

REPORT NUMBER: 214D-MGA-2001-006

**SAFETY COMPLIANCE TESTING FOR FMVSS 214
SIDE IMPACT PROTECTION
INDICANT**

**Hyundai Motor Company
2001 Hyundai Accent GL 4 door
NHTSA NUMBER:C10515**

**PREPARED BY:
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BURLINGTON, WI 53105**



January 29, 2001

FINAL REPORT

**PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
OFFICE OF VEHICLE SAFETY COMPLIANCE
400 SEVENTH STREET, SW, ROOM 6111 (NSA-30)
WASHINGTON, D.C. 20590**

This final test report was prepared for the U.S. Department of Transportation, National Highway Traffic Safety Administration, in response to Contract Number DTNH22-97-C-11033.

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16. Abstract A 55/28 km/h 90° Moving Deformable Barrier INDICANT Compliance Test was conducted on the subject 2001 Hyundai Accent GL 4 door in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-214D-05 Side Impact Protection (except the test was conducted 8kph (5 mph) faster than the standard specifies) for determination of FMVSS No. 214 Side Impact Protection. The test was conducted at MGA Research Corporation, in Burlington Wisconsin, on January 29, 2001. The impact velocity of the Moving Deformable Barrier (MDB) was 62.1 kph, and the ambient temperature at the struck side (driver's) of the vehicle was 21 °C. The target vehicle's maximum post test static crush was 331mm at level 2. The test vehicle's occupant performance is as follows: <table style="margin-left: auto; margin-right: auto; border: none;"> <thead> <tr> <th></th> <th style="text-align: center;"><u>DRIVER</u></th> <th style="text-align: center;"><u>PASS.</u></th> </tr> </thead> <tbody> <tr> <td>Left Upper Rib (LUR) Accel., g</td> <td style="text-align: center;">72</td> <td style="text-align: center;">109</td> </tr> <tr> <td>Left Lower Rib (LLR) Accel., g</td> <td style="text-align: center;">69</td> <td style="text-align: center;">120</td> </tr> <tr> <td>Lower Spine (T₁₂) Accel., g</td> <td style="text-align: center;">90</td> <td style="text-align: center;">77</td> </tr> <tr> <td>Thoracic Trauma Index (TTI)</td> <td style="text-align: center;">81</td> <td style="text-align: center;">98</td> </tr> <tr> <td>Pelvis (PEV) Accel., g</td> <td style="text-align: center;">101</td> <td style="text-align: center;">80</td> </tr> <tr> <td>HIC</td> <td style="text-align: center;">783</td> <td style="text-align: center;">1295</td> </tr> </tbody> </table> The doors on the struck side of the vehicle did not separate from the body at the hinges or latches and the opposite doors did not open during the side impact event.					<u>DRIVER</u>	<u>PASS.</u>	Left Upper Rib (LUR) Accel., g	72	109	Left Lower Rib (LLR) Accel., g	69	120	Lower Spine (T ₁₂) Accel., g	90	77	Thoracic Trauma Index (TTI)	81	98	Pelvis (PEV) Accel., g	101	80	HIC	783	1295
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SECTION 1

PURPOSE AND TEST PROCEDURE

1.1 PURPOSE

This side impact test is conducted as part of the FY' 2001 test program sponsored by the National Highway Traffic Safety Administration (NHTSA), under contract No. DTNH22-97-C-11033. The purpose of this test was to evaluate side impact protection in a 2001 Hyundai Accent GL 4 door manufactured by Hyundai Motor Company.

1.2 TEST PROCEDURE

The side impact test was conducted in accordance with the current National Highway Traffic Safety Administration (NHTSA), Office of Vehicle Safety Compliance (OVSC), laboratory test procedure TP-214D-05, dated August 2, 1999 and the corresponding MGA Research Corporation Test Procedure MGA-NHTSA2 with the exception of the test speed, which was at the NCAP High Speed Lateral Impact level (62.1 kph, approximately 8 kph faster than compliance speed). The procedures for receiving, inspection, testing, and reporting of test results are described in the test procedures and are not repeated in this report.

MGA does not endorse or certify products. The manufacturer's name appears solely for identification purposes.

SECTION 2

SUMMARY OF SIDE IMPACT TEST

2.1 SUMMARY OF SIDE IMPACT TEST

A model year 2001 Hyundai Accent GL 4 door was impacted on the left (driver's) side by a Moving Deformable Barrier (MDB) which was moving forward in a 27° crabbed position to the tow road guidance system at a velocity of 62.1 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 1294 kg and the test weight of the MDB was 1362 kg. The test was conducted at MGA Research Corporation in Burlington, Wisconsin, on January 29, 2001.

One (1) real-time motion picture camera and nine (9) high-speed motion picture cameras were used to document the impact event. Camera locations and pertinent camera information are documented in the data sheets. Pre- and post-test photographs of the vehicle and Side Impact Dummies (SID's) can be found in Appendix A. Two 50th percentile adult male SID's were placed in the driver and left rear passenger designated seating positions according to instructions specified in the OVSC Side Impact Laboratory Test Procedure dated August 19, 1999. Each SID was instrumented with 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 (20) structural accelerometers and the MDB was instrumented with five (5) accelerometers and two (2) contact switches on the bumper to compare left side to right side bumper impact timing. All data channels were recorded with a fully self contained on-board EME Data Acquisition System. 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 331 mm at level 2, 1200 mm rearward of the left vertical impact point. The driver and passenger SID's, Serial Nos. 036 and 037 respectively, were calibrated just prior to this test. The SID's injury criteria is summarized as follows:

Measurements	Units	Driver	Passenger
Thoracic Trauma Index (TTI)	G's	81	98
Peak Pelvic G's (PEV)	G's	101	80
Head Injury Criteria (HIC)	none	783	1295

Test 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.

TEST NOTES

The following accelerometers were not used for this test:

Left Front Door on Centerline
Midrear of Left Front Door
Left Front Door Upper Centerline
Midrear of Left Rear door
Left Rear Door Upper Centerline
Rear Seat Track

SECTION 3

SIDE IMPACT DUMMY (SID) AND VEHICLE TEST DATA

Test Vehicle: 2001/Hyundai/Accent/GL 4 door

NHTSA No.: C10515

Test Program: FMVSS 214

Test Date: January 29, 2001

CONVERSION FACTORS USED IN THIS REPORT*

Quantity	Typical Application	Old 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 Pressure	lbf/in ²	kPa	7.0
Volume	Liquid	gal	liter	3.785
Temperature	General Use	°F	°C	$=(\text{tf} - 32)/1.8$
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/Hyundai/Accent/GL 4 doorNHTSA No.: C10515Test Program: FMVSS 214Test Date: January 29, 2001**TEST VEHICLE INFORMATION**

Make	Hyundai
Model	Accent GL
Body Style	4 door
NHTSA No.	C10515
VIN	KMHCG45C01U151462
Color	White
Delivery Date	1/18/01
Odometer Reading (mile)	56
Dealer	Rosen Hyundai
Transmission	5 speed manual
Final Drive	front
Number of Cylinders	4
Engine Displacement (L)	1.6
Engine Placement	lateral

TEST VEHICLE OPTIONS

Front Airbags	yes
Side Airbags	no
Power Windows	no
Power Steering	yes
Power Door Locks	no
Tilt Wheel	no
Air Conditioning	yes
Power Brakes	no
Disc Brakes, Front	yes
Disc Brakes, Rear	yes
Anti-lock Brakes	no
AM/FM/Cassette	yes
Anti-theft System	no
Cruise Control	no

DATA FROM CERTIFICATION LABEL

Manufactured By	Hyundai Motor Company
Date of Manufacture	August 7, 2000

GVWR (kg)	3310
GAWR Front (kg)	1810
GAWR Rear (kg)	1875

DATA FROM TIRE PLACARD

Measured Parameter	Front	Rear
Maximum Tire Pressure (kPa)	207	230
Cold Pressure (kPa)	207	230
Recommend Tire Size	P175/70R13	P175/70R13
Tire Size on Vehicle	P175/70R13	P175/70R13
Tire Manufacturer	Hankook	Hankook

Measured Parameter	Front	Rear	Third	Total
Type of Seats	Bucket	Bench		
Number of Occupants	2	3		5
Capacity Wt. (VCW) (kg)				385.6
Cargo Weight (RCLW) (kg)				45.4

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

Test Vehicle: 2001/Hyundai/Accent/GL 4 door

NHTSA No.: C10515

Test Program: FMVSS 214

Test Date: January 29, 2001

TEST VEHICLE WEIGHTS

	Units	As Delivered (UVW)			As Tested (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	337.5	215.5	553	384.2	297.6	681.8
Right	kg	326.6	214.6	541.2	348.8	263.1	611.9
Ratio	%	60.7	39.3		56.7	43.3	
Totals	kg	664.1	430.1	1094.2	733.0	560.7	1293.7

TARGET TEST WEIGHT CALCULATION*

Measured Parameter	Units	Value
Total Delivered Weight (UVW)	kg	1094.2
Weight of 2 P572F Side Impact Dummies	kg	161.5
Rated Cargo/Luggage Weight (RCLW)	kg	45.4
Calculated Vehicle Target Weight (TVTW)	kg	1301.1

*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	639	641	636	643	962
As Tested	mm	622	638	598	616	1061
Fully Loaded	mm	621	638	592	616	

GENERAL TEST VEHICLE DATA

Measurement Description	Units	Value
Test Vehicle Wheel Base	mm	2448
Total Vehicle Length at Left Side	mm	3688
Total Vehicle Length at Centerline	mm	4340
Total Vehicle Length at Right Side	mm	3689
Weight of Ballast in Cargo Area	kg	0
Amount of Stoddard Solvent in Fuel Tank	liters	41.6

TEST VEHICLE VERTICAL IMPACT LINE DATA

Measurement Description	Units	Value
Test Vehicle Wheel Base	mm	2448
Target Impact Point Aft of Front Axle	mm	284
Actual Impact Point Aft of Front Axle	mm	264

DATA SHEET NO. 1...(continued)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2001/Hyundai/Accent/GL 4 door

NHTSA No.: C10515

Test Program: FMVSS 214

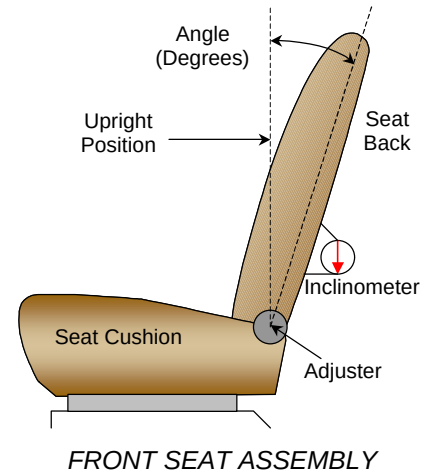
Test Date: January 29, 2001

NORMAL DESIGN RIDING POSITION

The driver's seat back is positioned to the manufacturer's designated position. The procedure for the seat is as follows: The seat back was set to the fifth latching position from the forward most latching position. The rear passenger seat is fixed; no adjustments can be made.

Driver seat back angle: Fifth latching position with full
forward as 0

Passenger seat back angle: non adjustable



SEAT FORE/AFT POSITIONS

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

Driver seat fore/aft total travel: 220 mm

Rear passenger seat fore/aft total travel: non-adjustable

Driver seat fore/aft position: 10th position rearward out of 19 positions, first as 1

Rear passenger seat fore/aft position: non adjustable

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, with the uppermost position numbered "1". The driver's "D" ring anchorage is placed in position 2.

DATA SHEET NO. 1...(continued)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2001/Hyundai/Accent/GL 4 door

NHTSA No.: C10515

Test Program: FMVSS 214

Test Date: January 29, 2001

FUEL TANK CAPACITY DATA

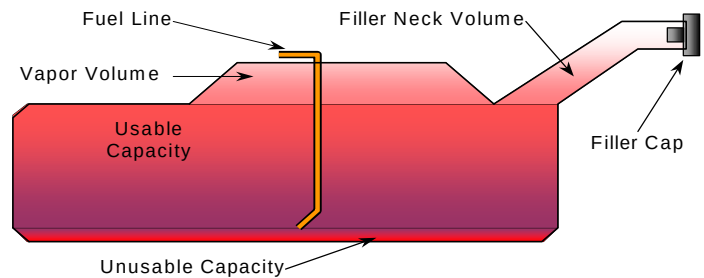
The "Usable Capacity" of the standard equipment fuel tank is: 45.0 liters

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

92-94% of "Usable Capacity" for certification to FMVSS 301 requirement: 41.4 - 42.3 liters

Actual amount of Stoddard solvent added to vehicle for certification test: 41.6 liters

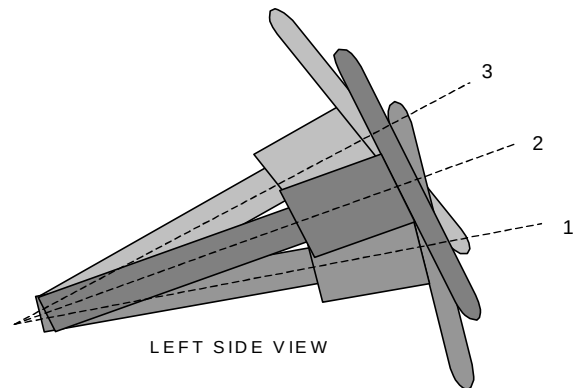
The test vehicle is equipped with an electric fuel pump. The fuel pump will operate for approximately three (3) seconds with the ignition in the "ON" position, after which the fuel pump automatically shuts off. The fuel filler door is located on the left rear fender.



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. A square is placed across the rim of the steering wheel, and inclinometer is placed onto the square and the angle is measured. The tested vehicle has a fixed steering column, no adjustment can be made.



STEERING COLUMN ASSEMBLY

Lowermost, position 1: NA

Geometric center, position 2: NA

Uppermost, position 3: NA

DATA SHEET NO. 2**TEST VEHICLE SUMMARY OF RESULTS**Test Vehicle: 2001/Hyundai/Accent/GL 4 doorNHTSA No.: C10515Test Program: FMVSS 214Test Date: January 29, 2001**TEST VEHICLE WEIGHTS**

	Units	As Delivered (UVW)			As Tested (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	337.5	215.5	553	384.2	297.6	681.8
Right	kg	326.6	214.6	541.2	348.8	263.1	611.9
Weight Ratio	%	60.7	39.3		56.7	43.3	
Totals	kg	664.1	430.1	1094.2	733.0	560.7	1293.7

MAXIMUM EXTERIOR STATIC CRUSH

Level	Measured Parameter	Units	Maximum Crush	Above Ground
Level 1	Sill Top Height	mm	182	230
Level 2	Occupant H-Point	mm	331	428
Level 3	Mid Door	mm	319	575
Level 4	Window Sill	mm	267	850
Level 5	Window Top	mm	96	1310
N/A	Maximum Penetration	mm	331	428

INSTRUMENTATION

Driver SID Accelerometers	11
Passenger SID Accelerometers	11
Vehicle Structure Accelerometers	20
MDB Accelerometers	5
Total	47

DATA SHEET NO. 3**MOVING DEFORMABLE BARRIER (MDB) SUMMARY OF RESULTS**Test Vehicle: 2001/Hyundai/Accent/GL 4 doorNHTSA No.: C10515Test Program: FMVSS 214Test Date: January 29, 2001**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	395.1	293.8	
Right	kg	385.7	287.4	
Ratio	%	57.3	42.7	
Totals	kg	780.8	581.2	1362.0

SPEED AND IMPACT ANGLE DATA

Measured Parameter	Units	Requirement	Value
Trap No. 1 Velocity (Primary)	km/h	61.1 to 62.7	62.1
Trap No. 2 Velocity (Redundant)	km/h	61.1 to 62.7	61.8
MDB CL to Target Vehicle CL	degrees	88.5 to 91.5	90

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	156
B	Top of Bumper	533	800	Left	144
C	Mid Level	686	800	Left	80
D	Top of Stack	813	800	Left	121

MDB INSTRUMENTATION AND CAMERAS

Accelerometers	5
Contact Switches	2
High Speed Cameras	2

DATA SHEET NO. 4**POST TEST OBSERVATIONS**Test Vehicle: 2001/Hyundai/Accent/GL 4 doorNHTSA No.: C10515Test Program: FMVSS 214Test Date: January 29, 2001**TEST DUMMY INFORMATION AND CONTACT POINTS**

Description	Front Seat SID	Rear Seat SID
Dummy Type / Serial No.	SID/036	SID/037
Head Contact	B post	C post
Upper Torso Contact	Door panel	Door panel
Lower Torso Contact	Armrest	Door panel
Left Knee Contact	Door panel	Door panel
Right Knee Contact	Left Knee	Left Knee

POST TEST DOOR OPENING AND SEAT TRACK INFORMATION

Description	Front	Rear
Left Side Door Opening	remained closed	remained closed
Right Side Door Opening	remained closed	remained closed
Seat Movement	none	none
Seat Back Failure	none	none

POST TEST STRUCTURAL OBSERVATIONS

Critical Areas of Performance	Observations and Conclusions
Pillar Performance	No separation
Sill Separation	None
Windshield Damage	Windshield broke
Window Damage	Left side windows broke
Other Notable Effects	None noted

AIRBAG DEPLOYMENT

	Driver	Front Passenger	Rear Passenger
Front	Deployed	Deployed	
Side			

MDB LEFT EDGE IMPACT POINT DATA

Measured Parameter	Units	Requirement	Value
Horizontal Offset	mm	+/- 50	20 forward
Vertical Offset	mm	+/-20	3 up

SECTION 4
OCCUPANT AND VEHICLE INFORMATION

DATA SHEET NO. 5

SID INJURY CRITERIA AND SENSOR DATA

Test Vehicle: 2001/Hyundai/Accent/GL 4 door

NHTSA No.: C10515

Test Program: FMVSS 214

Test Date: January 29, 2001

THORAX AND PELVIS PEAK ACCELERATIONS (FIR 100 Filtered)

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Upper Rib (LUR)	Y	G's	72.3	31.9	-13.7	86.9	109.4	40.6	-22.3	45.6
Upper Rib (LUR) (R)	Y	G's	71.0	31.9	-13.7	86.9	113.0	40.6	-22.0	45.6
Lower Rib (LLR)	Y	G's	69.3	31.3	-9.5	46.9	119.7	38.8	-20.0	68.1
Lower Rib (LLR) (R)	Y	G's	68.1	31.3	-9.0	46.3	121.6	38.8	-17.7	68.1
Lower Spine (T ₁₂)	Y	G's	90.2	35.0	-22.2	68.8	77.2	44.4	-21.3	71.3
Lower Spine (T ₁₂) (R)	Y	G's	90.8	35.0	-22.9	68.8	75.8	44.4	-21.4	71.3
Pelvis (PEV)	Y	G's	101.4	33.8	-5.5	79.4	80.4	30.6	-9.9	70.0
Pelvis (PEV) (R)	Y	G's	102.5	33.8	-5.6	50.6	81.0	30.6	-10.4	70.6

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

Location	Driver				Passenger			
	LUR	T ₁₂	TTI(g)	PEV(g)	LLR	T ₁₂	TTI(g)	PEV(g)
Rib, Spine, and Pelvis	72.3	90.2	81.3	101.4	119.7	77.2	98.5	80.4
Rib, Spine, and Pelvis (R)	71.0	90.8	80.9	102.5	121.6	75.8	98.7	81.0

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	66.3	42.1	-13.8	79.2	37.1	50.9	-21.8	92.8
Head CG	Y	G's	164.7	42.4	-8.2	55.2	184.0	49.2	-26.1	61.9
Head CG	Z	G's	31.3	39.3	-41.2	40.0	49.4	47.9	-34.5	61.0
Head CG Resultant		G's	170.8	42.4			186.7	49.2		

HEAD INJURY CRITERIA (SAE CLASS 1000 Filtered)

Location	Driver				Passenger			
	HIC	T ¹	T ²	Avg G's	HIC	T ¹	T ²	Avg G's
Head CG	783	38.5	44.4	112.0	1295	46.8	54.7	121.9

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

DATA SHEET NO. 6

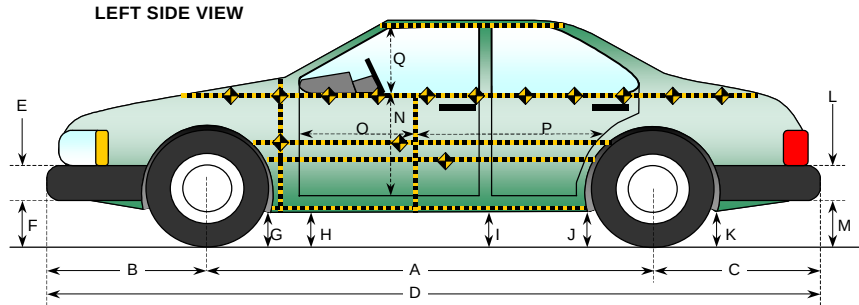
VEHICLE PRE-TEST AND POST-TEST MEASUREMENTS

Test Vehicle: 2001/Hyundai/Accent/GL 4 door

NHTSA No.: C10515

Test Program: FMVSS 214

Test Date: January 29, 2001



All Measurements in mm

Code	Measurement Description	Pre-Test	Post-Test	Difference
A	Wheelbase	2448	2386	-62
B	Front Axle to FSOV	775	836	61
C	Rear Axle to RSOV	971	922	-49
D	Total Length at Centerline	4340	4144	-196
E	Front Bumper Thickness	132	132	0
F	Front Bumper Bottom to Ground	374	400	26
G	Sill Height at Front Wheel Well	154	190	36
H	Sill Height at Front Door Leading Edge	148	181	33
I	Sill Height at "B" Pillar	146	144	-2
J1	Sill Height at Rear Wheel Well	138	141	3
J2	Pinch Weld Height at Rear Wheel Well	136	135	-1
K	Sill Height Aft of Rear Wheel Well	207	198	-9
L	Rear Bumper Thickness	253	253	0
M	Rear Bumper Bottom to Ground	267	259	-8
N	Sill Height to Window Bottom Sill	655	532	-123
O	Front Door Leading Edge to Impact CL	754	752	-2
P	Rear Door Trailing Edge to Impact CL	1038	960	-78
Q	Front Window Opening	465	473	8
R	Right Side Length	3689	3704	15
S	Left Side Length	3688	3603	-85
T	Vehicle Width at "B" Post	1672	1432	-240

DATA SHEET NO. 7

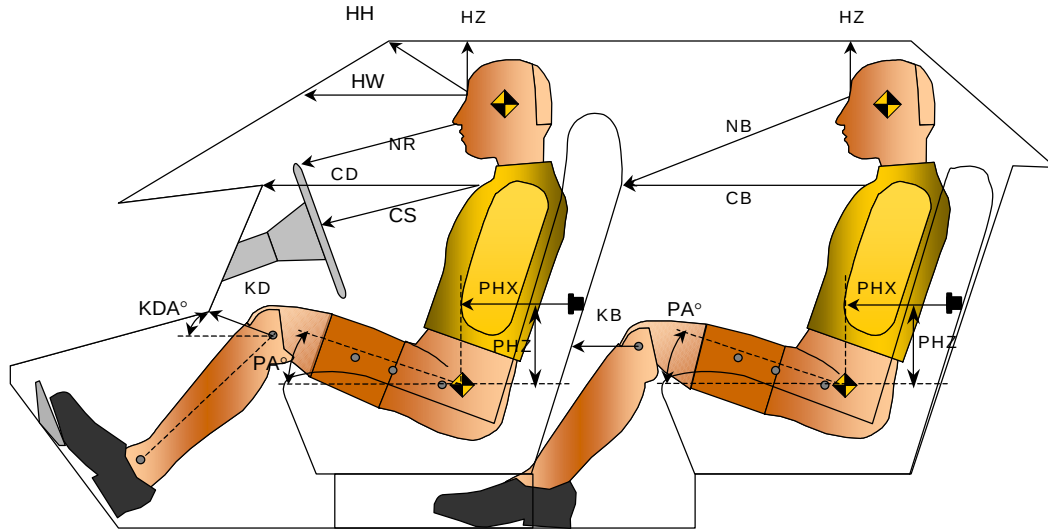
SID LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2001/Hyundai/Accent/GL 4 door

NHTSA No.: C10515

Test Program: FMVSS 214

Test Date: January 29, 2001



Driver Code	Pass. Code	Measurement Description	Driver		Passenger	
			Length(mm)	Angle(°)	Length(mm)	Angle(°)
HH		Head to Header	447			
HW		Head to Windshield	655			
HZ	HZ	Head to Roof	178		158	
NR	NB	Nose to Rim/Nose to Seatback	552		500	
CD	CB	Chest to Dash or Seatback	560		426	
CS		Chest to Steering Wheel	386			
KDL	KBL	Left Knee to Dash or Seatback	180	0.0	139	0.0
KDR	KBR	Right Knee to Dash or Seatback	218	0.0	136	0.0
PA	PA	Pelvic Angle		23.7		24.7
PHX	PHX	H-Point to Striker (X-Axis)	161		245	
PHZ	PHZ	H-Point to Striker (Z-Axis)	110		268	

DATA SHEET NO. 8

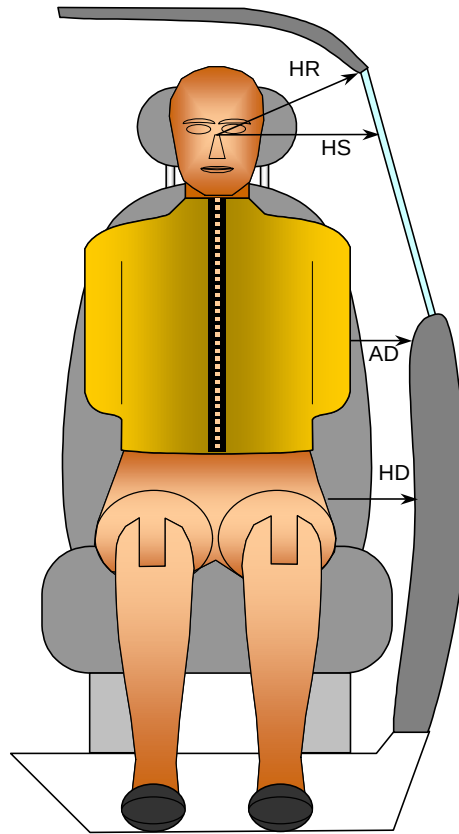
SID LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2001/Hyundai/Accent/GL 4 door

NHTSA No.: C10515

Test Program: FMVSS 214

Test Date: January 29, 2001



FRONT VIEW OF DUMMY

Code	Measurement Description	Units	Driver	Passenger
HR	Head to Side Header	mm	213	215
HS	Head to Side Window	mm	326	322
AD	Arm to Door	mm	113	120
HD	H-Point to Door	mm	138	184

DATA SHEET NO. 9

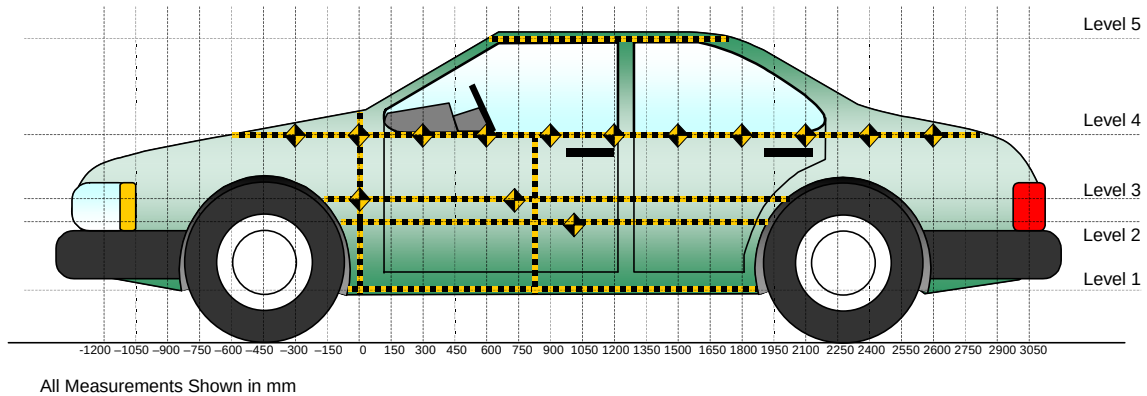
VEHICLE SIDE MEASUREMENTS

Test Vehicle: 2001/Hyundai/Accent/GL 4 door

NHTSA No.: C10515

Test Program: FMVSS 214

Test Date: January 29, 2001



LEFT SIDE VIEW

Measurements are taken with vehicle in the as tested condition.

Measurements along the vertical 800 mm.

All measurements below in mm.

Level	Measurement Description	Height Above Ground
5	Window	1310
4	Window Sill	850
3	Mid Door	575
2	Occupant H-Point	428
1	Sill Top	230

DATA SHEET NO. 10

VEHICLE EXTERIOR CRUSH PROFILES

Test Vehicle: 2001/Hyundai/Accent/GL 4 door

NHTSA No.: C10515

Test Program: FMVSS 214

Test Date: January 29, 2001

	Pre-Test					Post-Test					Difference				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
-900															
-750			477	571				508	600				31	29	
-600			447	546				488	584				41	38	
-450				520					570					50	
-300				502					560					58	
-150				487					556					69	
0			414	477				602	561				188	84	
150	482	436	415	471		581	685	648	580		99	249	233	109	
300	481	436	414	470		619	725	694	615		138	289	280	145	
450	482	436	414	469		629	736	706	664		147	300	292	195	
600	481	436	414	468		636	742	708	689		155	306	294	221	
750	481	435	414	467	681	640	750	712	699	762	159	315	298	232	81
900	481	435	414	465	661	643	758	718	699	752	162	323	304	234	91
1050	481	434	414	464	656	651	759	720	702	764	170	325	306	238	108
1200	481	434	414	464	657	663	765	733	704	785	182	331	319	240	128
1350	478	434	414	464	656	650	765	727	728	770	172	331	313	264	114
1500	476	434	414	464	657	637	759	724	731	753	161	325	310	267	96
1650	476	433	414	464	662	632	747	718	722	744	156	314	304	258	82
1800	475	432	414	465	665	645	713	682	680	735	170	281	268	215	70
1950			414	465	677			592	580	739			178	115	62
2100			408	467				518	526				110	59	
2250			414	470				494	544				80	74	
2400			432	480				487	538				55	58	
2550			450	490				494	538				44	48	
2700			474	510				510	543				36	33	
2850			505					529					24		
3000															

Reference plane is parallel to test vehicle longitudinal centerline

Given dimensions = Reference plane to car body

DATA SHEET NO. 10...(continued)

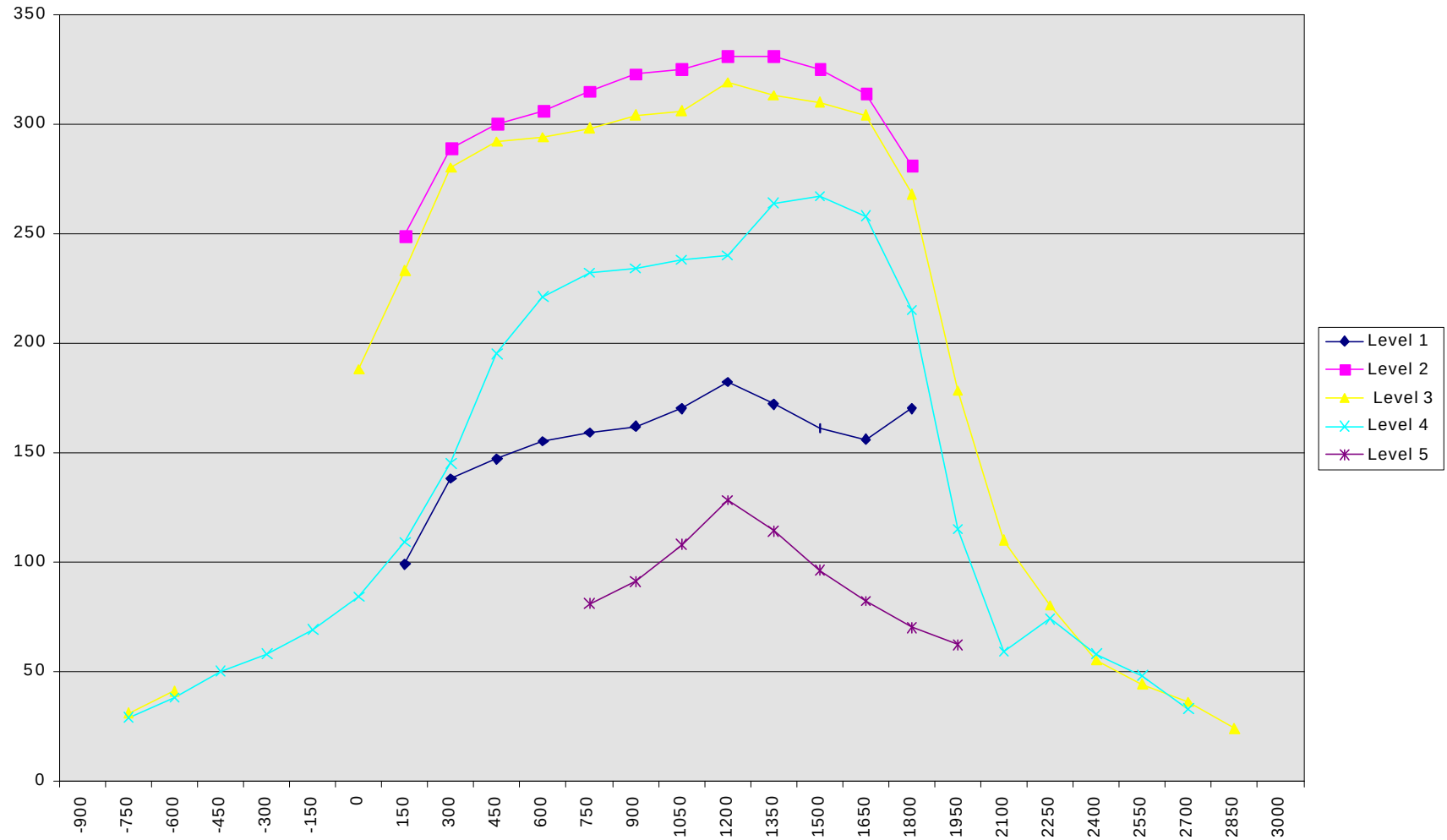
VEHICLE EXTERIOR CRUSH PROFILES

Test Vehicle: 2001/Hyundai/Accent/GL 4 door

NHTSA No.: C10515

Test Program: FMVSS 214

Test Date: January 29, 2001



DATA SHEET NO. 11

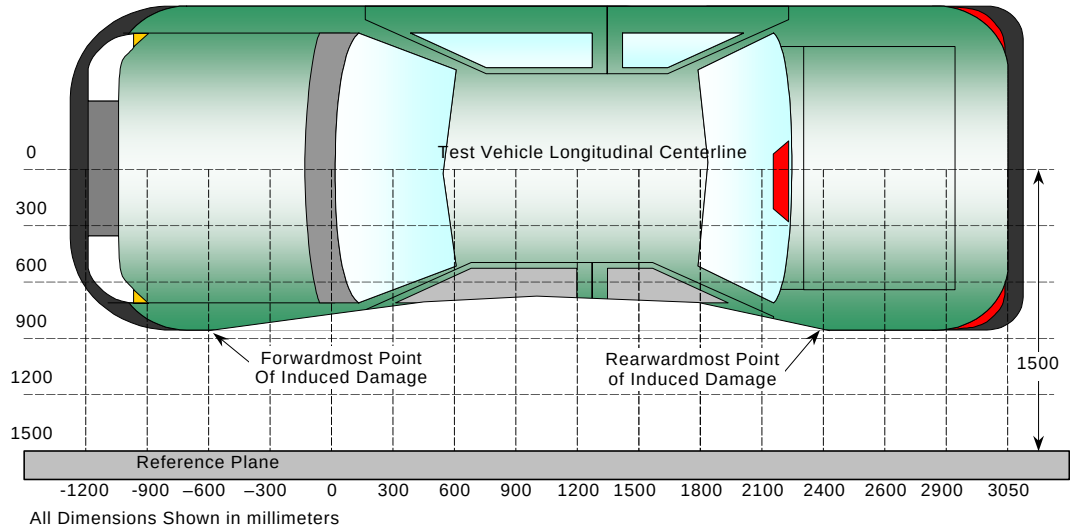
VEHICLE DAMAGE PROFILE DISTANCES

Test Vehicle: 2001/Hyundai/Accent/GL 4 door

NHTSA No.: C10515

Test Program: FMVSS 214

Test Date: January 29, 2001



TOP VIEW

Damage Profile Distances

DPD	Distance from Impact Point in mm	Level	Pre-Test (mm)	Post-Test (mm)	Max Static Crush (mm)
1	2700 mm	4	510	543	33
2	2015 mm	4	466	548	82
3	1285 mm	2.5	424	785	361
4	588 mm	2.5	425	764	339
5	-70 mm	3	414	586	172
6	-750 mm	4	571	600	29

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

DATA SHEET NO. 12

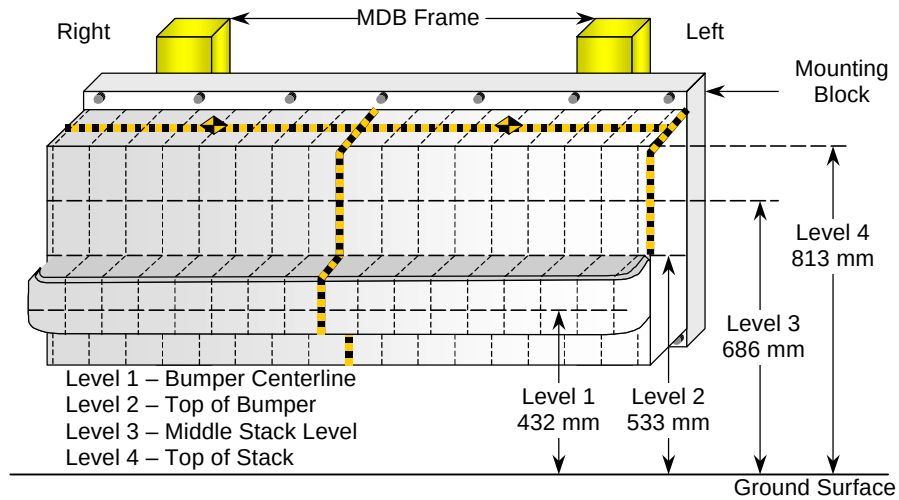
DEFORMABLE BARRIER HONEYCOMB FACE STATIC CRUSH

Test Vehicle: 2001/Hyundai/Accent/GL 4 door

NHTSA No.: C10515

Test Program: FMVSS 214

Test Date: January 29, 2001



DEFORMABLE BARRIER STATIC CRUSH

Stack Level	Distance Right of Center								C _L	Distance Left of Center							
	800	700	600	500	400	300	200	100		100	200	300	400	500	600	700	800
1	90	79	69	61	62	64	69	68	67	68	72	75	83	91	106	116	121
2	52	33	27	22	22	23	24	25	28	33	35	40	44	50	57	63	80
3	22	9	0	2	4	11	20	16	9	10	12	14	15	18	47	102	144
4	34	-1	-6	-5	-3	2	14	11	10	9	9	11	32	60	94	130	156

All Dimensions in mm

DATA SHEET NO. 13

VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

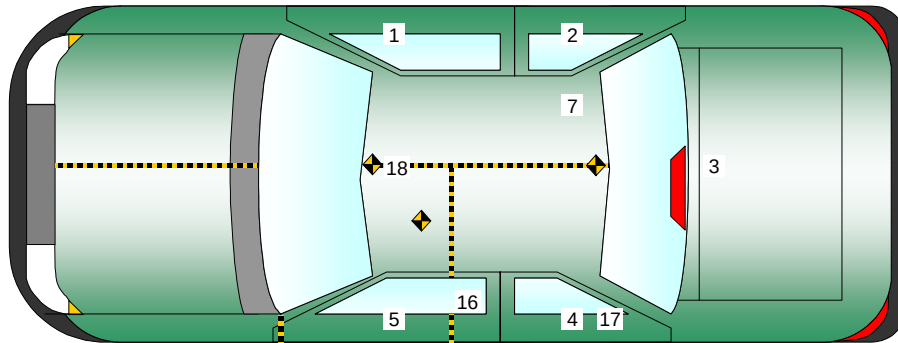
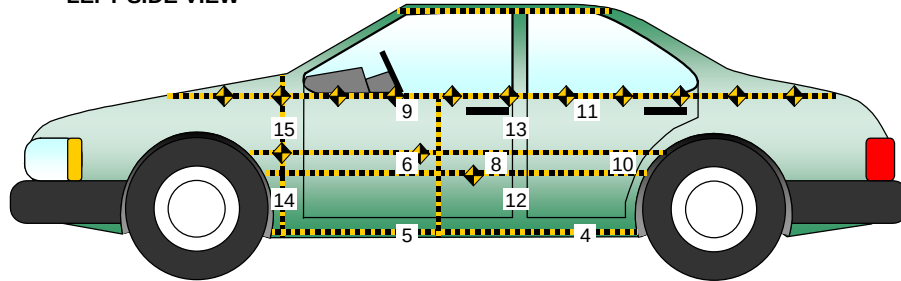
Test Vehicle: 2001/Hyundai/Accent/GL 4 door

NHTSA No.: C10515

Test Program: FMVSS 214

Test Date: January 29, 2001

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 Seat
5	Left Sill at Front Seat
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	Left Front Seat Track
17	Rear Seat Track or Structure
18	Vehicle CG

DATA SHEET NO. 13...(continued)

VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY

Test Vehicle: 2001/Hyundai/Accent/GL 4 door

NHTSA No.: C10515

Test Program: FMVSS 214

Test Date: January 29, 2001

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	2327	642	205	X	3.7	61.1	-6.4	11.0
					Y	30.7	8.3	-2.5	63.1
					Z	6.2	37.3	-7.3	10.8
					RES	31.5	8.4		
2	Right Sill at Rear Seat	1555	648	210	X	4.1	61.2	-4.9	14.1
					Y	32.3	8.8	-4.1	87.6
					Z	7.1	37.3	-3.6	27.7
					RES	32.6	8.8		
3	Rear Floorpan Above Axle *	1115	-25	370	X	5.4	23.5	-43.9	58.4
					Y	67.4	56.8	-13.1	146.3
					Z	35.7	147.3	-13.8	35.1
					RES	84.1	56.9		
4	Left Sill at Rear Seat **	1545	-640	208	Y	58.5	19.5	-7.4	13.2
5	Left Sill at Front Seat	2291	-640	208	Y	84.9	20.3	-22.4	29.0
7	Rear Occupant Compartment ***	1609	246	375	X	6.9	61.4	-15.9	12.6
12	Left B-Post Lower	1873	-645	284	Y	101.6	7.1	-10.9	50.8
13	Left B-Post Middle	1884	-627	823	Y	187.0	6.8	-39.4	25.0
14	Left A-Post Lower	2856	-666	270	Y	69.1	7.4	-26.9	19.0
15	Left A-Post Middle	2870	-736	830	Y	56.1	12.0	-4.4	18.8
16	Left Front Seat Track	2051	-526	275	Y	124.1	14.0	-21.4	25.8
18	Vehicle CG	2420	0	335	X	3.2	5.3	-10.0	38.4
					Y	28.1	17.9	-2.4	132.8
					Z	9.6	31.4	-17.5	20.0
					RES	30.9	19.0		

Reference Points

X - Rear of Vehicle
Y - Vehicle Centerline
Z - Ground Plane

* Not valid after 35 msec

** Not valid after 45 msec

*** Accelerometer was mounted on the X axis

DATA SHEET NO. 14

MDB ACCELEROMETER LOCATIONS AND DATA SUMMARY

Test Vehicle: 2001/Hyundai/Accent/GL 4 door

NHTSA No.: C10515

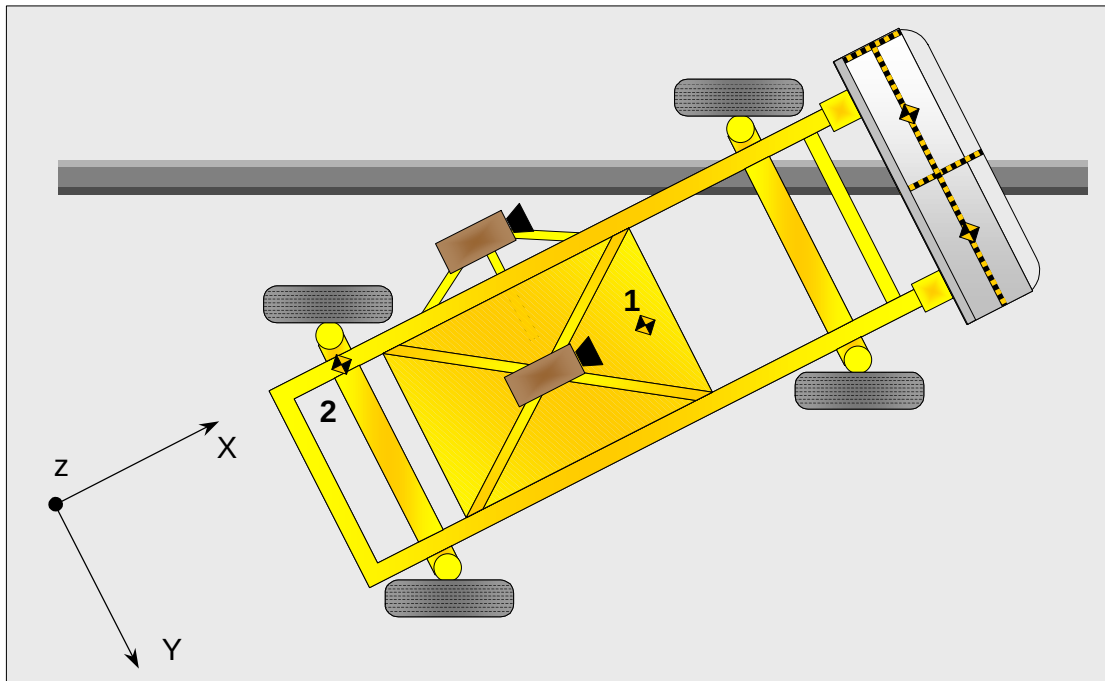
Test Program: FMVSS 214

Test Date: January 29, 2001

MDB ACCELEROMETER PEAK DATA AND LOCATIONS

Loc. No.	Accelerometer Location	Measurement (mm)			Peak Values (G's)				
		X	Y	Z	Axis	Max	Time	Min	Time
1	MDB CG	-1092	0	483	X	2.1	97.6	-18.3	39.3
					Y	3.0	58.8	-10.4	41.7
					Z	25.4	54.5	-16.1	48.4
					RES	27.1	54.5		
2	MDB Rear	-2591	-625	622	X	1.7	89.0	-22.5	33.8
					Y	7.0	28.9	-1.7	179.1

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



DATA SHEET NO. 15

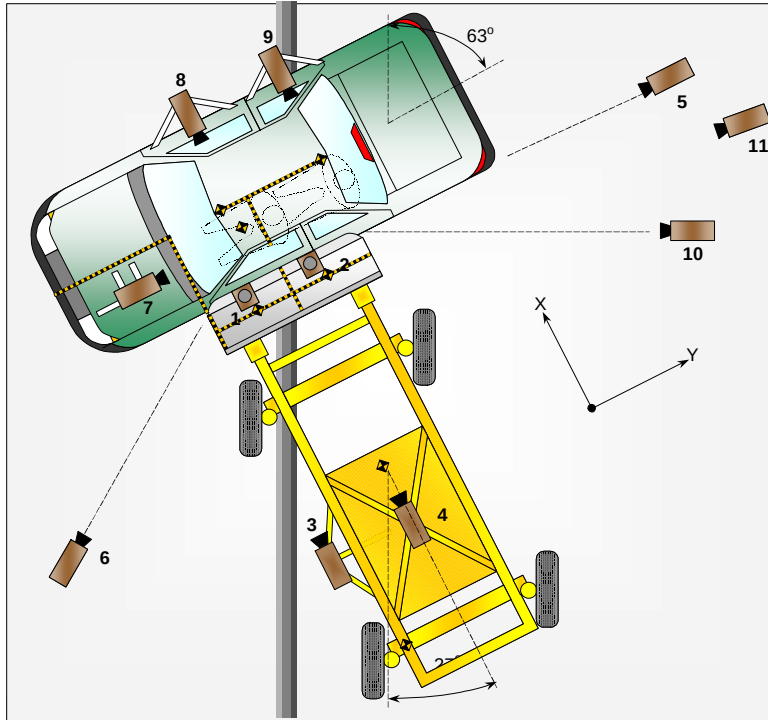
HIGH SPEED CAMERA LOCATIONS AND DATA

Test Vehicle: 2001/Hyundai/Accent/GL 4 door

NHTSA No.: C10515

Test Program: FMVSS 214

Test Date: January 29, 2001



No.	Camera View	Location (mm)			Lens (mm)	Film Speed (fps)
		X	Y	Z		
1	Overhead Overall	-140	1170	5000	8	*
2	Overhead Close-up	-55	-240	5000	13	1093
3	MDB Onboard, Impact Point Close-up				35	1010
4	MDB Onboard, Centerline of Impact				13	1026
5	Right Side, Ground Level, Overall	-88	10430	1920	25	1000
6	Left Side, Ground Level, Overall	-430	-2380	1840	13	1015
7	Vehicle Onboard Front SID, Front				13	1020
8	Vehicle Onboard Front SID, Side				8	500
9	Vehicle Onboard Rear SID, Side				13	1000
10	Real Time Coverage				10	24

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

* No Timing Marks

DATA SHEET NO. 16

FMVSS 301 FUEL SYSTEM INTEGRITY POST IMPACT DATA

Test Vehicle: 2001/Hyundai/Accent/GL 4 door

NHTSA No.: C10515

Test Program: FMVSS 214

Test Date: January 29, 2001

Test Time: 3:32 p.m.

Temperature at Time of Impact: 21 °C

Stoddard Solvent Spillage Measurements

- A. From impact until vehicle motion ceases: 0 oz.
(Maximum Allowable = 1 ounce)
- B. For the 5 minute period after motion ceases: 0 oz.
(Maximum Allowable = 5 ounces)
- C. For the following 25 minutes: 0 oz.
(Maximum Allowable = 1 oz./minute)
- D. Spillage Details: None

DATA SHEET NO. 17

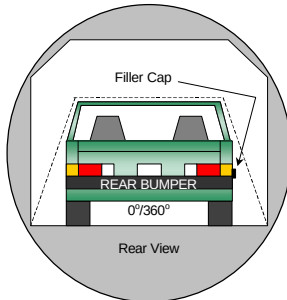
FMVSS 301 STATIC ROLLOVER DATA SHEET

Test Vehicle: 2001/Hyundai/Accent/GL 4 door

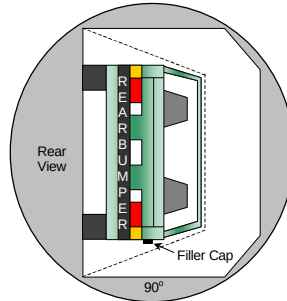
NHTSA No.: C10515

Test Program: FMVSS 214

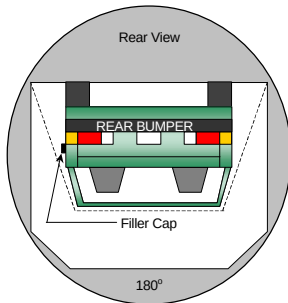
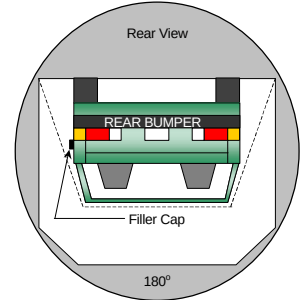
Test Date: January 29, 2001



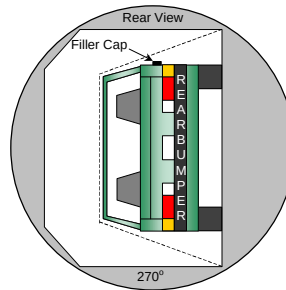
0° TO 90°



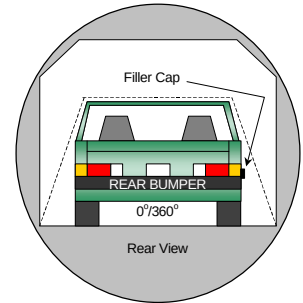
90° TO 180°



180° TO 270°



270° TO 360°



1. The specified fixture rollover rate for each 90° of rotation is 60 to 180 seconds.
2. The position hold time at each position is 300 seconds (minimum)
3. Details of Stoddard Solvent spillage locations:

Rollover Test Phase	Rotation Time (sec.)	Hold Time (sec.)	Spillage (oz.)
0° TO 90°	2 min 44 sec	5 min 0 sec	0
90° TO 180°	2 min 35 sec	5 min 0 sec	0
180° TO 270°	2 min 16 sec	5 min 0 sec	0
270° TO 360°	2 min 34 sec	5 min 0 sec	0

APPENDIX A

PHOTOGRAPHS

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

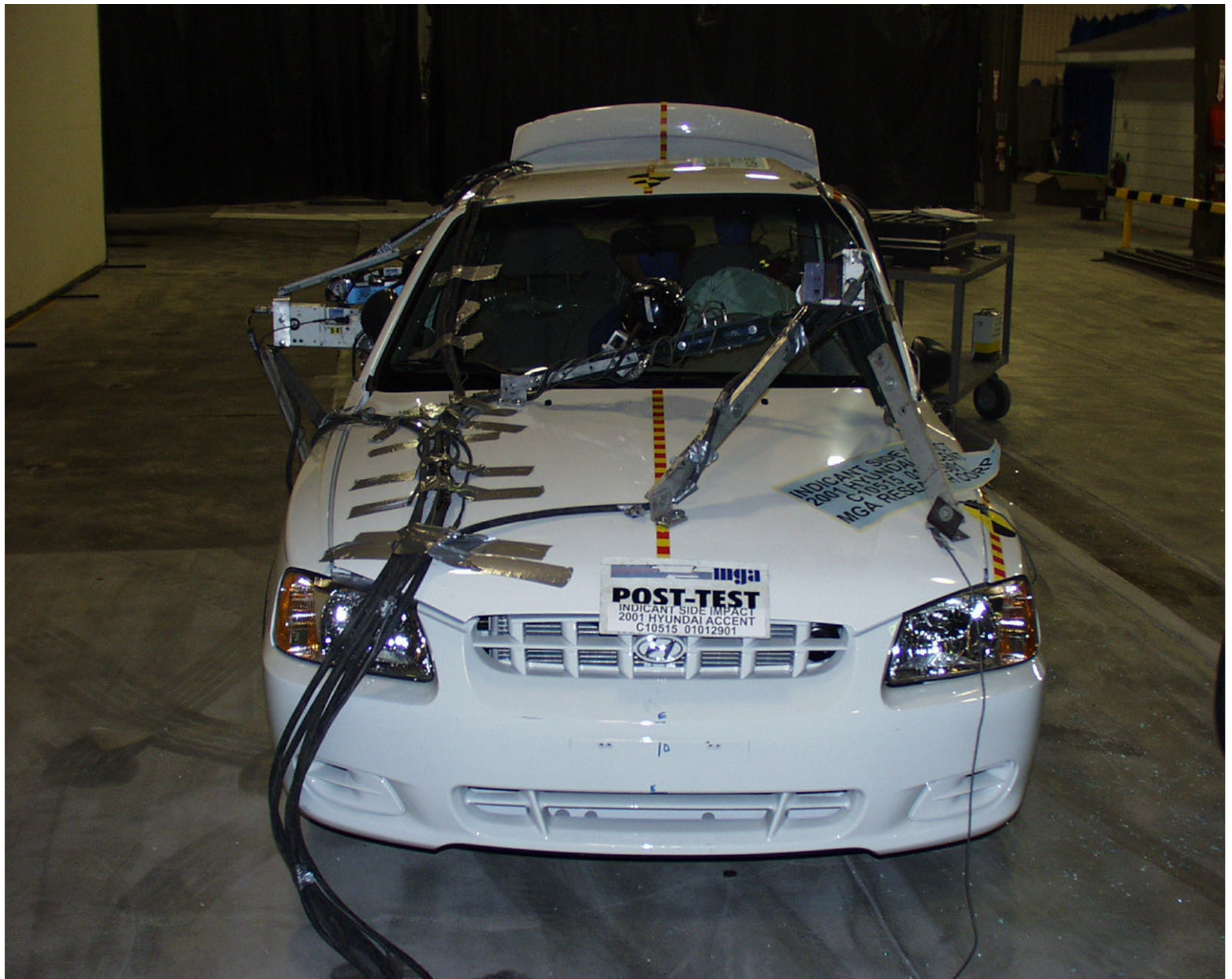


Photo No. A-2 - Post-Test Front View of Test Vehicle



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



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

A-5



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

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



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



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



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

A-10



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



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

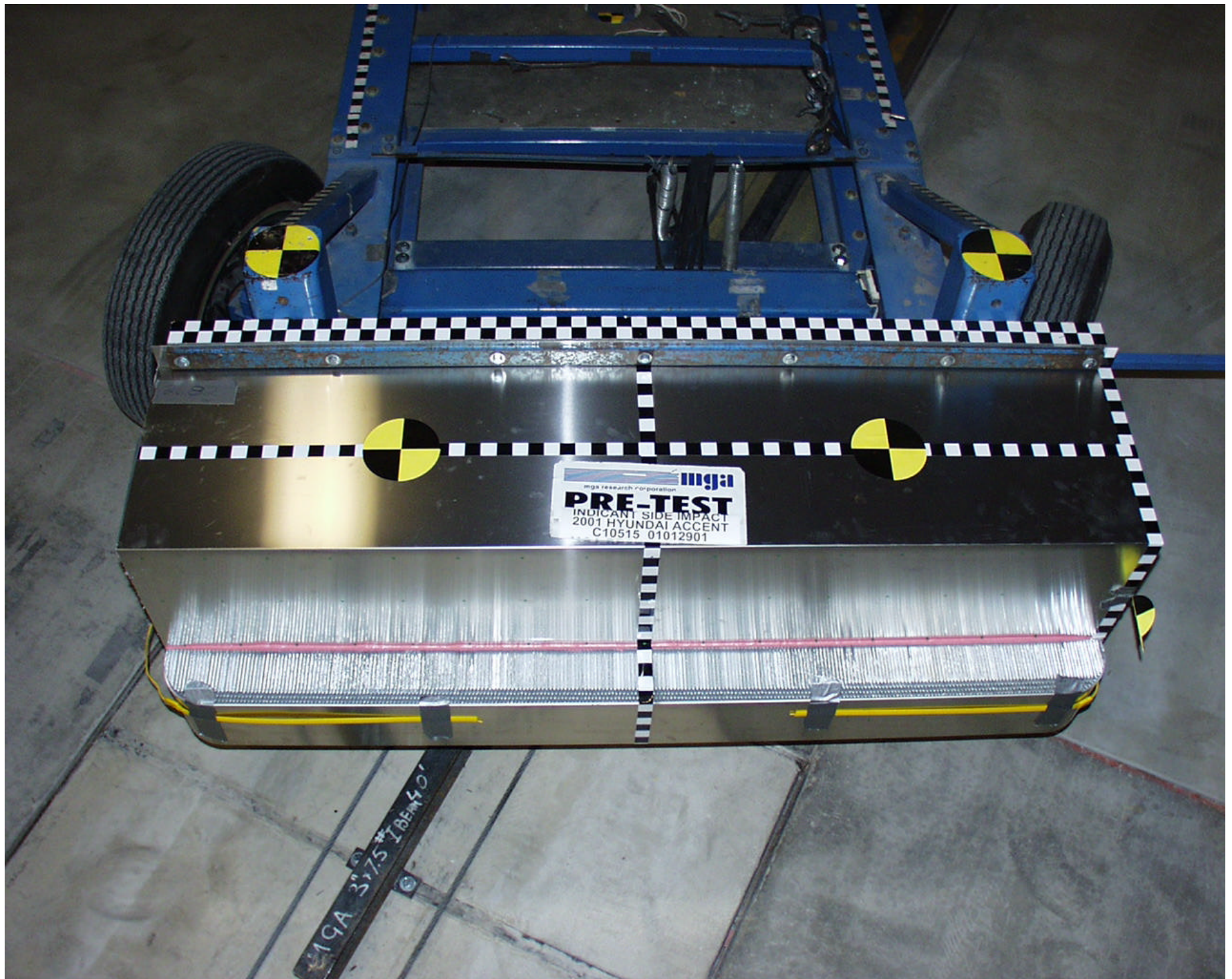


Photo No. A-12 - Pre-Test MDB Top View

A-13



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

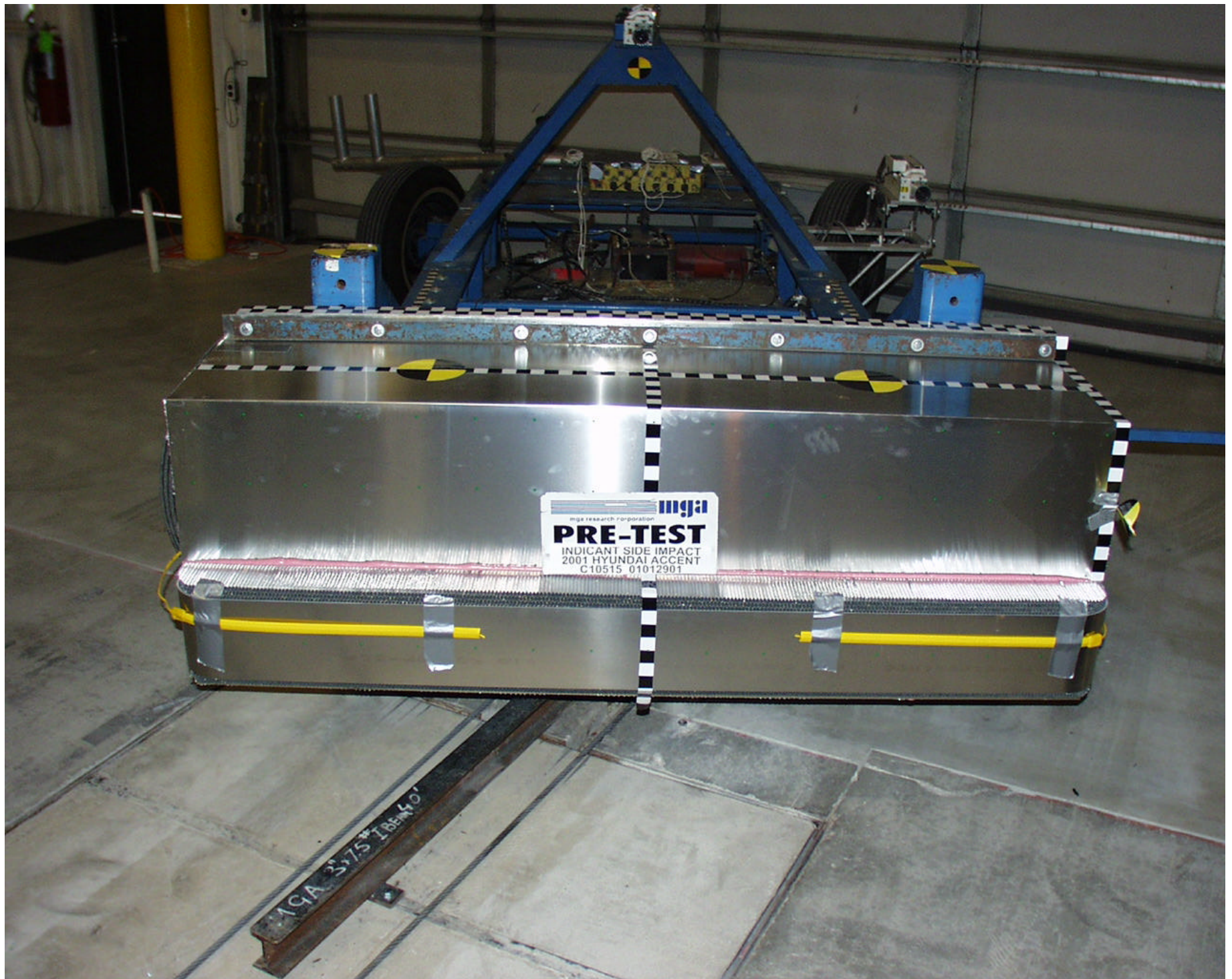


Photo No. A-14 - Pre-Test MDB Front View

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



Photo No. A-16 - Pre-Test MDB Right Side View

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



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



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

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Photo No. A-20 - Pre-Test Driver Dummy Right Side View

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

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



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



Photo No. A-24 - Pre-Test Driver Dummy Left Side View (Door Open)



Photo No. A-25 - Pre-Test Driver Dummy Shoulder and Door Top View



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

A-27



Photo No. A-27 - Post-Test Driver Dummy Contact



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

A-29



Photo No. A-29 - Pre-Test Passenger Dummy Right Side View

A-30



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

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

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



Photo No. A-33 - Pre-Test Passenger Dummy Left Side View (Door Open)

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



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

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



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



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

POST-TEST

INDICANT SIDE IMPACT
2001 HYUNDAI ACCENT
C10515 01012901

A-39



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

A-40



Photo No. A-40 – Impact

MANUFACTURED IN KOREA BY
HYUNDAI MOTOR COMPANY

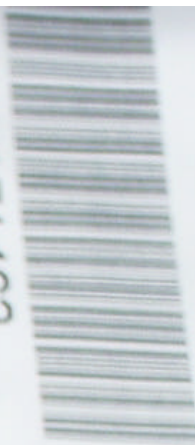
AUG/7/00 GVWR 3310lbs PAINT NW

GAWR FRONT 1810lbs GAWR REAR 1875lbs TRIM ZE

THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S.A. FEDERAL
MOTOR VEHICLE SAFETY, BUMPER, AND THEFT PREVENTION STANDARDS
IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE

V.I.N KMHCG45C01U151462
PASSENGER CAR

5C01U151462



A-42

TIRE INFLATION PRESSURE La Pression De Gonflage Des Pneus				
VEHICLE CAPACITY WEIGHT, LBS: 850 Poids en lb de la capacité du véhicule. 850				
SEATING CAPACITY: TOTAL 5 FRONT 2 REAR 3 Capacité de transport: total 5: 2 à l'avant 3 à l'arrière				
TIRE PRESSURES-COLD, KPA(PSI): Pression de gonflage à froid kPa(lb/po2)				
TIRE SIZE Dimension du pneu	UP TO 2 PERSONS Jusqu' a 2 Personnes		UP TO MAX. LOAD Pour charge maximum	
	FRONT Avant	REAR Arrière	FRONT Avant	REAR Arrière
P155/80 R13	207(30)	207(30)	230(33)	230(33)
P175/70 R13	207(30)	207(30)	230(33)	230(33)
P185/60 R14	207(30)	207(30)	230(33)	230(33)
T105/70 R14	414(60)	414(60)	414(60)	414(60)
T105/70 D14	414(60)	414(60)	414(60)	414(60)

Photo No. A-42 - Tire Placard

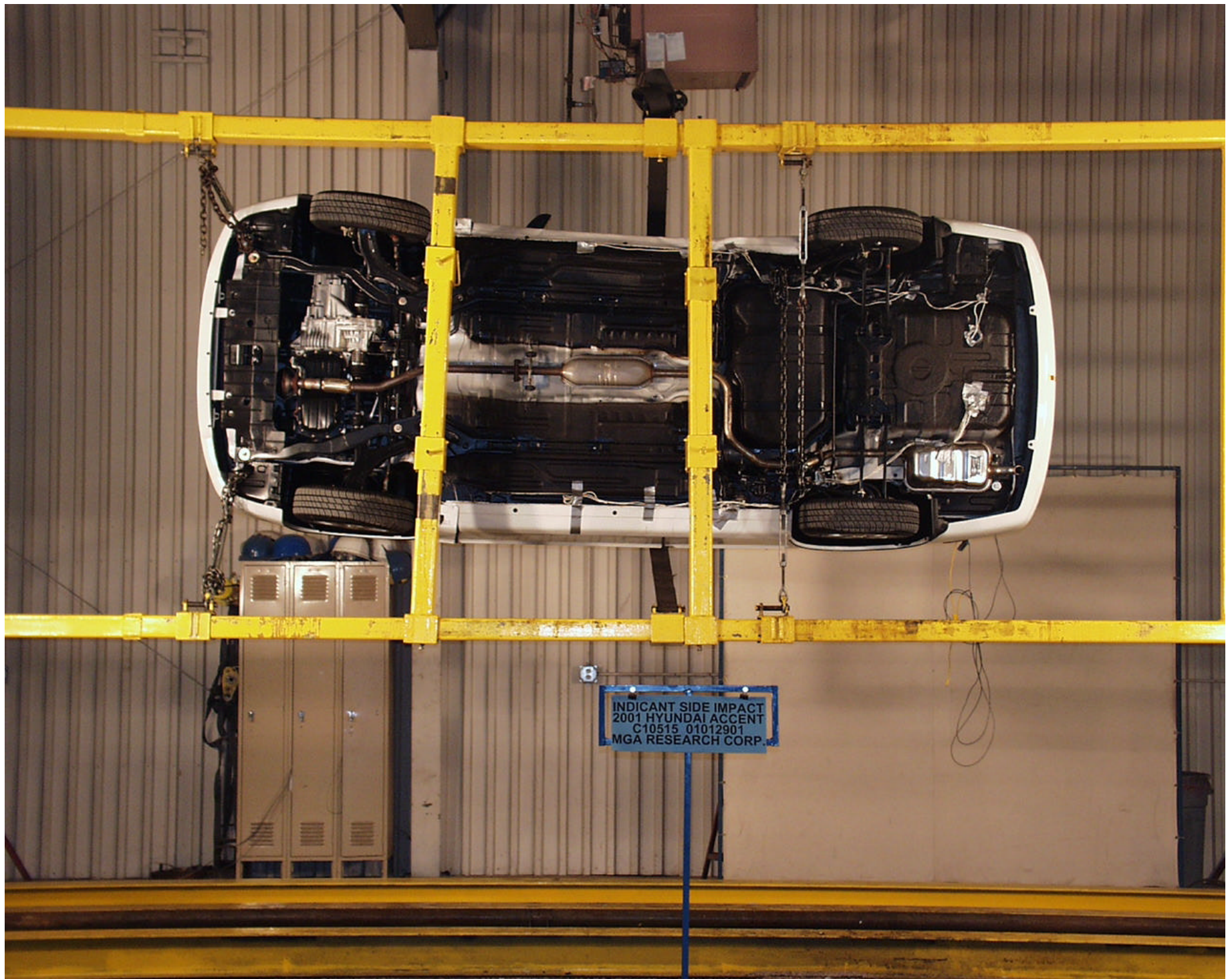
A-43



Photo No. A-43 - Rollover 90°



Photo No. A-44 - Rollover 180°



A-45

Photo No. A-45 - Rollover 270°



Photo No. A-46 - Rollover 360°

A-47



Photo No. A-47 - Left Front Attitude Point

A-48



Photo No. A-48 - Right Front Attitude Point

A-49



Photo No. A-49 - Left Rear Attitude Point

A-50



Photo No. A-50 - Right Rear Attitude Point

APPENDIX B

SID, VEHICLE, AND MDB RESPONSE DATA

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* Data Not Valid After 35 msec.

** Data Not Valid After 45 msec.

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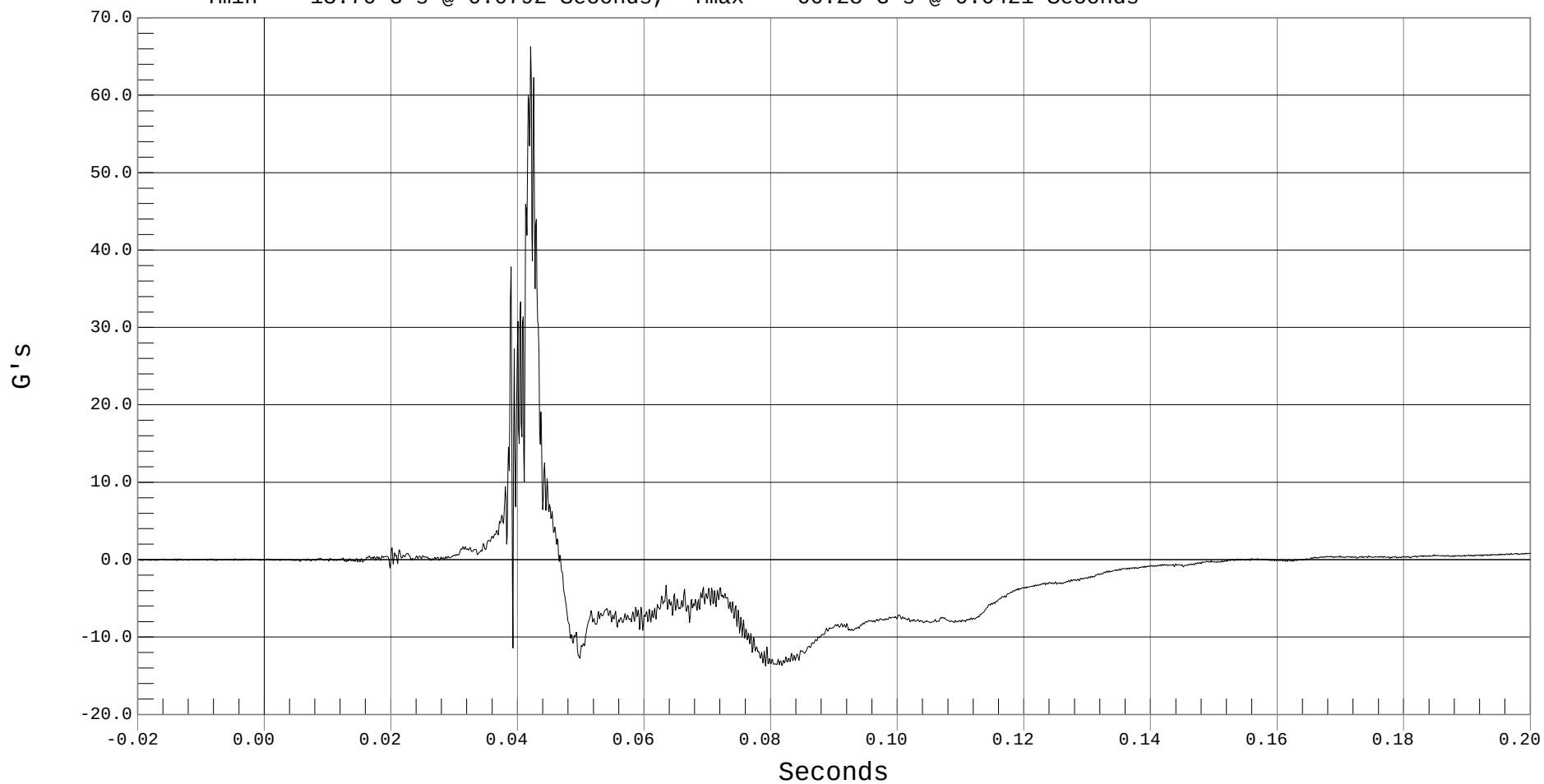
DRIVER HEAD X ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 1000

1 DRIVER HEAD X, B01008AT.A01

Ymin = -13.76 G's @ 0.0792 Seconds, Ymax = 66.28 G's @ 0.0421 Seconds





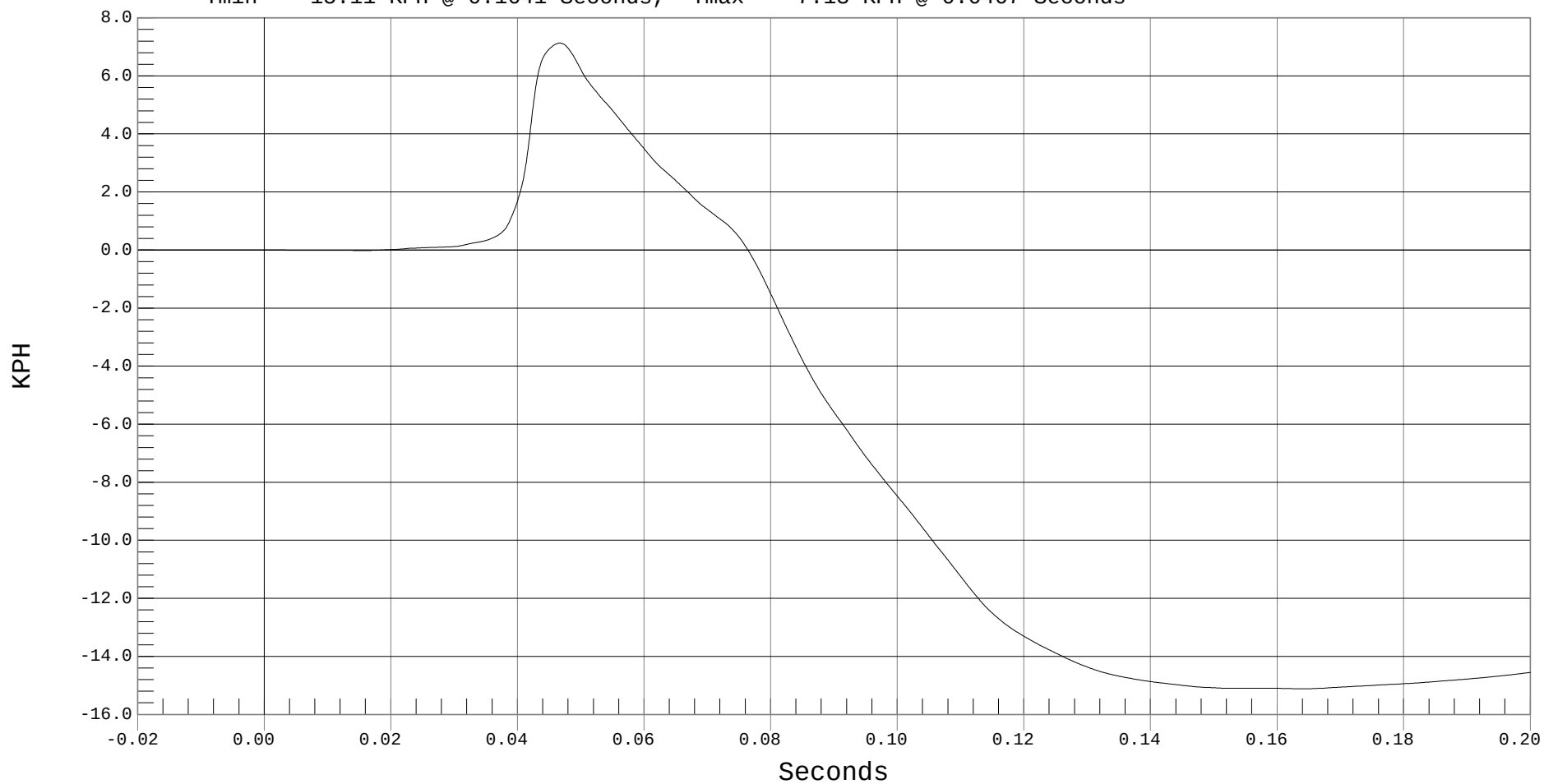
DRIVER HEAD X VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 DRIVER HEAD X VELOCITY, B01008AI.V01

Ymin = -15.11 KPH @ 0.1641 Seconds, Ymax = 7.13 KPH @ 0.0467 Seconds





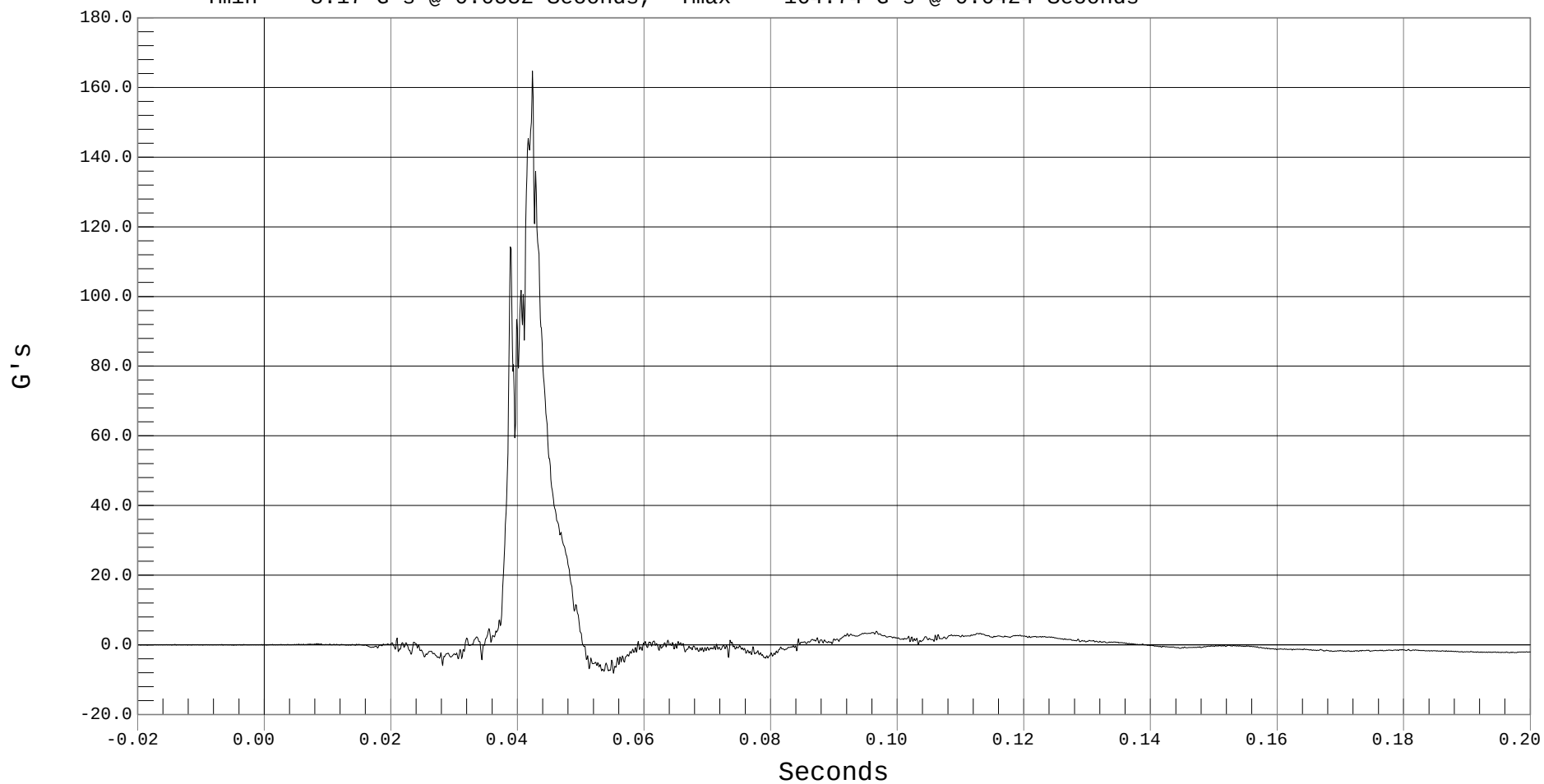
DRIVER HEAD Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 1000

— 1 DRIVER HEAD Y, B01008AT.A02

Ymin = -8.17 G's @ 0.0552 Seconds, Ymax = 164.74 G's @ 0.0424 Seconds





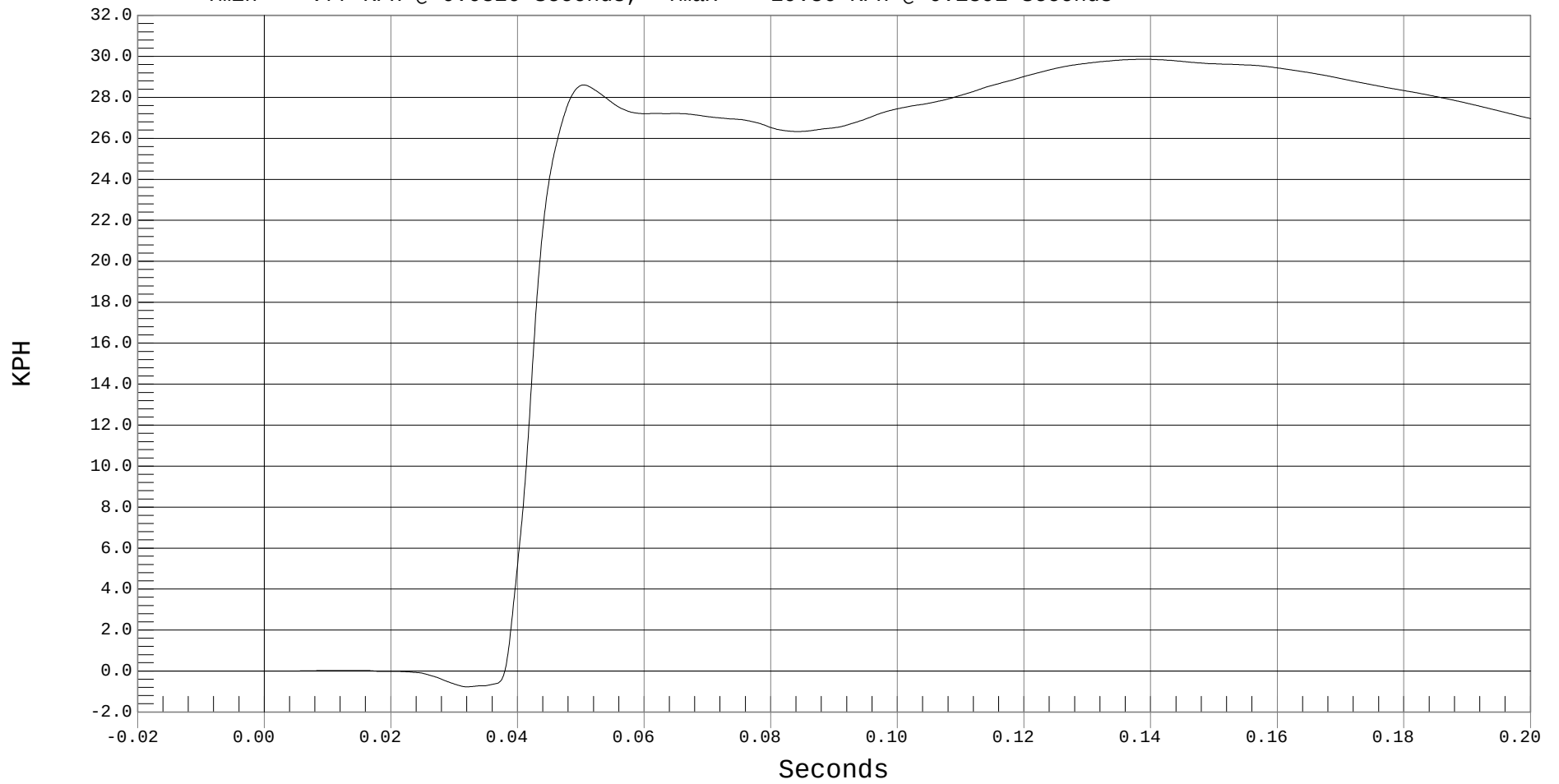
DRIVER HEAD Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 DRIVER HEAD Y VELOCITY, B01008AI.V02

Ymin = -.77 KPH @ 0.0320 Seconds, Ymax = 29.86 KPH @ 0.1391 Seconds





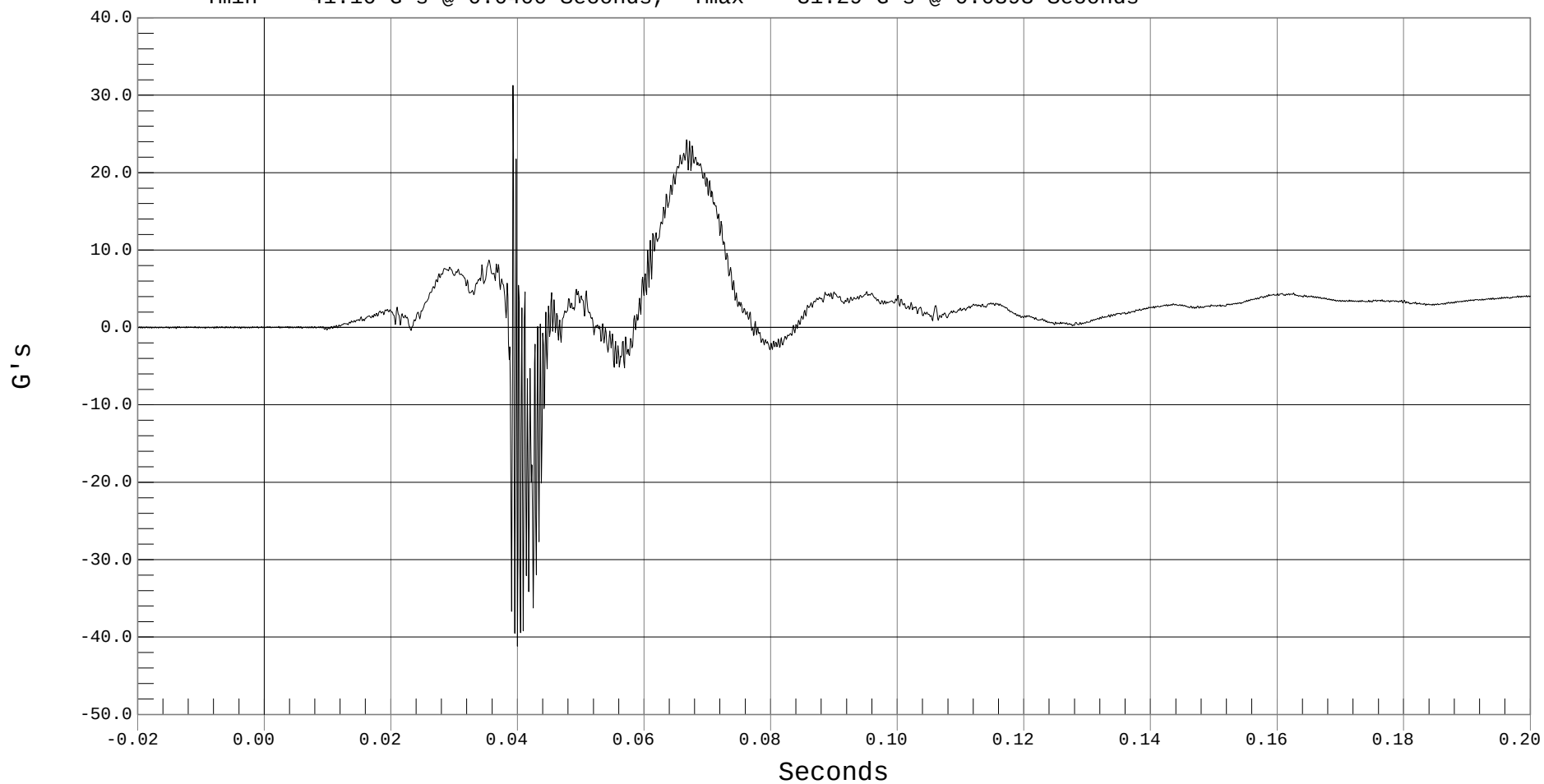
DRIVER HEAD Z ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 1000

1 DRIVER HEAD Z, B01008AT.A03

Ymin = -41.16 G's @ 0.0400 Seconds, Ymax = 31.29 G's @ 0.0393 Seconds





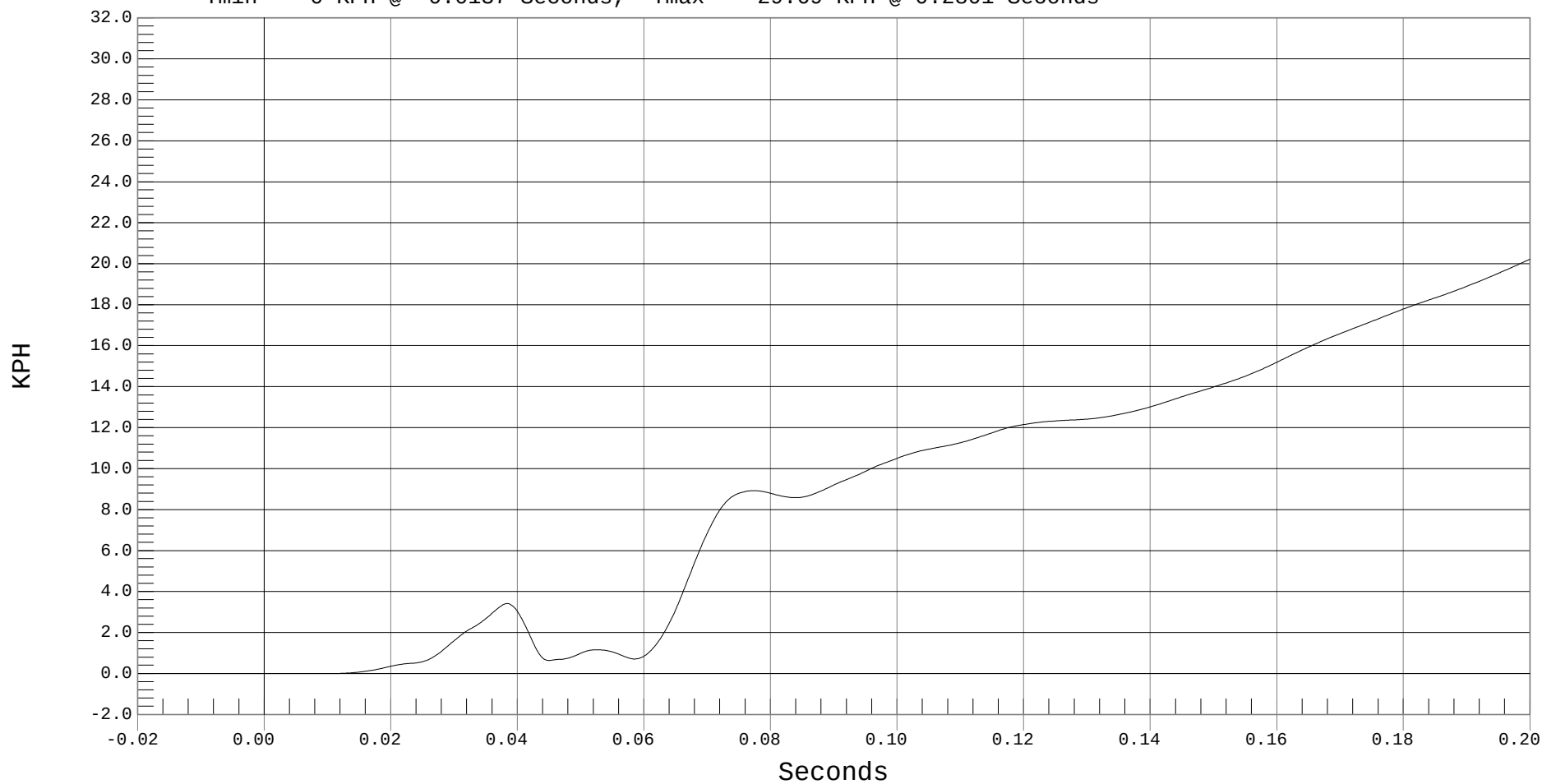
DRIVER HEAD Z VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 DRIVER HEAD Z VELOCITY, B01008AI.V03

Ymin = 0 KPH @ -0.0137 Seconds, Ymax = 29.69 KPH @ 0.2801 Seconds





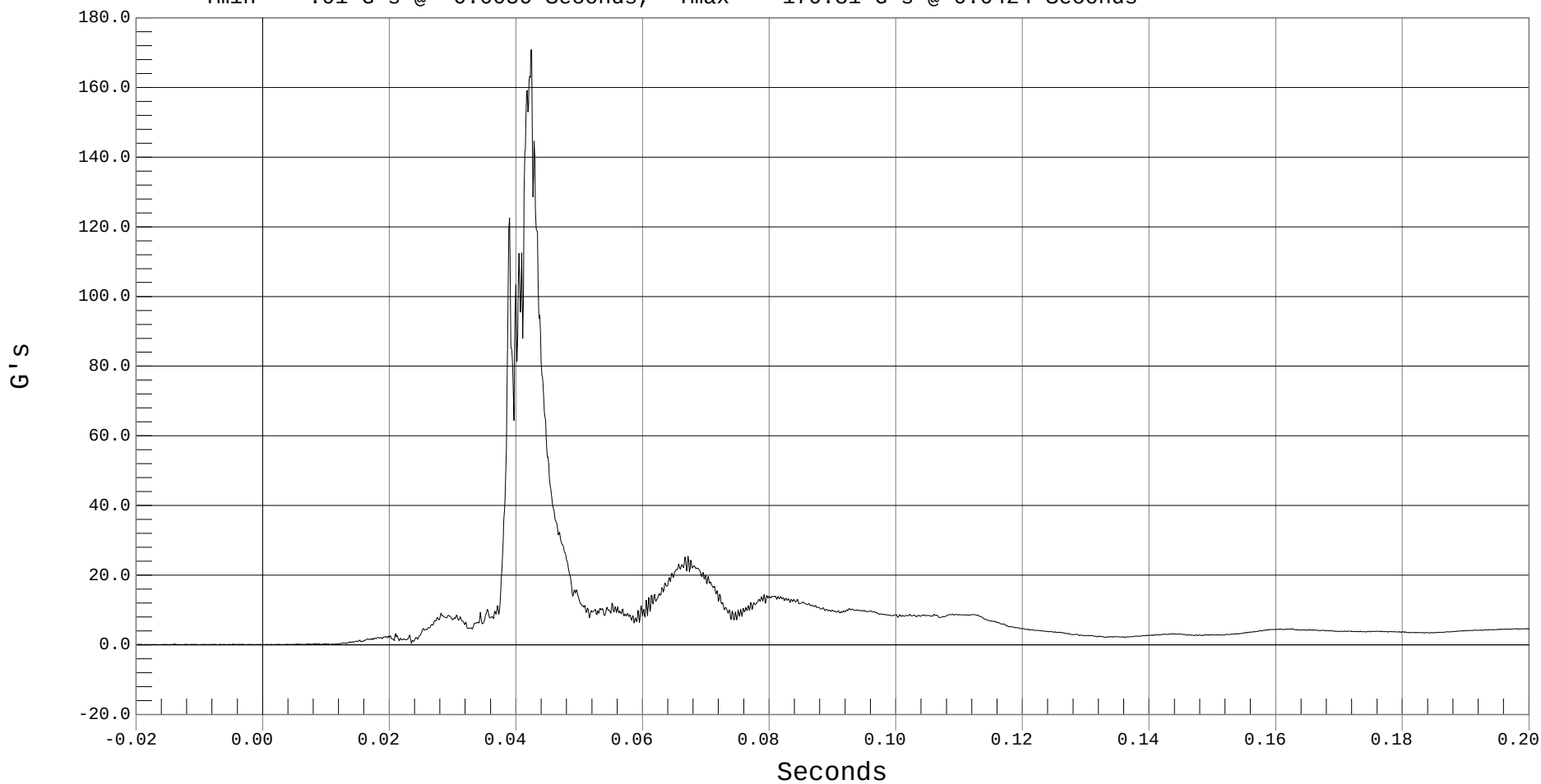
DRIVER HEAD RESULTANT ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 1000

— 1 DRIVER HEAD RESULTANT, B01008AV.A01

Ymin = .01 G's @ -0.0050 Seconds, Ymax = 170.81 G's @ 0.0424 Seconds





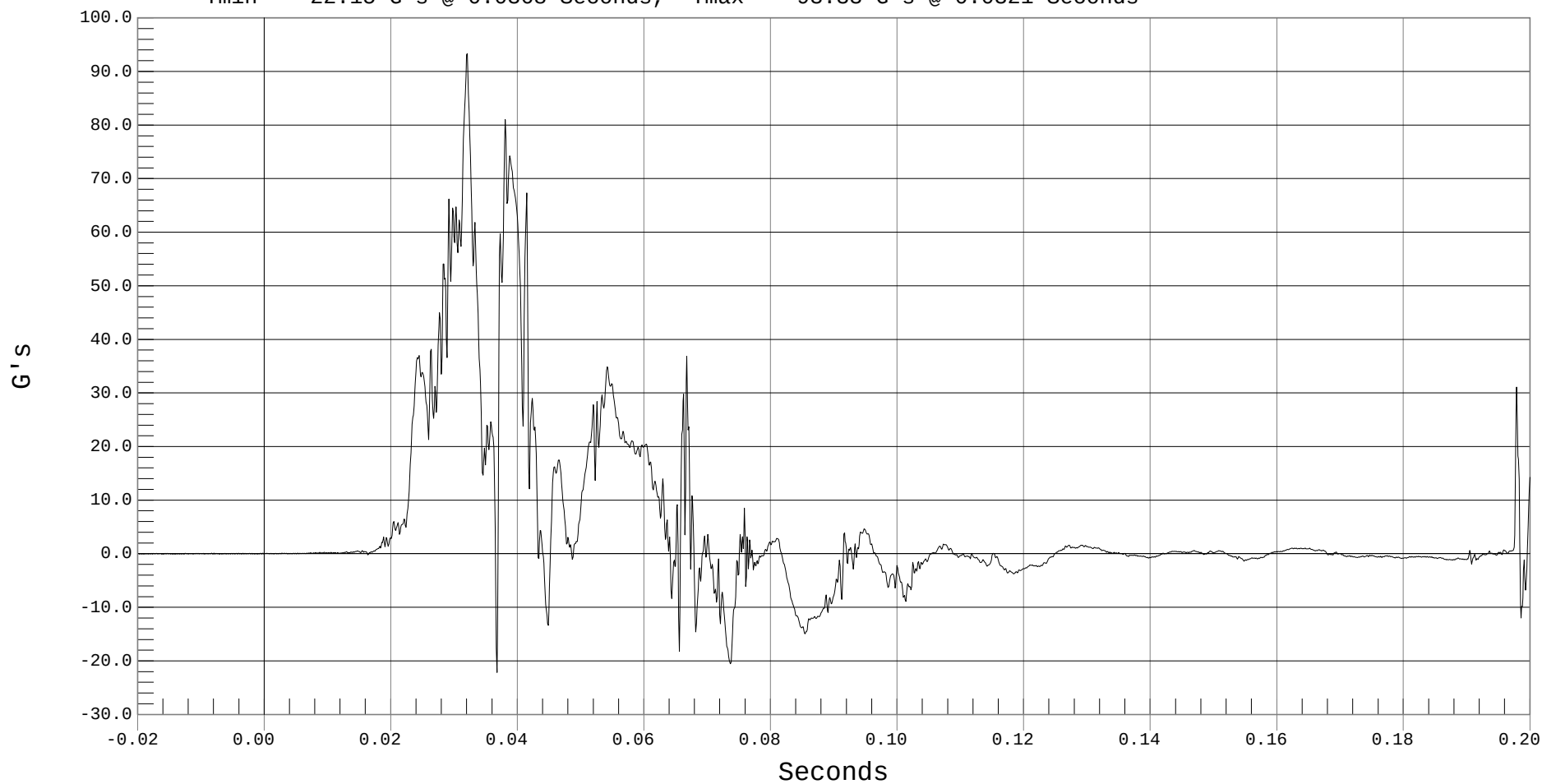
DRIVER UPPER RIB Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 1000

— 1 DRIVER UPPER RIB Y, B01008AT.A04

Ymin = -22.15 G's @ 0.0368 Seconds, Ymax = 93.33 G's @ 0.0321 Seconds





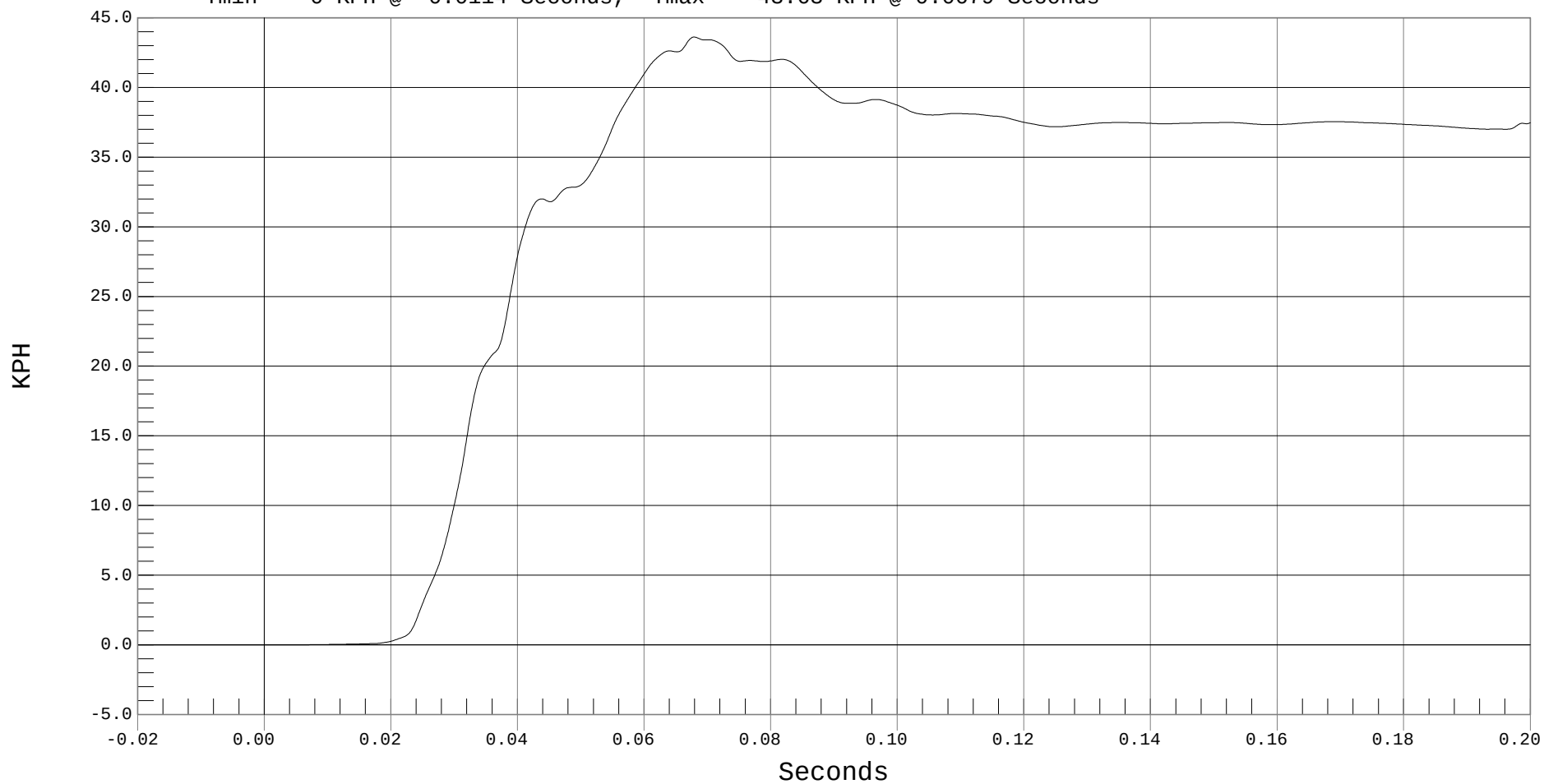
DRIVER UPPER RIB Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

1 DRIVER UPPER RIB Y VELOCITY, B01008AI.V04

Ymin = 0 KPH @ -0.0114 Seconds, Ymax = 43.63 KPH @ 0.0679 Seconds





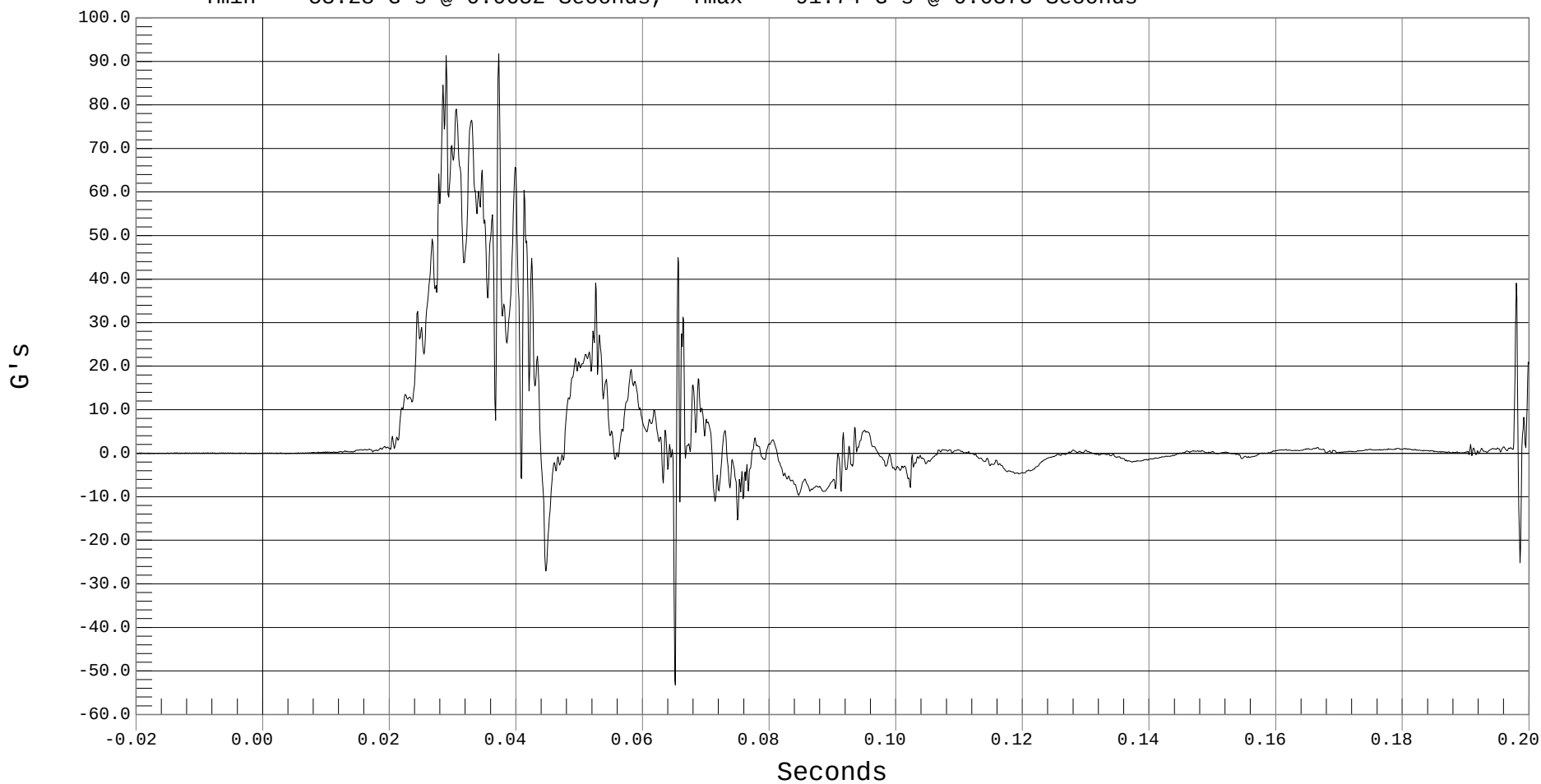
DRIVER LOWER RIB Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 1000

— 1 DRIVER LOWER RIB Y, B01008AT.A05

Ymin = -53.28 G's @ 0.0652 Seconds, Ymax = 91.74 G's @ 0.0373 Seconds





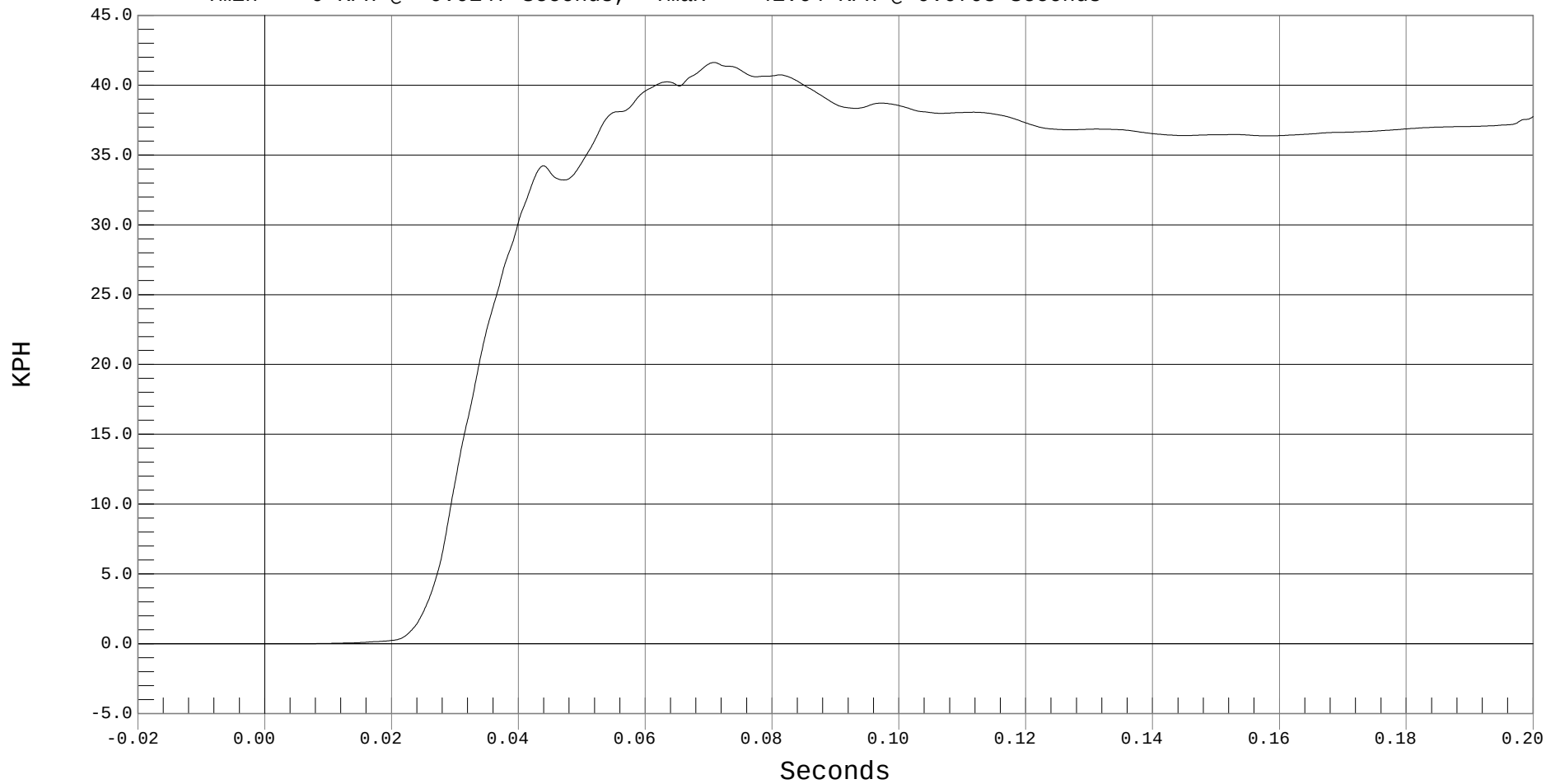
DRIVER LOWER RIB Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 DRIVER LOWER RIB Y VELOCITY, B01008AI.V05

Ymin = 0 KPH @ -0.0147 Seconds, Ymax = 41.64 KPH @ 0.0708 Seconds





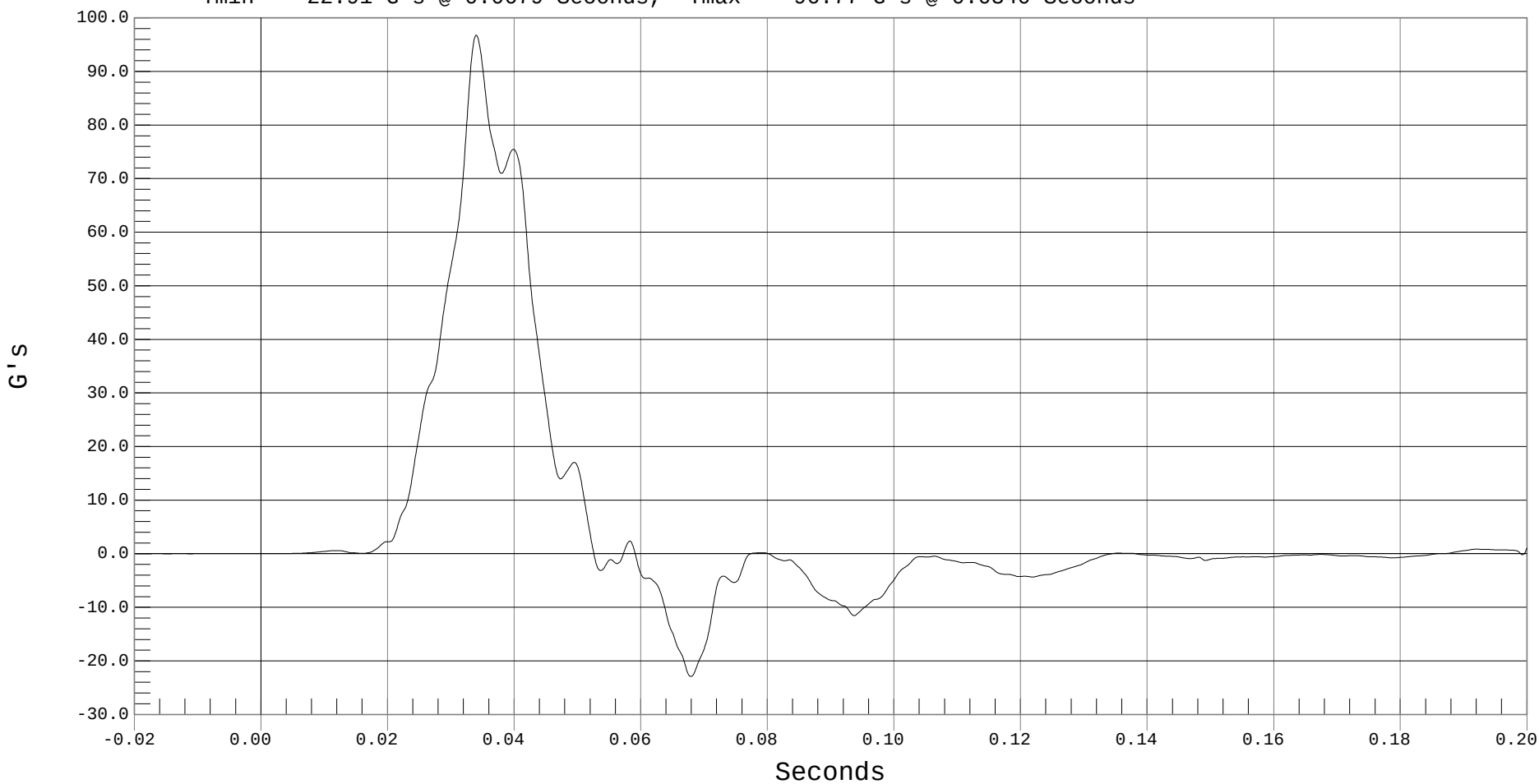
DRIVER LOWER SPINE Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 DRIVER LOWER SPINE Y, B01008AF.A06

Ymin = -22.91 G's @ 0.0679 Seconds, Ymax = 96.77 G's @ 0.0340 Seconds





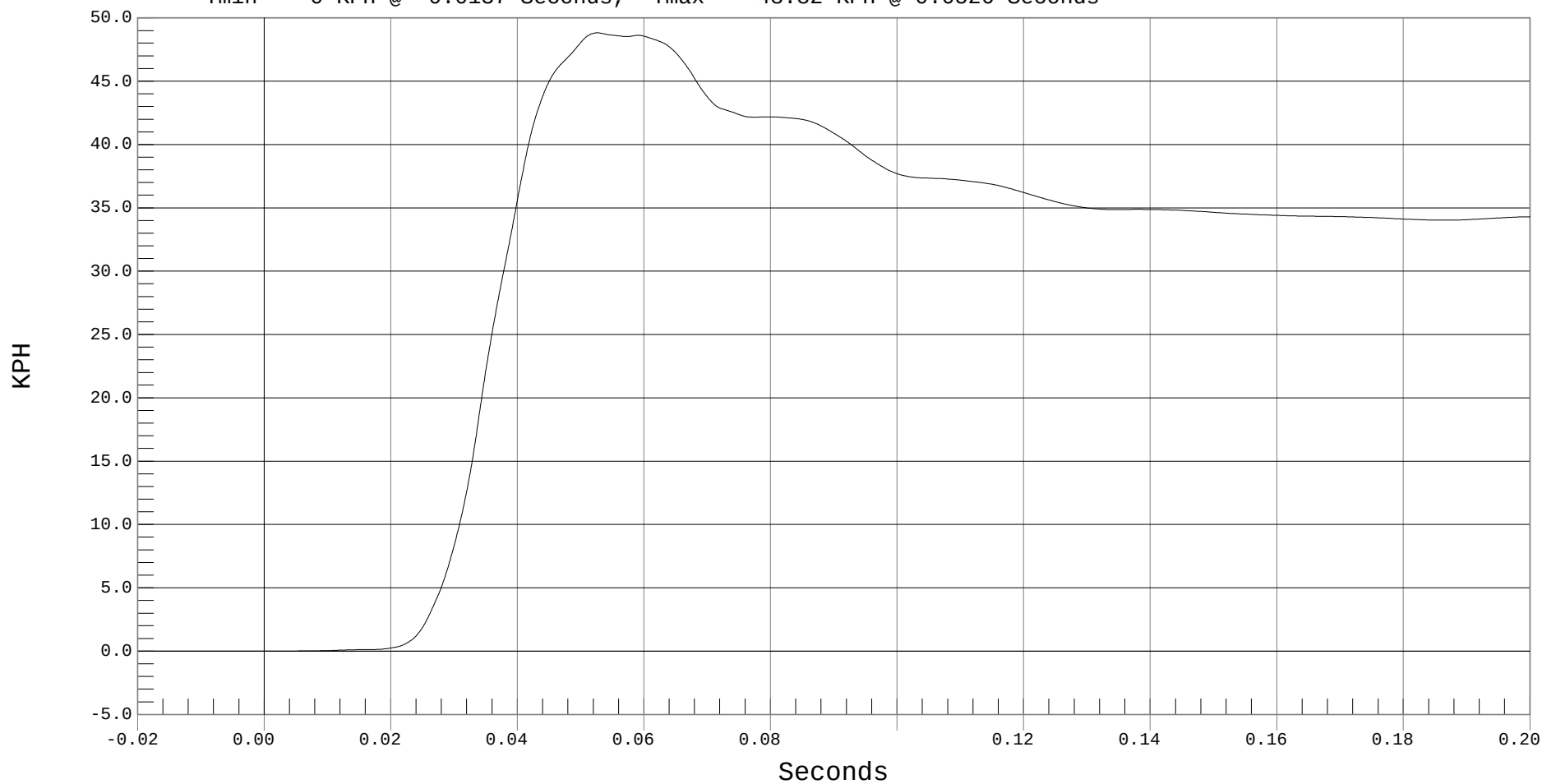
DRIVER LOWER SPINE Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 DRIVER LOWER SPINE Y VELOCITY, B01008AI.V06

Ymin = 0 KPH @ -0.0137 Seconds, Ymax = 48.82 KPH @ 0.0526 Seconds





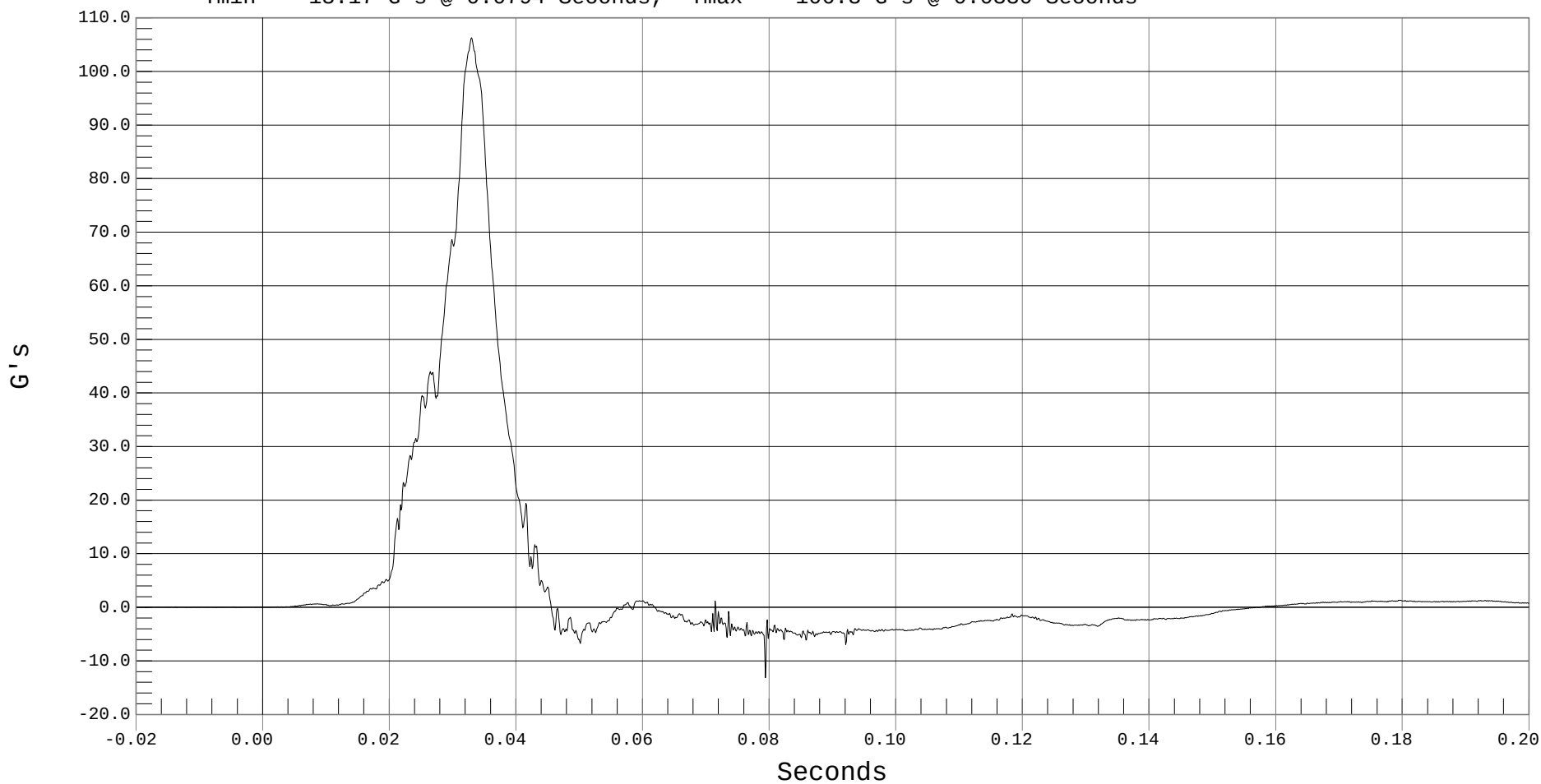
DRIVER PELVIS Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 1000

— 1 DRIVER PELVIS Y, B01008AT.A07

Ymin = -13.17 G's @ 0.0794 Seconds, Ymax = 106.3 G's @ 0.0330 Seconds





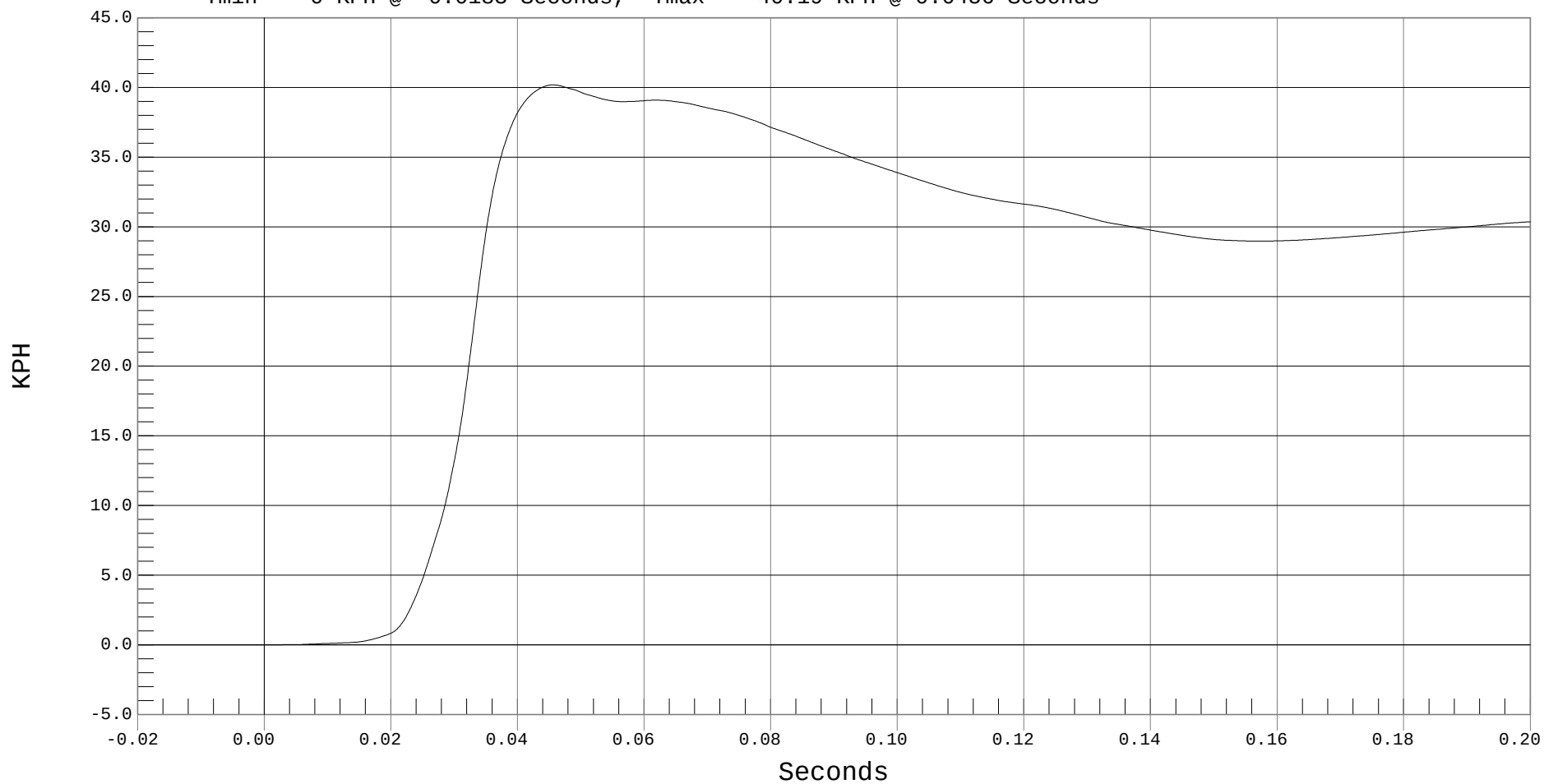
DRIVER PELVIS Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 DRIVER PELVIS Y VELOCITY, B01008AI.V07

Ymin = 0 KPH @ -0.0183 Seconds, Ymax = 40.19 KPH @ 0.0456 Seconds





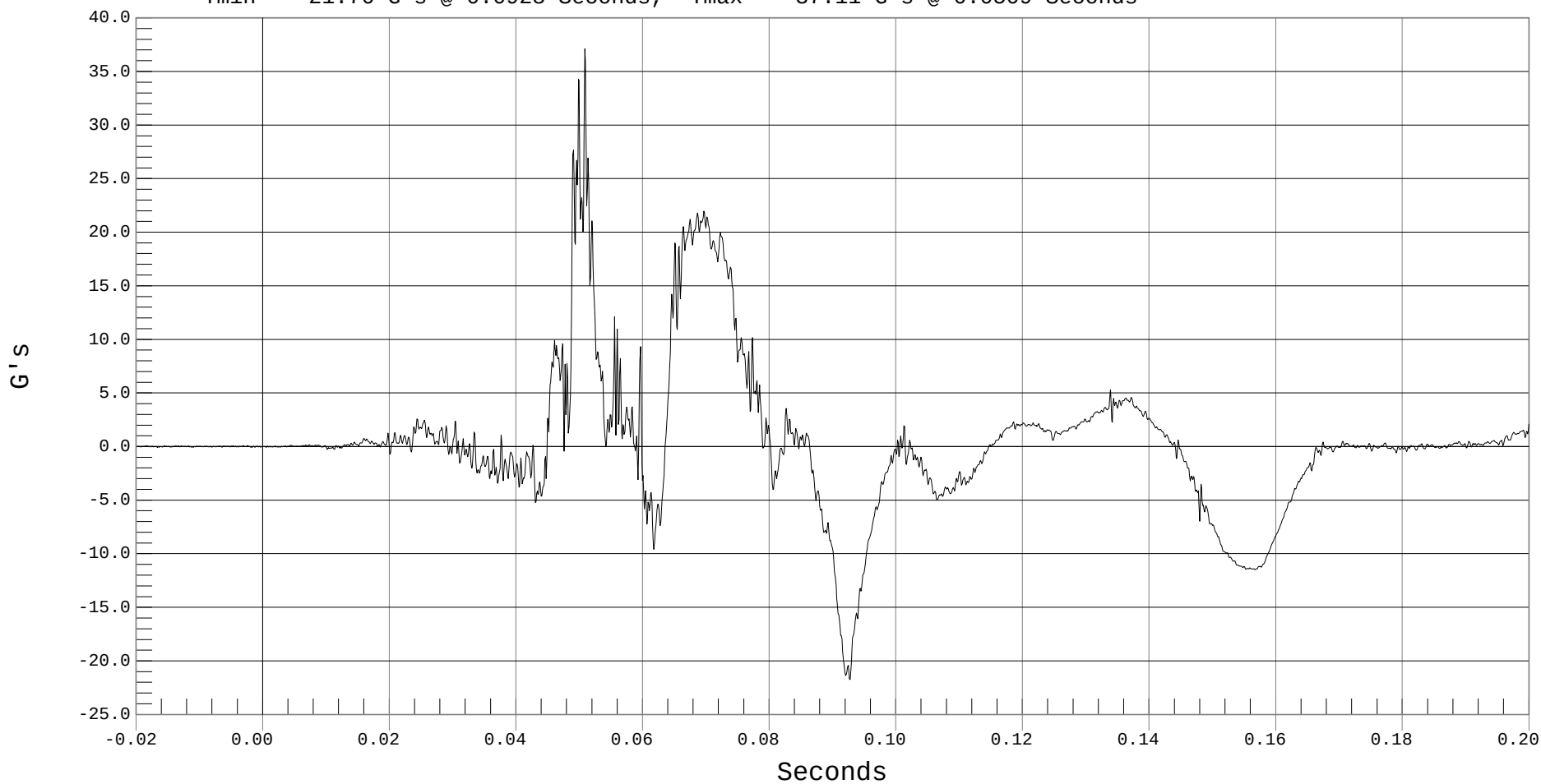
REAR PASSENGER HEAD X ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 1000

— 1 PASSENGER HEAD X, B01008AT.A49

Ymin = -21.76 G's @ 0.0928 Seconds, Ymax = 37.11 G's @ 0.0509 Seconds





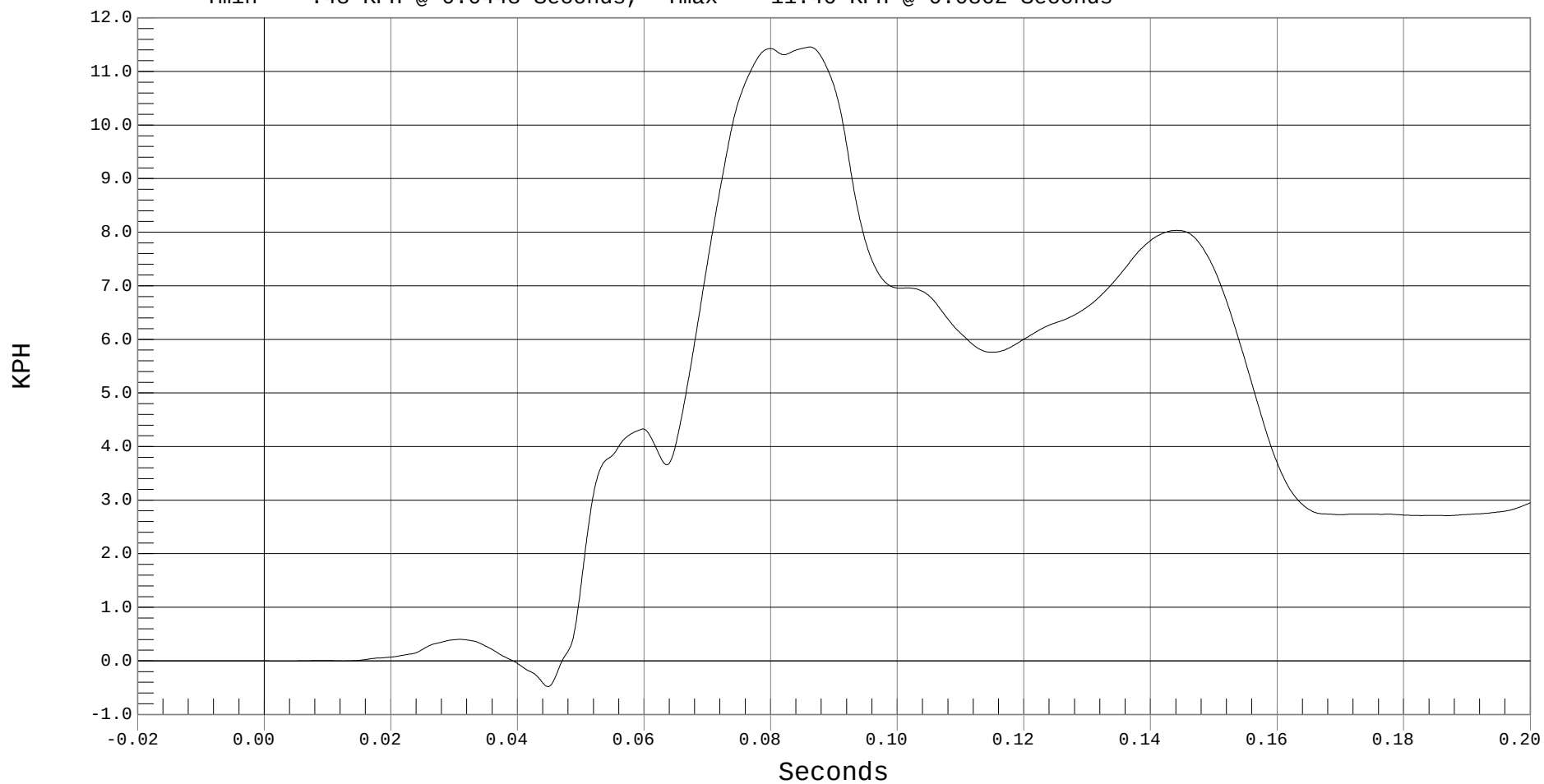
REAR PASSENGER HEAD X VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 REAR PASSENGER HEAD X VELOCITY, B01008AI.V49

Ymin = -.48 KPH @ 0.0448 Seconds, Ymax = 11.46 KPH @ 0.0862 Seconds





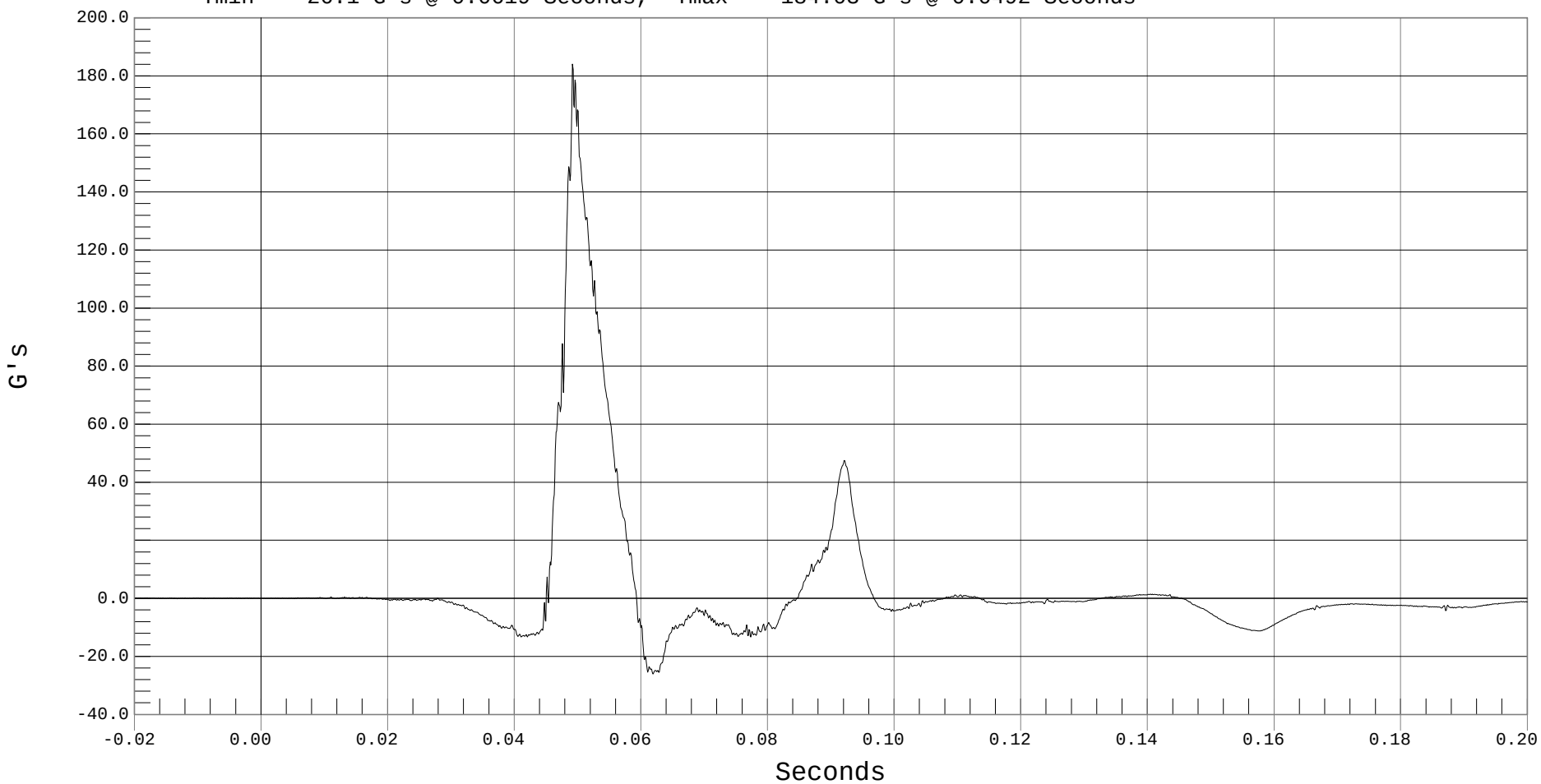
REAR PASSENGER HEAD Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 1000

— 1 PASSENGER HEAD Y, B01008AT.A09

Ymin = -26.1 G's @ 0.0619 Seconds, Ymax = 184.03 G's @ 0.0492 Seconds





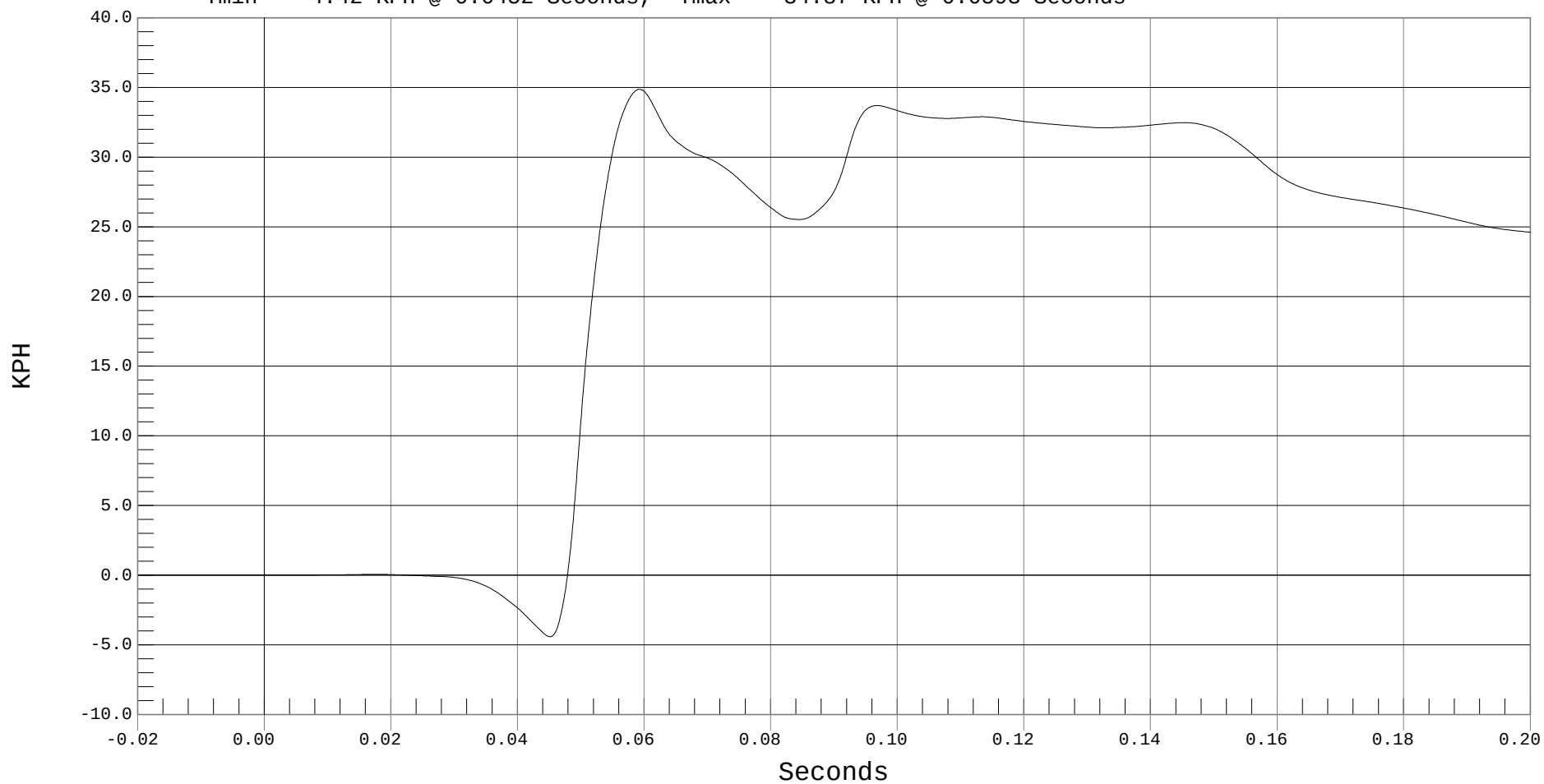
REAR PASSENGER HEAD Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 REAR PASSENGER HEAD Y VELOCITY, B01008AI.V09

Ymin = -4.42 KPH @ 0.0452 Seconds, Ymax = 34.87 KPH @ 0.0593 Seconds





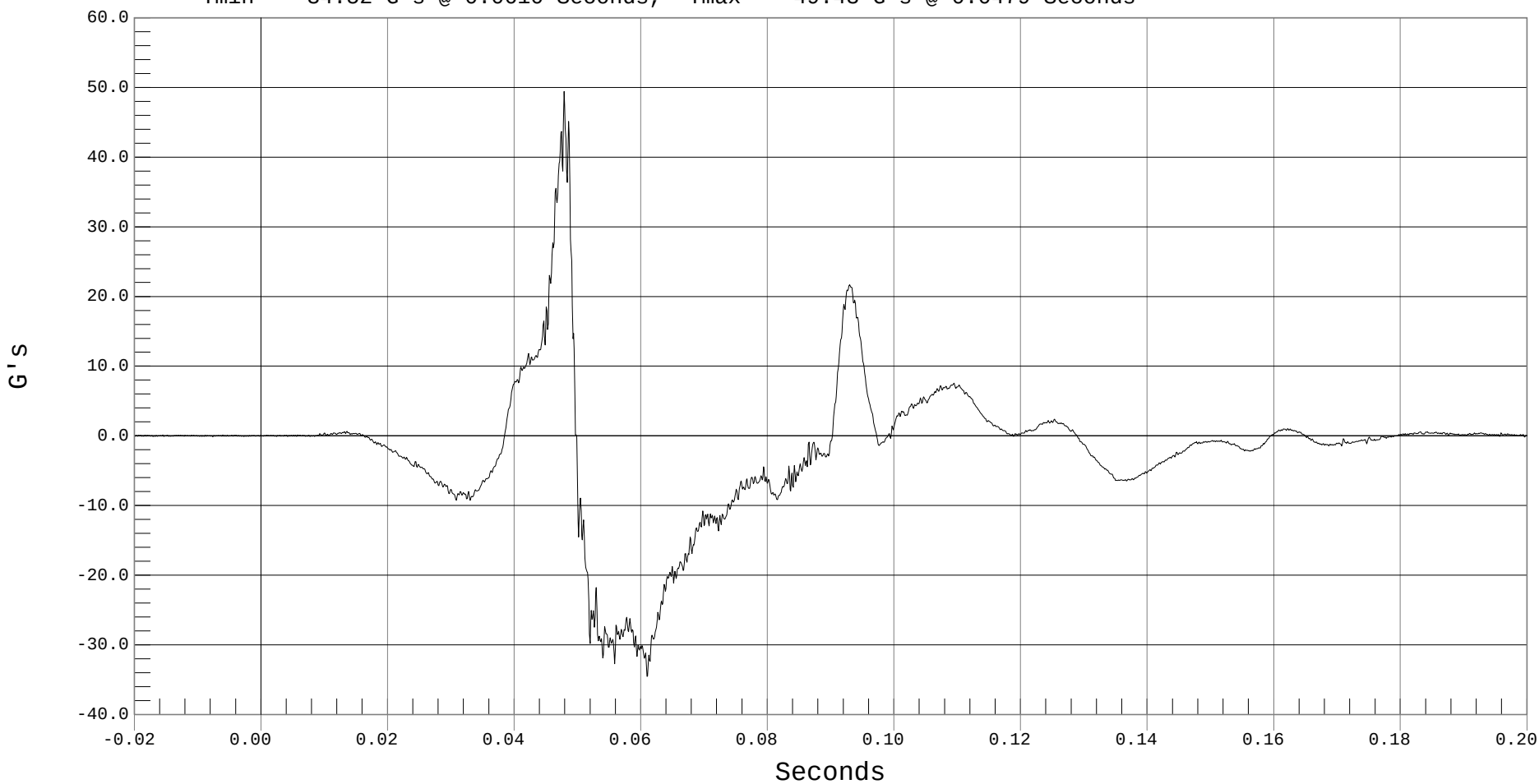
REAR PASSENGER HEAD Z ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 1000

— 1 PASSENGER HEAD Z, B01008AT.A10

Ymin = -34.52 G's @ 0.0610 Seconds, Ymax = 49.43 G's @ 0.0479 Seconds





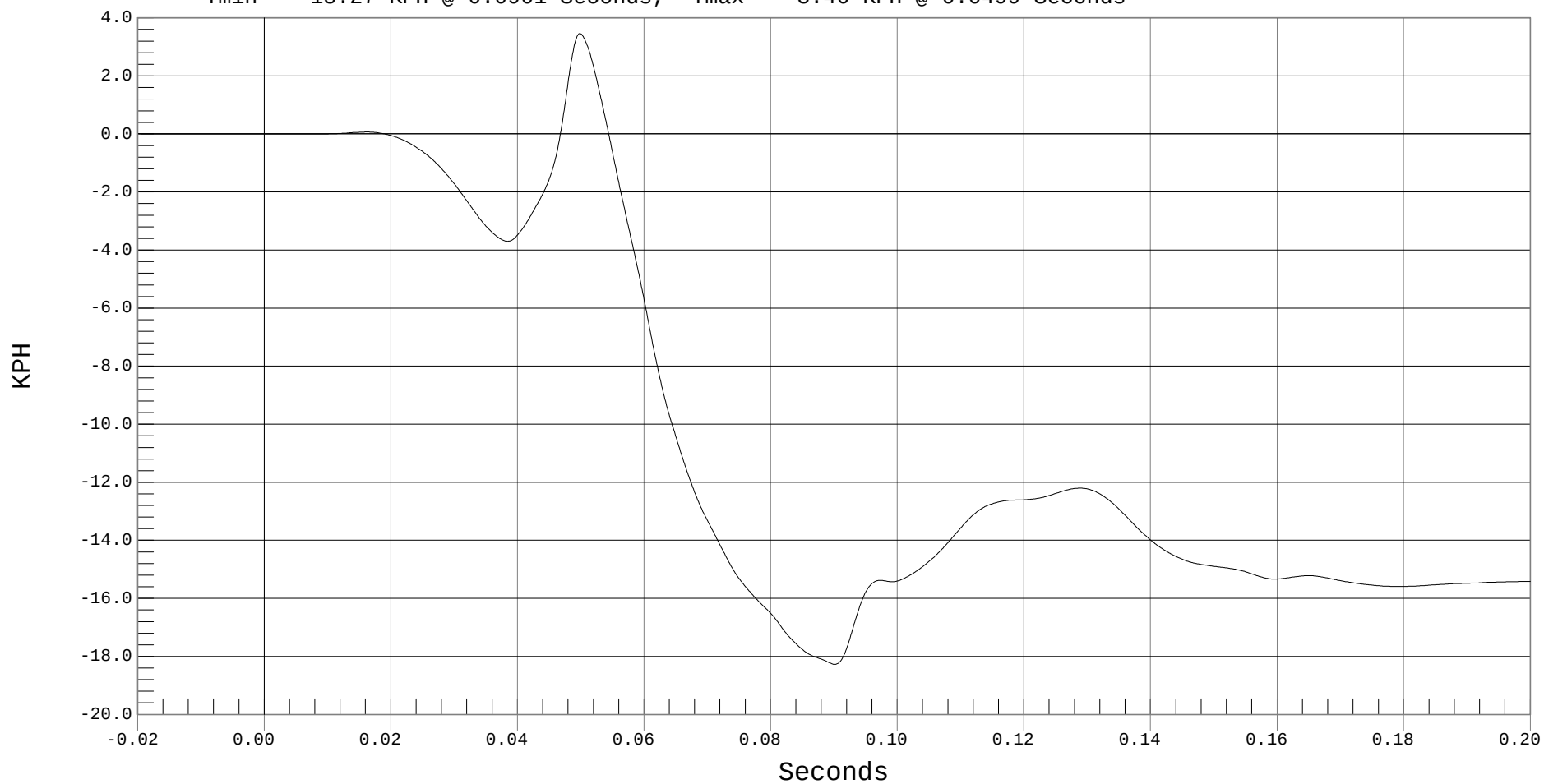
REAR PASSENGER HEAD Z VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 REAR PASSENGER HEAD Z VELOCITY, B01008AI.V10

Ymin = -18.27 KPH @ 0.0901 Seconds, Ymax = 3.46 KPH @ 0.0499 Seconds





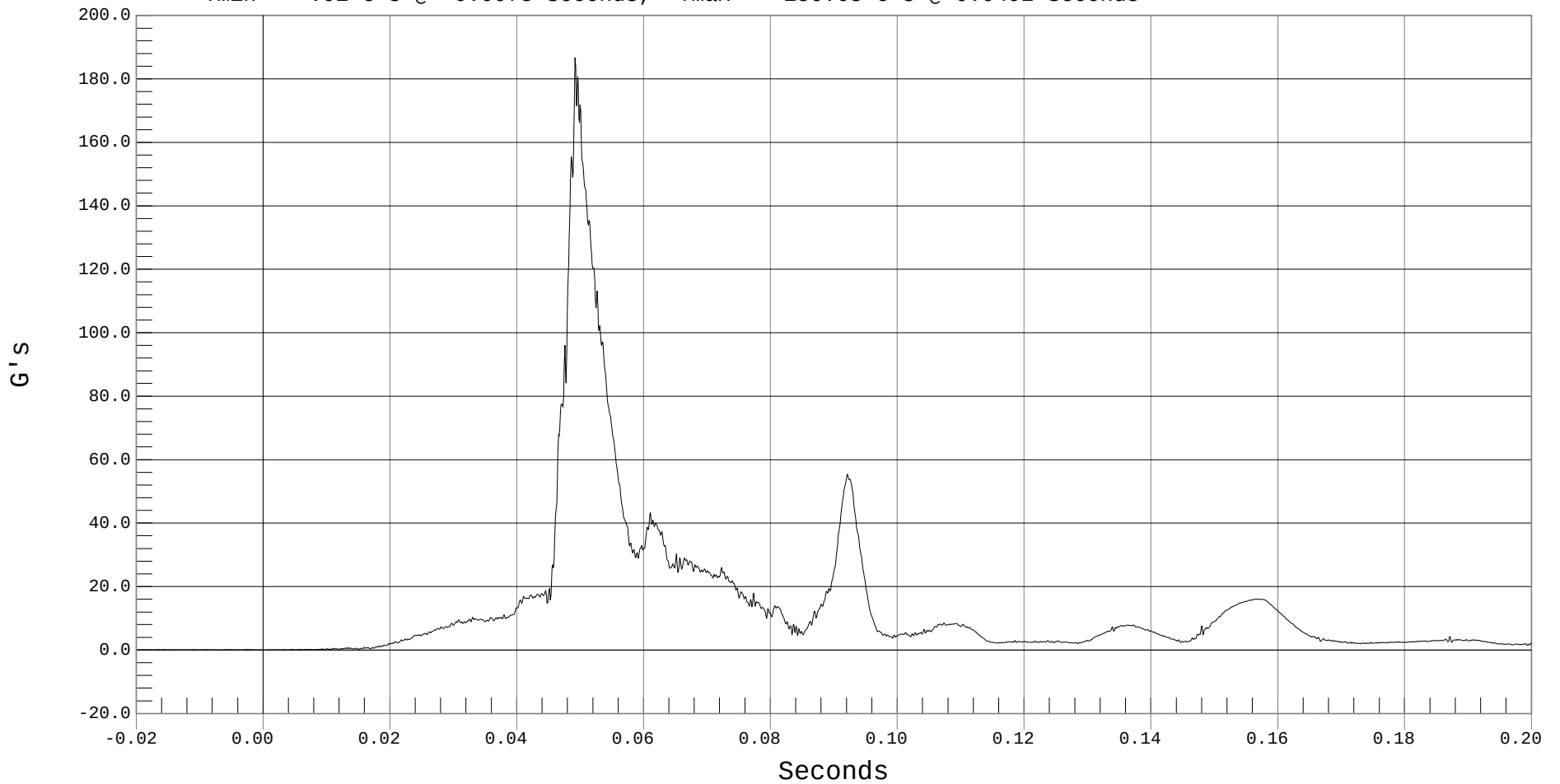
REAR PASSENGER HEAD RESULTANT ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 1000

— 1 REAR PASSENGER HEAD RESULTANT, B01008AV.A09

Ymin = .01 G's @ -0.0078 Seconds, Ymax = 186.68 G's @ 0.0492 Seconds





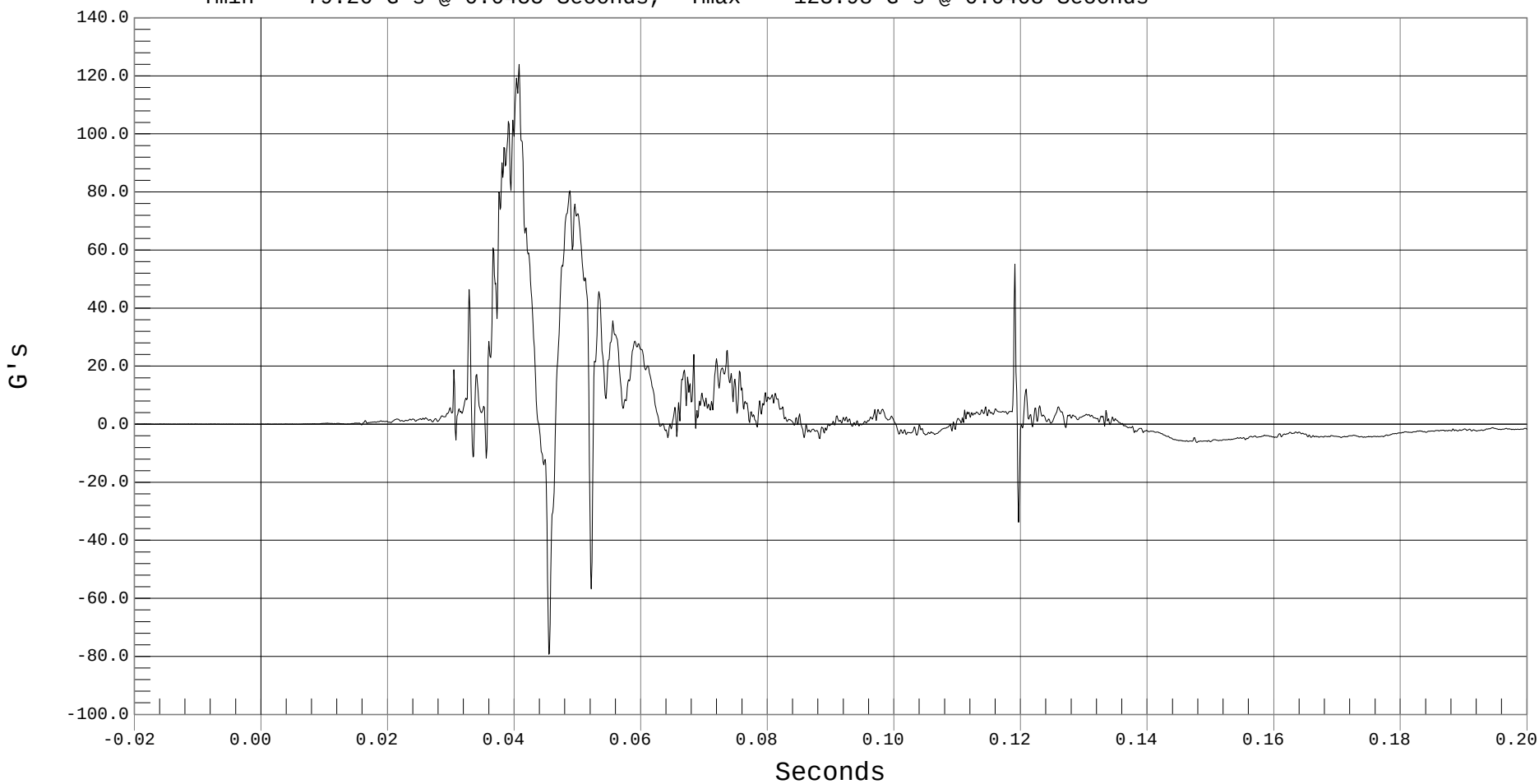
REAR PASSENGER UPPER RIB Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 1000

— 1 PASSENGER UPPER RIB Y, B01008AT.A11

Ymin = -79.26 G's @ 0.0455 Seconds, Ymax = 123.98 G's @ 0.0408 Seconds





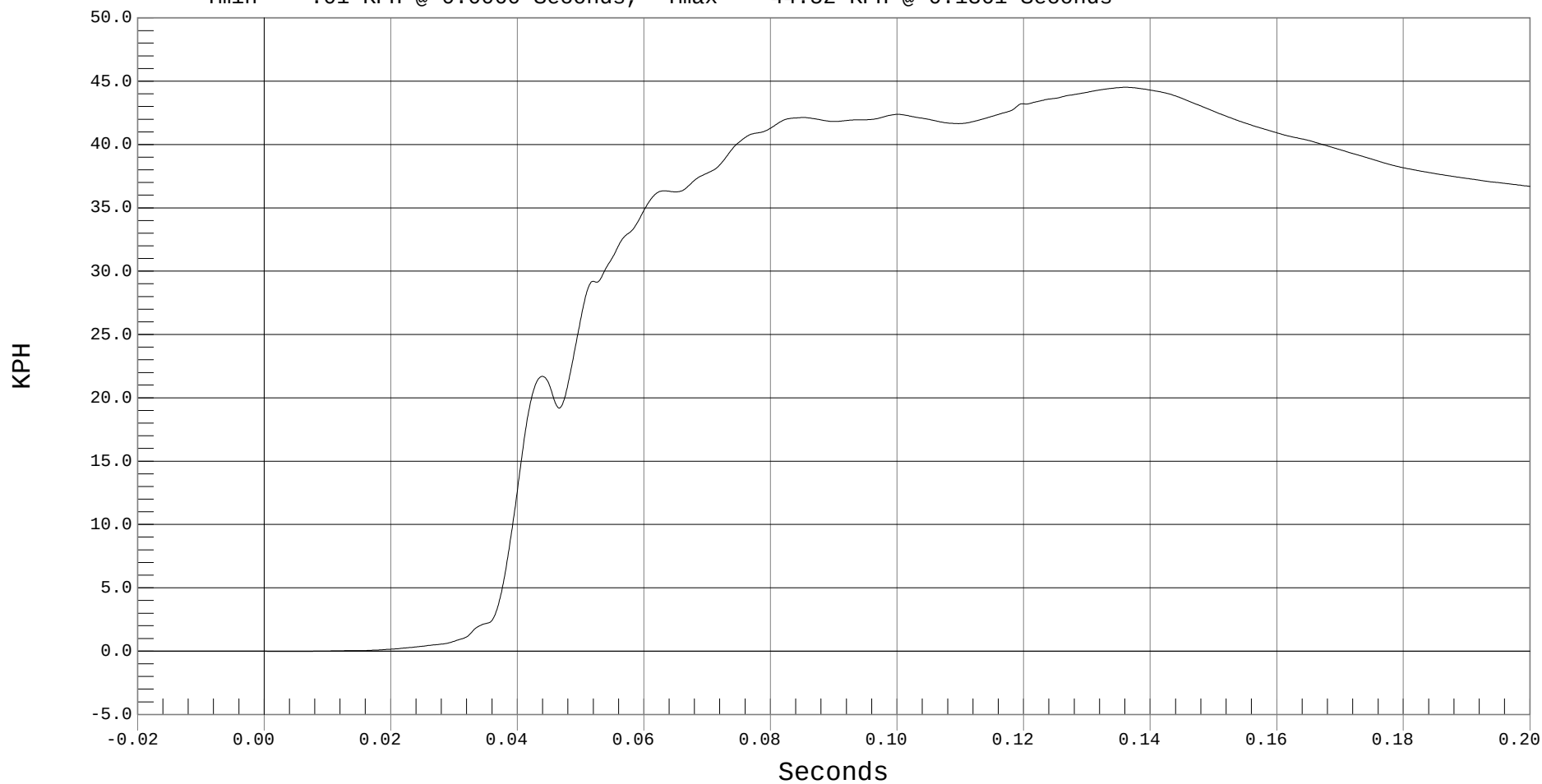
REAR PASSENGER UPPER RIB Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

1 REAR PASSENGER UPPER RIB Y VELOCITY, B01008AI.V11

Ymin = -.01 KPH @ 0.0060 Seconds, Ymax = 44.52 KPH @ 0.1361 Seconds





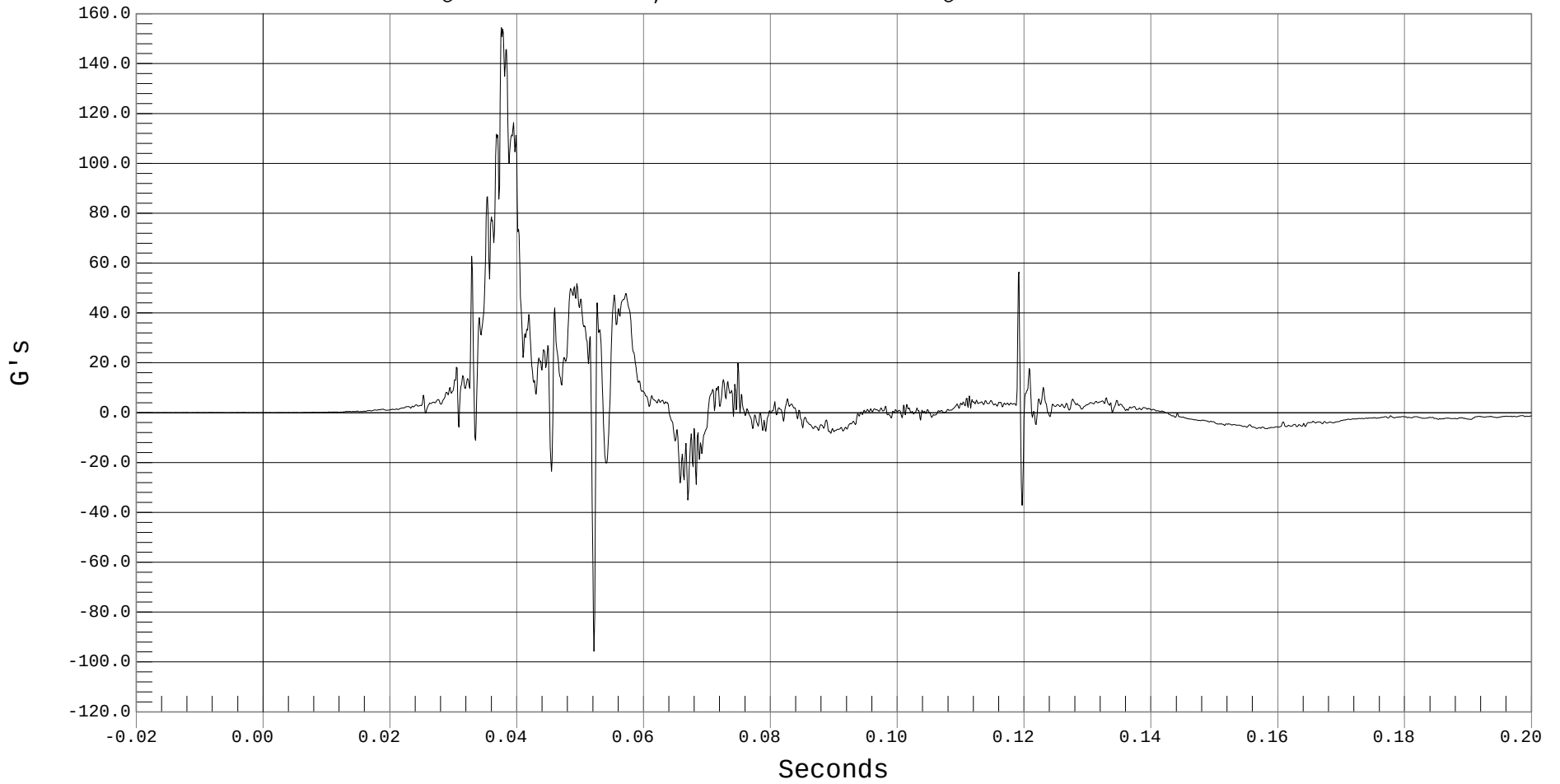
REAR PASSENGER LOWER RIB Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 1000

— 1 PASSENGER LOWER RIB Y, B01008AT.A12

Ymin = -95.68 G's @ 0.0522 Seconds, Ymax = 154.44 G's @ 0.0376 Seconds





REAR PASSENGER LOWER RIB Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT

Component: 2001 HYUNDAI ACCENT (C10515)

Other Info:

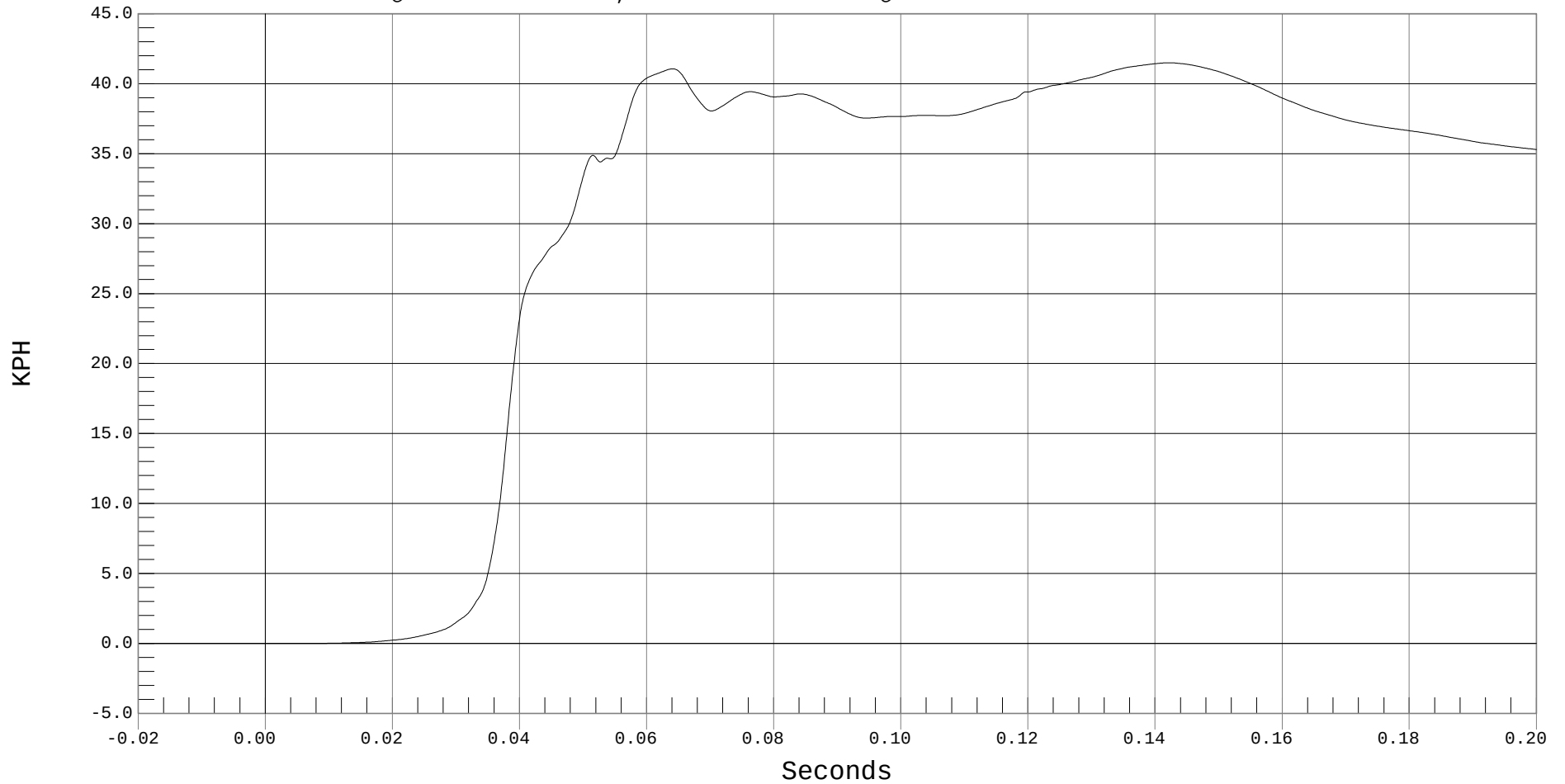
Test Date: 01-29-01

Speed: 38.6 MPH, 62.1 KPH

Filter Class: 180

— 1 REAR PASSENGER LOWER RIB Y VELOCITY, B01008AI.V12

Ymin = 0 KPH @ -0.0108 Seconds, Ymax = 41.5 KPH @ 0.1423 Seconds





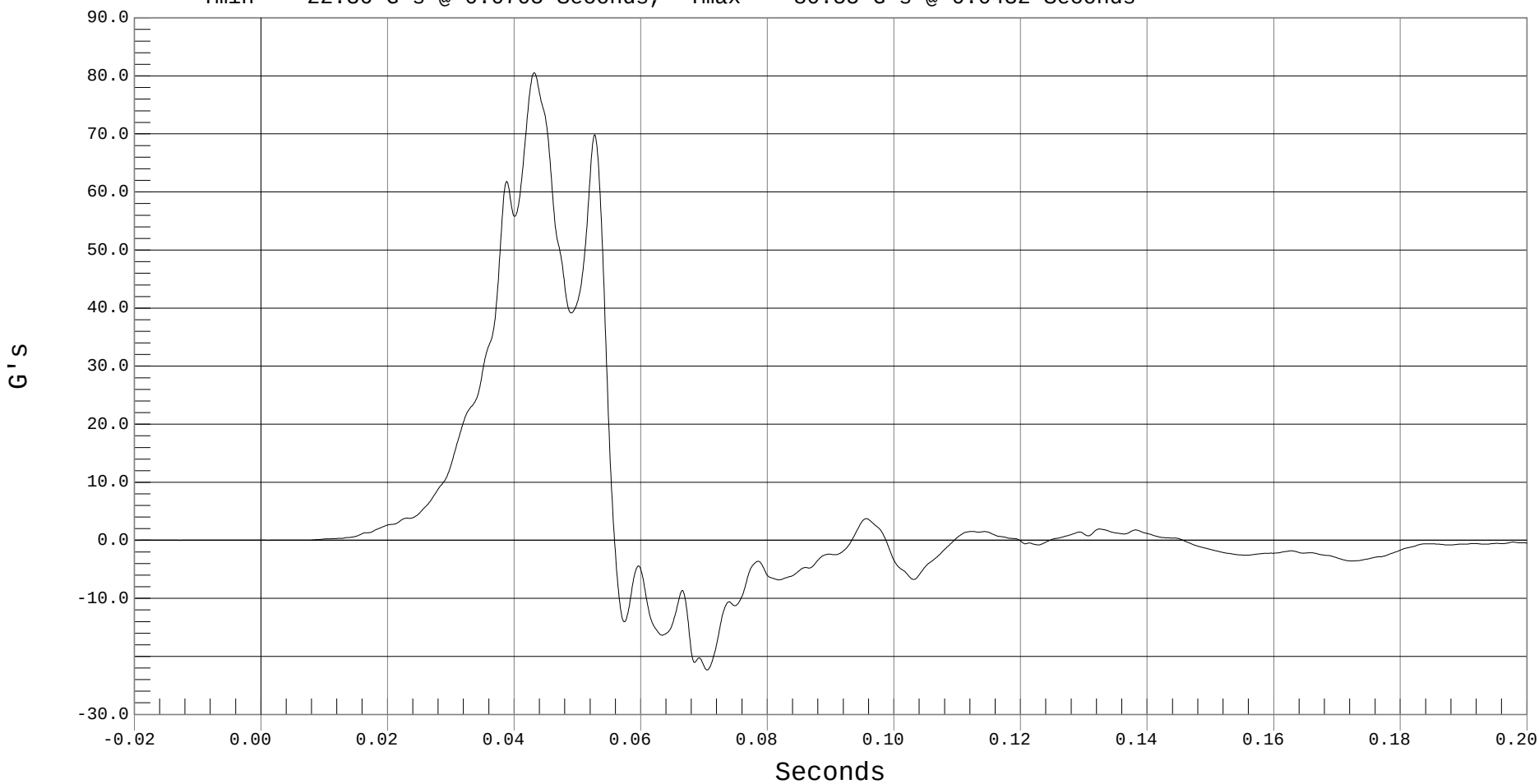
REAR PASSENGER LOWER SPINE Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 PASSENGER LOWER SPINE Y, B01008AF.A13

Ymin = -22.36 G's @ 0.0705 Seconds, Ymax = 80.55 G's @ 0.0432 Seconds





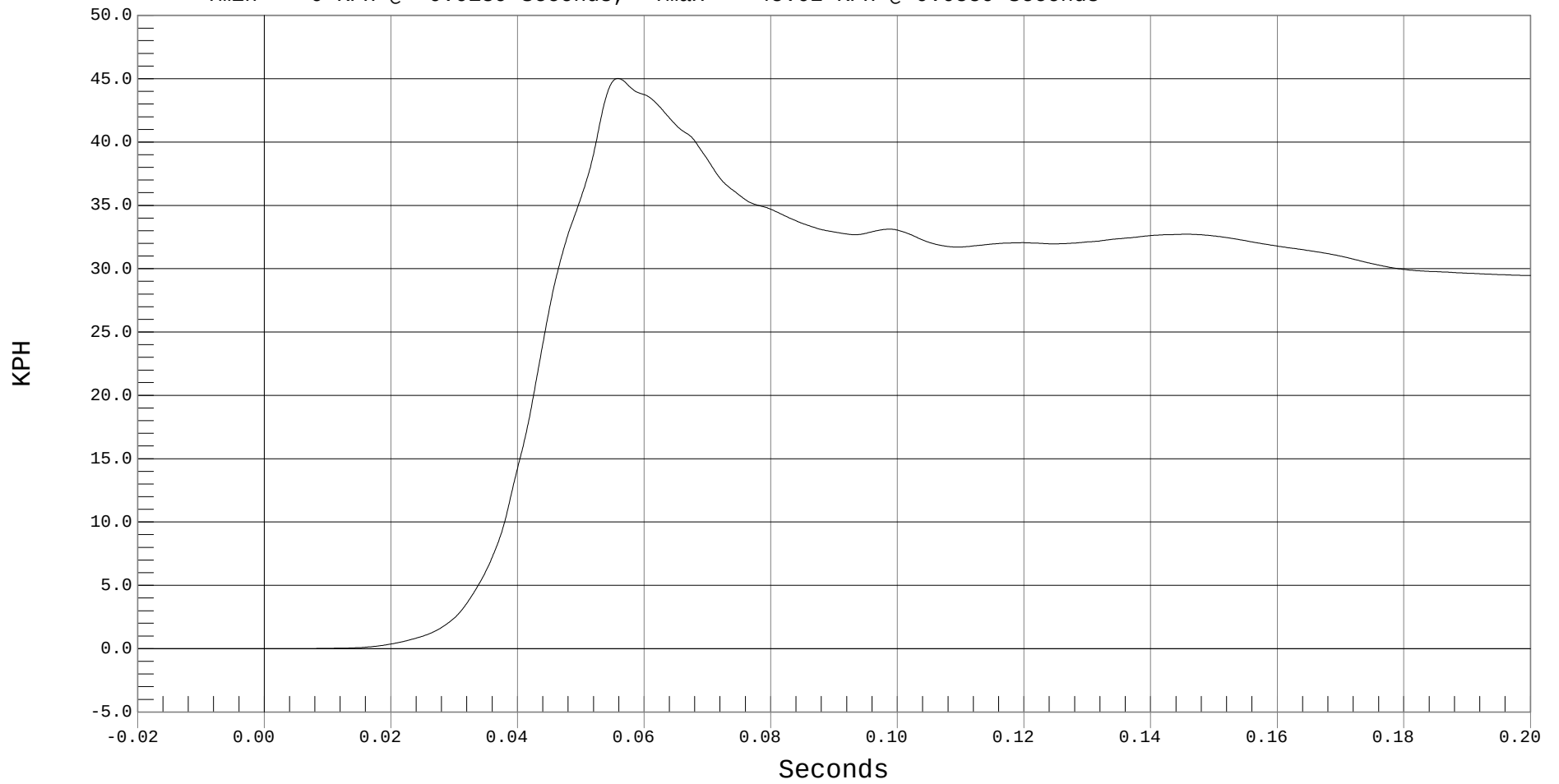
REAR PASSENGER LOWER SPINE Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 REAR PASSENGER LOWER SPINE Y VELOCITY, B01008AI.V13

Ymin = 0 KPH @ -0.0189 Seconds, Ymax = 45.02 KPH @ 0.0559 Seconds





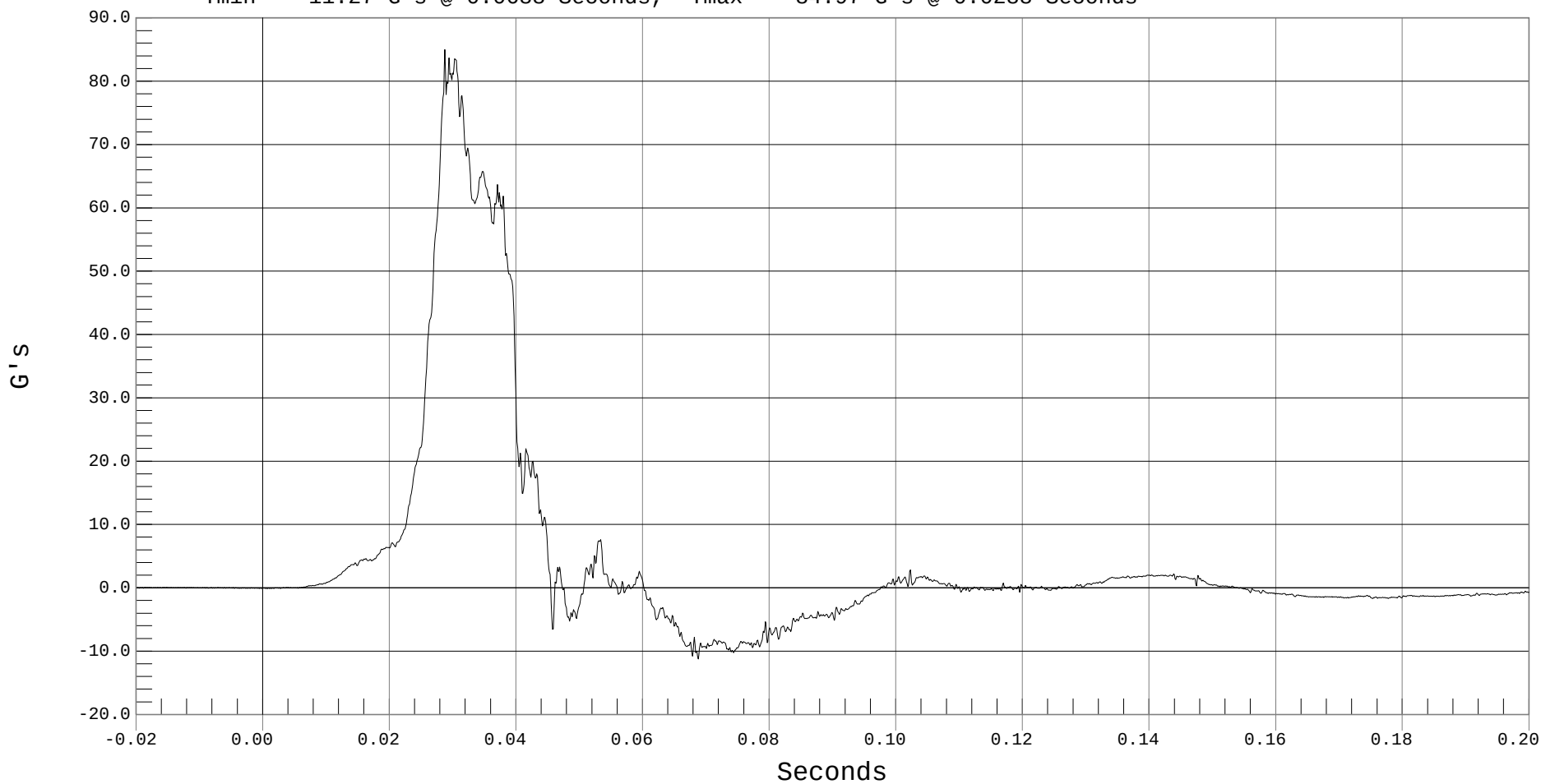
REAR PASSENGER PELVIS Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 1000

— 1 PASSENGER PELVIS Y, B01008AT.A14

Ymin = -11.27 G's @ 0.0688 Seconds, Ymax = 84.97 G's @ 0.0288 Seconds





REAR PASSENGER PELVIS Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT

Component: 2001 HYUNDAI ACCENT (C10515)

Other Info:

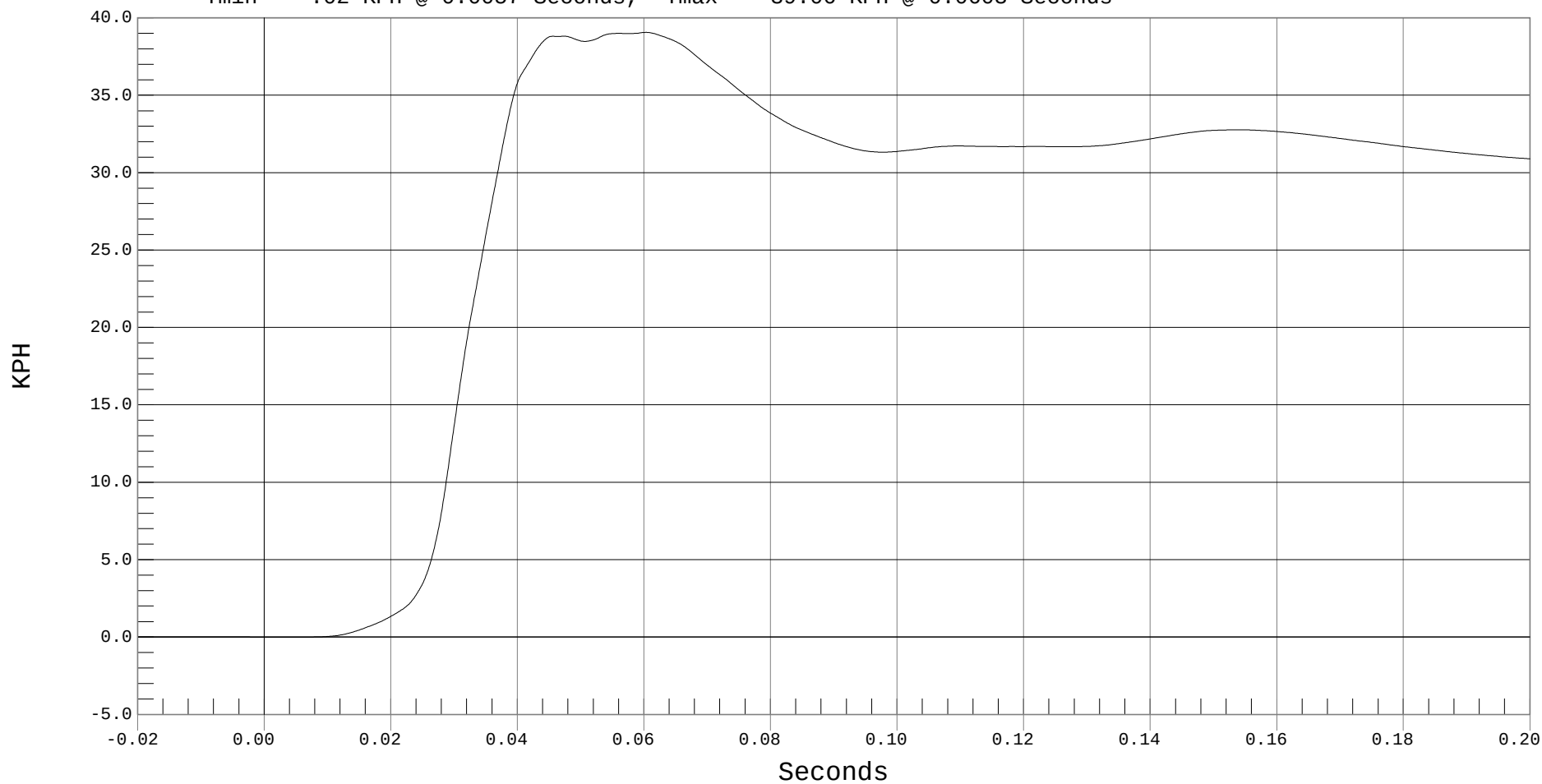
Test Date: 01-29-01

Speed: 38.6 MPH, 62.1 KPH

Filter Class: 180

— 1 REAR PASSENGER PELVIS Y VELOCITY, B01008AI.V14

Ymin = -.02 KPH @ 0.0057 Seconds, Ymax = 39.06 KPH @ 0.0603 Seconds





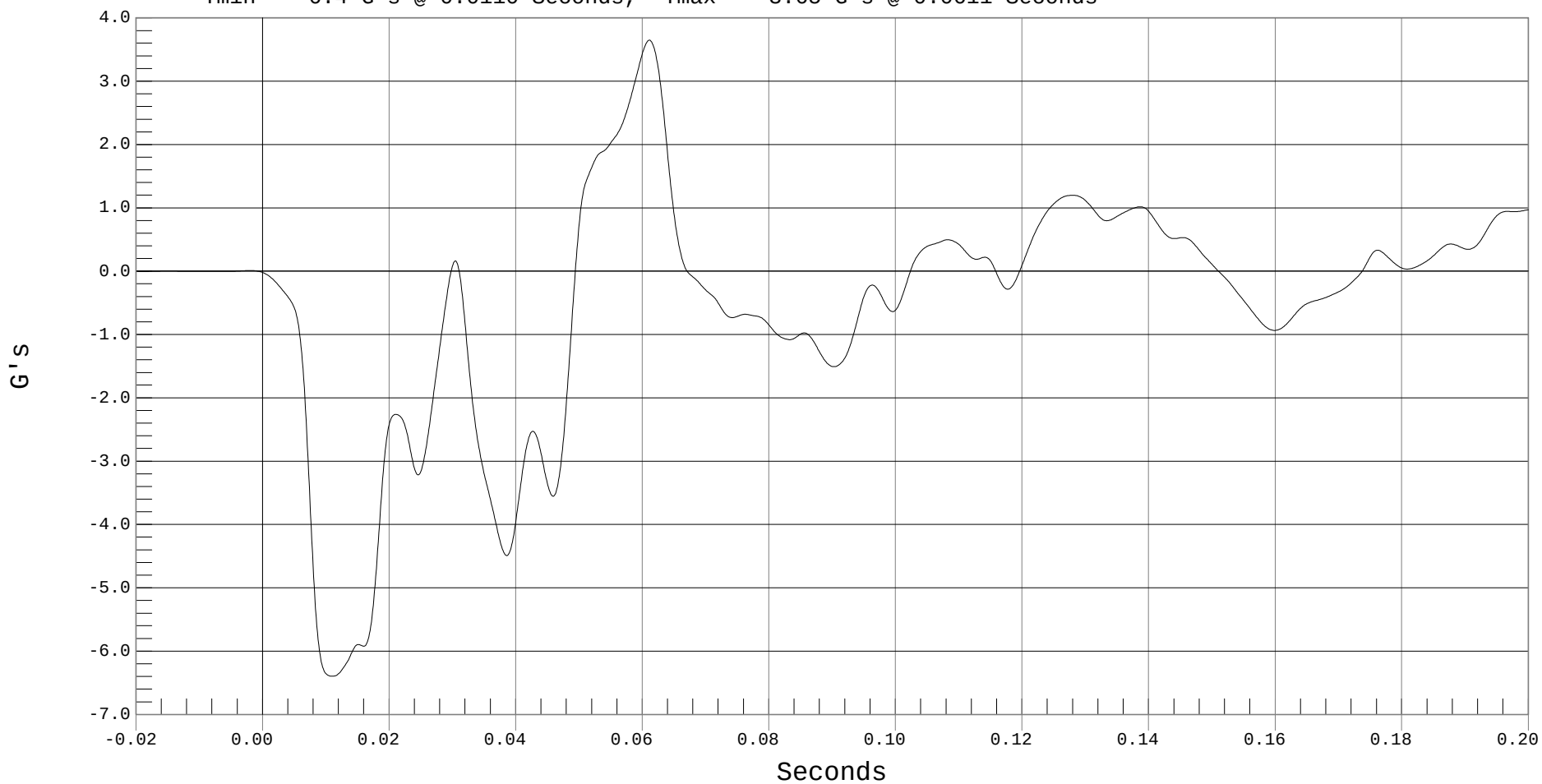
RIGHT SIDE SILL AT FRONT SEAT X ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 RIGHT FRONT SILL X, B01008AF.A15

Ymin = -6.4 G's @ 0.0110 Seconds, Ymax = 3.65 G's @ 0.0611 Seconds





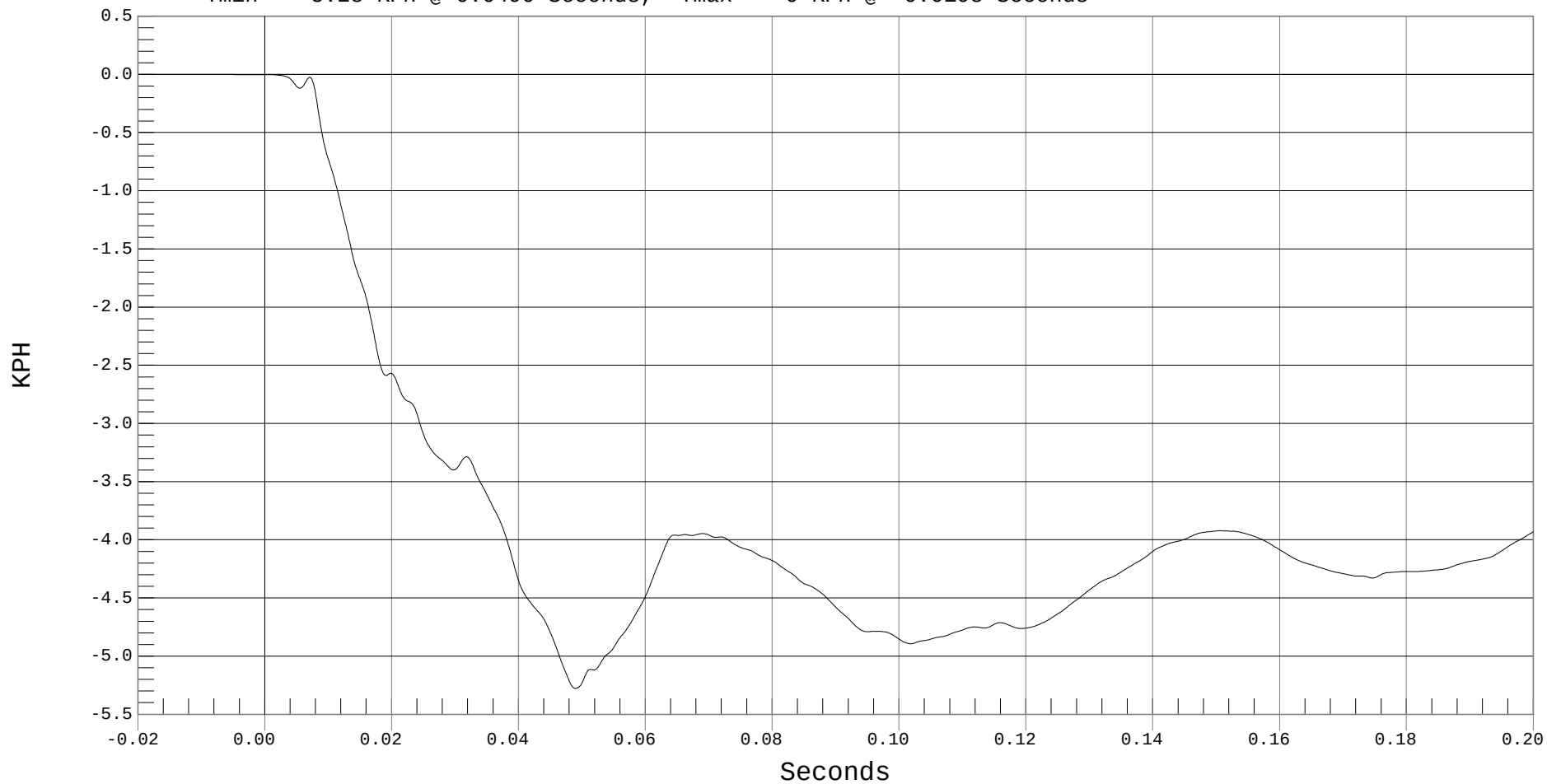
RIGHT SIDE SILL AT FRONT SEAT X VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 RIGHT SIDE SILL AT FRONT SEAT X VELOCITY, B01008AI.V15

Ymin = -5.28 KPH @ 0.0490 Seconds, Ymax = 0 KPH @ -0.0198 Seconds





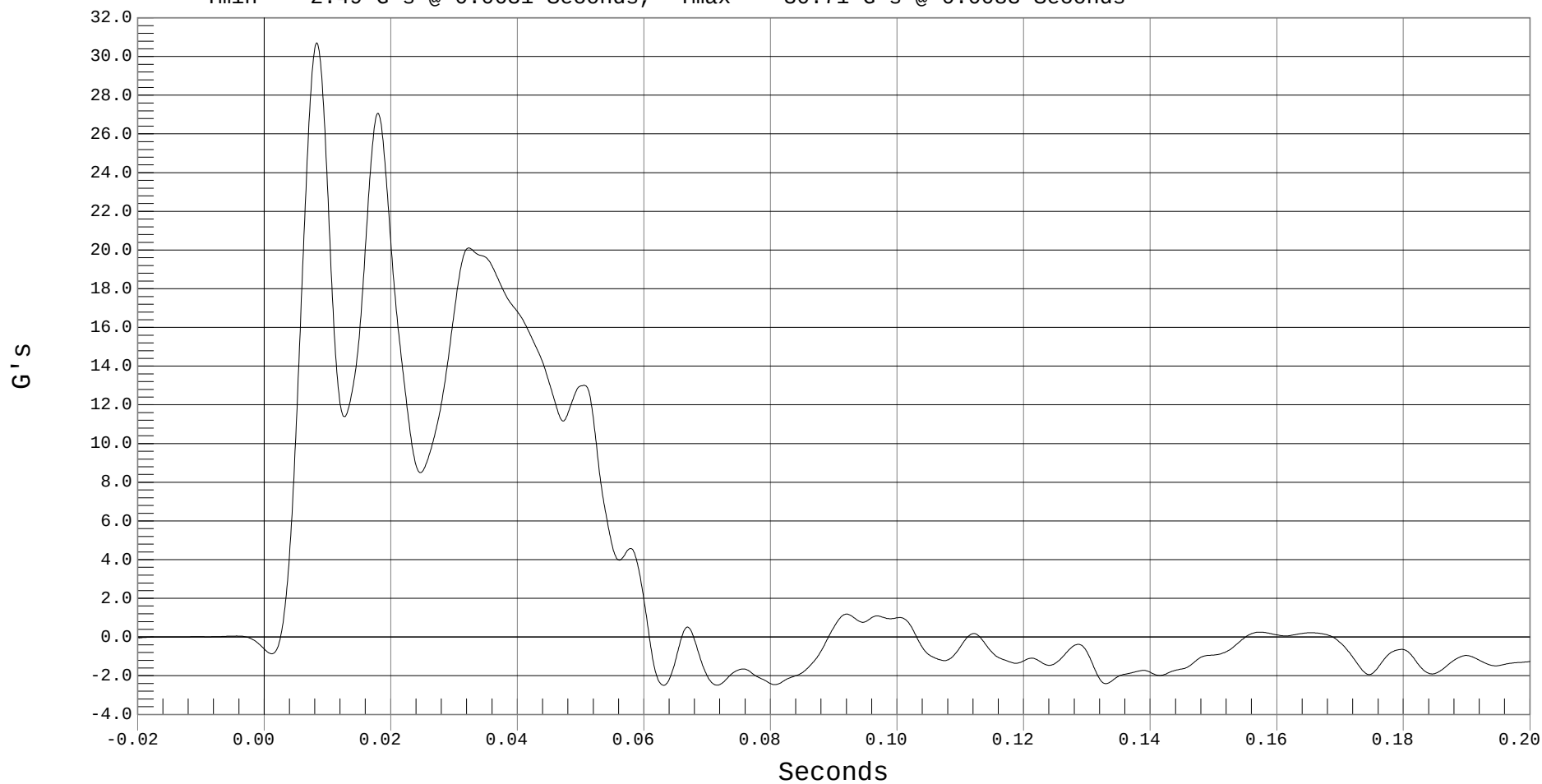
RIGHT SIDE SILL AT FRONT SEAT Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 RIGHT FRONT SILL Y, B01008AF.A16

Ymin = -2.49 G's @ 0.0631 Seconds, Ymax = 30.71 G's @ 0.0083 Seconds





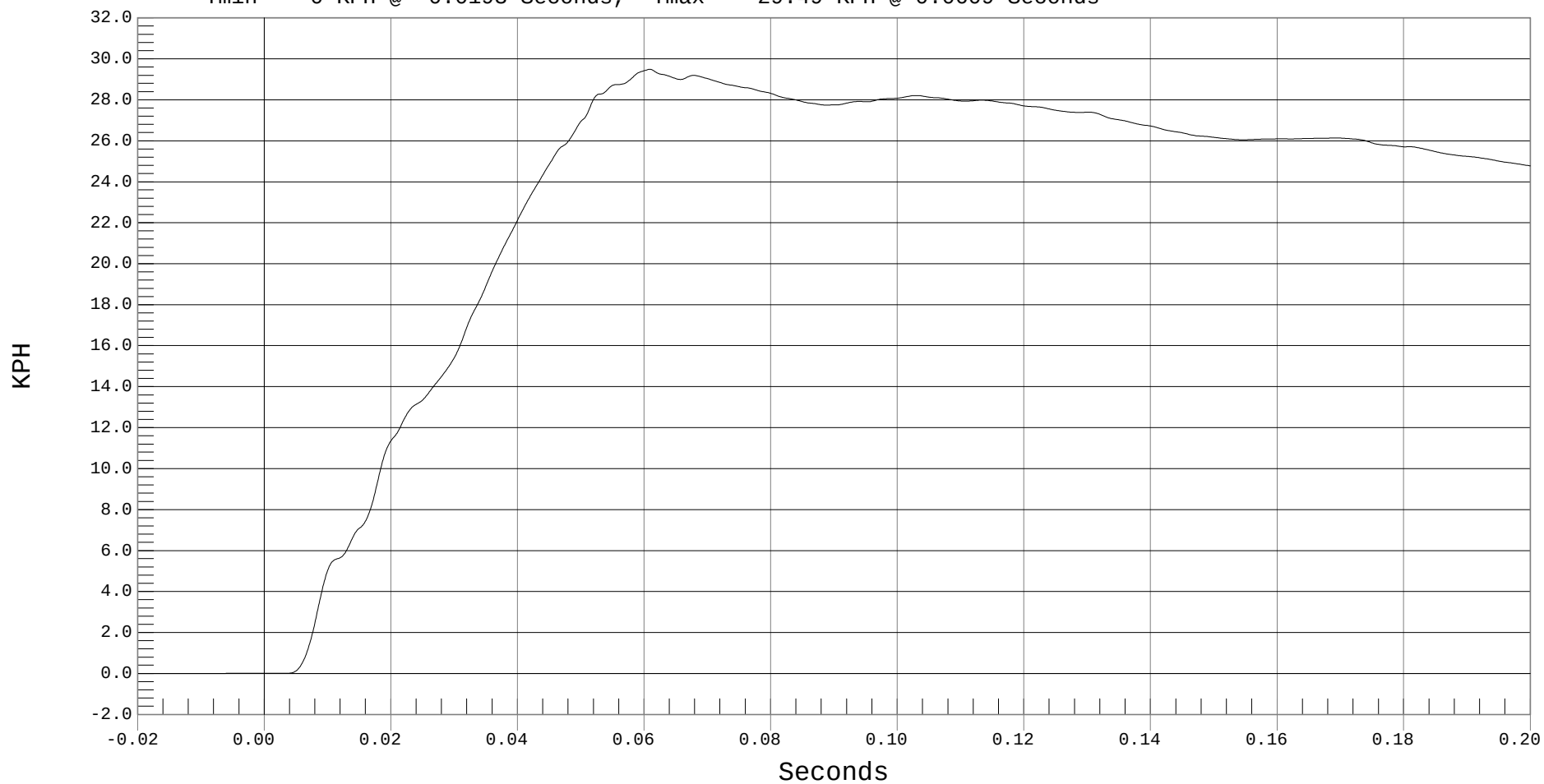
RIGHT SIDE SILL AT FRONT SEAT Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 RIGHT SIDE SILL AT FRONT SEAT Y VELOCITY, B01008AI.V16

Ymin = 0 KPH @ -0.0193 Seconds, Ymax = 29.49 KPH @ 0.0609 Seconds



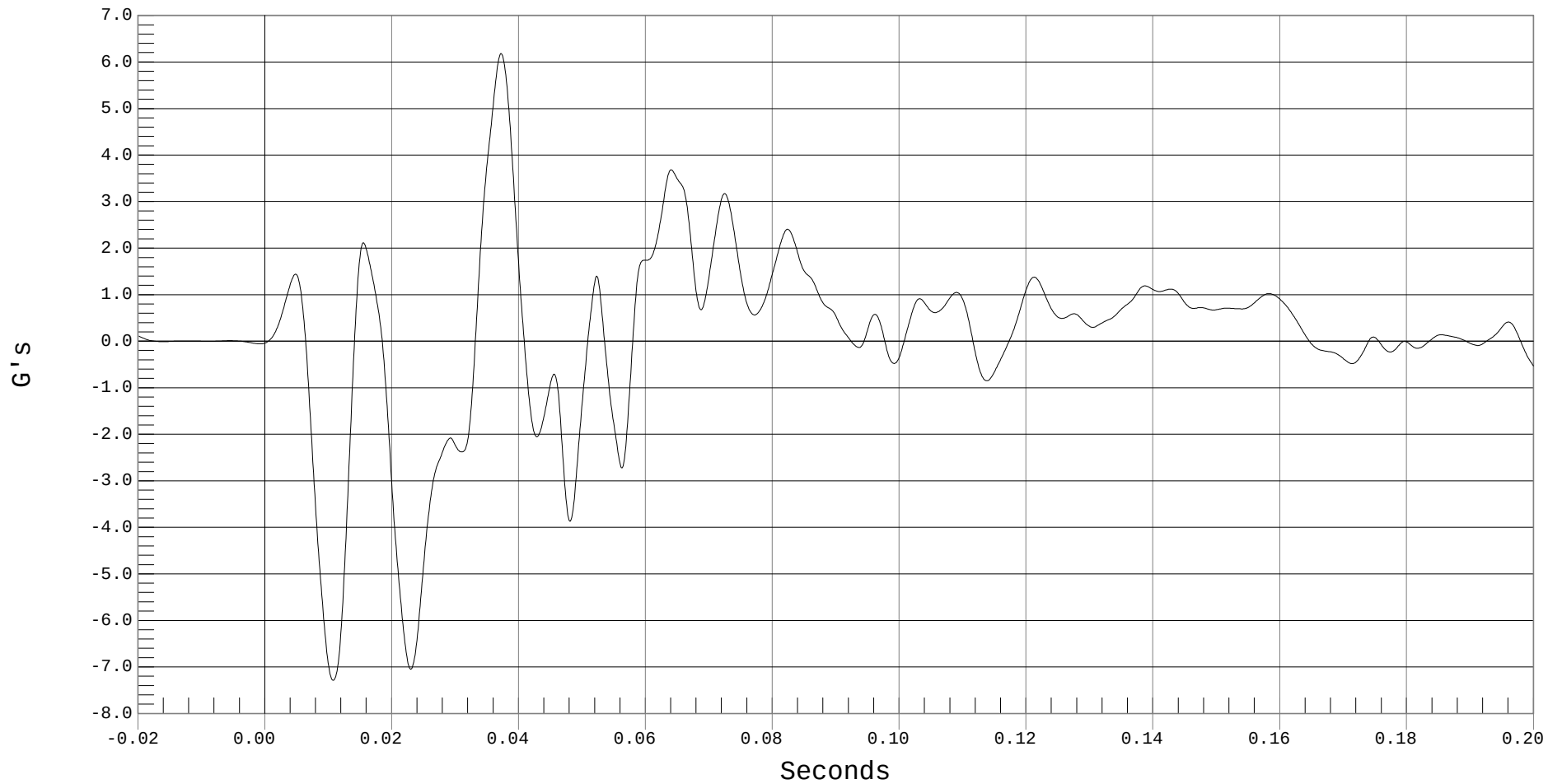


RIGHT SIDE SILL AT FRONT SEAT Z ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 RIGHT FRONT SILL Z, B01008AF.A17





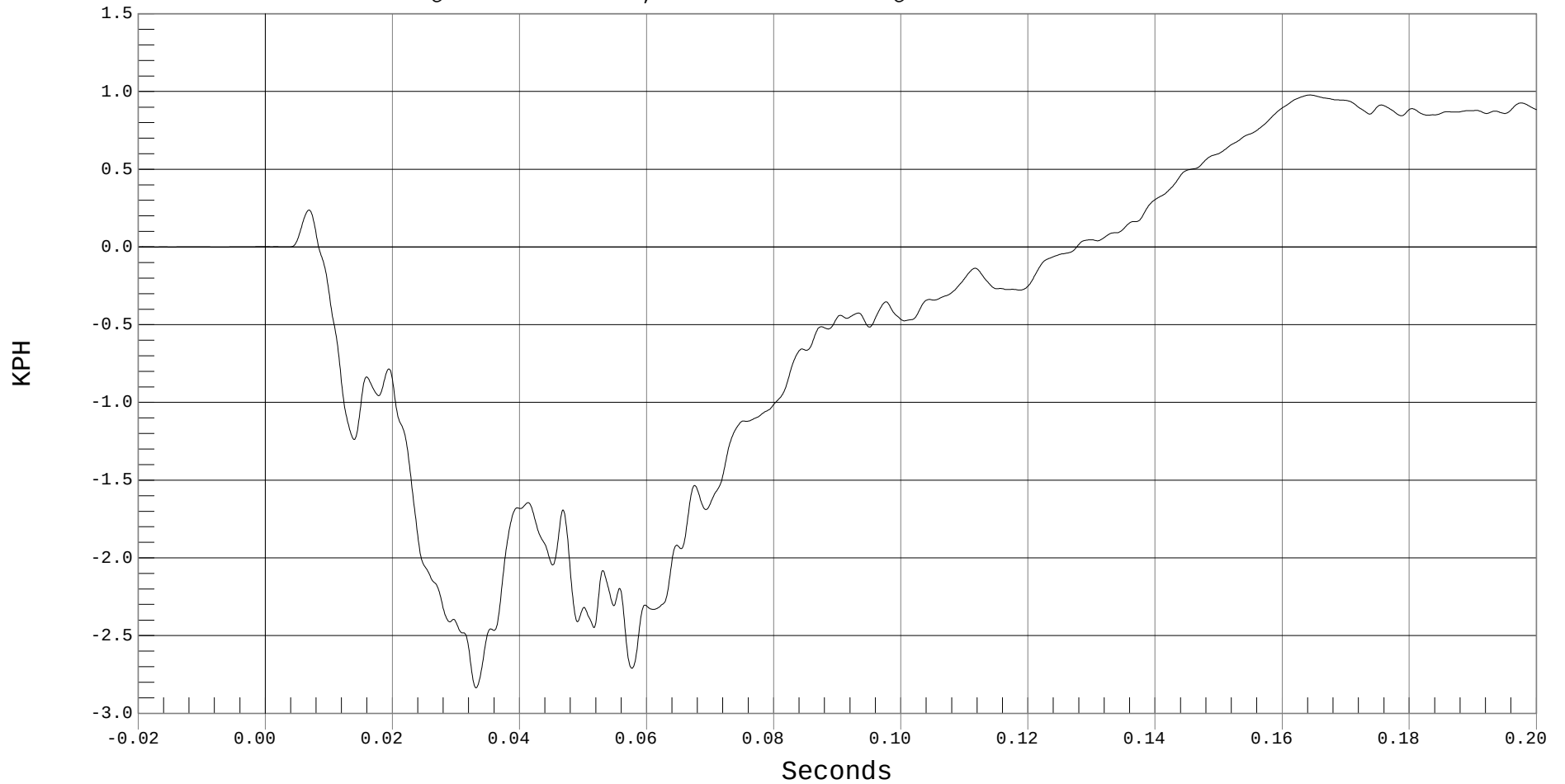
RIGHT SIDE SILL AT FRONT SEAT Z VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 RIGHT SIDE SILL AT FRONT SEAT Z VELOCITY, B01008AI.V17

Ymin = -2.84 KPH @ 0.0332 Seconds, Ymax = .98 KPH @ 0.1644 Seconds





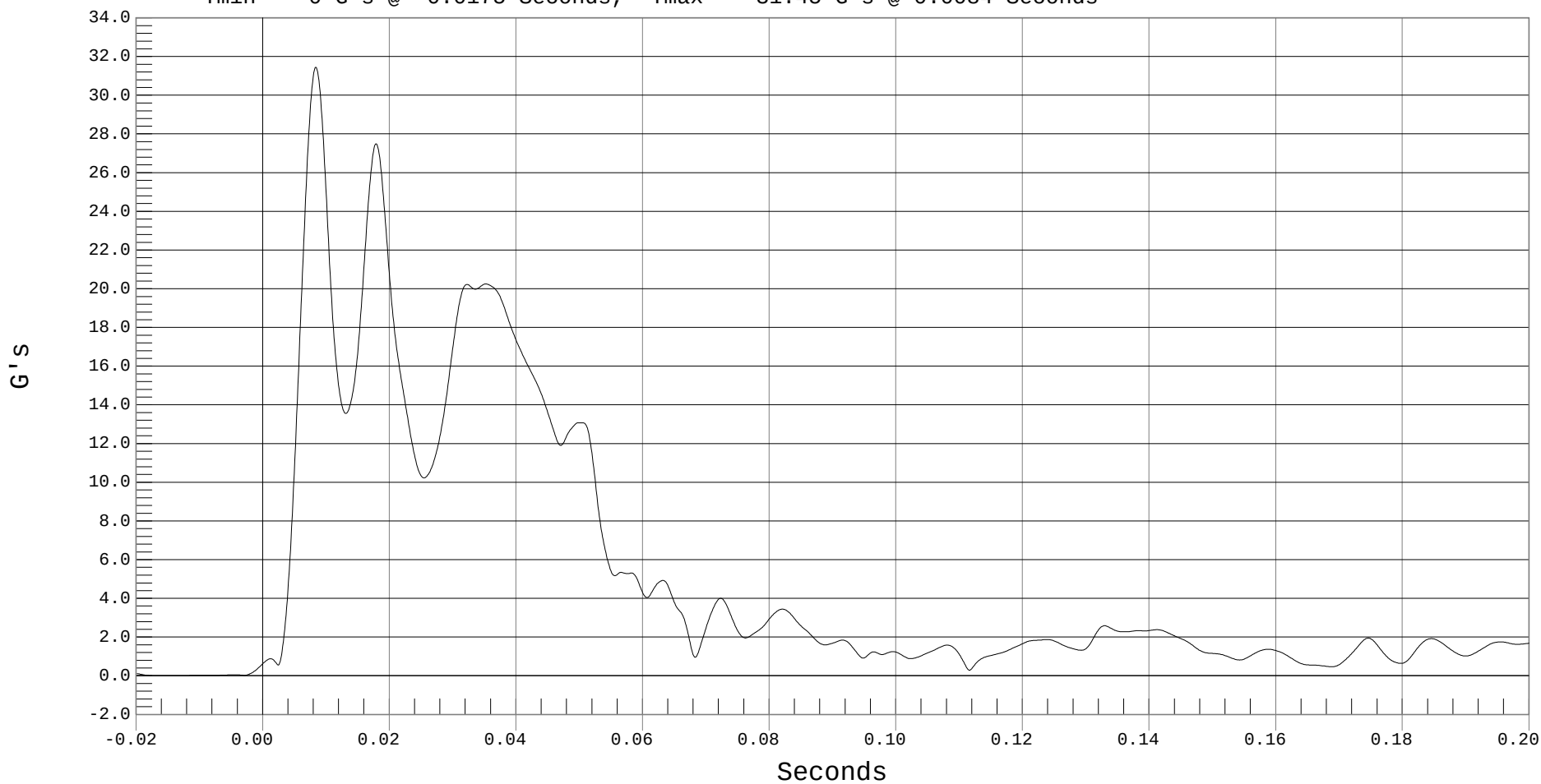
RIGHT SIDE SILL AT FRONT SEAT RESULTANT ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

1 RIGHT SIDE SILL AT FRONT SEAT RESULTANT ACCELERATION, B01008AV.A15

Ymin = 0 G's @ -0.0175 Seconds, Ymax = 31.45 G's @ 0.0084 Seconds





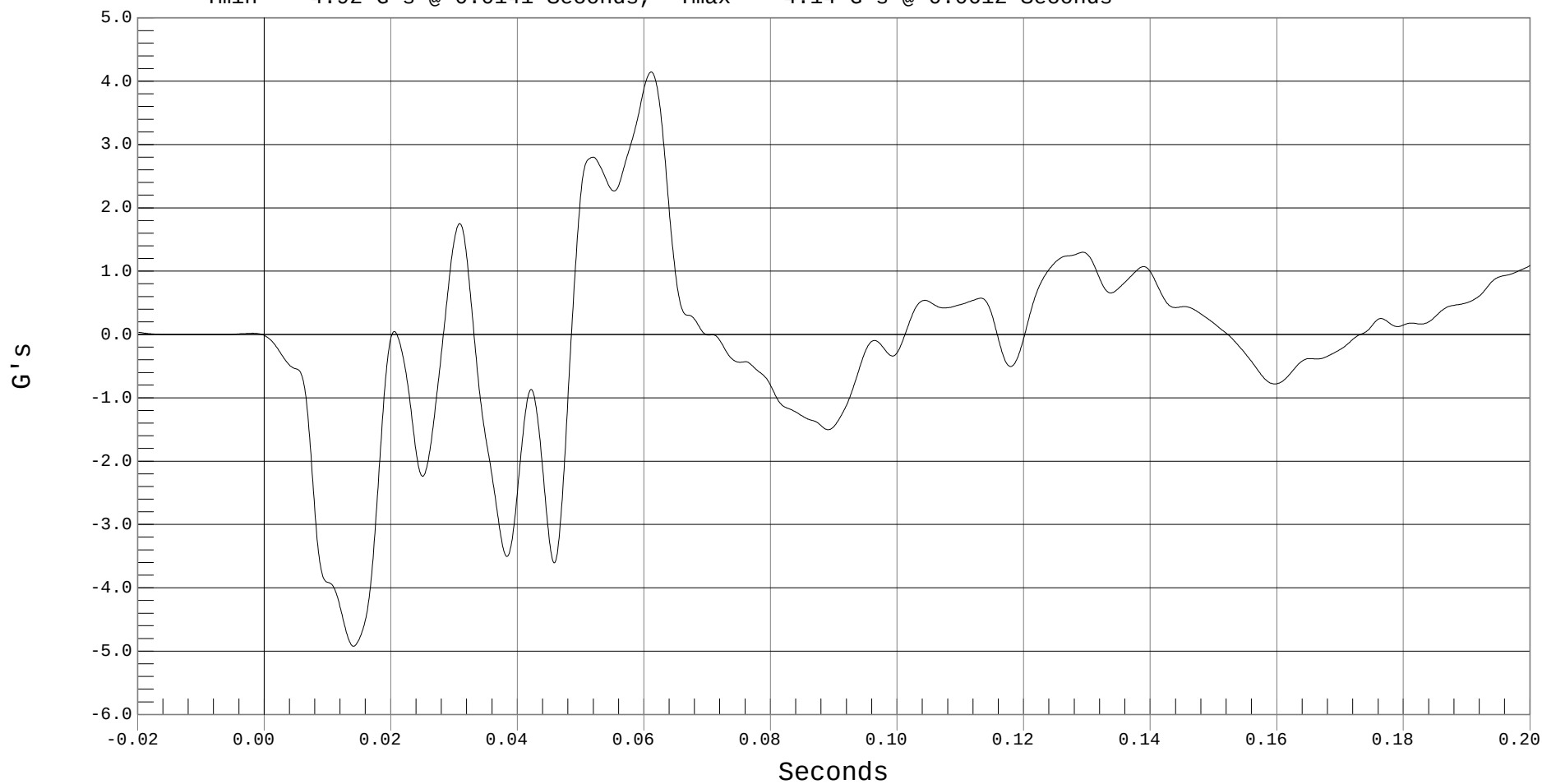
RIGHT SIDE SILL AT REAR SEAT X ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 RIGHT REAR SILL X, B01008AF.A18

Ymin = -4.92 G's @ 0.0141 Seconds, Ymax = 4.14 G's @ 0.0612 Seconds





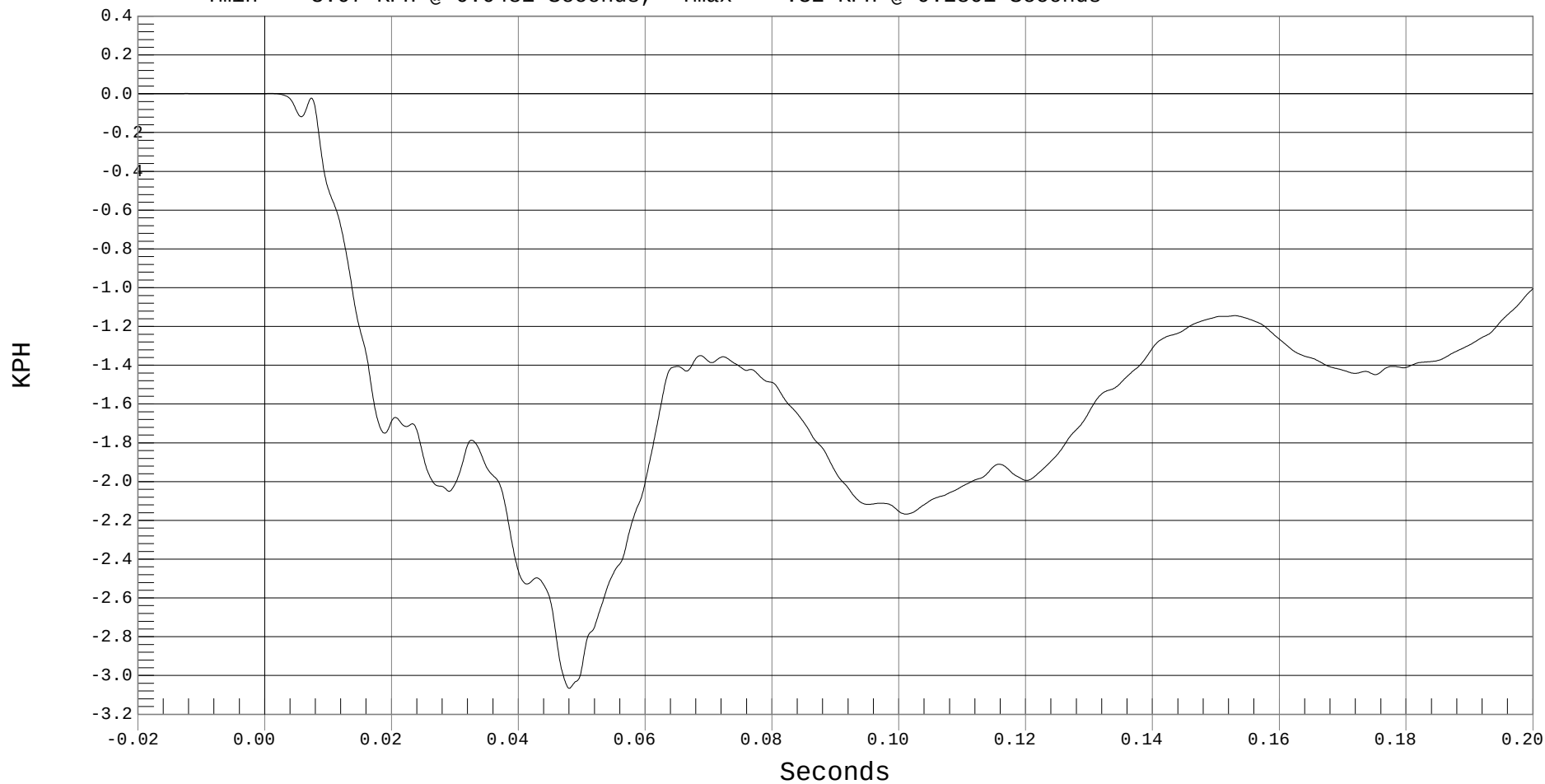
RIGHT SIDE SILL AT REAR SEAT X VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 RIGHT SIDE SILL AT REAR SEAT X VELOCITY, B01008AI.V18

Ymin = -3.07 KPH @ 0.0481 Seconds, Ymax = .32 KPH @ 0.2801 Seconds





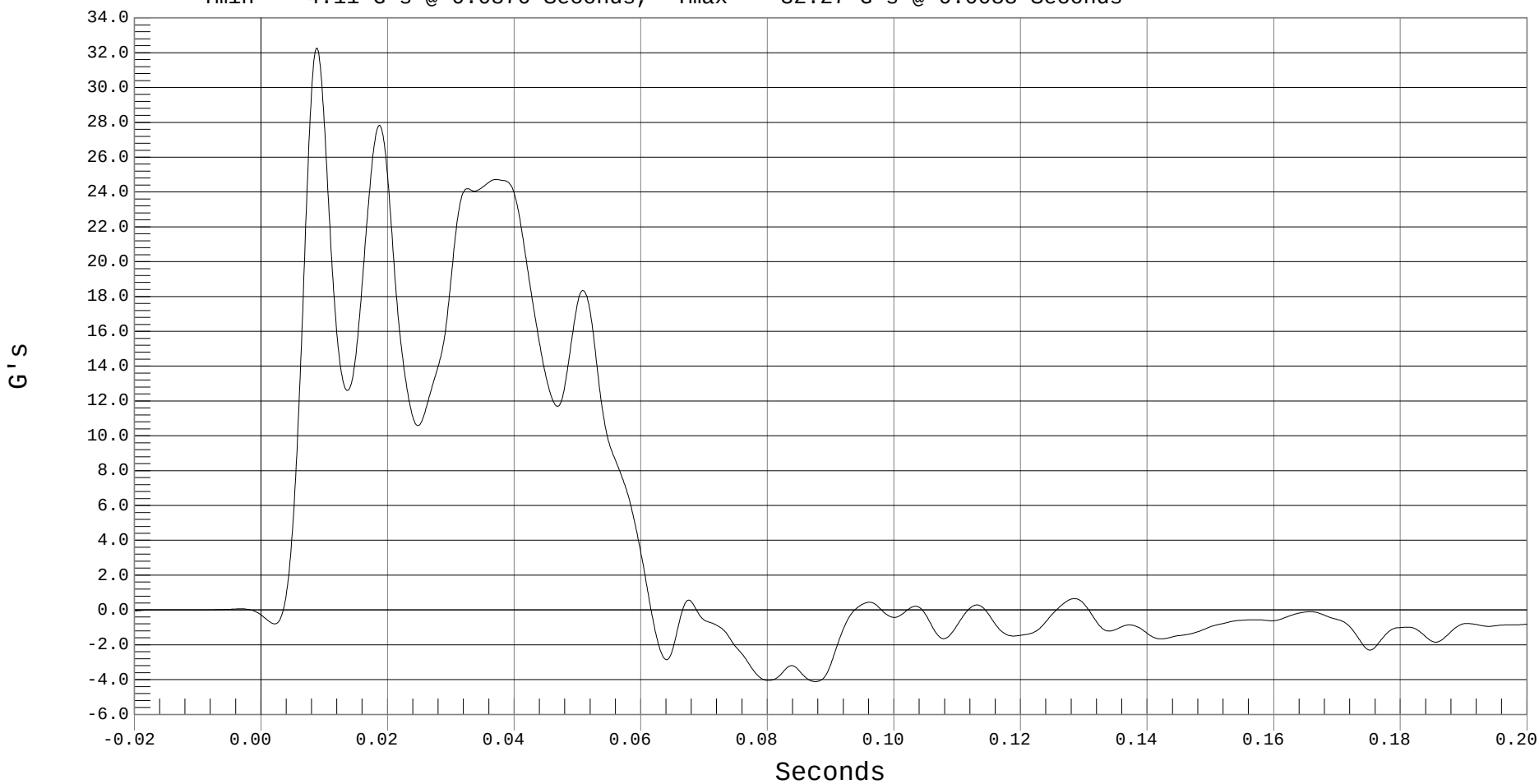
RIGHT SIDE SILL AT REAR SEAT Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 RIGHT REAR SILL Y, B01008AF.A19

Ymin = -4.11 G's @ 0.0876 Seconds, Ymax = 32.27 G's @ 0.0088 Seconds





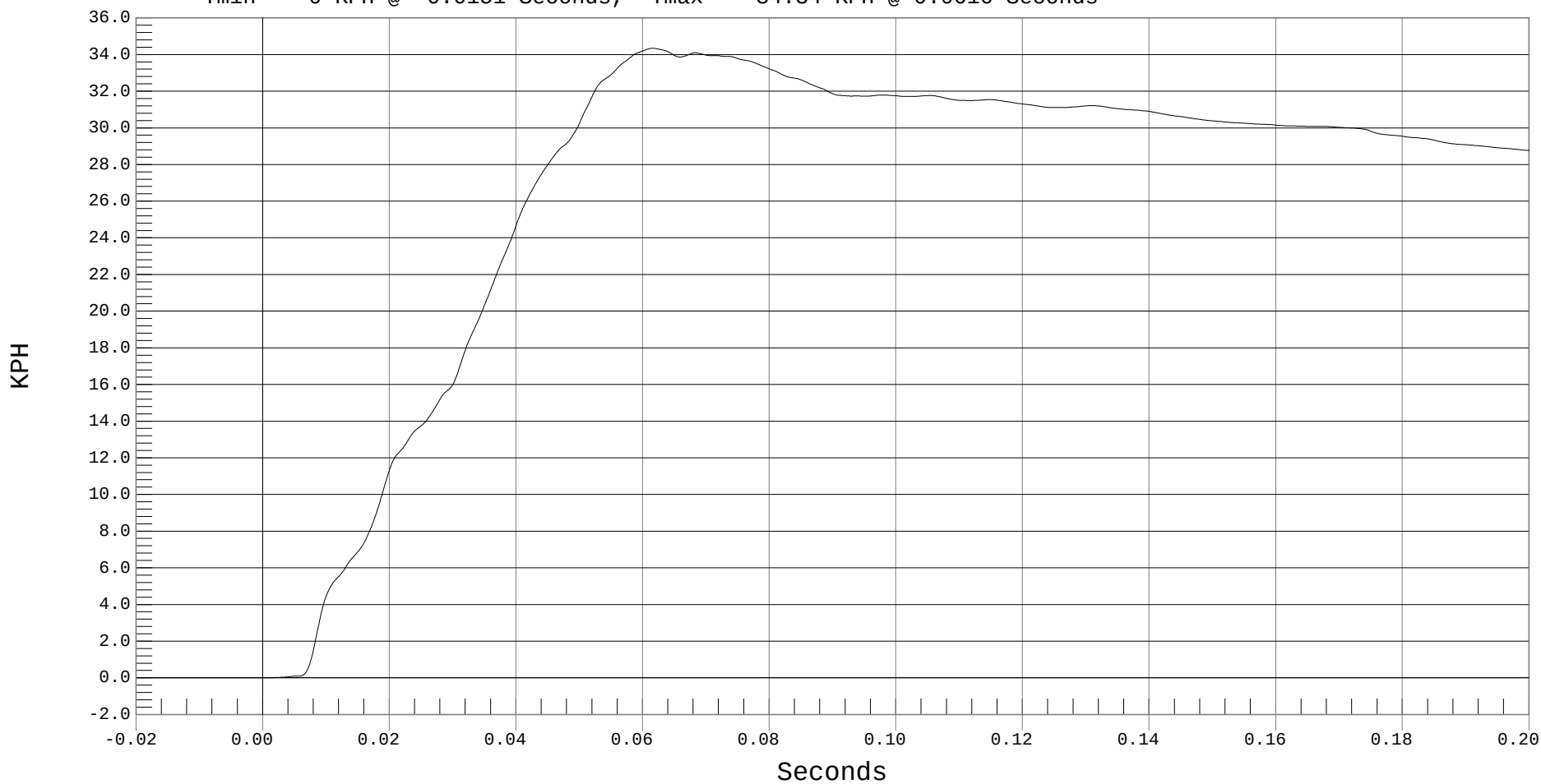
RIGHT SIDE SILL AT REAR SEAT Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 RIGHT SIDE SILL AT REAR SEAT Y VELOCITY, B01008AI.V19

Ymin = 0 KPH @ -0.0151 Seconds, Ymax = 34.34 KPH @ 0.0616 Seconds





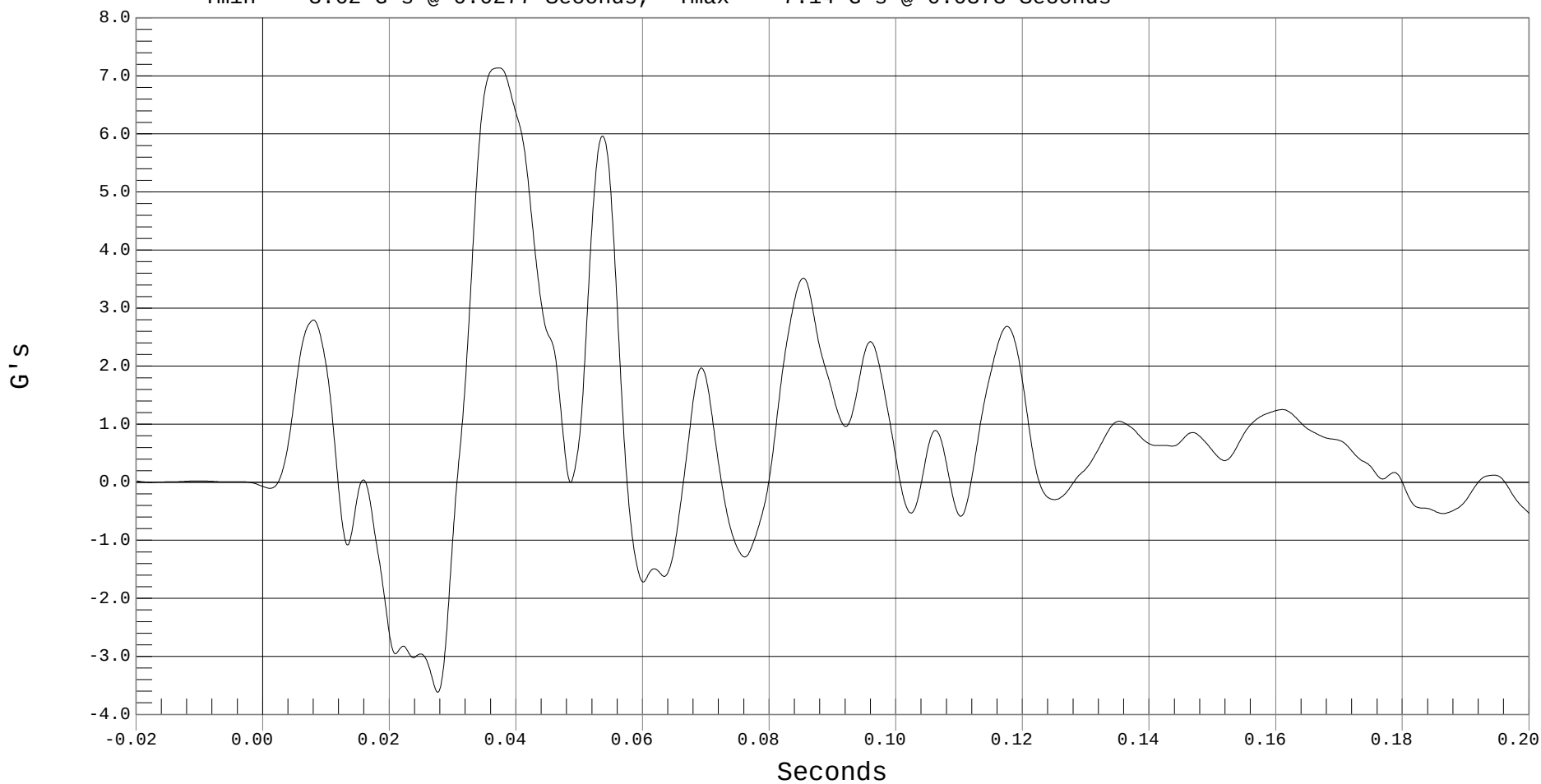
RIGHT SIDE SILL AT REAR SEAT Z ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 RIGHT REAR SILL Z, B01008AF.A20

Ymin = -3.62 G's @ 0.0277 Seconds, Ymax = 7.14 G's @ 0.0373 Seconds





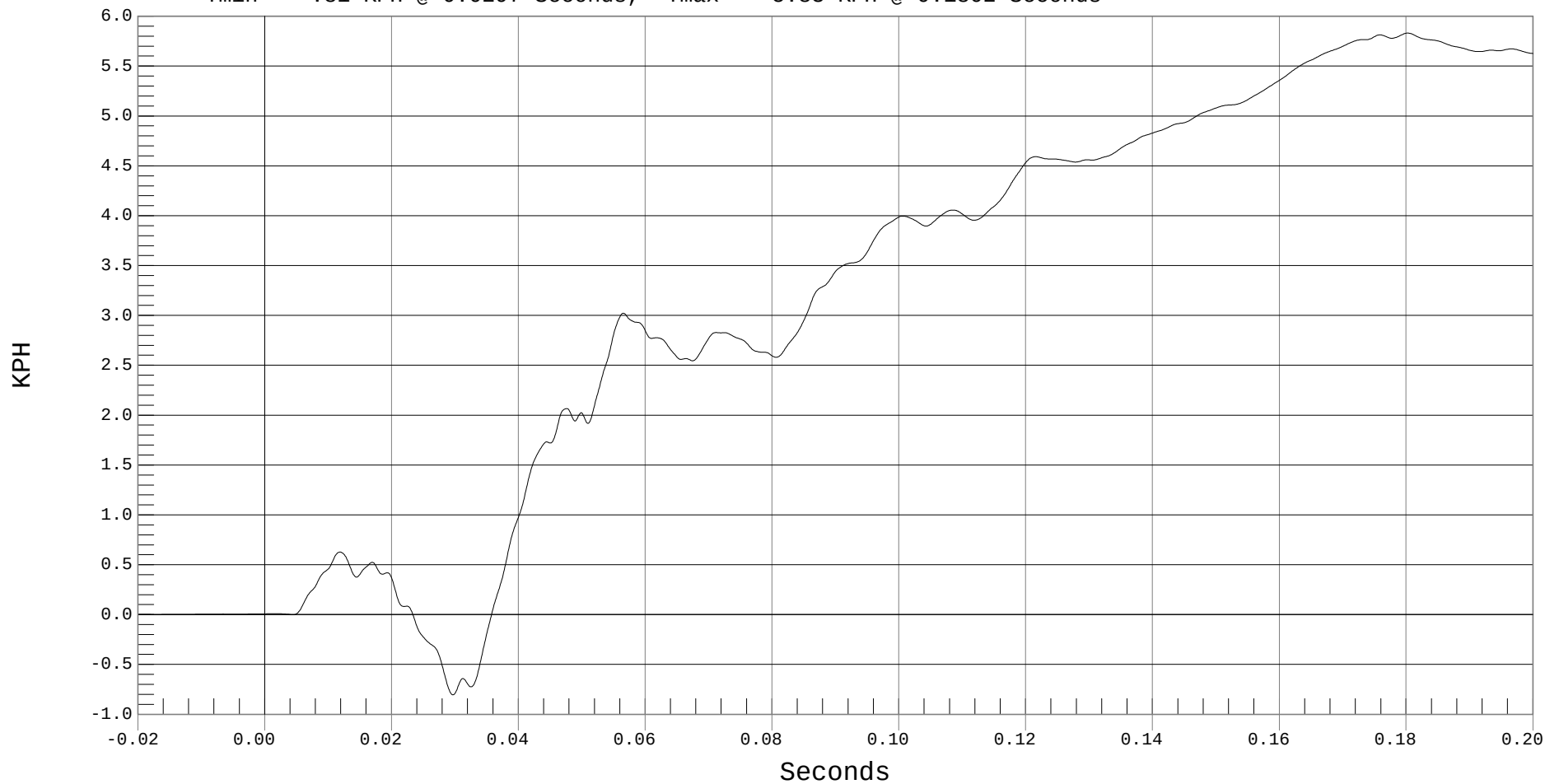
RIGHT SIDE SILL AT REAR SEAT Z VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 RIGHT SIDE SILL AT REAR SEAT Z VELOCITY, B01008AI.V20

Ymin = -.81 KPH @ 0.0297 Seconds, Ymax = 5.83 KPH @ 0.1802 Seconds





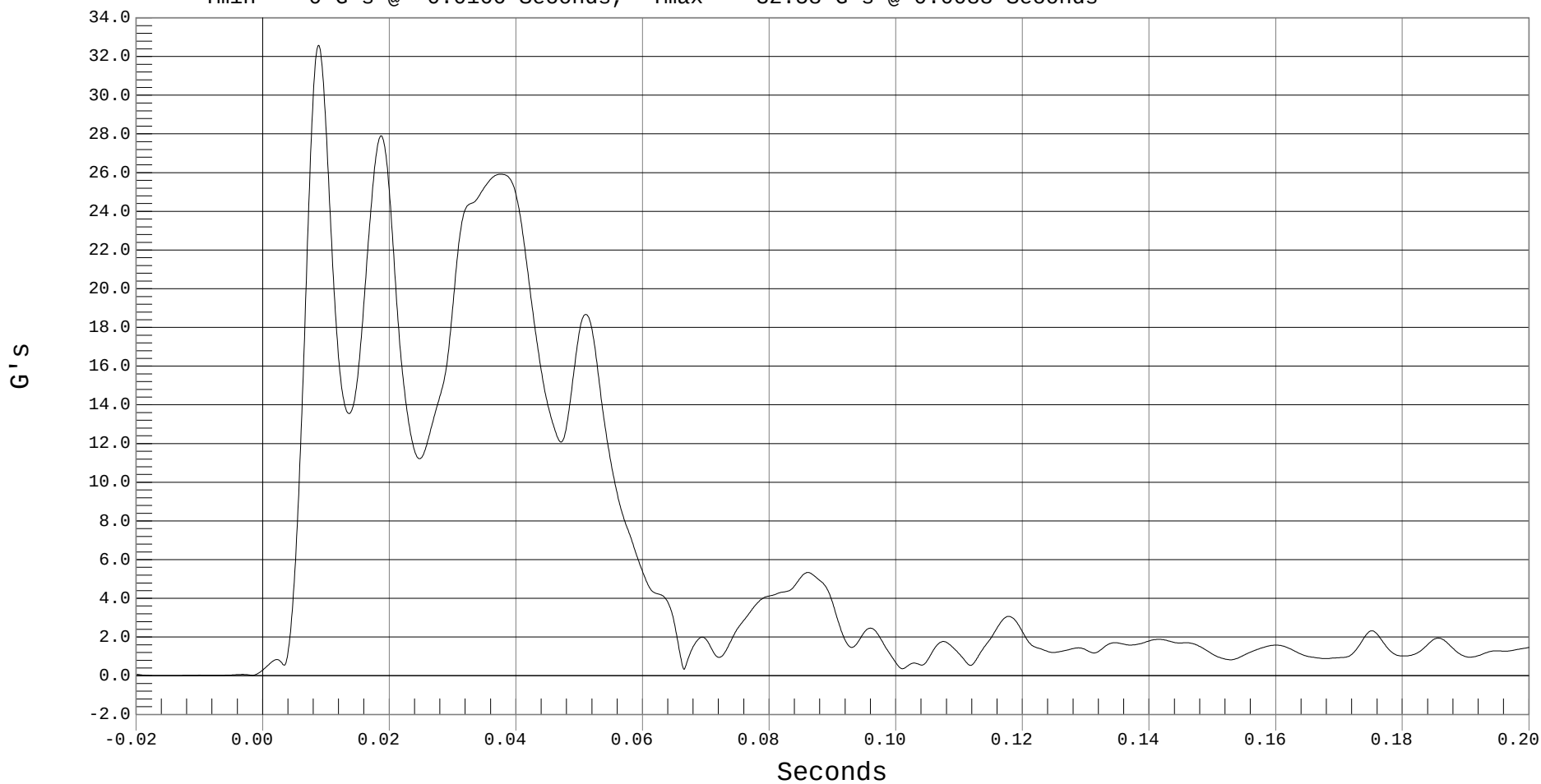
RIGHT SIDE SILL AT REAR SEAT RESULTANT ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 RIGHT SIDE SILL AT REAR SEAT RESULTANT ACCELERATION, B01008AV.A18

Ymin = 0 G's @ -0.0166 Seconds, Ymax = 32.58 G's @ 0.0088 Seconds





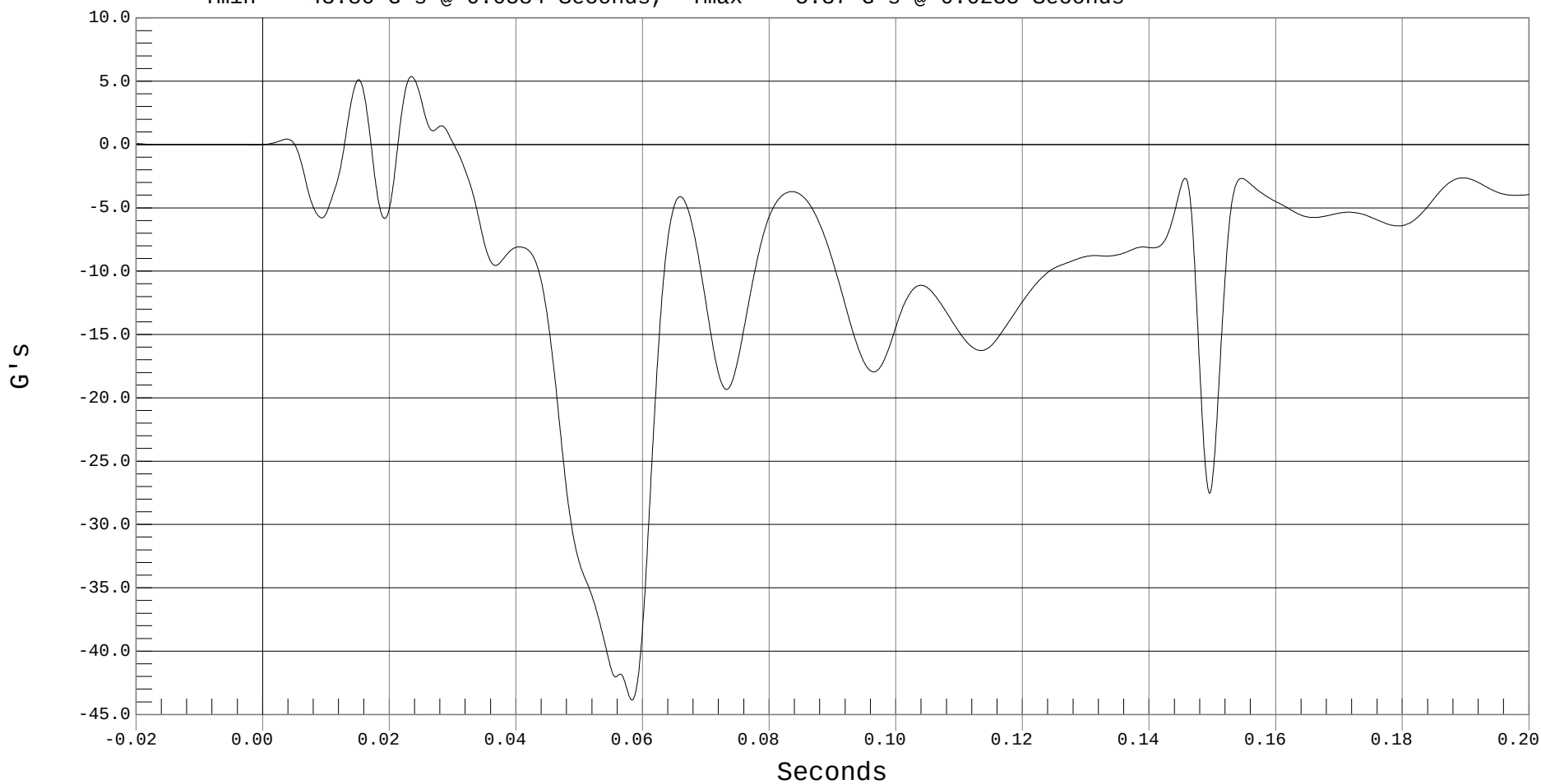
REAR FLOORPAN ABOVE AXLE X ACCELERATION (NVD AFTER 35 MSEC)

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 FLOORPAN @ REAR AXLE X, B01008AF.A23

Ymin = -43.86 G's @ 0.0584 Seconds, Ymax = 5.37 G's @ 0.0235 Seconds





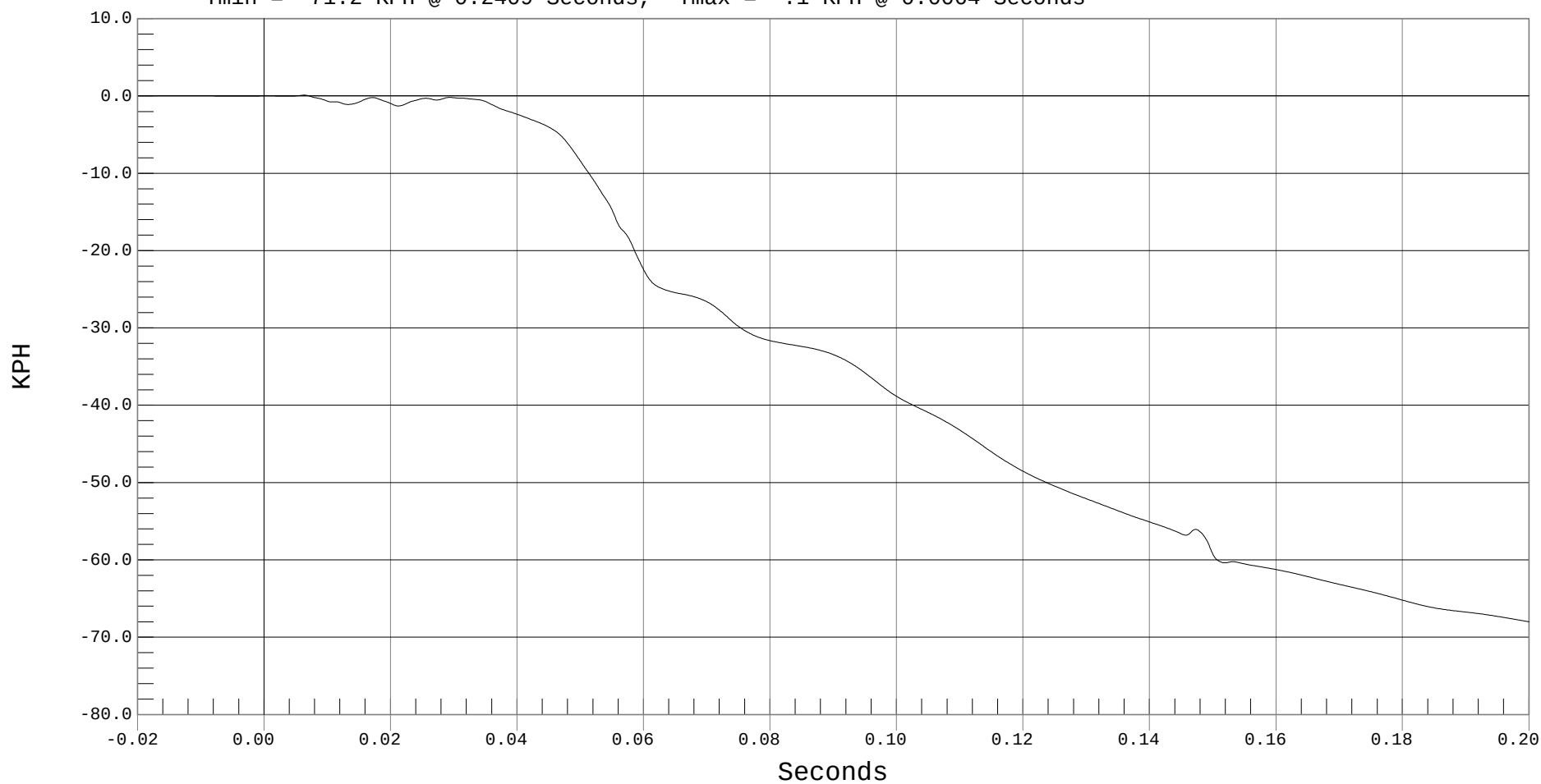
REAR FLOORPAN ABOVE AXLE X VELOCITY (NVD AFTER 35 MSEC)

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

1 REAR FLOORPAN ABOVE AXLE X VELOCITY, B01008AI.V23

Ymin = -71.2 KPH @ 0.2409 Seconds, Ymax = .1 KPH @ 0.0064 Seconds





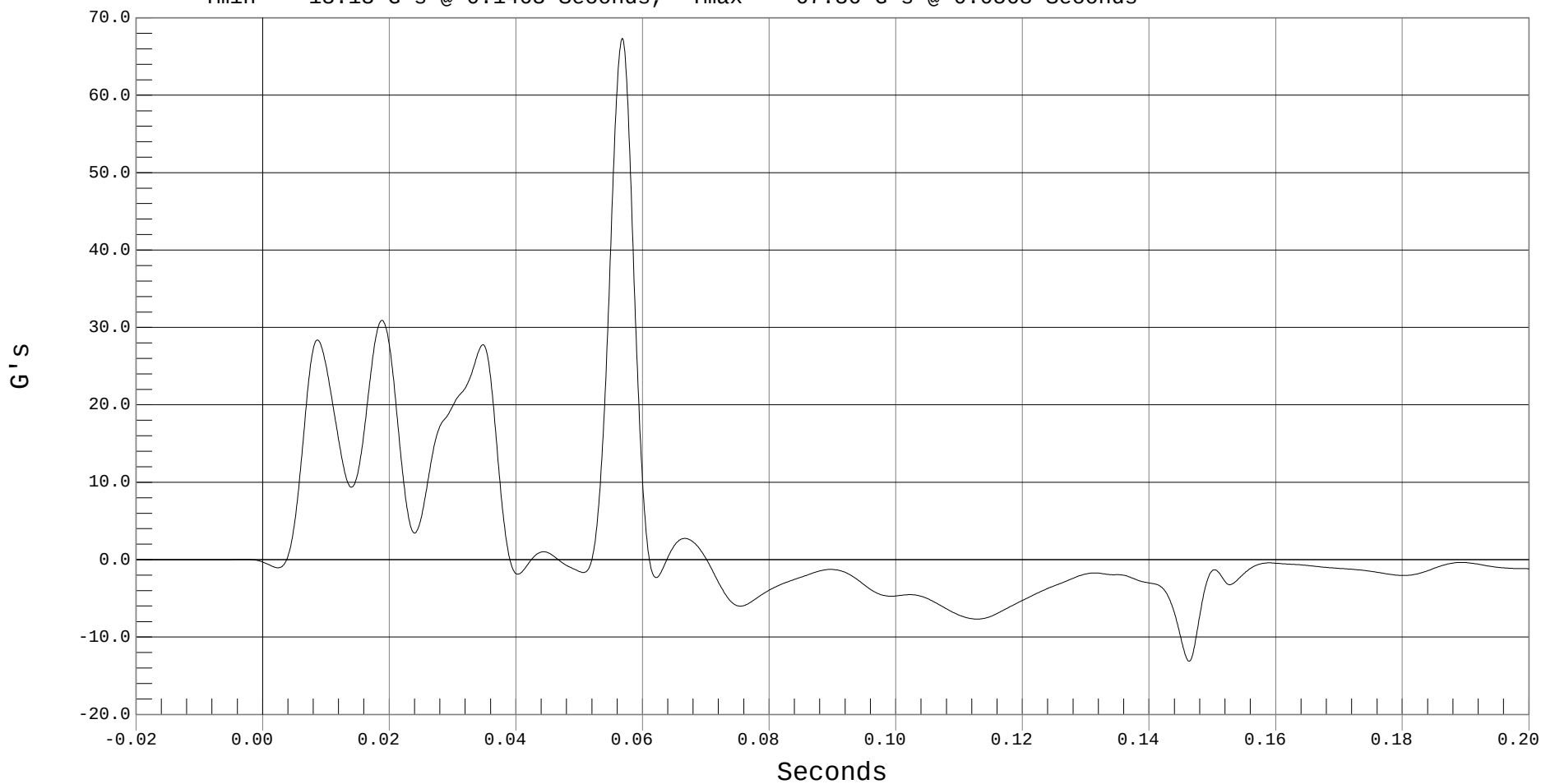
REAR FLOORPAN ABOVE AXLE Y ACCELERATION (NVD AFTER 35 MSEC)

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 FLOORPAN @ REAR AXLE Y, B01008AF.A51

Ymin = -13.13 G's @ 0.1463 Seconds, Ymax = 67.36 G's @ 0.0568 Seconds





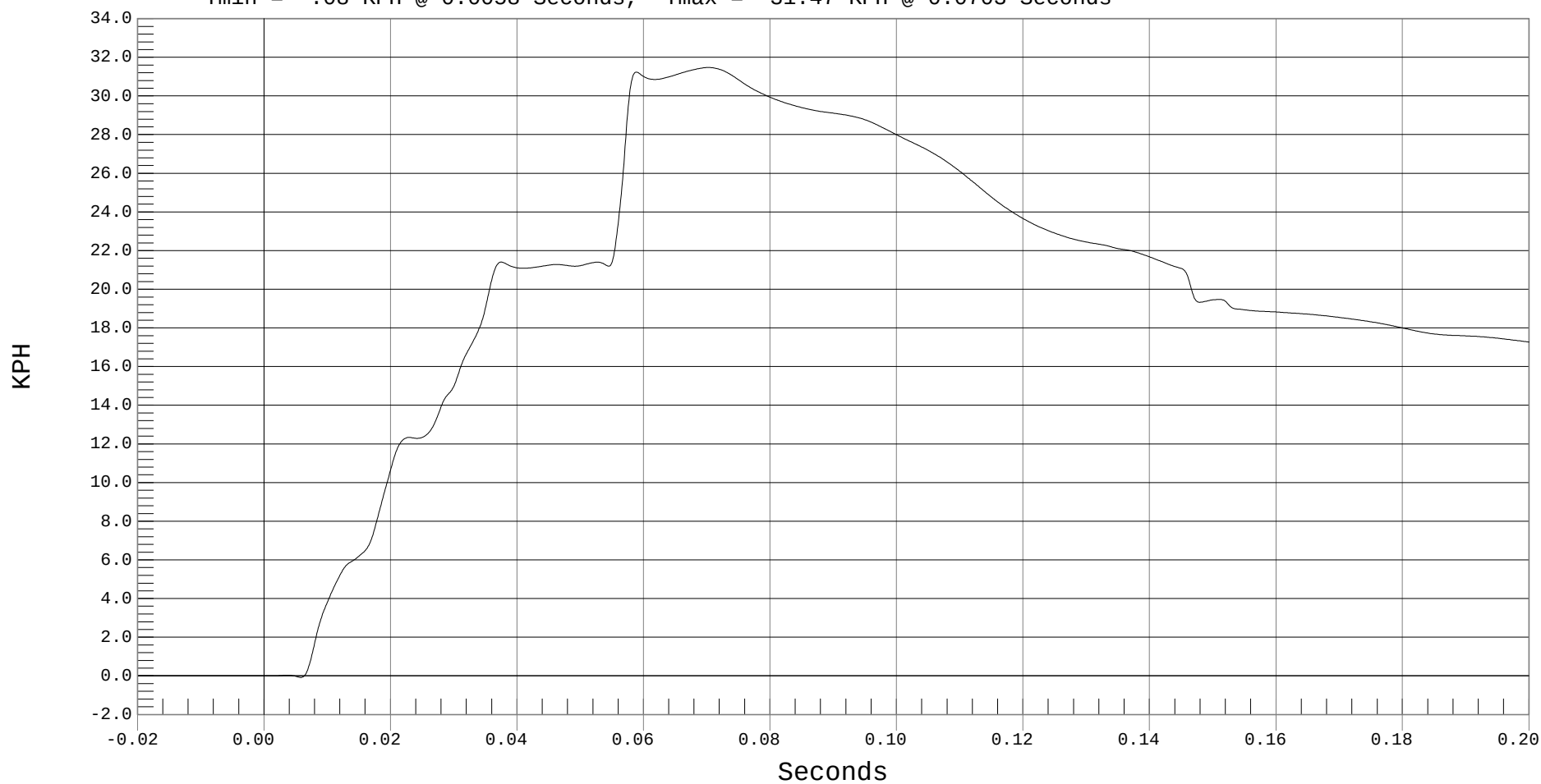
REAR FLOORPAN ABOVE AXLE Y VELOCITY (NVD AFTER 35 MSEC)

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 REAR FLOORPAN ABOVE AXLE Y VELOCITY, B01008AI.V51

Ymin = -.08 KPH @ 0.0058 Seconds, Ymax = 31.47 KPH @ 0.0703 Seconds





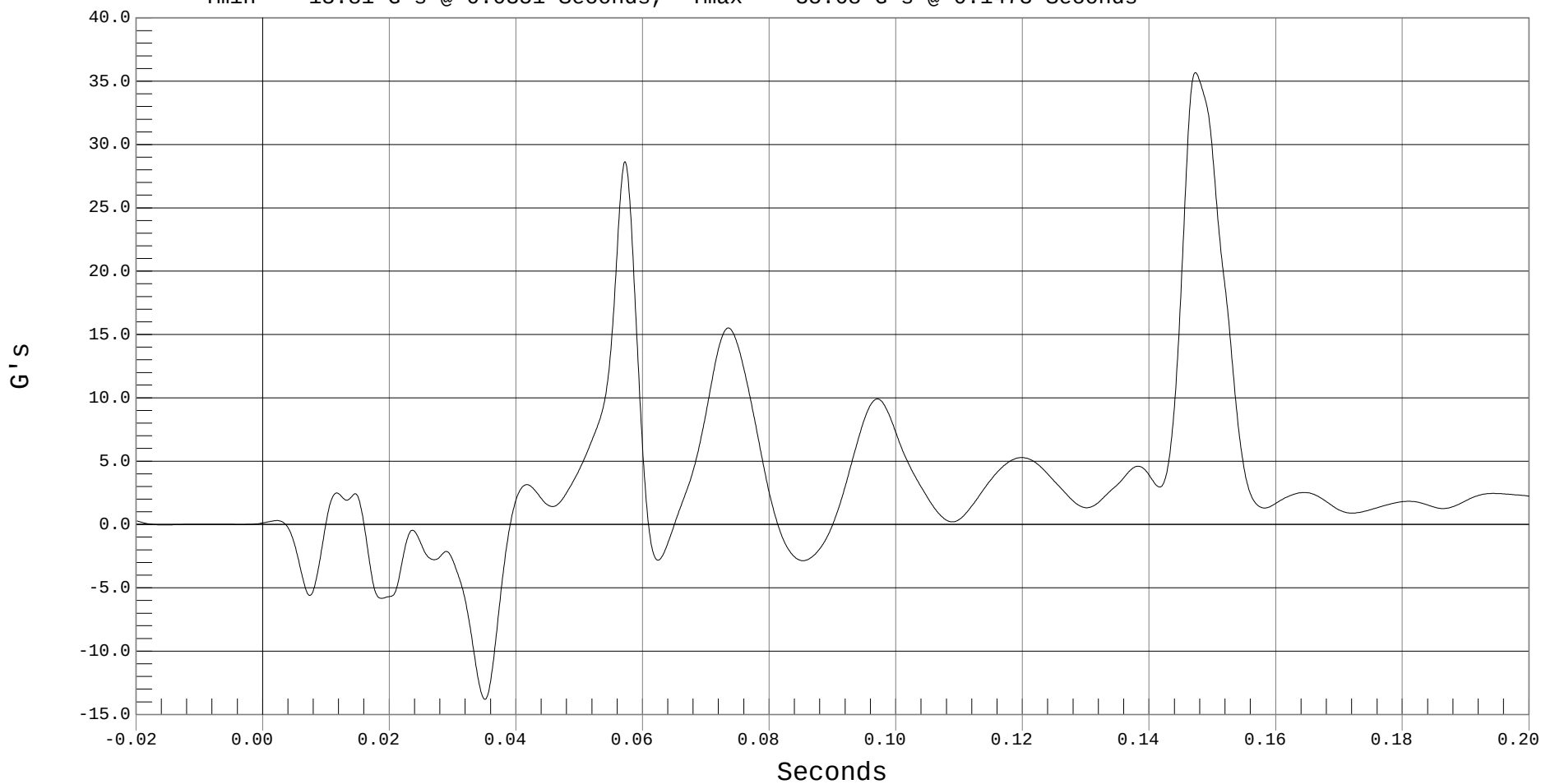
REAR FLOORPAN ABOVE AXLE Z ACCELERATION (NVD AFTER 35 MSEC)

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 FLOORPAN @ REAR AXLE Z, B01008AF.A25

Ymin = -13.81 G's @ 0.0351 Seconds, Ymax = 35.68 G's @ 0.1473 Seconds





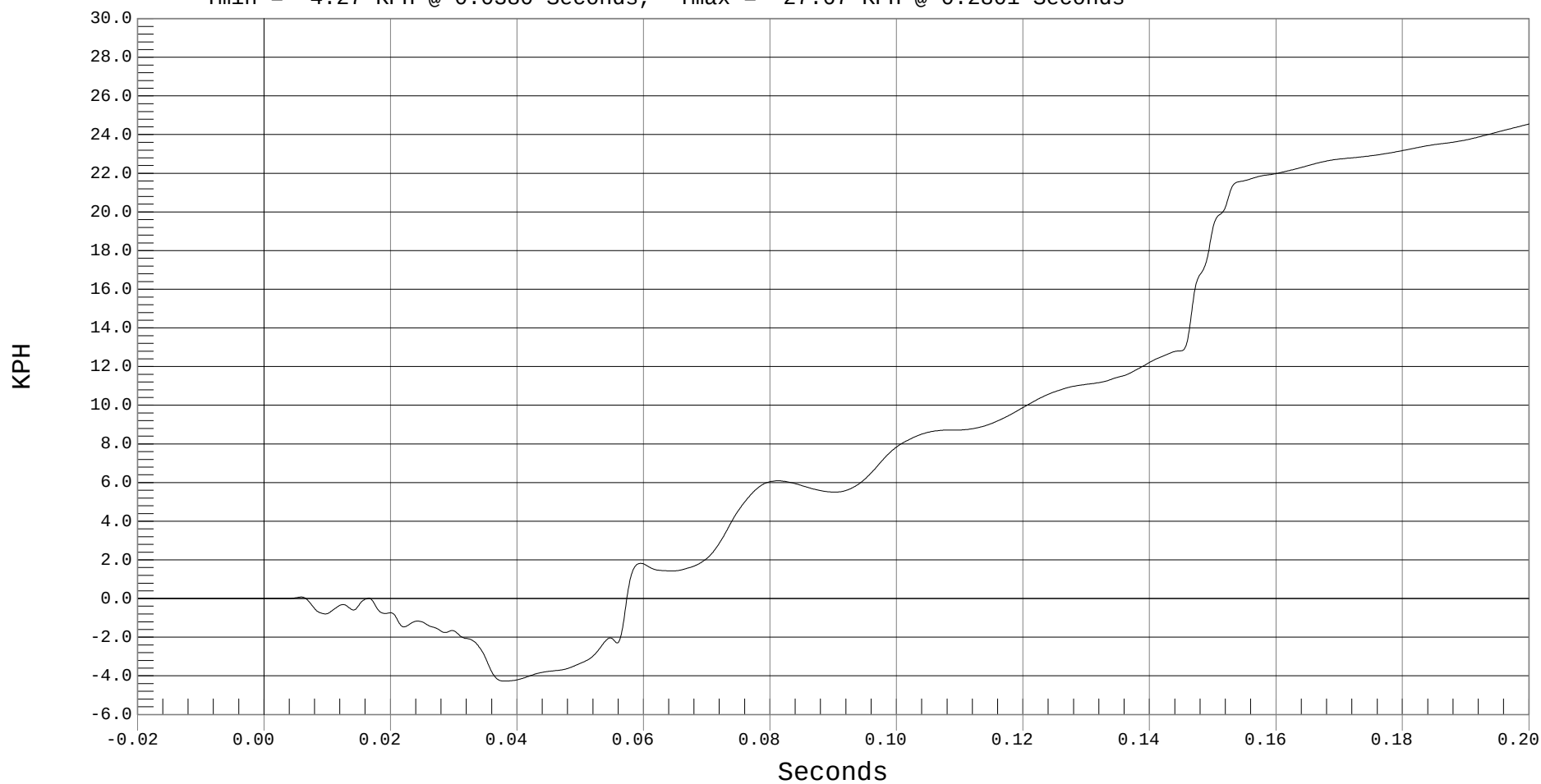
REAR FLOORPAN ABOVE AXLE Z VELOCITY (NVD AFTER 35 MSEC)

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 REAR FLOORPAN ABOVE AXLE Z VELOCITY, B01008AI.V25

Ymin = -4.27 KPH @ 0.0380 Seconds, Ymax = 27.67 KPH @ 0.2801 Seconds





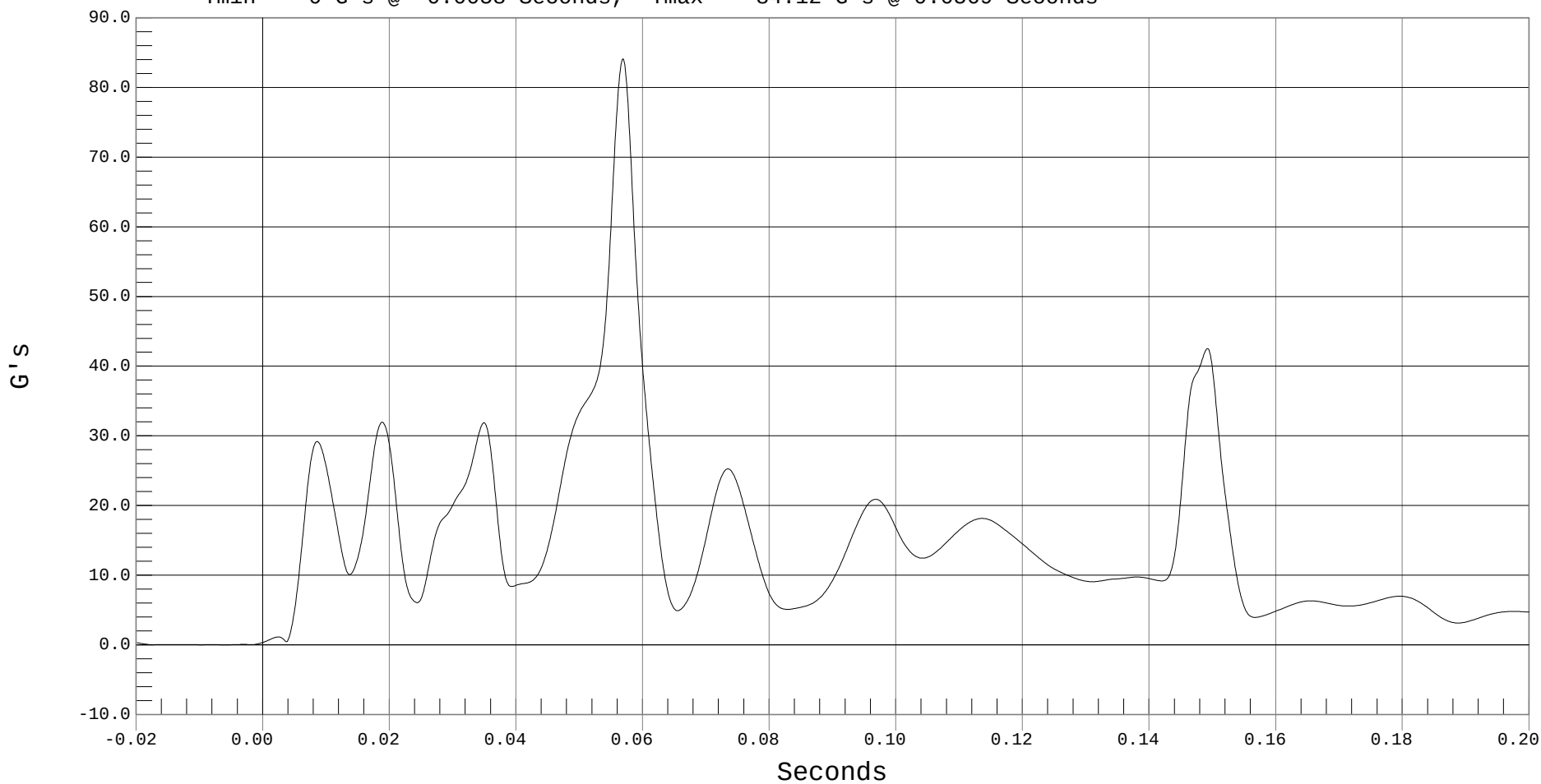
REAR FLOORPAN ABOVE AXLE RESULTANT ACCELERATION (NVD AFTER 35 MSEC)

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 REAR FLOORPAN ABOVE AXLE RESULTANT ACCELERATION, B01008AV.A23

Ymin = 0 G's @ -0.0058 Seconds, Ymax = 84.12 G's @ 0.0569 Seconds





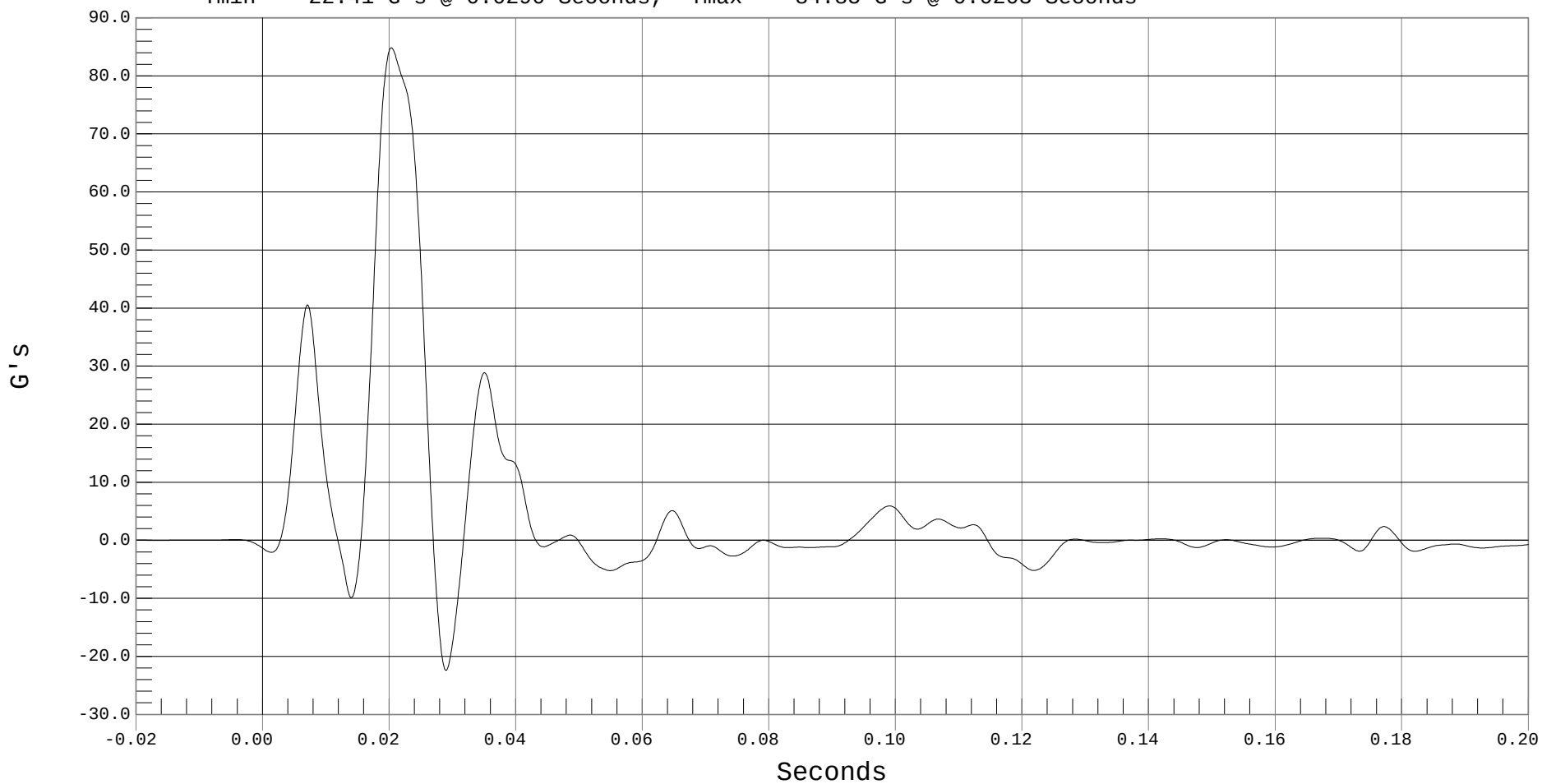
LEFT SIDE SILL AT FRONT SEAT Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 LEFT FRONT SILL Y, B01008AF.A21

Ymin = -22.41 G's @ 0.0290 Seconds, Ymax = 84.85 G's @ 0.0203 Seconds





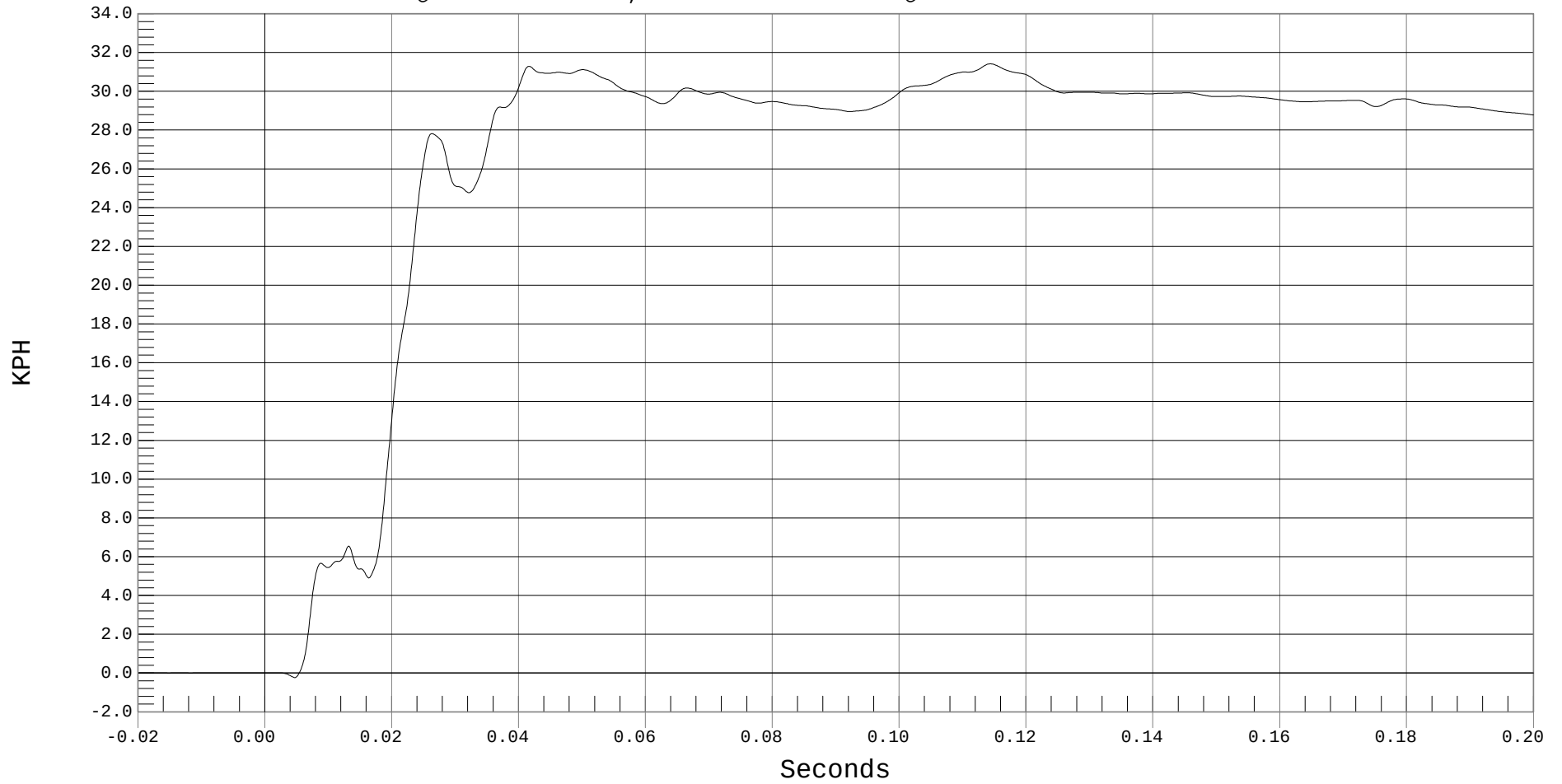
LEFT SIDE SILL AT FRONT SEAT Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 LEFT SIDE SILL AT FRONT SEAT Y VELOCITY, B01008AI.V21

Ymin = -.23 KPH @ 0.0047 Seconds, Ymax = 31.42 KPH @ 0.1144 Seconds





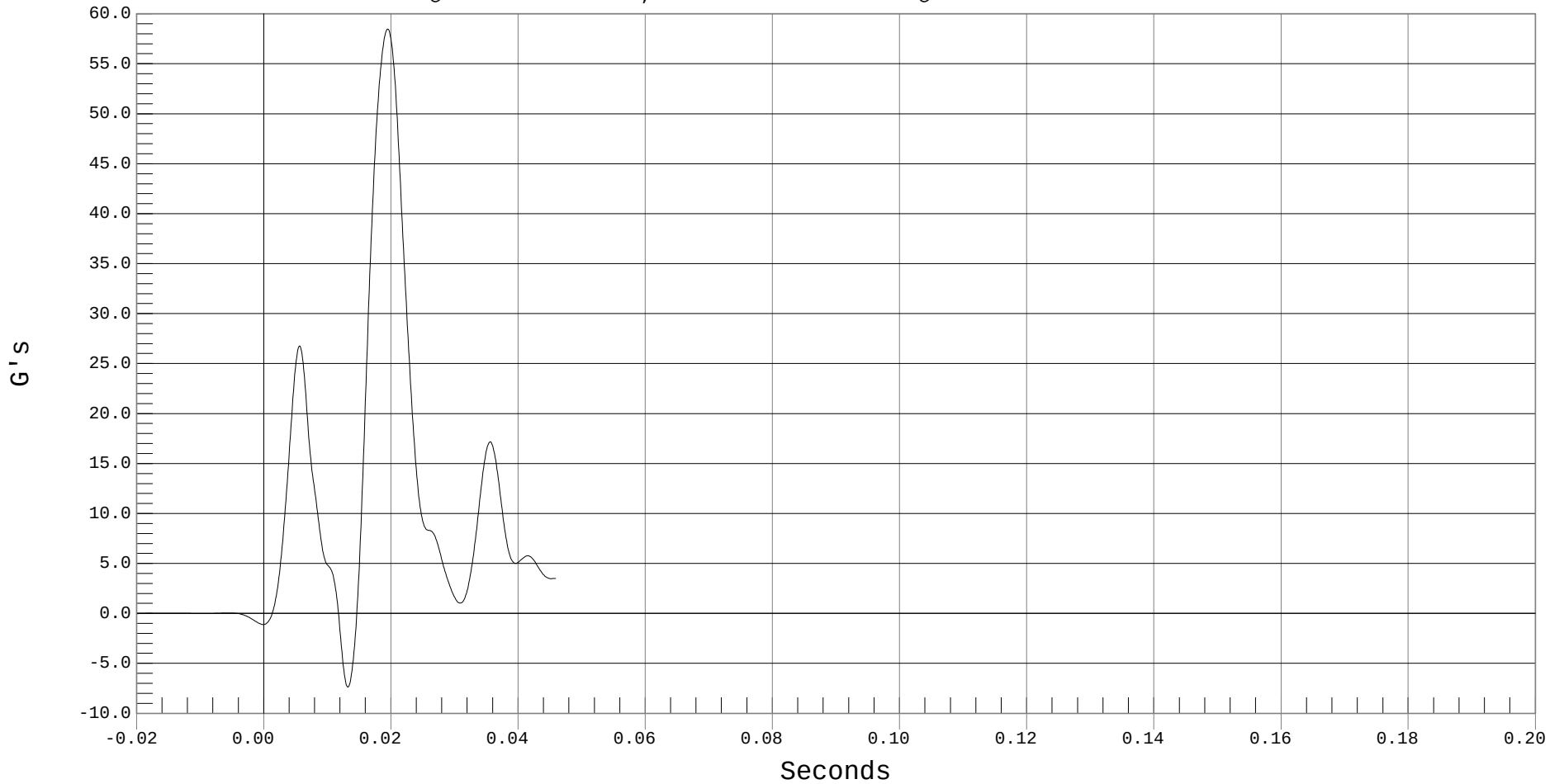
LEFT SIDE SILL AT REAR SEAT Y ACCELERATION (NVD AFTER 45 MSEC)

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 LEFT REAR SILL Y, B01008AF.A22

Ymin = -7.38 G's @ 0.0132 Seconds, Ymax = 58.49 G's @ 0.0195 Seconds





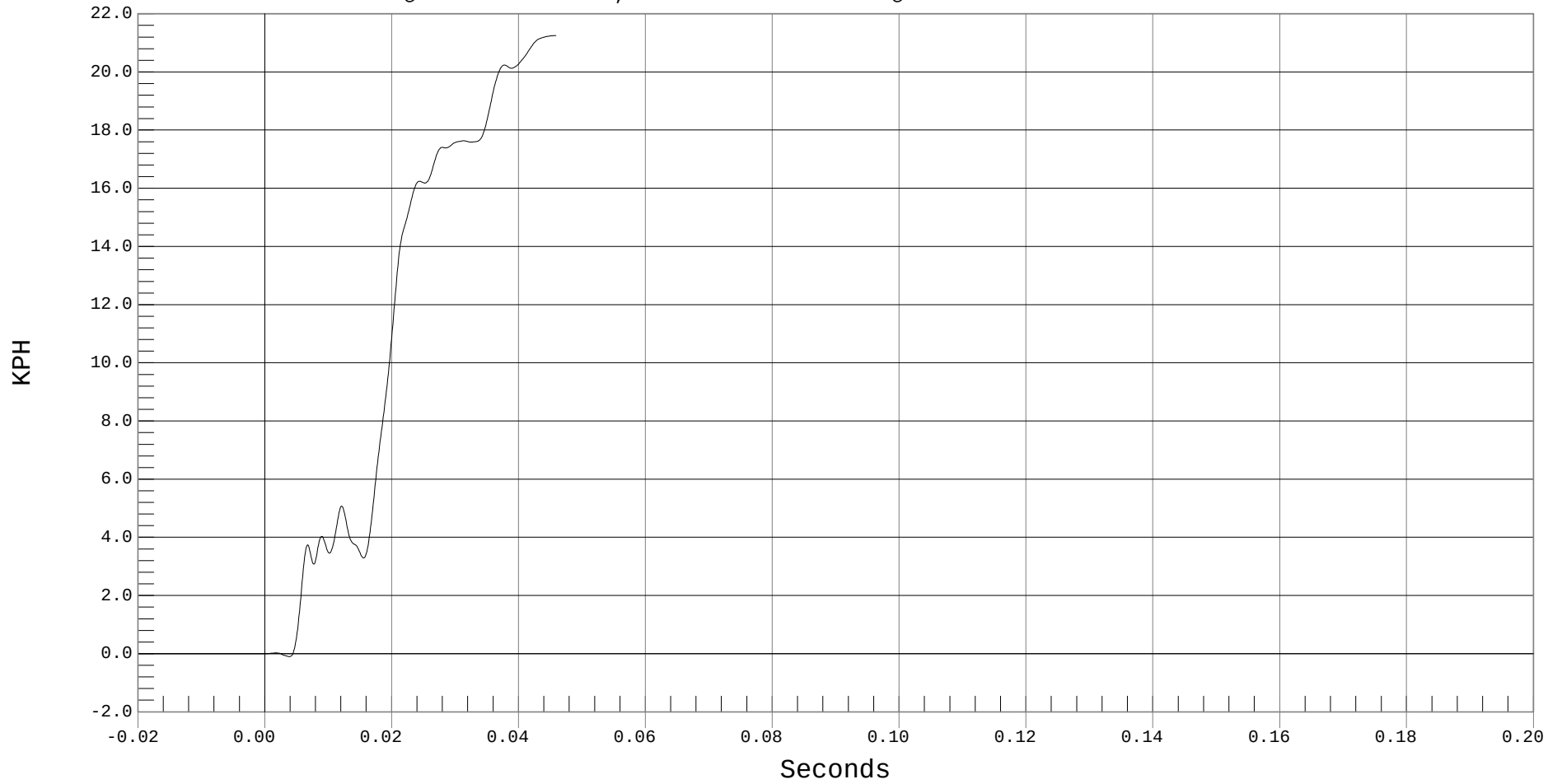
LEFT SIDE SILL AT REAR SEAT Y VELOCITY (NVD AFTER 45 MSEC)

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 LEFT SIDE SILL AT REAR SEAT Y VELOCITY, B01008AI.V22

Ymin = -.1 KPH @ 0.0039 Seconds, Ymax = 21.25 KPH @ 0.0459 Seconds





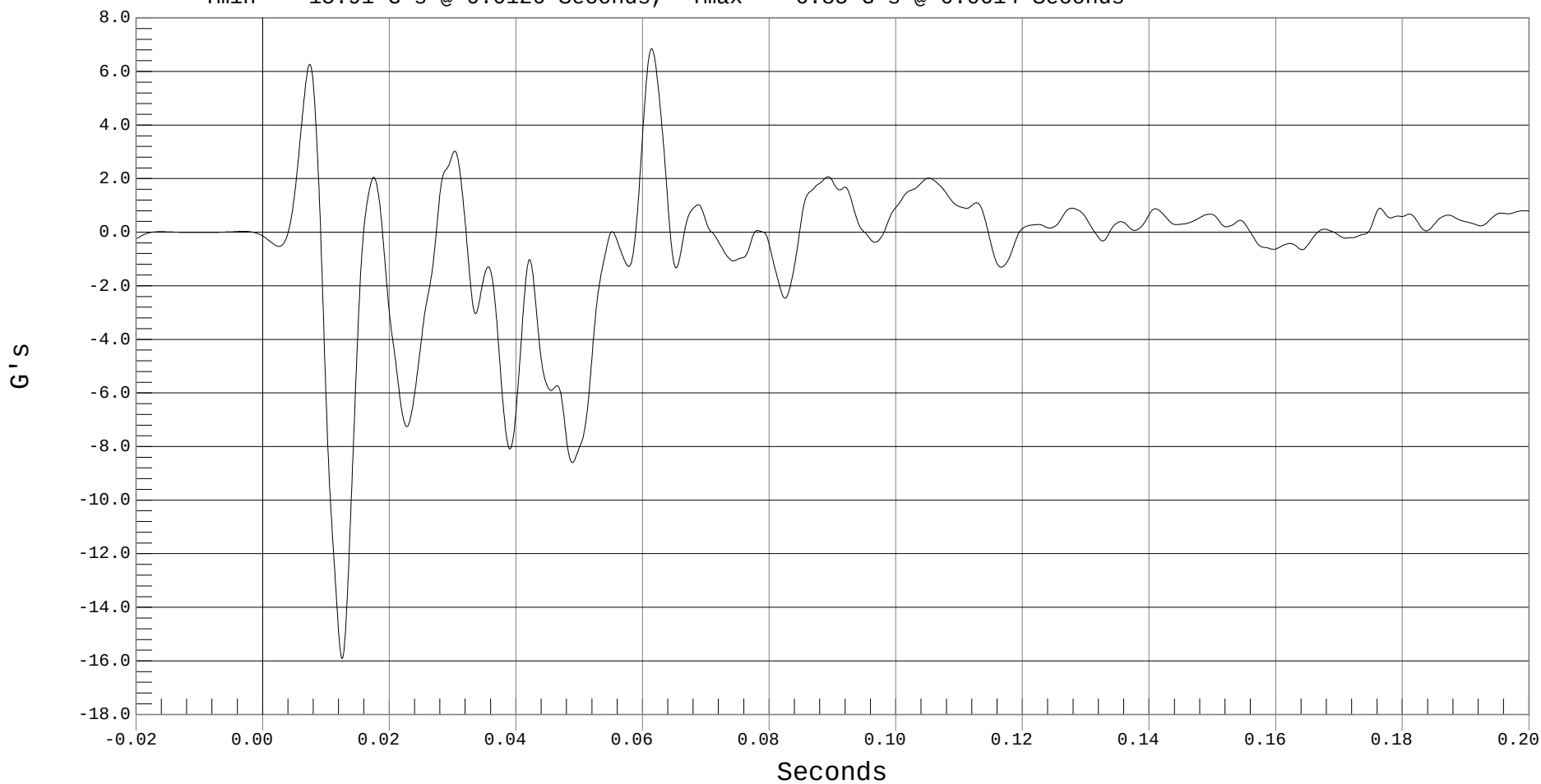
RIGHT REAR OCCUPANT COMPARTMENT X ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 RIGHT REAR OCCUPANT COMPARTMENT Y, B01008AF.A31

Ymin = -15.91 G's @ 0.0126 Seconds, Ymax = 6.85 G's @ 0.0614 Seconds





RIGHT REAR OCCUPANT COMPARTMENT X VELOCITY

Test Desc.: INDICANT SIDE IMPACT

Component: 2001 HYUNDAI ACCENT (C10515)

Other Info:

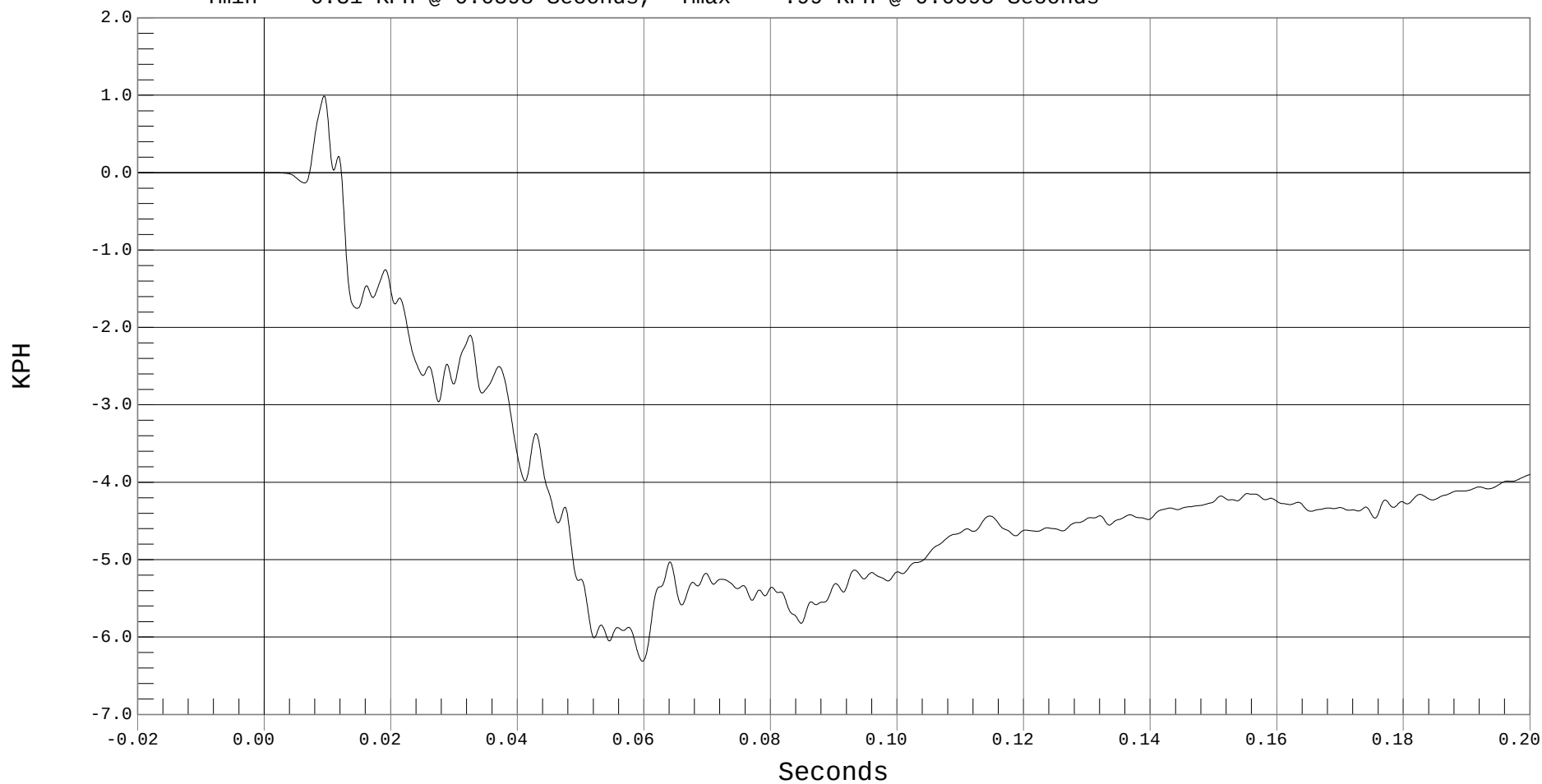
Test Date: 01-29-01

Speed: 38.6 MPH, 62.1 KPH

Filter Class: 180

— 1 RIGHT REAR OCCUPANT COMPARTMENT Y VELOCITY, B01008AI.V31

Ymin = -6.31 KPH @ 0.0598 Seconds, Ymax = .99 KPH @ 0.0095 Seconds





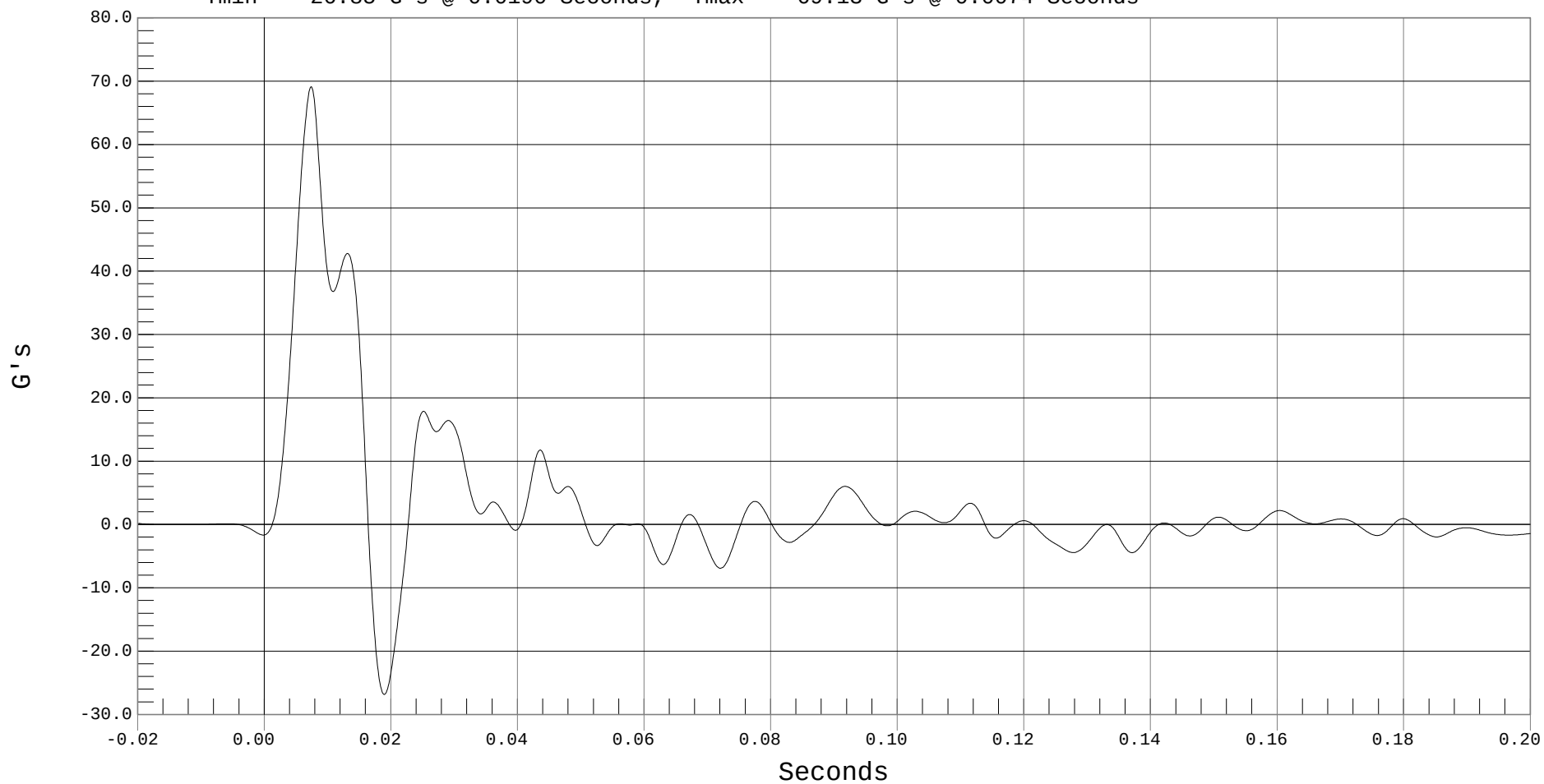
LEFT LOWER A-POST Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

1 LEFT LOWER A-POST Y, B01008AF.A27

Ymin = -26.85 G's @ 0.0190 Seconds, Ymax = 69.13 G's @ 0.0074 Seconds





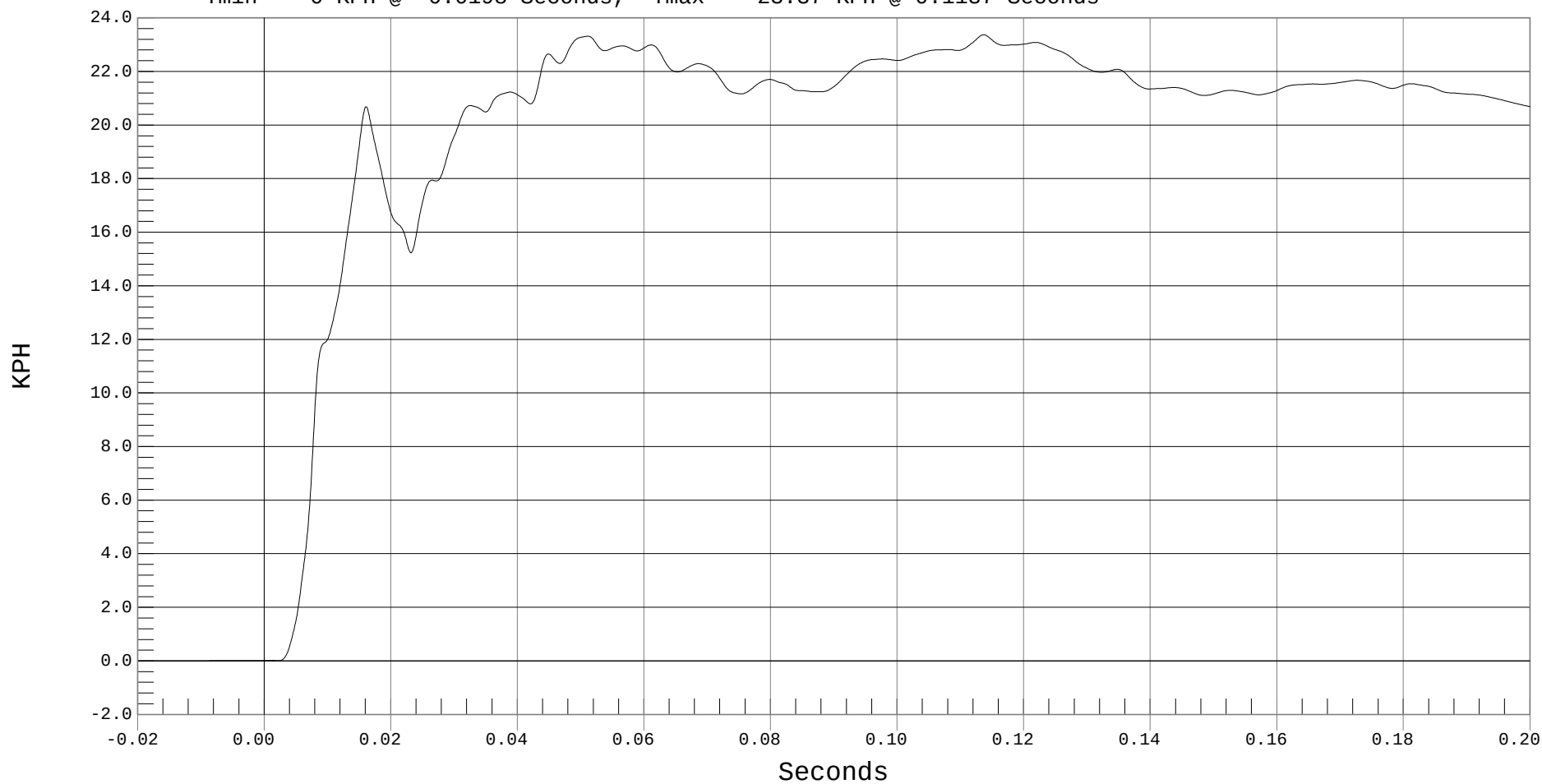
LEFT LOWER A-POST Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 LEFT LOWER A-POST Y VELOCITY, B01008AI.V27

Ymin = 0 KPH @ -0.0198 Seconds, Ymax = 23.37 KPH @ 0.1137 Seconds





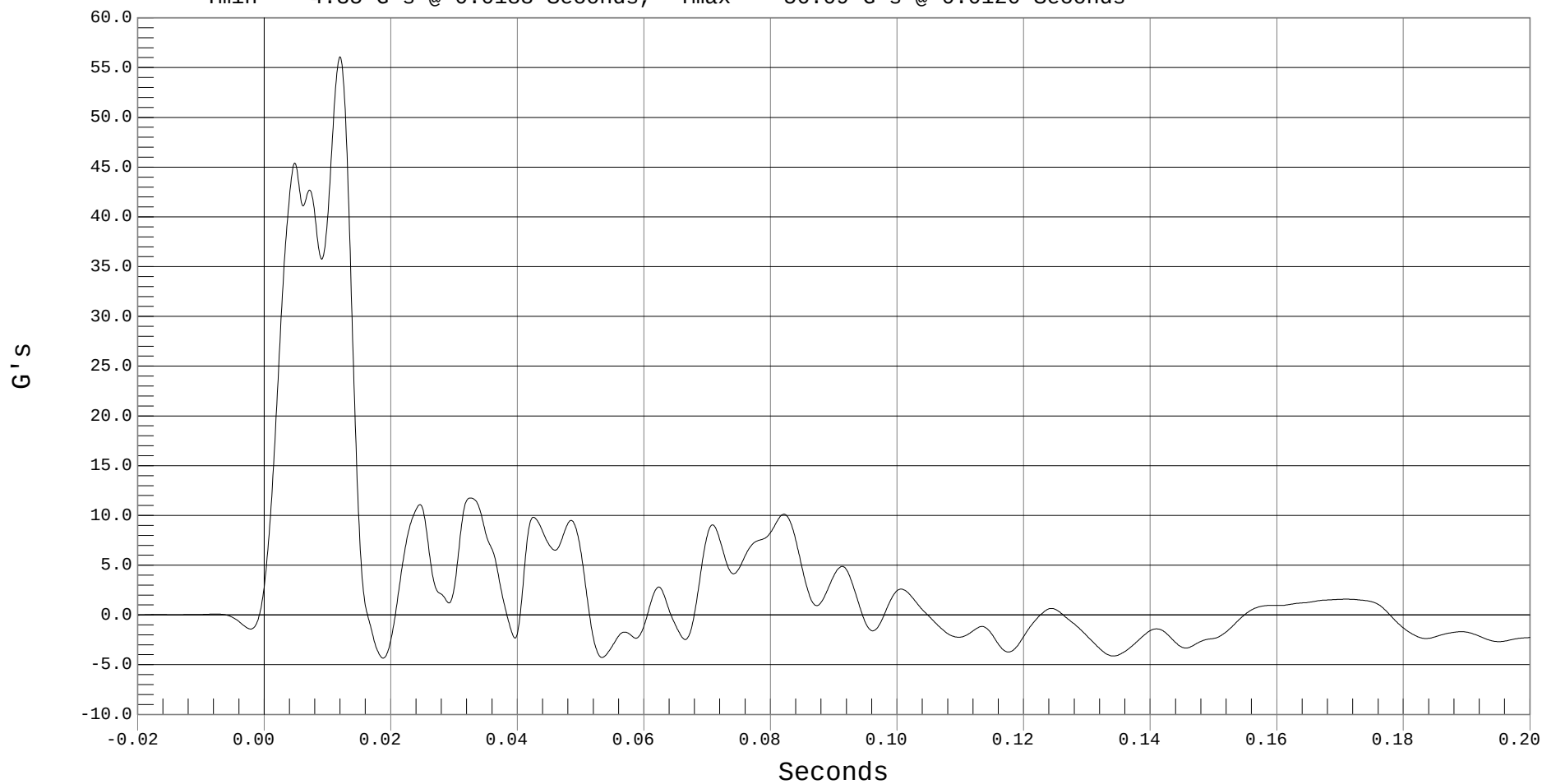
LEFT MID A-POST Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 LEFT MID A-POST Y, B01008AF.A26

Ymin = -4.35 G's @ 0.0188 Seconds, Ymax = 56.09 G's @ 0.0120 Seconds





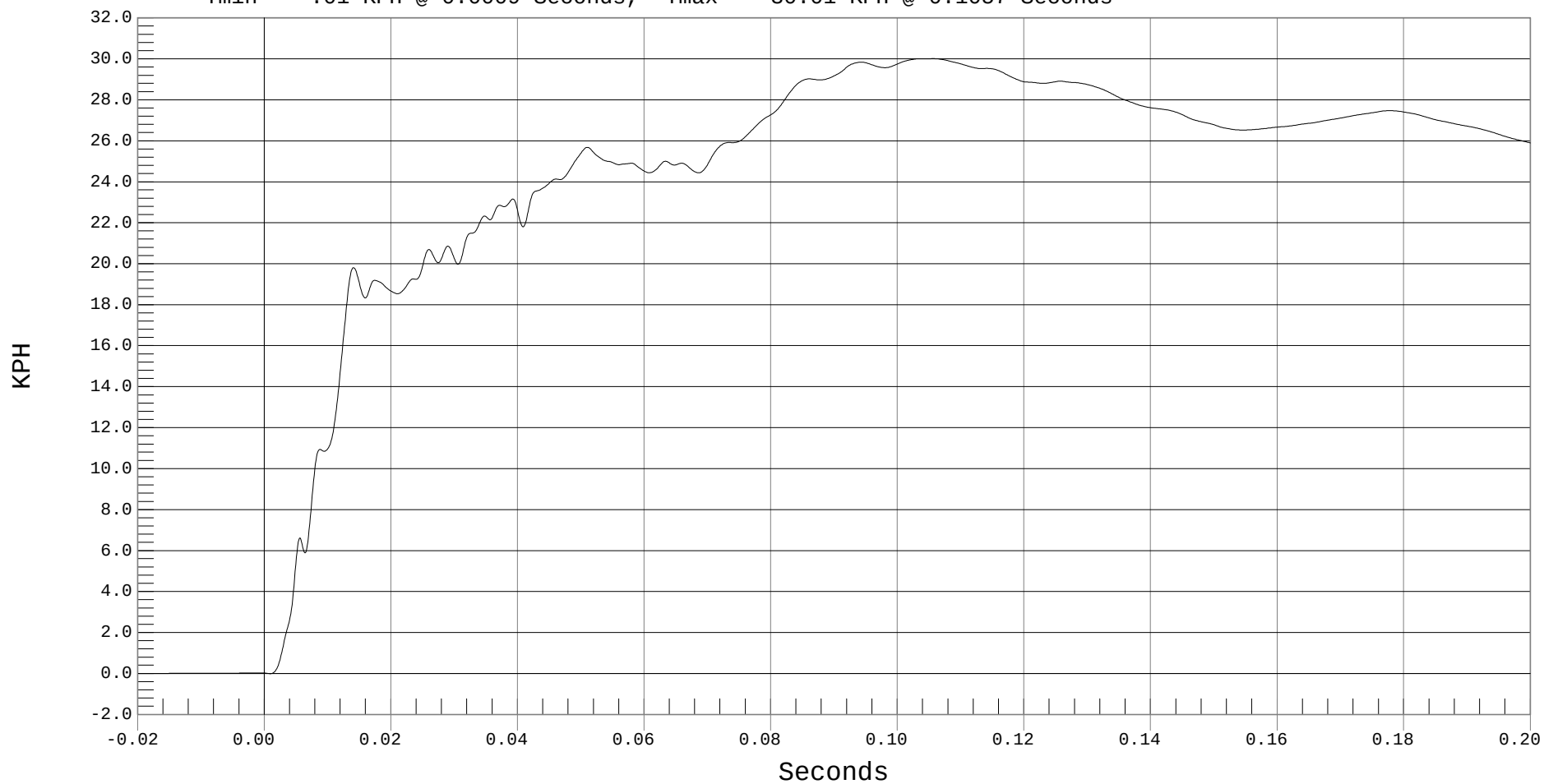
LEFT MID A-POST Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 LEFT MID A-POST Y VELOCITY, B01008AI.V26

Ymin = -.01 KPH @ 0.0009 Seconds, Ymax = 30.01 KPH @ 0.1057 Seconds





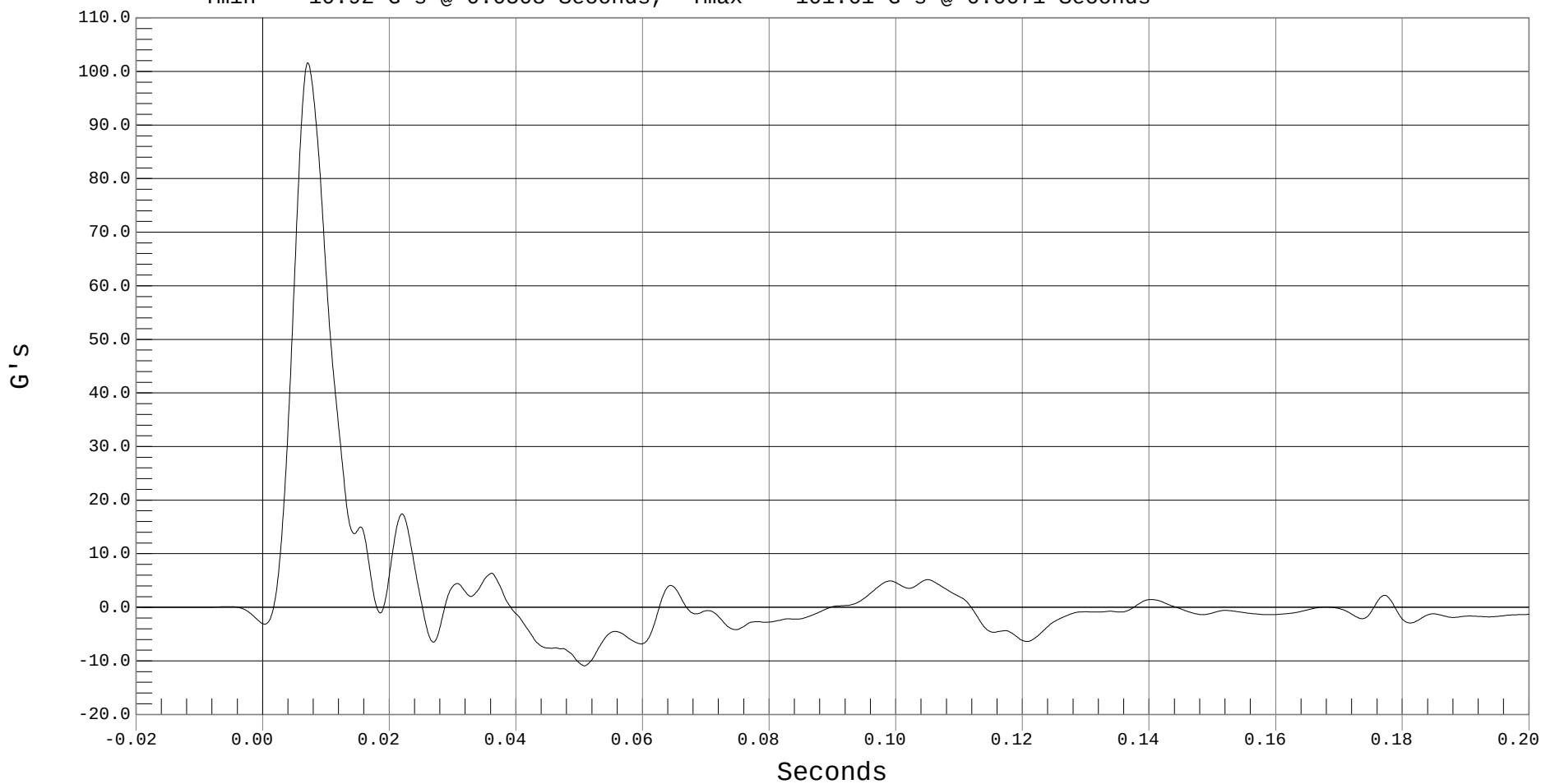
LEFT LOWER B-POST Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 LEFT LOWER B-POST, B01008AF.A29

Ymin = -10.92 G's @ 0.0508 Seconds, Ymax = 101.61 G's @ 0.0071 Seconds





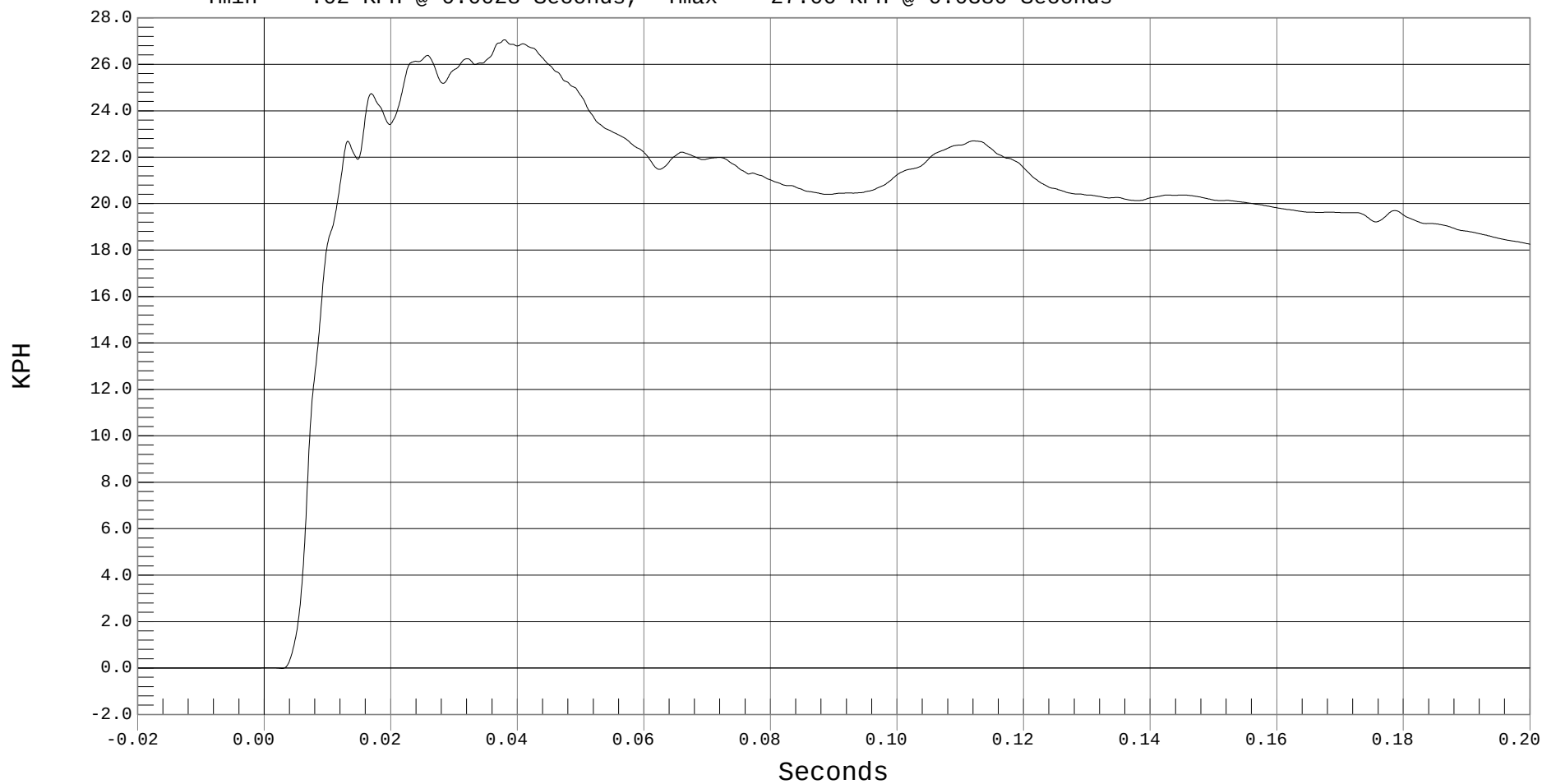
LEFT LOWER B-POST Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 LEFT LOWER B-POST Y VELOCITY, B01008AI.V29

Ymin = -.02 KPH @ 0.0028 Seconds, Ymax = 27.06 KPH @ 0.0380 Seconds





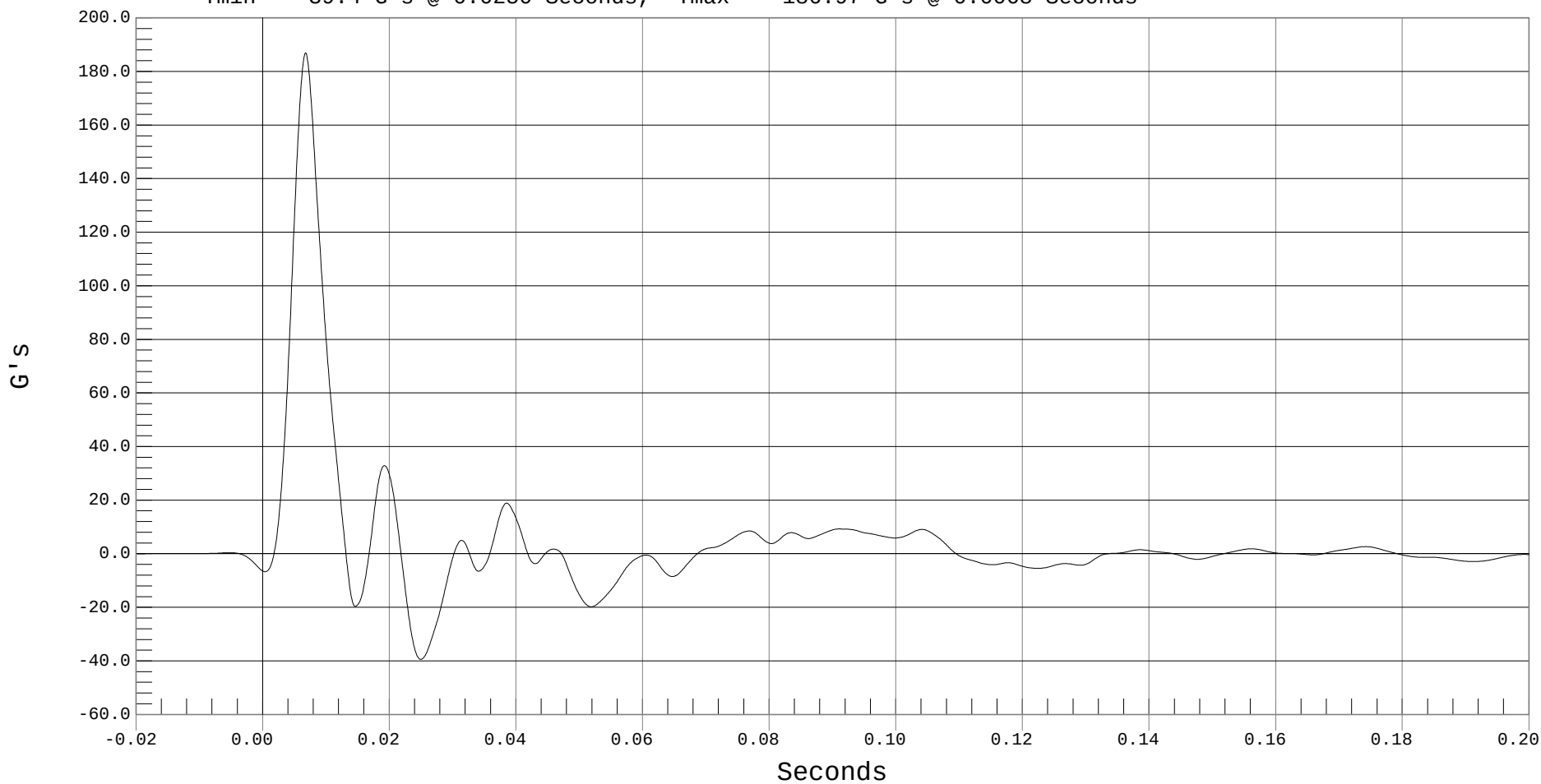
LEFT MID B-POST Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 LEFT MID B-POST, B01008AF.A28

Ymin = -39.4 G's @ 0.0250 Seconds, Ymax = 186.97 G's @ 0.0068 Seconds





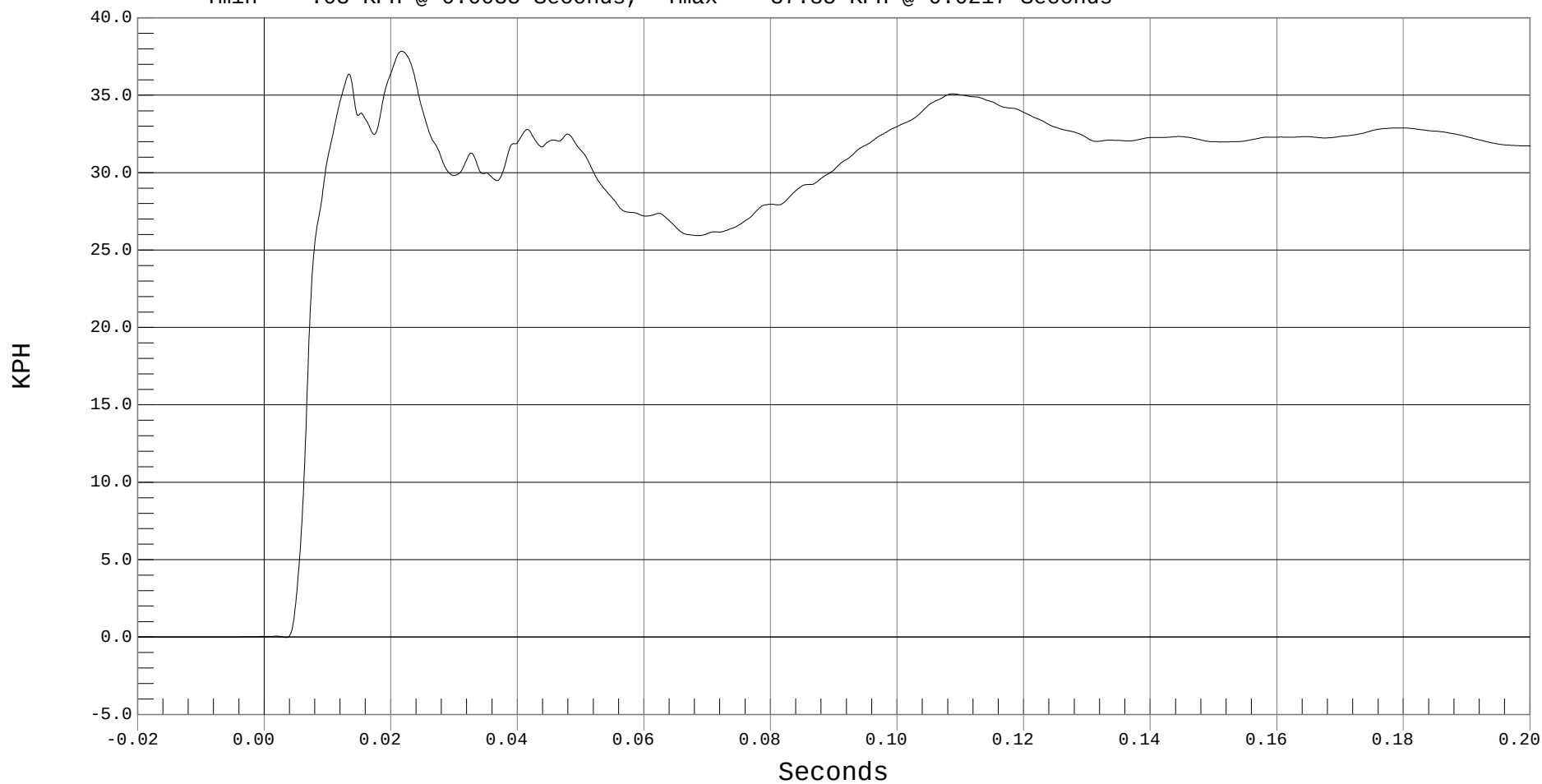
LEFT MID B-POST Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 LEFT MID B-POST Y VELOCITY, B01008AI.V28

Ymin = -.03 KPH @ 0.0035 Seconds, Ymax = 37.85 KPH @ 0.0217 Seconds





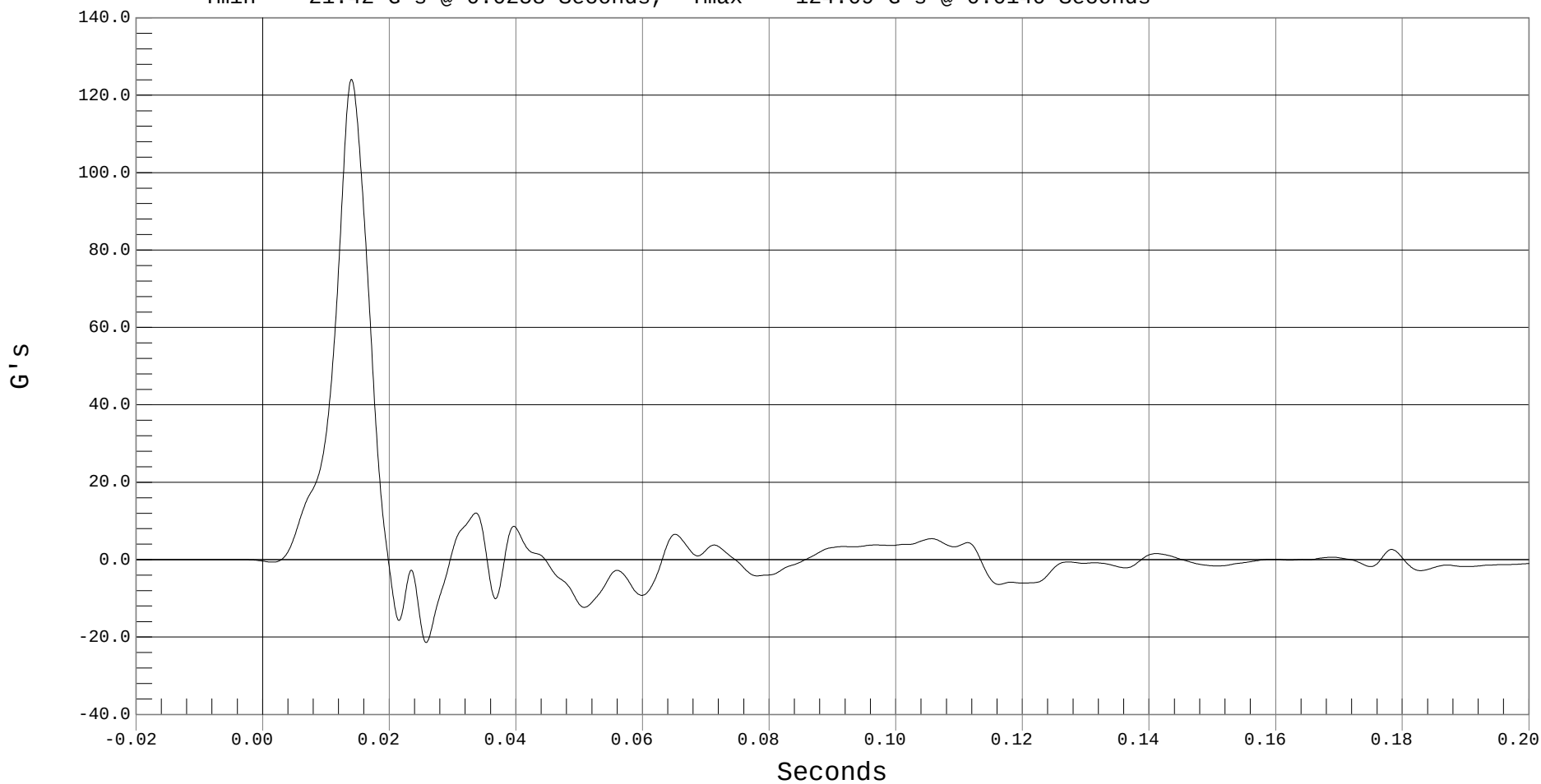
LEFT DRIVER SEAT TRACK Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 DRIVER SEAT TRACK Y, B01008AF.A30

Ymin = -21.42 G's @ 0.0258 Seconds, Ymax = 124.09 G's @ 0.0140 Seconds





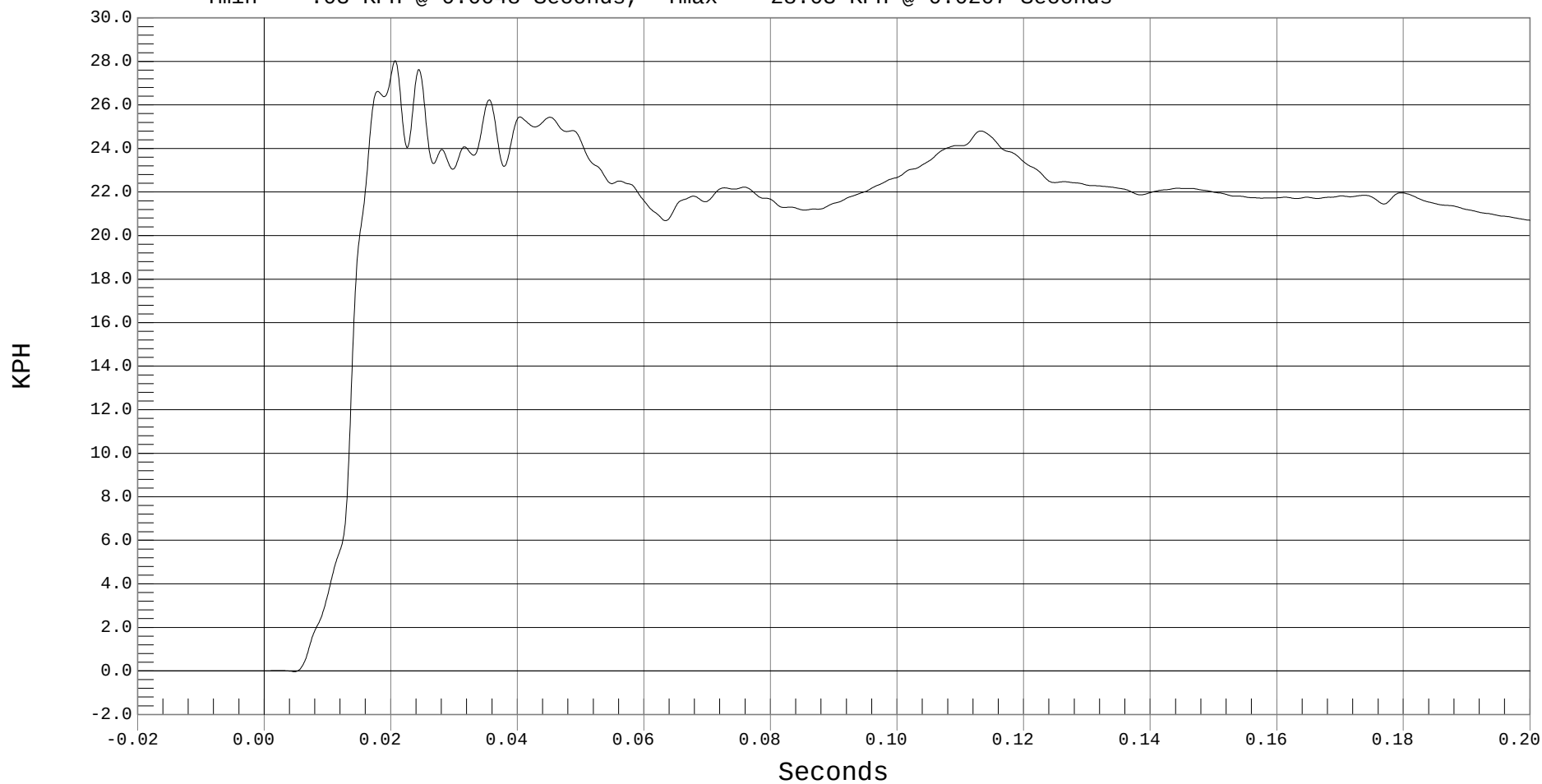
LEFT DRIVER SEAT TRACK Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 DRIVER SEAT TRACK Y VELOCITY, B01008AI.V30

Ymin = -.03 KPH @ 0.0048 Seconds, Ymax = 28.03 KPH @ 0.0207 Seconds





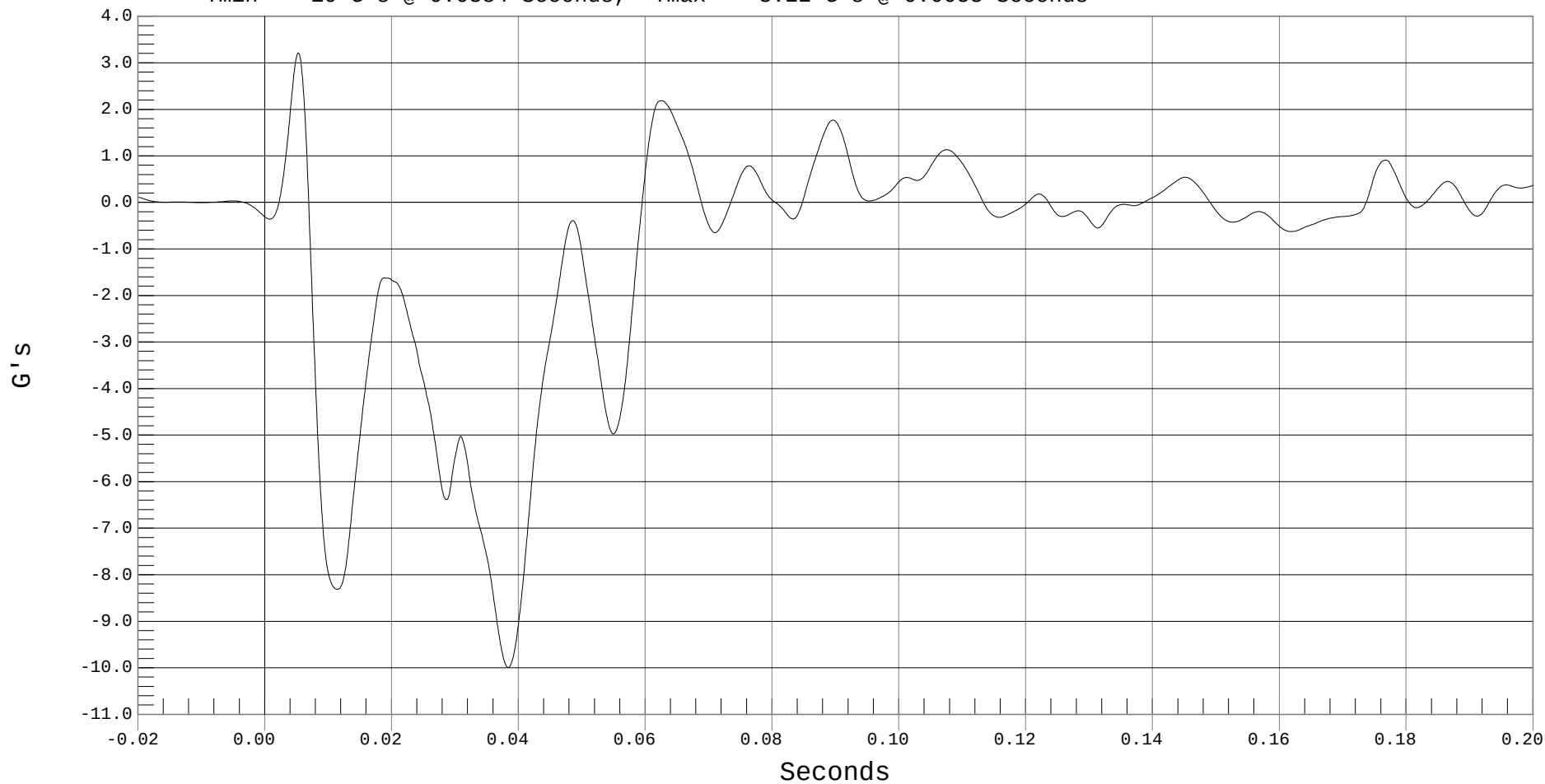
VEHICLE CG X ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 VEHICLE CG X, B01008AF.A33

Ymin = -10 G's @ 0.0384 Seconds, Ymax = 3.22 G's @ 0.0053 Seconds





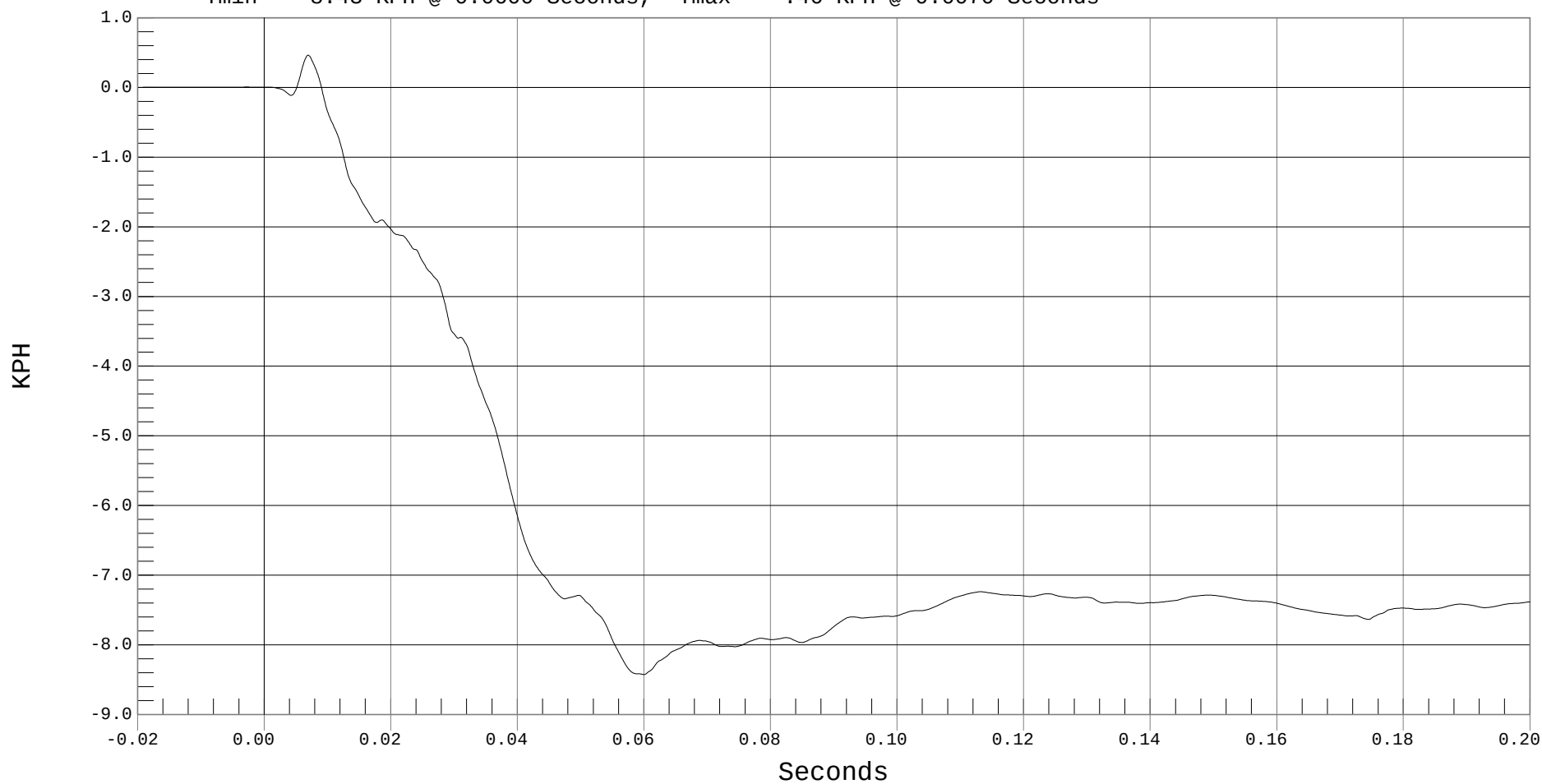
VEHICLE CG X VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 VEHICLE CG X VELOCITY, B01008AI.V33

Ymin = -8.43 KPH @ 0.0600 Seconds, Ymax = .46 KPH @ 0.0070 Seconds





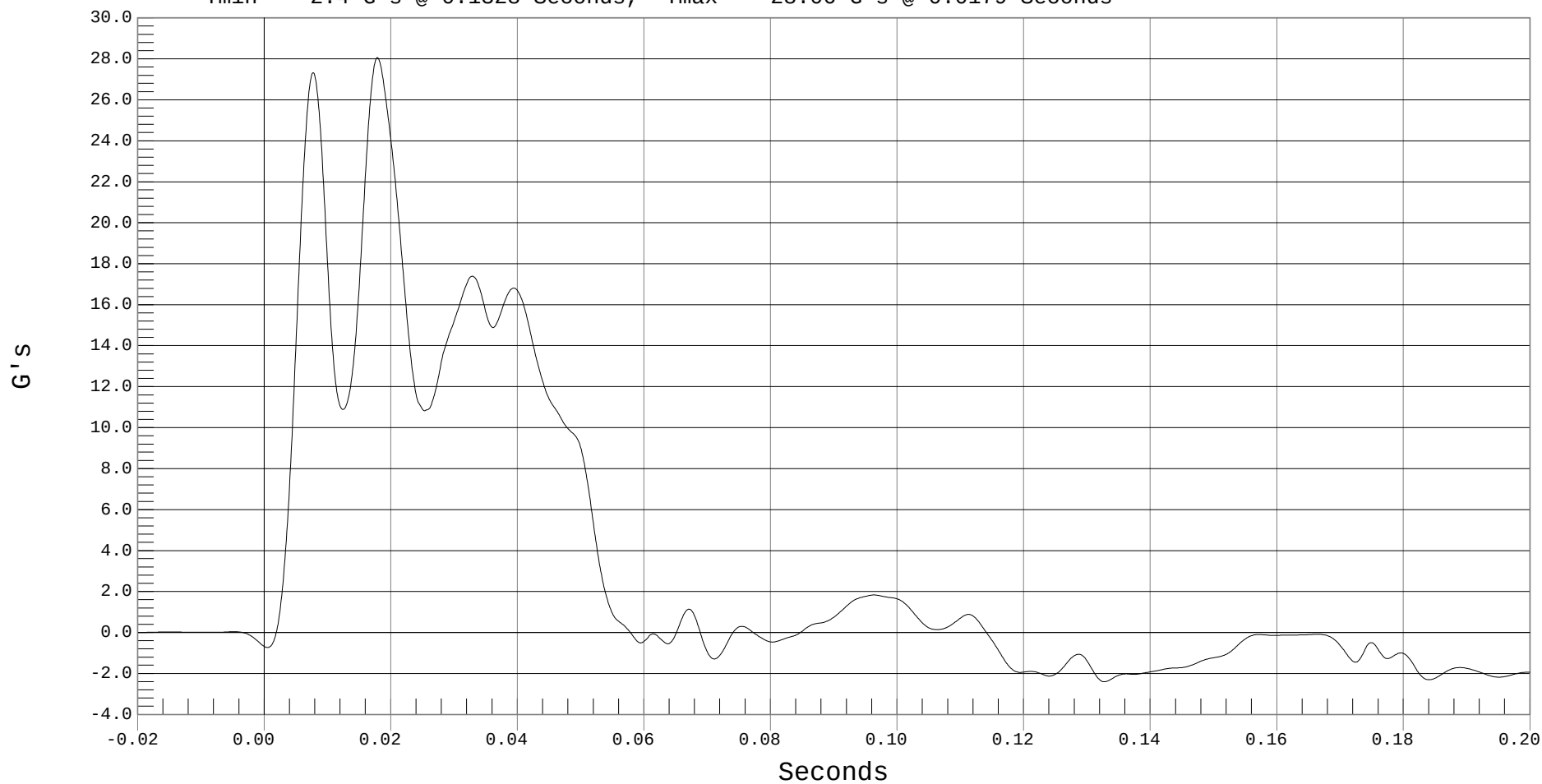
VEHICLE CG Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 VEHICLE CG Y, B01008AF.A34

Ymin = -2.4 G's @ 0.1328 Seconds, Ymax = 28.06 G's @ 0.0179 Seconds





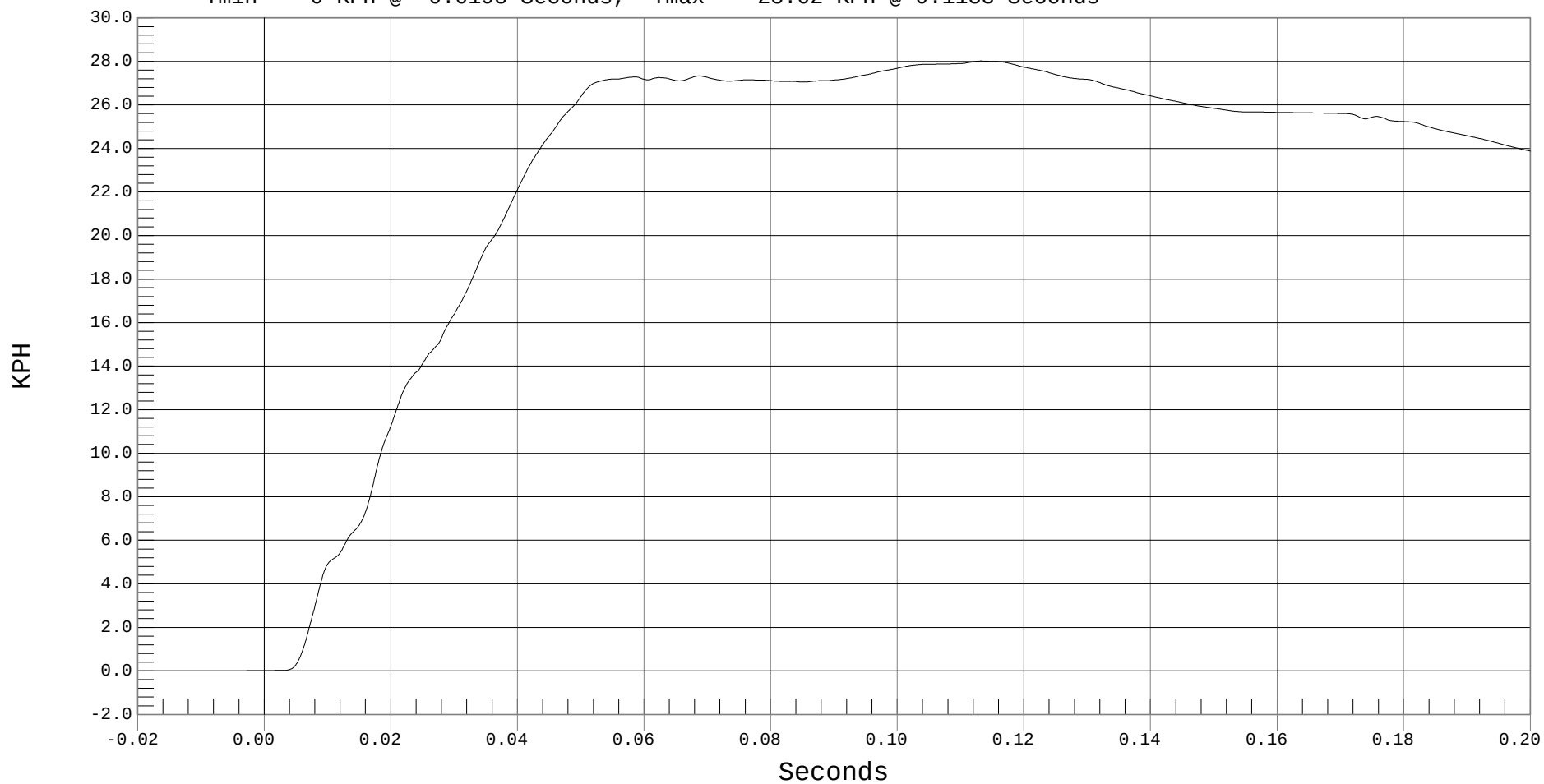
VEHICLE CG Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 VEHICLE CG Y VELOCITY, B01008AI.V34

Ymin = 0 KPH @ -0.0198 Seconds, Ymax = 28.02 KPH @ 0.1133 Seconds





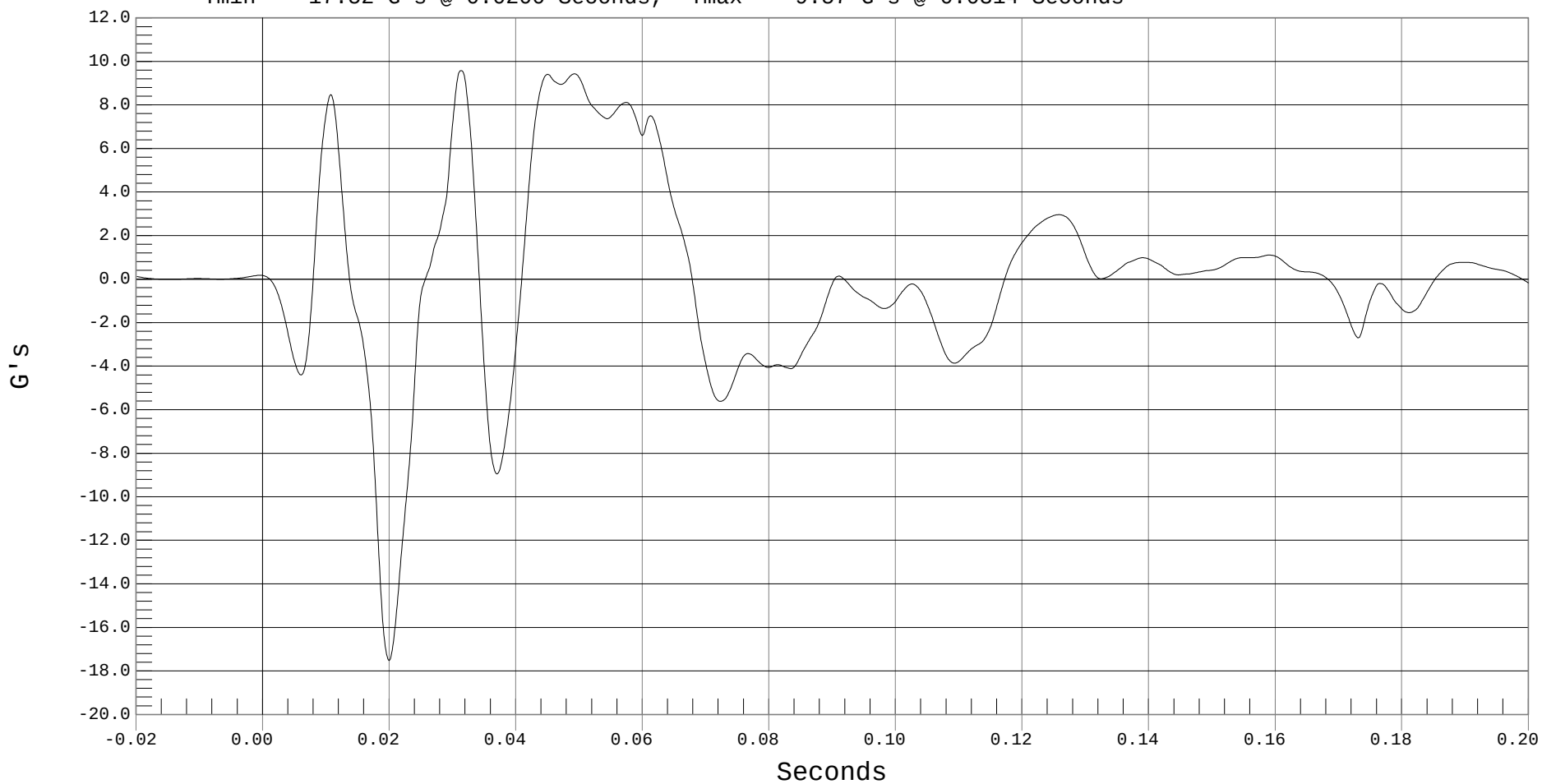
VEHICLE CG Z ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 VEHICLE CG Z, B01008AF.A35

Ymin = -17.52 G's @ 0.0200 Seconds, Ymax = 9.57 G's @ 0.0314 Seconds





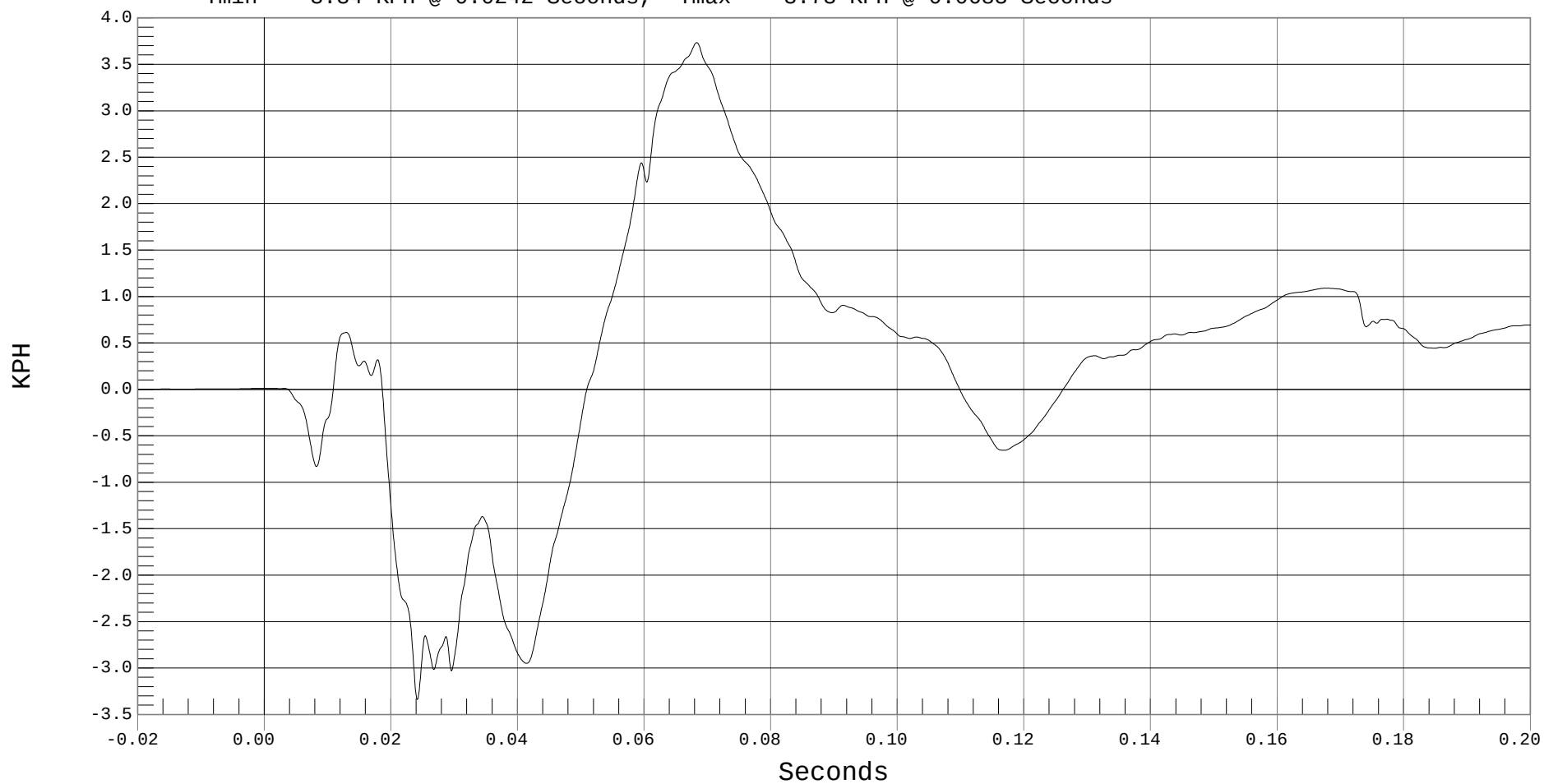
VEHICLE CG Z VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 VEHICLE CG Z VELOCITY, B01008AI.V35

Ymin = -3.34 KPH @ 0.0242 Seconds, Ymax = 3.73 KPH @ 0.0683 Seconds





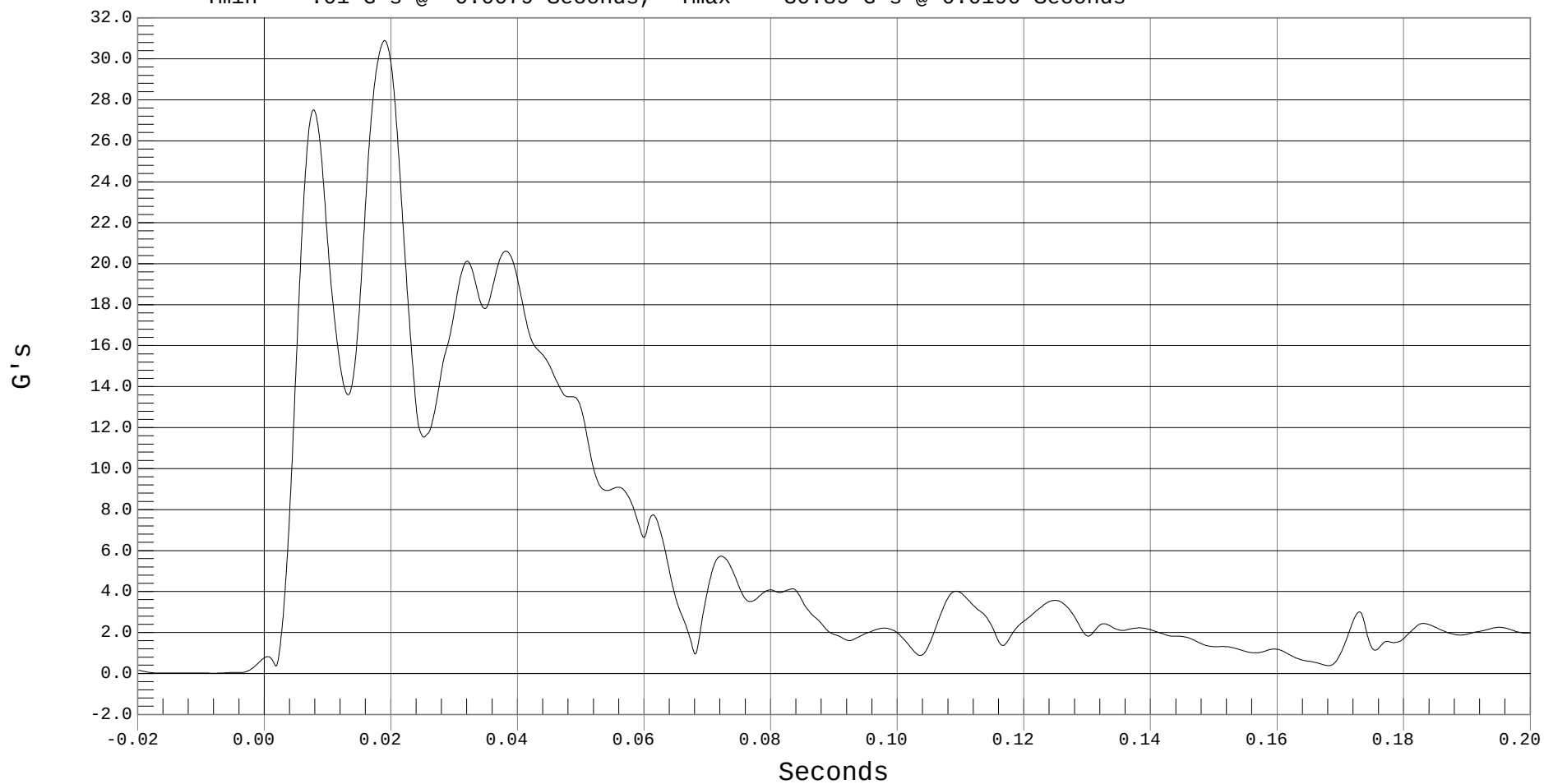
VEHICLE CG RESULTANT ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 VEHICLE CG RESULTANT ACCELERATION, B01008AV.A33

Ymin = .01 G's @ -0.0079 Seconds, Ymax = 30.89 G's @ 0.0190 Seconds





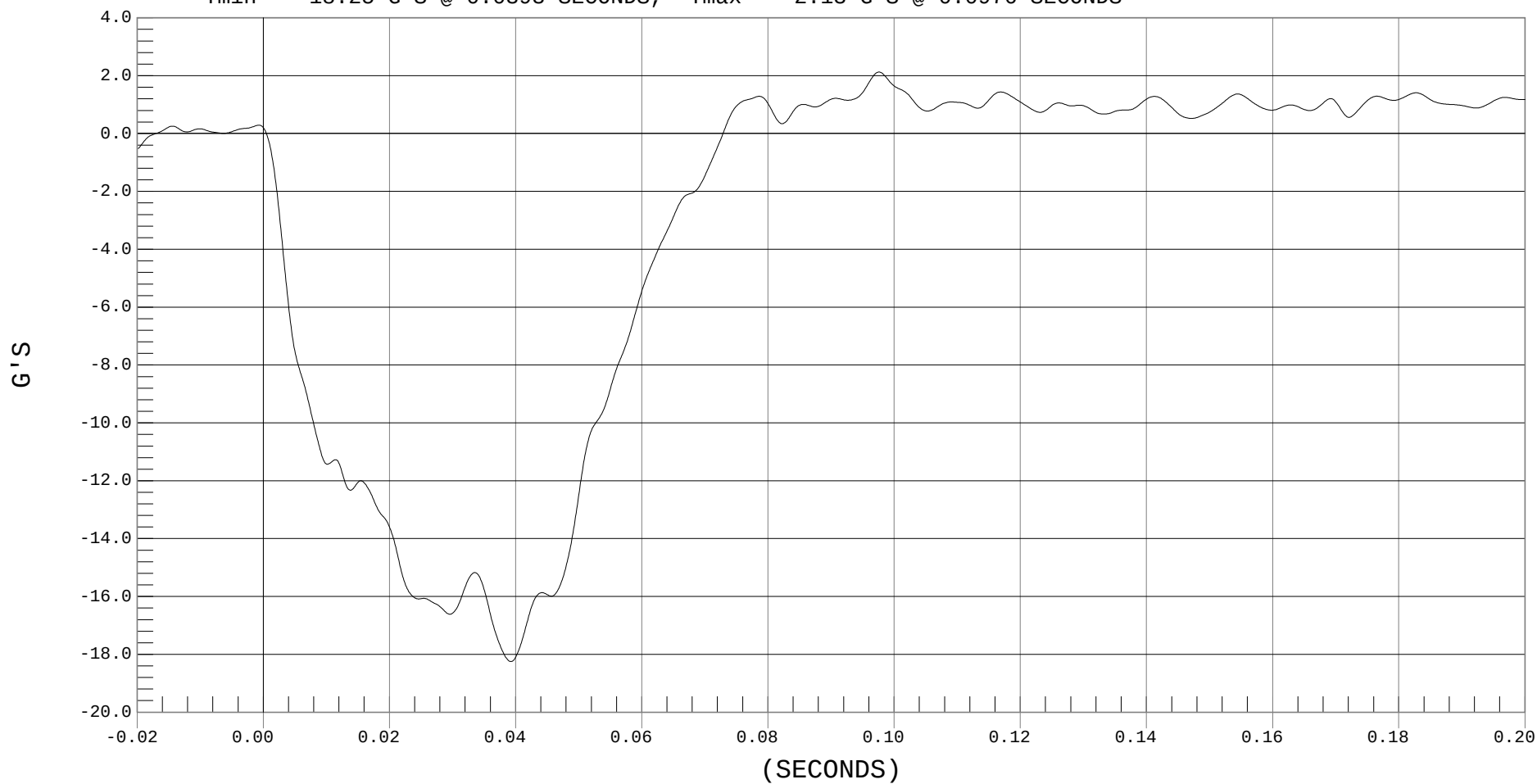
MOVING BARRIER CG X ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 CART CG X, B01008AF.A02

Ymin = -18.25 G'S @ 0.0393 SECONDS, Ymax = 2.13 G'S @ 0.0976 SECONDS





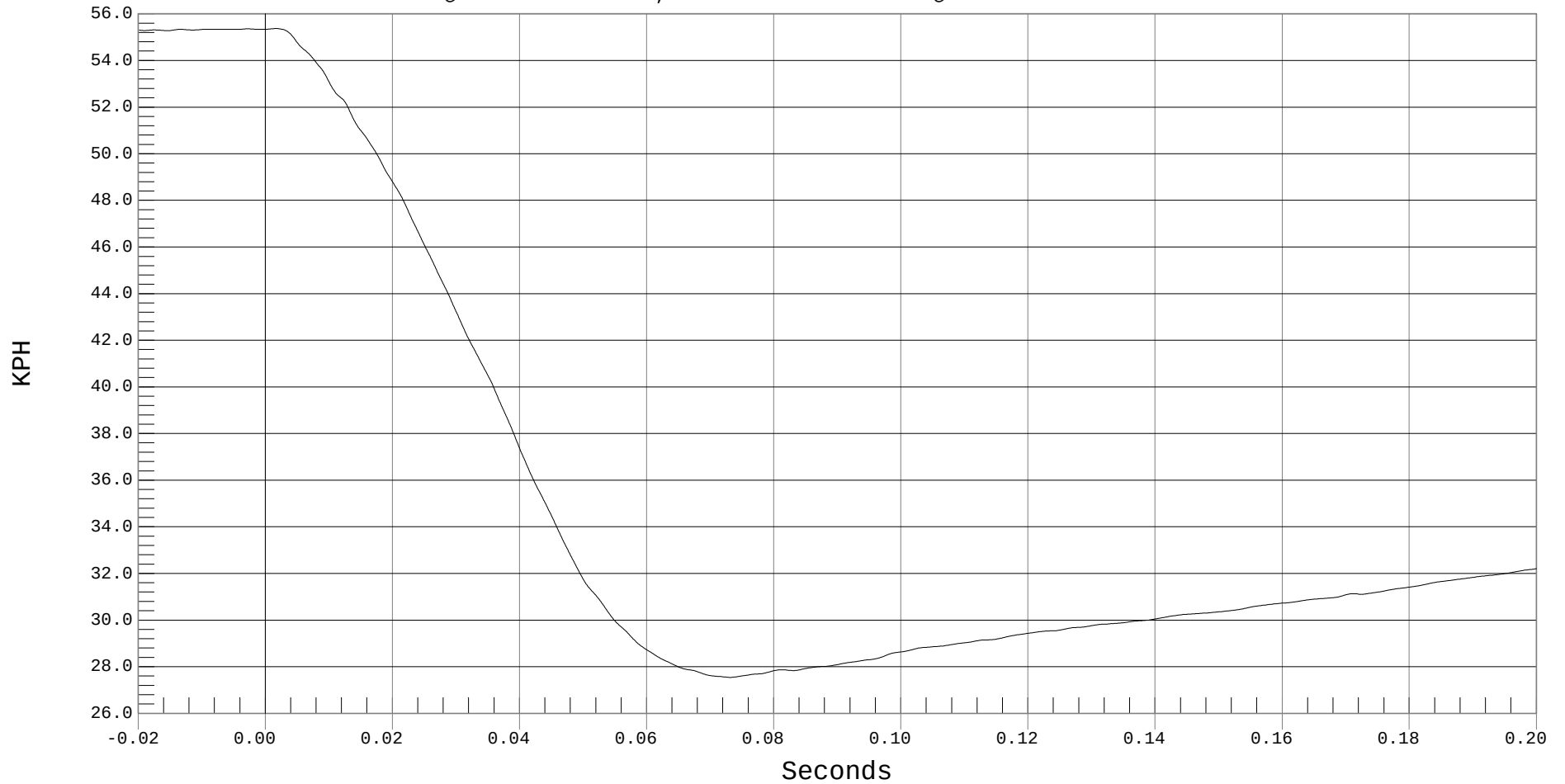
MOVING BARRIER CG X VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 MOVING BARRIER CG X VELOCITY, B01008AI.V02

Ymin = 27.54 KPH @ 0.0732 Seconds, Ymax = 55.36 KPH @ 0.0017 Seconds





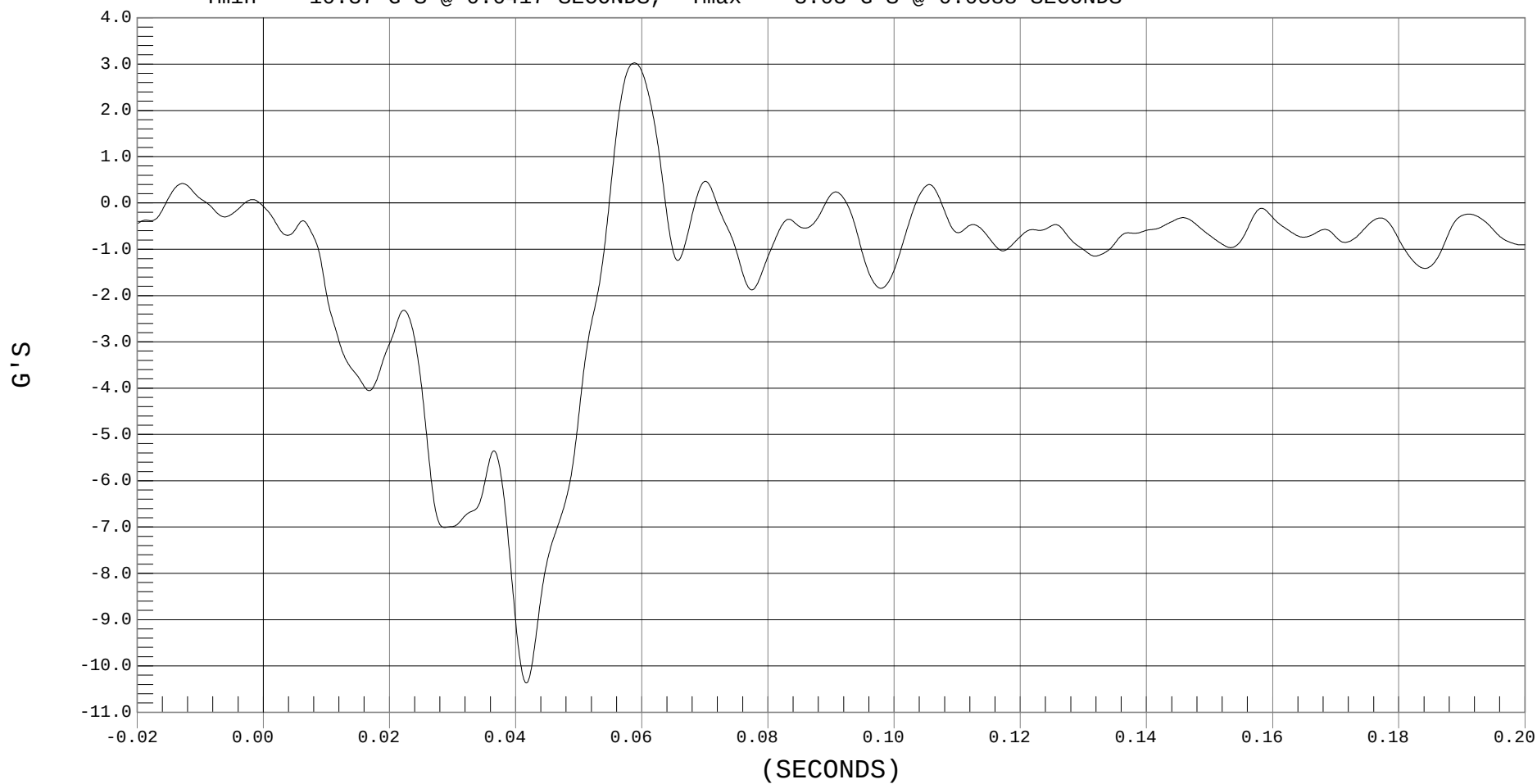
MOVING BARRIER CG Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 CART CG Y, B01008AF.A03

Ymin = -10.37 G'S @ 0.0417 SECONDS, Ymax = 3.03 G'S @ 0.0588 SECONDS





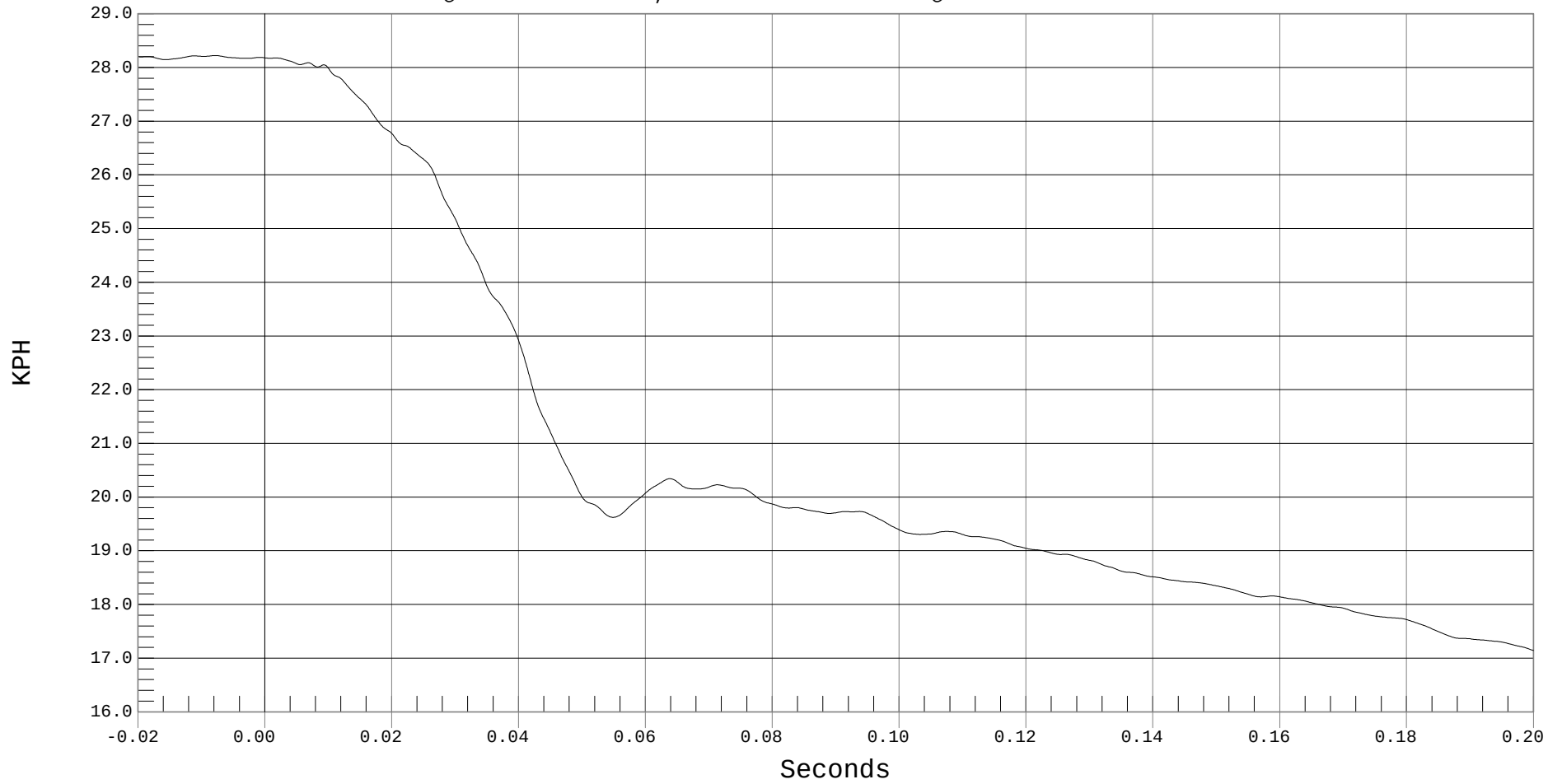
MOVING BARRIER CG Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 MOVING BARRIER CG Y VELOCITY, B01008AI.V03

Ymin = 17.13 KPH @ 0.2002 Seconds, Ymax = 28.22 KPH @ -0.0078 Seconds





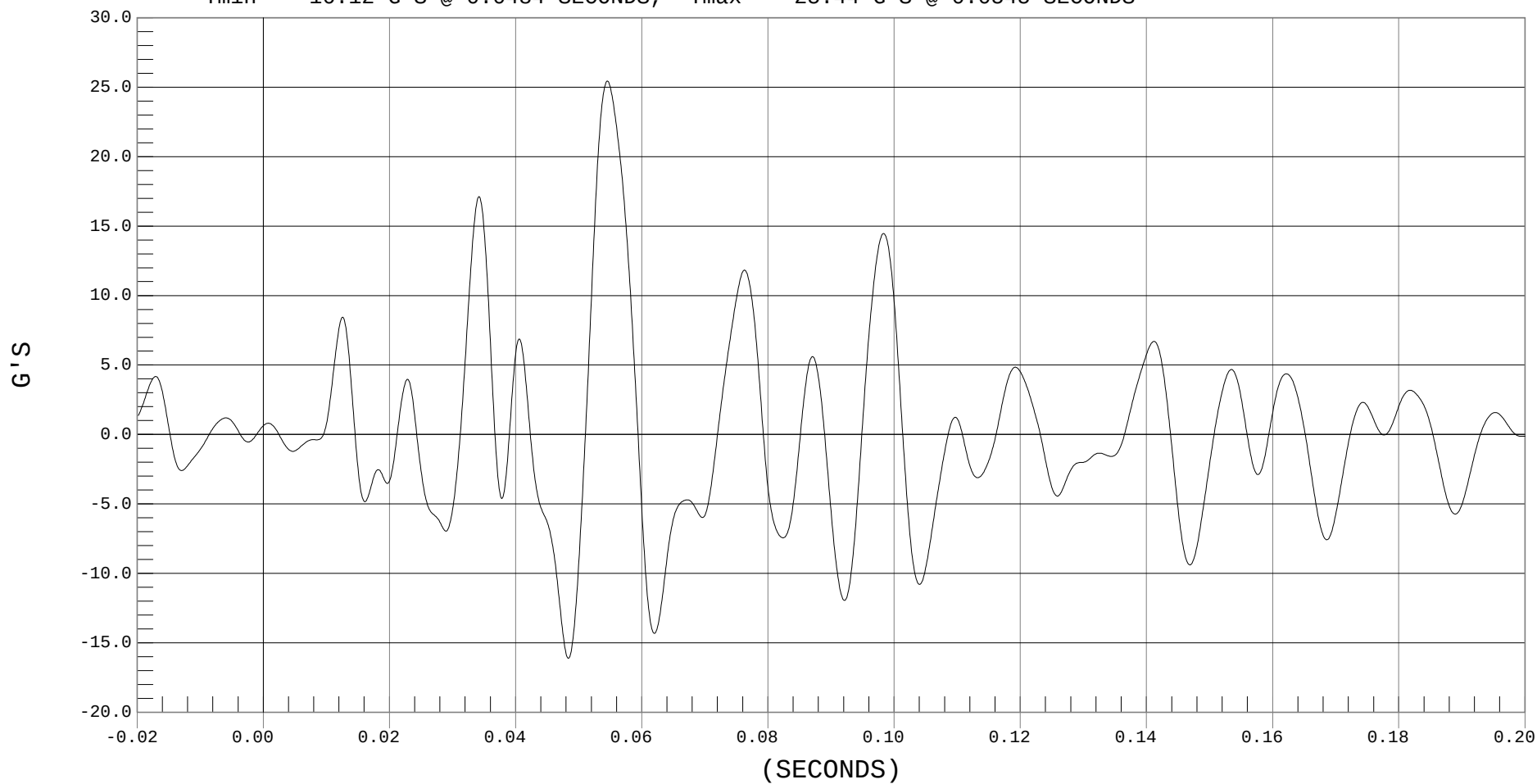
MOVING BARRIER CG Z ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 CART CG Z, B01008AF.A04

Ymin = -16.12 G'S @ 0.0484 SECONDS, Ymax = 25.44 G'S @ 0.0545 SECONDS





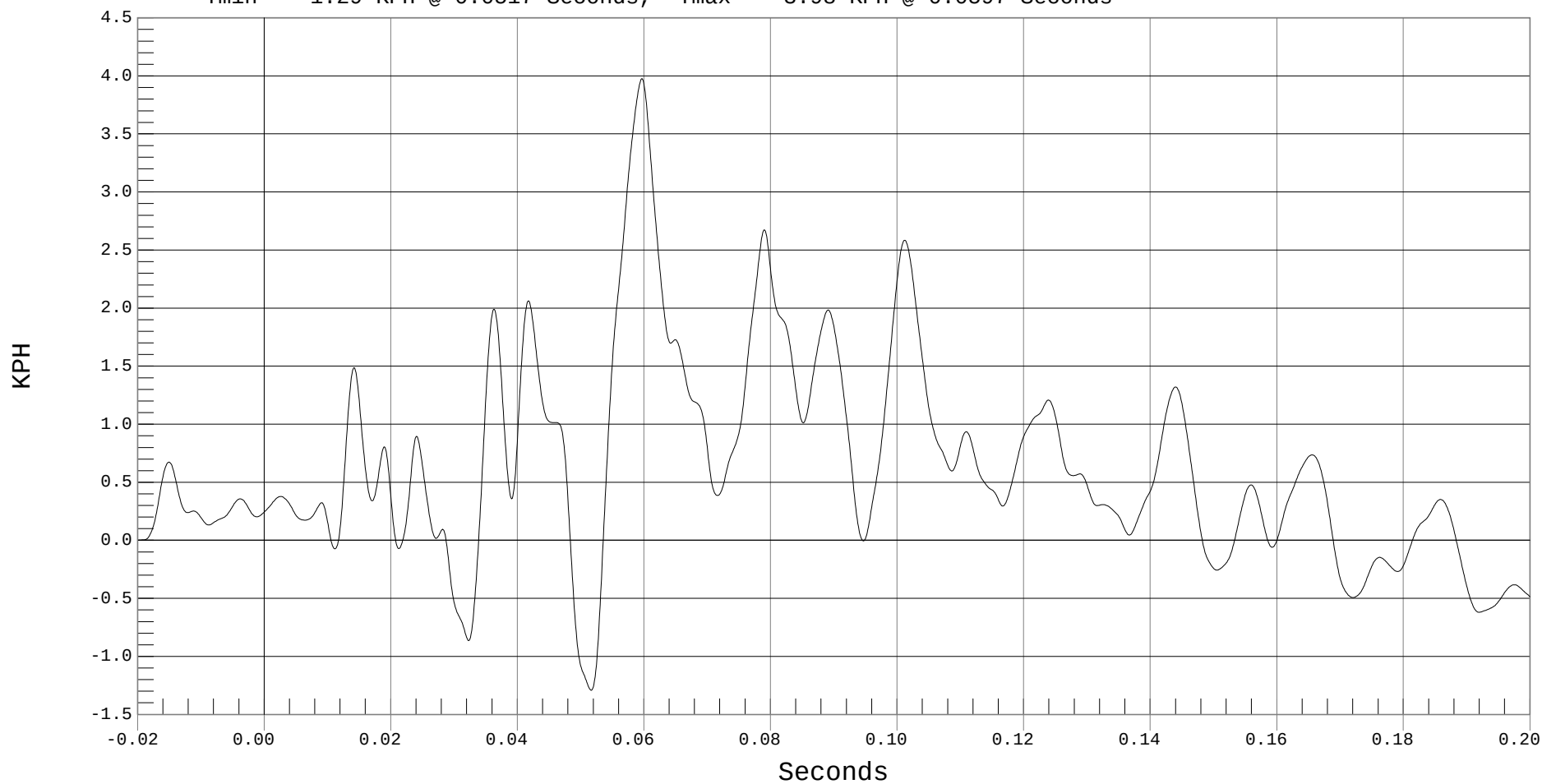
MOVING BARRIER CG Z VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 MOVING BARRIER CG Z VELOCITY, B01008AI.V04

Ymin = -1.29 KPH @ 0.0517 Seconds, Ymax = 3.98 KPH @ 0.0597 Seconds





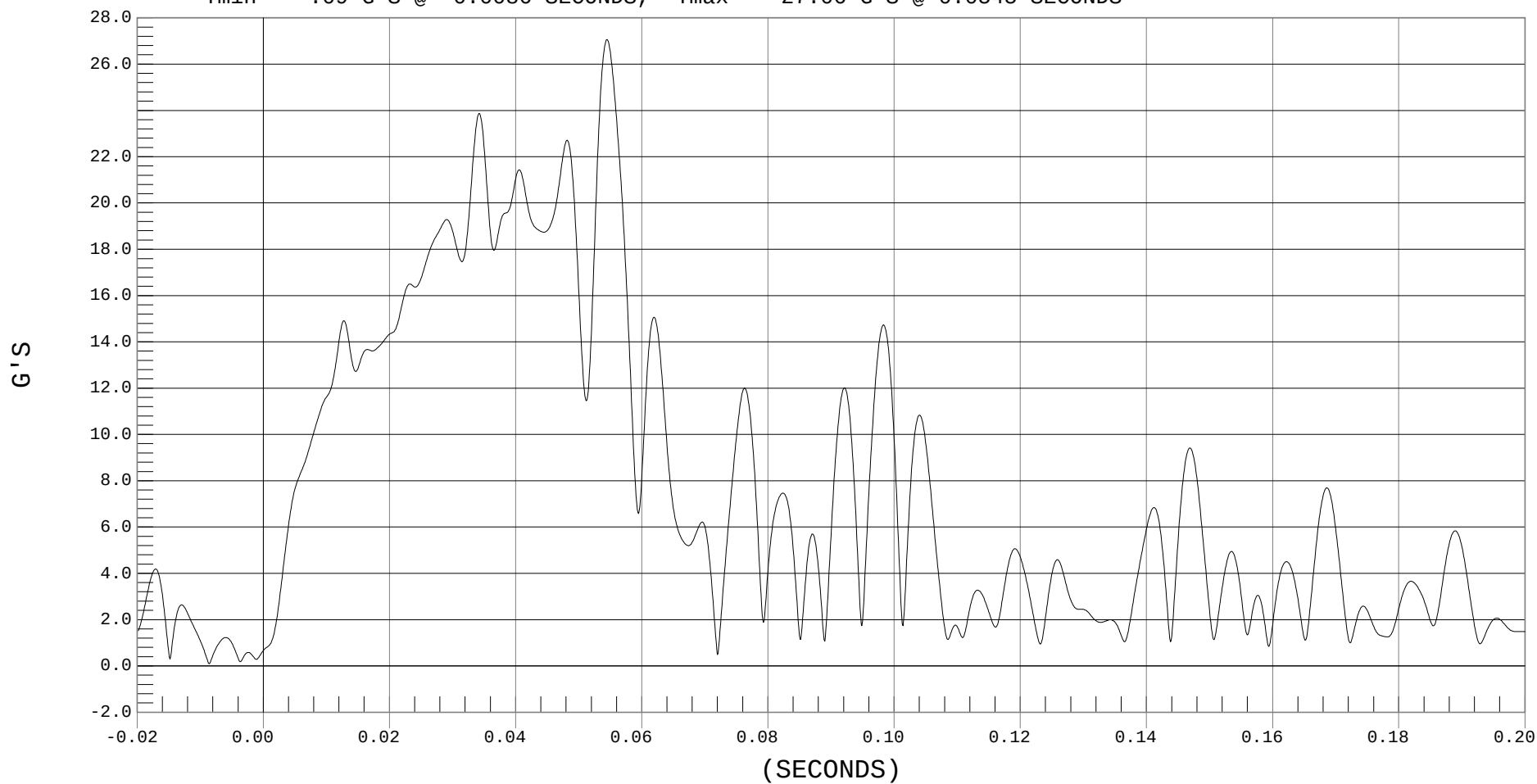
MOVING BARRIER CG RESULTANT ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 MOVING BARRIER CG RESULTANT ACCELERATION, B01008AV.A02

Ymin = .09 G'S @ -0.0086 SECONDS, Ymax = 27.06 G'S @ 0.0545 SECONDS





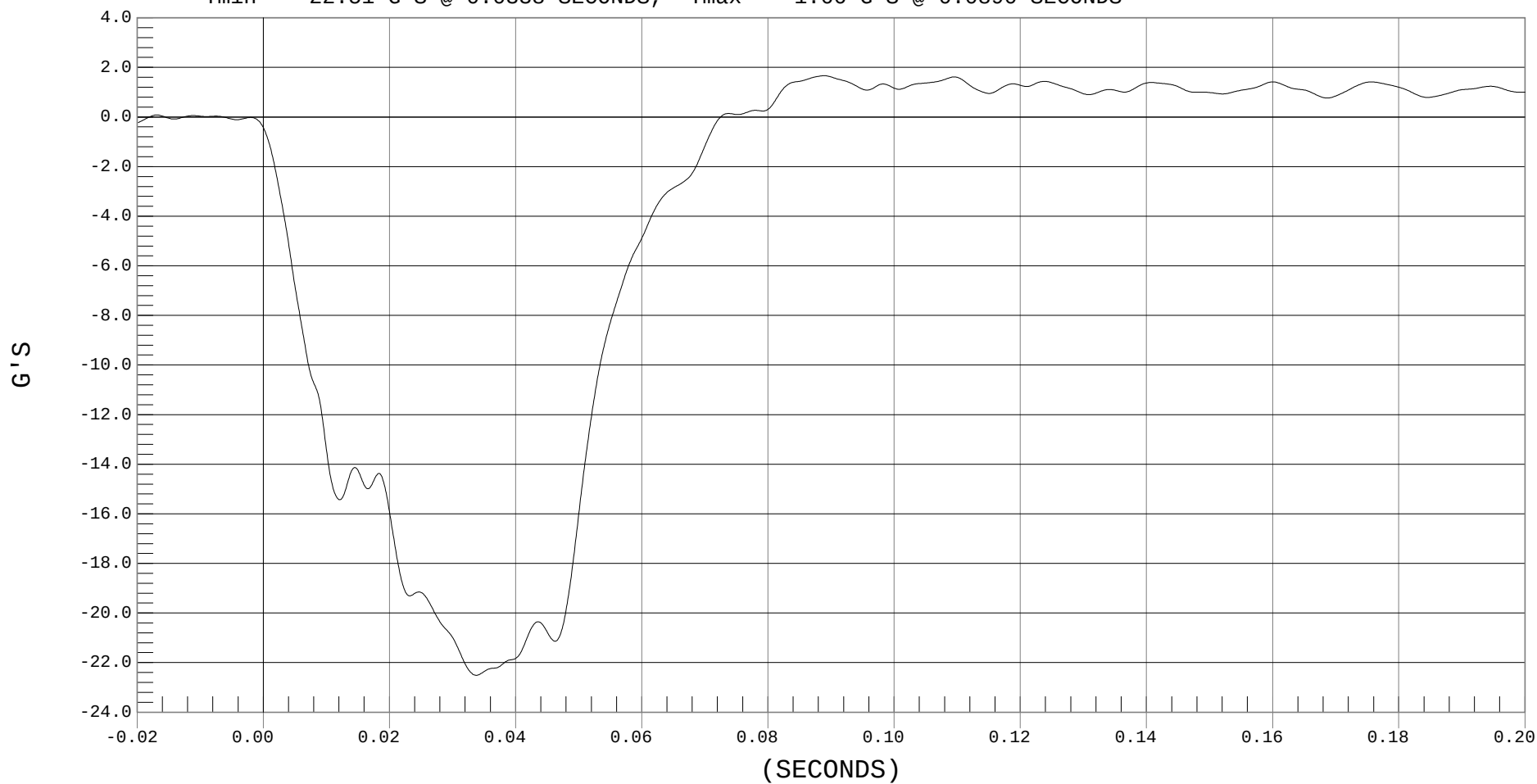
MOVING BARRIER REAR AXLE X ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 CART REAR X, B01008AF.A05

Ymin = -22.51 G'S @ 0.0338 SECONDS, Ymax = 1.66 G'S @ 0.0890 SECONDS





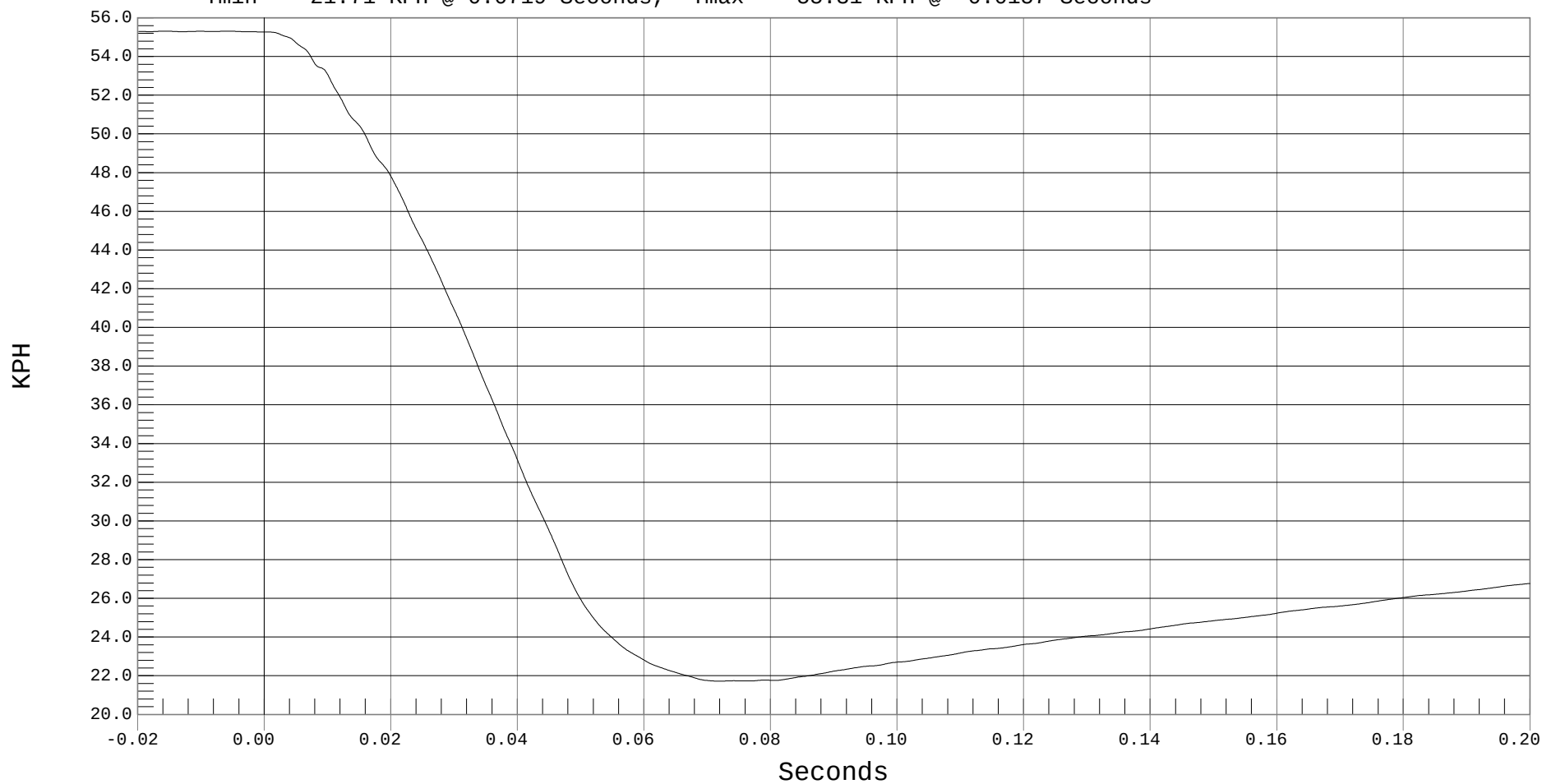
MOVING BARRIER REAR AXLE X VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 MOVING BARRIER REAR AXLE X VELOCITY, B01008AI.V05

Ymin = 21.71 KPH @ 0.0719 Seconds, Ymax = 55.31 KPH @ -0.0157 Seconds





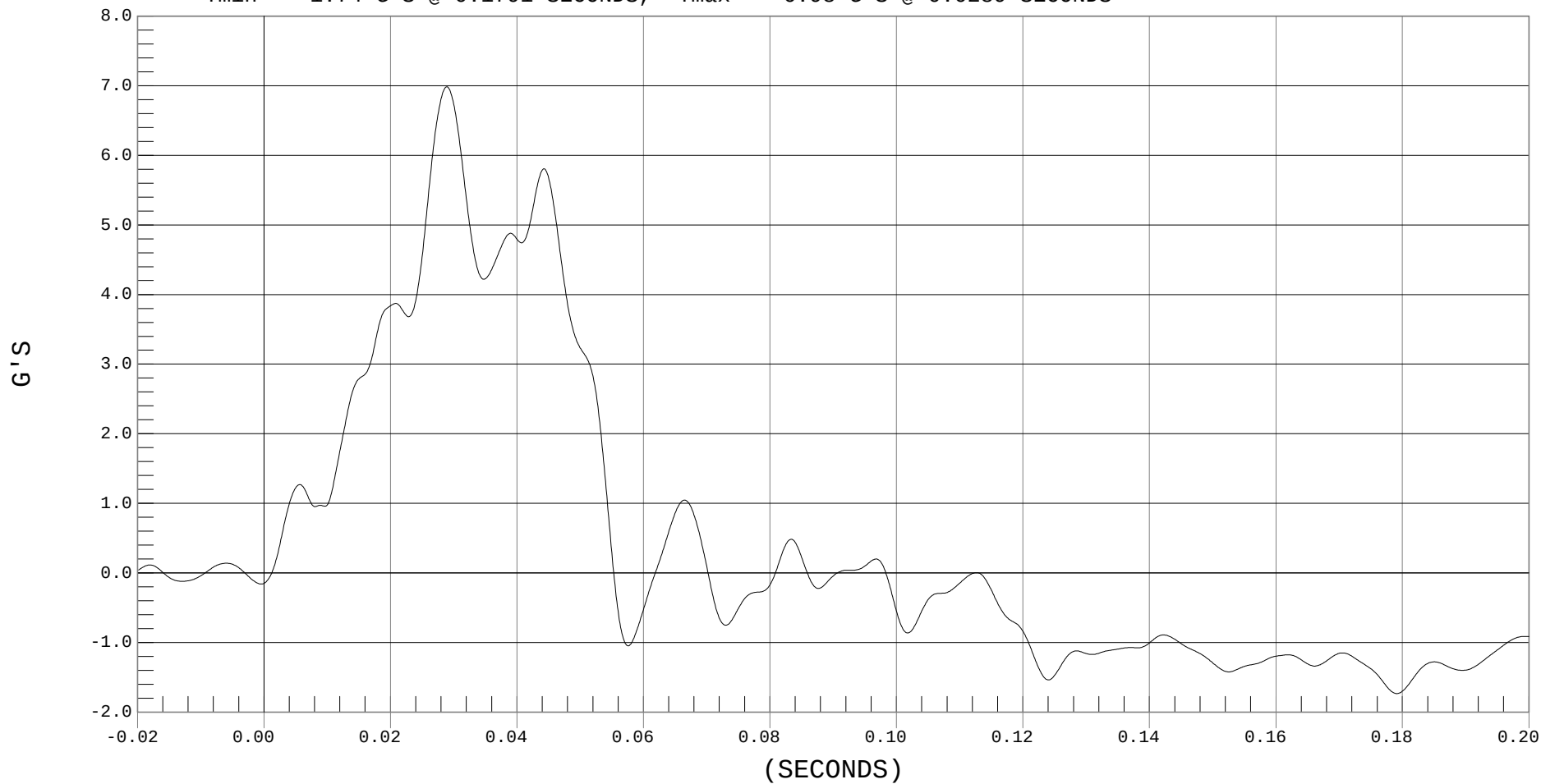
MOVING BARRIER REAR AXLE Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 60

— 1 CART REAR Y, B01008AF.A06

Ymin = -1.74 G'S @ 0.1791 SECONDS, Ymax = 6.98 G'S @ 0.0289 SECONDS





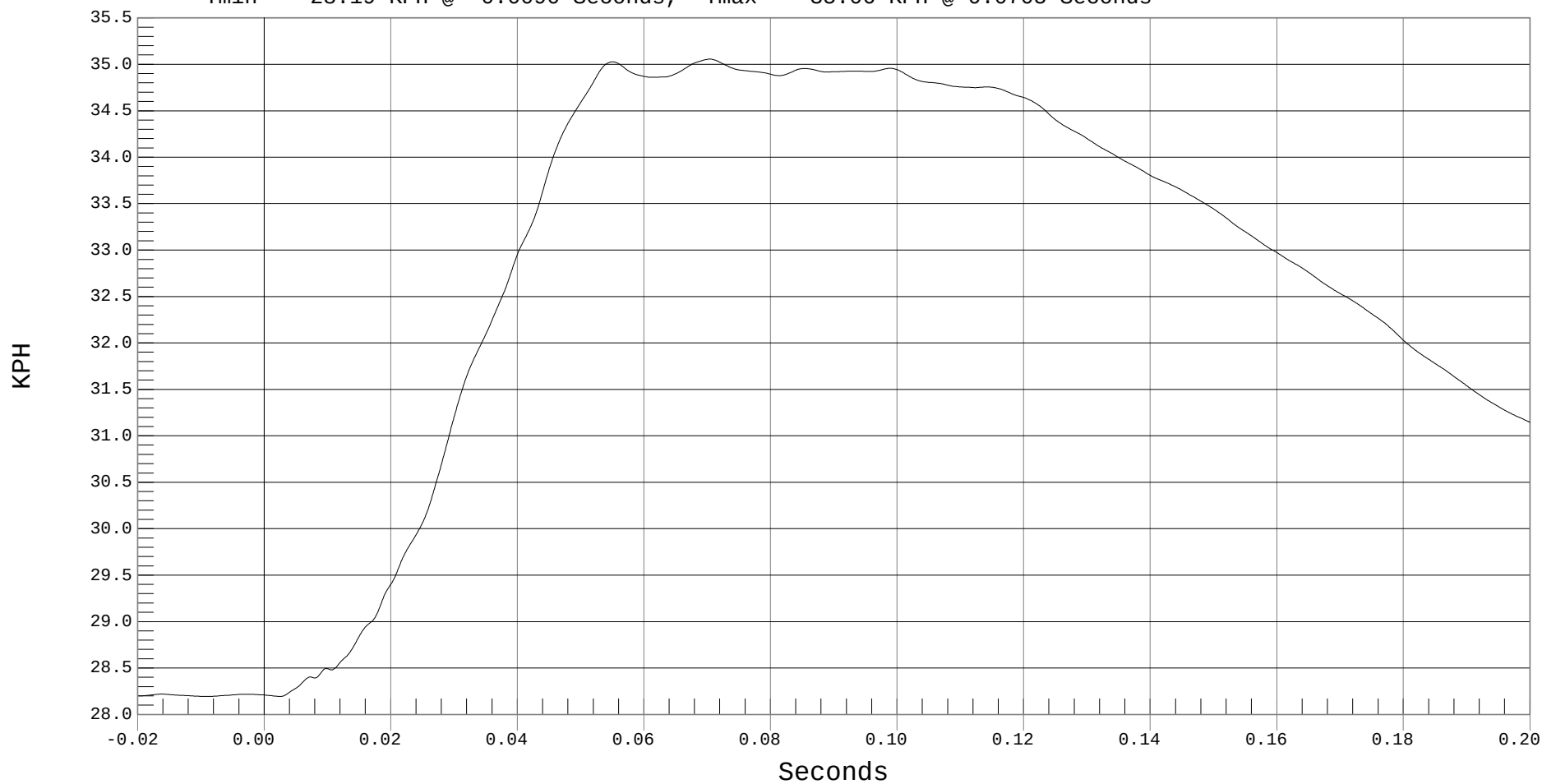
MOVING BARRIER REAR AXLE Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 MOVING BARRIER REAR AXLE Y VELOCITY, B01008AI.V06

Ymin = 28.19 KPH @ -0.0090 Seconds, Ymax = 35.06 KPH @ 0.0705 Seconds





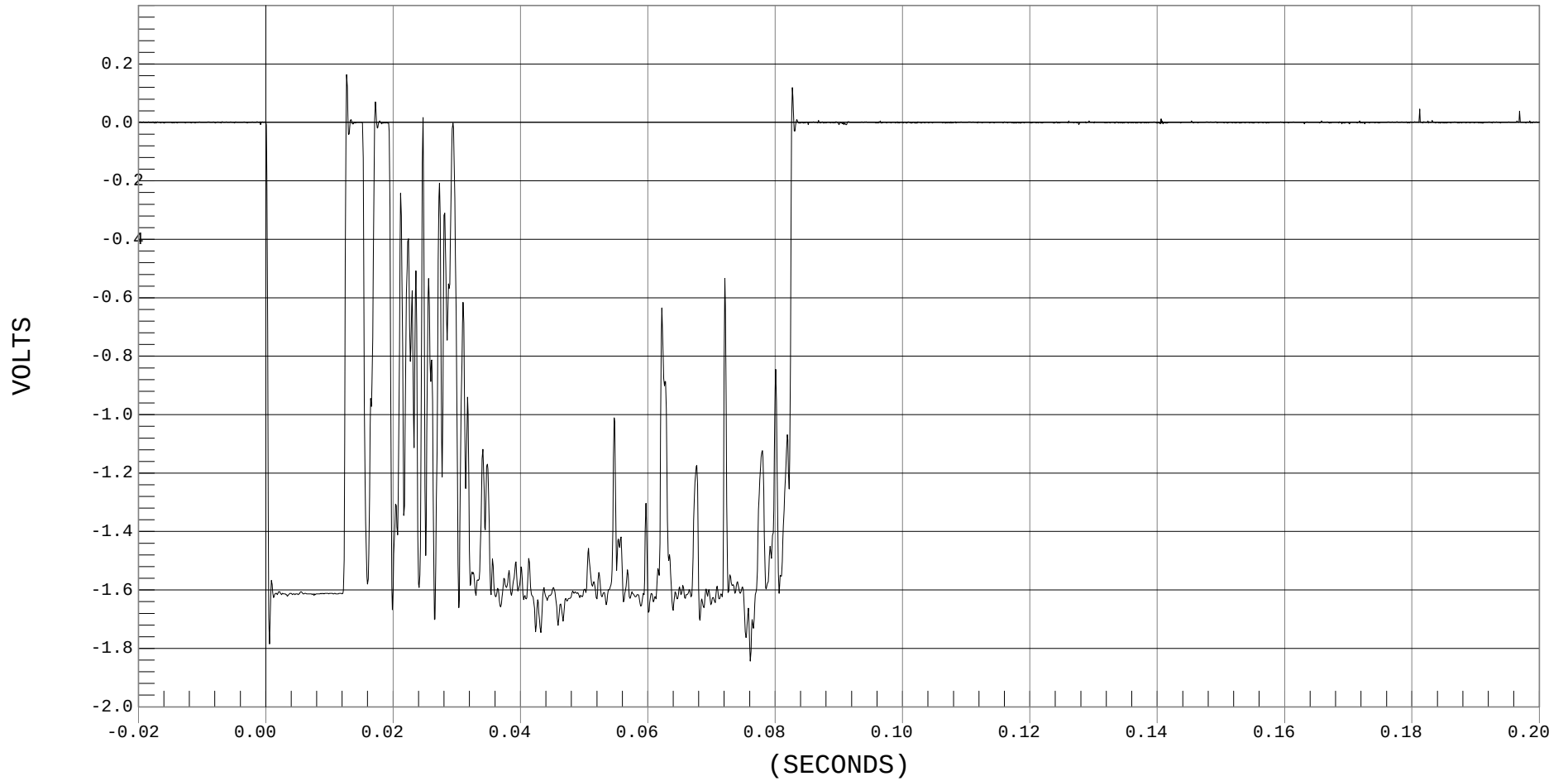
LEFT BARRIER CONTACT

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 1000

— 1 LEFT BARRIER CONTACT, B010080T.009

Ymin = -1.84 VOLTS @ 0.0761 SECONDS, Ymax = .16 VOLTS @ 0.0127 SECONDS





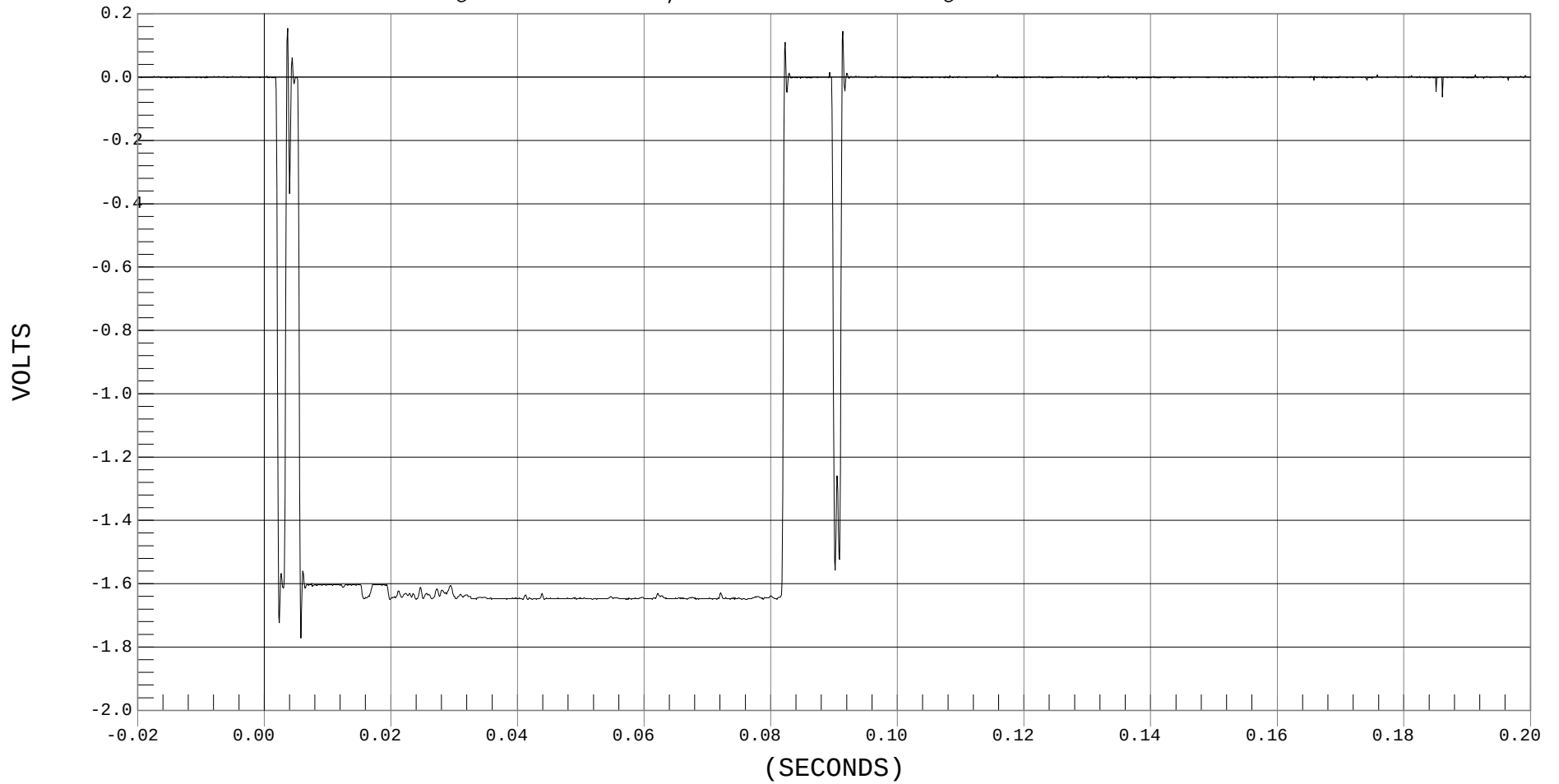
RIGHT BARRIER CONTACT

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 1000

— 1 RIGHT BARRIER CONTACT, B010080T.010

Ymin = -1.77 VOLTS @ 0.0058 SECONDS, Ymax = .15 VOLTS @ 0.0037 SECONDS





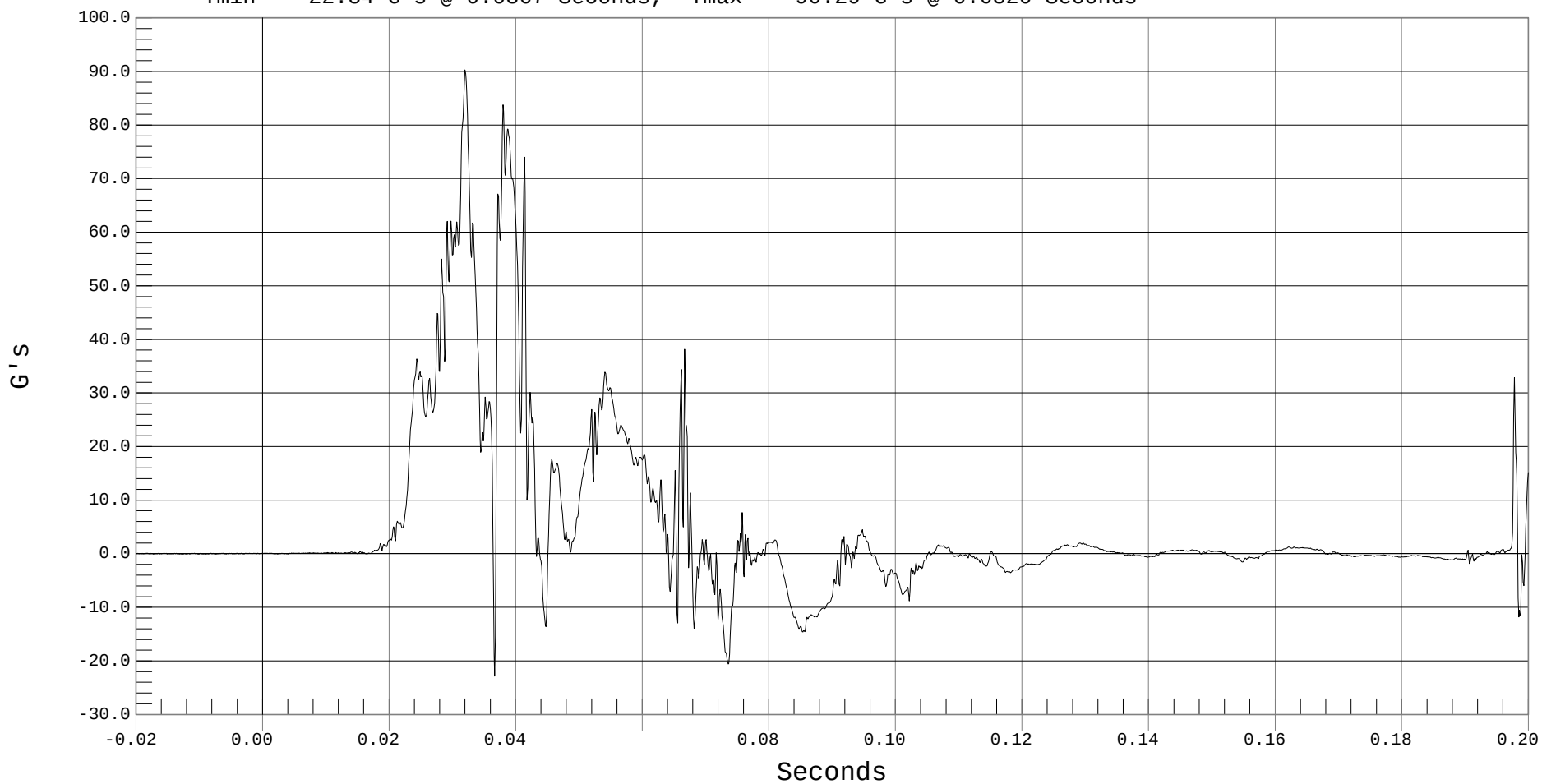
DRIVER UPPER RIB REDUNDANT Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 1000

— 1 DRIVER UPPER RIB Yr, B01008AT.A41

Ymin = -22.84 G's @ 0.0367 Seconds, Ymax = 90.29 G's @ 0.0320 Seconds





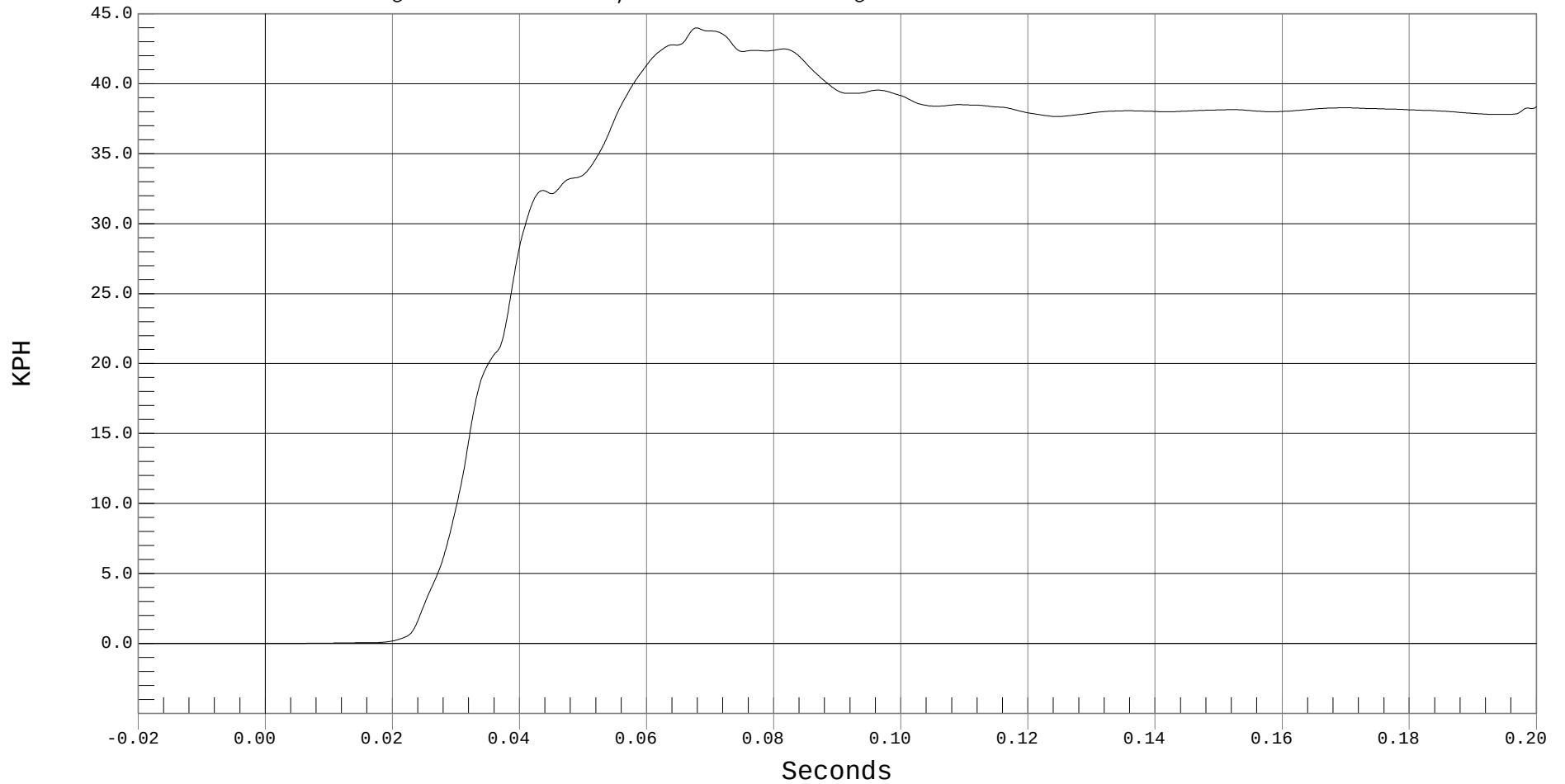
DRIVER UPPER RIB REDUNDANT Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 DRIVER UPPER RIB Y REDUNDANT VELOCITY, B01008AI.V41

Ymin = 0 KPH @ -0.0070 Seconds, Ymax = 44 KPH @ 0.0678 Seconds





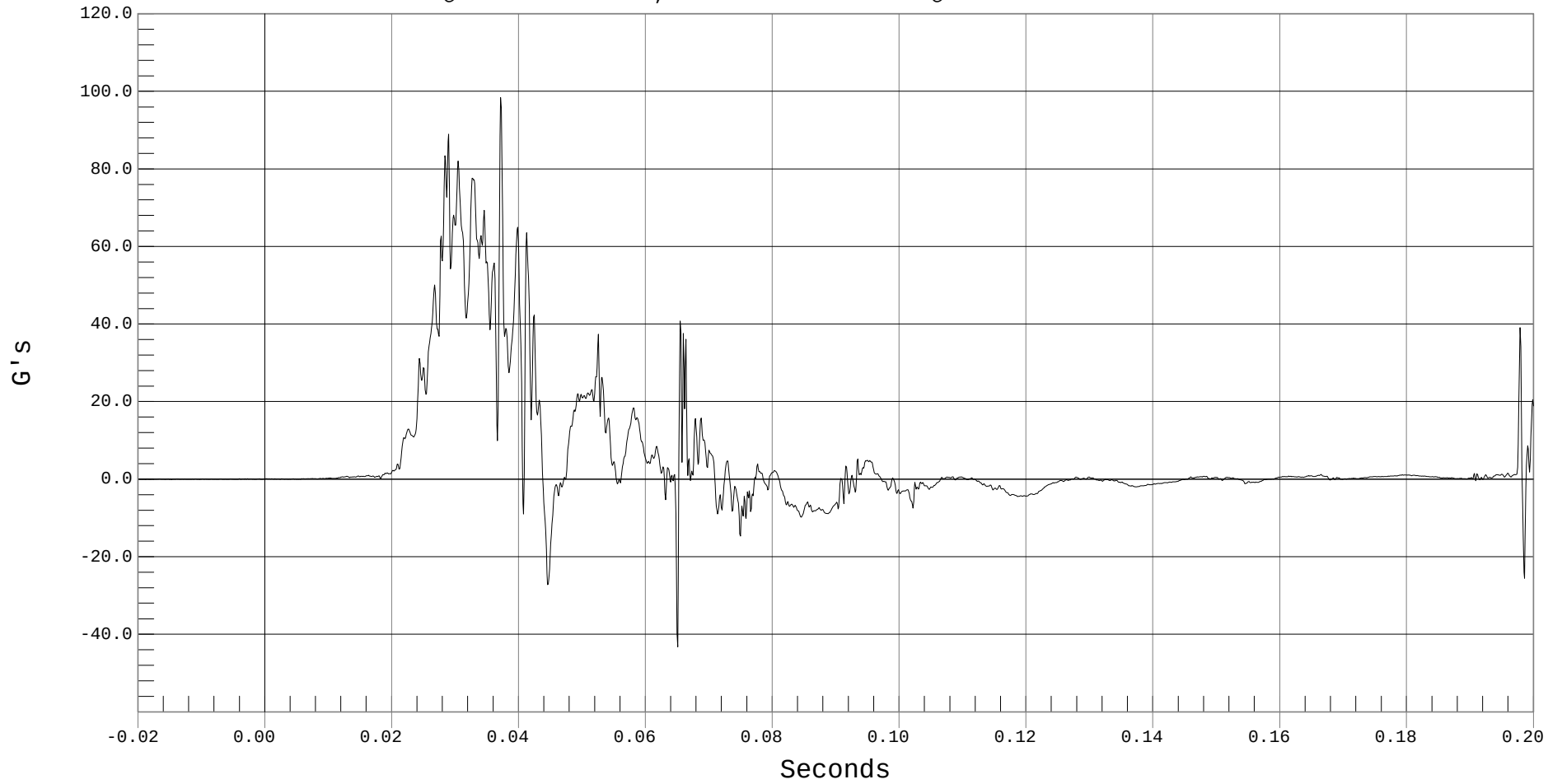
DRIVER LOWER RIB REDUNDANT Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 1000

— 1 DRIVER LOWER RIB Yr, B01008AT.A42

Ymin = -43.27 G's @ 0.0651 Seconds, Ymax = 98.38 G's @ 0.0372 Seconds





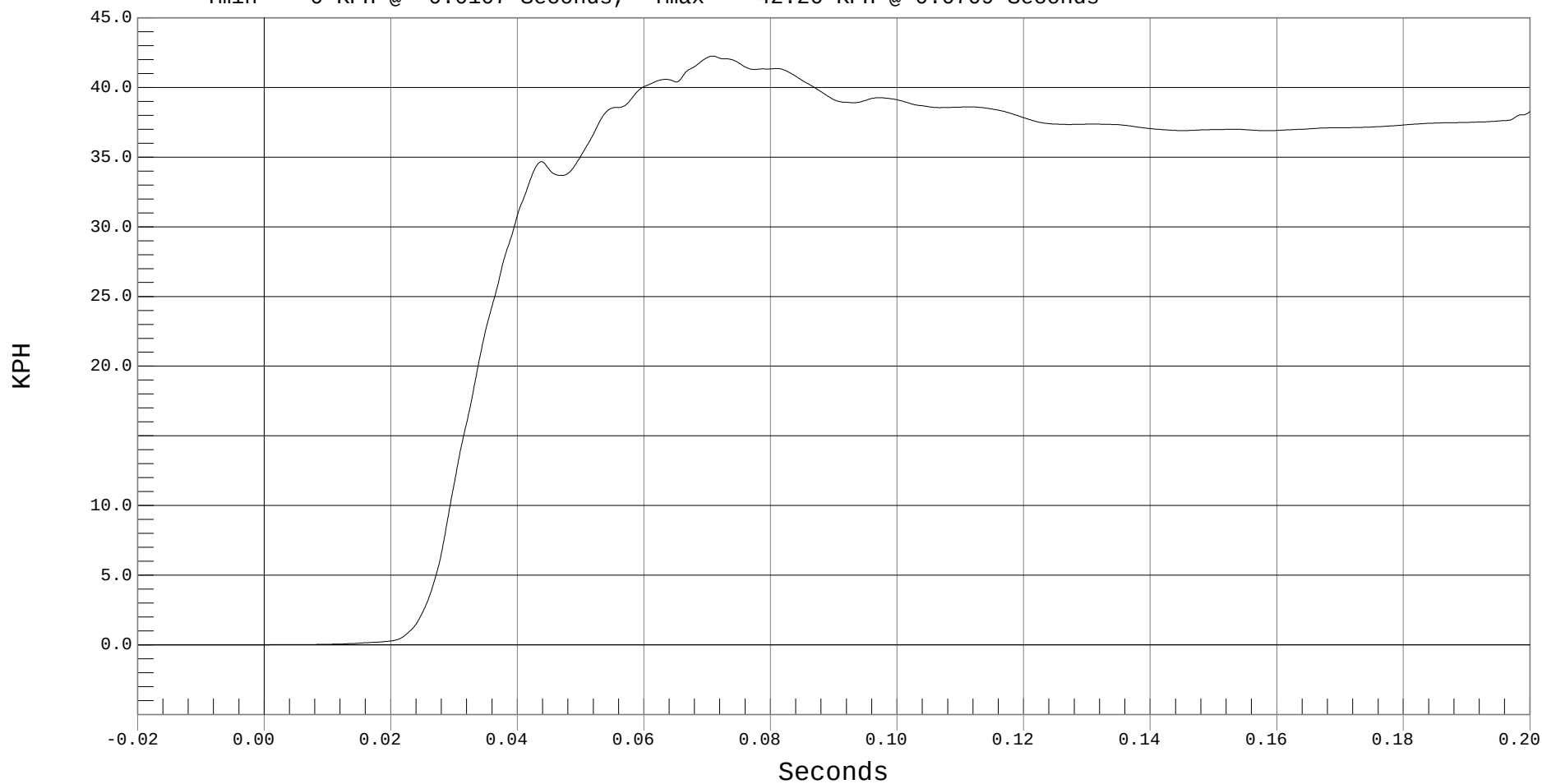
DRIVER LOWER RIB REDUNDANT Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 DRIVER LOWER RIB Y REDUNDANT VELOCITY, B01008AI.V42

Ymin = 0 KPH @ -0.0107 Seconds, Ymax = 42.26 KPH @ 0.0709 Seconds





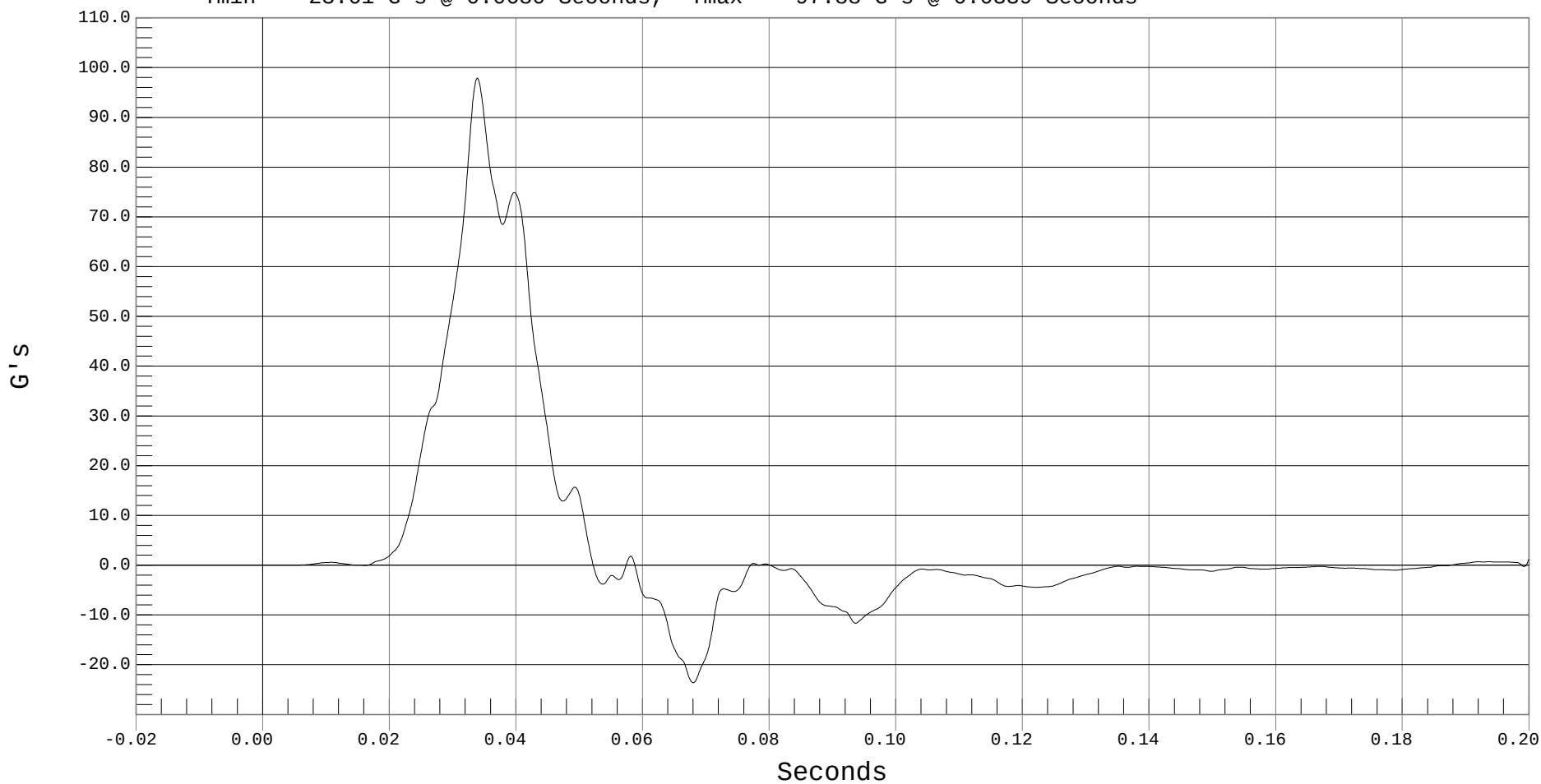
DRIVER LOWER SPINE REDUNDANT Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

1 DRIVER LOWER SPINE Yr, B01008AF.A43

Ymin = -23.61 G's @ 0.0680 Seconds, Ymax = 97.88 G's @ 0.0339 Seconds





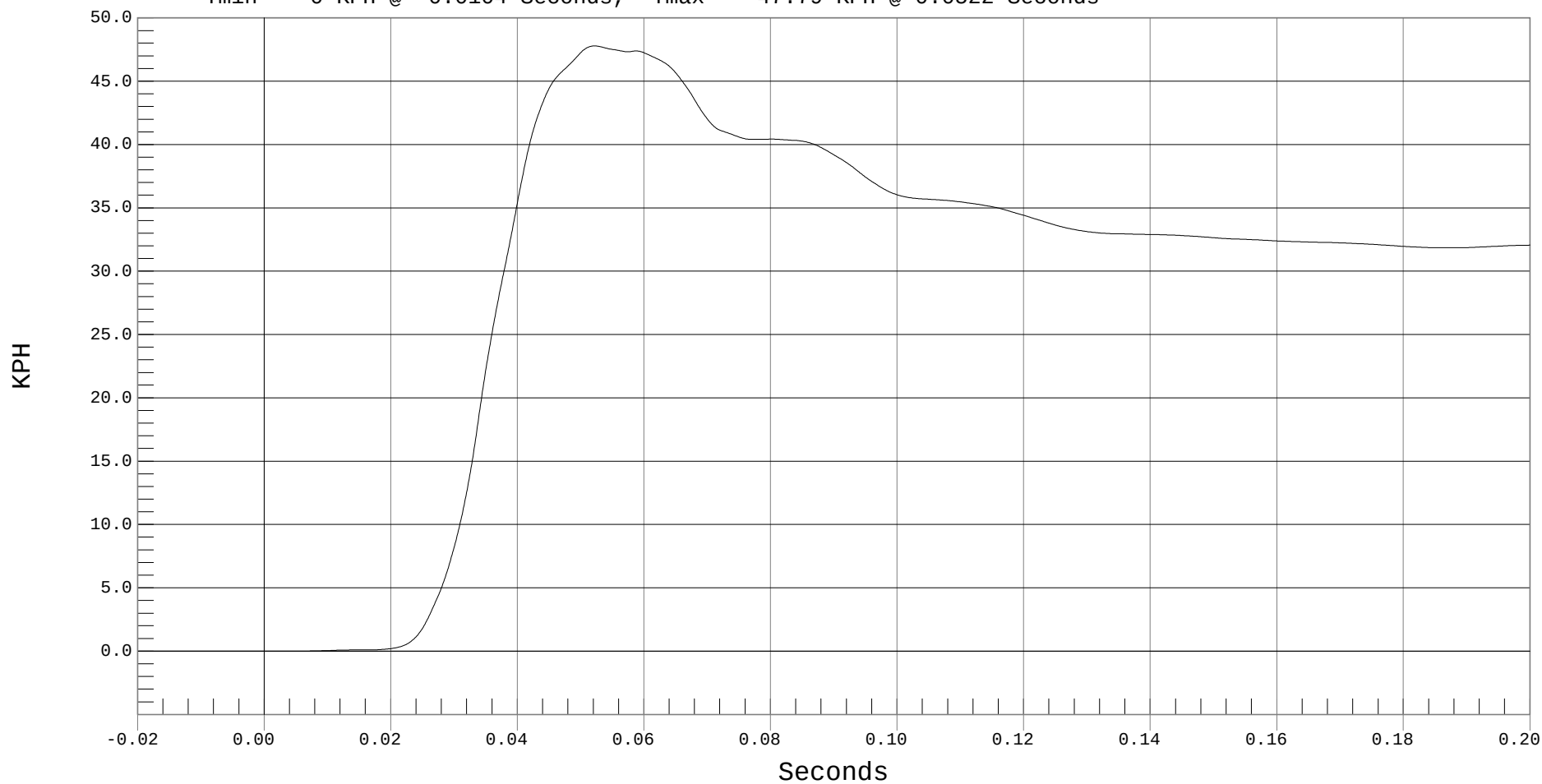
DRIVER LOWER SPINE REDUNDANT Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 DRIVER LOWER SPINE Y REDUNDANT VELOCITY, B01008AI.V43

Ymin = 0 KPH @ -0.0104 Seconds, Ymax = 47.79 KPH @ 0.0522 Seconds





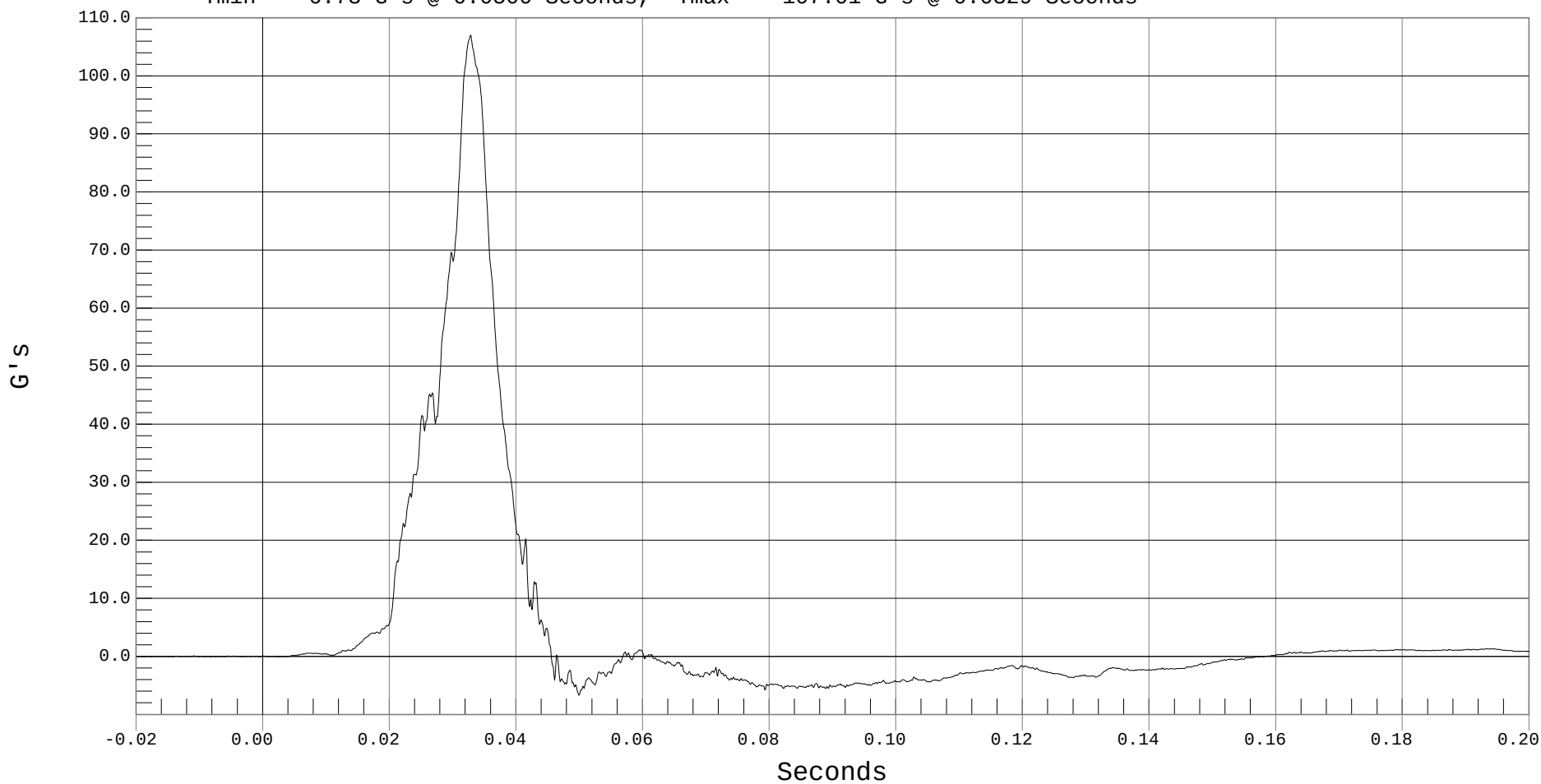
DRIVER PELVIS REDUNDANT Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 1000

— 1 DRIVER PELVIS Yr, B01008AT.A44

Ymin = -6.73 G's @ 0.0500 Seconds, Ymax = 107.01 G's @ 0.0329 Seconds





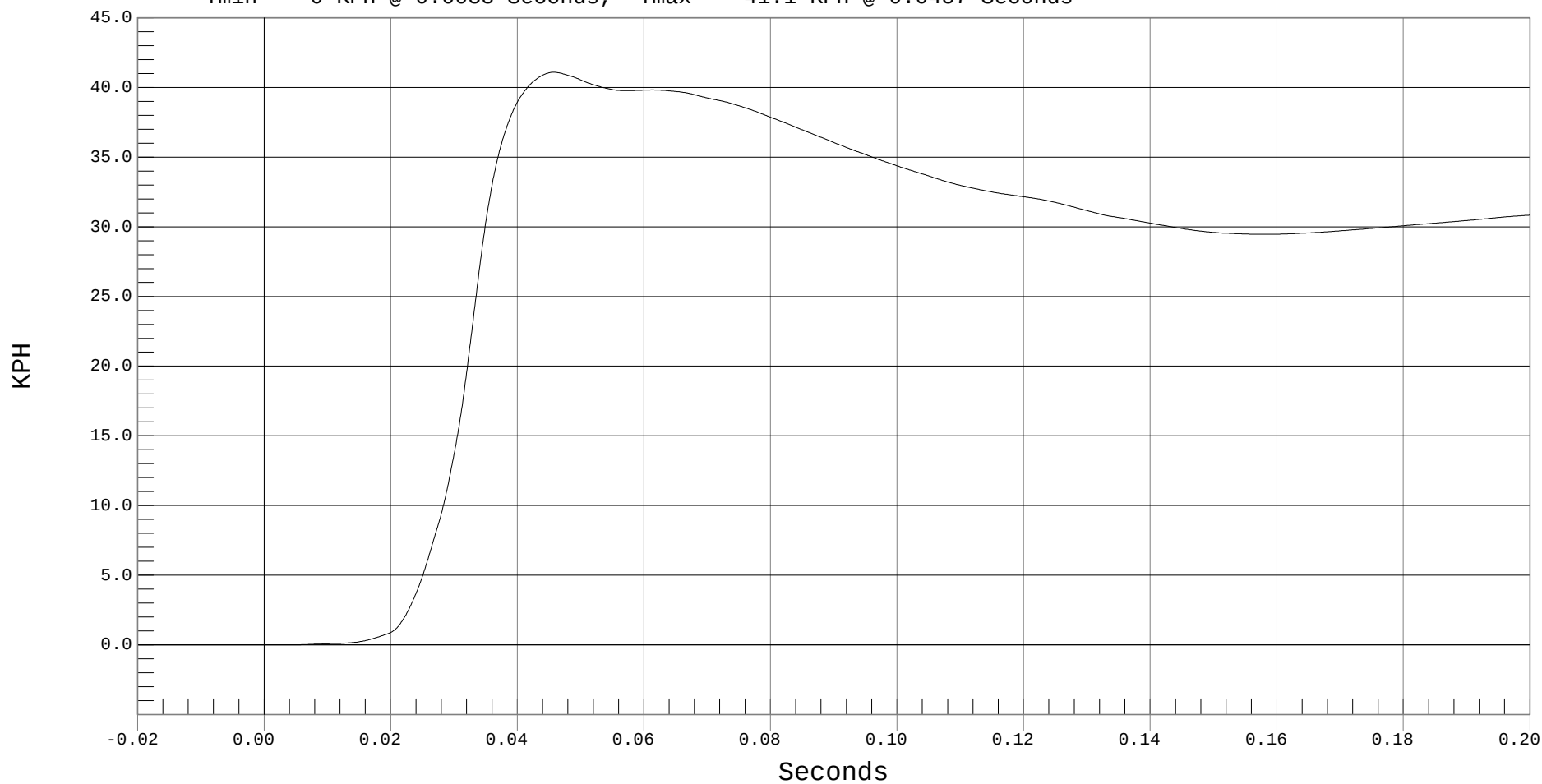
DRIVER PELVIS REDUNDANT Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 DRIVER PELVIS Y REDUNDANT VELOCITY, B01008AI.V44

Ymin = 0 KPH @ 0.0038 Seconds, Ymax = 41.1 KPH @ 0.0457 Seconds





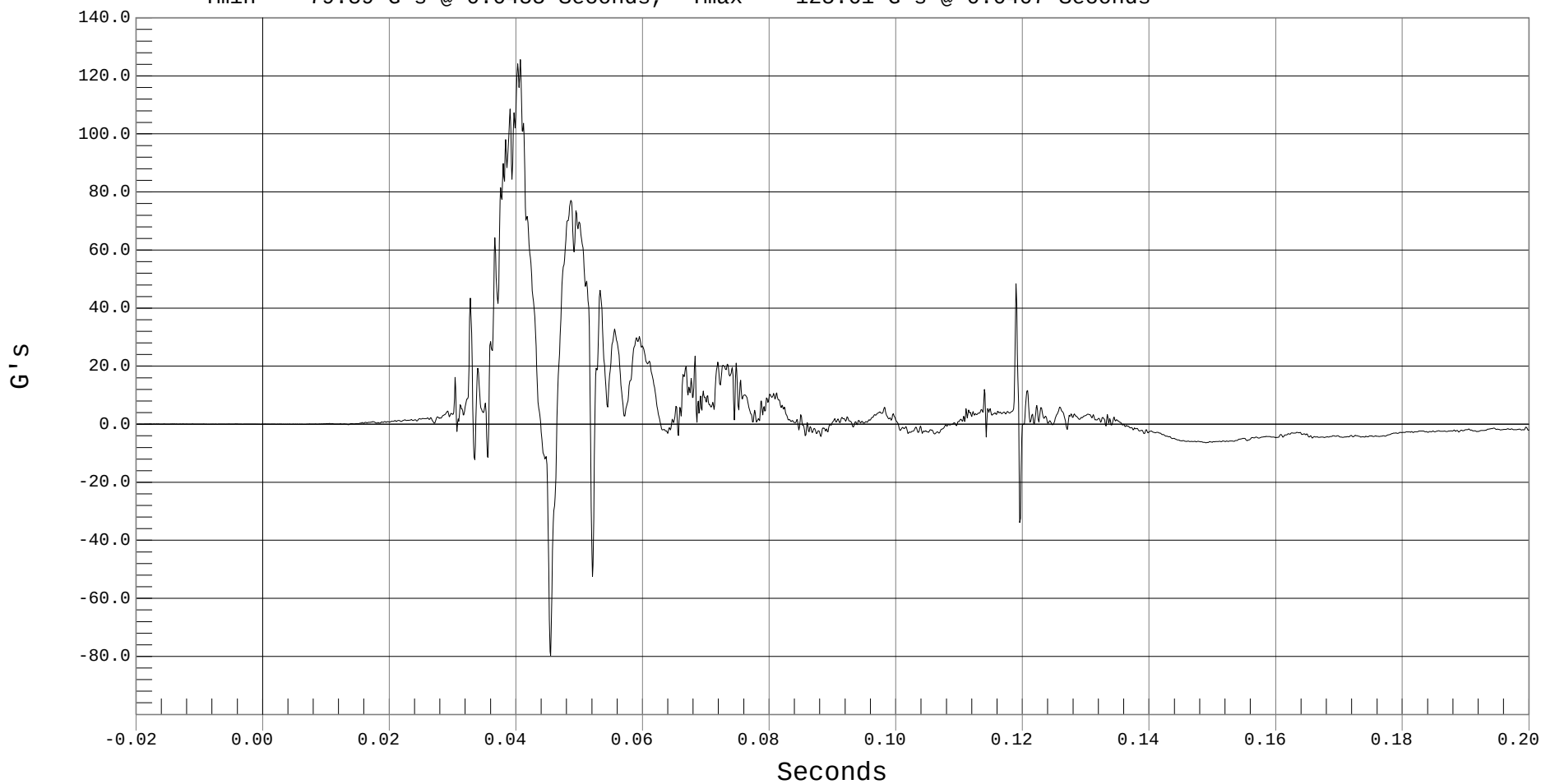
PASSENGER UPPER RIB REDUNDANT Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 1000

— 1 PASSENGER UPPER RIB Yr, B01008AT.A50

Ymin = -79.59 G's @ 0.0455 Seconds, Ymax = 125.61 G's @ 0.0407 Seconds





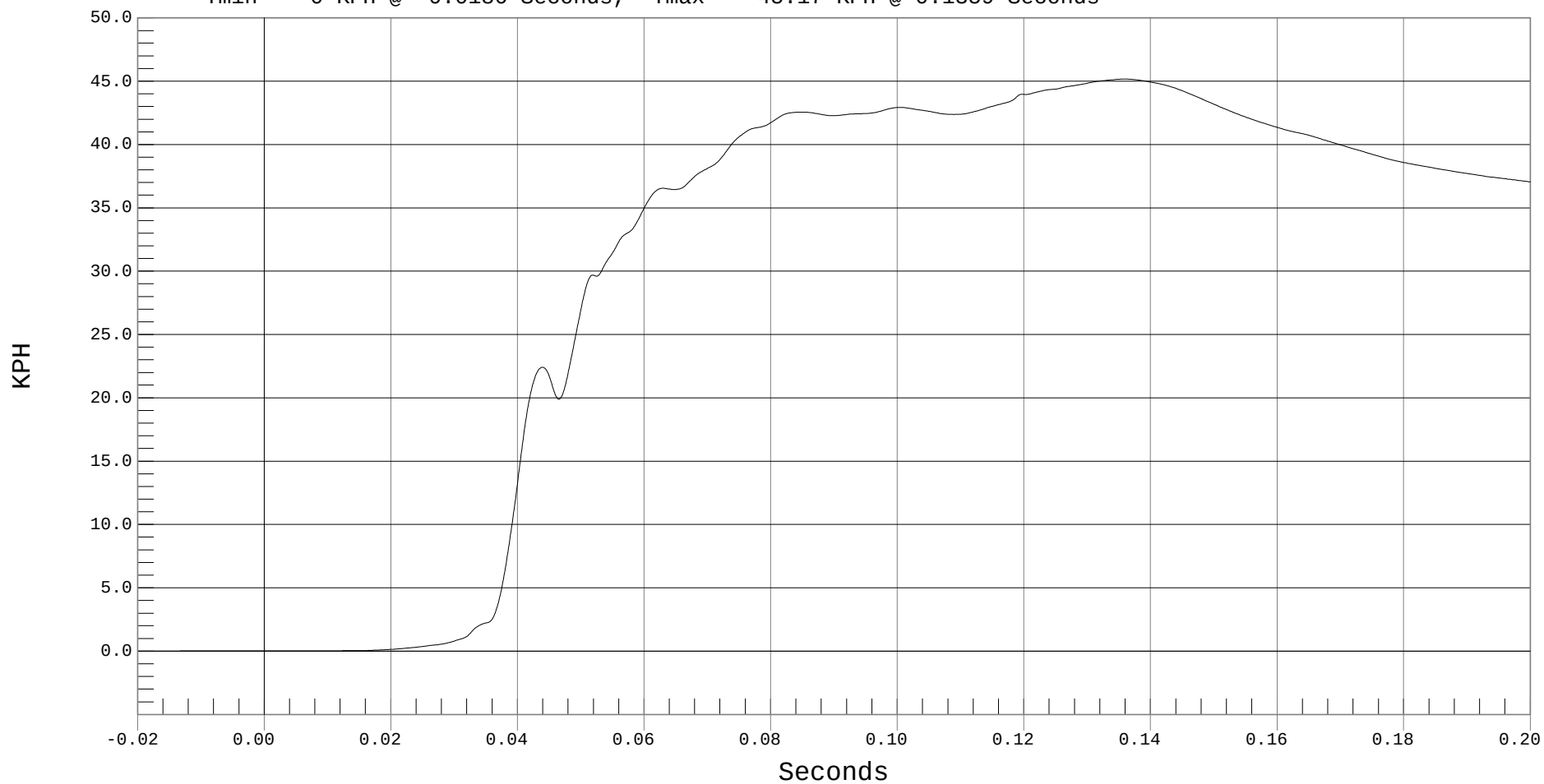
PASSENGER UPPER RIB REDUNDANT Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 REAR PASSENGER UPPER RIB Y REDUNDANT VELOCITY, B01008AI.V50

Ymin = 0 KPH @ -0.0186 Seconds, Ymax = 45.17 KPH @ 0.1359 Seconds





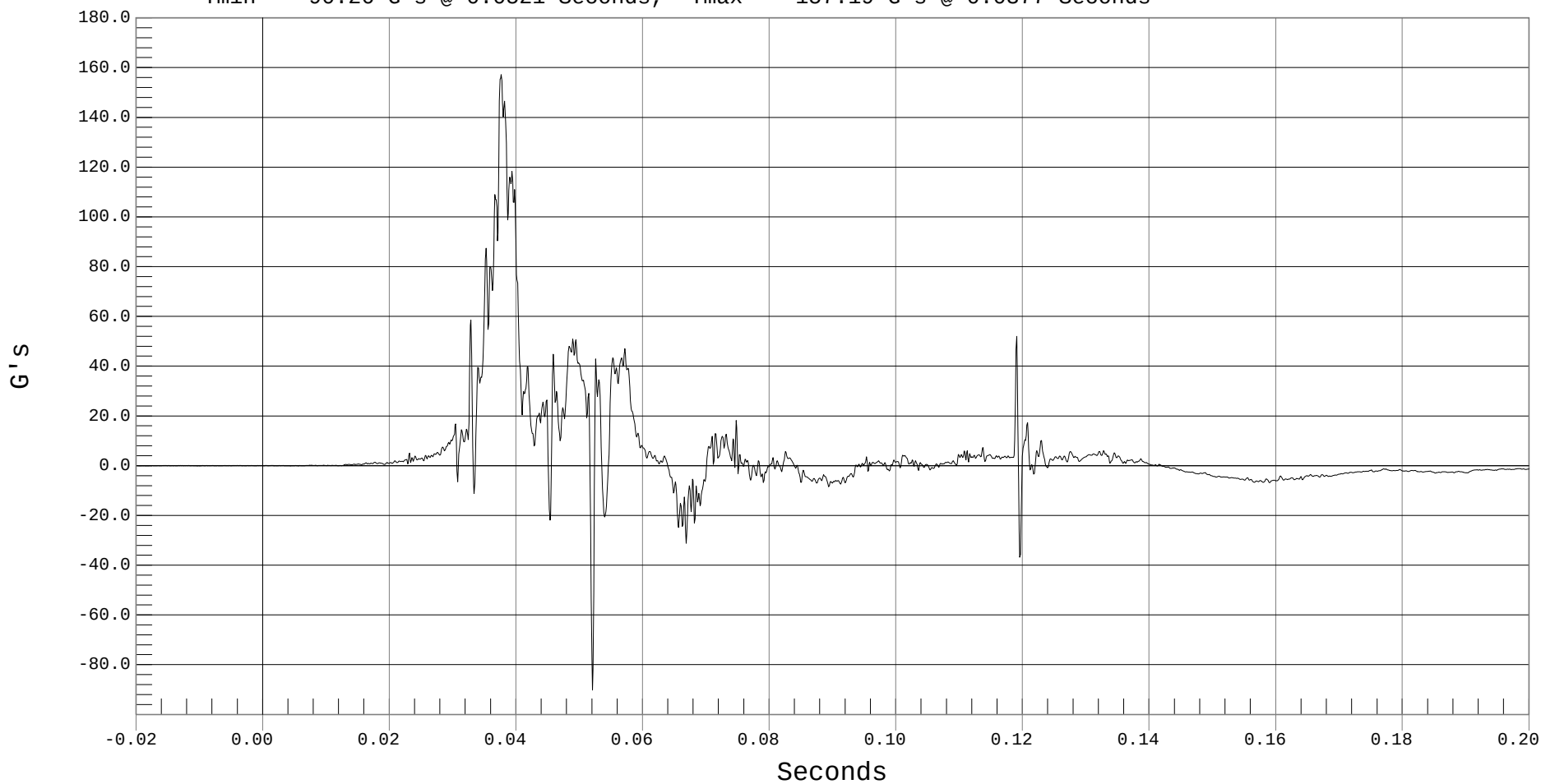
PASSENGER LOWER RIB REDUNDANT Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 1000

— 1 PASSENGER LOWER RIB Yr, B01008AT.A46

Ymin = -90.26 G's @ 0.0521 Seconds, Ymax = 157.19 G's @ 0.0377 Seconds





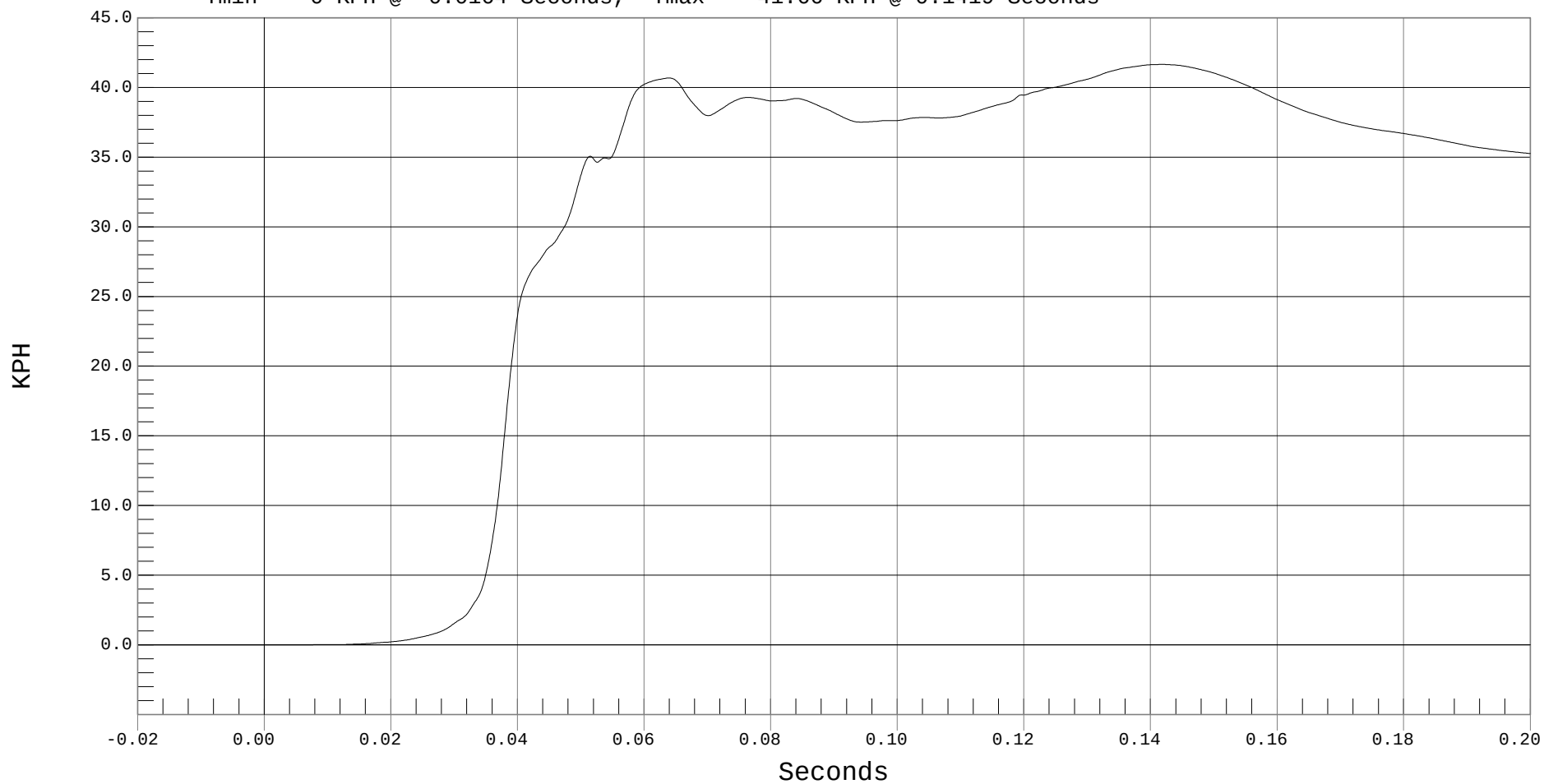
PASSENGER LOWER RIB REDUNDANT Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 REAR PASSENGER LOWER RIB Y REDUNDANT VELOCITY, B01008AI.V46

Ymin = 0 KPH @ -0.0164 Seconds, Ymax = 41.66 KPH @ 0.1419 Seconds





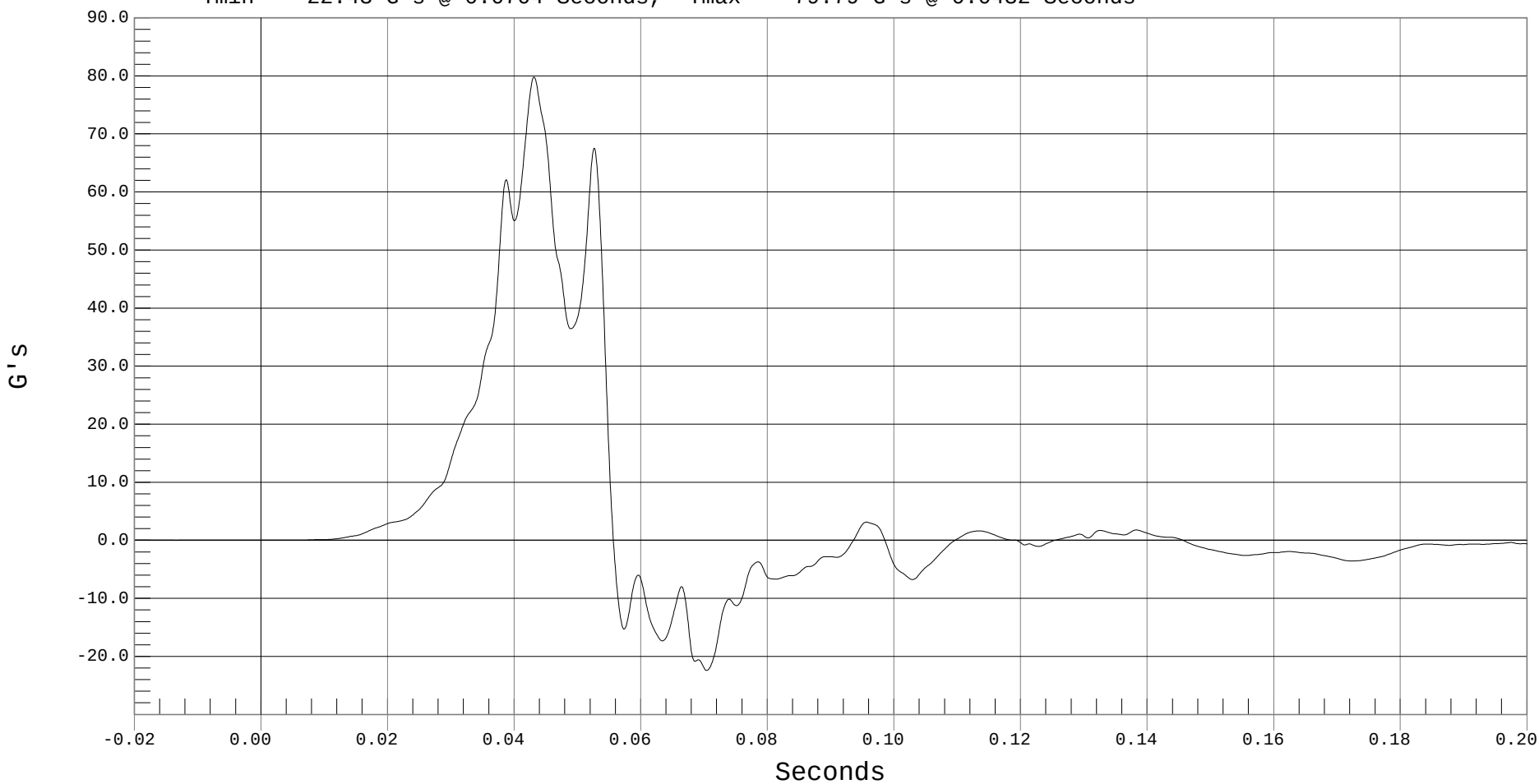
PASSENGER LOWER SPINE REDUNDANT Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 PASSENGER LOWER SPINE Yr, B01008AF.A47

Ymin = -22.43 G's @ 0.0704 Seconds, Ymax = 79.79 G's @ 0.0432 Seconds





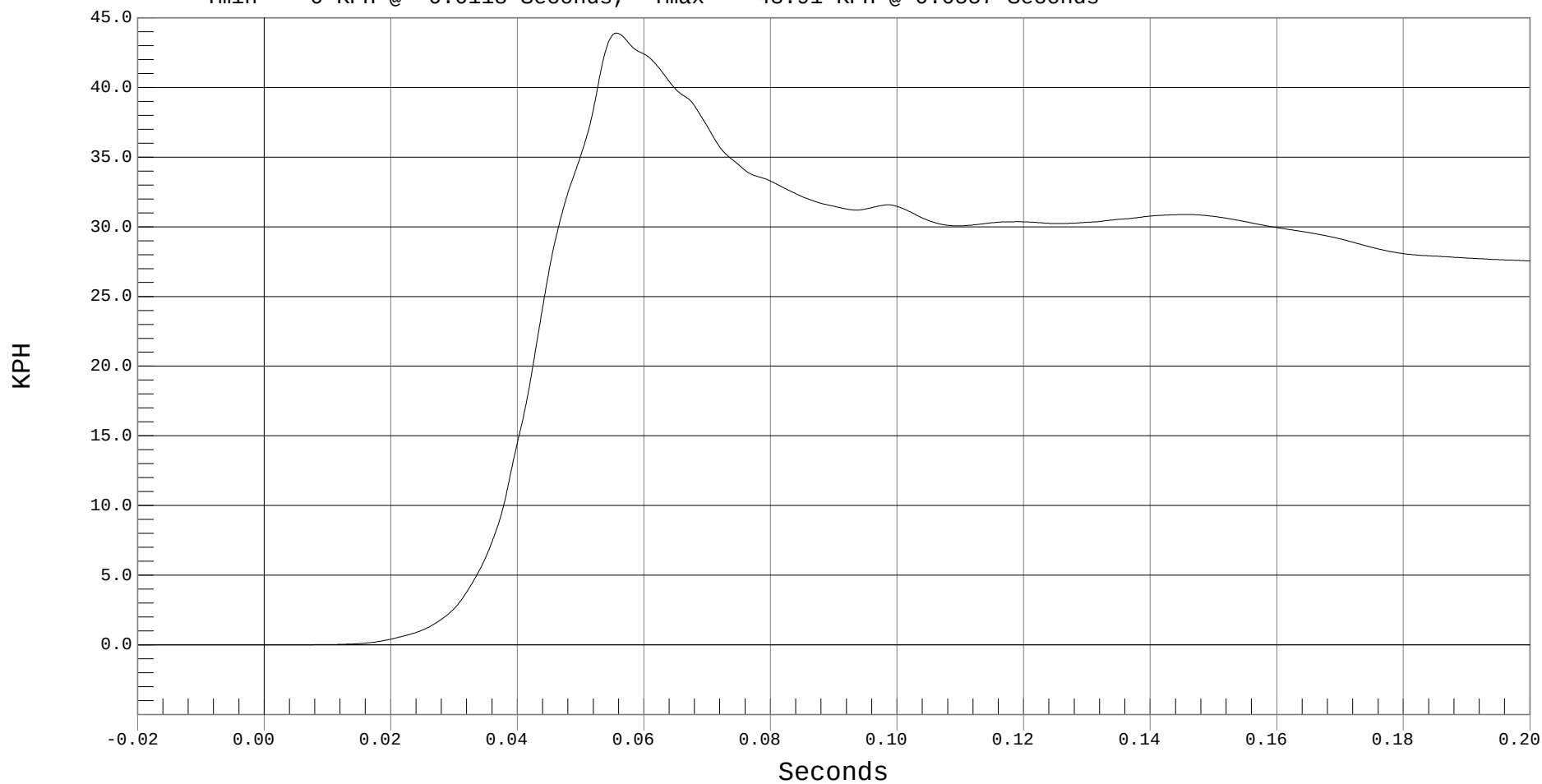
PASSENGER LOWER SPINE REDUNDANT Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 REAR PASSENGER LOWER SPINE Y REDUNDANT VELOCITY, B01008AI.V47

Ymin = 0 KPH @ -0.0118 Seconds, Ymax = 43.91 KPH @ 0.0557 Seconds





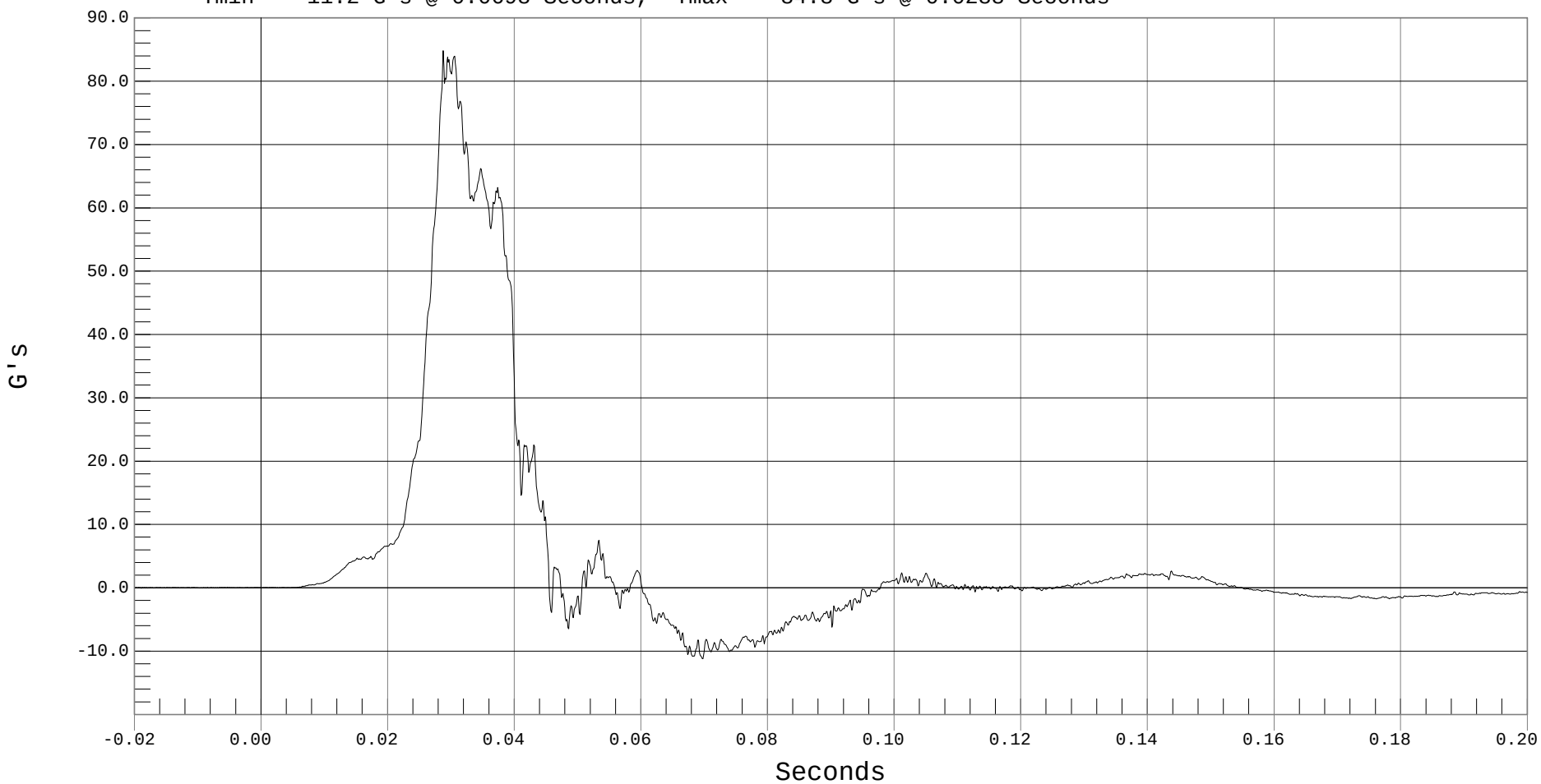
PASSENGER PELVIS REDUNDANT Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 1000

— 1 PASSENGER PELVIS Yr, B01008AT.A48

Ymin = -11.2 G's @ 0.0698 Seconds, Ymax = 84.8 G's @ 0.0288 Seconds





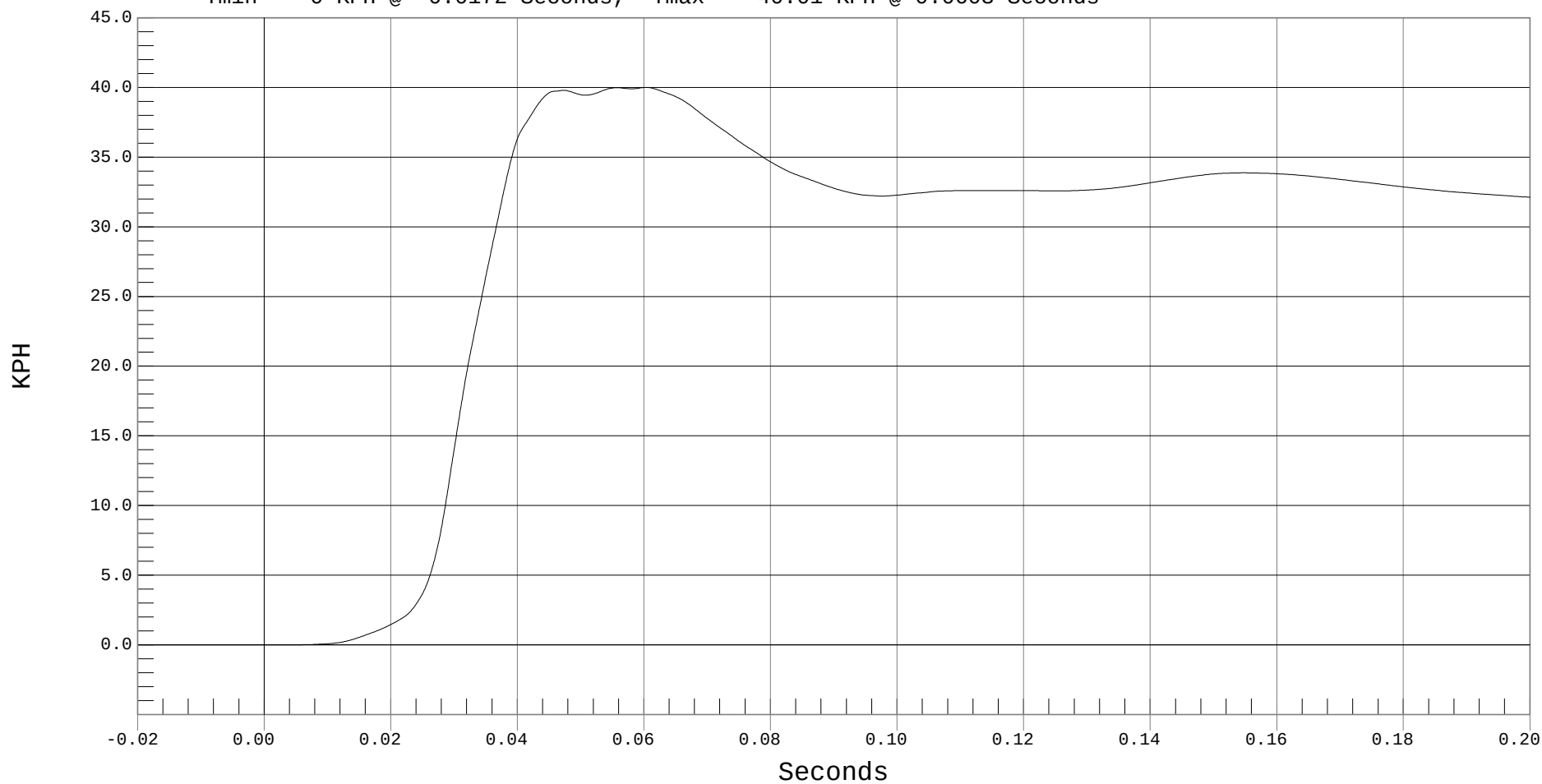
PASSENGER PELVIS REDUNDANT Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Filter Class: 180

— 1 REAR PASSENGER PELVIS Y REDUNDANT VELOCITY, B01008AI.V48

Ymin = 0 KPH @ -0.0172 Seconds, Ymax = 40.01 KPH @ 0.0603 Seconds





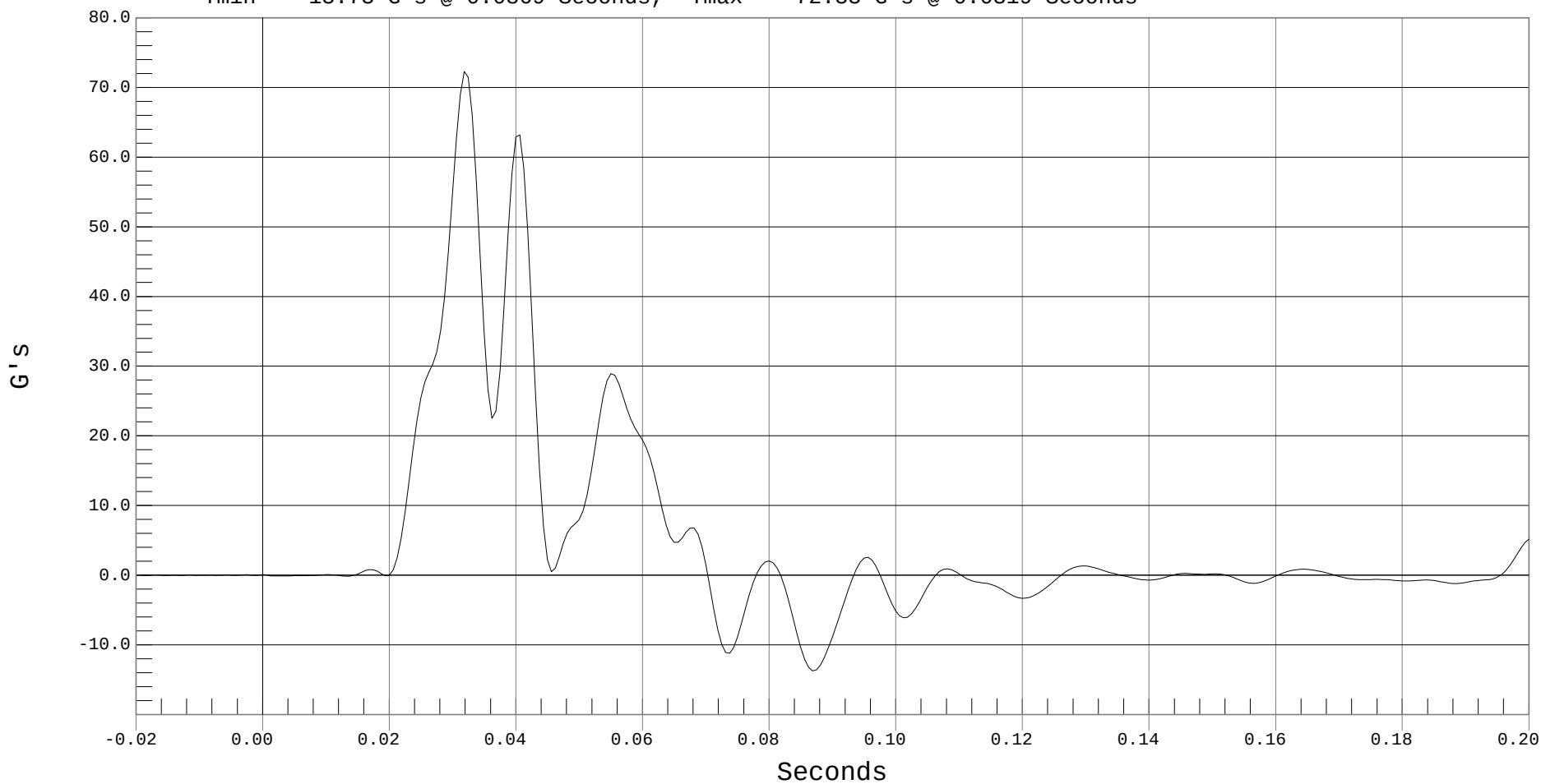
DRIVER UPPER RIB Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 DRIVER UPPER RIB Y, B01008FI.R04

Ymin = -13.73 G's @ 0.0869 Seconds, Ymax = 72.33 G's @ 0.0319 Seconds





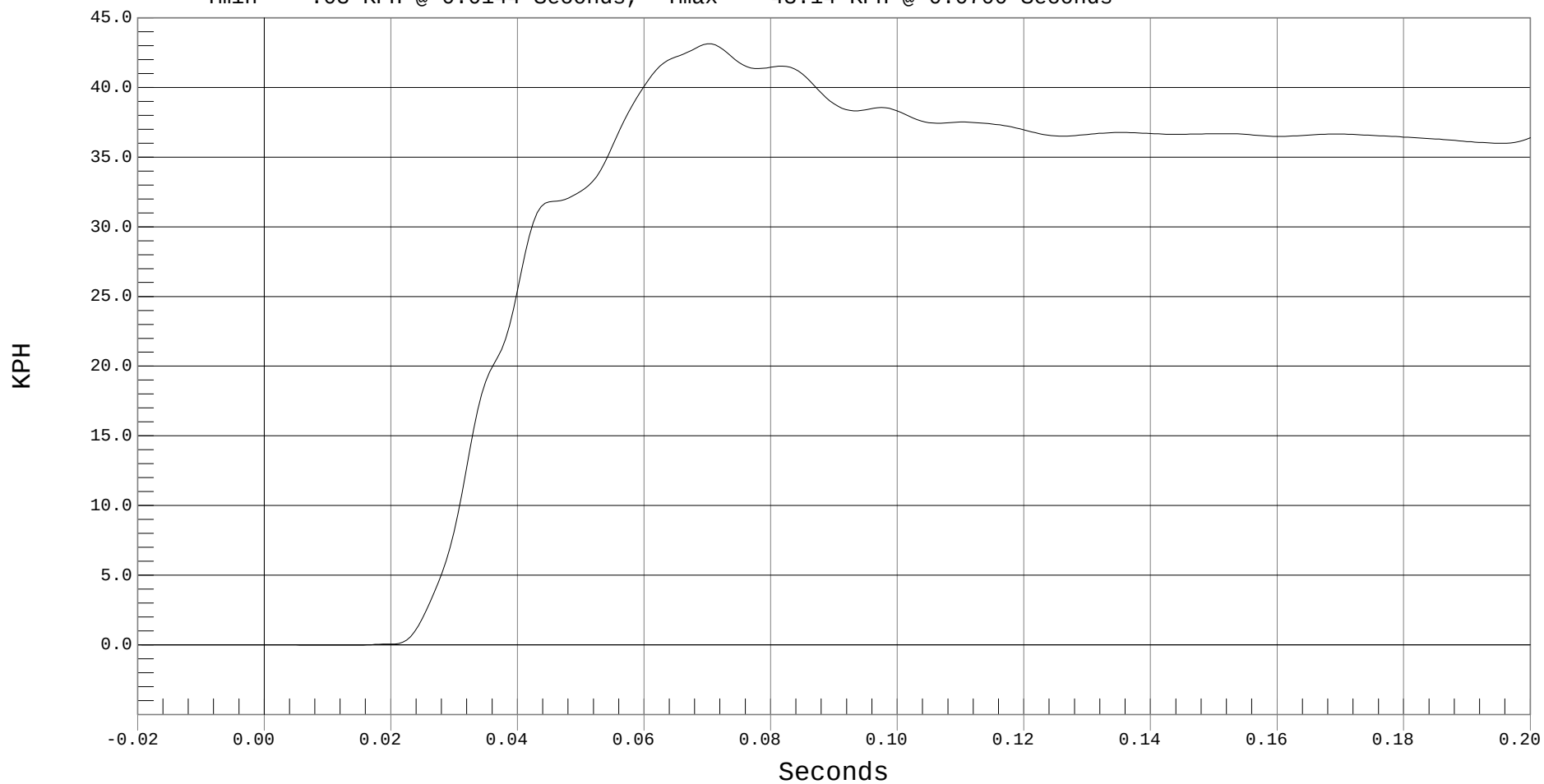
DRIVER UPPER RIB Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 DRIVER UPPER RIB Y VELOCITY, B01008FI.V04

Ymin = -.03 KPH @ 0.0144 Seconds, Ymax = 43.14 KPH @ 0.0700 Seconds





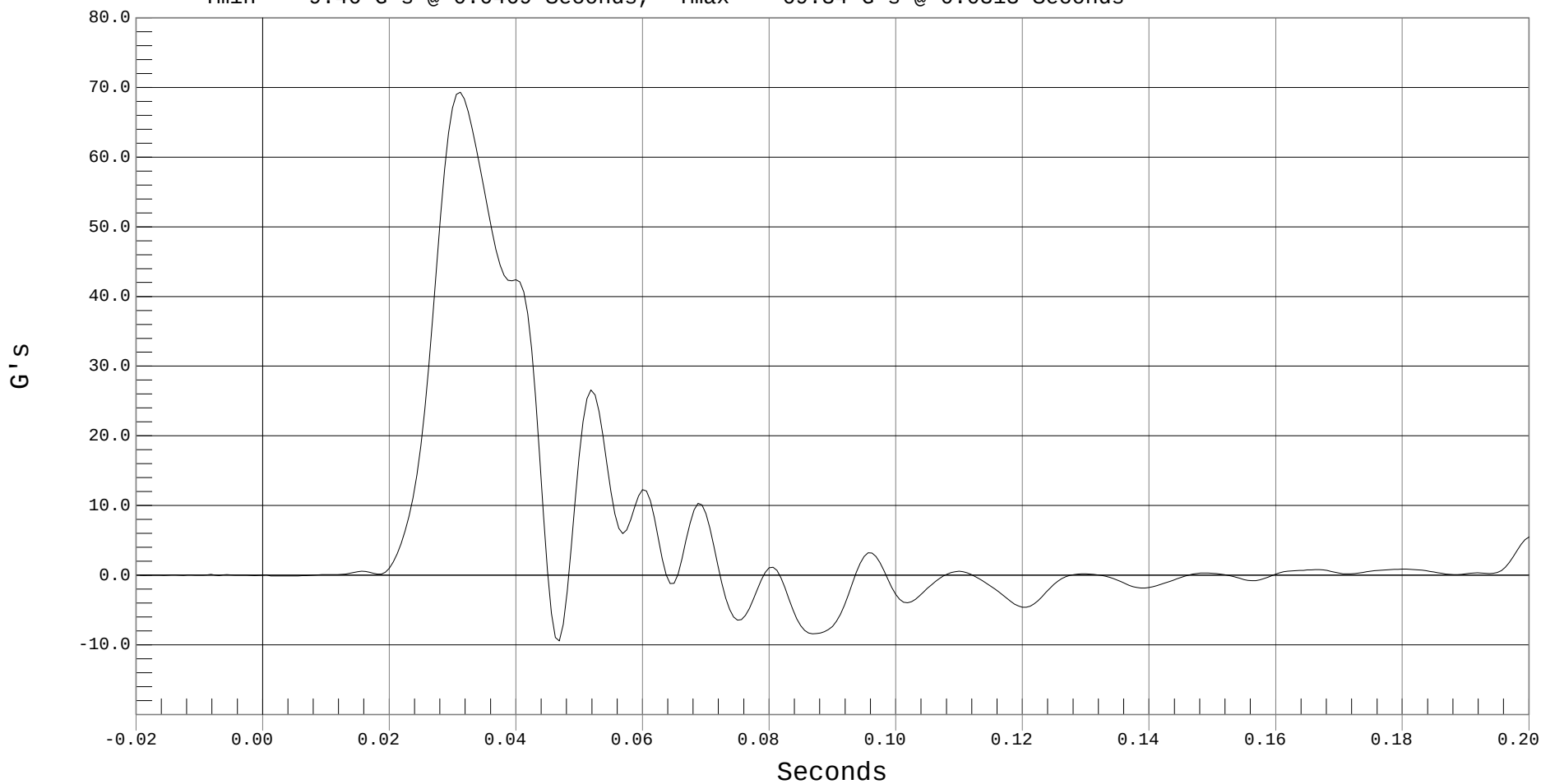
DRIVER LOWER RIB Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 DRIVER LOWER RIB Y, B01008FI.R05

Ymin = -9.46 G's @ 0.0469 Seconds, Ymax = 69.34 G's @ 0.0313 Seconds





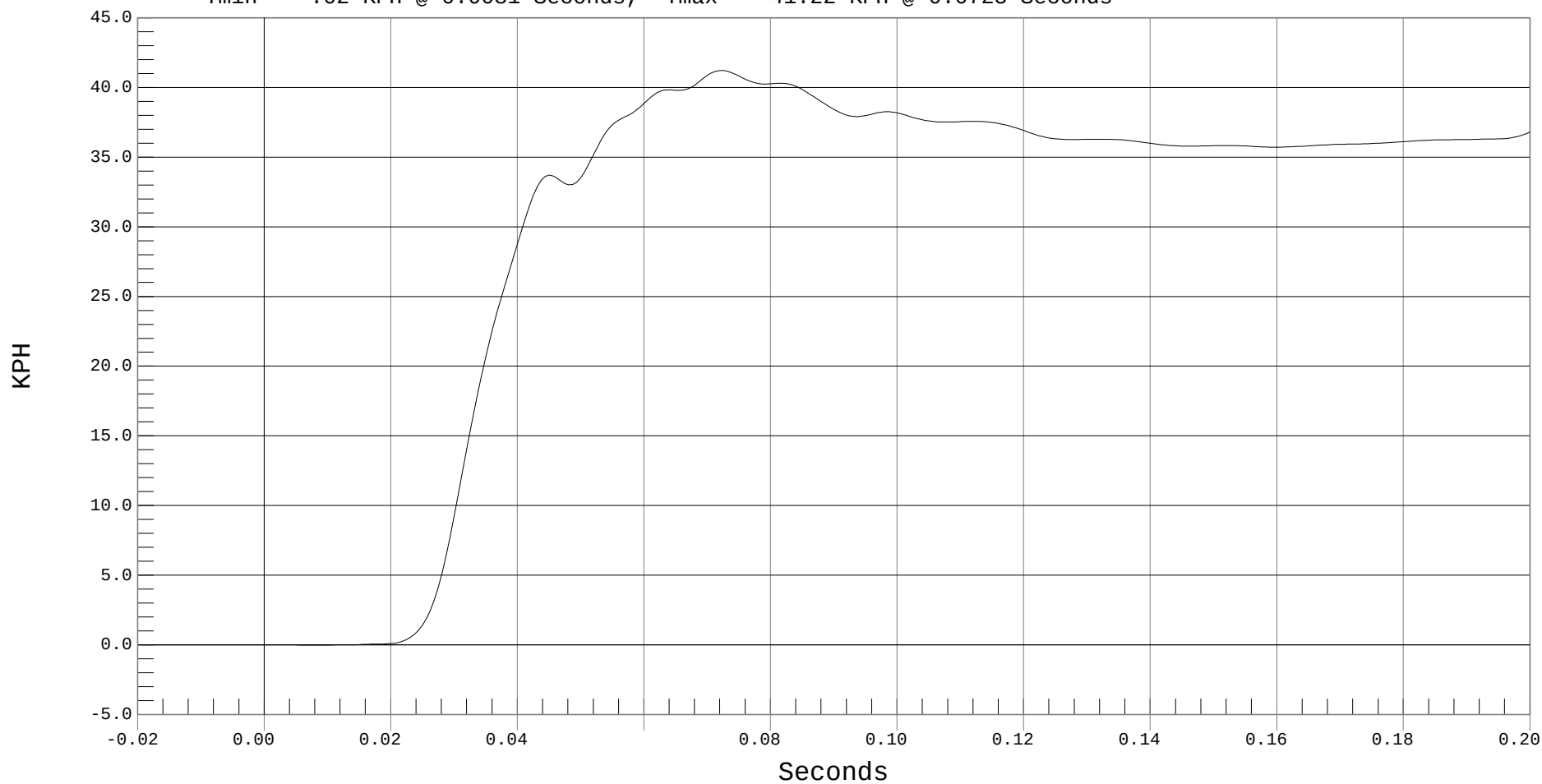
DRIVER LOWER RIB Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

1 DRIVER LOWER RIB Y VELOCITY, B01008FI.V05

Ymin = -.02 KPH @ 0.0081 Seconds, Ymax = 41.22 KPH @ 0.0725 Seconds





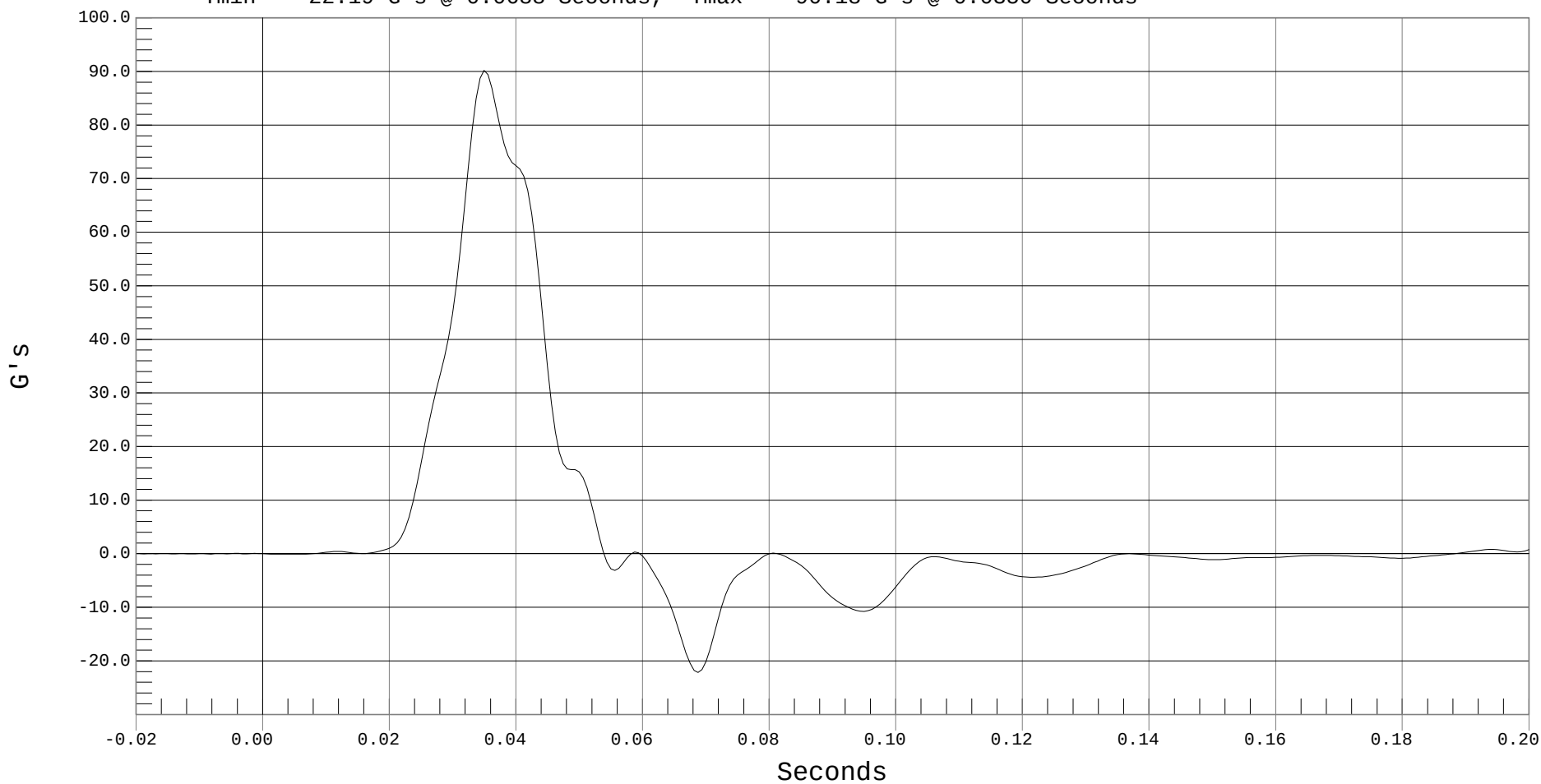
DRIVER LOWER SPINE Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 DRIVER LOWER SPINE Y, B01008FI.R06

Ymin = -22.19 G's @ 0.0688 Seconds, Ymax = 90.18 G's @ 0.0350 Seconds





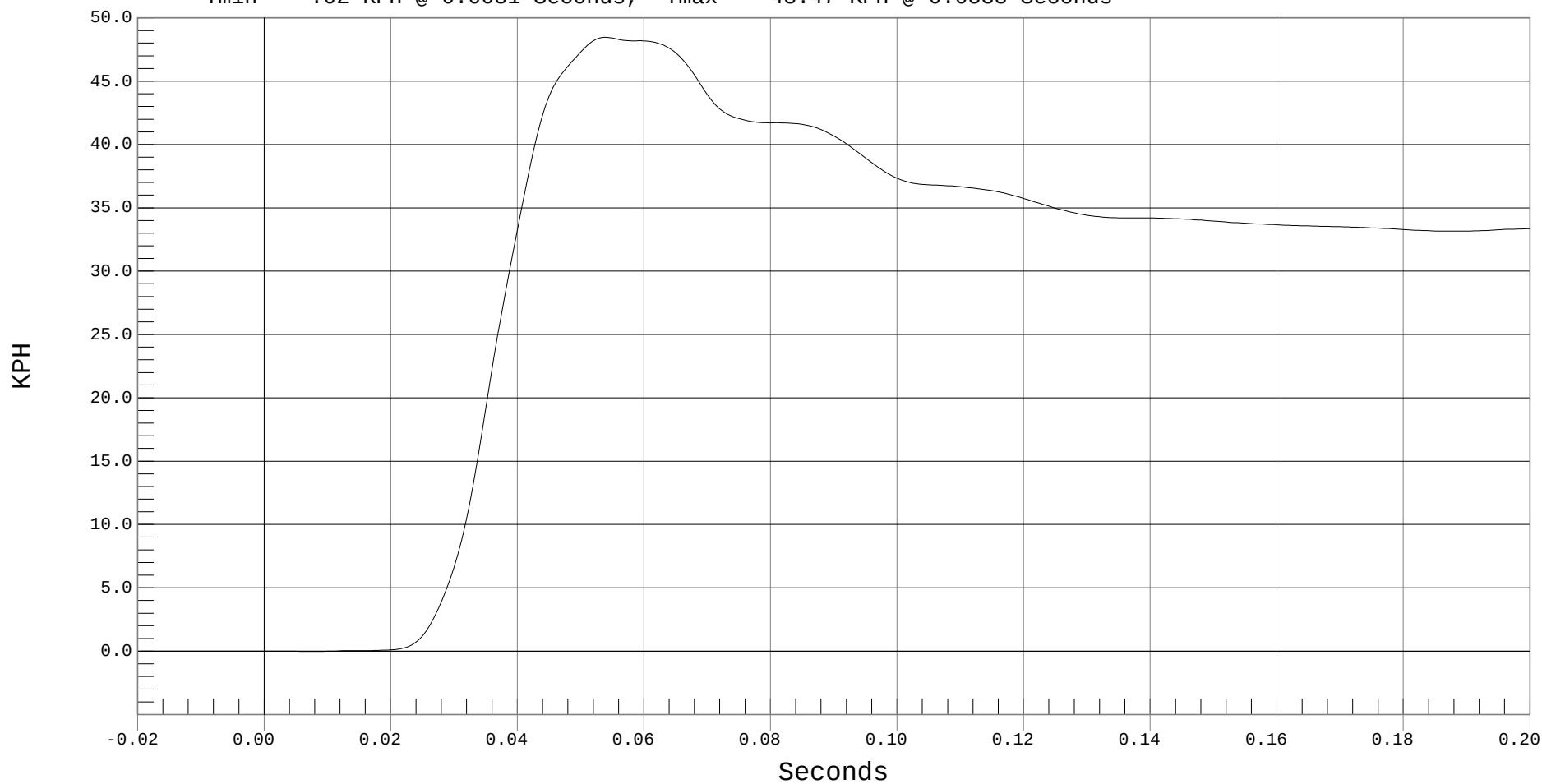
DRIVER LOWER SPINE Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 DRIVER LOWER SPINE Y VELOCITY, B01008FI.V06

Ymin = -.02 KPH @ 0.0081 Seconds, Ymax = 48.47 KPH @ 0.0538 Seconds





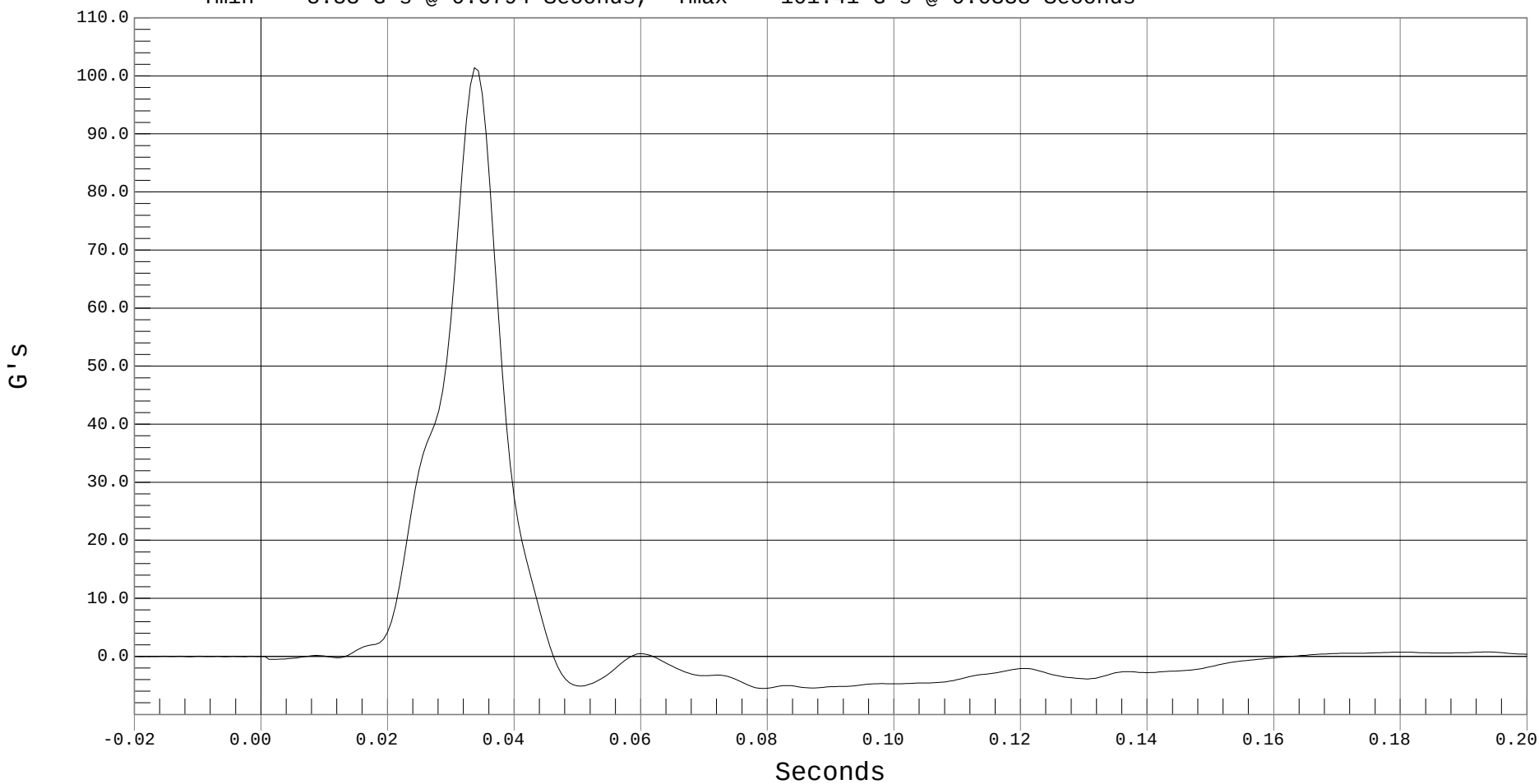
DRIVER PELVIS Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 DRIVER PELVIS Y, B01008FI.R07

Ymin = -5.53 G's @ 0.0794 Seconds, Ymax = 101.41 G's @ 0.0338 Seconds





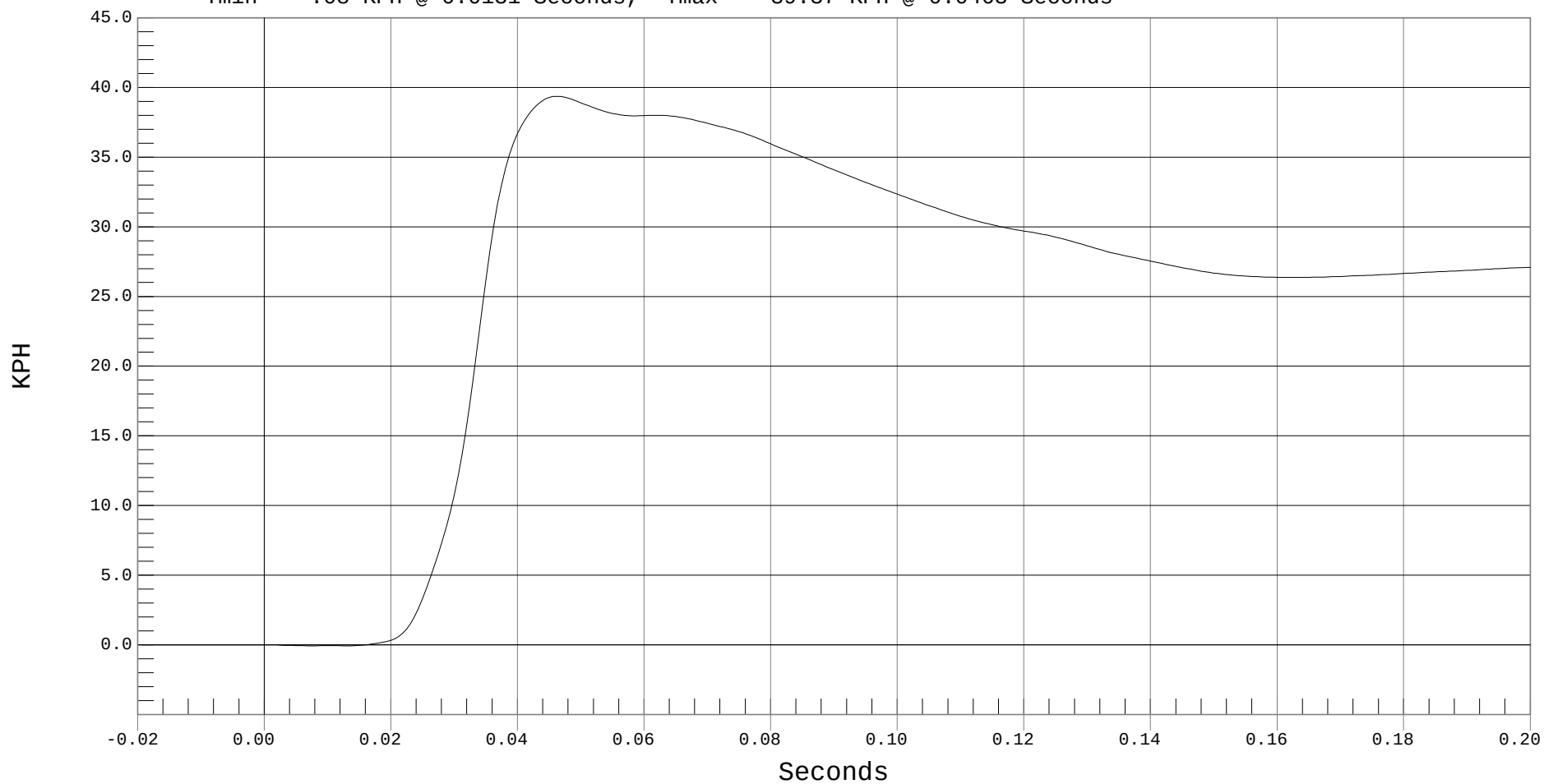
DRIVER PELVIS Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 DRIVER PELVIS Y VELOCITY, B01008FI.V07

Ymin = -.08 KPH @ 0.0131 Seconds, Ymax = 39.37 KPH @ 0.0463 Seconds





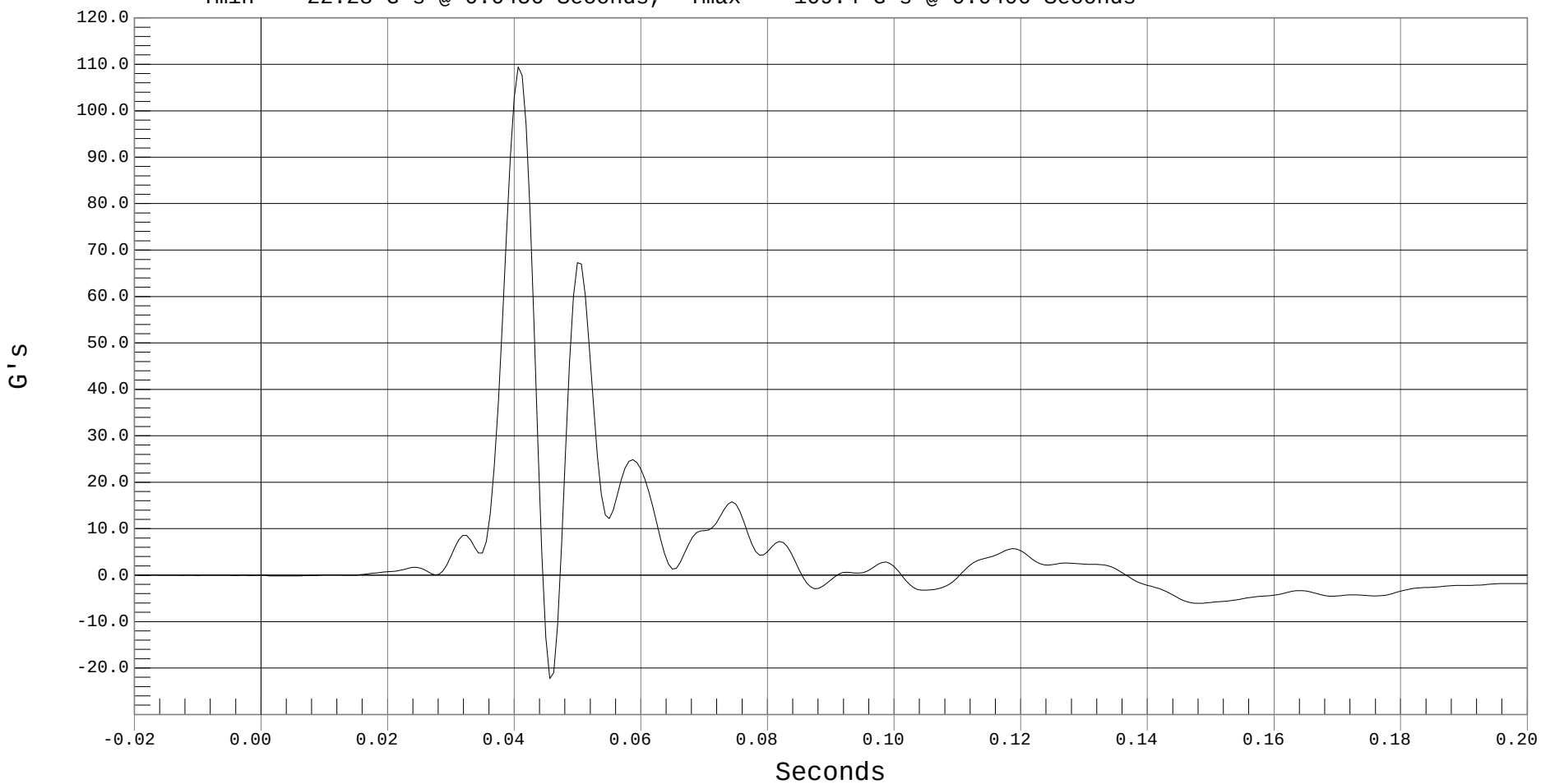
REAR PASSENGER UPPER RIB Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 PASSENGER UPPER RIB Y, B01008FI.R11

Ymin = -22.28 G's @ 0.0456 Seconds, Ymax = 109.4 G's @ 0.0406 Seconds





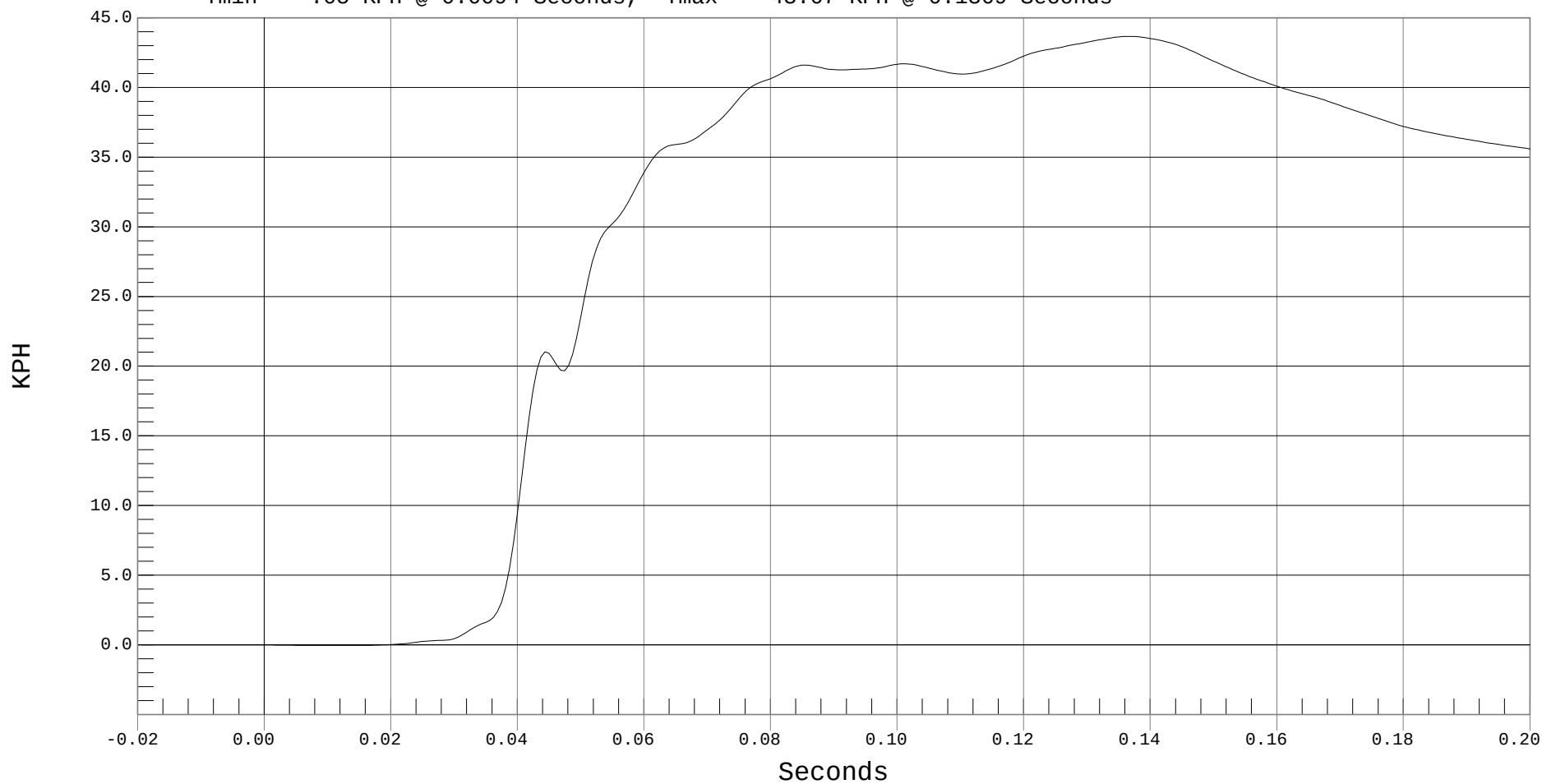
REAR PASSENGER UPPER RIB Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 REAR PASSENGER UPPER RIB Y VELOCITY, B01008FI.V11

Ymin = -.05 KPH @ 0.0094 Seconds, Ymax = 43.67 KPH @ 0.1369 Seconds





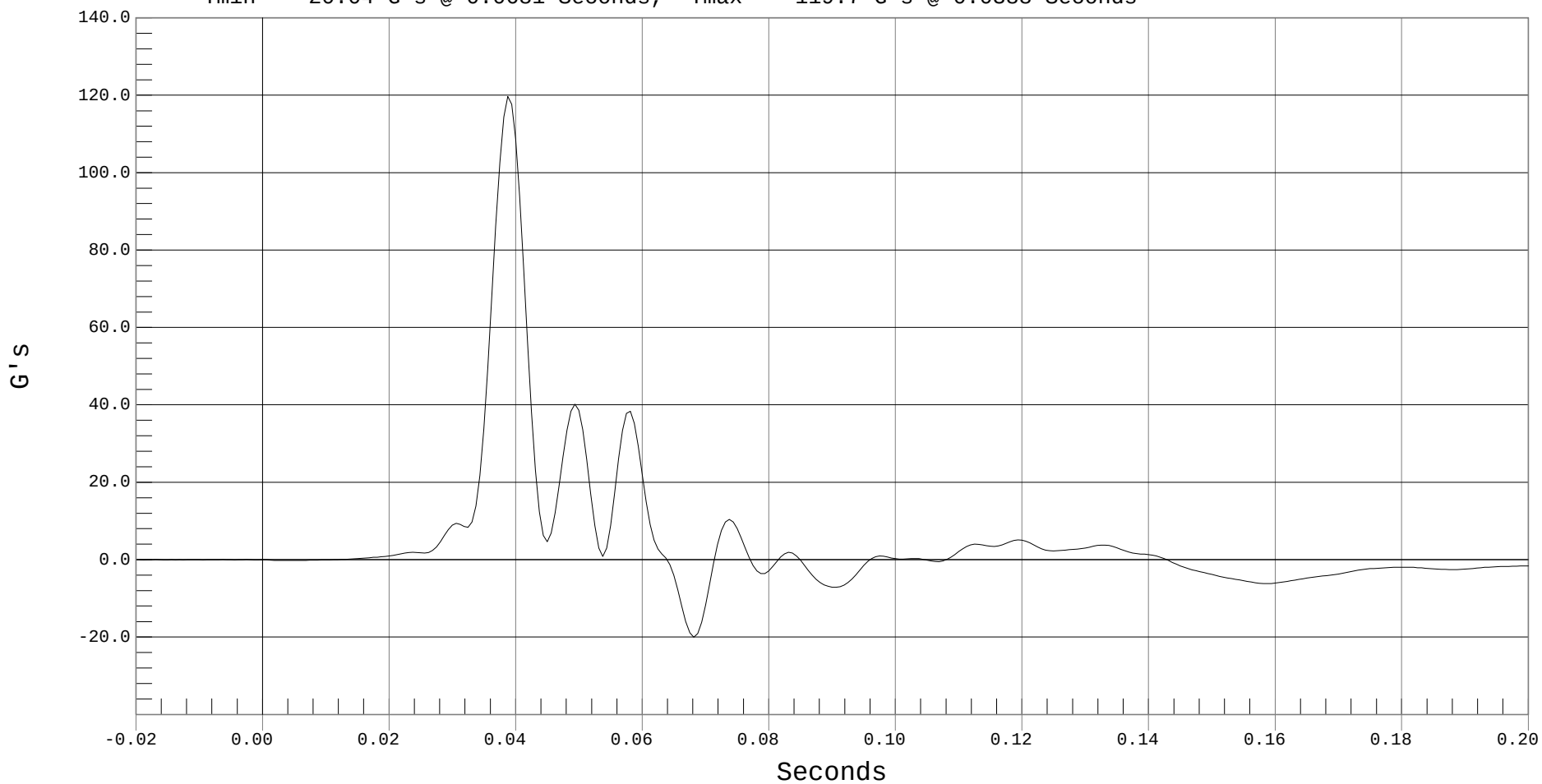
REAR PASSENGER LOWER RIB Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 PASSENGER LOWER RIB Y, B01008FI.R12

Ymin = -20.04 G's @ 0.0681 Seconds, Ymax = 119.7 G's @ 0.0388 Seconds





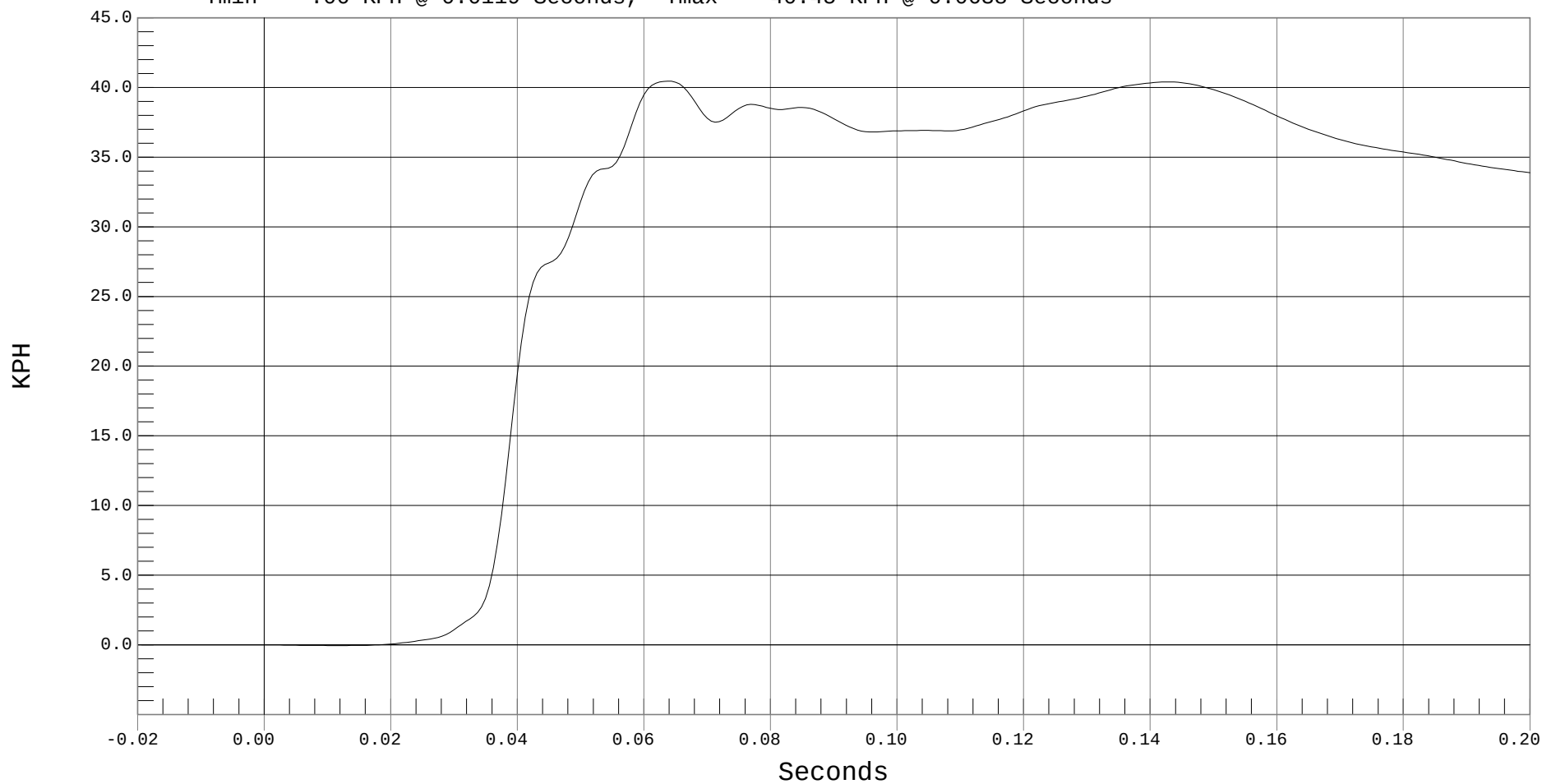
REAR PASSENGER LOWER RIB Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 REAR PASSENGER LOWER RIB Y VELOCITY, B01008FI.V12

Ymin = -.06 KPH @ 0.0119 Seconds, Ymax = 40.45 KPH @ 0.0638 Seconds





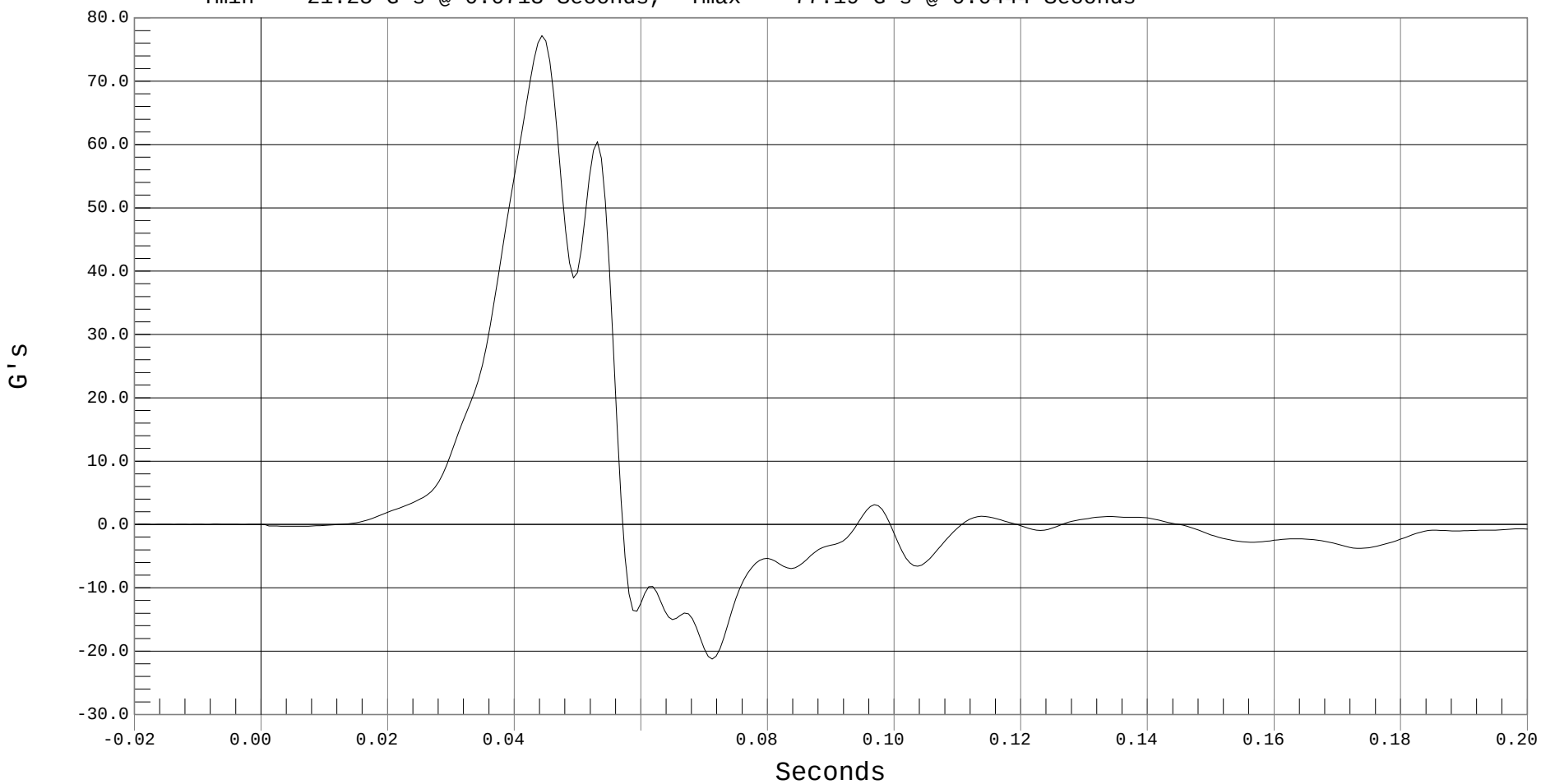
REAR PASSENGER LOWER SPINE Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 PASSENGER LOWER SPINE Y, B01008FI.R13

Ymin = -21.25 G's @ 0.0713 Seconds, Ymax = 77.19 G's @ 0.0444 Seconds





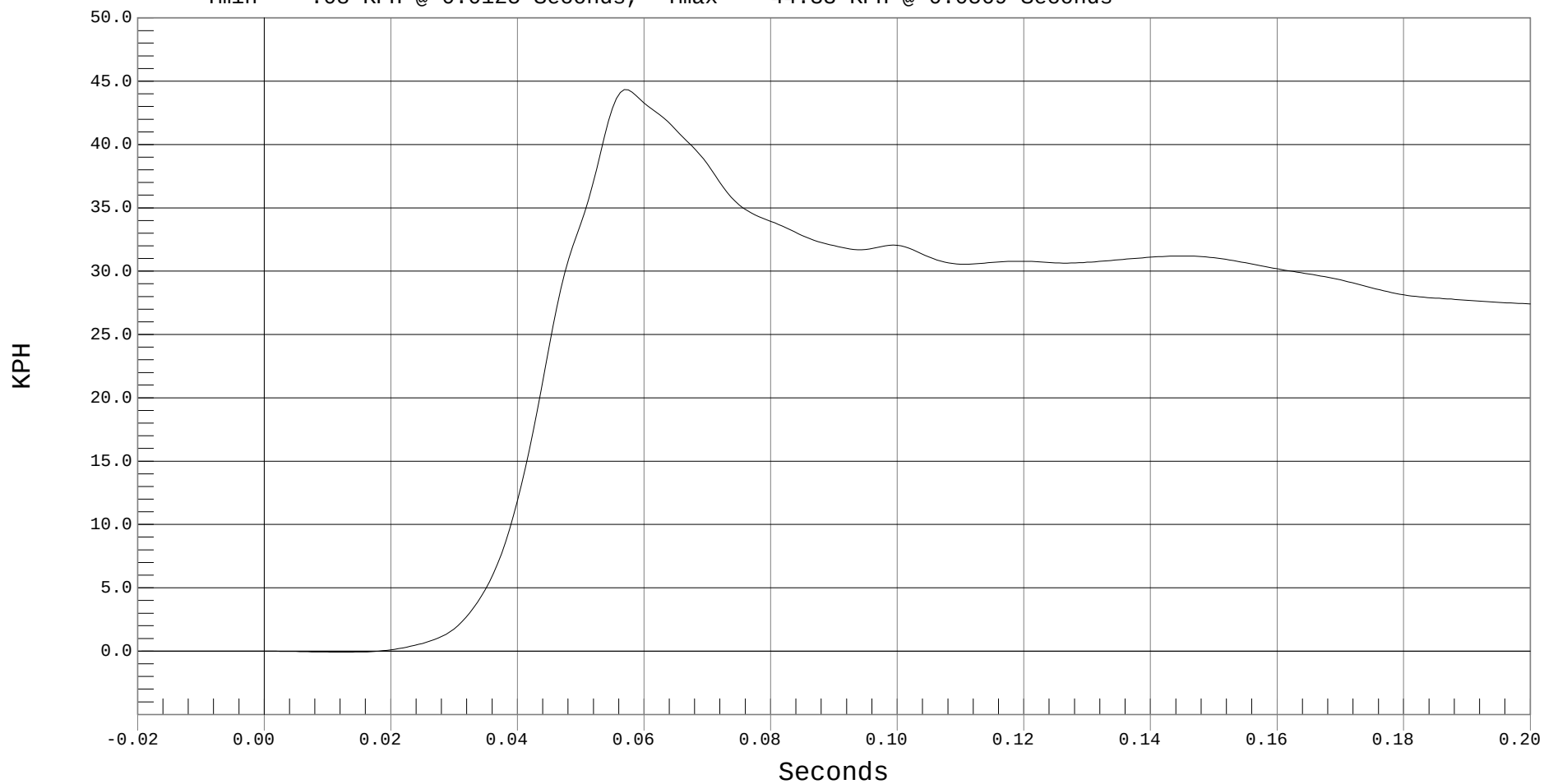
REAR PASSENGER LOWER SPINE Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 REAR PASSENGER LOWER SPINE Y VELOCITY, B01008FI.V13

Ymin = -.08 KPH @ 0.0125 Seconds, Ymax = 44.33 KPH @ 0.0569 Seconds





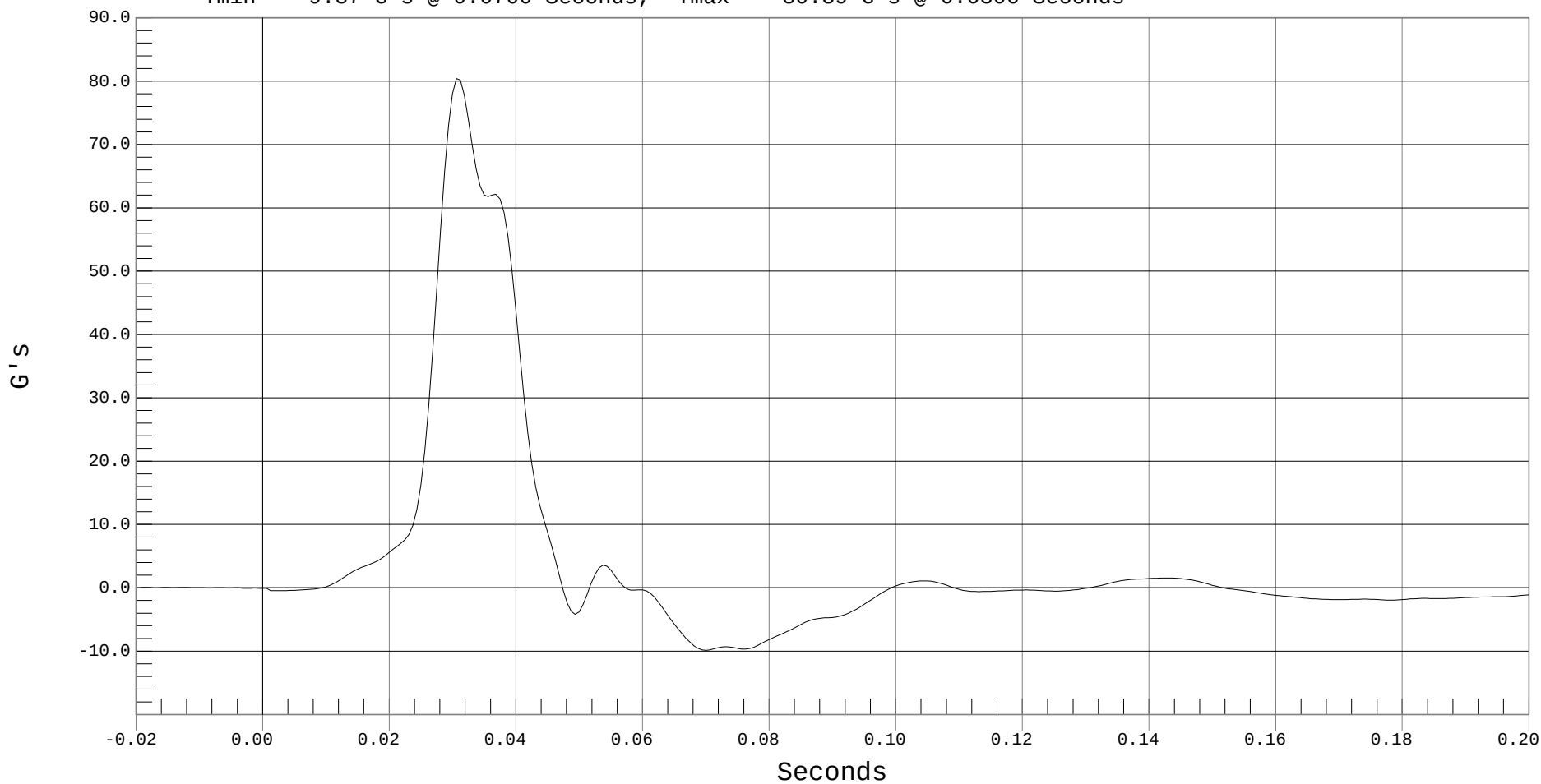
REAR PASSENGER PELVIS Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 PASSENGER PELVIS Y, B01008FI.R14

Ymin = -9.87 G's @ 0.0700 Seconds, Ymax = 80.39 G's @ 0.0306 Seconds





REAR PASSENGER PELVIS Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT

Component: 2001 HYUNDAI ACCENT (C10515)

Other Info:

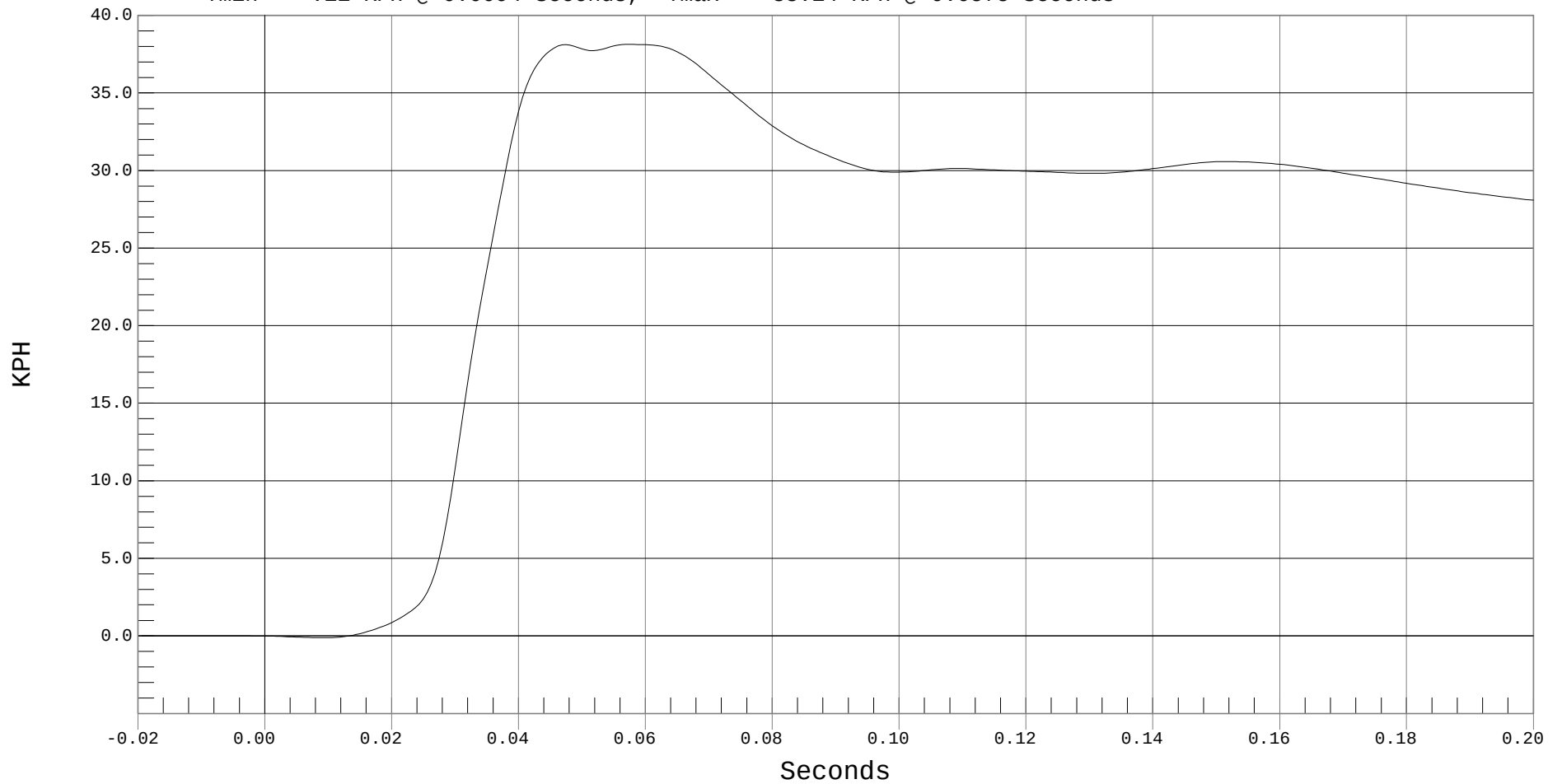
Test Date: 01-29-01

Speed: 38.6 MPH, 62.1 KPH

Fir Filtered

— 1 REAR PASSENGER PELVIS Y VELOCITY, B01008FI.V14

Ymin = -.11 KPH @ 0.0094 Seconds, Ymax = 38.14 KPH @ 0.0575 Seconds





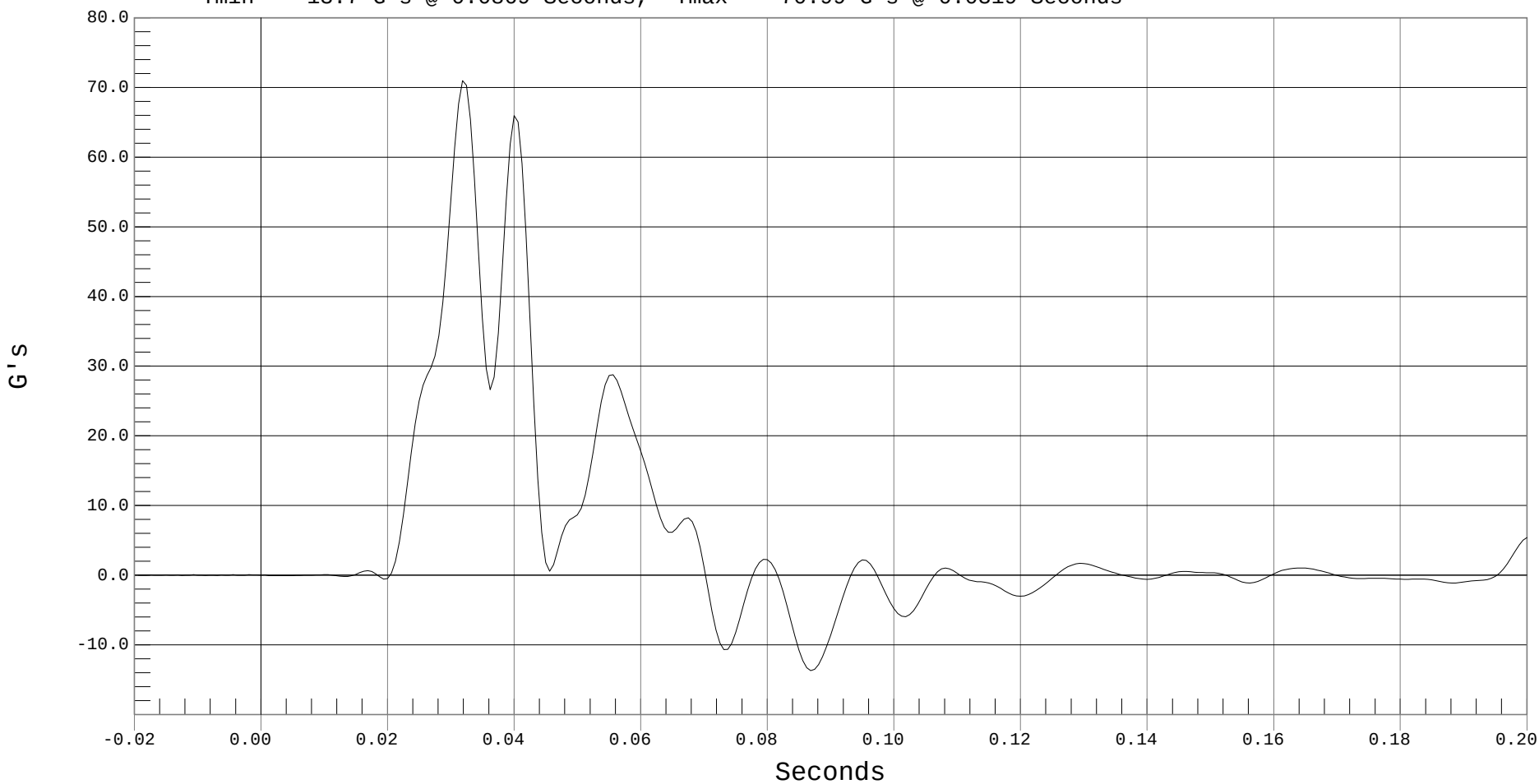
DRIVER UPPER RIB REDUNDANT Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 DRIVER UPPER RIB Yr, B01008FI.R41

Ymin = -13.7 G's @ 0.0869 Seconds, Ymax = 70.99 G's @ 0.0319 Seconds





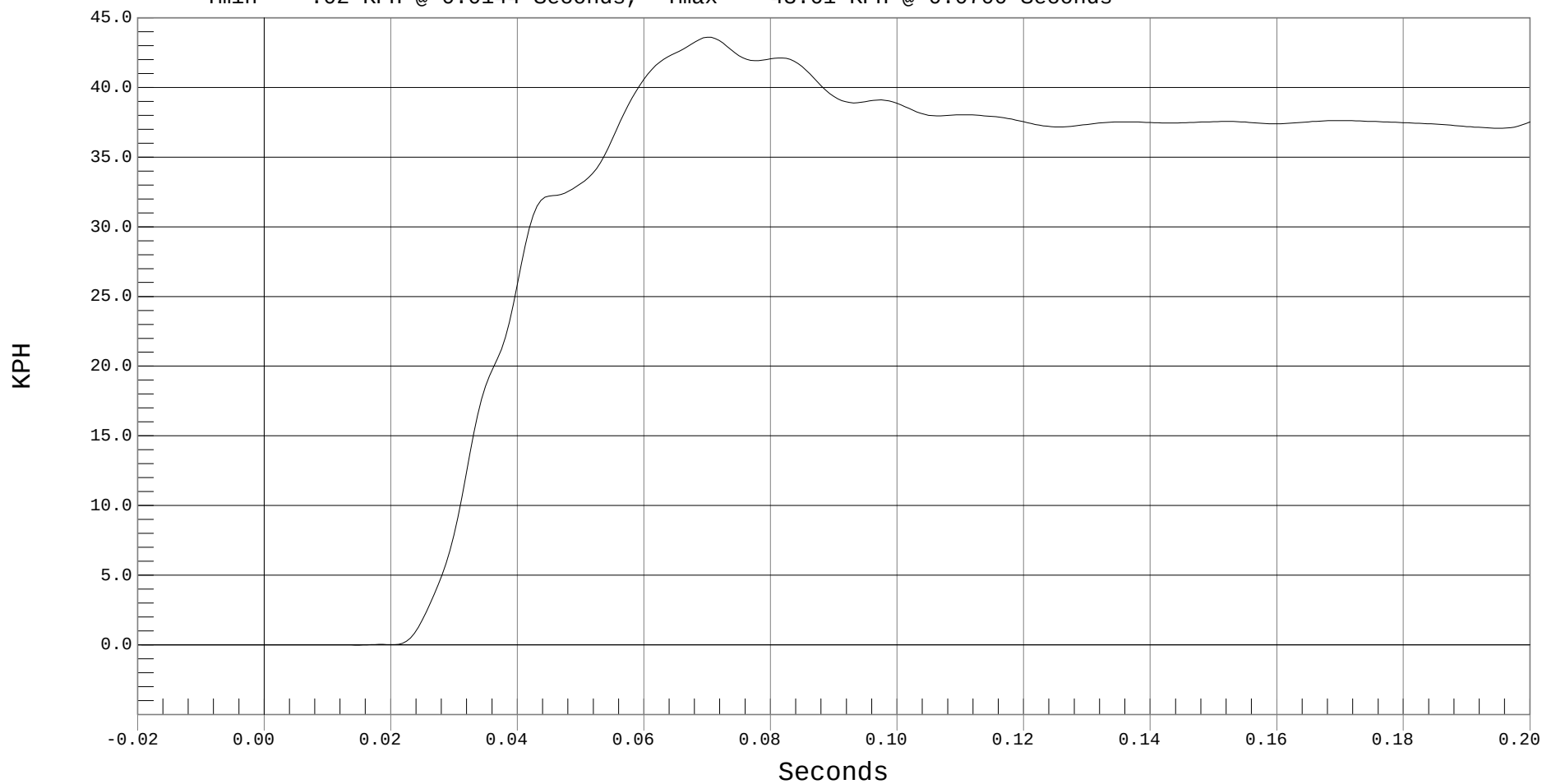
DRIVER UPPER RIB REDUNDANT Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 DRIVER UPPER RIB Y REDUNDANT VELOCITY, B01008FI.V41

Ymin = -.02 KPH @ 0.0144 Seconds, Ymax = 43.61 KPH @ 0.0700 Seconds





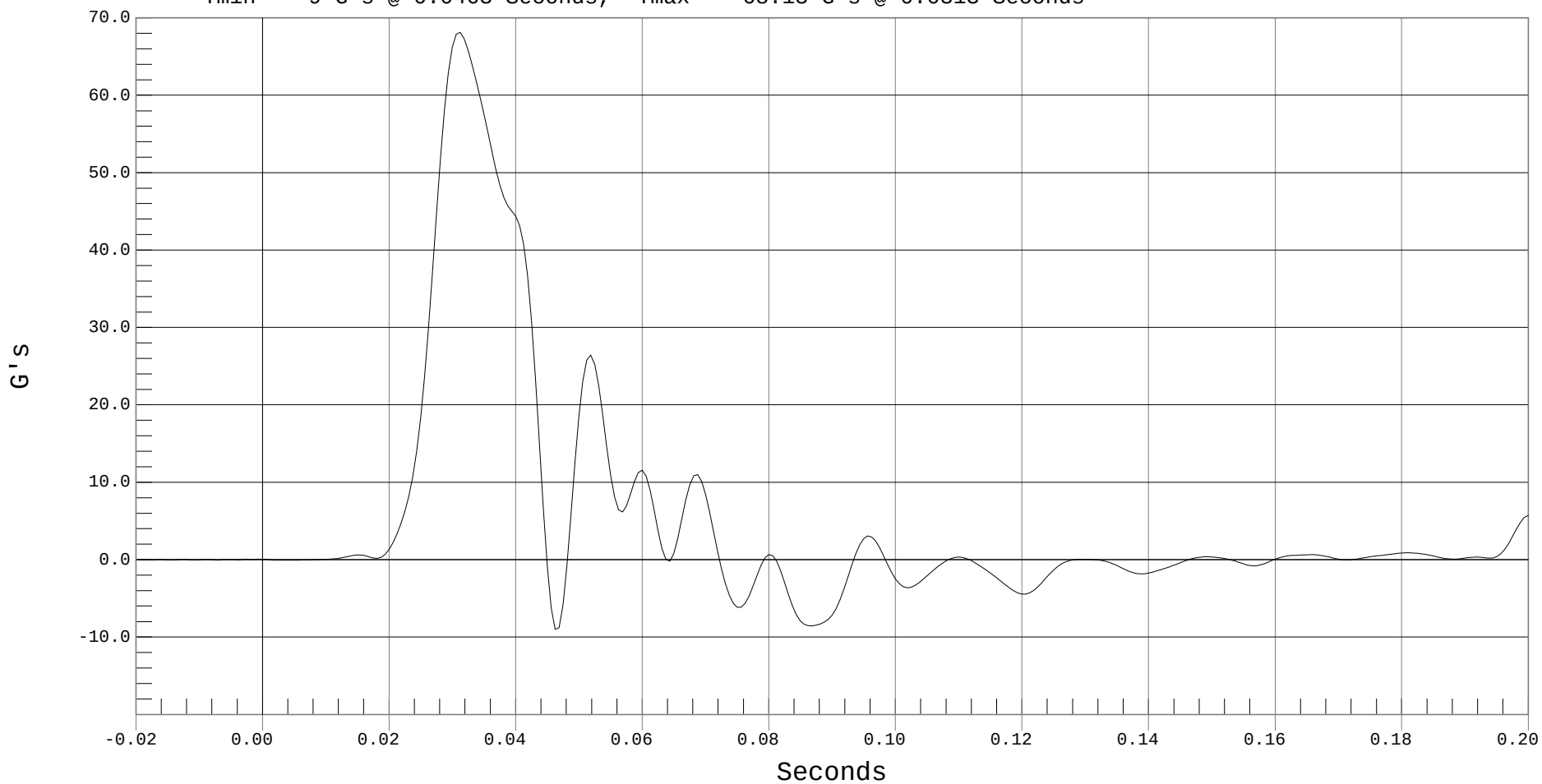
DRIVER LOWER RIB REDUNDANT Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 DRIVER LOWER RIB Yr, B01008FI.R42

Ymin = -9 G's @ 0.0463 Seconds, Ymax = 68.13 G's @ 0.0313 Seconds





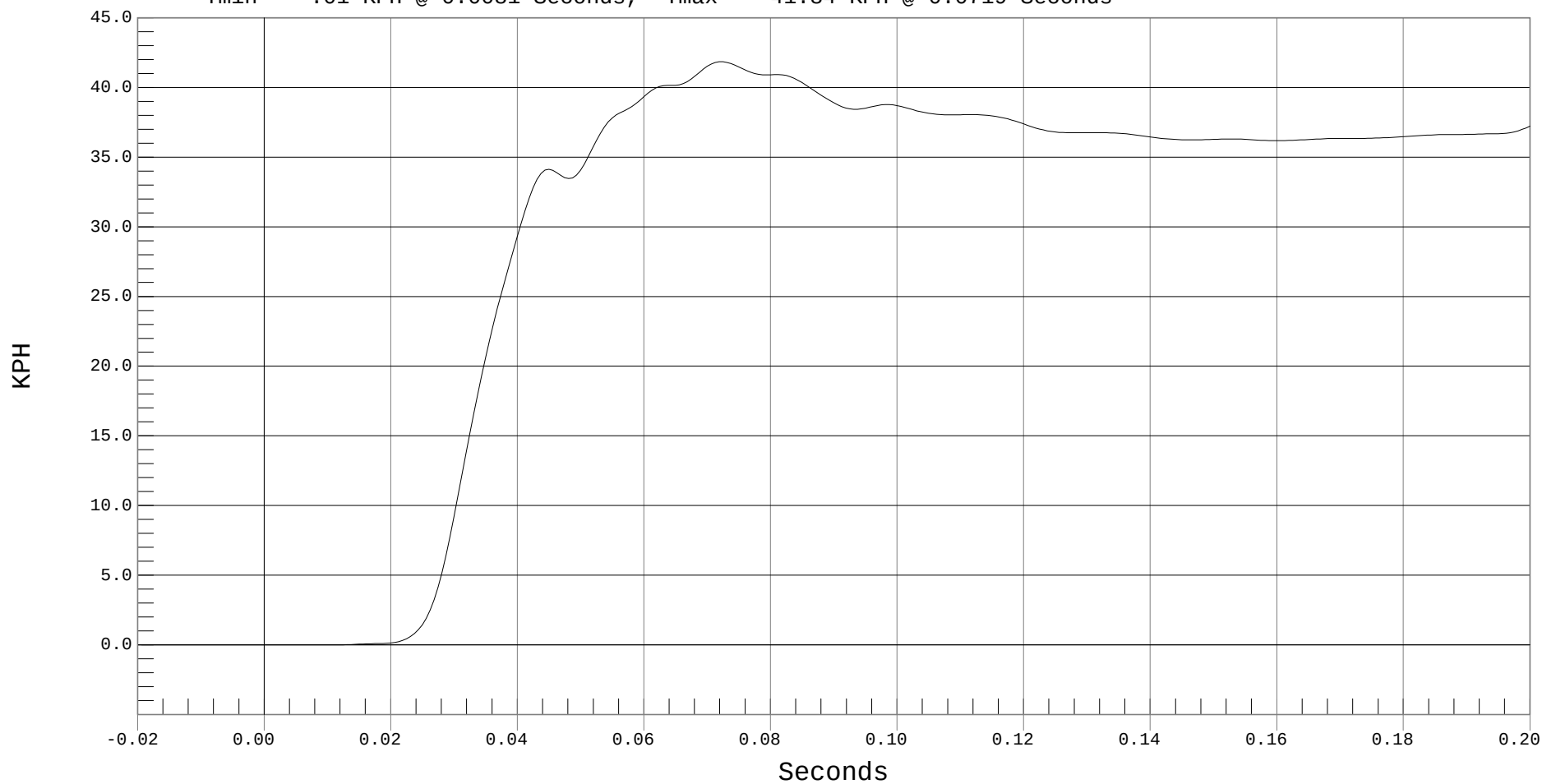
DRIVER LOWER RIB REDUNDANT Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 DRIVER LOWER RIB Y REDUNDANT VELOCITY, B01008FI.V42

Ymin = -.01 KPH @ 0.0081 Seconds, Ymax = 41.84 KPH @ 0.0719 Seconds





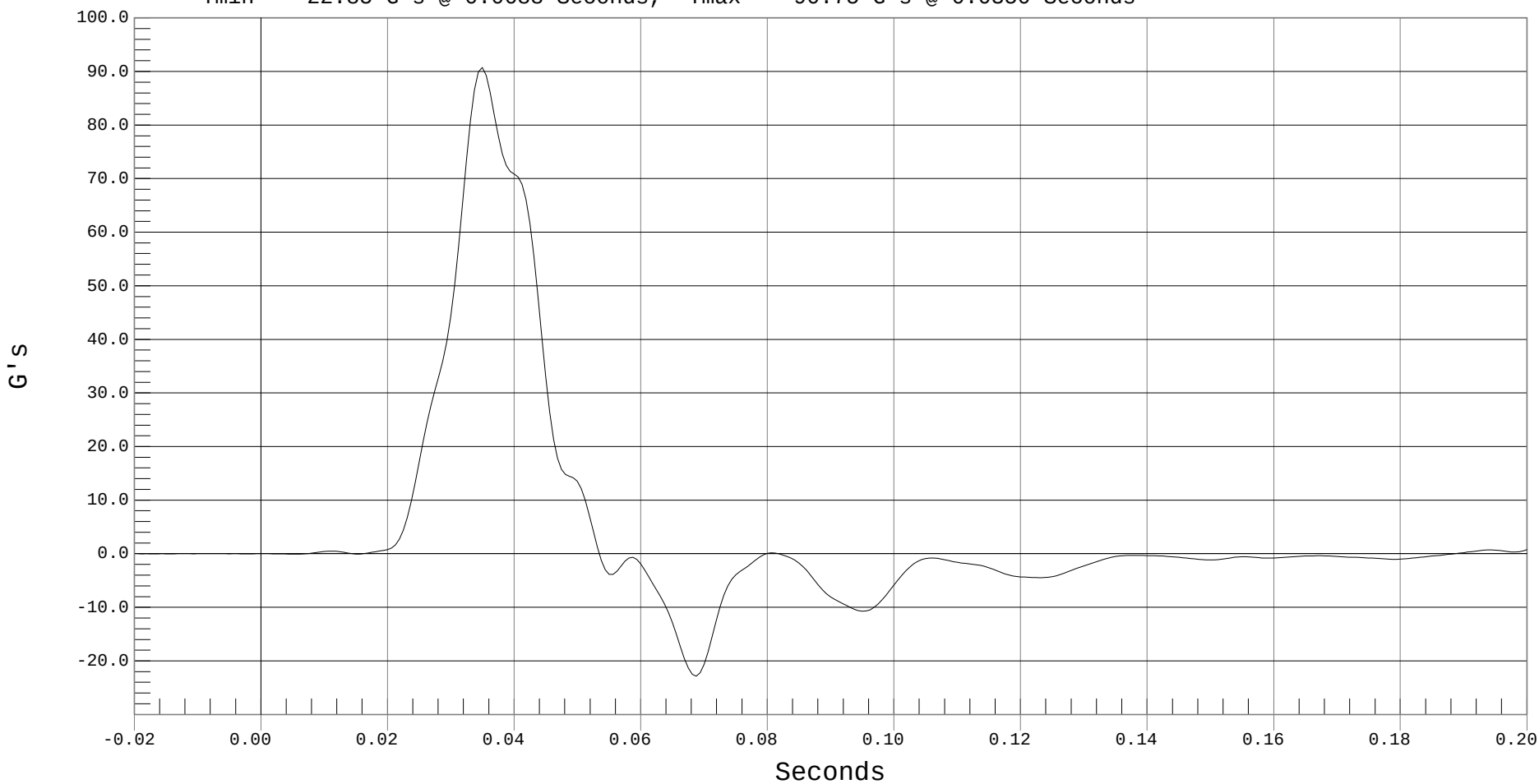
DRIVER LOWER SPINE REDUNDANT Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 DRIVER LOWER SPINE Yr, B01008FI.R43

Ymin = -22.85 G's @ 0.0688 Seconds, Ymax = 90.75 G's @ 0.0350 Seconds





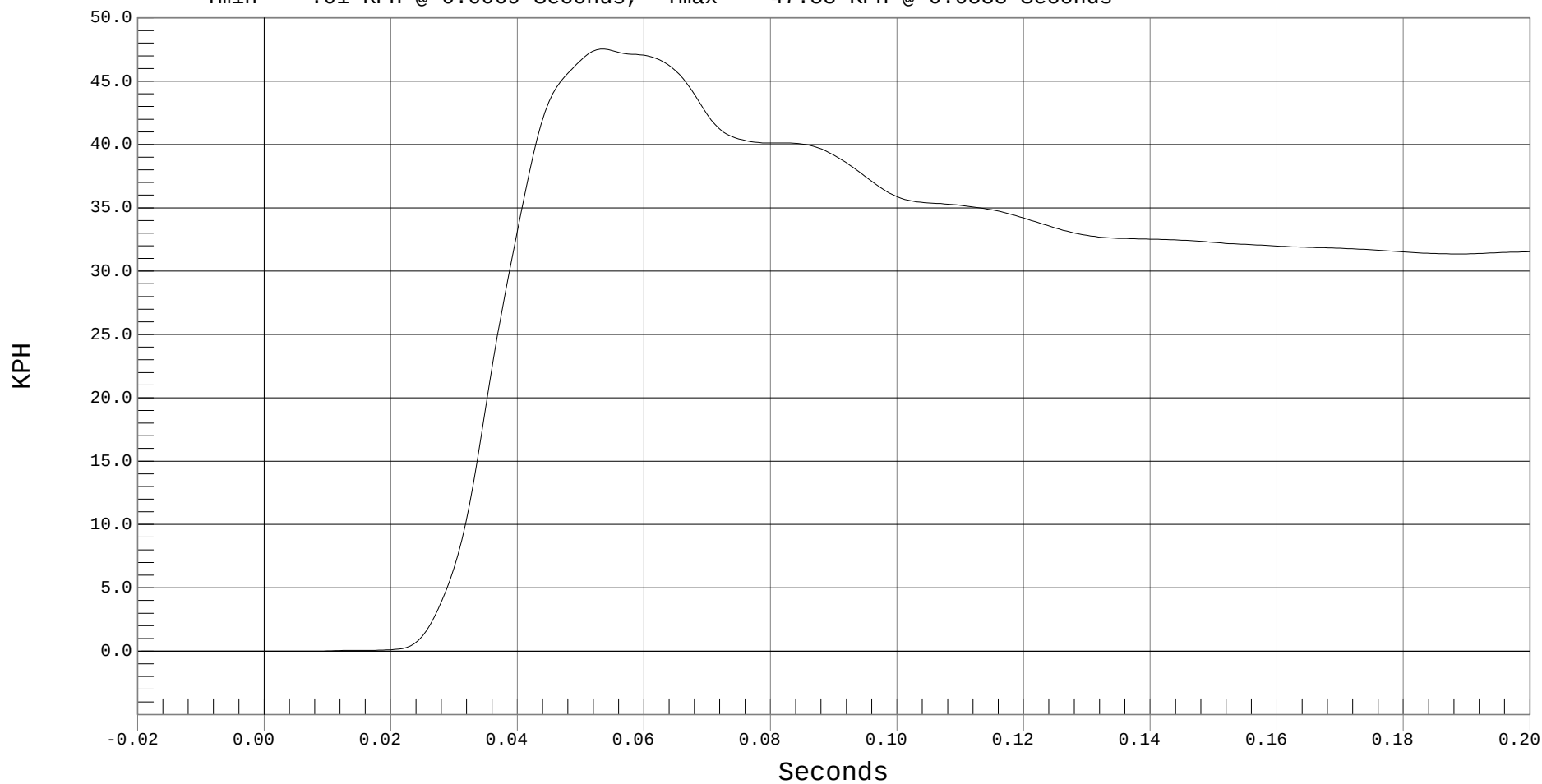
DRIVER LOWER SPINE REDUNDANT Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 DRIVER LOWER SPINE Y REDUNDANT VELOCITY, B01008FI.V43

Ymin = -.01 KPH @ 0.0069 Seconds, Ymax = 47.53 KPH @ 0.0538 Seconds





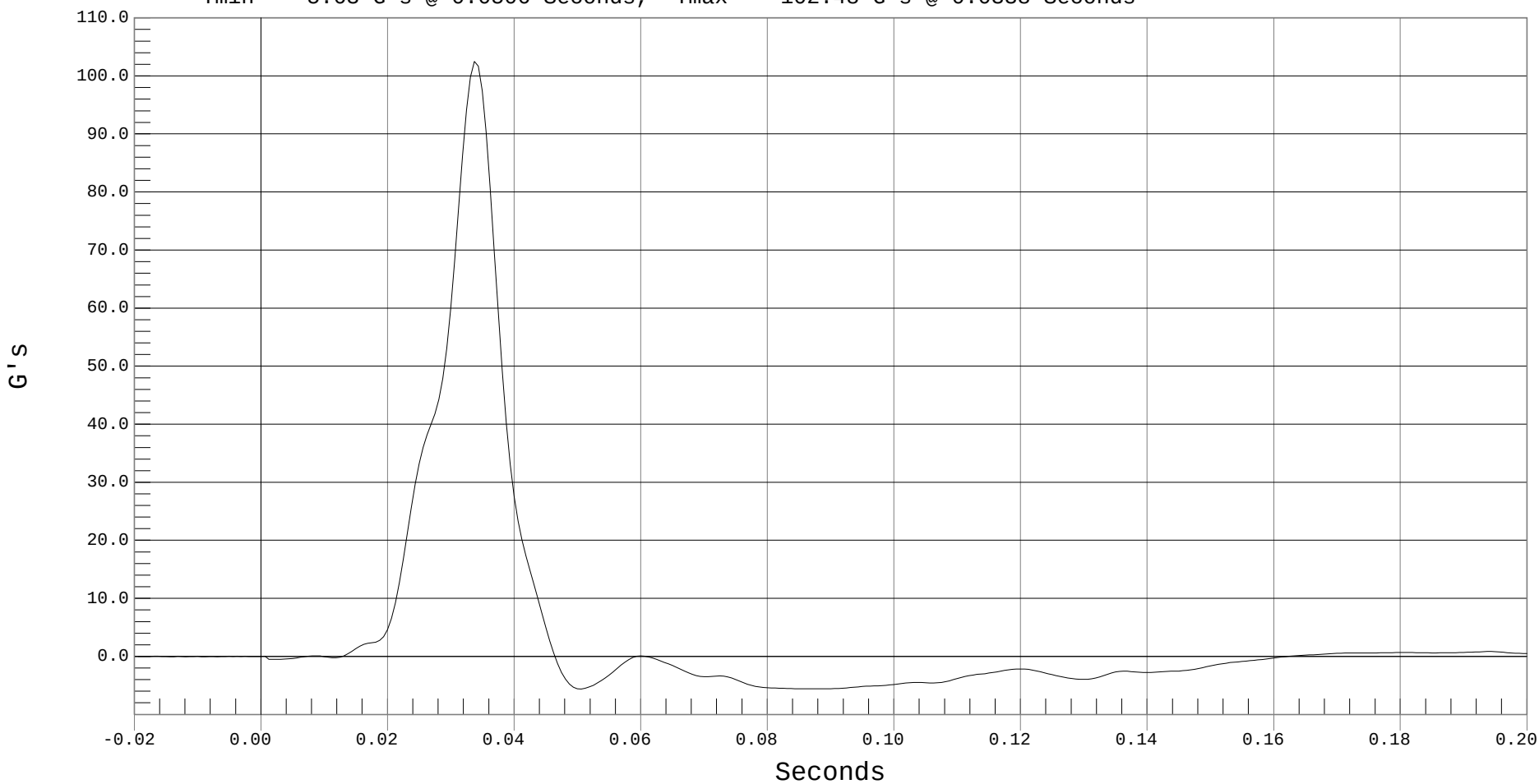
DRIVER PELVIS REDUNDANT Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 DRIVER PELVIS Yr, B01008FI.R44

Ymin = -5.63 G's @ 0.0506 Seconds, Ymax = 102.48 G's @ 0.0338 Seconds





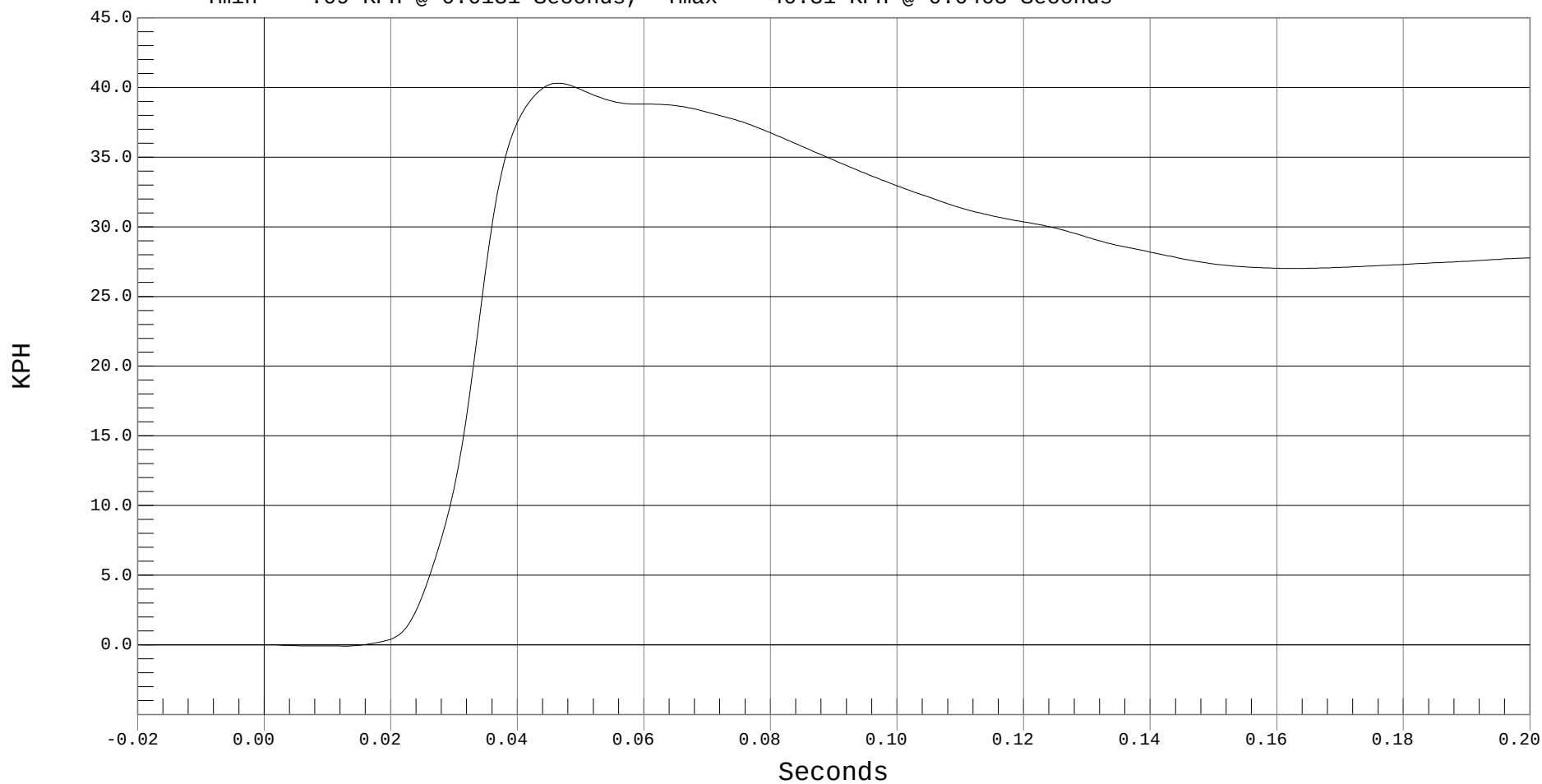
DRIVER PELVIS REDUNDANT Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 DRIVER PELVIS Y REDUNDANT VELOCITY, B01008FI.V44

Ymin = -.09 KPH @ 0.0131 Seconds, Ymax = 40.31 KPH @ 0.0463 Seconds





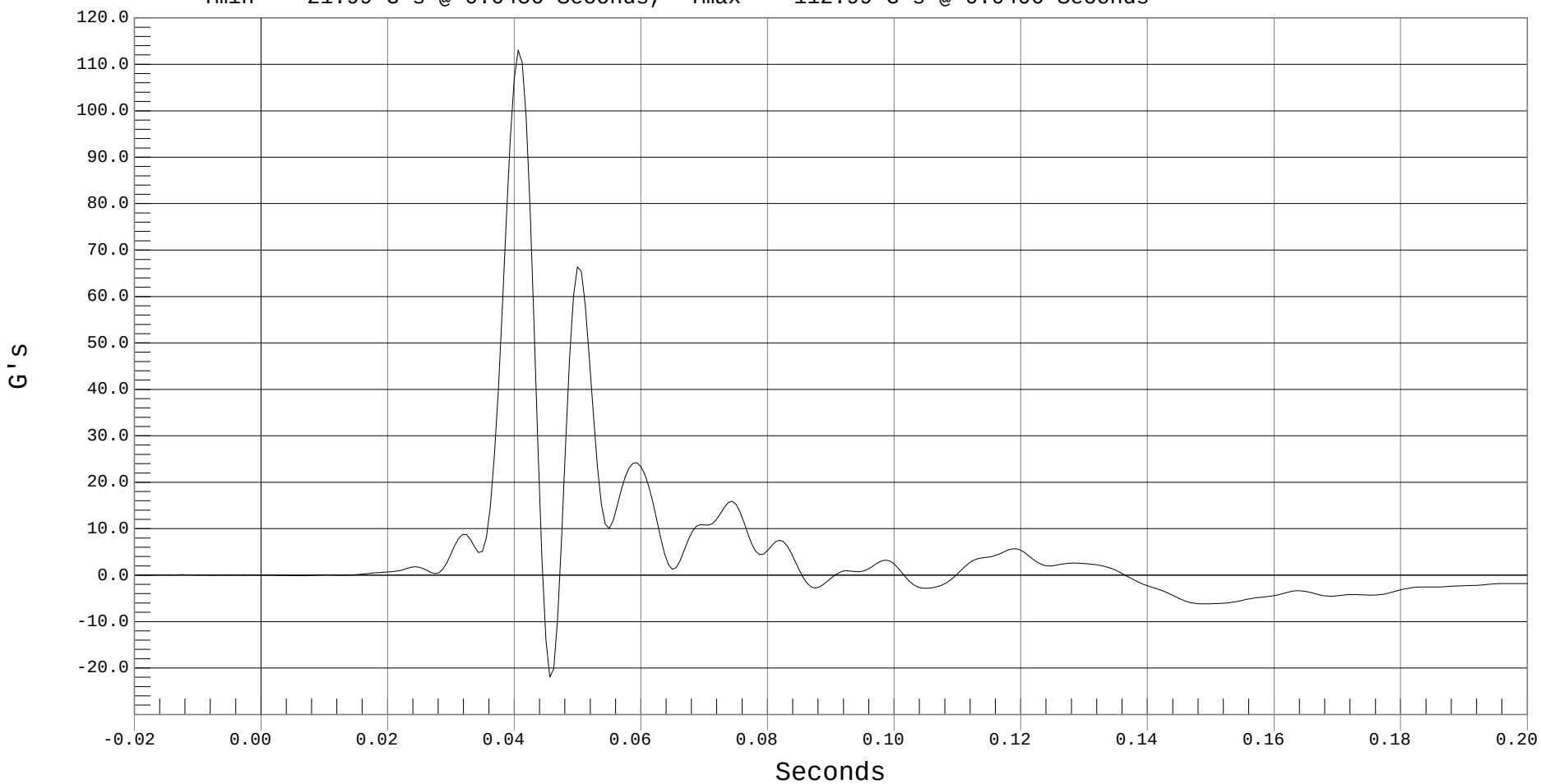
REAR PASSENGER UPPER RIB REDUNDANT Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 PASSENGER UPPER RIB Yr, B01008FI.R50

Ymin = -21.99 G's @ 0.0456 Seconds, Ymax = 112.99 G's @ 0.0406 Seconds





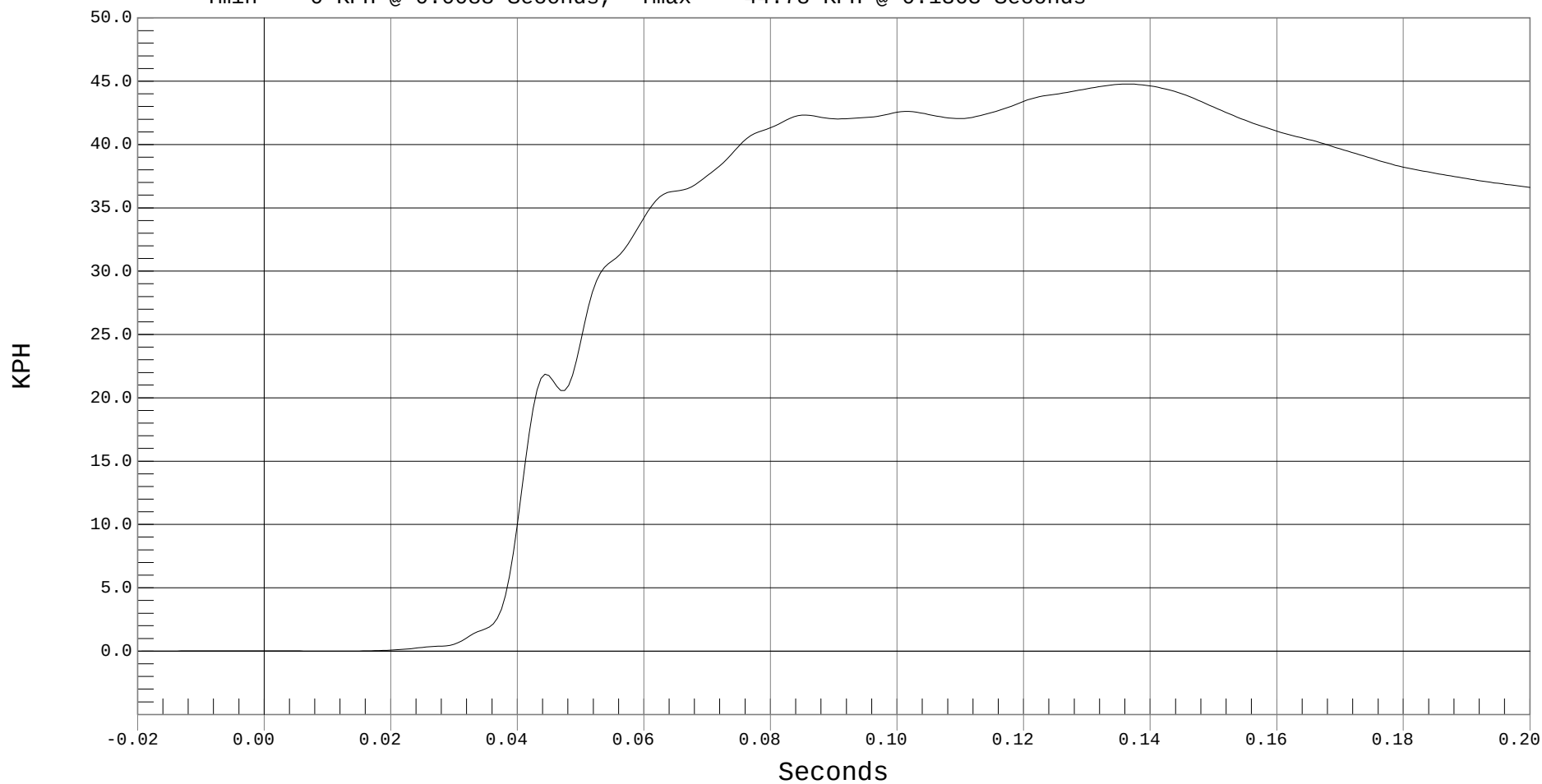
REAR PASSENGER UPPER RIB REDUNDANT Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 REAR PASSENGER UPPER RIB Y REDUNDANT VELOCITY, B01008FI.V50

Ymin = 0 KPH @ 0.0088 Seconds, Ymax = 44.78 KPH @ 0.1363 Seconds





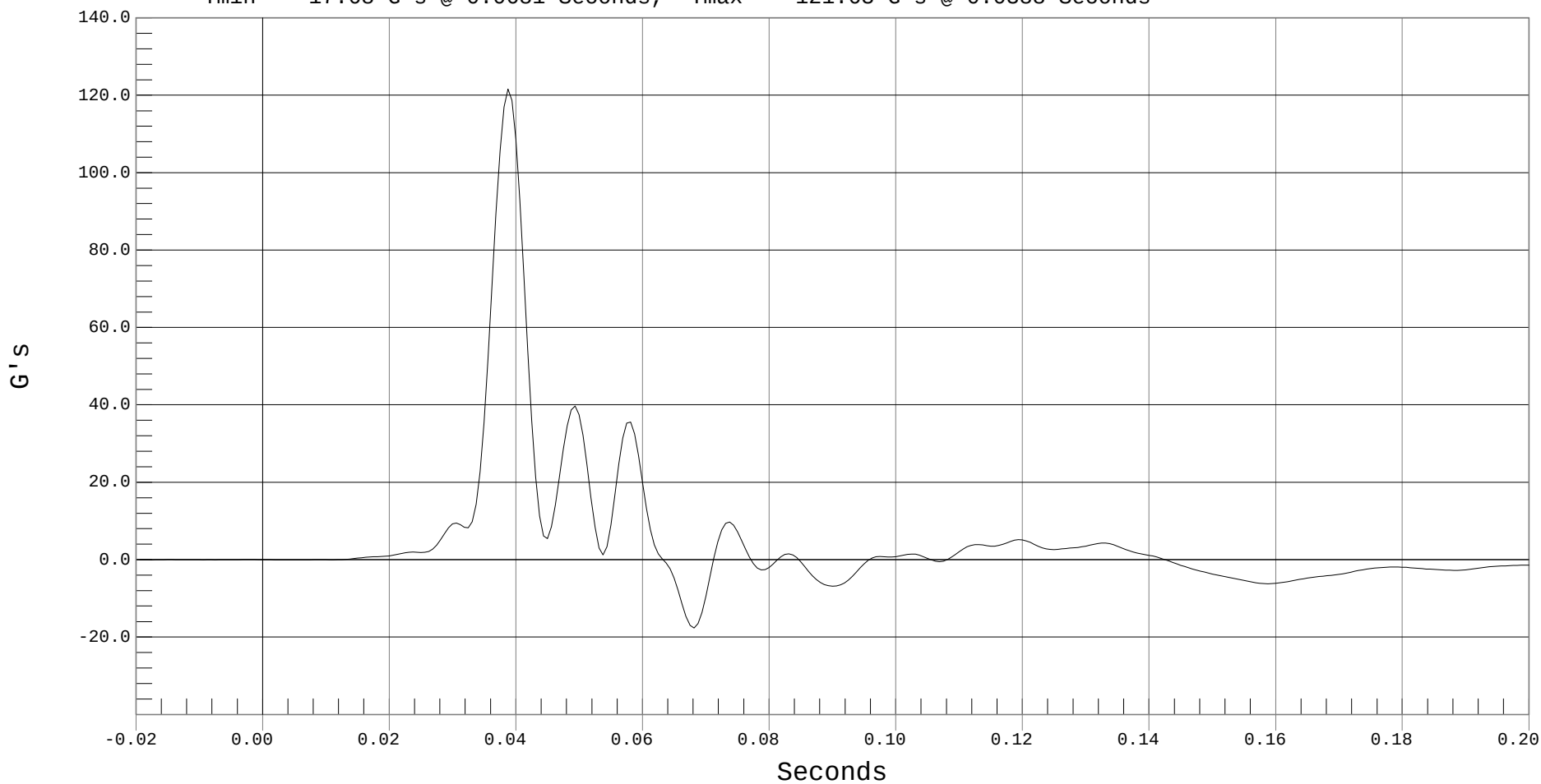
REAR PASSENGER LOWER RIB REDUNDANT Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 PASSENGER LOWER RIB Yr, B01008FI.R46

Ymin = -17.68 G's @ 0.0681 Seconds, Ymax = 121.63 G's @ 0.0388 Seconds





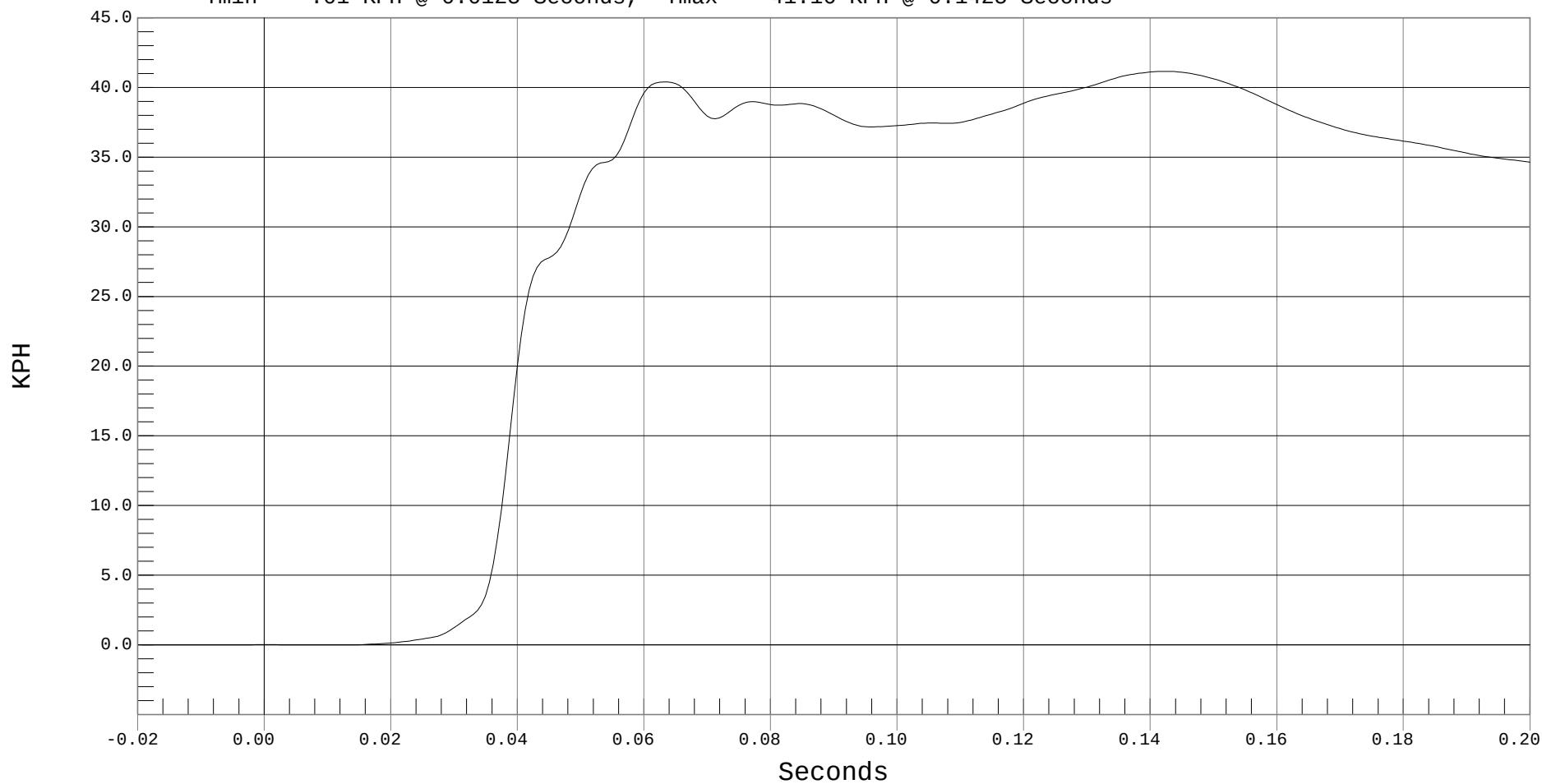
REAR PASSENGER LOWER RIB REDUNDANT Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 REAR PASSENGER LOWER RIB Y REDUNDANT VELOCITY, B01008FI.V46

Ymin = -.01 KPH @ 0.0125 Seconds, Ymax = 41.16 KPH @ 0.1425 Seconds





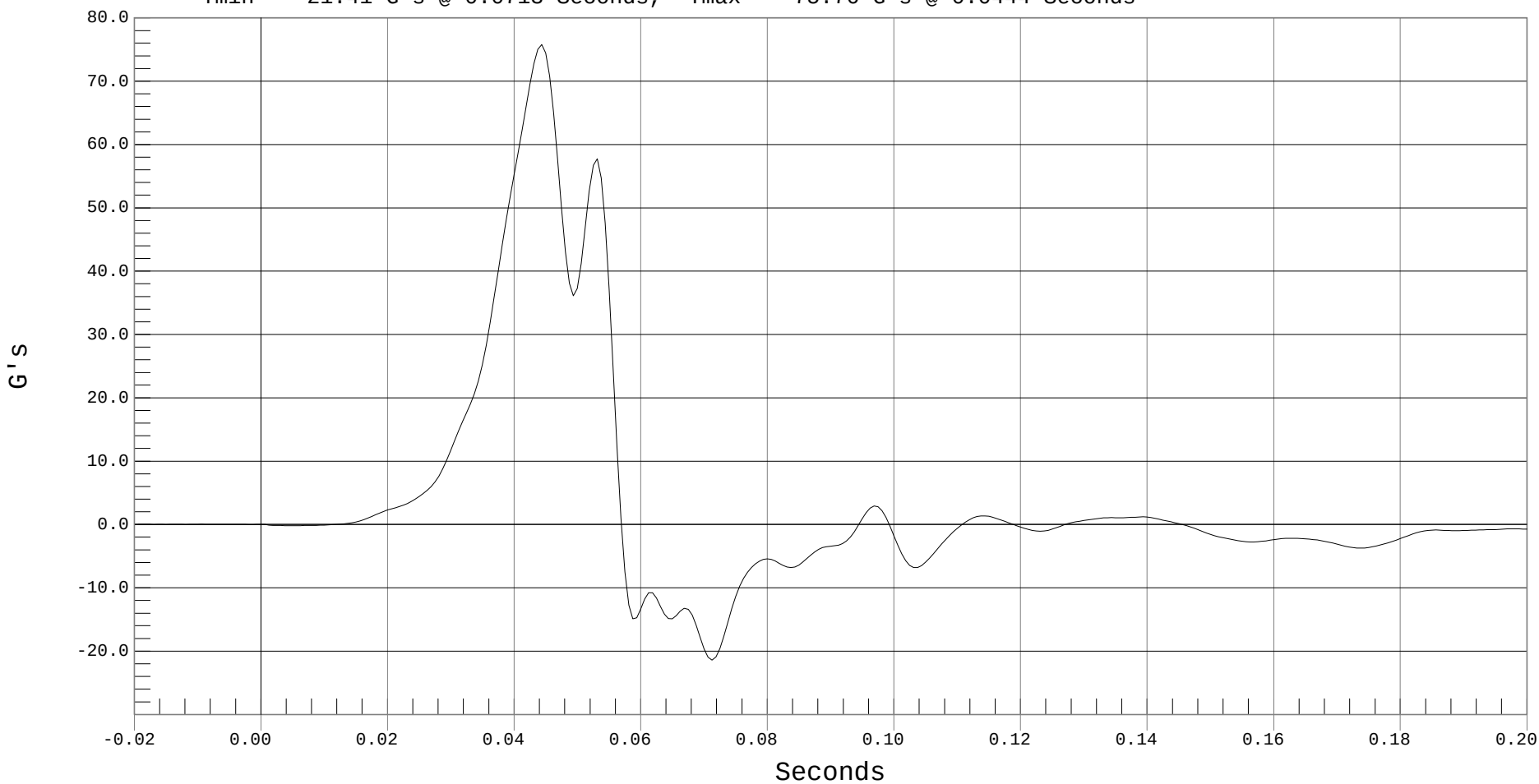
REAR PASSENGER LOWER SPINE REDUNDANT Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 PASSENGER LOWER SPINE Yr, B01008FI.R47

Ymin = -21.41 G's @ 0.0713 Seconds, Ymax = 75.76 G's @ 0.0444 Seconds





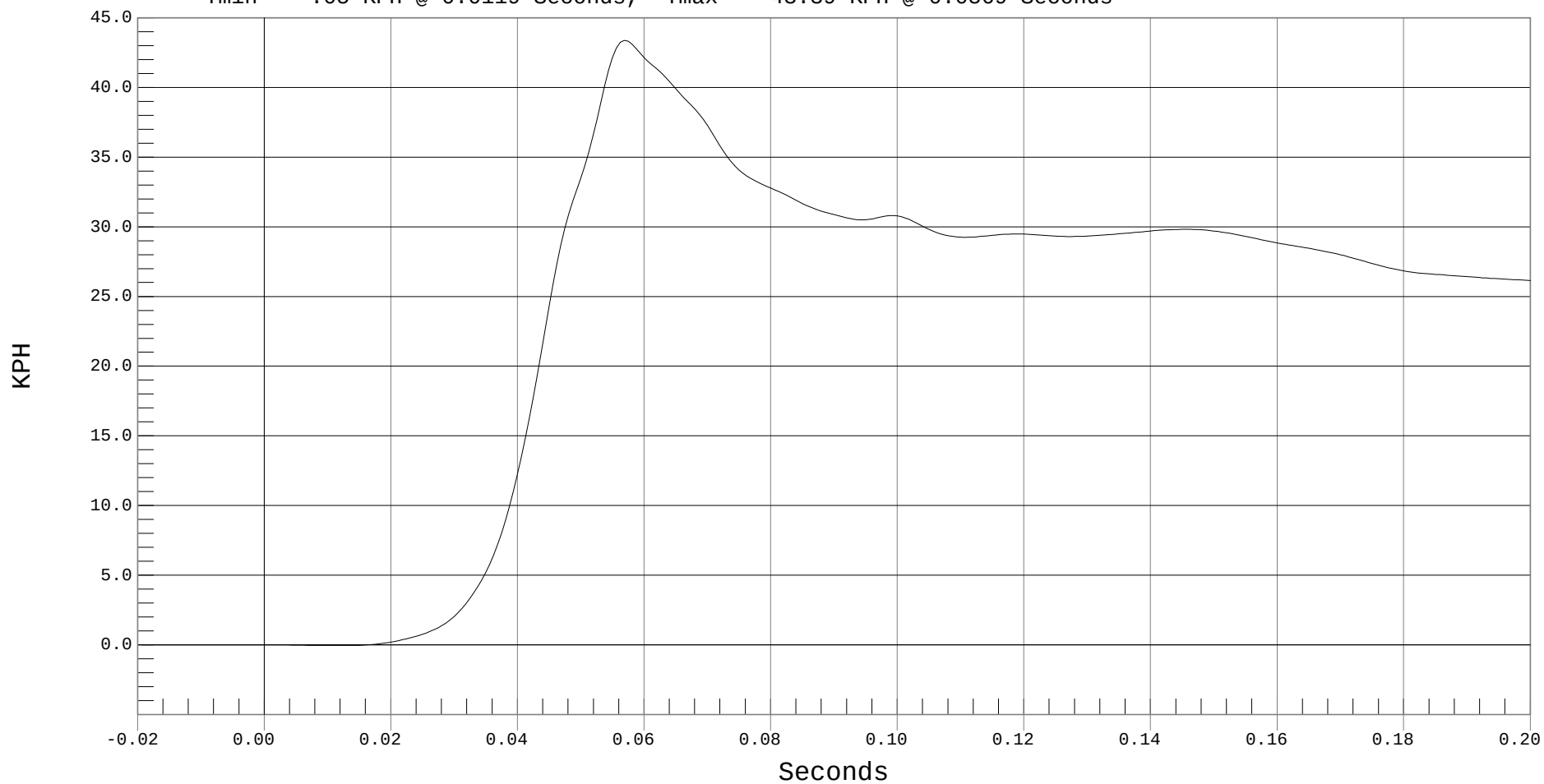
REAR PASSENGER LOWER SPINE REDUNDANT Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 REAR PASSENGER LOWER SPINE Y REDUNDANT VELOCITY, B01008FI.V47

Ymin = -.05 KPH @ 0.0119 Seconds, Ymax = 43.39 KPH @ 0.0569 Seconds





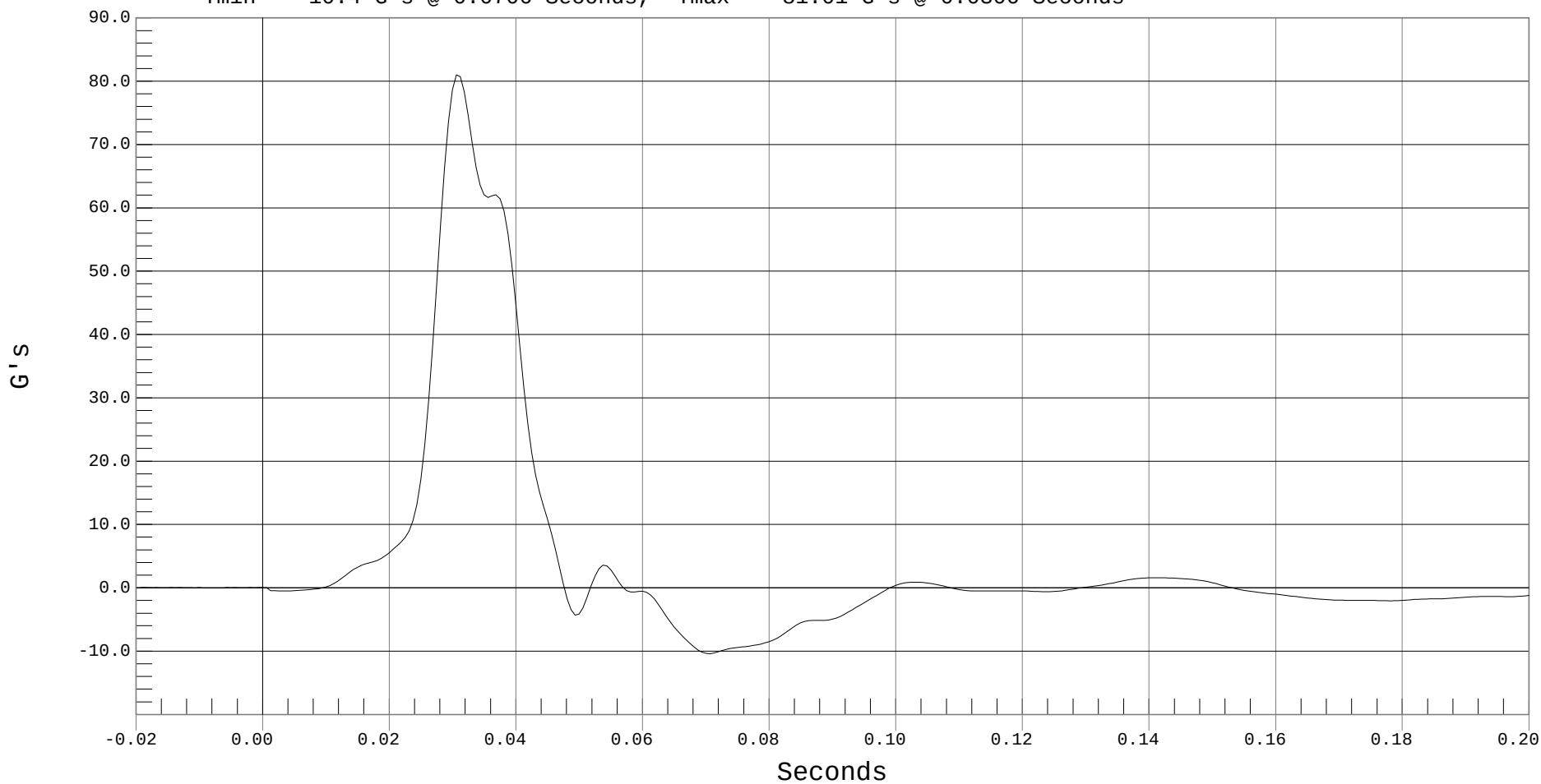
REAR PASSENGER PELVIS REDUNDANT Y ACCELERATION

Test Desc.: INDICANT SIDE IMPACT
Component: 2001 HYUNDAI ACCENT (C10515)
Other Info:

Test Date: 01-29-01
Speed: 38.6 MPH, 62.1 KPH
Fir Filtered

— 1 PASSENGER PELVIS Yr, B01008FI.R48

Ymin = -10.4 G's @ 0.0706 Seconds, Ymax = 81.01 G's @ 0.0306 Seconds





REAR PASSENGER PELVIS REDUNDANT Y VELOCITY

Test Desc.: INDICANT SIDE IMPACT

Component: 2001 HYUNDAI ACCENT (C10515)

Other Info:

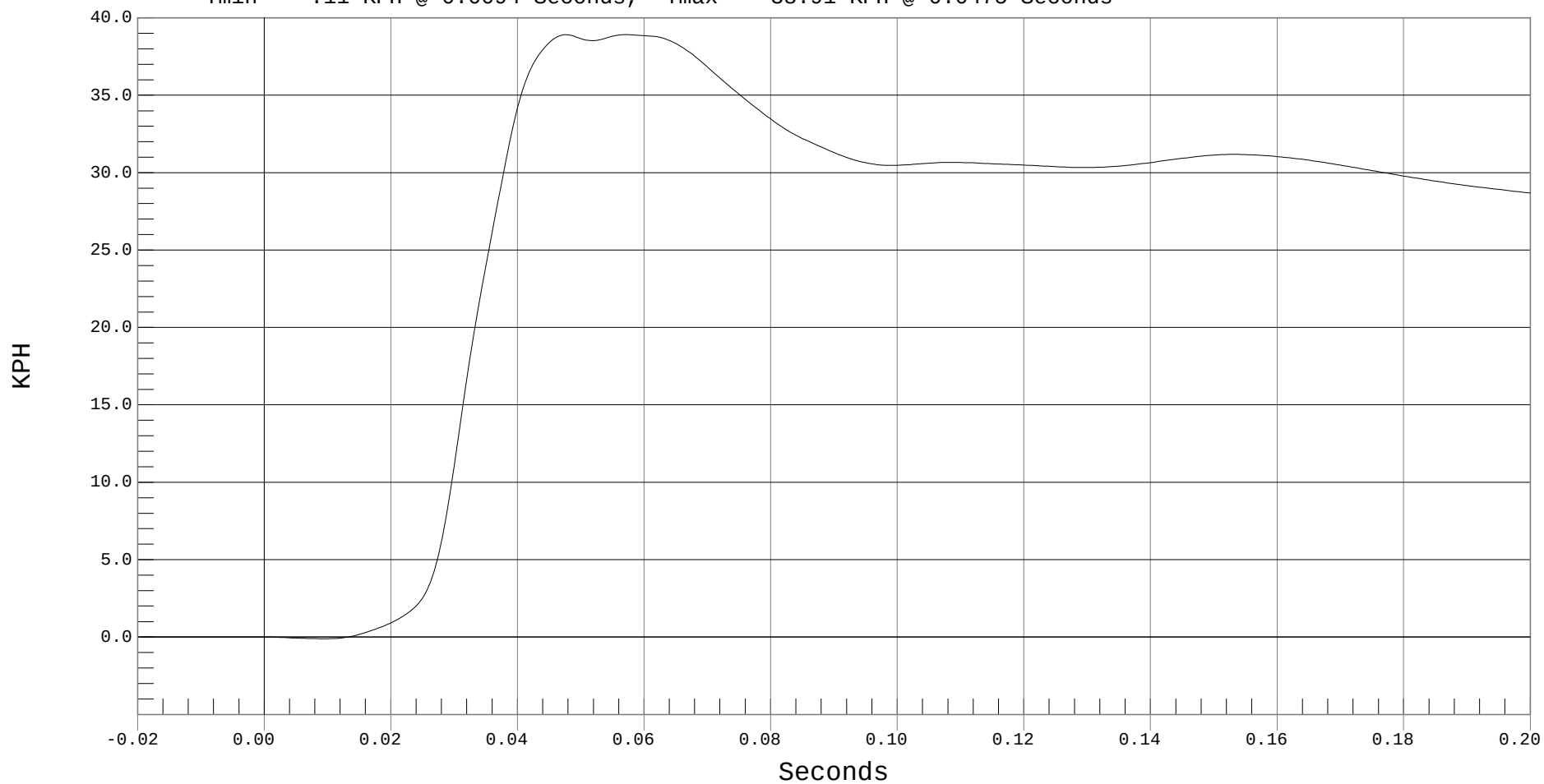
Test Date: 01-29-01

Speed: 38.6 MPH, 62.1 KPH

Fir Filtered

— 1 REAR PASSENGER PELVIS Y REDUNDANT VELOCITY, B01008FI.V48

Ymin = -.11 KPH @ 0.0094 Seconds, Ymax = 38.91 KPH @ 0.0475 Seconds



APPENDIX C

SID CONFIGURATION AND PERFORMANCE VERIFICATION DATA

CALIBRATION DATA SUMMARY
SIDE IMPACT DUMMY (SID)
CONFIGURED TO LEFT SIDE IMPACT

Report Date: February 19, 2001

Technician: Tim Michnay

Test Parameter	Specification	Dummy Serial Number: 036		Dummy Serial Number: 037	
		Pre-Test	Post-Test	Pre-Test	Post-Test
SH-Seated Height (mm)	889 – 909	901	901	901	901
RH-Rib Height (mm)	501 – 521	505	505	511	511
HP-Hip Pivot Height (mm)	99 ref.	99	99	99	99
RD-Rib from Back Line (mm)	229 – 241	234	234	236	236
KV-Knee Pivot from Back Line (mm)	511 – 526	520	520	520	520
SW-Knee Pivot to Floor (mm)	490 – 505	496	496	494	494
HW-Hip Width (mm)	356 - 391	372	372	380	380
Thorax Impact					
Temperature (°C)	18.9 – 25.5	21.4	21.4	21.4	21.5
Relative Humidity (%)	10 – 70	25	28	25	29
Probe Speed (m/s)	4.27 – 4.33	4.30	4.28	4.29	4.28
Upper Rib (g's)	37 – 46	46	46	43	46
Lower Rib (g's)	37 – 46	42	41	44	45
Lower Spine (g's)	15 – 22	19	19	19	20
Pelvis Impact					
Temperature (°C)	18.9 – 25.5	21.4	21.4	21.4	21.5
Relative Humidity (%)	10 – 70	25	28	25	29
Probe Speed (m/s)	4.27 – 4.33	4.30	4.27	4.29	4.27
Pelvis (g's)	40 - 60	47	45	48	49

REMARKS:

CERTIFICATION DATA

Dummy Serial Number: 036

Calibration Test Results Summary

Dummy Serial Number: 036

Pre-Test Calibration

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

SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

Dummy Serial Number: 036
 Date of Verification: 1/18/01
 Test Number: D0104

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH-Seated Height (mm)	889 – 909	901
RH-Rib Height (mm)	501 – 521	505
HP-Hip Pivot Height (mm)	99 ref.	99
RD-Rib From Back Line (mm)	229 - 241	234
KV-Knee Pivot From Back Line (mm)	511 – 526	520
SW-Knee Pivot to Floor (mm)	490 – 505	496
HW – Hip Width (mm)	356 – 391	372

Technician: _____

Approved By:_____

MGA RESEARCH CORPORATION

HEAD DROP TEST

SIDE IMPACT DUMMY (SID)

Date: 1/18/01

Dummy Serial Number: 036

Test Number: D01041

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 - 25.5	21.3
Relative Humidity (%)	10 - 70	18
Peak Resultant Acceleration	210 - 260 g's	211
Peak Lateral Acceleration	< 10 g's	-2
Time Above 100 g.	0.9 - 1.5 msec.	1.2

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



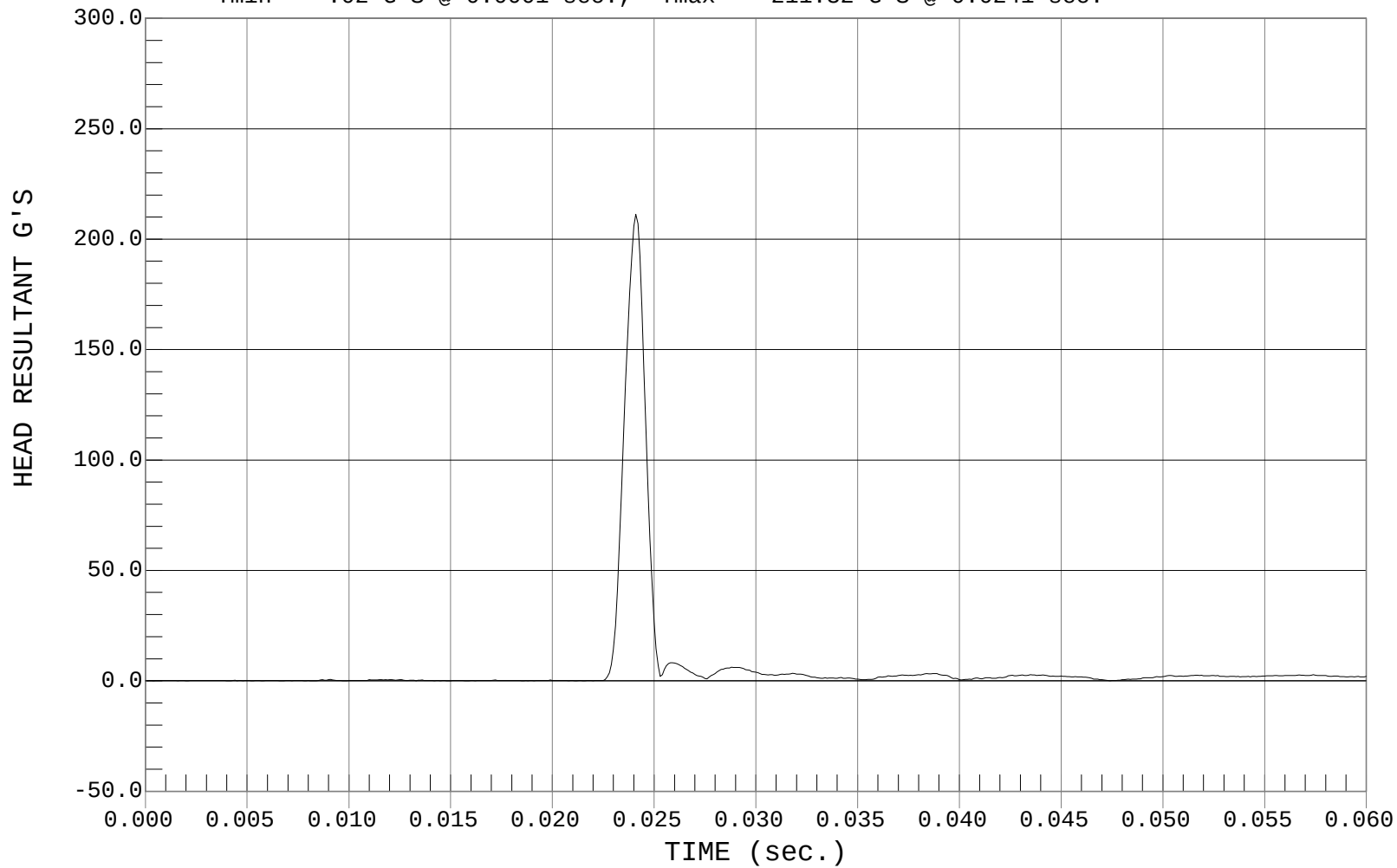
PEAK RESULTANT ACCELERATION

Test Desc.: Dummy Calibration - Head Drop
Component: Dummy #036

Test Date: 01-18-01
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 HEAD RESULTANT ACCELERATION, D01041av.a01

Ymin = .02 G'S @ 0.0001 sec., Ymax = 211.32 G'S @ 0.0241 sec.





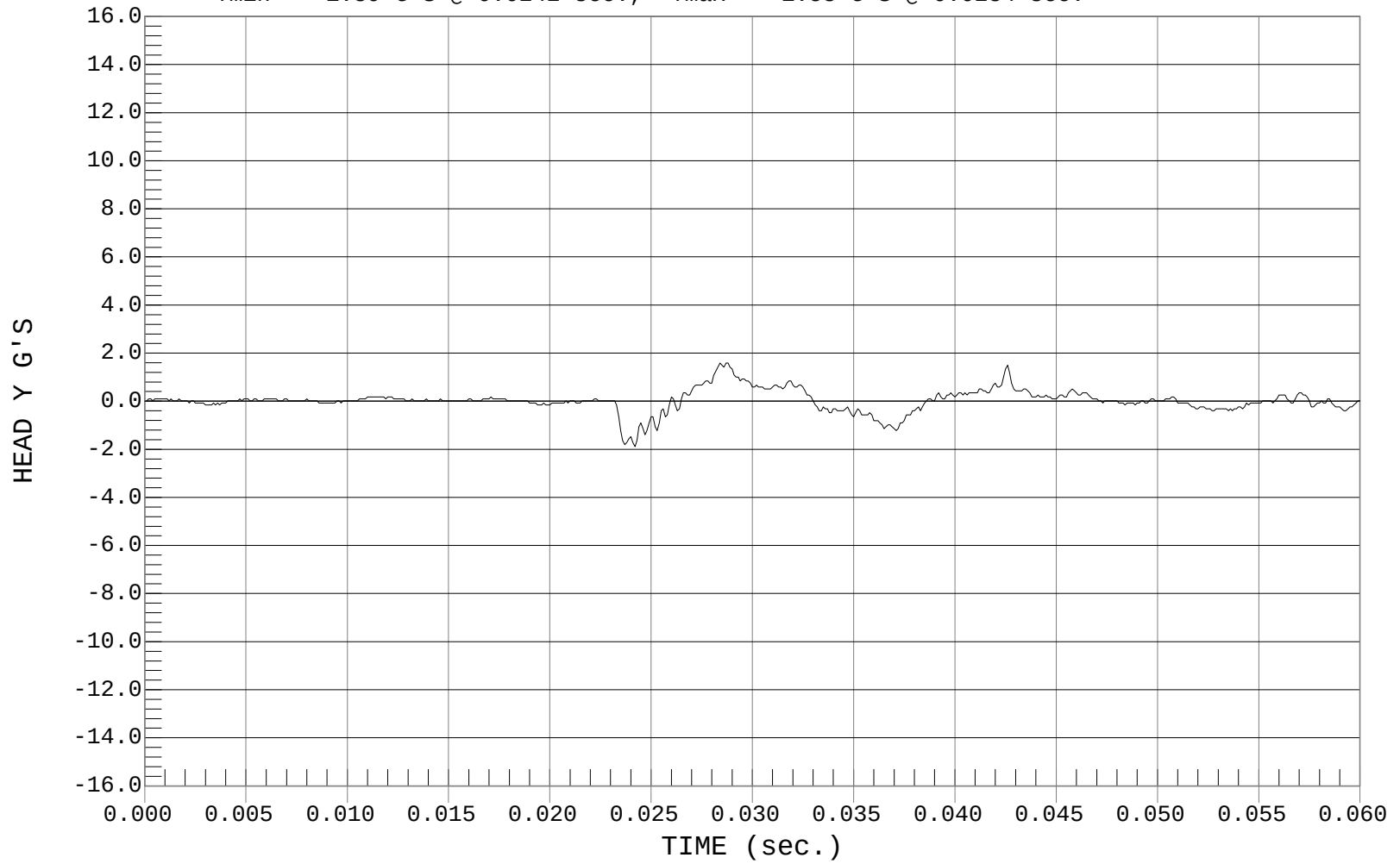
PEAK LATERAL ACCELARATION

Test Desc.: Dummy Calibration - Head Drop
Component: Dummy #036

Test Date: 01-18-01
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 HEAD Y, D01041AR.A02

Ymin = -1.89 G'S @ 0.0242 sec., Ymax = 1.58 G'S @ 0.0284 sec.



MGA RESEARCH CORPORATION
THORAX IMPACT TEST
SIDE IMPACT DUMMY (SID)

Date: 1/5/01
Dummy Serial Number: 036
Test Number: D01042

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.4
Relative Humidity (%)	10 – 70	25
Probe Speed (m/s)	4.27 – 4.33	4.30
Upper Rib (g's)	37 – 46	46
Lower Rib (g's)	37 – 46	42
Lower Spine (g's)	15 - 22	19

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



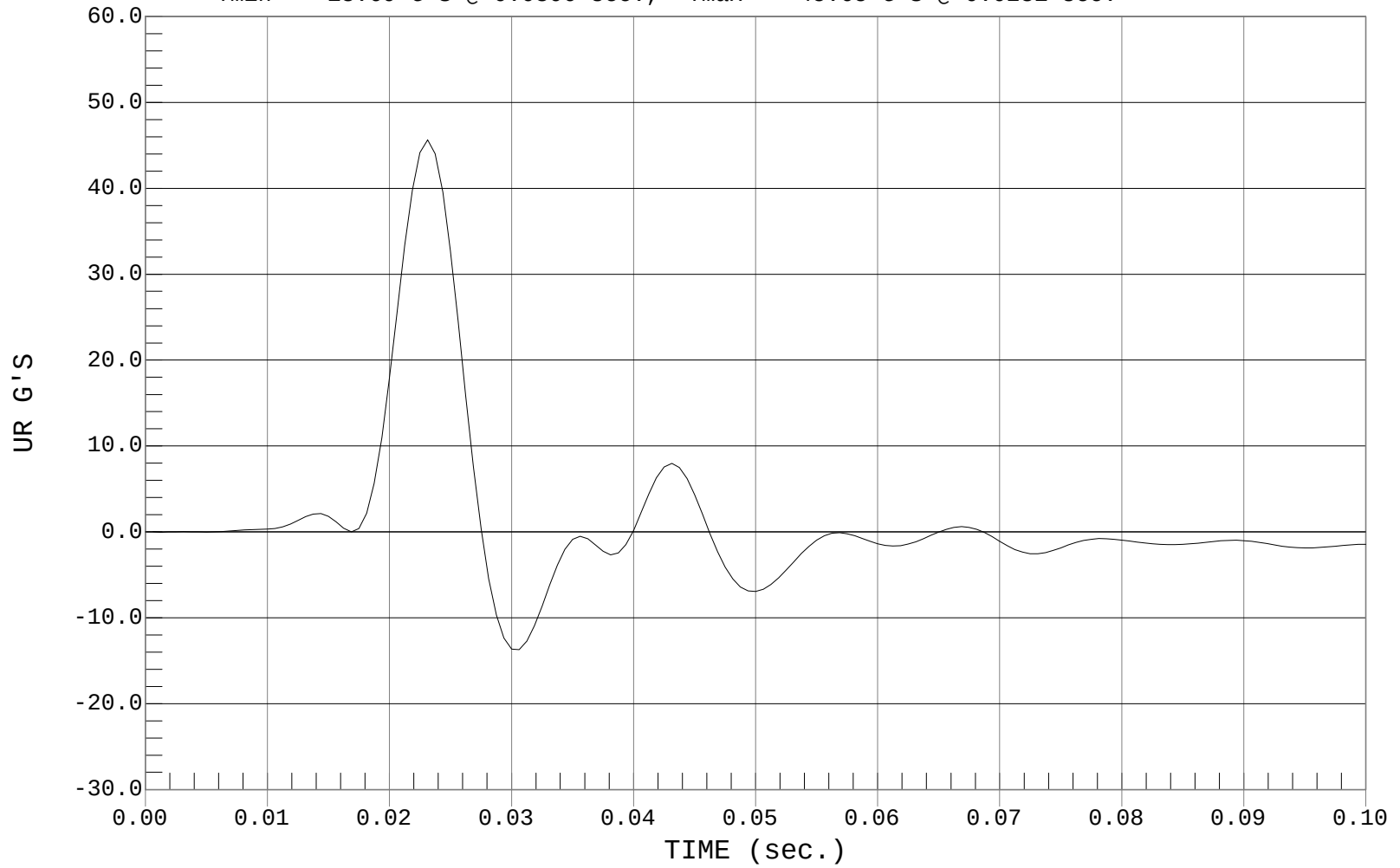
UPPER RIB ACCELERATION

Test Desc.: Dummy Calibration - Thorax Impact
Component: Dummy #036

Test Date: 01-05-01
Speed: 14.11 FT/SEC, 4.30 M/SEC

— 1 UR, D01042FI.R08

Ymin = -13.69 G'S @ 0.0306 sec., Ymax = 45.65 G'S @ 0.0231 sec.





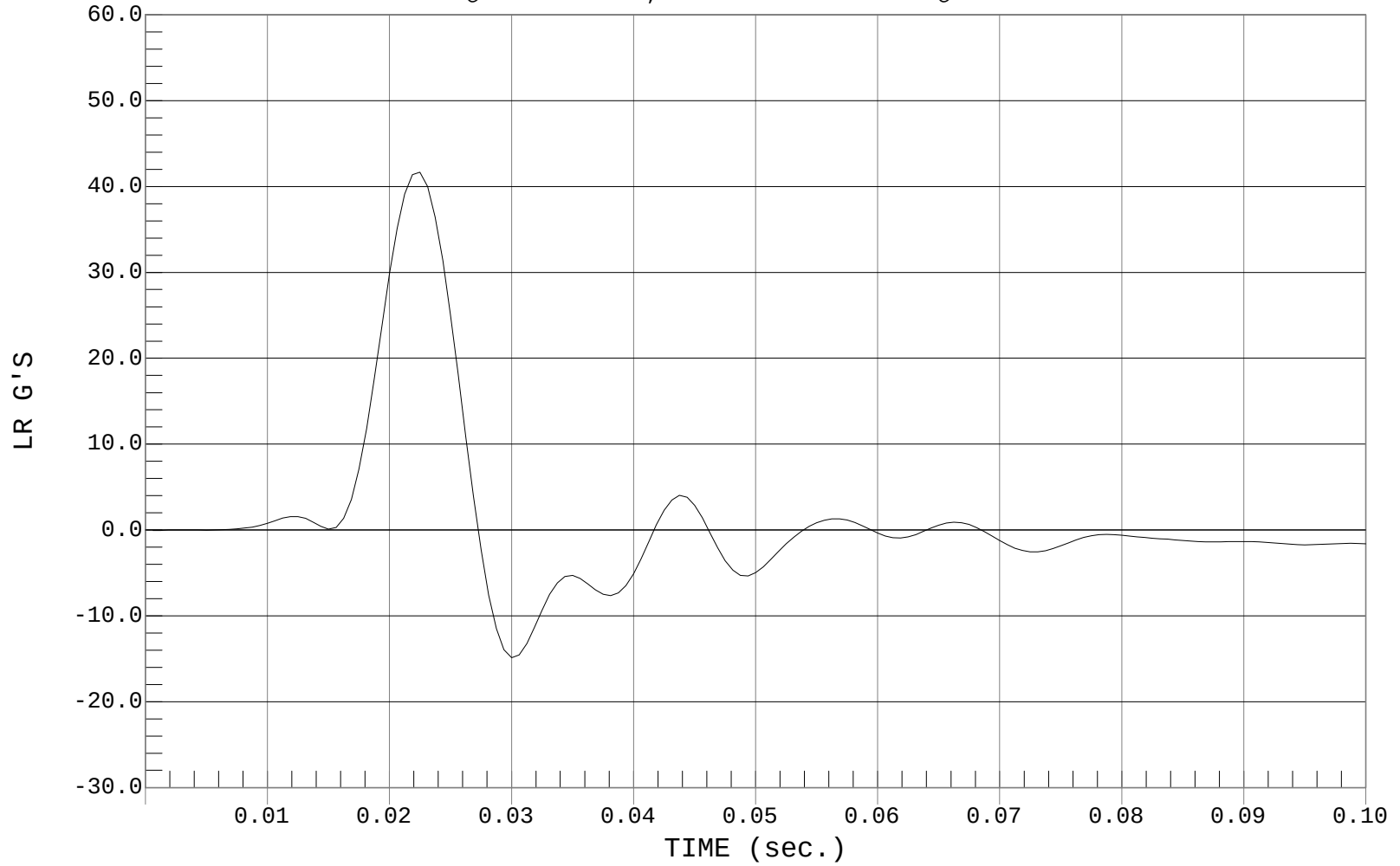
LOWER RIB ACCELERATION

Test Desc.: Dummy Calibration - Thorax Impact
Component: Dummy #036

Test Date: 01-05-01
Speed: 14.11 FT/SEC, 4.30 M/SEC

— 1 LR, D01042FI.R09

Ymin = -14.89 G'S @ 0.0300 sec., Ymax = 41.68 G'S @ 0.0225 sec.





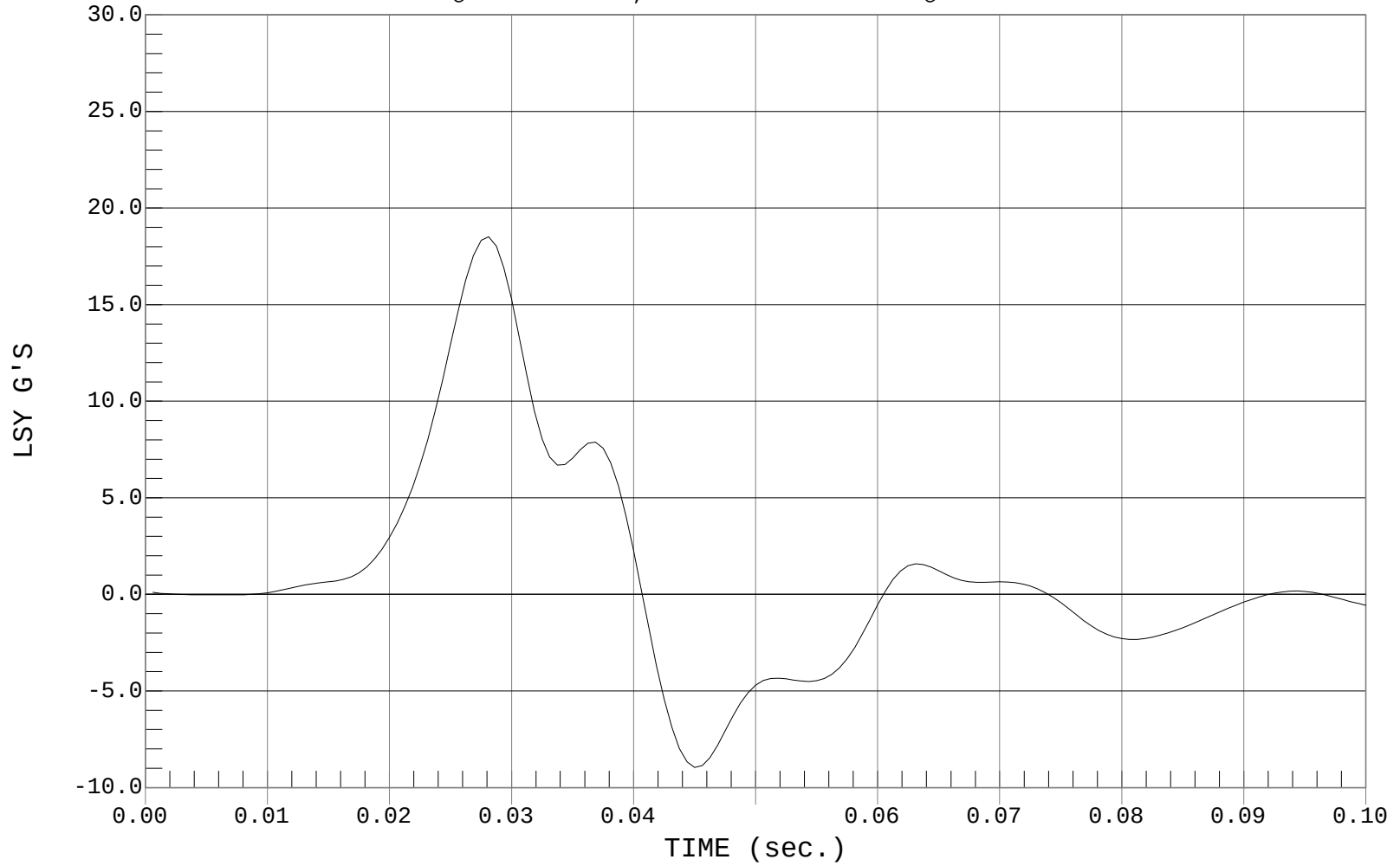
LOWER SPINE ACCELERATION

Test Desc.: Dummy Calibration - Thorax Impact
Component: Dummy #036

Test Date: 01-05-01
Speed: 14.11 FT/SEC, 4.30 M/SEC

— 1 LSY, D01042FI.R10

Ymin = -8.96 G'S @ 0.0450 sec., Ymax = 18.51 G'S @ 0.0281 sec.



MGA RESEARCH CORPORATION
PELVIS IMPACT TEST
SIDE IMPACT DUMMY (SID)

Date: 1/5/01
Dummy Serial Number: 036
Test Number: D01043

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.4
Relative Humidity (%)	10 – 70	25
Probe Speed (m/s)	4.27 – 4.33	4.30
Pelvis Acceleration (g's)	40 – 60	47

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



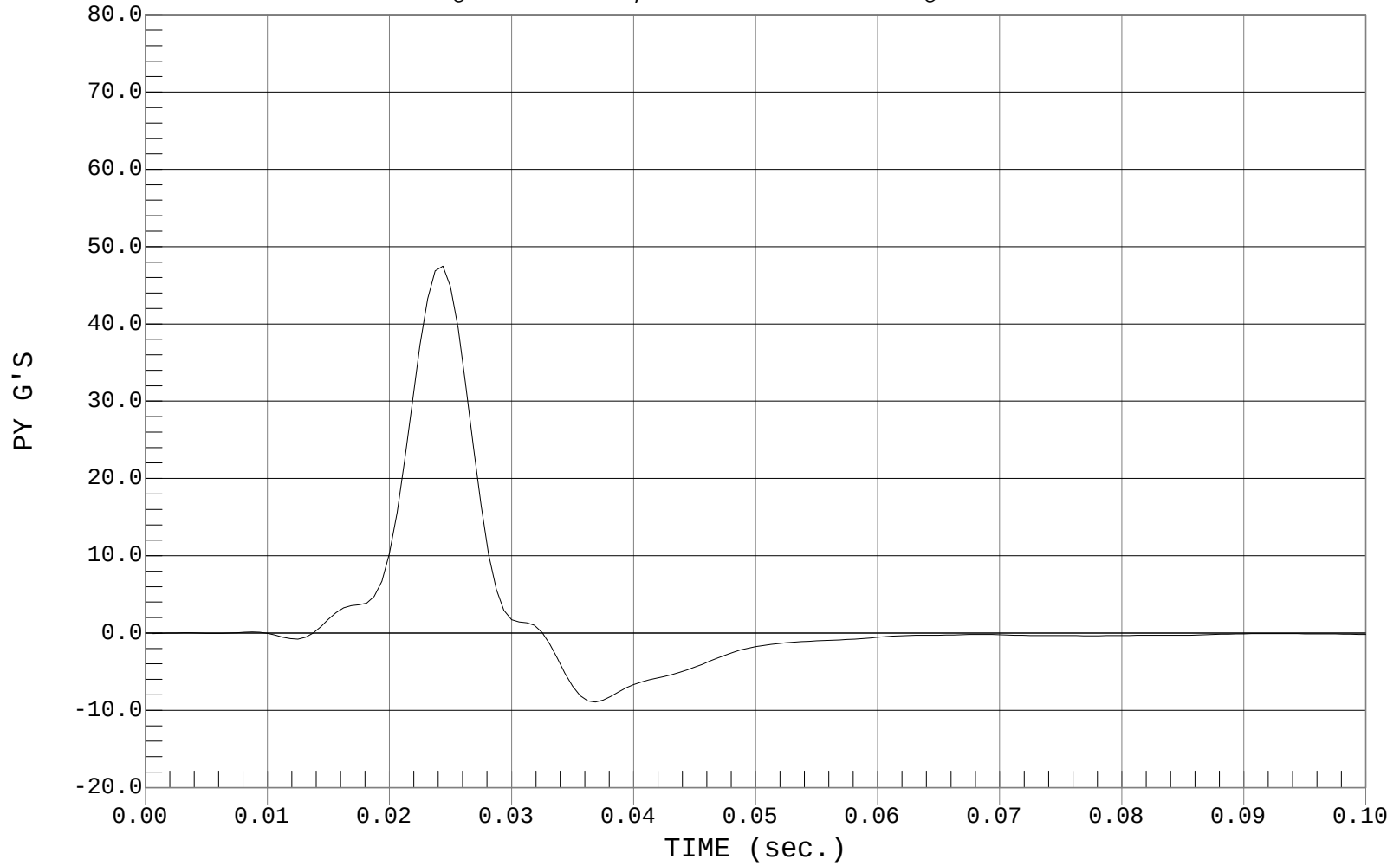
PELVIS ACCELERATION

Test Desc.: Dummy Calibration - Pelvis Impact
Component: Dummy #036

Test Date: 01-05-01
Speed: 14.11 FT/SEC, 4.30 M/SEC

— 1 PY, D01043FI.R11

Ymin = -8.94 G'S @ 0.0369 sec., Ymax = 47.47 G'S @ 0.0244 sec.



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

Date: 1/17/01

Dummy Serial Number: 036

Test Number: D01044

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.4
Relative Humidity (%)	10 – 70	20
Force @ 12.7 mm	104 – 162	146
Force @ 19 mm	163 – 222	204
Force @ 25.4 mm	222 – 280	267
Force @ 33 mm	325 - 391	367

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



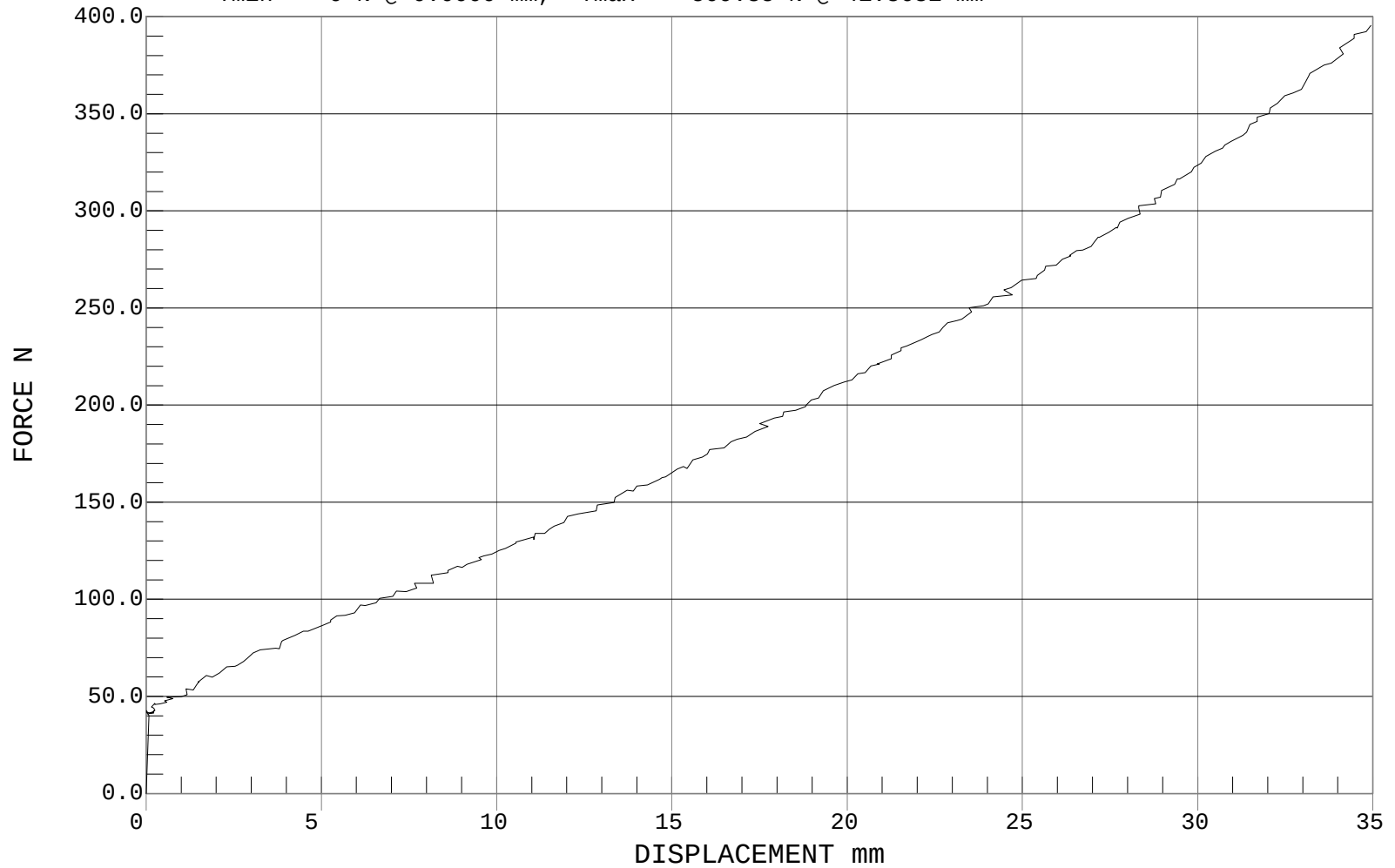
ABDOMEN COMPRESSION

Test Desc.: DUMMY CALIBRATION - ABDOMEN COMPRESSION
Component: DUMMY # 036

Test Date: 01-17-01
Speed: 0.00 FT/SEC, 0.00 M/SEC

1 FORCE, D01044FC.F16

Ymin = 0 N @ 0.0000 mm, Ymax = 509.85 N @ 41.8631 mm



MGA RESEARCH CORPORATION
LUMBAR FLEXION TEST
SIDE IMPACT DUMMY (SID)

Date: 1/17/01

Dummy Serial Number: 036

Test Number: D01045

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.4
Relative Humidity (%)	10 – 70	20
Force @ 0°	0 – 26.7	0
Force @ 20°	97.9 – 151.2	101.1
Force @ 30°	151.2 – 204.6	160.1
Force @ 40°	204.6 – 258.0	219.2
Return Angle	12° maximum	1°

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



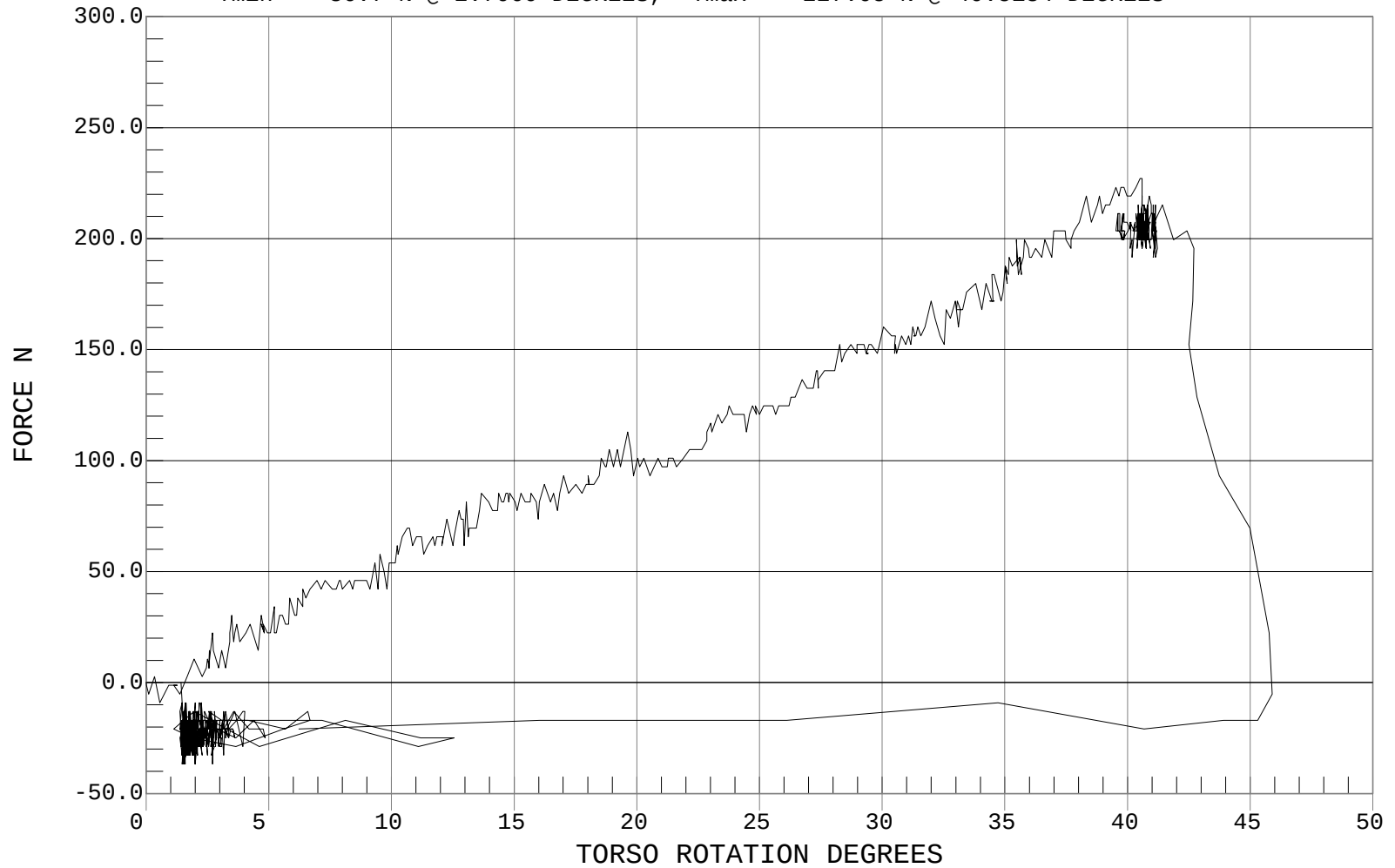
LUMBAR FLEXION

Test Desc.: DUMMY CALIBRATION - LUMBAR FLEXION
Component: DUMMY # 036

Test Date: 01-17-01
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 FORCE, D01045FC.F14

Ymin = -36.7 N @ 2.7060 DEGREES, Ymax = 227.05 N @ 40.5134 DEGREES



DUMMY INSPECTION CHECKLIST

Type: Side Impact Dummy

Dummy Serial Number: 036

Inspected By: Tim Michnay

Date: 1/18/01

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

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

CERTIFICATION DATA

Dummy Serial Number: 037

Calibration Test Results Summary

Dummy Serial Number: 037

Pre- Test Calibration

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

SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

Dummy Serial Number: 037
 Date of Verification: 1/18/01
 Test Number: D0105

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH-Seated Height (mm)	889 – 909	901
RH-Rib Height (mm)	501 – 521	511
HP-Hip Pivot Height (mm)	99 ref.	99
RD-Rib From Back Line (mm)	229 - 241	236
KV-Knee Pivot From Back Line (mm)	511 – 526	520
SW-Knee Pivot to Floor (mm)	490 – 505	494
HW – Hip Width (mm)	356 – 391	380

Technician: _____

Approved By:_____

MGA RESEARCH CORPORATION

HEAD DROP TEST

SIDE IMPACT DUMMY (SID)

Date: 1/18/01

Dummy Serial Number: 037

Test Number: D01051

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 - 25.5	21.3
Relative Humidity (%)	10 - 70	18
Peak Resultant Acceleration	210 - 260 g's	212
Peak Lateral Acceleration	< 10 g's	3
Time Above 100 g.	0.9 - 1.5 msec.	1.1

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



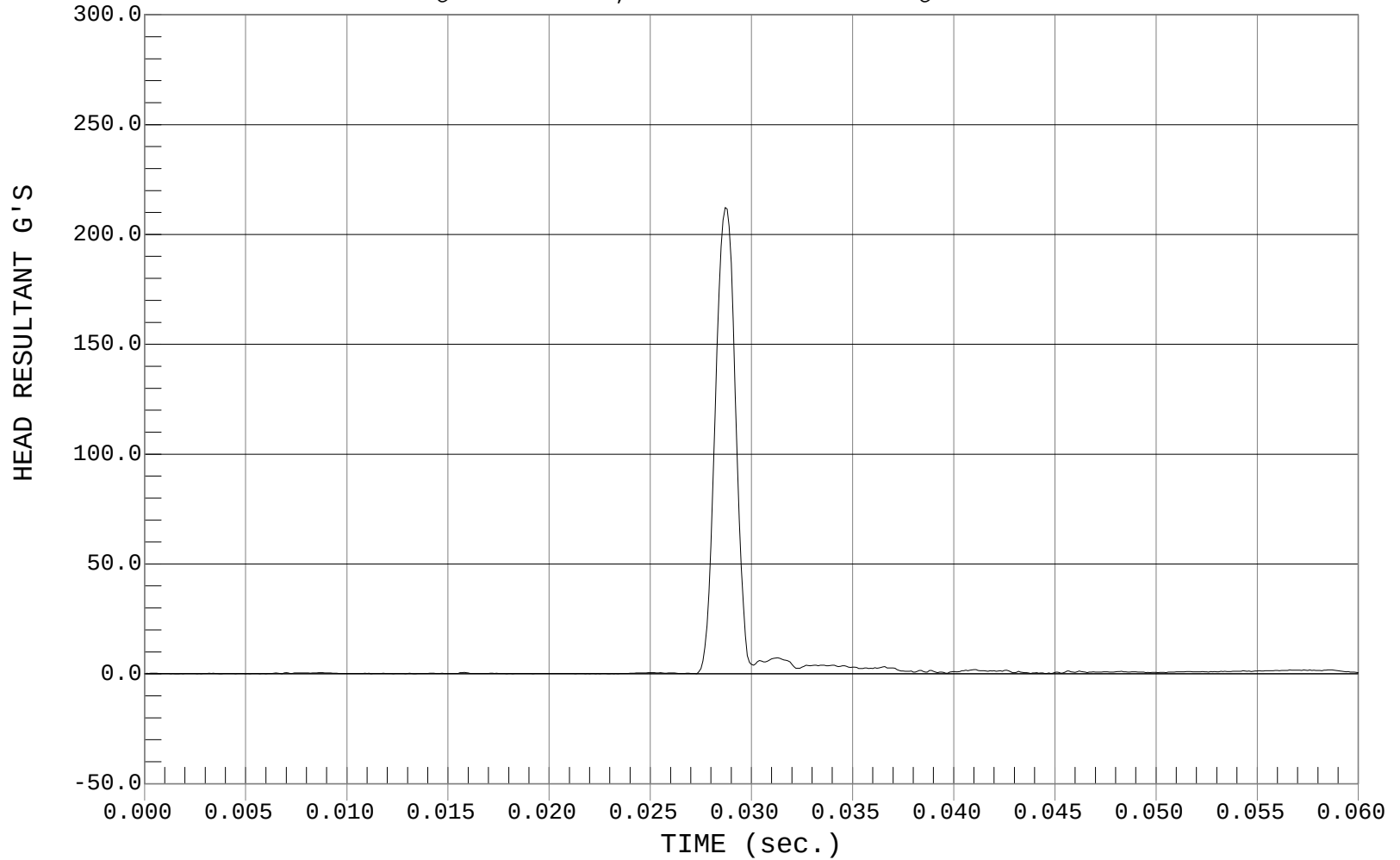
PEAK RESULTANT ACCELERATION

Test Desc.: Dummy Calibration - Head Drop
Component: Dummy #037

Test Date: 01-18-01
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 HEAD RESULTANT ACCELERATION, D01051av.a01

Ymin = .07 G'S @ 0.0013 sec., Ymax = 212.24 G'S @ 0.0287 sec.





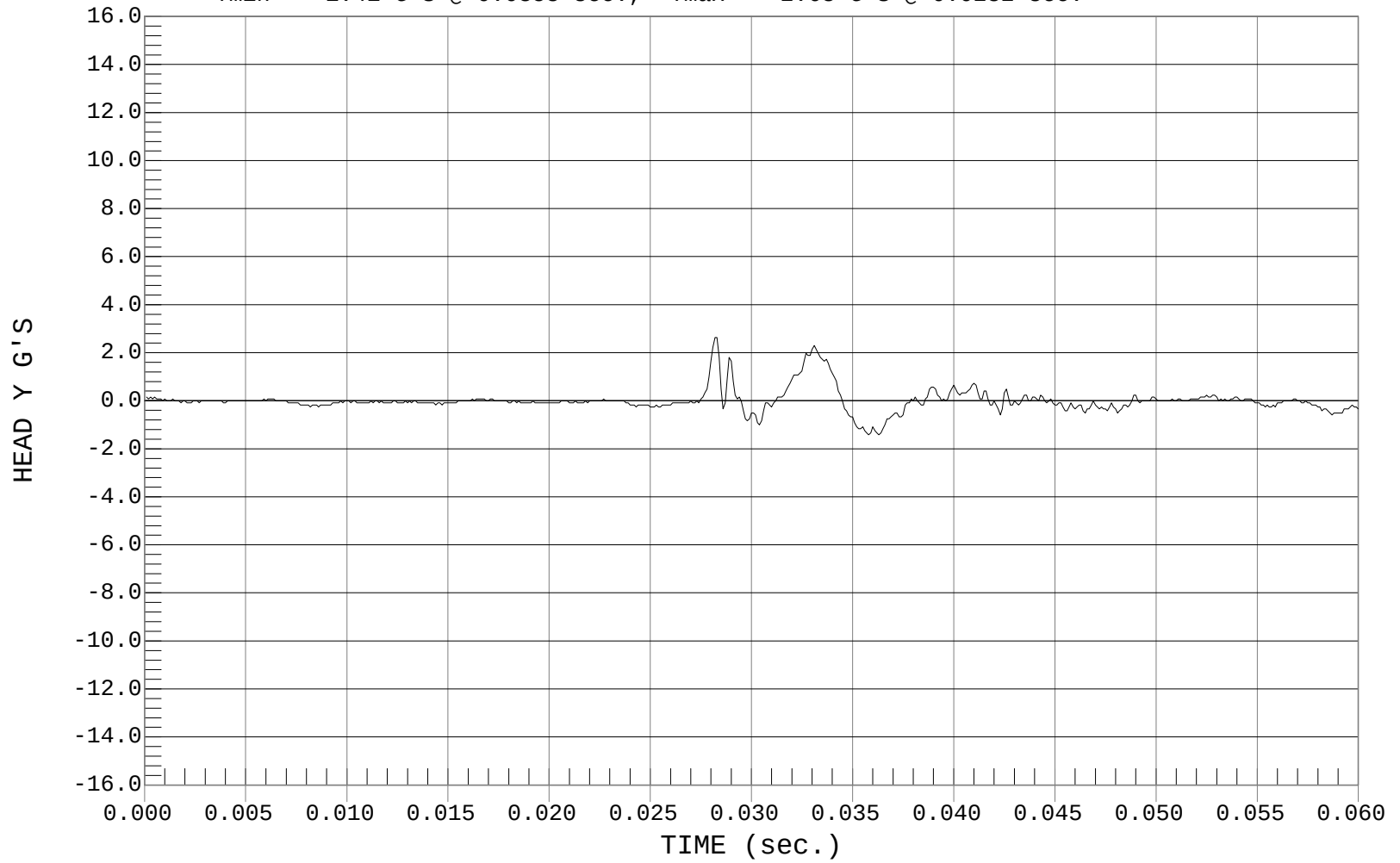
PEAK LATERAL ACCELARATION

Test Desc.: Dummy Calibration - Head Drop
Component: Dummy #037

Test Date: 01-18-01
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 HEAD Y, D01051AR.A02

Ymin = -1.41 G'S @ 0.0358 sec., Ymax = 2.63 G'S @ 0.0282 sec.



MGA RESEARCH CORPORATION
THORAX IMPACT TEST
SIDE IMPACT DUMMY (SID)

Date: 1/5/01
Dummy Serial Number: 037
Test Number: D01052

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.4
Relative Humidity (%)	10 – 70	25
Probe Speed (m/s)	4.27 – 4.33	4.29
Upper Rib (g's)	37 – 46	43
Lower Rib (g's)	37 – 46	44
Lower Spine (g's)	15 - 22	19

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



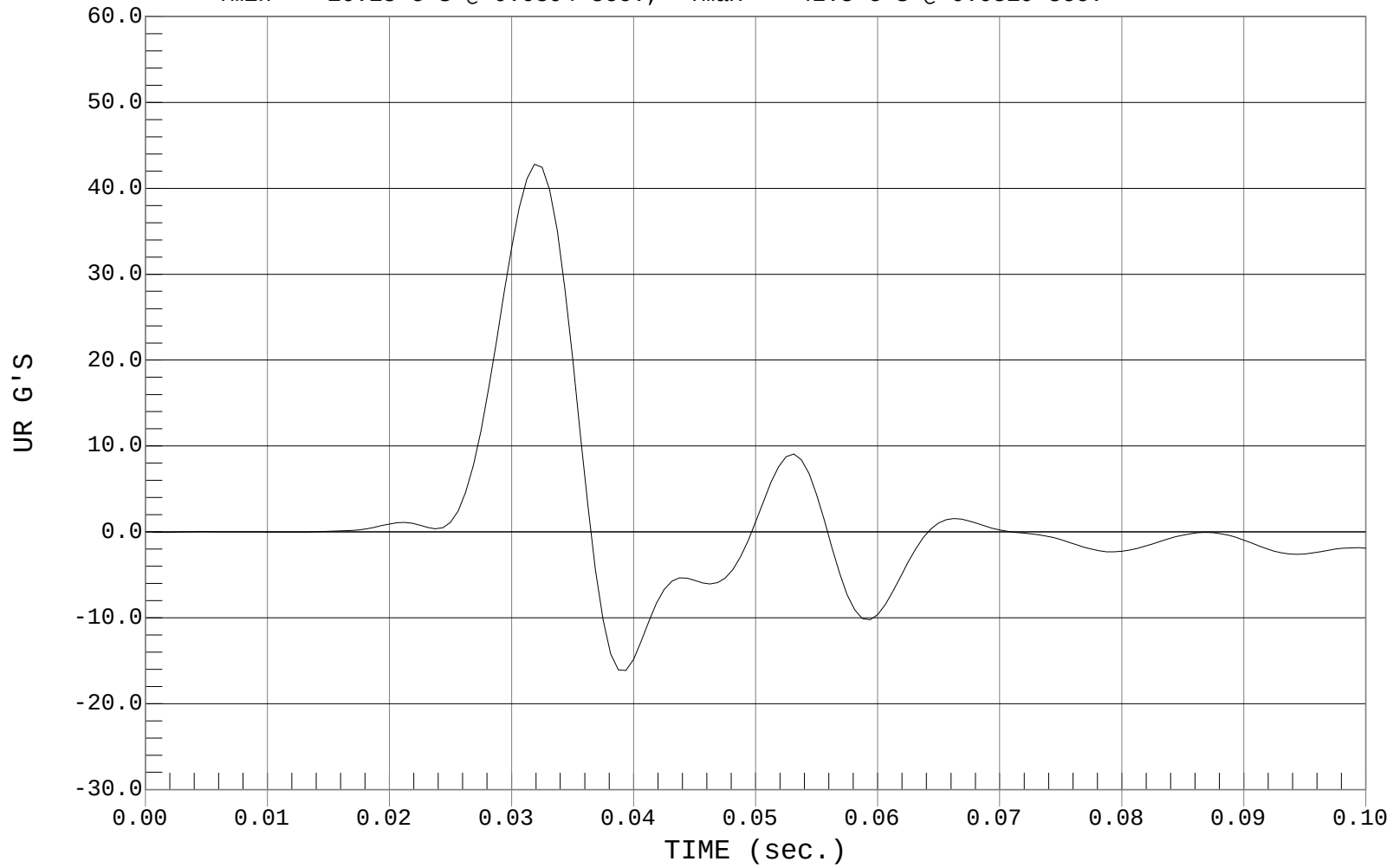
UPPER RIB ACCELERATION

Test Desc.: Dummy Calibration - Thorax Impact
Component: Dummy #037

Test Date: 01-05-01
Speed: 14.08 FT/SEC, 4.29 M/SEC

— 1 UR, D01052FI.R08

Ymin = -16.13 G'S @ 0.0394 sec., Ymax = 42.8 G'S @ 0.0319 sec.





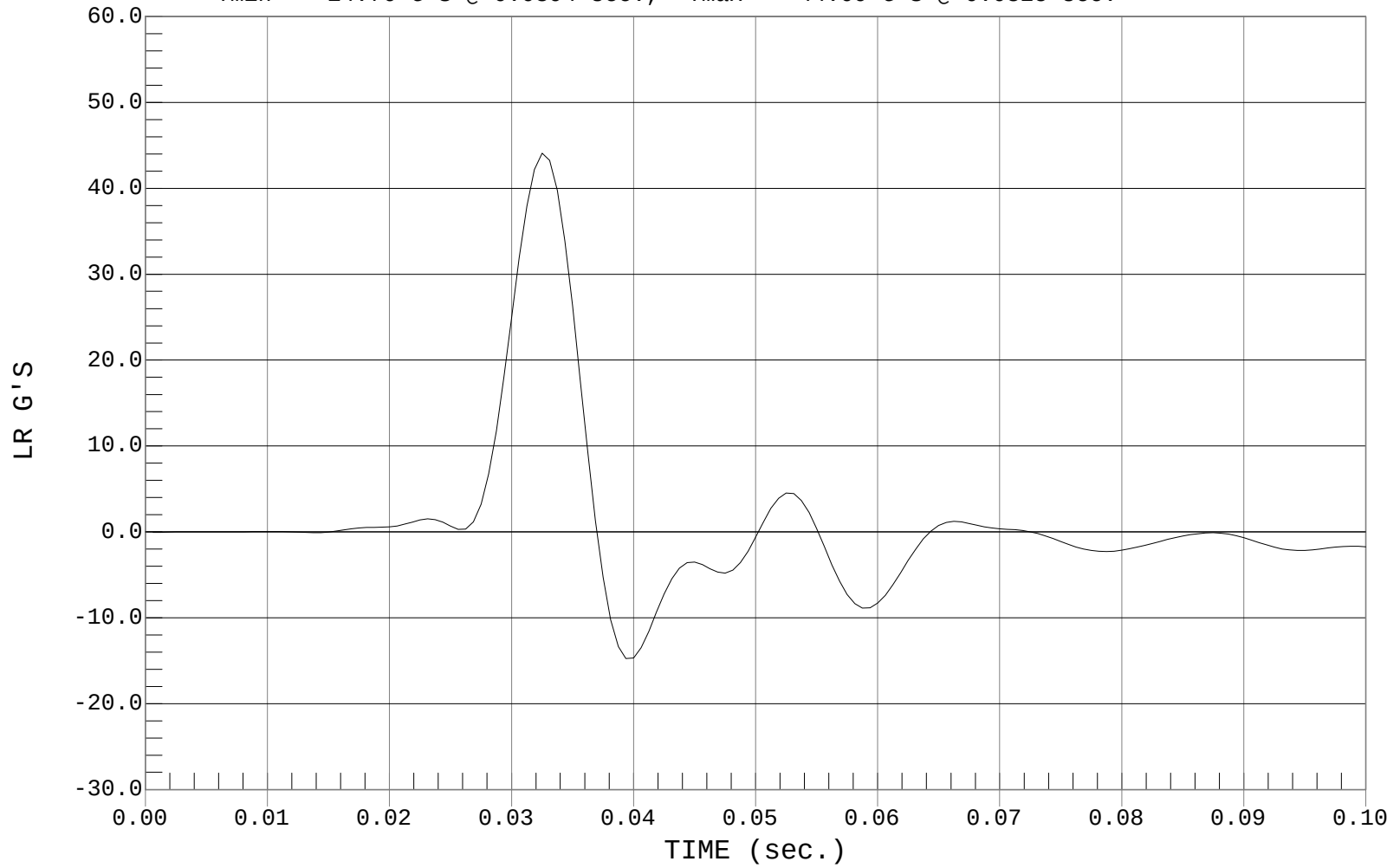
LOWER RIB ACCELERATION

Test Desc.: Dummy Calibration - Thorax Impact
Component: Dummy #037

Test Date: 01-05-01
Speed: 14.08 FT/SEC, 4.29 M/SEC

— 1 LR, D01052FI.R09

Ymin = -14.76 G'S @ 0.0394 sec., Ymax = 44.09 G'S @ 0.0325 sec.





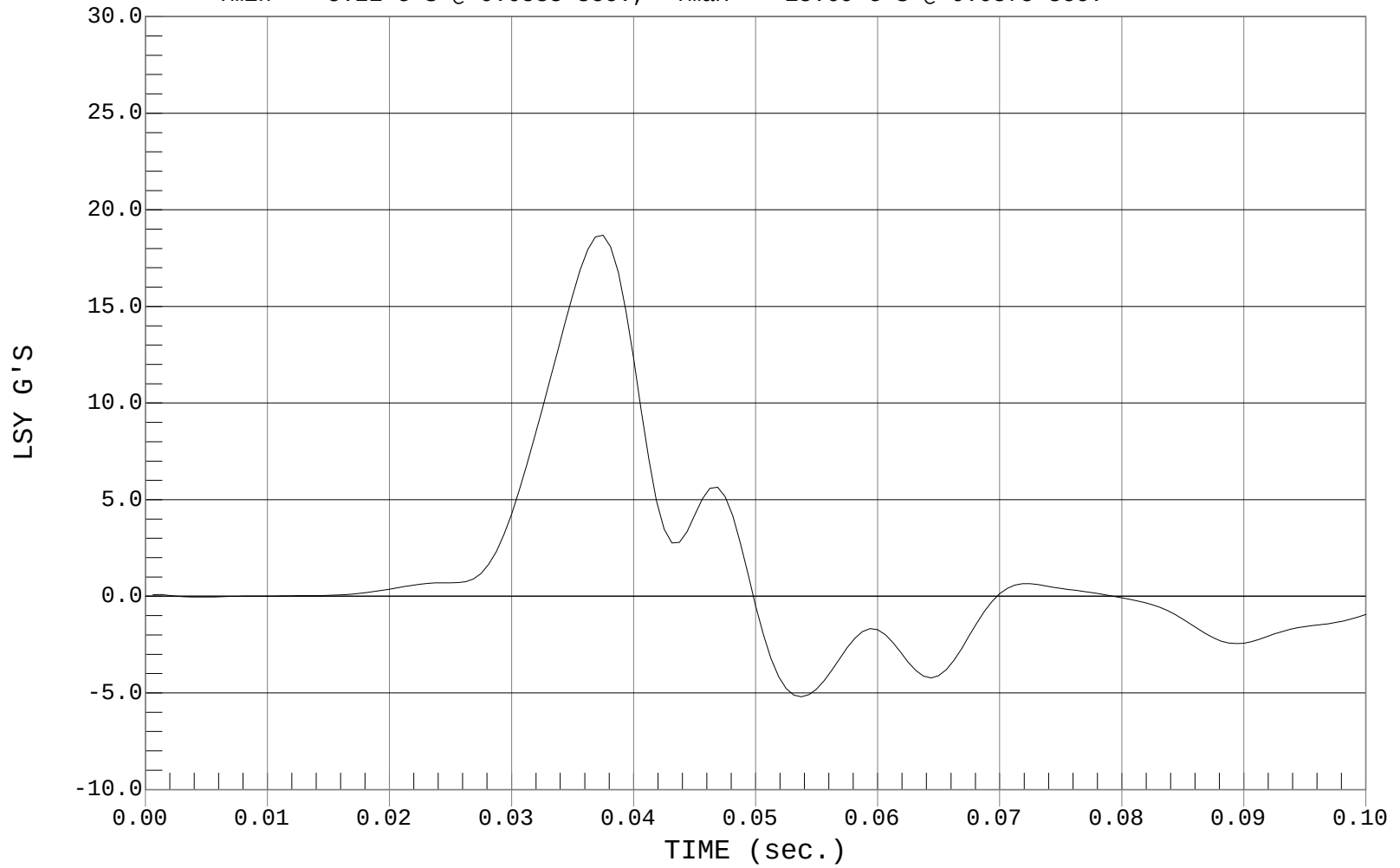
LOWER SPINE ACCELERATION

Test Desc.: Dummy Calibration - Thorax Impact
Component: Dummy #037

Test Date: 01-05-01
Speed: 14.08 FT/SEC, 4.29 M/SEC

— 1 LSY, D01052FI.R10

Ymin = -5.21 G'S @ 0.0538 sec., Ymax = 18.69 G'S @ 0.0375 sec.



MGA RESEARCH CORPORATION
PELVIS IMPACT TEST
SIDE IMPACT DUMMY (SID)

Date: 1/5/01
Dummy Serial Number: 037
Test Number: D01053

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.4
Relative Humidity (%)	10 – 70	25
Probe Speed (m/s)	4.27 – 4.33	4.29
Pelvis Acceleration (g's)	40 – 60	48

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



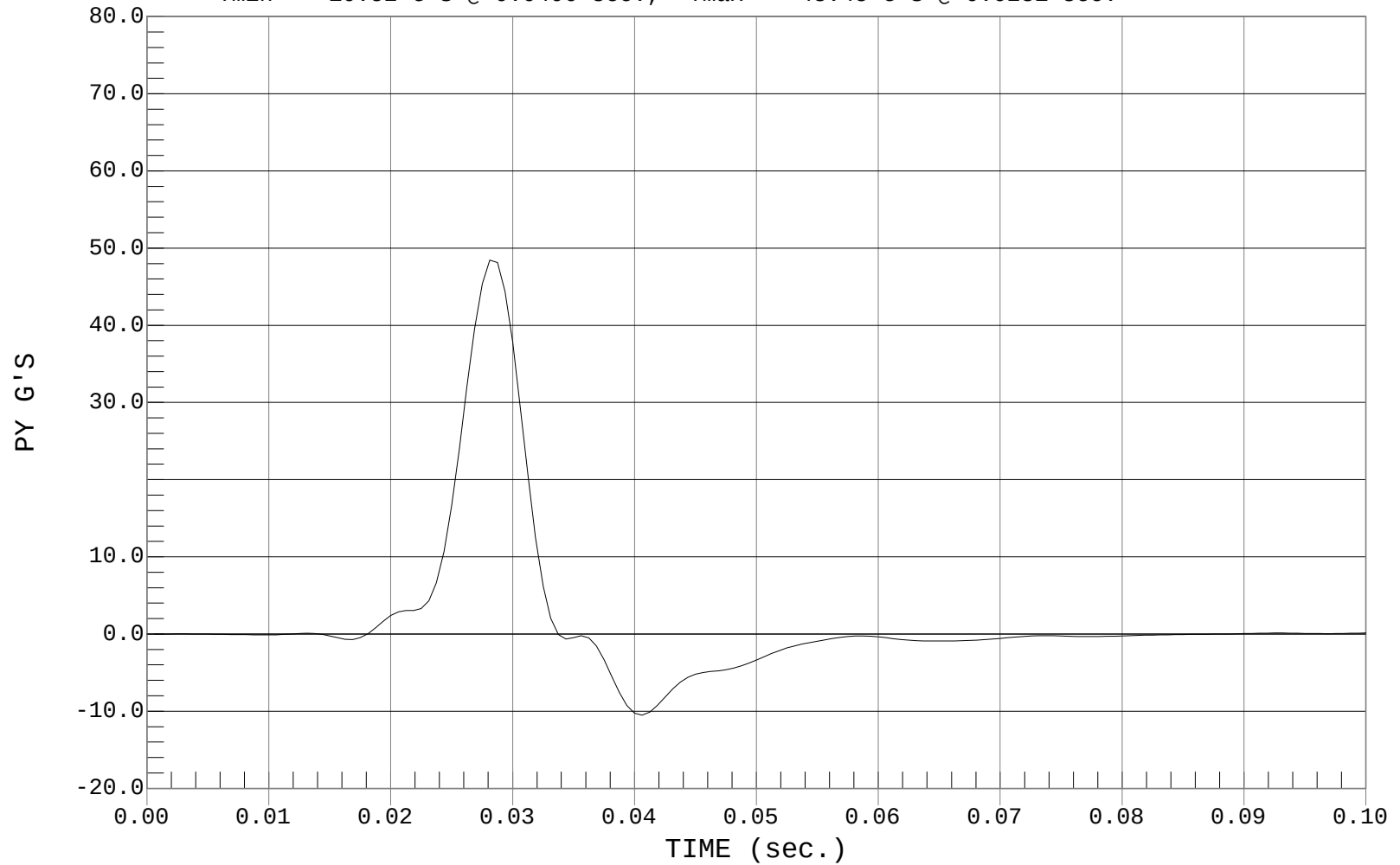
PELVIS ACCELERATION

Test Desc.: Dummy Calibration - Pelvis Impact
Component: Dummy #037

Test Date: 01-05-01
Speed: 14.07 FT/SEC, 4.29 M/SEC

— 1 PY, D01053FI.R11

Ymin = -10.52 G'S @ 0.0406 sec., Ymax = 48.45 G'S @ 0.0281 sec.



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

Date: 1/17/01

Dummy Serial Number: 037

Test Number: D01054

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.4
Relative Humidity (%)	10 – 70	20
Force @ 12.7 mm	104 – 162	146
Force @ 19 mm	163 – 222	199
Force @ 25.4 mm	222 – 280	260
Force @ 33 mm	325 - 391	363

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



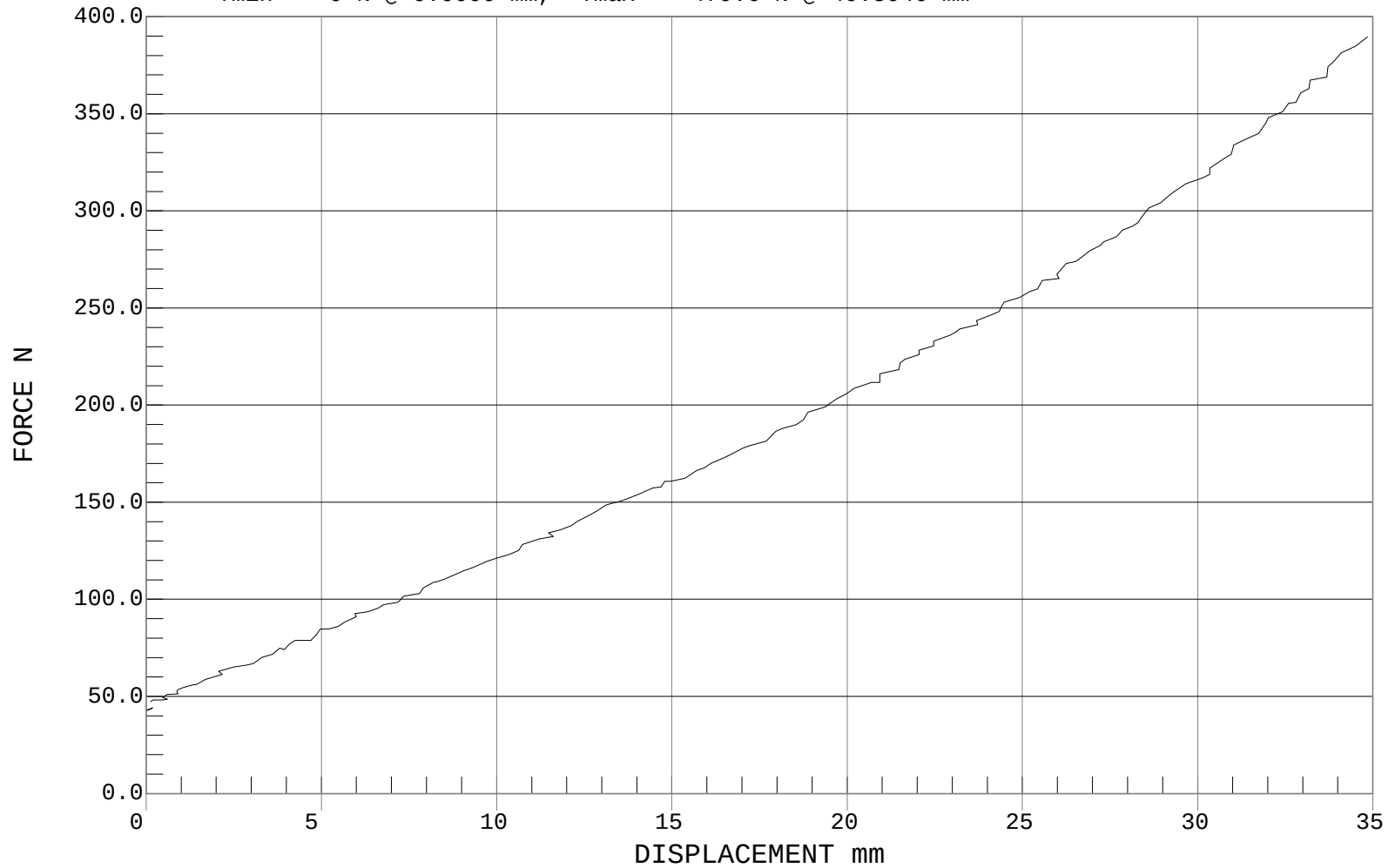
ABDOMEN COMPRESSION

Test Desc.: DUMMY CALIBRATION - ABDOMEN COMPRESSION
Component: DUMMY # 037

Test Date: 01-17-01
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 FORCE, D01054FC.F16

Ymin = 0 N @ 0.0000 mm, Ymax = 479.6 N @ 40.3046 mm



MGA RESEARCH CORPORATION
LUMBAR FLEXION TEST
SIDE IMPACT DUMMY (SID)

Date: 1/17/01

Dummy Serial Number: 037

Test Number: D01055

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.4
Relative Humidity (%)	10 – 70	20
Force @ 0°	0 – 26.7	0
Force @ 20°	97.9 – 151.2	101.7
Force @ 30°	151.2 – 204.6	160.8
Force @ 40°	204.6 – 258.0	235.5
Return Angle	12° maximum	2

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



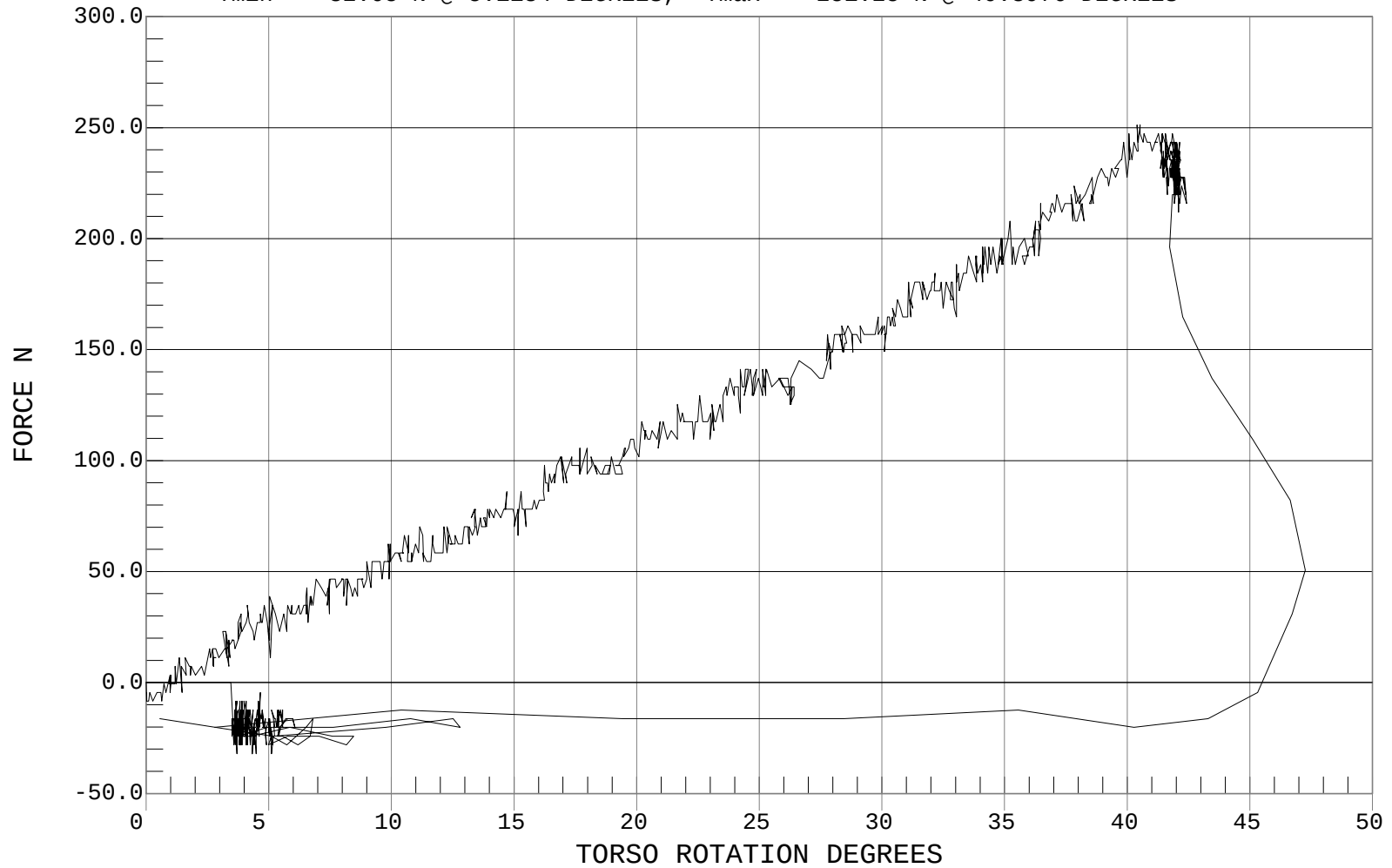
LUMBAR FLEXION

Test Desc.: DUMMY CALIBRATION - LUMBAR FLEXION
Component: DUMMY # 037

Test Date: 01-17-01
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 FORCE, D01055FC.F14

Ymin = -32.05 N @ 5.1134 DEGREES, Ymax = 251.25 N @ 40.3976 DEGREES



DUMMY INSPECTION CHECKLIST

Type: Side Impact Dummy

Dummy Serial Number: 037

Inspected By: Tim Michnay

Date: 1/18/01

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

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

CERTIFICATION DATA

Dummy Serial Number: 036

Calibration Test Results Summary

Dummy Serial Number: 036

Post-Test Calibration

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

SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

Dummy Serial Number: 036
 Date of Verification: 1/30/01
 Test Number: D0113

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH-Seated Height (mm)	889 – 909	901
RH-Rib Height (mm)	501 – 521	505
HP-Hip Pivot Height (mm)	99 ref.	99
RD-Rib From Back Line (mm)	229 - 241	234
KV-Knee Pivot From Back Line (mm)	511 – 526	520
SW-Knee Pivot to Floor (mm)	490 – 505	496
HW – Hip Width (mm)	356 – 391	372

Technician: _____

Approved By:_____

MGA RESEARCH CORPORATION

HEAD DROP TEST

SIDE IMPACT DUMMY (SID)

Date: 1/30/01

Dummy Serial Number: 036

Test Number: D01131

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 - 25.5	21.5
Relative Humidity (%)	10 - 70	30
Peak Resultant Acceleration	210 - 260 g's	216
Peak Lateral Acceleration	< 10 g's	-4
Time Above 100 g.	0.9 - 1.5 msec.	1.2

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



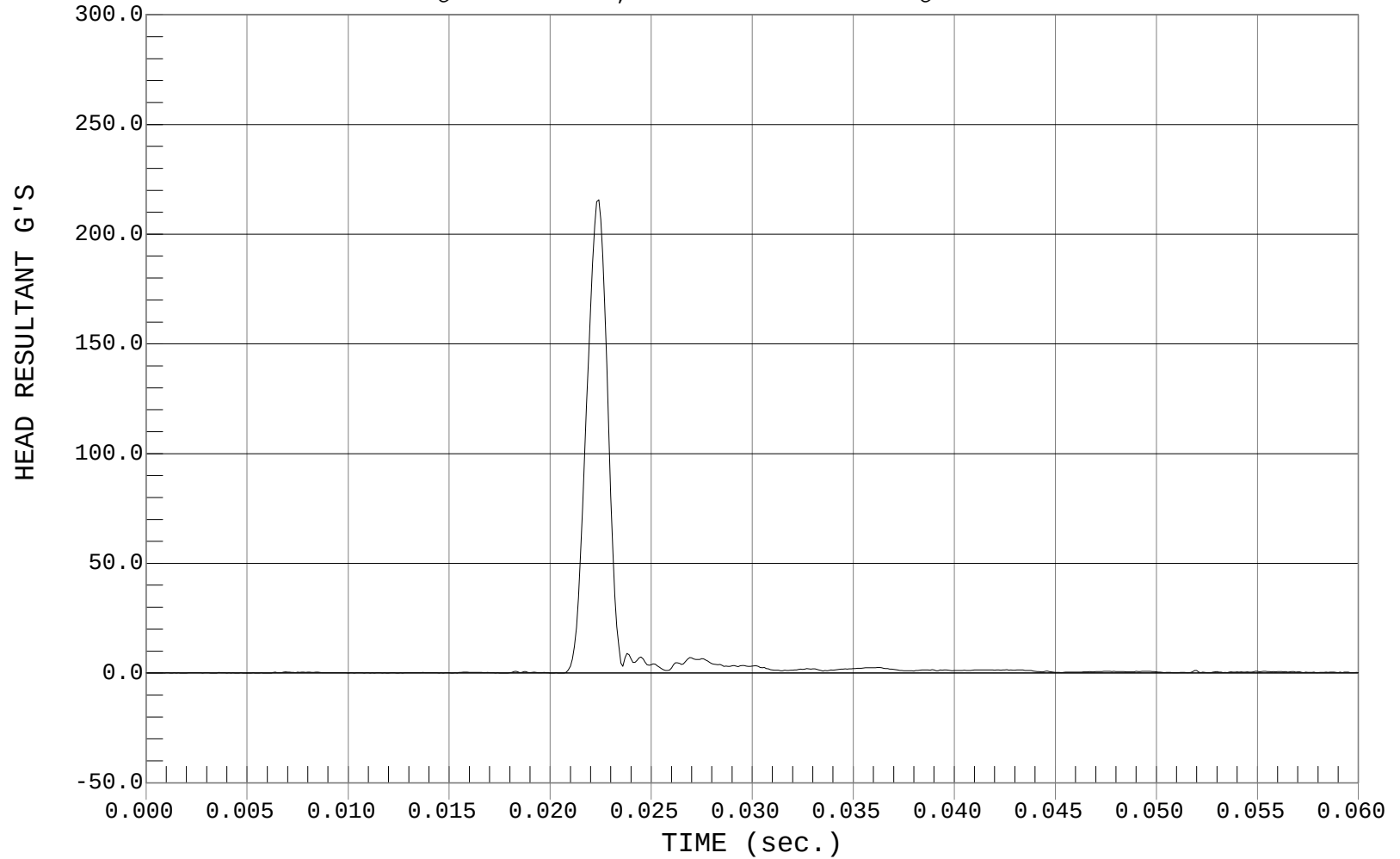
PEAK RESULTANT ACCELERATION

Test Desc.: Dummy Calibration - Head Drop
Component: Dummy #036

Test Date: 01-30-01
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 HEAD RESULTANT ACCELERATION, D01131av.a01

Ymin = .05 G'S @ 0.0012 sec., Ymax = 215.62 G'S @ 0.0224 sec.





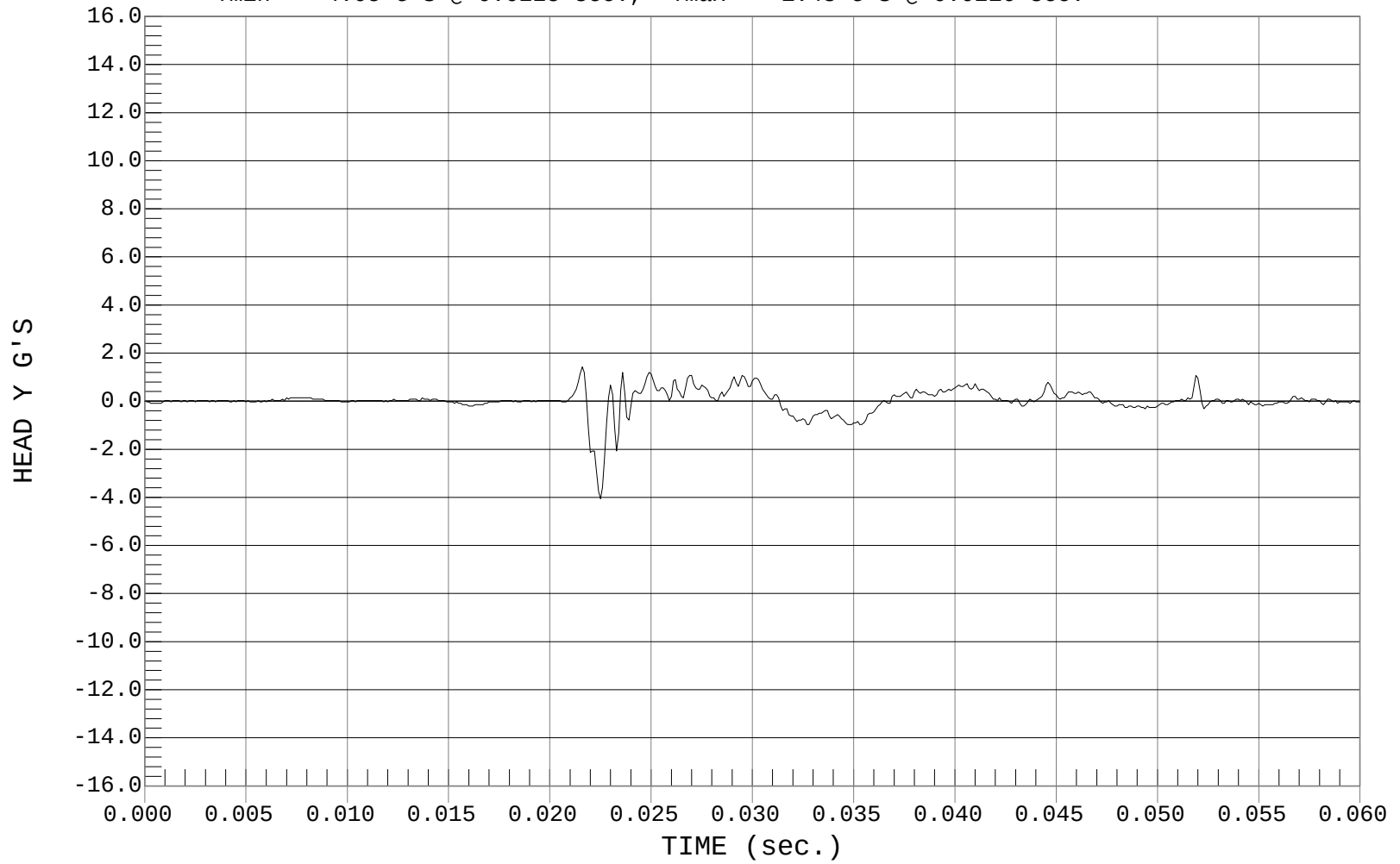
PEAK LATERAL ACCELARATION

Test Desc.: Dummy Calibration - Head Drop
Component: Dummy #036

Test Date: 01-30-01
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 HEAD Y, D01131AR.A02

Ymin = -4.05 G'S @ 0.0225 sec., Ymax = 1.43 G'S @ 0.0216 sec.



MGA RESEARCH CORPORATION
THORAX IMPACT TEST
SIDE IMPACT DUMMY (SID)

Date: 1/30/01

Dummy Serial Number: 036

Test Number: D01132

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.4
Relative Humidity (%)	10 – 70	28
Probe Speed (m/s)	4.27 – 4.33	4.28
Upper Rib (g's)	37 – 46	46
Lower Rib (g's)	37 – 46	41
Lower Spine (g's)	15 - 22	19

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



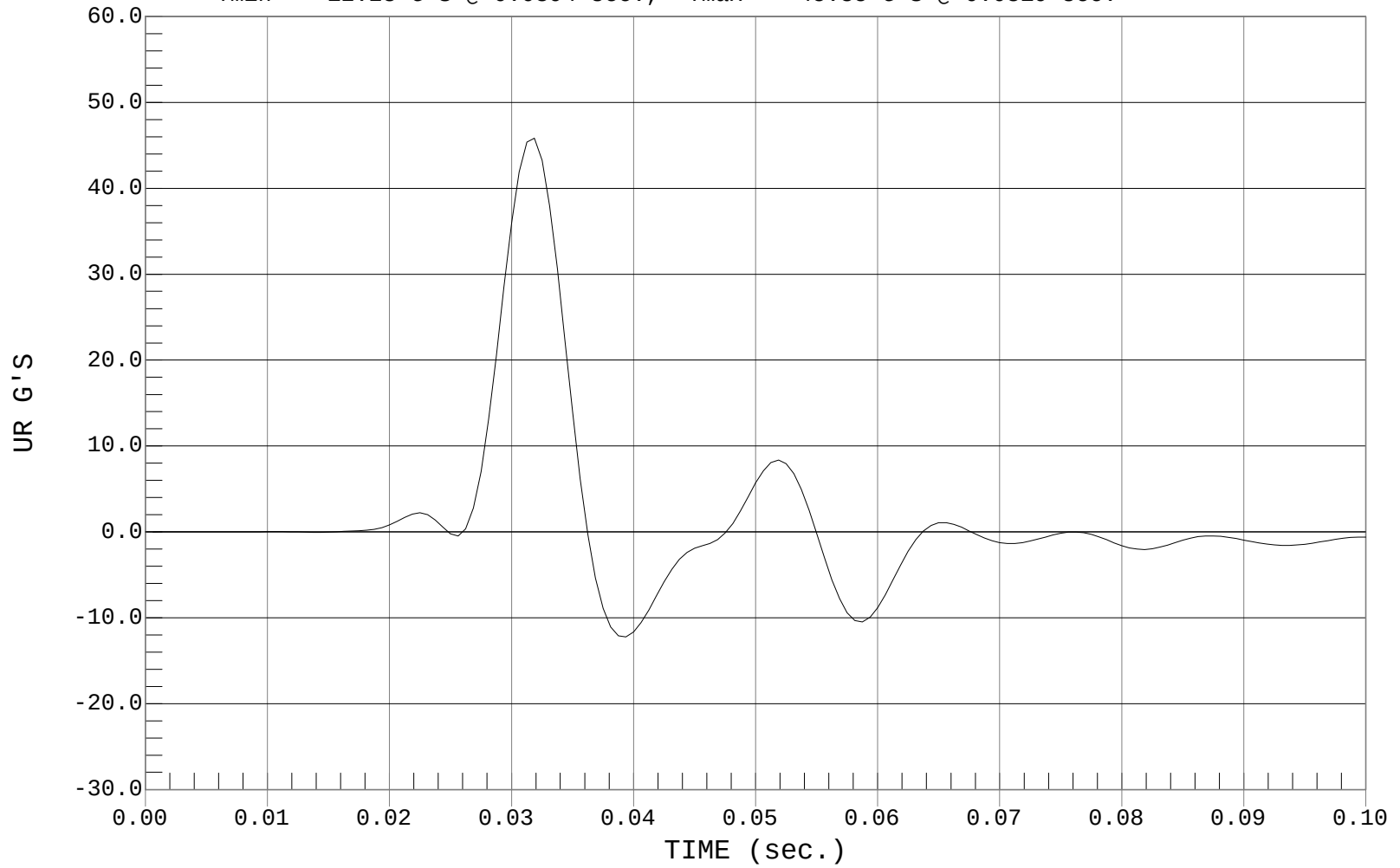
UPPER RIB ACCELERATION

Test Desc.: Dummy Calibration - Thorax Impact
Component: Dummy #036

Test Date: 01-30-01
Speed: 14.03 FT/SEC, 4.28 M/SEC

— 1 UR, D01132FI.R08

Ymin = -12.23 G'S @ 0.0394 sec., Ymax = 45.85 G'S @ 0.0319 sec.





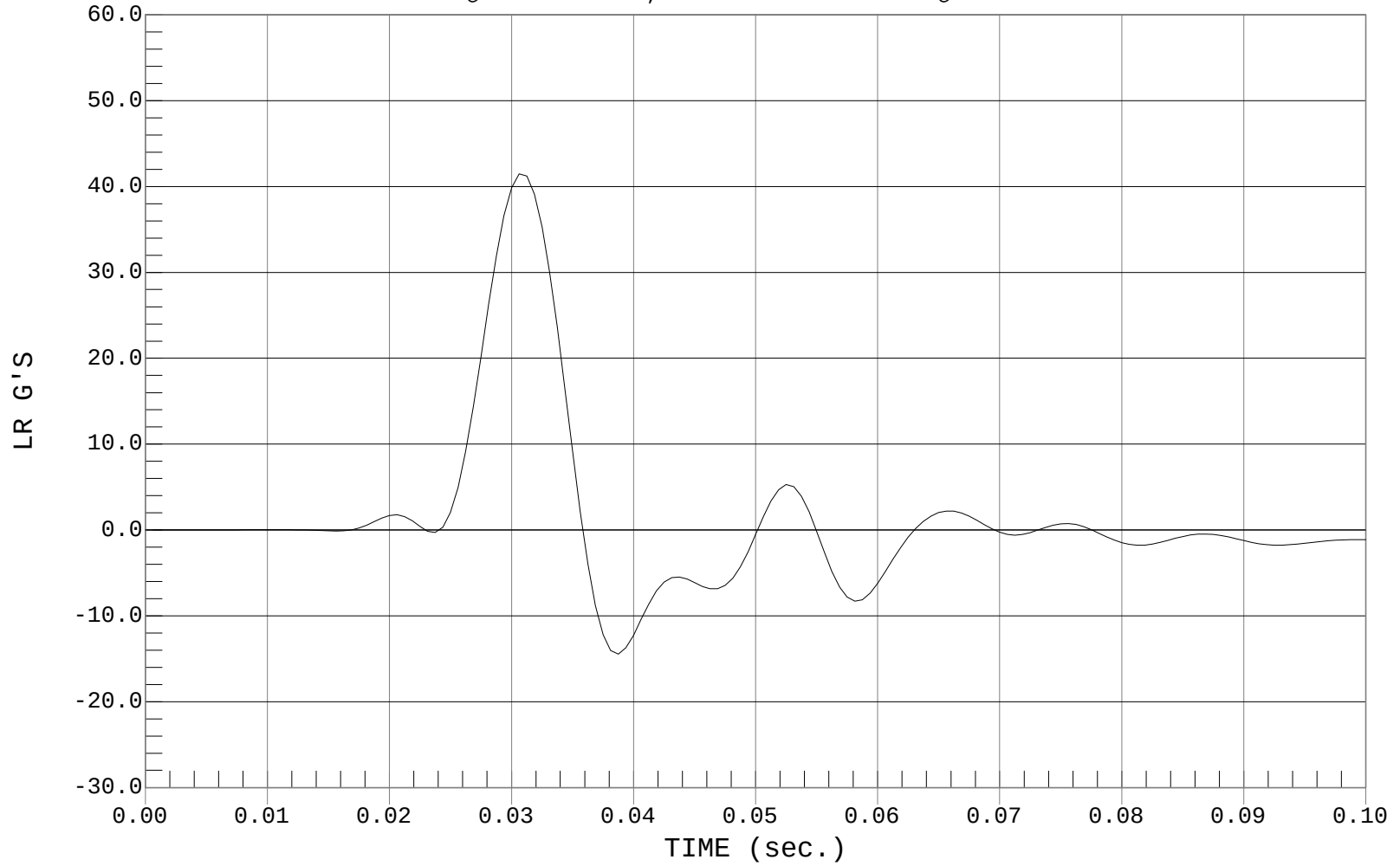
LOWER RIB ACCELERATION

Test Desc.: Dummy Calibration - Thorax Impact
Component: Dummy #036

Test Date: 01-30-01
Speed: 14.03 FT/SEC, 4.28 M/SEC

— 1 LR, D01132FI.R09

Ymin = -14.46 G'S @ 0.0388 sec., Ymax = 41.47 G'S @ 0.0306 sec.





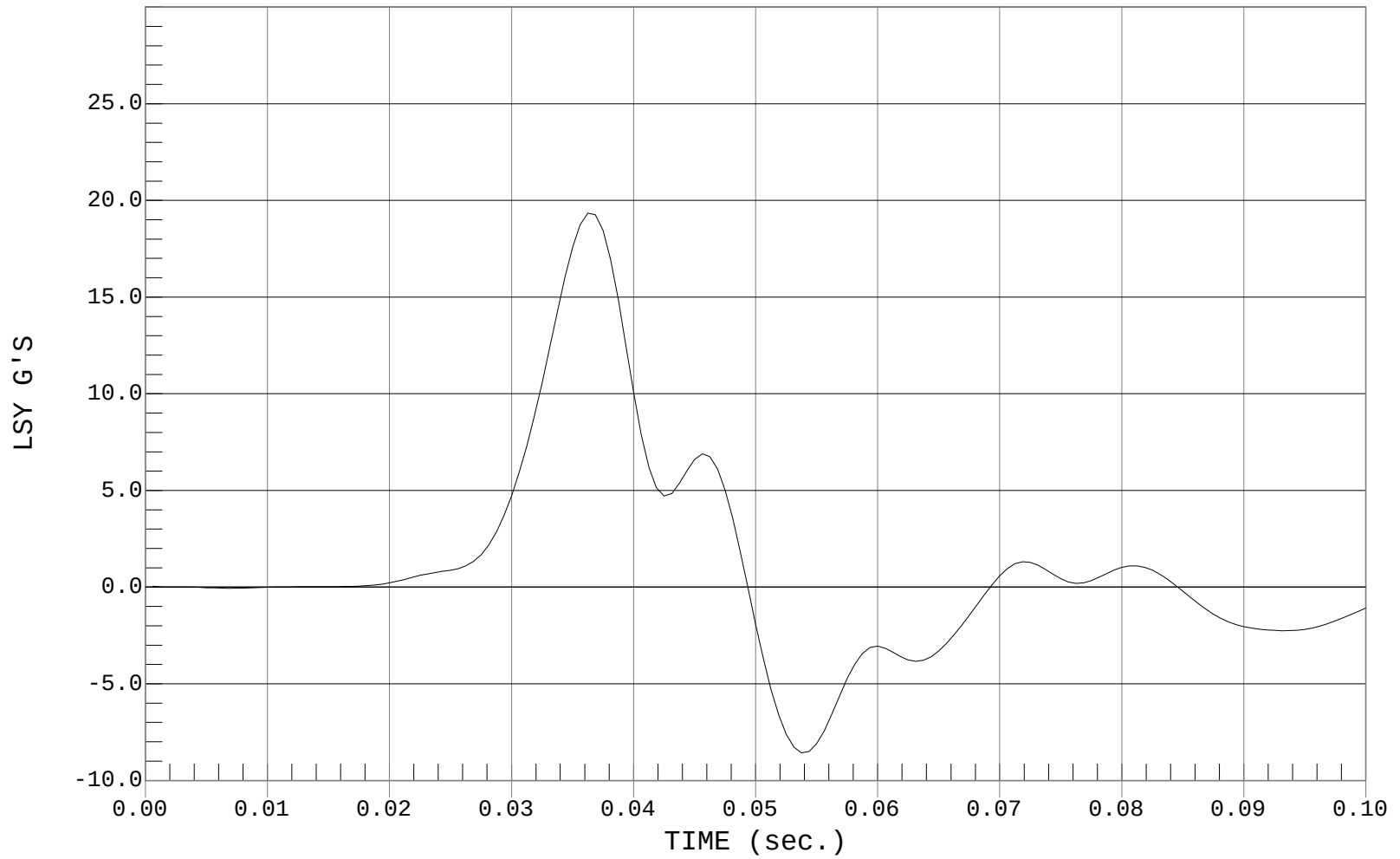
LOWER SPINE ACCELERATION

Test Desc.: Dummy Calibration - Thorax Impact
Component: Dummy #036

Test Date: 01-30-01
Speed: 14.03 FT/SEC, 4.28 M/SEC

— 1 LSY, D01132FI.R10

Ymin = -8.56 G'S @ 0.0538 sec., Ymax = 19.34 G'S @ 0.0363 sec.



MGA RESEARCH CORPORATION
PELVIS IMPACT TEST
SIDE IMPACT DUMMY (SID)

Date: 1/30/01

Dummy Serial Number: 036

Test Number: D01133

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.4
Relative Humidity (%)	10 – 70	28
Probe Speed (m/s)	4.27 – 4.33	4.27
Pelvis Acceleration (g's)	40 – 60	45

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



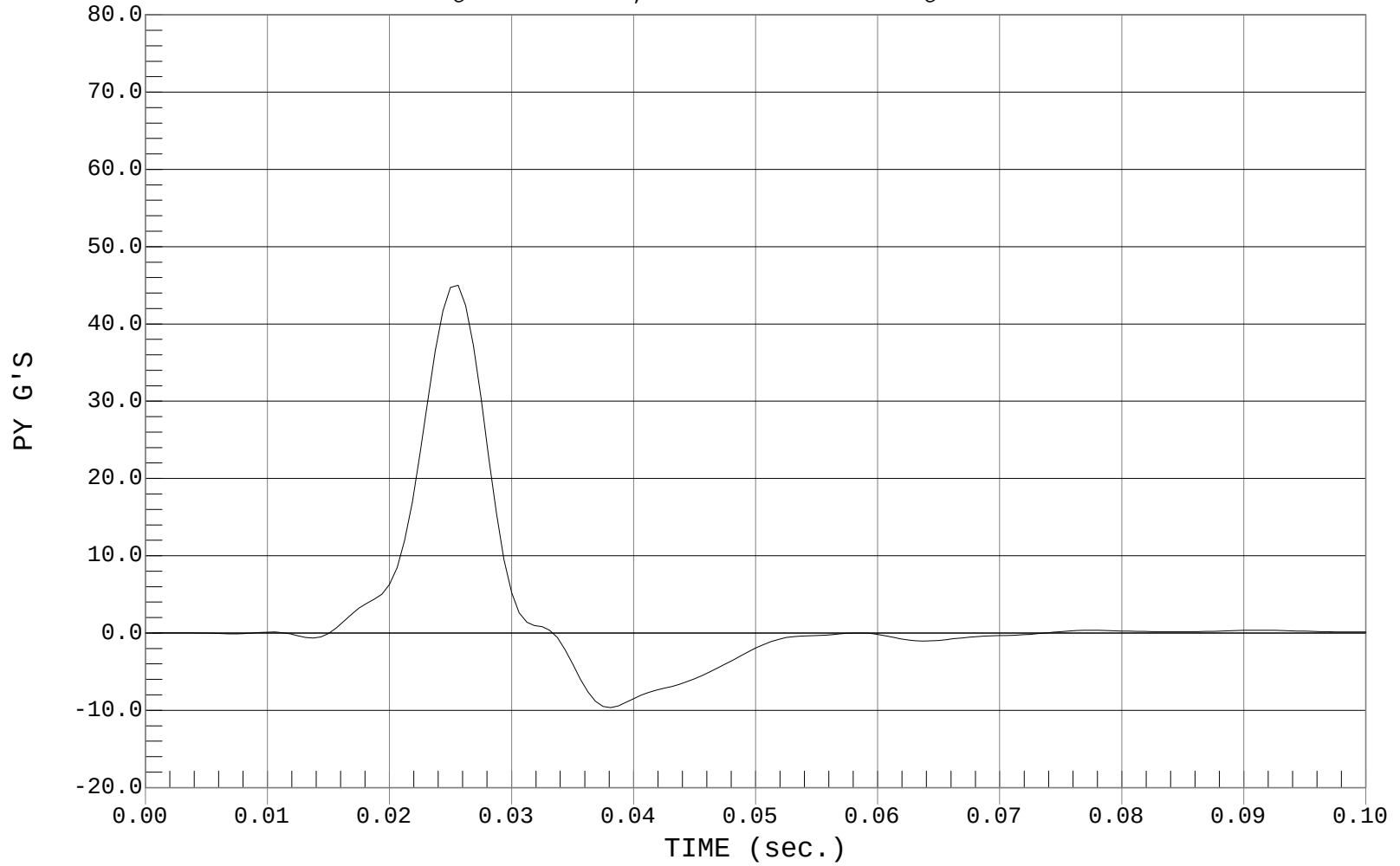
PELVIS ACCELERATION

Test Desc.: Dummy Calibration - Pelvis Impact
Component: Dummy #036

Test Date: 01-30-01
Speed: 14.01 FT/SEC, 4.27 M/SEC

— 1 PY, D01133FI.R11

Ymin = -9.66 G'S @ 0.0381 sec., Ymax = 45.01 G'S @ 0.0256 sec.



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

Date: 1/30/01

Dummy Serial Number: 036

Test Number: D01134

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.5
Relative Humidity (%)	10 – 70	29
Force @ 12.7 mm	104 – 162	155
Force @ 19 mm	163 – 222	211
Force @ 25.4 mm	222 – 280	276
Force @ 33 mm	325 - 391	382

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



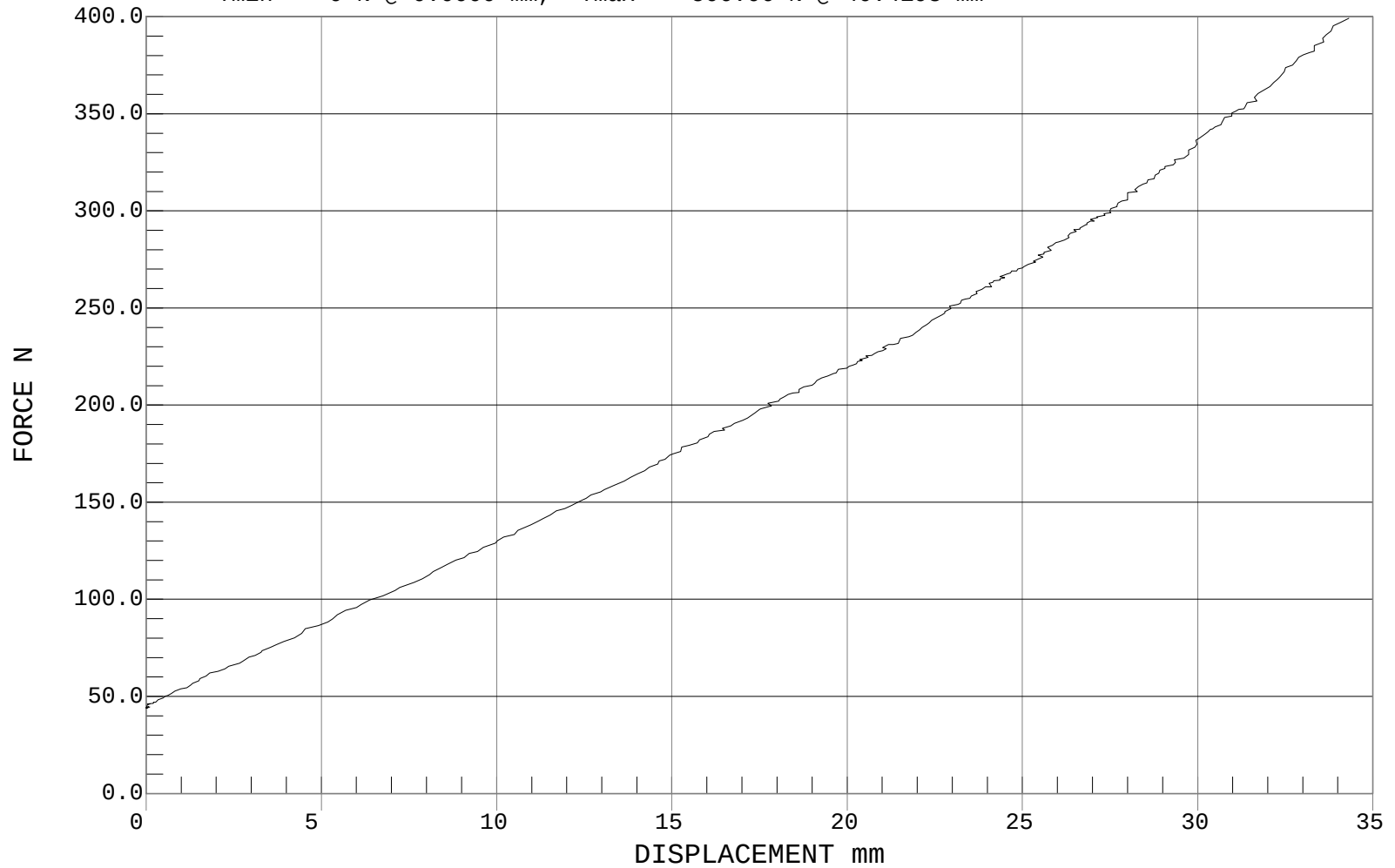
ABDOMEN COMPRESSION

Test Desc.: DUMMY CALIBRATION - ABDOMEN COMPRESSION
Component: DUMMY # 036

Test Date: 01-30-01
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 FORCE, D01134FC.F16

Ymin = 0 N @ 0.0000 mm, Ymax = 506.06 N @ 40.4198 mm



MGA RESEARCH CORPORATION
LUMBAR FLEXION TEST
SIDE IMPACT DUMMY (SID)

Date: 1/30/01

Dummy Serial Number: 036

Test Number: D01135

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.5
Relative Humidity (%)	10 – 70	29
Force @ 0°	0 – 26.7	0
Force @ 20°	97.9 – 151.2	107.8
Force @ 30°	151.2 – 204.6	167.9
Force @ 40°	204.6 – 258.0	219.1
Return Angle	12° maximum	4

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



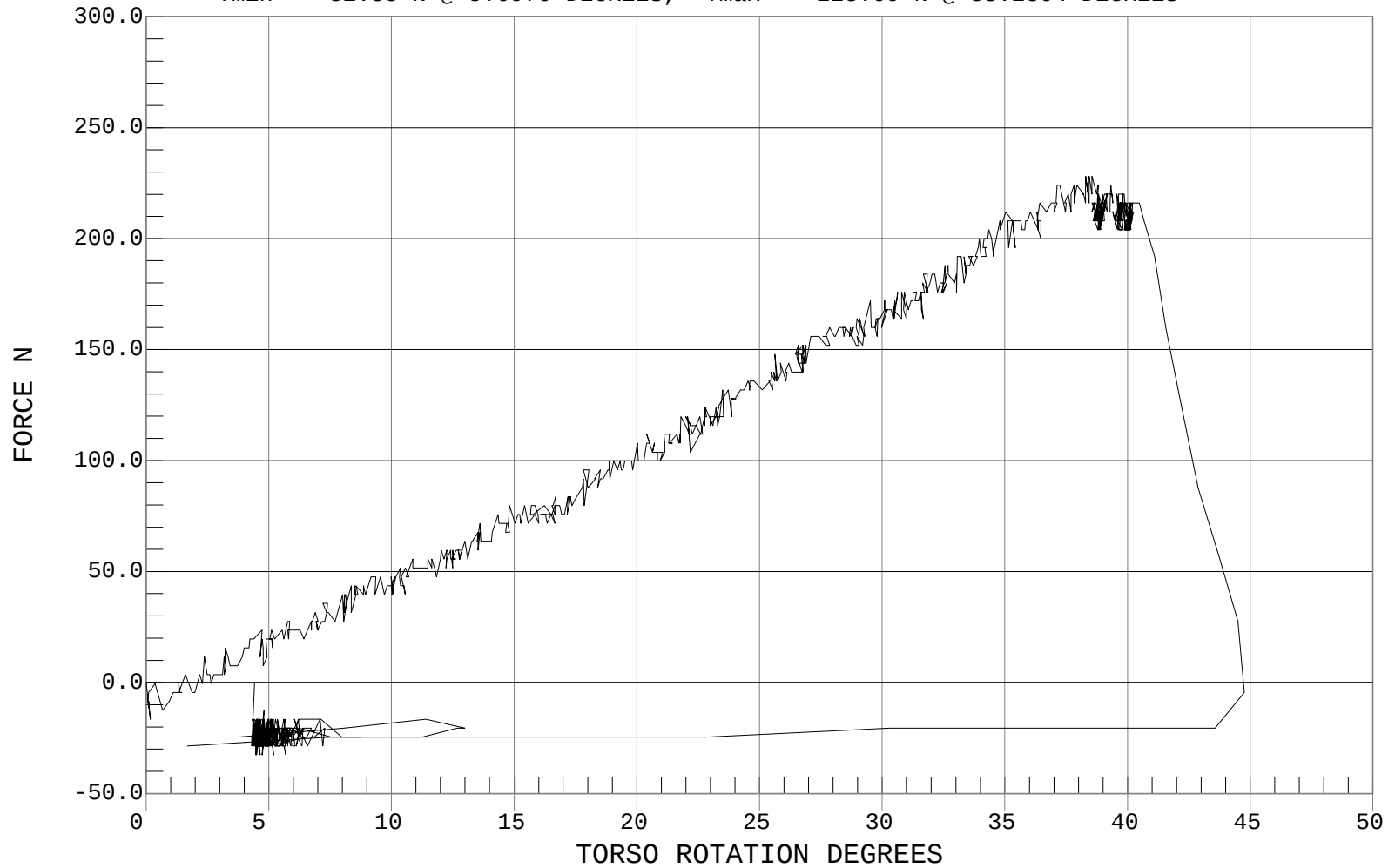
LUMBAR FLEXION

Test Desc.: DUMMY CALIBRATION - LUMBAR FLEXION
Component: DUMMY # 036

Test Date: 01-30-01
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 FORCE, D01135FC.F14

Ymin = -32.55 N @ 5.6970 DEGREES, Ymax = 228.09 N @ 38.2804 DEGREES



DUMMY INSPECTION CHECKLIST

Type: Side Impact Dummy

Dummy Serial Number: 036

Inspected By: Tim Michnay

Date: 1/30/01

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

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

CERTIFICATION DATA

Dummy Serial Number: 037

Calibration Test Results Summary

Dummy Serial Number: 037

Post-Test Calibration

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

SIDE IMPACT DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

Dummy Serial Number: 037
 Date of Verification: 1/30/01
 Test Number: D0114

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH-Seated Height (mm)	889 – 909	901
RH-Rib Height (mm)	501 – 521	505
HP-Hip Pivot Height (mm)	99 ref.	99
RD-Rib From Back Line (mm)	229 - 241	234
KV-Knee Pivot From Back Line (mm)	511 – 526	520
SW-Knee Pivot to Floor (mm)	490 – 505	496
HW – Hip Width (mm)	356 – 391	372

Technician: _____

Approved By:_____

MGA RESEARCH CORPORATION

HEAD DROP TEST

SIDE IMPACT DUMMY (SID)

Date: 1/30/01

Dummy Serial Number: 037

Test Number: D01141

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 - 25.5	21.5
Relative Humidity (%)	10 - 70	30
Peak Resultant Acceleration	210 - 260 g's	226
Peak Lateral Acceleration	< 10 g's	-7
Time Above 100 g.	0.9 - 1.5 msec.	1.1

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



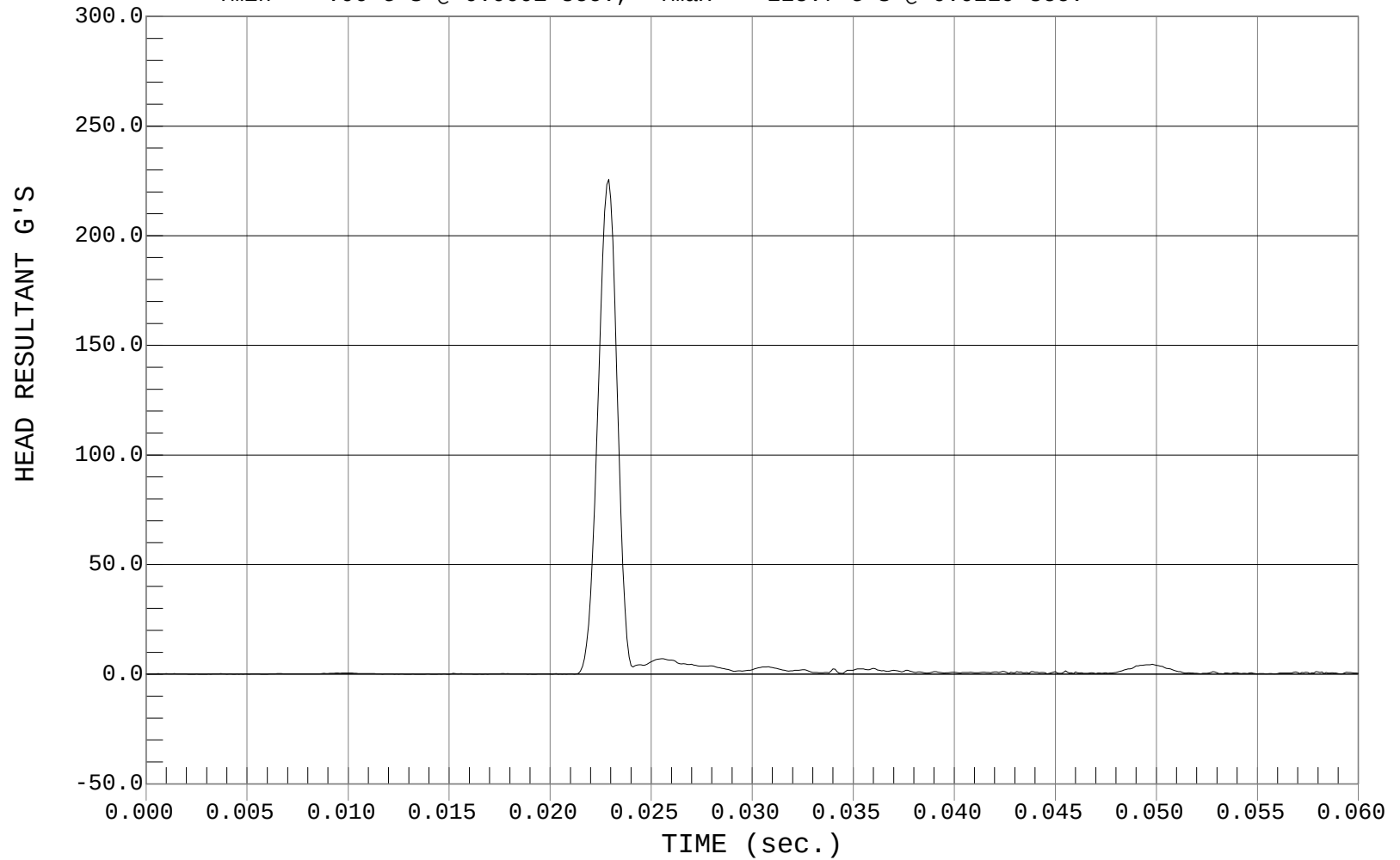
PEAK RESULTANT ACCELERATION

Test Desc.: Dummy Calibration - Head Drop
Component: Dummy #037

Test Date: 01-30-01
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 HEAD RESULTANT ACCELERATION, D01141av.a01

Ymin = .06 G'S @ 0.0001 sec., Ymax = 225.7 G'S @ 0.0229 sec.





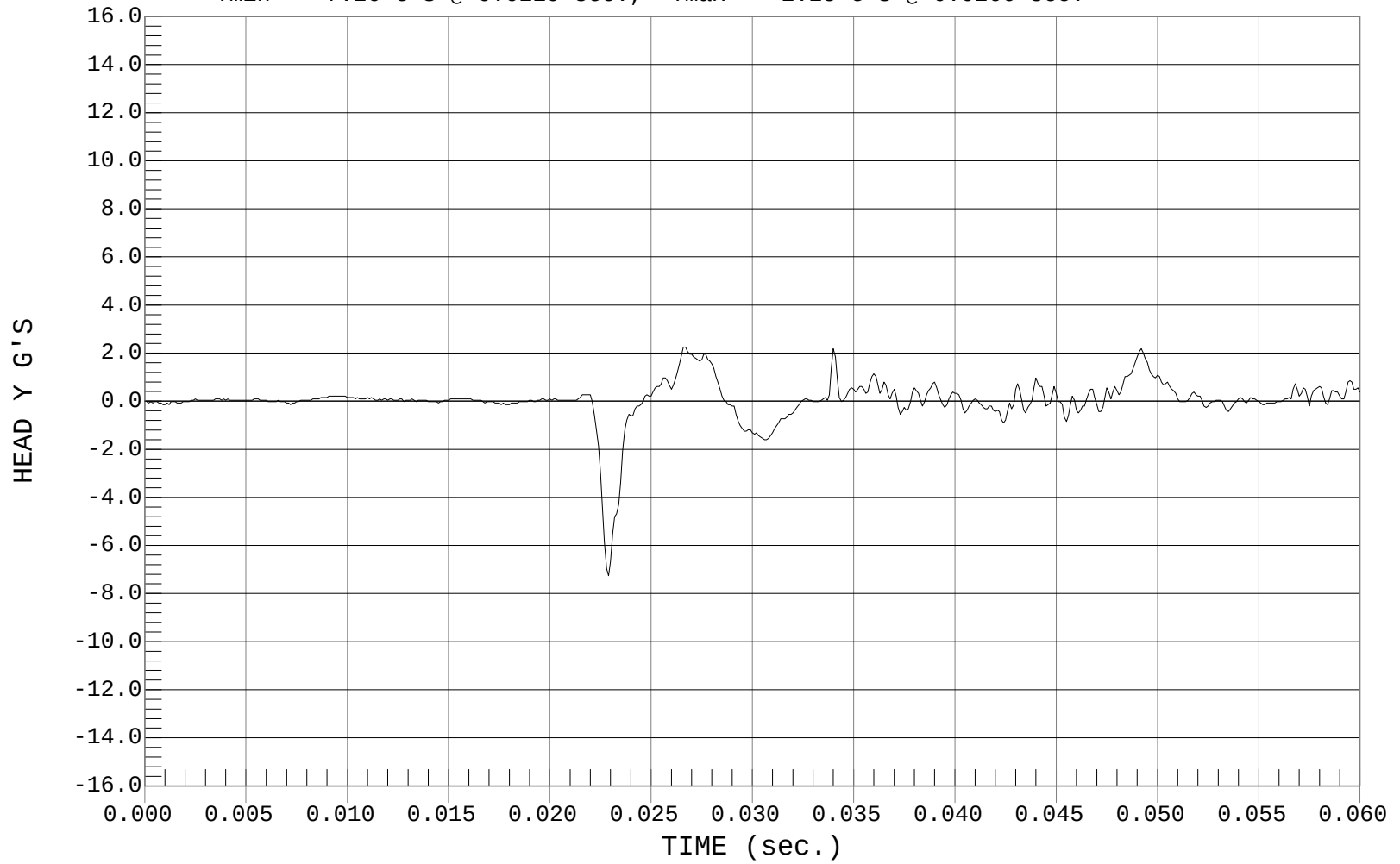
PEAK LATERAL ACCELARATION

Test Desc.: Dummy Calibration - Head Drop
Component: Dummy #037

Test Date: 01-30-01
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 HEAD Y, D01141AR.A02

Ymin = -7.26 G'S @ 0.0229 sec., Ymax = 2.25 G'S @ 0.0266 sec.



MGA RESEARCH CORPORATION
THORAX IMPACT TEST
SIDE IMPACT DUMMY (SID)

Date: 1/30/01

Dummy Serial Number: 037

Test Number: D01142

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.5
Relative Humidity (%)	10 – 70	29
Probe Speed (m/s)	4.27 – 4.33	4.28
Upper Rib (g's)	37 – 46	46
Lower Rib (g's)	37 – 46	45
Lower Spine (g's)	15 - 22	20

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



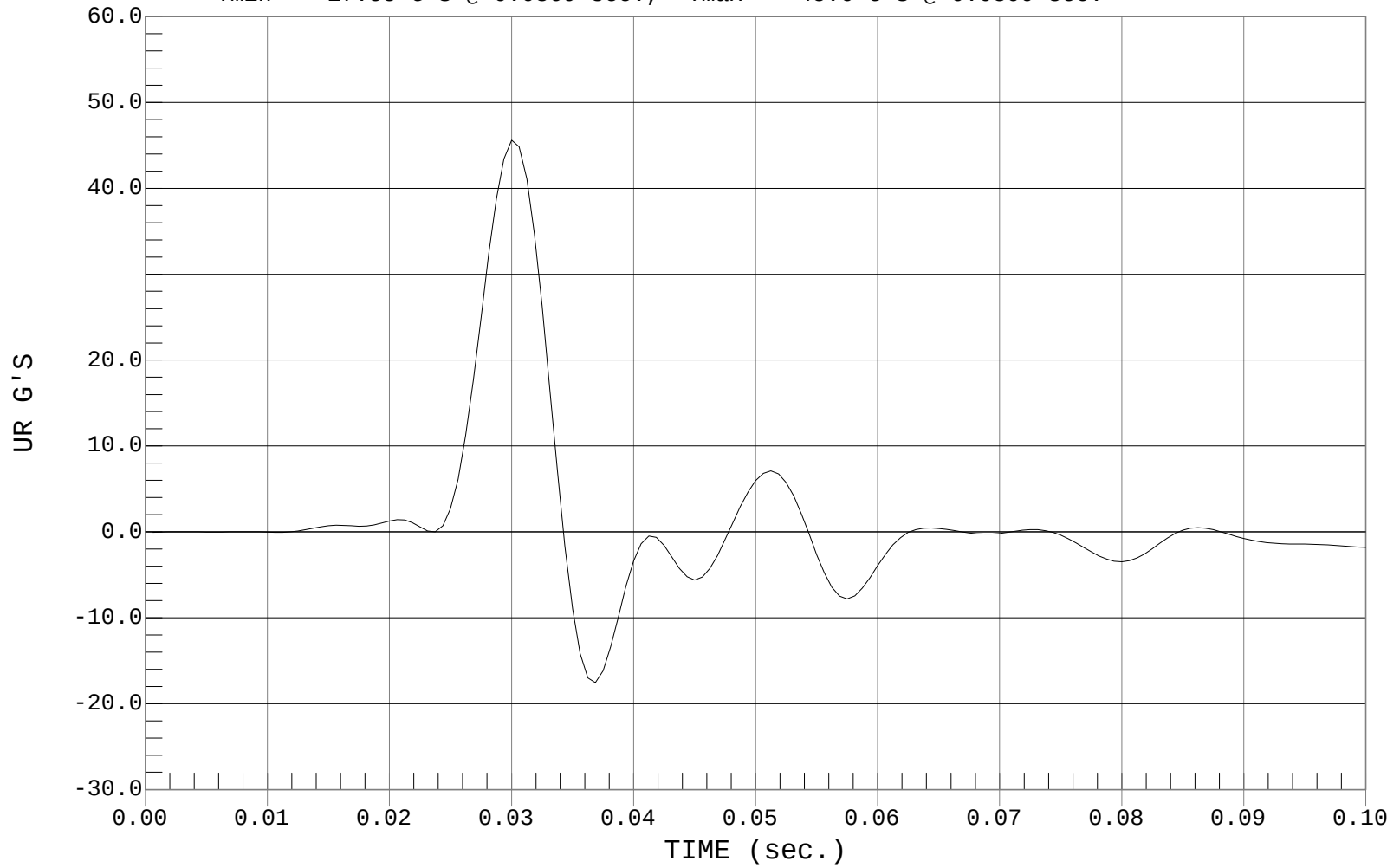
UPPER RIB ACCELERATION

Test Desc.: Dummy Calibration - Thorax Impact
Component: Dummy #037

Test Date: 01-30-01
Speed: 14.03 FT/SEC, 4.28 M/SEC

— 1 UR, D01142FI.R08

Ymin = -17.55 G'S @ 0.0369 sec., Ymax = 45.6 G'S @ 0.0300 sec.





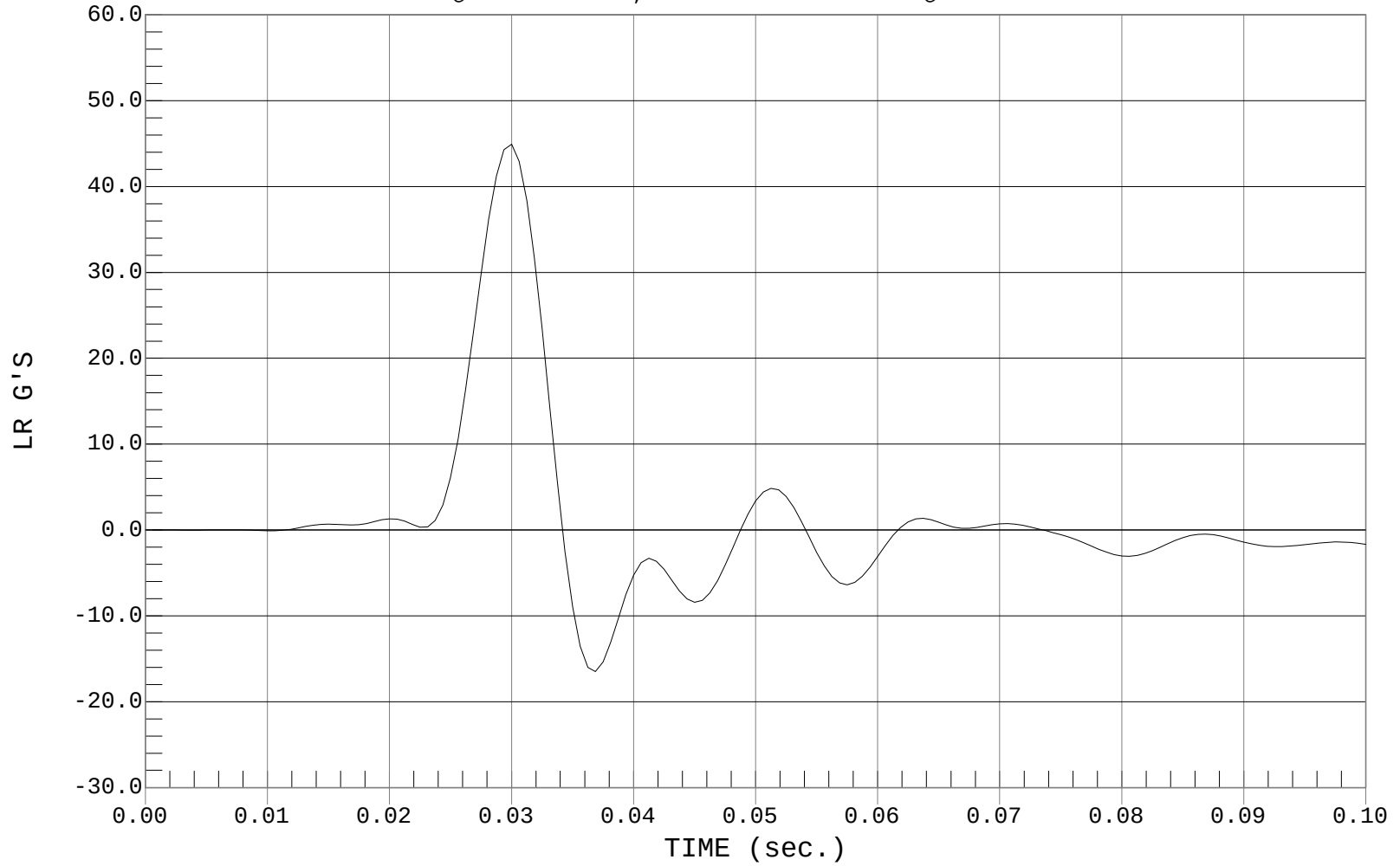
LOWER RIB ACCELERATION

Test Desc.: Dummy Calibration - Thorax Impact
Component: Dummy #037

Test Date: 01-30-01
Speed: 14.03 FT/SEC, 4.28 M/SEC

— 1 LR, D01142FI.R09

Ymin = -16.5 G'S @ 0.0369 sec., Ymax = 44.93 G'S @ 0.0300 sec.





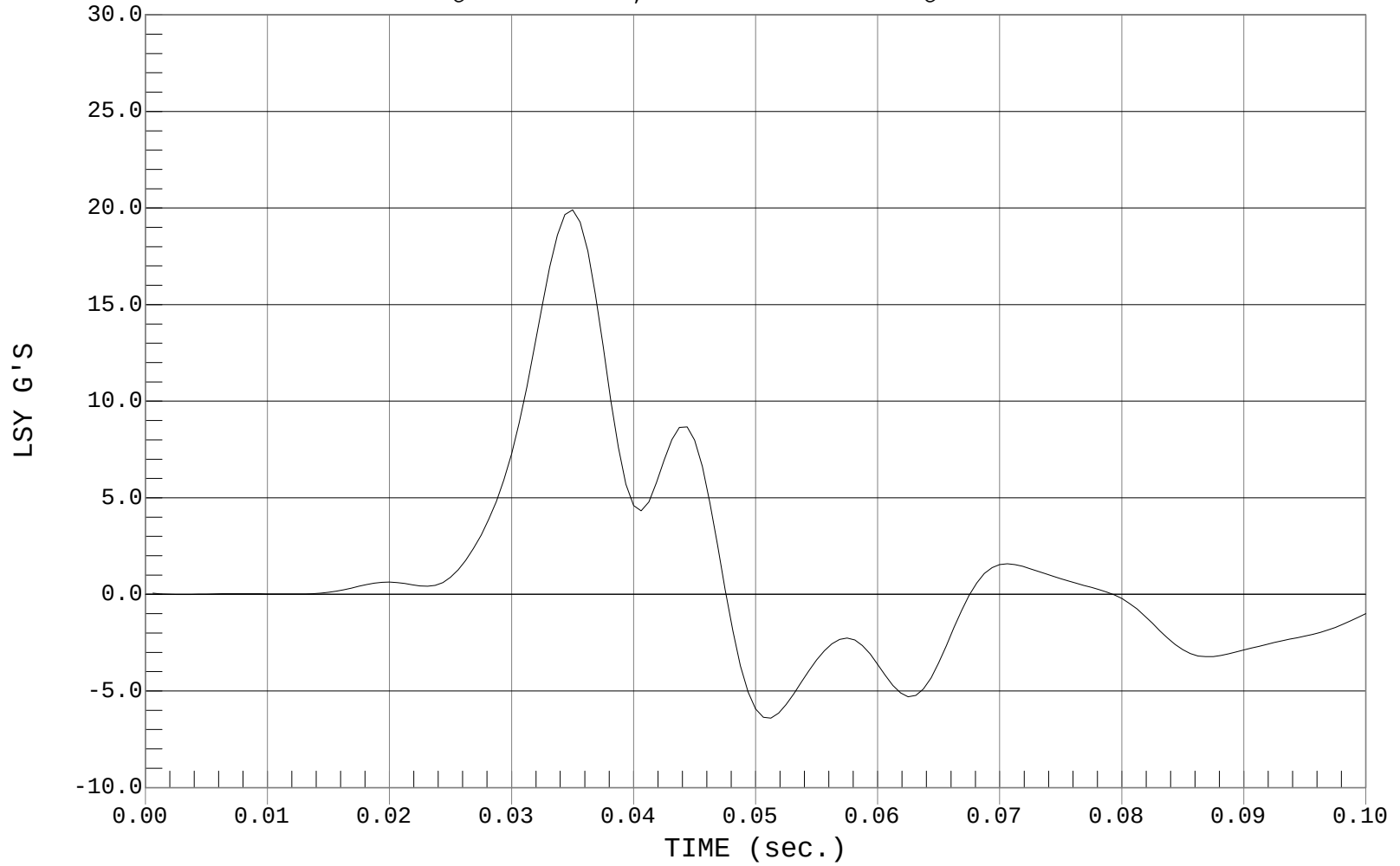
LOWER SPINE ACCELERATION

Test Desc.: Dummy Calibration - Thorax Impact
Component: Dummy #037

Test Date: 01-30-01
Speed: 14.03 FT/SEC, 4.28 M/SEC

— 1 LSY, D01142FI.R10

Ymin = -6.41 G'S @ 0.0513 sec., Ymax = 19.91 G'S @ 0.0350 sec.



MGA RESEARCH CORPORATION
PELVIS IMPACT TEST
SIDE IMPACT DUMMY (SID)

Date: 1/30/01

Dummy Serial Number: 037

Test Number: D01143

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.5
Relative Humidity (%)	10 – 70	29
Probe Speed (m/s)	4.27 – 4.33	4.27
Pelvis Acceleration (g's)	40 – 60	49

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



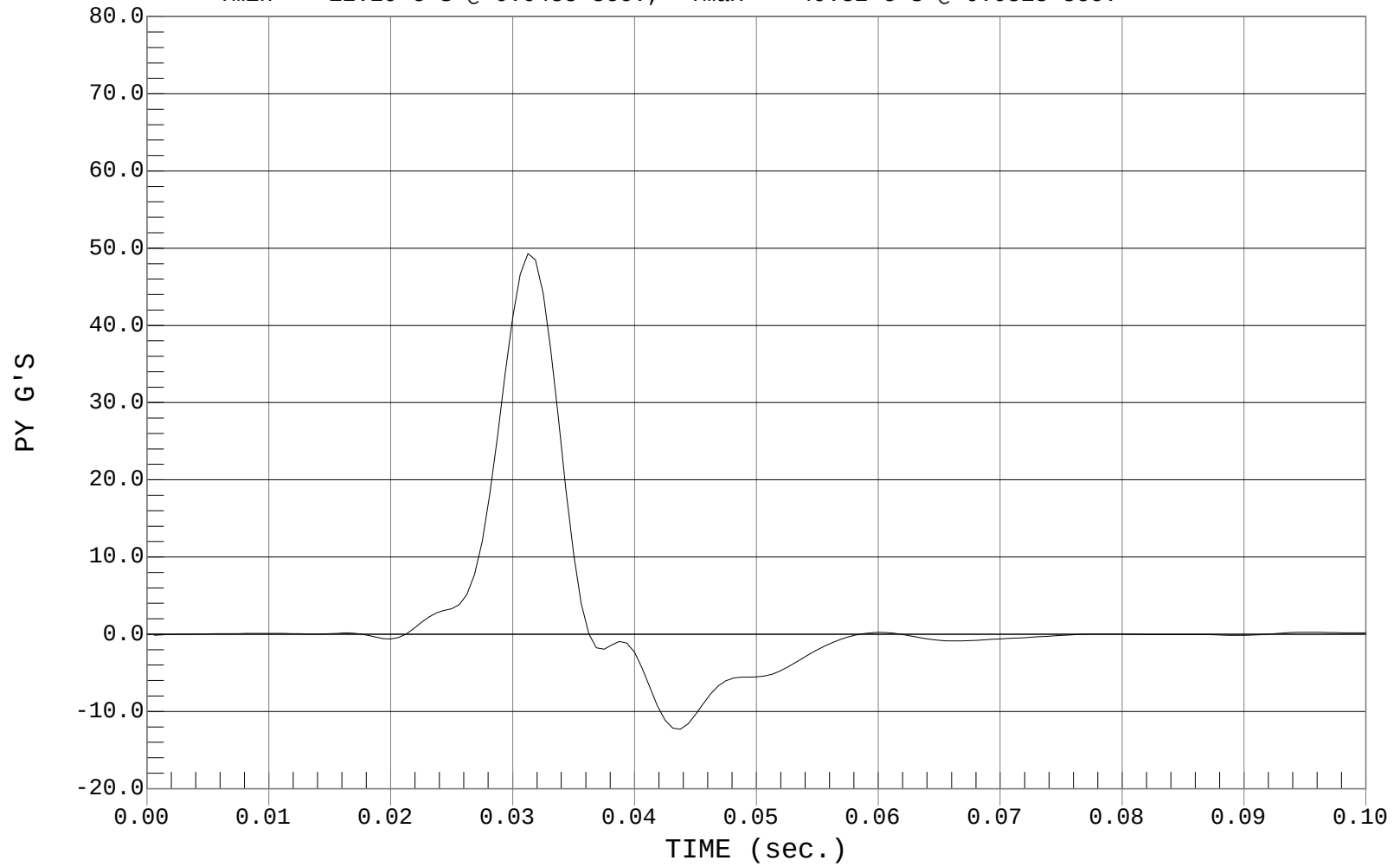
PELVIS ACCELERATION

Test Desc.: Dummy Calibration - Pelvis Impact
Component: Dummy #037

Test Date: 01-30-01
Speed: 14.00 FT/SEC, 4.27 M/SEC

— 1 PY, D01143FI.R11

Ymin = -12.29 G'S @ 0.0438 sec., Ymax = 49.32 G'S @ 0.0313 sec.



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

Date: 1/30/01

Dummy Serial Number: 037

Test Number: D01144

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.5
Relative Humidity (%)	10 – 70	29
Force @ 12.7 mm	104 – 162	136
Force @ 19 mm	163 – 222	184
Force @ 25.4 mm	222 – 280	243
Force @ 33 mm	325 - 391	329

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



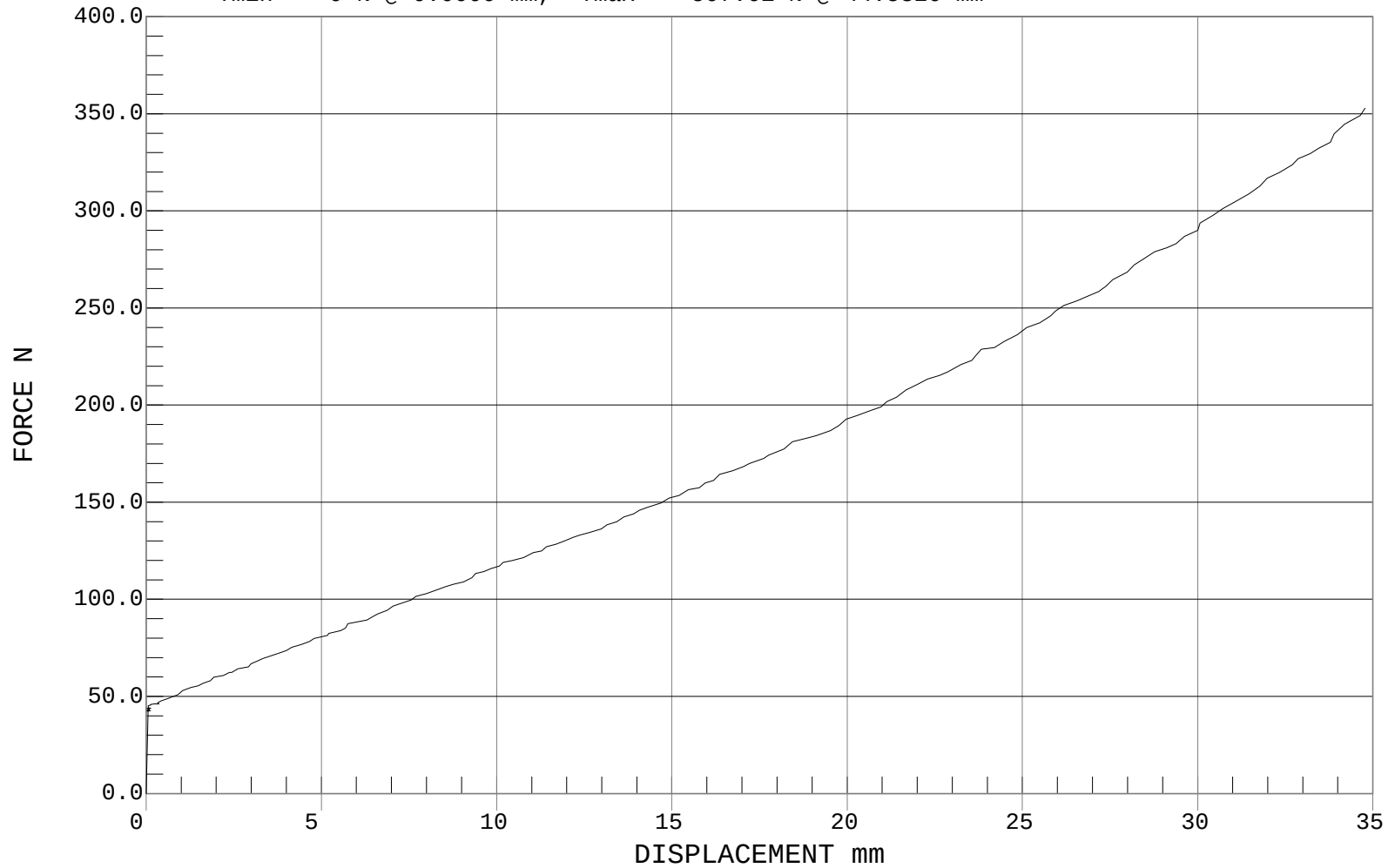
ABDOMEN COMPRESSION

Test Desc.: DUMMY CALIBRATION - ABDOMEN COMPRESSION
Component: DUMMY # 037

Test Date: 01-30-01
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 FORCE, D01144FC.F16

Ymin = 0 N @ 0.0000 mm, Ymax = 507.61 N @ 44.5320 mm



MGA RESEARCH CORPORATION
LUMBAR FLEXION TEST
SIDE IMPACT DUMMY (SID)

Date: 1/30/01

Dummy Serial Number: 037

Test Number: D01145

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.5
Relative Humidity (%)	10 – 70	29
Force @ 0°	0 – 26.7	0
Force @ 20°	97.9 – 151.2	106.3
Force @ 30°	151.2 – 204.6	158.4
Force @ 40°	204.6 – 258.0	222.6
Return Angle	12° maximum	6

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



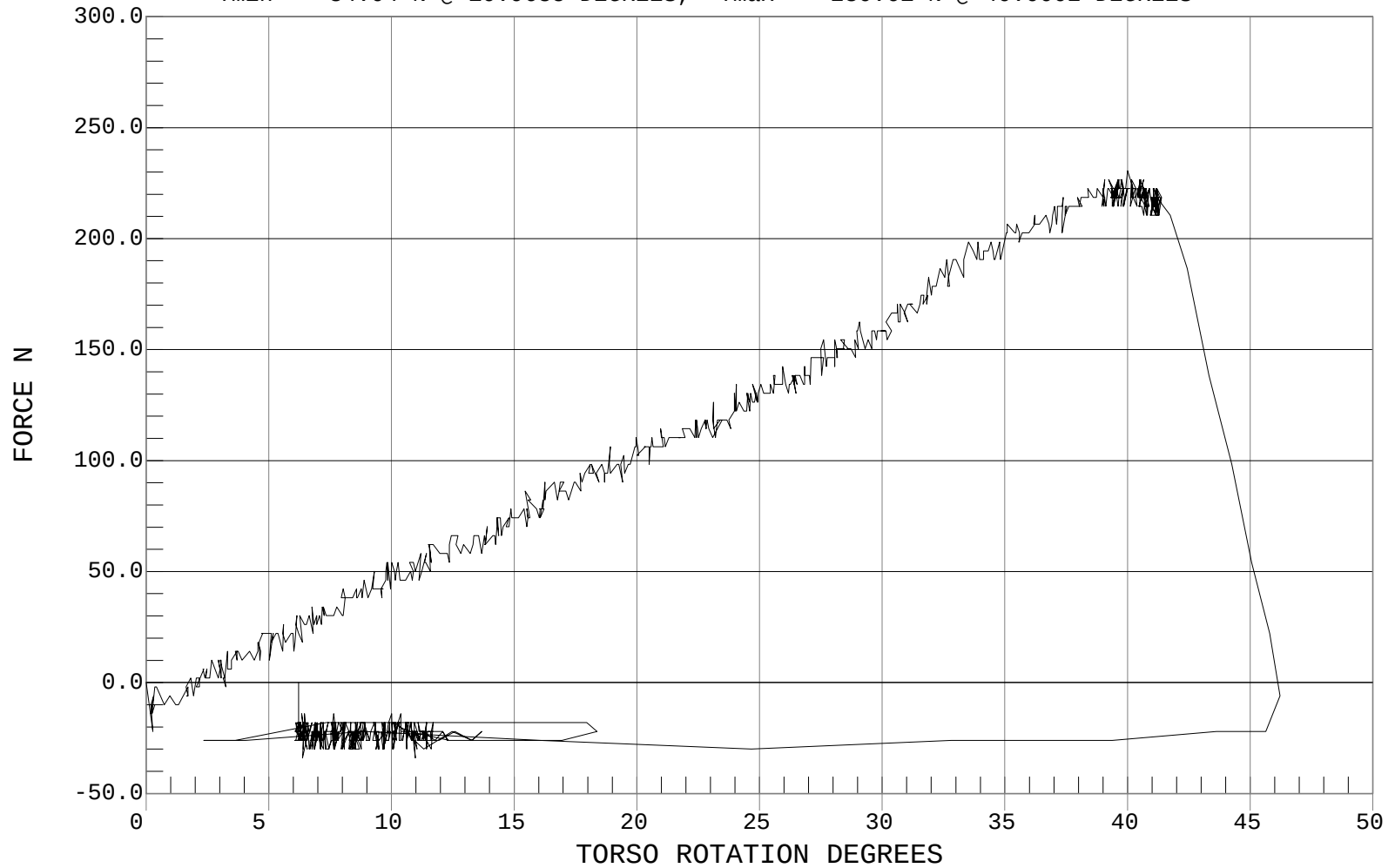
LUMBAR FLEXION

Test Desc.: DUMMY CALIBRATION - LUMBAR FLEXION
Component: DUMMY # 037

Test Date: 01-30-01
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 FORCE, D01145FC.F14

Ymin = -34.04 N @ 10.9685 DEGREES, Ymax = 230.61 N @ 40.0002 DEGREES



DUMMY INSPECTION CHECKLIST

Type: Side Impact Dummy

Dummy Serial Number: 037

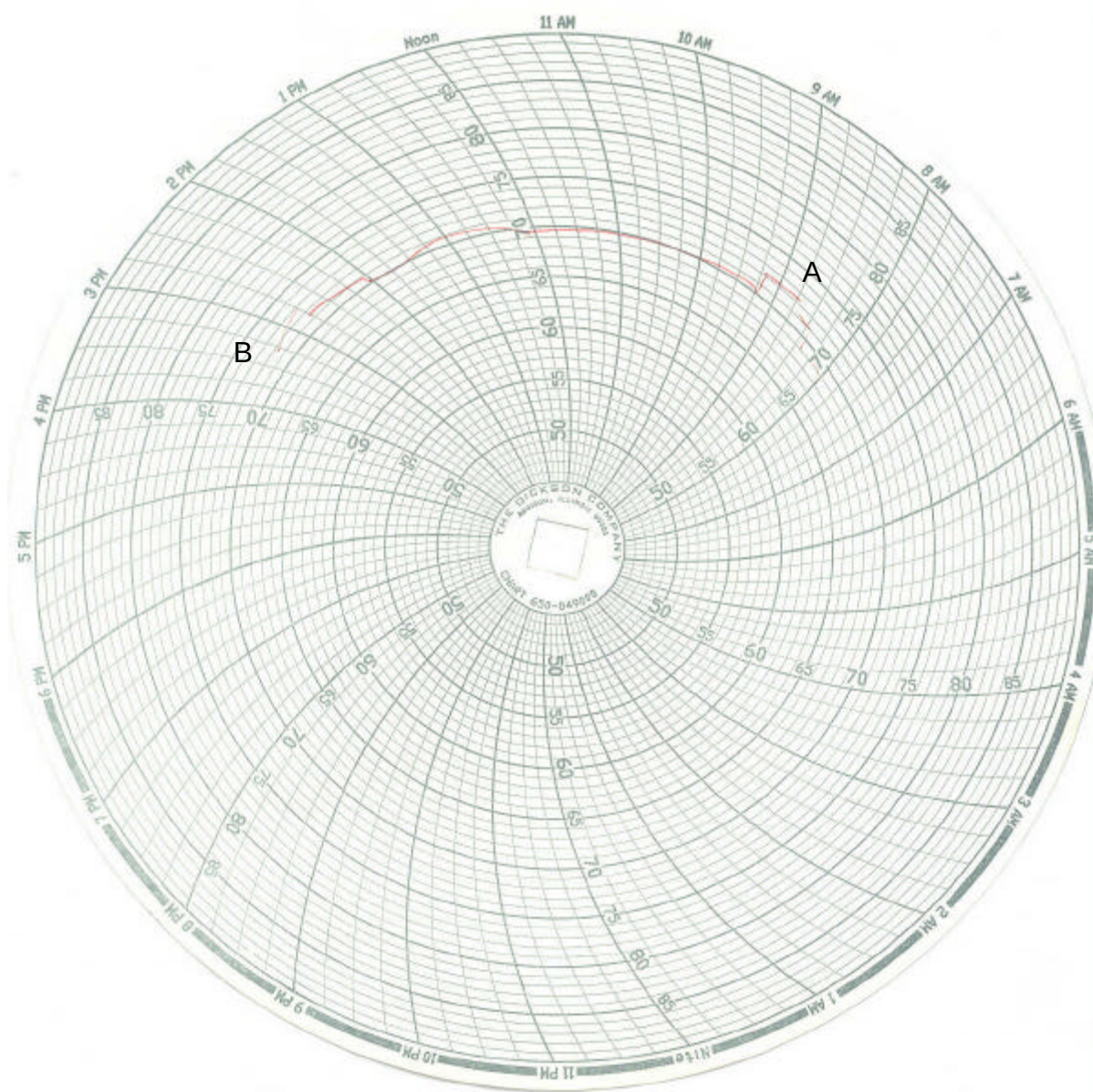
Inspected By: Tim Michnay

Date: 1/30/01

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

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

VEHICLE AND DUMMY TEMPERATURE



A = Dummies installed in vehicle at 9:30 a.m.
B = Test conducted at 3:30 p.m.

APPENDIX D

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

DUMMY AND VEHICLE CALIBRATION DATA

	INSTRUMENTS FOR DRIVER DUMMY NO. 036		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Upper Rib Y	AP138	Endevco	12/19/00
Lower Rib Y	J11361	Endevco	10/03/00
Lower Spine Y	AMP12	Endevco	11/17/00
Pelvis Y	J10411	Endevco	10/02/00
Upper Rib Redundant Y	AP0G2	Endevco	12/19/00
Lower Rib Redundant Y	J12465	Endevco	10/03/00
Lower Spine Redundant Y	AGWA4	Endevco	11/17/00
Pelvis Redundant Y	ALEC1	Endevco	10/02/00

	INSTRUMENTS FOR PASSENGER DUMMY NO. 037		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Upper Rib Y	AN8M6	Endevco	11/17/00
Lower Rib Y	ALEJ1	Endevco	10/02/00
Lower Spine Y	ALDY8	Endevco	11/17/00
Pelvis Y	AGP28	Endevco	8/31/00
Upper Rib Redundant Y	AN8P9	Endevco	11/17/00
Lower Rib Redundant Y	ALDP3	Endevco	10/02/00
Lower Spine Redundant Y	AP0E1	Endevco	11/17/00
Pelvis Redundant Y	AJ8T5	Endevco	8/31/00

VEHICLE INSTRUMENT CALIBRATION

	VEHICLE ACCELEROMETERS		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Moving Barrier CG X	I25-F09	Entran	12/13/00
Moving Barrier CG Y	I25-F07	Entran	12/13/00
Moving Barrier CG Z	I25-F08	Entran	12/13/00
Moving Barrier Rear Axle X	G13-B07	Entran	12/13/00
Moving Barrier Rear Axle Y	F11-G02	Entran	1/04/01
Left Mid A-Post Y	J10-E18	Entran	9/14/00
Left Lower A-Post Y	F20-G10	Entran	9/14/00
Left Mid B-Post Y	G13-F07	Entran	8/15/00
Left Lower B-Post Y	F07-A14	Entran	8/18/00
Rear Floorpan Above Axle X	I25-J08	Entran	11/17/00
Rear Floorpan Above Axle Y	I14-D18	Entran	11/17/00
Rear Floorpan Above Axle Z	C25-A17	Entran	11/17/00
Driver Seat Track Y	E25-G07	Entran	9/14/00
Right Side Sill at Front Seat X	I25-F10	Entran	11/15/00
Right Side Sill at Front Seat Y	I25-F12	Entran	11/15/00
Right Side Sill at Front Seat Z	G13-B14	Entran	9/14/00
Right Side Sill at Rear Seat X	I25-F05	Entran	11/15/00
Right Side Sill at Rear Seat Y	F20-G11	Entran	9/14/00
Right Side Sill at Rear Seat Z	F11-G09	Entran	9/14/00
Left Side Sill at Front Seat Y	G01-J12	Entran	9/12/00
Left Side Sill at Rear Seat Y	G13-F10	Entran	8/14/00
Right Rear Occupant Compartment Y	I18-G02	Entran	8/10/00
Vehicle CG X	D06-A03	Entran	8/15/00
Vehicle CG Y	C14-Z07	Entran	8/15/00
Vehicle CG Z	C05-Z13	Entran	8/15/00

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

All Entran accelerometers are Model No. EGE-72