

REPORT NUMBER KAR21003-05

**NEW CAR ASSESSMENT PROGRAM
SIDE IMPACT TEST**

**HONDA OF AMERICA MANUFACTURING, INC.
2001 ACURA 3.2 TL
4 DOOR SEDAN
NHTSA NUMBER: M15301**

**PREPARED BY:
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9270 HOLLY ROAD
ADELANTO, CALIFORNIA 92301**



DECEMBER 29, 2000

FINAL REPORT

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16. Abstract <p>A 55/28 km/h 90 deg. Moving Deformable Barrier Side Impact NCAP Test was conducted on the subject 2001 Acura 3.2 TL 4 Door Sedan 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 December 14, 2000.</p> <p>The impact velocity of the Moving Deformable Barrier was 61.64 km/h, and the ambient temperature at the struck (driver's) side of the vehicle was 12.7 C. The target vehicle's maximum post test static crush was 409 mm located at level 4 . The test vehicle's occupant performance is as follows:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 35%;">Measurement Description</th> <th style="width: 30%;">Driver SID</th> <th style="width: 35%;">Passenger SID</th> </tr> </thead> <tbody> <tr> <td>Left Upper Rib (LUR) G's</td> <td style="text-align: center;">46.3</td> <td style="text-align: center;">48.8</td> </tr> <tr> <td>Left Lower Rib (LLR) G's</td> <td style="text-align: center;">50.0</td> <td style="text-align: center;">55.6</td> </tr> <tr> <td>Lower Spine (T₁₂) G's</td> <td style="text-align: center;">69.7</td> <td style="text-align: center;">56.0</td> </tr> <tr> <td>Thoracic Trauma Index (TTI) G's</td> <td style="text-align: center;">60</td> <td style="text-align: center;">56</td> </tr> <tr> <td>Pelvis (PEV) G's</td> <td style="text-align: center;">79</td> <td style="text-align: center;">53</td> </tr> </tbody> </table>				Measurement Description	Driver SID	Passenger SID	Left Upper Rib (LUR) G's	46.3	48.8	Left Lower Rib (LLR) G's	50.0	55.6	Lower Spine (T ₁₂) G's	69.7	56.0	Thoracic Trauma Index (TTI) G's	60	56	Pelvis (PEV) G's	79	53
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17. Key Words New Car Assessment Program (NCAP) Side Impact Moving Deformable Barrier (MDB) Side Impact Dummy (SID)		18. Distribution Statement 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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SECTION 1

PURPOSE and TEST PROCEDURE

1.1 PURPOSE

This Side Impact NCAP test is conducted as part of the FY' 2001 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 on a 2001 Acura 3.2 TL 4 Door Sedan manufactured by Honda of America.

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 2001 Acura 3.2 TL 4 Door Sedan 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 61.64 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 1786 kg. and the test weight of the MDB was 1361 kg. The test was conducted at KARCO Engineering in Adelanto, California, on December 14, 2000.

One (1) real-time motion picture camera and eleven (11) 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. Two 50th percentile adult male Side Impact Dummy's (SID's) were placed in the driver's and left rear passenger designated seating positions according to the test procedure. Each 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 409 mm at level 4, 1350mm rearward of the left vertical impact point. The driver SID, Serial No. 274 and the passenger SID, Serial No. 275 were calibrated just prior to this test. The SID injury criteria is summarized as follows:

Measurement	Units	Driver	Passenger
Thoracic Trauma Index (TTI)	G's	60	56
Peak Pelvic G's (PEV)	G's	79	53

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 and passenger SID's, 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: 2001 Acura 3.2 TL 4 Door Sedan

NHTSA No. M15301

Test Program: 55/28 km/h 90° Side Impact NCAP

Test Date: 12/14/00

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: 2001 Acura 3.2 TL 4 Door Sedan

NHTSA No.: M15301

Test Program: 55/28 km/h 90° Side Impact NCAP

Test Date: 12/14/00

TEST VEHICLE INFORMATION

Make	Acura
Model	3.2 TL
Body Style	4 Door Sedan
NHTSA No.	M15301
VIN	19UUA56681A002096
Color	Green
Delivery Date	11/28/00
Odometer Reading (mile)	100
Dealer	Thomas Acura
Transmission	5-Speed Automatic
Final Drive	Front
Number of Cylinders	6
Engine Displacement (L)	3.2
Engine Placement	Transverse

TEST VEHICLE OPTIONS

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

DATA FROM CERTIFICATION LABEL

Manufactured By	Honda Of America	GVWR (kg)	1996
Date of Manufacture	September-00	GAWR Front (kg)	1100
		GAWR Rear (kg)	930

DATA FROM TIRE PLACARD

Measured Parameter	Front	Rear
Maximum Tire Pressure (kPa)	225	225
Cold Pressure (kPa)	225	225
Recommend Tire Size	P205/60/R15	P205/60/R15
Tire Size on Vehicle	P205/60/R15	P205/60/R15
Tire Manufacturer	Michelin	Michelin

Measured Parameter	Front	Rear	Third	Total
Type of Seats	Bucket	Bench	N/A	
Number of Occupants	2	3	N/A	5
Capacity Wt. (VCW) (kg)				385
Cargo Weight (RCLW) (kg)				45

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

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan
 Test Program: 55/28 km/h 90° Side Impact NCAP

NHTSA No.: M15301
 Test Date: 12/14/00

TEST VEHICLE WEIGHTS

	Units	As Delivered (UVW)			As Tested (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	482	311		524	386	
Right	kg	508	287		529	347	
Ratio	%	62.3	37.7		59.0	41.0	
Totals	kg	990	598	1588	1053	733	1786

TARGET TEST WEIGHT CALCULATION*

Measured Parameter	Units	Value
Total Delivered Weight (UVW)	kg	1588
Weight of 2 P572F Side Impact Dummies	kg	162
Rated Cargo/Luggage Weight (RCLW)	kg	45
Calculated Vehicle Target Weight (TVTW)	kg	1795

*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	705	710	699	702	1034
As Tested	mm	694	703	668	674	1125
Fully Loaded	mm	692	706	680	665	

GENERAL TEST VEHICLE DATA

Measurement Description	Units	Value
Test Vehicle Wheel base	mm	2743
Total Vehicle Length at Left Side	mm	3420
Total Vehicle Length at Centerline	mm	4900
Total Vehicle Length at Right Side	mm	3430
Weight of Ballast In Cargo Area	kg	39
Amount of Stoddard Solvent in Fuel Tank	Liters	60.4

TEST VEHICLE VERTICAL IMPACT LINE DATA

Measurement Description	Units	Value
Test Vehicle Wheel base	mm	2743
Target Impact Point Aft of Front Axle	mm	432
Actual Impact Point Aft of Front Axle	mm	447

DATA SHEET NO. 1...(continued)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

NHTSA No. M15301

Test Program: 55/28 km/h 90° Side Impact NCAP

Test Date: 12/14/00

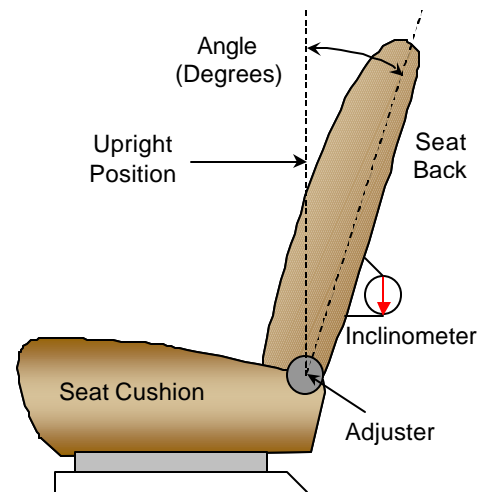
NOMINAL DESIGN RIDING POSITION

The driver's seat back is positioned to the manufacturers designated angle. The procedure for the seat is as follows:

1.) Seat is set in the middle of the fore/aft travel, 2.) Vertical adjustment is set to the bottom position, 3.) Seatback is adjusted until a measurement of 610 mm is achieved from the sun visor outer mounting bracket to the headrest outer mount. This is the manufacturers designated position.

Driver seat back angle: 610mm reference

Rear seat back angle: 24° fixed



FRONT SEAT ASSEMBLY

SEAT FORE/AFT POSITIONS

The driver's seat is adjustable. The fore/aft is set to the middle position.

Driver seat fore/aft total travel: 234mm of total travel

Rear seat fore/aft total travel: Seat is fixed

Driver seat fore/aft position: Seat set at 117mm

Rear seat fore/aft position: Seat is fixed

SEAT BELT UPPER ANCHORAGE

The test vehicle is equipped with an adjustable "D" ring anchorage for the driver's seat position. There are 4 positions or detents. The driver's "D" ring anchorage is placed in the 2nd position from uppermost. The rear seat anchor is fixed, no adjustments.

DATA SHEET NO. 1...(continued)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

NHTSA No. M15301

Test Program: 55/28 km/h 90° Side Impact NCAP

Test Date: 12/14/00

FUEL TANK CAPACITY DATA

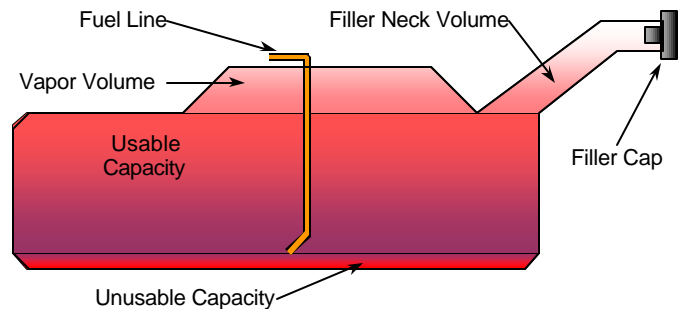
The "Usable Capacity" of the standard equipment fuel tank is: 64.7 liters

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

92-94% of "Usable Capacity" for certification to FMVSS 301 requirement: 59.7 to 61.0 liters

Actual amount of Stoddard solvent added to vehicle for certification test: 60.4 liters

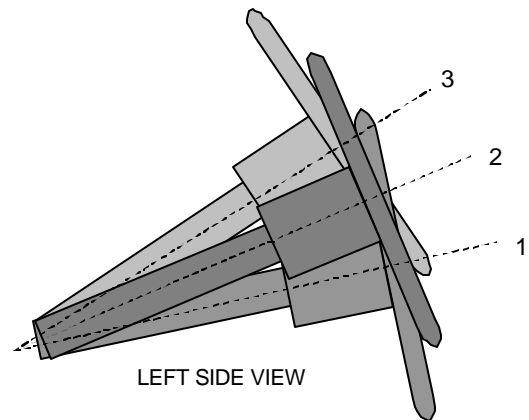
The test vehicle is equipped with an electric fuel pump. The fuel pump will operate for approximately three (3) seconds with the ignition in the "ON" position, after which the fuel pump automatically shuts off. The fuel filler door is located on the left rear fender.



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: 23°

Geometric center, position 2: 26°

Uppermost, position 3: 29°

**DATA SHEET NO. 2
TEST VEHICLE SUMMARY OF RESULTS**

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan
 Test Program: 55/28 km/h 90° Side Impact NCAP

NHTSA No.: M15301
 Test Date: 12/14/00

TEST VEHICLE WEIGHTS

	Units	As Delivered (UVW)			As Tested (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	482	311		524	386	
Right	kg	508	287		529	347	
Weight Ratio	%	62.3	37.7		59.0	41.0	
Totals	kg	990	598	1588	1053	733	1786

MAXIMUM EXTERIOR STATIC CRUSH

Level	Measured Parameter	Units	Maximum Crush	Above Ground
Level 1	Sill Top Height	mm	138	274
Level 2	Occupant H-Point	mm	328	490
Level 3	Mid Door	mm	322	589
Level 4	Window Sill	mm	409	874
Level 5	Window Top	mm	124	1345
N/A	Maximum Penetration	mm	409	

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	6
High Speed, MDB On-Board	2
Real Time, Panning	1
Total	12

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

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan
 Test Program: 55/28 km/h 90° Side Impact NCAP

NHTSA No.: M15301
 Test Date: 12/14/00

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	61.64
Trap No. 2 Velocity (Redn.)	km/h	61.1 to 62.7	62.14
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 Crush
Row	Description	Height	Distance	Direction	
A	Center of Bumper	432	800	Left	206
B	Top of Bumper	533	800	Right	101
C	Mid Level	686	800	Right	124
D	Top of Stack	813	800	Right	161

MDB INSTRUMENTATION AND CAMERAS

Accelerometers	5
Contact Switches	2
High Speed Cameras	2

**DATA SHEET NO. 4
POST TEST OBSERVATIONS**

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan
 Test Program: 55/28 km/h 90° Side Impact NCAP

NHTSA No.: M15301
 Test Date: 12/14/00

TEST DUMMY INFORMATION AND CONTACT POINTS

Description	Front Seat SID	Rear Seat SID
Dummy Type / Serial No.	P572F, SID / No. 274	P572F, SID / No. 275
Head Contact	Headrest	C-Pillar
Upper Torso Contact	Door Panel/Airbag/B-Pillar	Door Panel
Lower Torso Contact	Door Panel	Seat/Door Panel
Left Knee Contact	Door Panel/Knee	Door Panel/Knee
Right Knee Contact	Knee	Knee

POST TEST DOOR OPENING AND SEAT TRACK INFORMATION

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

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	Both Left Side Windows Broke
Other Notable Effects	No significant items to note.

AIR BAG DEPLOYMENT

Airbag Type	Driver	Front Pass.	Rear Pass.
Front Airbag	Yes	Yes	N/A
Side Airbag	Yes	N/A	N/A

MDB LEFT EDGE IMPACT POINT DATA

Measured Parameter	Units	Requirement	Value
Horizontal Offset	mm	+/- 50	15 (right)
Vertical Offset	mm	+/- 20	3 (below)

SECTION 4
OCCUPANT AND VEHICLE INFORMATION

DATA SHEET NO. 5
SID INJURY CRITERIA AND SENSOR DATA

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

NHTSA No.: M15301

Test Program: 55/28 km/h 90° Side Impact NCAP

Test Date: 12/14/00

THORAX AND PELVIS PEAK ACCELERATIONS, PRIMARY (FIR 100 Filtered)

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Upper Rib (LUR)	Y	G's	46.3	24.0	-10.9	74.5	48.8	38.3	-5.3	136.5
Lower Rib (LLR)	Y	G's	50.0	22.9	-9.5	77.0	55.6	39.3	-7.0	68.5
Lower Spine (T ₁₂)	Y	G's	69.7	33.7	-11.3	76.4	56.0	44.9	-16.4	72.1
Pelvis (PEV)	Y	G's	79.0	28.2	-13.7	72.9	52.6	34.9	-3.7	77.3

THORACIC TRAUMA INDEX (TTI) AND PELVIC ACCELERATION, PRIMARY (FIR 100 Filtered)

Location	Driver				Passenger			
	LLR	T ₁₂	TTI(g)	PEV(g)	LLR	T ₁₂	TTI(g)	PEV(g)
Primary Rib, Spine, and Pelvis	50.015	69.705	60	79	55.592	55.981	56	53

THORAX AND PELVIS PEAK ACCELERATIONS, REDUNDANT (FIR 100 Filtered)

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Upper Rib (LUR)	Y	G's	46.5	24.1	-11.5	74.2	48.4	38.1	-5.0	136.4
Lower Rib (LLR)	Y	G's	49.5	22.8	-9.8	76.8	55.8	39.2	-5.1	68.4
Lower Spine (T ₁₂)	Y	G's	69.7	33.6	-11.6	76.6	56.3	51.5	-15.8	71.9
Pelvis (PEV)	Y	G's	79.0	28.2	-14.2	73.0	52.5	34.8	-3.6	79.2

THORACIC TRAUMA INDEX (TTI) AND PELVIC ACCELERATION, REDUNDANT (FIR 100 Filtered)

Location	Driver				Passenger			
	LLR	T ₁₂	TTI(g)	PEV(g)	LLR	T ₁₂	TTI(g)	PEV(g)
Redundant Rib, Spine, and Pelvis	49.490	69.724	60	79	55.765	56.327	56	52

HEAD CG PEAK ACCELERATIONS (SAE CLASS 1000 Filtered)

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Head CG	X	G's	9.8	159.7	-19.5	80.3	6.3	166.0	-25.7	50.7
Head CG	Y	G's	24.5	41.3	-9.7	164.9	92.0	50.6	-5.9	39.7
Head CG	Z	G's	50.0	51.7	-3.6	16.6	10.5	44.9	-39.1	58.1
Head CG Resultant	N/A	G's	51.8	51.7			95.6	50.7		

HEAD INJURY CRITERIA (SAE CLASS 1000 Filtered)

Location	Driver				Passenger			
	HIC	T ¹	T ²	Avg G	HIC	T ¹	T ²	Avg G
Head CG	262.8	42.8	78.7	35.1	579.8	47.2	58.7	75.8

Positive Acceleration Polarities: Longitudinal (X) = Forward
 (Conforms to SAE J211) Lateral (Y) = Right
 Vertical (Z) = Down

DATA SHEET NO. 6

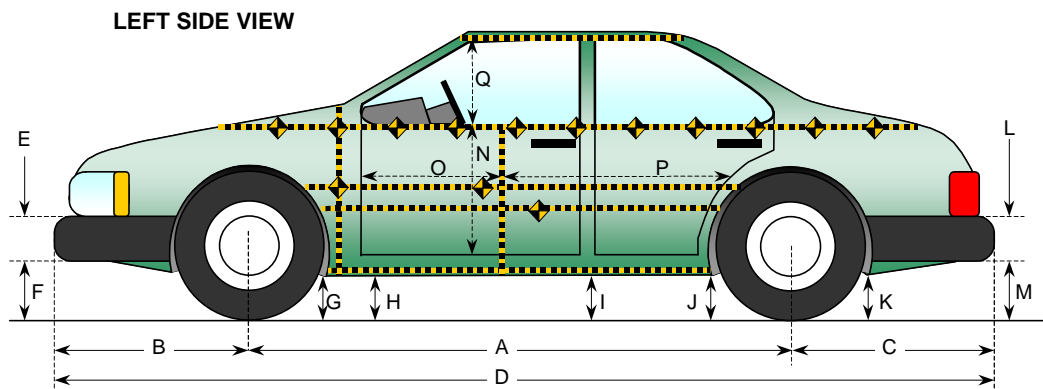
VEHICLE PRE-TEST AND POST-TEST MEASUREMENTS

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

NHTSA No.: M15301

Test Program: 55/28 km/h 90° Side Impact NCAP

Test Date: 12/14/00



All Measurements in mm

Code	Measurement Description	Pre-Test	Post-Test	Difference
A	Wheelbase	2743	2707	36
B	Front Axle To FSOV	1010	1020	-10
C	Rear Axle to RSOV	1144	1153	-9
D	Total Length at Centerline	4900	4880	20
E	Front Bumper Thickness	359	359	0
F	Front Bumper Bottom to Ground	218	245	-27
G	Sill Height at Front Wheel Well	186	220	-34
H	Sill Height at Front Door Leading Edge	189	224	-35
I	Sill Height at "B" Pillar	198	278	-80
J1	Sill Height at Rear Wheel Well	164	193	-29
J2	Pinch Weld Height at Rear Wheel Well	190	239	-49
K	Sill Height aft of Rear Wheel Well	267	313	-46
L	Rear Bumper Thickness	365	365	0
M	Rear Bumper Bottom to Ground	303	365	-62
N	Sill Height to Window Bottom Sill	603	592	11
O	Front Door Leading Edge to Impact CL	813	752	61
P	Rear Door Trailing Edge to Impact CL	1351	1228	123
Q	Front Window Opening	370	354	16
R	Right Side Length	3430	3438	-8
S	Left Side Length	3420	3375	45
T	Vehicle Width at "B" Post	1782	1630	152

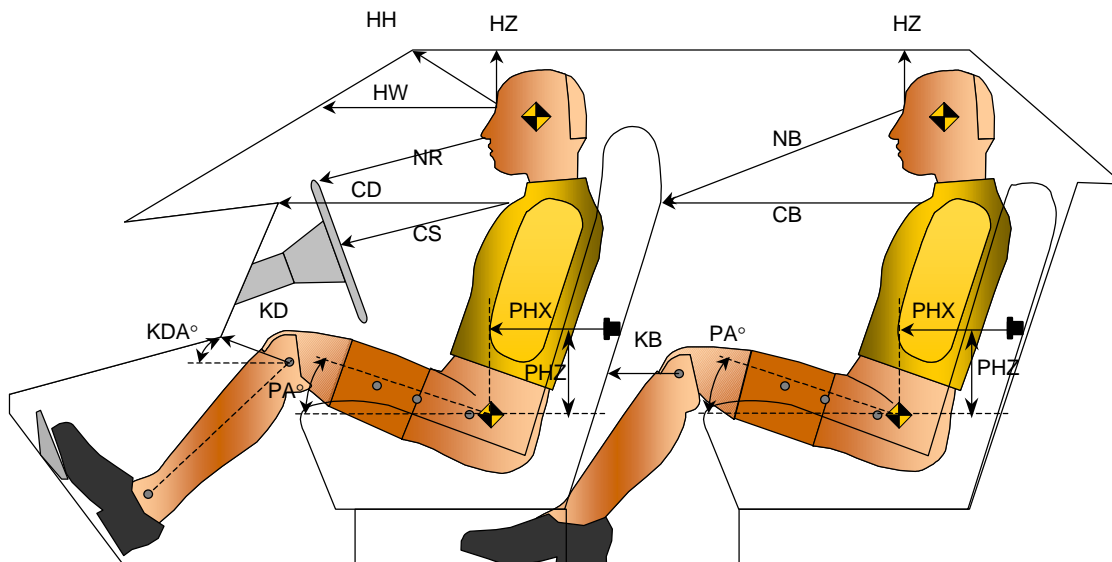
DATA SHEET NO. 7
SID LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

NHTSA No.: M15301

Test Program: 55/28 km/h 90° Side Impact NCAP

Test Date: 12/14/00

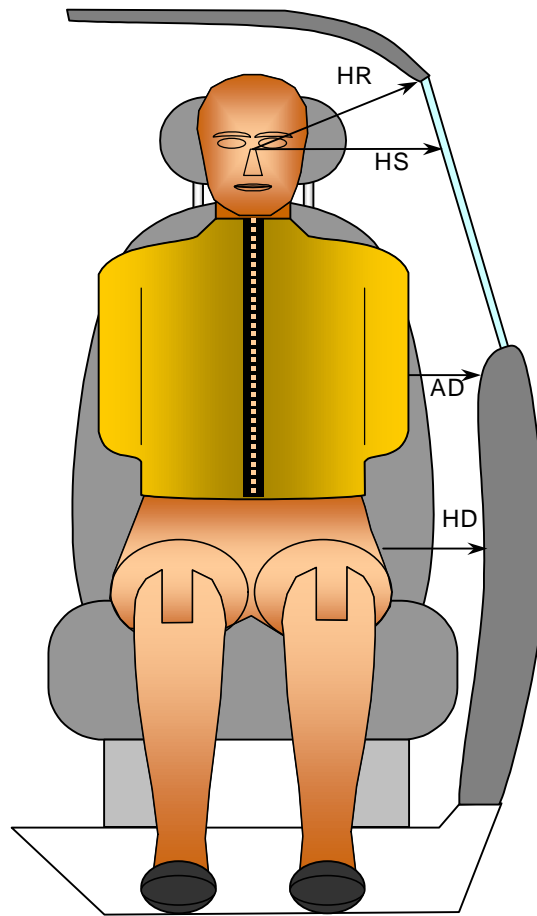


Driver Code	Pass. Code	Measurement Description	Driver		Passenger	
			Length(mm)	Angle(°)	Length(mm)	Angle(°)
HH		Head to Header	362	11		
HW		Head to Windshield	630			
HZ	HZ	Head to Roof	150	90	133	90
NR	NB	Nose to Rim/Nose to Seatback	507	14	612	25
CD	CB	Chest to Dash or Seatback	535	3	520	7
CS		Chest to Steering Wheel	350	13		
KDL	KBL	Left Knee to Dash or Seatback	182	25	235	
KDR	KBR	Right Knee to Dash or Seatback	190		244	
PA	PA	Pelvic Angle		22		24
PHX	PHX	H-Point to Striker (X-Axis)	230		292	
PHZ	PHZ	H-Point to Striker (Z-Axis)	136		298	

DATA SHEET NO. 8
SID LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan
 Test Program: 55/28 km/h 90° Side Impact NCAP

NHTSA No.: M15301
 Test Date: 12/14/00



FRONT VIEW OF DUMMY

Code	Measurement Description	Units	Driver	Passenger
HR	Head to Side Header	mm	241	205
HS	Head to Side Window	mm	329	330
AD	Arm to Door	mm	94	85
HD	H-Point to Door	mm	117	144

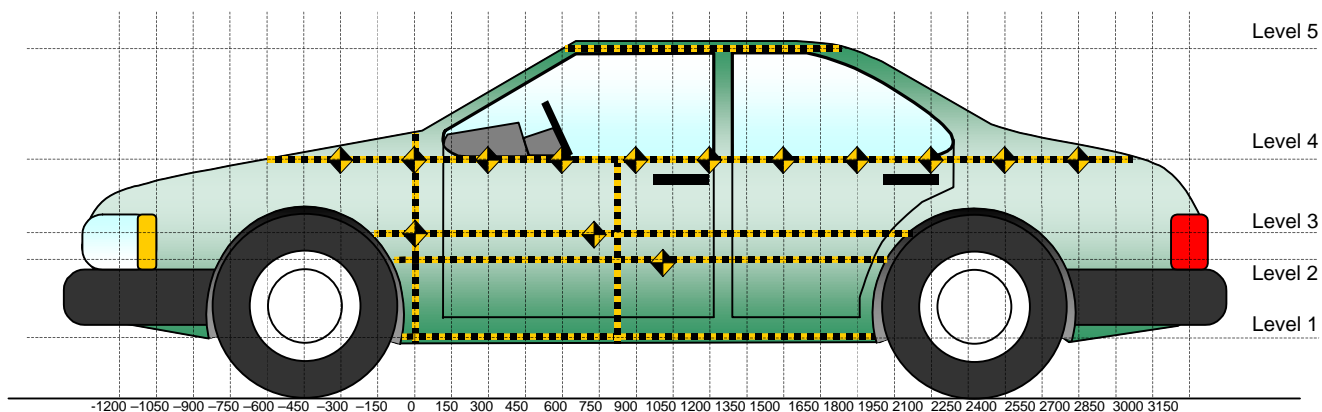
DATA SHEET NO. 9
VEHICLE SIDE MEASUREMENTS

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

NHTSA No.: M15301

Test Program: 55/28 km/h 90° Side Impact NCAP

Test Date: 12/14/00



All Measurements Shown in mm

LEFT SIDE VIEW

Measurements are taken with vehicle in the as tested condition.

Measurements taken 900mm right of impact reference.

All measurements below in mm.

Level	Measurement Description	Height Above Ground
5	Window Top	1345
4	Window Sill	874
3	Mid Door	589
2	Occupant H-Point	490
1	Sill Top	274

DATA SHEET NO. 10 - VEHICLE EXTERIOR CRUSH PROFILES

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

NHTSA No.: M15301

Test Program: 55/28 km/h 90° Side Impact NCAP

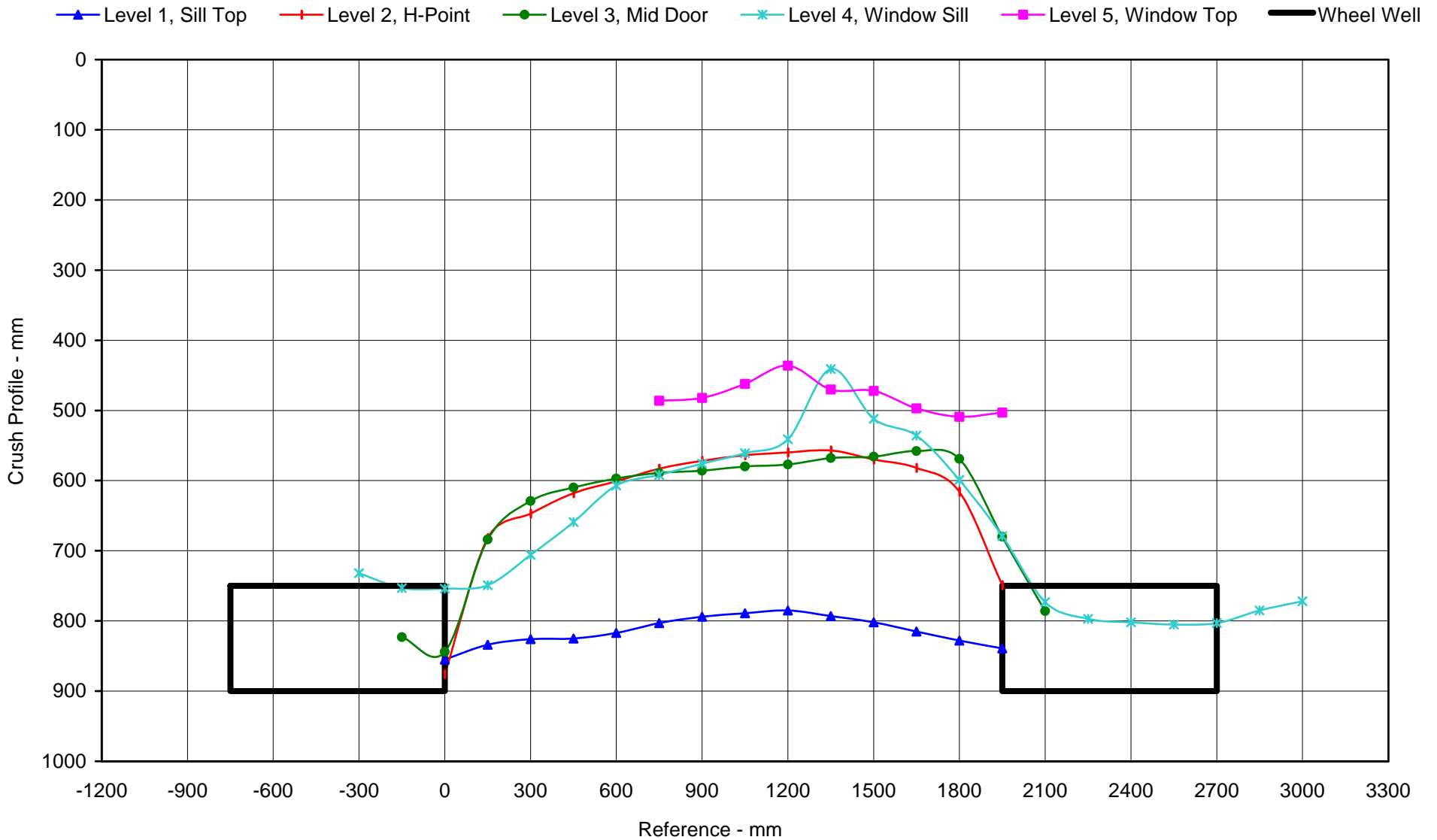
Test Date: 12/14/00

	Pre-Test					Post-Test					Difference				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
-900															
-750															
-600															
-450															
-300				756					732					24	
-150			889	784				823	753				66	31	
0	924	883	878	797		855	876	844	754		69	7	34	43	
150	925	883	878	809		834	682	684	749		91	201	194	60	
300	925	883	879	818		826	647	629	706		99	236	250	112	
450	925	885	881	829		825	618	610	659		100	267	271	170	
600	925	885	883	833		817	601	597	607		108	284	286	226	
750	925	886	884	839	517	803	583	589	592	486	122	303	295	247	31
900	925	886	884	843	544	794	572	586	576	482	131	314	298	267	62
1050	925	887	884	847	552	789	564	580	561	462	136	323	304	286	90
1200	923	886	884	848	560	785	560	577	541	436	138	326	307	307	124
1350	923	885	882	850	557	793	557	568	441	470	130	328	314	409	87
1500	923	884	881	851	559	802	570	566	512	472	121	314	315	339	87
1650	923	883	880	854	559	815	582	558	536	497	108	301	322	318	62
1800	923	882	878	854	550	828	616	569	599	509	95	266	309	255	41
1950	924	879	877	854	530	839	749	680	679	503	85	130	197	175	27
2100			887	853				786	773				101	80	
2250				850					797					53	
2400				844					802					42	
2550				834					805					29	
2700				824					803					21	
2850				804					785					19	
3000				787					772					15	

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

DATA SHEET NO. 10...(continued)

18



Maximum Crush, Level 1: 138 mm at 1200 mm
 Maximum Crush, Level 2: 328 mm at 1350 mm
 Maximum Crush, Level 3: 322 mm at 1650 mm
 Maximum Crush, Level 4: 409 mm at 1350 mm
 Maximum Crush, Level 5: 124 mm at 1200 mm

Test Program: 55/28 km/h 90° Side Impact NCAP No.: M15301
 Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan
 Test Date: 12/14/00



KAR21003-05

DATA SHEET NO. 11

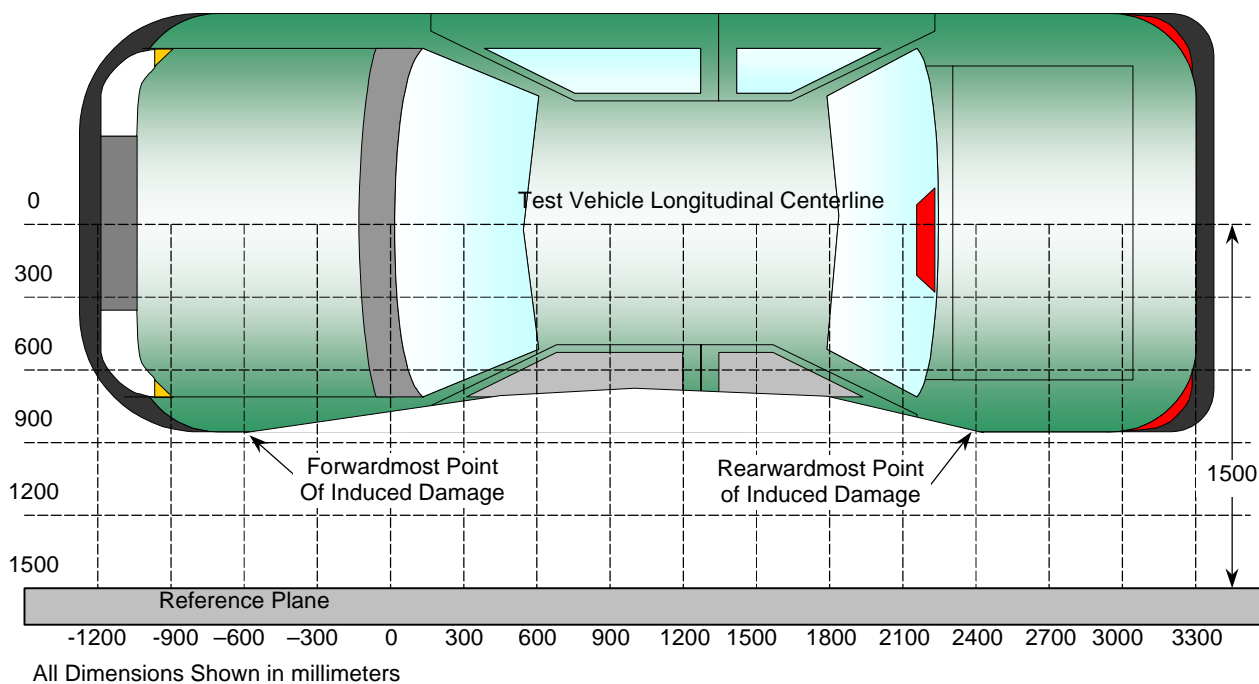
VEHICLE DAMAGE PROFILE DISTANCES

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

NHTSA No.: M15301

Test Program: 55/28 km/h 90° Side Impact NCAP

Test Date: 12/14/00



TOP VIEW

Damage Profile Distances

DPD	Distance From Impact Point in mm	Level	Pre-Test (mm)	Post-Test (mm)	Max Static Crush (mm)
1	-300	4	756	732	24
2	300	3	879	629	250
3	1050	2	887	564	323
4	1650	3	880	558	322
5	2250	4	850	797	53
6	3000	4	787	772	15

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

DATA SHEET NO. 12

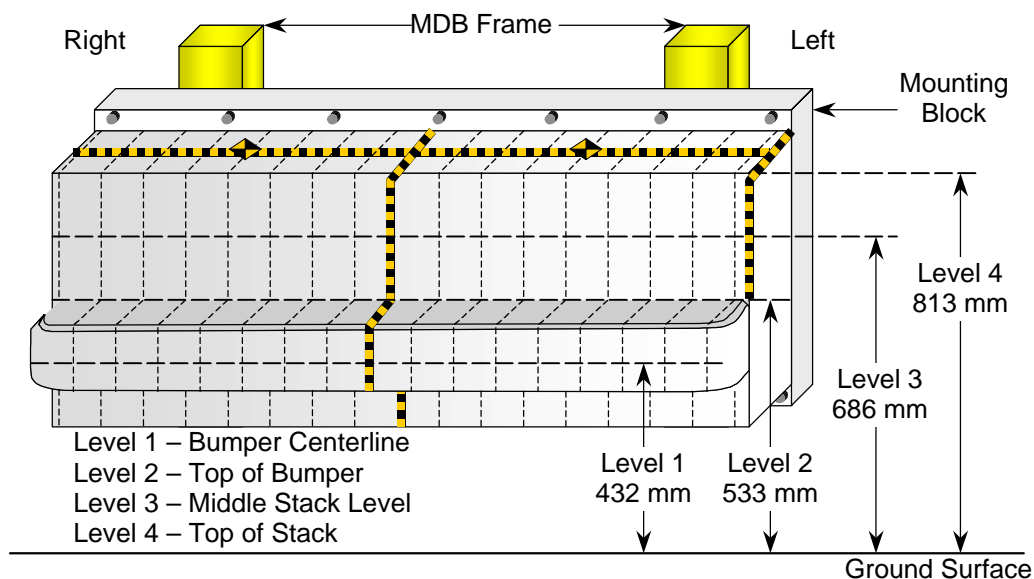
DEFORMABLE BARRIER HONEYCOMB FACE STATIC CRUSH

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

NHTSA No.: M15301

Test Program: 55/28 km/h 90° Side Impact NCAP

Test Date: 12/14/00



DEFORMABLE BARRIER STATIC CRUSH

Stack	Distance Right of Center								C _L	Distance Left of Center							
	800	700	600	500	400	300	200	100		0	100	200	300	400	500	600	700
1	206	178	160	142	131	131	126	125	121	121	122	126	126	131	138	153	174
2	99	86	69	56	50	49	50	46	44	45	53	58	63	70	76	87	101
3	43	9	0	-1	0	6	21	20	16	11	14	18	24	31	47	-16	124
4	54	6	-16	-19	-19	-17	15	6	4	2	9	16	22	46	82	121	161

All Dimensions in mm

DATA SHEET NO. 13

VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY

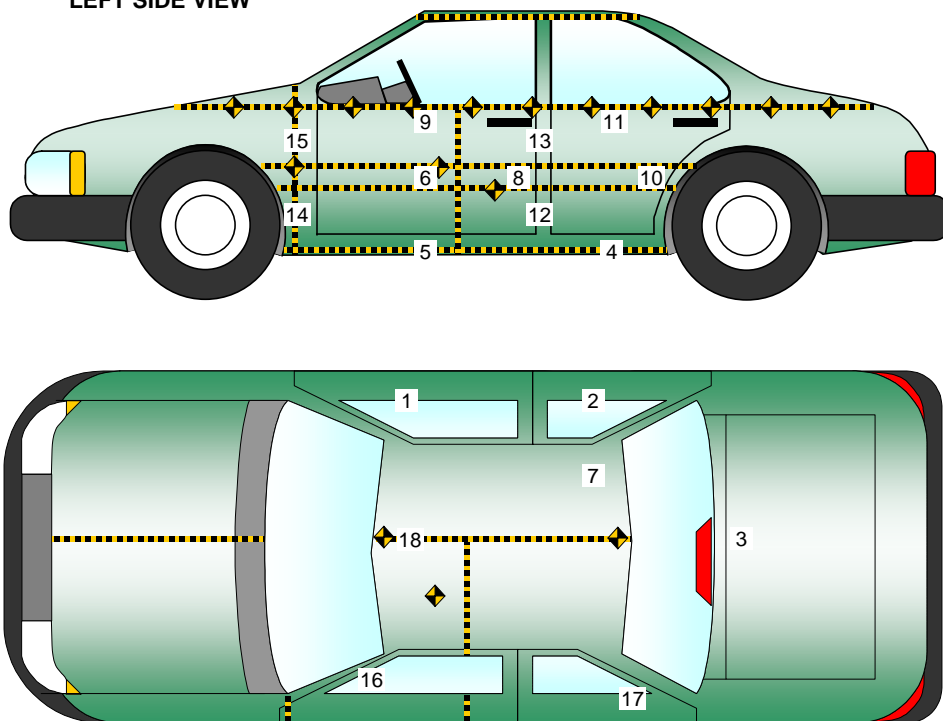
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

NHTSA No.: M15301

Test Program: 55/28 km/h 90° Side Impact NCAP

Test Date: 12/14/00

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: 2001 Acura 3.2 TL 4 Door Sedan

NHTSA No.: M15301

Test Program: 55/28 km/h 90° Side Impact NCAP

Test Date: 12/14/00

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	2850	700	360	X	4.5	64.2	-6.0	9.8
					Y	22.1	6.9	-2.1	138.1
					Z	4.5	65.0	-4.9	19.1
					RES	22.4	7.0		
2	Right Sill at Rear Seat	1910	700	360	X	5.0	64.0	-5.5	10.2
					Y	25.0	6.9	-2.1	132.9
					Z	5.6	39.1	-5.1	25.6
					RES	25.2	6.9		
3	Rear Floorpan Above Axle	935	395	480	X	4.1	64.3	-3.7	20.4
					Y	23.0	32.4	-2.6	109.7
					Z	9.4	43.6	-5.4	19.6
					RES	23.3	32.6		
4	Left Sill at Rear Door	1810	-665	225	Y	26.5	5.0	-1.5	144.0
5	Left Sill at Front Door	2830	-650	200	Y	31.7	15.6	-3.8	61.7
6	Front Door Centerline	2800	-765	740	Y	132.5	8.1	-91.4	25.8
7	Rear Occupant Compartment	2230	445	210	Y	27.1	6.5	-2.6	145.6
8	Front Door Mid-Rear	2405	-770	725	Y	147.1	4.8	-52.7	23.7*
9	Front Door Upper Centerline	2770	-755	855	Y	192.5	15.5	-166.5	37.6*
10	Rear Door Mid-Rear	1550	-770	715	Y	156.2	9.3	-68.3	25.4
11	Rear Door Upper Centerline	1860	-770	885	Y	169.8	14.2	-92.2	28.6
12	B-Post Lower	2260	-705	580	Y	199.6	4.5	-60.3	13.5
13	B-Post Middle	2260	-705	695	Y	174.5	4.3	-31.2	13.6
14	A-Post Lower	3335	-815	525	Y	152.3	3.5	-18.9	10.3
15	A-Post Middle	3335	-815	730	Y	48.6	3.3	-11.1	17.4
16	Front Seat Track	2870	-560	310	Y	33.9	16.5	-33.5	24.7
17	Rear Seat Structure				Y				
18	Vehicle CG	2020	0	330	X	3.9	13.8	-10.7	8.3
					Y	22.7	6.0	-1.8	133.9
					Z	20.7	8.4	-9.7	35.6
					RES	29.2	8.2		

* Channels failed, check plot for failure times

** Not installed

DATA SHEET NO. 14
MDB ACCELEROMETER LOCATION AND DATA SUMMARY

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan
 Test Program: 55/28 km/h 90° Side Impact NCAP

NHTSA No.: M15301
 Test Date: 12/14/00

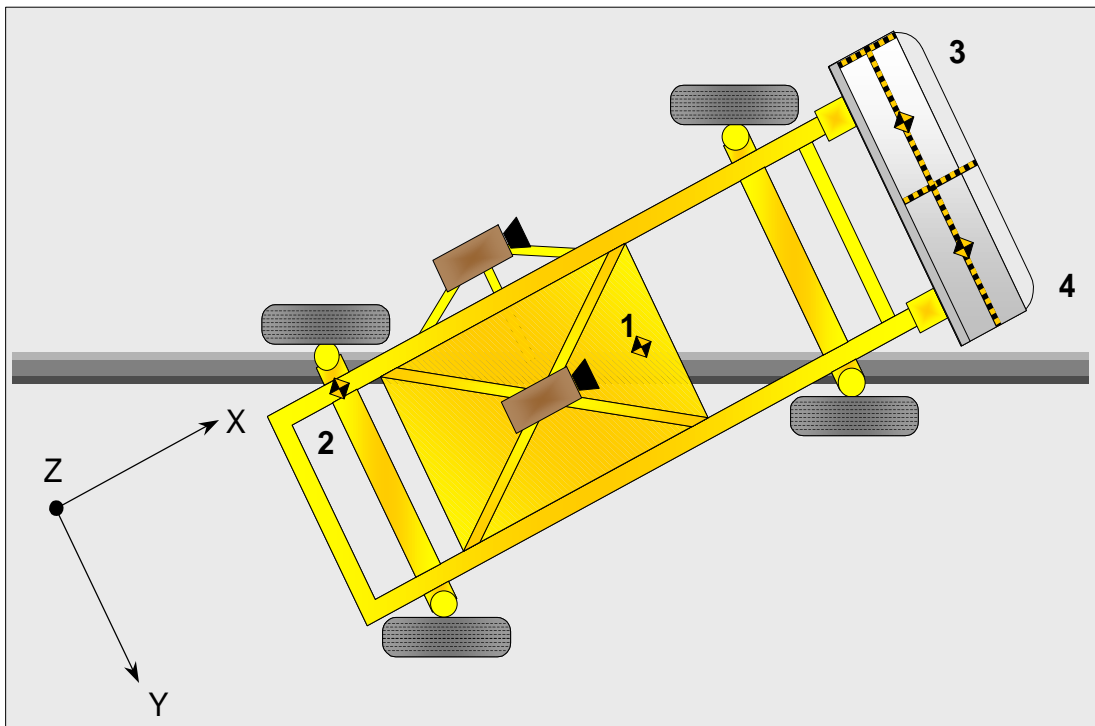
MDB ACCELEROMETER PEAK DATA AND LOCATIONS

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	2.0	181.4	-20.7	42.5
					Y	2.9	170.0	-6.6	37.3
					Z	13.1	157.6	-11.4	26.8
					RES	21.1	37.1		
2	MDB Rear	-2642	-593	608	X	2.6	100.9	-22.8	35.9
					Y	2.9	6.9	-6.7	34.6

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.	105.2	5.4	52.6	-0.3



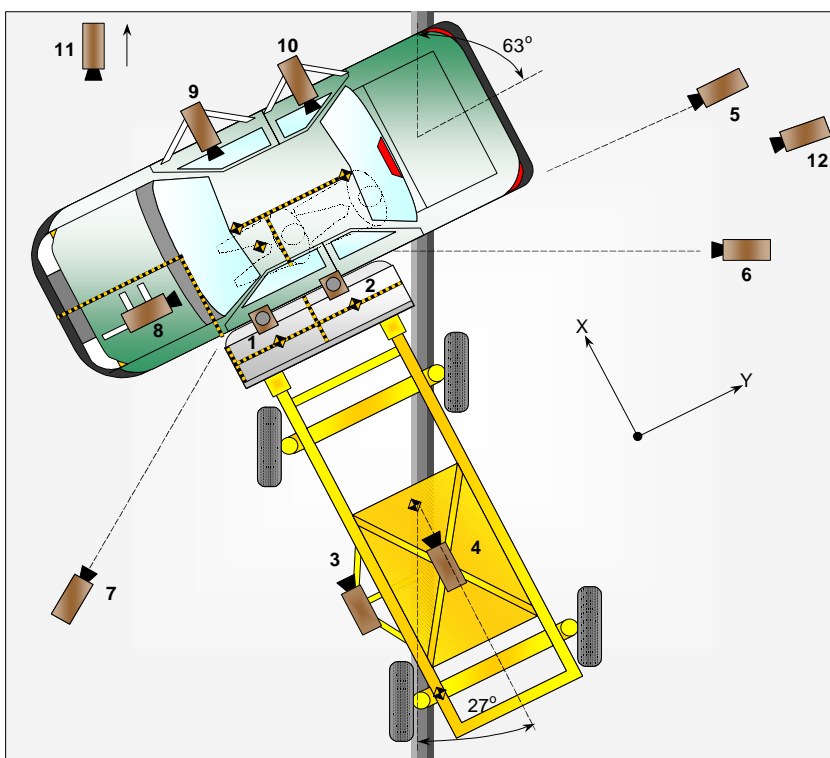
DATA SHEET NO. 15
HIGH SPEED CAMERA LOCATIONS AND DATA

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

NHTSA No.: M15301

Test Program: 55/28 km/h 90° Side Impact NCAP

Test Date: 12/14/00



No.	Camera View	Location (mm)			Angle (deg.)	Lens (mm)	Film Speed (fr./sec.)
		X	Y	Z			
1	Overhead Overall	1676	-762	5486	-86	10	911
2	Overhead Close-up	-762	0	5791	-82	24	1007
3	MDB Onboard, Impact Point Close-Up	-2134	0	1143	-7	13	812
4	MDB Onboard, Centerline of Impact	-3048	-1676	1829	-4	13	982
5	Right Side, Ground Level, Overall	9144	-18288	2210	-1	25	1060
6	Right Side, Ground Level, Close-up	0	-18898	1524	0	60	1000
7	Left Side, Ground Level, Close-up	-2362	-5410	1448	-6	13	1020
8	Vehicle Onboard Front SID, Front	-305	1219	1478	-10	19	1006
9	Vehicle Onboard Front SID, Side	1624	914	1173	0	19	1011
10	Vehicle Onboard Rear SID, Side	1981	0	1173	0	10	1021
11	Front View In-line with Track	108051	229	1021	0	80	490
12	Real Time Coverage	3072	20040	2350	N/A	N/A	24

DATA SHEET NO. 16

FMVSS 301 FUEL SYSTEM INTEGRITY POST IMPACT DATA

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

NHTSA No.: M15301

Test Program: 55/28 km/h 90° Side Impact NCAP

Test Date: 12/14/00

Test Time: 11:25 AM

Temperature at Time of Impact: 12.7 °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

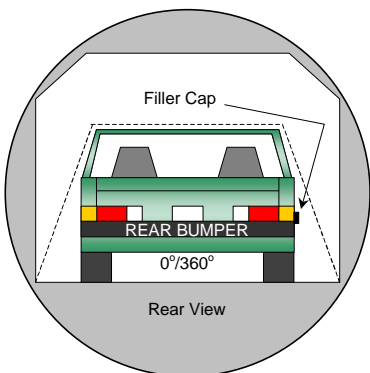
FMVSS 301 STATIC ROLLOVER DATA SHEET

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

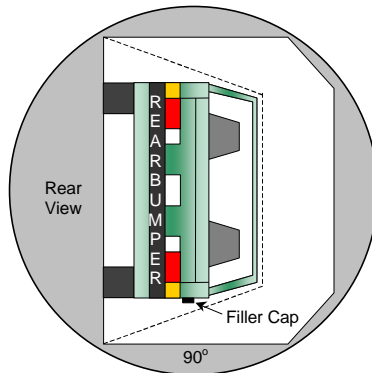
NHTSA No.: M15301

Test Program: 55/28 km/h 90° Side Impact NCAP

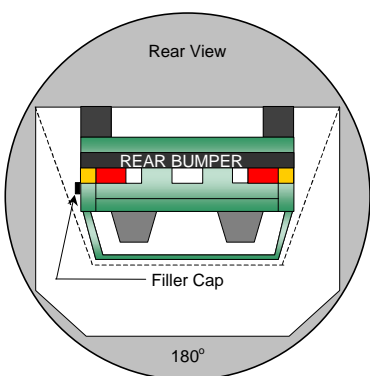
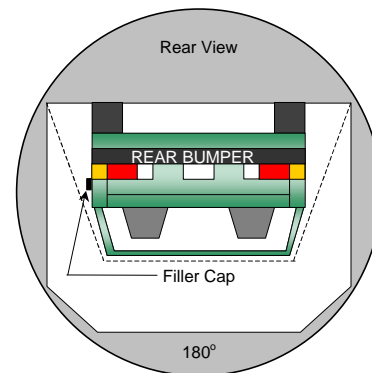
Test Date: 12/14/00



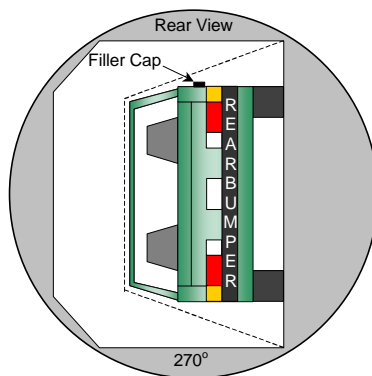
0° TO 90°



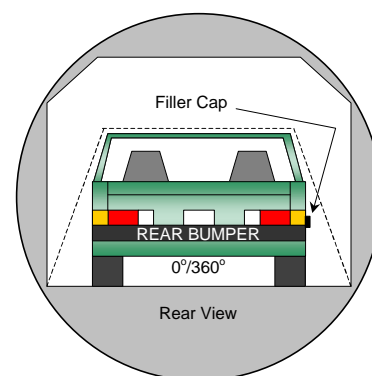
90° TO 180°



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°	80	300	0.0
90° to 180°	80	300	0.0
180° to 270°	80	300	0.0
270° to 360°	80	300	0.0

**APPENDIX A
PHOTOGRAPHS**

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Figure A-1: Left Front, as Received



Figure A-2: Right Rear, as Received

MFD. BY HONDA OF AMERICA MFG., INC. 9/00
GVWR 4400LBS GAWR F 2425LBS R 2050LBS
THIS VEHICLE CONFORMS TO ALL APPLICABLE
FEDERAL MOTOR VEHICLE SAFETY, BUMPER,
AND THEFT PREVENTION STANDARDS IN EFFECT
ON THE DATE OF MANUFACTURE SHOWN ABOVE:

V.I.N. **19UUA56681A002096**



PASSENGER CAR

Figure A-3: Vehicle Certification Label

SIDE AIRBAG (A8)

- This car is equipped with side airbags in the driver's and passenger's seat.
- Do not lean against the door.
- See owner's manual for

TIRE INFORMATION		VEHICLE CAPACITY WEIGHT	850LBS	
SEATING CAPACITY		TOTAL 5	FRONT 2 REAR 3	
RECOMMENDED TIRE SIZE	COLD TIRE INFLATION PRESSURE		SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION	
P205/60R16 91V	FRONT	220KPA , 32PSI		
	REAR	220KPA , 32PSI		
COMPACT SPARE TIRE	UP TO VEHICLE CAPACITY WEIGHT		42762-S0K-A000	
T135/80R16 101M	420KPA , 60PSI			

G87P
L3 150K A

Figure A-4: Vehicle Tire Label



Figure A-5: Front View, Pre-Test



Figure A-6: Front View, Post-Test



A-7

KAR21003-05

Figure A-7: Rear View, Pre-Test



Figure A-8: Rear View, Post-Test



Figure A-9: Left (Impacted) Side View, Pre-Test



A-10

KAR21003-05

Figure A-10: Left (Impacted) Side View, Post-Test

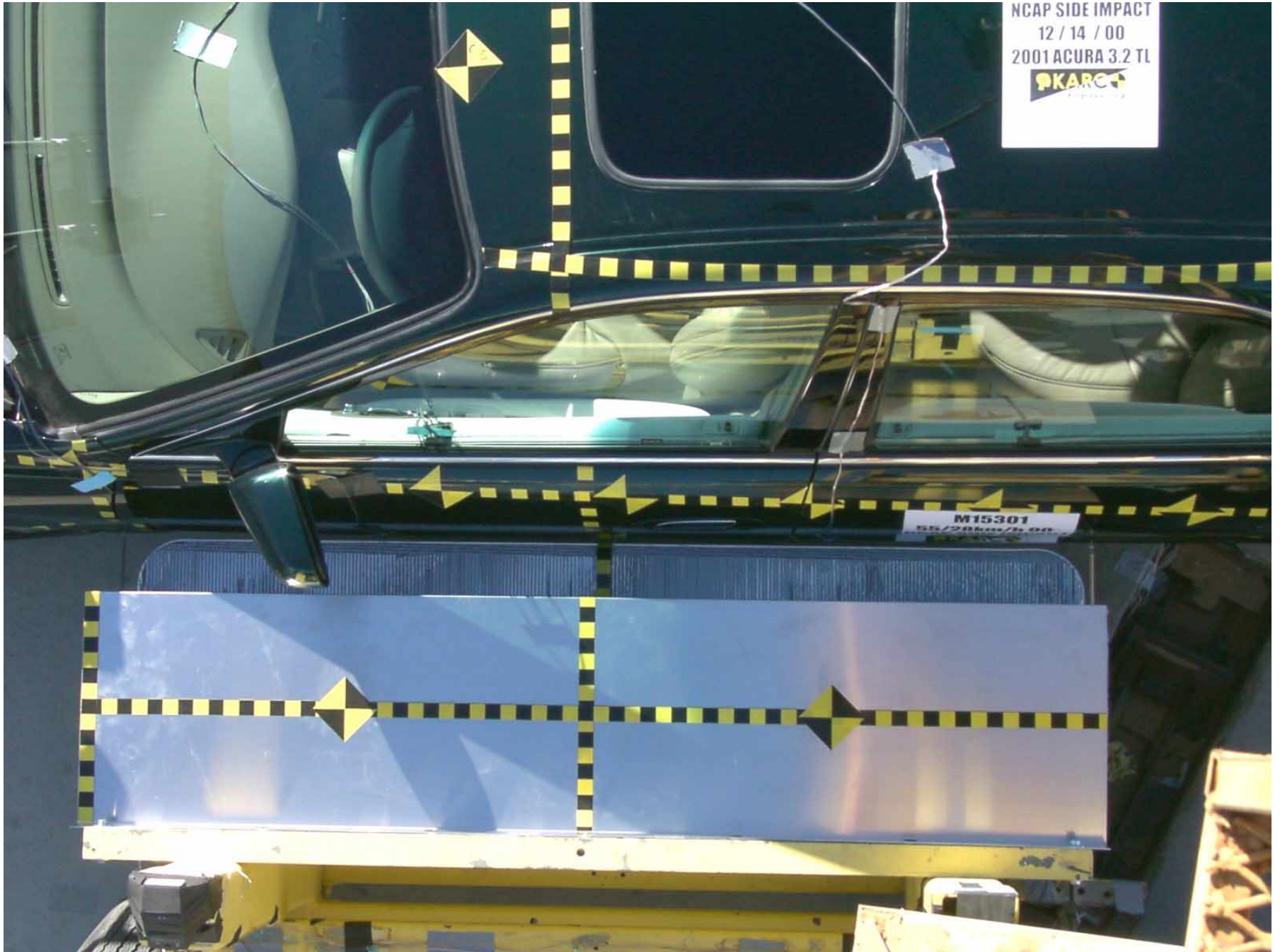


Figure A-11: Overhead Close-up View at Impact Position, Pre-Test



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Figure A-12: Overhead Overall View, Pre-Test



Figure A-13: Overhead Overall View, Post-Test



Figure A-14: MDB Left Side View at Impact Position, Pre-Test



Figure A-15: MDB Right Side View at Impact Position, Pre-Test



Figure A-16: Impact Point Target Close-up, Pre-Test



Figure A-17: Impact Point Target Close-up, Post-Test



Figure A-18: Driver Dummy Left Side with Door Open, Pre-Test



Figure A-19: Driver Dummy Left Side, Pre-test



Figure A-20: Driver Dummy Left Side, Post-Test



Figure A-21: Driver Dummy Clearance, Pre-Test



Figure A-22: Driver Dummy Clearance, Post-Test



Figure A-23: Driver Dummy Inside View, Pre-Test



Figure A-24: Driver Dummy Inside View, Post-Test



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Figure A-25: Driver Door Inside View, Pre-Test



Figure A-26: Driver Dummy Contact Points Inside View, Post-Test



Figure A-27: Passenger Dummy Left Side with Door Open, Pre-Test



Figure A-28: Passenger Dummy Left Side, Pre-Test



Figure A-29: Passenger Dummy Left Side, Post-Test



Figure A-30: Passenger Dummy Clearance, Pre-Test



Figure A-31: Passenger Dummy Clearance, Post-Test



Figure A-32: Passenger Dummy Inside View, Pre-Test



Figure A-33: Passenger Dummy Inside View, Post-Test



Figure A-34: Passenger Door Inside View, Pre-Test

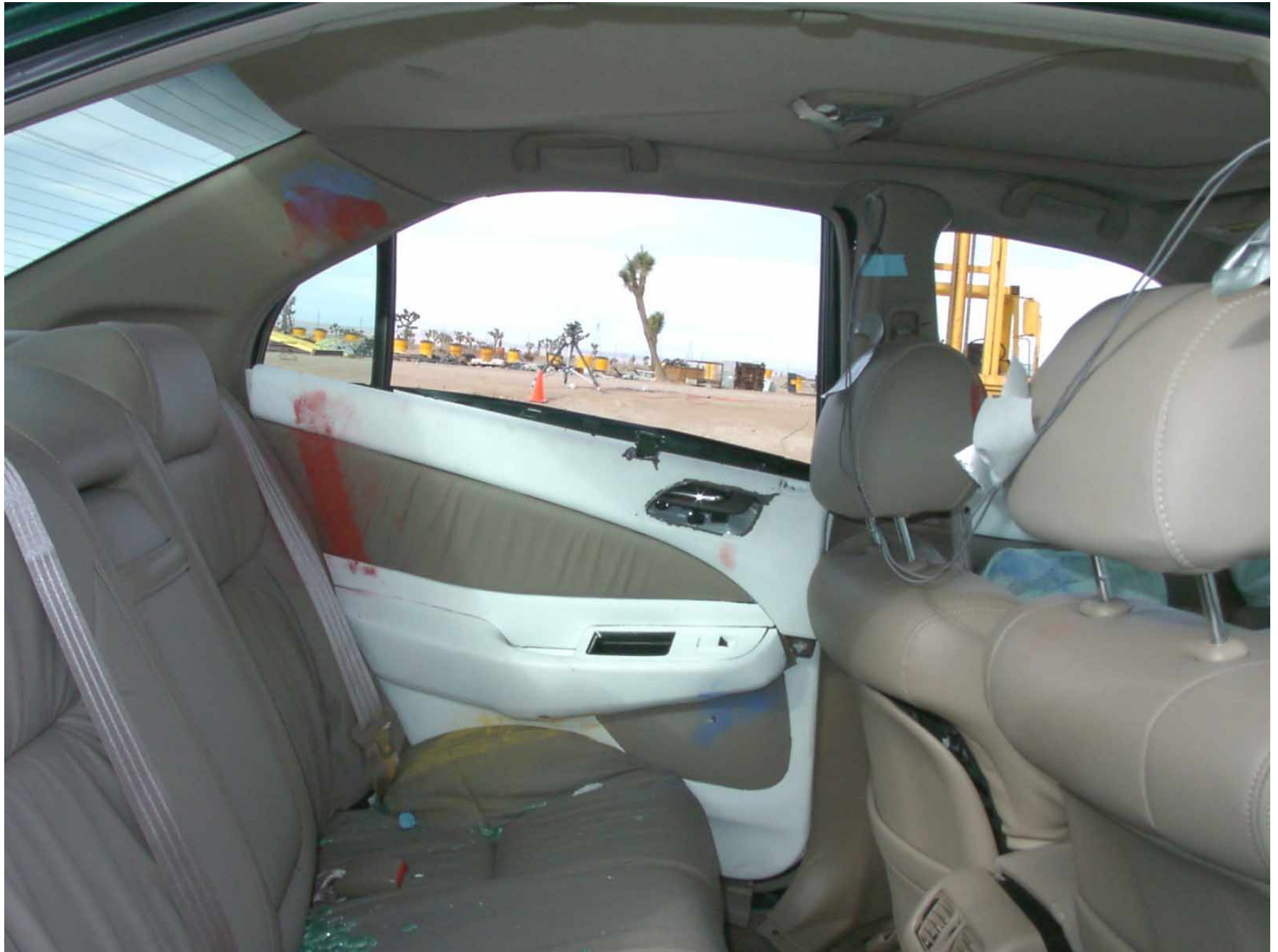


Figure A-35: Passenger Dummy Contact Points Inside View, Post-Test

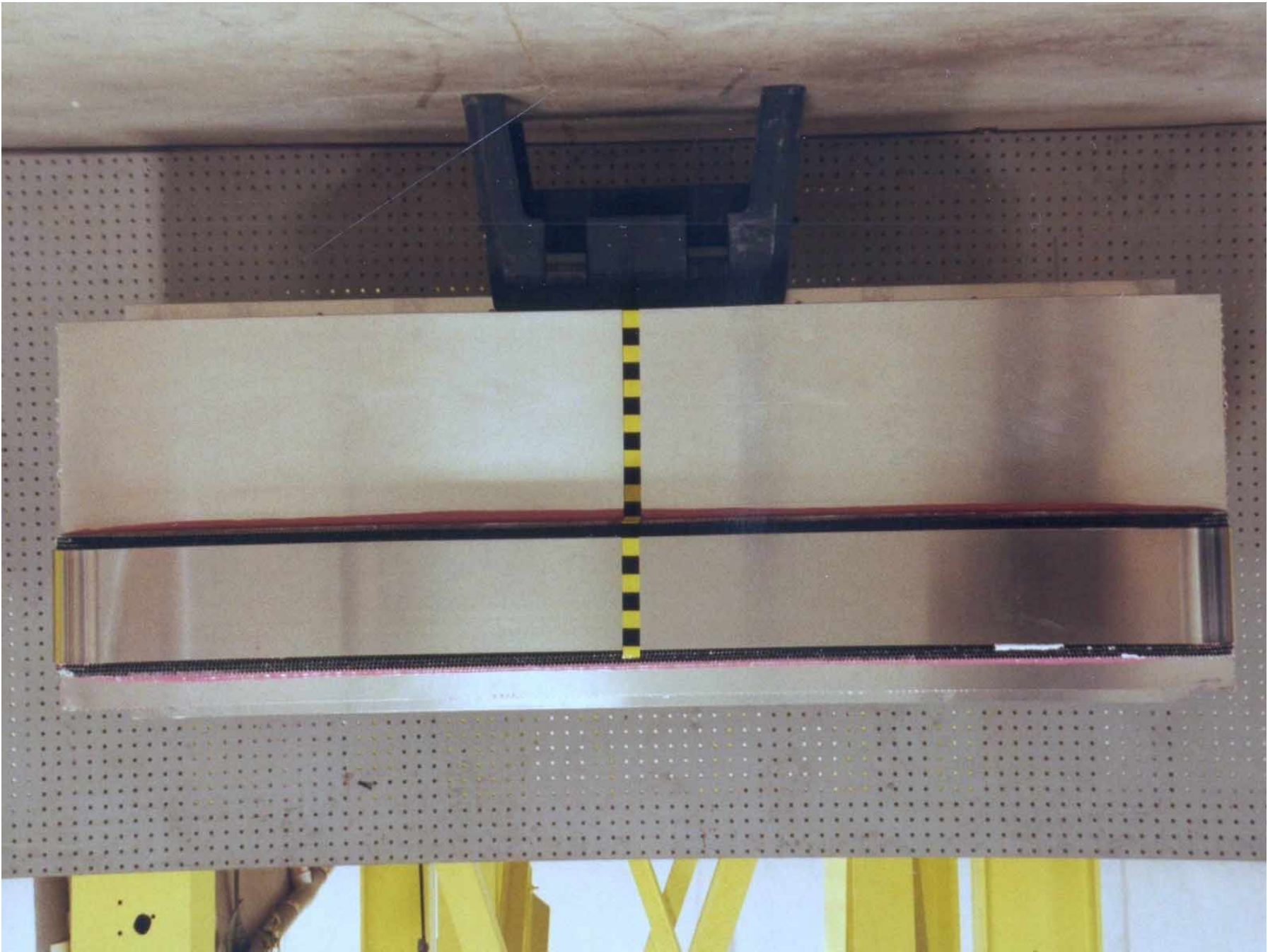


Figure A-36: Front View of Deformable Barrier, Pre-Test



Figure A-37: Front View of Deformable Barrier, Post-Test

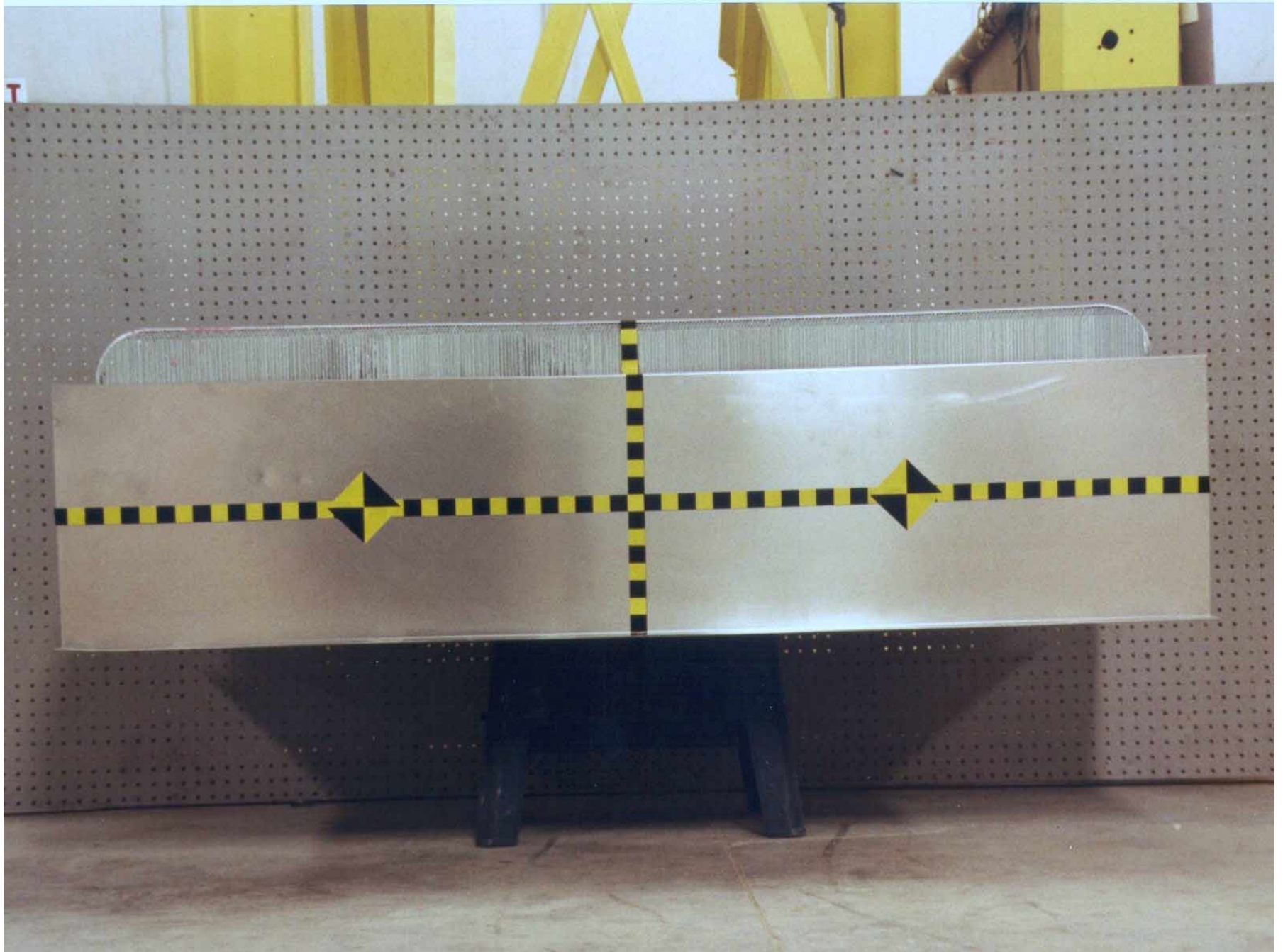


Figure A-38: Top View of Deformable Barrier, Pre-Test



Figure A-39: Top View of Deformable Barrier, Post-Test

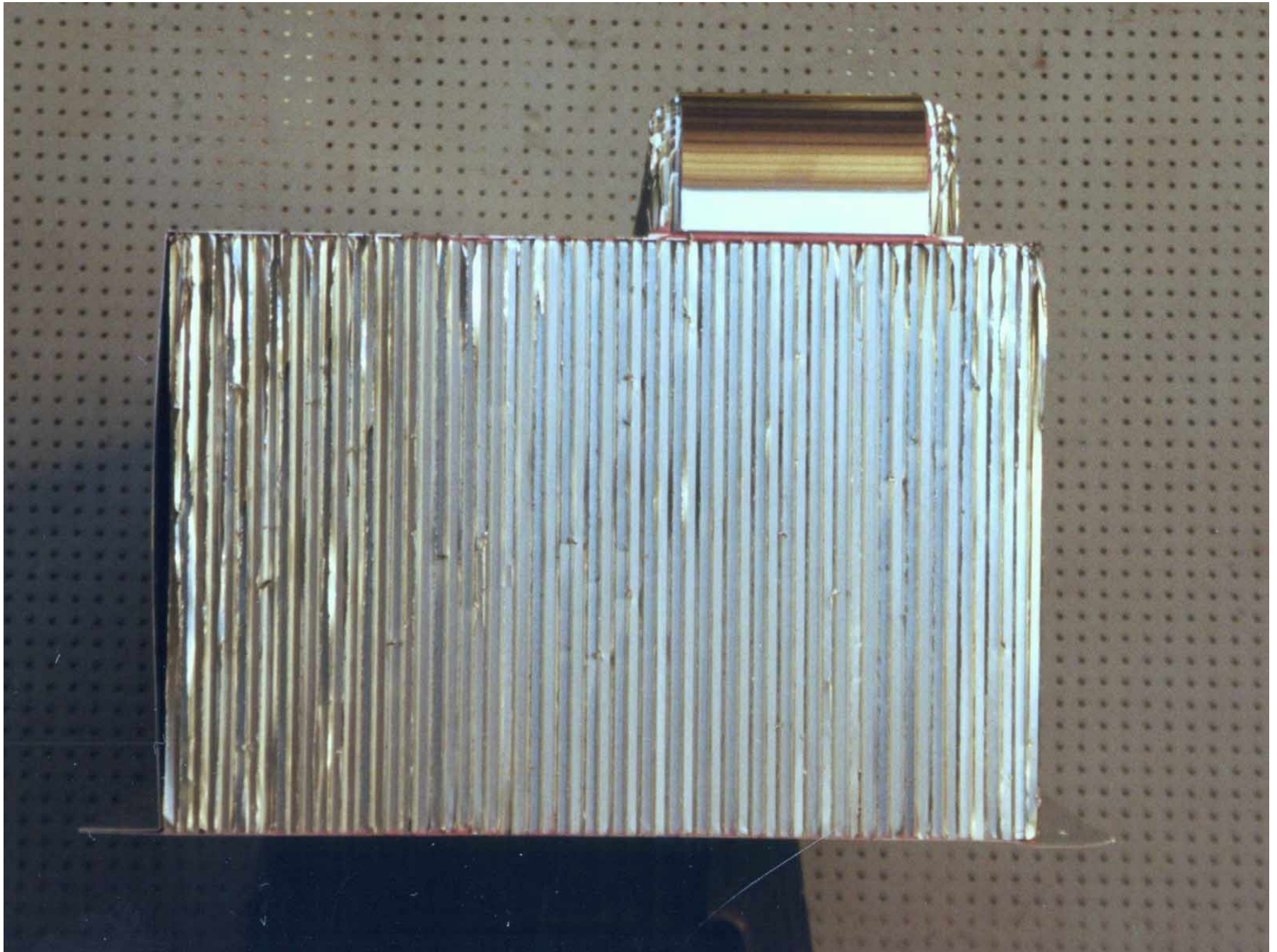


Figure A-40: Right Side View of Deformable Barrier, Pre-Test



Figure A-41: Right Side View of Deformable Barrier, Post-Test



Figure A-42: Left Side View of Deformable Barrier, Pre-Test



Figure A-43: Left Side View of Deformable Barrier, Post-Test



Figure A-44: Vehicle on Rollover Device, Top View

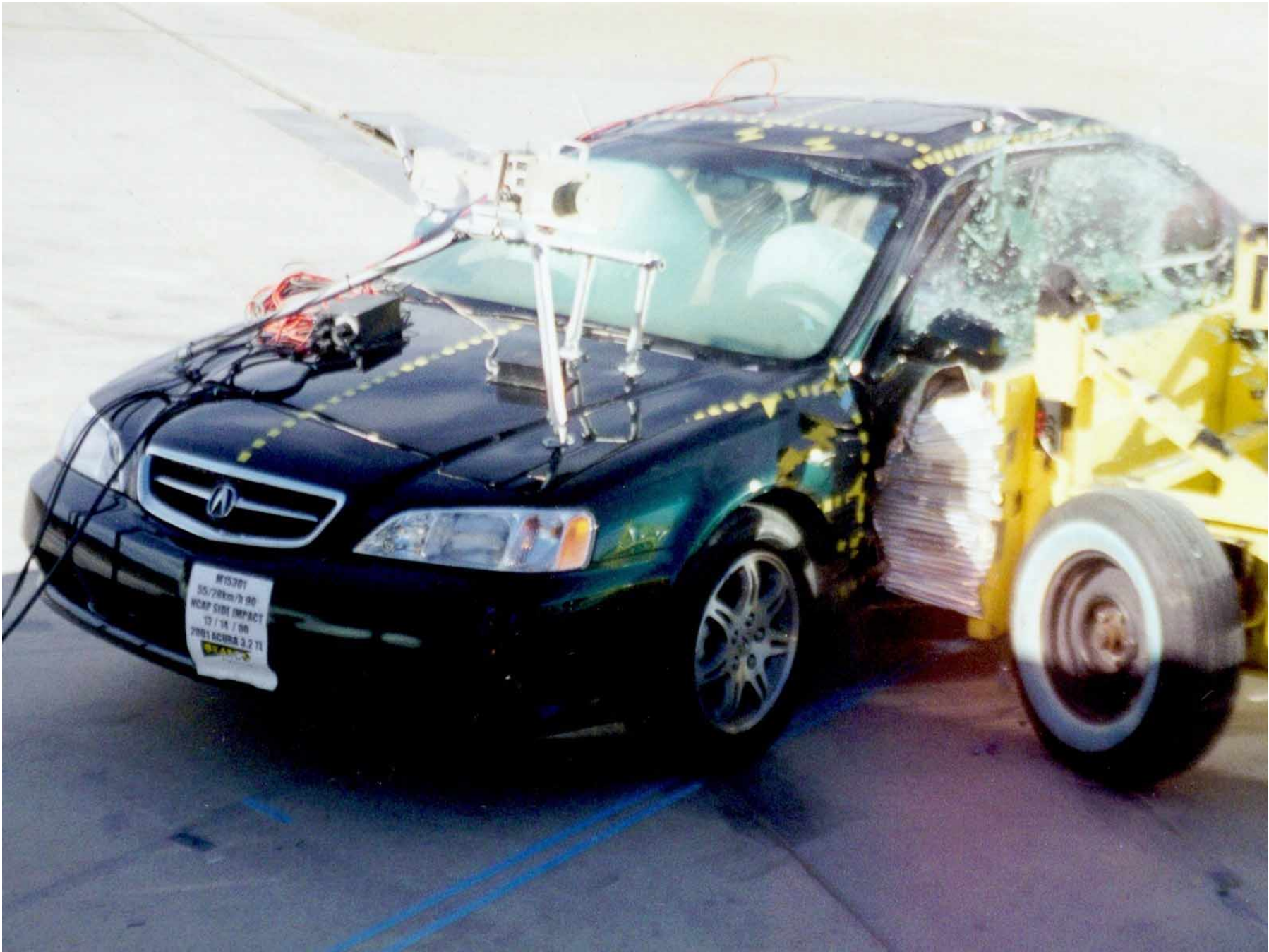


Figure A-45: Vehicle During Impact

APPENDIX B
SID, VEHICLE, AND MDB RESPONSE DATA

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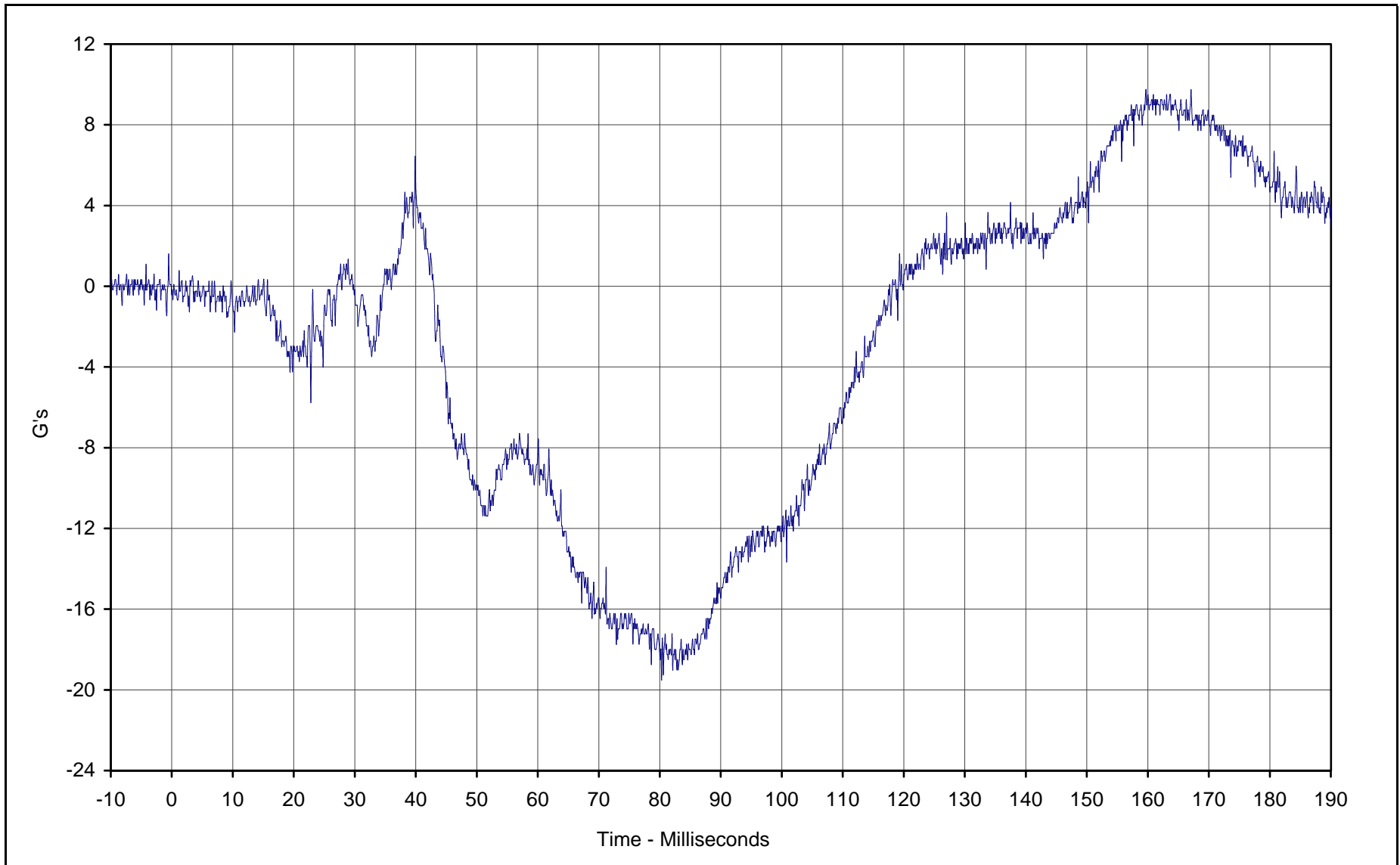
LIST OF DATA PLOTS, MDB

Data Plot		Page
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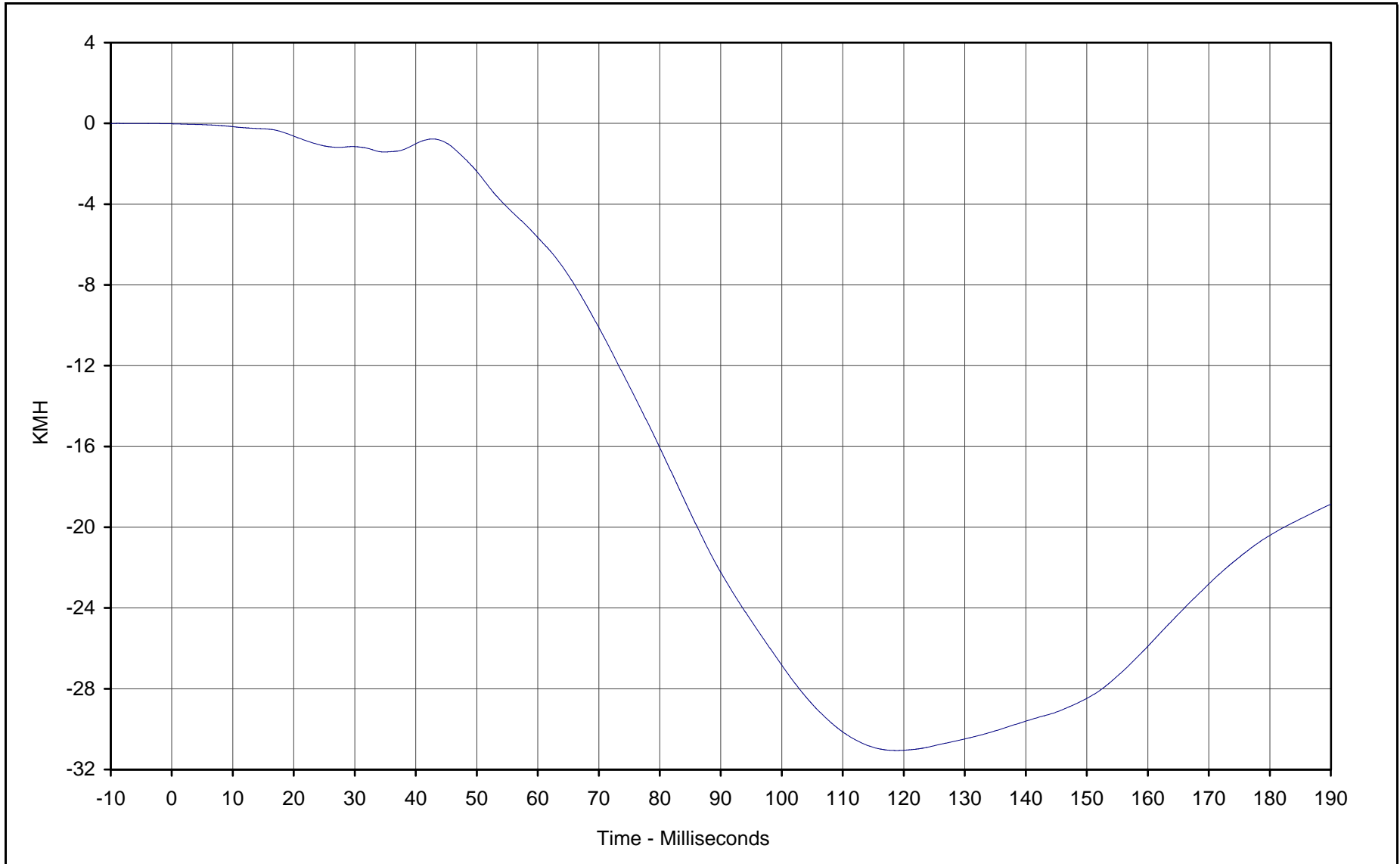
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Minimum Value: -19.5 at 80.3 Milliseconds
SAE Filter Class: 1000
Date of Test: 12/14/00
Curve Number: FIL-001

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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B-2

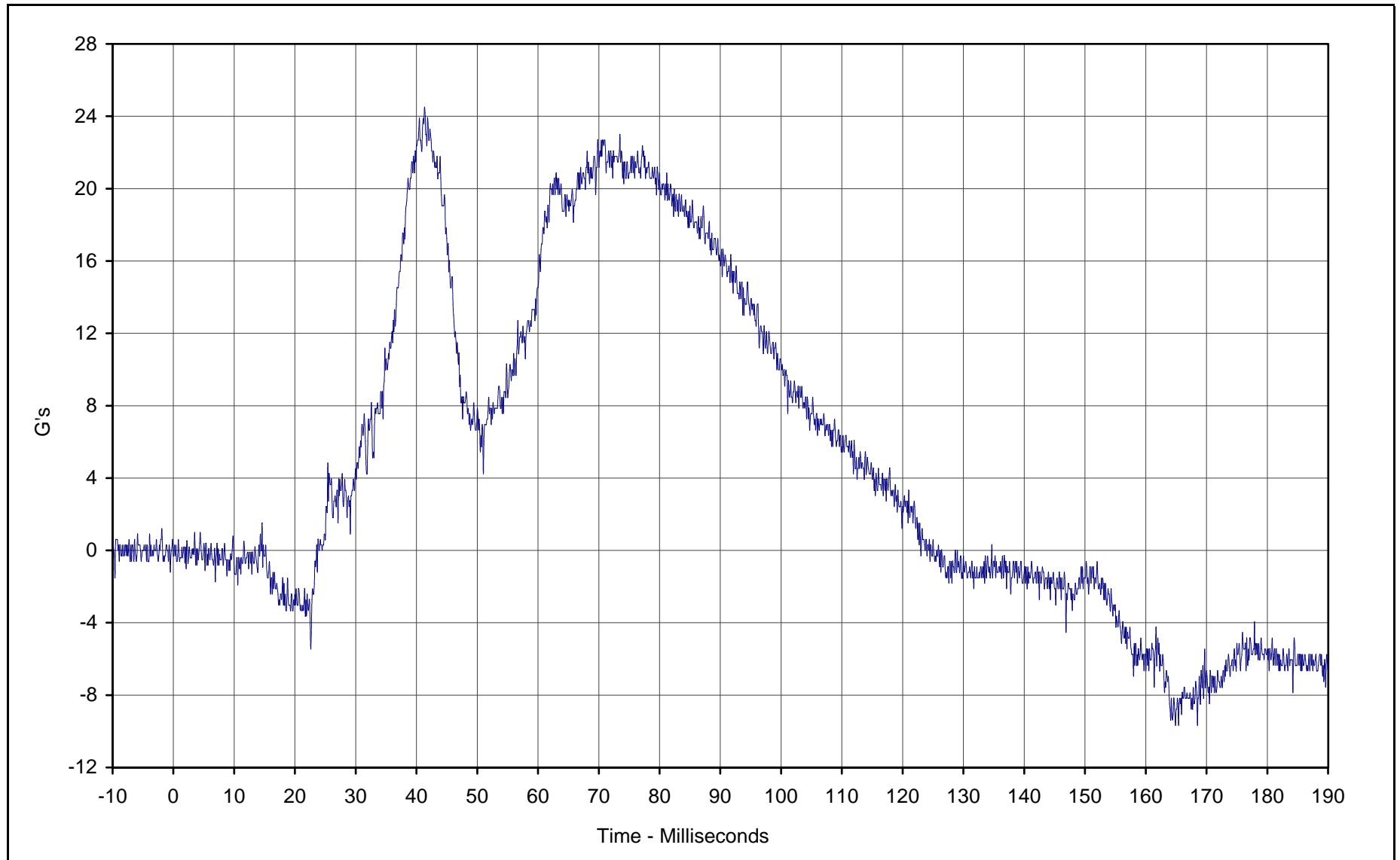


Curve Description: Driver Head CG X Velocity
Maximum Value: 0.0 at 0.0 Milliseconds
Minimum Value: -31.1 at 118.9 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: IN1-001

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



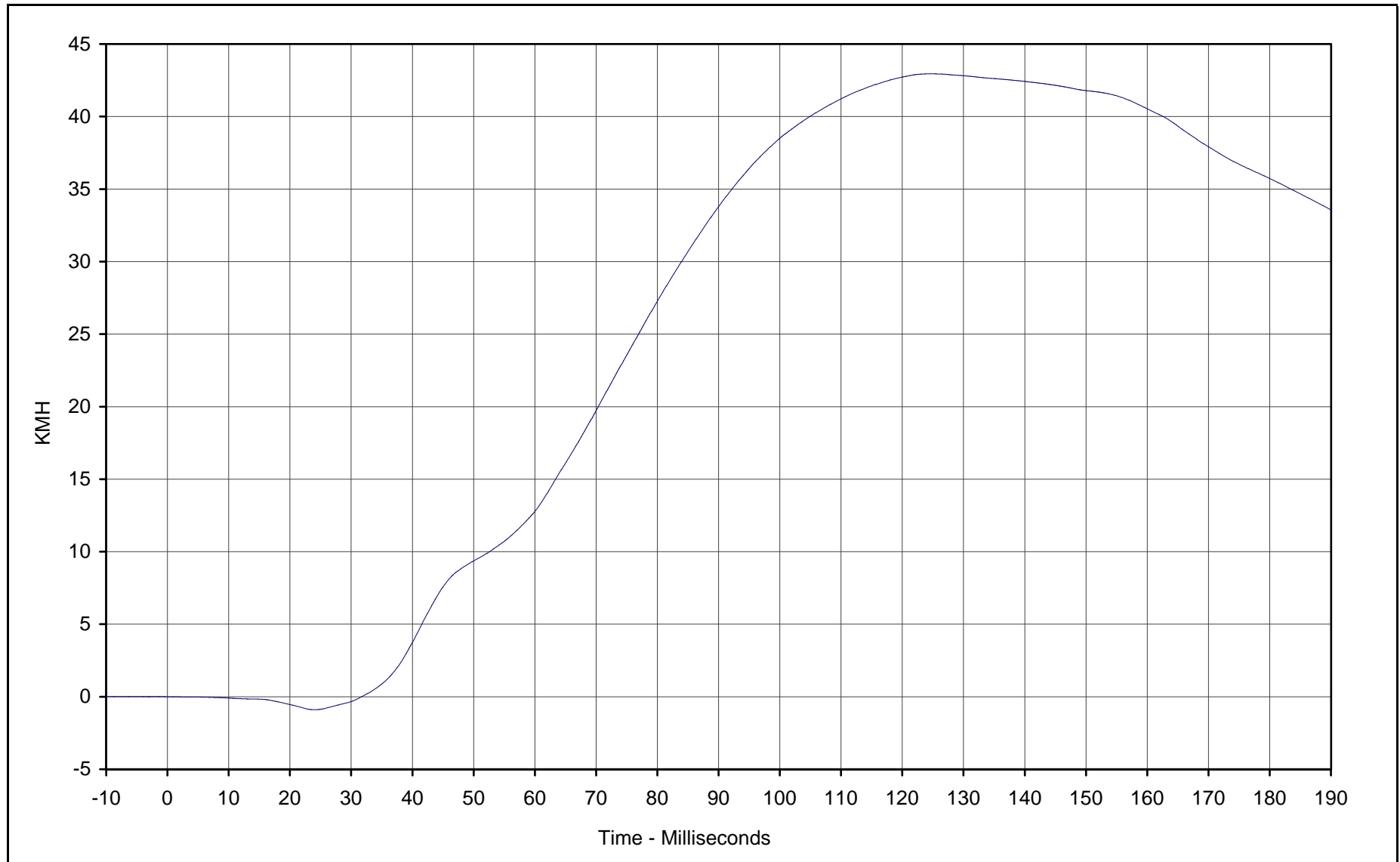
KAR21003-05



Curve Description: Driver Head CG Y
 Maximum Value: 24.5 at 41.3 Milliseconds
 Minimum Value: -9.7 at 164.9 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 12/14/00
 Curve Number: FIL-002

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
 Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan





Curve Description: Driver Head CG Y Velocity

Maximum Value: 42.9 at 124.6 Milliseconds

Minimum Value: -0.9 at 24.0 Milliseconds

SAE Filter Class: 180

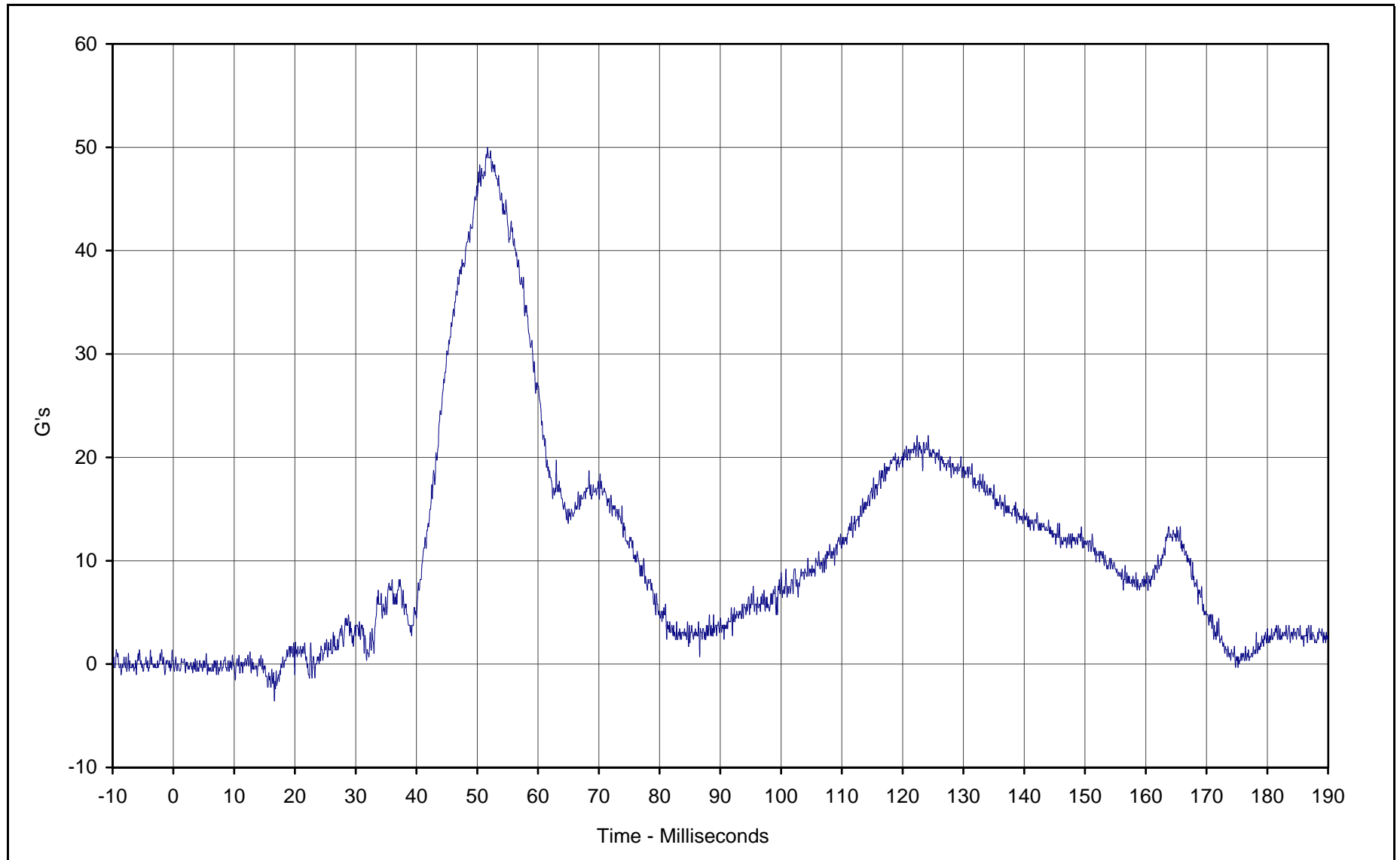
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Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

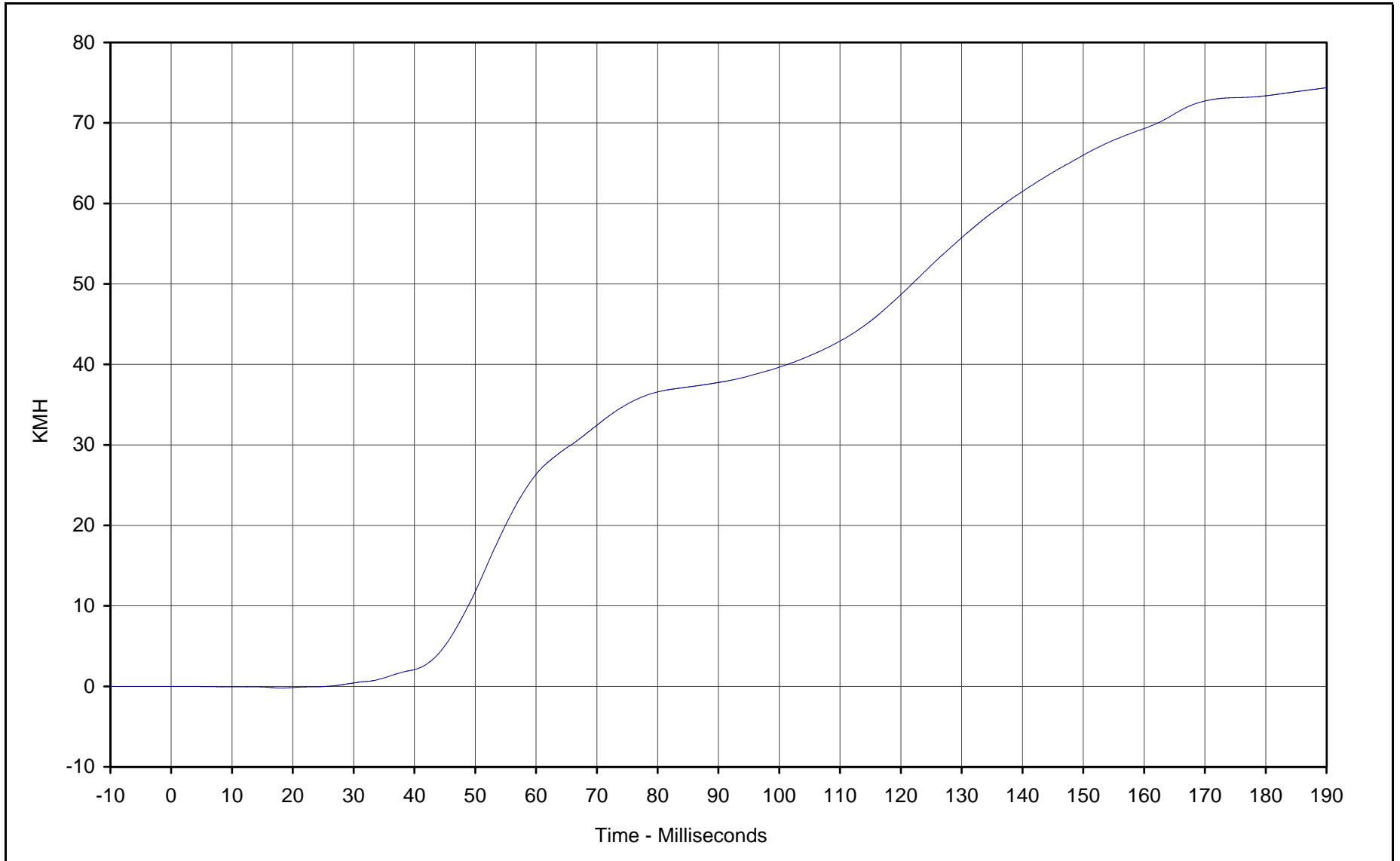




Curve Description: Driver Head CG Z
 Maximum Value: 50.0 at 51.7 Milliseconds
 Minimum Value: -3.6 at 16.6 Milliseconds
 SAE Filter Class: 1000
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 Curve Number: FIL-003

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
 Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

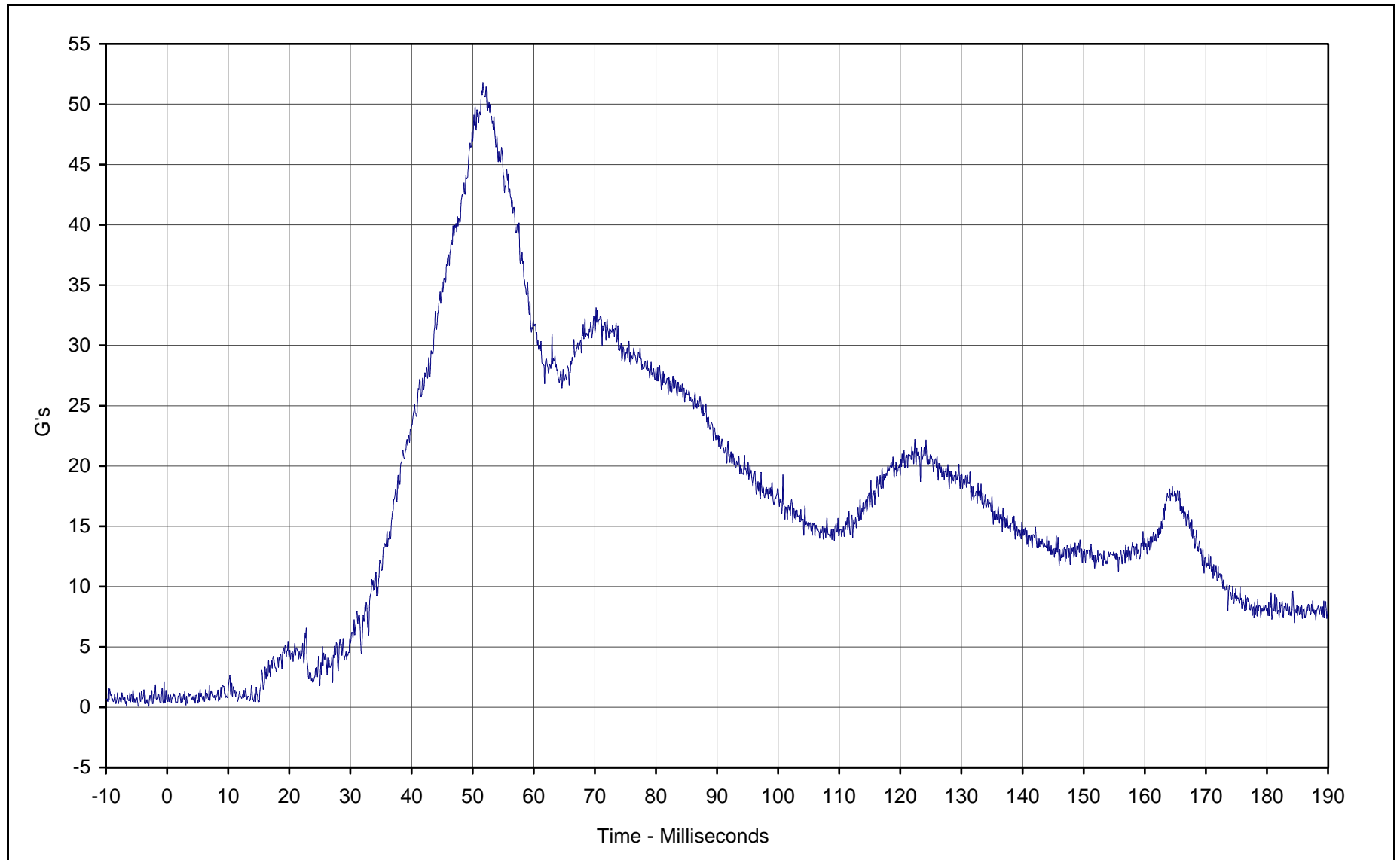




Curve Description: Driver Head CG Z Velocity
Maximum Value: 74.4 at 189.9 Milliseconds
Minimum Value: -0.2 at 18.1 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: IN1-003

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



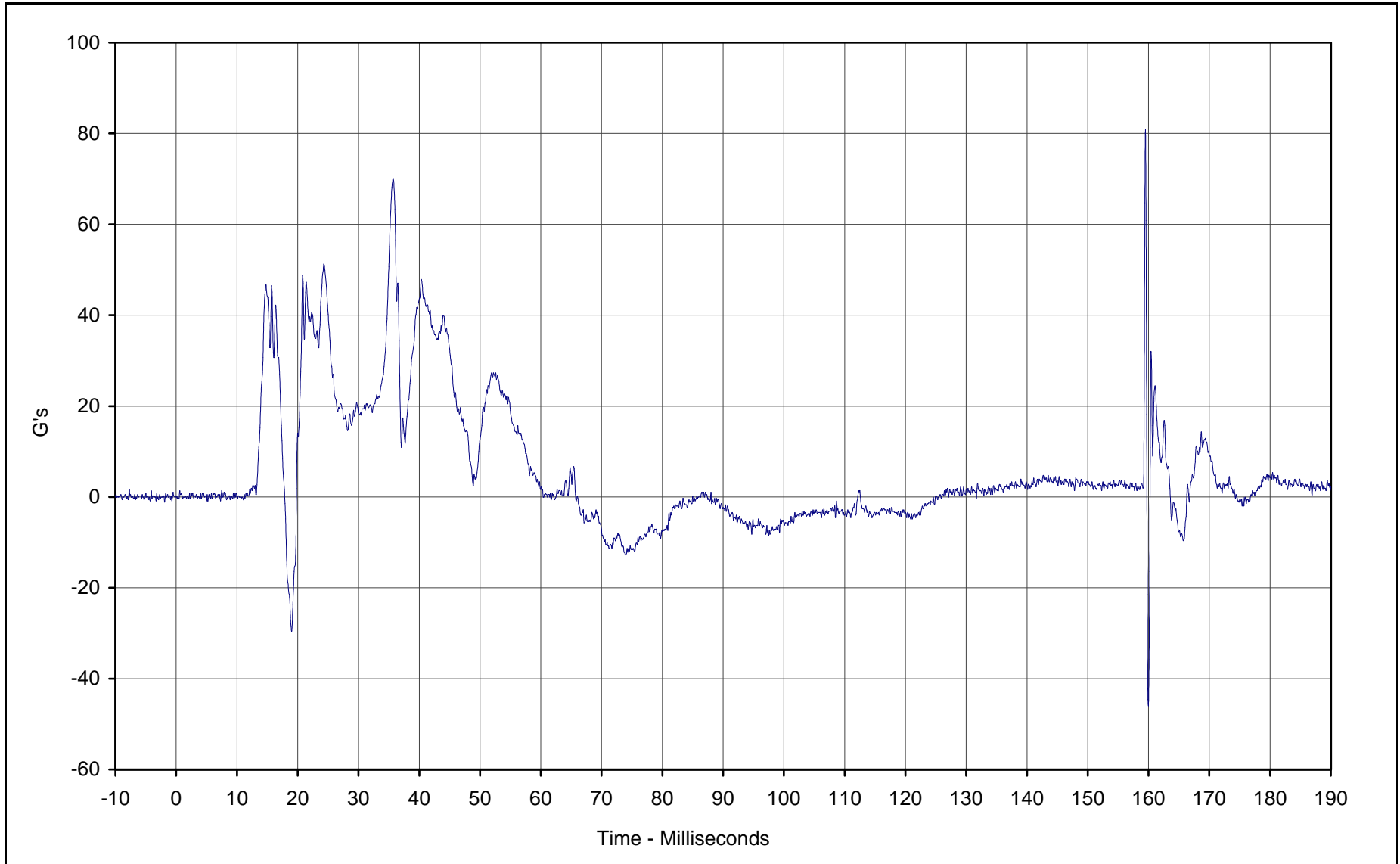


Curve Description: Driver Head CG Resultant
 Maximum Value: 51.8 at 51.7 Milliseconds
 Minimum Value: 0.2 at 3.1 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 12/14/00
 Curve Number: RES-001

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
 Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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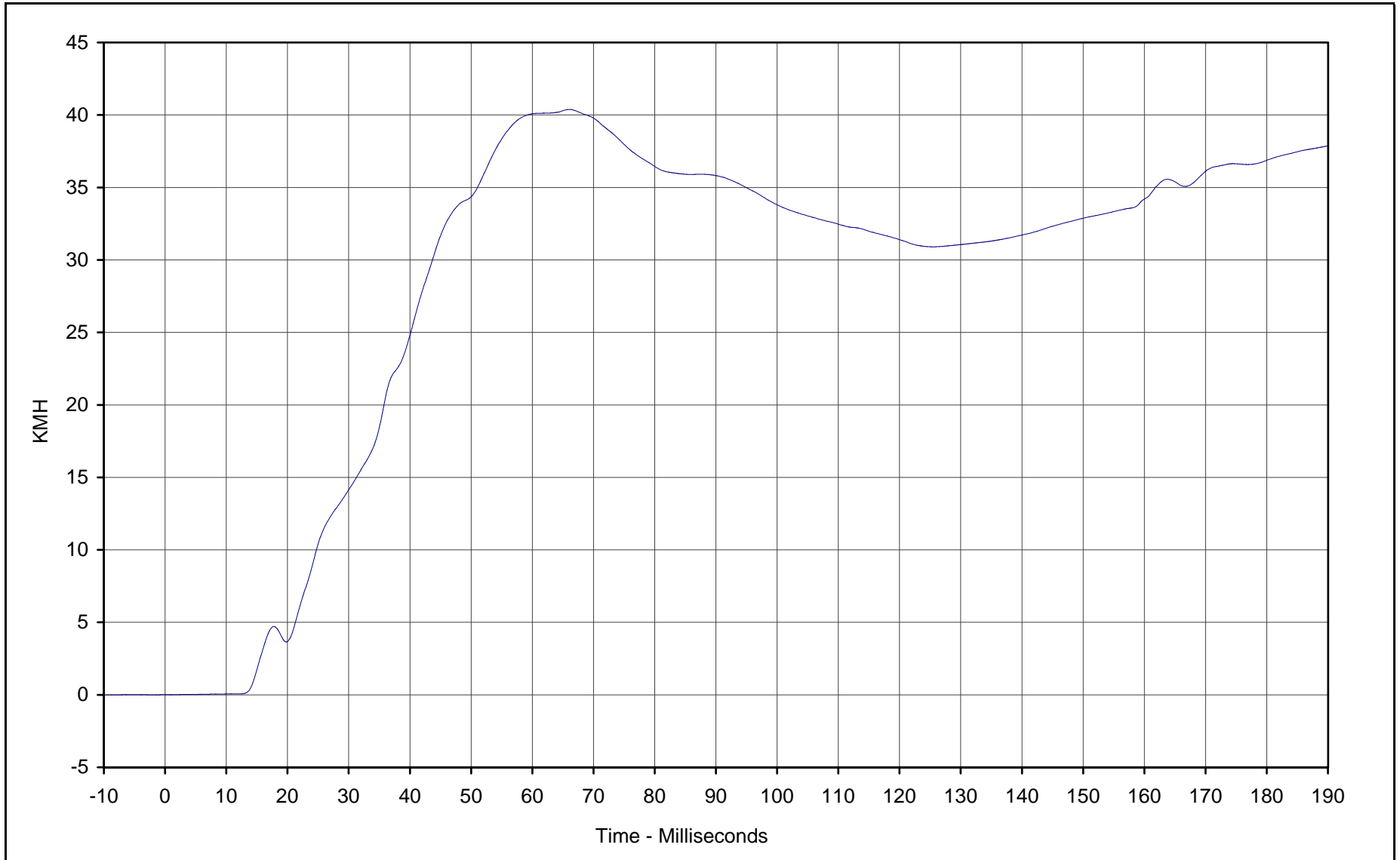


Curve Description: Driver Upper Rib Primary Y
Maximum Value: 80.8 at 159.5 Milliseconds
Minimum Value: -46.0 at 160.0 Milliseconds
SAE Filter Class: 1000
Date of Test: 12/14/00
Curve Number: FIL-004

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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Curve Description: Driver Upper Rib Primary Y Velocity

Maximum Value: 40.4 at 66.0 Milliseconds

Minimum Value: 0.0 at 0.0 Milliseconds

SAE Filter Class: 180

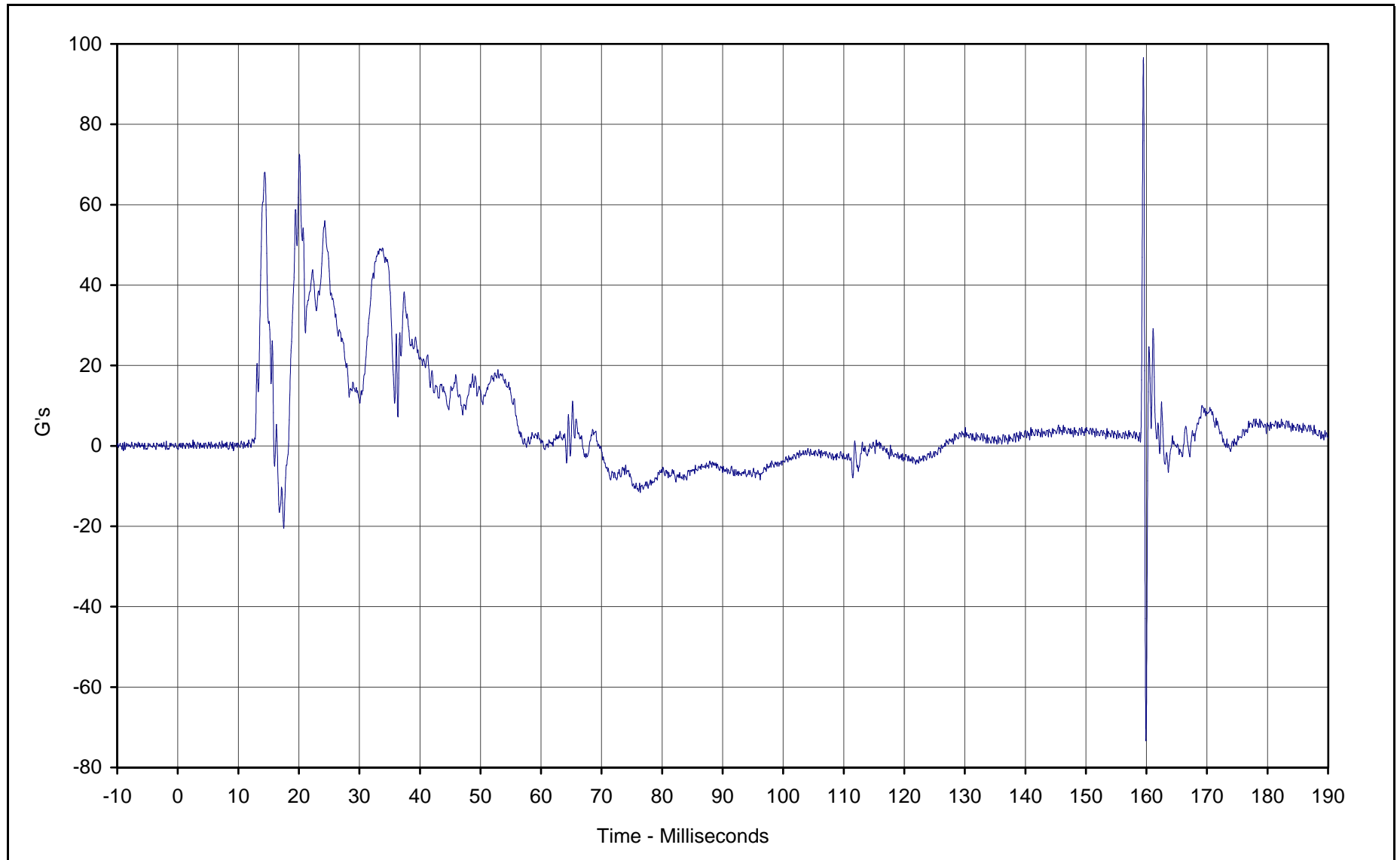
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Curve Number: IN1-004

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



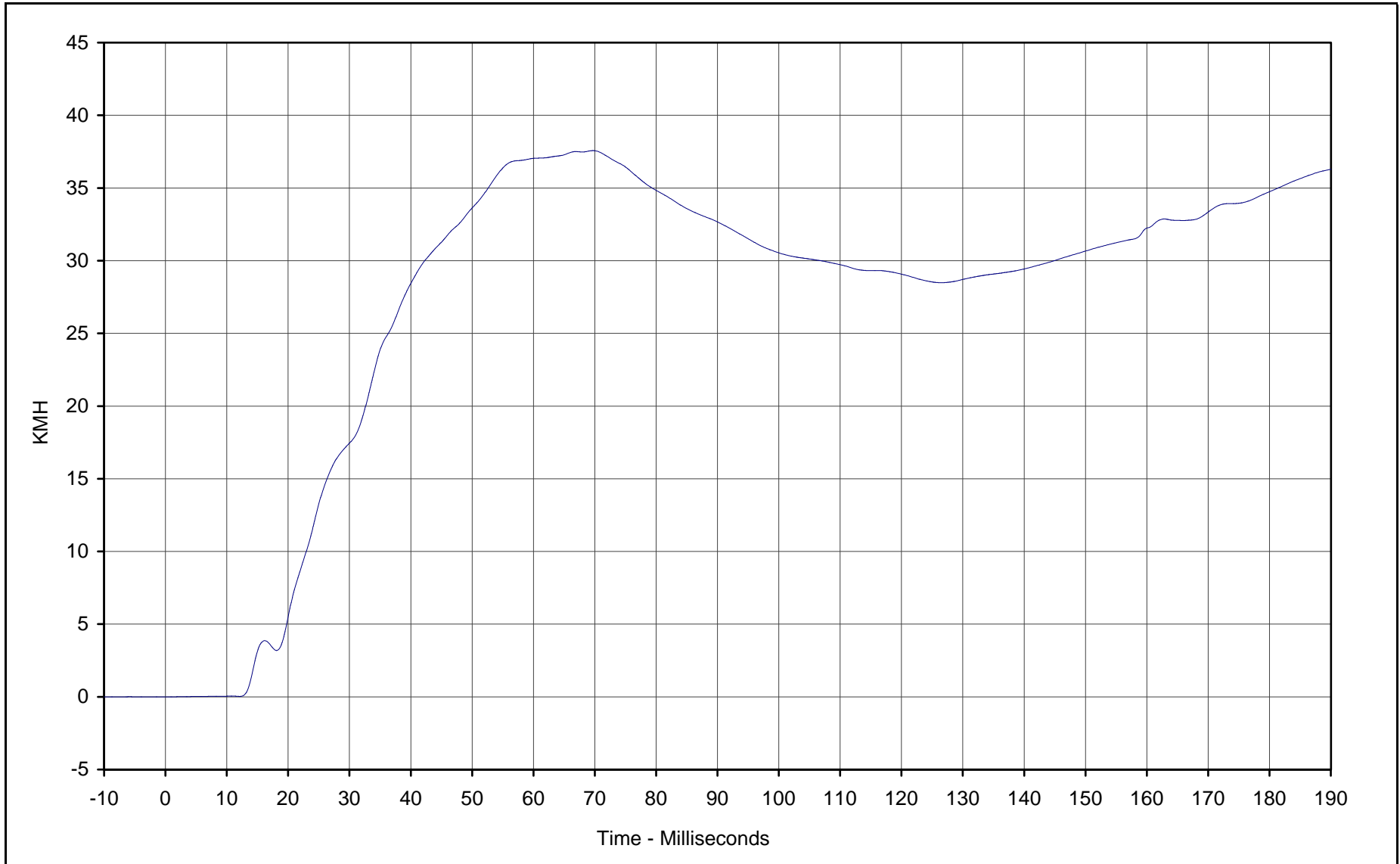


Curve Description: Driver Lower Rib Primary Y
 Maximum Value: 96.5 at 159.5 Milliseconds
 Minimum Value: -73.0 at 159.9 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 12/14/00
 Curve Number: FIL-005

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
 Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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Curve Description: Driver Lower Rib Primary Y Velocity

Maximum Value: 37.6 at 69.7 Milliseconds

Minimum Value: 0.0 at 0.5 Milliseconds

SAE Filter Class: 180

Date of Test: 12/14/00

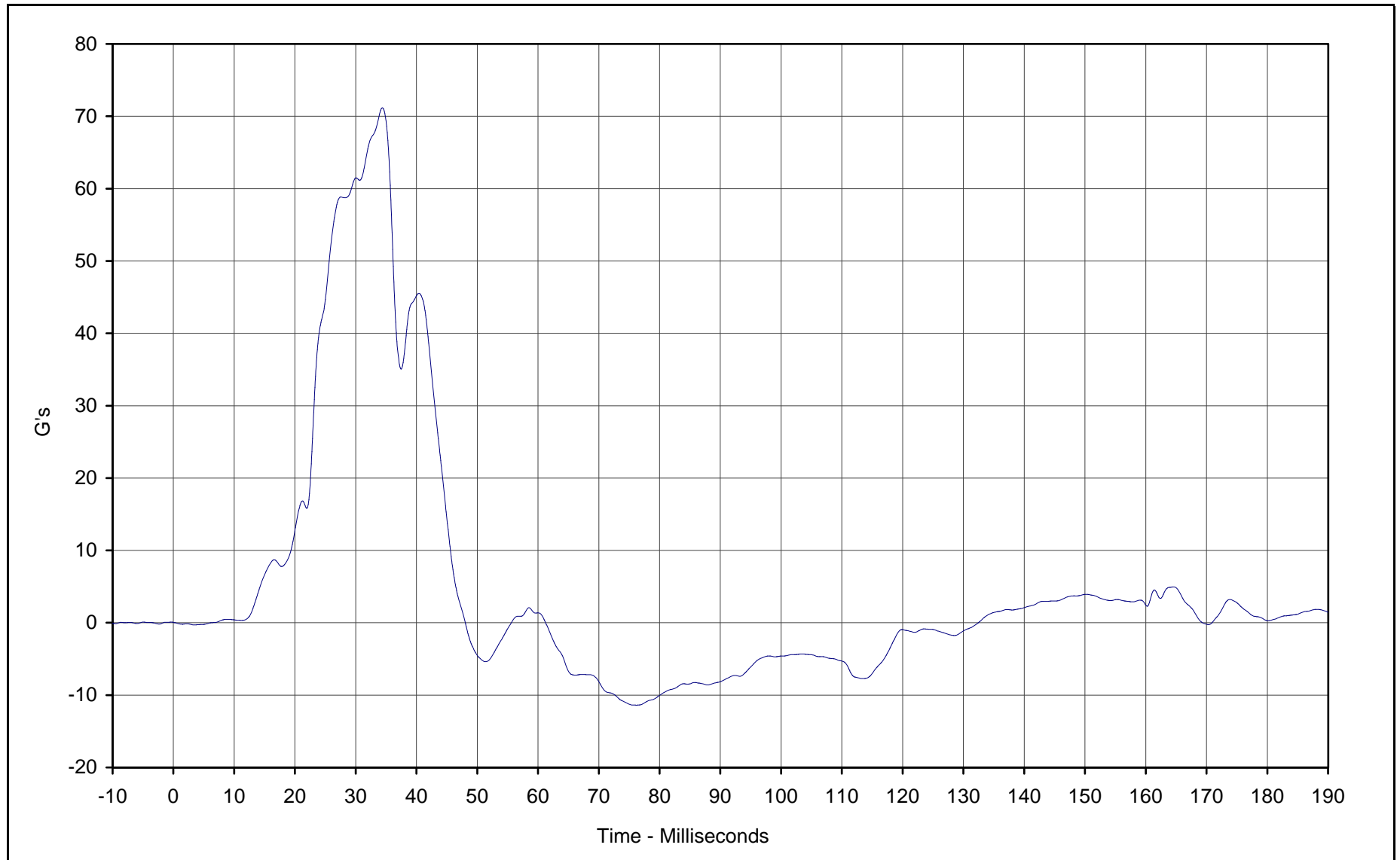
Curve Number: IN1-005

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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Curve Description: Driver Lower Spine Primary Y

Maximum Value: 71.2 at 34.4 Milliseconds

Minimum Value: -11.4 at 76.2 Milliseconds

SAE Filter Class: 180

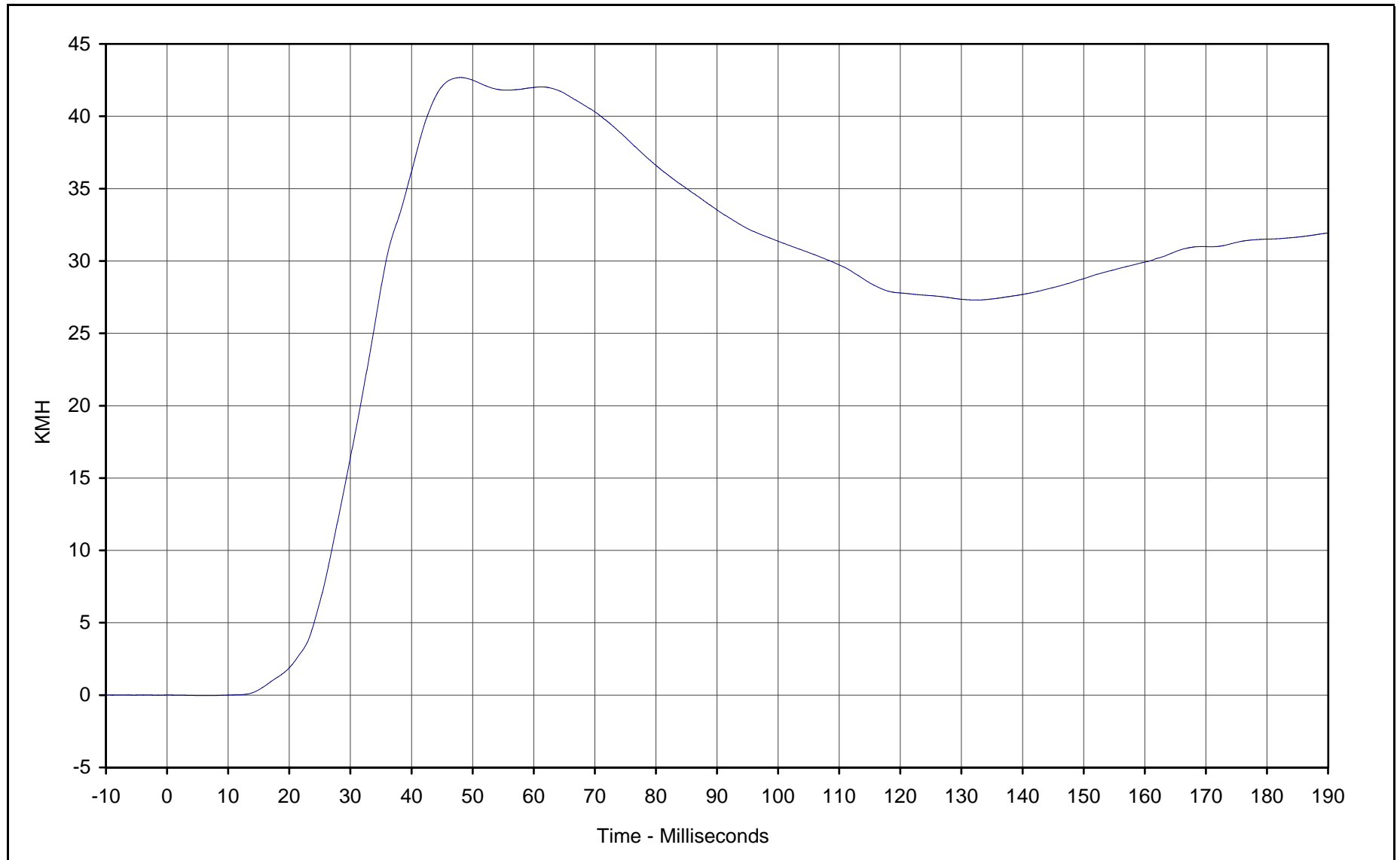
Date of Test: 12/14/00

Curve Number: FIL-006

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan





Curve Description: Driver Lower Spine Primary Y Velocity

Maximum Value: 42.7 at 48.0 Milliseconds

Minimum Value: 0.0 at 6.2 Milliseconds

SAE Filter Class: 180

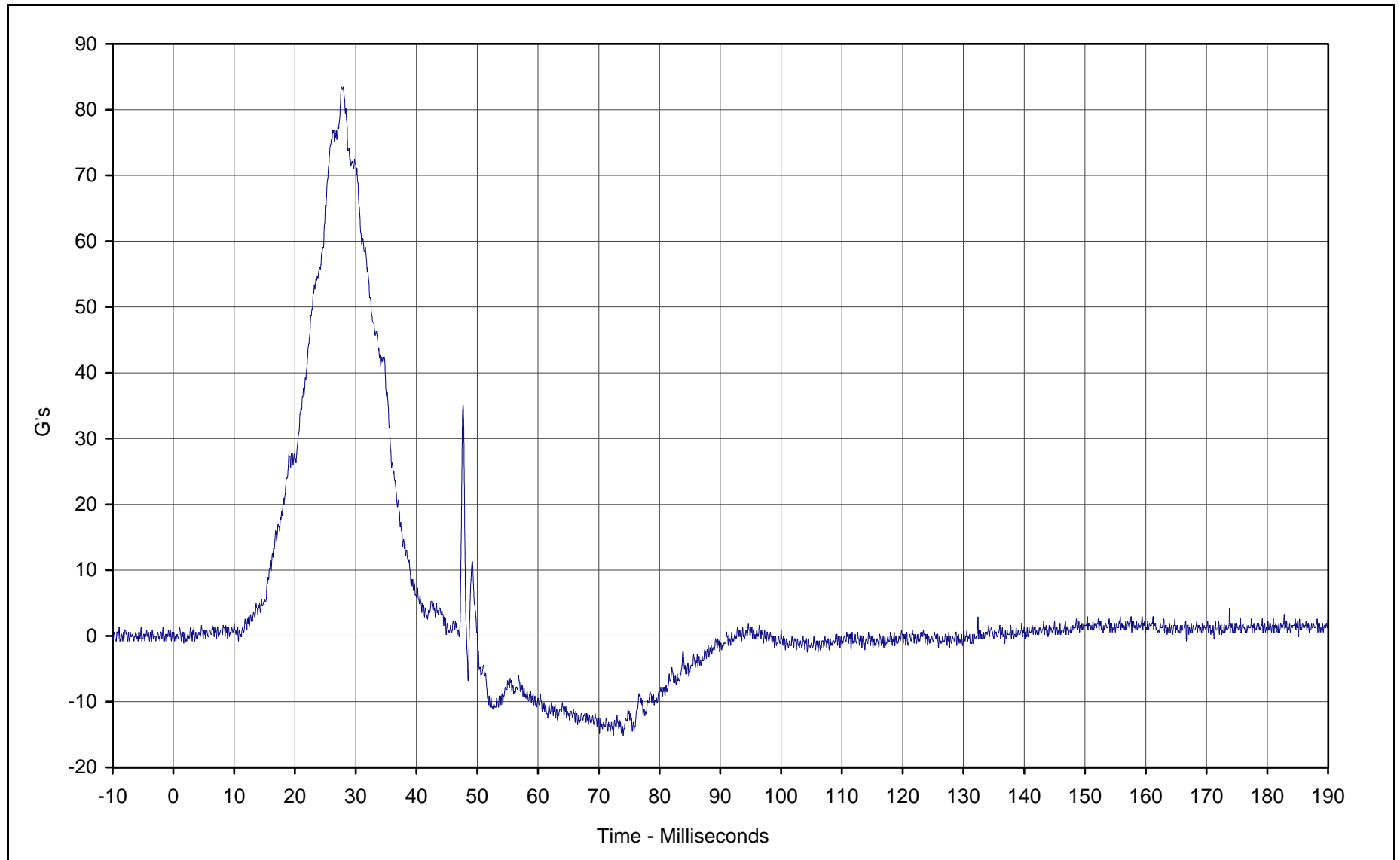
Date of Test: 12/14/00

Curve Number: IN1-006

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan





Curve Description: Driver Pelvis Primary Y

Maximum Value: 83.5 at 27.7 Milliseconds

Minimum Value: -15.1 at 72.4 Milliseconds

SAE Filter Class: 1000

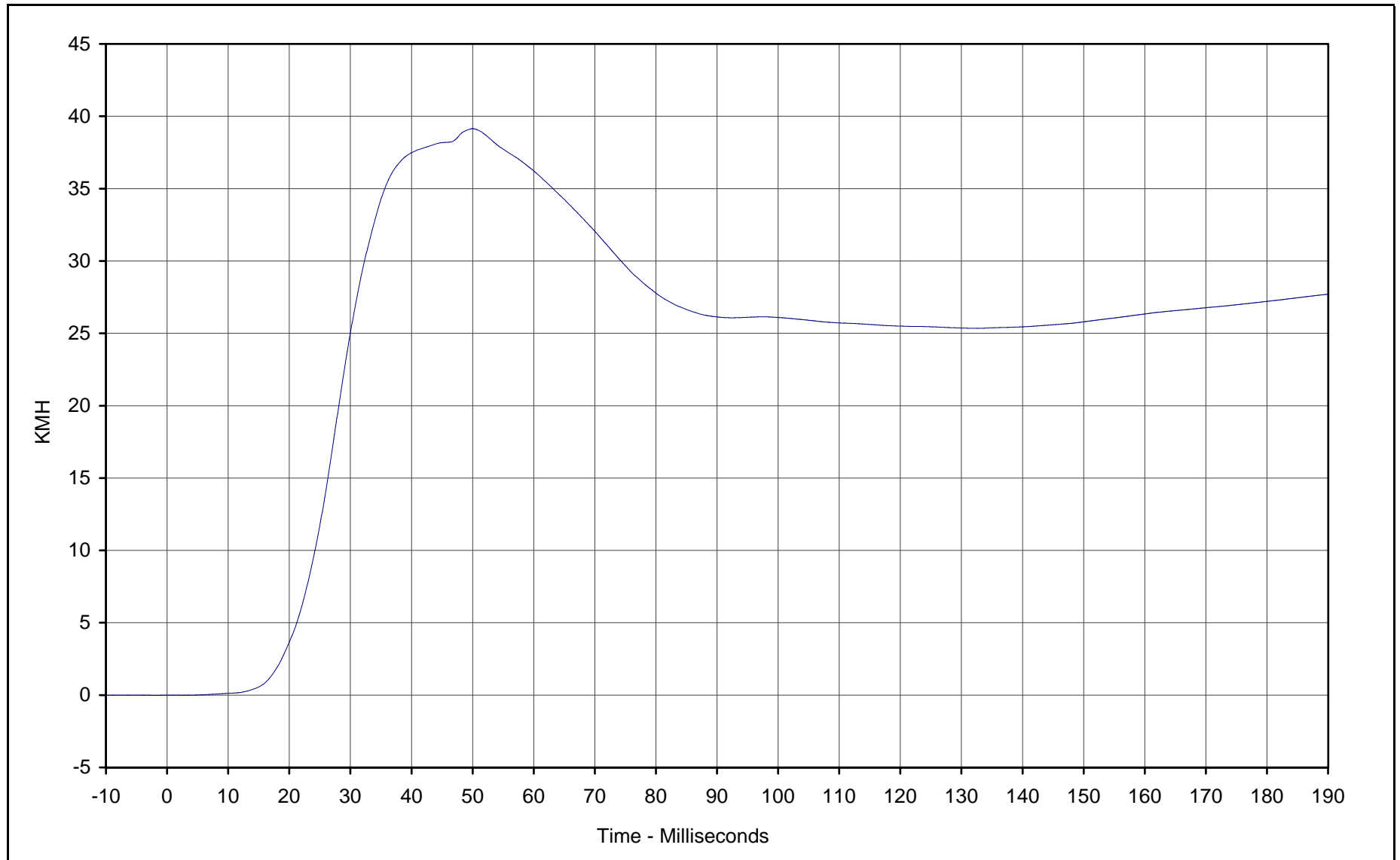
Date of Test: 12/14/00

Curve Number: FIL-007

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan





Curve Description: Driver Pelvis Primary Y Velocity

Maximum Value: 39.1 at 50.0 Milliseconds

Minimum Value: 0.0 at 2.5 Milliseconds

SAE Filter Class: 180

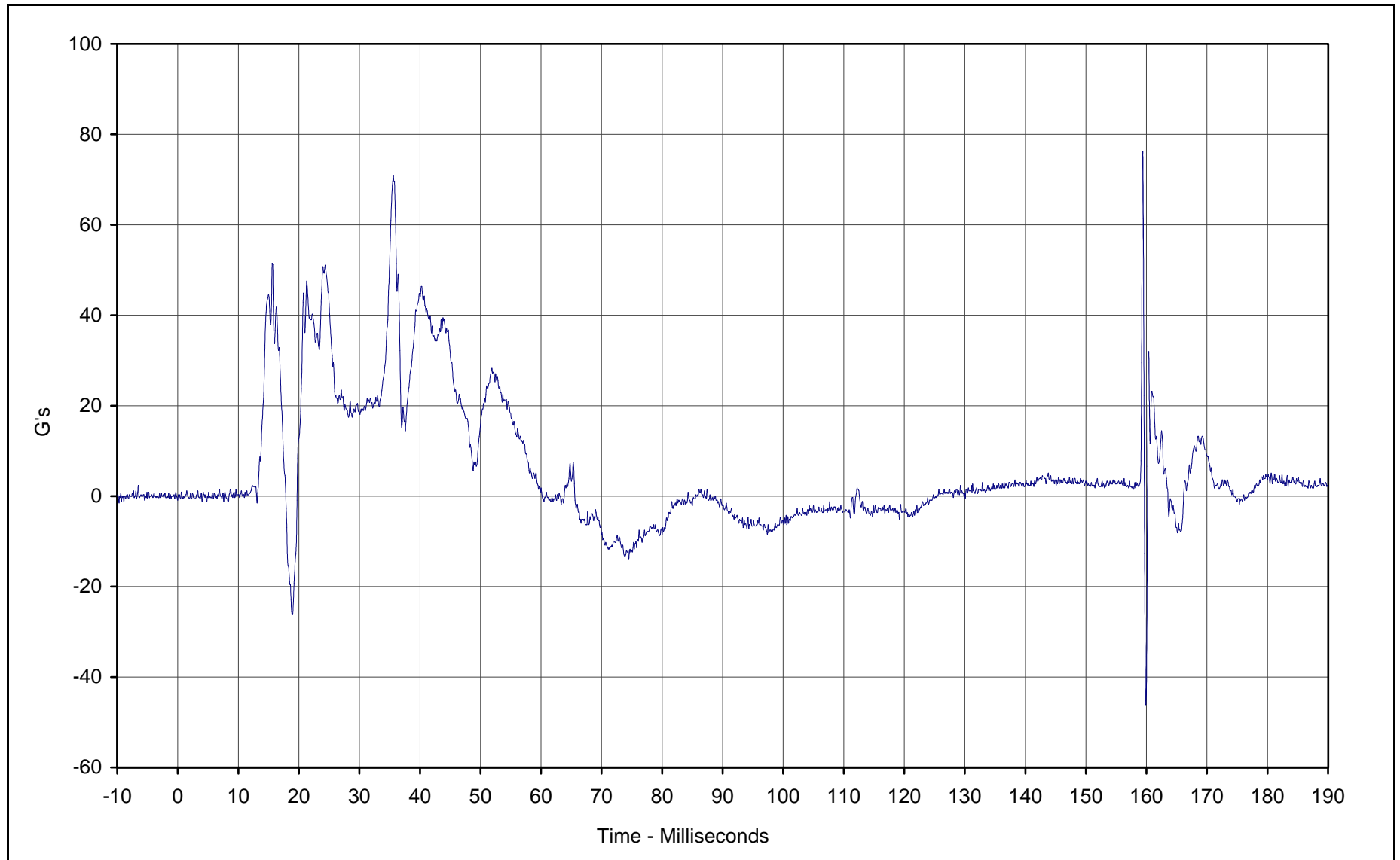
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Curve Number: IN1-007

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

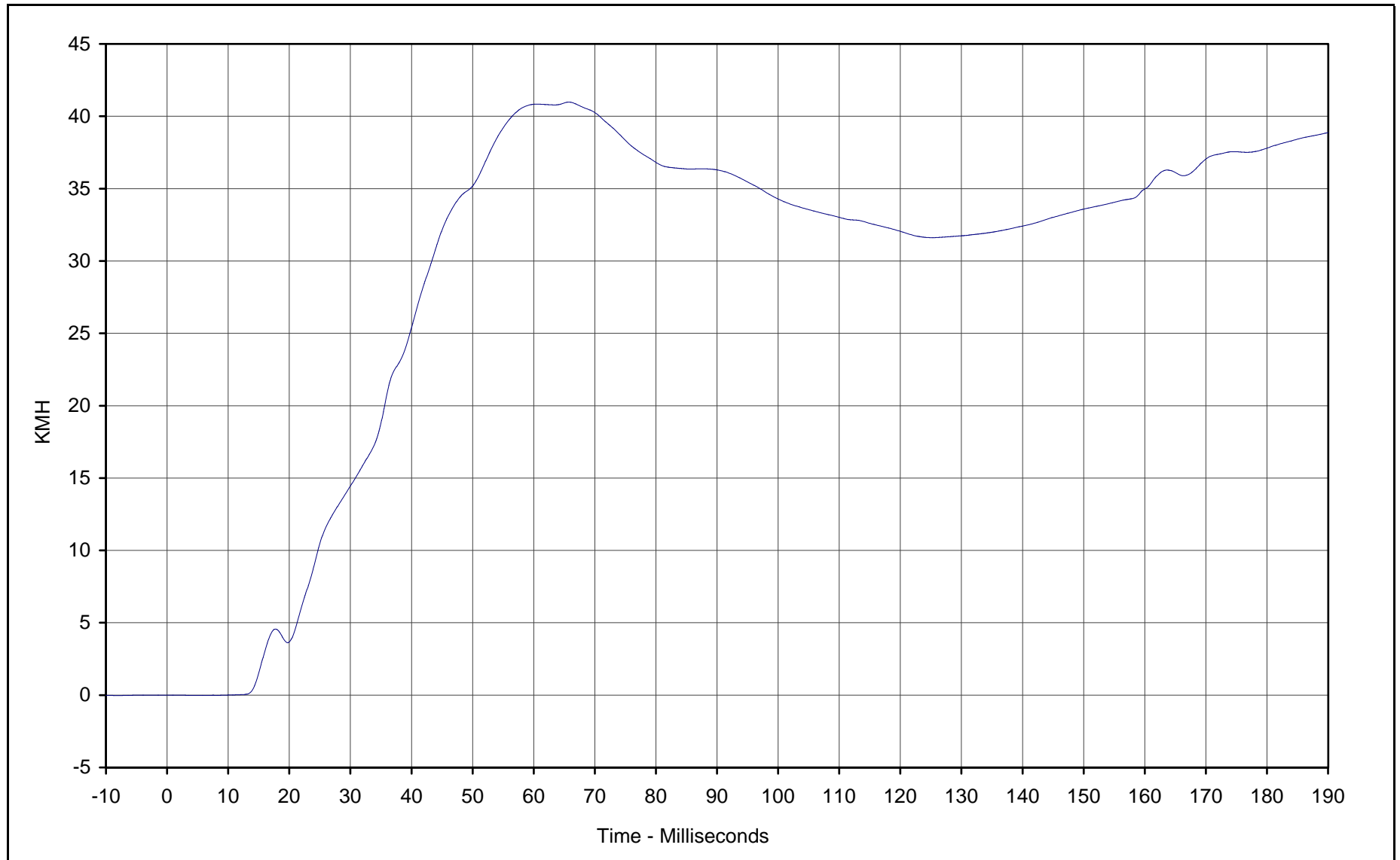




Curve Description: Driver Upper Rib Redundant Y
 Maximum Value: 76.1 at 159.4 Milliseconds
 Minimum Value: -46.0 at 159.9 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 12/14/00
 Curve Number: FIL-008

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
 Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan





Curve Description: Driver Upper Rib Redundant Y Velocity

Maximum Value: 41.0 at 65.8 Milliseconds

Minimum Value: 0.0 at 5.8 Milliseconds

SAE Filter Class: 180

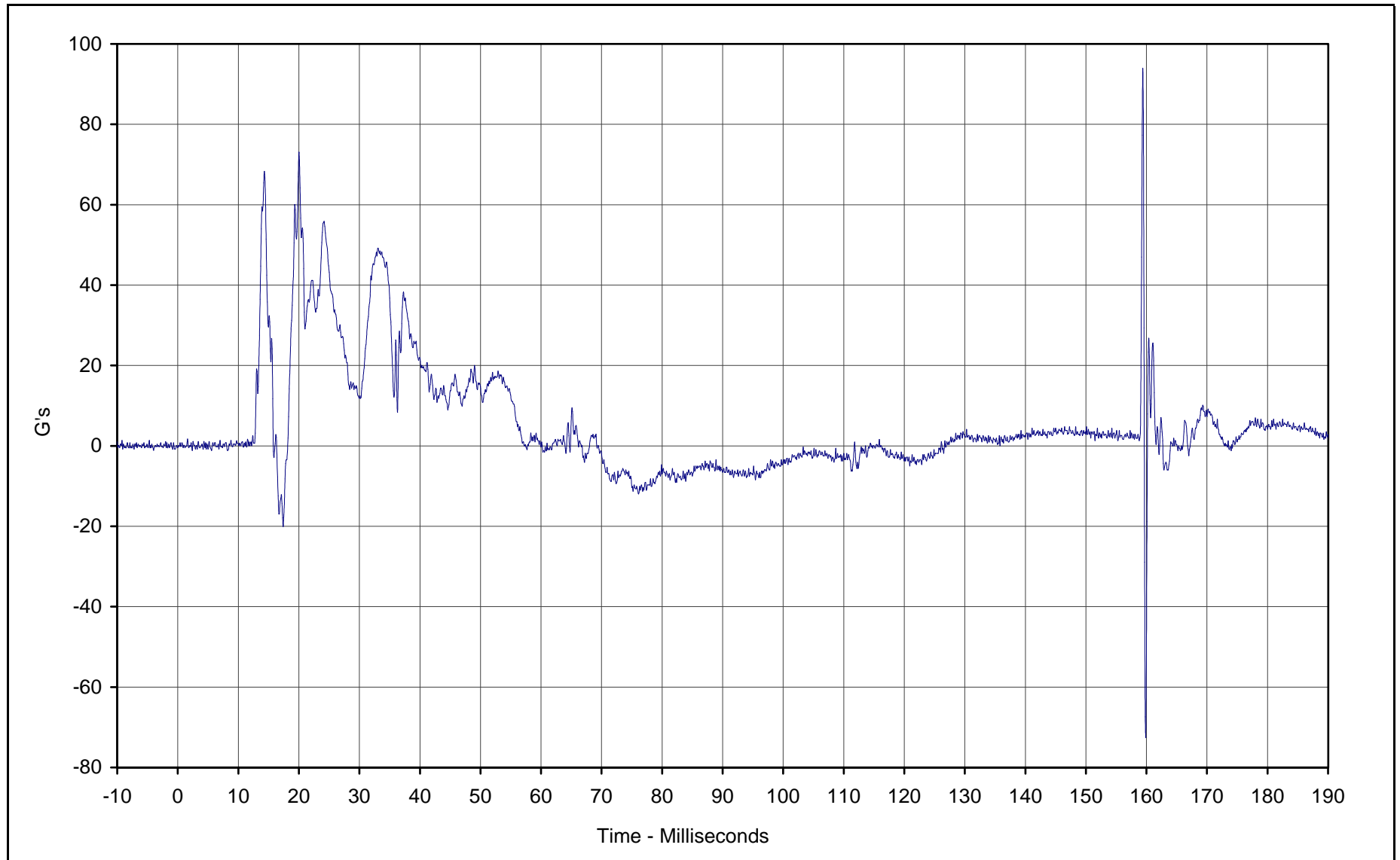
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Curve Number: IN1-008

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

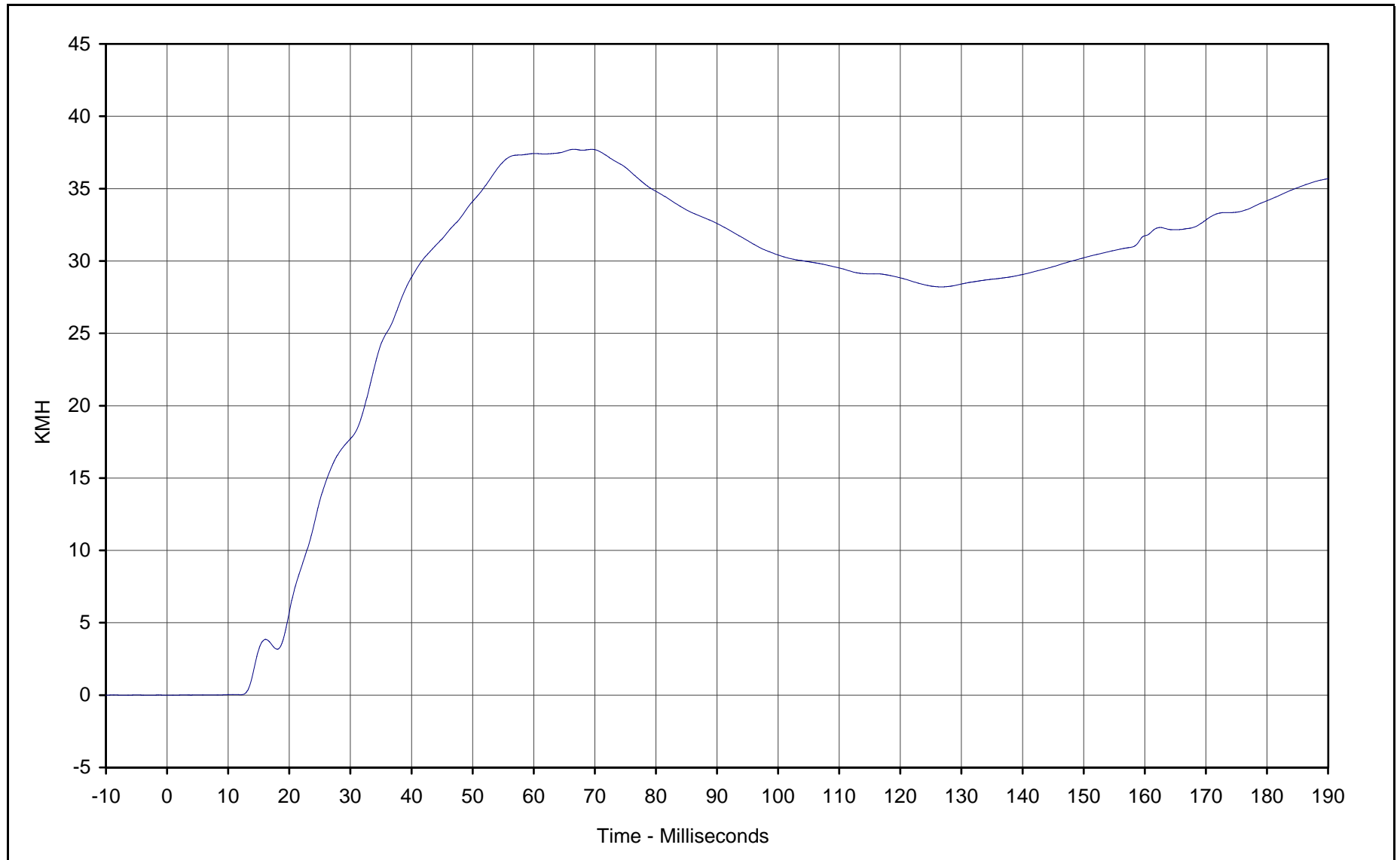




Curve Description: Driver Lower Rib Redundant Y
 Maximum Value: 94.0 at 159.4 Milliseconds
 Minimum Value: -72.5 at 159.9 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 12/14/00
 Curve Number: FIL-009

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
 Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan





Curve Description: Driver Lower Rib Redundant Y Velocity

Maximum Value: 37.7 at 66.5 Milliseconds

Minimum Value: 0.0 at 0.3 Milliseconds

SAE Filter Class: 180

Date of Test: 12/14/00

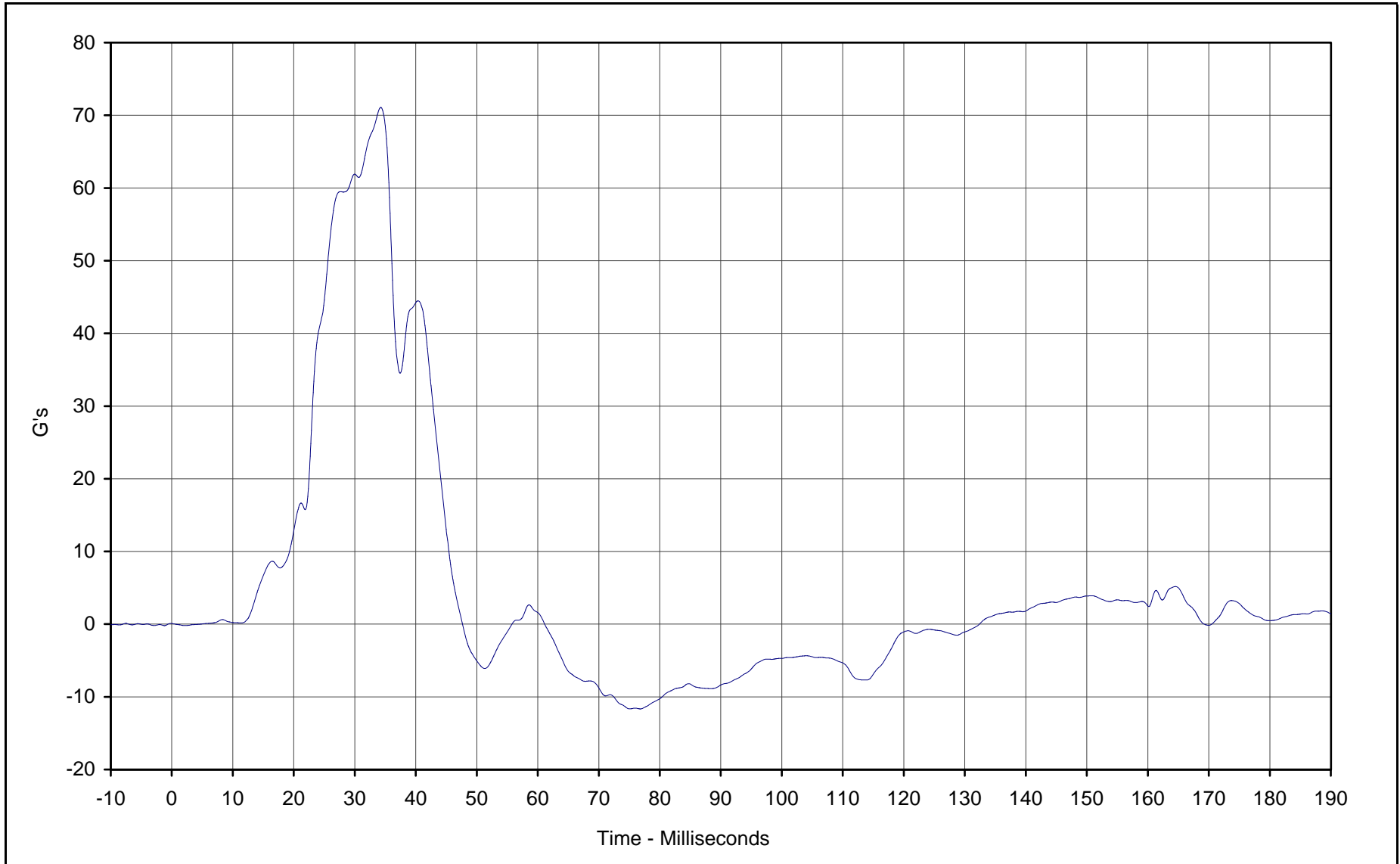
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Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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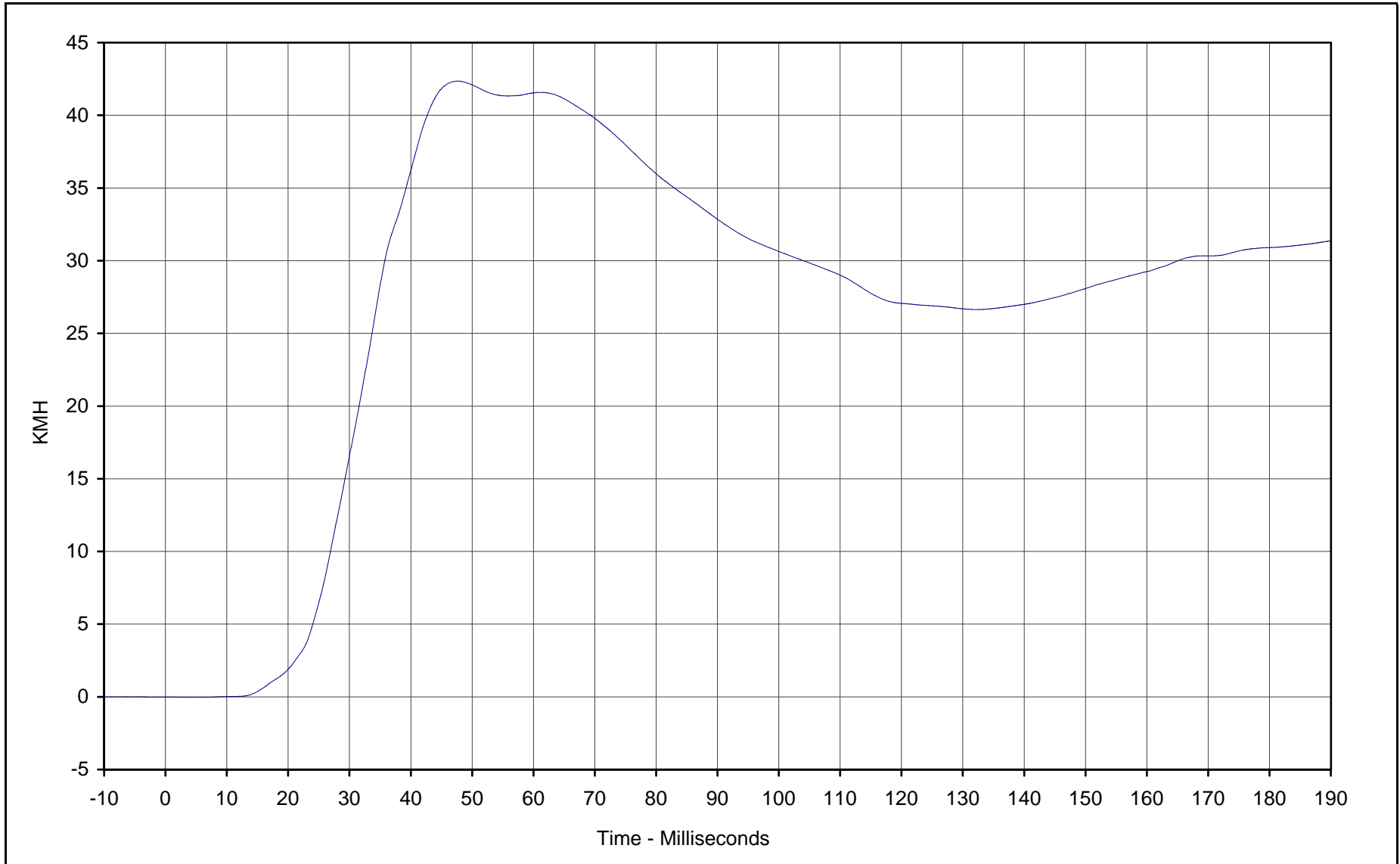
Curve Description: Driver Lower Spine Redundant Y
Maximum Value: 71.1 at 34.3 Milliseconds
Minimum Value: -11.7 at 76.8 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: FIL-010

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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Curve Description: Driver Lower Spine Redundant Y Velocity

Maximum Value: 42.4 at 47.7 Milliseconds

Minimum Value: 0.0 at 4.7 Milliseconds

SAE Filter Class: 180

Date of Test: 12/14/00

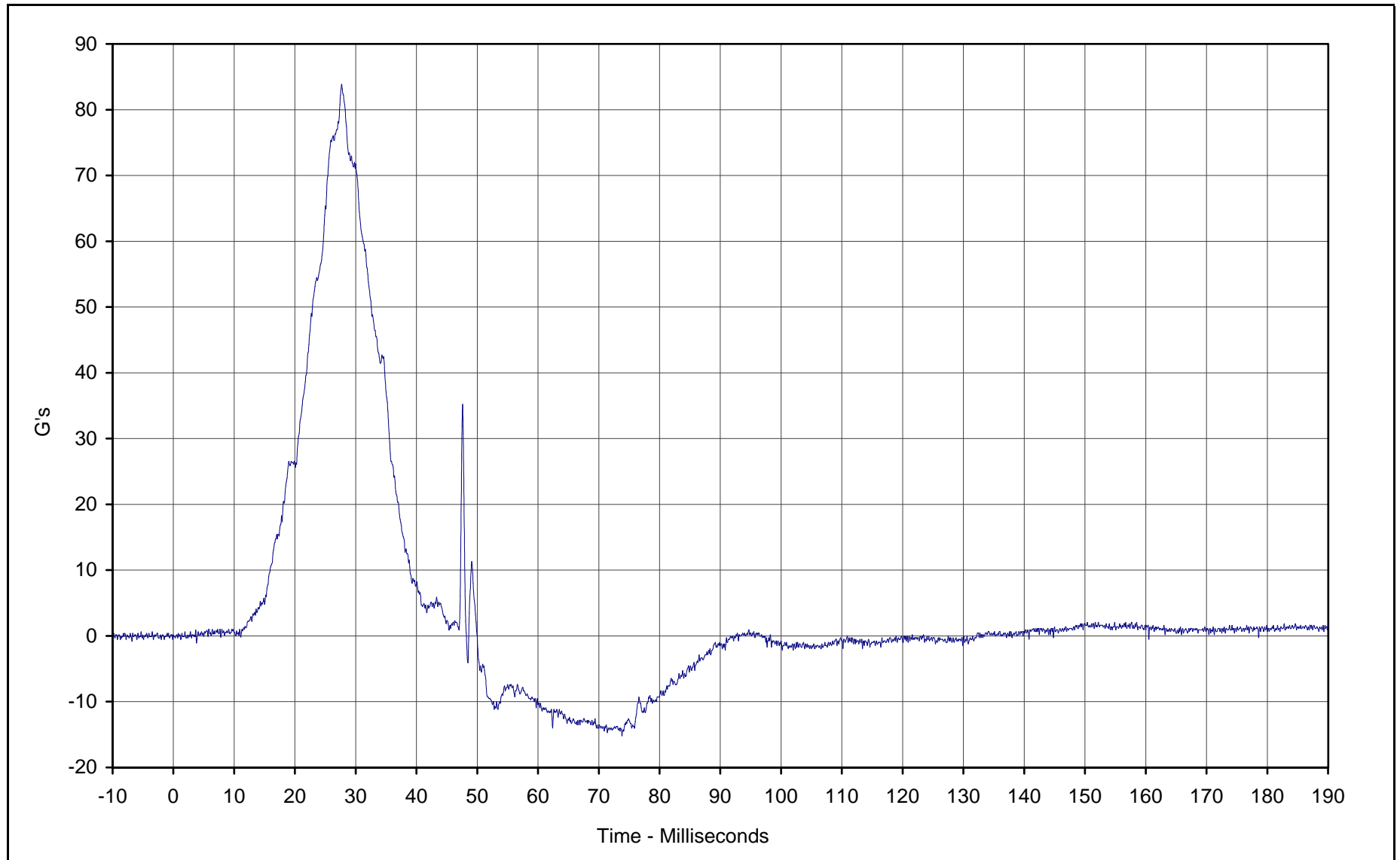
Curve Number: IN1-0010

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



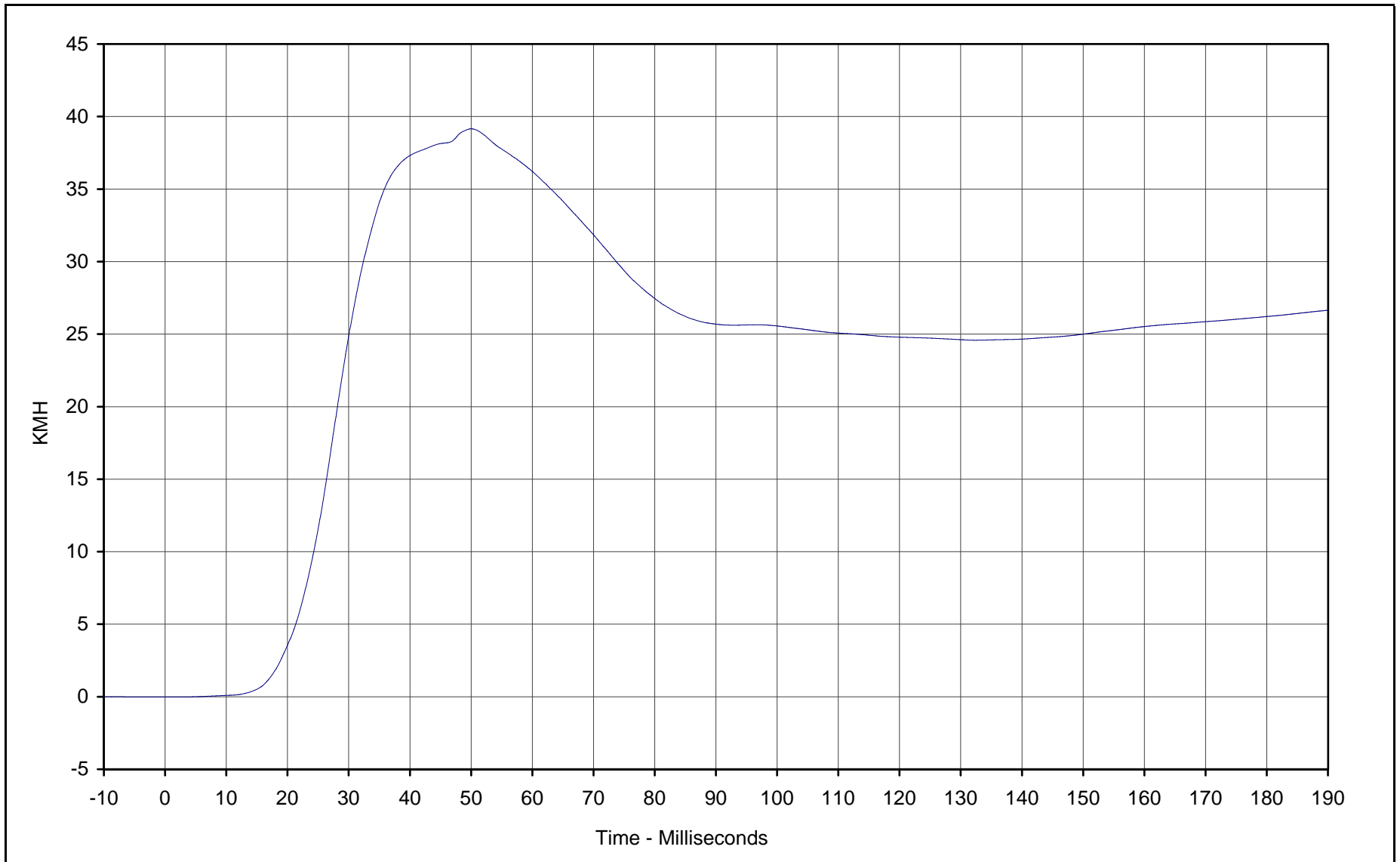
KAR21003-05



Curve Description: Driver Pelvis Redundant Y
 Maximum Value: 83.9 at 27.7 Milliseconds
 Minimum Value: -15.2 at 73.8 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 12/14/00
 Curve Number: FIL-011

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
 Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan





Curve Description: Driver Pelvis Redundant Y Velocity

Maximum Value: 39.2 at 50.0 Milliseconds

Minimum Value: 0.0 at 2.4 Milliseconds

SAE Filter Class: 180

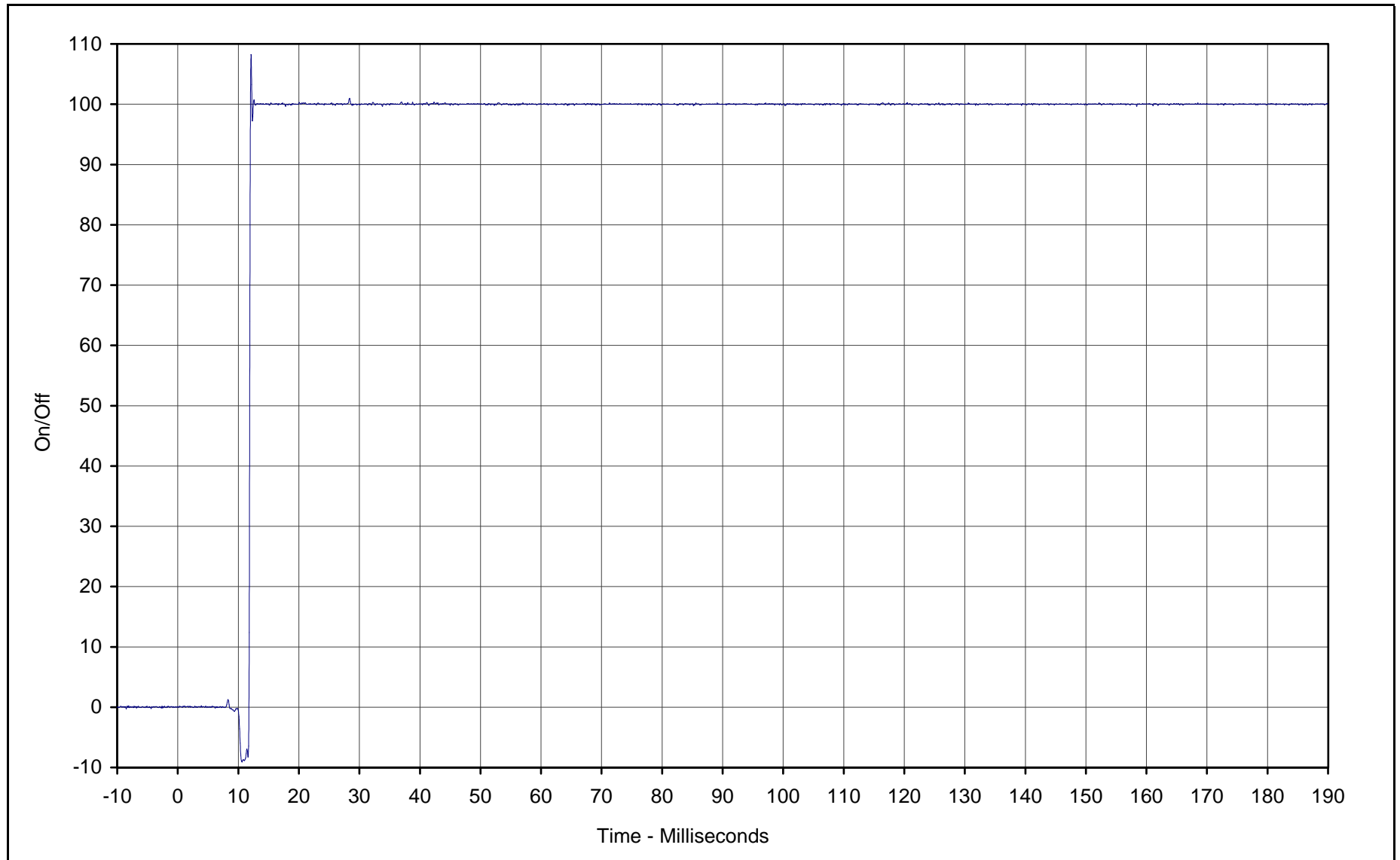
Date of Test: 12/14/00

Curve Number: IN1-011

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



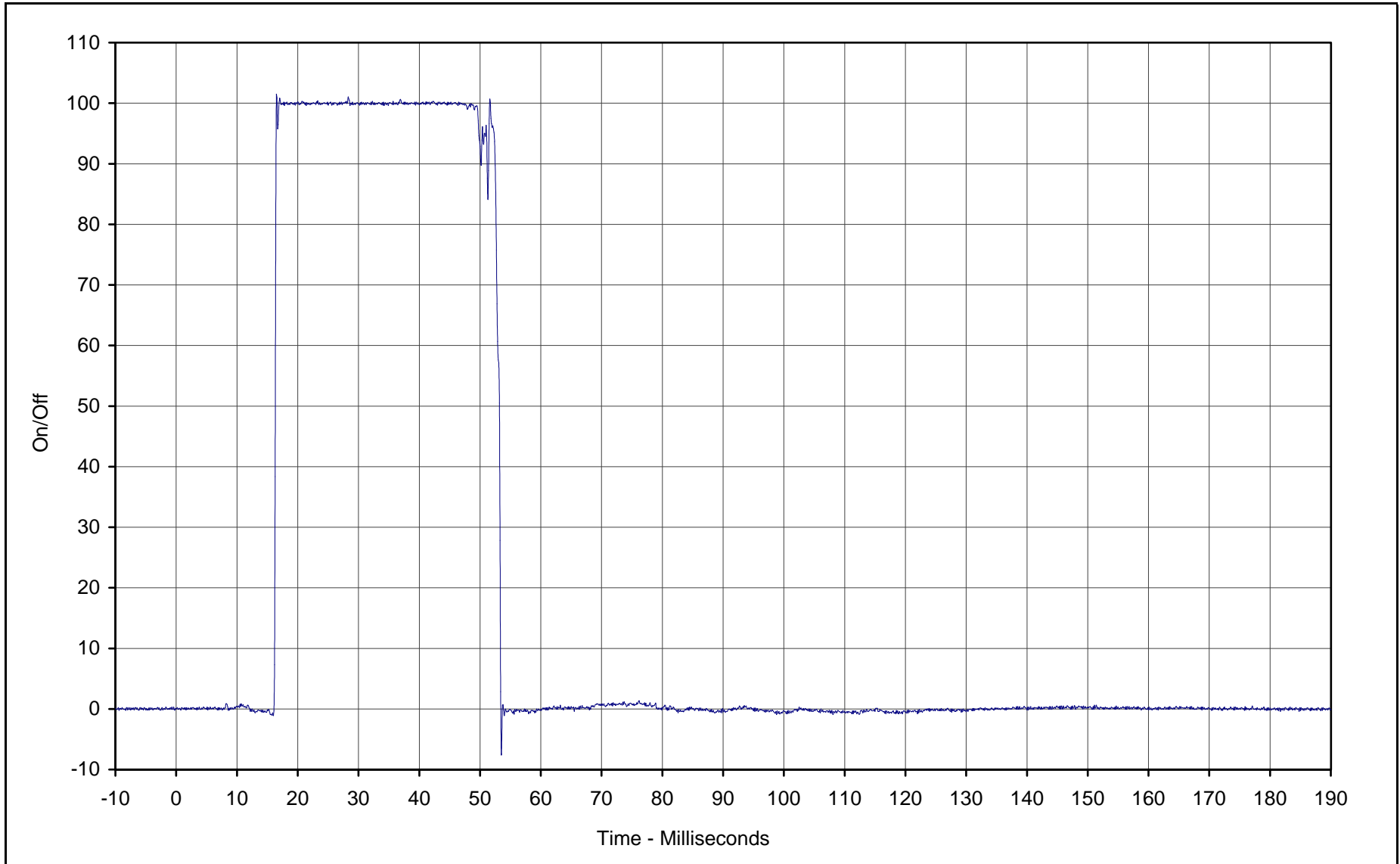


Curve Description: Driver Thorax Contact
Maximum Value: 108.2 at 12.1 Milliseconds
Crossing Point: 50% at 11.9 Milliseconds
SAE Filter Class: 1000
Date of Test: 12/14/00
Curve Number: FIL-012

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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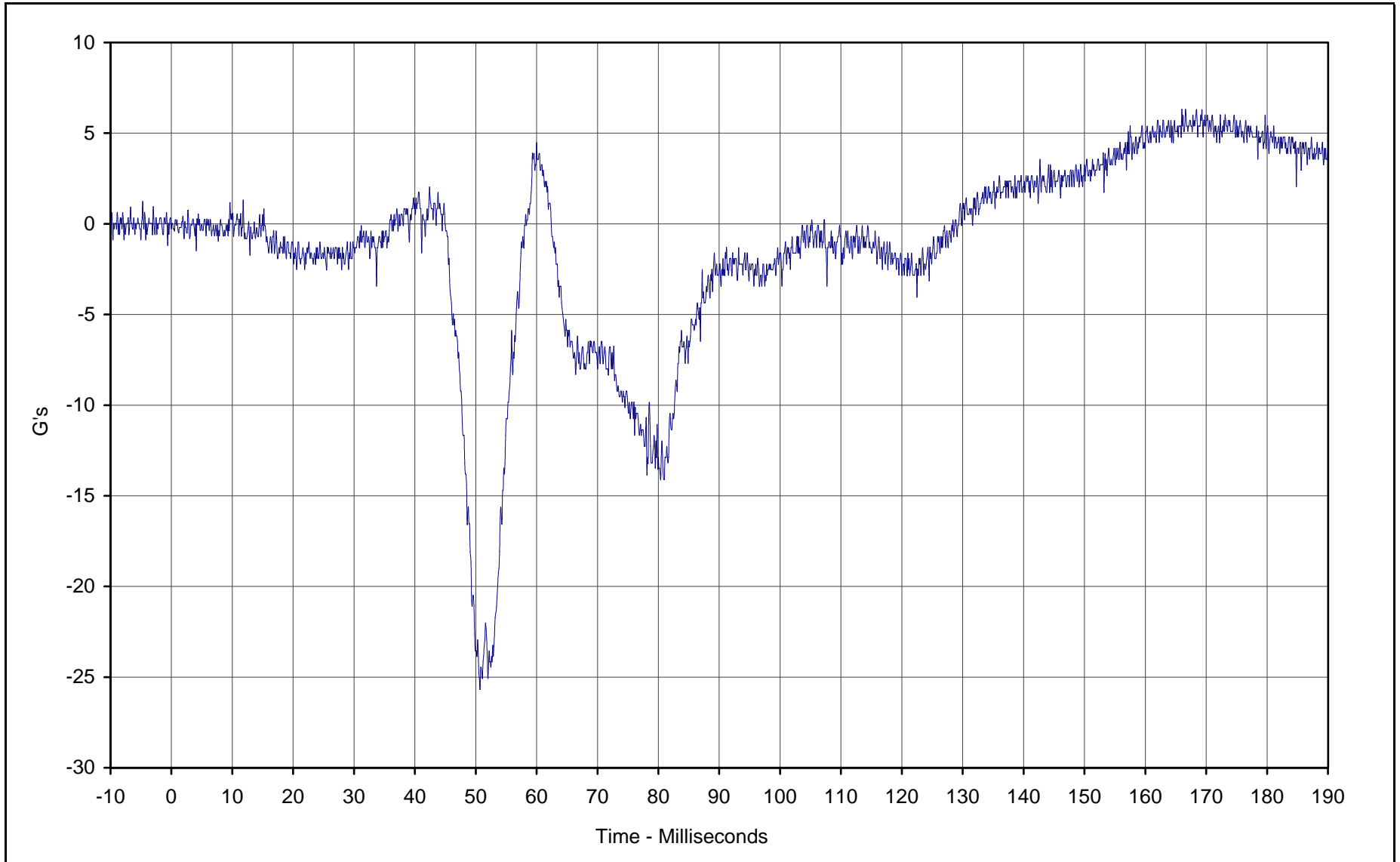


Curve Description: Driver Pelvis Contact
Maximum Value: 101.4 at 16.5 Milliseconds
Crossing Point: 50% at 16.4 Milliseconds
SAE Filter Class: 1000
Date of Test: 12/14/00
Curve Number: FIL-013

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



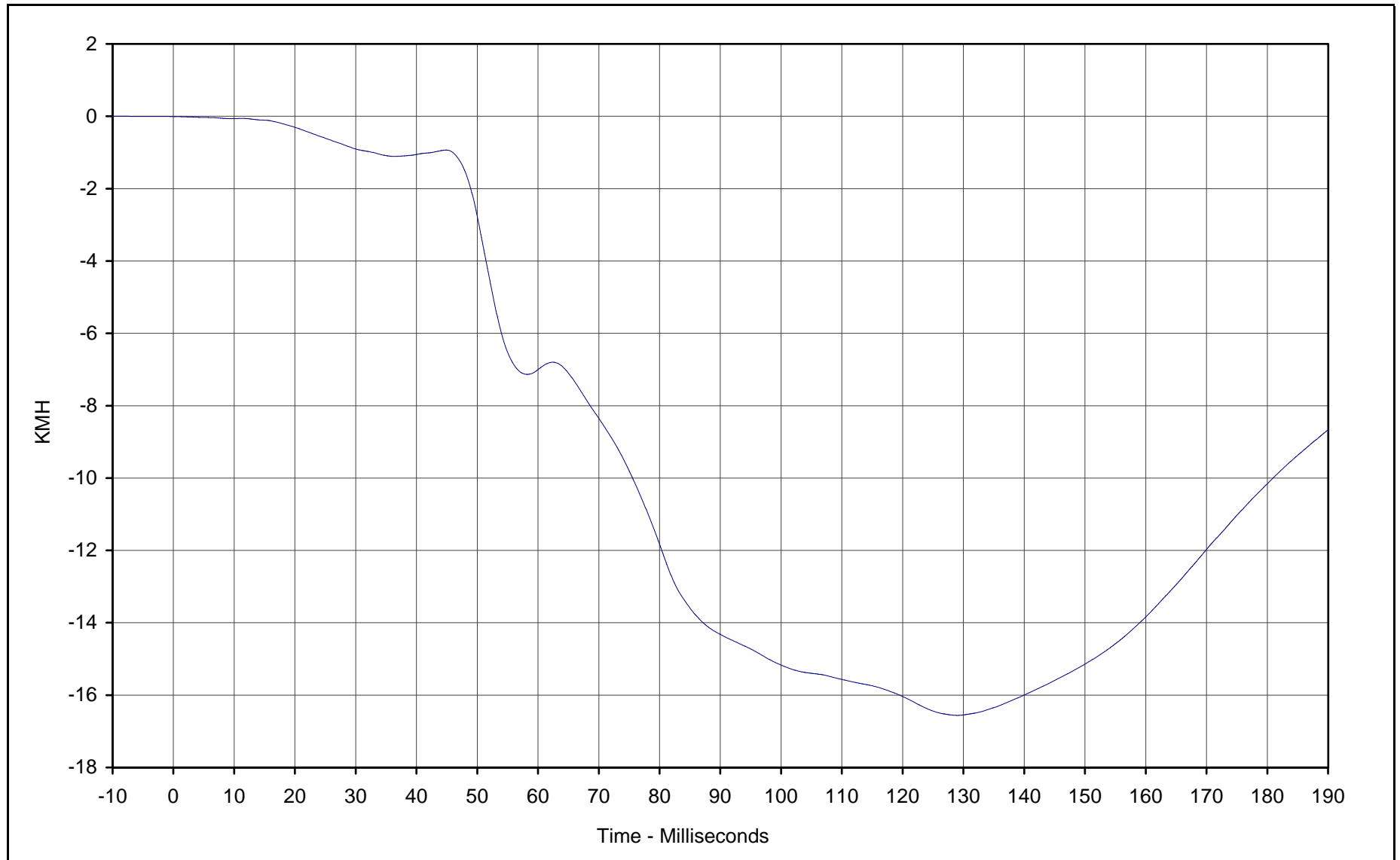
KAR21003-05



Curve Description: Pass. Head CG X
 Maximum Value: 6.3 at 166.0 Milliseconds
 Minimum Value: -25.7 at 50.7 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 12/14/00
 Curve Number: FIL-014

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
 Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan





Curve Description: Pass. Head CG X Velocity

Maximum Value: 0.0 at 0.0 Milliseconds

Minimum Value: -16.6 at 129.0 Milliseconds

SAE Filter Class: 180

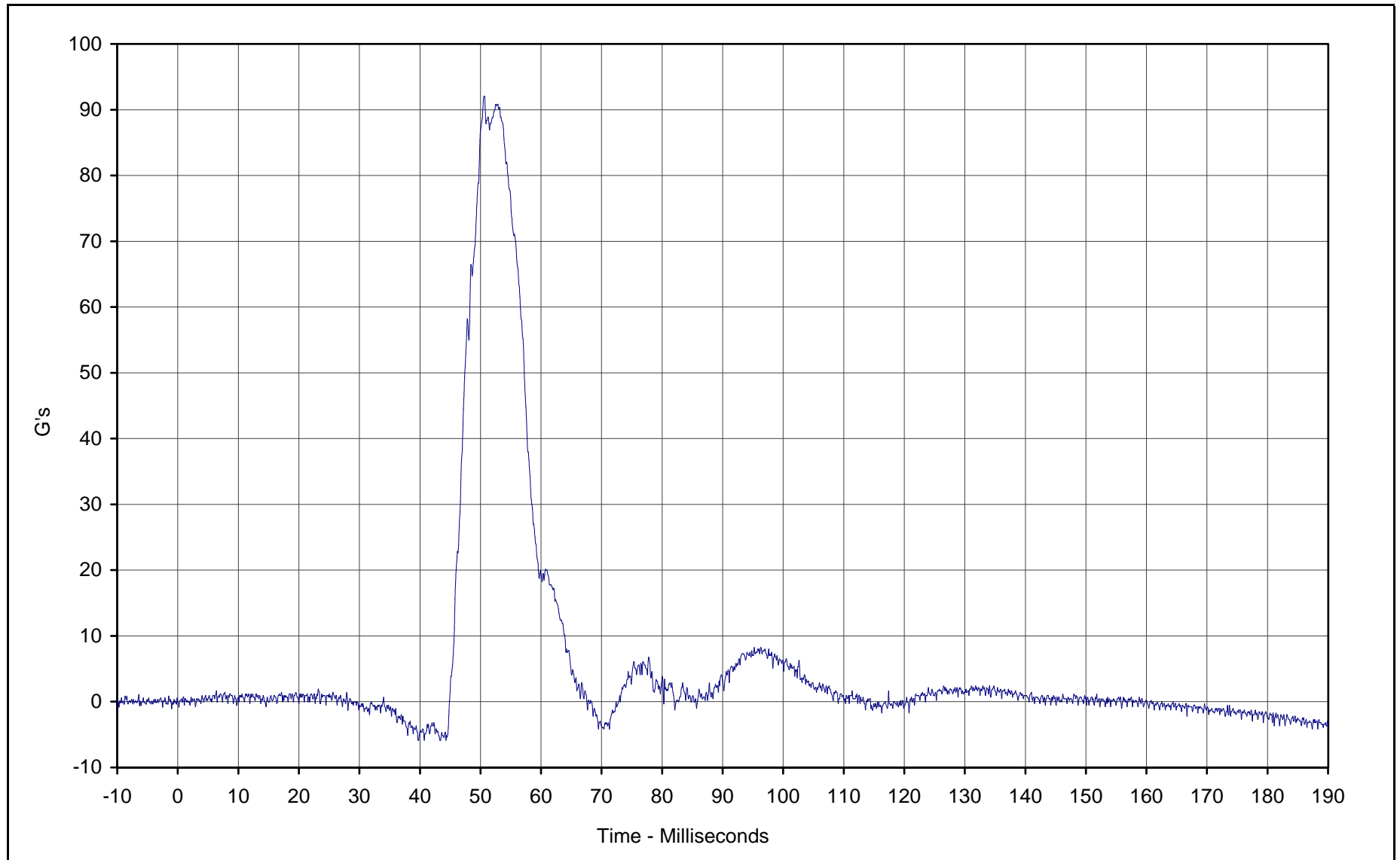
Date of Test: 12/14/00

Curve Number: IN1-014

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

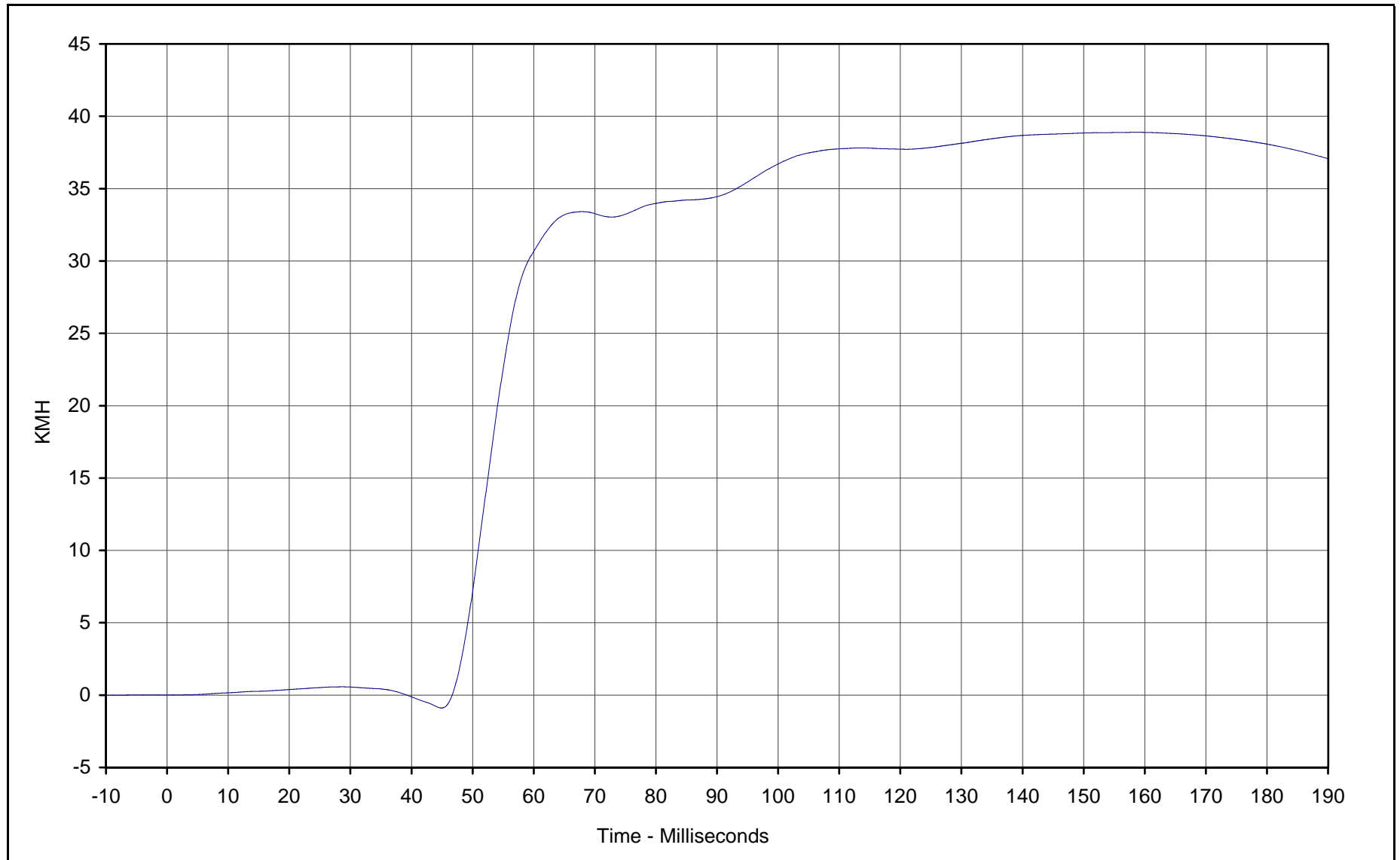




Curve Description: Pass. Head CG Y
 Maximum Value: 92.0 at 50.6 Milliseconds
 Minimum Value: -5.9 at 39.7 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 12/14/00
 Curve Number: FIL-015

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
 Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan





Curve Description: Pass. Head CG Y Velocity

Maximum Value: 38.9 at 158.5 Milliseconds

Minimum Value: -0.9 at 44.9 Milliseconds

SAE Filter Class: 180

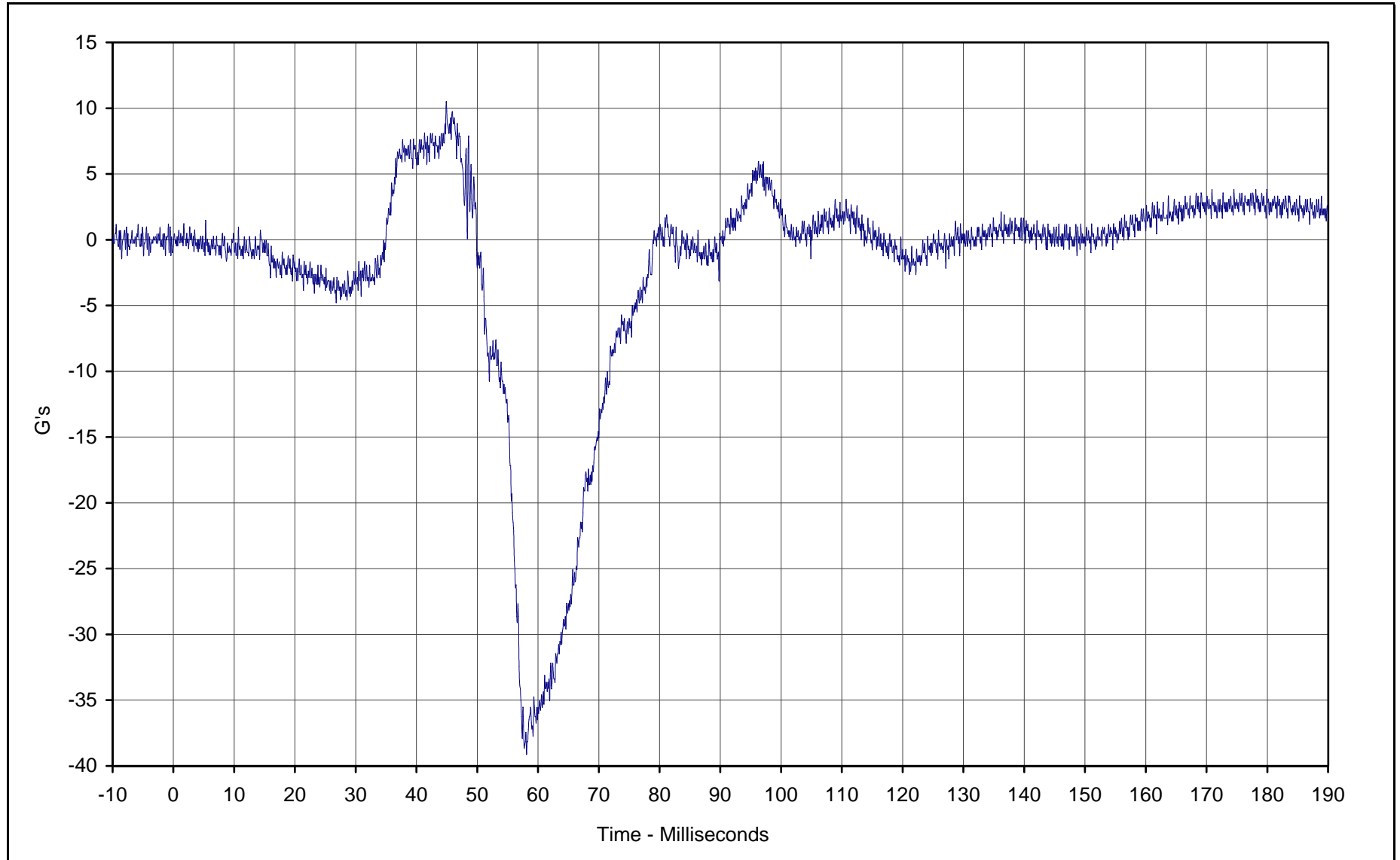
Date of Test: 12/14/00

Curve Number: IN1-015

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



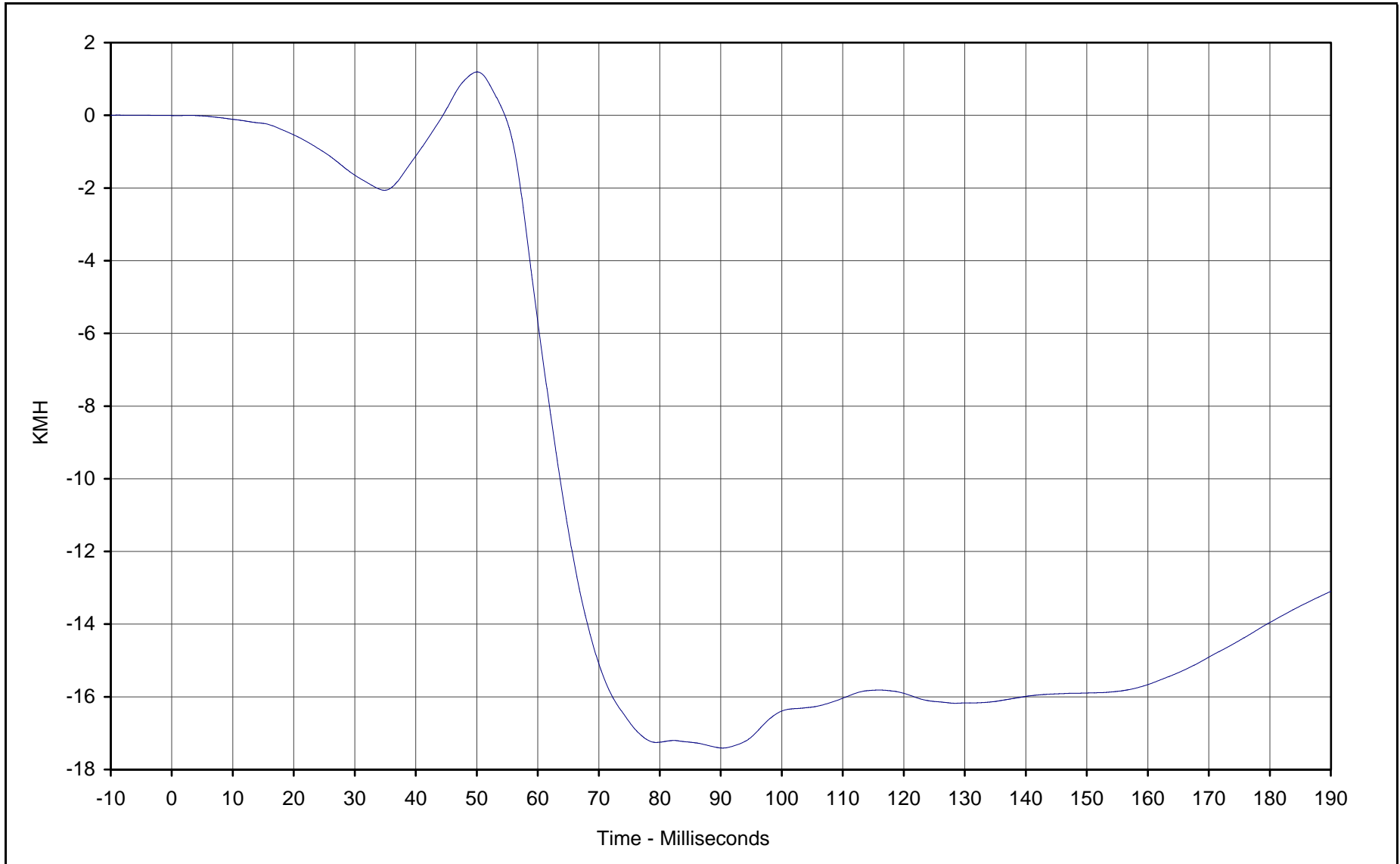


Curve Description: Pass. Head CG Z
 Maximum Value: 10.5 at 44.9 Milliseconds
 Minimum Value: -39.1 at 58.1 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 12/14/00
 Curve Number: FIL-016

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
 Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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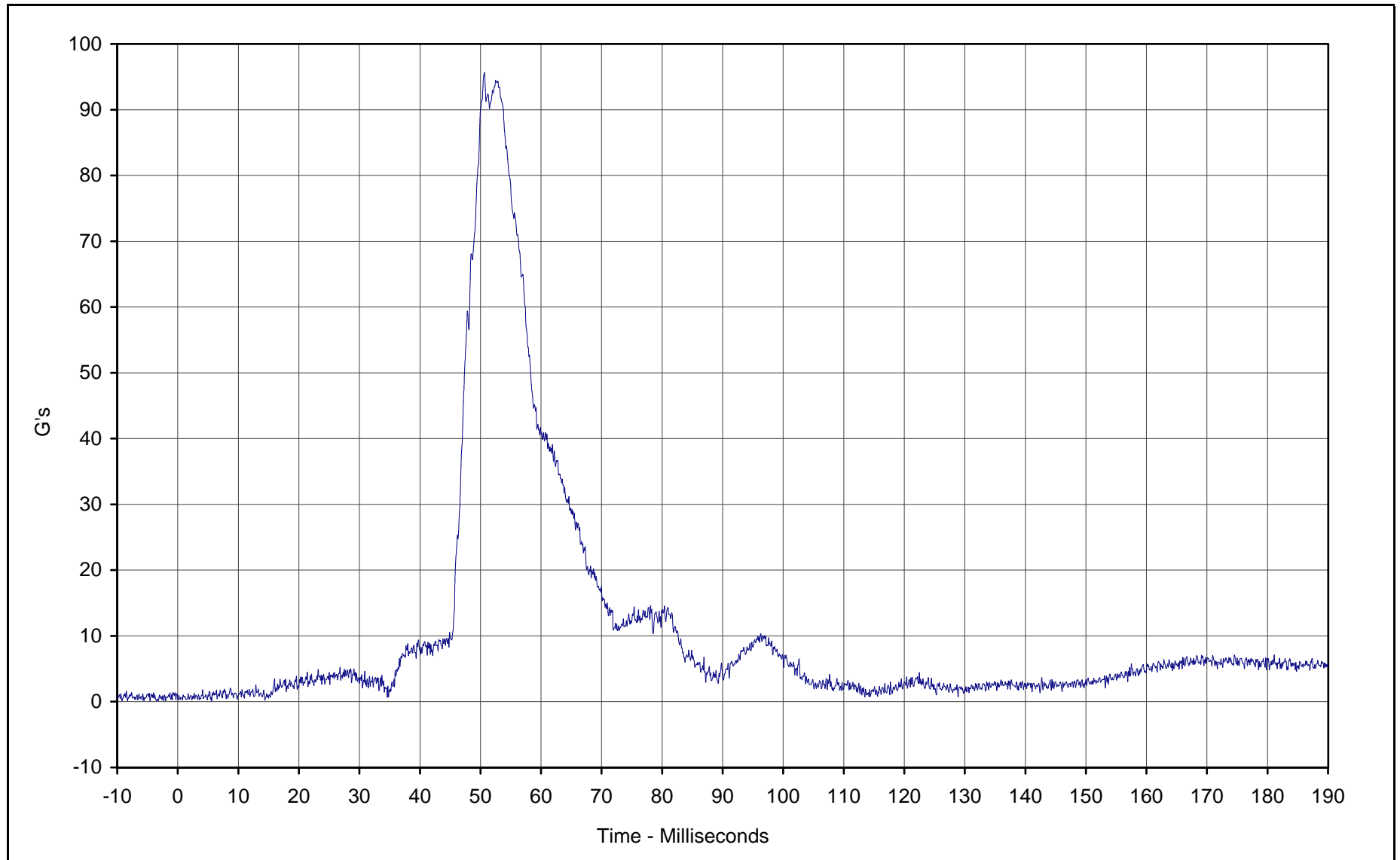


Curve Description: Pass. Head CG Z Velocity
Maximum Value: 1.2 at 50.0 Milliseconds
Minimum Value: -17.4 at 90.3 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: IN1-016

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



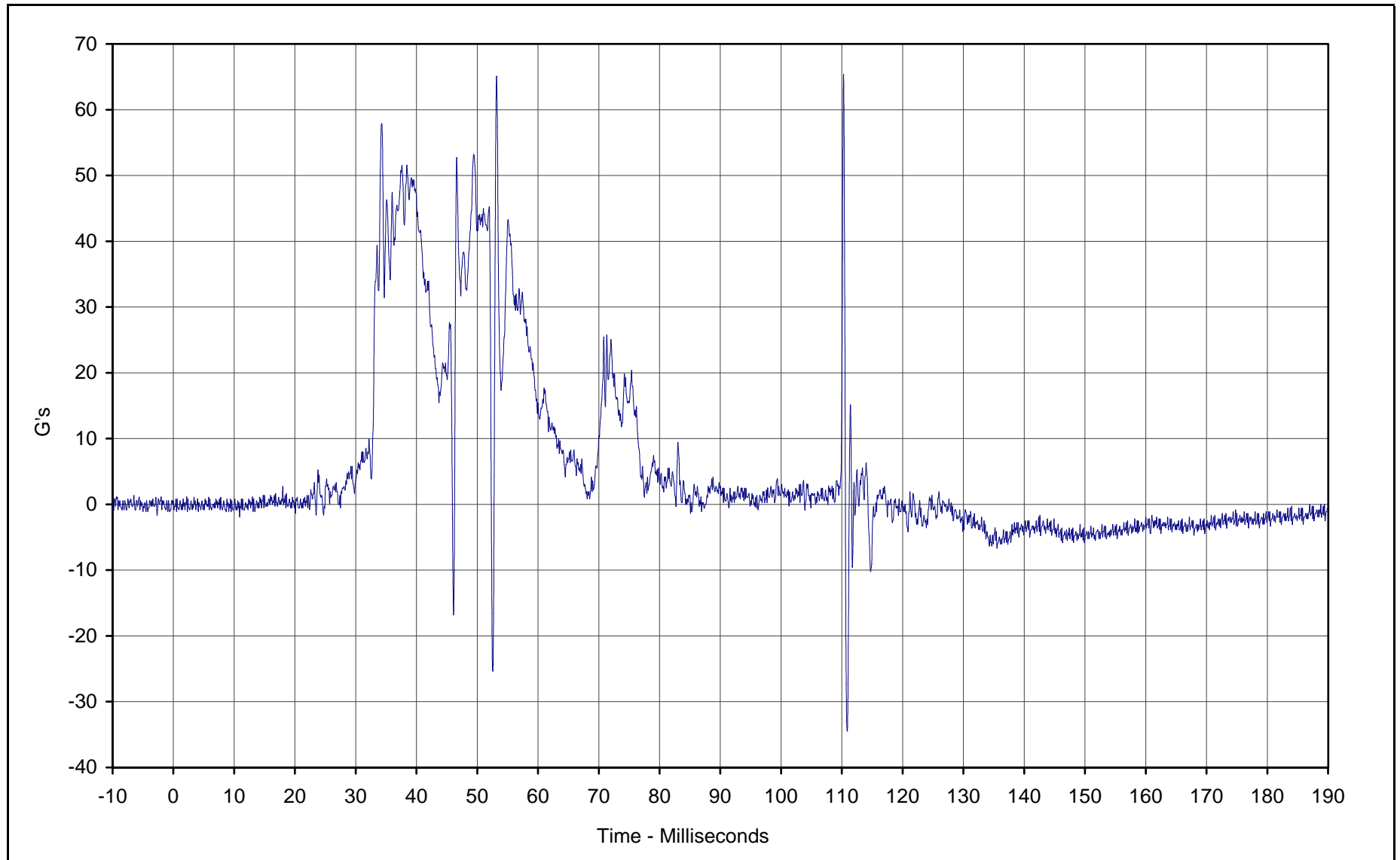
KAR21003-05



Curve Description: Pass. Head CG Resultant
 Maximum Value: 95.6 at 50.7 Milliseconds
 Minimum Value: 0.1 at 5.6 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 12/14/00
 Curve Number: RES-014

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
 Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

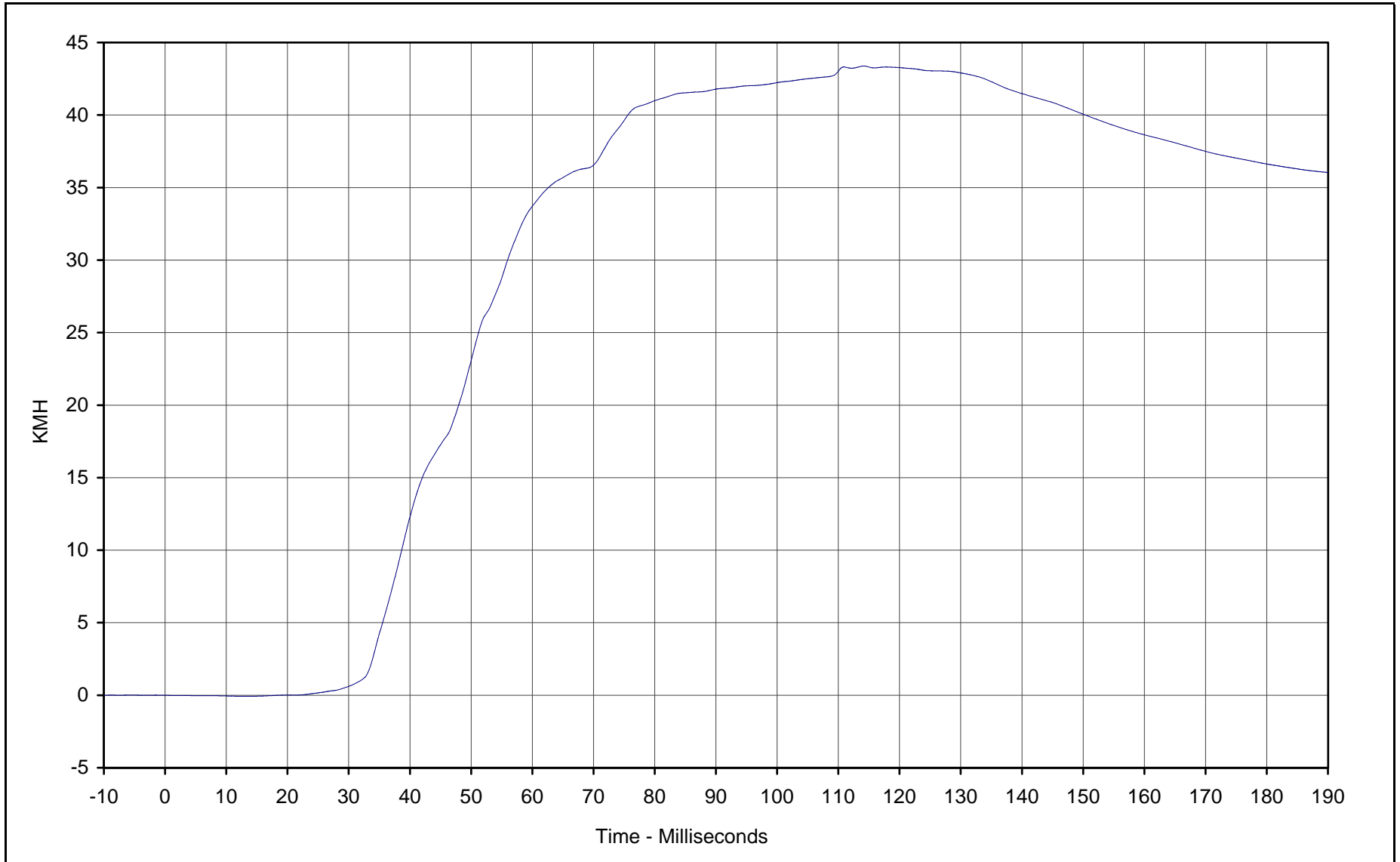




Curve Description: Pass. Upper Rib Primary Y
 Maximum Value: 65.3 at 110.3 Milliseconds
 Minimum Value: -34.5 at 110.9 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 12/14/00
 Curve Number: FIL-017

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
 Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan





Curve Description: Pass. Upper Rib Primary Y Velocity

Maximum Value: 43.4 at 114.2 Milliseconds

Minimum Value: -0.1 at 13.7 Milliseconds

SAE Filter Class: 180

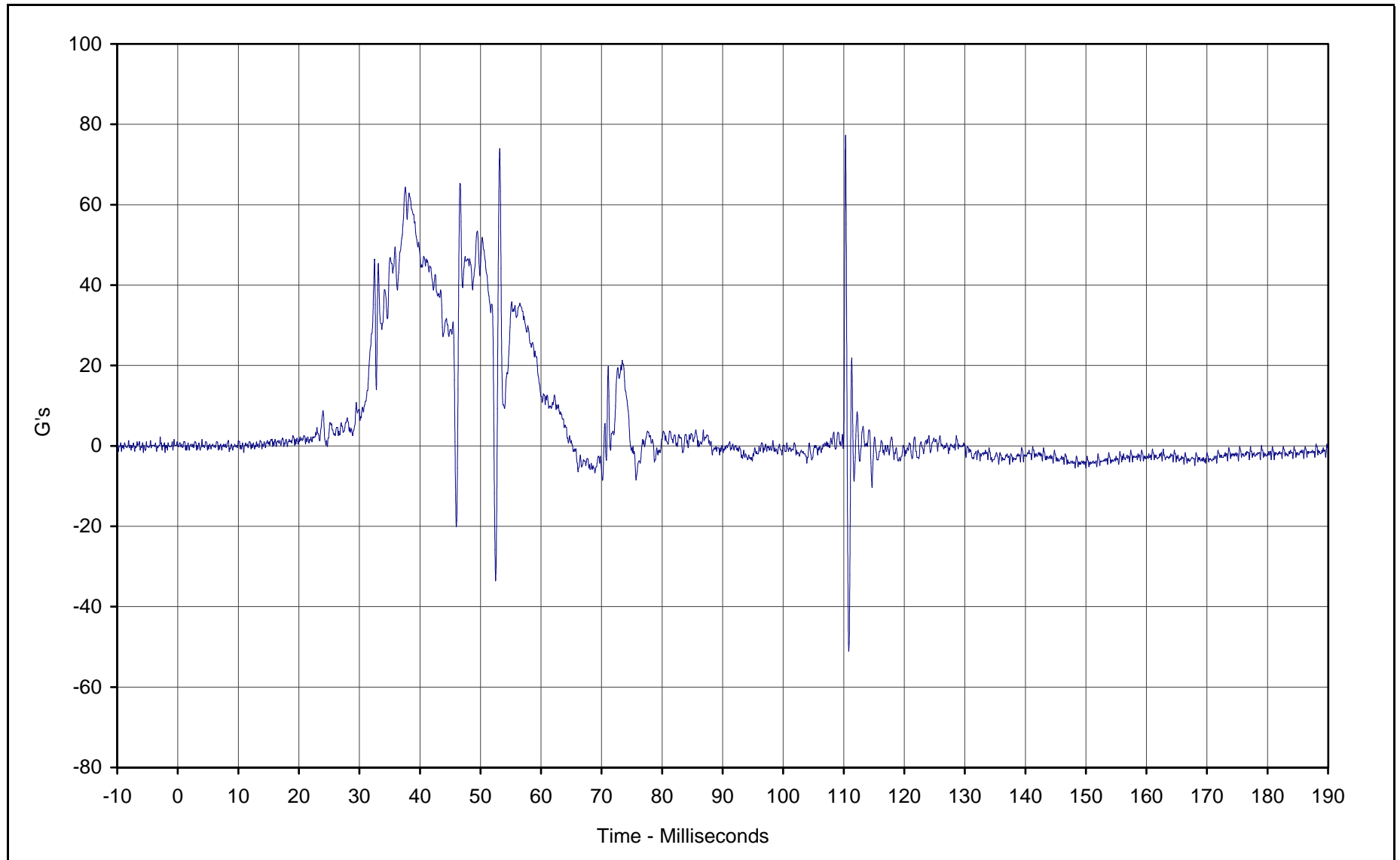
Date of Test: 12/14/00

Curve Number: IN1-017

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan





Curve Description: Pass. Lower Rib Primary Y

Maximum Value: 77.2 at 110.3 Milliseconds

Minimum Value: -51.0 at 110.8 Milliseconds

SAE Filter Class: 1000

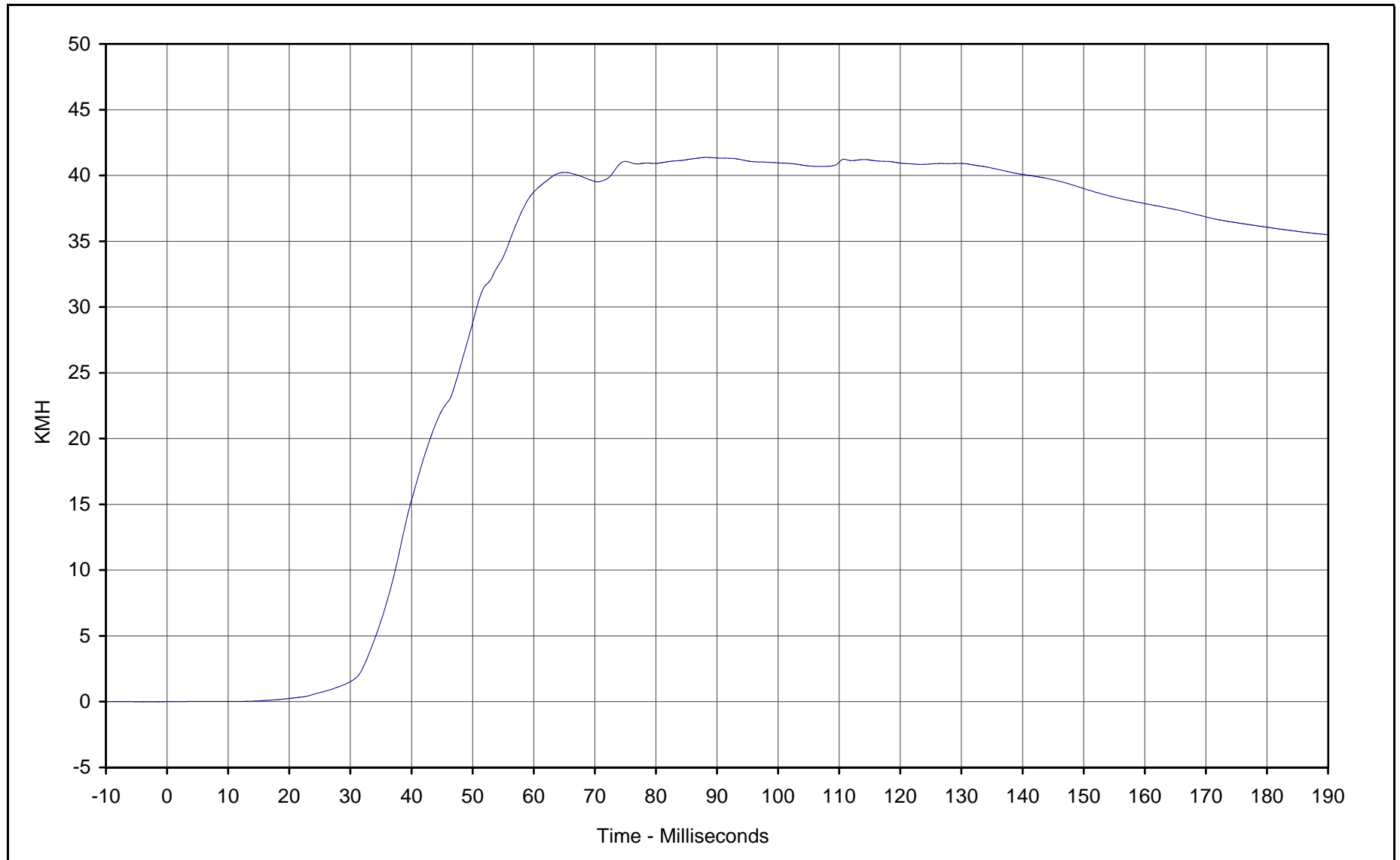
Date of Test: 12/14/00

Curve Number: FIL-018

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan





Curve Description: Pass. Lower Rib Primary Y Velocity

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Maximum Value: 41.4 at 88.2 Milliseconds

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

Minimum Value: 0.0 at 0.0 Milliseconds

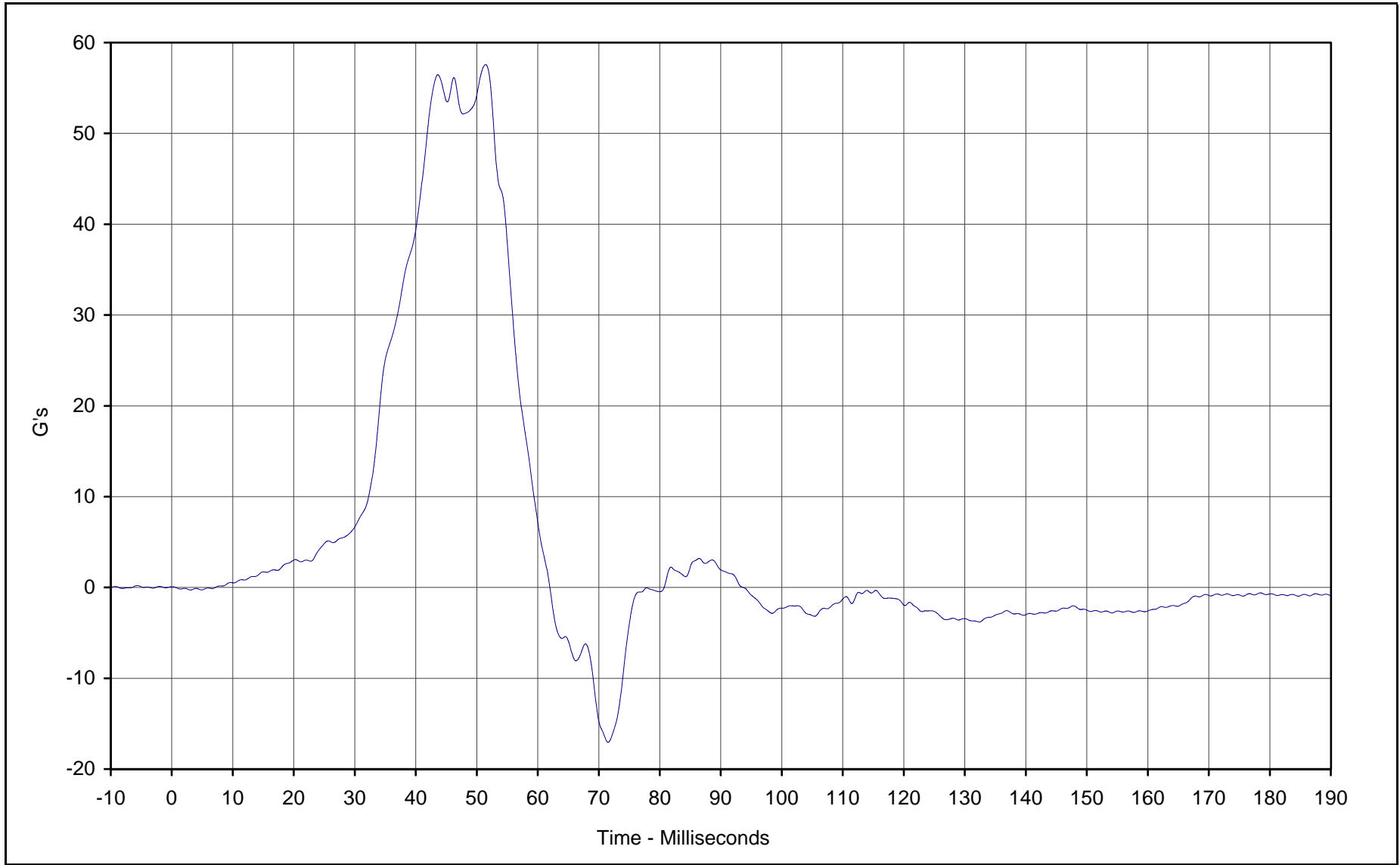
SAE Filter Class: 180

Date of Test: 12/14/00

Curve Number: IN1-018



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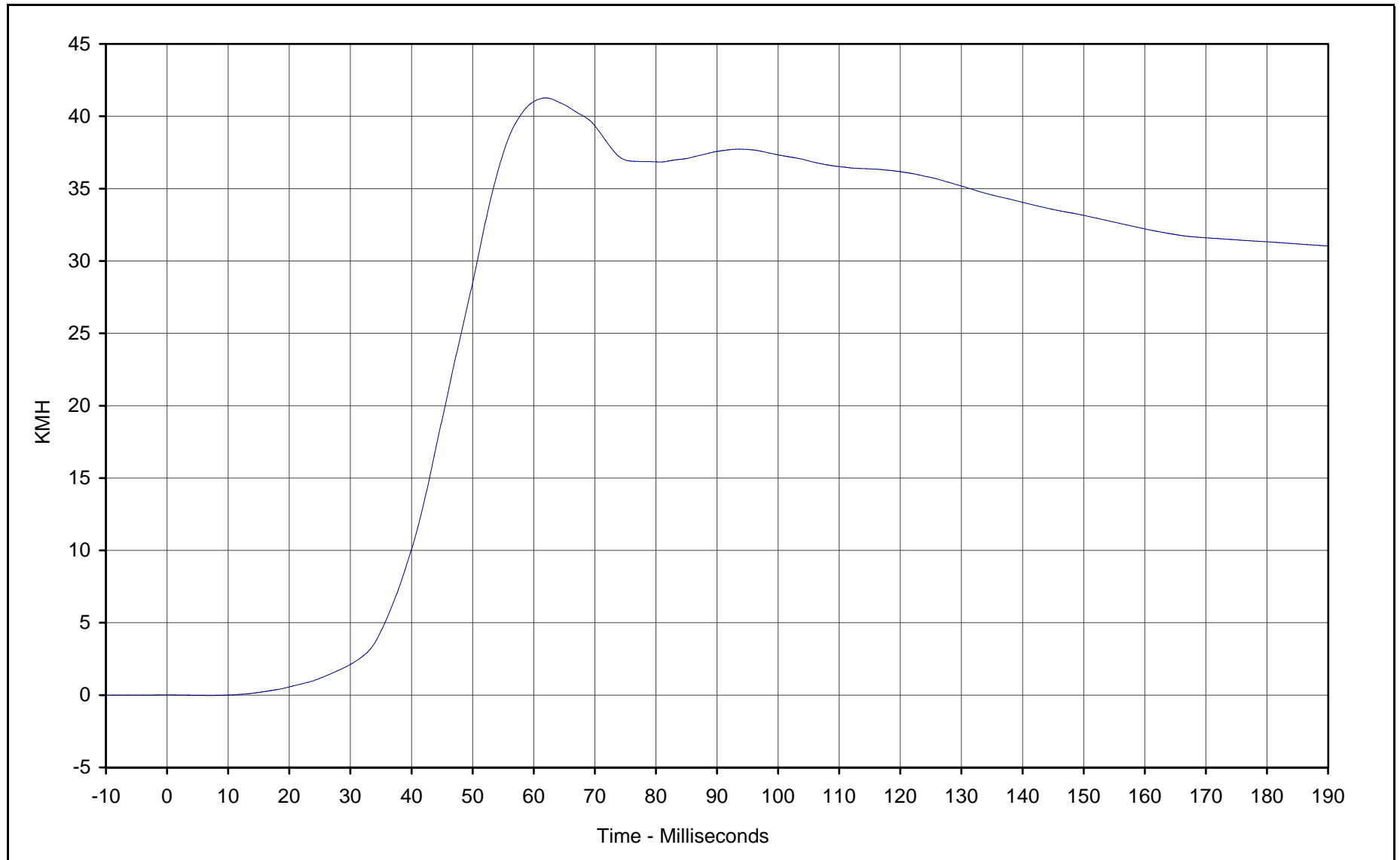


Curve Description: Pass. Lower Spine Primary Y
Maximum Value: 57.6 at 51.4 Milliseconds
Minimum Value: -17.1 at 71.5 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: FIL-019

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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Curve Description: Pass. Lower Spine Primary Y Velocity

Maximum Value: 41.3 at 62.0 Milliseconds

Minimum Value: 0.0 at 7.2 Milliseconds

SAE Filter Class: 180

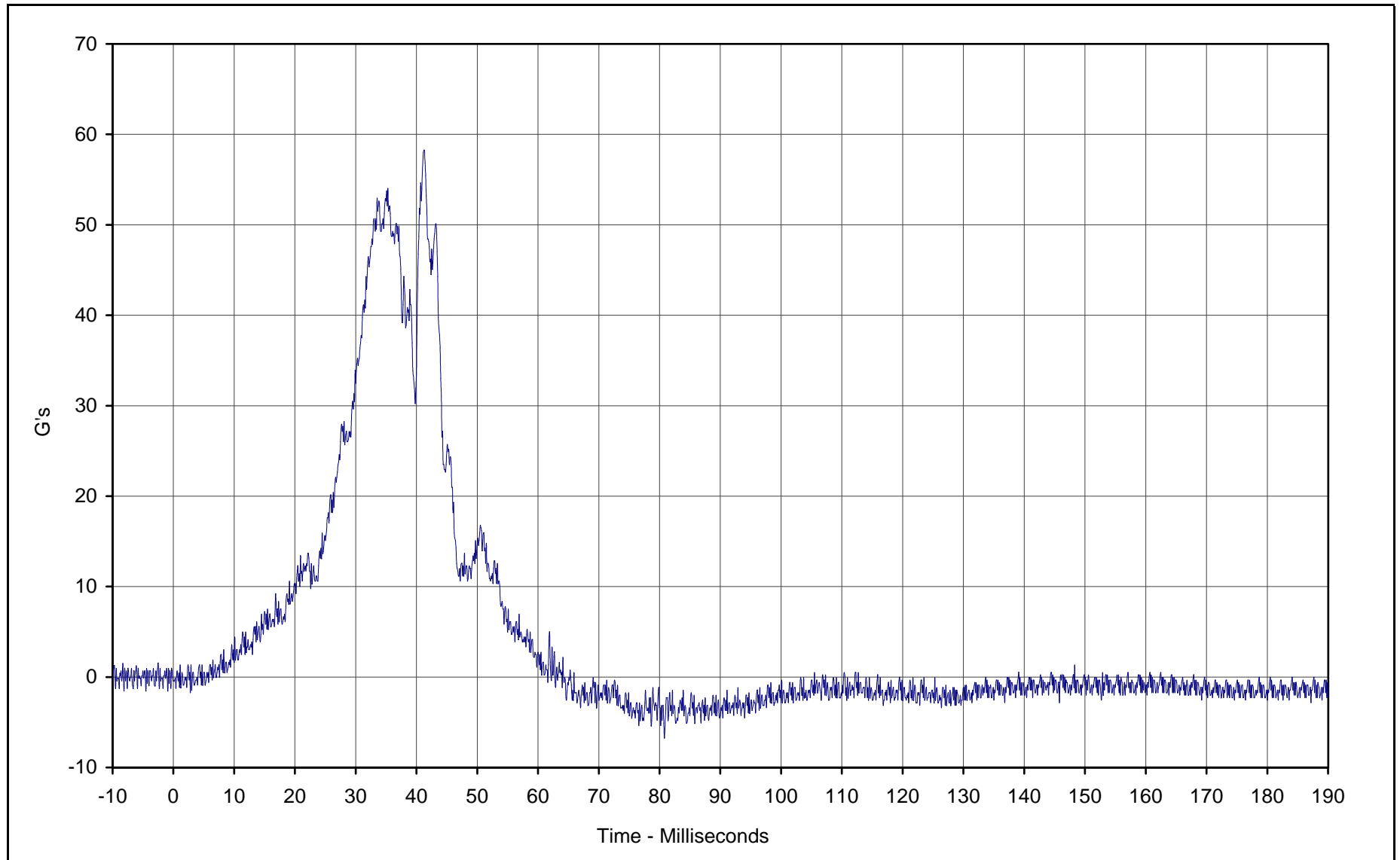
Date of Test: 12/14/00

Curve Number: IN1-019

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



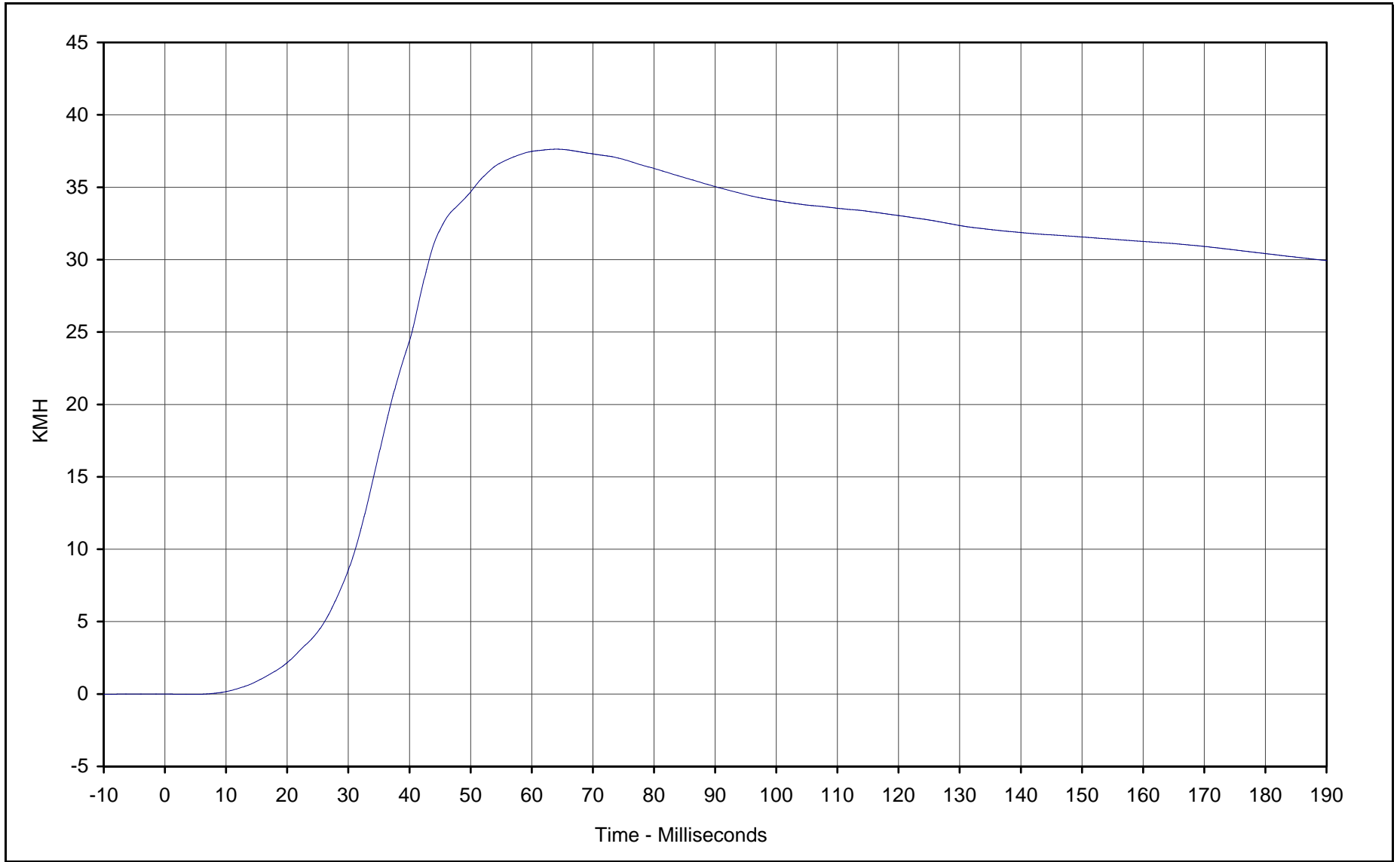


Curve Description: Pass. Pelvis Primary Y
 Maximum Value: 58.3 at 41.2 Milliseconds
 Minimum Value: -6.8 at 80.8 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 12/14/00
 Curve Number: FIL-020

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
 Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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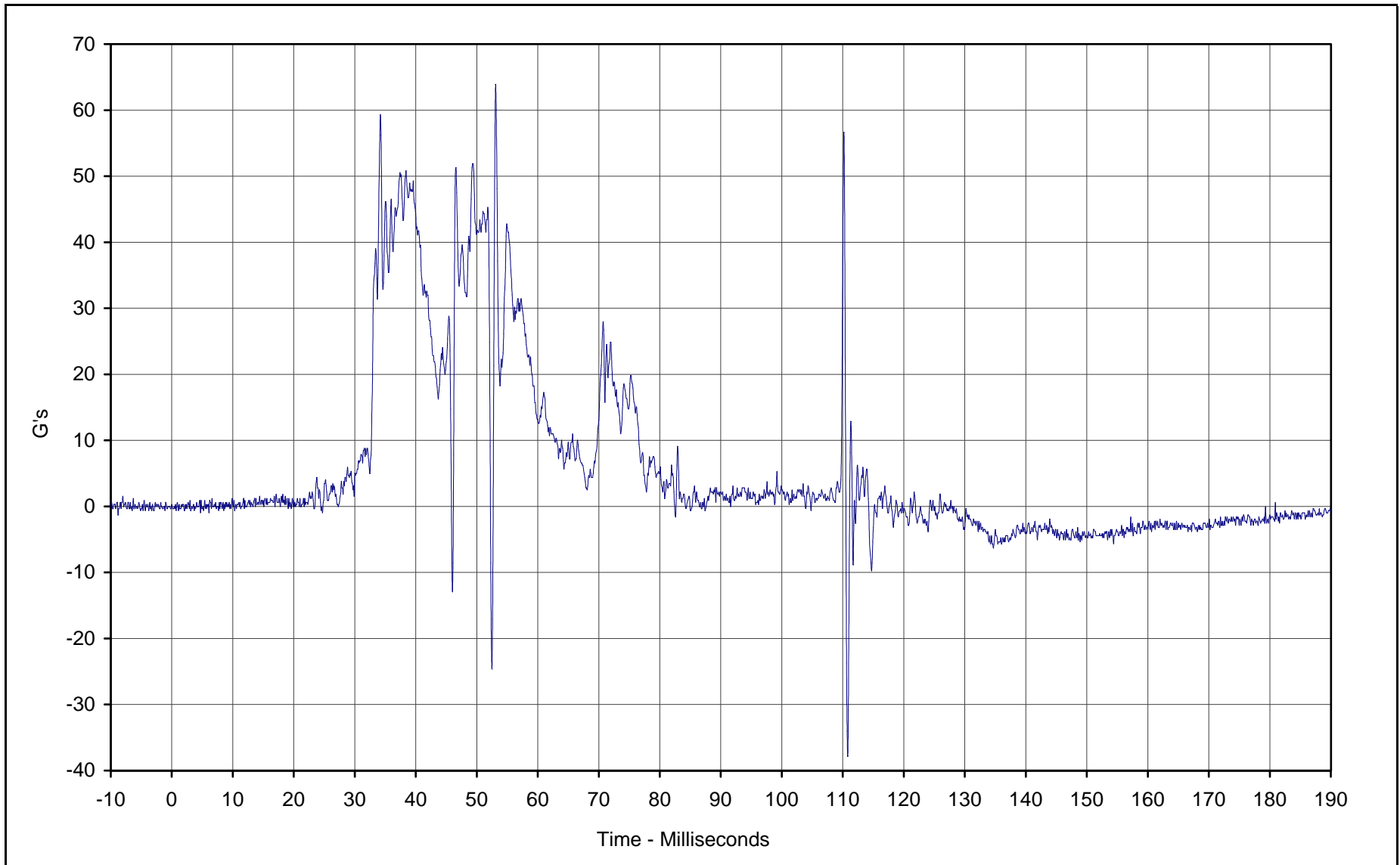
Curve Description: Pass. Pelvis Primary Y Velocity
Maximum Value: 37.6 at 64.0 Milliseconds
Minimum Value: 0.0 at 4.1 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: IN1-020

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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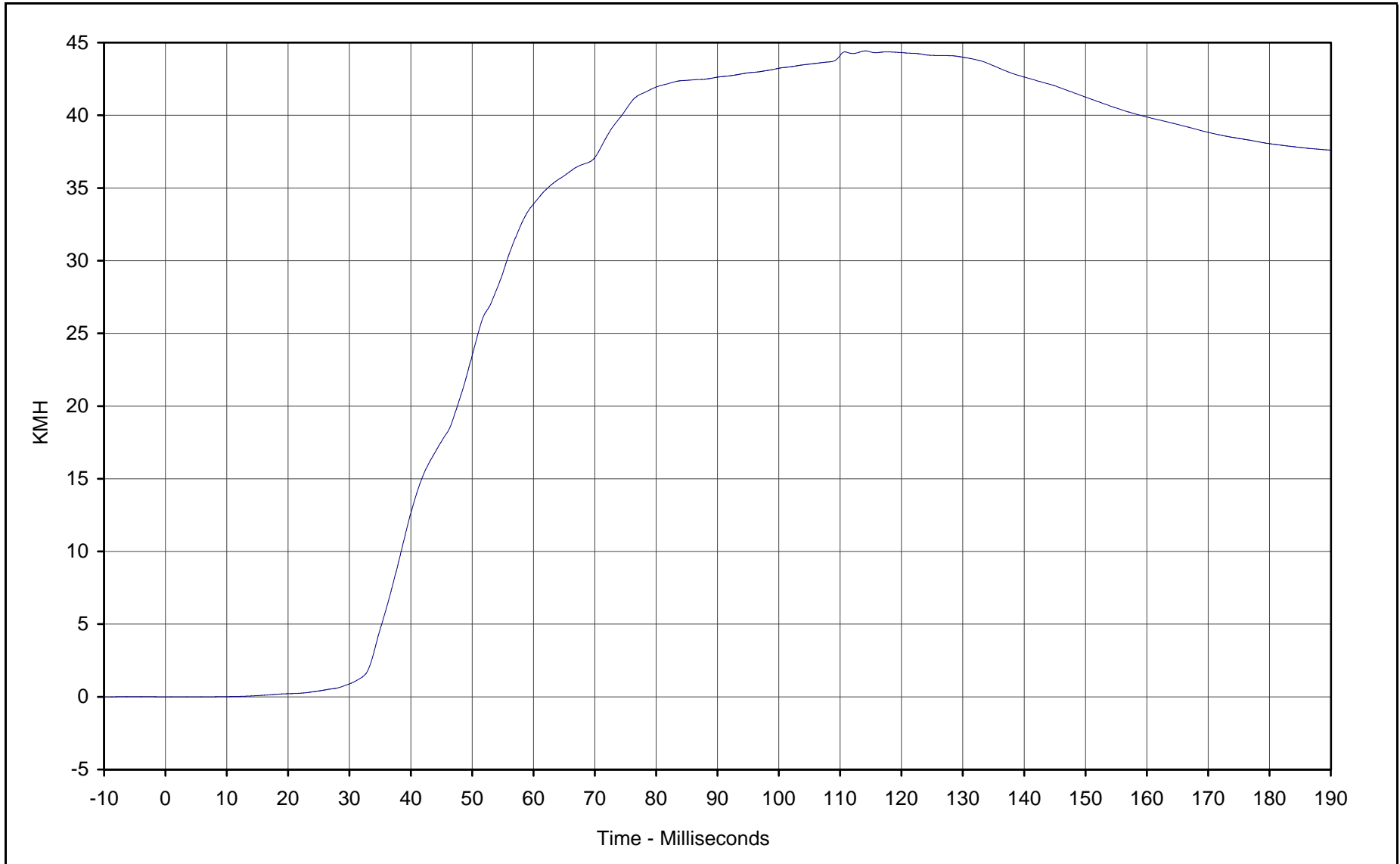
Curve Description: Pass. Upper Rib Redundant Y
Maximum Value: 63.9 at 53.1 Milliseconds
Minimum Value: -37.8 at 110.8 Milliseconds
SAE Filter Class: 1000
Date of Test: 12/14/00
Curve Number: FIL-021

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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Curve Description: Pass. Upper Rib Redundant Y Velocity

Maximum Value: 44.4 at 114.1 Milliseconds

Minimum Value: 0.0 at 4.0 Milliseconds

SAE Filter Class: 180

Date of Test: 12/14/00

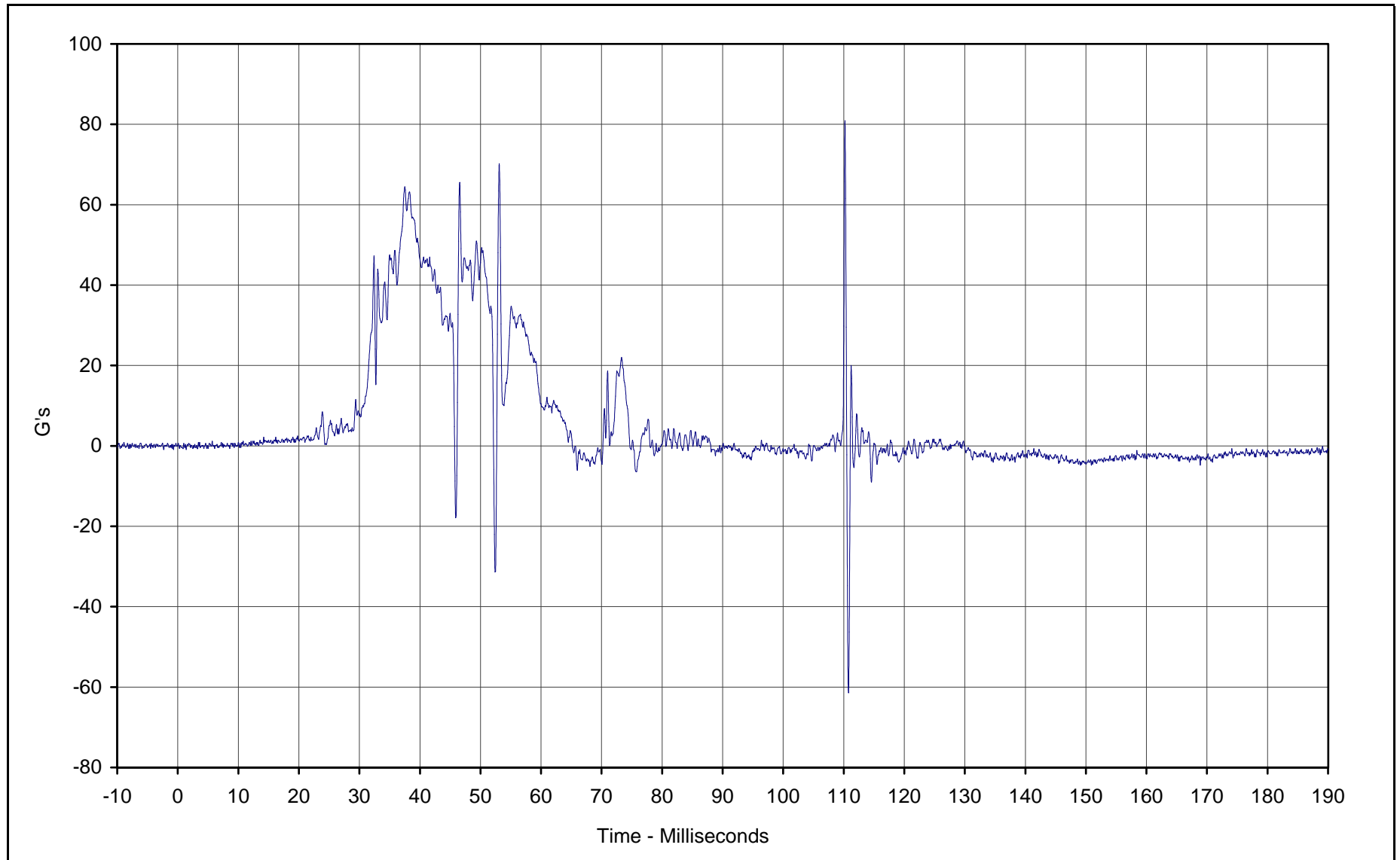
Curve Number: IN1-021

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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Curve Description: Pass. Lower Rib Redundant Y

Maximum Value: 80.9 at 110.2 Milliseconds

Minimum Value: -61.4 at 110.8 Milliseconds

SAE Filter Class: 1000

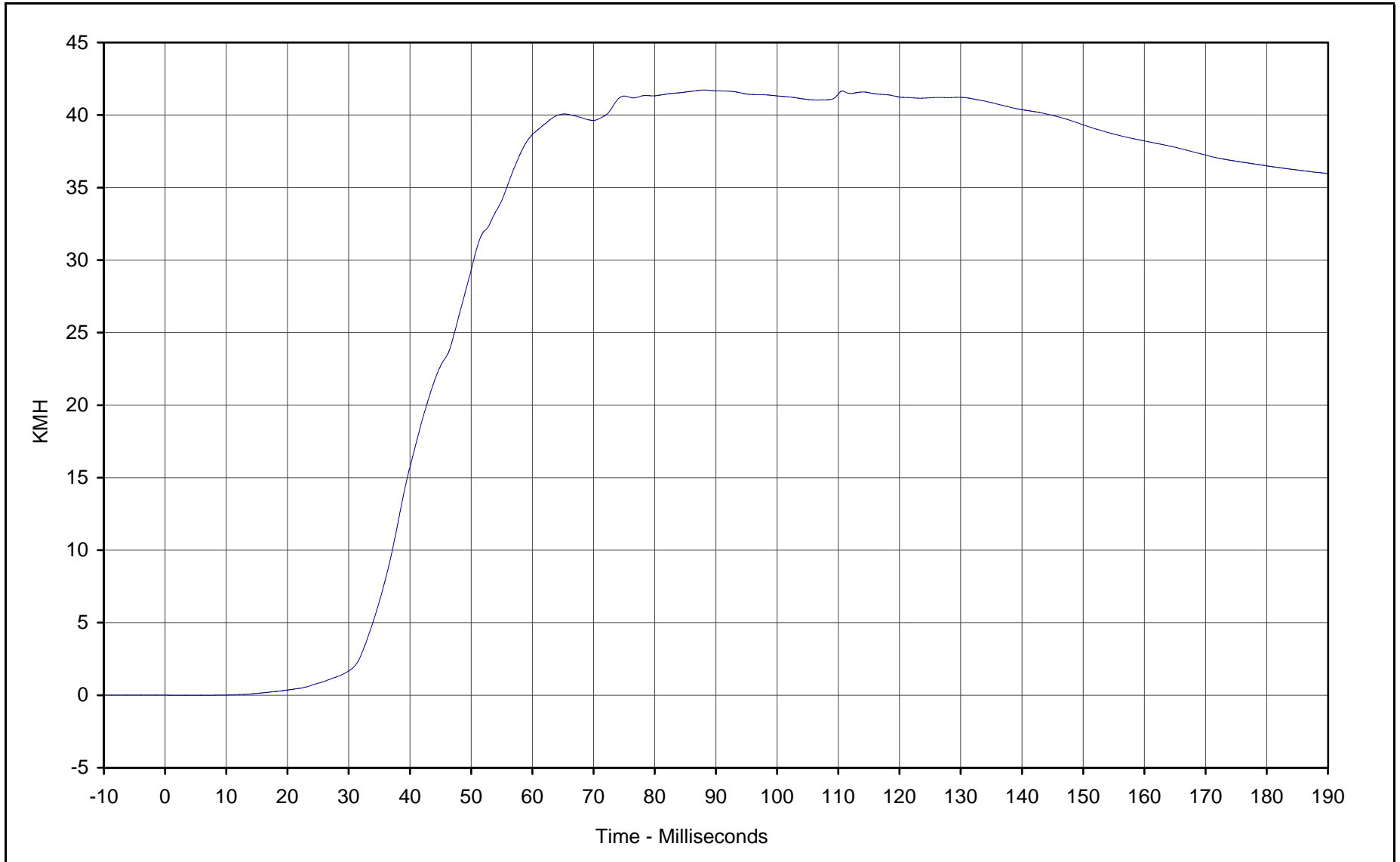
Date of Test: 12/14/00

Curve Number: FIL-022

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan





Curve Description: Pass. Lower Rib Redundant Y Velocity

Maximum Value: 41.7 at 88.1 Milliseconds

Minimum Value: 0.0 at 4.6 Milliseconds

SAE Filter Class: 180

Date of Test: 12/14/00

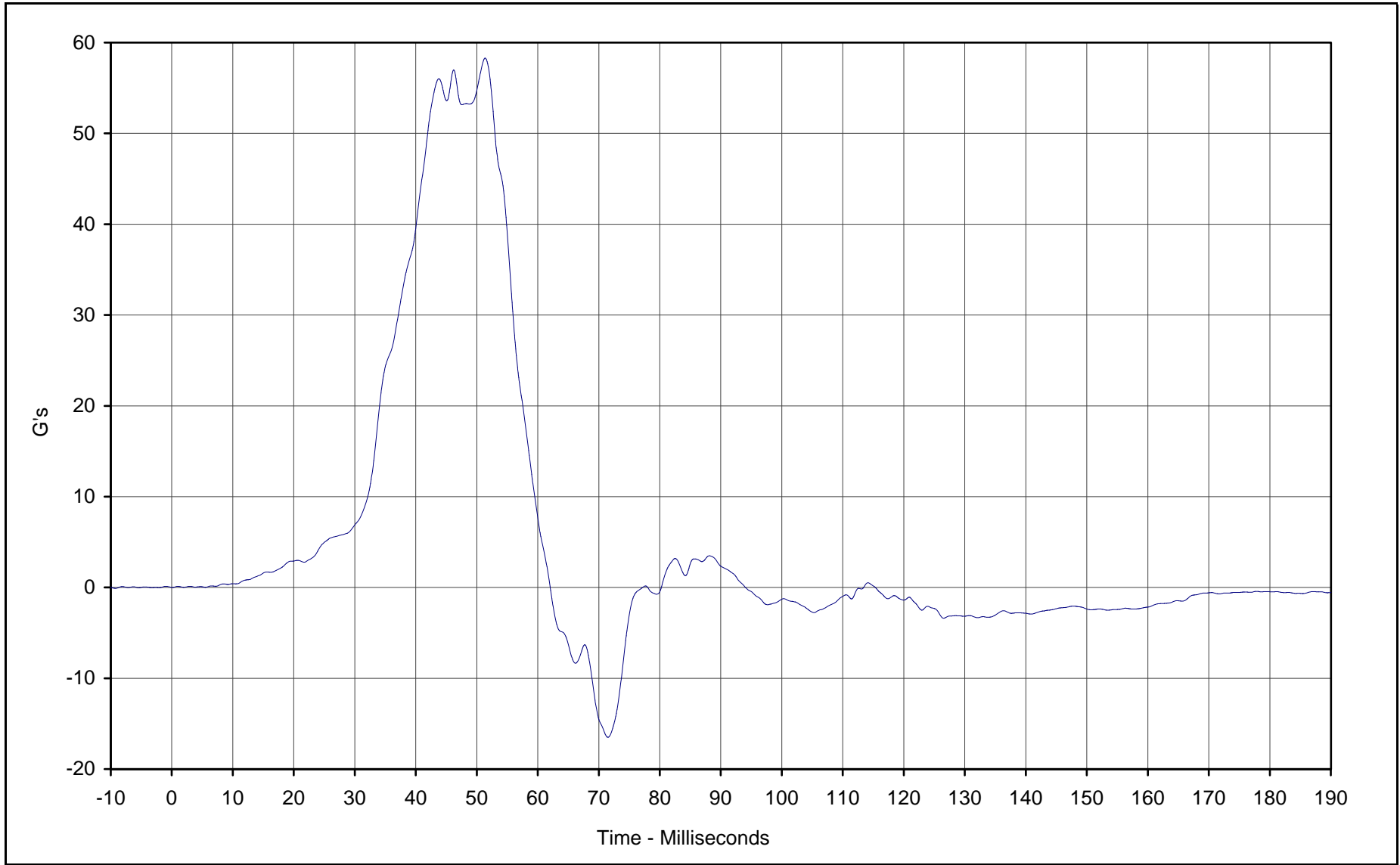
Curve Number: IN1-022

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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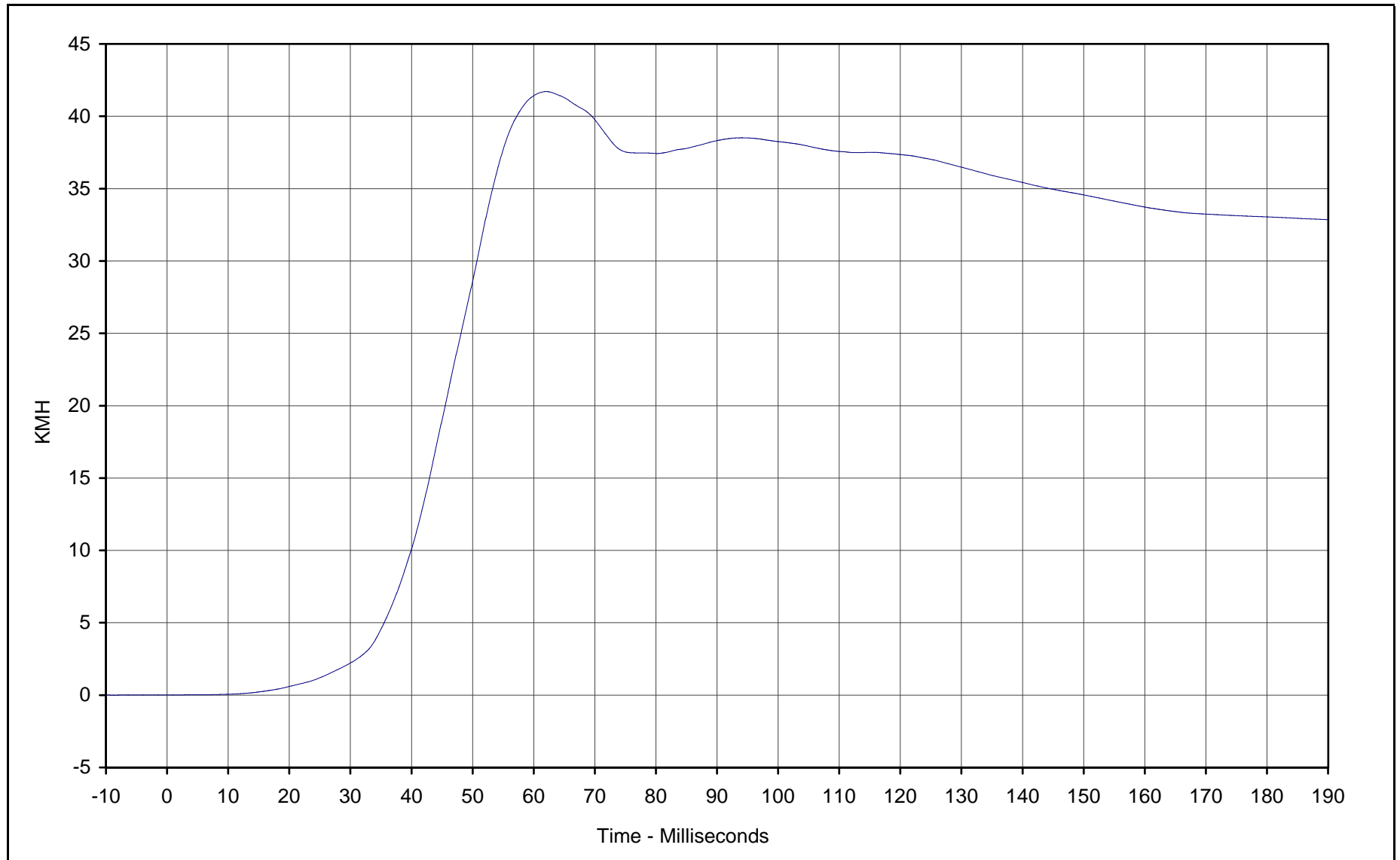


Curve Description: Pass. Lower Spine Redundant Y
Maximum Value: 58.3 at 51.4 Milliseconds
Minimum Value: -16.5 at 71.5 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: FIL-023

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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Curve Description: Pass. Lower Spine Redundant Y Velocity

Maximum Value: 41.7 at 62.0 Milliseconds

Minimum Value: 0.0 at 0.2 Milliseconds

SAE Filter Class: 180

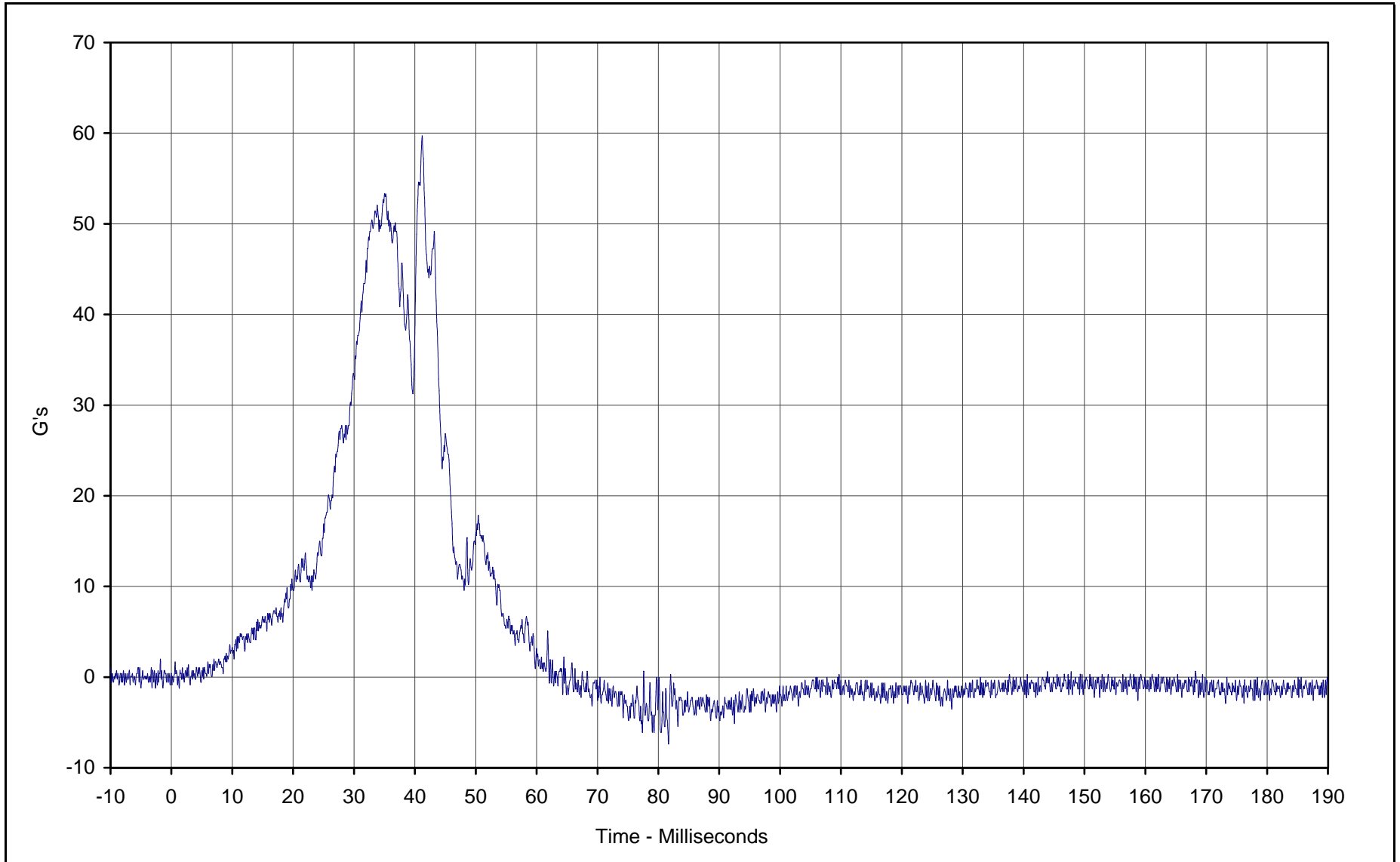
Date of Test: 12/14/00

Curve Number: IN1-023

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



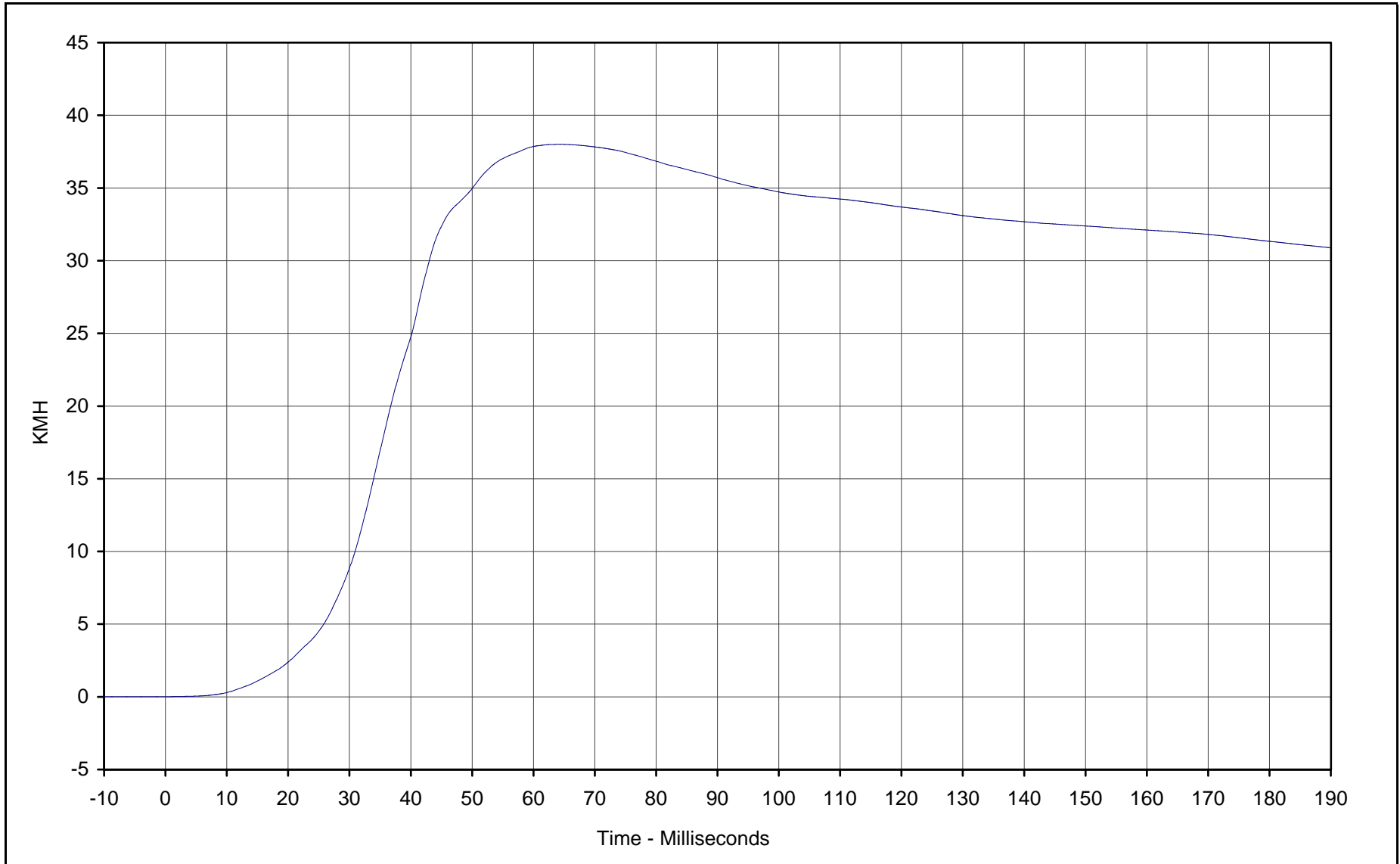


Curve Description: Pass. Pelvis Redundant Y
Maximum Value: 59.7 at 41.2 Milliseconds
Minimum Value: -7.4 at 81.7 Milliseconds
SAE Filter Class: 1000
Date of Test: 12/14/00
Curve Number: FIL-024

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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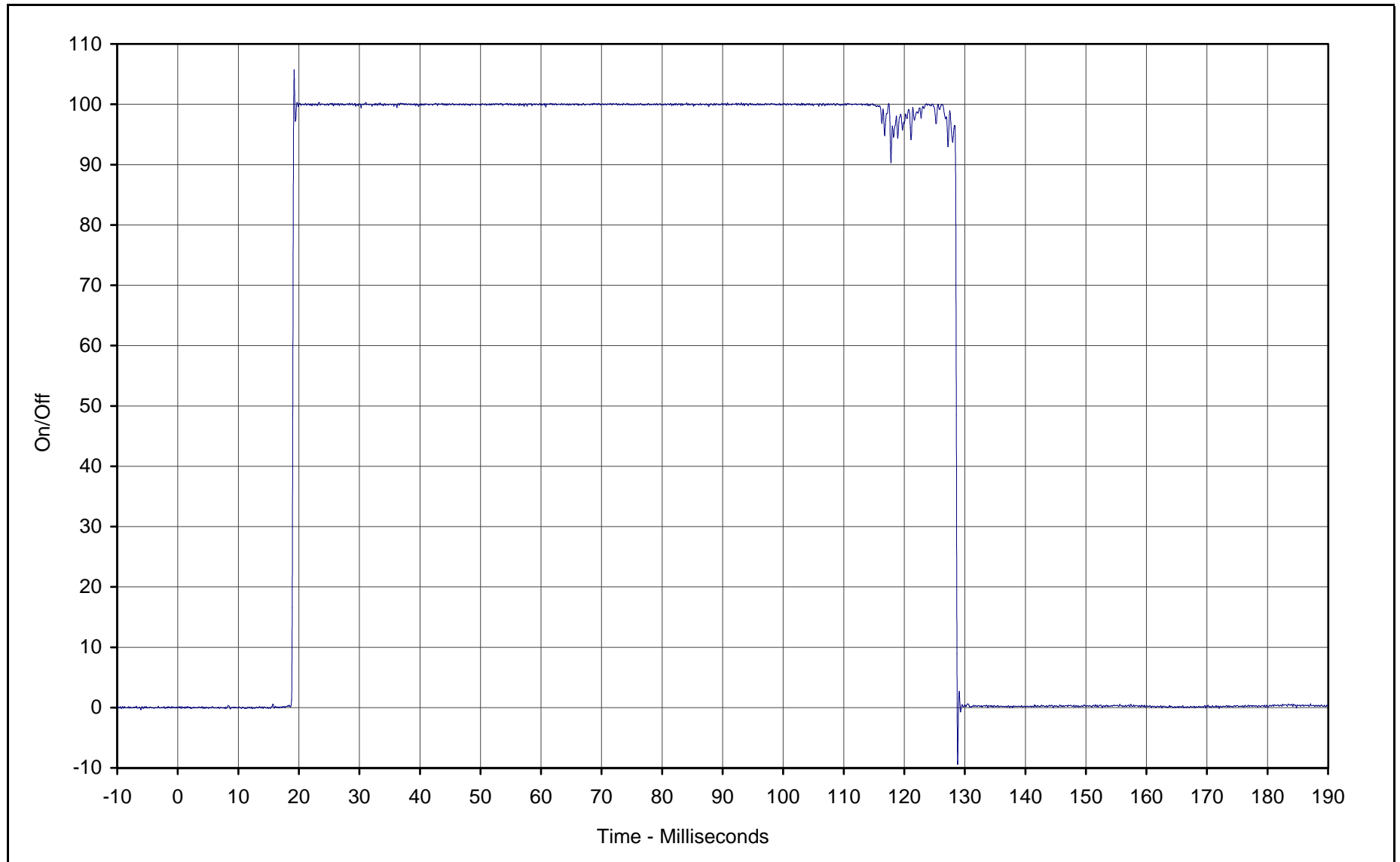
Curve Description: Pass. Pelvis Redundant Y Velocity
Maximum Value: 38.0 at 64.4 Milliseconds
Minimum Value: 0.0 at 0.1 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: IN1-024

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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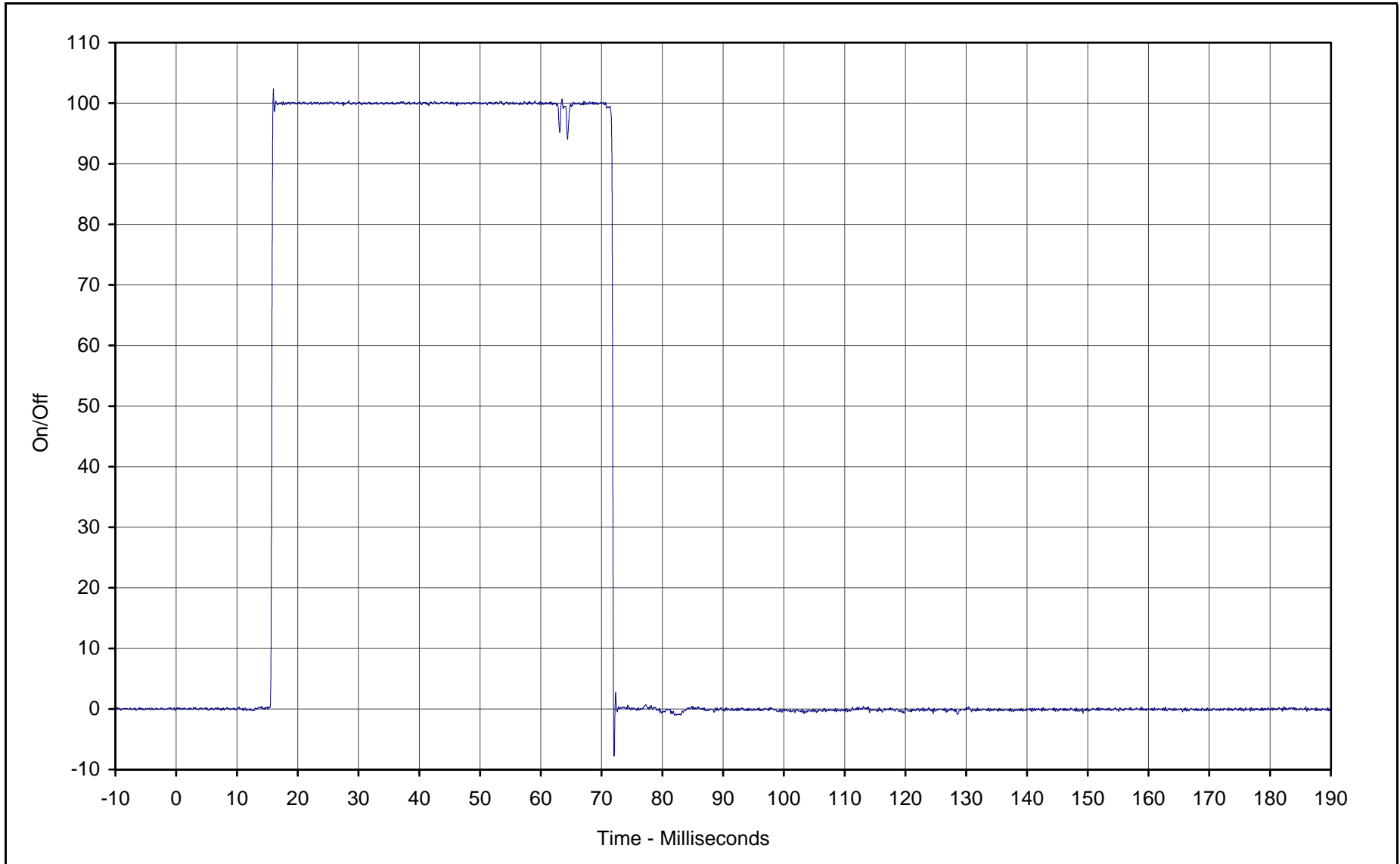
Curve Description: Pass. Thorax Contact
Maximum Value: 105.4 at 19.2 Milliseconds
Crossing Point: 50% at 19.0 Milliseconds
SAE Filter Class: 1000
Date of Test: 12/14/00
Curve Number: FIL-025

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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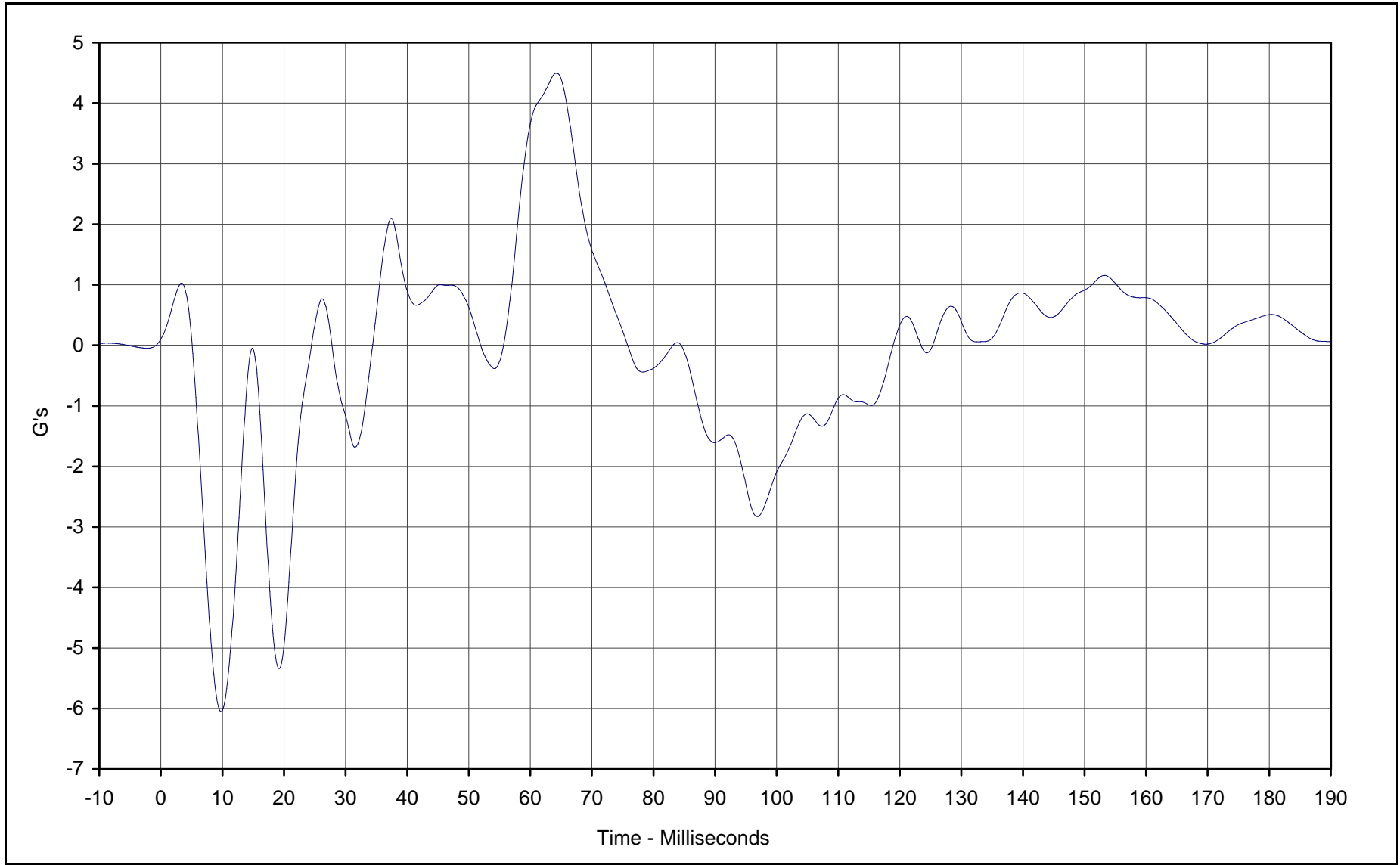
Curve Description: Pass. Pelvis Contact
Maximum Value: 102.3 at 16.0 Milliseconds
Crossing Point: 50% at 15.8 Milliseconds
SAE Filter Class: 1000
Date of Test: 12/14/00
Curve Number: FIL-026

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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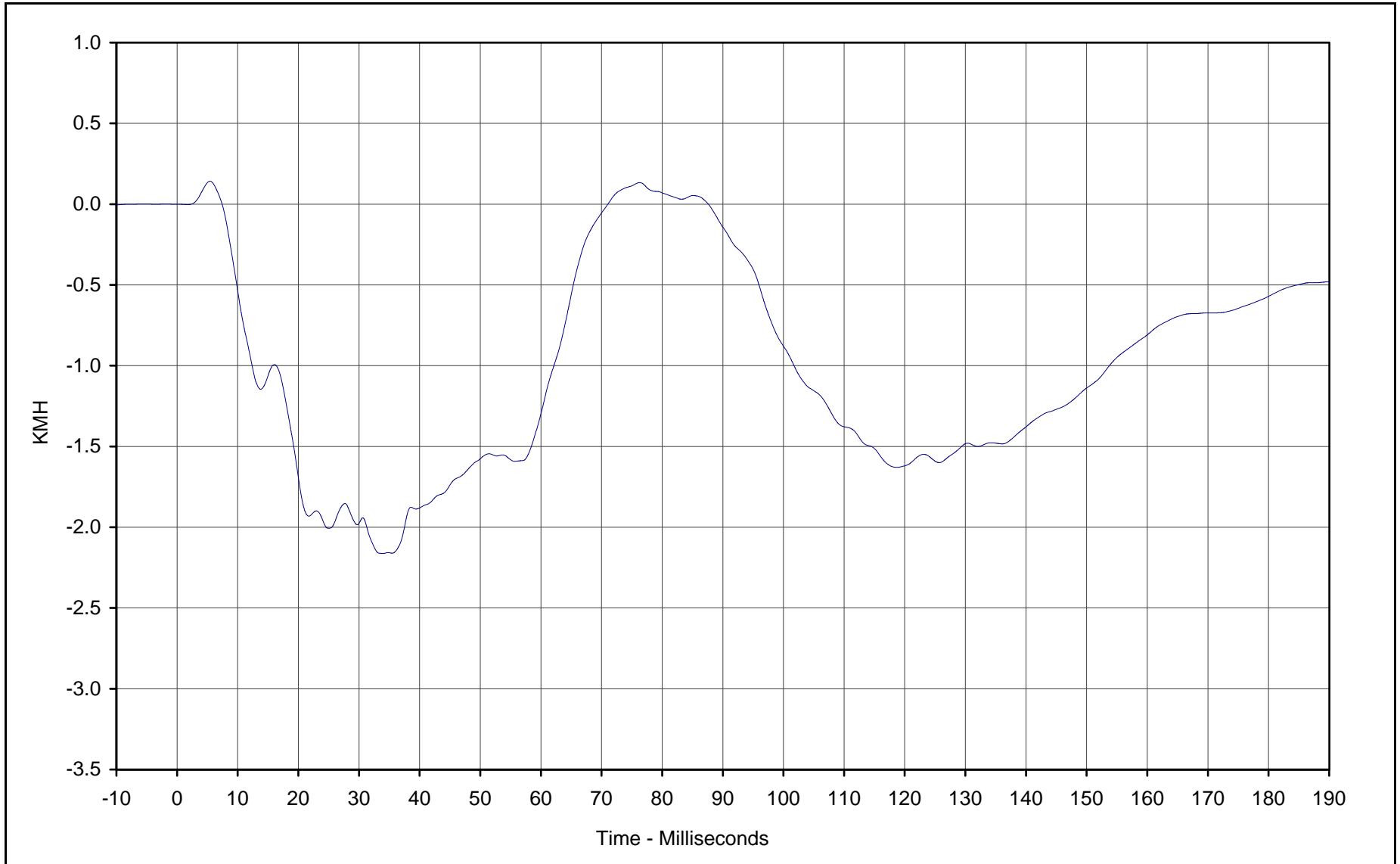
Curve Description: Right Sill at Front Seat X
Maximum Value: 4.5 at 64.2 Milliseconds
Minimum Value: -6.0 at 9.8 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: FIL-027

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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Curve Description: Right Sill at Front Seat X Velocity

Maximum Value: 0.1 at 5.4 Milliseconds

Minimum Value: -2.2 at 33.9 Milliseconds

SAE Filter Class: 180

Date of Test: 12/14/00

Curve Number: IN1-027

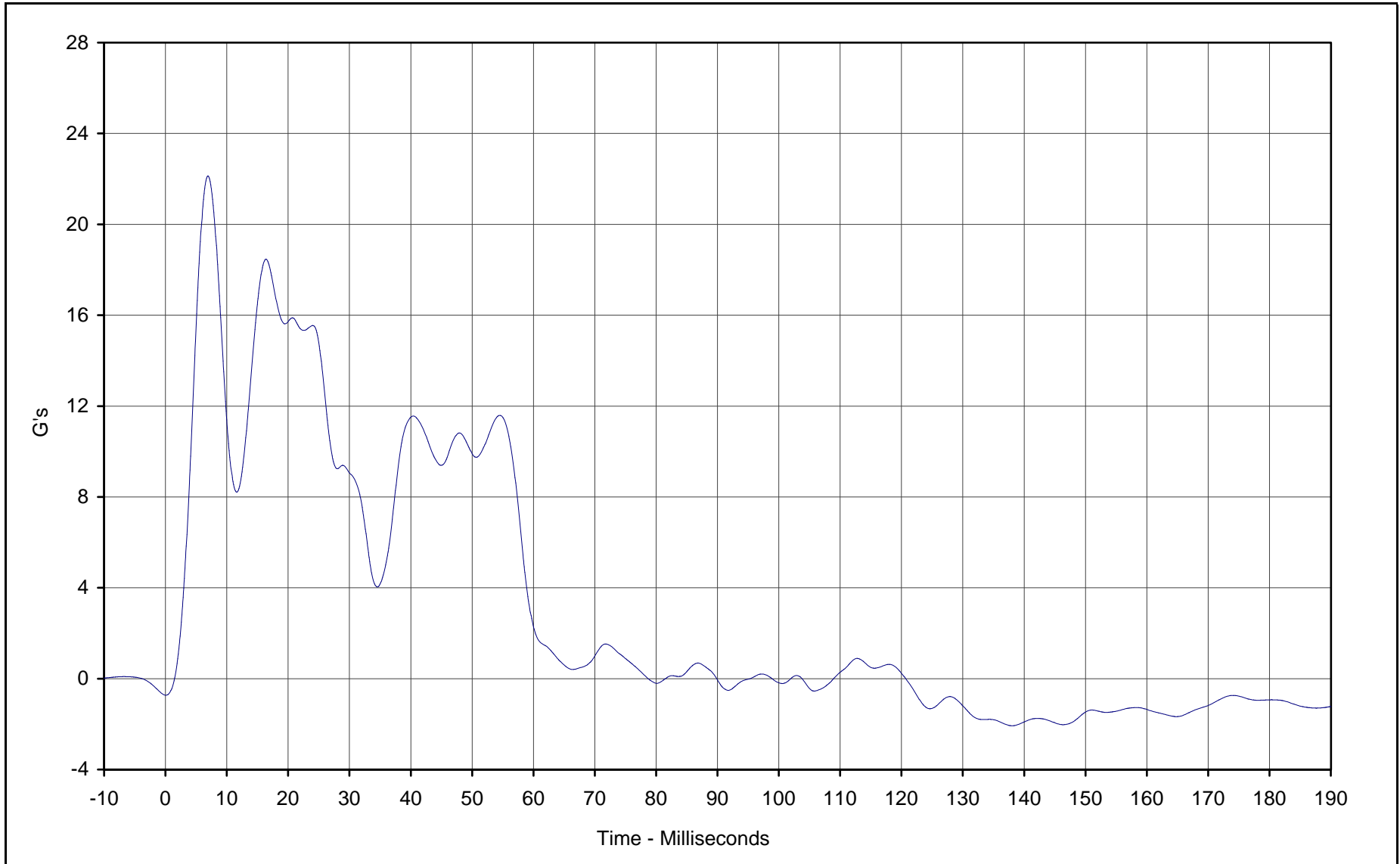
Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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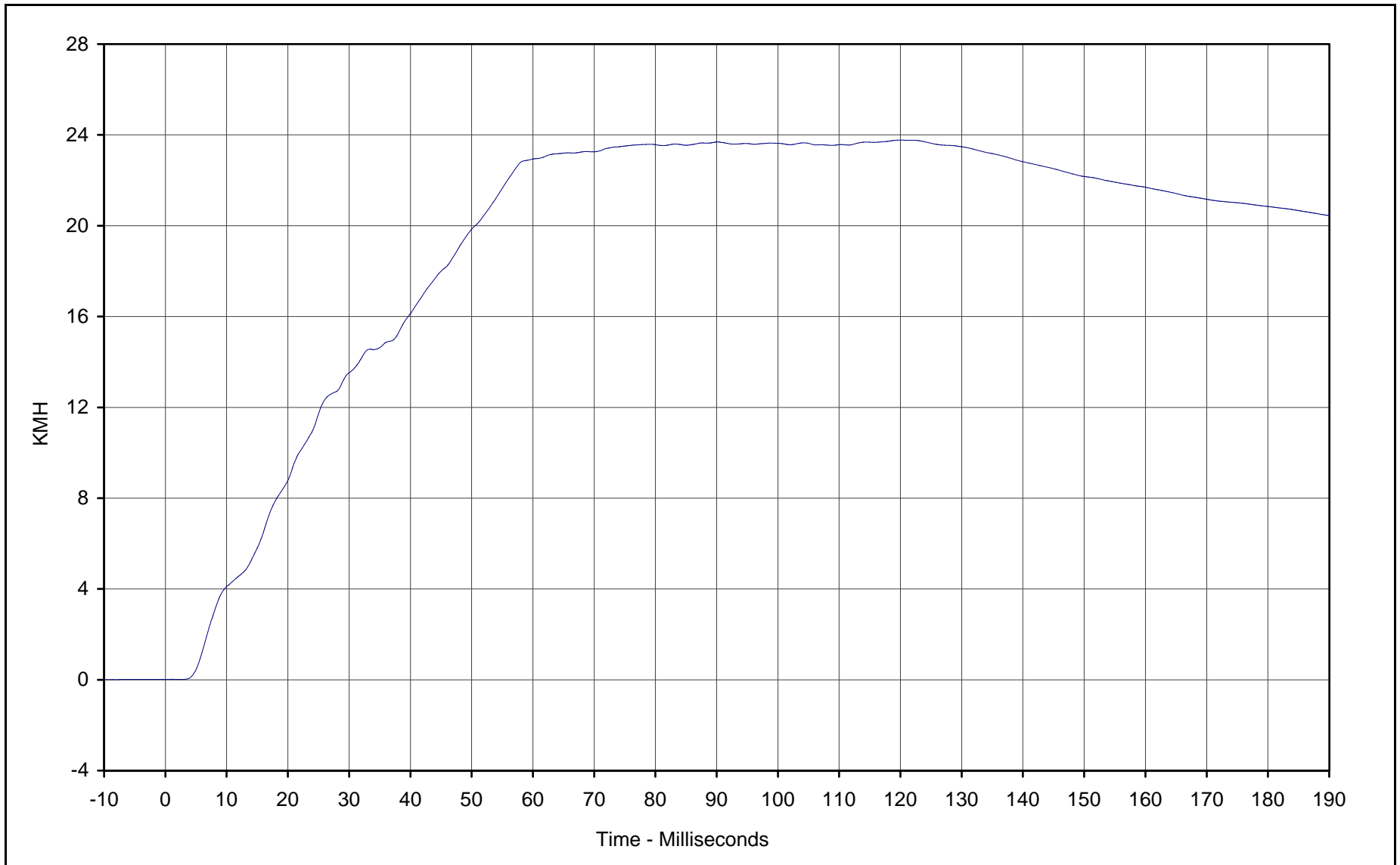
Curve Description: Right Sill at Front Seat Y
Maximum Value: 22.1 at 6.9 Milliseconds
Minimum Value: -2.1 at 138.1 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: FIL-028

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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Curve Description: Right Sill at Front Seat Y Velocity

Maximum Value: 23.8 at 120.0 Milliseconds

Minimum Value: 0.0 at 2.8 Milliseconds

SAE Filter Class: 180

Date of Test: 12/14/00

Curve Number: IN1-028

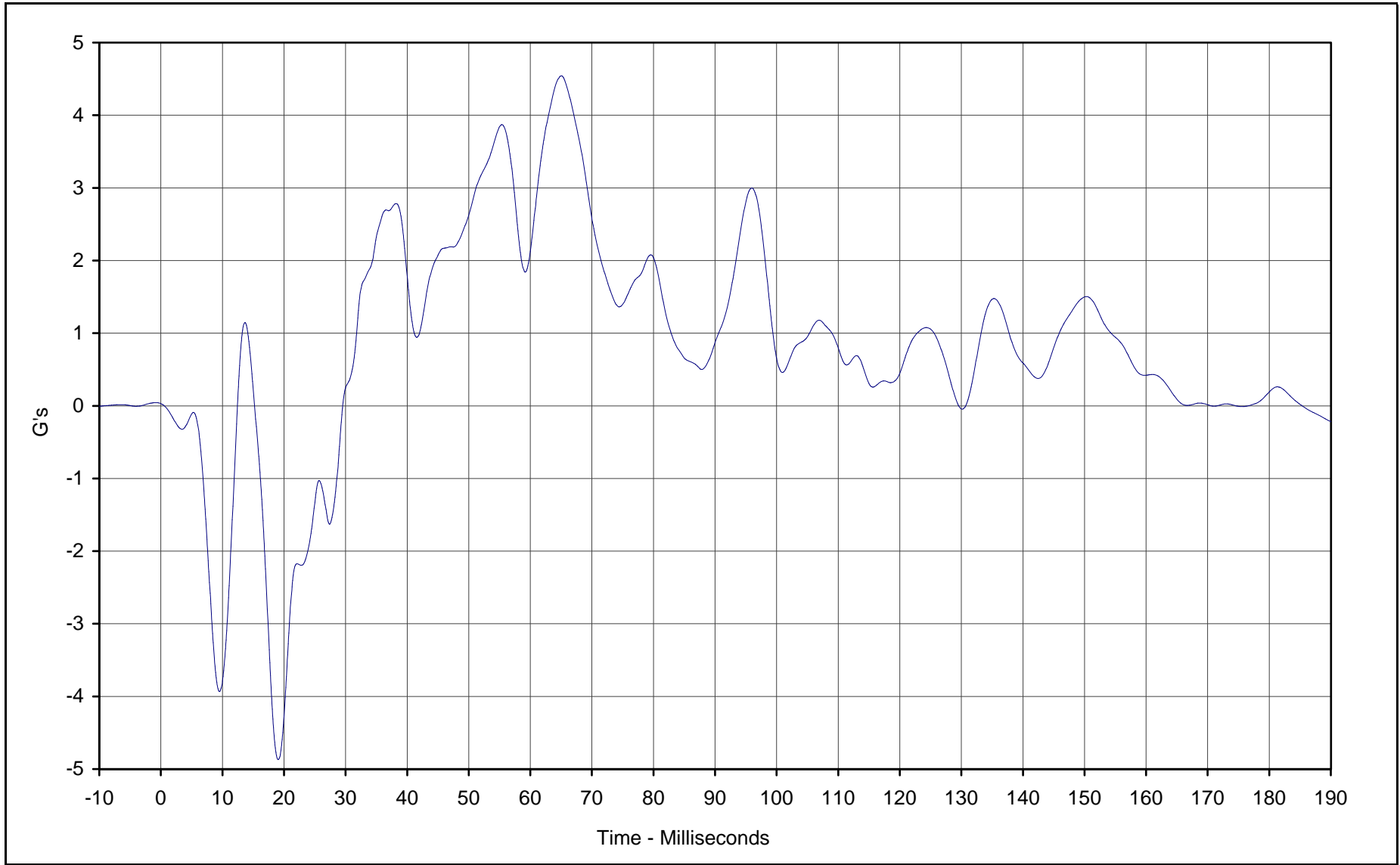
Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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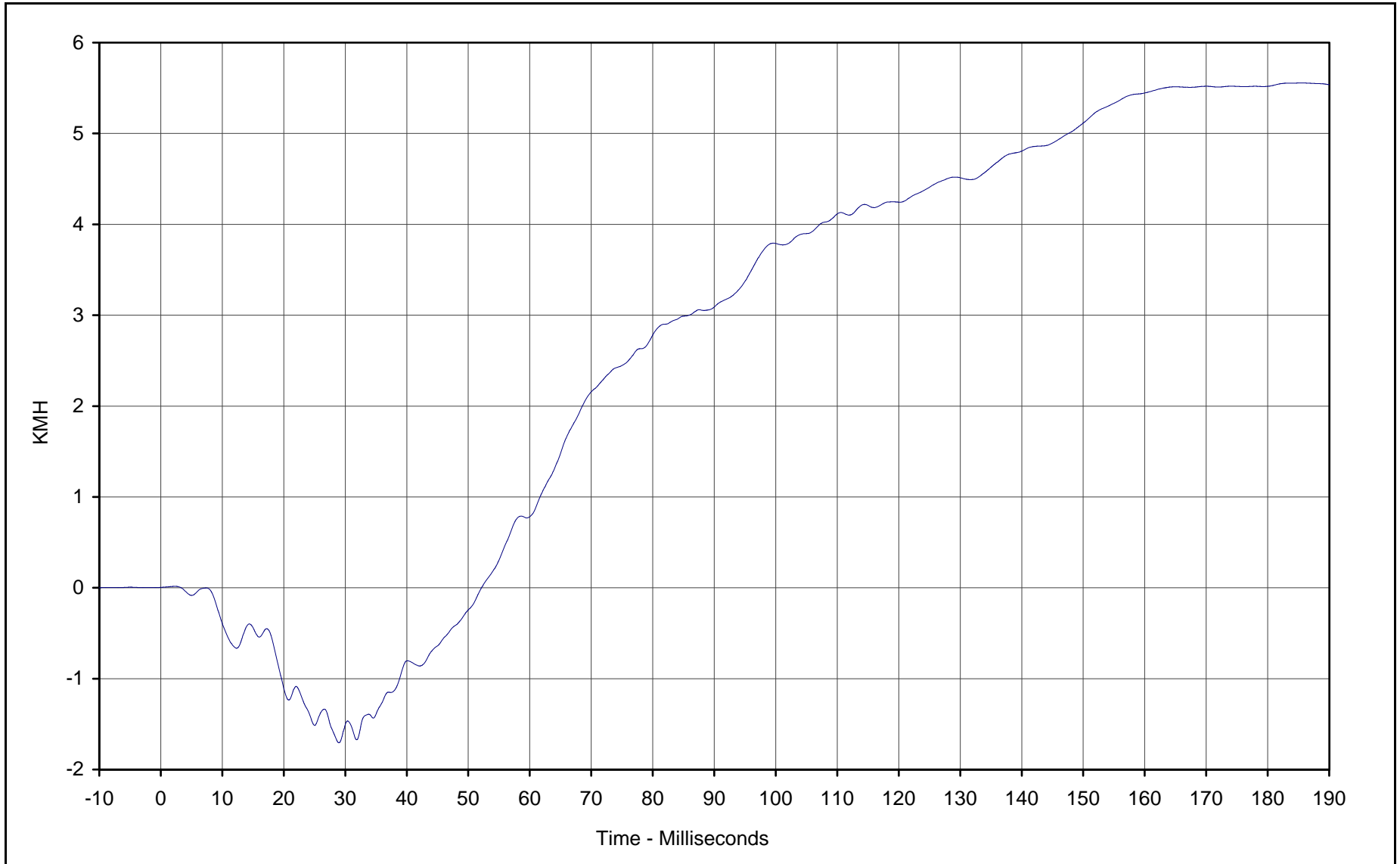


Curve Description: Right Sill at Front Seat Z
Maximum Value: 4.5 at 65.0 Milliseconds
Minimum Value: -4.9 at 19.1 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: FIL-029

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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Curve Description: Right Sill at Front Seat Z Velocity

Maximum Value: 5.6 at 185.5 Milliseconds

Minimum Value: -1.7 at 29.0 Milliseconds

SAE Filter Class: 180

Date of Test: 12/14/00

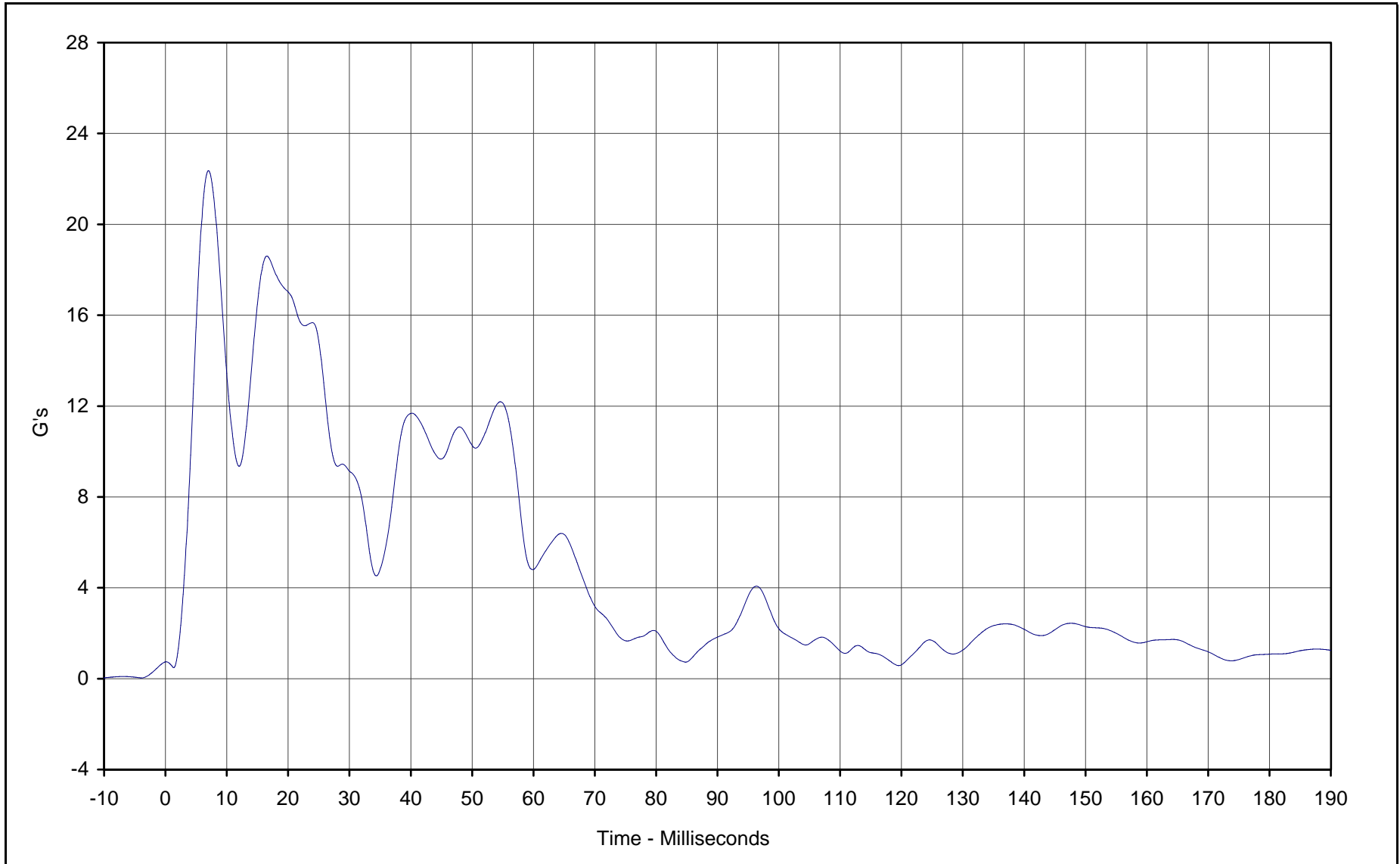
Curve Number: IN1-029

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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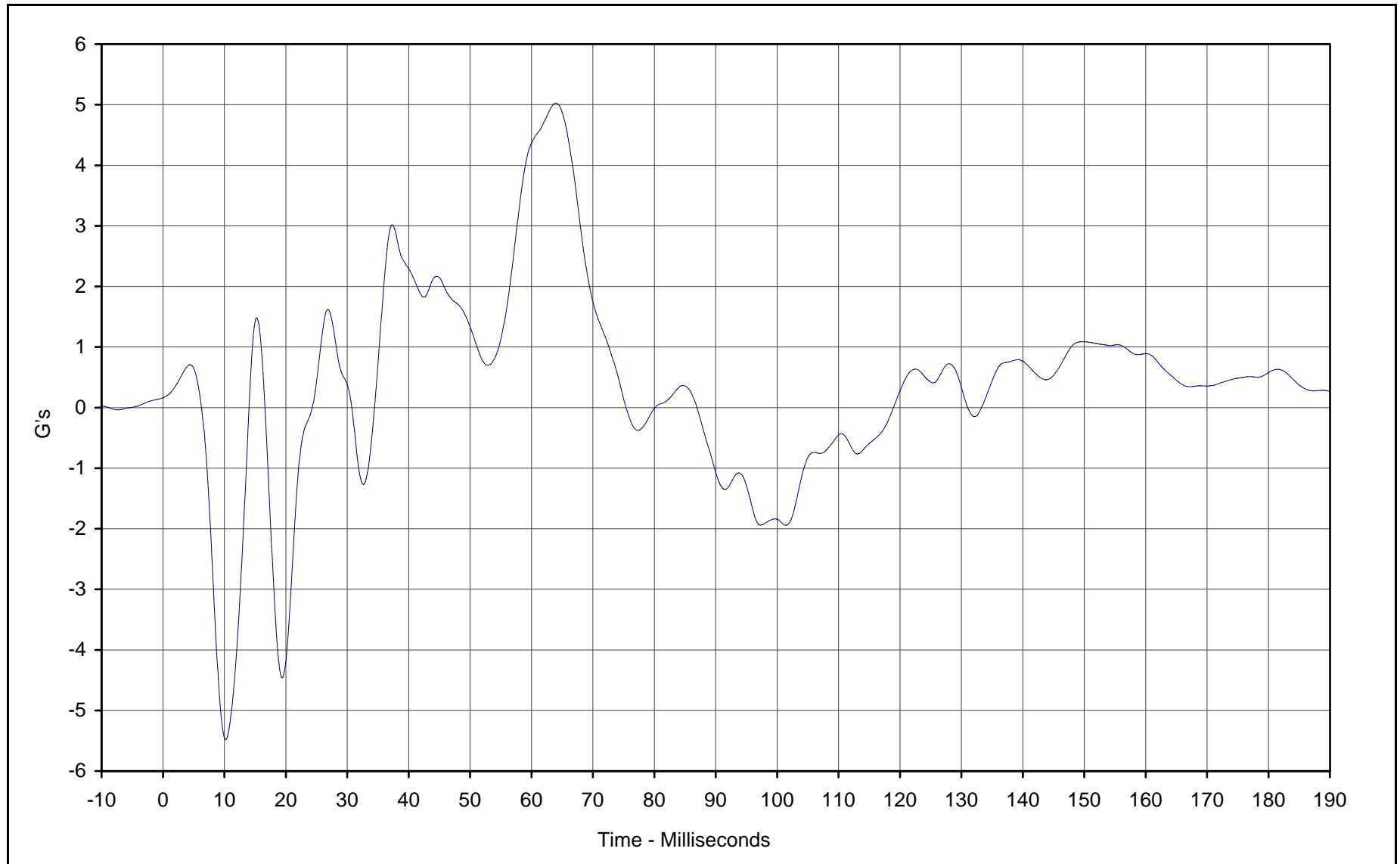


Curve Description: Right Sill at Front Seat Resultant
Maximum Value: 22.4 at 7.0 Milliseconds
Minimum Value: 0.5 at 1.3 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: RES-027

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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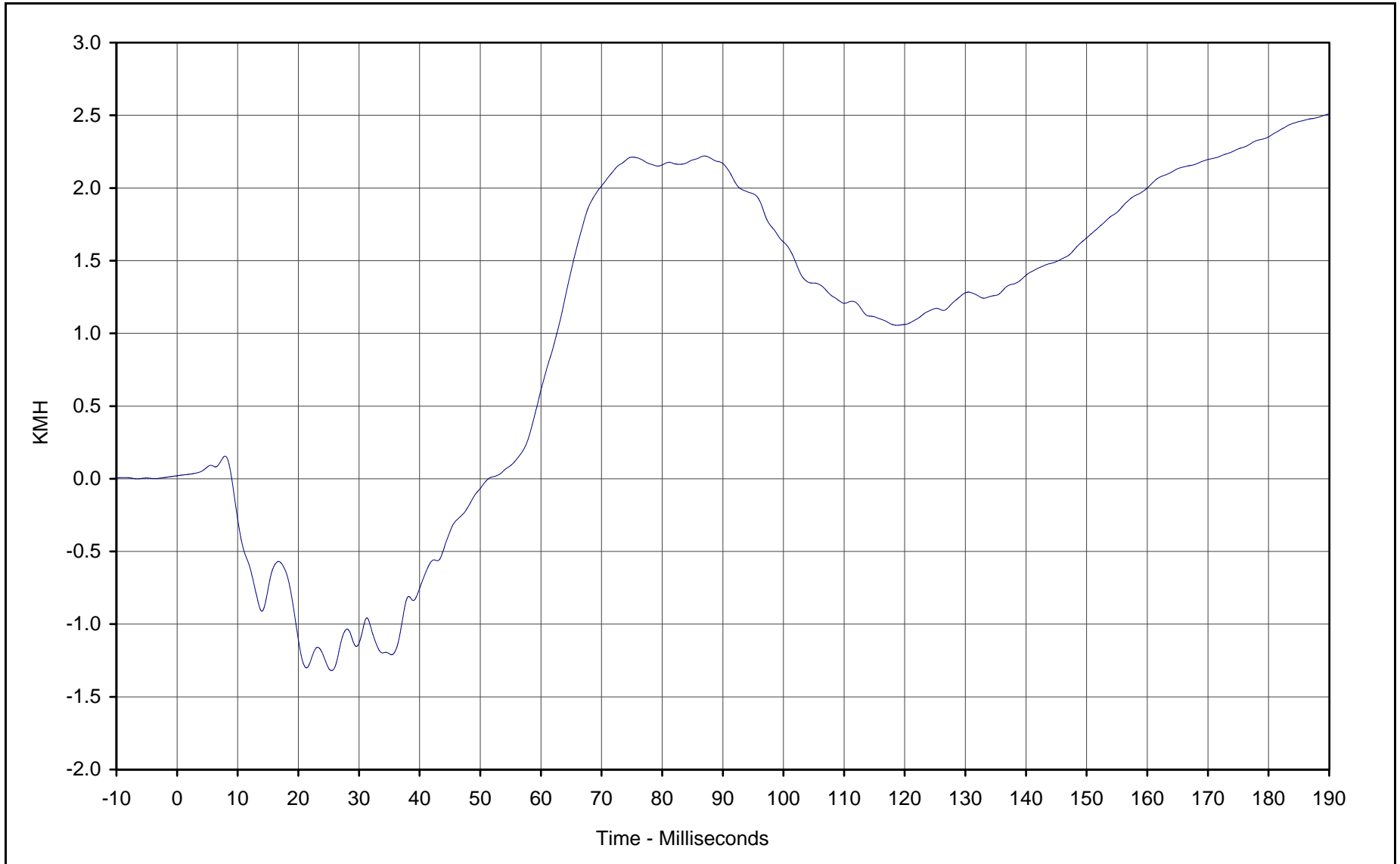


Curve Description: Right Sill at Rear Seat X
 Maximum Value: 5.0 at 64.0 Milliseconds
 Minimum Value: -5.5 at 10.2 Milliseconds
 SAE Filter Class: 60
 Date of Test: 12/14/00
 Curve Number: FIL-030

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
 Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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Curve Description: Right Sill at Rear Seat X Velocity

Maximum Value: 2.5 at 189.9 Milliseconds

Minimum Value: -1.3 at 25.5 Milliseconds

SAE Filter Class: 180

Date of Test: 12/14/00

Curve Number: IN1-030

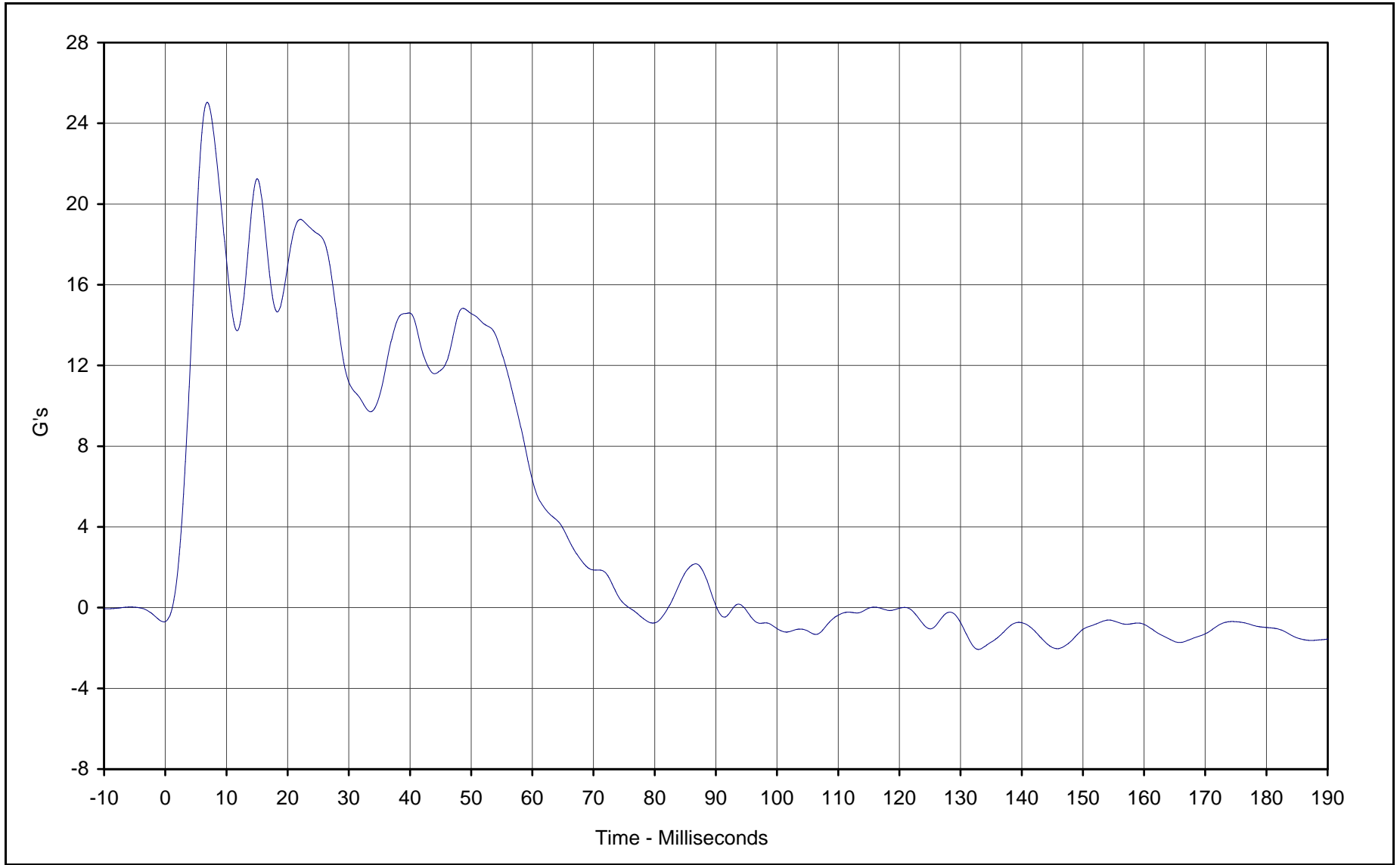
Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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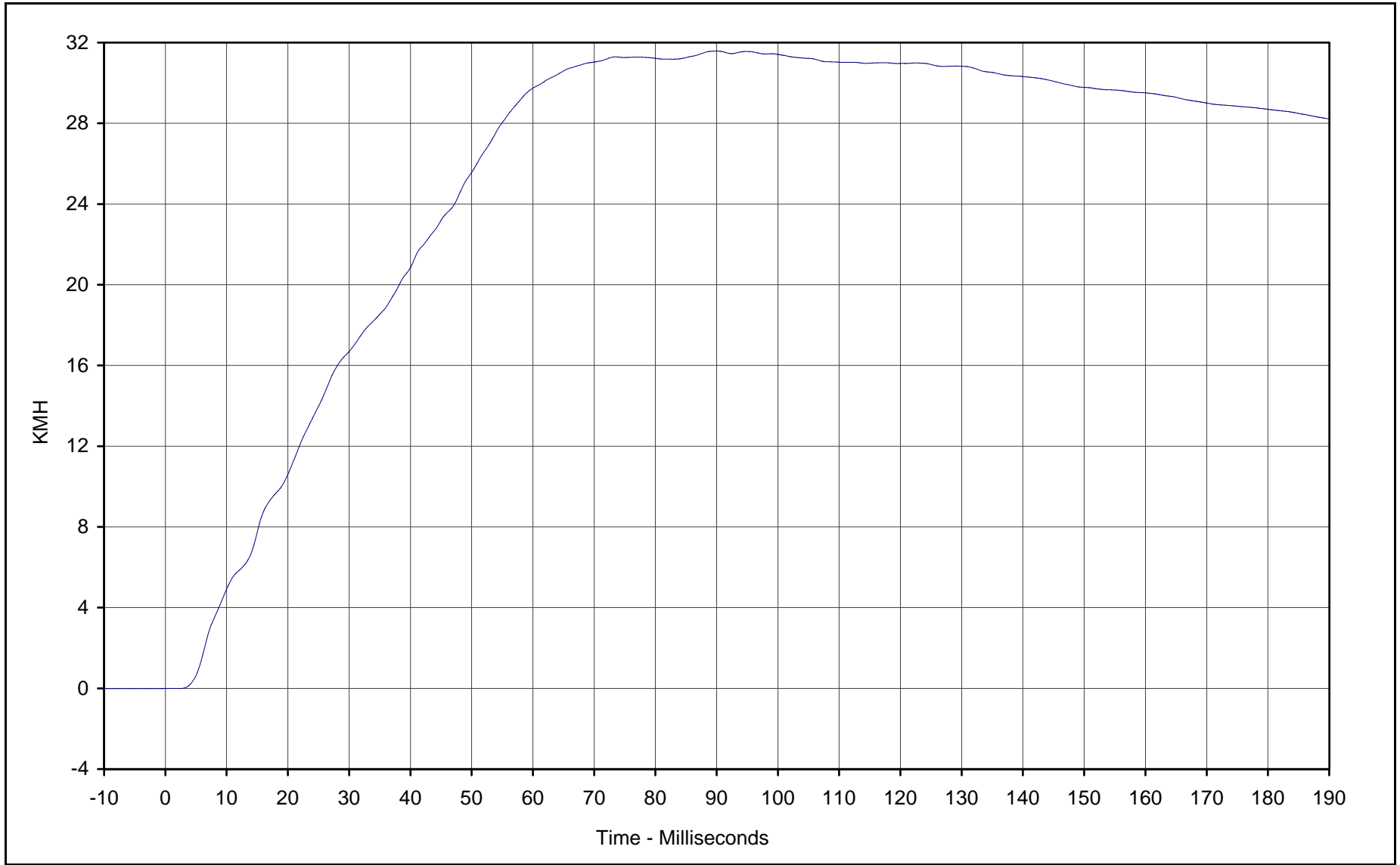
Curve Description: Right Sill at Rear Seat Y
Maximum Value: 25.0 at 6.9 Milliseconds
Minimum Value: -2.1 at 132.9 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: FIL-031

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

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Curve Description: Right Sill at Rear Seat Y Velocity

Maximum Value: 31.6 at 90.0 Milliseconds

Minimum Value: 0.0 at 2.2 Milliseconds

SAE Filter Class: 180

Date of Test: 12/14/00

Curve Number: IN1-031

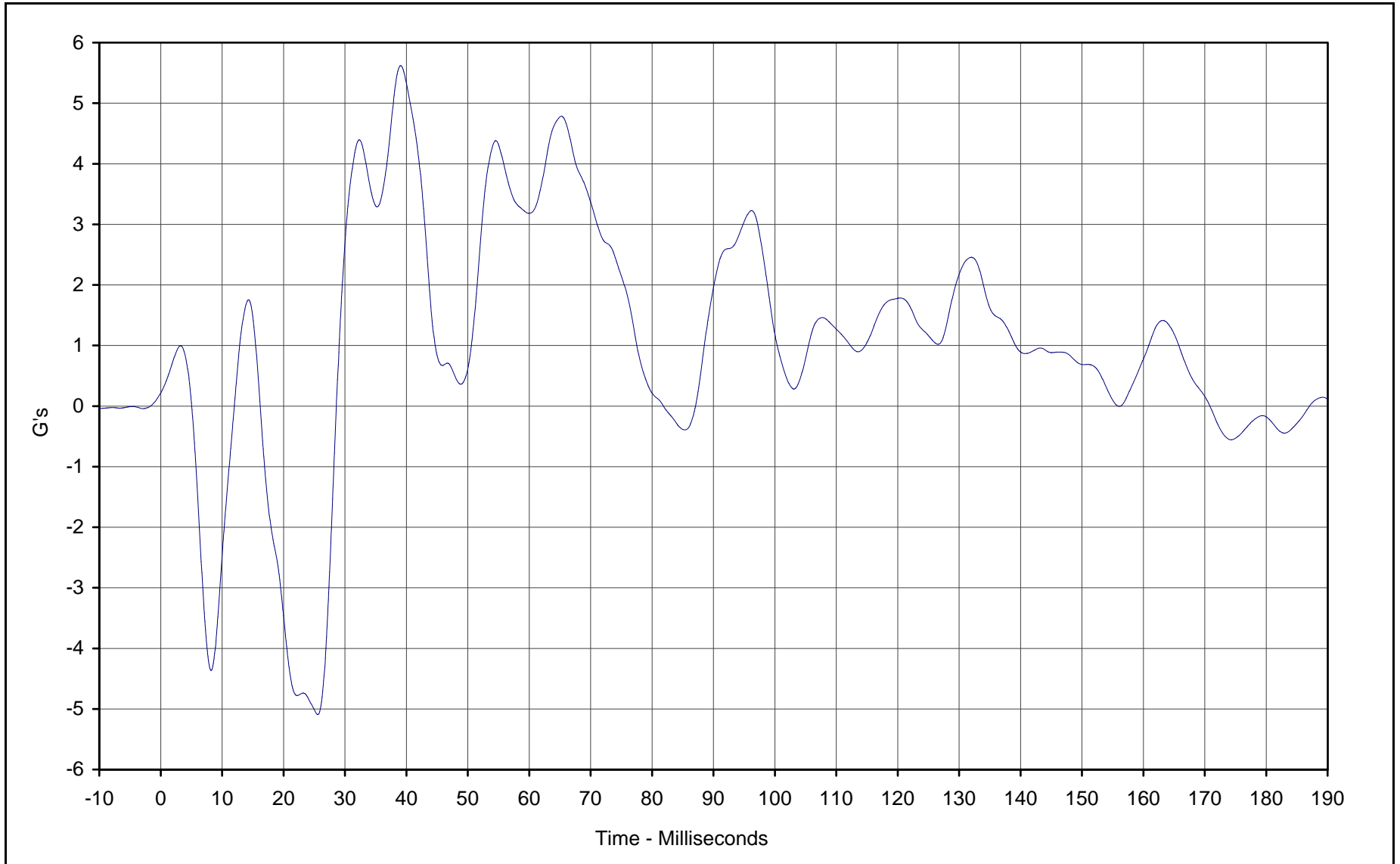
Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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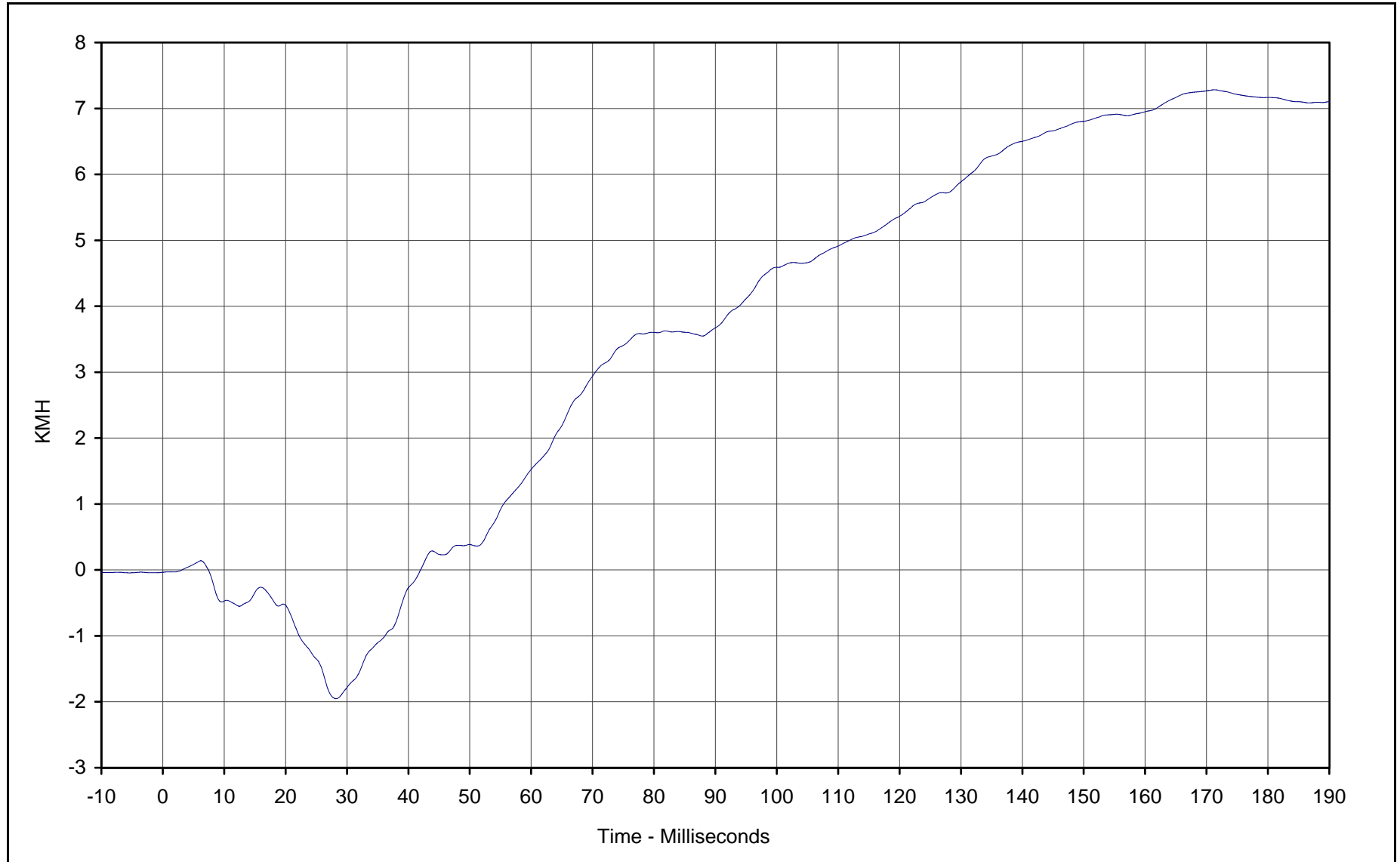


Curve Description: Right Sill at Rear Seat Z
Maximum Value: 5.6 at 39.1 Milliseconds
Minimum Value: -5.1 at 25.6 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: FIL-032

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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Curve Description: Right Sill at Rear Seat Z Velocity

Maximum Value: 7.3 at 171.3 Milliseconds

Minimum Value: -2.0 at 28.2 Milliseconds

SAE Filter Class: 180

Date of Test: 12/14/00

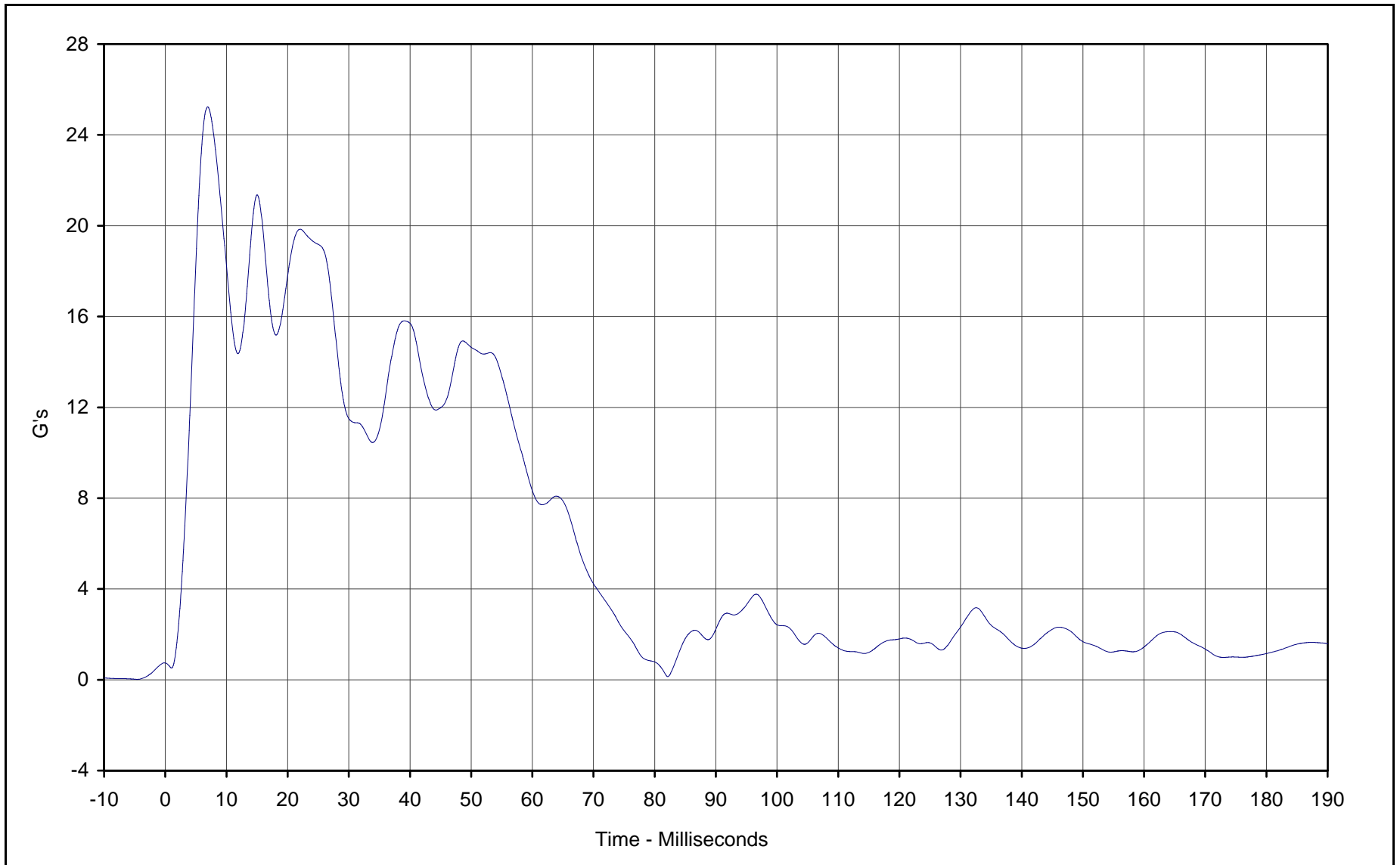
Curve Number: IN1-032

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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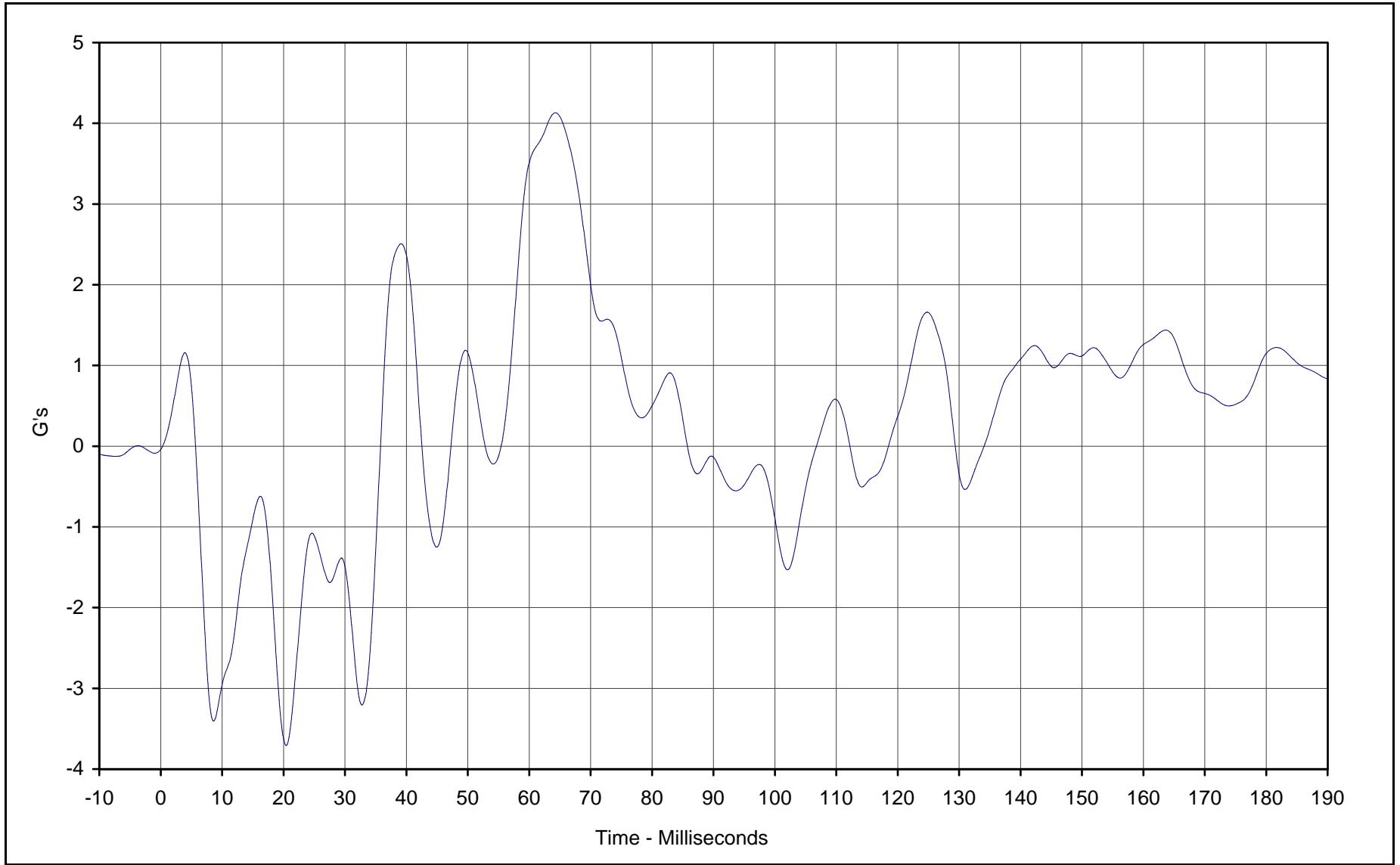
Curve Description: Right Sill at Rear Resultant
Maximum Value: 25.2 at 6.9 Milliseconds
Minimum Value: 0.1 at 82.2 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: RES-030

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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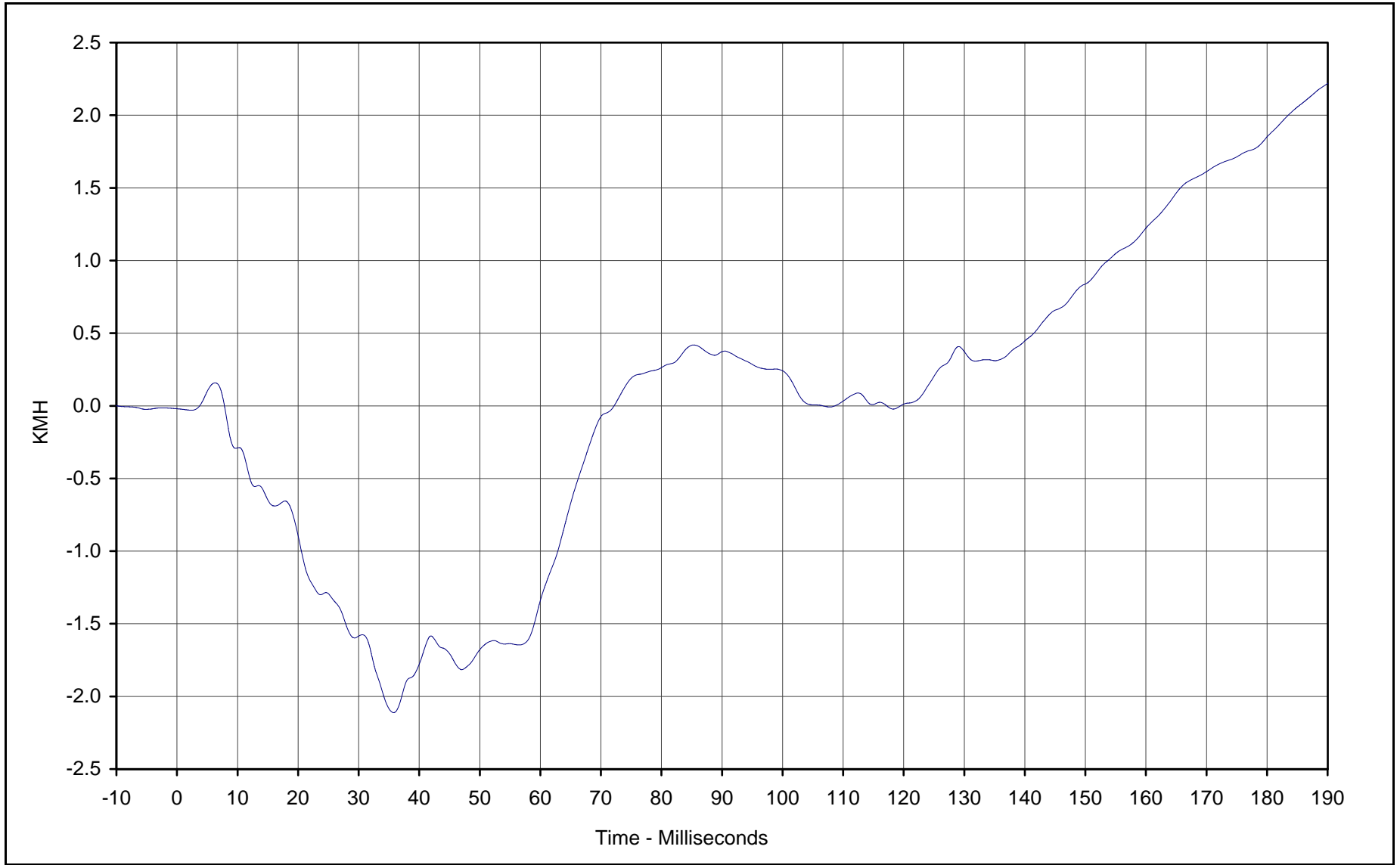
Curve Description: Rear Floor Above Axle X
Maximum Value: 4.1 at 64.3 Milliseconds
Minimum Value: -3.7 at 20.4 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: FIL-033

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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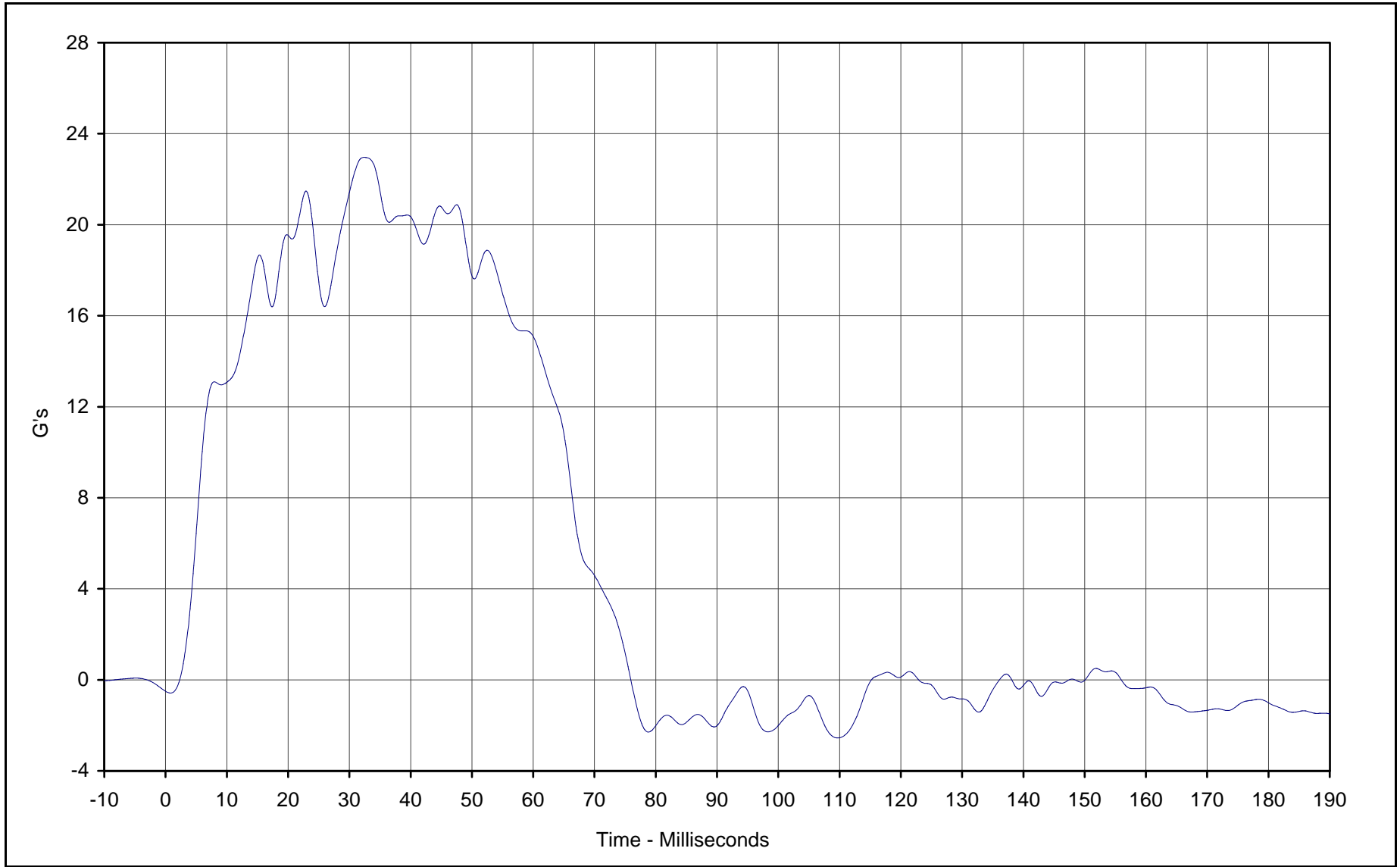
Curve Description: Rear Floor Above Axle X Velocity
Maximum Value: 2.2 at 189.9 Milliseconds
Minimum Value: -2.1 at 35.8 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: IN1-033

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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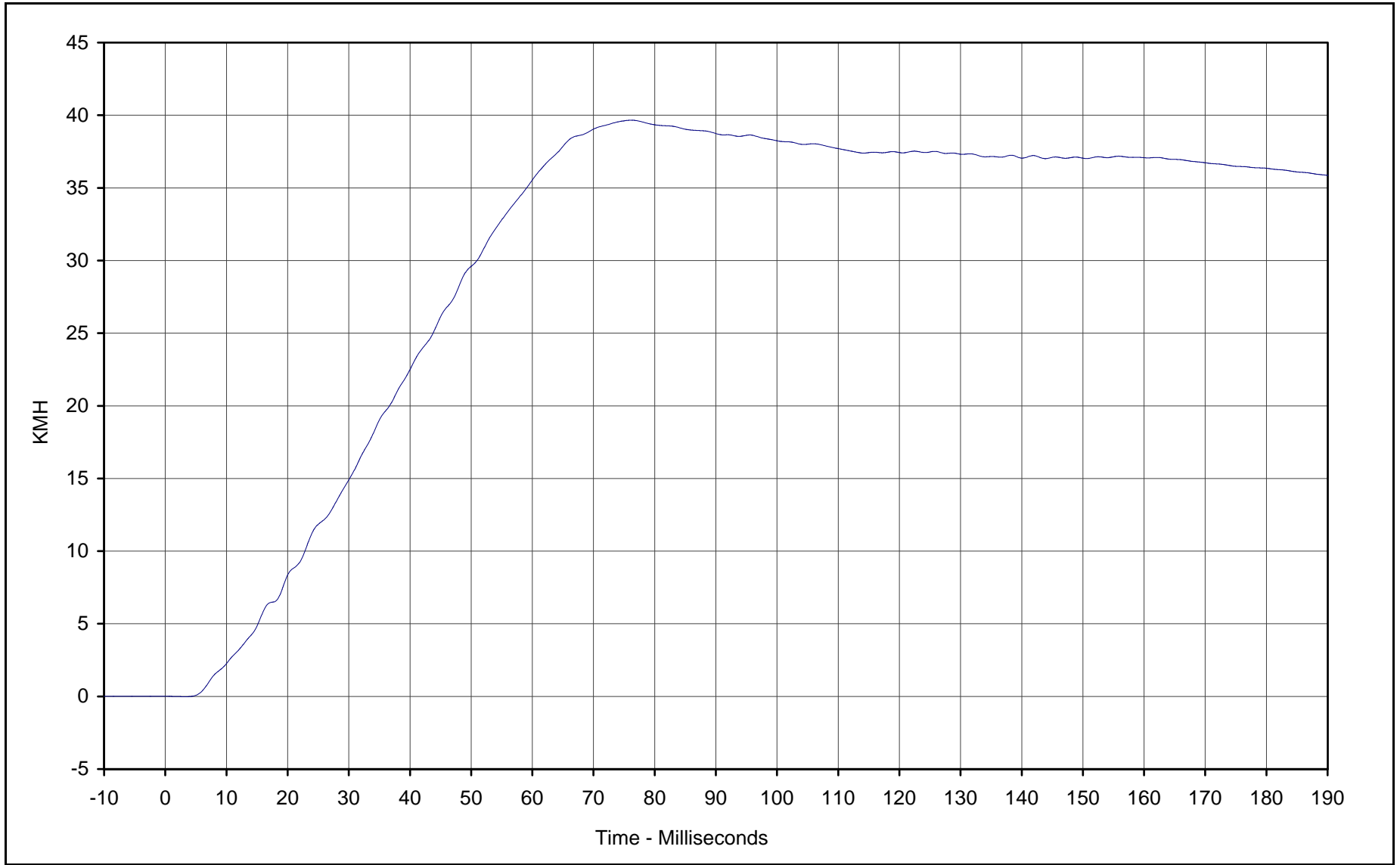
Curve Description: Rear Floor Above Axle Y
Maximum Value: 23.0 at 32.4 Milliseconds
Minimum Value: -2.6 at 109.7 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: FIL-034

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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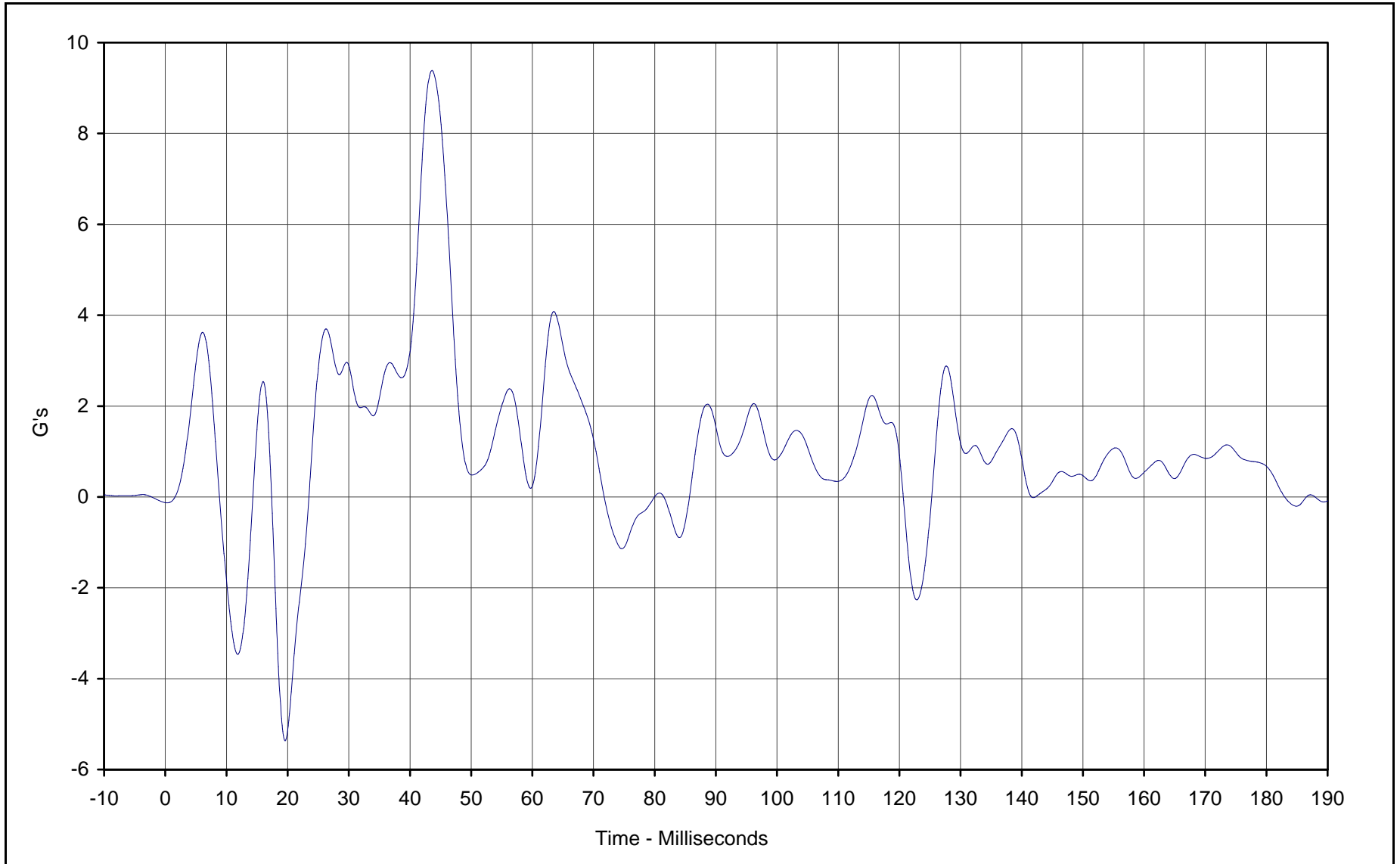
Curve Description: Rear Floor Above Axle Y Velocity
Maximum Value: 39.7 at 76.2 Milliseconds
Minimum Value: 0.0 at 3.4 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: IN1-034

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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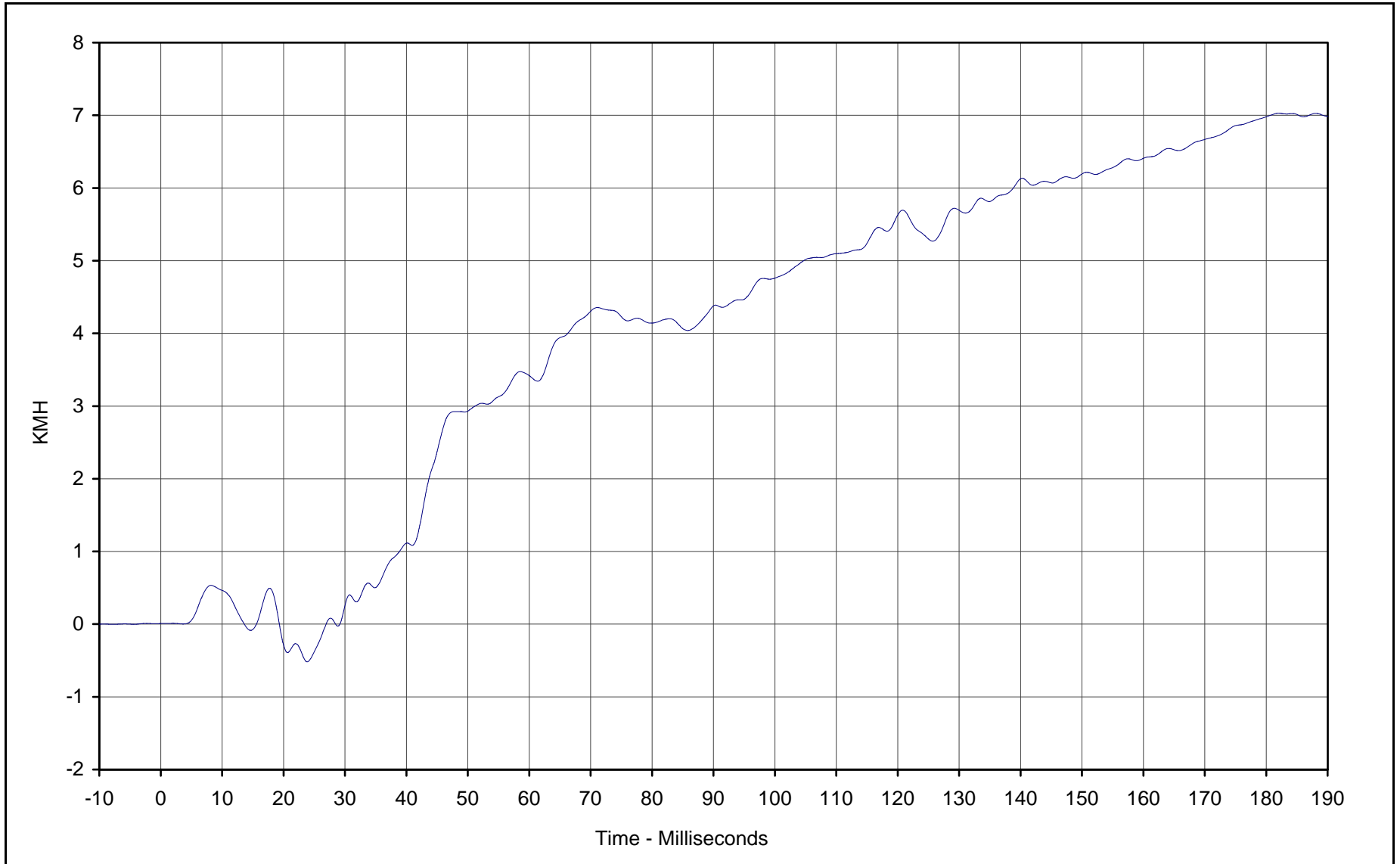
Curve Description: Rear Floor Above Axle Z
Maximum Value: 9.4 at 43.6 Milliseconds
Minimum Value: -5.4 at 19.6 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: FIL-035

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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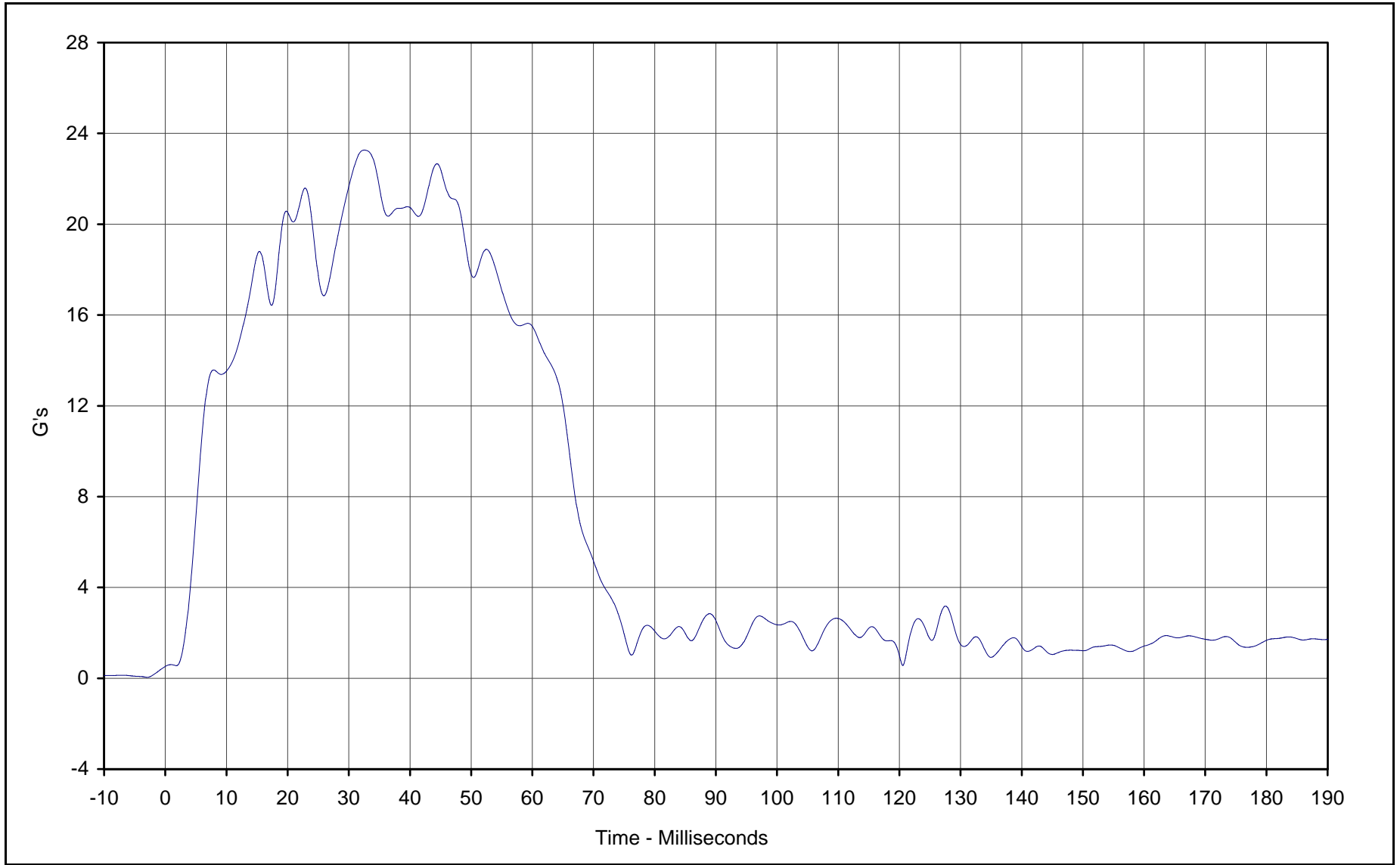
Curve Description: Rear Floor Above Axle Z Velocity
Maximum Value: 7.0 at 182.0 Milliseconds
Minimum Value: -0.5 at 23.9 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: IN1-035

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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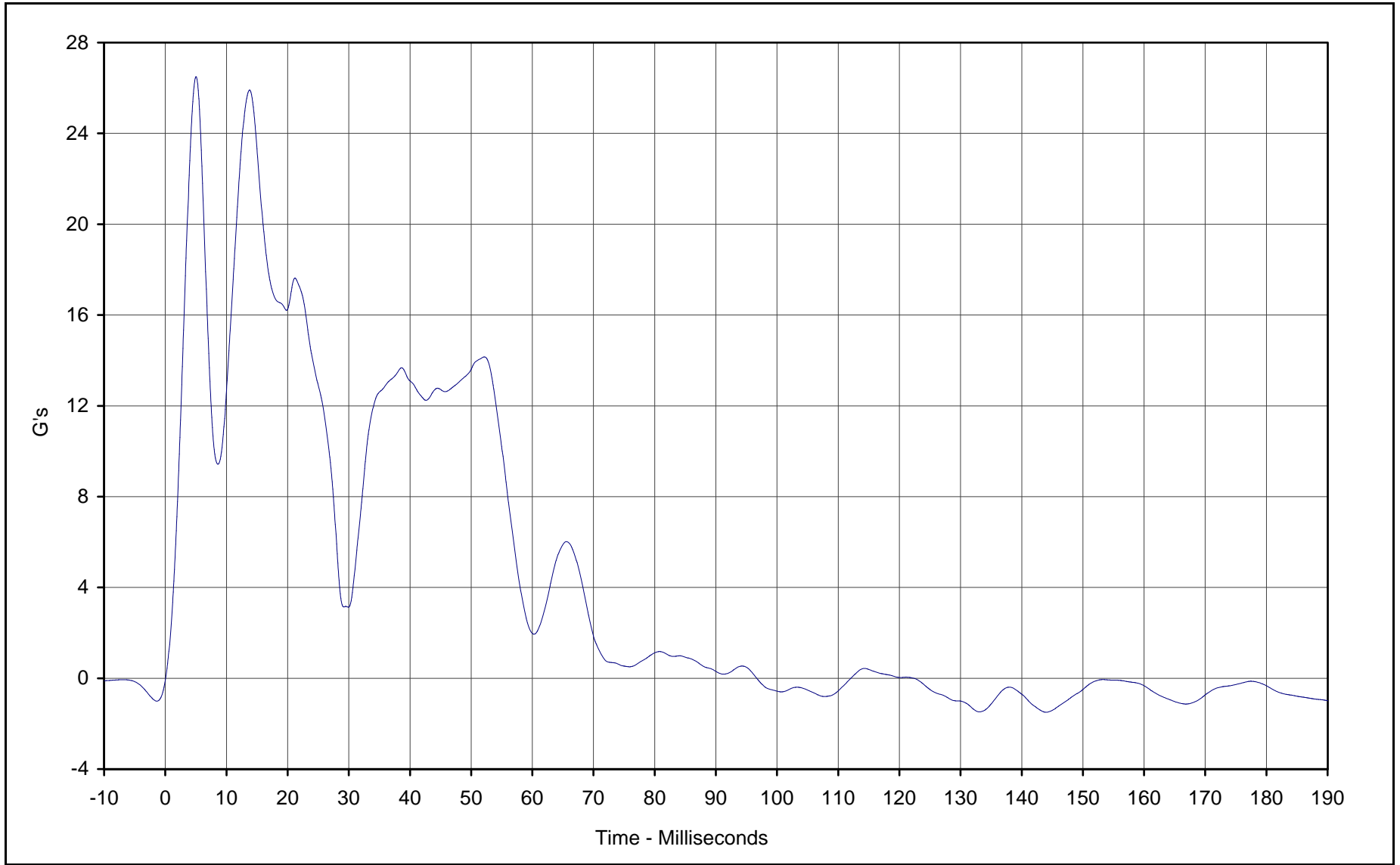
Curve Description: Rear Floor Above Axle Resultant
Maximum Value: 23.3 at 32.6 Milliseconds
Minimum Value: 0.5 at 0.0 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: RES-033

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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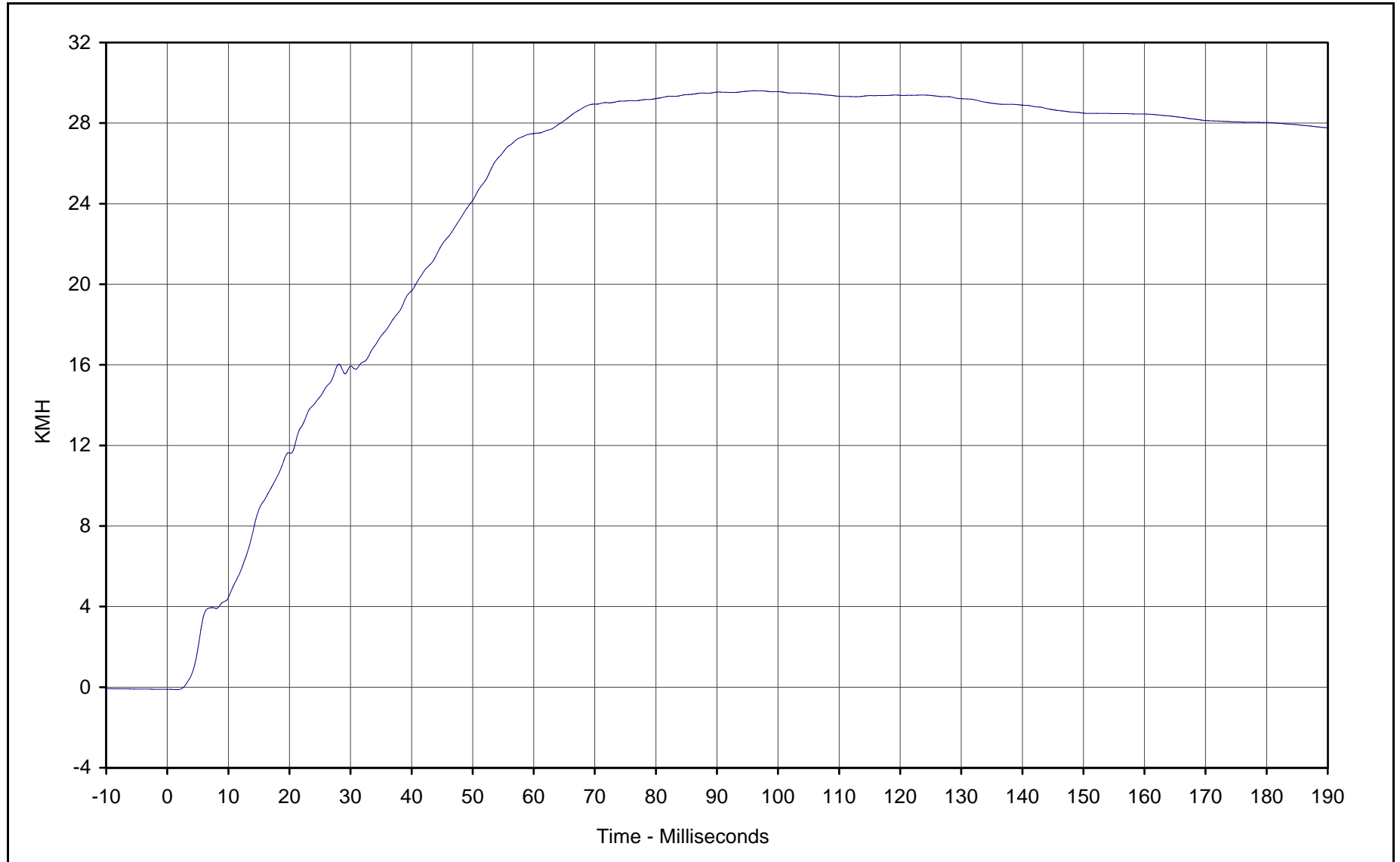


Curve Description: Left Sill at Rear Door Y
Maximum Value: 26.5 at 5.0 Milliseconds
Minimum Value: -1.5 at 144.0 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: FIL-036

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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Curve Description: Left Sill at Rear Door Y Velocity

Maximum Value: 29.6 at 96.1 Milliseconds

Minimum Value: -0.1 at 1.6 Milliseconds

SAE Filter Class: 180

Date of Test: 12/14/00

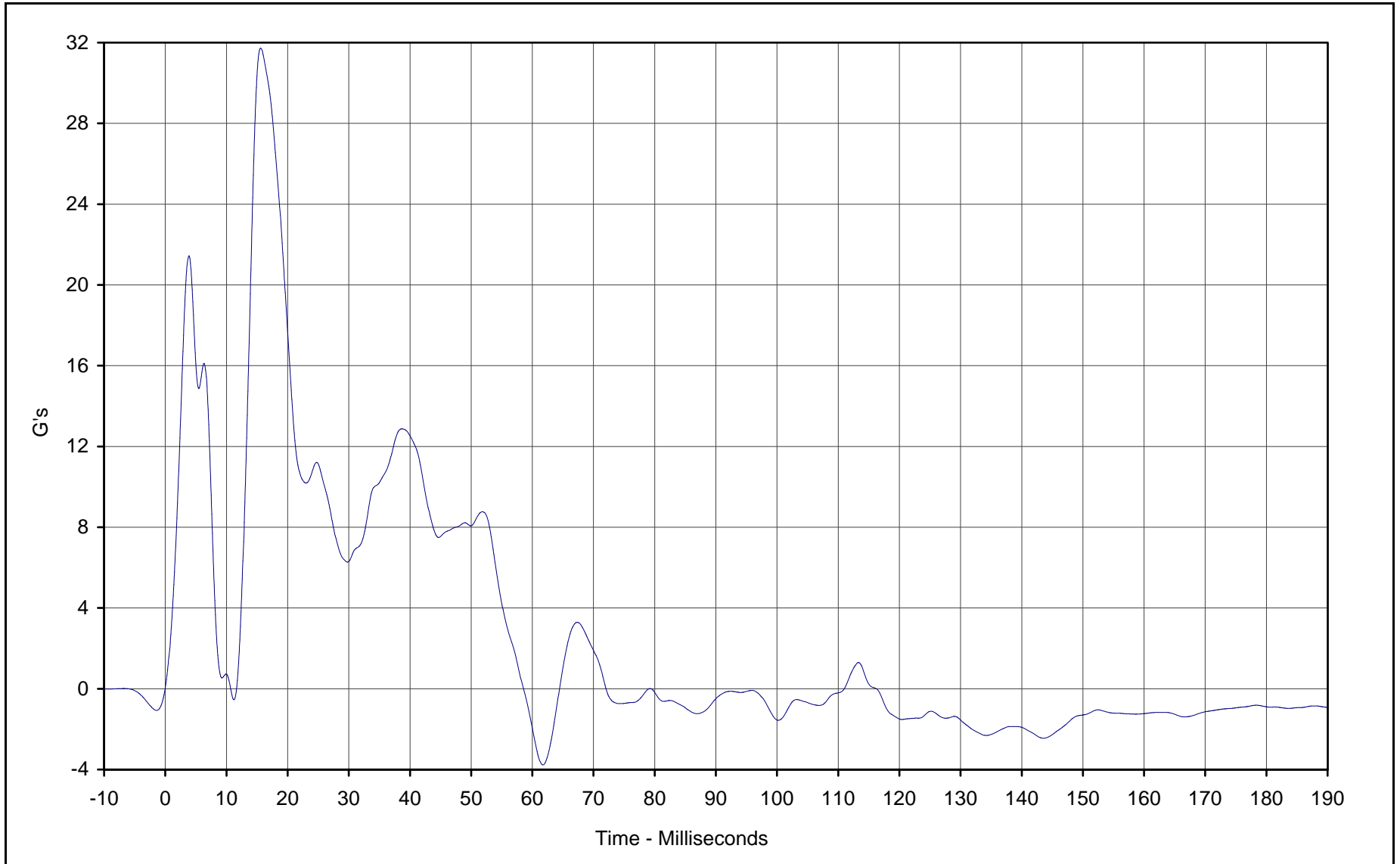
Curve Number: IN1-036

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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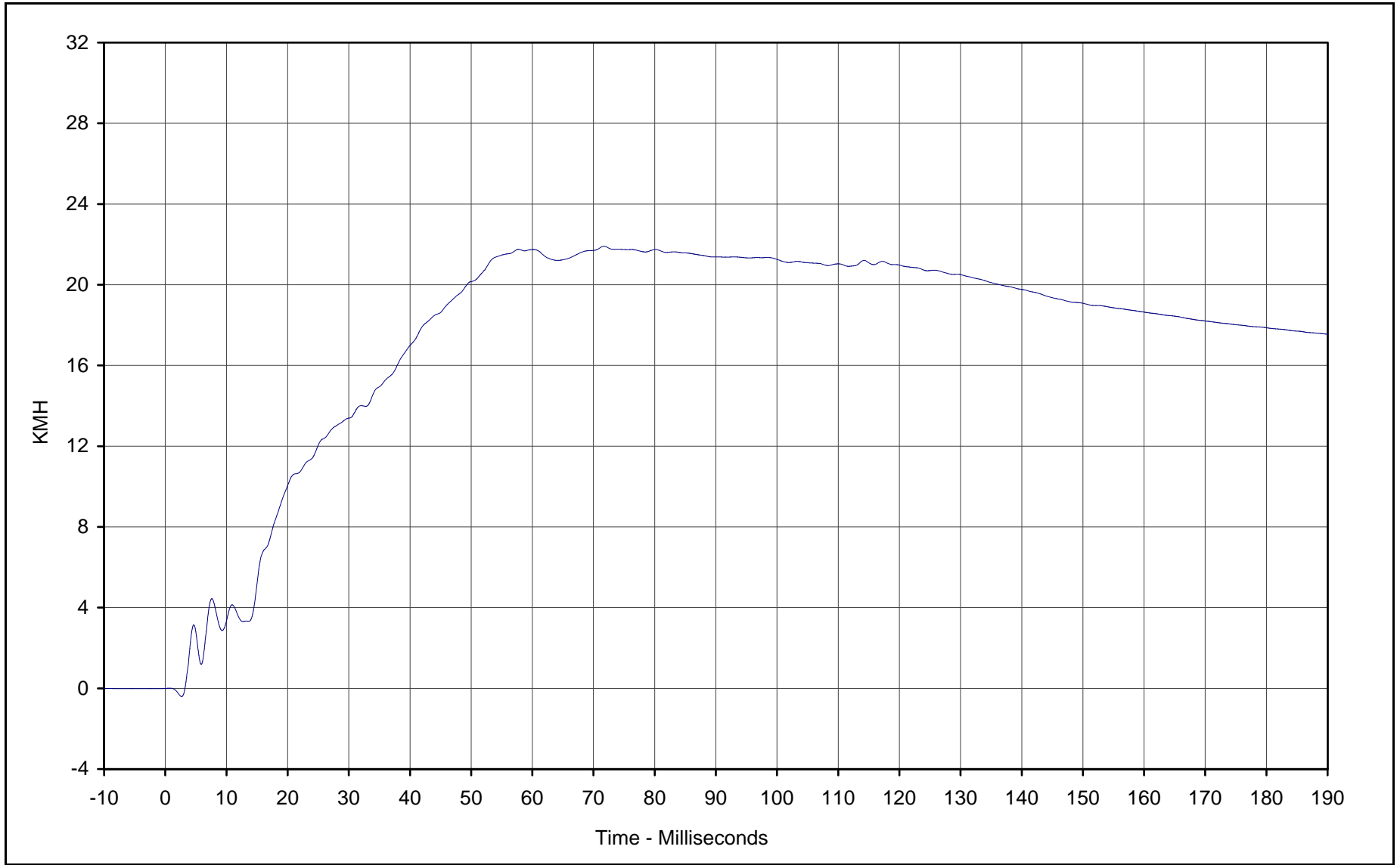
Curve Description: Left Sill at Front Door Y
Maximum Value: 31.7 at 15.6 Milliseconds
Minimum Value: -3.8 at 61.7 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: FIL-037

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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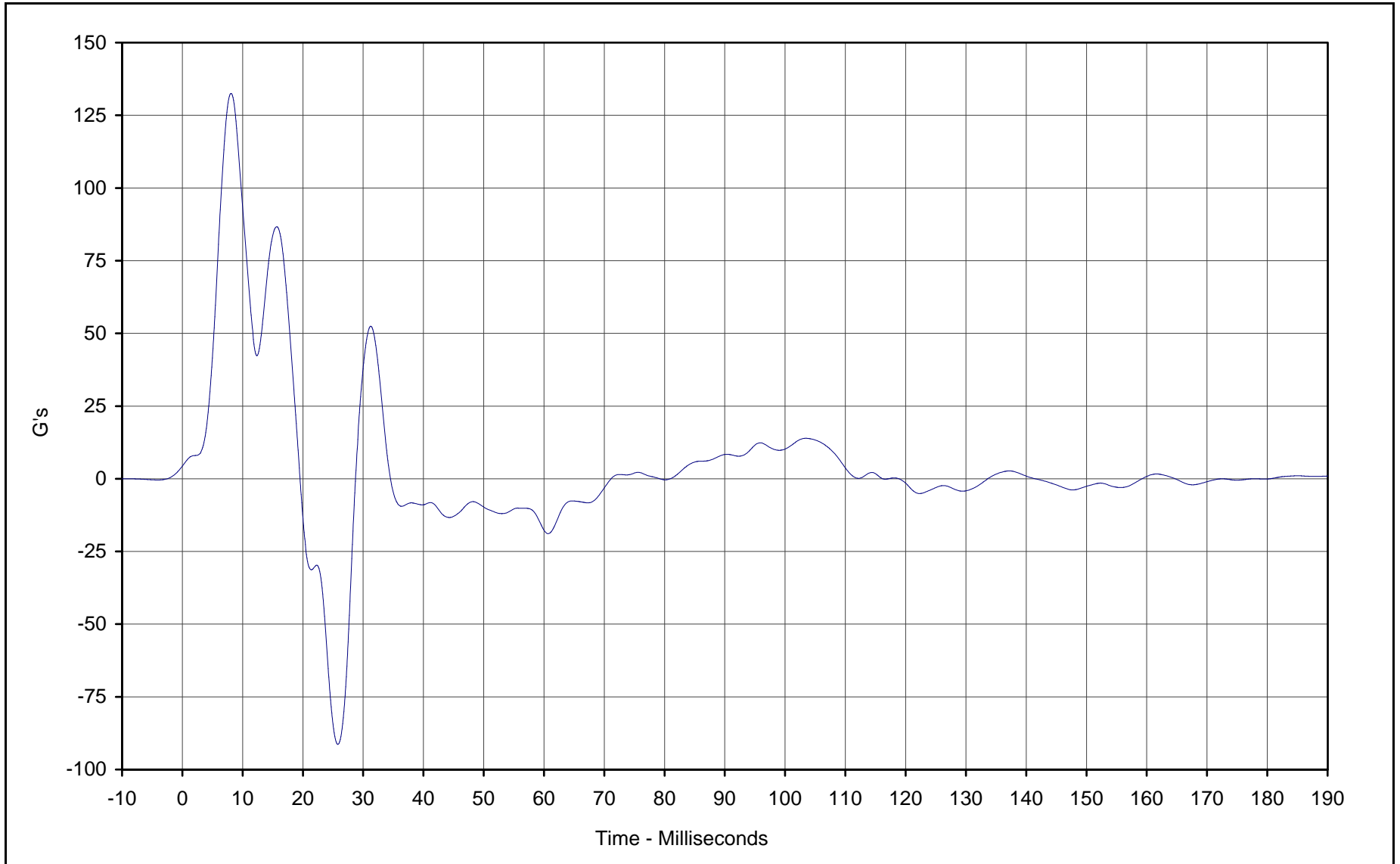
Curve Description: Left Sill at Front Door Y Velocity
Maximum Value: 21.9 at 71.7 Milliseconds
Minimum Value: -0.4 at 2.7 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: IN1-037

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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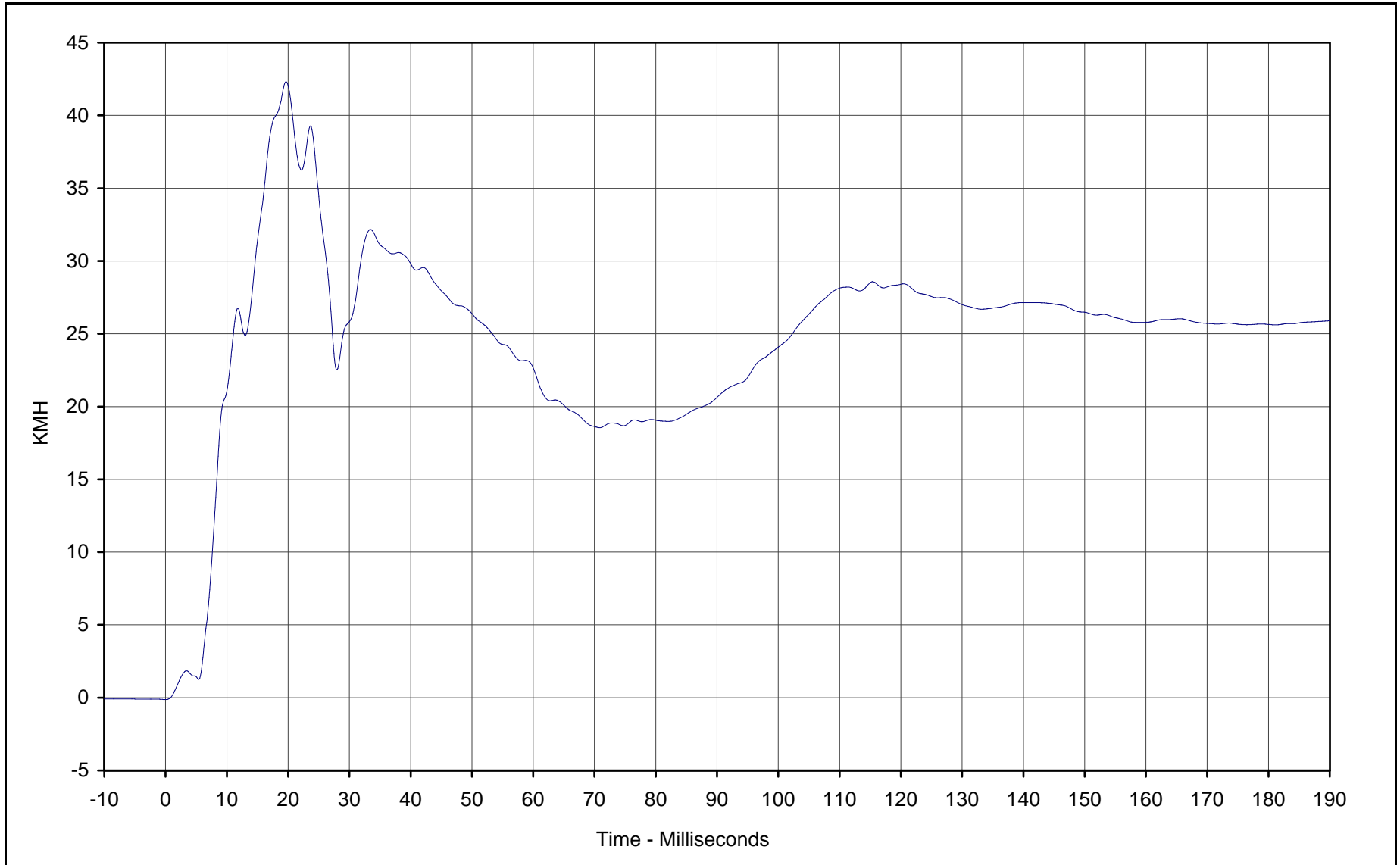
Curve Description: Left Front Door Centerline Y
Maximum Value: 132.5 at 8.1 Milliseconds
Minimum Value: -91.4 at 25.8 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: FIL-038

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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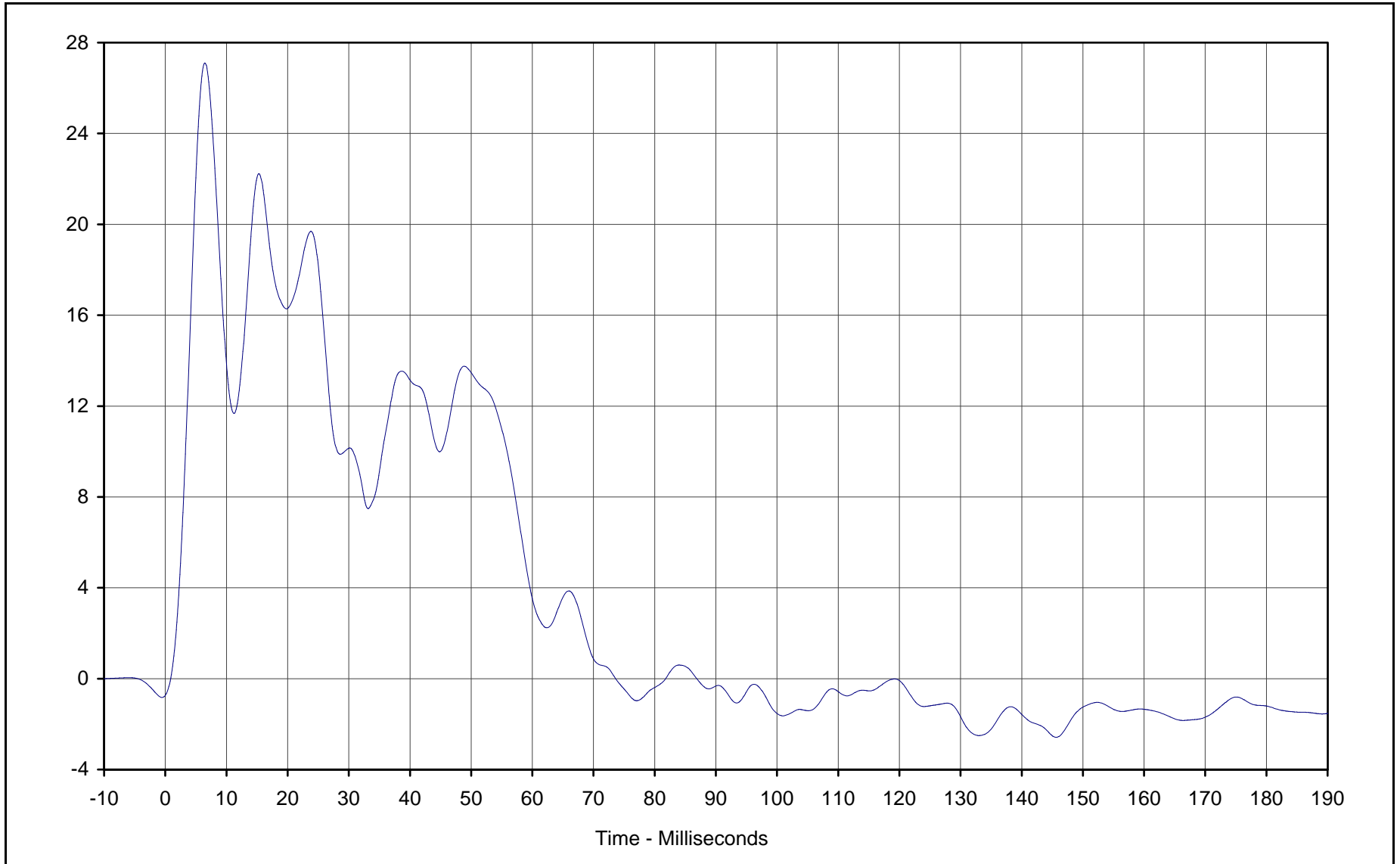
Curve Description: Left Front Door CL Y Velocity
Maximum Value: 42.3 at 19.7 Milliseconds
Minimum Value: -0.1 at 0.0 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: IN1-038

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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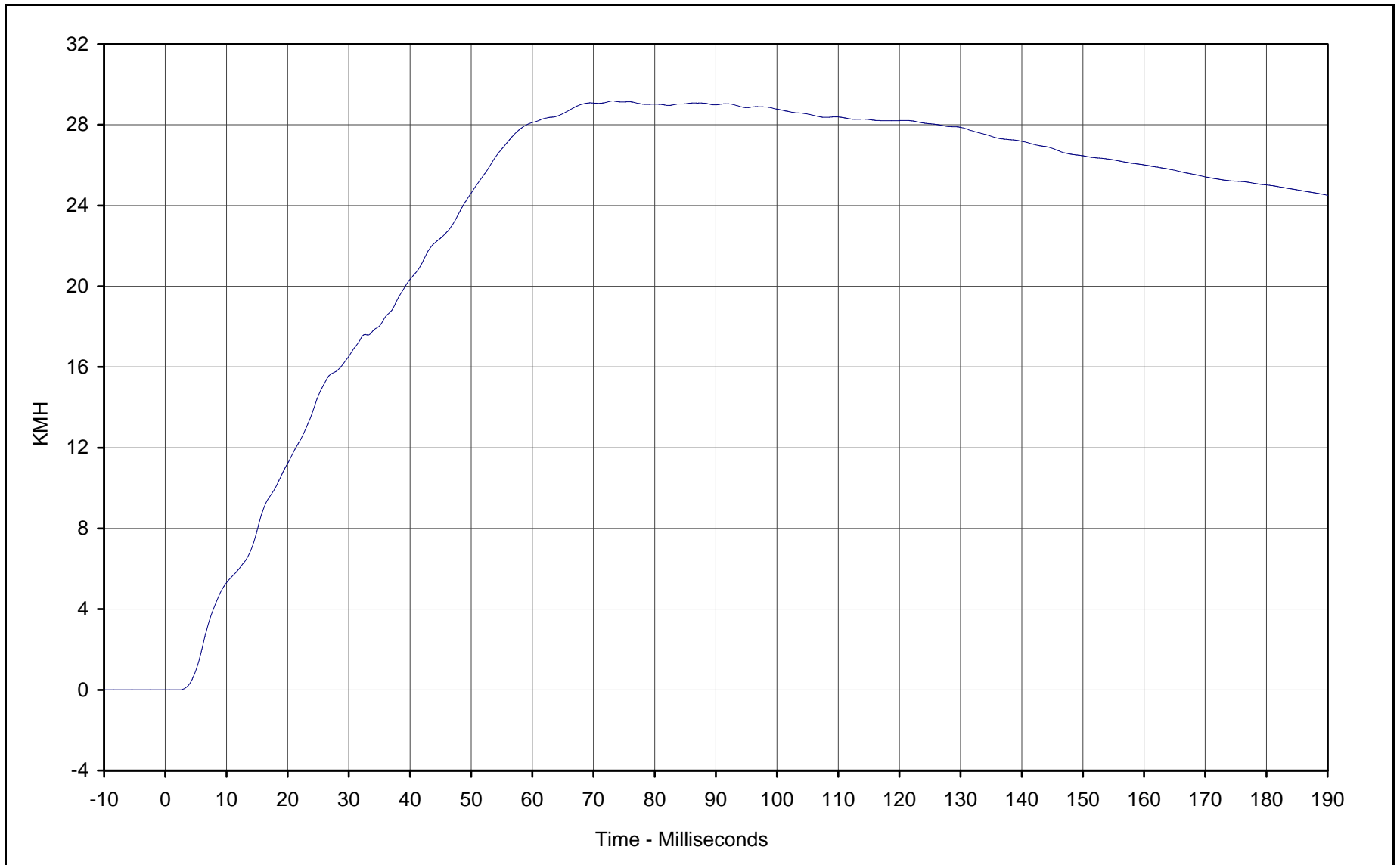
Curve Description: Right Rear Occ. Compartment Y
Maximum Value: 27.1 at 6.5 Milliseconds
Minimum Value: -2.6 at 145.6 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: FIL-039

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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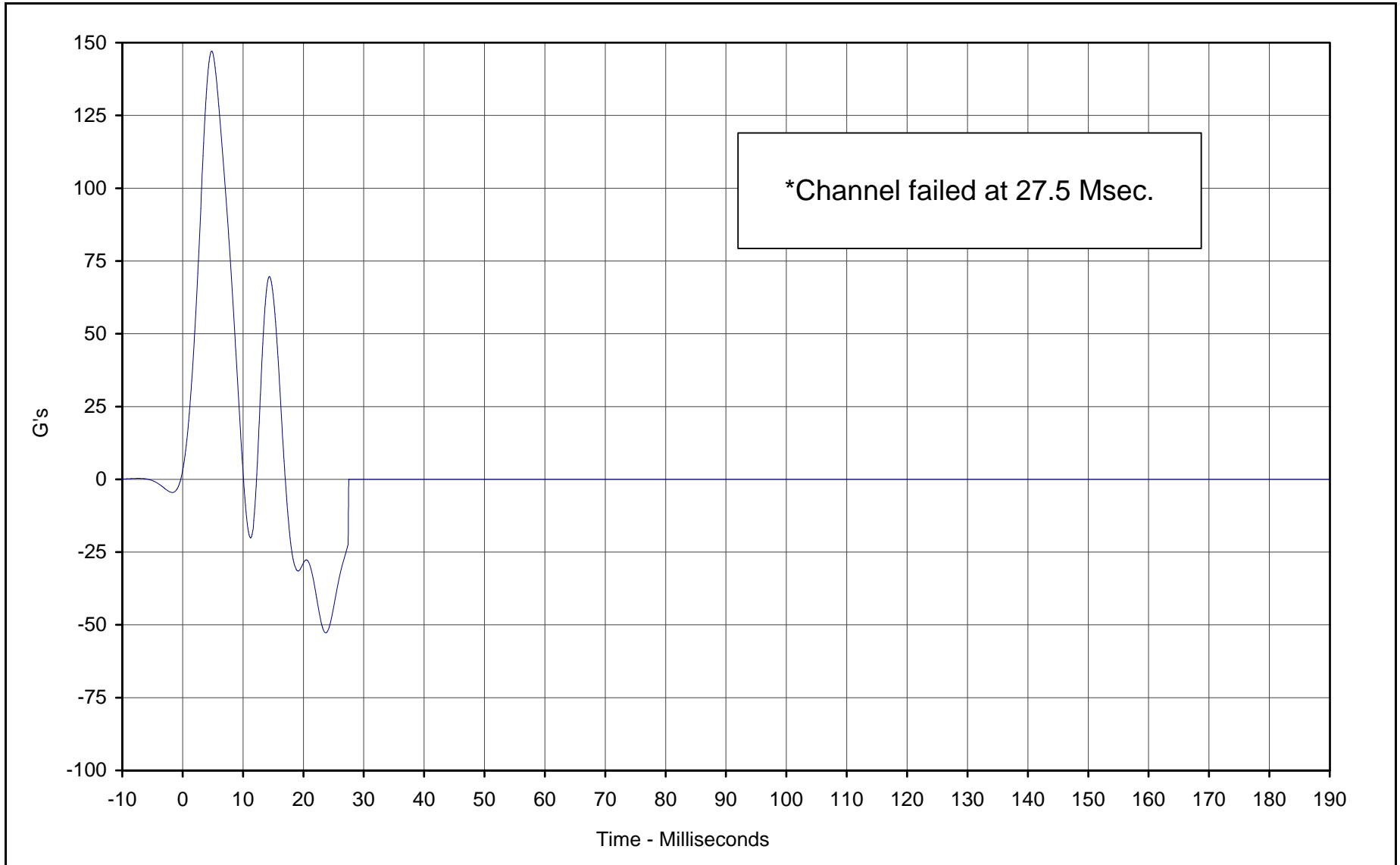
Curve Description: Right Rear Occ. Comp. Y Velocity
Maximum Value: 29.2 at 73.1 Milliseconds
Minimum Value: 0.0 at 2.1 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: IN1-039

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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Curve Description: Left Front Door Mid Rear Y *
Maximum Value: 147.1 at 4.8 Milliseconds
Minimum Value: -52.7 at 23.7 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: FIL-040

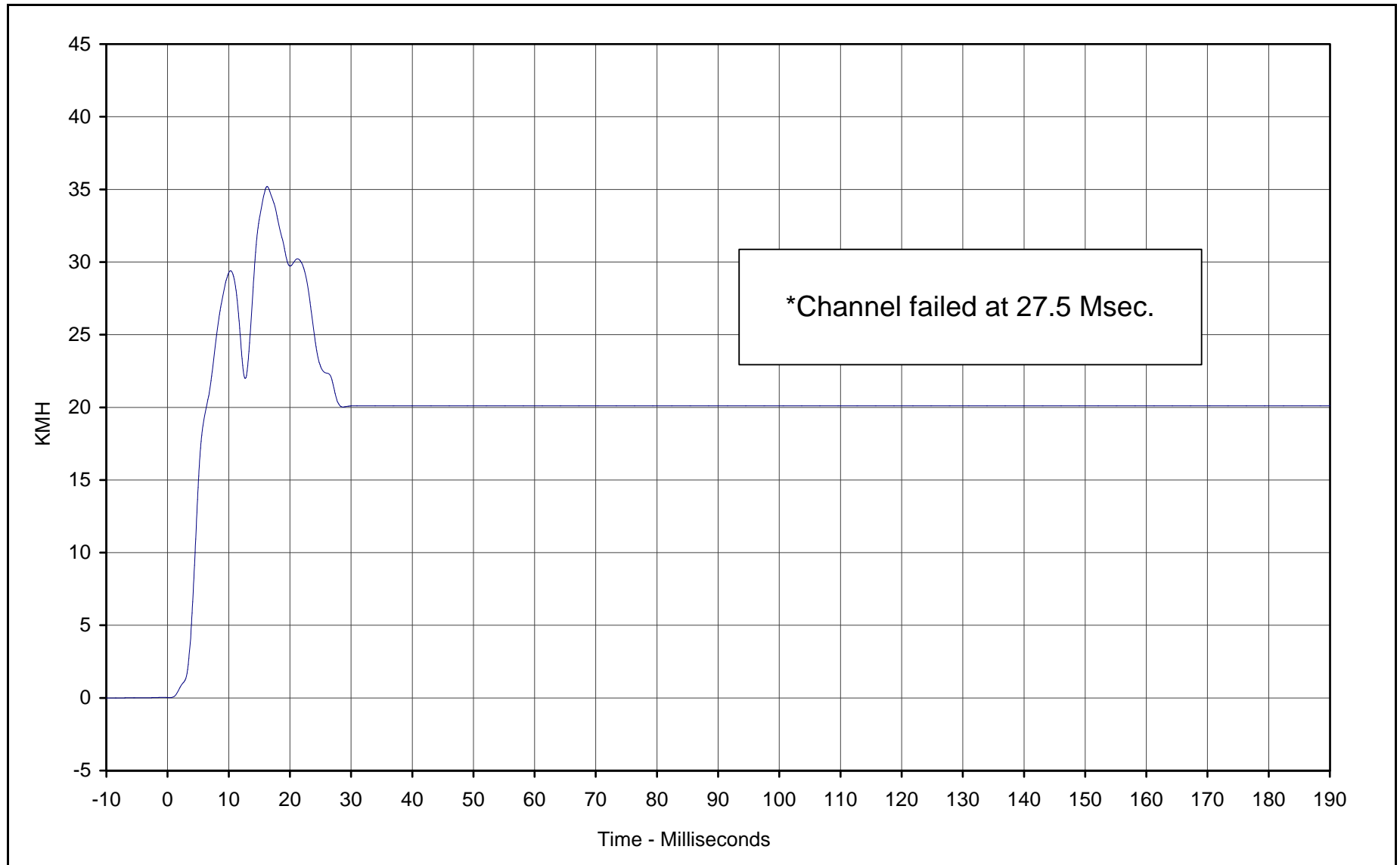
Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

*Channel failed at 27.5 Msec.



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Curve Description: Left Front Door Mid Rear Y Velocity *

Maximum Value: 35.2 at 16.3 Milliseconds

Minimum Value: 0.0 at 0.3 Milliseconds

SAE Filter Class: 180

Date of Test: 12/14/00

Curve Number: IN1-040

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

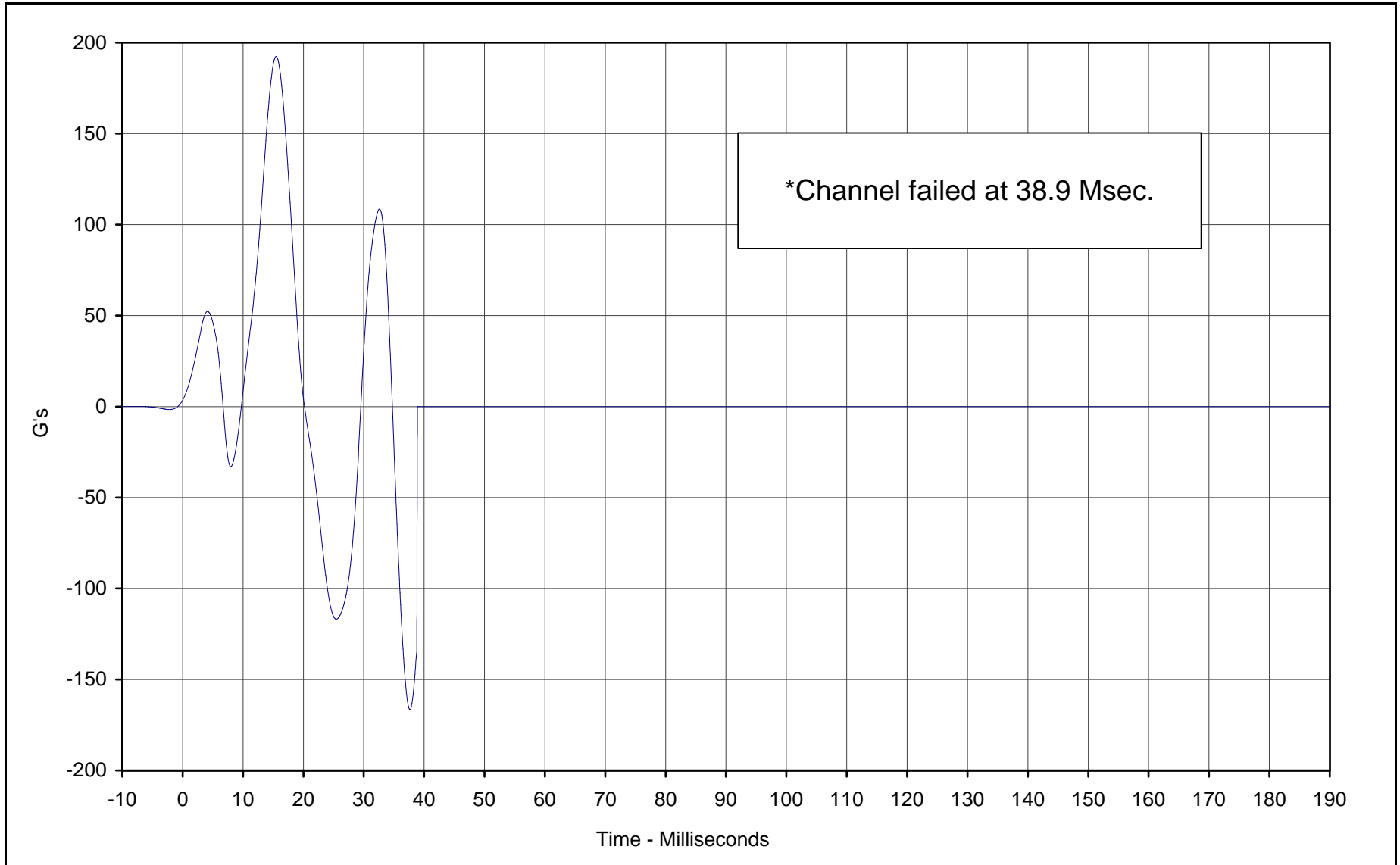
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

*Channel failed at 27.5 Msec.



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Curve Description: Left Front Door Upper CL Y *

Maximum Value: 192.5 at 15.5 Milliseconds

Minimum Value: -166.5 at 37.6 Milliseconds

SAE Filter Class: 60

Date of Test: 12/14/00

Curve Number: FIL-041

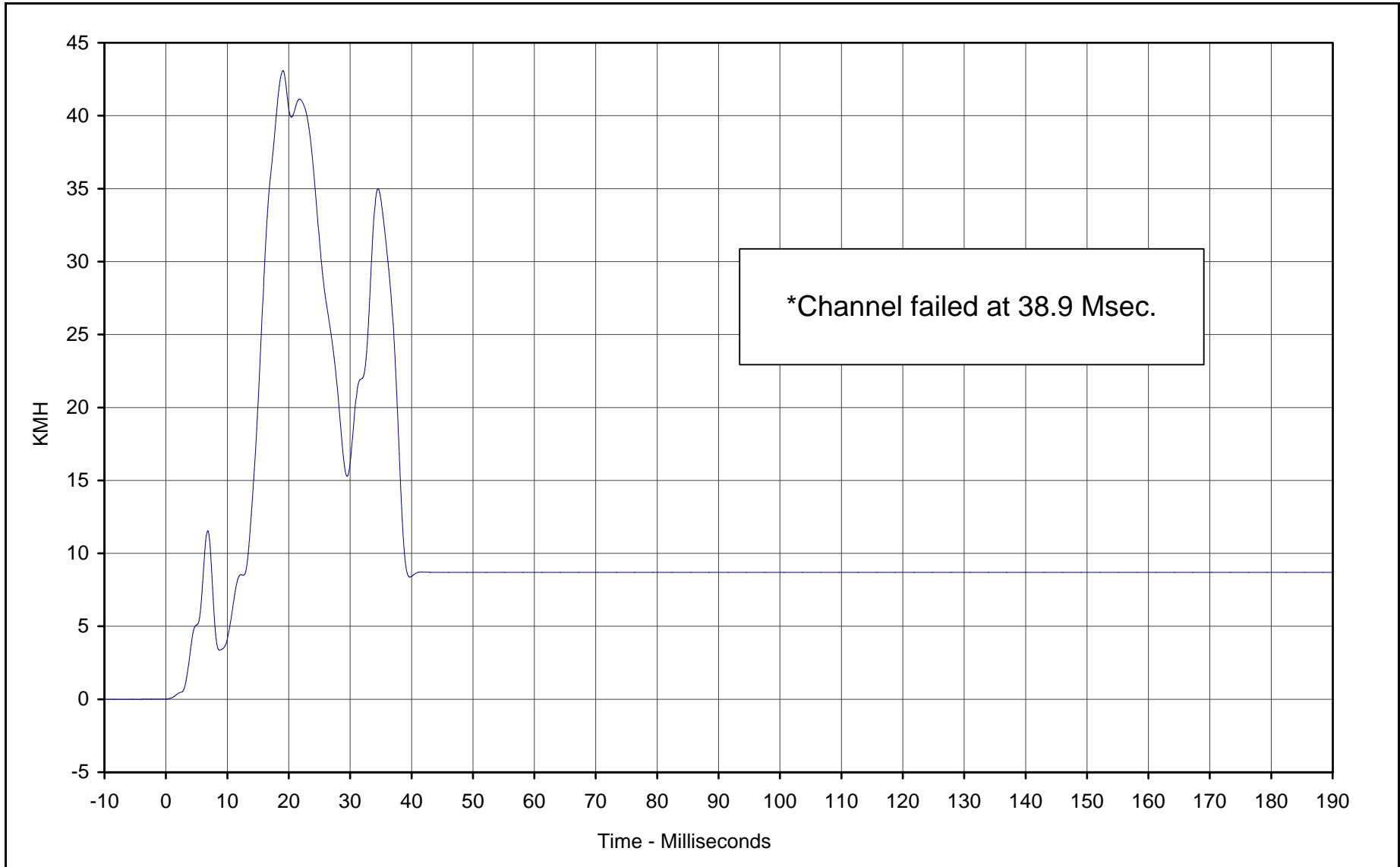
Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

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*Channel failed at 38.9 Msec.





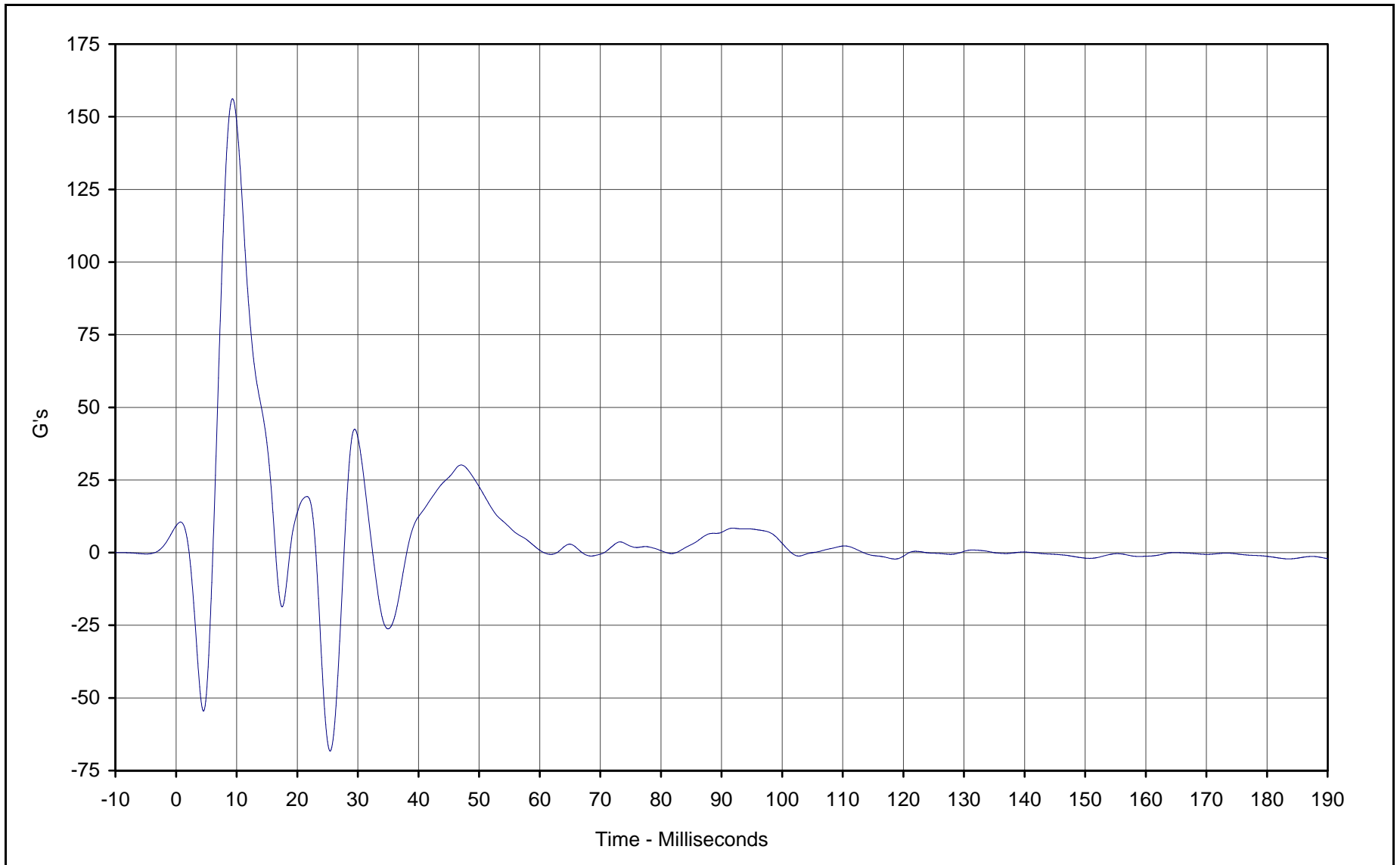
Curve Description: Left Front Door Upper CL Y Velocity *
Maximum Value: 43.1 at 19.0 Milliseconds
Minimum Value: 0.0 at 0.0 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: IN1-041

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

*Channel failed at 38.9 Msec.



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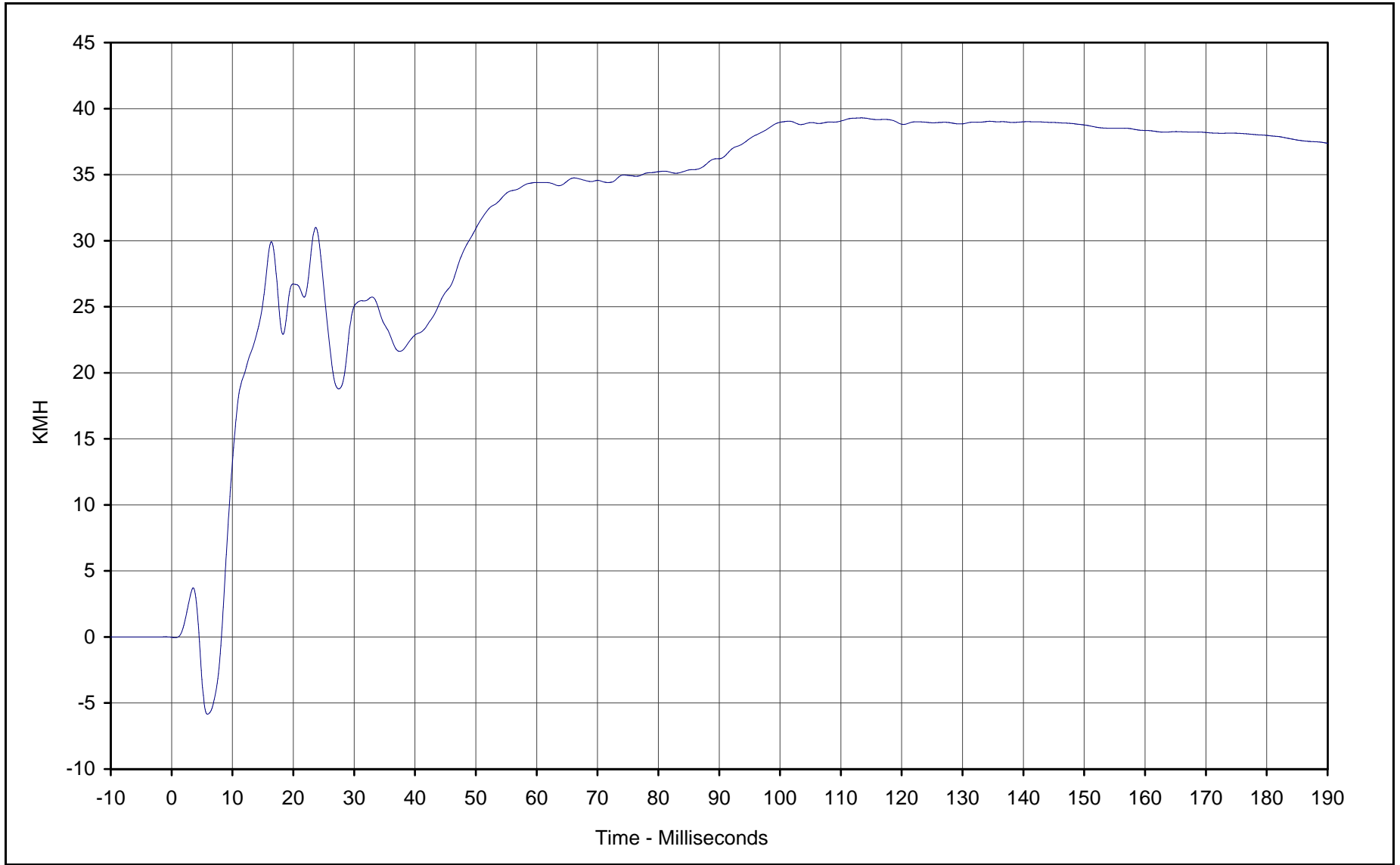
Curve Description: Left Rear Door Mid Rear Y
Maximum Value: 156.2 at 9.3 Milliseconds
Minimum Value: -68.3 at 25.4 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: FIL-042

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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Curve Description: Left Rear Door Mid Rear Y Velocity

Maximum Value: 39.3 at 113.4 Milliseconds

Minimum Value: -5.8 at 5.9 Milliseconds

SAE Filter Class: 180

Date of Test: 12/14/00

Curve Number: IN1-042

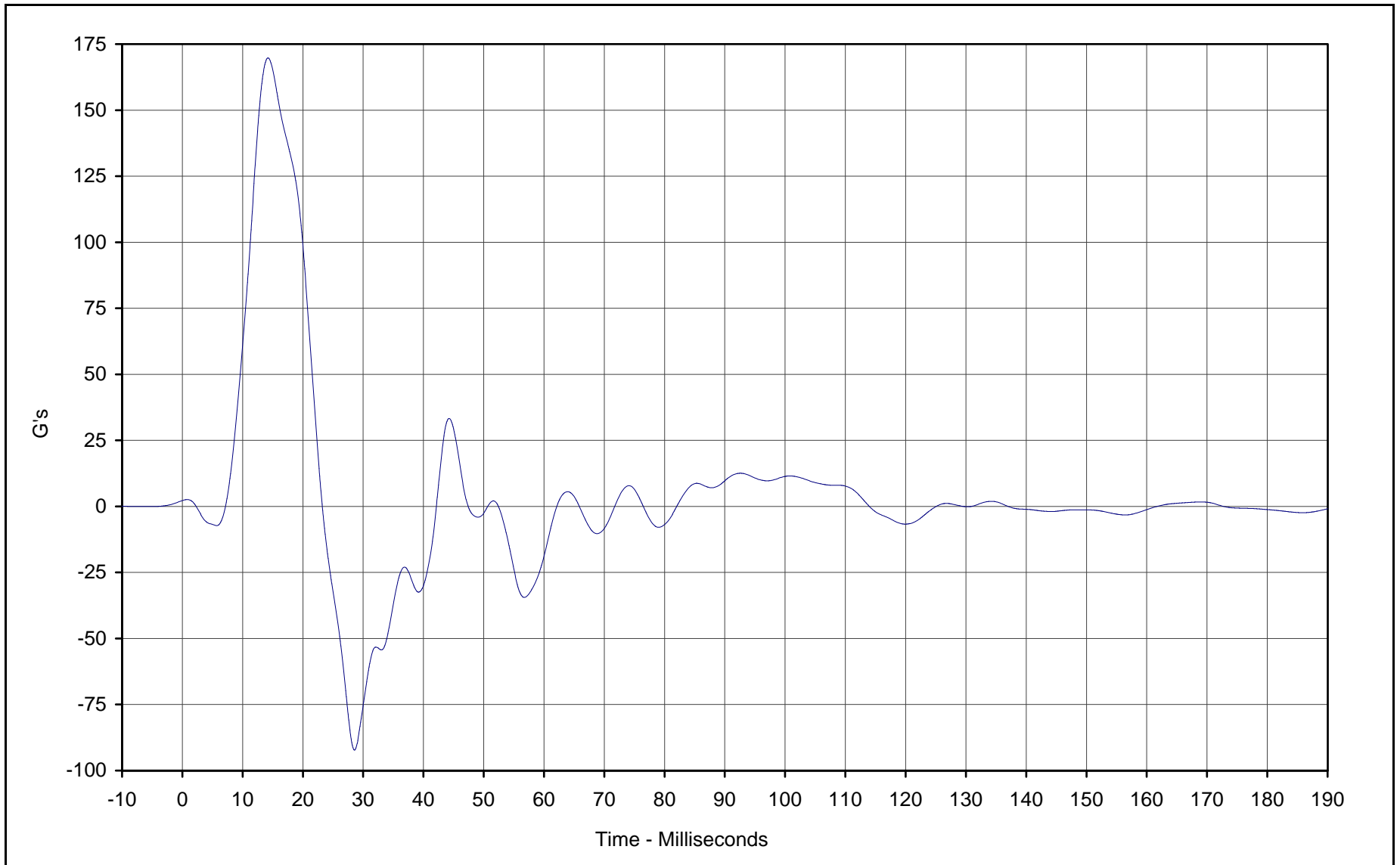
Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

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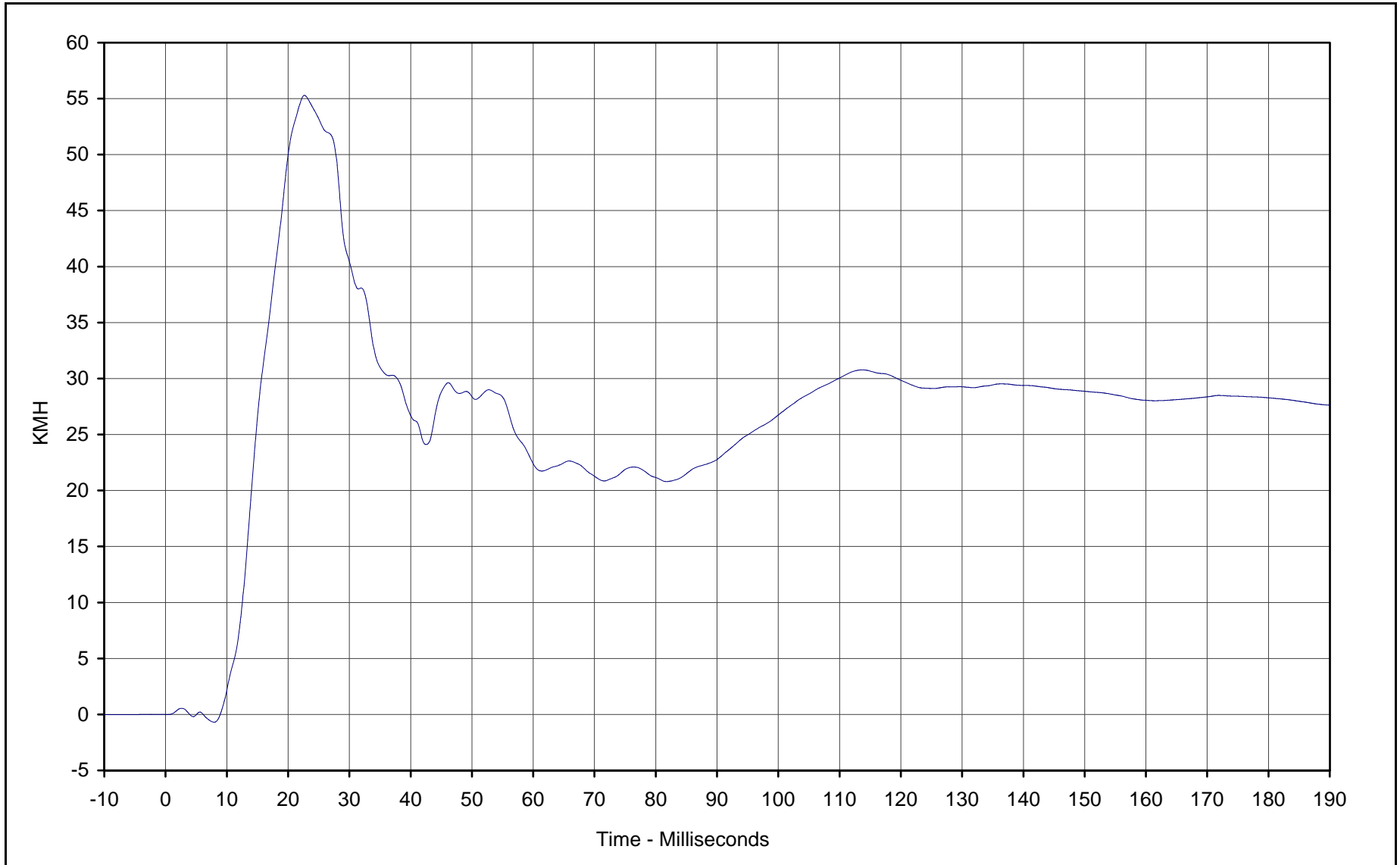
Curve Description: Left Rear Door Upper CL Y
Maximum Value: 169.8 at 14.2 Milliseconds
Minimum Value: -92.2 at 28.6 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: FIL-043

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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Curve Description: Left Rear Door Upper CL Y Velocity

Maximum Value: 55.3 at 22.7 Milliseconds

Minimum Value: -0.7 at 7.9 Milliseconds

SAE Filter Class: 180

Date of Test: 12/14/00

Curve Number: IN1-043

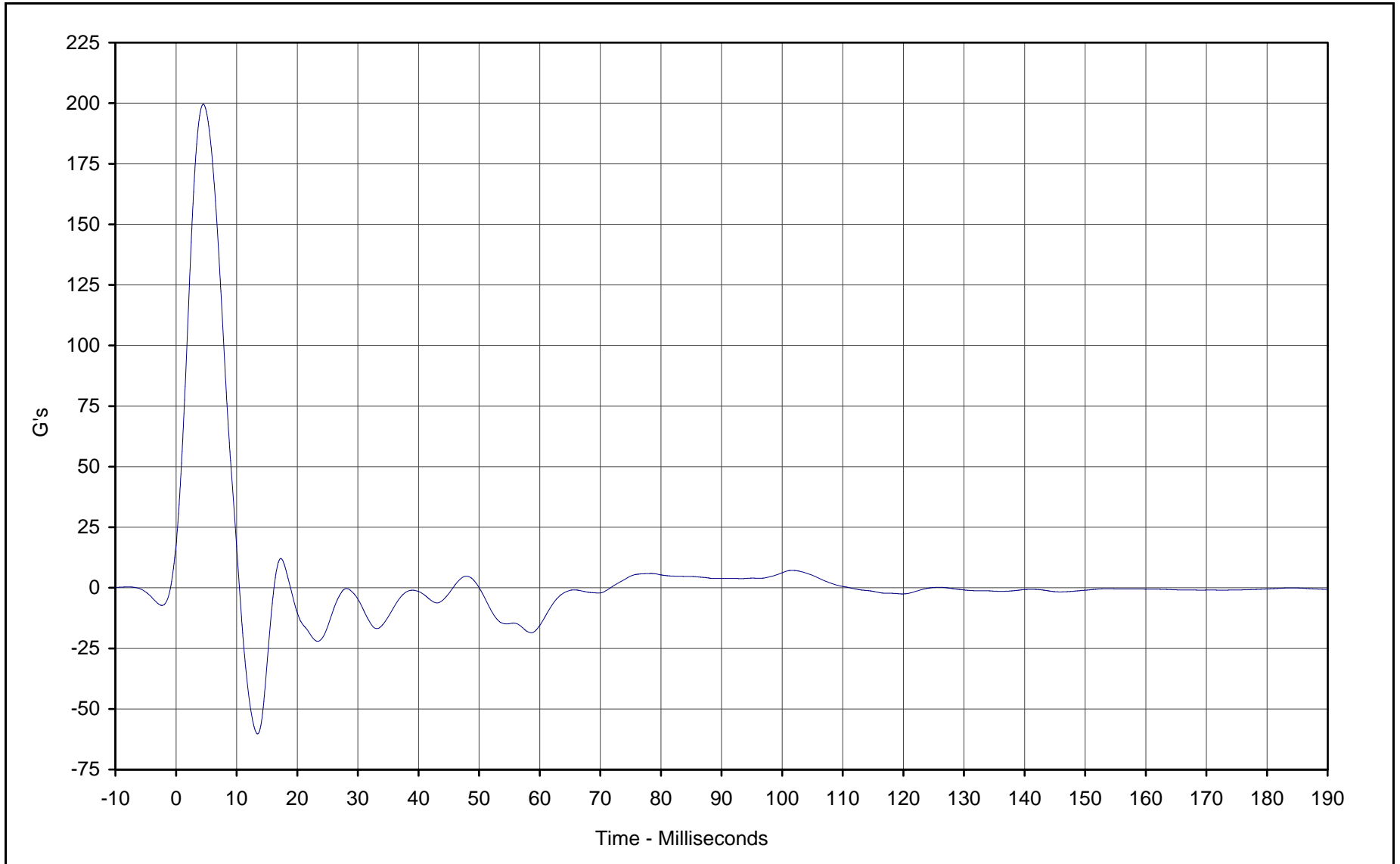
Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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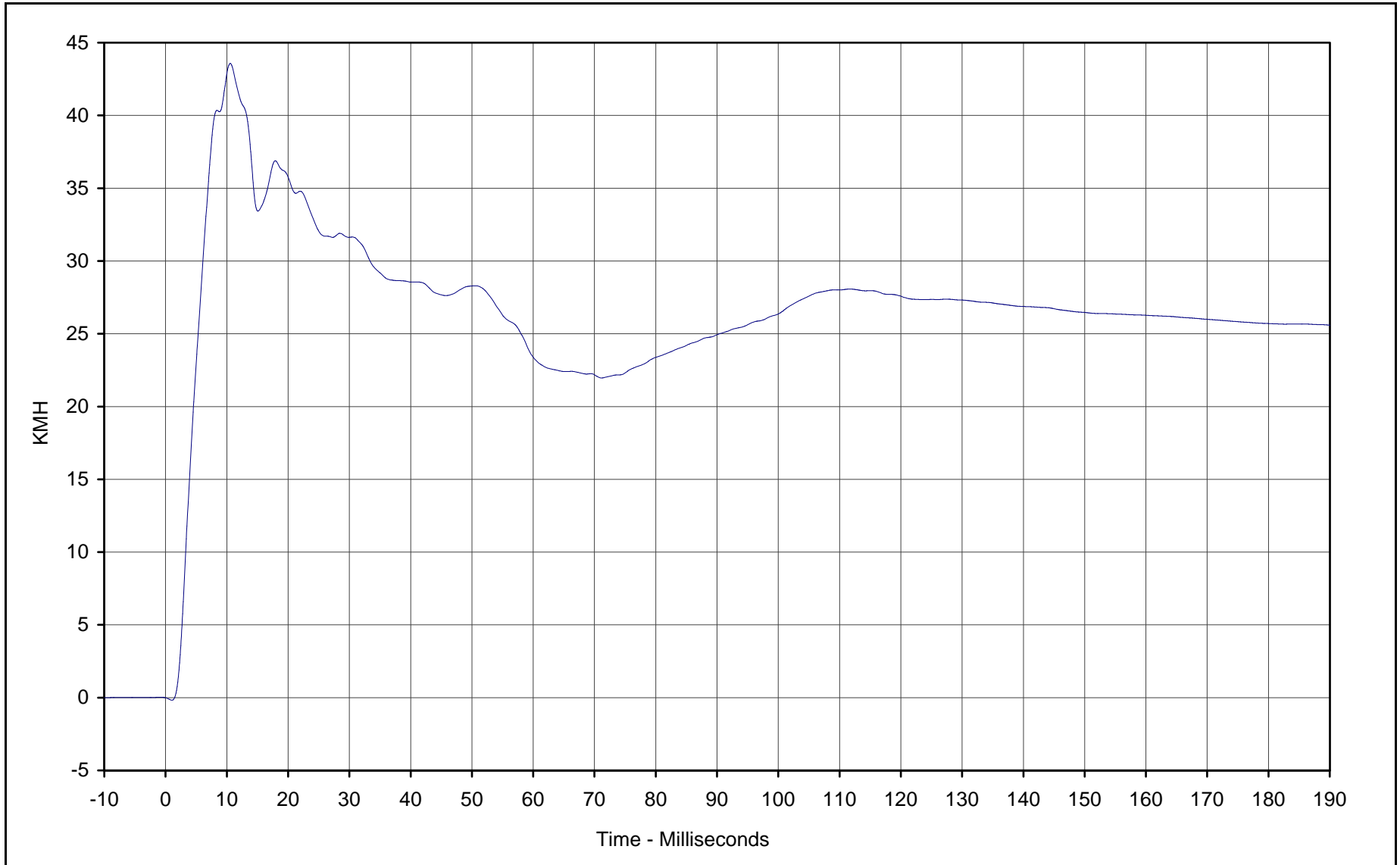
Curve Description: Left B-Post Lower Y
Maximum Value: 199.6 at 4.5 Milliseconds
Minimum Value: -60.3 at 13.5 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: FIL-044

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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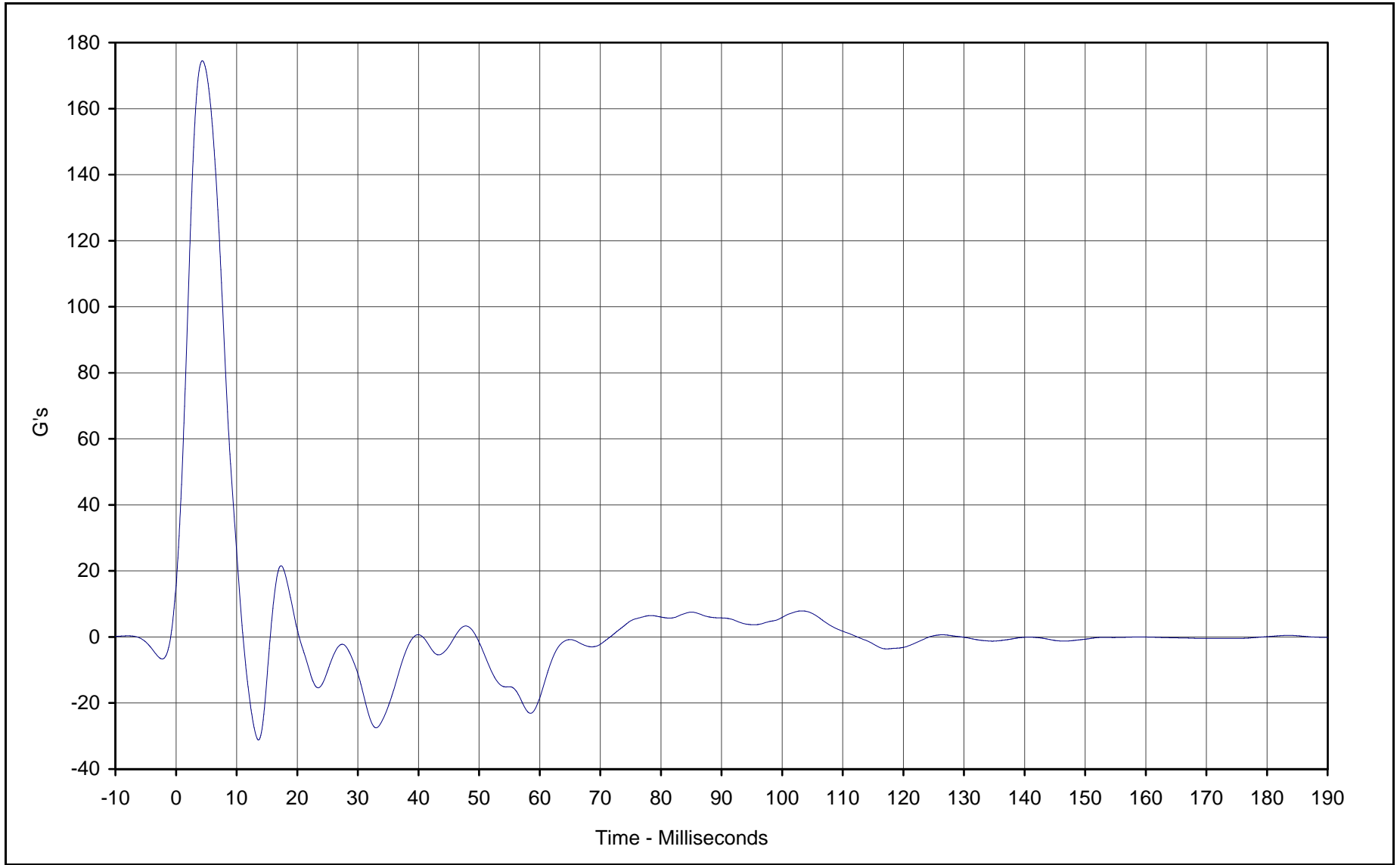
Curve Description: Left B-Post Lower Y Velocity
Maximum Value: 43.6 at 10.6 Milliseconds
Minimum Value: -0.2 at 1.0 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: IN1-044

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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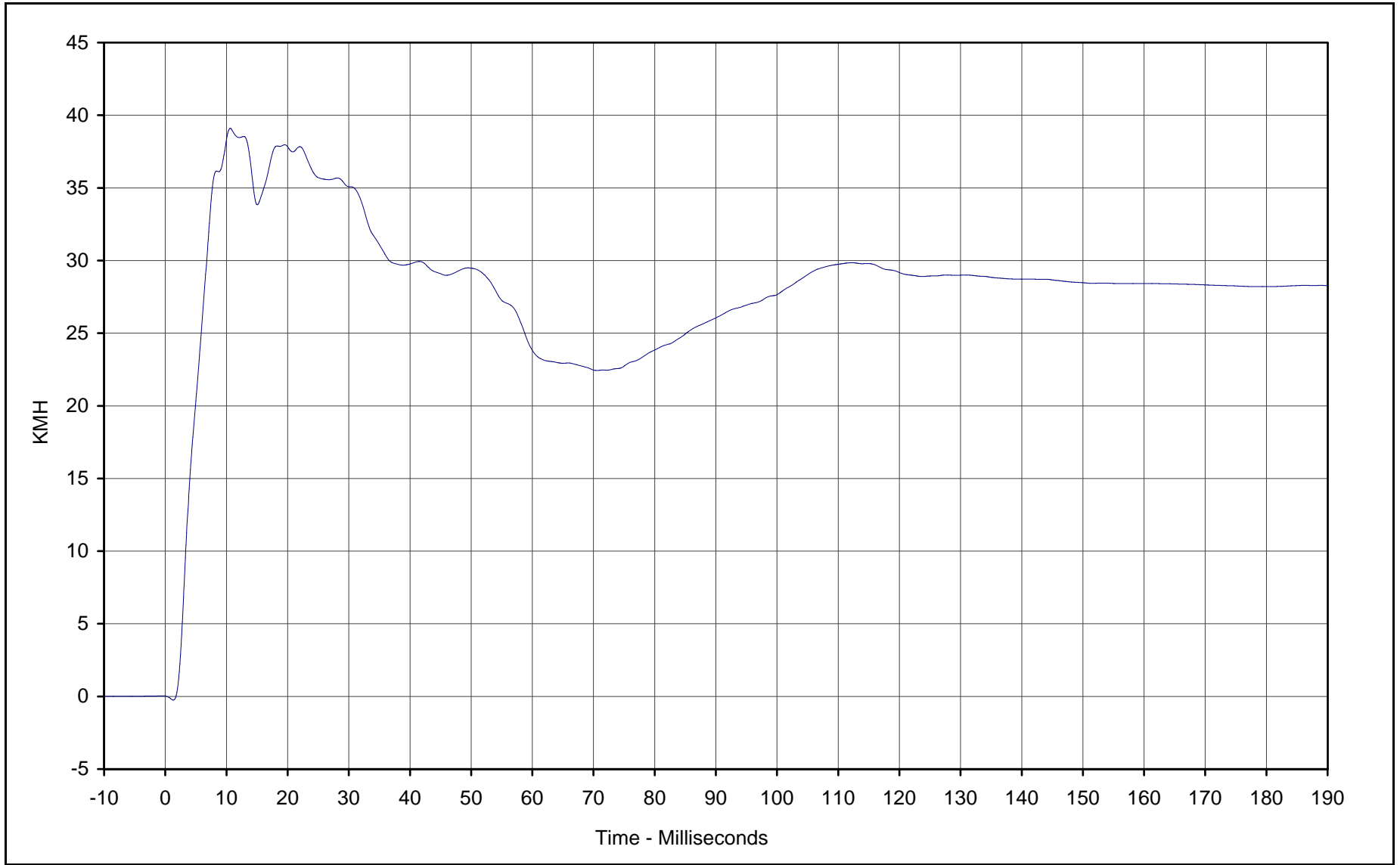
Curve Description: Left B-Post Middle Y
Maximum Value: 174.5 at 4.3 Milliseconds
Minimum Value: -31.2 at 13.6 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: FIL-045

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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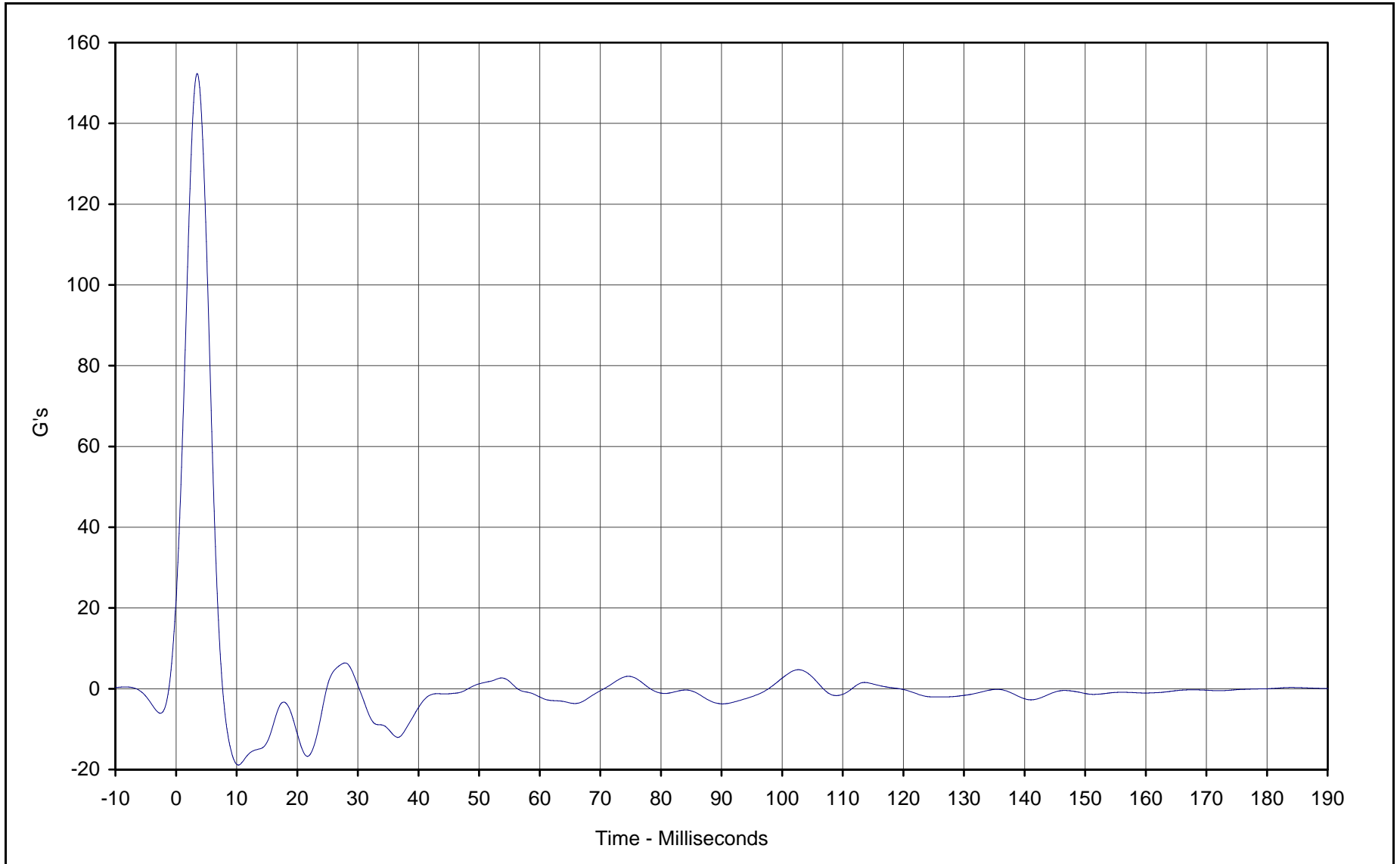
Curve Description: Left B-Post Middle Y Velocity
Maximum Value: 39.1 at 10.6 Milliseconds
Minimum Value: -0.2 at 1.3 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: IN1-045

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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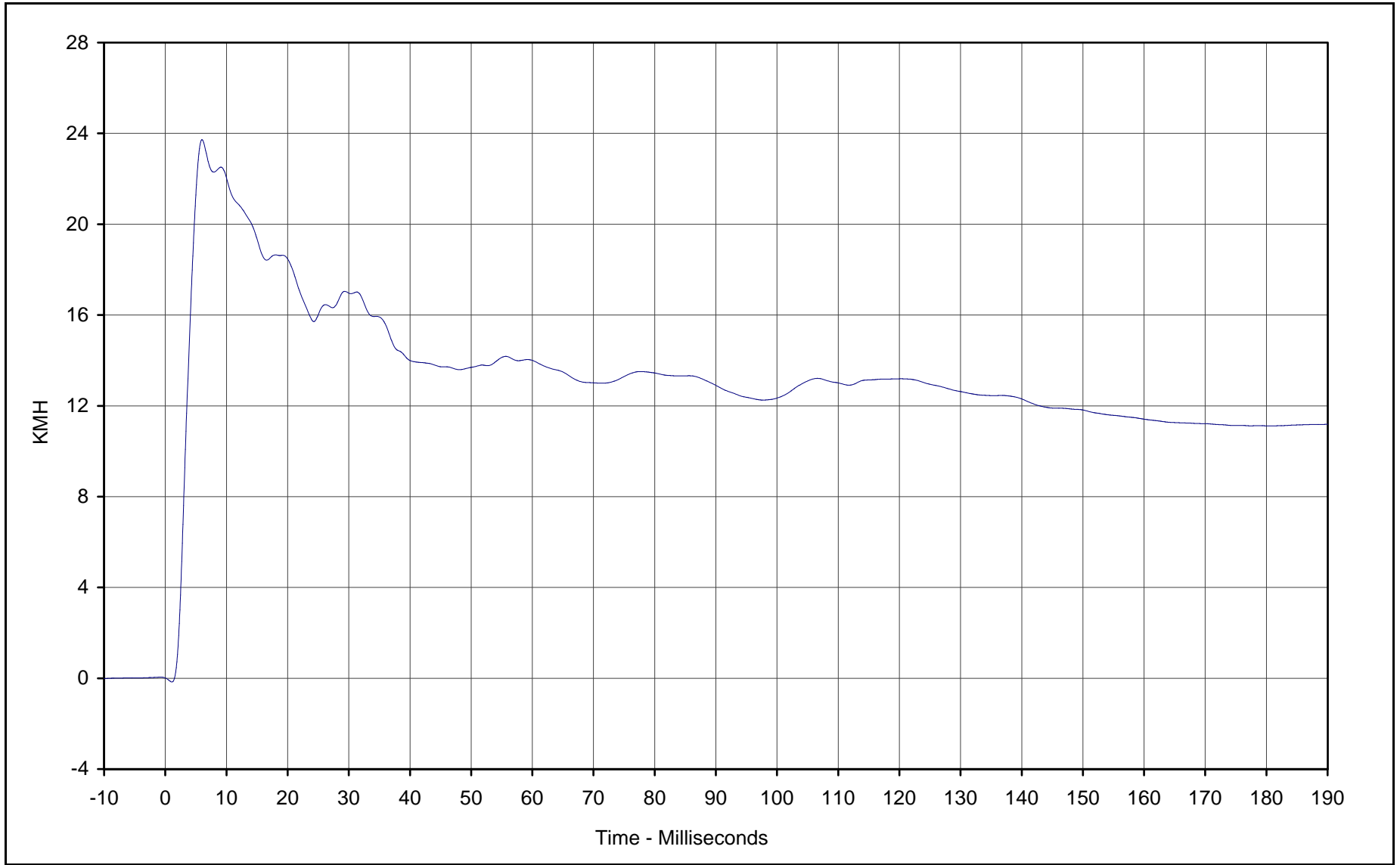
Curve Description: Left A-Post Lower Y
Maximum Value: 152.3 at 3.5 Milliseconds
Minimum Value: -18.9 at 10.3 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: FIL-046

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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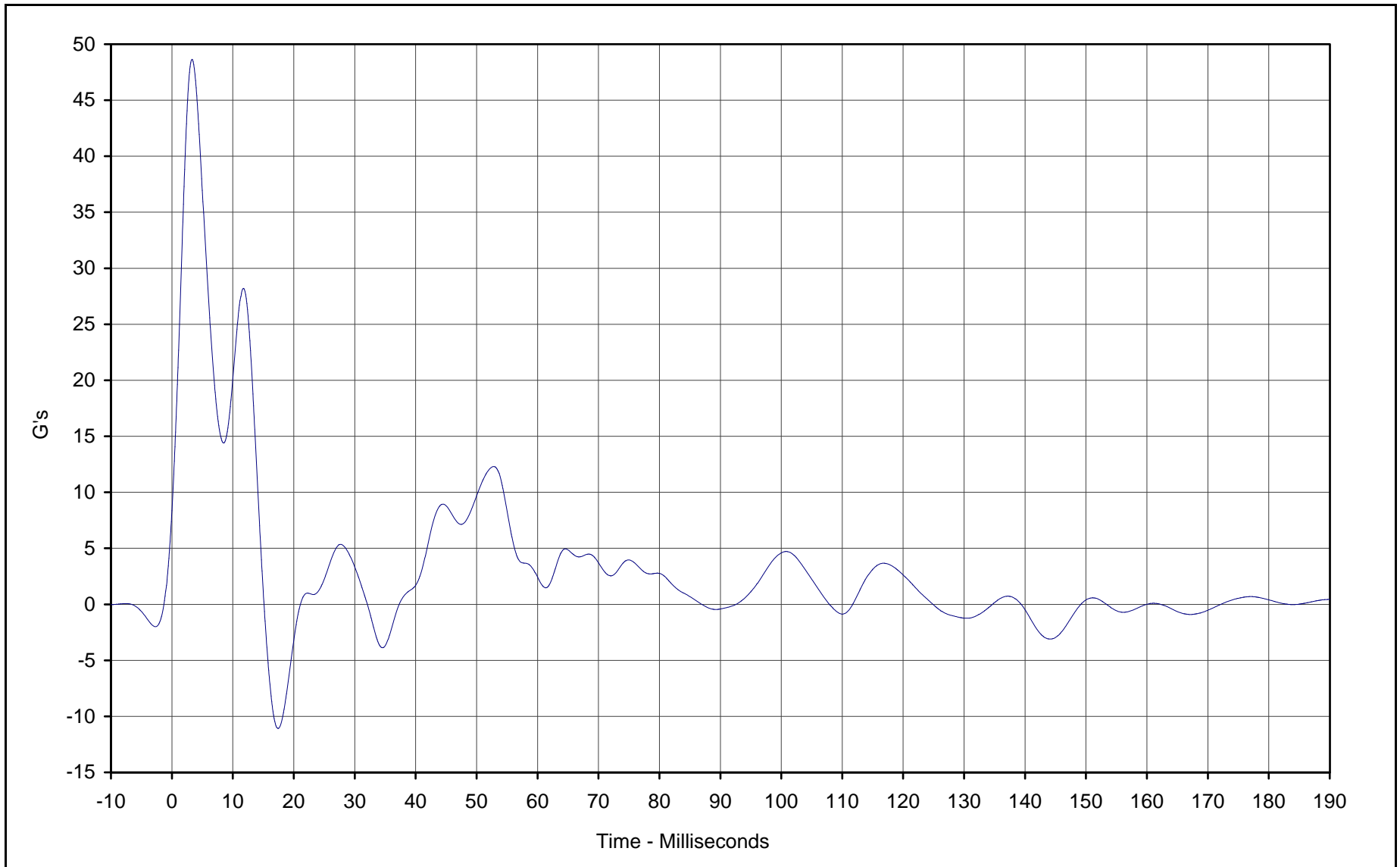
Curve Description: Left A-Post Lower Y Velocity
Maximum Value: 23.7 at 6.0 Milliseconds
Minimum Value: -0.2 at 1.1 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: IN1-046

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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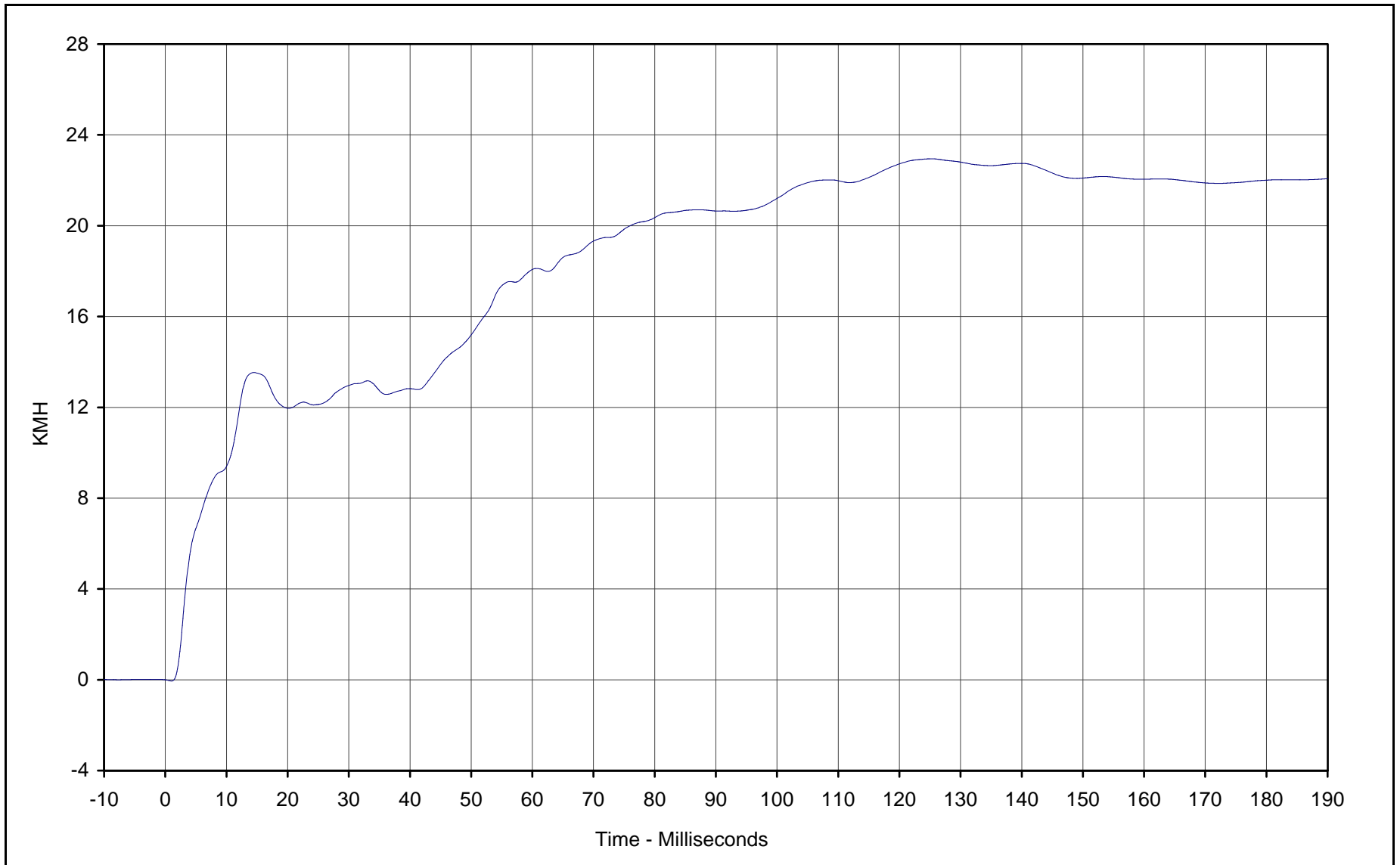
Curve Description: Left A-Post Middle Y
Maximum Value: 48.6 at 3.3 Milliseconds
Minimum Value: -11.1 at 17.4 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: FIL-047

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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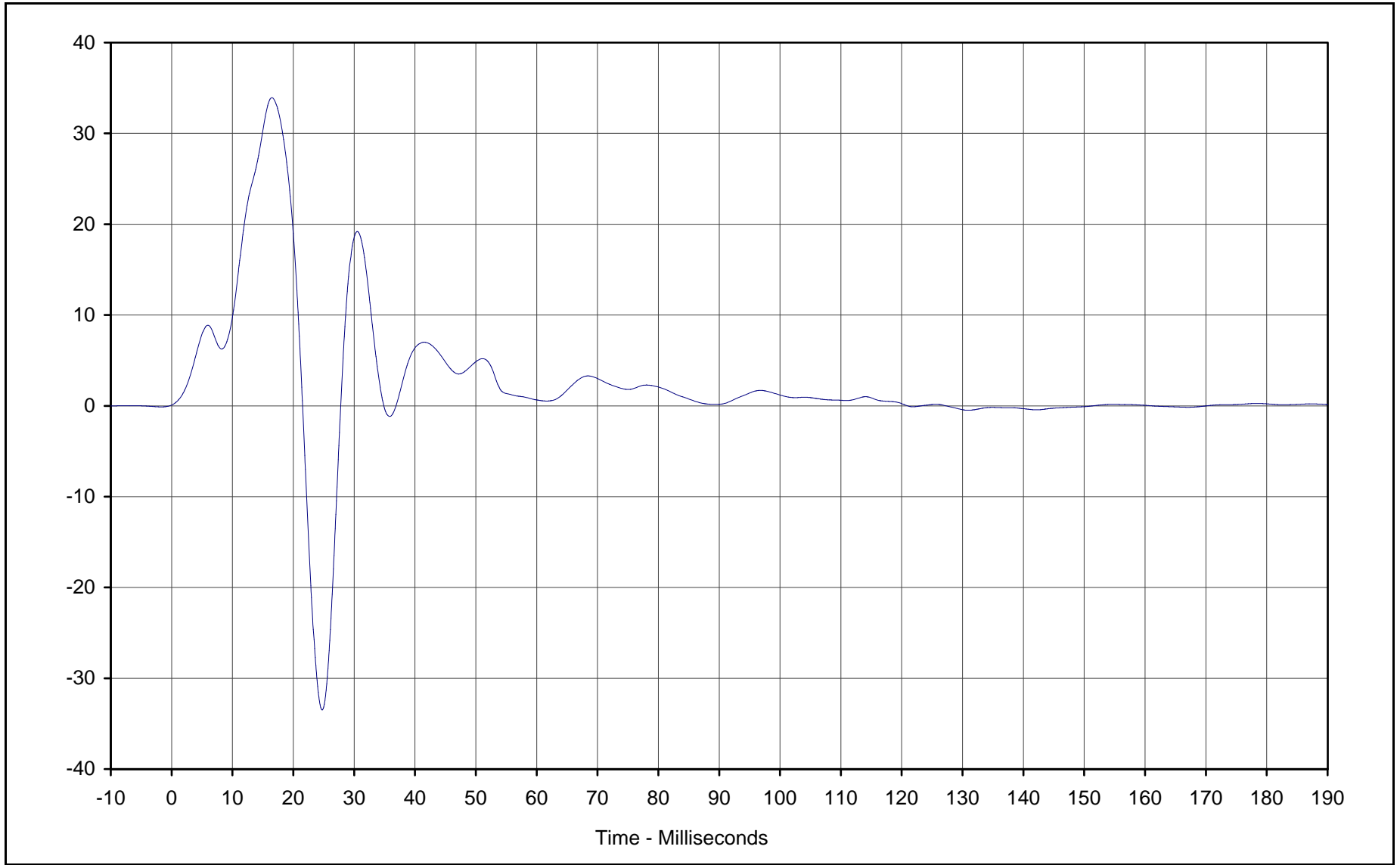
Curve Description: Left A-Post Middle Y Velocity
Maximum Value: 22.9 at 125.2 Milliseconds
Minimum Value: -0.1 at 1.0 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: IN1-047

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

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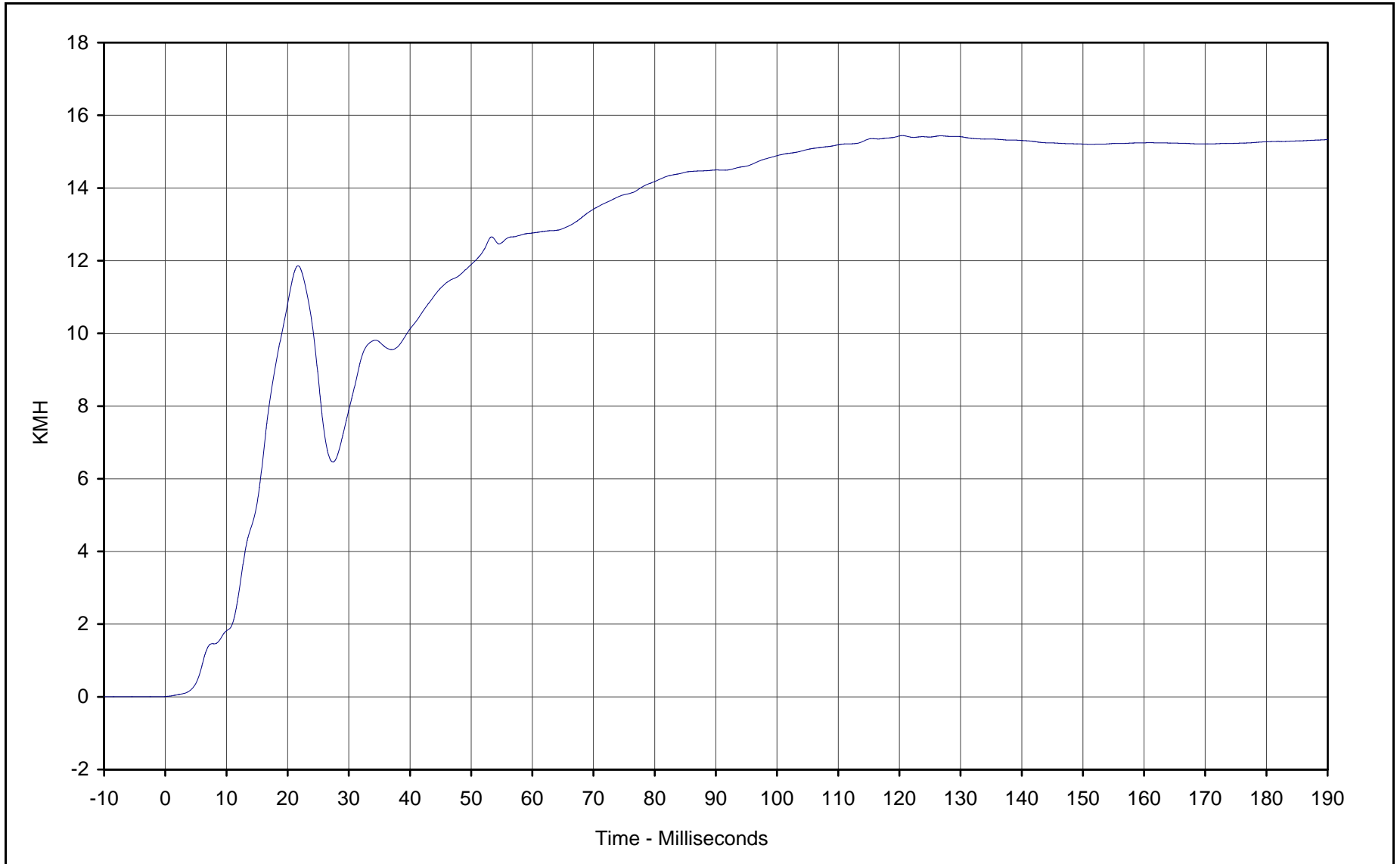
Curve Description: Left Front Seat Track Y
Maximum Value: 33.9 at 16.5 Milliseconds
Minimum Value: -33.5 at 24.7 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: FIL-048

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

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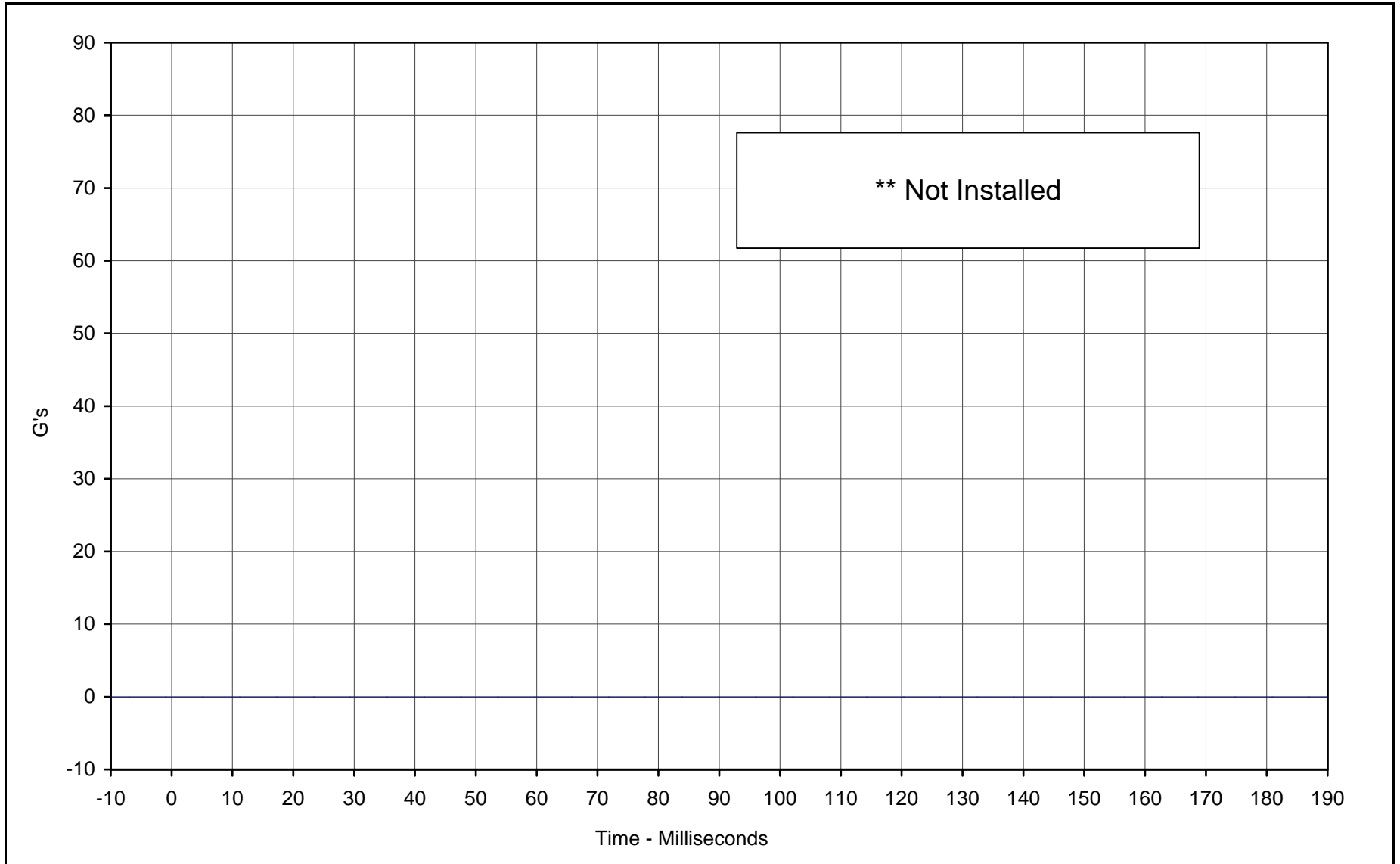
Curve Description: Left Front Seat Track Y Velocity
Maximum Value: 15.4 at 120.5 Milliseconds
Minimum Value: 0.0 at 0.0 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: IN1-048

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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Curve Description: Left Rear Seat Structure Y **

Maximum Value: 0.0 at 0.0 Milliseconds

Minimum Value: 0.0 at 0.0 Milliseconds

SAE Filter Class: 60

Date of Test: 12/14/00

Curve Number: FIL-049

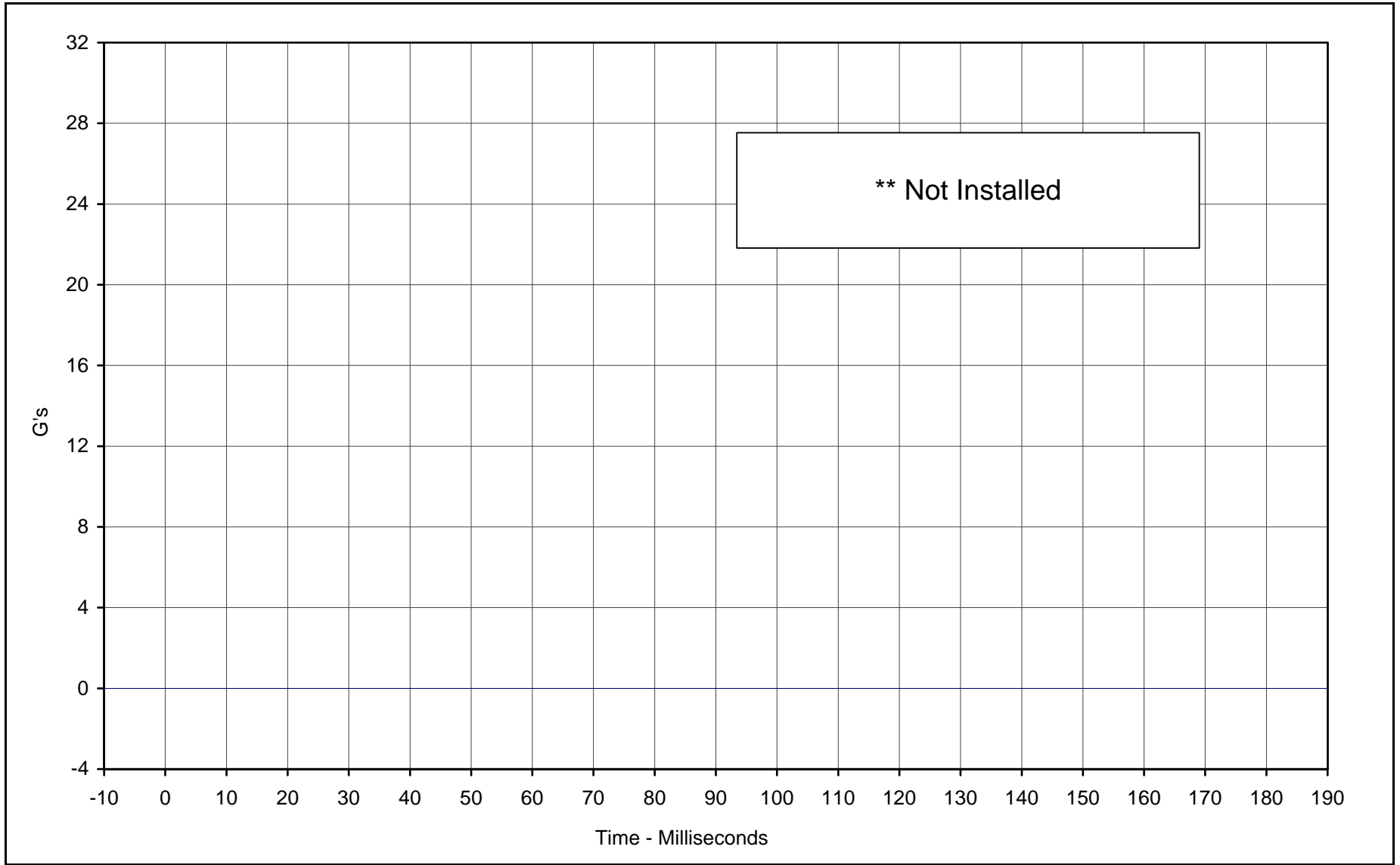
Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

** Not Installed



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Curve Description: Left Rear Seat Structure Y Velocity **

Maximum Value: 0.0 at 0.0 Milliseconds

Minimum Value: 0.0 at 0.0 Milliseconds

SAE Filter Class: 180

Date of Test: 12/14/00

Curve Number: IN1-049

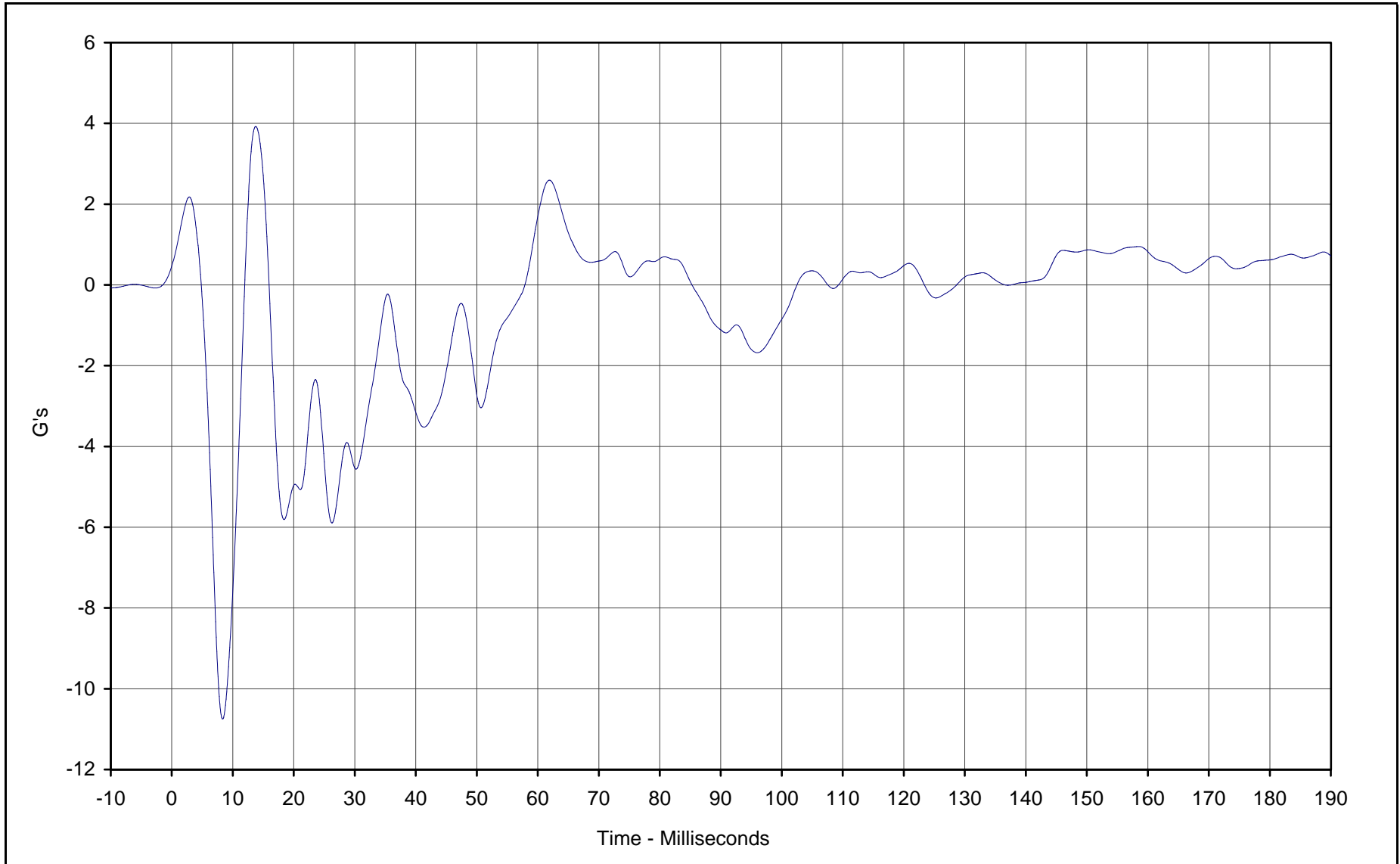
Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

** Not Installed



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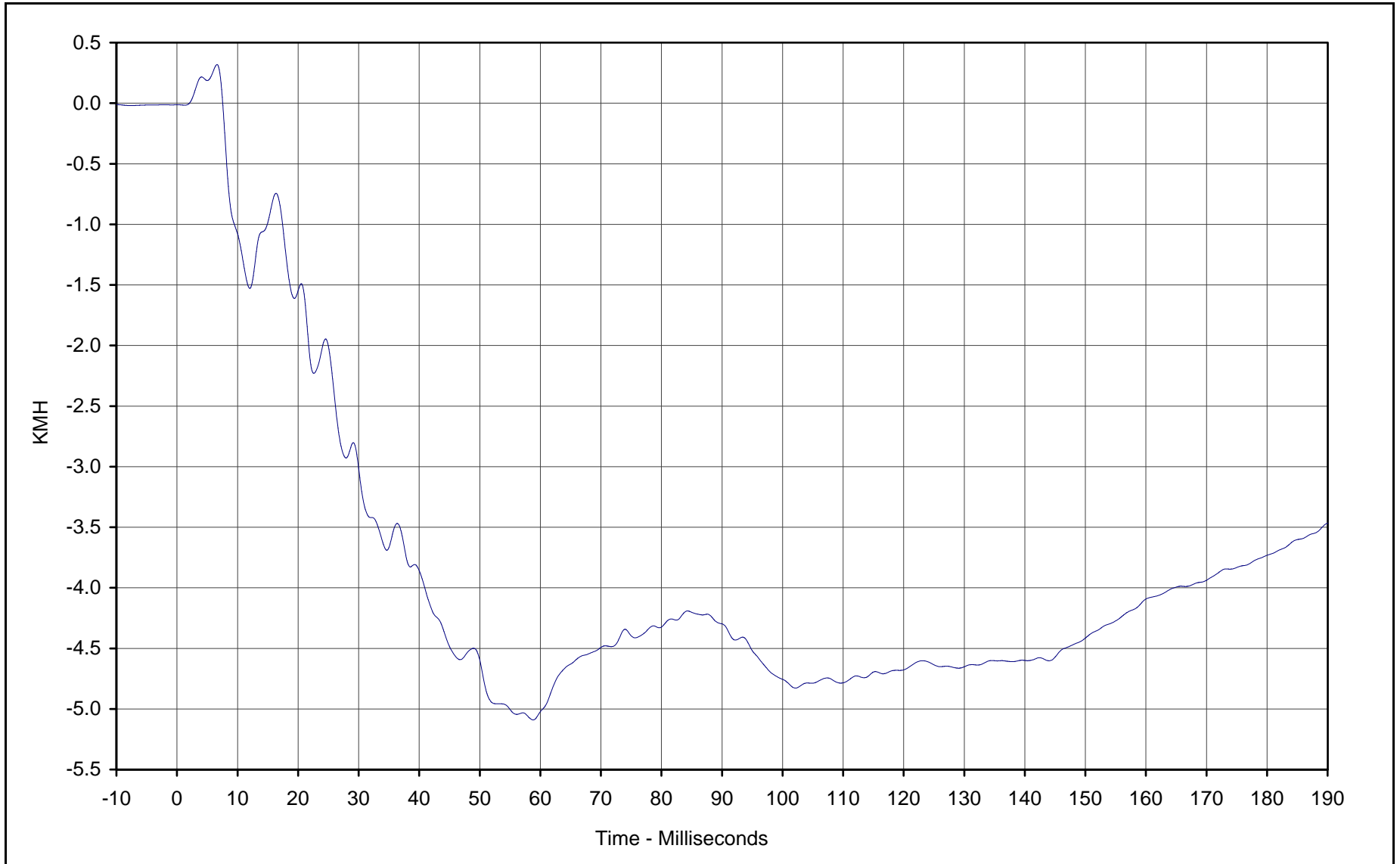
Curve Description: Vehicle CG X
Maximum Value: 3.9 at 13.8 Milliseconds
Minimum Value: -10.7 at 8.3 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: FIL-050

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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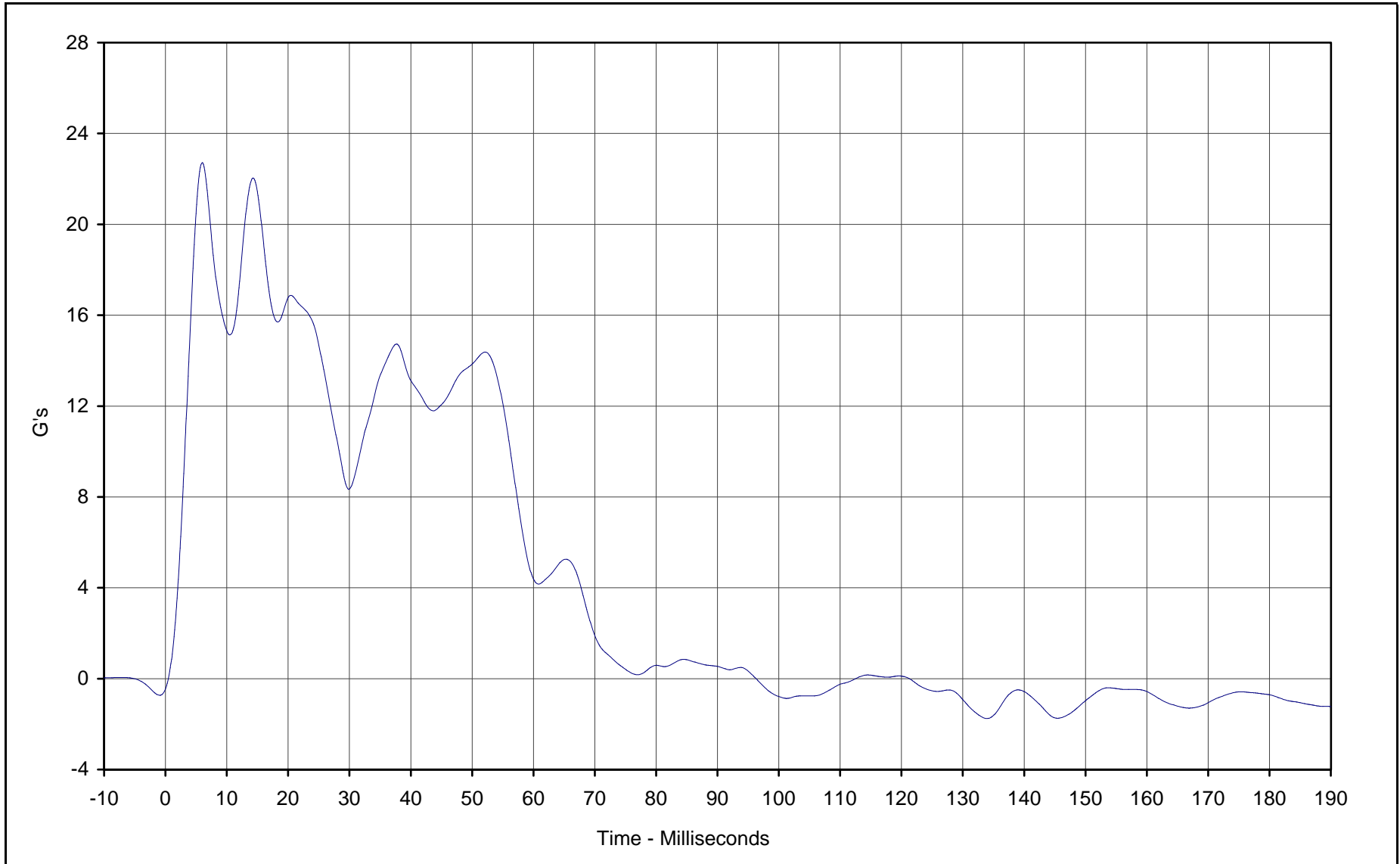
Curve Description: Vehicle CG X Velocity
Maximum Value: 0.3 at 6.6 Milliseconds
Minimum Value: -5.1 at 58.8 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: IN1-050

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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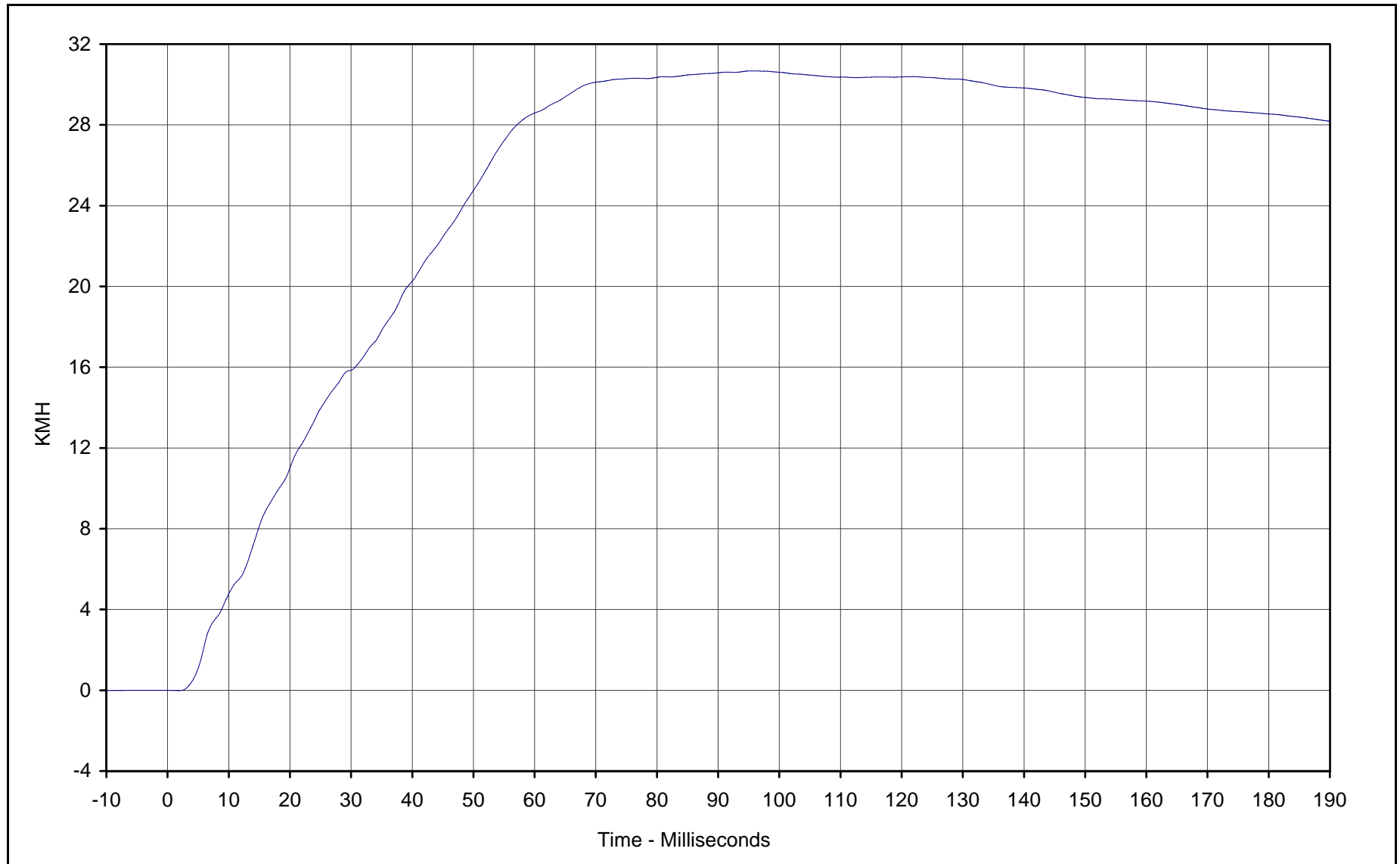


Curve Description: Vehicle CG Y
Maximum Value: 22.7 at 6.0 Milliseconds
Minimum Value: -1.8 at 133.9 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: FIL-051

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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Curve Description: Vehicle CG Y Velocity

Maximum Value: 30.7 at 95.2 Milliseconds

Minimum Value: 0.0 at 1.8 Milliseconds

SAE Filter Class: 180

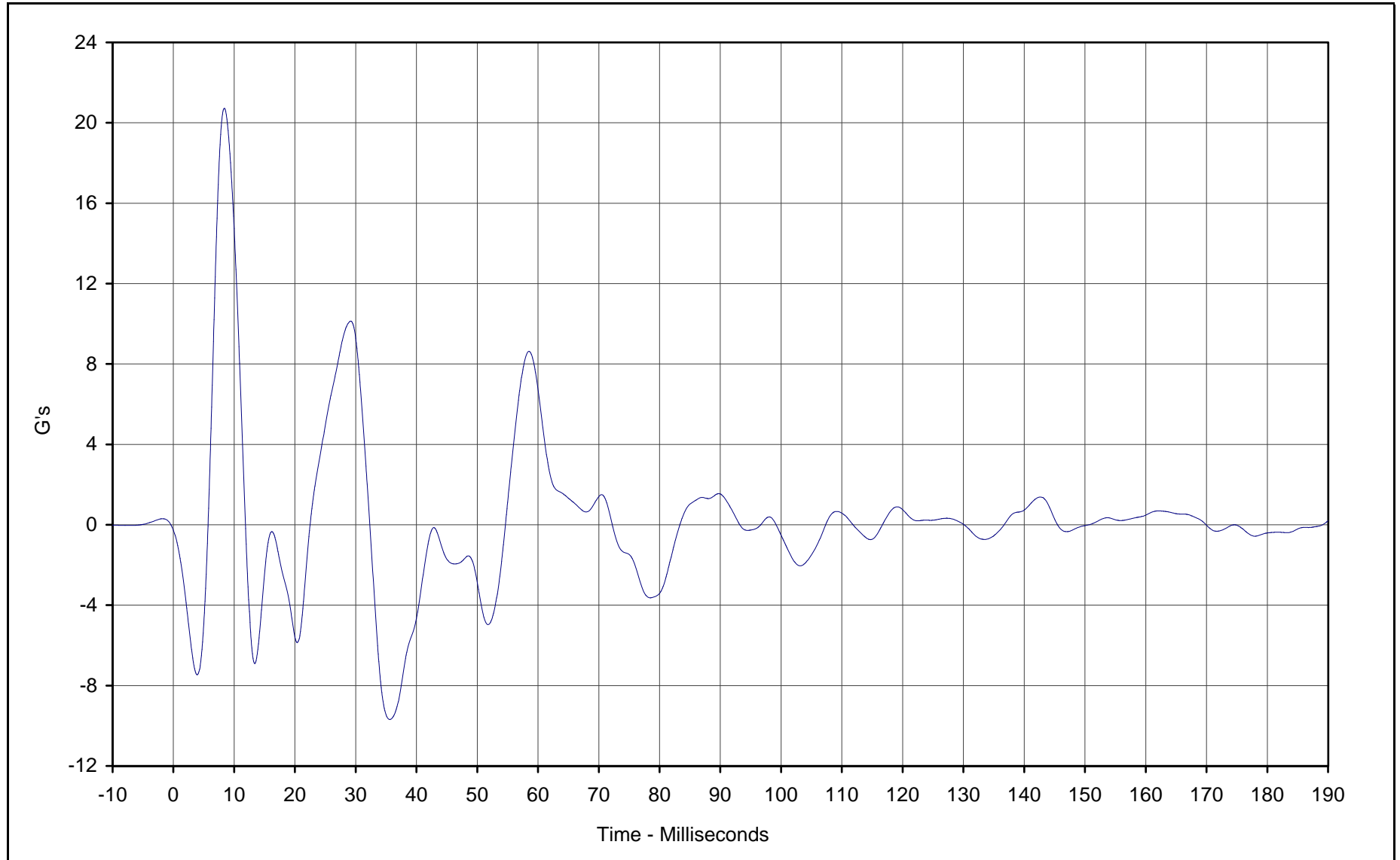
Date of Test: 12/14/00

Curve Number: IN1-051

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



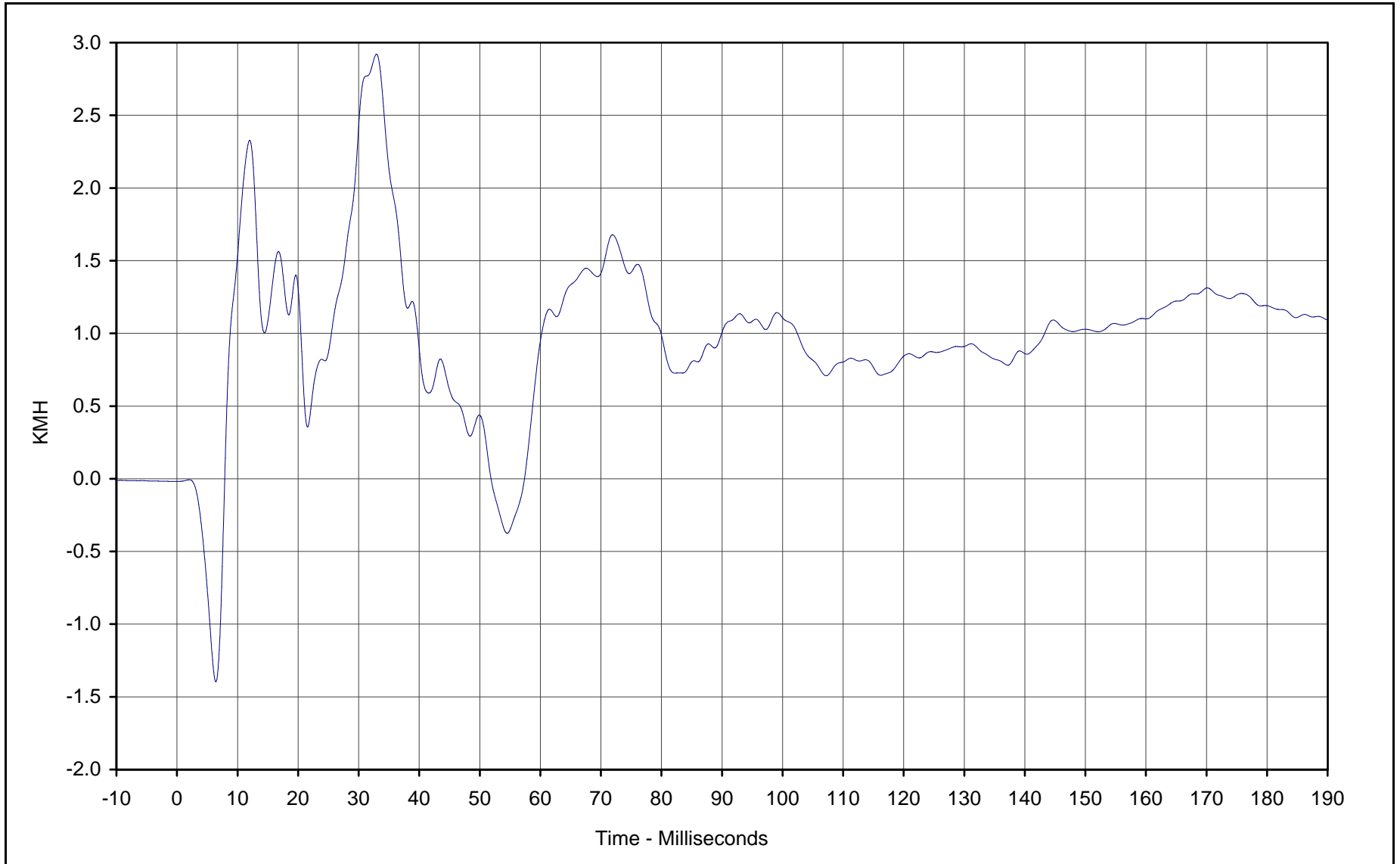


Curve Description: Vehicle CG Z
 Maximum Value: 20.7 at 8.4 Milliseconds
 Minimum Value: -9.7 at 35.6 Milliseconds
 SAE Filter Class: 60
 Date of Test: 12/14/00
 Curve Number: FIL-052

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
 Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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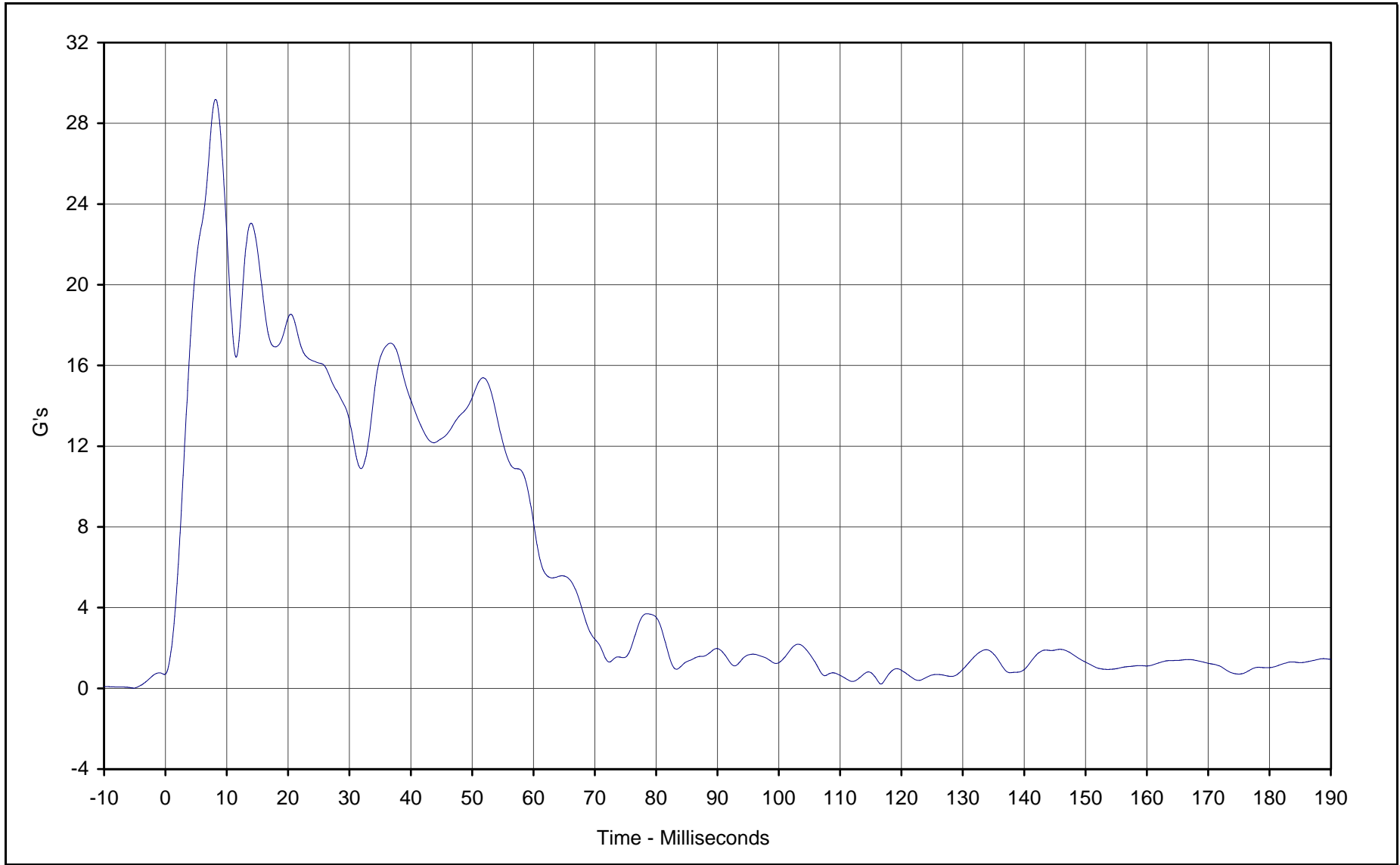


Curve Description: Vehicle CG Z Velocity
Maximum Value: 2.9 at 32.9 Milliseconds
Minimum Value: -1.4 at 6.4 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: IN1-052

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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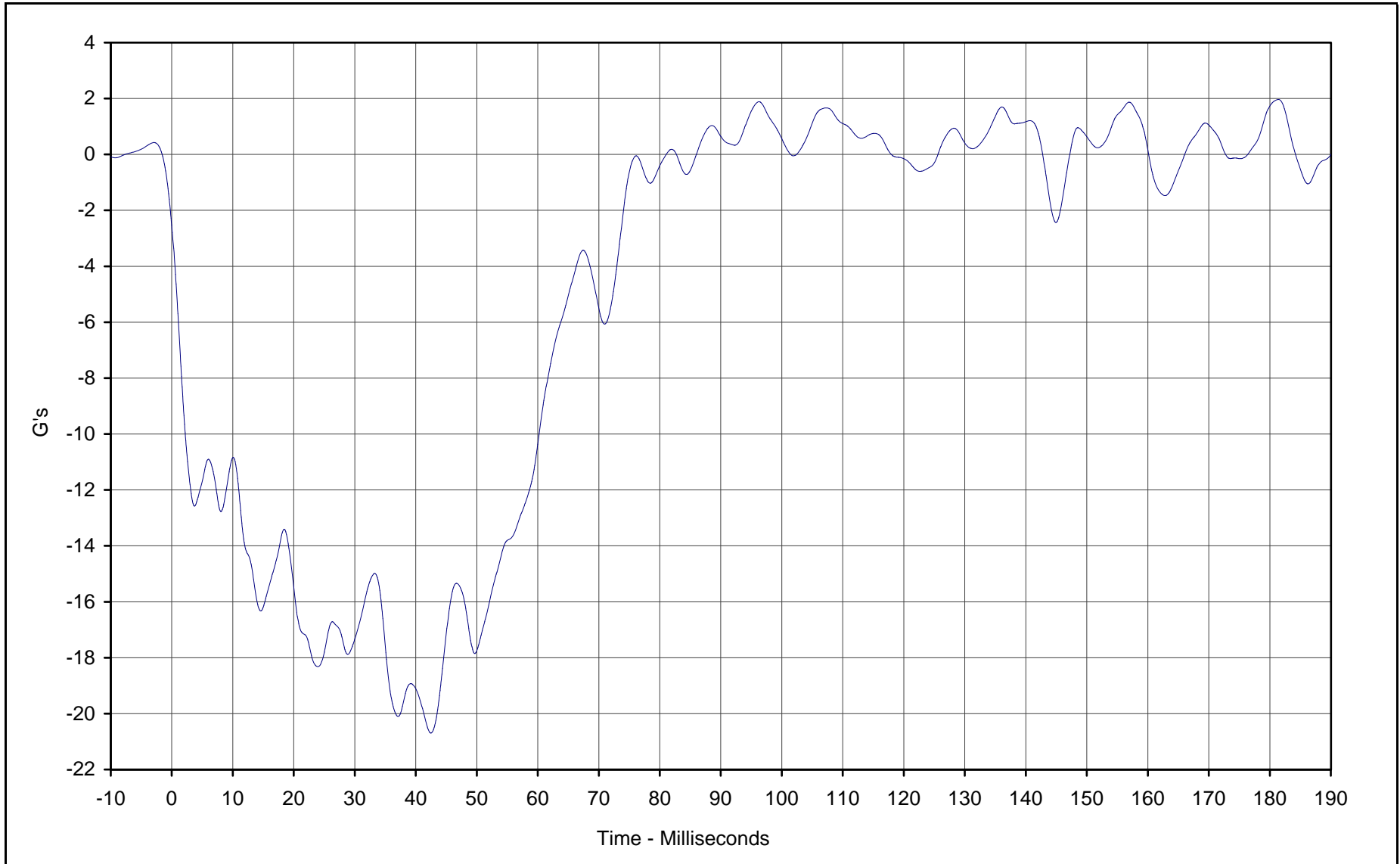


Curve Description: Vehicle CG Resultant
 Maximum Value: 29.2 at 8.2 Milliseconds
 Minimum Value: 0.2 at 116.6 Milliseconds
 SAE Filter Class: 60
 Date of Test: 12/14/00
 Curve Number: RES-050

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
 Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



B-107



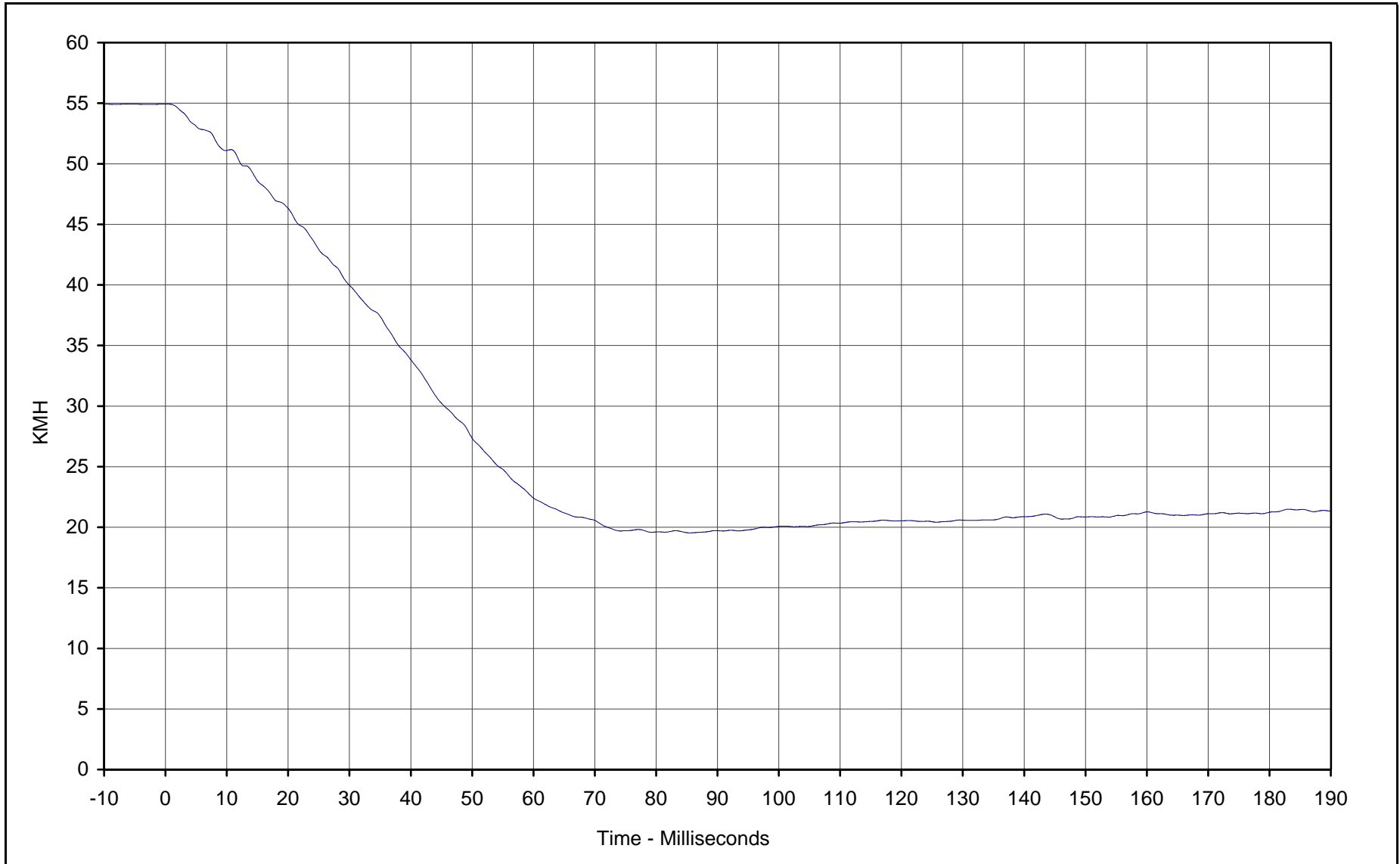
Curve Description: MDB CG X
Maximum Value: 2.0 at 181.4 Milliseconds
Minimum Value: -20.7 at 42.5 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: FIL-053

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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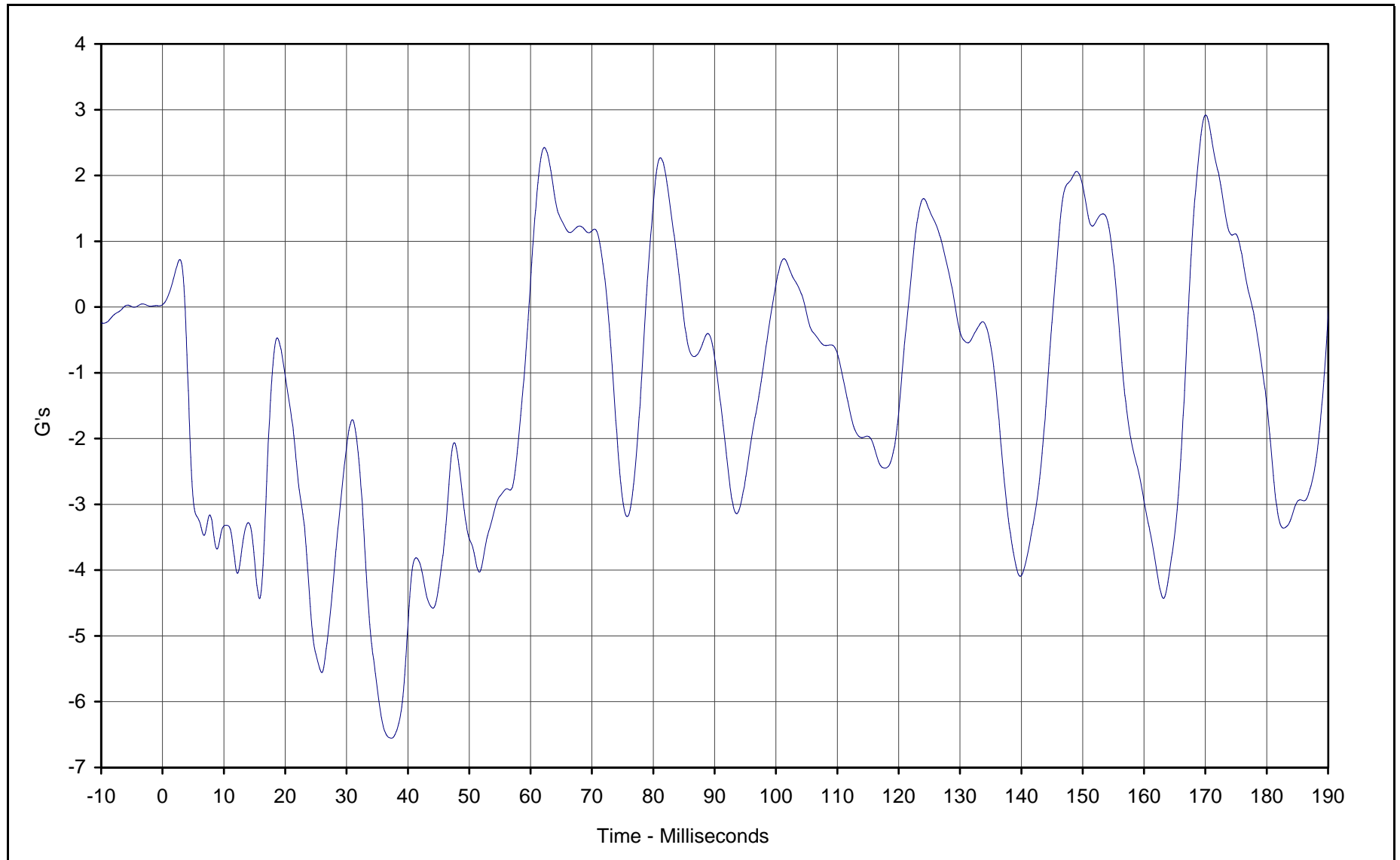


Curve Description: MDB CG X Velocity
Maximum Value: 54.9 at 0.5 Milliseconds
Minimum Value: 19.5 at 85.5 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: IN1-053

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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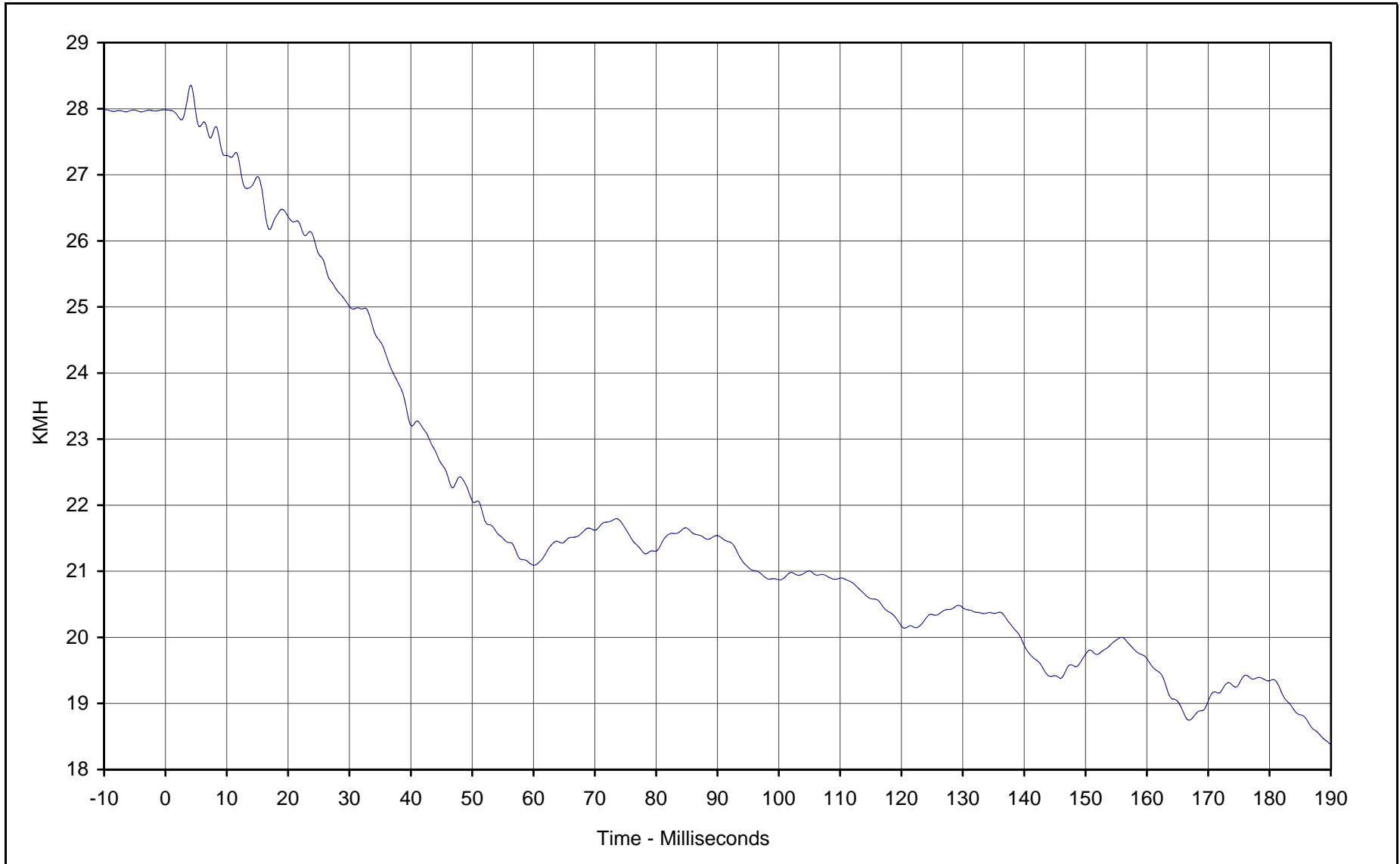


Curve Description: MDB CG Y
 Maximum Value: 2.9 at 170.0 Milliseconds
 Minimum Value: -6.6 at 37.3 Milliseconds
 SAE Filter Class: 60
 Date of Test: 12/14/00
 Curve Number: FIL-054

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
 Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



B-110



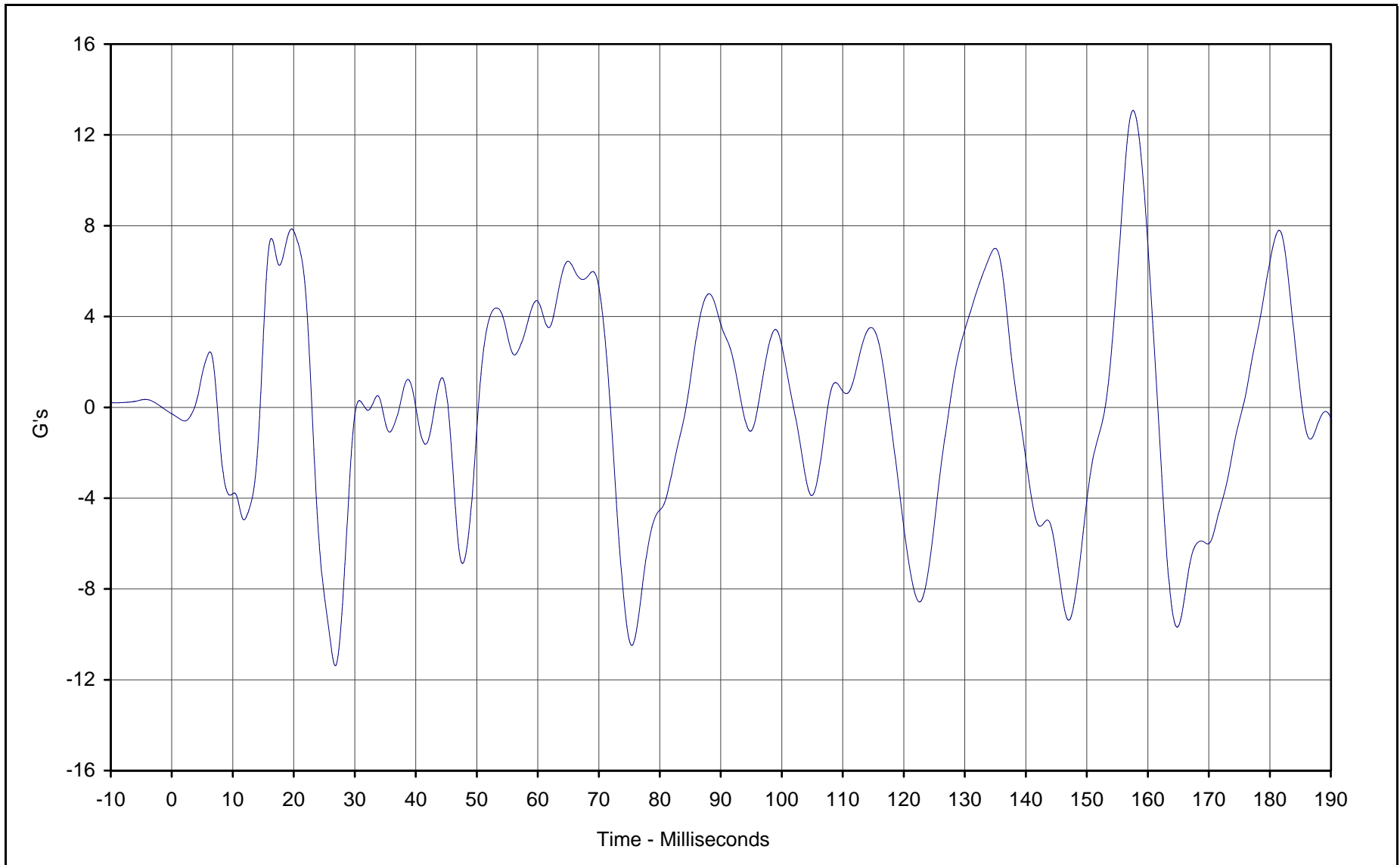
Curve Description: MDB CG Y Velocity
Maximum Value: 28.4 at 4.1 Milliseconds
Minimum Value: 18.4 at 189.9 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: IN1-054

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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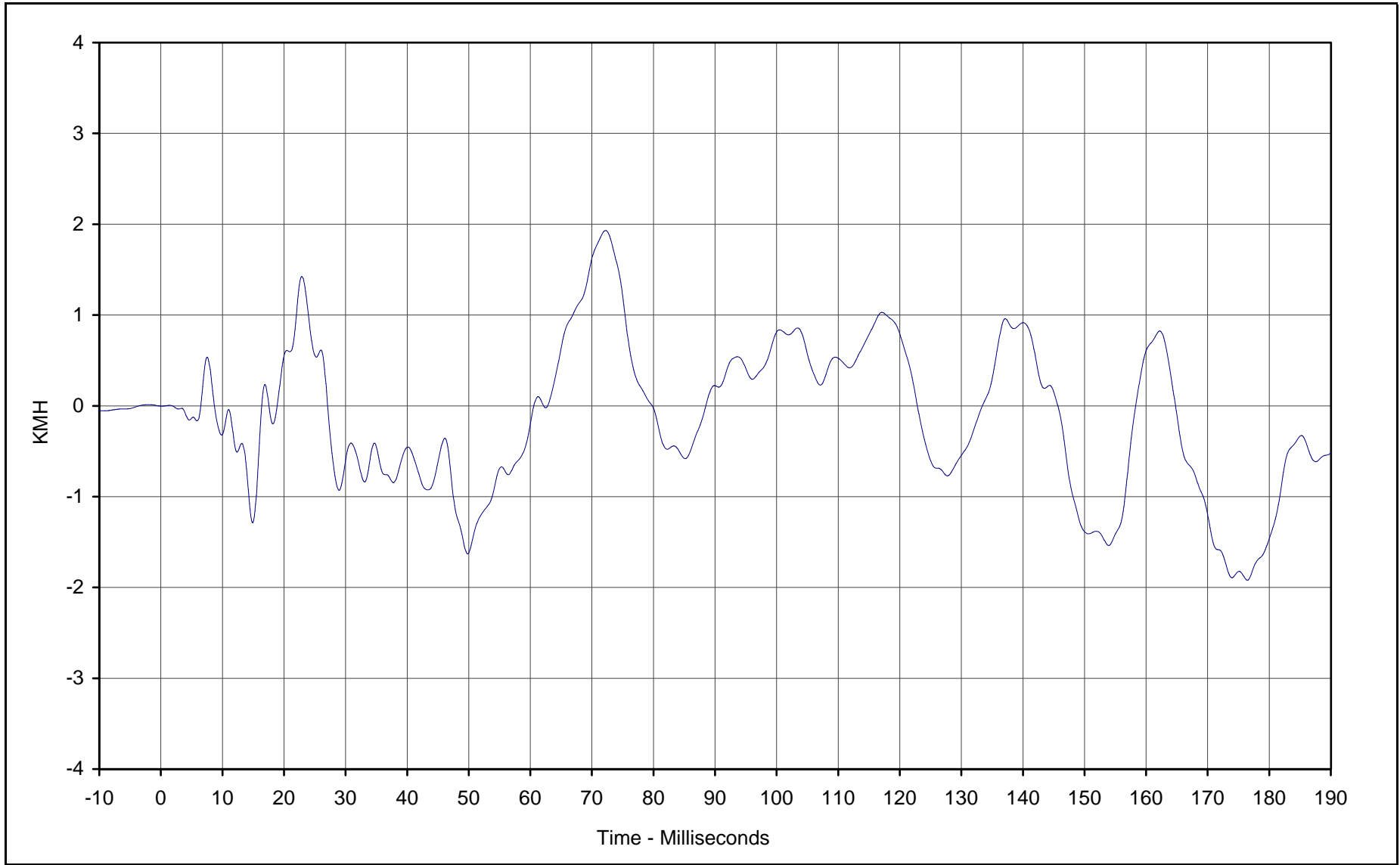
Curve Description: MDB CG Z
Maximum Value: 13.1 at 157.6 Milliseconds
Minimum Value: -11.4 at 26.8 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: FIL-055

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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B-112



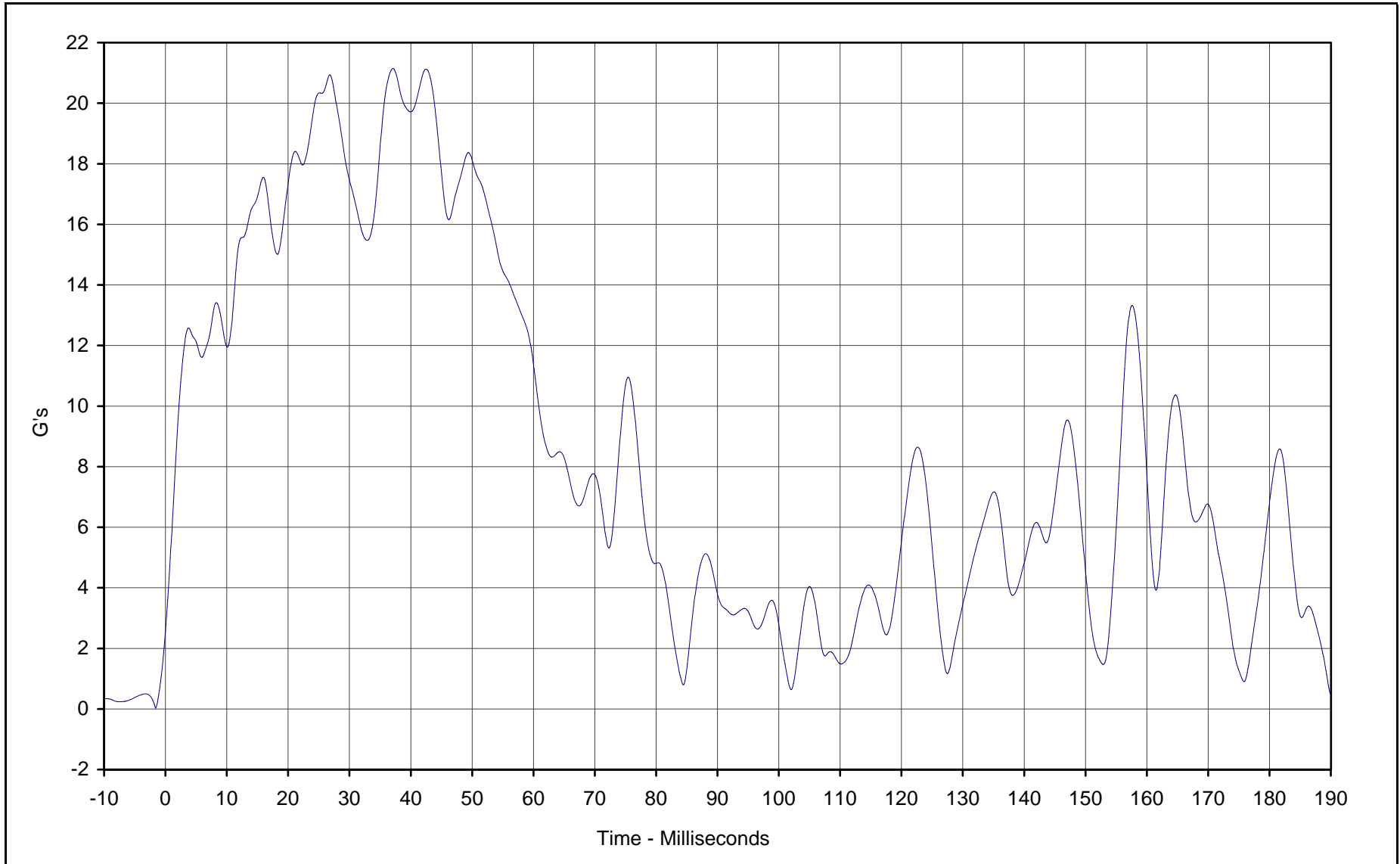
Curve Description: MDB CG Z Velocity
Maximum Value: 1.9 at 72.2 Milliseconds
Minimum Value: -1.9 at 176.4 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: IN1-055

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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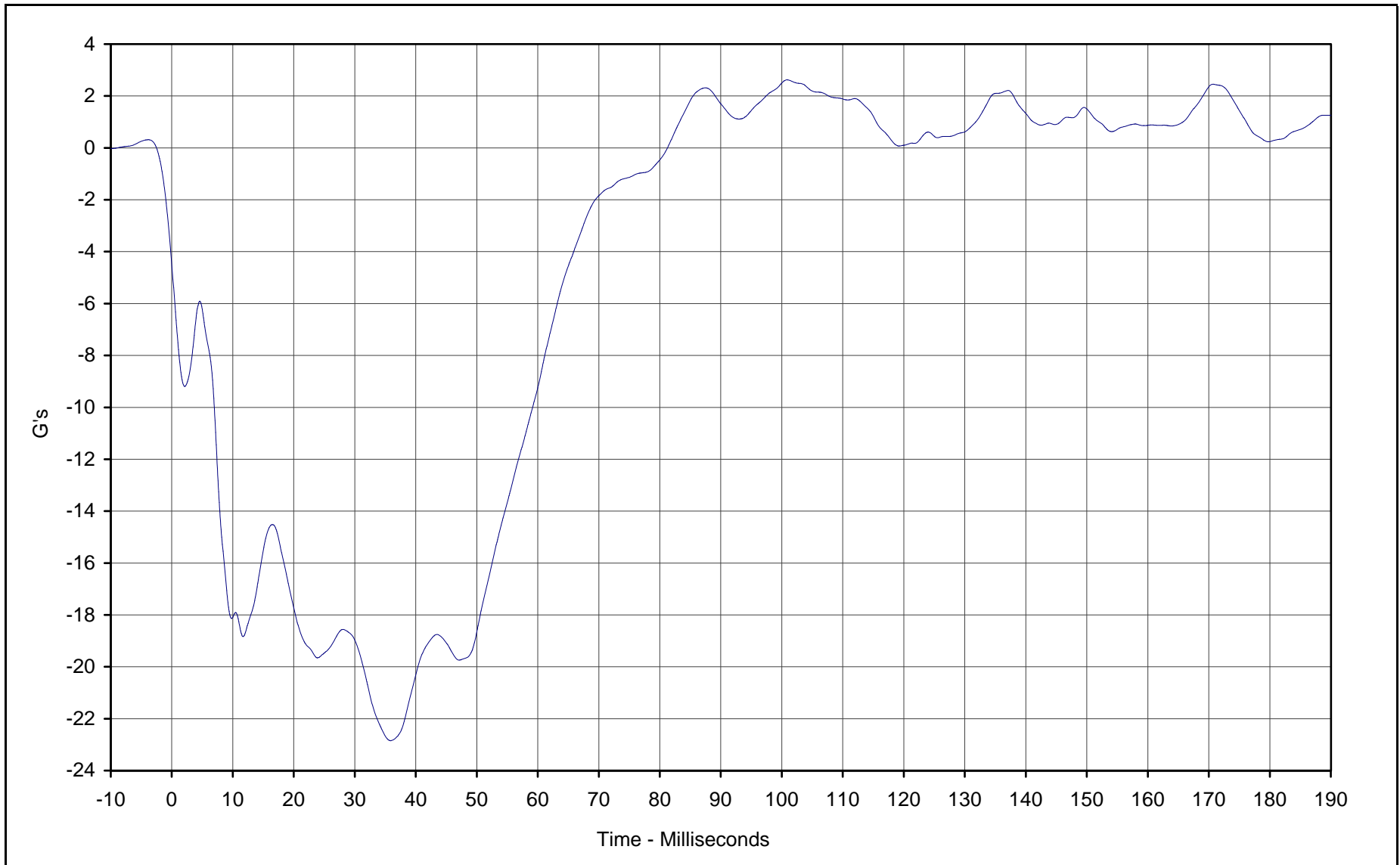
Curve Description: MDB CG Resultant
Maximum Value: 21.1 at 37.1 Milliseconds
Minimum Value: 0.5 at 189.9 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: RES-053

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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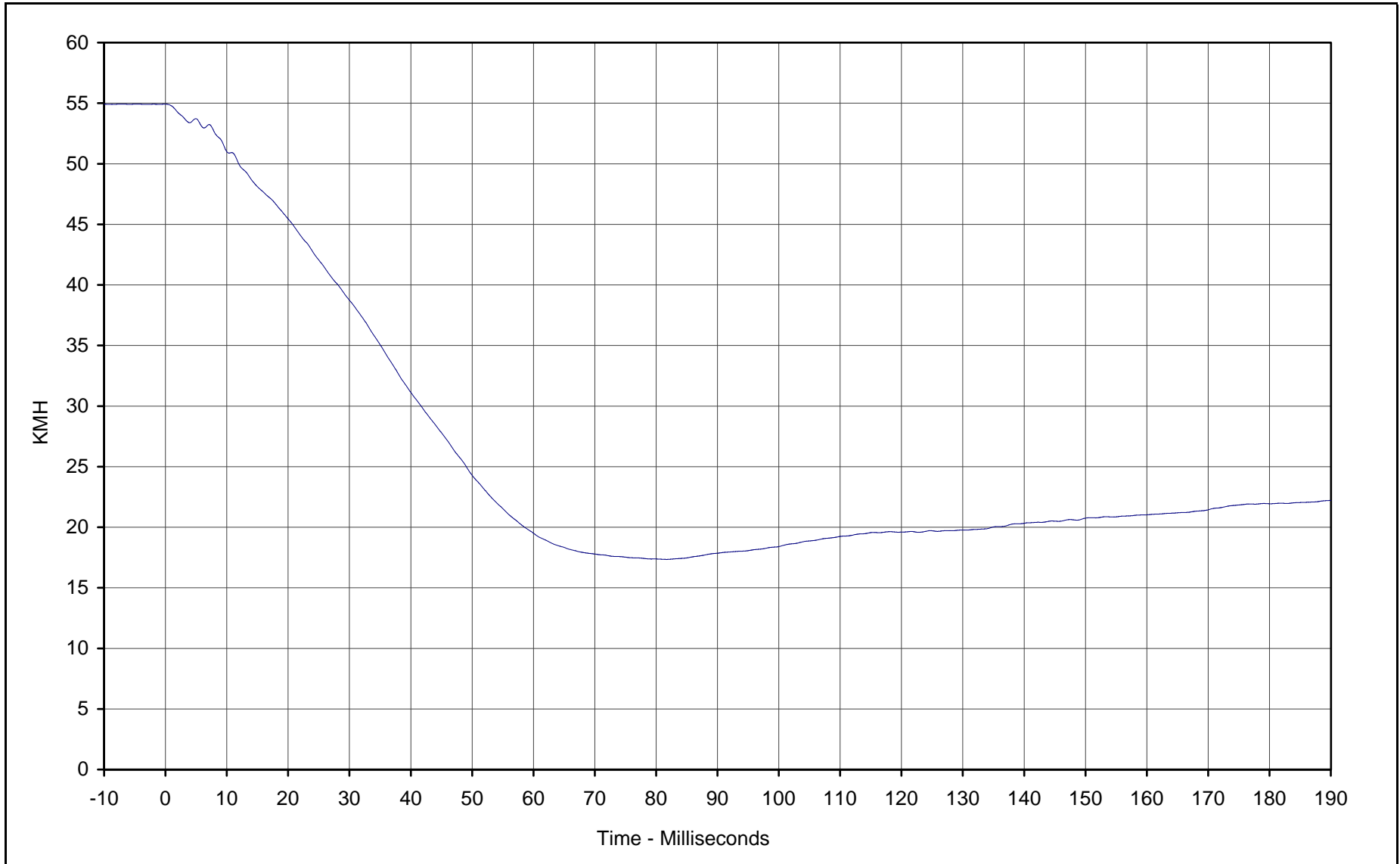
Curve Description: MDB Rear X
Maximum Value: 2.6 at 100.9 Milliseconds
Minimum Value: -22.8 at 35.9 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: FIL-056

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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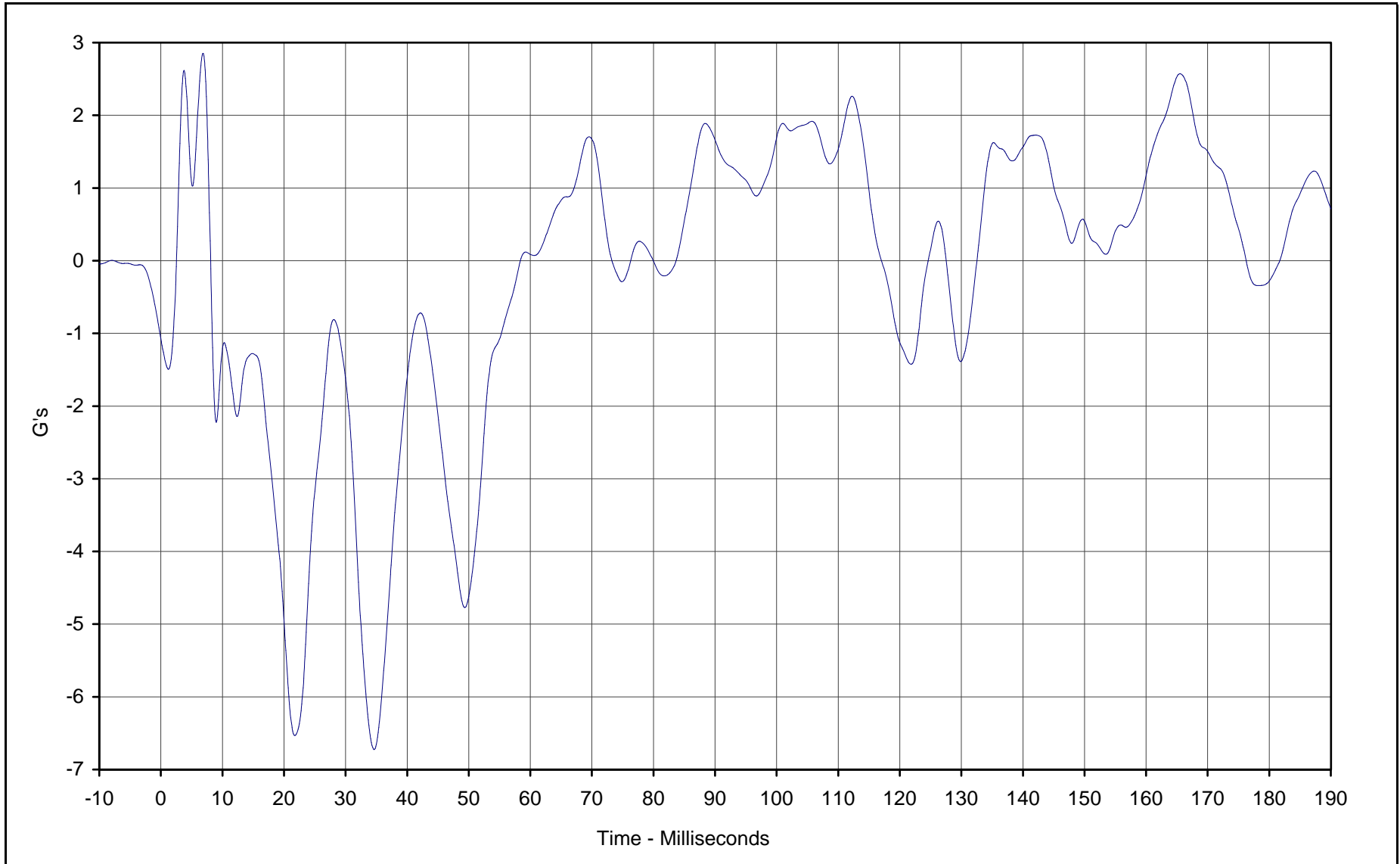
Curve Description: MDB Rear X Velocity
Maximum Value: 54.9 at 0.0 Milliseconds
Minimum Value: 17.3 at 81.7 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: IN1-056

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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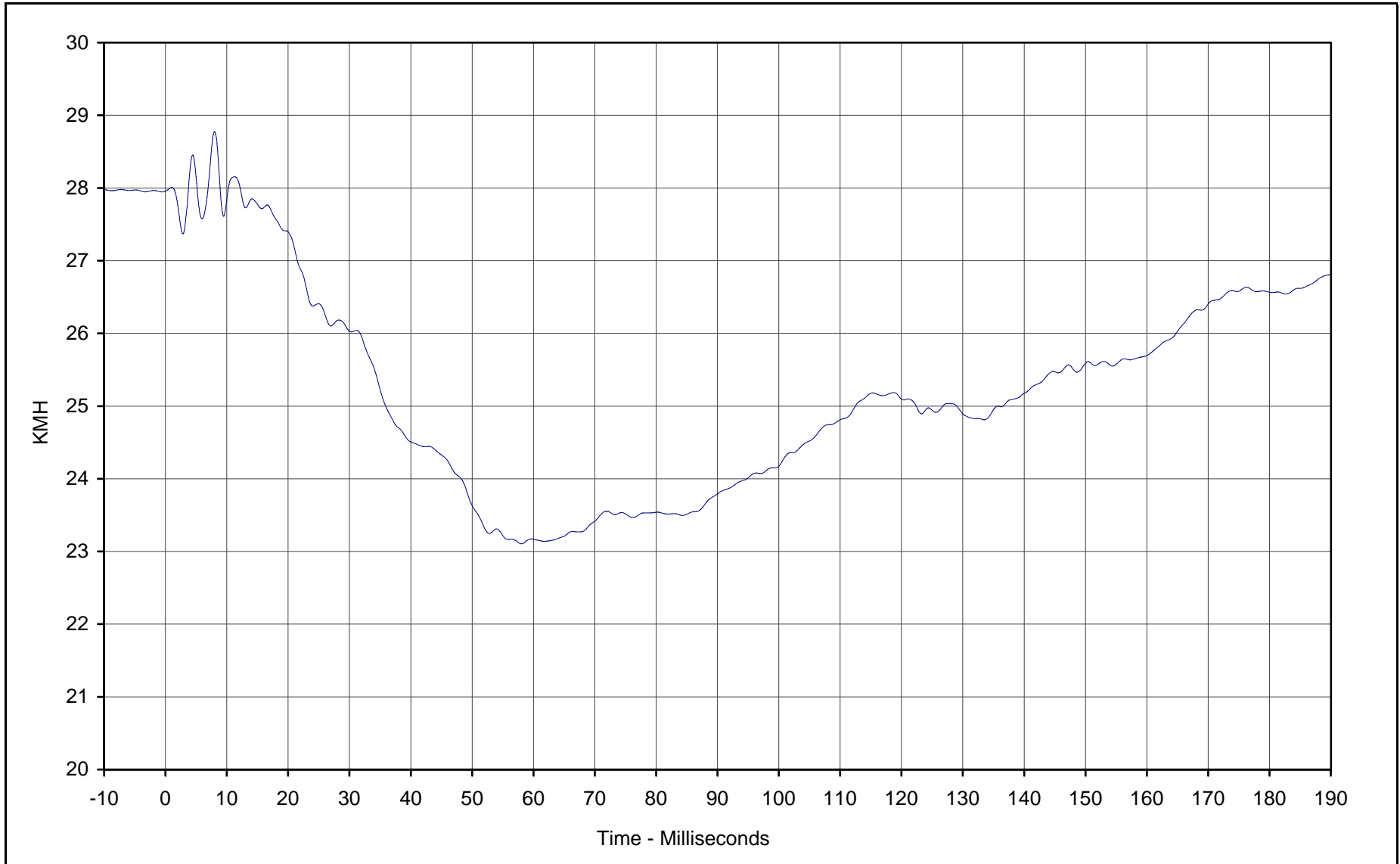
Curve Description: MDB Rear Y
Maximum Value: 2.9 at 6.9 Milliseconds
Minimum Value: -6.7 at 34.6 Milliseconds
SAE Filter Class: 60
Date of Test: 12/14/00
Curve Number: FIL-057

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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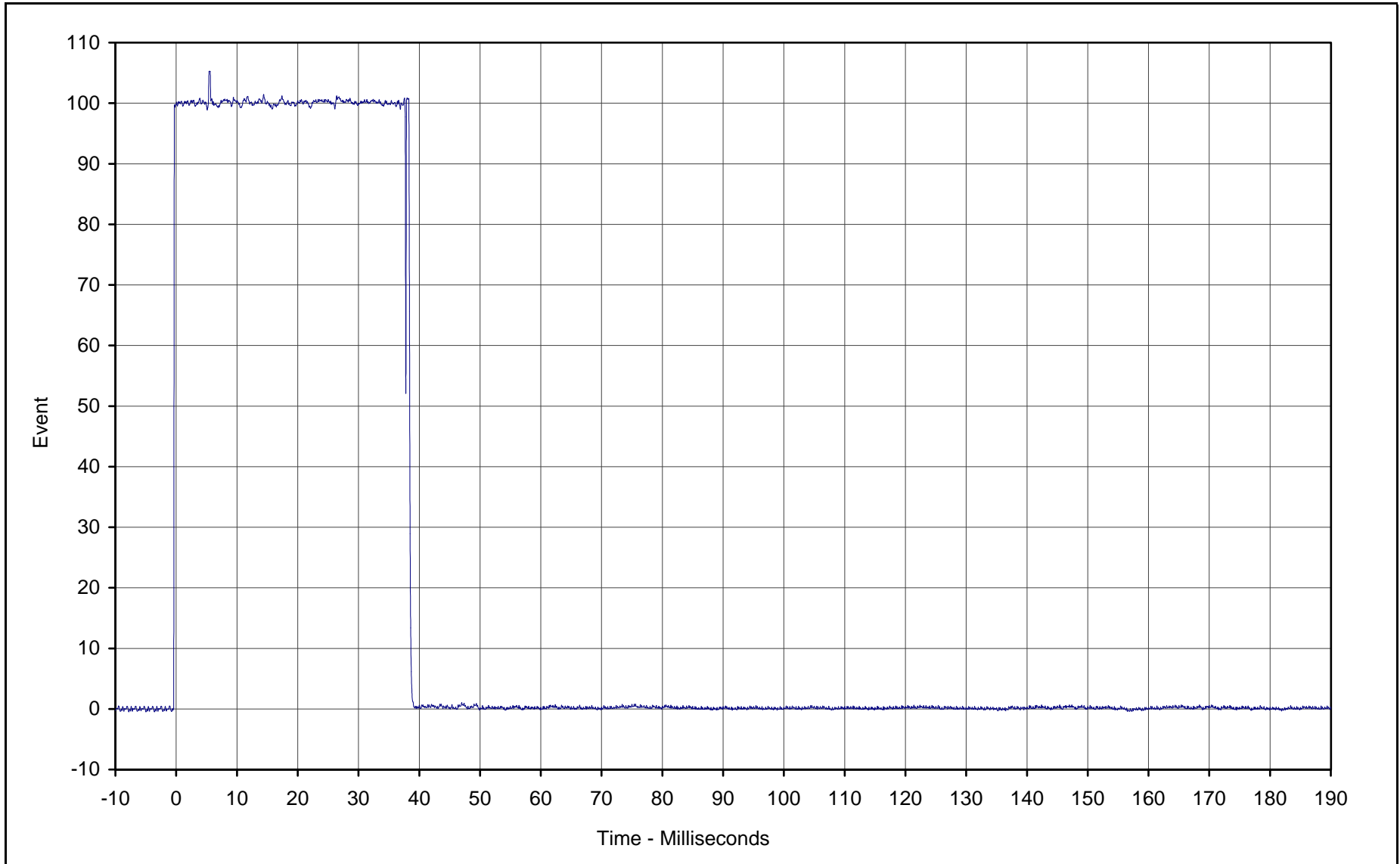
Curve Description: MDB Rear Y Velocity
Maximum Value: 28.8 at 8.0 Milliseconds
Minimum Value: 23.1 at 58.1 Milliseconds
SAE Filter Class: 180
Date of Test: 12/14/00
Curve Number: IN1-057

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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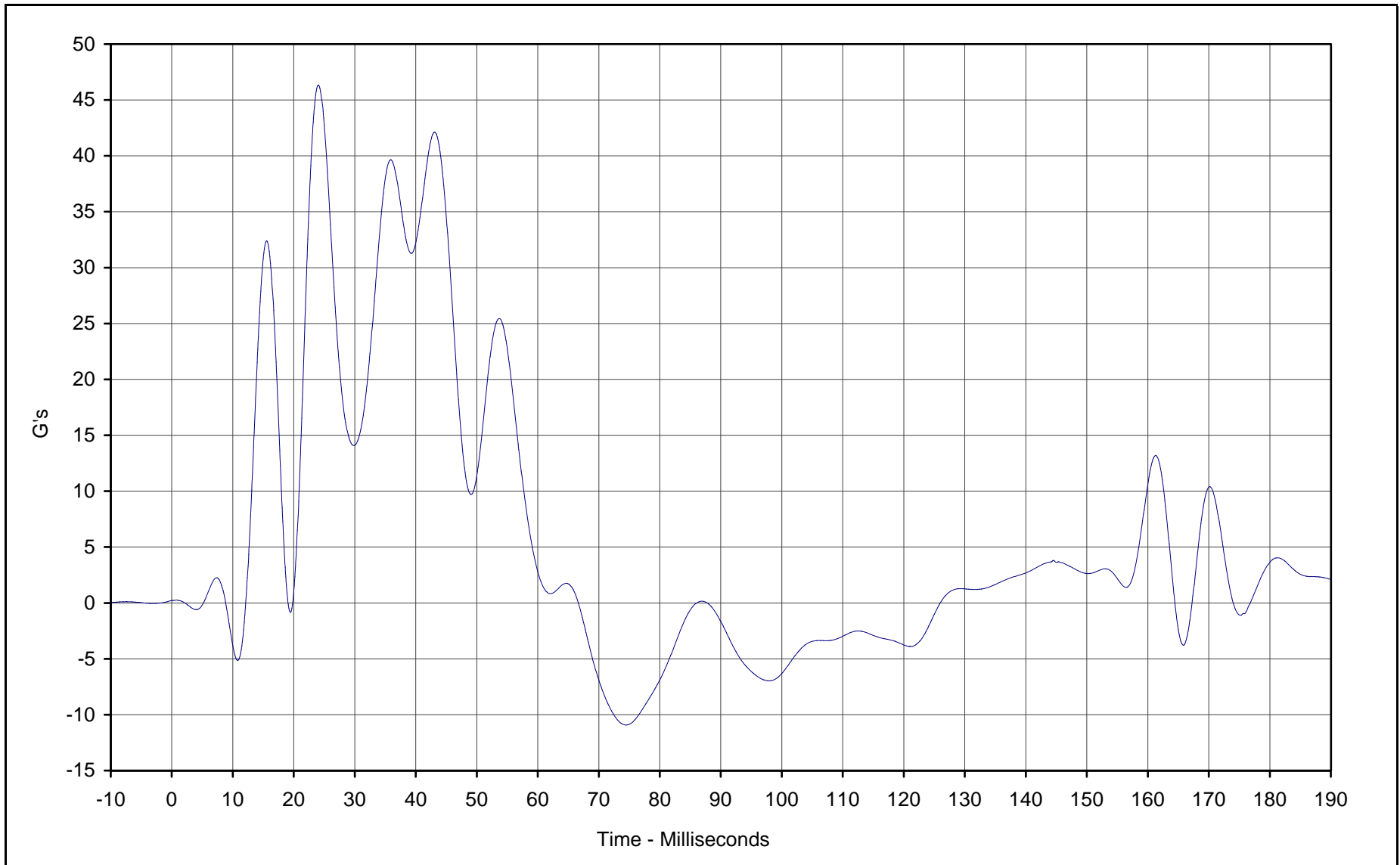
Curve Description: MDB Right Bumper Contact
Maximum Value: 105.2 at 5.4 Milliseconds
Crossing Point: 50% at -0.3 Milliseconds
SAE Filter Class: 1000
Date of Test: 12/14/00
Curve Number: FIL-058

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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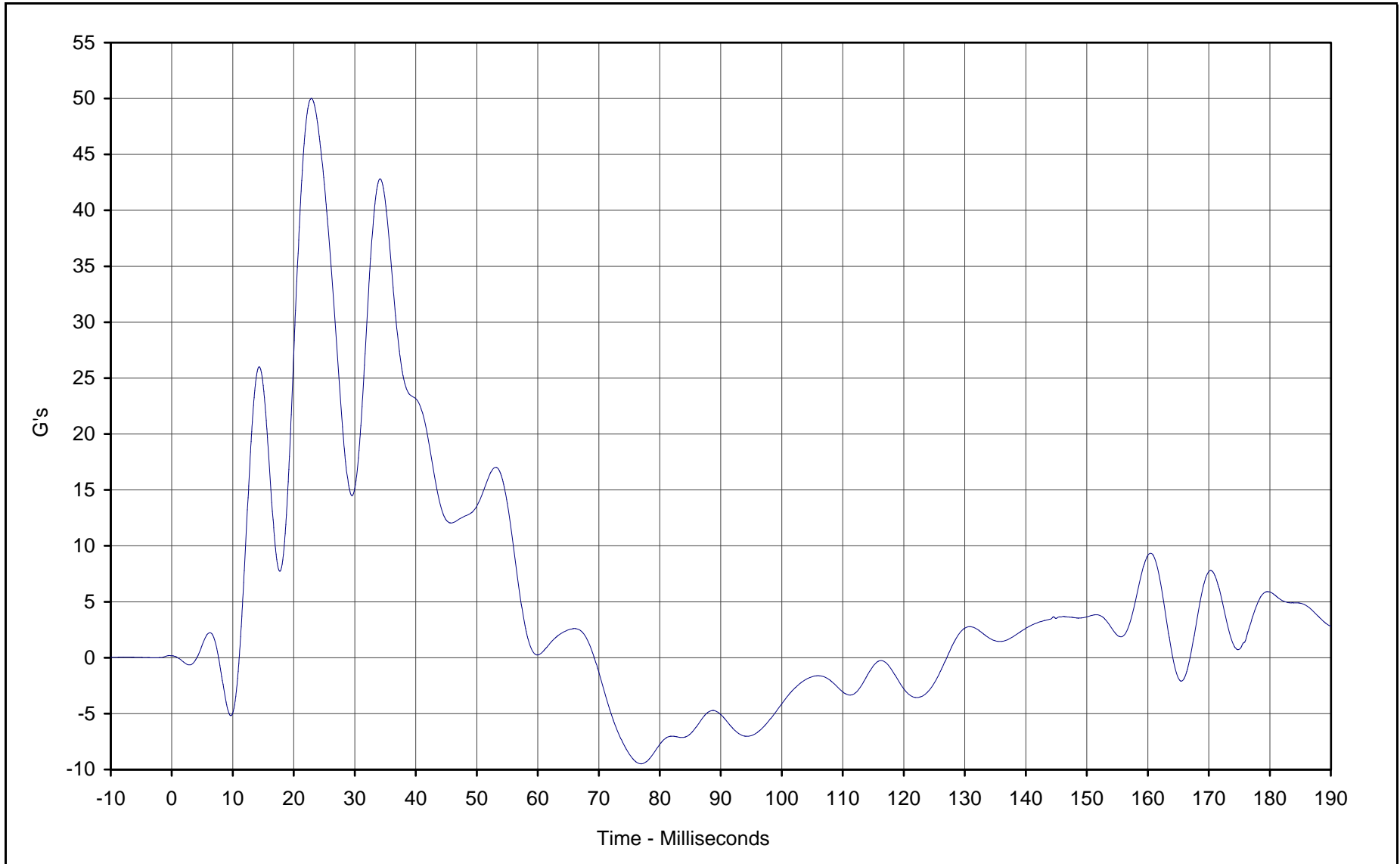
Curve Description: Driver Upper Rib Primary Y
Maximum Value: 46.3 at 24.0 Milliseconds
Minimum Value: -10.9 at 74.5 Milliseconds
SAE Filter Class: FIR 100
Date of Test: 12/14/00
Curve Number: FIR-004

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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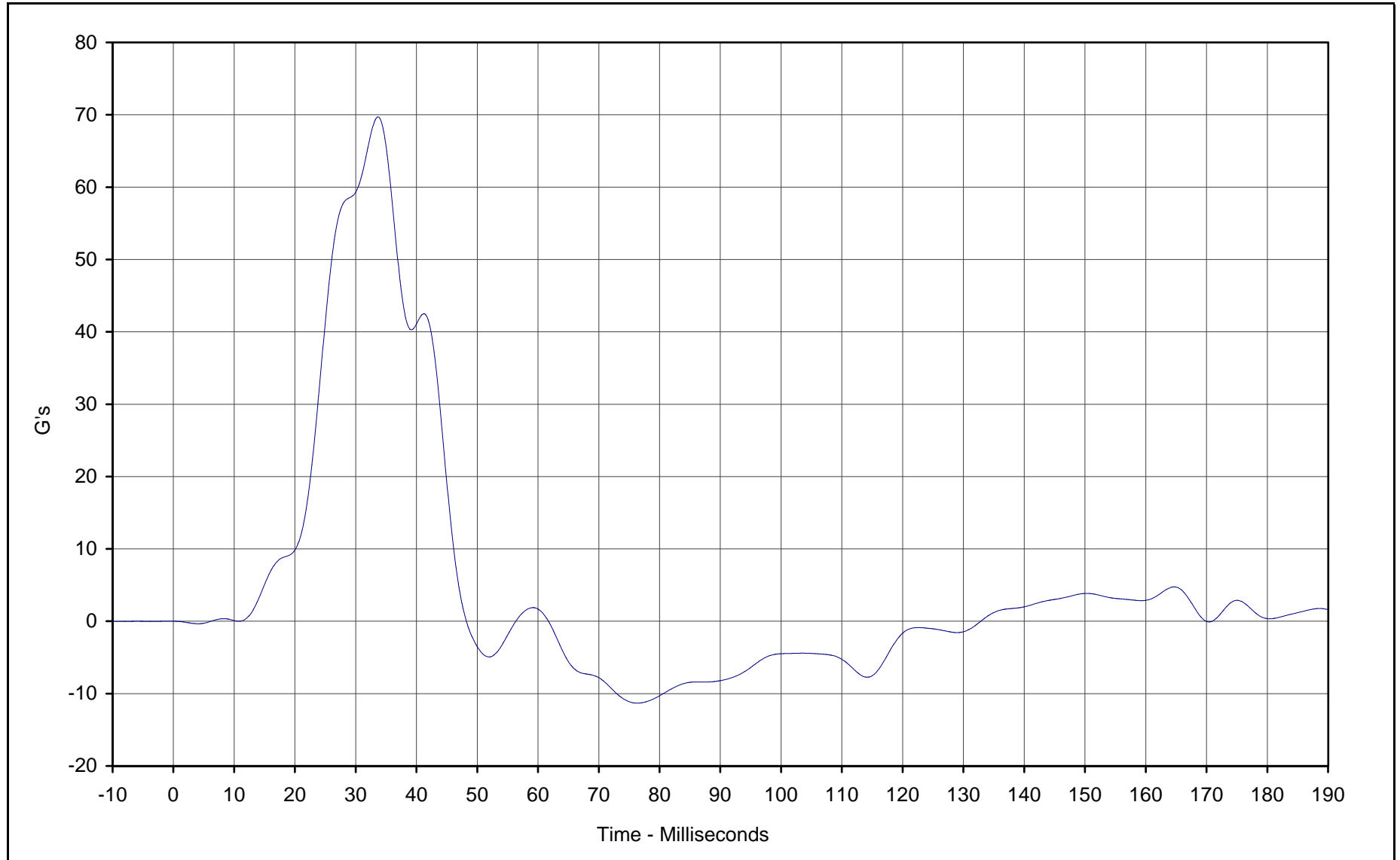


Curve Description: Driver Lower Rib Primary Y
Maximum Value: 50.0 at 22.9 Milliseconds
Minimum Value: -9.5 at 77.0 Milliseconds
SAE Filter Class: FIR 100
Date of Test: 12/14/00
Curve Number: FIR-005

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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Curve Description: Driver Lower Spine Primary Y

Maximum Value: 69.7 at 33.7 Milliseconds

Minimum Value: -11.3 at 76.4 Milliseconds

SAE Filter Class: FIR 100

Date of Test: 12/14/00

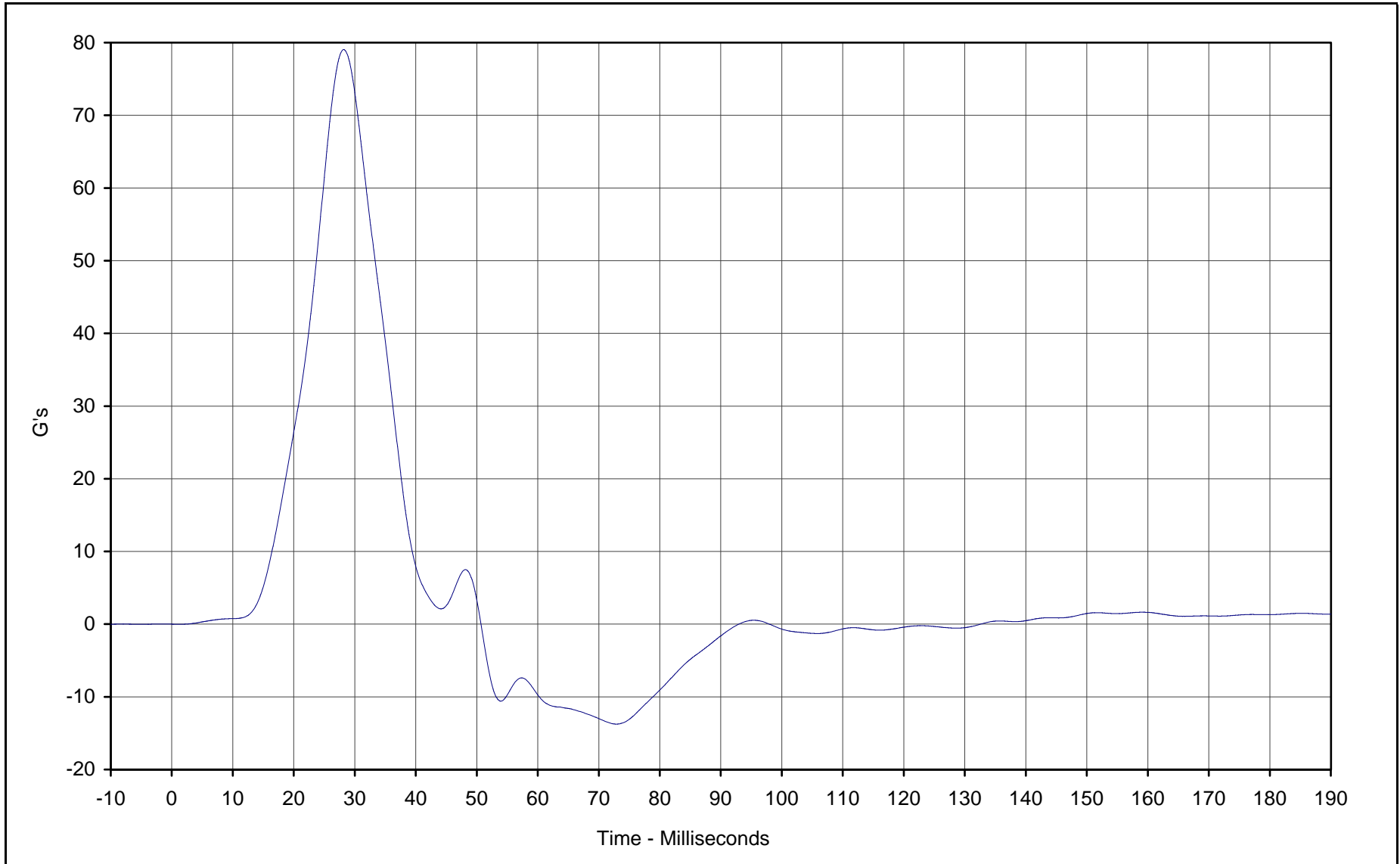
Curve Number: FIR-006

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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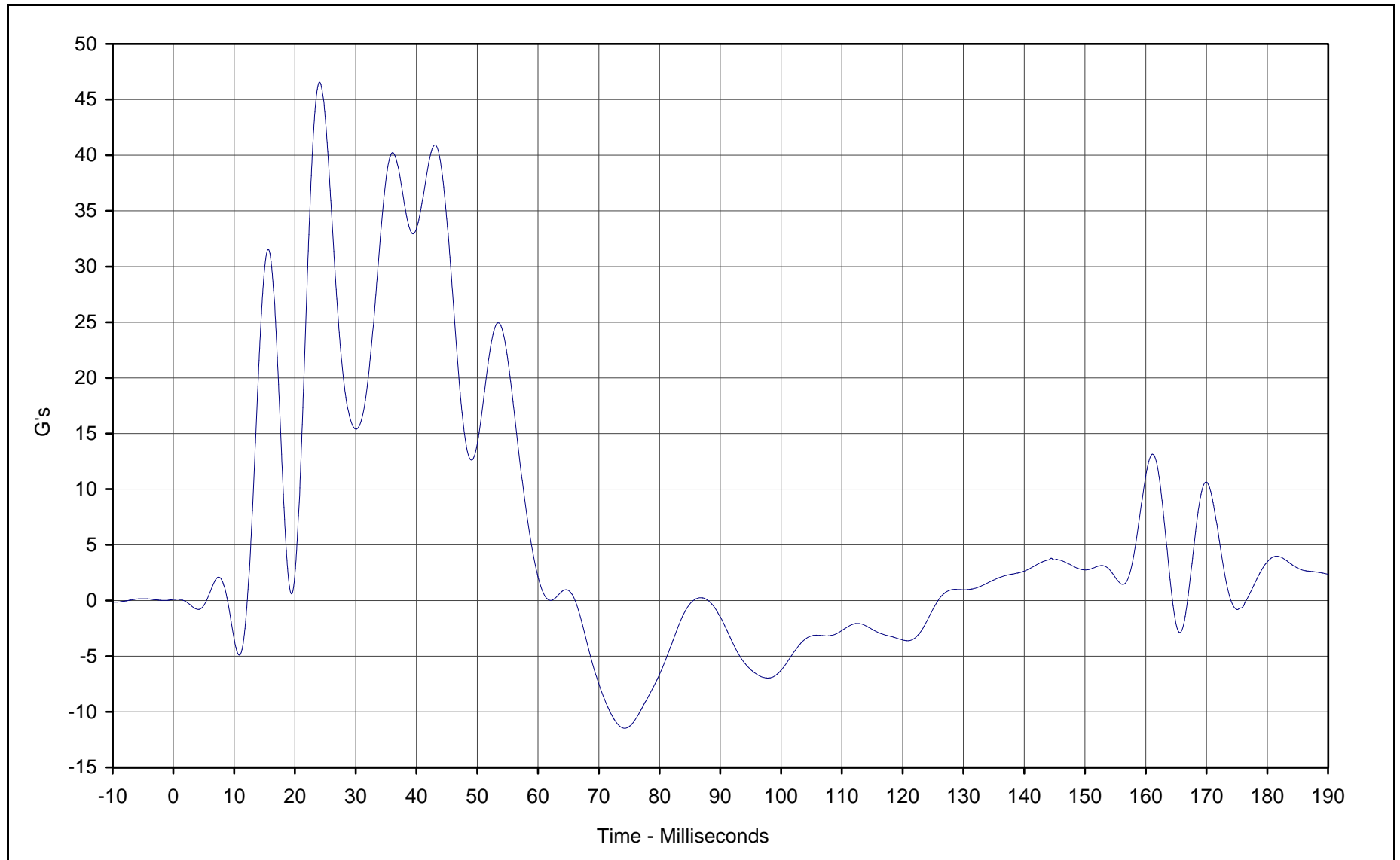


Curve Description: Driver Pelvis Primary Y
Maximum Value: 79.0 at 28.2 Milliseconds
Minimum Value: -13.7 at 72.9 Milliseconds
SAE Filter Class: FIR 100
Date of Test: 12/14/00
Curve Number: FIR-007

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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Curve Description: Driver Upper Rib Redundant Y

Maximum Value: 46.5 at 24.1 Milliseconds

Minimum Value: -11.5 at 74.2 Milliseconds

SAE Filter Class: FIR 100

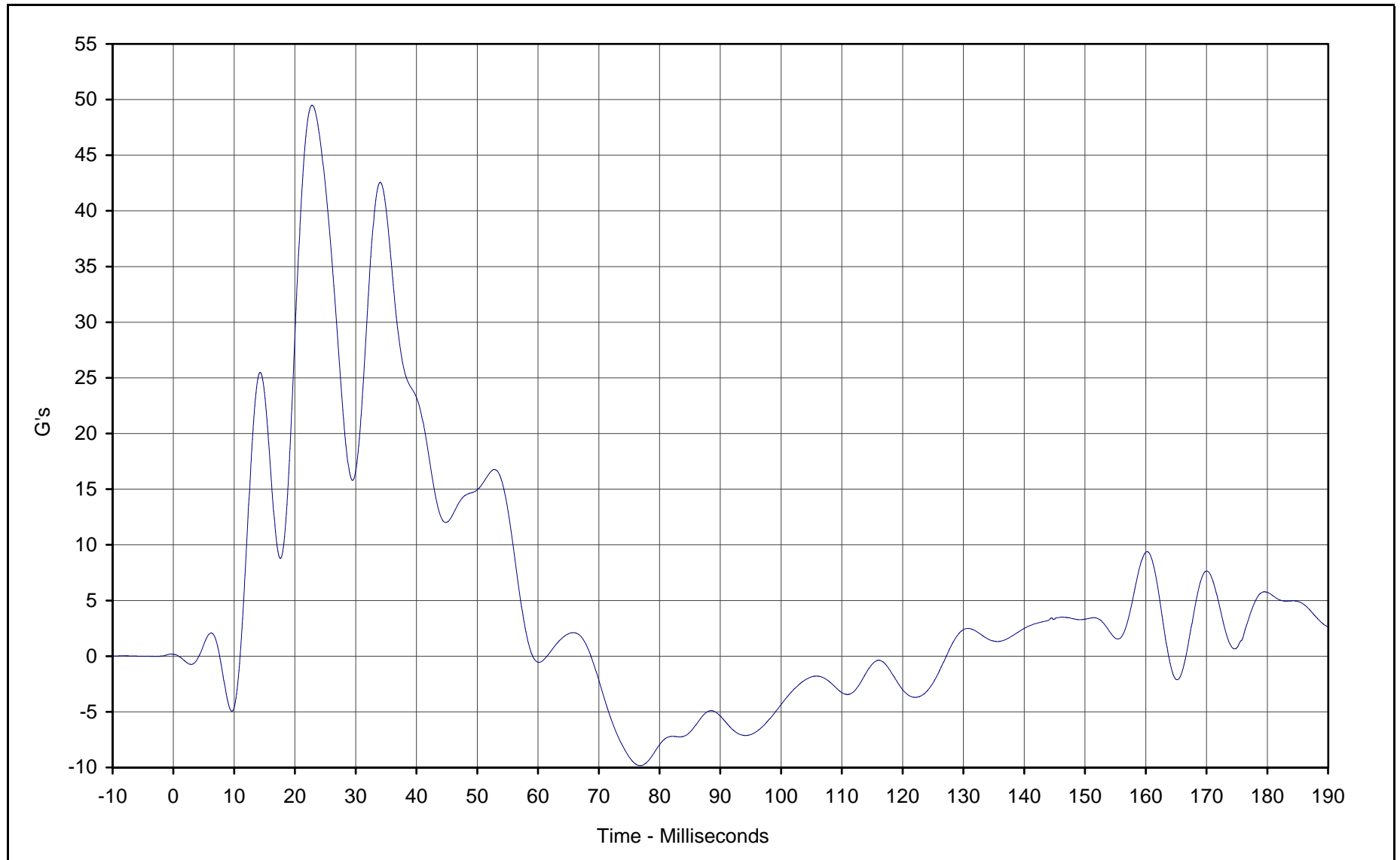
Date of Test: 12/14/00

Curve Number: FIR-008

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan

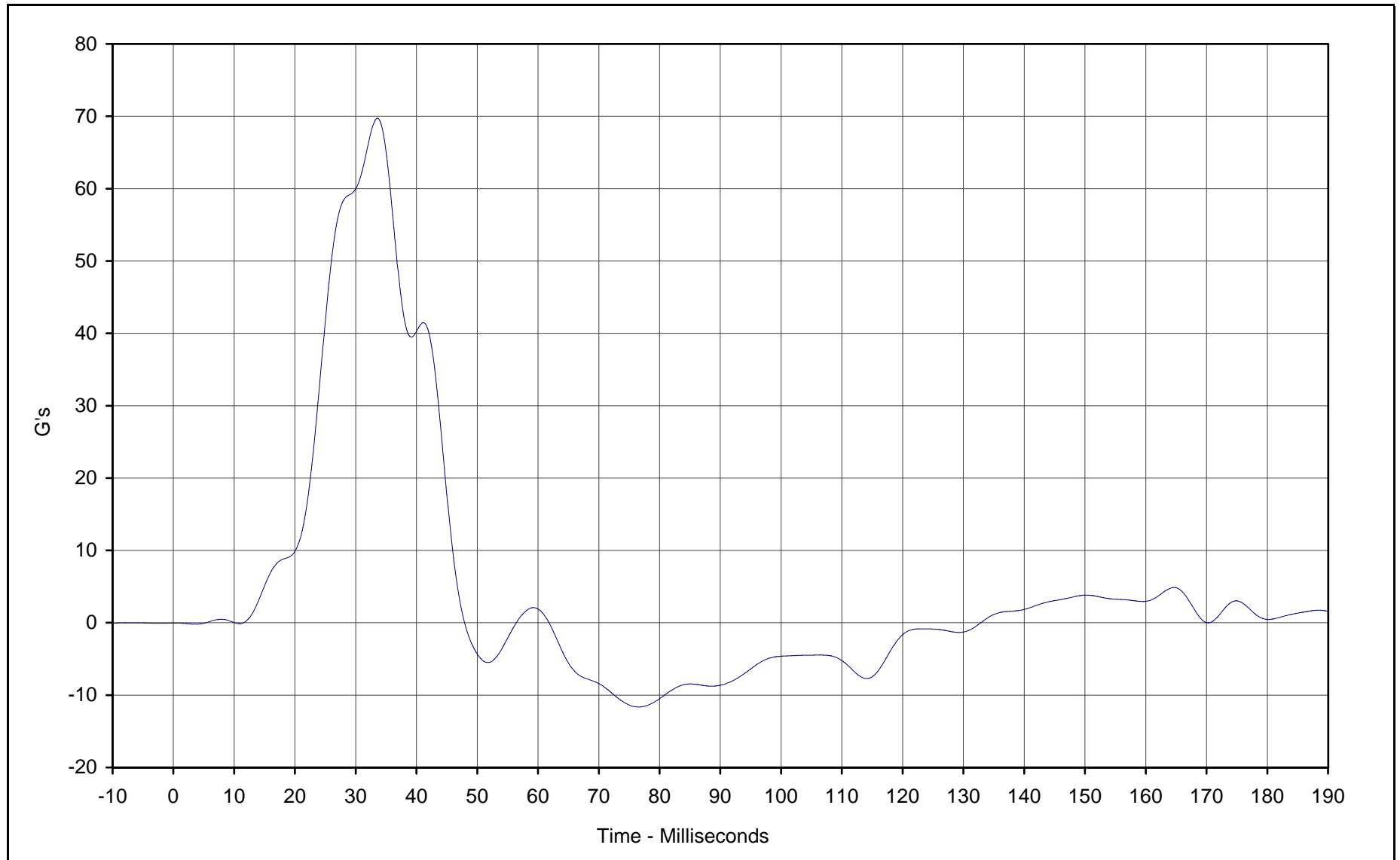




Curve Description: Driver Lower Rib Redundant Y
 Maximum Value: 49.5 at 22.8 Milliseconds
 Minimum Value: -9.8 at 76.8 Milliseconds
 SAE Filter Class: FIR 100
 Date of Test: 12/14/00
 Curve Number: FIR-009

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
 Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan





Curve Description: Driver Lower Spine Redundant Y

Maximum Value: 69.7 at 33.6 Milliseconds

Minimum Value: -11.6 at 76.6 Milliseconds

SAE Filter Class: FIR 100

Date of Test: 12/14/00

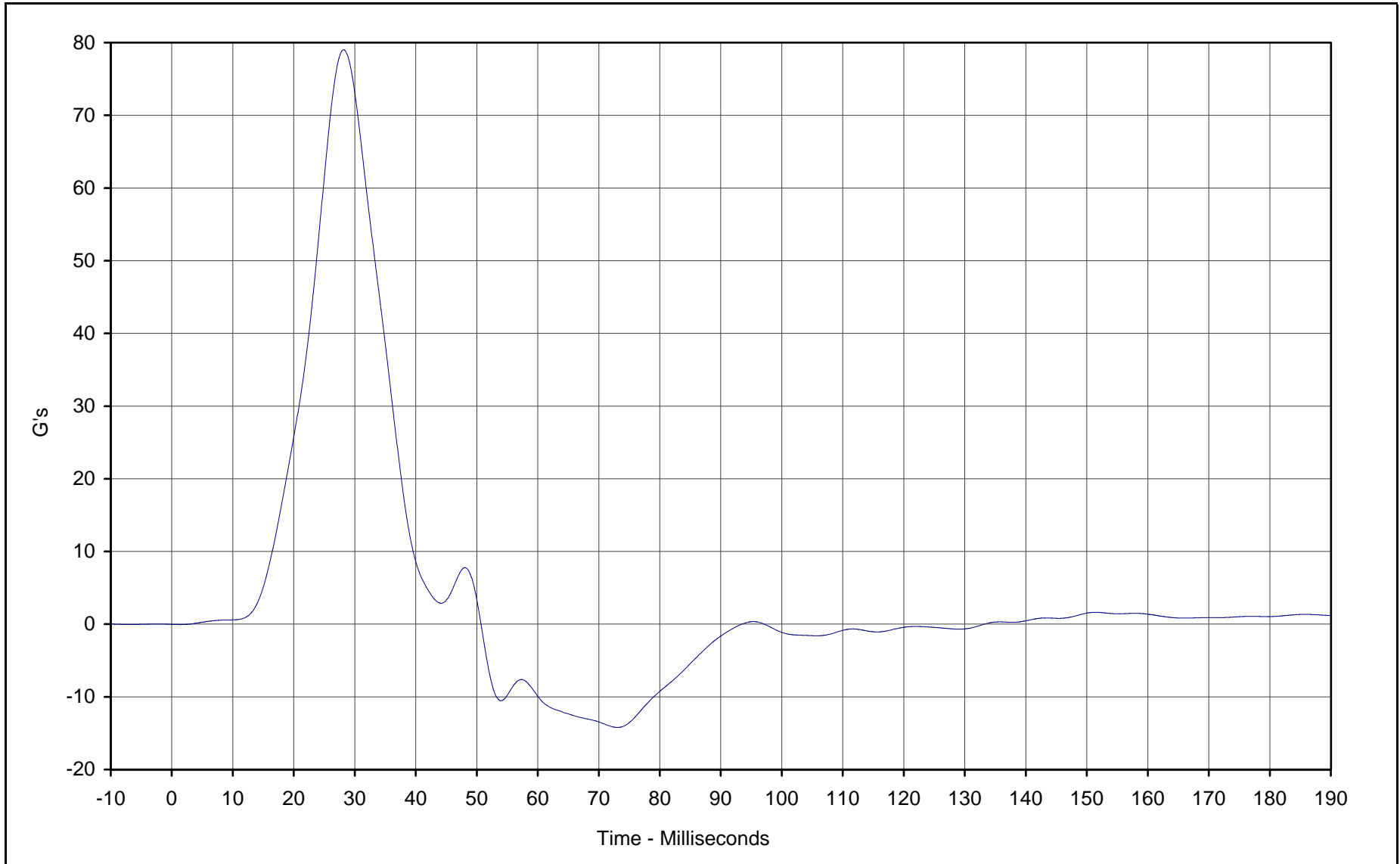
Curve Number: FIR-010

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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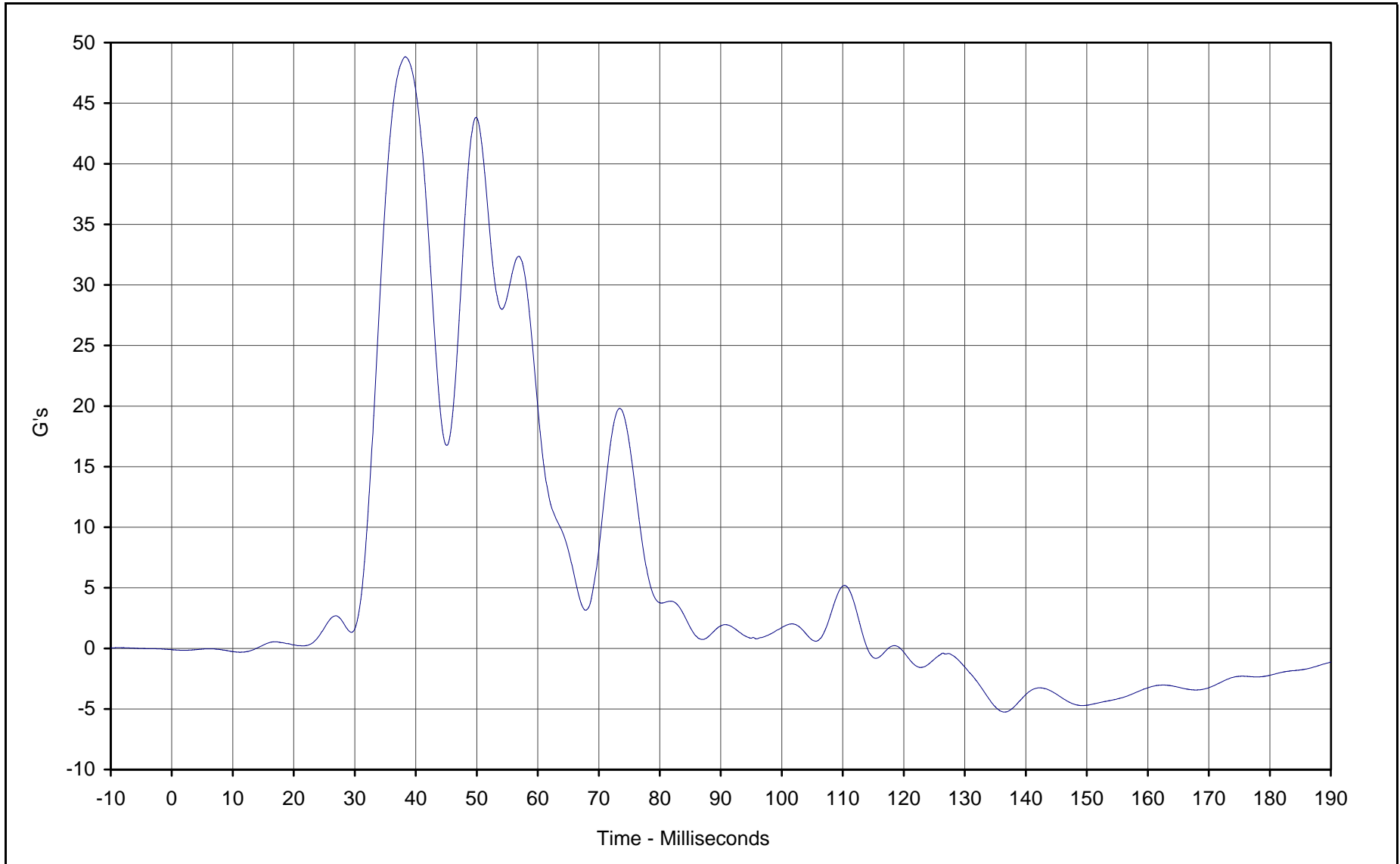
Curve Description: Driver Pelvis Redundant Y
Maximum Value: 79.0 at 28.2 Milliseconds
Minimum Value: -14.2 at 73.0 Milliseconds
SAE Filter Class: FIR 100
Date of Test: 12/14/00
Curve Number: FIR-011

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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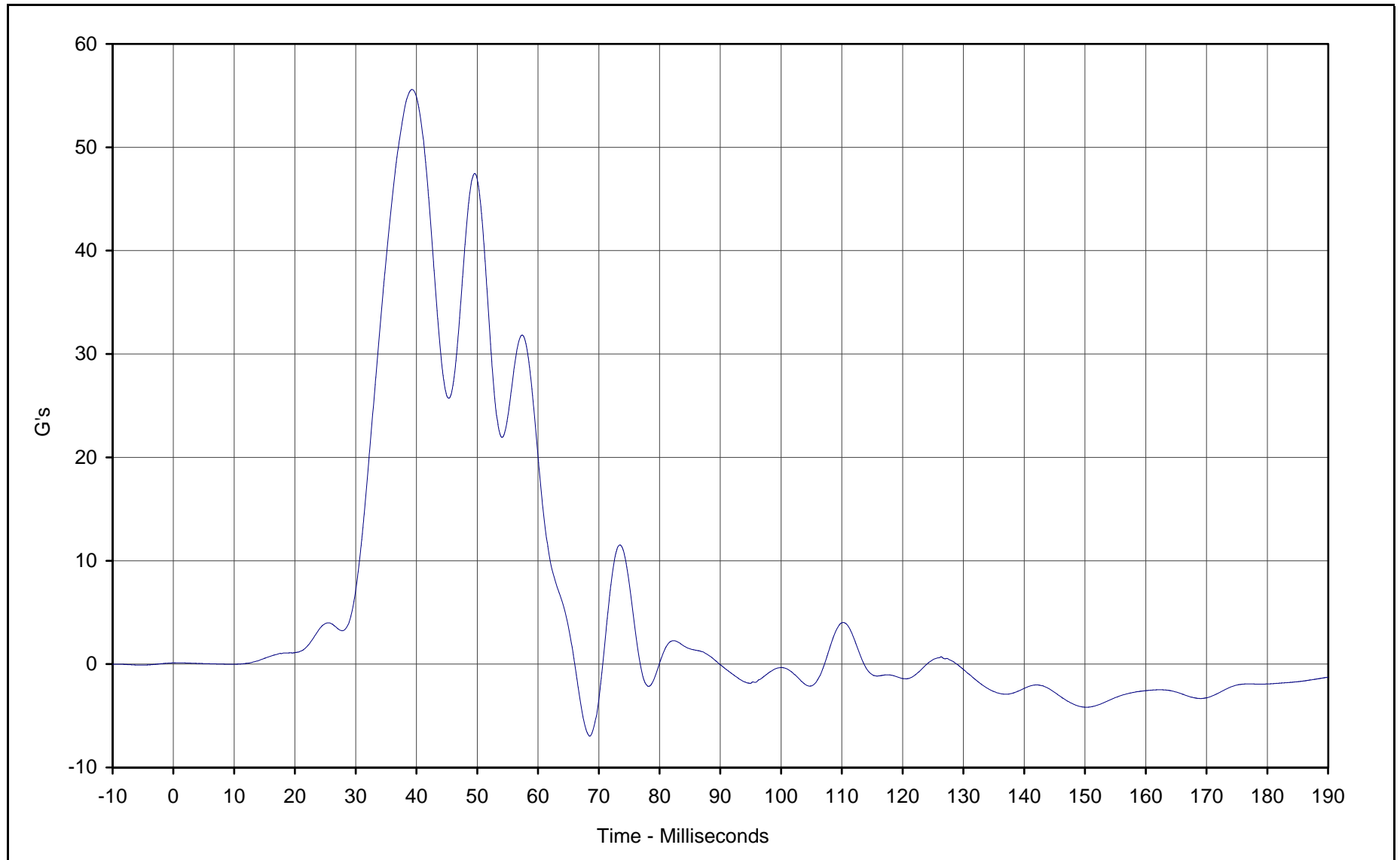


Curve Description: Pass. Upper Rib Primary Y
Maximum Value: 48.8 at 38.3 Milliseconds
Minimum Value: -5.3 at 136.5 Milliseconds
SAE Filter Class: FIR 100
Date of Test: 12/14/00
Curve Number: FIR-017

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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Curve Description: Pass. Lower Rib Primary Y

Maximum Value: 55.6 at 39.3 Milliseconds

Minimum Value: -7.0 at 68.5 Milliseconds

SAE Filter Class: FIR 100

Date of Test: 12/14/00

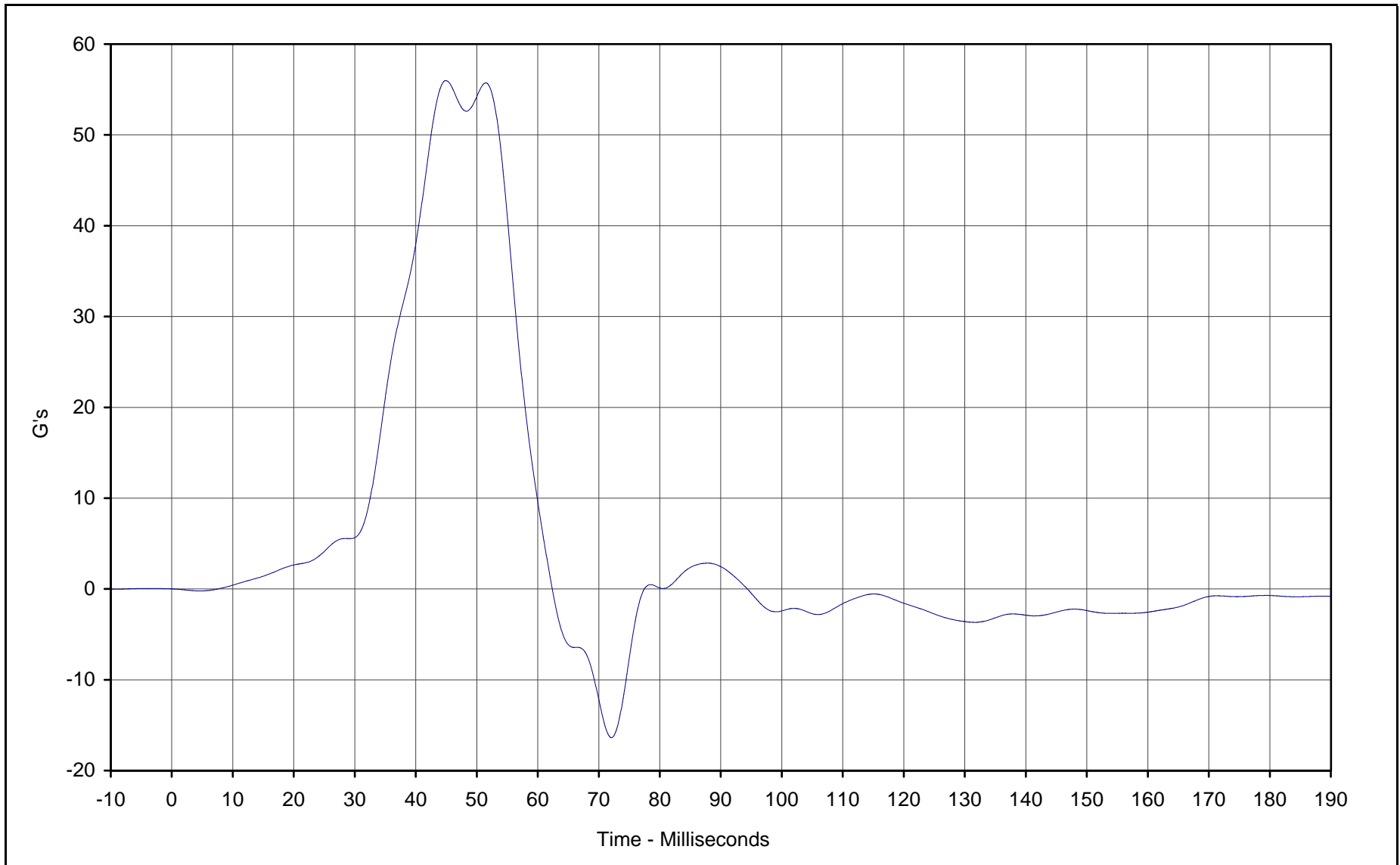
Curve Number: FIR-018

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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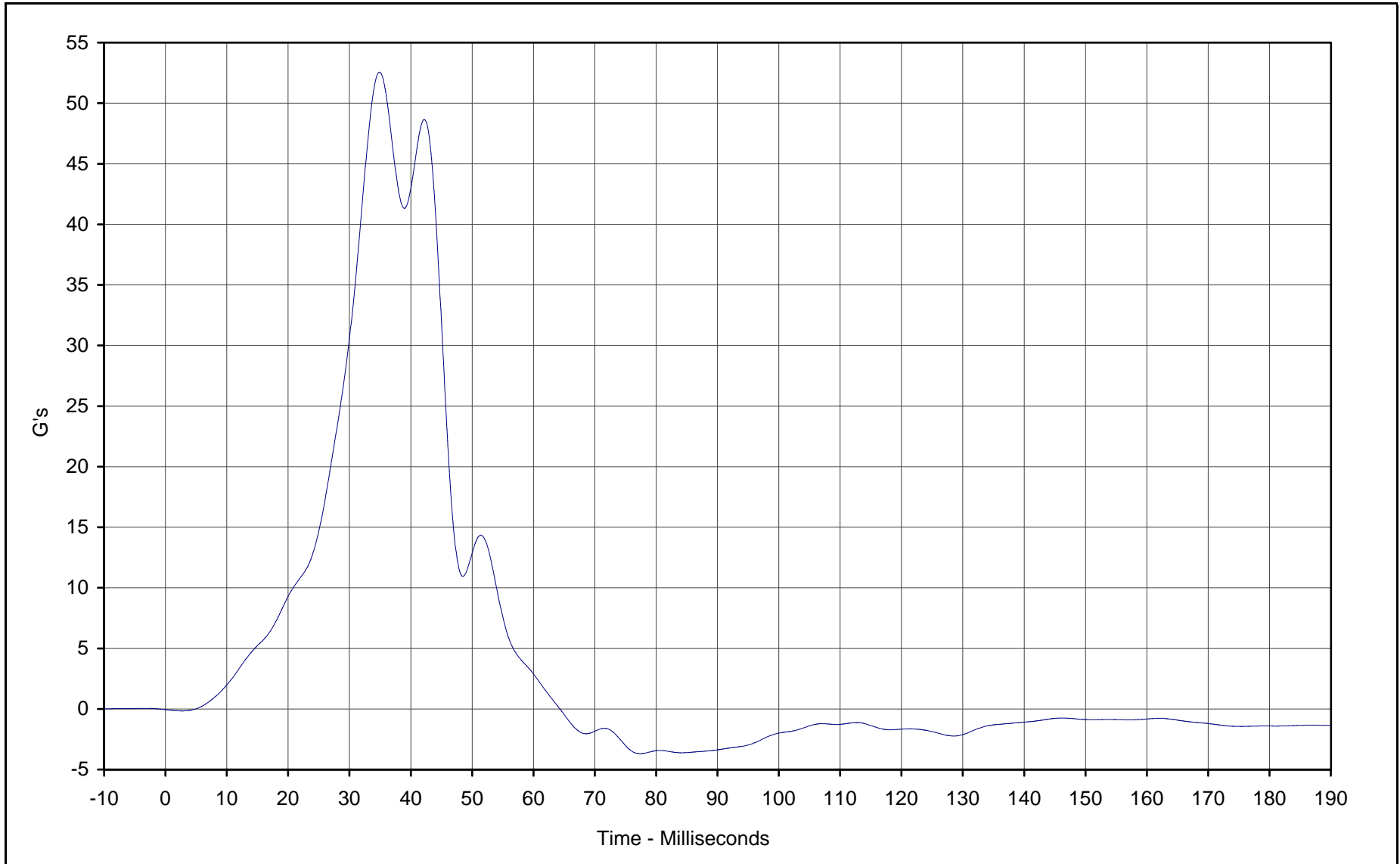
Curve Description: Pass. Lower Spine Primary Y
Maximum Value: 56.0 at 44.9 Milliseconds
Minimum Value: -16.4 at 72.1 Milliseconds
SAE Filter Class: FIR 100
Date of Test: 12/14/00
Curve Number: FIR-019

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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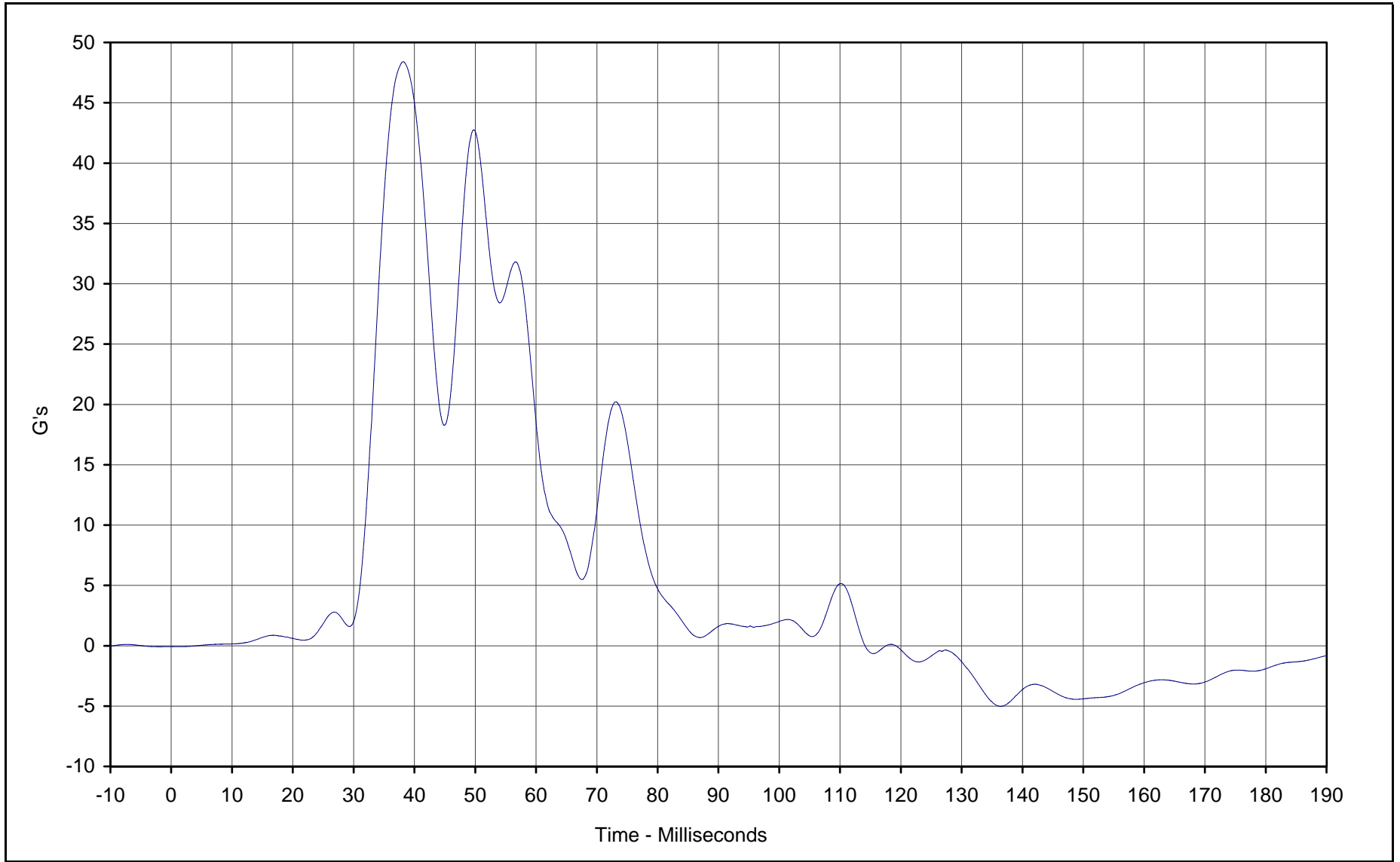
Curve Description: Pass. Pelvis Primary Y
Maximum Value: 52.6 at 34.9 Milliseconds
Minimum Value: -3.7 at 77.3 Milliseconds
SAE Filter Class: FIR 100
Date of Test: 12/14/00
Curve Number: FIR-020

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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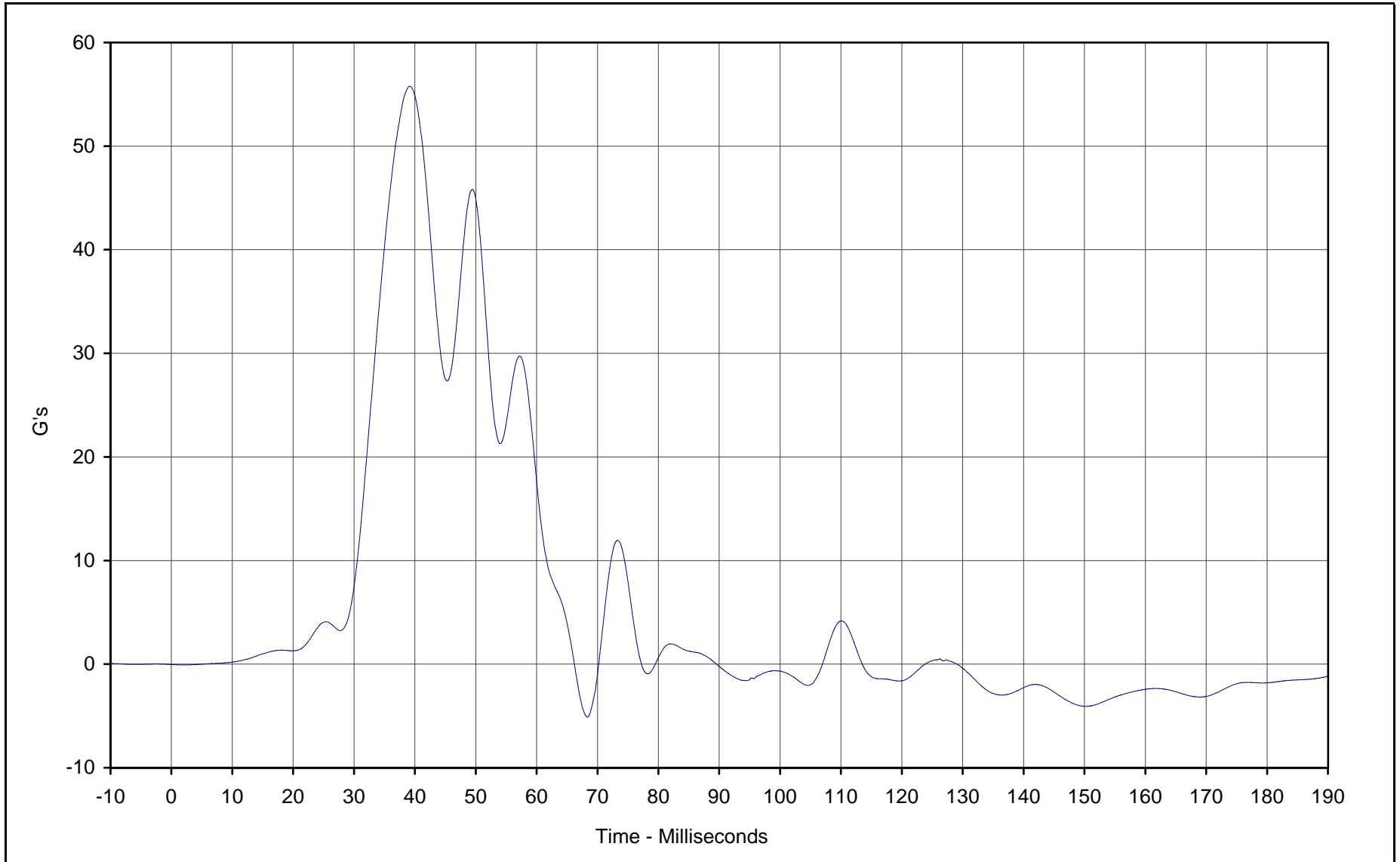


Curve Description: Pass. Upper Rib Redundant Y
Maximum Value: 48.4 at 38.1 Milliseconds
Minimum Value: -5.0 at 136.4 Milliseconds
SAE Filter Class: FIR 100
Date of Test: 12/14/00
Curve Number: FIR-021

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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Curve Description: Pass. Lower Rib Redundant Y

Maximum Value: 55.8 at 39.2 Milliseconds

Minimum Value: -5.1 at 68.4 Milliseconds

SAE Filter Class: FIR 100

Date of Test: 12/14/00

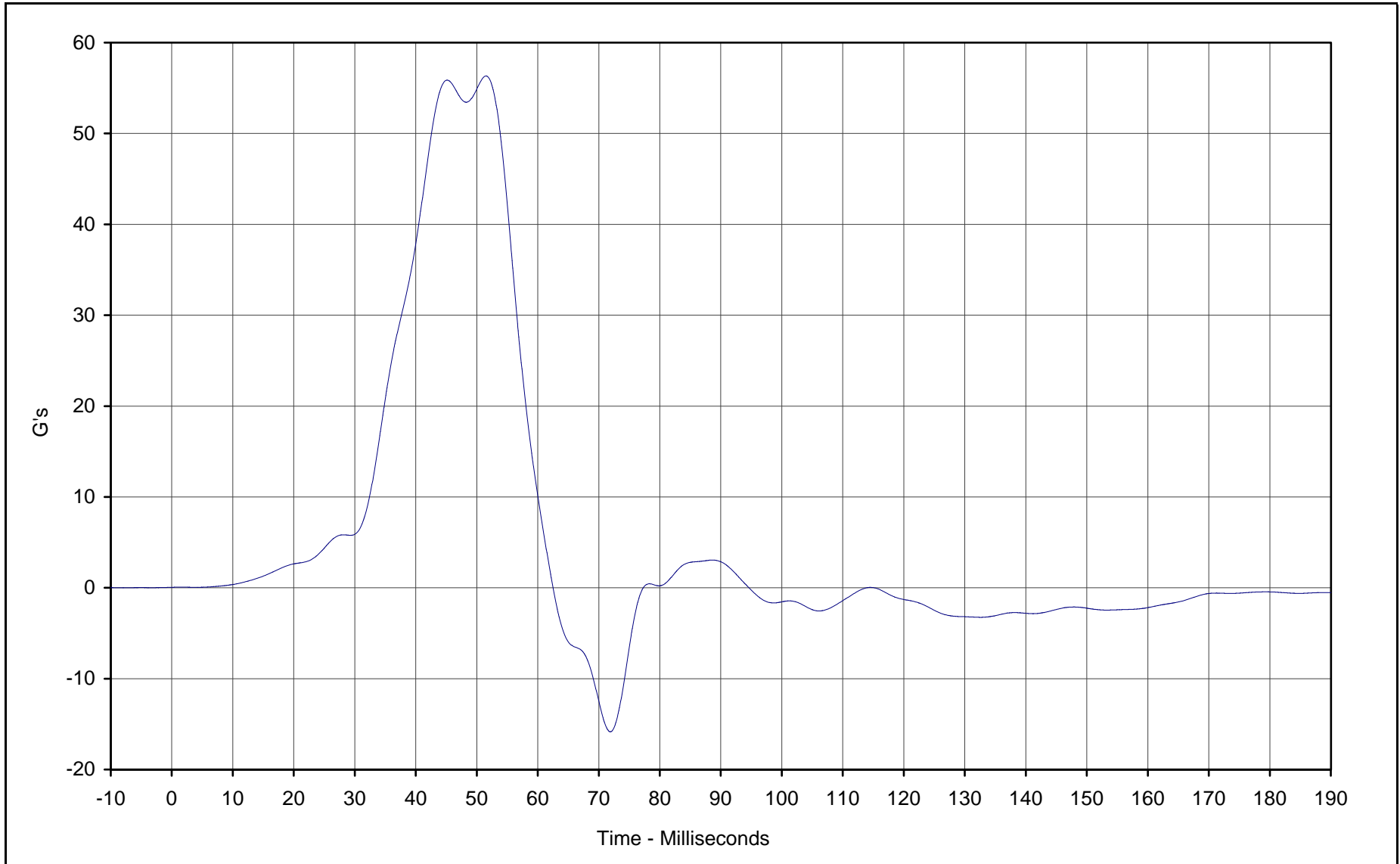
Curve Number: FIR-022

Test Program: 55/28 km/h Side Impact NCAP No.: M15301

Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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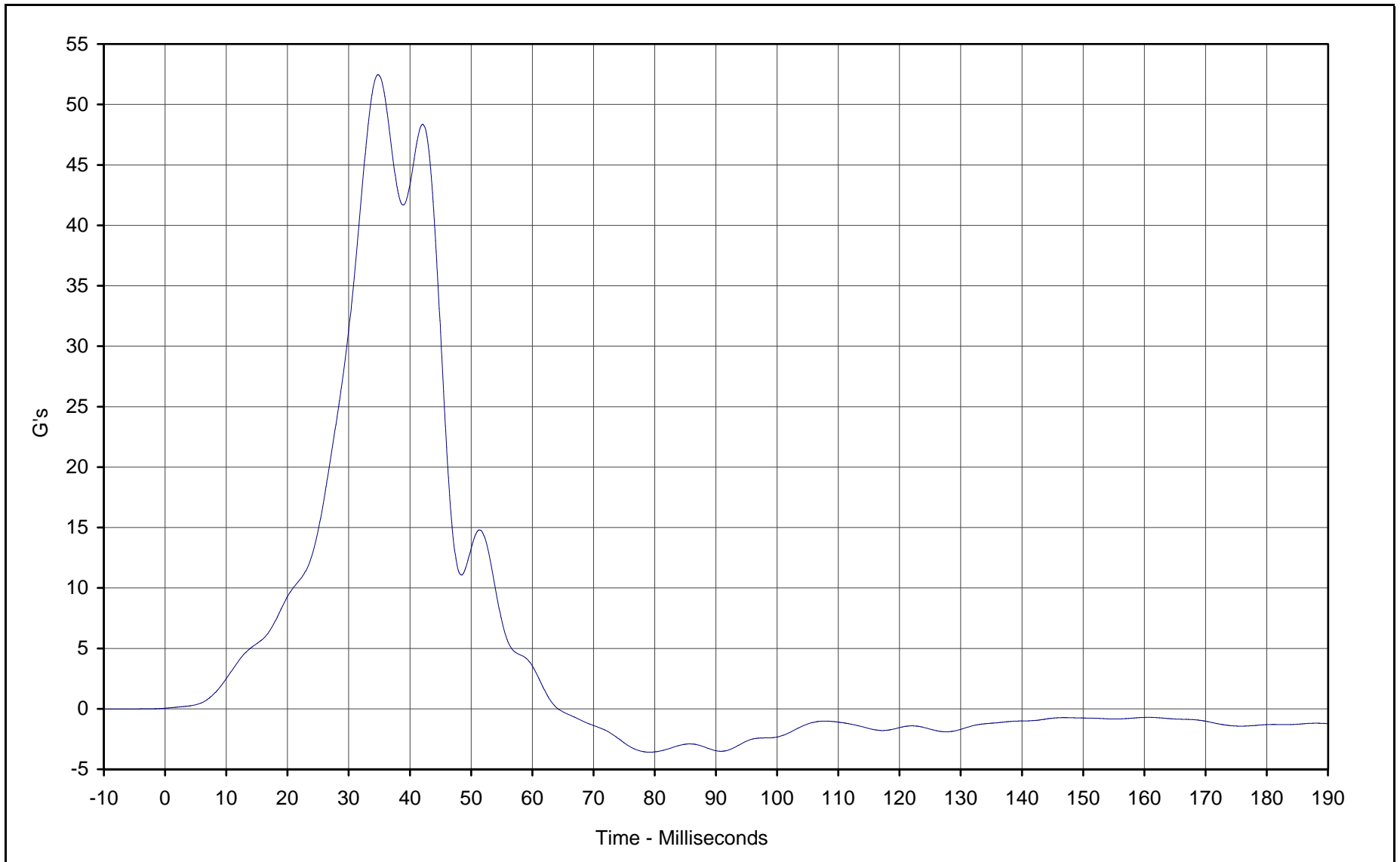


Curve Description: Pass. Lower Spine Redundant Y
Maximum Value: 56.3 at 51.5 Milliseconds
Minimum Value: -15.8 at 71.9 Milliseconds
SAE Filter Class: FIR 100
Date of Test: 12/14/00
Curve Number: FIR-023

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



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Curve Description: Pass. Pelvis Redundant Y
 Maximum Value: 52.5 at 34.8 Milliseconds
 Minimum Value: -3.6 at 79.2 Milliseconds
 SAE Filter Class: FIR 100
 Date of Test: 12/14/00
 Curve Number: FIR-024

Test Program: 55/28 km/h Side Impact NCAP No.: M15301
 Test Vehicle: 2001 Acura 3.2 TL 4 Door Sedan



APPENDIX C
SID CONFIGURATION AND PERFORMANCE VERIFICATION DATA

APPENDIX C
PRE-TEST SID CONFIGURATION AND PERFORMANCE VERIFICATION DATA



Performance Verification Data Side Impact Dummy (SID) External Dimensions

ATD Serial No.: 274

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	30	Pass
SH- Seated Height	mm	889 to 909	906	Pass
HP- Hip Point Height	mm	99 (reference)	99	Pass
RH- Rib Height	mm	502 to 520	515	Pass
KH- Knee Pivot From Back Line	mm	511 to 526	520	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

December 13, 2000

Test Date

Approved By

Date



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

ATD Serial No.: 274

Part Serial No.: N/A

Test I.D.: TI12A

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.5	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	4.21 to 4.33	4.27	Pass
Left Upper Rib Acceleration	G's	37.0 to 46.0	40.0	Pass
Left Lower Rib Acceleration	G's	37.0 to 46.0	38.8	Pass
Thoracic Spine Acceleration	G's	15.0 to 22.0	18.5	Pass
Overall Test Results				Pass

Laboratory Technician

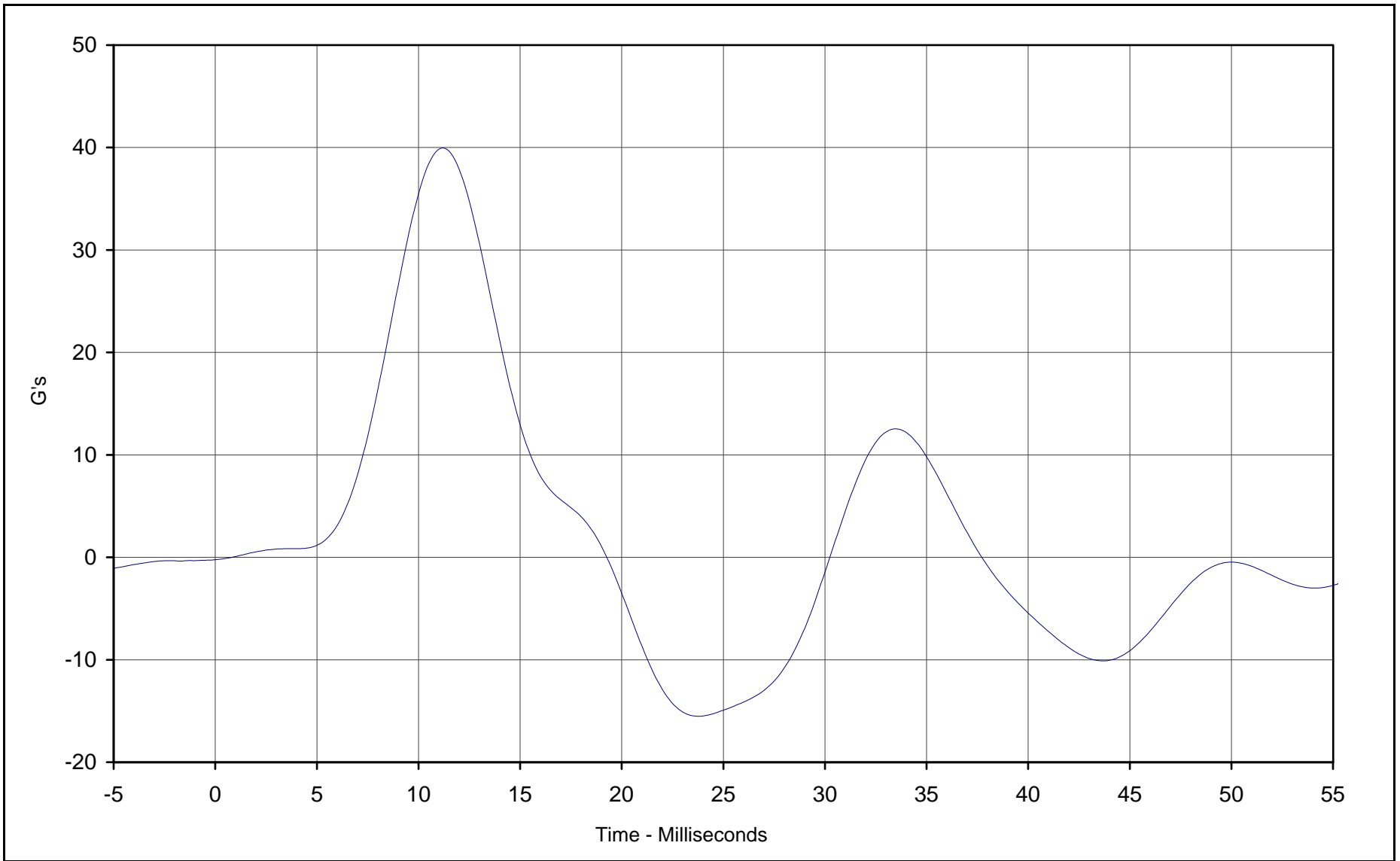
December 13, 2000

Test Date

Approved By

Date

C-3



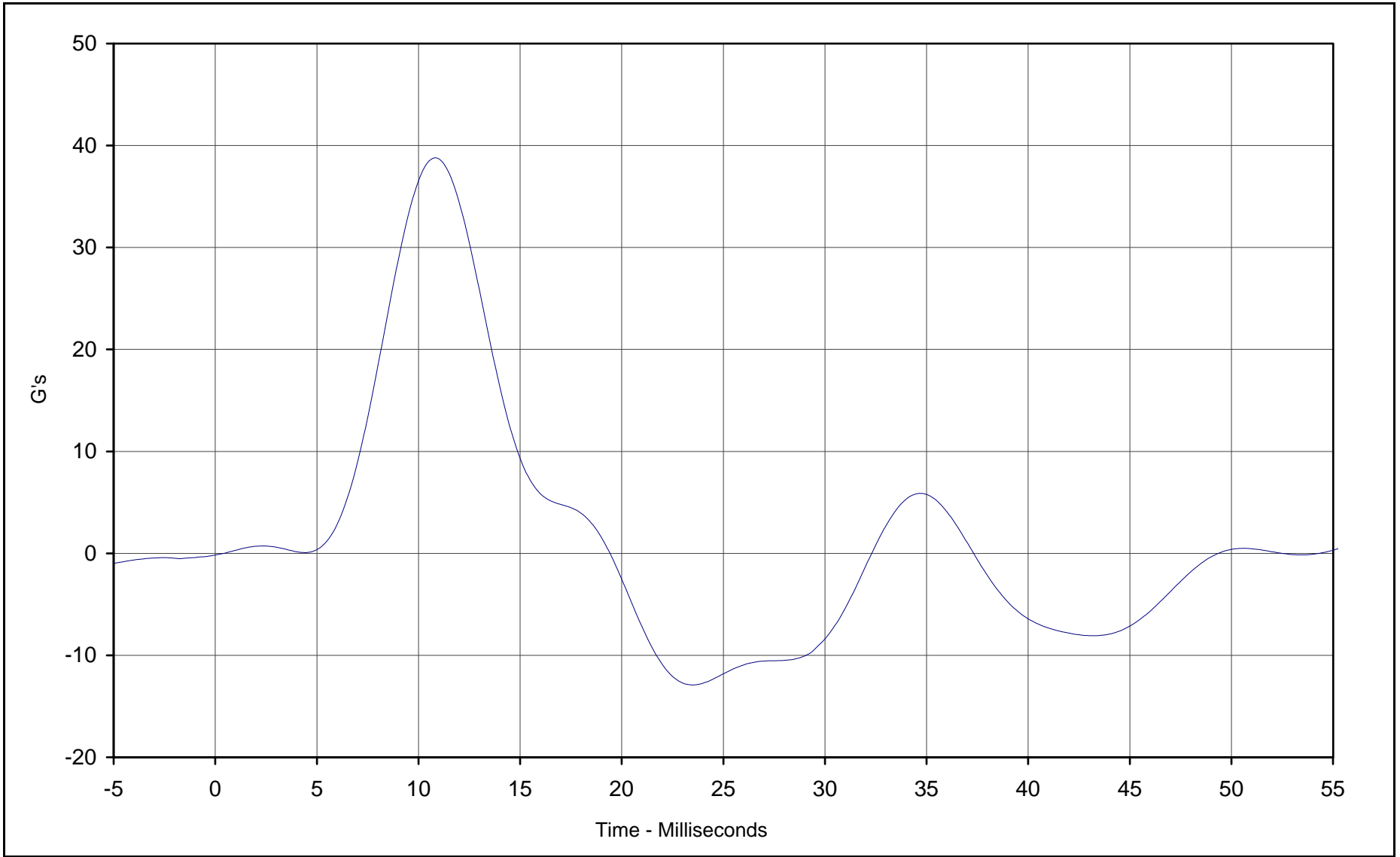
Curve Description: Left Upper Rib Y Acceleration
Maximum Value: 40.0 at 11.2 Milliseconds
Minimum Value: -15.5 at 23.8 Milliseconds
SAE Filter Class: FIR 100
Date of Test: 12/13/00

Test Program: SID Thorax Lateral Impact Test
Test Information: SID S/N: 274 Test I.D.: TI12A



KAR21003-05

C-4



Curve Description: Left Lower Rib Y Acceleration

Maximum Value: 38.8 at 10.8 Milliseconds

Minimum Value: -12.9 at 23.5 Milliseconds

SAE Filter Class: FIR 100

Date of Test: 12/13/00

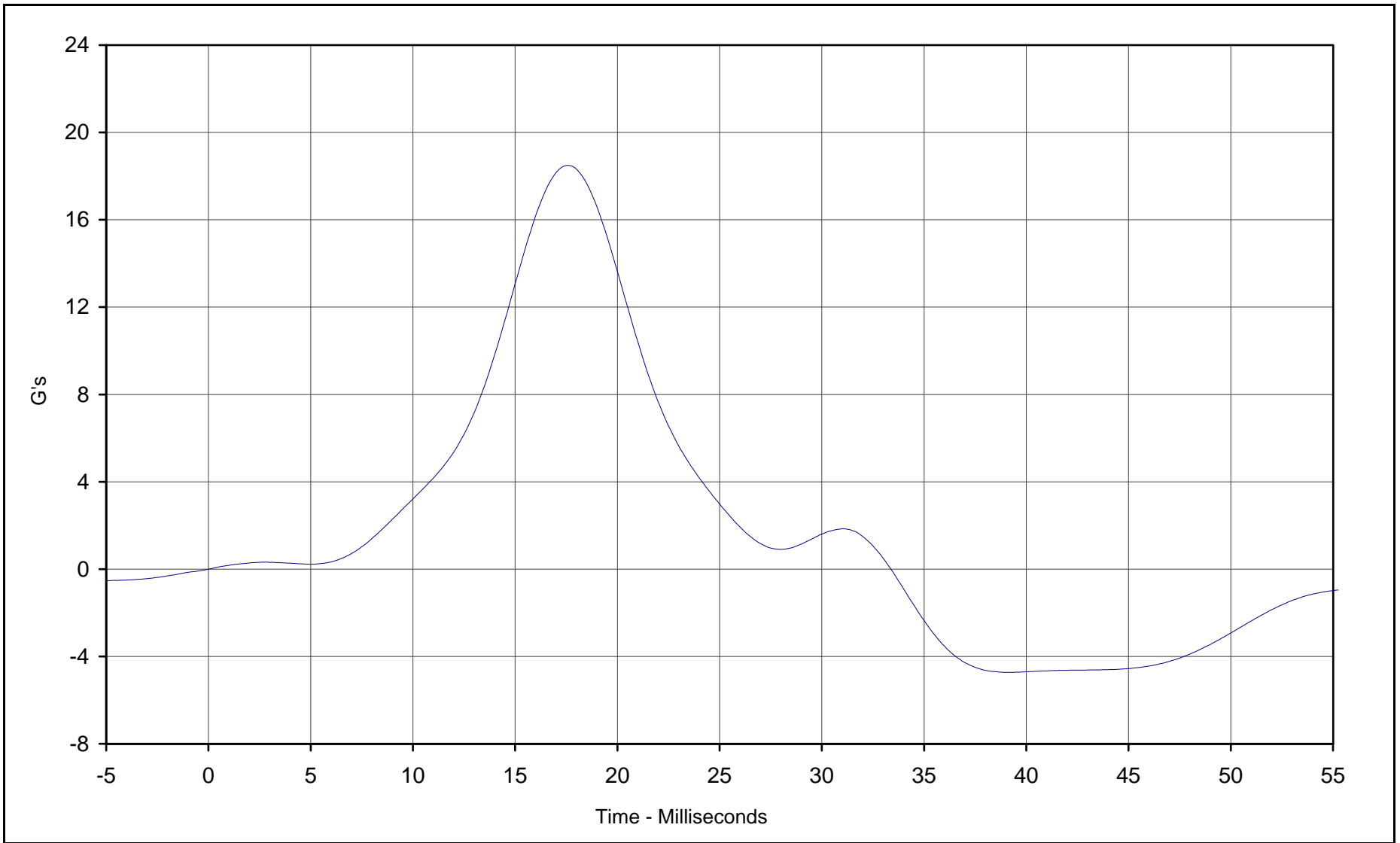
Test Program: SID Thorax Lateral Impact Test

Test Information: SID S/N: 274 Test I.D.: TI12A

KAR21003-05



C-5



Curve Description: Lower Spine Y Acceleration
Maximum Value: 18.5 at 17.6 Milliseconds
Minimum Value: -4.7 at 39.0 Milliseconds
SAE Filter Class: FIR 100
Date of Test: 12/13/00

Test Program: SID Thorax Lateral Impact Test
Test Information: SID S/N: 274 Test I.D.: TI12A



KAR21003-05



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

ATD Serial No.: 274

Part Serial No.: N/A

Test I.D.: PI12A

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.5	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	4.21 to 4.33	4.33	Pass
Pelvis Acceleration	G's	40.0 to 60.0	43.4	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

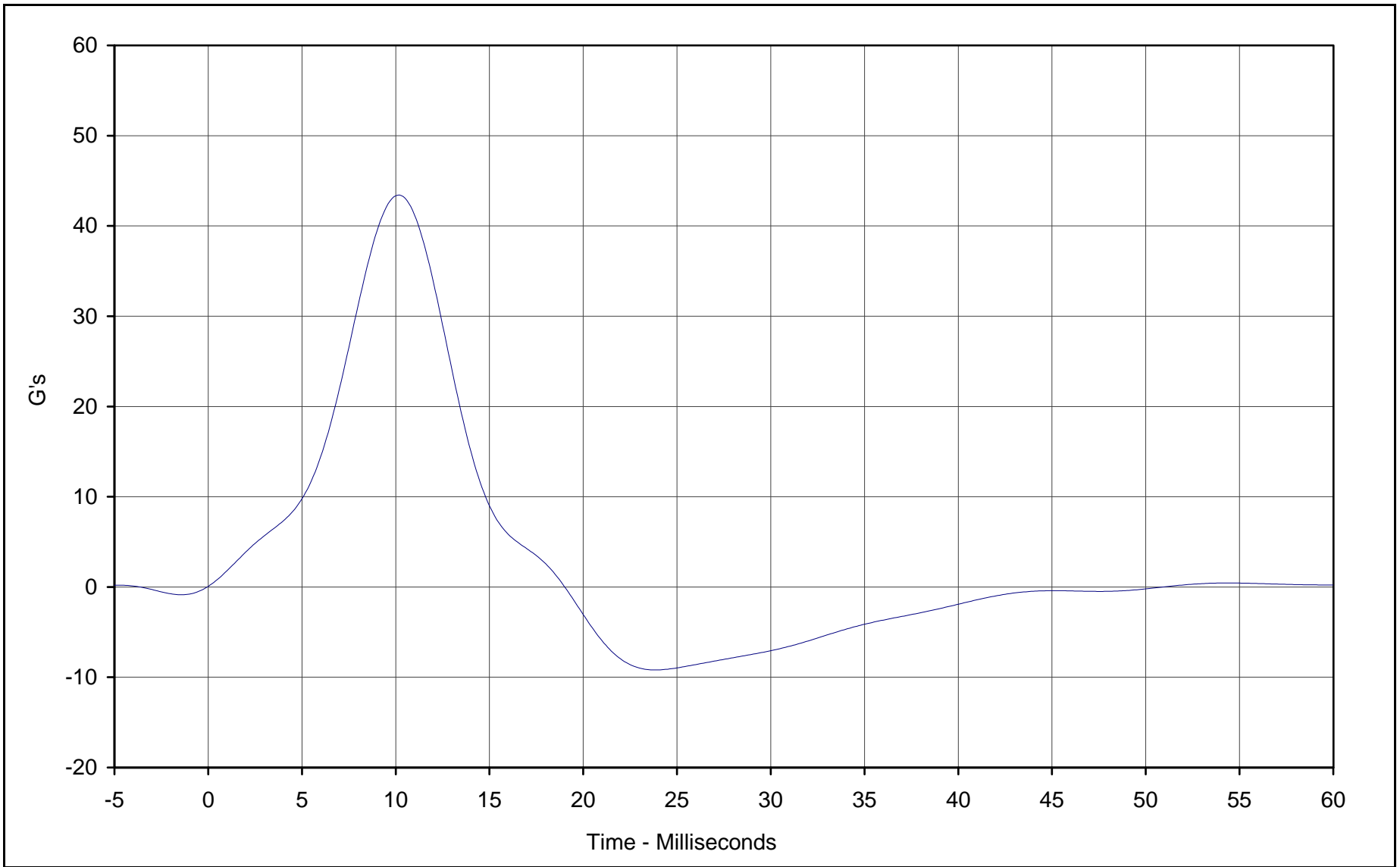
December 13, 2000

Test Date

Approved By

Date

C-7



Curve Description: Pelvis Y Axis Acceleration
Maximum Value: 43.4 at 10.2 Milliseconds
Minimum Value: -9.2 at 23.8 Milliseconds
SAE Filter Class: FIR 100
Date of Test: 12/13/00

Test Program: Left Side Pelvis Lateral Impact
Test Information: SID S/N: 274 Test I.D.: PI12A

KAR21003-05





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

ATD Serial No.: 274

Part Serial No.: N/A

Test I.D.: AB12G

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°F	66 to 78	70	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Force at 0.5 Inches of Displacement	Pounds	23.0 to 36.0	29.3	Pass
Force at 0.75 Inches of Displacement	Pounds	36.0 to 50.0	42.7	Pass
Force at 1.0 Inches of Displacement	Pounds	50.0 to 63.0	59.4	Pass
Force at 1.3 Inches of Displacement	Pounds	73.0 to 88.0	82.2	Pass
Overall Test Results				Pass

Laboratory Technician

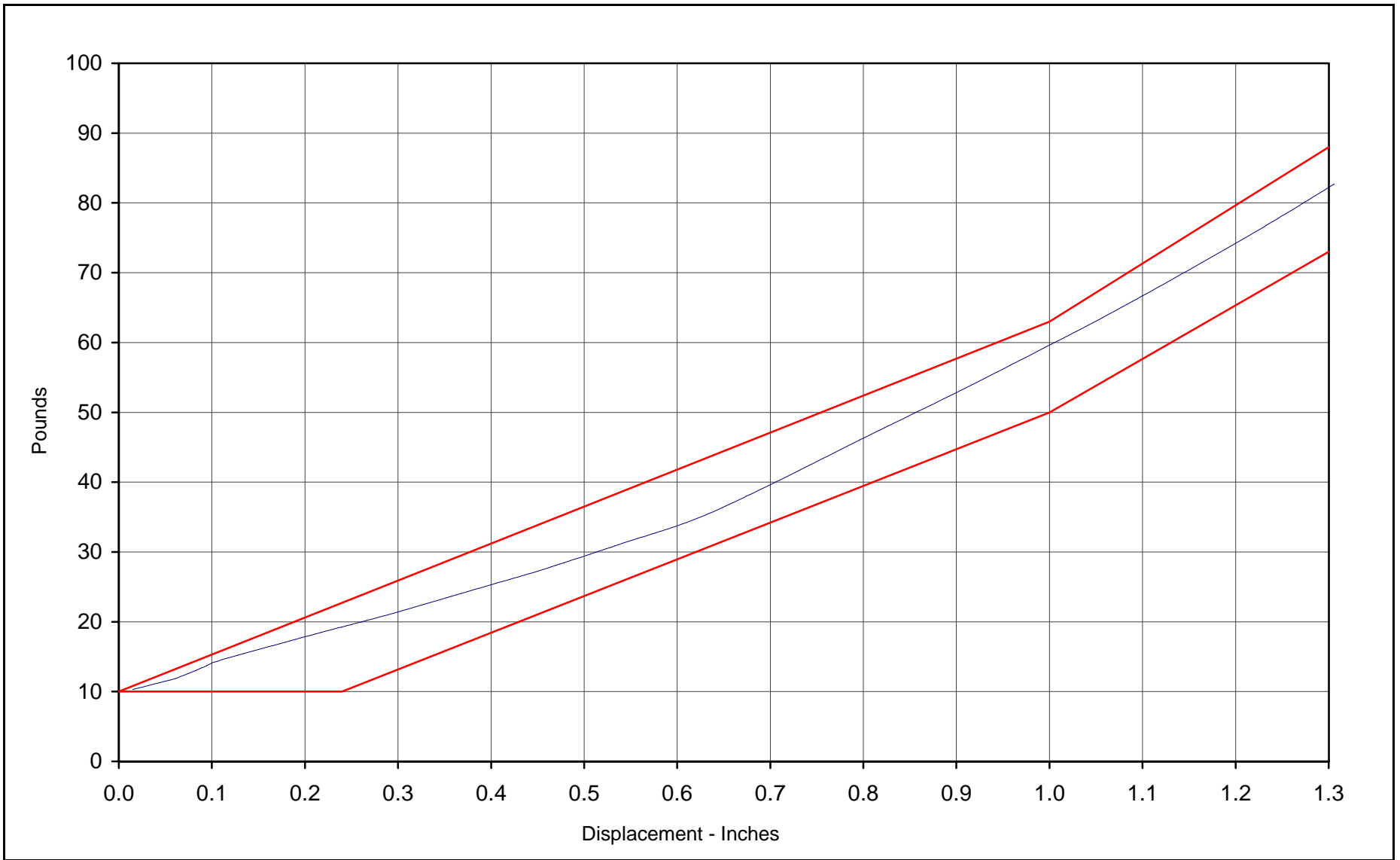
December 12, 2000

Test Date

Approved By

Date

C-9



Curve Description: Abdomen Force vs. Displacement

Test Program: Hybrid II Abdominal Compression

Force at 0.5 In.: 29.3 Pounds

Test Information: SID S/N: 274 Test I.D.: AB12G

Force at 0.75 In.: 42.7 Pounds

Force at 1.0 In.: 59.4 Pounds

Force at 1.3 In.: 82.2 Pounds

Date of Test: 12/12/00



KAR21003-05



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

ATD Serial No.: 274

Part Serial No.: N/A

Test I.D.: HD12G

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°F	66 to 78	70	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Peak Resultant Acceleration	G's	210.0 to 260.0	245.5	Pass
Peak Lateral Acceleration	G's	≤10.0	7.7	Pass
Time Above 100 G's	Msec.	0.9 to 1.5	1.1	Pass
Is Resultant Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Overall Test Results				Pass

Laboratory Technician

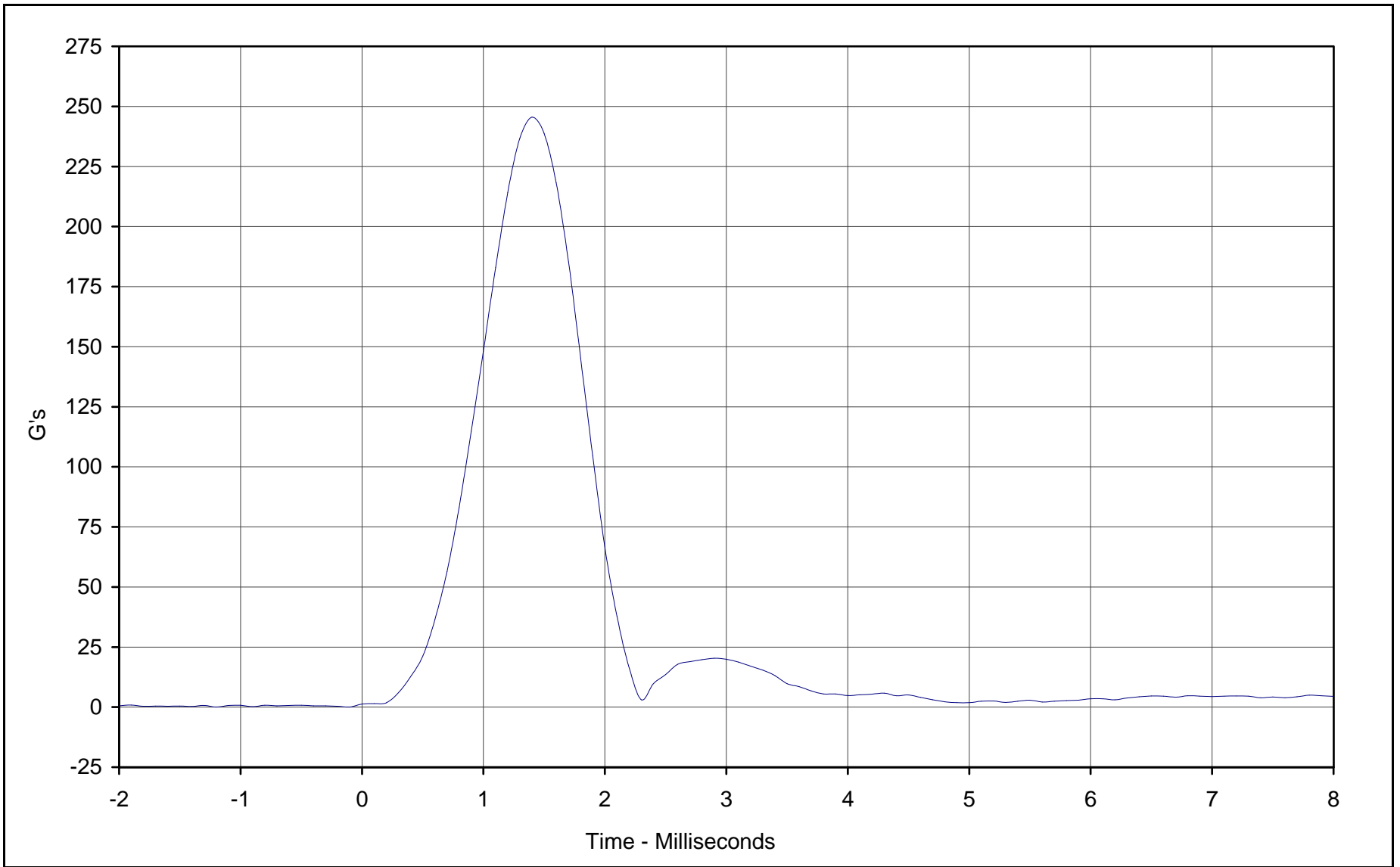
December 12, 2000

Test Date

Approved By

Date

C-11



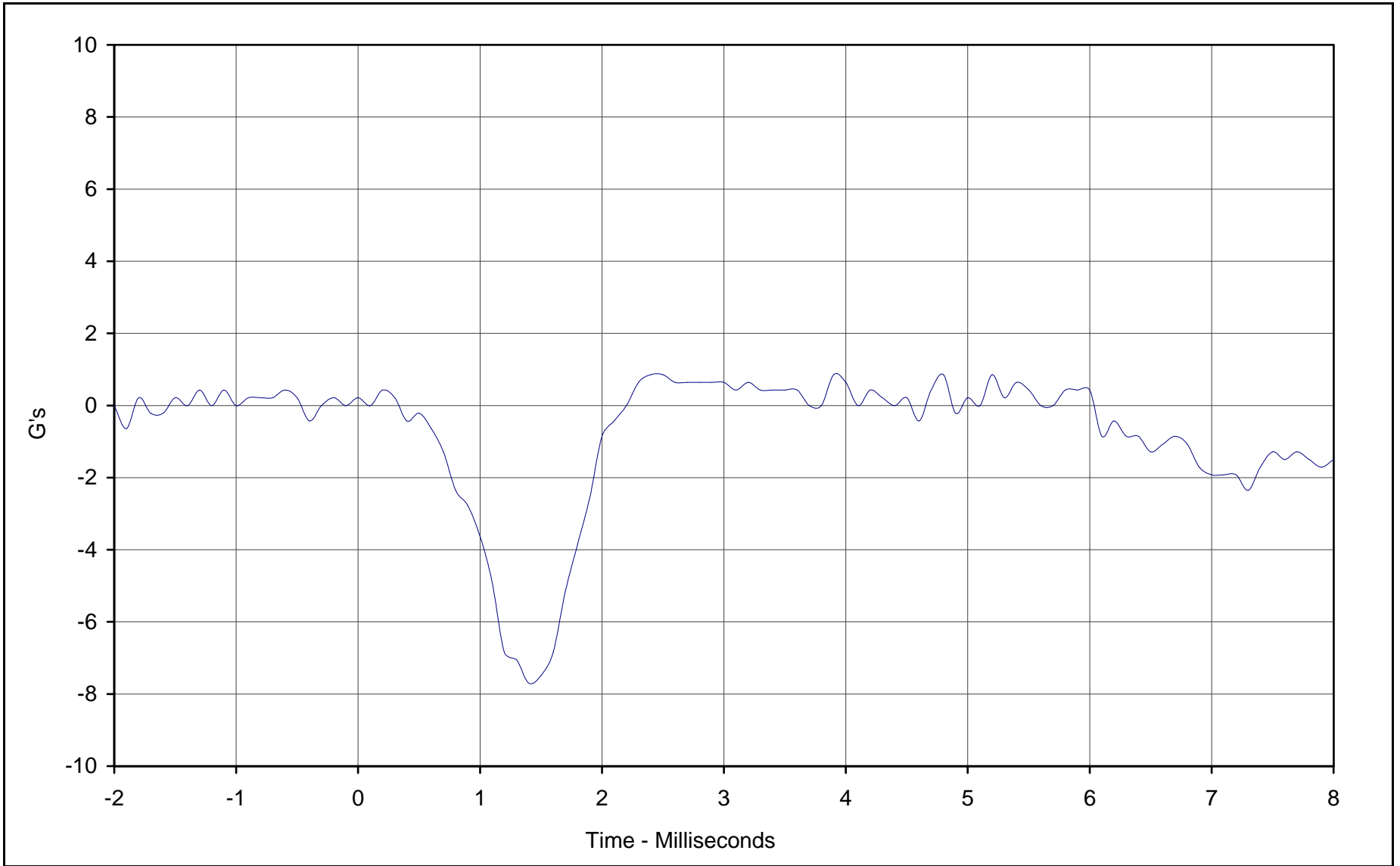
Curve Description: Head Resultant Acceleration
Maximum Value: 245.5 at 1.4 Milliseconds
Minimum Value: 1.3 at 0.0 Milliseconds
SAE Filter Class: 1000
Date of Test: 12/12/00

Test Program: Hybrid II Head Drop Calibration
Test Information: SID S/N: 274 Test I.D.: HD12G



KAR21003-05

C-12



Curve Description: Head Y Axis Acceleration
Maximum Value: 0.9 at 2.4 Milliseconds
Minimum Value: -7.7 at 1.4 Milliseconds
SAE Filter Class: 1000
Date of Test: 12/12/00

Test Program: Hybrid II Head Drop Calibration
Test Information: SID S/N: 274 Test I.D.: HD12G



KAR21003-05



Performance Verification Data Side Impact Dummy (SID) External Dimensions

ATD Serial No.: 275

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	30	Pass
SH- Seated Height	mm	889 to 909	905	Pass
HP- Hip Point Height	mm	99 (reference)	99	Pass
RH- Rib Height	mm	502 to 520	510	Pass
KH- Knee Pivot From Back Line	mm	511 to 526	520	Pass
KV- Knee Pivot From Floor	mm	490 to 505	495	Pass
HW- Hip Width	mm	356 to 391	360	Pass
Overall Test Results				Pass

Laboratory Technician

December 13, 2000

Test Date

Approved By

Date



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

ATD Serial No.: 275

Part Serial No.: N/A

Test I.D.: TI12B

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.5	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	4.21 to 4.33	4.27	Pass
Left Upper Rib Acceleration	G's	37.0 to 46.0	39.4	Pass
Left Lower Rib Acceleration	G's	37.0 to 46.0	39.1	Pass
Thoracic Spine Acceleration	G's	15.0 to 22.0	18.5	Pass
Overall Test Results				Pass

Laboratory Technician

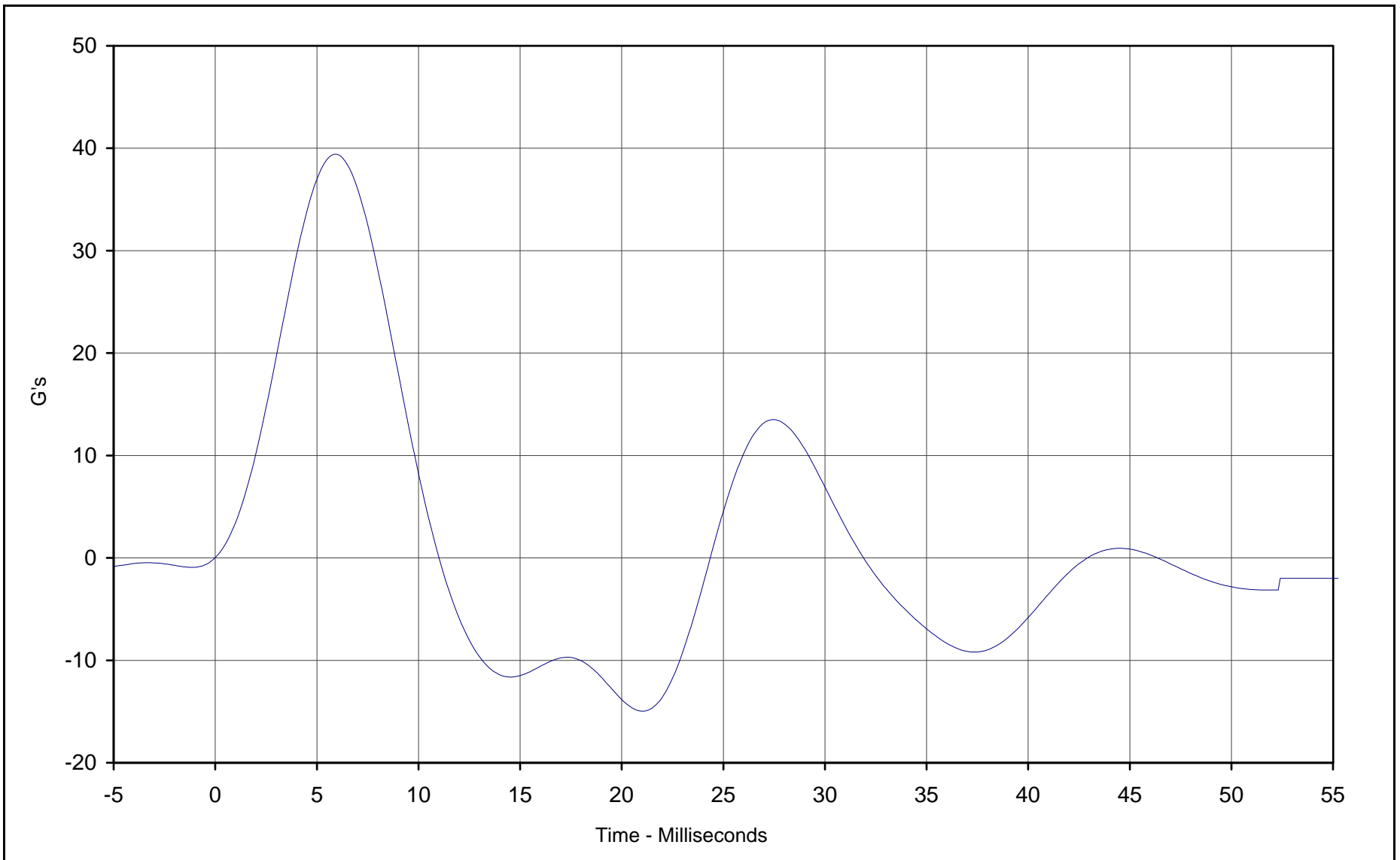
December 13, 2000

Test Date

Approved By

Date

C-15



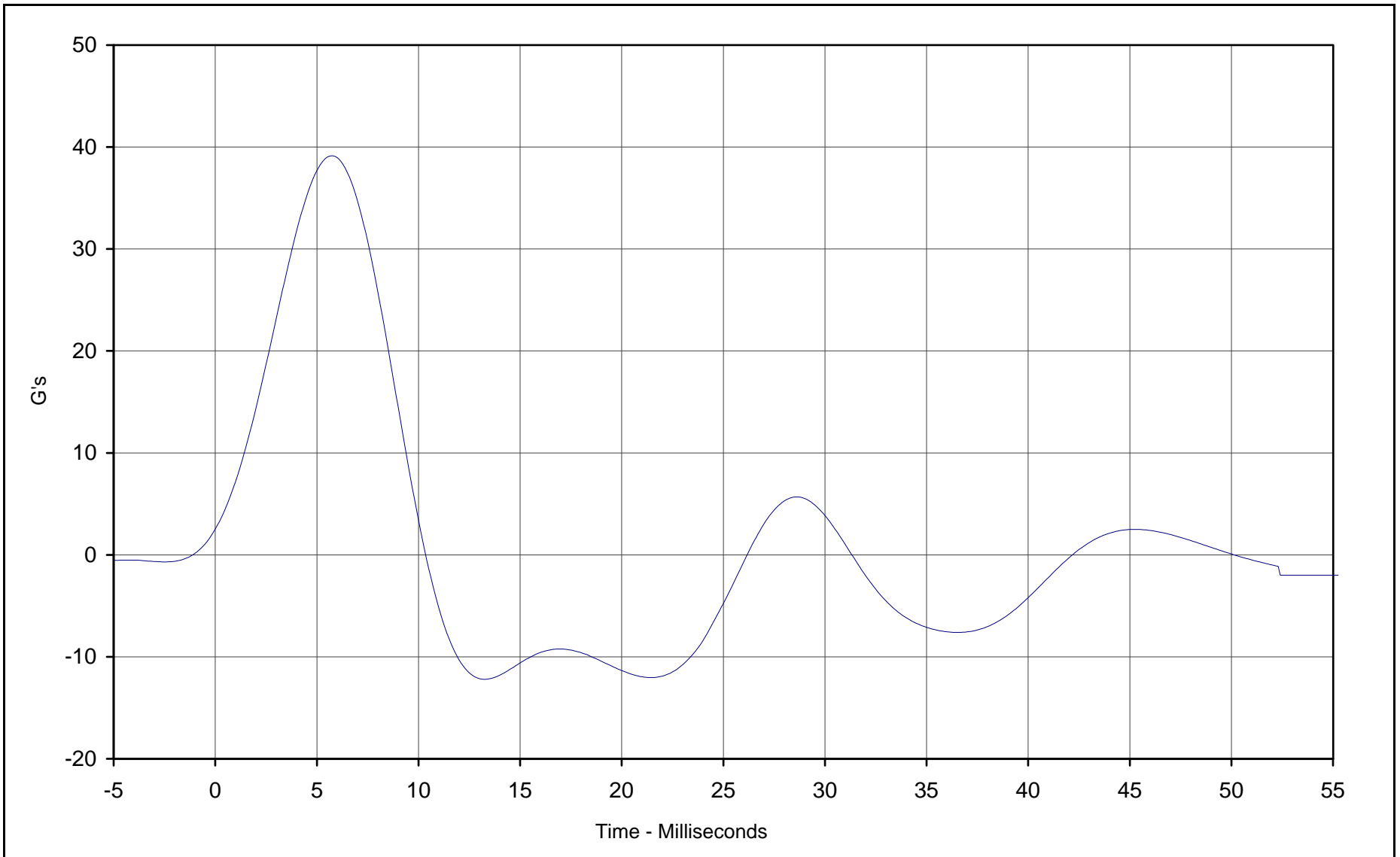
Curve Description: Left Upper Rib Y Acceleration
Maximum Value: 39.4 at 5.9 Milliseconds
Minimum Value: -15.0 at 21.0 Milliseconds
SAE Filter Class: FIR 100
Date of Test: 12/13/00

Test Program: SID Thorax Lateral Impact Test
Test Information: SID S/N: 275 Test I.D.: TI12B

KAR21003-05



C-16



Curve Description: Left Lower Rib Y Acceleration

Maximum Value: 39.1 at 5.7 Milliseconds

Minimum Value: -12.2 at 13.3 Milliseconds

SAE Filter Class: FIR 100

Date of Test: 12/13/00

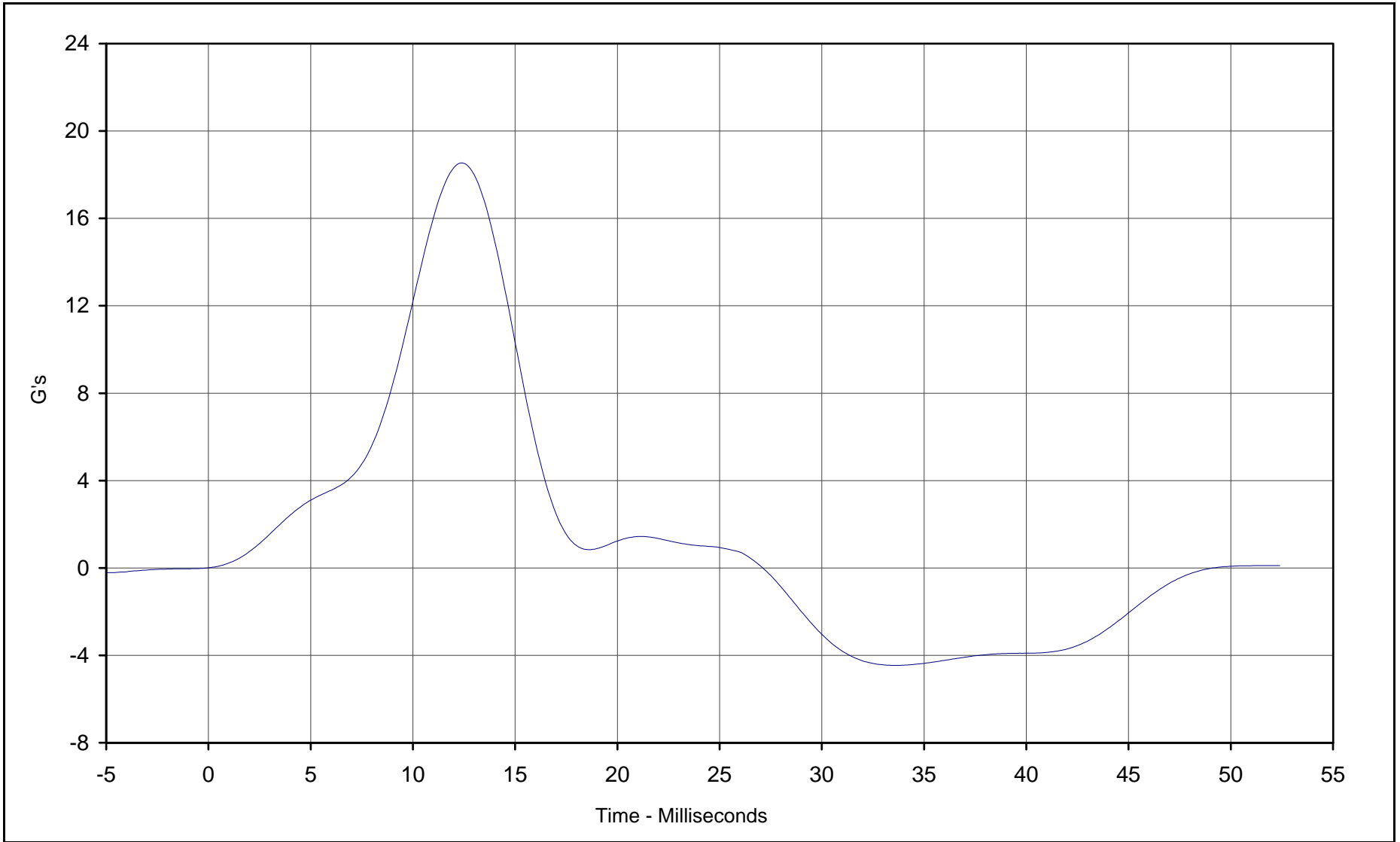
Test Program: SID Thorax Lateral Impact Test

Test Information: SID S/N: 275 Test I.D.: TI12B

KAR21003-05



C-17



Curve Description: Lower Spine Y Acceleration
Maximum Value: 18.5 at 12.4 Milliseconds
Minimum Value: -4.5 at 33.6 Milliseconds
SAE Filter Class: FIR 100
Date of Test: 12/13/00

Test Program: SID Thorax Lateral Impact Test
Test Information: SID S/N: 275 Test I.D.: TI12B



KAR21003-05



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

ATD Serial No.: 275

Part Serial No.: N/A

Test I.D.: PI12B

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.5	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	4.21 to 4.33	4.33	Pass
Pelvis Acceleration	G's	40.0 to 60.0	42.3	Pass
Acceleration Time Above 20 G's	Msec.	3.0 to 7.0 Msec.	6.8	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Overall Test Results				Pass

Laboratory Technician

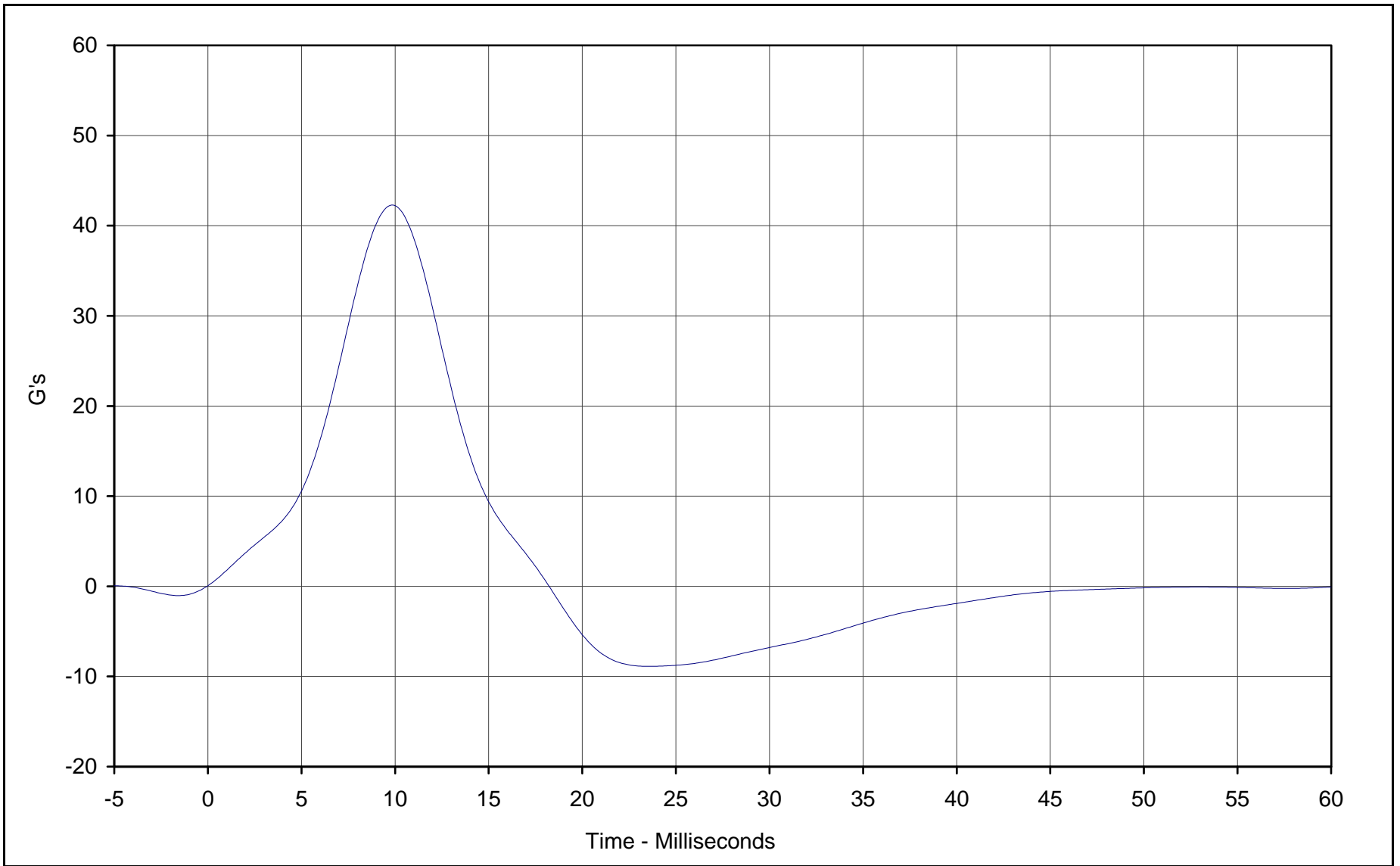
December 13, 2000

Test Date

Approved By

Date

C-19



Curve Description: Pelvis Y Axis Acceleration
Maximum Value: 42.3 at 9.8 Milliseconds
Minimum Value: -8.9 at 23.7 Milliseconds
SAE Filter Class: FIR 100
Date of Test: 12/13/00

Test Program: Left Side Pelvis Lateral Impact
Test Information: SID S/N: 275 Test I.D.: P112B

KAR21003-05





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

ATD Serial No.: 275

Part Serial No.: N/A

Test I.D.: AB12H

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°F	66 to 78	70	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Force at 0.5 Inches of Displacement	Pounds	23.0 to 36.0	29.7	Pass
Force at 0.75 Inches of Displacement	Pounds	36.0 to 50.0	42.3	Pass
Force at 1.0 Inches of Displacement	Pounds	50.0 to 63.0	59.0	Pass
Force at 1.3 Inches of Displacement	Pounds	73.0 to 88.0	80.7	Pass
Overall Test Results				Pass

Laboratory Technician

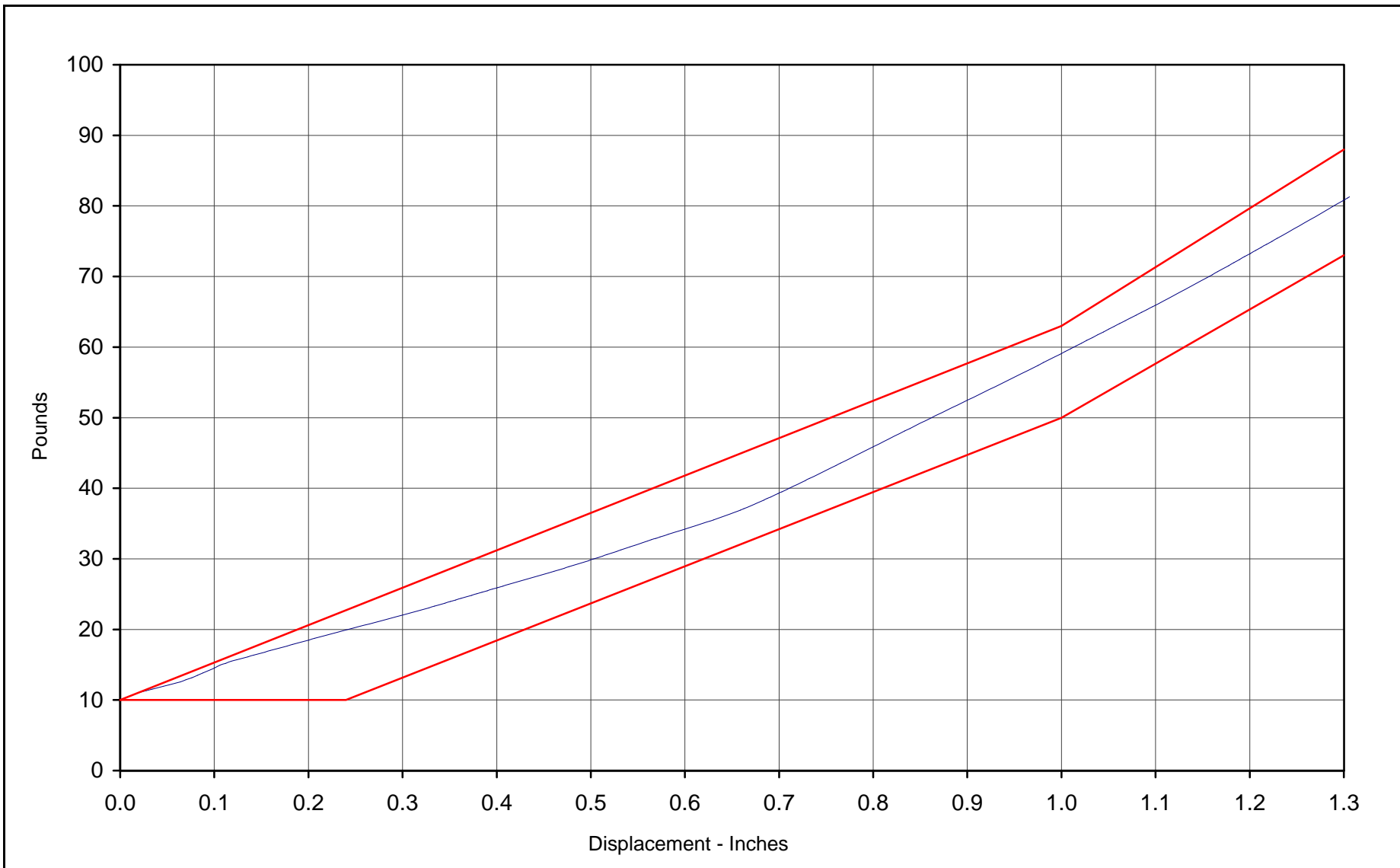
December 12, 2000

Test Date

Approved By

Date

C-21



Curve Description: Abdomen Force vs. Displacement

Test Program: Hybrid II Abdominal Compression

Force at 0.5 In.: 29.7 Pounds

Test Information: SID S/N: 275 Test I.D.: AB12H

Force at 0.75 In.: 42.3 Pounds

Force at 1.0 In.: 59.0 Pounds

Force at 1.3 In.: 80.7 Pounds

Date of Test: 12/12/00



KAR21003-05



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

ATD Serial No.: 275

Part Serial No.: N/A

Test I.D.: HD12H

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°F	66 to 78	70	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Peak Resultant Acceleration	G's	210.0 to 260.0	228.3	Pass
Peak Lateral Acceleration	G's	≤10.0	7.0	Pass
Time Above 100 G's	Msec.	0.9 to 1.5	1.0	Pass
Is Resultant Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Overall Test Results				Pass

Laboratory Technician

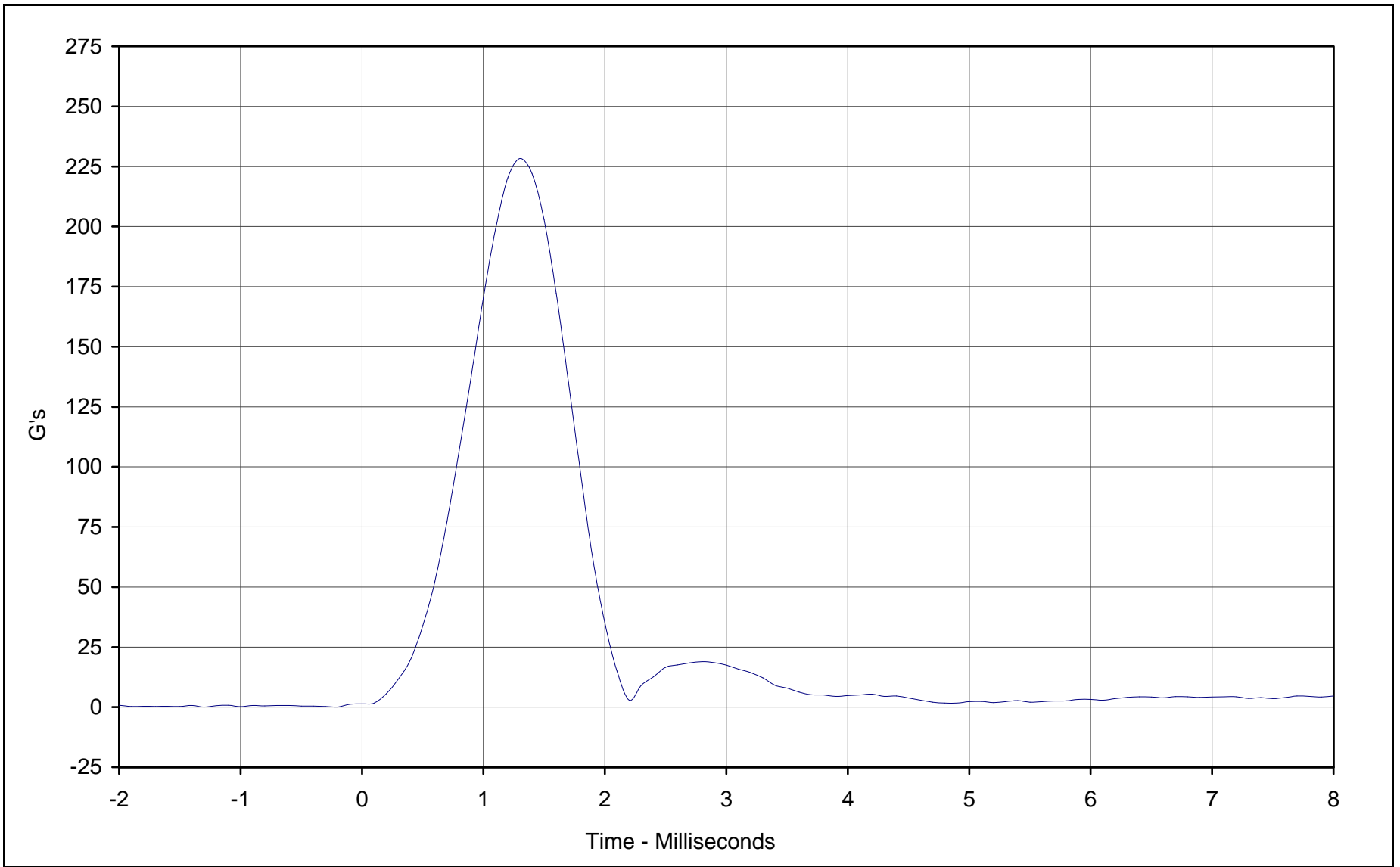
December 12, 2000

Test Date

Approved By

Date

C-23



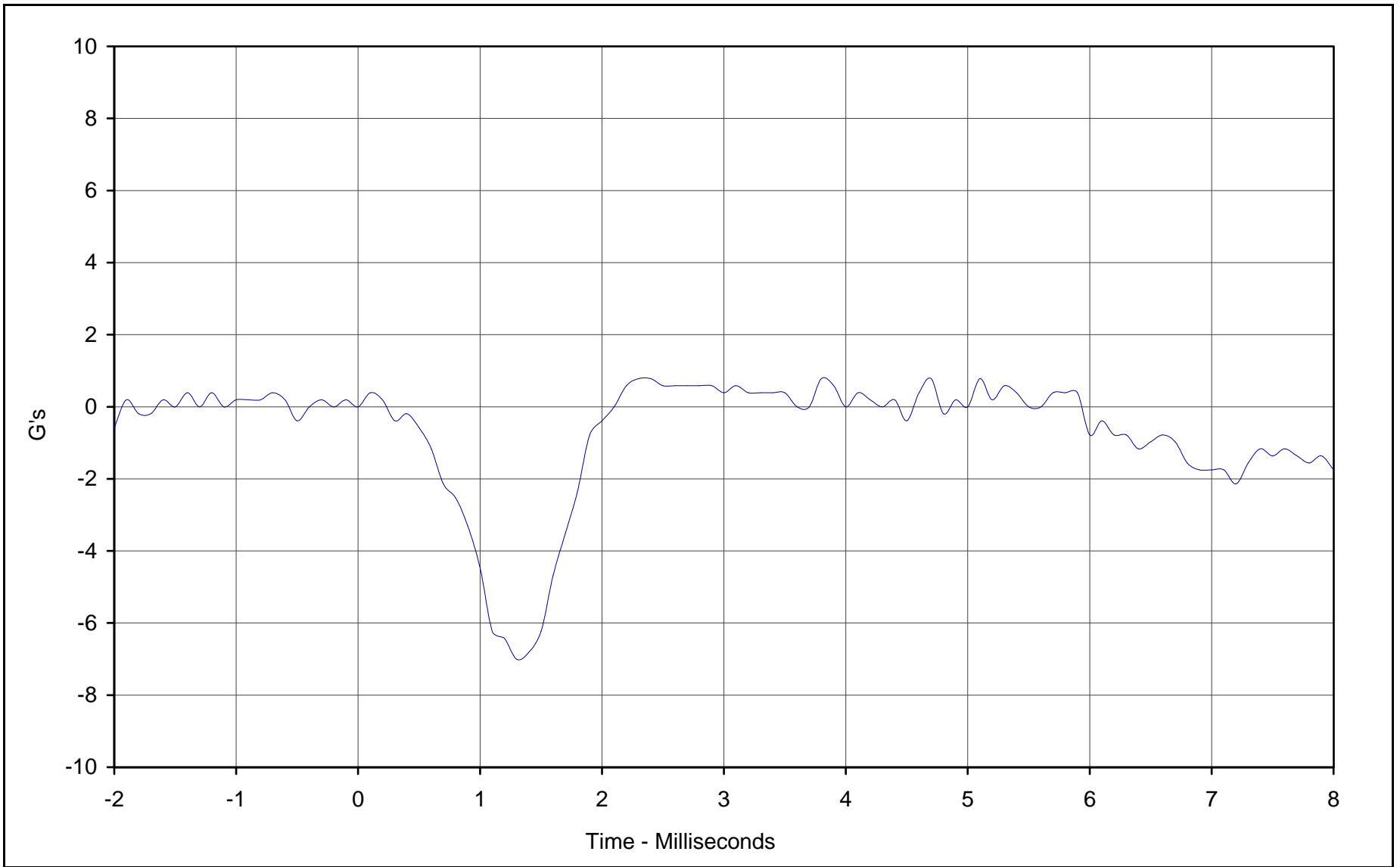
Curve Description: Head Resultant Acceleration
Maximum Value: 228.3 at 1.3 Milliseconds
Minimum Value: 1.4 at 0.0 Milliseconds
SAE Filter Class: 1000
Date of Test: 12/12/00

Test Program: Hybrid II Head Drop Calibration
Test Information: SID S/N: 275 Test I.D.: HD12H



KAR21003-05

C-24



Curve Description: Head Y Axis Acceleration
Maximum Value: 0.8 at 2.3 Milliseconds
Minimum Value: -7.0 at 1.3 Milliseconds
SAE Filter Class: 1000
Date of Test: 12/12/00

Test Program: Hybrid II Head Drop Calibration
Test Information: SID S/N: 275 Test I.D.: HD12H



KAR21003-05

APPENDIX C
POST-TEST SID CONFIGURATION AND PERFORMANCE VERIFICATION DATA



Performance Verification Data Side Impact Dummy (SID) External Dimensions

ATD Serial No.: 274

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	30	Pass
SH- Seated Height	mm	889 to 909	906	Pass
HP- Hip Point Height	mm	99 (reference)	99	Pass
RH- Rib Height	mm	502 to 520	515	Pass
KH- Knee Pivot From Back Line	mm	511 to 526	520	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

December 17, 2000

Test Date

Approved By

Date



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

ATD Serial No.: 274

Part Serial No.: N/A

Test I.D.: TI12C

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.5	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	4.21 to 4.33	4.24	Pass
Left Upper Rib Acceleration	G's	37.0 to 46.0	39.7	Pass
Left Lower Rib Acceleration	G's	37.0 to 46.0	39.7	Pass
Thoracic Spine Acceleration	G's	15.0 to 22.0	18.8	Pass
Overall Test Results				Pass

Laboratory Technician

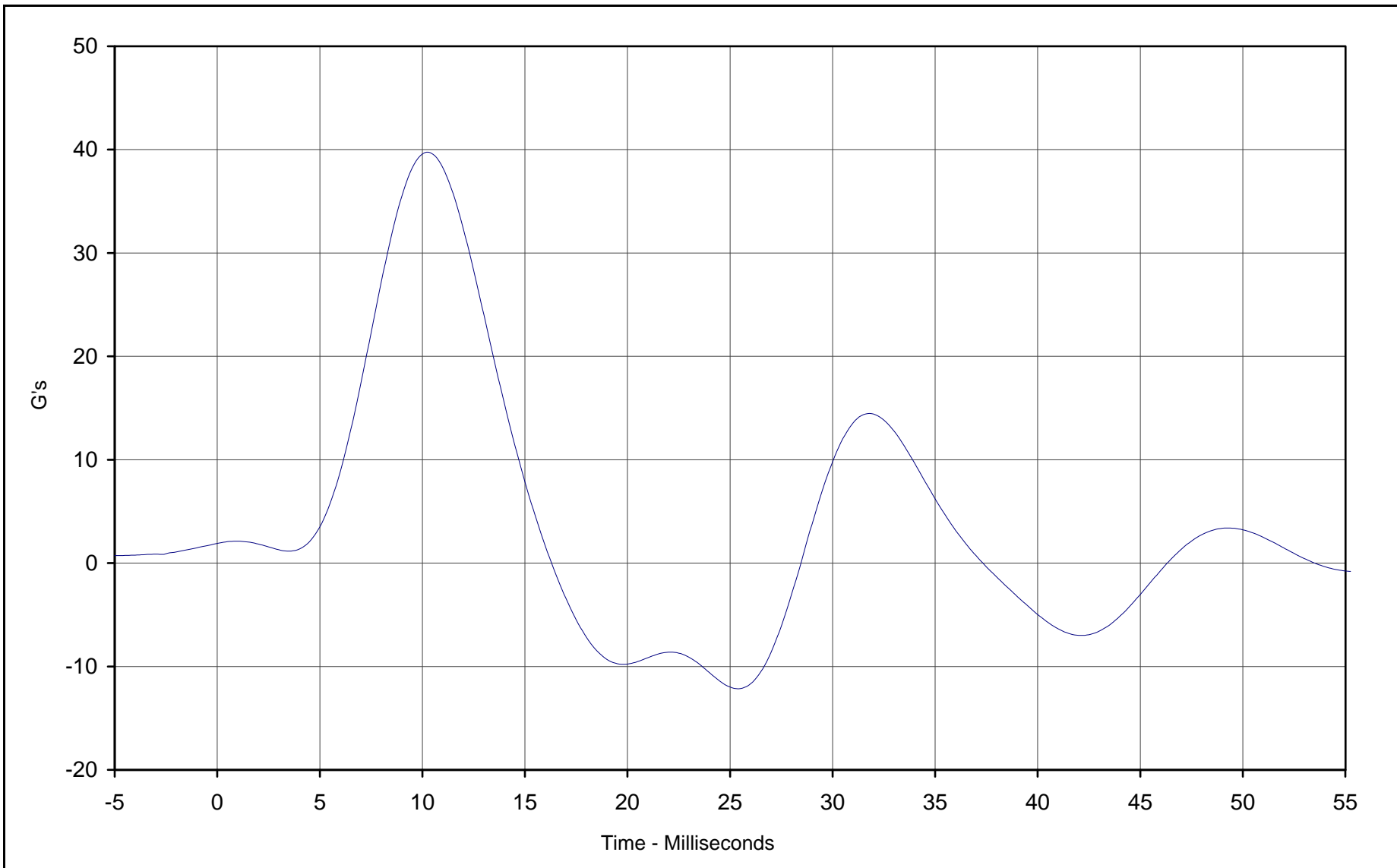
December 15, 2000

Test Date

Approved By

Date

C-27



Curve Description: Left Upper Rib Y Acceleration

Maximum Value: 39.7 at 10.2 Milliseconds

Minimum Value: -12.2 at 25.4 Milliseconds

SAE Filter Class: FIR 100

Date of Test: 12/15/00

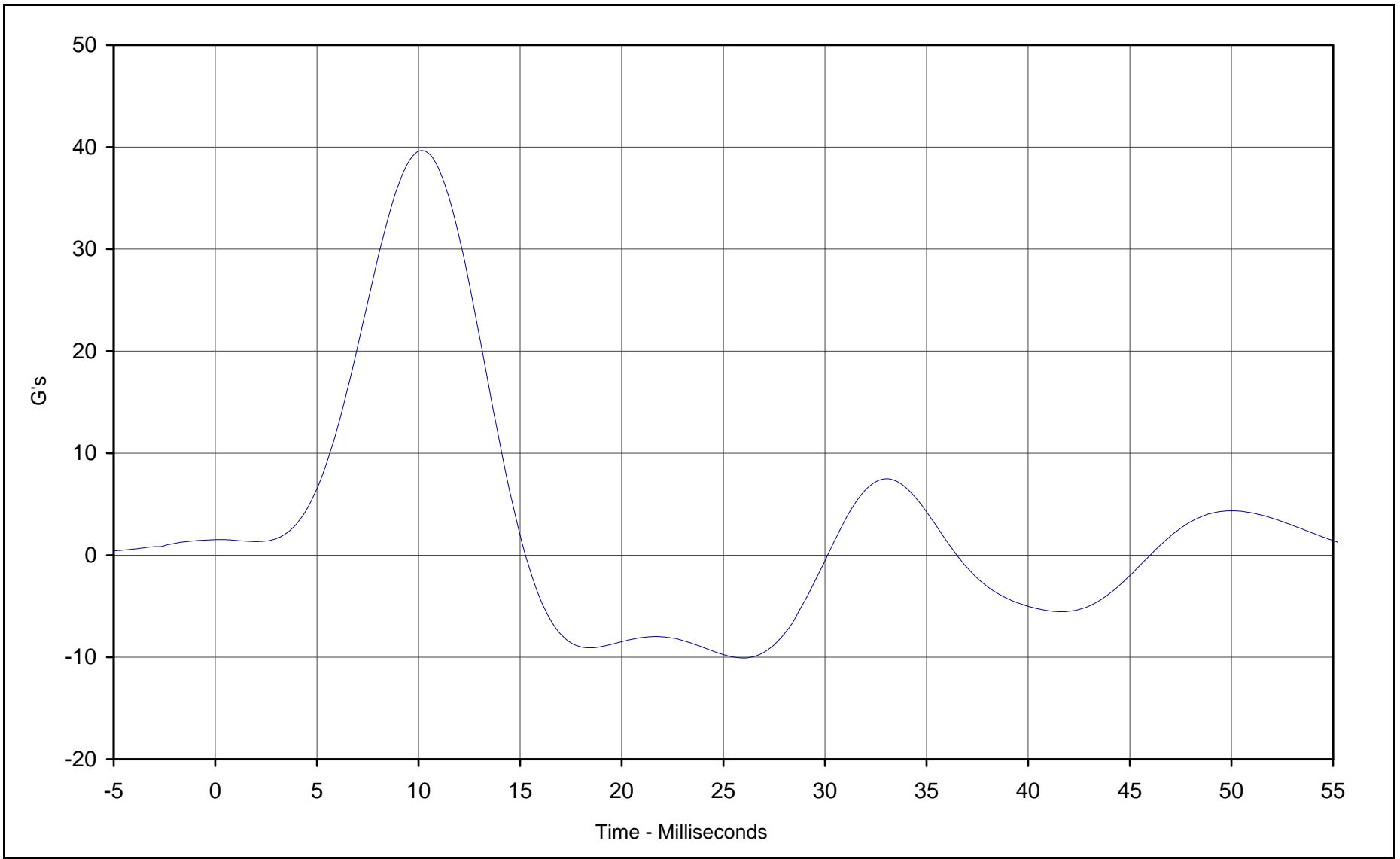
Test Program: SID Thorax Lateral Impact Test

Test Information: SID S/N: 274 Test I.D.: TI12C

KAR21003-05



C-28



Curve Description: Left Lower Rib Y Acceleration

Maximum Value: 39.7 at 10.2 Milliseconds

Minimum Value: -10.1 at 25.9 Milliseconds

SAE Filter Class: FIR 100

Date of Test: 12/15/00

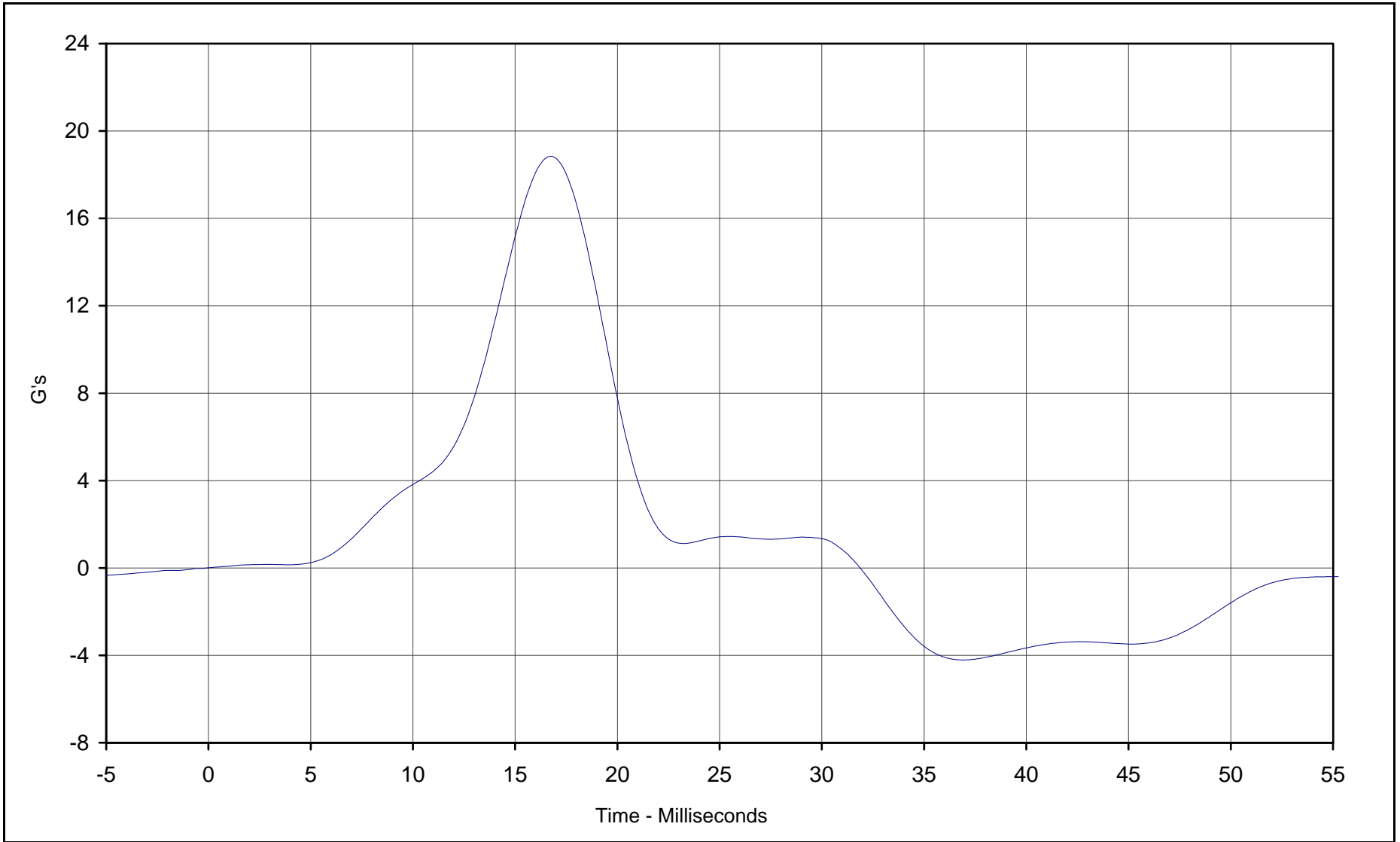
Test Program: SID Thorax Lateral Impact Test

Test Information: SID S/N: 274 Test I.D.: TI12C

KAR21003-05



C-29



Curve Description: Lower Spine Y Acceleration
Maximum Value: 18.8 at 16.7 Milliseconds
Minimum Value: -4.2 at 36.9 Milliseconds
SAE Filter Class: FIR 100
Date of Test: 12/15/00

Test Program: SID Thorax Lateral Impact Test
Test Information: SID S/N: 274 Test I.D.: T112C



KAR21003-05



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

ATD Serial No.: 274

Part Serial No.: N/A

Test I.D.: PI12C

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.5	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	4.21 to 4.33	4.30	Pass
Pelvis Acceleration	G's	40.0 to 60.0	53.9	Pass
Acceleration Time Above 20 G's	Msec.	3.0 to 7.0 Msec.	6.0	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Overall Test Results				Pass

Laboratory Technician

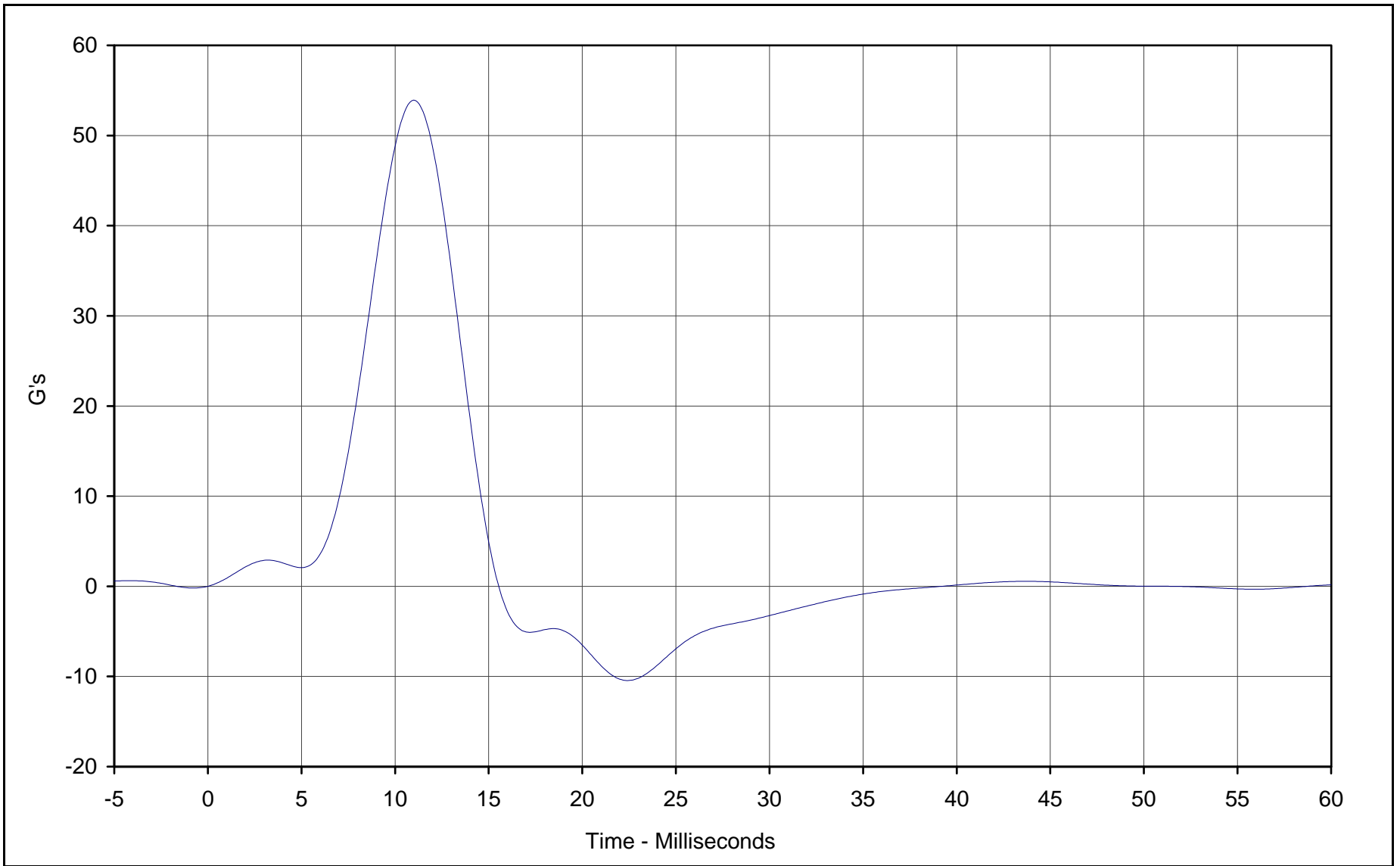
December 15, 2000

Test Date

Approved By

Date

C-31



Curve Description: Pelvis Y Axis Acceleration
Maximum Value: 53.9 at 11.0 Milliseconds
Minimum Value: -10.5 at 22.4 Milliseconds
SAE Filter Class: FIR 100
Date of Test: 12/15/00

Test Program: SID Left Side Pelvis Lateral Impact
Test Information: SID S/N: 274 Test I.D.: PI12C

KAR21003-05





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

ATD Serial No.: 274

Part Serial No.: N/A

Test I.D.: AB12I

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°F	66 to 78	70	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Force at 0.5 Inches of Displacement	Pounds	23.0 to 36.0	28.4	Pass
Force at 0.75 Inches of Displacement	Pounds	36.0 to 50.0	43.6	Pass
Force at 1.0 Inches of Displacement	Pounds	50.0 to 63.0	61.0	Pass
Force at 1.3 Inches of Displacement	Pounds	73.0 to 88.0	86.5	Pass
Overall Test Results				Pass

Laboratory Technician

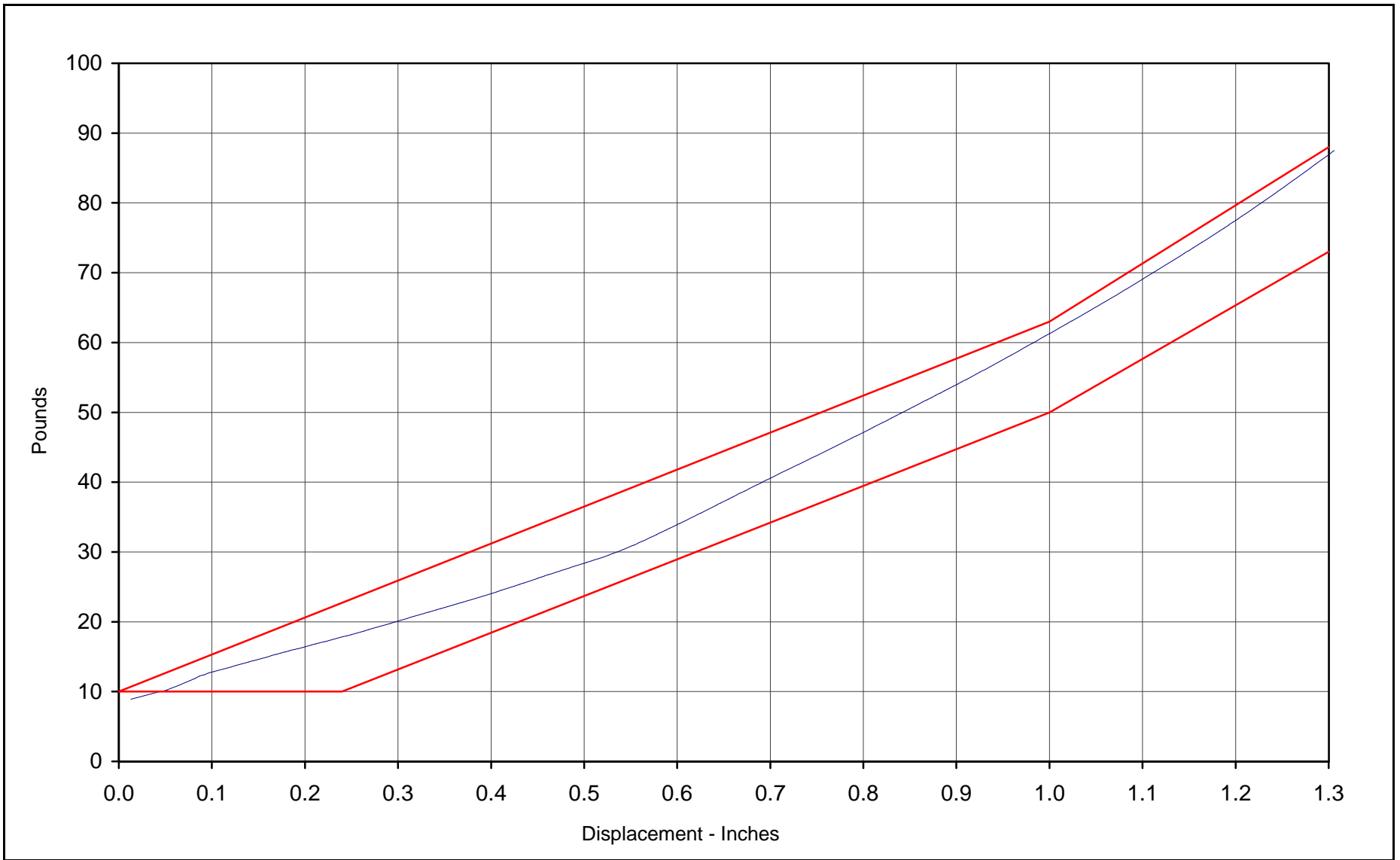
December 16, 2000

Test Date

Approved By

Date

C-33



Curve Description: Abdomen Force vs. Displacement

Test Program: SID Abdominal Compression

Force at 0.5 In.: 28.4 Pounds

Test Information: SID S/N: 274 Test I.D.: AB12I

Force at 0.75 In.: 43.6 Pounds

Force at 1.0 In.: 61.0 Pounds

Force at 1.3 In.: 86.5 Pounds

Date of Test: 12/16/00



KAR21003-05



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

ATD Serial No.: 274

Part Serial No.: N/A

Test I.D.: HD12I

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	242.9	Pass
Peak Lateral Acceleration	G's	≤10.0	7.6	Pass
Time Above 100 G's	Msec.	0.9 to 1.5	1.1	Pass
Is Resultant Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Overall Test Results				Pass

Laboratory Technician

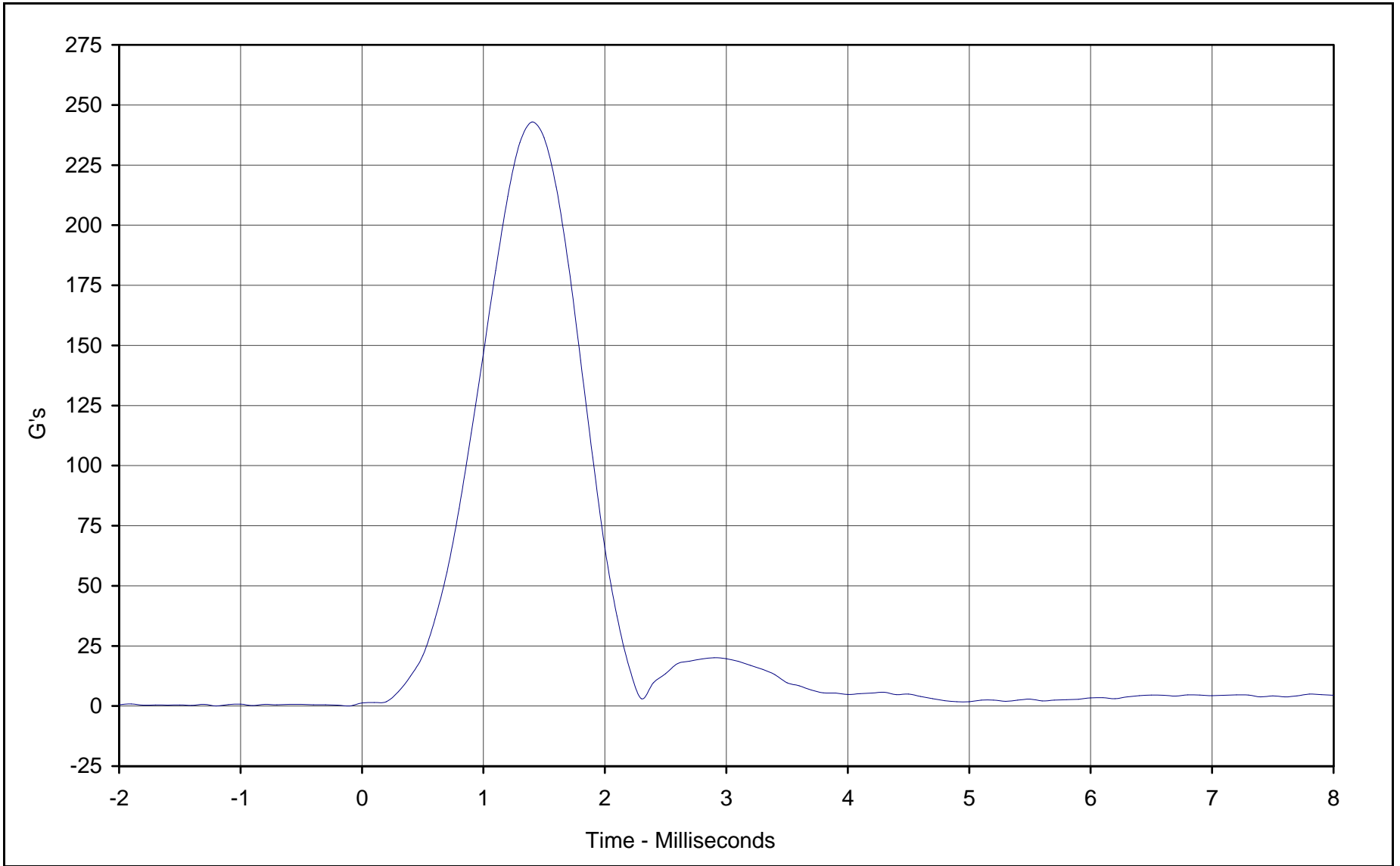
December 16, 2000

Test Date

Approved By

Date

C-35



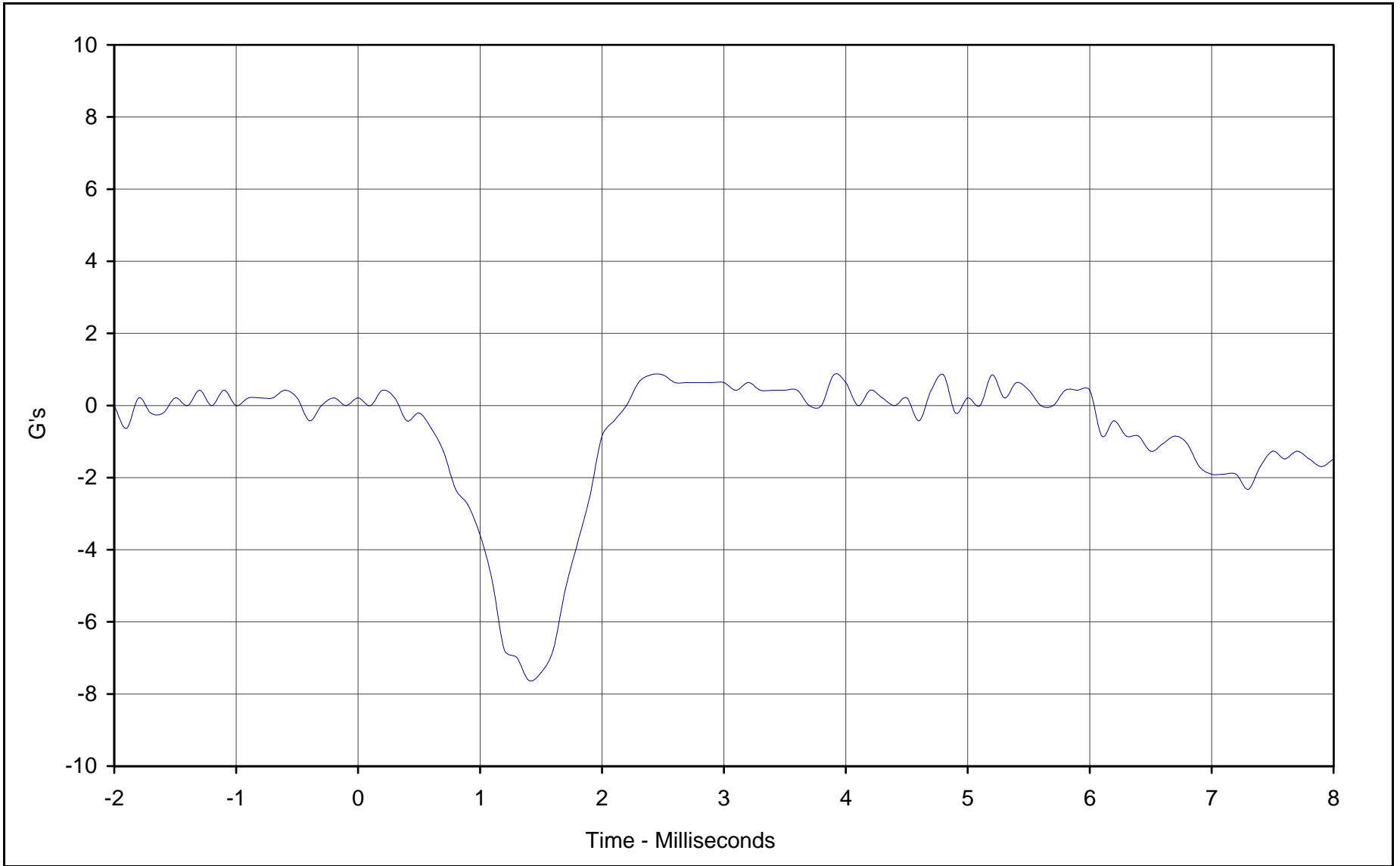
Curve Description: Head Resultant Acceleration
Maximum Value: 242.9 at 1.4 Milliseconds
Minimum Value: 1.3 at 0.0 Milliseconds
SAE Filter Class: 1000
Date of Test: 12/16/00

Test Program: SID Head Drop Calibration
Test Information: SID S/N: 274 Test I.D.: HD12I



KAR21003-05

C-36



Curve Description: Head Y Axis Acceleration
Maximum Value: 0.8 at 2.4 Milliseconds
Minimum Value: -7.6 at 1.4 Milliseconds
SAE Filter Class: 1000
Date of Test: 12/16/00

Test Program: SID Head Drop Calibration
Test Information: SID S/N: 274 Test I.D.: HD12I



KAR21003-05



Performance Verification Data Side Impact Dummy (SID) External Dimensions

ATD Serial No.: 275

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	30	Pass
SH- Seated Height	mm	889 to 909	907	Pass
HP- Hip Point Height	mm	99 (reference)	99	Pass
RH- Rib Height	mm	502 to 520	510	Pass
KH- Knee Pivot From Back Line	mm	511 to 526	515	Pass
KV- Knee Pivot From Floor	mm	490 to 505	500	Pass
HW- Hip Width	mm	356 to 391	360	Pass
Overall Test Results				Pass

Laboratory Technician

December 17, 2000

Test Date

Approved By

Date



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

ATD Serial No.: 275

Part Serial No.: N/A

Test I.D.: TI12D

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.5	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	4.21 to 4.33	4.28	Pass
Left Upper Rib Acceleration	G's	37.0 to 46.0	39.2	Pass
Left Lower Rib Acceleration	G's	37.0 to 46.0	38.8	Pass
Thoracic Spine Acceleration	G's	15.0 to 22.0	18.5	Pass
Overall Test Results				Pass

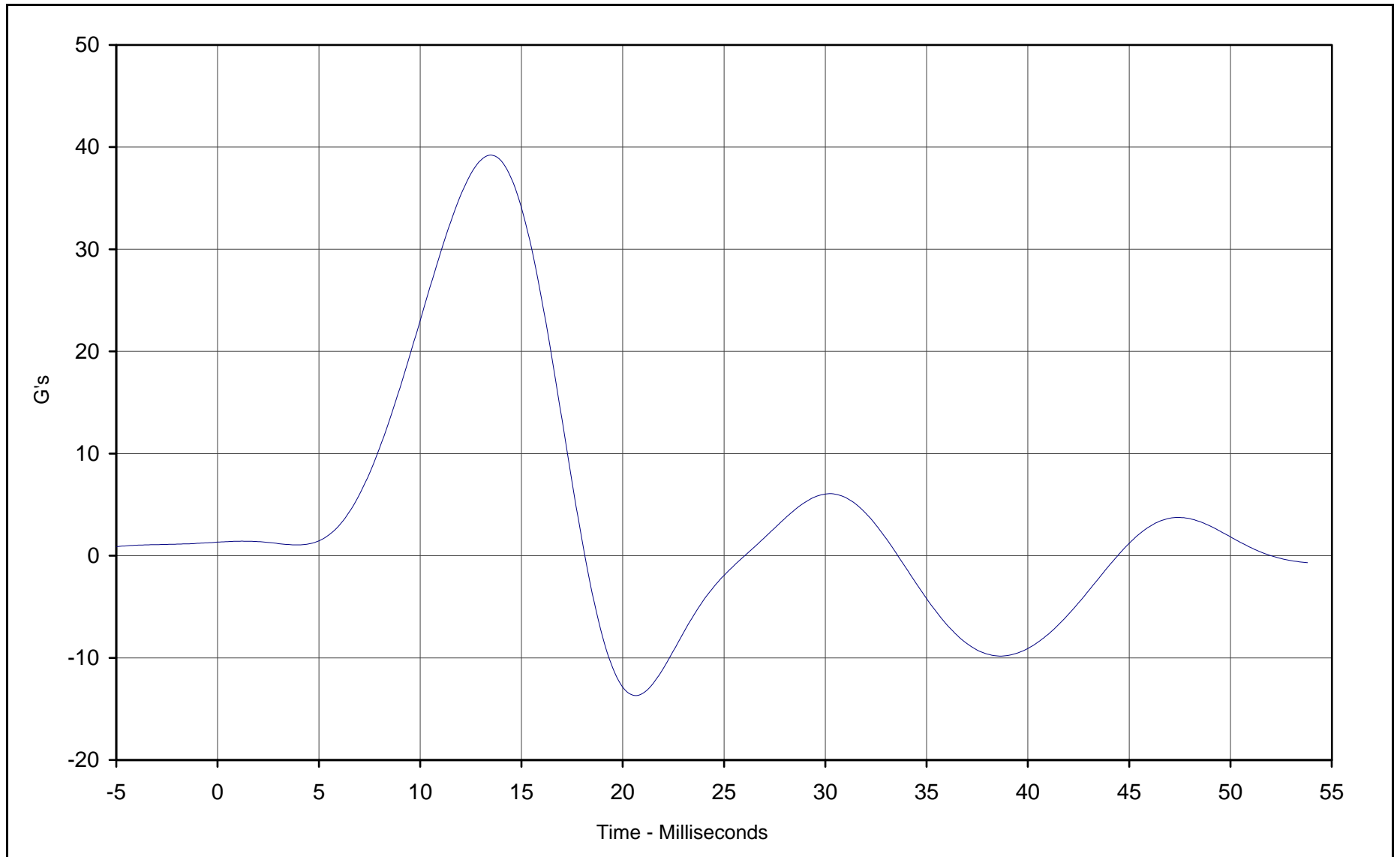
Laboratory Technician

December 15, 2000

Test Date

Approved By

Date



Curve Description: Left Upper Rib Y Acceleration

Maximum Value: 39.2 at 13.5 Milliseconds

Minimum Value: -13.7 at 20.6 Milliseconds

SAE Filter Class: FIR 100

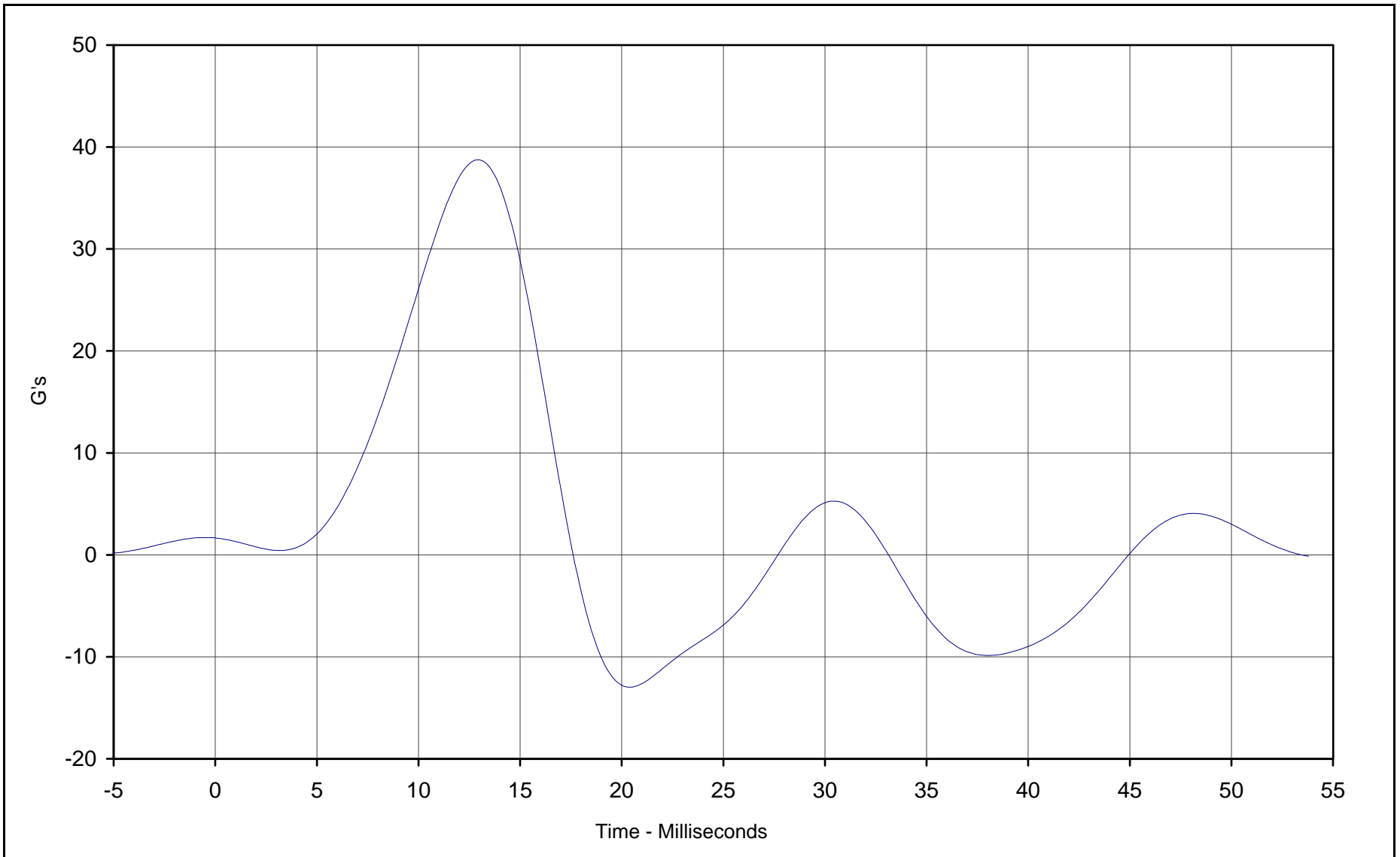
Date of Test: 12/15/00

Test Program: SID Thorax Lateral Impact Test

Test Information: SID S/N: 275 Test I.D.: TI12D



C-40



Curve Description: Left Lower Rib Y Acceleration

Maximum Value: 38.8 at 12.9 Milliseconds

Minimum Value: -13.0 at 20.4 Milliseconds

SAE Filter Class: FIR 100

Date of Test: 12/15/00

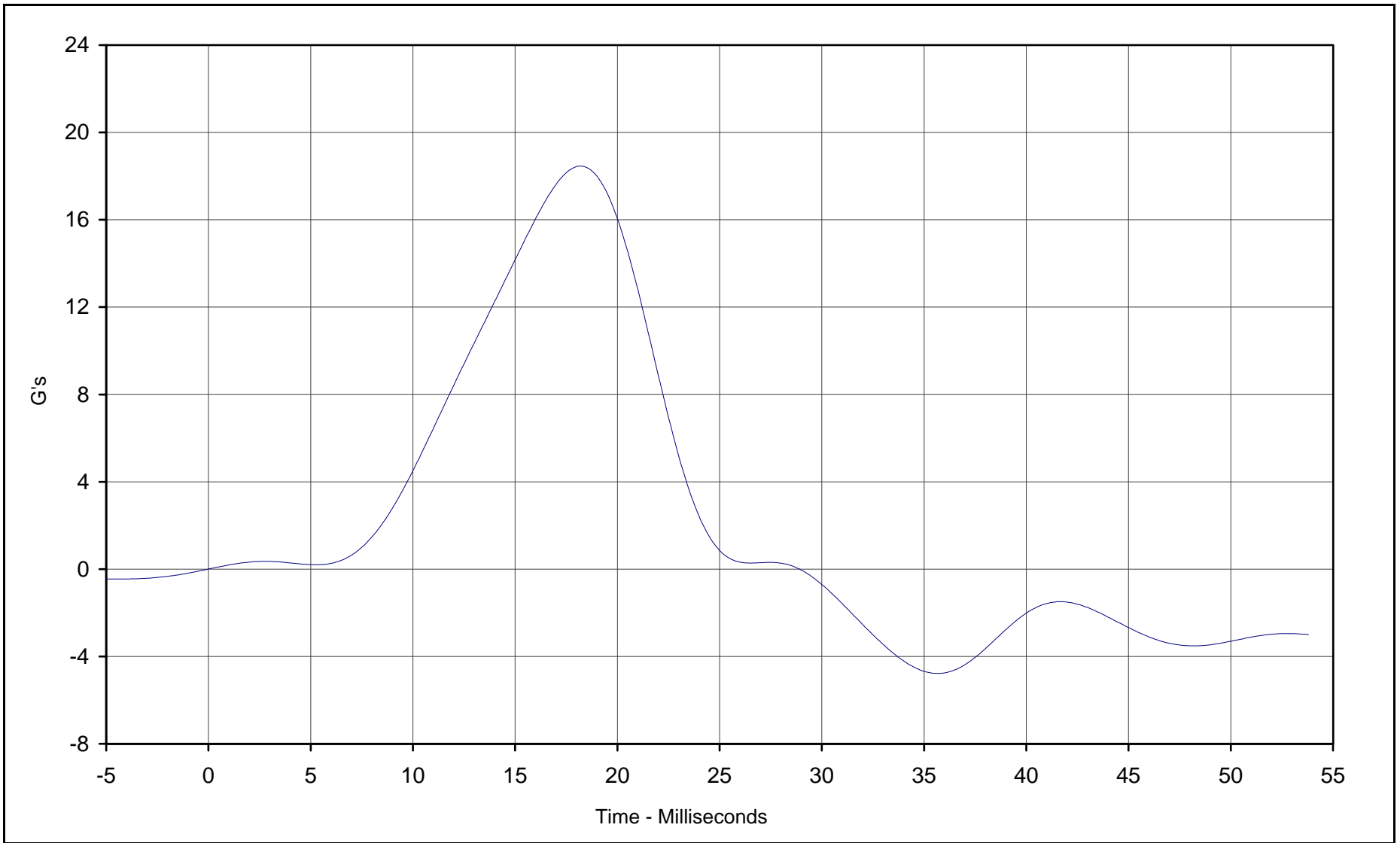
Test Program: SID Thorax Lateral Impact Test

Test Information: SID S/N: 275 Test I.D.: TI12D

KAR21003-05



C-41



Curve Description: Lower Spine Y Acceleration
Maximum Value: 18.5 at 18.2 Milliseconds
Minimum Value: -4.8 at 35.7 Milliseconds
SAE Filter Class: FIR 100
Date of Test: 12/15/00

Test Program: SID Thorax Lateral Impact Test
Test Information: SID S/N: 275 Test I.D.: T112D



KAR21003-05



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

ATD Serial No.: 275

Part Serial No.: N/A

Test I.D.: PI12D

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.5	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	4.21 to 4.33	4.25	Pass
Pelvis Acceleration	G's	40.0 to 60.0	54.7	Pass
Acceleration Time Above 20 G's	Msec.	3.0 to 7.0 Msec.	5.9	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Overall Test Results				Pass

Laboratory Technician

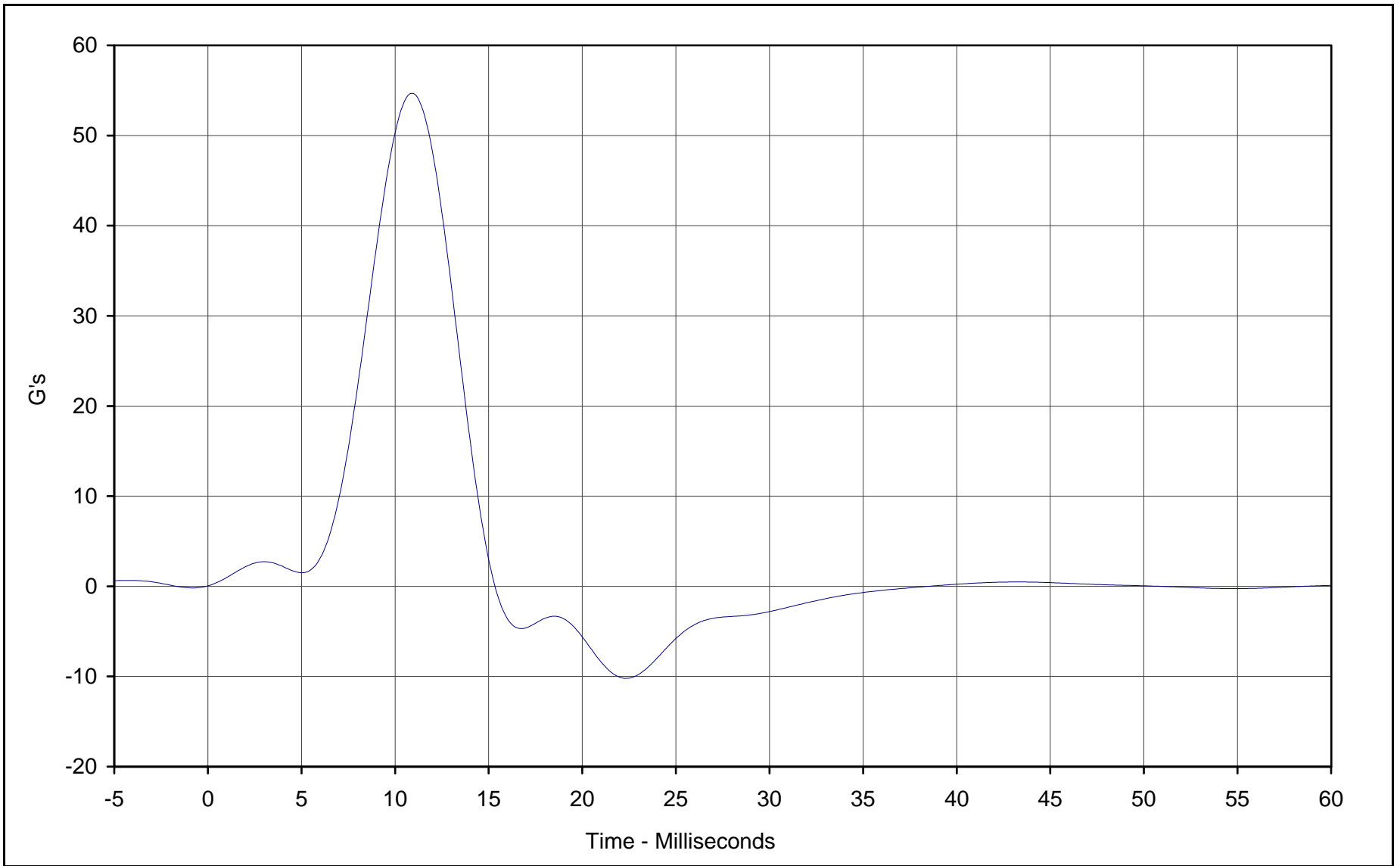
December 15, 2000

Test Date

Approved By

Date

C-43



Curve Description: Pelvis Y Axis Acceleration

Maximum Value: 54.7 at 10.9 Milliseconds

Minimum Value: -10.2 at 22.3 Milliseconds

SAE Filter Class: FIR 100

Date of Test: 12/15/00

Test Program: SID Left Side Pelvis Lateral Impact

Test Information: SID S/N: 275 Test I.D.: PI12D

KAR21003-05





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

ATD Serial No.: 275

Part Serial No.: N/A

Test I.D.: AB12J

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°F	66 to 78	70	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Force at 0.5 Inches of Displacement	Pounds	23.0 to 36.0	29.0	Pass
Force at 0.75 Inches of Displacement	Pounds	36.0 to 50.0	43.2	Pass
Force at 1.0 Inches of Displacement	Pounds	50.0 to 63.0	60.0	Pass
Force at 1.3 Inches of Displacement	Pounds	73.0 to 88.0	83.7	Pass
Overall Test Results				Pass

Laboratory Technician

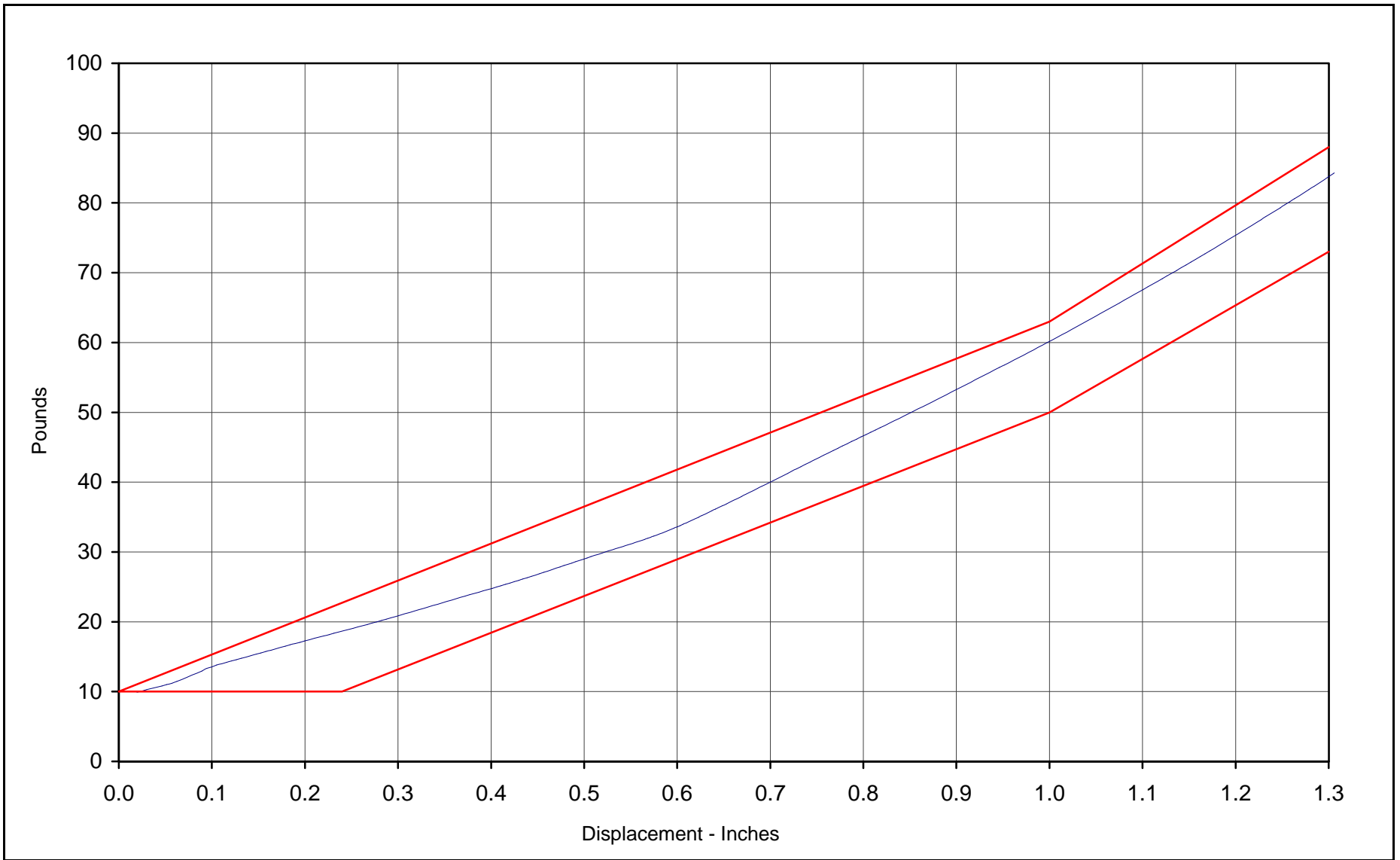
December 16, 2000

Test Date

Approved By

Date

C-45



Curve Description: Abdomen Force vs. Displacement

Test Program: SID Abdominal Compression

Force at 0.5 In.: 29.0 Pounds

Test Information: SID S/N: 275 Test I.D.: AB12J

Force at 0.75 In.: 43.2 Pounds

Force at 1.0 In.: 60.0 Pounds

Force at 1.3 In.: 83.7 Pounds

Date of Test: 12/16/00



KARR21003-05



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

ATD Serial No.: 275

Part Serial No.: N/A

Test I.D.: HD12J

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	223.5	Pass
Peak Lateral Acceleration	G's	≤10.0	7.0	Pass
Time Above 100 G's	Msec.	0.9 to 1.5	1.0	Pass
Is Resultant Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Overall Test Results				Pass

Laboratory Technician

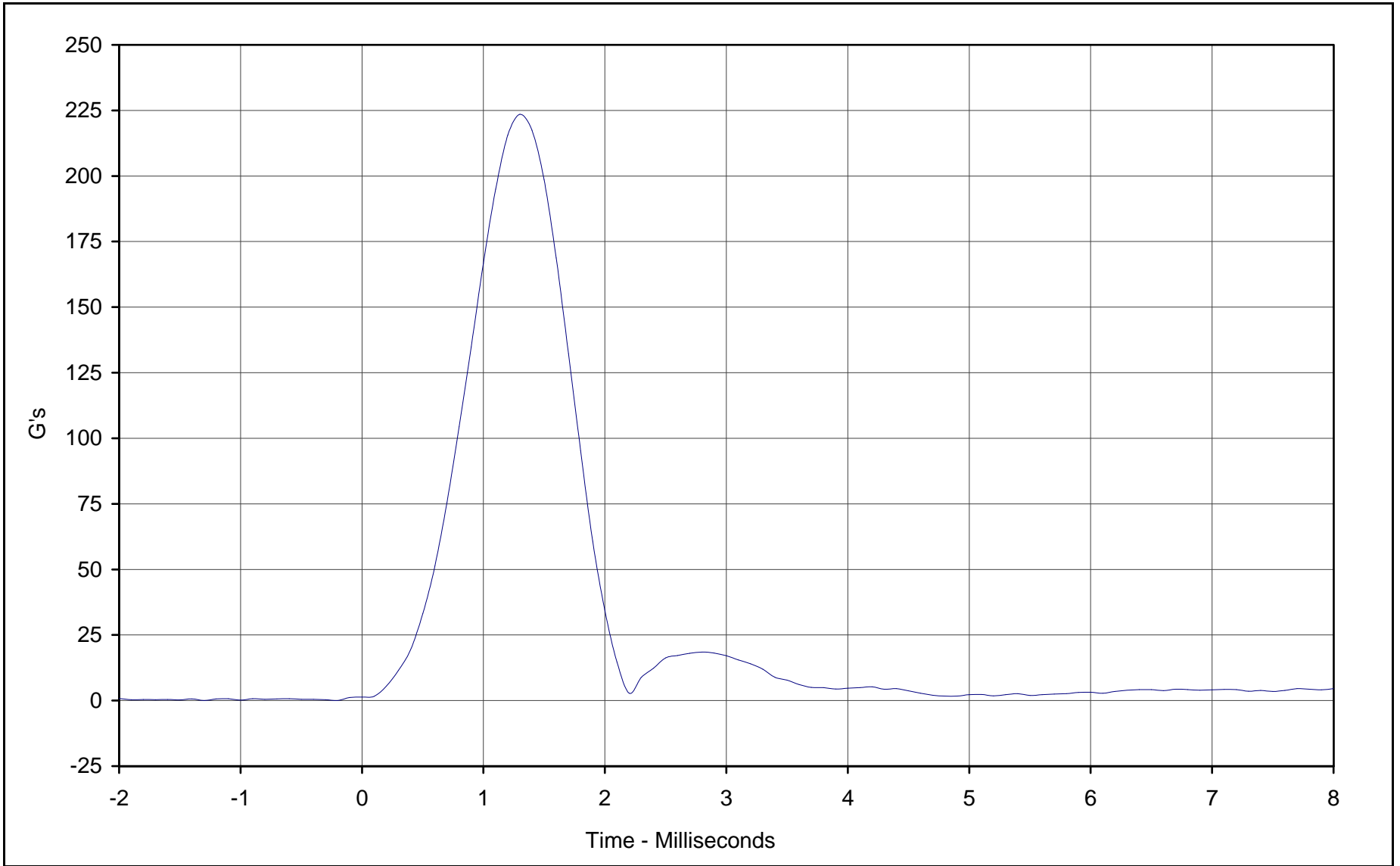
December 16, 2000

Test Date

Approved By

Date

C-47



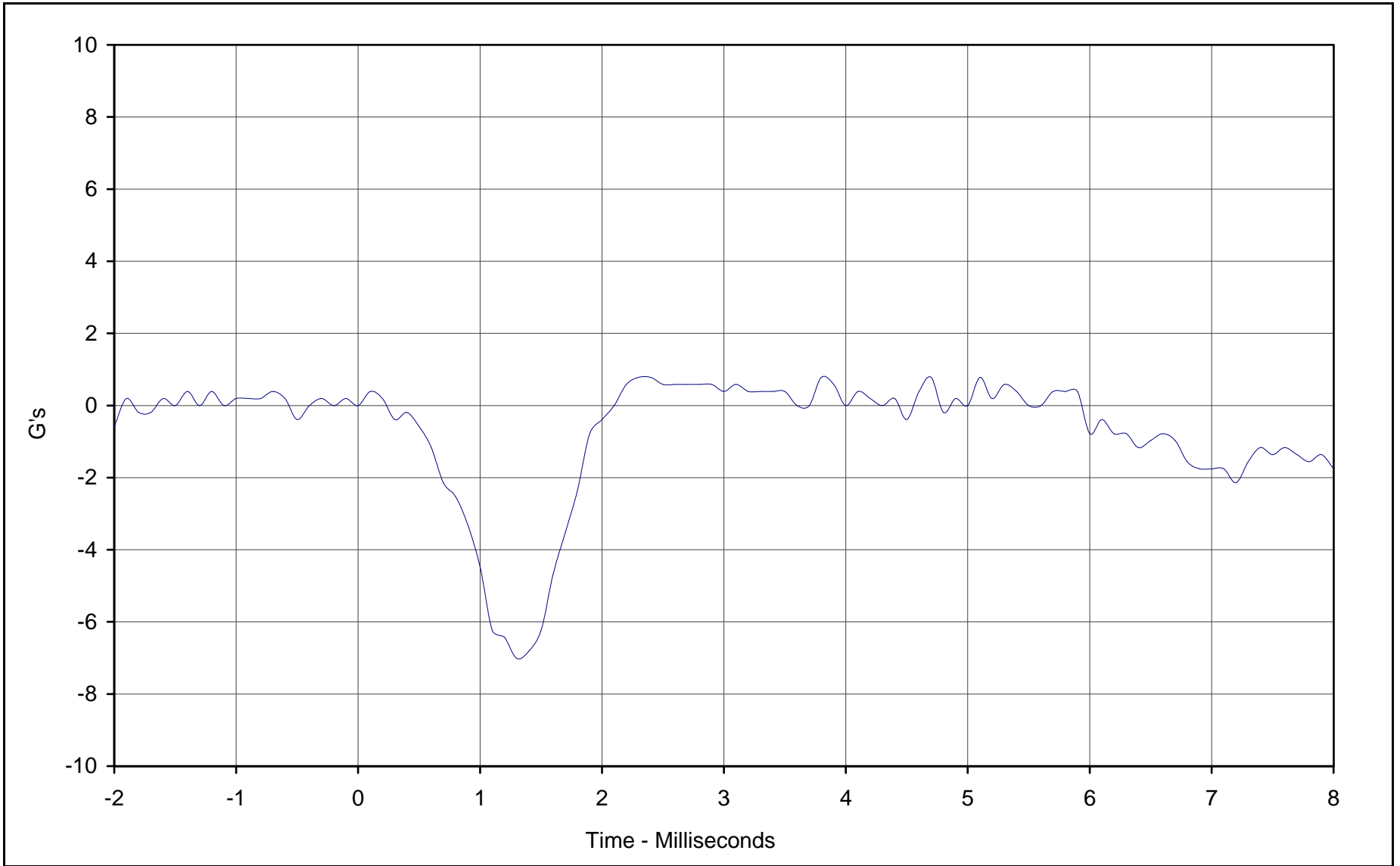
Curve Description: Head Resultant Acceleration
Maximum Value: 223.5 at 1.3 Milliseconds
Minimum Value: 1.3 at 0.0 Milliseconds
SAE Filter Class: 1000
Date of Test: 12/16/00

Test Program: SID Head Drop Calibration
Test Information: SID S/N: 275 Test I.D.: HD12J



KAR21003-05

C-48



Curve Description: Head Y Axis Acceleration
Maximum Value: 0.8 at 2.3 Milliseconds
Minimum Value: -7.0 at 1.3 Milliseconds
SAE Filter Class: 1000
Date of Test: 12/16/00

Test Program: SID Head Drop Calibration
Test Information: SID S/N: 275 Test I.D.: HD12J



KAR21003-05

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 274
12/14/00
2001 Acura 3.2 TL 4 Door Sedan**

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
1	Head CG	X	KEAC086	Accel.,1/2 bridge	Endevco	7264-2000X	G
2	Head CG	Y	KEAC087	Accel.,1/2 bridge	Endevco	7264-2000Y	G
3	Head CG	Z	KEAC088	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. Yellow	%
13	Pelvis Contact	N/A	T0	Contact Switch	Tapeswitch	8 oz. Yellow	%

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KAR21003-05

**55/28 km/h Side Impact NCAP
Instrumentation Data Channel Assignments
Passenger S.I.D. Serial Number 275
12/14/00
2001 Acura 3.2 TL 4 Door Sedan**

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
14	Head CG	X	KEAC069	Accel.,1/2 bridge	Endevco	7264-2000X	G
15	Head CG	Y	KEAC080	Accel.,1/2 bridge	Endevco	7264-2000Y	G
16	Head CG	Z	KEAC082	Accel.,1/2 bridge	Endevco	7264-2000Z	G
17	Upper Rib Primary	Y	KEAC066	Accel.,1/2 bridge	Endevco	7264-2000X	G
18	Lower Rib, Primary	Y	KEAC067	Accel.,1/2 bridge	Endevco	7264-2000Y	G
19	Lower Spine, Primary	Y	KEAC068	Accel.,1/2 bridge	Endevco	7264-2000Z	G
20	Pelvis, Primary	Y	KEAC079	Accel.,1/2 bridge	Endevco	7264-2000X	G
21	Upper Rib Redundant	Y	KEAC073	Accel.,1/2 bridge	Endevco	7264-2000X	G
22	Lower Rib, Redundant	Y	KEAC074	Accel.,1/2 bridge	Endevco	7264-2000Y	G
23	Lower Spine, Redundant	Y	KEAC075	Accel.,1/2 bridge	Endevco	7264-2000Z	G
24	Pelvis, Redundant	Y	KEAC081	Accel.,1/2 bridge	Endevco	7264-2000X	G
25	Thorax Contact	Y	T0	Contact Switch	Tapeswitch	8 oz. Yellow	%
26	Pelvis Contact	Y	T0	Contact Switch	Tapeswitch	8 oz. Yellow	%

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KAR21003-05

**55/28 km/h Side Impact NCAP
Instrumentation Data Channel Assignments
Vehicle Accelerometers
12/14/00
2001 Acura 3.2 TL 4 Door Sedan**

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
27	Right at Sill Front Seat	X	KETX2A	Accel., Triax	I.C. Sensor	3031-200	G
28	Right at Sill Front Seat	Y	KETX2B	Accel., Triax	I.C. Sensor	3031-200	G
29	Right at Sill Front Seat	Z	KETX2C	Accel., Triax	I.C. Sensor	3031-200	G
30	Right at Sill Rear Seat	X	KETX3A	Accel., Triax	I.C. Sensor	3031-500	G
31	Right at Sill Rear Seat	Y	KETX3B	Accel., Triax	I.C. Sensor	3031-500	G
32	Right at Sill Rear Seat	Z	KETX3C	Accel., Triax	I.C. Sensor	3031-500	G
33	Rear Floorpan Above Axle	X	KETX4A	Accel., Triax	I.C. Sensor	3031-500	G
34	Rear Floorpan Above Axle	Y	KETX4B	Accel., Triax	I.C. Sensor	3031-500	G
35	Rear Floorpan Above Axle	Z	KETX4C	Accel., Triax	I.C. Sensor	3031-500	G
36	Left Sill at Rear Door	Y	KEVA012	Accel., Vehicle block	I.C. Sensor	3031-500	G
37	Left Sill at Front Door	Y	KEVA001	Accel., Vehicle block	I.C. Sensor	3031-500	G
38	Left Front Door Centerline	Y	ICST004X	Accel., Triax	I.C. Sensor	3031-500	G
39	Rear Occupant Compartment	Y	KEVA006	Accel., Vehicle block	I.C. Sensor	3031-200	G
40	Left Front Door Mid-Rear	Y	ICST004Y	Accel., Triax	I.C. Sensor	3031-500	G
41	Left Front Door Upper Centerline	Y	ICST004Z	Accel., Triax	I.C. Sensor	3031-500	G
42	Rear Door Mid-Rear	Y	ICST005X	Accel., Triax	I.C. Sensor	3031-500	G
43	Rear Door Upper Centerline	Y	ICST005Y	Accel., Triax	I.C. Sensor	3031-500	G
44	B-Post Lower	Y	KEBX2A	Accel., Biax	I.C. Sensor	3031-500	G
45	B-Post Middle	Y	KEBX2B	Accel., Biax	I.C. Sensor	3031-500	G
46	A-Post Lower	Y	KEBX1A	Accel., Biax	I.C. Sensor	3031-200	G
47	A-Post Middle	Y	KEBX1B	Accel., Biax	I.C. Sensor	3031-500	G
48	Front Seat Track	Y	KEIC008Y	Single	I.C. Sensor	3031-500	G
49	Rear Seat Structure	Y	N/A	N/A	N/A	N/A	N/A
50	Vehicle CG	X	KETX2A	Accel., Triax	I.C. Sensor	3031-200	G
51	Vehicle CG	Y	KETX2B	Accel., Triax	I.C. Sensor	3031-200	G
52	Vehicle CG	Z	KETX2C	Accel., Triax	I.C. Sensor	3031-200	G

**55/28 km/h Side Impact NCAP
Instrumentation Data Channel Assignments
Moving Deformable Barrier
12/14/00
2001 Acura 3.2 TL 4 Door Sedan**

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
53	MDB CG	X	ICST001X	Accel., Triax	I.C. Sensor	3031-100	G
54	MDB CG	Y	ICST001Y	Accel., Triax	I.C. Sensor	3031-100	G
55	MDB CG	Z	ICST001Z	Accel., Triax	I.C. Sensor	3031-100	G
56	MDB Rear Centerline	X	ICST002X	Accel., Biax	I.C. Sensor	3031-100	G
57	MDB Rear Centerline	Y	ICST002Y	Accel., Biax	I.C. Sensor	3031-100	G
58	Right Bumper Contact	N/A	T0	Contact Switch	Tapeswitch	40 oz. Grey	%