V2501

REPORT NO.: 214-MGA-97-12
SAFETY COMPLIANCE TESTING FOR
FMVSS 214 "SIDE IMPACT PROTECTION -
PASSENGER CARS"

FORD MOTOR COMPANY
1997 FORD ESCORT 4 DOOR
NHTSA NO: CV0205

MGA PROVING GROUNDS
5000 WARREN ROAD
BURLINGTON, WI 53105

Test Date: November 26, 1996

Report Date: January 13, 1997

FINAL REPORT

Prepared For:

U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
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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
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15. Supplementary Notes		

16. Abstract

A 48/24 kph 90° Impact (Moving Deformable Barrier) Compliance Test was conducted on the subject 1997 Ford Escort 4 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 November 26, 1996.

The impact velocity of the Moving Deformable Barrier (MDB) was 53.3 kph, and the ambient temperature at the struck side of the target vehicle at the time of impact was 21°C. The target vehicle post test maximum crush was 355 mm at level 2. The test vehicle's performance follows:

	RIGHT FRONT PASS.	RIGHT REAR PASS.
Right Upper Rib (RUR) Accel., g	47	52
Right Lower Rib (RLR) Accel., g	61	63
Lower Spine (T_{12}) Accel., g	61	63
Thoracic Trauma Index (TTI)	61	63
Pelvis (PEV) Accel., g	77	72

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

17. Key Words 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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Approval Date: 1-17-97

FINAL REPORT ACCEPTED BY (OVSC):

Accepted By:
Contract Technical Manager

Acceptance Date: 3/19/97

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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 of a 1997 Ford Escort 4 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 1997 Ford Escort 4 Door was impacted on the right 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 33.2 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 November 26, 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 right front and rear right 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. Right Upper Rib (RUR) uniaxial accelerometer (Y-direction)
2. Right Lower Rib (RLR) 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 FMVSS 214 Right Side Impact test:

Injury Criteria	Front SID	Rear SID
TTI (g)	61	63
Pelvis (g)	77	72

TEST NOTES

1. The following accelerometers were not used for this test:

   Right Front Door on Centerline

   Midrear of Right Front Door

   Right Front Door Upper Centerline

   Midrear of Right Rear Door

   Right 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: 1997/Ford/Escort/4 Door

Vehicle NHTSA No.: CV0205 VIN: 1FALP13P0VW136646

Vehicle Body Color: Green Build Date: 5/96

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

Placement __ Longitudinal; X Lateral

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

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

Odometer Reading 50 miles

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

__Cruise Control; __Tilt Wheel; __Power Door Locks;

DATA FROM TIRE PLACARD:

Tire Pressure (at capacity): 32 Psi FRONT

32 Psi REAR

Recommended Tire Size: P185/65R14

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

Vehicle Capacity Data:

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

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

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

Vehicle Maximum Capacity Loading	= 376.5 kg	(A)
No. of Occupants x 68.04 kg.	= 340.2 kg	(B)
Cargo Capacity (A-B)	= 36.3 kg	

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

WEIGHT OF TEST VEHICLE WITH MAXIMUM FLUIDS:

Right Front	= 354.3 kg	Right Rear	= 209.6 kg
Left Front	= 346.0 kg	Left Rear	= 214.5 kg
TOTAL FRONT = 700.3 kg		TOTAL REAR = 424.1 kg	

% of Total Vehicle Weight = 62.3 %; % of Total Weight = 37.7 %

TOTAL WEIGHT = 1124.4 kg

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

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

Vehicle NHTSA No.: CV0205 Test Date: November 26, 1996

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Test Vehicle Delivered Weight with Maximum Fluids	= 1124.4 kg
Cargo Carrying Capacity of Test Vehicle	= 36.3 kg
Weight of 2 Side Impact Dummies (2 x 80.7 kg.)	= 161.4 kg
TEST VEHICLE TARGET WEIGHT	= 1322.1 kg

FULLY LOADED WEIGHT OF VEHICLE:

Right Front	= 354.3 kg	Right Rear	= 209.6 kg
Left Front	= 346.1 kg	Left Rear	= 214.5 kg
TOTAL FRONT	= 700.4 kg	TOTAL REAR	= 424.1 kg
% of Total Weight	= 62.3 %	% of Total Weight	= 37.7 %

TOTAL TEST WEIGHT = 1124.5 kg

TEST VEHICLE ATTITUDE:

CURB WEIGHT ATTITUDE:

Right Front 672 mm Left Front 673 mm Right Rear 644 mm Left Rear 626 mm

FULLY LOADED WEIGHT ATTITUDE:

Right Front 656 mm Left Front 668 mm Right Rear 599 mm Left Rear 599 mm

TEST ATTITUDE:

Right Front 657 mm Left Front 661 mm Right Rear 603 mm Left Rear 610 mm

GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

Test Vehicle Wheelbase: 2496 mm

C.G. = 1015 mm rearward of front wheel centerline

TOTAL VEHICLE LENGTH:

Right Side = 3924 mm

Centerline = 4312 mm

Left Side = 3924 mm

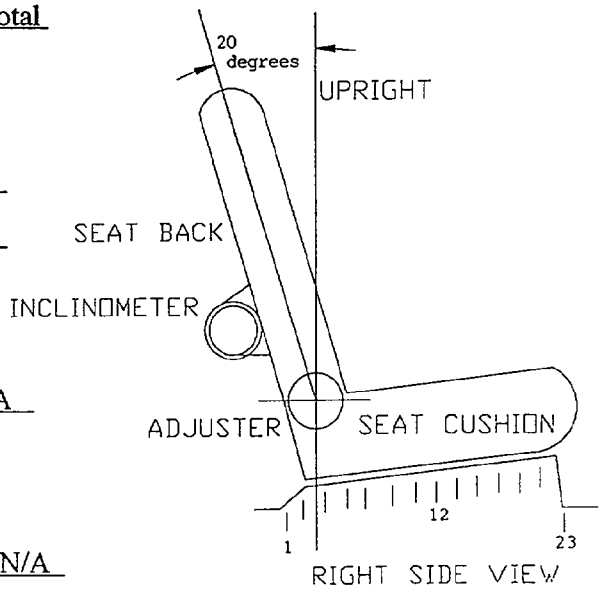
GENERAL VEHICLE TEST PARAMETER DATA (Cont'd)

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

Vehicle NHTSA No.: CV0205 Test Date: November 26, 1996

FRONT SEAT CUSHION PLACEMENT:

Test Position: 12th position rearward out of 23 total



FRONT SEAT BACK ADJUSTMENT POSITION:

Seat Back Angle = 20° from the vertical position

5th latching position from first detent "0".

REAR POSITION SEAT:

Total Length of Fore/Aft Adjustment Travel: N/A

Seat Back Adjustment Position: N/A

ADJUSTABLE STEERING COLUMN POSITION: N/A

WINDOW POSITIONS: Left Front Down Left Rear Removed

Right Front Up Right Rear Up

AMOUNT OF STODDARD SOLVENT IN FUEL TANK:

Fuel system usable capacity = 48.1 liters

Test Volume: 44.7 liters 93 % of capacity

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

Wheelbase: = 2496 mm

Impact Point is 308 mm rearward of front axle centerline

DATA SHEET NO. 2

TEST VEHICLE SUMMARY OF RESULTS

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

Vehicle NHTSA No.: CV0205 Test Date: November 26, 1996

Overall Length = 4312 mm; Overall Width = 1709 mm

TEST WEIGHT:

Right Front =	408.2 kg	Right Rear =	272.6 kg
Left Front =	371.5 kg	Left Rear =	261.8 kg
TOTAL FRONT =	779.7 kg	TOTAL REAR =	534.4 kg
% of Total Weight =	59.3 %	% of Total Weight =	40.7 %

TOTAL VEHICLE WEIGHT = 1314.1 kg

Wheelbase = 2496 mm

Longitudinal C.G. from Center of Front Axle = 1015 mm

Impact Angle with Respect to Impactor = 90° degrees

MAXIMUM EXTERIOR STATIC CRUSH:

1. LEVEL 1 (249 mm above ground) = 177 mm
2. LEVEL 2 (463 mm above ground) = 355 mm
3. LEVEL 3 (577 mm above ground) = 328 mm
4. LEVEL 4 (862 mm above ground) = 237 mm
5. LEVEL 5 (1295 mm above ground) = 55 mm

Maximum Post-Test Intrusion = 355 mm

OCCUPANTS:	Right Front Passenger	Right Rear Passenger
Type of Dummy	SID	SID
Restraints Used	type II belt with frontal airbag	type II belt

TEST VEHICLE SUMMARY OF RESULTS (Cont'd)

INSTRUMENTATION:

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

DATA SHEET NO. 3

MOVING DEFORMABLE BARRIER (MDB) SUMMARY OF RESULTS

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

Vehicle NHTSA No.: CV0205 Test Date: November 26, 1996

POSITION OF IMPACT (MDB) ON MONORAIL:

Crabbed 27° to right

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	= 1106 mm
C.G. Location From Center Line	= 14.7 mm
C.G. Location Above Ground Level	= 488 mm

MDB WEIGHT:

Left Front	= 434.5 kg	Left Rear	= 233.2 kg
Right Front	= 342.9 kg	Right Rear	= 346.0 kg
TOTAL FRONT = 777.4 kg		TOTAL REAR = 579.2 kg	

TOTAL MDB WEIGHT = 1356.6 kg

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

Impact Speed = Primary: 33.2 mph (53.3 kph) Secondary: 33.2 mph (53.3 kph)

CRASH TEST SUMMARY FOR SIDE IMPACTOR (Cont'd)

MAXIMUM STATIC CRUSH OF HONEYCOMB IMPACT FACE:

1. Row A Top of Stack (813 mm) = 137 mm
2. Row B Mid Stack (686 mm) = 116 mm
3. Row C Top of Bumper (533 mm) = 79 mm
4. Row D Center of Bumper (432 mm) = 115 mm

INSTRUMENTATION:

Number of MDB Data Channels = 7

DATA SHEET NO. 4

POST-TEST OBSERVATIONS

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

Vehicle NHTSA No.: CV0205 Test Date: November 26, 1996

VISIBLE DUMMY CONTACT POINTS:

	RIGHT FRONT SID	RIGHT REAR SID
Head	to headrest and shoulder	to C Post
Arm	to door panel	to door panel
Pelvis	to door panel	to door panel
Left Knee	to right knee	to right knee
Right Knee	to door panel	to door panel

DOOR OPENING:

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

MDB DISTANCE FROM TARGET IMPACT POINT:

Horizontal: 3 mm forward Vertical: 12 mm high

ARM REST LOCATIONS:

Front: 205 mm from bottom of window

Rear: 215 mm from bottom of window

POST-TEST OBSERVATIONS (Cont'd)

SEAT CRUSH:

Front Seat Back: 58 mm Front Seat Cushion: 48 mm

Left Rear Seat Back: 100 mm Rear Seat Cushion: 230 mm

GLAZING DAMAGE:

Right side front and rear door glass broken, windshield cracked

PILLAR PERFORMANCE:

No failure noted

SILL SEPARATION:

No failure noted

OTHER NOTABLE IMPACT EFFECTS:

None noted

SECTION 4

OCCUPANT AND VEHICLE INFORMATION

DATA SHEET NO. 5

SIDE IMPACT DUMMY (SID) INSTRUMENTATION DATA

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

Vehicle NHTSA No.: CV0205 Test Date: November 26, 1996

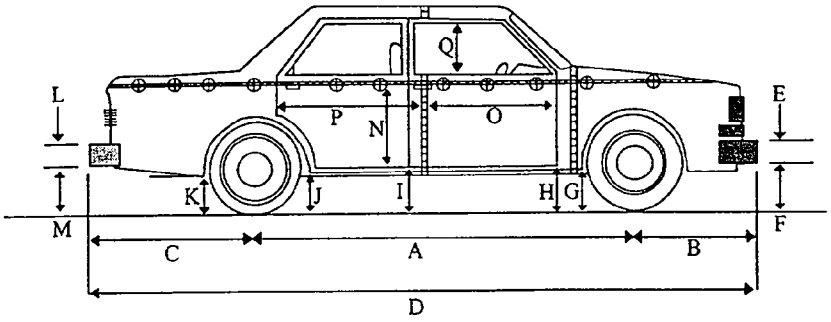
	Front SID ID #271				Rear SID ID #272			
	Pos. Direct.		Neg. Direct		Pos. Direct.		Neg. Direct	
	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)
RIB ACCELERATIONS								
Right Upper Rib (RUR) Y	8	31	-47	38	5	58	-52	43
Right Lower Rib (RLR) Y	7	93	-61	39	19	71	-63	44
SPINE ACCELERATIONS								
Lower Lateral Y	13	73	-61	30	19	75	-63	44
PELVIS ACCELERATIONS								
Lateral Y	9	76	-77	32	11	86	-72	35

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



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	2496	2482	14
B	878	880	2
C	946	974	28
D	4312	4336	24
E	170	165	5
F	386	410	24
G	213	215	2
H	192	215	23
I	210	237	27
J1/J2	216/216	224/226	8/10
K	382	405	23
L*	---	---	---
M	344	352	8
N	595	535	60
O	684	670	14
P	1230	1164	66
Q	445	427	18
R	3924	3921	3
S	3924	3953	29
T	1709	1505	204

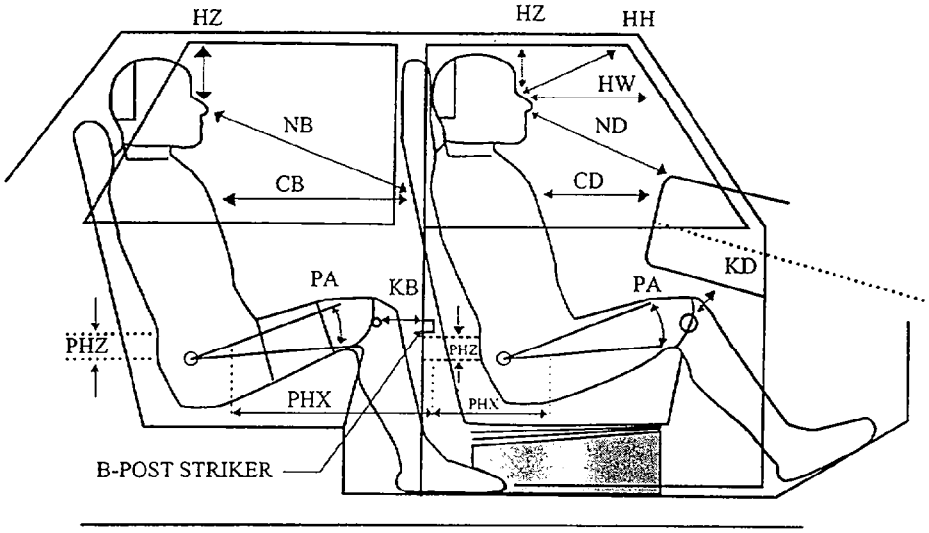
* Rear bumper removed for test

DATA SHEET NO. 7

SIDE IMPACT DUMMY (SID) LONGITUDINAL CLEARANCE DIMENSIONS

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

NHTSA NO.: CV0205 Test Date: November 26, 1996



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

	FRONT PASSENGER ID #271
HH	354
HW	587
HZ	166
ND	661
CD	543
CS	N/A
KDL(KDA°)	169 (0°)
KDR(KDA°)	167 (0°)
PA°	24.8°
PHX	192
PHZ	118

	REAR PASSENGER SID ID #272
HZ	135
NB	557
CB	471
KBL (KBA)	174 (0°)
KBR (KBA)	184 (0°)
PA°	23.3°
PHX	278
PHZ	300

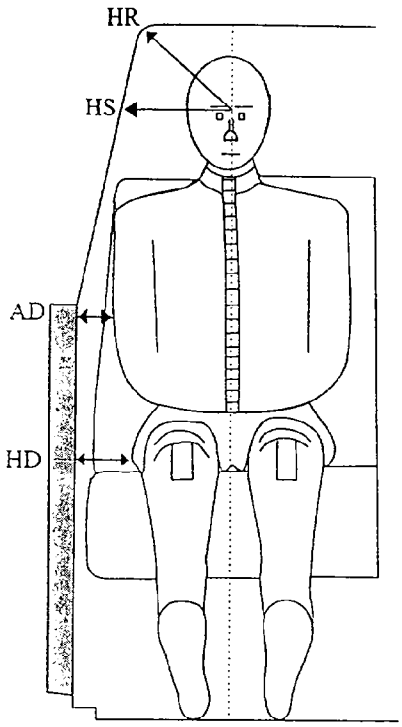
NOTE: 2-door vehicle shown. Rear dummy PHX & PHZ measurements for 4-door vehicle would use the C-post striker as reference point.

DATA SHEET NO. 8

SIDE IMPACT DUMMY (SID) LATERAL CLEARANCE DIMENSIONS

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

NHTSA NO.: CV0205 Test Date: November 26, 1996



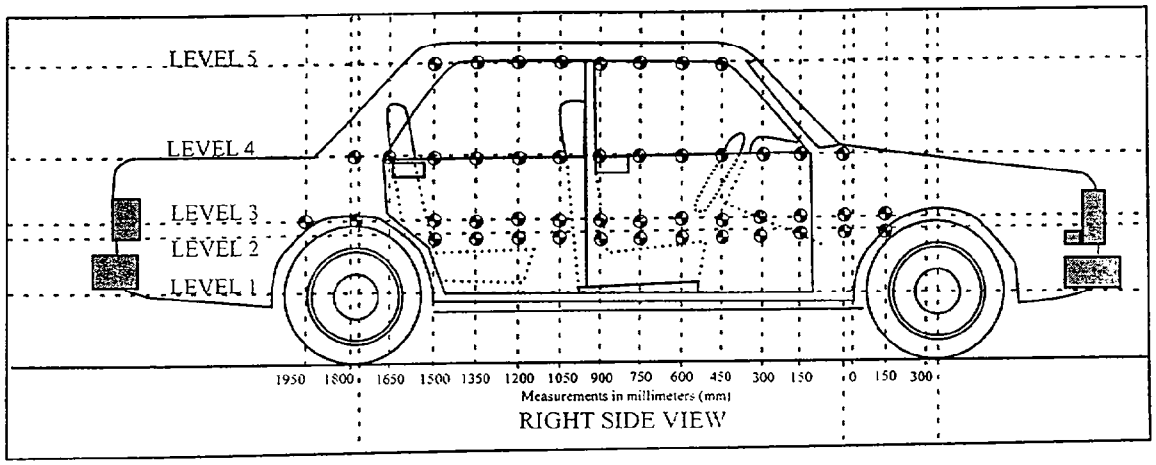
NOTE: All dimensions are in mm

	FRONT PASSENGER ID #271	REAR PASSENGER ID #272
HR	199	191
HS	278	229
AD	103	115
HD	157	136

DATA SHEET NO. 9
VEHICLE SIDE MEASUREMENTS

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

NHTSA NO.: CV0205 Test Date: November 26, 1996



RIGHT SIDE VIEW

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

MEASUREMENTS ALONG THE VERTICAL 750 mm. LINE SHOWN ABOVE

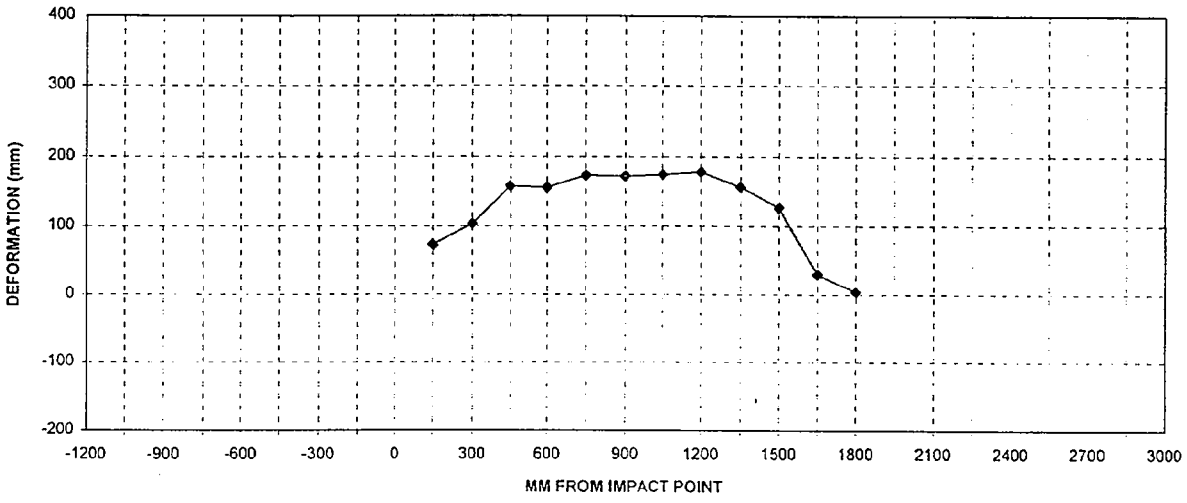
Level 1 @ Axle Centerline Height (or Sill Top Height)	= 249 mm
Level 2 @ Occupant H-Point	= 463 mm
Level 3 @ Mid Door	= 577 mm
Level 4 @ Window Sill	= 862 mm
Level 5 @ Window Top	= 1295 mm

DATA SHEET NO. 10
VEHICLE EXTERIOR CRUSH PROFILES

	Level 1 - Axle Centerline		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1200			
-1050			
-900			
-750			
-600			
-450			
-300			
-150			
0 (impact point)			
150	822	895	73
300	824	927	103
450	827	984	157
600	827	982	155
750	826	998	172
900	828	999	171
1050	828	1001	173
1200	828	1005	177
1350	827	983	156
1500	828	954	126
1650	826	856	30
1800	826	830	4
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 (Cont'd)



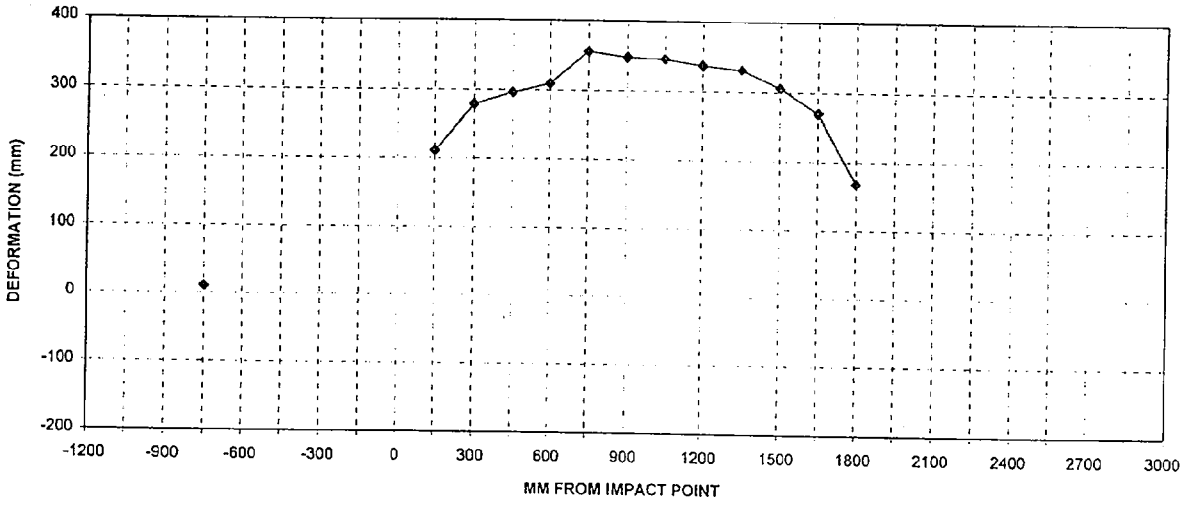
LEVEL 1 - AXLE CENTERLINE

DATA SHEET NO. 10 (Cont'd)
VEHICLE EXTERIOR CRUSH PROFILES

	Level 2 - Occupant H Point		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1200			
-1050			
-900			
-750	797	807	10
-600			
-450			
-300			
-150			
0 (impact point)			
150	753	964	211
300	753	1032	279
450	754	1050	296
600	755	1064	309
750	756	1111	355
900	757	1104	347
1050	759	1104	345
1200	760	1097	337
1350	760	1091	331
1500	756	1062	306
1650	757	1028	271
1800	757	924	167
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 (Cont'd)



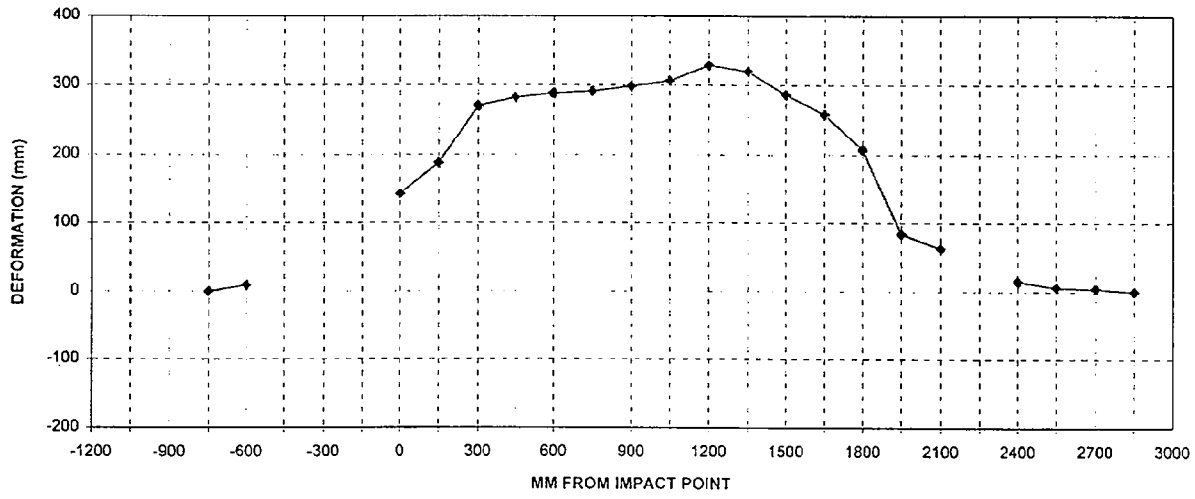
LEVEL 2 - OCCUPANT H-POINT

DATA SHEET NO. 10 (Cont'd)
VEHICLE EXTERIOR CRUSH PROFILES

	Level 3 - Mid Door		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1200			
-1050			
-900			
-750	800	800	0
-600	771	780	9
-450			
-300			
-150			
0 (impact point)	744	887	143
150	747	935	188
300	741	1011	270
450	745	1027	282
600	746	1034	288
750	748	1039	291
900	750	1048	298
1050	752	1058	306
1200	755	1083	328
1350	751	1070	319
1500	750	1036	286
1650	752	1010	258
1800	752	959	207
1950	751	835	84
2100	752	815	63
2250			
2400	762	777	15
2550	774	780	6
2700	789	793	4
2850	823	823	0
3000			

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

VEHICLE EXTERIOR STATIC CRUSH (Cont'd)



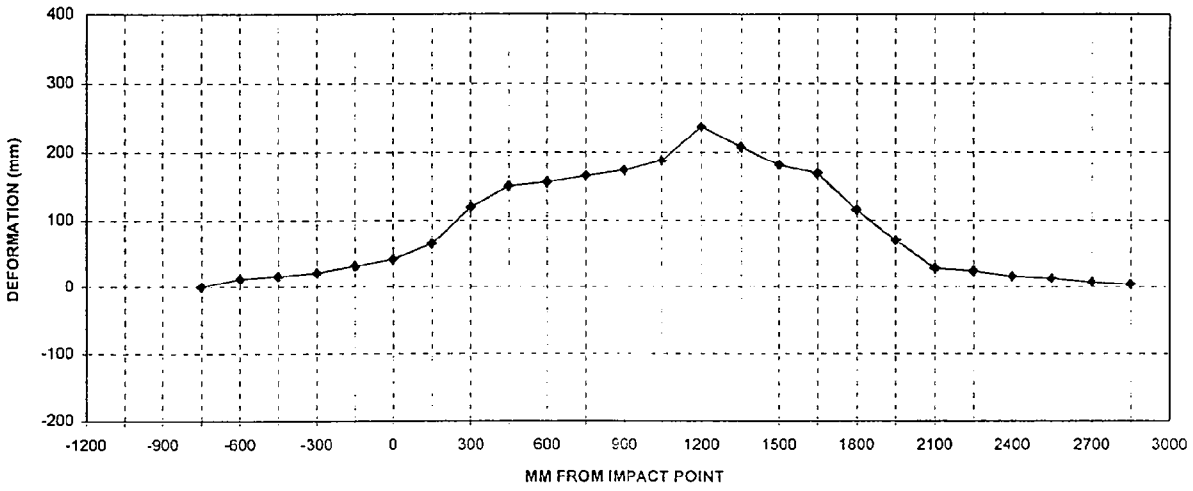
LEVEL 3 - MID DOOR

DATA SHEET NO. 10 (Cont'd)
VEHICLE EXTERIOR CRUSH PROFILES

	Level 4 - Window Sill		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1200			
-1050			
-900			
-750	870	870	0
-600	854	866	12
-450	840	856	16
-300	831	852	21
-150	823	854	31
0 (impact point)	819	860	41
150	818	882	64
300	819	938	119
450	822	972	150
600	826	982	156
750	825	990	165
900	828	1001	173
1050	827	1015	188
1200	827	1064	237
1350	828	1036	208
1500	828	1009	181
1650	826	995	169
1800	828	943	115
1950	828	897	69
2100	826	854	28
2250	831	855	24
2400	838	854	16
2550	849	862	13
2700	861	868	7
2850	876	880	4
3000			

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

VEHICLE EXTERIOR STATIC CRUSH (Cont'd)



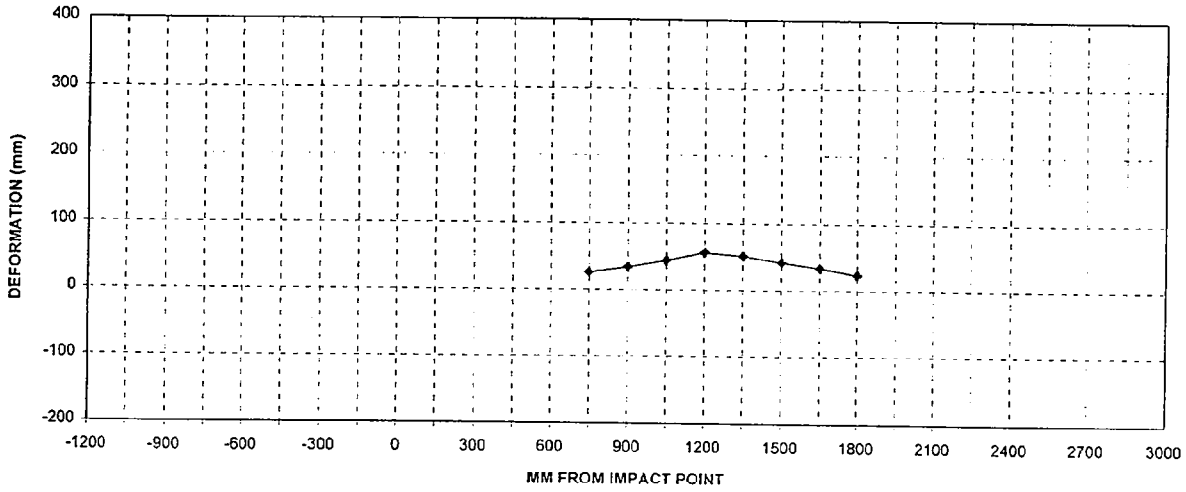
LEVEL 4 - WINDOW SILL

DATA SHEET NO. 10 (Cont'd)
VEHICLE EXTERIOR CRUSH PROFILES

	Level 5 - Window Top		
Longitudinal Distance (mm)	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
-1200			
-1050			
-900			
-750			
-600			
-450			
-300			
-150			
0 (impact point)			
150			
300			
450			
600			
750	1052	1077	25
900	1040	1073	33
1050	1038	1081	43
1200	1037	1092	55
1350	1034	1084	50
1500	1035	1076	41
1650	1034	1067	33
1800	1036	1059	23
1950	1040	1060	20
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 (Cont'd)



LEVEL 5 - WINDOW TOP

DATA SHEET NO. 11
VEHICLE DAMAGE PROFILE DISTANCES

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

NHTSA NO.: CV0205 Test Date: November 26, 1996

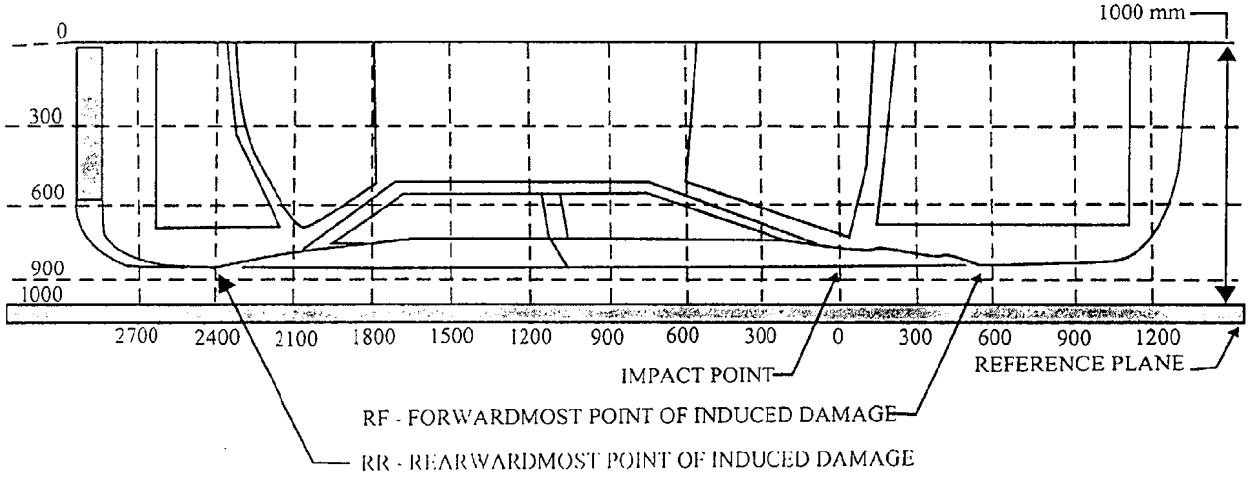


Figure is not representative of the actual test configuration

DPD MEASUREMENTS	POST-TEST (mm)	PRE-TEST (mm)	STATIC CRUSH (mm)
1. (RF = -750 mm)	800	800	0
2. -30 mm	890	750	140
3. 690 mm	1037	747	290
4. 1410 mm	1060	750	310
5. 2130 mm	815	752	63
6. (RR = 2850 mm)	823	823	0

DATA SHEET NO. 12

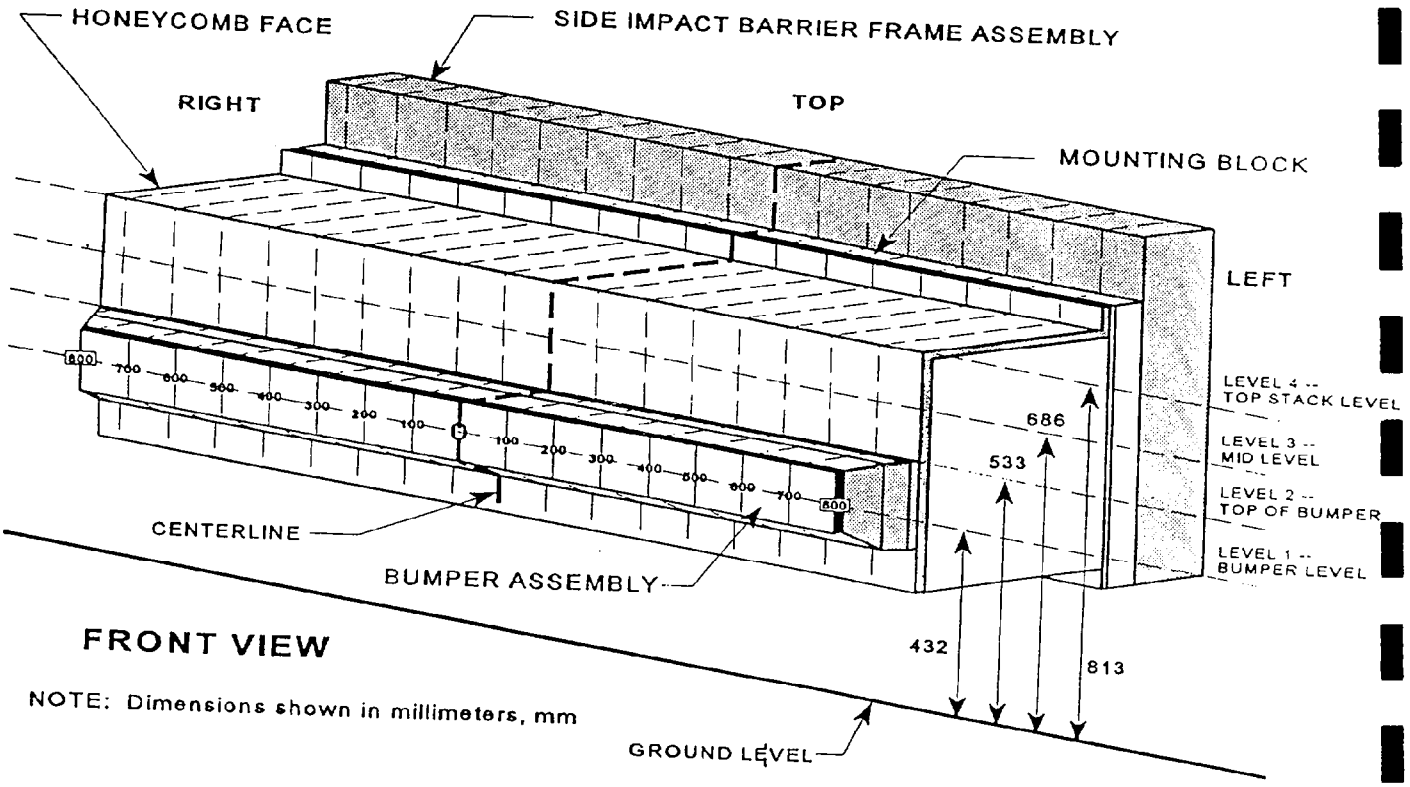
EXTERIOR STATIC CRUSH FOR SIDE IMPACTOR

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

Vehicle NHTSA No.: CV0205 Test Date: November 26, 1996

		Distance Right of Center (mm)									Distance Left of Center (mm)							
Location	Height at CL*	800	700	600	500	400	300	200	100	0	100	200	300	400	500	600	700	800
Top Stack Level 4	813 mm	137	89	55	34	24	13	9	5	3	1	0	-1	-3	-4	-5	-6	21
Mid Level Level 3	686 mm	116	92	32	10	8	6	4	2	1	1	0	-2	-4	-5	-6	-5	3
Top Bumper Level 2	533 mm	79	49	32	21	19	16	15	15	13	14	11	13	12	8	9	24	35
Mid Bumper Level 1	432 mm	115	94	57	35	30	27	26	26	25	23	23	22	21	22	26	36	53

See next page for Barrier Face Graphic

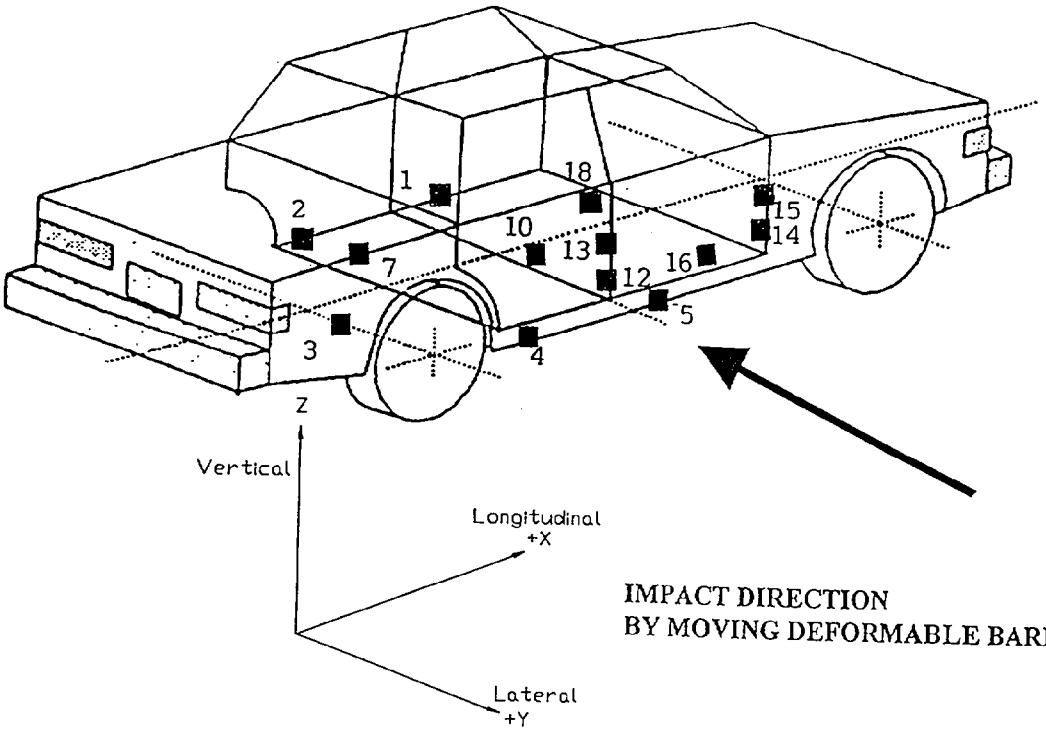

HONEYCOMB FACE
SIDE IMPACT BARRIER FRAME ASSEMBLY
RIGHT
TOP
MOUNTING BLOCK
LEFT
LEVEL 4 -- TOP STACK LEVEL
LEVEL 3 -- MID LEVEL
LEVEL 2 -- TOP OF BUMPER
LEVEL 1 -- BUMPER LEVEL
686
533
432
813
CENTERLINE
BUMPER ASSEMBLY
FRONT VIEW
NOTE: Dimensions shown in millimeters, mm
GROUND LEVEL

DATA SHEET 13

TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

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

Vehicle NHTSA No.: CV0205 Test Date: November 26, 1996



IMPACT DIRECTION
BY MOVING DEFORMABLE BARRIER

1 - Left Side Sill @ Front Seat
2 - Left Side Sill @ Rear Seat
3 - Rear Floorpan Above Axle
4 - Right Side Sill @ Rear Seat
5 - Right Side Sill @ Front Seat
7 - Left Rear Occupant Compartment
12 - Right Lower B-Post
13 - Right Mid B-Post
14 - Right Lower A-Post
15 - Right Mid A-Post
16 - Front Seat Track
18 - Vehicle C.G.

DATA SHEET NO. 13

TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

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

Vehicle NHTSA No.: CV0205 Test Date: November 26, 1996

Accel. No.	Description	Coordinates (mm)*			Long. (X) Maximums (g's)		Lat. (Y) Maximums (g's)		Vert. (Z) Maximums (g's)		Resultant (g's)
		X	Y	Z	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Max.
1	Left Side Sill @ Front Seat	2116	-641	211	2.7	-6.1	2.6	-20.5	5.1	-6.7	20.5
2	Left Side Sill @ Rear Seat	1249	-685	232	2.6	-7.2	4.6	-28.0	9.2	-5.8	29.2
3	Rr. Floorpan Above Axle	1508	0	512	7.4	-12.4	3.5	-30.3	14.7	-16.2	33.4
4	Right Side Sill @ Rr. Seat	1204	630	224	---	---	57.8	-91.3	---	---	---
5	Right Side Sill @ Frt. Seat	2141	641	216	---	---	5.1	-27.9	---	---	---
7	Left Rear Occupant Compartment	707	-458	347	---	---	2.9	-23.2	---	---	---
12	Right Lower B-Post	1755	660	352	---	---	37.1	-122.0	---	---	---
13	Right Mid B-Post	1522	682	840	---	---	45.9	-157.0	---	---	---
14	Right Lower A-Post	2758	702	338	---	---	24.6	-81.2	---	---	---
15	Right Mid A-Post	2796	754	835	---	---	22.4	-73.1	---	---	---
16	Right Front Passenger Seat Track	1981	528	318	---	---	27.6	-60.2	---	---	---
18	Vehicle CG	2279	0	330	5.7	-23.0	4.2	-24.5	21.5	-6.3	33.9

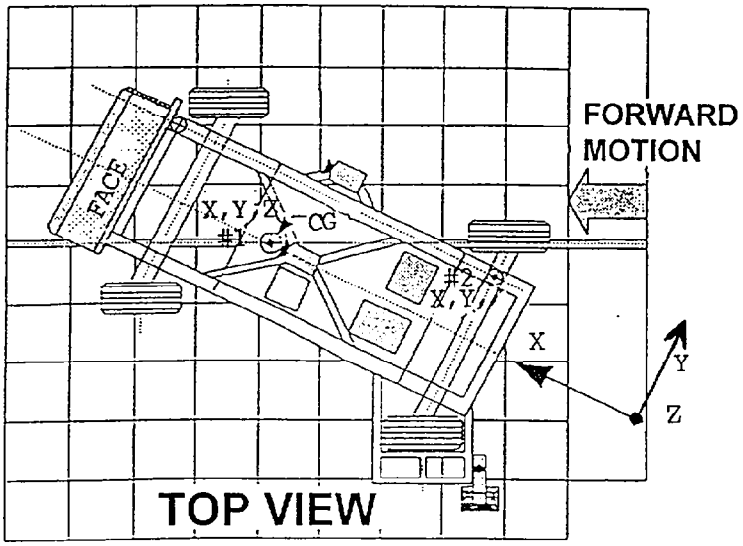
*Reference: X - Rear Bumper (+ Forward)
Y - Vehicle Centerline (+ To right)
Z - Ground Level (+ Up)

DATA SHEET NO. 14

MOVING DEFORMABLE BARRIER (MDB) ACCELEROMETER LOCATIONS AND DATA SUMMARY

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

Vehicle NHTSA No.: CV0205 Test Date: November 26, 1996



Accel. No.	Description	Coordinates (mm)*			(+) Positive		(-) Negative	
		X	Y	Z	Max. (g)	Time (msec)	Max. (g)	Time (msec)
1	MDB Center of Gravity	-1092	0	483				
	Longitudinal (X)	---	---	---	1.1	150	-16.4	44
	Lateral (Y)	---	---	---	6.8	22	-1.5	56
	Vertical (Z)	---	---	---	9.2	53	-7.7	23
	Resultant (R)	---	---	---	17.3	41	---	---
2	Rear Frame Member	-2591	625	622				
	Longitudinal (X)	---	---	---	1.3	132	-19.9	37
	Lateral (Y)	---	---	---	1.4	68	-6.3	22

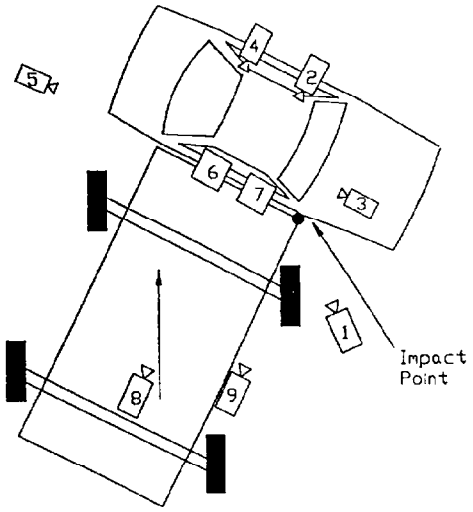
*Reference: X - Front Axle (+ Forward)
Y - Vehicle Centerline (+ To right)
Z - Ground Level (+ Up)

DATA SHEET NO. 15

HIGH SPEED CAMERA LOCATIONS AND DATA

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

Vehicle NHTSA No.: CV0205 Test Date: November 26, 1996



Camera No.	View	Coordinates (mm)*			Angle	Lens (mm)	Film Speed (fps)
		X	Y	Z			
	Real Time					13	24
1	Right Impact	-1000	2300	1700	90°	13	1020
2	Onboard Front Passenger					8	917
3	Onboard Rear Passenger					8	980
4	Onboard Hood					13	1010
5	Left Impact	175	-7670	1770	90°	25	1020
6	Top Overall	-260	1140	5000	90°	8	1042
7	Top Impact	-200	100	5000	90°	13	935
8	Cart Wide					13	1031
9	Cart Impact					35	943

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

DATA SHEET 16

FUEL SYSTEM INTEGRITY POST IMPACT TEST DATA

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

Vehicle NHTSA No.: CV0205 Test Date: November 26, 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 33.2 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

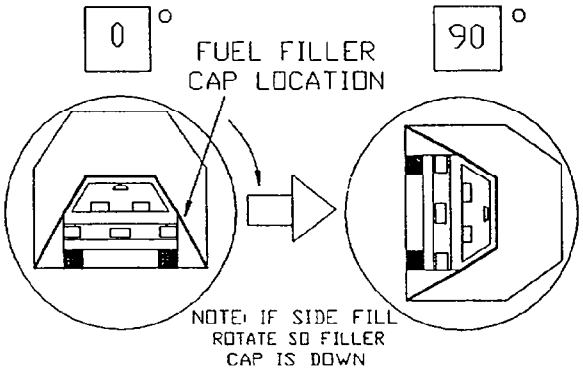
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA

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

Vehicle NHTSA No.: CV0205 Test Date: November 26, 1996

TEST PHASE: 0° - 90°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 54 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 54 seconds

Next Whole Minute Interval = 8 minutes

FUEL SPILLAGE MEASUREMENT:

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

FUEL SPILLAGE LOCATIONS(S): None

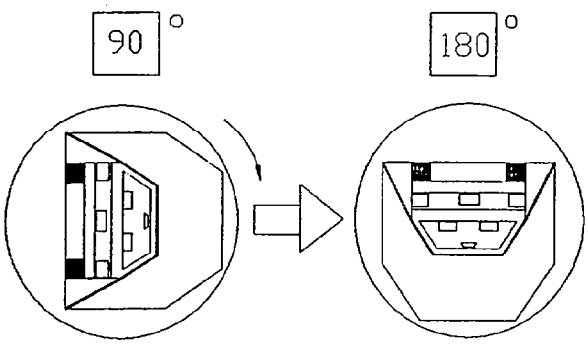
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA (Cont'd)

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

Vehicle NHTSA No.: CV0205 Test Date: November 26, 1996

TEST PHASE: 90° - 180°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 33 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 33 seconds

Next Whole Minute Interval = 8 minutes

FUEL SPILLAGE MEASUREMENT:

90° TO 180° ROTATION	TEST RESULTS	MAXIMUM ALLOWABLE
1. First 5 Minutes From Onset of Rotation	0 oz	5 oz
2. Sixth Minute From Onset of Rotation	0 oz	1 oz
3. Seventh Minute From Onset of Rotation	0 oz	1 oz
4. Eighth Minute if Required	0 oz	1 oz

FUEL SPILLAGE LOCATIONS(S): None

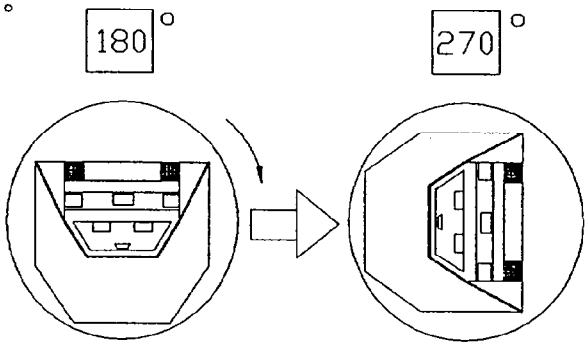
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA (Cont'd)

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

Vehicle NHTSA No.: CV0205 Test Date: November 26, 1996

TEST PHASE: 180° - 270°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = 2 minutes 16 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = 5 minutes 0 seconds

TOTAL TIME = 7 minutes 16 seconds

Next Whole Minute Interval = 8 minutes

FUEL SPILLAGE MEASUREMENT:

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

FUEL SPILLAGE LOCATIONS(S): None

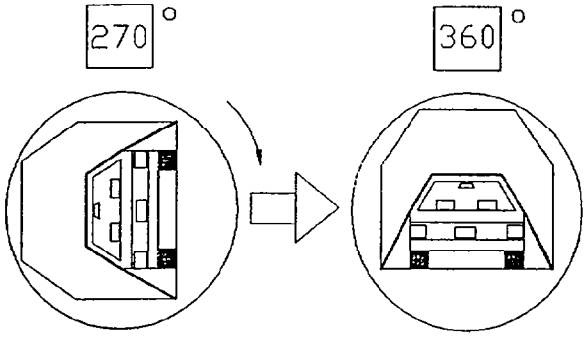
DATA SHEET 16

FMVSS 301 STATIC ROLLOVER TEST DATA

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

Vehicle NHTSA No.: CV0205 Test Date: November 26, 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:

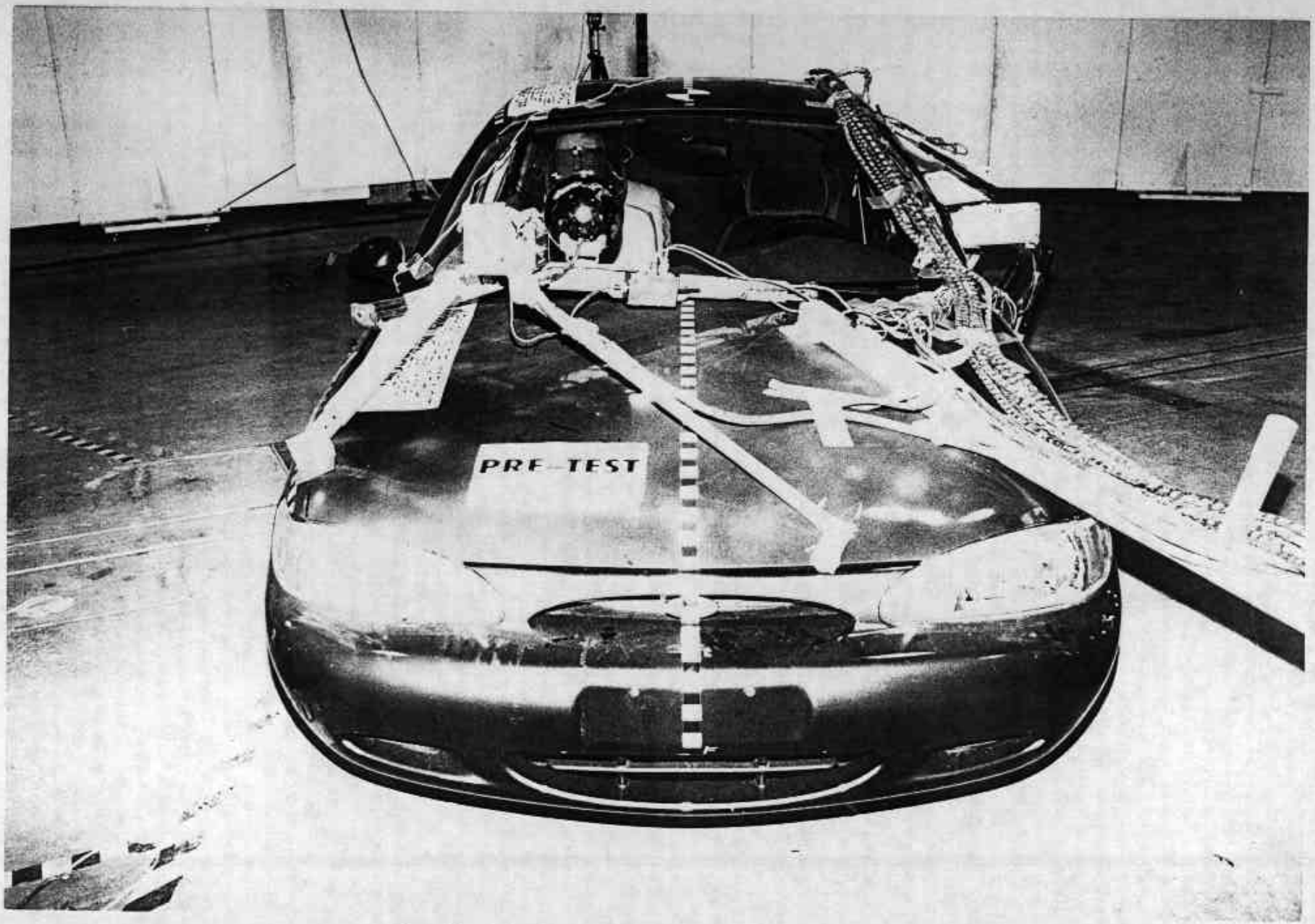
270° TO 360° ROTATION	TEST RESULTS	MAXIMUM ALLOWABLE
1. First 5 Minutes From Onset of Rotation	0 oz	5 oz
2. Sixth Minute From Onset of Rotation	0 oz	1 oz
3. Seventh Minute From Onset of Rotation	0 oz	1 oz
4. Eighth Minute if Required	0 oz	1 oz

FUEL SPILLAGE LOCATIONS(S): None

APPENDIX A - PHOTOGRAPHS

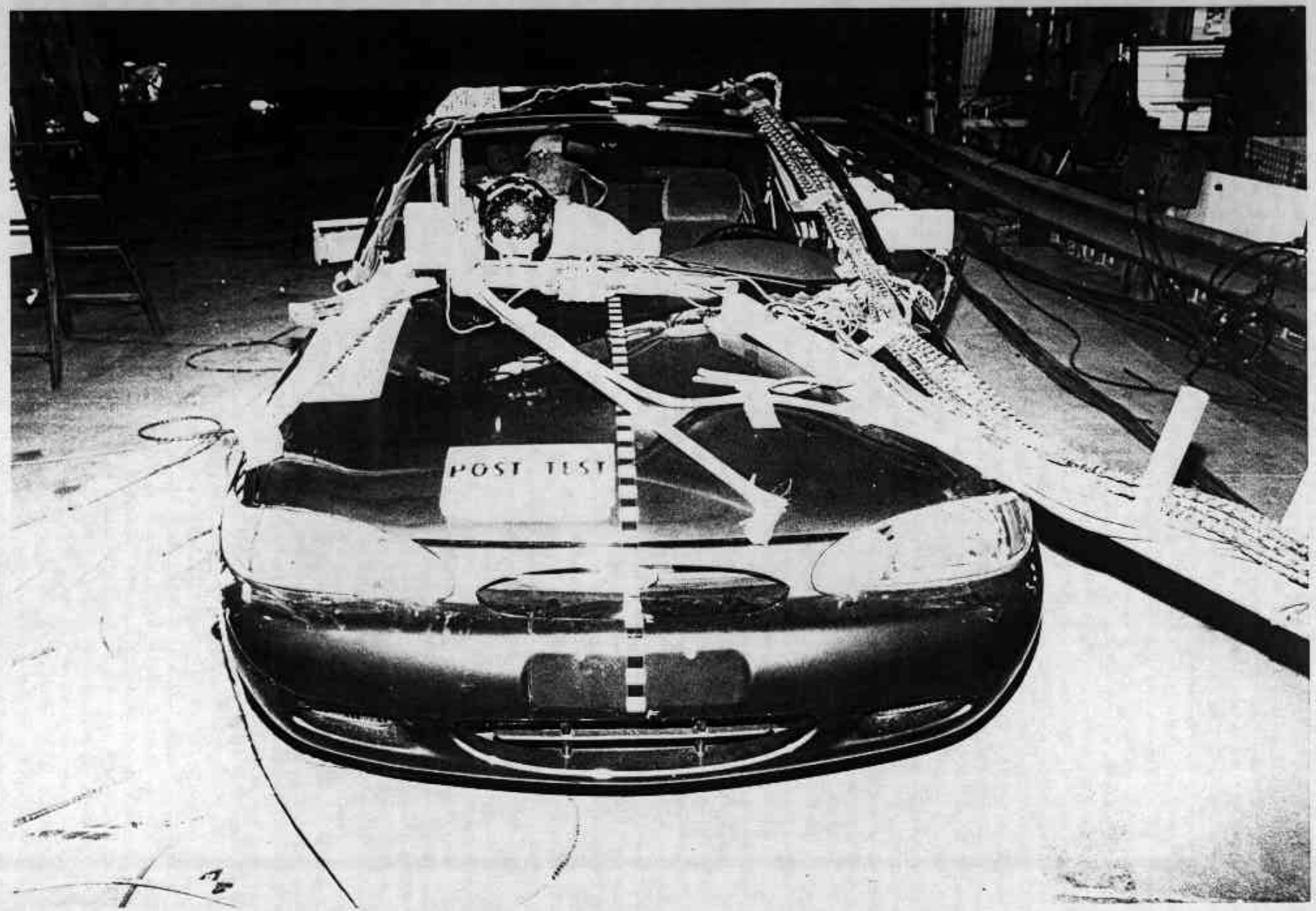
TABLE OF PHOTOGRAPHS

TABLE OF PHOTOGRAPHS



A-1

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



A-2

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

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

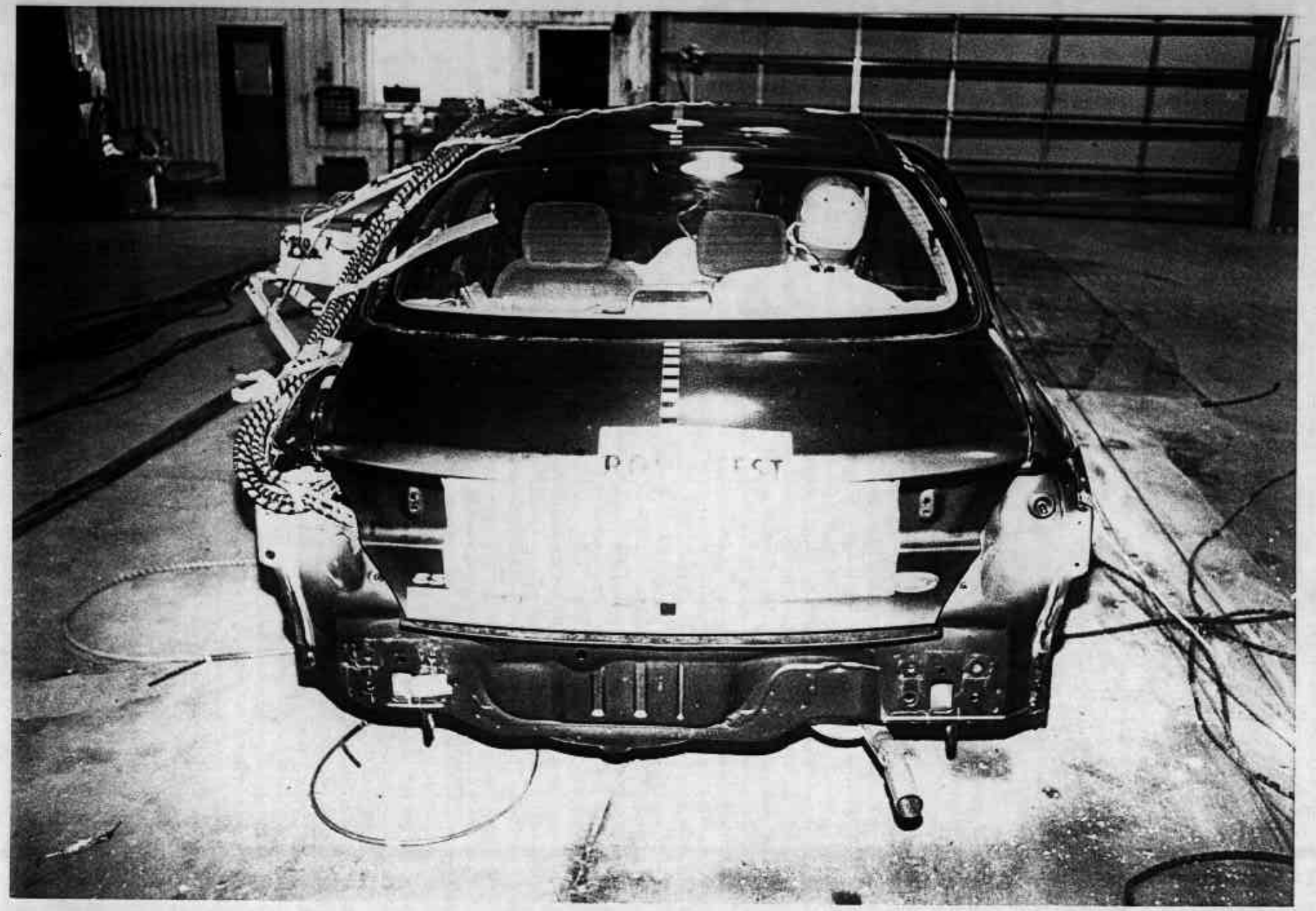


Photo No. A-4 - Post-Test Rear View of Test Vehicle

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

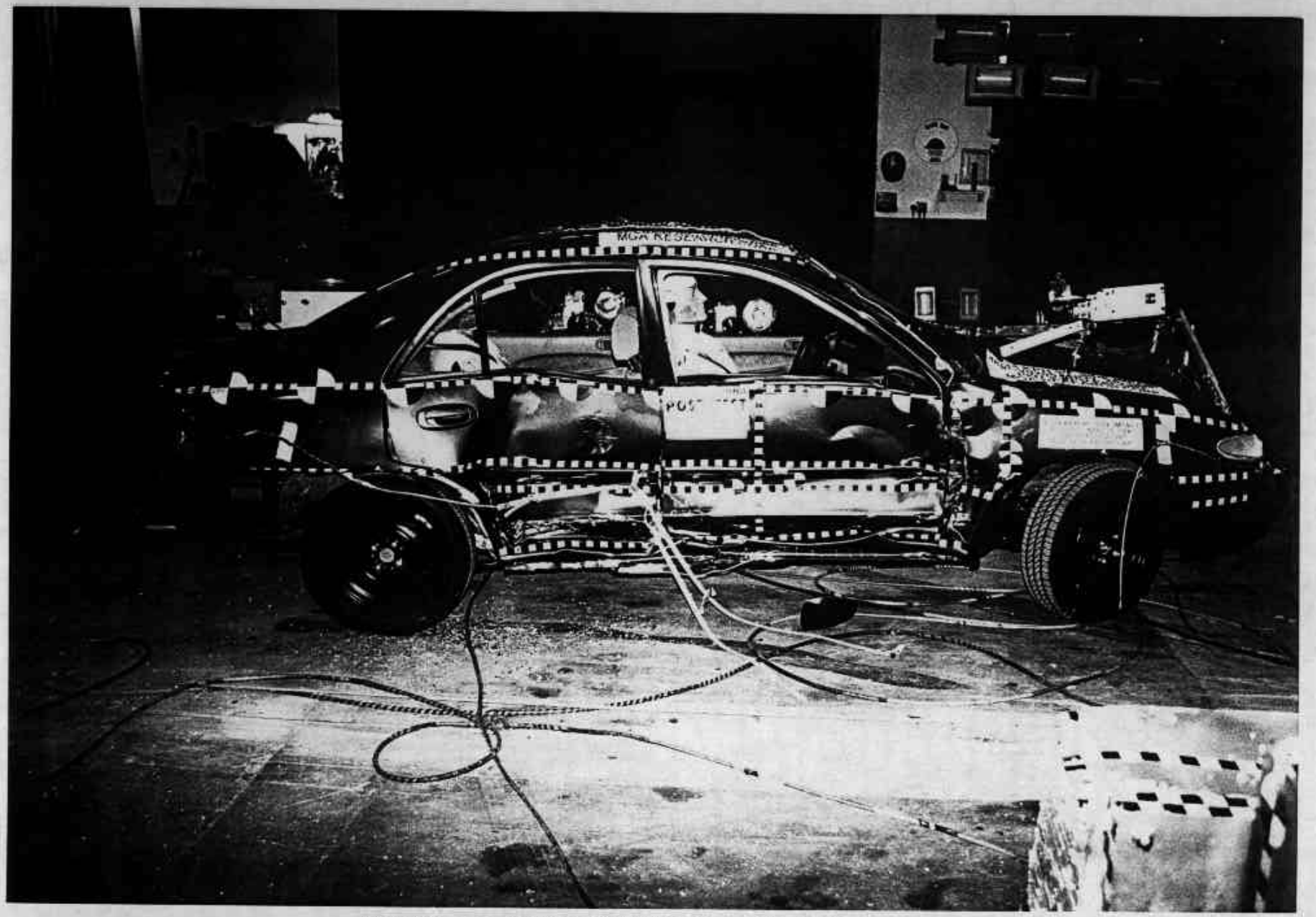


Photo No. A-6 - Post-Test Right Side View of Test Vehicle

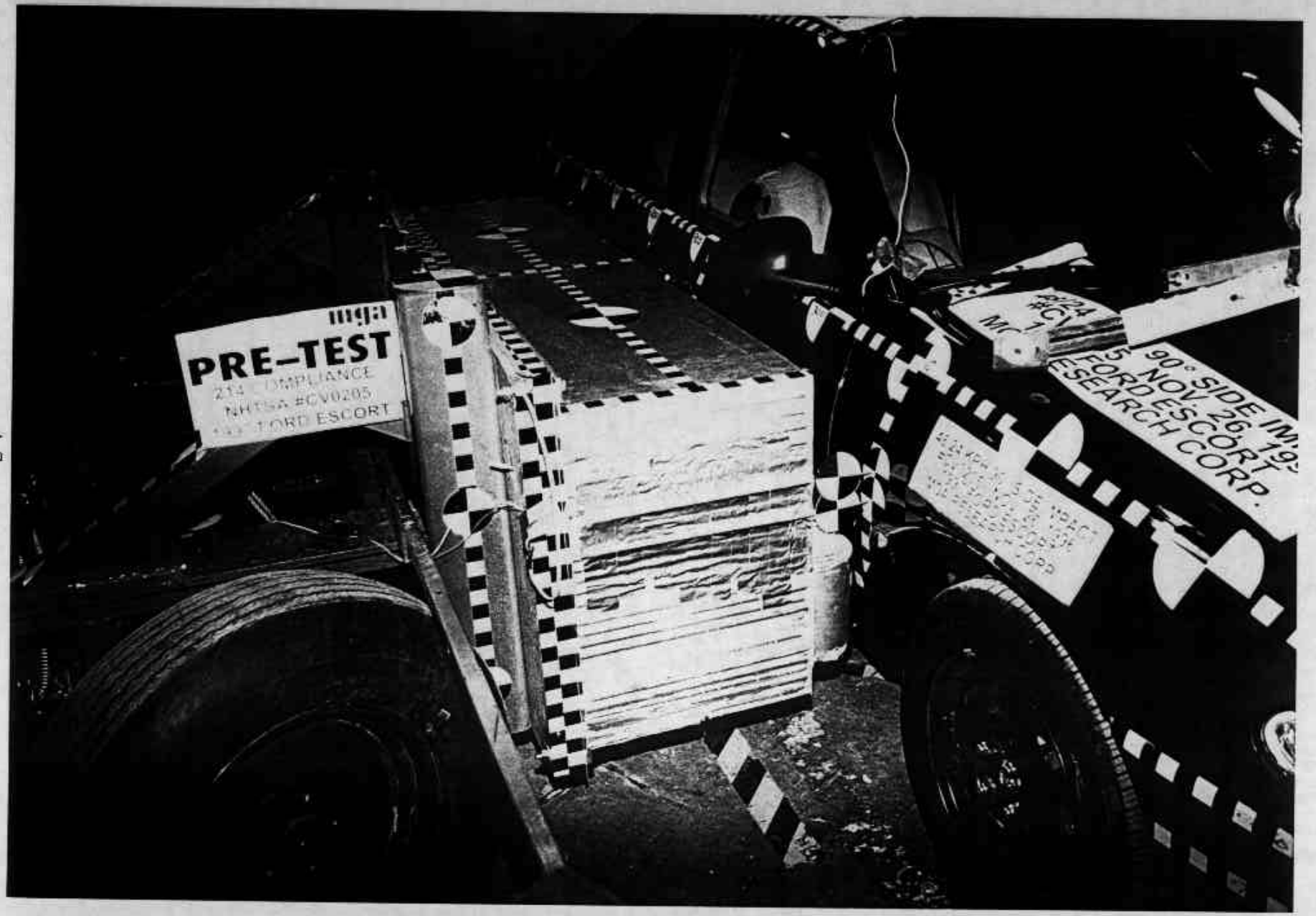


Photo No. A-7 - Pre-Test MDB Positioned Against Vehicle (right side)

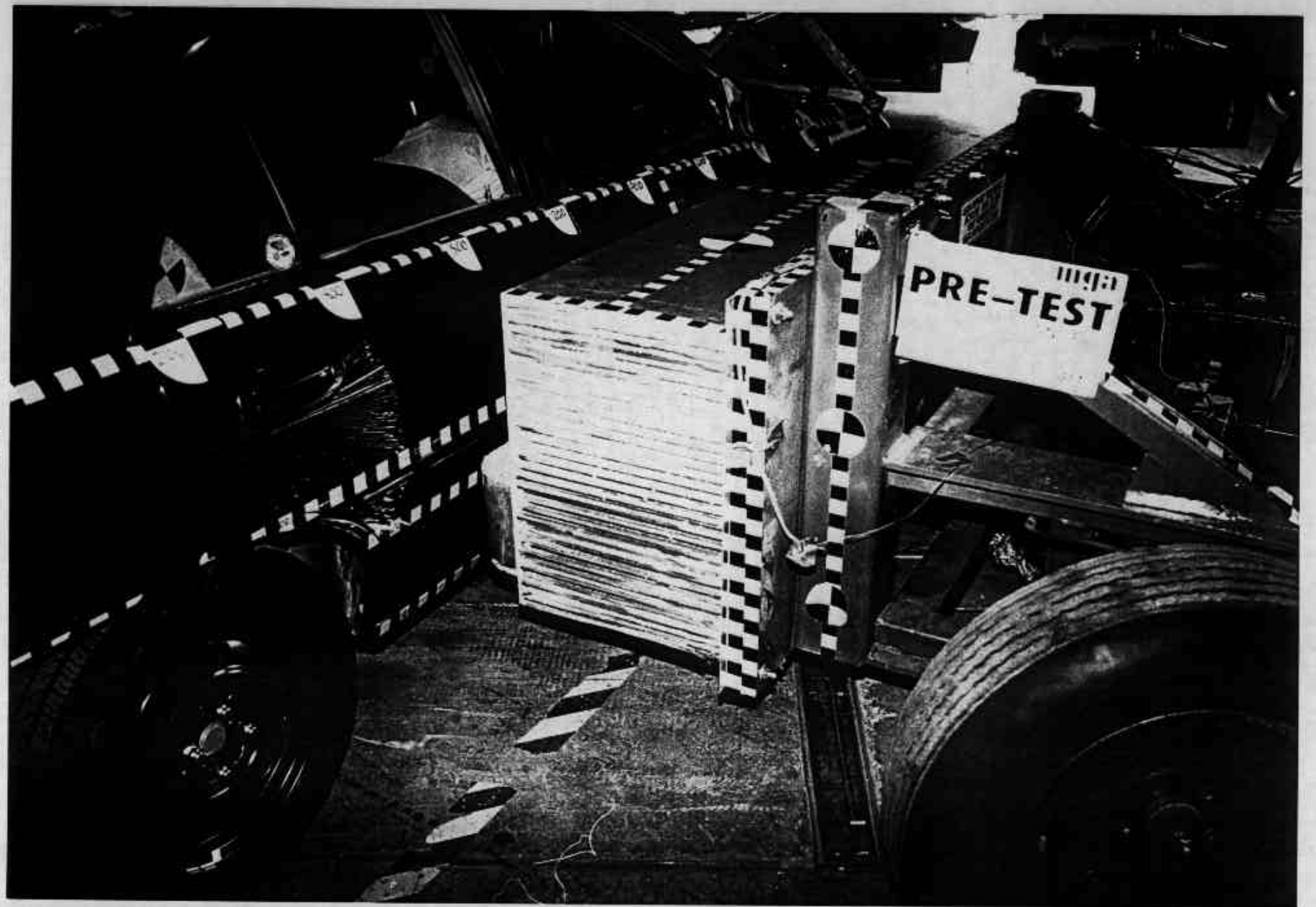


Photo No. A-8 - Pre-Test MDB Positioned Against Vehicle (left side)

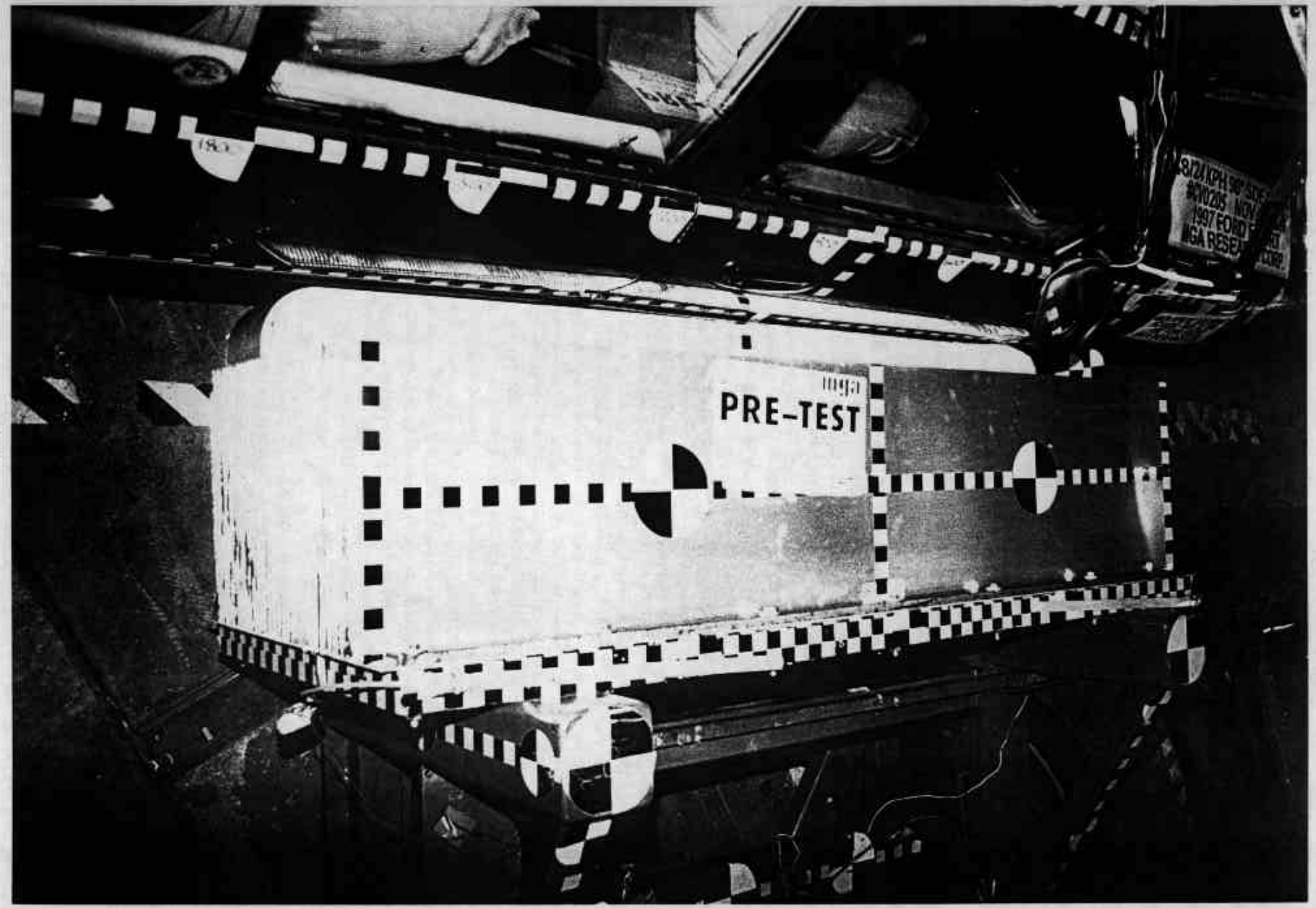


Photo No. A-9 - Pre-Test MDB Positioned Against Vehicle Overhead View

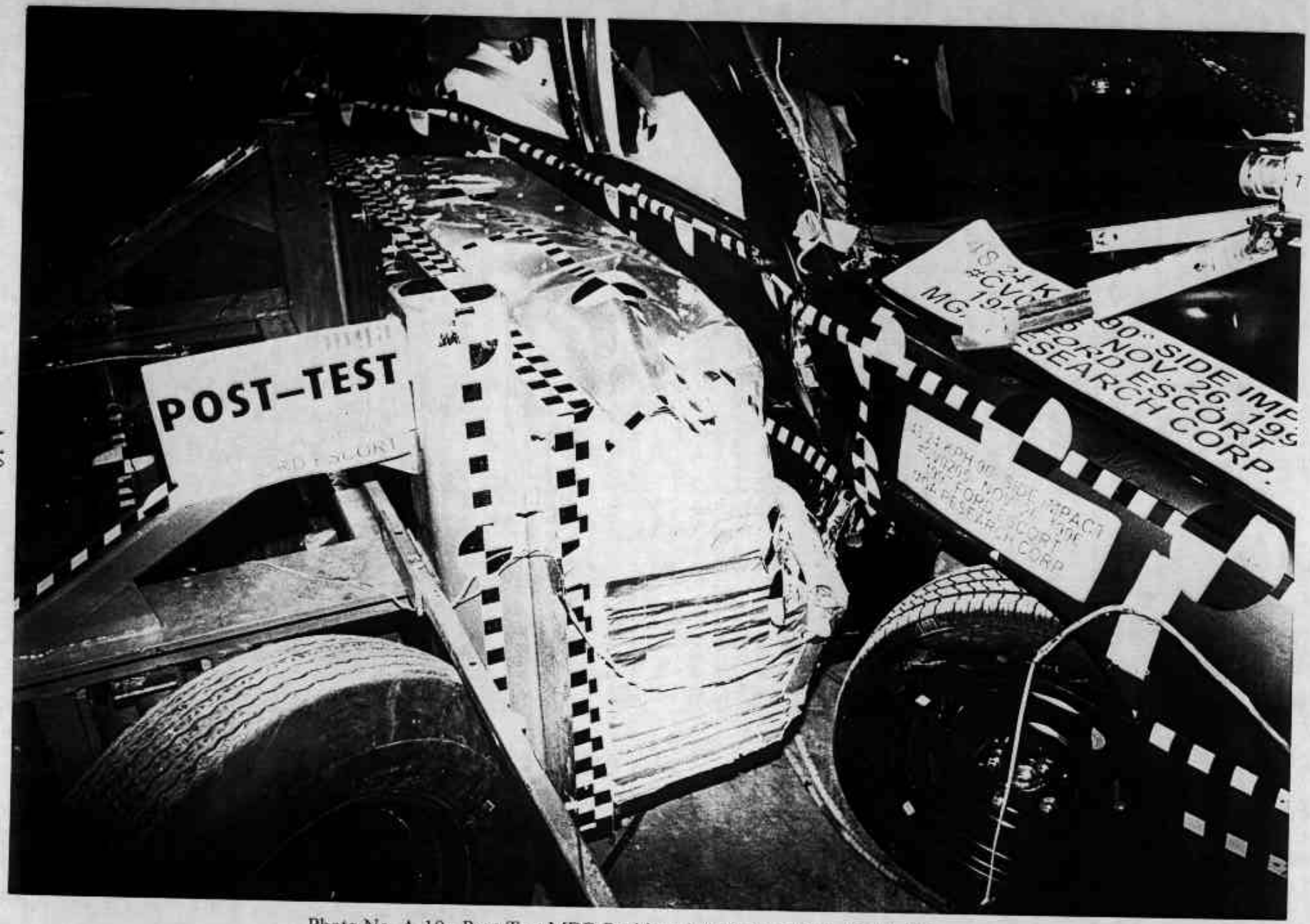


Photo No. A-10 - Post-Test MDB Positioned Against Vehicle (right side)

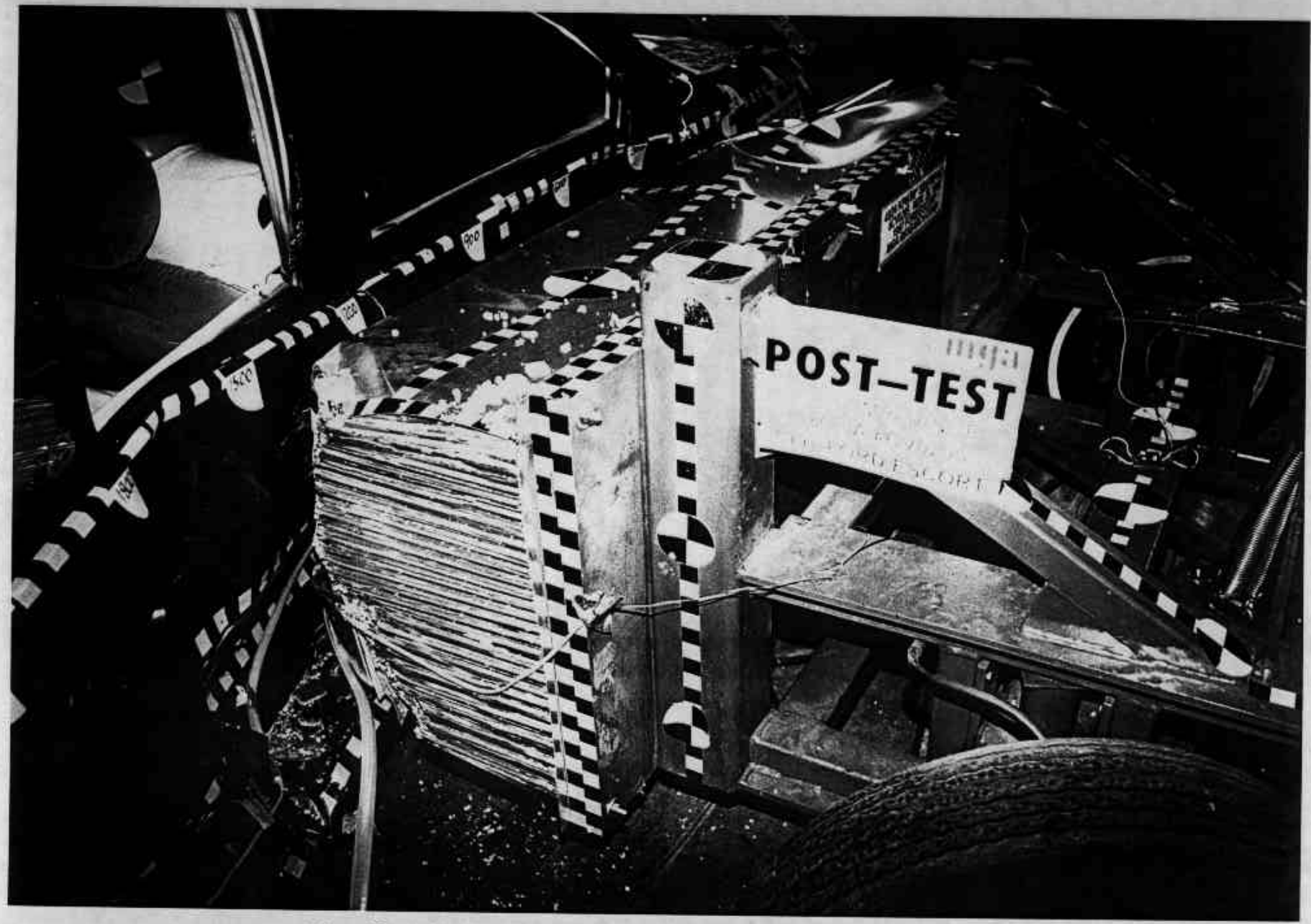
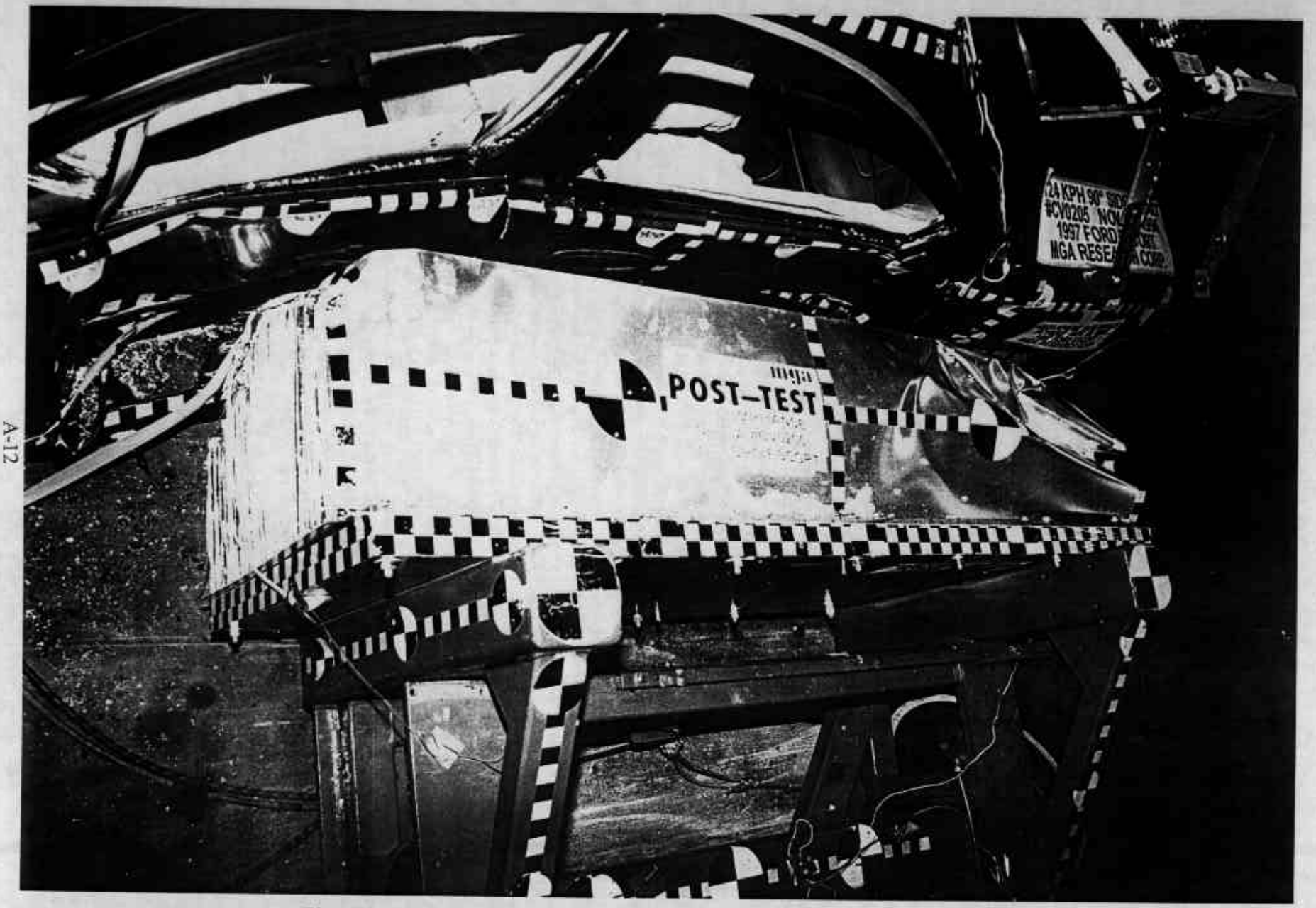


Photo No. A-11 - Post-Test MDB Positioned Against Vehicle (left side)



A-12

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

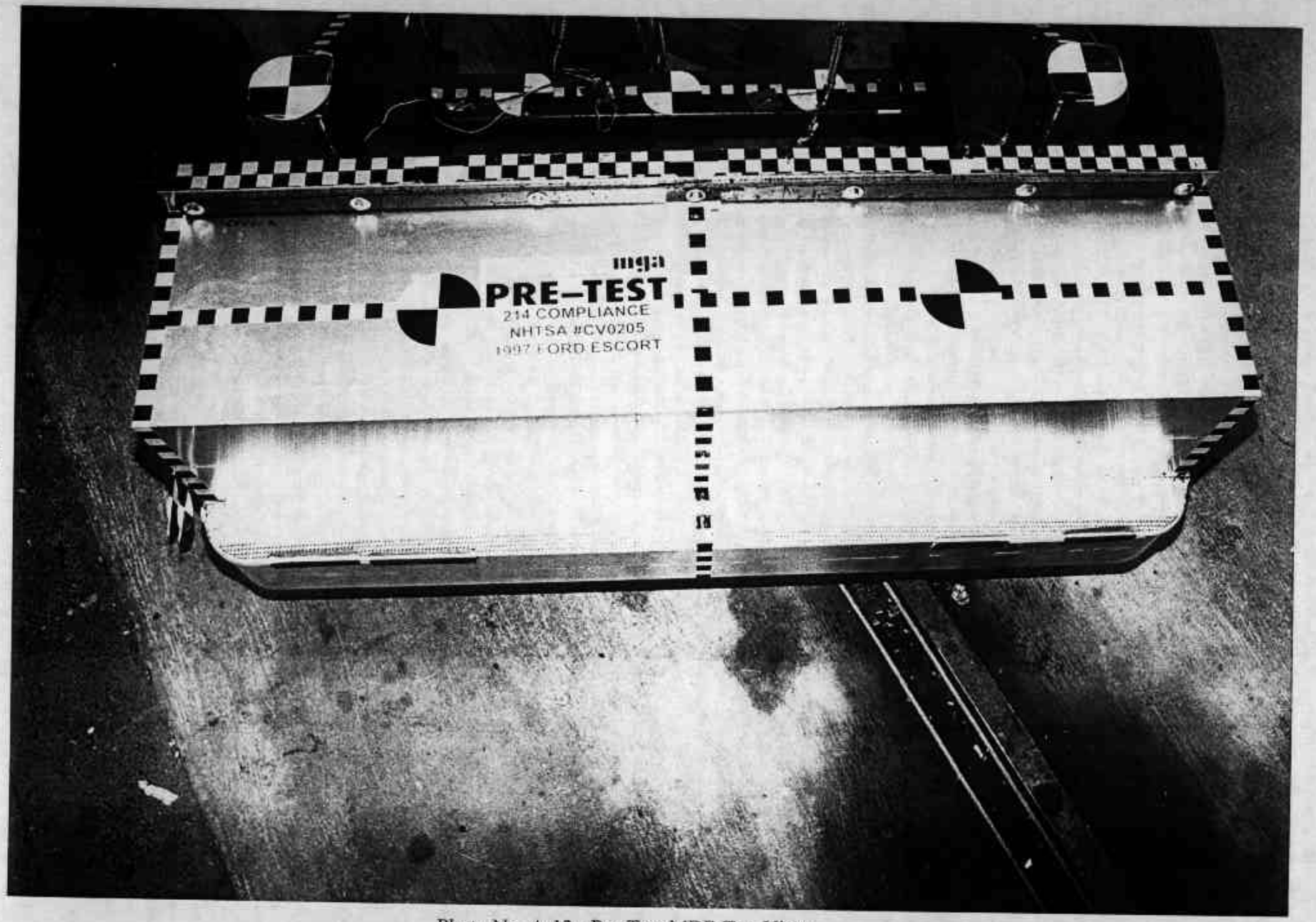


Photo No. A-13 - Pre-Test MDB Top View

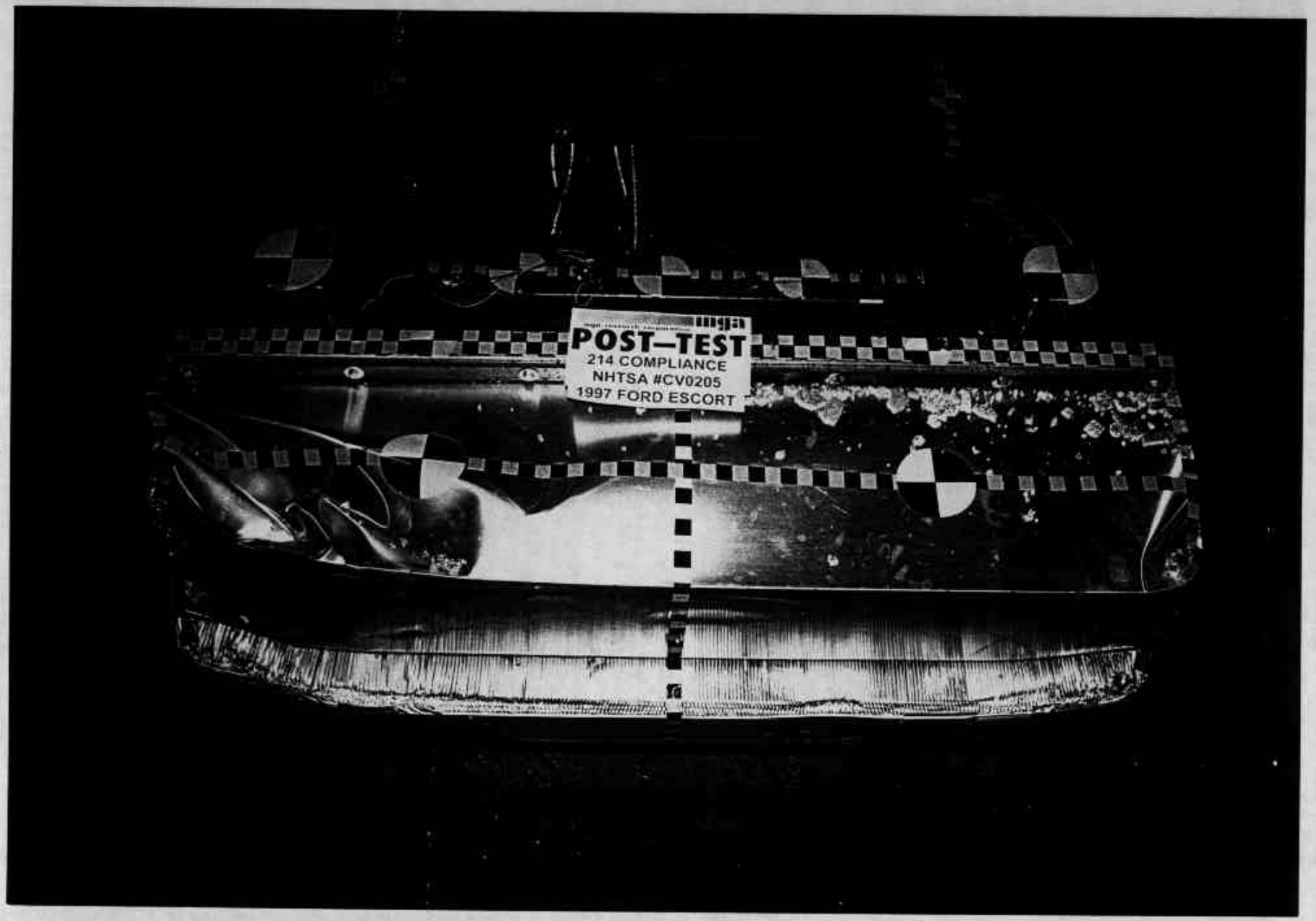


Photo No. A-14 - Post-Test MDB Top View

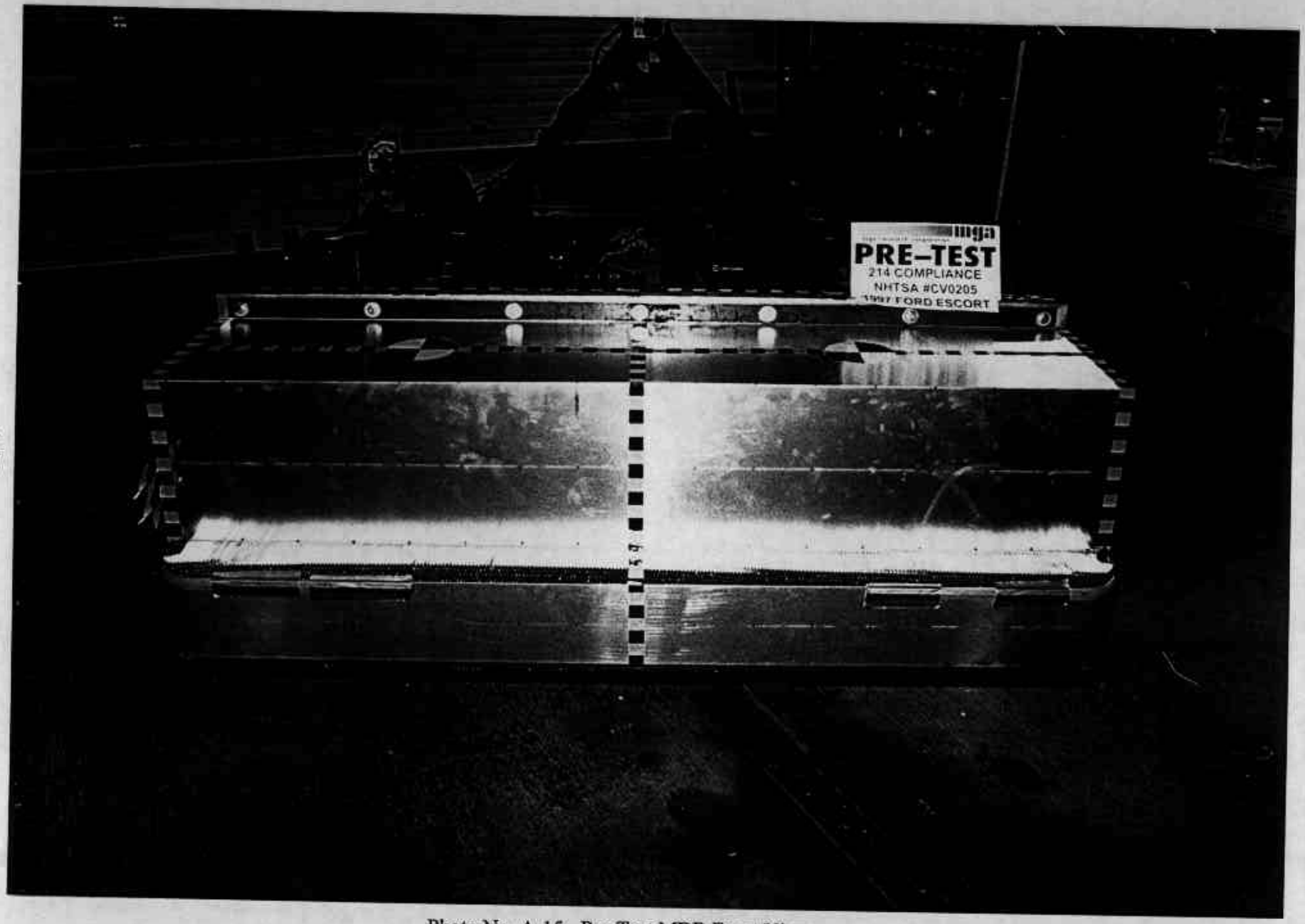


Photo No. A-15 - Pre-Test MDB Front View

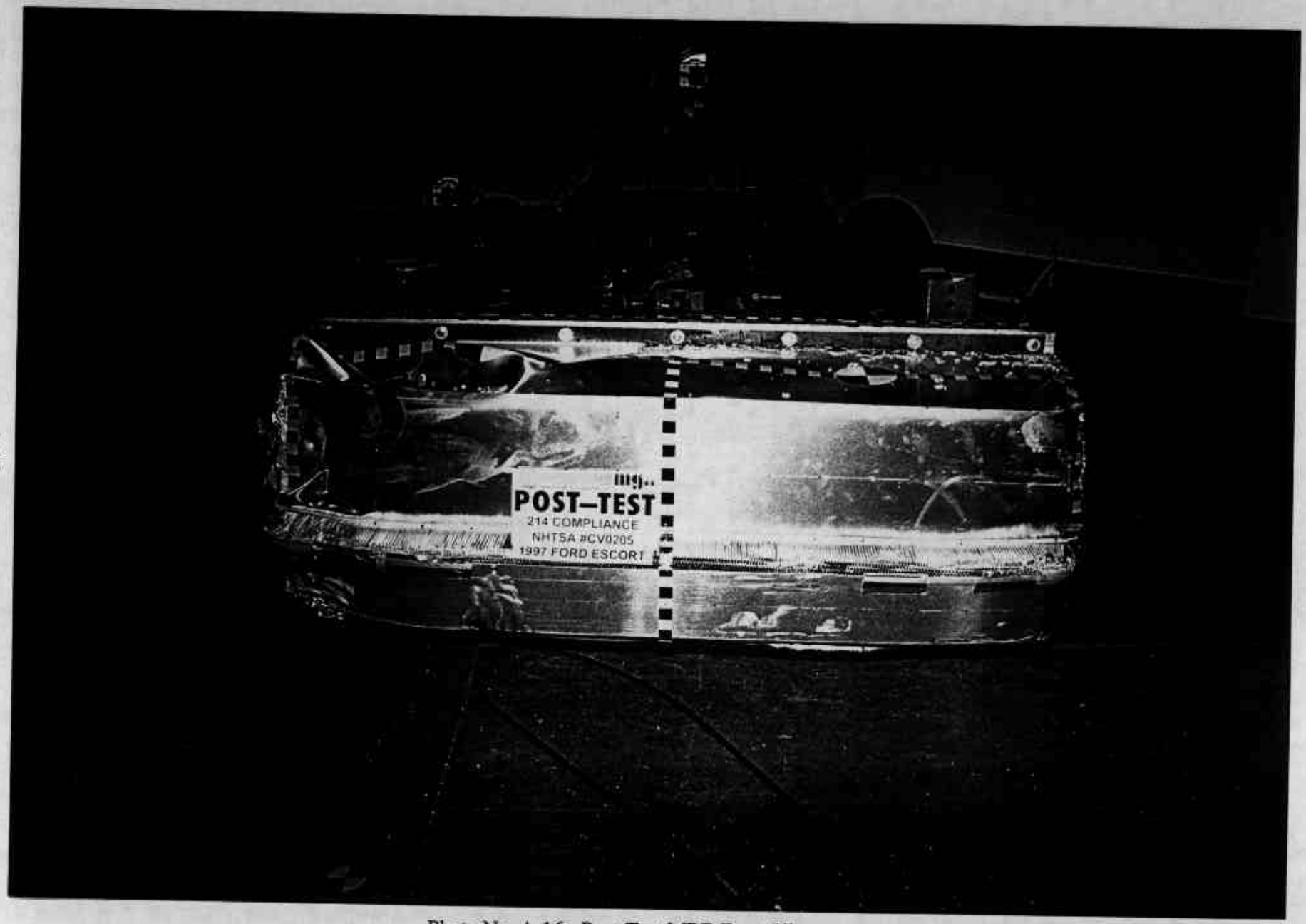


Photo No. A-16 - Post-Test MDB Front View

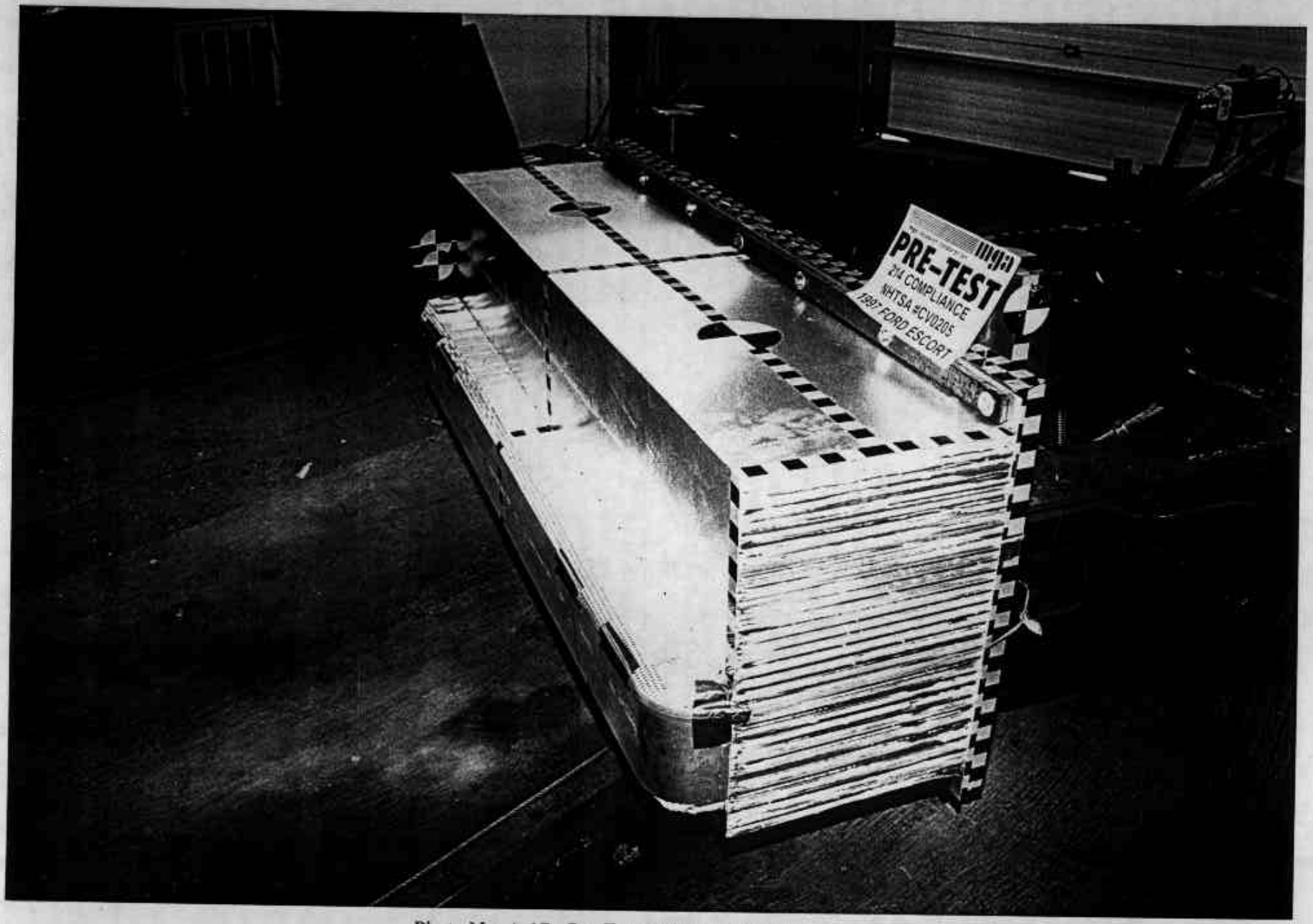


Photo No. A-17 - Pre-Test MDB Left Side View

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

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

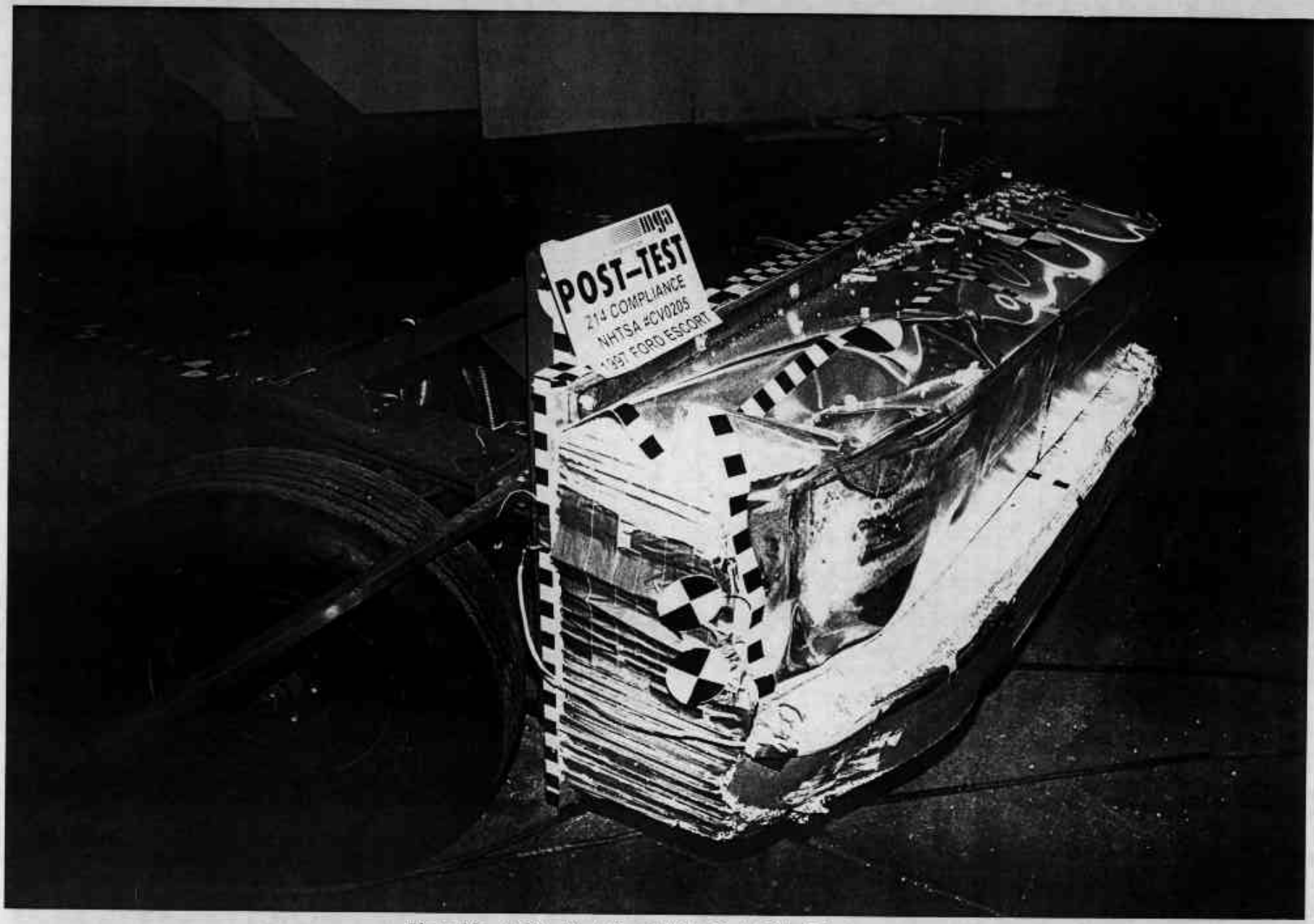


Photo No. A-20 - Post-Test MDB Right Side View

Photo No. A-21 - Pre-Test Right Front Seat Position View

Photo No. A-22 - Pre-Test Front Passenger Dummy Left Side View

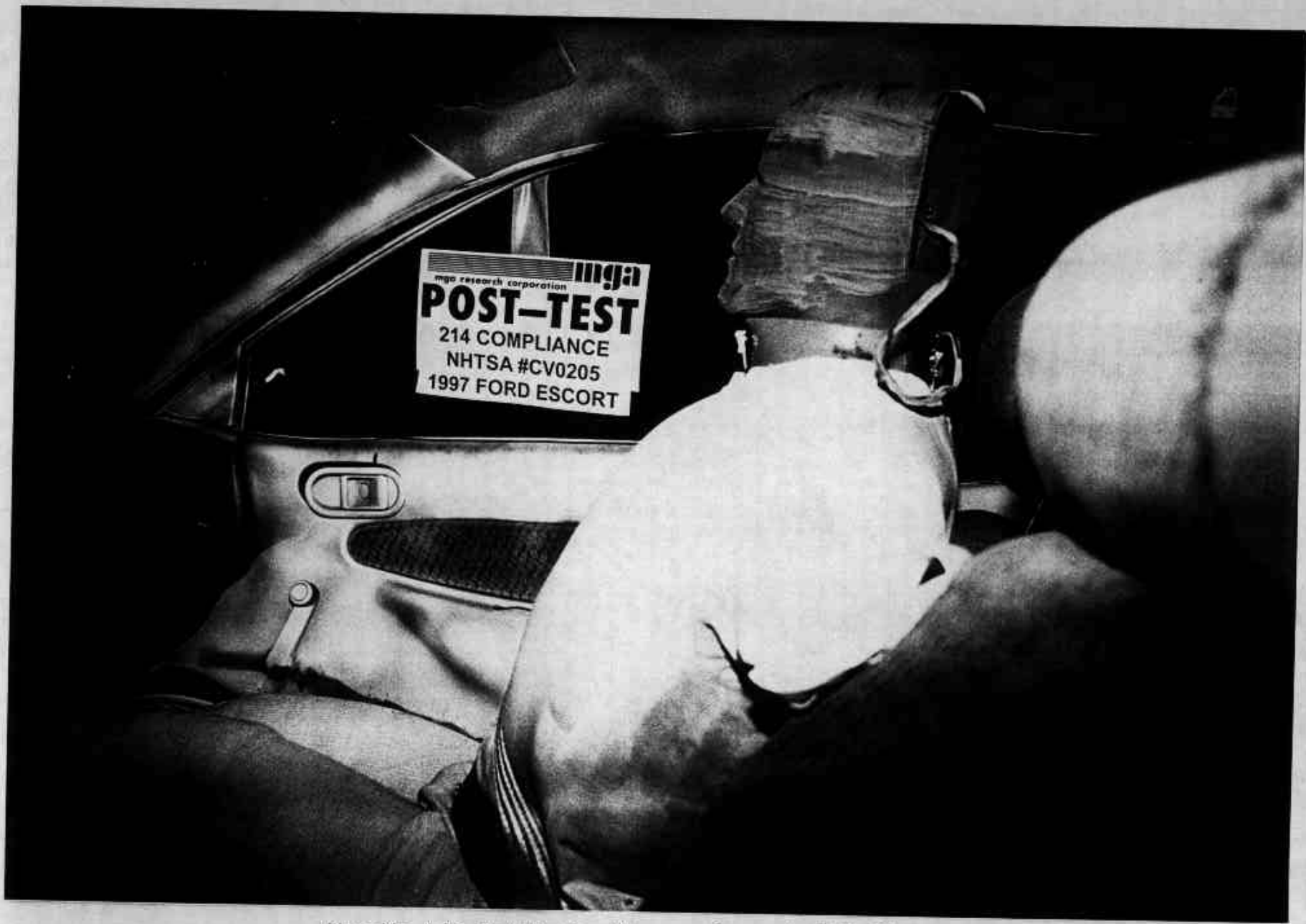


Photo No. A-23 - Post-Test Front Passenger Dummy Left Side View

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

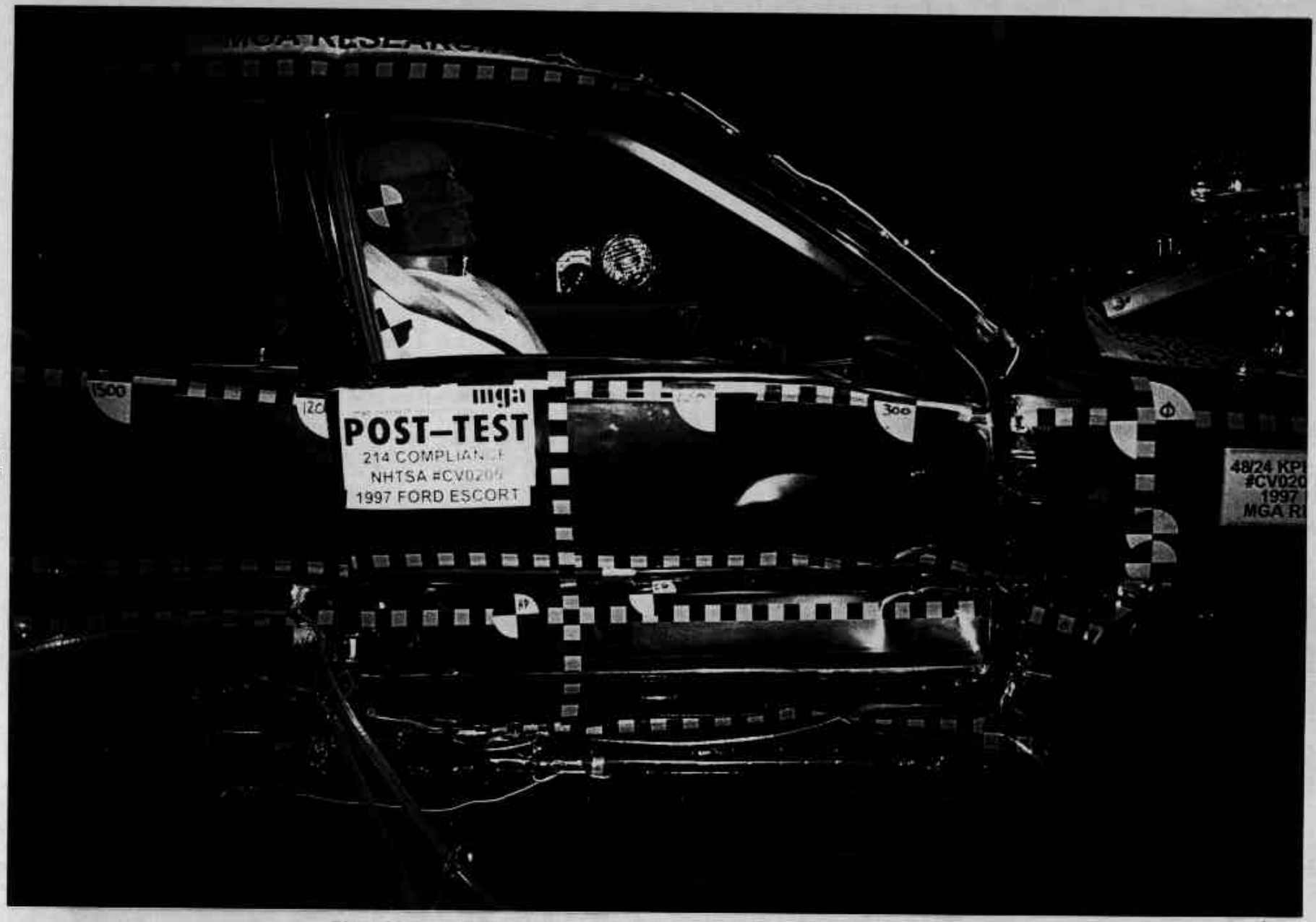
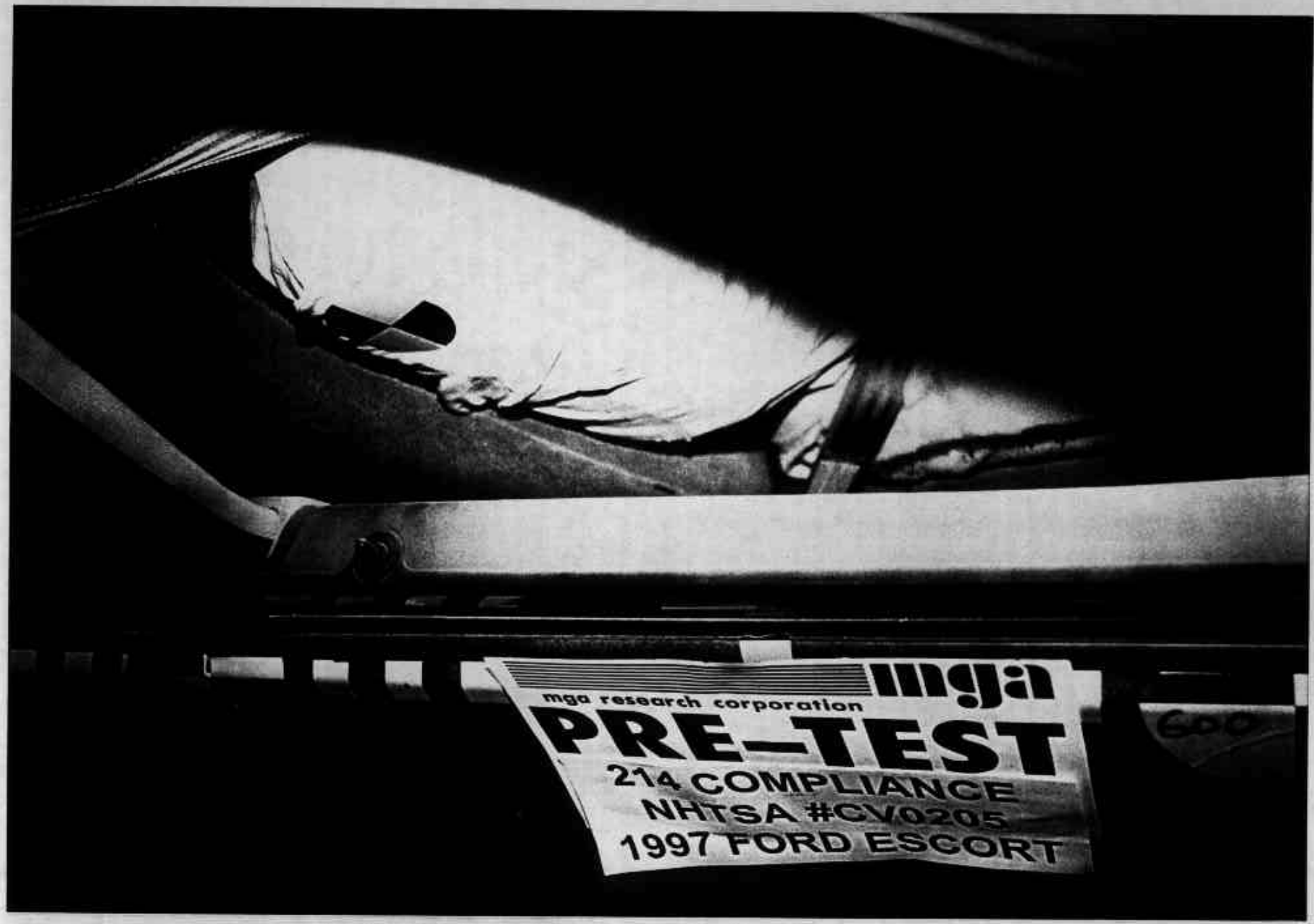


Photo No. A-25 - Post-Test Front Passenger Dummy Right Side View

Photo No. A-26 - Pre-Test Front Passenger Dummy Right Side View (Door Open)



A-27

Photo No. A-27 - Pre-Test Front Passenger Shoulder and Door Top View

Photo No. A-28 - Post-Test Front Passenger Shoulder and Door Top View

Photo No. A-29 - Post-Test Front Passenger Dummy Contact

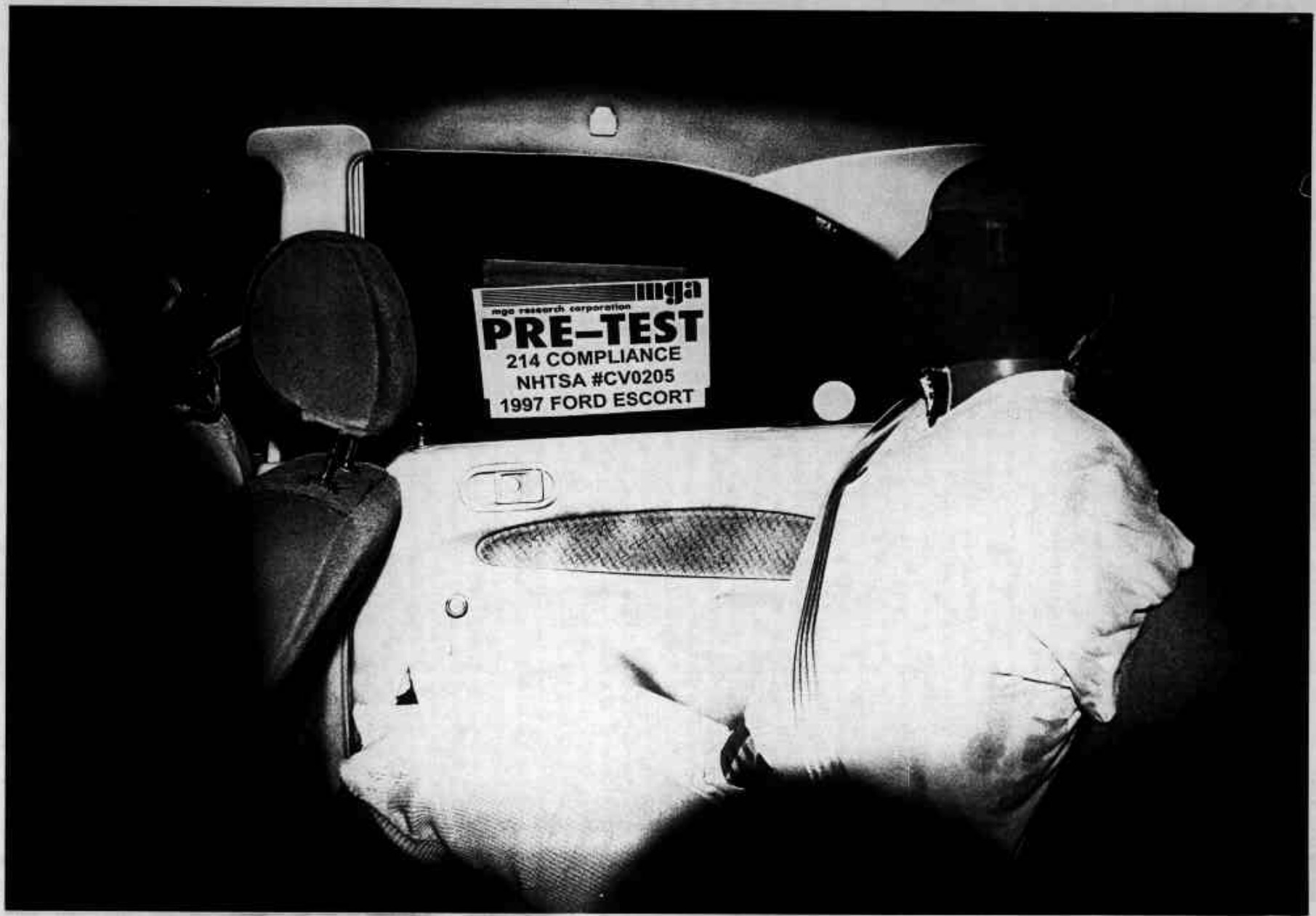


Photo No. A-30 - Pre-Test Rear Passenger Dummy Left Side View

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

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

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

Photo No. A-34 - Pre-Test Rear Passenger Dummy Right Side View (Door Open)

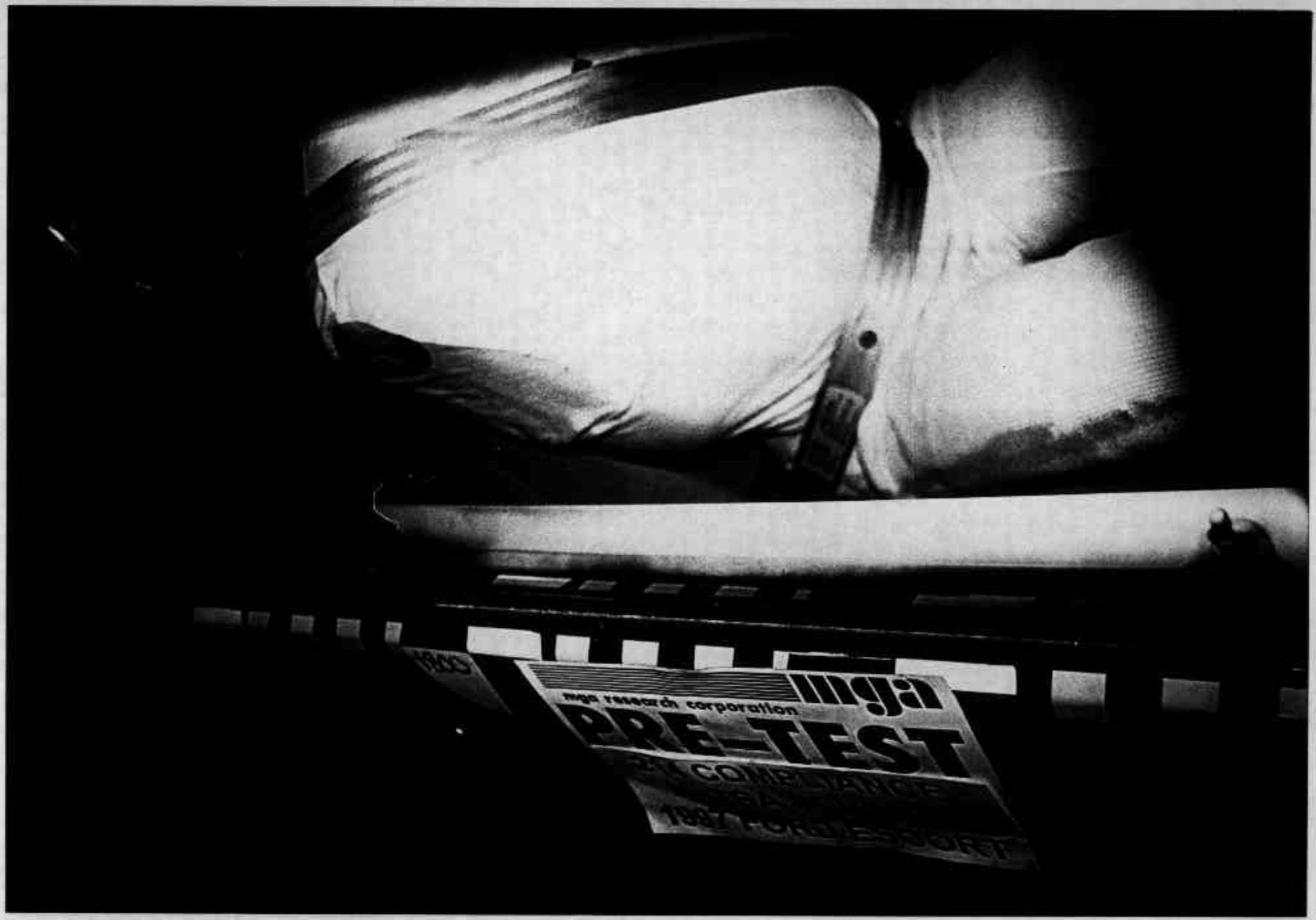


Photo No. A-35 - Pre-Test Rear Passenger Dummy Shoulder and Door Top View

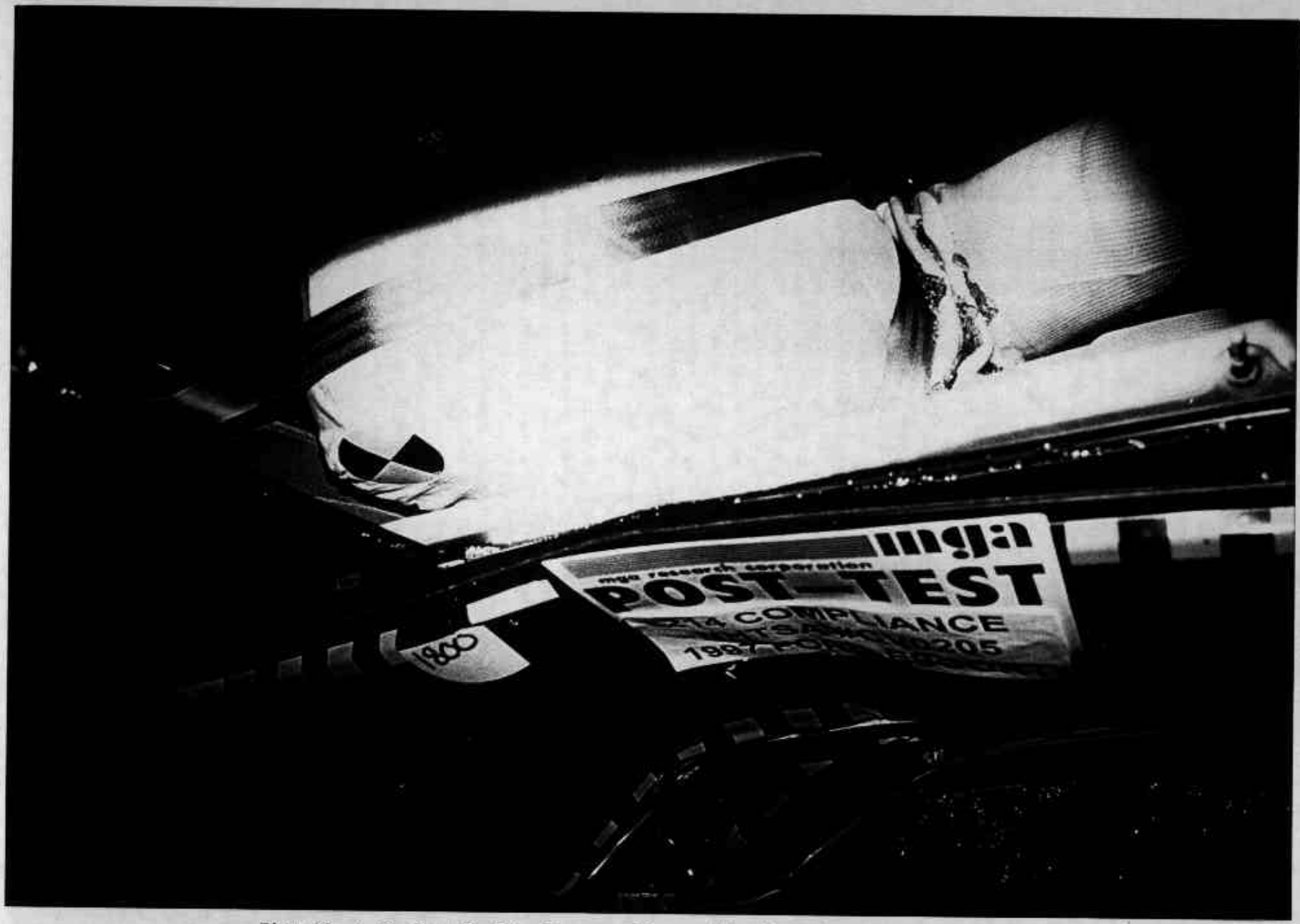


Photo No. A-36 - Post-Test Rear Passenger Dummy Shoulder and Door Top View

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

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

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

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

A-41

Photo No. A-41 - Impact

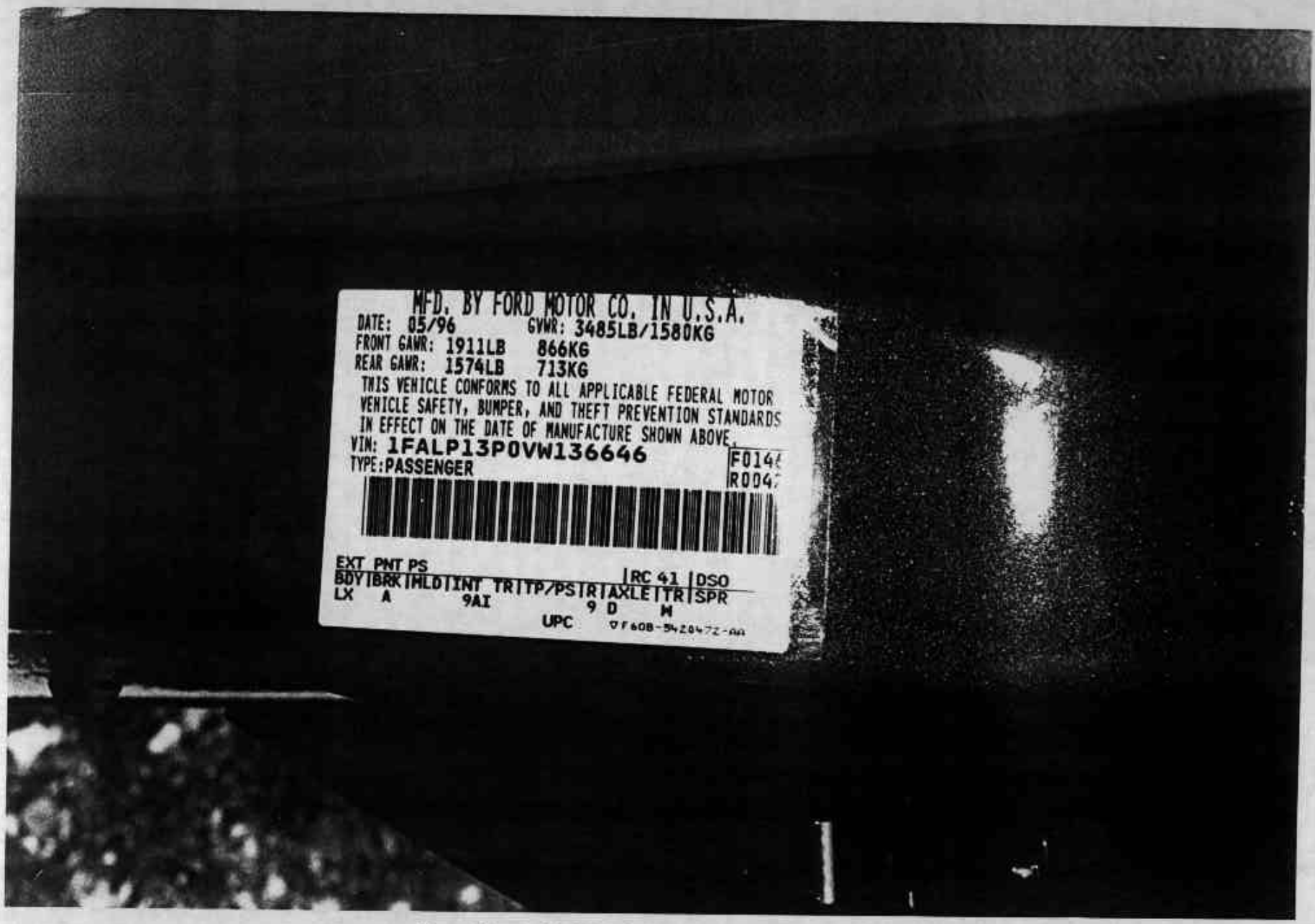


Photo No. A-42 - Vehicle Certification Label

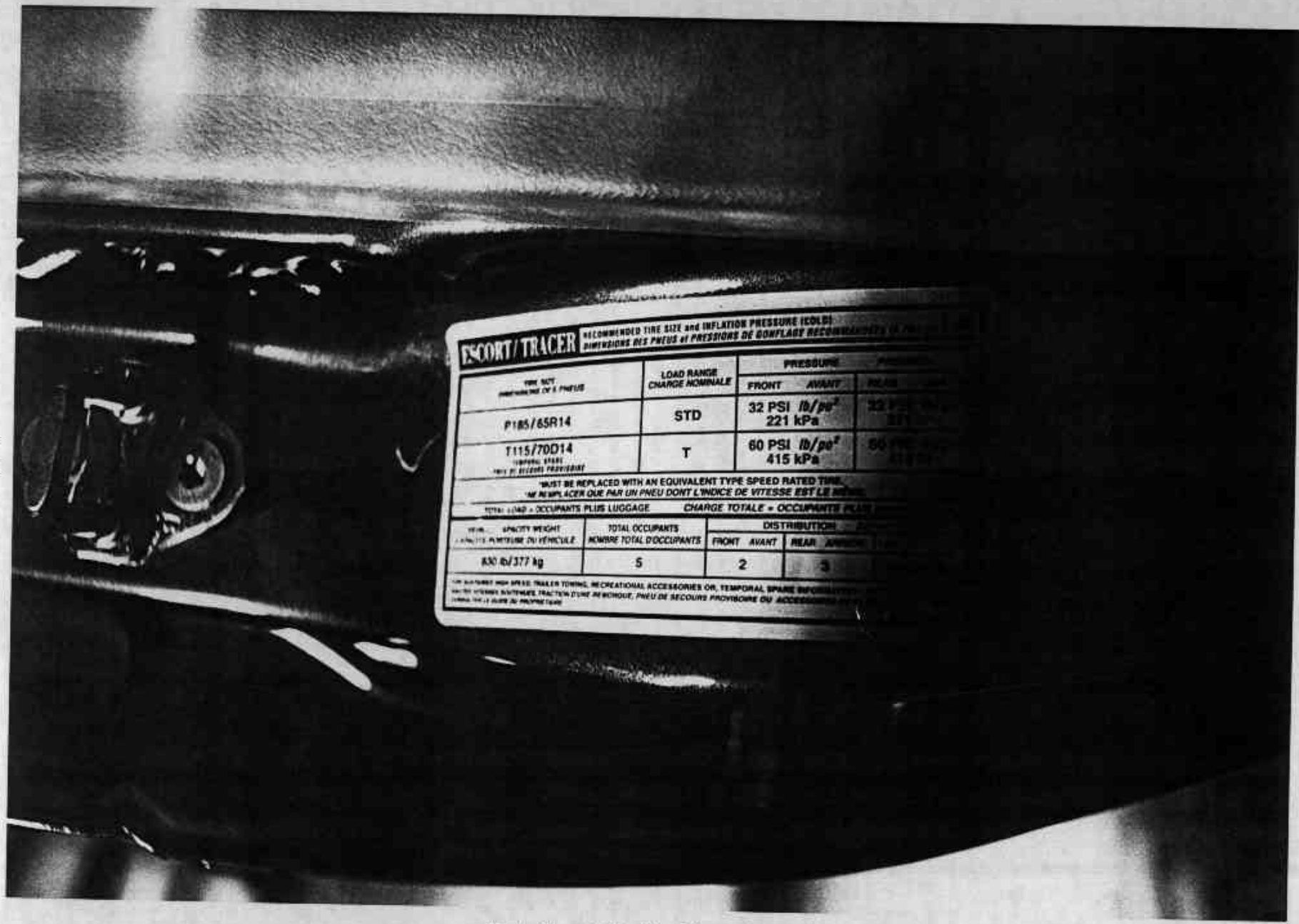
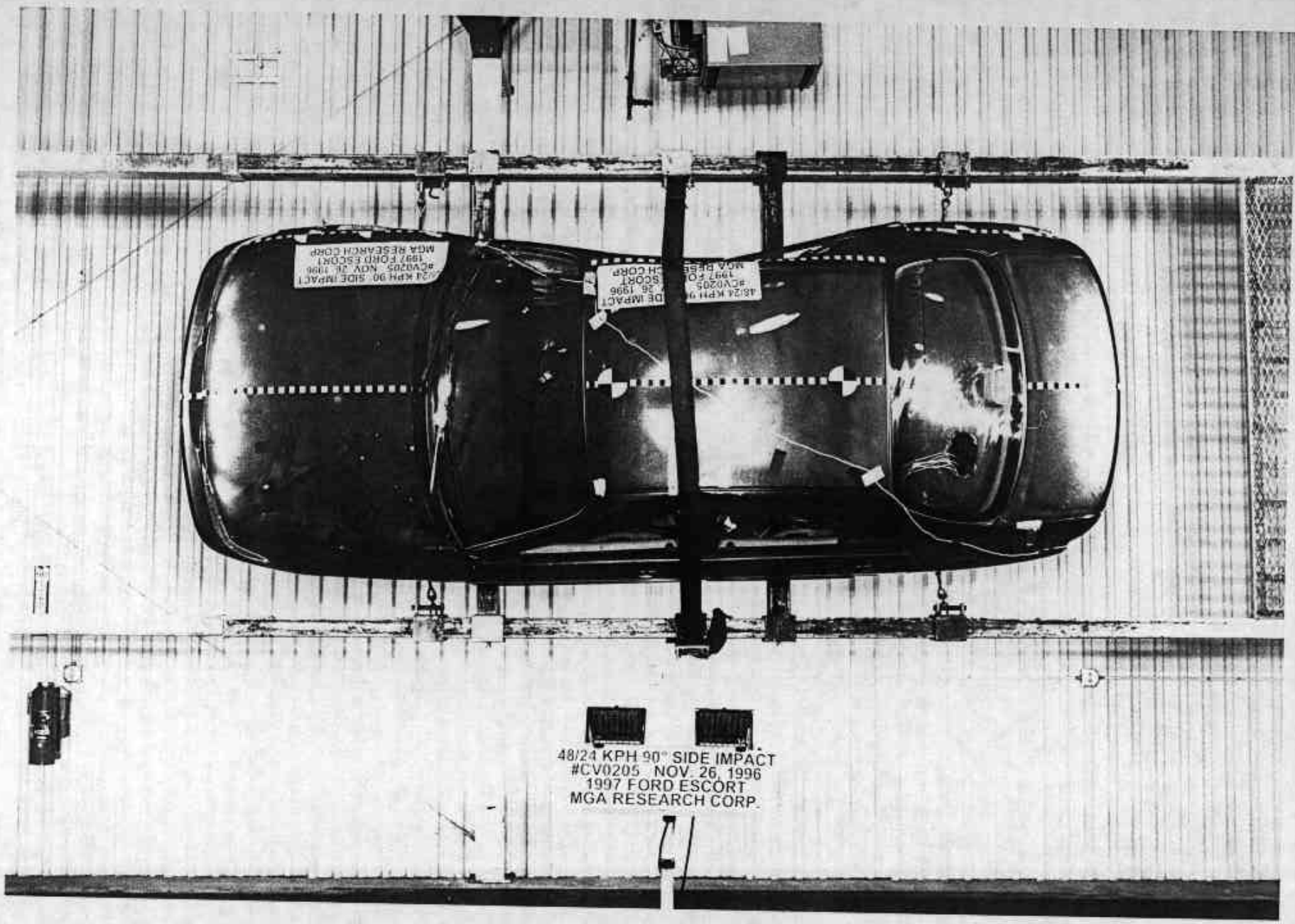
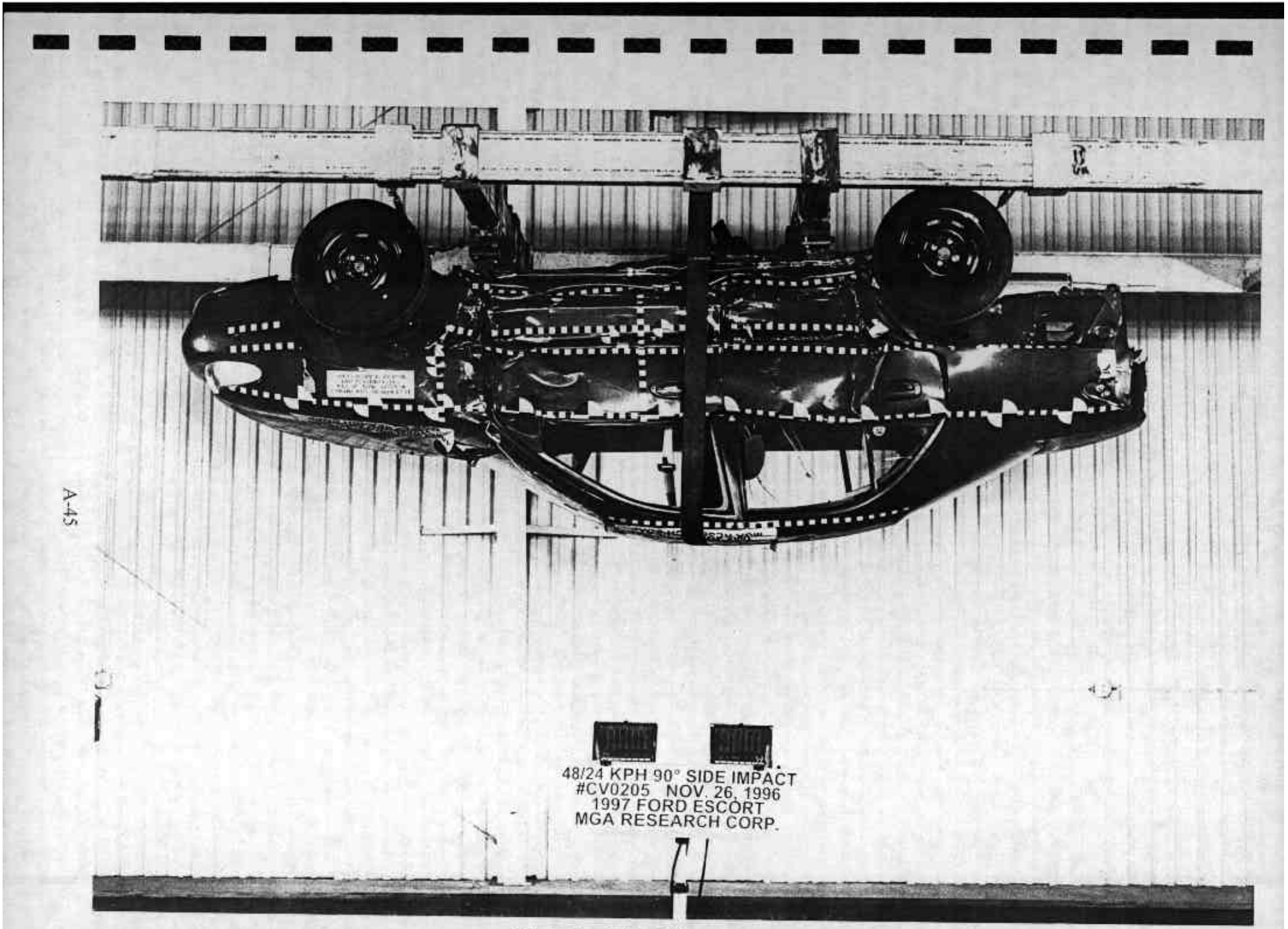


Photo No. A-43 - Tire Placard



A-44

Photo No. A-44 - Rollover 90°



A-45

Photo No. A-45 - Rollover 180°

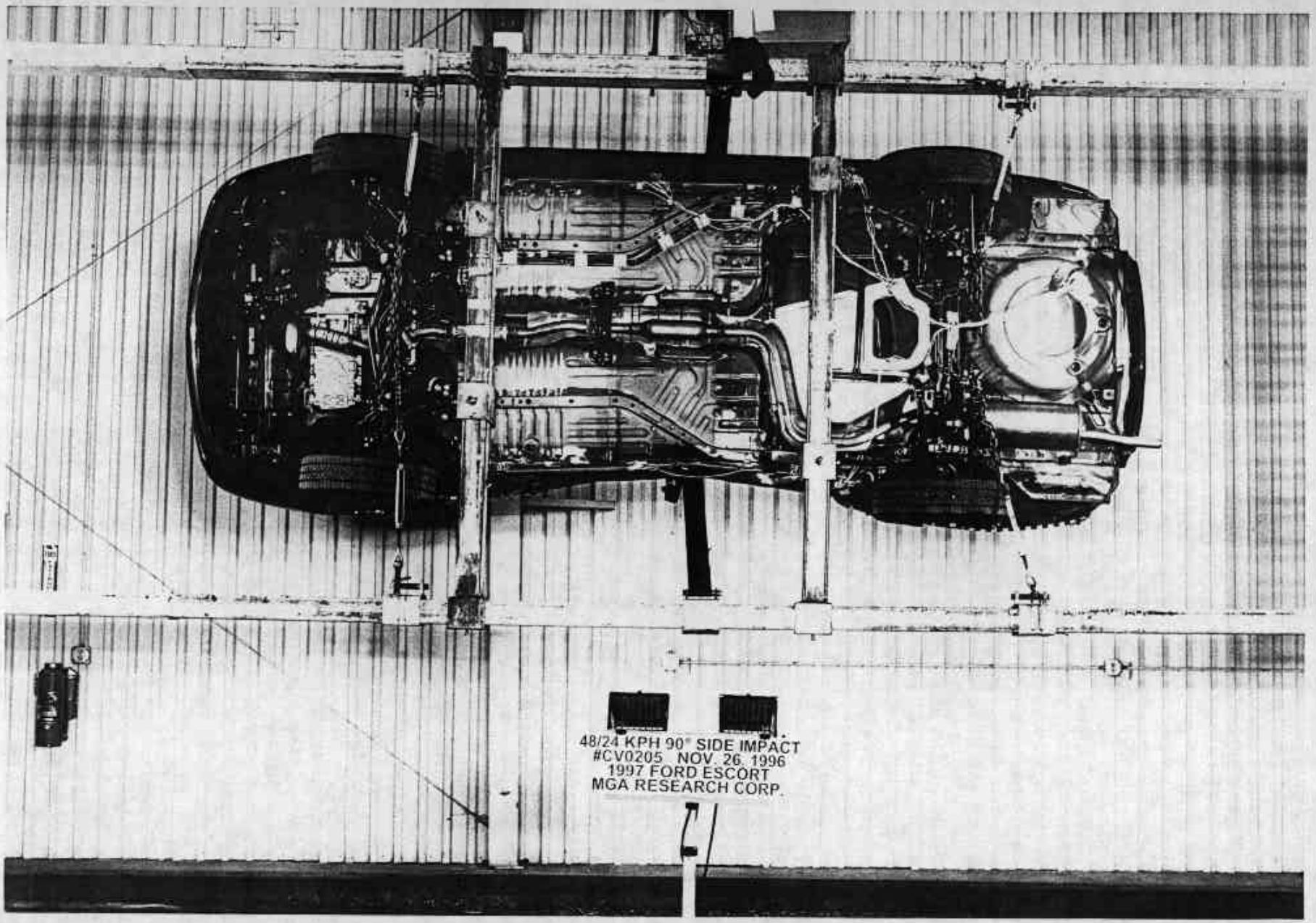
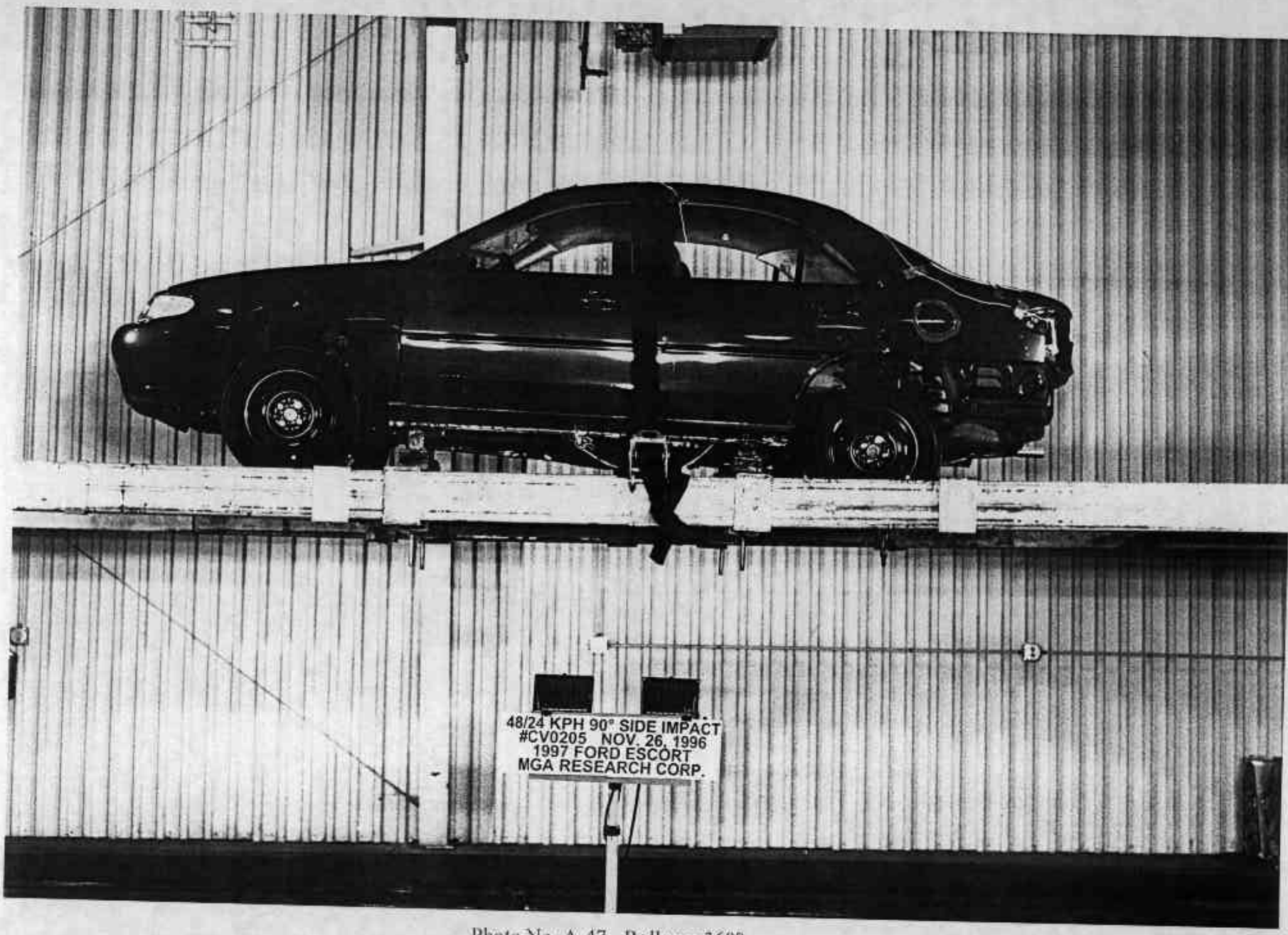


Photo No. A-46 - Rollover 270°



A-47

Photo No. A-47 - Rollover 360°

Photo No. A-48 - Right Front Attitude Point

Photo No. A-49 - Left Front Attitude Point

Photo No. A-50 - Right Rear Attitude Point

A-51

Photo No. A-51 - Left Rear Attitude Point

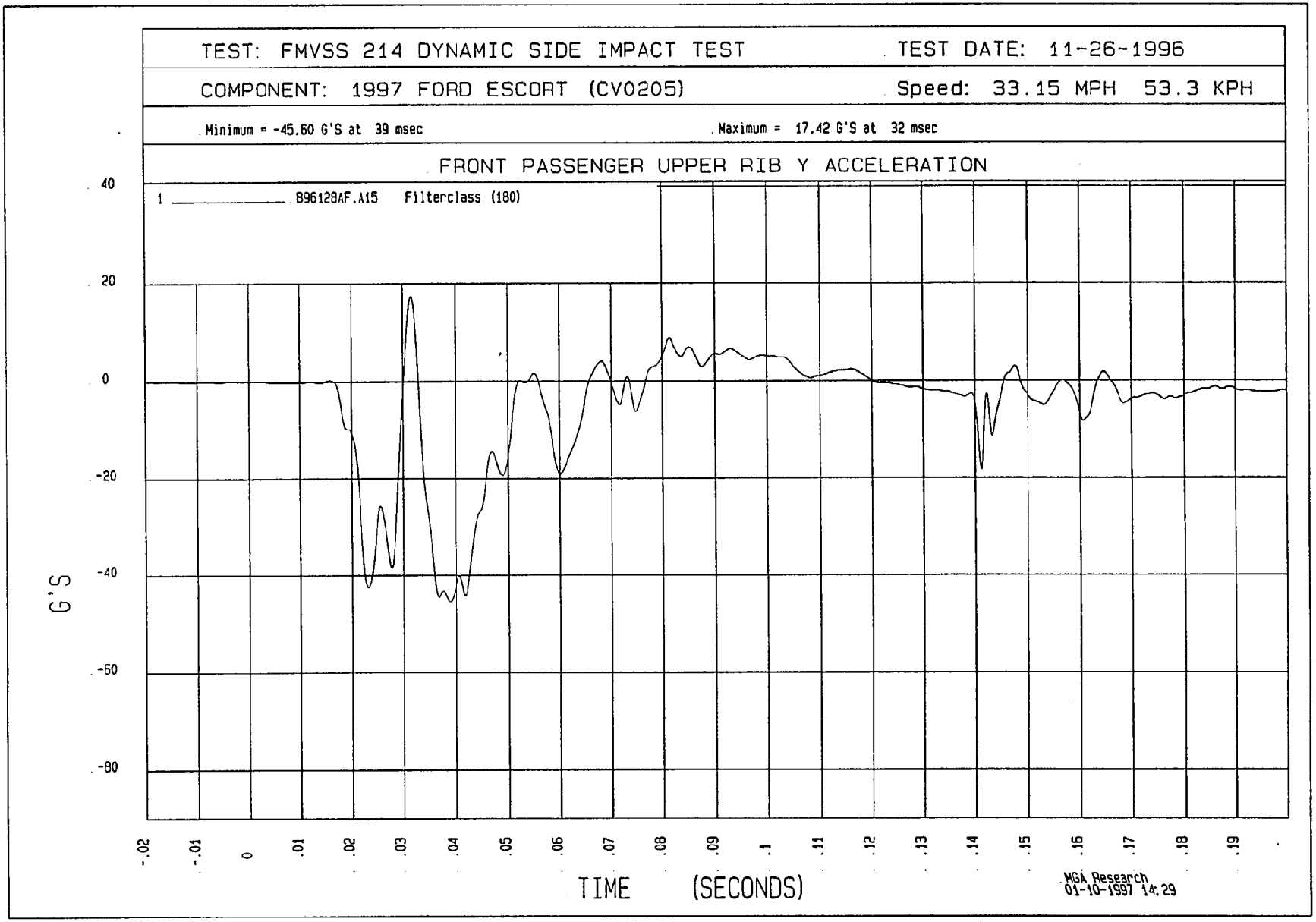
APPENDIX B - VEHICLE AND SID RESPONSE DATA

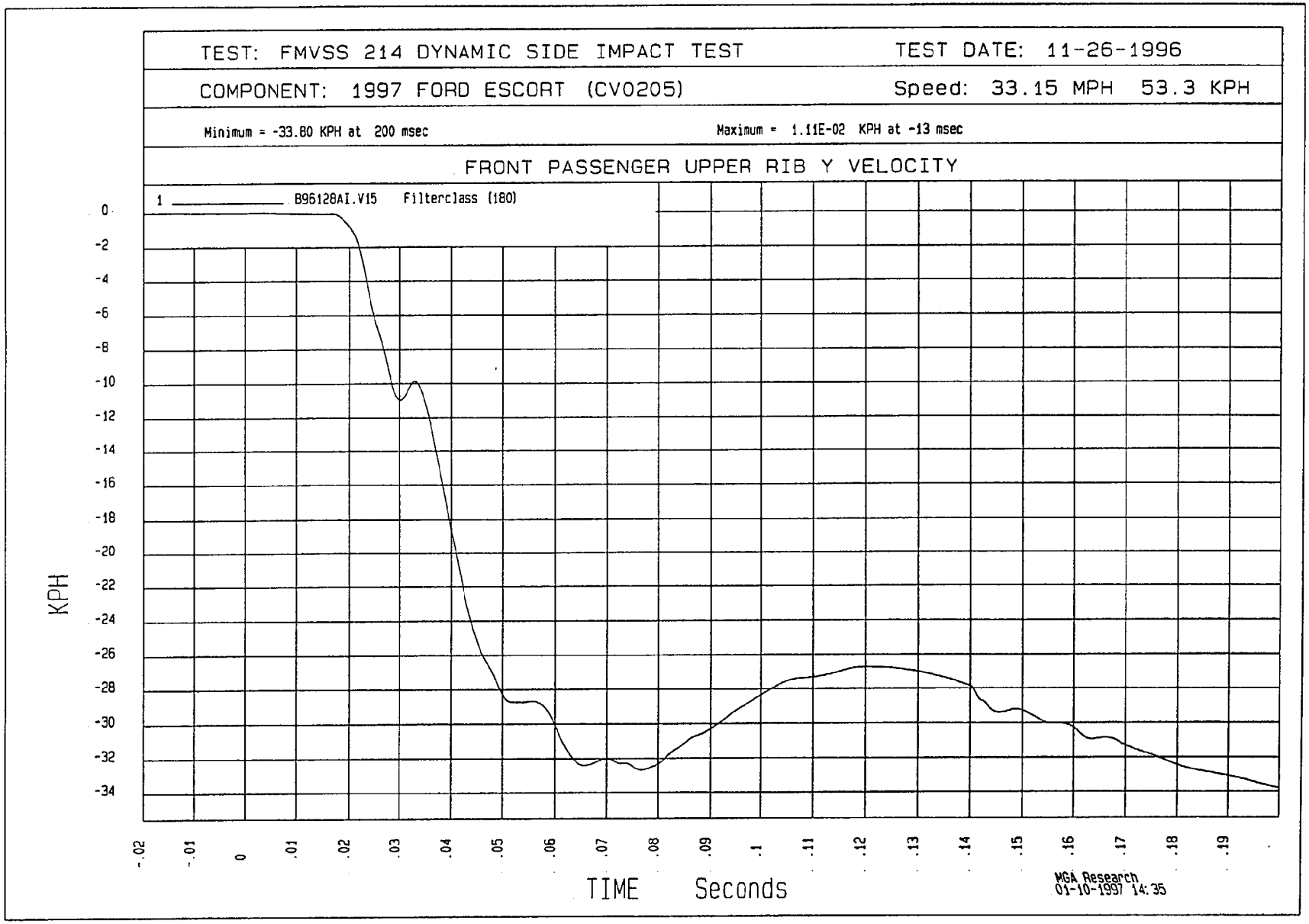
Table of Data Plots

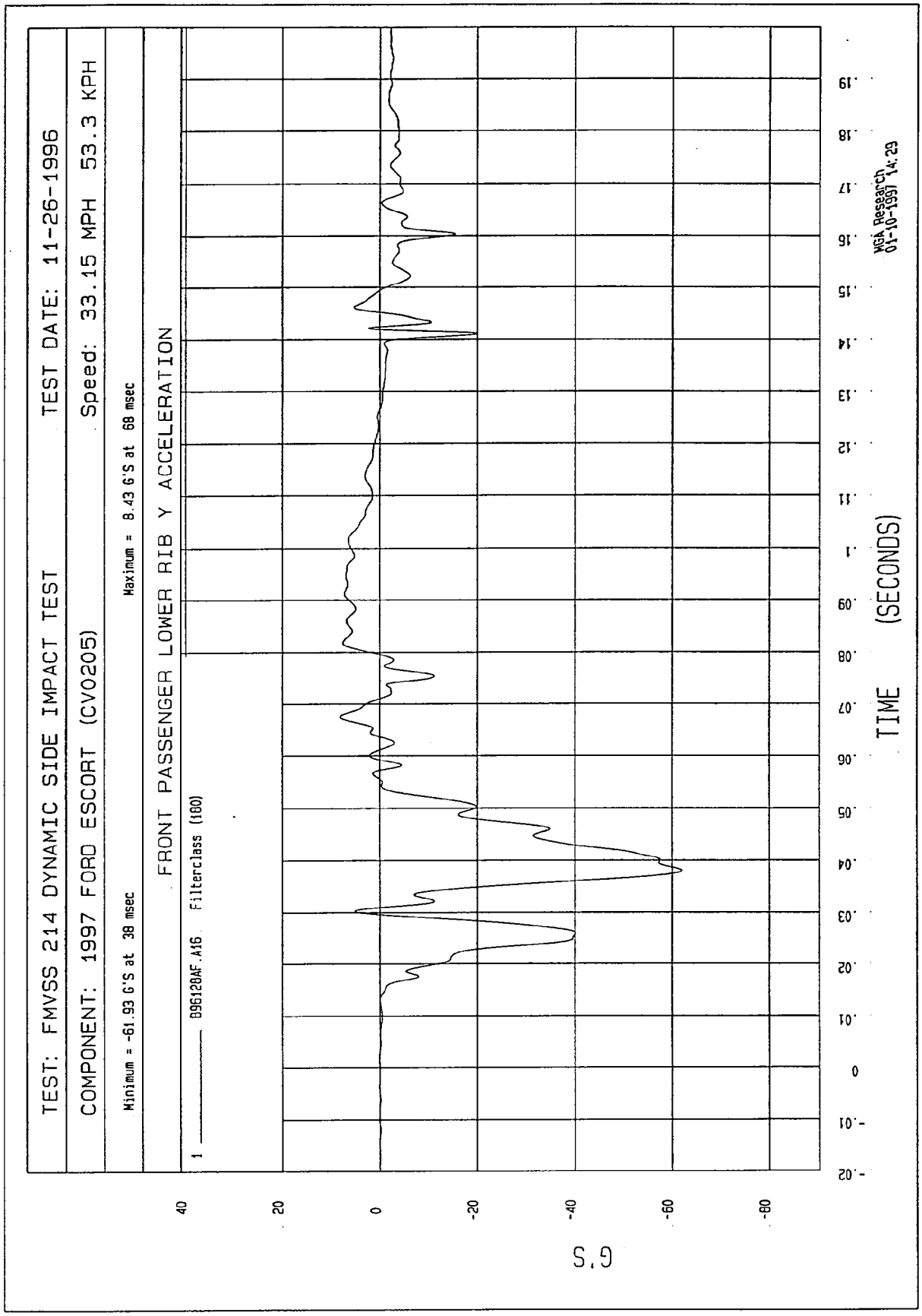
Table of Data Plots

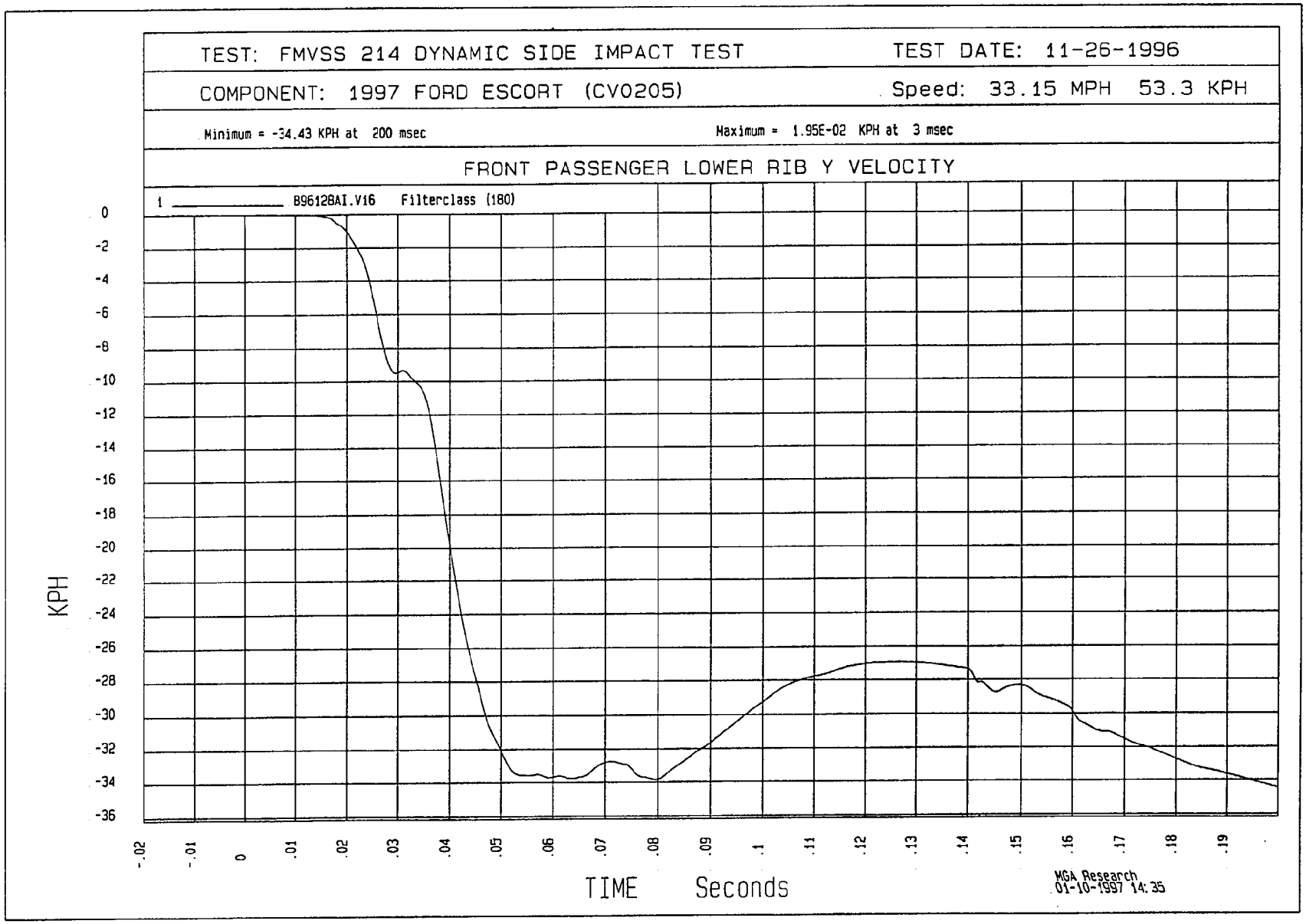
Table of Data Plots

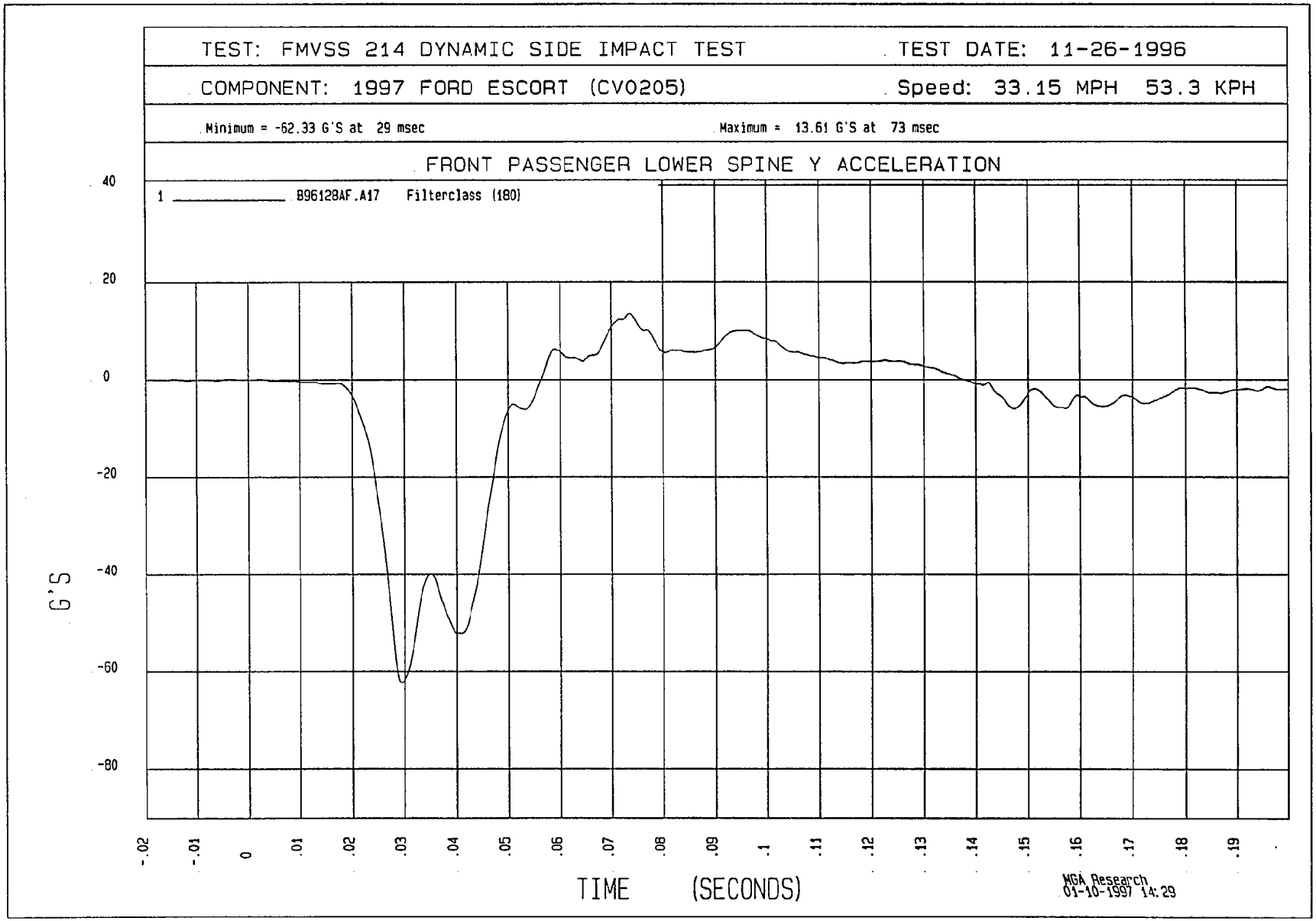
Table of Data Plots

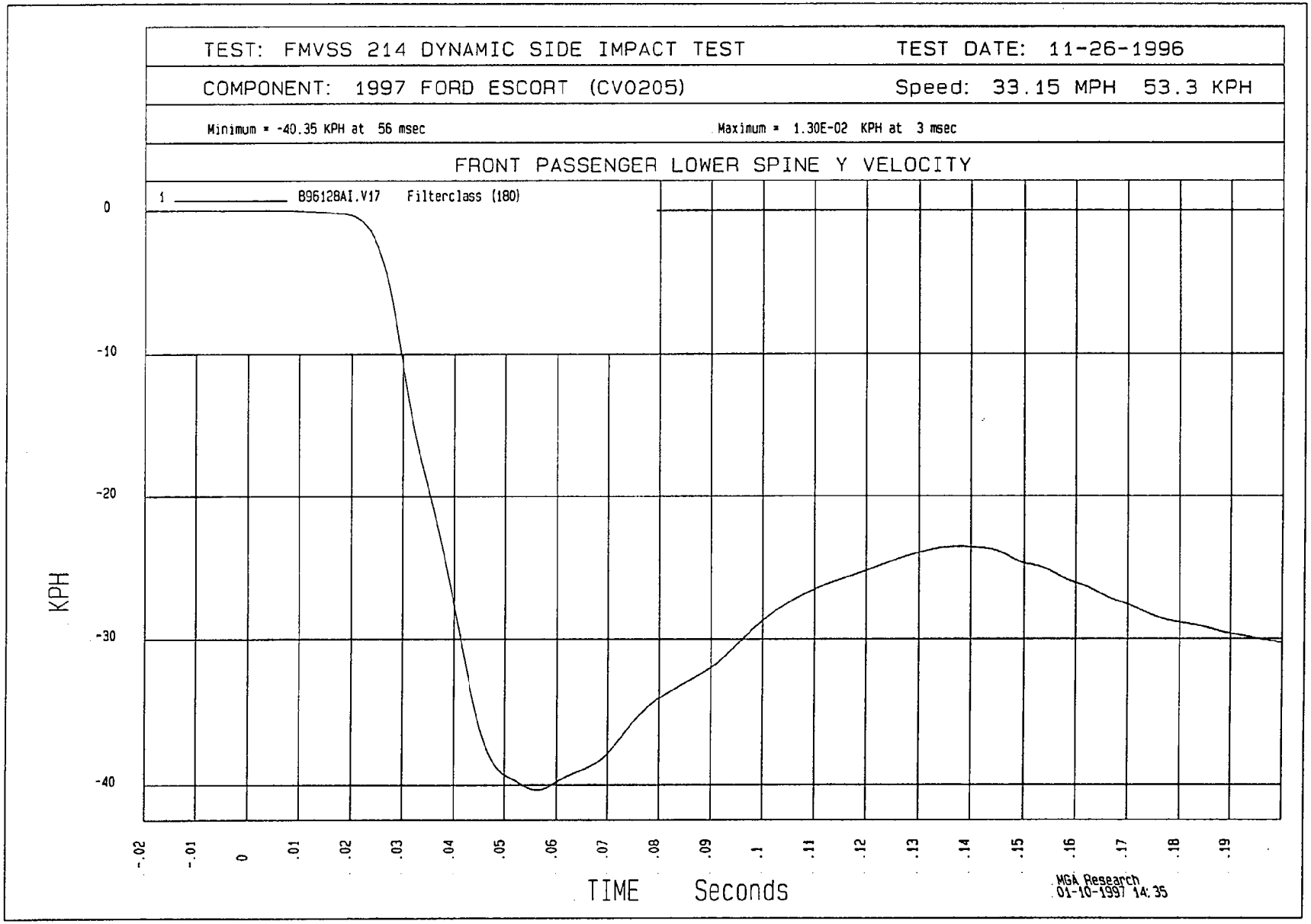

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -45.60 G'S at 39 msec
Maximum = 17.42 G'S at 32 msec
FRONT PASSENGER UPPER RIB Y ACCELERATION
1 B96128AF.A15 Filterclass (180)
40
20
0
-20
-40
-60
-80
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-10-1997 14:29

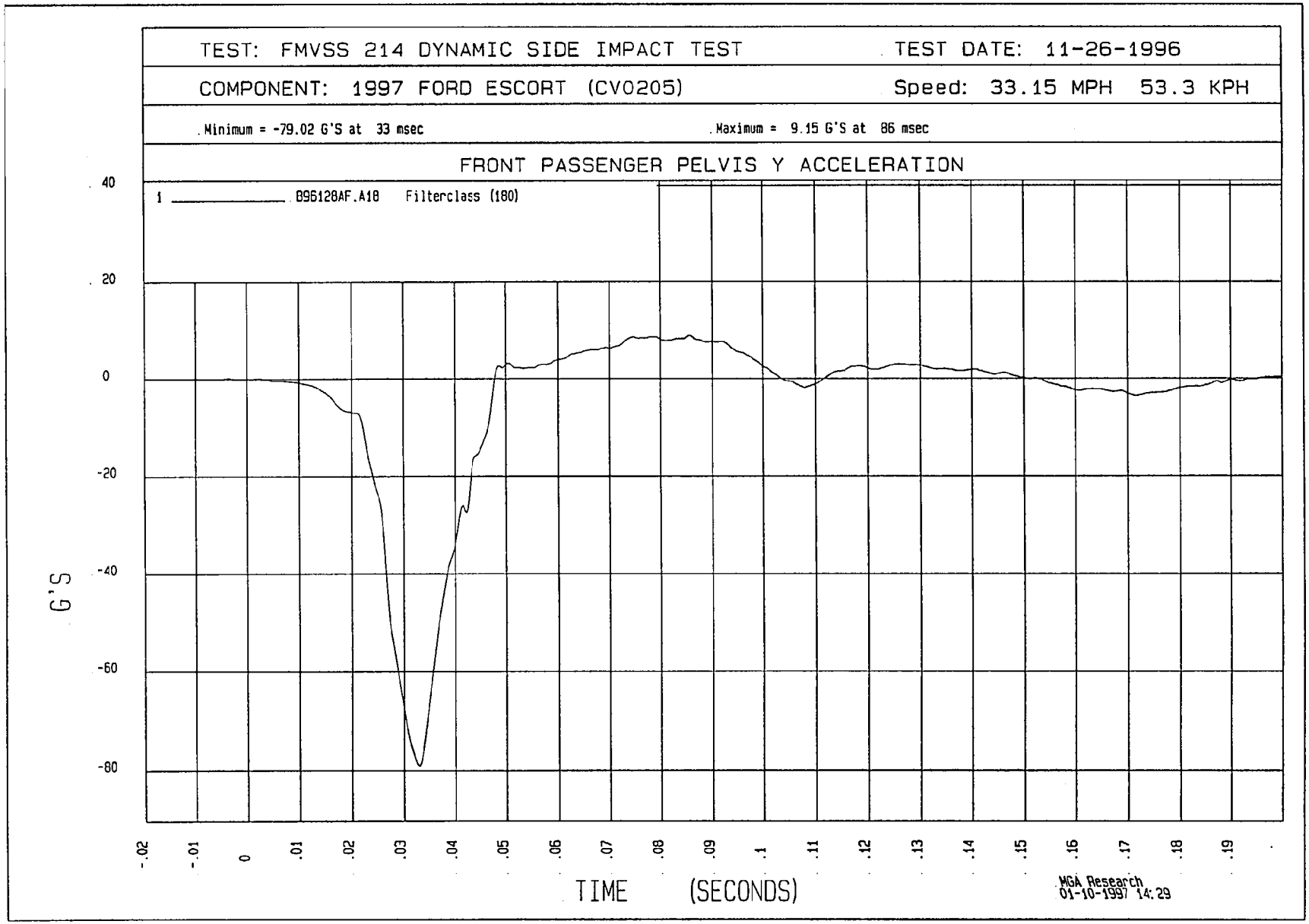

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -33.80 KPH at 200 msec
Maximum = 1.11E-02 KPH at -13 msec
FRONT PASSENGER UPPER RIB Y VELOCITY
1 B96128AI.V15 Filterclass (180)
KPH
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-28
-30
-32
-34
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-10-1997 14:35

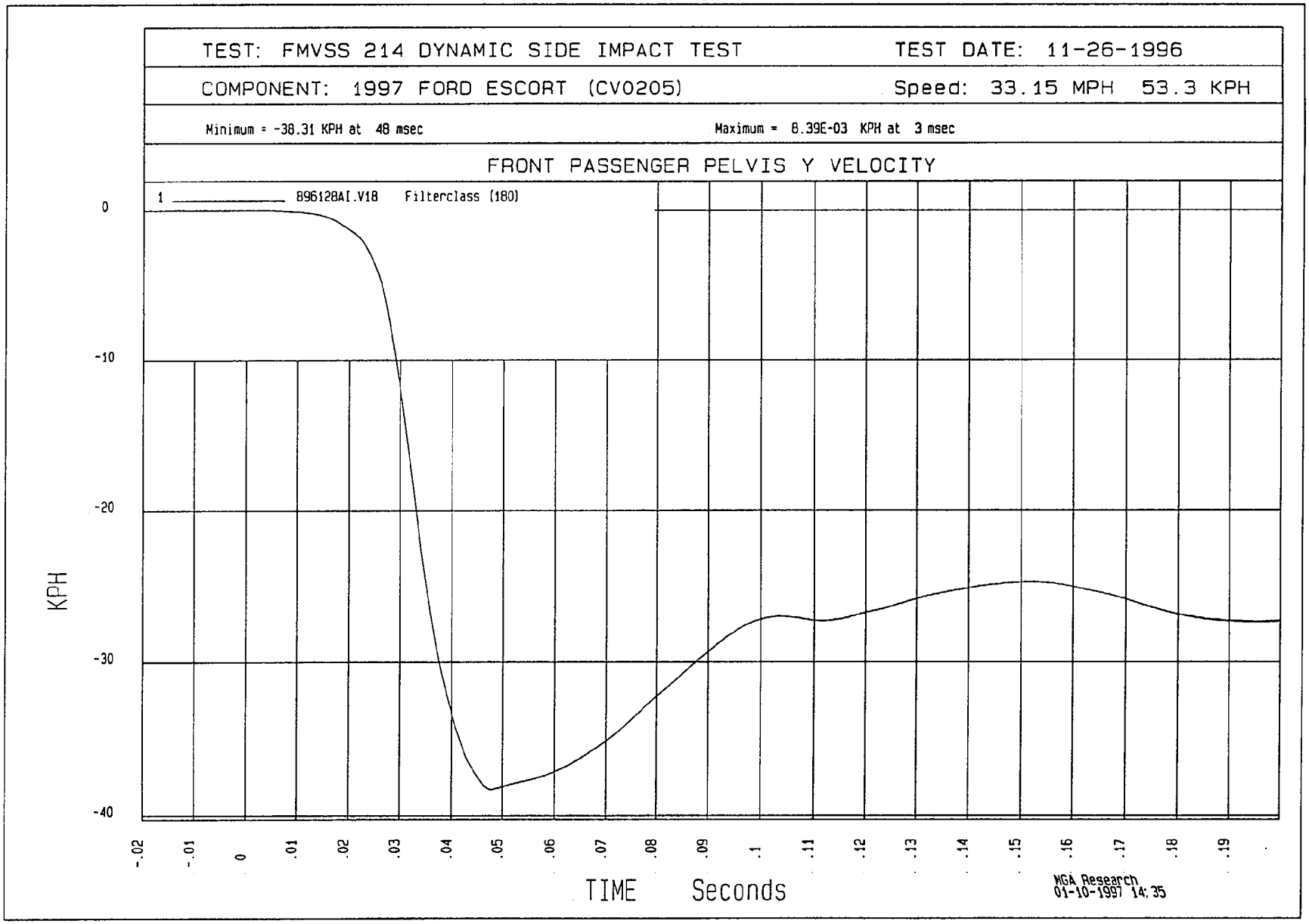

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -61.93 G'S at 38 msec
Maximum = 8.43 G'S at 68 msec
FRONT PASSENGER LOWER RIB Y ACCELERATION
1 B96120AF.A16 Filterclass (180)
MGA Research 01-10-1997 14:29
G'S
TIME (SECONDS)

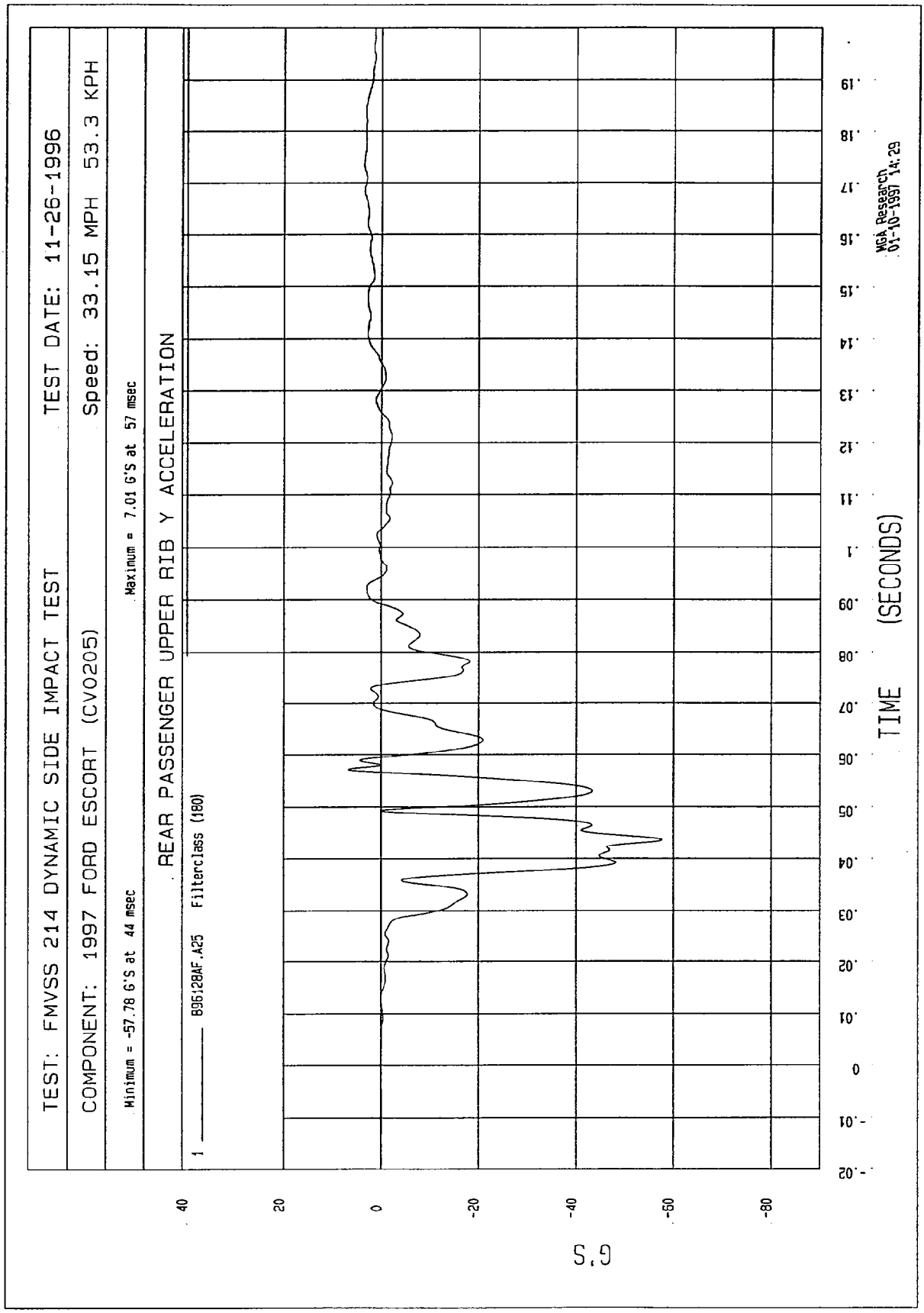

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -34.43 KPH at 200 msec
Maximum = 1.95E-02 KPH at 3 msec
FRONT PASSENGER LOWER RIB Y VELOCITY
1 B96128AI.V16 Filterclass (180)
KPH
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-28
-30
-32
-34
-36
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-10-1997 14:35

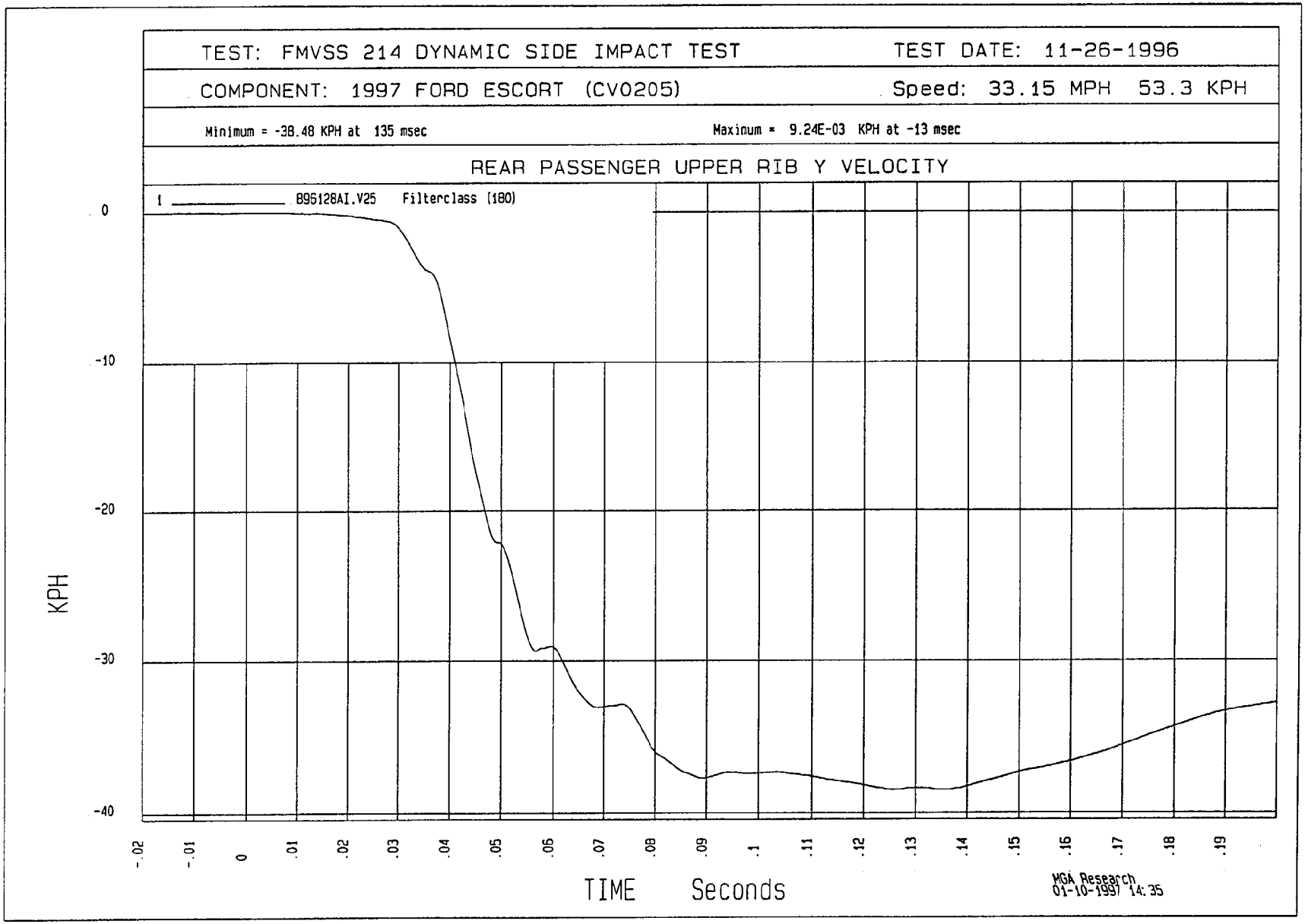

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -62.33 G'S at 29 msec
Maximum = 13.61 G'S at 73 msec
FRONT PASSENGER LOWER SPINE Y ACCELERATION
1 B96128AF.A17 Filterclass (180)
40
20
0
-20
-40
-60
-80
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-10-1997 14:29

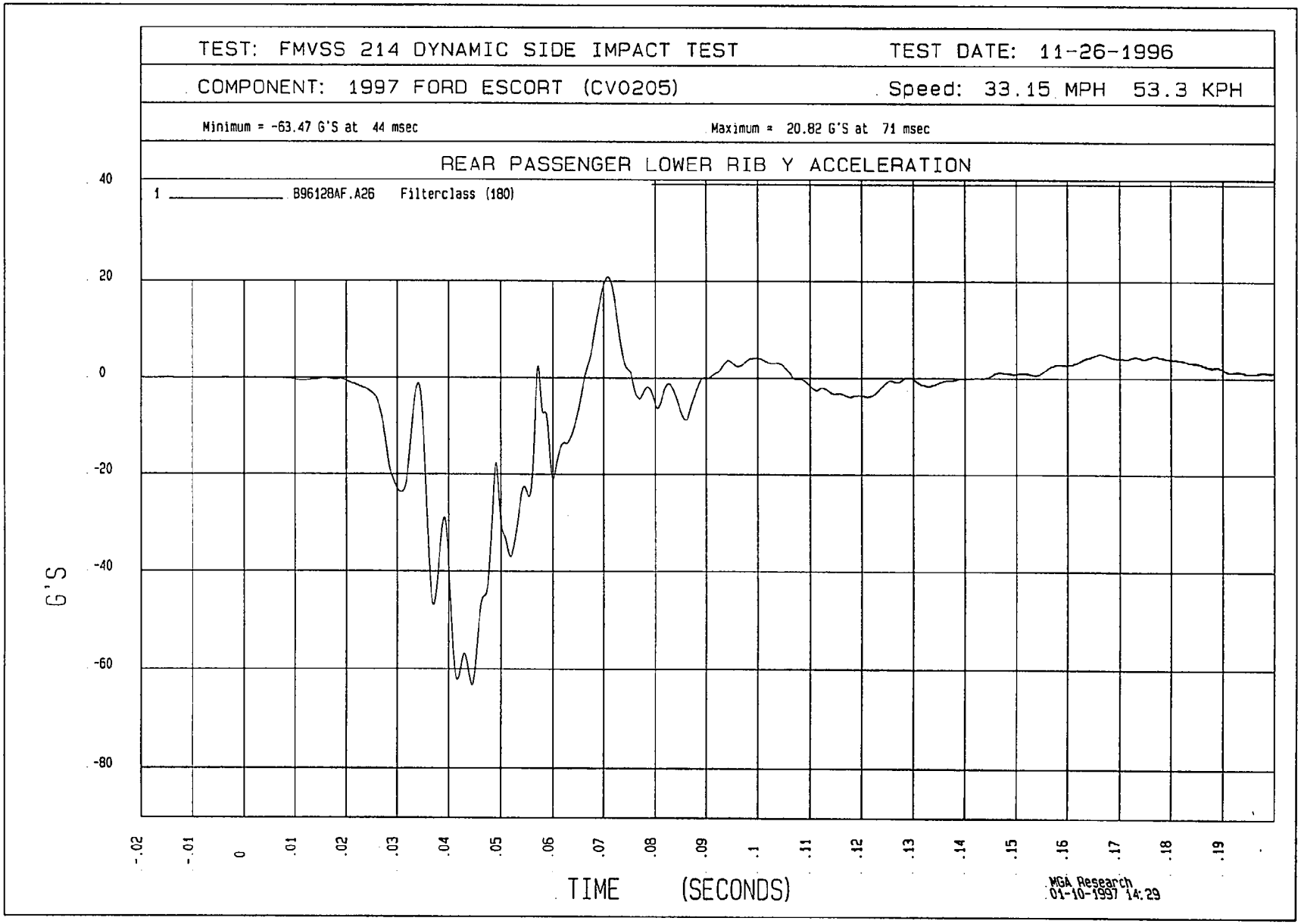

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -40.35 KPH at 56 msec
Maximum = 1.30E-02 KPH at 3 msec
FRONT PASSENGER LOWER SPINE Y VELOCITY
1 B96128AI.V17 Filterclass (180)
0
-10
-20
-30
-40
KPH
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-10-1997 14:35

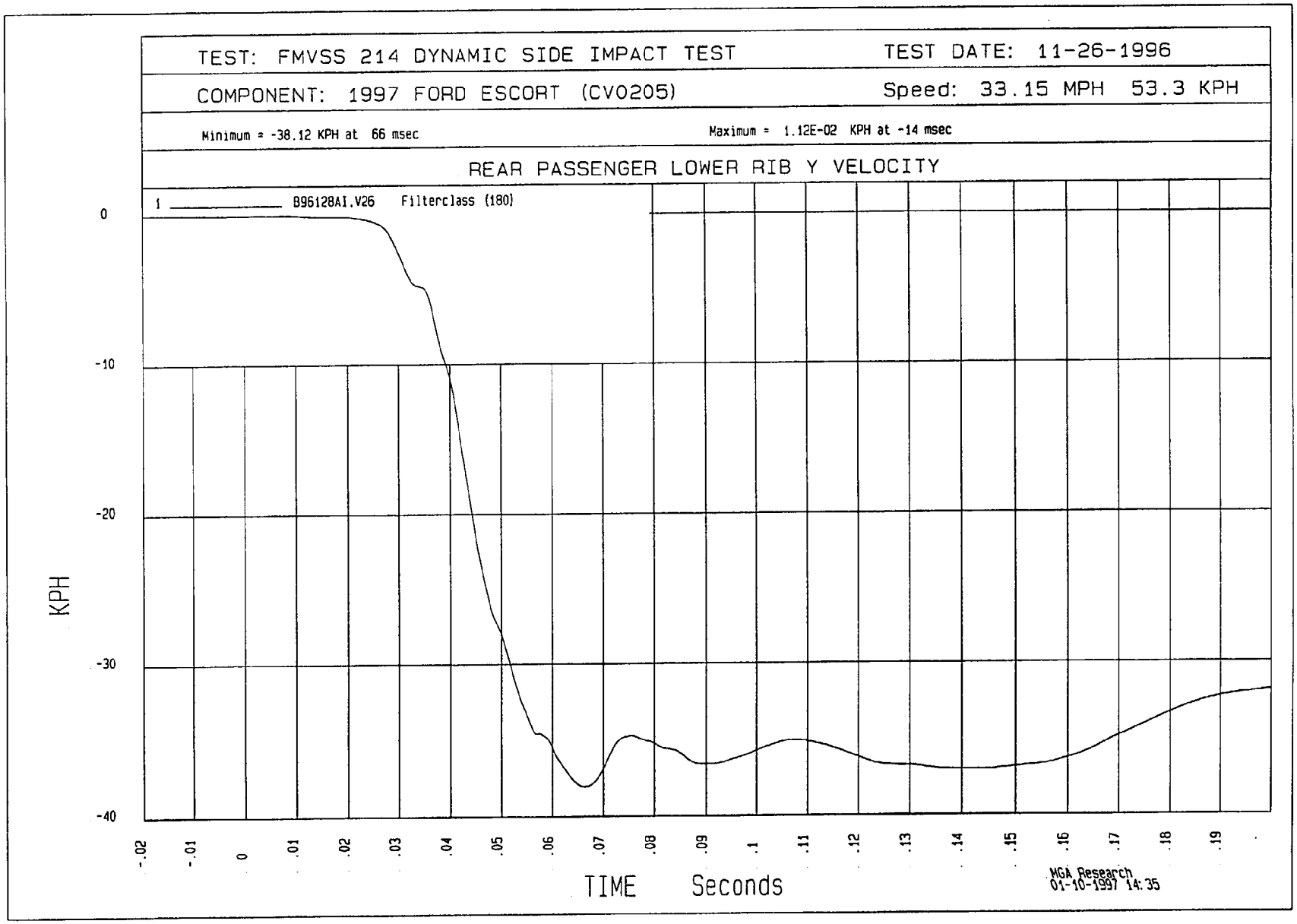

TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -79.02 G'S at 33 msec
Maximum = 9.15 G'S at 86 msec
FRONT PASSENGER PELVIS Y ACCELERATION
1 B96128AF.A18 Filterclass (180)
40
20
0
-20
-40
-60
-80
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-10-1997 14:29


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -38.31 KPH at 48 msec
Maximum = 8.39E-03 KPH at 3 msec
FRONT PASSENGER PELVIS Y VELOCITY
1 896128AI.V18 Filterclass (180)
0
-10
-20
-30
-40
KPH
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-10-1997 14:35


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -57.78 G'S at 44 msec
Maximum = 7.01 G'S at 57 msec
REAR PASSENGER UPPER RIB Y ACCELERATION
1 B96128AF.A25 Filterclass (180)
40
20
0
-20
-40
-60
-80
G'S
.19
.18
.17
.16
.15
.14
.13
.12
.11
1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
-.01
-.02
TIME (SECONDS)
MGA Research
01-10-1997 14:29


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -38.48 KPH at 135 msec
Maximum = 9.24E-03 KPH at -13 msec
REAR PASSENGER UPPER RIB Y VELOCITY
1 B96128AI.V25 Filterclass (180)
0
-10
-20
-30
-40
KPH
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-10-1997 14:35


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -63.47 G'S at 44 msec
Maximum = 20.82 G'S at 71 msec
REAR PASSENGER LOWER RIB Y ACCELERATION
1 B96128AF.A26 Filterclass (180)
40
20
0
-20
-40
-60
-80
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-10-1997 14:29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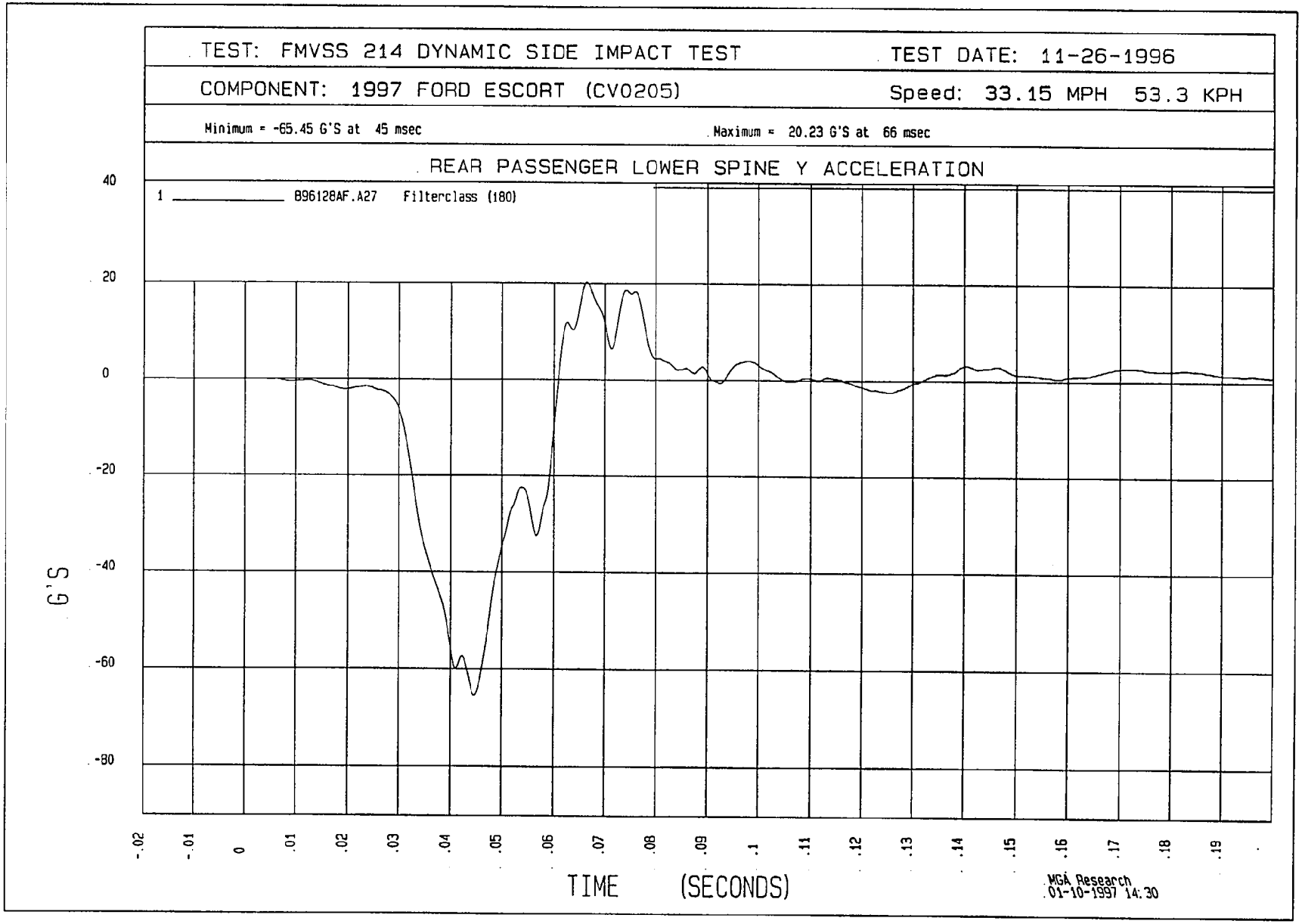
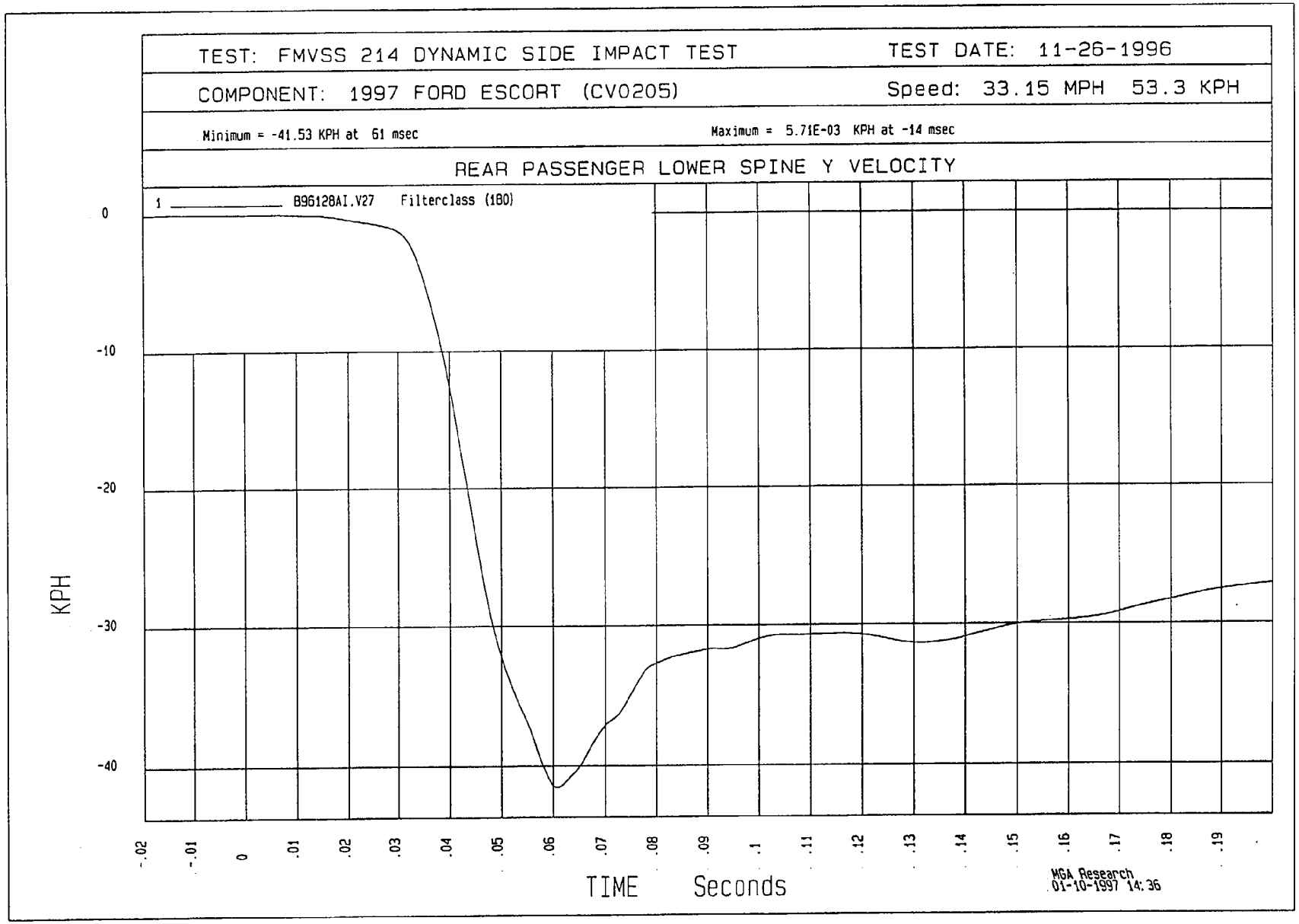
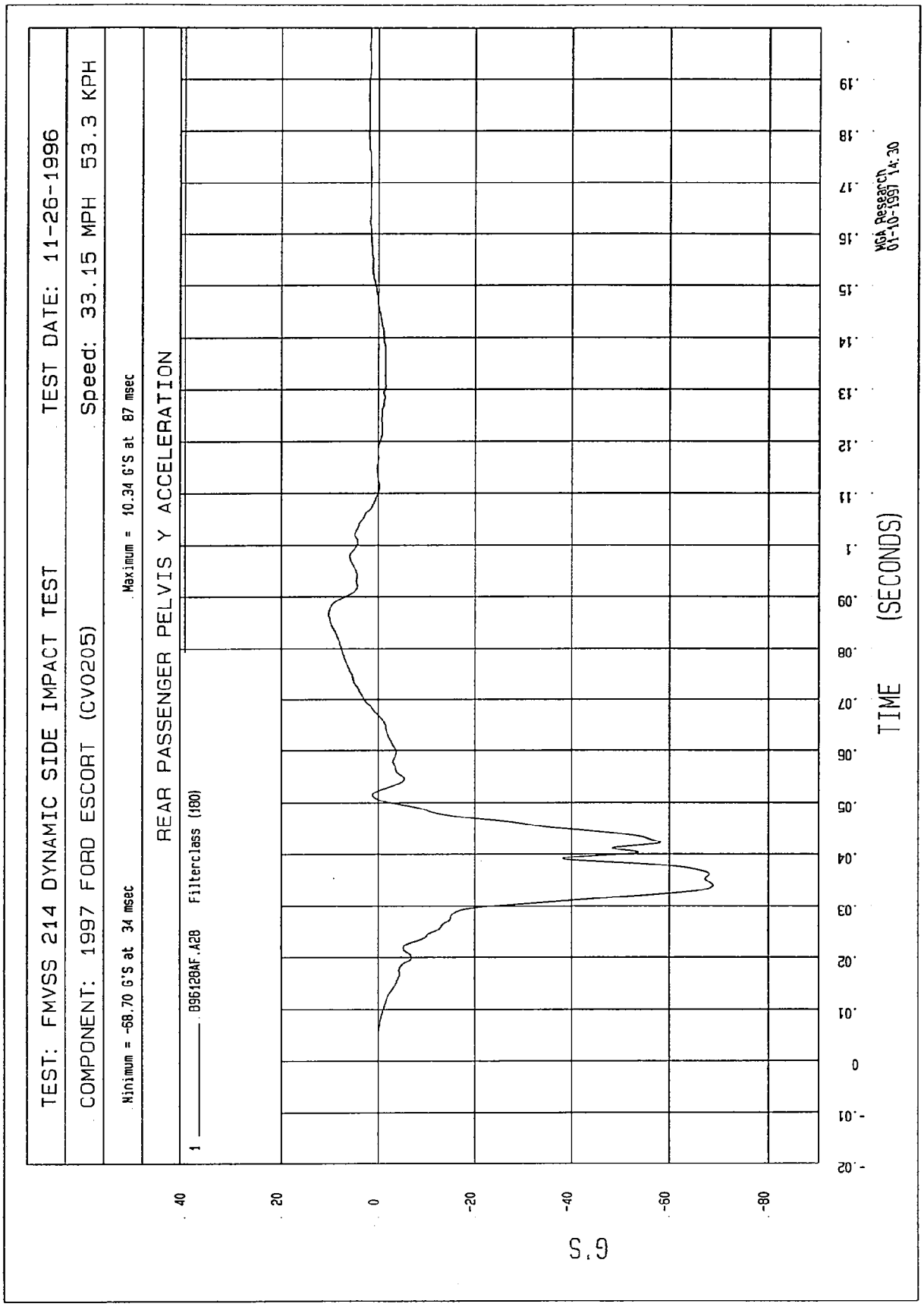
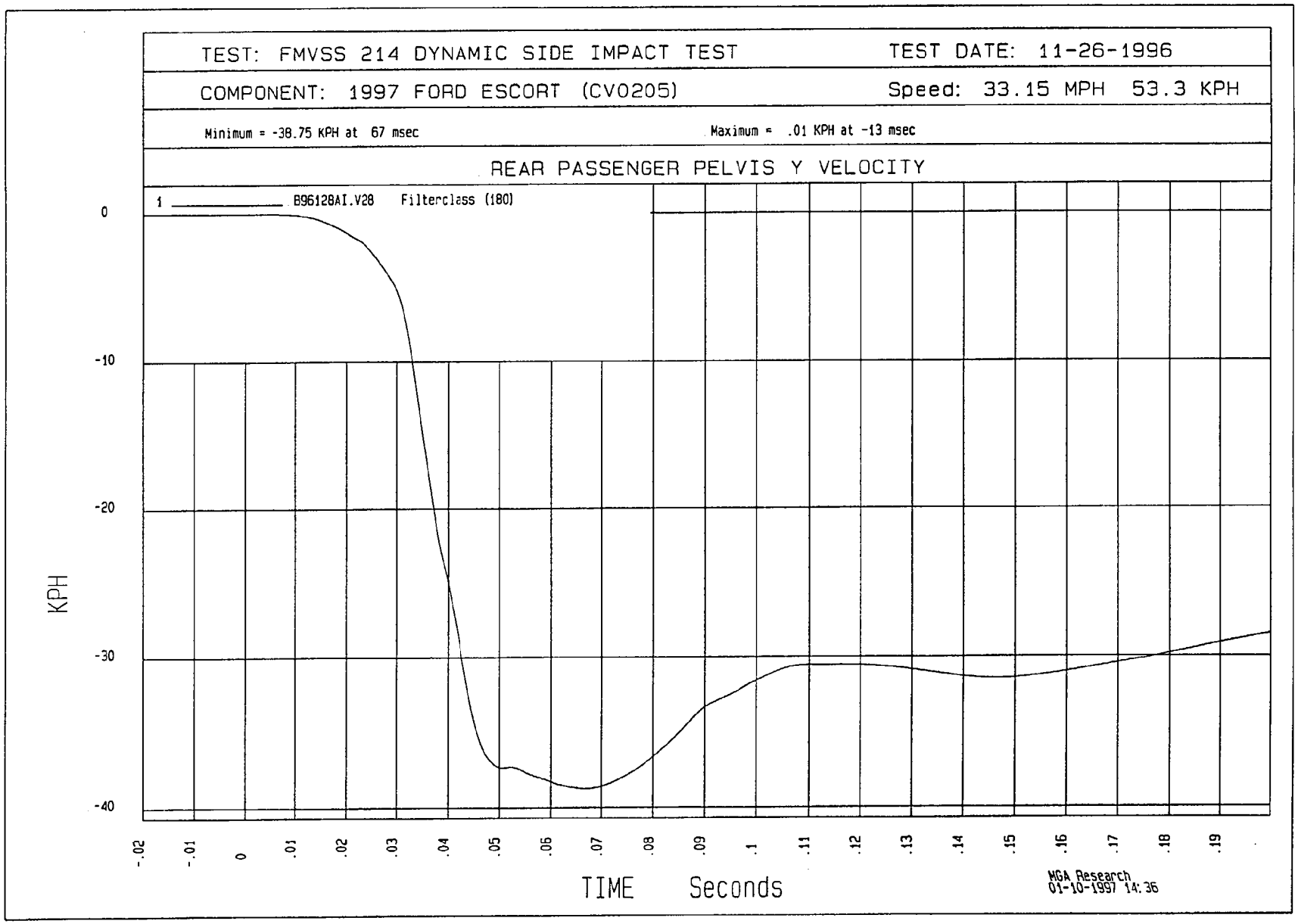
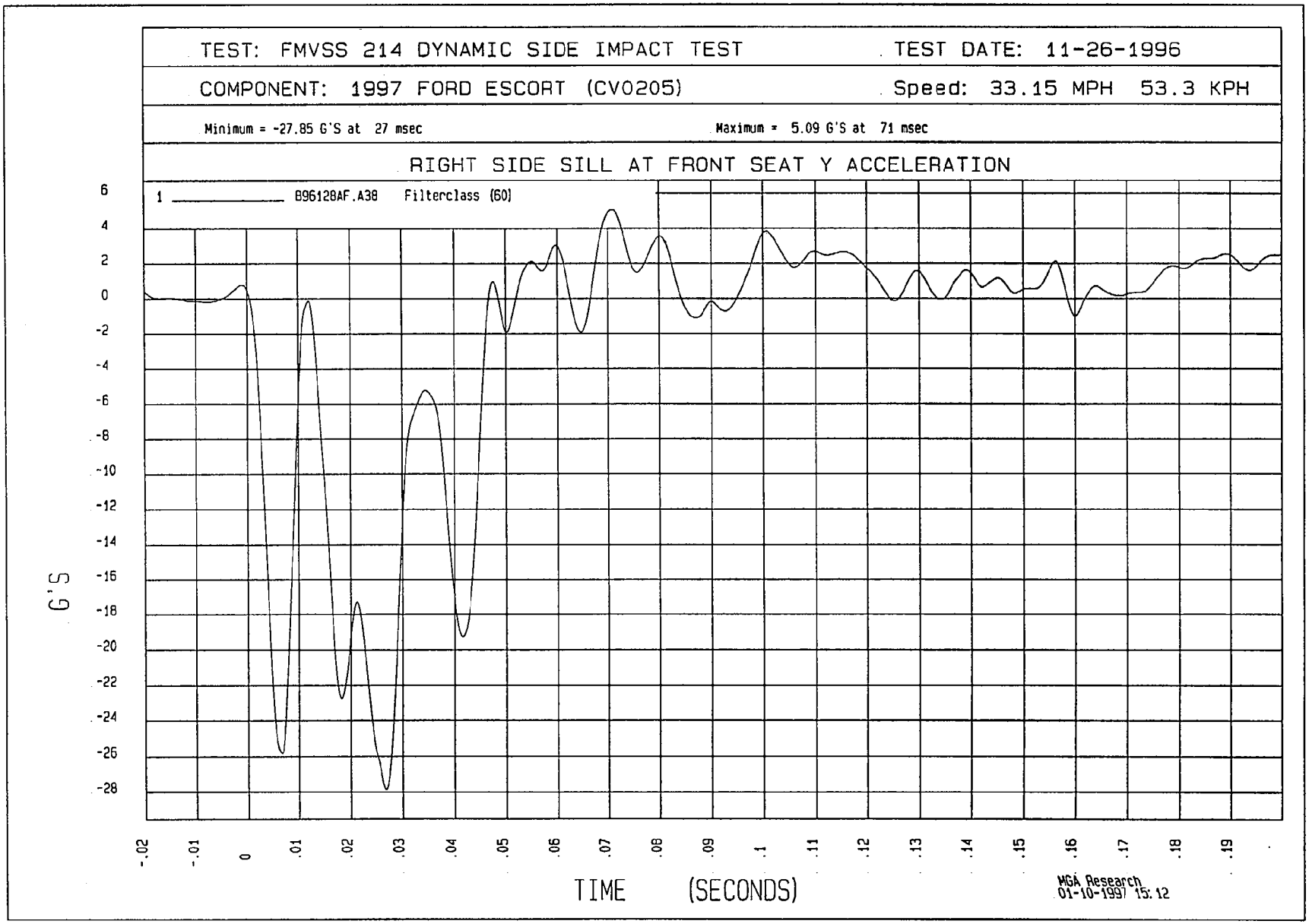
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -38.12 KPH at 66 msec
Maximum = 1.12E-02 KPH at -14 msec
REAR PASSENGER LOWER RIB Y VELOCITY
1 B96128AI.V26 Filterclass (180)
0
-10
-20
-30
-40
KPH
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-10-1997 14:35


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -65.45 G'S at 45 msec
Maximum = 20.23 G'S at 66 msec
REAR PASSENGER LOWER SPINE Y ACCELERATION
1 B96128AF.A27 Filterclass (180)
40
20
0
-20
-40
-60
-80
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-10-1997 14:30


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -41.53 KPH at 61 msec
Maximum = 5.71E-03 KPH at -14 msec
REAR PASSENGER LOWER SPINE Y VELOCITY
1 B96128AI.V27 Filterclass (180)
0
-10
-20
-30
-40
KPH
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-10-1997 14:36


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -68.70 G'S at 34 msec
Maximum = 10.34 G'S at 87 msec
REAR PASSENGER PELVIS Y ACCELERATION
1 _____ B96128AF.A2B Filterclass (180)
MGA Research
01-10-1997 14:30
TIME (SECONDS)
G'S
40
20
0
-20
-40
-60
-80
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -38.75 KPH at 67 msec
Maximum = .01 KPH at -13 msec
REAR PASSENGER PELVIS Y VELOCITY
1 B96128AI.V28 Filterclass (180)
0
-10
-20
-30
-40
KPH
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-10-1997 14:36


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -27.85 G'S at 27 msec
Maximum = 5.09 G'S at 71 msec
RIGHT SIDE SILL AT FRONT SEAT Y ACCELERATION
1 B96128AF.A38 Filterclass (60)
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-28
G'S
-.02
-.01
0
.01
.02
.03
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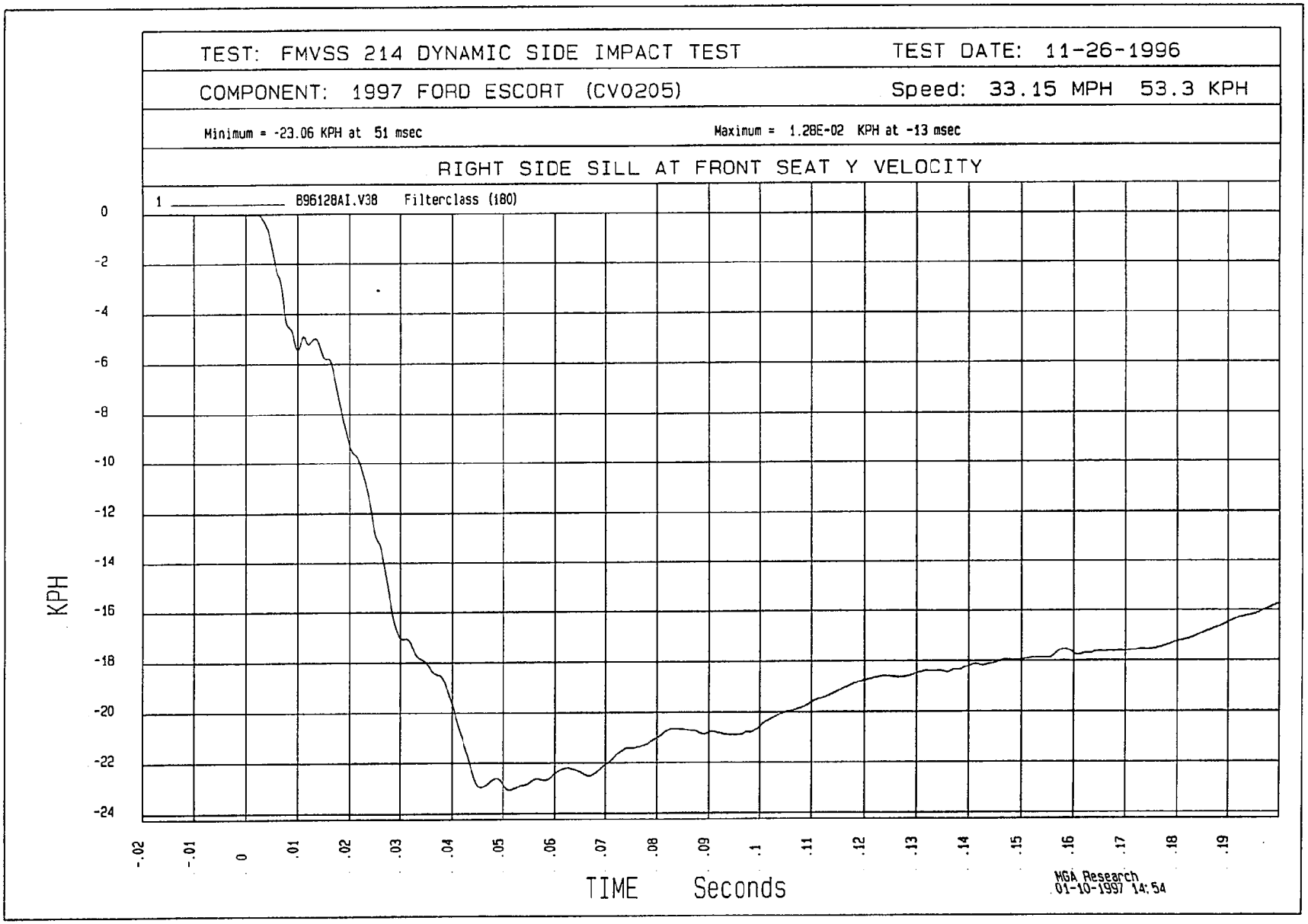
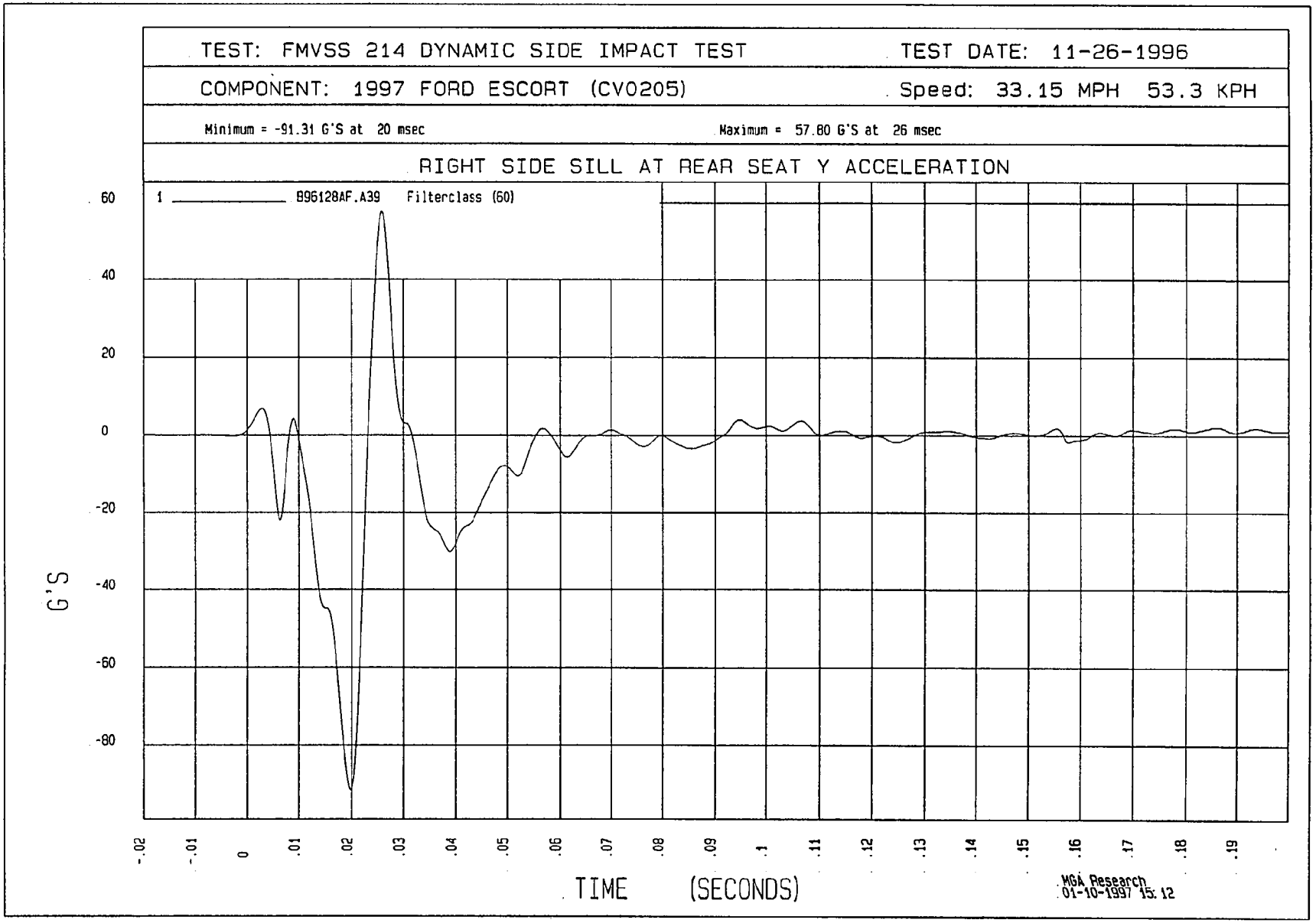
TIME (SECONDS)
MGA Research
01-10-1997 15:12


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -23.06 KPH at 51 msec
Maximum = 1.28E-02 KPH at -13 msec
RIGHT SIDE SILL AT FRONT SEAT Y VELOCITY
1 B96128AI.V38 Filterclass (180)
KPH
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-10-1997 14:54


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -91.31 G'S at 20 msec
Maximum = 57.80 G'S at 26 msec
RIGHT SIDE SILL AT REAR SEAT Y ACCELERATION
1 B96128AF.A39 Filterclass (60)
60
40
20
0
-20
-40
-60
-80
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
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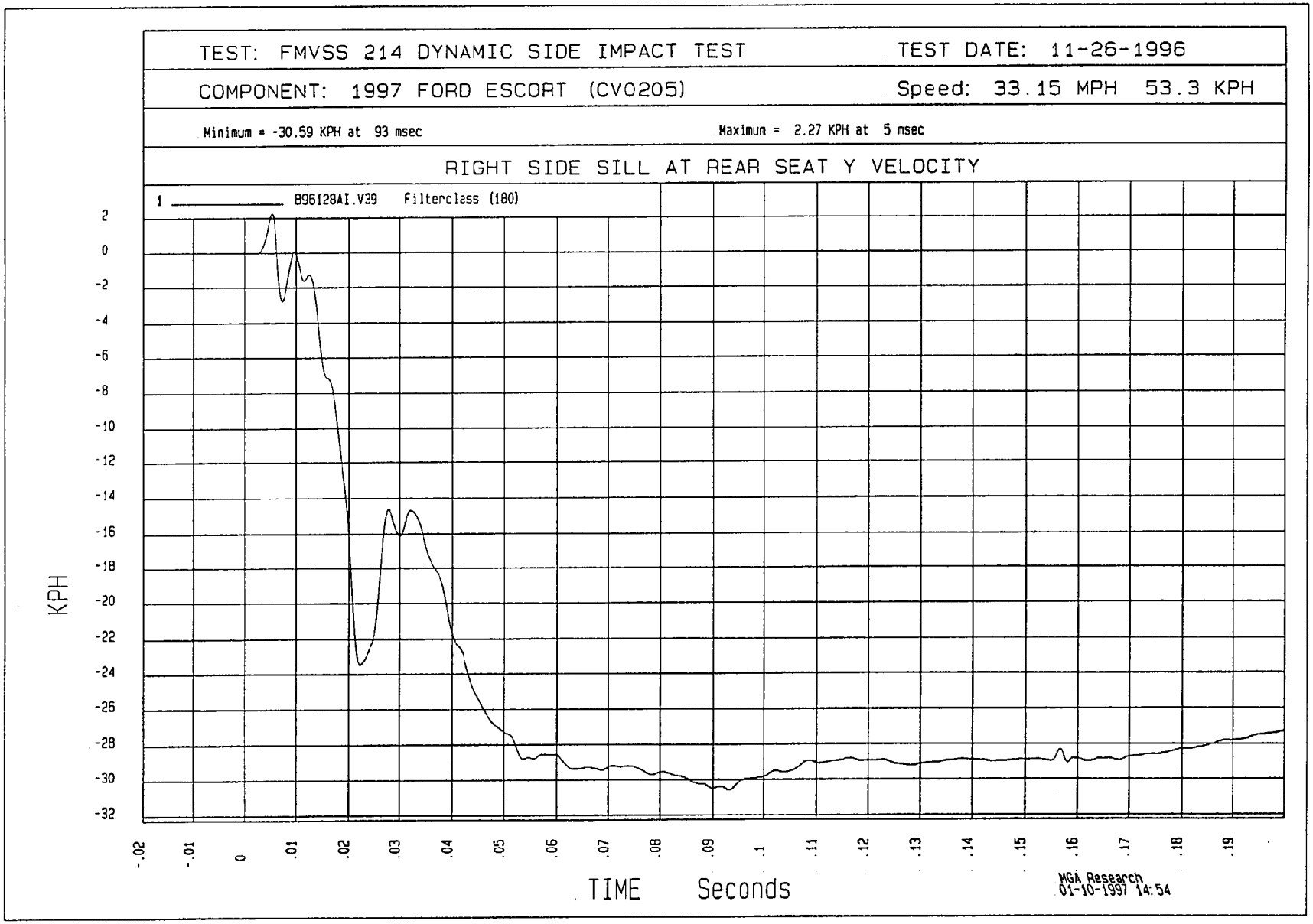
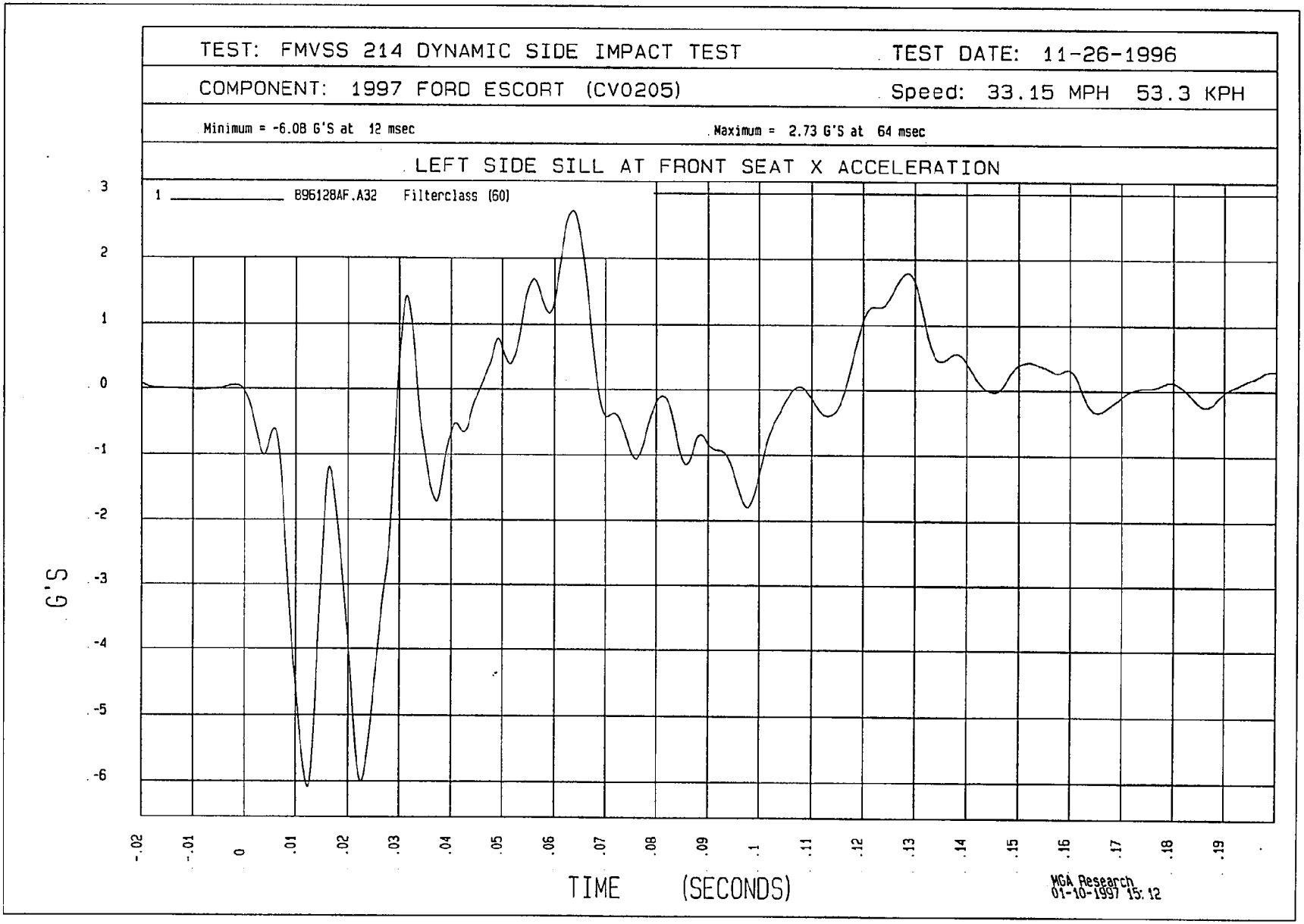
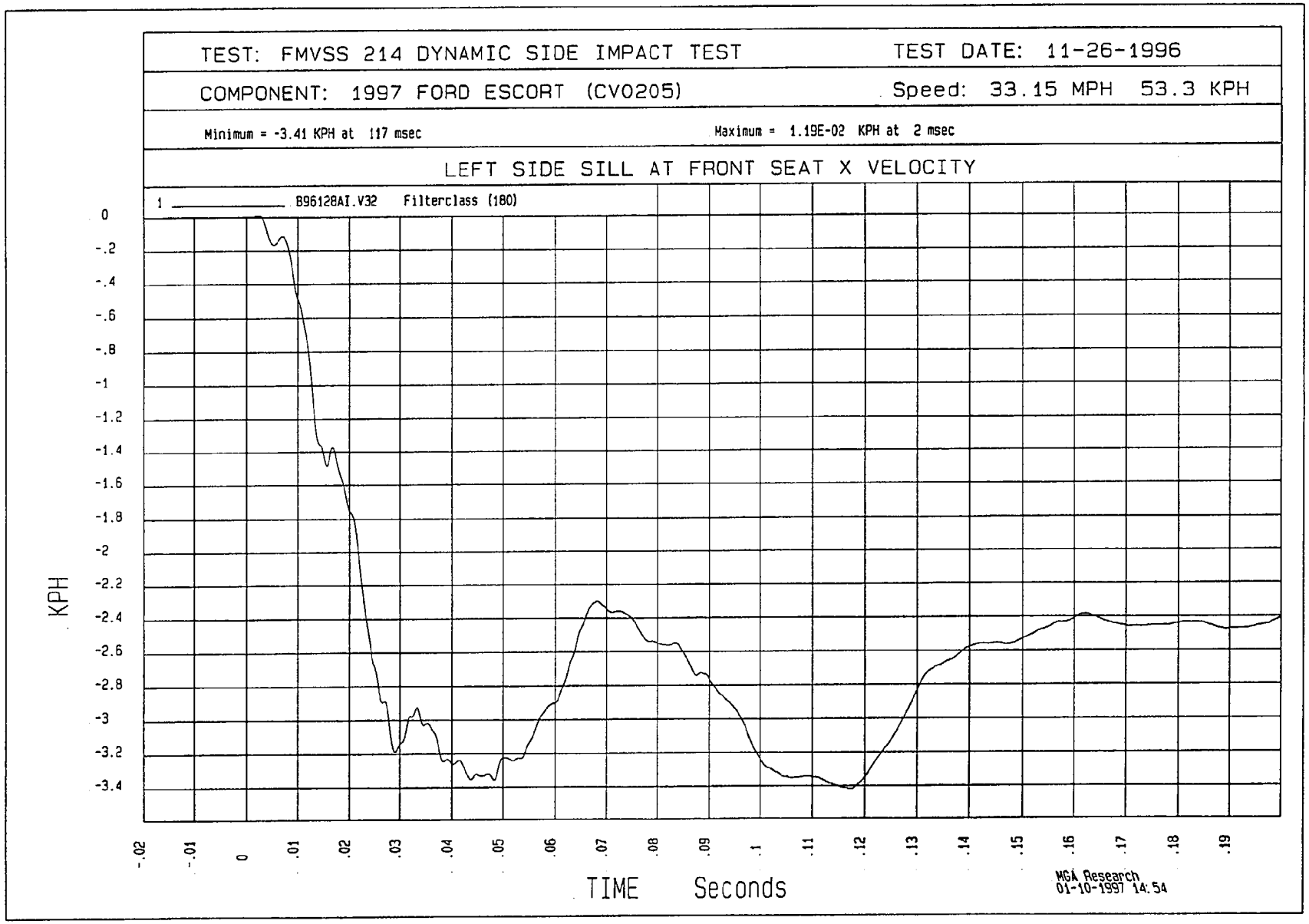
TIME (SECONDS)
MGA Research
01-10-1997 15:12


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -30.59 KPH at 93 msec
Maximum = 2.27 KPH at 5 msec
RIGHT SIDE SILL AT REAR SEAT Y VELOCITY
1 B96128AI.V39 Filterclass (180)
KPH
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-28
-30
-32
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-10-1997 14:54


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -6.08 G'S at 12 msec
Maximum = 2.73 G'S at 64 msec
LEFT SIDE SILL AT FRONT SEAT X ACCELERATION
1 B96128AF.A32 Filterclass (60)
3
2
1
0
-1
-2
-3
-4
-5
-6
G's
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-10-1997 15:12


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -3.41 KPH at 117 msec
Maximum = 1.19E-02 KPH at 2 msec
LEFT SIDE SILL AT FRONT SEAT X VELOCITY
1 B96128AI.V32 Filterclass (180)
KPH
0
-.2
-.4
-.6
-.8
-1
-1.2
-1.4
-1.6
-1.8
-2
-2.2
-2.4
-2.6
-2.8
-3
-3.2
-3.4
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
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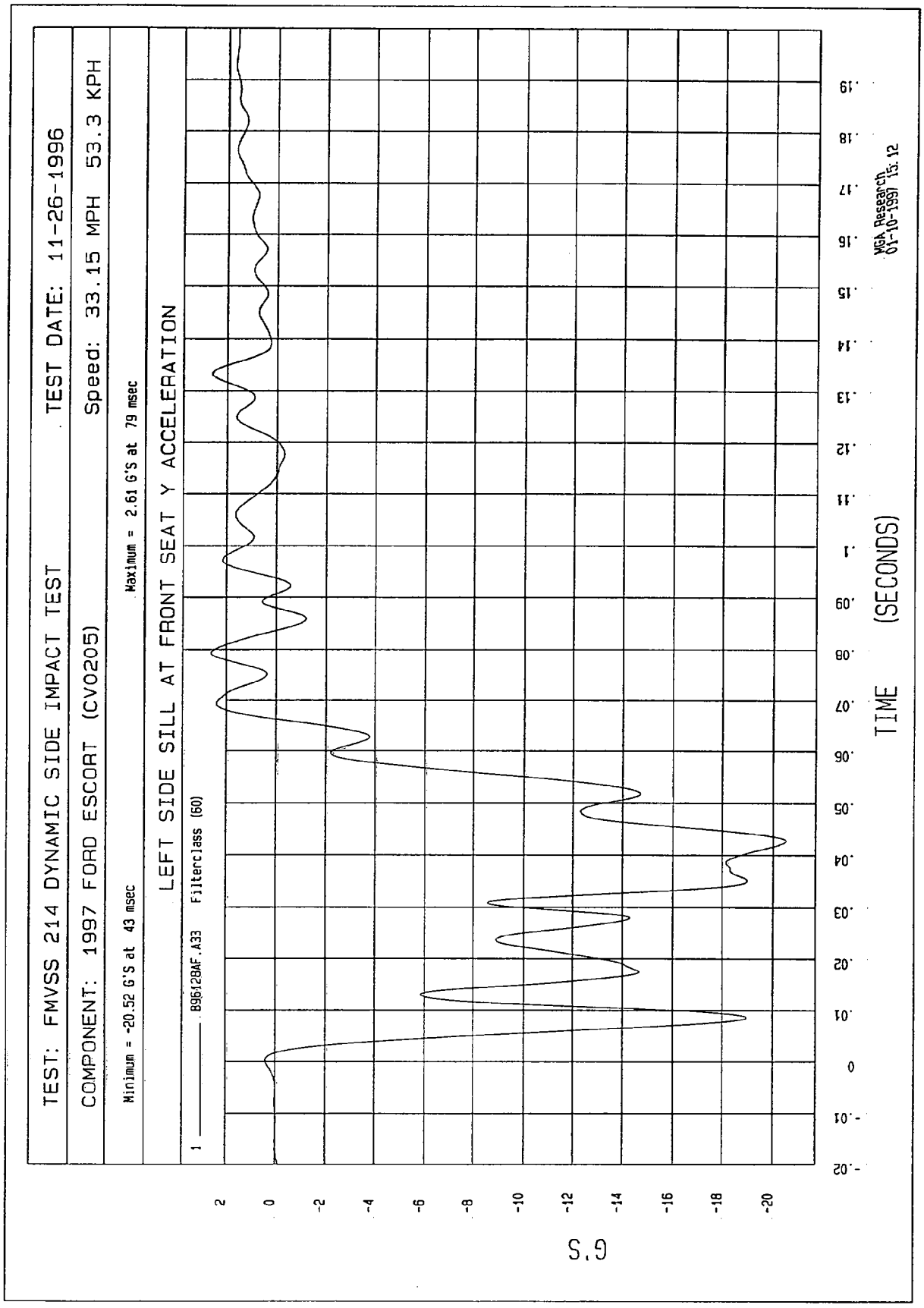
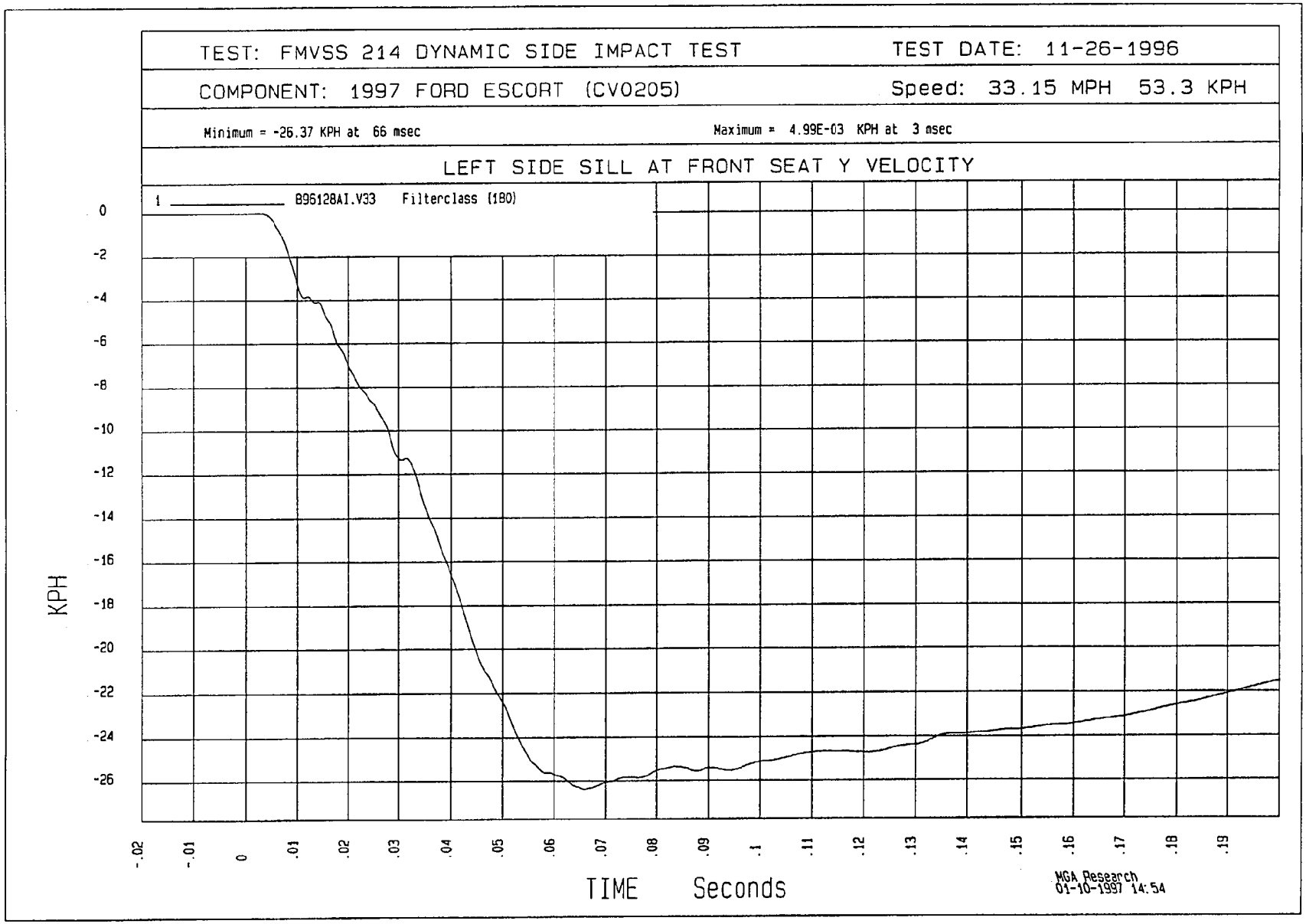
.19
TIME Seconds
MGA Research
01-10-1997 14:54


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -20.52 G'S at 43 msec
Maximum = 2.61 G'S at 79 msec
LEFT SIDE SILL AT FRONT SEAT Y ACCELERATION
1 _____ 896128AF.A33 Filterclass (60)
MGA Research
01-10-1997 15:12
G'S
TIME (SECONDS)


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -26.37 KPH at 66 msec
Maximum = 4.99E-03 KPH at 3 msec
LEFT SIDE SILL AT FRONT SEAT Y VELOCITY
1 B96128AI.V33 Filterclass (180)
KPH
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
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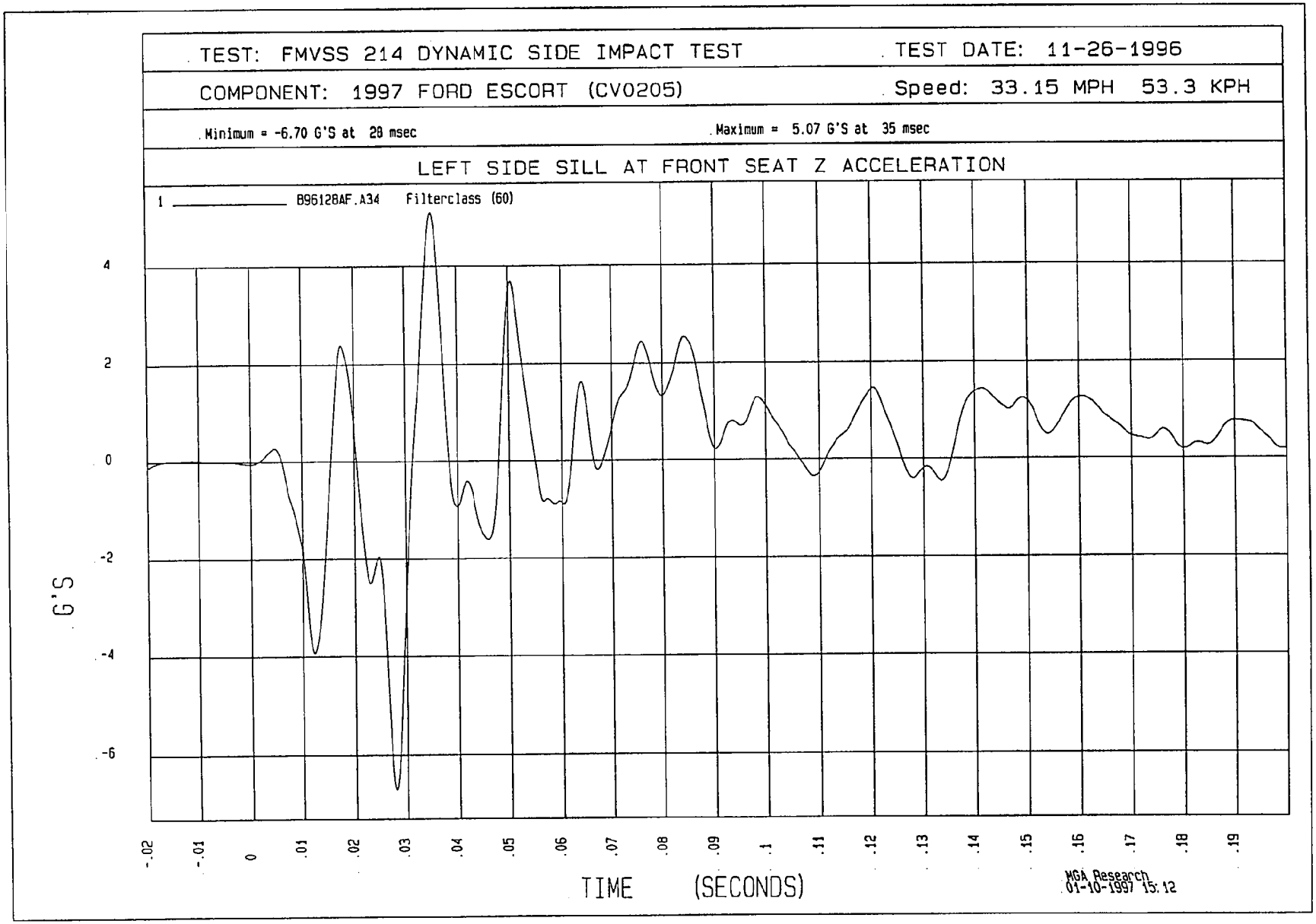
TIME Seconds
MGA Research
01-10-1997 14:54


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -6.70 G'S at 28 msec
Maximum = 5.07 G'S at 35 msec
LEFT SIDE SILL AT FRONT SEAT Z ACCELERATION
1 B96128AF.A34 Filterclass (60)
4
2
0
-2
-4
-6
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
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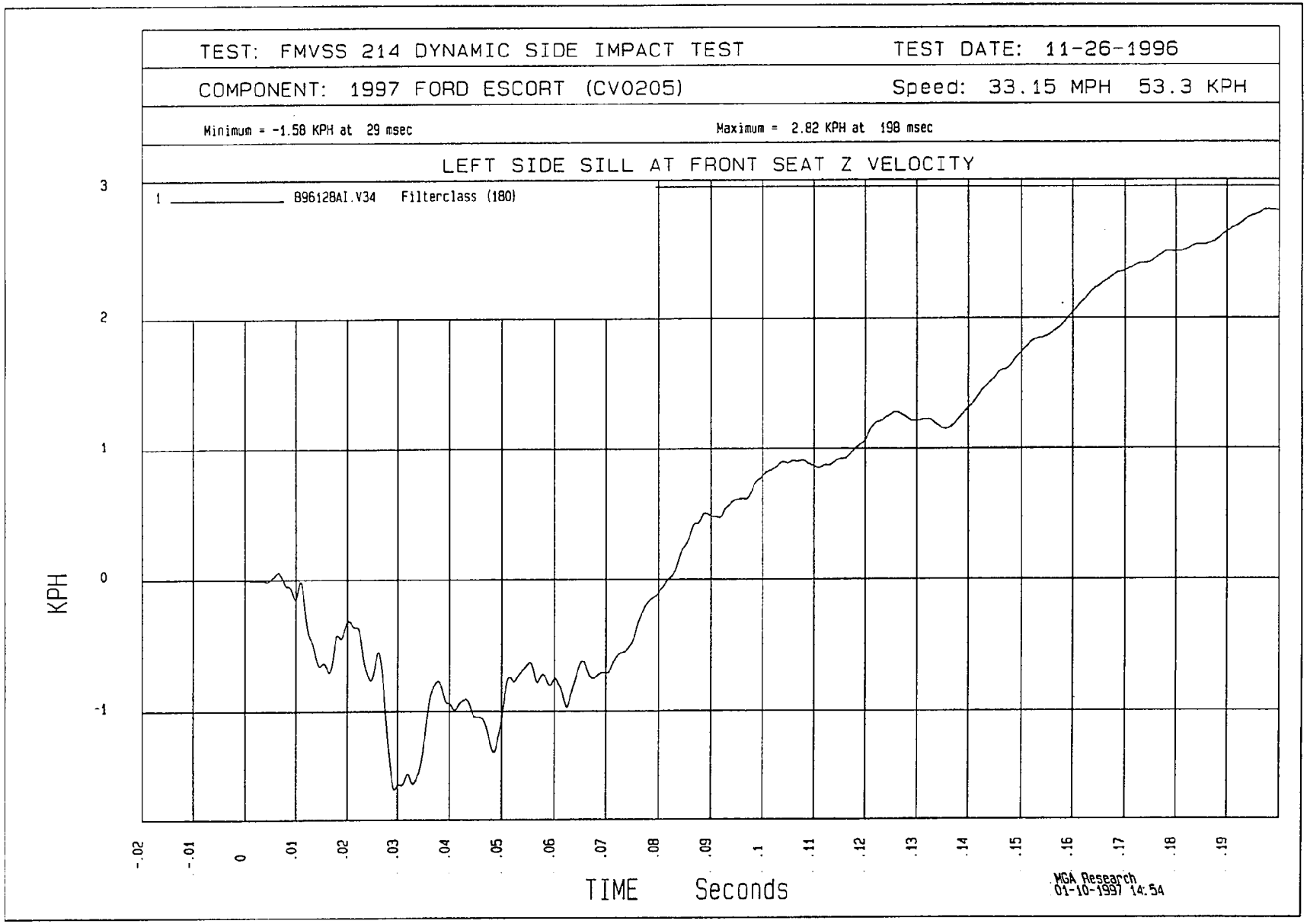
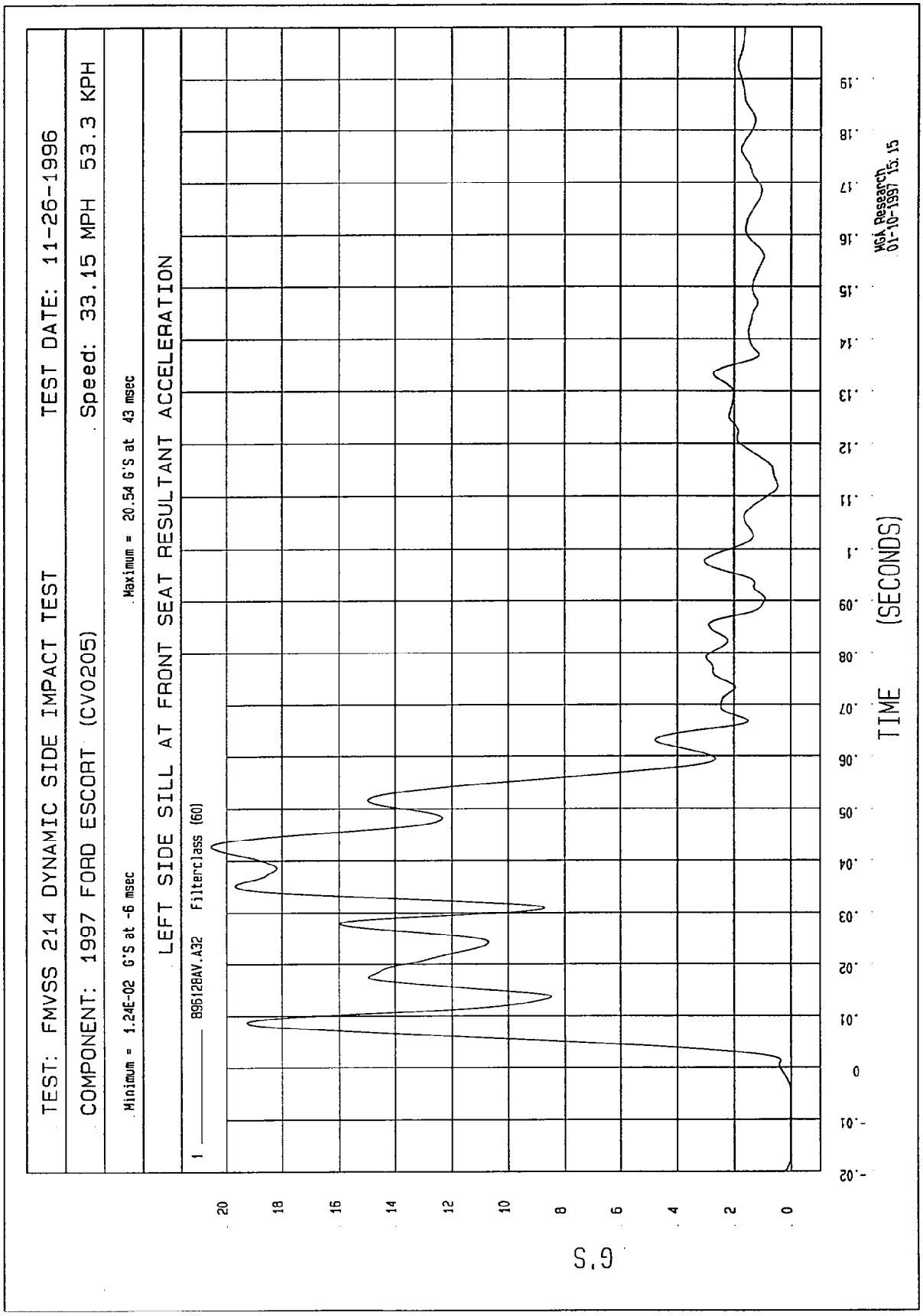
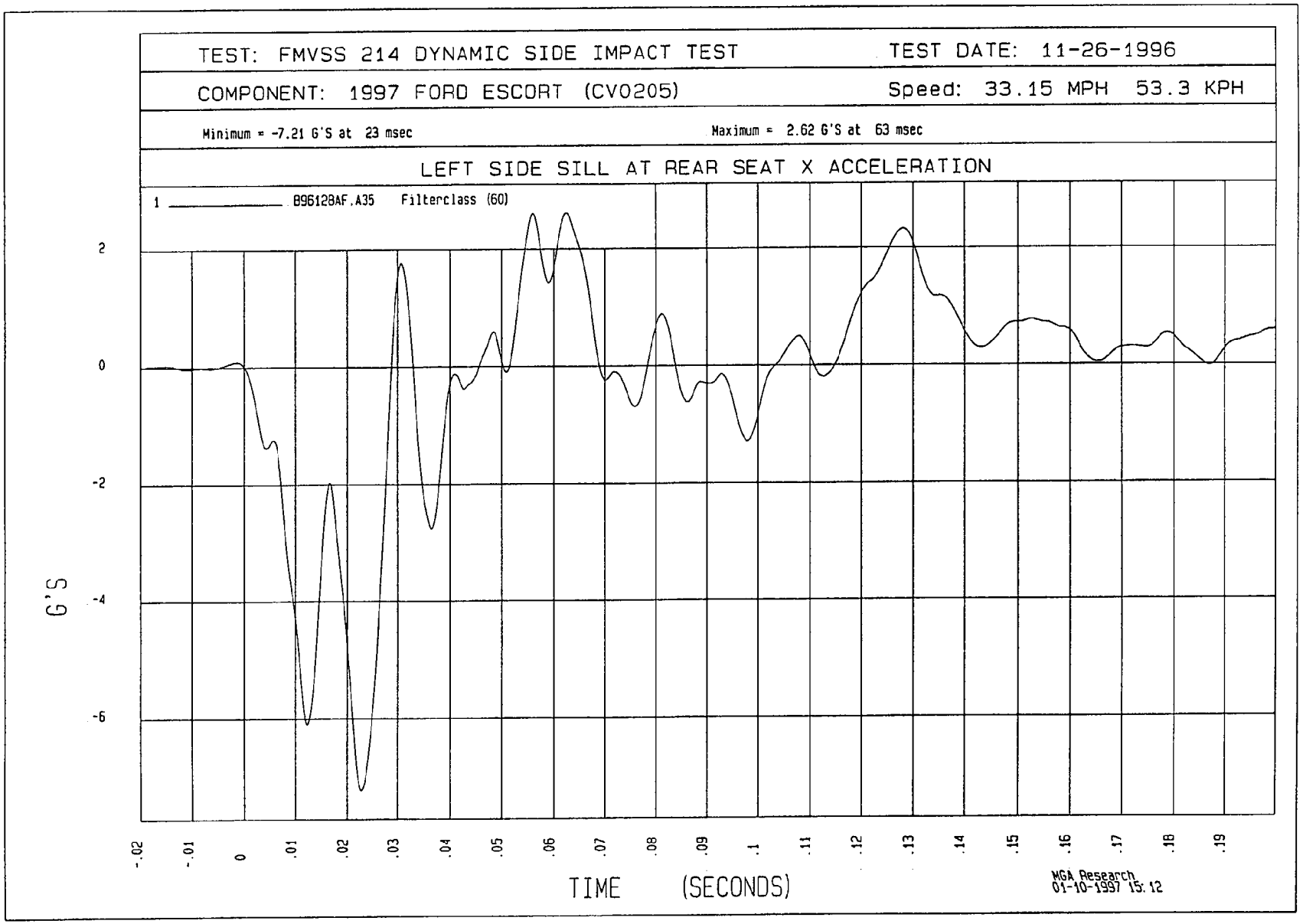
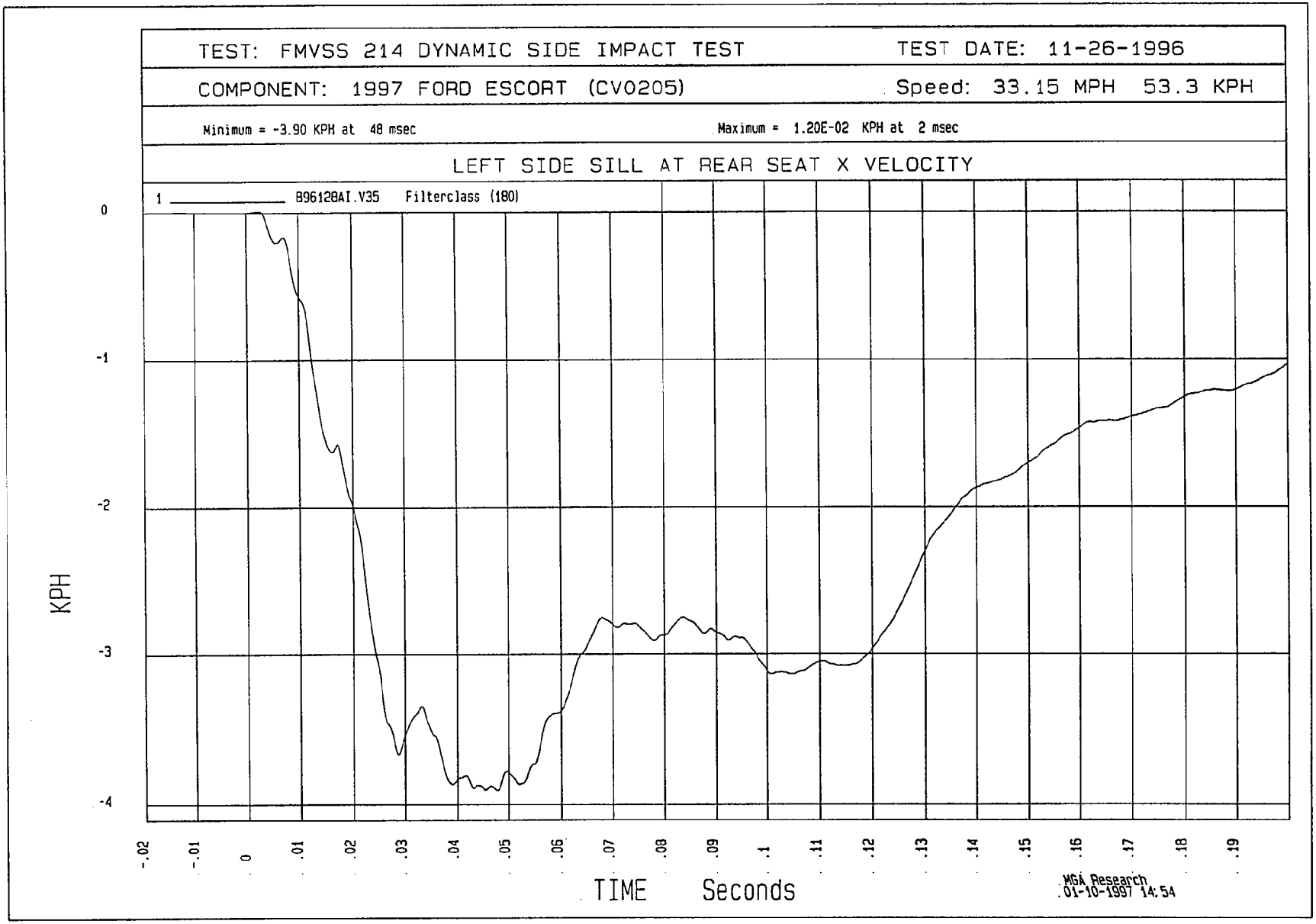
TIME (SECONDS)
MGA Research
01-10-1997 15:12


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -1.58 KPH at 29 msec
Maximum = 2.82 KPH at 198 msec
LEFT SIDE SILL AT FRONT SEAT Z VELOCITY
1 B96128AI.V34 Filterclass (180)
KPH
3
2
1
0
-1
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-10-1997 14:54


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = 1.24E-02 G'S at -6 msec
Maximum = 20.54 G'S at 43 msec
LEFT SIDE SILL AT FRONT SEAT RESULTANT ACCELERATION
1 B96128AV.A32 Filterclass (60)
MGA Research
01-10-1997 15:15
G'S
TIME (SECONDS)


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -7.21 G'S at 23 msec
Maximum = 2.62 G'S at 63 msec
LEFT SIDE SILL AT REAR SEAT X ACCELERATION
1 B96128AF.A35 Filterclass (60)
2
0
-2
-4
-6
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-10-1997 15:12


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -3.90 KPH at 48 msec
Maximum = 1.20E-02 KPH at 2 msec
LEFT SIDE SILL AT REAR SEAT X VELOCITY
1 B96128AI.V35 Filterclass (180)
KPH
0
-1
-2
-3
-4
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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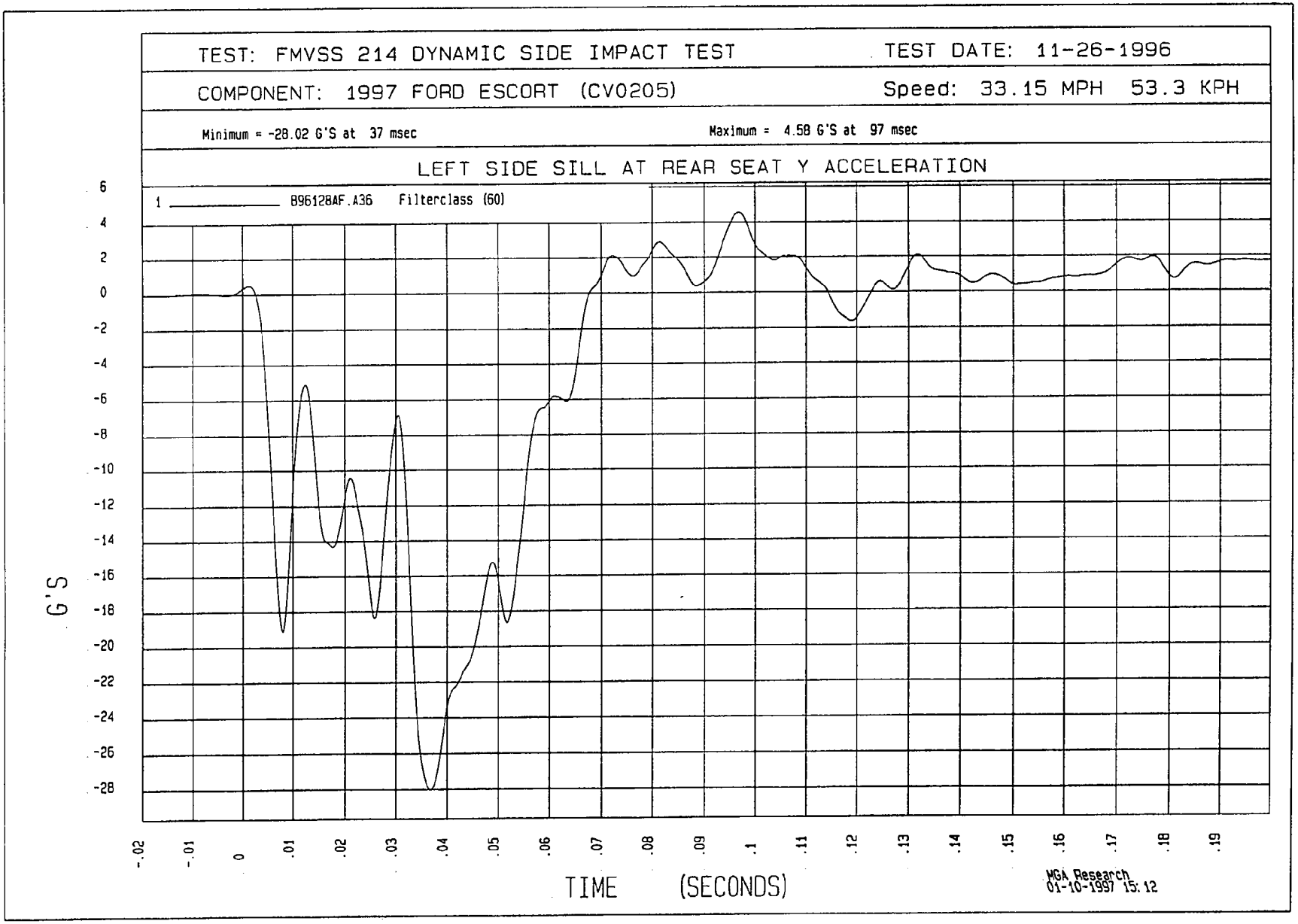
TIME Seconds
MGA Research
01-10-1997 14:54


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -28.02 G'S at 37 msec
Maximum = 4.58 G'S at 97 msec
LEFT SIDE SILL AT REAR SEAT Y ACCELERATION
1 B96128AF.A36 Filterclass (60)
G'S
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-28
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-10-1997 15:12


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -30.99 KPH at 66 msec
Maximum = 1.14E-03 KPH at -4 msec
LEFT SIDE SILL AT REAR SEAT Y VELOCITY
1 B96128AI.V36 Filterclass (180)
KPH
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-28
-30
-32
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
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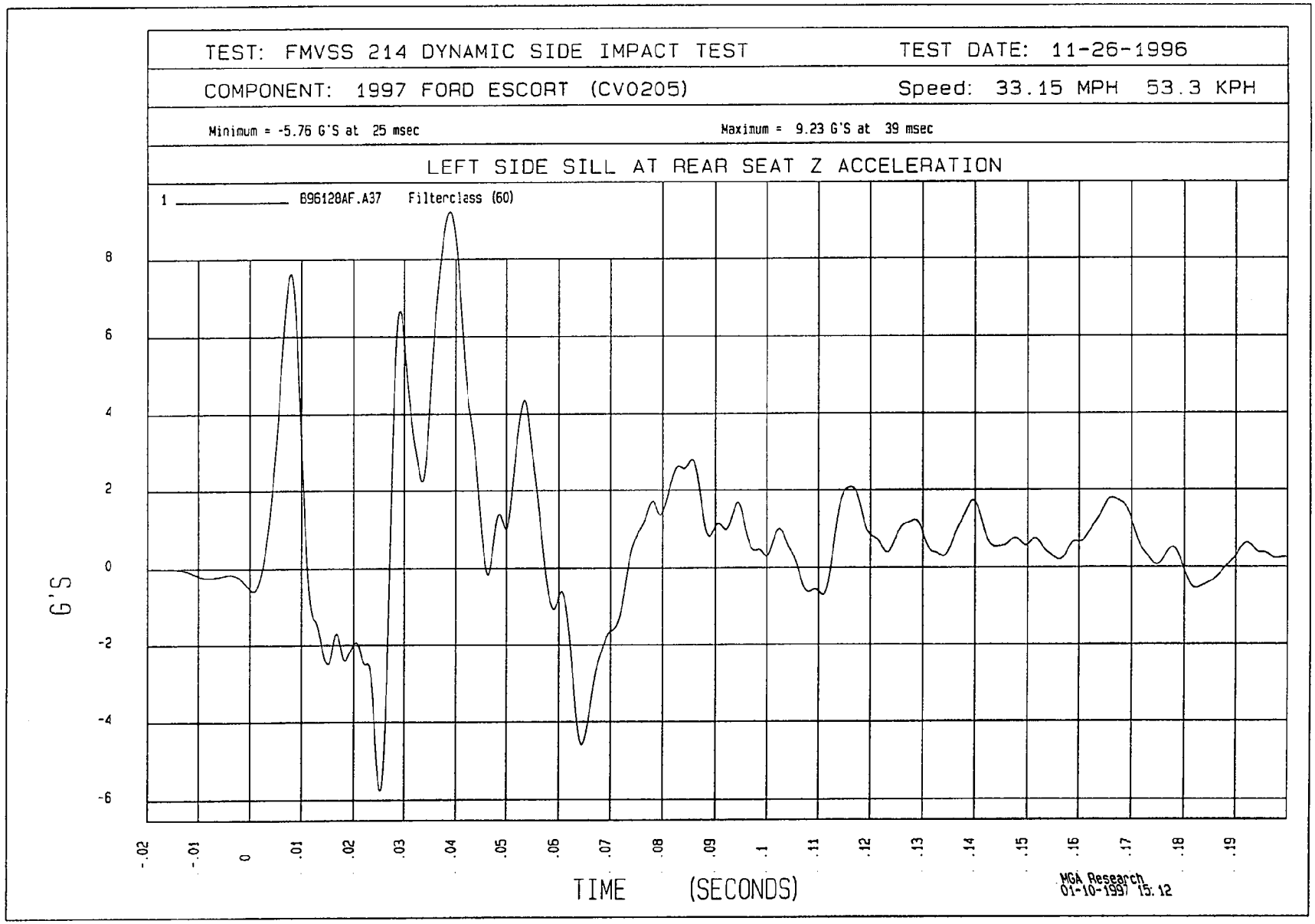
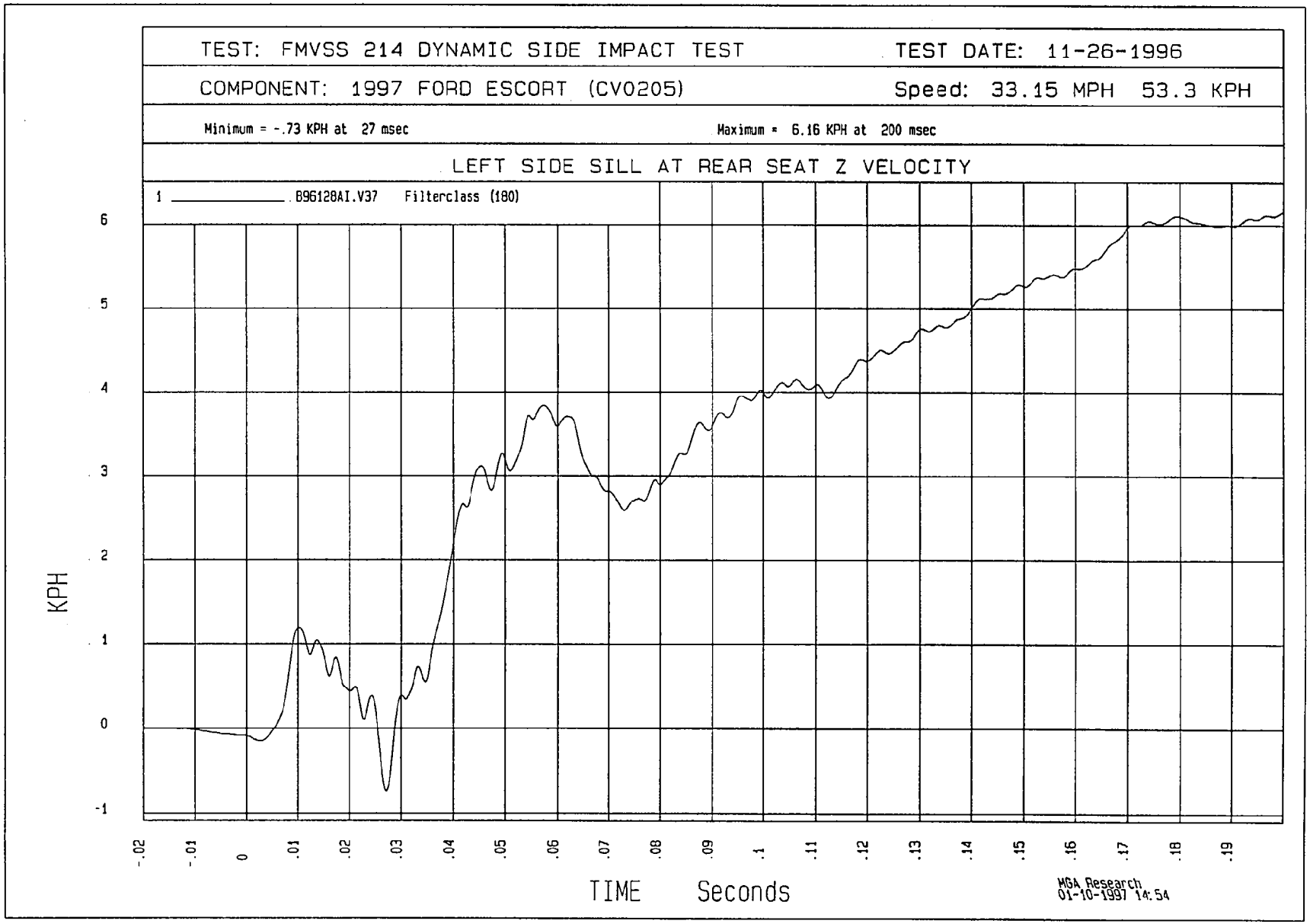
TIME Seconds
MGA Research
01-10-1997 14:54


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -5.76 G'S at 25 msec
Maximum = 9.23 G'S at 39 msec
LEFT SIDE SILL AT REAR SEAT Z ACCELERATION
1 696128AF.A37 Filterclass (60)
G'S
8
6
4
2
0
-2
-4
-6
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-10-1997 15:12


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -.73 KPH at 27 msec
Maximum = 6.16 KPH at 200 msec
LEFT SIDE SILL AT REAR SEAT Z VELOCITY
1 B96128AI.V37 Filterclass (180)
KPH
6
5
4
3
2
1
0
-1
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
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.17
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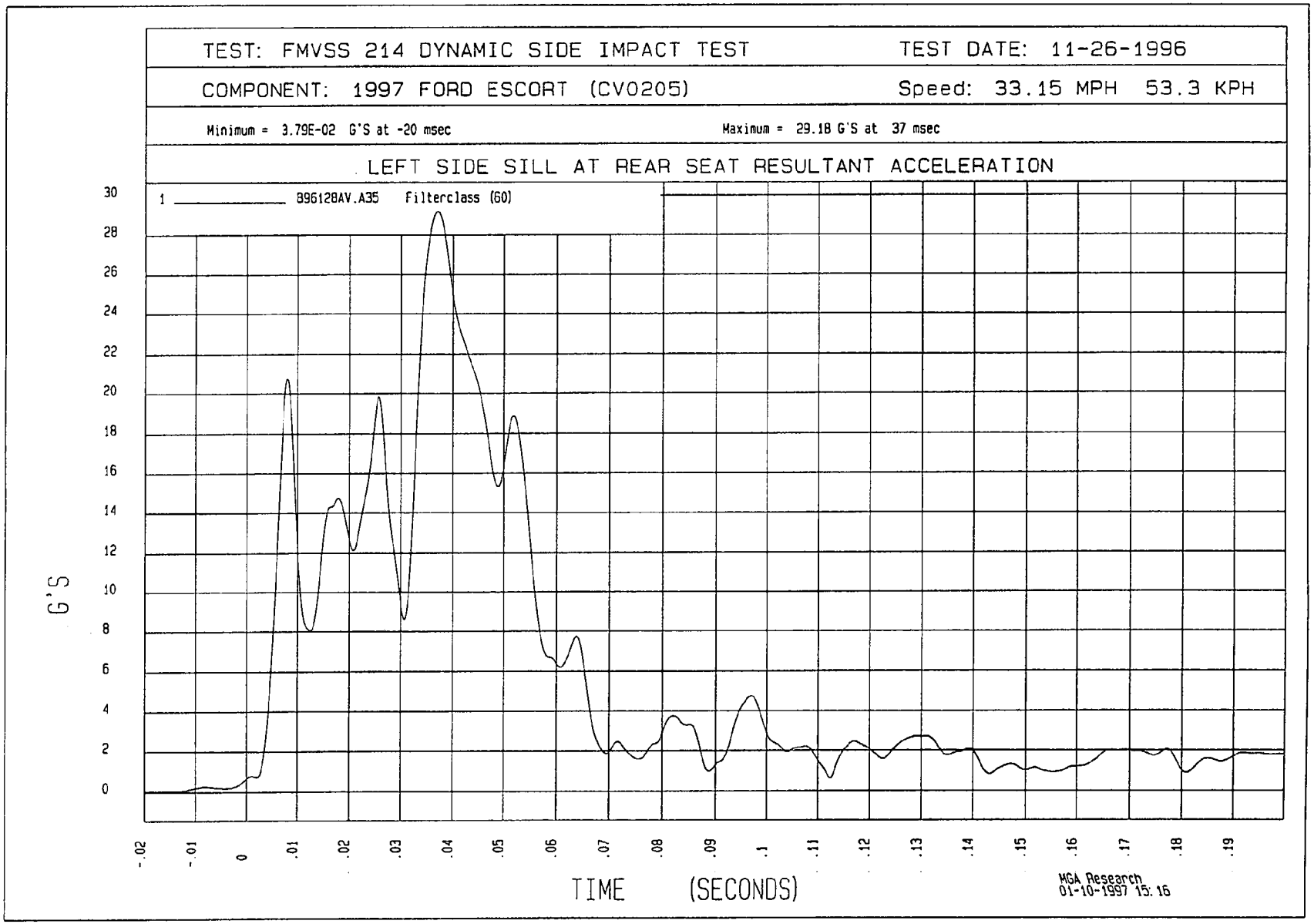
.19
TIME Seconds
MGA Research
01-10-1997 14:54


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = 3.79E-02 G'S at -20 msec
Maximum = 29.18 G'S at 37 msec
LEFT SIDE SILL AT REAR SEAT RESULTANT ACCELERATION
1 B96128AV.A35 Filterclass (60)
G'S
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
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.14
.15
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.17
.18
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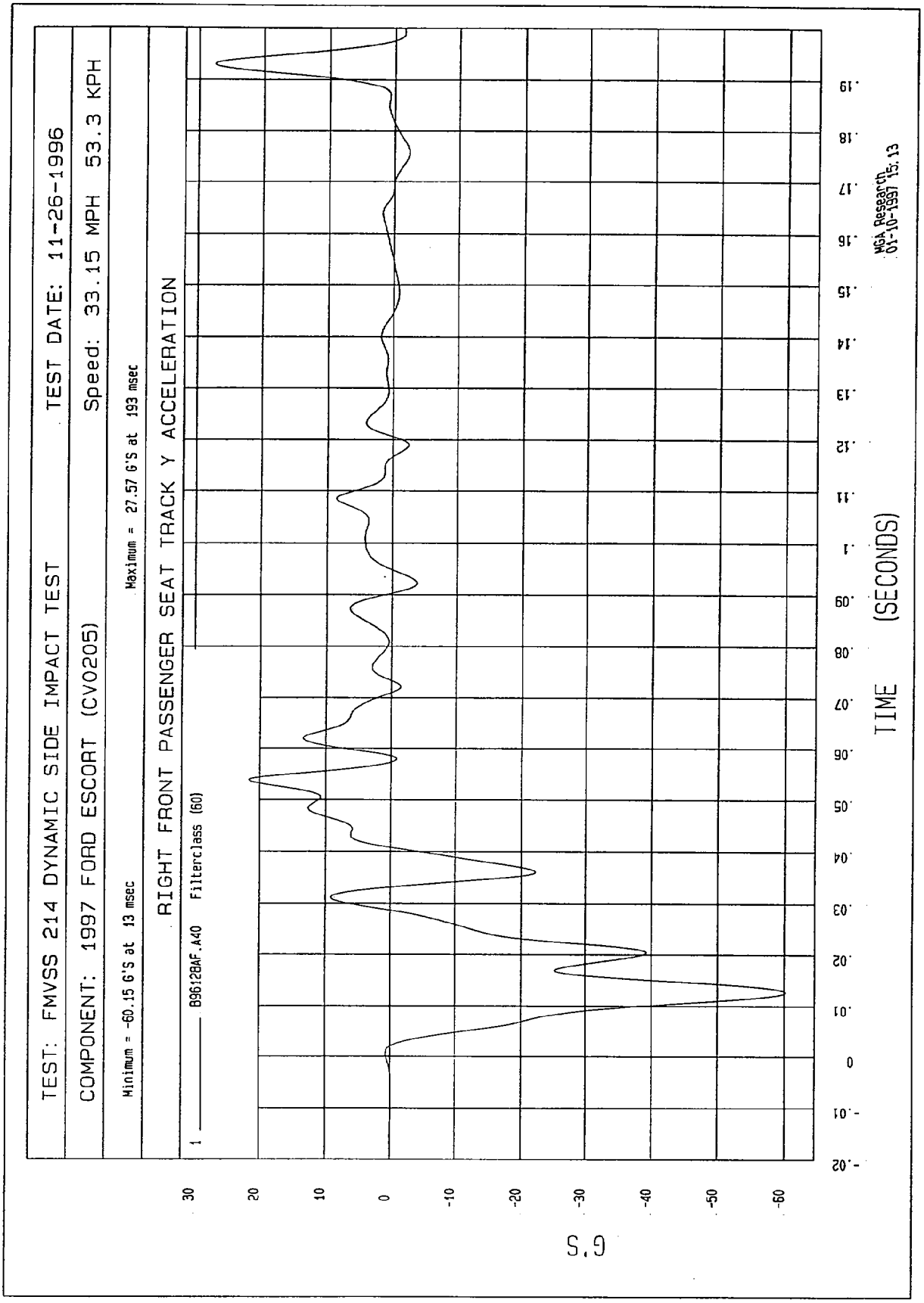
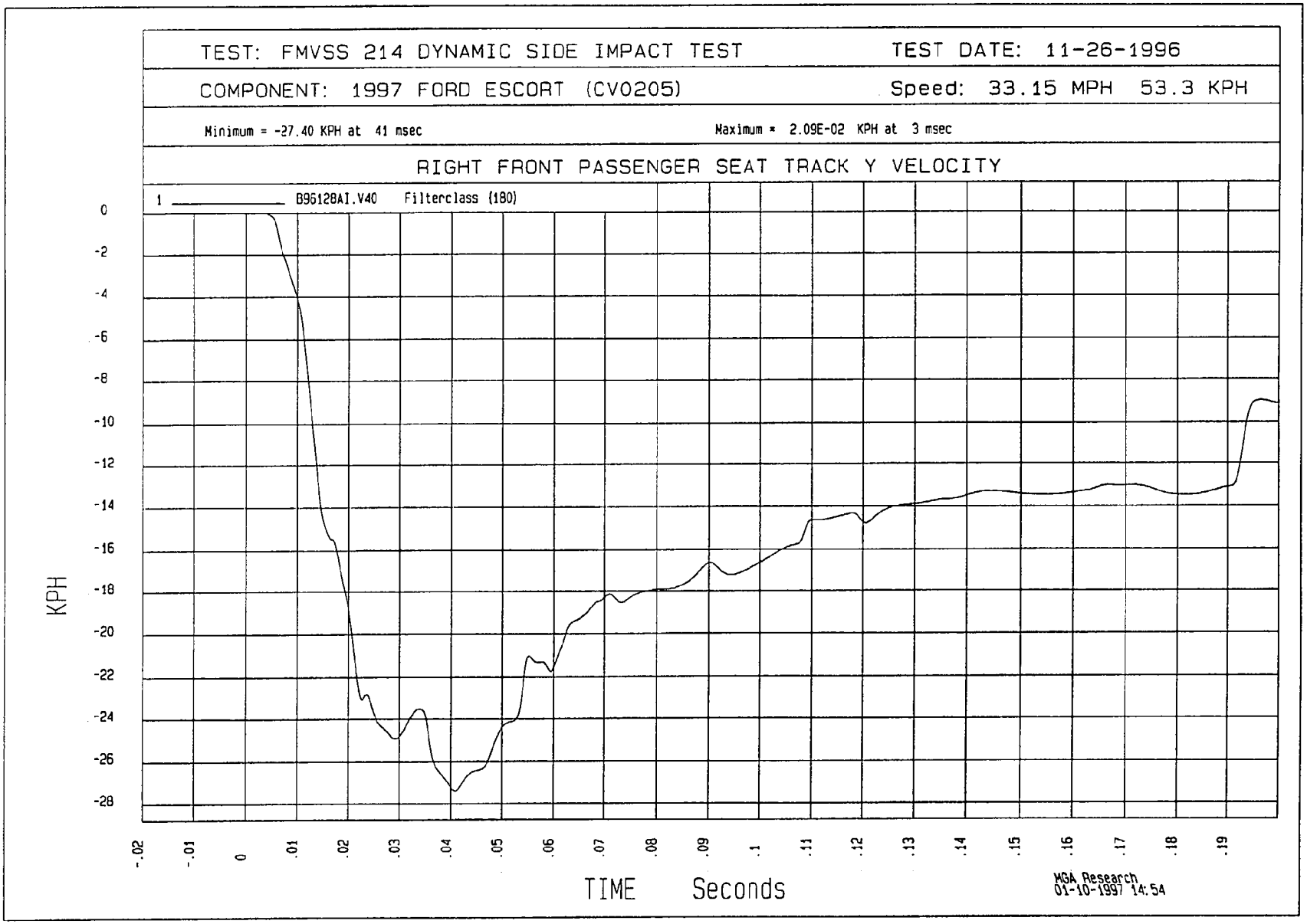
TIME (SECONDS)
MGA Research
01-10-1997 15:16


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -60.15 G'S at 13 msec
Maximum = 27.57 G'S at 193 msec
RIGHT FRONT PASSENGER SEAT TRACK Y ACCELERATION
1 B9612BAF.A40 Filterclass (60)
G'S
TIME (SECONDS)
MGA Research
01-10-1997 15:13


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -27.40 KPH at 41 msec
Maximum = 2.09E-02 KPH at 3 msec
RIGHT FRONT PASSENGER SEAT TRACK Y VELOCITY
1 B96128AI.V40 Filterclass (180)
KPH
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-28
-.02
-.01
0
.01
.02
.03
.04
.05
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TIME Seconds
MGA Research
01-10-1997 14:54


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -12.39 G'S at 25 msec
Maximum = 7.42 G'S at 53 msec
REAR FLOORPAN ABOVE AXLE X ACCELERATION
1 B96128AF.A08 Filterclass (60)
G'S
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-.02
-.01
0
.01
.02
.03
.04
.05
.06
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.1
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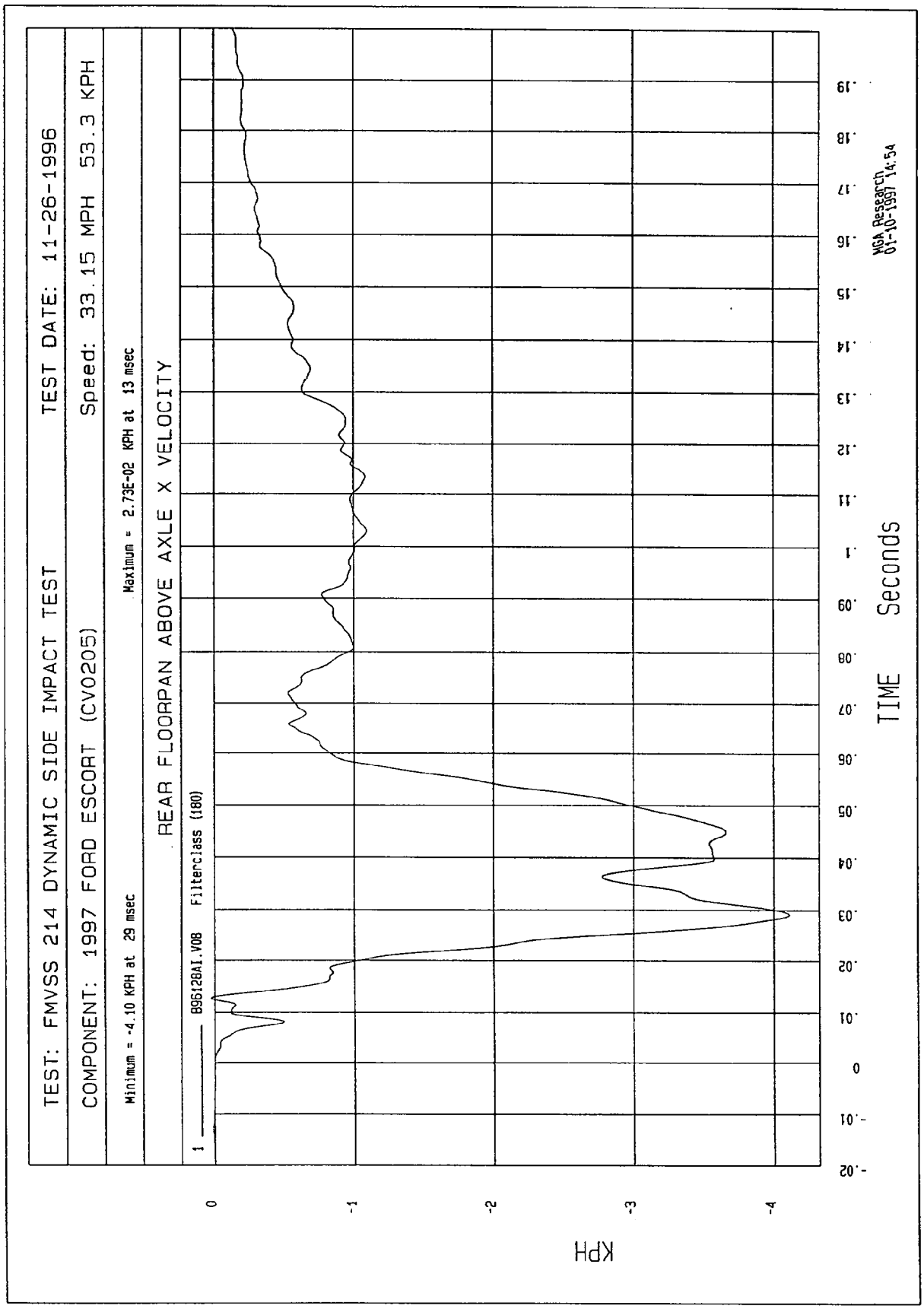
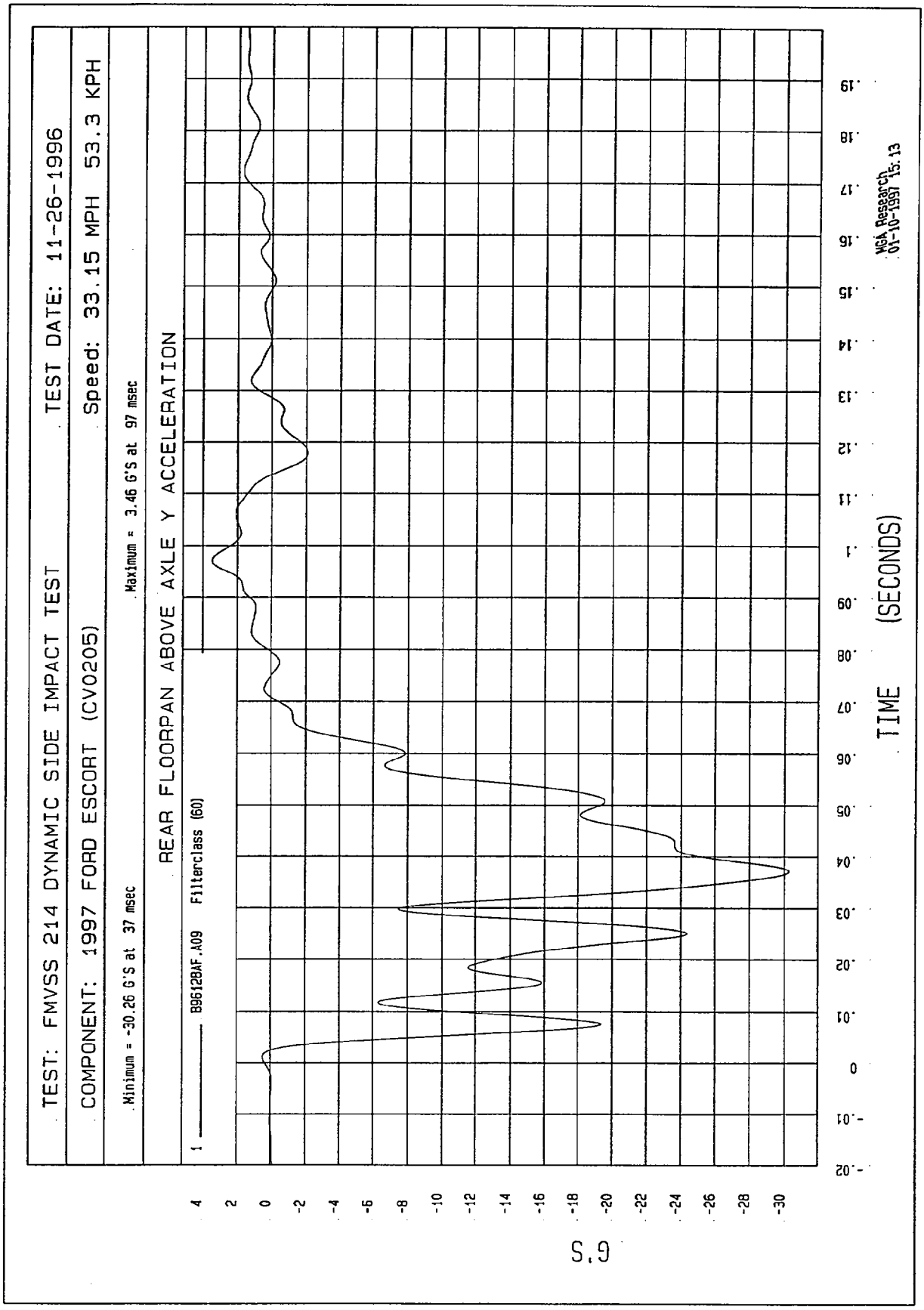
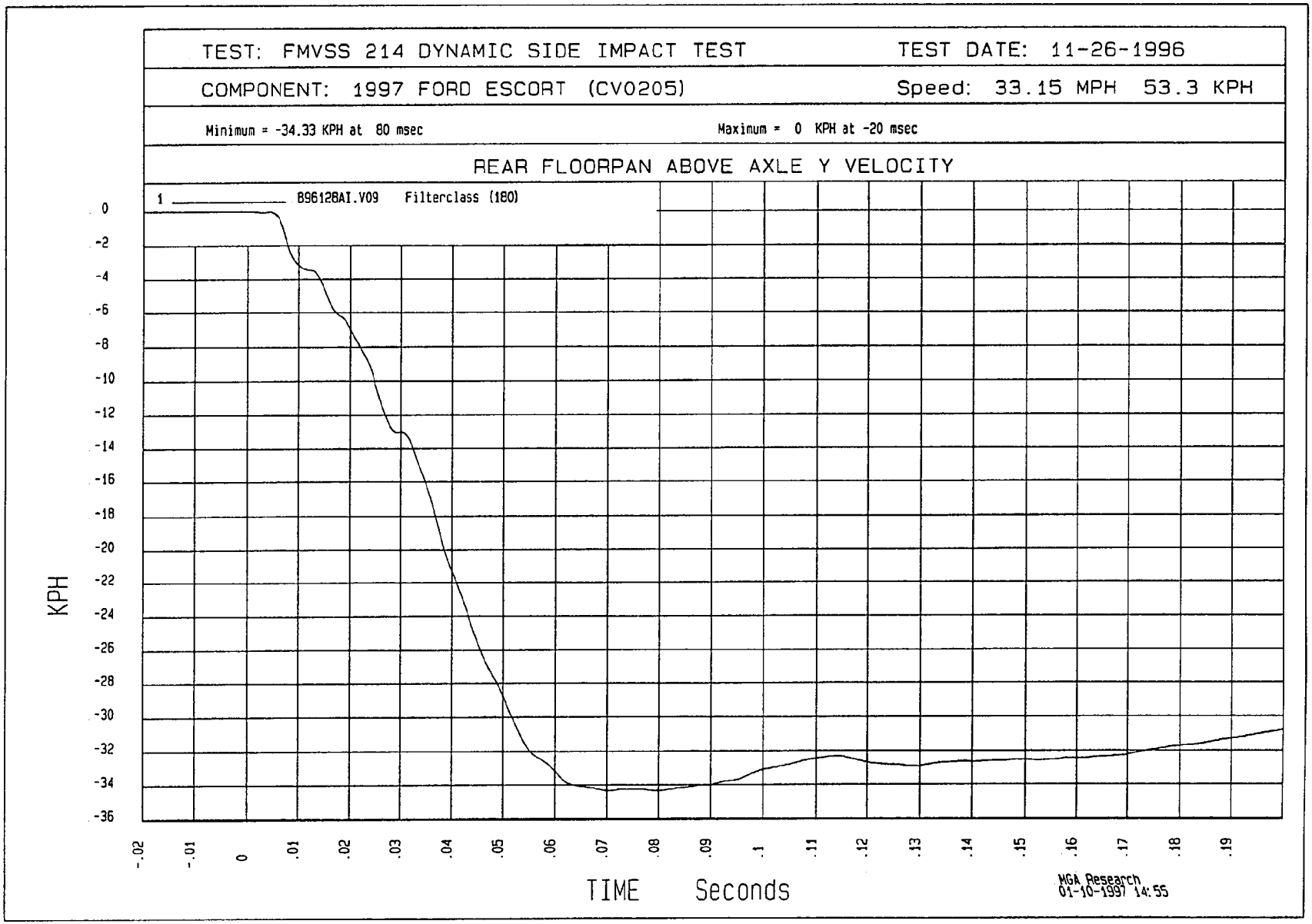
TIME (SECONDS)
MGA Research
01-10-1997 15:13


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -4.10 KPH at 29 msec
Maximum = 2.73E-02 KPH at 13 msec
REAR FLOORPAN ABOVE AXLE X VELOCITY
1 B9612BAI.V0B Filterclass (180)
KPH
TIME Seconds
MGA Research
01-10-1997 14:54


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -30.26 G'S at 37 msec
Maximum = 3.46 G'S at 97 msec
REAR FLOORPAN ABOVE AXLE Y ACCELERATION
1 B9612BAF.A09 Filterclass (60)
MGA Research 01-10-1997 15:13
TIME (SECONDS)
G's


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -34.33 KPH at 80 msec
Maximum = 0 KPH at -20 msec
REAR FLOORPAN ABOVE AXLE Y VELOCITY
1 B96128AI.V09 Filterclass (180)
KPH
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-28
-30
-32
-34
-36
-.02
-.01
0
.01
.02
.03
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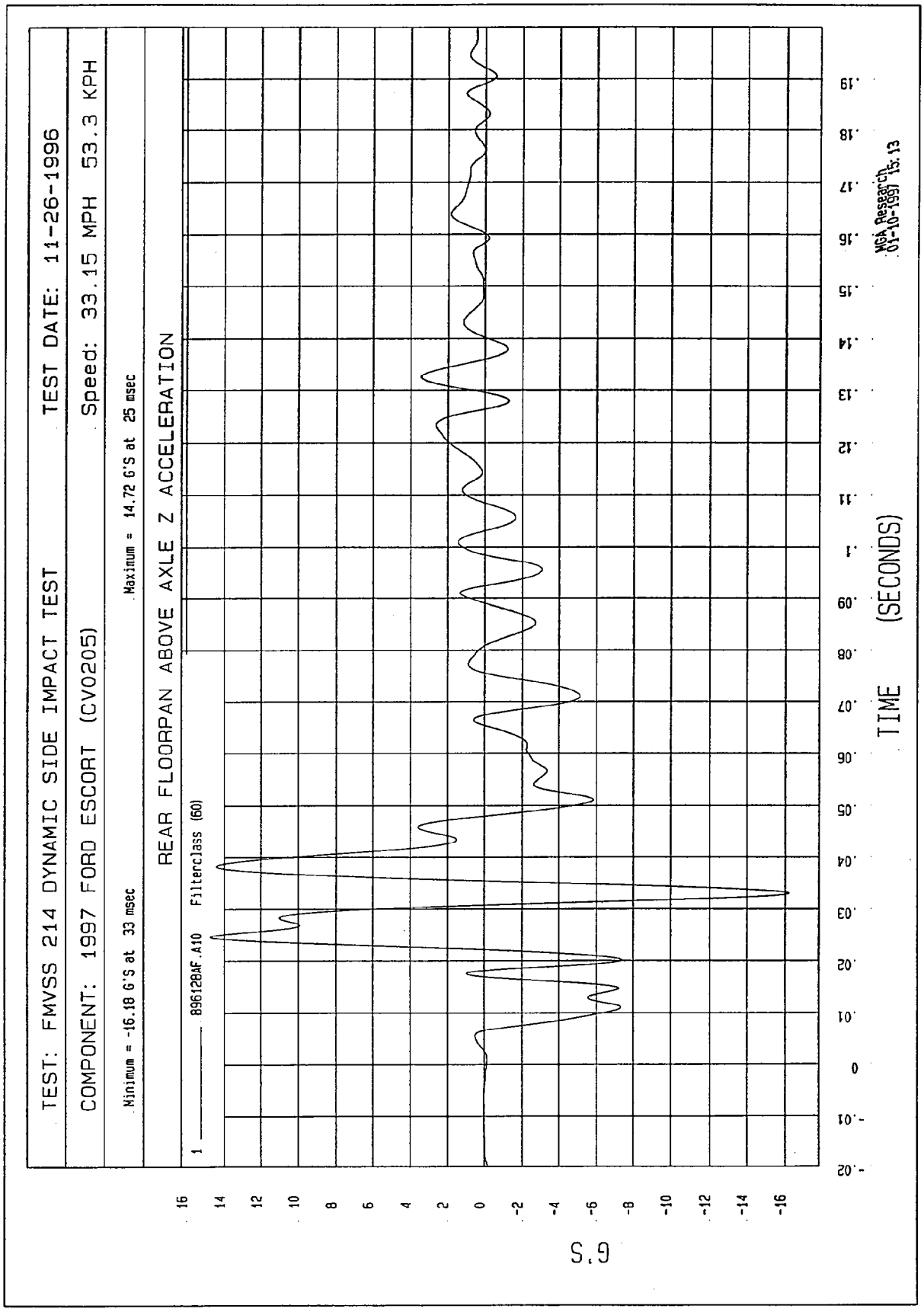
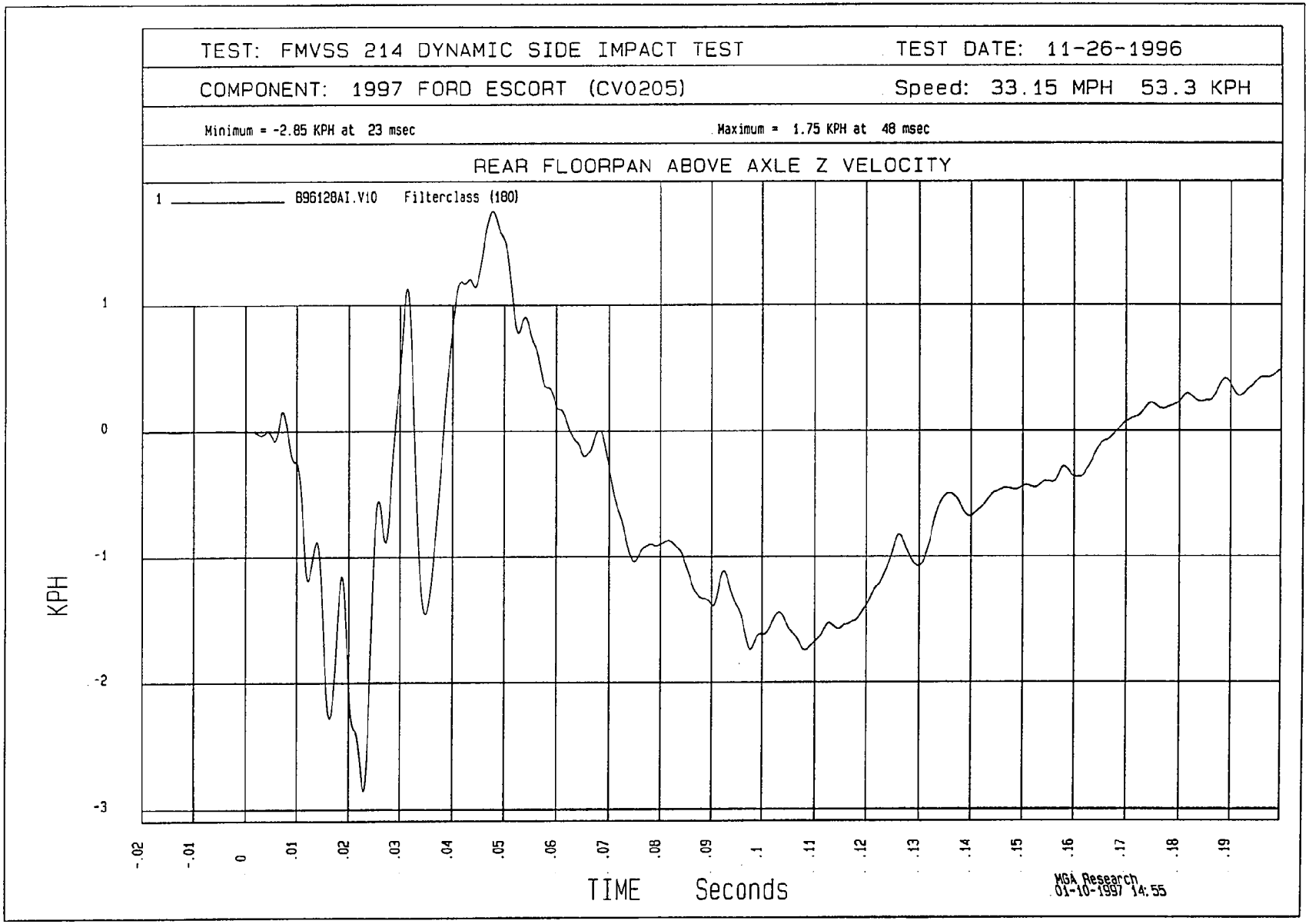
TIME Seconds
MGA Research
01-10-1997 14:55


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -16.18 G'S at 33 msec
Maximum = 14.72 G'S at 25 msec
REAR FLOORPAN ABOVE AXLE Z ACCELERATION
1 _____ 896128AF.A10 Filterclass (60)
16 14 12 10 8 6 4 2 0 -2 -4 -6 -8 -10 -12 -14 -16
G'S
.19 .18 .17 .16 .15 .14 .13 .12 .11 .1 .09 .08 .07 .06 .05 .04 .03 .02 .01 0 -.01 -.02
TIME (SECONDS)
MGA Research
01-10-1997 15:13


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -2.85 KPH at 23 msec
Maximum = 1.75 KPH at 48 msec
REAR FLOORPAN ABOVE AXLE Z VELOCITY
1 B96128AI.V10 Filterclass (180)
KPH
1
0
-1
-2
-3
-.02
-.01
0
.01
.02
.03
.04
.05
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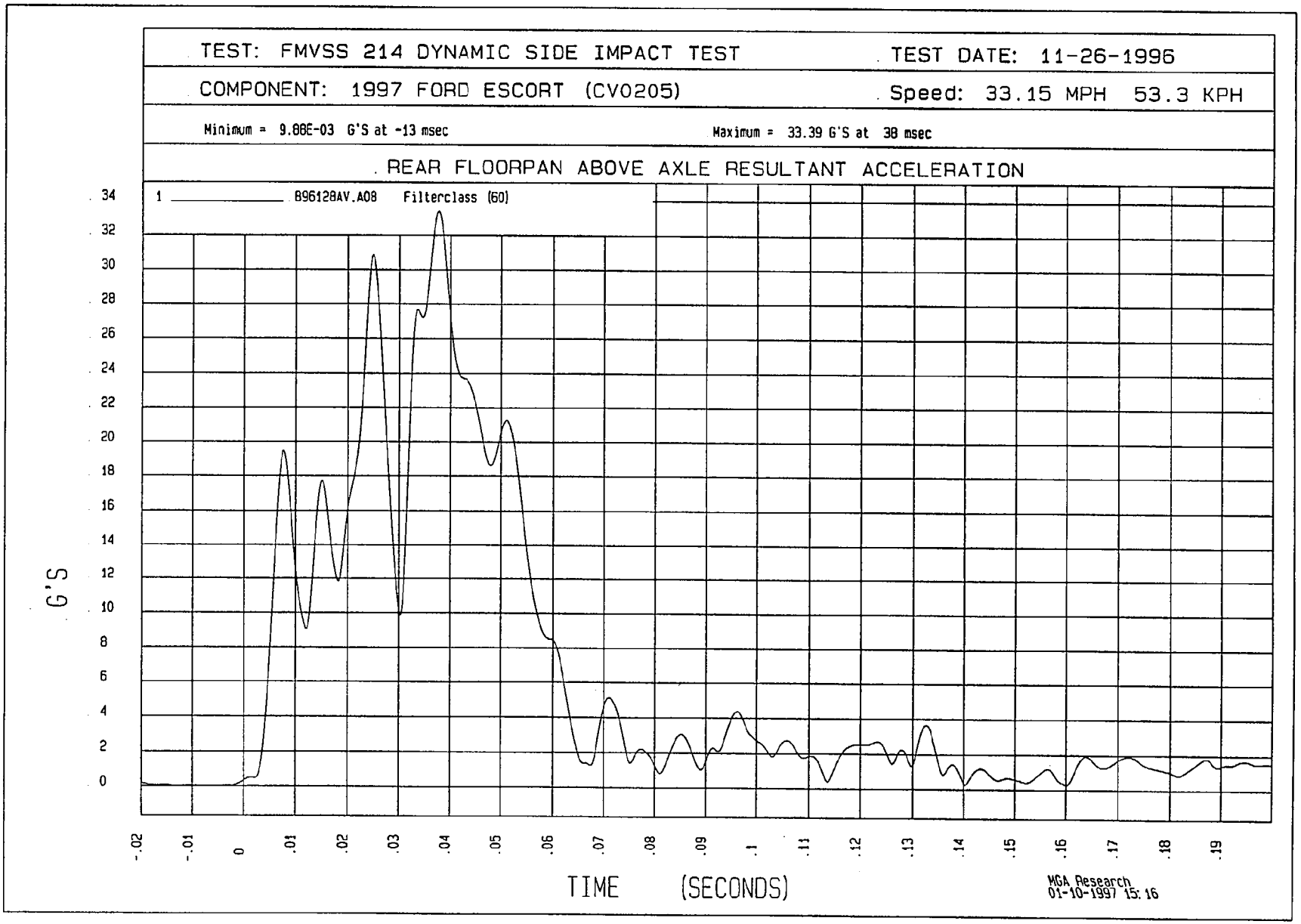
TIME Seconds
MGA Research
01-10-1997 14:55


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = 9.88E-03 G'S at -13 msec
Maximum = 33.39 G'S at 38 msec
REAR FLOORPAN ABOVE AXLE RESULTANT ACCELERATION
1 B96128AV.A08 Filterclass (60)
G's
34
32
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-.02
-.01
0
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.02
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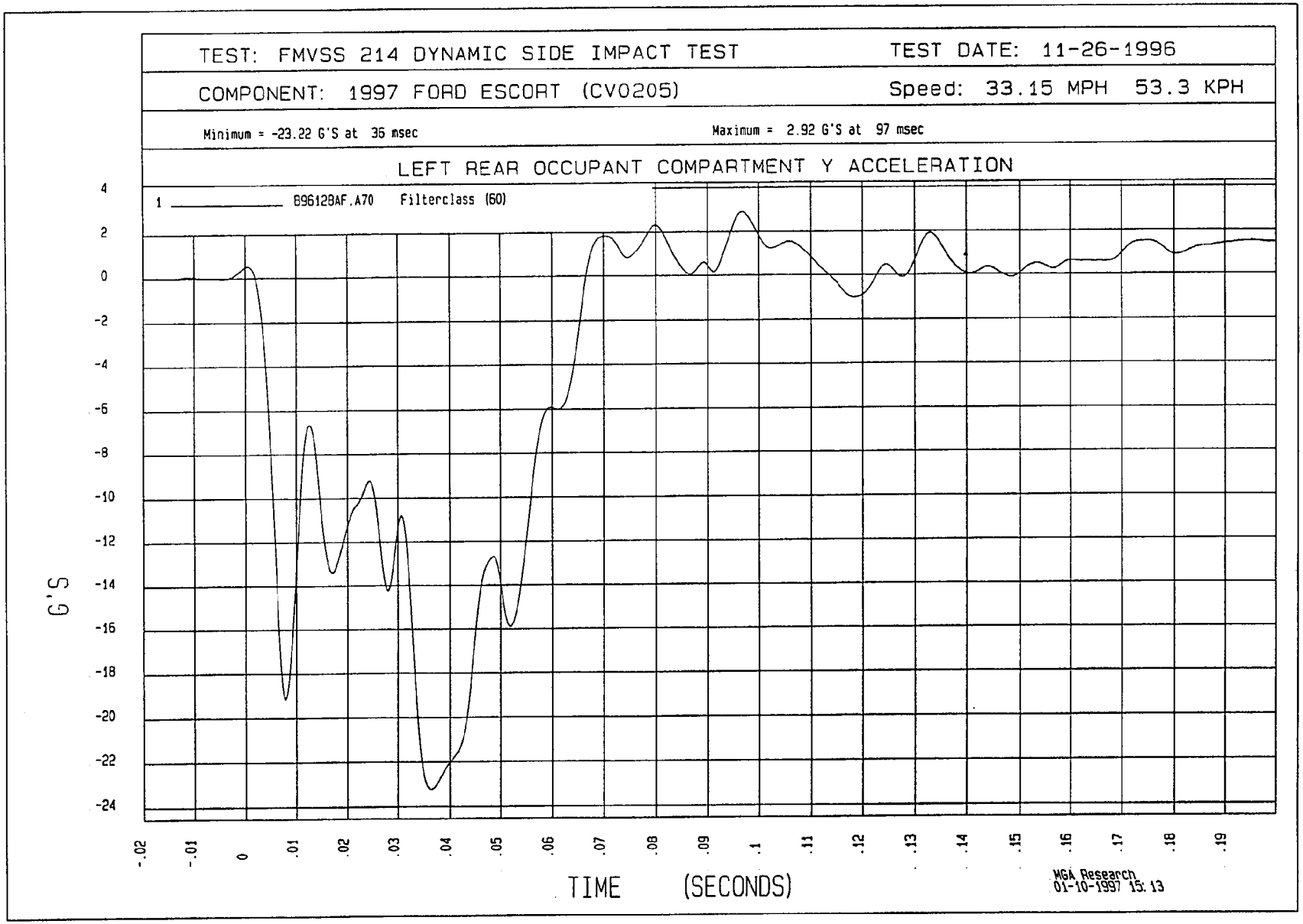
TIME (SECONDS)
MGA Research
01-10-1997 15:16


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -23.22 G'S at 36 msec
Maximum = 2.92 G'S at 97 msec
LEFT REAR OCCUPANT COMPARTMENT Y ACCELERATION
1 896128AF.A70 Filterclass (60)
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
G's
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
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.14
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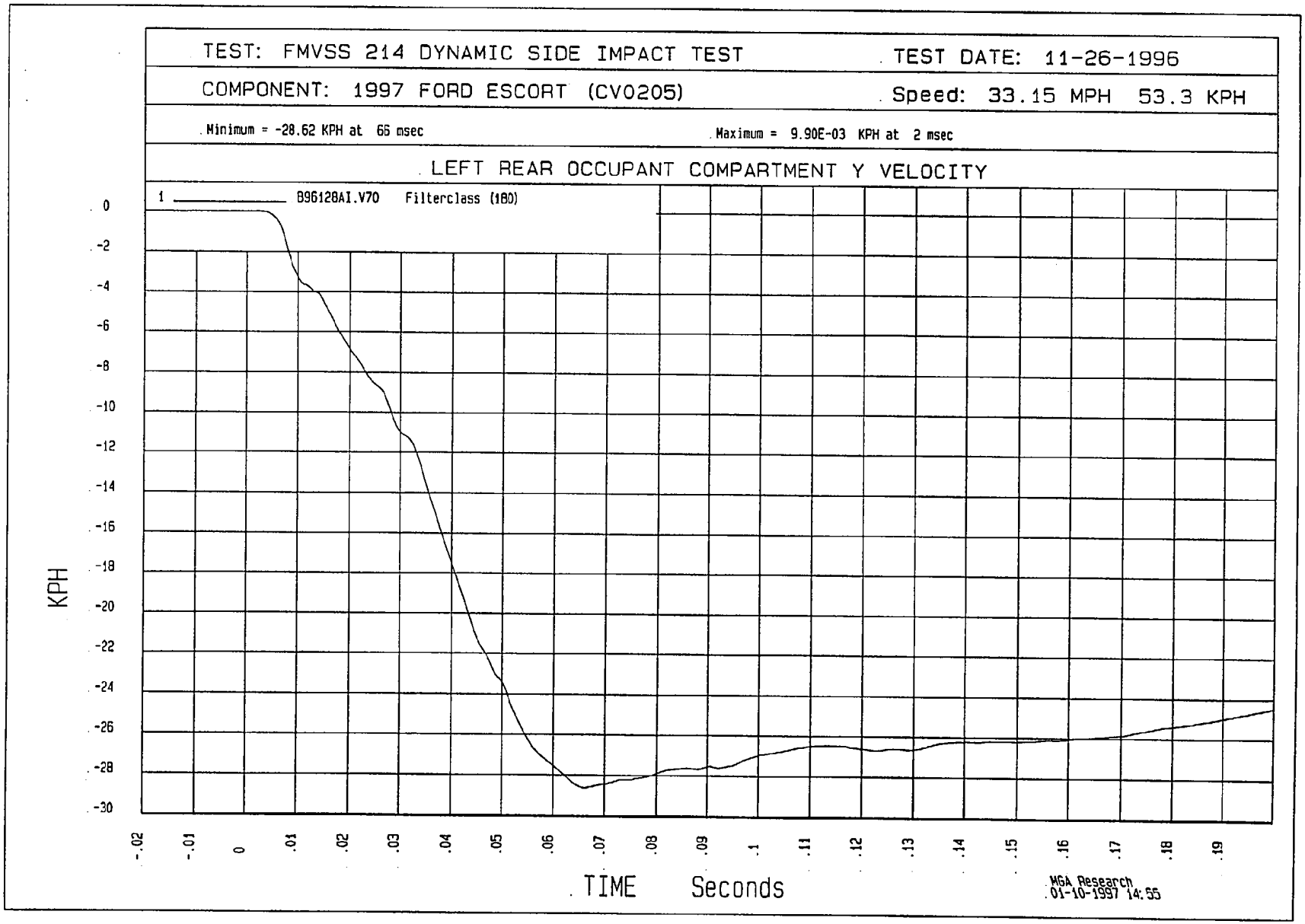
TIME (SECONDS)
MGA Research
01-10-1997 15:13


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -28.62 KPH at 65 msec
Maximum = 9.90E-03 KPH at 2 msec
LEFT REAR OCCUPANT COMPARTMENT Y VELOCITY
1 B96128AI.V70 Filterclass (180)
KPH
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-28
-30
-.02
-.01
0
.01
.02
.03
.04
.05
.06
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.13
.14
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.17
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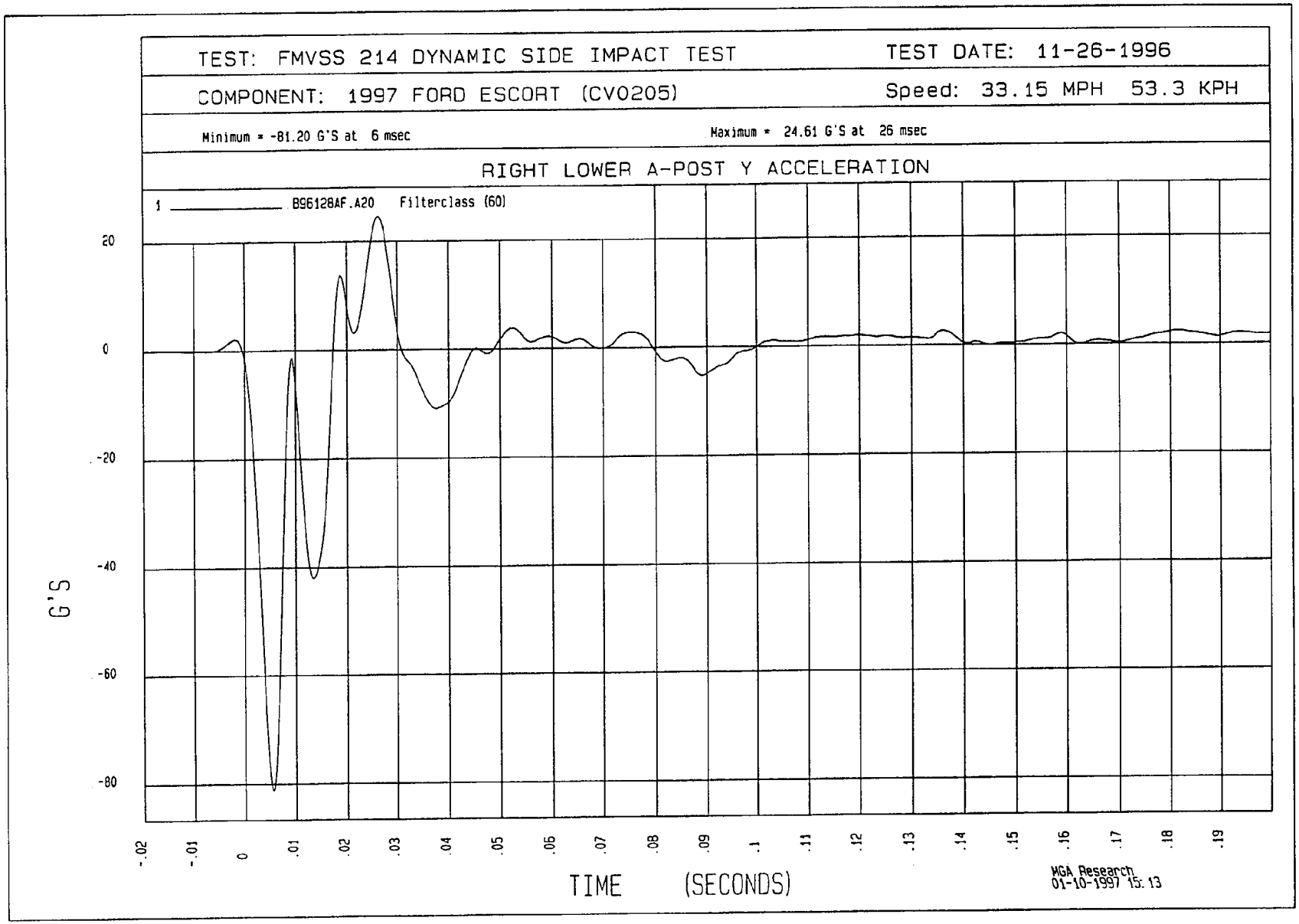
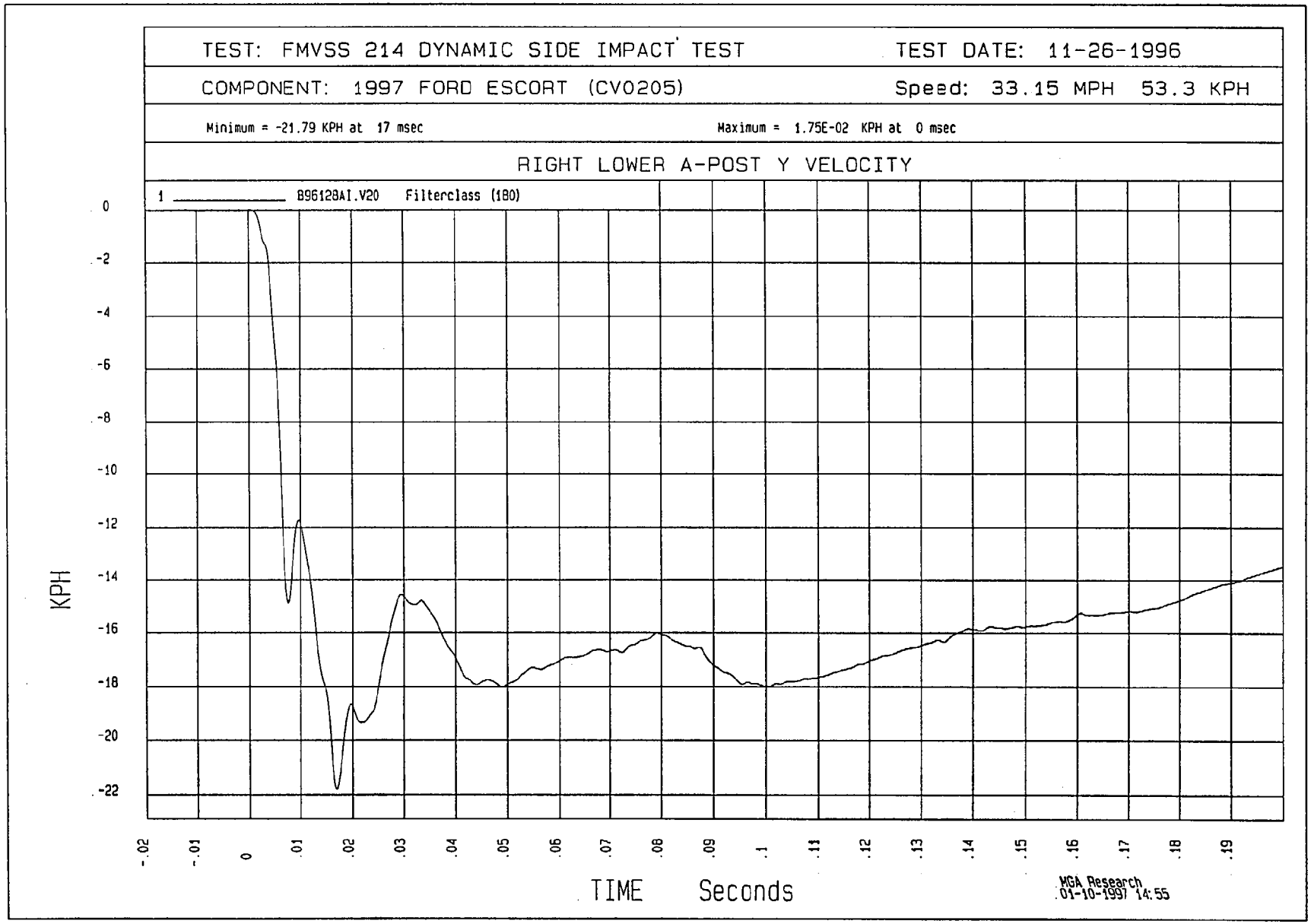
TIME Seconds
MGA Research
01-10-1997 14:55


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -81.20 G'S at 6 msec
Maximum = 24.61 G'S at 26 msec
RIGHT LOWER A-POST Y ACCELERATION
1 B96128AF.A20 Filterclass (60)
20
0
-20
-40
-60
-80
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-10-1997 15:13


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -21.79 KPH at 17 msec
Maximum = 1.75E-02 KPH at 0 msec
RIGHT LOWER A-POST Y VELOCITY
1 B96128AI.V20 Filterclass (180)
KPH
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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.12
.13
.14
.15
.16
.17
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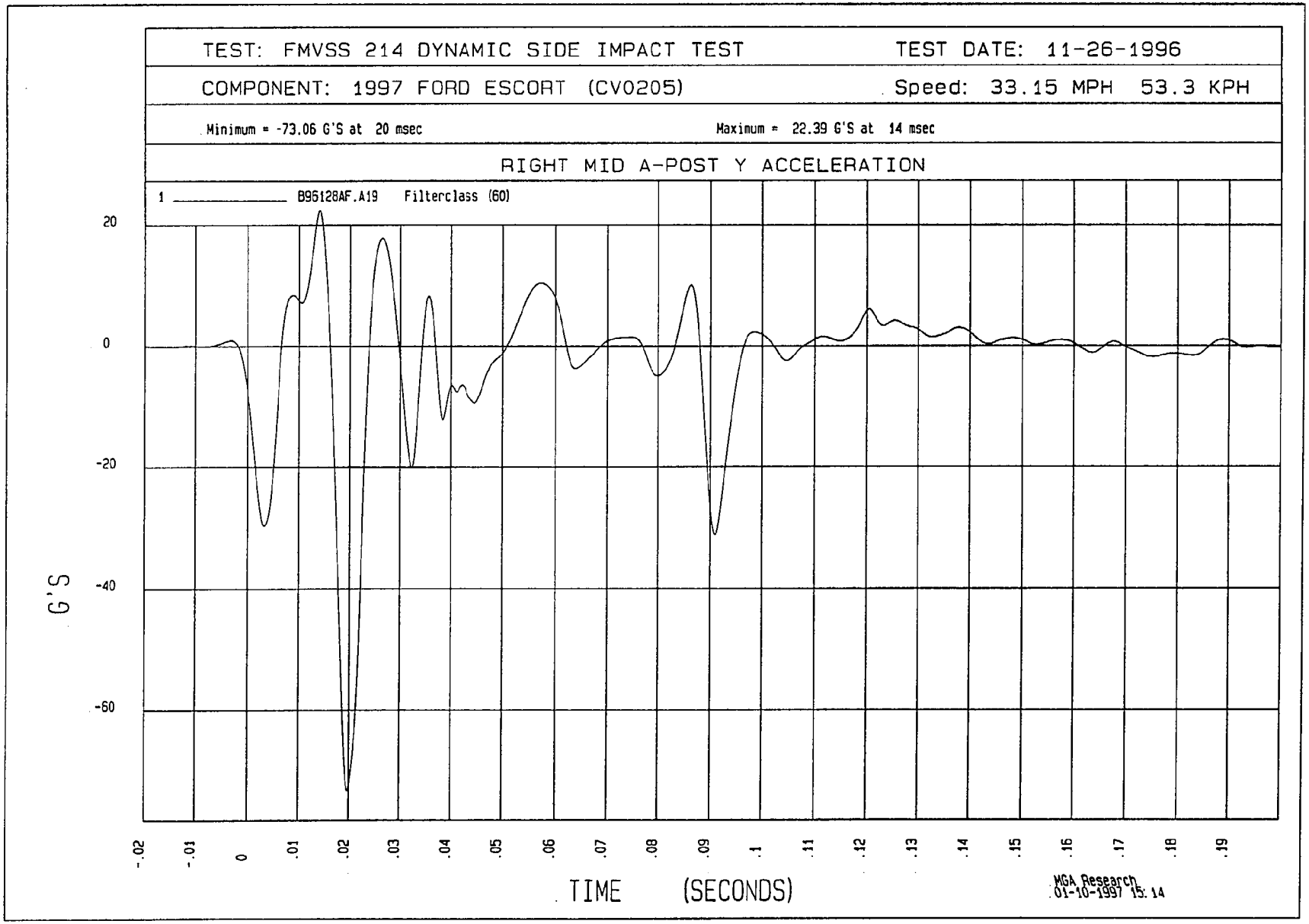
TIME Seconds
MGA Research
01-10-1997 14:55


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -73.06 G'S at 20 msec
Maximum = 22.39 G'S at 14 msec
RIGHT MID A-POST Y ACCELERATION
1 B96128AF.A19 Filterclass (60)
20
0
-20
-40
-60
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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.14
.15
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.18
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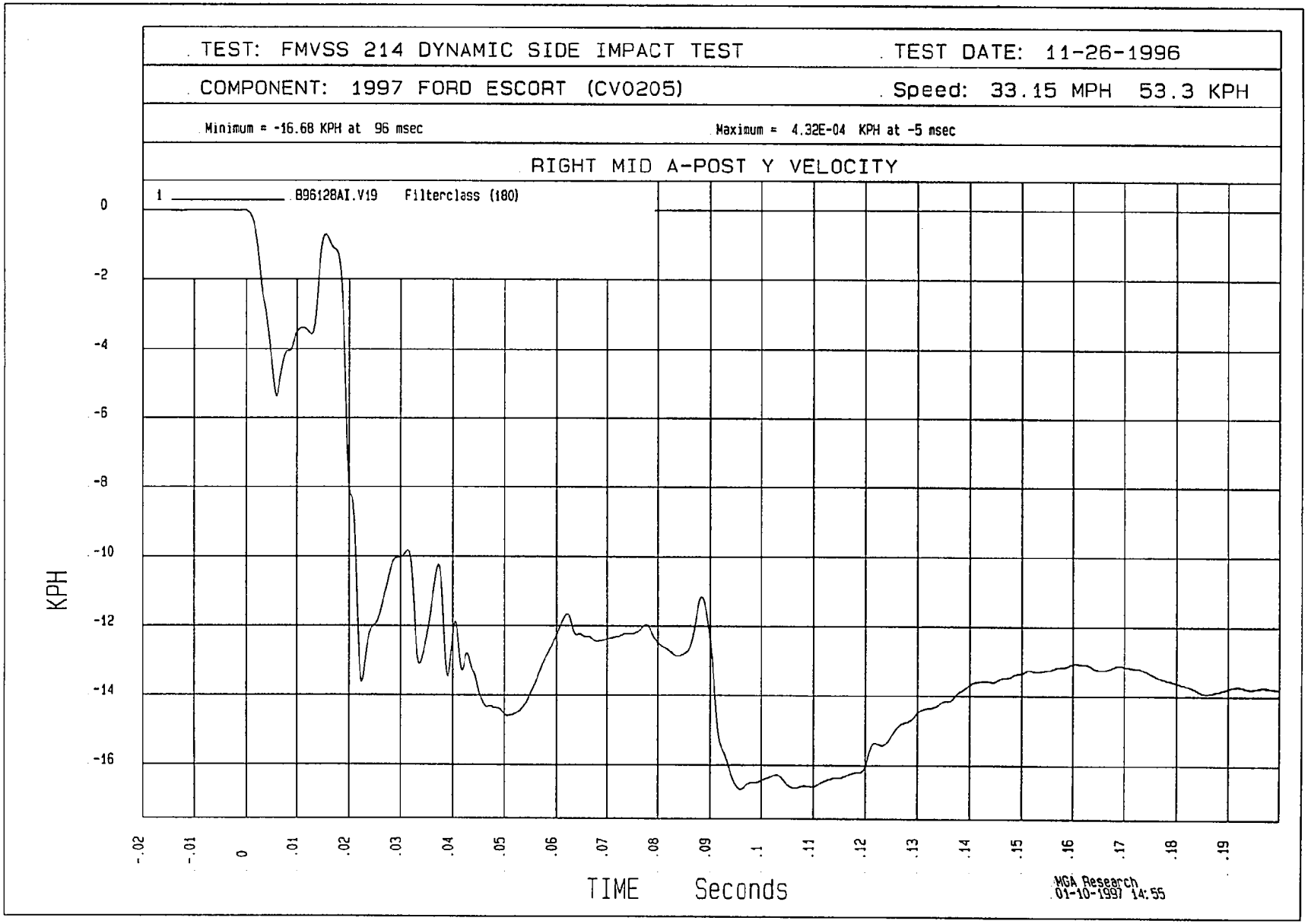
TIME (SECONDS)
MGA Research
01-10-1997 15:14


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -16.68 KPH at 96 msec
Maximum = 4.32E-04 KPH at -5 msec
RIGHT MID A-POST Y VELOCITY
1 B96128AI.V19 Filterclass (180)
KPH
0
-2
-4
-6
-8
-10
-12
-14
-16
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
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.14
.15
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.17
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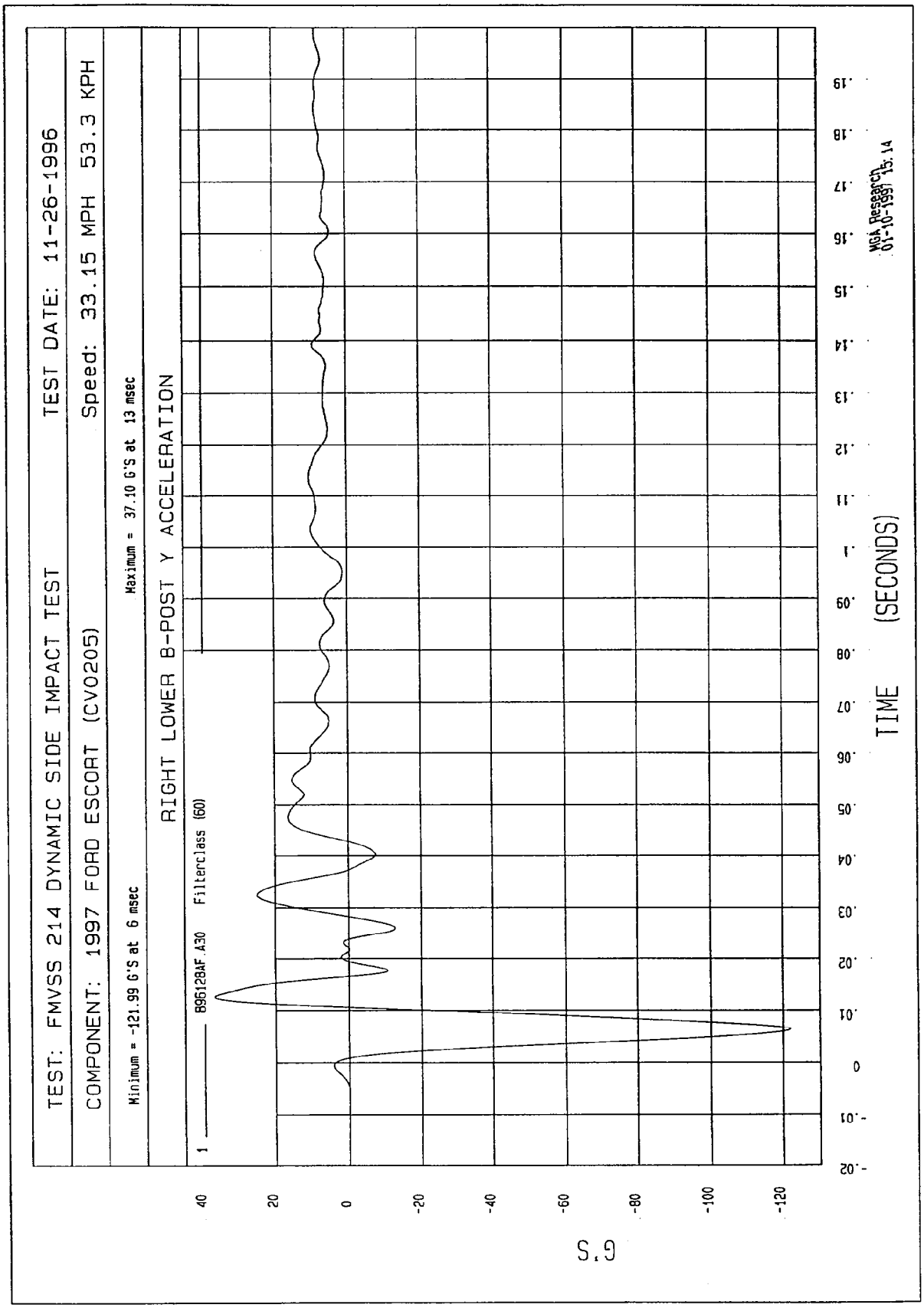
TIME Seconds
MGA Research
01-10-1997 14:55


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -121.99 G'S at 6 msec
Maximum = 37.10 G'S at 13 msec
RIGHT LOWER B-POST Y ACCELERATION
1 B96128AF.A30 Filterclass (60)
40
20
0
-20
-40
-60
-80
-100
-120
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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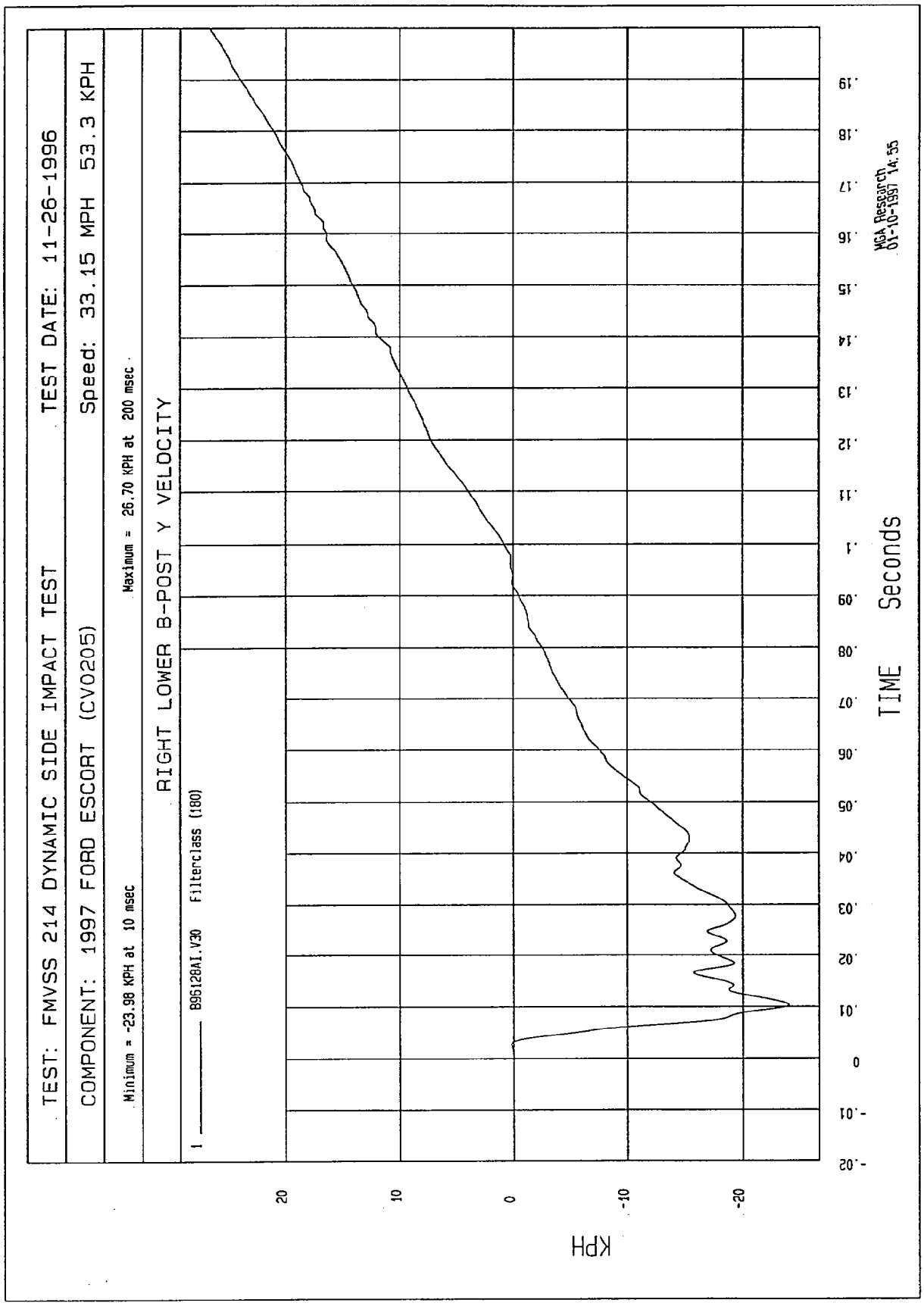
TIME (SECONDS)
MGA Research
01-10-1997 15:14


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -23.98 KPH at 10 msec
Maximum = 26.70 KPH at 200 msec
RIGHT LOWER B-POST Y VELOCITY
1 B96128AI.V30 Filterclass (180)
KPH
20
10
0
-10
-20
TIME Seconds
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
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.11
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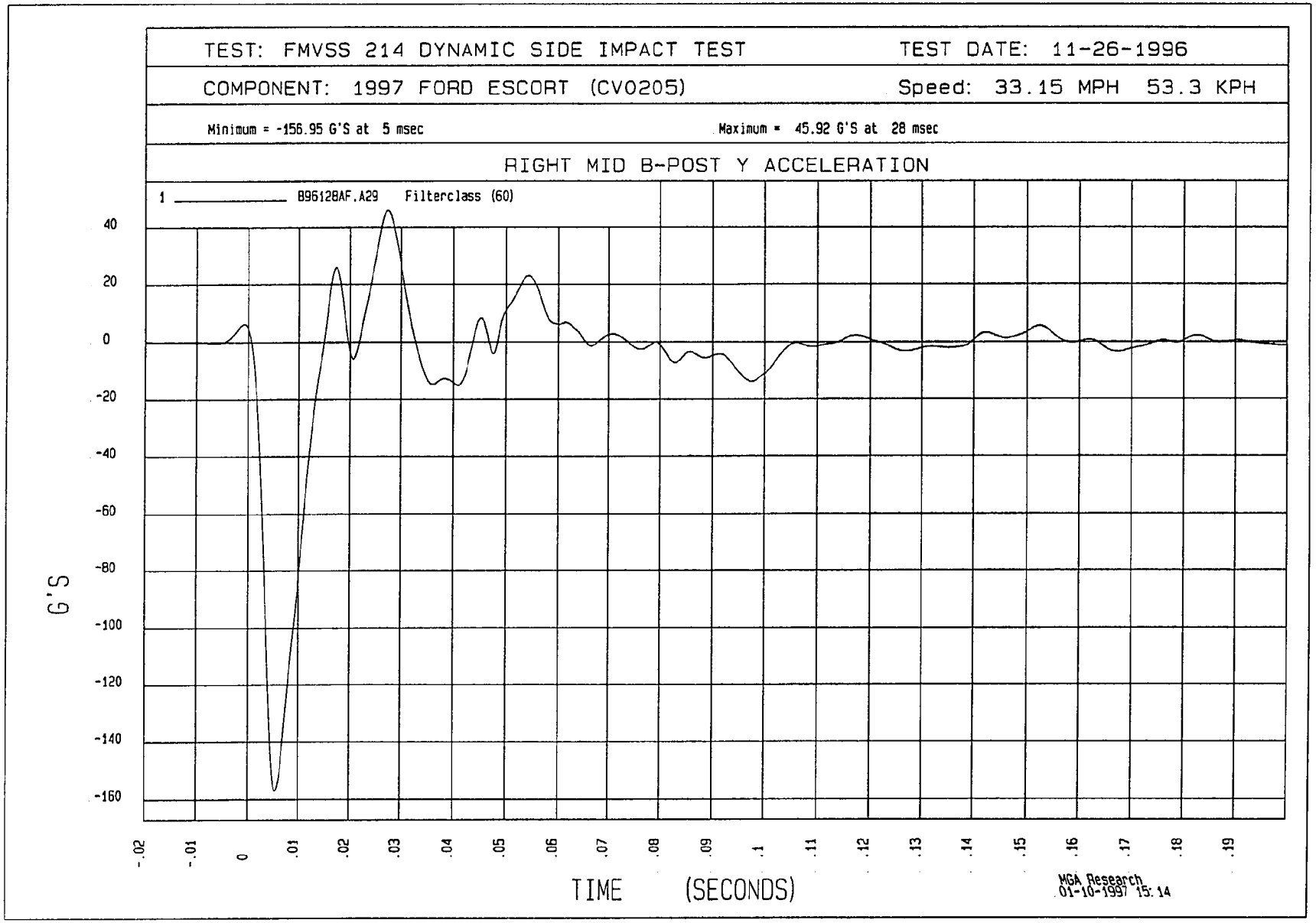
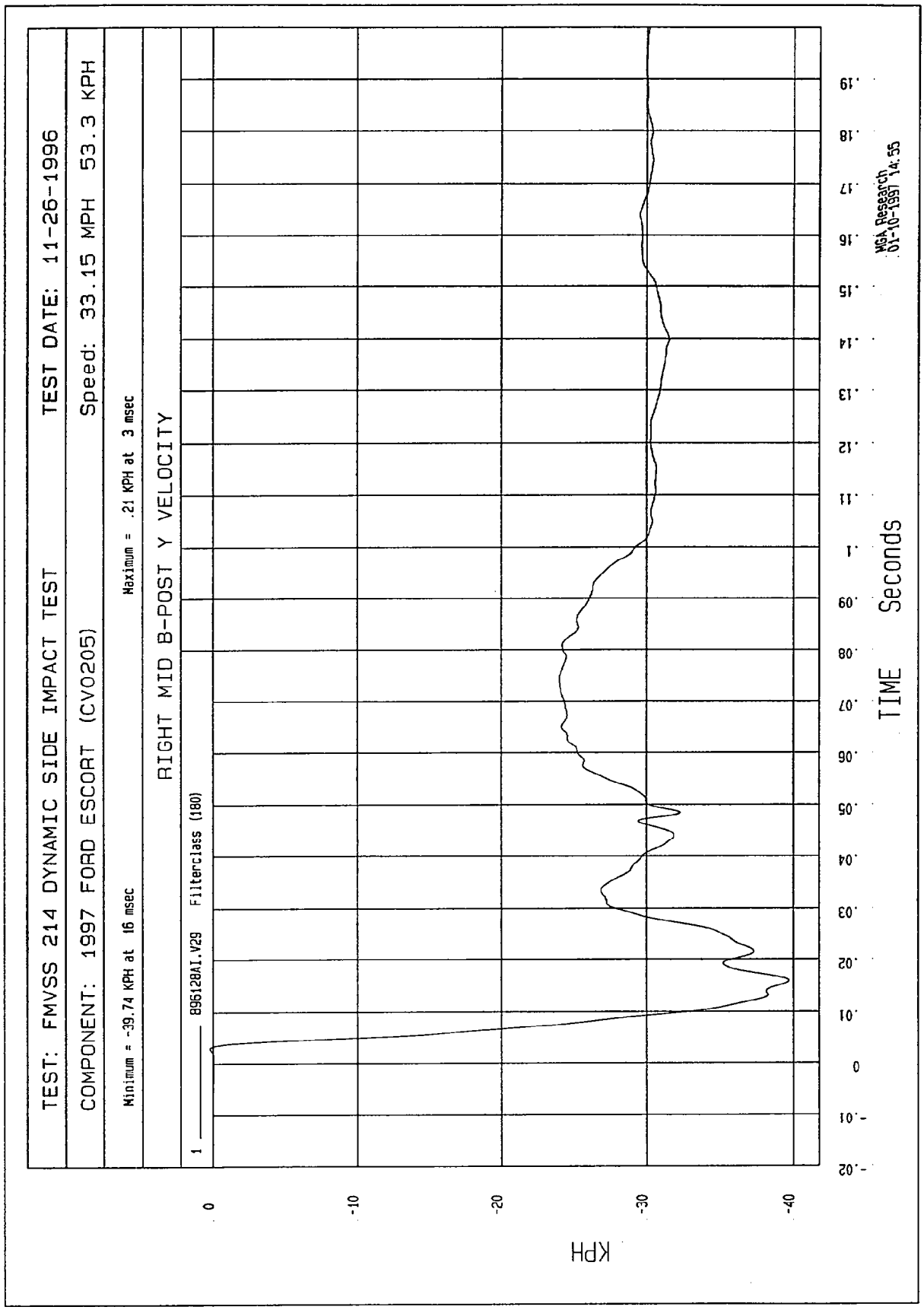
MGA Research
01-10-1997 14:55


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -156.95 G'S at 5 msec
Maximum = 45.92 G'S at 28 msec
RIGHT MID B-POST Y ACCELERATION
1 B96128AF.A29 Filterclass (60)
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-10-1997 15:14


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -39.74 KPH at 16 msec
Maximum = .21 KPH at 3 msec
RIGHT MID B-POST Y VELOCITY
1 896120AI.V29 Filterclass (180)
KPH
0
-10
-20
-30
-40
TIME Seconds
-02
-01
0
01
02
03
04
05
06
07
08
09
1
11
12
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14
15
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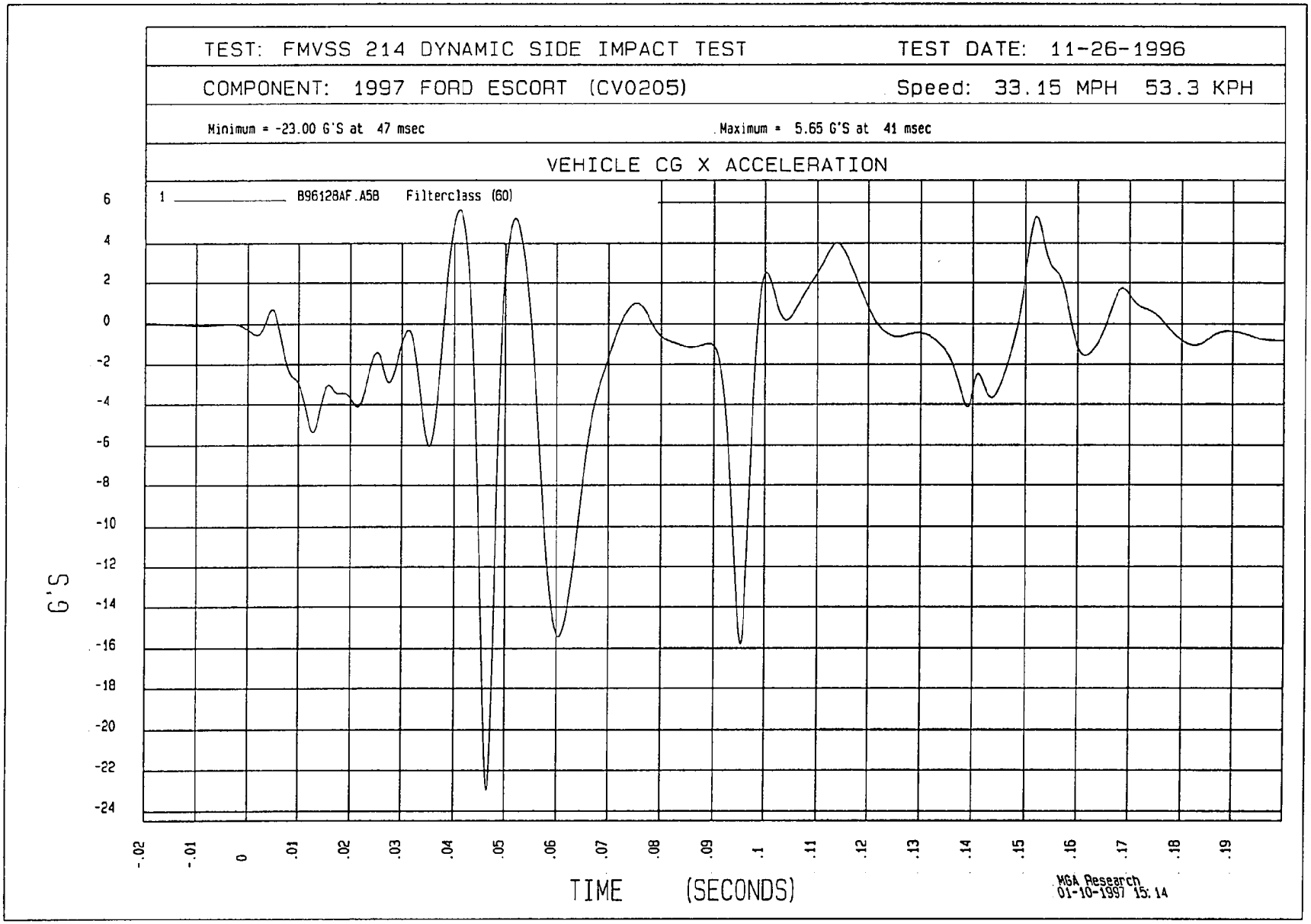
MGA Research
01-10-1997 14:55


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -23.00 G'S at 47 msec
Maximum = 5.65 G'S at 41 msec
VEHICLE CG X ACCELERATION
1 B96128AF.A5B Filterclass (60)
6
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
G's
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
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.17
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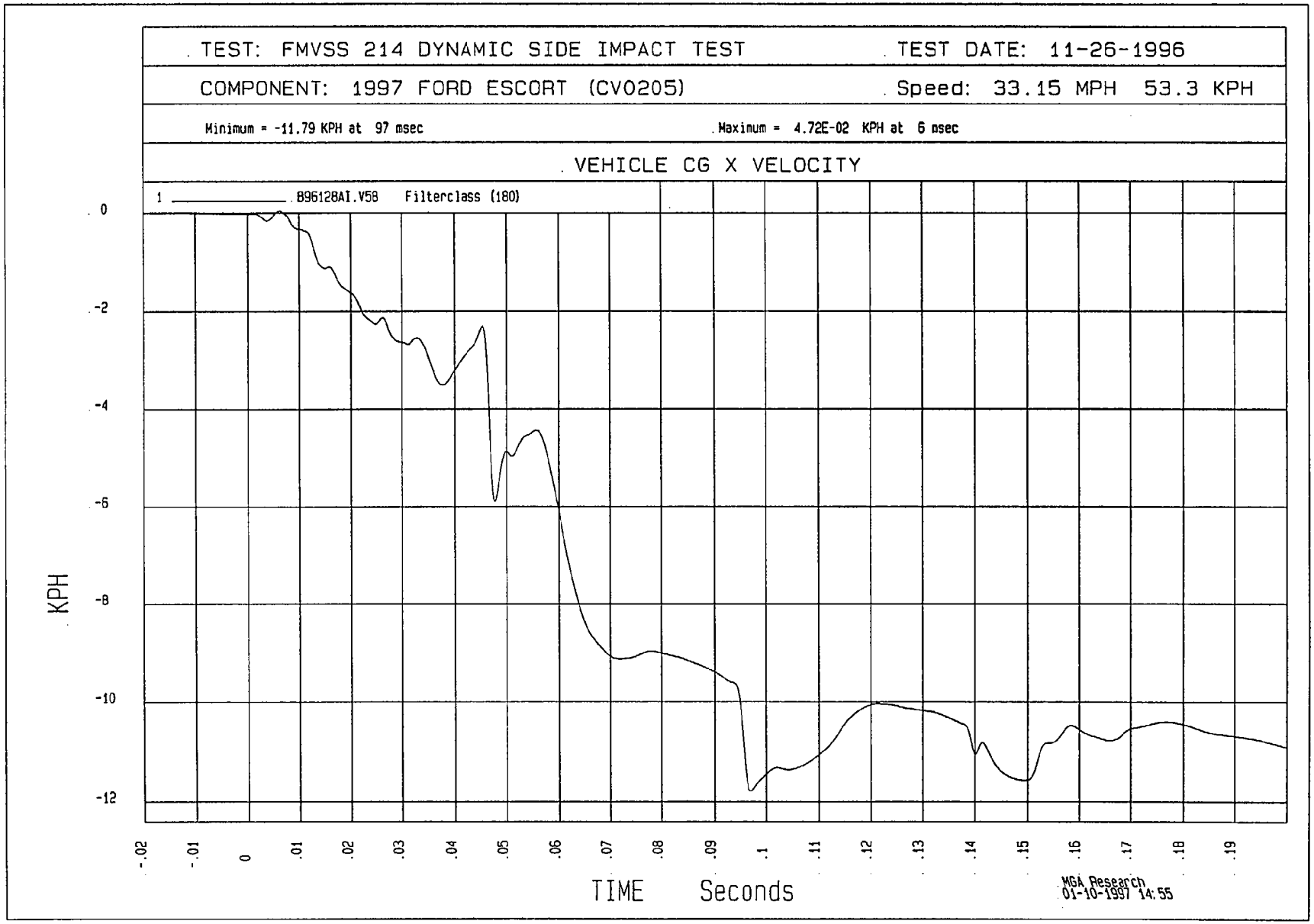
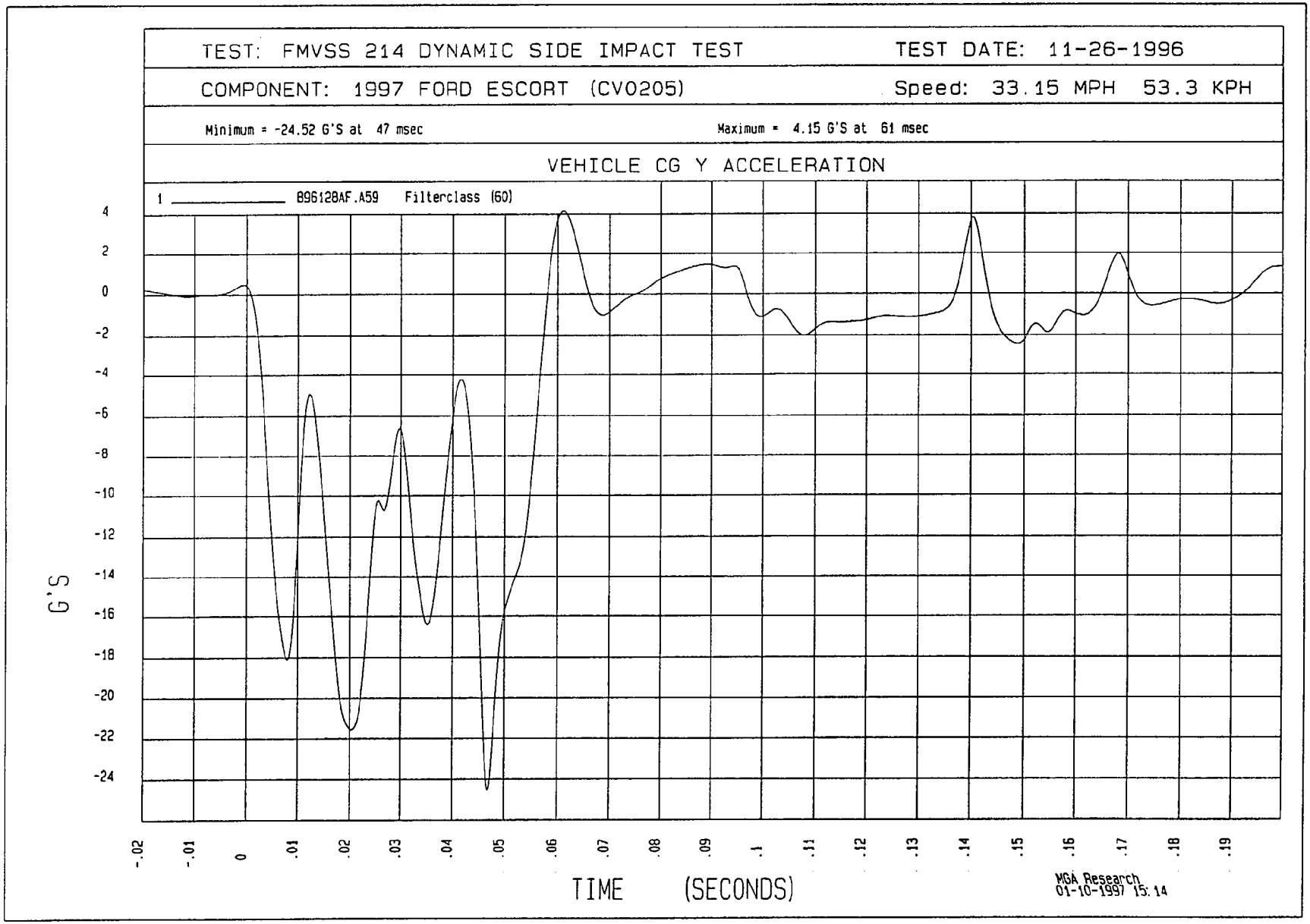
TIME (SECONDS)
MGA Research
01-10-1997 15:14


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -11.79 KPH at 97 msec
Maximum = 4.72E-02 KPH at 6 msec
VEHICLE CG X VELOCITY
1 B96128AI.V58 Filterclass (180)
KPH
0
-2
-4
-6
-8
-10
-12
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-10-1997 14:55


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -24.52 G'S at 47 msec
Maximum = 4.15 G'S at 61 msec
VEHICLE CG Y ACCELERATION
1 B96128AF.A59 Filterclass (60)
4
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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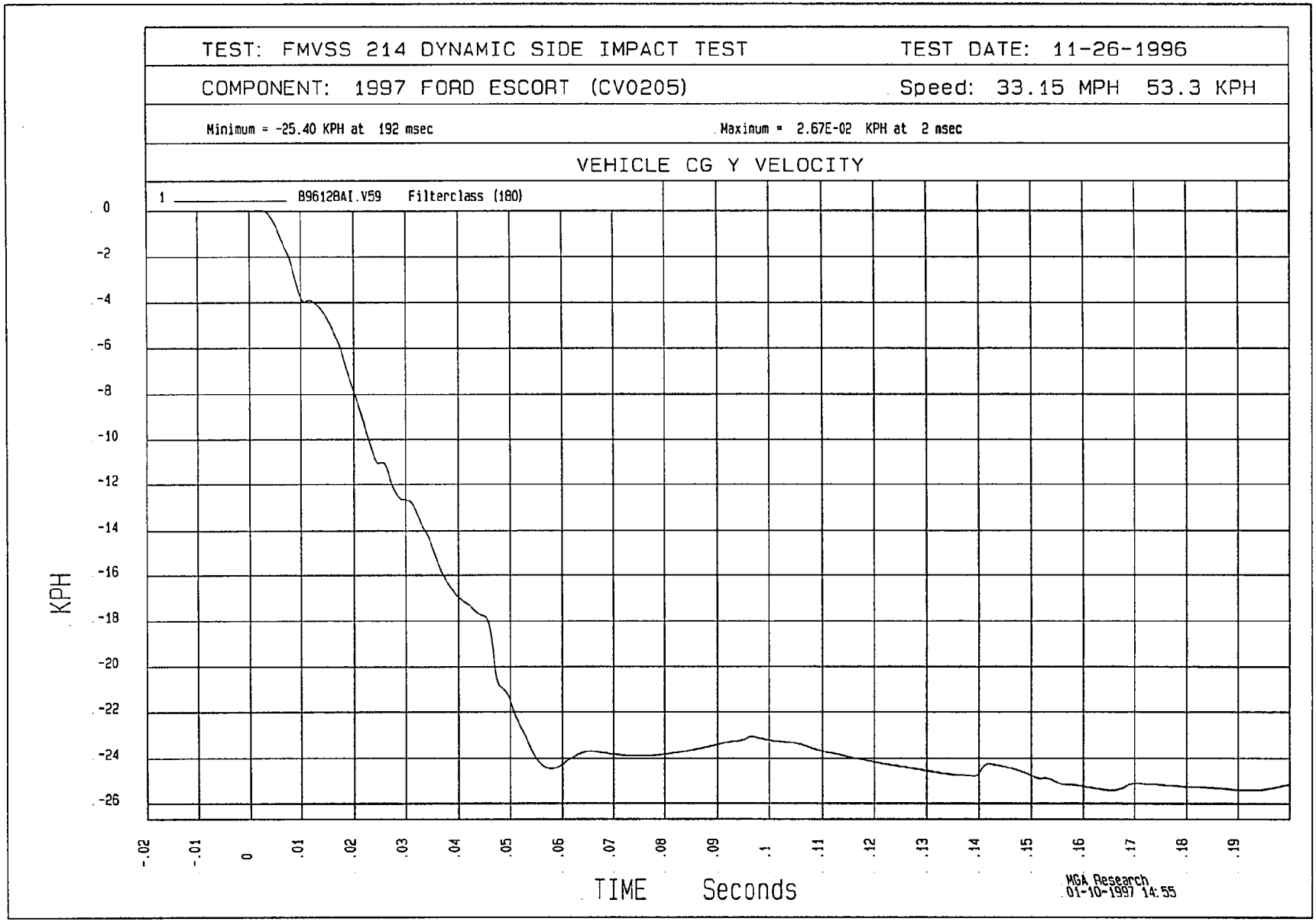
TIME (SECONDS)
MGA Research
01-10-1997 15:14


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -25.40 KPH at 192 msec
Maximum = 2.67E-02 KPH at 2 msec
VEHICLE CG Y VELOCITY
1 896128AI.V59 Filterclass (180)
KPH
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-.02
-.01
0
.01
.02
.03
.04
.05
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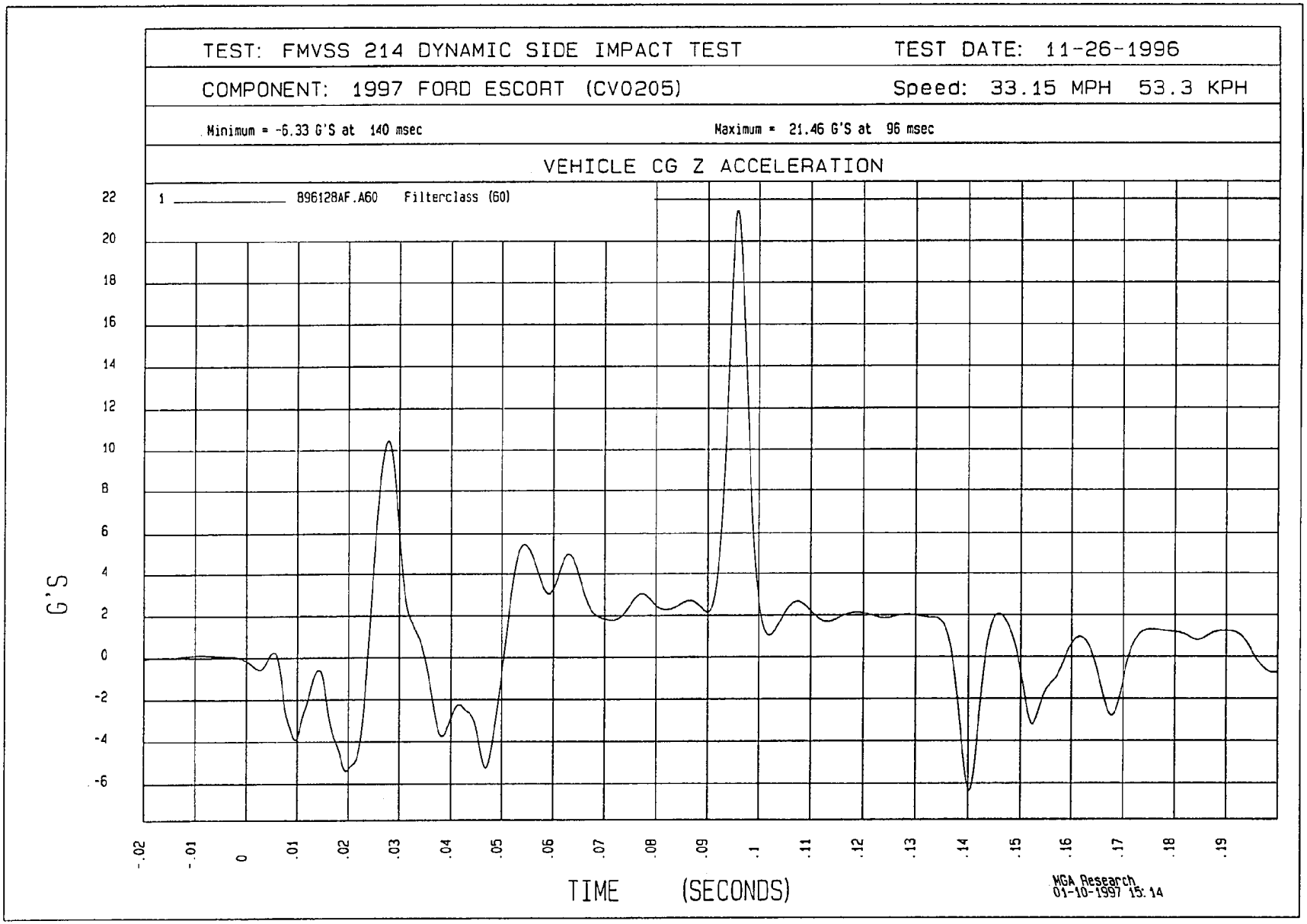
TIME Seconds
MGA Research
01-10-1997 14:55


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -6.33 G'S at 140 msec
Maximum = 21.46 G'S at 96 msec
VEHICLE CG Z ACCELERATION
1 896128AF.A60 Filterclass (60)
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
-6
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
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.09
.1
.11
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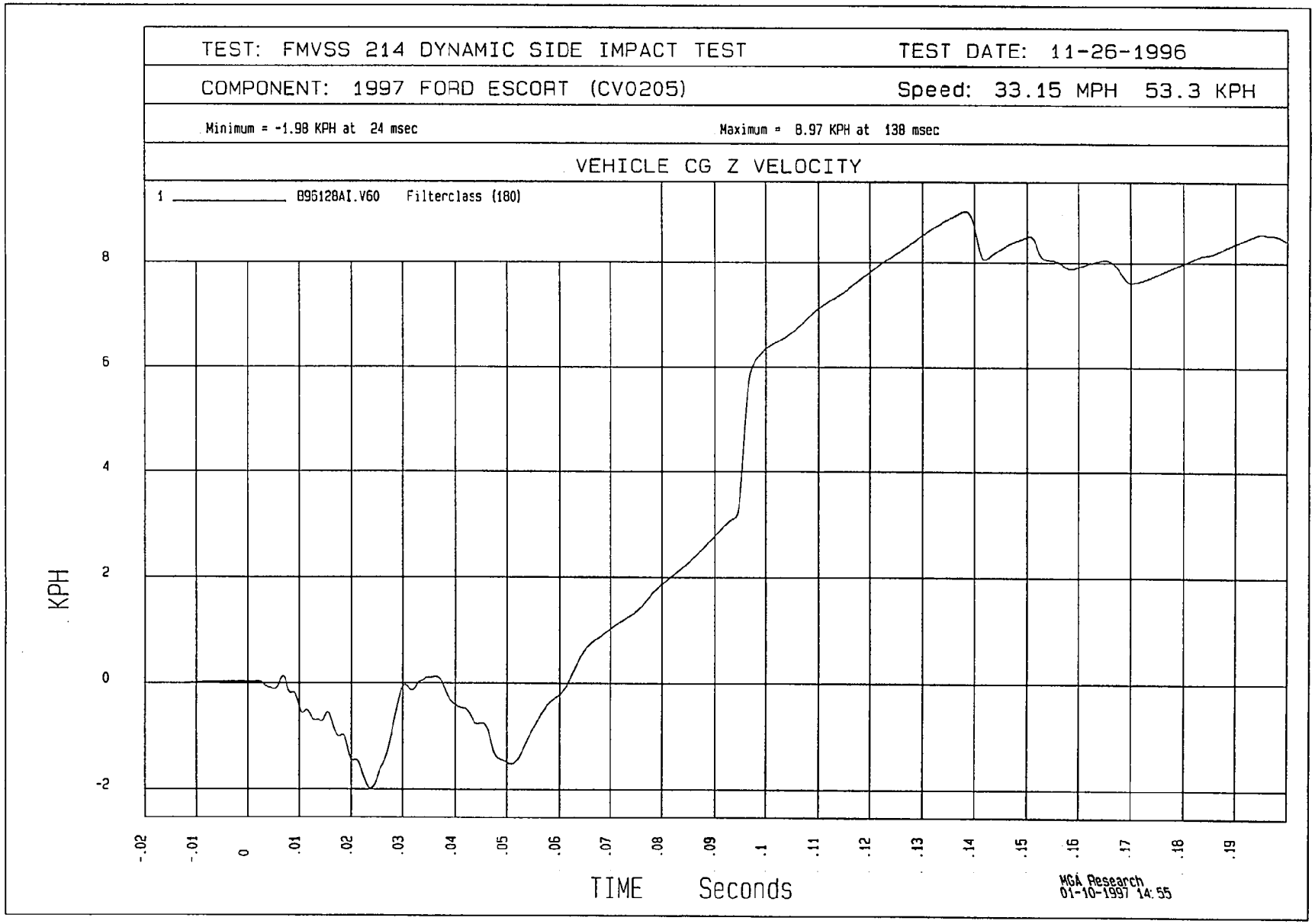
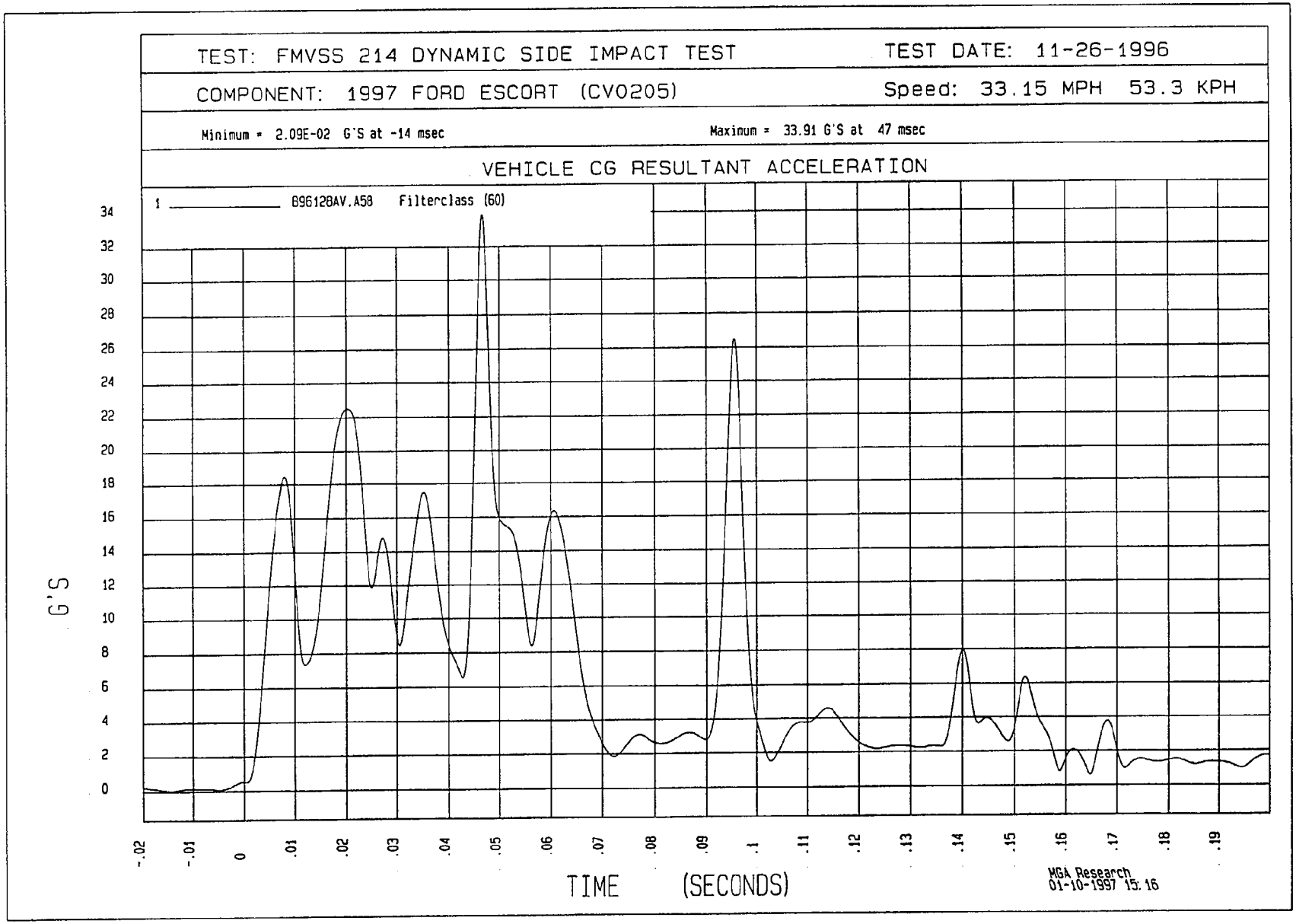
TIME (SECONDS)
MGA Research
01-10-1997 15:14


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -1.98 KPH at 24 msec
Maximum = 8.97 KPH at 138 msec
VEHICLE CG Z VELOCITY
1 B96128AI.V60 Filterclass (180)
KPH
8
6
4
2
0
-2
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-10-1997 14:55


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = 2.09E-02 G'S at -14 msec
Maximum = 33.91 G'S at 47 msec
VEHICLE CG RESULTANT ACCELERATION
1 B96128AV.A58 Filterclass (60)
G'S
34
32
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
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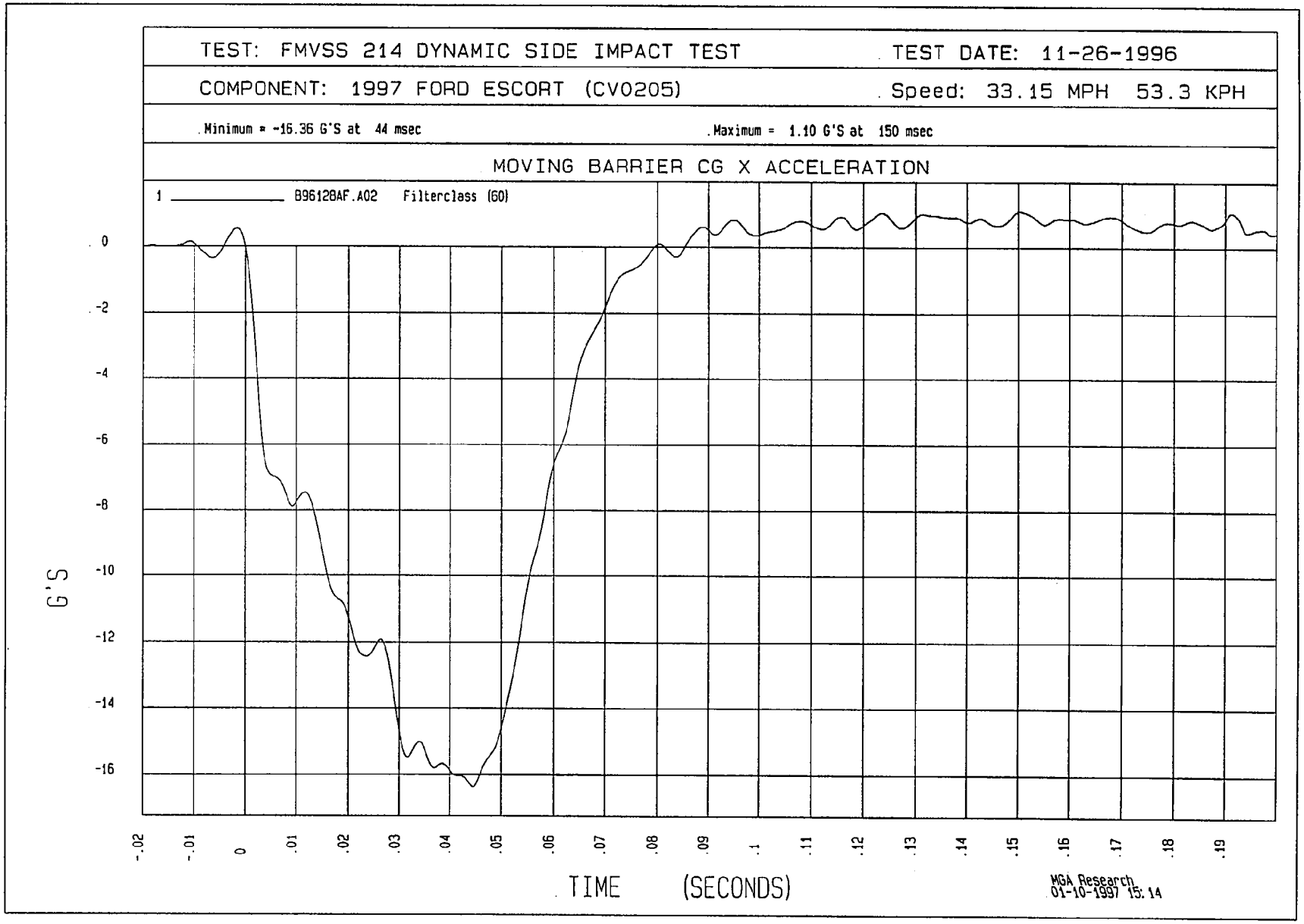
TIME (SECONDS)
MGA Research
01-10-1997 15:16


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -16.36 G'S at 44 msec
Maximum = 1.10 G'S at 150 msec
MOVING BARRIER CG X ACCELERATION
1 B96128AF.A02 Filterclass (60)
0
-2
-4
-6
-8
-10
-12
-14
-16
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
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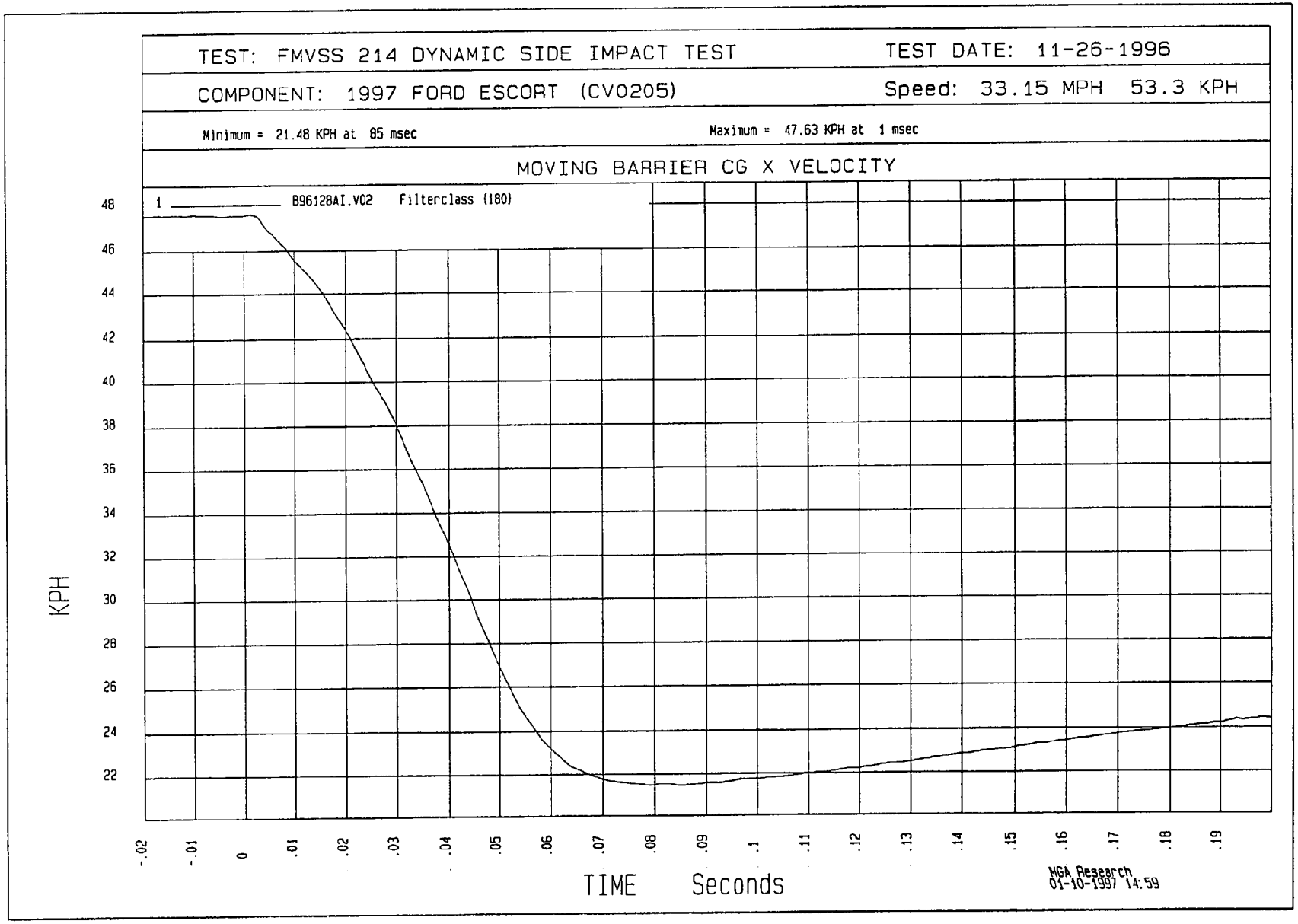
TIME (SECONDS)
MGA Research
01-10-1997 15:14


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = 21.48 KPH at 85 msec
Maximum = 47.63 KPH at 1 msec
MOVING BARRIER CG X VELOCITY
1 B96128AI.V02 Filterclass (180)
KPH
48
46
44
42
40
38
36
34
32
30
28
26
24
22
-.02
-.01
0
.01
.02
.03
.04
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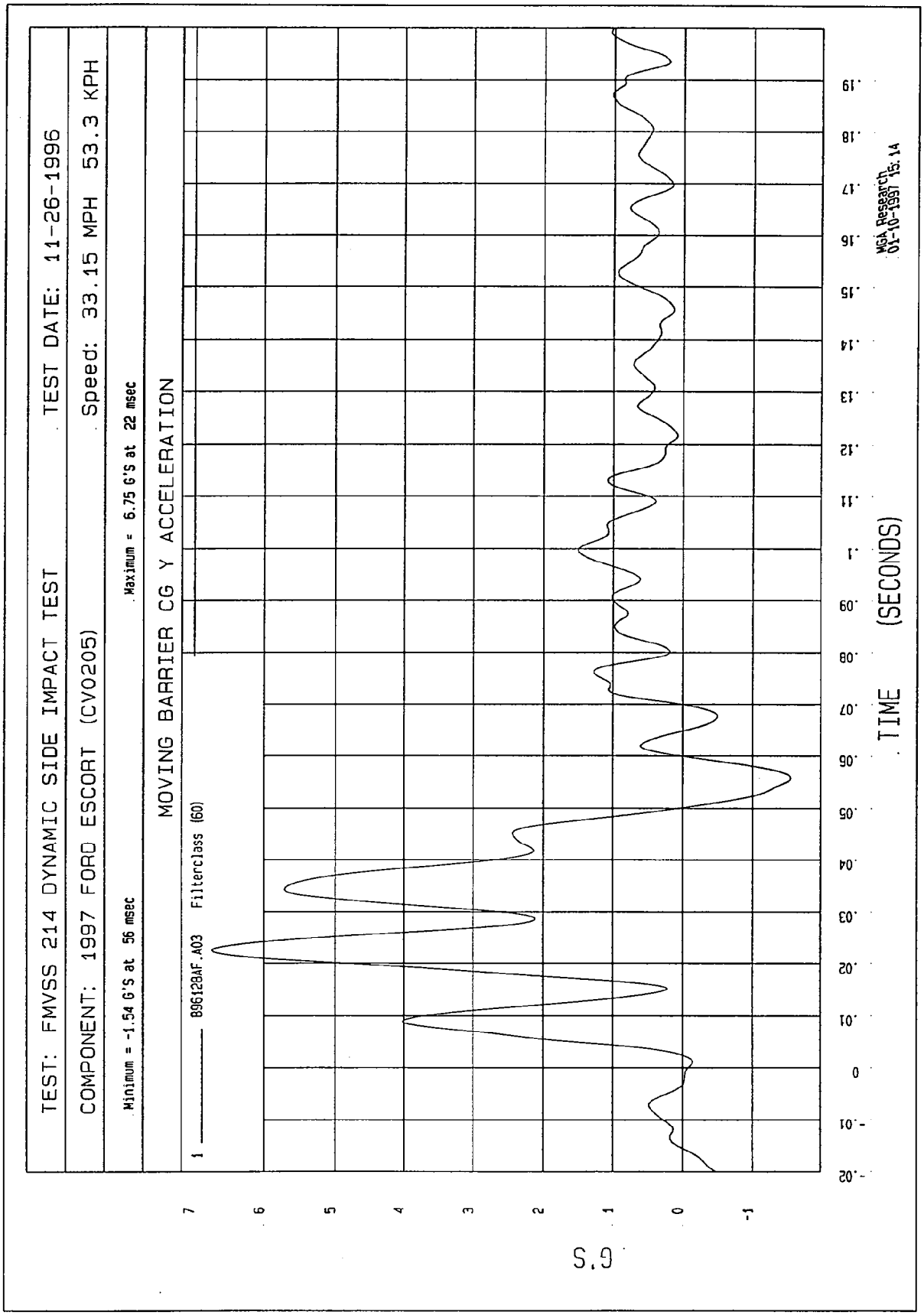
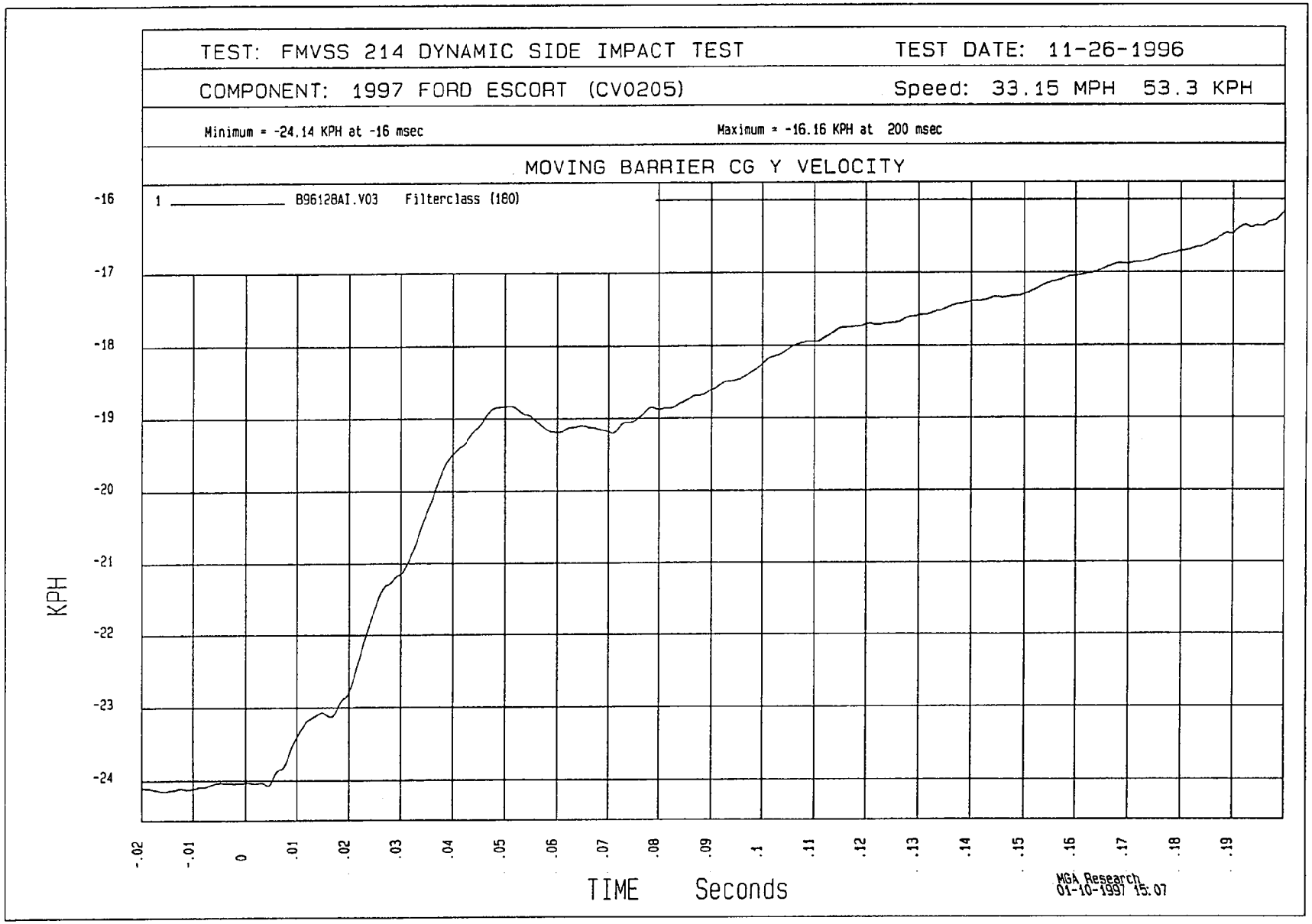
TIME Seconds
NGA Research
01-10-1997 14:59


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -1.54 G'S at 56 msec
Maximum = 6.75 G'S at 22 msec
MOVING BARRIER CG Y ACCELERATION
1 B96128AF.A03 Filterclass (60)
G'S
TIME (SECONDS)
MGA Research 01-10-1997 15:14


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -24.14 KPH at -16 msec
Maximum = -16.16 KPH at 200 msec
MOVING BARRIER CG Y VELOCITY
1 B96128AI.V03 Filterclass (180)
KPH
-16
-17
-18
-19
-20
-21
-22
-23
-24
-.02
-.01
0
.01
.02
.03
.04
.05
.06
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.14
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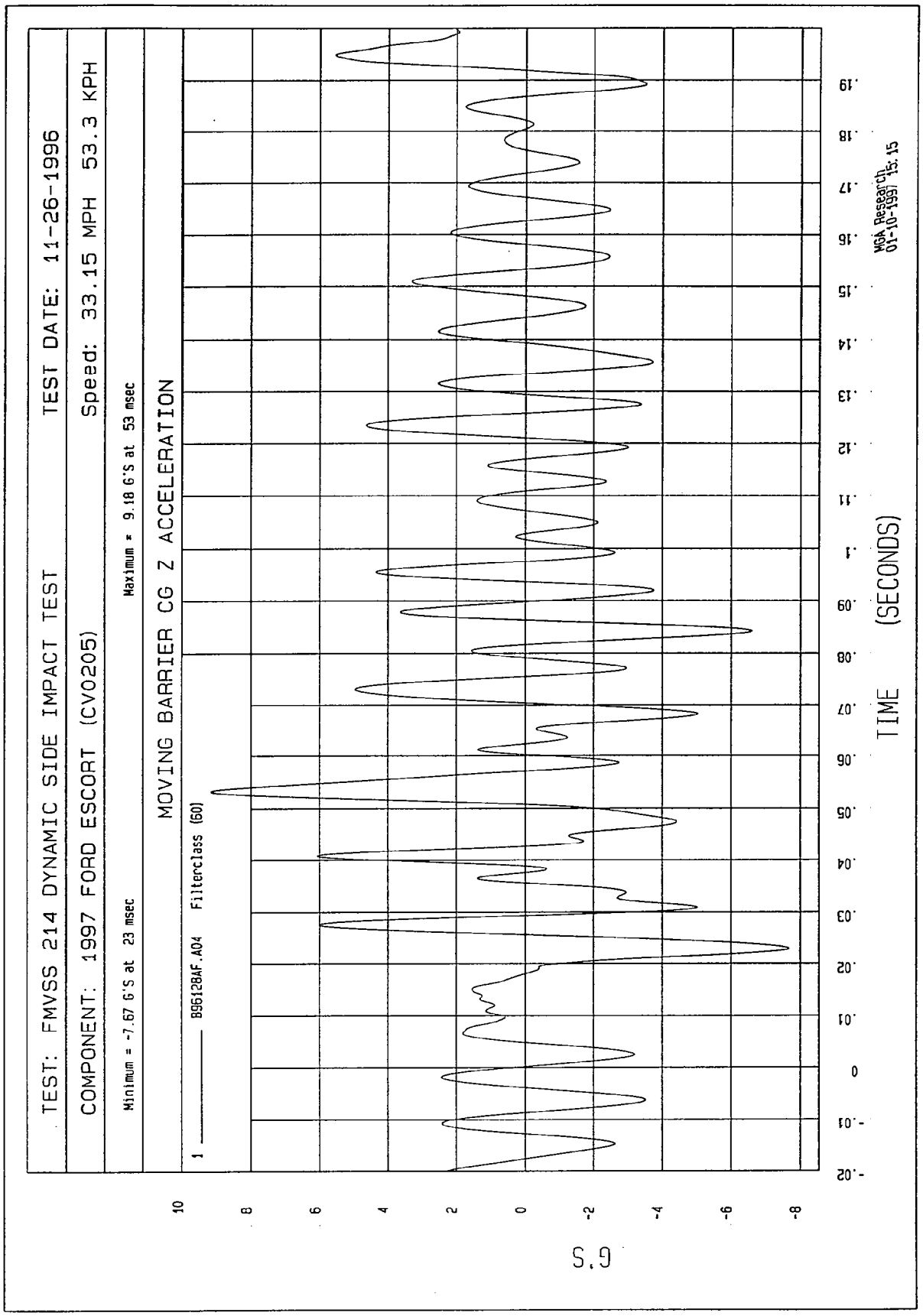
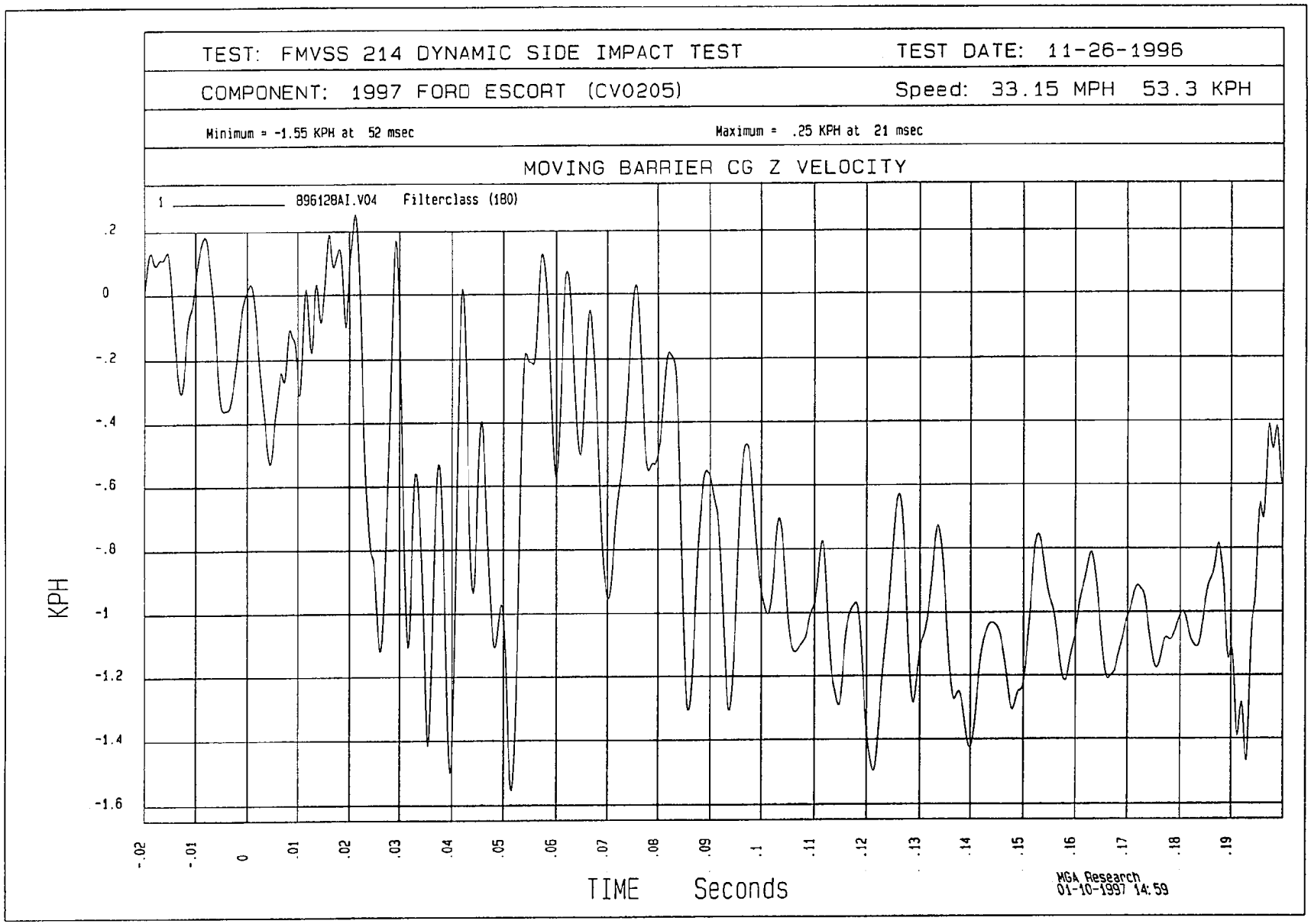
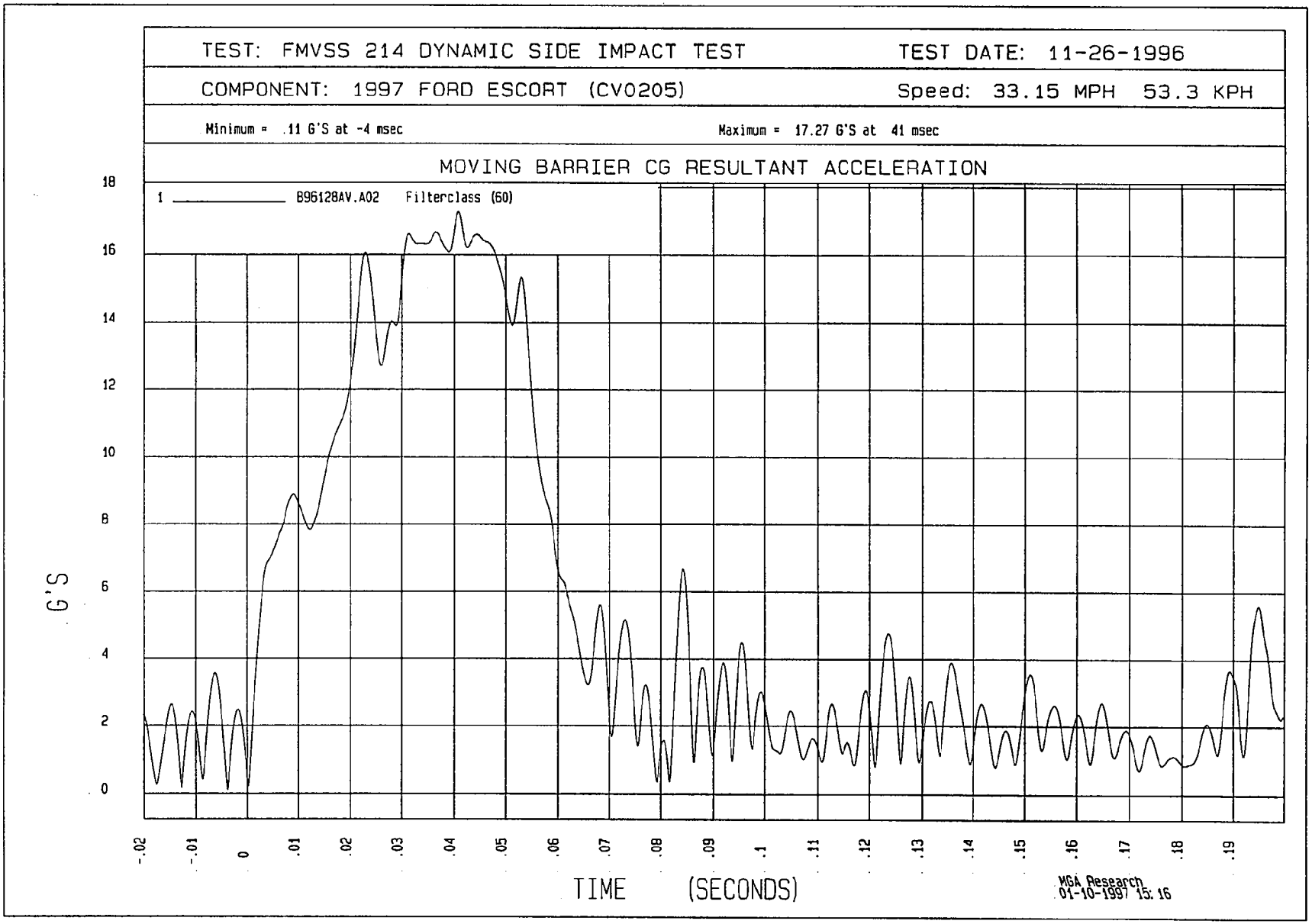
TIME Seconds
MGA Research
01-10-1997 15:07


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -7.67 G'S at 23 msec
Maximum = 9.18 G'S at 53 msec
MOVING BARRIER CG Z ACCELERATION
1 B9612BAF.A04 Filterclass (60)
MGA Research
01-10-1997 15:15
TIME (SECONDS)
G'S


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -1.55 KPH at 52 msec
Maximum = .25 KPH at 21 msec
MOVING BARRIER CG Z VELOCITY
1 896128AI.V04 Filterclass (180)
KPH
.2
0
-.2
-.4
-.6
-.8
-1
-1.2
-1.4
-1.6
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-10-1997 14:59


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = .11 G'S at -4 msec
Maximum = 17.27 G'S at 41 msec
MOVING BARRIER CG RESULTANT ACCELERATION
1 B96128AV.A02 Filterclass (60)
G'S
18
16
14
12
10
8
6
4
2
0
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
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.11
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.14
.15
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.18
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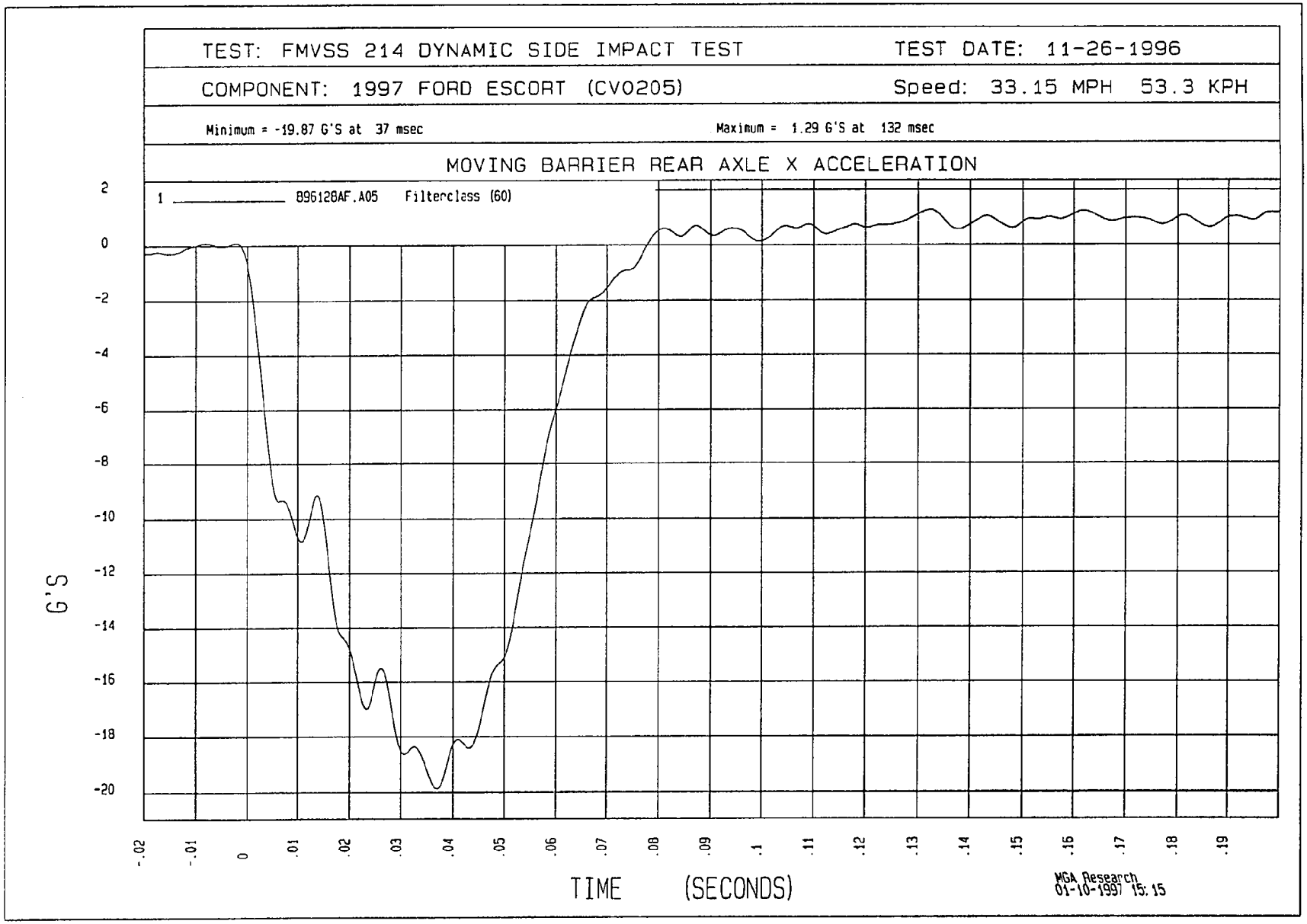
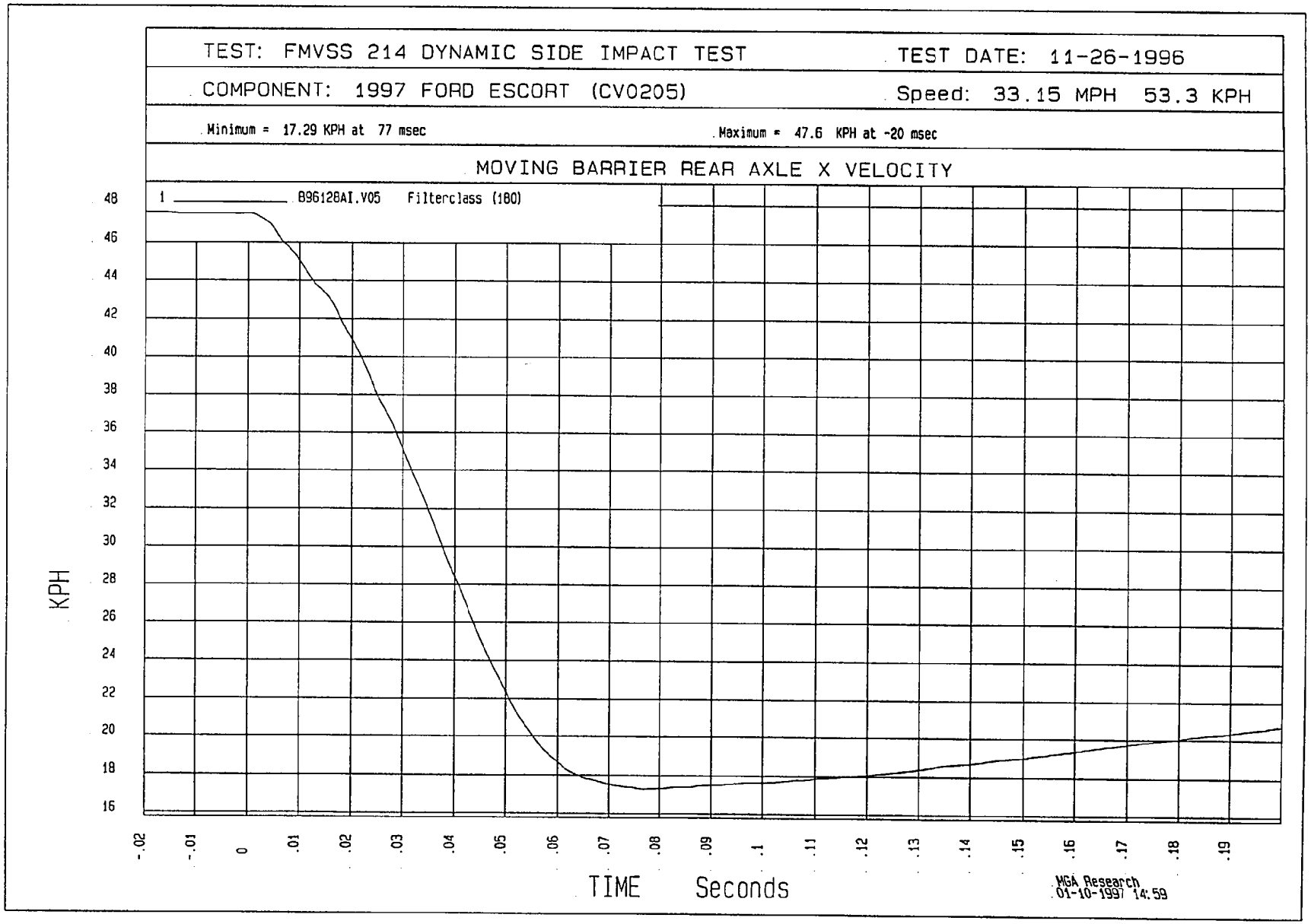
TIME (SECONDS)
MGA Research
01-10-1997 15:16


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -19.87 G'S at 37 msec
Maximum = 1.29 G'S at 132 msec
MOVING BARRIER REAR AXLE X ACCELERATION
1 896128AF.A05 Filterclass (60)
2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-10-1997 15:15


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = 17.29 KPH at 77 msec
Maximum = 47.6 KPH at -20 msec
MOVING BARRIER REAR AXLE X VELOCITY
1 B96128AI.V05 Filterclass (180)
KPH
48
46
44
42
40
38
36
34
32
30
28
26
24
22
20
18
16
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
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.1
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.12
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.14
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.16
.17
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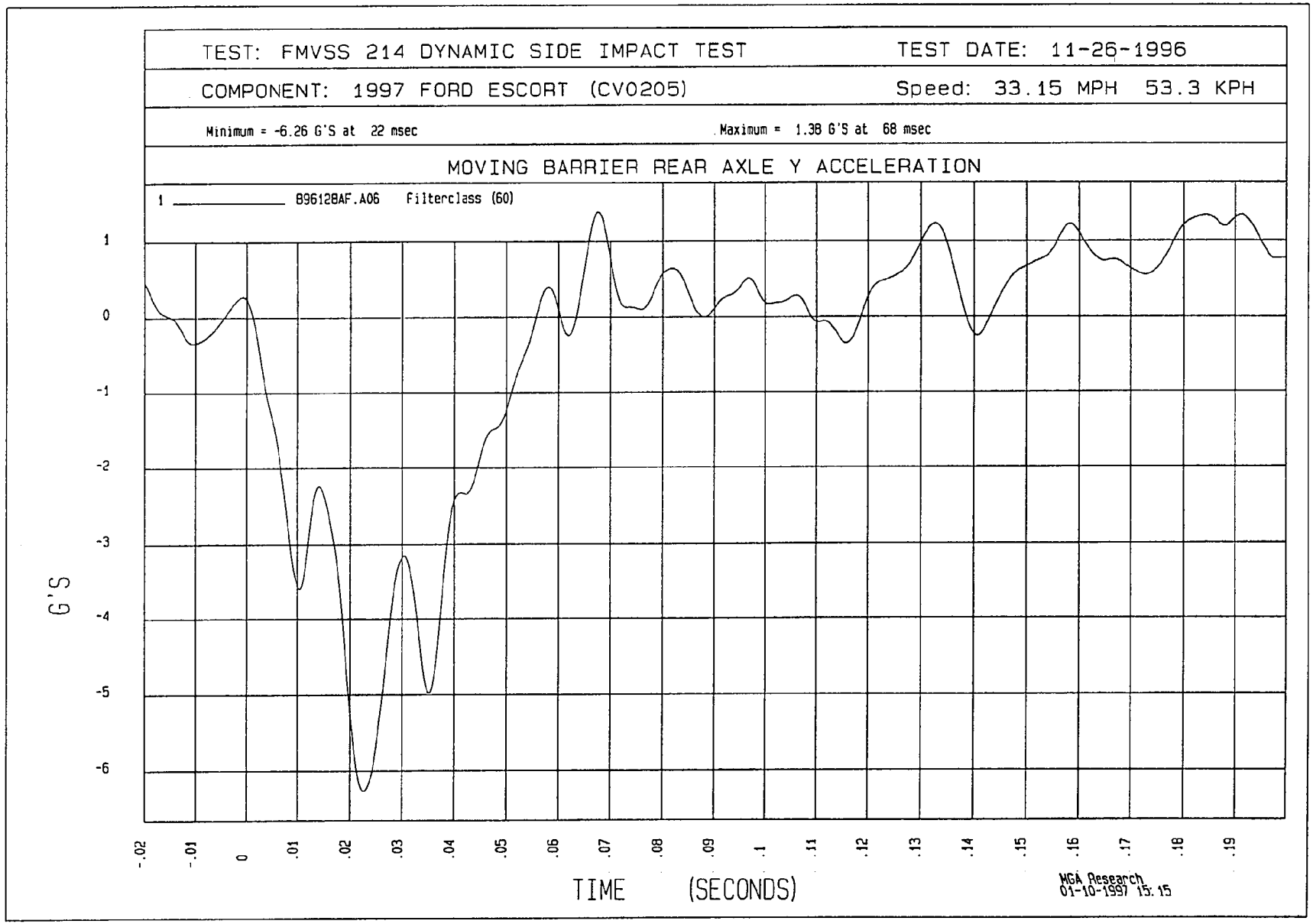
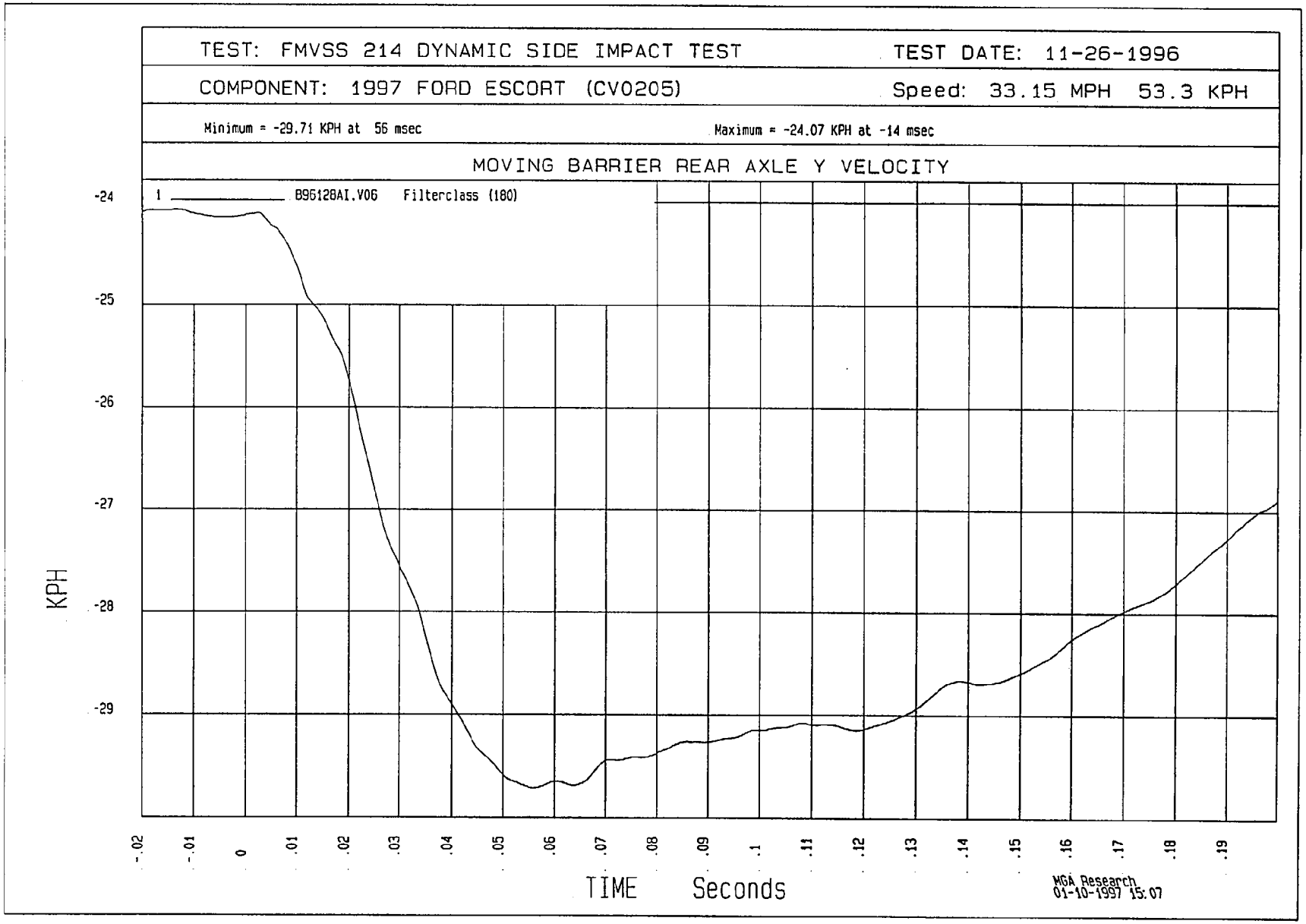
.19
TIME Seconds
MGA Research
01-10-1997 14:59


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -6.26 G'S at 22 msec
Maximum = 1.38 G'S at 68 msec
MOVING BARRIER REAR AXLE Y ACCELERATION
1 B96128AF.A06 Filterclass (60)
G'S
1
0
-1
-2
-3
-4
-5
-6
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-10-1997 15:15


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -29.71 KPH at 56 msec
Maximum = -24.07 KPH at -14 msec
MOVING BARRIER REAR AXLE Y VELOCITY
1 B96128AI.V06 Filterclass (180)
-24
-25
-26
-27
-28
-29
KPH
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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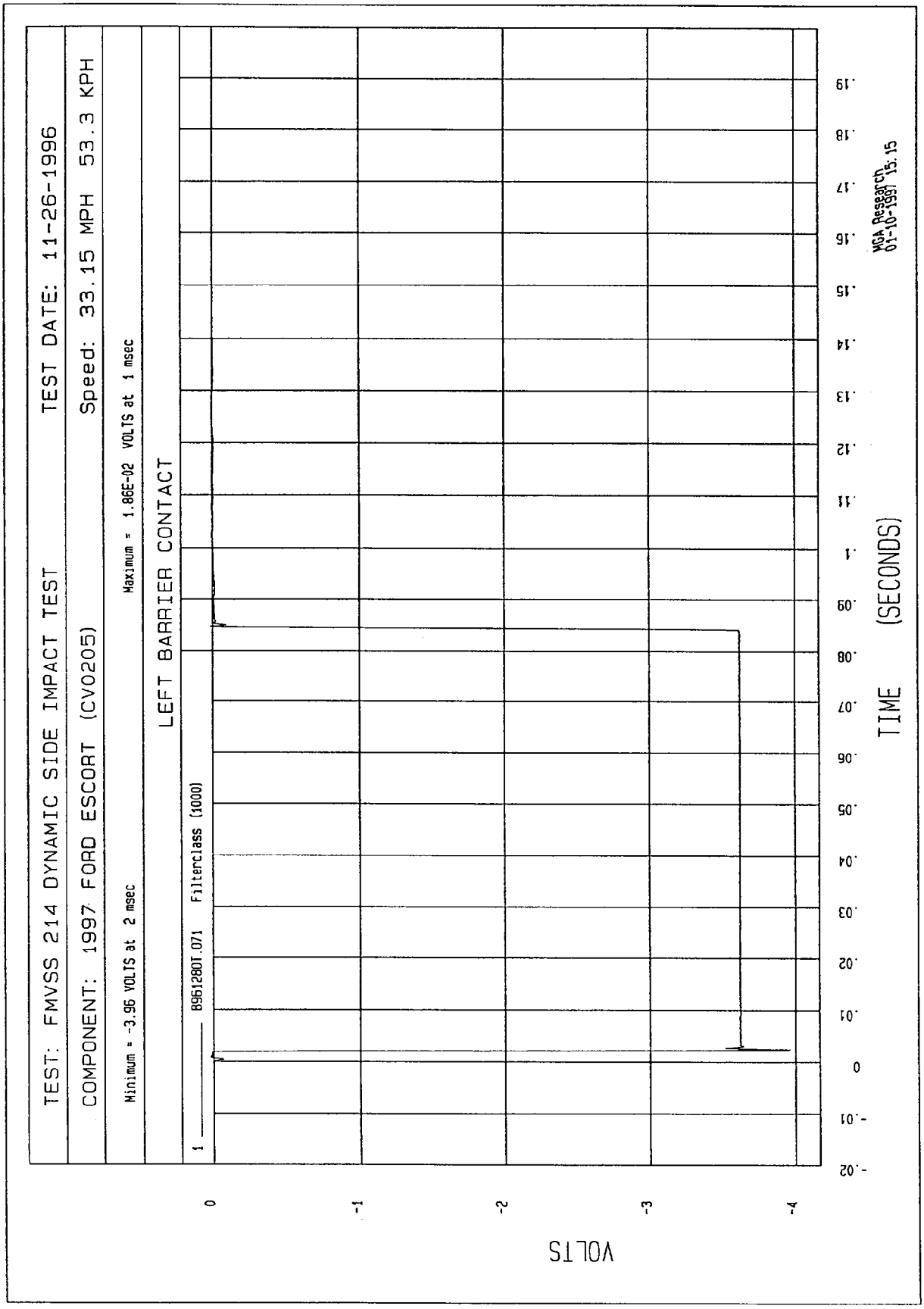
.12
.13
.14
.15
.16
.17
.18
.19
TIME Seconds
MGA Research
01-10-1997 15:07


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -3.96 VOLTS at 2 msec
Maximum = 1.86E-02 VOLTS at 1 msec
LEFT BARRIER CONTACT
1 896128DT.071 Filterclass (1000)
VOLTS
0
-1
-2
-3
-4
TIME (SECONDS)
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
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.15
.16
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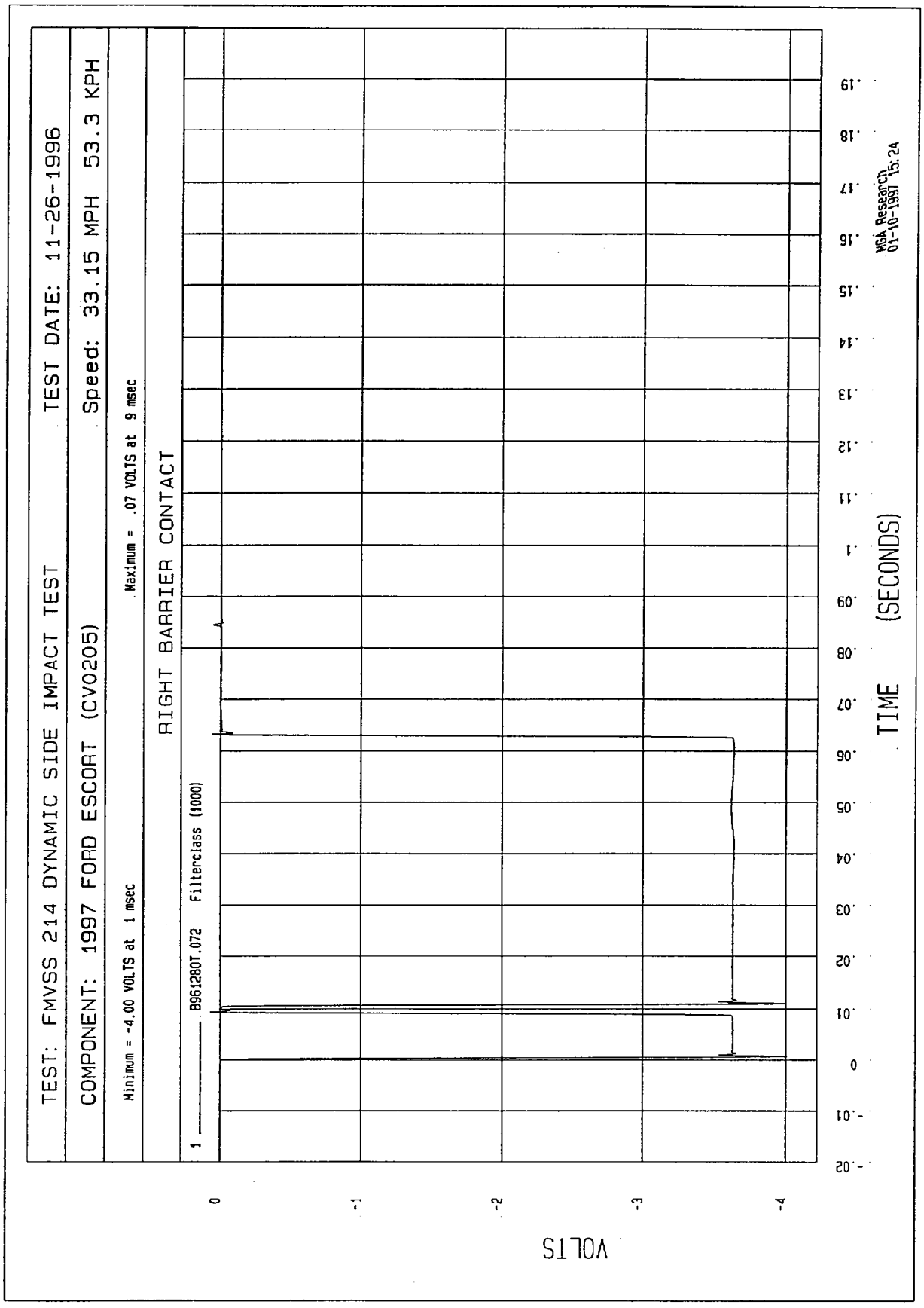
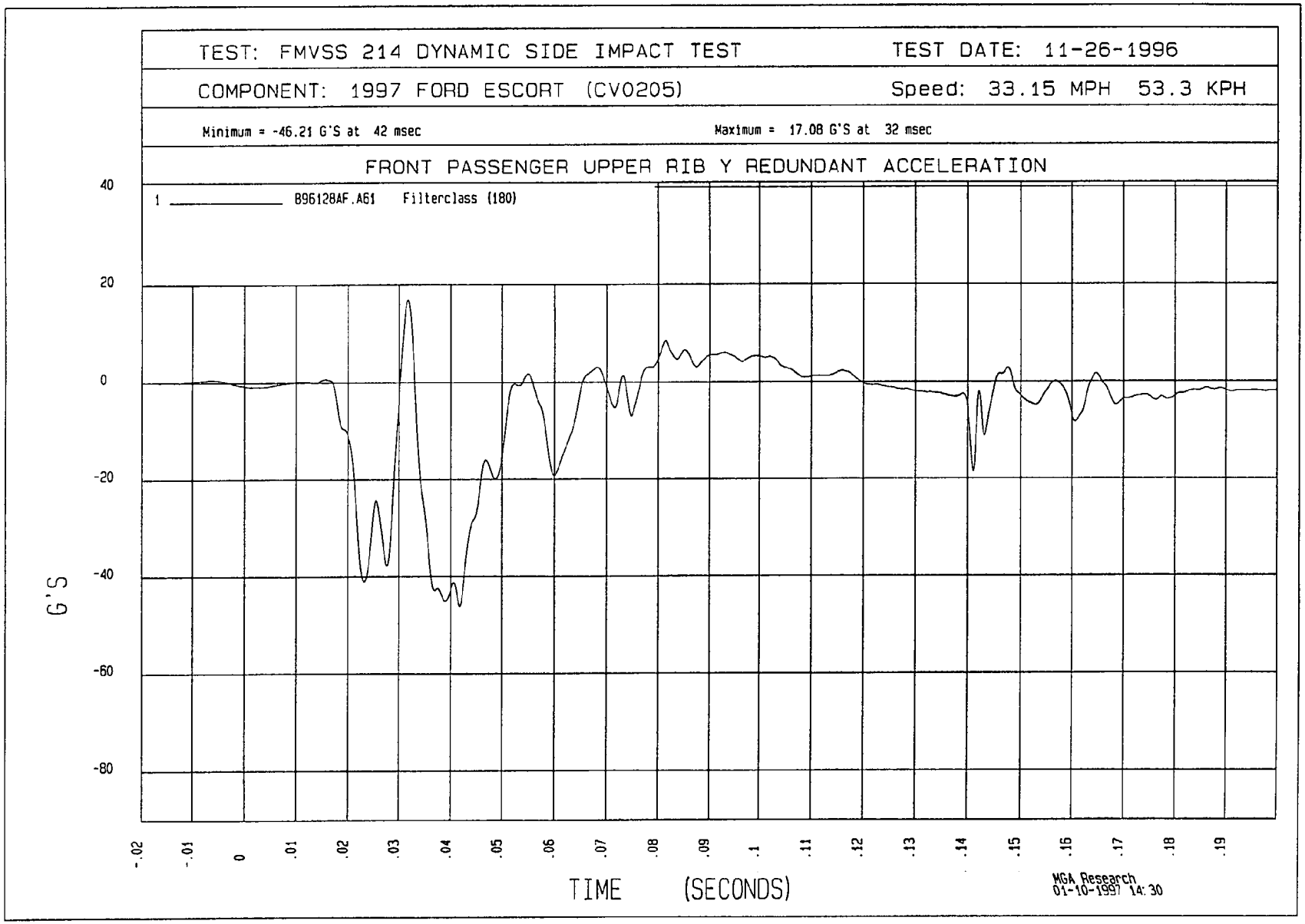
.18
.19
MGA Research
01-10-1997 15:15


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -4.00 VOLTS at 1 msec
Maximum = .07 VOLTS at 9 msec
RIGHT BARRIER CONTACT
1 B9612801.072 Filterclass (1000)
MGA Research
01-10-1997 15:24
VOLTS
0
-1
-2
-3
-4
TIME (SECONDS)
.19
.18
.17
.16
.15
.14
.13
.12
.11
.1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
-.01
-.02


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -46.21 G'S at 42 msec
Maximum = 17.08 G'S at 32 msec
FRONT PASSENGER UPPER RIB Y REDUNDANT ACCELERATION
1 B96128AF.A61 Filterclass (180)
40
20
0
-20
-40
-60
-80
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
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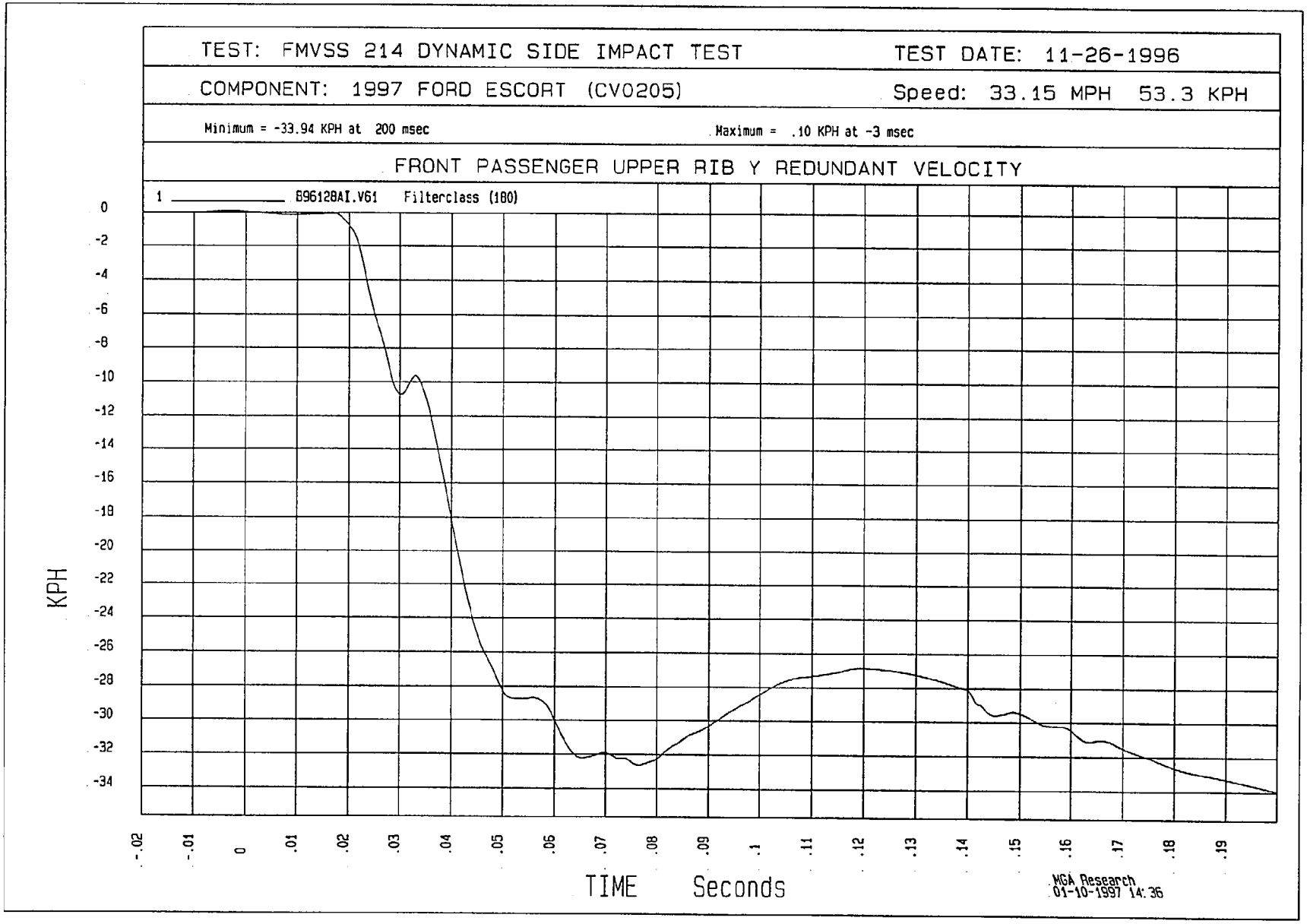
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
01-10-1997 14:30


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -33.94 KPH at 200 msec
Maximum = .10 KPH at -3 msec
FRONT PASSENGER UPPER RIB Y REDUNDANT VELOCITY
1 B96128AI.V61 Filterclass (180)
KPH
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-28
-30
-32
-34
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
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.14
.15
.16
.17
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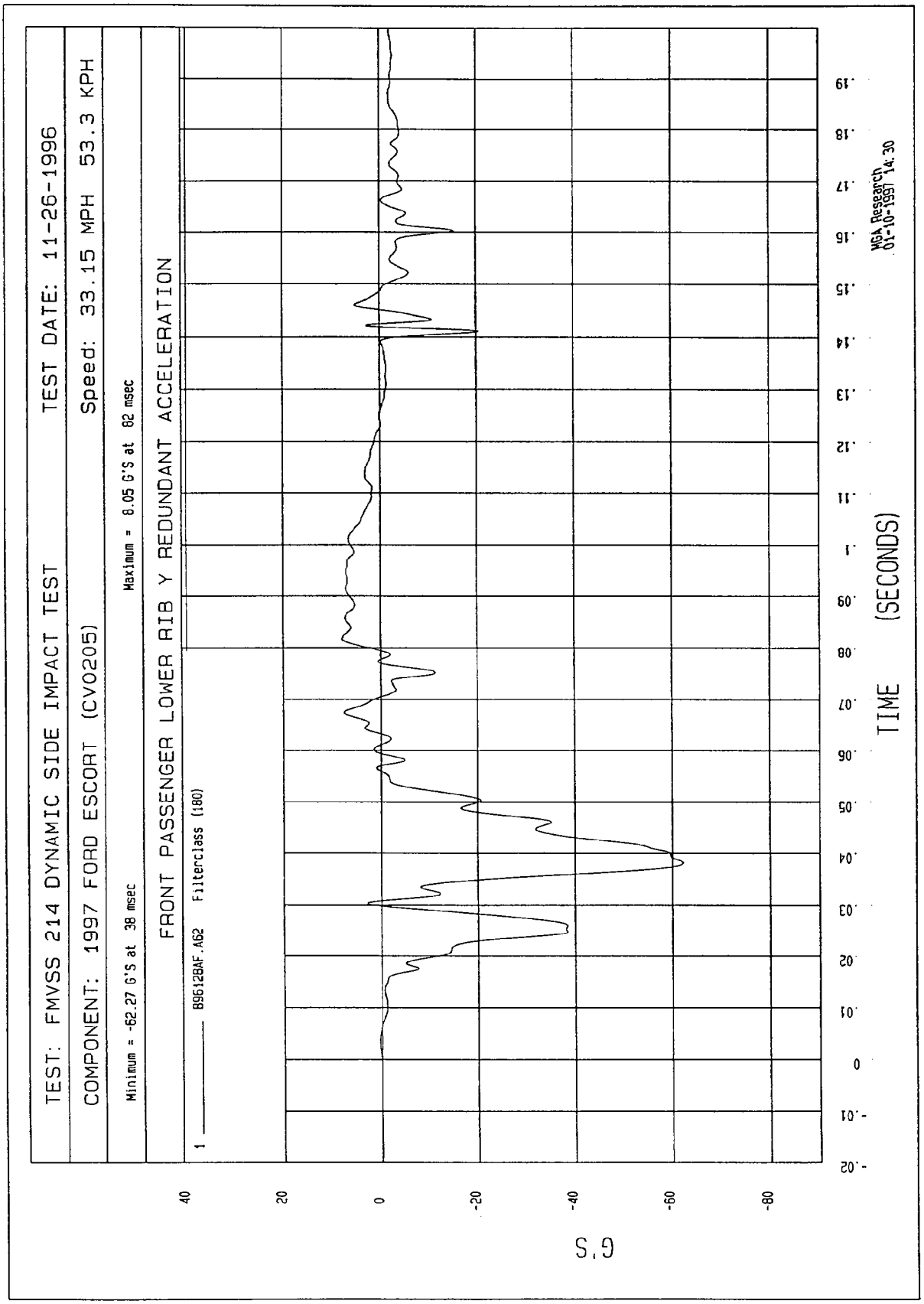
.19
TIME Seconds
MGA Research
01-10-1997 14:36


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -62.27 G'S at 38 msec
Maximum = 8.05 G'S at 82 msec
FRONT PASSENGER LOWER RIB Y REDUNDANT ACCELERATION
1 B9612BAF.A62 Filterclass (180)
MGA Research 01-10-1997 14:30
TIME (SECONDS)
G'S
40
20
0
-20
-40
-60
-80
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
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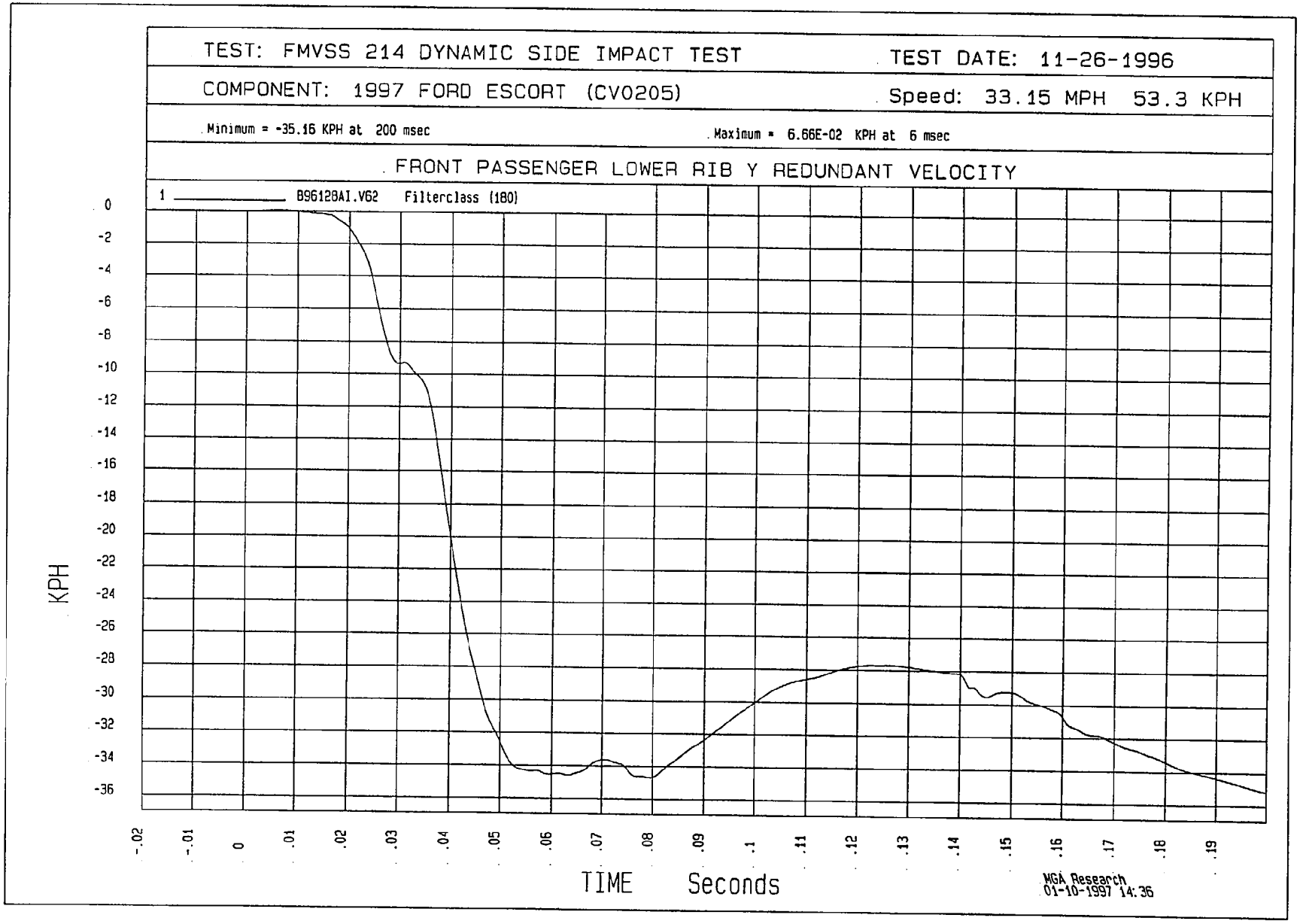
.19


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -35.16 KPH at 200 msec
Maximum = 6.66E-02 KPH at 6 msec
FRONT PASSENGER LOWER RIB Y REDUNDANT VELOCITY
1 B96128AI.V62 Filterclass (180)
KPH
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20
-22
-24
-26
-28
-30
-32
-34
-36
-.02
-.01
0
.01
.02
.03
.04
.05
.06
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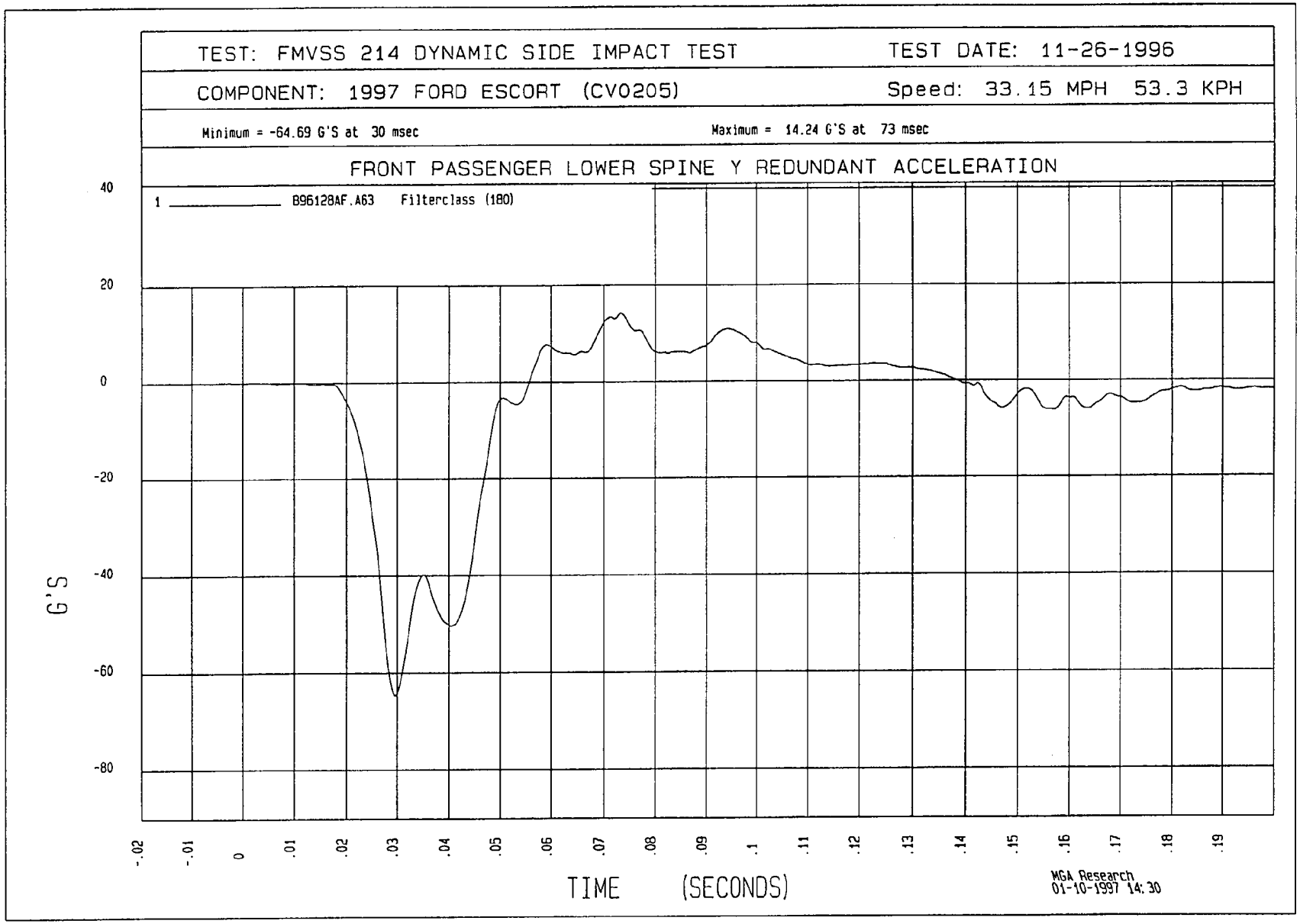
TIME Seconds
MGA Research
01-10-1997 14:36


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -64.69 G'S at 30 msec
Maximum = 14.24 G'S at 73 msec
FRONT PASSENGER LOWER SPINE Y REDUNDANT ACCELERATION
1 B96128AF.A63 Filterclass (180)
40
20
0
-20
-40
-60
-80
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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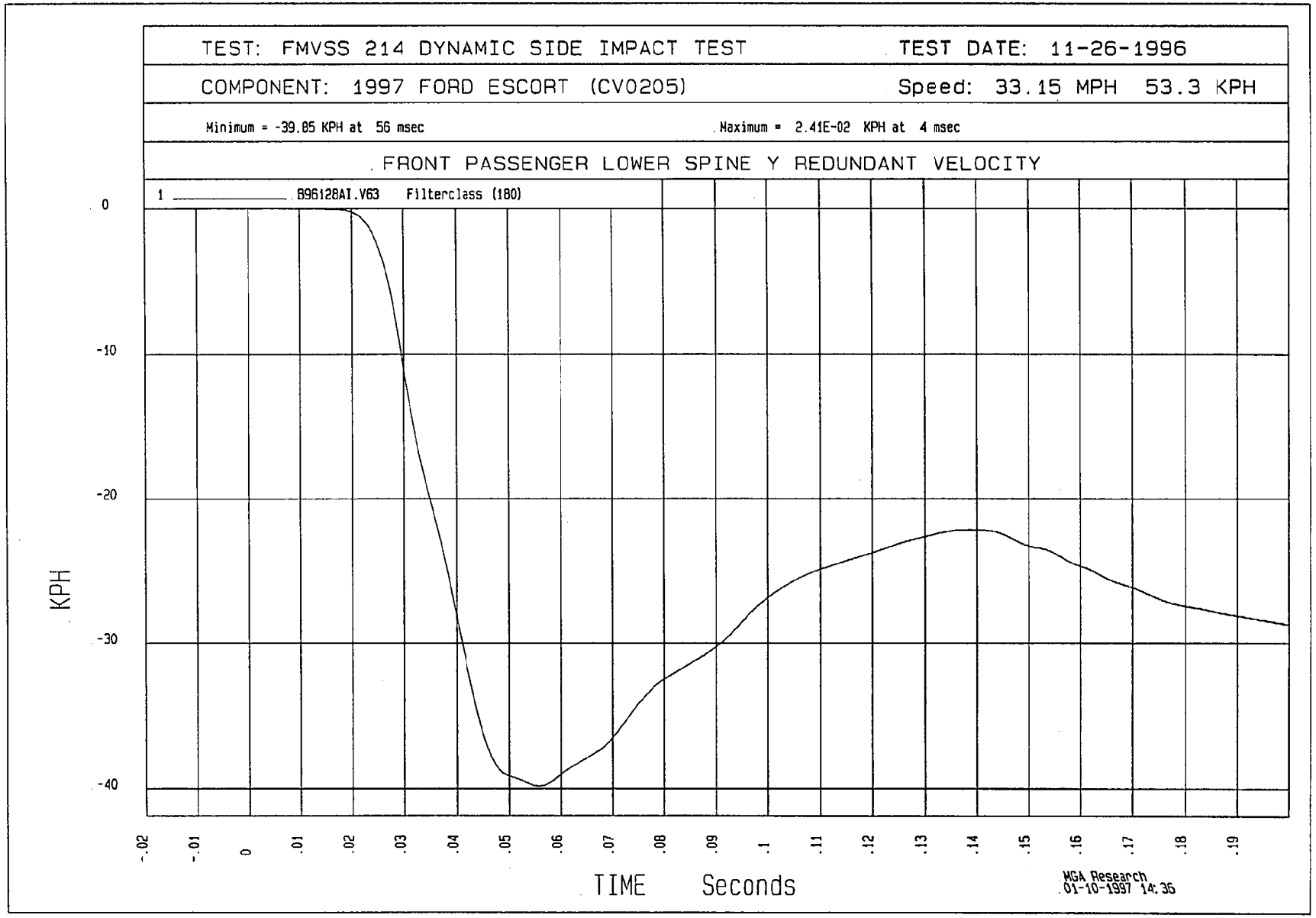
TIME (SECONDS)
MGA Research
01-10-1997 14:30


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -39.85 KPH at 56 msec
Maximum = 2.41E-02 KPH at 4 msec
FRONT PASSENGER LOWER SPINE Y REDUNDANT VELOCITY
1 B96128AI.V63 Filterclass (180)
0
-10
-20
-30
-40
KPH
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
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.17
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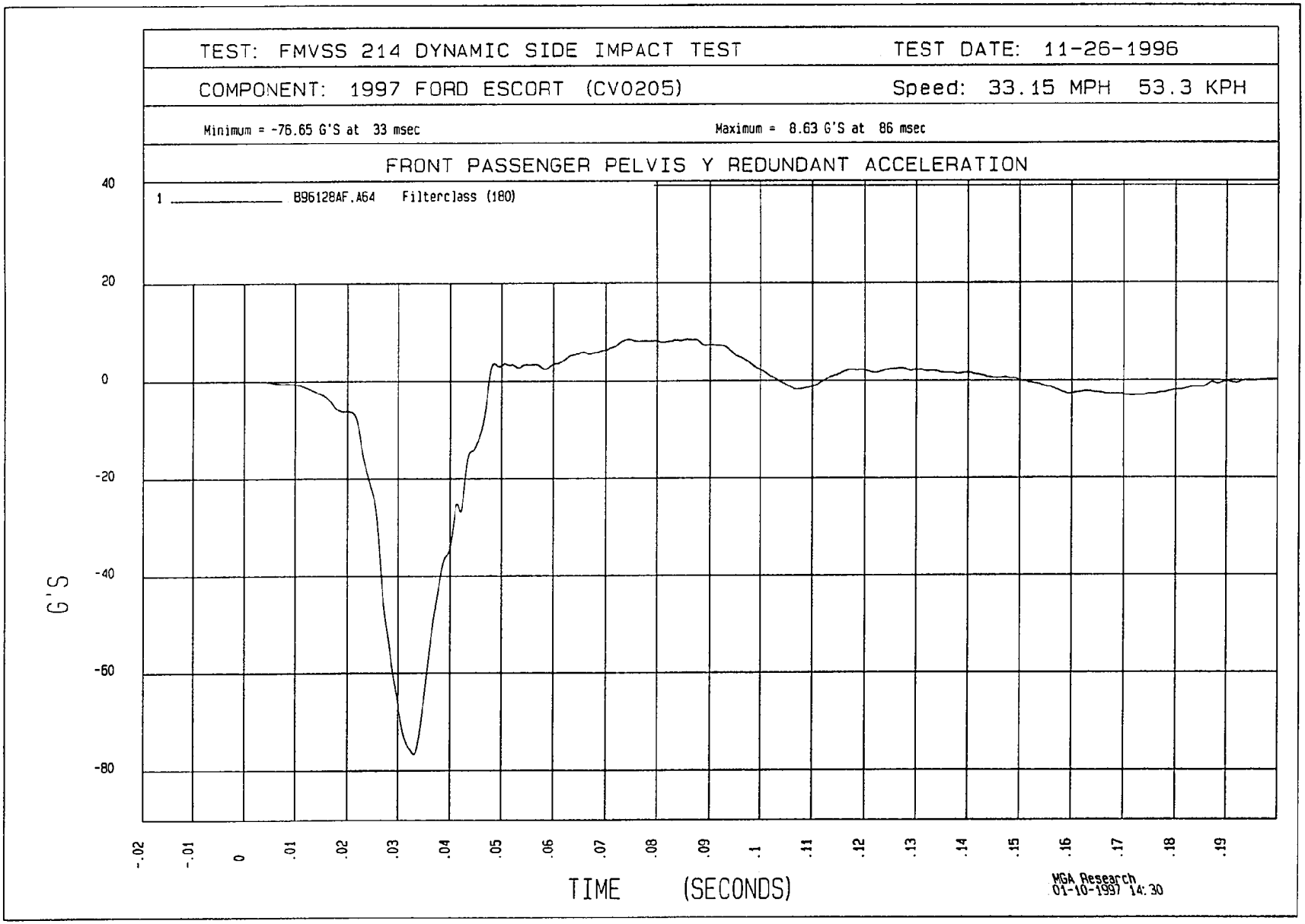
.19
TIME Seconds
MGA Research
01-10-1997 14:36


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -76.65 G'S at 33 msec
Maximum = 8.63 G'S at 86 msec
FRONT PASSENGER PELVIS Y REDUNDANT ACCELERATION
1 B96128AF.A64 Filterclass (180)
40
20
0
-20
-40
-60
-80
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
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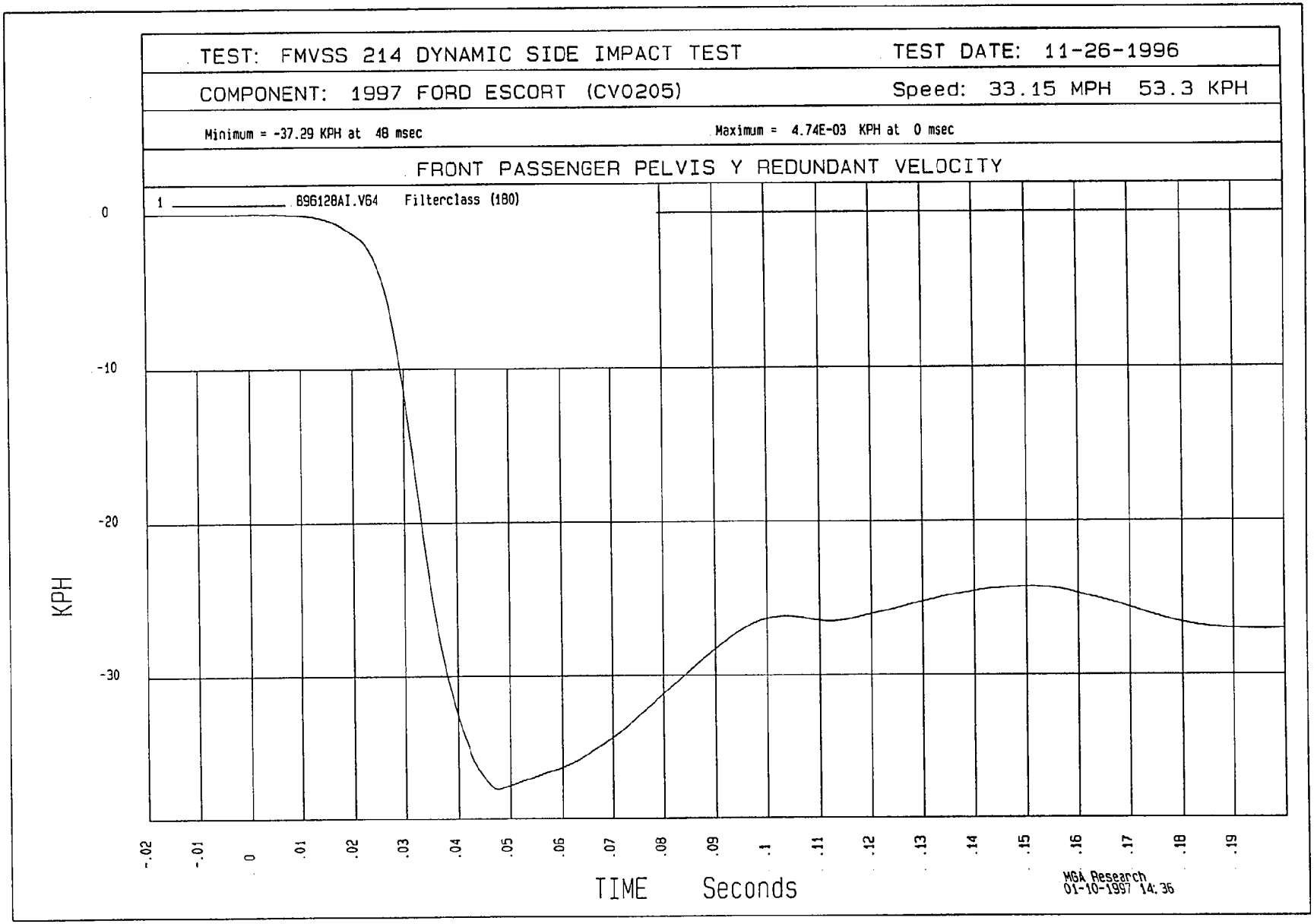
TIME (SECONDS)
MGA Research
01-10-1997 14:30


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -37.29 KPH at 48 msec
Maximum = 4.74E-03 KPH at 0 msec
FRONT PASSENGER PELVIS Y REDUNDANT VELOCITY
1 B96128AI.V64 Filterclass (180)
0
-10
-20
-30
KPH
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
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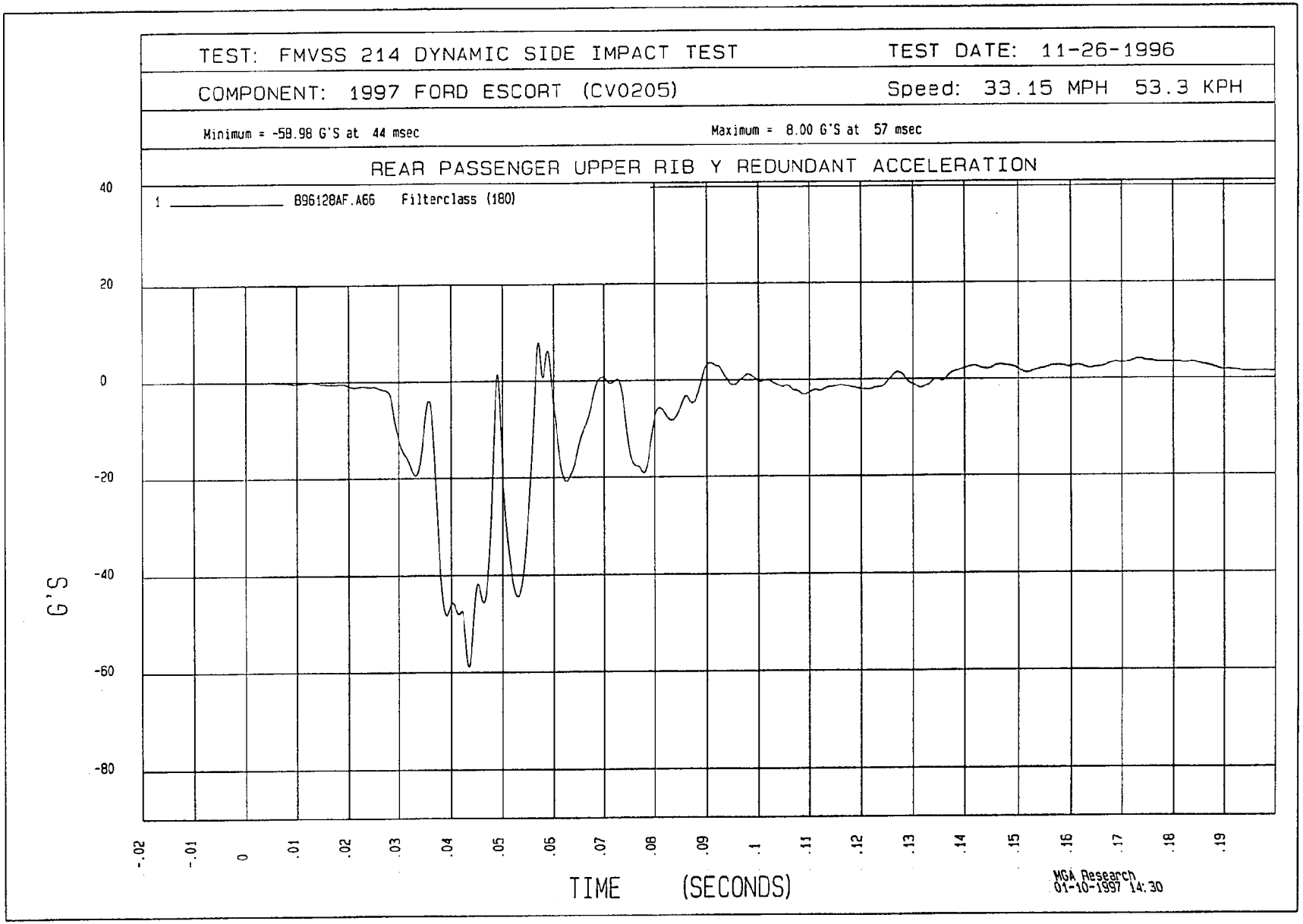
TIME Seconds
MGA Research
01-10-1997 14:36


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -58.98 G'S at 44 msec
Maximum = 8.00 G'S at 57 msec
REAR PASSENGER UPPER RIB Y REDUNDANT ACCELERATION
1 B96128AF.A66 Filterclass (180)
40
20
0
-20
-40
-60
-80
G'S
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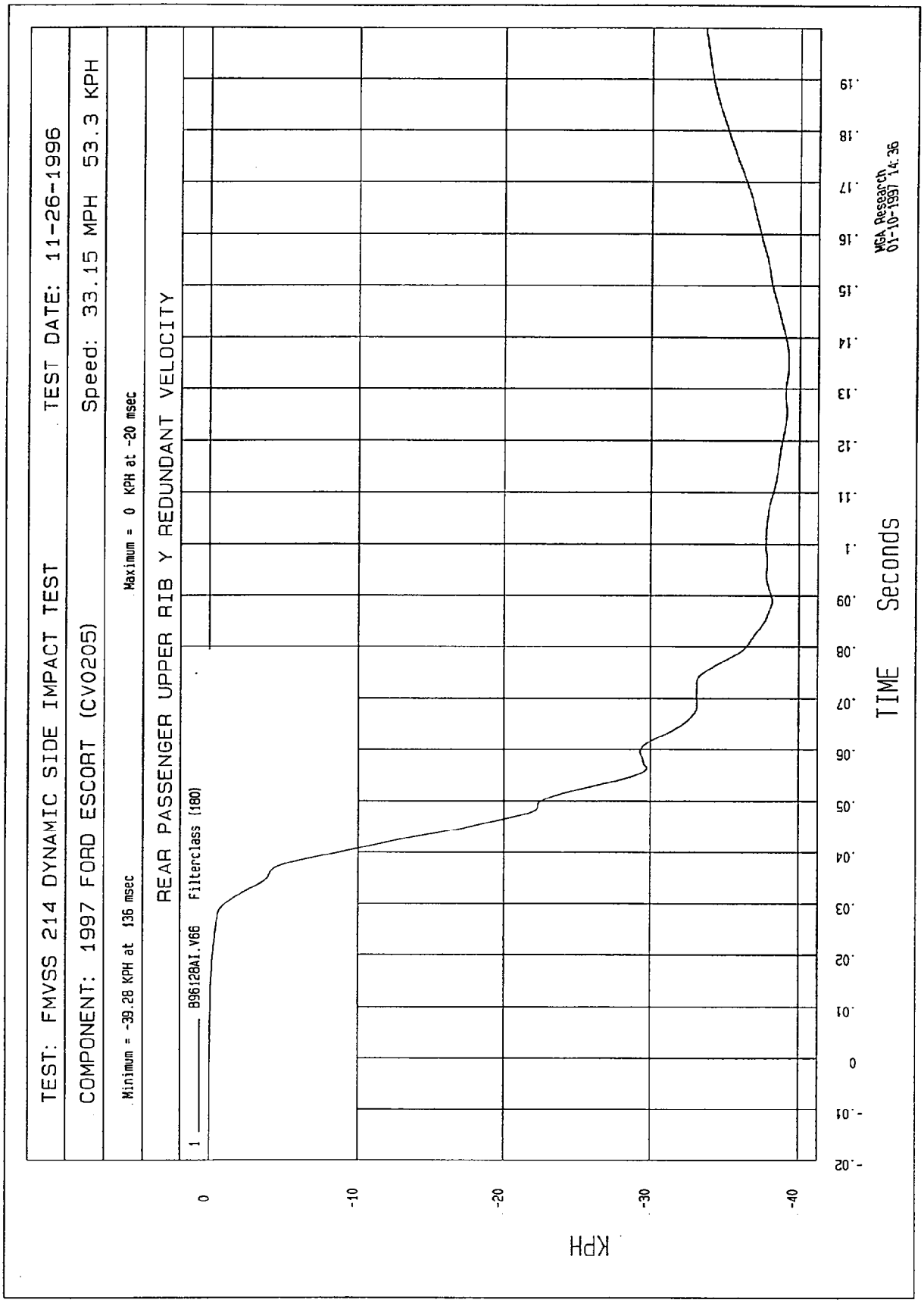
TIME (SECONDS)
MGA Research
01-10-1997 14:30


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -39.28 KPH at 136 msec
Maximum = 0 KPH at -20 msec
REAR PASSENGER UPPER RIB Y REDUNDANT VELOCITY
1 ——— 896128AI.V66 Filterclass (180)
KPH
0
-10
-20
-30
-40
TIME Seconds
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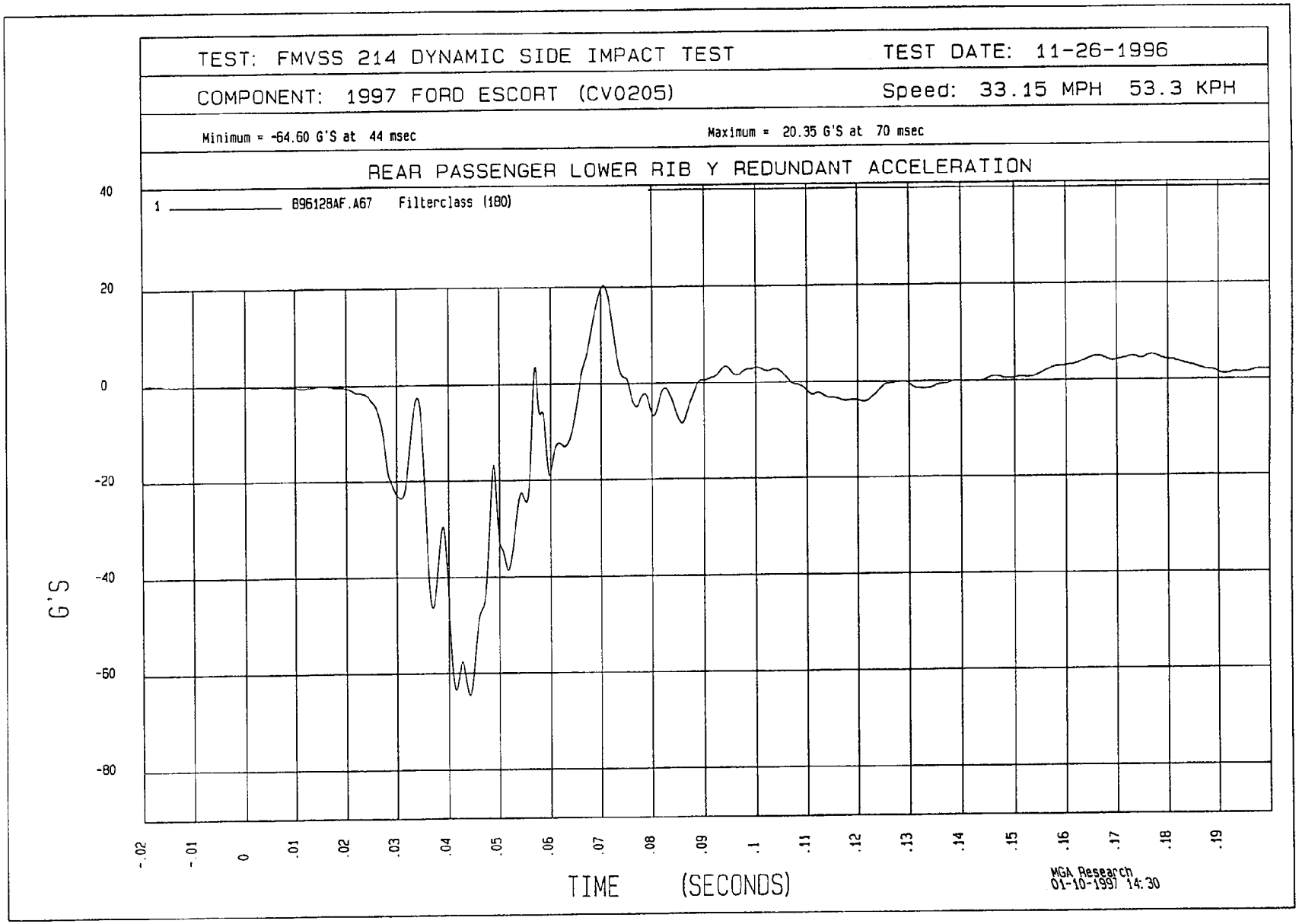
MGA Research
01-10-1997 14:36


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -64.60 G'S at 44 msec
Maximum = 20.35 G'S at 70 msec
REAR PASSENGER LOWER RIB Y REDUNDANT ACCELERATION
1 B96128AF.A67 Filterclass (180)
40
20
0
-20
-40
-60
-80
G'S
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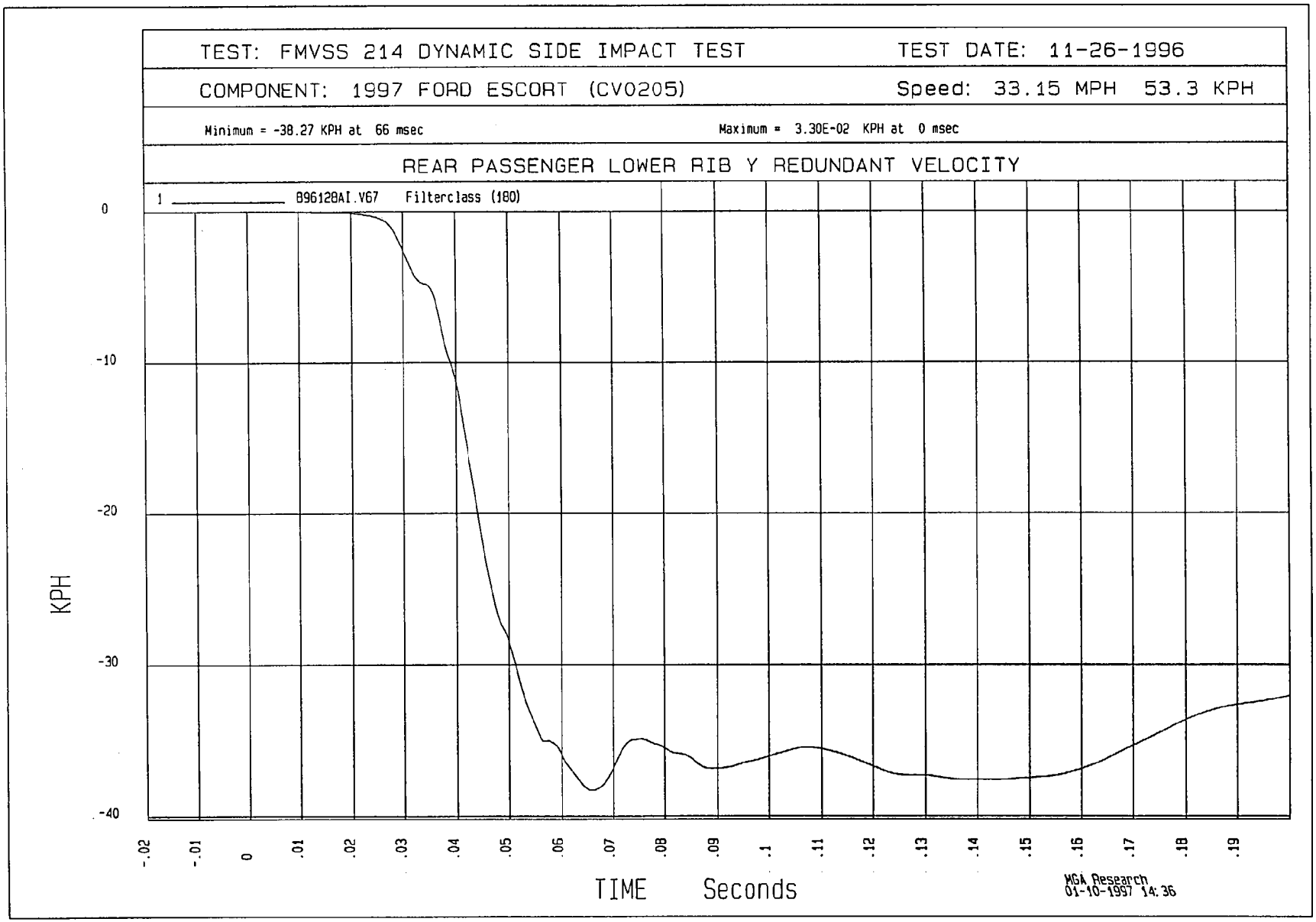
TIME (SECONDS)
MGA Research
01-10-1997 14:30


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -38.27 KPH at 66 msec
Maximum = 3.30E-02 KPH at 0 msec
REAR PASSENGER LOWER RIB Y REDUNDANT VELOCITY
1 B96128AI.V67 Filterclass (180)
0
-10
-20
-30
-40
KPH
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-.01
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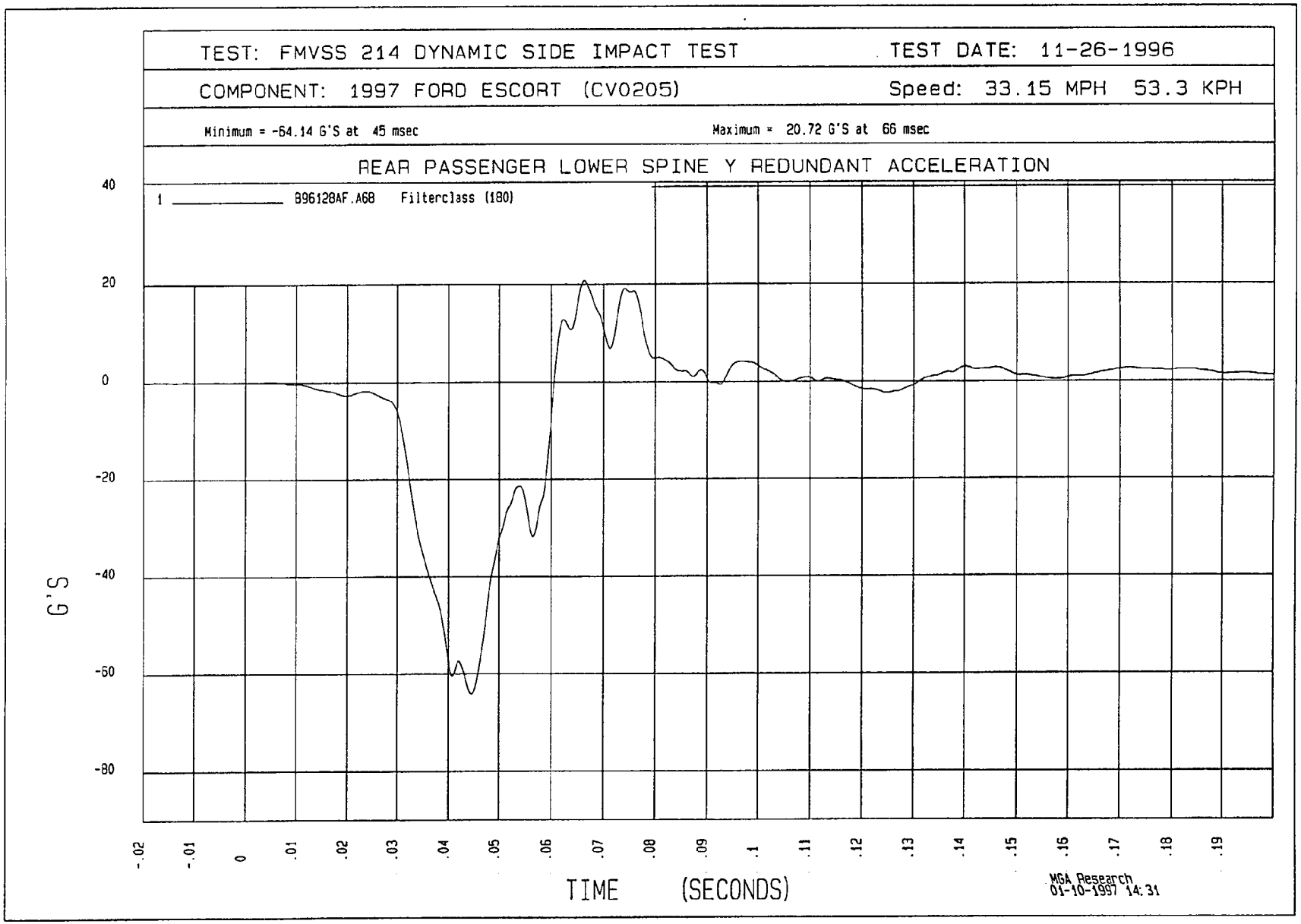
TIME Seconds
MGA Research
01-10-1997 14:36


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -64.14 G'S at 45 msec
Maximum = 20.72 G'S at 66 msec
REAR PASSENGER LOWER SPINE Y REDUNDANT ACCELERATION
1 B96128AF.A68 Filterclass (180)
40
20
0
-20
-40
-60
-80
G'S
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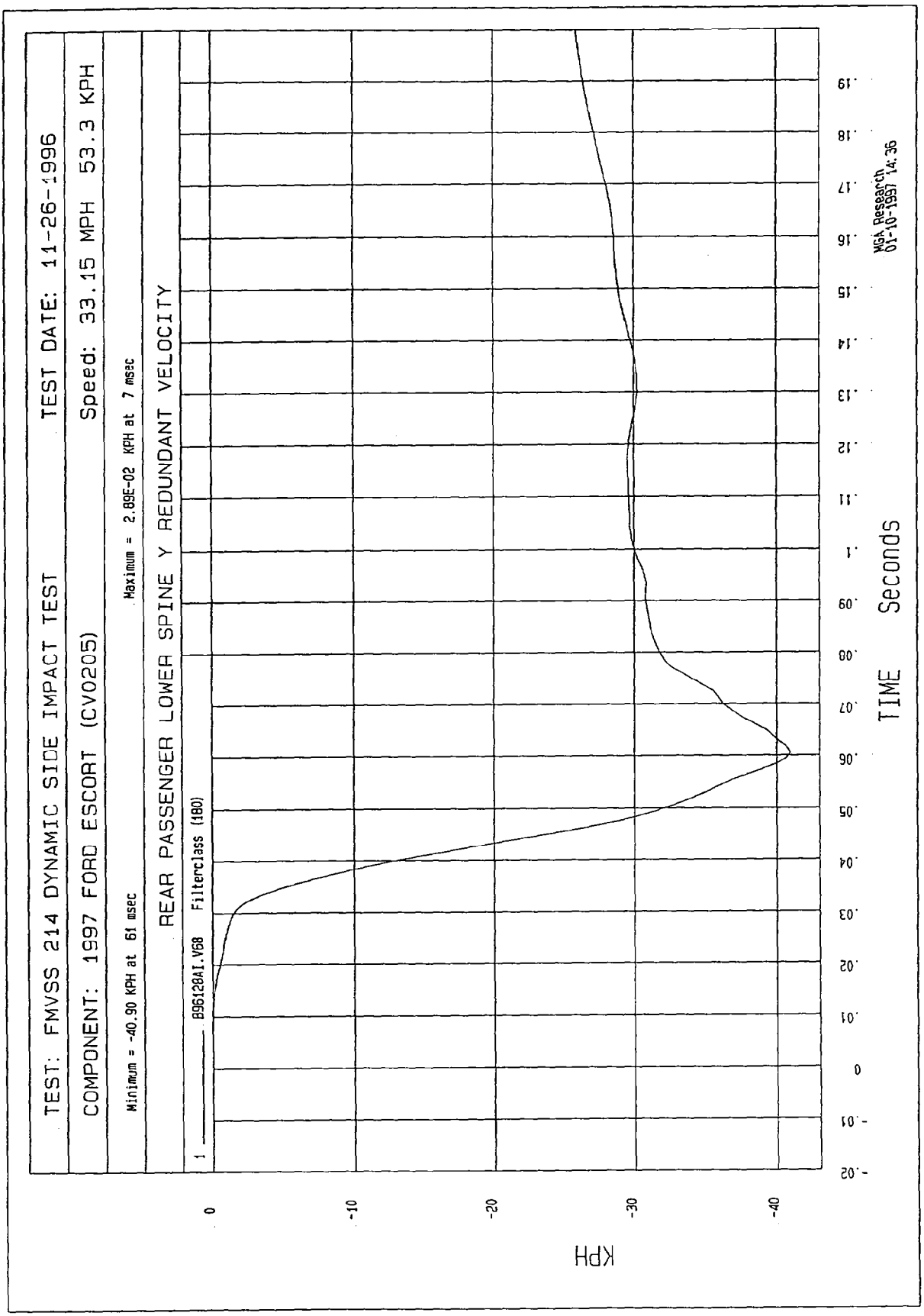
TIME (SECONDS)
MGA Research
01-10-1997 14:31


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -40.90 KPH at 61 msec
Maximum = 2.88E-02 KPH at 7 msec
REAR PASSENGER LOWER SPINE Y REDUNDANT VELOCITY
1 B96128AI.V68 Filterclass (180)
KPH
0
-10
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-30
-40
TIME Seconds
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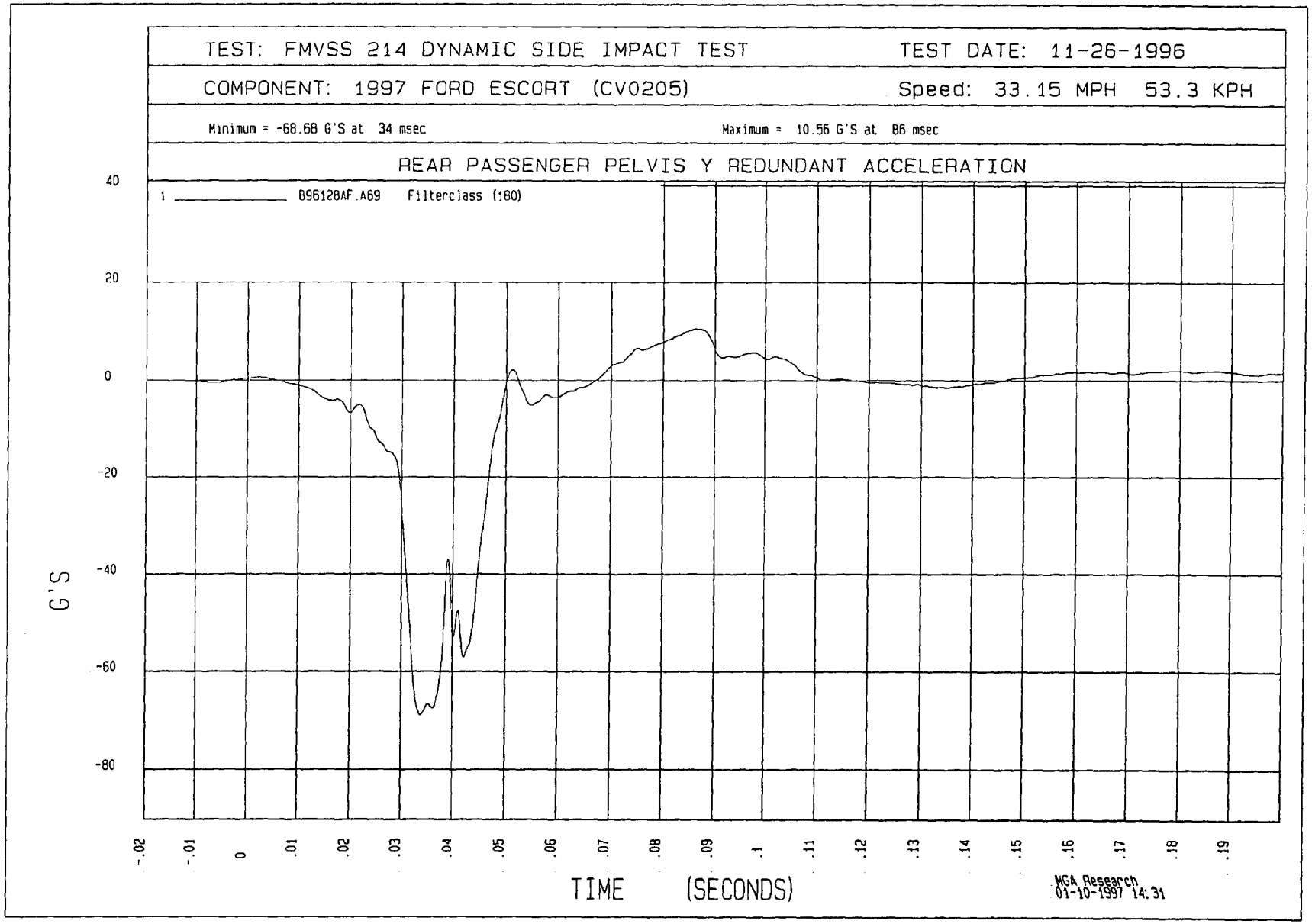
MGA Research
01-10-1997 14:36


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -68.68 G'S at 34 msec
Maximum = 10.56 G'S at 86 msec
REAR PASSENGER PELVIS Y REDUNDANT ACCELERATION
1 B96128AF.A69 Filterclass (180)
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G'S
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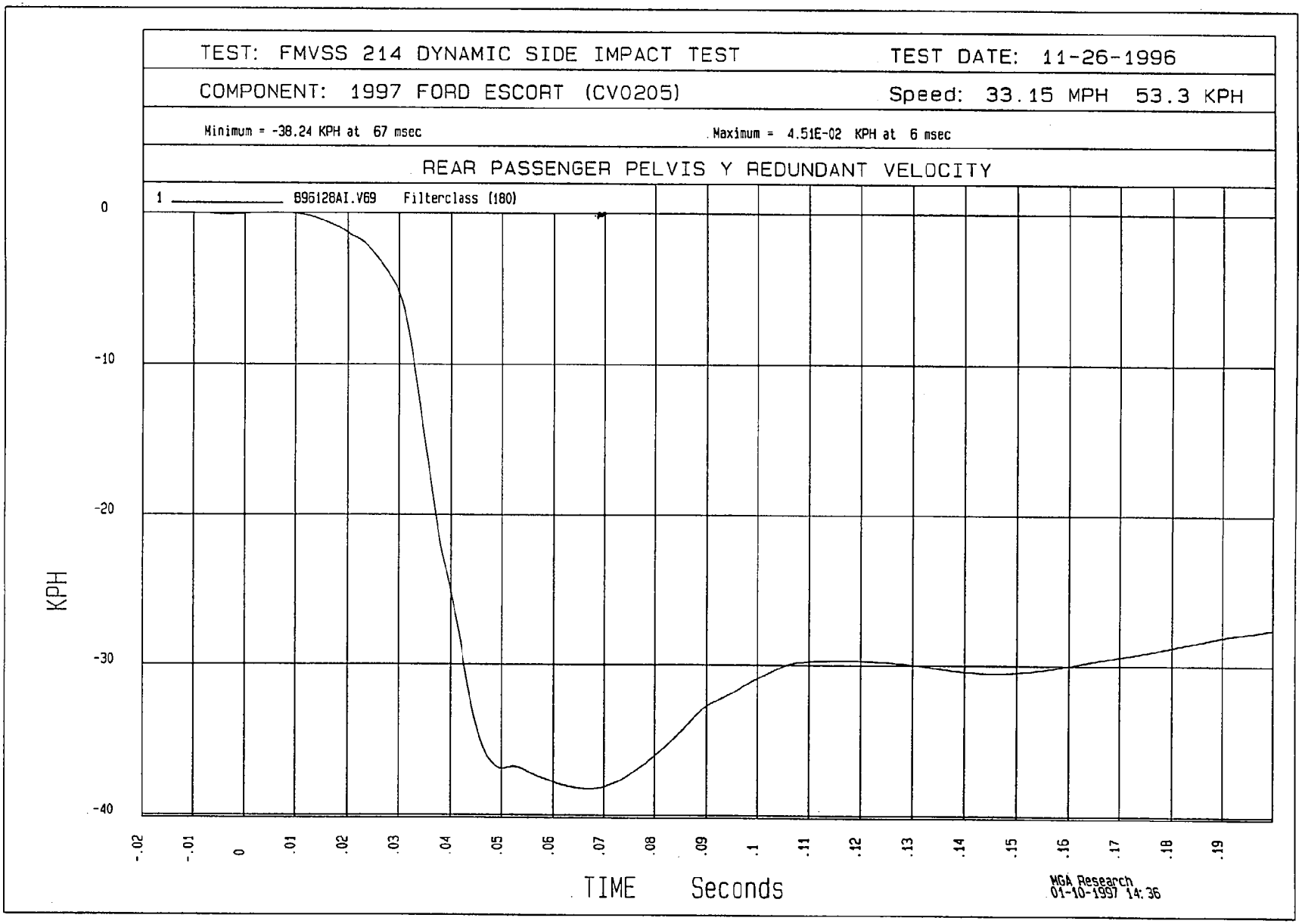
TIME (SECONDS)
MGA Research
01-10-1997 14:31


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
Minimum = -38.24 KPH at 67 msec
Maximum = 4.51E-02 KPH at 6 msec
REAR PASSENGER PELVIS Y REDUNDANT VELOCITY
1 896128AI.V69 Filterclass (180)
0
-10
-20
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-40
KPH
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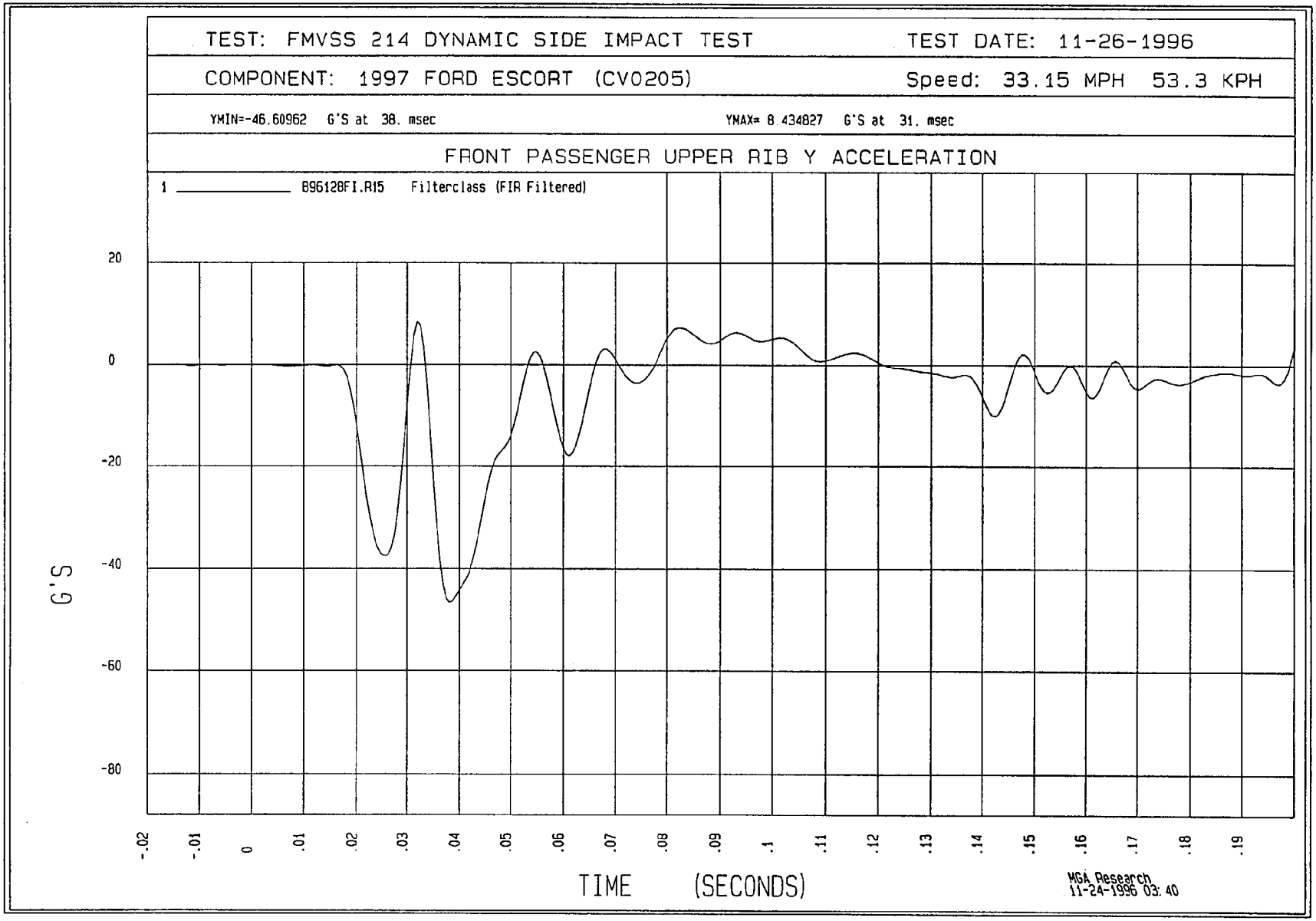
TIME Seconds
MGA Research
01-10-1997 14:36

FINITE IMPULSE RESPONSE (FIR) FILTERED DATA


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
YMIN=-46.60962 G'S at 38. msec
YMAX= 8.434827 G'S at 31. msec
FRONT PASSENGER UPPER RIB Y ACCELERATION
1 B96128FI.R15 Filterclass (FIR Filtered)
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G'S
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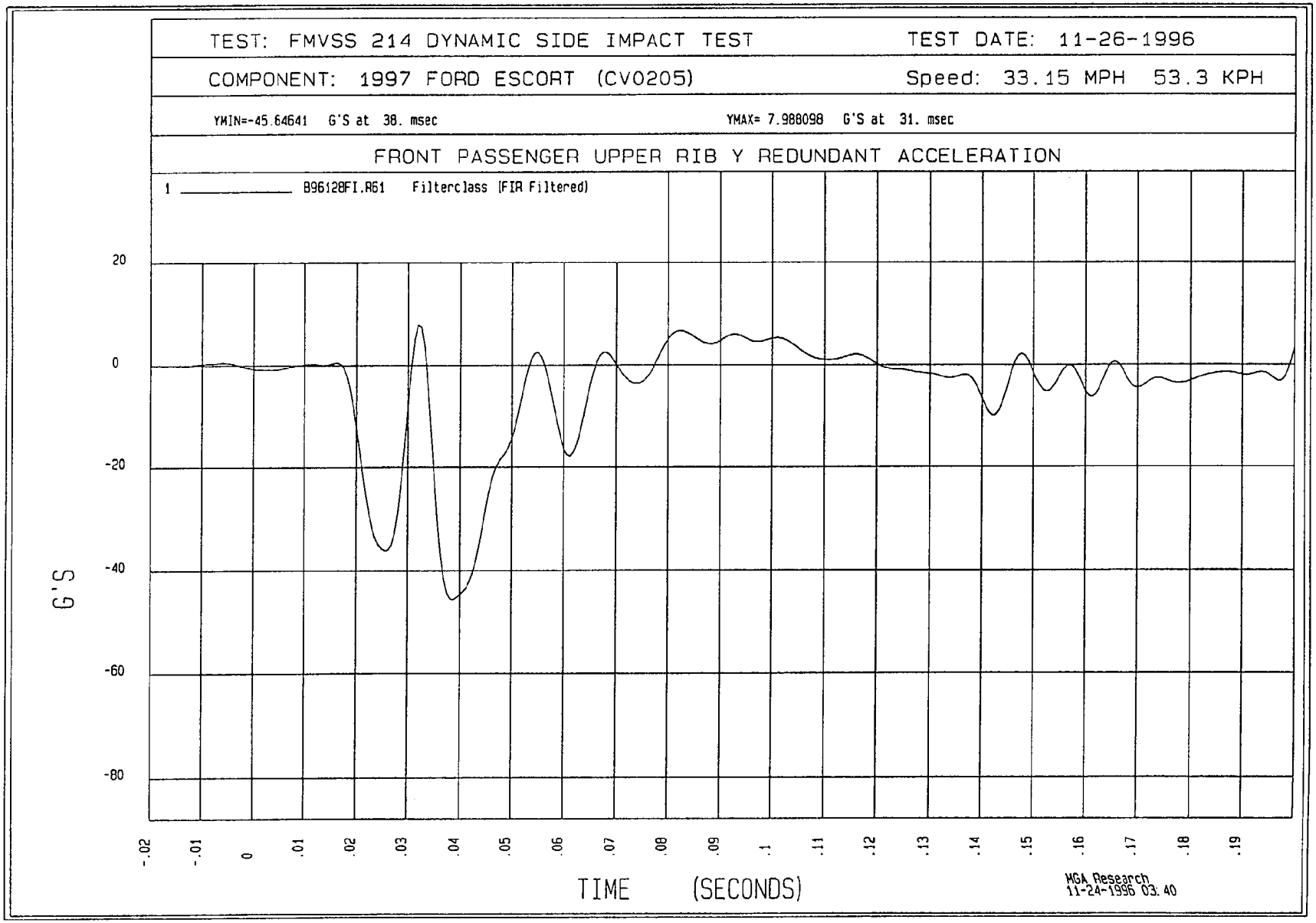
TIME (SECONDS)
MGA Research
11-24-1996 03:40


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
YMIN=-45.64641 G'S at 38. msec
YMAX= 7.988098 G'S at 31. msec
FRONT PASSENGER UPPER RIB Y REDUNDANT ACCELERATION
1 B96128FI.A61 Filterclass (FIR Filtered)
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-60
-80
G'S
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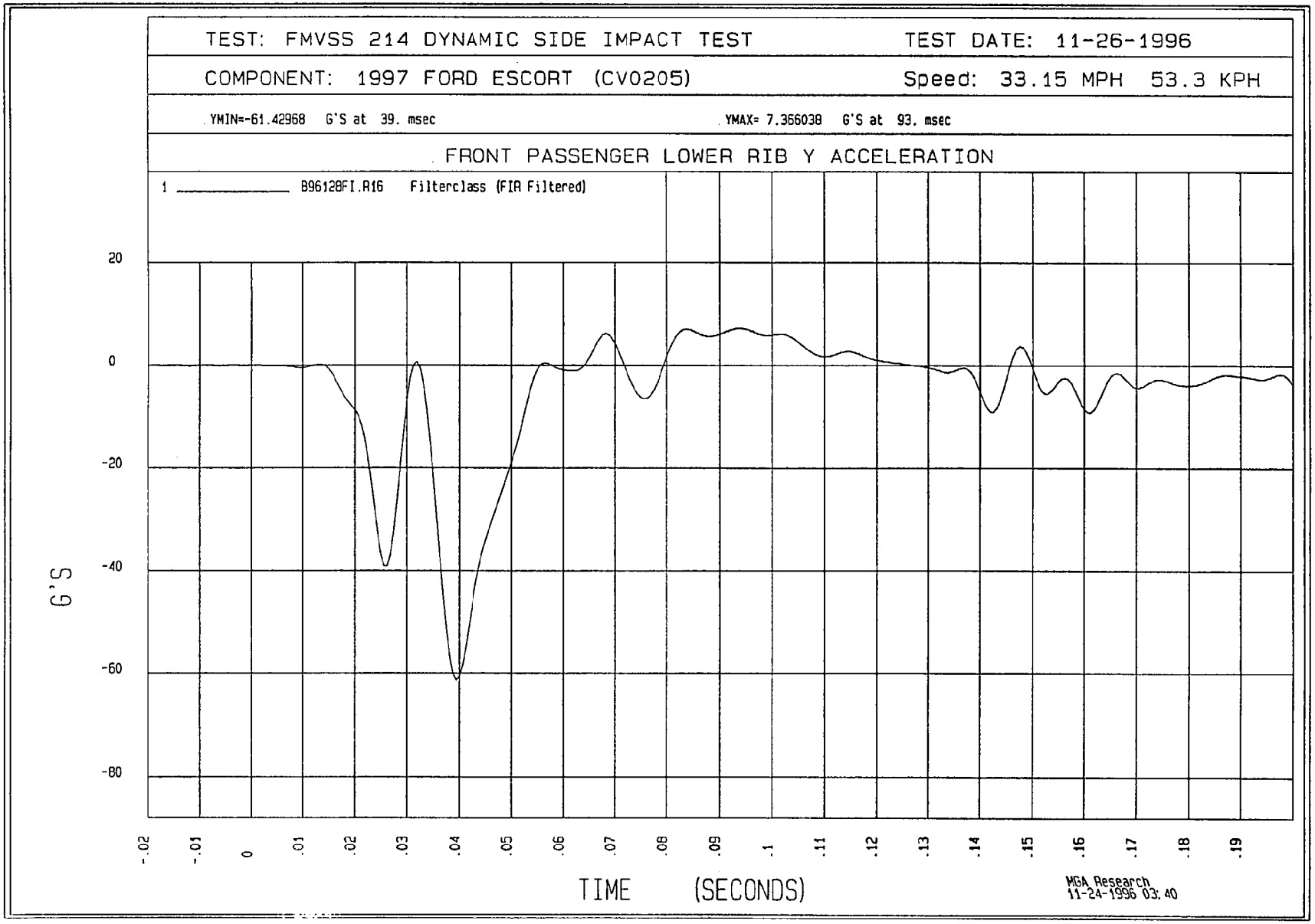
TIME (SECONDS)
MGA Research
11-24-1996 03.40


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
YMIN=-61.42968 G'S at 39. msec
YMAX= 7.366038 G'S at 93. msec
FRONT PASSENGER LOWER RIB Y ACCELERATION
1 B96128FI.A16 Filterclass (FIA Filtered)
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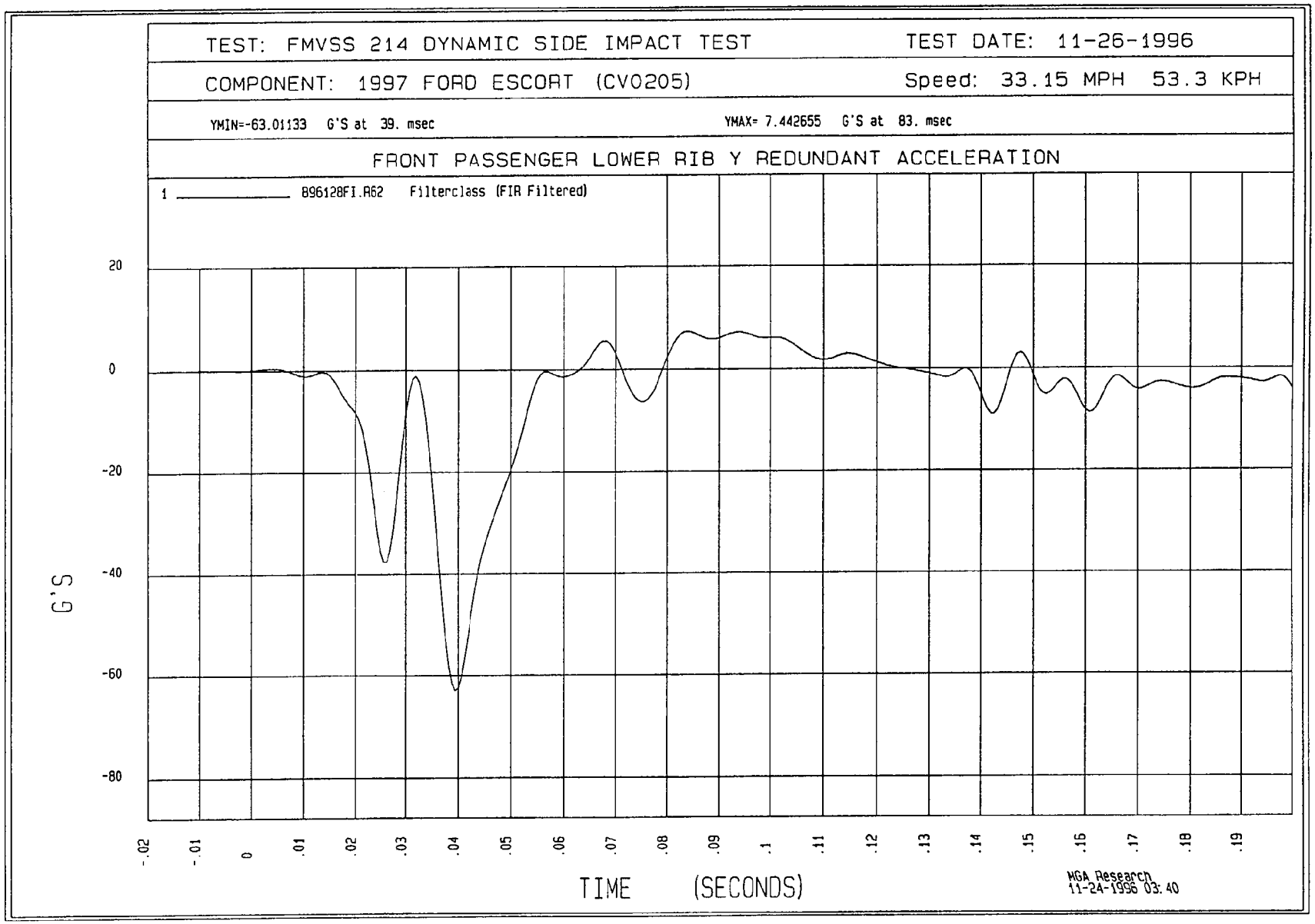
TIME (SECONDS)
MGA Research
11-24-1996 03:40


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
YMIN=-63.01133 G'S at 39. msec
YMAX= 7.442655 G'S at 83. msec
FRONT PASSENGER LOWER RIB Y REDUNDANT ACCELERATION
1 B96128FI.A62 Filterclass (FIR Filtered)
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G'S
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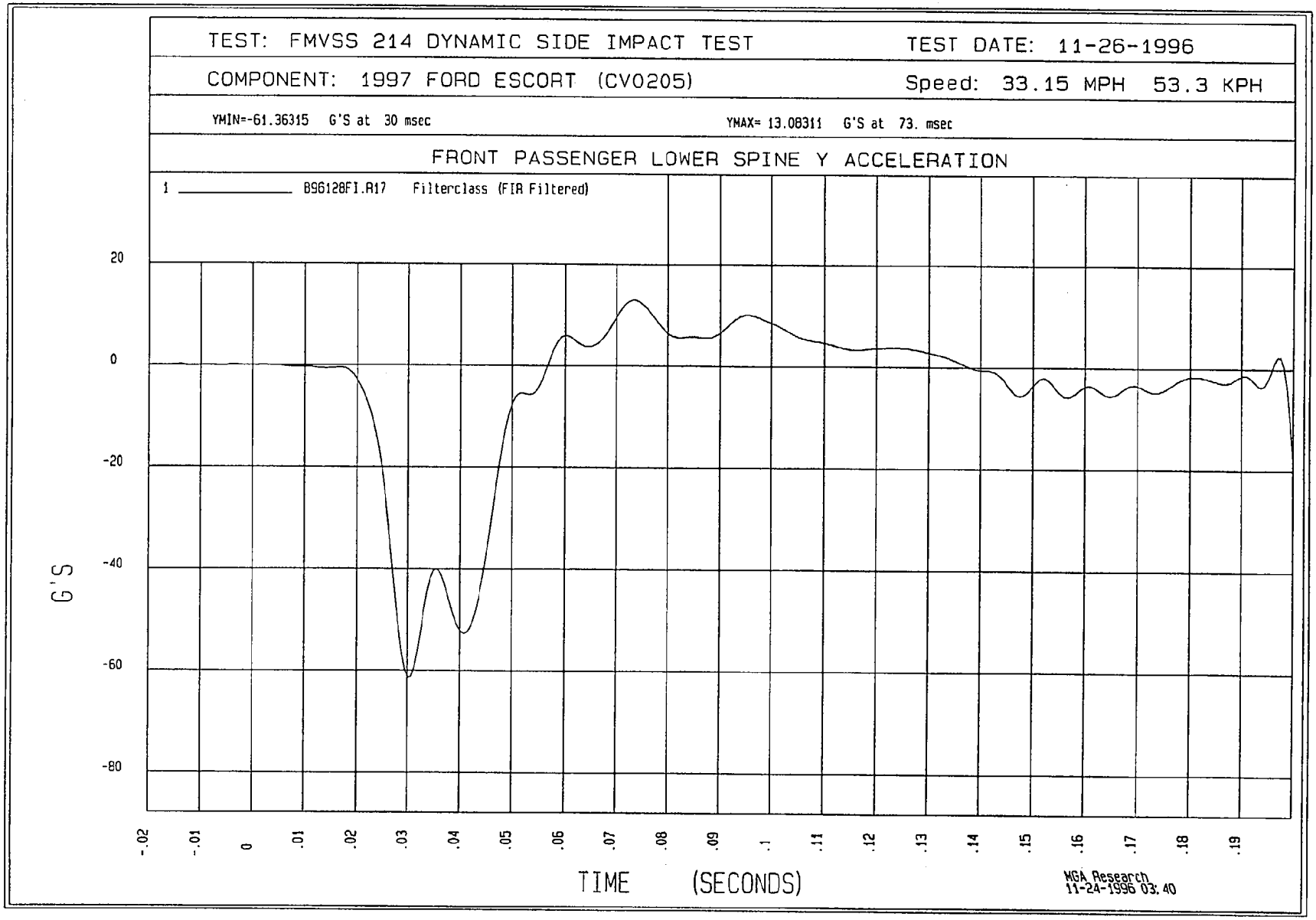
TIME (SECONDS)
MGA Research
11-24-1996 03:40


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
YMIN=-61.36315 G'S at 30 msec
YMAX= 13.08311 G'S at 73. msec
FRONT PASSENGER LOWER SPINE Y ACCELERATION
1 B96128FI.A17 Filterclass (FIR Filtered)
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G'S
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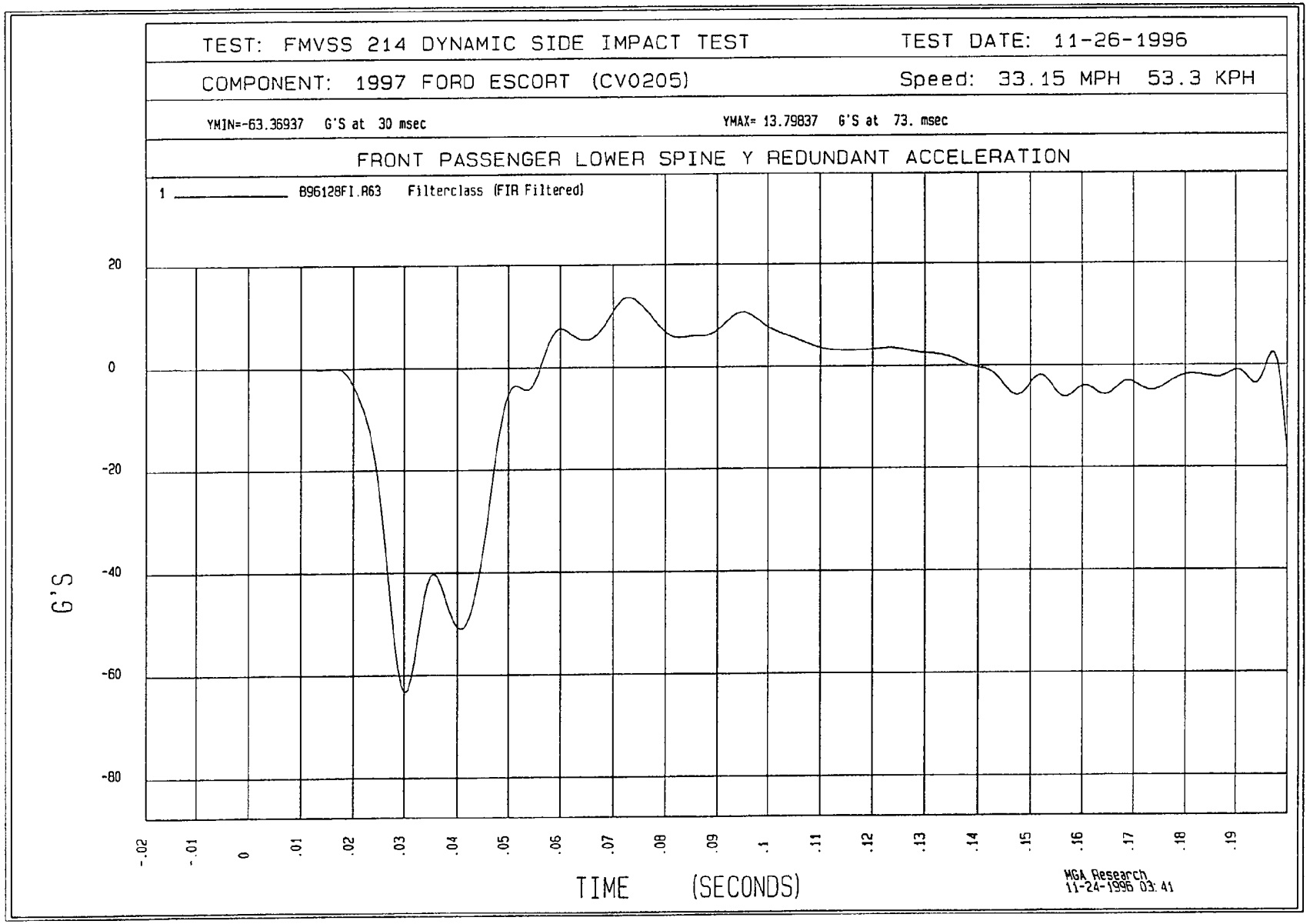
TIME (SECONDS)
MGA Research
11-24-1996 03:40


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
YMIN=-63.36937 G'S at 30 msec
YMAX= 13.79837 G'S at 73. msec
FRONT PASSENGER LOWER SPINE Y REDUNDANT ACCELERATION
1 B96128FI.A63 Filterclass (FIR Filtered)
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-60
-80
G'S
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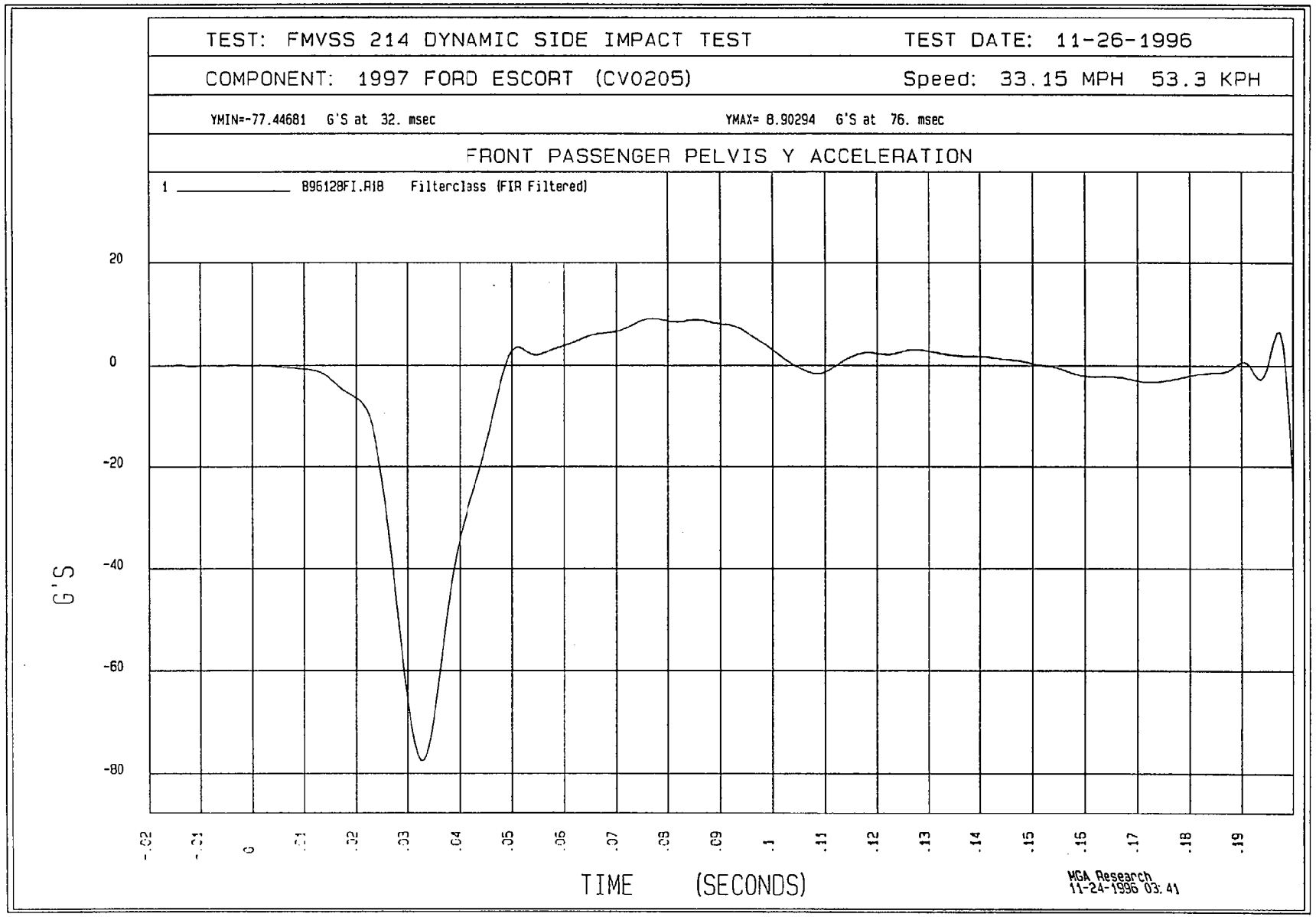
TIME (SECONDS)
MGA Research
11-24-1996 03:41


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
YMIN=-77.44681 G'S at 32. msec
YMAX= 8.90294 G'S at 76. msec
FRONT PASSENGER PELVIS Y ACCELERATION
1 B96128FI.A18 Filterclass (FIR Filtered)
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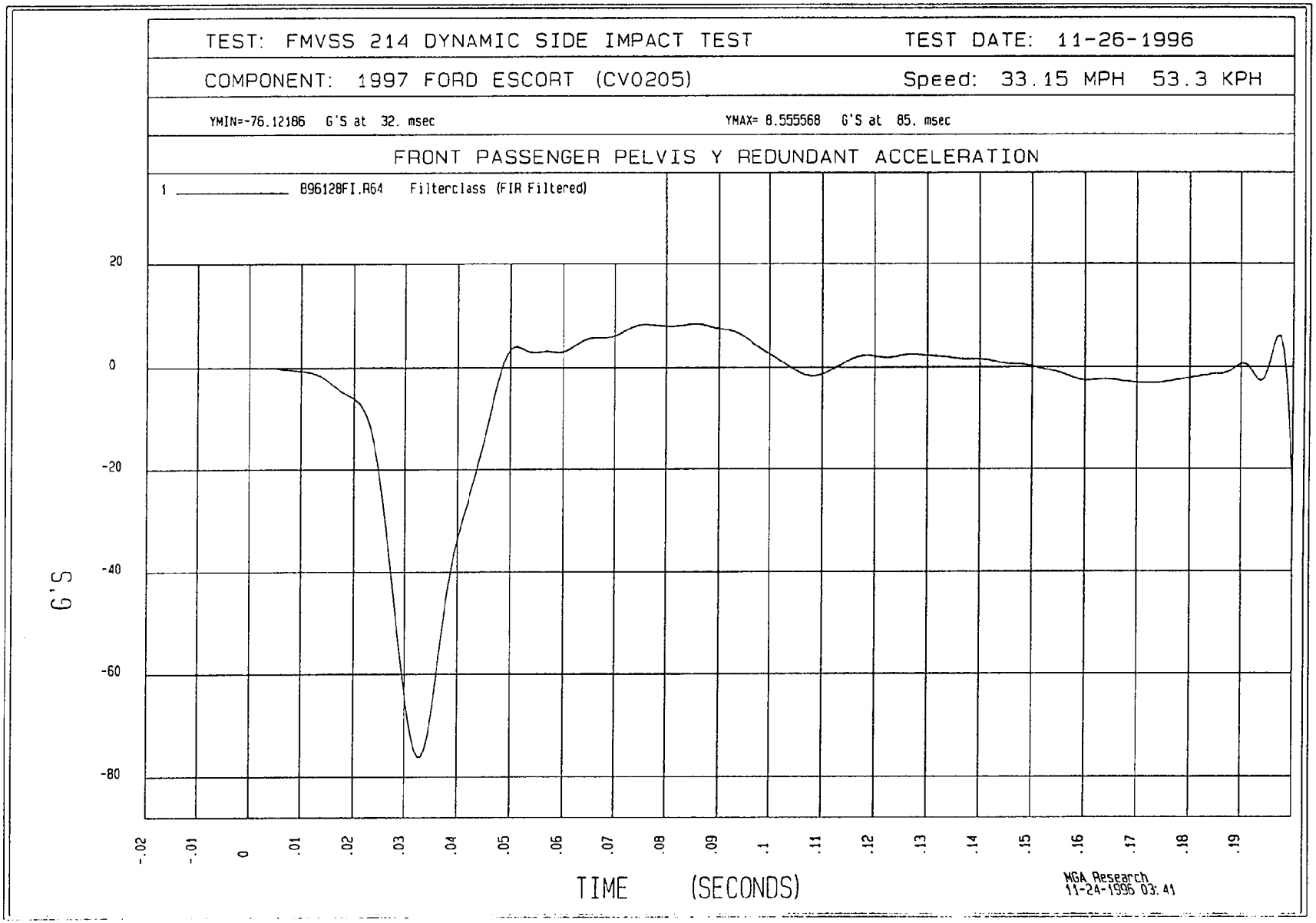
TIME (SECONDS)
MGA Research
11-24-1996 03:41


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
YMIN=-76.12186 G'S at 32. msec
YMAX= 8.555568 G'S at 85. msec
FRONT PASSENGER PELVIS Y REDUNDANT ACCELERATION
1 B96128FI.A64 Filterclass (FIR Filtered)
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-40
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-80
G'S
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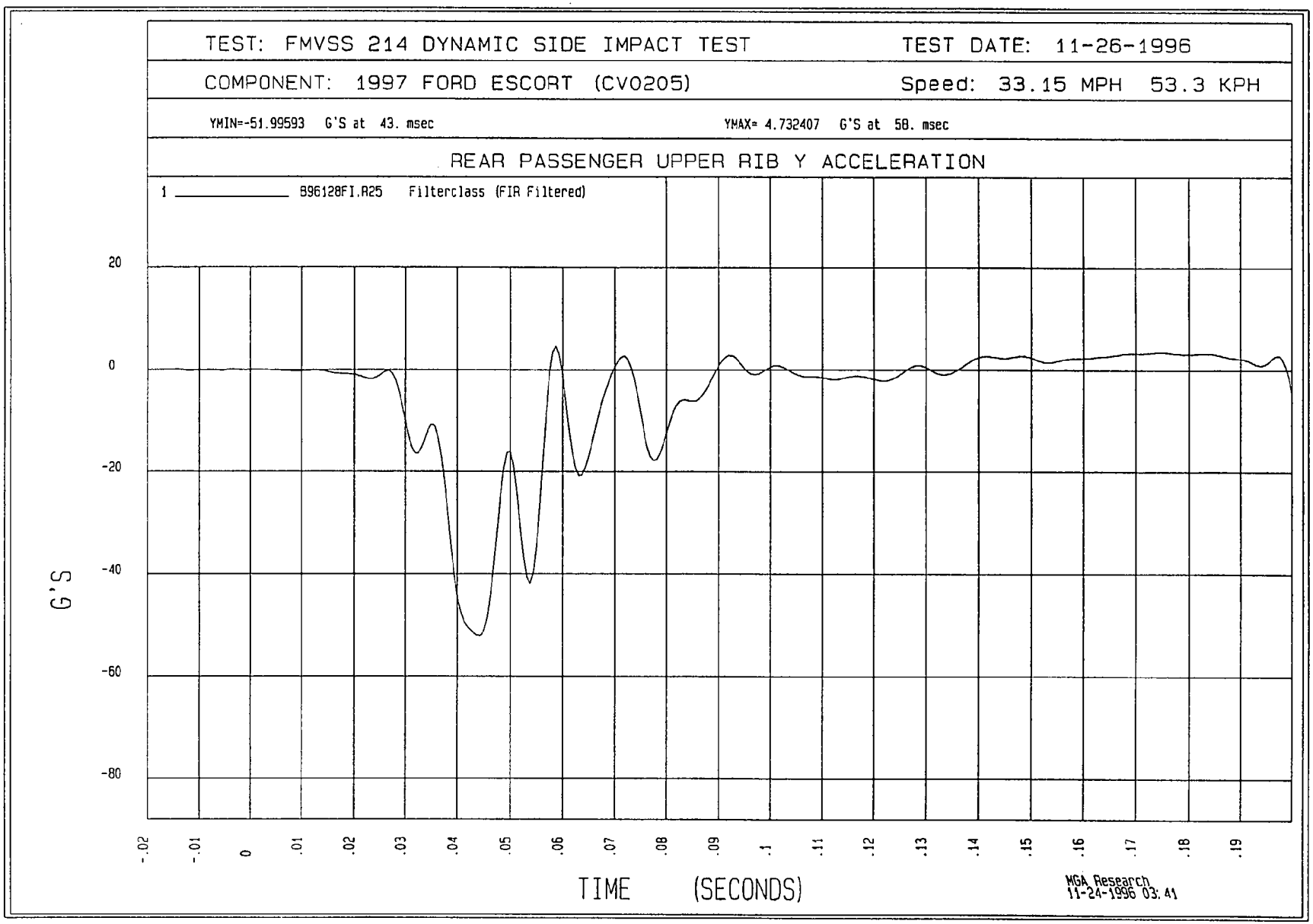
TIME (SECONDS)
MGA Research
11-24-1996 03:41


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
YMIN=-51.99593 G'S at 43. msec
YMAX= 4.732407 G'S at 58. msec
REAR PASSENGER UPPER RIB Y ACCELERATION
1 B96128FI.A25 Filterclass (FIR Filtered)
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G'S
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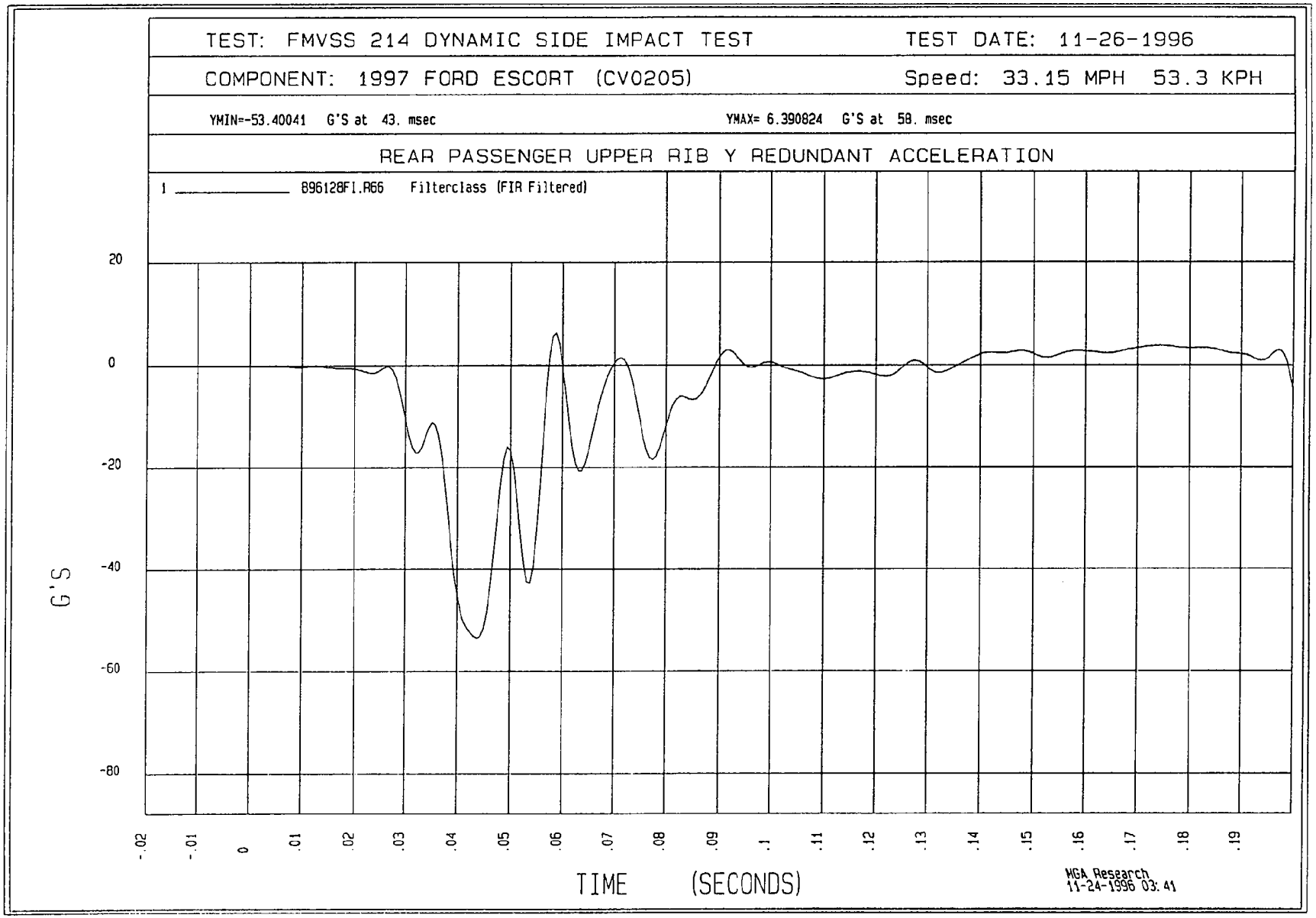
TIME (SECONDS)
MGA Research
11-24-1996 03:41


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
YMIN=-53.40041 G'S at 43. msec
YMAX= 6.390824 G'S at 58. msec
REAR PASSENGER UPPER RIB Y REDUNDANT ACCELERATION
1 896128F1.R66 Filterclass (FIR Filtered)
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G'S
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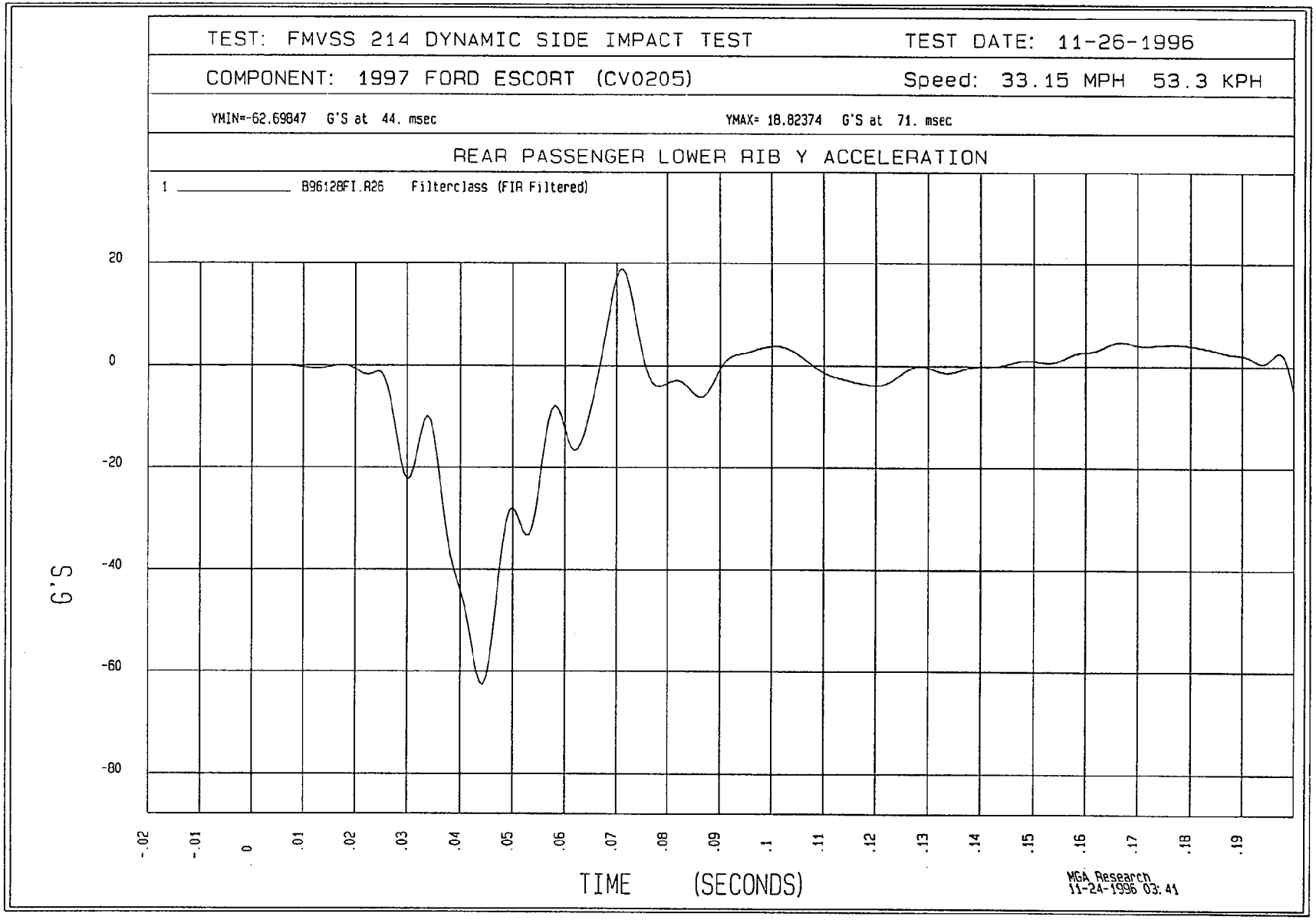
TIME (SECONDS)
MGA Research
11-24-1996 03:41


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
YMIN=-62.69847 G'S at 44. msec
YMAX= 18.82374 G'S at 71. msec
REAR PASSENGER LOWER RIB Y ACCELERATION
1 B96128FI.A26 Filterclass (FIR Filtered)
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G's
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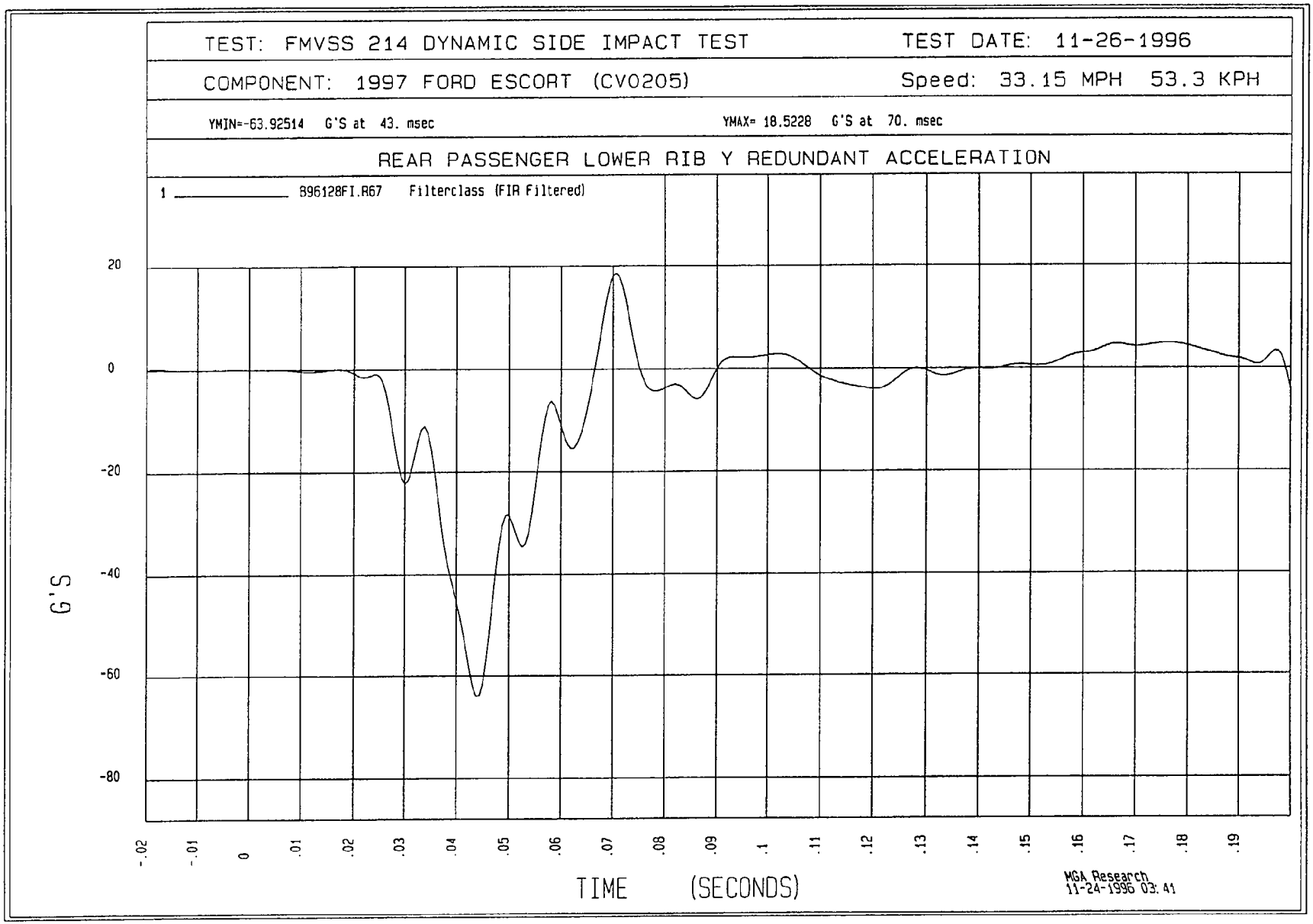
TIME (SECONDS)
MGA Research
11-24-1996 03:41


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
YMIN=-63.92514 G'S at 43. msec
YMAX= 18.5228 G'S at 70. msec
REAR PASSENGER LOWER RIB Y REDUNDANT ACCELERATION
1 B96128FI.R67 Filterclass (FIR Filtered)
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G's
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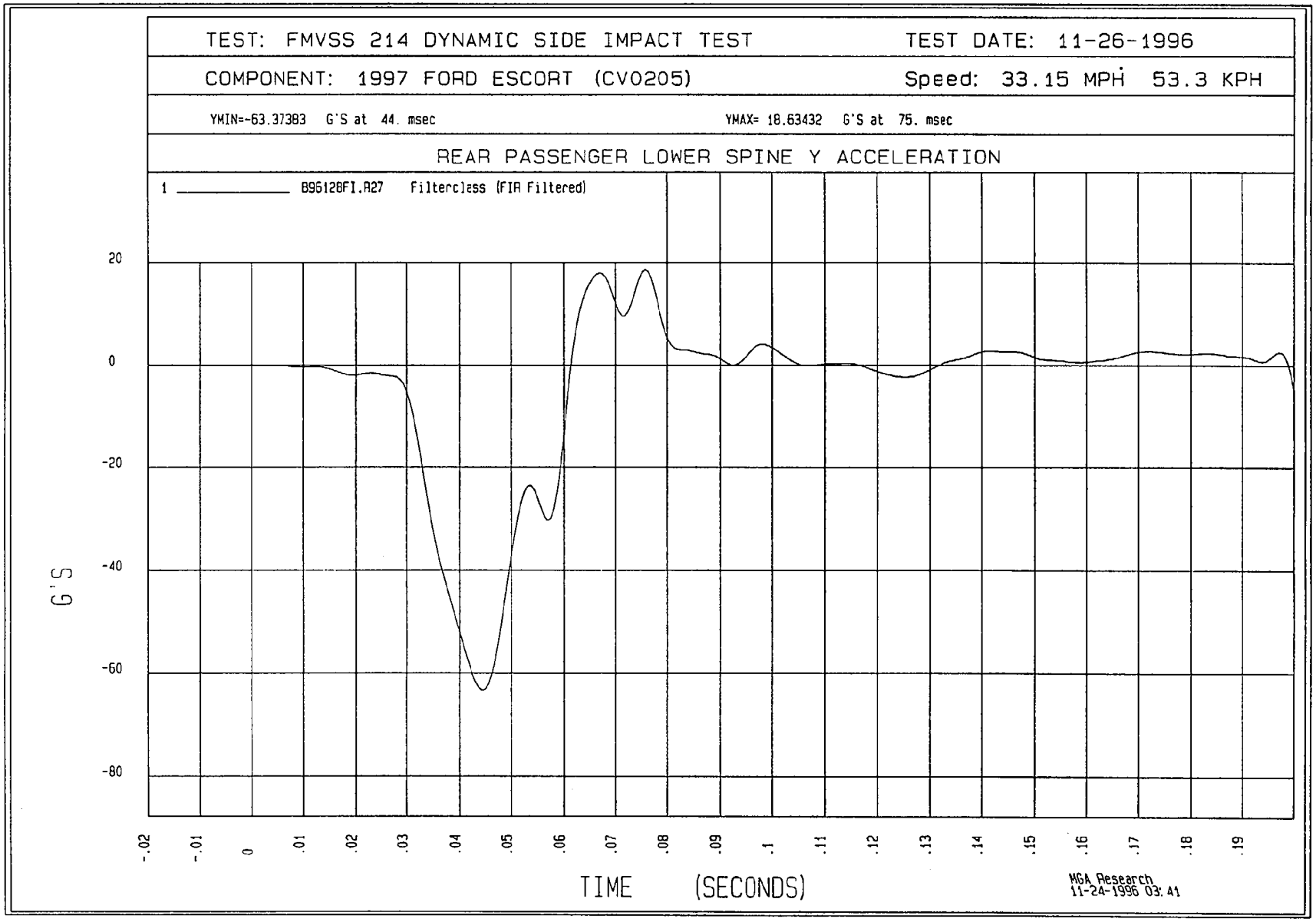
TIME (SECONDS)
MGA Research
11-24-1996 03:41


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
YMIN=-63.37383 G'S at 44. msec
YMAX= 18.63432 G'S at 75. msec
REAR PASSENGER LOWER SPINE Y ACCELERATION
1 B95128FI.A27 Filterclass (FIR Filtered)
20
0
-20
-40
-60
-80
G'S
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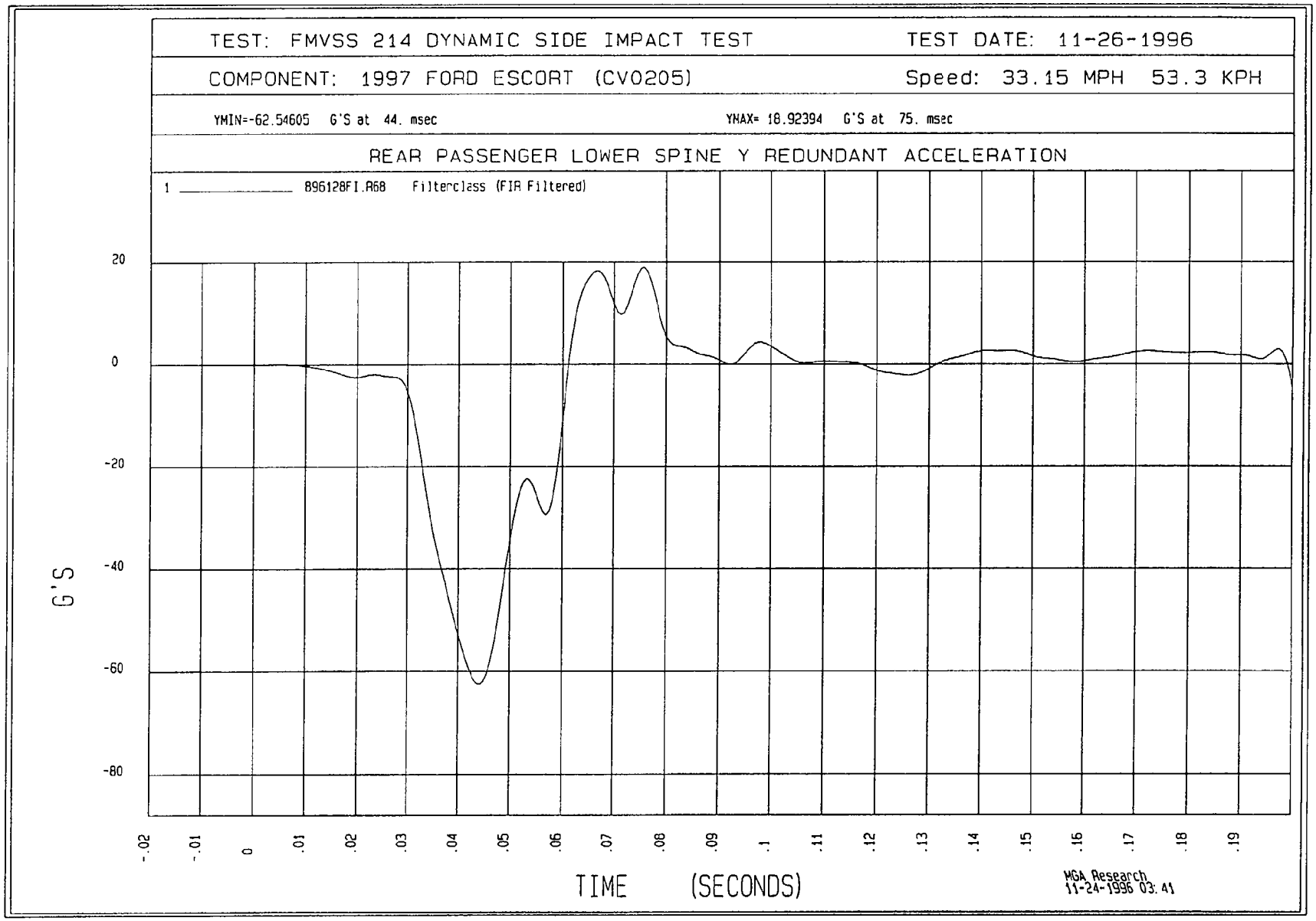
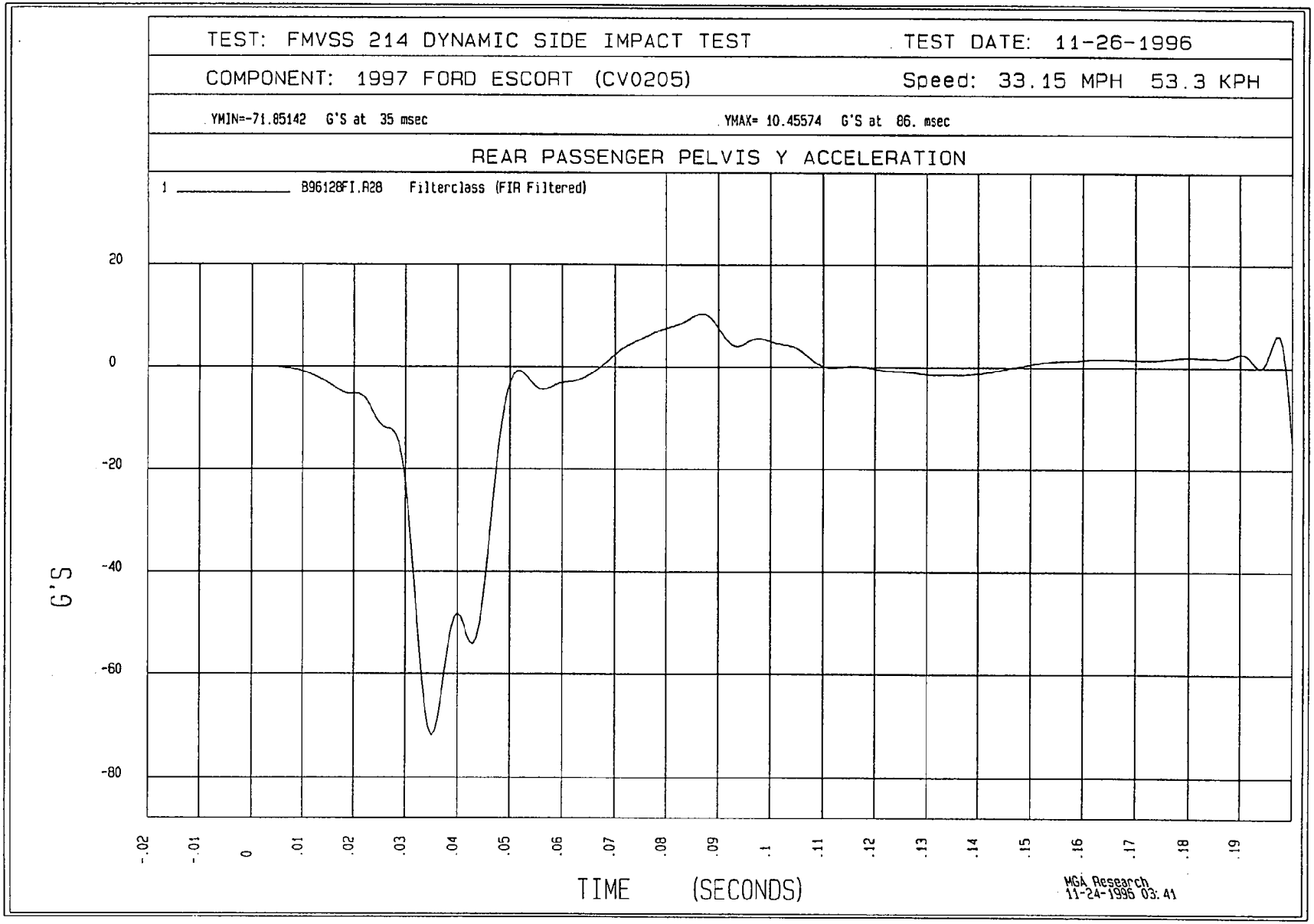
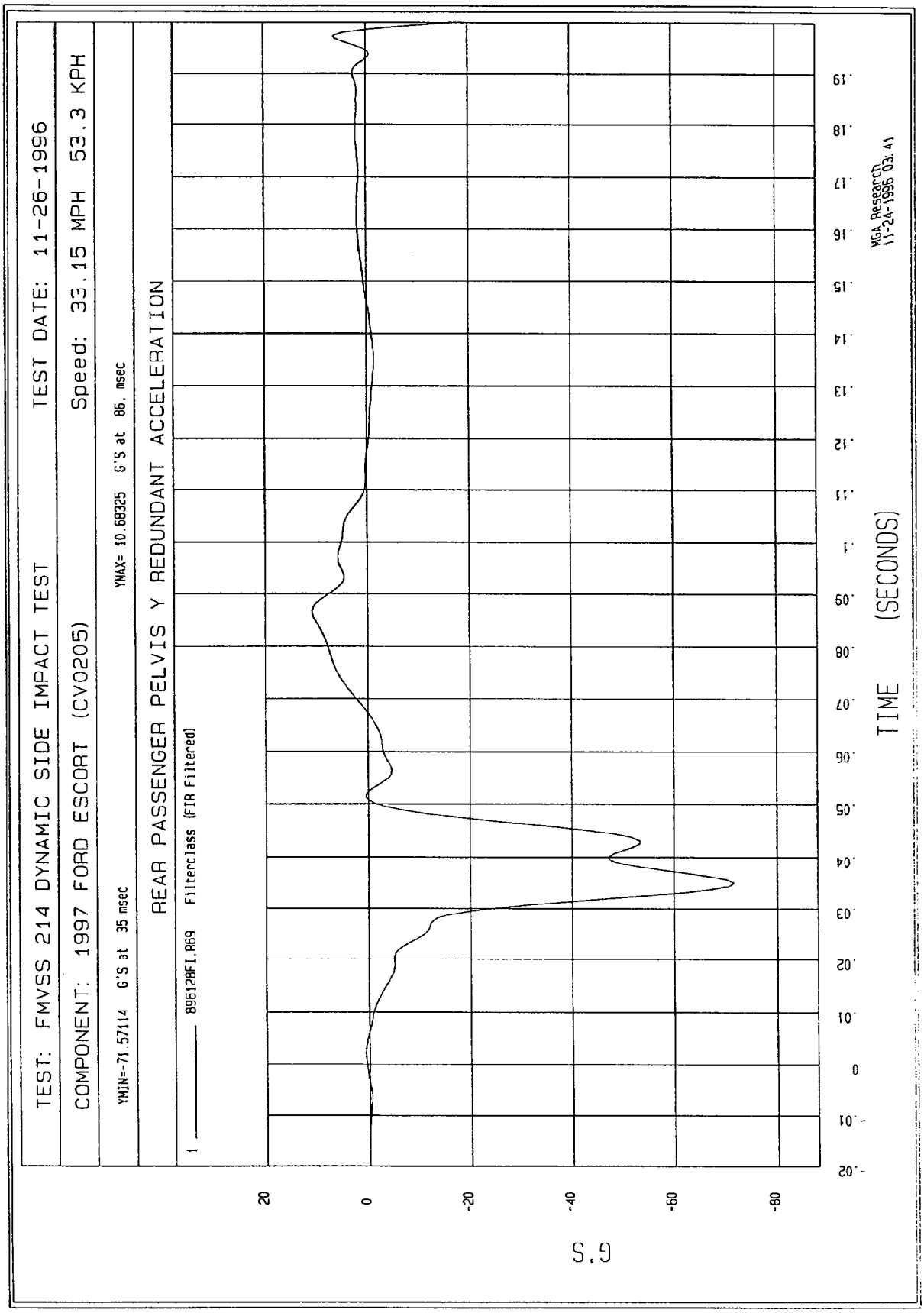
.17
.18
.19
TIME (SECONDS)
MGA Research
11-24-1996 03:41


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
YMIN=-62.54605 G'S at 44. msec
YMAX= 18.92394 G'S at 75. msec
REAR PASSENGER LOWER SPINE Y REDUNDANT ACCELERATION
1 896128FI.A68 Filterclass (FIR Filtered)
20
0
-20
-40
-60
-80
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
11-24-1996 03:41


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
YMIN=-71.85142 G'S at 35 msec
YMAX= 10.45574 G'S at 86. msec
REAR PASSENGER PELVIS Y ACCELERATION
1 B96128FI.A28 Filterclass (FIR Filtered)
20
0
-20
-40
-60
-80
G'S
-.02
-.01
0
.01
.02
.03
.04
.05
.06
.07
.08
.09
.1
.11
.12
.13
.14
.15
.16
.17
.18
.19
TIME (SECONDS)
MGA Research
11-24-1996 03:41


TEST: FMVSS 214 DYNAMIC SIDE IMPACT TEST
TEST DATE: 11-26-1996
COMPONENT: 1997 FORD ESCORT (CV0205)
Speed: 33.15 MPH 53.3 KPH
YMIN=-71.57114 G'S at 35 msec
YMAX= 10.68325 G'S at 86. msec
REAR PASSENGER PELVIS Y REDUNDANT ACCELERATION
1 B96128FI.R69 Filterclass (FIR Filtered)
MGA Research
11-24-1996 03:41
20
0
-20
-40
-60
-80
G'S
.19
.18
.17
.16
.15
.14
.13
.12
.11
1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
-.01
-.02
TIME (SECONDS)

APPENDIX C

SID CONFIGURATION AND PERFORMANCE VERIFICATION

REPORT NO. MGA-96-DC12

DUMMY PERFORMANCE CALIBRATIONS

FMVSS 214 - SIDE IMPACT TEST

FORD MOTOR COMPANY
1997 FORD ESCORT 4 DOOR
NHTSA NO. CV0205

MGA PROVING GROUNDS
5000 WARREN ROAD
BURLINGTON, WI 53105

Test Date: November 26, 1996

Report Date: January 13, 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

TABLE OF CONTENTS

PRE-TEST CERTIFICATION DATA

Front Dummy Serial Number: 271

Calibration Test Results Summary

Dummy Serial Number: 271

Pre-Test Calibration

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

SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 271 DATE OF VERIFICATION: November 26, 1996

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH - Seated Height	35.0" - 35.8"	35.4
RH - Rib Height	19.75" - 20.50"	20.40
HP - Hip Pivot Height	3.9" ref.	3.9
RD - Rib From Back Line	9.0" to 9.5"	9.4
KV - Knee Pivot From Back Line	20.1" - 20.7"	20.4
SW - Knee Pivot to Floor	19.3" - 19.9"	19.5
HW - Hip Width	14.0" - 15.4"	15.0

MEASUREMENTS BY: _____

APPROVED BY: _____

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

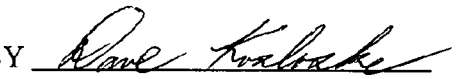
DATE: November 25, 1996

DUMMY NUMBER: 271 TEST NUMBER: D961902

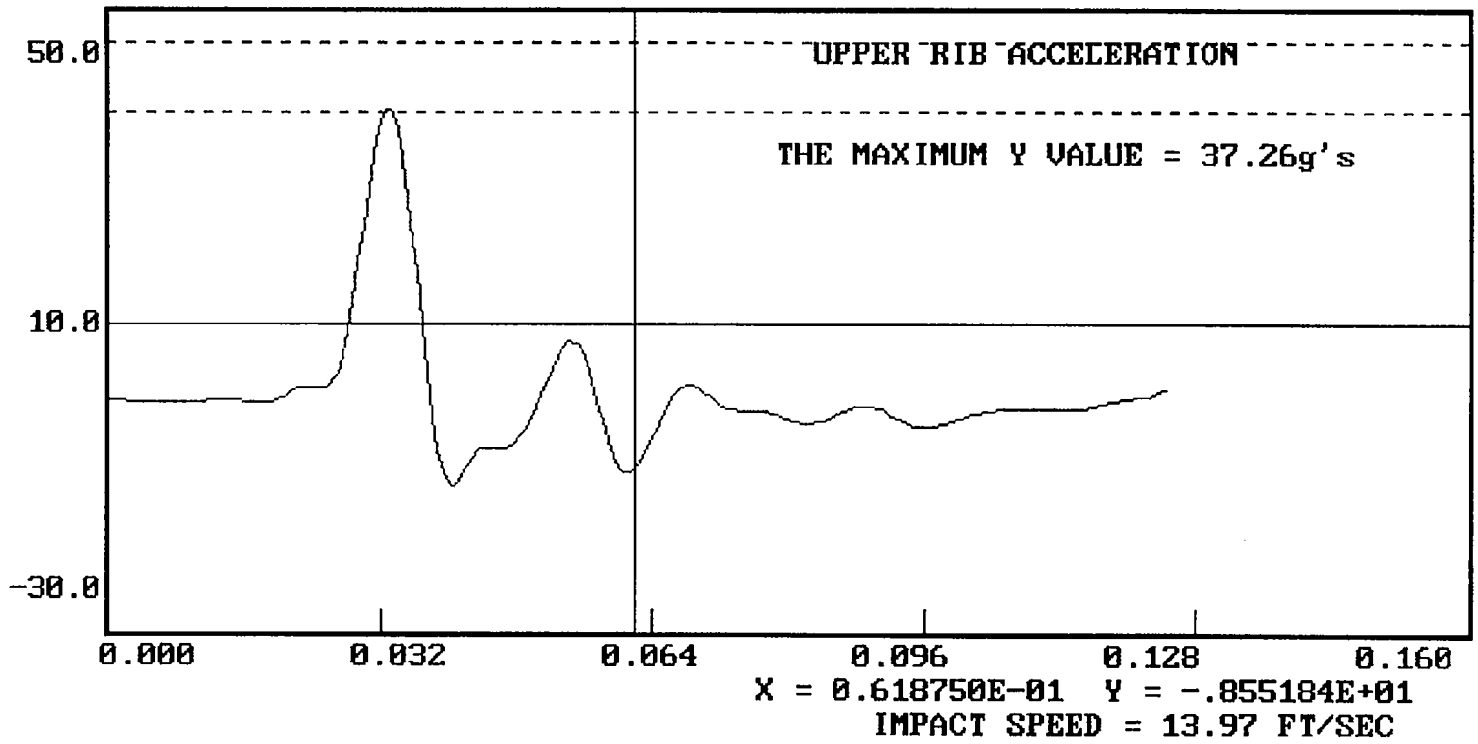
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
PROBE SPEED	13.8 - 14.2 fps	14.0
UPPER RIB	37 - 46 g's	37
LOWER RIB	37 - 46 g's	41
LOWER SPINE	15 - 22 g's	19

TEST MEETS SPECIFICATIONS

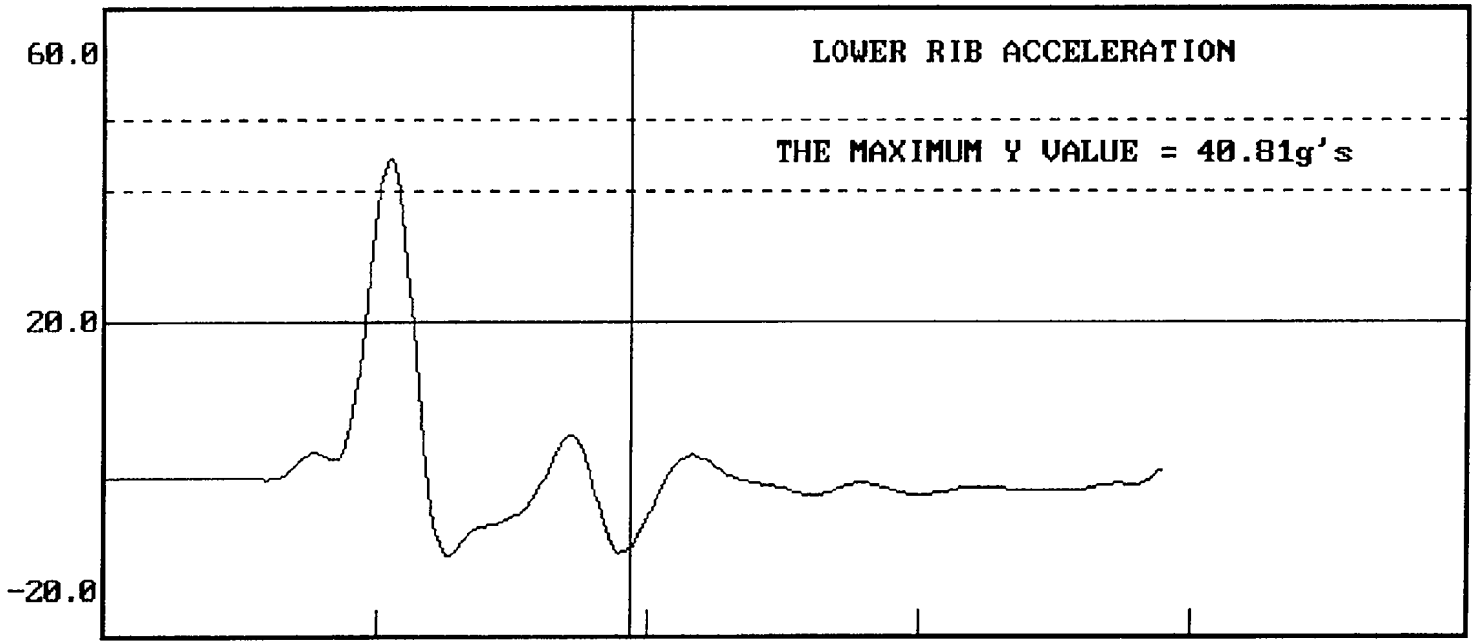
TECHNICIAN 

APPROVED BY 

DUMMY CALIBRATION - THORAX IMPACT 11-25-1996 22:32
DUMMY # 271
ACCELERATION (G'S) VS. TIME ((SECONDS))

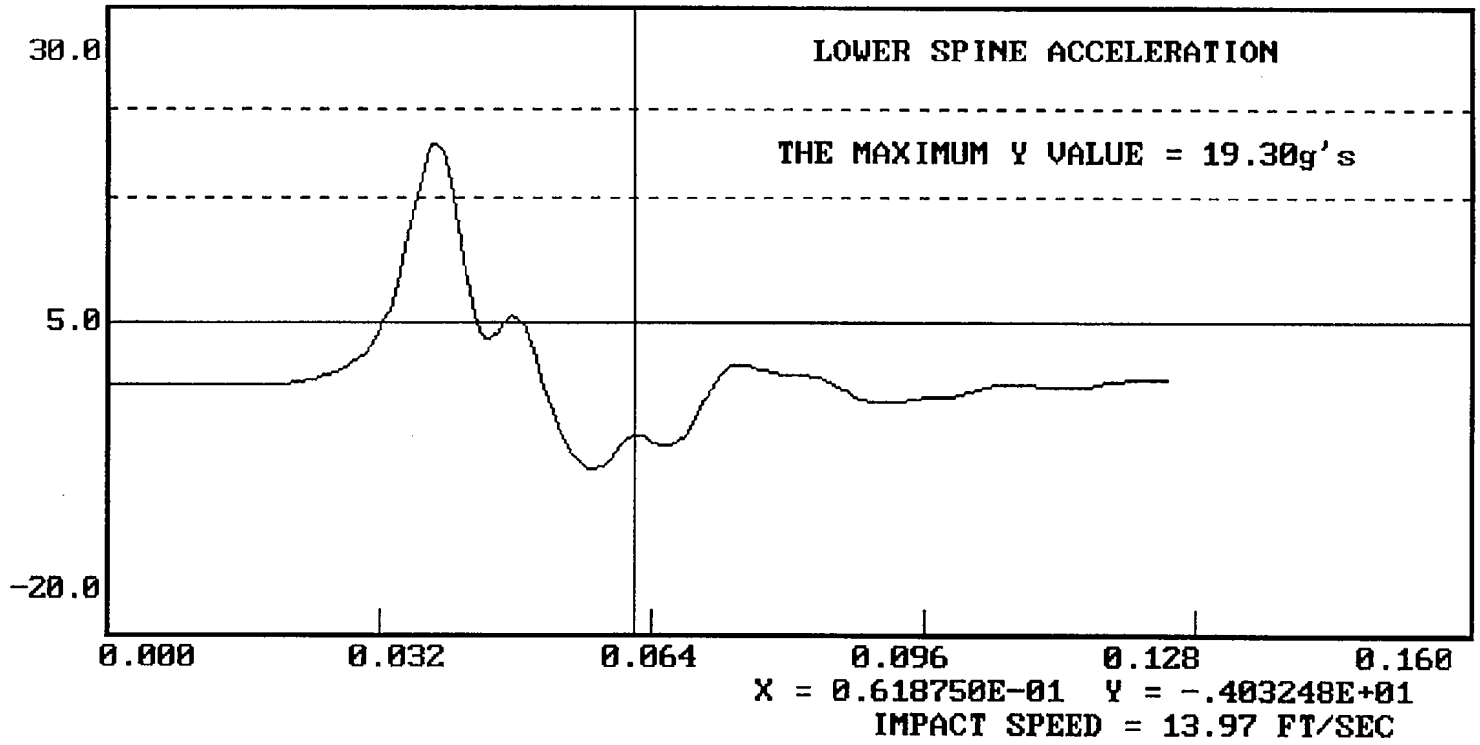


DUMMY CALIBRATION - THORAX IMPACT 11-25-1996 22:32
DUMMY # 271
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.880839E+01
IMPACT SPEED = 13.97 FT/SEC

DUMMY CALIBRATION - THORAX IMPACT 11-25-1996 22:32
DUMMY # 271
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.403248E+01
IMPACT SPEED = 13.97 FT/SEC

MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: November 25, 1996

DUMMY NUMBER: 271 TEST NUMBER: D961903

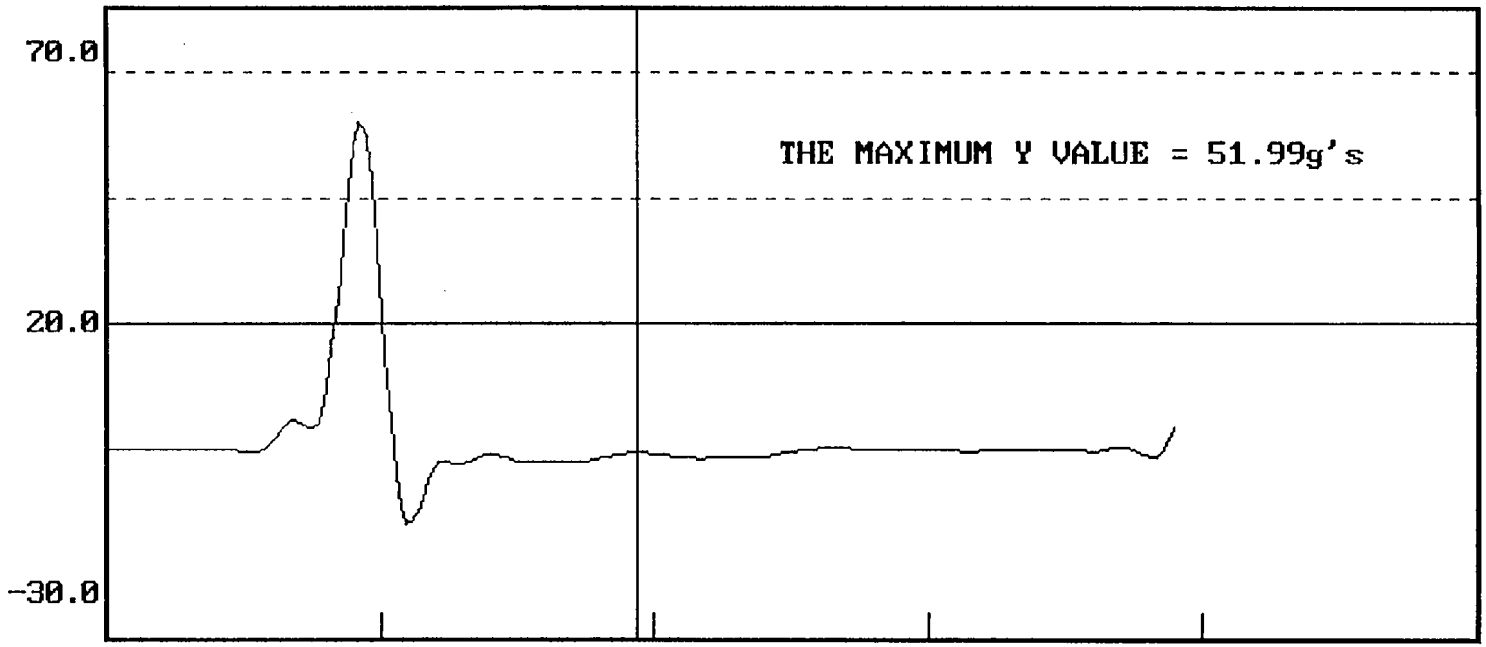
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
PROBE SPEED	13.8 - 14.2 f/s	13.9
PELVIS ACCELERATION	40 - 60 g's	52

TEST MEETS SPECIFICATIONS

TECHNICIAN

APPROVED BY

DUMMY CALIBRATION - PELVIS IMPACT 11-25-1996 23:00
DUMMY # 271
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.485191E+00
IMPACT SPEED = 13.90 FT/SEC

MGA RESEARCH CORPORATION

ABDOMINAL COMPRESSION TEST
(PRELOAD = 10 LBS)

SIDE IMPACT DUMMY (SID)

DATE: November 26, 1996

DUMMY NUMBER: 271 TEST NUMBER: D961904

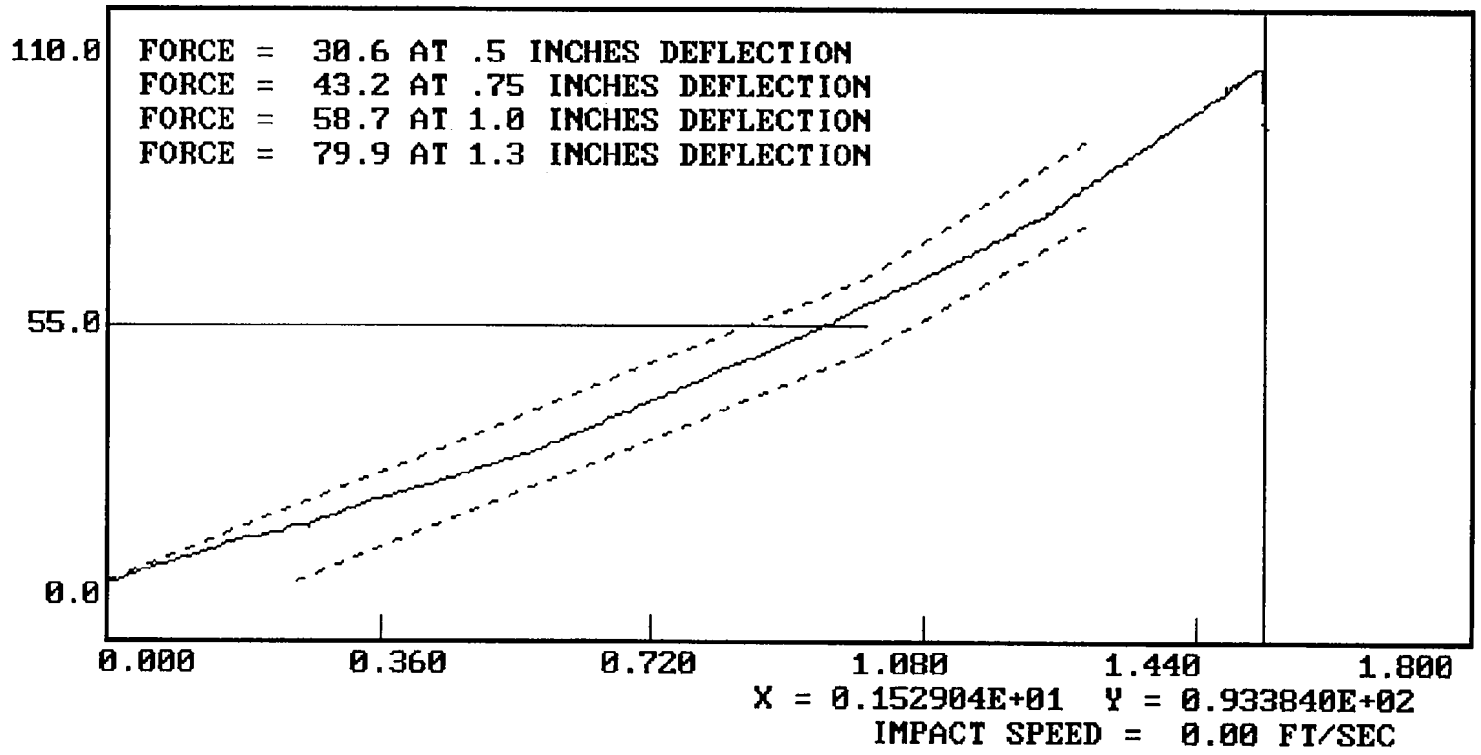
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
FORCE @ 0.5 in	23.3 - 36.5 lbs	30.6
FORCE @ 0.75 in	36.7 - 49.8 lbs	43.2
FORCE @ 1.0 in	50 - 63 lbs	59
FORCE @ 1.3 in	73 - 88 lbs	80

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

DUMMY CALIBRATION - ABDOMEN COMPRESSION 11-26-1996 00:28
DUMMY # 271
ABDOMEN FORCE (LBS) VS. ABDOMEN DISPLACEMENT (INCHES)



X = 0.152904E+01 Y = 0.933840E+02
IMPACT SPEED = 0.00 FT/SEC

MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: November 25, 1996

DUMMY NUMBER: 271 TEST NUMBER: D961905

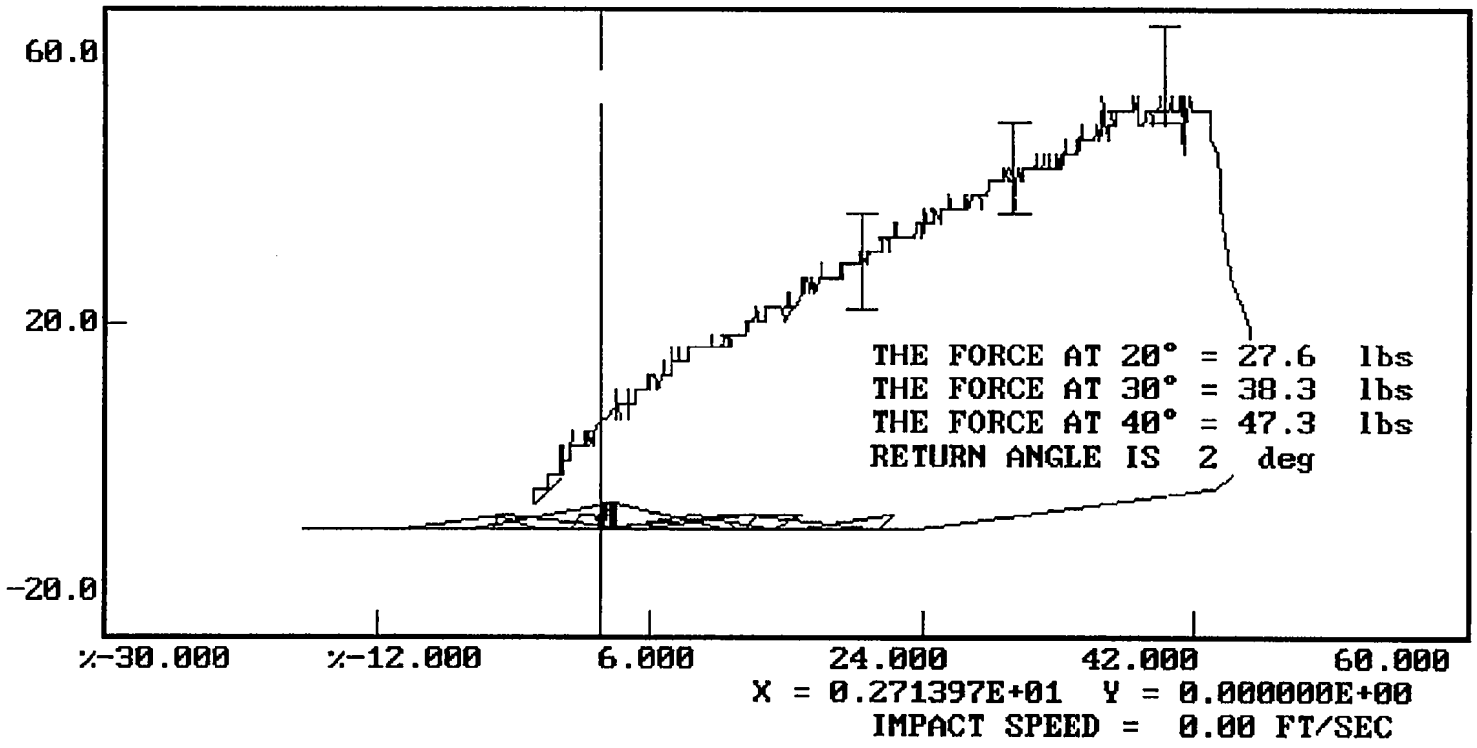
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	28
FORCE @ 30°	34 - 46 lbs	38
FORCE @ 40°	46 - 58 lbs	47
RETURN ANGLE	12° maximum	2°

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

DUMMY CALIBRATION - LUMBAR FLEXION 11-25-1996 23:51
DUMMY # 271
FORCE (LBS) VS. TORSO ROTATION (DEGREES)



X = 0.271397E+01 Y = 0.000000E+00
IMPACT SPEED = 0.00 FT/SEC

PRE-TEST CERTIFICATION DATA

Rear Dummy Serial Number: 272

Calibration Test Results Summary

Passenger Serial Number: 272

Pre-Test Calibration

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

SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 272 DATE OF VERIFICATION: November 26, 1996

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

MEASUREMENTS BY: _____

APPROVED BY: _____

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: November 25, 1996

DUMMY NUMBER: 272

TEST NUMBER: D961912

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	41
LOWER RIB	37 - 46 g's	41
LOWER SPINE	15 - 22 g's	20

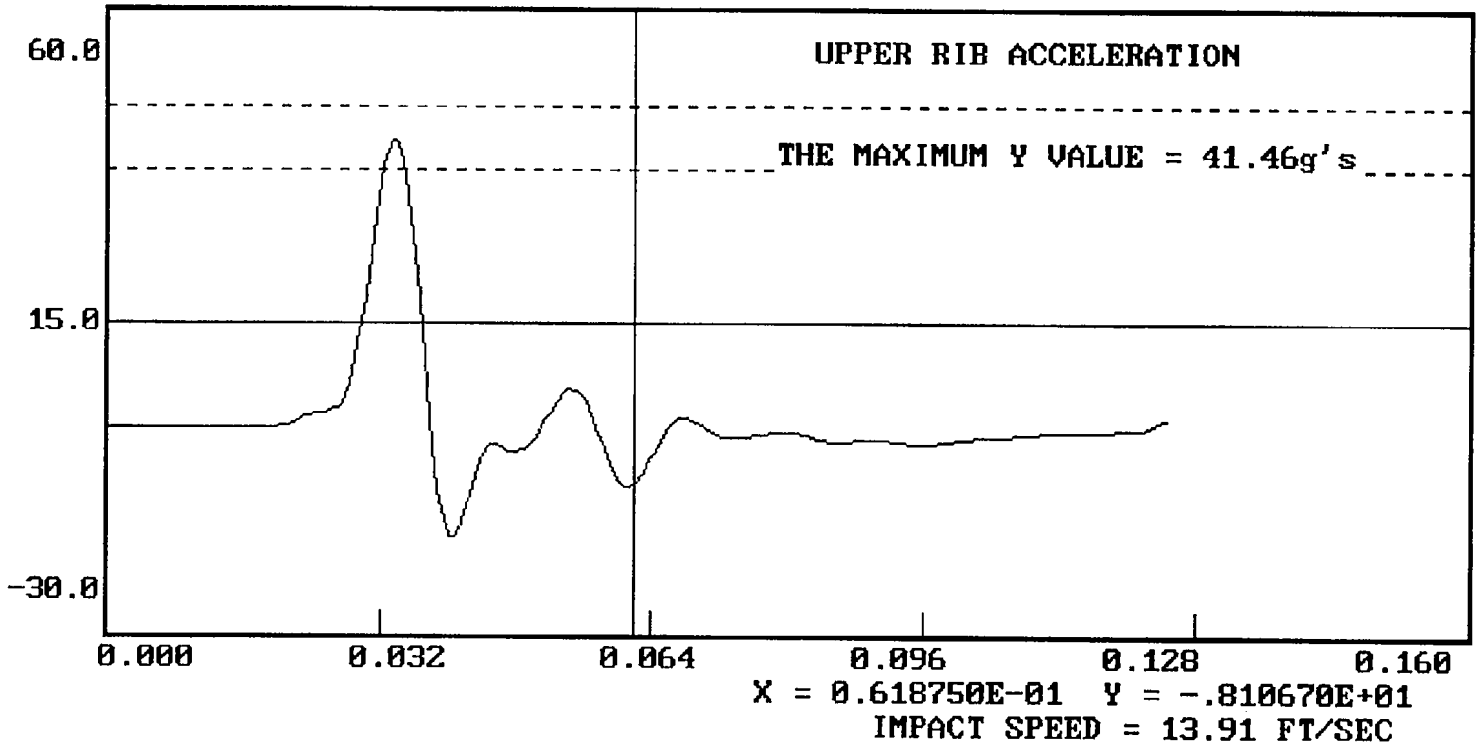
TEST MEETS SPECIFICATIONS

TECHNICIAN

APPROVED BY

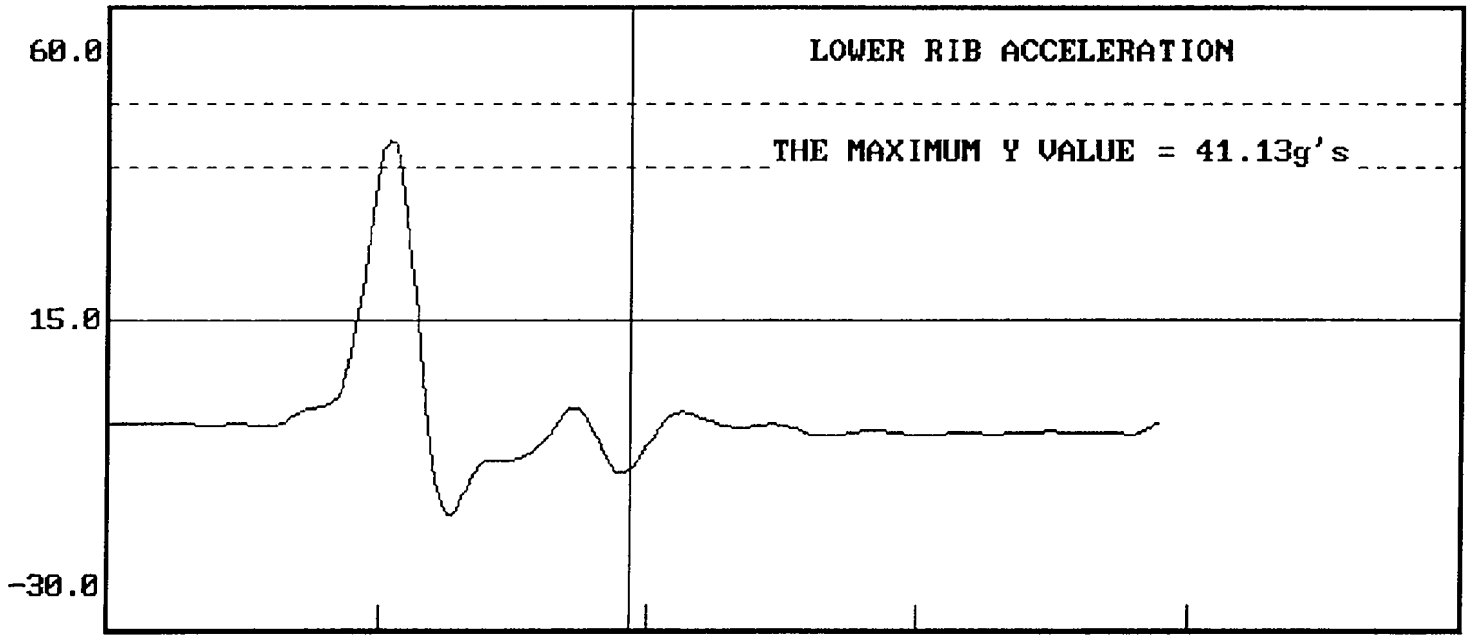
DUMMY CALIBRATION - THORAX IMPACT
DUMMY # 272
ACCELERATION (G'S) VS. TIME ((SECONDS))

11-25-1996 23:21



X = 0.618750E-01 Y = -.810670E+01
IMPACT SPEED = 13.91 FT/SEC

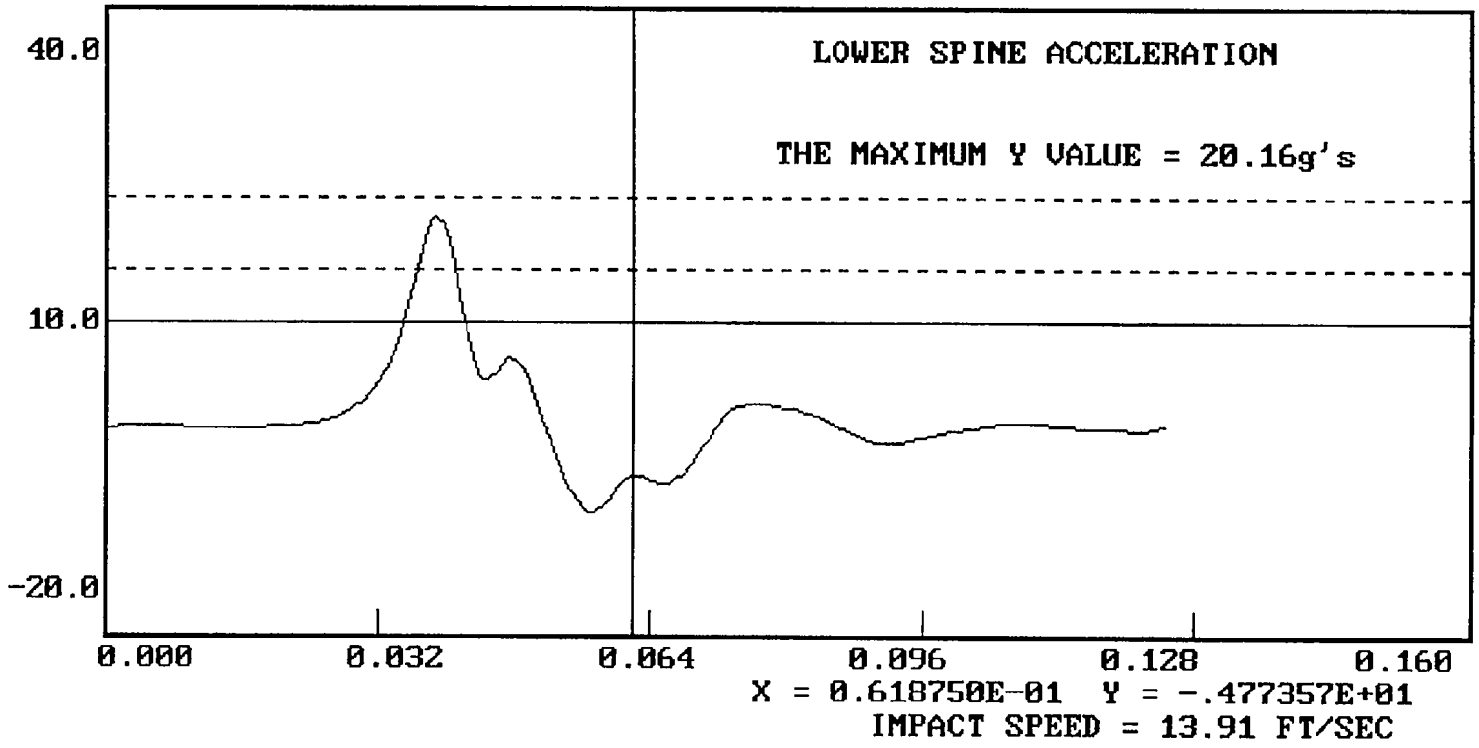
DUMMY CALIBRATION - THORAX IMPACT 11-25-1996 23:21
DUMMY # 272
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.676757E+01
IMPACT SPEED = 13.91 FT/SEC

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

11-25-1996 23:22



X = 0.618750E-01 Y = -.477357E+01
IMPACT SPEED = 13.91 FT/SEC

MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: November 25, 1996

DUMMY NUMBER: 272

TEST NUMBER: D961913

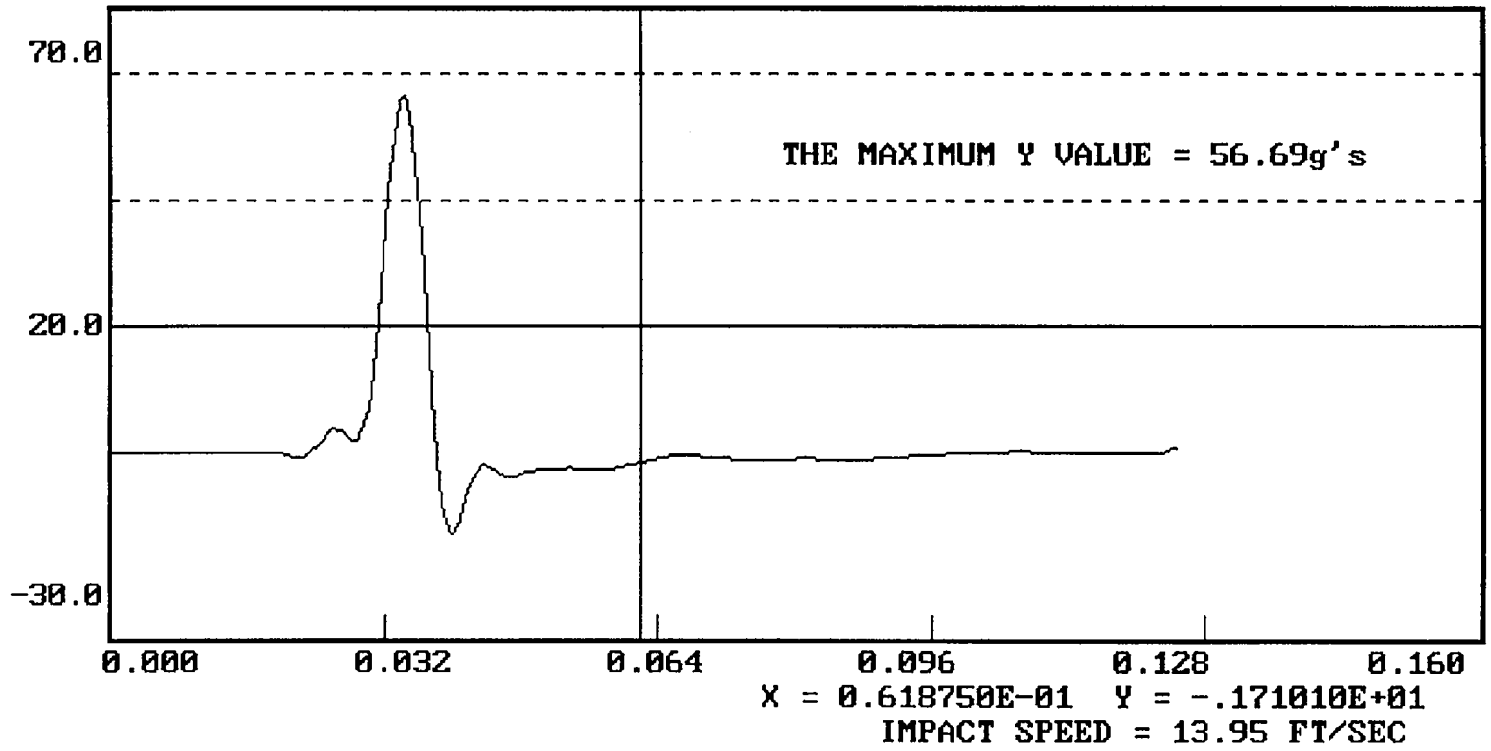
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
PROBE SPEED	13.8 - 14.2 f/s	14.0
PELVIS ACCELERATION	40 - 60 g's	57

TEST MEETS SPECIFICATIONS

TECHNICIAN

APPROVED BY

DUMMY CALIBRATION - PELVIS IMPACT 11-25-1996 23:30
DUMMY # 272
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.171010E+01
IMPACT SPEED = 13.95 FT/SEC

MGA RESEARCH CORPORATION

ABDOMINAL COMPRESSION TEST
(PRELOAD = 10 LBS)

SIDE IMPACT DUMMY (SID)

DATE: November 26, 1996

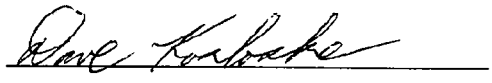
DUMMY NUMBER: 272

TEST NUMBER: D961914

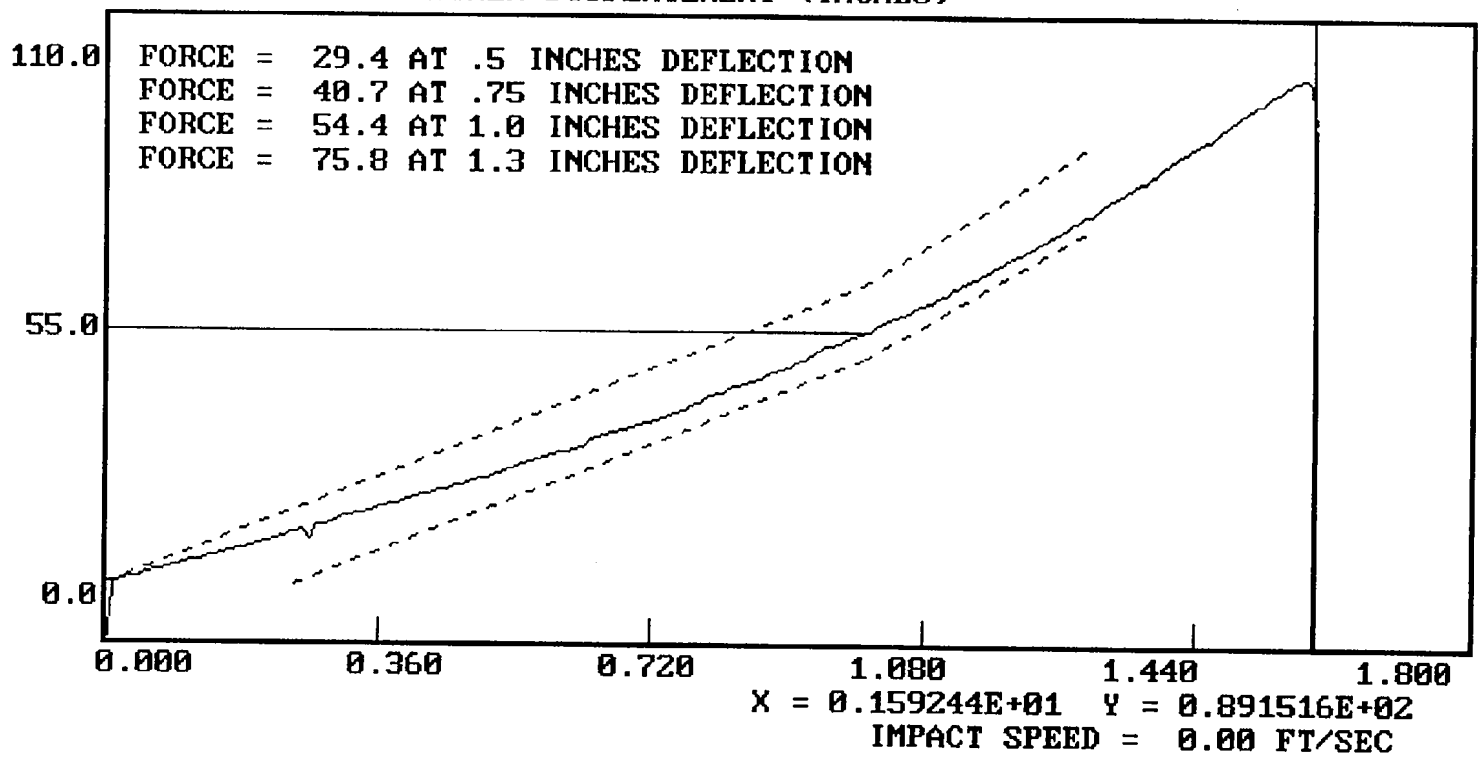
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
FORCE @ 0.5 in	23.3 - 36.5 lbs	29.4
FORCE @ 0.75 in	36.7 - 49.8 lbs	40.7
FORCE @ 1.0 in	50 - 63 lbs	54
FORCE @ 1.3 in	73 - 88 lbs	76

TEST MEETS SPECIFICATIONS

TECHNICIAN 

APPROVED BY 

DUMMY CALIBRATION - ABDOMEN COMPRESSION 11-26-1996 00:32
DUMMY # 272
ABDOMEN FORCE (LBS) VS. ABDOMEN DISPLACEMENT (INCHES)



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: November 26, 1996

DUMMY NUMBER: 272 TEST NUMBER: D961915

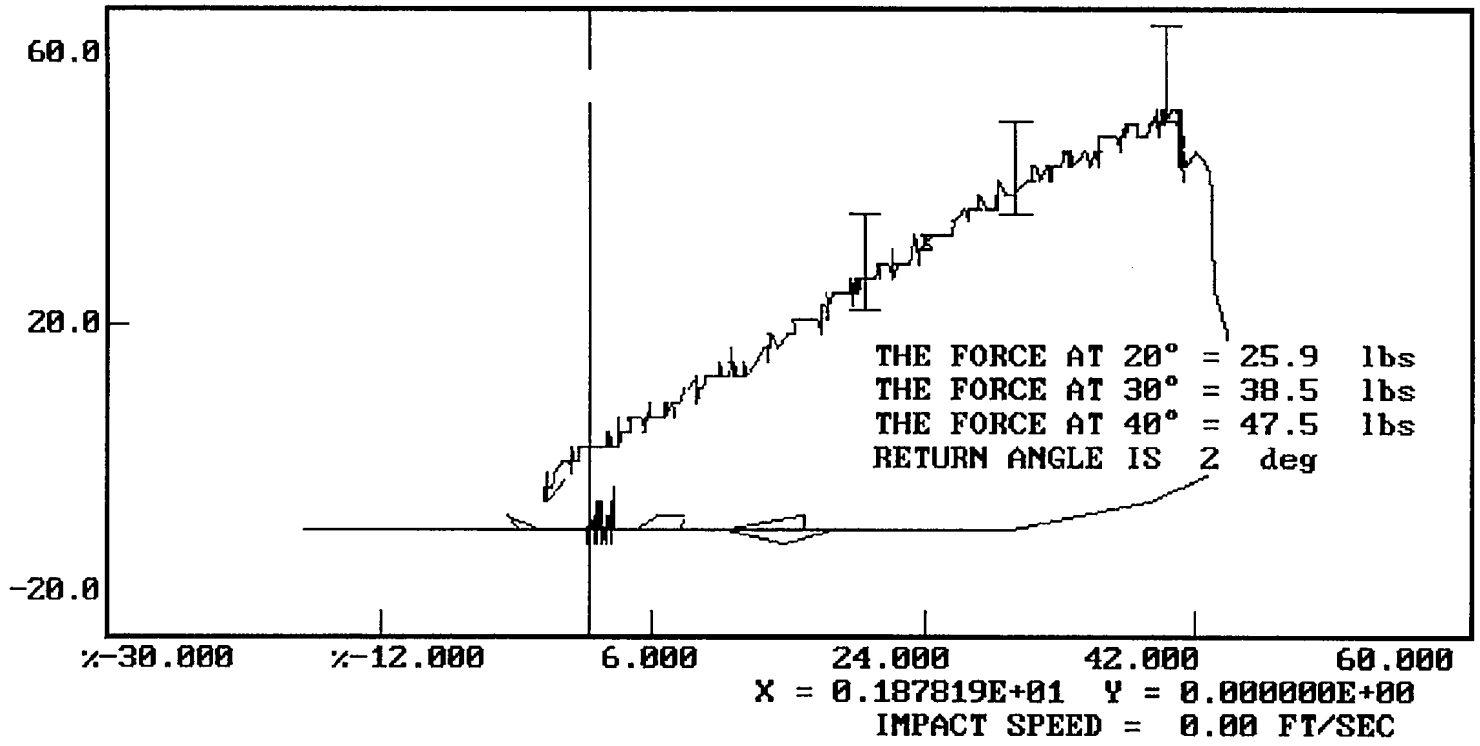
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	26
FORCE @ 30°	34 - 46 lbs	39
FORCE @ 40°	46 - 58 lbs	48
RETURN ANGLE	12° maximum	2°

TEST MEETS SPECIFICATIONS

TECHNICIAN

APPROVED BY

DUMMY CALIBRATION - LUMBAR FLEXION 11-26-1996 00:17
DUMMY # 272
FORCE (LBS) VS. TORSO ROTATION (DEGREES)



POST-TEST CERTIFICATION DATA

Front Dummy Serial Number: 271

Calibration Test Results Summary

Dummy Serial Number: 271

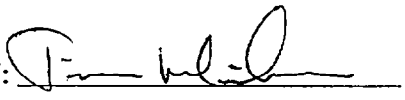
Post-Test Calibration

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

SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 271 DATE OF VERIFICATION: November 27, 1996

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH - Seated Height	35.0" - 35.8"	35.4
RH - Rib Height	19.75" - 20.50"	20.40
HP - Hip Pivot Height	3.9" ref.	3.9
RD - Rib From Back Line	9.0" to 9.5"	9.4
KV - Knee Pivot From Back Line	20.1" - 20.7"	20.4
SW - Knee Pivot to Floor	19.3" - 19.9"	19.5
HW - Hip Width	14.0" - 15.4"	15.1

MEASUREMENTS BY: 

APPROVED BY: Dave Kosbicke

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: November 27, 1996

DUMMY NUMBER: 271 TEST NUMBER: D961922

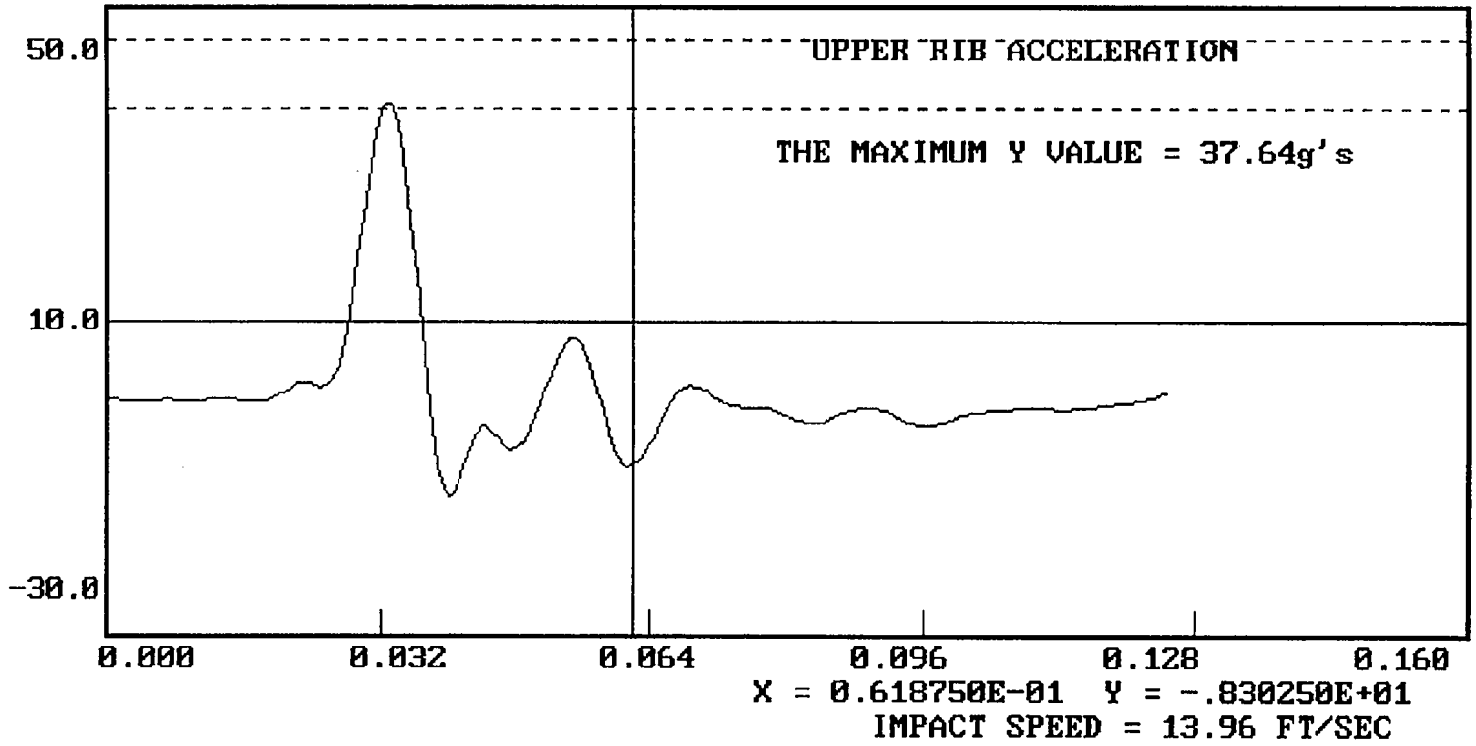
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
PROBE SPEED	13.8 - 14.2 fps	14.0
UPPER RIB	37 - 46 g's	38
LOWER RIB	37 - 46 g's	38
LOWER SPINE	15 - 22 g's	18

TEST MEETS SPECIFICATIONS

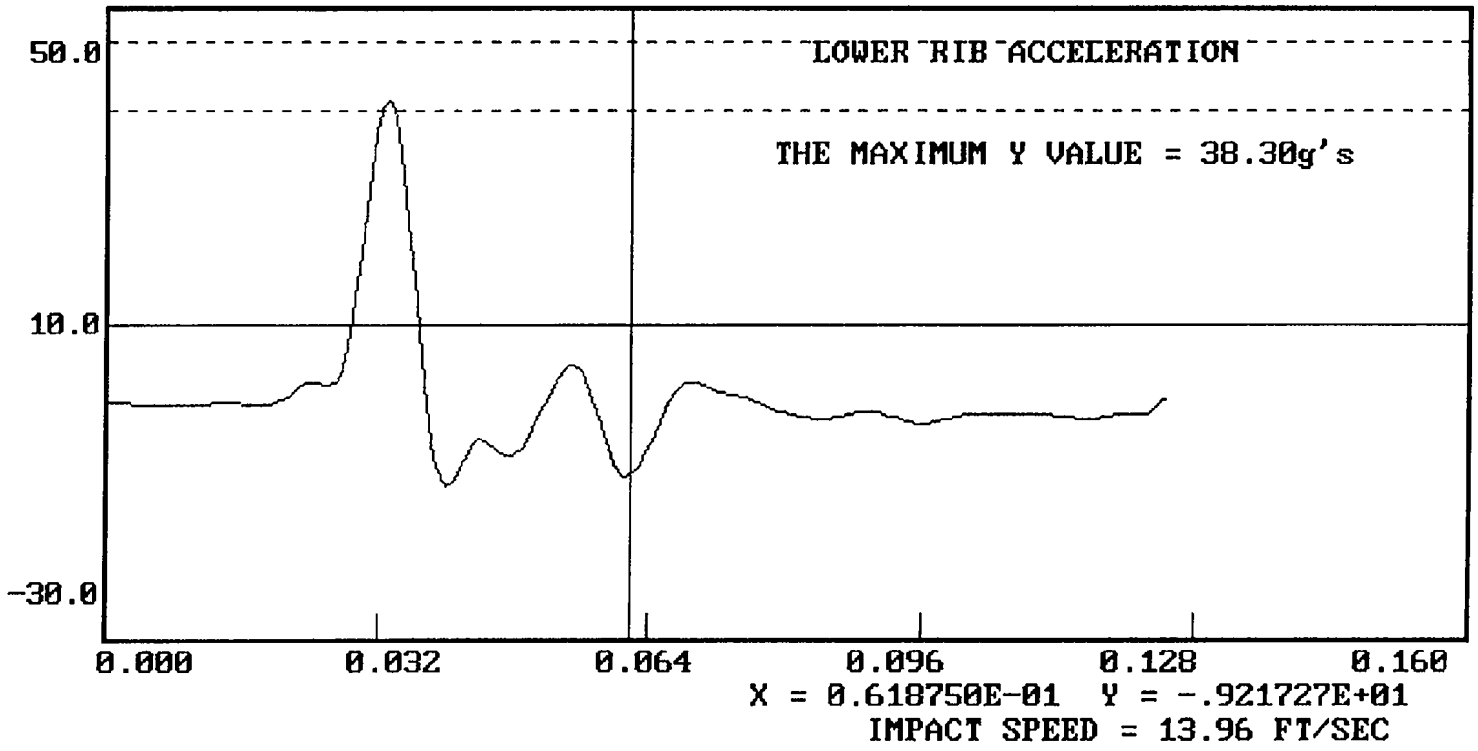
TECHNICIAN

APPROVED BY

DUMMY CALIBRATION - THORAX IMPACT 11-27-1996 11:05
DUMMY # 271
ACCELERATION (G'S) VS. TIME ((SECONDS))

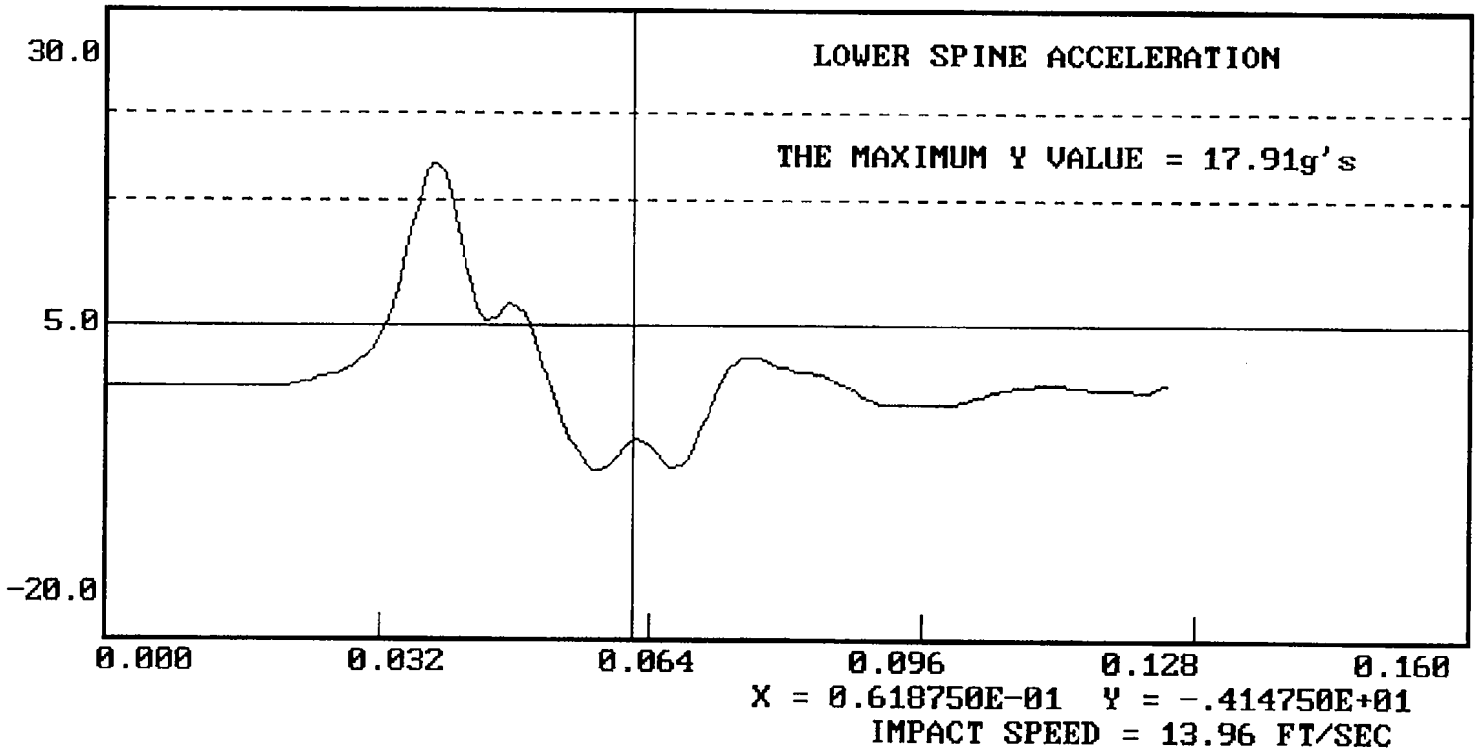


DUMMY CALIBRATION - THORAX IMPACT 11-27-1996 11:05
DUMMY # 271
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.921727E+01
IMPACT SPEED = 13.96 FT/SEC

DUMMY CALIBRATION - THORAX IMPACT 11-27-1996 11:06
DUMMY # 271
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.414750E+01
IMPACT SPEED = 13.96 FT/SEC

MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: November 27, 1996

DUMMY NUMBER: 271 TEST NUMBER: D961923

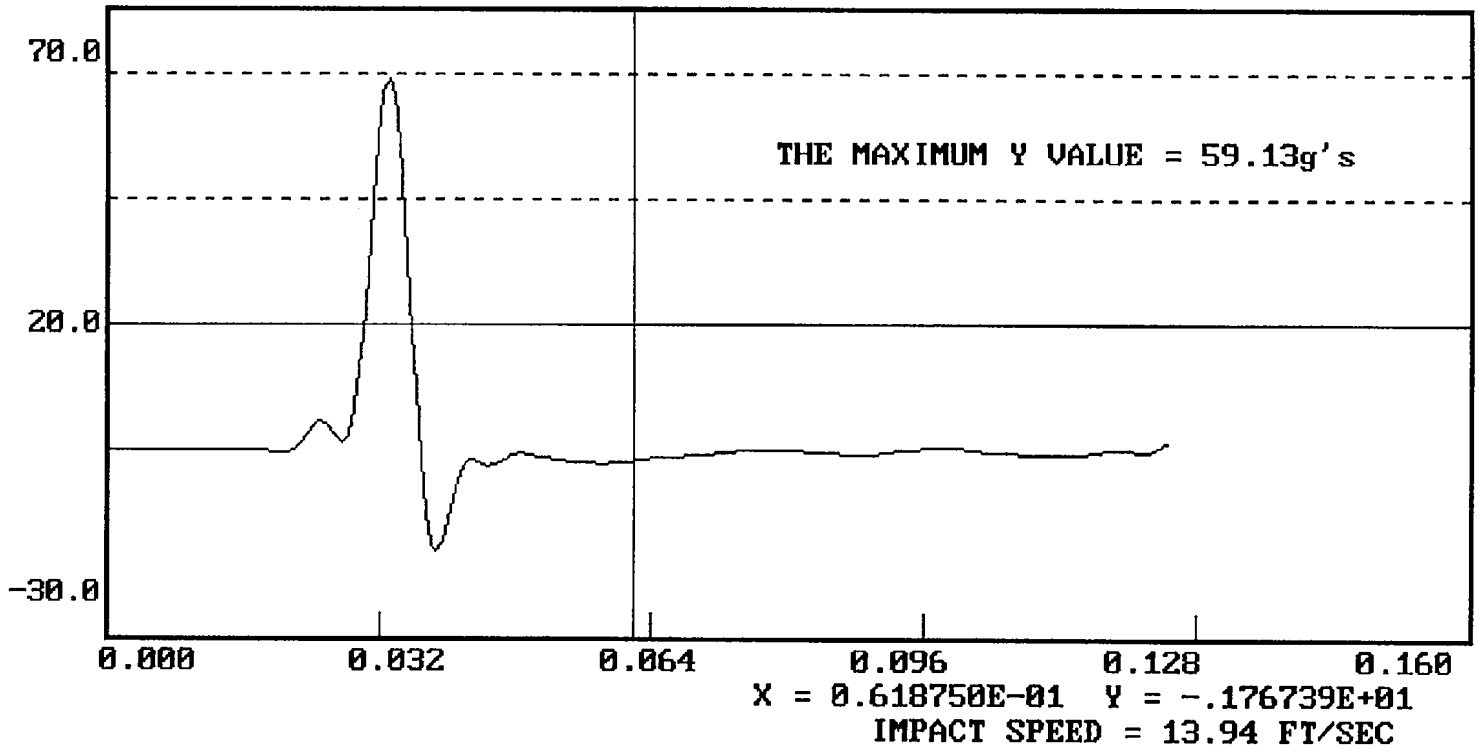
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
PROBE SPEED	13.8 - 14.2 f/s	13.9
PELVIS ACCELERATION	40 - 60 g's	59

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY Dave Koelbake

DUMMY CALIBRATION - PELVIS IMPACT 11-27-1996 11:37
DUMMY # 271
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.176739E+01
IMPACT SPEED = 13.94 FT/SEC

MGA RESEARCH CORPORATION

ABDOMINAL COMPRESSION TEST
(PRELOAD = 10 LBS)

SIDE IMPACT DUMMY (SID)

DATE: November 27, 1996

DUMMY NUMBER: 271 TEST NUMBER: D961924

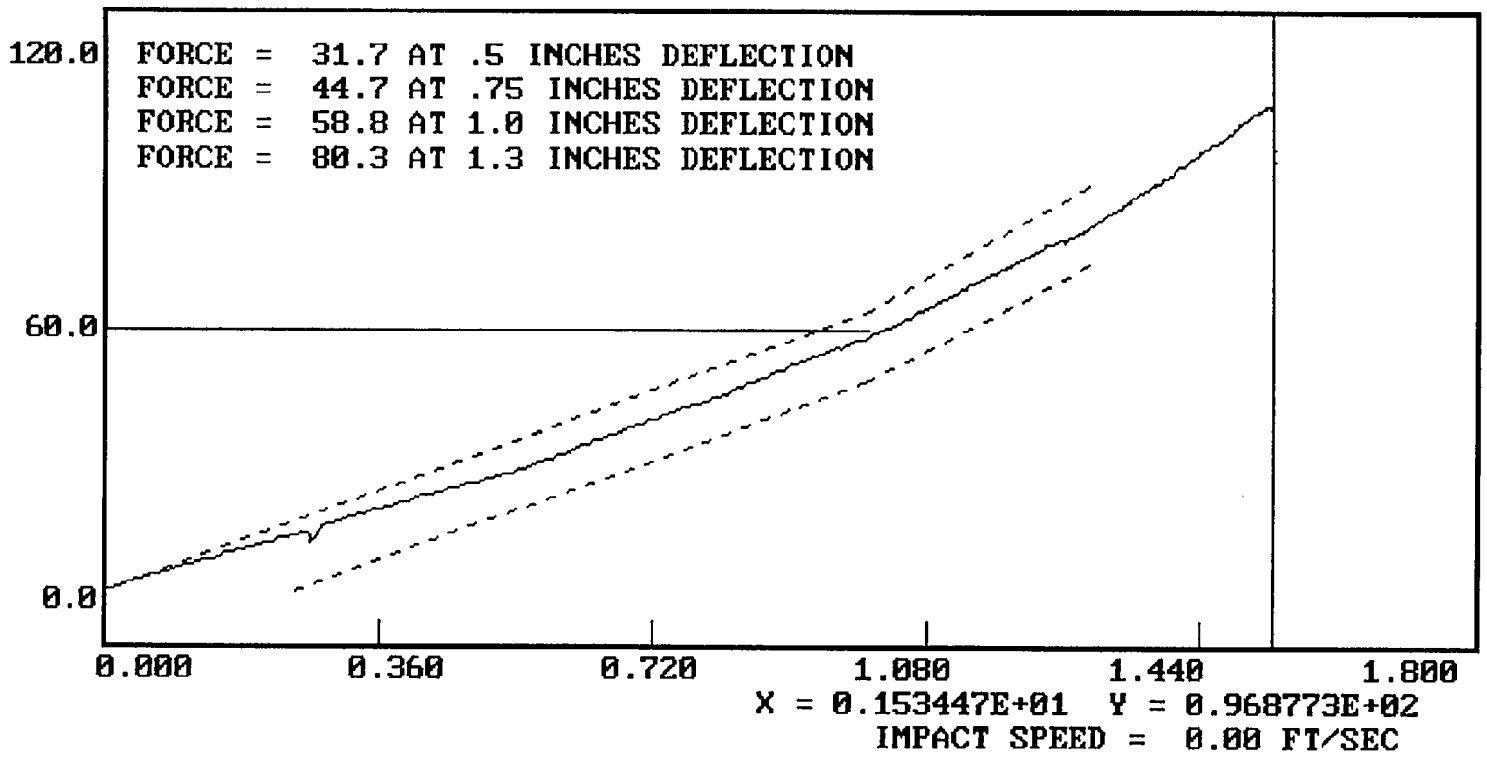
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
FORCE @ 0.5 in	23.3 - 36.5 lbs	31.7
FORCE @ 0.75 in	36.7 - 49.8 lbs	44.7
FORCE @ 1.0 in	50 - 63 lbs	59
FORCE @ 1.3 in	73 - 88 lbs	80

TEST MEETS SPECIFICATIONS

TECHNICIAN

APPROVED BY

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



X = 0.153447E+01 Y = 0.968773E+02
IMPACT SPEED = 0.00 FT/SEC

MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

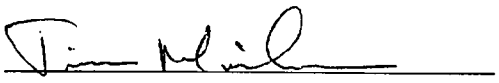
SIDE IMPACT DUMMY (SID)

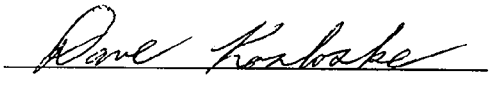
DATE: November 27, 1996

DUMMY NUMBER: 271 TEST NUMBER: D961925

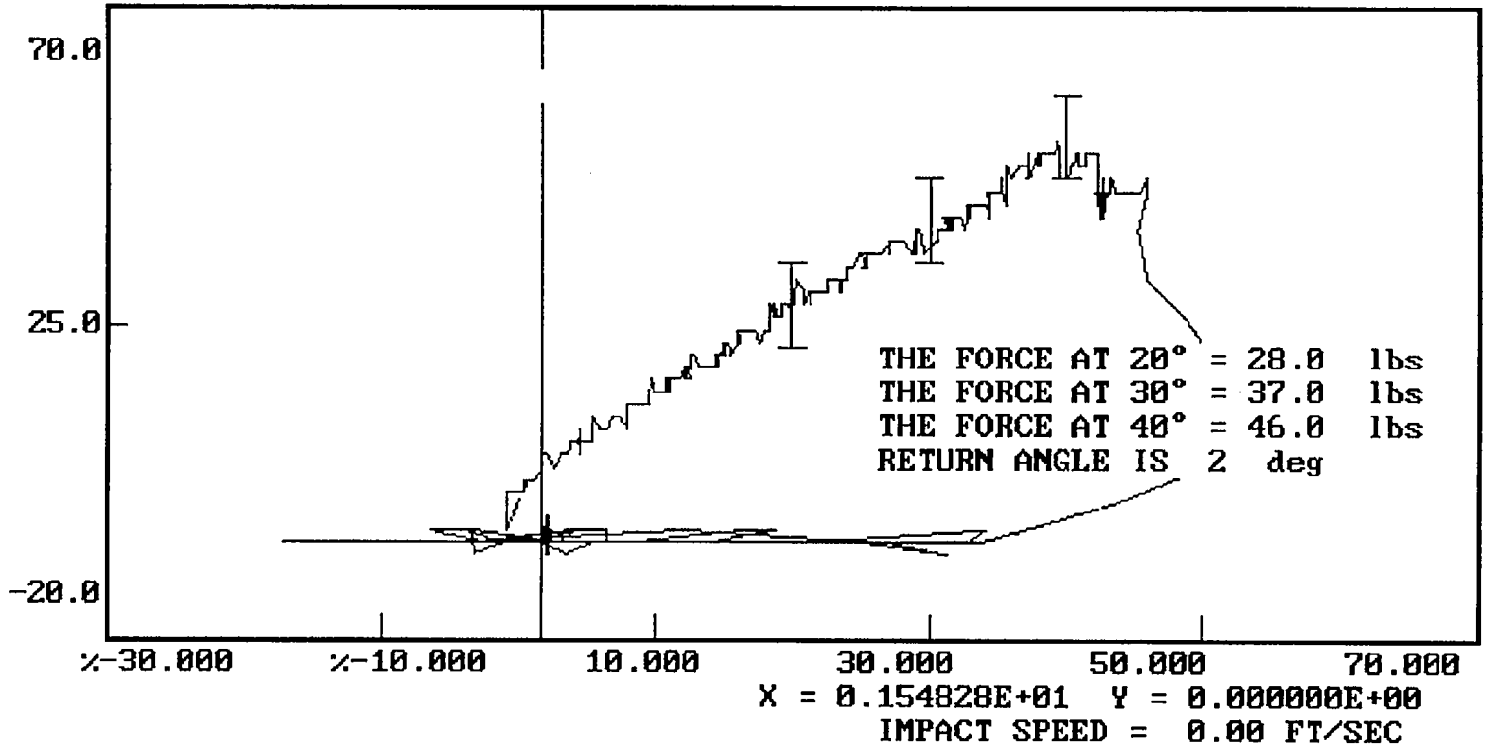
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	28
FORCE @ 30°	34 - 46 lbs	37
FORCE @ 40°	46 - 58 lbs	46
RETURN ANGLE	12° maximum	2°

TEST MEETS SPECIFICATIONS

TECHNICIAN 

APPROVED BY 

DUMMY CALIBRATION - LUMBAR FLEXION 11-27-1996 14:19
DUMMY # 271
FORCE (LBS) VS. TORSO ROTATION (DEGREES)



POST-TEST CERTIFICATION DATA

Rear Dummy Serial Number: 272

Calibration Test Results Summary

Dummy Serial Number: 272

Post-Test Calibration

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

SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

DUMMY NO.: 272 DATE OF VERIFICATION: November 27, 1996

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

MEASUREMENTS BY: _____

APPROVED BY: _____

MGA RESEARCH CORPORATION

THORAX IMPACT TEST

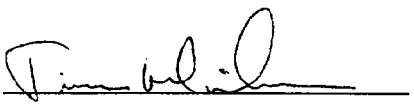
SIDE IMPACT DUMMY (SID)

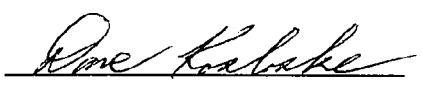
DATE: November 27, 1996

DUMMY NUMBER: 272 TEST NUMBER: D961932

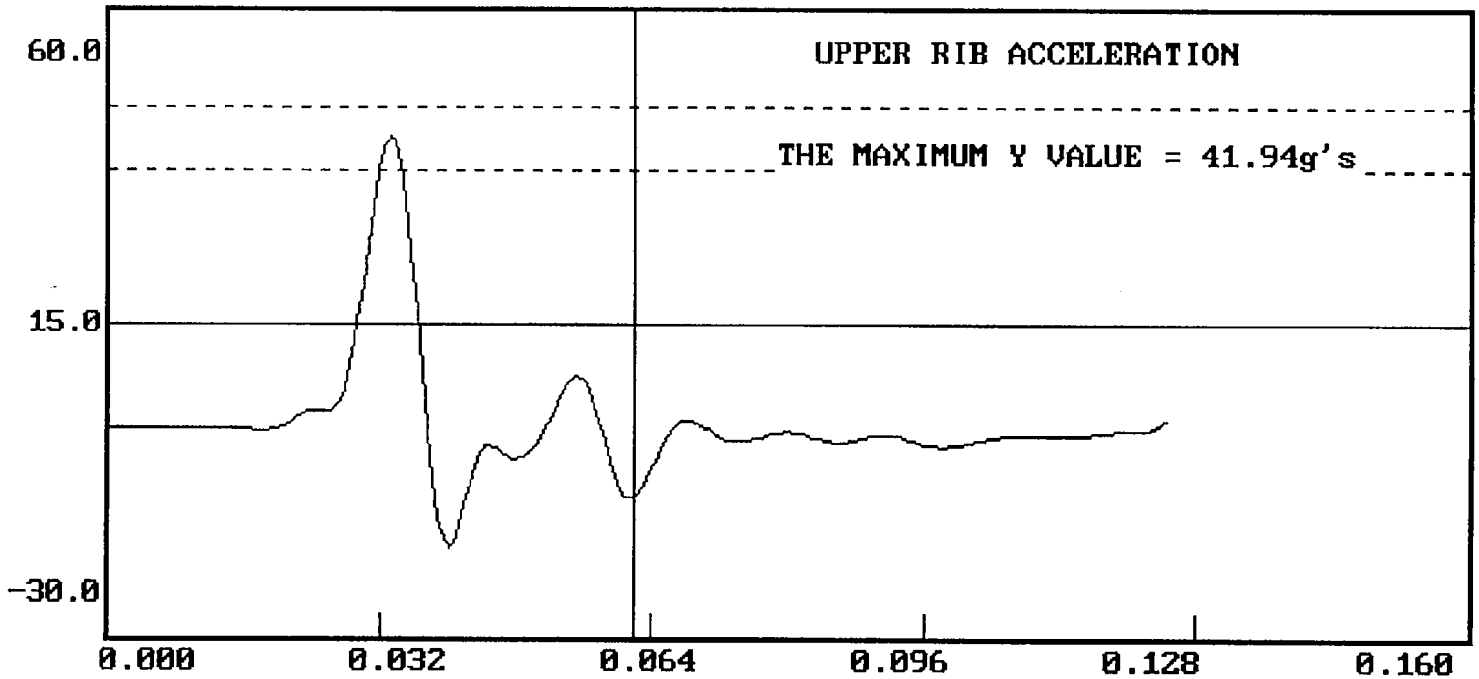
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
PROBE SPEED	13.8 - 14.2 fps	13.9
UPPER RIB	37 - 46 g's	42
LOWER RIB	37 - 46 g's	41
LOWER SPINE	15 - 22 g's	21

TEST MEETS SPECIFICATIONS

TECHNICIAN 

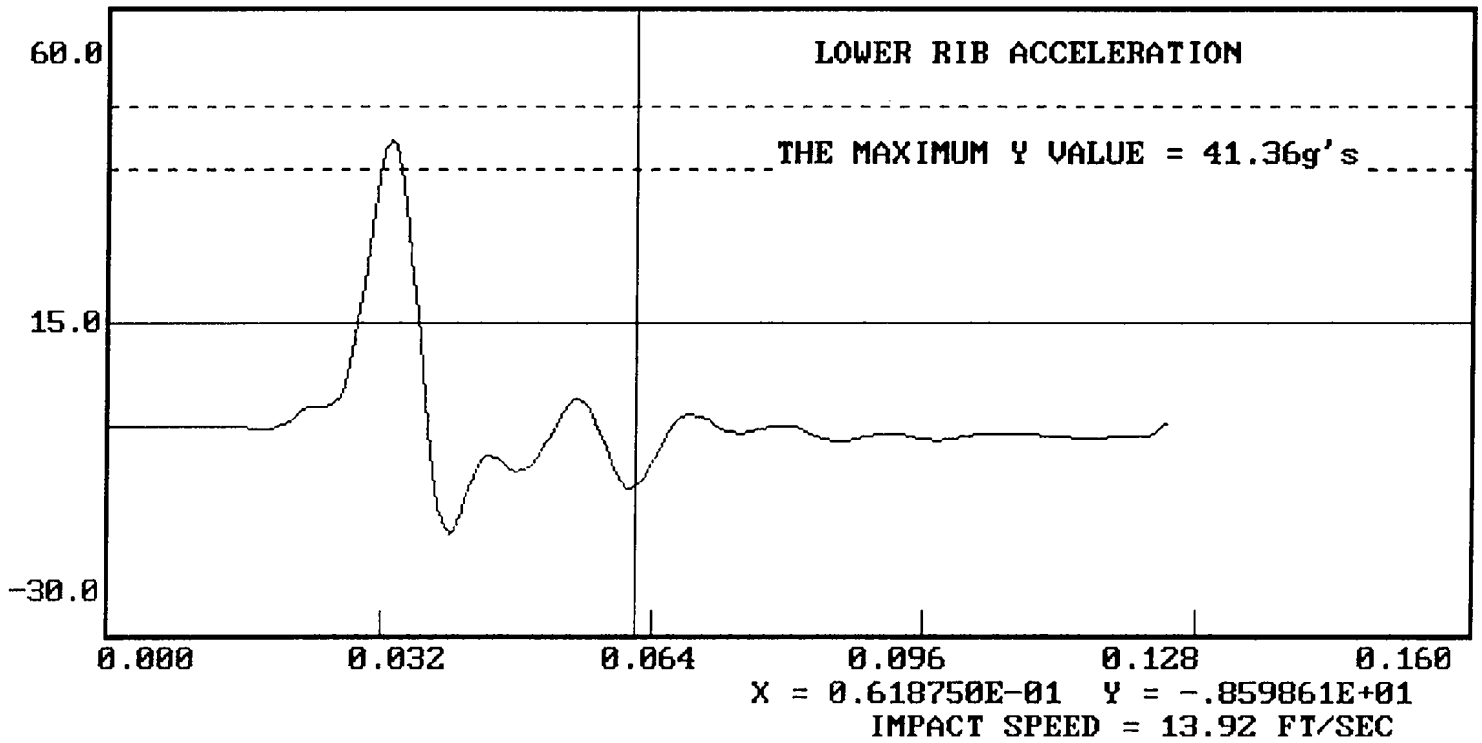
APPROVED BY 

DUMMY CALIBRATION - THORAX IMPACT 11-27-1996 12:04
DUMMY # 272
ACCELERATION (G'S) VS. TIME ((SECONDS))



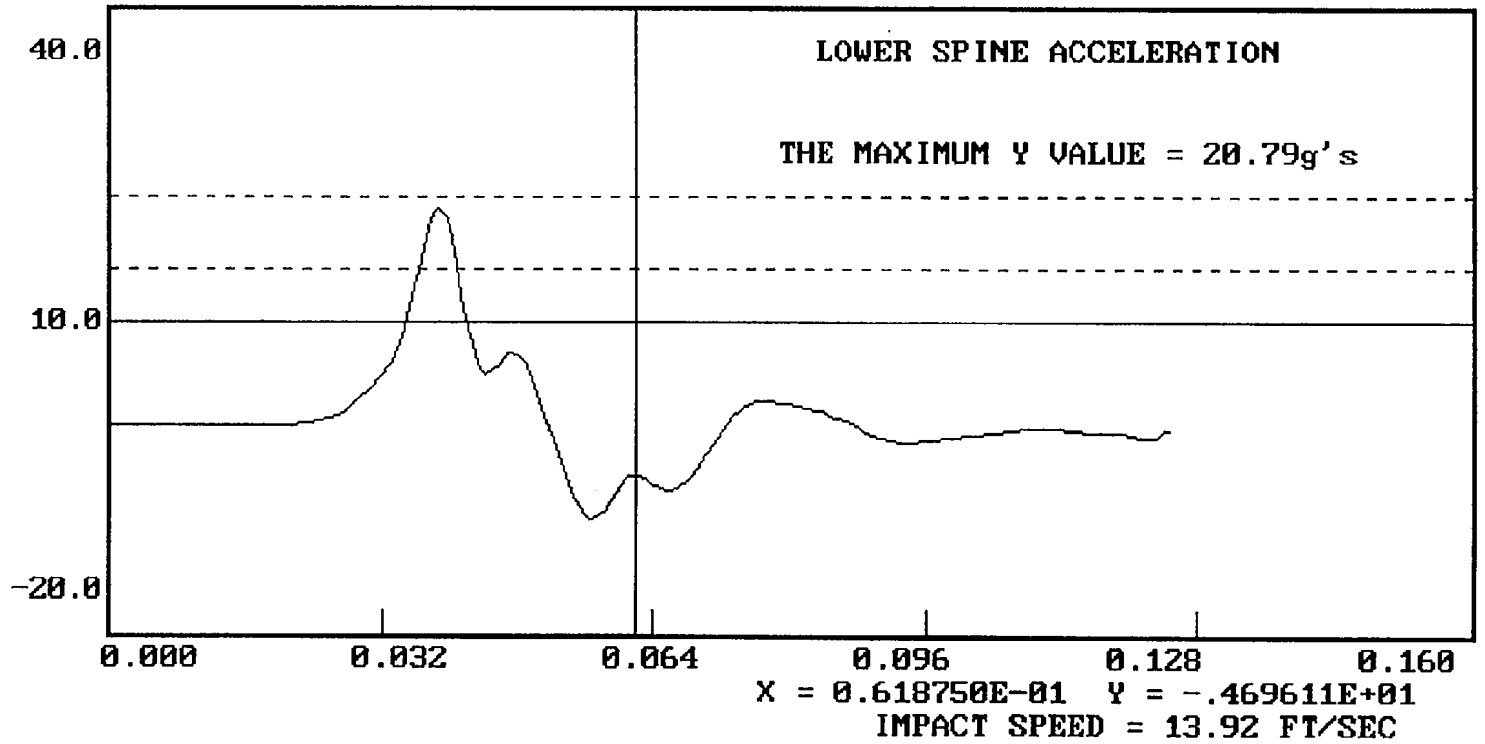
X = 0.618750E-01 Y = -.979611E+01
IMPACT SPEED = 13.92 FT/SEC

DUMMY CALIBRATION - THORAX IMPACT 11-27-1996 12:04
DUMMY # 272
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.859861E+01
IMPACT SPEED = 13.92 FT/SEC

DUMMY CALIBRATION - THORAX IMPACT 11-27-1996 12:04
DUMMY # 272
ACCELERATION (G'S) VS. TIME ((SECONDS))



X = 0.618750E-01 Y = -.469611E+01
IMPACT SPEED = 13.92 FT/SEC

MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SIDE IMPACT DUMMY (SID)

DATE: November 27, 1996

DUMMY NUMBER: 272 TEST NUMBER: D961933

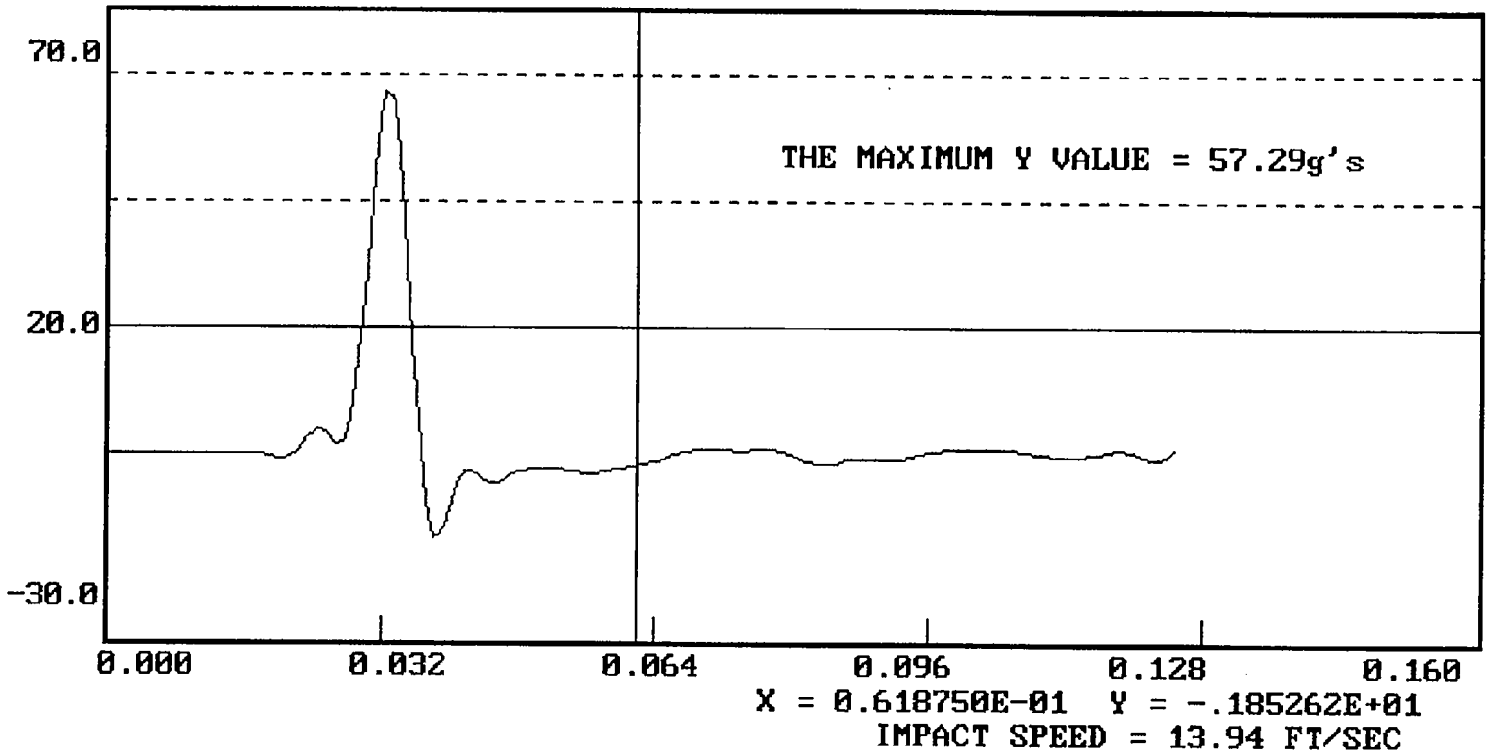
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
PROBE SPEED	13.8 - 14.2 f/s	13.9
PELVIS ACCELERATION	40 - 60 g's	57

TEST MEETS SPECIFICATIONS

TECHNICIAN

APPROVED BY

DUMMY CALIBRATION - PELVIS IMPACT 11-27-1996 12:17
DUMMY # 272
ACCELERATION (G'S) VS. TIME ((SECONDS))



MGA RESEARCH CORPORATION

ABDOMINAL COMPRESSION TEST
(PRELOAD = 10 LBS)

SIDE IMPACT DUMMY (SID)

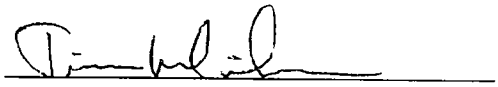
DATE: November 27, 1996

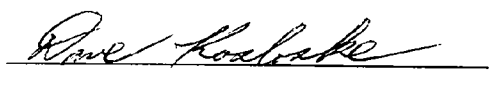
DUMMY NUMBER: 272

TEST NUMBER: D961934

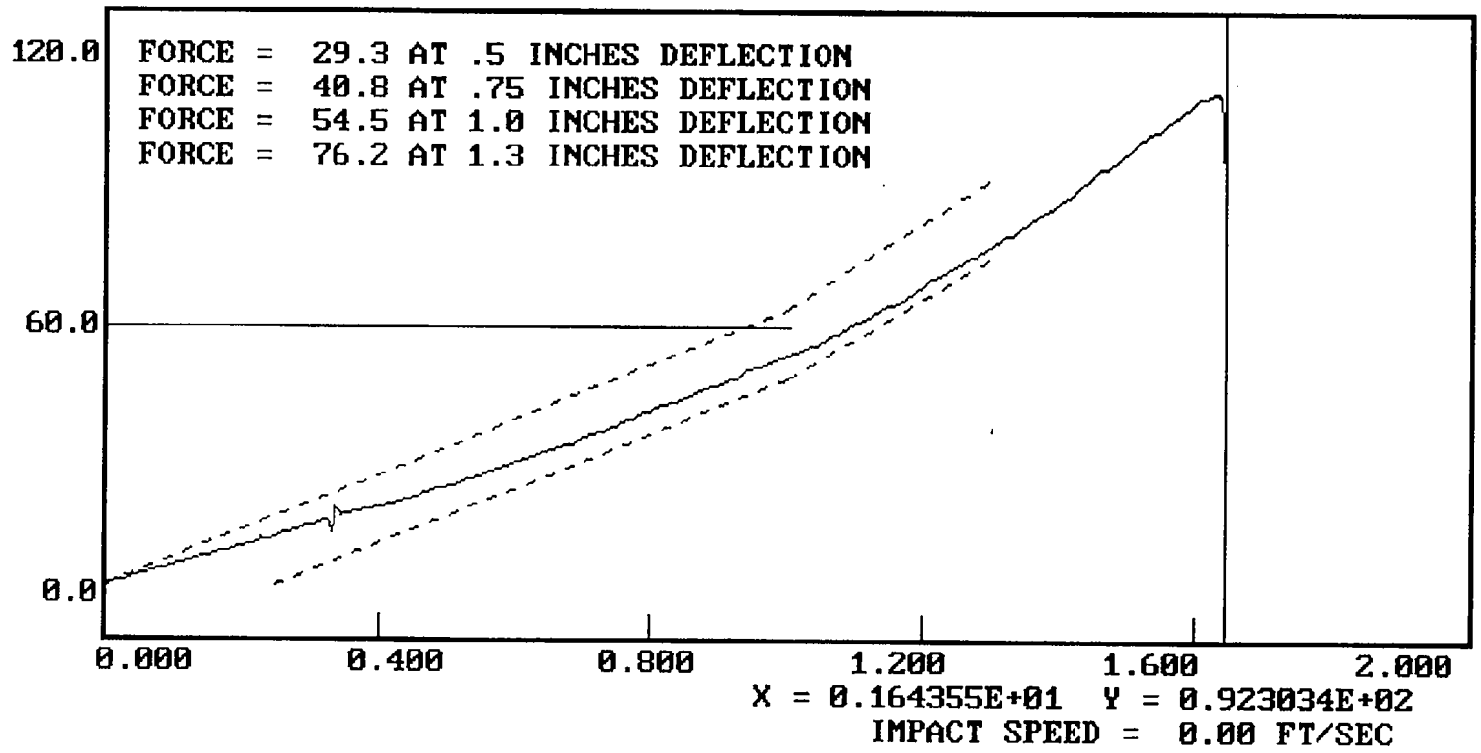
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
FORCE @ 0.5 in	23.3 - 36.5 lbs	29.3
FORCE @ 0.75 in	36.7 - 49.8 lbs	40.8
FORCE @ 1.0 in	50 - 63 lbs	55
FORCE @ 1.3 in	73 - 88 lbs	76

TEST MEETS SPECIFICATIONS

TECHNICIAN 

APPROVED BY 

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



MGA RESEARCH CORPORATION

LUMBAR FLEXION TEST

SIDE IMPACT DUMMY (SID)

DATE: November 27, 1996

DUMMY NUMBER: 272 TEST NUMBER: D961935

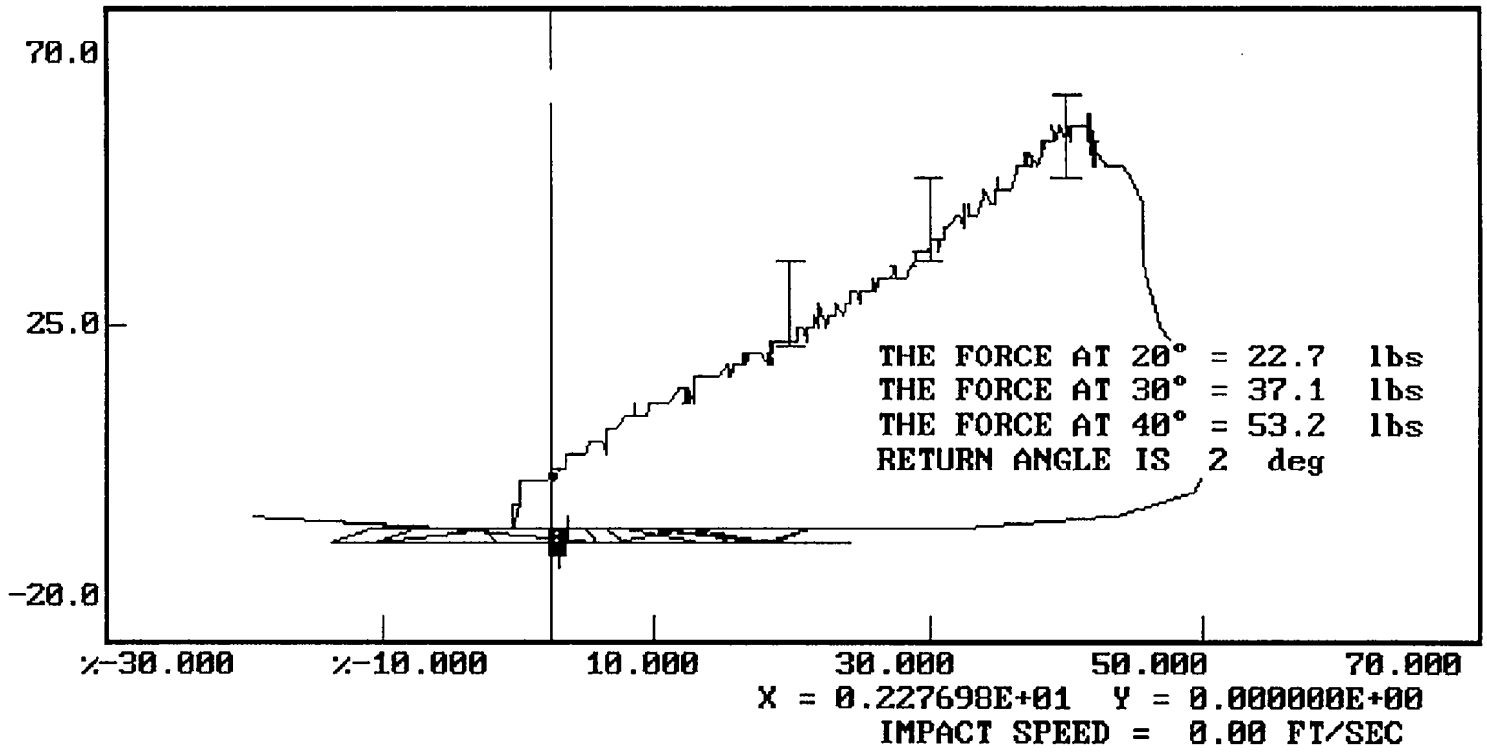
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	66 - 78° F	70°
RELATIVE HUMIDITY	10 - 70%	20%
FORCE @ 0°	0 - 6 lbs	0
FORCE @ 20°	22 - 34 lbs	23
FORCE @ 30°	34 - 46 lbs	37
FORCE @ 40°	46 - 58 lbs	53
RETURN ANGLE	12° maximum	2°

TEST MEETS SPECIFICATIONS

TECHNICIAN _____

APPROVED BY _____

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



POST-TEST DRIVER DUMMY INSPECTION CHECKLIST

Type: Side Impact Dummy

Serial Number: 271

Inspected By: Tim Michnay

Date: November 27, 1996

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

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

POST-TEST PASSENGER DUMMY INSPECTION CHECKLIST

Type: Side Impact Dummy

Serial Number: 272

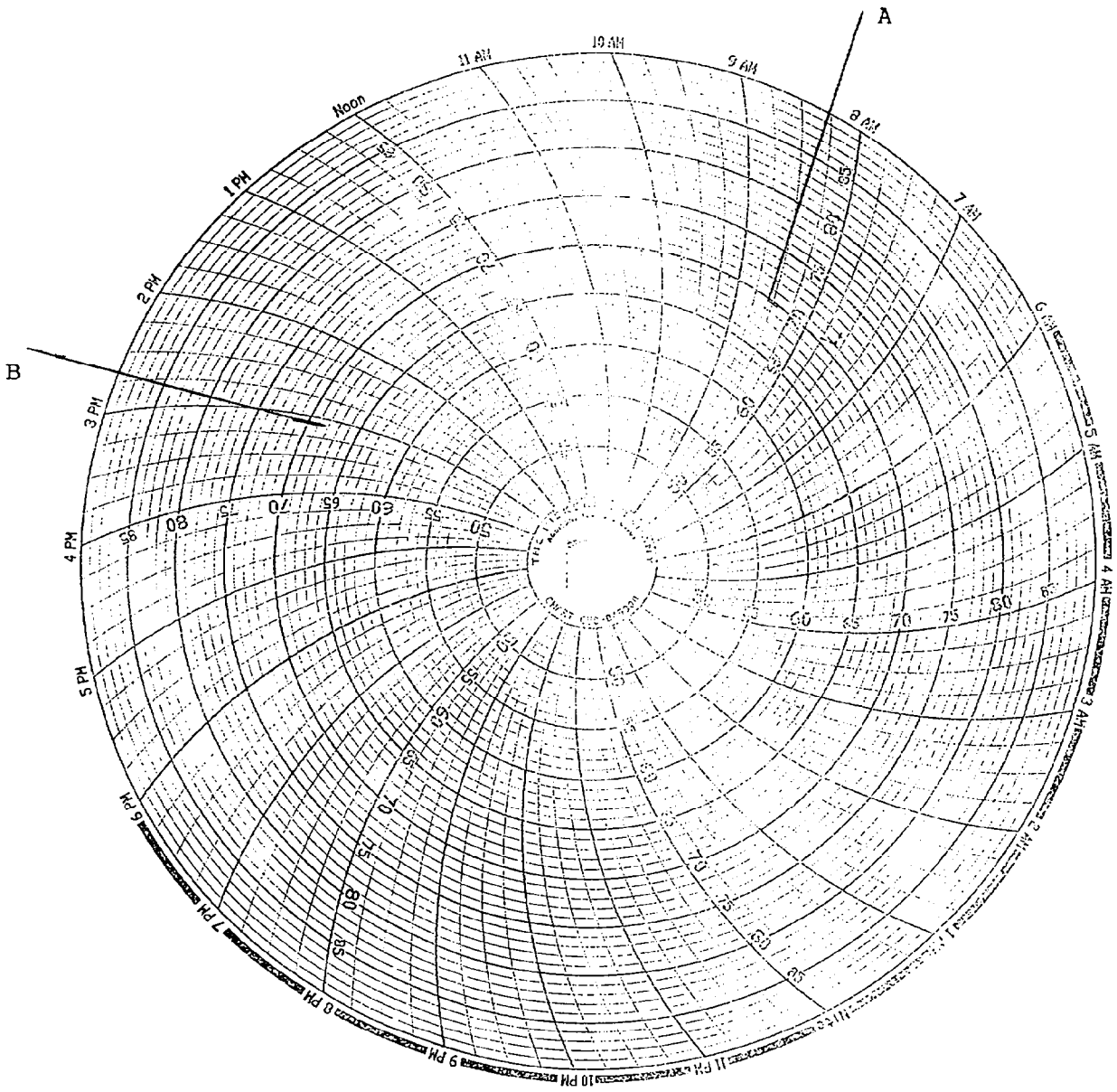
Inspected By: Tim Michnay

Date: November 27, 1996

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

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

VEHICLE AND DUMMY TEMPERATURE



A = Dummies installed in vehicle
B = Test conducted

APPENDIX D

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

DUMMY AND VEHICLE CALIBRATION DATA

INSTRUMENTS FOR RIGHT FRONT PASSENGER DUMMY NO. 271

	RIGHT FRONT PASSENGER		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Upper Rib Y	AP2A4	Endevco	September 16, 1996
Lower Rib Y	AP1B3	Endevco	September 16, 1996
Lower Spine Y	ANAP1	Endevco	September 16, 1996
Pelvis Y	AHTC3	Endevco	September 16, 1996
Upper Rib Redundant Y	AP2D8	Endevco	September 16, 1996
Lower Rib Redundant Y	AP1C6	Endevco	September 16, 1996
Lower Spine Redundant Y	ANAT6	Endevco	September 16, 1996
Pelvis Redundant Y	AGP53	Endevco	September 16, 1996

INSTRUMENTS FOR RIGHT REAR PASSENGER DUMMY NO. 272

	RIGHT REAR PASSENGER		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Upper Rib Y	ALFJ7	Endevco	July 12, 1996
Lower Rib Y	APYN0	Endevco	June 07, 1996
Lower Spine Y	AP0G2	Endevco	July 12, 1996
Pelvis Y	APY15	Endevco	September 16, 1996
Upper Rib Redundant Y	ALDD6	Endevco	July 12, 1996
Lower Rib Redundant Y	APYN3	Endevco	June 07, 1996
Lower Spine Redundant Y	AP138	Endevco	July 12, 1996
Pelvis Redundant Y	APY16	Endevco	September 16, 1996

VEHICLE INSTRUMENT CALIBRATION

	VEHICLE AND MDB ACCELEROMETERS		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Moving Barrier CG X	C14-Z10	Entran	July 12, 1996
Moving Barrier CG Y	B14-R01	Entran	July 15, 1996
Moving Barrier CG Z	B14-R16	Entran	July 11, 1996
Moving Barrier Rear Axle X	B14-R03	Entran	July 11, 1996
Moving Barrier Rear Axle Y	A10-G01	Entran	June 04, 1996
Right Mid A-Post Y	F12-X10	Entran	October 02, 1996
Right Lower A-Post Y	B28-B01	Entran	July 15, 1996
Right Mid B-Post Y	B02-G16	Entran	June 04, 1996
Right Lower B-Post Y	B02-G06	Entran	October 02, 1996
Rear Floorpan Above Axle X	A15-Z16	Entran	June 04, 1996
Rear Floorpan Above Axle Y	C14-Z01	Entran	July 11, 1996
Rear Floorpan Above Axle Z	J23-E04	Entran	July 11, 1996
Right Front Passenger Seat Track Y	C14-Z12	Entran	July 11, 1996
Left Side Sill at Front Seat X	D06-A09	Entran	July 03, 1996
Left Side Sill at Front Seat Y	D05-R01	Entran	July 03, 1996
Left Side Sill at Front Seat Z	C14-Z07	Entran	July 11, 1996
Left Side Sill at Rear Seat X	A09-G06	Entran	July 11, 1996
Left Side Sill at Rear Seat Y	A09-G01	Entran	July 15, 1996
Left Side Sill at Rear Seat Z	L15-G03	Entran	October 02, 1996
Right Side Sill at Front Seat Y	A10-G09	Entran	July 15, 1996

VEHICLE INSTRUMENT CALIBRATION

	VEHICLE AND MDB ACCELEROMETERS		
	SERIAL NO	MANUFACTURER	CALIBRATION DATE
Right Side Sill at Rear Seat Y	H16-X11	Entran	June 04, 1996
Left Rear Occupant Compartment Y	L14-D08	Entran	July 03, 1996
Vehicle CG X	A09-G08	Entran	July 11, 1996
Vehicle CG Y	J06-D23	Entran	July 03, 1996
Vehicle CG Z	D05-R14	Entran	July 11, 1996

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