>71</u> | mm |

INSTRUMENTATION:

Number of MDB Data Channels = 7

DATA SHEET NO. 3

MOVING DEFORMABLE BARRIER (MDB) SUMMARY OF RESULTS

Year/Make/Model/Body Style: 1996/Honda/Accord/2 Door

Vehicle NHTSA No.: CT5306 Test Date: February 14, 1996

POSITION OF IMPACT (MDB) ON MONORAIL:

Crabbed 27° to left

MDB DETAILS:

Overall Width of Framework Carriage	= <u>1252 mm</u>
Overall Length of MDB (incl. honeycomb impact face)	= <u>4115 mm</u>
Wheelbase of Framework Carriage	= <u>2591 mm</u>
Tread of Framework Carriage (Front & Rear)	= <u>1880 mm</u>
C.G. Location Rearward of Front Axle	= <u>1102 mm</u>
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MDB WEIGHT:

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

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

Impact Speed = Primary: 33.15 mph (53.3 kph) Secondary: 33.3 mph (53.4 kph)

CRASH TEST SUMMARY FOR SIDE IMPACTOR (Cont'd)

MAXIMUM STATIC CRUSH OF HONEYCOMB IMPACT FACE:

- | | | | | |
|----|---------------------------------|---|------------|----|
| 1. | Row A Top of Stack (813 mm) | = | <u>138</u> | mm |
| 2. | Row B Mid Stack (686 mm) | = | <u>77</u> | mm |
| 3. | Row C Top of Bumper (533 mm) | = | <u>46</u> | mm |
| 4. | Row D Center of Bumper (432 mm) | = | <u>71</u> | mm |

INSTRUMENTATION:

Number of MDB Data Channels = 7

DATA SHEET NO. 4
POST-TEST OBSERVATIONS

Year/Make/Model/Body Style: 1996/Honda/Accord/2 Door

Vehicle NHTSA No.: CT5306 Test Date: February 14, 1996

VISIBLE DUMMY CONTACT POINTS:

	<u>LEFT FRONT SID</u>	<u>LEFT REAR SID</u>
Head	<u>to window sill, shoulder</u>	<u>to C Post</u>
Arm	<u>to door panel</u>	<u>to side panel</u>
Pelvis	<u>to door panel</u>	<u>to side panel</u>
Left Knee	<u>to door panel</u>	<u>to side panel, B post</u>
Right Knee	<u>to left knee</u>	<u>to left knee</u>

DOOR OPENING:

	<u>LEFT SIDE</u>	<u>RIGHT SIDE</u>
Front	<u>remained closed</u>	<u>remained closed</u>
Rear	<u>N/A</u>	<u>N/A</u>

MDB DISTANCE FROM TARGET IMPACT POINT:

Horizontal: 11 mm forward Vertical: 5 mm high

ARM REST LOCATIONS:

Front: 265 mm Below window opening
Rear: 310 mm Below window opening

POST-TEST OBSERVATIONS (Cont'd)

SEAT CRUSH:

Front Seat Back: 44 mm Front Seat Cushion: 106 mm

Left Rear Seat Back: 83 mm Rear Seat Cushion: 186 mm

GLAZING DAMAGE:

Windshield cracked, both left side windows broke

PILLAR PERFORMANCE:

No failure noted

SILL SEPARATION:

No failure noted

OTHER NOTABLE IMPACT EFFECTS:

Both airbags deployed, fuel filler door and trunk opened

SECTION 4
OCCUPANT AND VEHICLE INFORMATION

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

Year/Make/Model/Body Style: 1996/Honda/Accord/2 Door

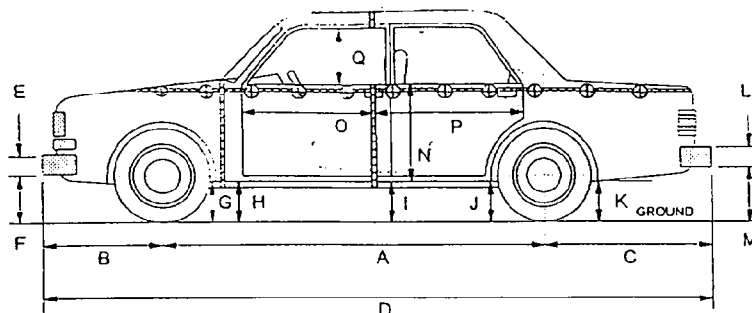
Vehicle NHTSA No.: CT5306 Test Date: February 14, 1996

	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	58.0	35	17.8	79	42.3	45	6.4	132
Left Lower Rib (LLR) Y	61.7	35	15.0	101	61.7	48	9.7	80
SPINE ACCELERATIONS								
Lower Lateral Y	81.0	38	19.1	96	59.0	50	22.3	73
PELVIS ACCELERATIONS								
Lateral Y	79.7	34	11.2	86	66.2	41	12.8	93

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)

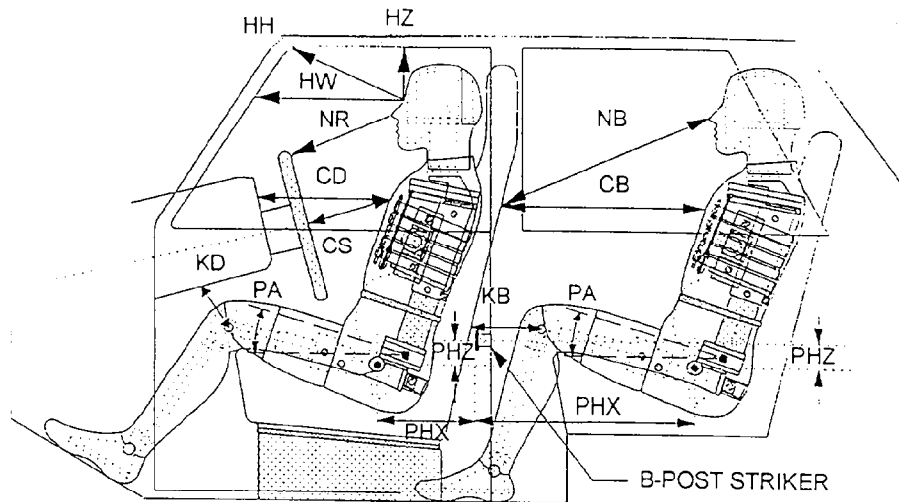
	PRE-TEST	POST-TEST	Δ CHANGE
A	2710	2650	60
B	863	854	9
C	968	1038	70
D	4541	4542	1
E	100	100	0
F	420	443	23
G	221	231	10
H	186	170	16
I	176	162	14
J1/J2	178/181	185/154	7/27
K	221	223	2
L	259	259	0
M	323	312	11
N	640	547	93
O	780	730	50
P	610	618	8
Q	418	427	9
R	4345	4370	25
S	4345	4266	79
T	1773	1534	239

DATA SHEET NO. 7

SIDE IMPACT DUMMY (SID) LONGITUDINAL CLEARANCE DIMENSIONS

Year/Make/Model/Body Style: 1996/Honda/Accord/2 Door

NHTSA NO.: CT5306 Test Date: February 14, 1996



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

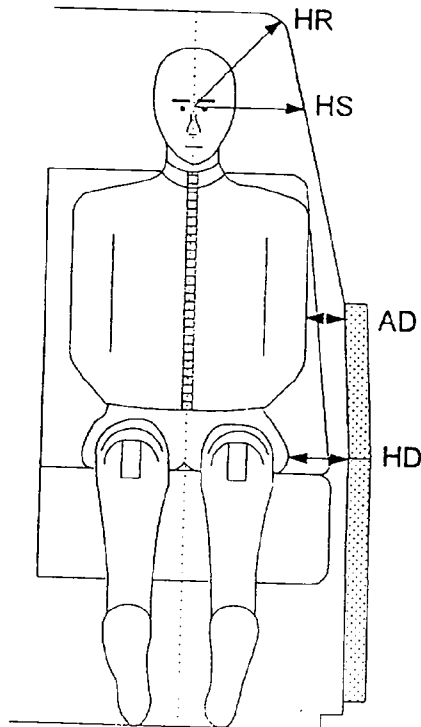
	FRONT SID ID #269		REAR PASSENGER SID ID #272
HH	377	HZ	138
HW	645	NB	604
HZ	185	CB	444
NR	487	KBL (KBA)	140 (7.5)
CD	580	KBR (KBA)	118 (9.7)
CS	354	PA°	24.8
KDL(KDA°)	210 (17)	PHX	390
KDR(KDA°)	214 (18)	PHZ	172
PA°	23.9		
PHX	445		
PHZ	188		

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/Honda/Accord/2 Door

NHTSA NO.: CT5306 Test Date: February 14, 1996



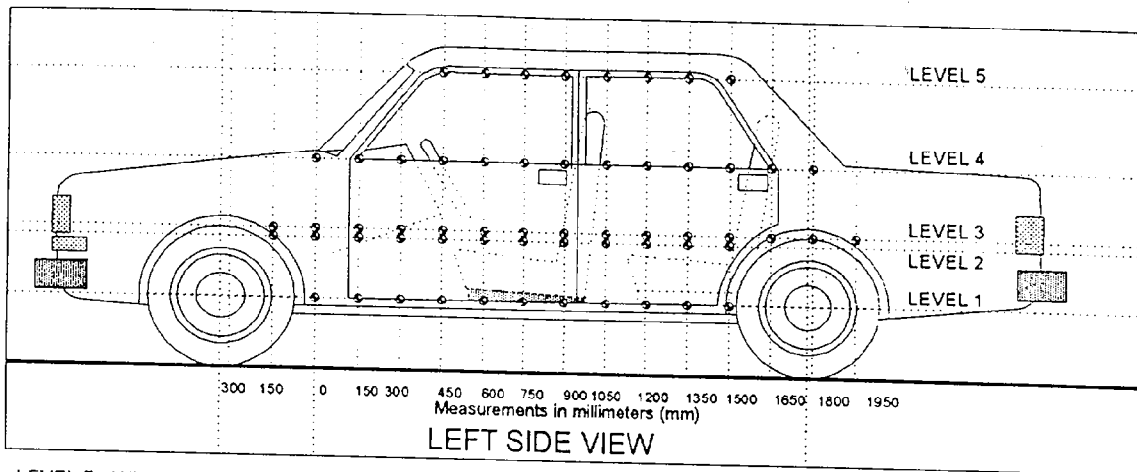
NOTE: All dimensions are in mm

	DRIVER ID #269	LEFT REAR PASSENGER ID #272
HR	220	208
HS	330	254
AD	124	108
HD	129	117

DATA SHEET NO. 9
VEHICLE SIDE MEASUREMENTS

Year/Make/Model/Body Style: 1996/Honda/Accord/2 Door

NHTSA NO.: CT5306 Test Date: February 14, 1996



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

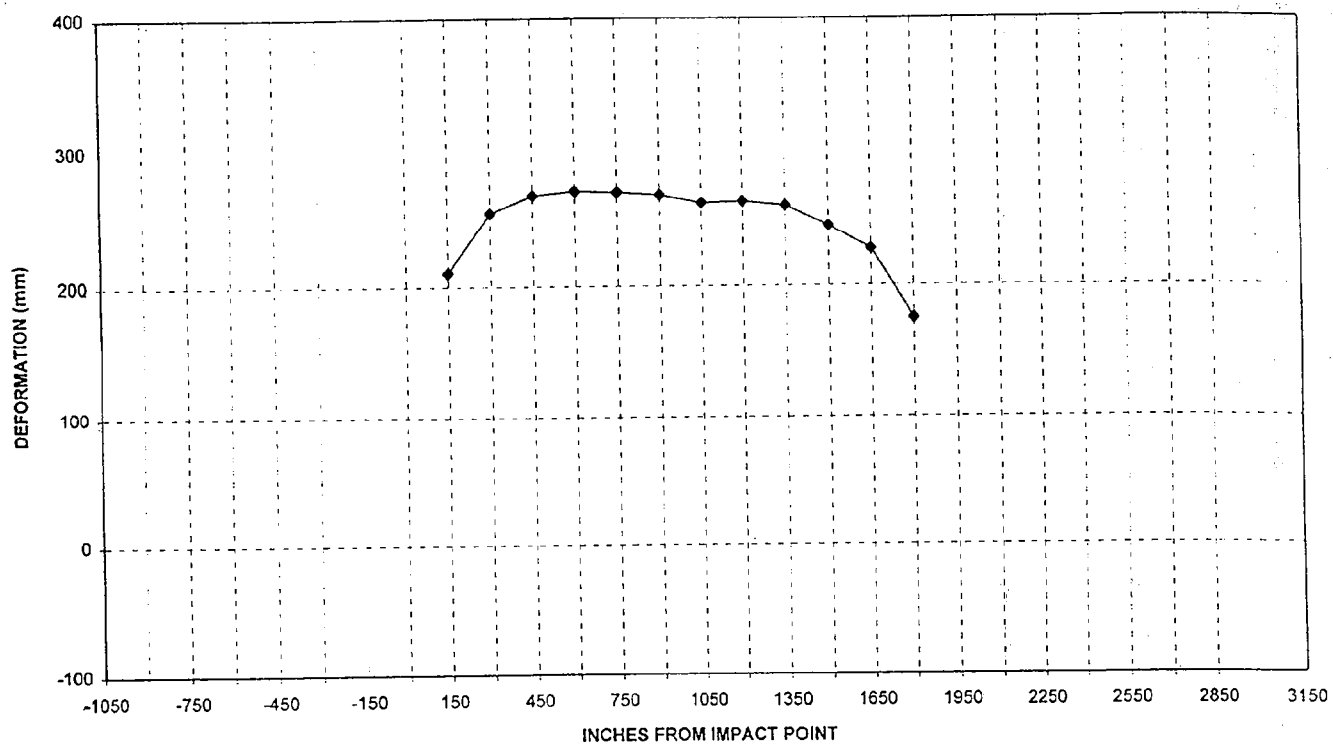
Level 5 @ Window Top	=	<u>1300</u> mm
Level 4 @ Window Sill	=	<u>850</u> mm
Level 3 @ Mid Door	=	<u>605</u> mm
Level 2 @ Occupant H-Point	=	<u>445</u> mm
Level 1 @ Axle Centerline Height (or Sill Top Height)	=	<u>280</u> mm

DATA SHEET NO. 10
VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

	Level 1 - Axle Centerline		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1050			
-900			
-750			
-600			
-450			
-300			
-150			
0 (impact point)			
150	652	862	210
300	652	907	255
450	650	918	268
600	651	922	271
750	652	922	270
900	650	918	268
1050	650	912	262
1200	650	913	263
1350	652	912	260
1500	653	898	245
1650	654	881	227
1800	656	832	176
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



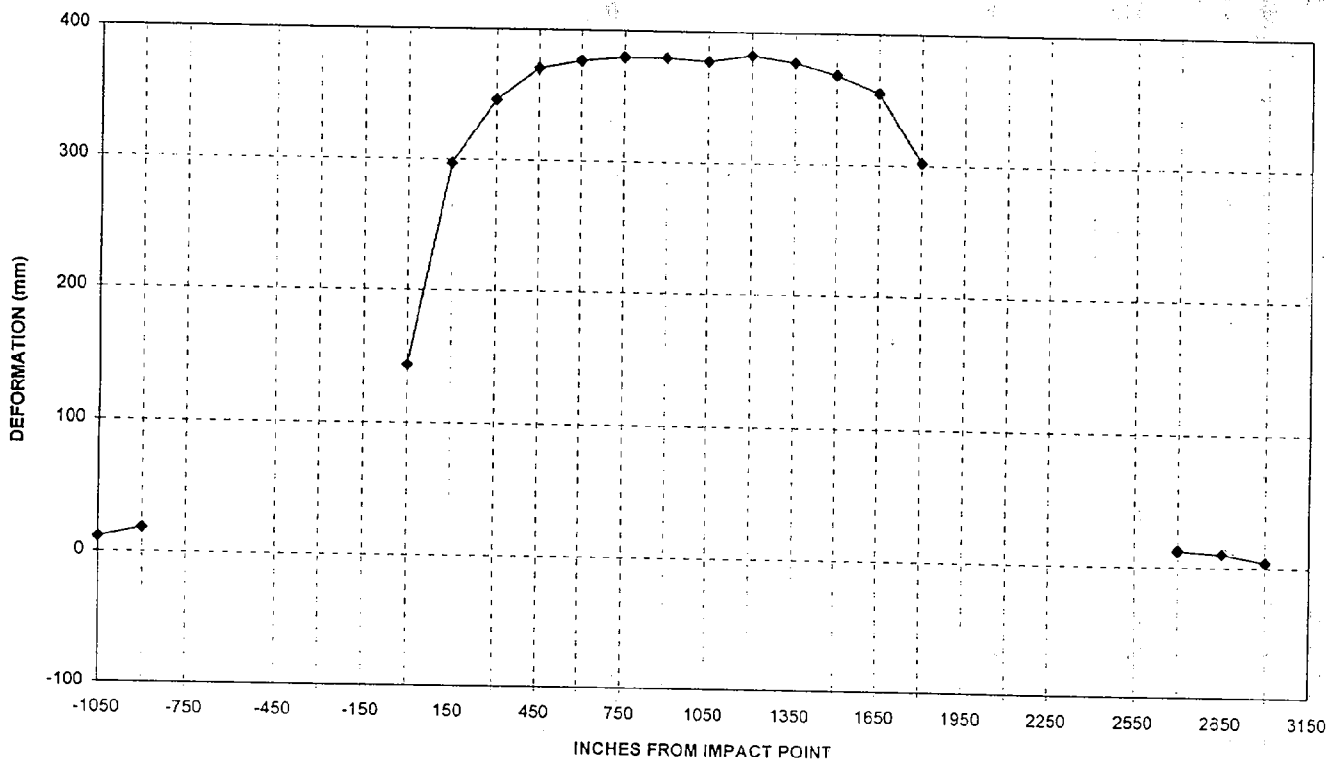
LEVEL 1 - AXLE CENTERLINE

DATA SHEET NO. 10
VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

	Level 2 - Occupant H Point		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1050	646	657	11
-900	626	644	18
-750			
-600			
-450			
-300			
-150			
0 (impact point)	603	747	144
150	602	899	297
300	602	948	346
450	602	972	370
600	602	978	376
750	602	981	379
900	603	982	379
1050	603	980	377
1200	603	985	382
1350	602	979	377
1500	604	972	368
1650	605	960	355
1800	606	908	302
1950			
2100			
2250			
2400			
2550			
2700	628	640	12
2850	634	644	10
3000	650	654	4

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

VEHICLE EXTERIOR STATIC CRUSH



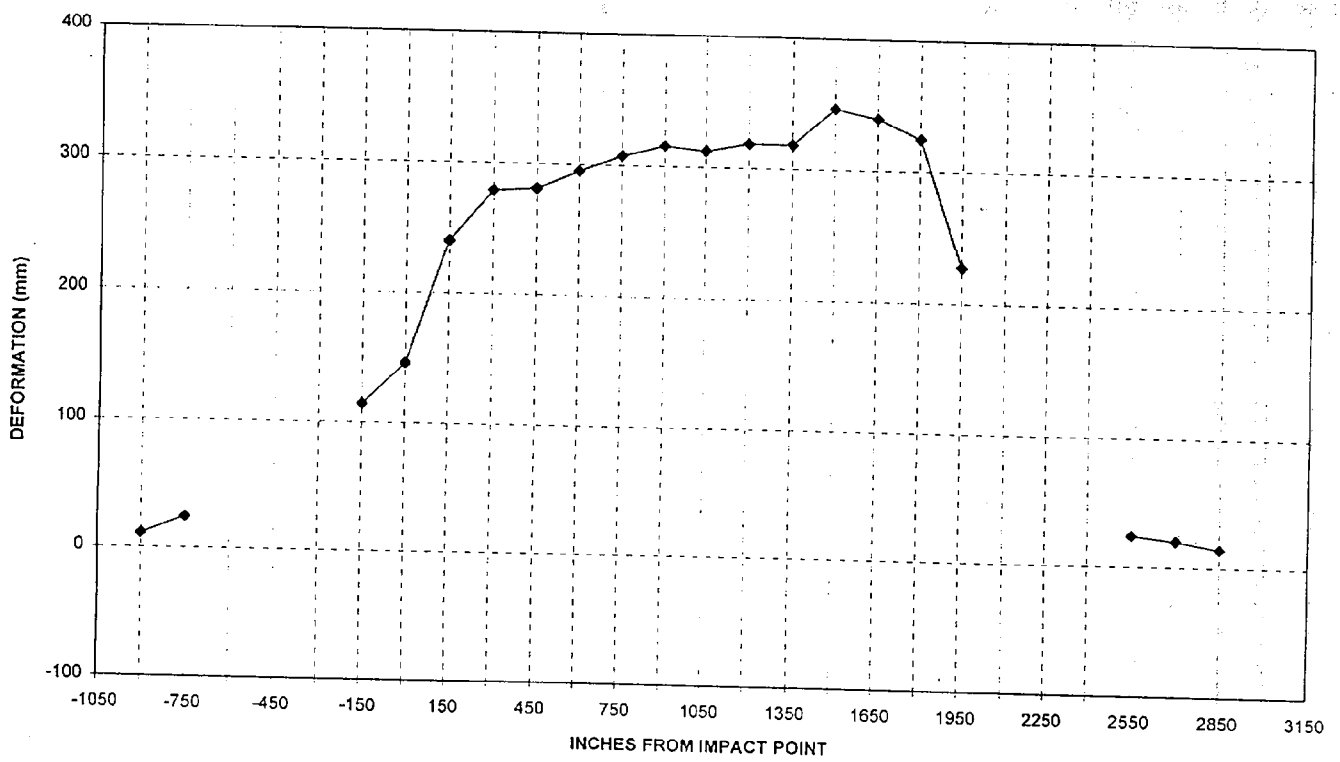
LEVEL 2 - OCCUPANT H-POINT

DATA SHEET NO. 10
VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

	Level 3 - Mid Door		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1050			
-900	657	668	11
-750	624	648	24
-600			
-450			
-300			
-150	596	710	114
0 (impact point)	601	747	146
150	603	843	240
300	605	884	279
450	605	886	281
600	604	899	295
750	602	909	307
900	601	916	315
1050	599	911	312
1200	598	916	318
1350	598	916	318
1500	597	943	346
1650	597	936	339
1800	598	922	324
1950	598	825	227
2100			
2250			
2400			
2550	608	632	24
2700	626	646	20
2850	642	656	14
3000			

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

VEHICLE EXTERIOR STATIC CRUSH



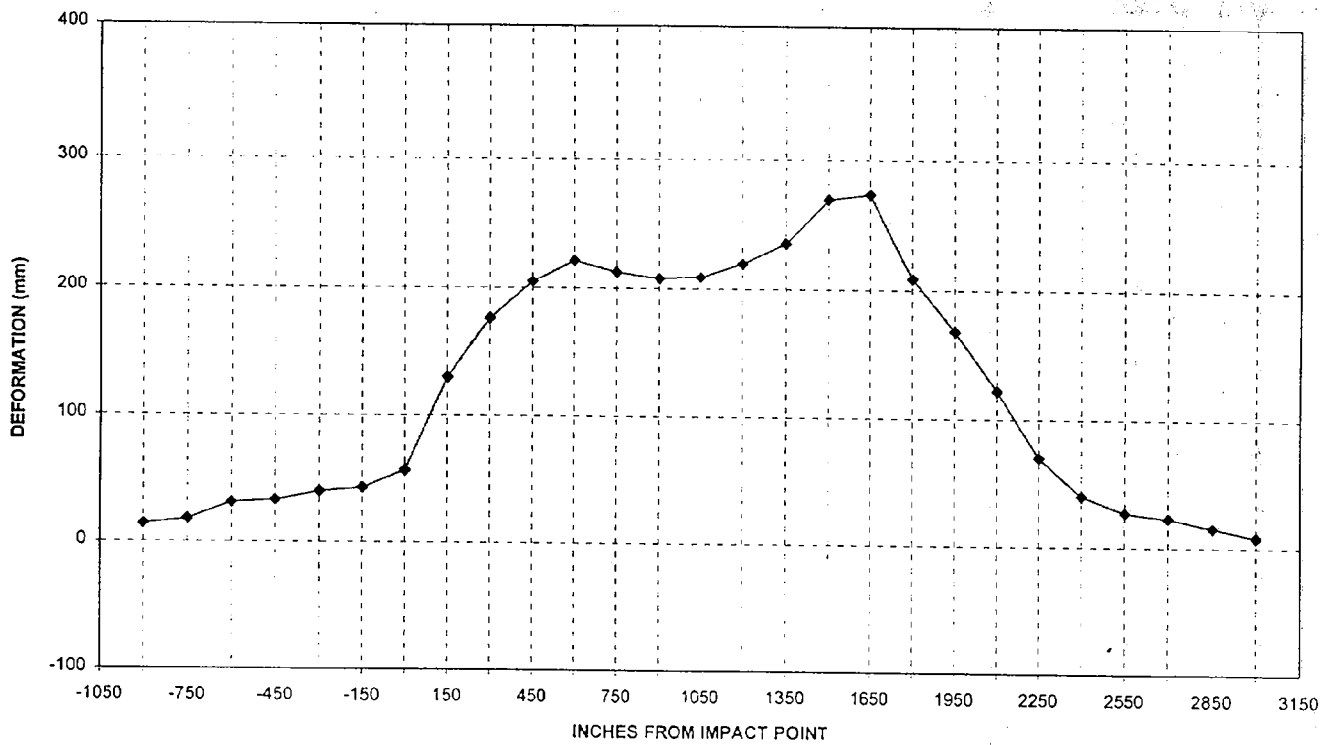
LEVEL 3 - MID DOOR

DATA SHEET NO. 10
VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

	Level 4 - Window Sill		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1050			
-900	690	704	14
-750	675	693	18
-600	650	681	31
-450	650	683	33
-300	640	680	40
-150	643	686	43
0 (impact point)	637	694	57
150	642	772	130
300	642	818	176
450	646	851	205
600	646	868	222
750	649	862	213
900	652	860	208
1050	653	862	209
1200	652	872	220
1350	656	892	236
1500	656	926	270
1650	657	931	274
1800	658	867	209
1950	666	834	168
2100	667	789	122
2250	672	742	70
2400	678	718	40
2550	694	721	27
2700	708	731	23
2850	727	742	15
3000	744	752	8

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

VEHICLE EXTERIOR STATIC CRUSH



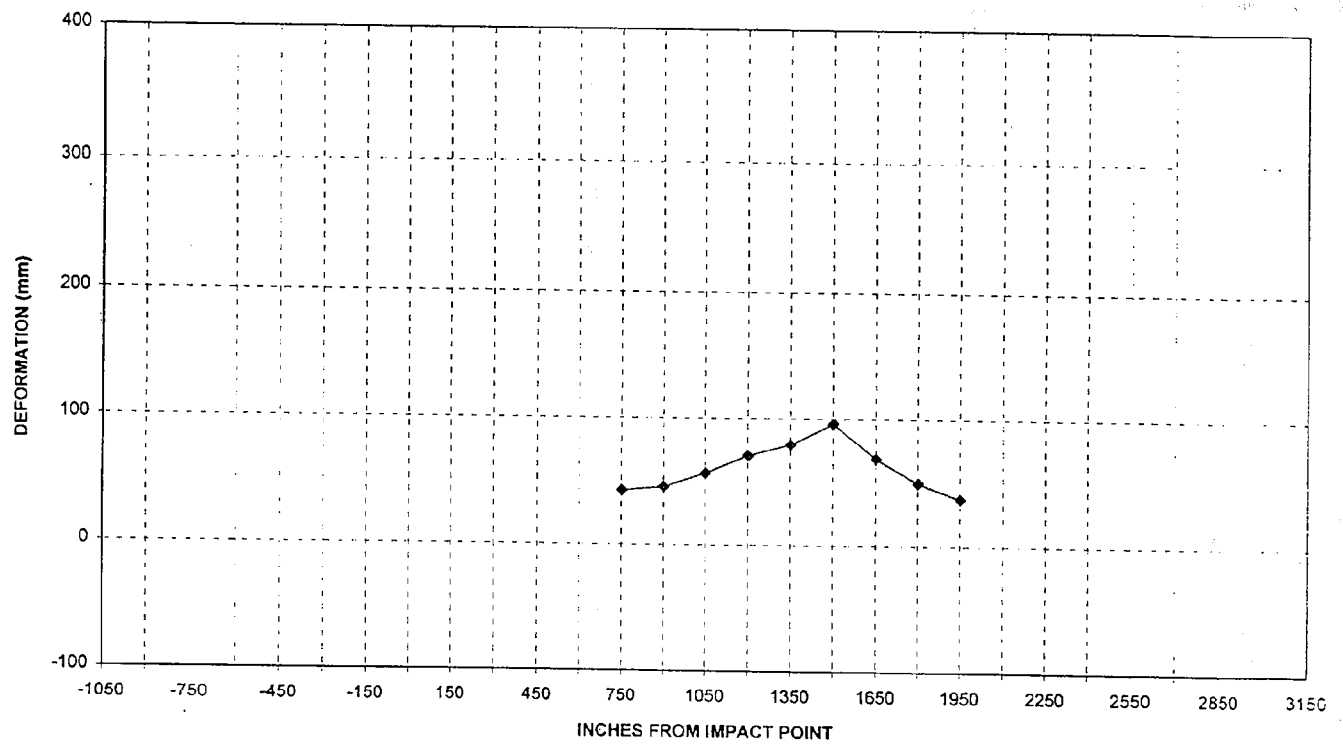
LEVEL 4 - WINDOW SILL

DATA SHEET NO. 10
VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

Longitudinal Distance (mm)	Level 5 - Window Top		
	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1050			
-900			
-750			
-600			
-450			
-300			
-150			
0 (impact point)			
150			
300			
450			
600			
750	910	952	42
900	922	967	45
1050	927	983	56
1200	927	997	70
1350	930	1009	79
1500	928	1024	96
1650	922	990	68
1800	917	966	49
1950	917	954	37
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



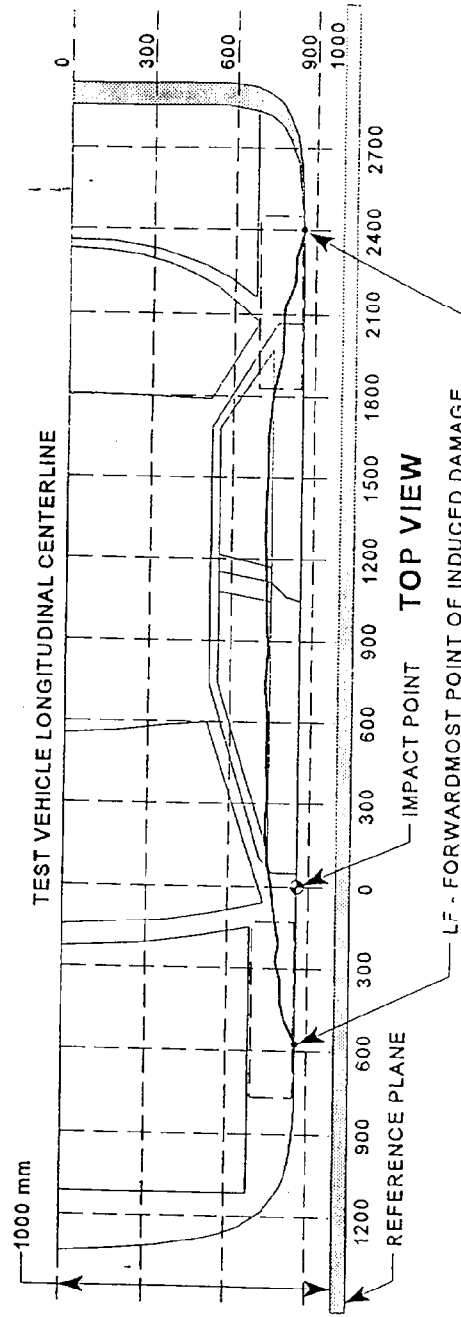
LEVEL 5 - WINDOW TOP

DATA SHEET NO. 11

VEHICLE DAMAGE PROFILE DISTANCES

Year/Make/Model/Body Style: 1996/Honda/Accord/2 Door

NHTSA NO.: CTS306 Test Date: February 14, 1996



MEASUREMENT CONVENTIONS: LR - REARWARD MOST POINT OF INDUCED DAMAGE
Forward of the impact point (towards front of vehicle) is considered negative (-).
Rearward of the impact point (toward rear of vehicle) is considered positive (+).

DPD MEASUREMENTS	POST-TEST (mm)	PRE-TEST (mm)	STATIC CRUSH (mm)
1. (LF = -300 mm)	640	640	0
2. 270 mm	975	602	373
3. 840 mm	978	603	375
4. 1410 mm	966	602	364
5. 1980 mm	762	606	156
6. (LR = 2550 mm)	694	694	0

DATA SHEET NO. 12

EXTERIOR STATIC CRUSH FOR SIDE IMPACTOR

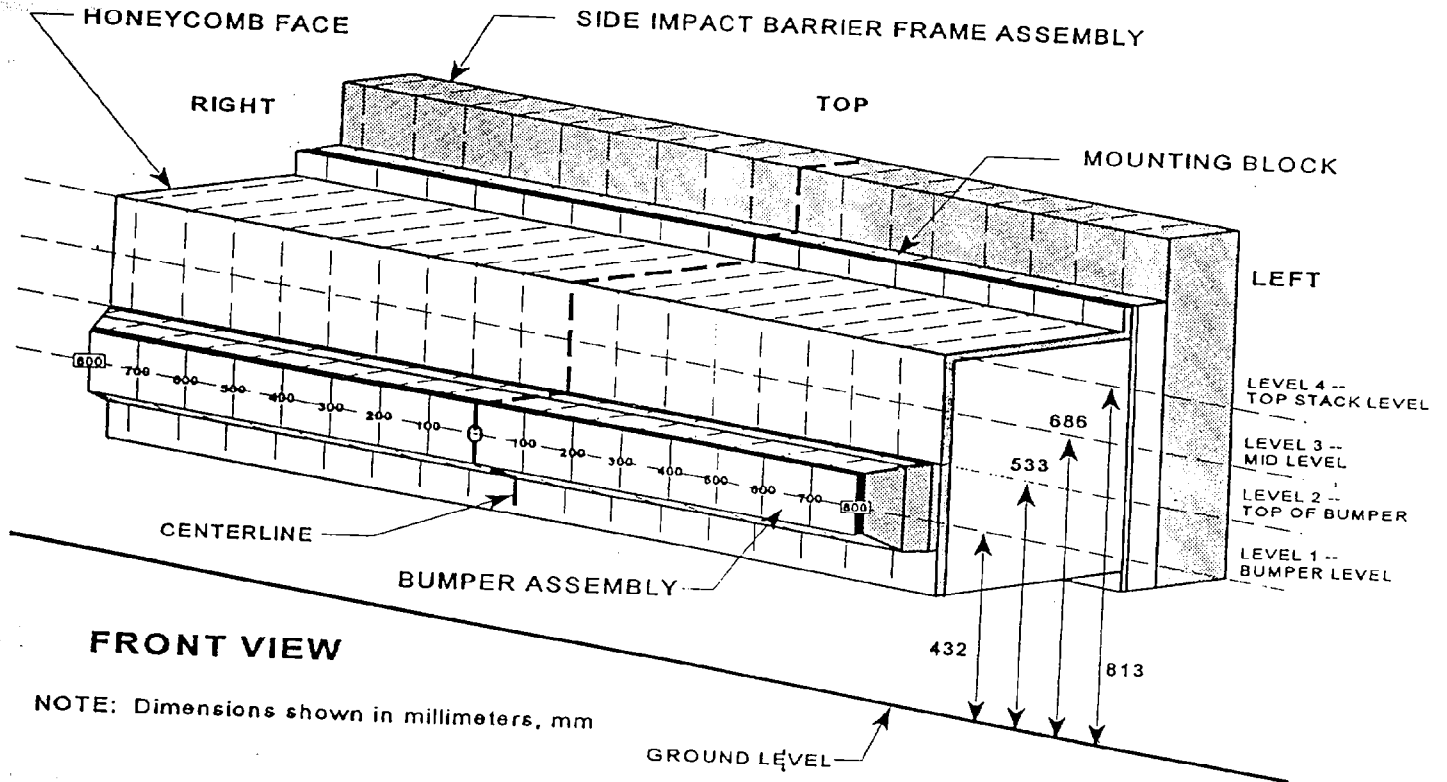
Year/Make/Model/Body Style: 1996/Honda/Accord/2 Door

Vehicle NHTSA No.: CT5306 Test Date: February 14, 1996

Location	Height at CL*	Distance Right of Center (mm)									Distance Left of Center (mm)							
		800	700	600	500	400	300	200	100	0	100	200	300	400	500	600	700	800
Top Stack Level 4	813 mm	73	7	-6	-4	-4	-4	-4	-4	-3	-1	-1	1	1	26	68	96	138
Mid Level Level 3	686 mm	12	-3	-3	-1	-1	-1	-1	1	2	2	5	3	5	13	30	53	77
Top Bumper Level 2	533 mm	30	18	11	7	4	4	4	4	5	5	6	8	9	11	16	30	46
Mid Bumper Level 1	432 mm	71	52	38	43	28	22	18	18	16	14	15	15	16	18	27	49	64

See next page for Barrier Face Graphic

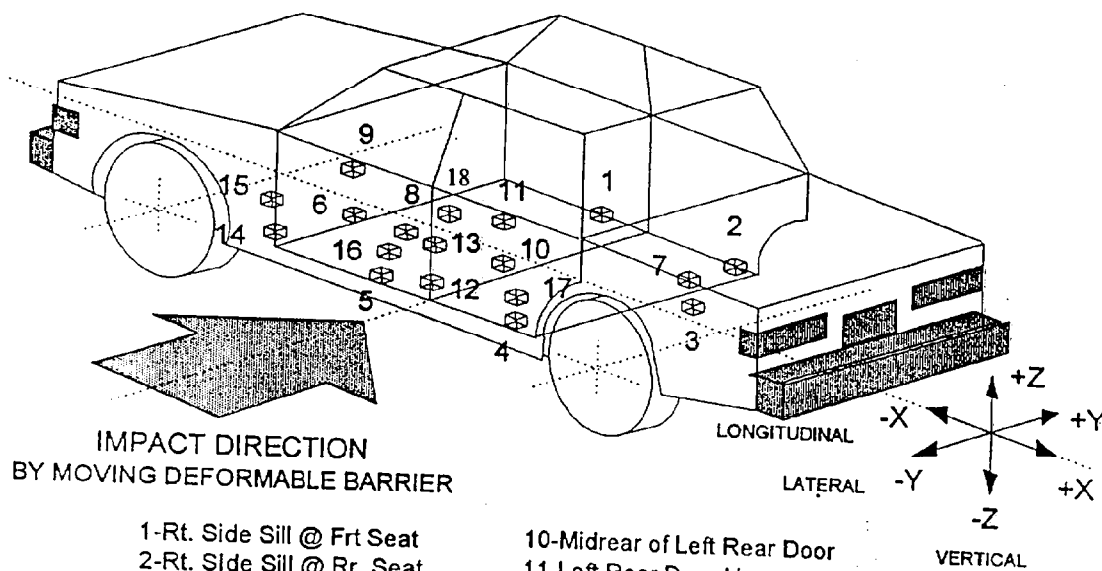
DATA SHEET NO. 12 (Cont'd)



DATA SHEET 13
TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Year/Make/Model/Body Style: 1996/Honda/Accord/2 Door

Vehicle NHTSA No.: CT5306 Test Date: February 14, 1996



- 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/Honda/Accord/2 Door

Vehicle NHTSA No.: CT5306 Test Date: February 14, 1996

Accel. No.	Description	Coordinates (mm)*			Long. (X) Maximums (g's)		Lat. (Y) Maximums (g's)		Vert. (Z) Maximums (g's)		Resultant (g's)
		X	Y	Z	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	
1	Rt. Side Sill @ Front Seat	2721	682	184	2.2	3.9	20.4	2.3	5.9	4.3	20.5
2	Rt. Side Sill @ Rear Seat	1765	652	209	3.1	2.9	21.8	5.1	4.9	4.1	21.9
3	Rr. Floorpan Above Axle	981	27	427	4.8	9.8	19.2	2.9	12.0	7.2	24.4
4	Left Side Sill @ Rr. Seat	1764	-652	217	---	---	**	**	---	---	---
5	Left Side Sill @ Frt. Seat	2727	-682	214	---	---	30.6	5.9	---	---	---
7	Right Rear Occupant Compartment	1866	435	294	---	---	18.3	4.1	---	---	---
12	Left Lower B-Post	1965	-690	222	---	---	48.3	18.9	---	---	---
13	Left Mid B-Post	1901	-635	982	---	---	75.5	64.8	---	---	---
14	Left Lower A-Post	3098	-730	337	---	---	59.9	98.8	---	---	---
15	Left Mid A-Post	3146	-750	830	---	---	67.9	25.1	---	---	---
16	Driver Left Seat Track	2245	-570	240	---	---	61.9	31.5	---	---	---
18	Vehicle CG	2666	0	450	4.5	7.1	24.3	3.4	8.7	5.9	24.4

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

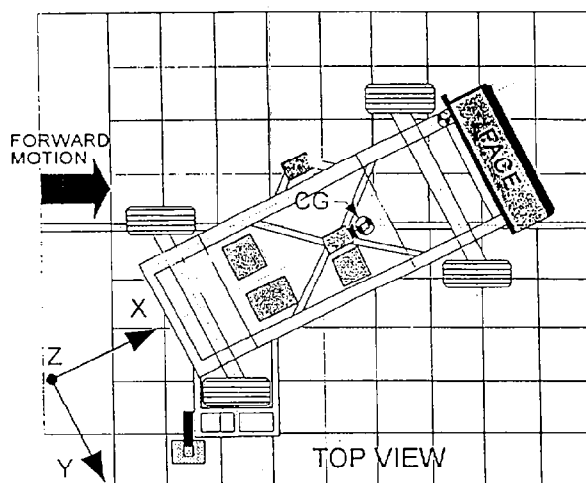
** No valid data collected

DATA SHEET NO. 14

MOVING DEFORMABLE BARRIER (MDB) ACCELEROMETER LOCATIONS AND DATA SUMMARY

Year/Make/Model/Body Style: 1996/Honda/Accord/2 Door

Vehicle NHTSA No.: CT5306 Test Date: February 14, 1996



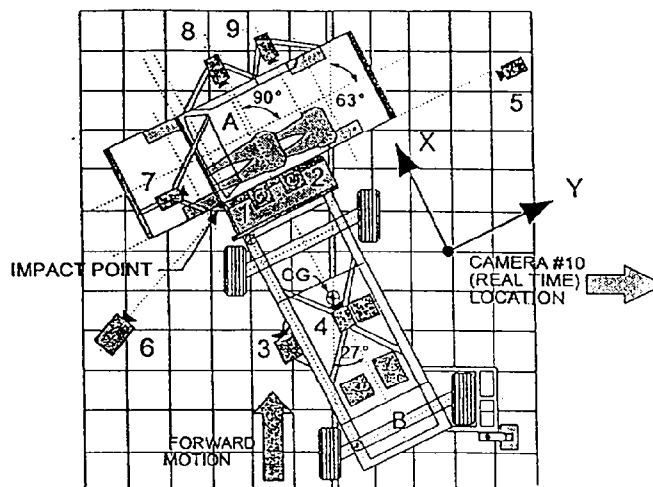
Accel. No.	Description	Coordinates (mm)*			(+) Positive		(-) Negative	
		X	Y	Z	Max. (g)	Time (msec)	Max. (g)	Time (msec)
1	MDB Center of Gravity	-1092	0	483				
	Longitudinal (X)	---	---	---	1.6	115	14.2	35
	Lateral (Y)	---	---	---	2.1	56	2.2	155
	Vertical (Z)	---	---	---	10.1	34	8.2	27
	Resultant (R)	---	---	---	17.3	34	---	---
2	Rear Frame Member	-2591	-625	622				
	Longitudinal (X)	---	---	---	2.0	158	21.7	38
	Lateral (Y)	---	---	---	8.9	39	3.6	72

*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/Honda/Accord/2 Door

Vehicle NHTSA No.: CT5306 Test Date: February 14, 1996



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	980
2	Top Wide	700	0	5130		8	1111
3	Cart Pointer					35	1020
4	Cart					13	1026
5	Right Impact	3270	7770	1950	90°	25	1081
6	Left Overall	-2760	-2470	1630	90°	13	1124
7	Onboard Driver					8	837
8	Onboard Hood					8	1026
9	Onboard Passenger					13	985

* Reference: (from point of impact)

+X = Forward

+Y = To Right

+Z = Upward

DATA SHEET 16
FUEL SYSTEM INTEGRITY POST IMPACT TEST DATA

Vehicle Year/Make/Model/Body Style: 1996/Honda/Accord/2 Door

Vehicle NHTSA No.: CT5306 Test Date: February 14, 1996

TEST REQUIREMENTS:

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

TEST VEHICLE IMPACT TYPE: X Side Impact MDB 33.15 mph (53.3 kph)

FUEL SPILLAGE MEASUREMENT:

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

FUEL SPILLAGE LOCATION(S): None

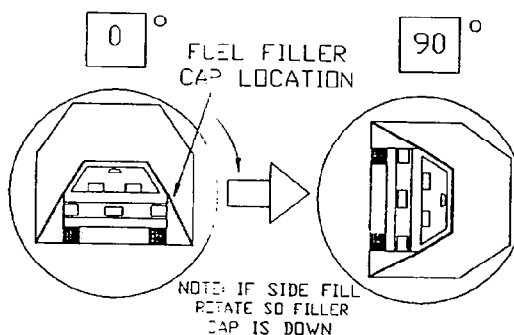
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA

Vehicle Year/Make/Model/Body Style: 1996/Honda/Accord/2 Door

Vehicle NHTSA No.: CT5306 Test Date: February 14, 1996

TEST PHASE: 0° - 90°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 45 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 45 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

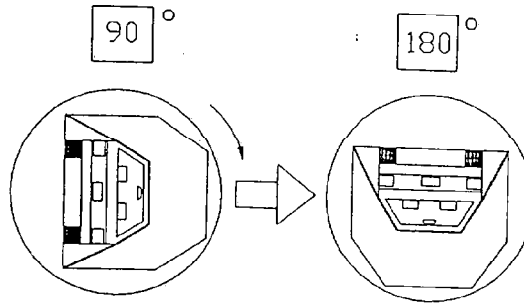
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA (Cont'd)

Vehicle Year/Make/Model/Body Style: 1996/Honda/Accord/2 Door

Vehicle NHTSA No.: CT5306 Test Date: February 14, 1996

TEST PHASE: 90° - 180°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 30 seconds
(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 30 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

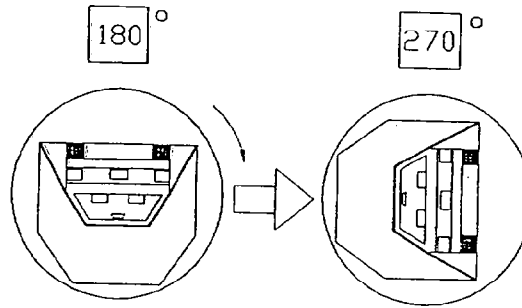
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA (Cont'd)

Vehicle Year/Make/Model/Body Style: 1996/Honda/Accord/2 Door

Vehicle NHTSA No.: CT5306 Test Date: February 14, 1996

TEST PHASE: 180° - 270°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 20 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 20 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

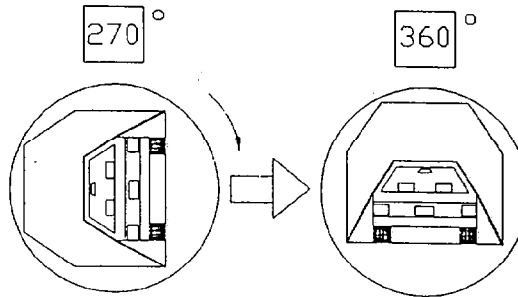
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA

Vehicle Year/Make/Model/Body Style: 1996/Honda/Accord/2 Door

Vehicle NHTSA No.: CT5306 Test Date: February 14, 1996

TEST PHASE: 270° - 360°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 40 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 40 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

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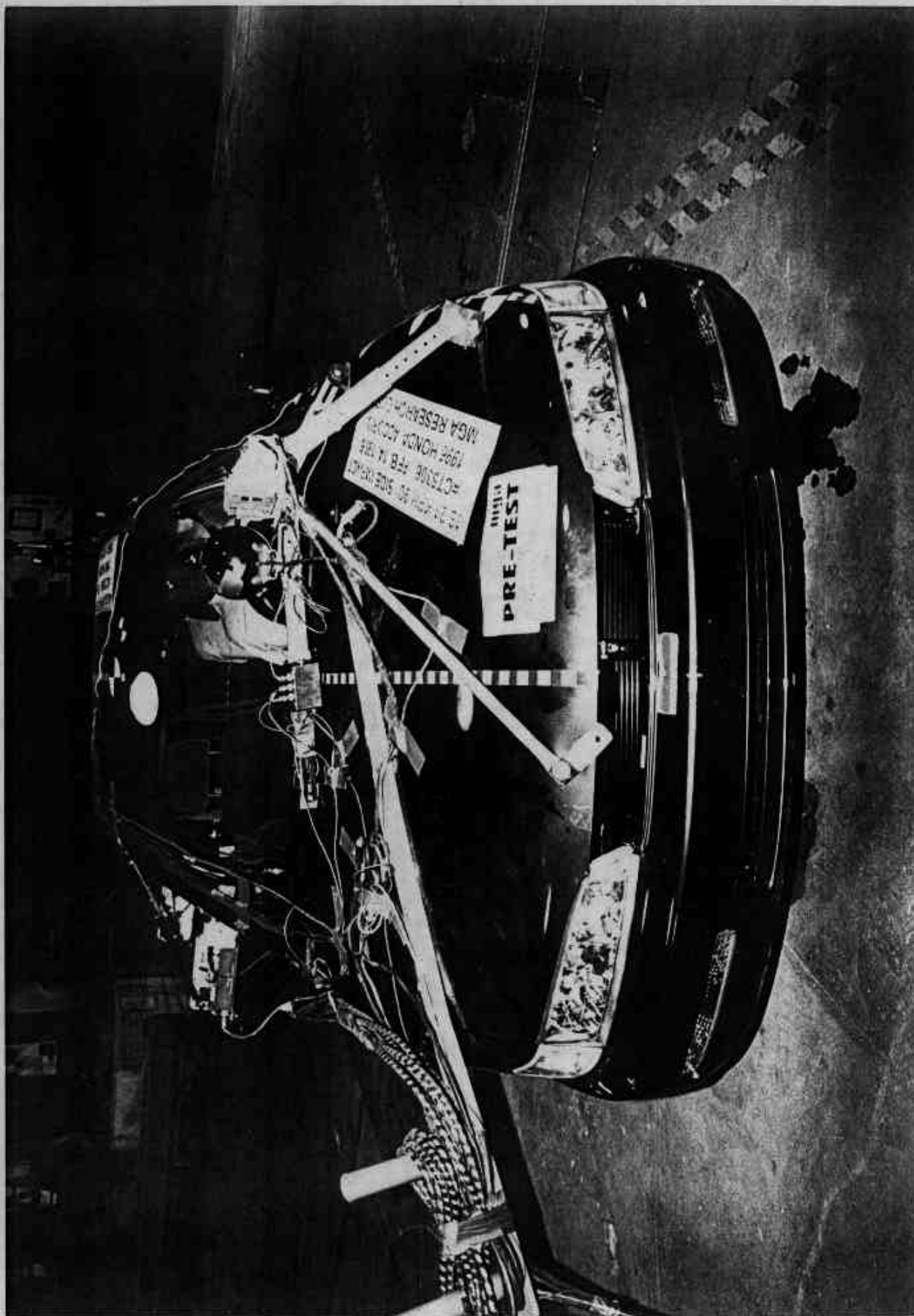
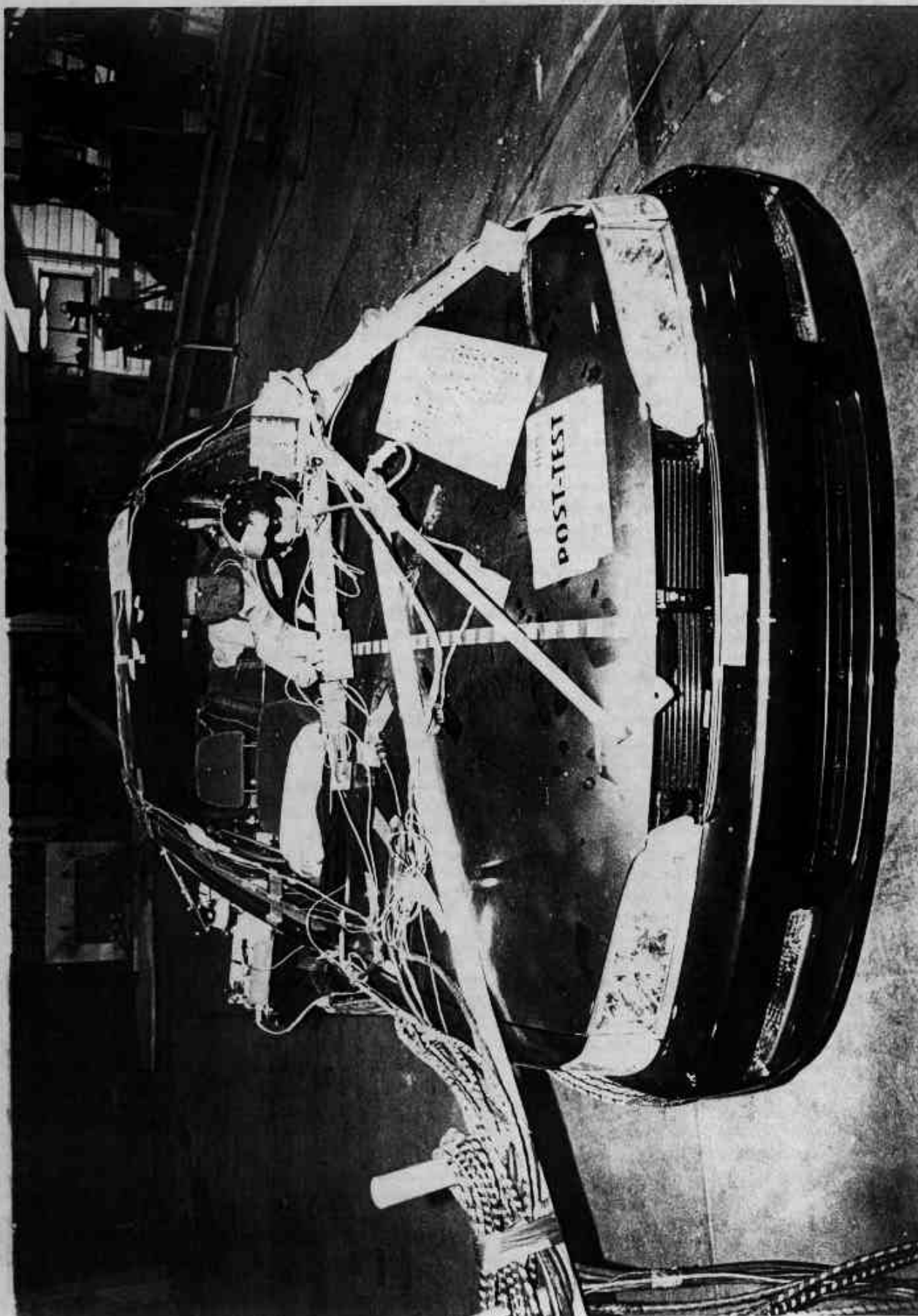


Photo No. A-1 - Pre-Test Front View of Test Vehicle

A-1



A-2

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

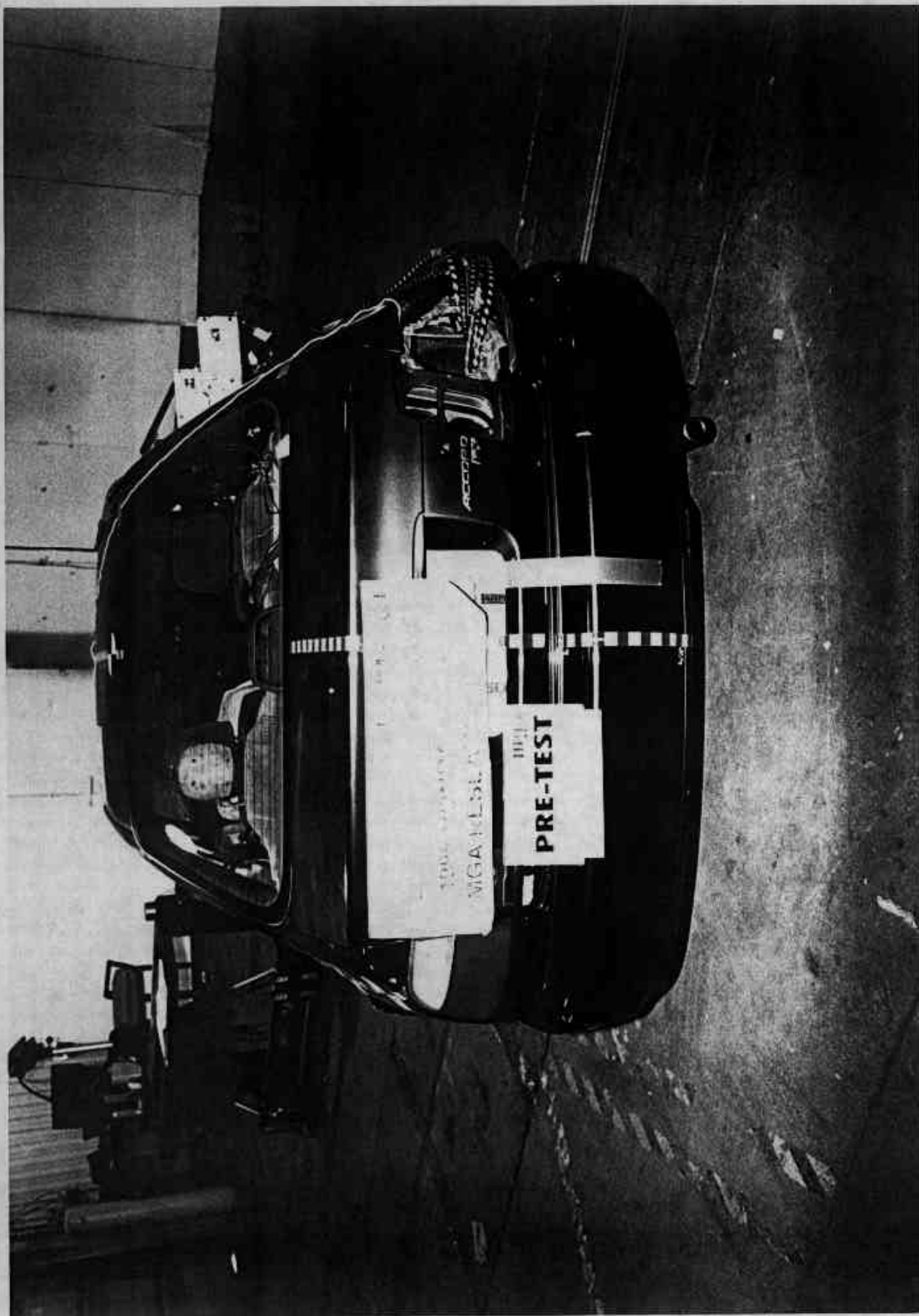


Photo No. A-3 - Pre-Test Rear View of Test Vehicle

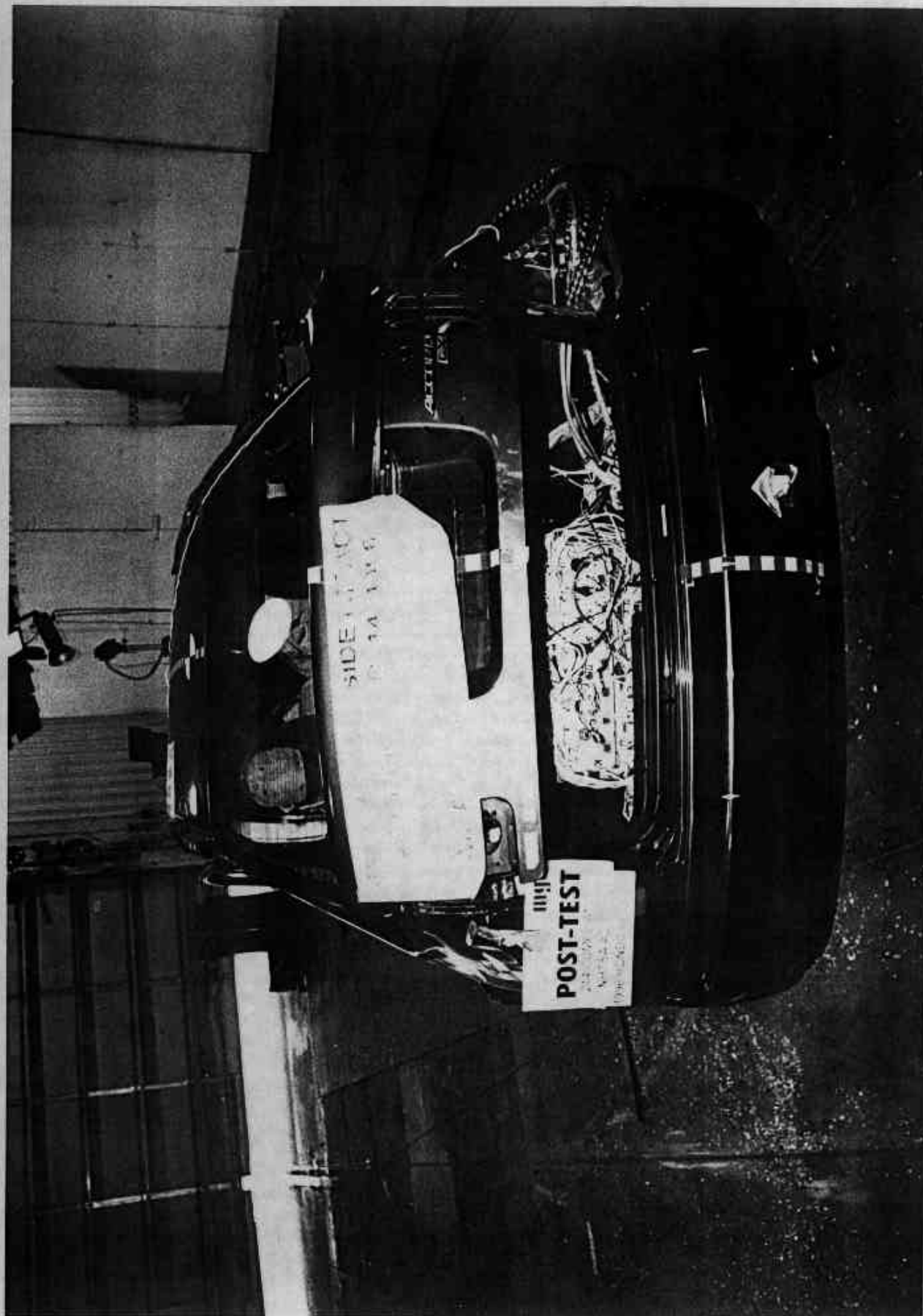


Photo No. A-4 - Post-Test Rear View of Test Vehicle

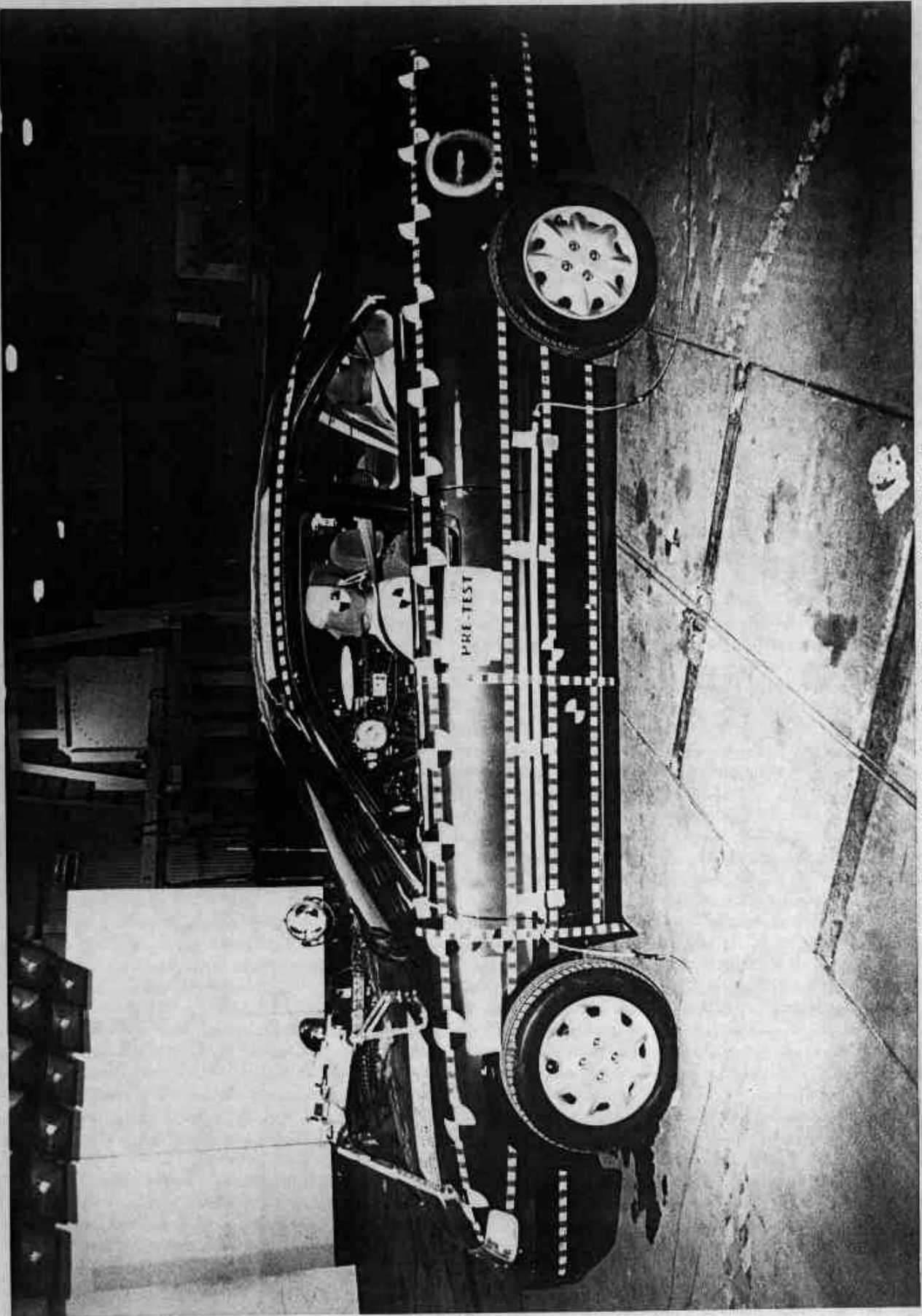


Photo No. A-5 - Pre-Test Left Side View of Test Vehicle

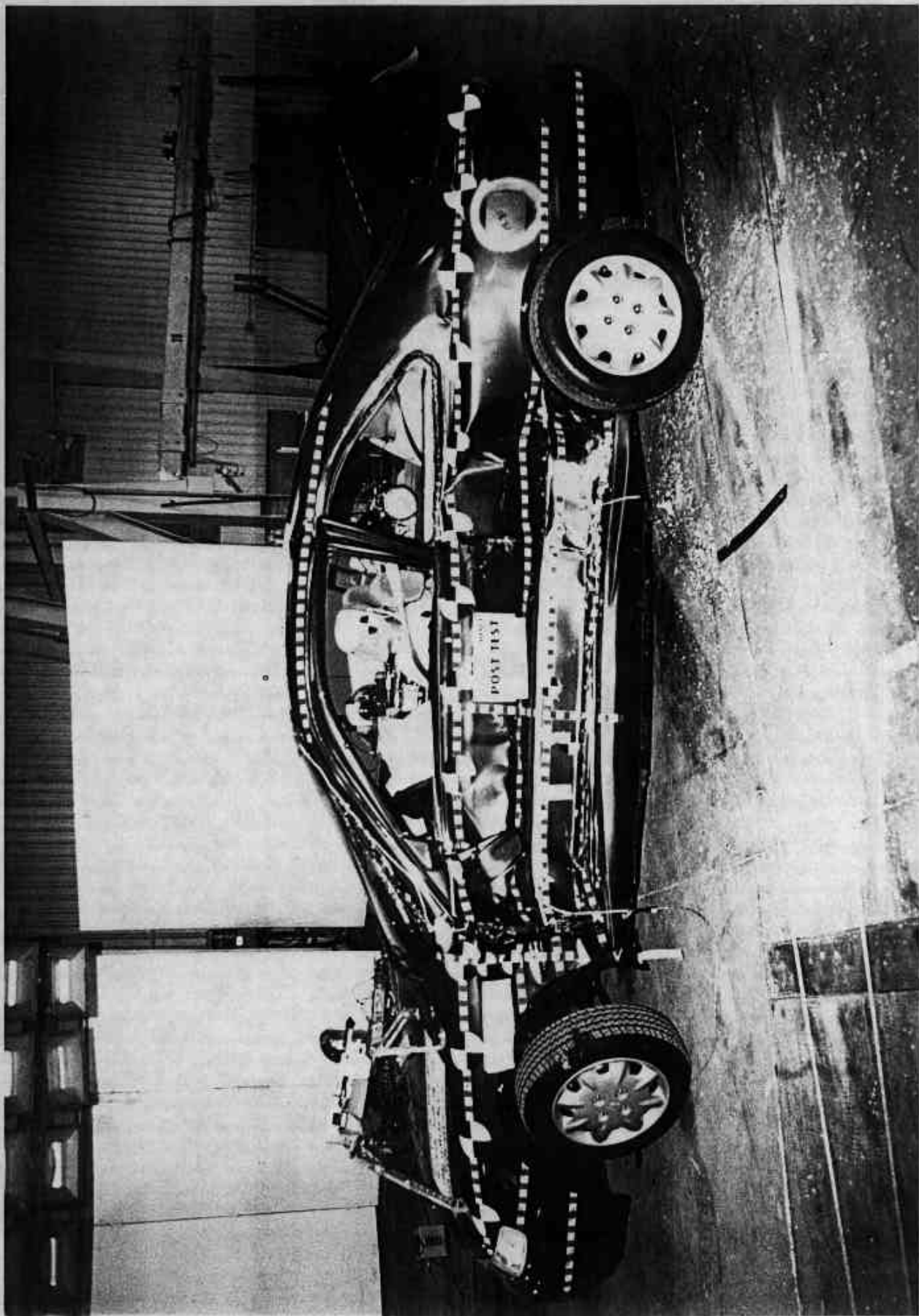


Photo No. A-6 - Post-Test Left Side View of Test Vehicle

A-6



A-7

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

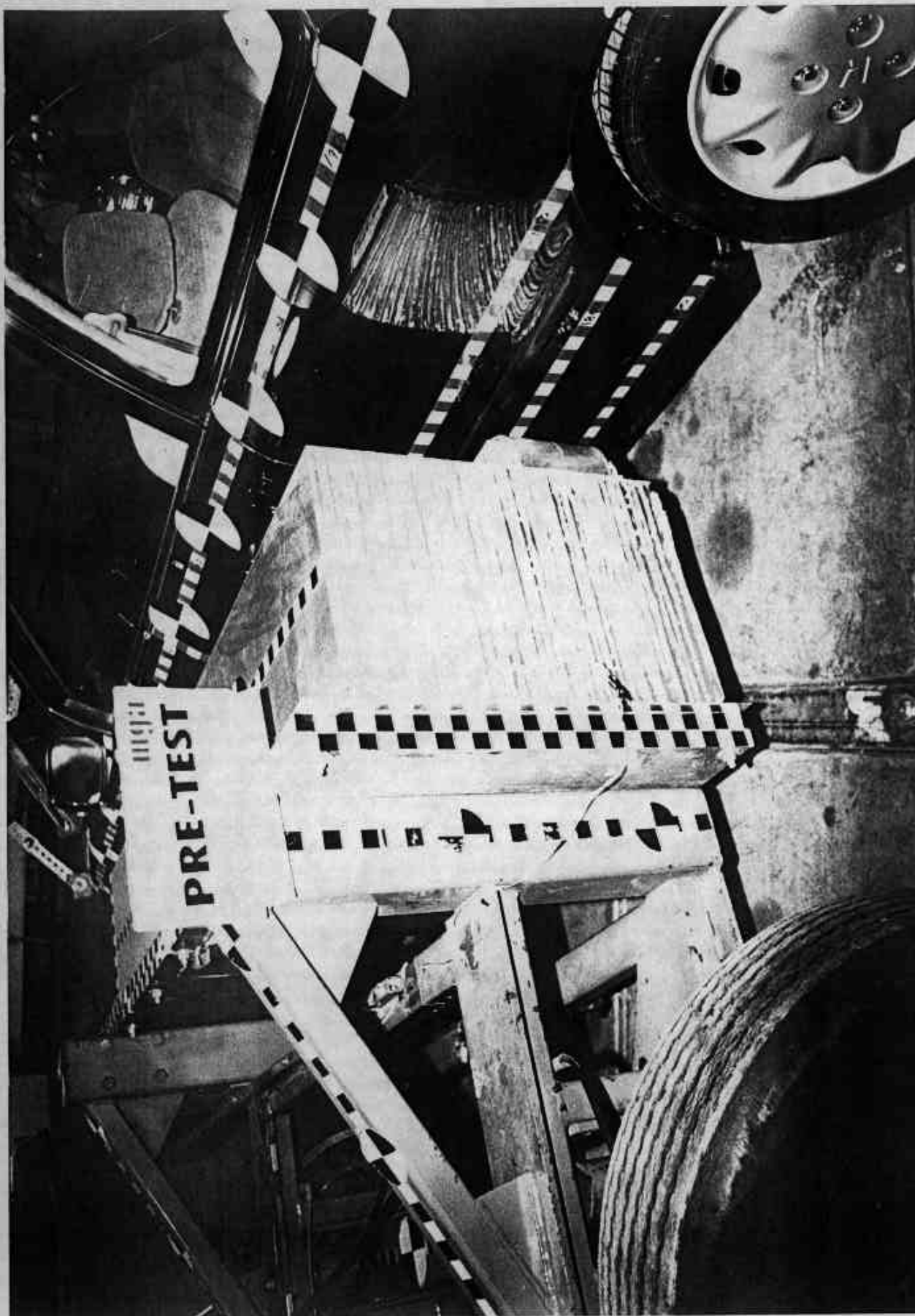


Photo No. A-8 - Pre-Test MDB Positioned Against Vehicle (right side)

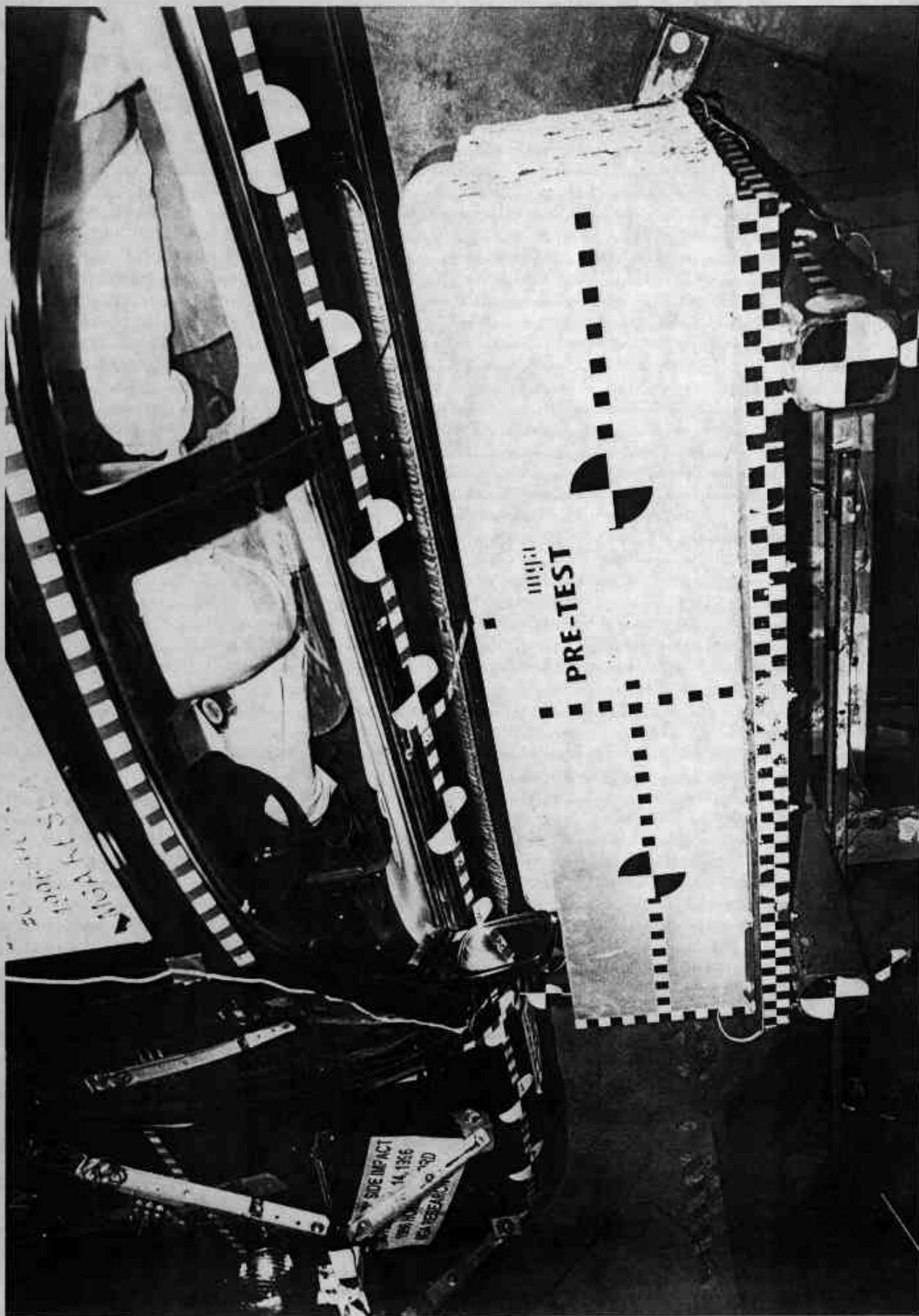


Photo No. A-9 - Pre-Test MDB Positioned Against Vehicle Overhead View

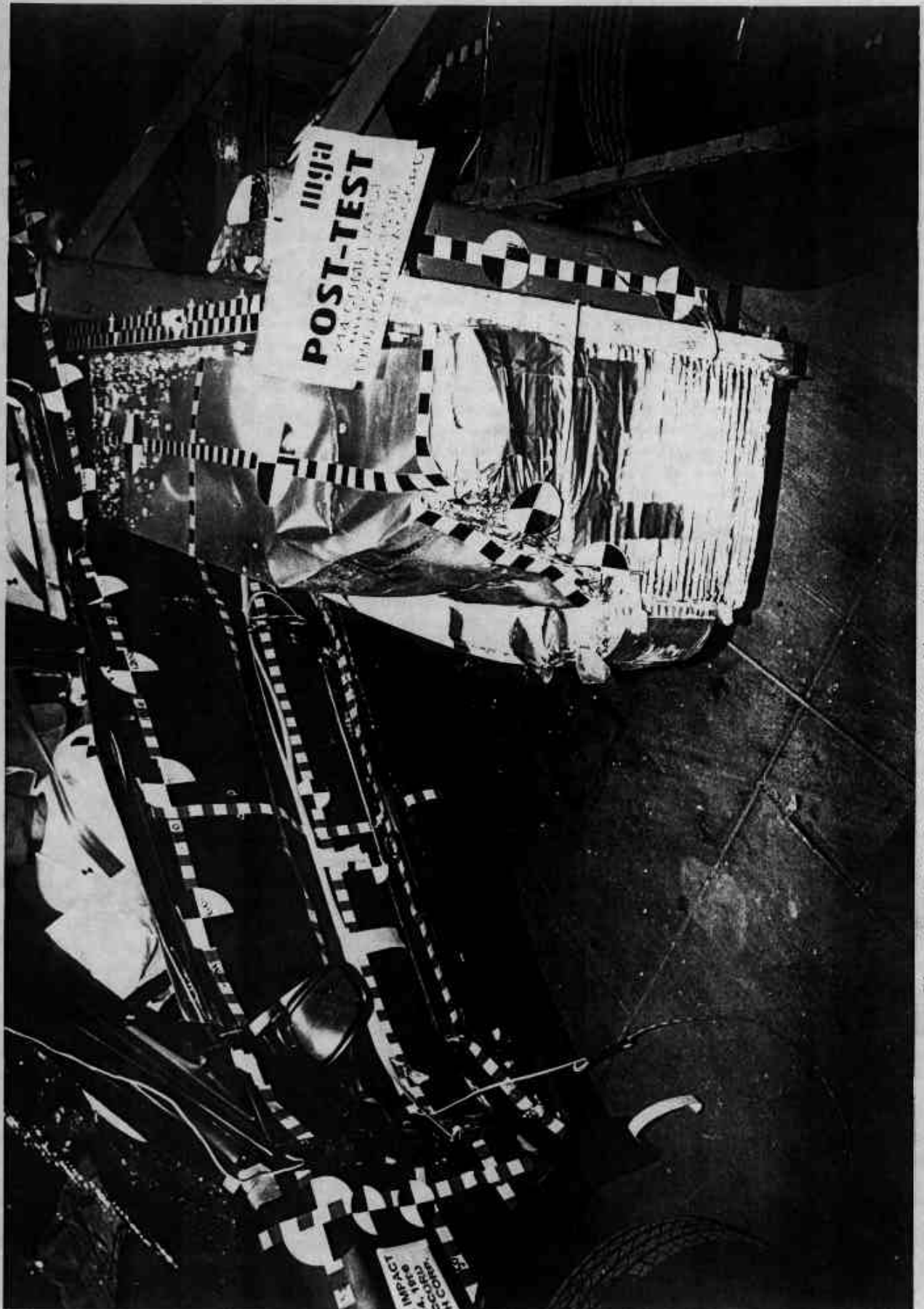


Photo No. A-10 - Post-Test MDB Positioned Against Vehicle (left side)

A-10

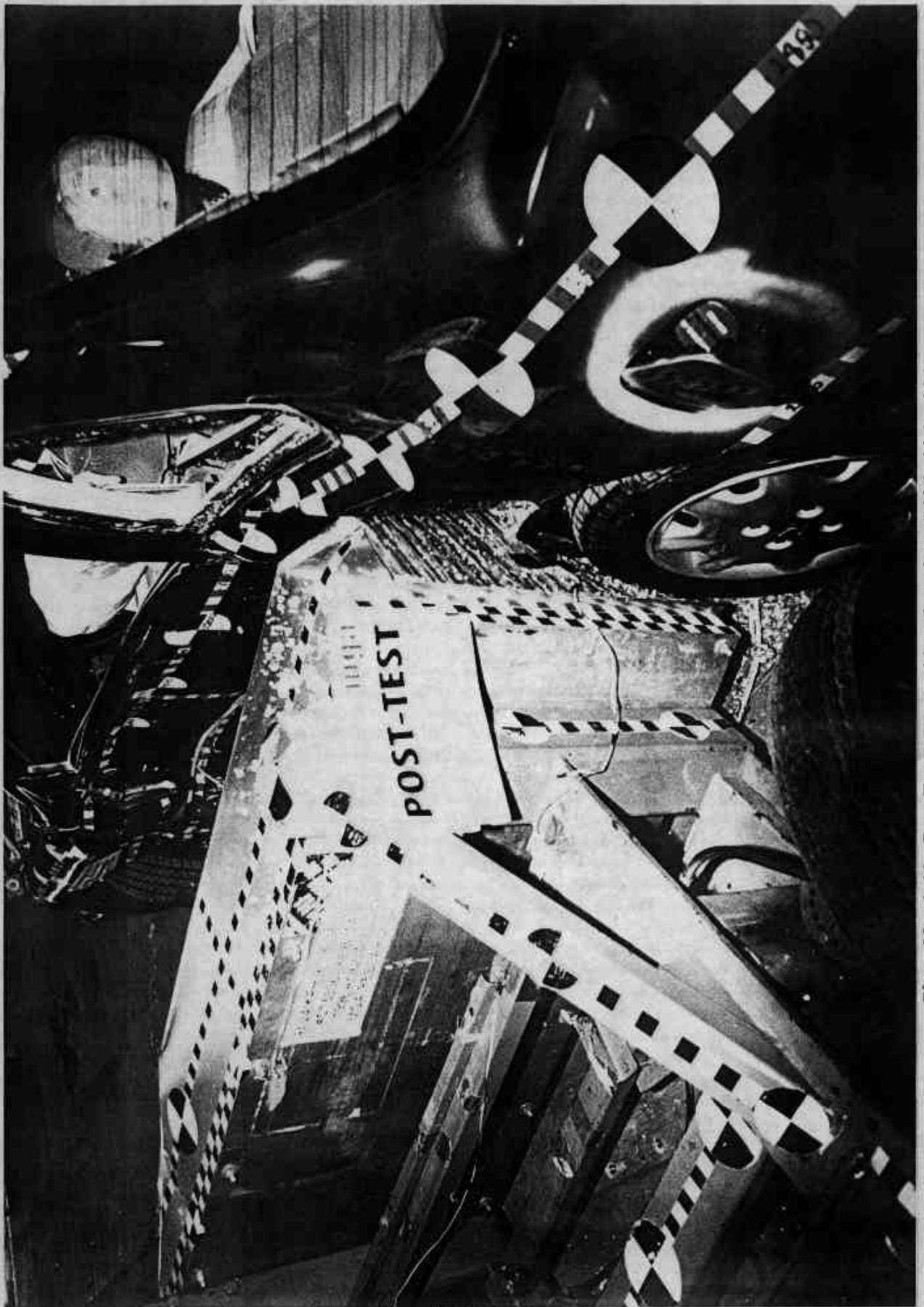


Photo No. A-11 - Post-Test MDB Positioned Against Vehicle (right side)

A-11

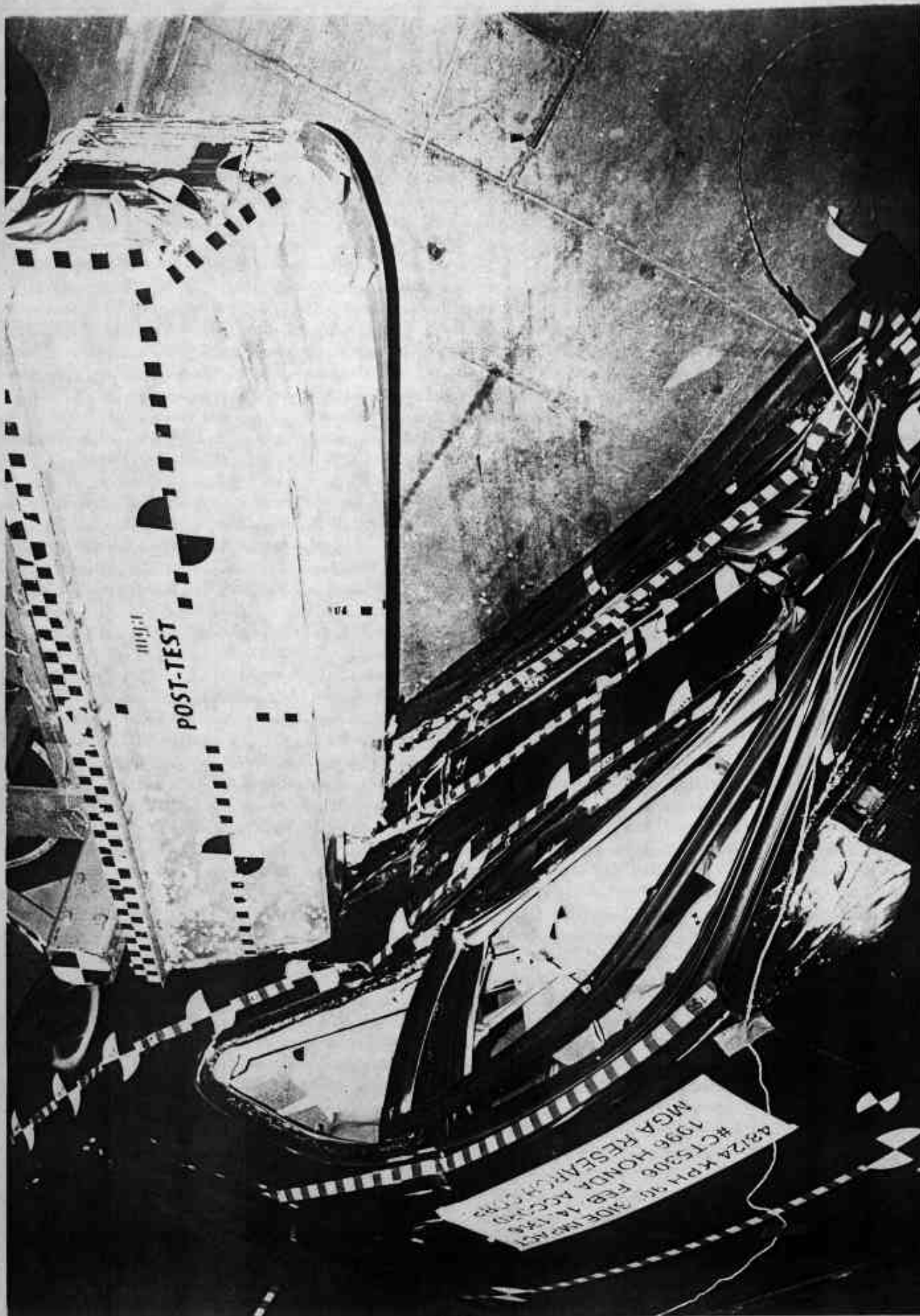


Photo No. A-12 - Post-Test MDB Positioned Against Vehicle Overhead View

A-12

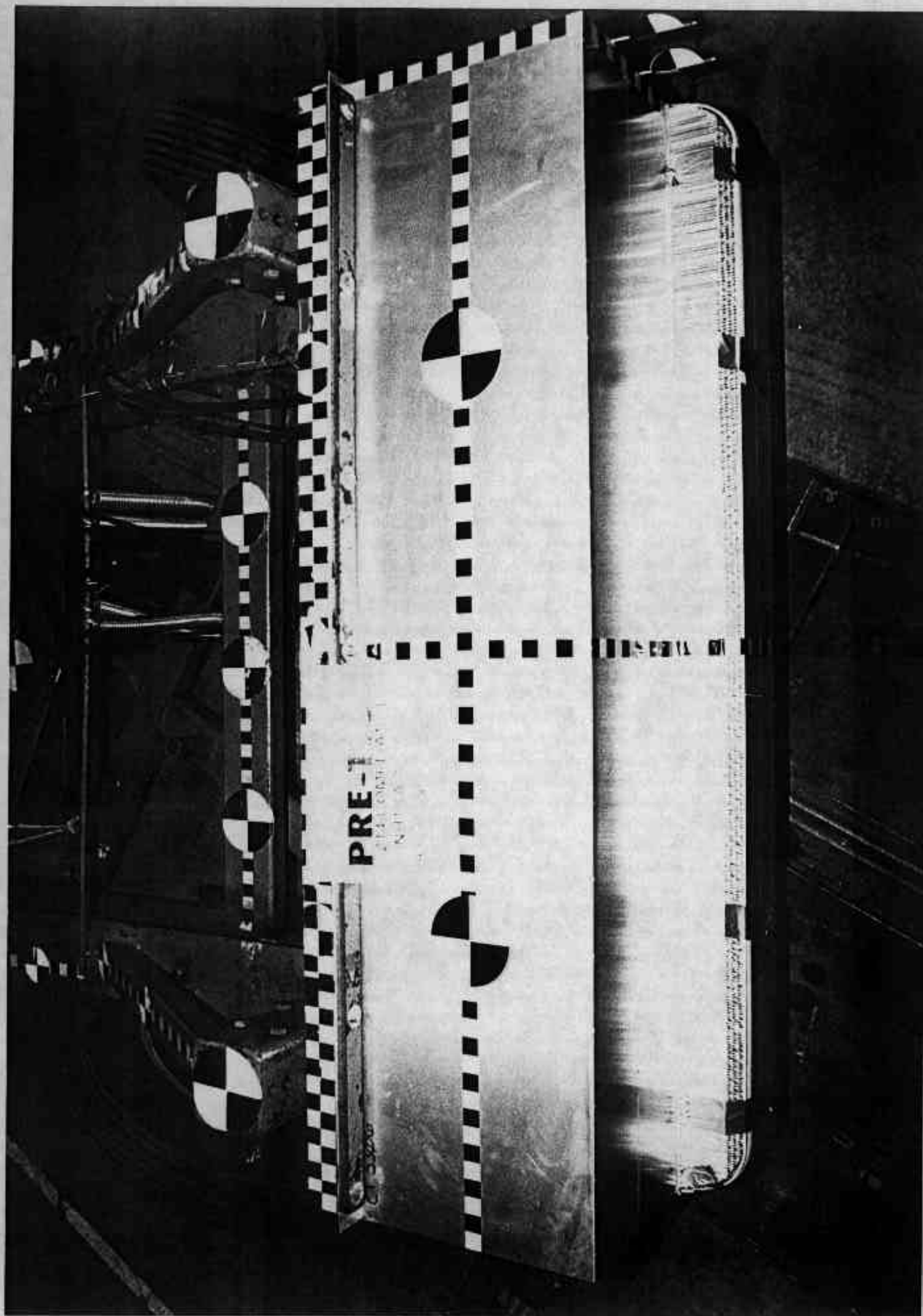


Photo No. A-13 - Pre-Test MDB Top View

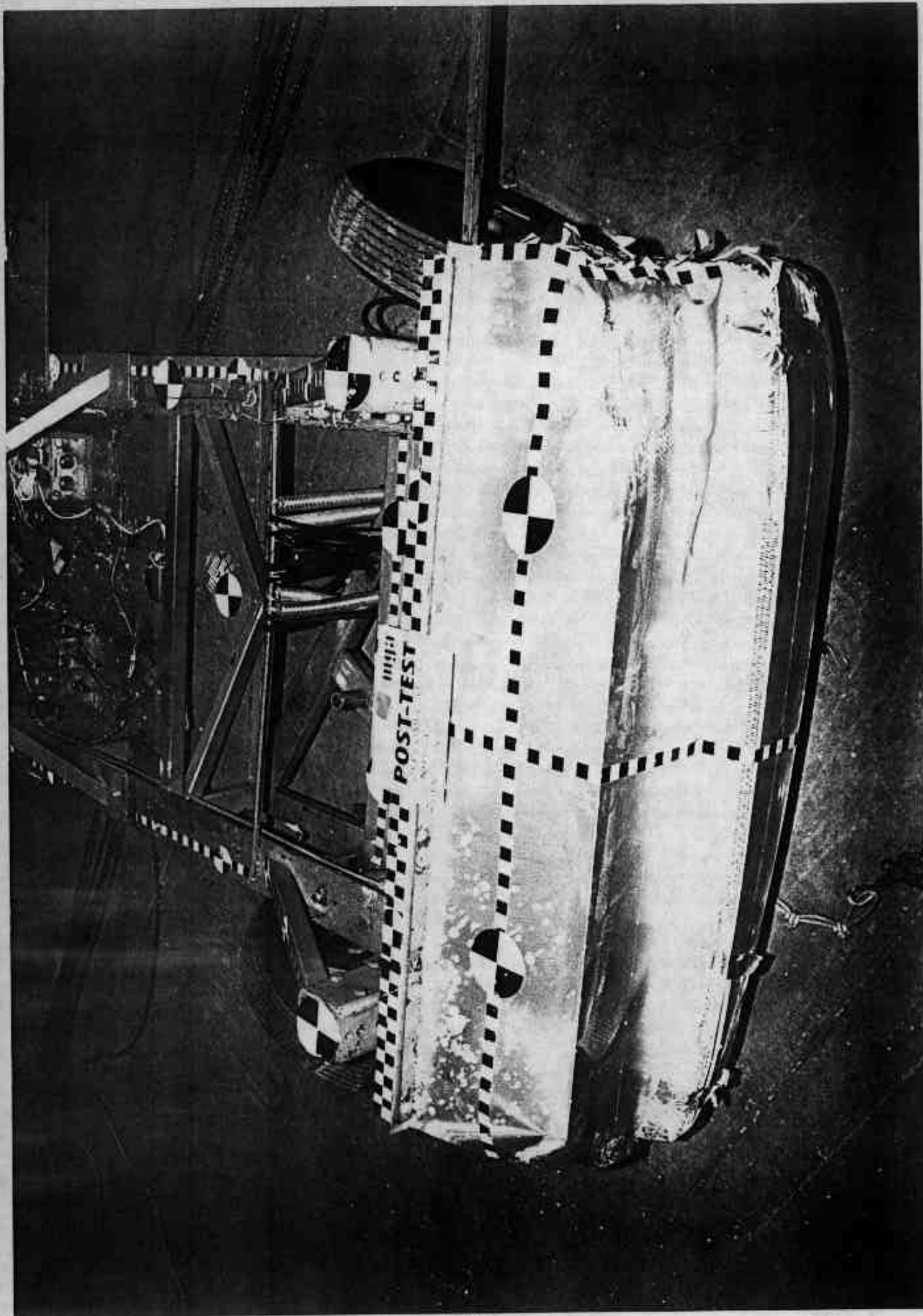
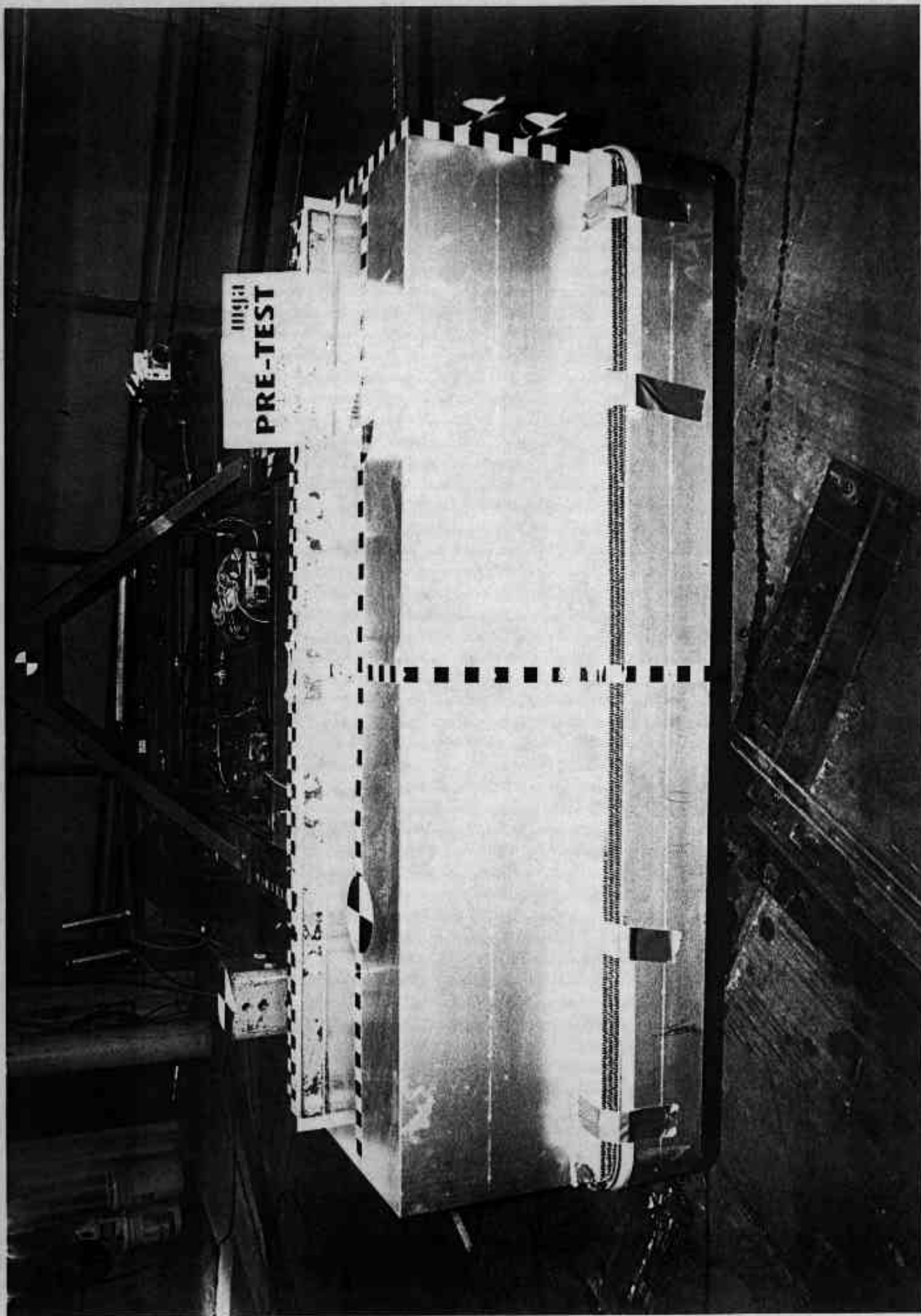


Photo No. A-14 - Post-Test MDB Top View

A-14



A-15

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

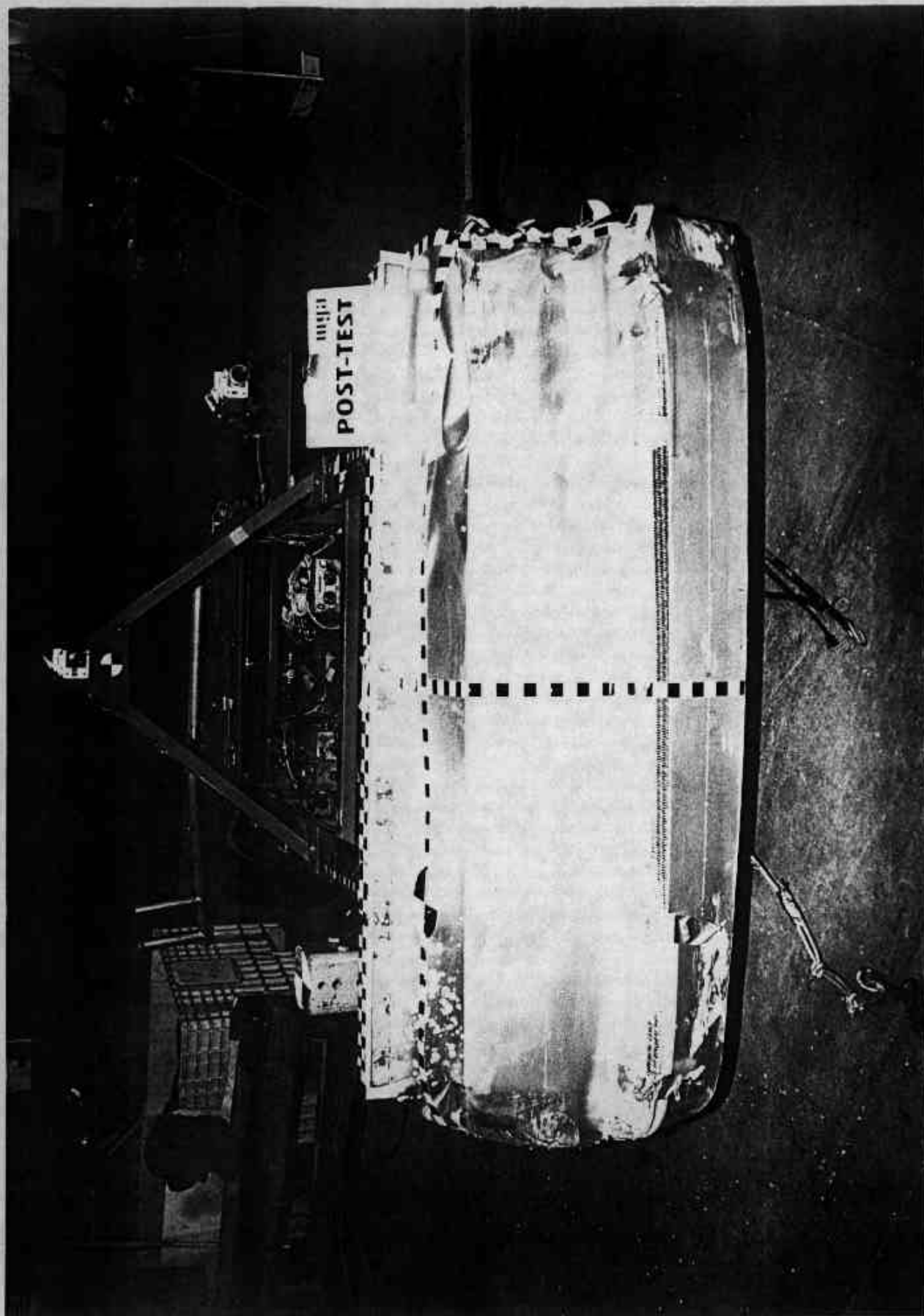


Photo No. A-16 - Post-Test MDB Front View

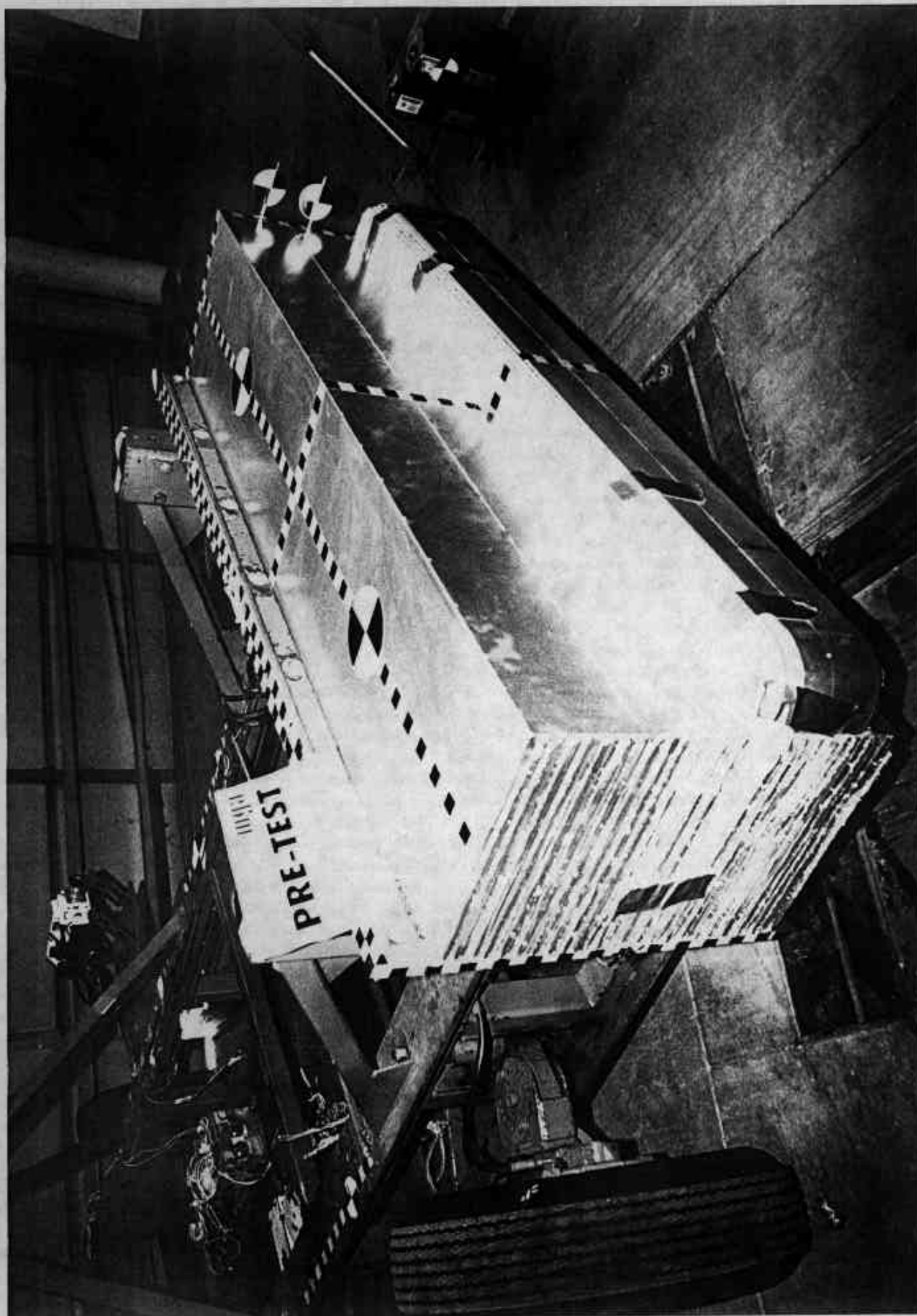


Photo No. A-17 - Pre-Test MDB Right Side View

A-17

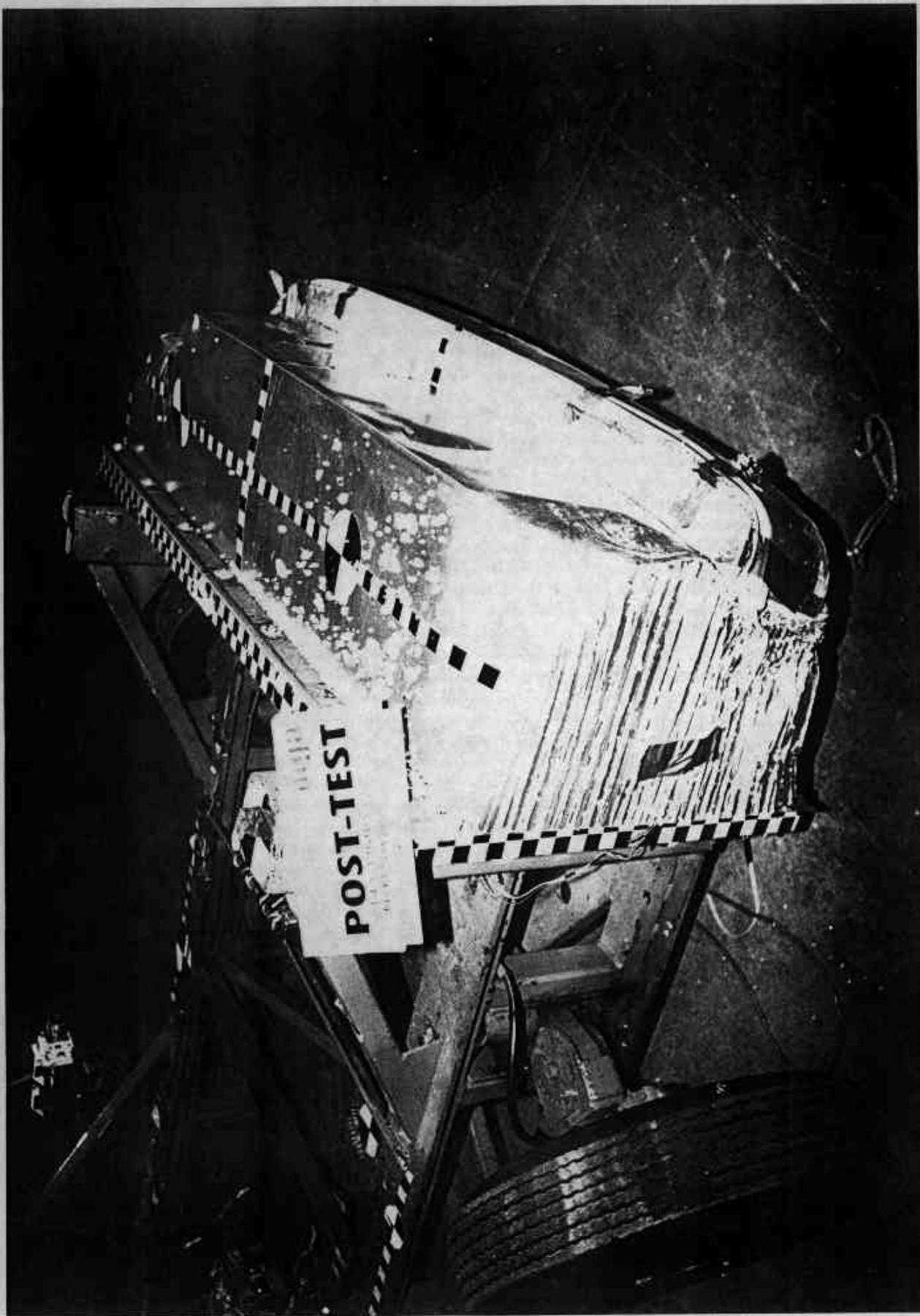


Photo No. A-18 - Post-Test MDB Right Side View

A-18

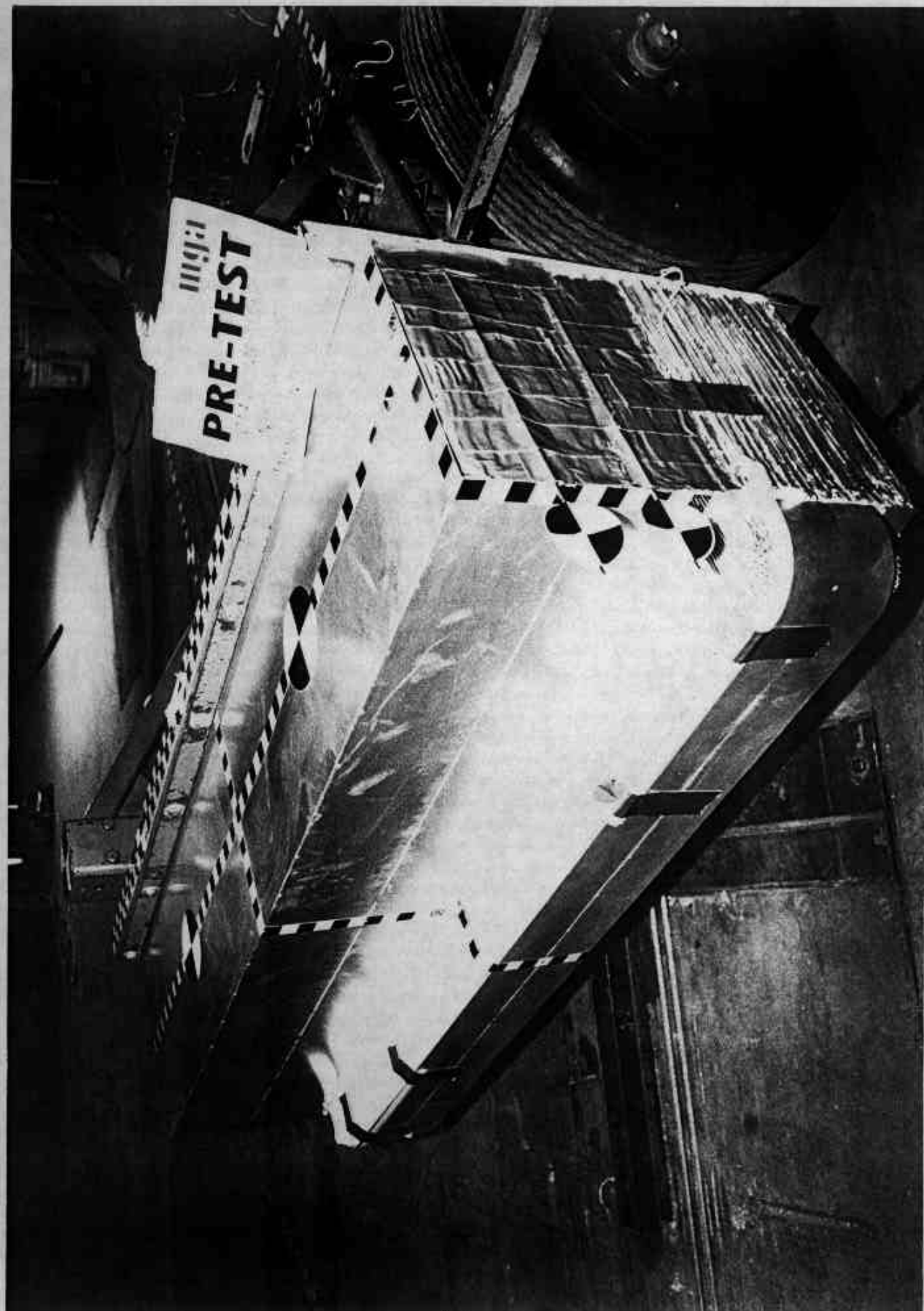


Photo No. A-19 - Pre-Test MDB Left Side View

A-19

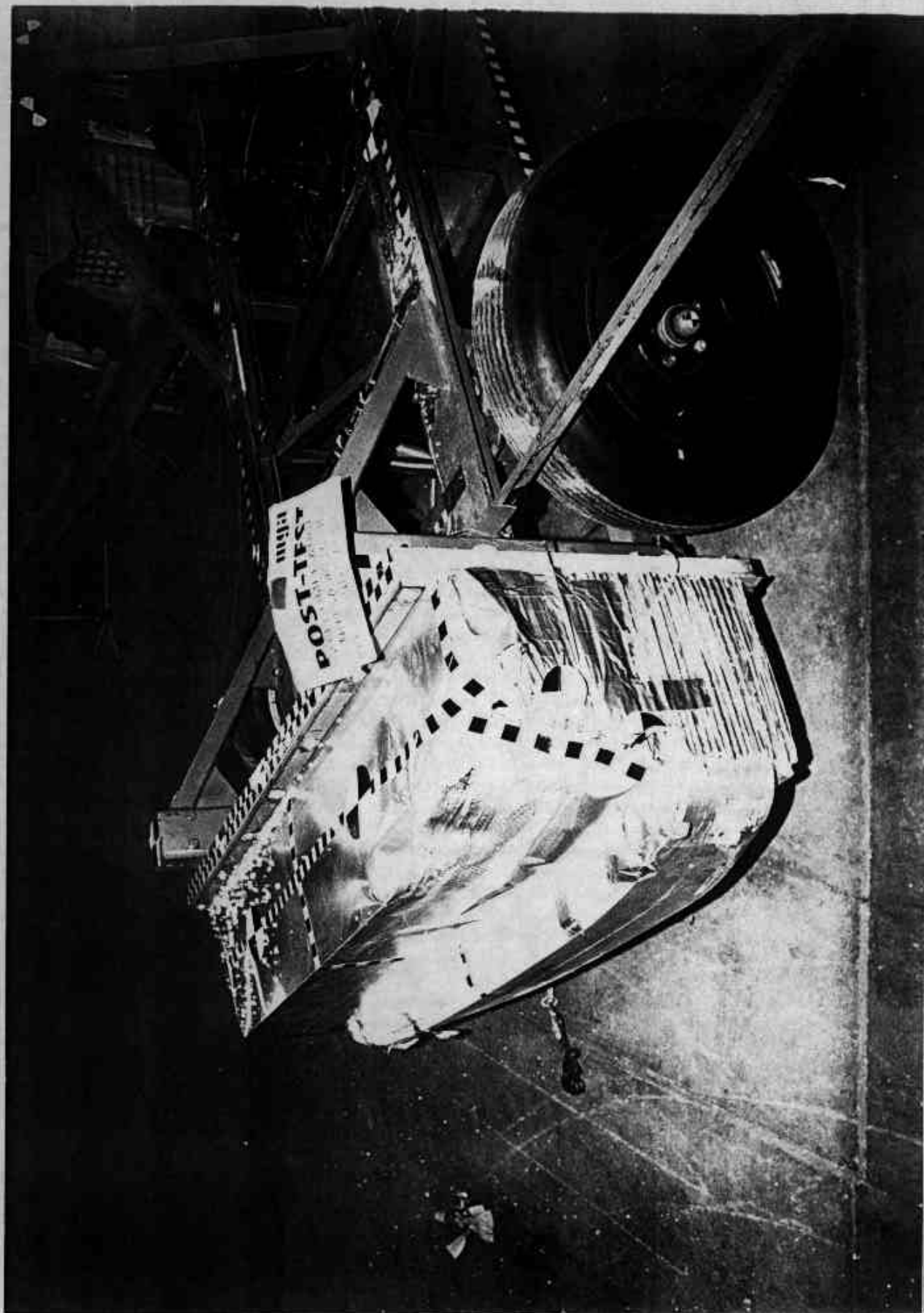


Photo No. A-20 - Post-Test MDB Left Side View

A-20

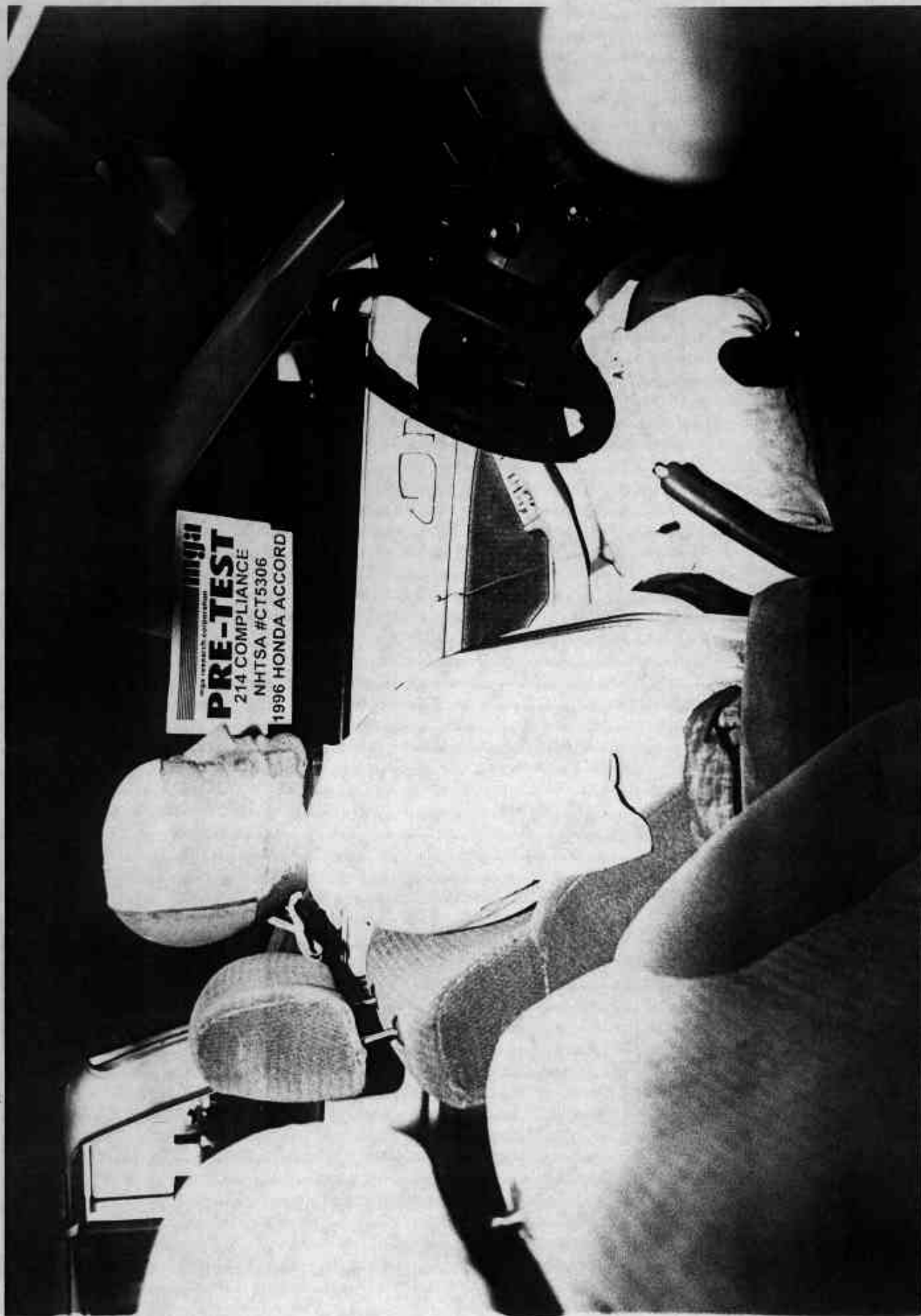


Photo No. A-21 - Pre-Test Driver Dummy Right Side View

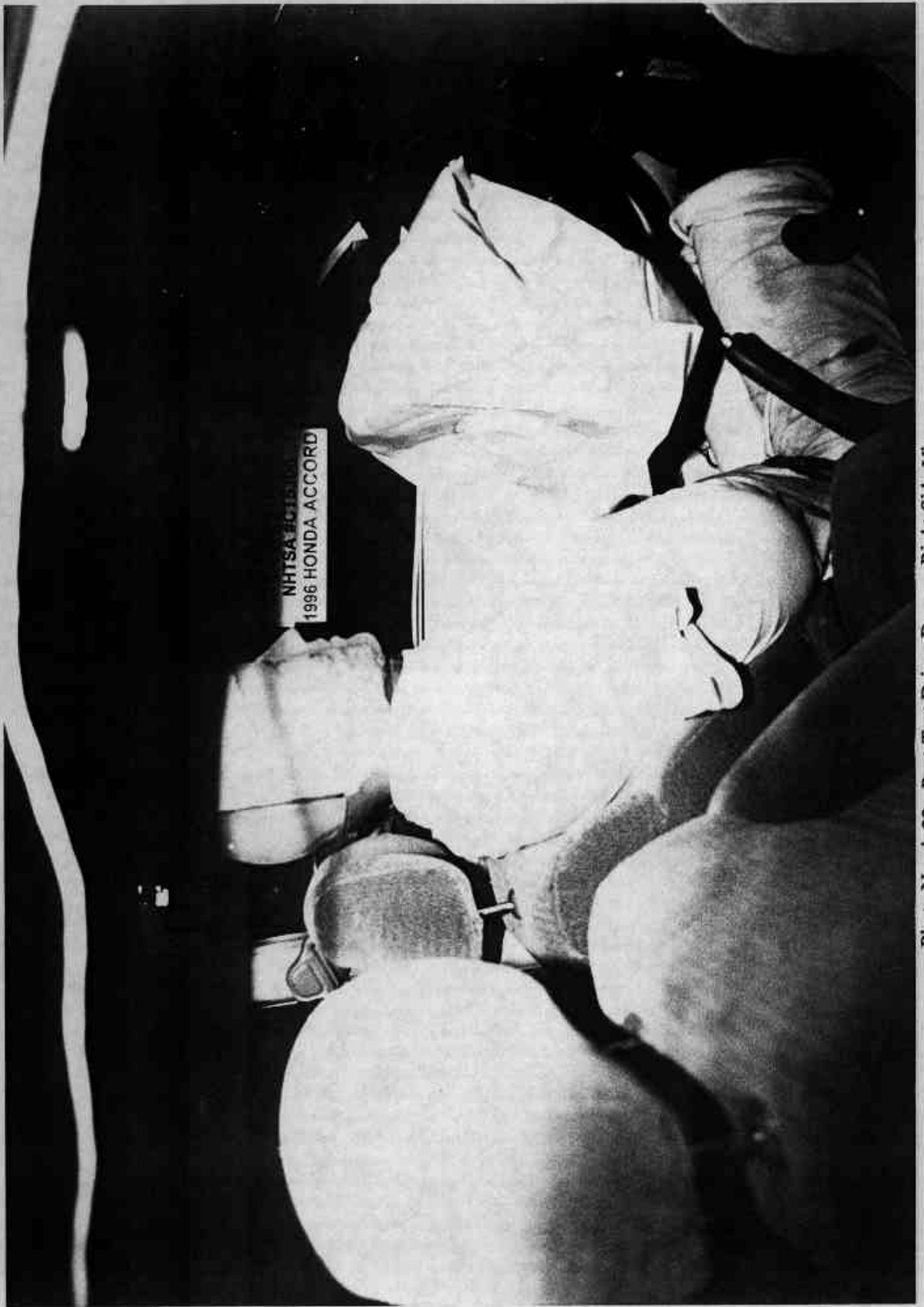
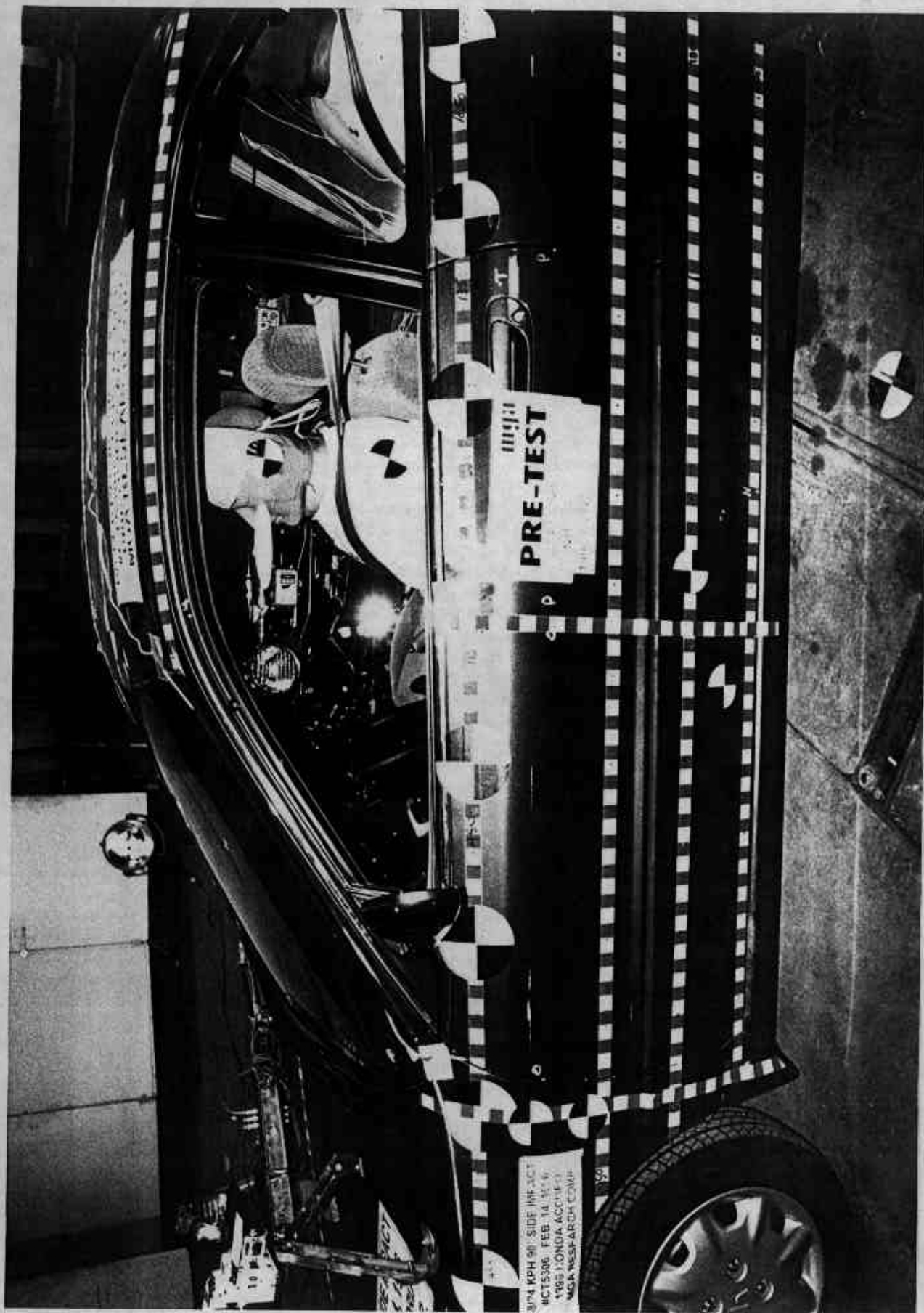


Photo No. A-22 - Post-Test Driver Dummy Right Side View



A-23

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

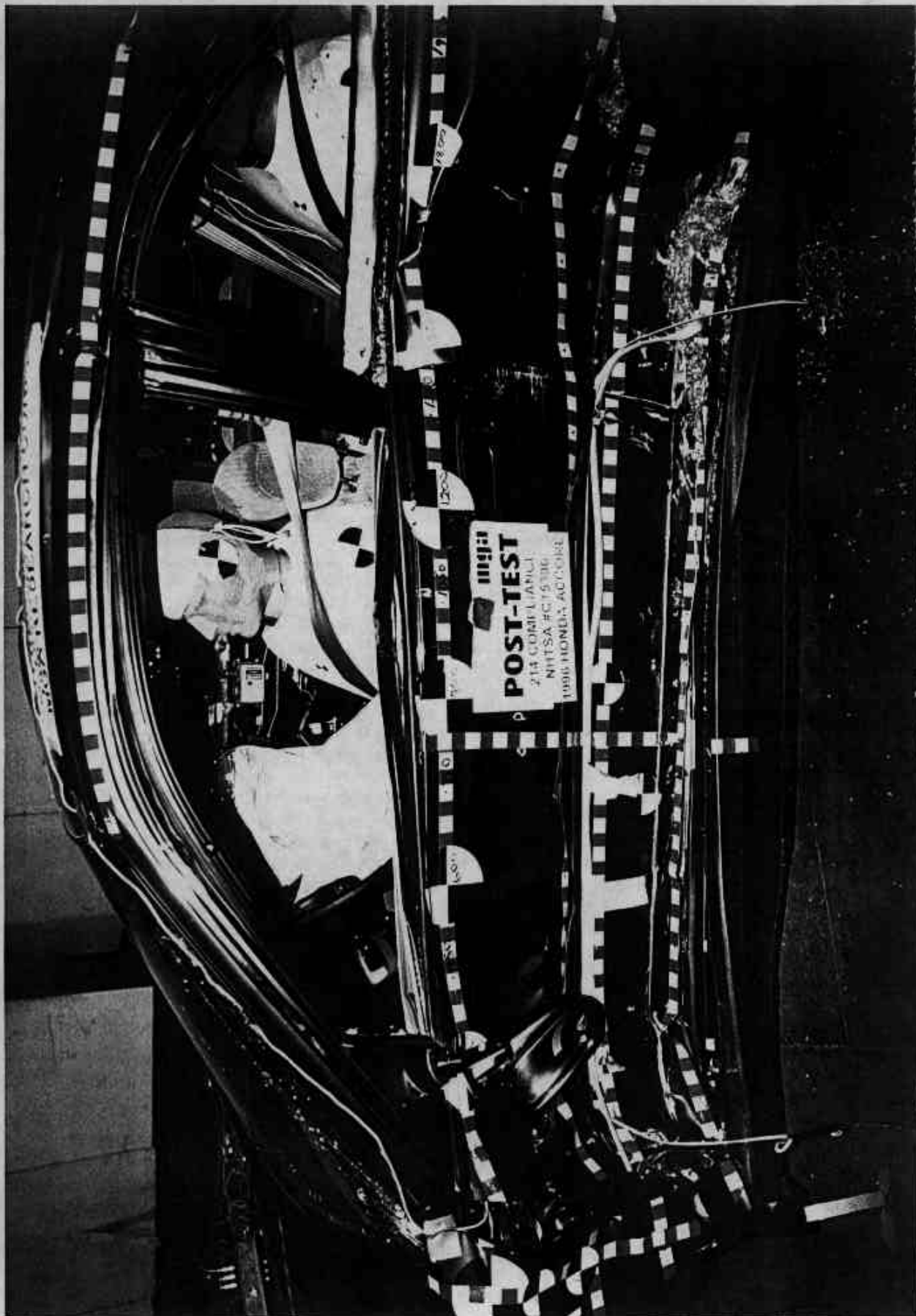


Photo No. A-24 - Post-Test Driver Dummy Left Side View

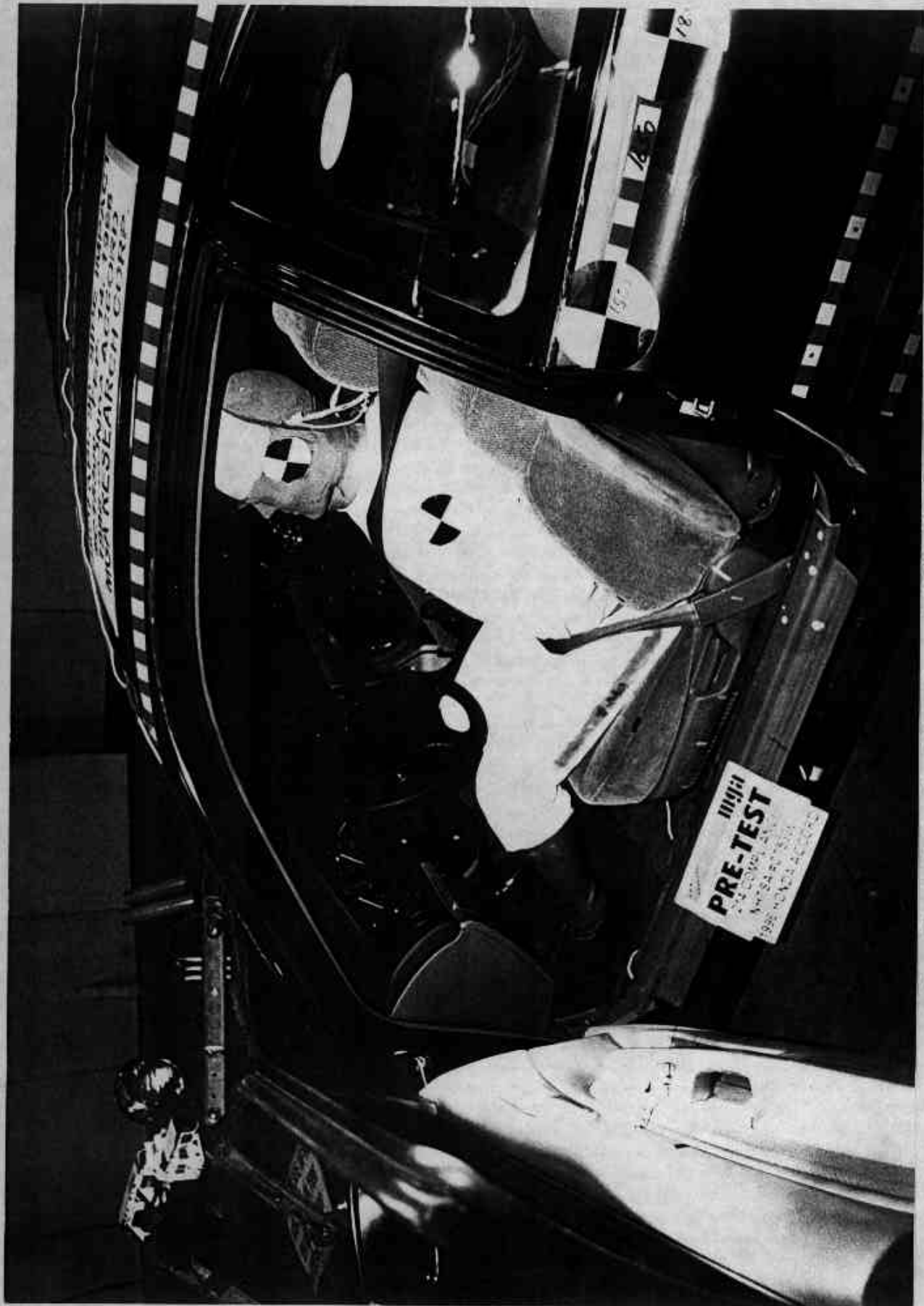


Photo No. A-25 - Pre-Test Driver Dummy Left Side View (Door Open)

A-25



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



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



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



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



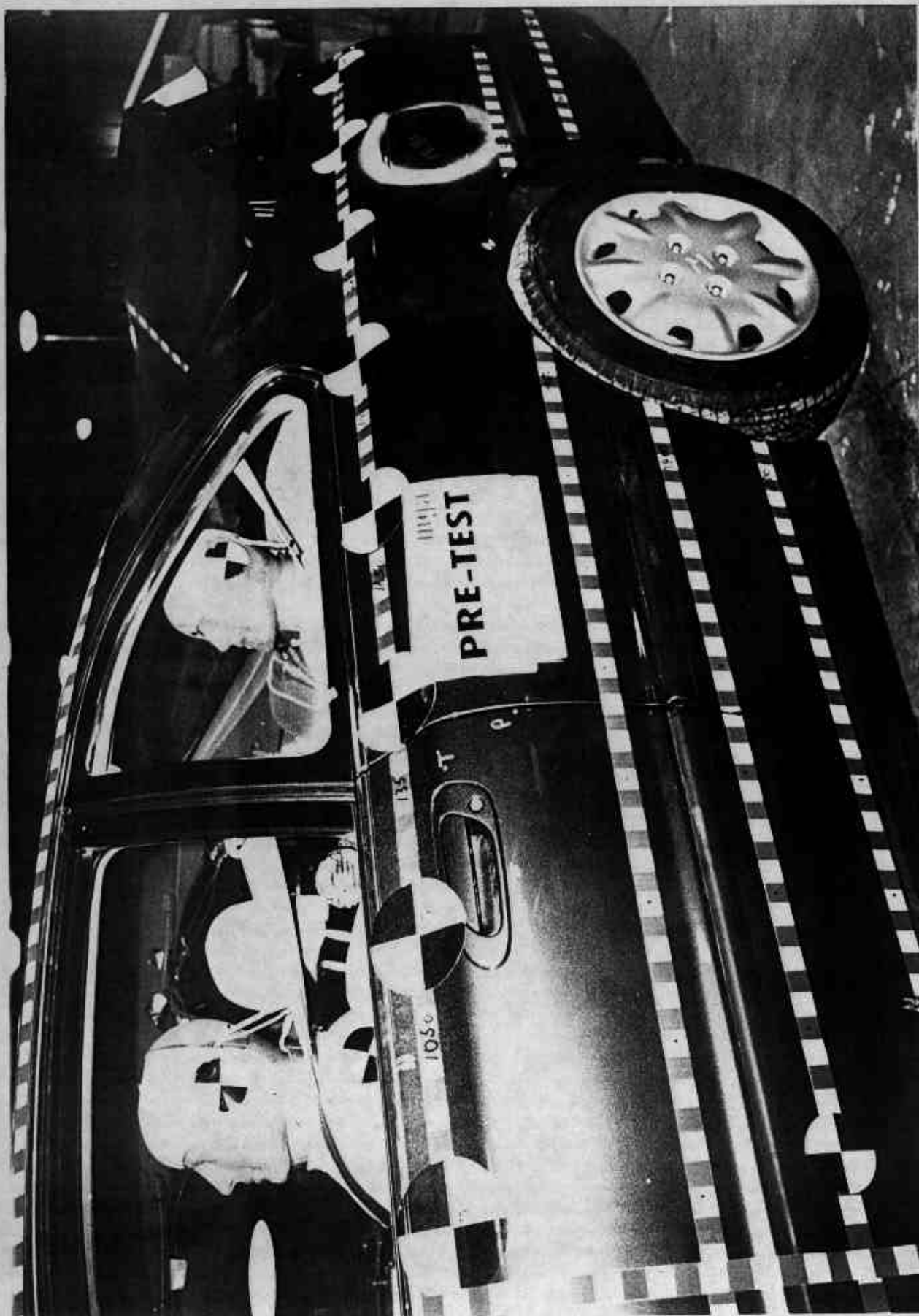
Photo No. A-30 - Post-Test Driver Dummy Contact



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



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



A-33

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

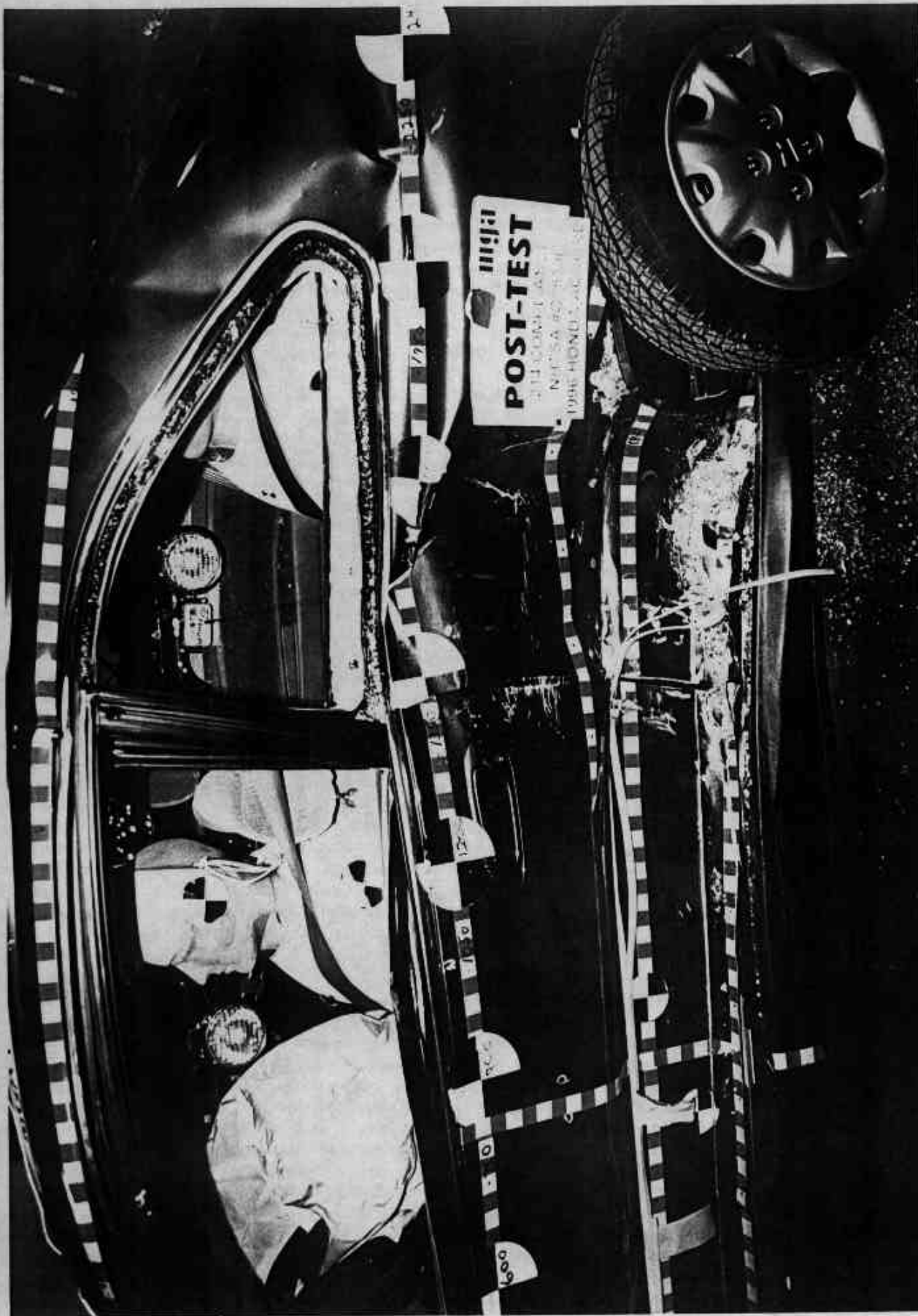


Photo No. A-34 - Post-Test Passenger Dummy Left Side View



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



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

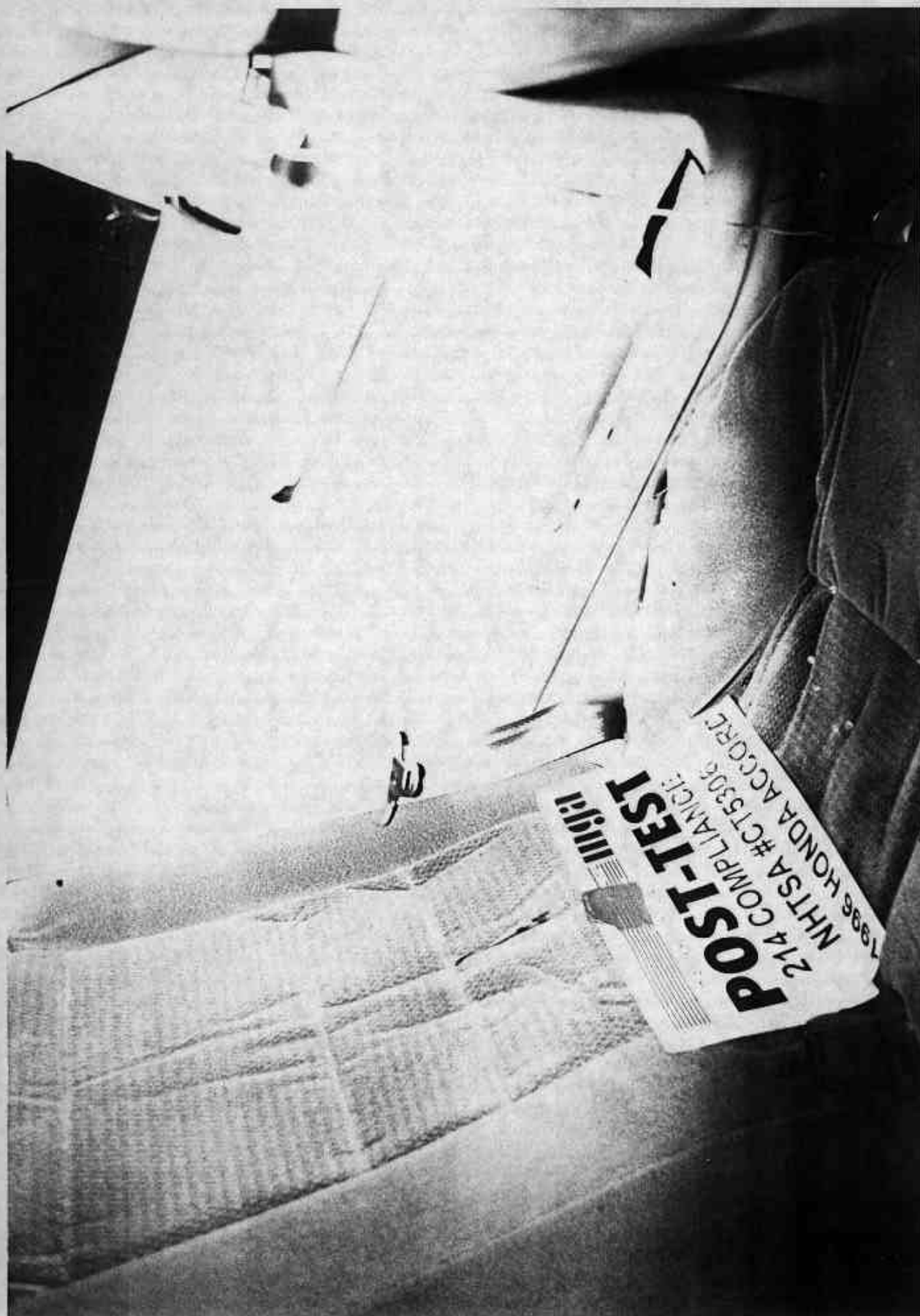


Photo No. A-37 - Post-Test Passenger Dummy Contact



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

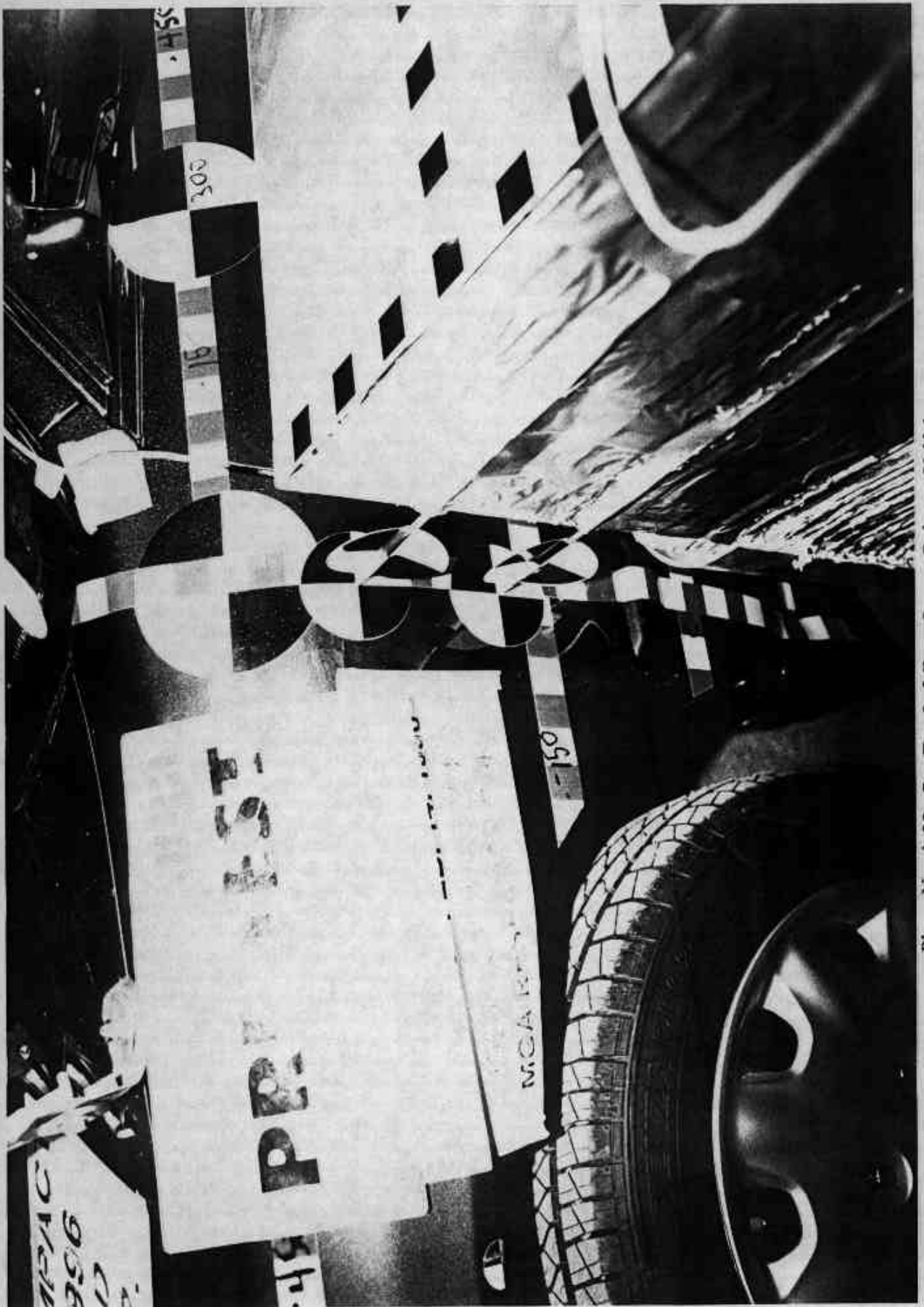
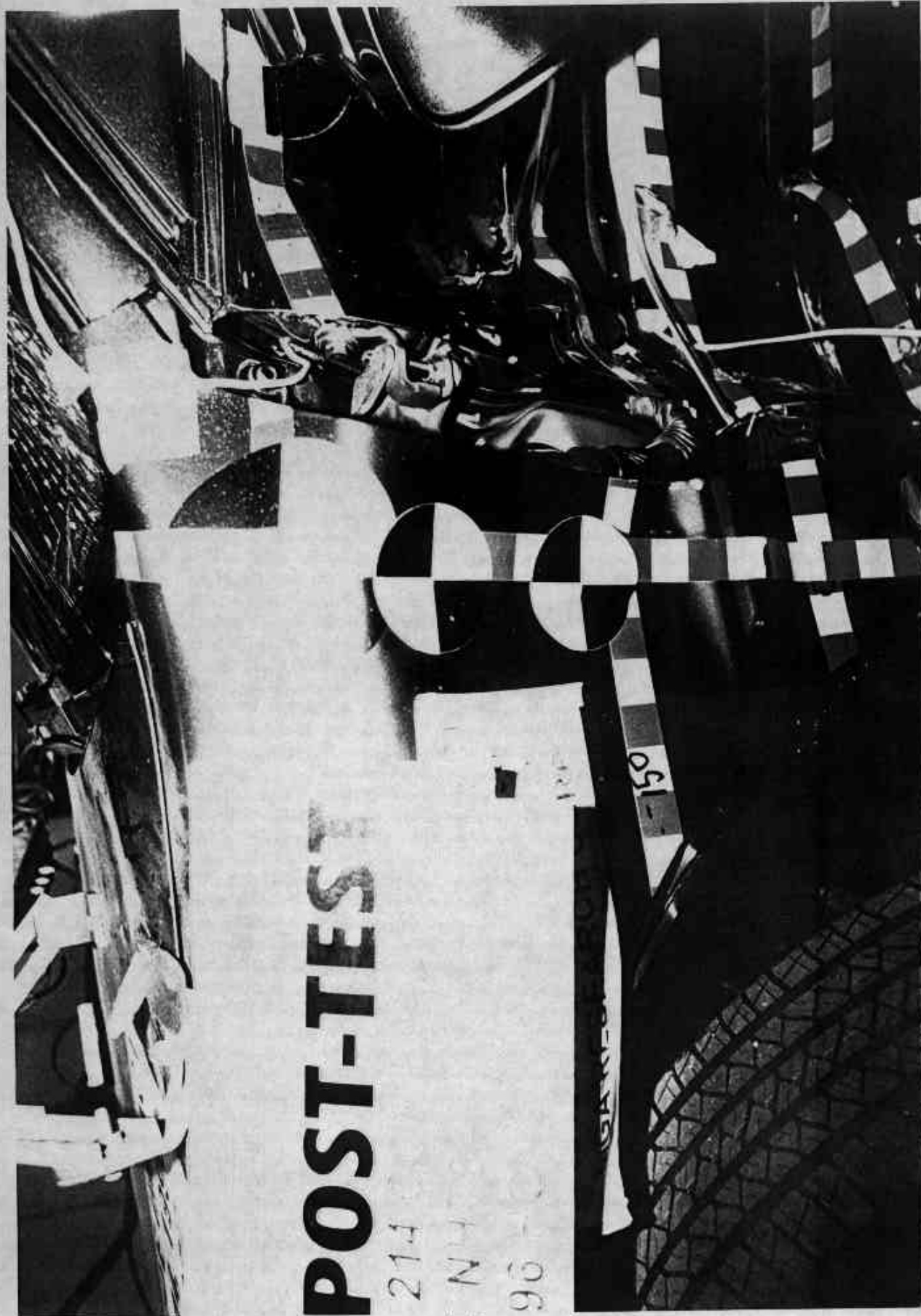


Photo No. A-39 - Pre-Test Left Front Impact Point on Vehicle



POST-TEST

214

N4

96

A-40

Photo No. A-40 - Post-Test Left Front Impact Point on Vehicle

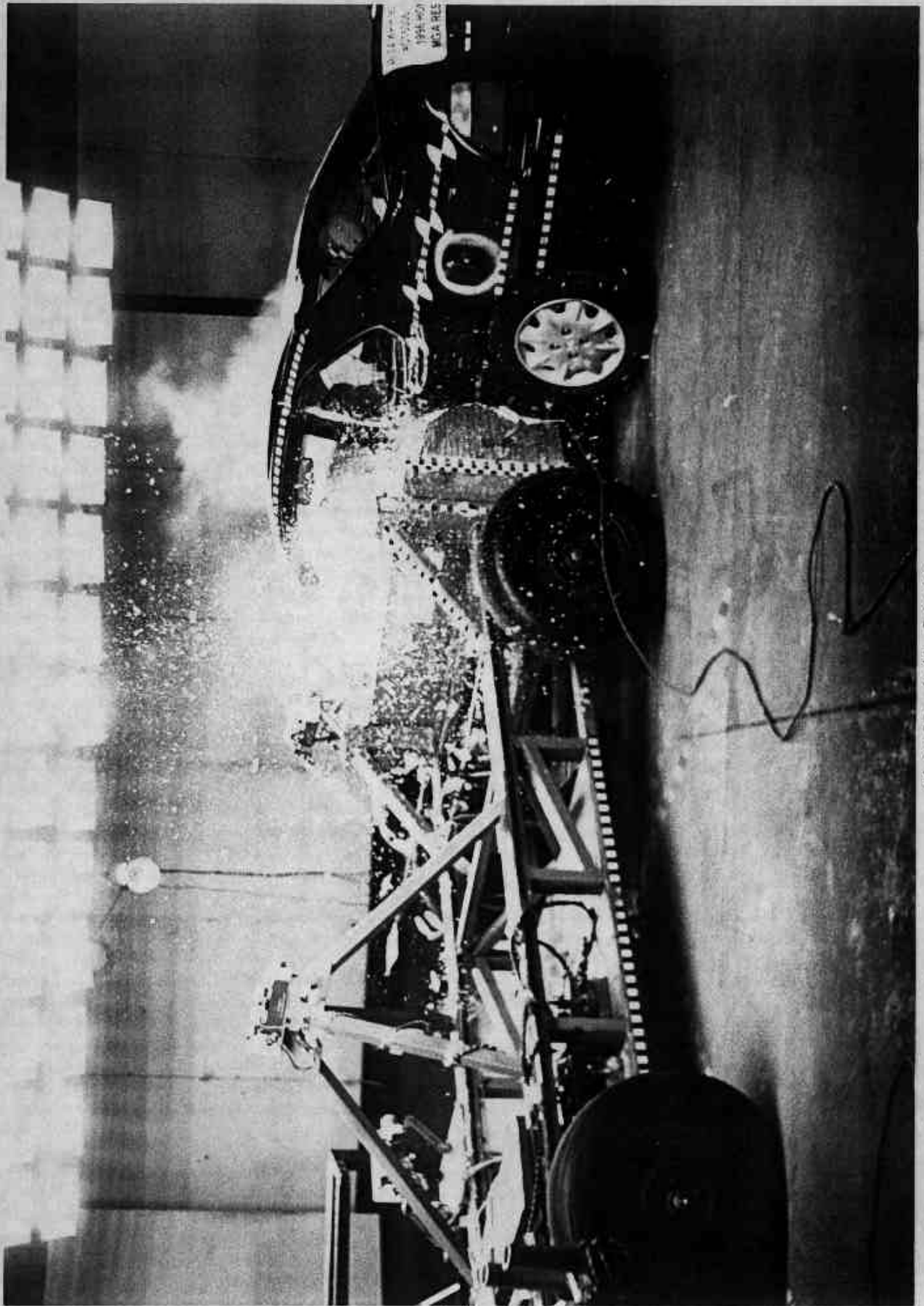


Photo No. A-41 - Impact

A-41

MFD. BY HONDA OF AMERICA MFG., INC. 11/90
 GVWR 3915LBS GAWR F 2140LBS R 1810LBS
 THIS VEHICLE CONFORMS TO ALL APPLICABLE
 FEDERAL MOTOR VEHICLE SAFETY, BUMPER,
 AND THEFT PREVENTION STANDARDS IN EFFECT
 ON THE DATE OF MANUFACTURE SHOWN ABOVE:

V.I.N. 1HGCD7139TA012652



MADE IN U.S.A.

PASSENGER CAR

TIRE INFORMATION

VEHICLE CAPACITY WEIGHT: 850 lbs.

SEATING CAPACITY: TOTAL 5 FRONT 2 REAR 3

RECOMMENDED TIRE SIZE COLD TIRE INFLATION PRESSURE

185 / 65R15 88S	FRONT / REAR 220kPa, 32psi	UP TO VEHICLE CAPACITY WEIGHT.
-----------------	-------------------------------	-----------------------------------

COMPACT SPARE TIRE T115 / 70D14	INFLATION PRESSURE 420kPa, 60psi	DO NOT INSTALL ON OTHER VEHICLES.
------------------------------------	-------------------------------------	--------------------------------------

SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION.

V4YA3

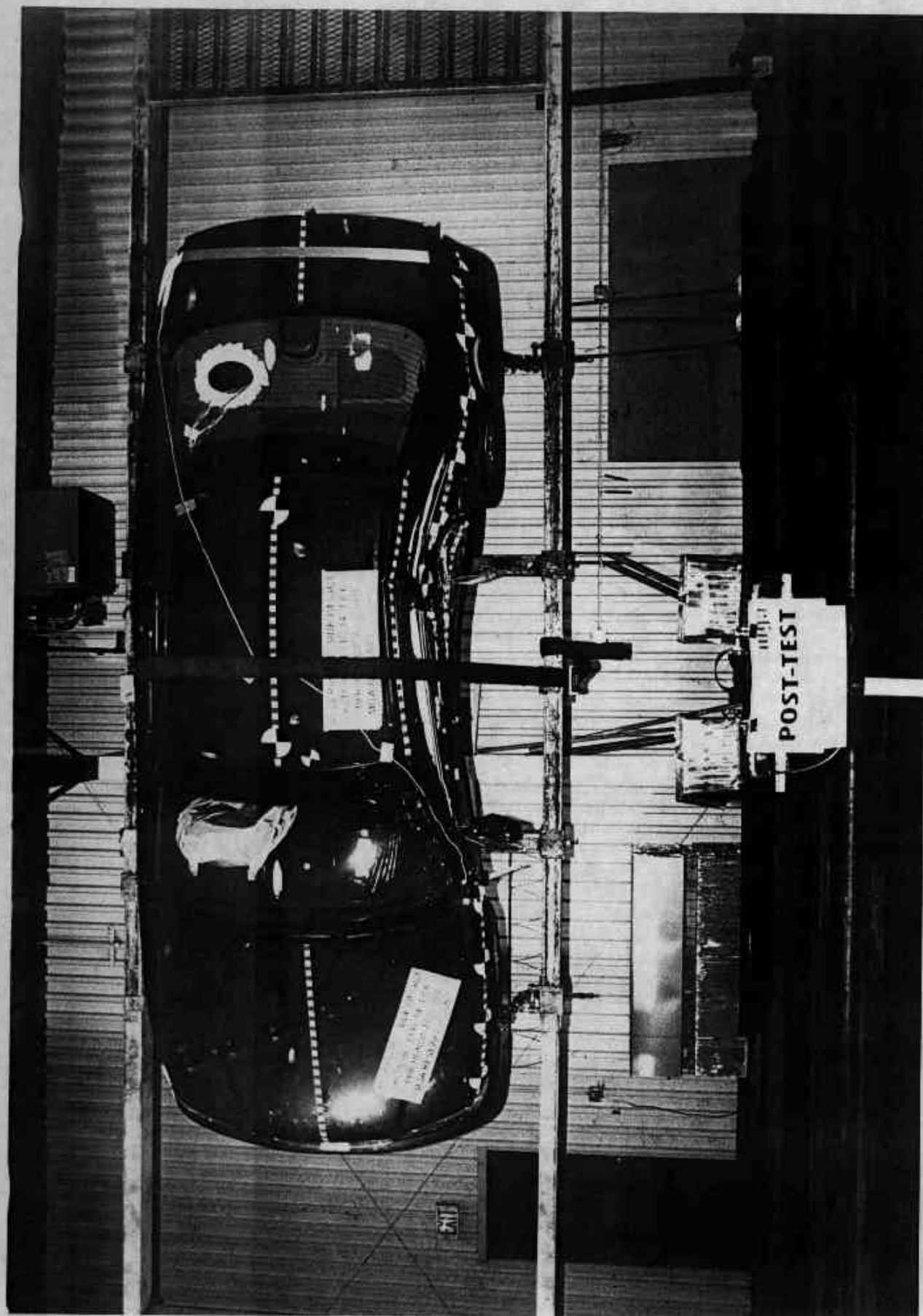
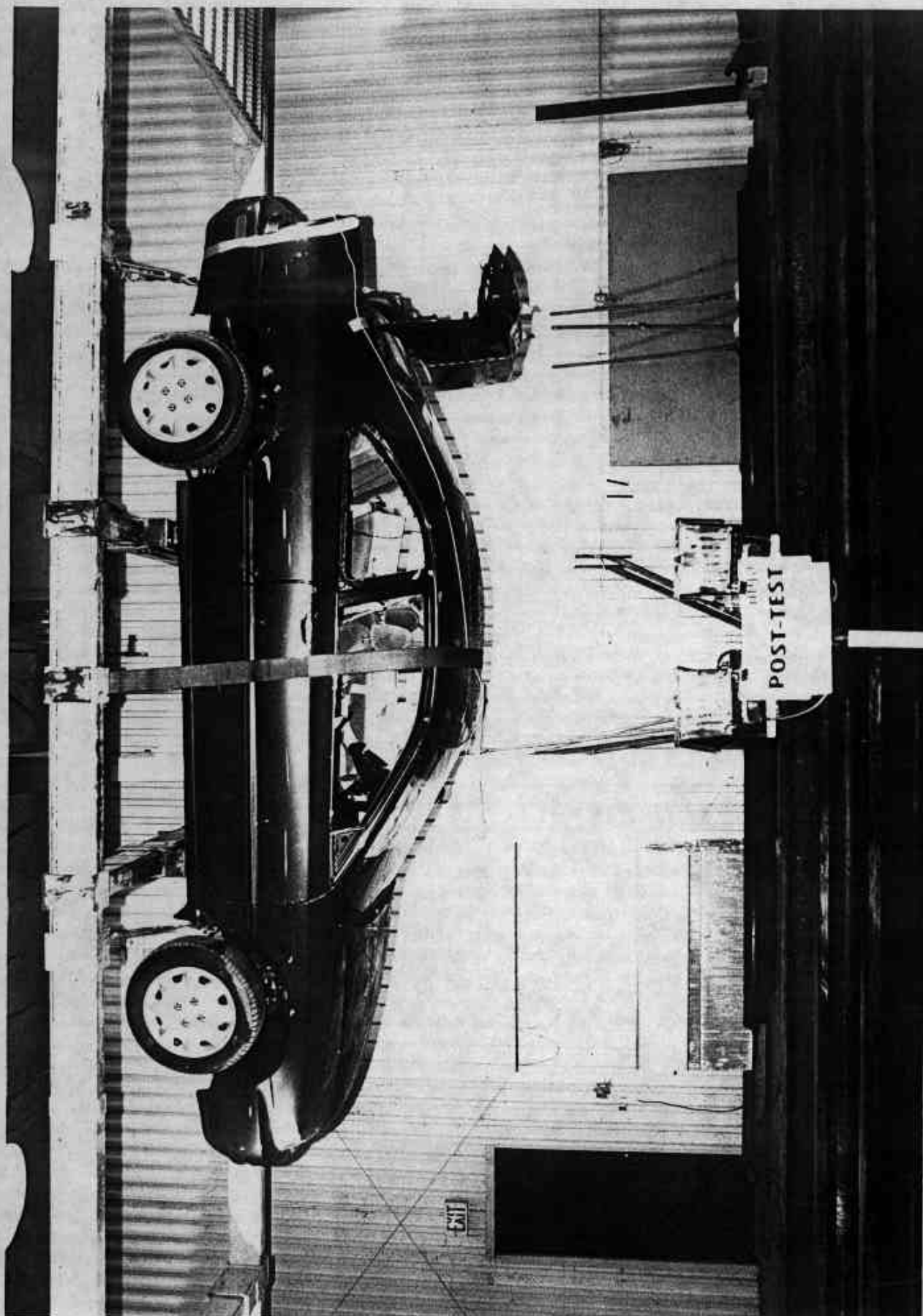


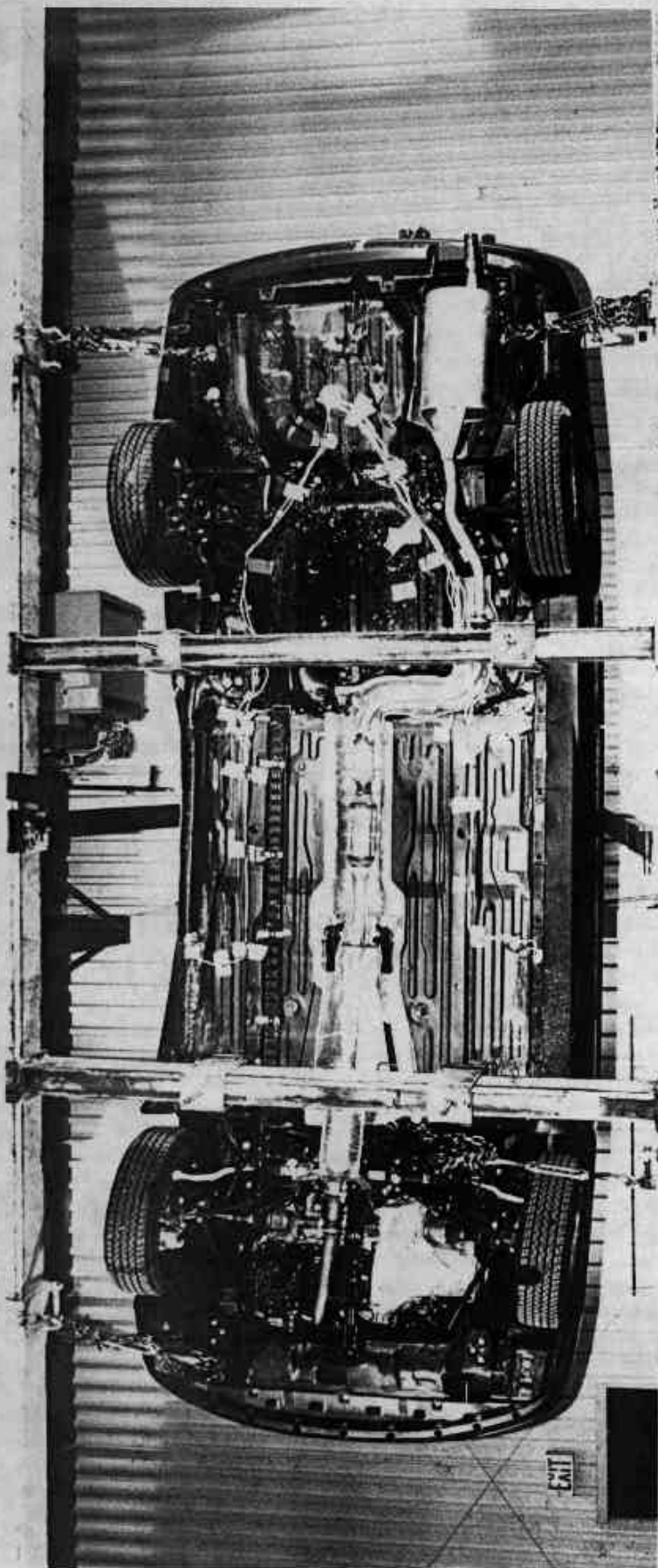
Photo No. A-43 - Rollover 90°

A-43



A-44

Photo No. A-44 - Rollover 180°



A-45

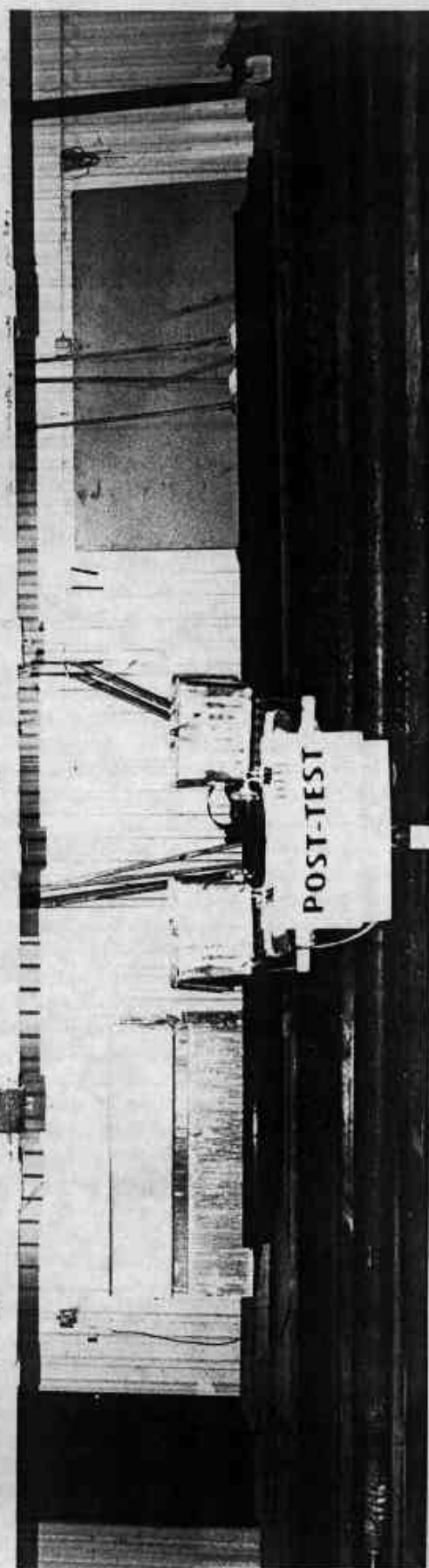
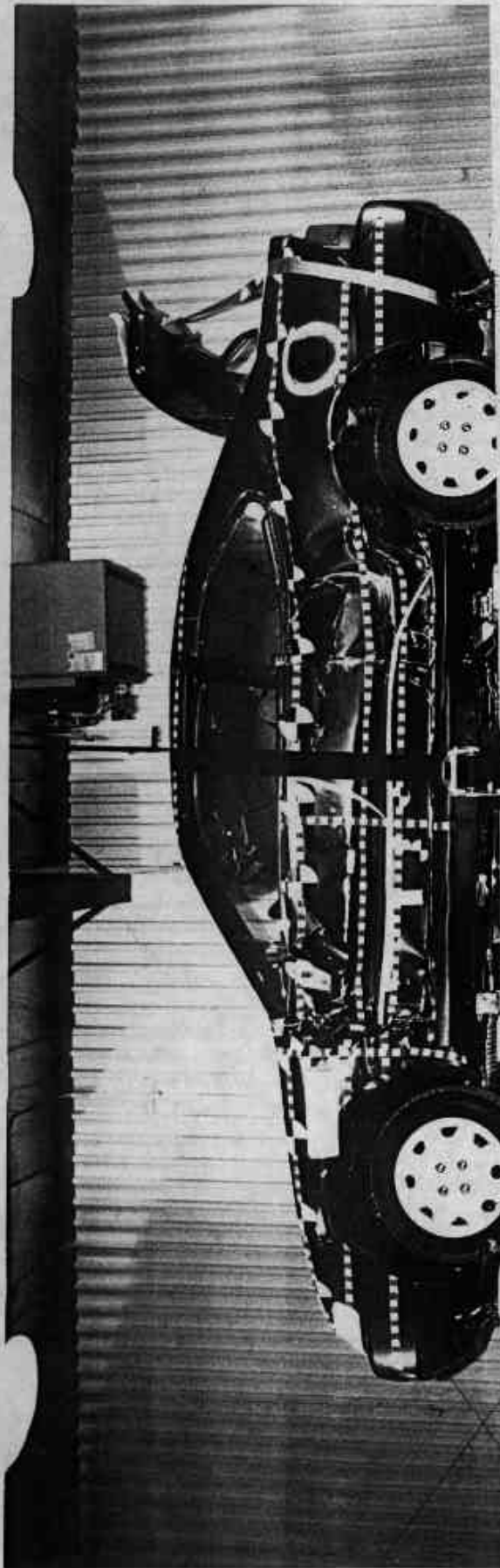


Photo No. A-45 - Rollover 270°



A-46

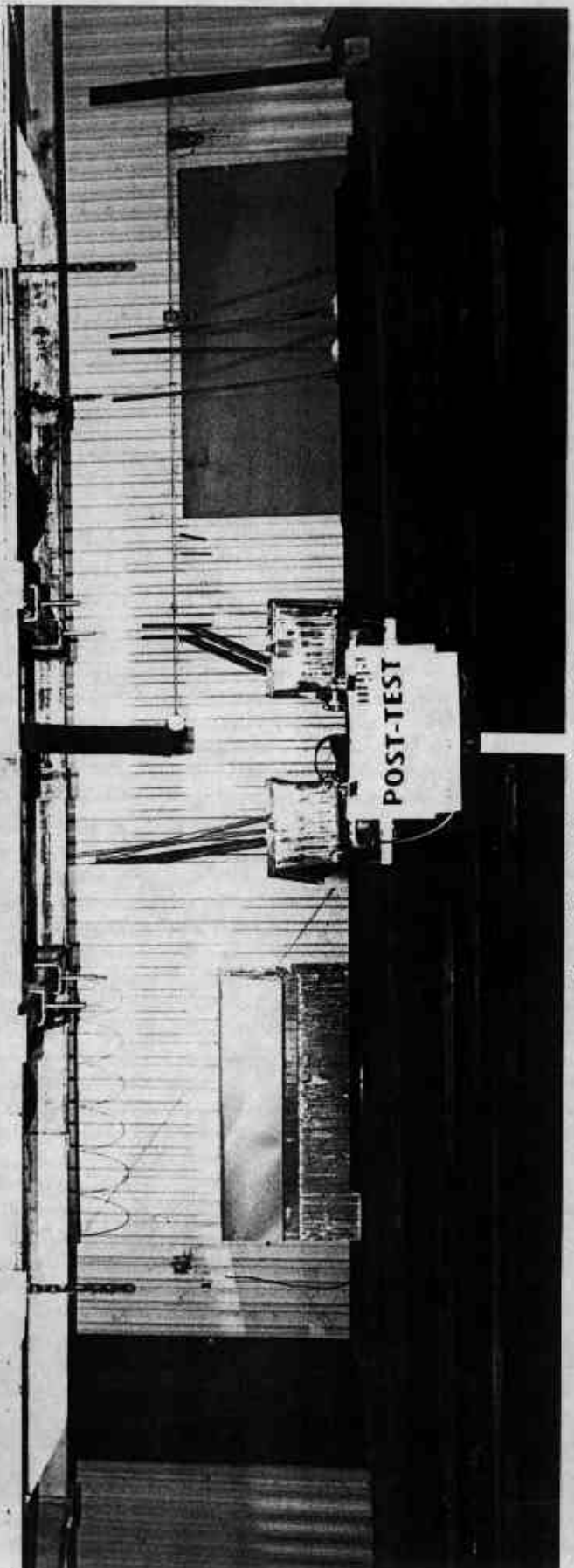


Photo No. A-46 - Rollover 360°

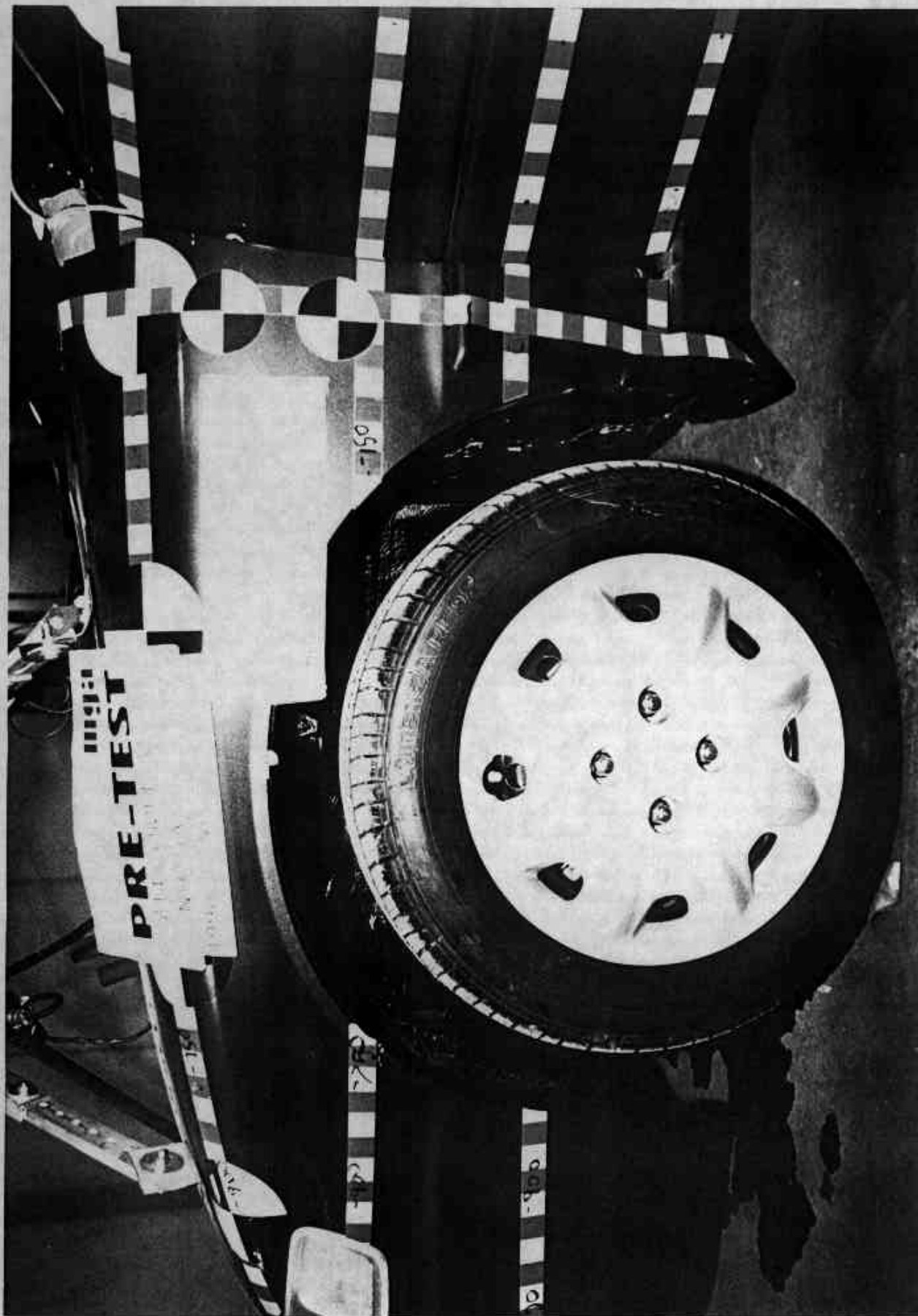


Photo No. A-47 - Left Front Attitude Point

A-47

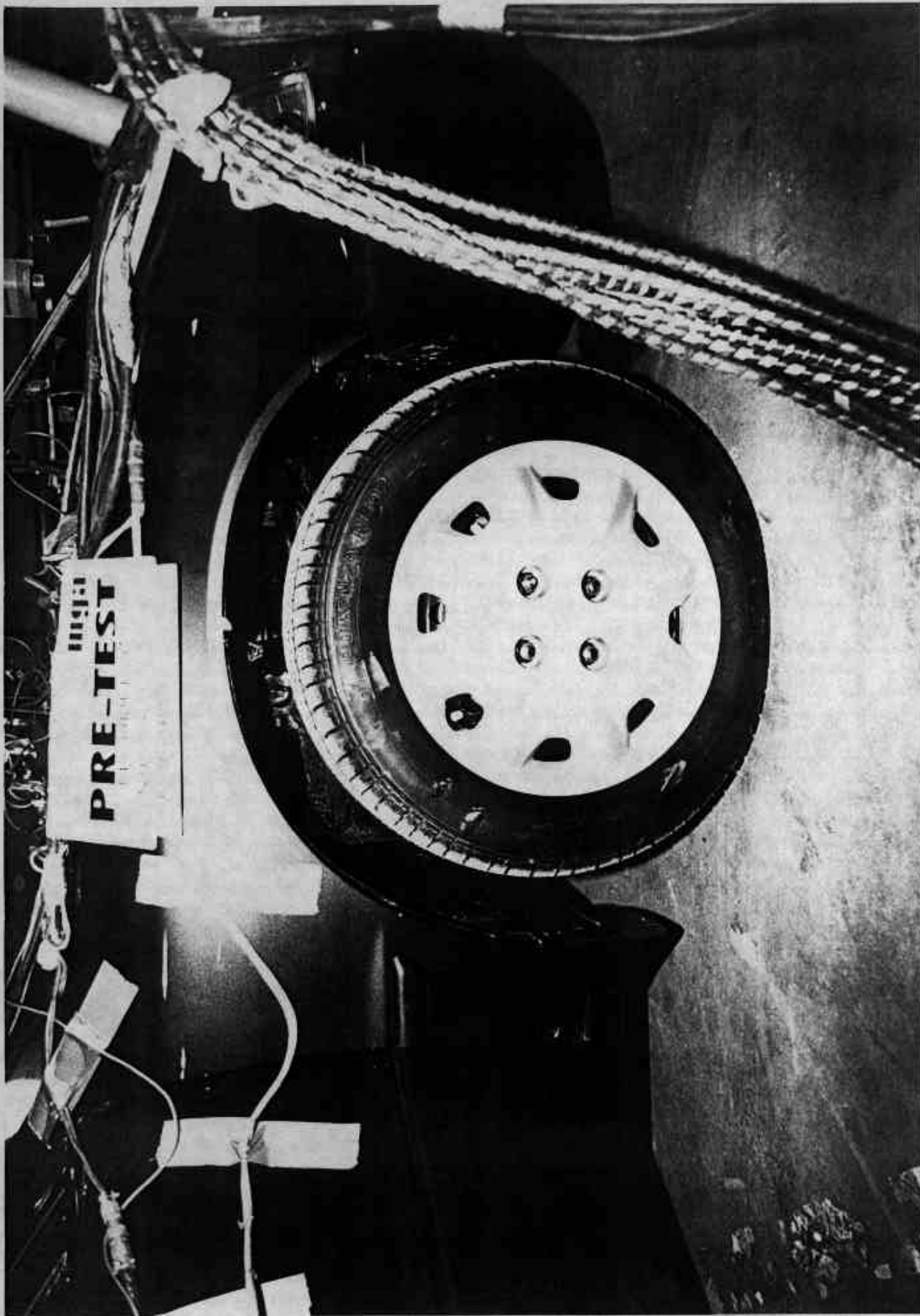


Photo No. A-48 - Right Front Attitude Point

A-48



Photo No. A-49 - Left Rear Attitude Point

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Photo No. A-50 - Right Rear Attitude Point

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* No valid data collect

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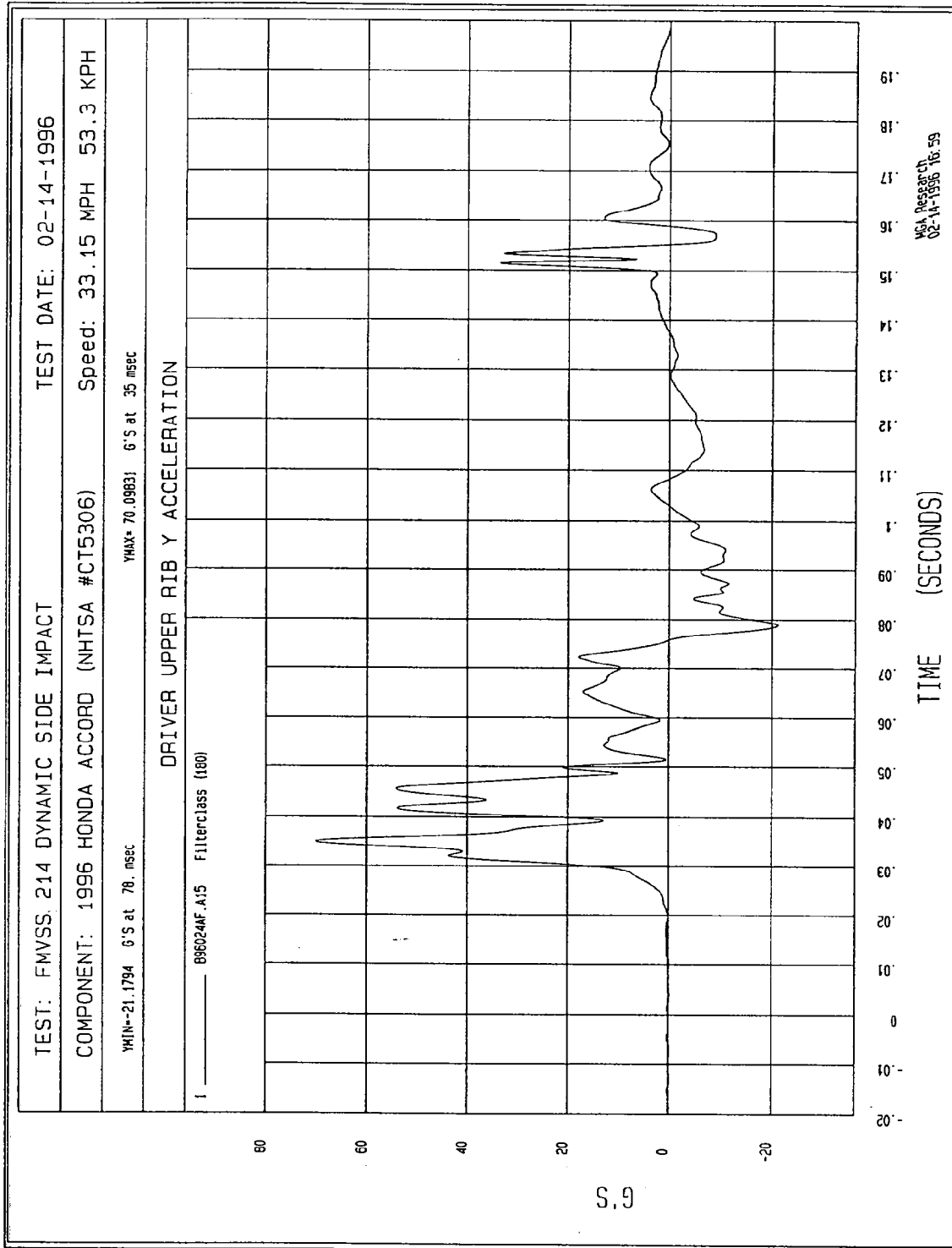
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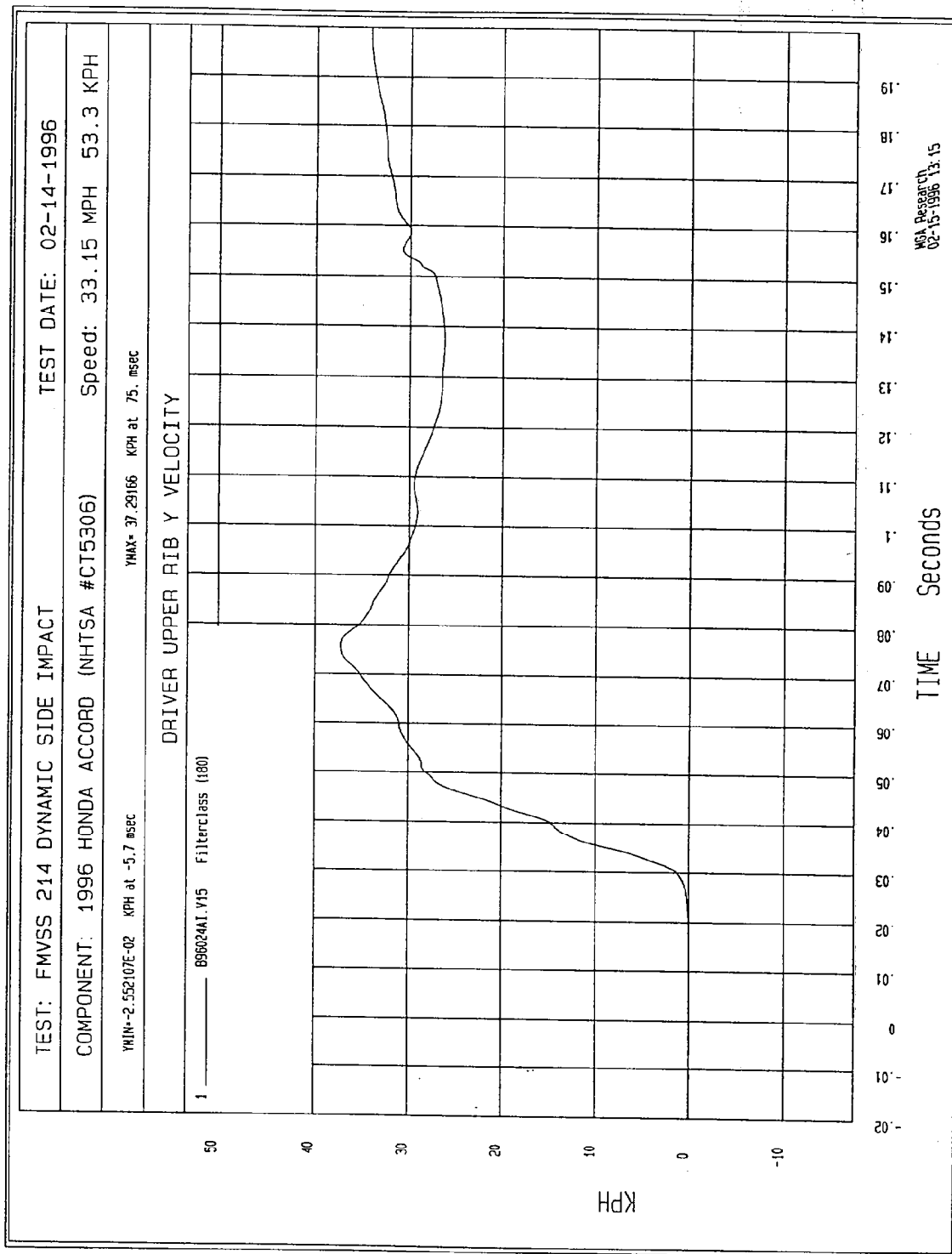
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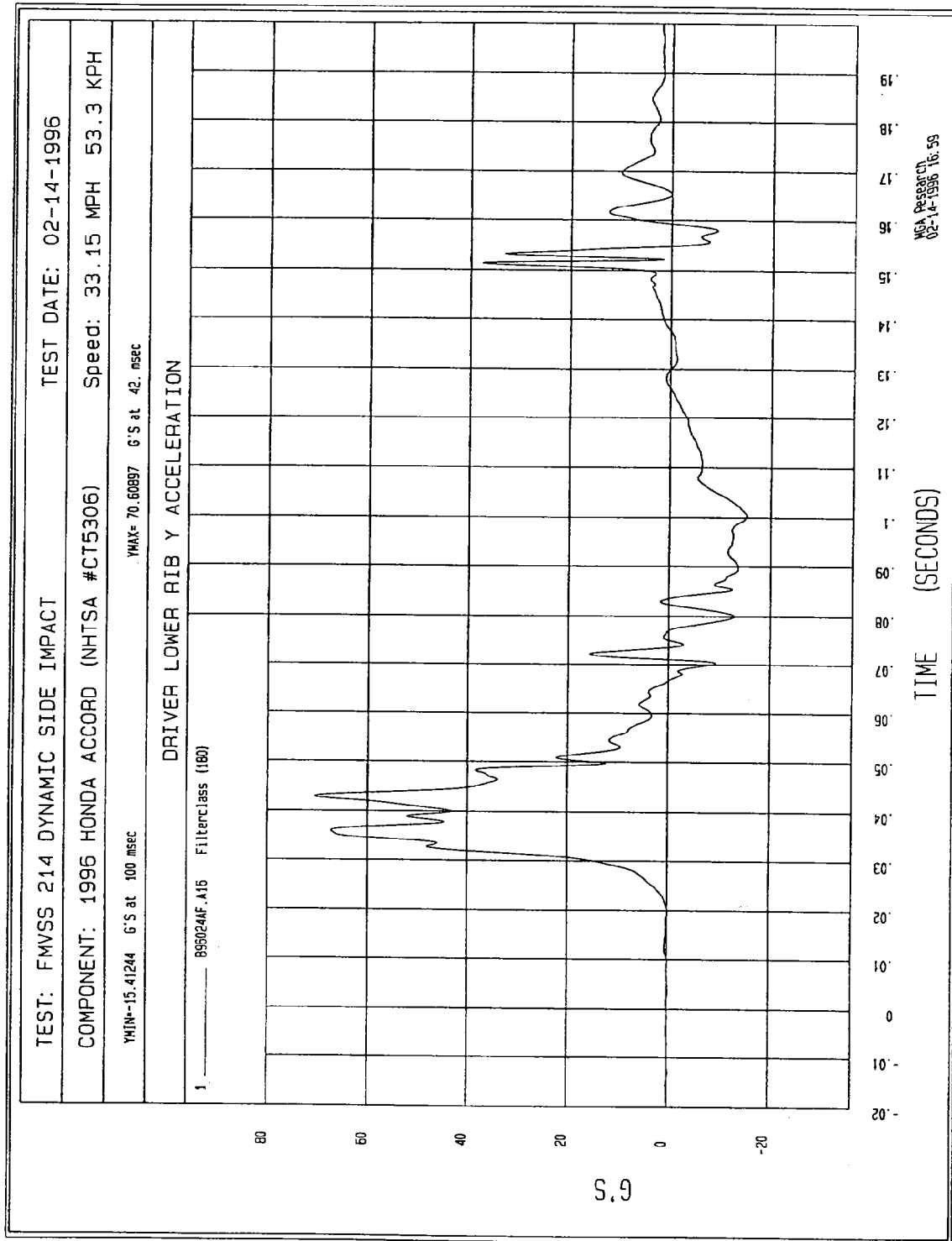
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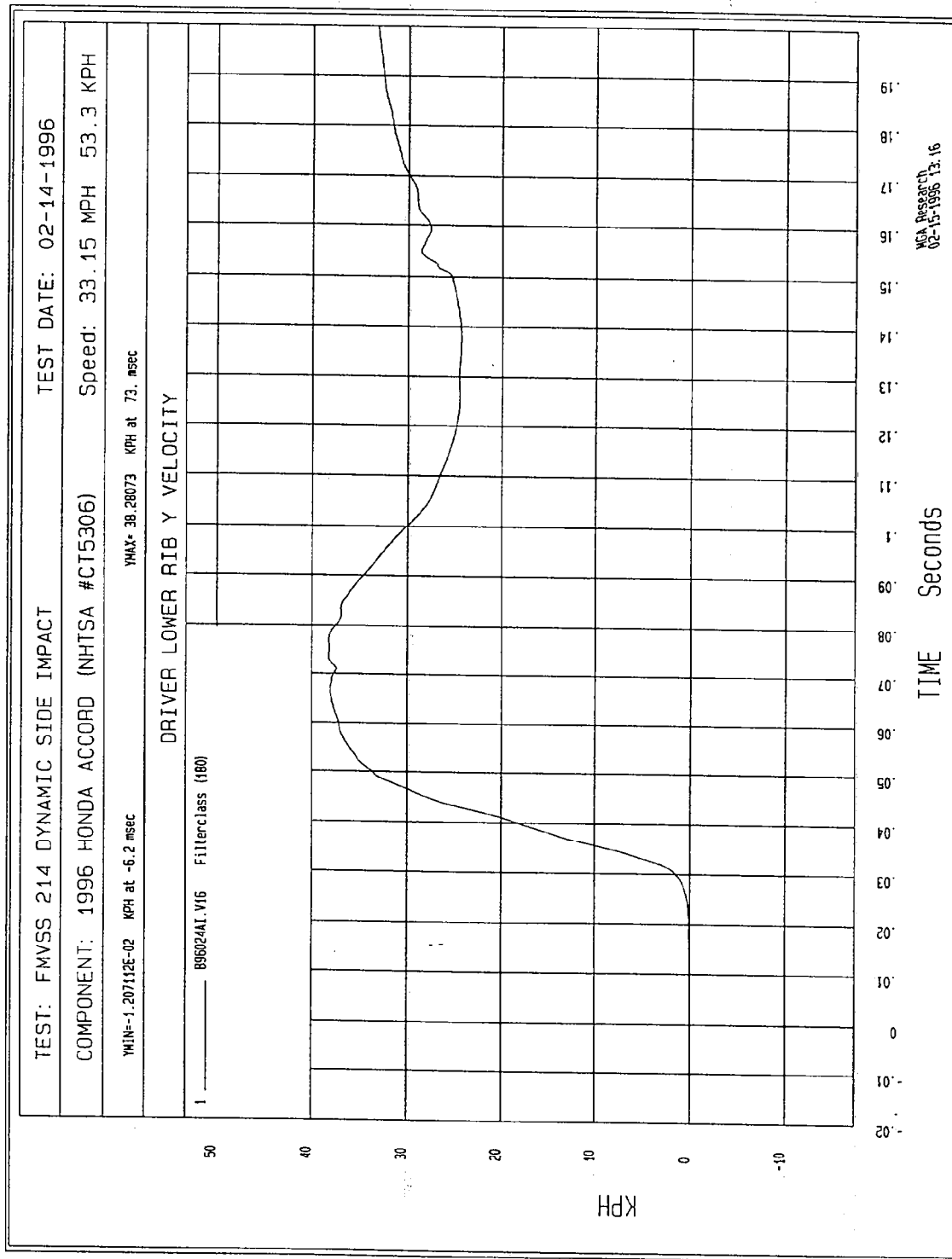
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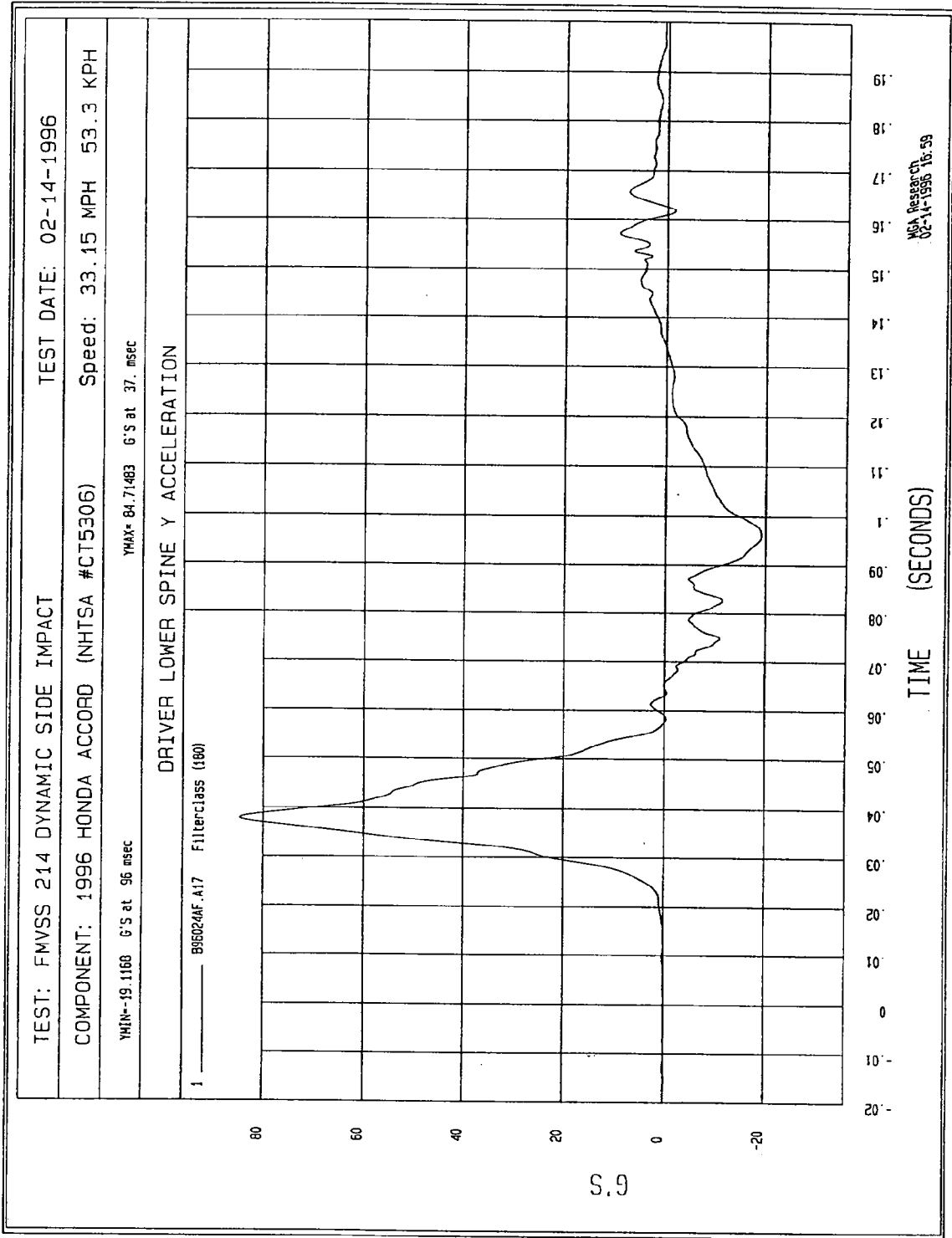
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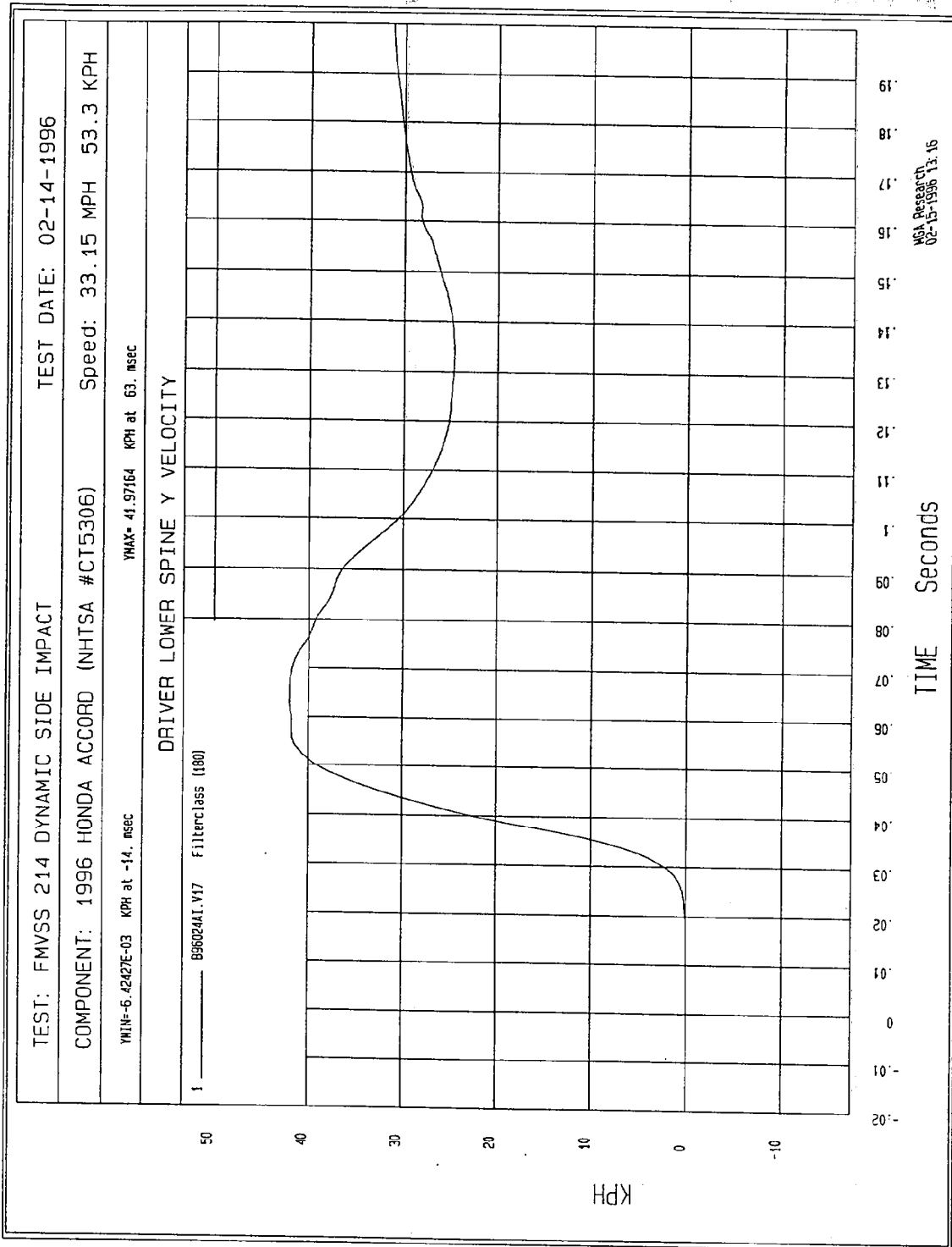












TEST DATE: 02-14-1996

TEST: FMVSS 214 DYNAMIC SIDE IMPACT

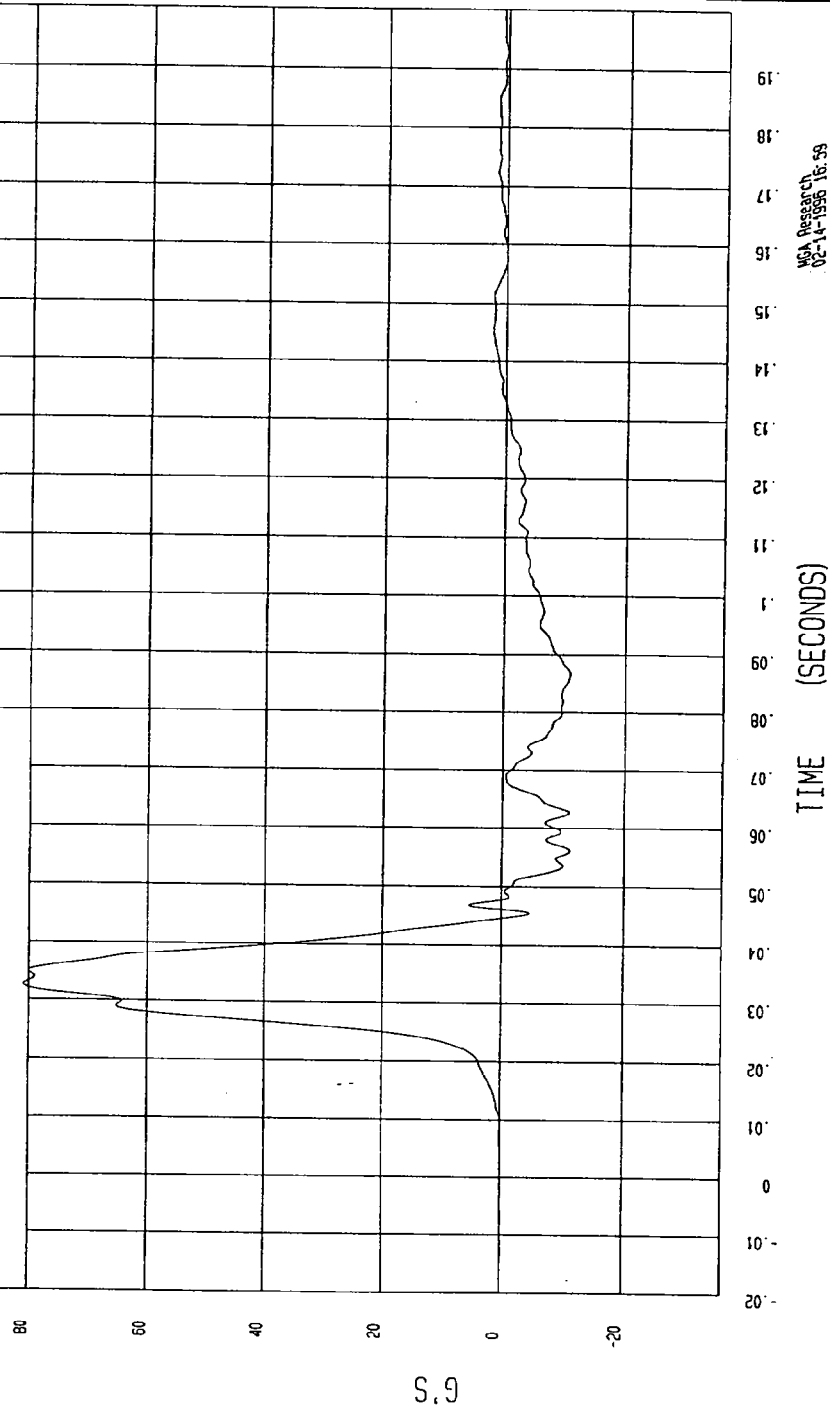
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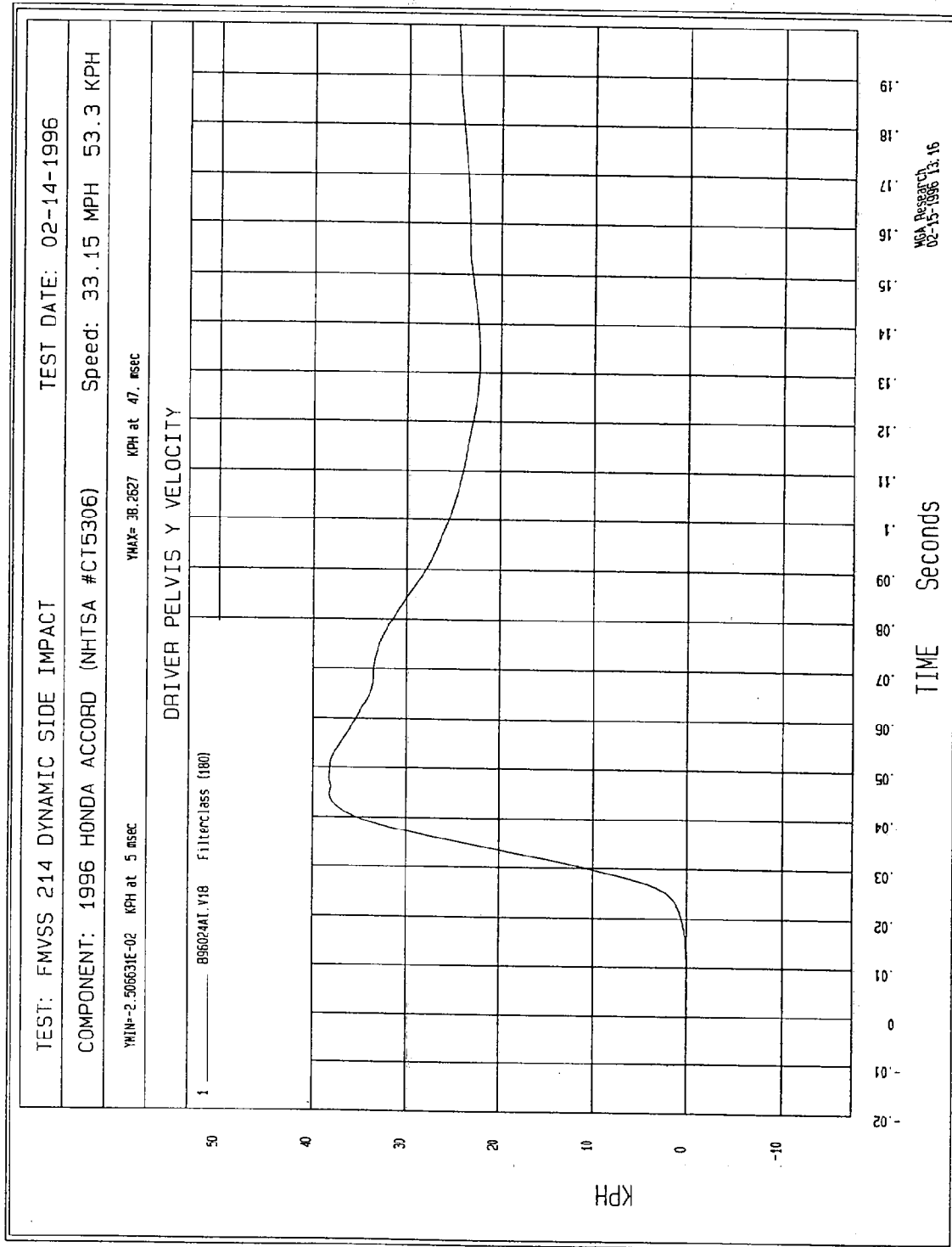
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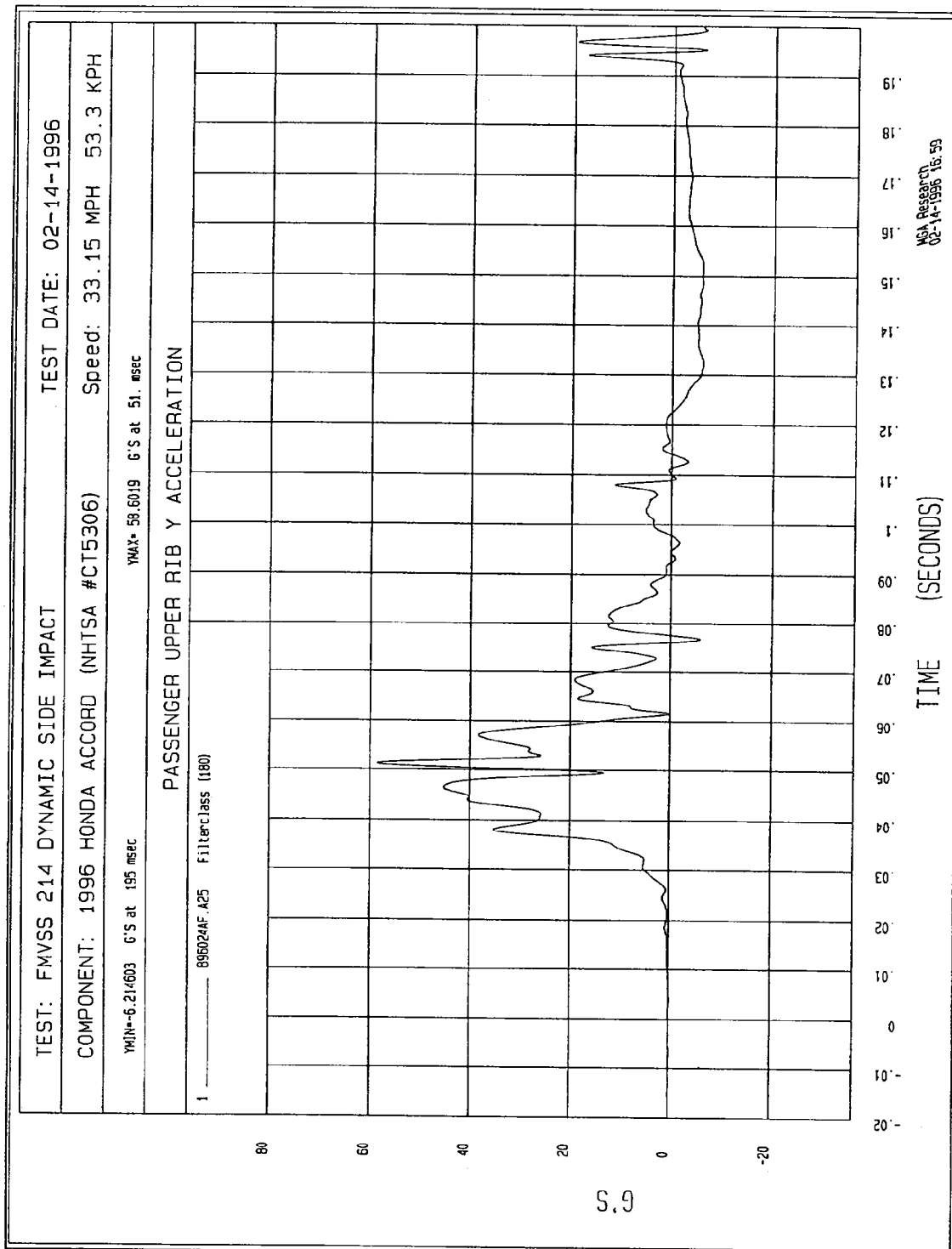
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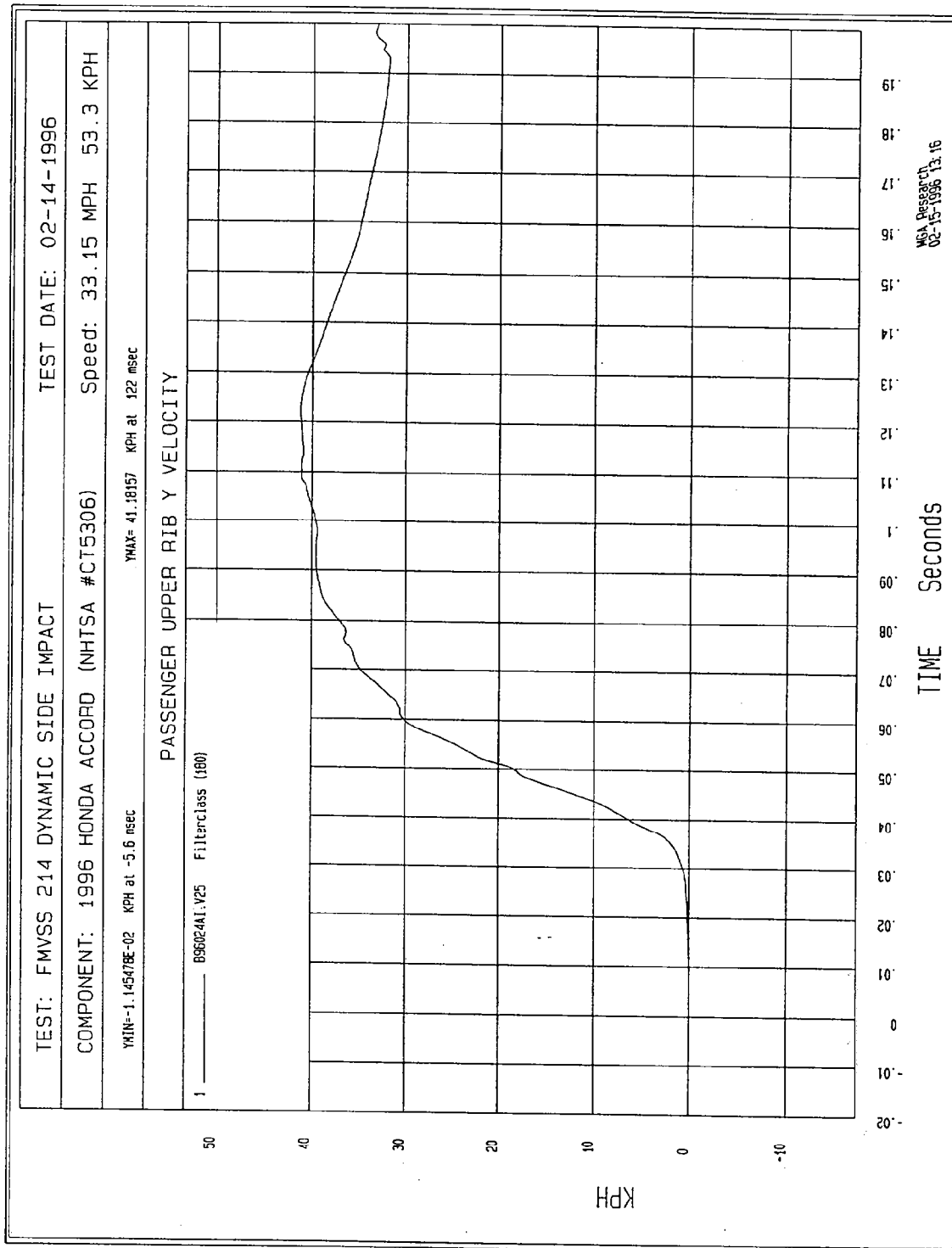
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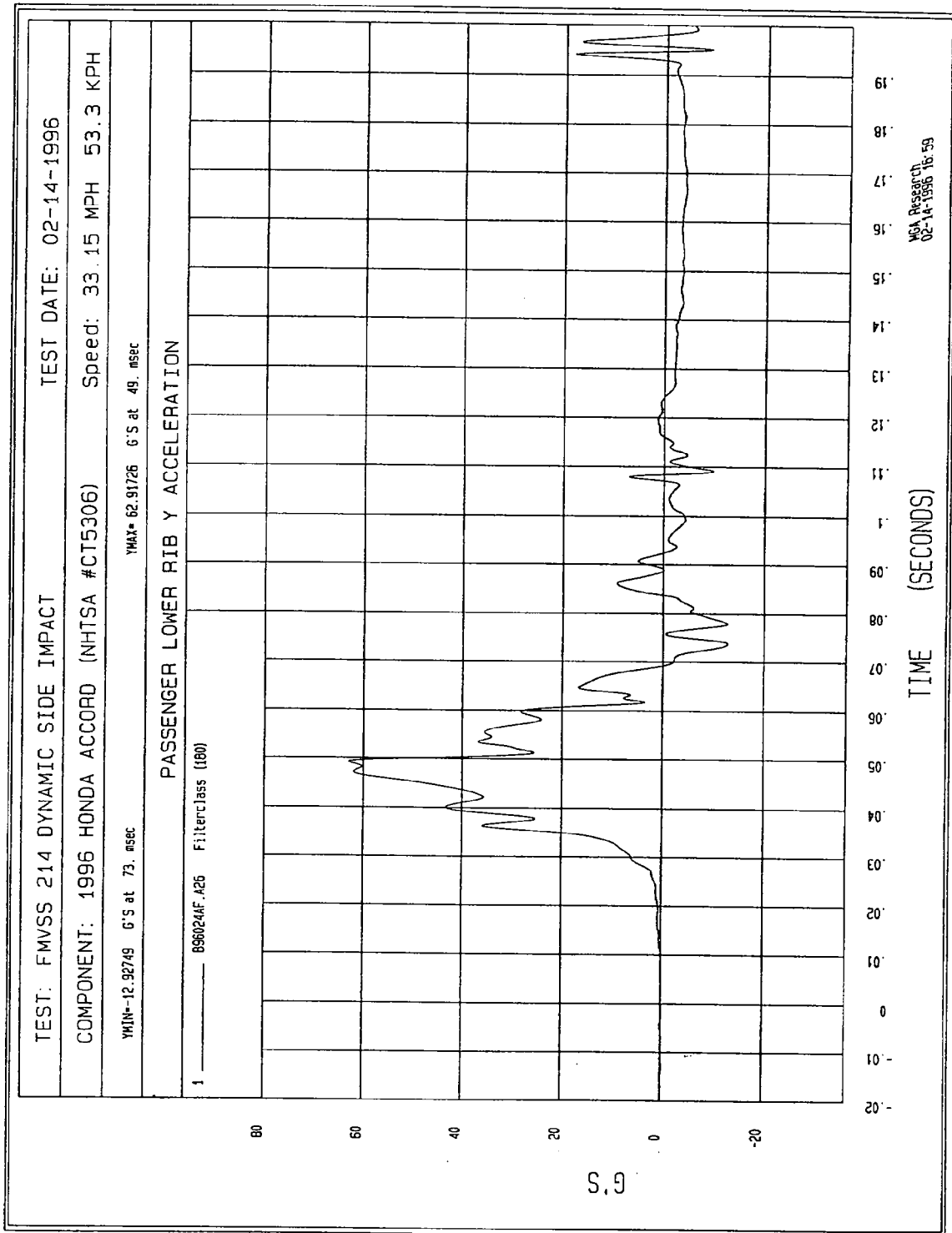
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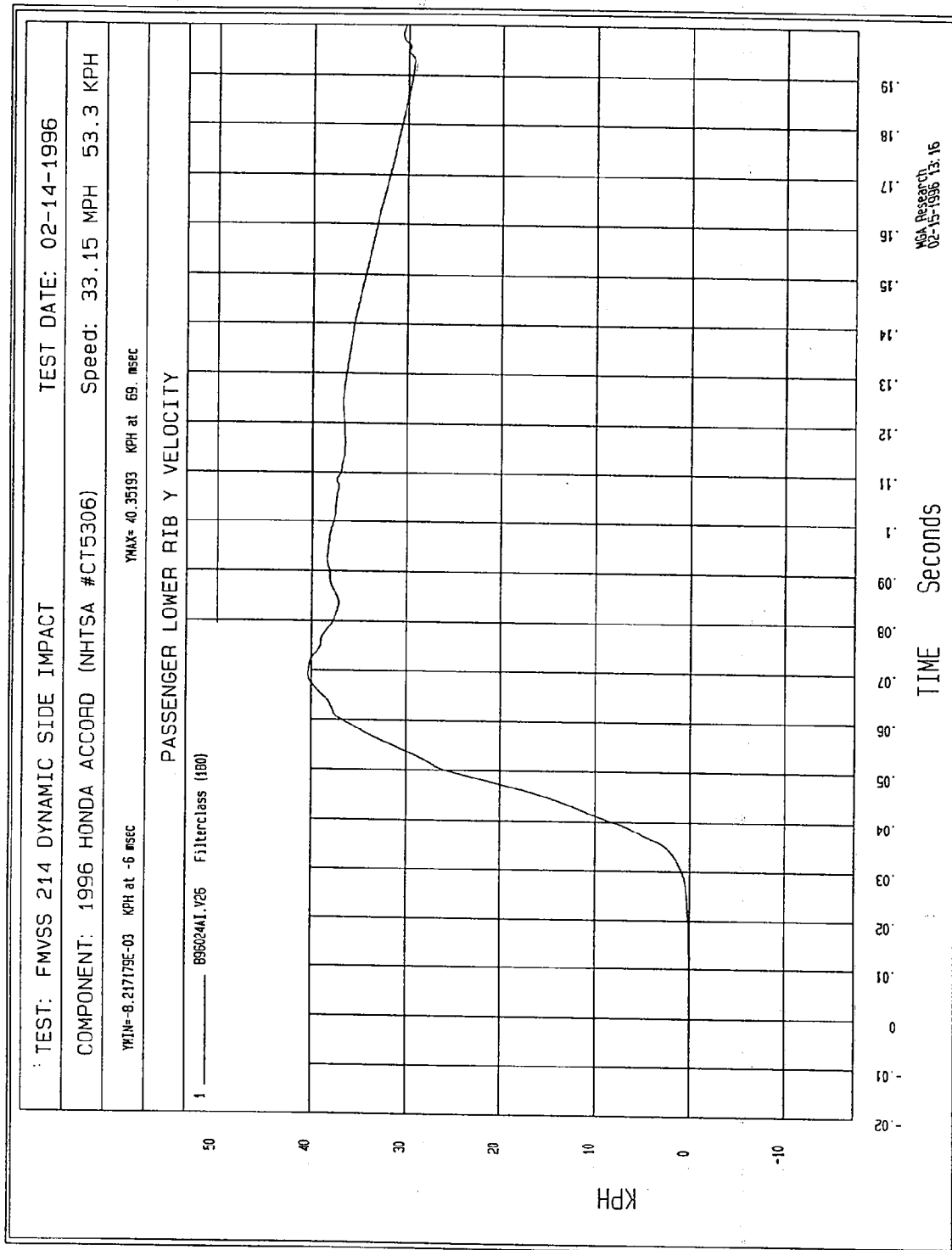


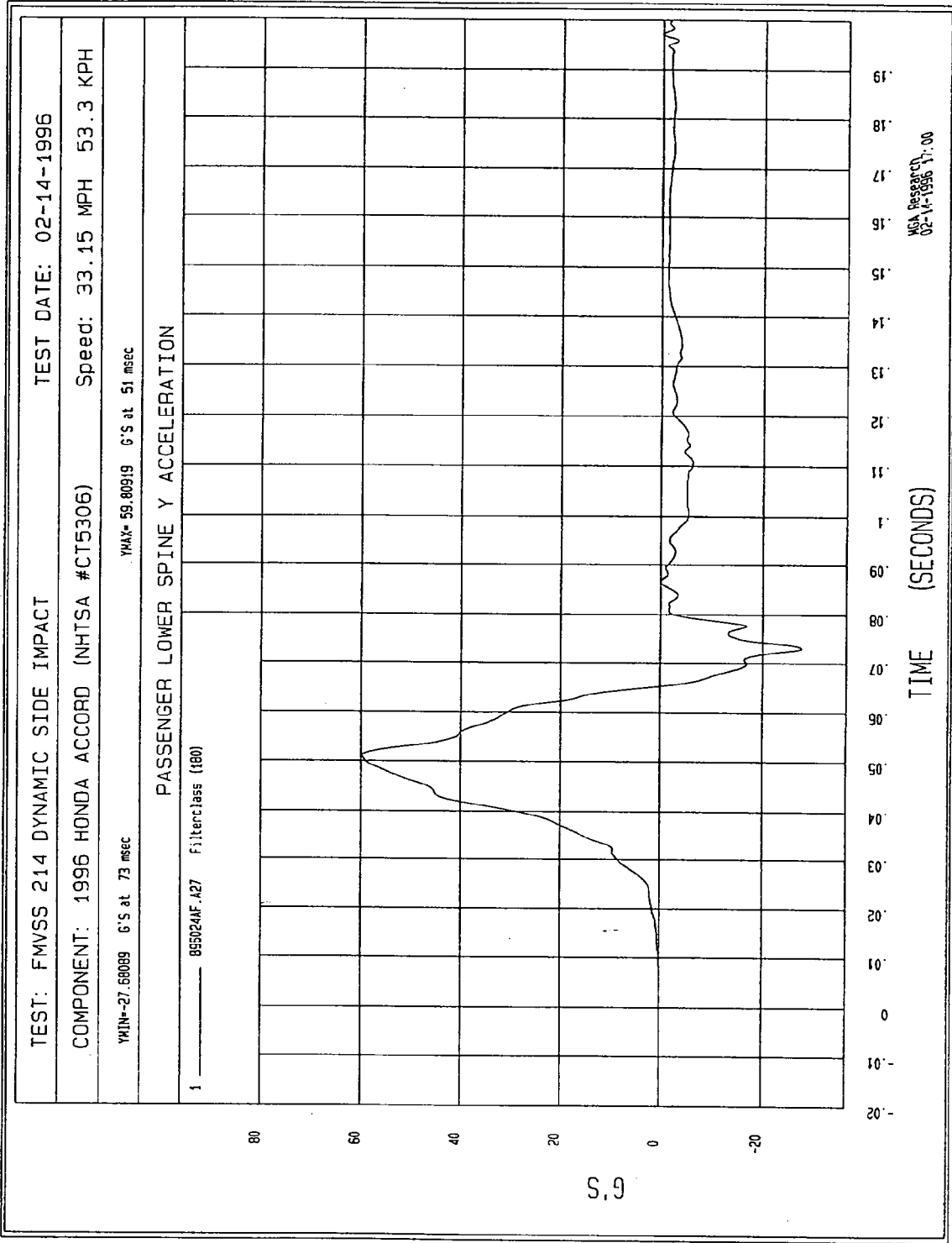


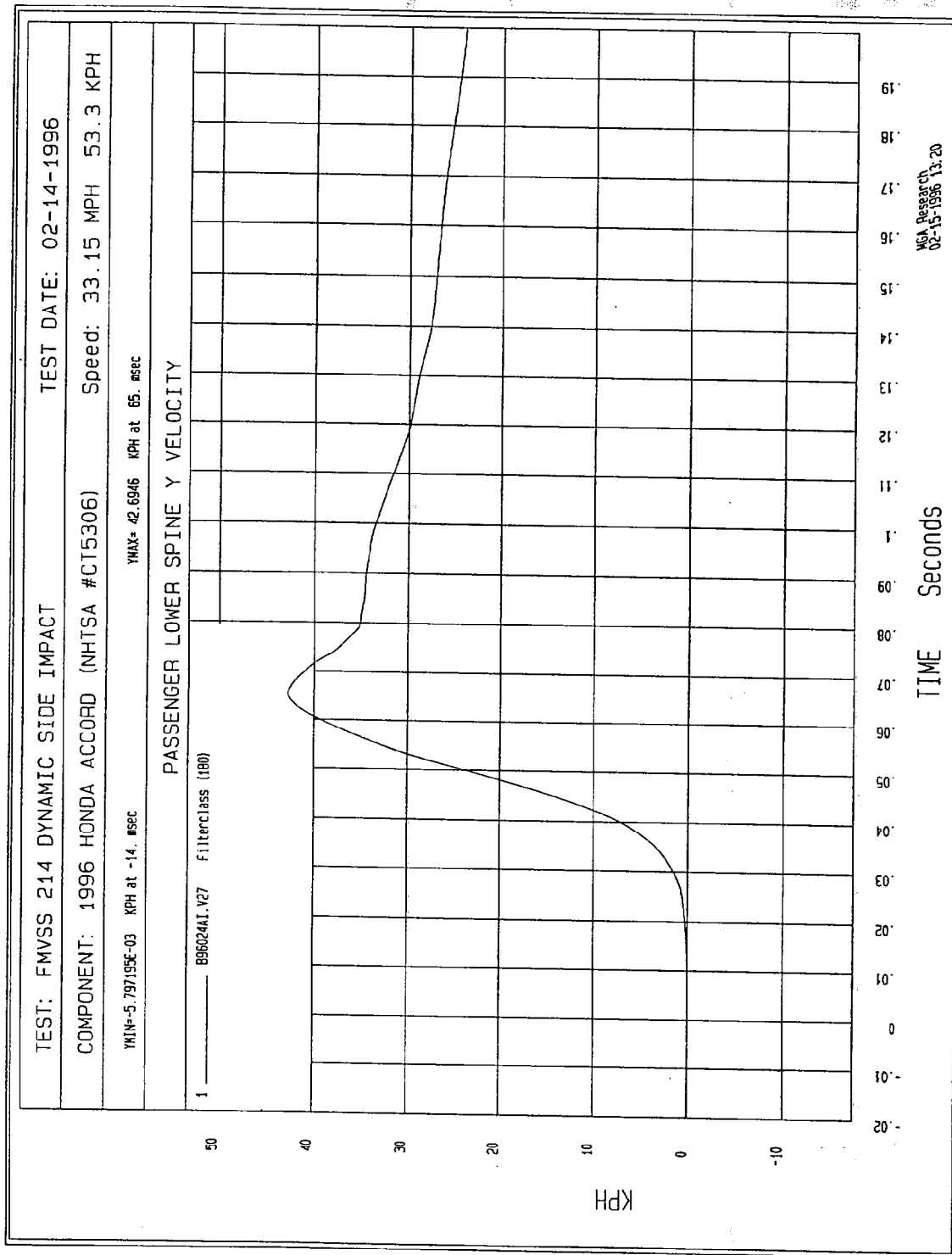


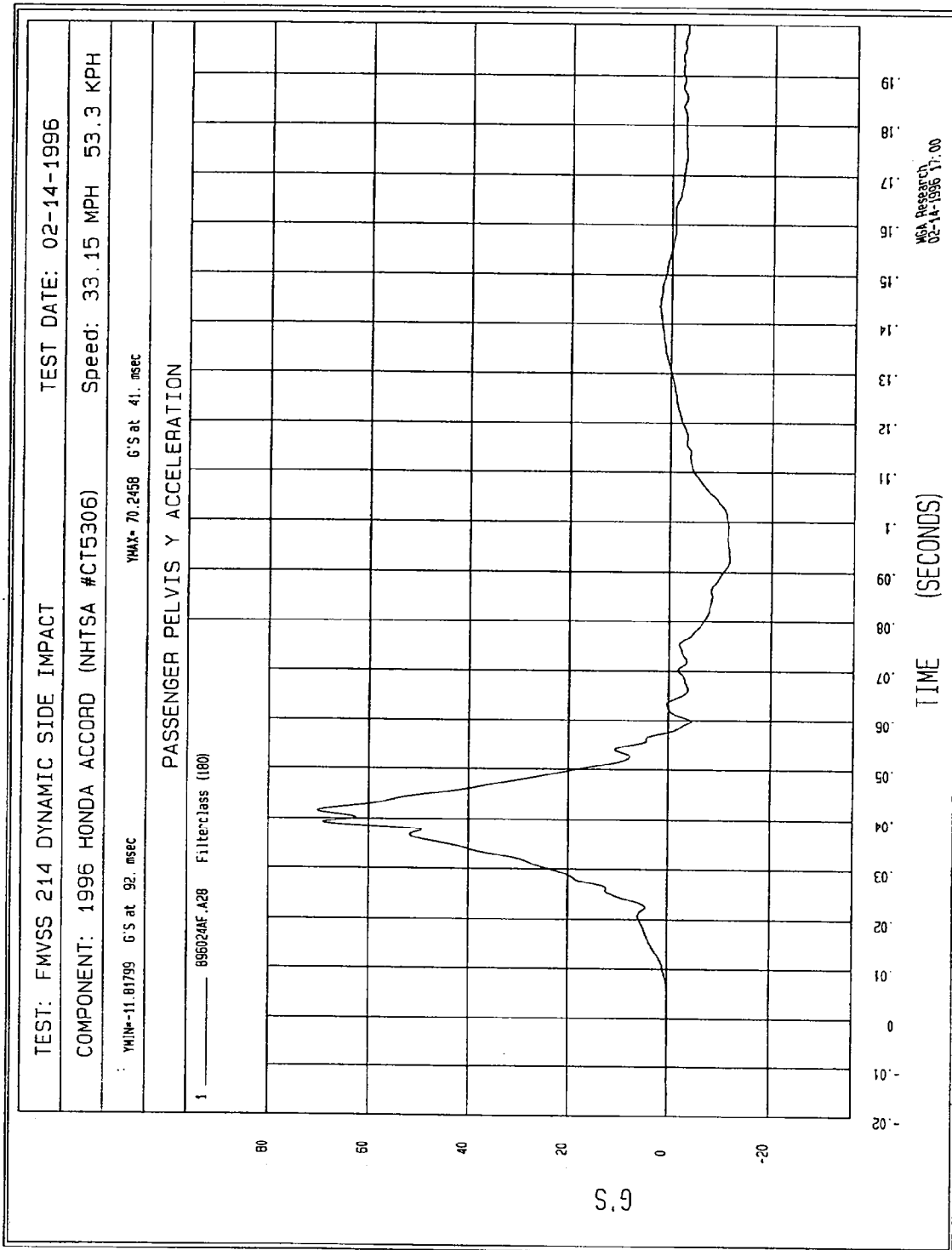


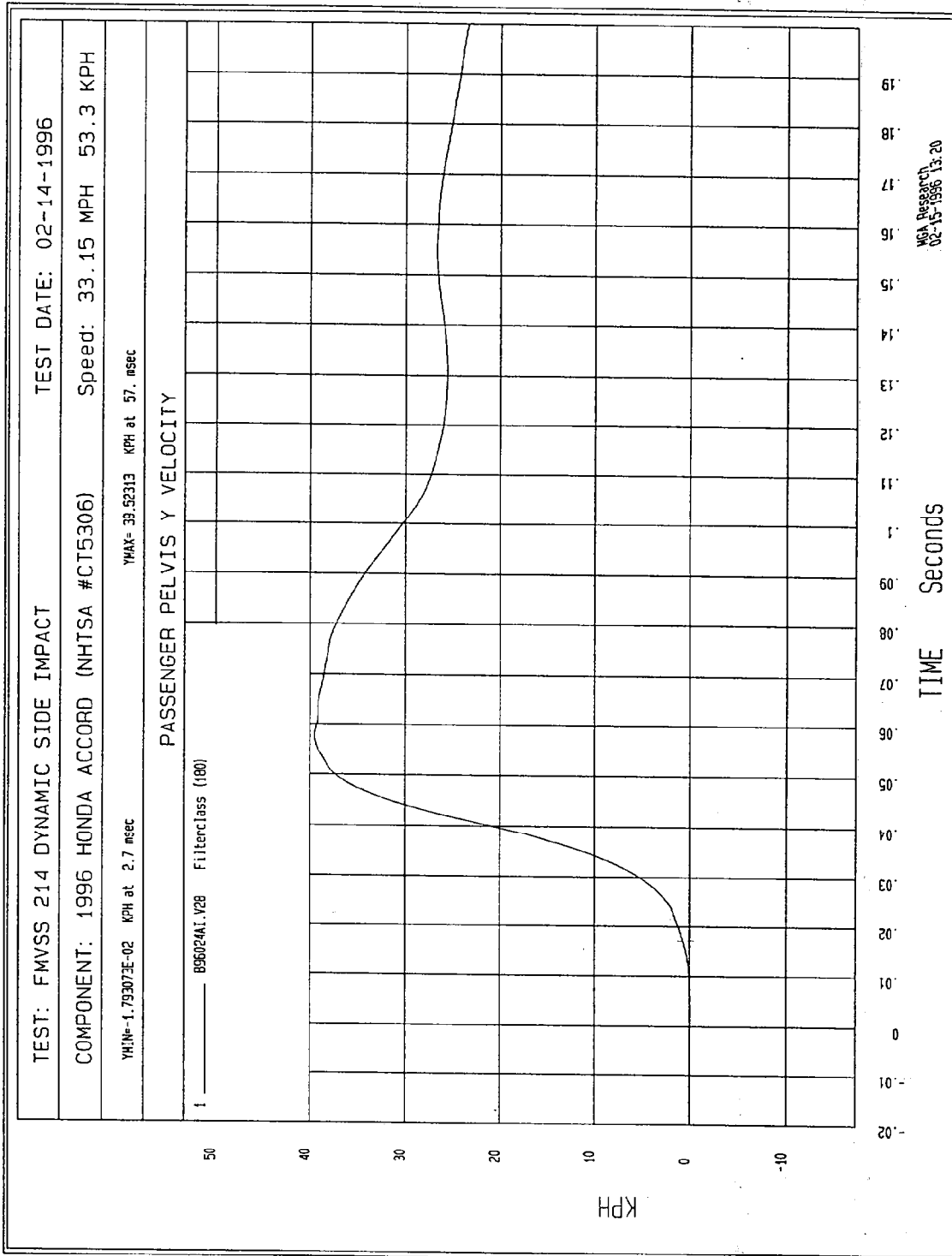


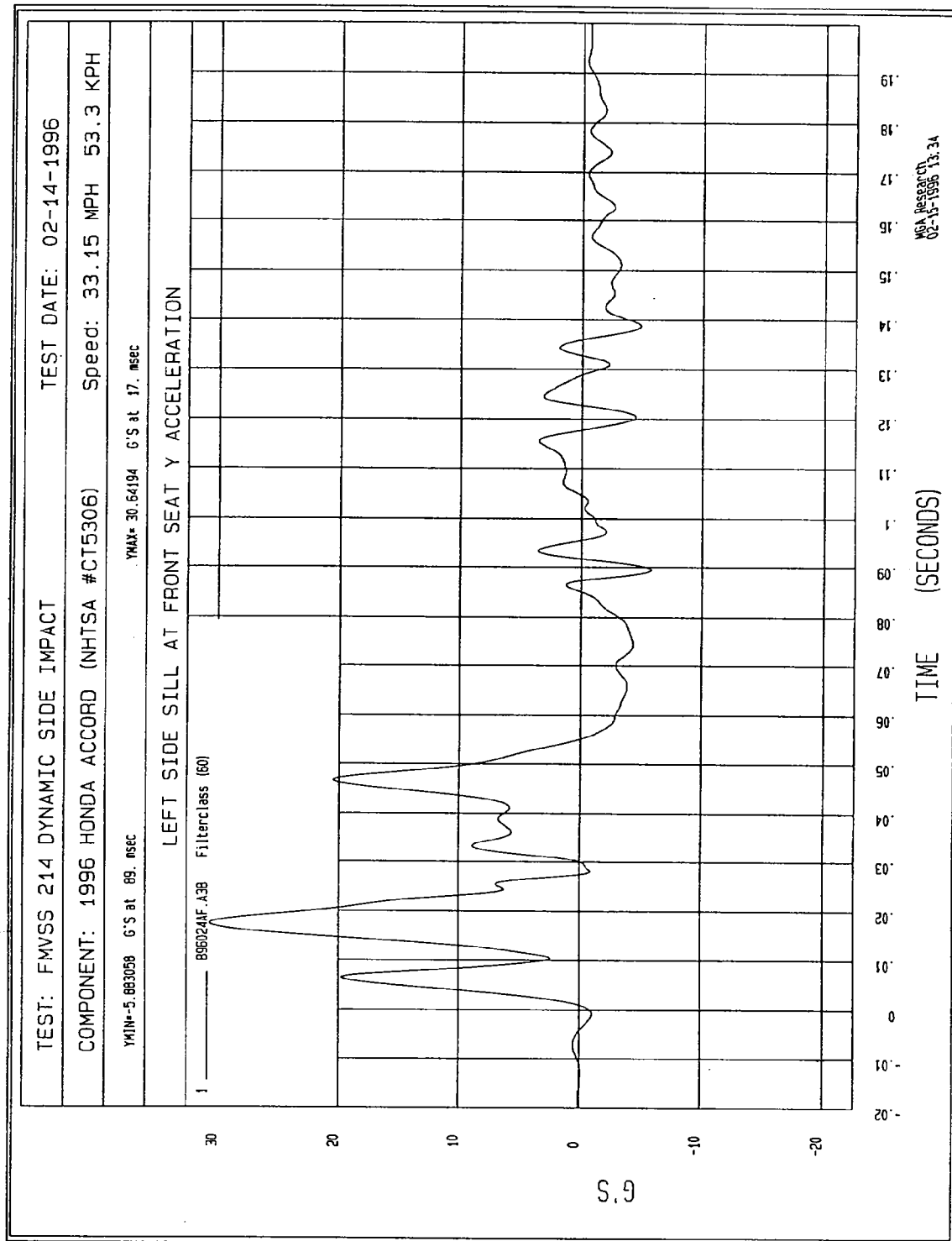


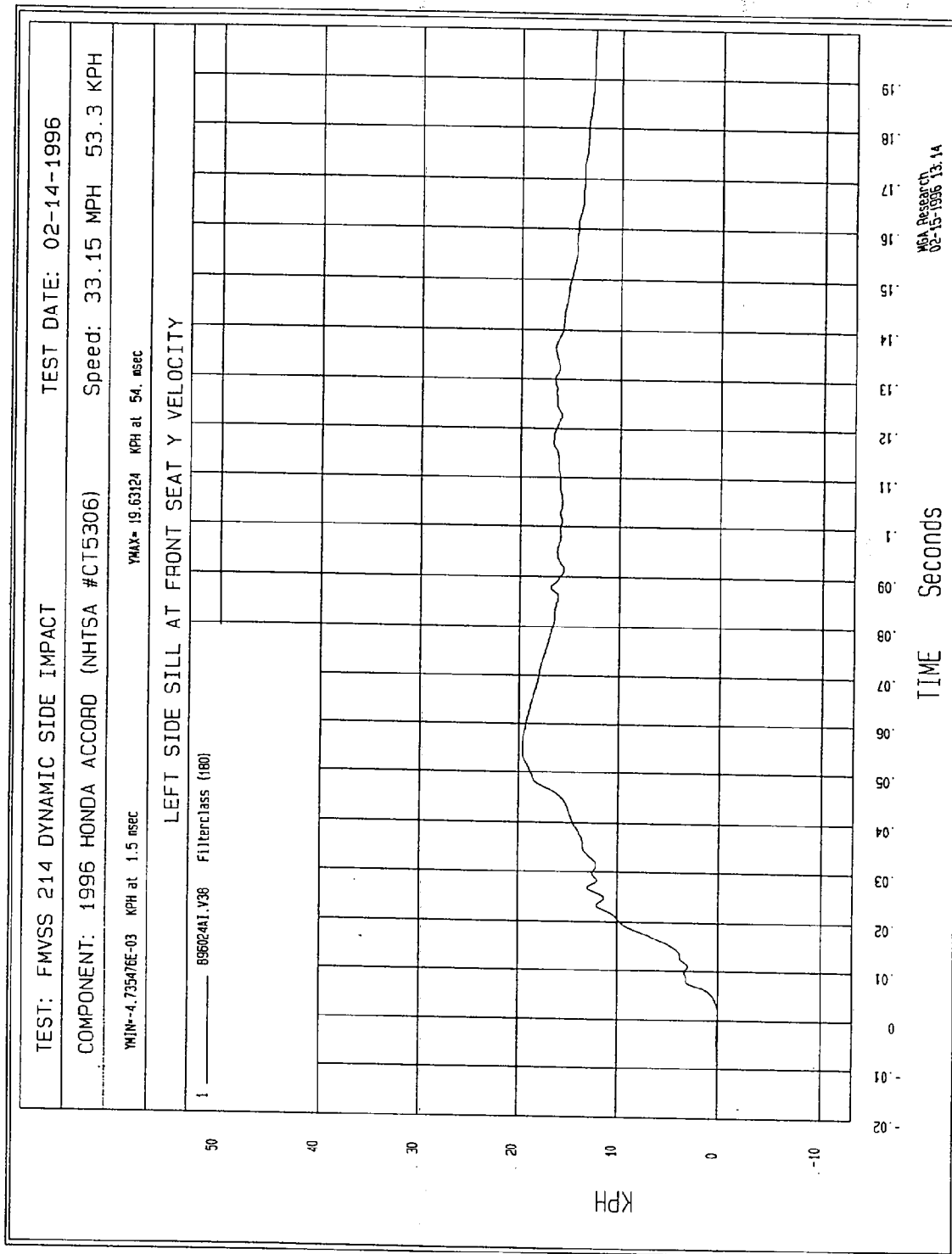






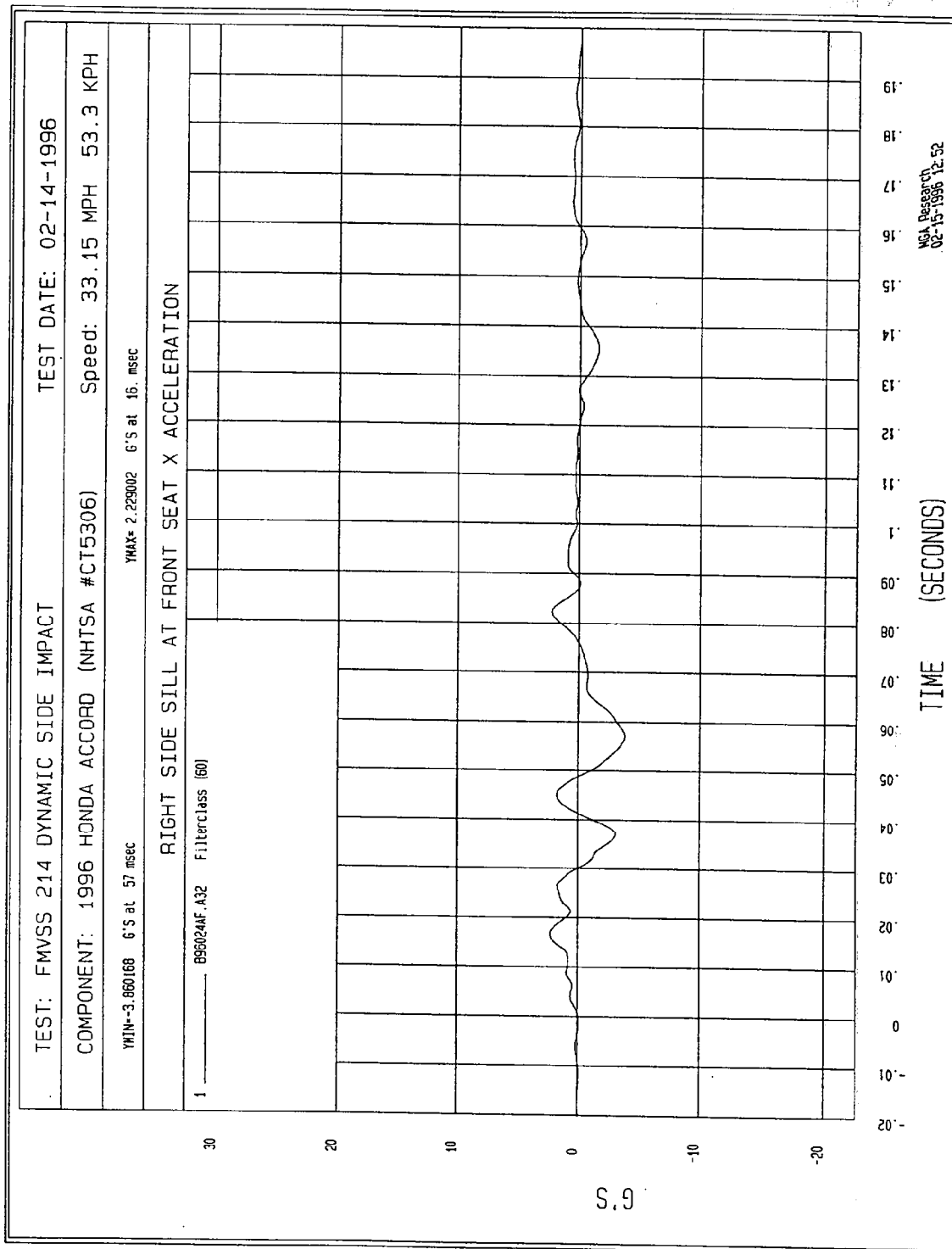


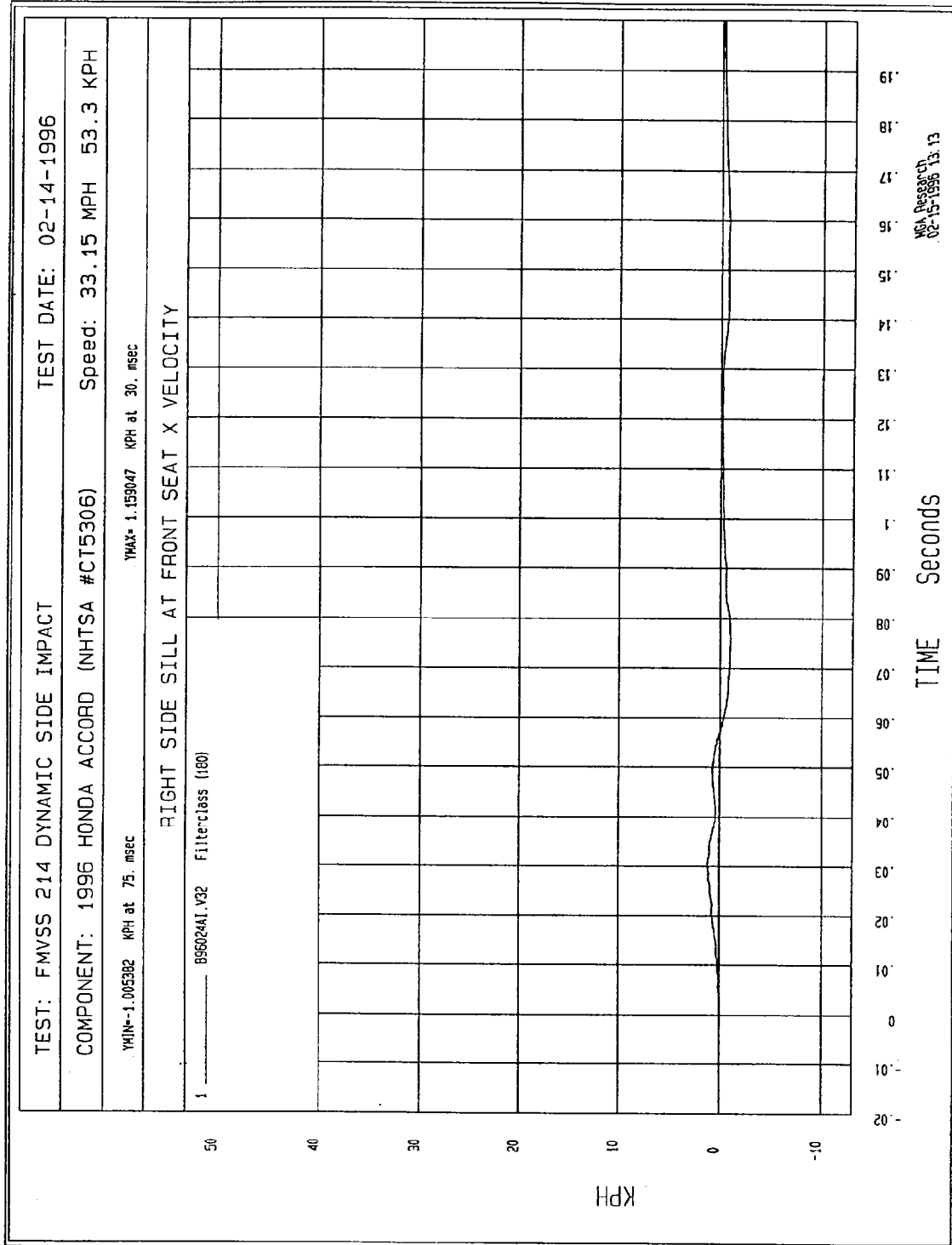


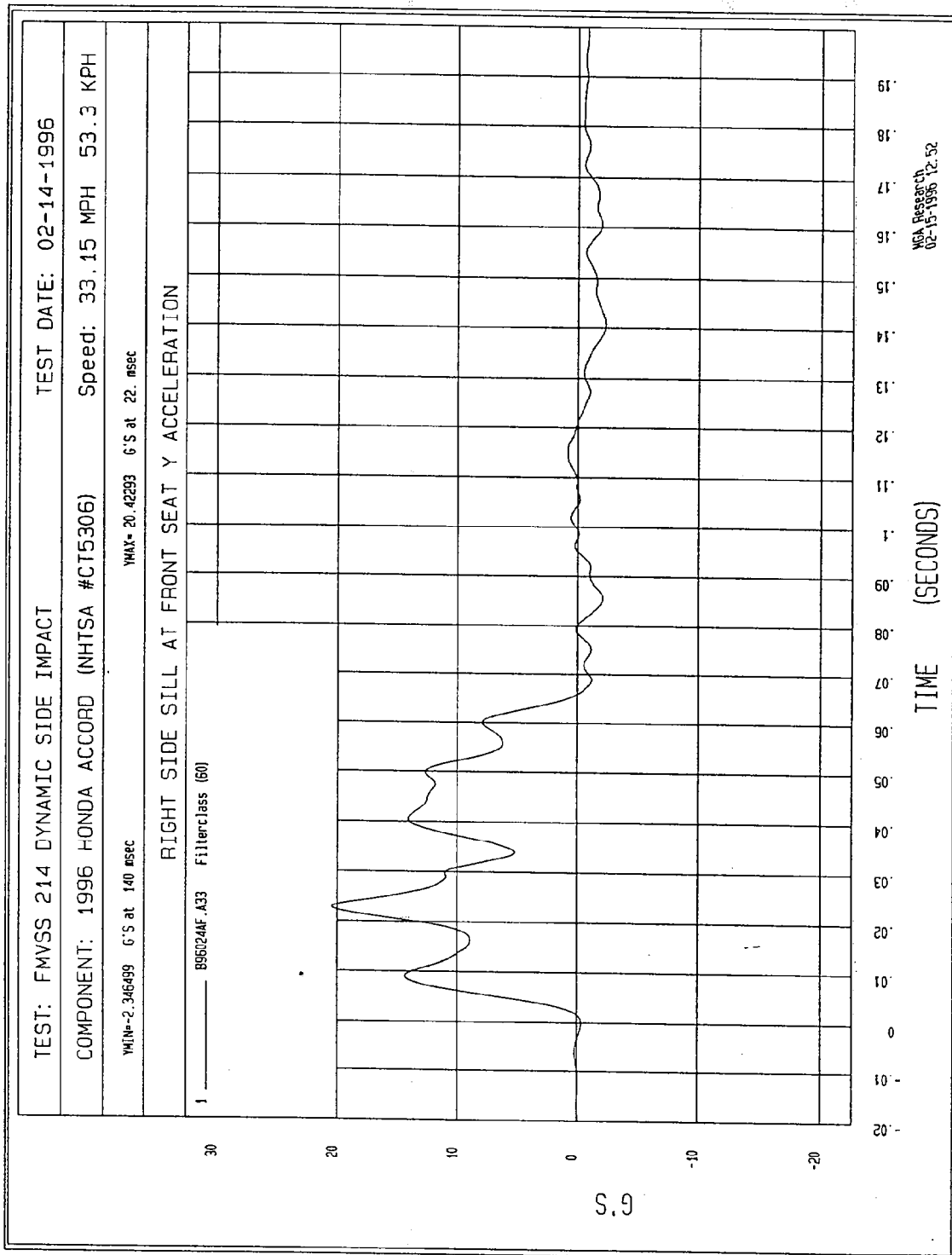


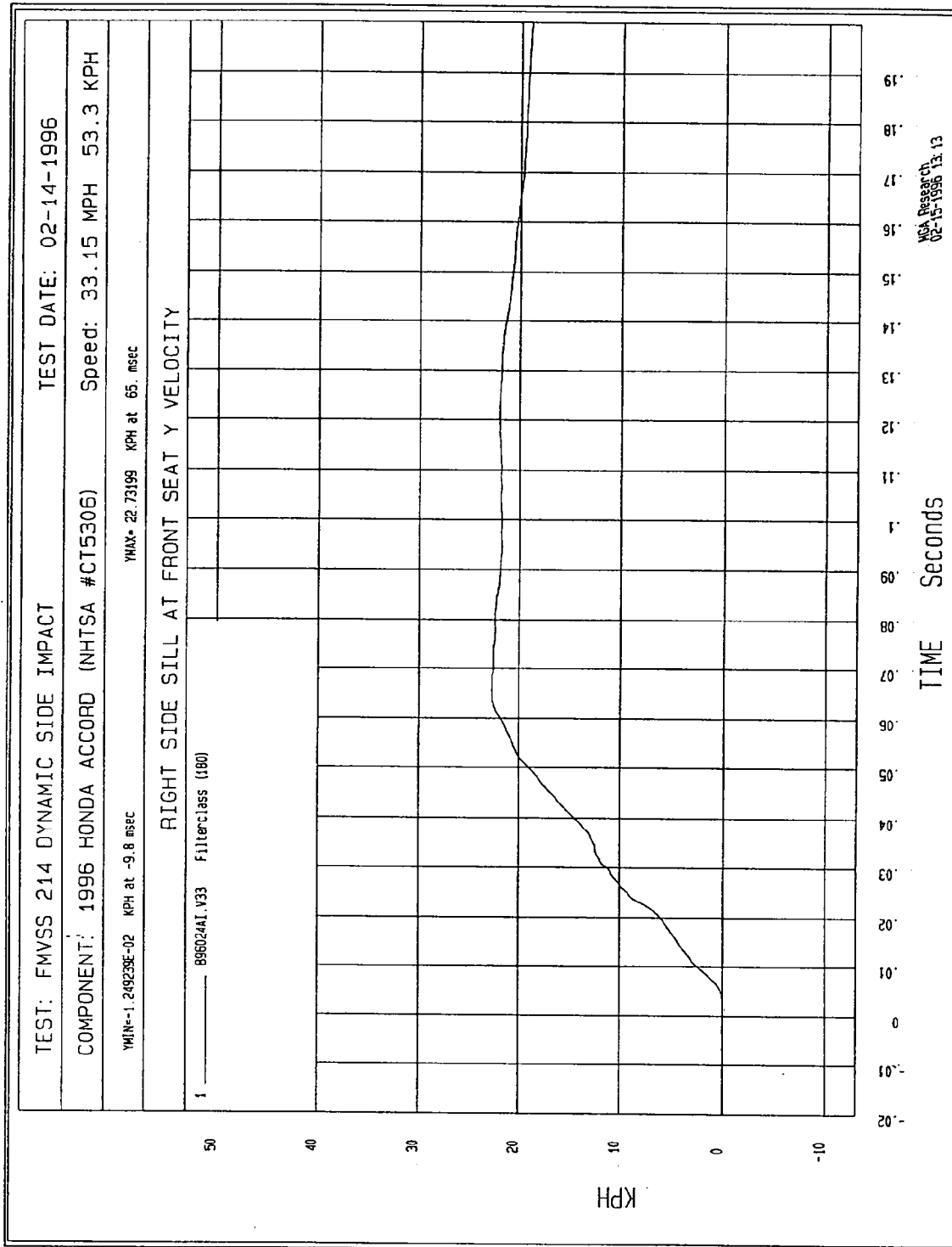
LEFT SIDE SILL AT REAR SEAT Y ACCELERATION VS. TIME

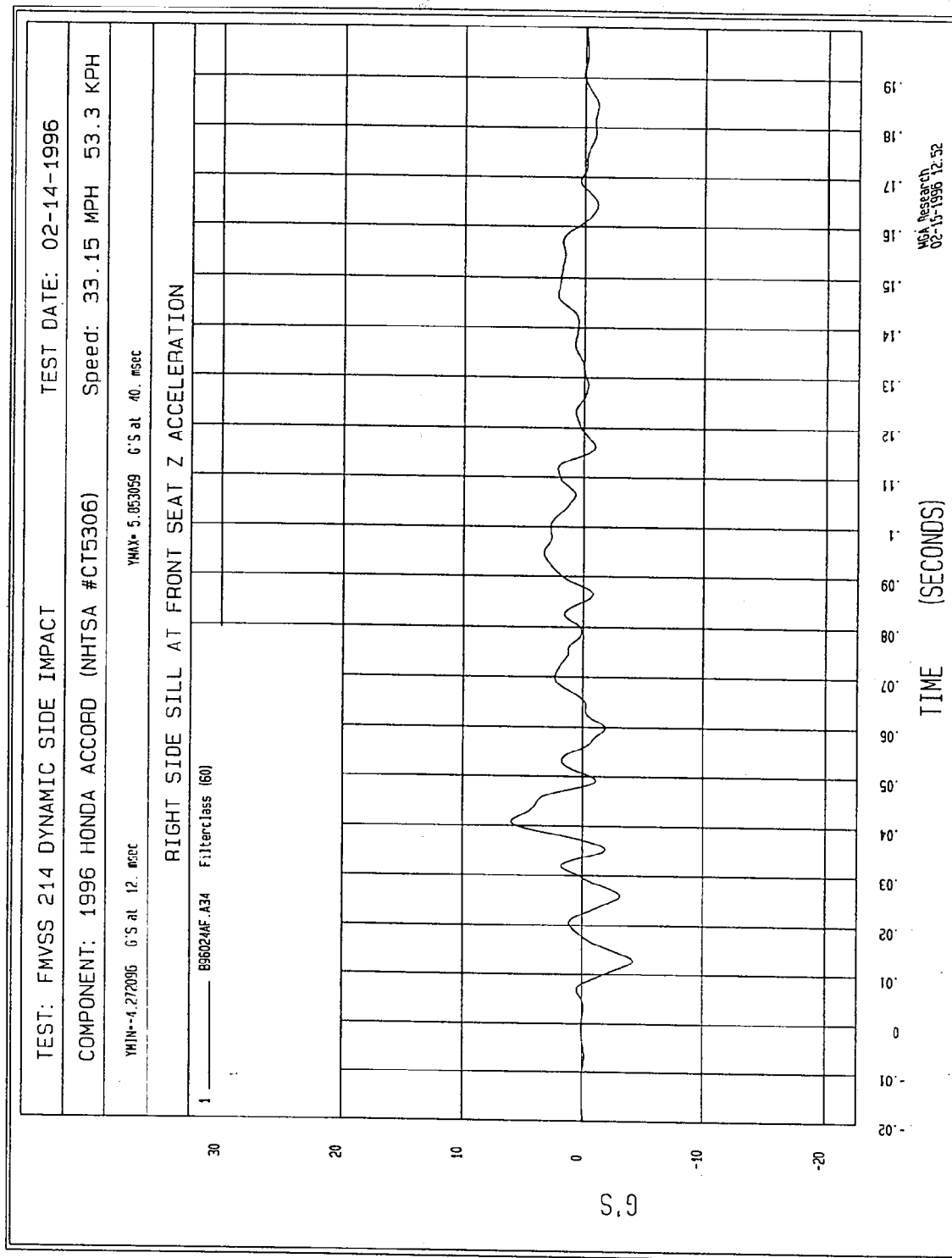
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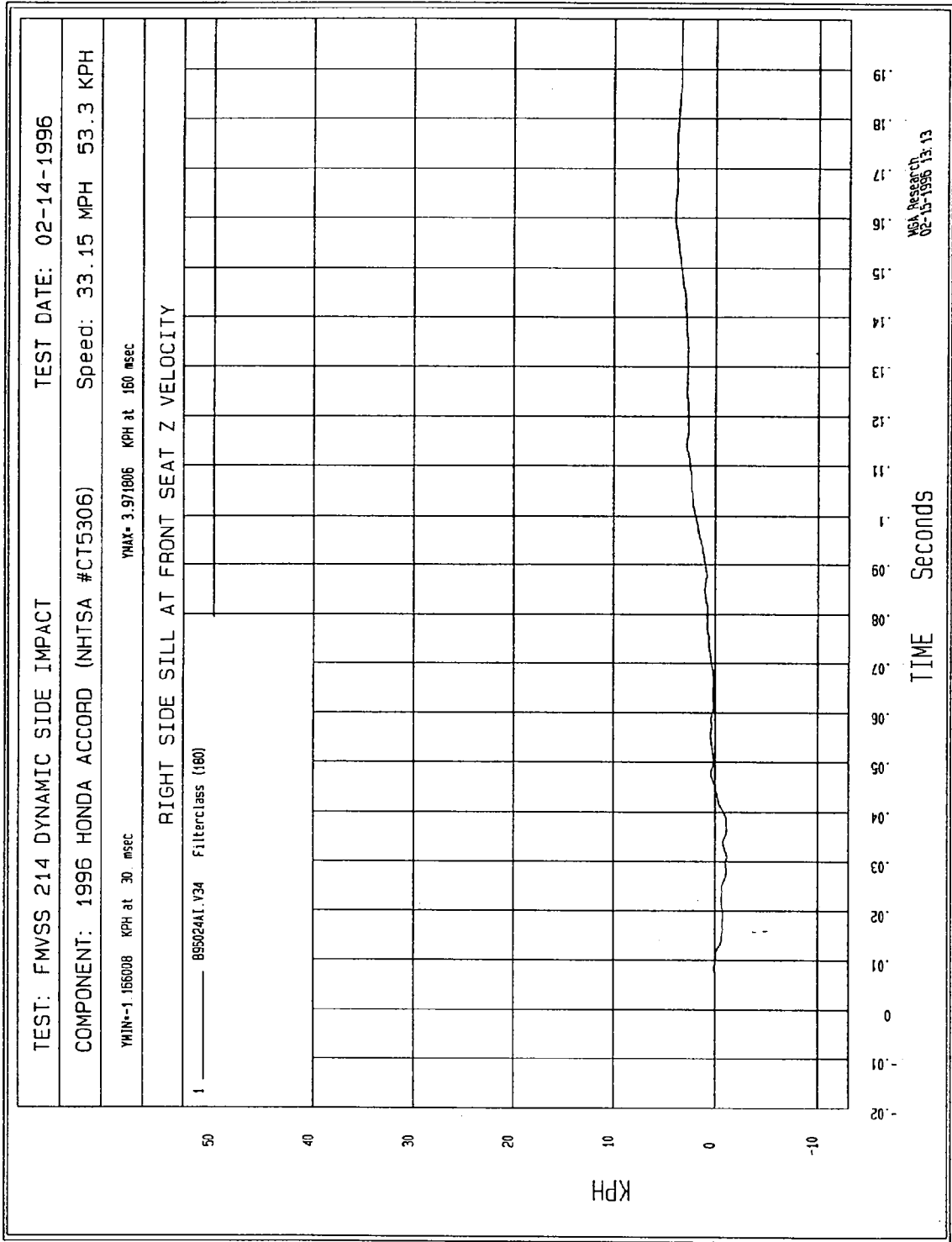


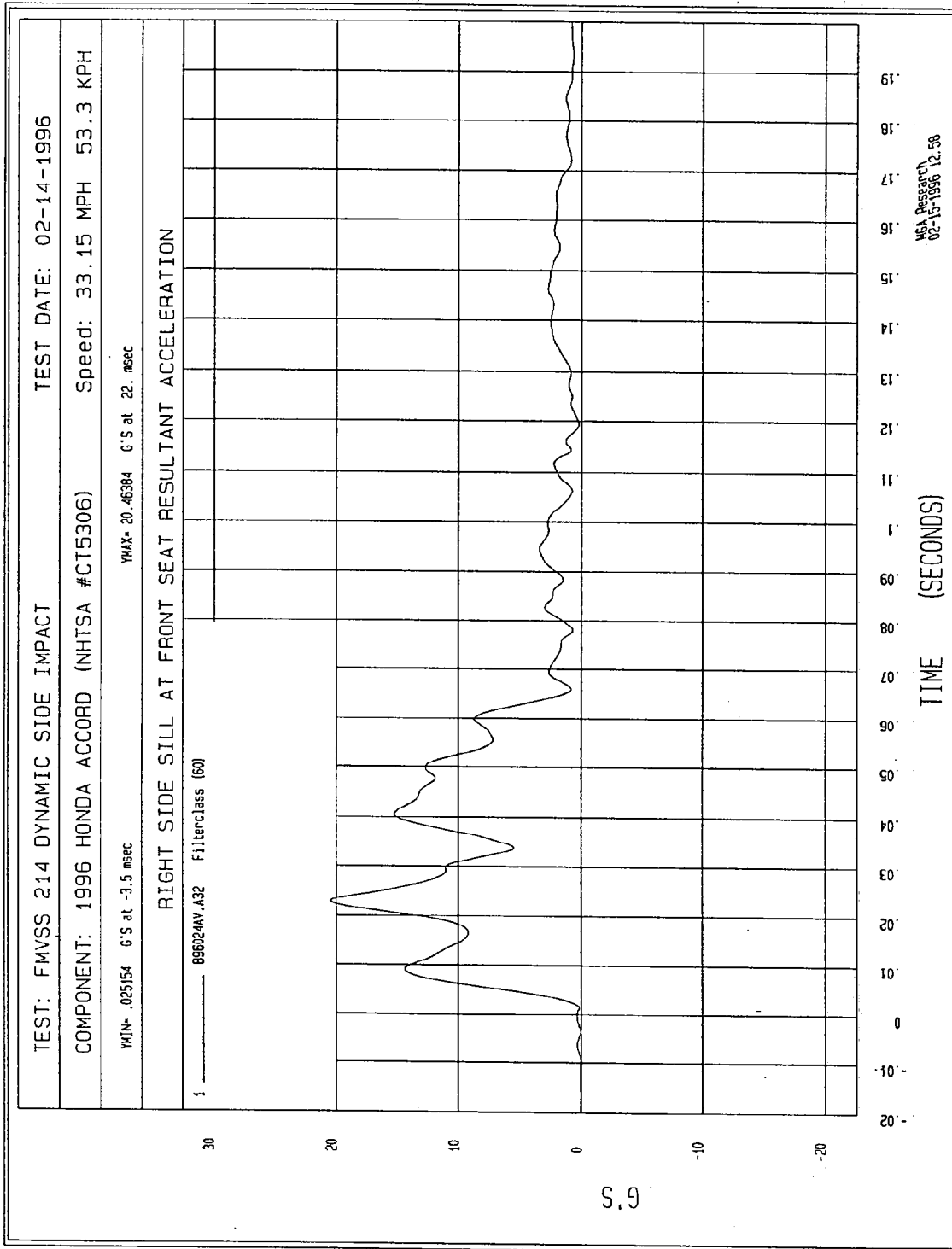


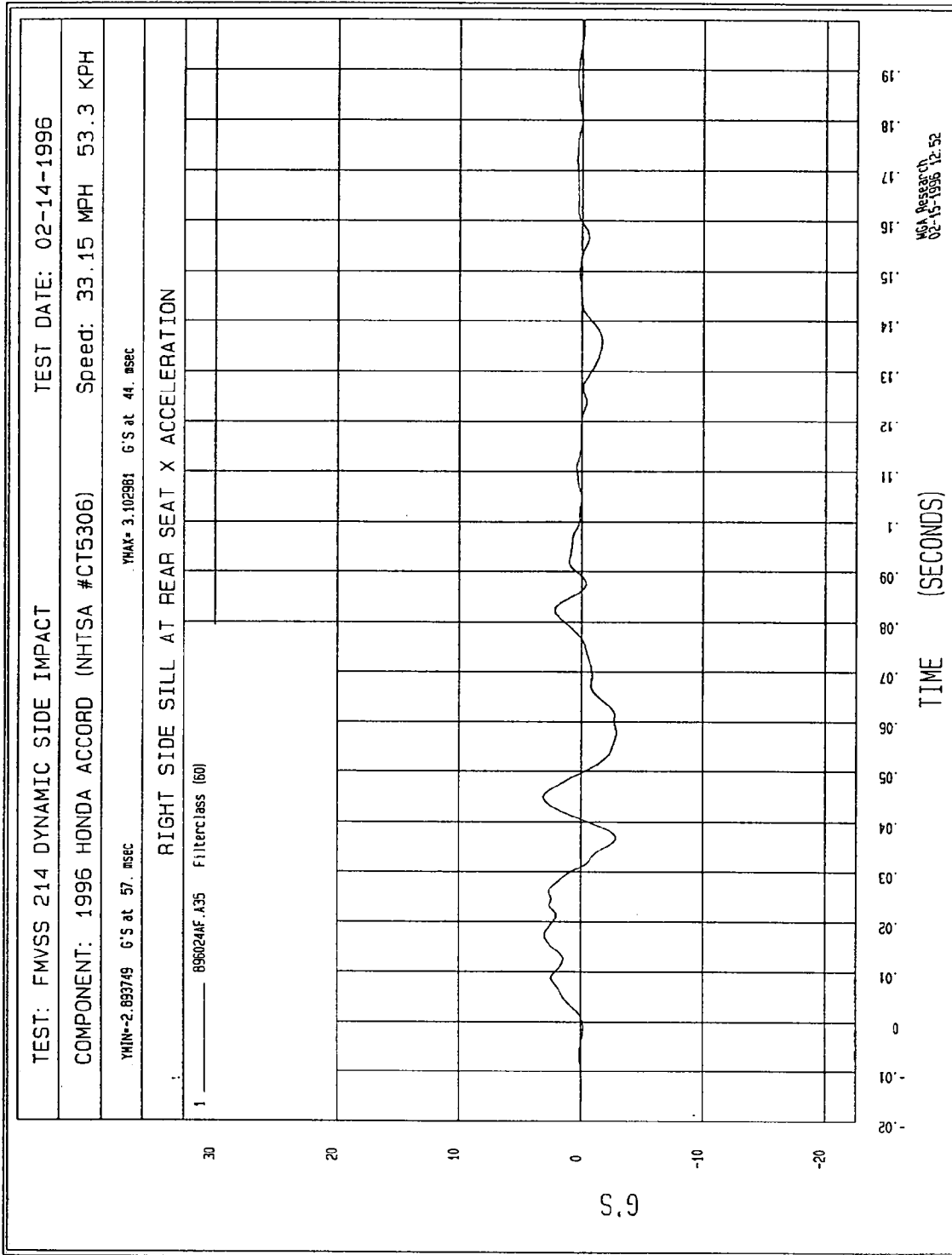


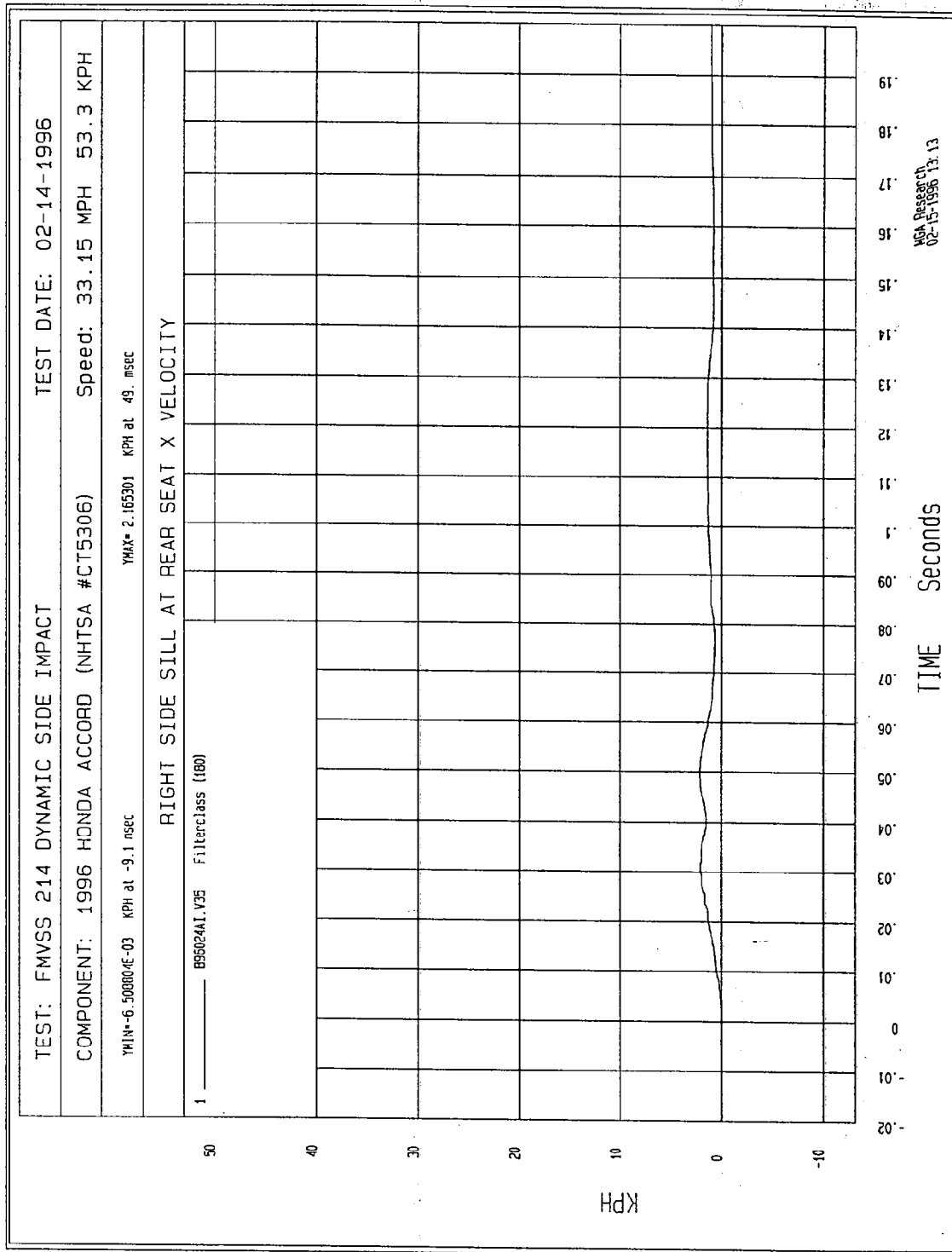


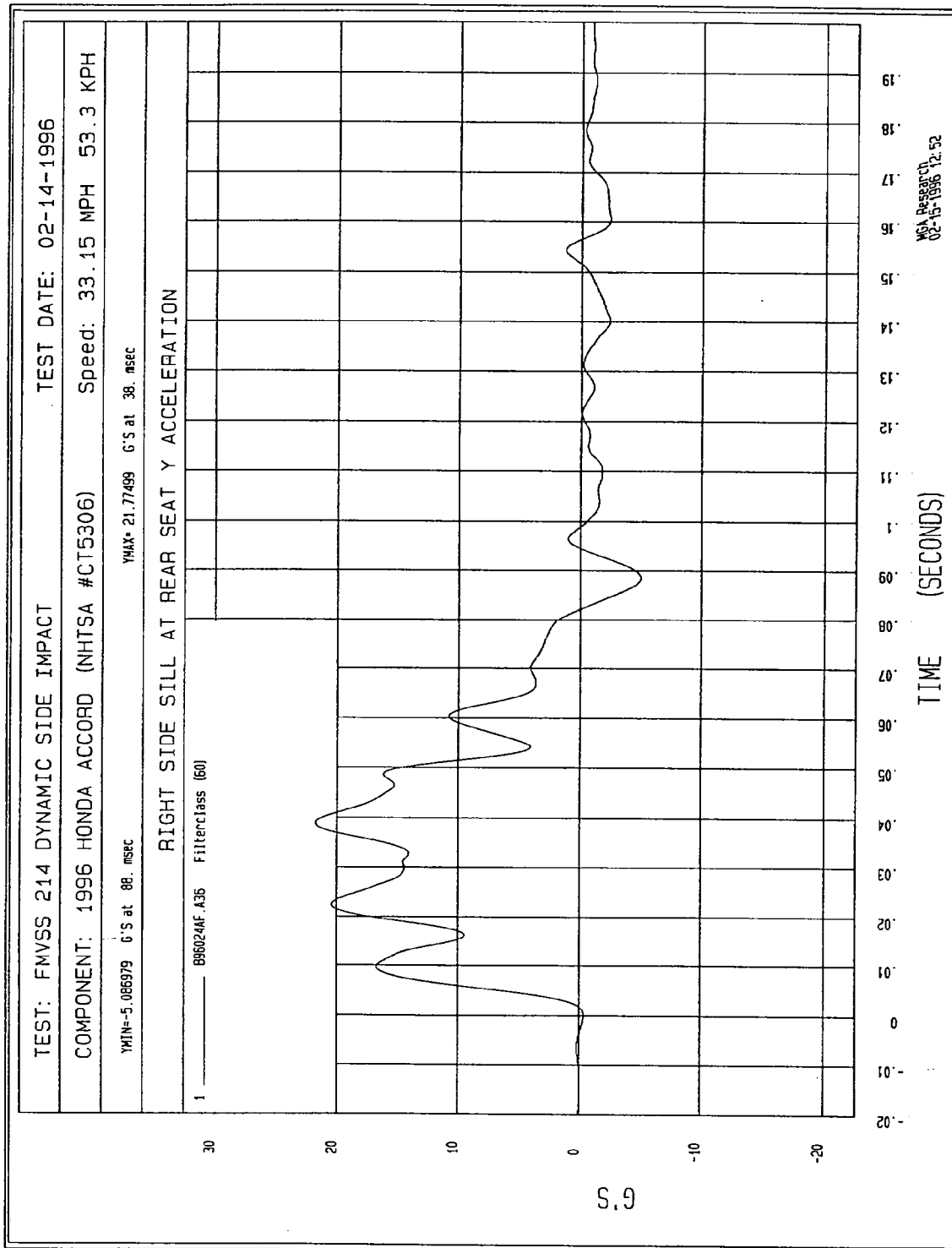


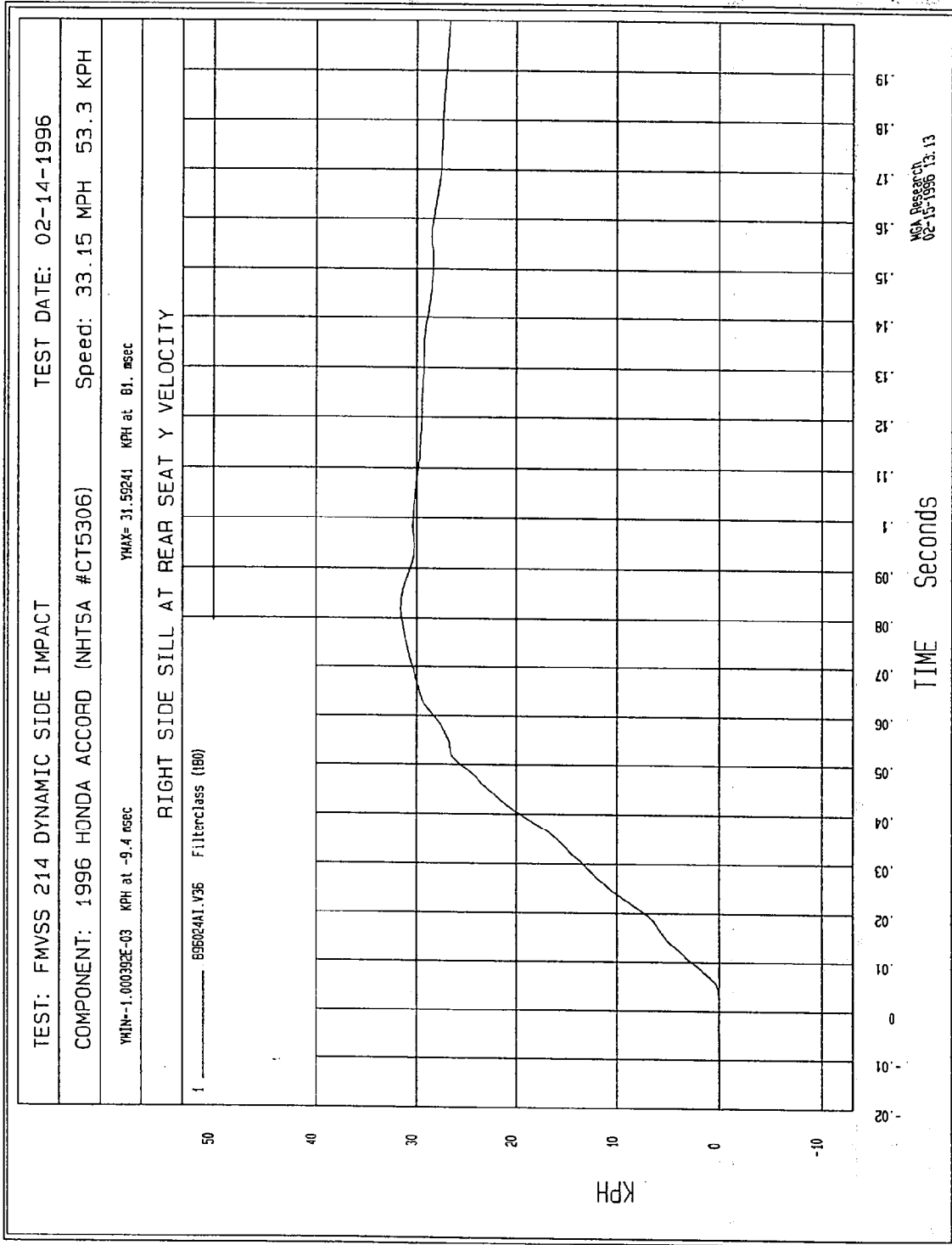


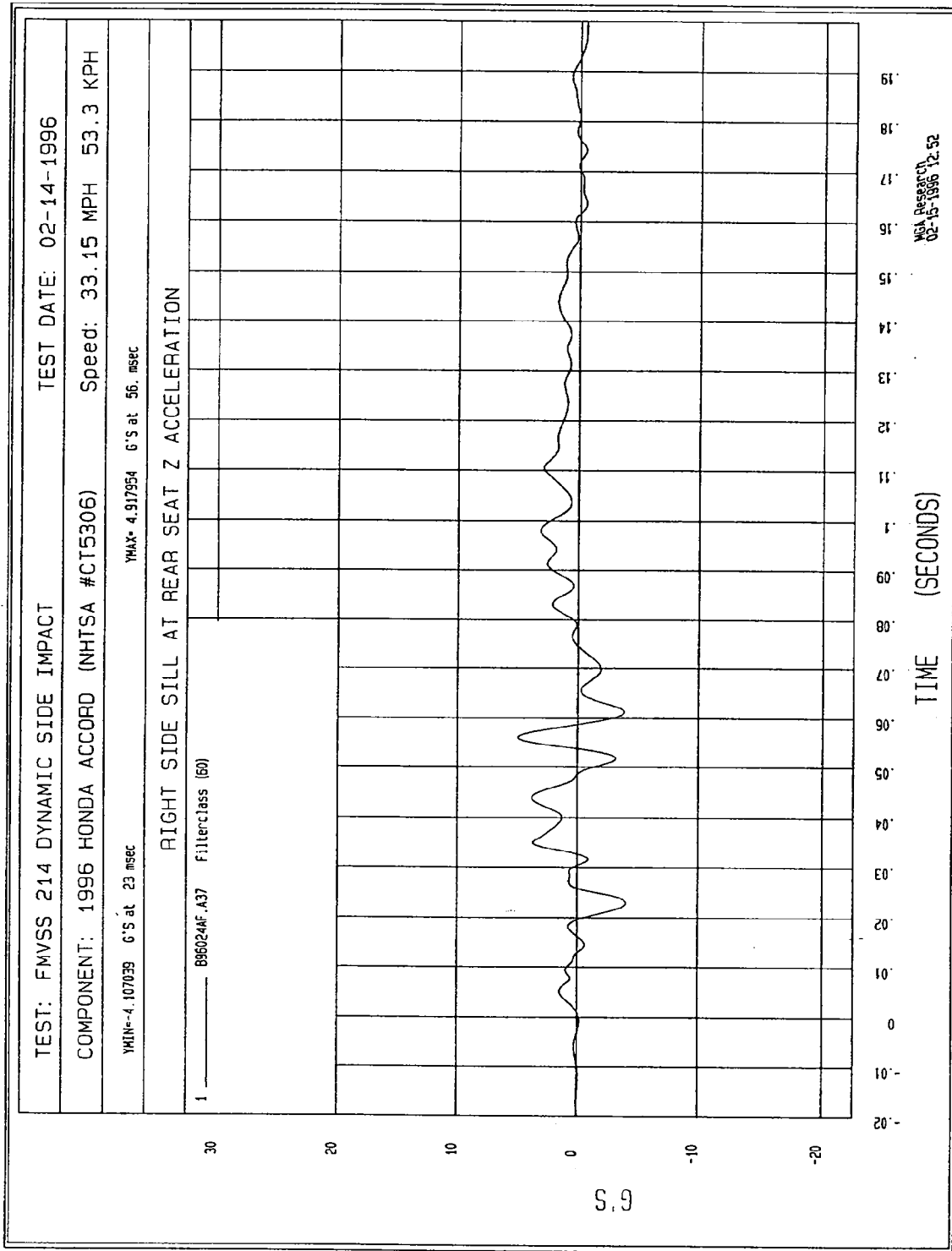


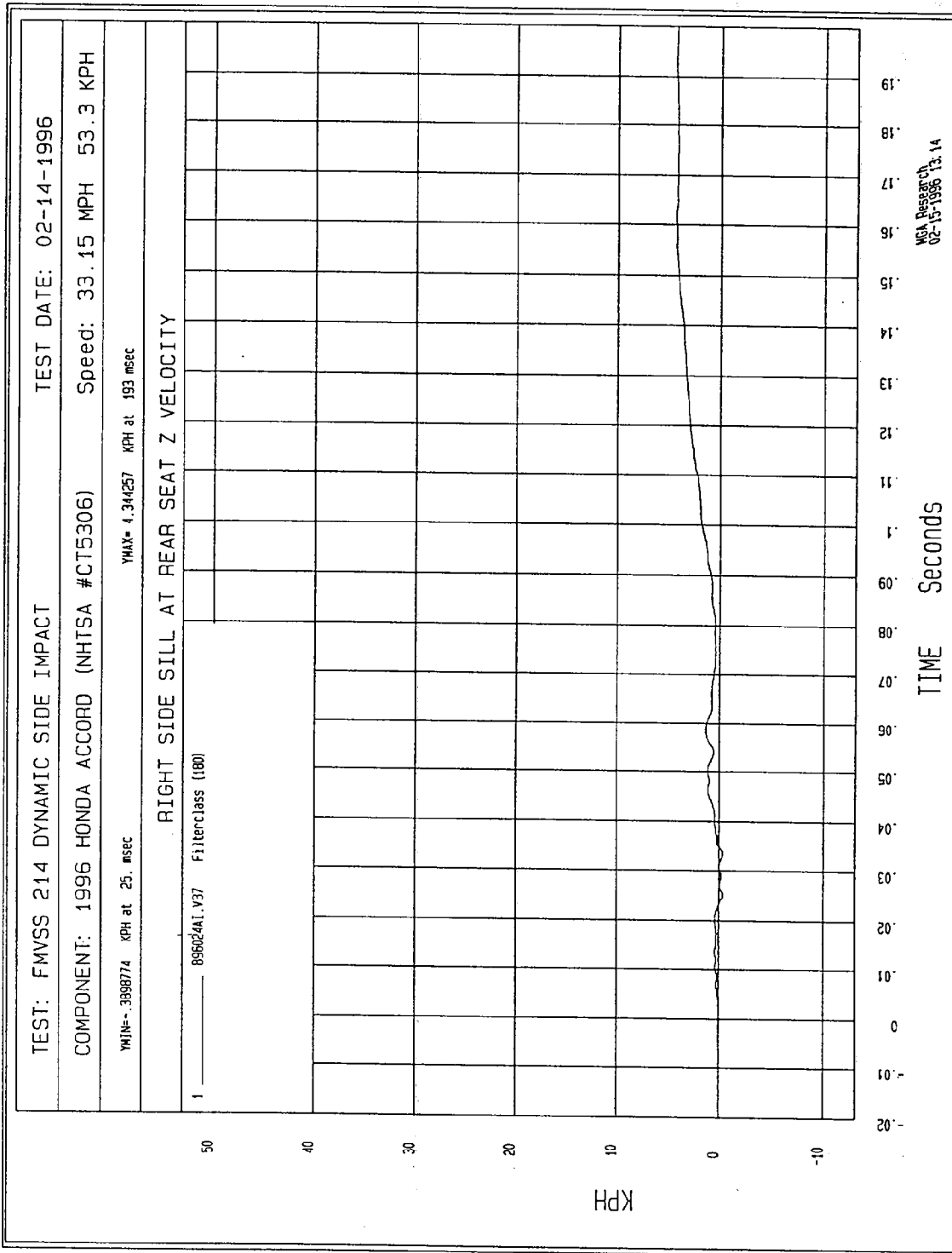


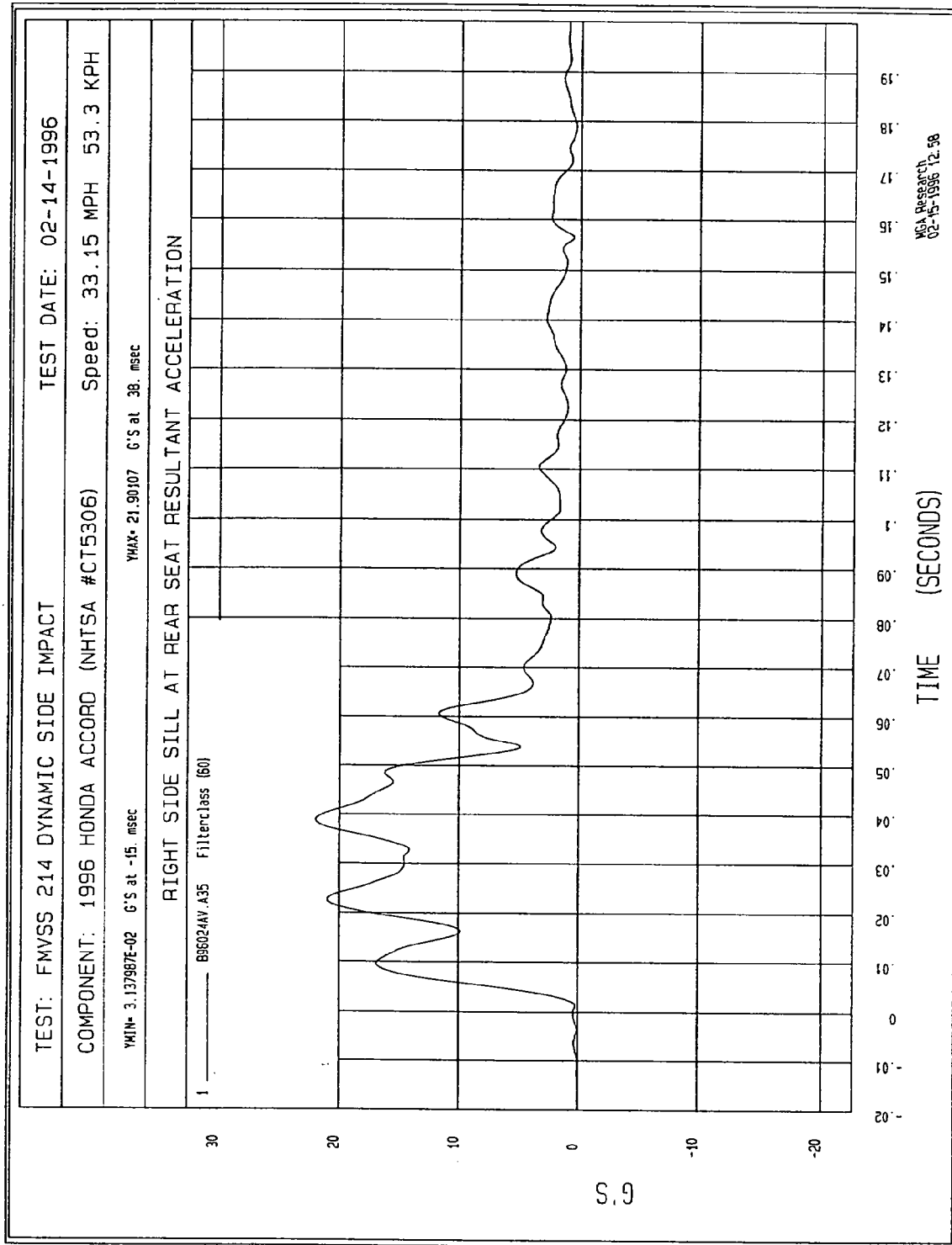


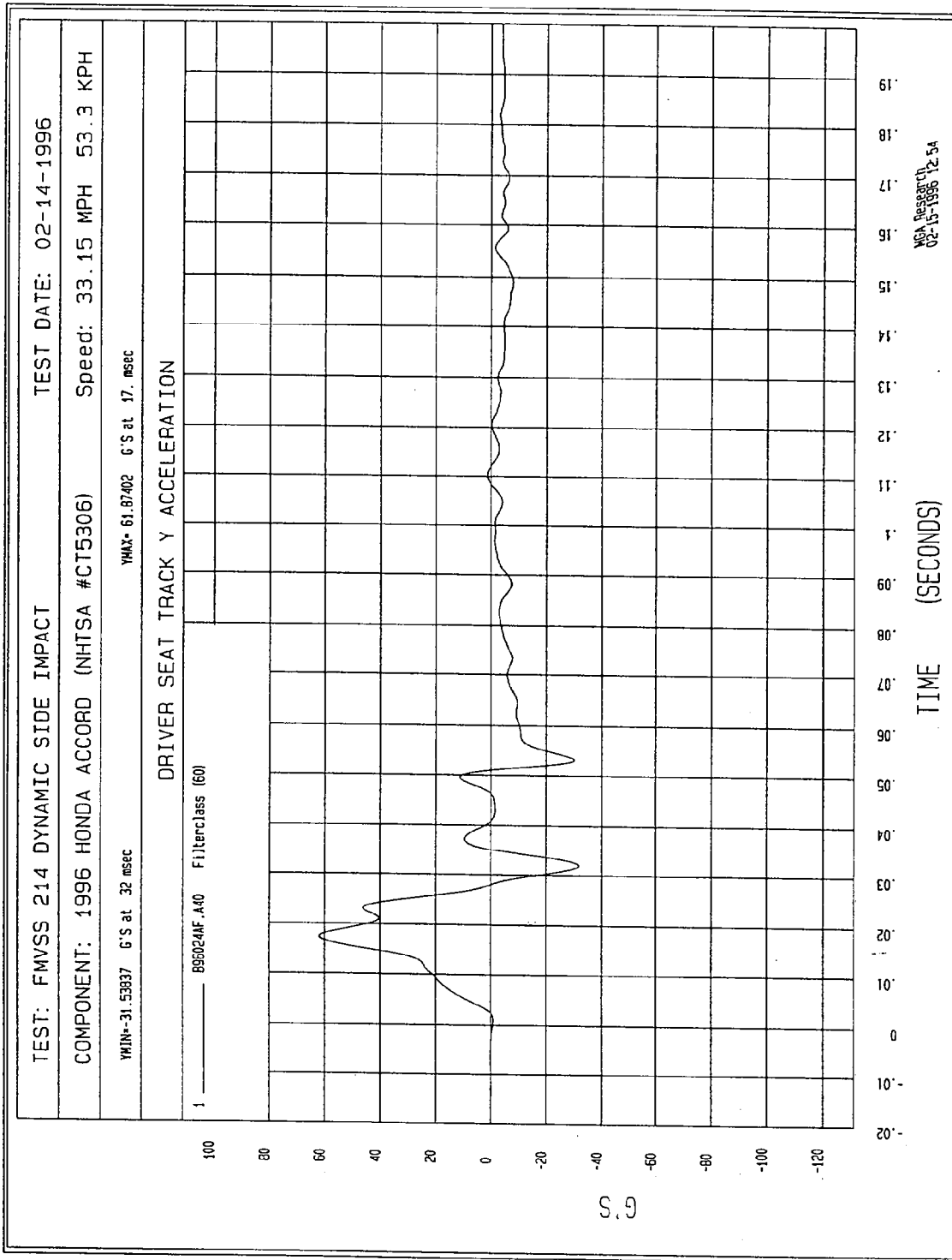


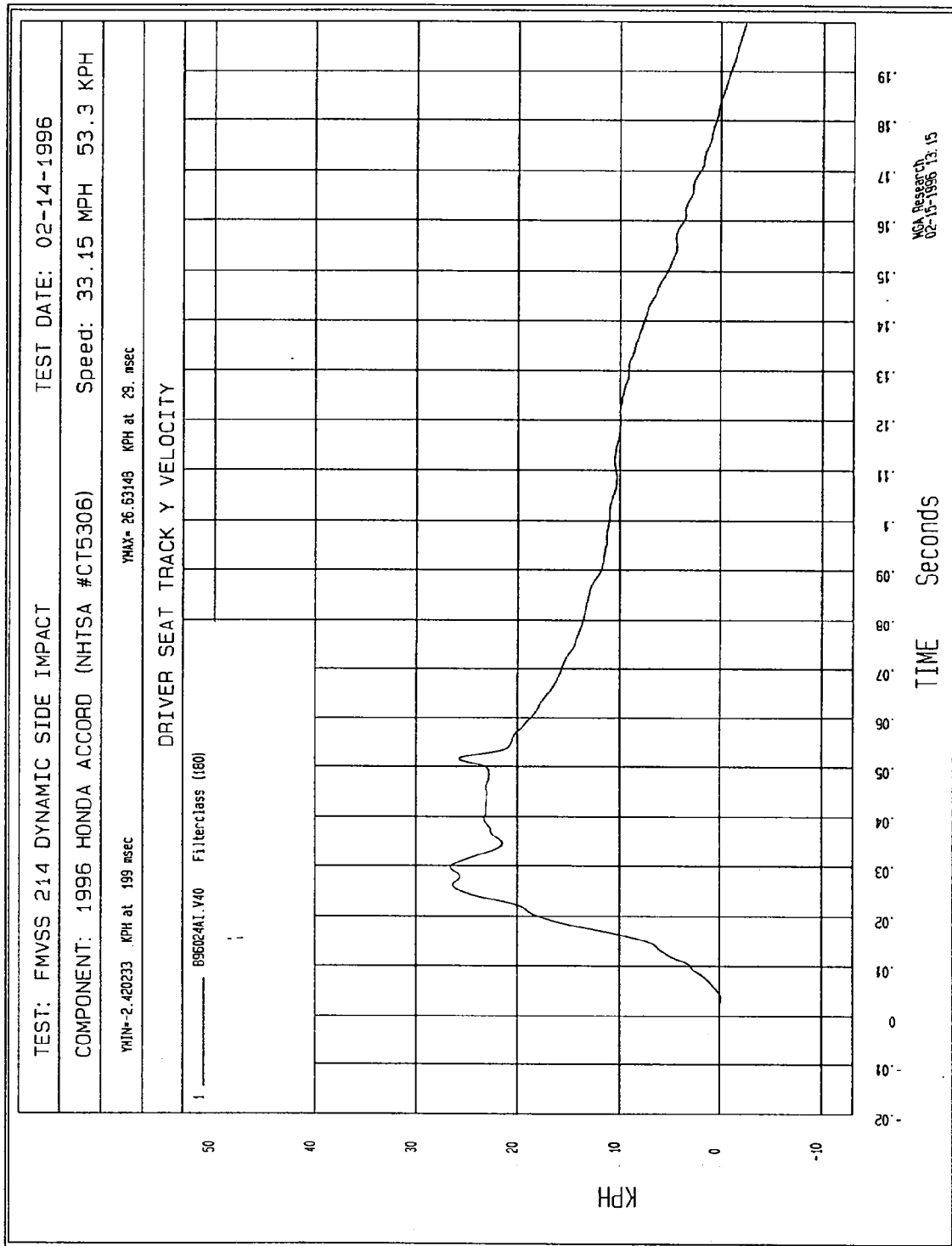


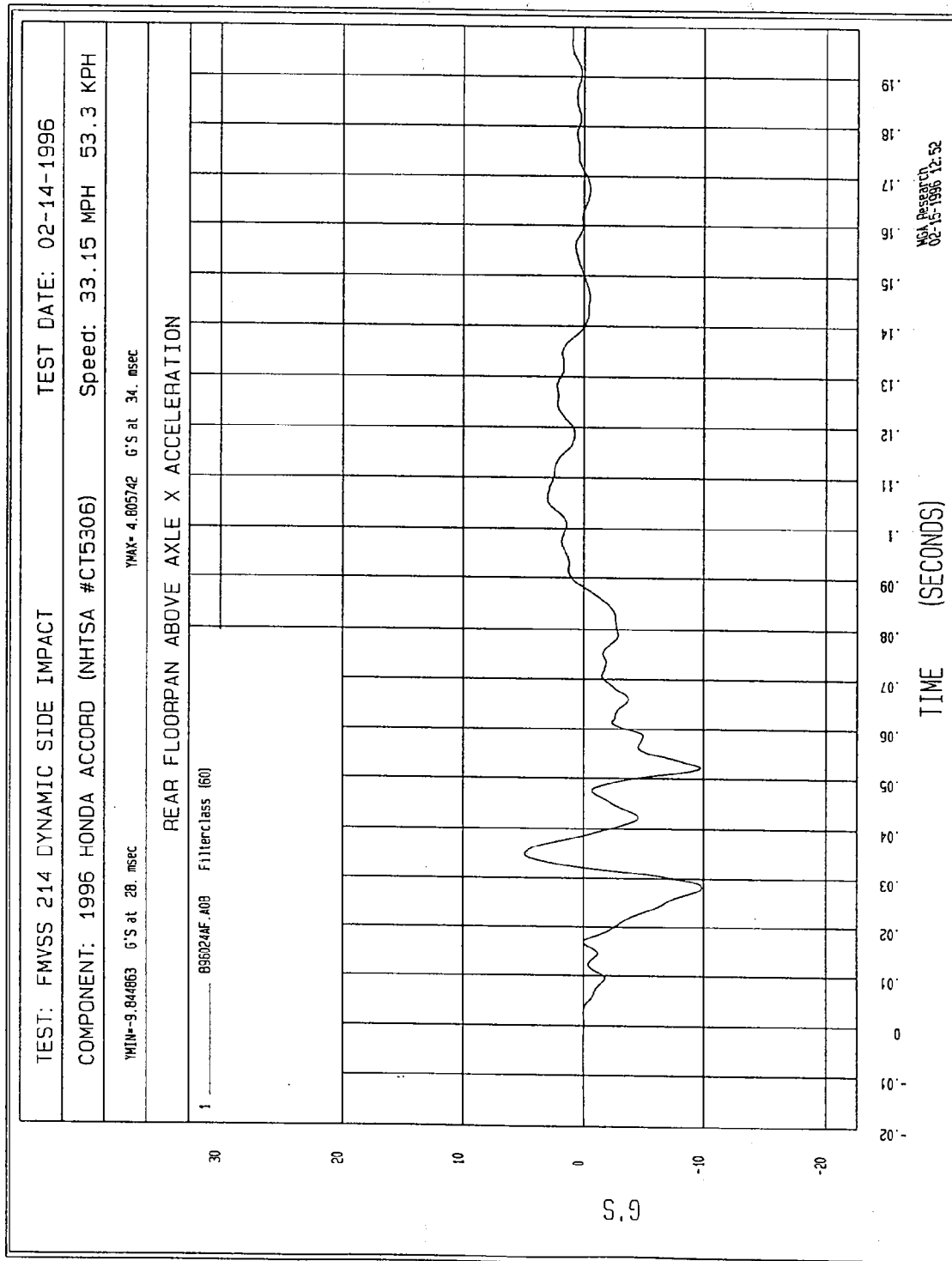


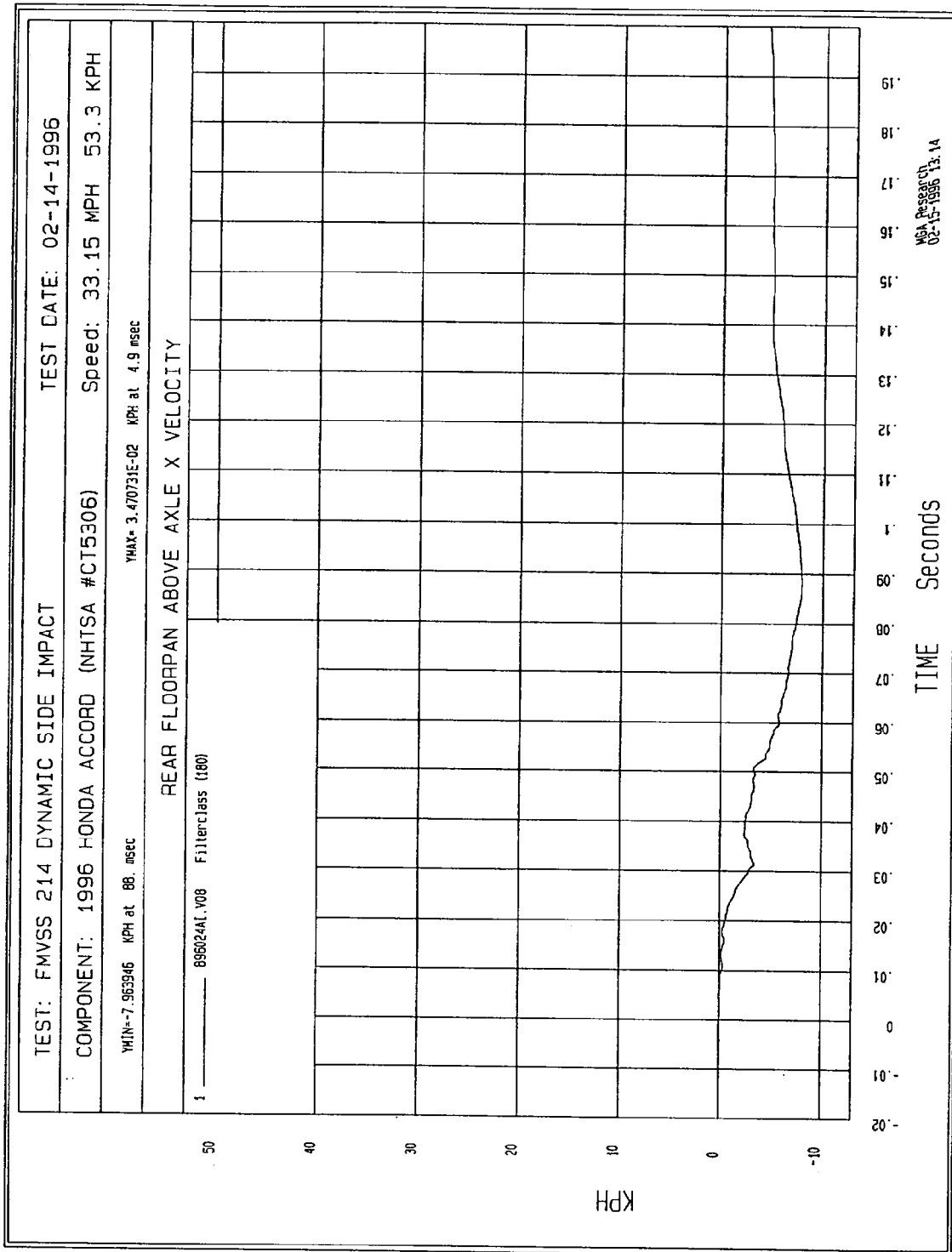


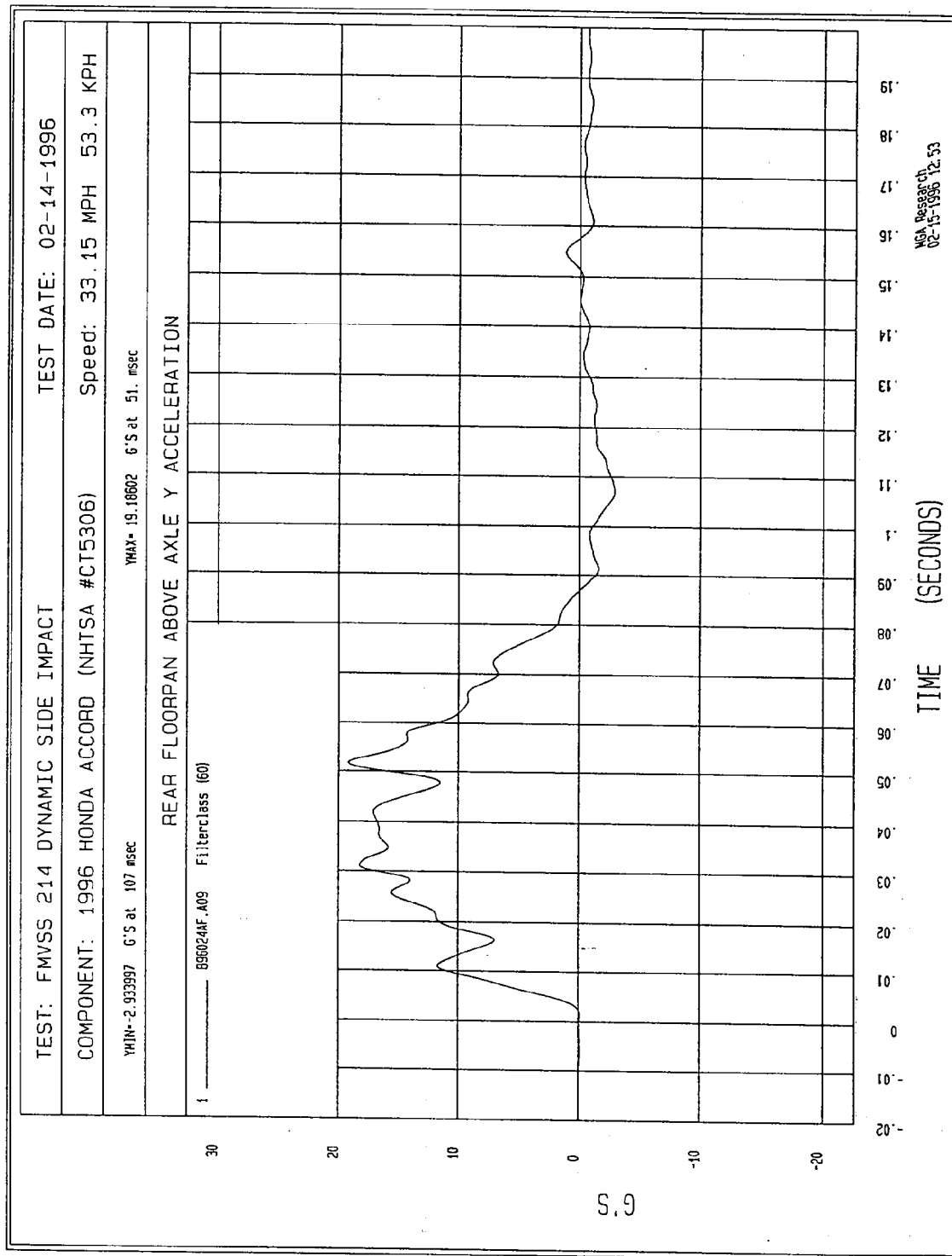


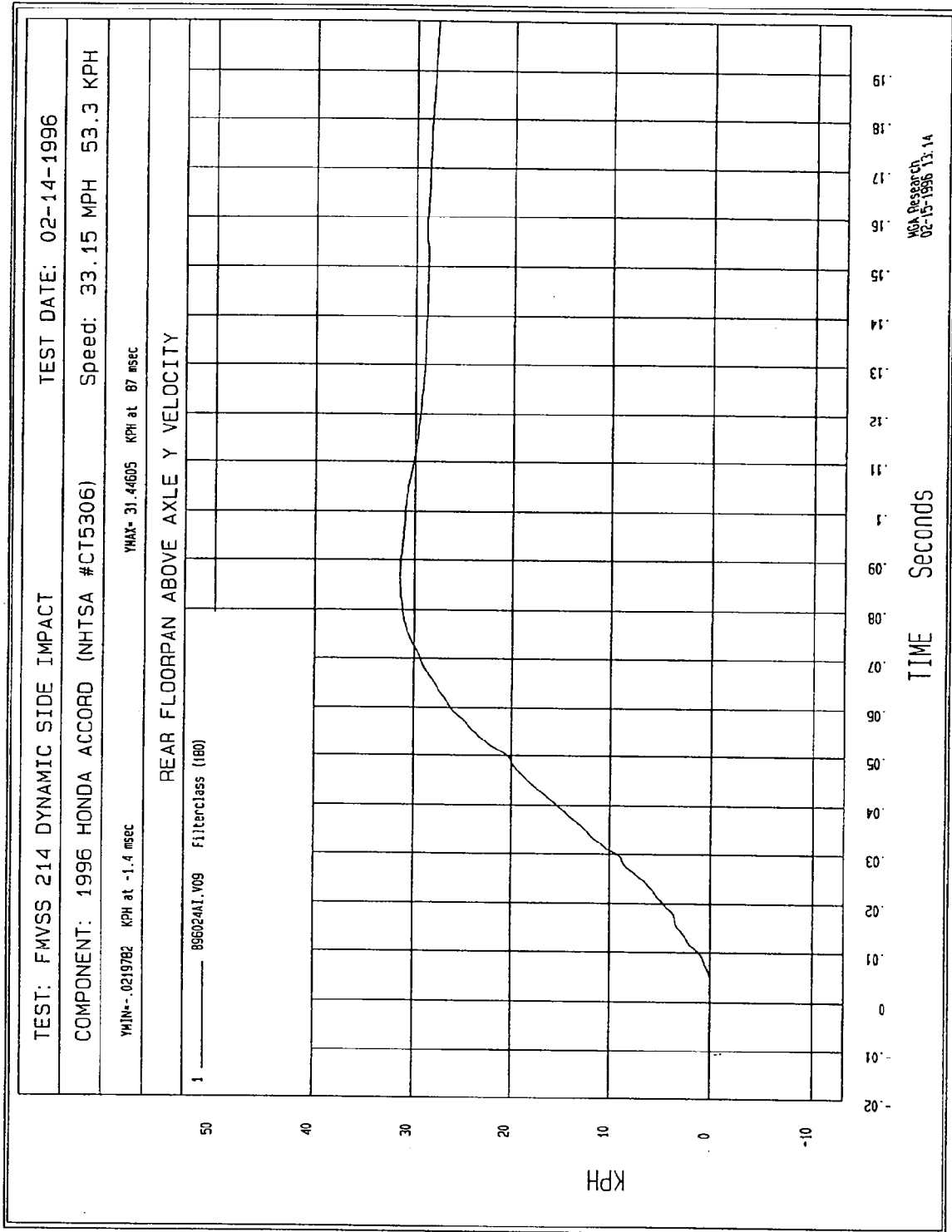


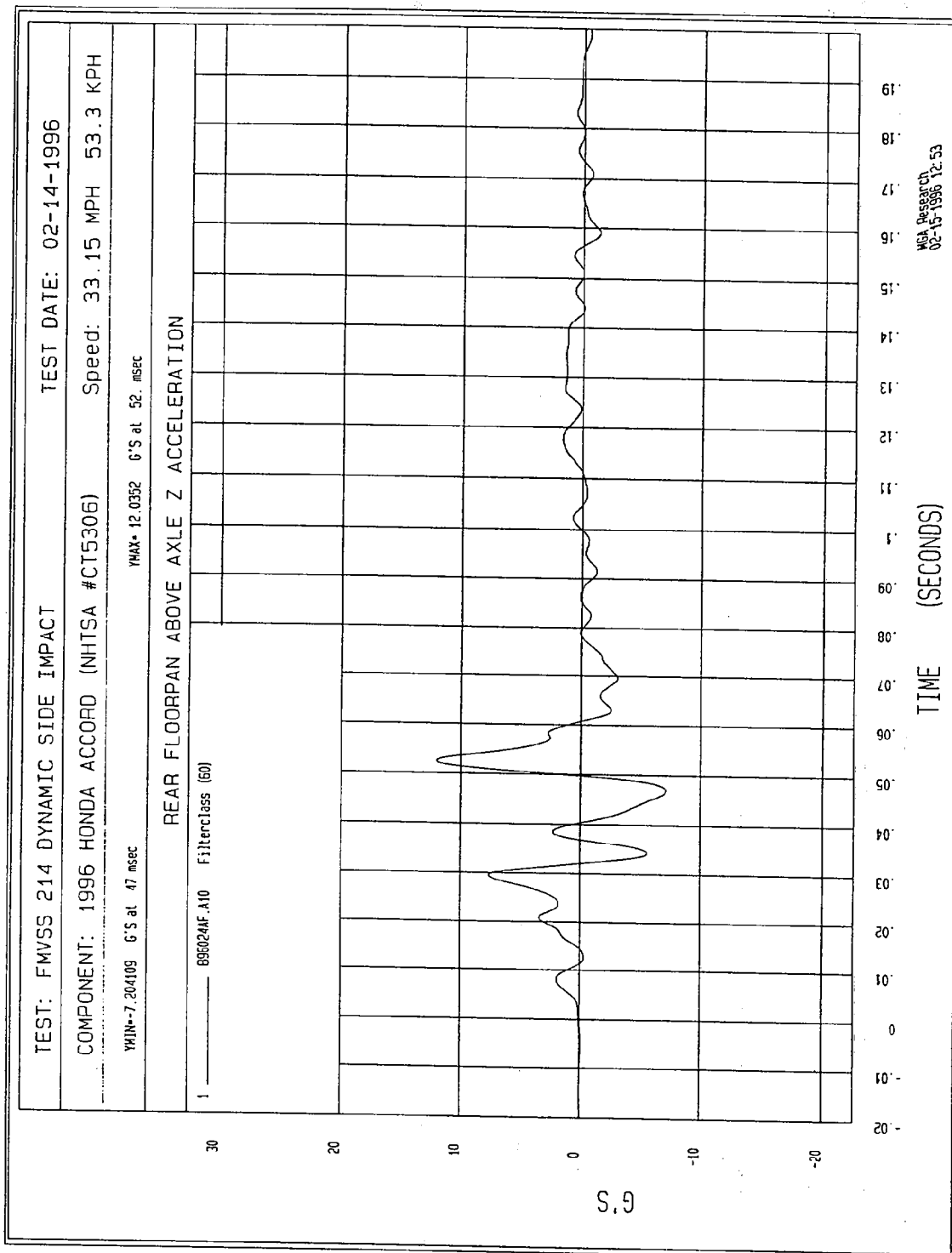


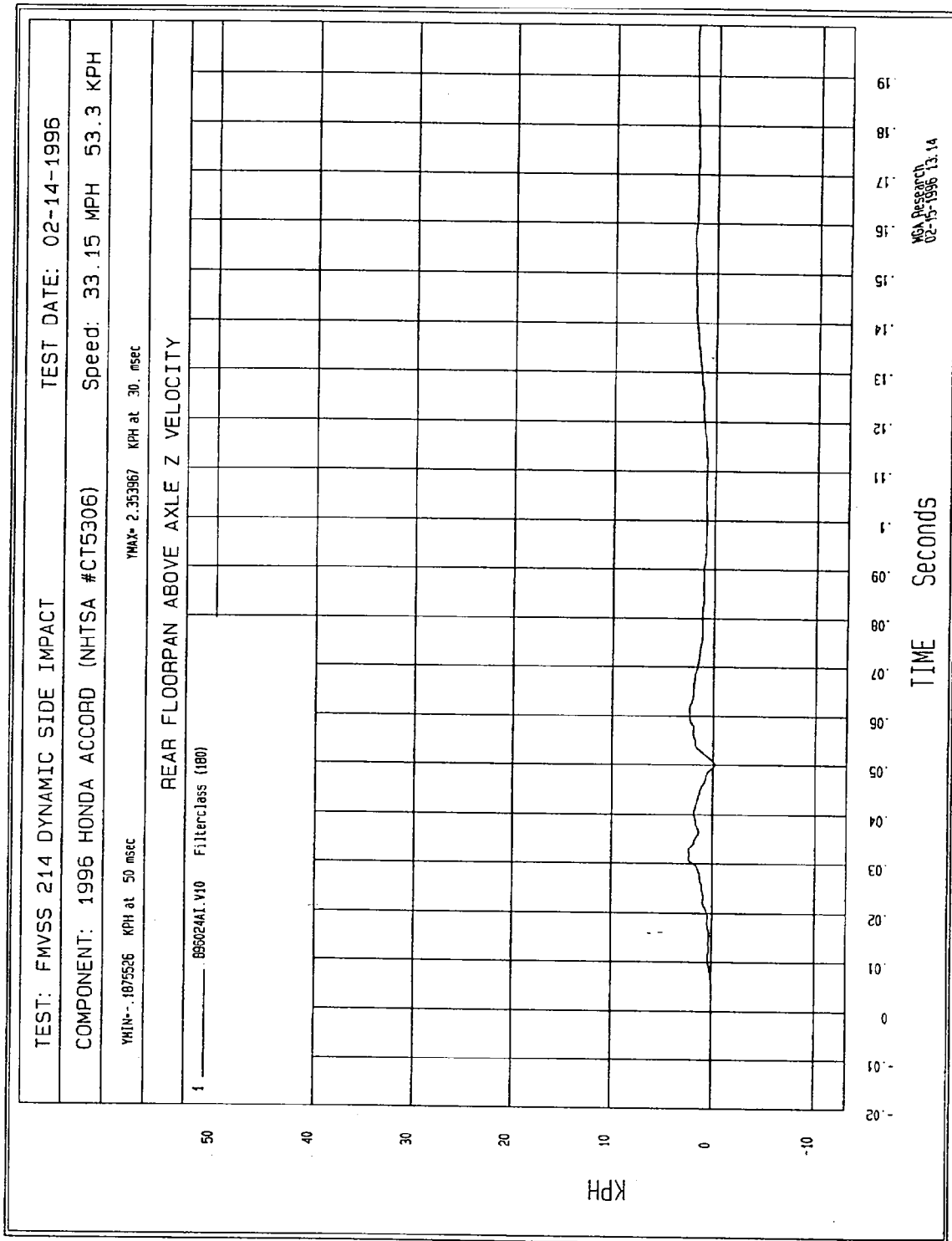


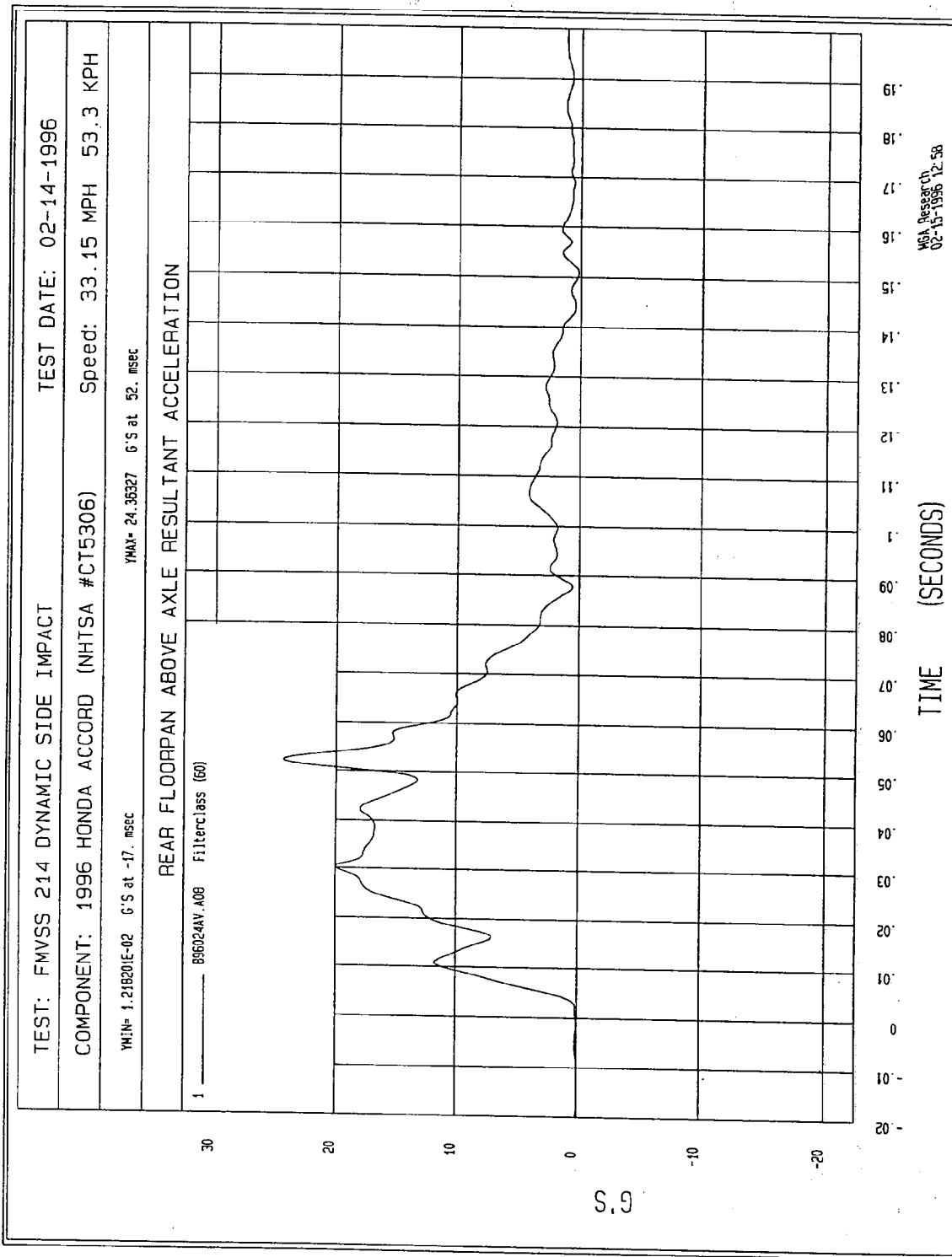


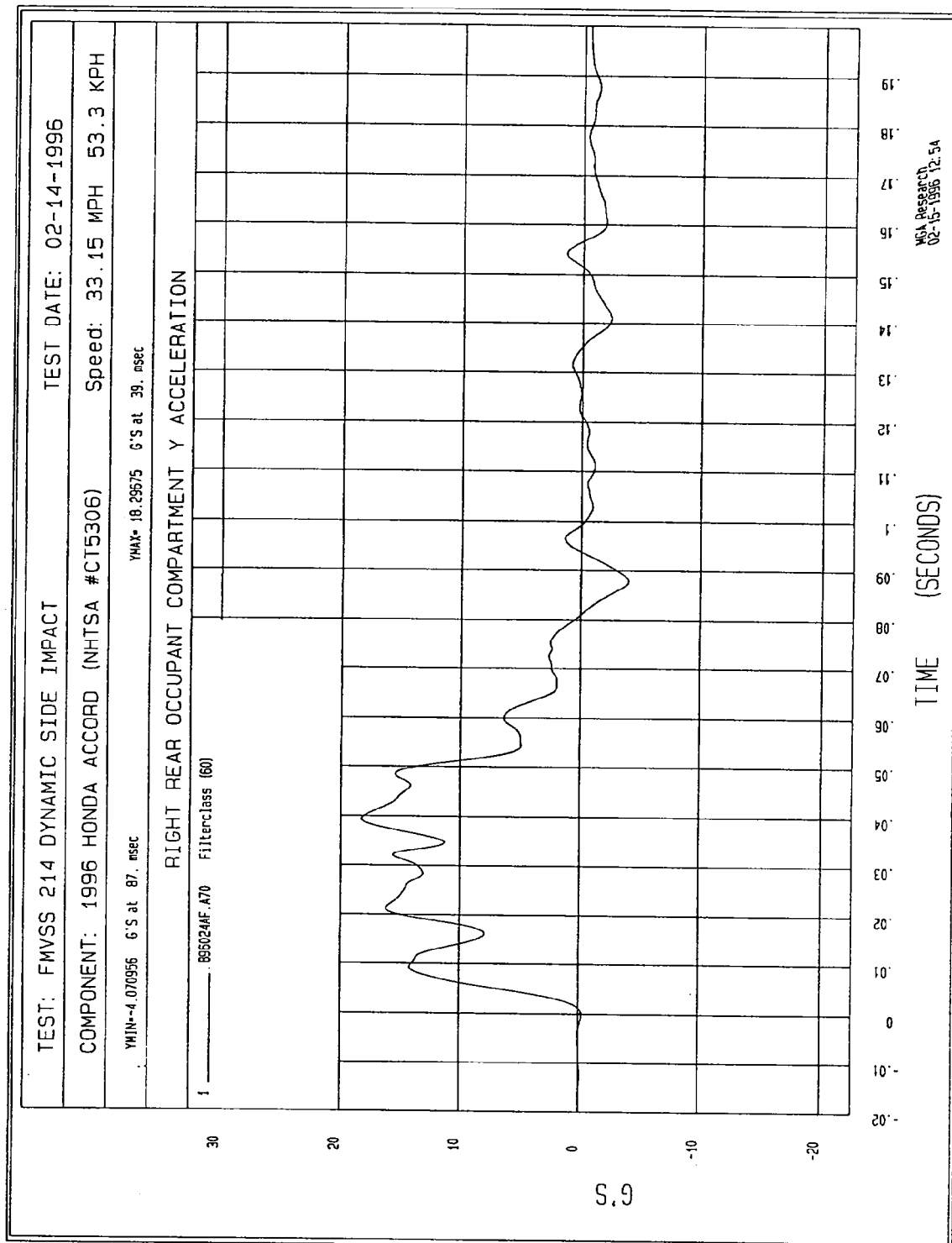


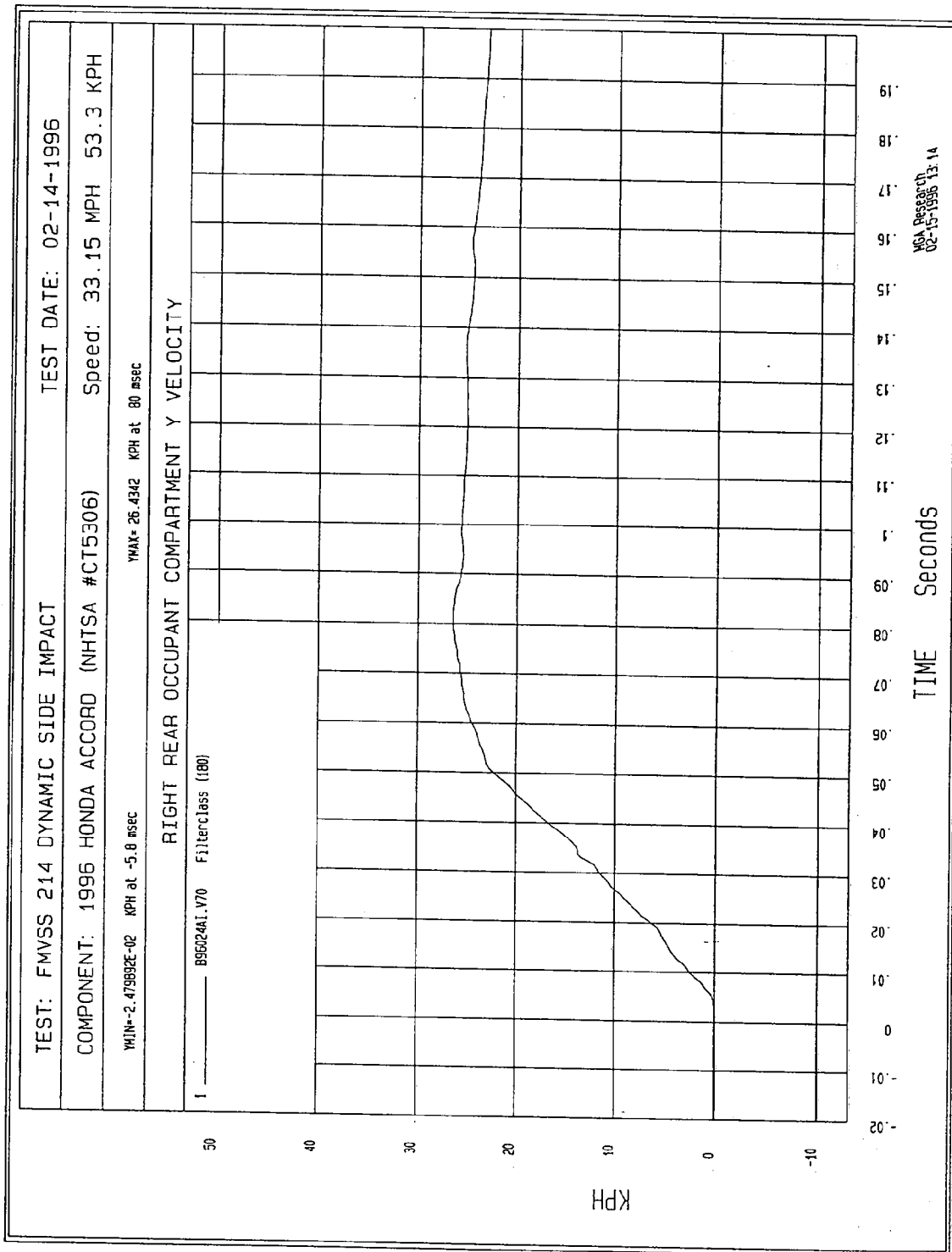


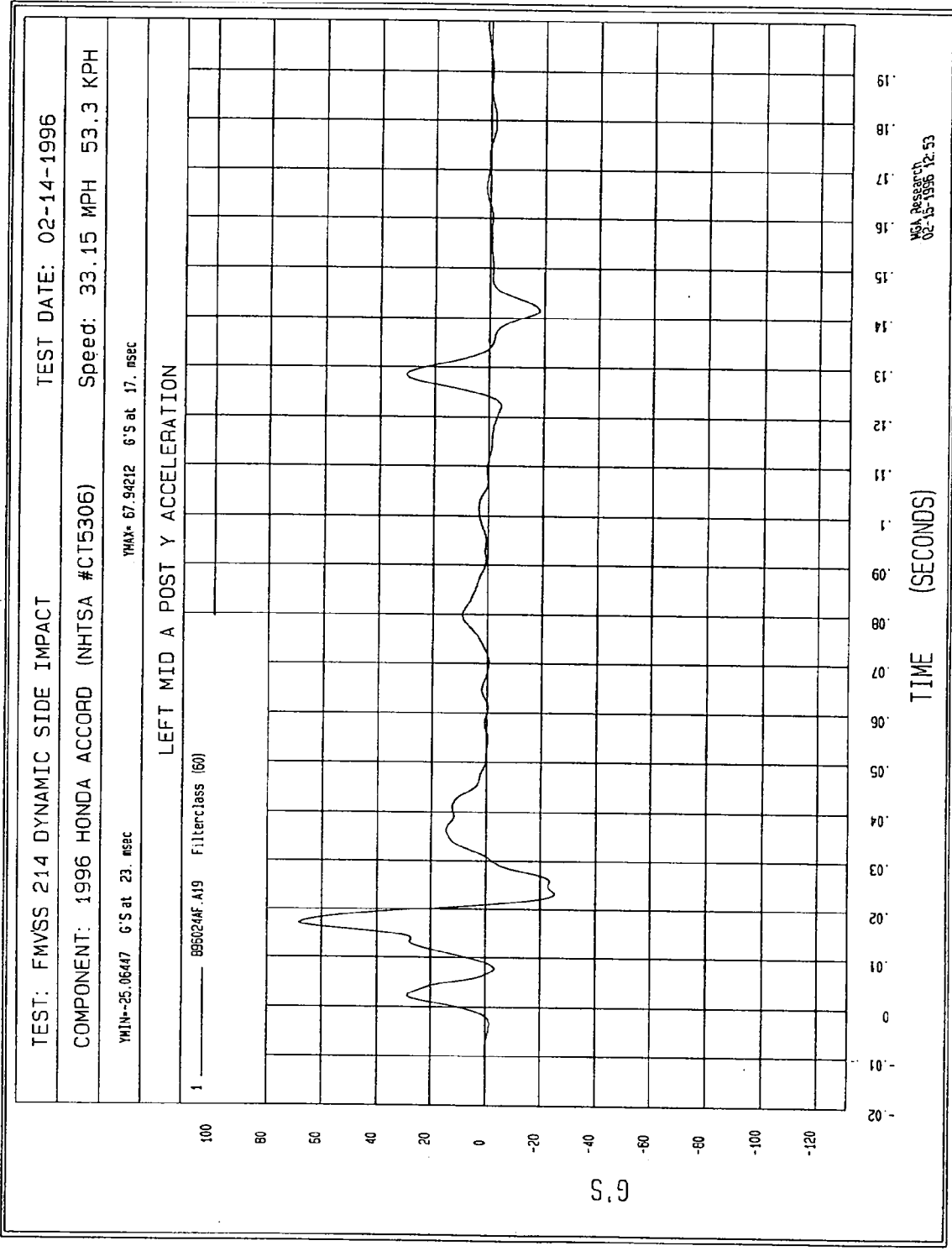


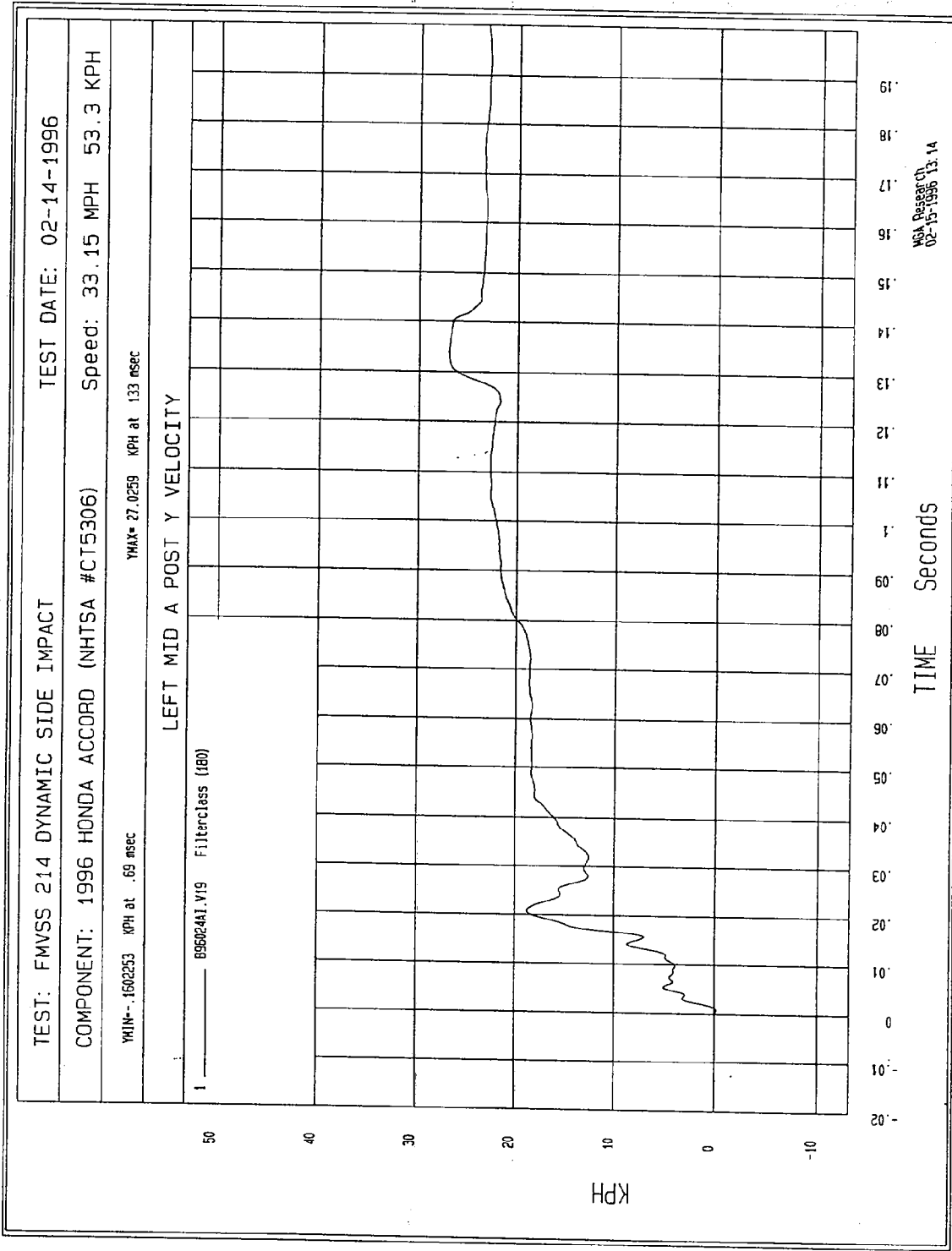


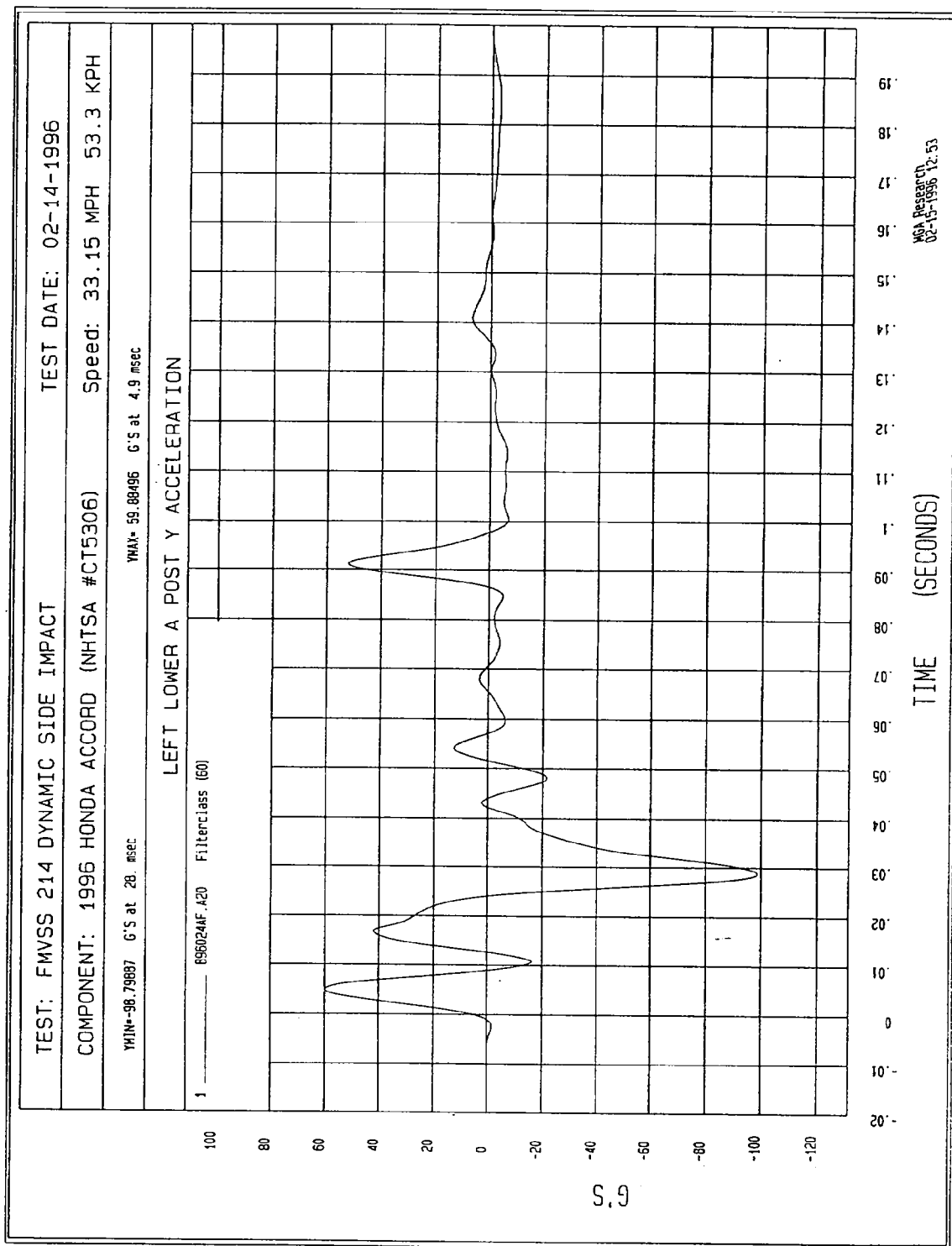


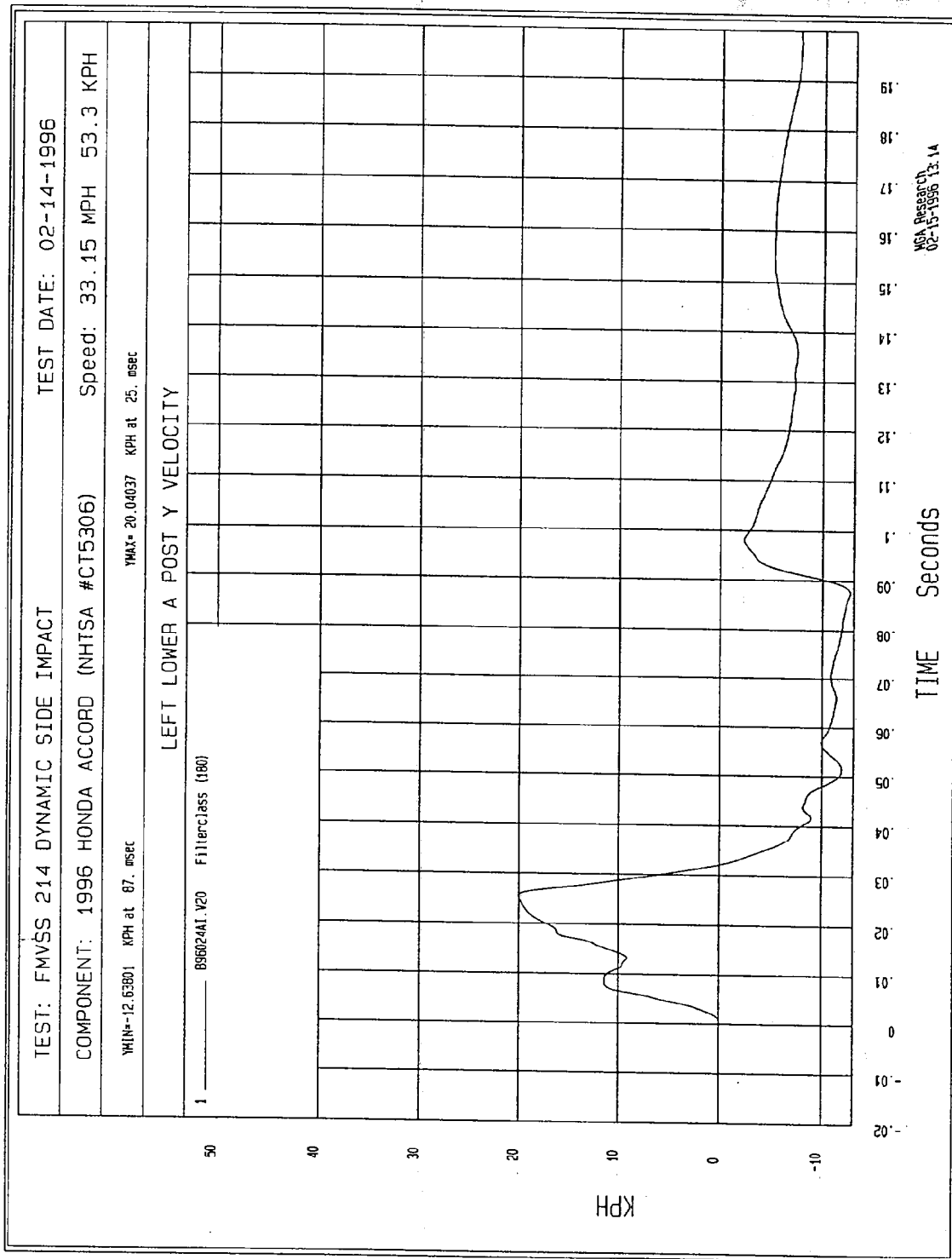


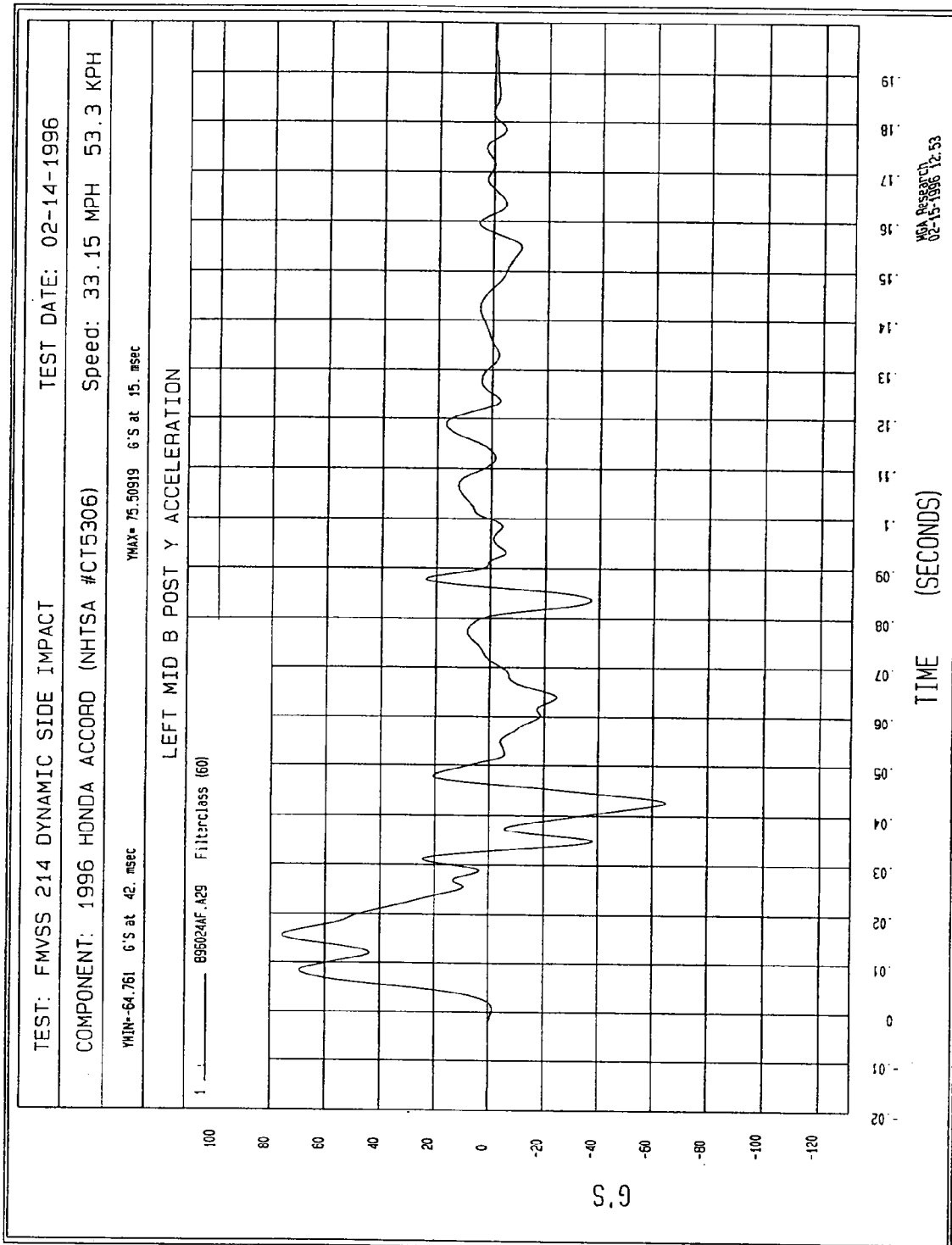


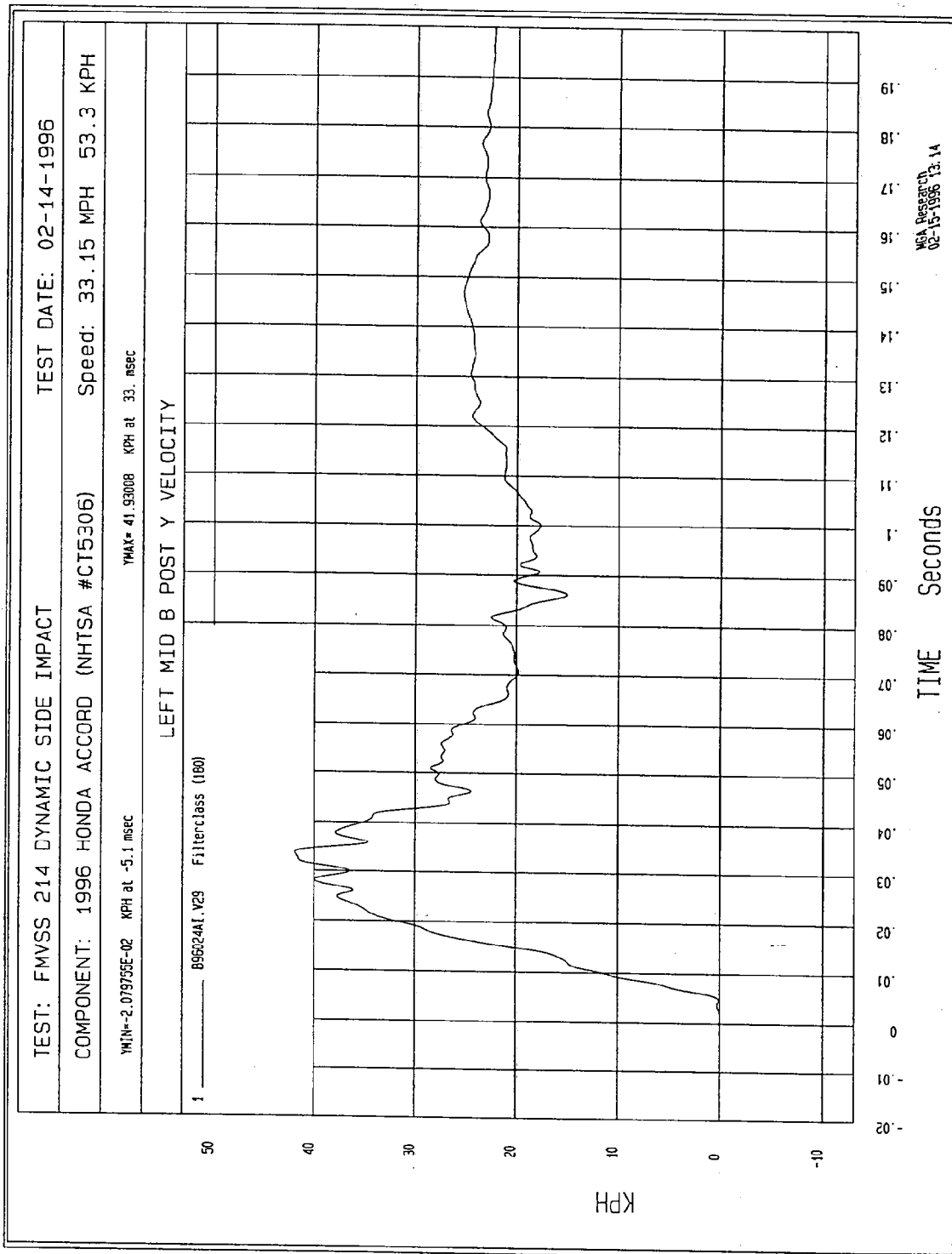


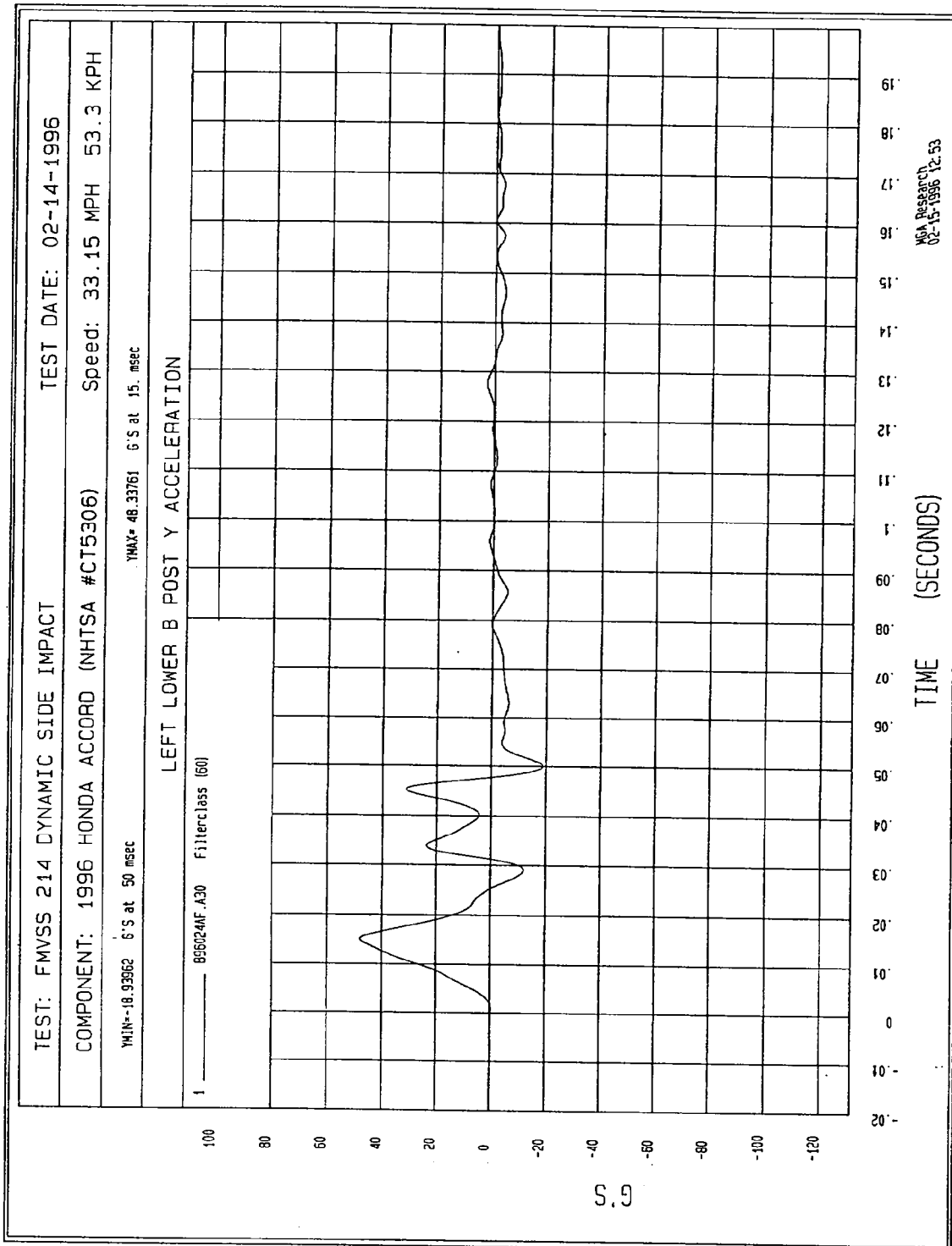


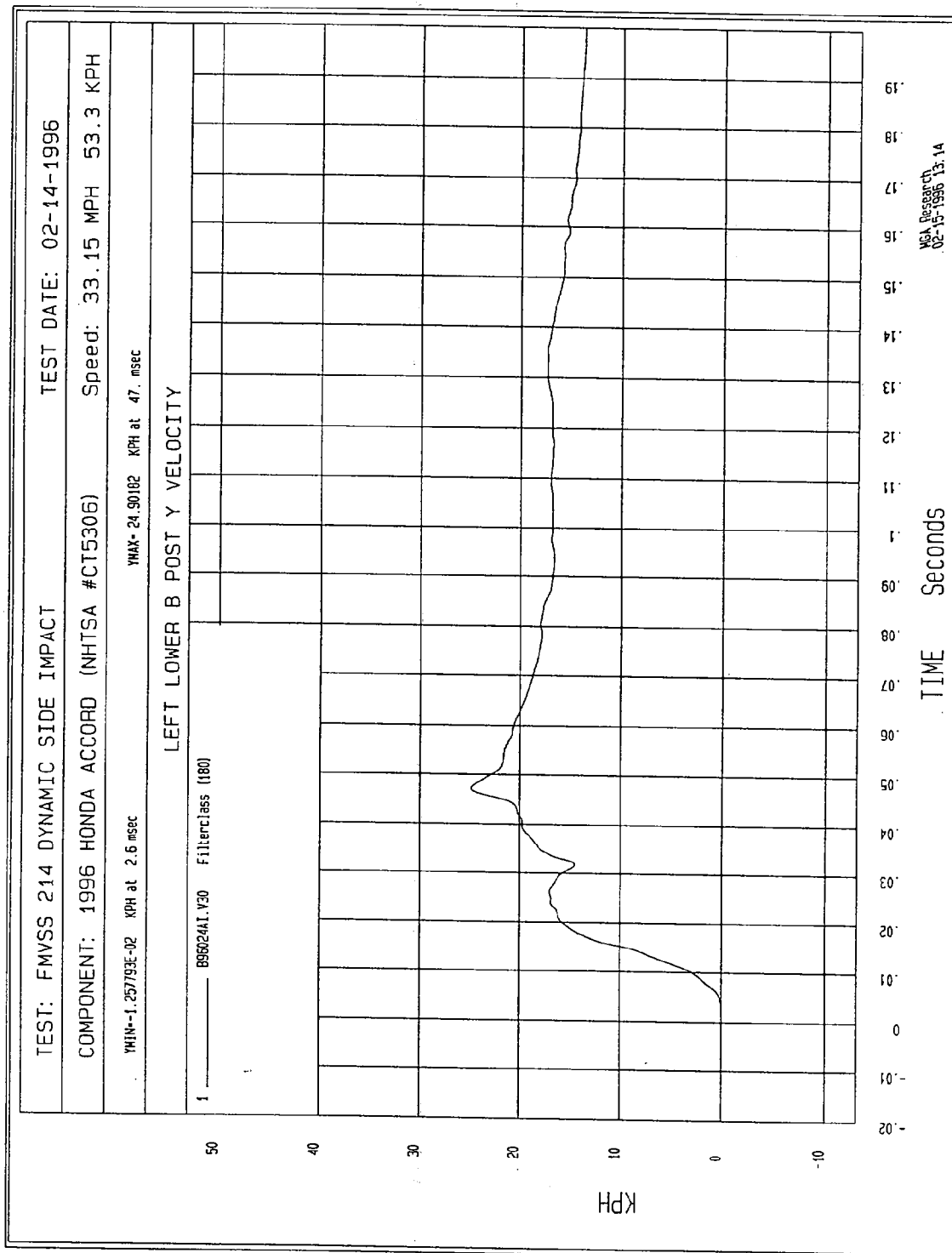


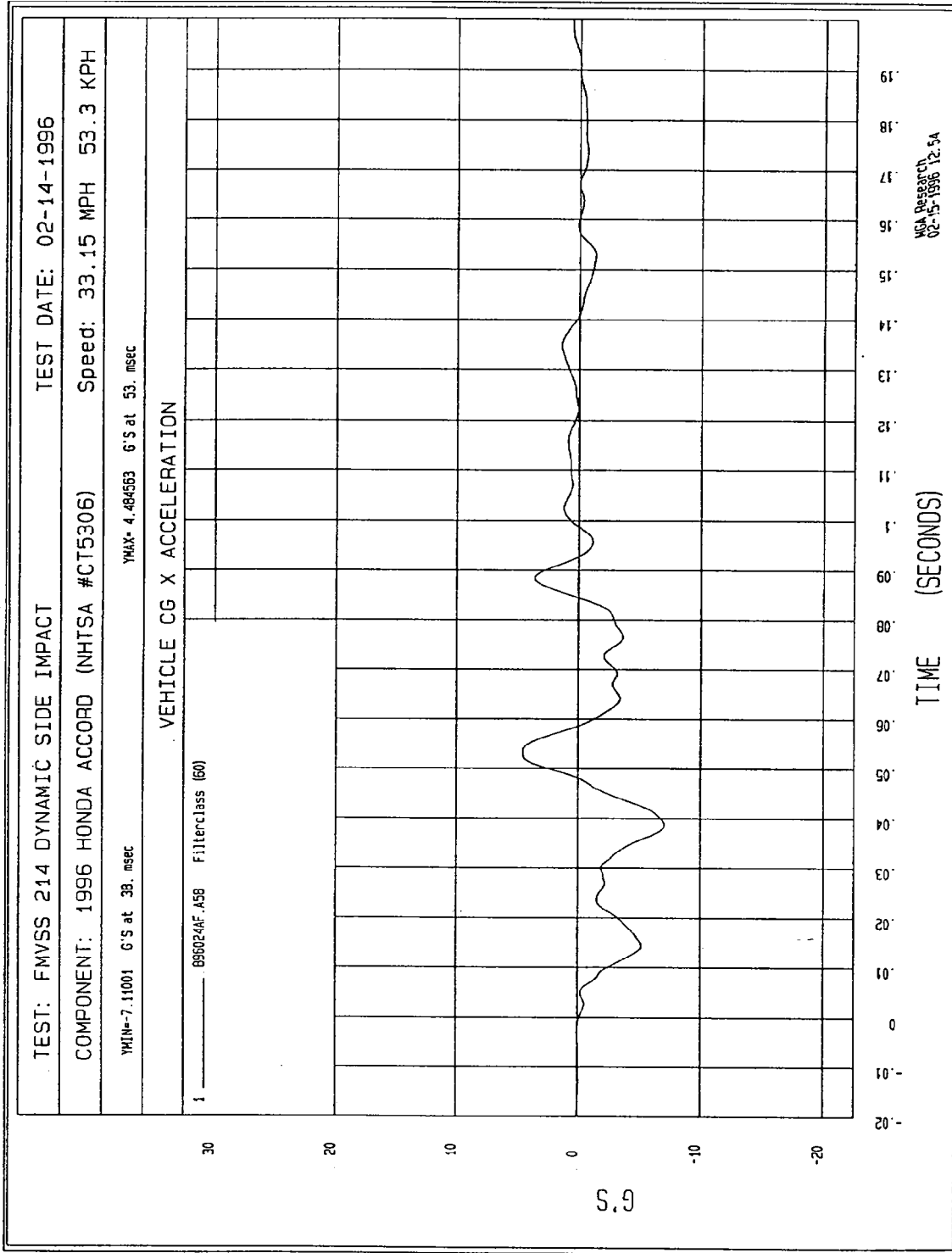


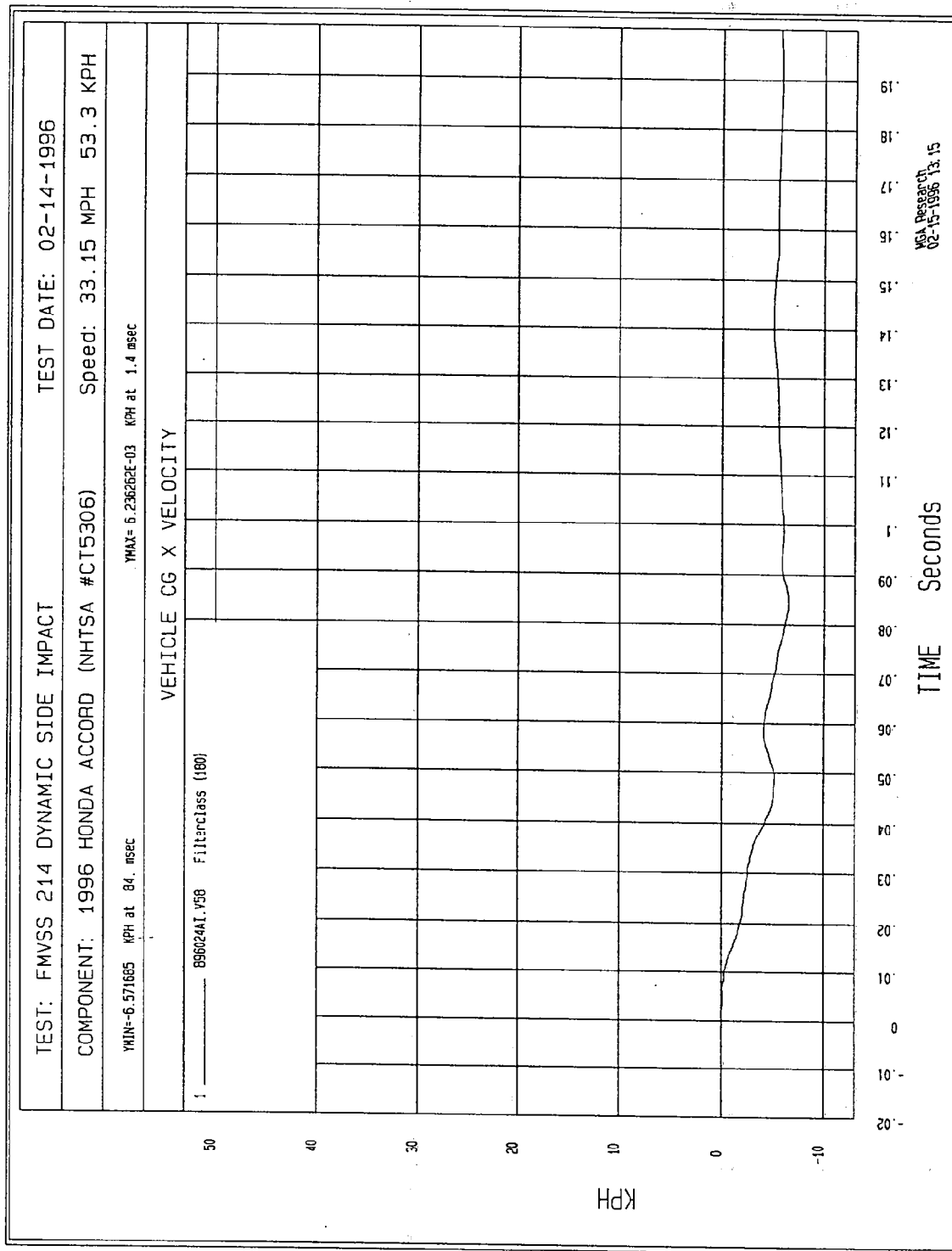


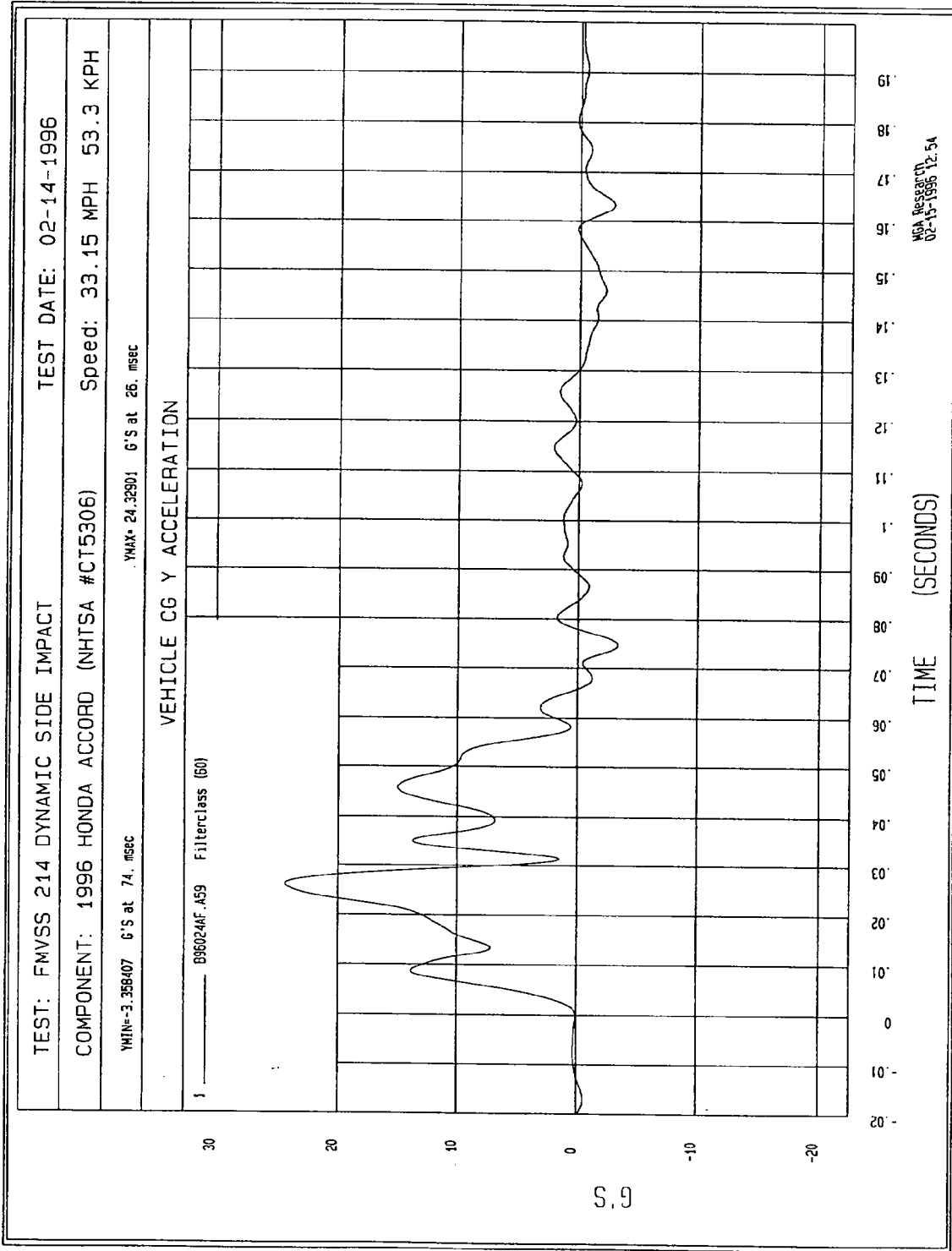


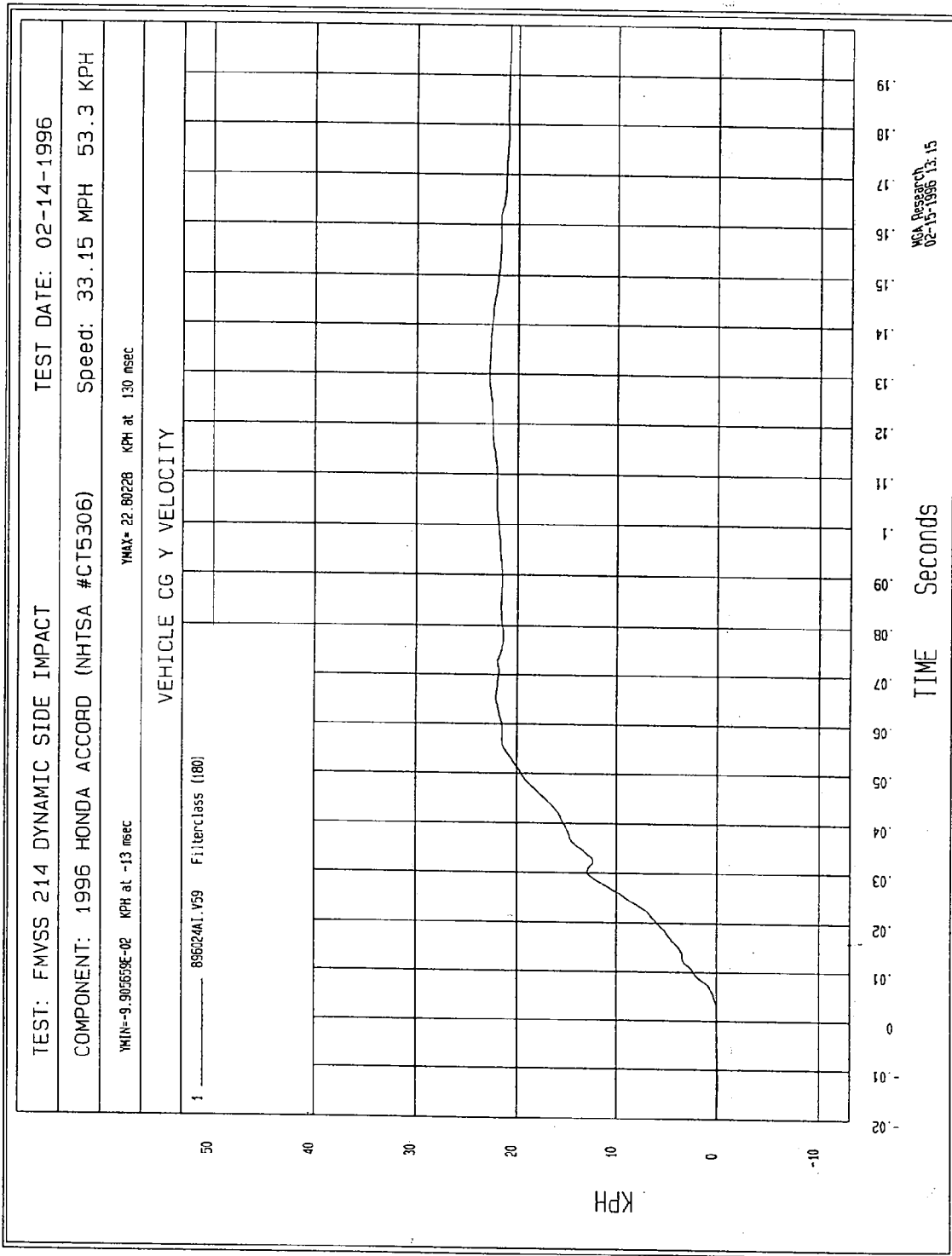


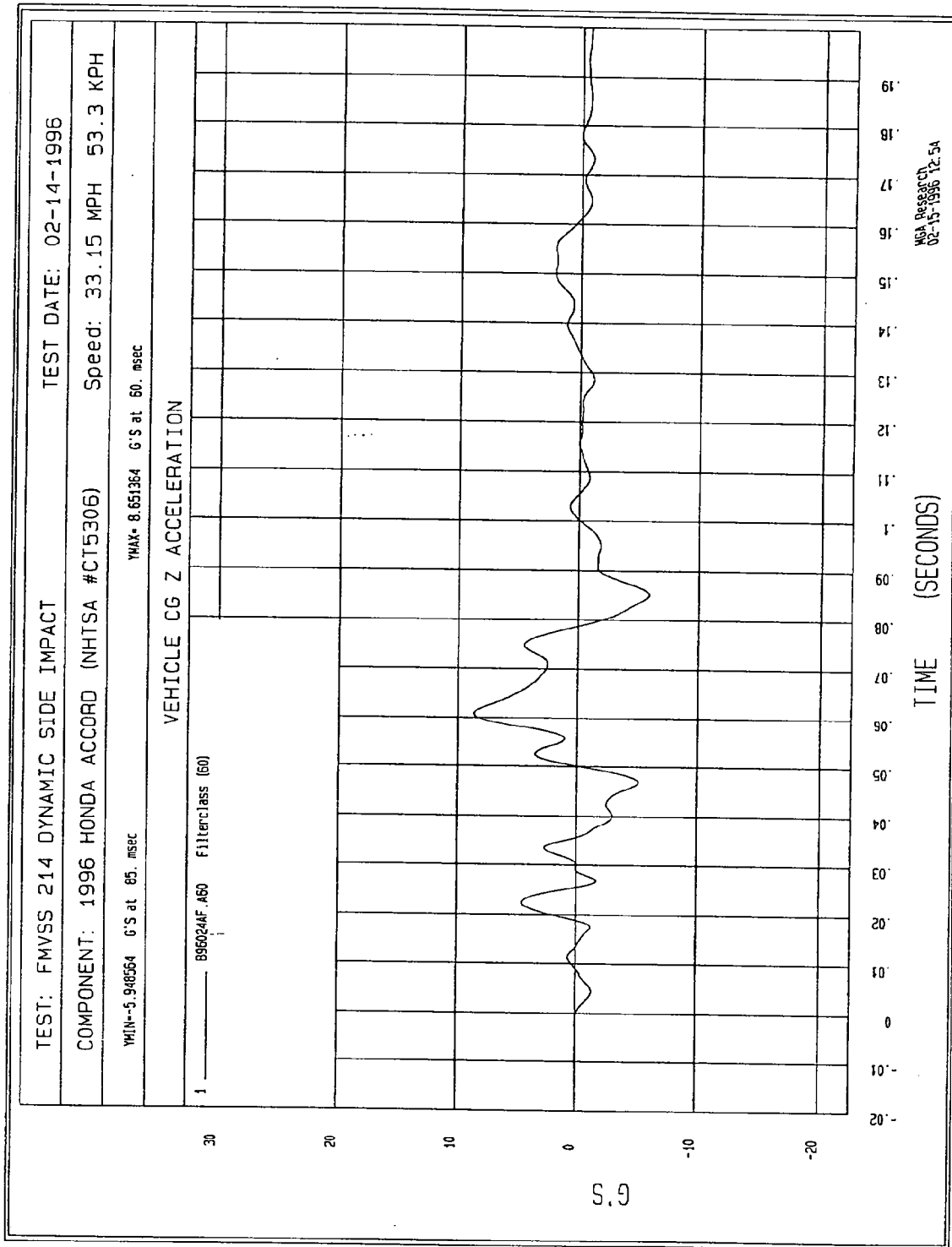


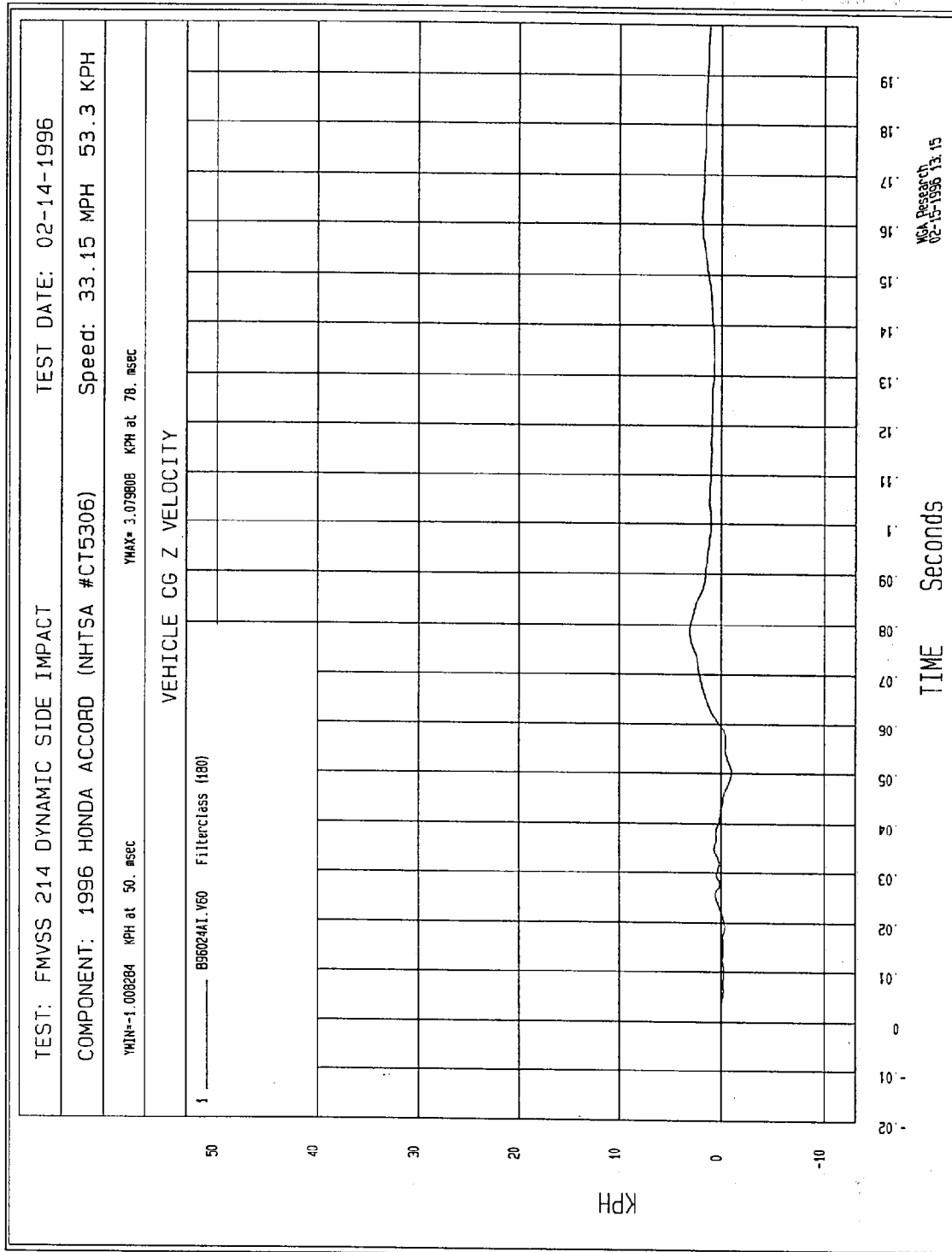


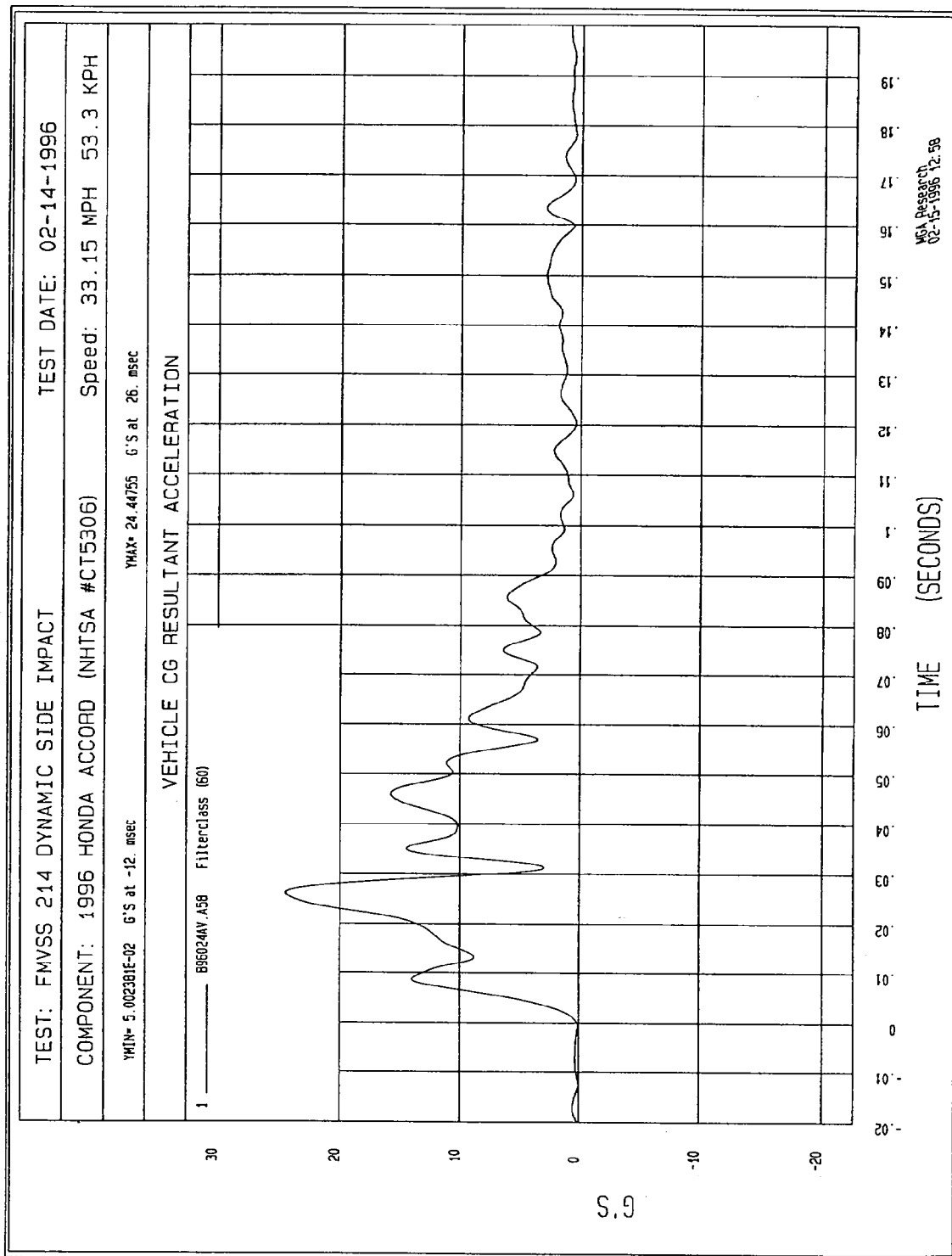


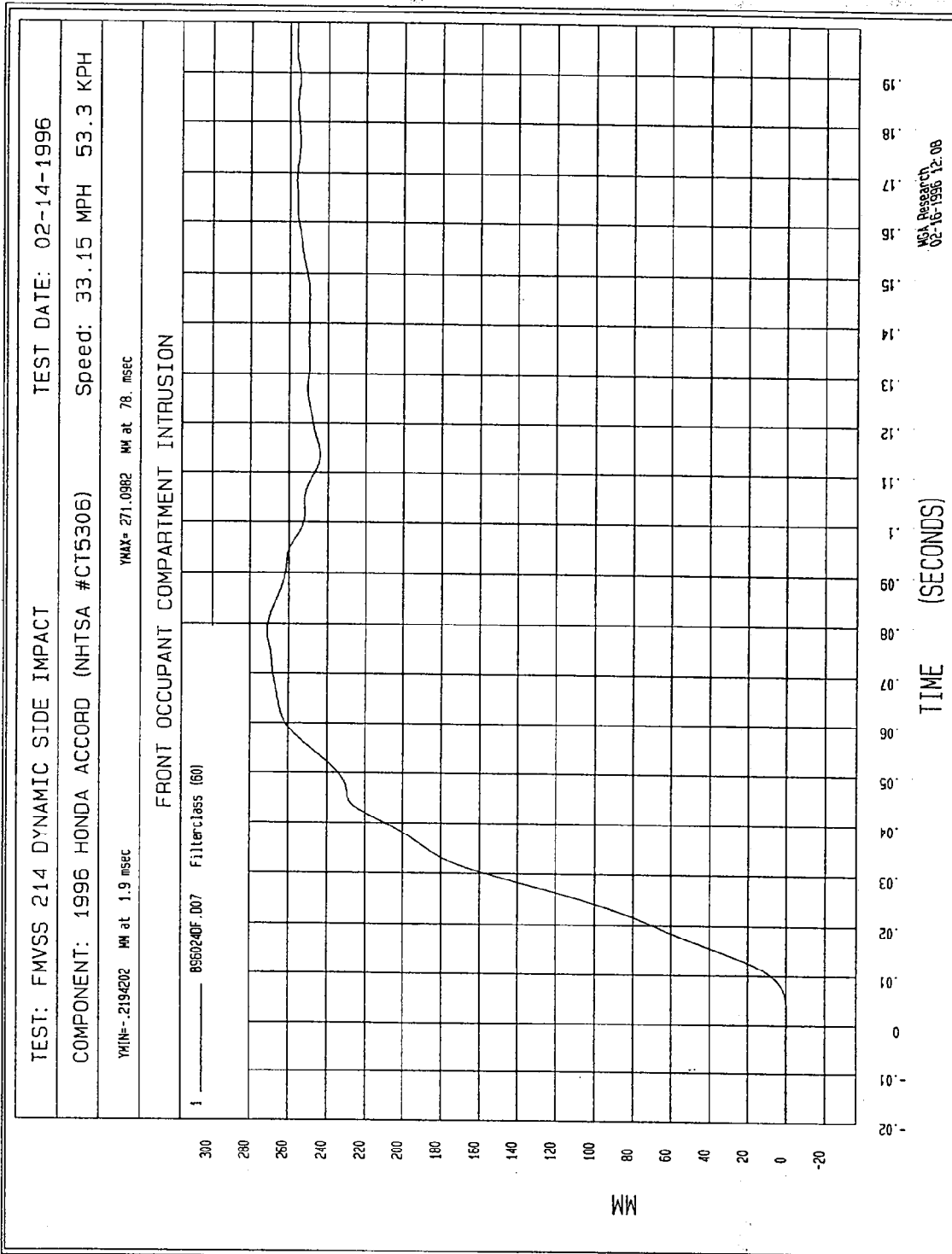


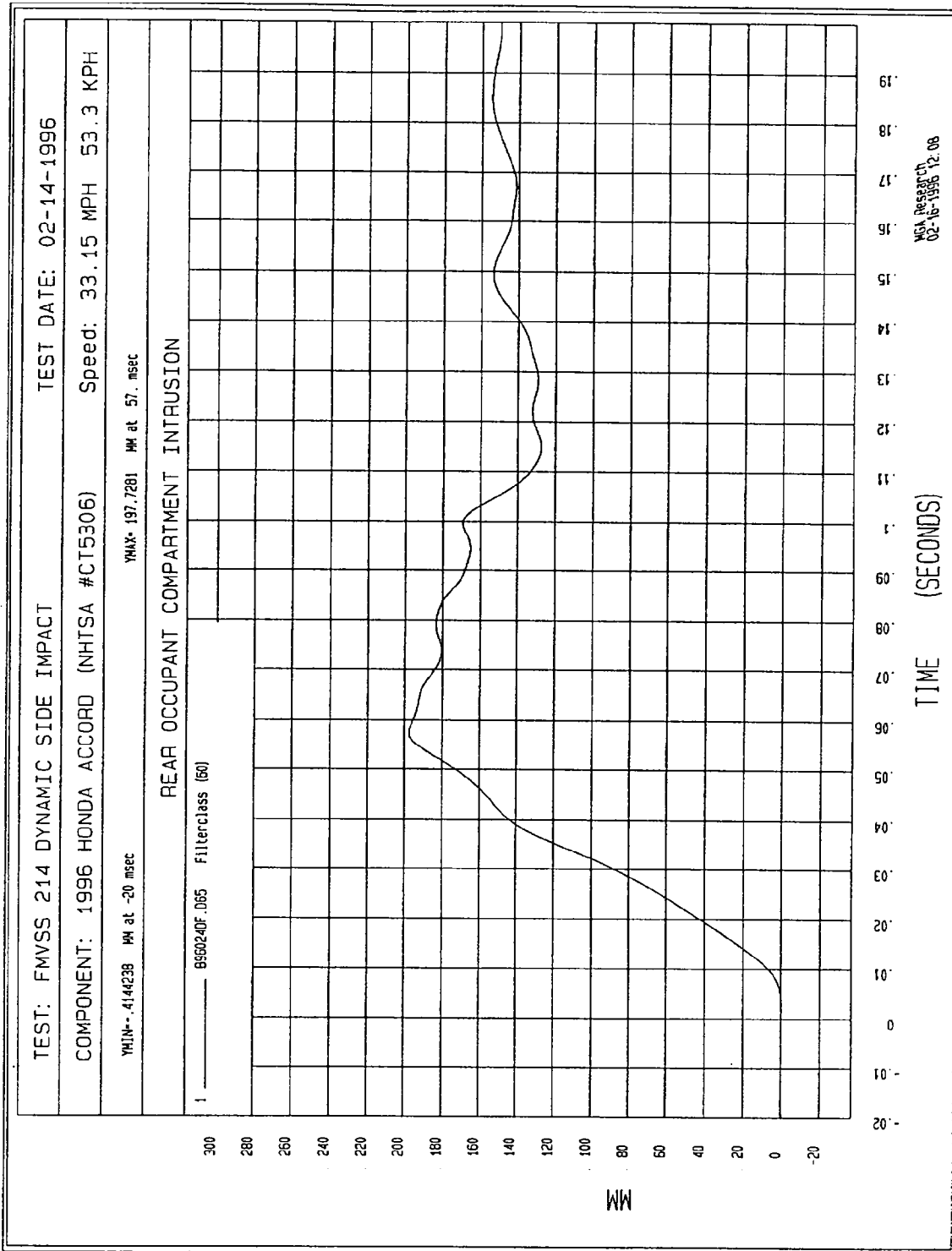


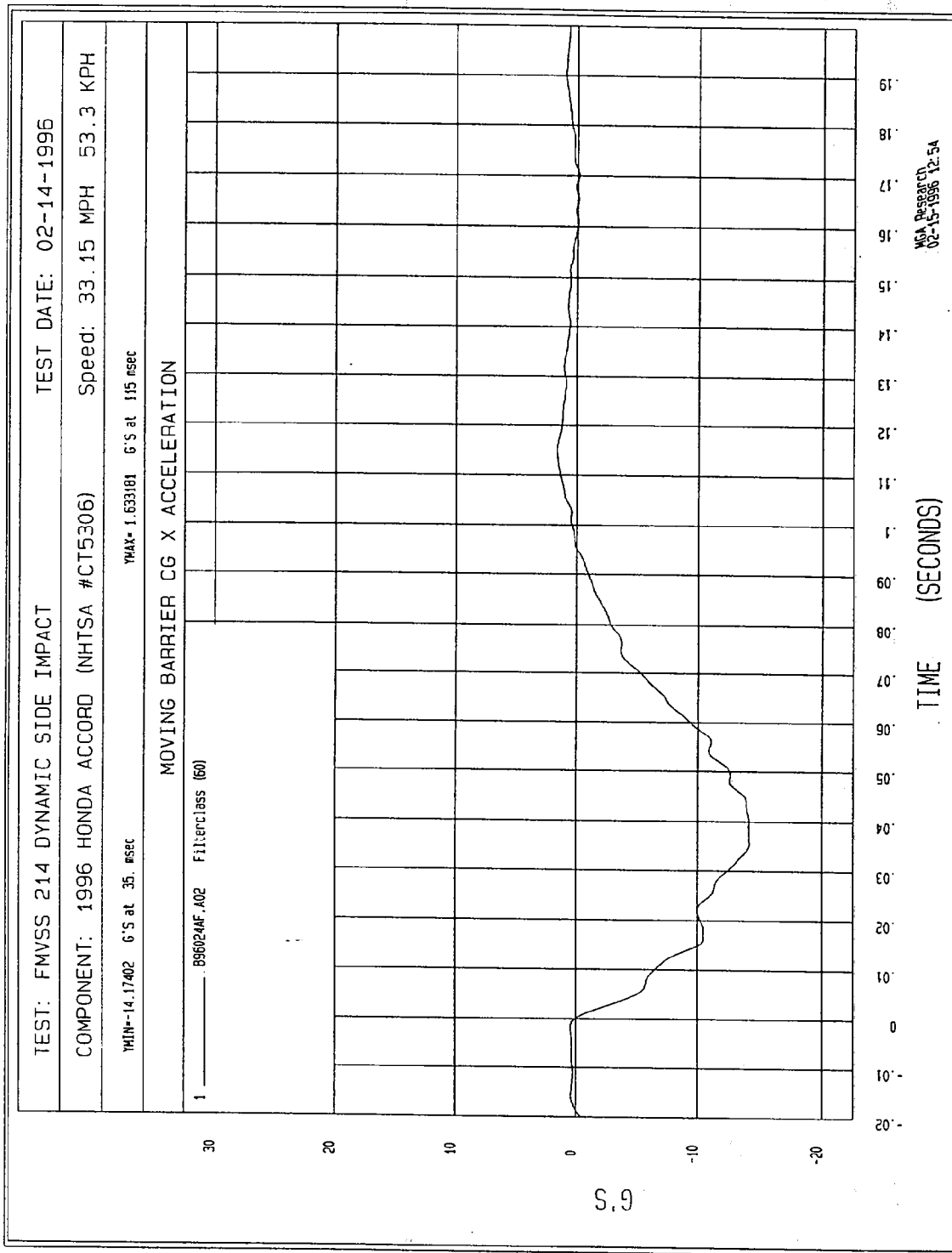


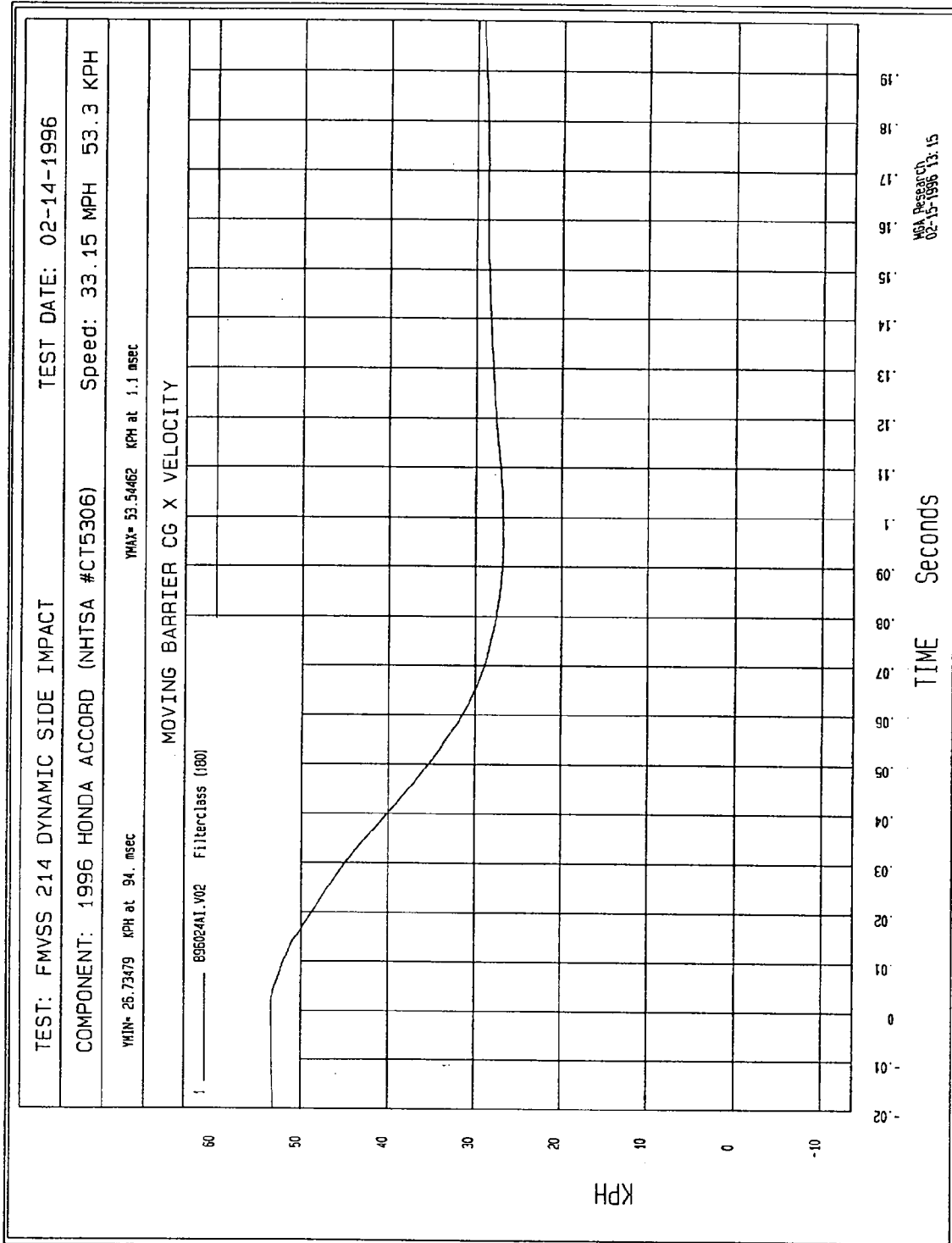


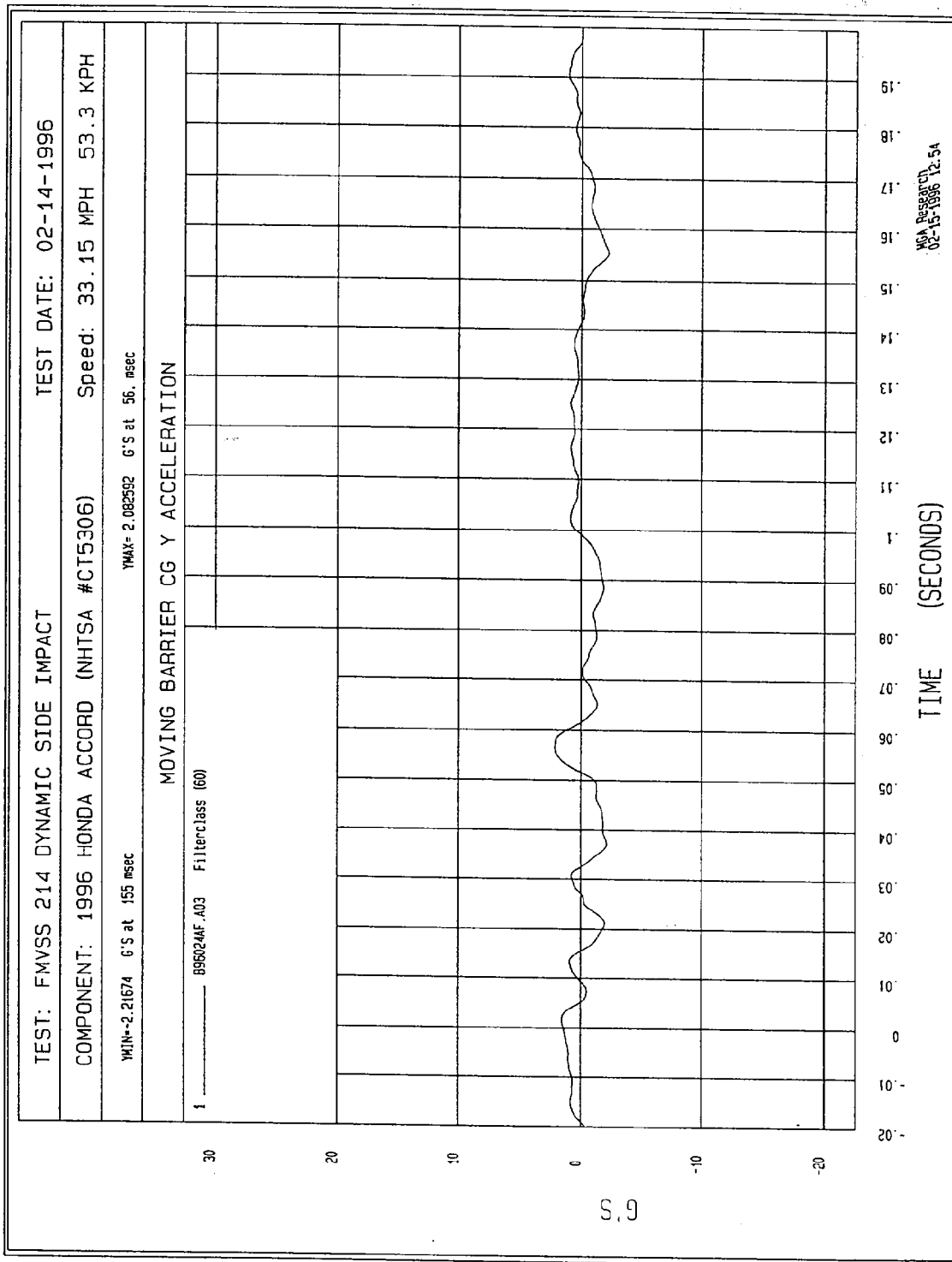


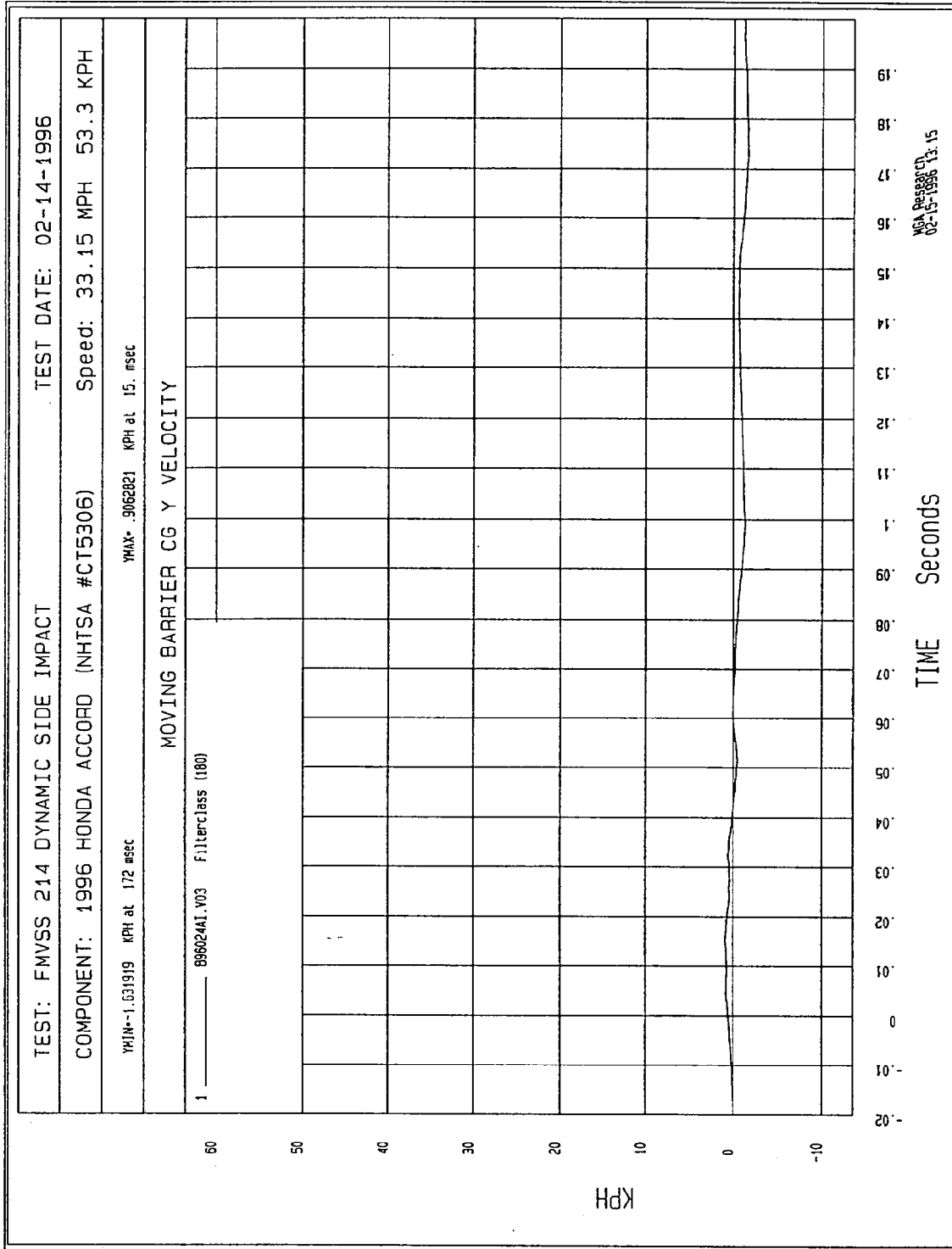


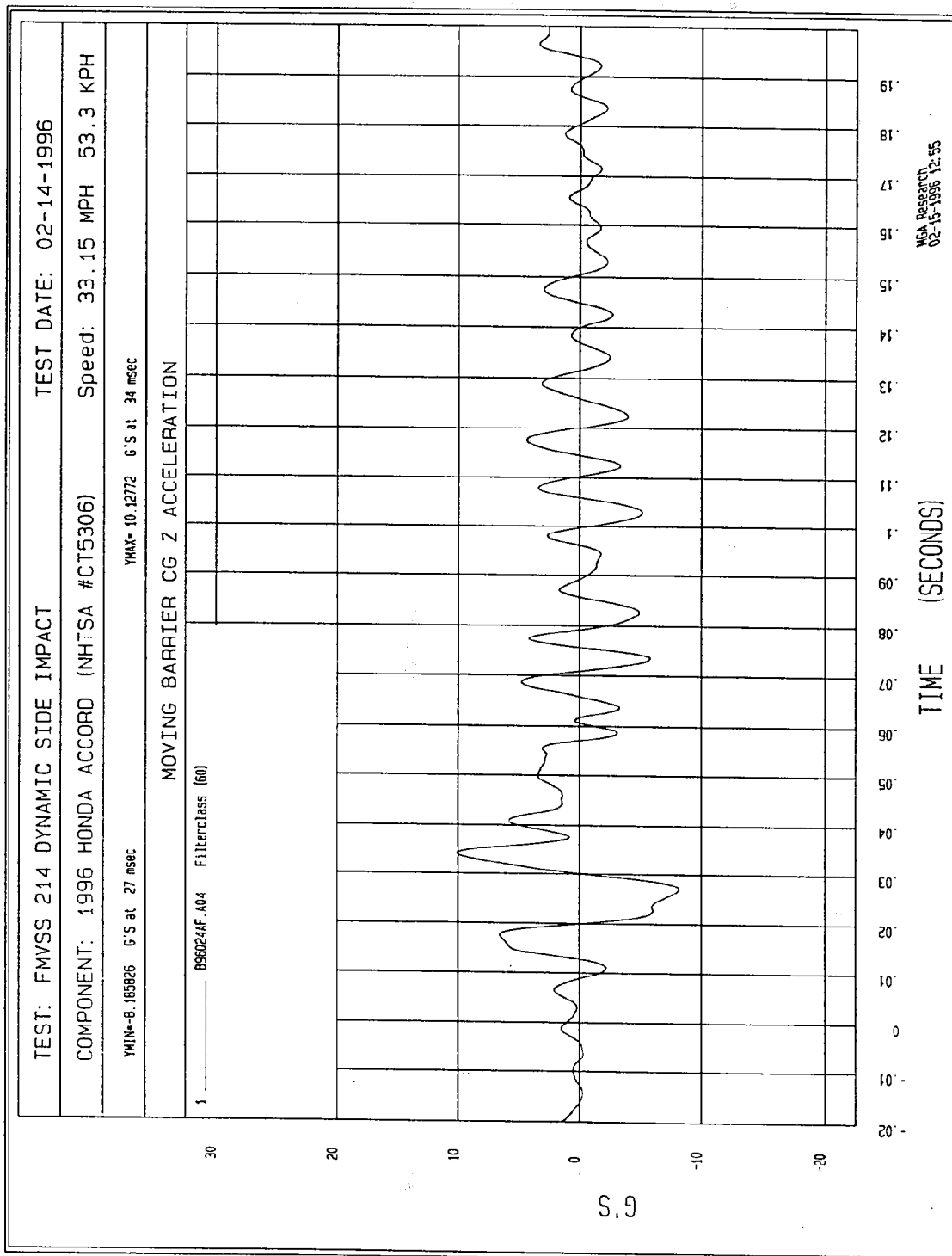


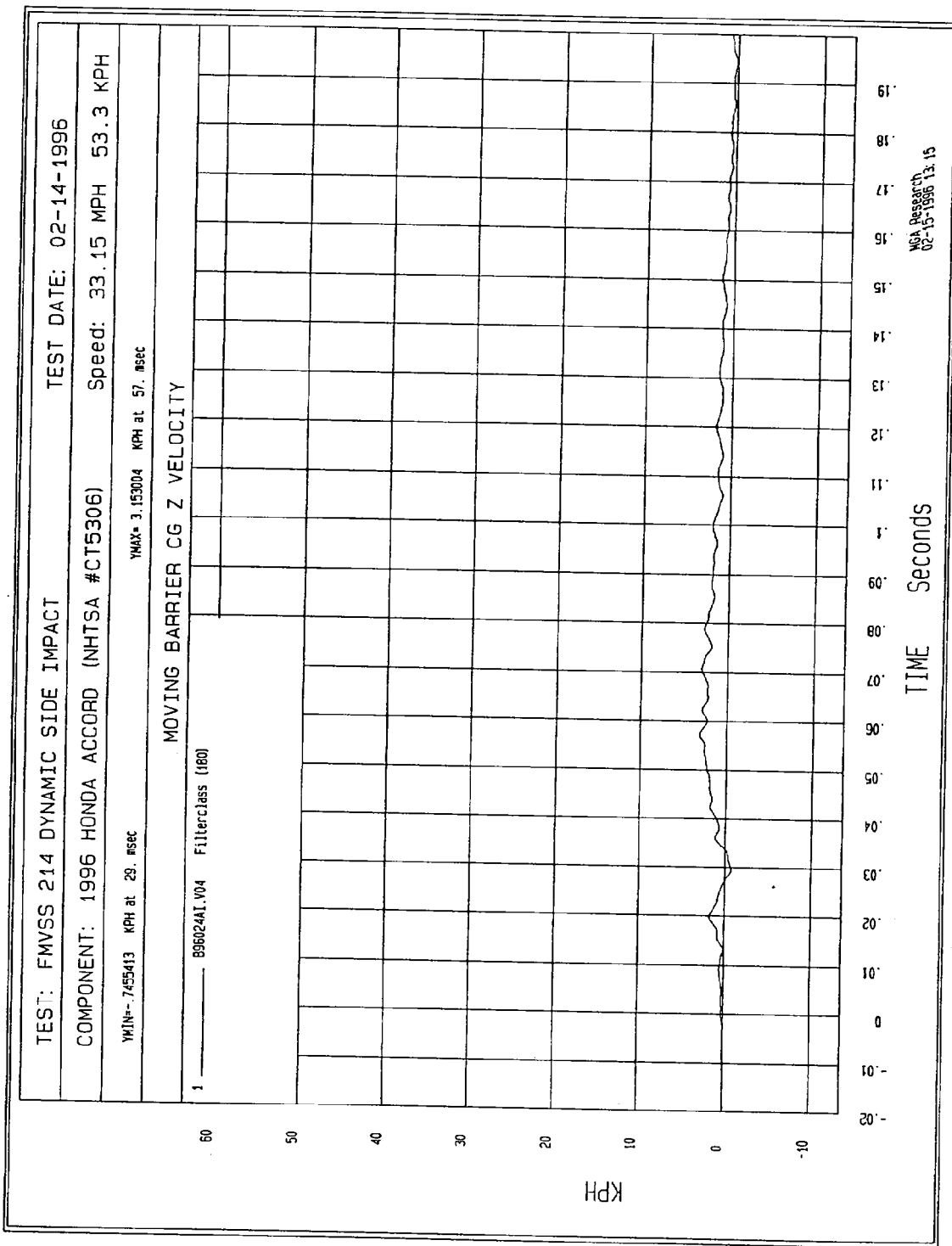


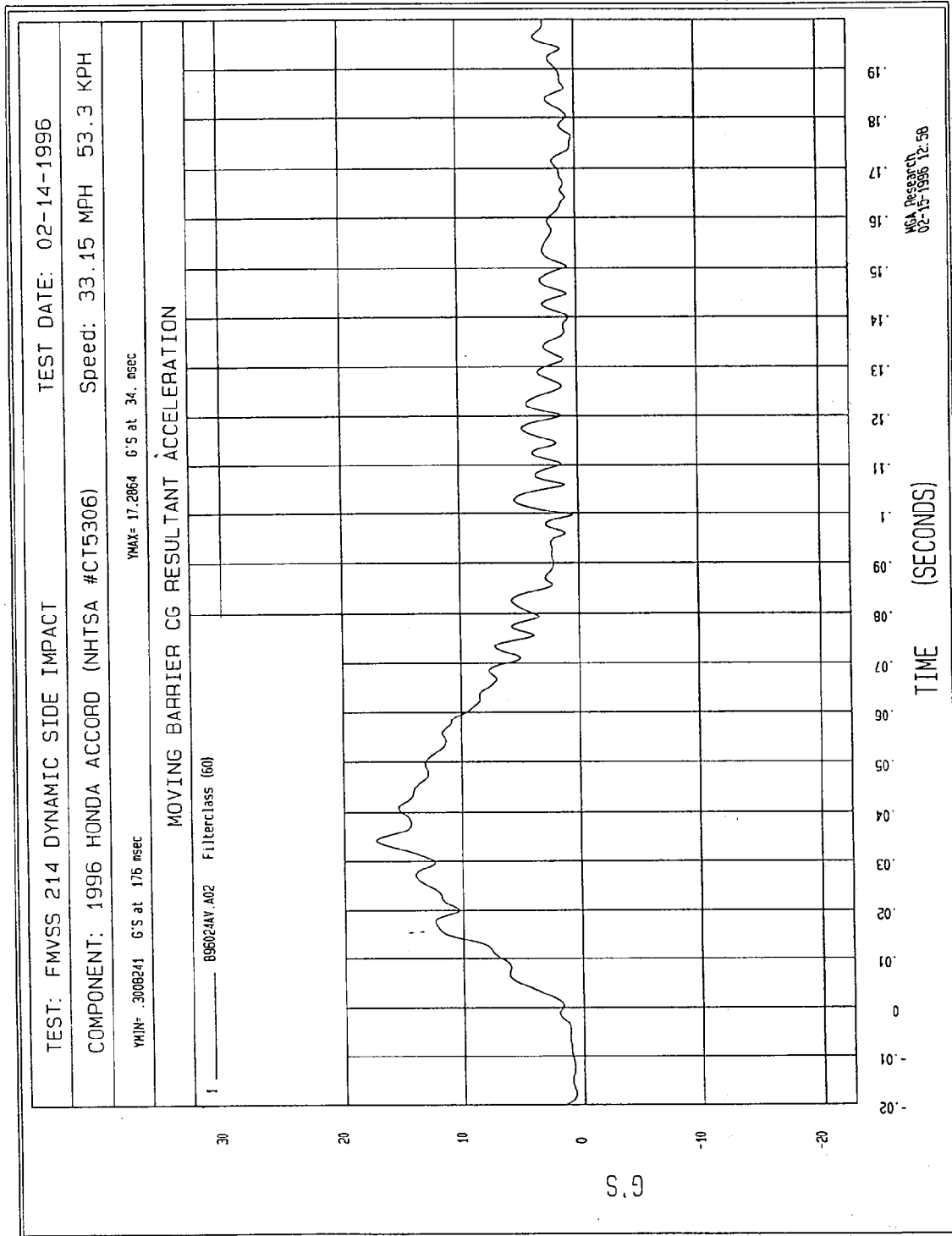


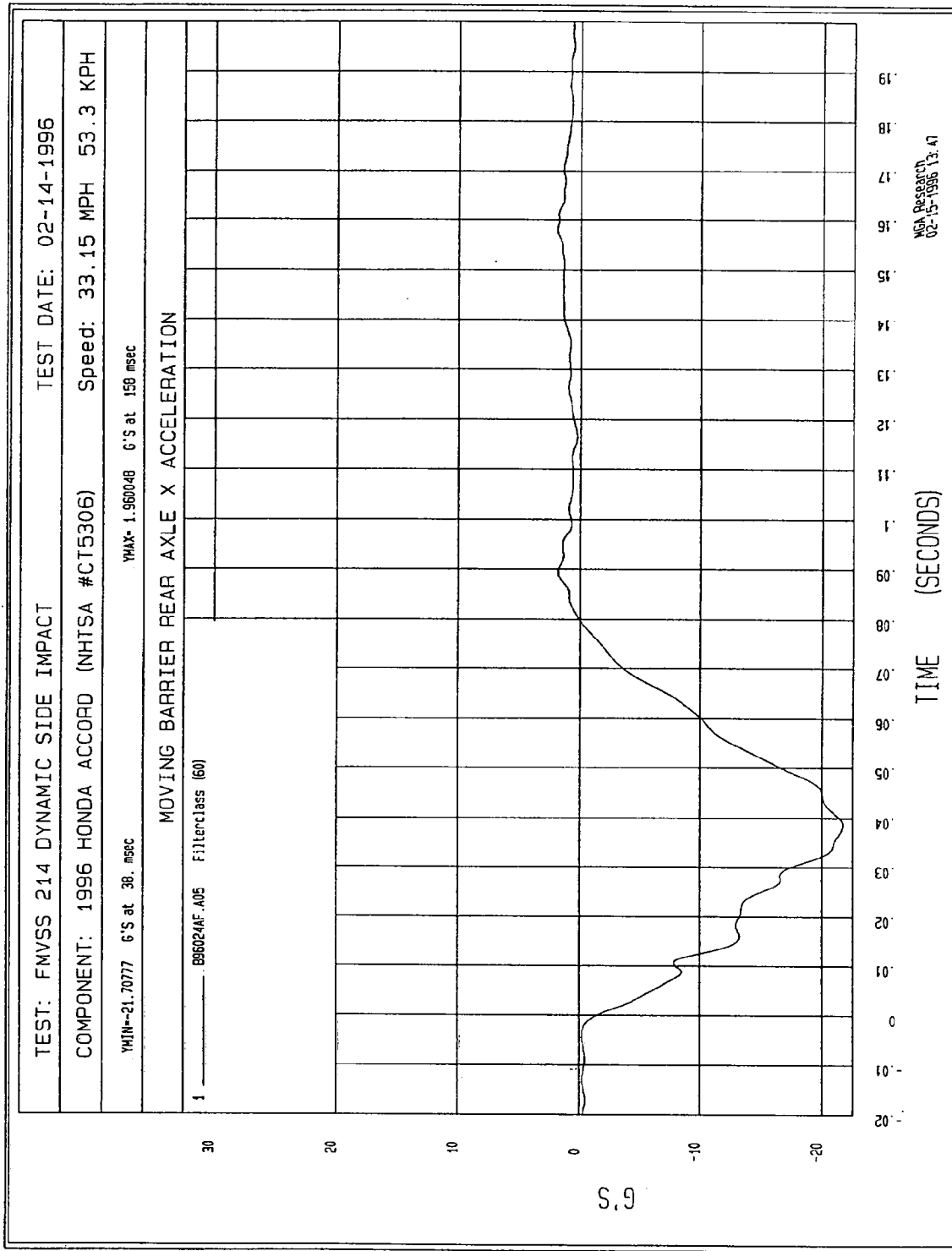


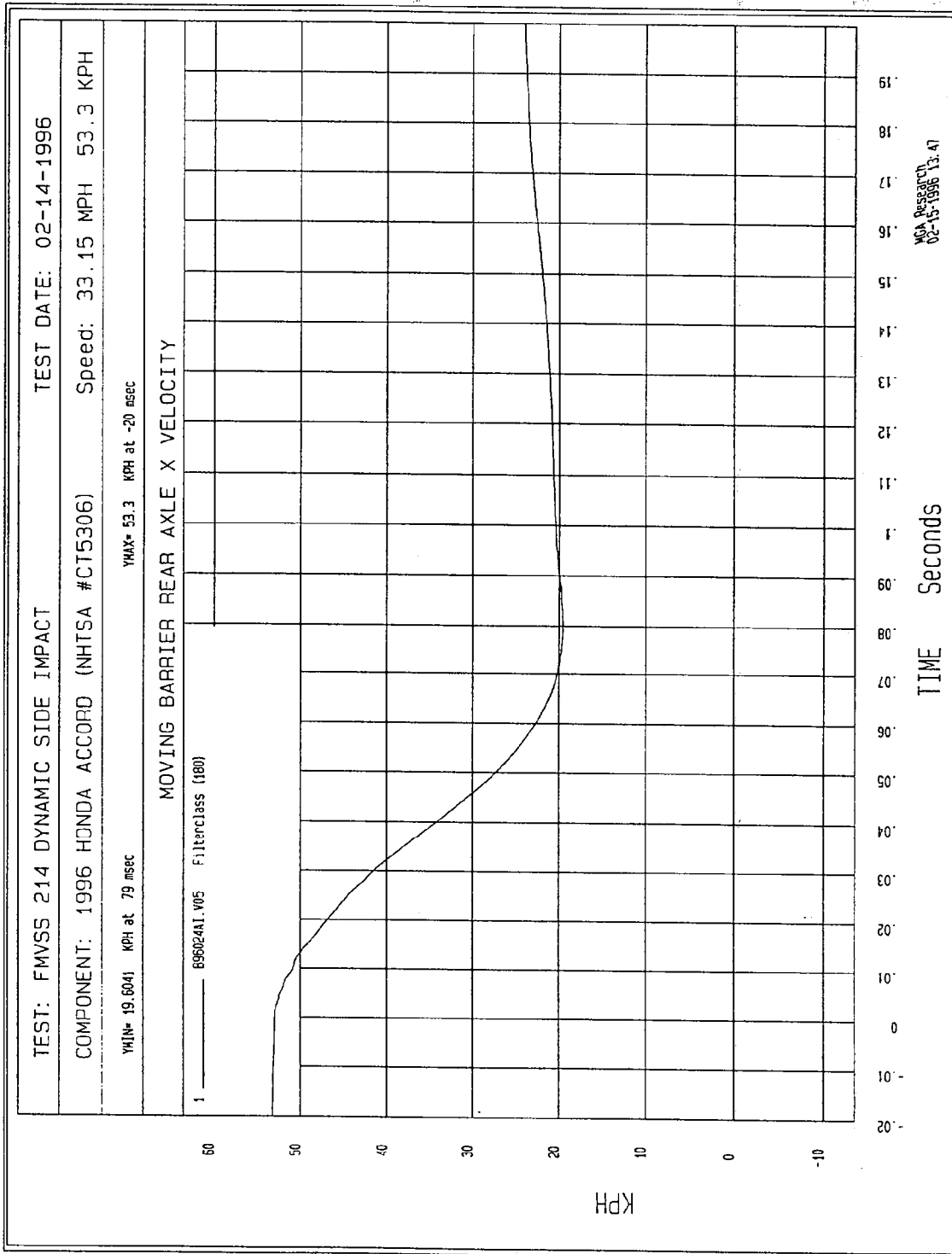


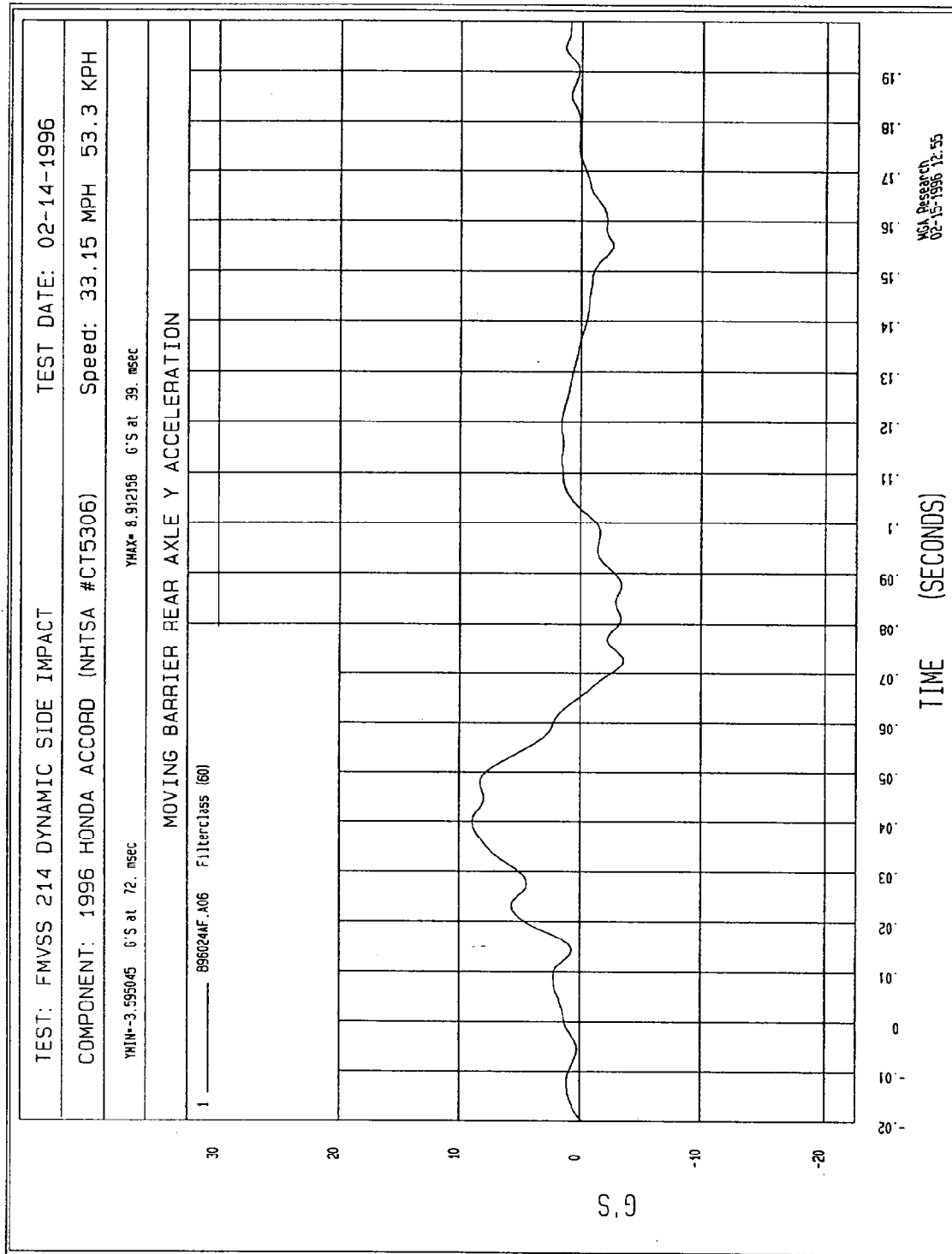


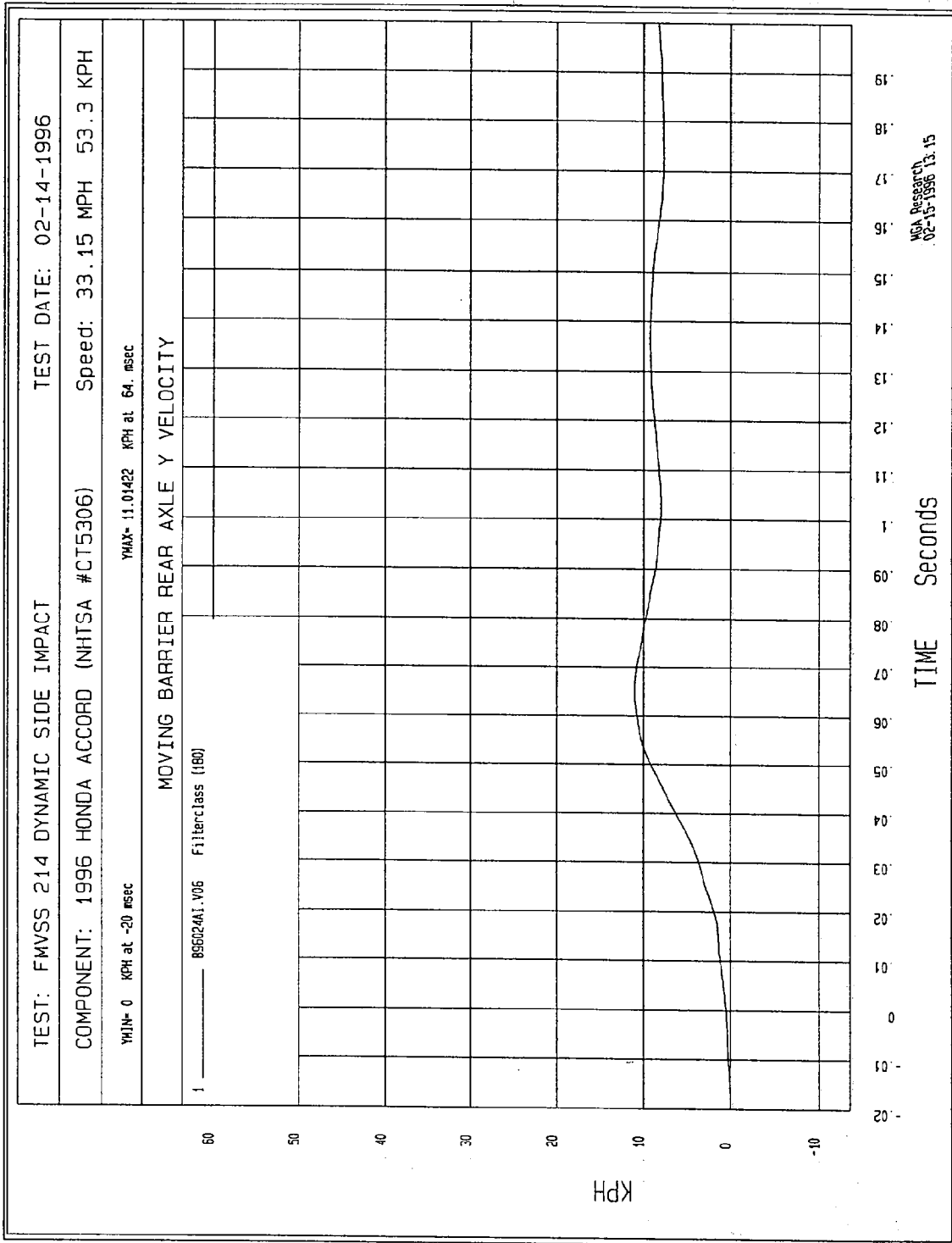


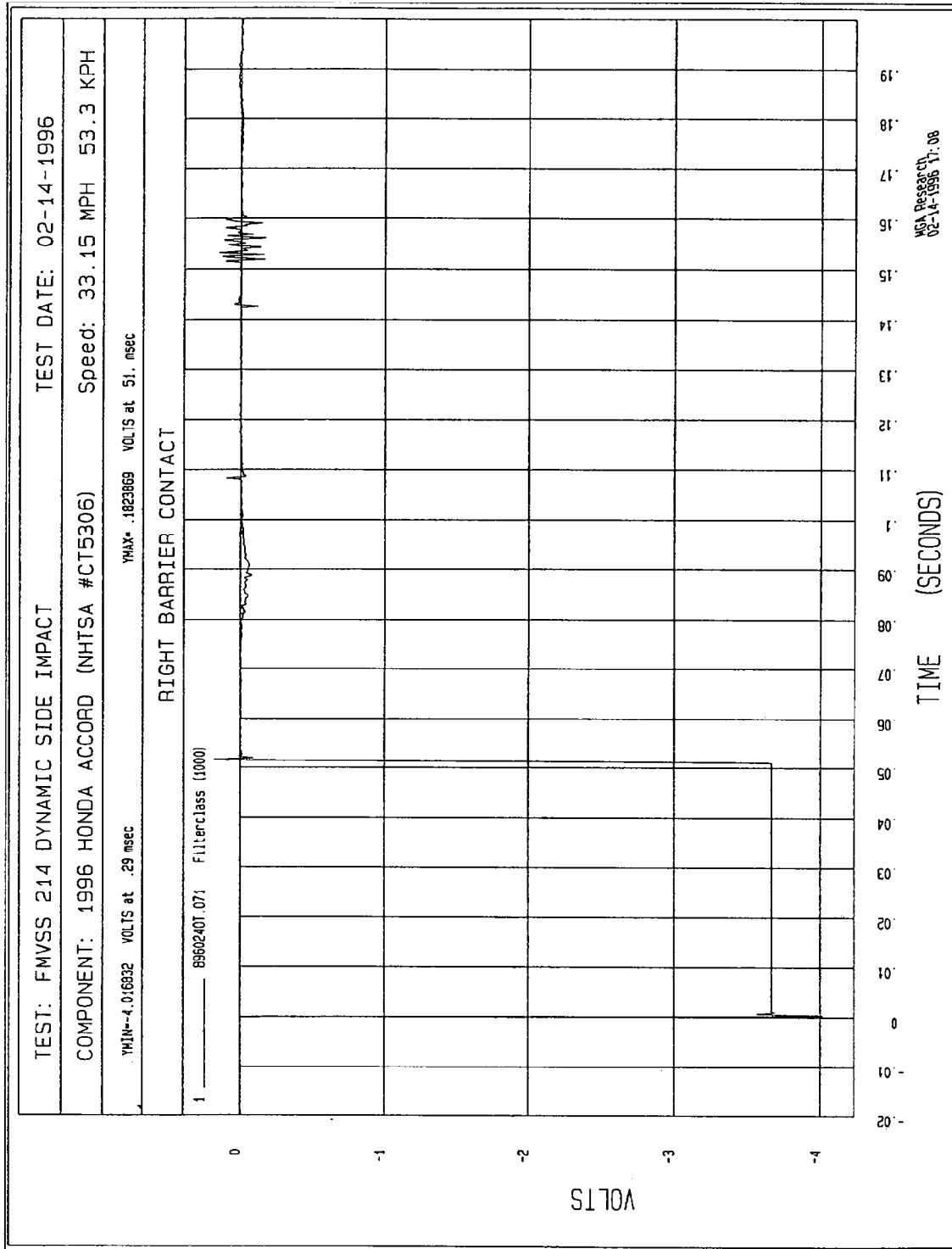


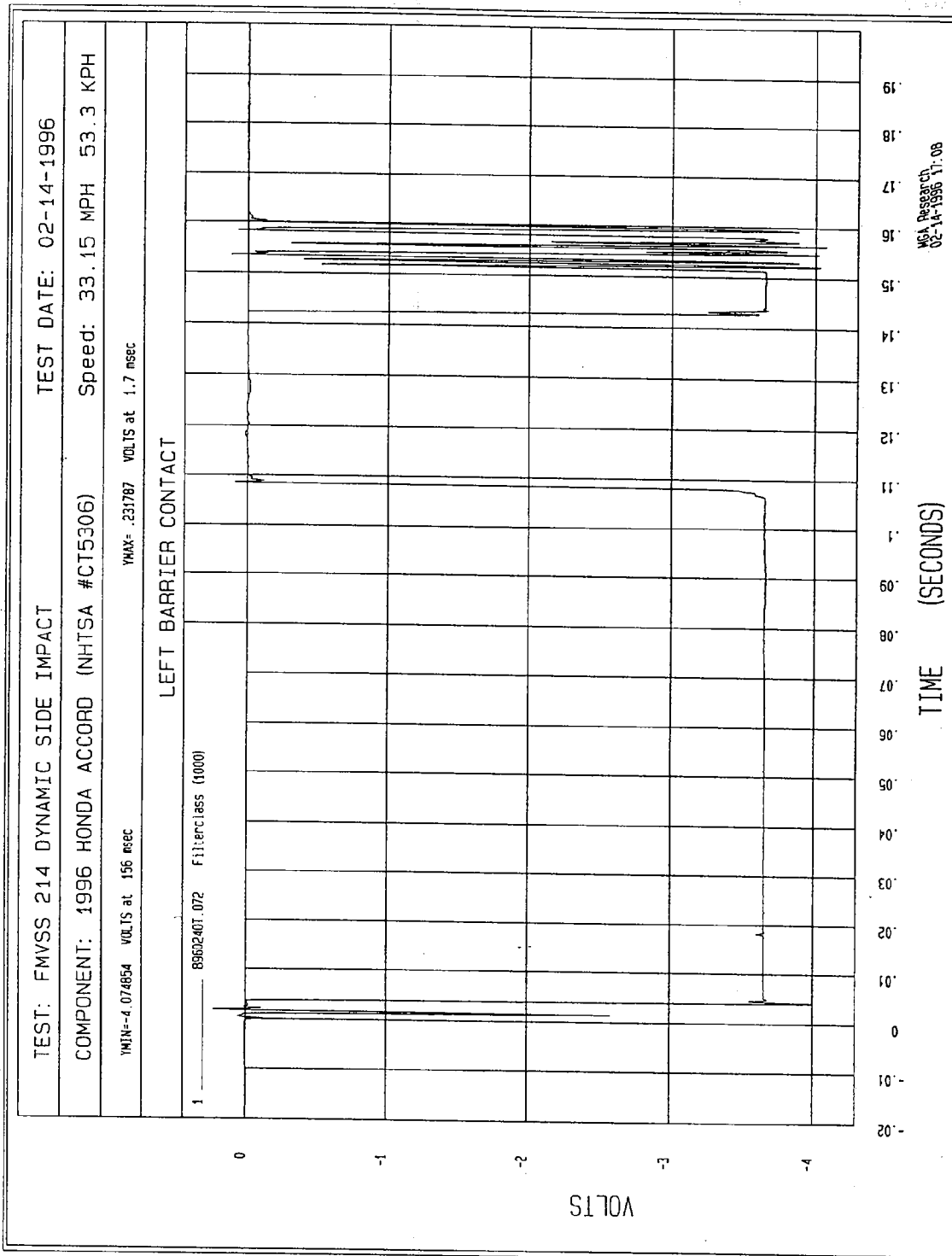


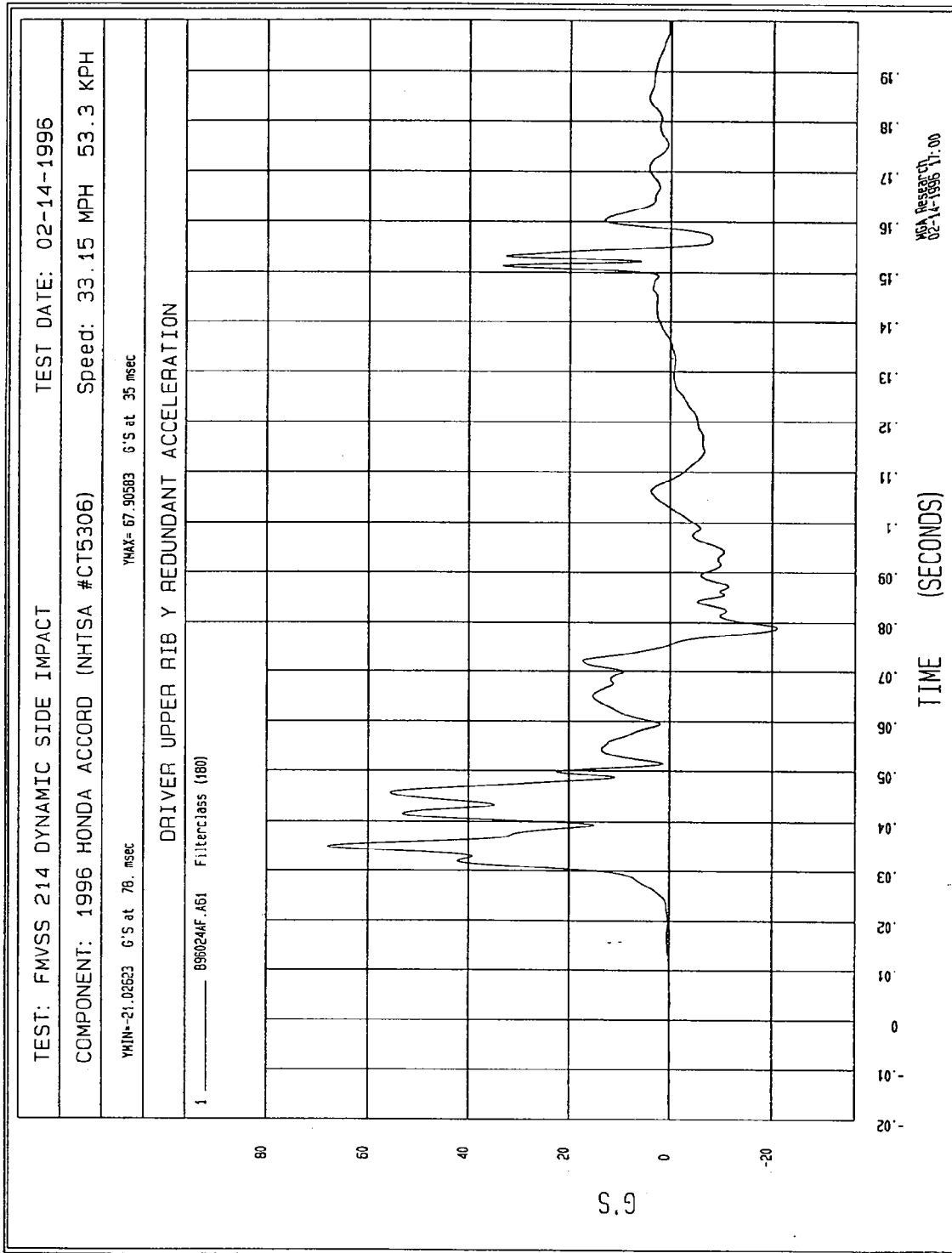


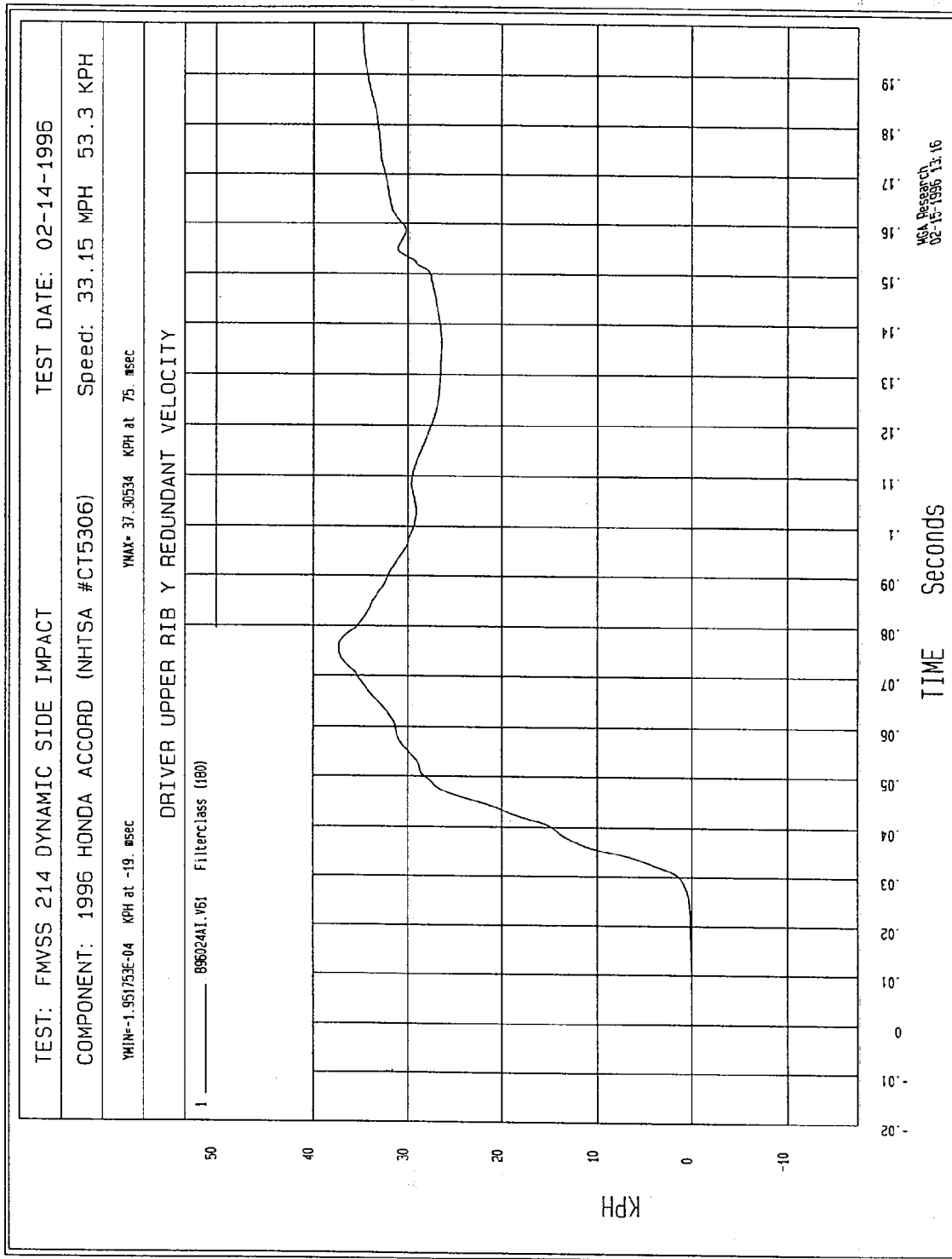


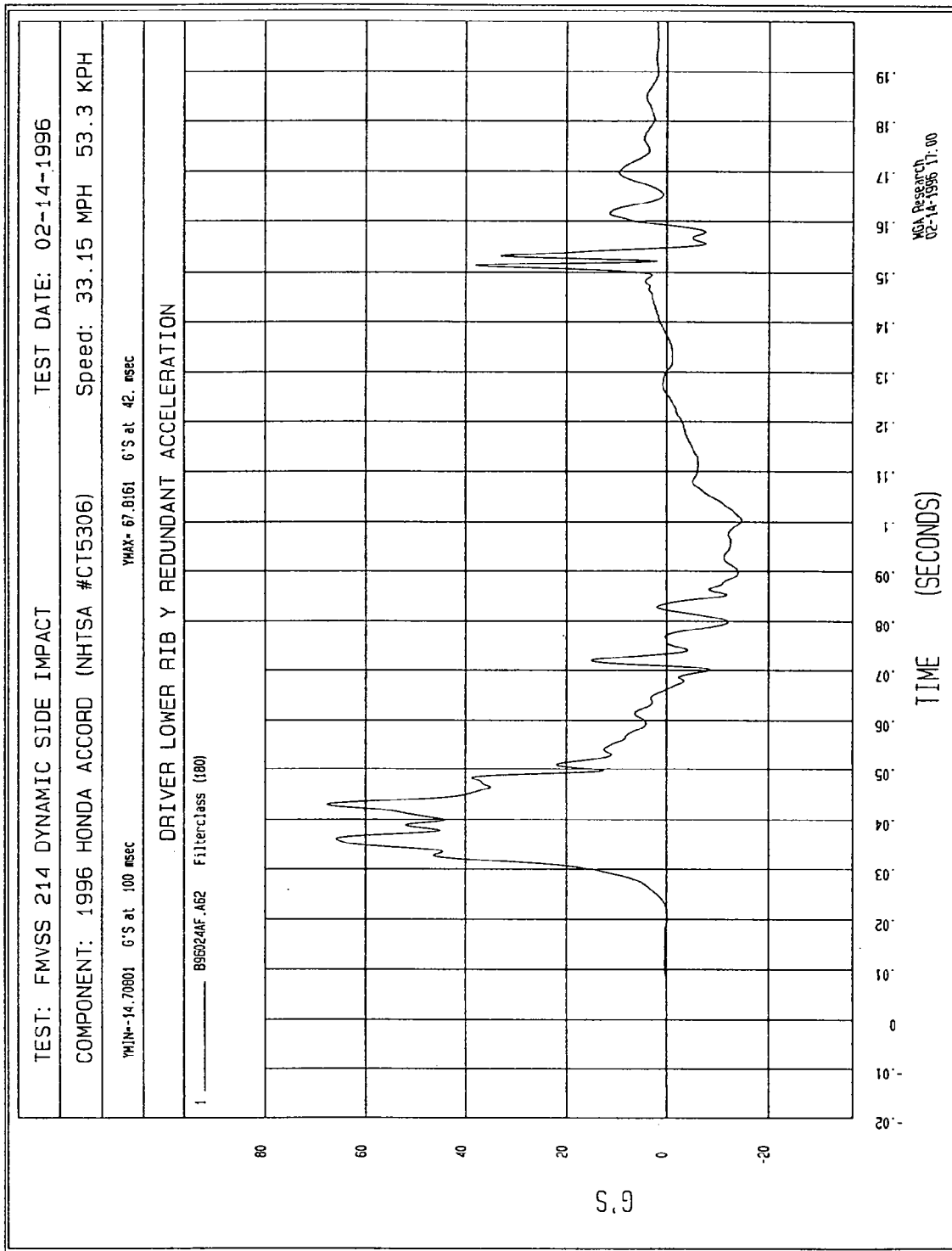


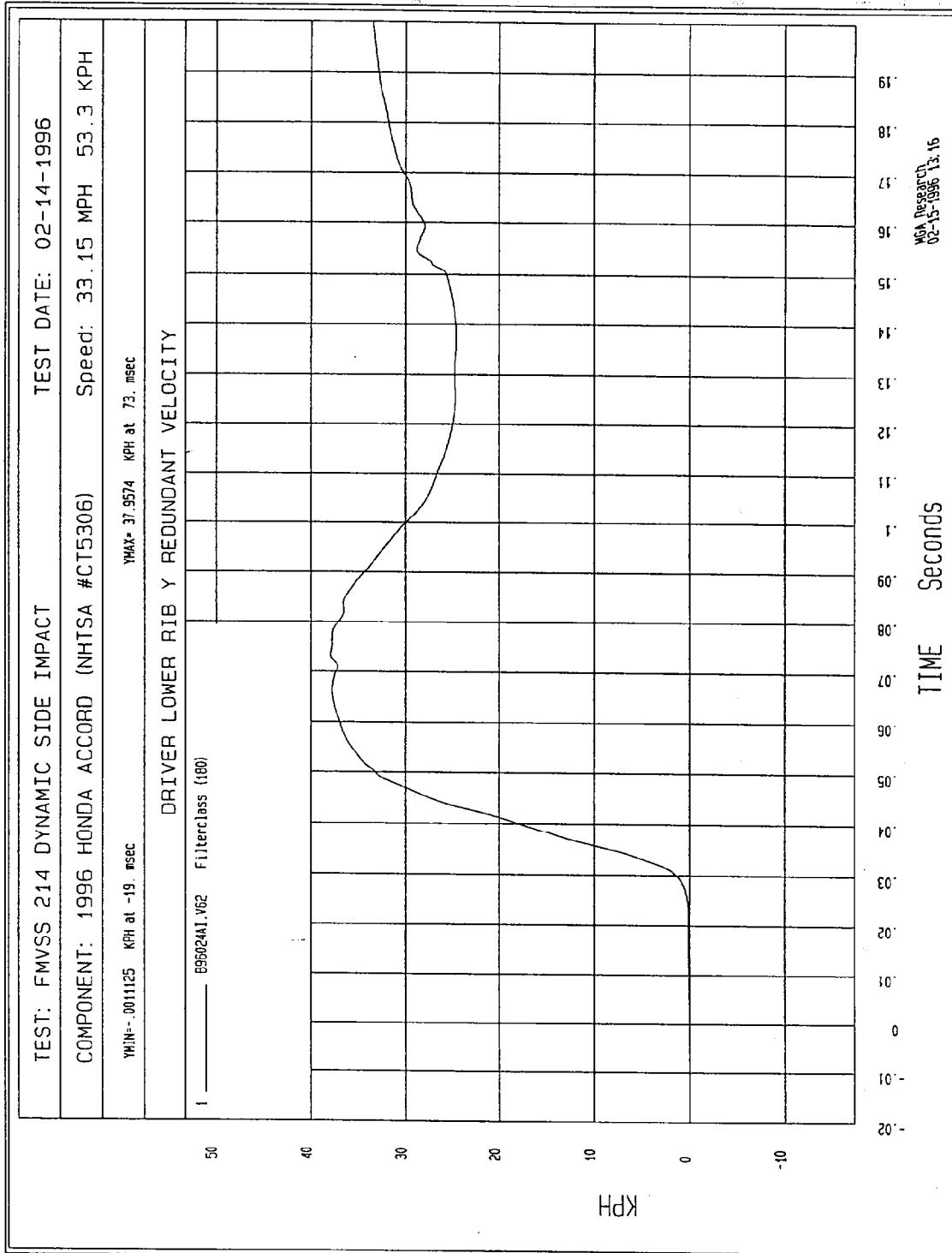


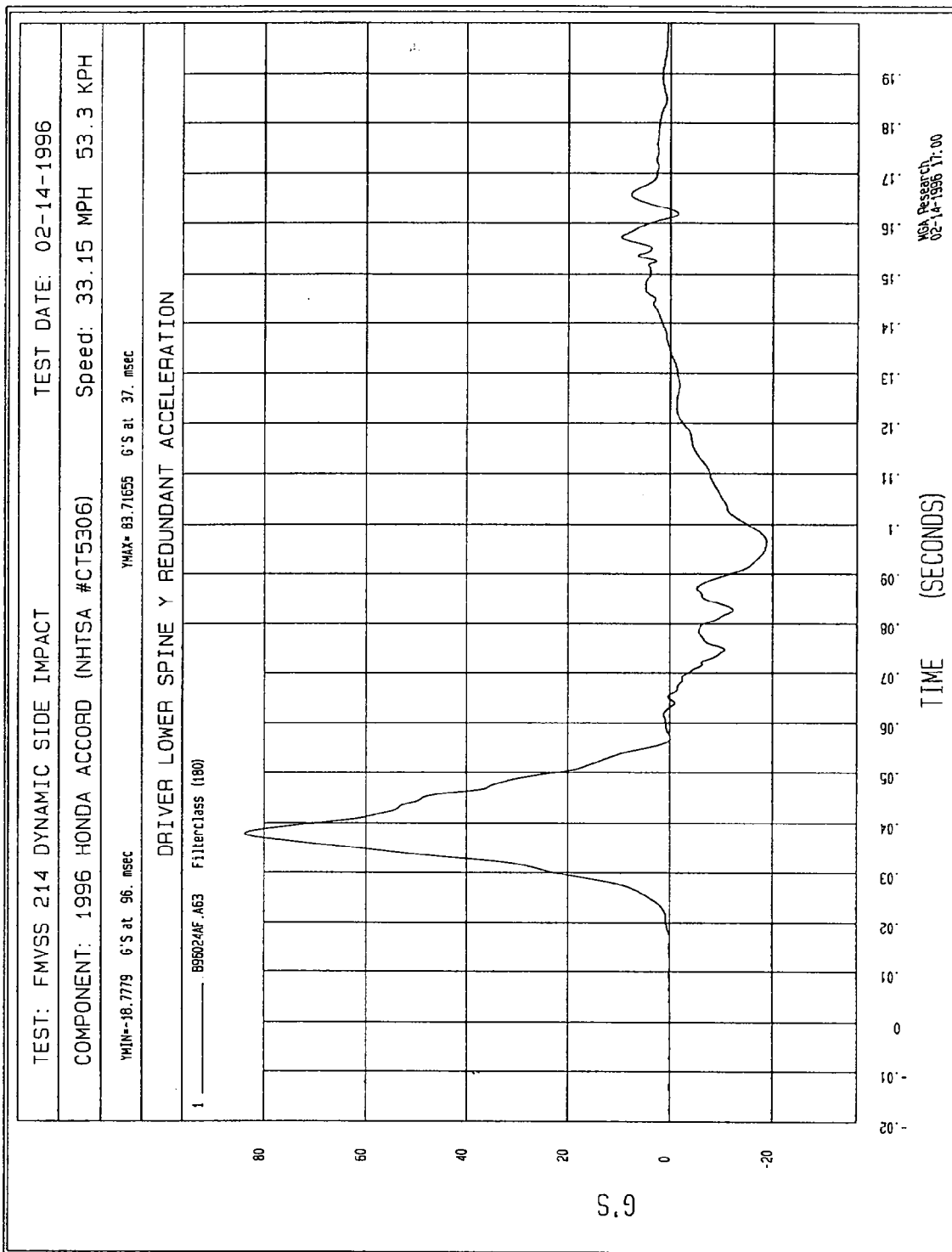


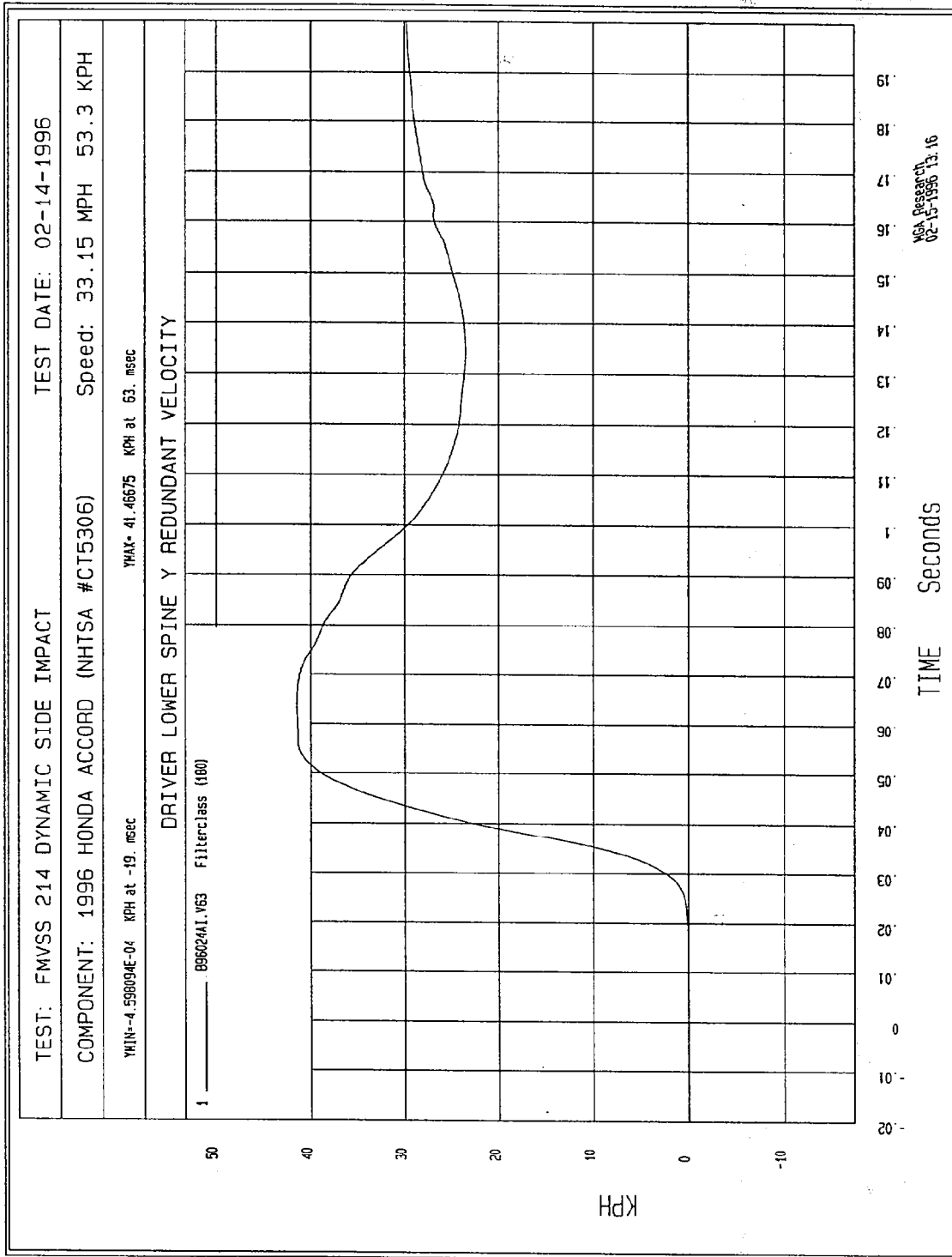


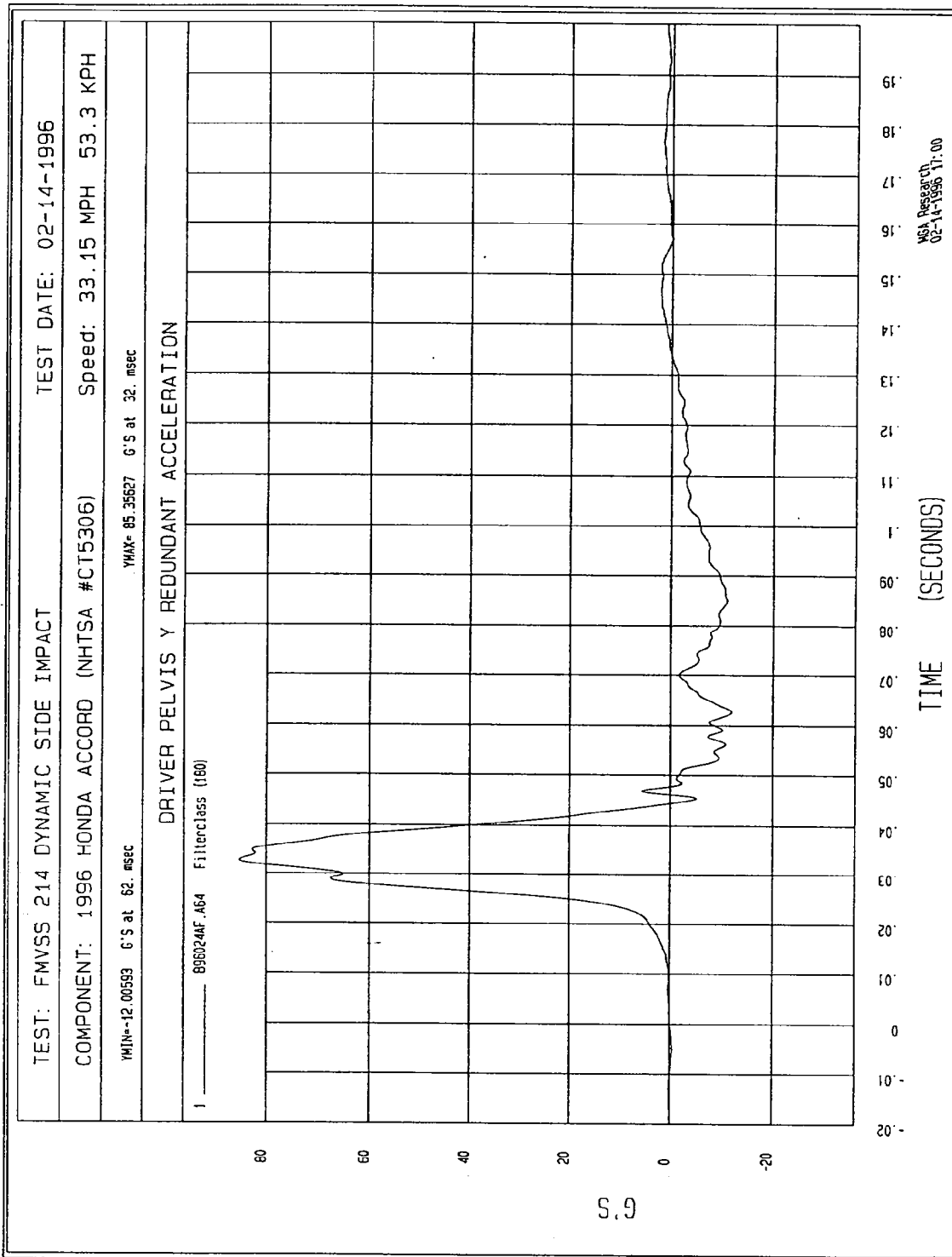


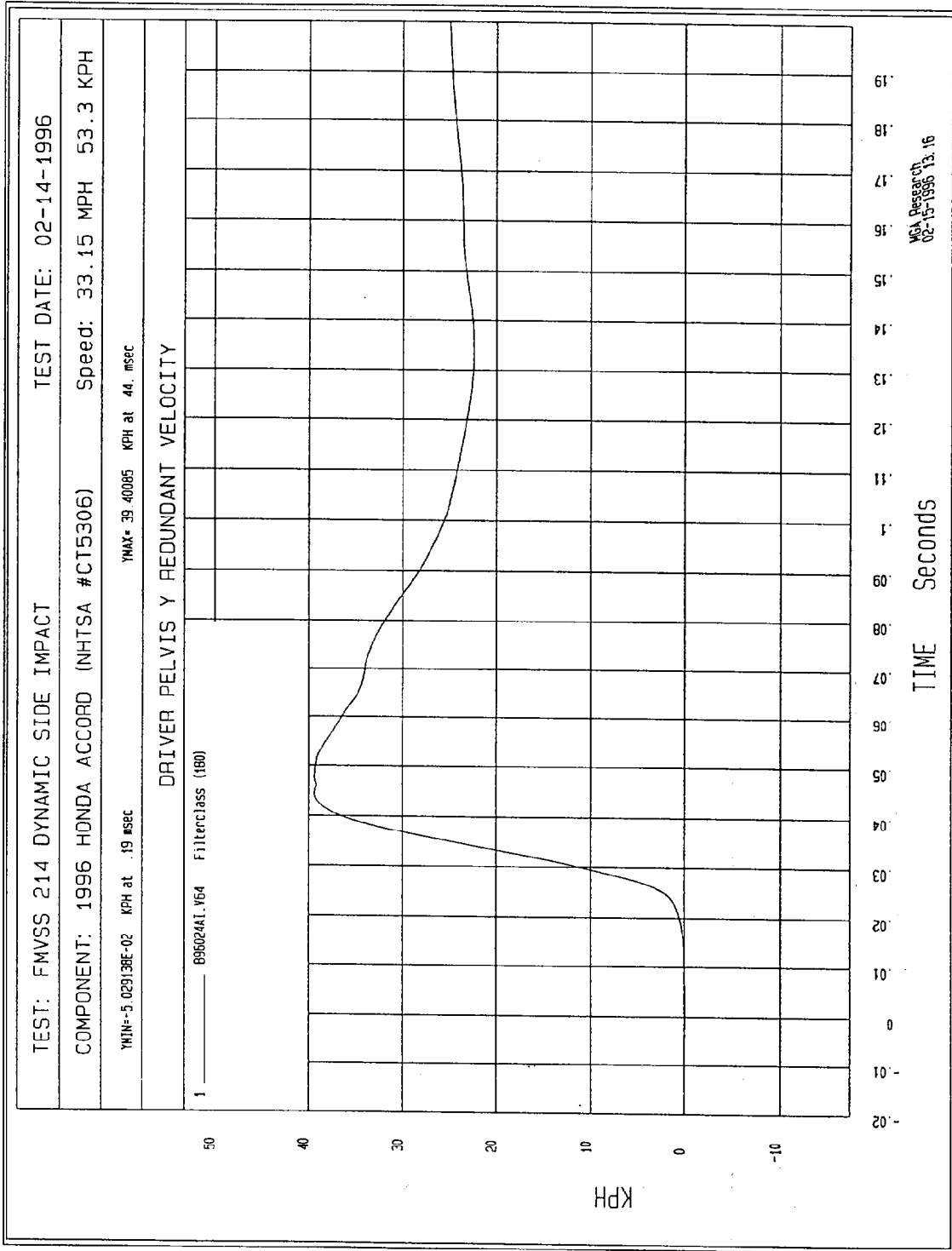


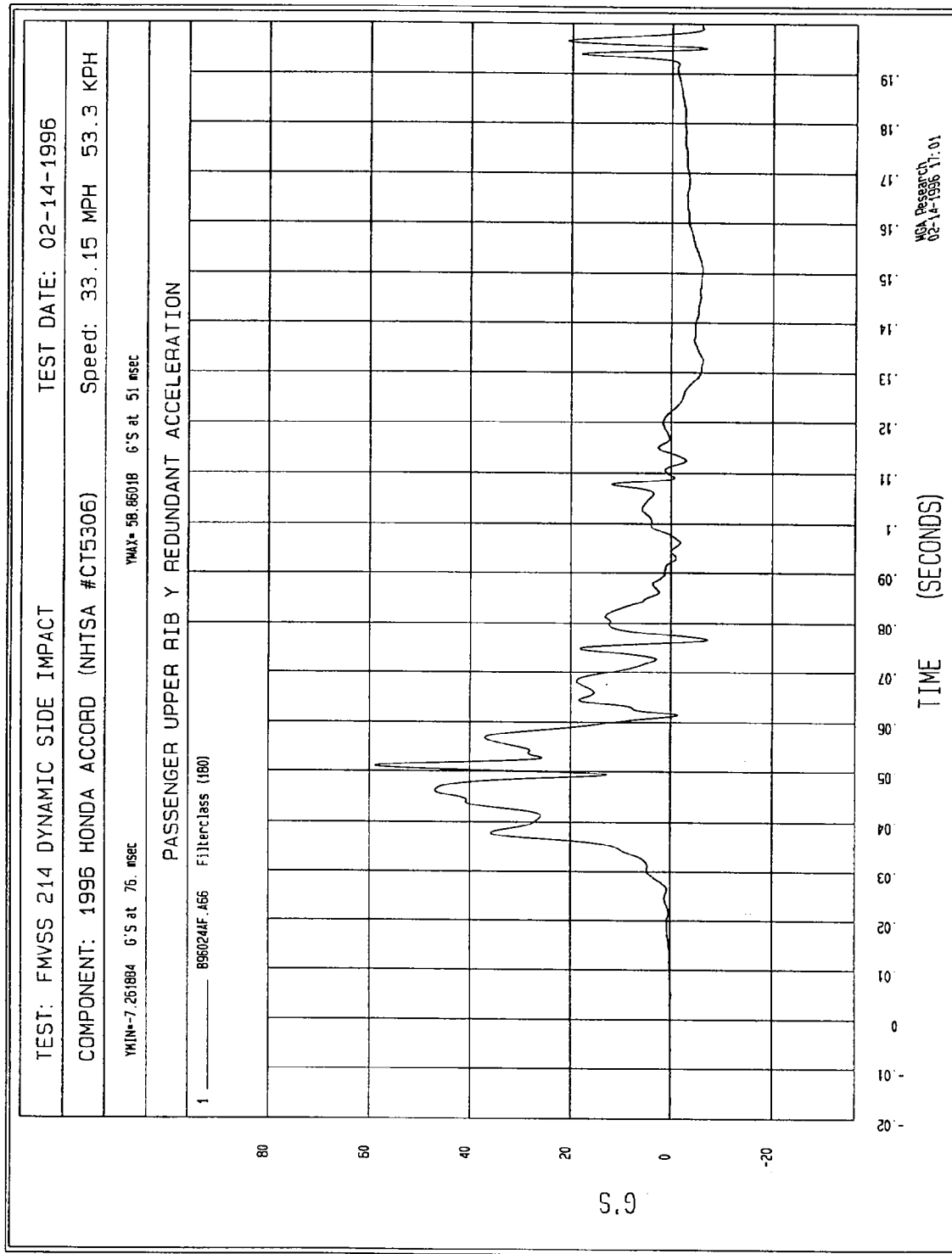


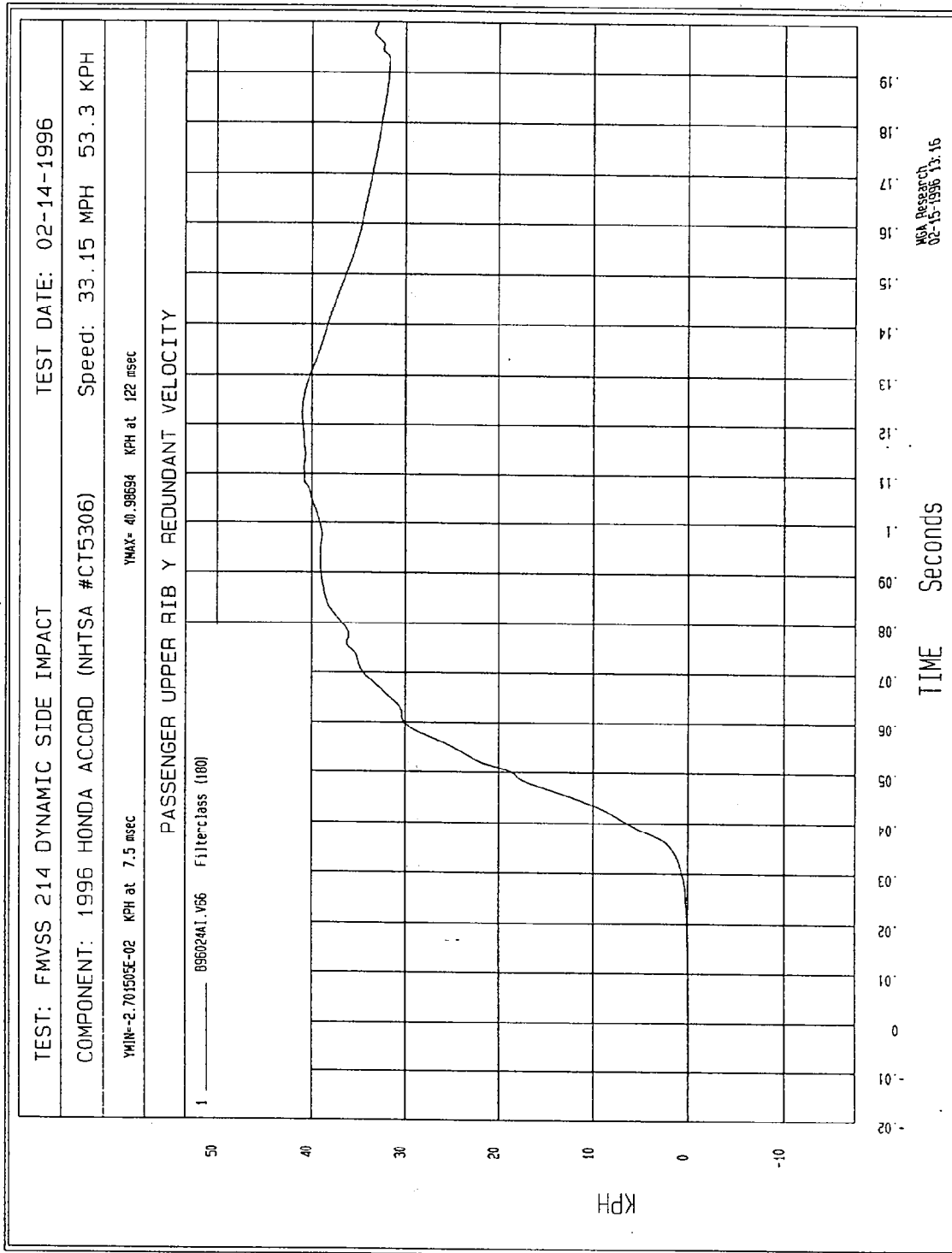


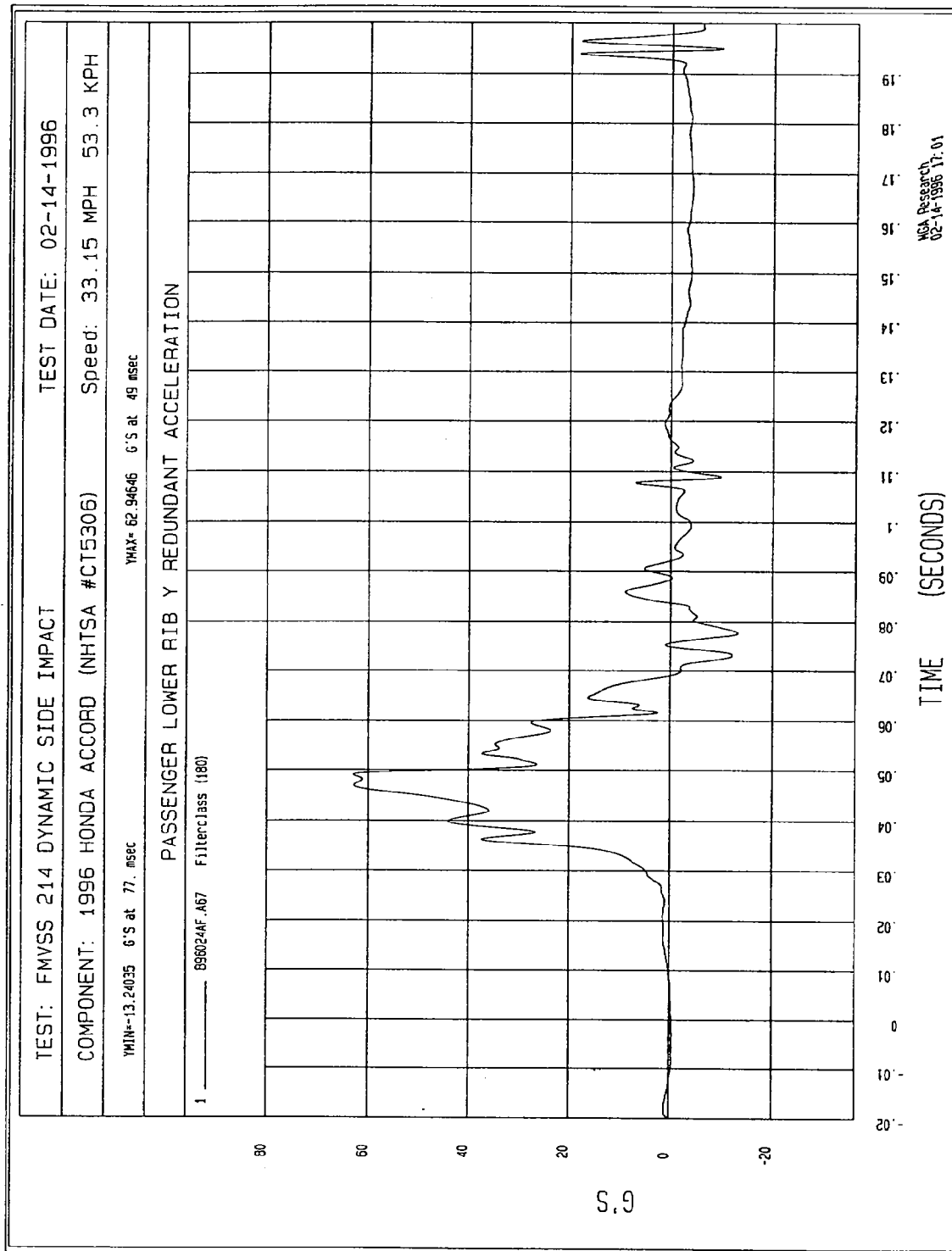


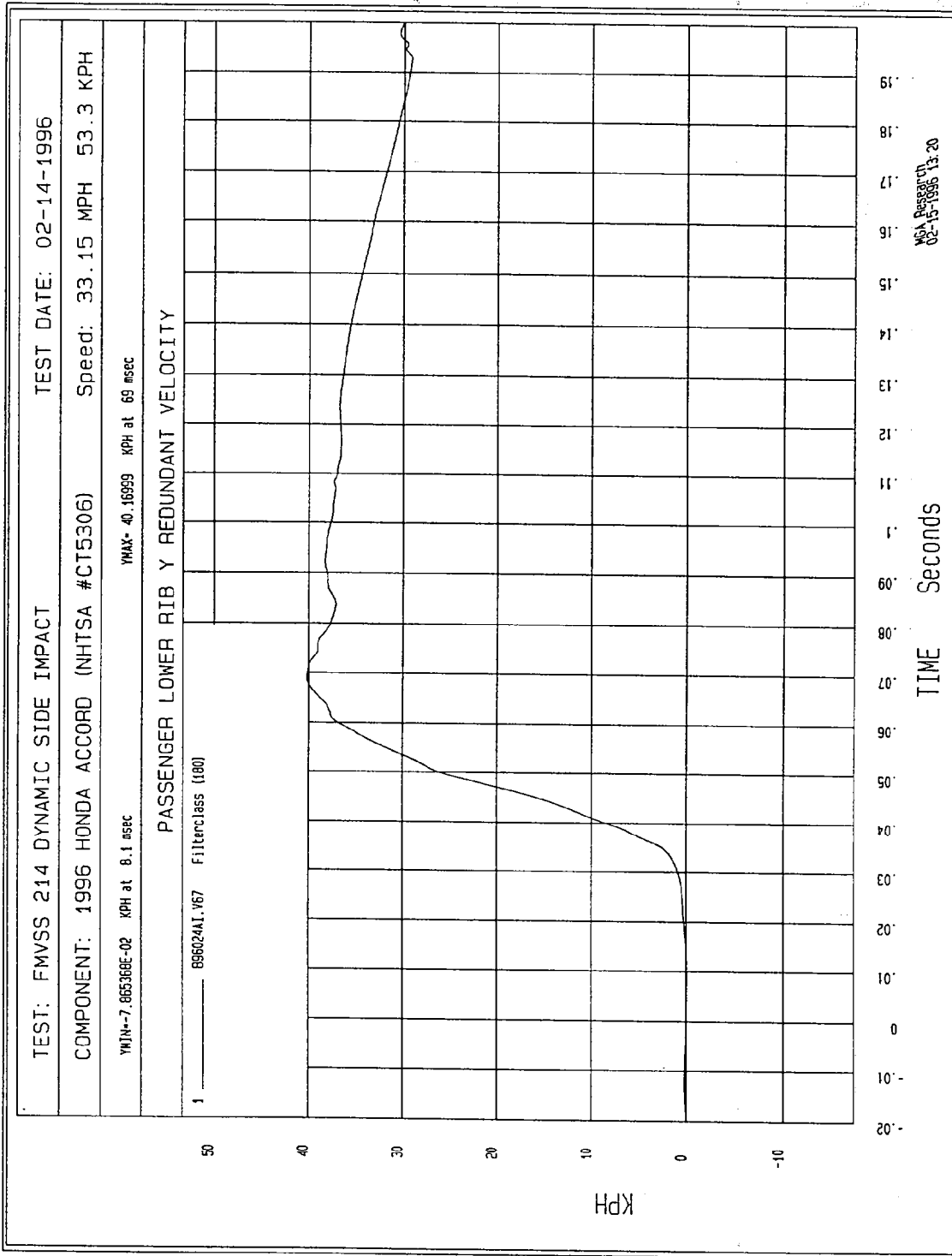


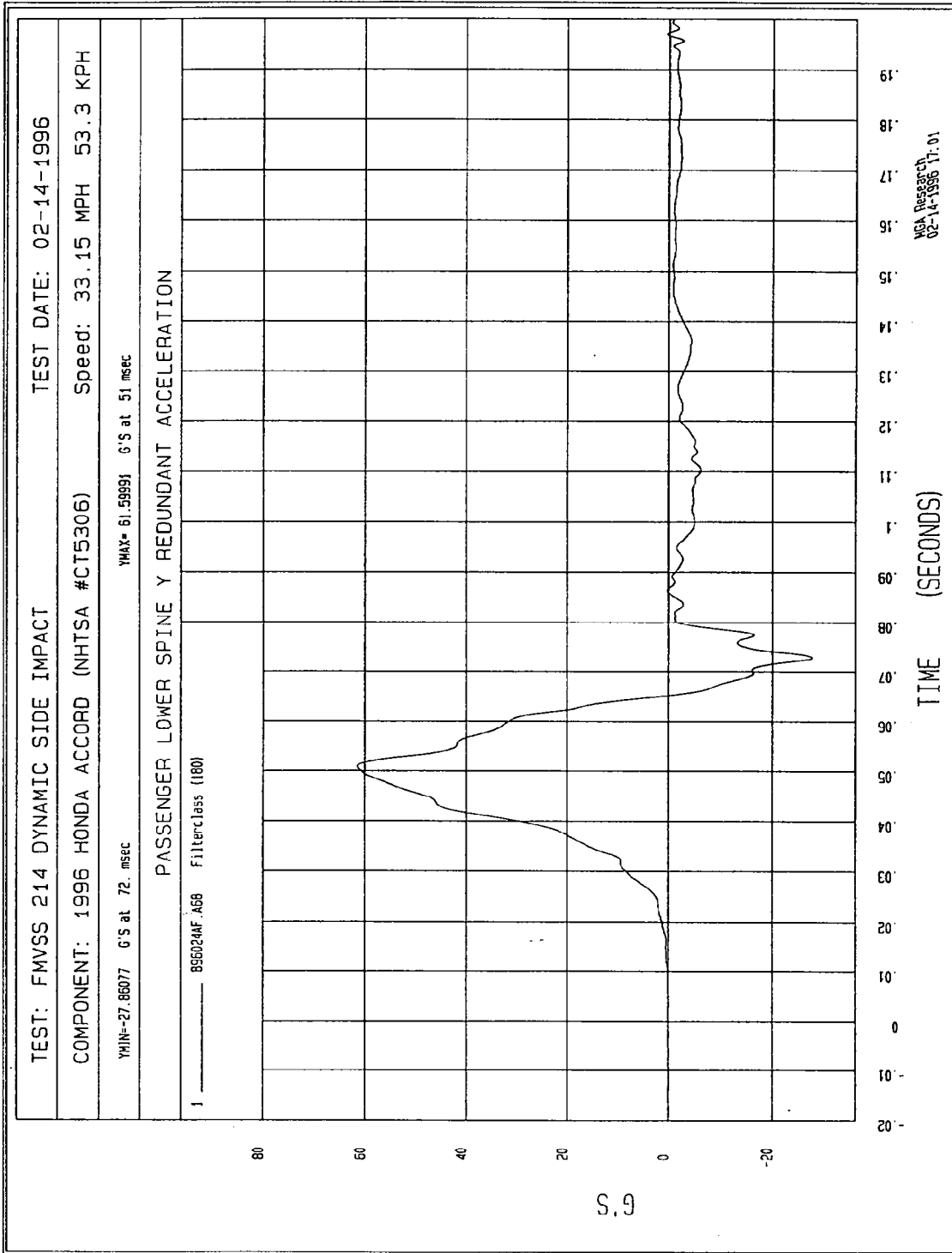


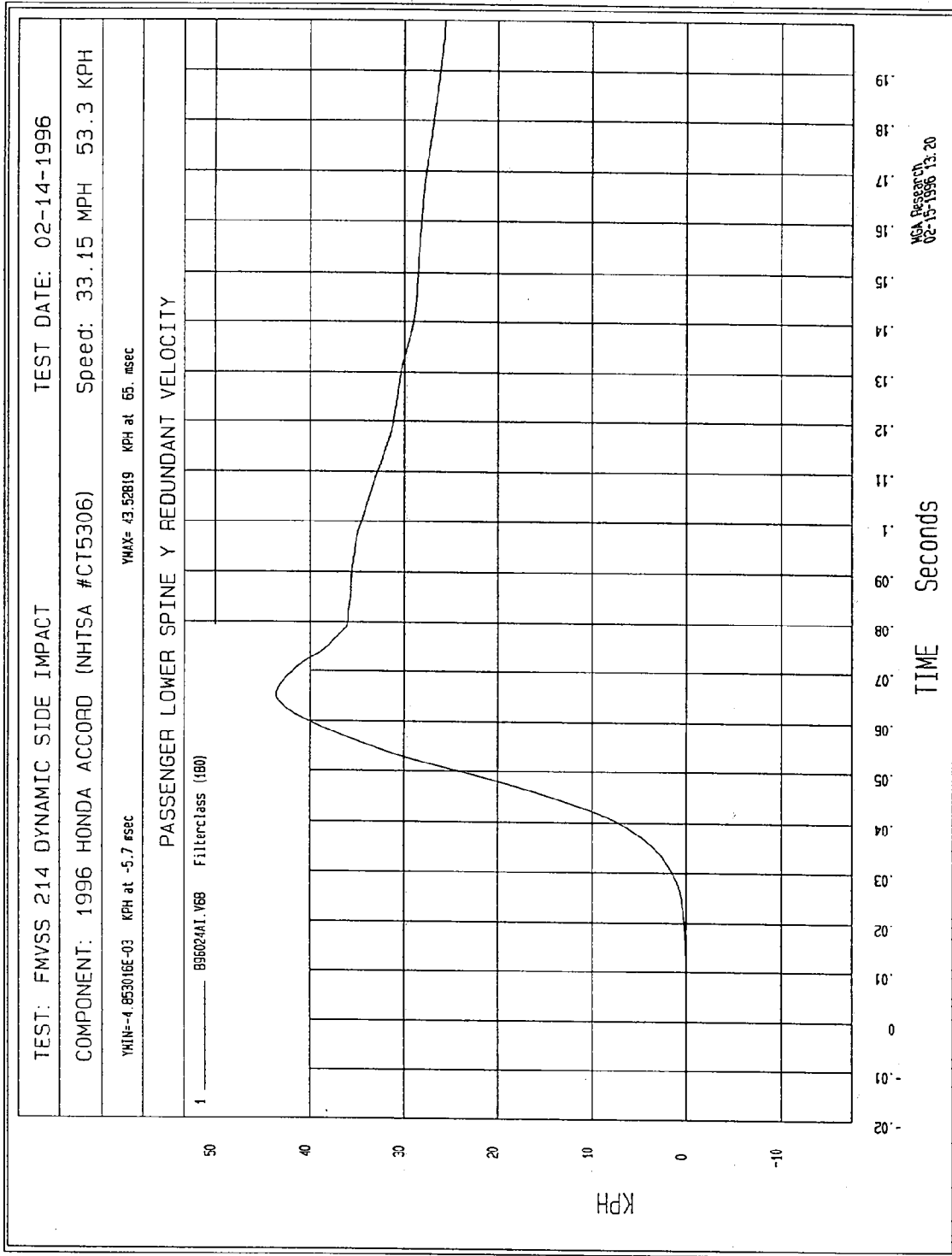


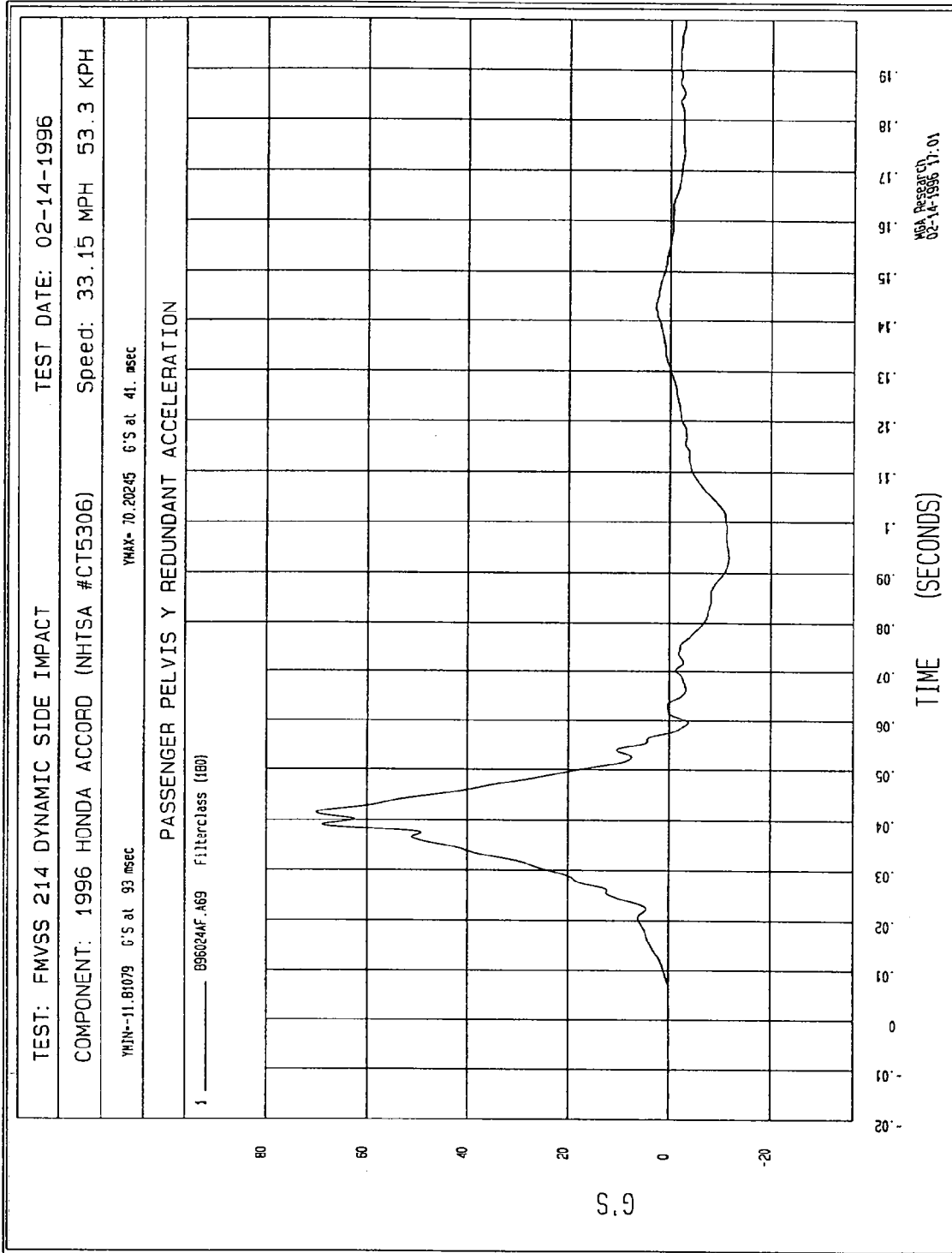


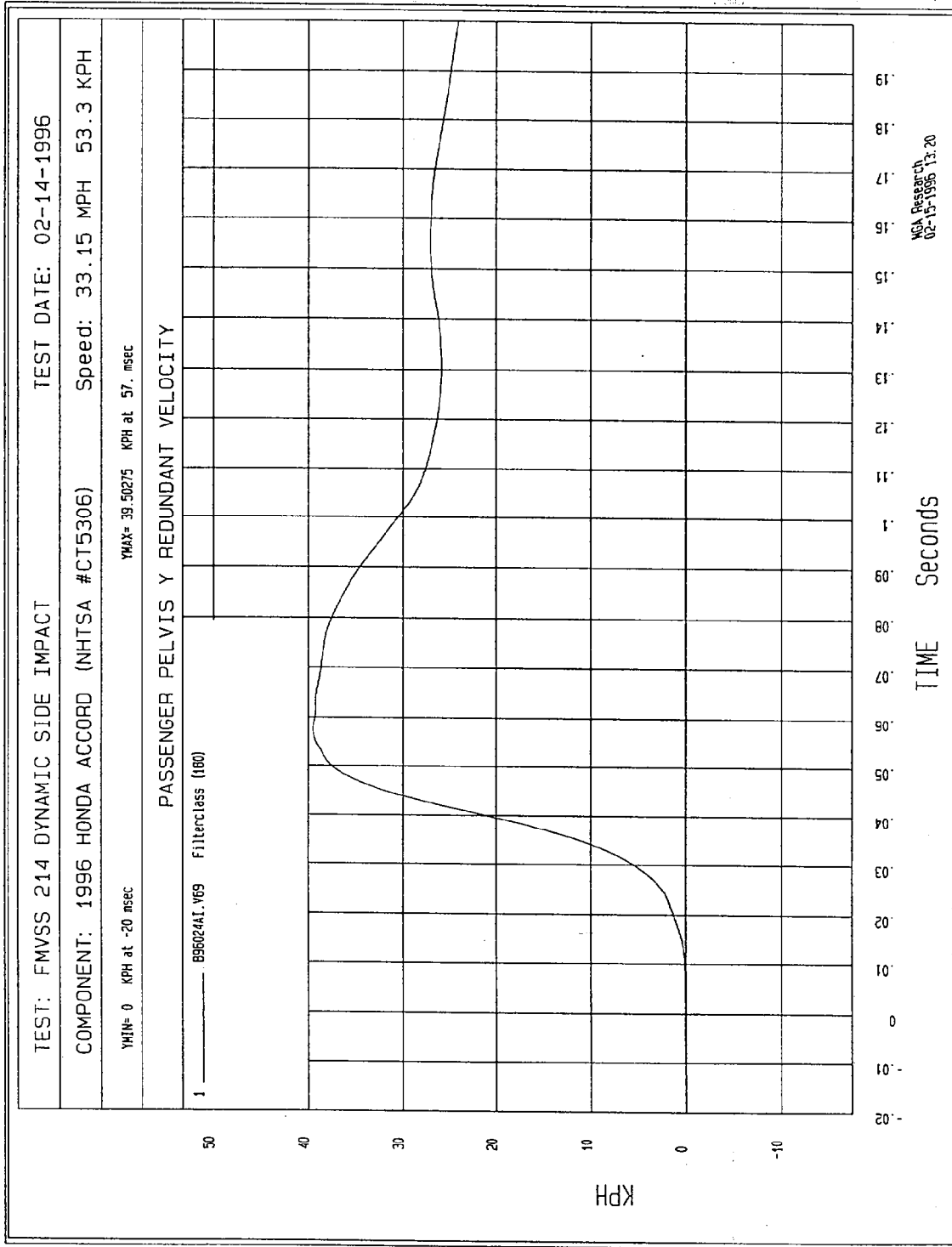












FINITE IMPULSE RESPONSE (FIR) FILTERED DATA

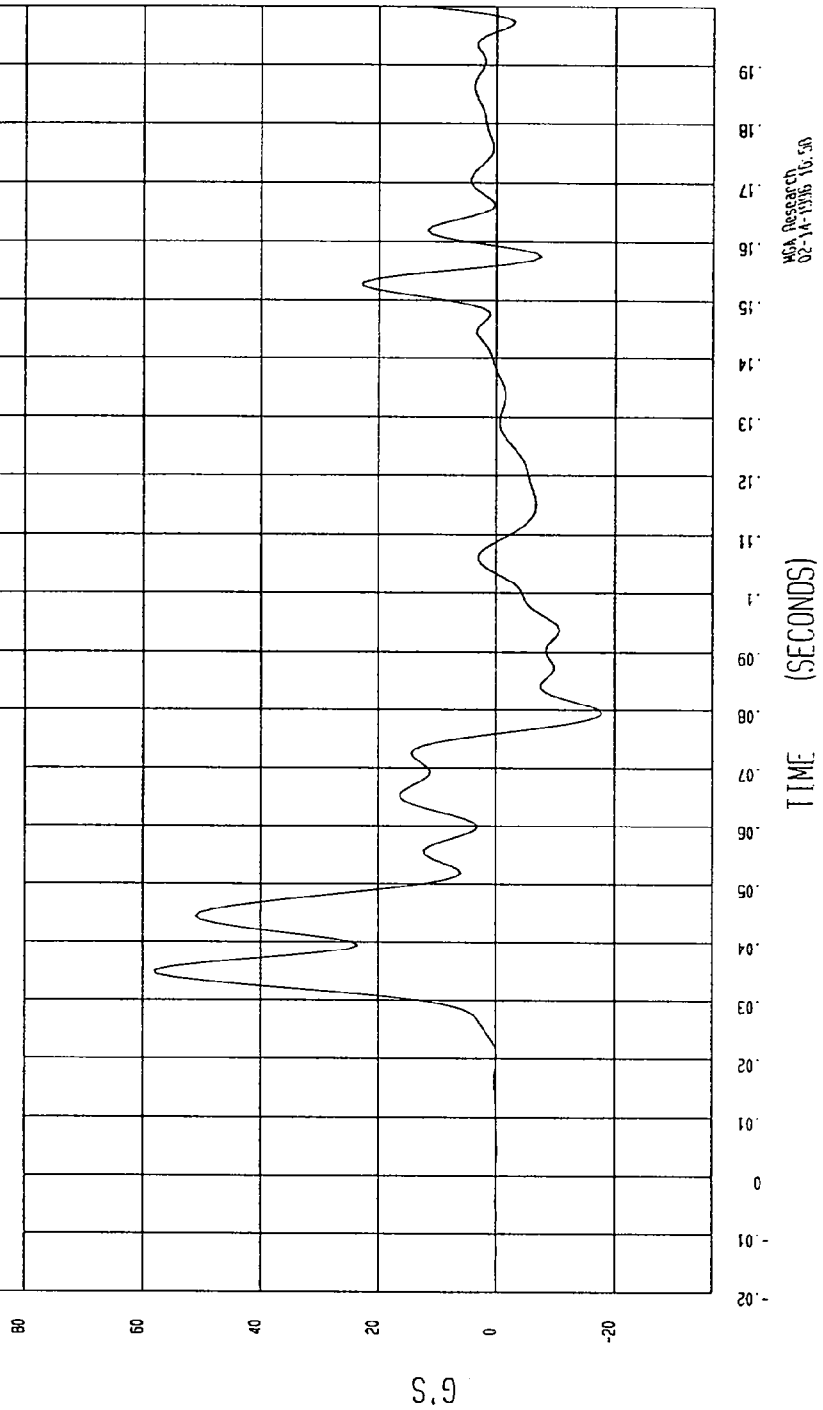
TEST: FMVSS 214 DYNAMIC SIDE IMPACT

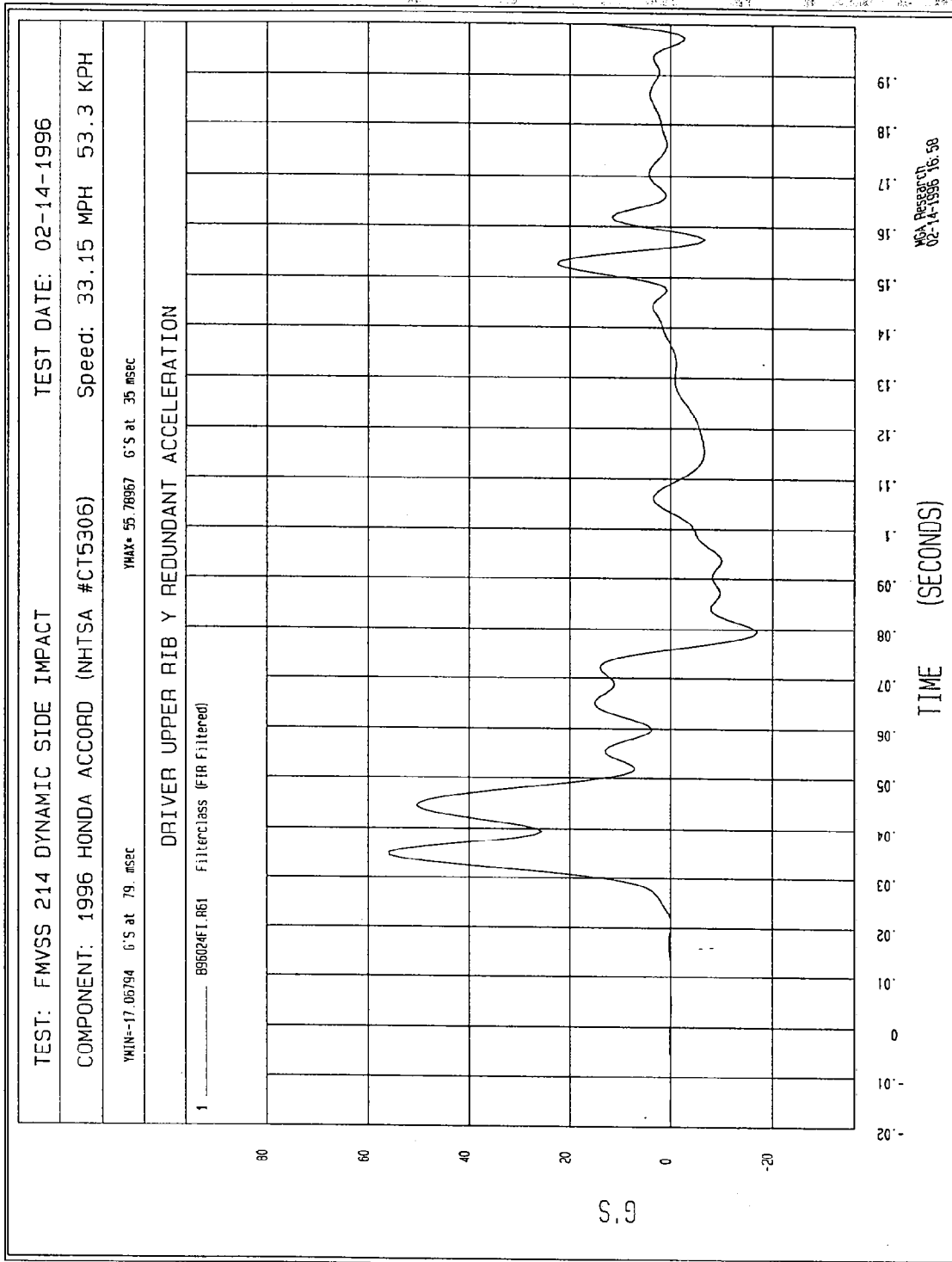
COMPONENT: 1996 HONDA ACCORD (NHTSA #CT5306) Speed: 33.15 MPH 53.3 KPH

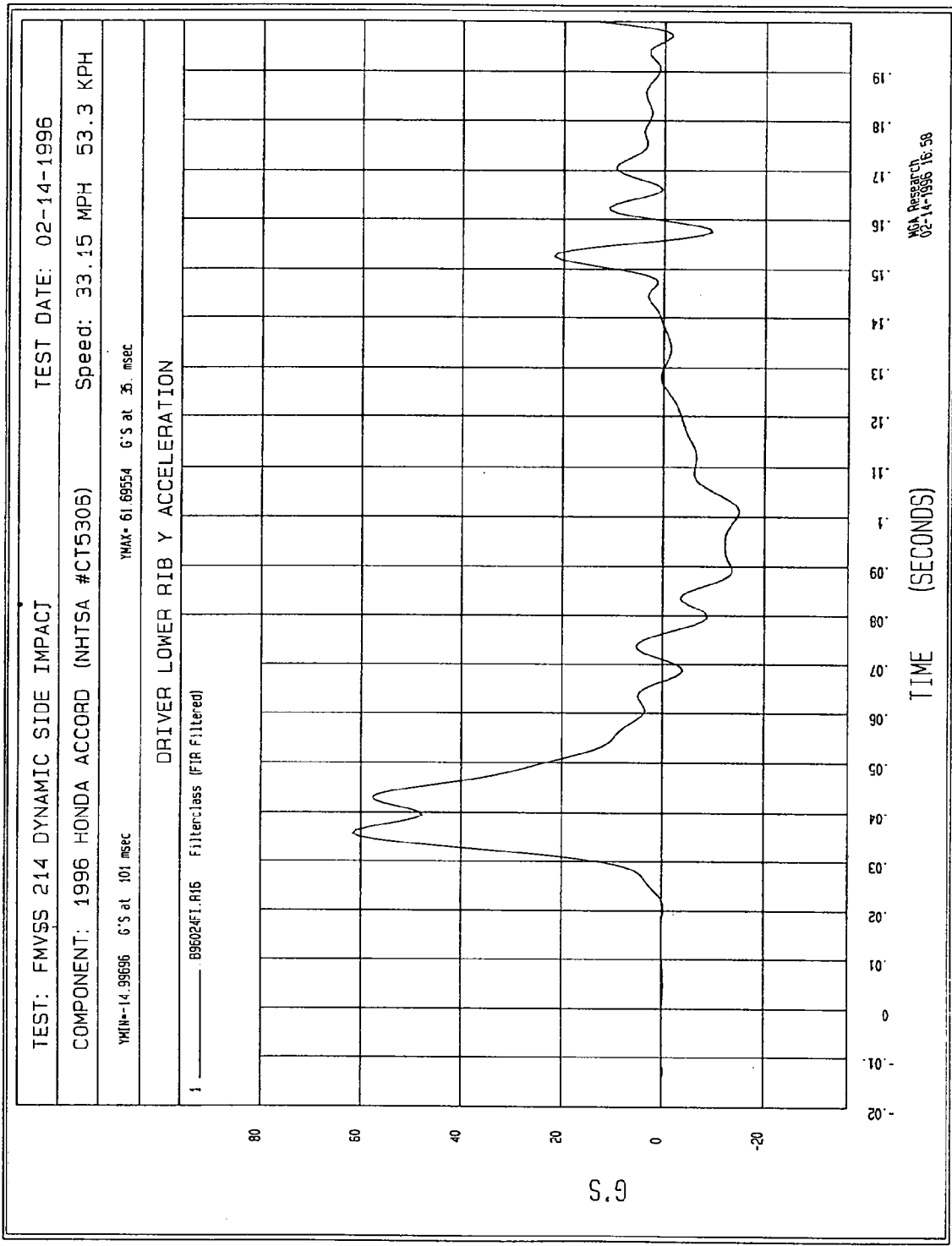
YMIN=-17.77057 G'S at 79. msec
YMAX= 58.03802 G'S at 35 msec

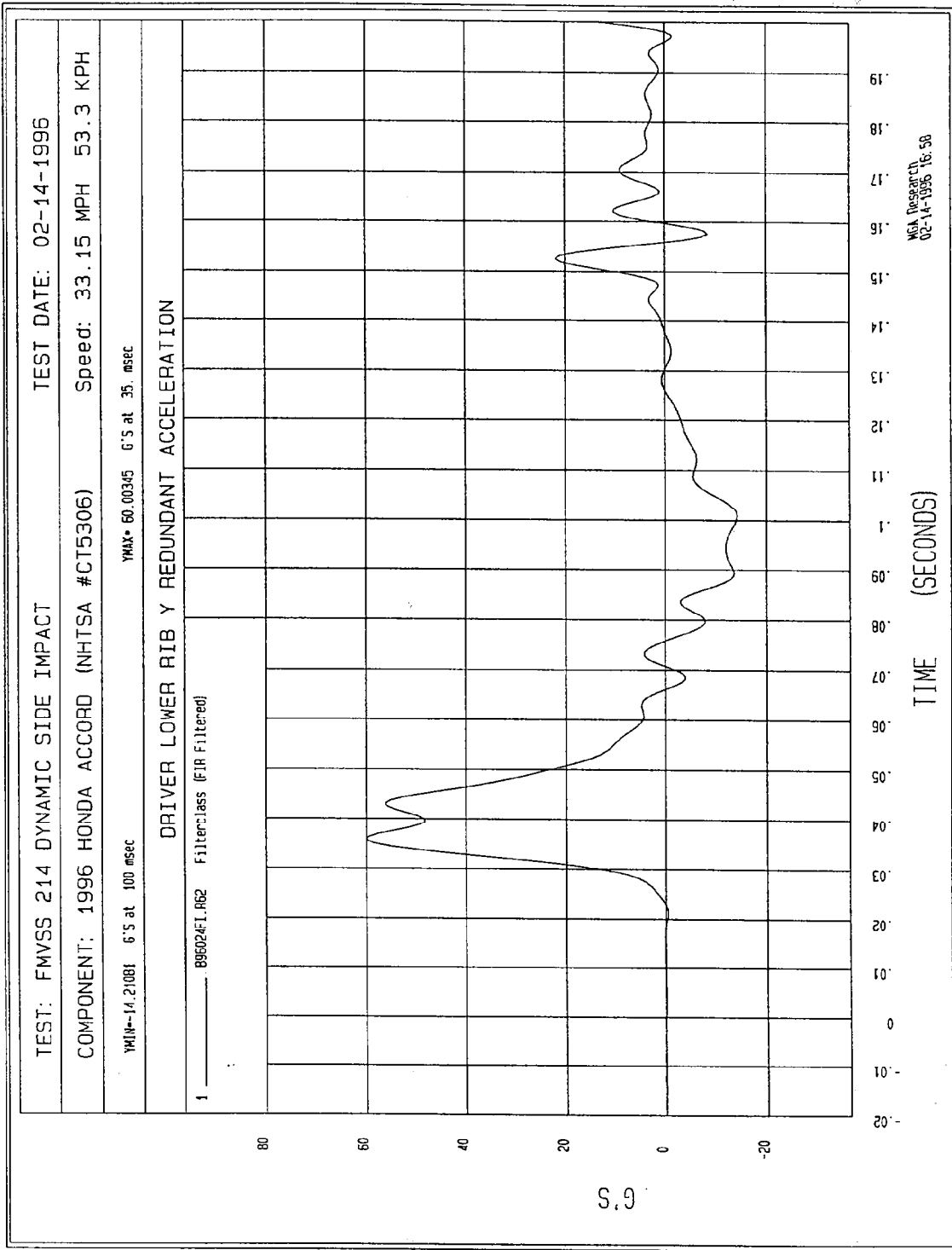
DRIVER UPPER RIB Y ACCELERATION

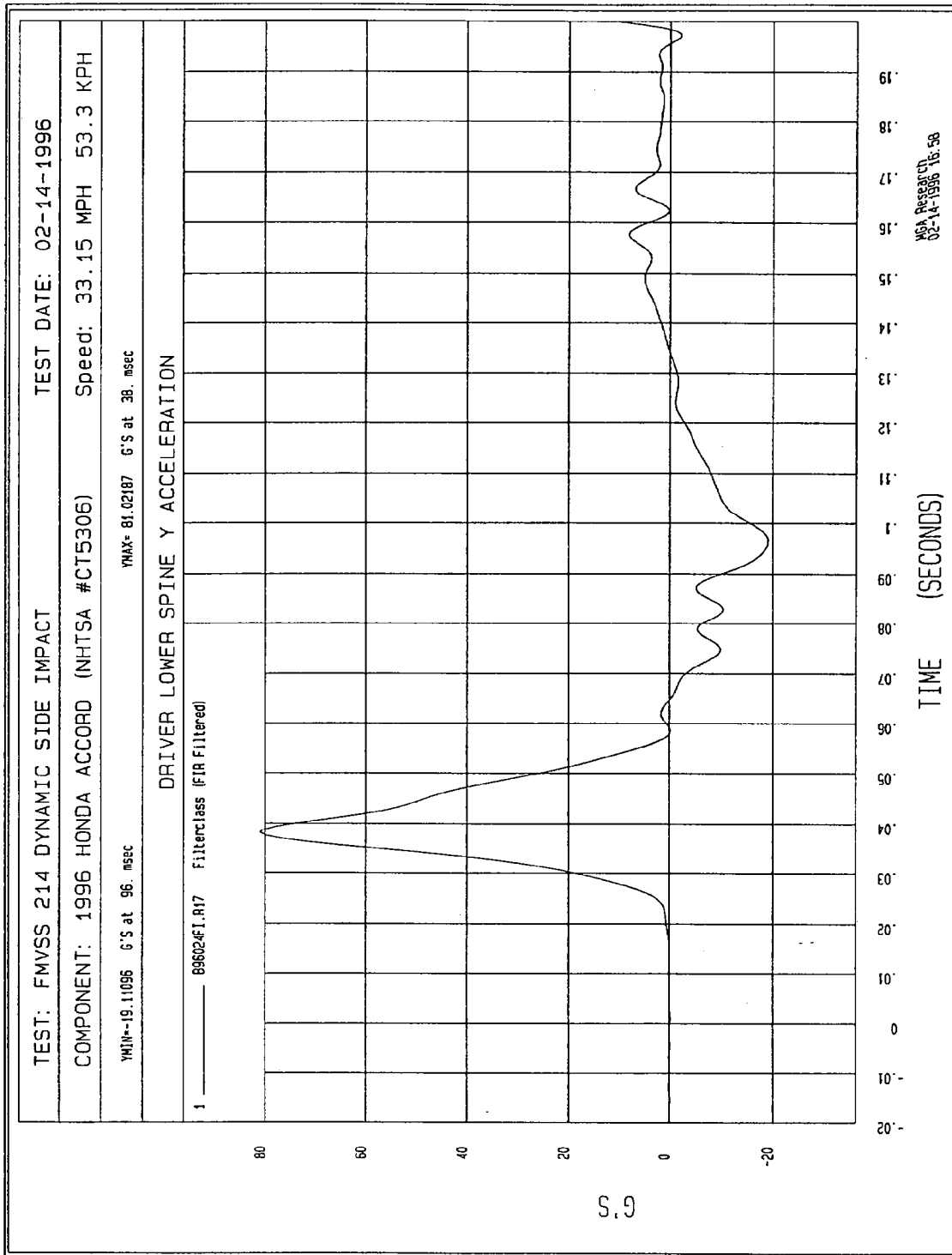
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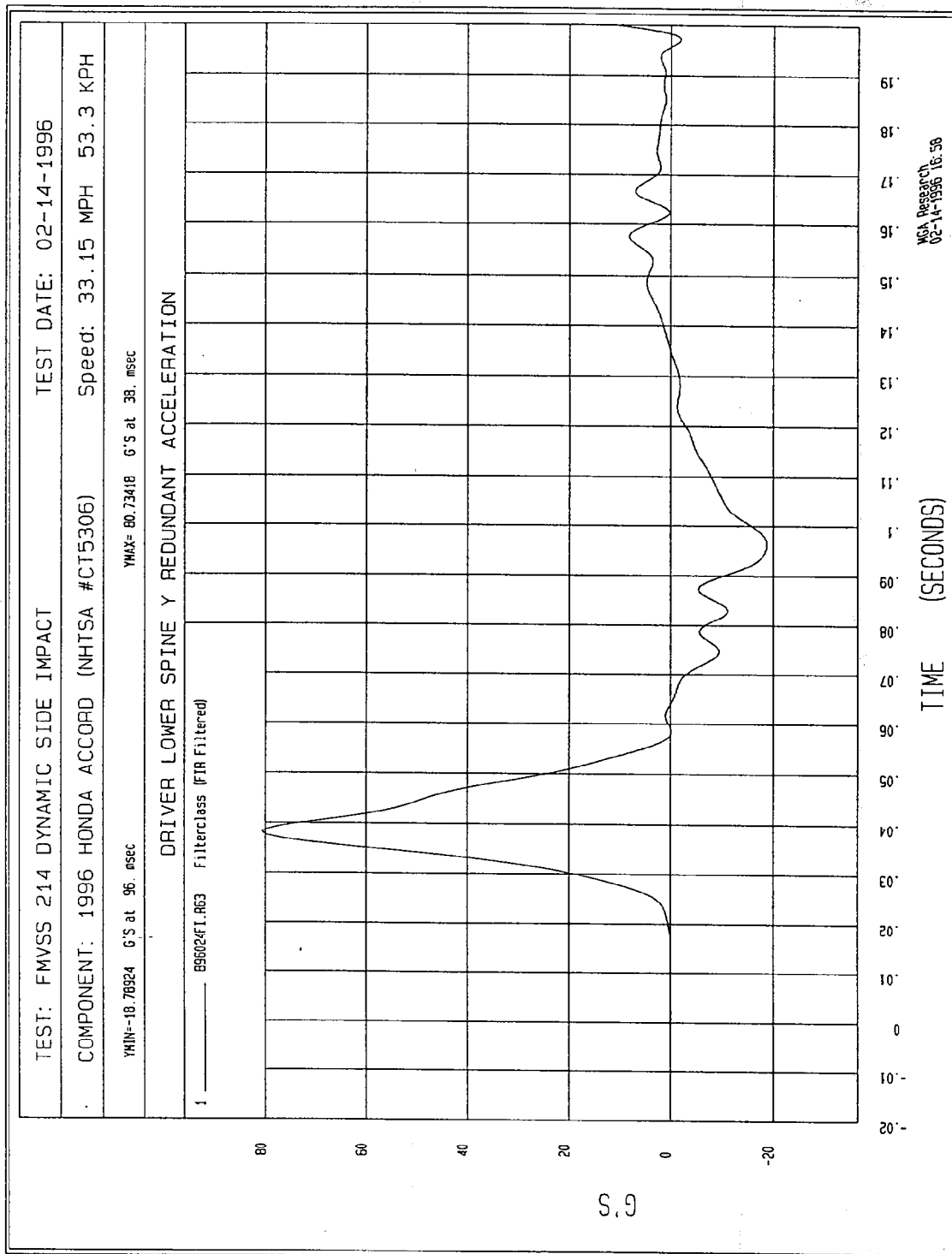


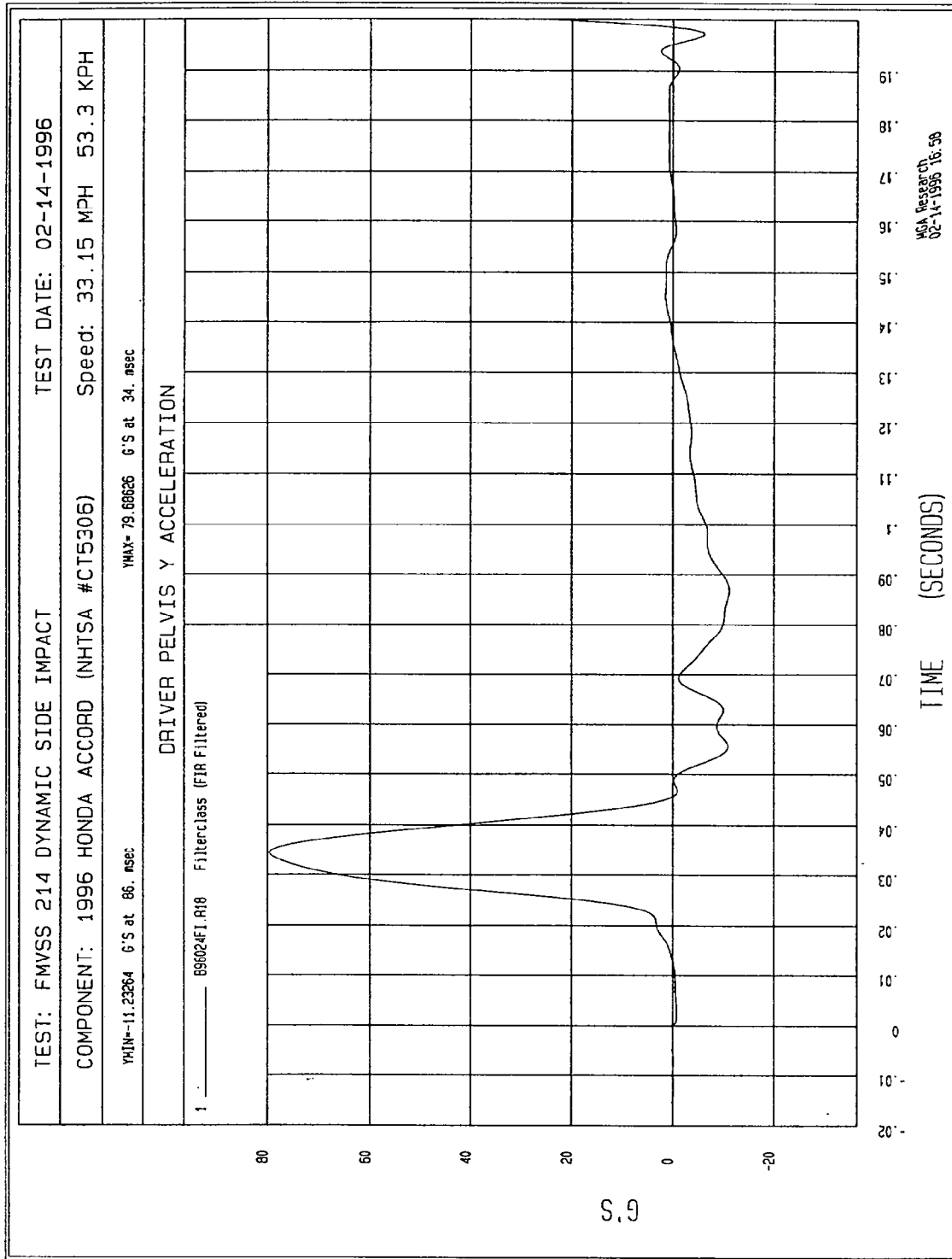


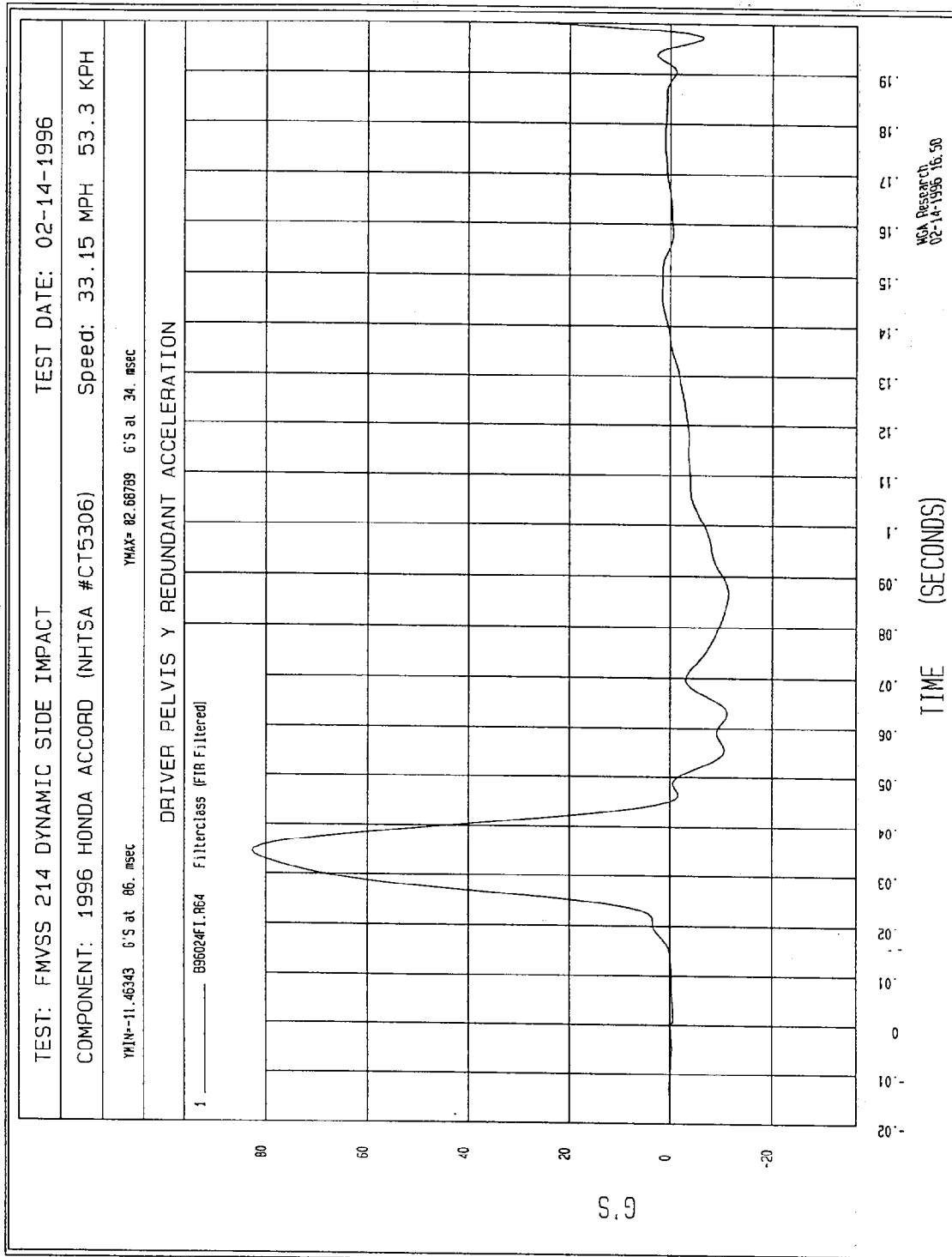


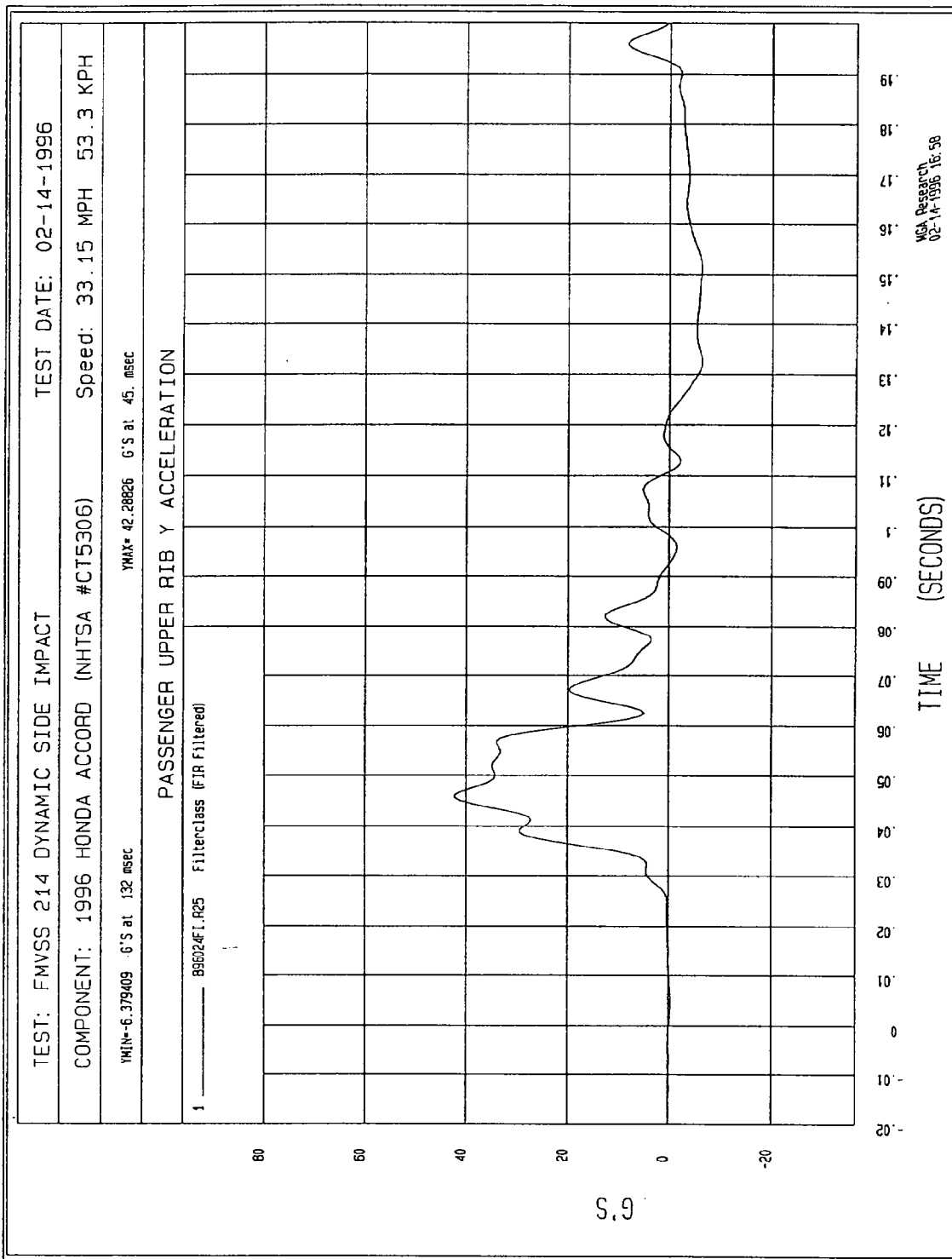


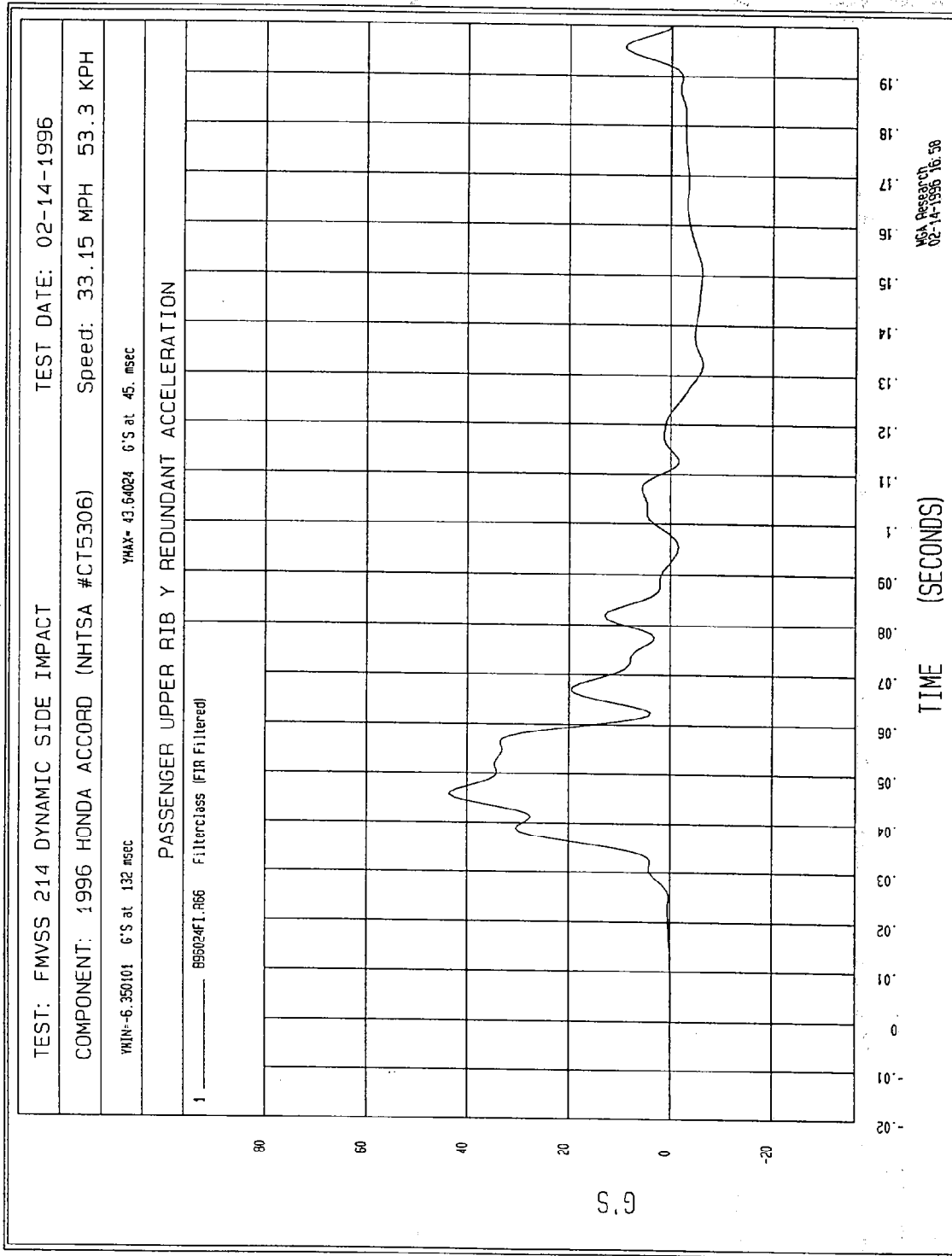


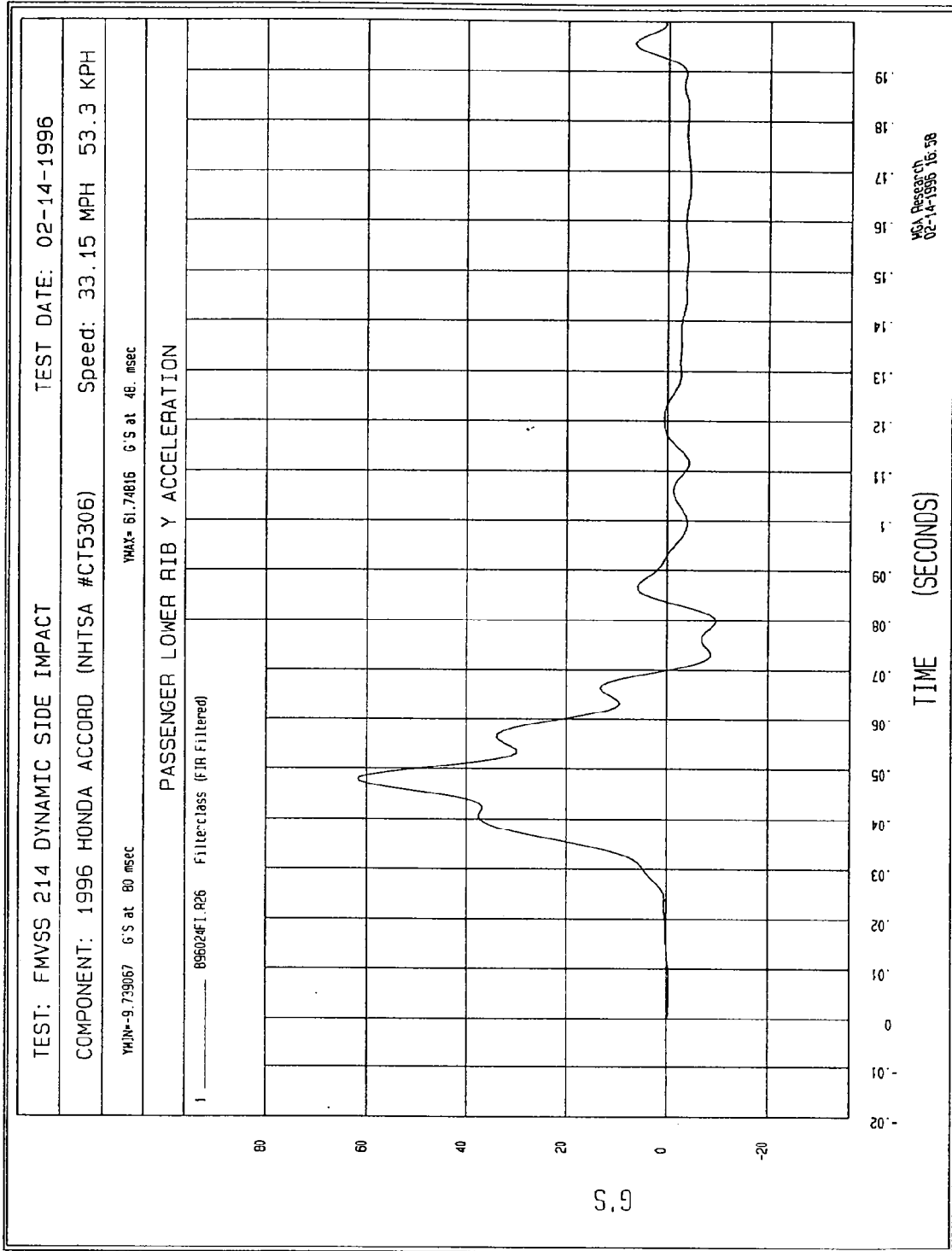












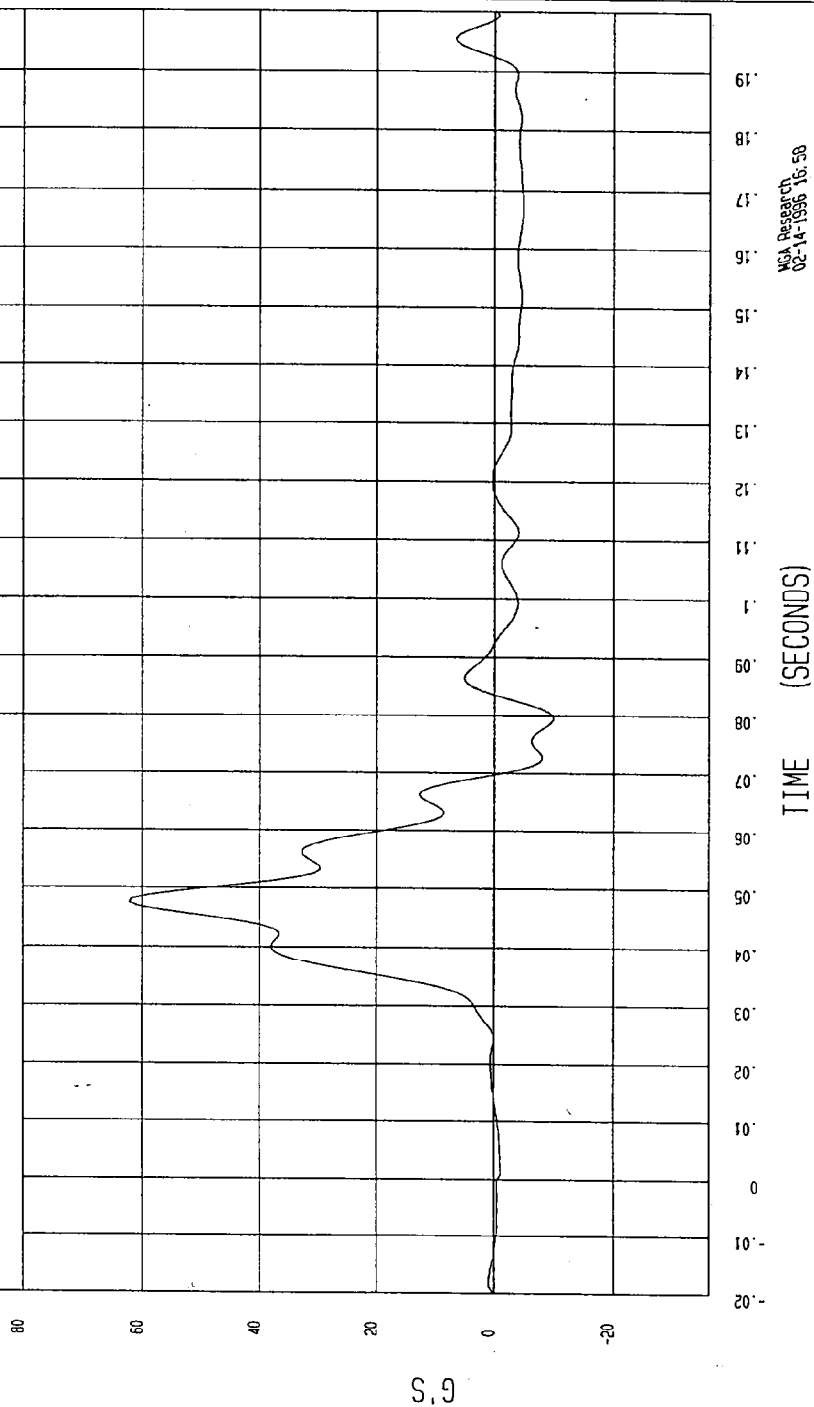
TEST: FMVSS 214 DYNAMIC SIDE IMPACT

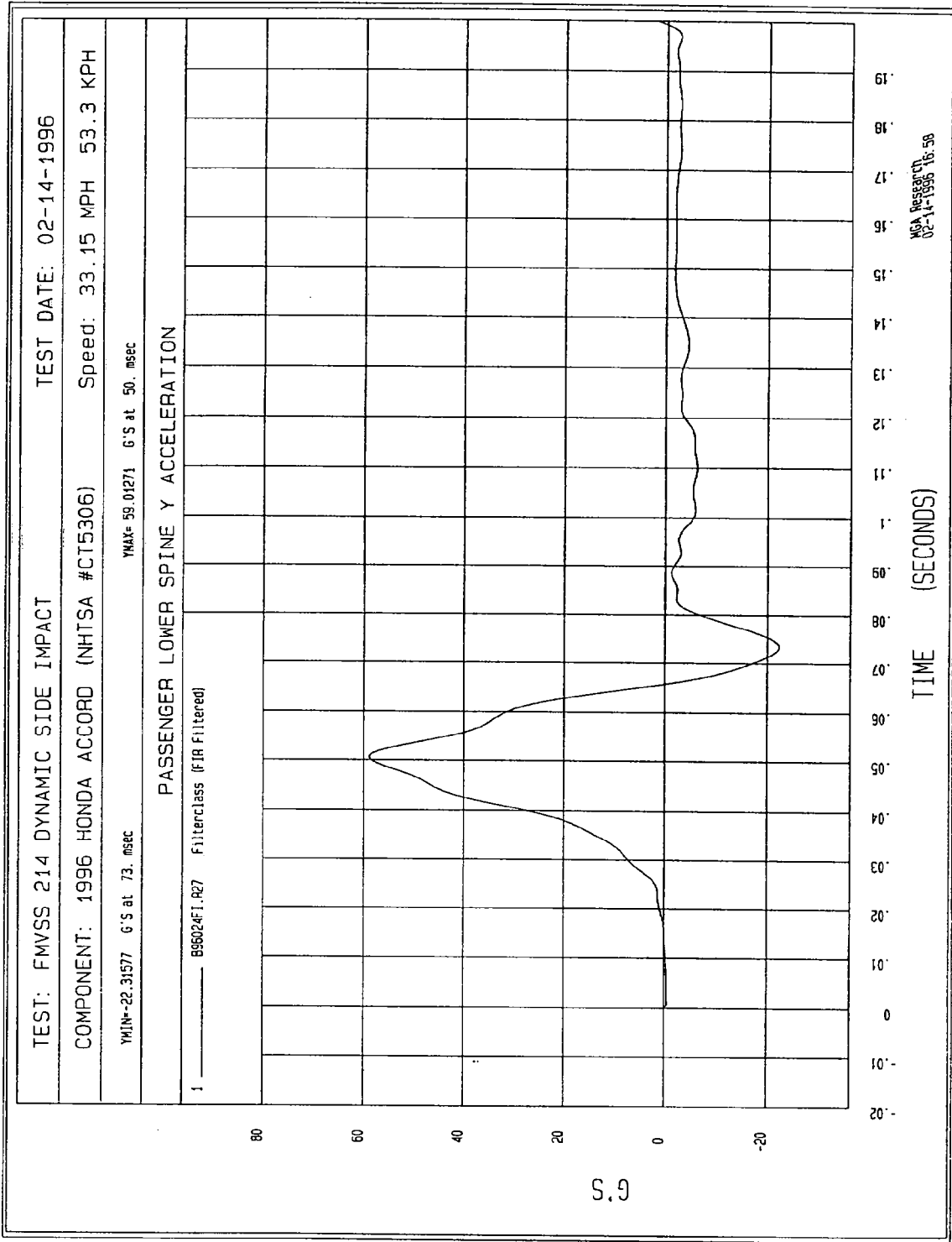
COMPONENT: 1996 HONDA ACCORD (NHTSA #CT5306) Speed: 33.15 MPH 53.3 KPH

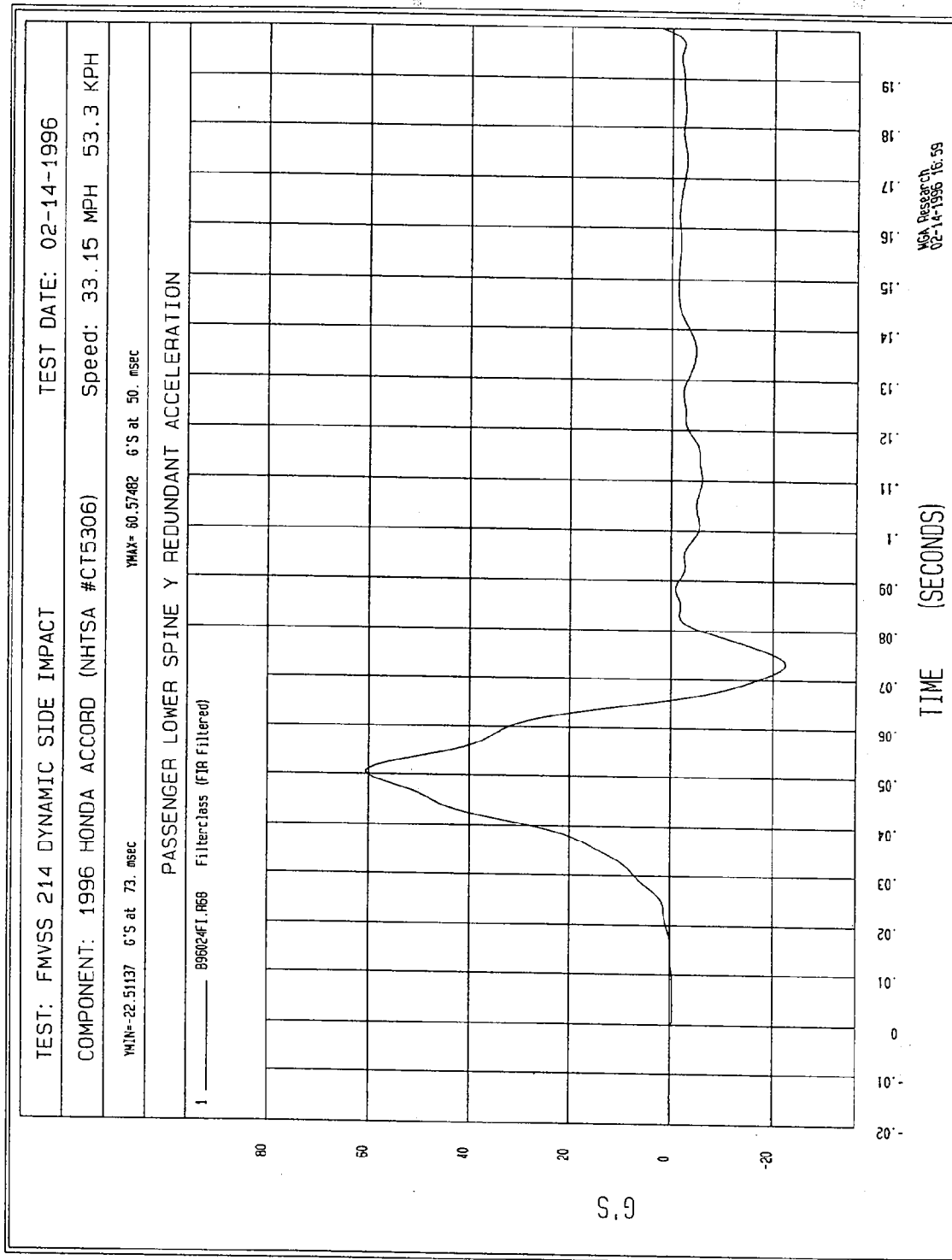
YMIN=-9.903249 G'S at 79. msec
YMAX= 52.25082 G'S at 47. msec

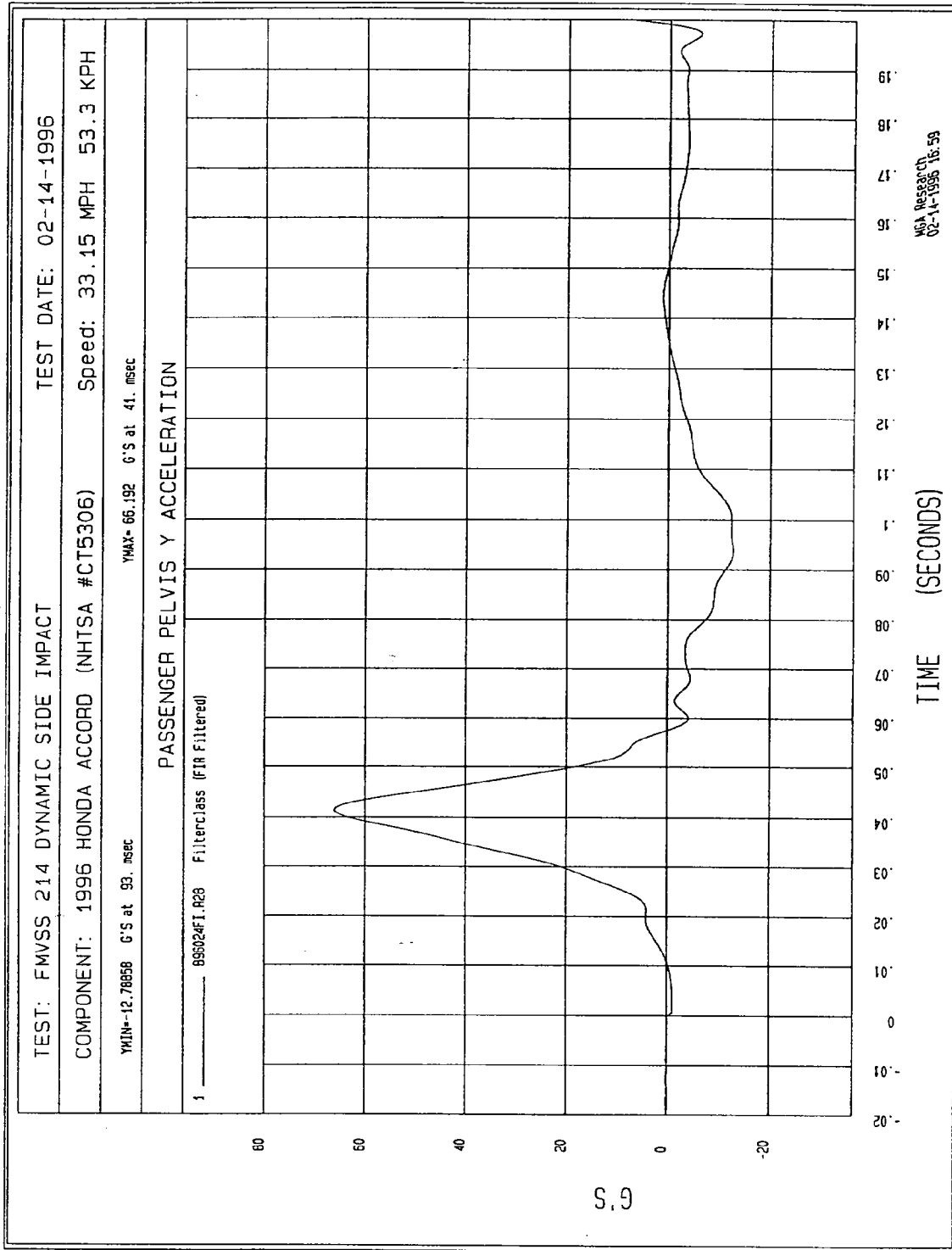
PASSENGER LOWER RIB Y REDUNDANT ACCELERATION

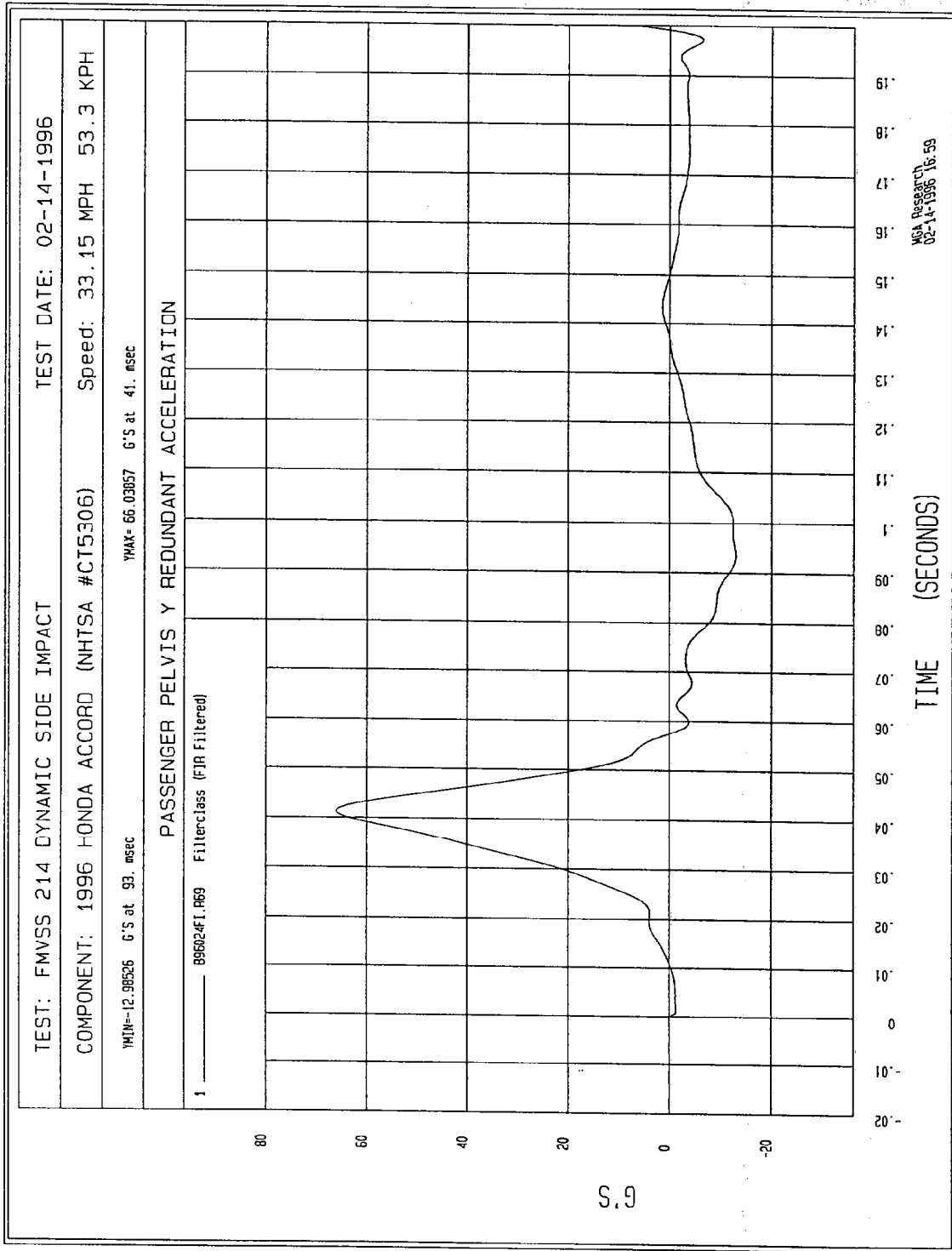
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APPENDIX C

SID CONFIGURATION AND PERFORMANCE VERIFICATION

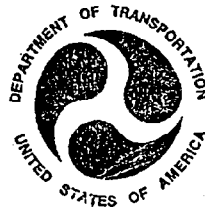
REPORT NO. MGA-96-DC13

DUMMY PERFORMANCE CALIBRATIONS

FMVSS 214 - SIDE IMPACT TEST

HONDA MOTOR COMPANY
1996 HONDA ACCORD 2 DOOR
NHTSA NO. CT5306

MGA PROVING GROUNDS
5000 WARREN ROAD
BURLINGTON, WI 53105



Test Date: February 14, 1996

Report Date: February 16, 1996

FINAL REPORT

Prepared For:

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

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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

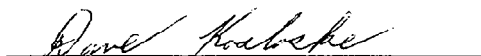
DATE OF VERIFICATION: January 18, 1996

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: January 16, 1996

DUMMY NUMBER: 269

TEST NUMBER: D96132

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	24%
PROBE SPEED	13.8 - 14.2 fps	14.0
UPPER RIB	37 - 46 g's	43
LOWER RIB	37 - 46 g's	43
LOWER SPINE	15 - 22 g's	21

TEST MEETS SPECIFICATIONS

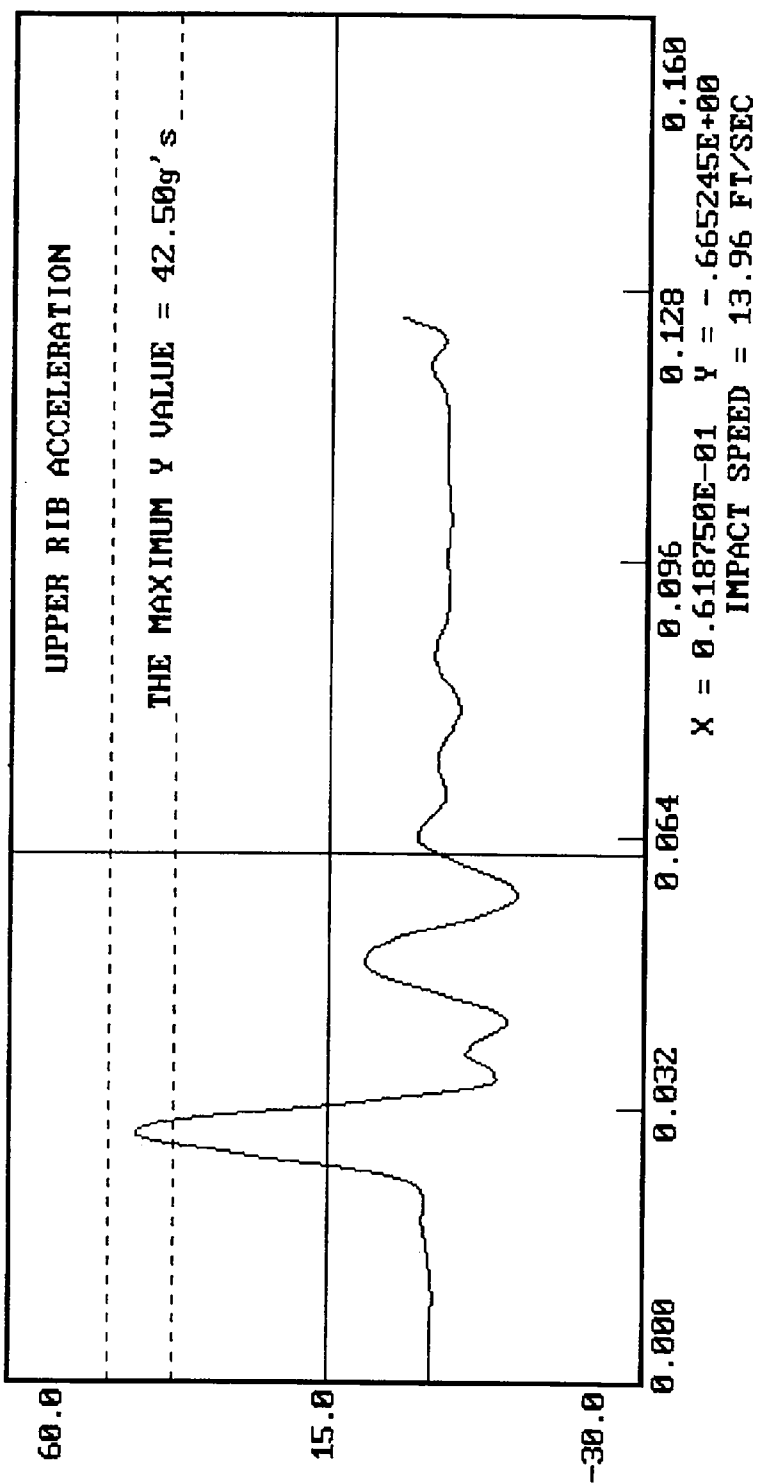
TECHNICIAN

He Chen

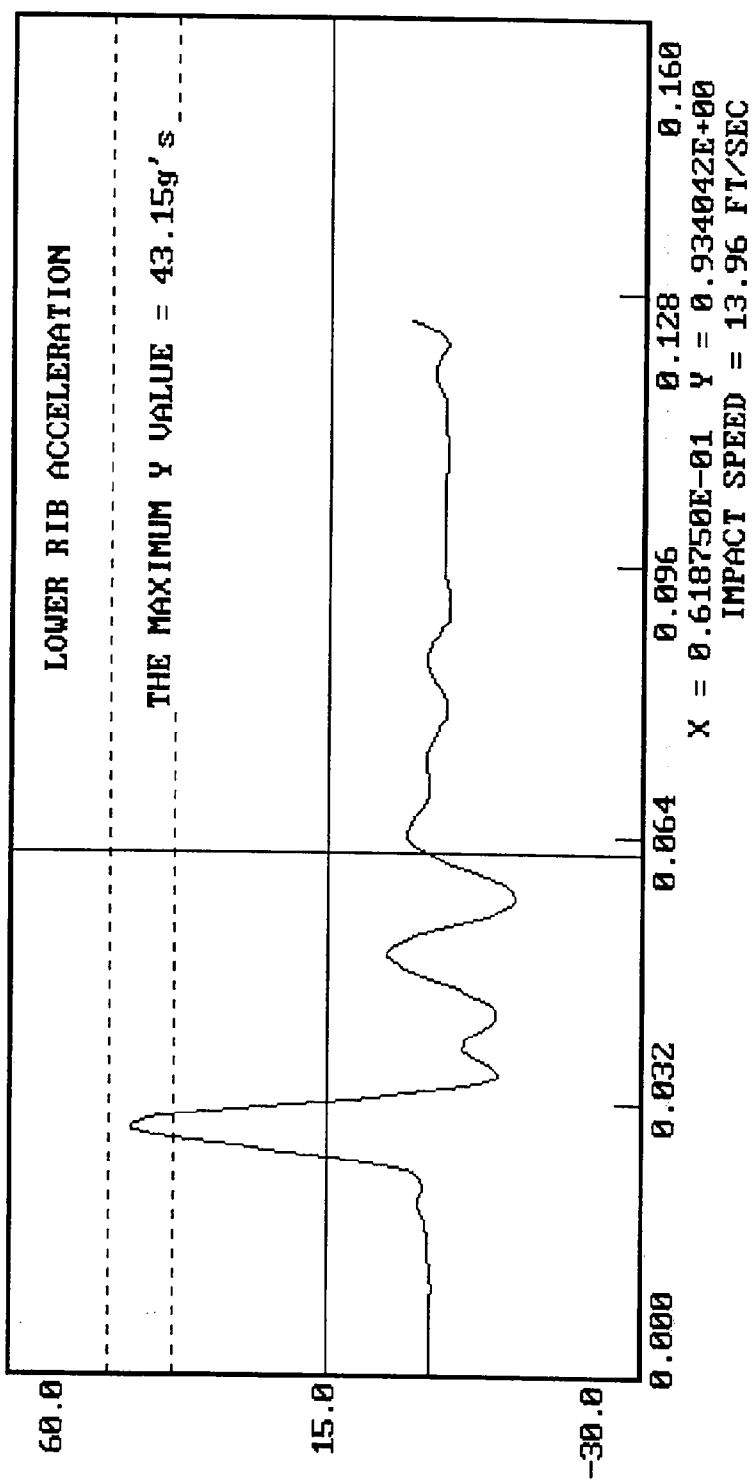
APPROVED BY

Dave Kabeke

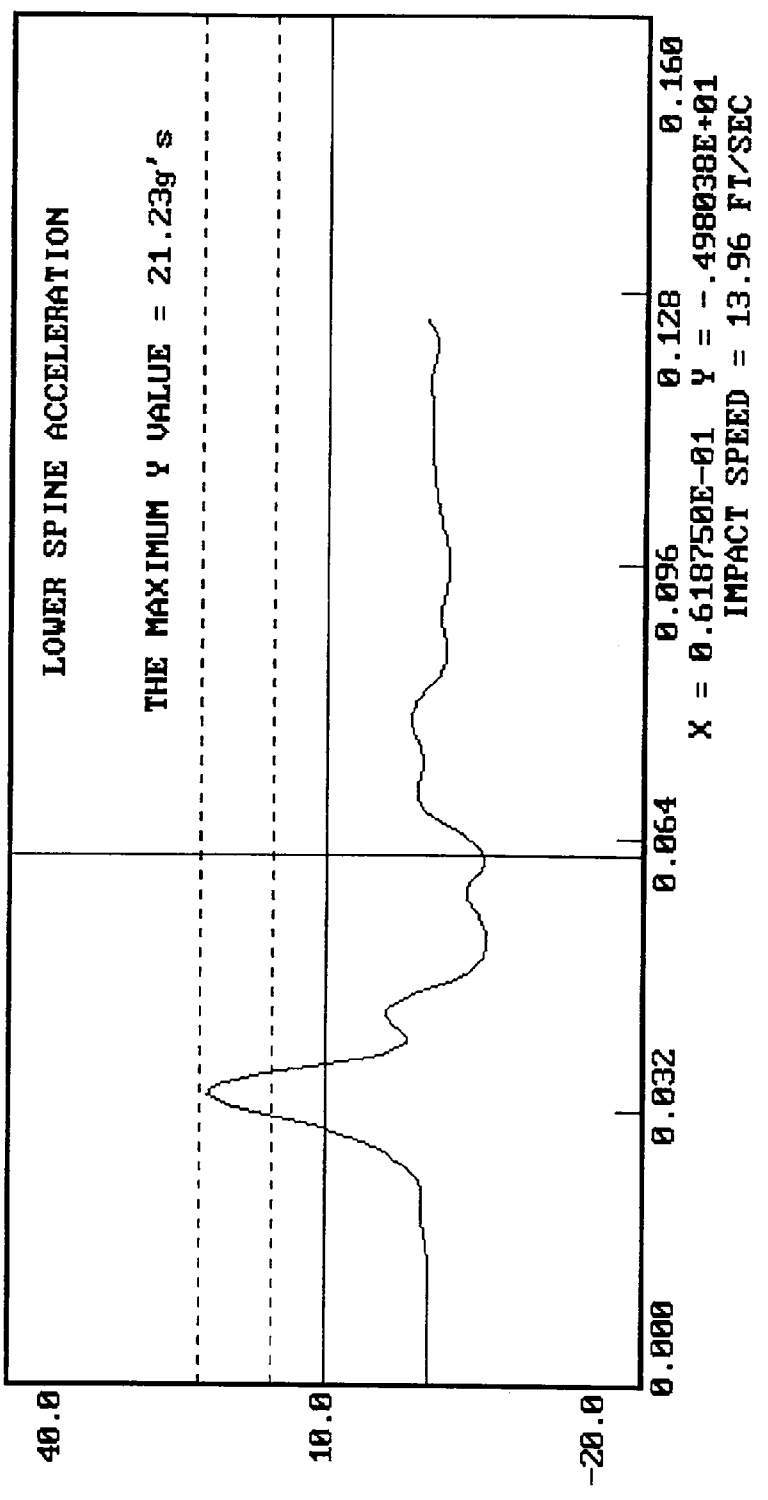
DUMMY CALIBRATION - THORAX IMPACT
 DUMMY # 269
 01-16-1996 18:12
 ACCELERATION (G'S) VS. TIME ((SECONDS))



DUMMY CALIBRATION - THORAX IMPACT
 DUMMY # 269
 01-16-1996 18:12
 ACCELERATION (G'S) VS. TIME ((SECONDS))



DUMMY CALIBRATION - THORAX IMPACT
 DUMMY # 269
 01-16-1996 18:12
 ACCELERATION (G'S) VS. TIME ((SECONDS))



MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: January 16, 1996

DUMMY NUMBER: 269

TEST NUMBER: D96133

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	24%
PROBE SPEED	13.8 - 14.2 f/s	13.9
PELVIS ACCELERATION	40 - 60 g's	58

TEST MEETS SPECIFICATIONS

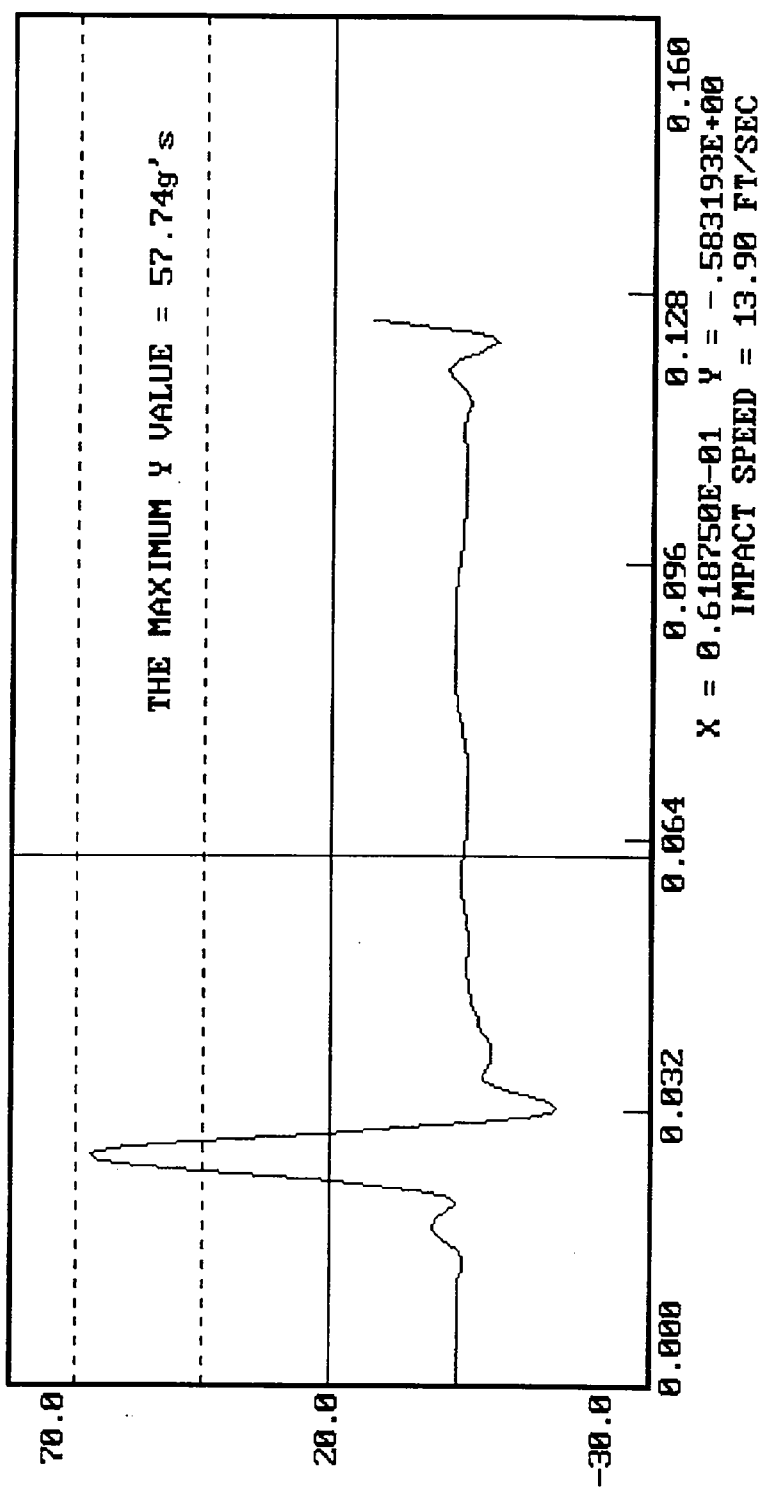
TECHNICIAN

Al C. Chen

APPROVED BY

Dave K. Kozlowski

DUMMY CALIBRATION - PELVIS IMPACT
 DUMMY # 269
 01-16-1996 18:33
 ACCELERATION (G'S) VS. TIME ((SECONDS))



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

DATE: January 17, 1996

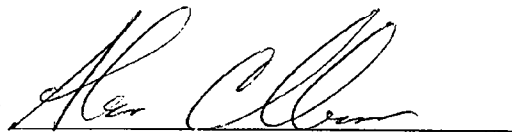
DUMMY NUMBER: 269

TEST NUMBER: D96134

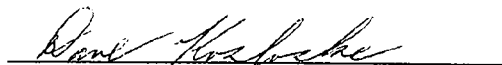
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	30%
FORCE @ 0.5 in	23.3 - 36.5 lbs	34.5
FORCE @ 0.75 in	36.7 - 49.8 lbs	47.4
FORCE @ 1.0 in	50 - 63 lbs	61
FORCE @ 1.3 in	73 - 88 lbs	81

TEST MEETS SPECIFICATIONS

TECHNICIAN



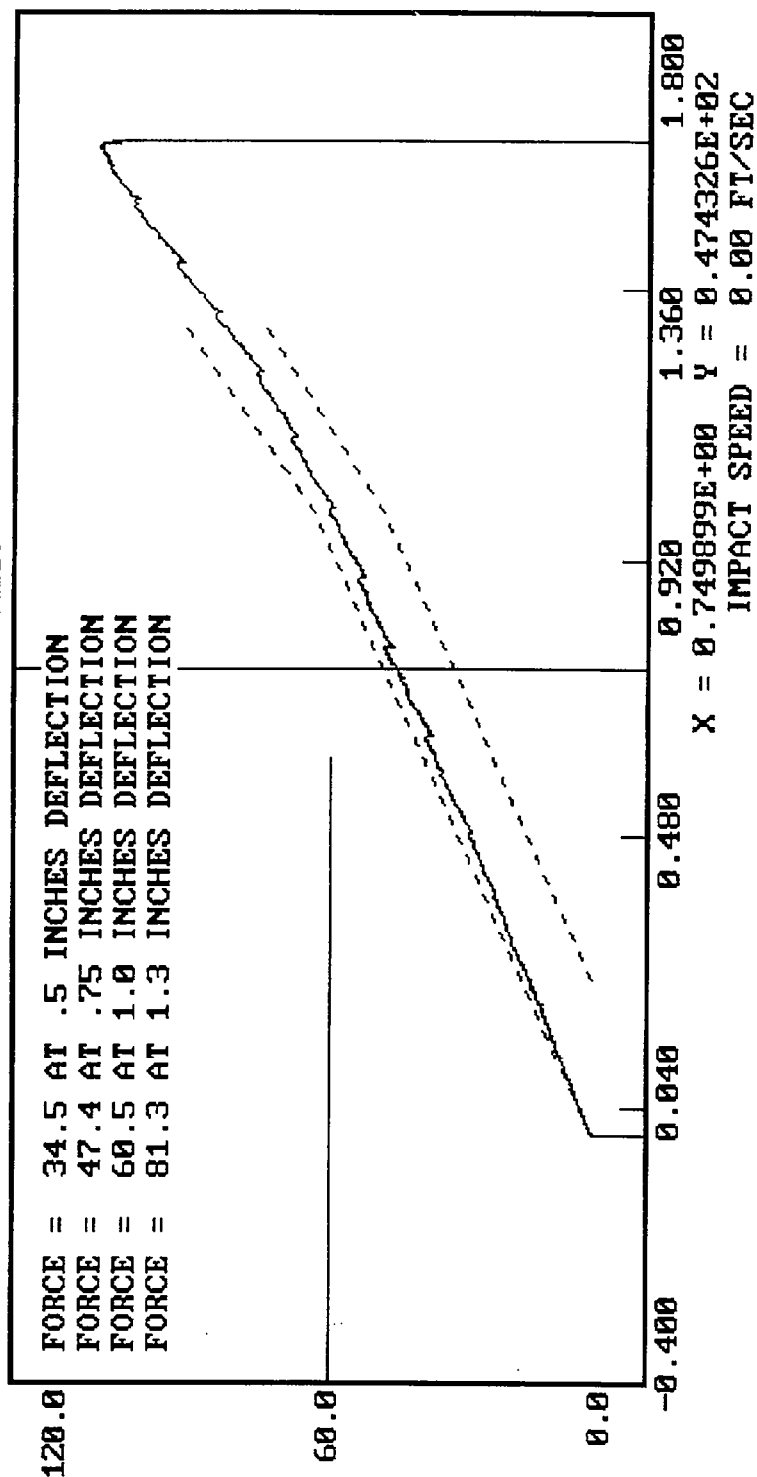
APPROVED BY



DUMMY CALIBRATION - ABDOMEN COMPRESSION
 DUMMY # 269

01-17-1996 14:31

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



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: January 18, 1996

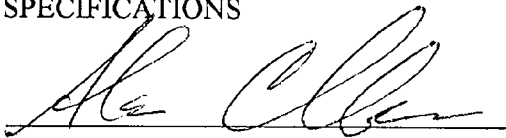
DUMMY NUMBER: 269

TEST NUMBER: D96135

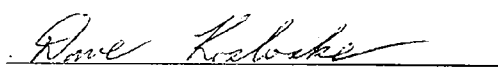
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	30%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	29
FORCE @ 30°	34 - 46 lbs	36
FORCE @ 40°	46 - 58 lbs	49
RETURN ANGLE	12° maximum	6°

TEST MEETS SPECIFICATIONS

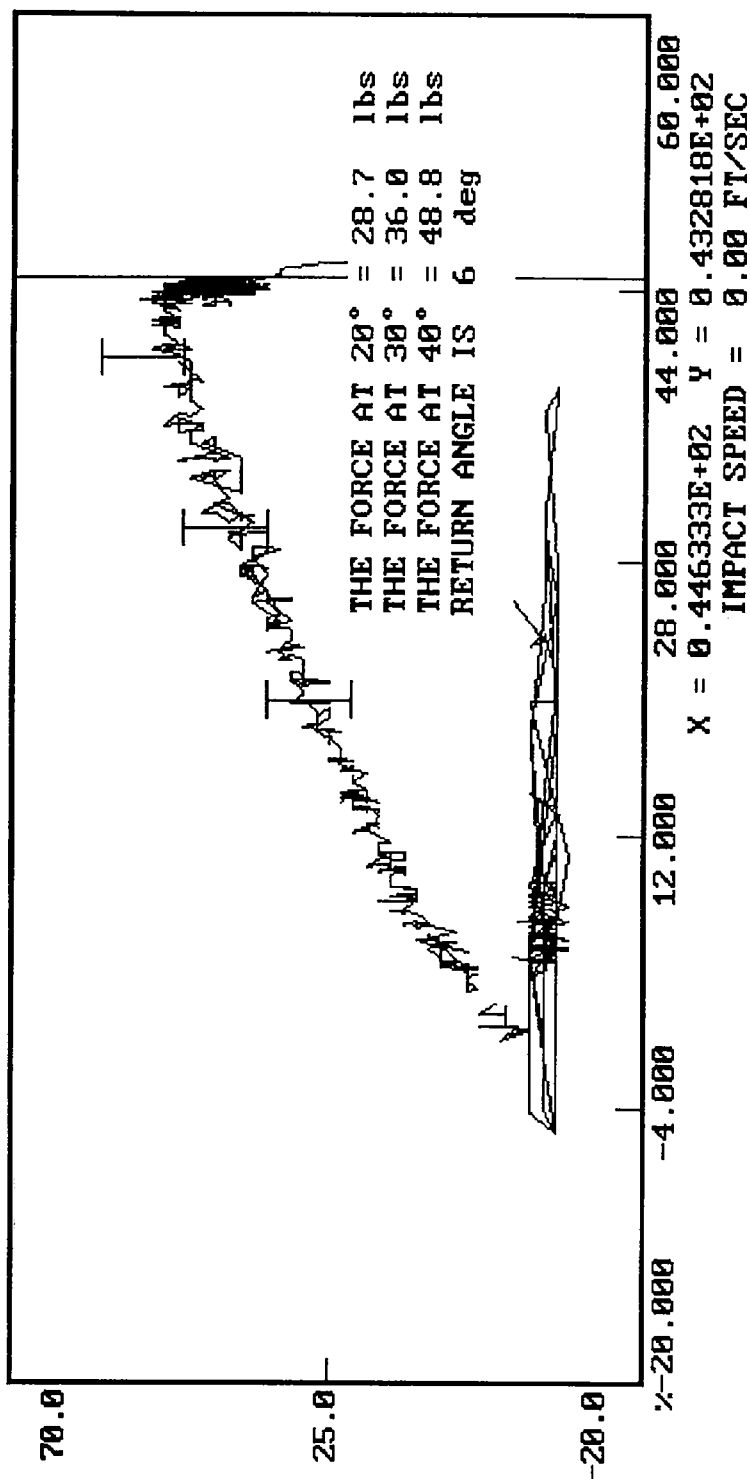
TECHNICIAN



APPROVED BY



DUMMY CALIBRATION - LUMBAR FLEXION
 DUMMY # 269
 01-18-1996 13:13
 FORCE (LBS) VS. TORSO ROTATION (DEGREES)



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.

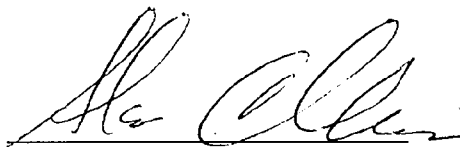
SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 272

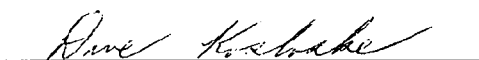
DATE OF VERIFICATION: January 18, 1996

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: January 17, 1996

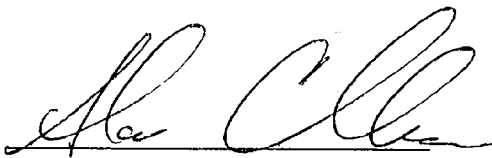
DUMMY NUMBER: 272

TEST NUMBER: D96162

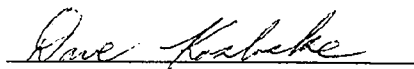
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	30%
PROBE SPEED	13.8 - 14.2 fps	14.0
UPPER RIB	37 - 46 g's	41
LOWER RIB	37 - 46 g's	40
LOWER SPINE	15 - 22 g's	20

TEST MEETS SPECIFICATIONS

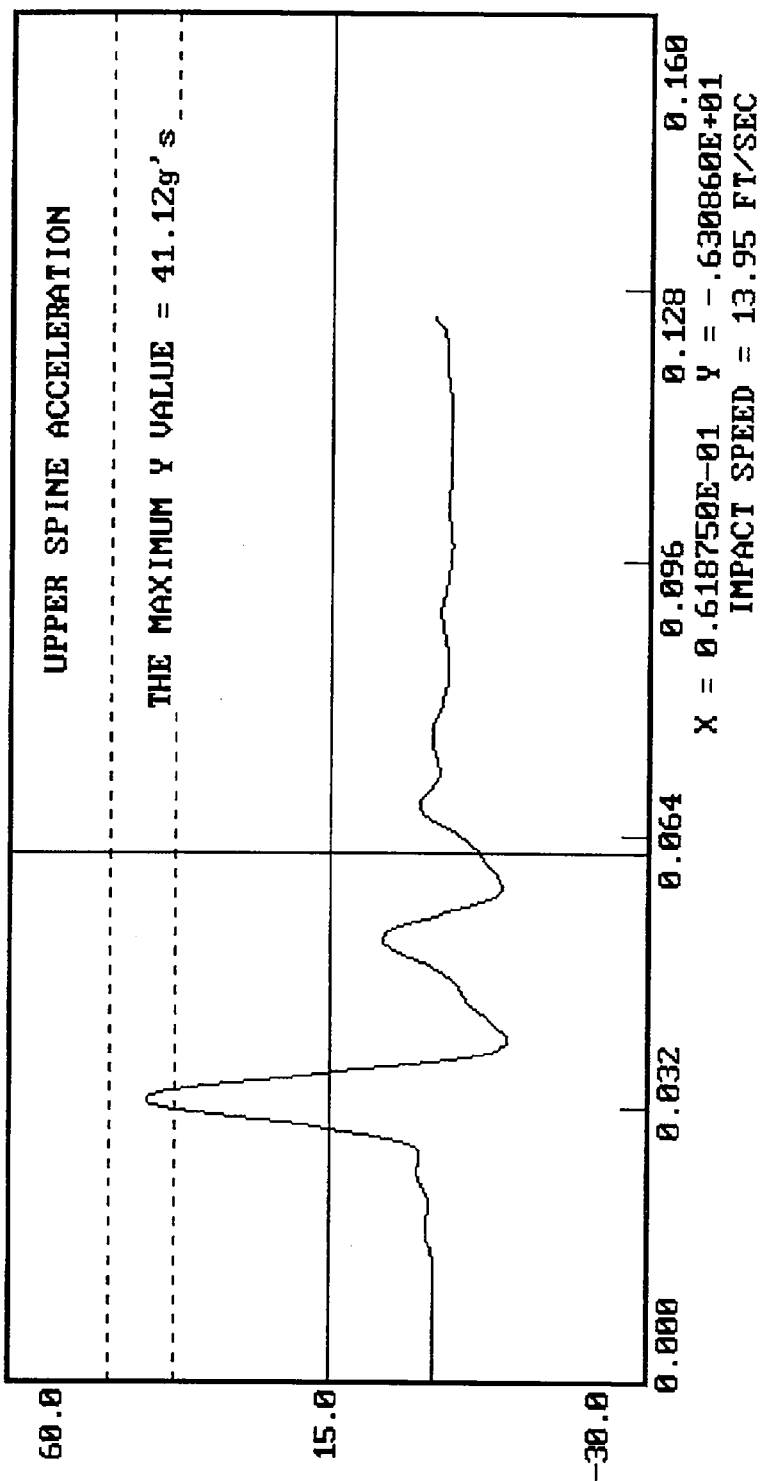
TECHNICIAN



APPROVED BY

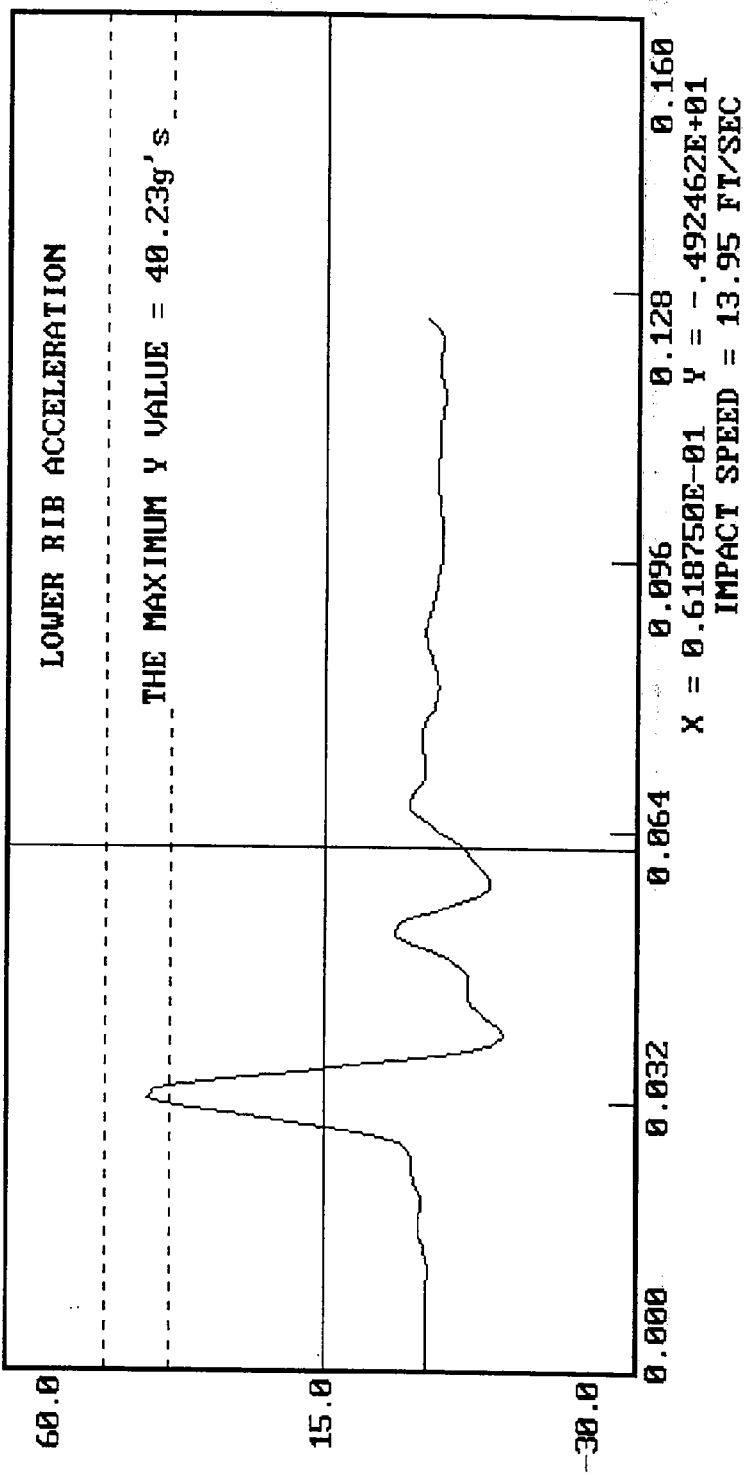


DUMMY CALIBRATION - THORAX IMPACT
 DUMMY # 272
 01-17-1996 09:20
 ACCELERATION (G'S) VS. TIME ((SECONDS))

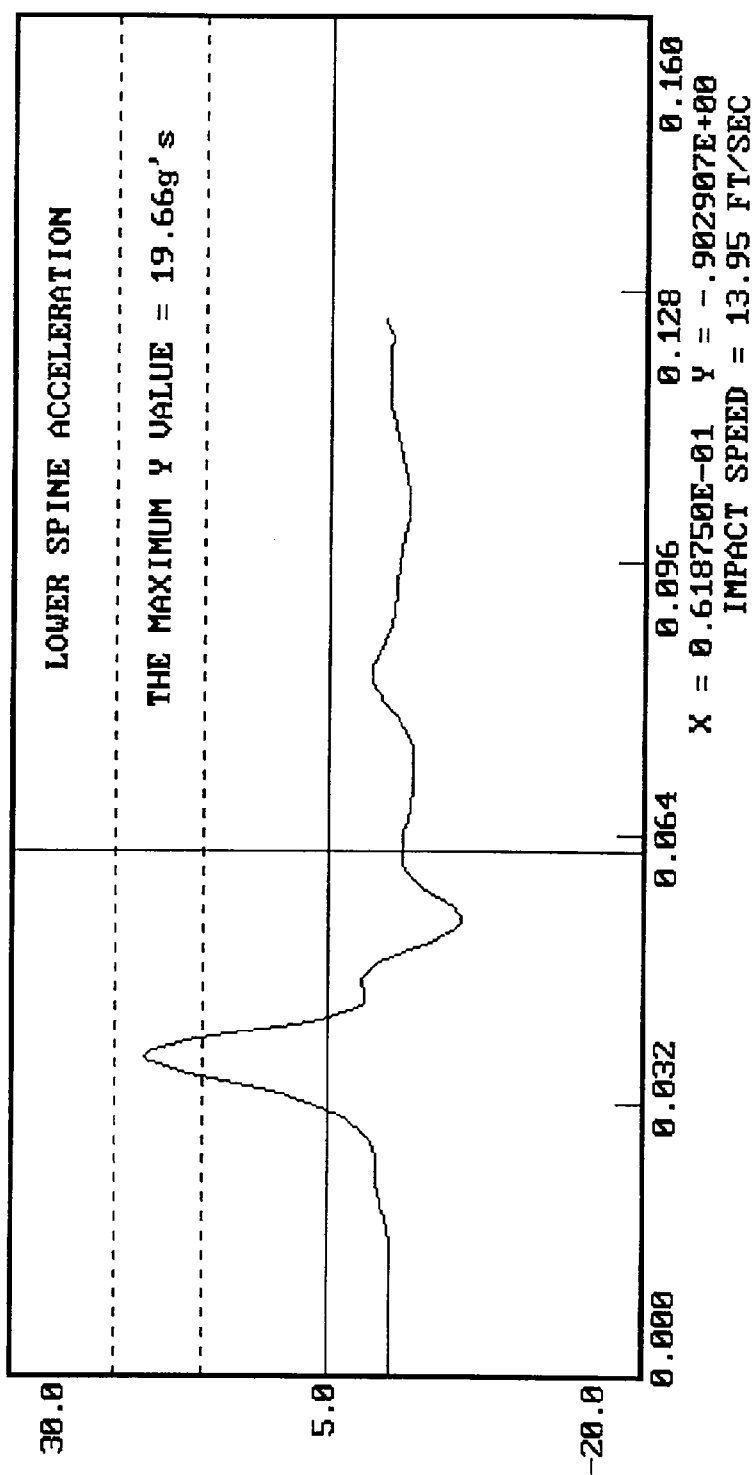


DUMMY CALIBRATION - THORAX IMPACT
DUMMY # 272
01-17-1996 09:20

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



DUMMY CALIBRATION - THORAX IMPACT
 DUMMY # 272
 01-17-1996 09:20
 ACCELERATION (G'S) VS. TIME ((SECONDS))



MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: January 17, 1996

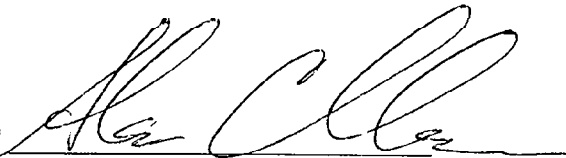
DUMMY NUMBER: 272

TEST NUMBER: D96163

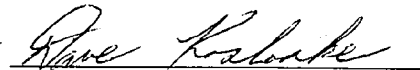
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	30%
PROBE SPEED	13.8 - 14.2 f/s	13.9
PELVIS ACCELERATION	40 - 60 g's	50

TEST MEETS SPECIFICATIONS

TECHNICIAN

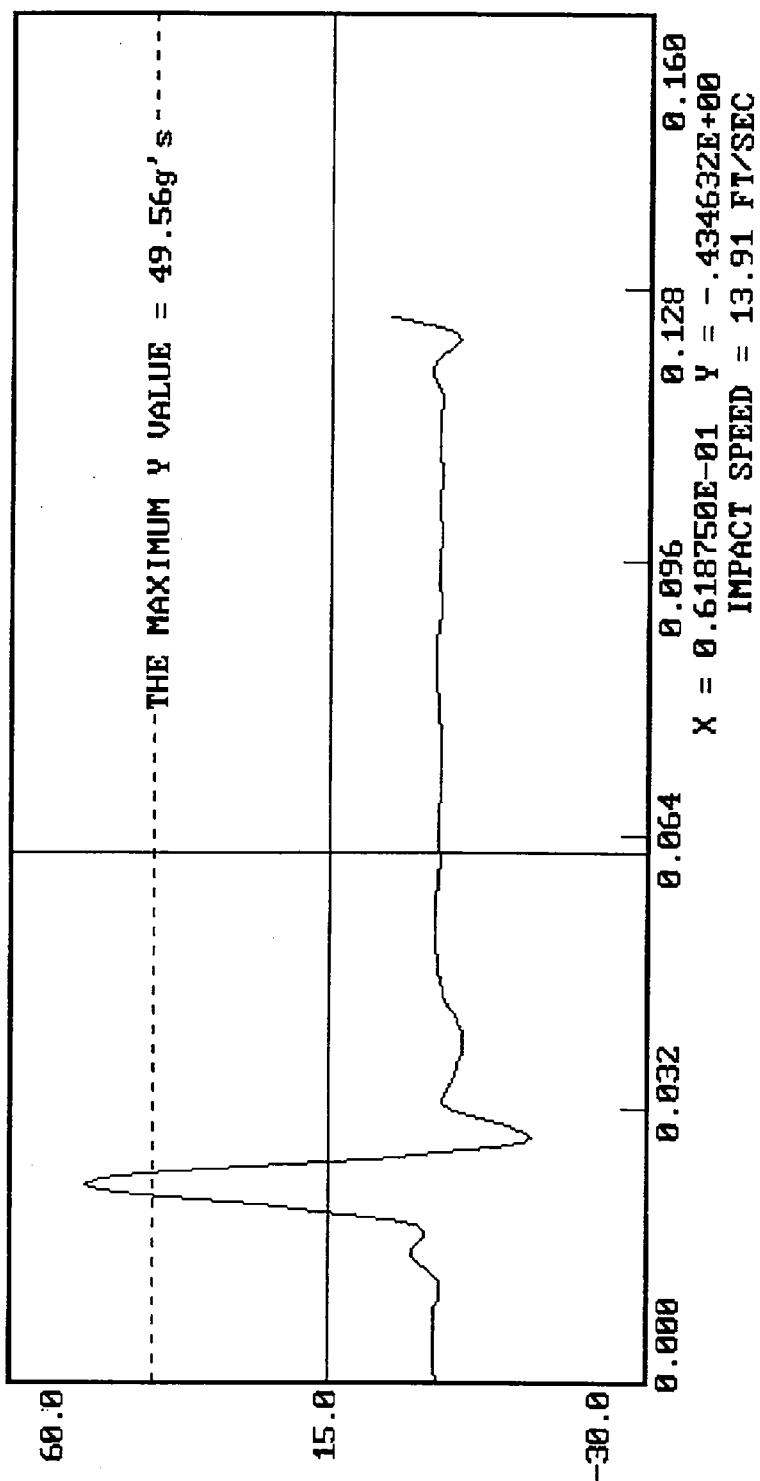


APPROVED BY



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

01-17-1996 09:36



MGA RESEARCH CORPORATION

ABDOMINAL COMPRESSION TEST
(PRELOAD = 10 LBS)

SIDE IMPACT DUMMY (SID)

DATE: January 17, 1996

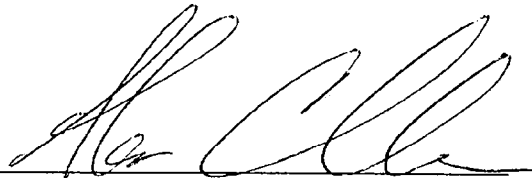
DUMMY NUMBER: 272

TEST NUMBER: D96164

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	30%
FORCE @ 0.5 in	23.3 - 36.5 lbs	34.3
FORCE @ 0.75 in	36.7 - 49.8 lbs	47.6
FORCE @ 1.0 in	50 - 63 lbs	62
FORCE @ 1.3 in	73 - 88 lbs	83

TEST MEETS SPECIFICATIONS

TECHNICIAN



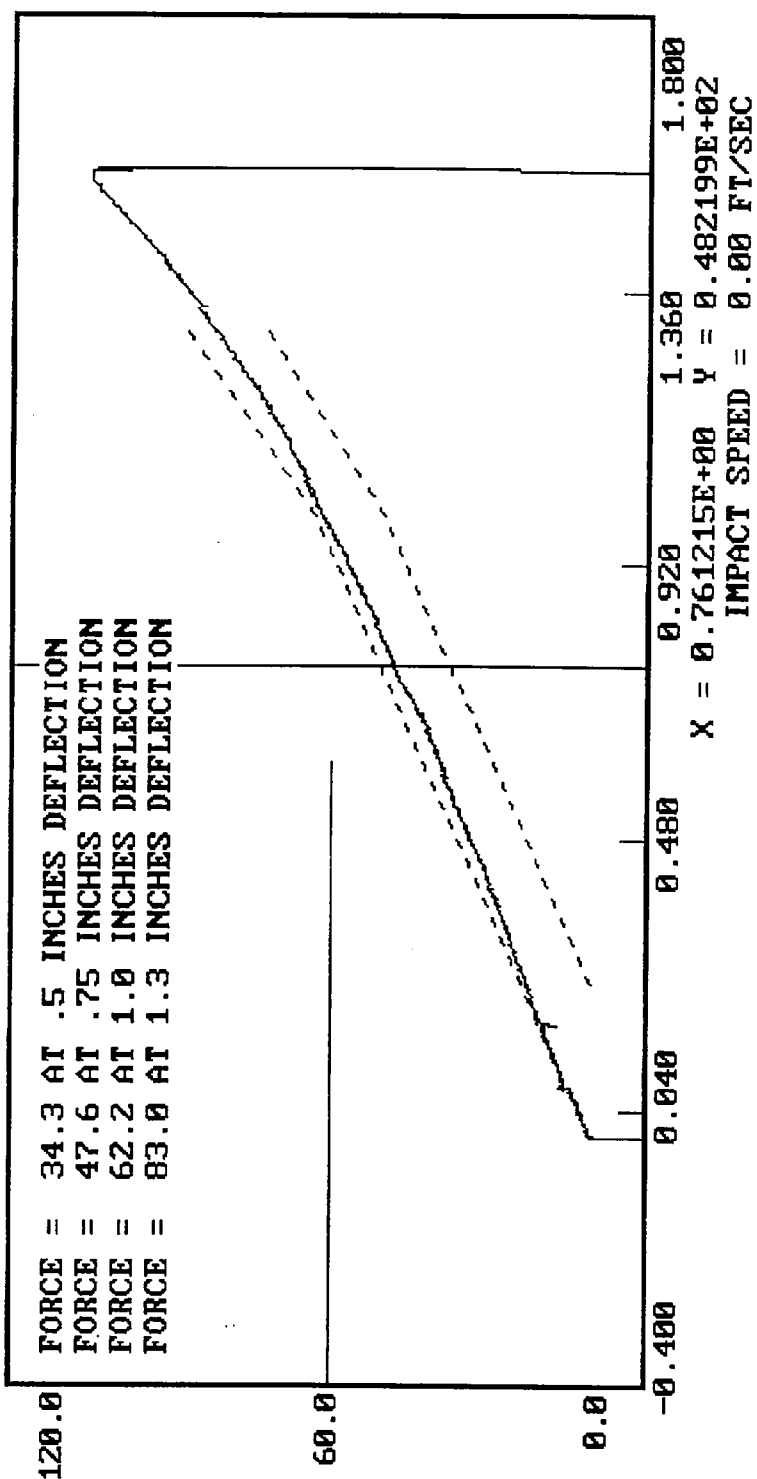
APPROVED BY



DUMMY CALIBRATION - ABDOMEN COMPRESSION
 DUMMY # 272

01-17-1996 14:42

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



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: January 18, 1996

DUMMY NUMBER: 272

TEST NUMBER: D96165

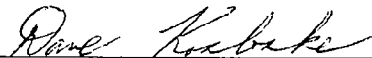
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	47%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	30
FORCE @ 30°	34 - 46 lbs	44
FORCE @ 40°	46 - 58 lbs	55
RETURN ANGLE	12° maximum	5°

TEST MEETS SPECIFICATIONS

TECHNICIAN

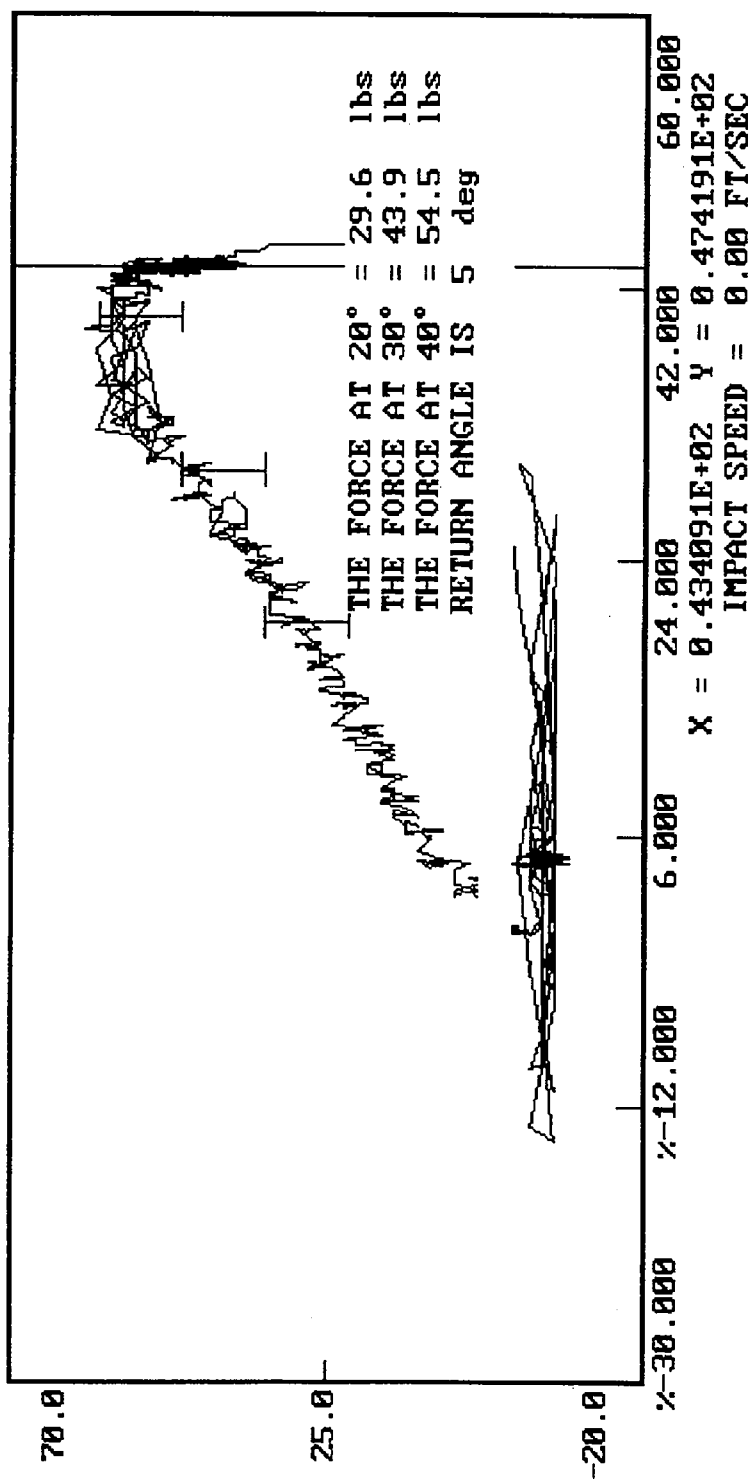


APPROVED BY



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

01-18-1996 12:54



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

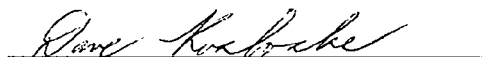
DATE OF VERIFICATION: February 20, 1996

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)

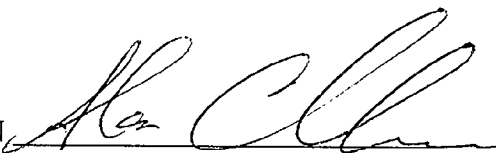
DATE: February 19, 1996

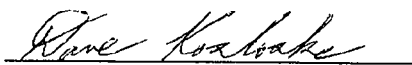
DUMMY NUMBER: 269

TEST NUMBER: D96332

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	28%
PROBE SPEED	13.8 - 14.2 fps	14.0
UPPER RIB	37 - 46 g's	40
LOWER RIB	37 - 46 g's	42
LOWER SPINE	15 - 22 g's	21

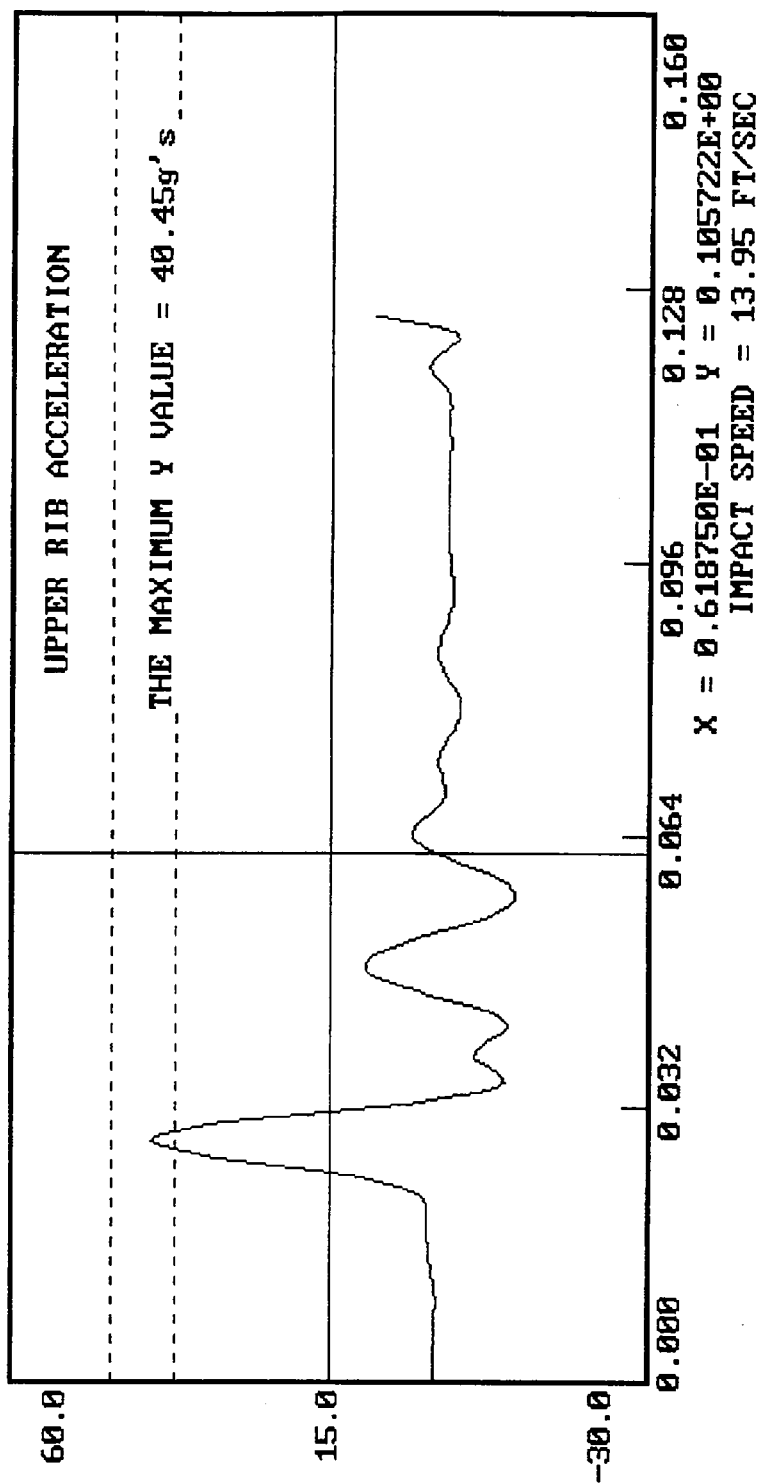
TEST MEETS SPECIFICATIONS

TECHNICIAN 

APPROVED BY 

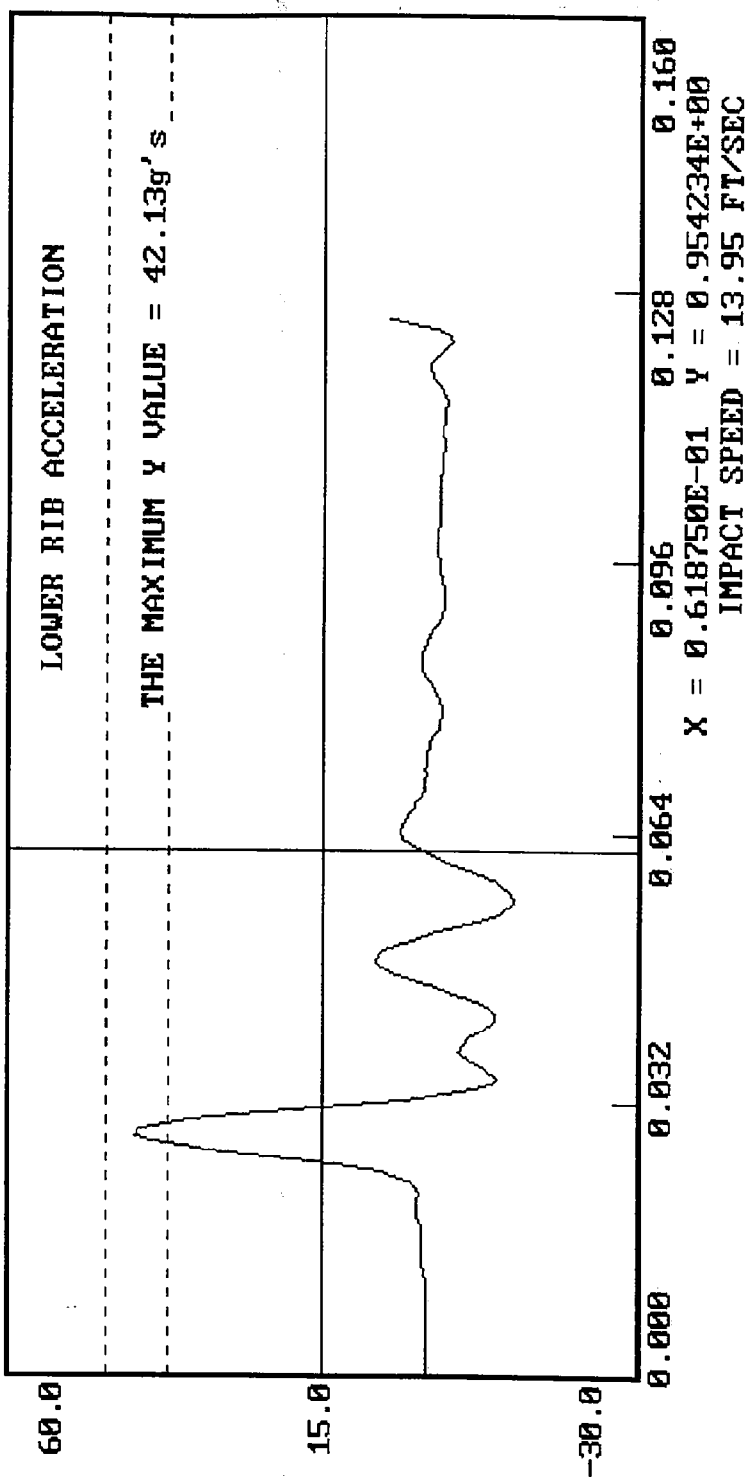
DUMMY CALIBRATION - THORAX IMPACT
DUMMY # 269
ACCELERATION (G'S) VS. TIME ((SECONDS))

02-19-1996 16:04

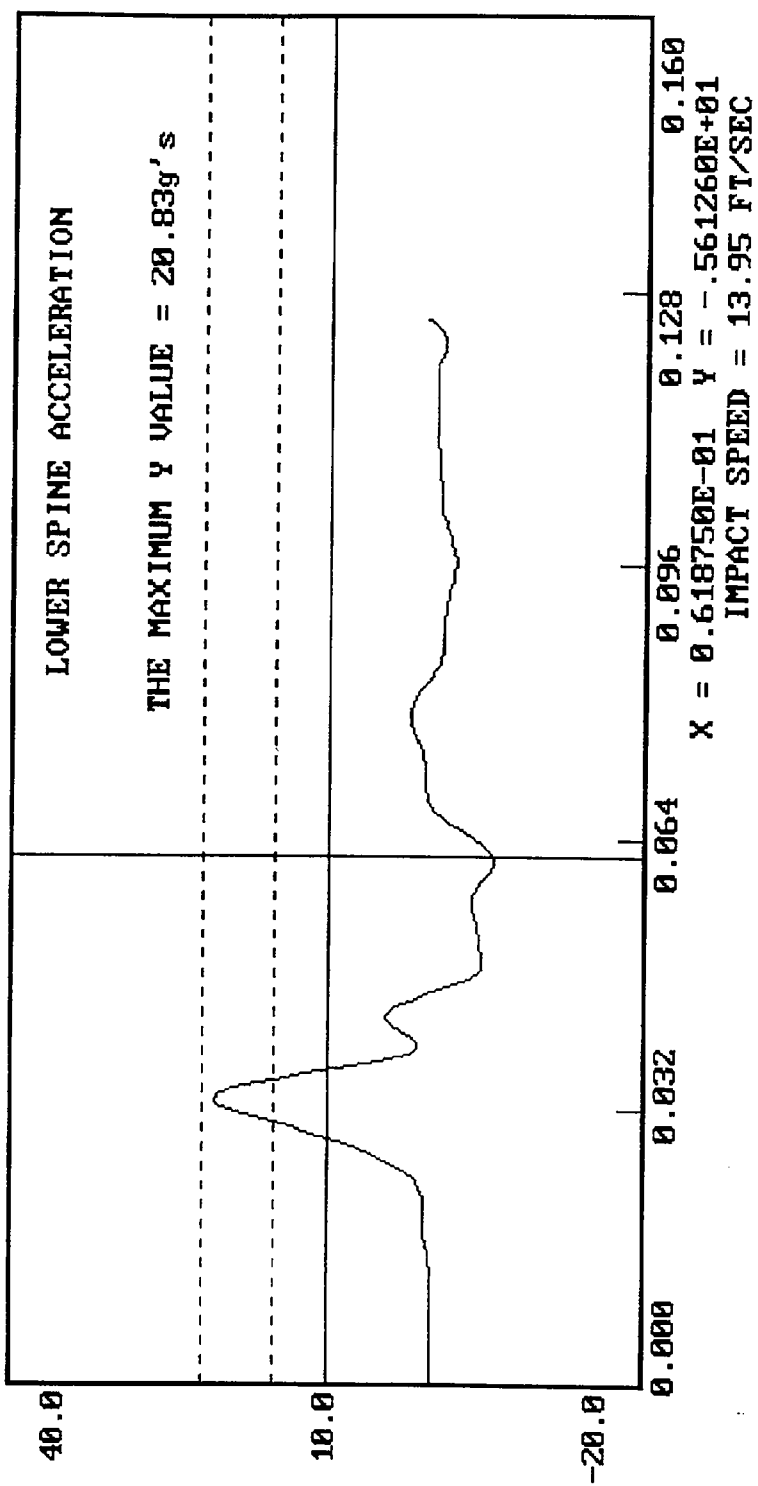


DUMMY CALIBRATION - THORAX IMPACT
 DUMMY # 269
 ACCELERATION (G'S) VS. TIME ((SECONDS))

02-19-1996 16:04



DUMMY CALIBRATION - THORAX IMPACT
 DUMMY # 269
 02-19-1996 16:04
 ACCELERATION (G'S) VS. TIME ((SECONDS))



MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: February 19, 1996

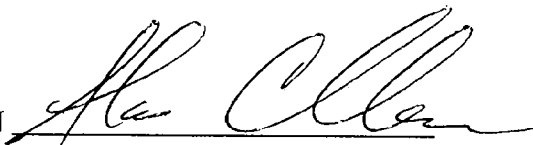
DUMMY NUMBER: 269

TEST NUMBER: D96333

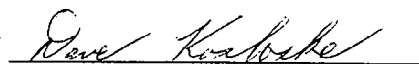
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	28%
PROBE SPEED	13.8 - 14.2 f/s	14.0
PELVIS ACCELERATION	40 - 60 g's	58

TEST MEETS SPECIFICATIONS

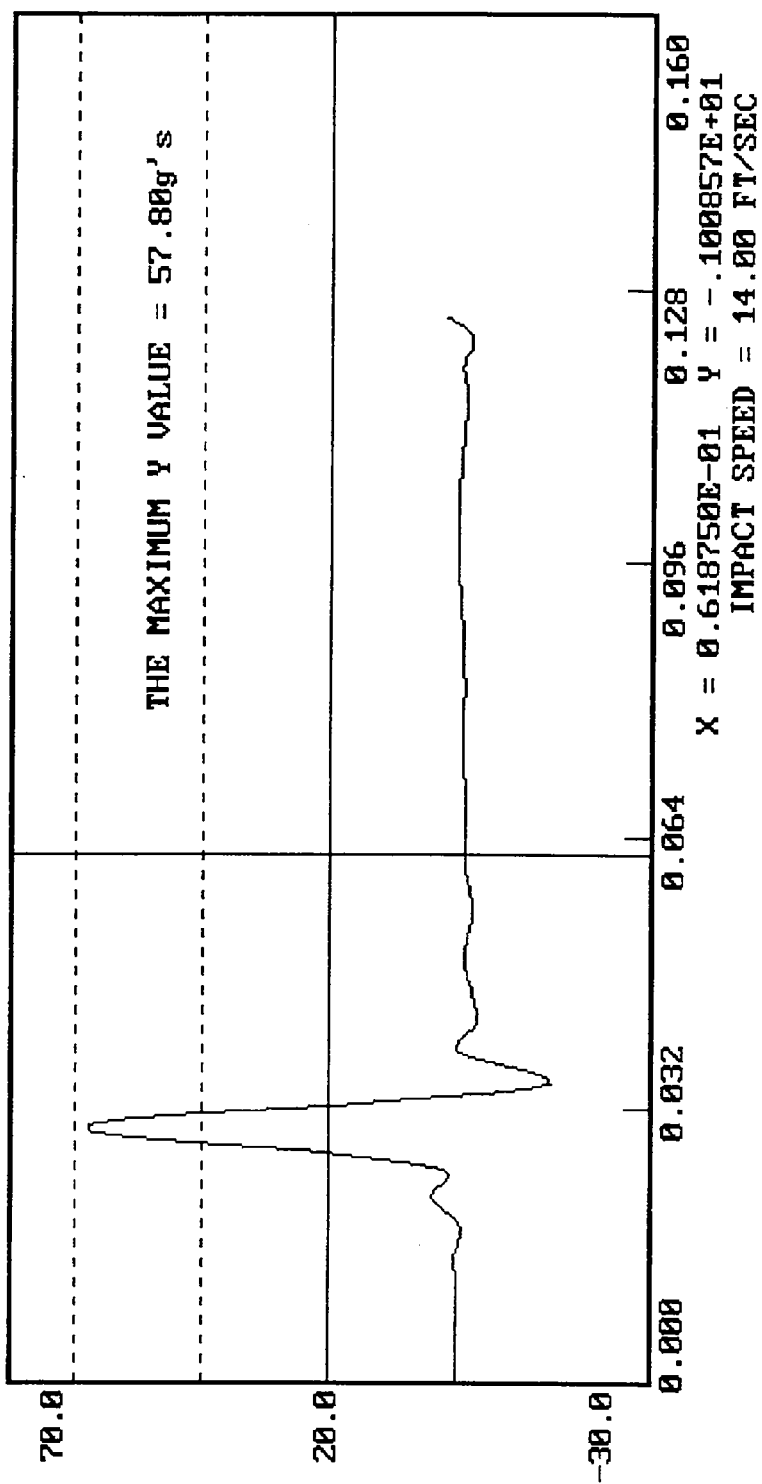
TECHNICIAN



APPROVED BY



DUMMY CALIBRATION - PELVIS IMPACT
 DUMMY # 269
 02-19-1996 16:20
 ACCELERATION (G'S) VS. TIME ((SECONDS))



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

DATE: February 20, 1996

DUMMY NUMBER: 269

TEST NUMBER: D96334

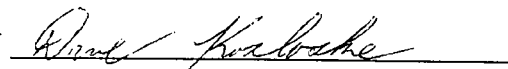
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	30%
FORCE @ 0.5 in	23.3 - 36.5 lbs	34.1
FORCE @ 0.75 in	36.7 - 49.8 lbs	47.5
FORCE @ 1.0 in	50 - 63 lbs	60
FORCE @ 1.3 in	73 - 88 lbs	81

TEST MEETS SPECIFICATIONS

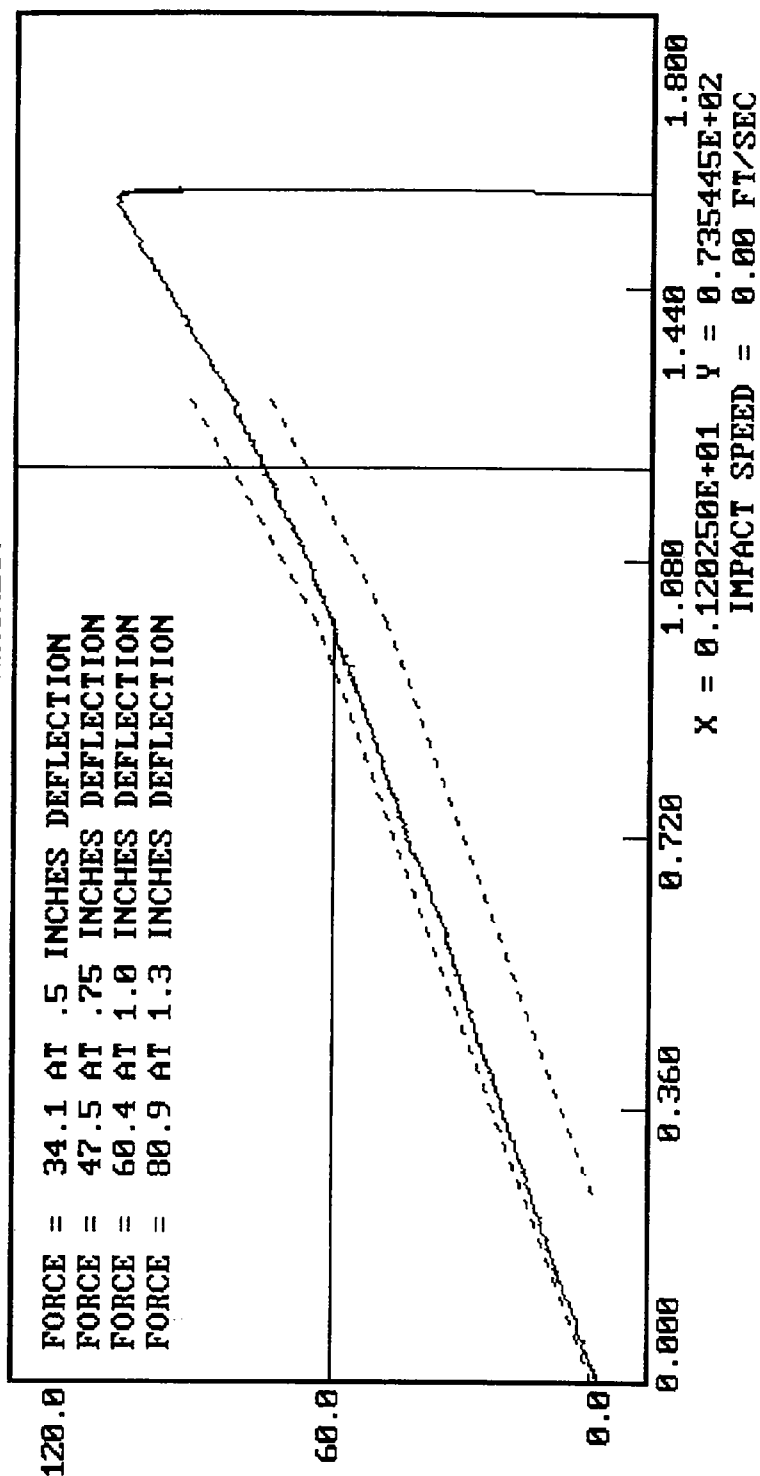
TECHNICIAN



APPROVED BY



DUMMY CALIBRATION - ABDOMEN COMPRESSION
 DUMMY # 269
 02-20-1996 15:43
 ABDOMEN FORCE (LBS) VS. ABDOMEN DISPLACEMENT (INCHES)



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: February 20, 1996

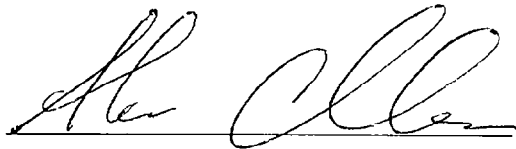
DUMMY NUMBER: 269

TEST NUMBER: D96335

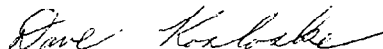
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	30%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	31
FORCE @ 30°	34 - 46 lbs	46
FORCE @ 40°	46 - 58 lbs	51
RETURN ANGLE	12° maximum	5°

TEST MEETS SPECIFICATIONS

TECHNICIAN

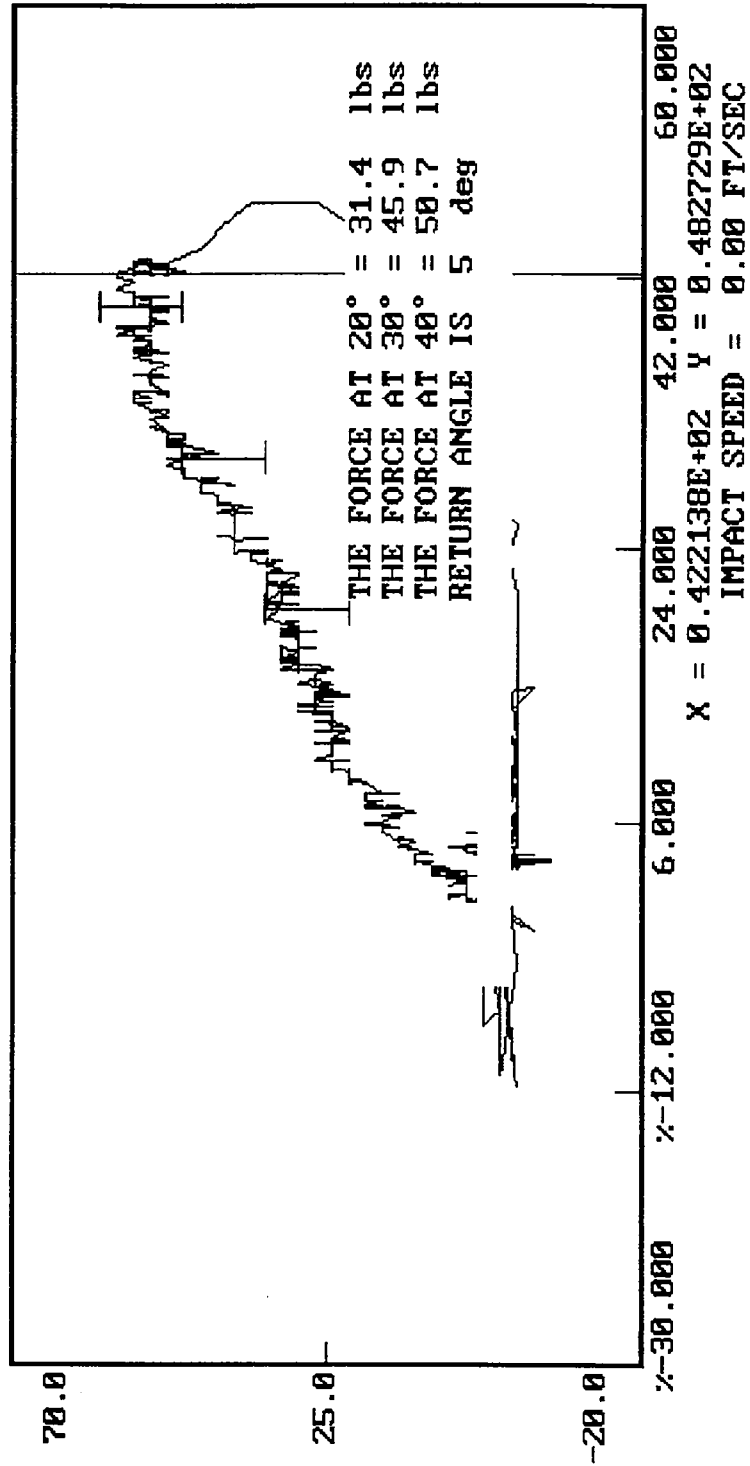


APPROVED BY



DUMMY CALIBRATION - LUMBAR FLEXION
 DUMMY # 269
 FORCE () VS. TORSO ROTATION (DEGREES)

02-20-1996 11:27



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.

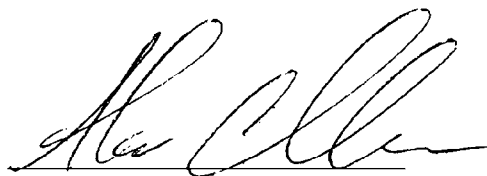
SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 272

DATE OF VERIFICATION: February 20, 1996

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: February 20, 1996

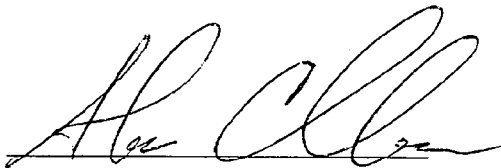
DUMMY NUMBER: 272

TEST NUMBER: D96362

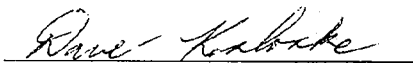
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	30%
PROBE SPEED	13.8 - 14.2 fps	13.9
UPPER RIB	37 - 46 g's	46
LOWER RIB	37 - 46 g's	45
LOWER SPINE	15 - 22 g's	21

TEST MEETS SPECIFICATIONS

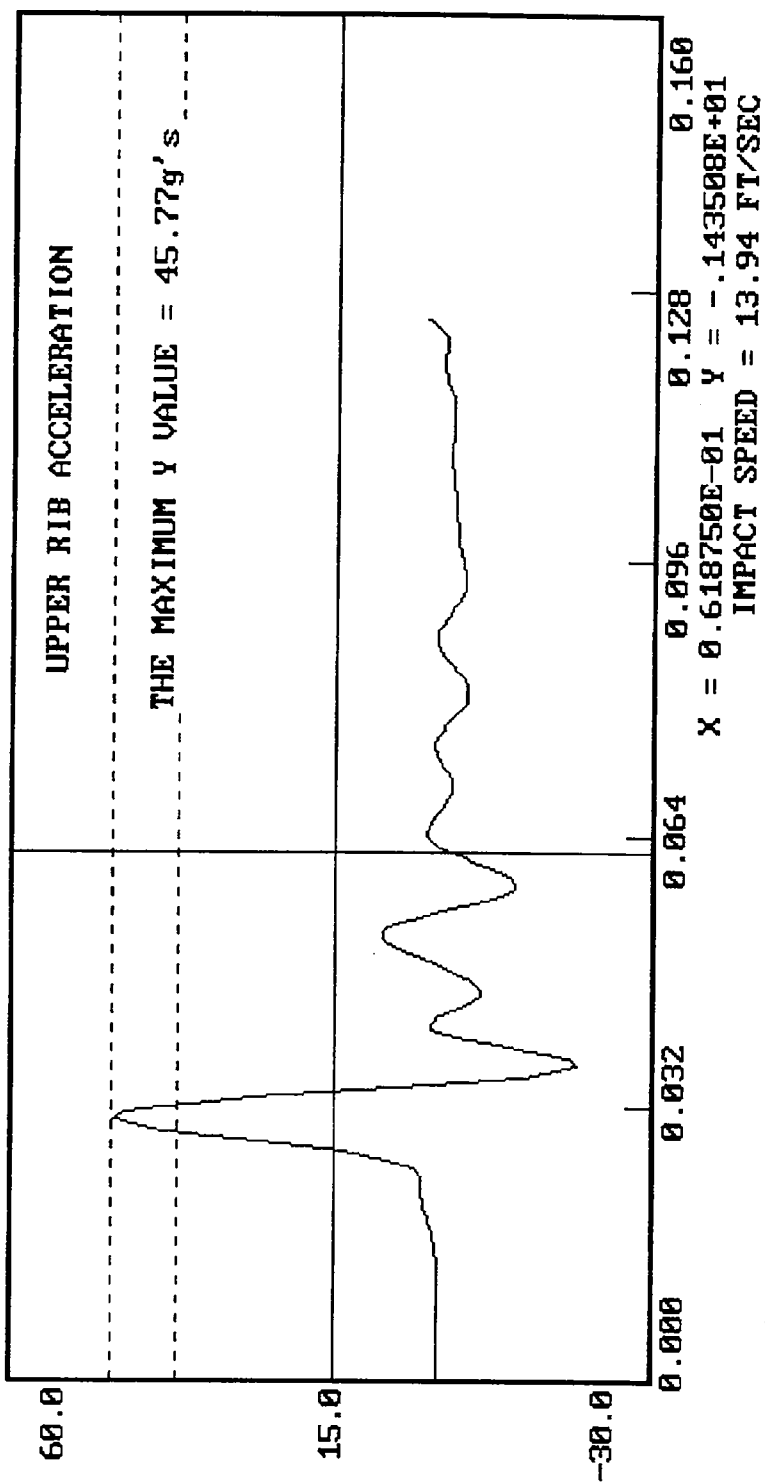
TECHNICIAN



APPROVED BY

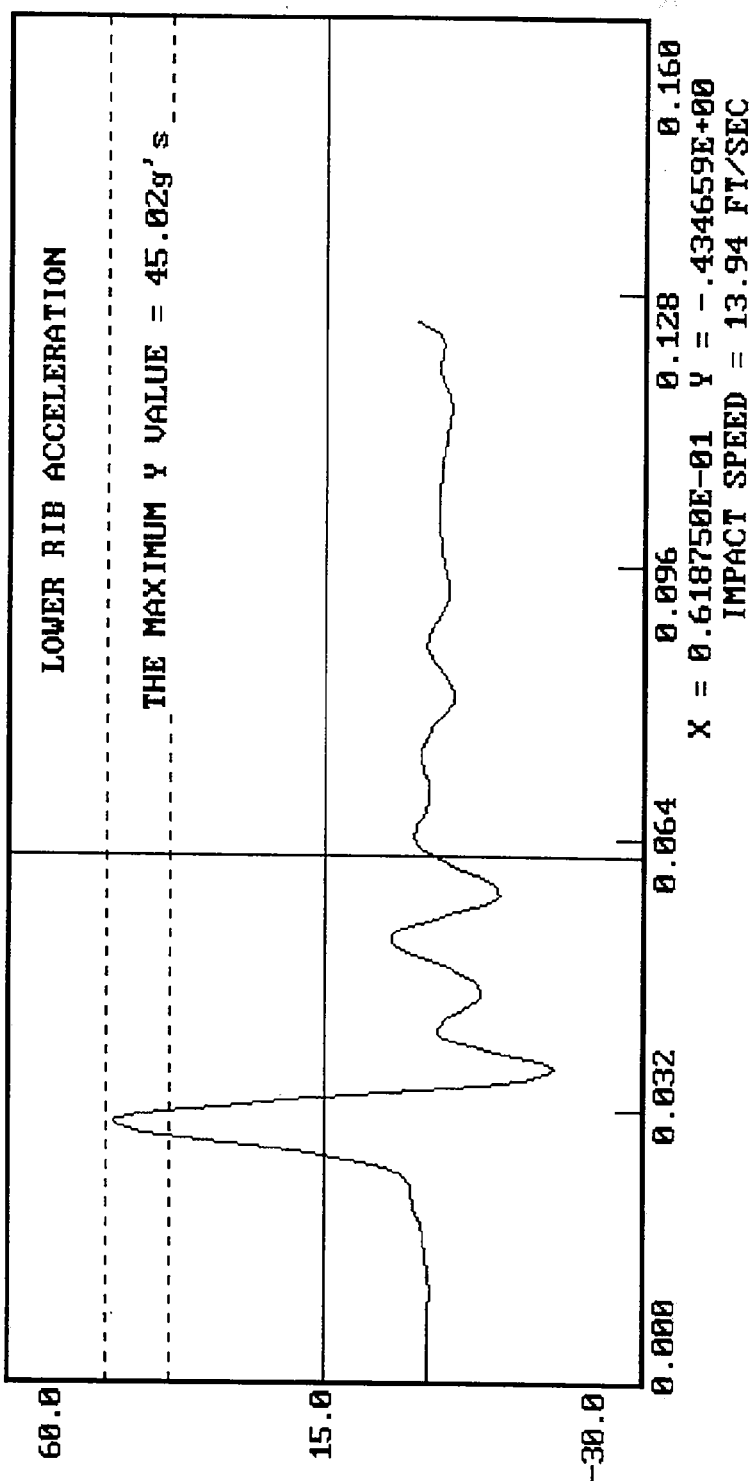


DUMMY CALIBRATION - THORAX IMPACT
 DUMMY # 272
 02-20-1996 08:08
 ACCELERATION (G'S) VS. TIME ((SECONDS))

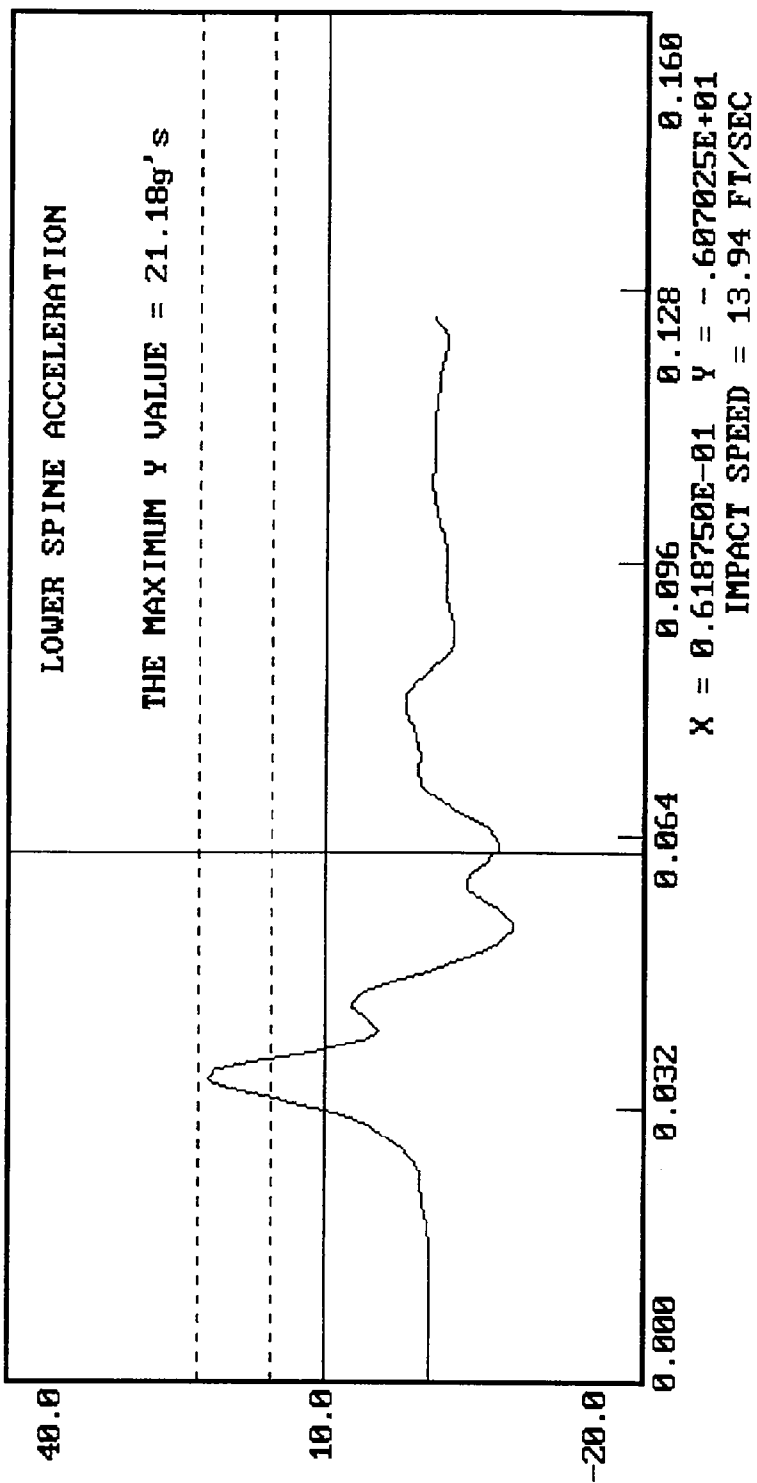


DUMMY CALIBRATION - THORAX IMPACT
 DUMMY # 272
 ACCELERATION (G'S) VS. TIME ((SECONDS))

02-20-1996 08:04



DUMMY CALIBRATION - THORAX IMPACT
 DUMMY # 272
 02-20-1996 08:04
 ACCELERATION (G'S) VS. TIME ((SECONDS))



MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: February 20, 1996

DUMMY NUMBER: 272

TEST NUMBER: D96363

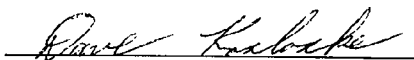
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	30%
PROBE SPEED	13.8 - 14.2 f/s	13.9
PELVIS ACCELERATION	40 - 60 g's	46

TEST MEETS SPECIFICATIONS

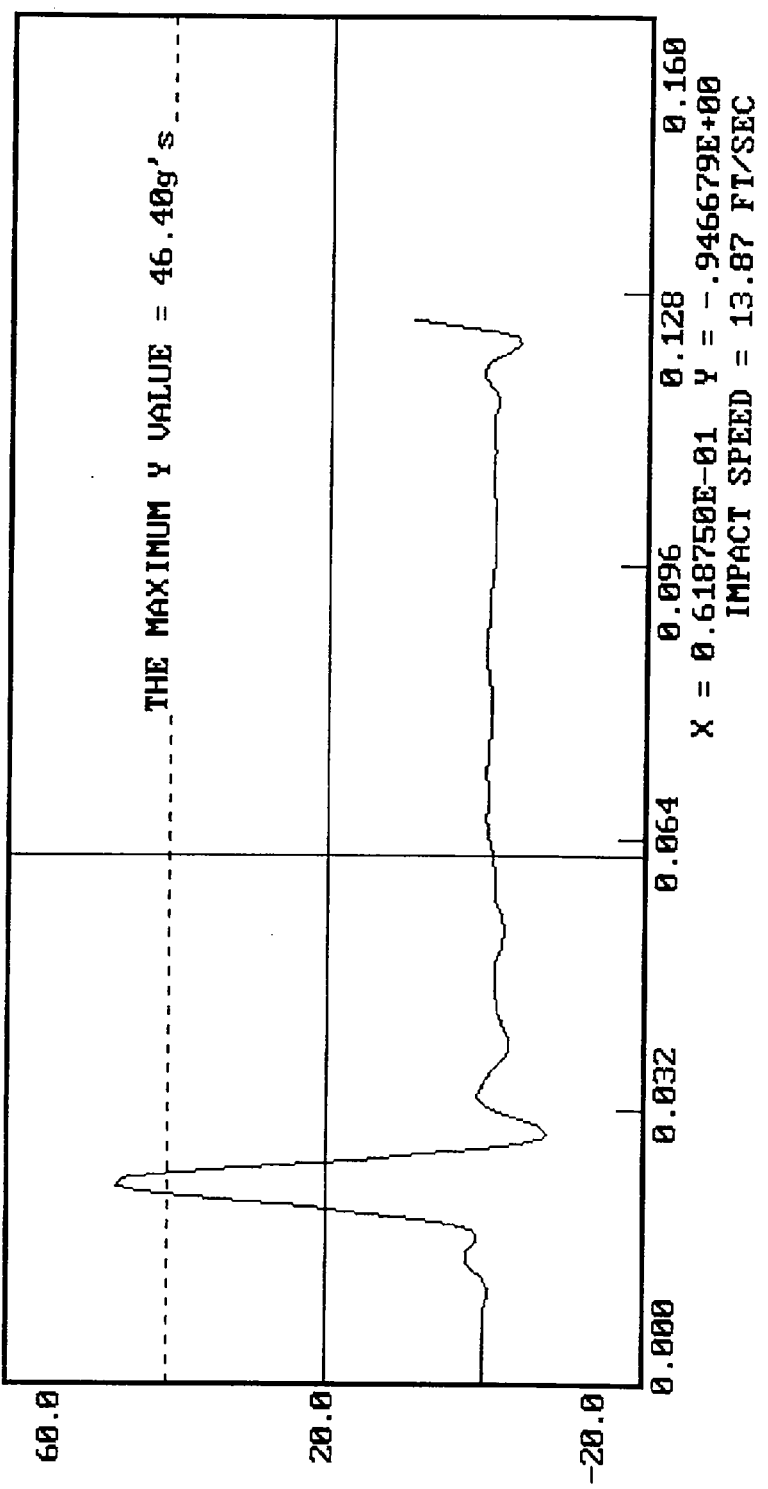
TECHNICIAN



APPROVED BY



DUMMY CALIBRATION - PELVIS IMPACT
 DUMMY # 272
 02-20-1996 08:27
 ACCELERATION (G'S) VS. TIME ((SECONDS))



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

DATE: February 20, 1996

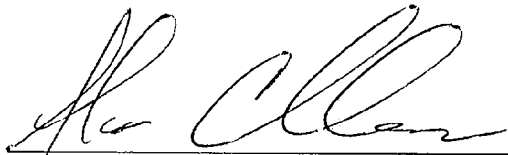
DUMMY NUMBER: 272

TEST NUMBER: D96364

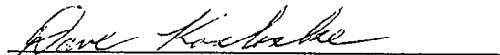
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	30%
FORCE @ 0.5 in	23.3 - 36.5 lbs	32.8
FORCE @ 0.75 in	36.7 - 49.8 lbs	46.1
FORCE @ 1.0 in	50 - 63 lbs	61
FORCE @ 1.3 in	73 - 88 lbs	83

TEST MEETS SPECIFICATIONS

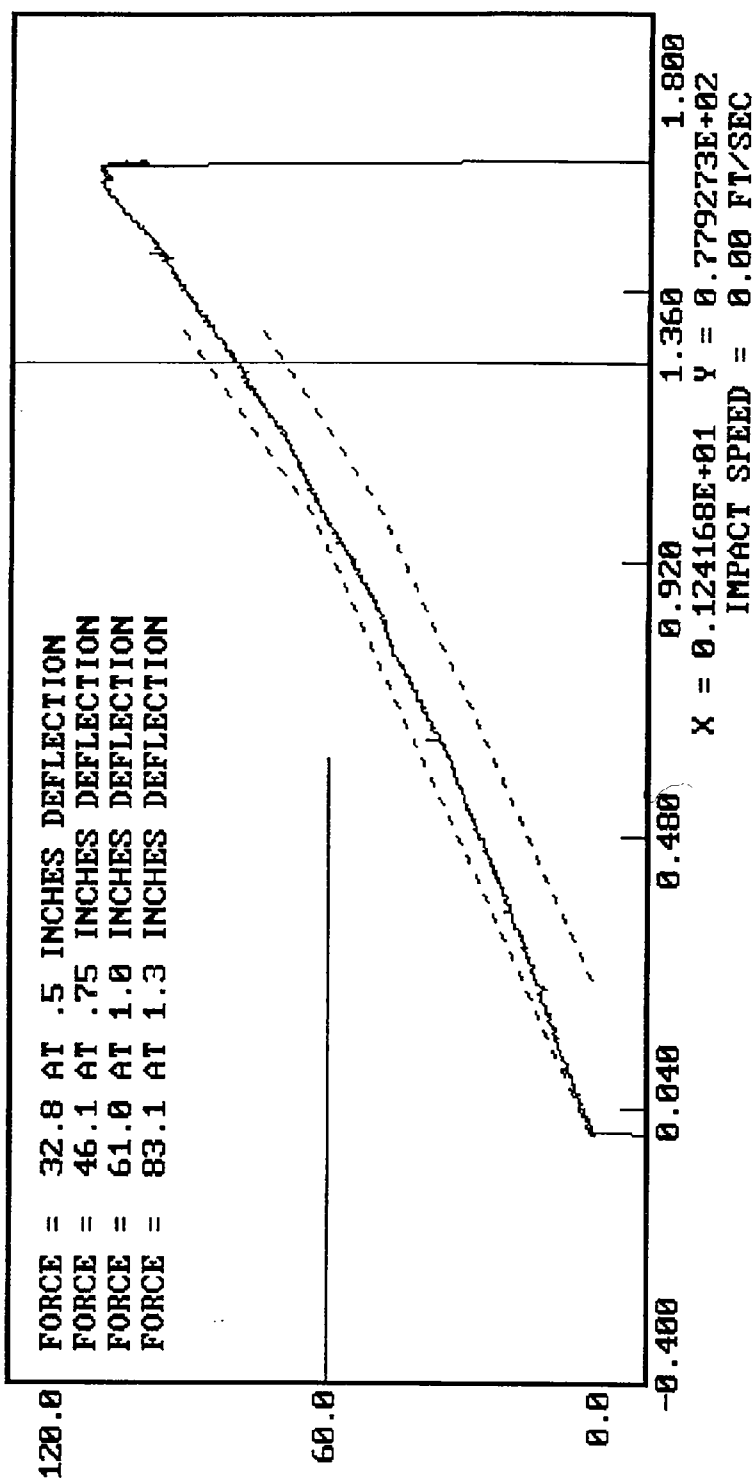
TECHNICIAN



APPROVED BY



DUMMY CALIBRATION - ABDOMEN COMPRESSION
 DUMMY # 272
 02-20-1996 18:05
 ABDOMEN FORCE (LBS) VS. ABDOMEN DISPLACEMENT (INCHES)



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: February 20, 1996

DUMMY NUMBER: 272

TEST NUMBER: D96365

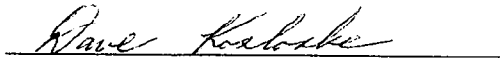
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	30%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	23
FORCE @ 30°	34 - 46 lbs	38
FORCE @ 40°	46 - 58 lbs	48
RETURN ANGLE	12° maximum	4°

TEST MEETS SPECIFICATIONS

TECHNICIAN



APPROVED BY

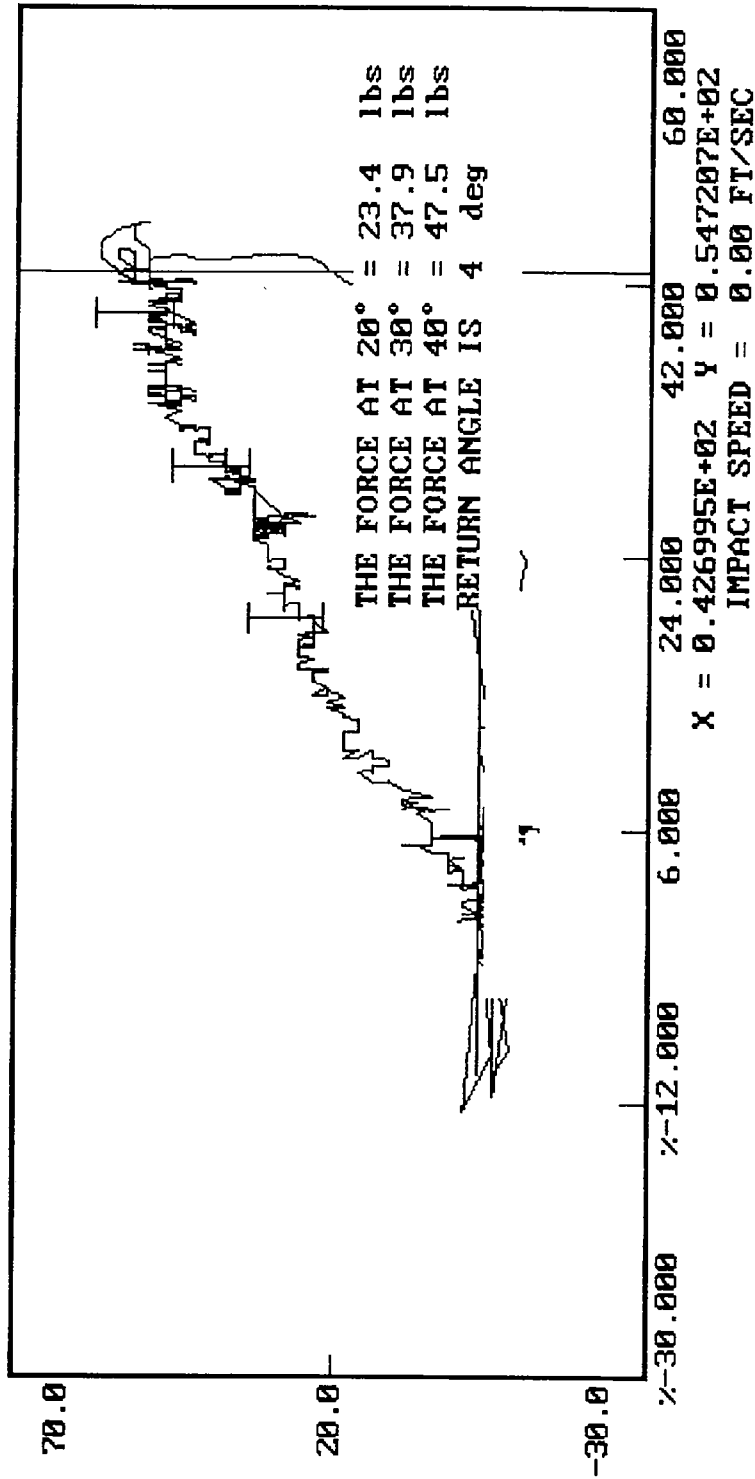


DUMMY CALIBRATION - LUMBAR FLEXION

DUMMY # 272

FORCE () VS. TORSO ROTATION (DEGREES)

02-20-1996 11:35



POST-TEST DRIVER DUMMY INSPECTION CHECKLIST

Type: Side Impact Dummy

Serial Number: 269

Inspected By: Al Chalmers

Date: February 20, 1996

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

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

POST-TEST PASSENGER DUMMY INSPECTION CHECKLIST

Type: Side Impact Dummy

Serial Number: 272

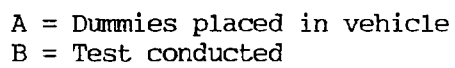
Inspected By: Al Chalmers

Date: February 20, 1996

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

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

1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.



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	February 12, 1996
Lower Rib Y	ALEC1	Endevco	February 12, 1996
Lower Spine Y	AH1G2	Endevco	February 12, 1996
Pelvis Y	ALCN9	Endevco	February 12, 1996
Upper Rib Redundant Y	AGTB5	Endevco	February 12, 1996
Lower Rib Redundant Y	10411	Endevco	February 12, 1996
Lower Spine Redundant Y	AM751	Endevco	February 12, 1996
Pelvis Redundant Y	AKAF3	Endevco	February 12, 1996

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	10866	Endevco	January 29, 1996
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	11380	Endevco	January 29, 1996
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-D03	Entran	October 23, 1995
Moving Barrier CG Y	C25-A07	Entran	September 01, 1995
Moving Barrier CG Z	AH0L7	Endevco	October 24, 1995
Moving Barrier Rear Axle X	E25-G09	Entran	February 2, 1996
Moving Barrier Rear Axle Y	E25-G06	Entran	February 2, 1996
Left Mid A-Post Y	H07-A12	Entran	January 31, 1996
Left Lower A-Post Y	F07-A12	Entran	January 31, 1996
Left Mid B-Post Y	D06-A06	Entran	October 23, 1995
Left Lower B-Post Y	B02-G06	Entran	January 31, 1996
Rear Floorpan Above Axle X	L14-D05	Entran	October 24, 1995
Rear Floorpan Above Axle Y	H07-A11	Entran	September 05, 1995
Rear Floorpan Above Axle Z	F07-A19	Entran	September 29, 1995
Driver Seat Track Y	L18-E07	Entran	October 23, 1995
Right Side Sill at Front Seat X	C25-A08	Entran	October 24, 1995
Right Side Sill at Front Seat Y	L18-G01	Entran	October 24, 1995
Right Side Sill at Front Seat Z	C25-A01	Entran	October 05, 1995
Right Side Sill at Rear Seat X	E13-D18	Entran	October 23, 1995
Right Side Sill at Rear Seat Y	D06-A15	Entran	October 23, 1995
Right Side Sill at Rear Seat Z	L14-D19	Entran	October 24, 1995
Left Side Sill at Front Seat Y	H07-A06	Entran	September 05, 1995

VEHICLE INSTRUMENT CALIBRATION

	VEHICLE ACCELEROMETERS		
	SERIAL NO	MANUFACTURER	CALIBRATION DATE
Left Side Sill at Rear Seat Y	F07-A04	Entran	August 01, 1995
Right Rear Occupant Compartment Y	C25-A04	Entran	January 31, 1996
Vehicle CG X	D06-A16	Entran	February 02, 1996
Vehicle CG Y	H16-X16	Entran	September 21, 1995
Vehicle CG Z	L18-E13	Entran	January 22, 1995

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