3288

REPORT NUMBER KAR20003-03

NEW CAR ASSESSMENT PROGRAM
SIDE IMPACT TEST

GENERAL MOTORS CORPORATION
2000 CHEVROLET
S-10 PICKUP
NHTSA NUMBER: MY0107

PREPARED BY:
KARCO ENGINEERING
9270 HOLLY ROAD
ADELANTO, CALIFORNIA 92301

MARCH 11, 2000

FINAL REPORT

PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
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This final test report was prepared for the U.S. Department of Transportation, National Highway Traffic Safety Administration, in response to Contract Number DTNH22-99-D-02041.

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FINAL REPORT ACCEPTED BY:

_____
Manager, Side Impact NCAP

_____
Date of Acceptance

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15. Supplementary Notes

16. Abstract

A 55/28 km/h 90° Moving Deformable Barrier Side Impact NCAP Test was conducted on the subject 2000 Chevrolet S-10 Pickup in accordance with the specifications of the Office of Crash Worthiness Standards Test Procedure for the generation of consumer information on vehicle side crash protection. The test was conducted at KARCO Engineering laboratories in Adelanto, California, on January 26, 2000.

The impact velocity of the Moving Deformable Barrier was 62.6 km/h, and the ambient temperature at the struck side (driver's) of the vehicle was 11.7 C. The target vehicle's maximum post test static crush was 410 mm located at level 1. The test vehicle's occupant performance is as follows:

Measurement Description	Driver SID	Passenger SID
Left Upper Rib (LUR) G's	58	N/A
Left Lower Rib (LLR) G's	68	N/A
Lower Spine (T_{12}) G's	69	N/A
Thoracic Trauma Index (TTI) G's	69	N/A
Pelvis (PEV) G's	77	N/A

17. Key Words	18. Distribution Statement
New Car Assessment Program (NCAP) Side Impact Moving Deformable Barrier (MDB) Side Impact Dummy (SID)	Copies of this report are available from: National Highway Traffic Safety Admin. NHTSA Technical Reference Division 400 Seventh St., SW, Room 5108 Washington, DC 20590

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TABLE OF CONTENTS

SECTION 1

PURPOSE and TEST PROCEDURE

1.1 PURPOSE

This Side Impact NCAP test is conducted as part of the FY' 2000 test program sponsored by the National Highway Traffic Safety Administration (NHTSA), under contract No. DTNH22-99-D-02041. The purpose of this test is to generate comparative side impact data in a 2000 Chevrolet S-10 Pickup manufactured by General Motors Corporation.

1.2 TEST PROCEDURE

The side impact test was conducted in accordance with the current National Highway Traffic Safety Administration (NHTSA), Office of Crashworthiness Standards (OCS), laboratory test procedure NCAP Side Impact Testing, dated July 1997 and the corresponding KARCO Engineering Test Procedure KTP-214D, dated November 18, 1998. The procedures for receiving, inspection, testing, and reporting of test results are described in the test procedures and are not repeated in this report.

SECTION 2

SUMMARY OF SIDE IMPACT TEST

2.1 SUMMARY OF SIDE IMPACT NCAP TEST

A model year 2000 Chevrolet S-10 Pickup was impacted on the left (driver's) side by a Moving Deformable Barrier (MDB) which was moving forward in a 27° crabbed position to the tow road guidance system at a velocity of 62.6 km/h. The specified impact velocity range is from 61.1 to 62.7 km/h. The test (target) vehicle was stationary and positioned 63° to the line of forward motion. The weight of the vehicle as tested was 1598 kg. and the test weight of the MDB was 1361 kg. The test was conducted at KARCO Engineering in Adelanto, California, on January 26, 2000.

One (1) real-time motion picture camera and ten (10) high-speed motion picture cameras were used to document the impact event. The pre-test and post-test conditions were recorded by one (1) real-time motion picture camera. Camera locations and pertinent camera information is documented in the data sheets. Pre- and post-test photographs of the vehicle and SID can be found in Appendix A. One 50th percentile adult male Side Impact Dummy's (SID) was placed in the driver's designated seating position according to the test procedure. The SID is instrumented with contact switches on the pelvis and thorax, and eleven accelerometers in the following locations:

- Left Upper Rib (LUR) uni-axial accelerometer (Y-axis primary and redundant)
- Left Lower Rib (LLR) uni-axial accelerometer (Y-axis primary and redundant)
- Lower Thoracic Spine (T12) uni-axial accelerometer (Y-axis primary and redundant)
- Pelvic (PEV) section uni-axial accelerometer (Y-axis primary and redundant)
- Head Center of Gravity (CG) tri-axial accelerometers (X, Y, and Z axes)

The test vehicle was instrumented with twenty-five (25) structural accelerometers and the MDB was instrumented with five (5) accelerometers and a one (1) contact switch on the right bumper to compare left side to right side bumper impact timing. All data channels were recorded with a fully self contained on-board Test Data Acquisition System (TDAS). The data was digitally sampled at 10,000 samples per second and processed per Appendix V of the Test Procedure.

2.2 GENERAL COMMENTS

The test vehicle sustained a maximum static crush of 410 mm at level 1, 1650 mm rearward of the left vertical impact point. The driver SID, Serial No. 056, was calibrated just prior to this test. The SID injury criteria is summarized as follows:

Measurement	Units	Driver	Passenger
Thoracic Trauma Index (TTI)	G's	69	N/A
Peak Pelvic G's (PEV)	G's	77	N/A

Tests summaries and post-test observations are presented in Section 3. The vehicle, camera, and occupant measurements are presented in Section 4. Appendix A contains the still photograph prints. Appendix B contains the driver SID, vehicle, and MDB response data traces. Appendix C contains the SID's Configuration and performance verification data. Appendix D contains the test equipment information.

SECTION 3

SIDE IMPACT DUMMY (SID) AND VEHICLE TEST DATA

Test Vehicle: 2000 Chevrolet S-10 Pickup NHTSA No. MY0107

Test Program: 55/28 km/h 90° Side Impact NCAP Test Date: 1/26/00

CONVERSION FACTORS USED IN THIS REPORT*

Quantity	Typical Application	Std Units	Metric Unit	Multiply By
Mass	Vehicle Weight	lb	kg	0.4536
Linear Velocity	Impact Velocity	mile/h	km/h	1.609
Length or Distance	Measurements	in	mm	25.4
Volume	Fuel Systems	gal	liter	3.785
Volume	Small Fluids	oz	mL	29.573
Pressure	Tire Pressures	lbf/in^2	kPa	7.0
Volume	Liquid	gal	liter	3.785
Temperature	General Use	°F	°C	=(tf -32)/1.8
Force	Dynamic Forces	lbf	N	4.448
Moment	Torque	lbf/ft	Nm	1.355

* Based on the Recommended Practice in SAE J916, May 85

DATA SHEET NO. 1
GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2000 Chevrolet S-10 Pickup NHTSA No.: MY0107

Test Program: 55/28 km/h 90° Side Impact NCAP Test Date: 1/26/2000

TEST VEHICLE INFORMATION

Make	Chevrolet
Model	S-10
Body Style	Pickup
NHTSA No.	MY0107
VIN	1GCCS1449YK185367
Color	White
Delivery Date	1/12/2000
Odometer Reading (mile)	64
Dealer	Crest Chevrolet
Transmission	5-Speed Manual
Final Drive	Rear
Number of Cylinders	4
Engine Displacement (L)	2.2
Engine Placement	Longitudinal

TEST VEHICLE OPTIONS

Driver Airbag	Yes
Passenger Airbag	Yes
Power Windows	No
Power Steering	Yes
Power Door Locks	No
Tilt Wheel	No
Air Conditioning	Yes
Power Brakes	Yes
Disc Brakes, Front	Yes
Disc Brakes, Rear	No
Anti-lock Brakes	Yes
AM/FM/Cassette	Yes
Anti-Theft System	No
Cruise Control	No

DATA FROM CERTIFICATION LABEL

Manufactured By	General Motors Corporation
Date of Manufacture	December-99

GVWR (kg)	1905
GAWR Front (kg)	1134
GAWR Rear (kg)	1043

DATA FROM TIRE PLACARD

Measured Parameter	Front	Rear
Maximum Tire Pressure (kPa)	245	245
Cold Pressure (kPa)	245	245
Recommend Tire Size	P205/75/R15	P205/75/R15
Tire Size on Vehicle	P205/75/R15	P205/75/R15
Tire Manufacturer	UniRoyal	UniRoyal

Measured Parameter	Front	Rear	Third	Total
Type of Seats	Bench	Bench	None	
Number of Occupants	3	0	0	3
Capacity Wt. (VCW) (kg)				518
Cargo Weight (RCLW) (kg)				136

DATA SHEET NO. 1...(continued)
GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2000 Chevrolet S-10 Pickup NHTSA No.: MY0107

Test Program: 55/28 km/h 90° Side Impact NCAP Test Date: 1/26/2000

TEST VEHICLE WEIGHTS

	Units	As Delivered *(UVW)*			As Tested *(ATW)*		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	413	299		439	382	
Right	kg	395	280		409	368	
Ratio	%	58.3	41.7		53.1	46.9	
Totals	kg	808	579	1387	848	750	1598

TARGET TEST WEIGHT CALCULATION*

Measured Parameter	Units	Value
Total Delivered Weight *(UVW)*	kg	1387
Weight of 1 P572F Side Impact Dummies	kg	81
Rated Cargo/Luggage Weight *(RCLW)*	kg	136
Calculated Vehicle Target Weight *(TVTW)*	kg	1604

*Actual As Tested Weight (ATW) will be TVTW -5/-10 kg

TEST VEHICLE ATTITUDES AND CG

	Units	LF	RF	LR	RR	CG (aft of front axle)
As Delivered	mm	781	800	785	792	1150
As Tested	mm	777	794	756	767	1293
Fully Loaded	mm	772	798	757	770	

GENERAL TEST VEHICLE DATA

Measurement Description	Units	Value
Test Vehicle Wheel base	mm	2755
Total Vehicle Length at Left Side	mm	3590
Total Vehicle Length at Centerline	mm	4810
Total Vehicle Length at Right Side	mm	3590
Weight of Ballast In Cargo Area	kg	97
Amount of Stoddard Solvent in Fuel Tank	Liters	65.1

TEST VEHICLE VERTICAL IMPACT LINE DATA

Measurement Description	Units	Value
Test Vehicle Wheel base	mm	2755
Target Impact Point Aft of Front Axle	mm	438
Actual Impact Point Aft of Front Axle	mm	421

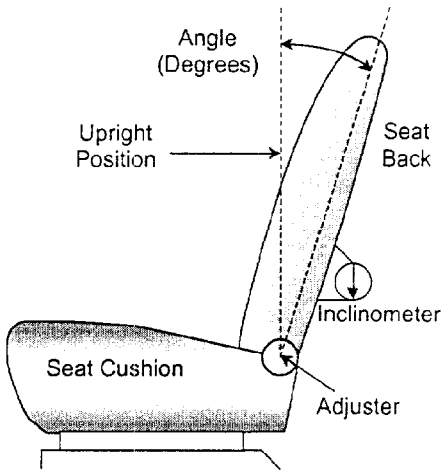
DATA SHEET NO. 1...(continued)
GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2000 Chevrolet S-10 Pickup NHTSA No. MY0107

Test Program: 55/28 km/h 90° Side Impact NCAP Test Date: 1/26/00

NOMINAL DESIGN RIDING POSITION

The driver's seat back is positioned to the manufacturers designated angle. The procedure for the seat is as follows: A slit is cut into fabric of the seat at the outboard edge, approximately 10-13 inches above the pivot point to expose the frame of the seat. An inclinometer is firmly placed against the flat portion of the frame surface and the seat back is adjusted to the manufacturers designated angle. The rear passenger seat is fixed; no adjustments can be made.



FRONT SEAT ASSEMBLY

Driver seat back angle: 23° with a seated dummy

Passenger seat back angle: No Rear Seat

SEAT FORE/AFT POSITIONS

The driver's seat is electronically operated and the rear passenger seat has no adjustments. The fore/aft is set to the middle position for the driver's seat. The first detent is numbered "1".

Driver seat fore/aft total travel: 21 Seat Positions

Passenger seat fore/aft total travel: No Rear Seat

Driver seat fore/aft position: Seat Set At The 11th Detent

Passenger seat fore/aft position: No Rear Seat

SEAT BELT UPPER ANCHORAGE

The test vehicle is equipped with a "D" ring anchorage for the driver's seat positions. There is 1 position or detent, with the uppermost position numbered "1". The driver's "D" ring anchorage is placed in position 1.

DATA SHEET NO. 1...(continued)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2000 Chevrolet S-10 Pickup NHTSA No. MY0107

Test Program: 55/28 km/h 90° Side Impact NCAP Test Date: 1/26/00

FUEL TANK CAPACITY DATA

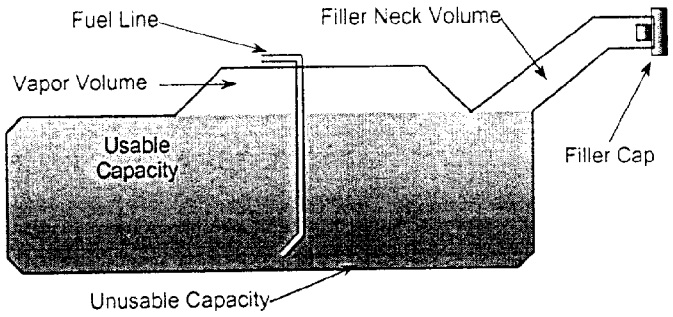
The "Usable Capacity" of the standard equipment fuel tank is: 70.0 liters

The "Usable Capacity" of any optional equipment fuel tank is: N/A liters

92-94% of "Usable Capacity" for certification to FMVSS 301 requirement: 64.4 to 65.8 liters

Actual amount of Stoddard solvent added to vehicle for certification test: 65.1 liters

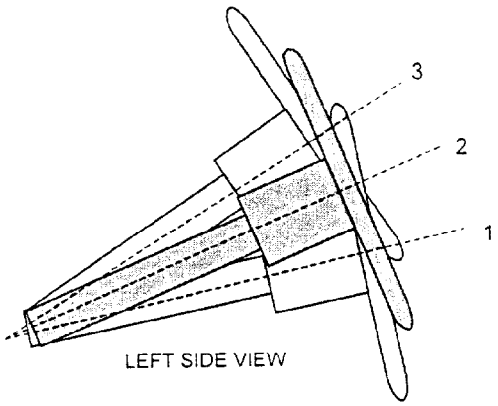
The test vehicle is equipped with an electric fuel pump. The fuel pump will operate for approximately three (3) seconds with the ignition in the "ON" position, after which the fuel pump automatically shuts off. The fuel filler door is located on the left rear fender.



VEHICLE FUEL TANK ASSEMBLY

STEERING COLUMN ADJUSTMENT

Steering wheel and column adjustments are made so that the steering wheel hub is at the geometric center of the locus it describes, when it is moved through its full range of motion. An aluminum plate is placed across the rim of the steering wheel, an inclinometer is placed onto the plate and the angle is measured. The tested vehicle has its steering column set at position 2 as indicated in the drawing at right and the angle below.



STEERING COLUMN ASSEMBLY

Lowermost, position 1: N/A°

Geometric center, position 2: 21°

Uppermost, position 3: N/A°

Note: Steering Wheel is fixed on this vehicle.

DATA SHEET NO. 2
TEST VEHICLE SUMMARY OF RESULTS

Test Vehicle: 2000 Chevrolet S-10 Pickup NHTSA No.: MY0107

Test Program: 55/28 km/h 90° Side Impact NCAP Test Date: 1/26/2000

TEST VEHICLE WEIGHTS

	Units	As Delivered *(UVW)*			As Tested *(ATW)*		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	413	299		439	382	
Right	kg	395	280		409	368	
Weight Ratio	%	58.3	41.7		53.1	46.9	
Totals	kg	808	579	1387	848	750	1598

MAXIMUM EXTERIOR STATIC CRUSH

Level	Measured Parameter	Units	Maximum Crush	Above Ground
Level 1	Sill Top Height	mm	410	355
Level 2	Occupant H-Point	mm	362	698
Level 3	Mid Door	mm	352	709
Level 4	Window Sill	mm	241	1036
Level 5	Window Top	mm	198	1516
N/A	Maximum Penetration	mm	410	709

INSTRUMENTATION

Driver SID Accelerometers	11
Passenger SID Accelerometers	11
Vehicle Structure Accelerometers	25
MDB Accelerometers	5
Total	52

16mm MOVIE COVERAGE

High Speed, Vehicle On-Board	3
High Speed, Off-Board	5
High Speed, MDB On-Board	2
Real Time, Panning	1
Total	11

DATA SHEET NO. 3
MOVING DEFORMABLE BARRIER (MDB) SUMMARY OF RESULTS

Test Vehicle: 2000 Chevrolet S-10 Pickup NHTSA No.: MY0107

Test Program: 55/28 km/h 90° Side Impact NCAP Test Date: 1/26/2000

MDB SPECIFICATIONS (mm)

Measurement Description	Length
Overall Width of Framework Carriage	1252
Overall Length Including Honeycomb Face	4115
Wheel base of Framework Carriage	2590
C.G. Location aft of Front Axle	1127

MDB WEIGHTS

	Units	Front Axle	Rear Axle	Total
Left	kg	384	308	
Right	kg	385	284	
Ratio	%	56.5	43.5	
Totals	kg	769	592	1361

SPEED AND IMPACT ANGLE DATA

Measured Parameter	Units	Requirement	Value
Trap No. 1 Velocity (Primary)	km/h	61.1 to 62.7	62.62
Trap No. 2 Velocity (Redn.)	km/h	61.1 to 62.7	62.79
MDB CL to Target Vehicle CL	degrees	88.5 to 91.5	89.5

MAXIMUM STATIC CRUSH OF HONEYCOMB FACE (mm)

Vertical Location			From Centerline		Max
Row	Description	Height	Distance	Direction	Crush
A	Center of Bumper	432	800	Left	192
B	Top of Bumper	533	800	Left	144
C	Mid Level	686	800	Right	149
D	Top of Stack	813	800	Left	199

MDB INSTRUMENTATION AND CAMERAS

Accelerometers	5
Contact Switches	2
High Speed Cameras	2

DATA SHEET NO. 4
POST TEST OBSERVATIONS

Test Vehicle: 2000 Chevrolet S-10 Pickup NHTSA No.: MY0107

Test Program: 55/28 km/h 90° Side Impact NCAP Test Date: 1/26/2000

TEST DUMMY INFORMATION AND CONTACT POINTS

Description	Front Seat SID	Rear Seat SID
Dummy Type / Serial No.	P572F, SID / No. 056	N/A
Head Contact	Side Window	N/A
Upper Torso Contact	Trim Panel	N/A
Lower Torso Contact	Door Panel	N/A
Left Knee Contact	Door Panel	N/A
Right Knee Contact	Left Knee	N/A

POST TEST DOOR OPENING AND SEAT TRACK INFORMATION

Description	Front	Rear
Left Side Door Opening	Remained closed, inoperable	N/A
Right Side Door Opening	Remained closed operable	N/A
Seat Movement	None	N/A
Seat Back Failure	None	N/A

POST TEST STRUCTURAL OBSERVATIONS

Critical Areas of Performance	Observations and Conclusions
Pillar Performance	Pillars pushed inward with no apparent failure
Sill Separation	No Apparent Visible Failure
Windshield Damage	Glazing Cracks on Struck Side Only
Window Damage	Left Front Windows Shattered During Impact
Other Notable Effects	No significant items to note.

AIR BAG DEPLOYMENT

	Driver	Front Passenger	Rear Passenger
Front	No	No	N/A
Side	N/A	N/A	N/A

Yes = Deployed No = No deployment N/A = Not Installed

MDB LEFT EDGE IMPACT POINT DATA

Measured Parameter	Units	Requirement	Value
Horizontal Offset	mm	+/- 50	17(Left)
Vertical Offset	mm	+/- 20	1(below

SECTION 4
OCCUPANT AND VEHICLE INFORMATION

DATA SHEET NO. 5

SID INJURY CRITERIA AND SENSOR DATA

Test Vehicle: 2000 Chevrolet S-10 Pickup NHTSA No.: MY0107

Test Program: 55/28 km/h 90° Side Impact NCAP Test Date: 01/26/00

THORAX AND PELVIC ACCELERATIONS, PRIMARY (FIR 100 Filter)

			Driver			
Location	Axis	Units	Max	Time	Min	Time
Upper Rib (LUR)	Y	G's	57.8	46.6	-28.2	40.2
Lower Rib (LLR)	Y	G's	67.7	25.8	-9.9	93.3
Lower Spine (T_{12})	Y	G's	69.4	30.4	-18.2	57.3
Pelvis (PEV)	Y	G's	76.6	34.8	-12.5	82.3

THORACIC TRAUMA INDEX (TTI) AND PELVIC ACCEL., PRIMARY (FIR 100 Filter)

	Driver			
Location	LLR	T_{12}	TTI(g)	PEV(g)
Primary Rib, Spine, and Pelvis	67.707	69.399	69	77

THORAX AND PELVIC ACCELERATIONS, REDUNDANT (FIR 100 Filter)

			Driver			
Location	Axis	Units	Max	Time	Min	Time
Upper Rib (LUR)	Y	G's	58.6	46.7	-28.0	40.3
Lower Rib (LLR)	Y	G's	67.2	25.8	-10.2	93.5
Lower Spine (T_{12})	Y	G's	70.1	30.5	-18.7	57.3
Pelvis (PEV)	Y	G's	76.9	34.9	-12.7	82.6

THORACIC TRAUMA INDEX (TTI) AND PELVIC ACCEL., REDUNDANT (FIR 100 Filter)

	Driver			
Location	LLR	T_{12}	TTI(g)	PEV(g)
Redundant Rib, Spine, and Pelvis	67.187	70.089	69	77

HEAD CG PEAK ACCELERATIONS (SAE CLASS 1000 Filter)

			Driver			
Location	Axis	Units	Max	Time	Min	Time
Head CG	X	G's	6.5	187.7	-16.2	102.8
Head CG	Y	G's	18.7	84.8	-7.7	32.7
Head CG	Z	G's	56.5	67.9	-8.9	30.2
Head CG Resultant	N/A	G's	57.3	67.9		

HEAD INJURY CRITERIA (HIC) (SAE CLASS 1000 Filter)

	Driver			
Location	HIC	T^1	T^2	Avg G's
Head CG	239.8	58.6	94.5	33.9

Positive Acceleration Polarities: (Conforms to SAE J211)

Longitudinal (X) = Forward
Lateral (Y) = Right
Vertical (Z) = Down

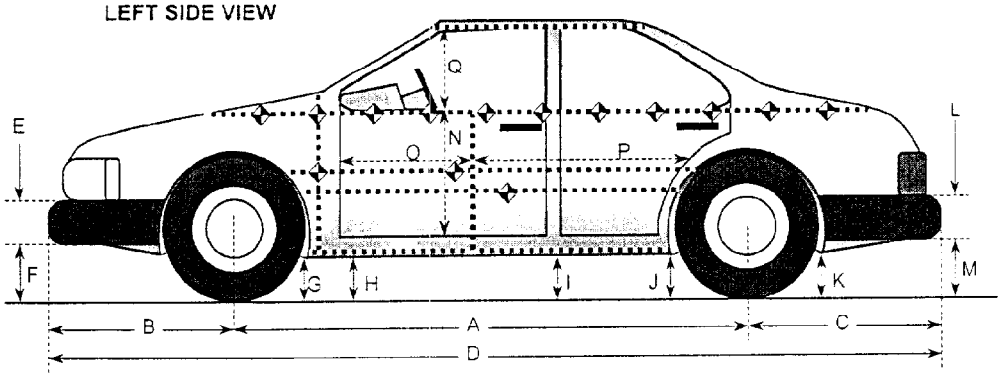
DATA SHEET NO. 6

VEHICLE PRE-TEST AND POST-TEST MEASUREMENTS

Test Vehicle: 2000 Chevrolet S-10 Pickup NHTSA No.: MY0107

Test Program: 55/28 km/h 90° Side Impact NCAP Test Date: 1/26/00

LEFT SIDE VIEW



All Measurements in mm

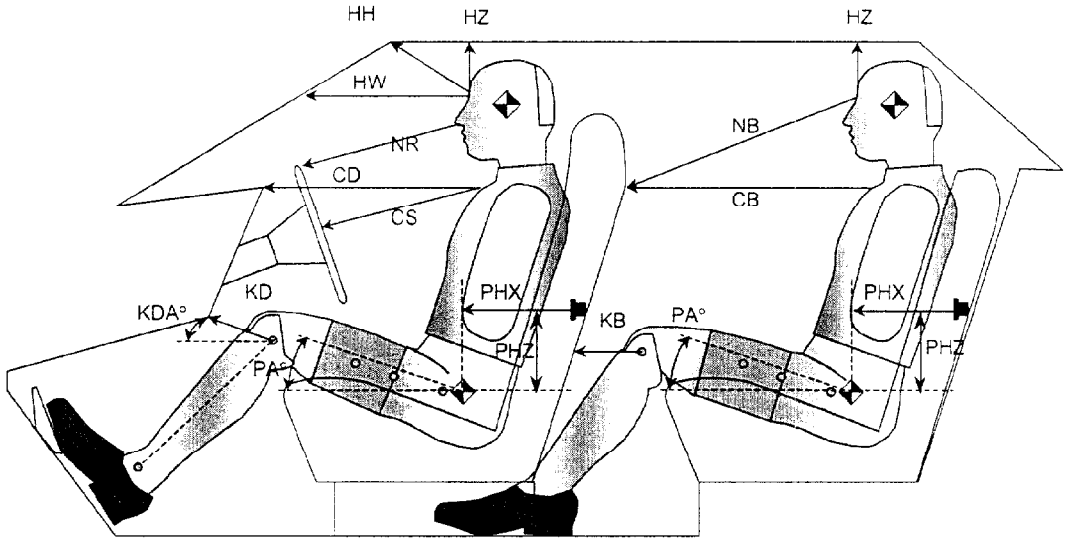
Code	Measurement Description	Pre-Test	Post-Test	Difference
A	Wheelbase	2755	2730	25
B	Front Axle To FSOV	875	870	5
C	Rear Axle to RSOV	1180	1170	10
D	Total Length at Centerline	4810	4814	-4
E	Front Bumper Thickness	310	310	0
F	Front Bumper Bottom to Ground	306	315	-9
G	Sill Height at Front Wheel Well	324	356	-32
H	Sill Height at Front Door Leading Edge	322	366	-44
I	Sill Height at "B" Pillar	310	347	-37
J1	Sill Height at Rear Wheel Well	300	391	-91
J2	Pinch Weld Height at Rear Wheel Well	300	391	-91
K	Sill Height aft of Rear Wheel Well	297	363	-66
L	Rear Bumper Thickness	200	200	0
M	Rear Bumper Bottom to Ground	333	420	-87
N	Sill Height to Window Bottom Sill	695	673	22
O	Front Door Leading Edge to Impact CL	790	785	5
P	Rear Door Trailing Edge to Impact CL	380	370	10
Q	Front Window Opening	450	465	-15
R	Right Side Length	3590	3585	5
S	Left Side Length	3590	3420	170
T	Vehicle Width at "B" Post	1695	1582	113

DATA SHEET NO. 7

SID LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2000 Chevrolet S-10 Pickup NHTSA No.: MY0107

Test Program: 55/28 km/h 90° Side Impact NCAP Test Date: 1/26/00



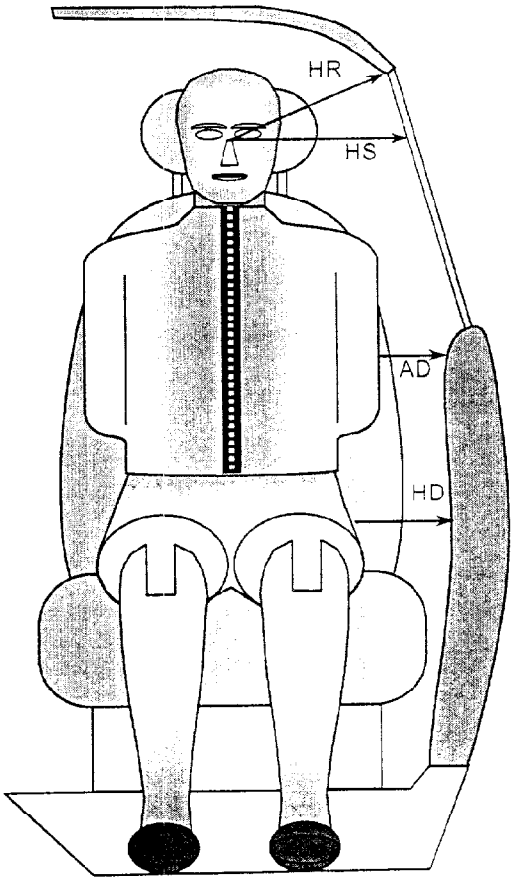
Driver Code	Pass. Code	Measurement Description	Driver		Passenger	
			Length(mm)	Angle(°)	Length(mm)	Angle(°)
HH	HH	Head to Header	555	19		
HW	HW	Head to Windshield	730			
HZ	HZ	Head to Roof	195	0	N/A	N/A
NR	NB	Nose to Rim/Nose to Seatback	471	12	N/A	N/A
CD	CB	Chest to Dash or Seatback	560	2	N/A	N/A
CS		Chest to Steering Wheel	340	0		
KDL	KBL	Left Knee to Dash or Seatback	152	19	N/A	
KDR	KBR	Right Knee to Dash or Seatback	160		N/A	
PA	PA	Pelvic Angle		23		N/A
PHX	PHX	H-Point to Striker (X-Axis)	320		N/A	
PHZ	PHZ	H-Point to Striker (Z-Axis)	78		N/A	

DATA SHEET NO. 8

SID LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2000 Chevrolet S-10 Pickup NHTSA No.: MY0107

Test Program: 55/28 km/h 90° Side Impact NCAP Test Date: 1/26/00



FRONT VIEW OF DUMMY

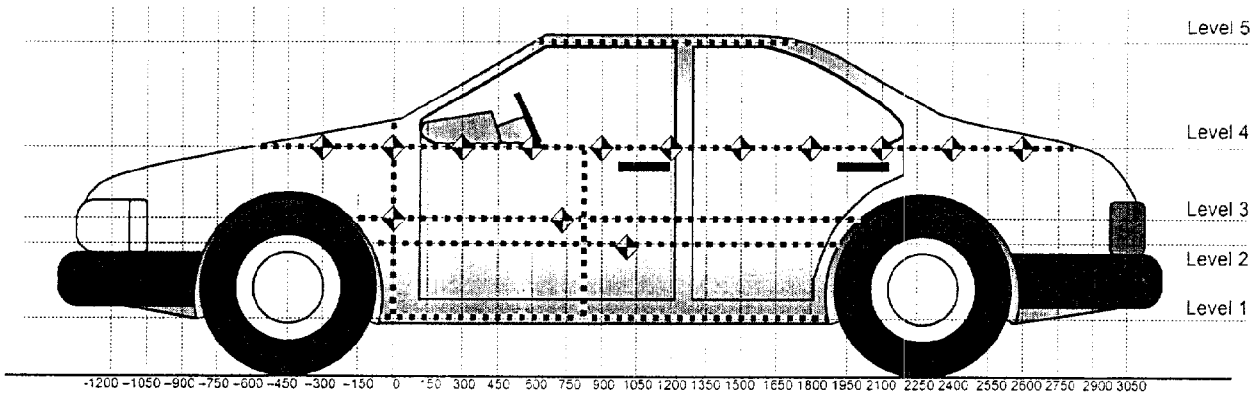
Code	Measurement Description	Units	Driver	Passenger
HR	Head to Side Header	mm	265	N/A
HS	Head to Side Window	mm	360	N/A
AD	Arm to Door	mm	116	N/A
HD	H-Point to Door	mm	166	N/A

DATA SHEET NO. 9

VEHICLE SIDE MEASUREMENTS

Test Vehicle: 2000 Chevrolet S-10 Pickup NHTSA No.: MY0107

Test Program: 55/28 km/h 90° Side Impact NCAP Test Date: 1/26/00



All Measurements Shown in mm

LEFT SIDE VIEW

Measurements are taken with vehicle in the as tested condition.
Measurments taken 900mm right of impact reference.
All measurements below in mm.

Level	Measurement Description	Height Above Ground
5	Window Top	1516
4	Window Sill	1036
3	Mid Door	709
2	Occupant H-Point	698
1	Sill Top	355

DATA SHEET NO. 10 - VEHICLE EXTERIOR CRUSH PROFILES

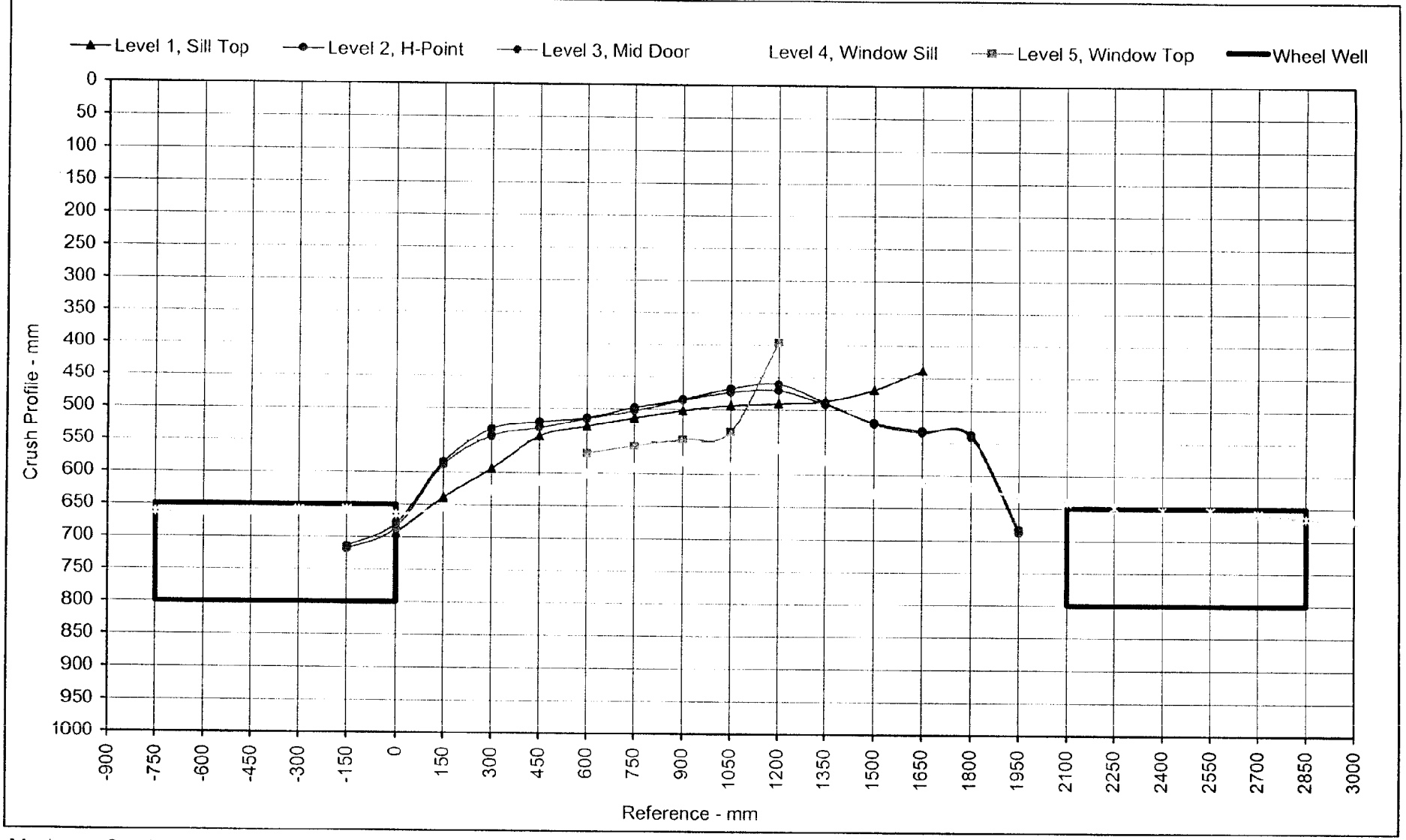
Test Vehicle: 2000 Chevrolet S-10 Pickup PROJECT No.: MY0107

Test Program: 55/28 km/h 90° Side Impact NCAP Test Date: 1/26/2000

	Pre-Test					Post-Test					Difference				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
-900															
-750				674					662					12	
-600				709					662					47	
-450				729					661					68	
-300				749					659					90	
-150		829	829	766			714	719	658			115	110	108	
0	834	810	810	777		694	679	686	665		140	131	124	112	
150	833	809	809	784		639	584	589	654		194	225	220	130	
300	834	809	809	786		594	532	543	627		240	277	266	159	
450	837	815	815	791		543	521	530	612		294	294	285	179	
600	837	818	818	791	582	527	514	516	601	569	310	304	302	190	13
750	839	820	820	793	594	514	498	503	591	557	325	322	317	202	37
900	842	821	821	799	591	502	485	487	580	546	340	336	334	219	45
1050	847	824	824	798	591	494	468	474	589	534	353	356	350	209	57
1200	847	823	823	801	594	491	461	471	560	396	356	362	352	241	198
1350	844	822	822	798		487	489	492	578		357	333	330	220	
1500	849	821	821	795		469	521	519	629		380	300	302	166	
1650	849	821	821	794		439	534	531	612		410	287	290	182	
1800		819	819	794			537	541	618			282	278	176	
1950		844	844	791			683	688	633			161	156	158	
2100				789					641					148	
2250				788					649					139	
2400				784					654					130	
2550				780					654					126	
2700				777					659					118	
2850				772					666					106	
3000				766					669					97	

Pre-Test and Post-Test dimensions are actual distance from centerline of test vehicle.

DATA SHEET NO. 10...(continued)



Maximum Crush, Level 1: 410 mm at 1650 mm

Maximum Crush, Level 2: 362 mm at 1200 mm

Maximum Crush, Level 3: 352 mm at 1200 mm

Maximum Crush, Level 4: mm at 1200 mm

Maximum Crush, Level 5: 102 mm at 1200 mm

Test Program: 55/28 km/h 90° Side Impact NCAP No.: MY0203

Test Vehicle: 2000 Chevrolet S-10 Pickup

Test Date: 01/26/00

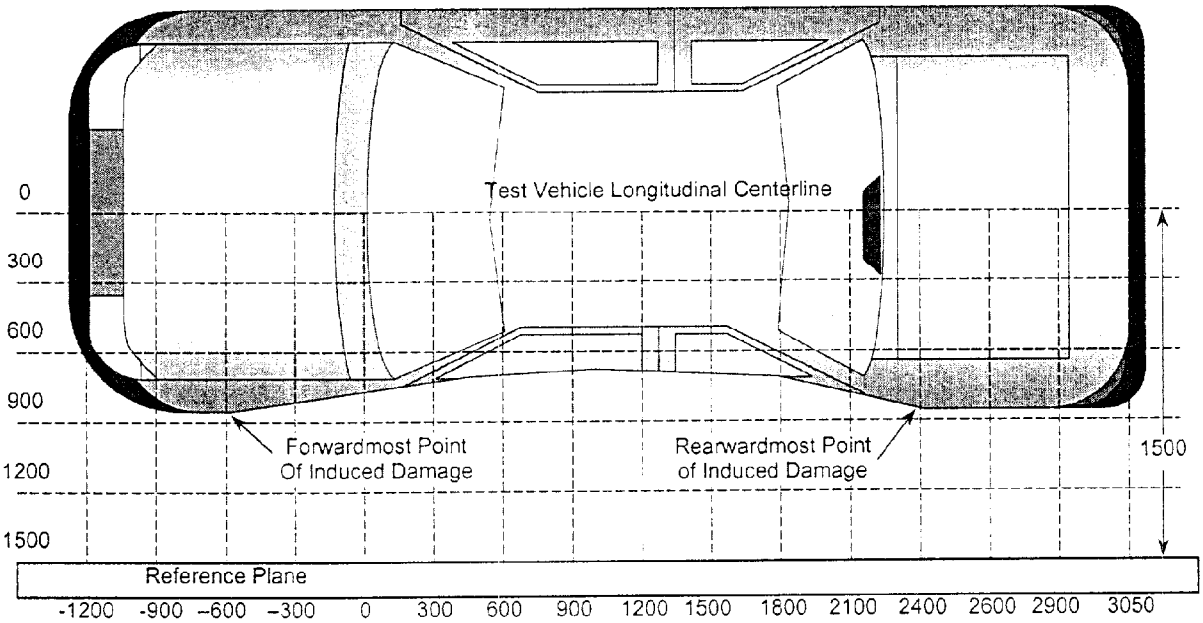
KARCO Engineering

DATA SHEET NO. 11

VEHICLE DAMAGE PROFILE DISTANCES

Test Vehicle: 2000 Chevrolet S-10 Pickup NHTSA No.: MY0107

Test Program: 55/28 km/h 90° Side Impact NCAP Test Date: 1/26/00



All Dimensions Shown in millimeters

TOP VIEW

Damage Profile Distances

DPD	Distance From Impact Point in mm	Level	Pre-Test (mm)	Post-Test (mm)	Max Static Crush (mm)
1	-750 mm	4	674	662	12
2	150 mm	1	833	639	194
3	600 mm	1	837	527	310
4	1350 mm	1	844	487	357
5	2100 mm	4	789	641	148
6	3000 mm	4	766	669	97

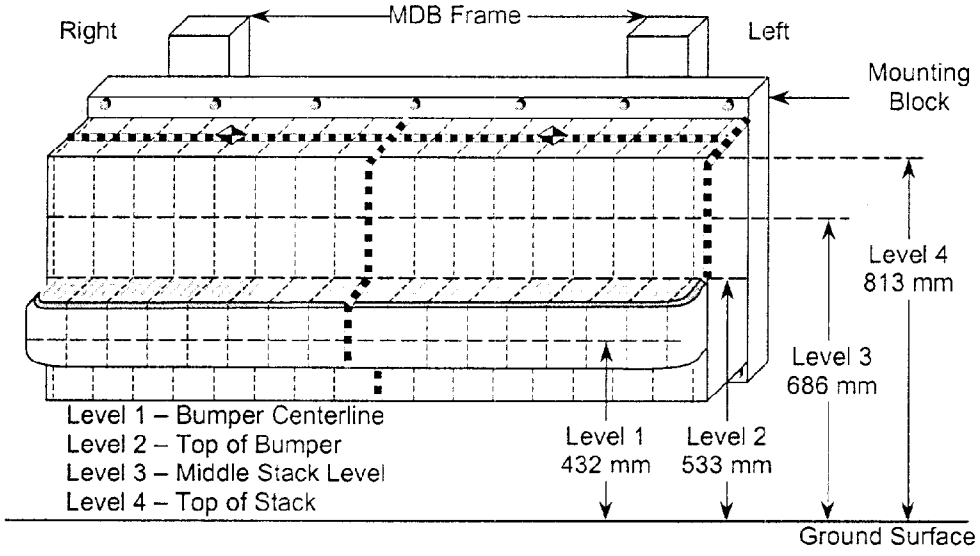
Pre-Test and Post-Test measurements are distance from vehicle centerline.

DATA SHEET NO. 12

DEFORMABLE BARRIER HONEYCOMB FACE STATIC CRUSH

Test Vehicle: 2000 Chevrolet S-10 Pickup NHTSA No.: MY0107

Test Program: 55/28 km/h 90° Side Impact NCAP Test Date: 1/26/00



DEFORMABLE BARRIER STATIC CRUSH

Stack	Distance Right of Center								C_L	Distance Left of Center							
Level	800	700	600	500	400	300	200	100	0	100	200	300	400	500	600	700	800
1	192	158	117	89	73	67	63	58	55	59	71	77	75	73	74	83	98
2	144	112	84	66	60	56	51	49	44	114	68	75	66	88	96	76	106
3	134	91	66	47	34	28	20	16	16	16	19	36	81	146	131	130	149
4	199	145	111	86	66	52	44	41	36	35	144	101	116	147	135	133	146

All Dimensions in mm

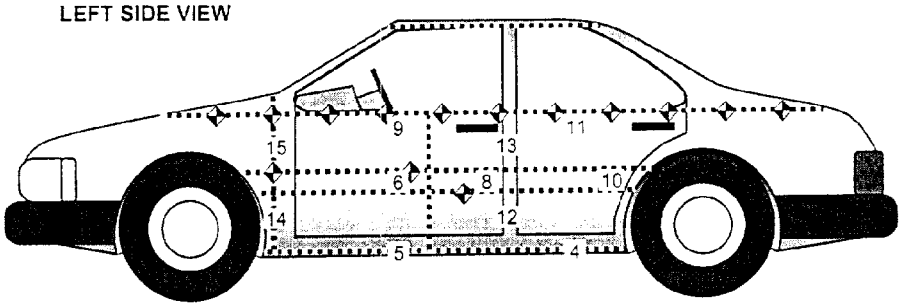
DATA SHEET NO. 13

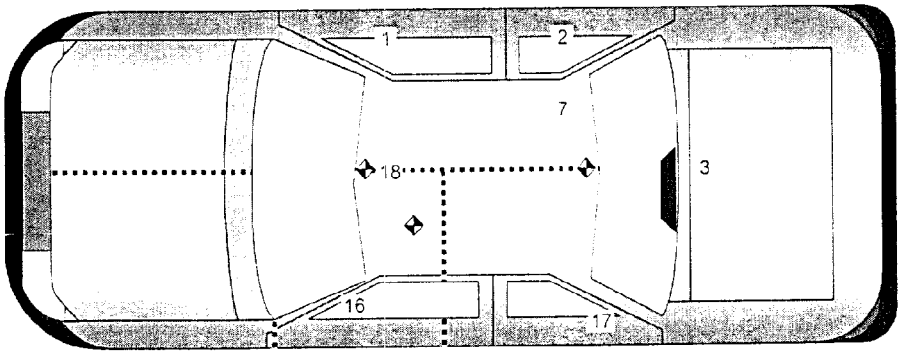
VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY

Test Vehicle: 2000 Chevrolet S-10 Pickup NHTSA No.: MY0107

Test Program: 55/28 km/h 90° Side Impact NCAP Test Date: 1/26/00

LEFT SIDE VIEW





No.	Location
1	Right Sill at Front Seat
2	Right Sill at Rear Seat
3	Rear Floorpan Above Axle
4	Left Sill at Rear Door
5	Left Sill at Front Door
6	Left Front Door Centerline
7	Right Rear Occupant Compartment
8	Left Front Door Mid-Rear
9	Left Front Door Upper Centerline

No.	Location
10	Left Rear Door Mid-Rear
11	Left Rear Door Upper Centerline
12	Left Lower B-Post
13	Left Middle B-Post
14	Left Lower A-Post
15	Left Middle A-Post
16	Front Seat Track
17	Rear Seat Track or Structure
18	Vehicle CG

DATA SHEET NO. 13

VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY

Test Vehicle: 2000 Chevrolet S-10 Pickup NHTSA No.: MY0107

Test Program: 55/28 km/h 90° Side Impact NCAP Test Date: 01/26/00

VEHICLE ACCELEROMETER PEAK DATA AND PRE-TEST LOCATIONS

Loc. No.	Accelerometer Location	Measurements (mm)			Peak Values (G's)					
		X	Y	Z	Axis	Max	Time	Min	Time	
1	Right Sill at Front Seat	3220	655	460	X	14.0	13.3	-9.2	33.6	
					Y	28.1	18.7	-5.7	66.2	
					Z	13.1	64.0	-16.7	14.0	
					RES	29.8	18.7			
2	Right Sill at Rear Seat	2630	630	450	X	11.1	12.6	-9.0	17.6	
					Y	33.0	3.0	-11.6	55.0	
					Z	14.6	25.5	-23.4	15.2	
					RES	34.0	10.0			
3	Rear Floorpan Above Axle	1240	0	660	X	9.4	58.5	-10.8	20.3	
					Y	35.7	16.5	-7.4	122.8	
					Z	27.2	59.2	-34.1	48.0	
					RES	35.8	16.4			
4	Left Sill at Rear Door				Y					**
5	Left Sill at Front Door	2580	-680	400	Y	188.4	10.2	-49.3	27.1	
6	Front Door Centerline	2805	-745	835	Y	184.4	8.7	-95.1	24.1	
7	Rear Occupant Compartment	2480	310	510	Y	43.1	3.4	-9.4	57.9	
8	Front Door Mid-Rear	2590	-730	870	Y	104.7	15.8	-71.9	26.6	
9	Front Door Upper Centerline	2855	-720	1010	Y	201.2	16.2	-95.0	32.1	
10	Rear Door Mid-Rear									**
11	Rear Door Upper Centerline									**
12	B-Post Lower	2280	-735	630	Y	157.1	6.4	-193.7	14.5	
13	B-Post Middle	2280	-730	860	Y	105.4	13.0	-50.3	20.2	
14	A-Post Lower	3420	-750	655	Y	92.3	3.0	-53.6	12.3	*
15	A-Post Middle	3420	-750	655	Y	57.1	8.7	-6.3	28.1	
16	Front Seat Track	2820	-570	485	Y	124.3	12.1	-71.1	26.1	*
17	Rear Seat Structure									**
18	Vehicle CG	2450	0	495	X	50.6	19.1	-32.8	13.7	
					Y	39.6	3.3	-16.6	60.1	
					Z	64.1	16.7	-43.6	21.0	
					RES	70.9	17.1			

*Channel failed, check plot for time of failure.

** Not Used, no appropriate mounting structure on 2 door vehicle.

DATA SHEET NO. 14
MDB ACCELEROMETER LOCATION AND DATA SUMMARY

Test Vehicle: 2000 Chevrolet S-10 Pickup NHTSA No.: MY0107

Test Program: 55/28 km/h 90° Side Impact NCAP Test Date: 01/26/00

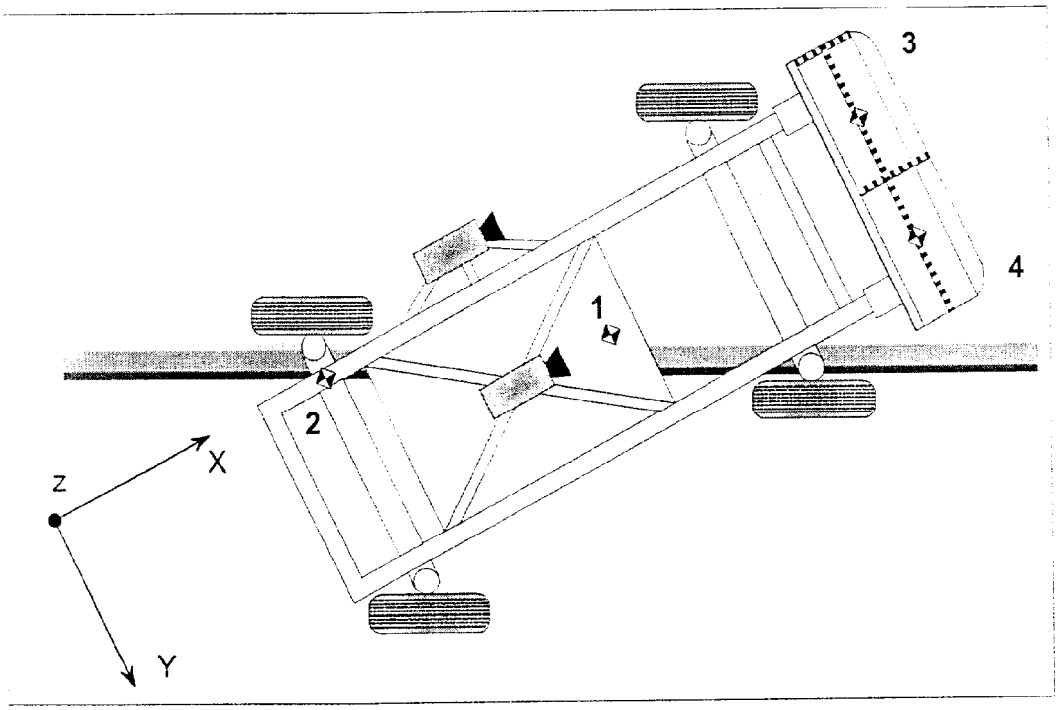
MDB ACCELEROMETER PEAK DATA AND LOCATIONS

Loc. No.	Accelerometer Location	Measurements (mm)			Peak Values (G's)				
		X	Y	Z	Axis	Max	Time	Min	Time
1	MDB CG	-1195	0	430	X	8.2	182.1	-20.3	38.0
					Y	1.9	128.9	-9.4	181.8
					Z	16.4	164.7	-12.7	154.0
					RES	23.1	24.4		
2	MDB Rear	-2642	-593	608	X	3.5	172.4	-22.6	34.2
					Y	4.0	108.8	-4.5	34.3

Reference Points X - MDB Front Axle Y - MDB Centerline Z - Ground Plane

MDB BUMPER CONTACT SWITCH DATA

Loc. No.	Contact Switch Location	Units	Peak and 50% Crossing Point			
			Max	Time	50%	Time
3	MDB Left Bumper (T=0)	% F.S	100.0	0.0	0.0	0.0
4	MDB Right Bumper	% F.S.	100.9	10.7	50.5	0.2

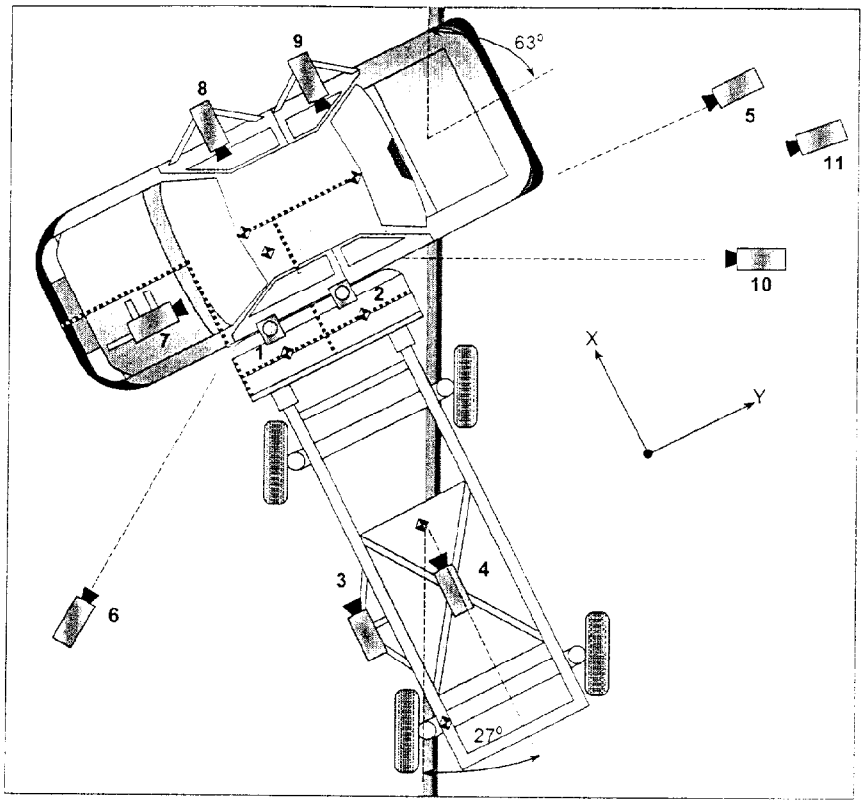


DATA SHEET NO. 15

HIGH SPEED CAMERA LOCATIONS AND DATA

Test Vehicle: 2000 Chevrolet S-10 Pickup NHTSA No.: MY0107

Test Program: 55/28 km/h 90° Side Impact NCAP Test Date: 1/26/00



No.	Camera View	Location (mm)			Angle (deg.)	Lens (mm)	Film Speed (fps)
		X	Y	Z			
1	Overhead Overall	2260	750	5490	90	10	940
2	Overhead Close-up	0	0	5490	90	24	1030
3	MDB Onboard, Impact Point Close-Up	2200	840	1110	7	13	930
4	MDB Onboard, Centerline of Impact	3420	660	1815	11	13	860
5	Right Side, Ground Level, Overall	9550	17850	1570	4	25	1010
6	Left Side, Ground Level, Close-up	5150	4400	1495	0	13	1000
7	Vehicle Onboard Front SID, Front	600	2020	1580	17	19	1010
8	Vehicle Onboard Front SID, Side	1950	2330	1210	5	10	920
9	Vehicle Onboard Rear SID, Side	93268	1070	1340	1	10	1000
10	Right Side, Ground Level, Close-up	1200	18850	725	1	70	480
11	Real Time Coverage	3100	18870	585	1	Zoom	24

DATA SHEET NO. 16

FMVSS 301 FUEL SYSTEM INTEGRITY POST IMPACT DATA

Test Vehicle: 2000 Chevrolet S-10 Pickup NHTSA No.: MY0107

Test Program: 55/28 km/h 90° Side Impact NCAP Test Date: 1/26/00

Test Time: 11:18 AM Temperature at Time of Impact: 11.71 °C

STODDARD SOLVENT SPILLAGE MEASUREMENTS

A. From impact until vehicle motion ceases: 0.0 oz.
(Maximum Allowable = 1 ounce)

B. For the 5 minute period after motion ceases: 0.0 oz.
(Maximum Allowable = 5 ounces)

C. For the following 25 minutes: 0.0 oz.
(Maximum Allowable = 1 oz./minute)

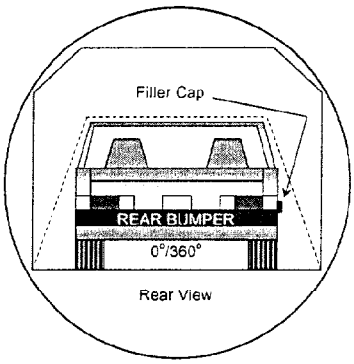
D. Spillage Details: No leakage occurred

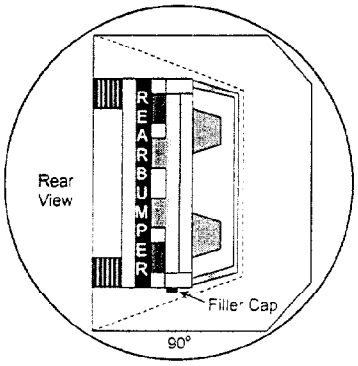
DATA SHEET NO. 17

FMVSS 301 STATIC ROLLOVER DATA SHEET

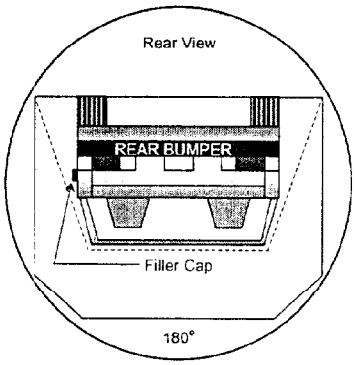
Test Vehicle: 2000 Chevrolet S-10 Pickup NHTSA No.: MY0107

Test Program: 55/28 km/h 90° Side Impact NCAP Test Date: 1/26/00

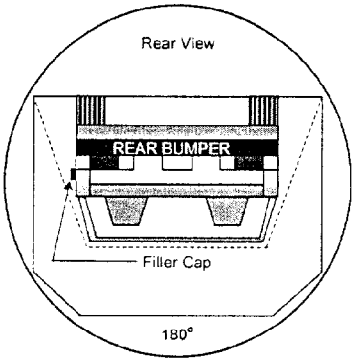




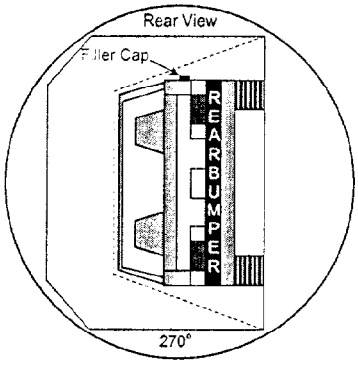
0° TO 90°

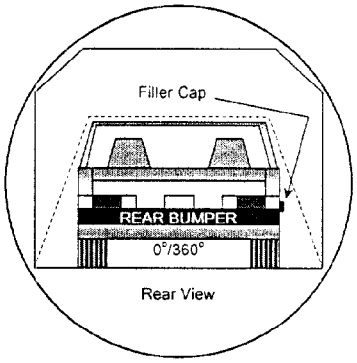


90°TO 180°



180° TO 270°





270°TO 360°

1. The specified fixture rollover rate for each 90° of rotation is 60 to 120 seconds.
2. The position hold time at each position is 300 seconds (minimum).
3. Details of Stoddard Solvent spillage locations:

   No solvent leakage occurred during static rollover testing.

Rollover Test Phase	Rotation Time (sec.)	Hold Time (sec.)	Spillage (oz.)
0° TO 90°	84	300	0.0
90° TO 180°	82	300	0.0
180° TO 270°	80	300	0.0
270° TO 360°	82	300	0.0

APPENDIX A
PHOTOGRAPHS

LIST OF PHOTOGRAPHS

LIST OF PHOTOGRAPHS, ...(Continued)

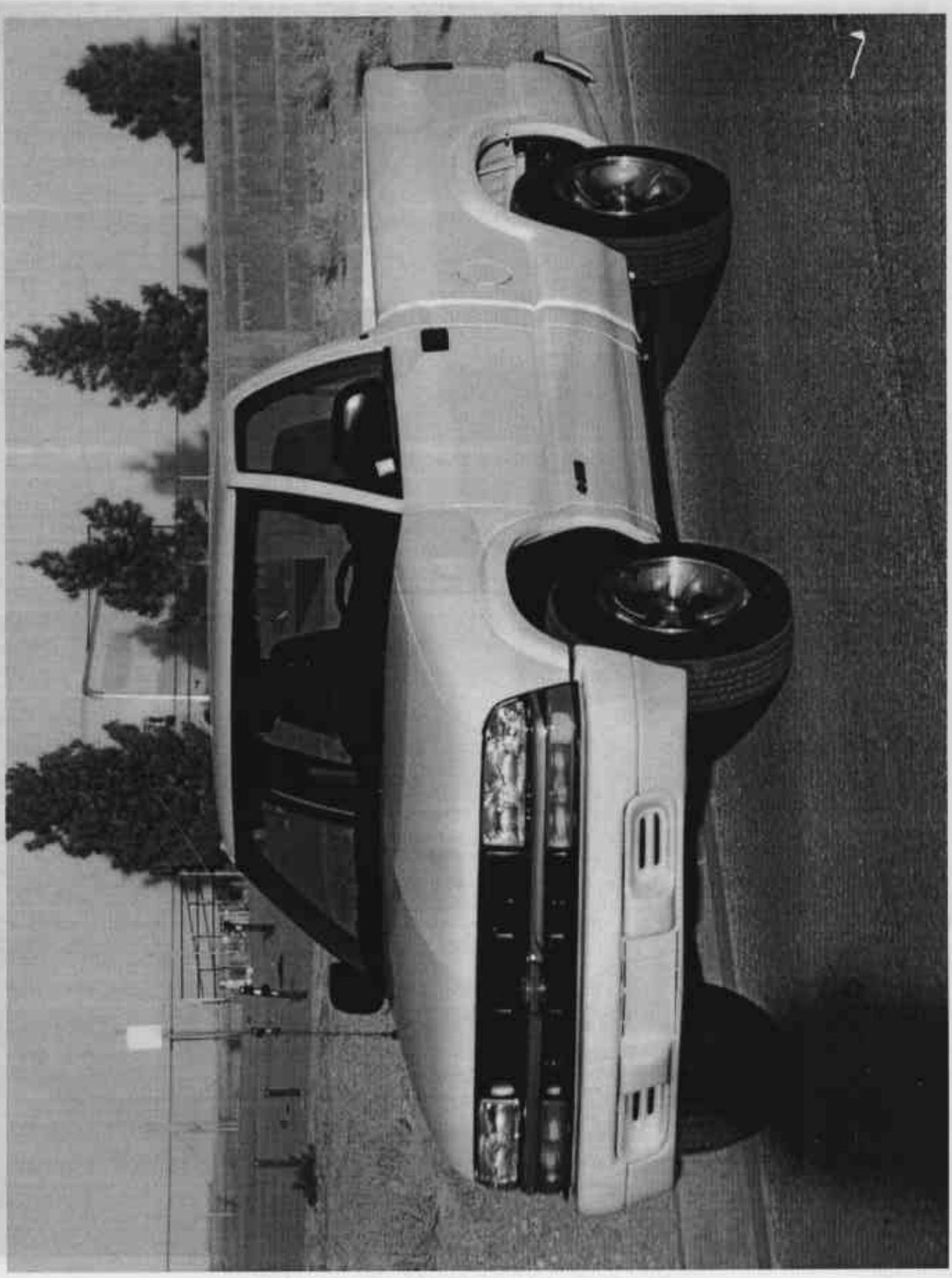


FIGURE A-1: LEFT FRONT, AS RECEIVED

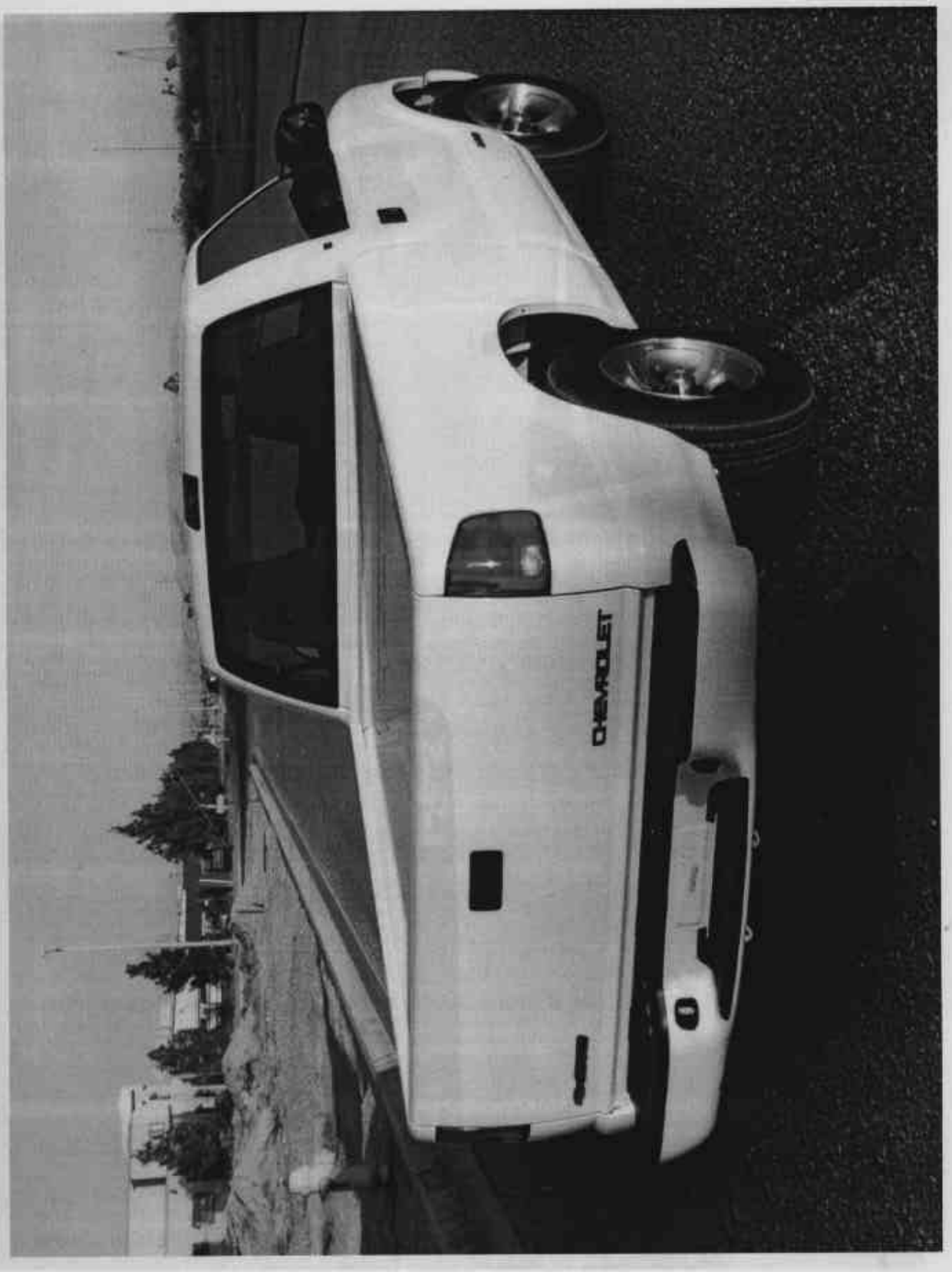


FIGURE A-2: RIGHT REAR, AS RECEIVED

FIGURE A-3: VEHICLE CERTIFICATION LABEL

FIGURE A-4: VEHICLE TIRE PLACARD

FIGURE A-5: PRE-TEST FRONT VIEW

FIGURE A-6: POST-TEST FRONT VIEW

FIGURE A-7: PRE-TEST REAR VIEW

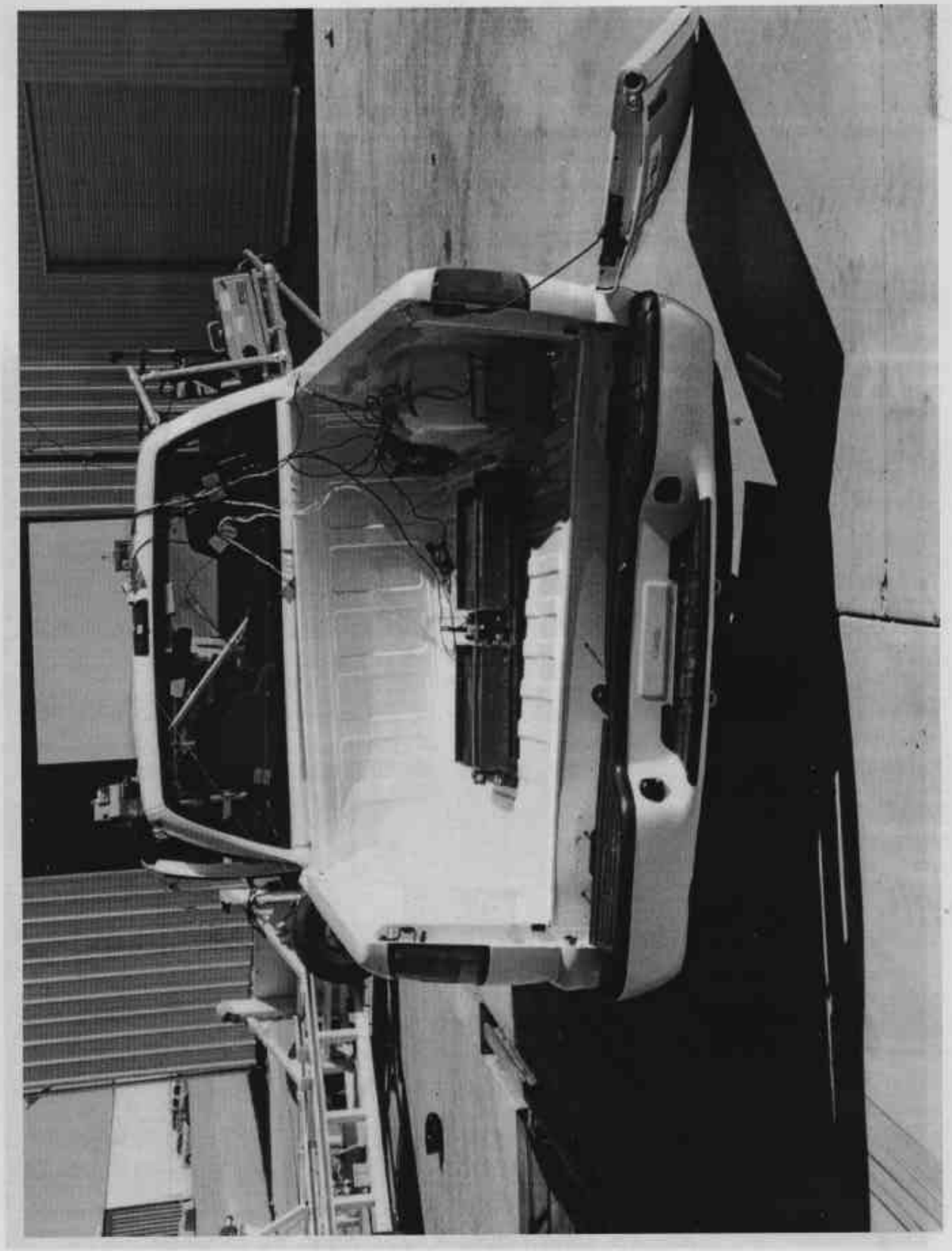


FIGURE A-8: POST-TEST REAR VIEW

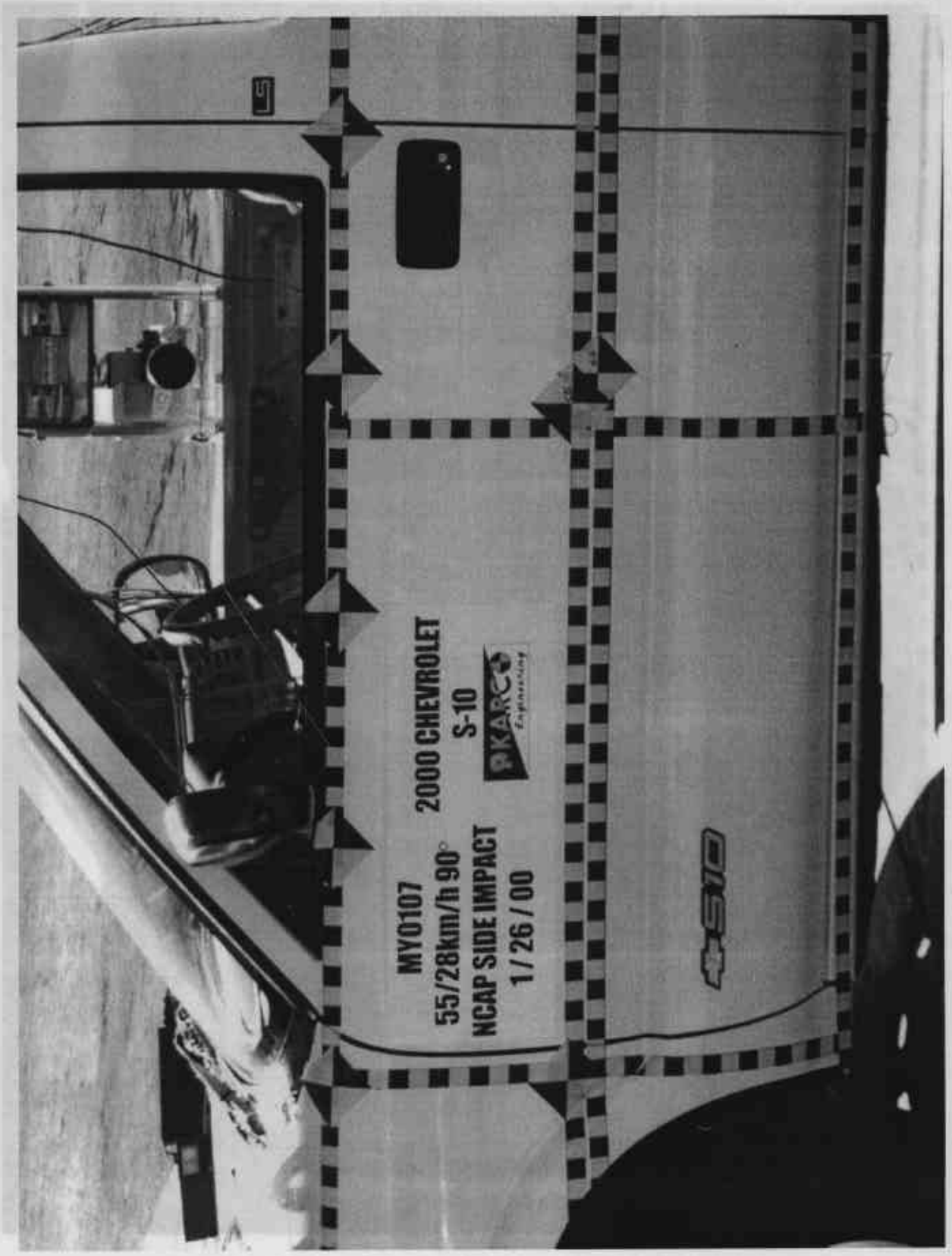


FIGURE A-9: PRE-TEST LEFT SIDE (STRUCK SIDE) VIEW

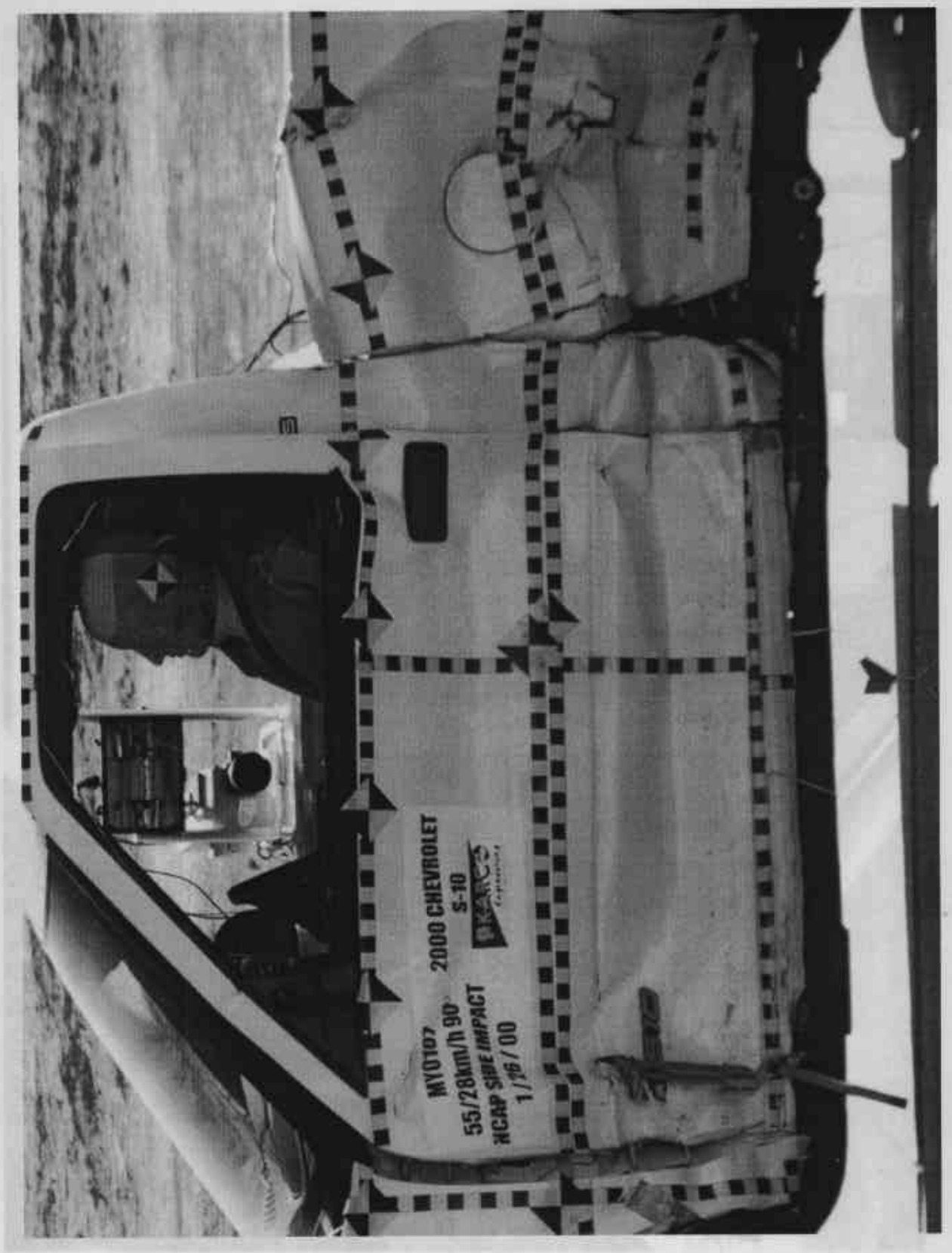


FIGURE A-10: POST-TEST LEFT SIDE (STRUCK SIDE) VIEW

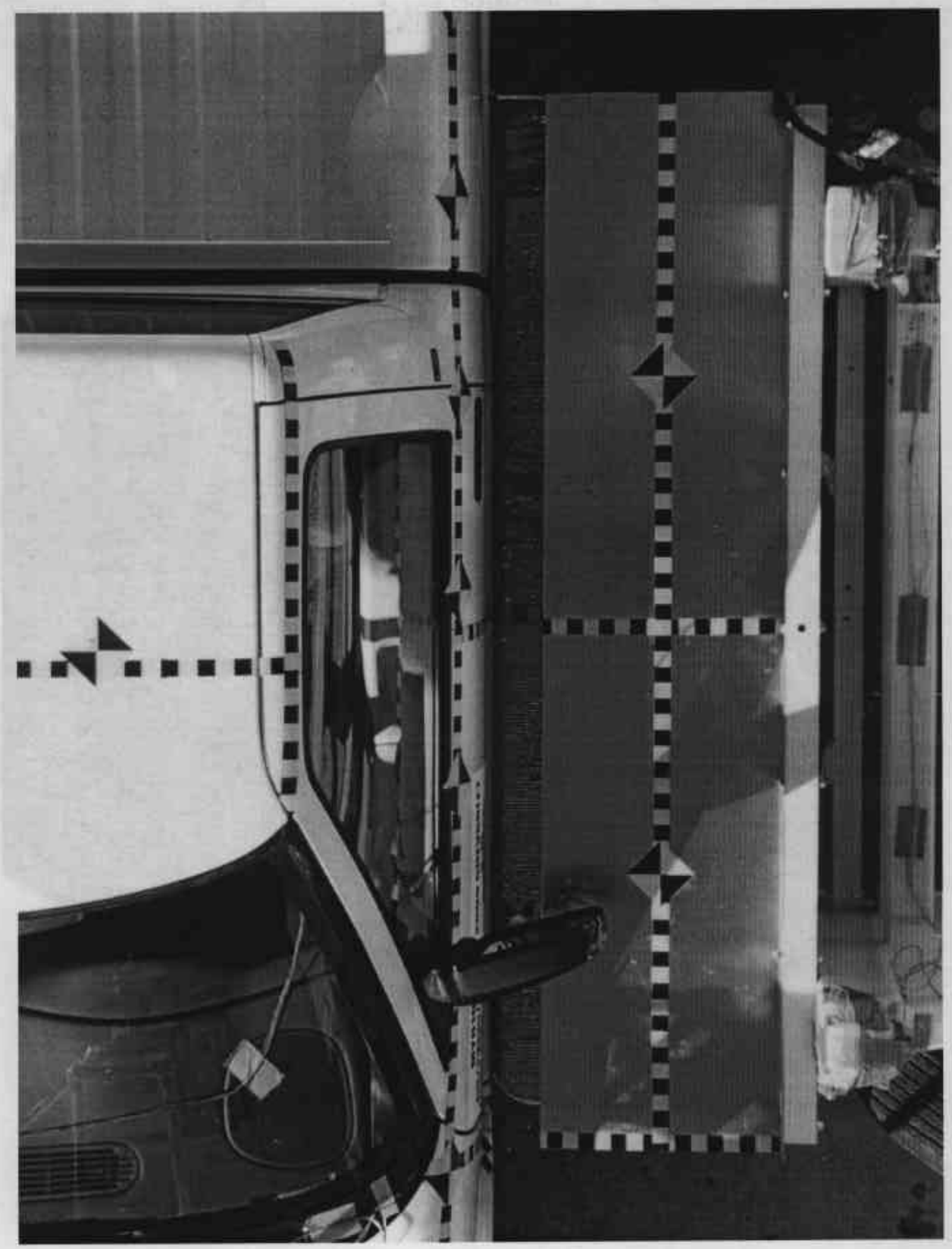


FIGURE A-11: PRE-TEST OVERHEAD VIEW (AT IMPACT POSITION)

FIGURE A-12: PRE-TEST OVERHEAD OVERALL

FIGURE A-13: POST-TEST OVERHEAD OVERALL

FIGURE A-14: PRE-TEST MDB LEFT SIDE VIEW (AT IMPACT POSITION)

FIGURE A-15: PRE-TEST MDB RIGHT SIDE VIEW (AT IMPACT POSITION)

FIGURE A-16: PRE-TEST IMPACT POINT TARGET CLOSE-UP

FIGURE A-17: POST-TEST IMPACT POINT TARGET CLOSE-UP

FIGURE A-18: PRE-TEST DRIVER DUMMY LEFT SIDE (DOOR OPEN)

FIGURE A-19: PRE-TEST DRIVER DUMMY LEFT SIDE VIEW

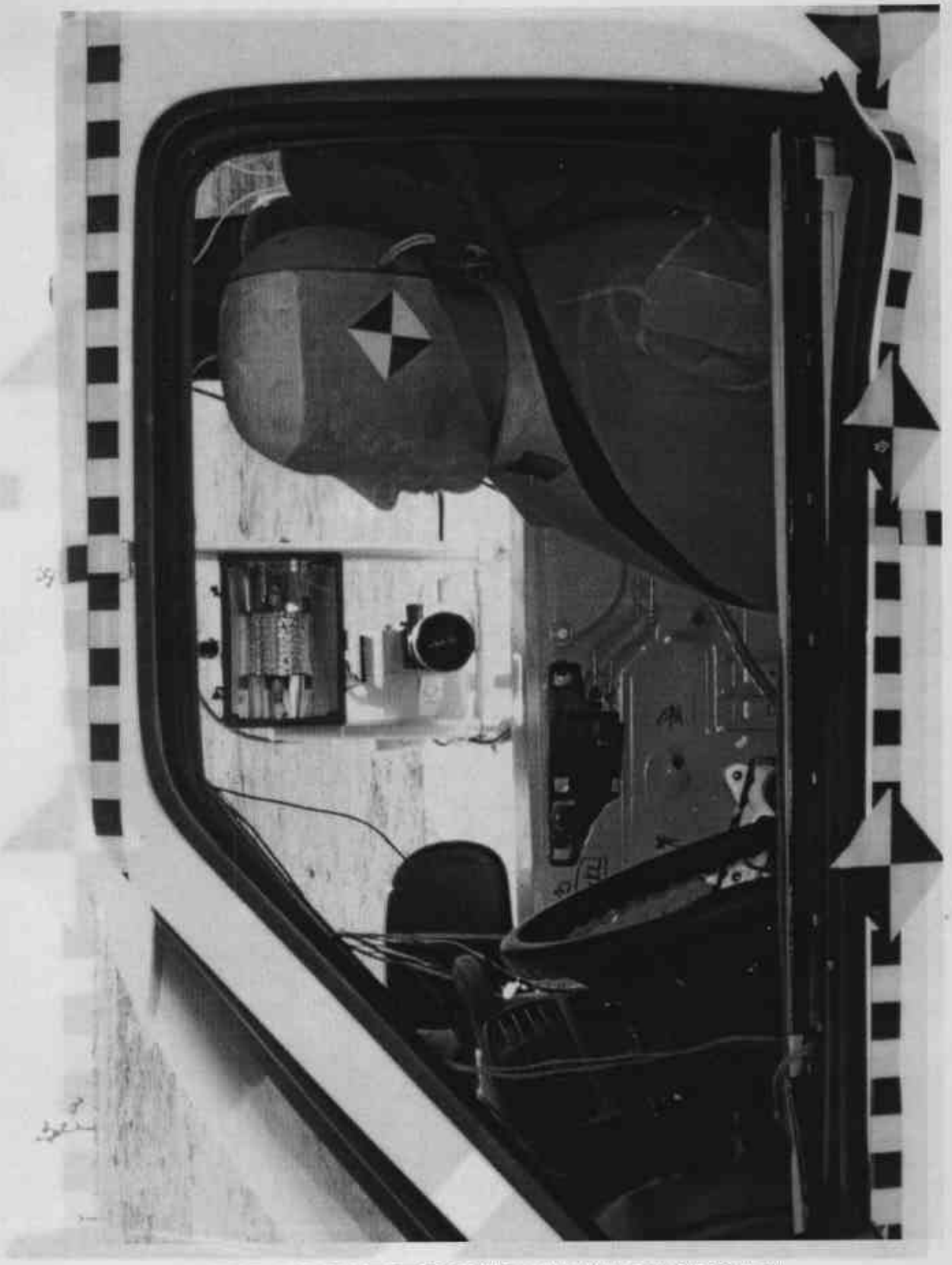


FIGURE A-20: POST-TEST DRIVER DUMMY LEFT SIDE VIEW

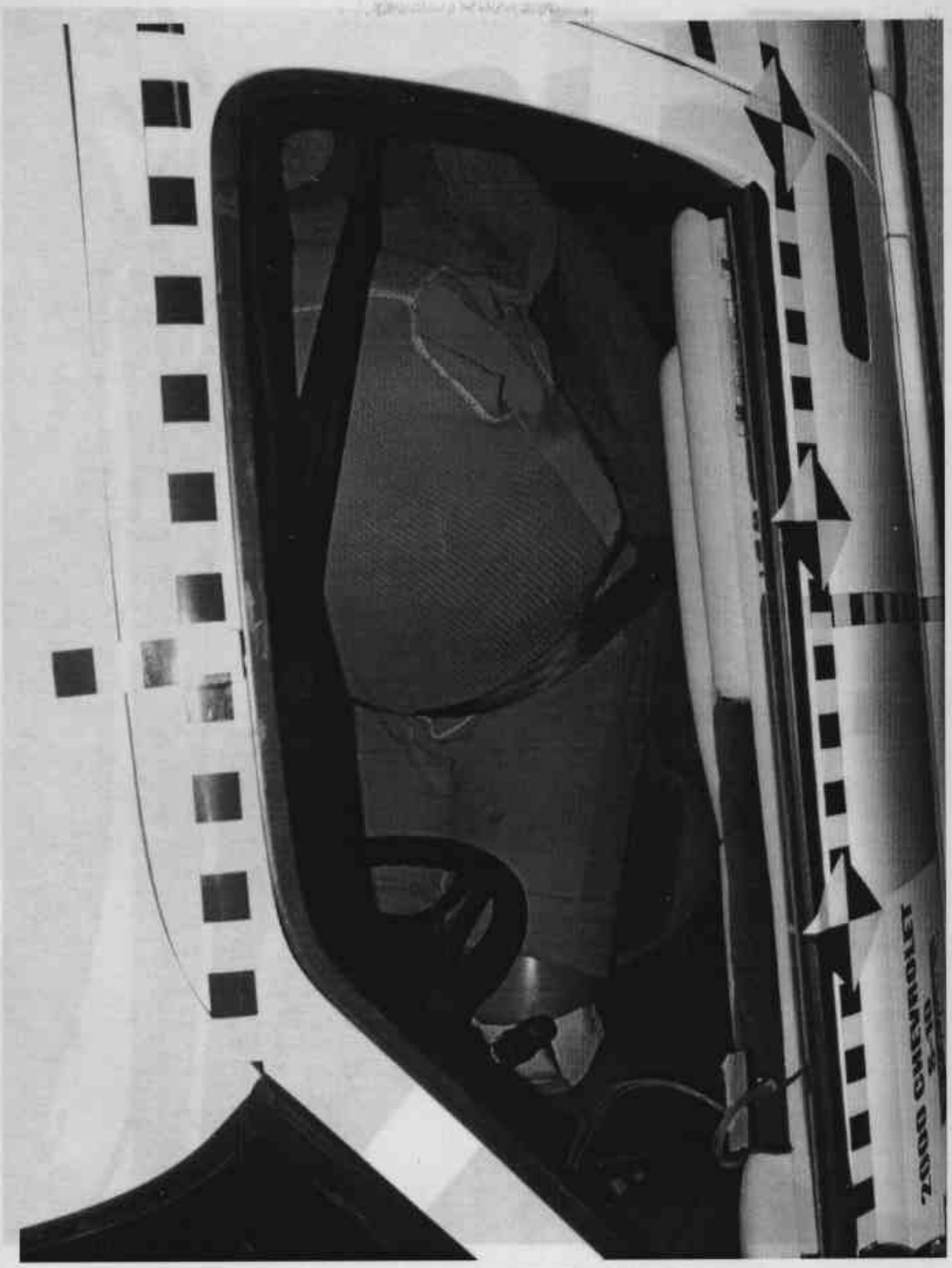


FIGURE A-21: PRE-TEST DRIVER DUMMY CLEARANCE

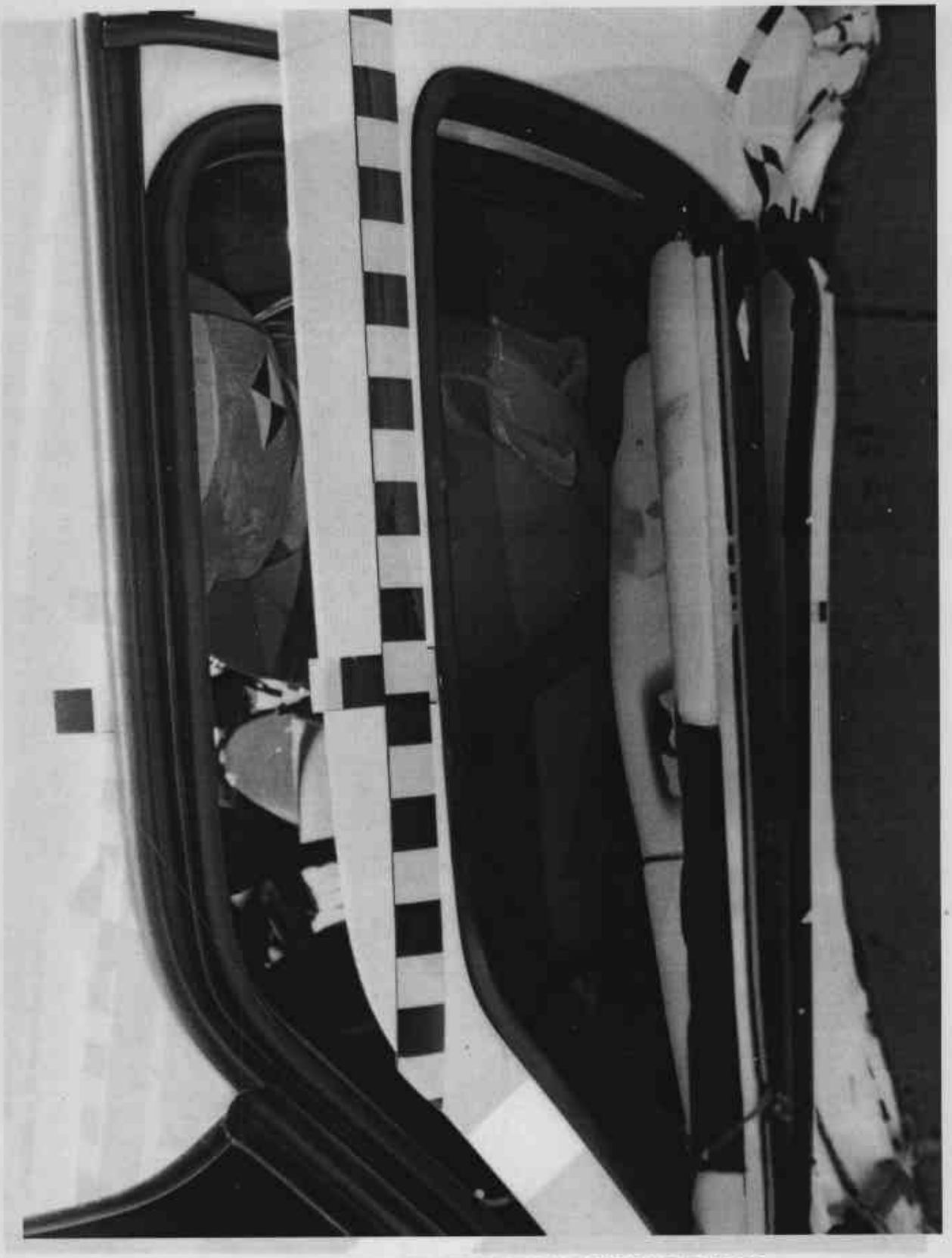


FIGURE A-22: POST-TEST DRIVER DUMMY CLEARANCE

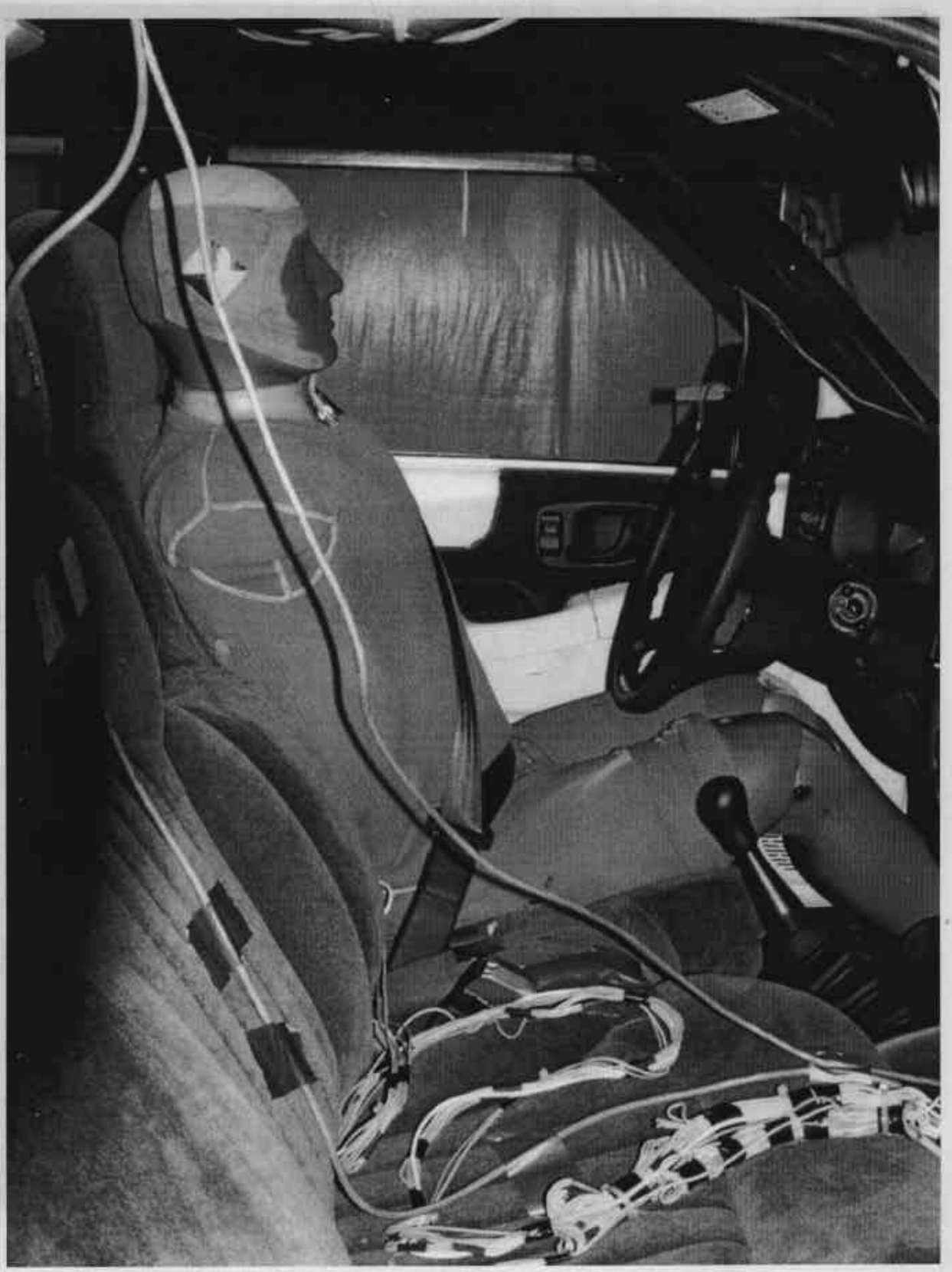


FIGURE A-23: PRE-TEST DRIVER DUMMY INSIDE VIEW

FIGURE A-24: POST-TEST DRIVER DUMMY INSIDE VIEW

FIGURE A-25: PRE-TEST DRIVER DOOR (INSIDE VIEW)

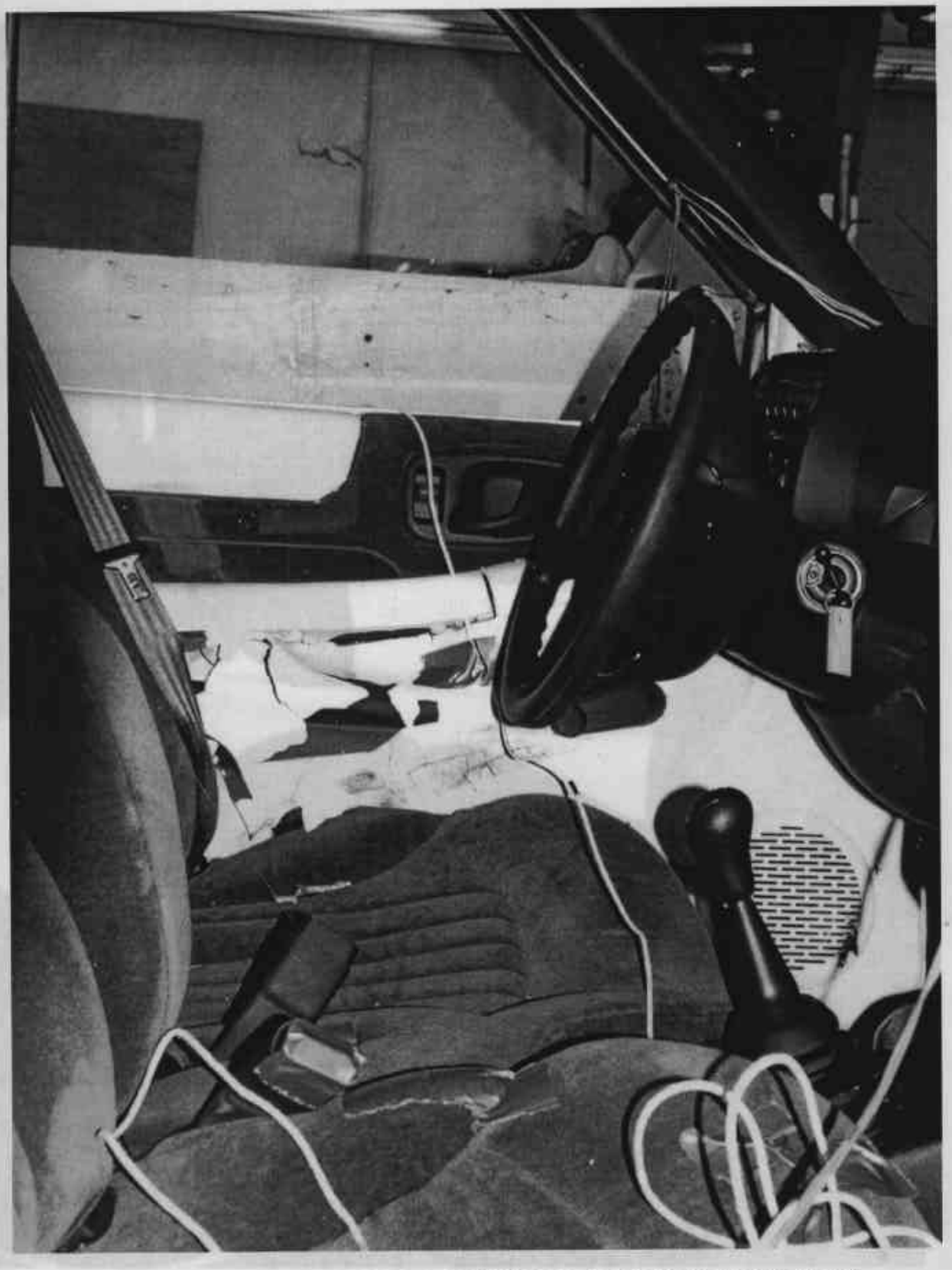


FIGURE A-26: POST-TEST DRIVER DUMMY CONTACT POINTS (INSIDE VIEW)

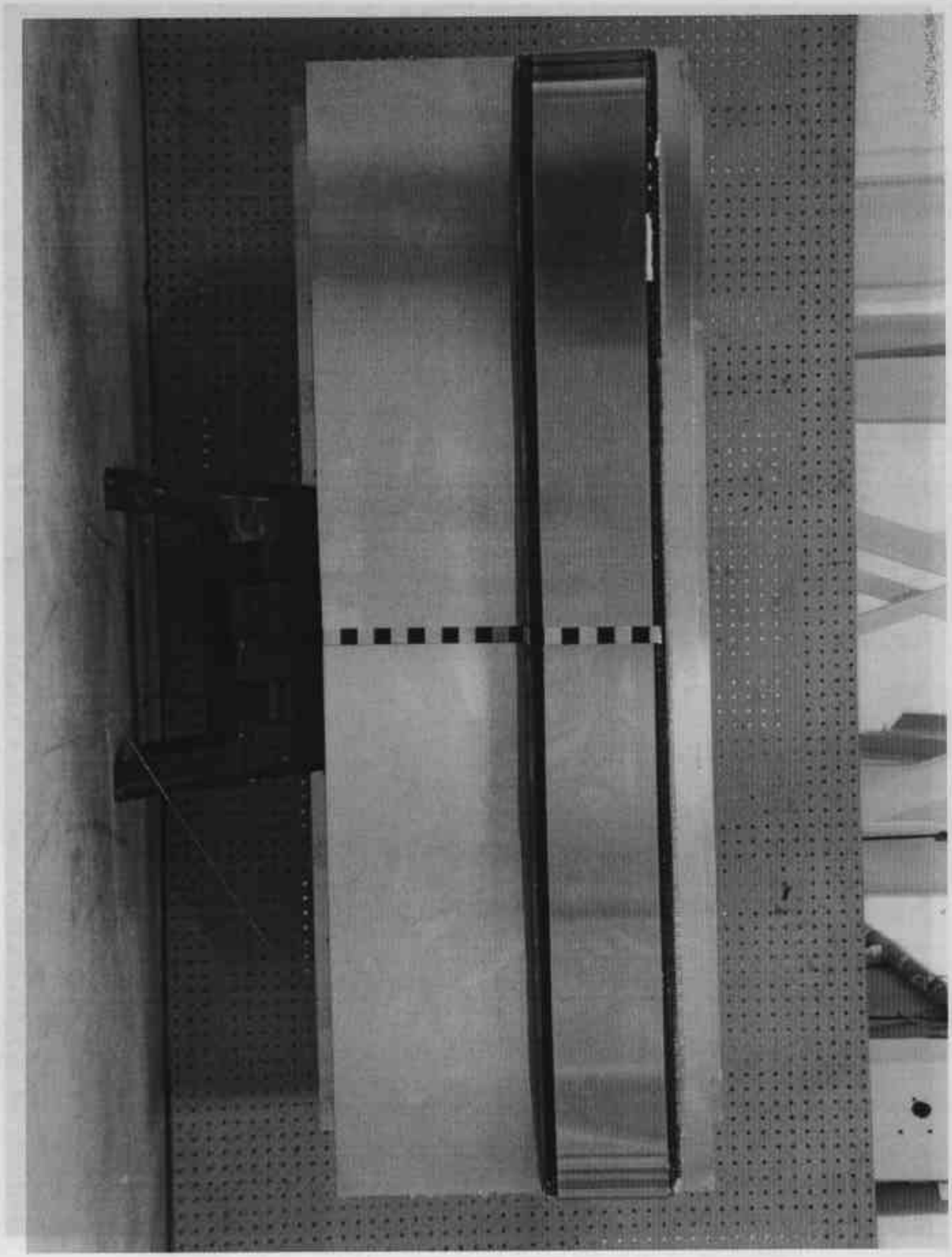


FIGURE A-27: PRE-TEST FRONT VIEW OF DEFORMABLE BARRIER

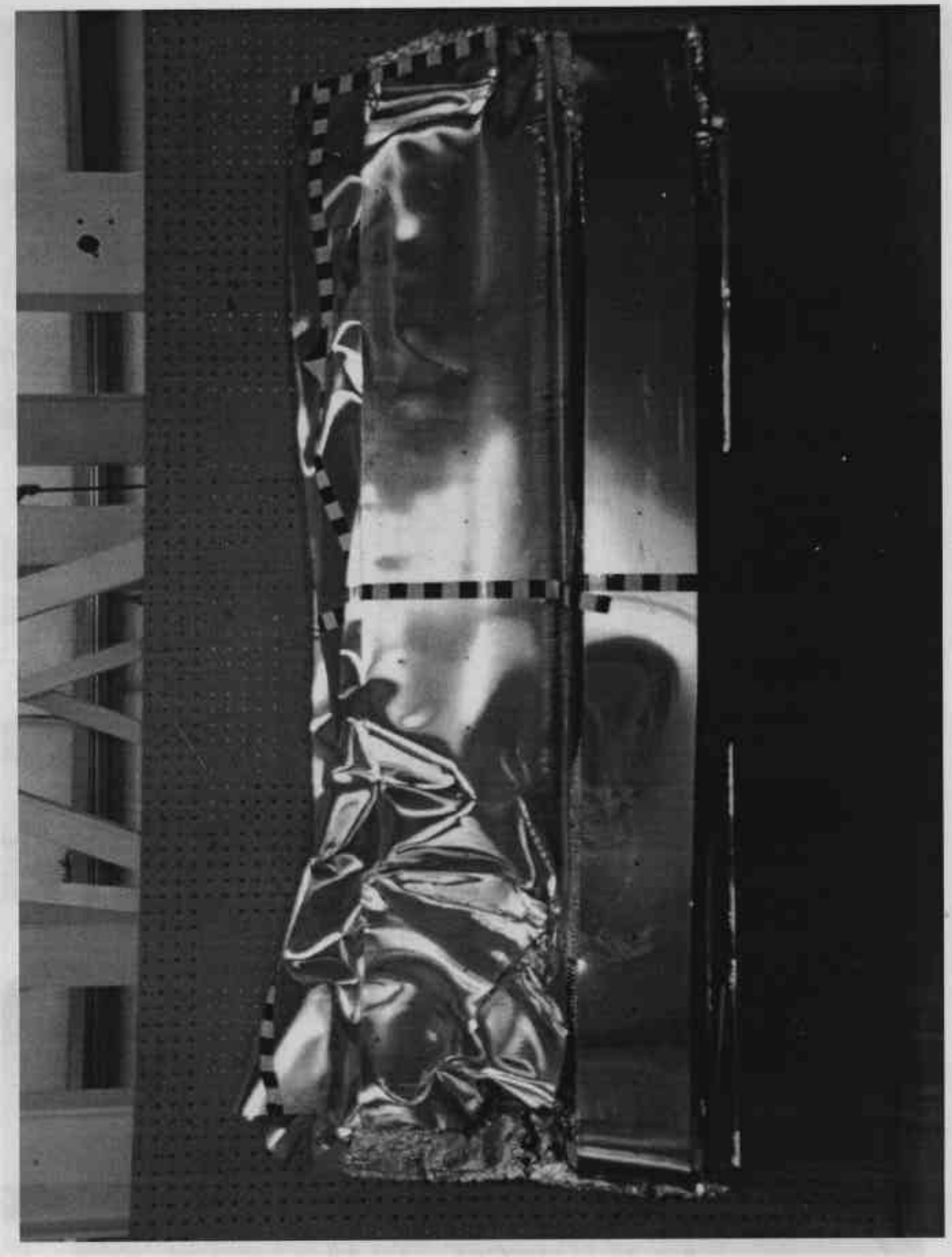


FIGURE A-28: POST-TEST FRONT VIEW OF DEFORMABLE BARRIER

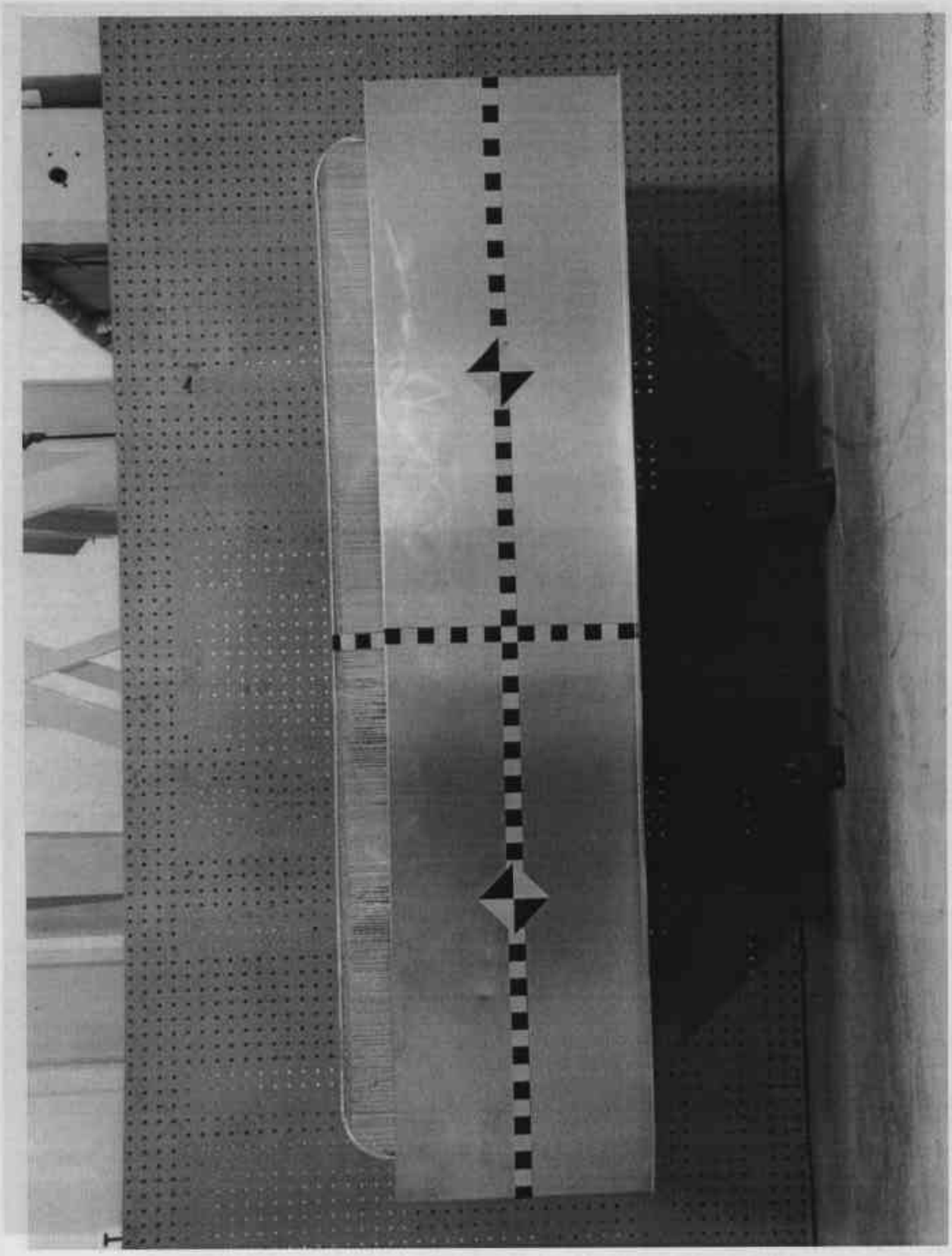


FIGURE A-29: PRE-TEST TOP VIEW OF DEFORMABLE BARRIER

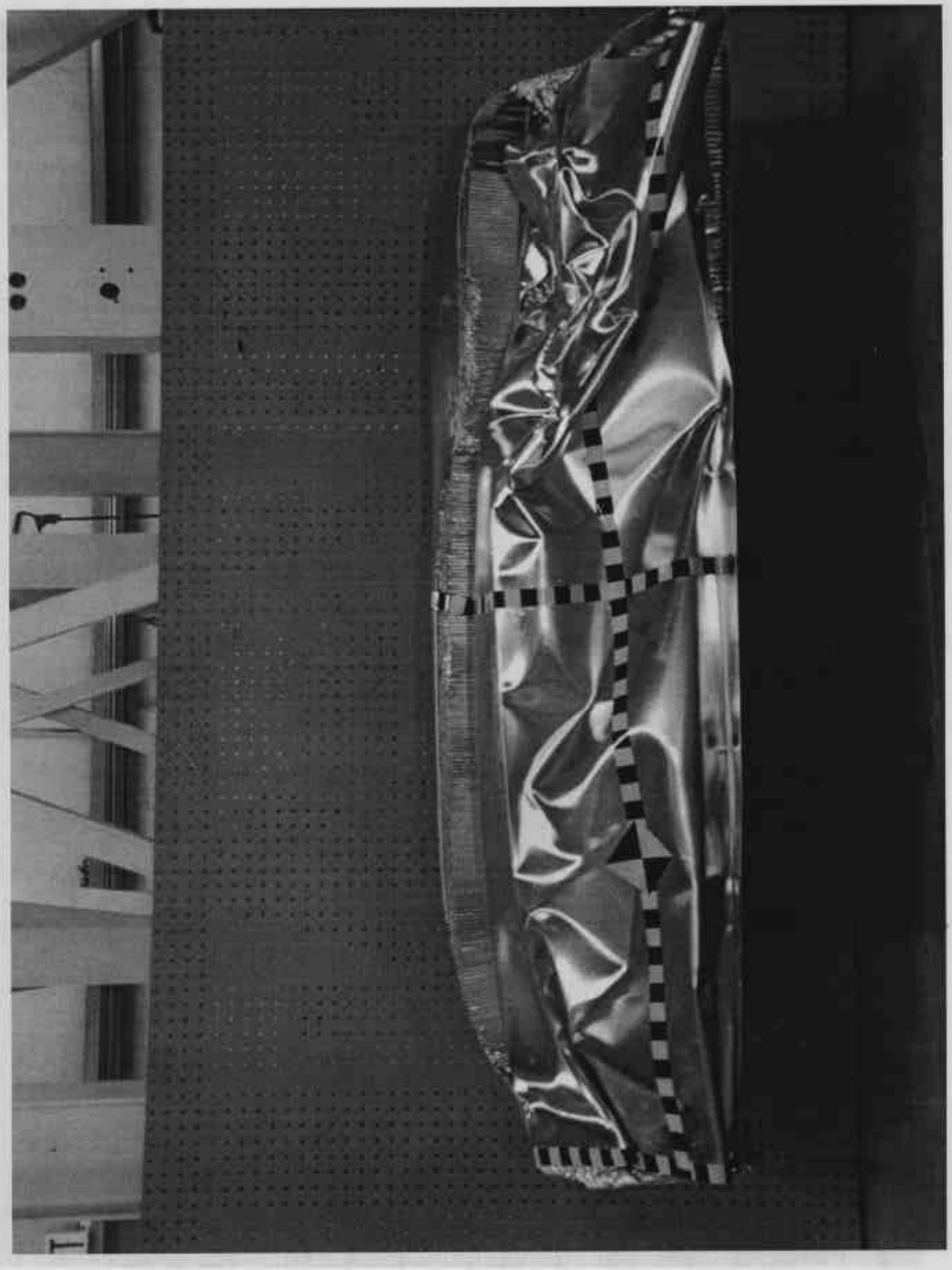


FIGURE A-30: POST-TEST TOP VIEW OF DEFORMABLE BARRIER

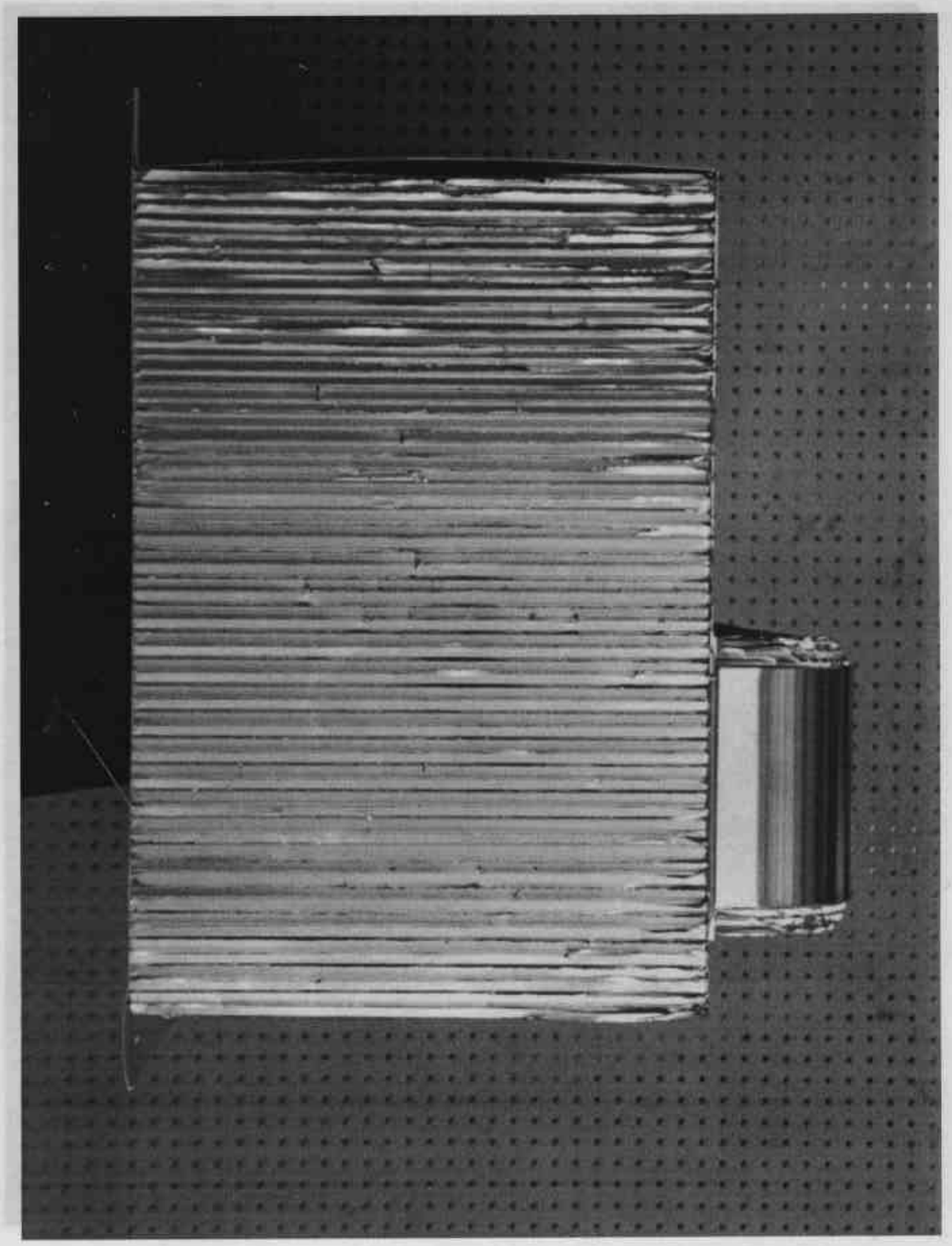


FIGURE A-31: PRE-TEST RIGHT SIDE VIEW OF DEFORMABLE BARRIER

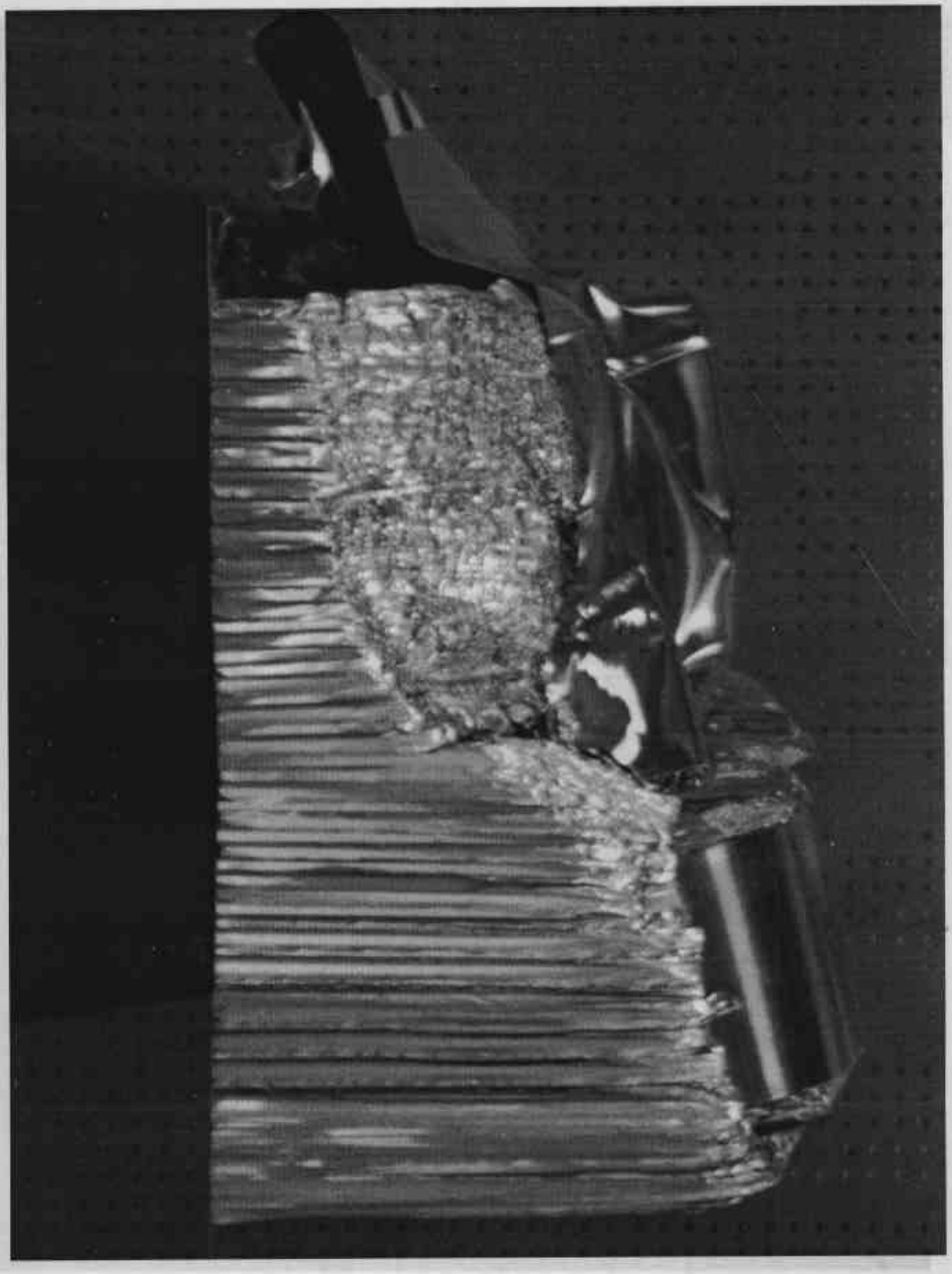


FIGURE A-32: POST-TEST RIGHT SIDE VIEW OF DEFORMABLE BARRIER

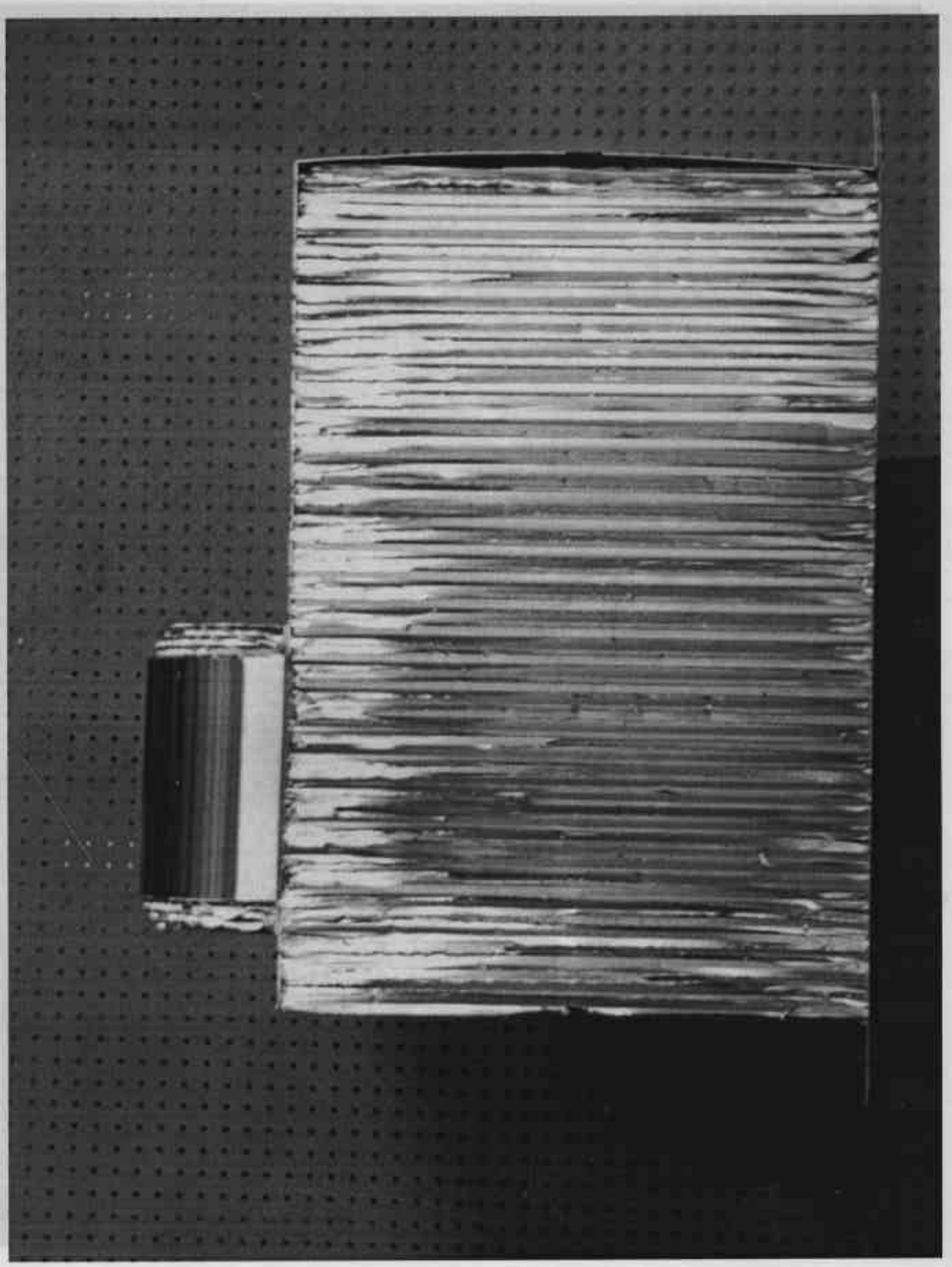


FIGURE A-33: PRE-TEST LEFT SIDE VIEW OF DEFORMABLE BARRIER

FIGURE A-34: POST-TEST LEFT SIDE VIEW OF DEFORMABLE BARRIER

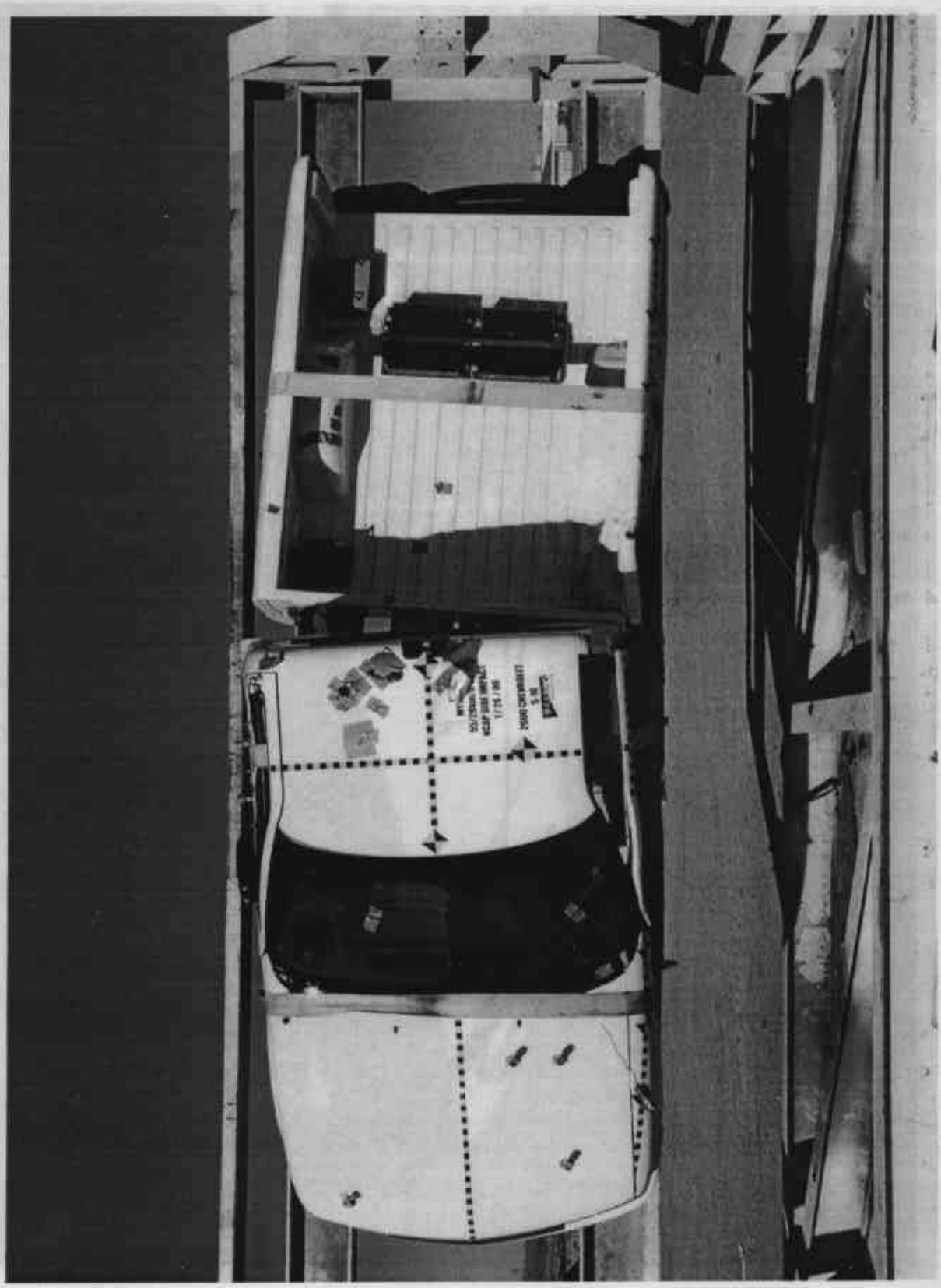


FIGURE A-35: VEHICLE ON ROLLOVER, TOP VIEW

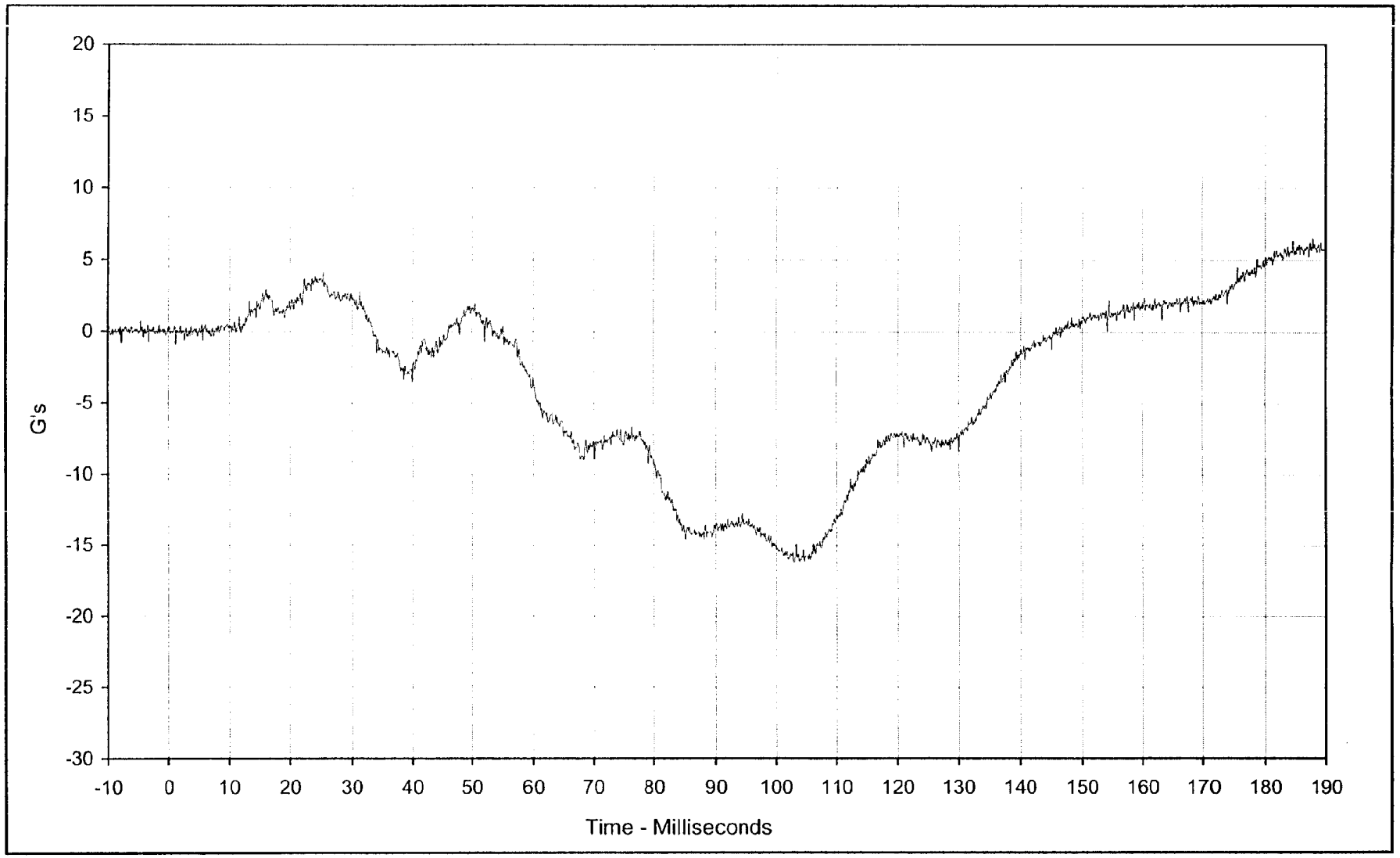
FIGURE A-36: VEHICLE DURING IMPACT

APPENDIX B

SID, VEHICLE, AND MDB RESPONSE DATA

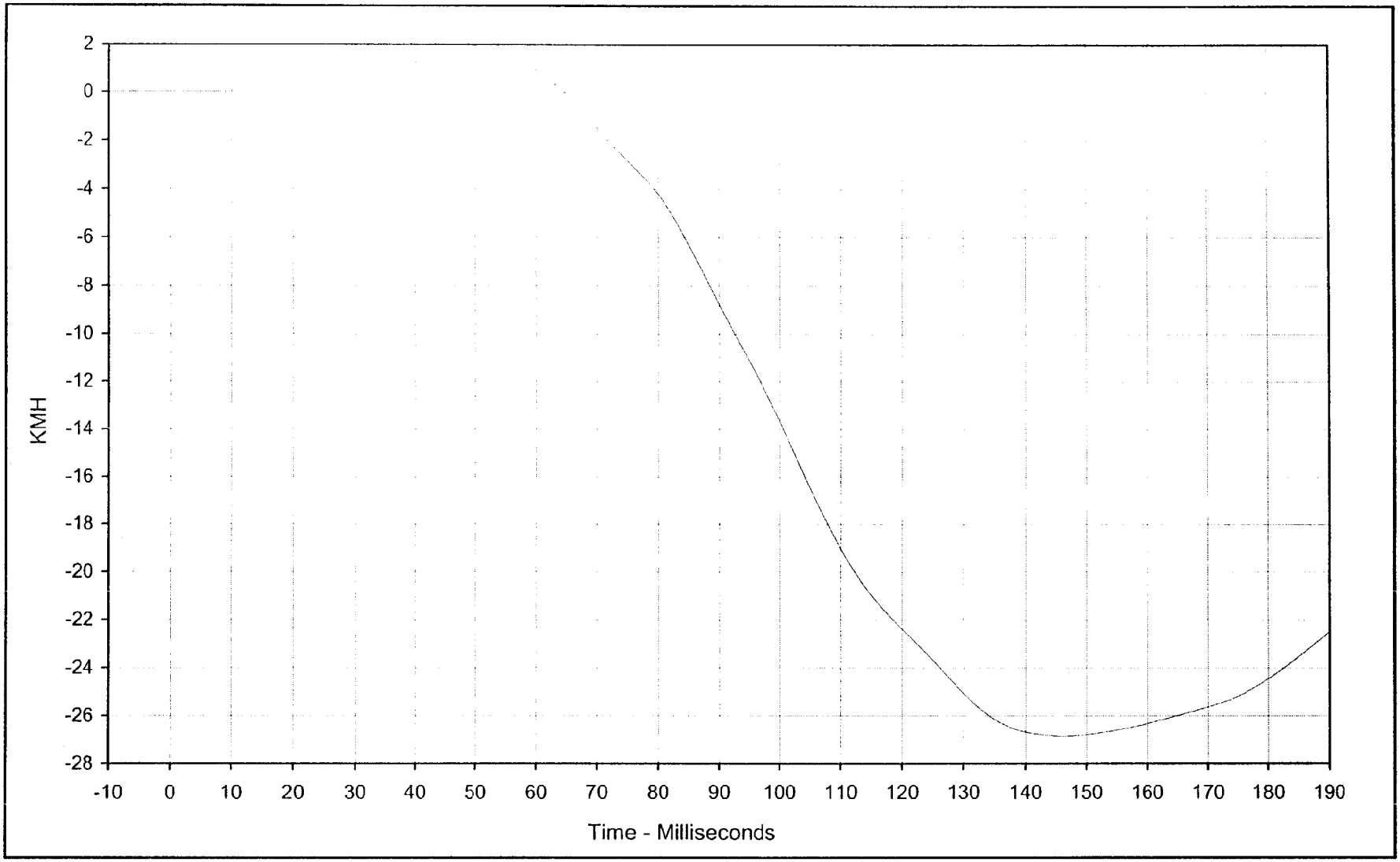
LIST OF DATA PLOTS, DRIVER SID

LIST OF DATA PLOTS, DRIVER SID



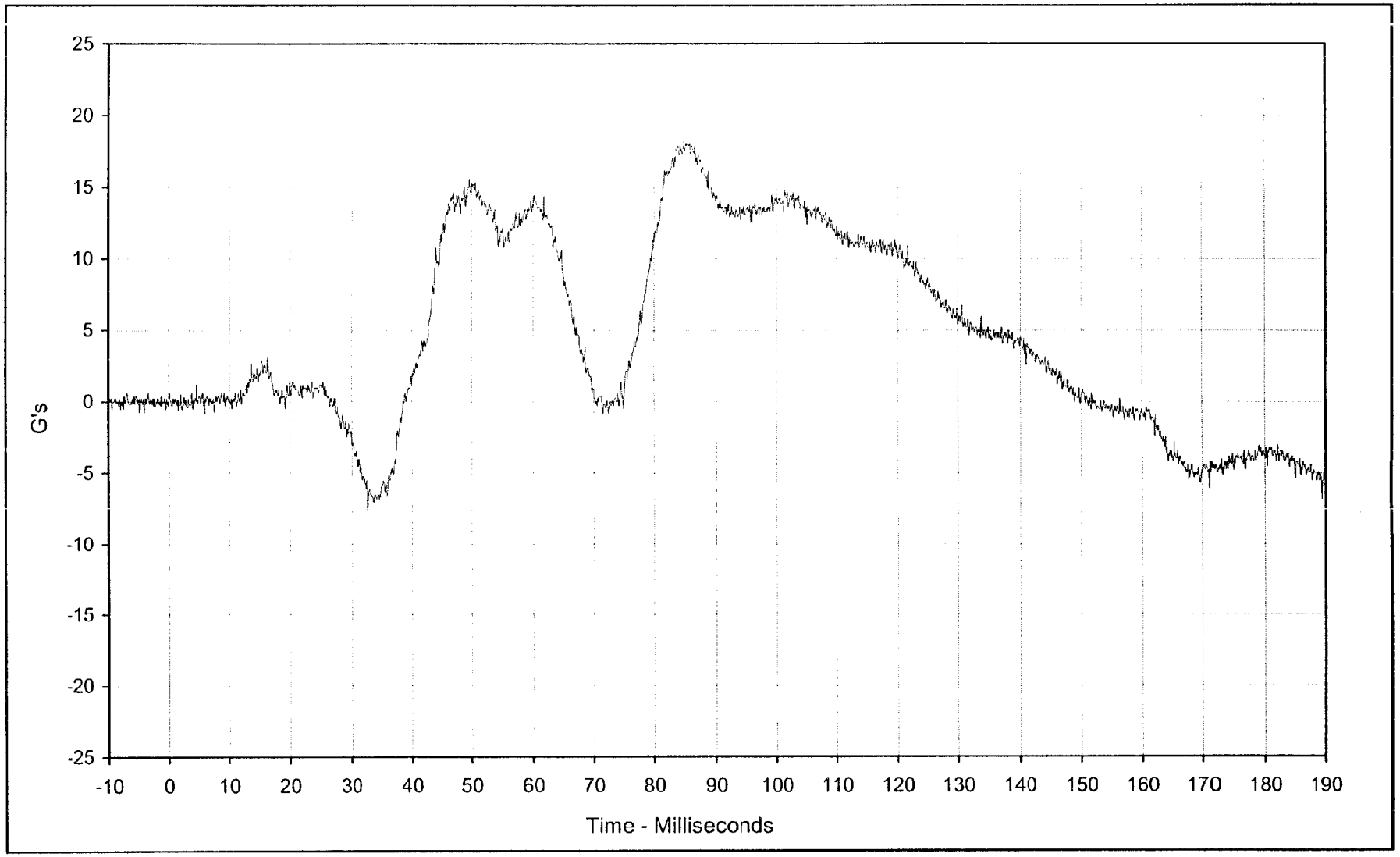
Curve Description:	Driver Head CG X			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	6.5	at	187.7 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-16.2	at	102.8 Milliseconds		
SAE Filter Class:	1000				
Date of Test:	1/26/00				
Curve Number:	FIL-001				

KARC Engineering



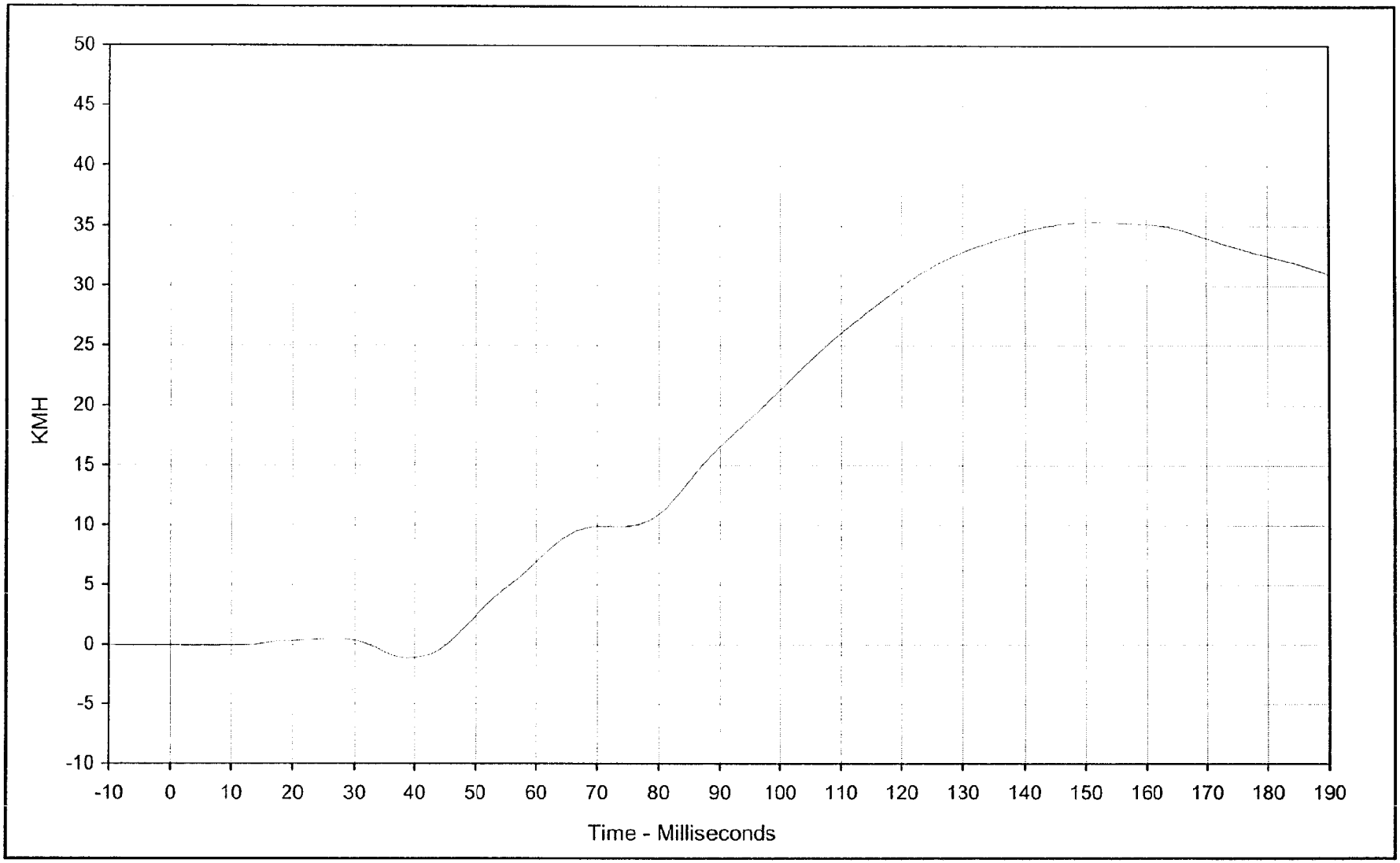
Curve Description:	Driver Head CG X Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	1.7	at	33.5 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-26.8	at	146.1 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-001				

KARC Engineering



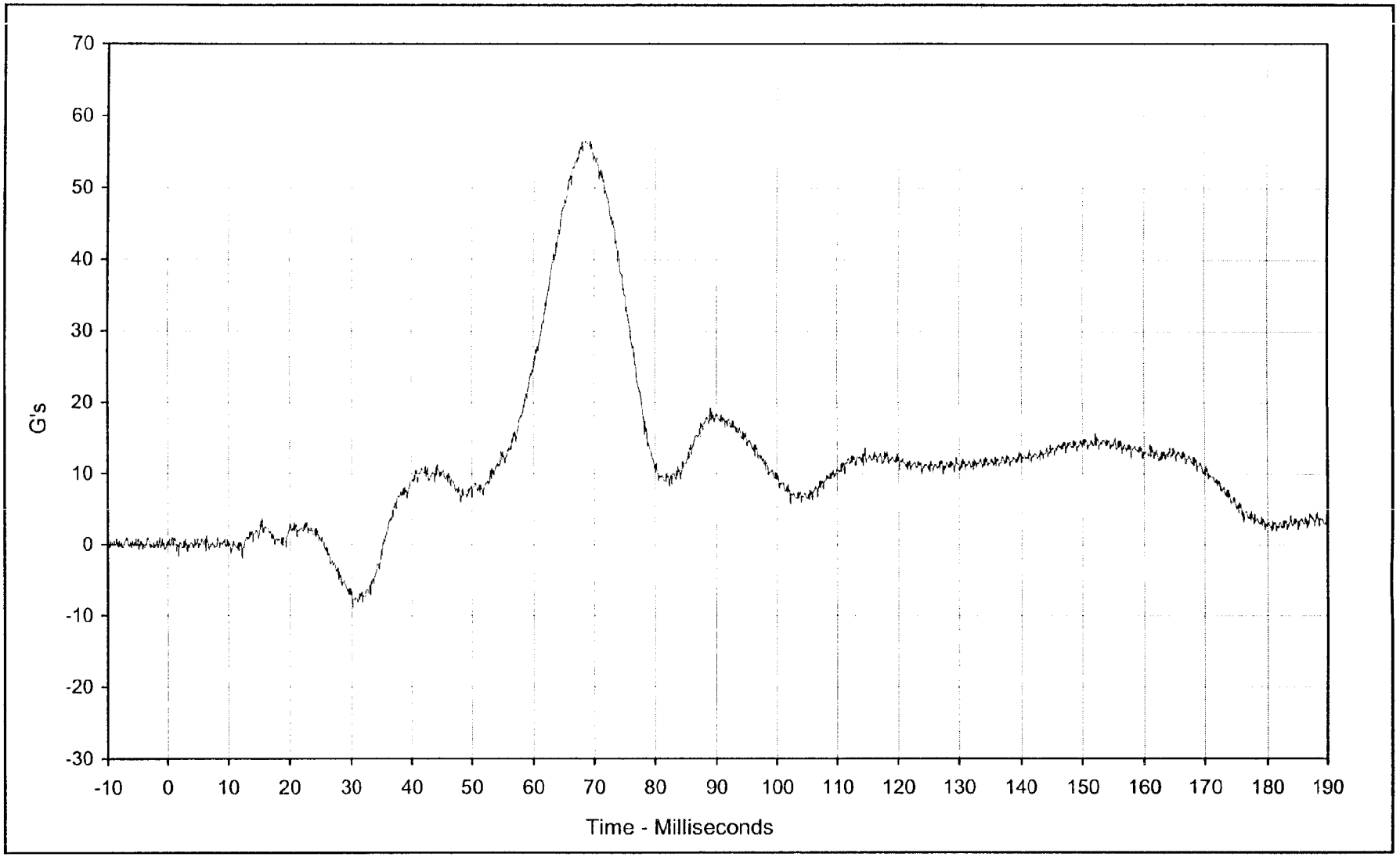
Curve Description:	Driver Head CG Y			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	18.7	at	84.8 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-7.7	at	32.7 Milliseconds		
SAE Filter Class:	1000				
Date of Test:	1/26/00				
Curve Number:	FIL-002				

KARCO Engineering



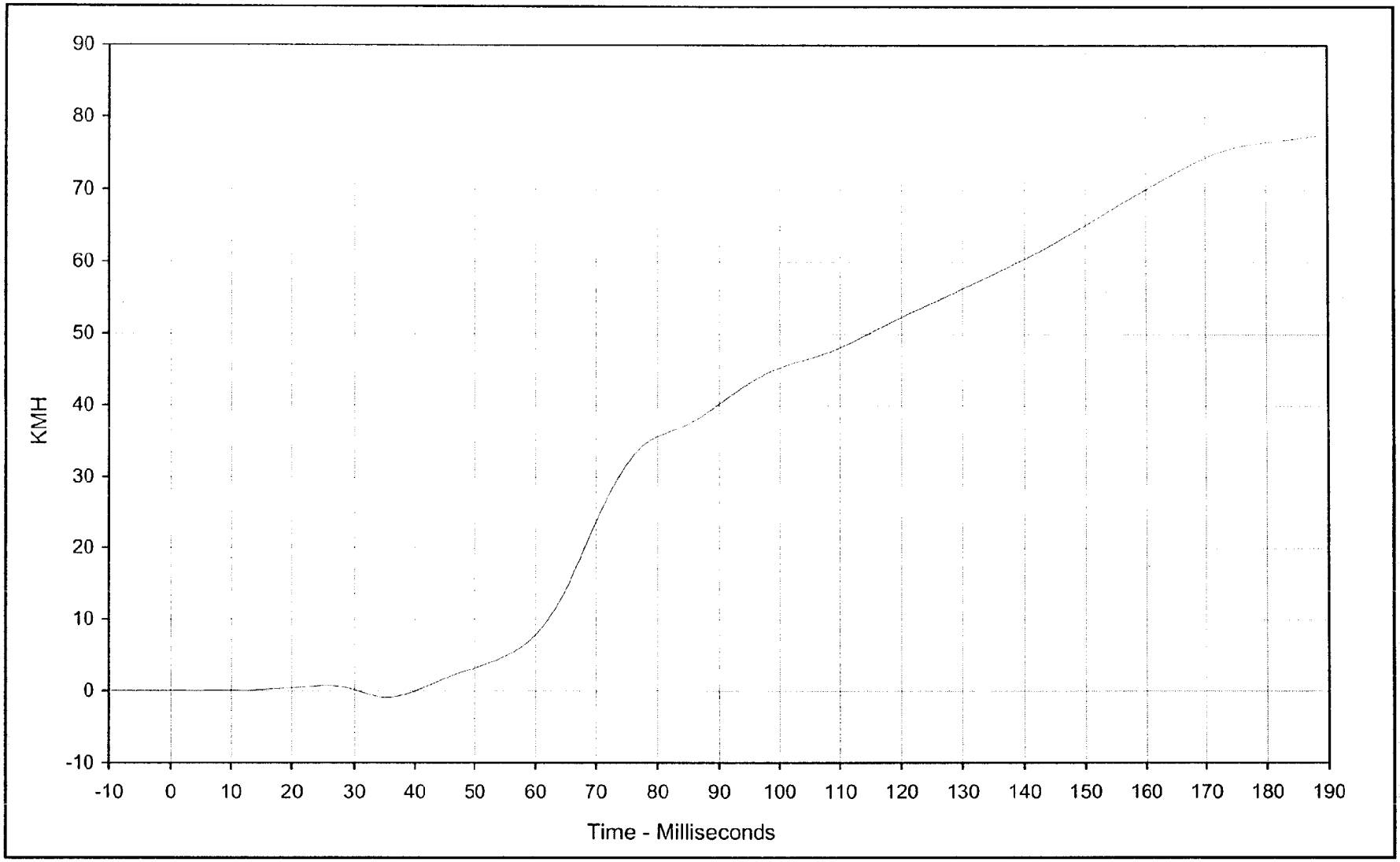
Curve Description:	Driver Head CG Y Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	35.3	at	151.4 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-1.1	at	38.8 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-002				

KARC Engineering



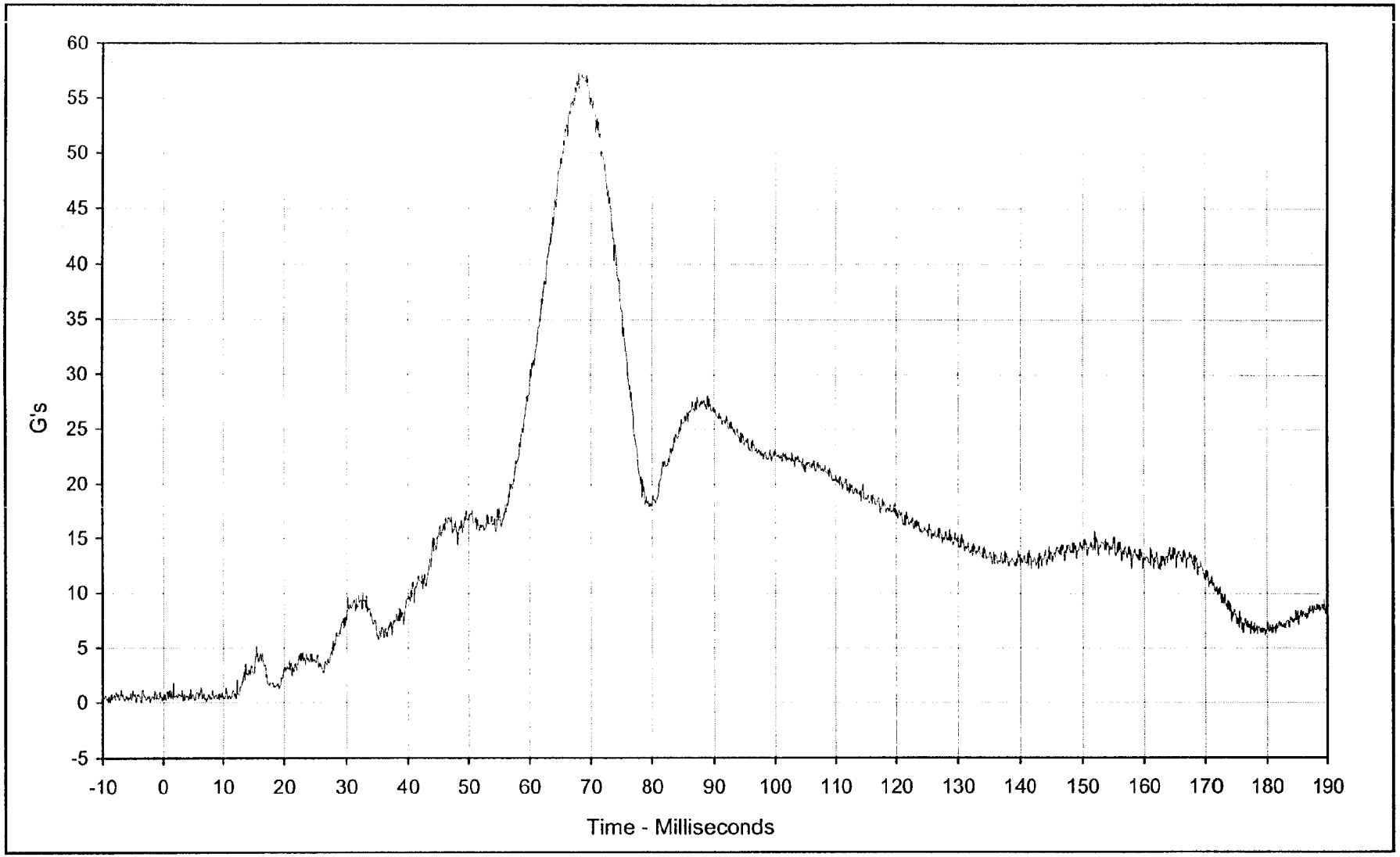
Curve Description:	Driver Head CG Z			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	56.5	at	67.9 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-8.9	at	30.2 Milliseconds		
SAE Filter Class:	1000				
Date of Test:	1/26/00				
Curve Number:	FIL-003				

KARCO Engineering



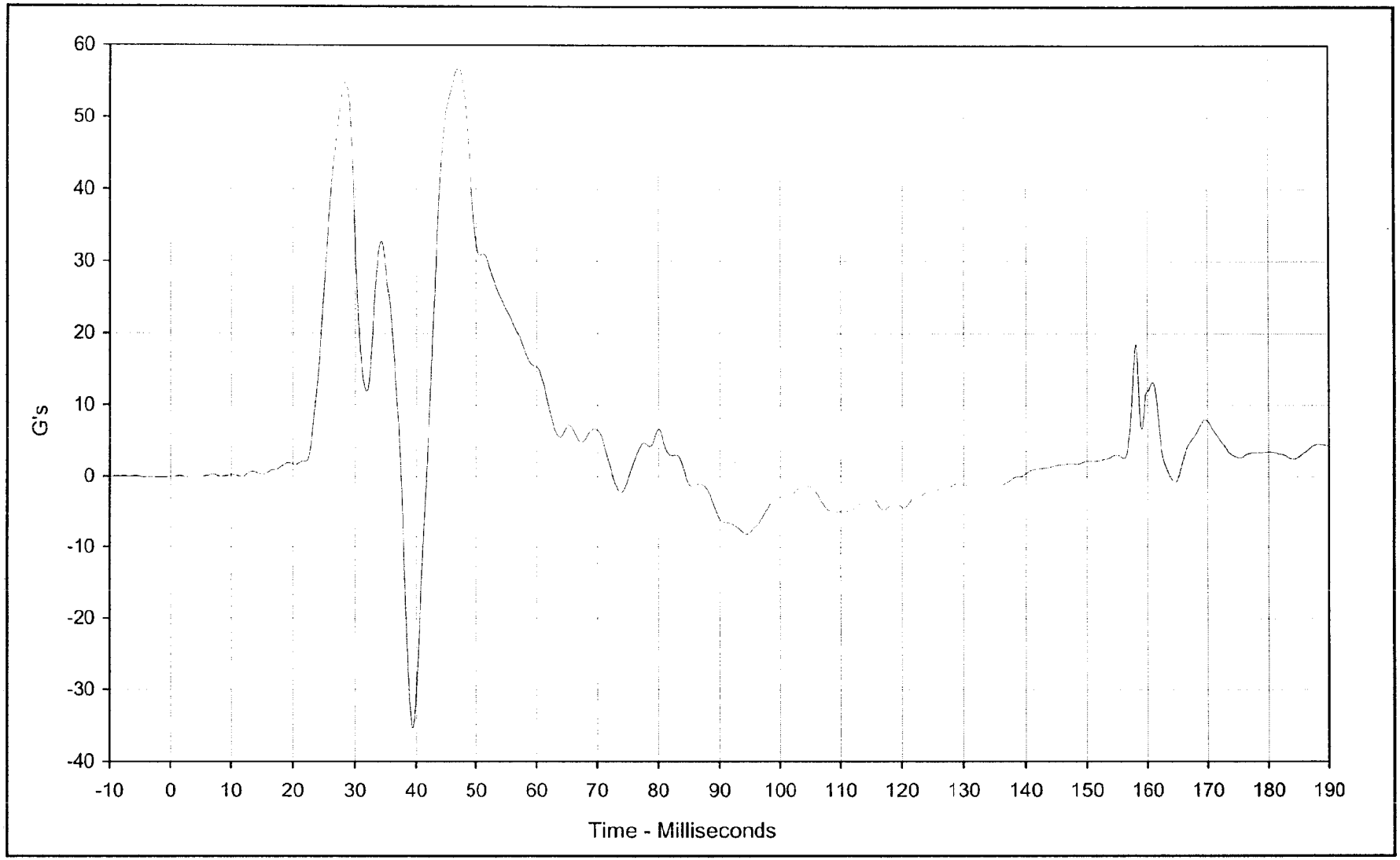
Curve Description:	Driver Head CG Z Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	77.7	at	189.9 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-0.9	at	35.4 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-003				

KARC Engineering



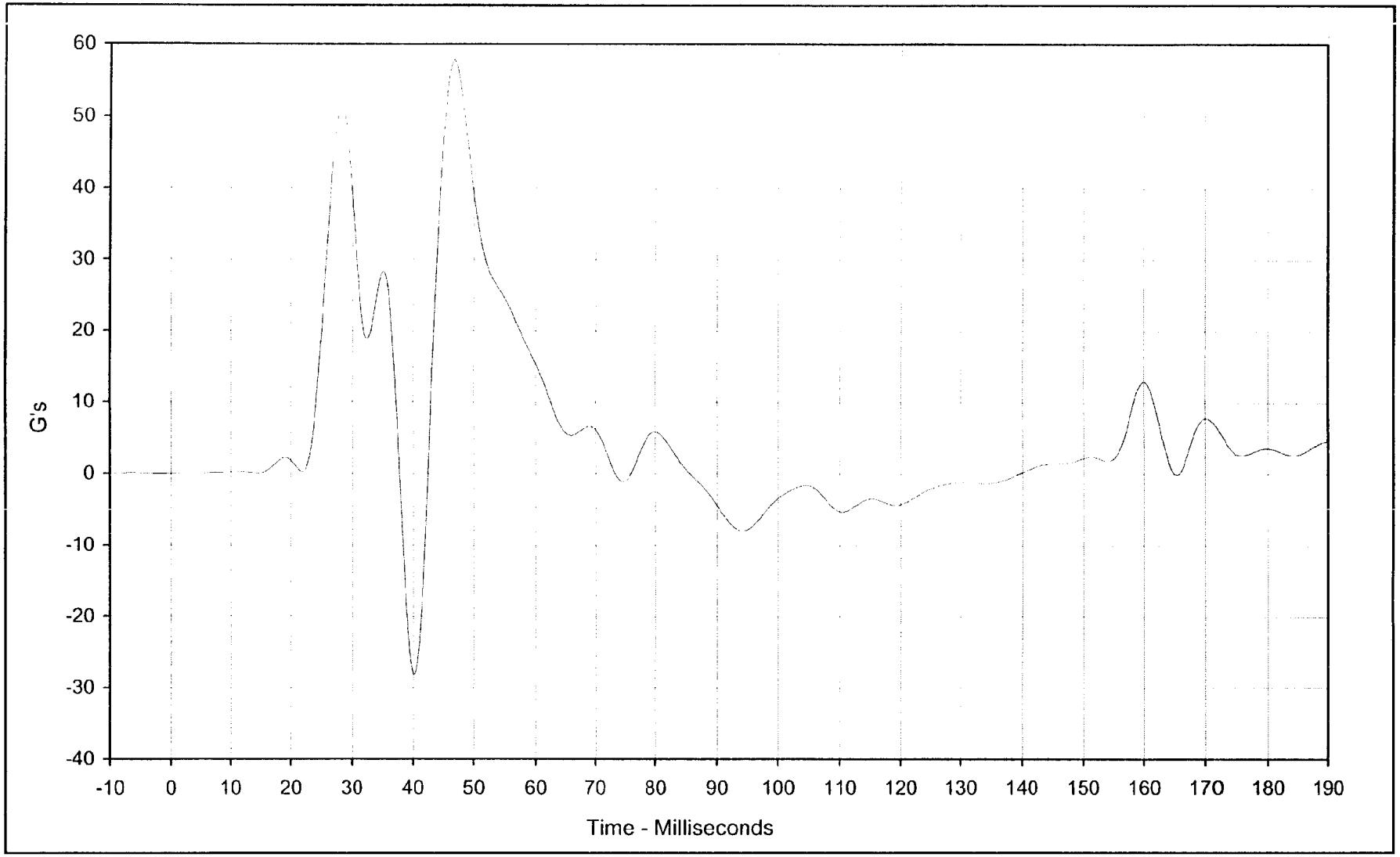
Curve Description:	Driver Head CG Resultant			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	57.3	at	67.9 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	0.1	at	7.2 Milliseconds		
SAE Filter Class:	1000				
Date of Test:	1/26/00				
Curve Number:	RES-001				

KARCO Engineering



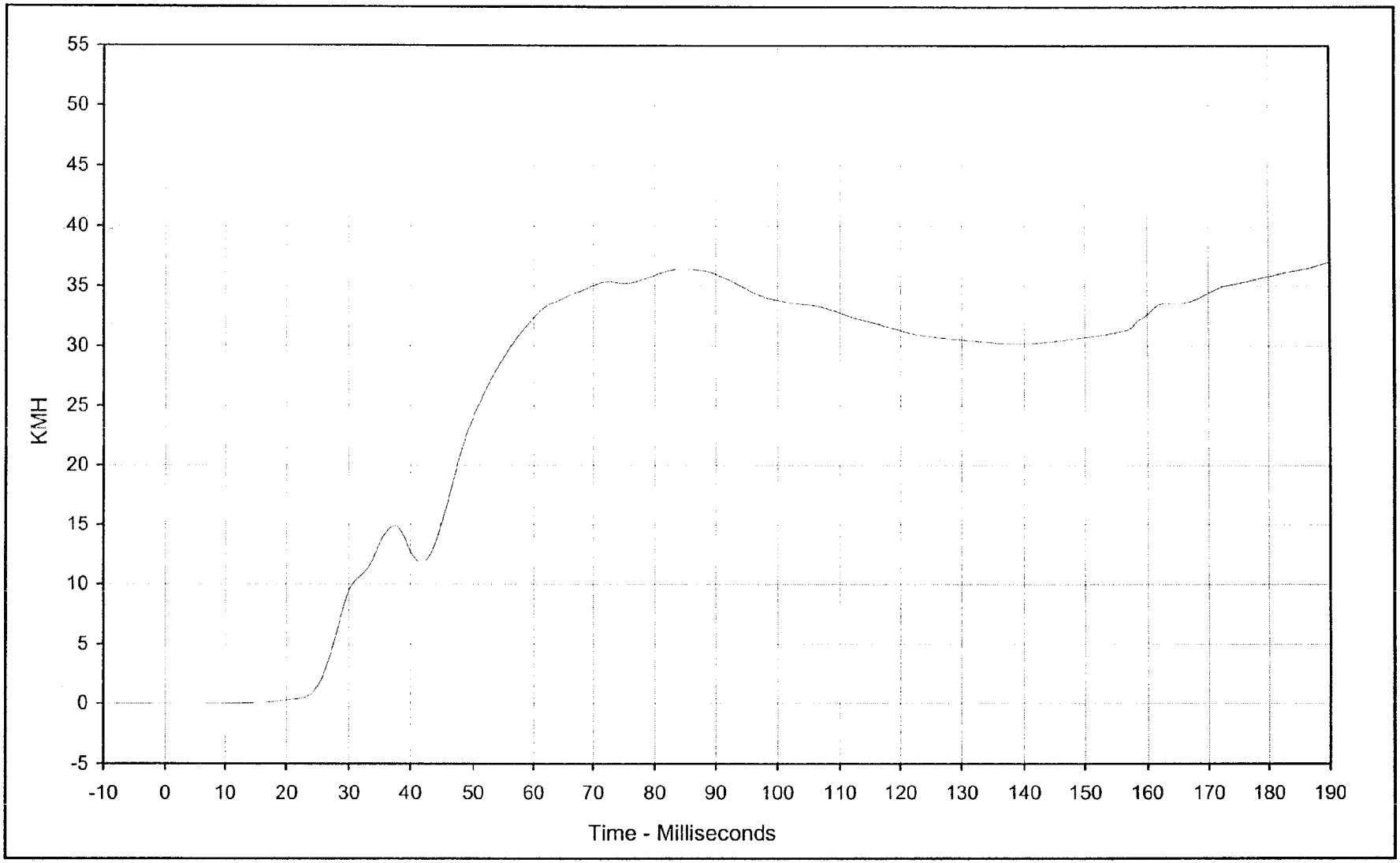
Curve Description:	Driver Upper Rib Primary			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	56.8	at	46.9 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-35.4	at	39.4 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	FIL-004				

KARC Engineering



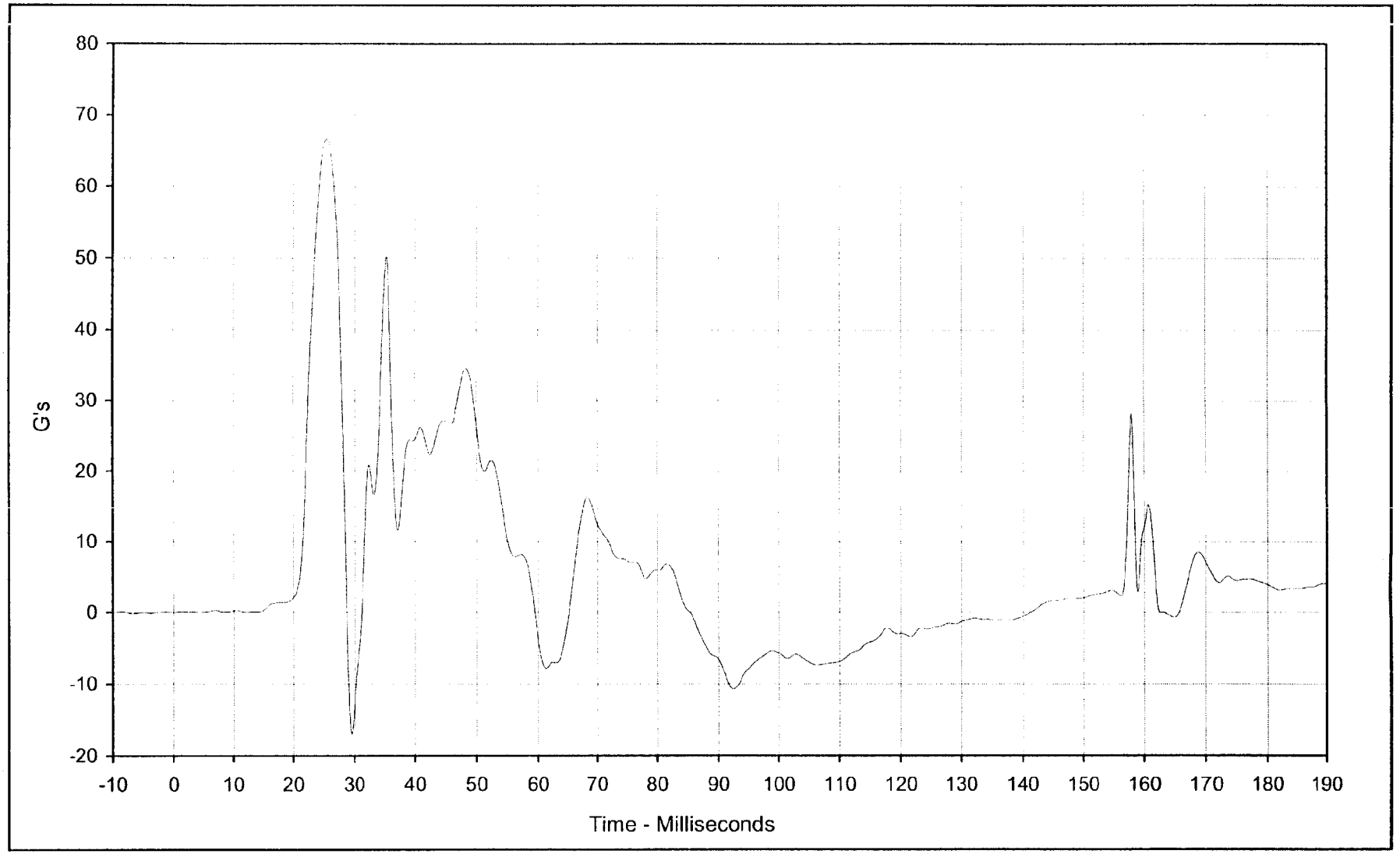
Curve Description:	Driver Upper Rib Primary			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	57.8	at	46.6 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-28.2	at	40.2 Milliseconds		
SAE Filter Class:	FIR 100				
Date of Test:	1/26/00				
Curve Number:	FIR-004				

KARCO Engineering



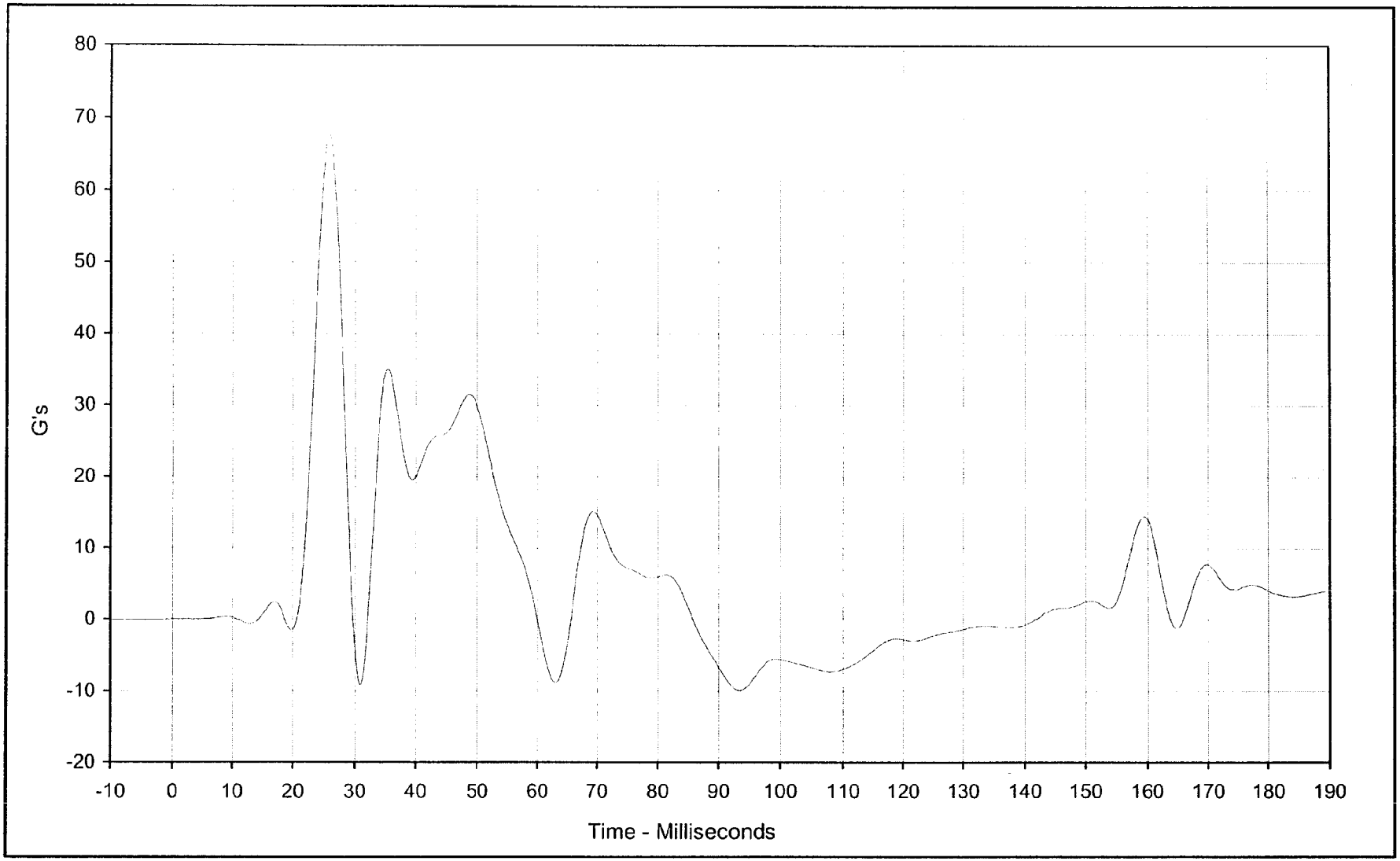
Curve Description:	Driver Upper Rib Primary Y Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	37.0	at	189.9 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	0.0	at	0.5 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-004				

KARC Engineering



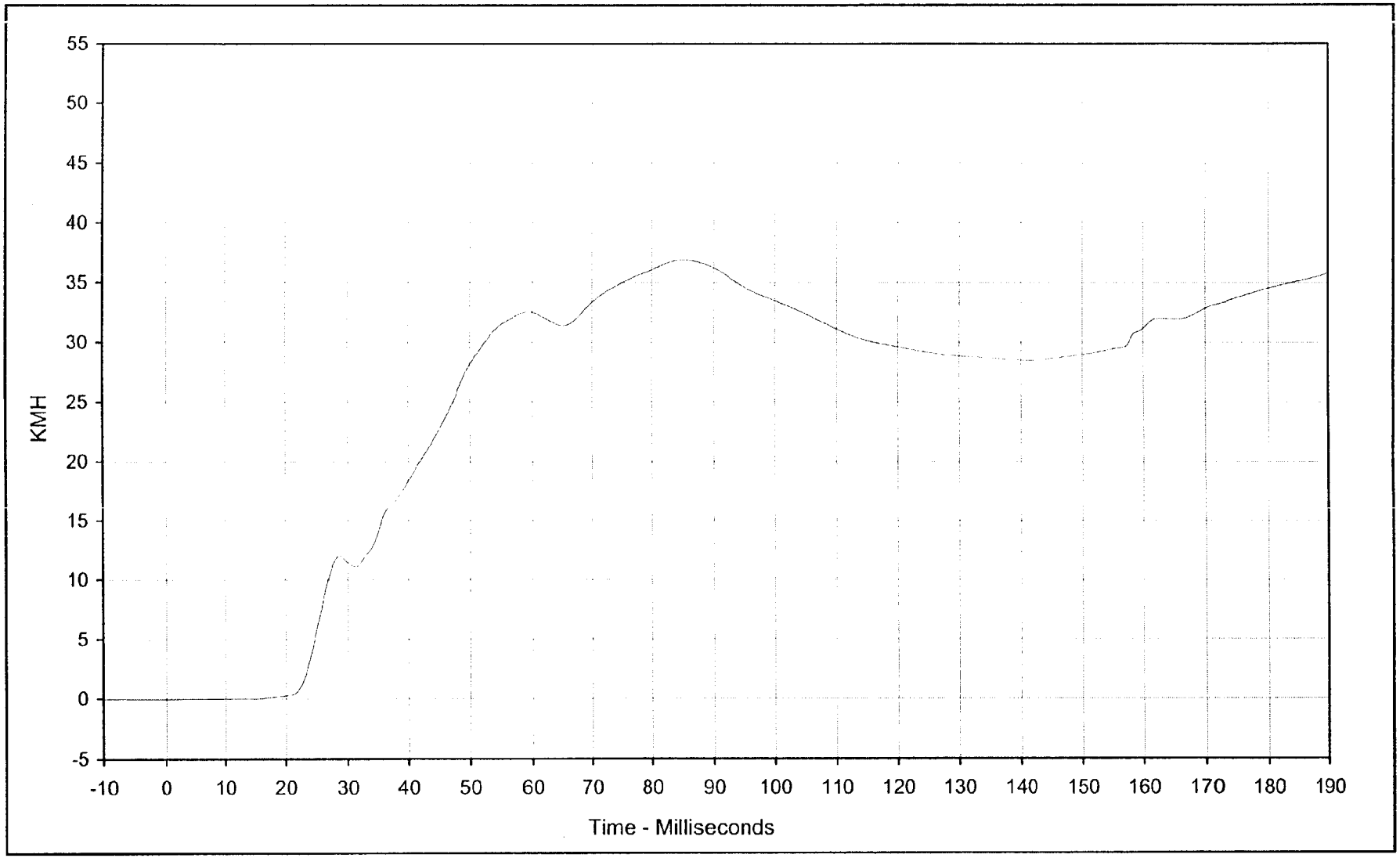
Curve Description:	Driver Lower Rib Primary			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	66.6	at	25.4 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-16.9	at	29.5 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	FIL-005				

KARCO Engineering



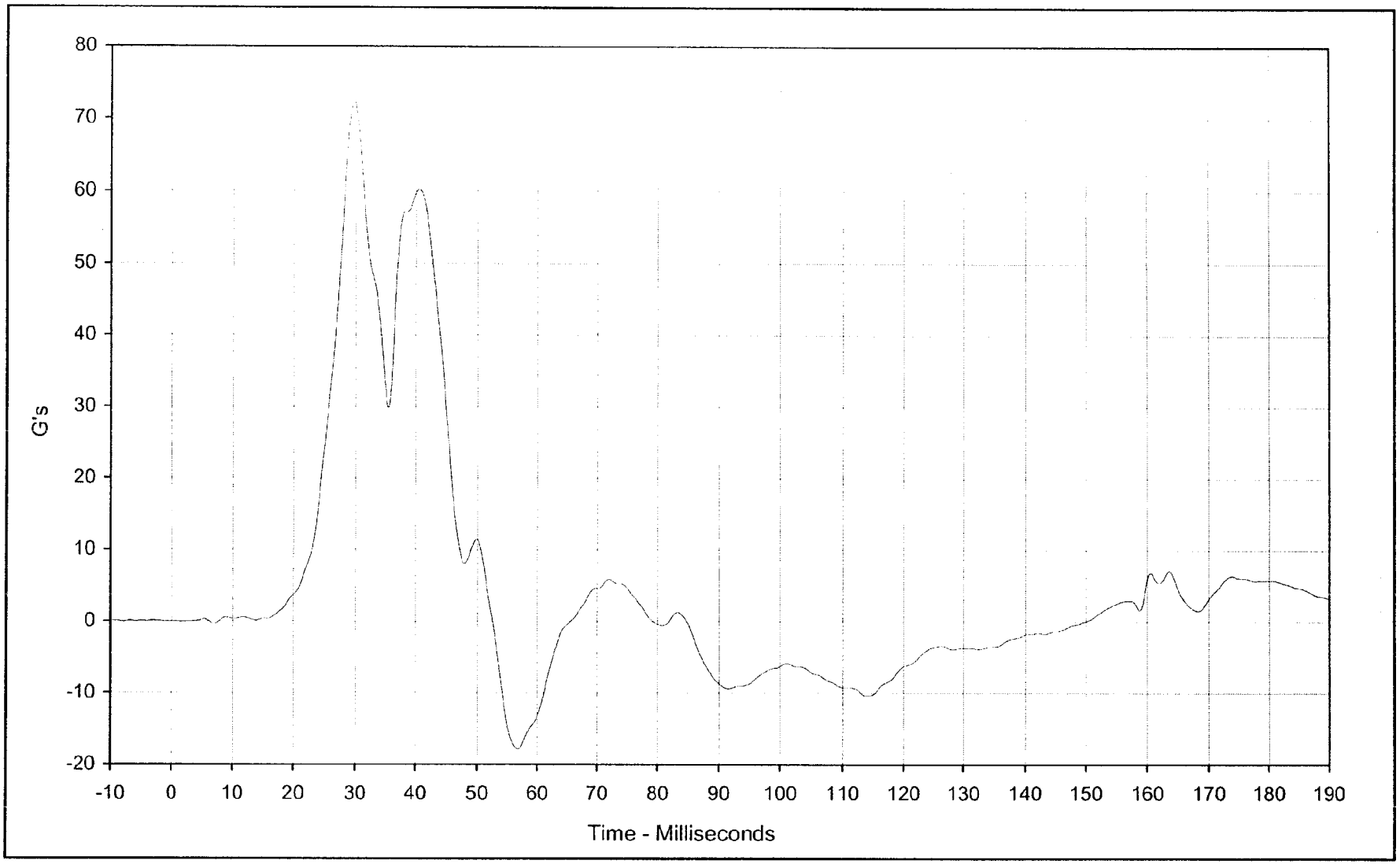
Curve Description:	Driver Lower Rib Primary			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	67.7	at	25.8 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-9.9	at	93.3 Milliseconds		
SAE Filter Class:	FIR 100				
Date of Test:	1/26/00				
Curve Number:	FIR-005				

KARC Engineering



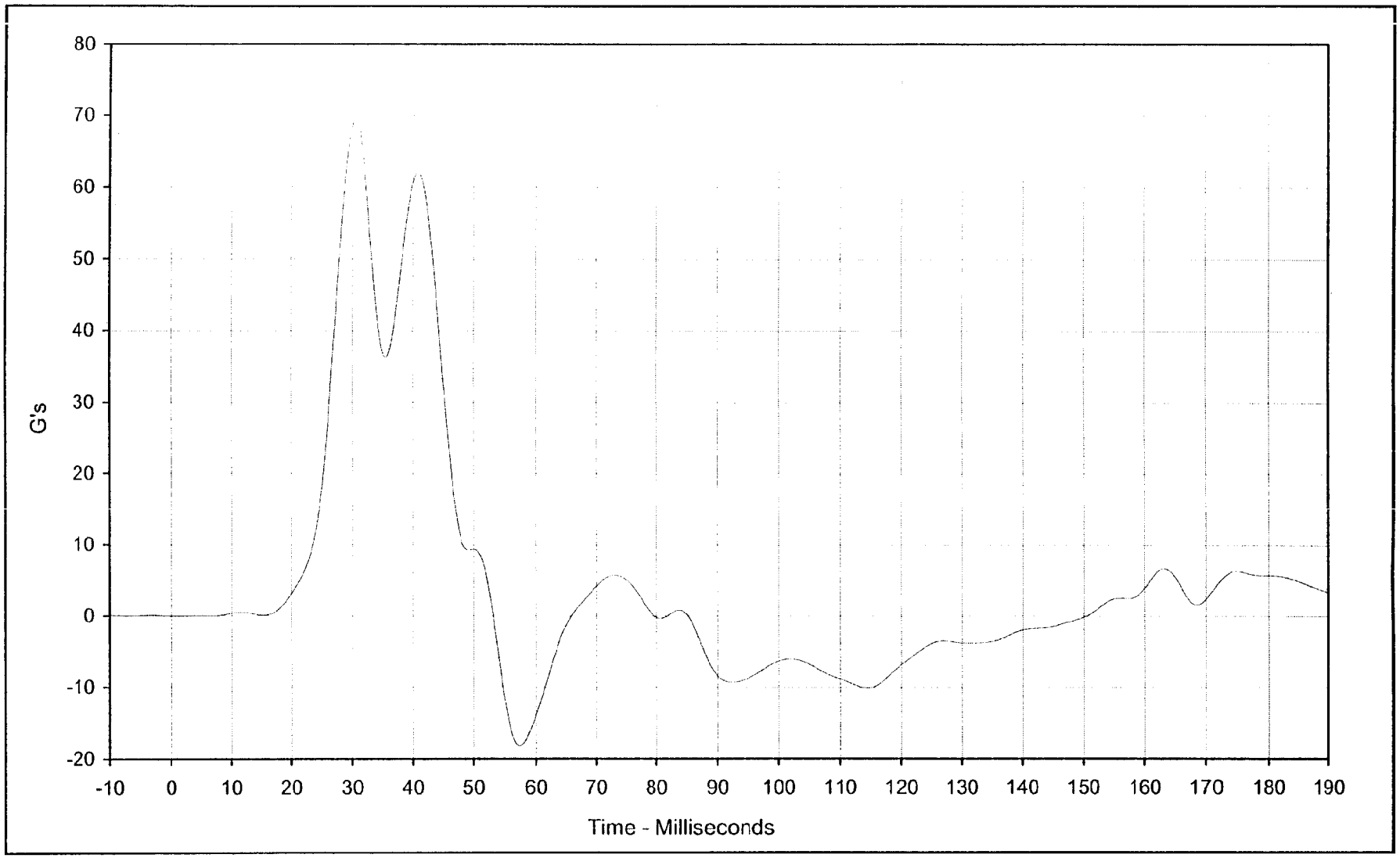
Curve Description:	Driver Lower Rib Primary Y Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	36.9	at	85.3 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-0.1	at	0.2 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-005				

KARCO Engineering



Curve Description:	Driver Lower Spine Primary			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	72.6	at	29.7 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-17.8	at	56.7 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	FIL-006				

KARC Engineering



Curve Description: Driver Lower Spine Primary

Maximum Value: 69.4 at 30.4 Milliseconds

Minimum Value: -18.2 at 57.3 Milliseconds

SAE Filter Class: FIR 100

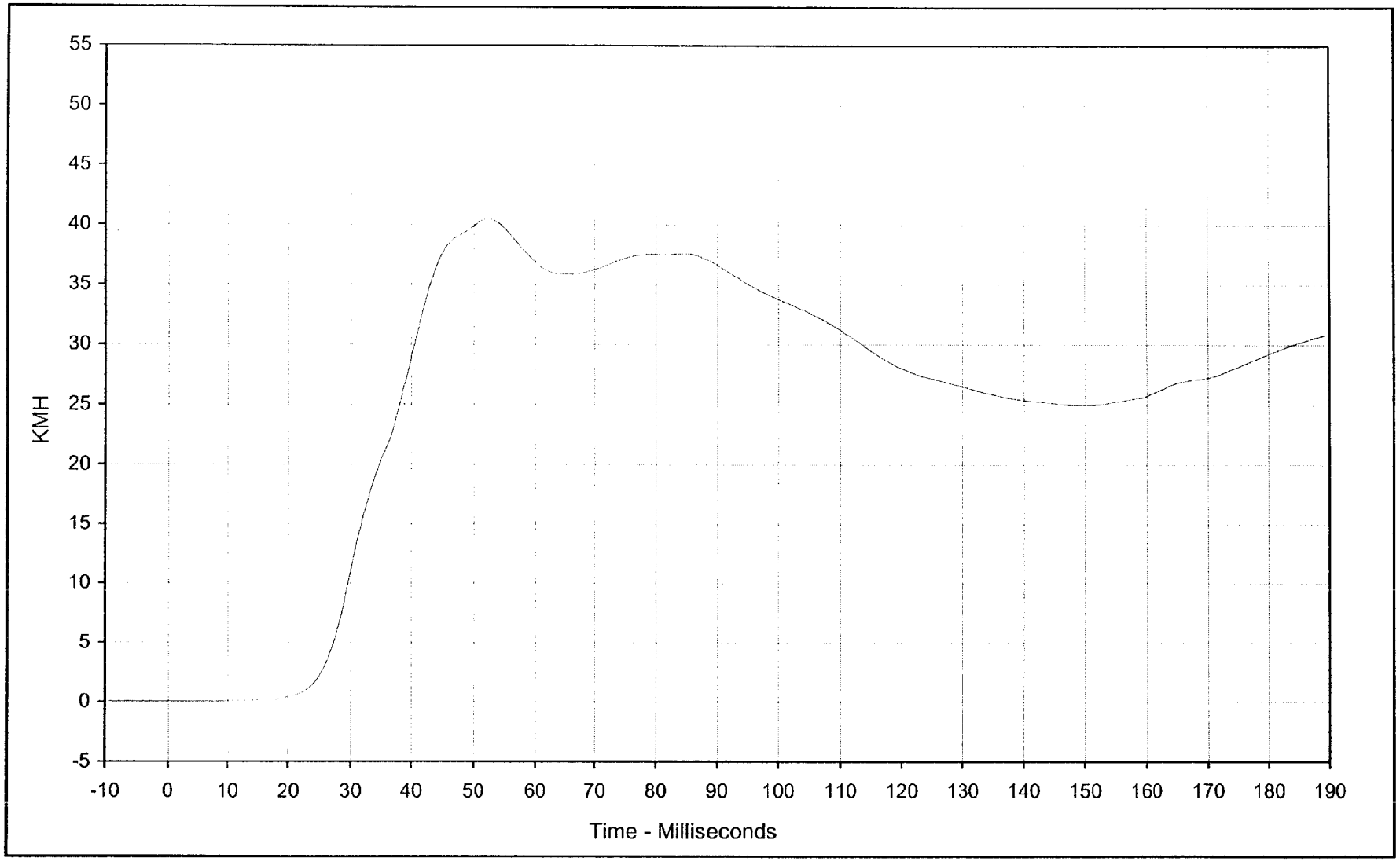
Date of Test: 1/26/00

Curve Number: FIR-006

Test Program: 55/28 km/h Side Impact NCAP No.: MY0107

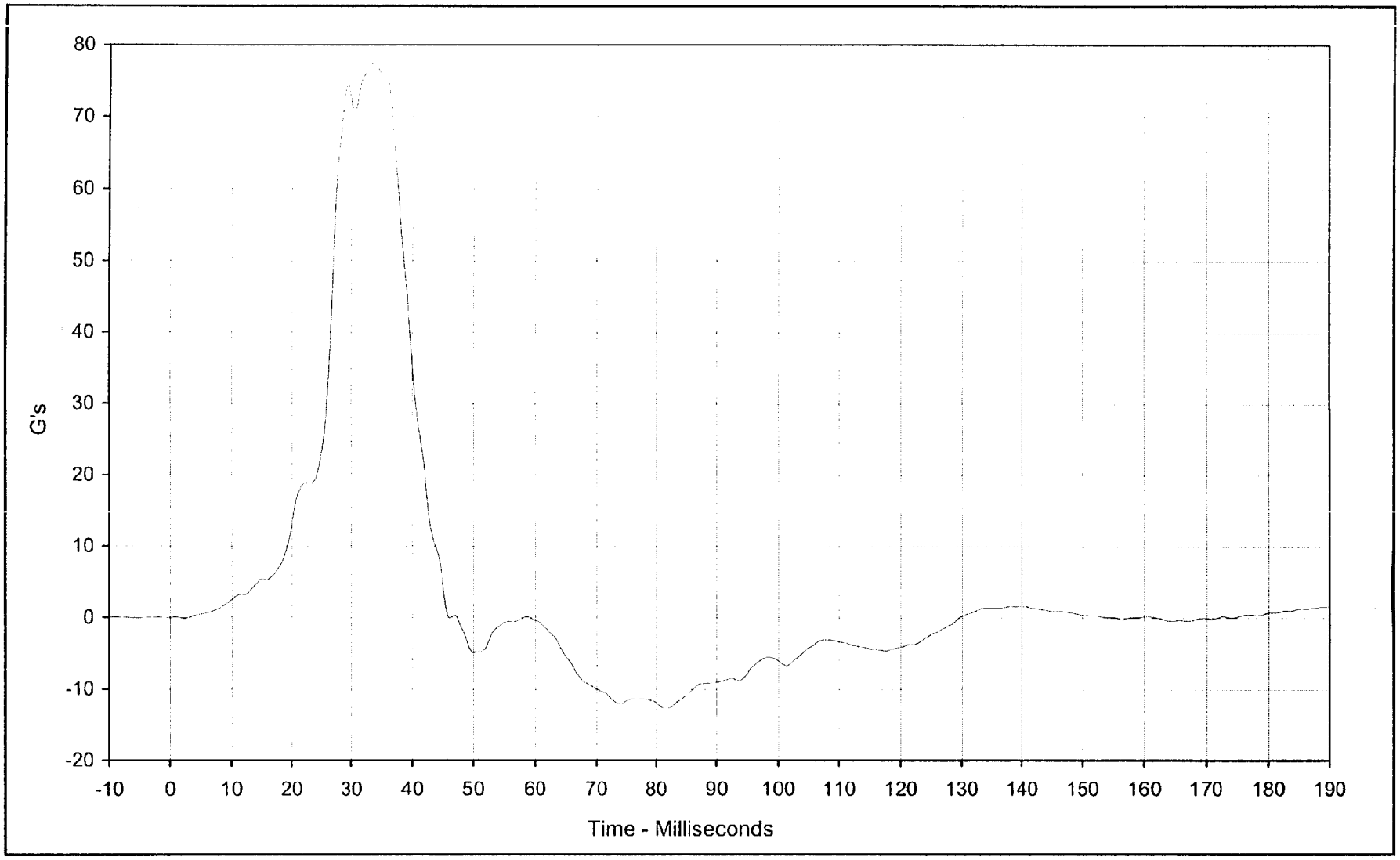
Test Vehicle: 2000 Chevrolet S-10 Pickup

KARCO Engineering



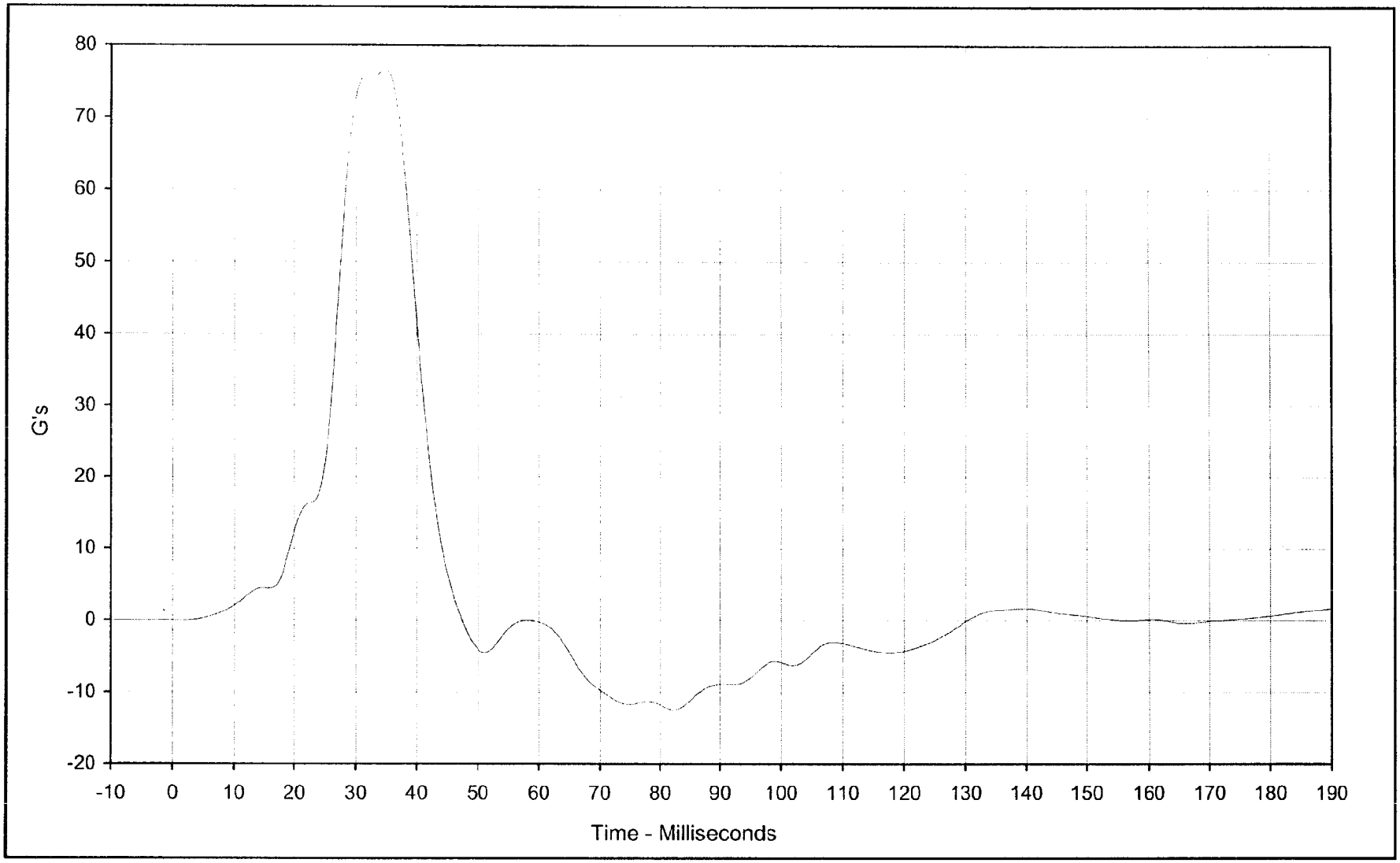
Curve Description:	Driver Lower Spine Primary Y Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	40.4	at	52.4 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	0.0	at	7.8 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-006				

KARC Engineering



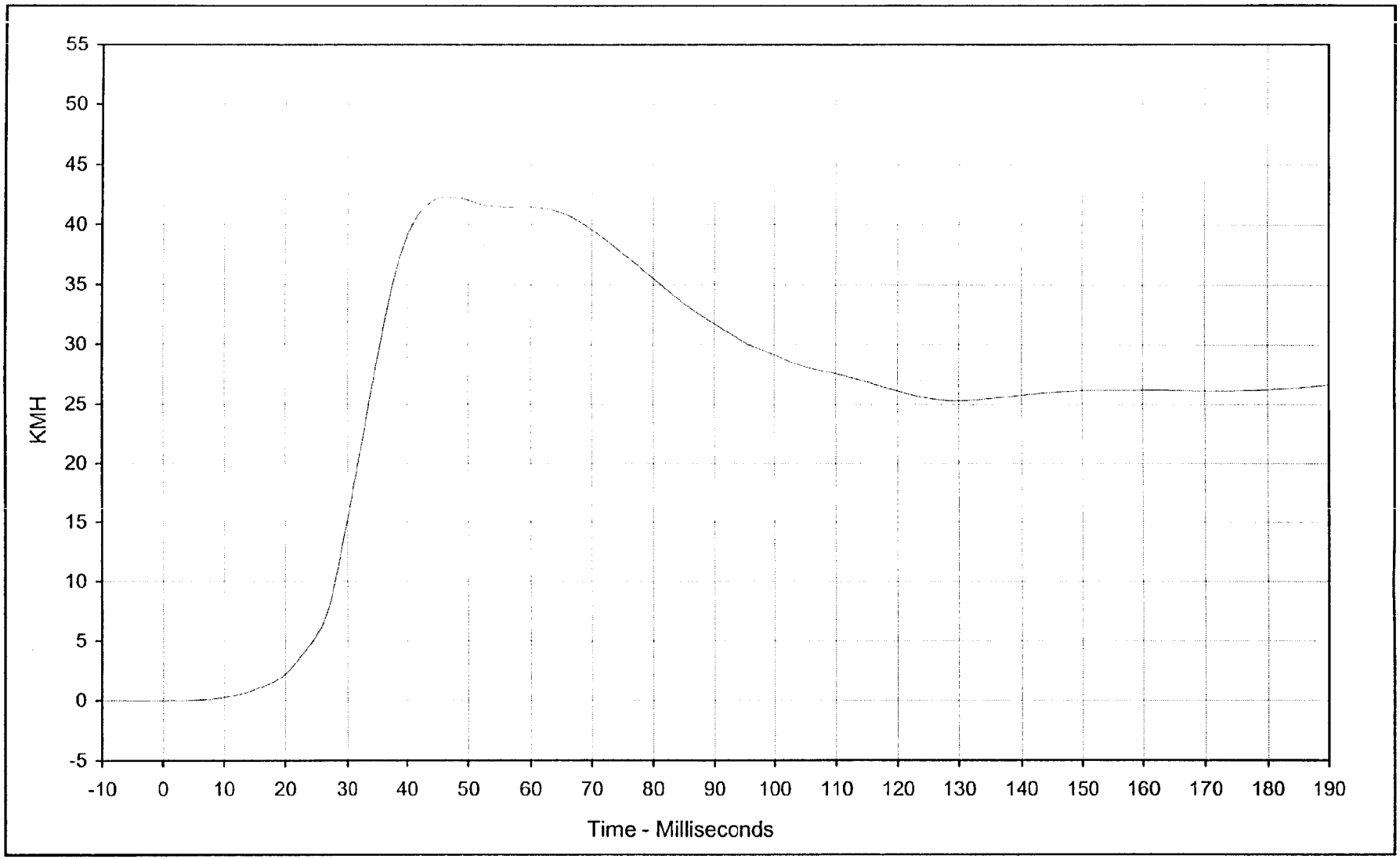
Curve Description:	Driver Pelvis Primary Y			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	77.6	at	33.5 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-12.7	at	81.7 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	FIL-007				

KARC Engineering



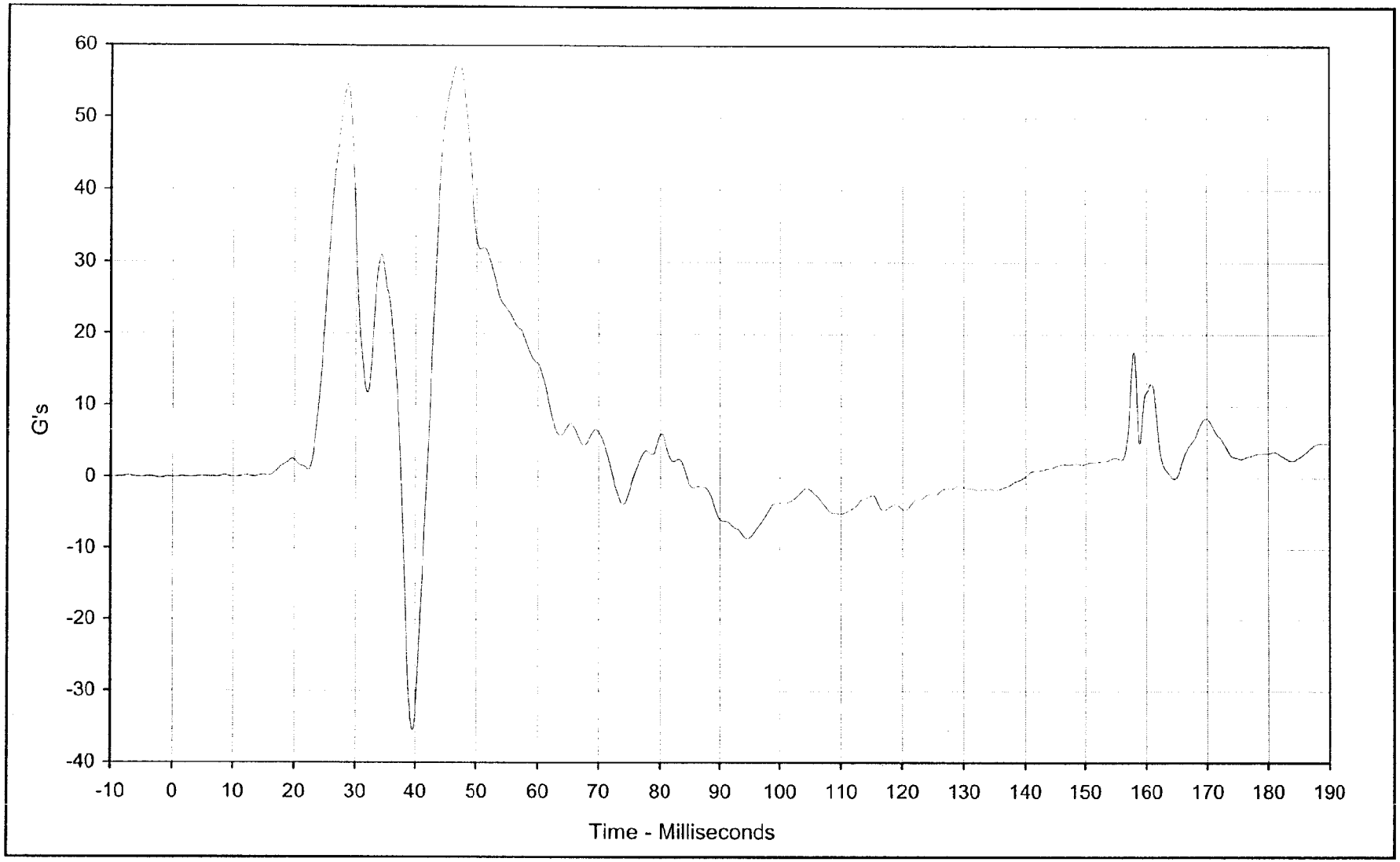
Curve Description:	Driver Pelvis Primary Y			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	76.6	at	34.8 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-12.5	at	82.3 Milliseconds		
SAE Filter Class:	FIR 100				
Date of Test:	1/26/00				
Curve Number:	FIR-007				

KARCO Engineering



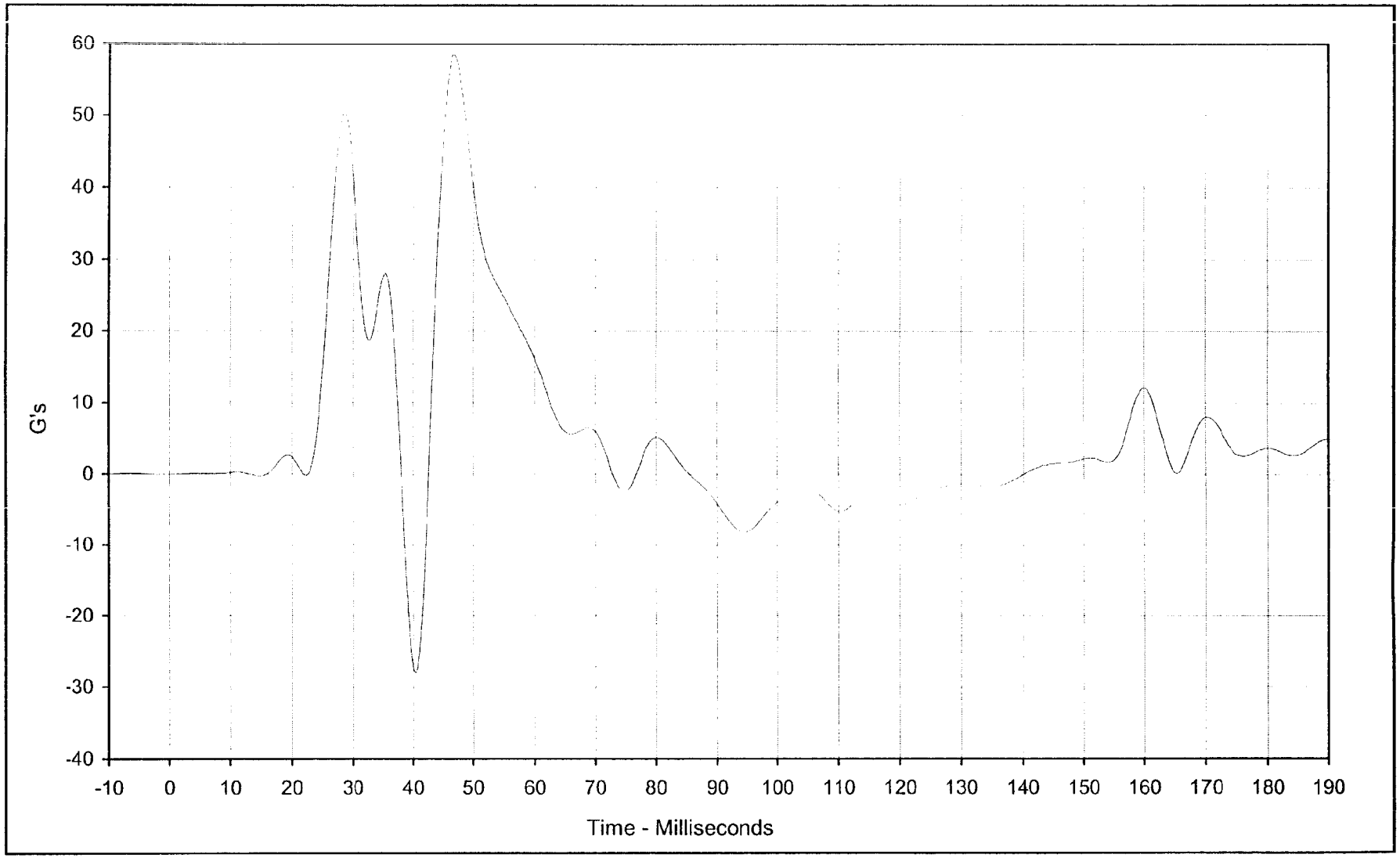
Curve Description:	Driver Pelvis Primary Y Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	42.3	at	47.4 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	0.0	at	3.0 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-007				

KARCO Engineering



Curve Description:	Driver Upper Rib Redundant			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	57.7	at	46.8 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-35.5	at	39.5 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	FIL-008				

KARC Engineering



Curve Description: Driver Upper Rib Redundant

Maximum Value: 58.6 at 46.7 Milliseconds

Minimum Value: -28.0 at 40.3 Milliseconds

SAE Filter Class: FIR 100

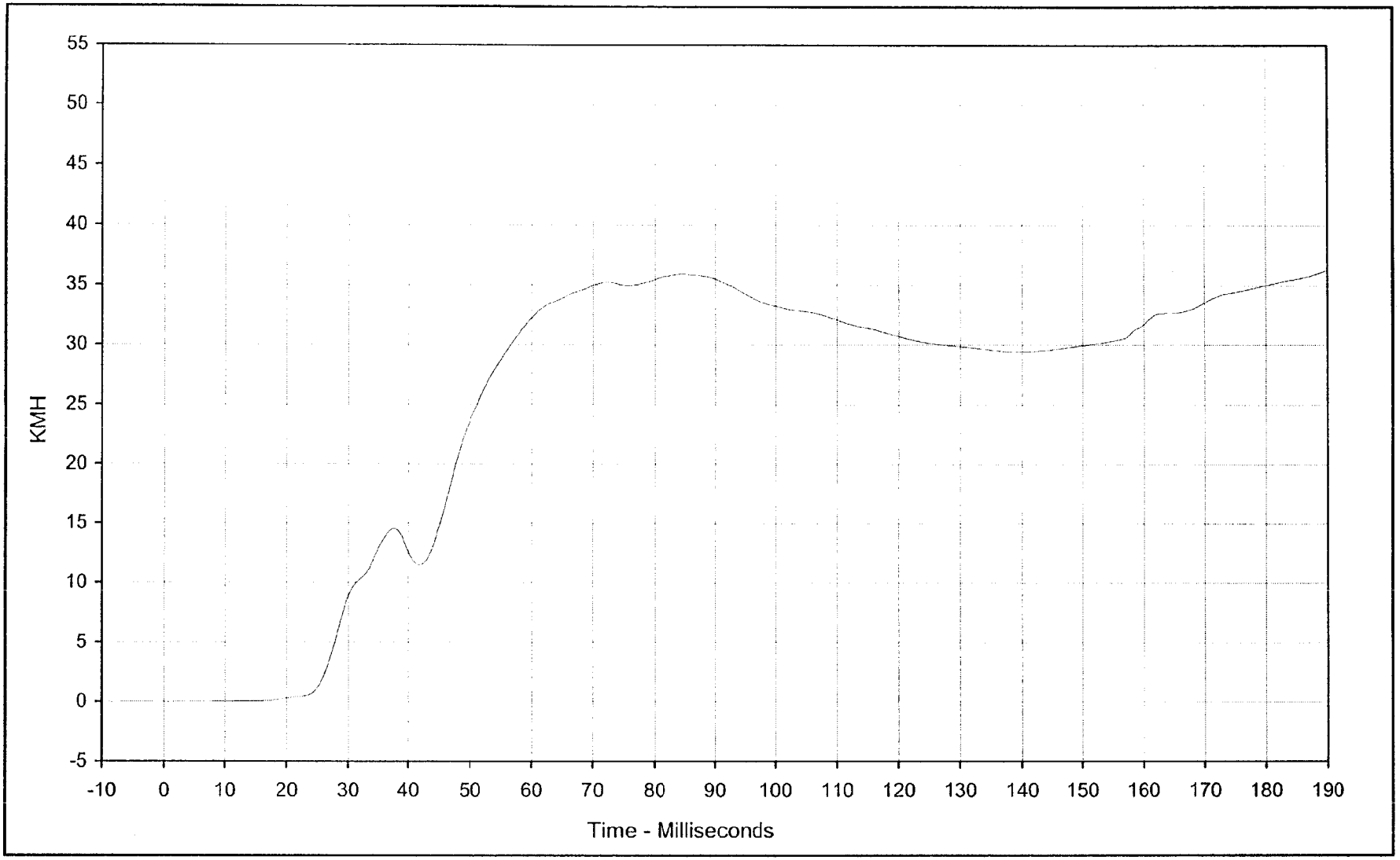
Date of Test: 1/26/00

Curve Number: FIR-008

Test Program: 55/28 km/h Side Impact NCAP No.: MY0107

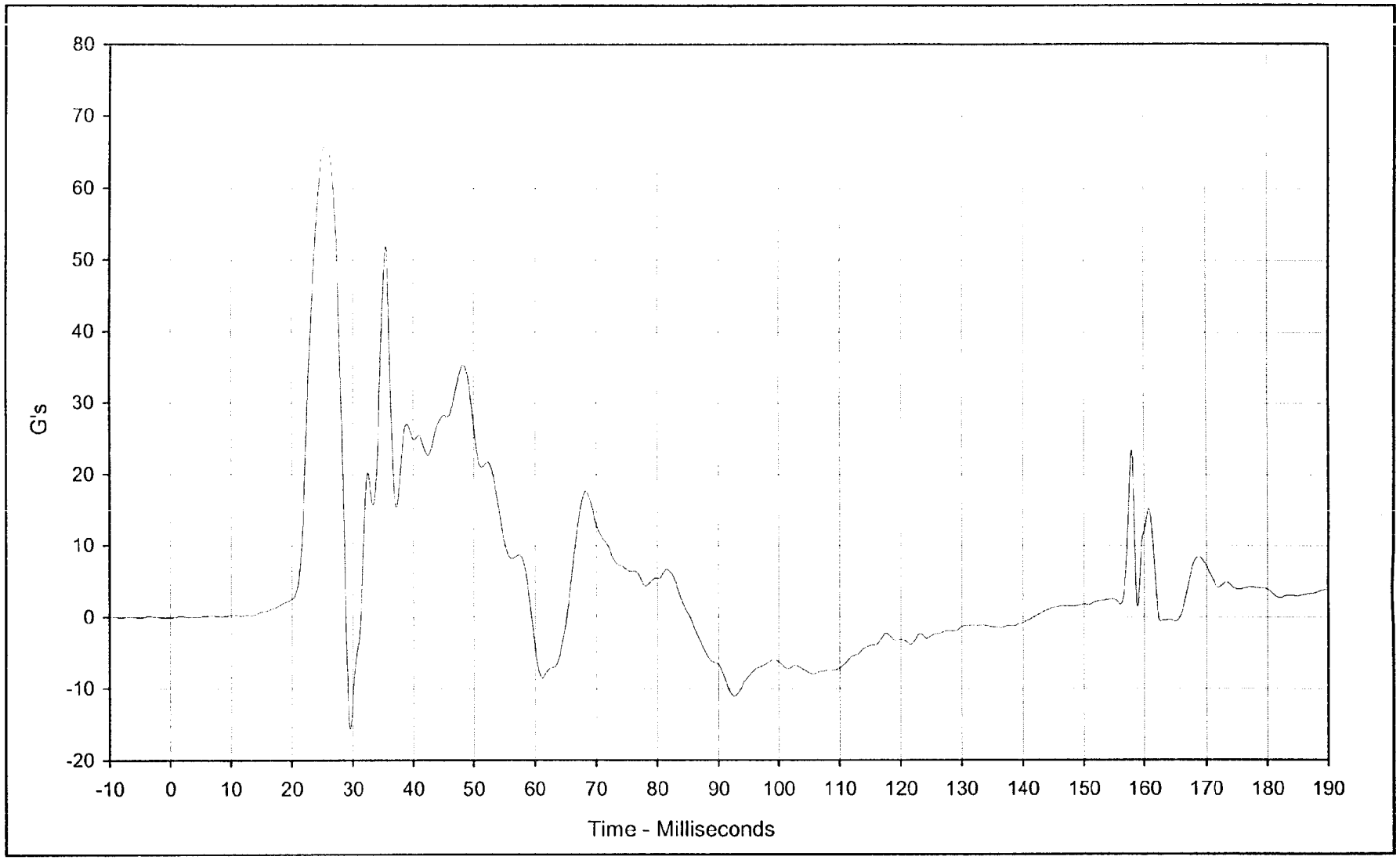
Test Vehicle: 2000 Chevrolet S-10 Pickup

KARCO Engineering



Curve Description:	Driver Upper Rib Redundant Y Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	36.3	at	189.9 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	0.0	at	0.8 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-008				

KARC Engineering



Curve Description: Driver Lower Rib Redundant

Maximum Value: 66.3 at 25.5 Milliseconds

Minimum Value: -15.6 at 29.5 Milliseconds

SAE Filter Class: 180

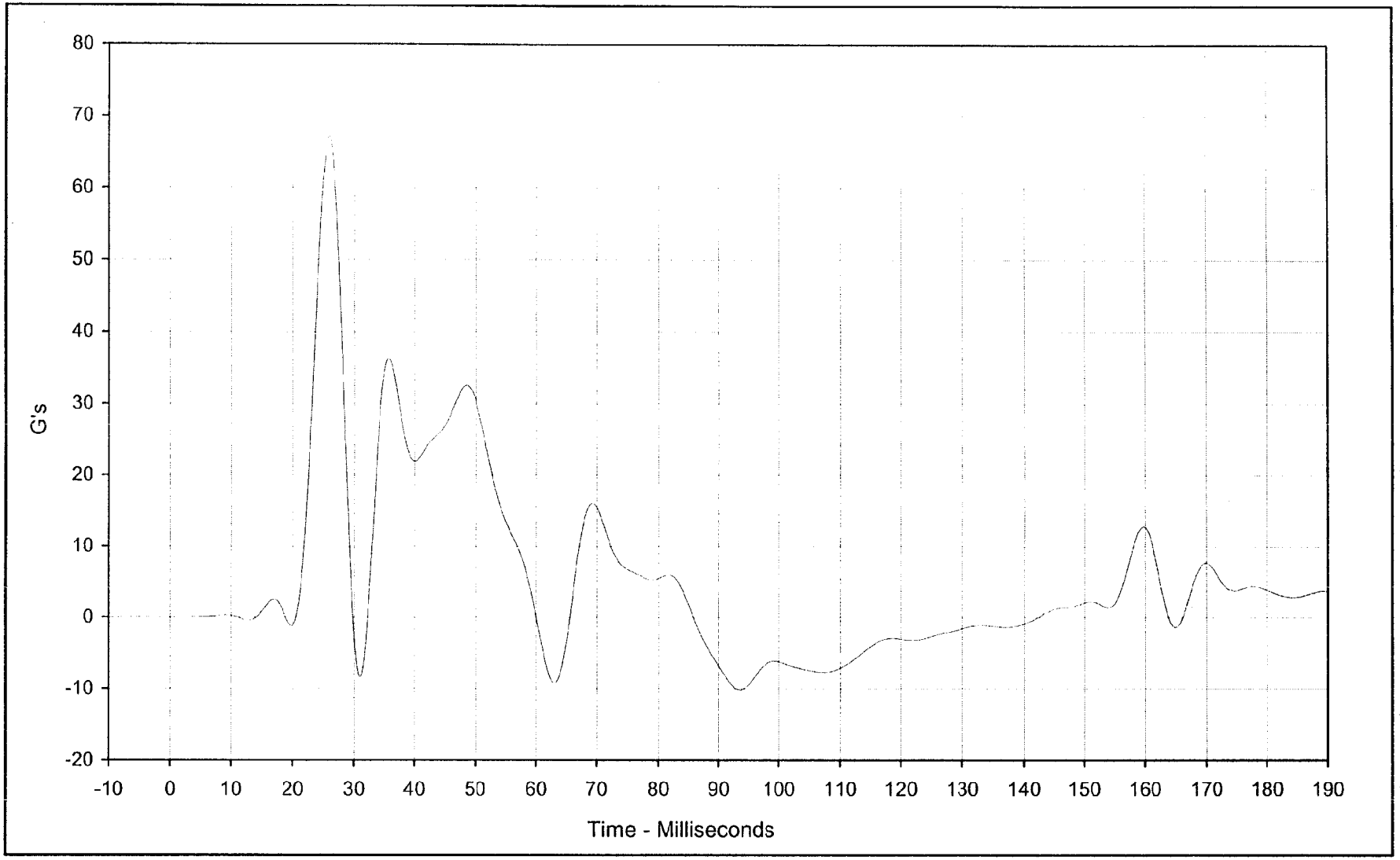
Date of Test: 1/26/00

Curve Number: FIL-009

Test Program: 55/28 km/h Side Impact NCAP No.: MY0107

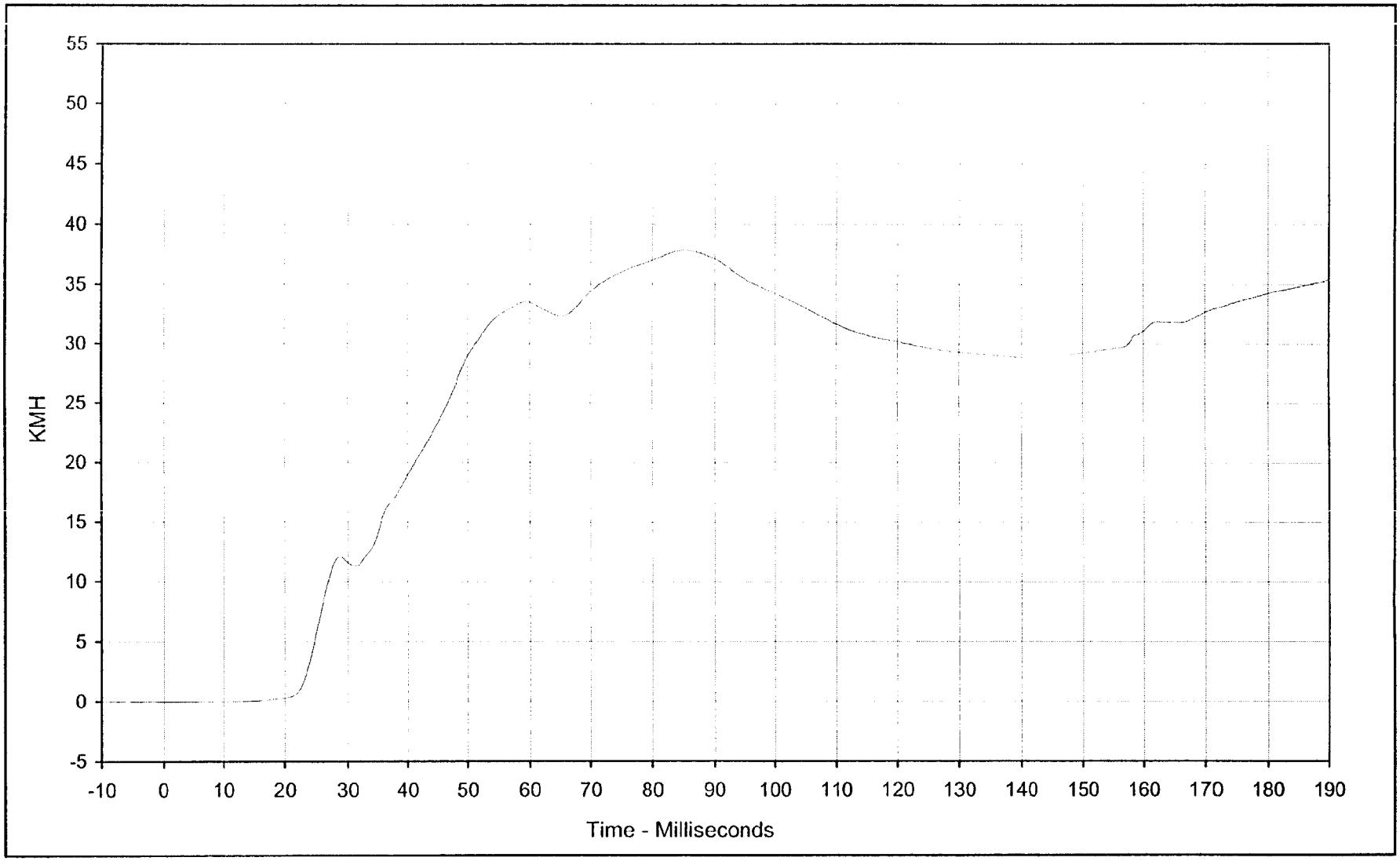
Test Vehicle: 2000 Chevrolet S-10 Pickup

KARCO Engineering



Curve Description:	Driver Lower Rib Redundant	Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	67.2 at 25.8 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-10.2 at 93.5 Milliseconds		
SAE Filter Class:	FIR 100		
Date of Test:	1/26/00		
Curve Number:	FIR-009		

KARC Engineering



Curve Description: Driver Lower Rib Redundant Y Velocity

Maximum Value: 37.8 at 85.3 Milliseconds

Minimum Value: 0.0 at 0.8 Milliseconds

SAE Filter Class: 180

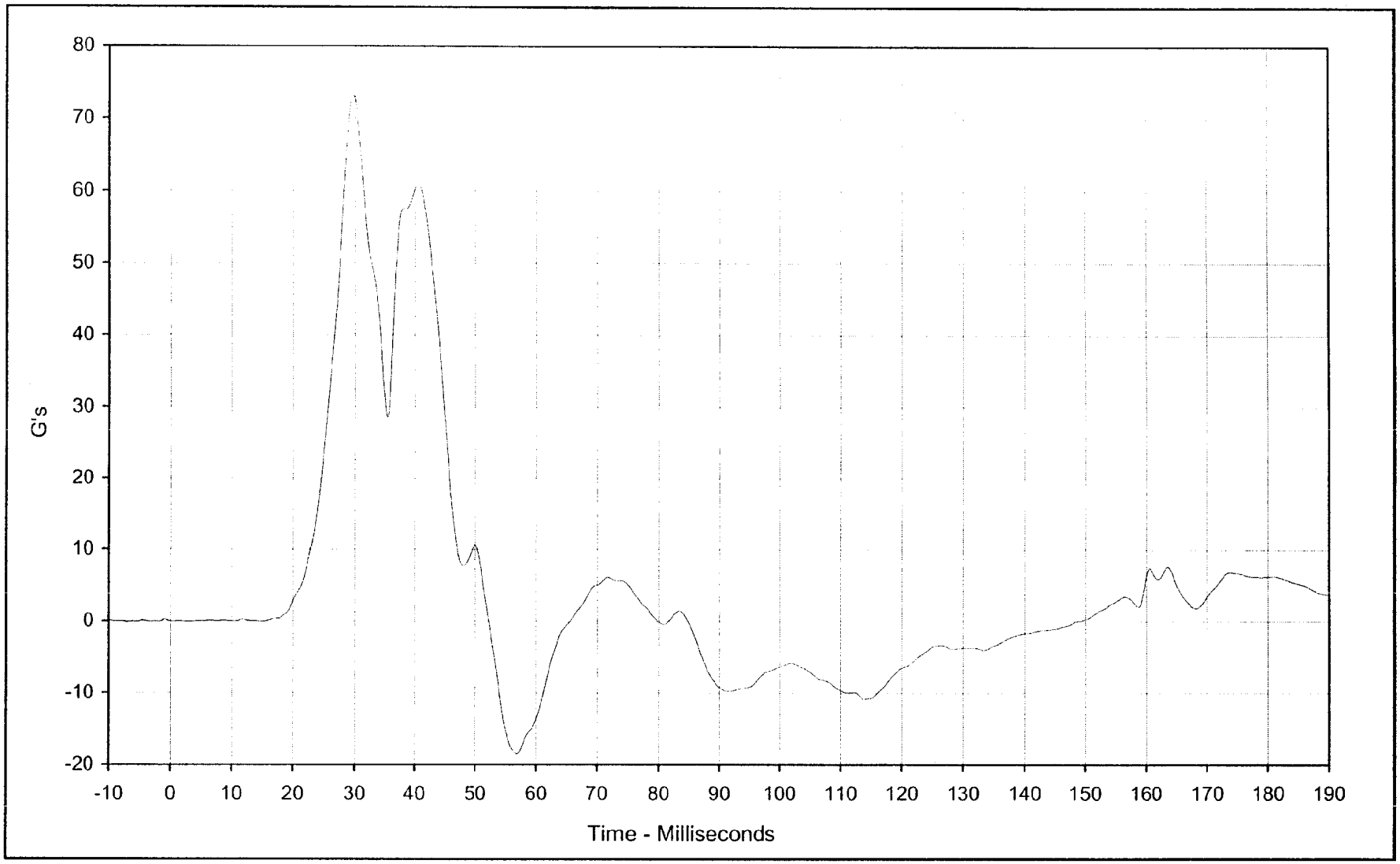
Date of Test: 1/26/00

Curve Number: IN1-009

Test Program: 55/28 km/h Side Impact NCAP No.: MY0107

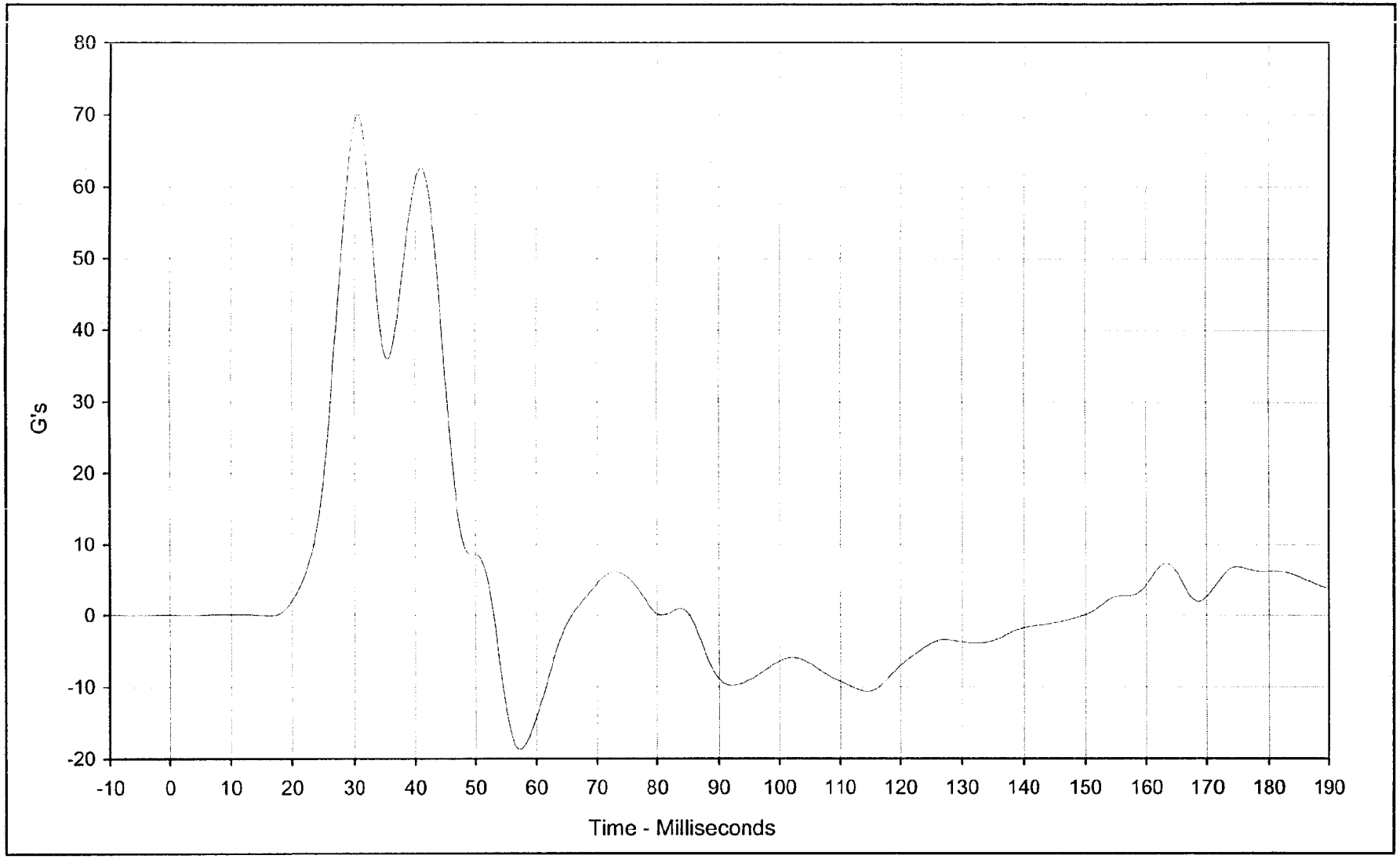
Test Vehicle: 2000 Chevrolet S-10 Pickup

KARCO Engineering



Curve Description:	Driver Lower Spine Redundant			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	73.2	at	29.7 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-18.4	at	56.7 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	FIL-010				

KARC Engineering



Curve Description: Driver Lower Spine Redundant

Maximum Value: 70.1 at 30.5 Milliseconds

Minimum Value: -18.7 at 57.3 Milliseconds

SAE Filter Class: FIR 100

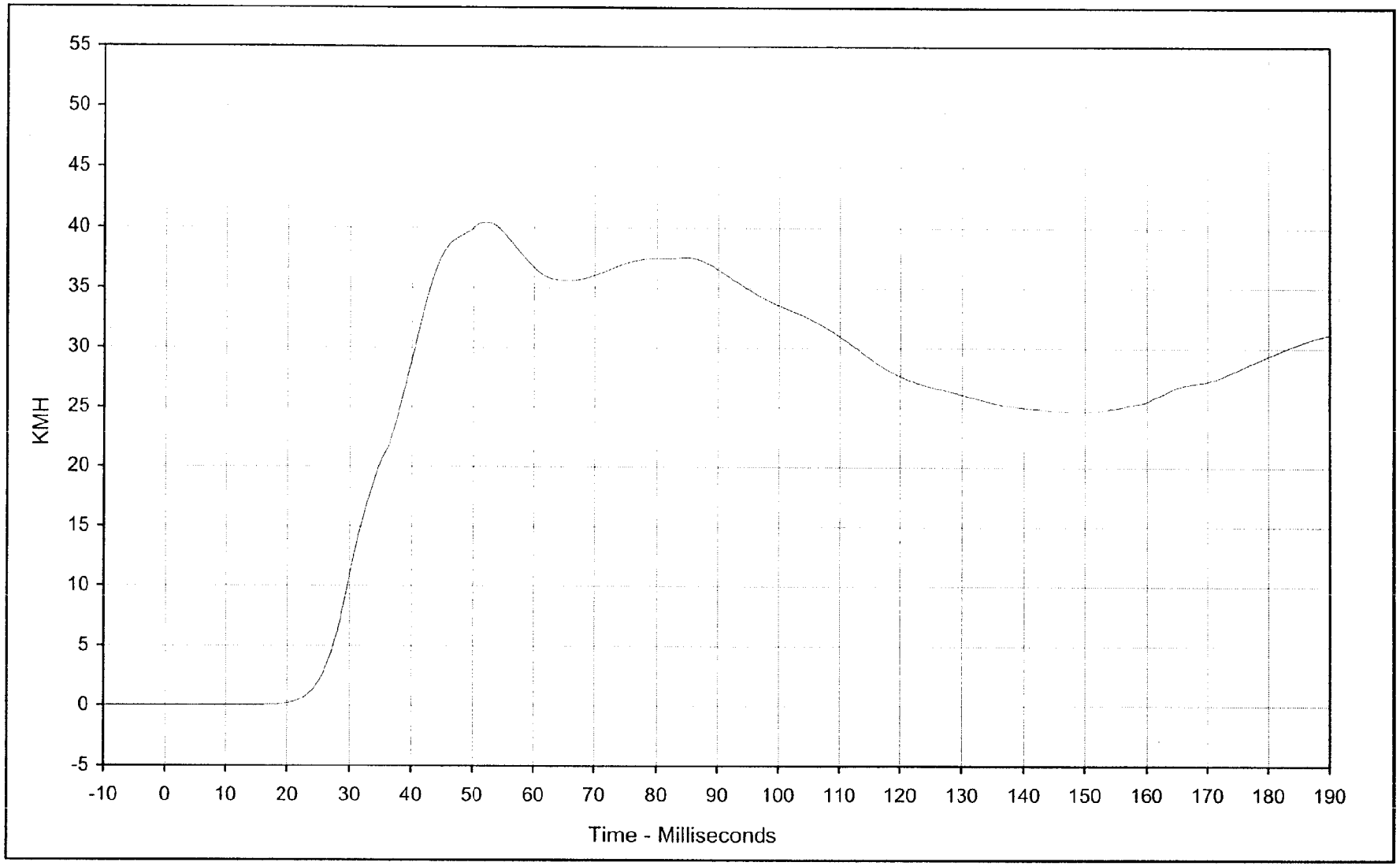
Date of Test: 1/26/00

Curve Number: FIR-010

Test Program: 55/28 km/h Side Impact NCAP No.: MY0107

Test Vehicle: 2000 Chevrolet S-10 Pickup

KARC Engineering



Curve Description: Driver Lower Spine Redundant Y Velocity

Maximum Value: 40.4 at 52.2 Milliseconds

Minimum Value: 0.0 at 3.9 Milliseconds

SAE Filter Class: 180

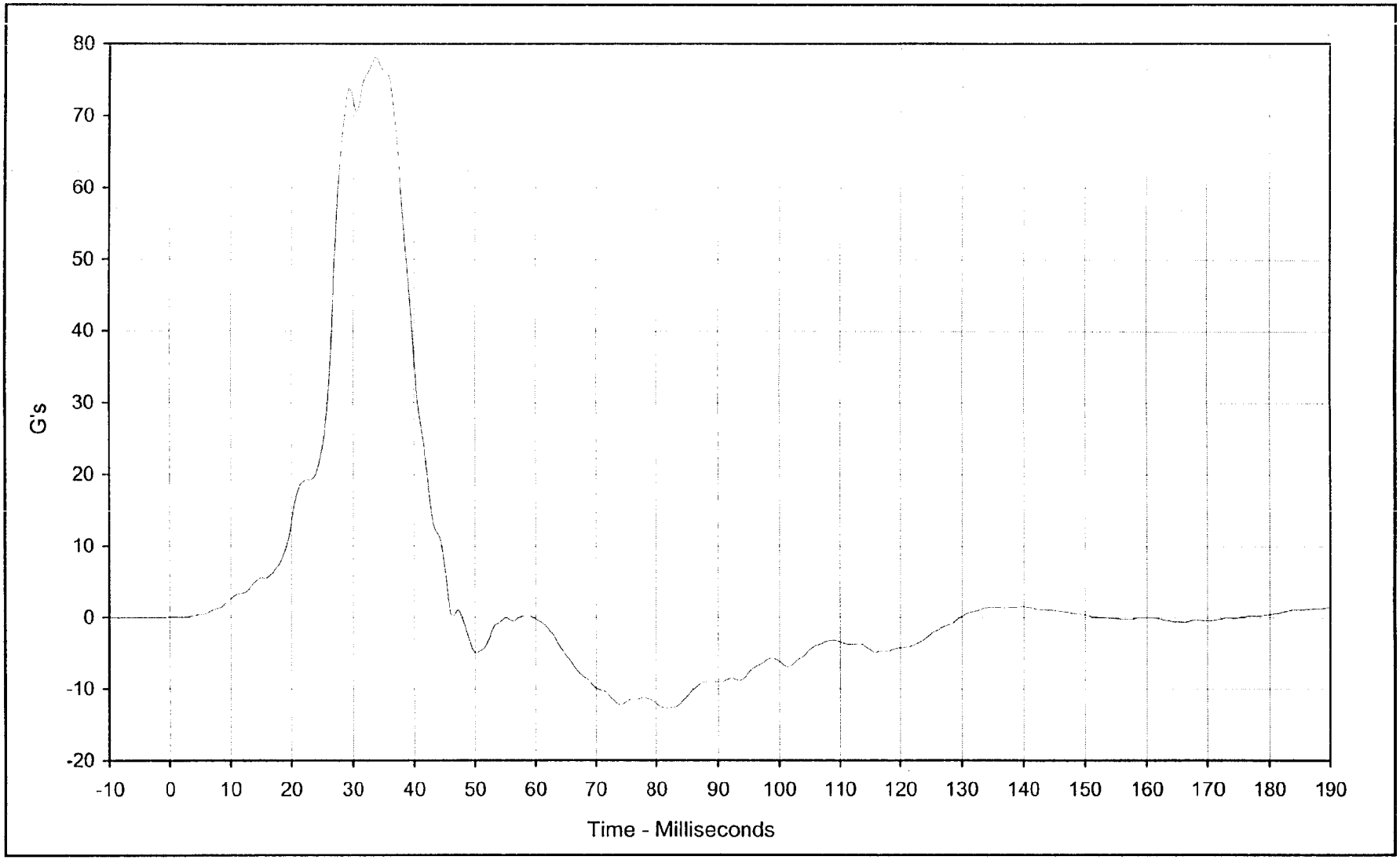
Date of Test: 1/26/00

Curve Number: IN1-010

Test Program: 55/28 km/h Side Impact NCAP No.: MY0107

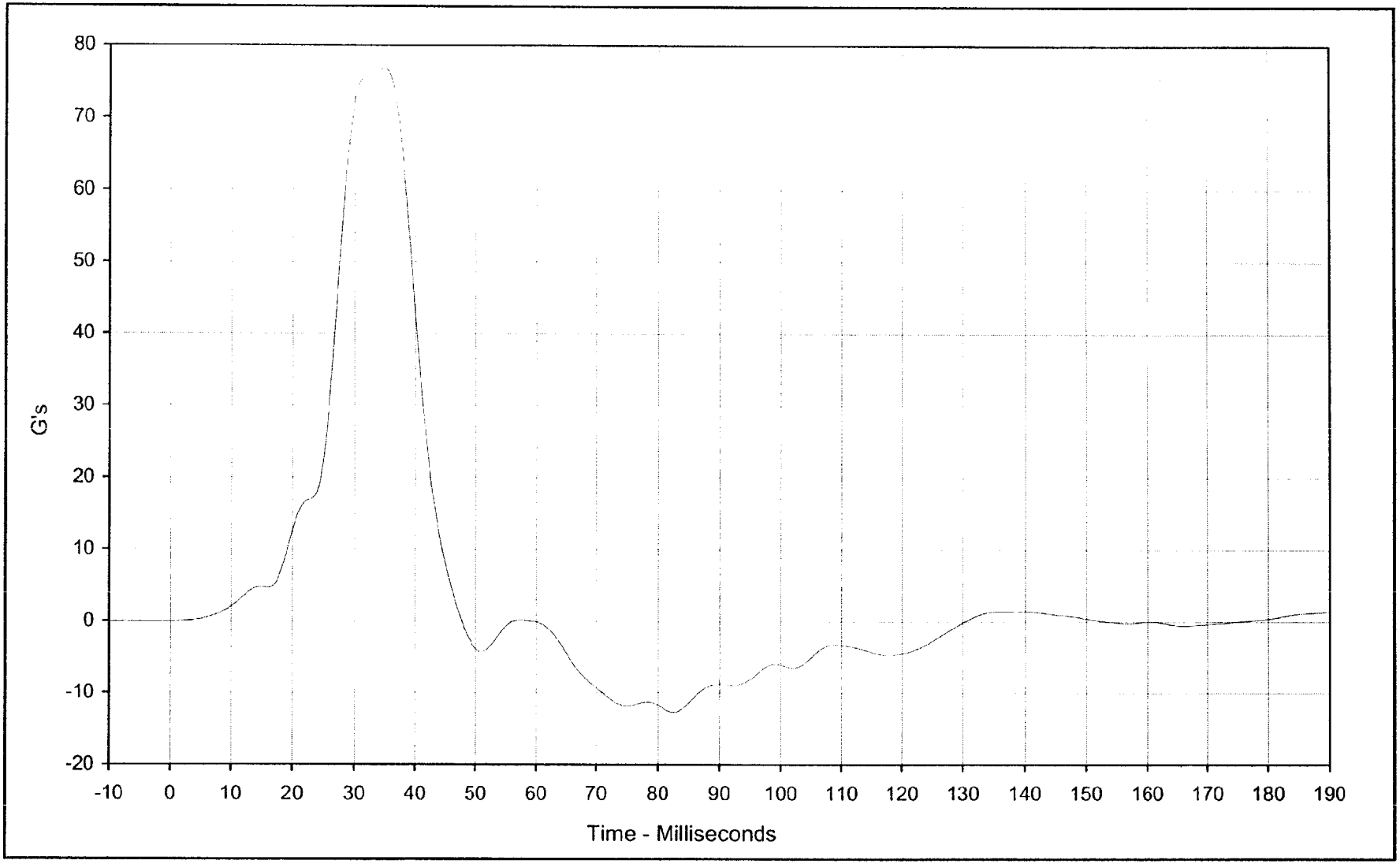
Test Vehicle: 2000 Chevrolet S-10 Pickup

KARC Engineering



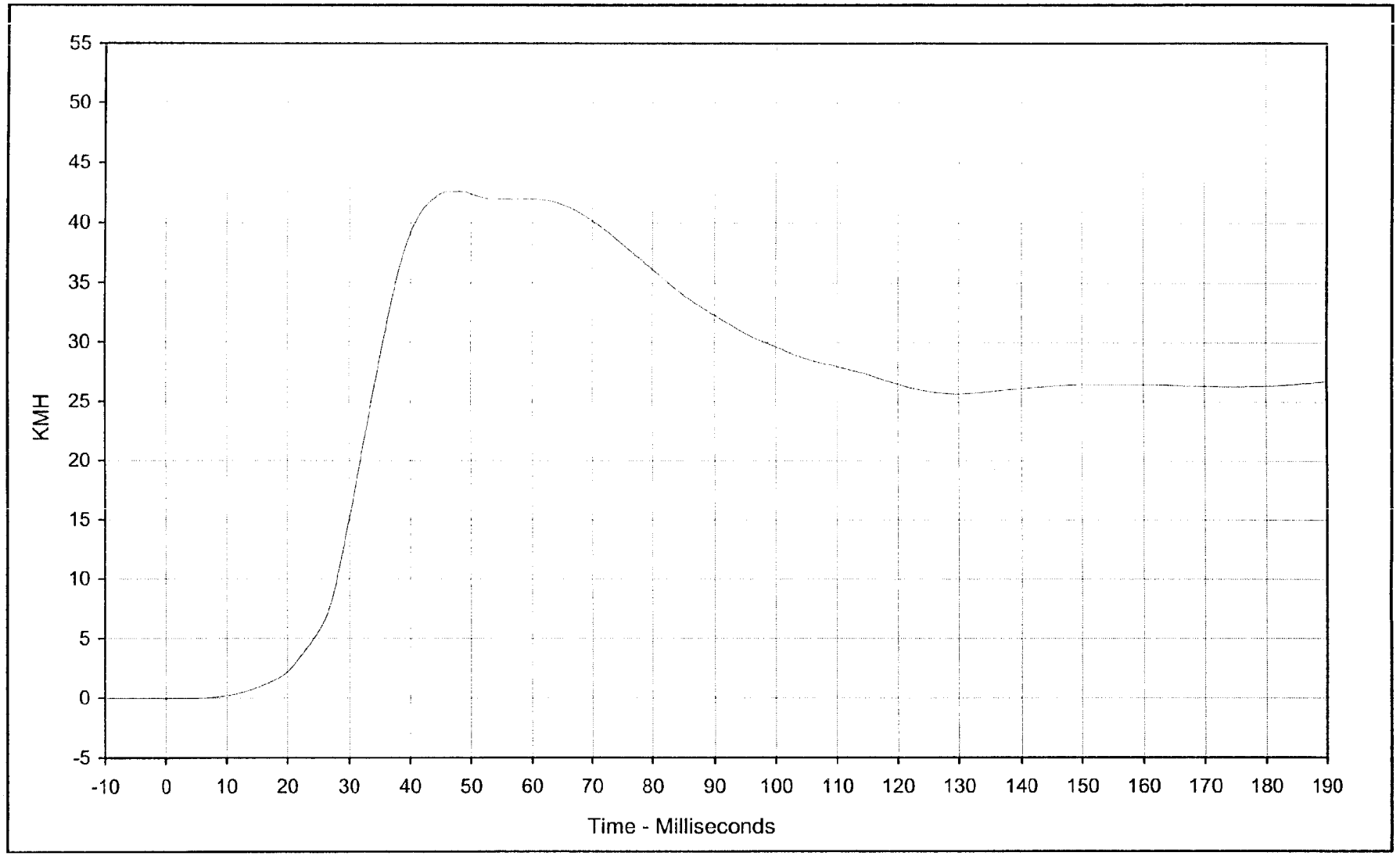
Curve Description:	Driver Pelvis Redundant Y			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	78.2	at	33.6 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-12.8	at	81.6 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	FIL-011				

KARC Engineering



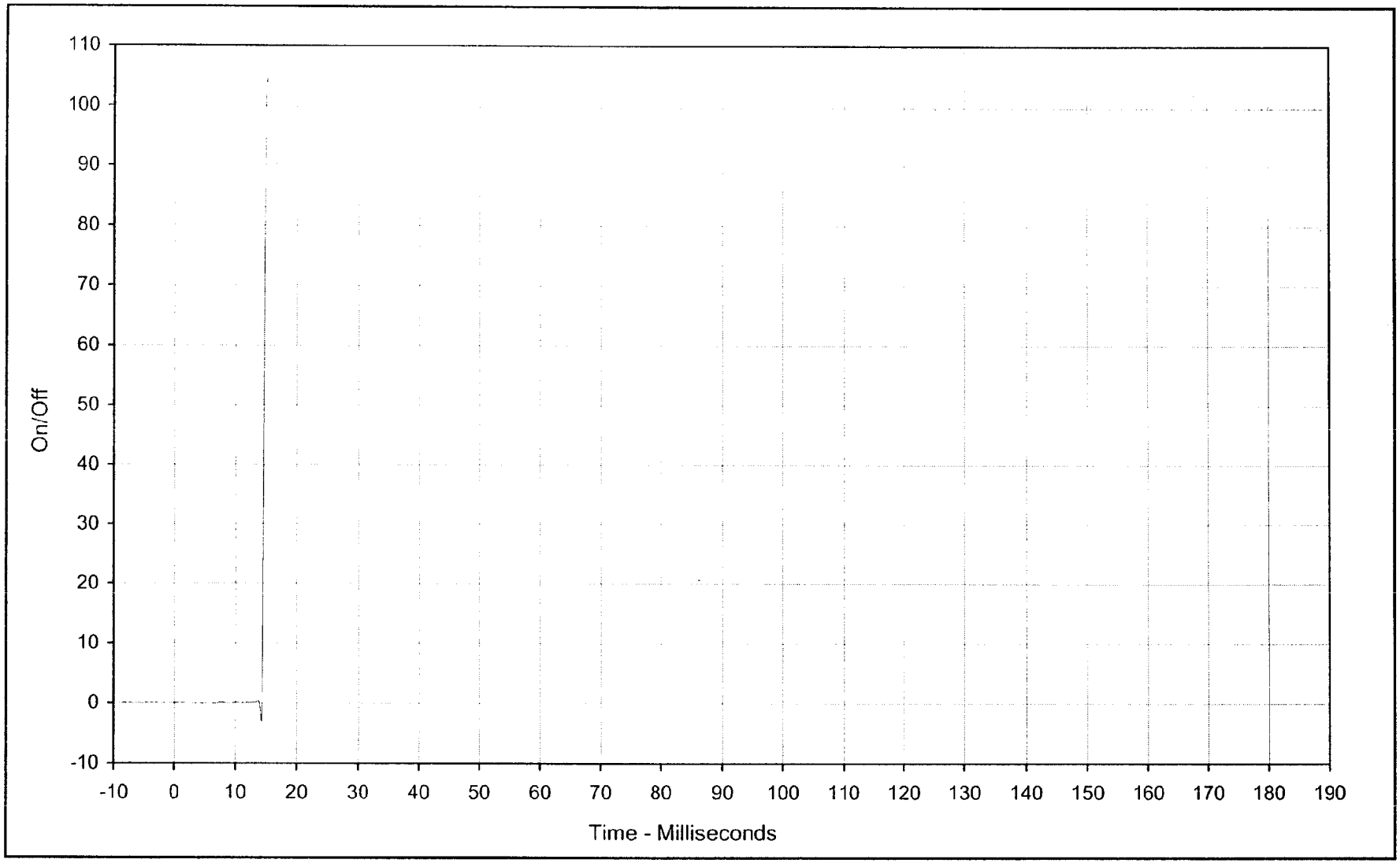
Curve Description:	Driver Pelvis Redundant Y			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	76.9	at	34.9 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-12.7	at	82.6 Milliseconds		
SAE Filter Class:	FIR 100				
Date of Test:	1/26/00				
Curve Number:	FIR-011				

KARC Engineering



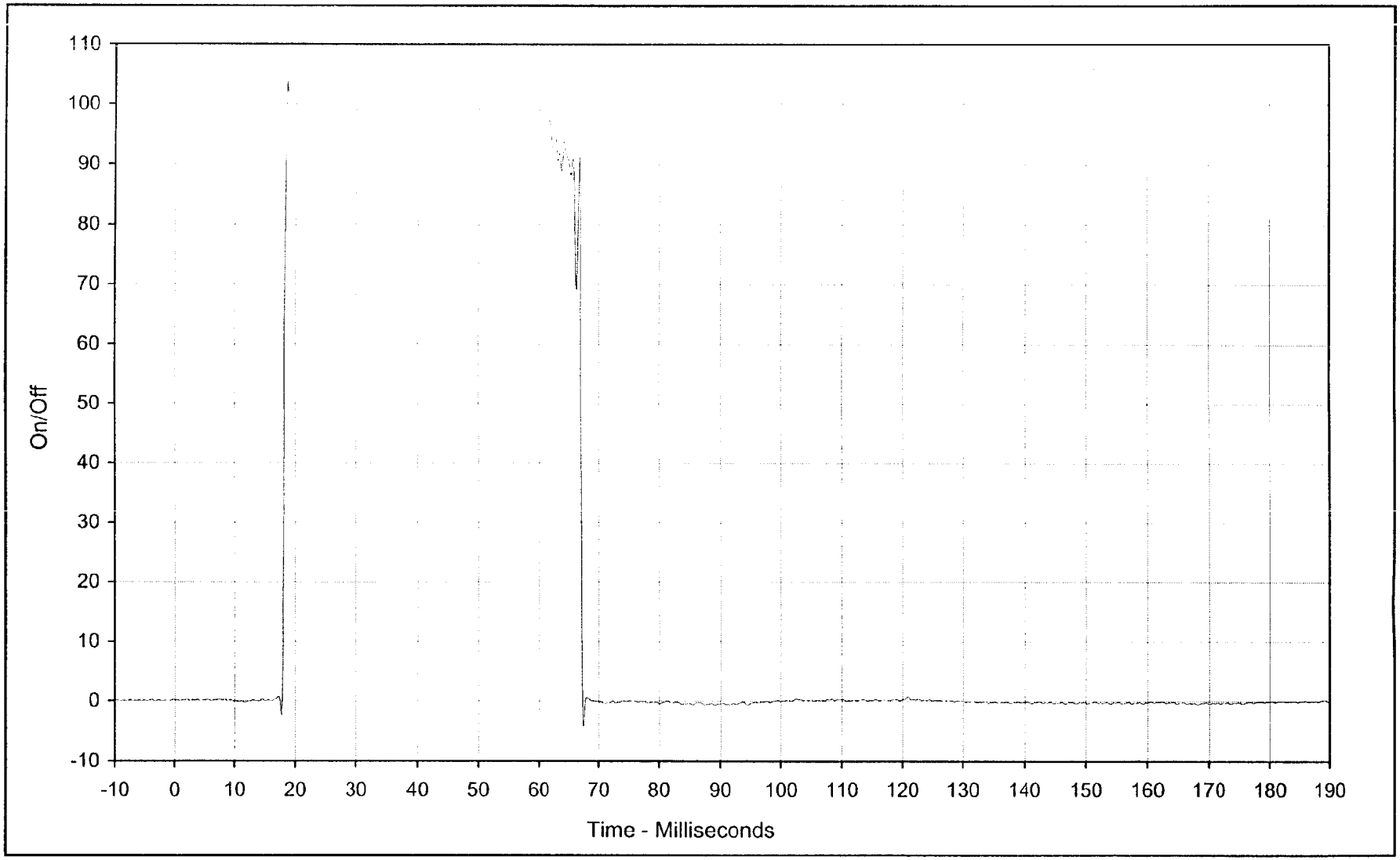
Curve Description:	Driver Pelvis Redundant Y Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	42.6	at	47.9 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-0.1	at	0.0 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-011				

KARCO Engineering



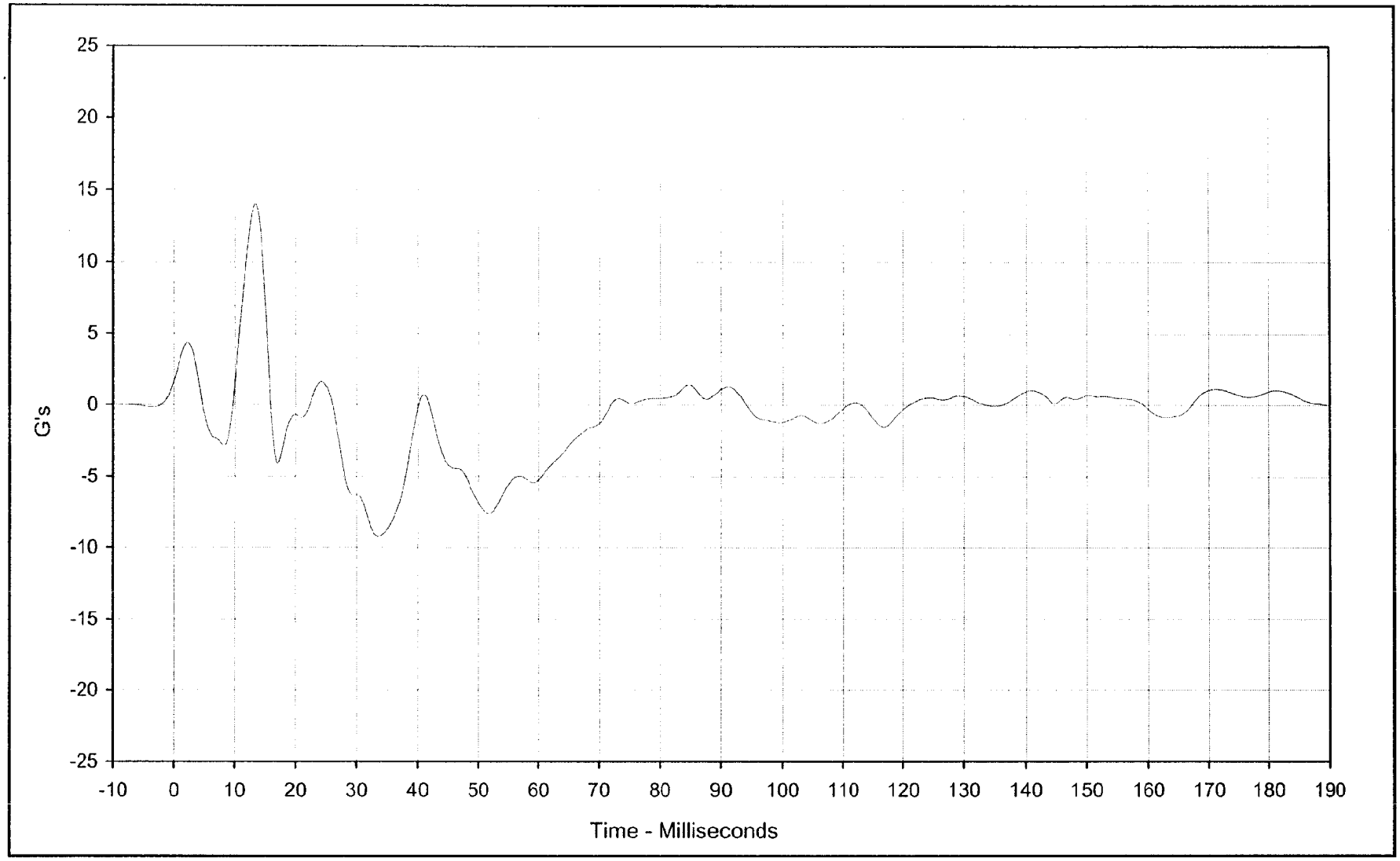
Curve Description:	Driver Thorax Contact			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	104.4	at	15.0 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Crossing Point:	50%	at	14.7 Milliseconds		
SAE Filter Class:	600				
Date of Test:	1/26/00				
Curve Number:	FIL-012				

KARC Engineering



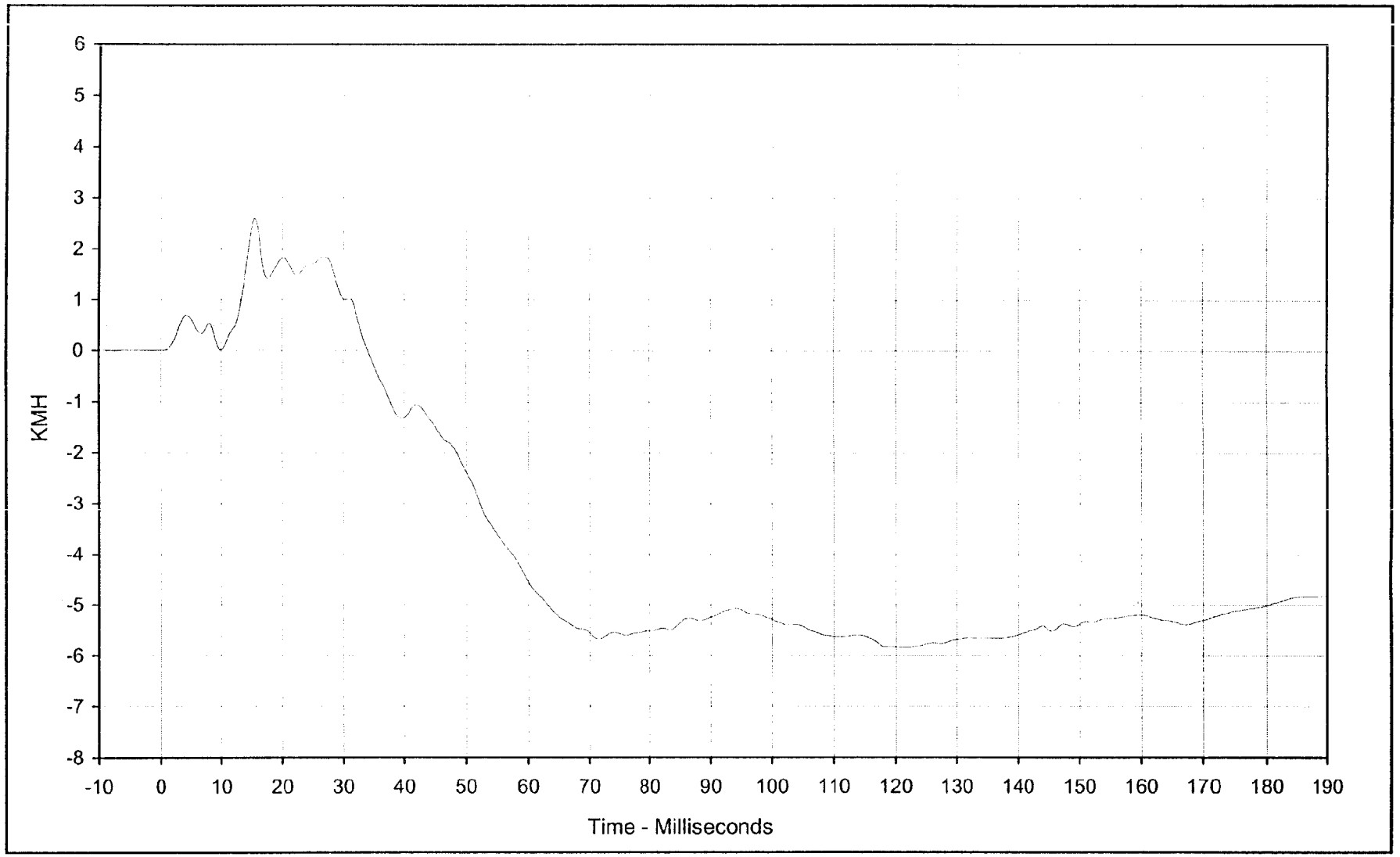
Curve Description:	Driver Pelvis Contact			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	103.8	at	18.6 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Crossing Point:	50%	at	18.2 Milliseconds		
SAE Filter Class:	600				
Date of Test:	1/26/00				
Curve Number:	FIL-013				

KARCO Engineering



Curve Description:	Right Sill at Front Seat X			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	14.0	at	13.3 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-9.2	at	33.6 Milliseconds		
SAE Filter Class:	60				
Date of Test:	1/26/00				
Curve Number:	FIL-014				

KARCO Engineering



Curve Description: Right Sill at Front Seat X Velocity

Maximum Value: 2.6 at 15.4 Milliseconds

Minimum Value: -5.8 at 121.8 Milliseconds

SAE Filter Class: 180

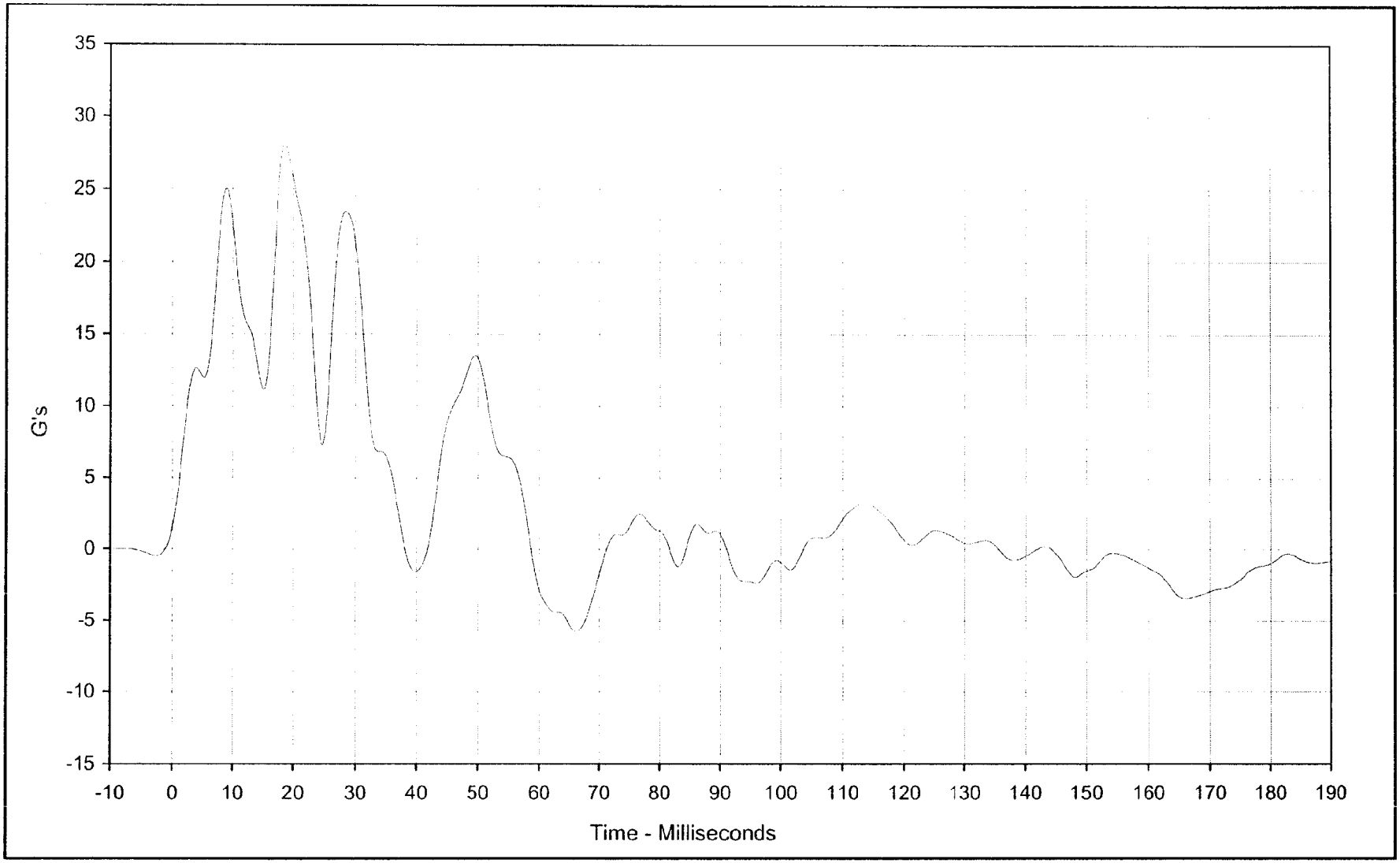
Date of Test: 1/26/00

Curve Number: IN1-014

Test Program: 55/28 km/h Side Impact NCAP No.: MY0107

Test Vehicle: 2000 Chevrolet S-10 Pickup

KARCO Engineering



Curve Description: Right Sill at Front Seat Y

Maximum Value: 28.1 at 18.7 Milliseconds

Minimum Value: -5.7 at 66.2 Milliseconds

SAE Filter Class: 60

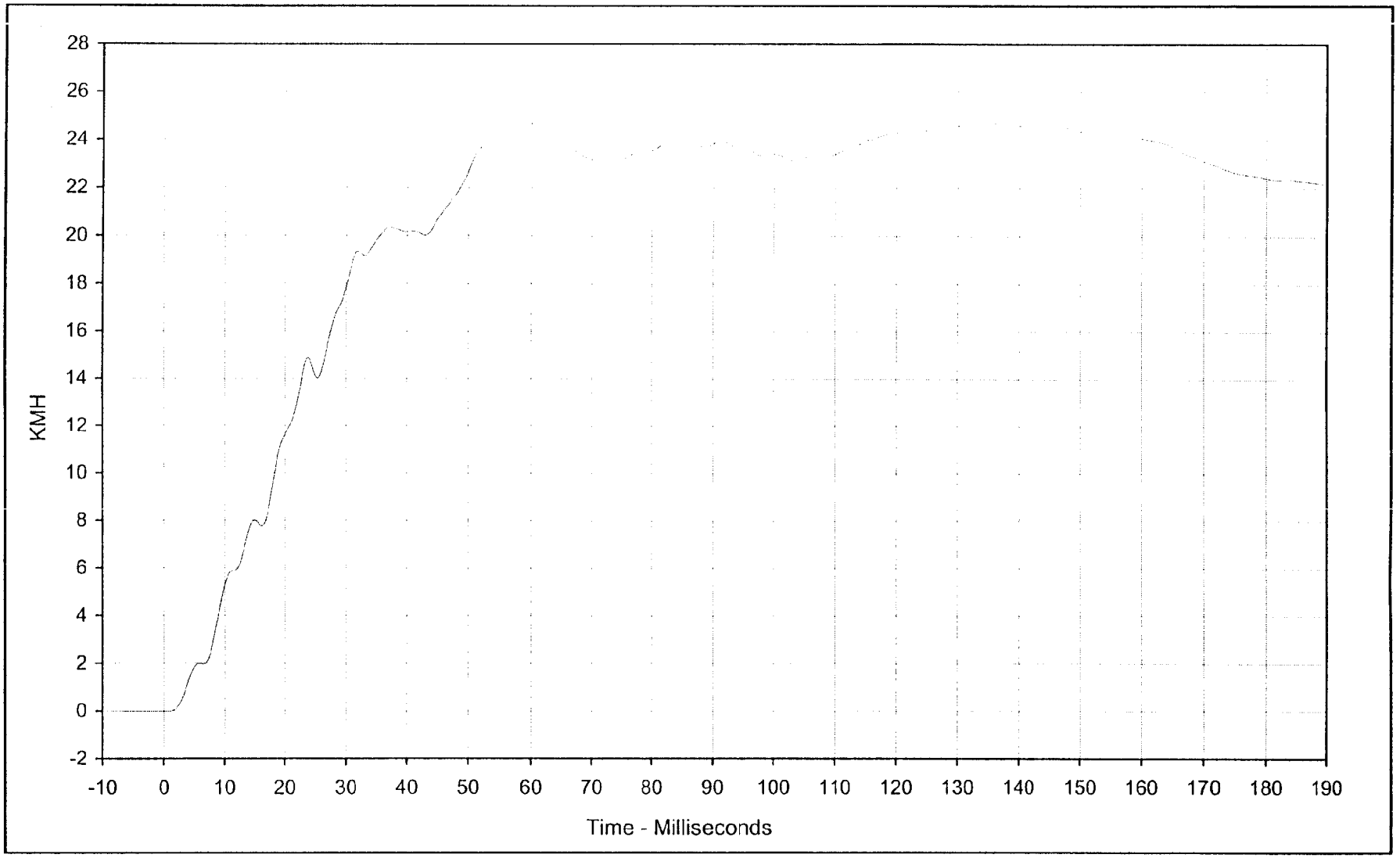
Date of Test: 1/26/00

Curve Number: FIL-015

Test Program: 55/28 km/h Side Impact NCAP No.: MY0107

Test Vehicle: 2000 Chevrolet S-10 Pickup

KARCO Engineering



Curve Description: Right Sill at Front Seat Y Velocity

Maximum Value: 25.0 at 58.5 Milliseconds

Minimum Value: 0.0 at 0.6 Milliseconds

SAE Filter Class: 180

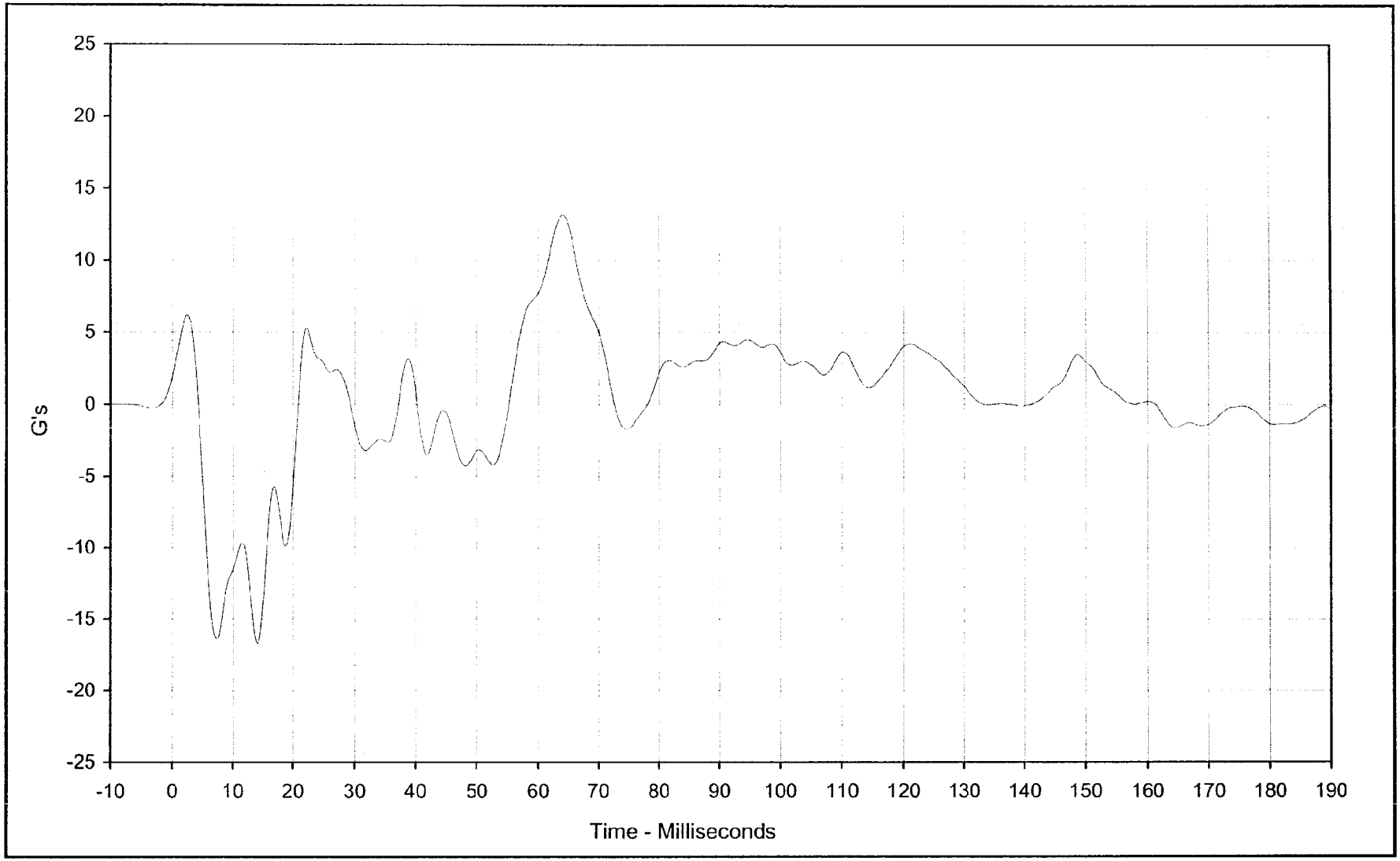
Date of Test: 1/26/00

Curve Number: IN1-015

Test Program: 55/28 km/h Side Impact NCAP No.: MY0107

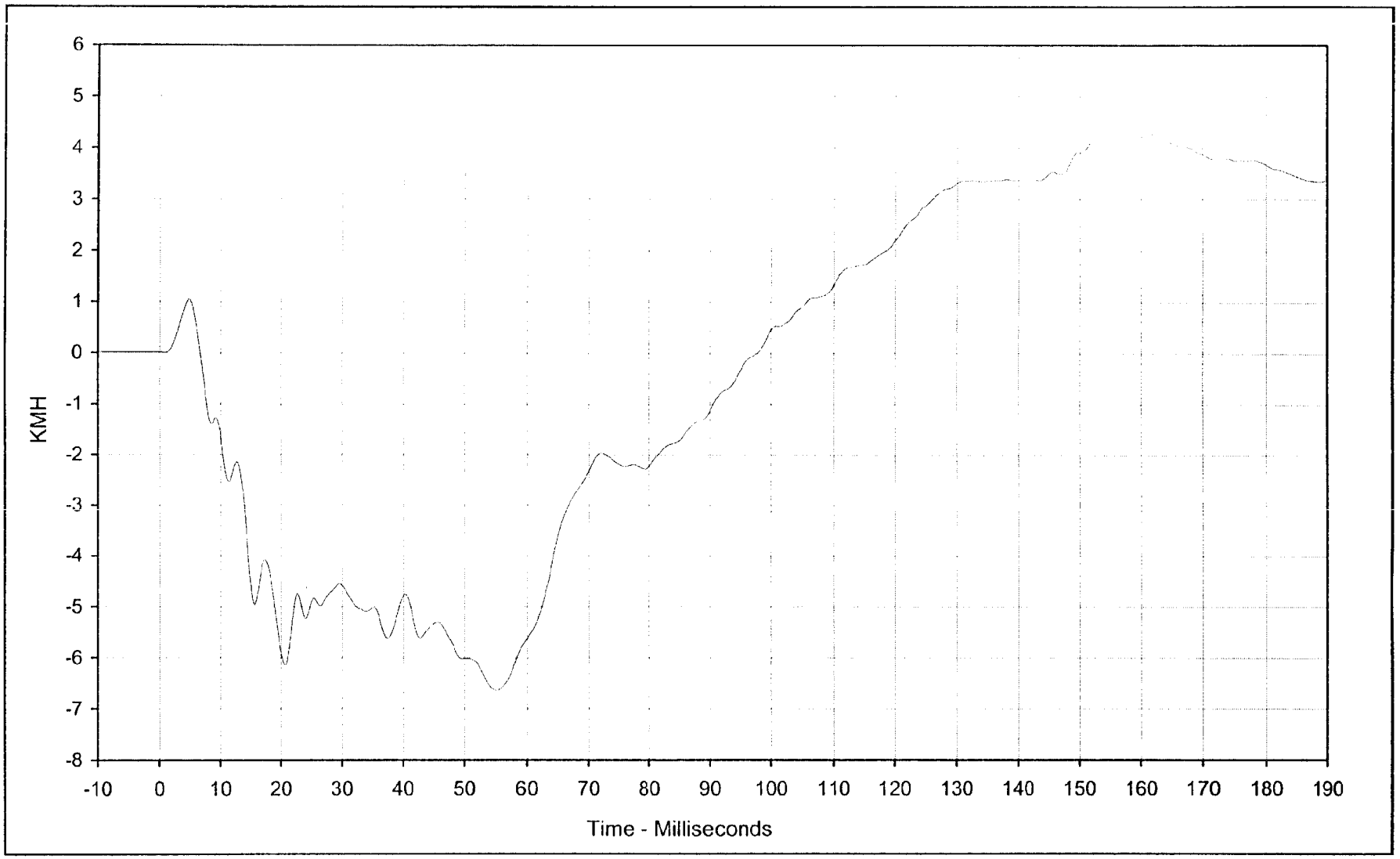
Test Vehicle: 2000 Chevrolet S-10 Pickup

KARCO Engineering



Curve Description:	Right Sill at Front Seat Z			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	13.1	at	64.0 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-16.7	at	14.0 Milliseconds		
SAE Filter Class:	60				
Date of Test:	1/26/00				
Curve Number:	FIL-016				

KARC Engineering



Curve Description: Right Sill at Front Seat Z Velocity

Maximum Value: 4.3 at 162.3 Milliseconds

Minimum Value: -6.6 at 55.0 Milliseconds

SAE Filter Class: 180

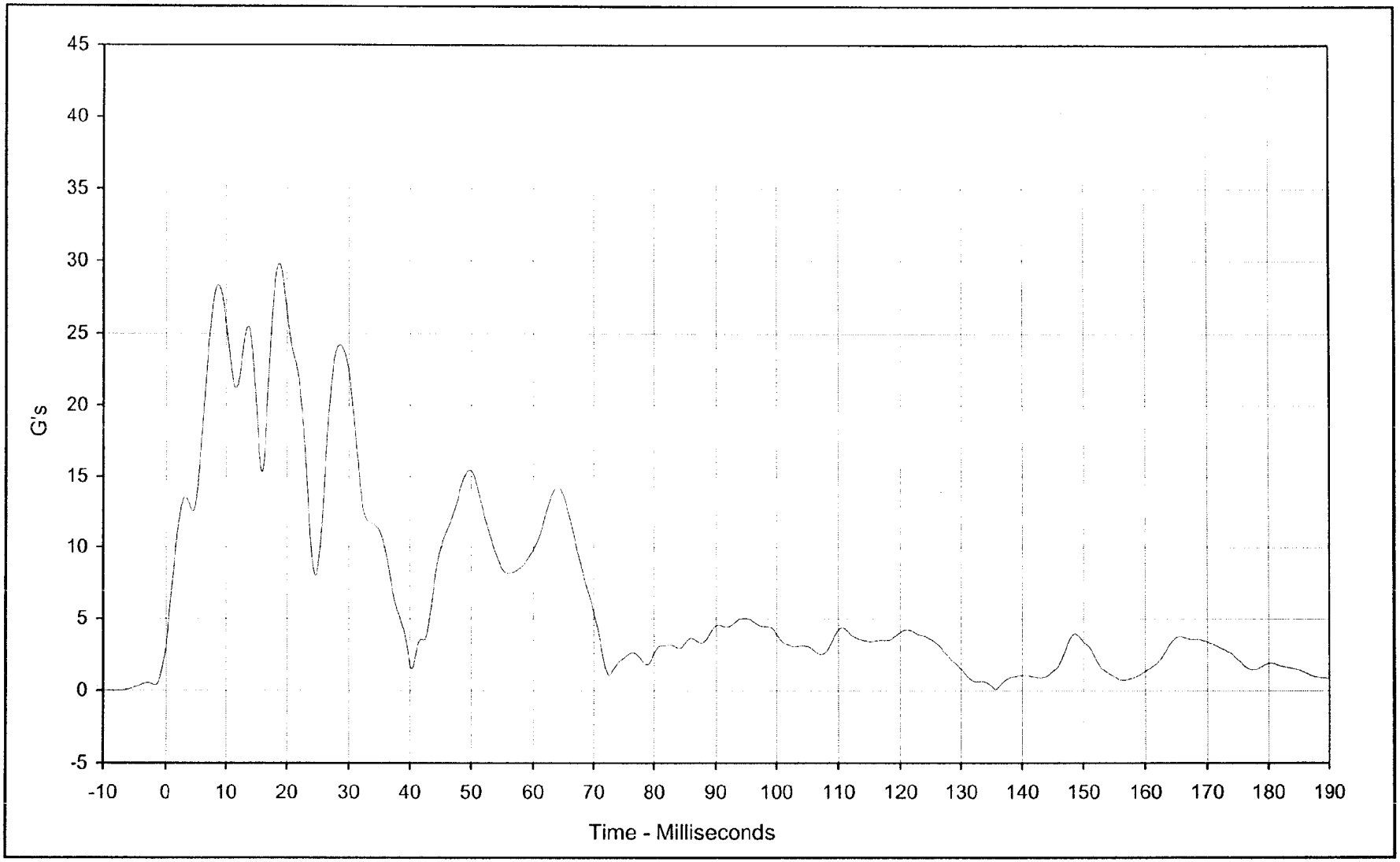
Date of Test: 1/26/00

Curve Number: IN1-016

Test Program: 55/28 km/h Side Impact NCAP No.: MY0107

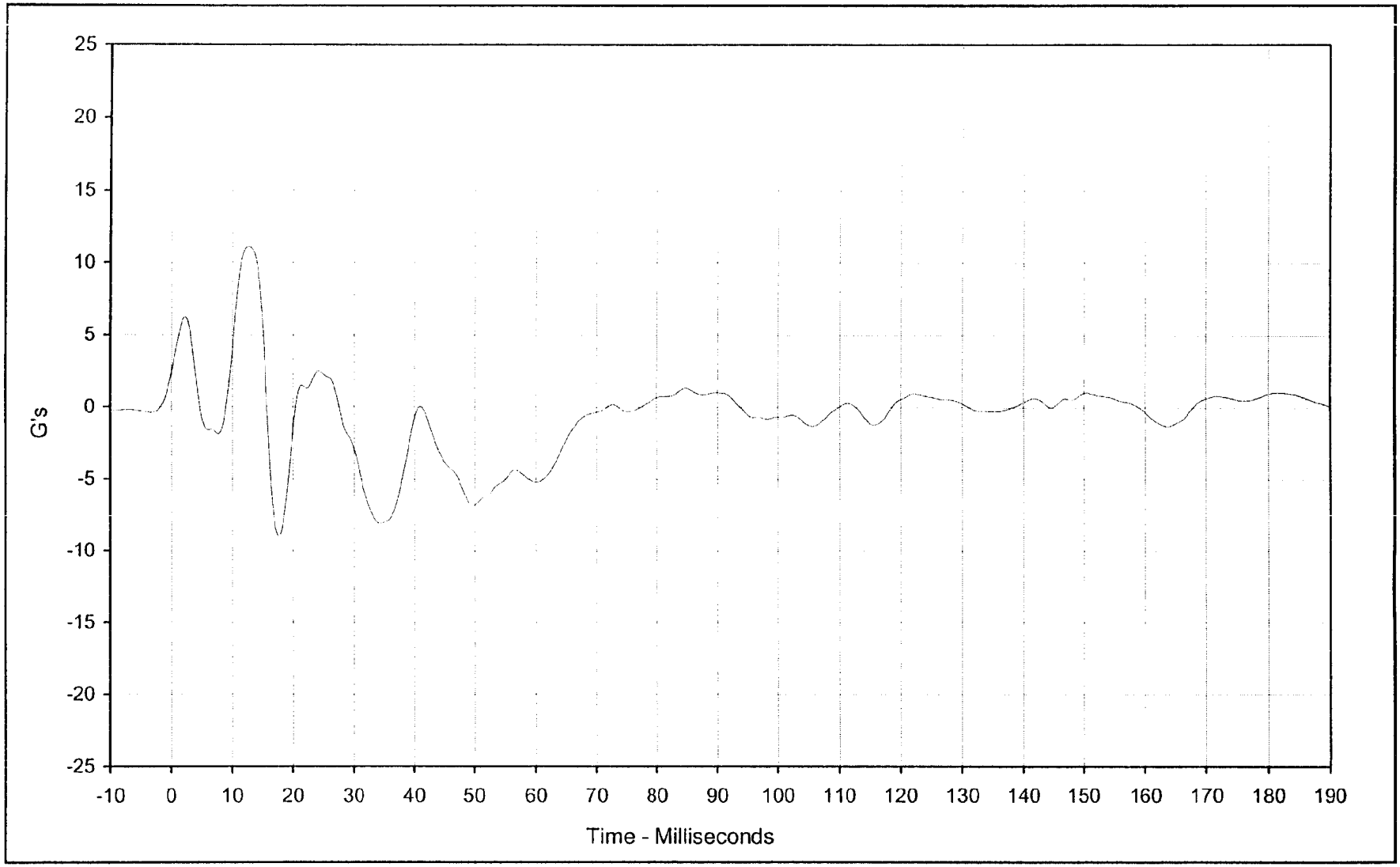
Test Vehicle: 2000 Chevrolet S-10 Pickup

KARCO Engineering



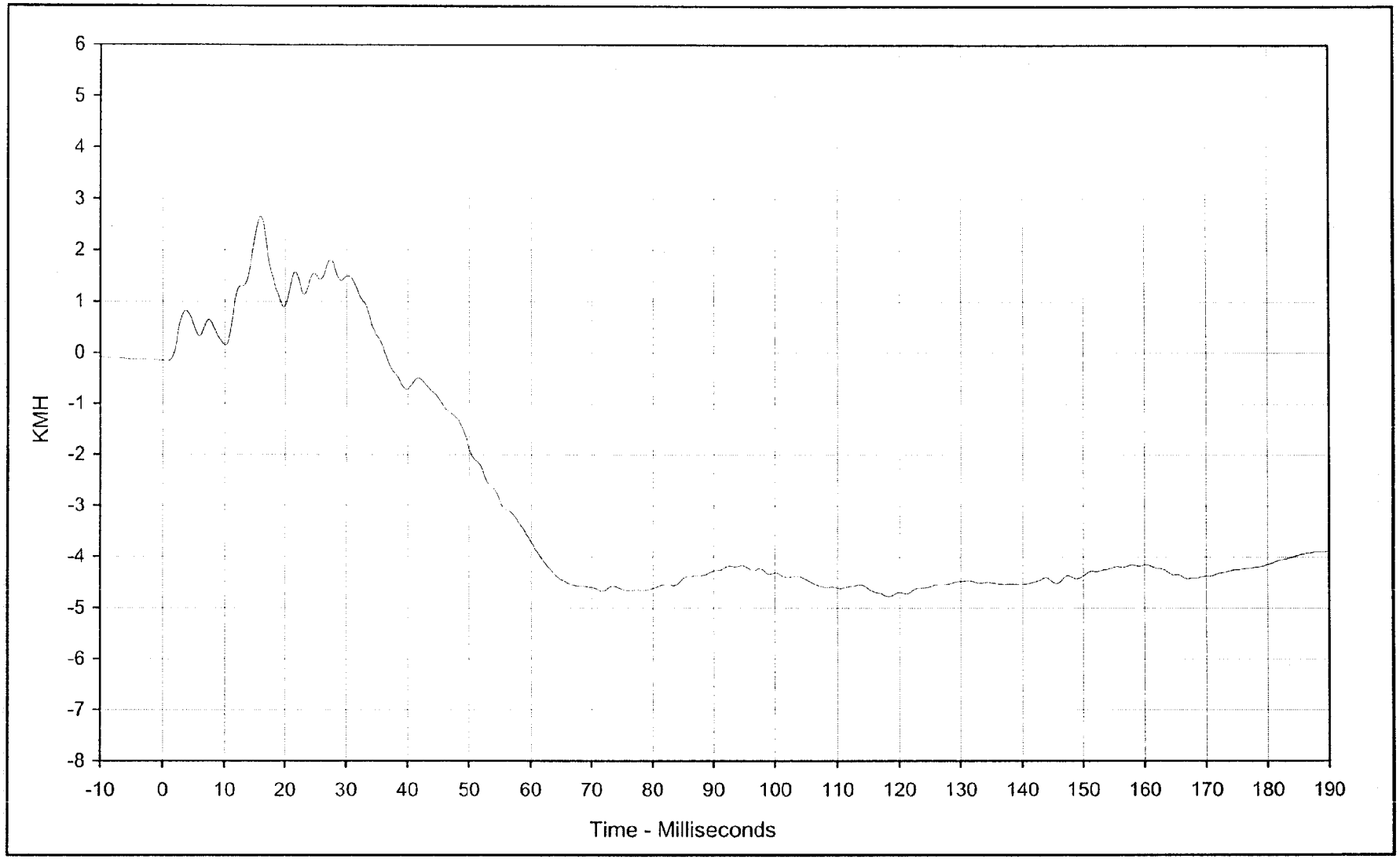
Curve Description:	Right Sill at Front Seat Resultant			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	29.8	at	18.7 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	0.1	at	135.6 Milliseconds		
SAE Filter Class:	60				
Date of Test:	1/26/00				
Curve Number:	RES-014				

KARCO Engineering



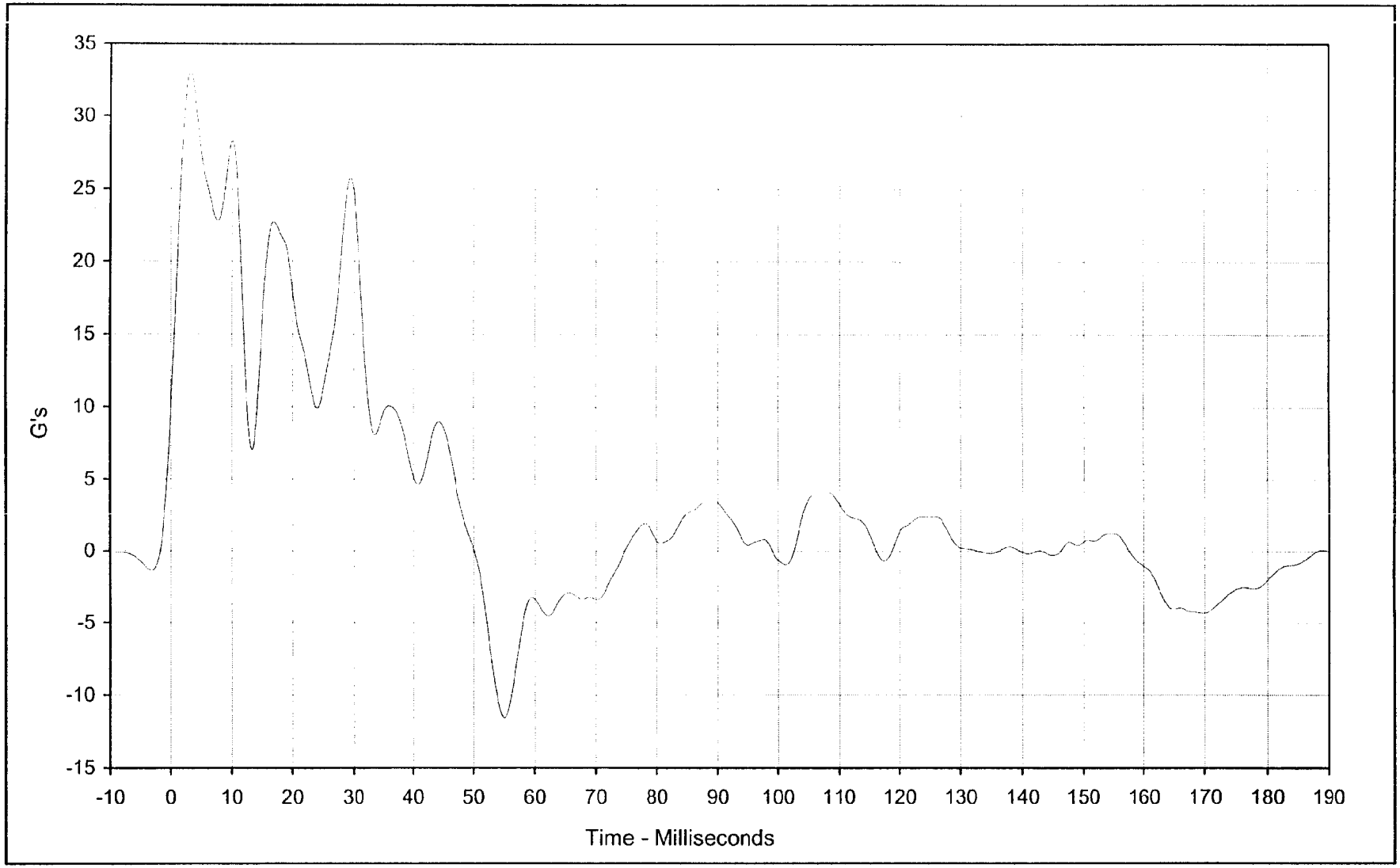
Curve Description:	Right Sill at Rear Seat X			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	11.1	at	12.6 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-9.0	at	17.6 Milliseconds		
SAE Filter Class:	60				
Date of Test:	1/26/00				
Curve Number:	FIL-017				

KARC Engineering



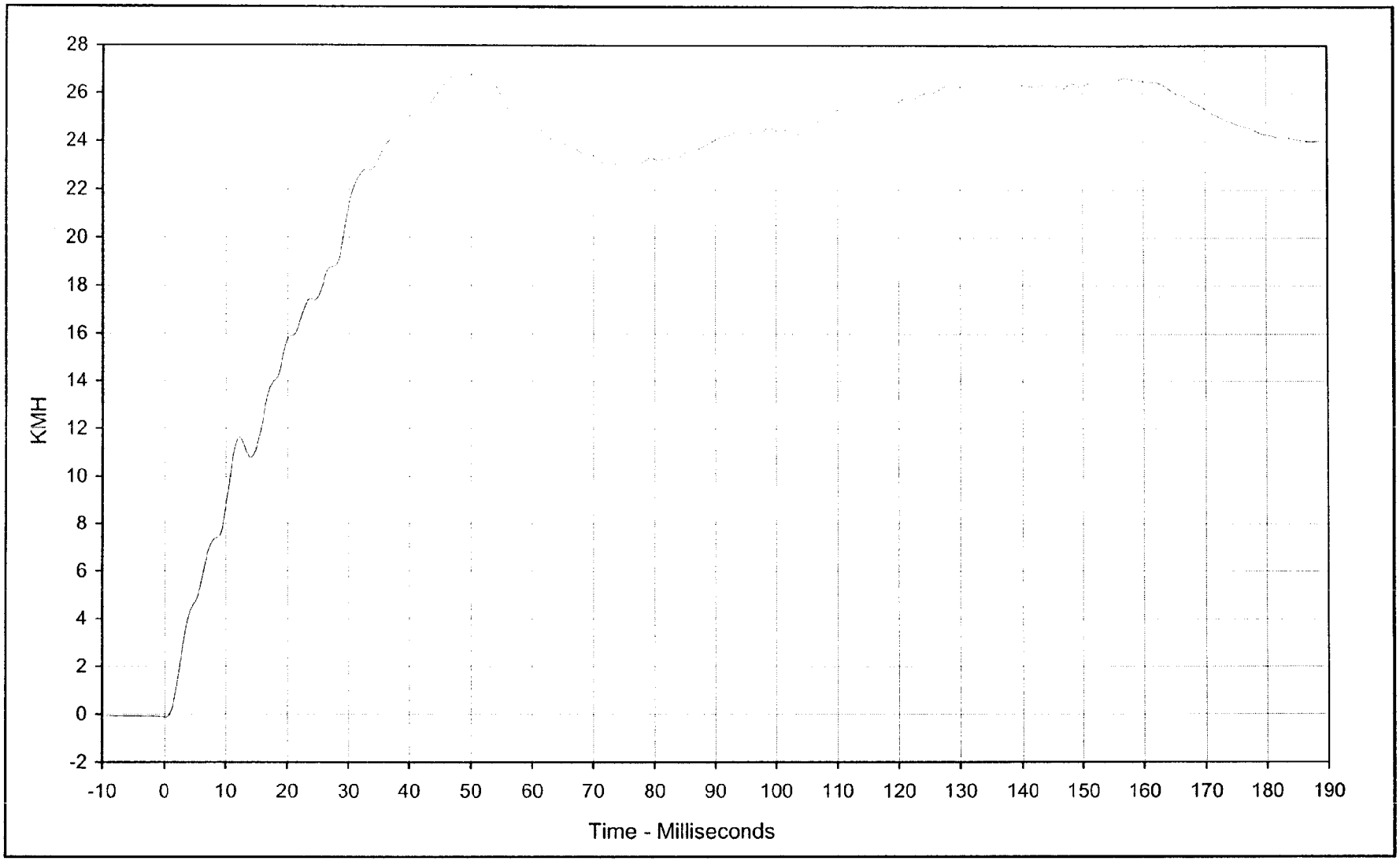
Curve Description:	Right Sill at Rear Seat X Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	2.7	at	15.8 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-4.8	at	118.3 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-017				

KARC Engineering



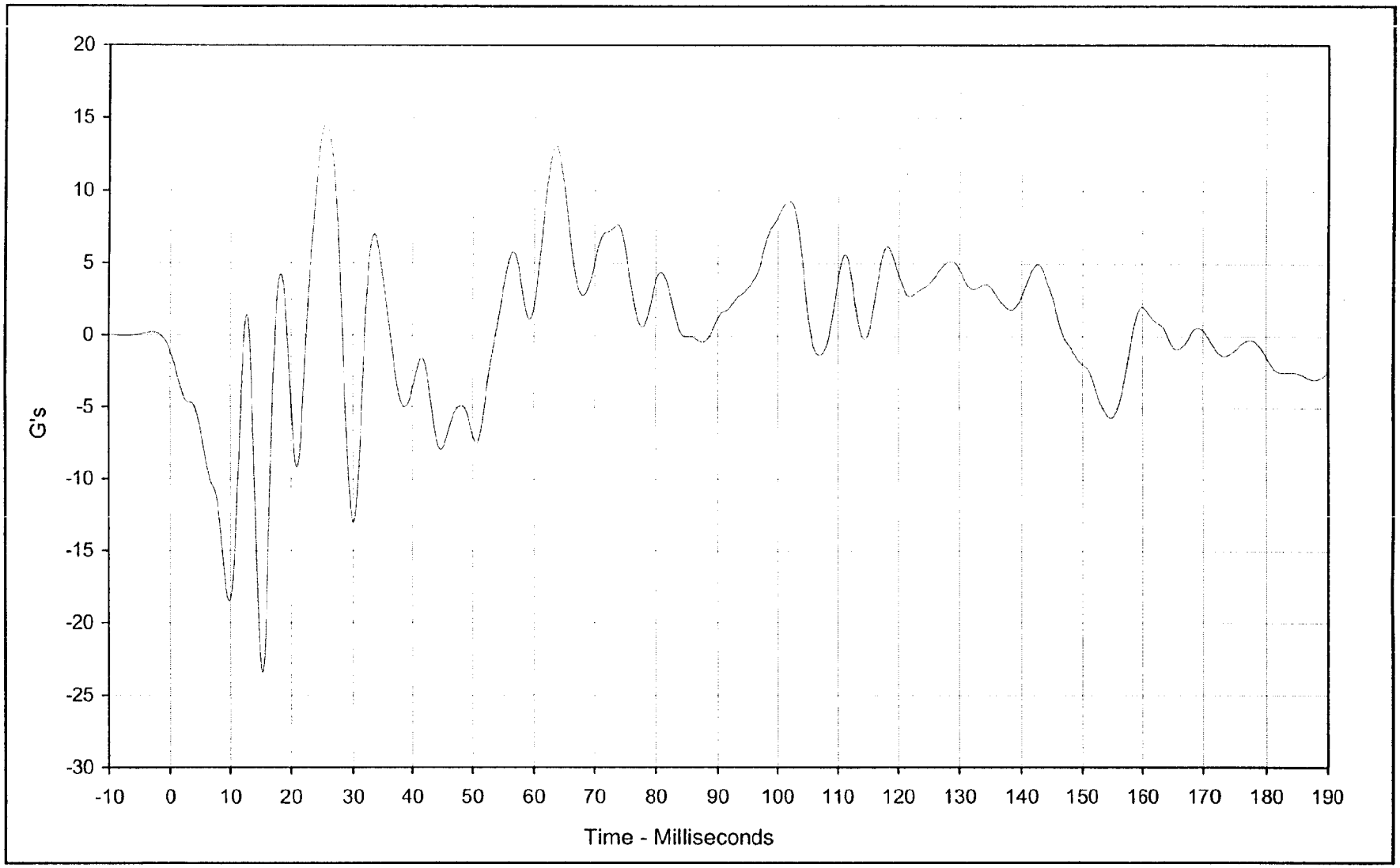
Curve Description:	Right Sill At Rear Seat Y			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	33.0	at	3.0 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-11.6	at	55.0 Milliseconds		
SAE Filter Class:	60				
Date of Test:	1/26/00				
Curve Number:	FIL-018				

KARC Engineering



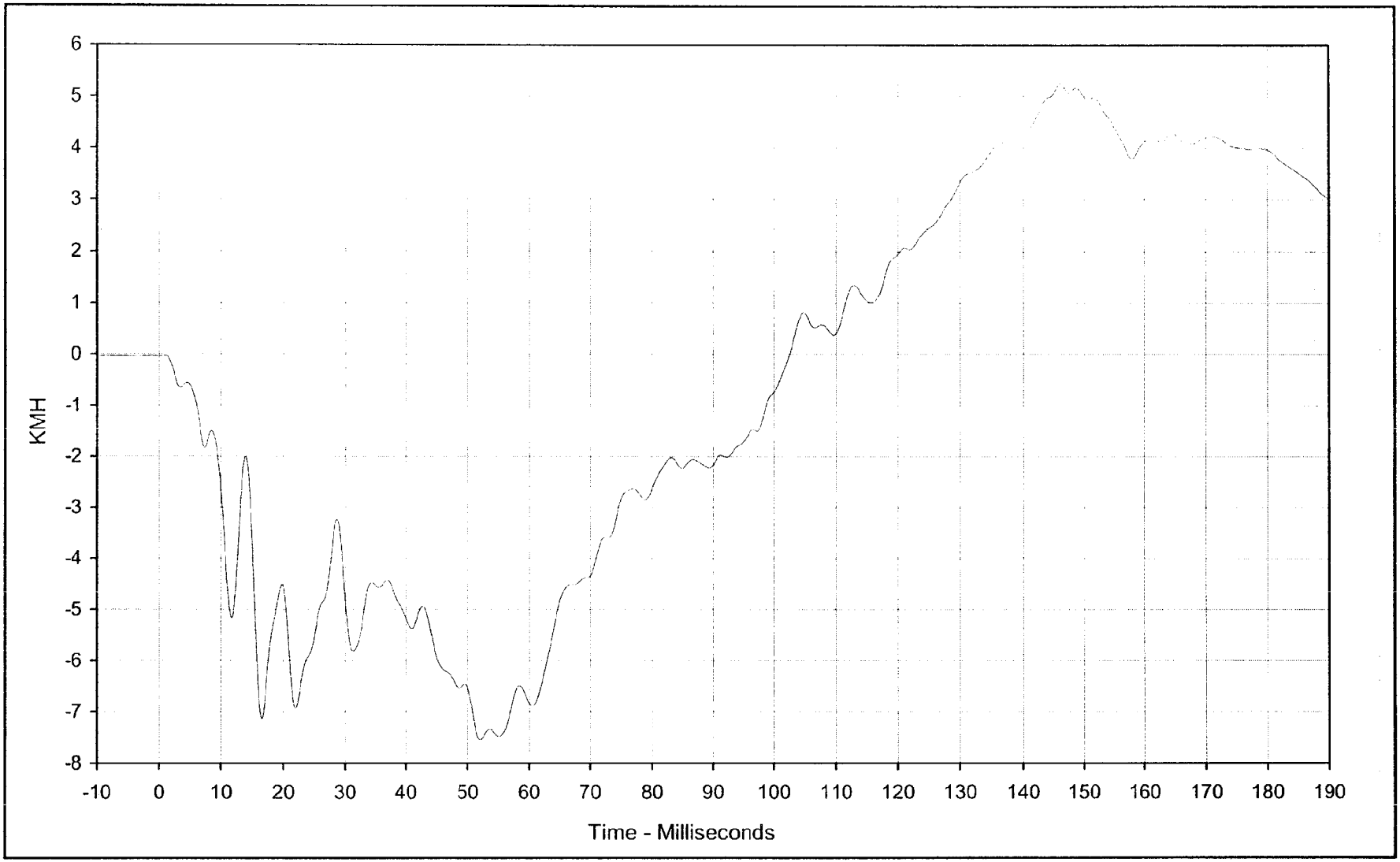
Curve Description:	Right Sill at Rear Seat Y Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	26.9	at	51.6 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-0.1	at	0.2 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-018				

KARCO Engineering



Curve Description:	Right Sill At Rear Seat Z			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	14.6	at	25.5 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-23.4	at	15.2 Milliseconds		
SAE Filter Class:	60				
Date of Test:	1/26/00				
Curve Number:	FIL-019				

KARC Engineering



Curve Description: Right Sill at Rear Seat Z Velocity

Maximum Value: 5.3 at 146.1 Milliseconds

Minimum Value: -7.6 at 52.0 Milliseconds

SAE Filter Class: 180

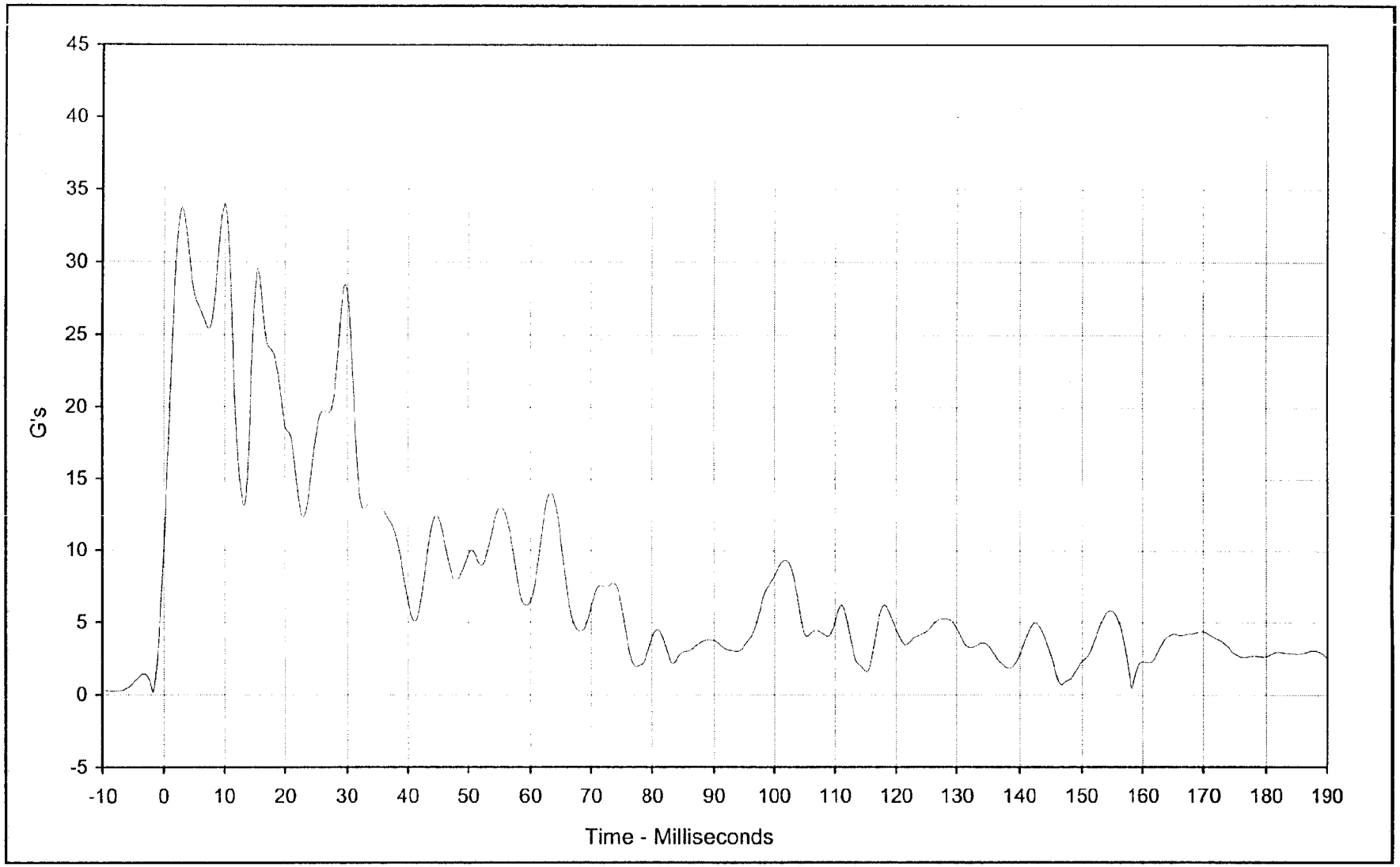
Date of Test: 1/26/00

Curve Number: IN1-019

Test Program: 55/28 km/h Side Impact NCAP No.: MY0107

Test Vehicle: 2000 Chevrolet S-10 Pickup

KARCO Engineering



Curve Description: Right Sill at Rear Seat Resultant

Maximum Value: 34.0 at 10.0 Milliseconds

Minimum Value: 0.5 at 158.1 Milliseconds

SAE Filter Class: 60

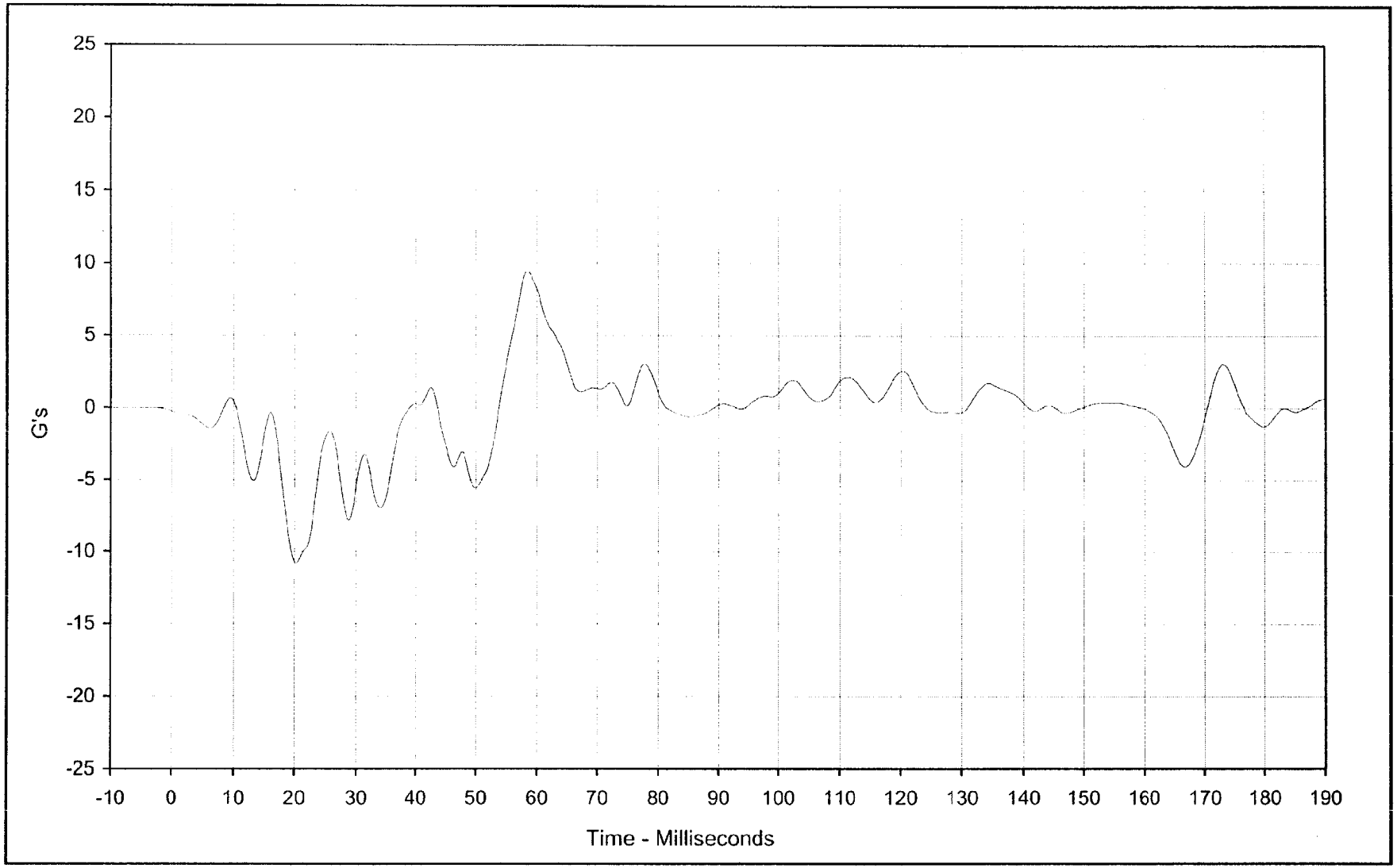
Date of Test: 1/26/00

Curve Number: RES-017

Test Program: 55/28 km/h Side Impact NCAP No.: MY0107

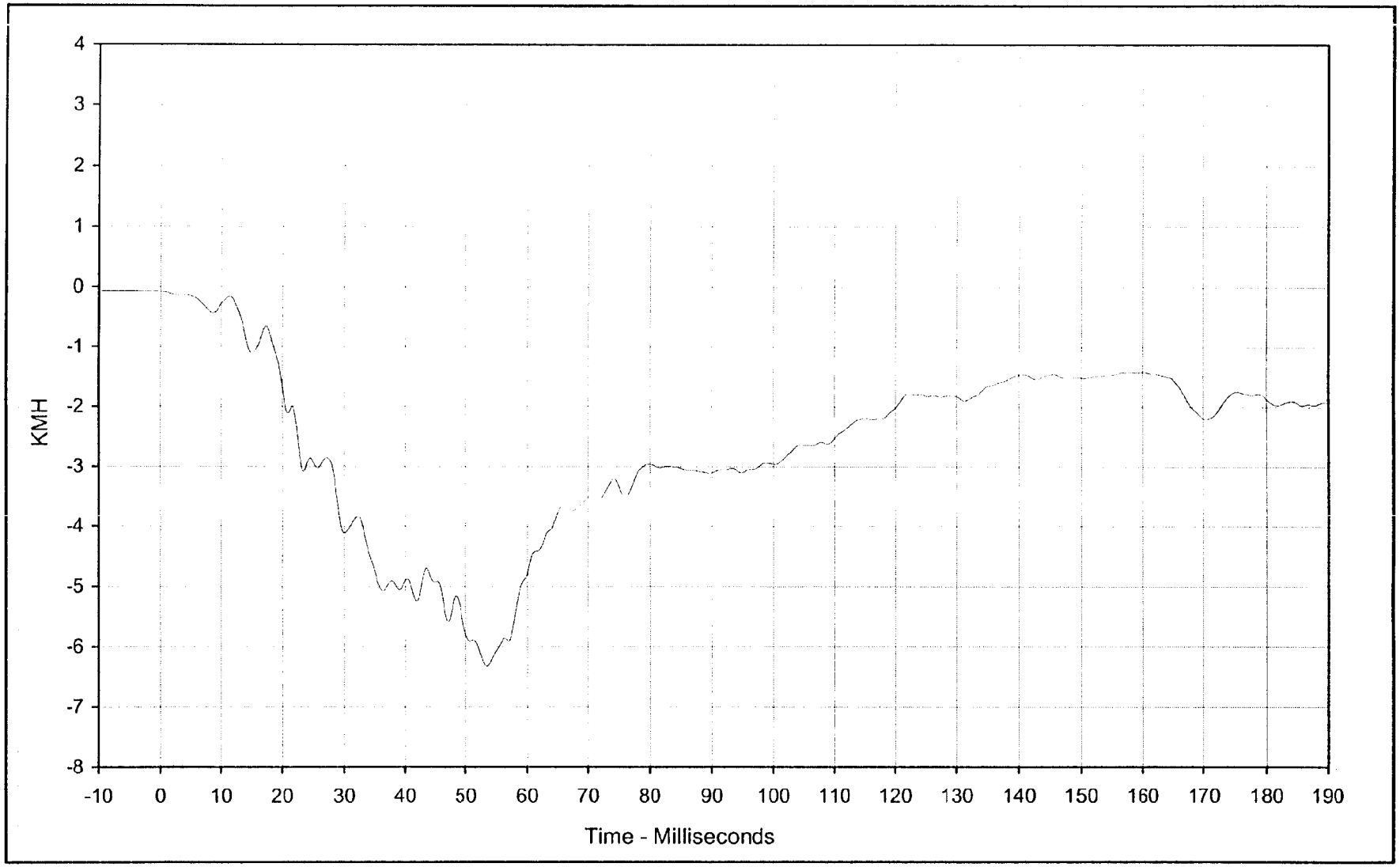
Test Vehicle: 2000 Chevrolet S-10 Pickup

KARCO Engineering



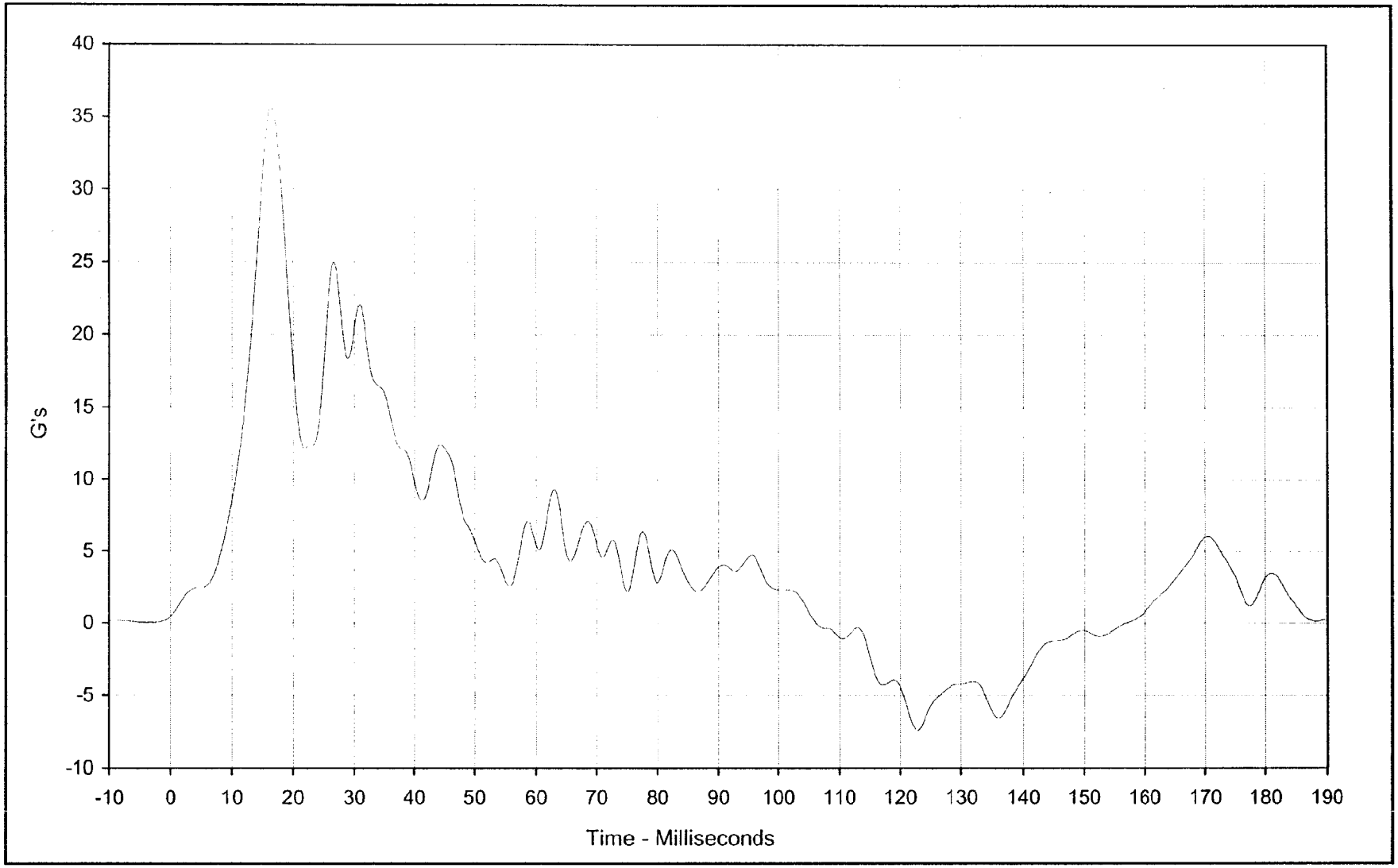
Curve Description:	Rear Floor Above Axle X			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	9.4	at	58.5 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-10.8	at	20.3 Milliseconds		
SAE Filter Class:	60				
Date of Test:	1/26/00				
Curve Number:	FIL-020				

KARC Engineering



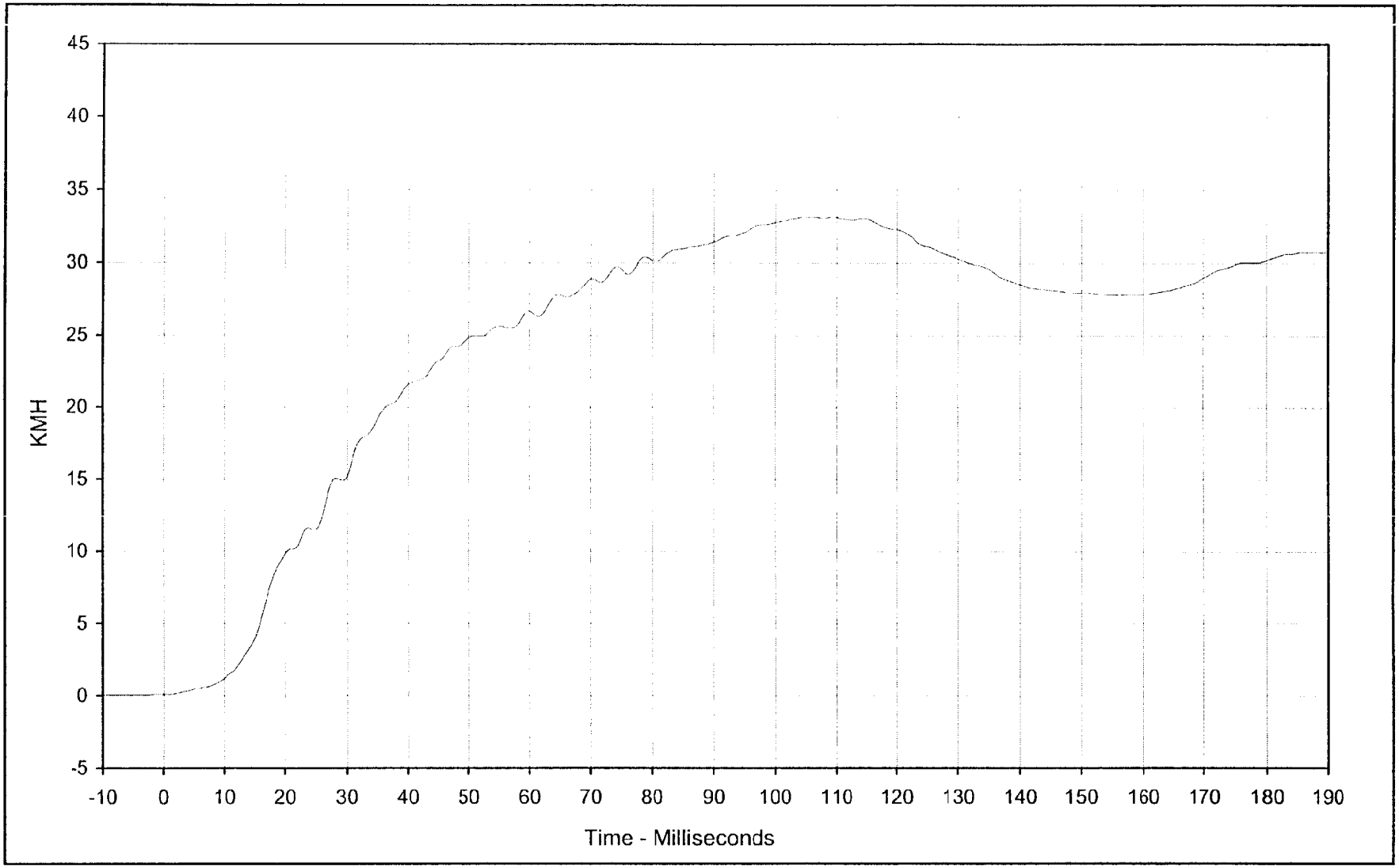
Curve Description:	Rear Floorpan Above Axle X Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	-0.1	at	0.0 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-6.3	at	53.4 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-020				

KARC Engineering



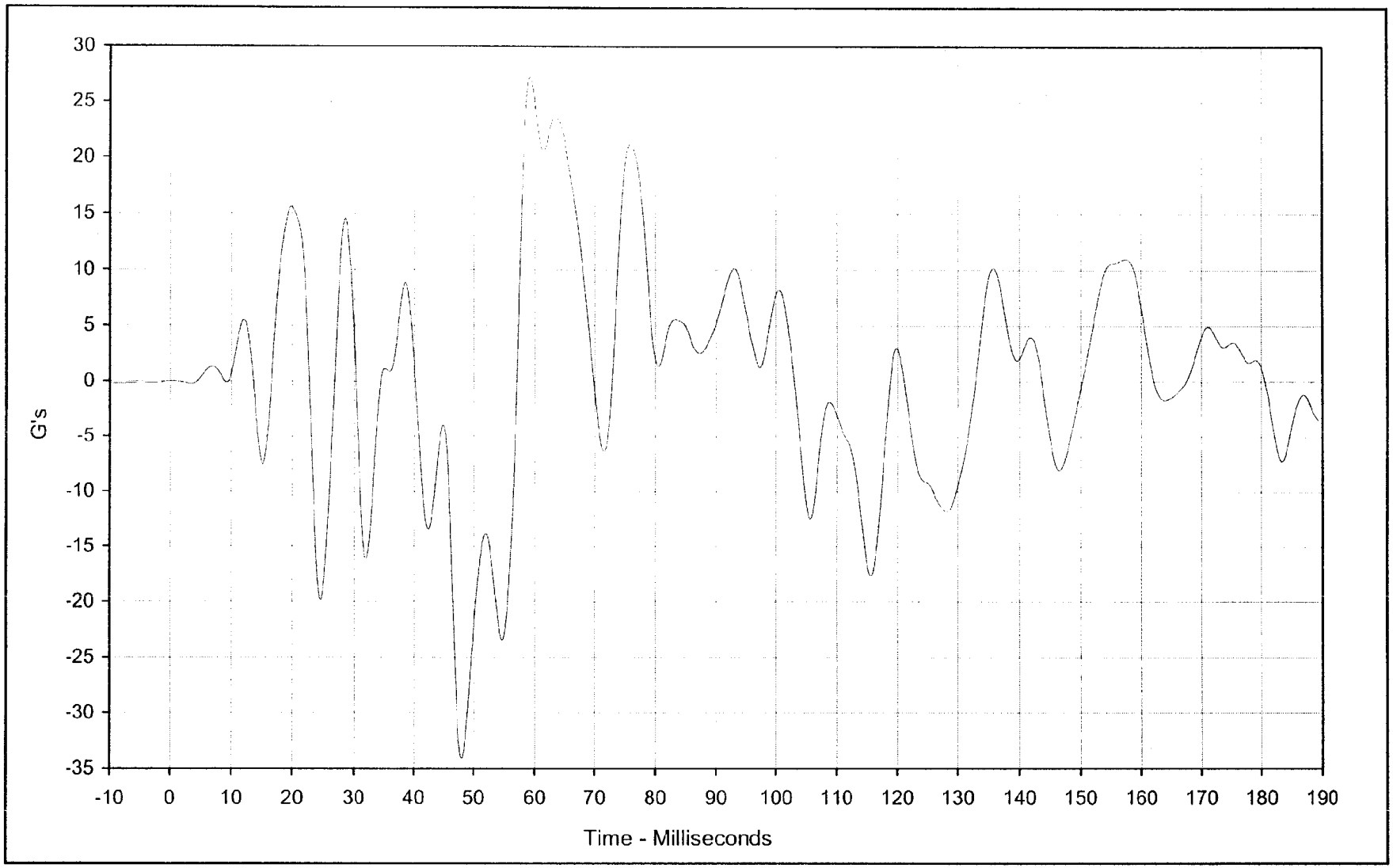
Curve Description:	Rear Floor Above Axle Y			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	35.7	at	16.5 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-7.4	at	122.8 Milliseconds		
SAE Filter Class:	60				
Date of Test:	1/26/00				
Curve Number:	FIL-021				

KARC Engineering



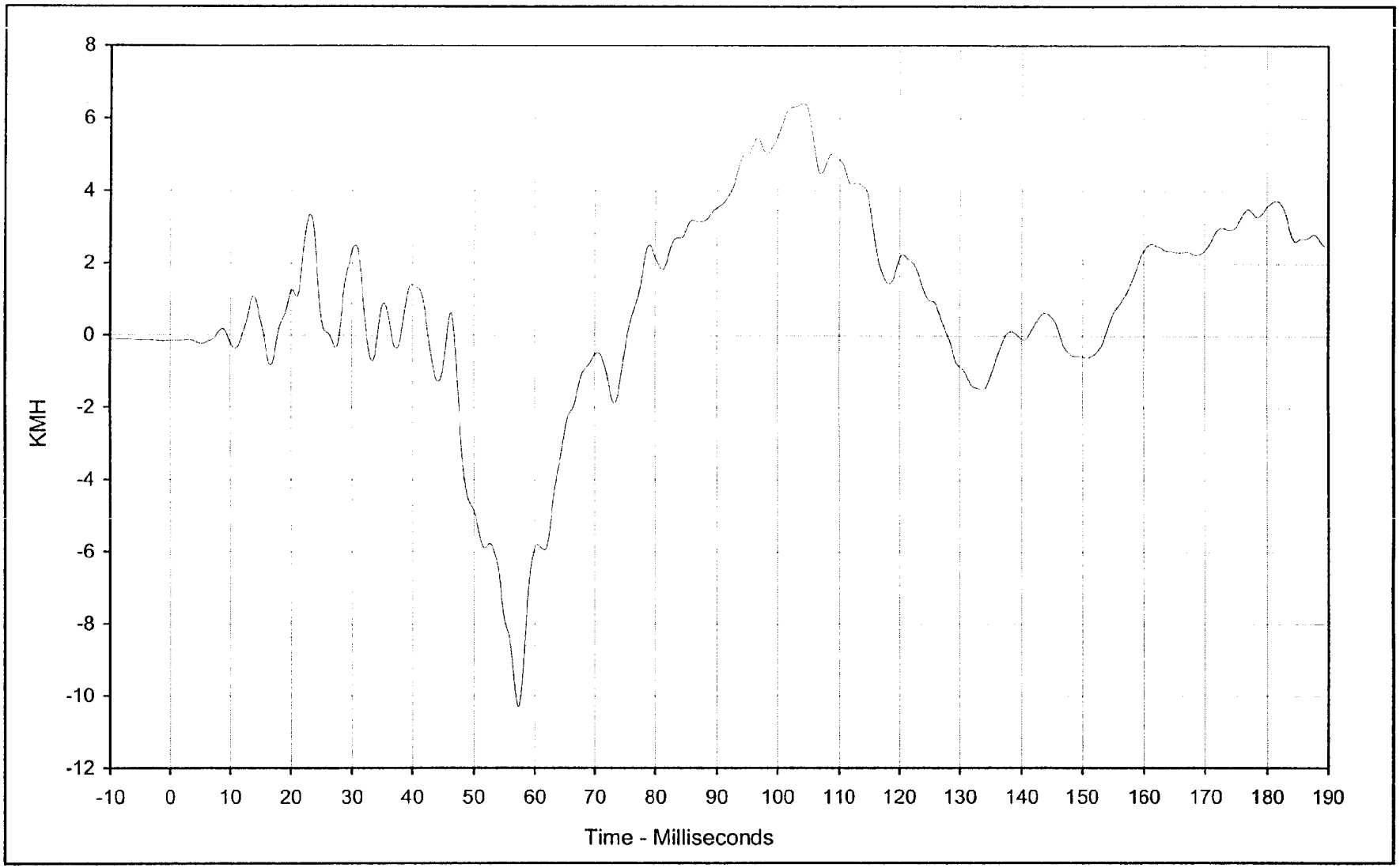
Curve Description:	Rear Floorpan Above Axle Y Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	33.2	at	109.3 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	0.1	at	0.4 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-021				

KARC Engineering



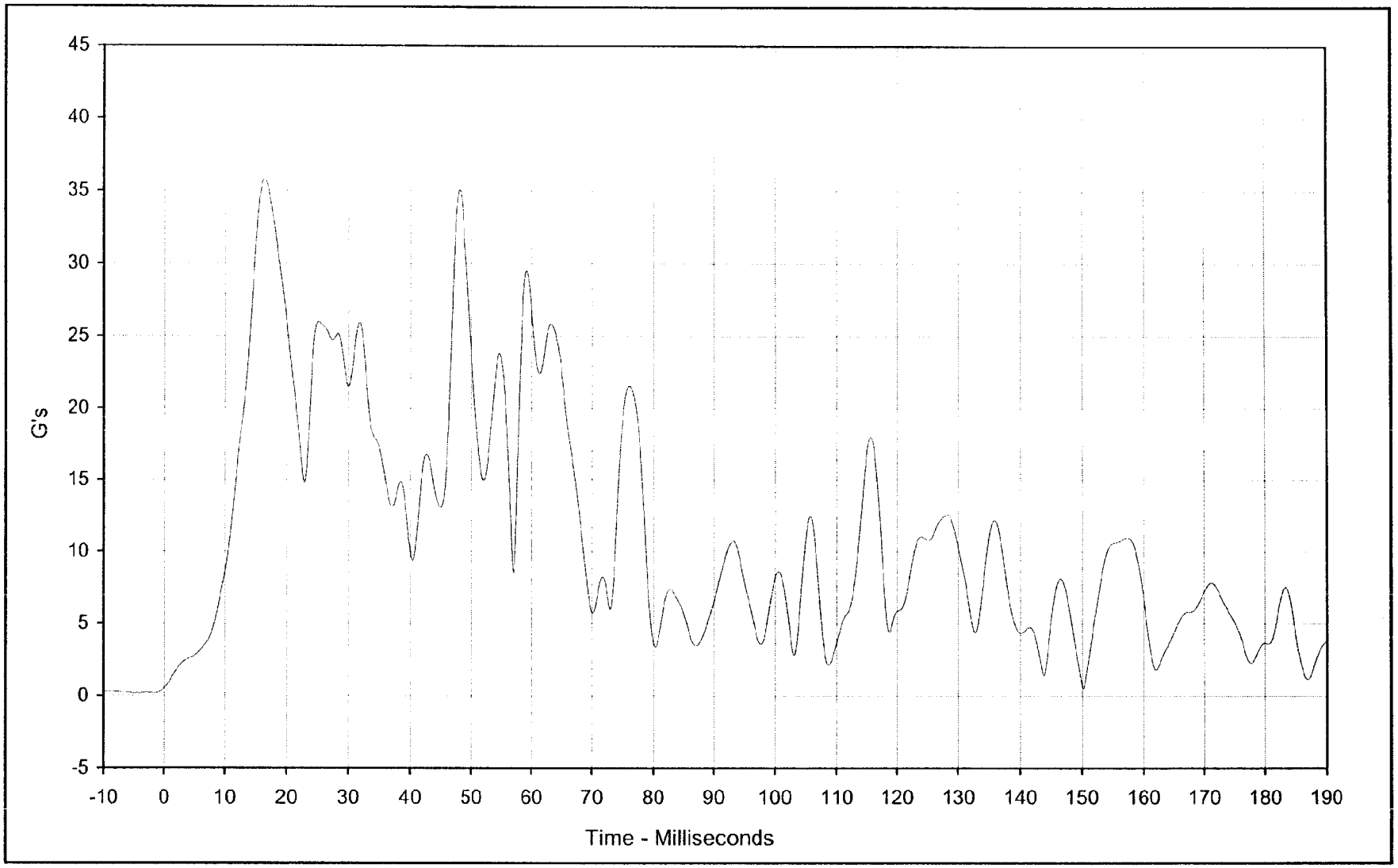
Curve Description:	Rear Floor Above Axle Z			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	27.2	at	59.2 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-34.1	at	48.0 Milliseconds		
SAE Filter Class:	60				
Date of Test:	1/26/00				
Curve Number:	FIL-022				

KARC Engineering



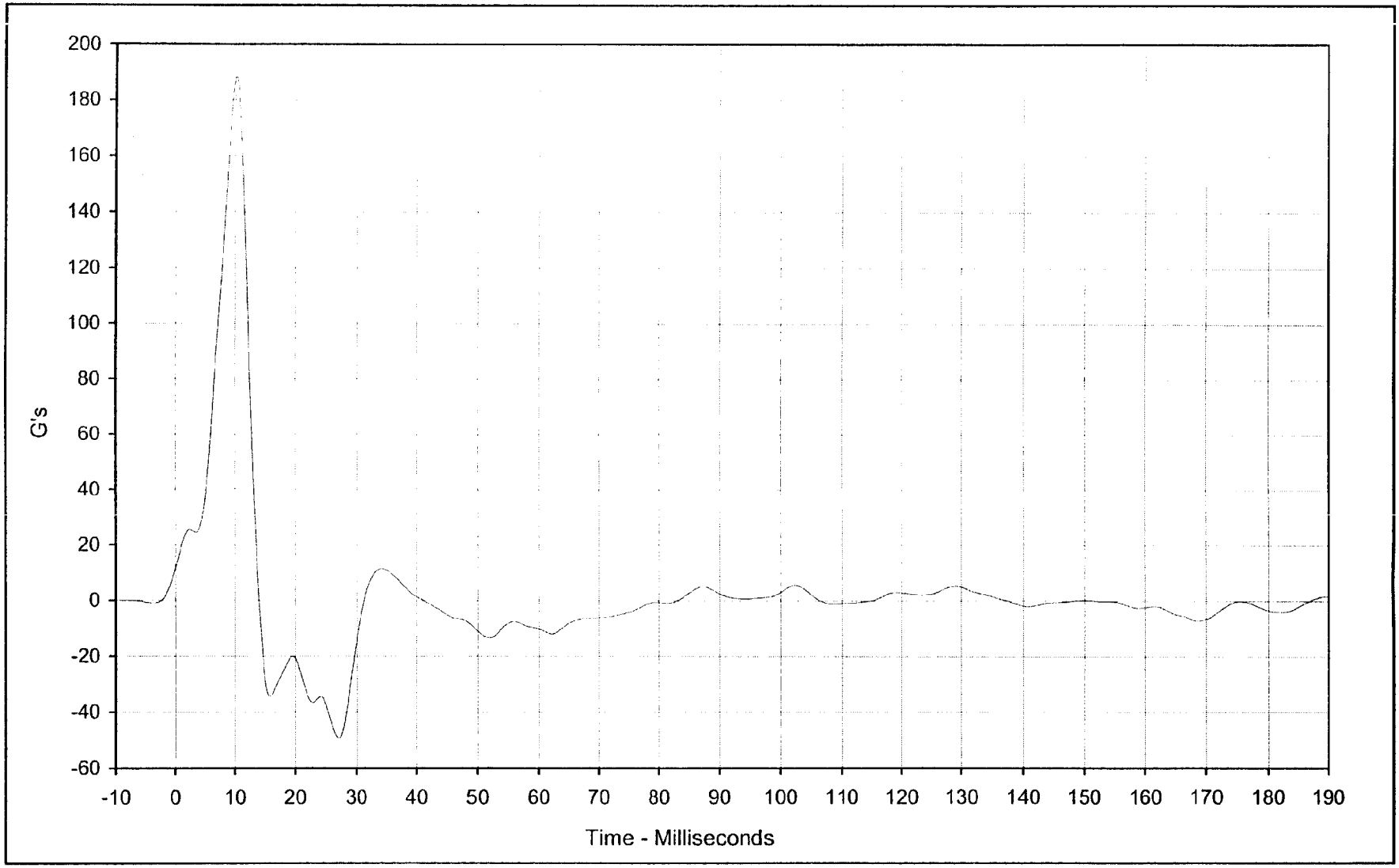
Curve Description:	Rear Floorpan Above Axle Z Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	6.4	at	104.1 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-10.3	at	57.4 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-022				

KARC Engineering



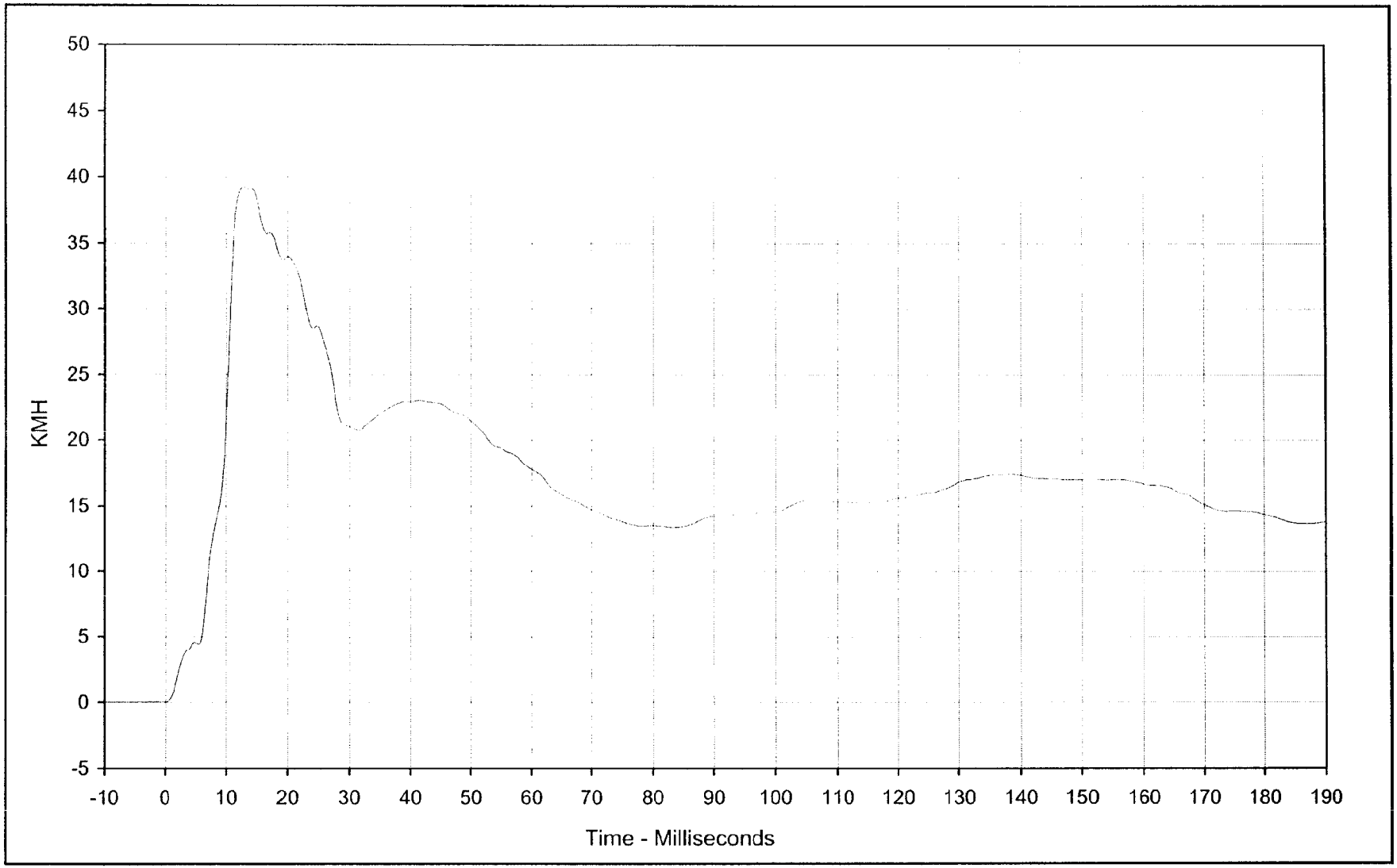
Curve Description:	Rear Floor Above Axle Resultant			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	35.8	at	16.4 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	0.5	at	150.2 Milliseconds		
SAE Filter Class:	60				
Date of Test:	1/26/00				
Curve Number:	RES-020				

KARC Engineering



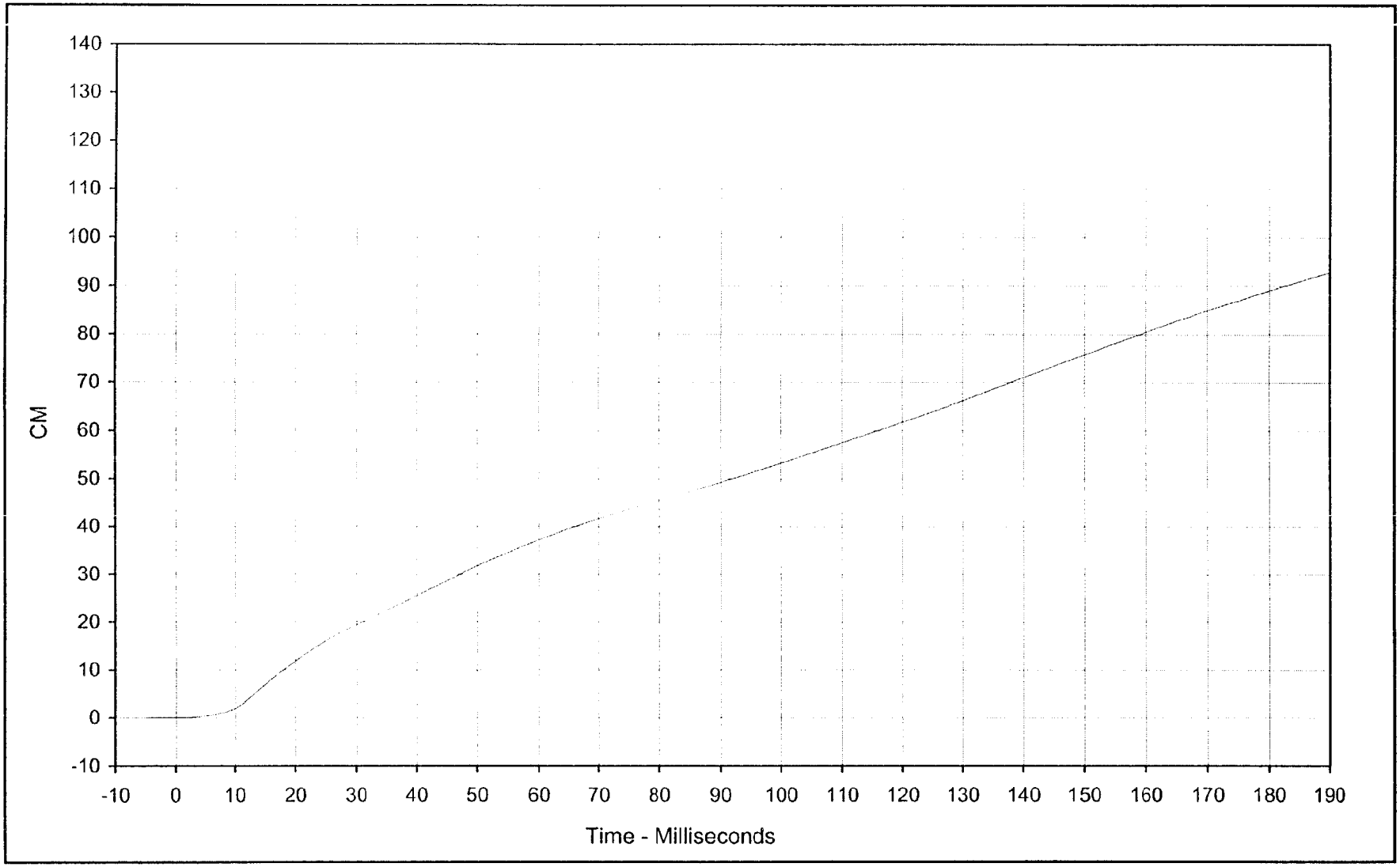
Curve Description:	Left Sill at Front Door Y			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	188.4	at	10.2 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-49.3	at	27.1 Milliseconds		
SAE Filter Class:	60				
Date of Test:	1/26/00				
Curve Number:	FIL-023				

KARCO Engineering



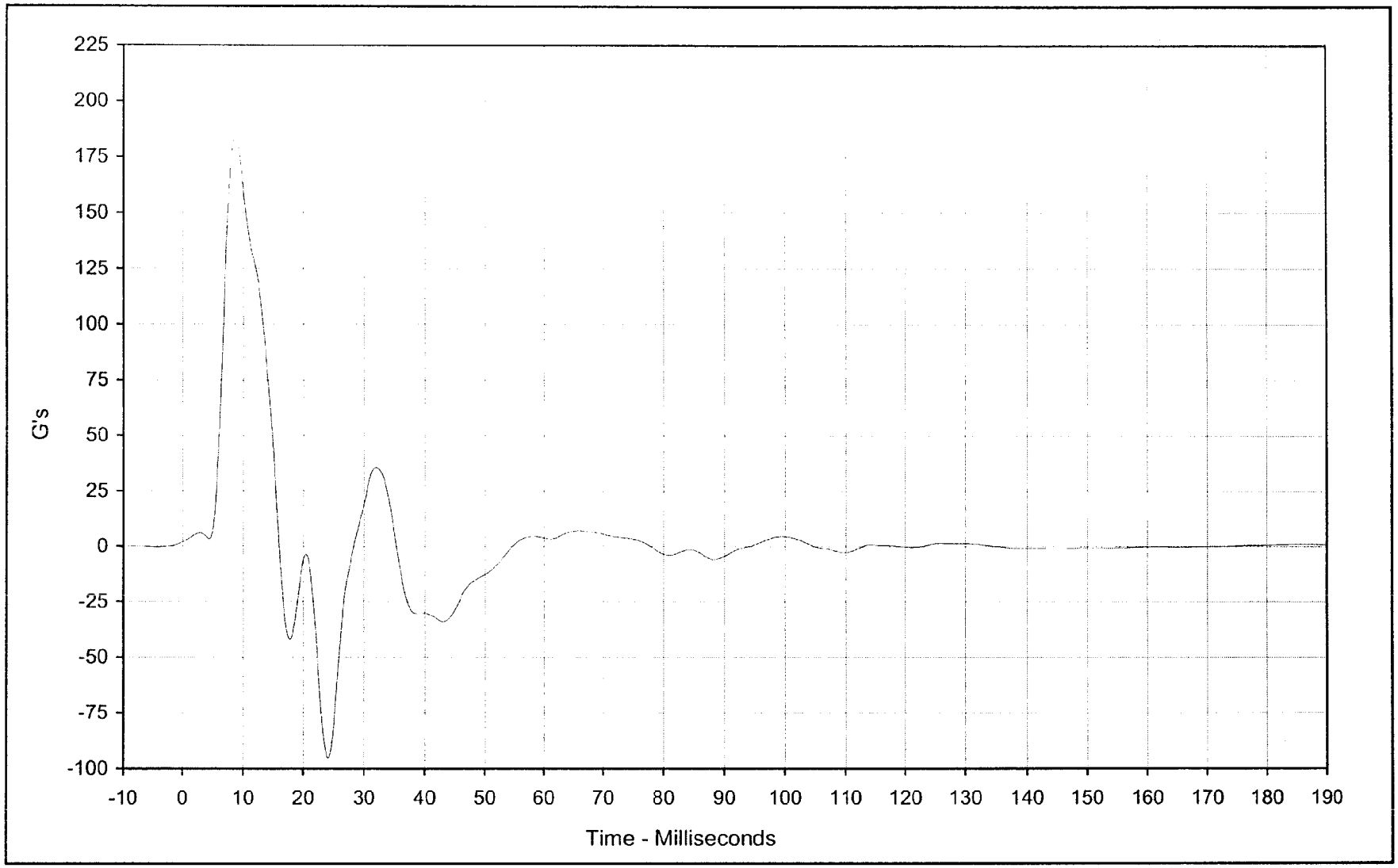
Curve Description:	Left Sill at Front Seat Y Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	39.2	at	12.8 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	0.0	at	0.0 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-023				

KARCO Engineering



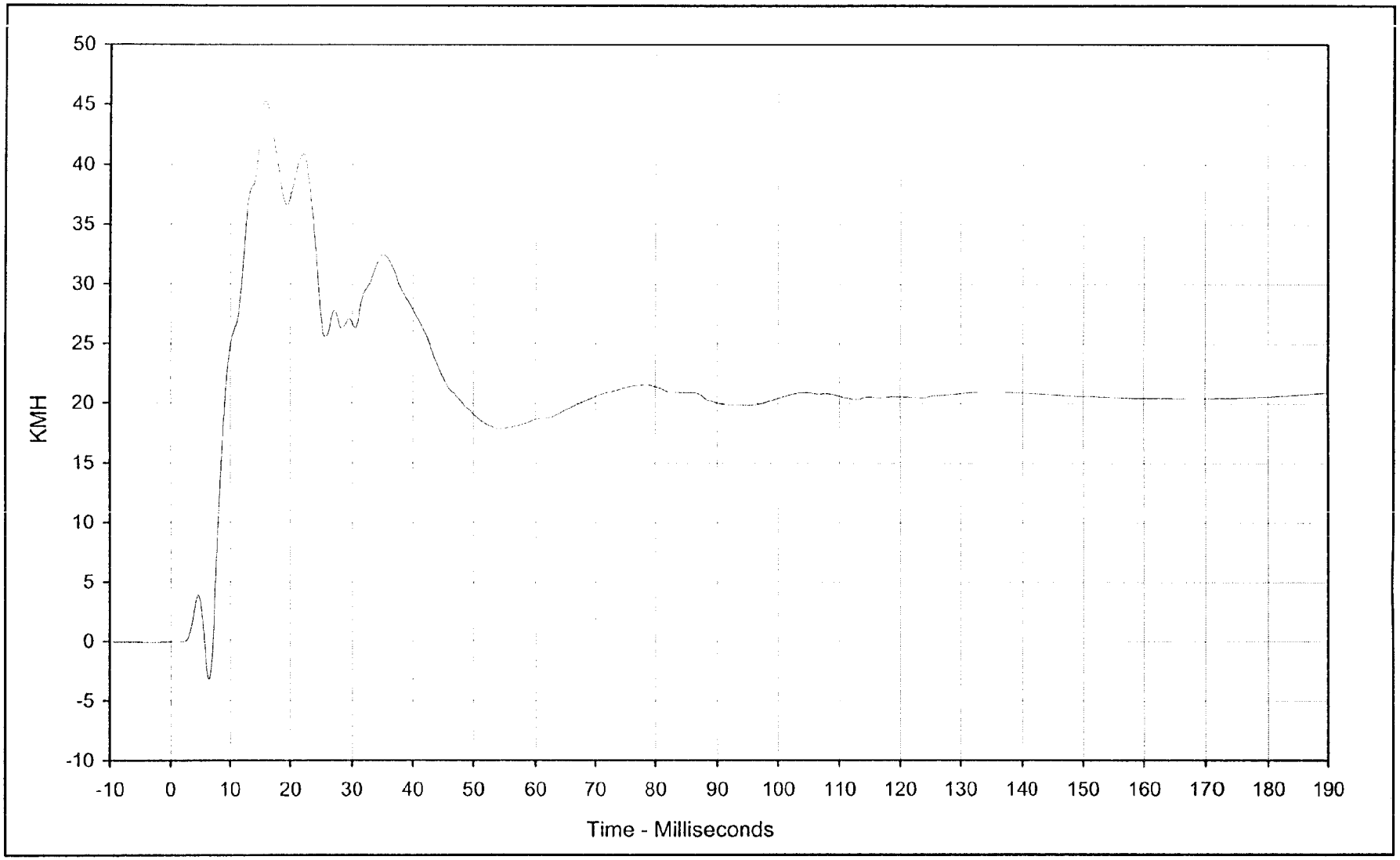
Curve Description:	Left Sill at Front Seat Y Disp.			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	92.8	at	189.9 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	0.0	at	0.0 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN2-036				

KARC Engineering



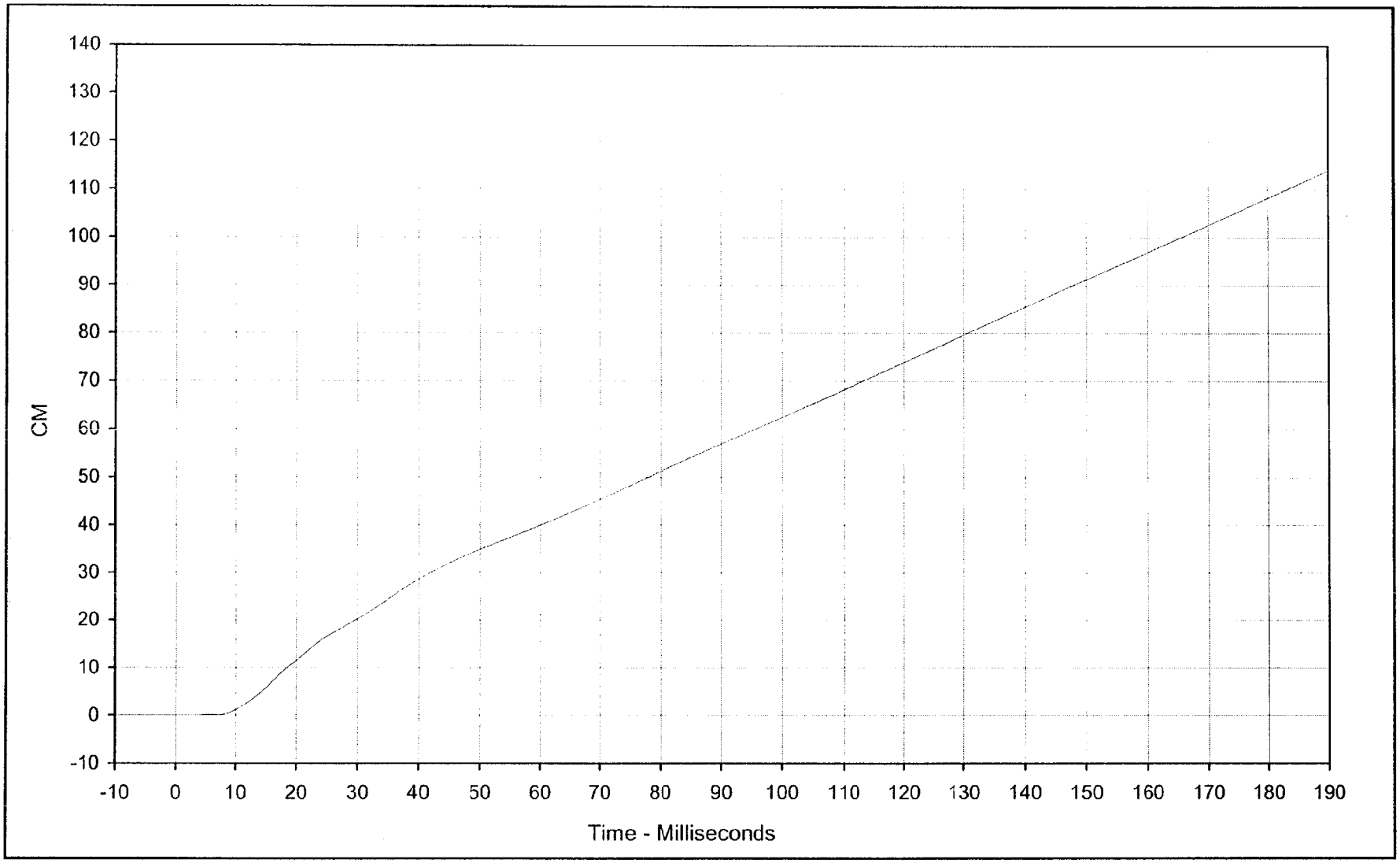
Curve Description:	Left Front Door Centerline Y			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	184.4	at	8.7 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-95.1	at	24.1 Milliseconds		
SAE Filter Class:	60				
Date of Test:	1/26/00				
Curve Number:	FIL-024				

KARCO Engineering



Curve Description:	Left Front Door CL Y Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	45.3	at	15.8 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-3.2	at	6.5 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-024				

KARC Engineering



Curve Description: Left Front Door CL Y Displacement

Maximum Value: 113.9 at 189.9 Milliseconds

Minimum Value: -0.1 at 2.4 Milliseconds

SAE Filter Class: 180

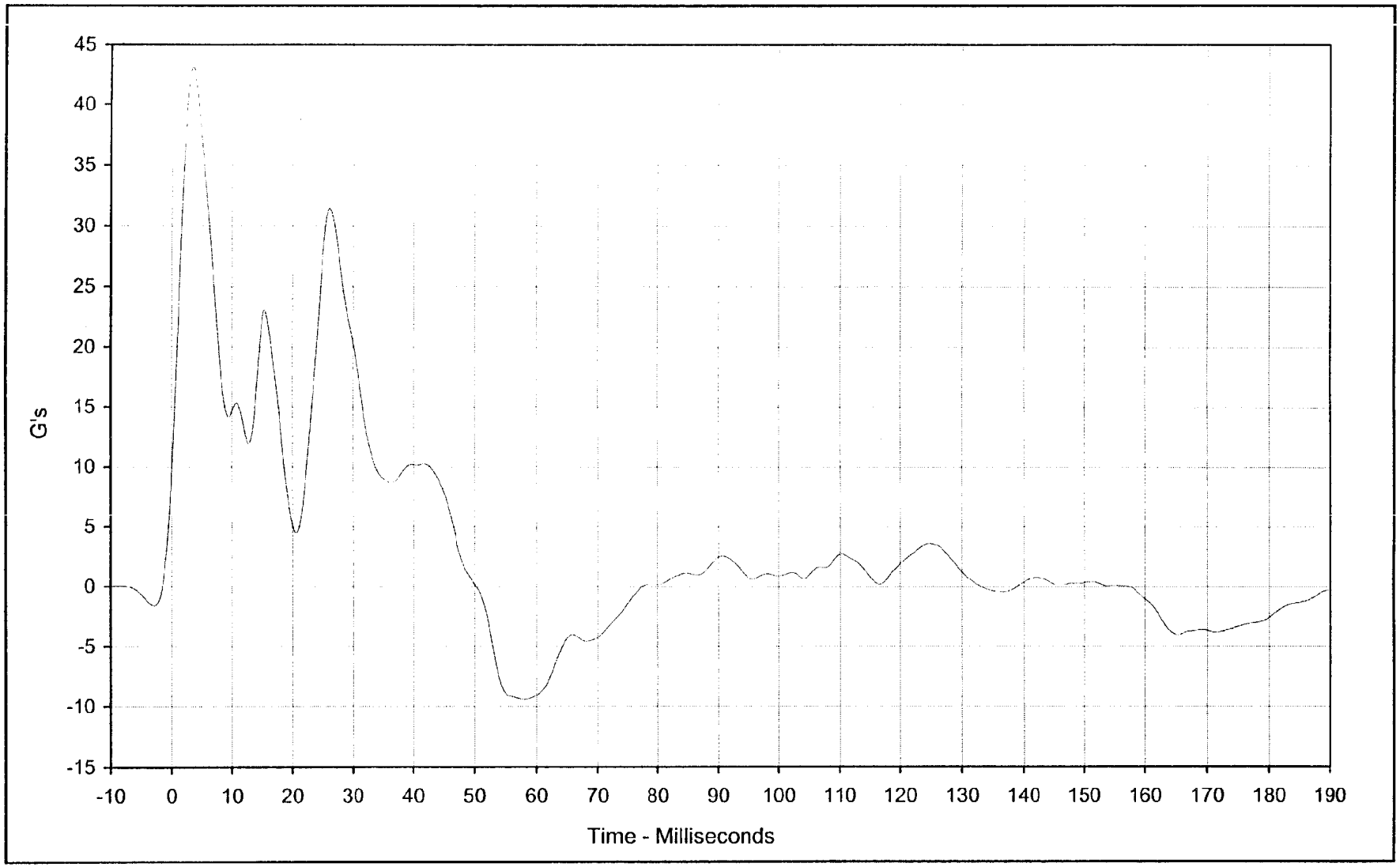
Date of Test: 1/26/00

Curve Number: IN2-024

Test Program: 55/28 km/h Side Impact NCAP No.: MY0107

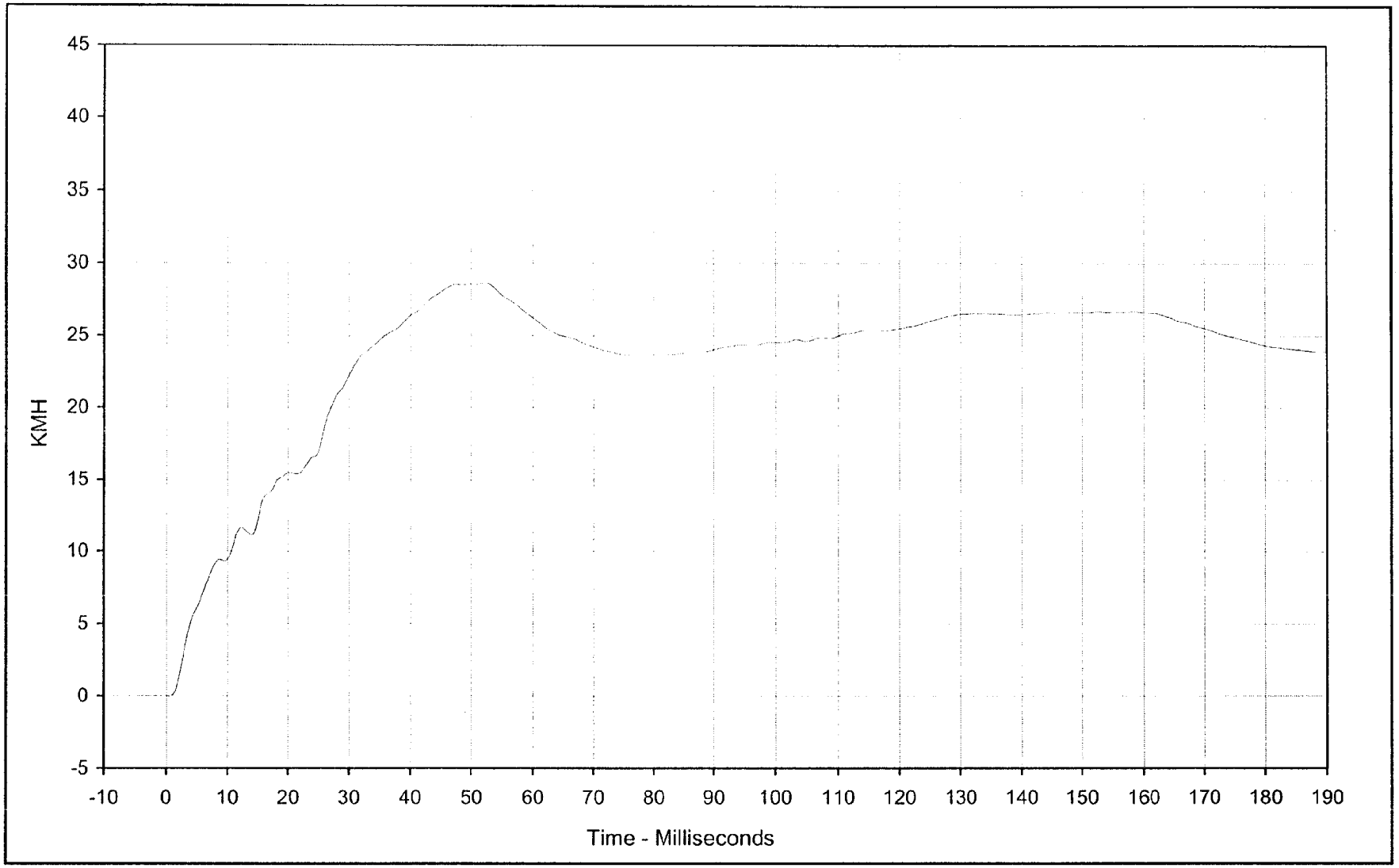
Test Vehicle: 2000 Chevrolet S-10 Pickup

KARCO Engineering



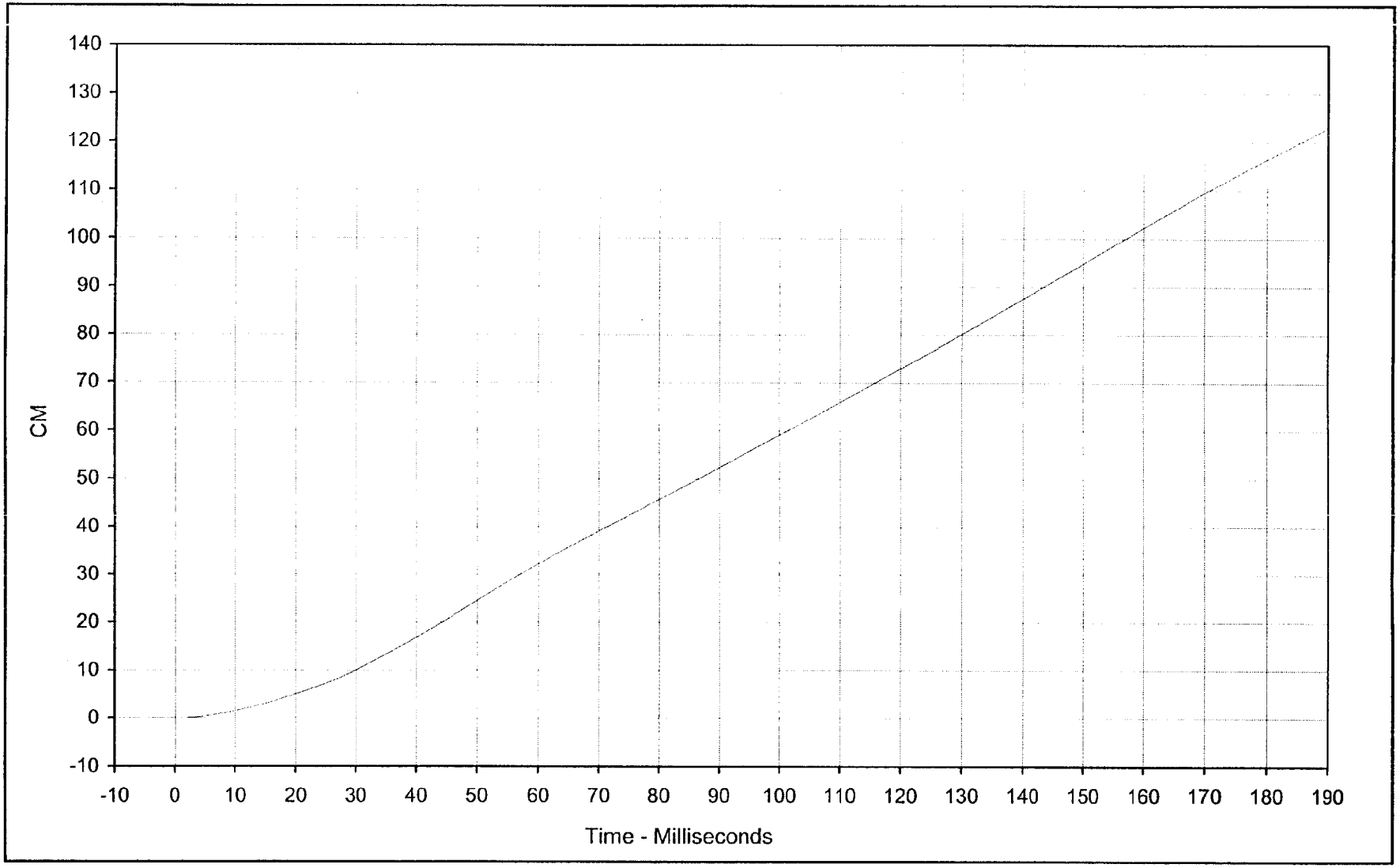
Curve Description:	Right Rear Occ. Compartment Y			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	43.1	at	3.4 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-9.4	at	57.9 Milliseconds		
SAE Filter Class:	60				
Date of Test:	1/26/00				
Curve Number:	FIL-025				

KARC Engineering



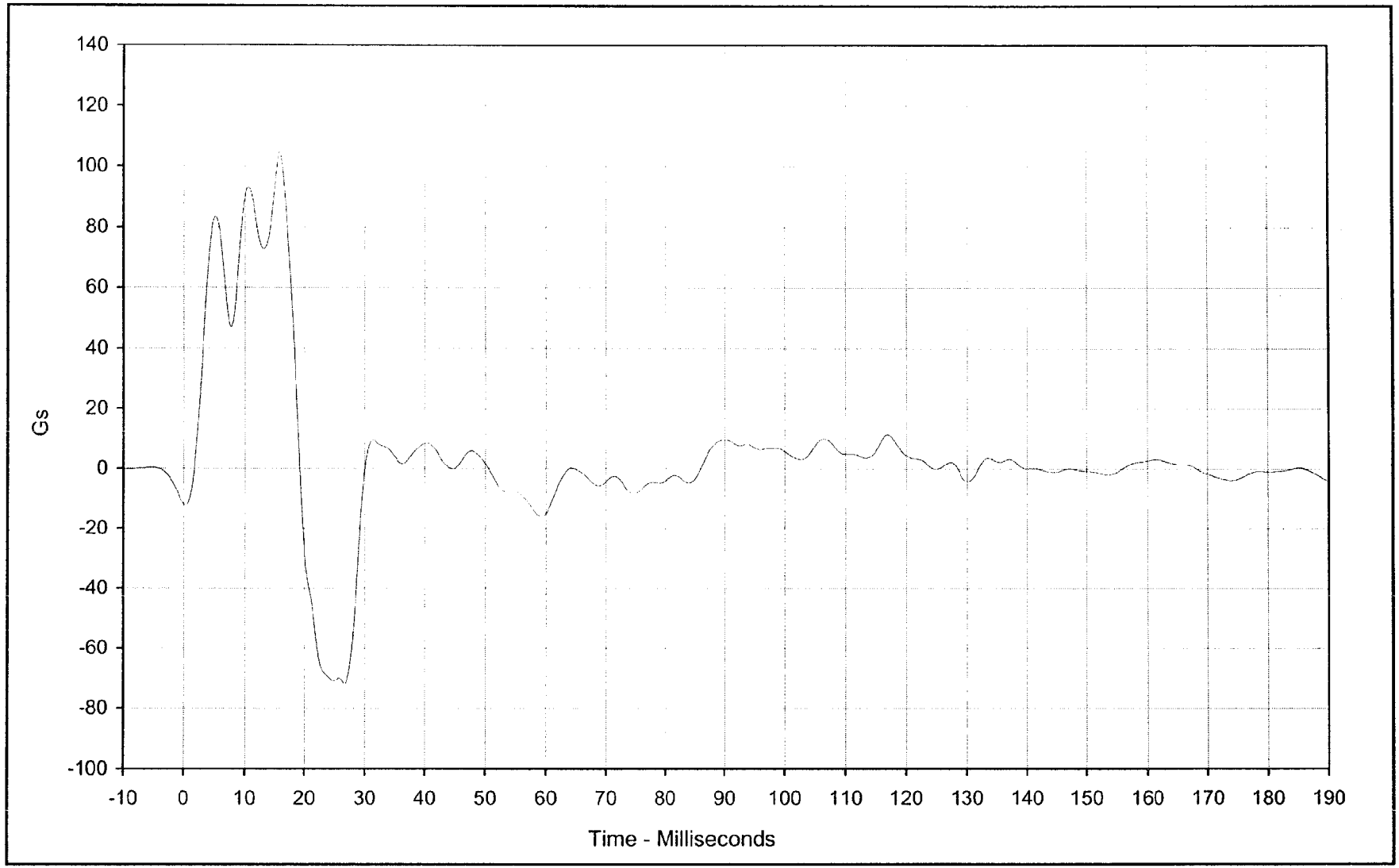
Curve Description:	Right Rear Occ. Comp. Y Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	28.6	at	52.4 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	0.0	at	0.4 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-025				

KARC Engineering



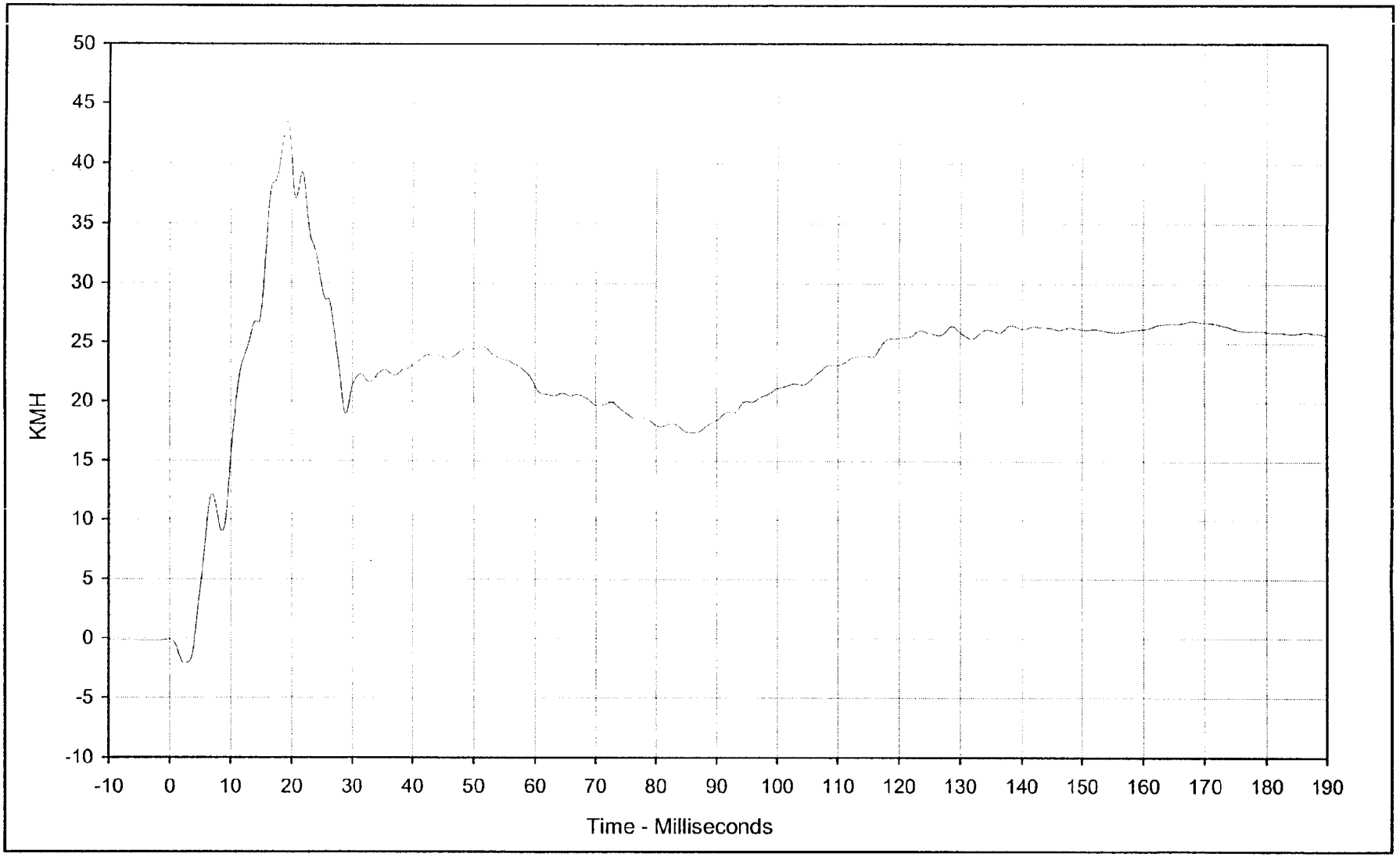
Curve Description:	Right Rear Occ. Comp. Y Disp.			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	123.0	at	189.9 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	0.0	at	0.8 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN2-025				

KARCO Engineering



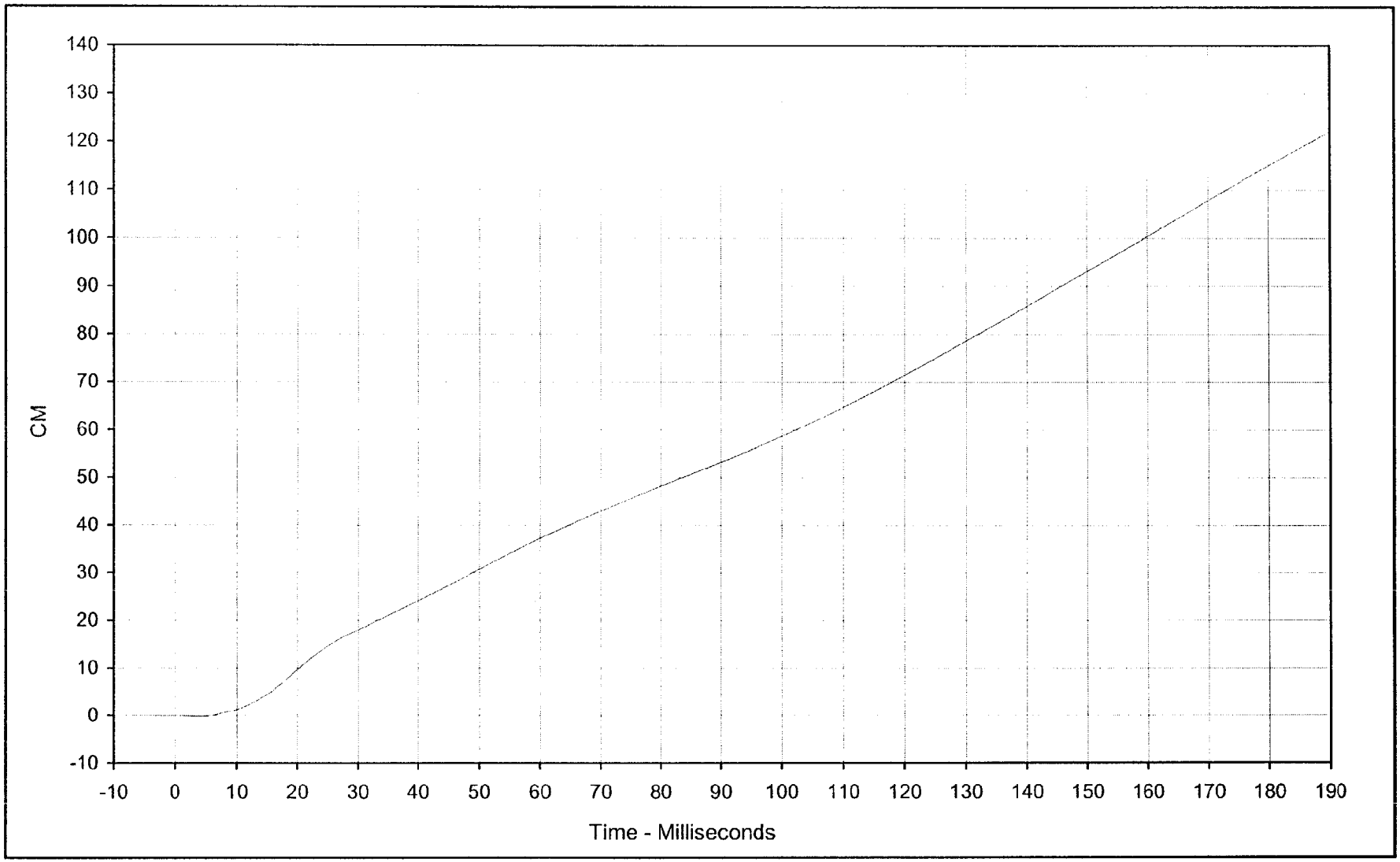
Curve Description:	Left Front Door Mid Rear Y			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	104.7	at	15.8 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-71.9	at	26.6 Milliseconds		
SAE Filter Class:	60				
Date of Test:	1/26/00				
Curve Number:	FIL-026				

KARCO Engineering



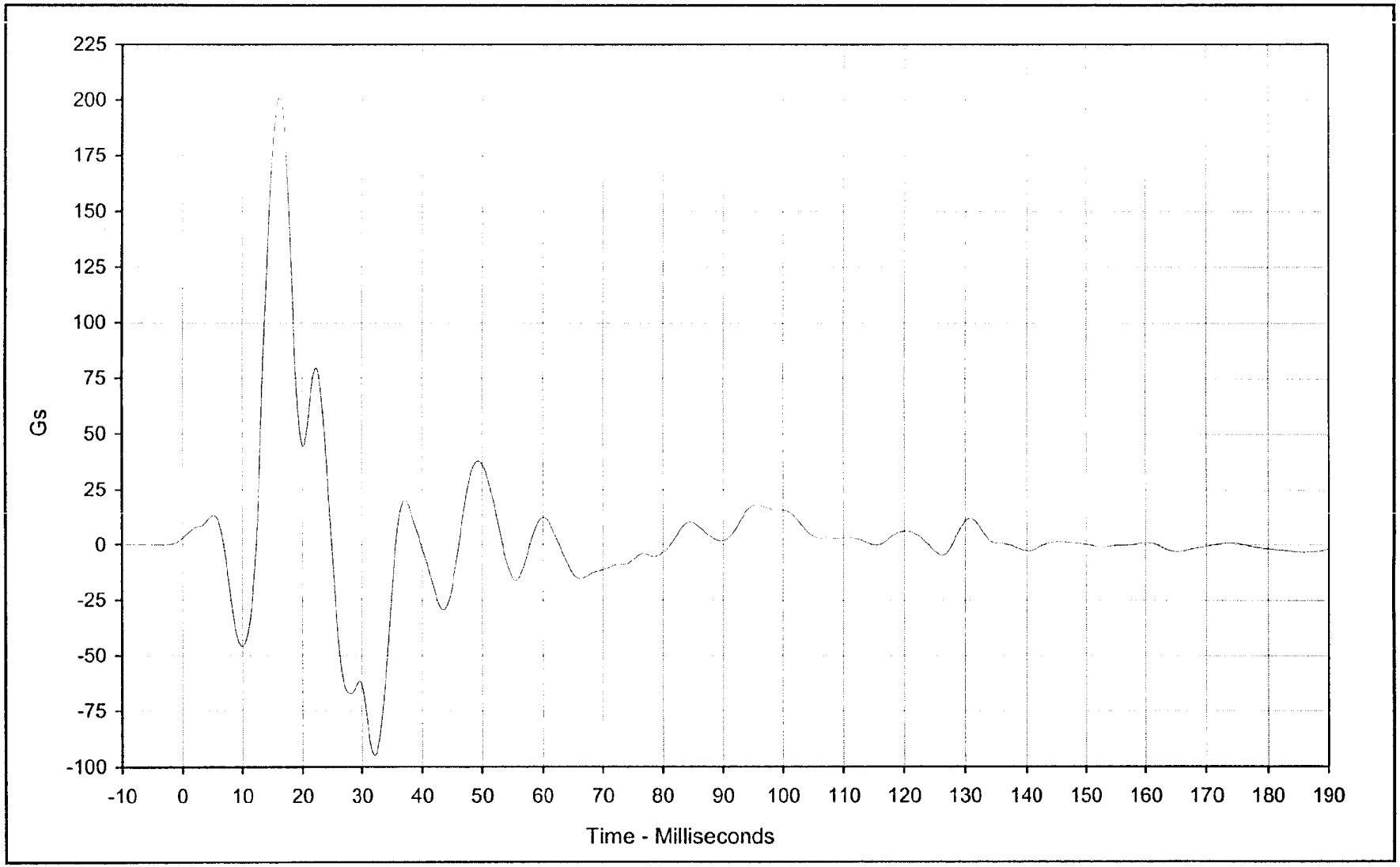
Curve Description:	Left Front Door Mid-Rear Y Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	43.4	at	19.1 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-2.1	at	2.4 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-026				

KARCO Engineering



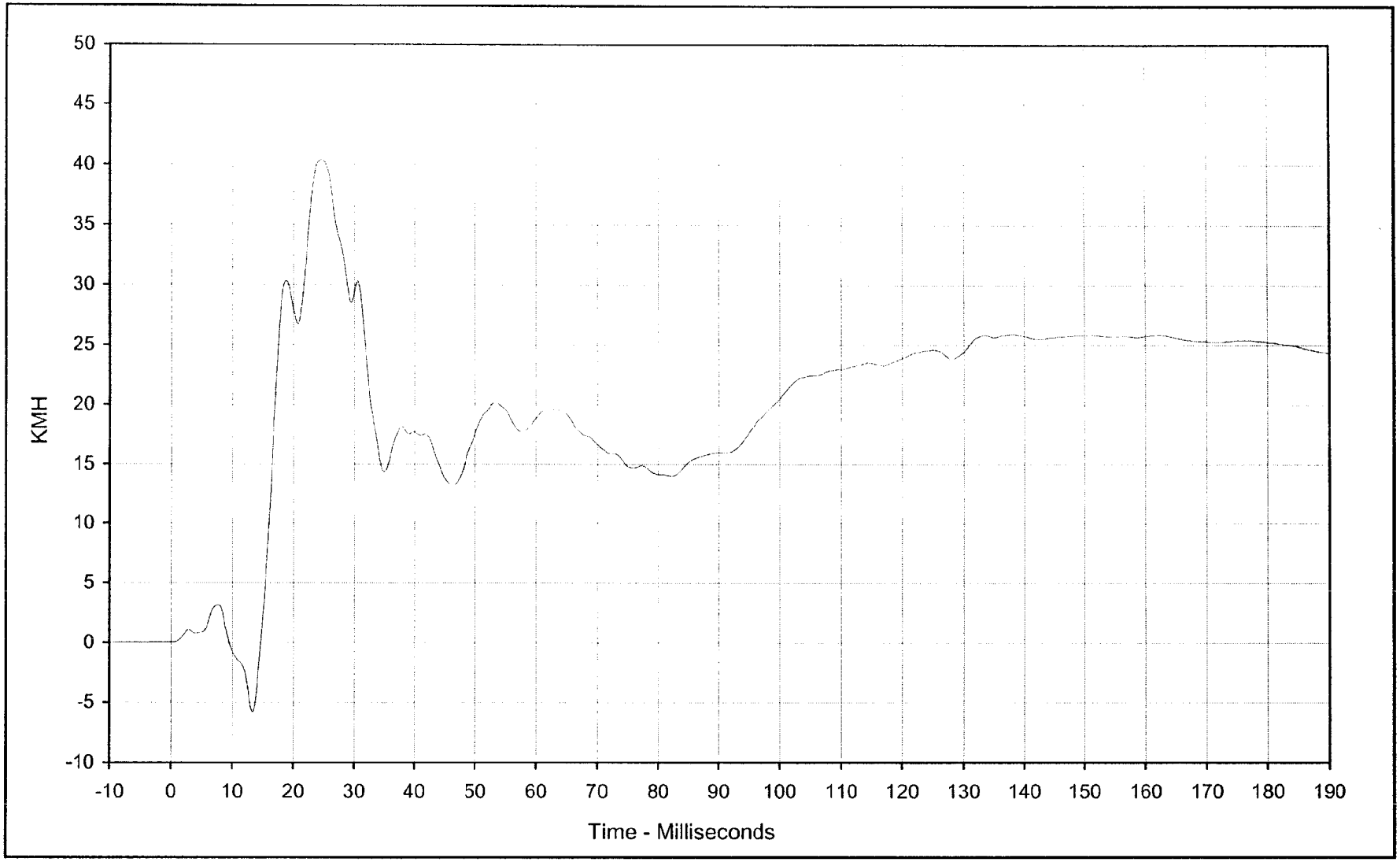
Curve Description:	Left Front Door Mid-Rear Y Disp.			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	122.1	at	189.9 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-0.2	at	4.1 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN2-026				

KARC Engineering



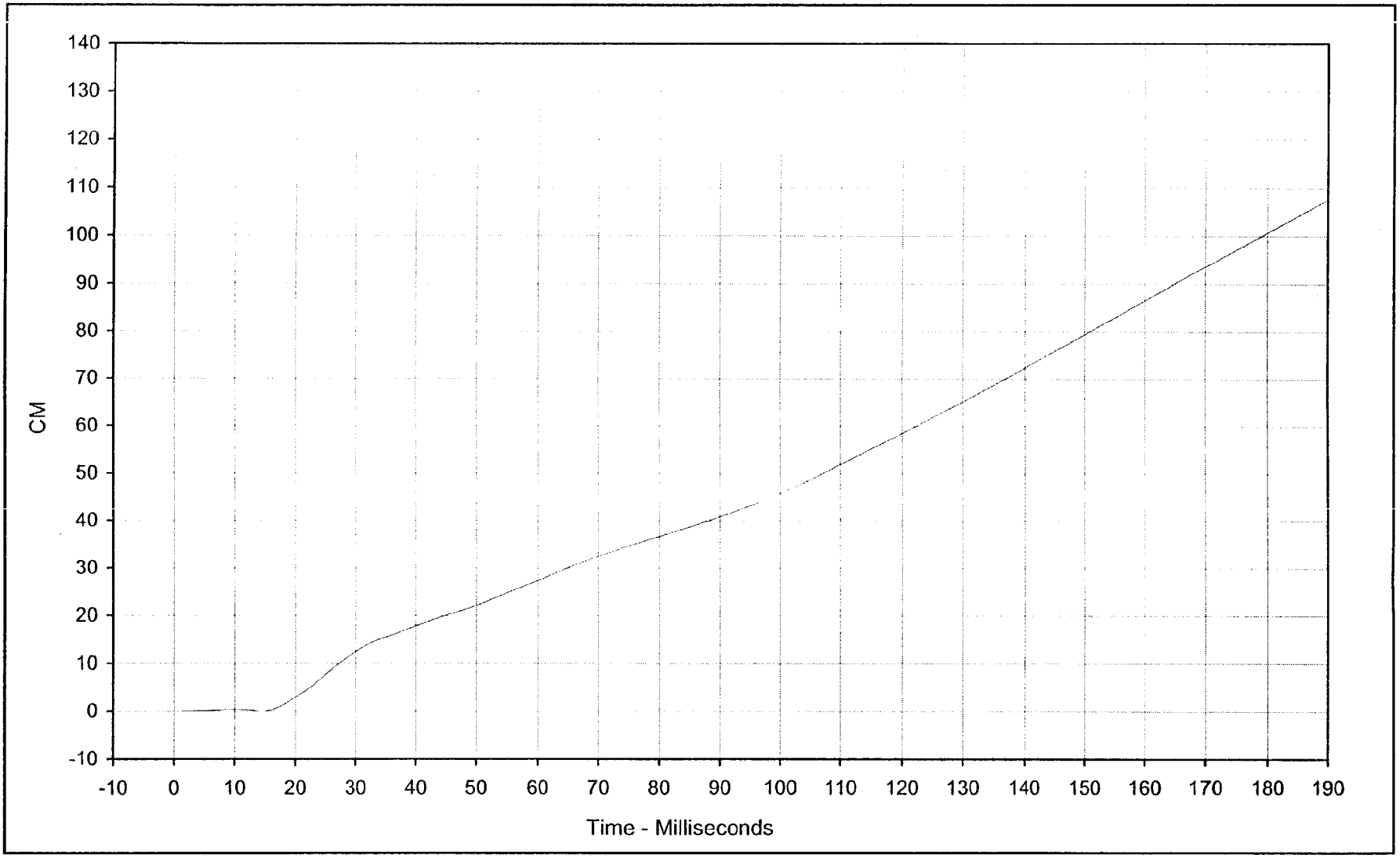
Curve Description:	Left Front Door Upper CL Y			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	201.2	at	16.2 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-95.0	at	32.1 Milliseconds		
SAE Filter Class:	60				
Date of Test:	1/26/00				
Curve Number:	FIL-027				

KARC Engineering



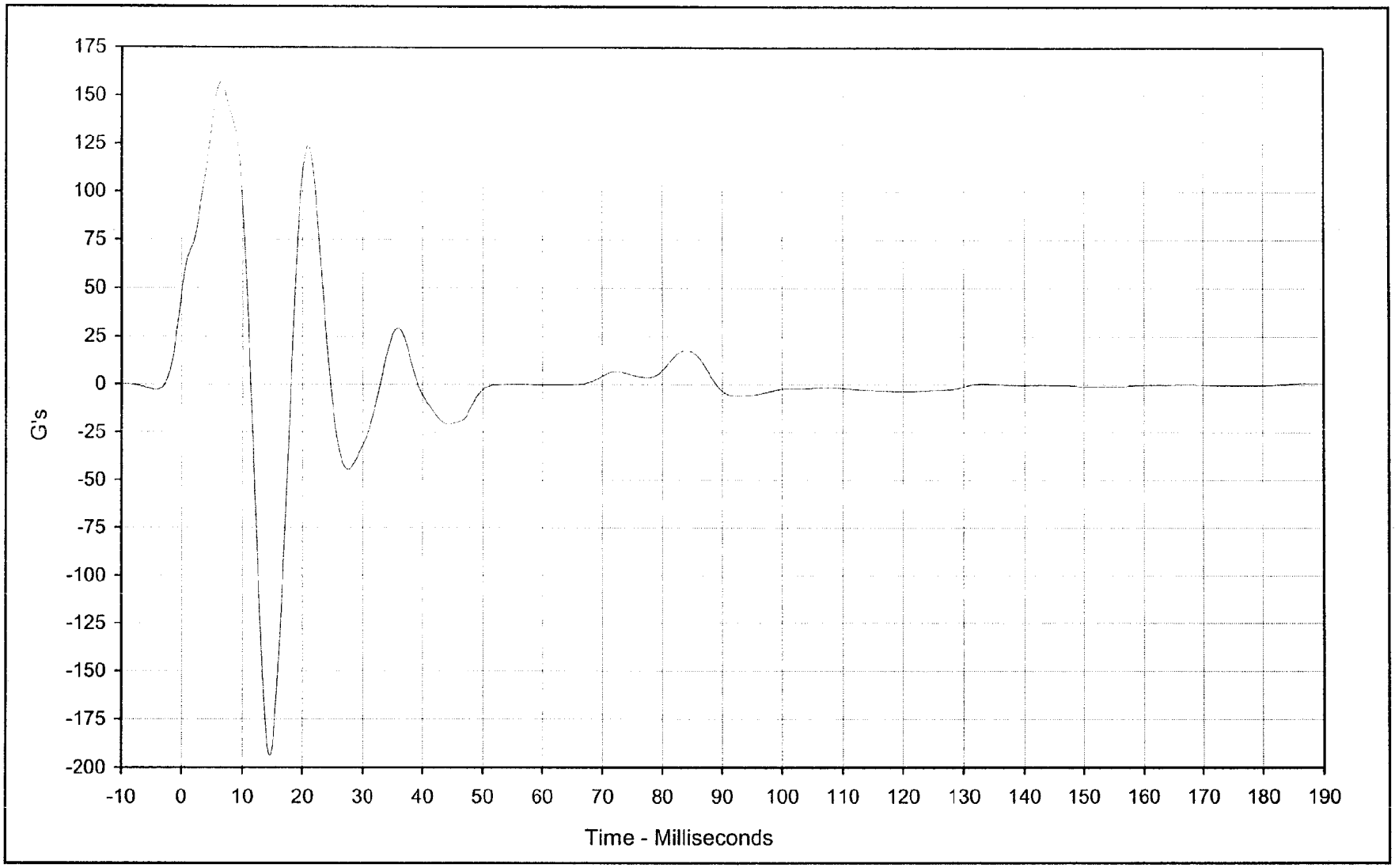
Curve Description:	Left Front Door Upper CL Y Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	40.4	at	24.6 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-5.8	at	13.2 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-027				

KARCO Engineering



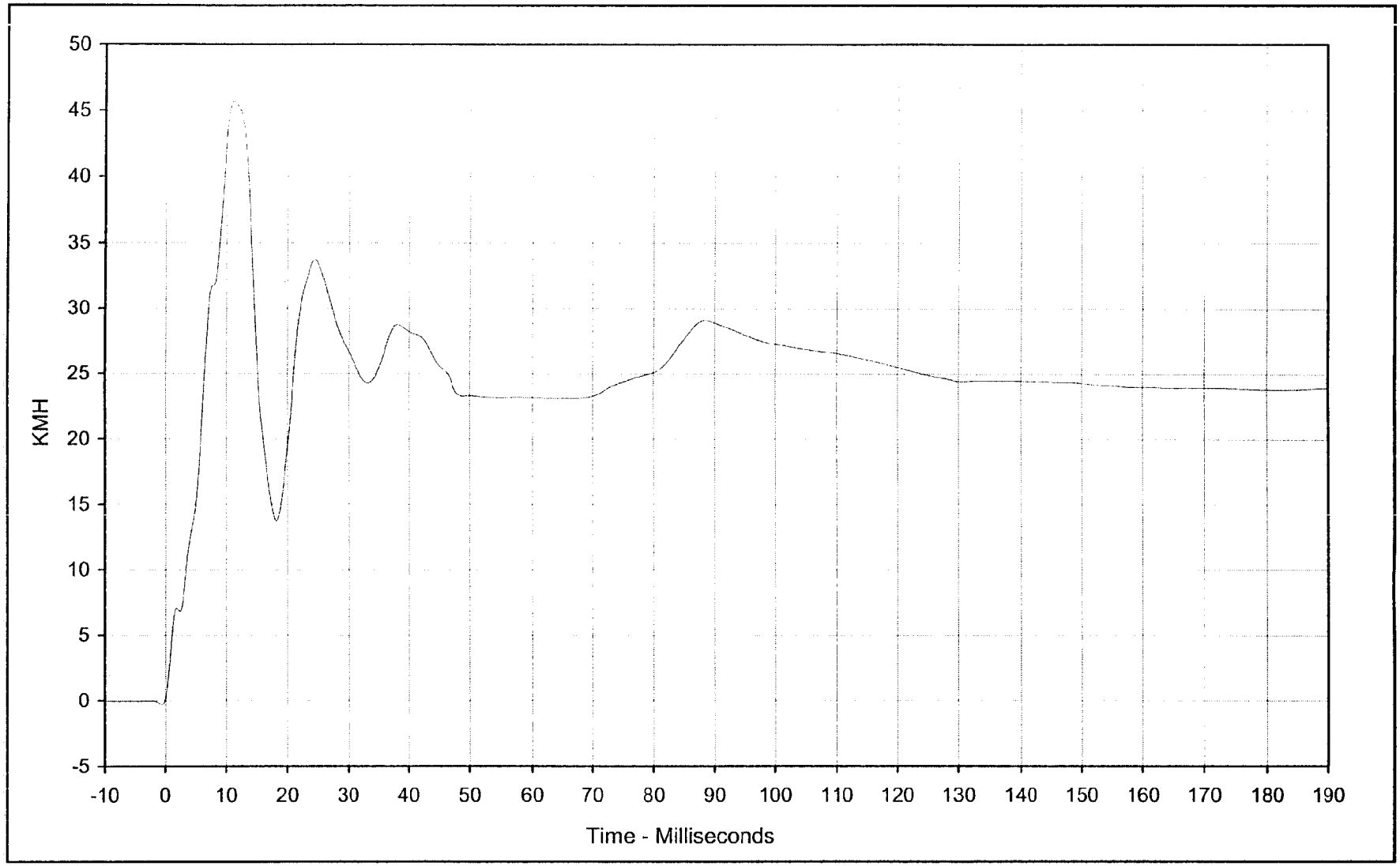
Curve Description:	Left Front Door Upper CL Y Disp.			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	107.5	at	189.9 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	0.0	at	14.5 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN2-027				

KARCO Engineering



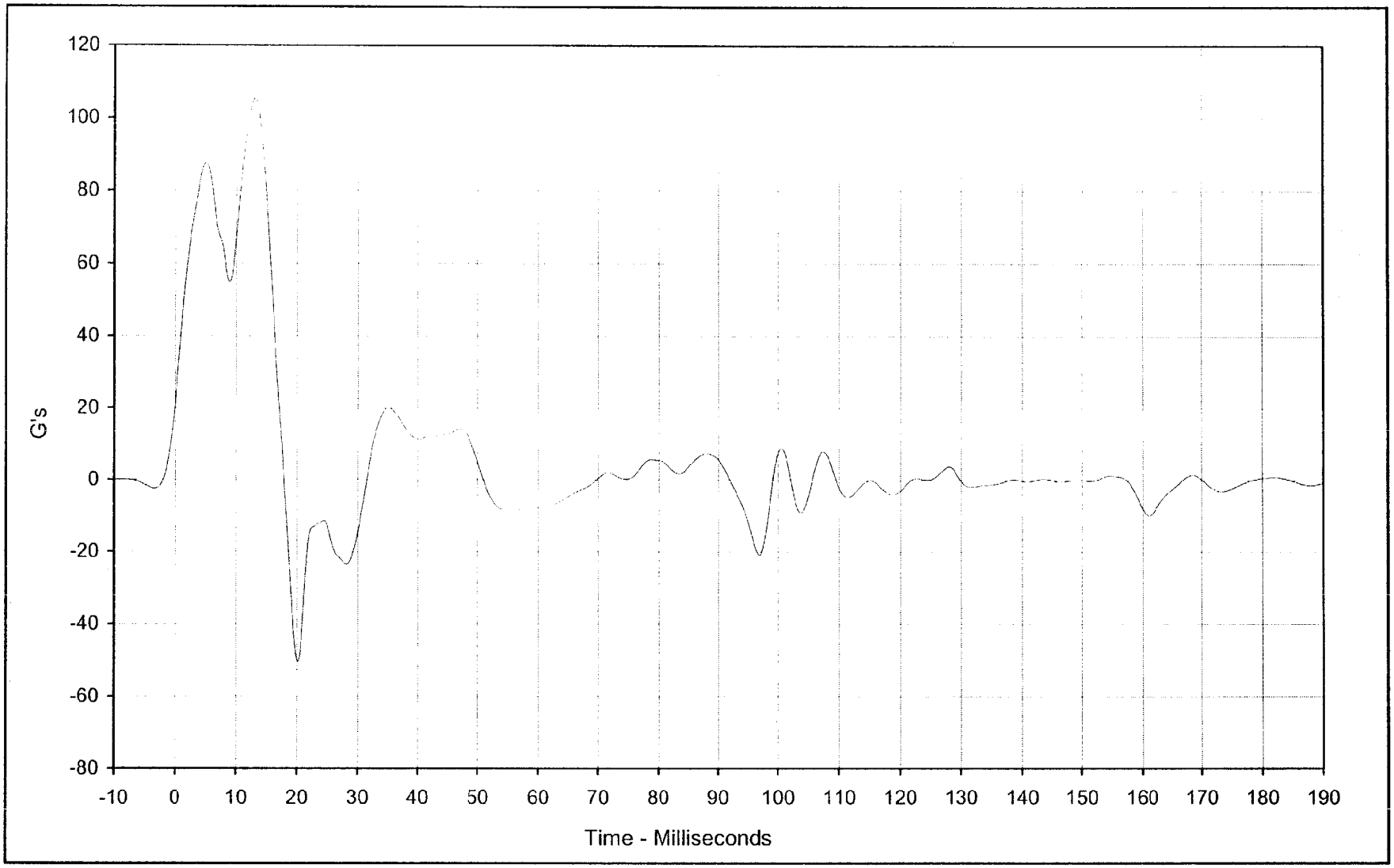
Curve Description:	B-Post Lower Y			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	157.1	at	6.4 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-193.7	at	14.5 Milliseconds		
SAE Filter Class:	60				
Date of Test:	1/26/00				
Curve Number:	FIL-028				

KARC Engineering



Curve Description:	B-Post Lower Y Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	45.7	at	11.1 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	0.1	at	0.0 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-028				

KARC Engineering



Curve Description: B-Post Middle Y

Maximum Value: 105.4 at 13.0 Milliseconds

Minimum Value: -50.3 at 20.2 Milliseconds

SAE Filter Class: 60

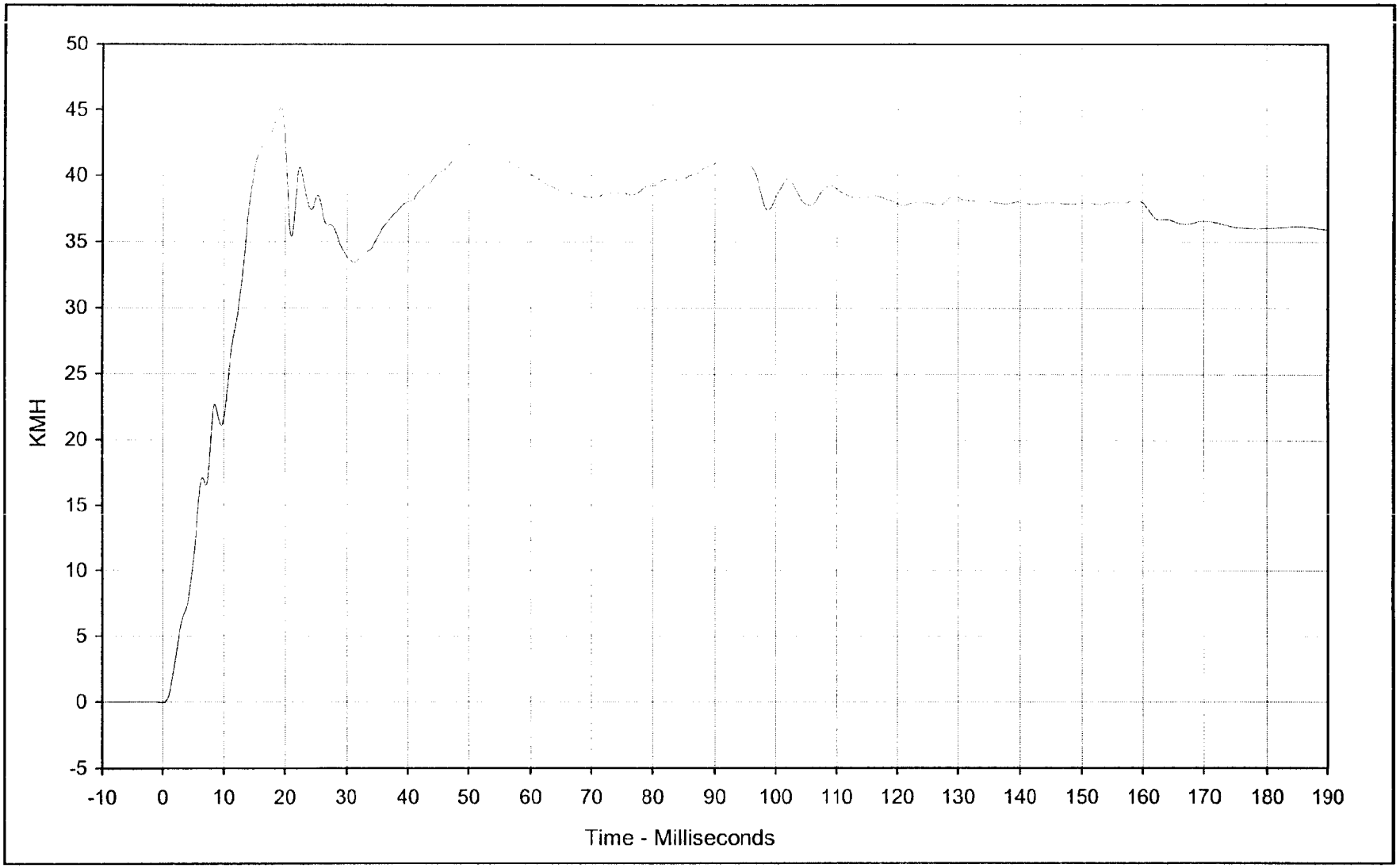
Date of Test: 1/26/00

Curve Number: FIL-029

Test Program: 55/28 km/h Side Impact NCAP No.: MY0107

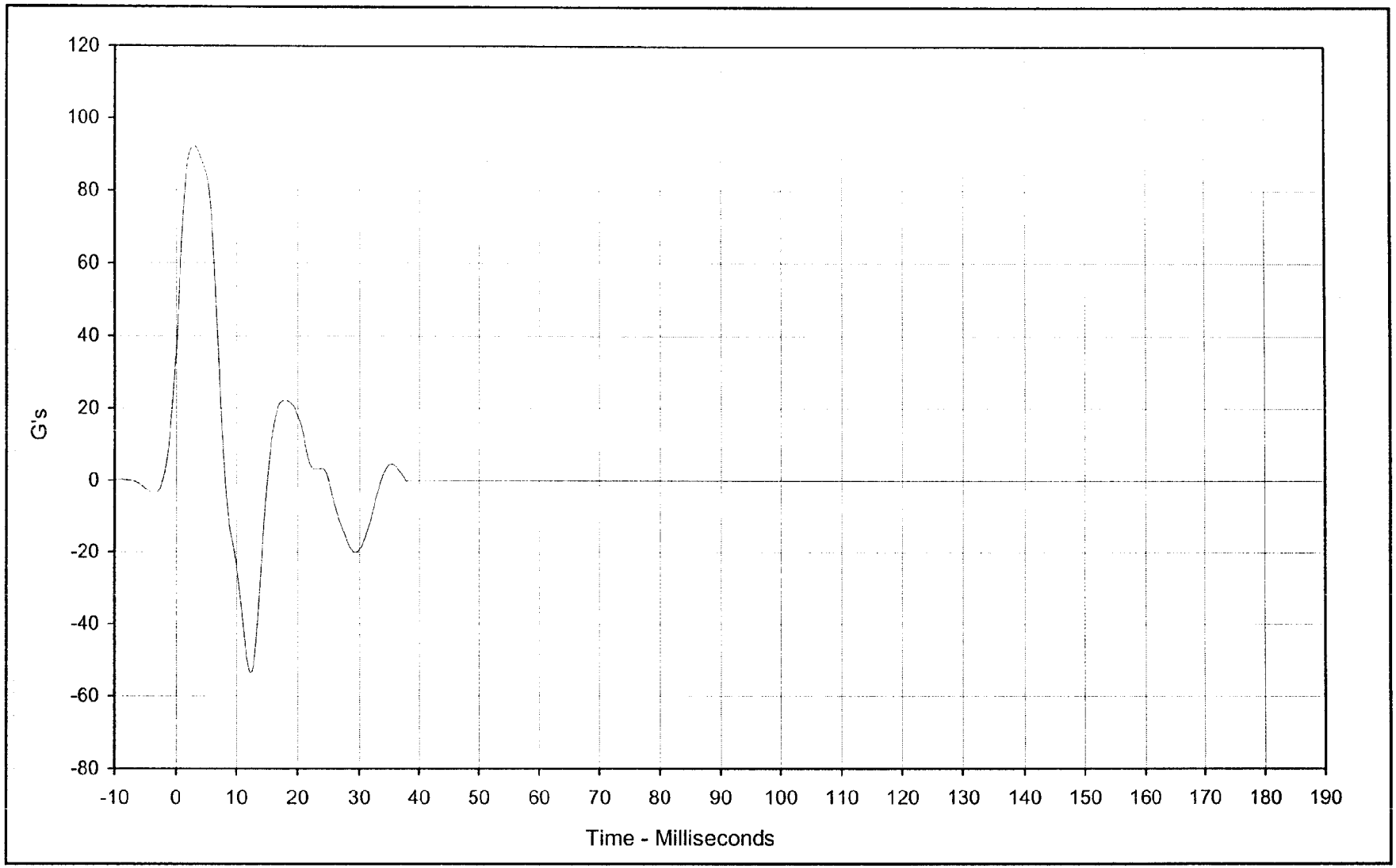
Test Vehicle: 2000 Chevrolet S-10 Pickup

KARCO Engineering



Curve Description:	B-Post Middle Y Velocity				Test Program:	55/28 km/h Side Impact NCAP No.: MY0107	
Maximum Value:	45.2	at	19.2	Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup	
Minimum Value:	-0.1	at	0.0	Milliseconds			
SAE Filter Class:	180						
Date of Test:	1/26/00						
Curve Number:	IN1-029						

KARC Engineering



Curve Description: A-Post Lower Y *

Maximum Value: 92.3 at 3.0 Milliseconds

Minimum Value: -53.6 at 12.3 Milliseconds

SAE Filter Class: 60

Date of Test: 1/26/00

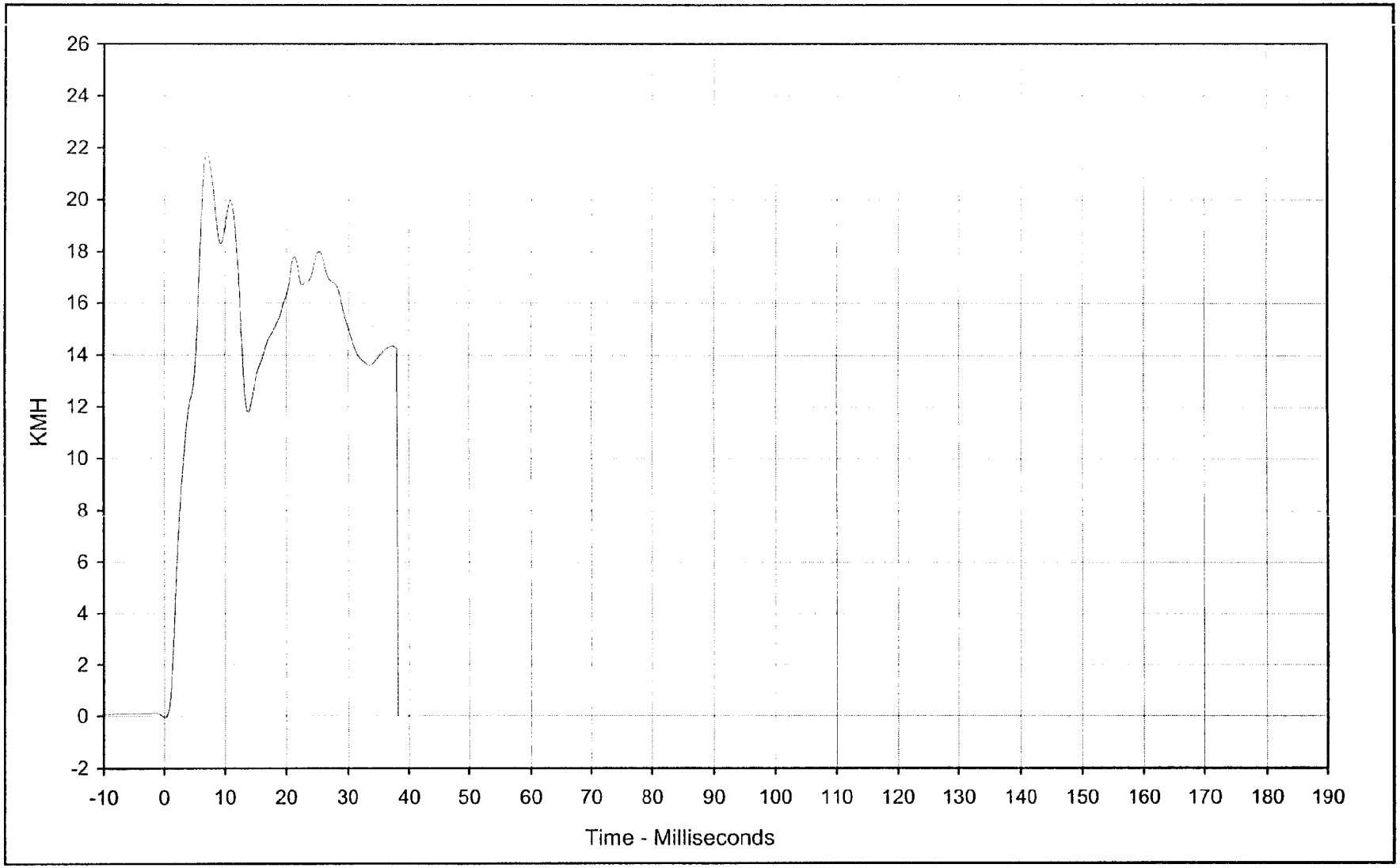
Curve Number: FIL-030

Test Program: 55/28 km/h Side Impact NCAP No.: MY0107

Test Vehicle: 2000 Chevrolet S-10 Pickup

* Channel failed at 38.1 Msec.

KARCO Engineering



Curve Description: A-Post Lower Y Velocity *

Maximum Value: 21.9 at 7.0 Milliseconds

Minimum Value: -0.1 at 0.1 Milliseconds

SAE Filter Class: 180

Date of Test: 1/26/00

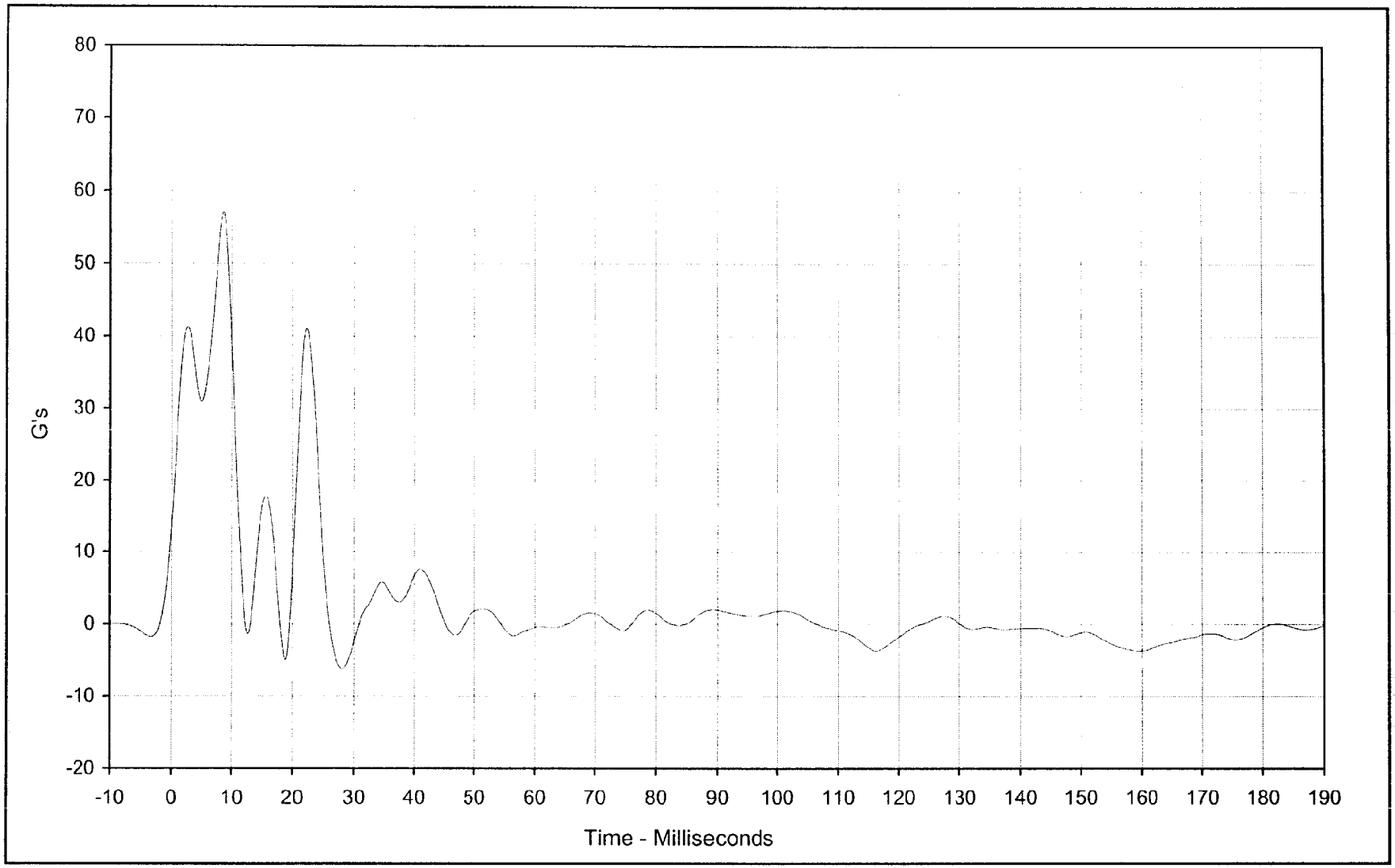
Curve Number: IN1-030

Test Program: 55/28 km/h Side Impact NCAP No.: MY0107

Test Vehicle: 2000 Chevrolet S-10 Pickup

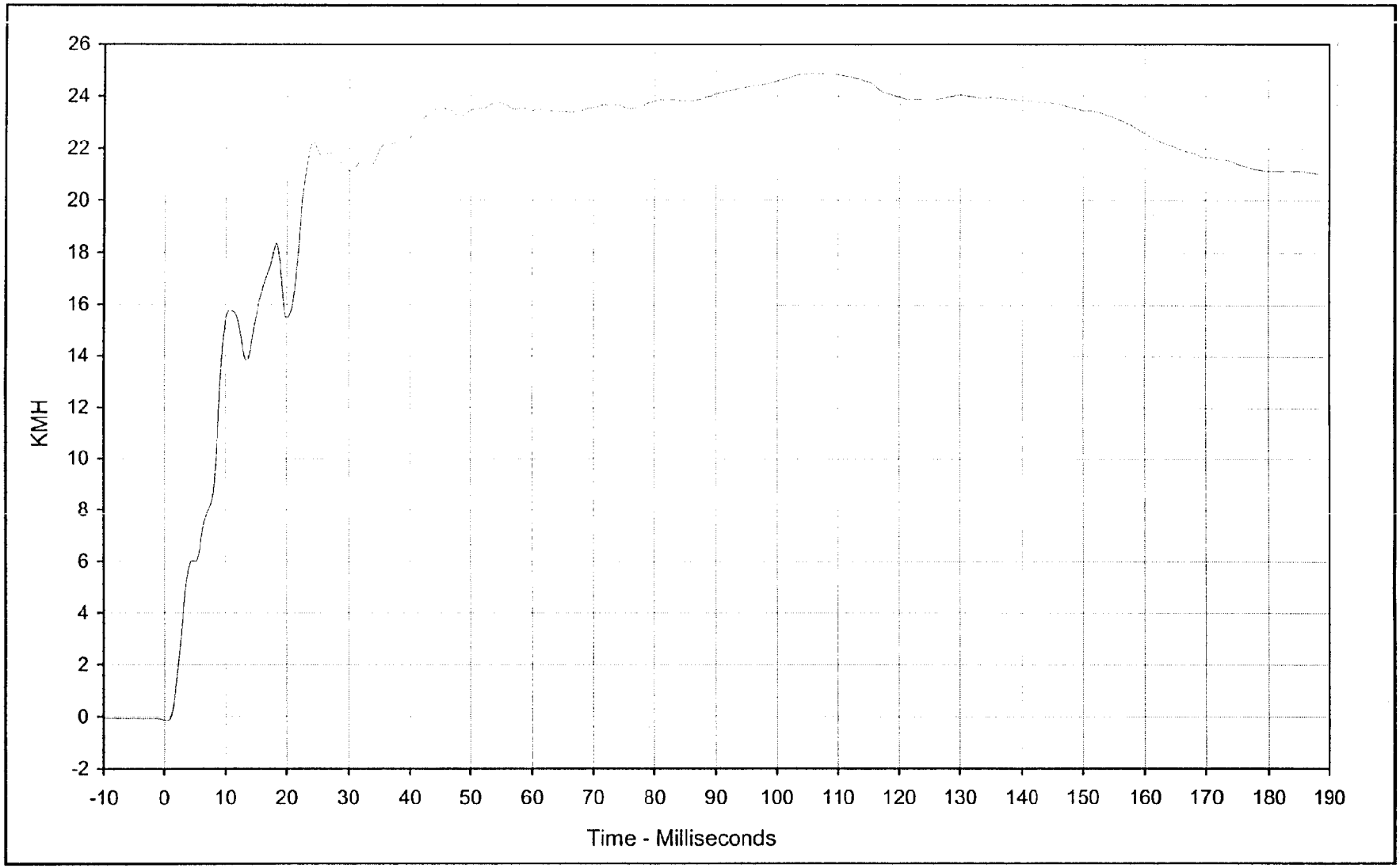
* Channel failed at 38.1 Msec.

KARCO Engineering



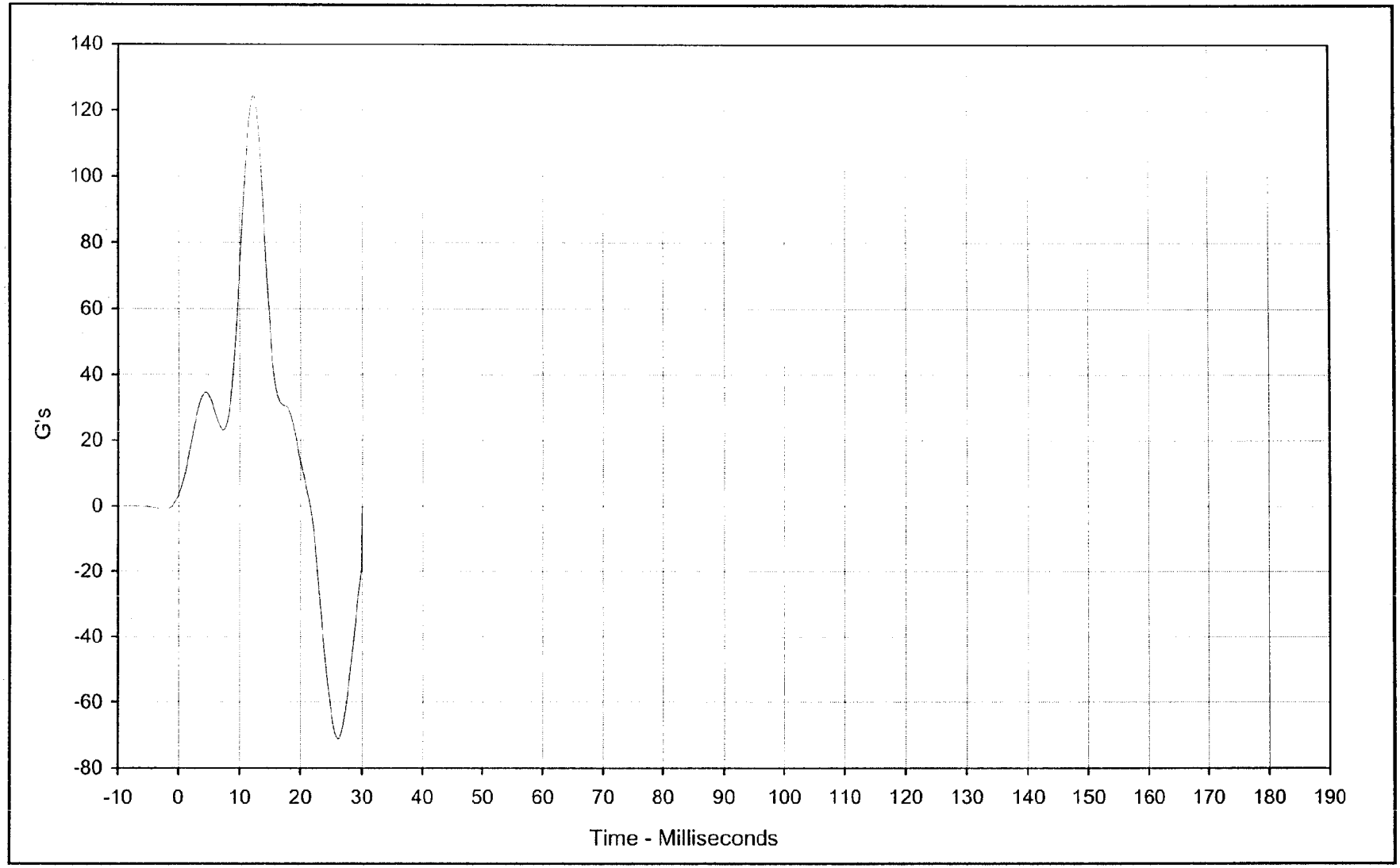
Curve Description:	A-Post Middle Y			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	57.1	at	8.7 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-6.3	at	28.1 Milliseconds		
SAE Filter Class:	60				
Date of Test:	1/26/00				
Curve Number:	FIL-031				

KARC Engineering



Curve Description:	A-Post Middle Y Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	24.9	at	106.3 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-0.2	at	0.4 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-031				

KARC Engineering



Curve Description: Left Front Seat Track Y *

Maximum Value: 124.3 at 12.1 Milliseconds

Minimum Value: -71.1 at 26.1 Milliseconds

SAE Filter Class: 60

Date of Test: 1/26/00

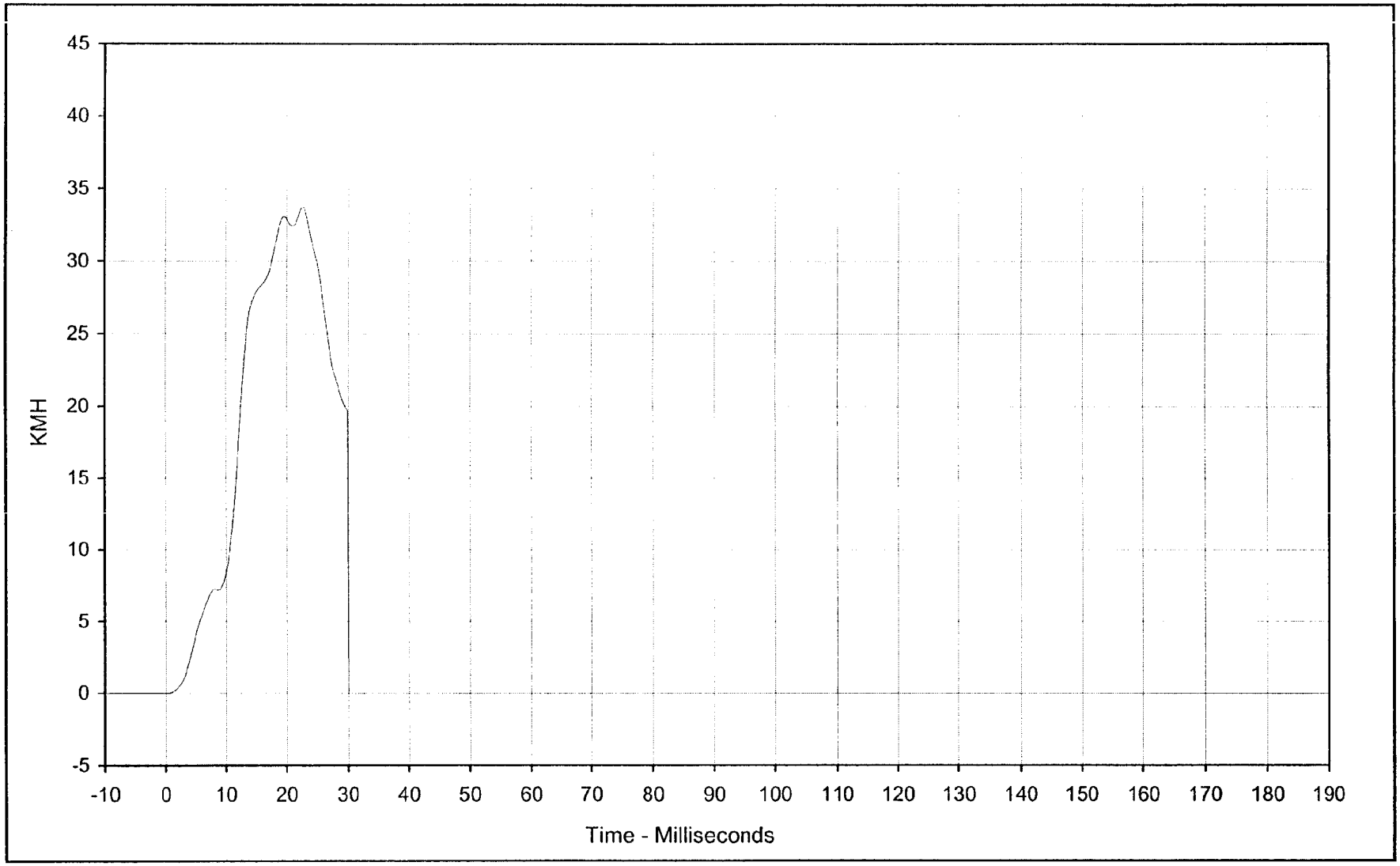
Curve Number: FIL-032

Test Program: 55/28 km/h Side Impact NCAP No.: MY0107

Test Vehicle: 2000 Chevrolet S-10 Pickup

* Channel failed at 30.0 Msec.

KARCO Engineering



Curve Description: Left Front Seat Track Y Velocity *

Maximum Value: 33.8 at 22.6 Milliseconds

Minimum Value: 0.0 at 30.0 Milliseconds

SAE Filter Class: 180

Date of Test: 1/26/00

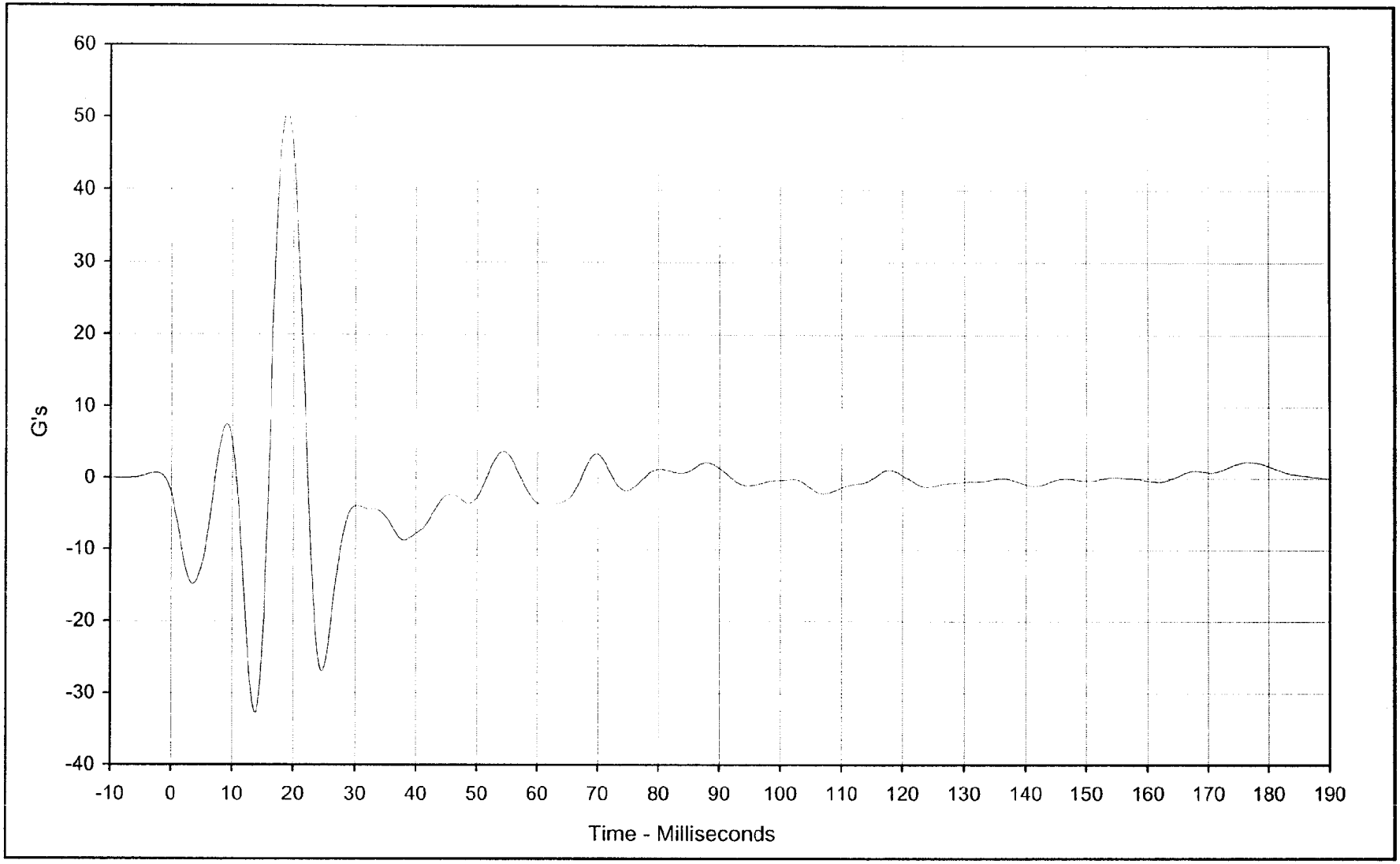
Curve Number: IN1-032

Test Program: 55/28 km/h Side Impact NCAP No.: MY0107

Test Vehicle: 2000 Chevrolet S-10 Pickup

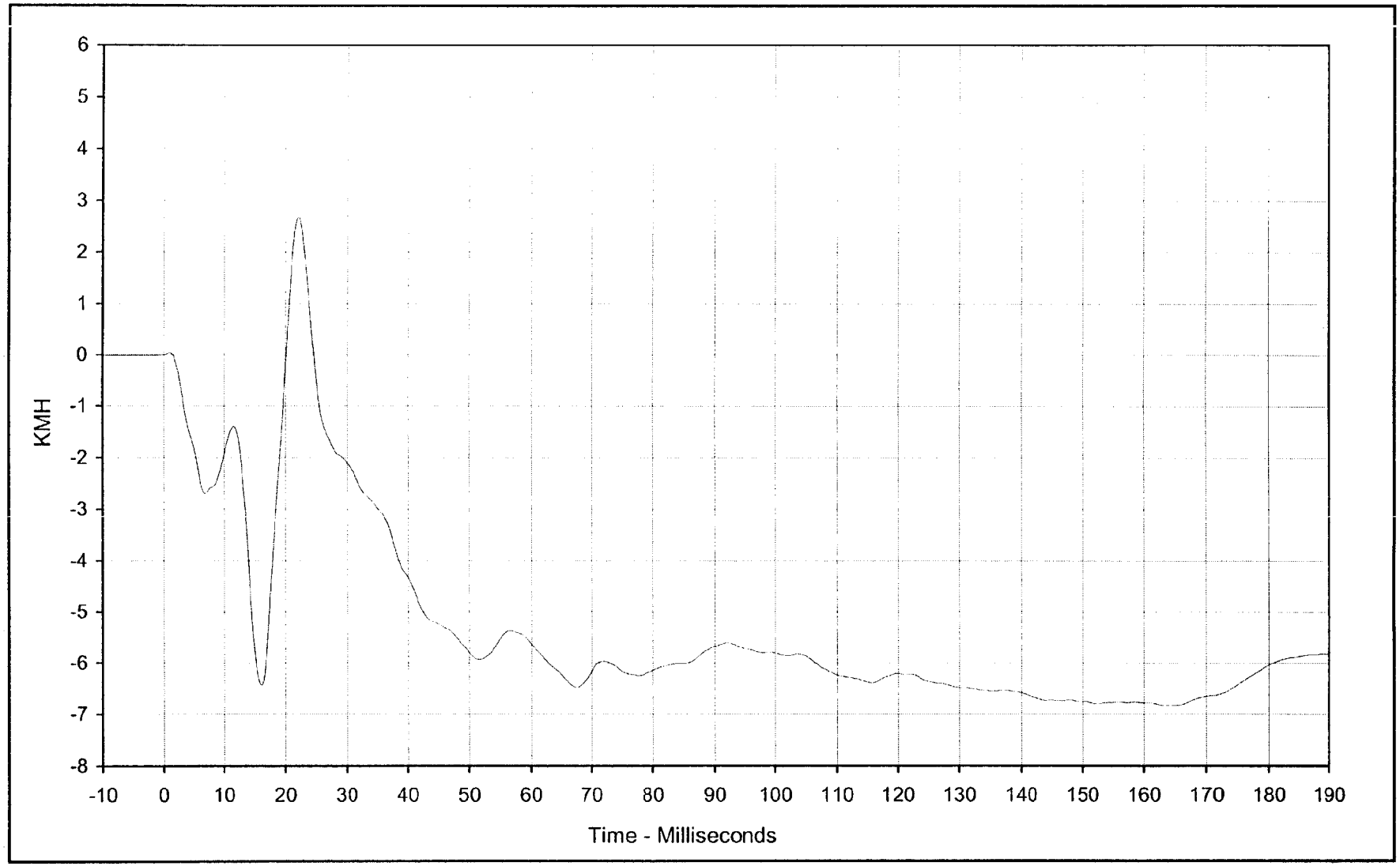
* Channel failed at 30.0 Msec.

KARC Engineering



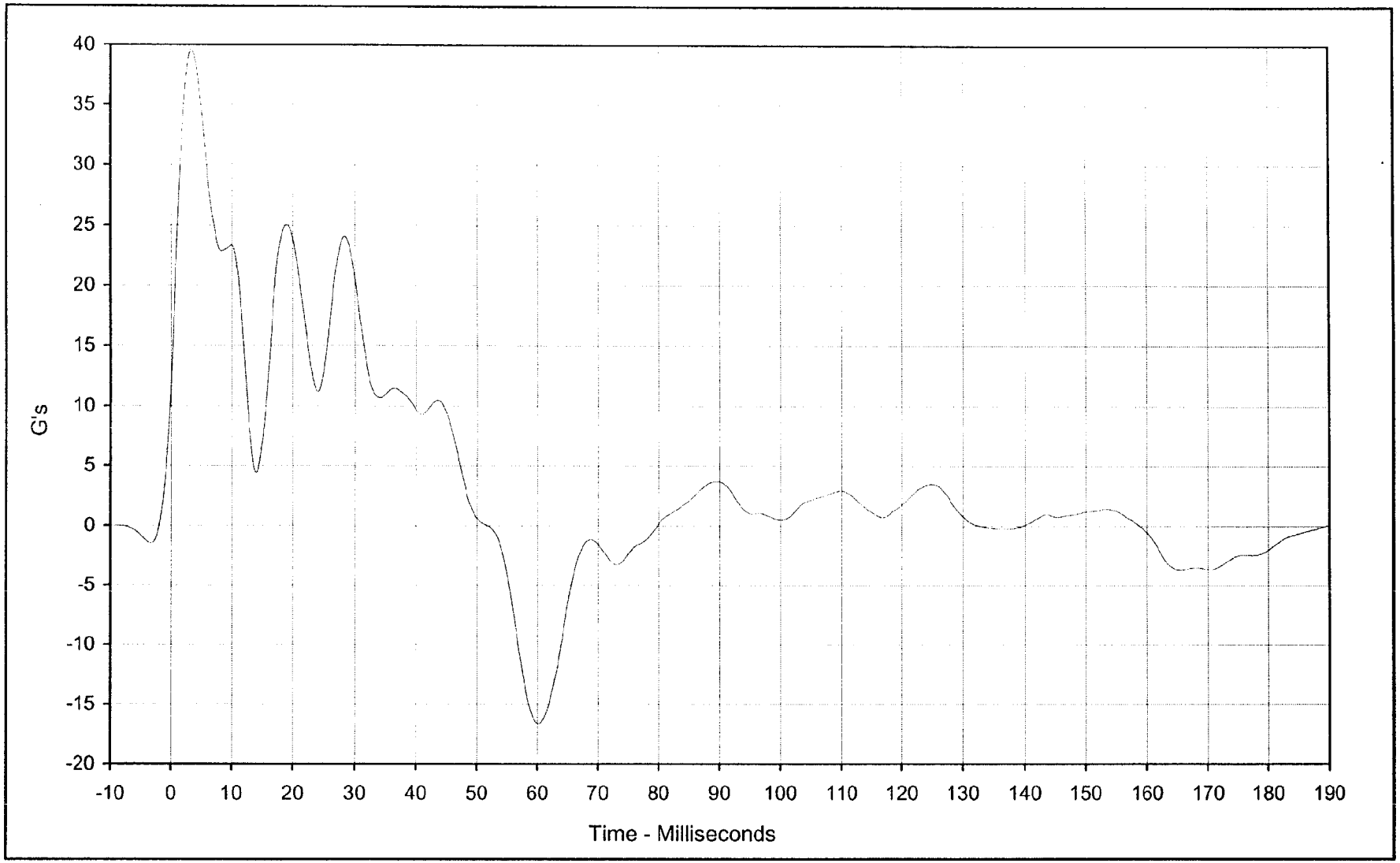
Curve Description:	Vehicle CG X			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	50.6	at	19.1 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-32.8	at	13.7 Milliseconds		
SAE Filter Class:	60				
Date of Test:	1/26/00				
Curve Number:	FIL-033				

KARC Engineering



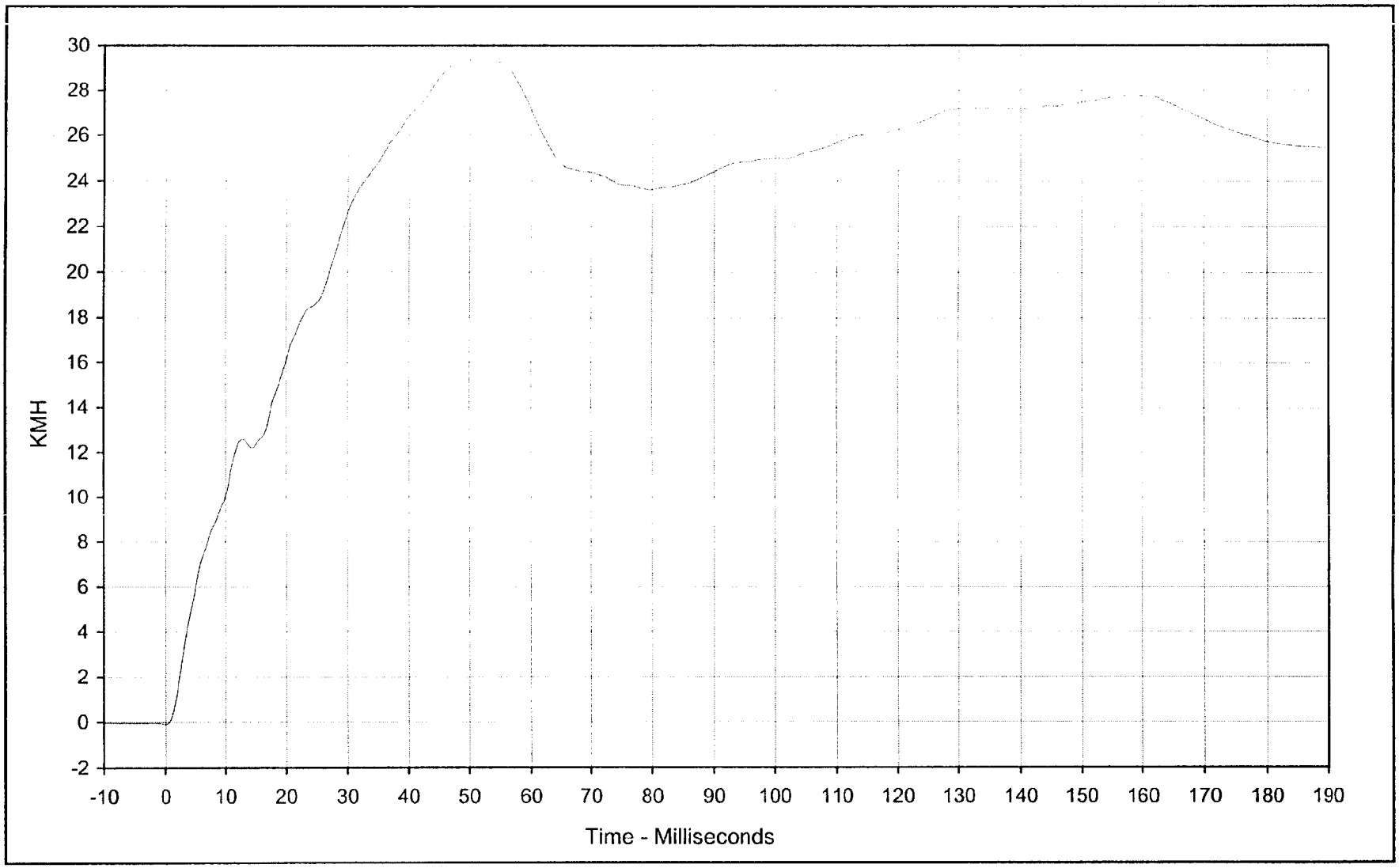
Curve Description:	Vehicle CG X Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	2.7	at	22.0 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-6.8	at	164.2 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-033				

KARCO Engineering



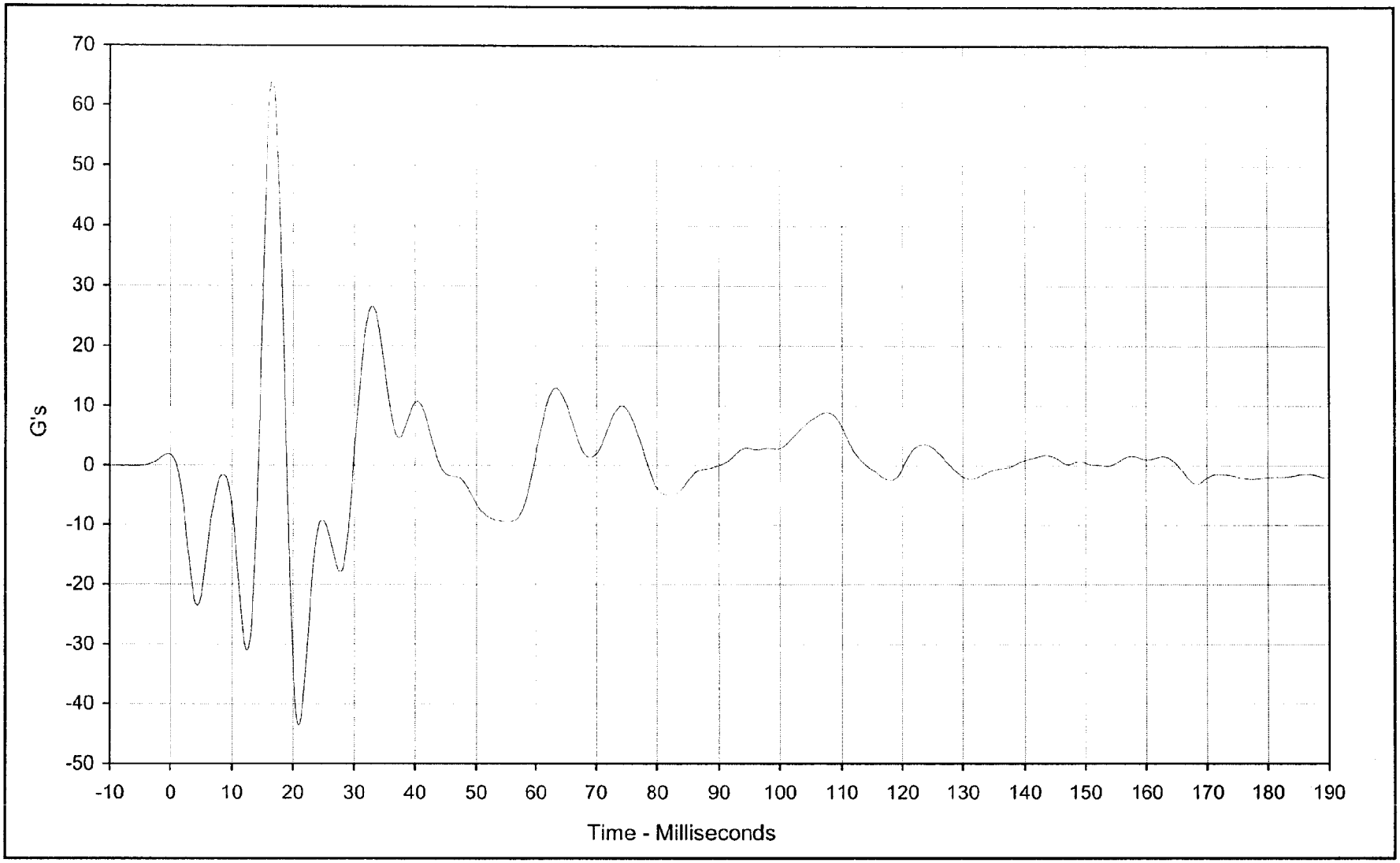
Curve Description:	Vehicle CG Y			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	39.6	at	3.3 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-16.6	at	60.1 Milliseconds		
SAE Filter Class:	60				
Date of Test:	1/26/00				
Curve Number:	FIL-034				

KARC Engineering



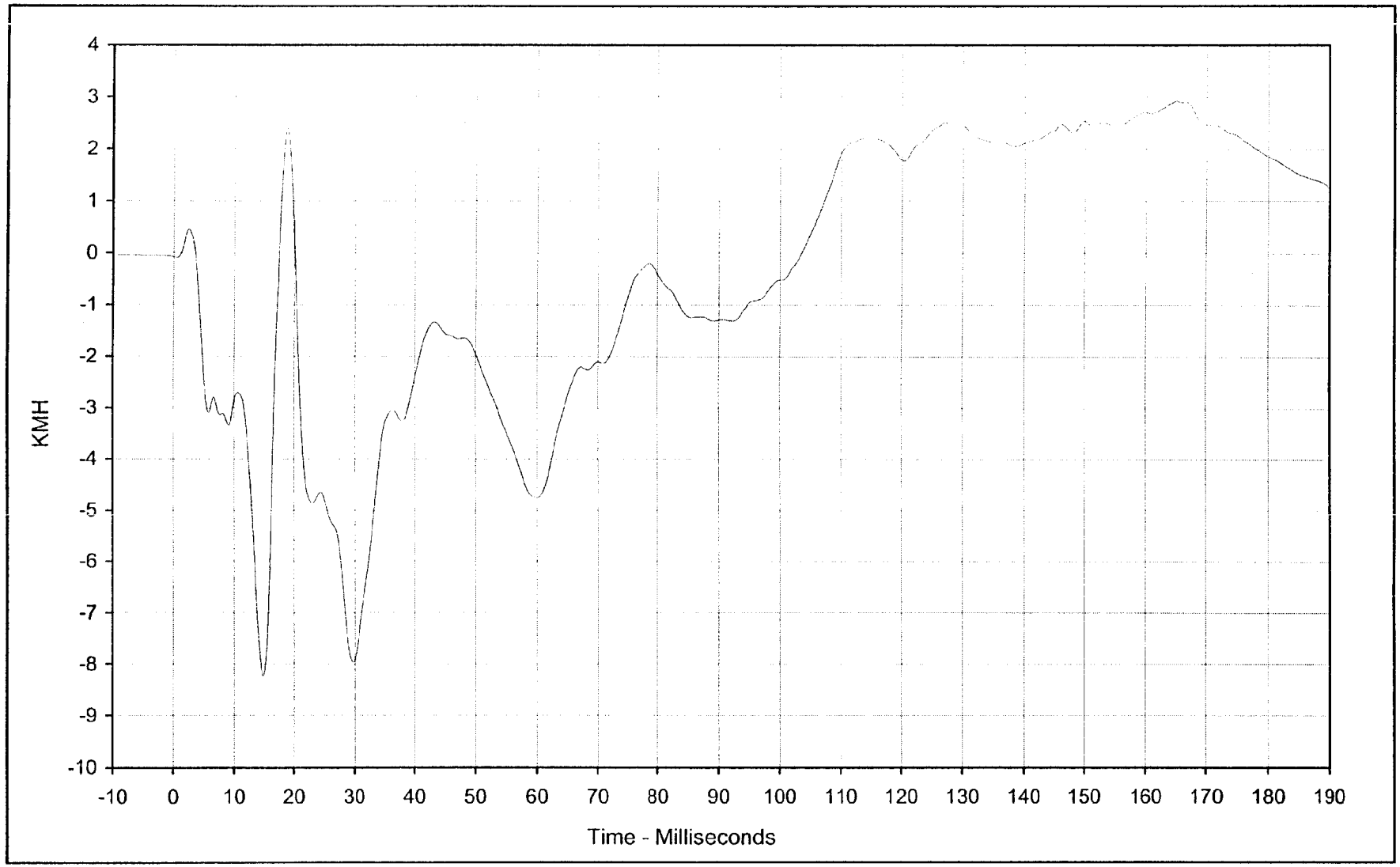
Curve Description:	Vehicle CG Y Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	29.3	at	49.6 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-0.1	at	0.0 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-034				

KARC Engineering



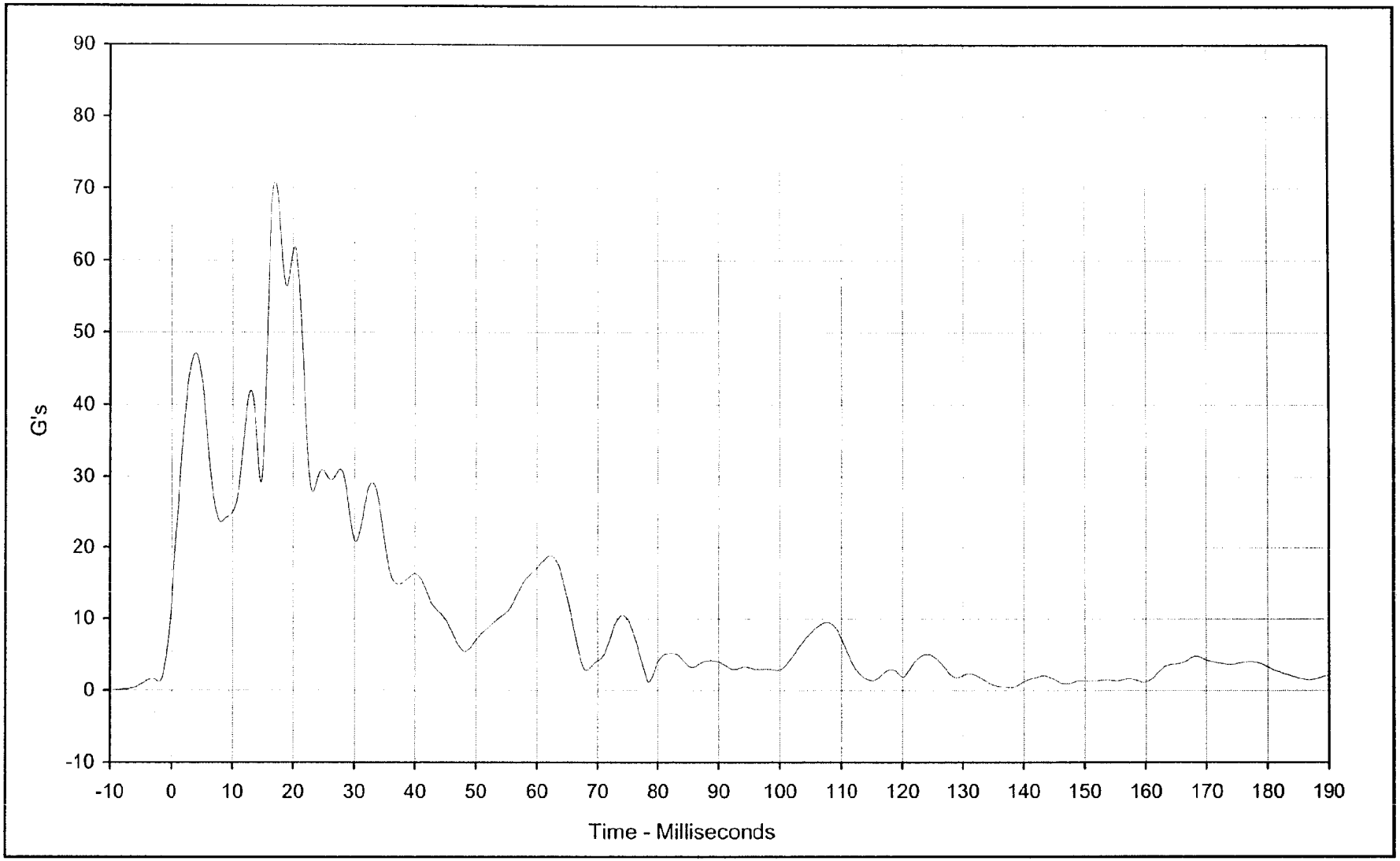
Curve Description:	Vehicle CG Z			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	64.1	at	16.7 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-43.6	at	21.0 Milliseconds		
SAE Filter Class:	60				
Date of Test:	1/26/00				
Curve Number:	FIL-035				

KARC Engineering



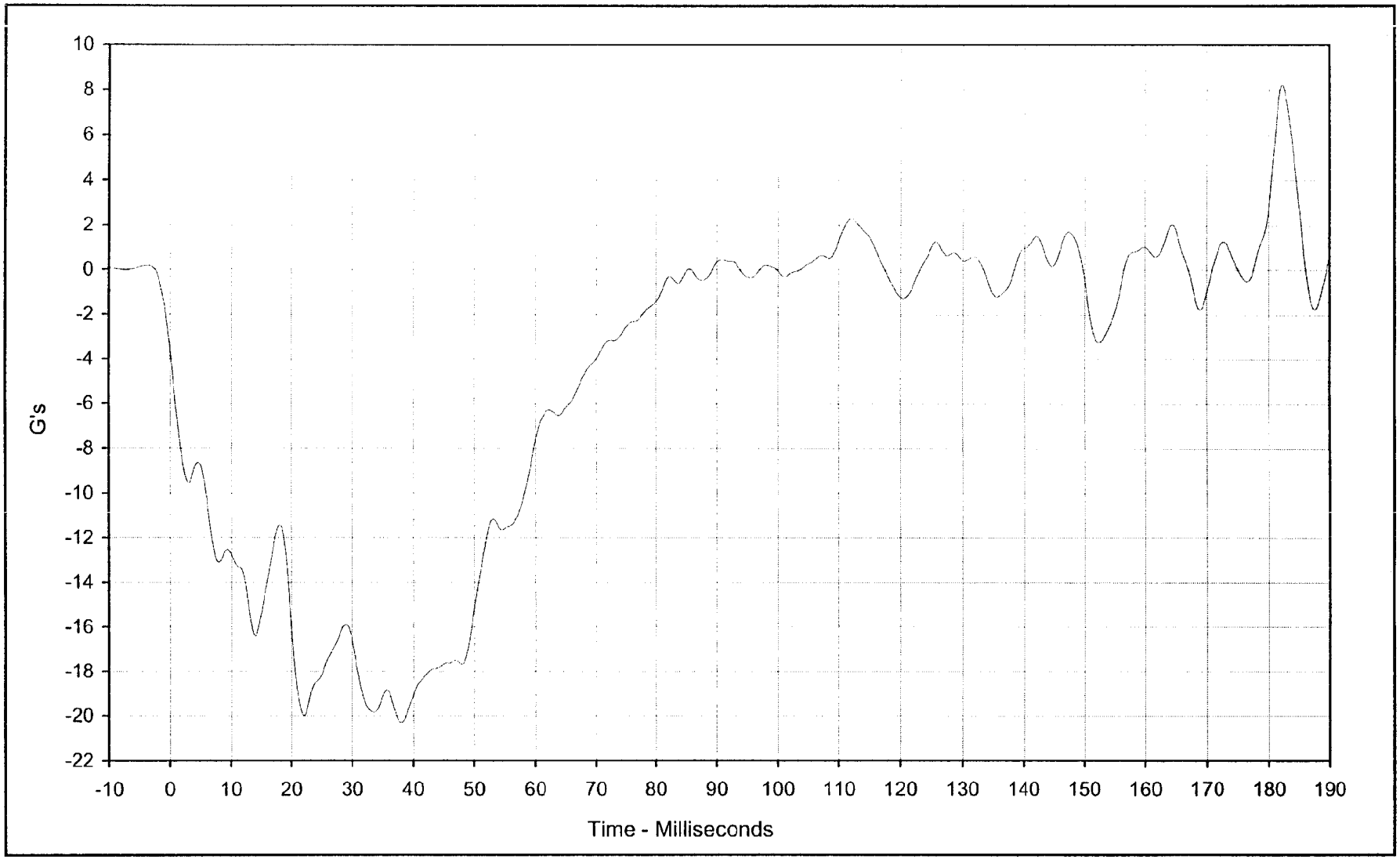
Curve Description:	Vehicle CG Z Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	2.9	at	164.9 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-8.2	at	14.9 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-035				

KARC Engineering



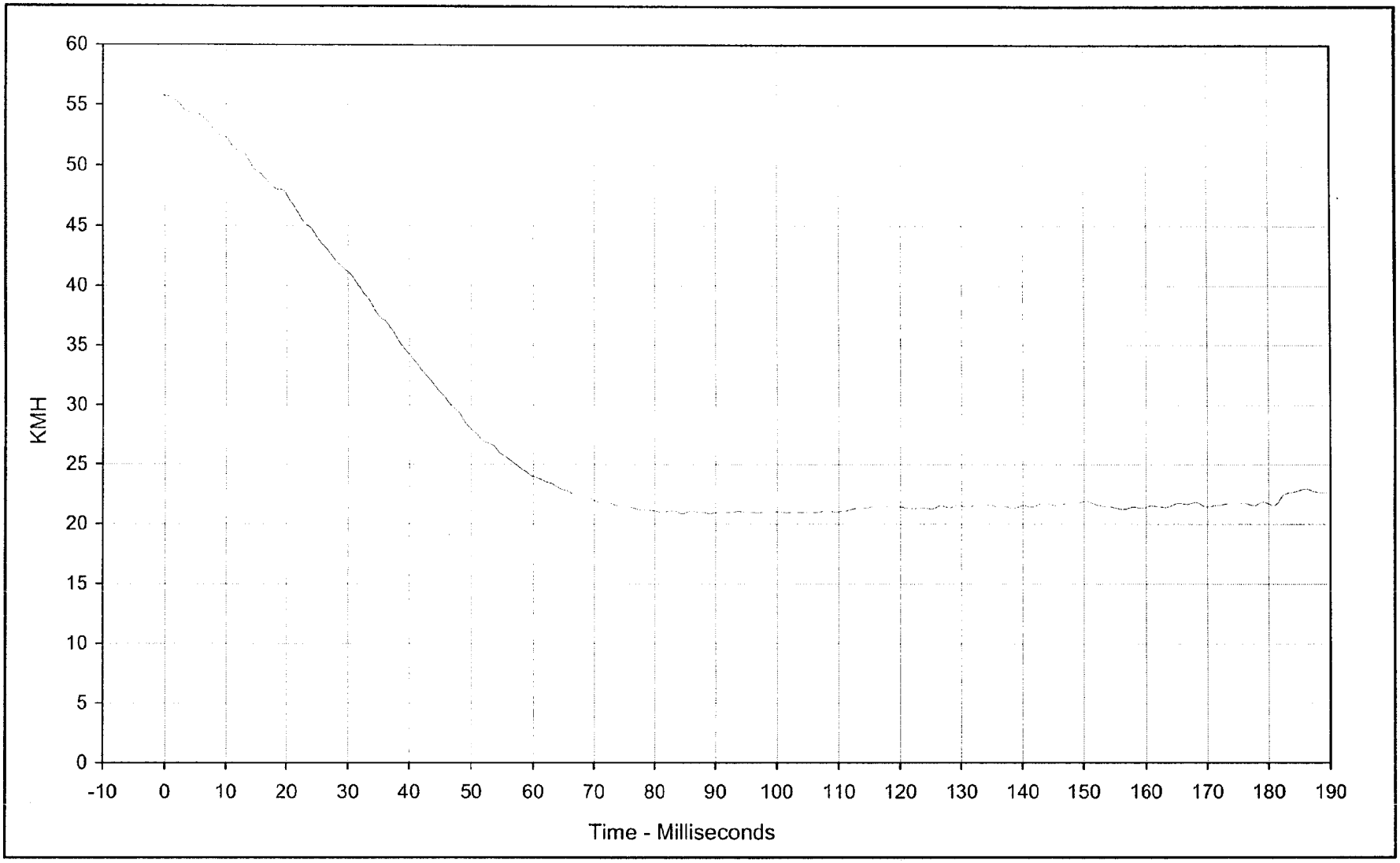
Curve Description:	Vehicle CG Resultant			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	70.9	at	17.1 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	0.4	at	137.9 Milliseconds		
SAE Filter Class:	60				
Date of Test:	1/26/00				
Curve Number:	RES-033				

KARC Engineering



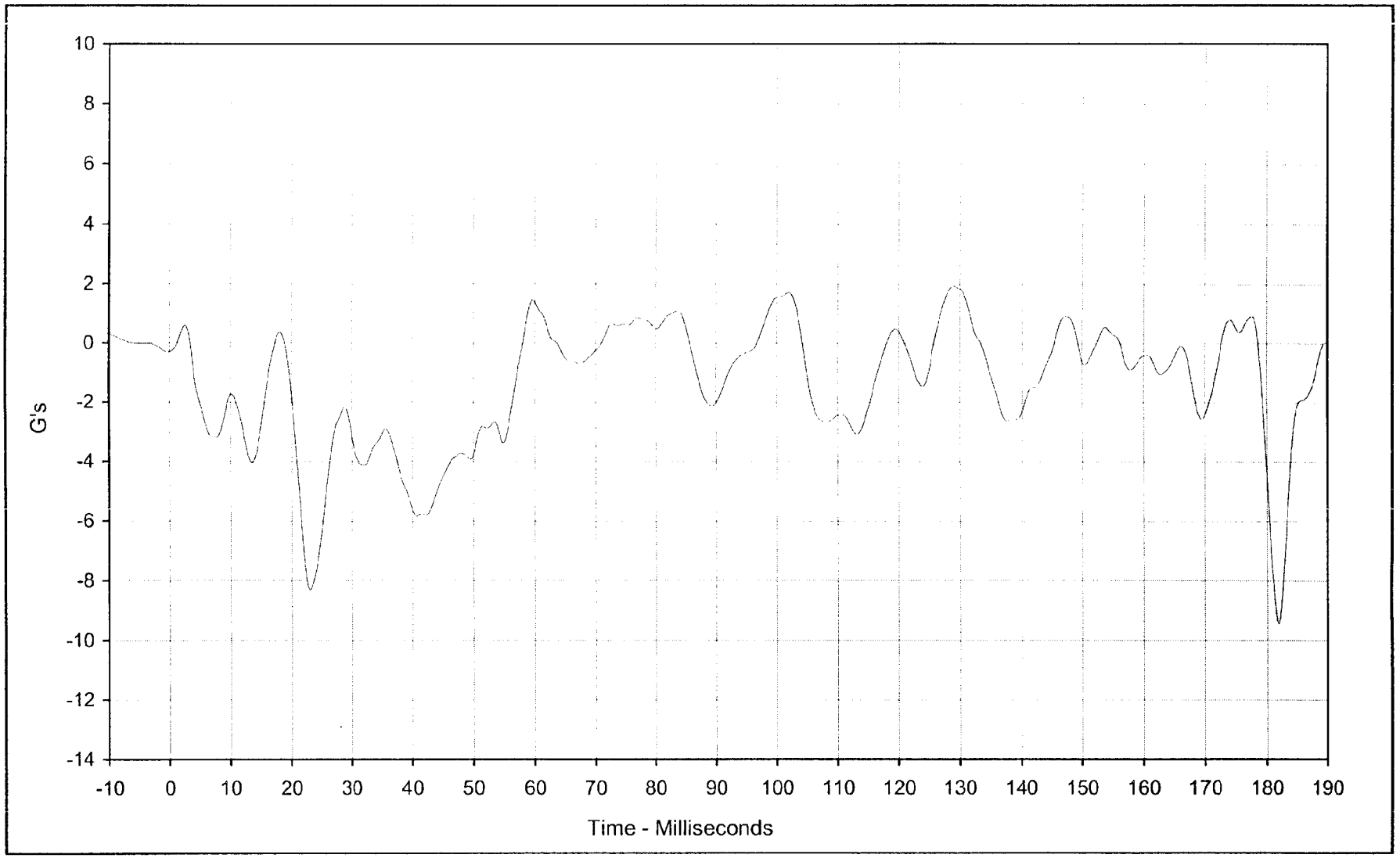
Curve Description:	MDB CG X			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	8.2	at	182.1 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-20.3	at	38.0 Milliseconds		
SAE Filter Class:	60				
Date of Test:	1/26/00				
Curve Number:	FIL-036				

KARCO Engineering



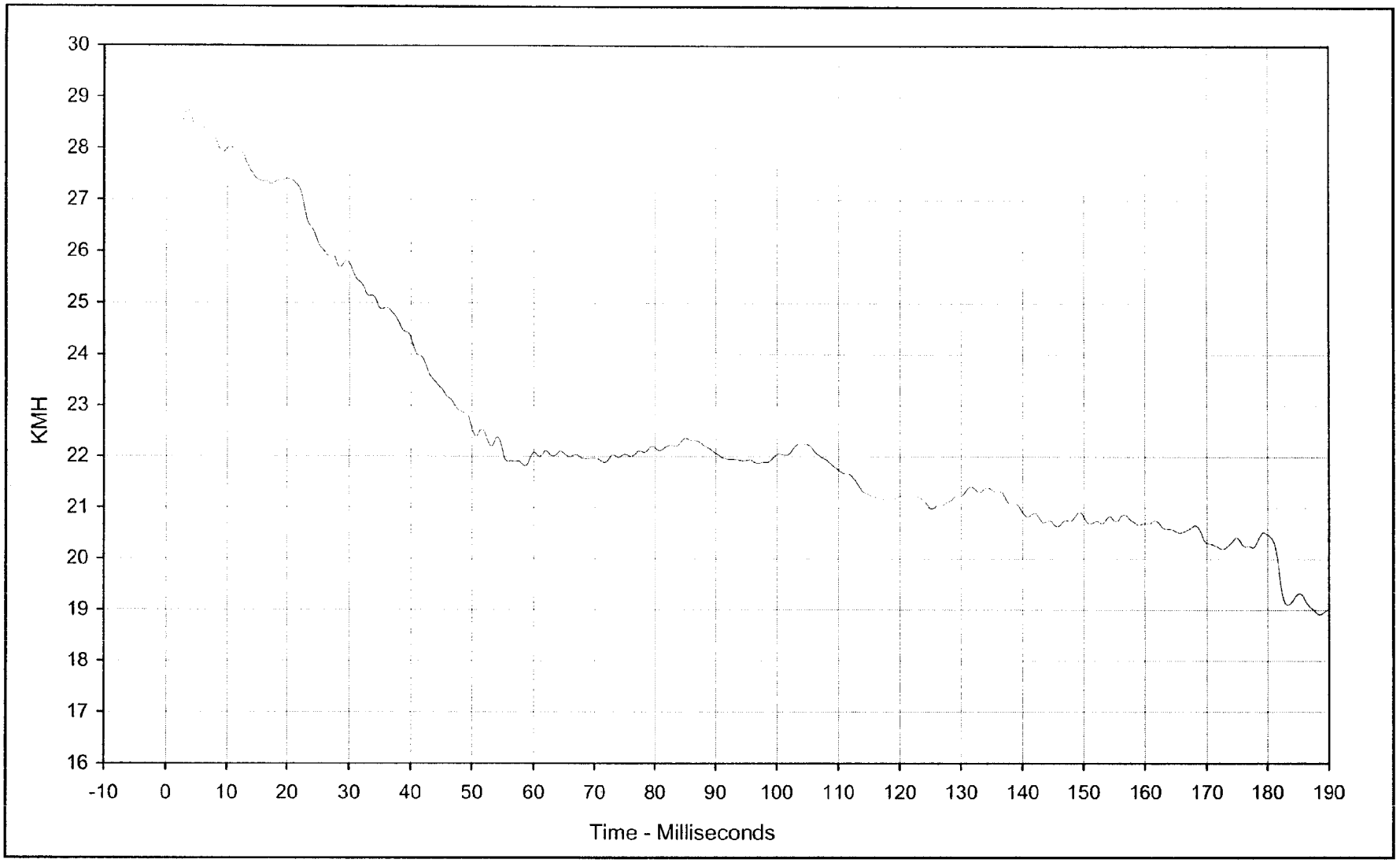
Curve Description:	MDB CG X Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	55.8	at	0.0 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	20.9	at	84.6 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-036				

KARCO Engineering



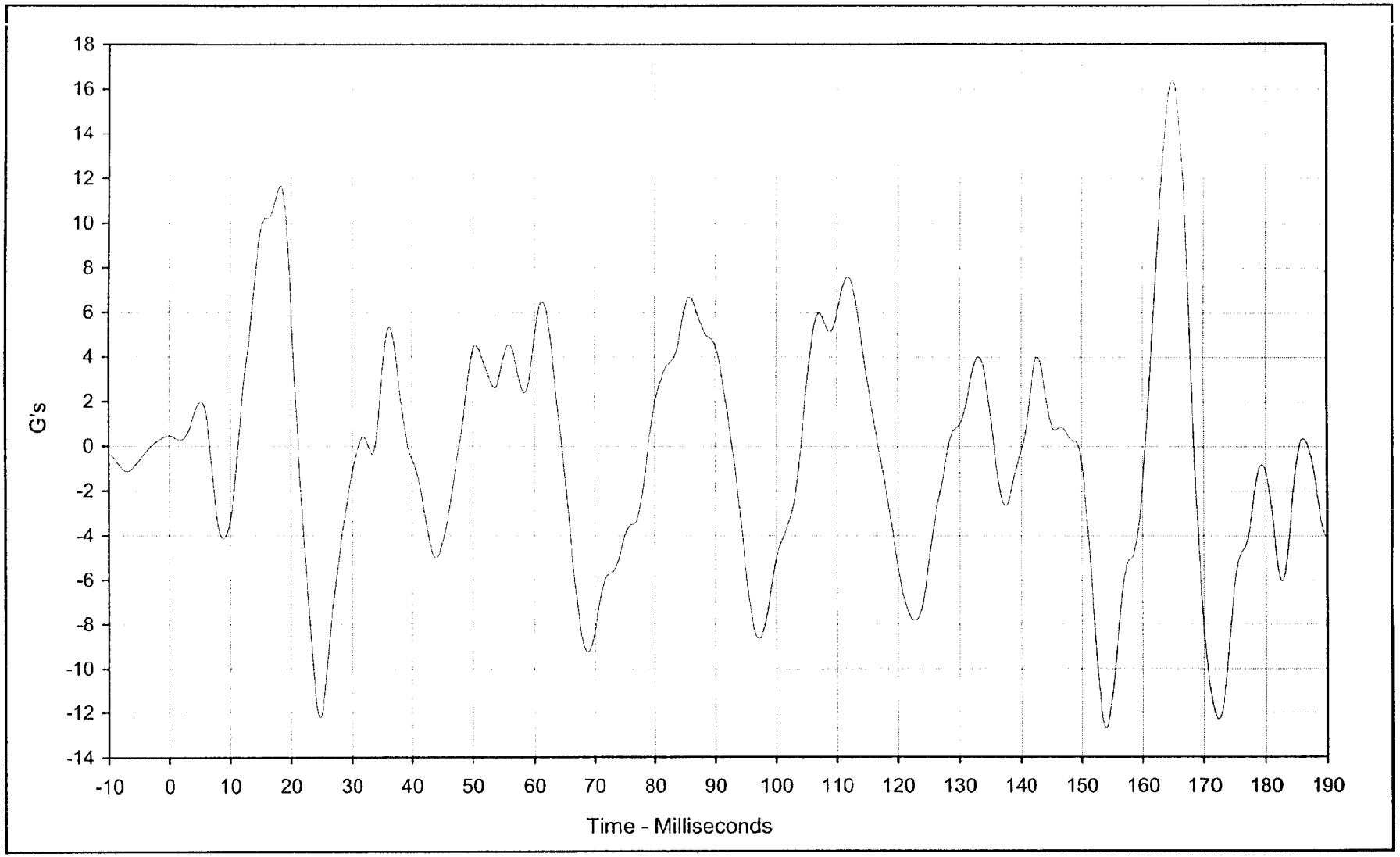
Curve Description:	MDB CG Y			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	1.9	at	128.9 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-9.4	at	181.8 Milliseconds		
SAE Filter Class:	60				
Date of Test:	1/26/00				
Curve Number:	FIL-037				

KARCO Engineering



Curve Description:	MDB CG Y Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	28.8	at	3.6 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	18.9	at	188.5 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-037				

KARC Engineering



Curve Description: MDB CG Z

Maximum Value: 16.4 at 164.7 Milliseconds

Minimum Value: -12.7 at 154.0 Milliseconds

SAE Filter Class: 60

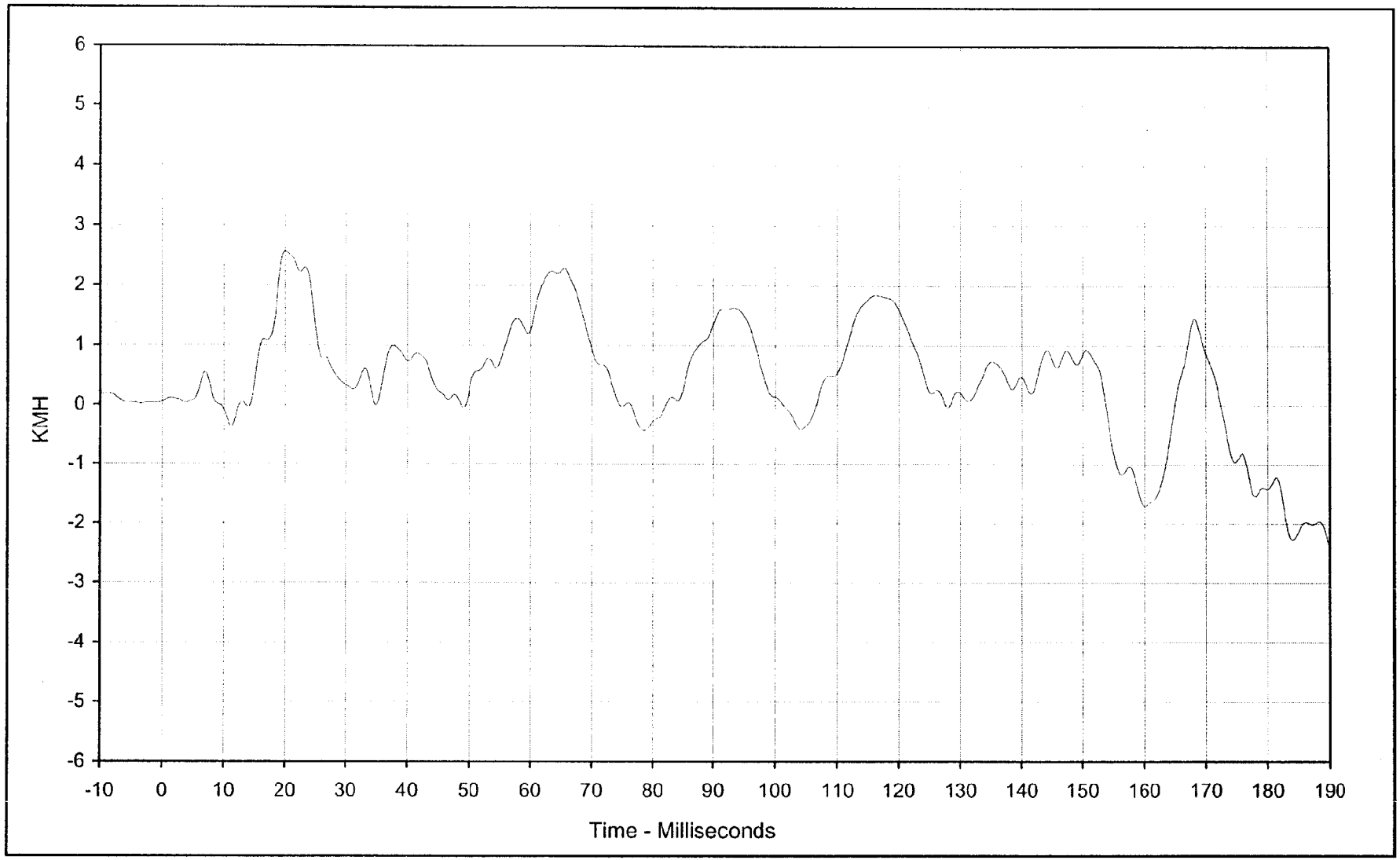
Date of Test: 1/26/00

Curve Number: FIL-038

Test Program: 55/28 km/h Side Impact NCAP No.: MY0107

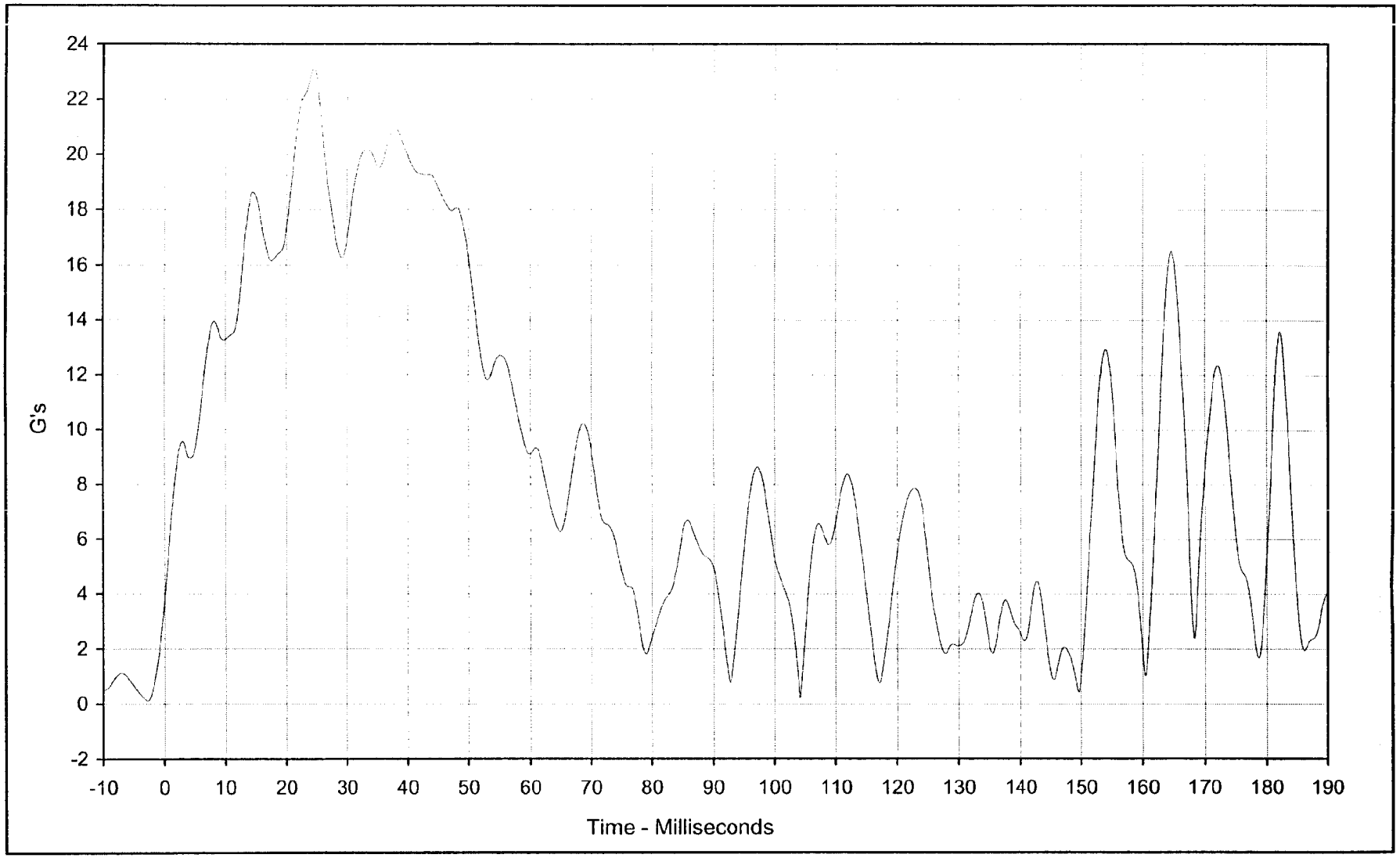
Test Vehicle: 2000 Chevrolet S-10 Pickup

KARCO Engineering



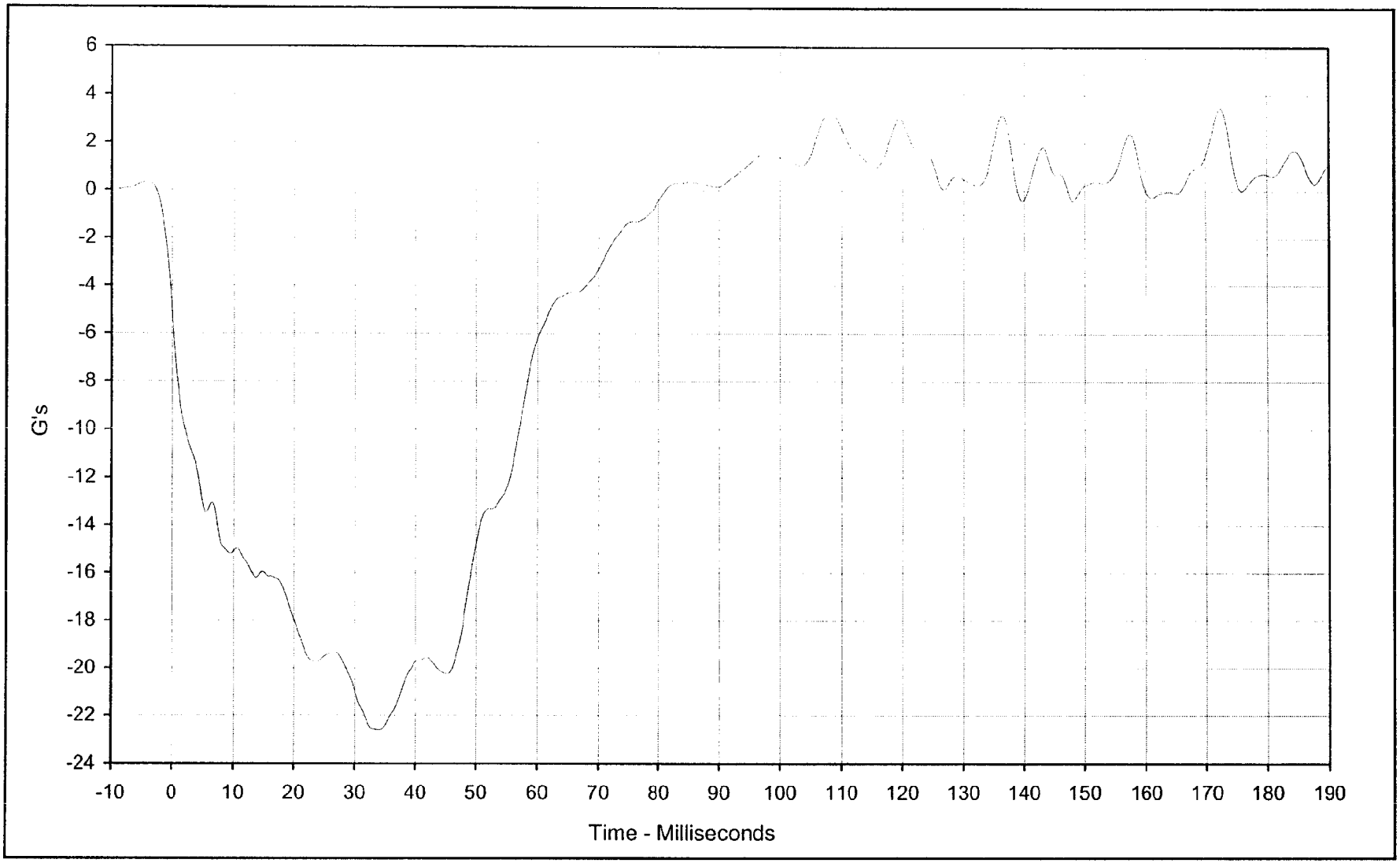
Curve Description:	MDB CG Z Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	2.6	at	20.1 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-2.4	at	189.9 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-038				

KARC Engineering



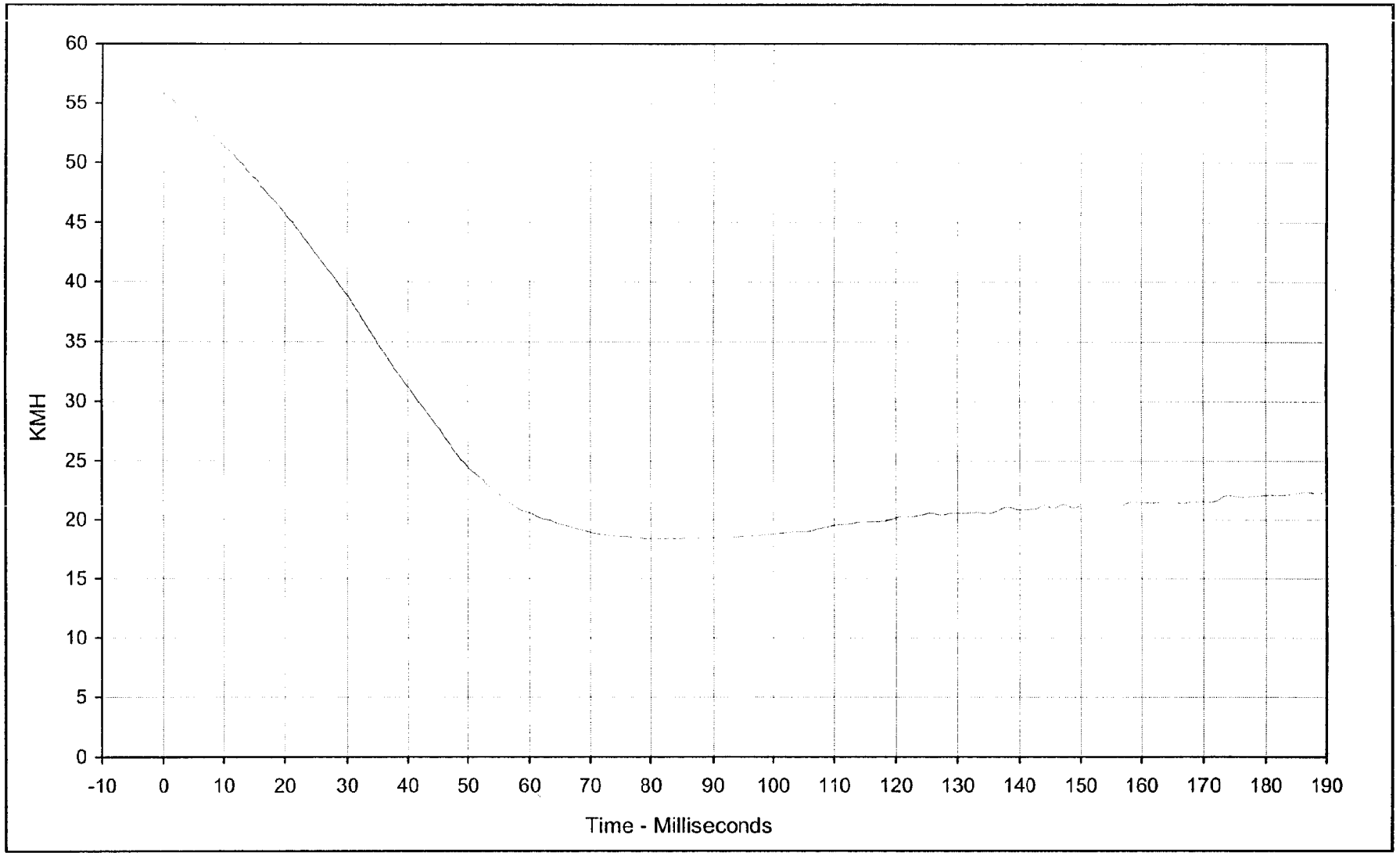
Curve Description:	MDB CG Resultant			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	23.1	at	24.4 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	0.2	at	104.0 Milliseconds		
SAE Filter Class:	60				
Date of Test:	1/26/00				
Curve Number:	RES-036				

KARC Engineering



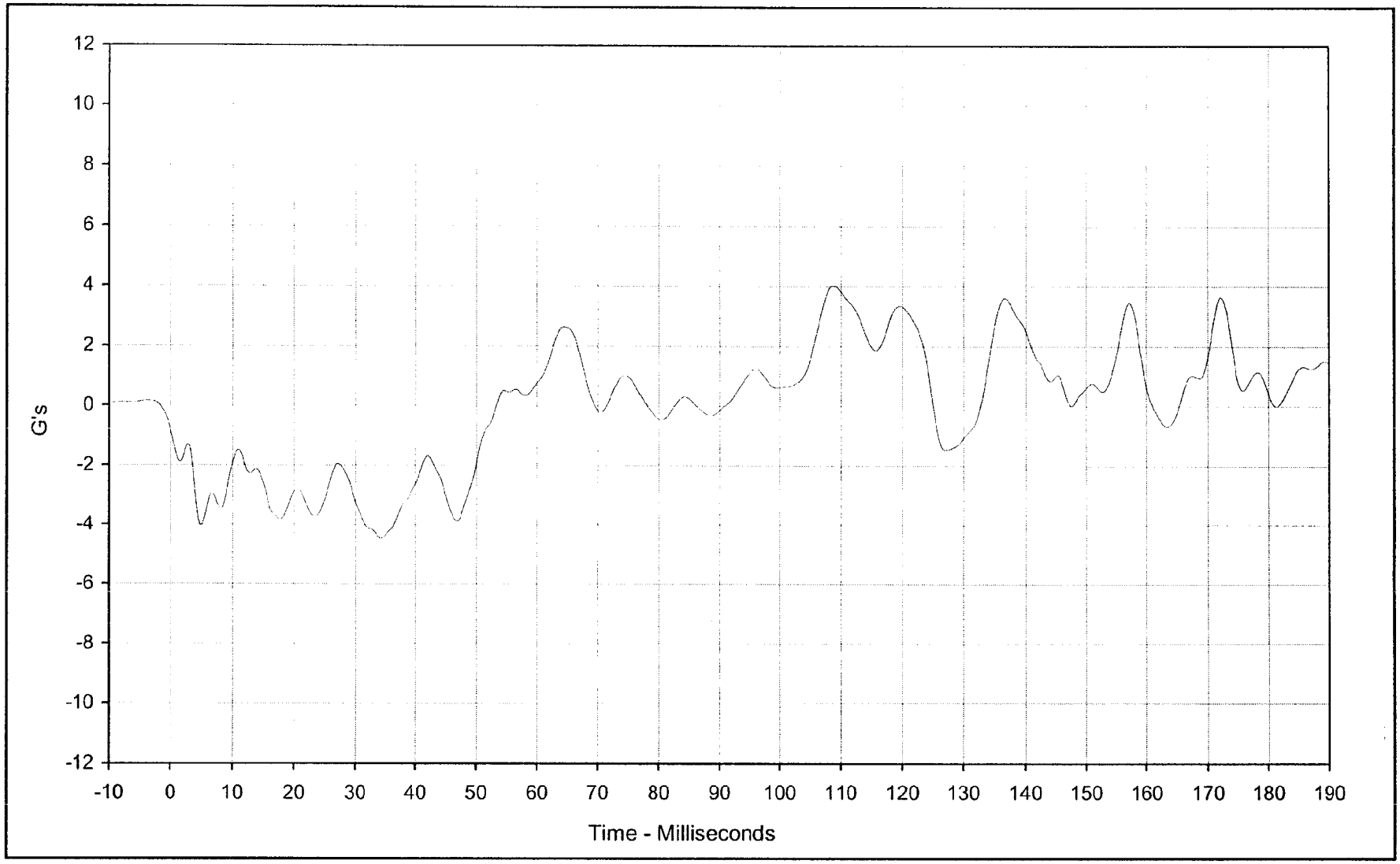
Curve Description:	MDB Rear X			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	3.5	at	172.4 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-22.6	at	34.2 Milliseconds		
SAE Filter Class:	60				
Date of Test:	1/26/00				
Curve Number:	FIL-039				

KARC Engineering



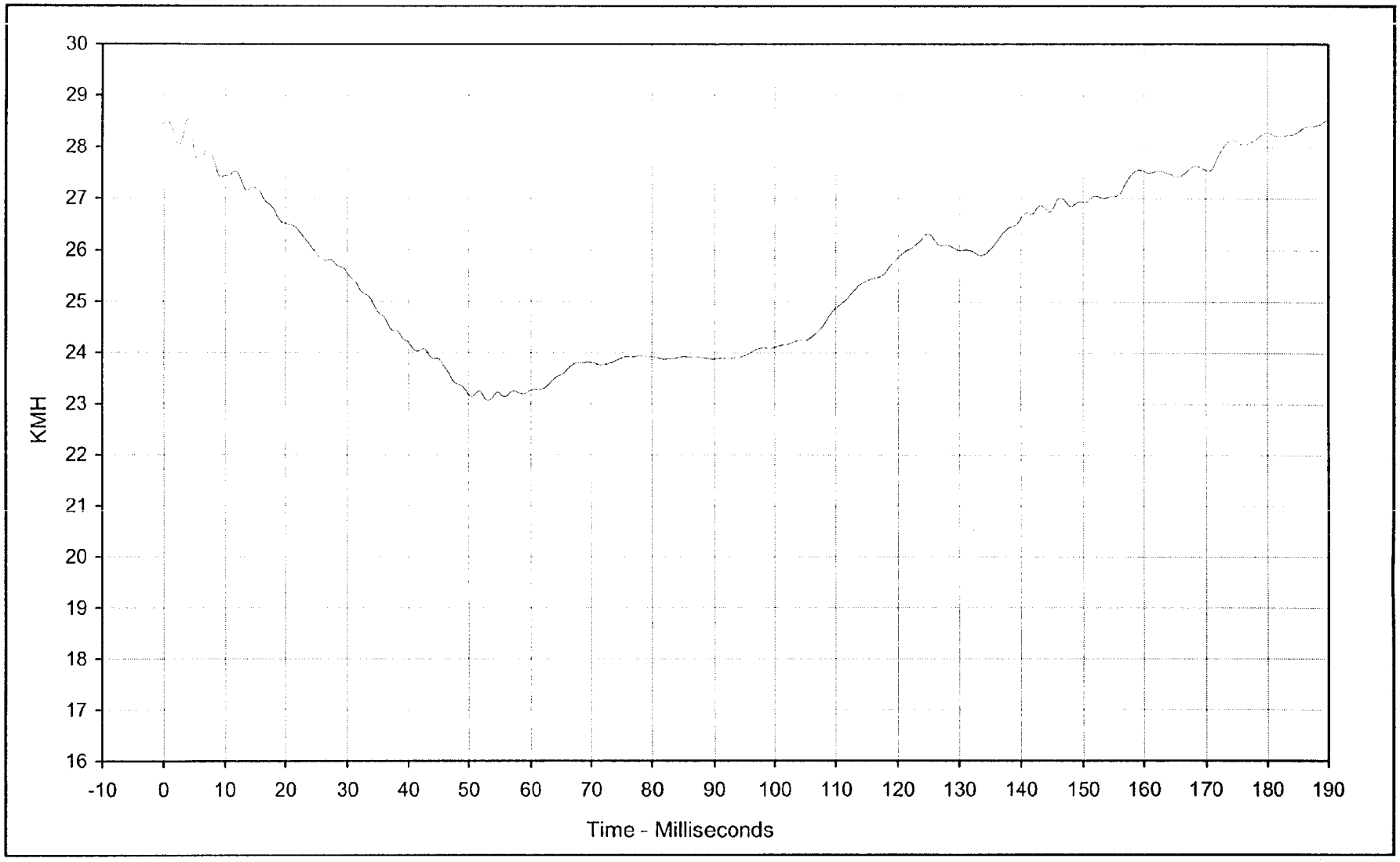
Curve Description:	MDB Rear X Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	55.8	at	0.0 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	18.4	at	81.1 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-039				

KARCO Engineering



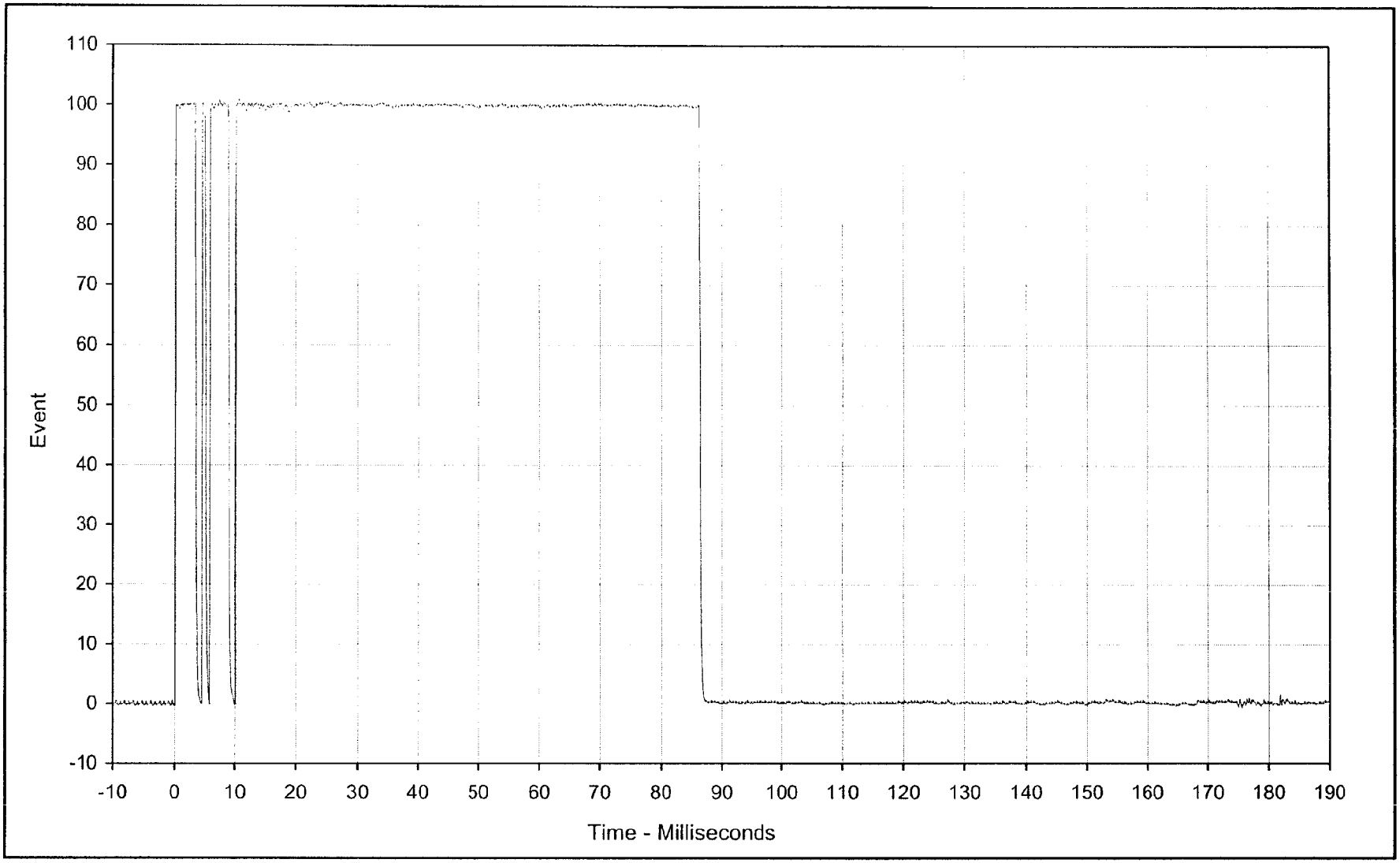
Curve Description:	MDB Rear Y			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	4.0	at	108.8 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	-4.5	at	34.3 Milliseconds		
SAE Filter Class:	60				
Date of Test:	1/26/00				
Curve Number:	FIL-040				

KARC Engineering



Curve Description:	MDB Rear Y Velocity			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	28.6	at	189.9 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Minimum Value:	23.1	at	53.2 Milliseconds		
SAE Filter Class:	180				
Date of Test:	1/26/00				
Curve Number:	IN1-040				

KARC Engineering



Curve Description:	MDB Right Bumper Contact			Test Program:	55/28 km/h Side Impact NCAP No.: MY0107
Maximum Value:	100.9	at	10.7 Milliseconds	Test Vehicle:	2000 Chevrolet S-10 Pickup
Crossing Point:	50%	at	0.2 Milliseconds		
SAE Filter Class:	1000				
Date of Test:	1/26/00				
Curve Number:	FIL-041				

KARC Engineering

APPENDIX C

SID CONFIGURATION AND PERFORMANCE VERIFICATION DATA

Performance Verification Data
Side Impact Dummy (SID)
External Dimensions

ATD Serial No.: 056 Part Serial No.: N/A Test I.D.: N/A

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory temperature	°C	20.4 to 22.1	20.6	Pass
Laboratory relative humidity	%	10 to 70	30	Pass
SH- Seated Height	mm	889 to 909	902	Pass
HP- Hip Point Height	mm	99 (reference)	99	Pass
RH- Rib Height	mm	502 to 520	512	Pass
KH- Knee Pivot From Back Line	mm	511 to 526	521	Pass
KV- Knee Pivot From Floor	mm	490 to 505	500	Pass
HW- Hip Width	mm	356 to 391	365	Pass
		Overall Test Results		Pass

Laboratory Technician — January 24, 2000 (Test Date)

James E. Scott — 1/24/00 (Date)

Approved By

Performance Verification Data
Side Impact Dummy (SID)
Thorax Lateral Impact

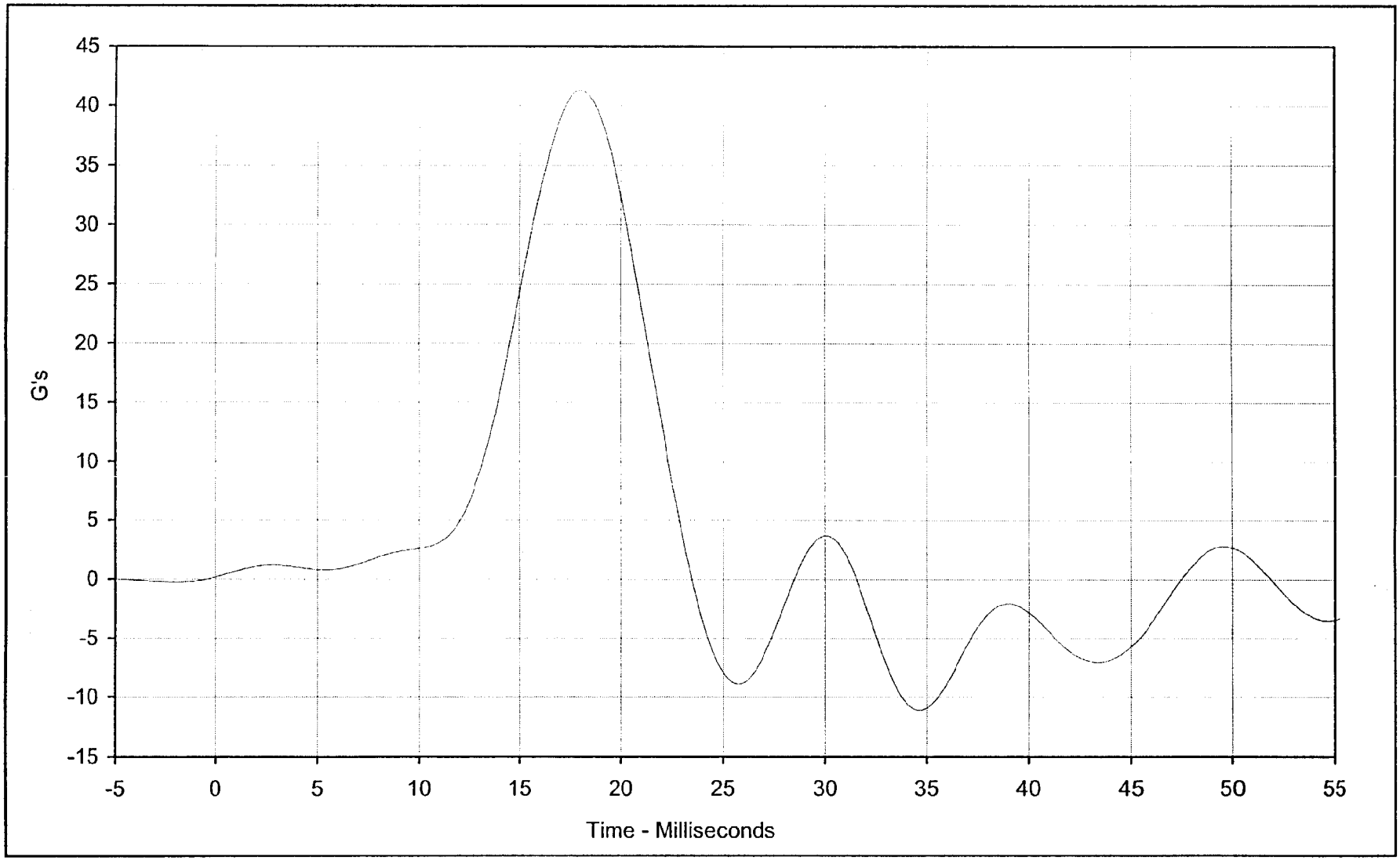
ATD Serial No.: 056 Part Serial No.: N/A Test I.D.: TI02A

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.5	22.8	Pass
Laboratory Relative Humidity	%	10 to 70	41	Pass
Probe Velocity	m/s	4.21 to 4.33	4.33	Pass
Left Upper Spine Acceleration	G's	37.0 to 46.0	41.3	Pass
Left Lower Spine Acceleration	G's	37.0 to 46.0	40.8	Pass
Thoracic Spine Acceleration	G's	15.0 to 22.0	19.8	Pass
		Overall Test Results		Pass

Laboratory Technician — January 22, 2000 (Test Date)

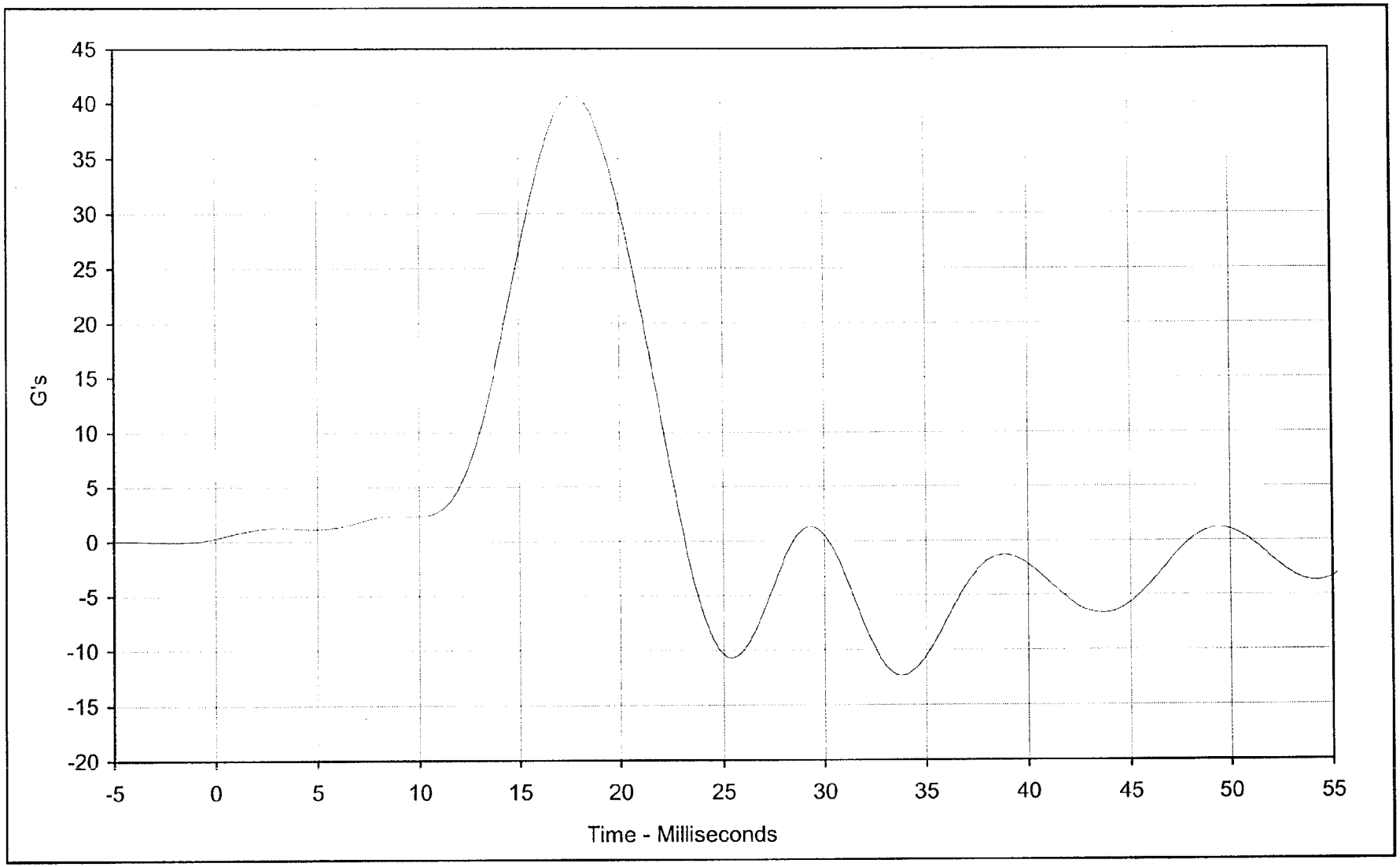
James E. Scott — 1/22/00 (Date)

Approved By



Curve Description:	Left Upper Rib Y Acceleration			Test Program:	SID Thorax Lateral Impact Test
Maximum Value:	41.3	at	18.0 Milliseconds	Test Information:	SID S/N: 056 Test I.D.: TI02A
Minimum Value:	-11.1	at	34.6 Milliseconds		
SAE Filter Class:	FIR 100				
Date of Test:	1/22/00				

KARC Engineering



Curve Description: Left Lower Rib Y Acceleration

Maximum Value: 40.8 at 17.7 Milliseconds

Minimum Value: -12.3 at 33.8 Milliseconds

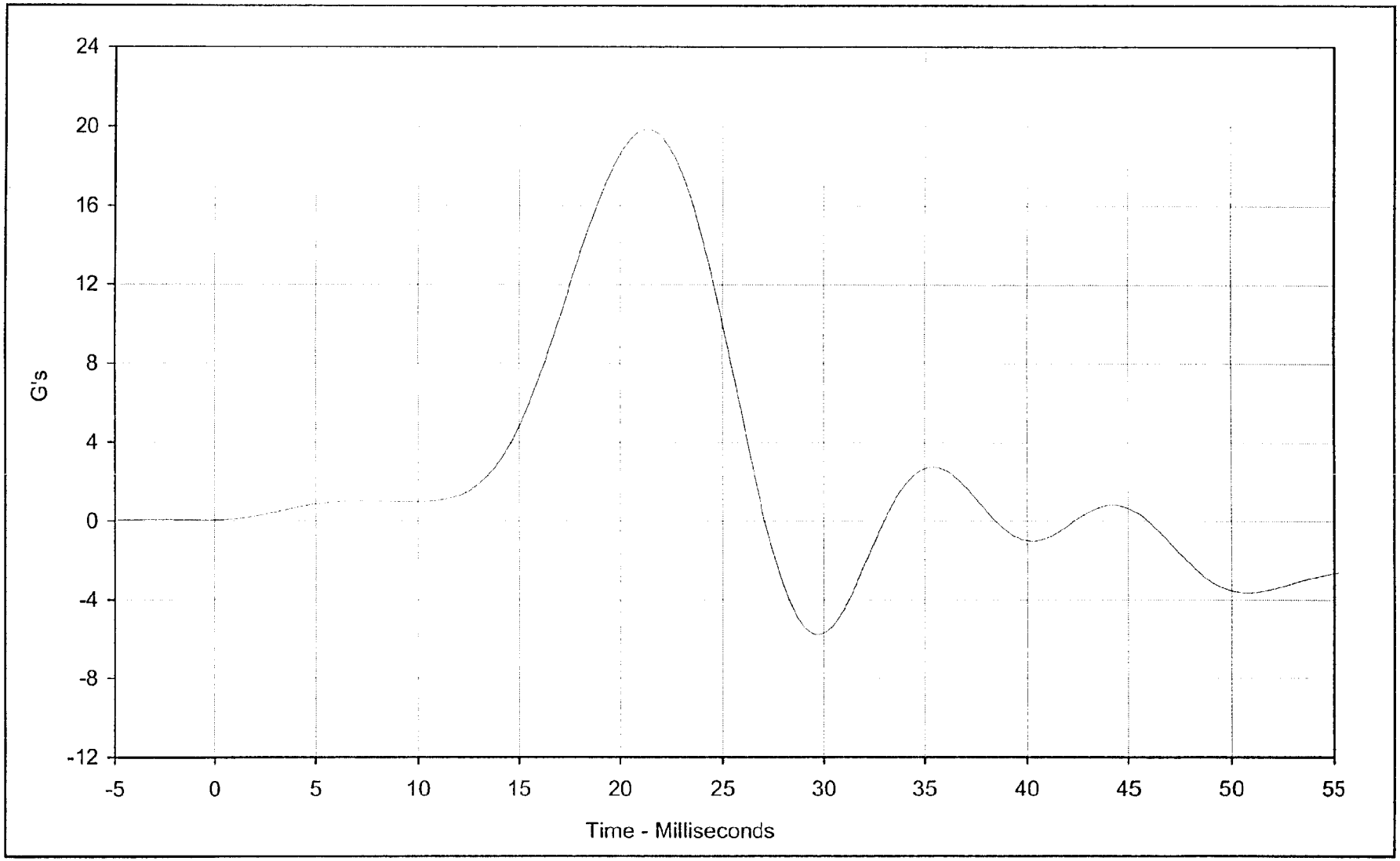
SAE Filter Class: FIR 100

Date of Test: 1/22/00

Test Program: SID Thorax Lateral Impact Test

Test Information: SID S/N: 056 Test I.D.: TI02A

KARC Engineering



Curve Description:	Lower Spine Y Acceleration			Test Program:	SID Thorax Lateral Impact Test
Maximum Value:	19.8	at	21.3 Milliseconds	Test Information:	SID S/N: 056 Test I.D.: TI02A
Minimum Value:	-5.8	at	29.7 Milliseconds		
SAE Filter Class:	FIR 100				
Date of Test:	1/22/00				

KARC Engineering

Performance Verification Data
Side Impact Dummy (SID)
Left Side Pelvis Lateral Impact

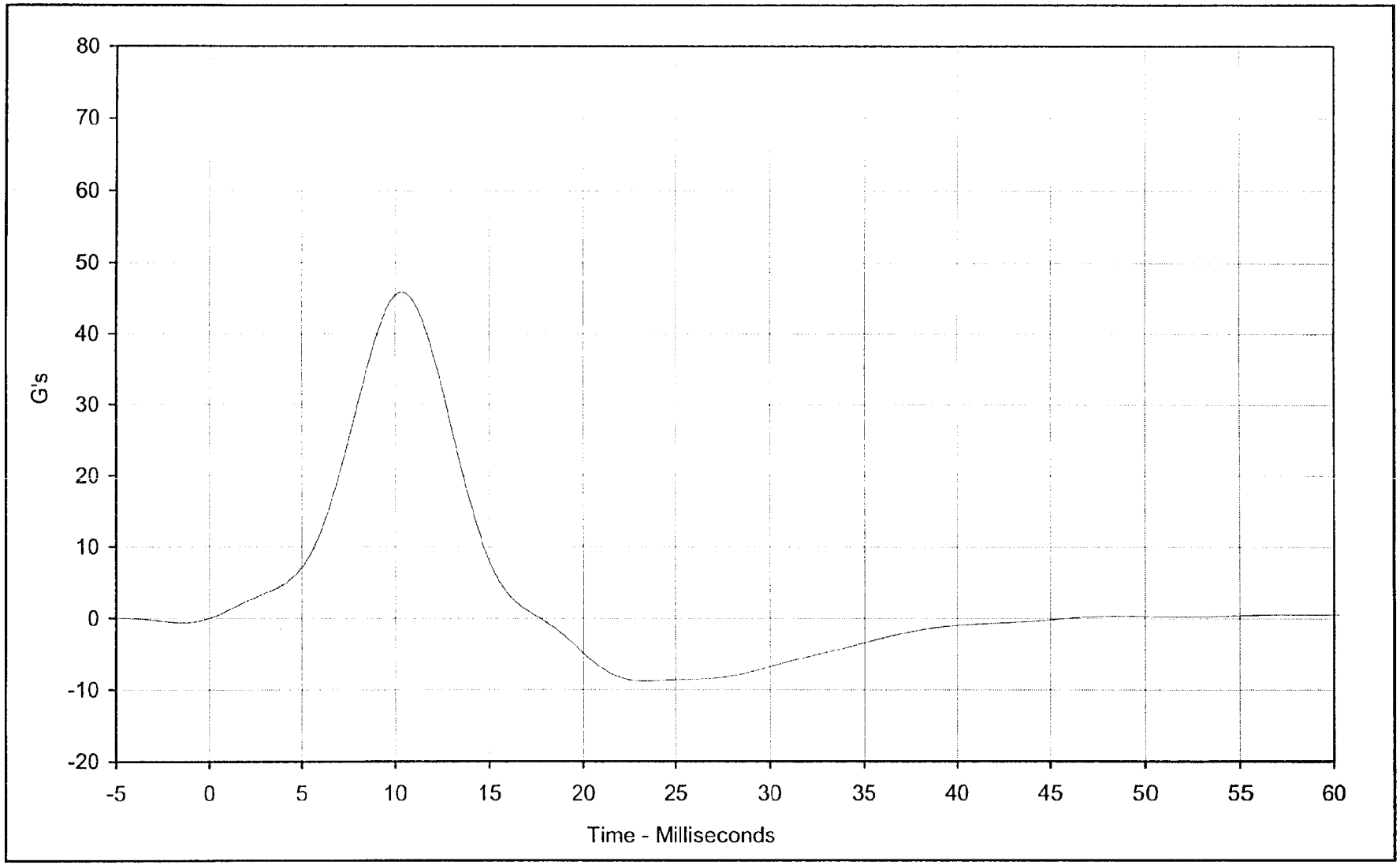
ATD Serial No.: 056 Part Serial No.: N/A Test I.D.: PI02A

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.5	21.7	Pass
Laboratory Relative Humidity	%	10 to 70	42	Pass
Probe Velocity	m/s	4.21 to 4.33	4.33	Pass
Pelvis Acceleration	G's	40.0 to 60.0	45.9	Pass
Acceleration Time Above 20 G's	Msec.	3.0 to 7.0 Msec.	6.7	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
		Overall Test Results		Pass

Laboratory Technician — January 22, 2000 (Test Date)

James E. Scott — 1/22/00 (Date)

Approved By



Curve Description:	Pelvis Y Axis Acceleration			Test Program:	Left Side Pelvis Lateral Impact
Maximum Value:	45.9	at	10.4 Milliseconds	Test Information:	SID S/N: 056 Test I.D.: PI02A
Minimum Value:	-8.8	at	23.4 Milliseconds		
SAE Filter Class:	FIR 100				
Date of Test:	1/22/00				

KARC Engineering

Performance Verification Data
Side Impact Dummy (SID)
Abdominal Compression Test

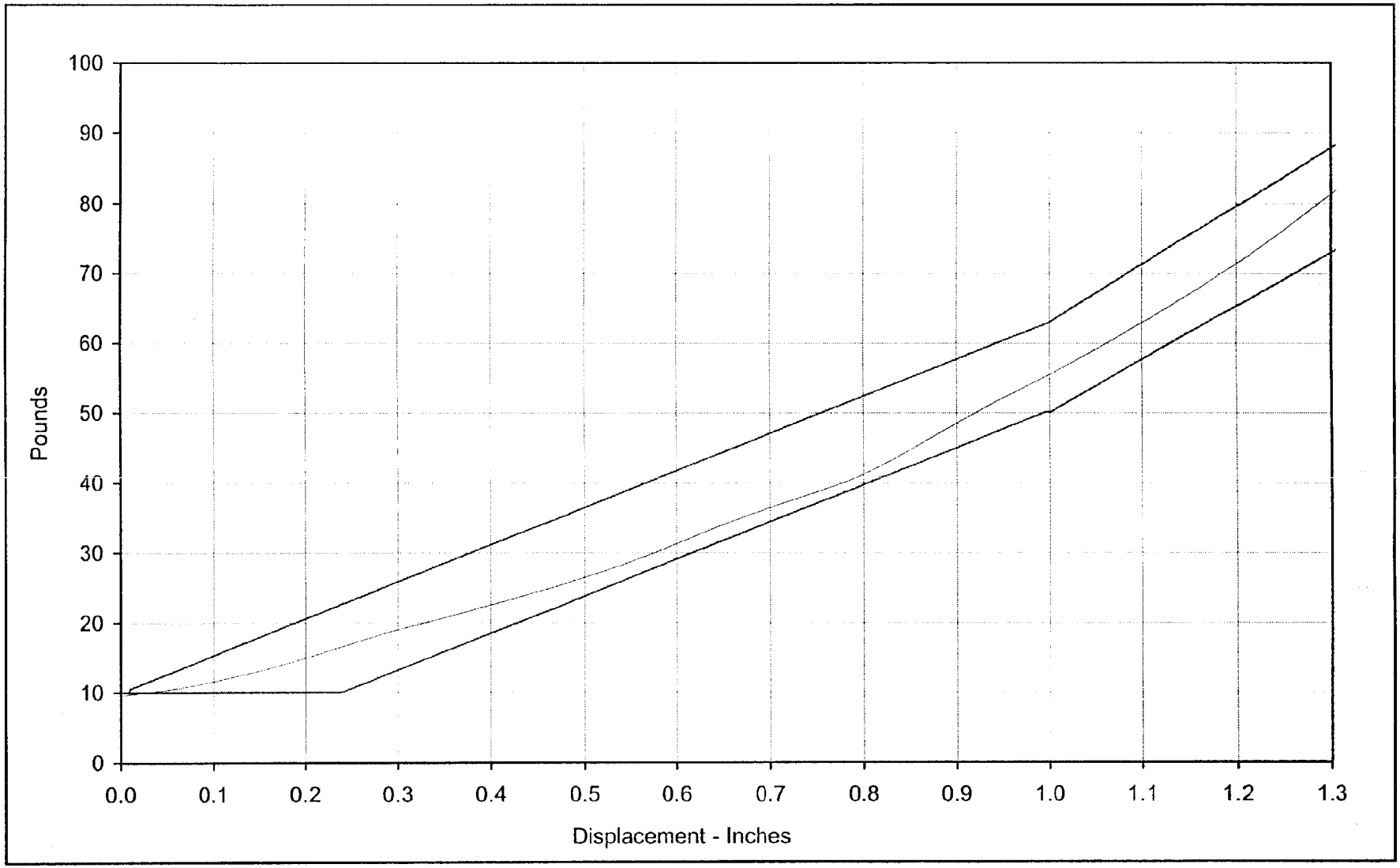
ATD Serial No.: 056 Part Serial No.: N/A Test I.D.: AC01A

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°F	66 to 78	70	Pass
Laboratory Relative Humidity	%	10 to 70	38	Pass
Force at 0.5 Inches of Displacement	Pounds	23.0 to 36.0	26.5	Pass
Force at 0.75 Inches of Displacement	Pounds	36.0 to 50.0	38.7	Pass
Force at 1.0 Inches of Displacement	Pounds	50.0 to 63.0	55.3	Pass
Force at 1.3 Inches of Displacement	Pounds	73.0 to 88.0	80.9	Pass
		Overall Test Results		Pass

Laboratory Technician — January 22, 2000 (Test Date)

James E. Hoth — 1/22/00

Approved By — Date



Curve Description:	Abdomen Force vs. Displacement	Test Program:	Hybrid II Abdominal Compression
Force at 0.5 In.:	26.5 Pounds	Test Information:	SID S/N: 056 Test I.D.: AC01A
Force at 0.75 In.:	38.7 Pounds		
Force at 1.0 In.:	55.3 Pounds		
Force at 1.3 In.:	80.9 Pounds		
Date of Test:	1/22/00		

KARC Engineering

KARCO Engineering

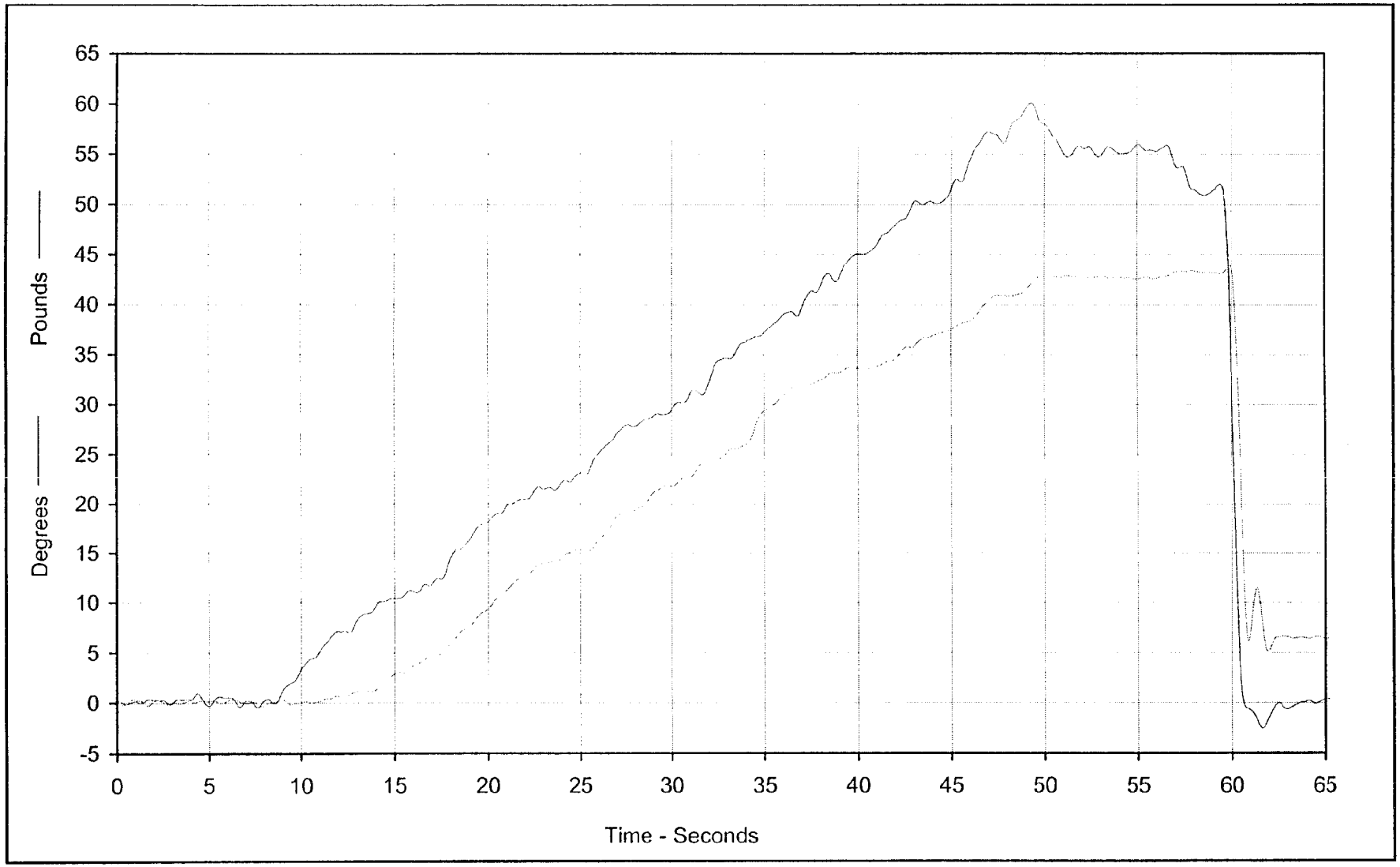
Performance Verification Data
Side Impact Dummy (SID)
Lumbar Flexion Test

ATD Serial No.: 056 Part Serial No.: N/A Test I.D.: LF01A

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°F	66 to 78	70	Pass
Laboratory Relative Humidity	%	10 to 70	24	Pass
Applied Force at 0° of Flexion	Pounds	0.0	0.0	Pass
Applied Force at 20° of Flexion	Pounds	22.0 to 34.0	28.5	Pass
Applied Force at 30° of Flexion	Pounds	34.0 to 46.0	38.0	Pass
Applied Force at 40° of Flexion	Pounds	46.0 to 58.0	56.8	Pass
Return Angle 3 Minutes After Release	Degrees	≤12.0	5.0	Pass
		Overall Test Results		Pass

Laboratory Technician — January 23, 2000 (Test Date)

James E. Holtz — Approved By — 1/23/00 (Date)



Curve Description:	Applied Lumbar Force And Angle		Test Program:	Side Impact Dummy Lumbar Flexion
Force at 20°:	28.5	Pounds	Test Information:	SID S/N: 056 Test I.D.: LF01A
Force at 30°:	38.0	Pounds		
Force at 40°:	56.8	Pounds		
Return Angle:	5.0	Degrees		
Test Date:	1/23/00			

KARC Engineering

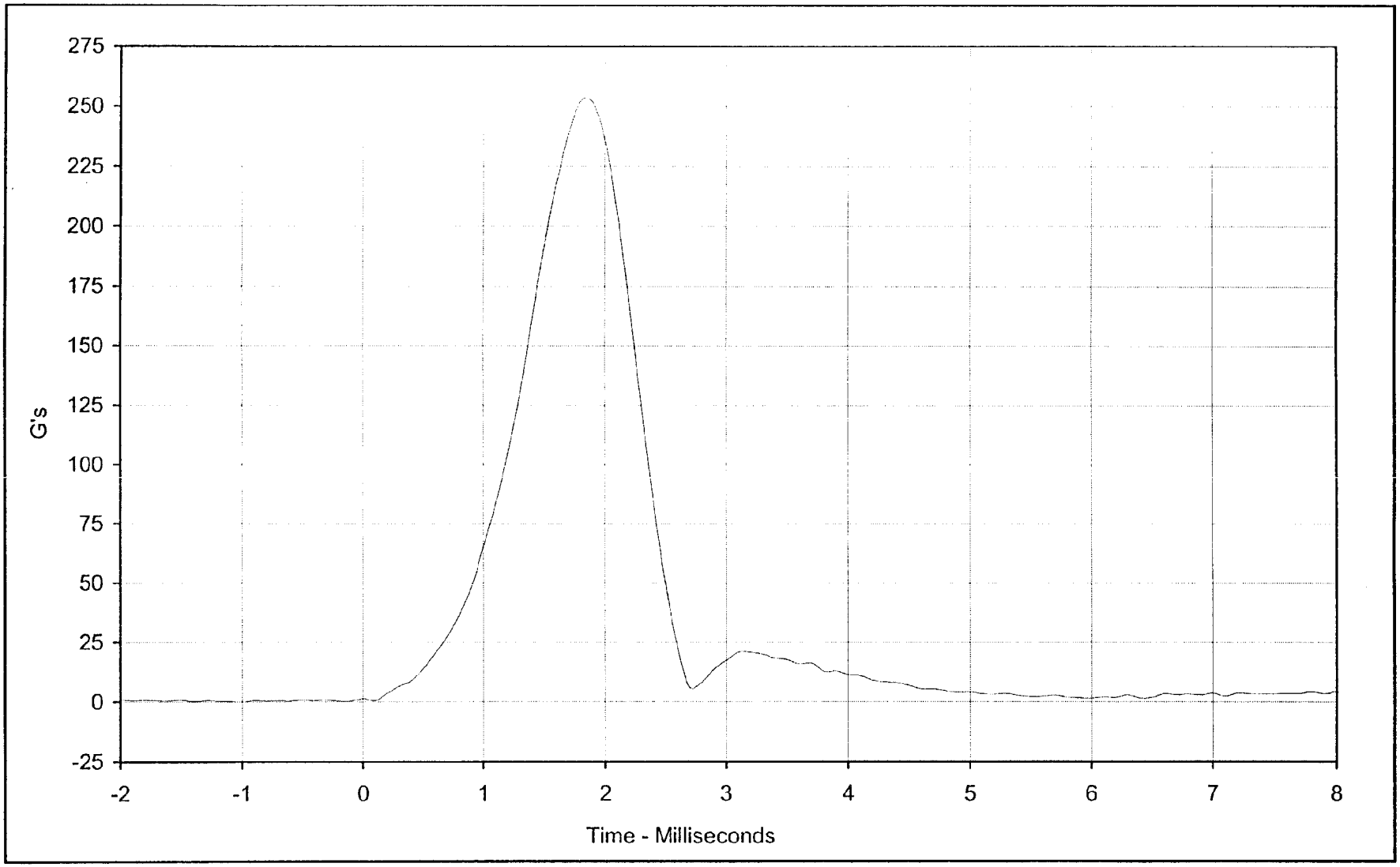
Performance Verification Data
Side Impact Dummy (SID)
Head Drop Calibration

ATD Serial No.: 056 Part Serial No.: N/A Test I.D.: SH01A

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°F	66 to 78	69	Pass
Laboratory Relative Humidity	%	10 to 70	29	Pass
Peak Resultant Acceleration	G's	210.0 to 260.0	252.6	Pass
Peak Lateral Acceleration	G's	≤10.0	8.3	Pass
Time Above 100 G's	Msec.	0.9 to 1.5	1.2	Pass
Is Resultant Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
		Overall Test Results		Pass

Laboratory Technician — January 22, 2000 (Test Date)

James E. Scott — Approved By — 1/22/00 (Date)



Curve Description: Head Resultant Acceleration

Maximum Value: 252.6 at 1.8 Milliseconds

Minimum Value: 0.7 at 0.1 Milliseconds

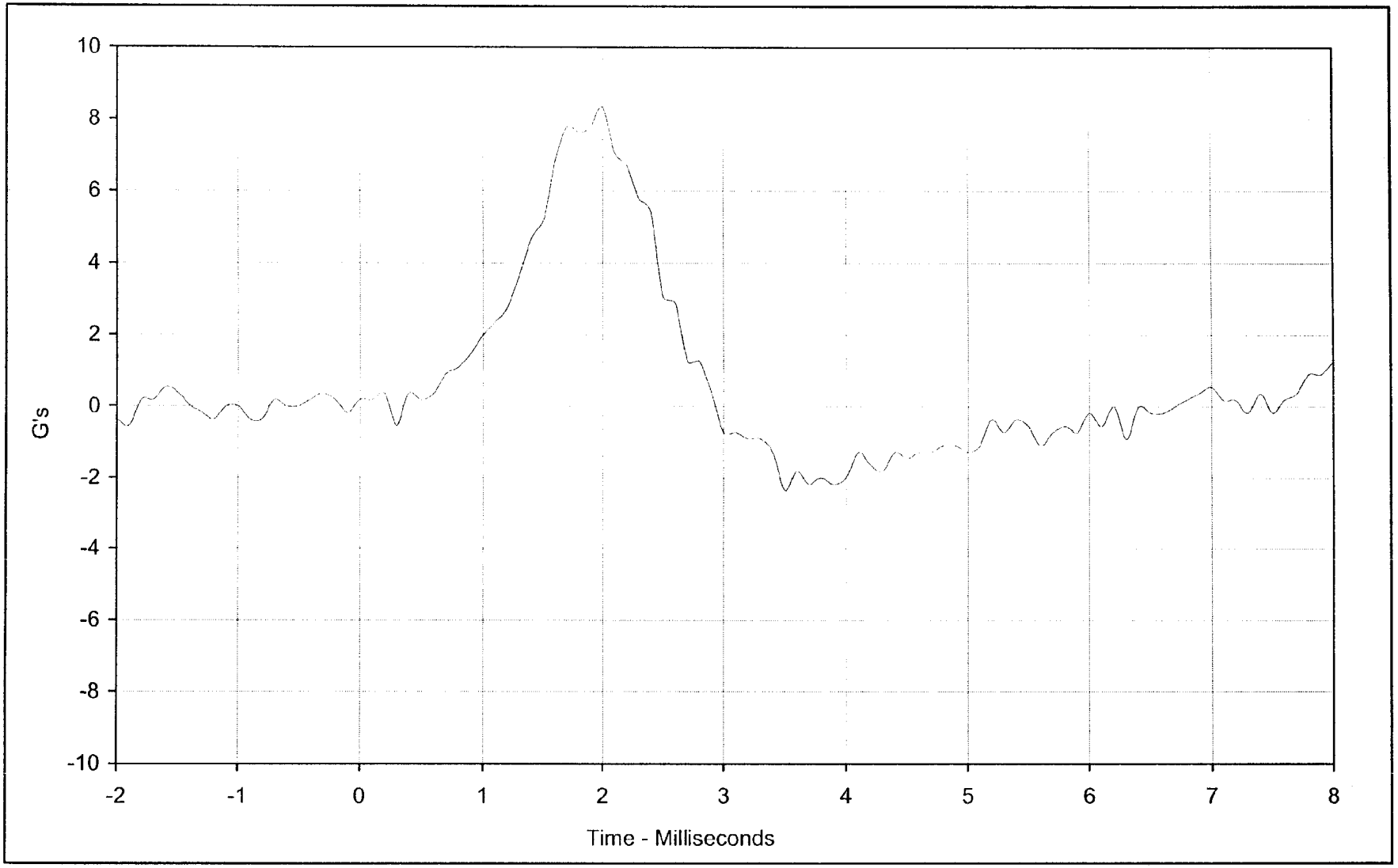
SAE Filter Class: 1000

Date of Test: 1/22/00

Test Program: Hybrid II Head Drop Calibration

Test Information: SID S/N: 056 Test I.D.: SH01A

KARC Engineering



Curve Description: Head Y Axis Acceleration

Maximum Value: 8.3 at 2 Milliseconds

Minimum Value: -2.4 at 3.5 Milliseconds

SAE Filter Class: 1000

Date of Test: 1/22/00

Test Program: Hybrid II Head Drop Calibration

Test Information: SID S/N: 056 Test I.D.: SH01A

KARC Engineering

Performance Verification Data
Side Impact Dummy (SID)
External Dimensions

ATD Serial No.: 056 Part Serial No.: N/A Test I.D.: N/A

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory temperature	°C	20.4 to 22.1	21.1	Pass
Laboratory relative humidity	%	10 to 70	31	Pass
SH- Seated Height	mm	889 to 909	901	Pass
HP- Hip Point Height	mm	99 (reference)	99	Pass
RH- Rib Height	mm	502 to 520	511	Pass
KH- Knee Pivot From Back Line	mm	511 to 526	520	Pass
KV- Knee Pivot From Floor	mm	490 to 505	499	Pass
HW- Hip Width	mm	356 to 391	364	Pass
		Overall Test Results		Pass

Laboratory Technician — February 5, 2000 (Test Date)

James E. Scott — 2/5/00 (Date)

Approved By

Performance Verification Data
Side Impact Dummy (SID)
Thorax Lateral Impact

ATD Serial No.: 056 Part Serial No.: N/A Test I.D.: TI01E

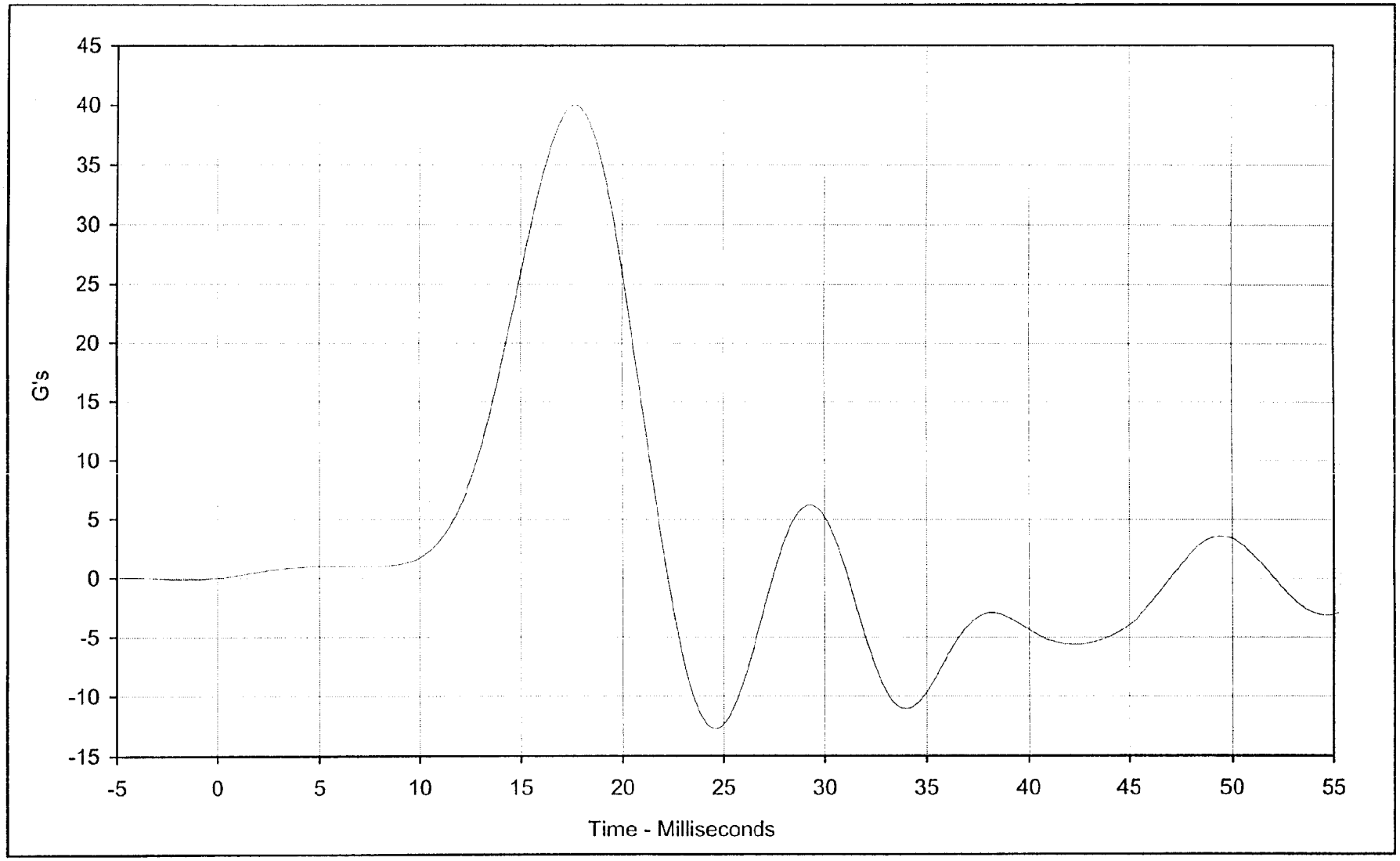
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.5	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	31	Pass
Probe Velocity	m/s	4.21 to 4.33	4.33	Pass
Left Upper Spine Acceleration	G's	37.0 to 46.0	40.0	Pass
Left Lower Spine Acceleration	G's	37.0 to 46.0	39.1	Pass
Thoracic Spine Acceleration	G's	15.0 to 22.0	21.8	Pass
		Overall Test Results		Pass

Laboratory Technician

January 28, 2000
Test Date

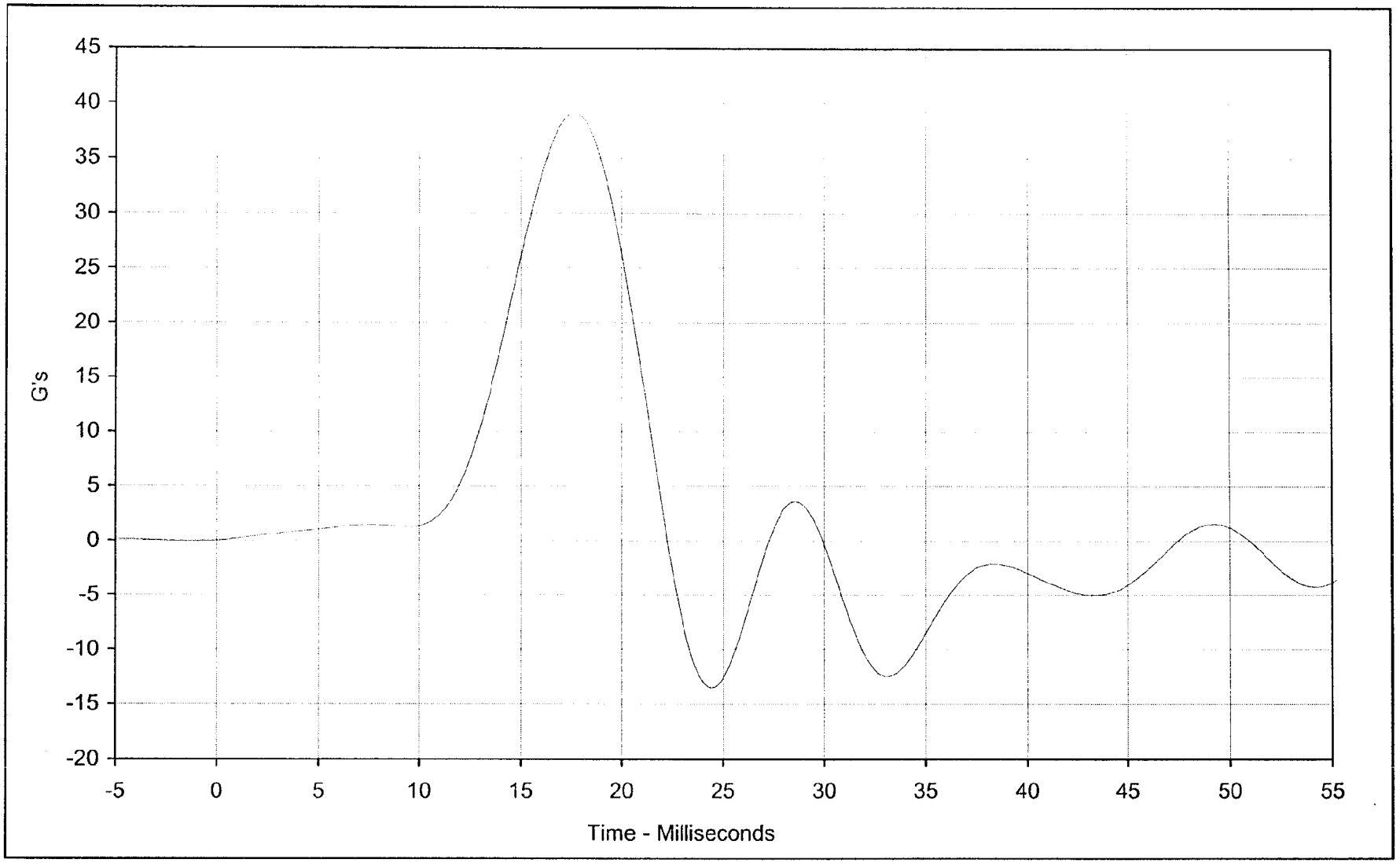
James E. Arndt
Approved By

1/28/00
Date



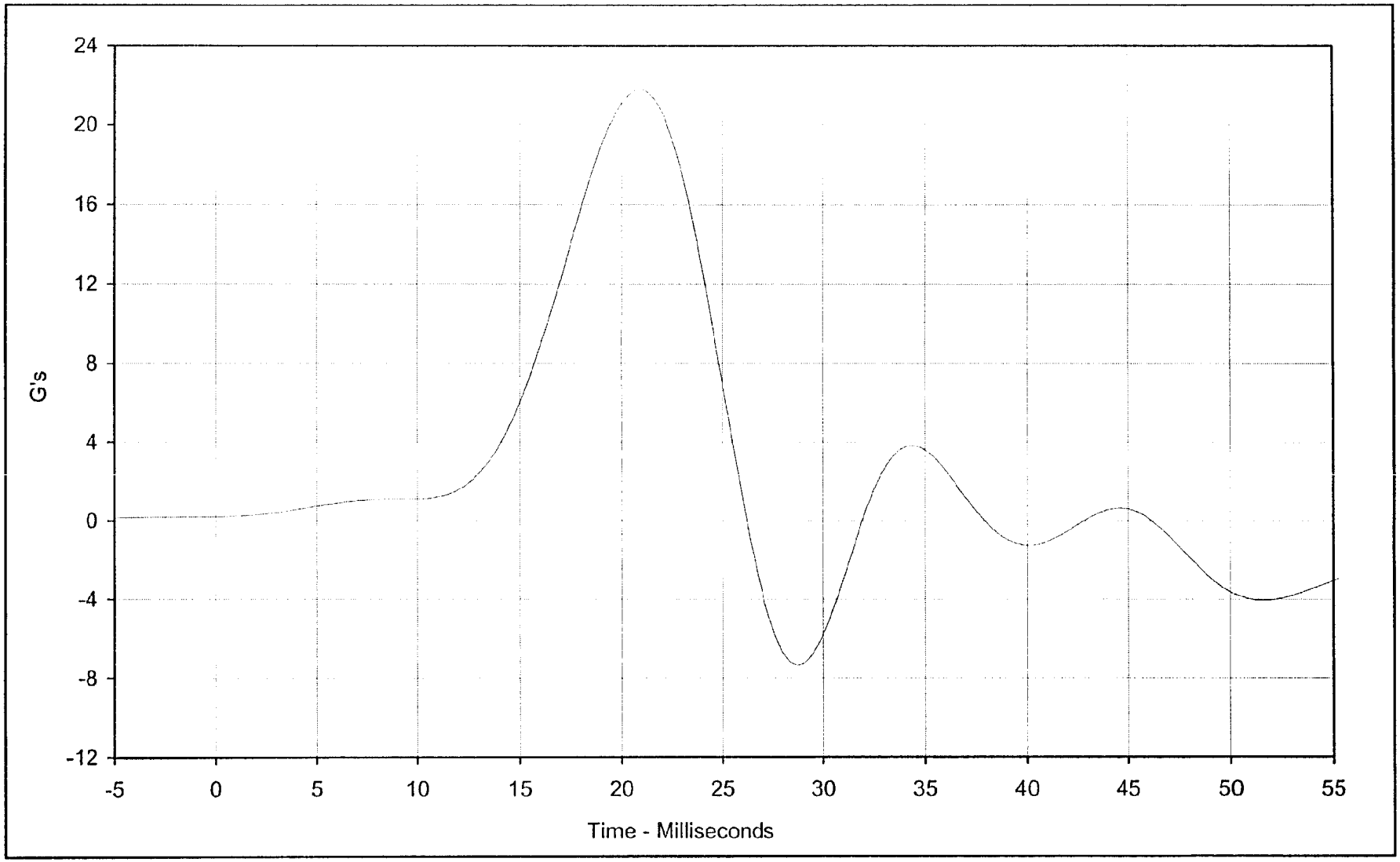
Curve Description:	Left Upper Rib Y Acceleration			Test Program:	SID Thorax Lateral Impact Test
Maximum Value:	40.0	at	17.7 Milliseconds	Test Information:	SID S/N: 056 Test I.D.: TI01E
Minimum Value:	-12.7	at	24.6 Milliseconds		
SAE Filter Class:	FIR 100				
Date of Test:	1/28/00				

KARC Engineering



Curve Description:	Left Lower Rib Y Acceleration			Test Program:	SID Thorax Lateral Impact Test
Maximum Value:	39.1	at	17.7 Milliseconds	Test Information:	SID S/N: 056 Test I.D.: TI01E
Minimum Value:	-13.5	at	24.4 Milliseconds		
SAE Filter Class:	FIR 100				
Date of Test:	1/28/00				

KARC Engineering



Curve Description:	Lower Spine Y Acceleration			Test Program:	SID Thorax Lateral Impact Test
Maximum Value:	21.8	at	20.9 Milliseconds	Test Information:	SID S/N: 056 Test I.D.: TI01E
Minimum Value:	-7.3	at	28.8 Milliseconds		
SAE Filter Class:	FIR 100				
Date of Test:	1/28/00				

KARC Engineering

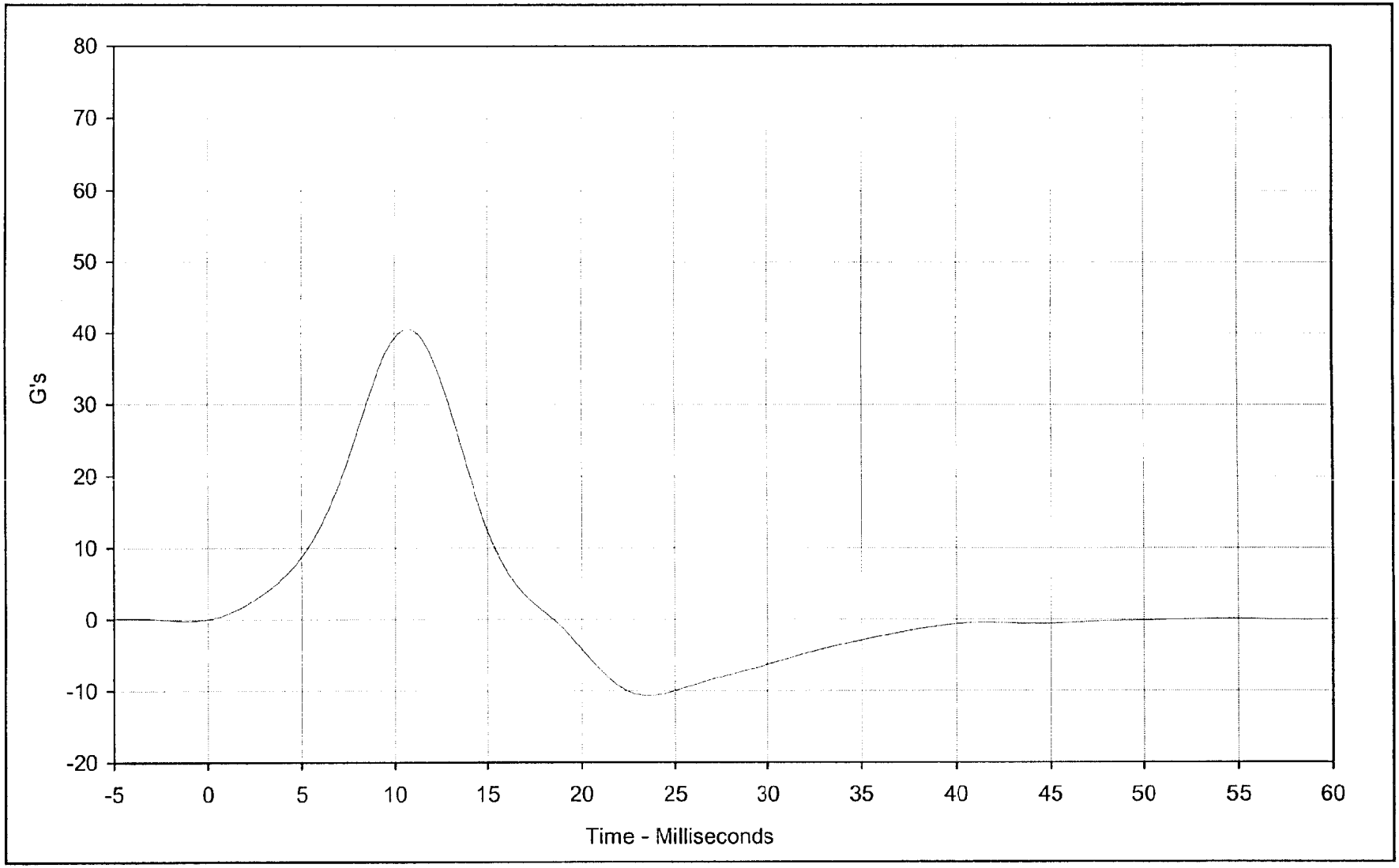
Performance Verification Data
Side Impact Dummy (SID)
Left Side Pelvis Lateral Impact

ATD Serial No.: 056 Part Serial No.: N/A Test I.D.: PI02E

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.5	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	31	Pass
Probe Velocity	m/s	4.21 to 4.33	4.33	Pass
Pelvis Acceleration	G's	40.0 to 60.0	40.6	Pass
Acceleration Time Above 20 G's	Msec.	3.0 to 7.0 Msec.	6.9	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
		Overall Test Results		Pass

Laboratory Technician — January 28, 2000 (Test Date)

James E. North — 1/28/00 (Date)
Approved By



Curve Description: Pelvis Y Axis Acceleration

Maximum Value: 40.6 at 10.7 Milliseconds

Minimum Value: -10.7 at 23.6 Milliseconds

SAE Filter Class: FIR 100

Date of Test: 1/28/00

Test Program: Left Side Pelvis Lateral Impact

Test Information: SID S/N: 056 Test I.D.: PI02E

KARC Engineering

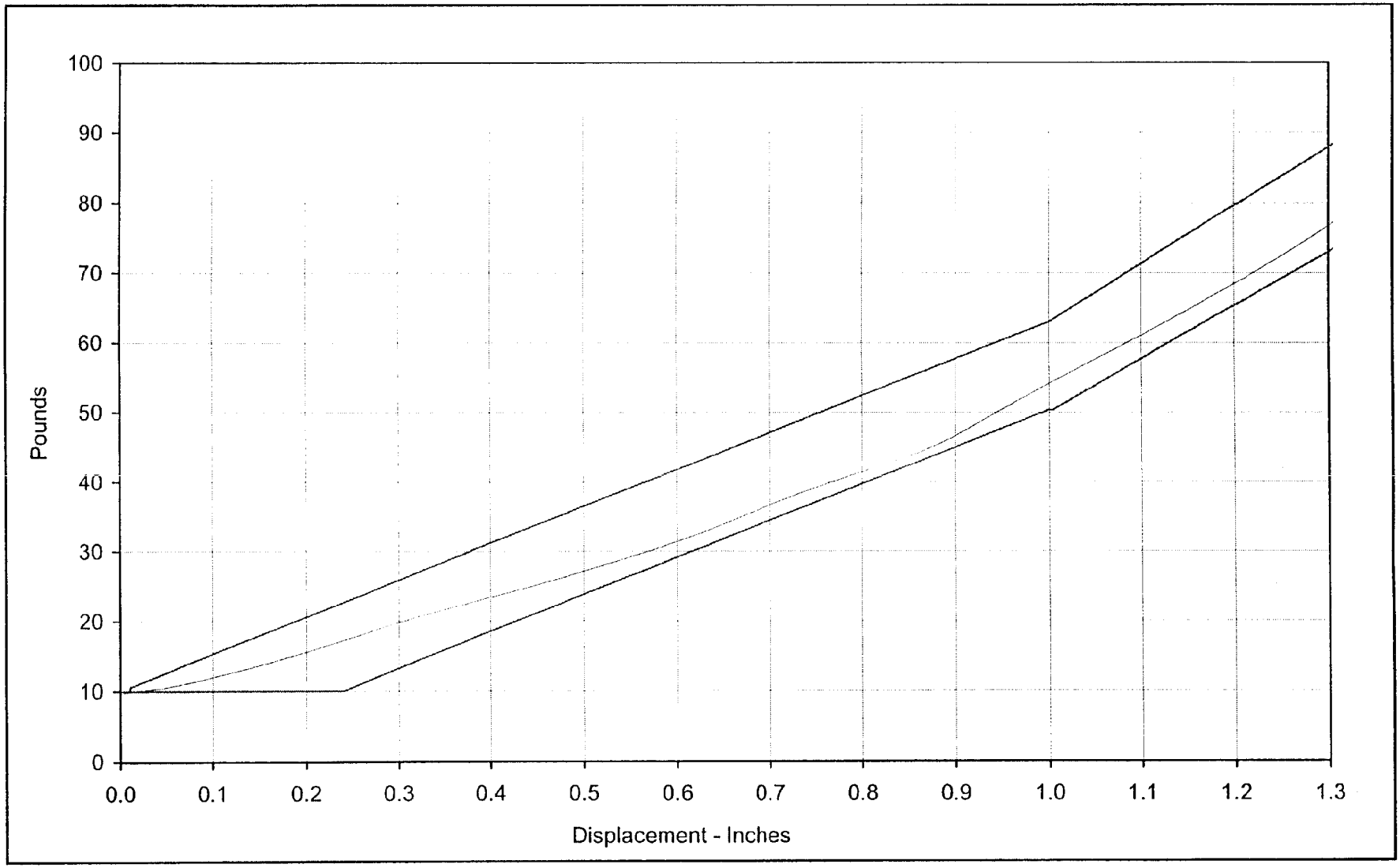
Performance Verification Data
Side Impact Dummy (SID)
Abdominal Compression Test

ATD Serial No.: 056 Part Serial No.: N/A Test I.D.: AC01E

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°F	66 to 78	70	Pass
Laboratory Relative Humidity	%	10 to 70	32	Pass
Force at 0.5 Inches of Displacement	Pounds	23.0 to 36.0	27.0	Pass
Force at 0.75 Inches of Displacement	Pounds	36.0 to 50.0	39.1	Pass
Force at 1.0 Inches of Displacement	Pounds	50.0 to 63.0	54.1	Pass
Force at 1.3 Inches of Displacement	Pounds	73.0 to 88.0	76.4	Pass
		Overall Test Results		Pass

Laboratory Technician — January 29, 2000 (Test Date)

James E. Scott — Approved By — 1/29/00 (Date)



Curve Description: Abdomen Force vs. Displacement

Force at 0.5 In.: 27.0 Pounds

Force at 0.75 In.: 39.1 Pounds

Force at 1.0 In.: 54.1 Pounds

Force at 1.3 In.: 76.4 Pounds

Date of Test: 1/29/00

Test Program: Hybrid II Abdominal Compression

Test Information: SID S/N: 056 Test I.D.: AC01E

KARC Engineering

Performance Verification Data
Side Impact Dummy (SID)
Lumbar Flexion Test

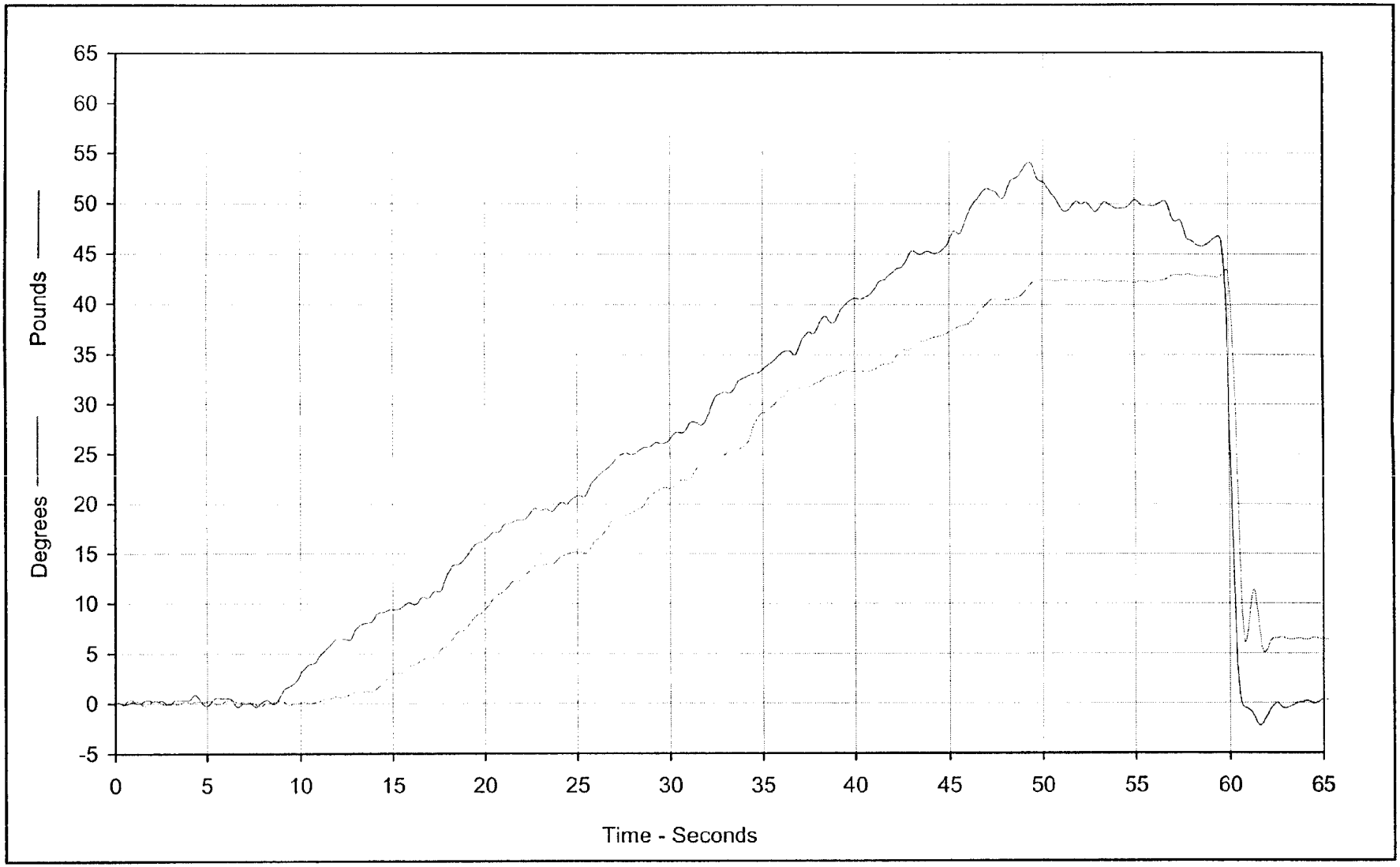
ATD Serial No.: 056 Part Serial No.: N/A Test I.D.: LF01E

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°F	66 to 78	70	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Applied Force at 0° of Flexion	Pounds	0.0	0.0	Pass
Applied Force at 20° of Flexion	Pounds	22.0 to 34.0	25.7	Pass
Applied Force at 30° of Flexion	Pounds	34.0 to 46.0	34.4	Pass
Applied Force at 40° of Flexion	Pounds	46.0 to 58.0	51.5	Pass
Return Angle 3 Minutes After Release	Degrees	≤12.0	5.0	Pass
		Overall Test Results		Pass

Laboratory Technician — January 29, 2000 (Test Date)

James E. Roth — 1/29/00 (Date)

Approved By



Curve Description:	Applied Lumbar Force And Angle		Test Program:	Side Impact Dummy Lumbar Flexion
Force at 20°:	25.7	Pounds	Test Information:	SID S/N: 056 Test I.D.: LF01E
Force at 30°:	34.4	Pounds		
Force at 40°:	51.5	Pounds		
Return Angle:	5.0	Degrees		
Test Date:	1/29/00			

KARC Engineering

Performance Verification Data
Side Impact Dummy (SID)
Head Drop Calibration

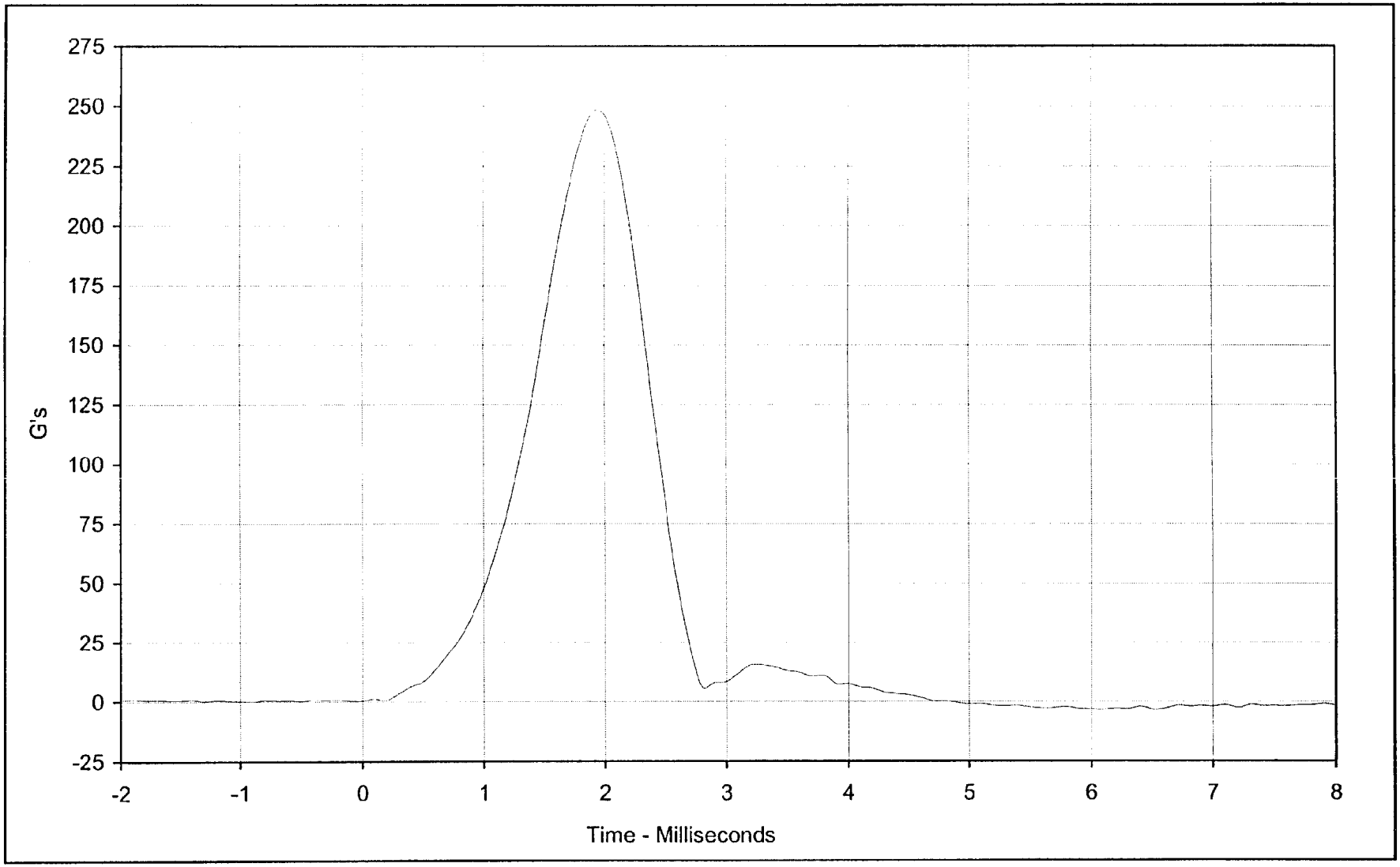
ATD Serial No.: 056 Part Serial No.: N/A Test I.D.: SH01E

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°F	66 to 78	69	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Peak Resultant Acceleration	G's	210.0 to 260.0	247.5	Pass
Peak Lateral Acceleration	G's	≤10.0	2.5	Pass
Time Above 100 G's	Msec.	0.9 to 1.5	1.2	Pass
Is Resultant Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
		Overall Test Results		Pass

Laboratory Technician — January 30, 2000 (Test Date)

James E. Yott — 1/30/00 (Date)

Approved By



Curve Description: Head Resultant Acceleration

Maximum Value: 247.5 at 1.9 Milliseconds

Minimum Value: -3.4 at 6.1 Milliseconds

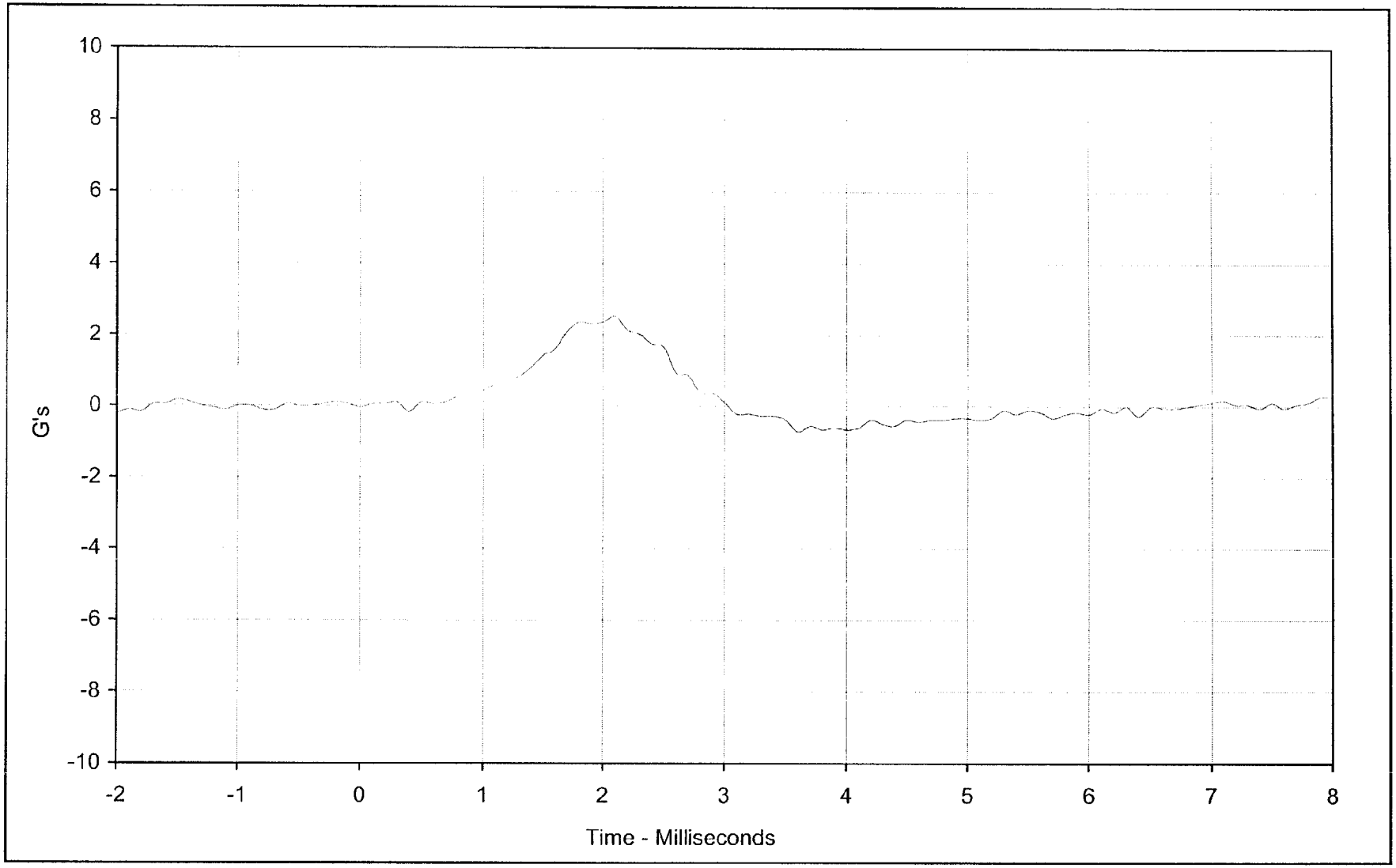
SAE Filter Class: 1000

Date of Test: 1/30/00

Test Program: Hybrid II Head Drop Calibration

Test Information: SID S/N: 056 Test I.D.: SH01E

KARC Engineering



Curve Description: Head Y Axis Acceleration

Maximum Value: 2.5 at 2.1 Milliseconds

Minimum Value: -0.7 at 3.6 Milliseconds

SAE Filter Class: 1000

Date of Test: 1/30/00

Test Program: Hybrid II Head Drop Calibration

Test Information: SID S/N: 056 Test I.D.: SH01E

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APPENDIX D

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

55/28 km/h Side Impact NCAP

Instrumentation Data Channel Assignments

Driver S.I.D. Serial Number 056

01/26/00

2000 Chevrolet S-10 Pickup

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
1	Head CG	X	KEAC070	Accel.,1/2 bridge	Endevco	7264-2000X	G
2	Head CG	Y	KEAC071	Accel.,1/2 bridge	Endevco	7264-2000Y	G
3	Head CG	Z	KEAC072	Accel.,1/2 bridge	Endevco	7264-2000Z	G
4	Upper Rib Primary	Y	KEAC070	Accel.,1/2 bridge	Endevco	7264-2000X	G
5	Lower Rib, Primary	Y	KEAC071	Accel.,1/2 bridge	Endevco	7264-2000Y	G
6	Lower Spine, Primary	Y	KEAC072	Accel.,1/2 bridge	Endevco	7264-2000Z	G
7	Pelvis, Primary	Y	KEAC090	Accel.,Full bridge	Endevco	7264-2000X	G
8	Upper Rib Redundant	Y	KEAC076	Accel.,1/2 bridge	Endevco	7264-2000X	G
9	Lower Rib, Redundant	Y	KEAC077	Accel.,1/2 bridge	Endevco	7264-2000Y	G
10	Lower Spine, Redundant	Y	KEAC078	Accel.,1/2 bridge	Endevco	7264-2000Z	G
11	Pelvis, Redundant	Y	KEAC089	Accel.,1/2 bridge	Endevco	7264-2000X	G
12	Thorax Contact	N/A	T0	Contact Switch	Tapeswitch	8 oz. Grey	%
13	Pelvis Contact	N/A	T0	Contact Switch	Tapeswitch	8 oz. Grey	%