

REPORT NUMBER: 214D-MGA-2001-004

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

**Mazda Motor Company
2001 Mazda Tribute SUV
NHTSA NUMBER: C15402**

**PREPARED BY:
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January 3, 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**

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16. Abstract A 55/28 km/h 90° Moving Deformable Barrier INDICANT Compliance Test was conducted on the subject 2001 Mazda Tribute SUV 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 3, 2001. The impact velocity of the Moving Deformable Barrier (MDB) was 62.0 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 315 mm at level 3. 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;">50</td> <td style="text-align: center;">36</td> </tr> <tr> <td>Left Lower Rib (LLR) Accel., g</td> <td style="text-align: center;">48</td> <td style="text-align: center;">40</td> </tr> <tr> <td>Lower Spine (T₁₂) Accel., g</td> <td style="text-align: center;">55</td> <td style="text-align: center;">56</td> </tr> <tr> <td>Thoracic Trauma Index (TTI)</td> <td style="text-align: center;">53</td> <td style="text-align: center;">48</td> </tr> <tr> <td>Pelvis (PEV) Accel., g</td> <td style="text-align: center;">94</td> <td style="text-align: center;">76</td> </tr> <tr> <td>HIC</td> <td style="text-align: center;">123</td> <td style="text-align: center;">385</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	50	36	Left Lower Rib (LLR) Accel., g	48	40	Lower Spine (T ₁₂) Accel., g	55	56	Thoracic Trauma Index (TTI)	53	48	Pelvis (PEV) Accel., g	94	76	HIC	123	385
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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 Mazda Tribute SUV manufactured by Mazda 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 (62.0 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 Mazda Tribute SUV 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 62.0 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 1609 kg and the test weight of the MDB was 1362 kg. The test was conducted at MGA Research Corporation in Burlington, Wisconsin, on January 3, 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 2, 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 315 mm at level 3, 1200 mm rearward of the left vertical impact point. The driver and passenger SID's, Serial Nos. 048 and 049 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	53	48
Peak Pelvic G's (PEV)	G's	94	76
Head Injury Criteria (HIC)	none	123	385

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/Mazda/Tribute/SUV

NHTSA No.: C15402

Test Program: FMVSS 214

Test Date: January 3, 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	$=(t_f - 32)/1.8$
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/Mazda/Tribute/SUVNHTSA No.: C15402Test Program: FMVSS 214Test Date: January 3, 2001**TEST VEHICLE INFORMATION**

Make	Mazda
Model	Tribute
Body Style	SUV
NHTSA No.	C15402
VIN	4F2YU07B31KM29279
Color	Red
Delivery Date	12/19/00
Odometer Reading (mile)	134
Dealer	Terry's Mazda
Transmission	Manual
Final Drive	Front
Number of Cylinders	4
Engine Displacement (L)	2.0
Engine Placement	Lateral

TEST VEHICLE OPTIONS

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

DATA FROM CERTIFICATION LABEL

Manufactured By	Mazda Motor Corporation
Date of Manufacture	11/00

GVWR (kg)	1848
GAWR Front (kg)	965
GAWR Rear (kg)	924

DATA FROM TIRE PLACARD

Measured Parameter	Front	Rear
Maximum Tire Pressure (kPa)	203	203
Cold Pressure (kPa)	203	203
Recommend Tire Size	P215/70R16	P215/70R16
Tire Size on Vehicle	P215/70R16	P215/70R16
Tire Manufacturer	Goodyear	Goodyear

Measured Parameter	Front	Rear	Third	Total
Type of Seats	bucket	bench		
Number of Occupants	2	3		5
Capacity Wt. (VCW) (kg)				407.8
Cargo Weight (RCLW) (kg)				67.6

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

Test Vehicle: 2001/Mazda/Tribute/SUV

NHTSA No.: C15402

Test Program: FMVSS 214

Test Date: January 3, 2001

TEST VEHICLE WEIGHTS

	Units	As Delivered (UVW)			As Tested (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	413.7	280.3		479.0	372.9	
Right	kg	403.3	290.8		401.9	354.7	
Ratio	%	58.9	41.1		54.8	45.2	
Totals	kg	817.0	571.1	1388.1	880.9	727.6	1608.5

TARGET TEST WEIGHT CALCULATION*

Measured Parameter	Units	Value
Total Delivered Weight (UVW)	kg	1388.1
Weight of 2 P572F Side Impact Dummies	kg	161.4
Rated Cargo/Luggage Weight (RCLW)	kg	67.6
Calculated Vehicle Target Weight (TVTW)	kg	1617.1

*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	804	811	825	834	1080
As Tested	mm	790	804	794	809	1187
Fully Loaded	mm	790	809	788	808	

GENERAL TEST VEHICLE DATA

Measurement Description	Units	Value
Test Vehicle Wheel Base	mm	2624
Total Vehicle Length at Left Side	mm	3734
Total Vehicle Length at Centerline	mm	4380
Total Vehicle Length at Right Side	mm	3733
Weight of Ballast in Cargo Area	kg	19.1
Amount of Stoddard Solvent in Fuel Tank	liters	53.6

TEST VEHICLE VERTICAL IMPACT LINE DATA

Measurement Description	Units	Value
Test Vehicle Wheel Base	mm	2624
Target Impact Point Aft of Front Axle	mm	372
Actual Impact Point Aft of Front Axle	mm	366

DATA SHEET NO. 1...(continued)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2001/Mazda/Tribute/SUV

NHTSA No.: C15402

Test Program: FMVSS 214

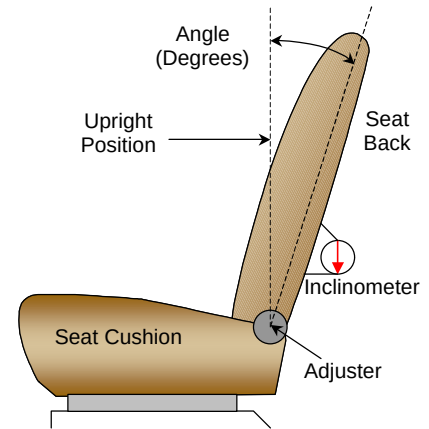
Test Date: January 3, 2001

NORMAL DESIGN RIDING POSITION

The driver's seat back is positioned to the manufacturer's designated angle. The procedure for the seat is as follows: position the seat back to the 5th latch position from most upright as position 0. The seatback frame angle is 17.5 degrees with dummy in seat. The rear passenger seat is fixed; no adjustments can be made.

Driver seat back angle: 5th latch rearward, 1st as 0

Passenger seat back angle: non-adjustable



FRONT SEAT ASSEMBLY

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 "0".

Driver seat fore/aft total travel: 240 mm

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

Driver seat fore/aft position: 12th detent from first as 0

Rear passenger seat fore/aft position: non-adjustable

SEAT BELT UPPER ANCHORAGE

The test vehicle is equipped with adjustable "D" ring anchorage for the driver's seat position. The driver's "D" ring anchorage was placed in the full up position.

DATA SHEET NO. 1...(continued)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2001/Mazda/Tribute/SUV

NHTSA No.: C15402

Test Program: FMVSS 214

Test Date: January 3, 2001

FUEL TANK CAPACITY DATA

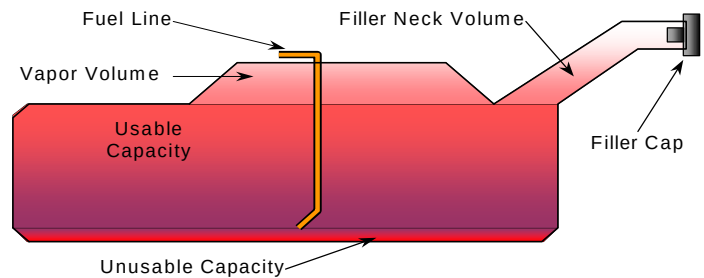
The "Usable Capacity" of the standard equipment fuel tank is: 57 liters

The "Usable Capacity" of any optional equipment fuel tank is: n/a liters

92-94% of "Usable Capacity" for certification to FMVSS 301 requirement: 52.4 - 53.6 liters

Actual amount of Stoddard solvent added to vehicle for certification test: 53.6 liters

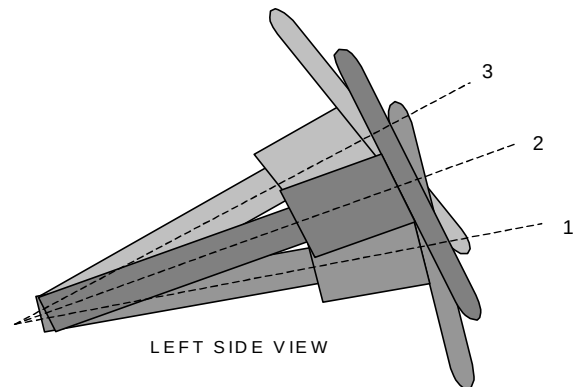
The test vehicle is equipped with an electric fuel pump. The fuel filler door is located on the left rear fender.



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 steering column was placed in the mid position of its range of motion.



STEERING COLUMN ASSEMBLY

DATA SHEET NO. 2**TEST VEHICLE SUMMARY OF RESULTS**Test Vehicle: 2001/Mazda/Tribute/SUVNHTSA No.: C15402Test Program: FMVSS 214Test Date: January 3, 2001**TEST VEHICLE WEIGHTS**

	Units	As Delivered (UVW)			As Tested (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	413.7	280.3		479.0	372.9	
Right	kg	403.3	290.8		401.9	354.7	
Weight Ratio	%	58.9	41.1		54.8	45.2	
Totals	kg	817.0	571.1	1388.1	880.9	727.6	1608.5

MAXIMUM EXTERIOR STATIC CRUSH

Level	Measured Parameter	Units	Maximum Crush	Above Ground
Level 1	Sill Top Height	mm	162	384
Level 2	Occupant H-Point	mm	296	705
Level 3	Mid Door	mm	315	734
Level 4	Window Sill	mm	207	1053
Level 5	Window Top	mm	72	1577
N/A	Maximum Penetration	mm	315	734

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/Mazda/Tribute/SUVNHTSA No.: C15402Test Program: FMVSS 214Test Date: January 3, 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	62.0
Trap No. 2 Velocity (Redundant)	km/h	61.1 to 62.7	61.5
MDB CL to Target Vehicle CL	degrees	88.5 to 91.5	90.2

MAXIMUM STATIC CRUSH OF HONEYCOMB FACE (mm)

Vertical Location			From Centerline		Max. Crush
Row	Description	Height	Distance	Direction	
A	Center of Bumper	432	800	Right	210
B	Top of Bumper	533	800	Right	160
C	Mid Level	686	800	Right	80
D	Top of Stack	813	800	Left	142

MDB INSTRUMENTATION AND CAMERAS

Accelerometers	5
Contact Switches	2
High Speed Cameras	2

DATA SHEET NO. 4**POST TEST OBSERVATIONS**Test Vehicle: 2001/Mazda/Tribute/SUVNHTSA No.: C15402Test Program: FMVSS 214Test Date: January 3, 2001**TEST DUMMY INFORMATION AND CONTACT POINTS**

Description	Front Seat SID	Rear Seat SID
Dummy Type / Serial No.	SID/049	SID/048
Head Contact	Headrest	C post, headliner
Upper Torso Contact	Door trim panel	Door trim panel
Lower Torso Contact	Door trim panel	Door trim panel
Left Knee Contact	Door trim panel	Door trim 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 failures noted
Sill Separation	None noted
Windshield Damage	Lower left windshield cracked
Window Damage	Left rear door window broke
Other Notable Effects	None noted

AIRBAG DEPLOYMENT

	Driver	Front Passenger	Rear Passenger
Front	no	no	
Side			

MDB LEFT EDGE IMPACT POINT DATA

Measured Parameter	Units	Requirement	Value
Horizontal Offset	mm	+/- 50	+6 forward
Vertical Offset	mm	+/-20	5 up

SECTION 4
OCCUPANT AND VEHICLE INFORMATION

DATA SHEET NO. 5

SID INJURY CRITERIA AND SENSOR DATA

Test Vehicle: 2001/Mazda/Tribute/SUV

NHTSA No.: C15402

Test Program: FMVSS 214

Test Date: January 3, 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	50.4	55	4.1	99	35.7	53	2.9	156
Upper Rib (LUR) (R)	Y	G's	50.4	54	4.2	99	35.5	53	3.1	156
Lower Rib (LLR)	Y	G's	48.0	54	3.2	100	39.7	51	3.2	150
Lower Rib (LLR) (R)	Y	G's	47.5	54	2.8	100	40.5	52	3.3	150
Lower Spine (T ₁₂)	Y	G's	55.4	46	4.8	71	56.4	54	4.9	74
Lower Spine (T ₁₂) (R)	Y	G's	55.3	46	4.8	71	55.7	54	6.1	74
Pelvis (PEV)	Y	G's	94.4	41	12.9	59	75.7	48	8.7	78
Pelvis (PEV) (R)	Y	G's	95.5	41	12.9	59	76.0	48	11.4	78

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	50.4	55.4	53	94	39.7	56.4	48	76
Rib, Spine, and Pelvis (R)	50.4	55.3	53	95	40.5	55.7	48	76

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	8.5	46	23.2	91	88.2	181	14.1	57
Head CG	Y	G's	16.0	96	3.2	46	41.8	57	25.7	68
Head CG	Z	G's	30.9	66	4.9	54	83.0	57	51.4	181
Head CG Resultant		G's	36.1	66			102.0	181		

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	123	60.7	96.7	25.9	385	54.8	66.1	65.0

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

= Forward
= Right
= Down

DATA SHEET NO. 6

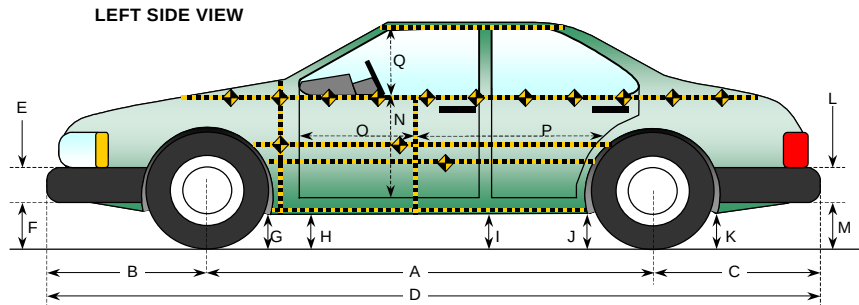
VEHICLE PRE-TEST AND POST-TEST MEASUREMENTS

Test Vehicle: 2001/Mazda/Tribute/SUV

NHTSA No.: C15402

Test Program: FMVSS 214

Test Date: January 3, 2001



All Measurements in mm

Code	Measurement Description	Pre-Test	Post-Test	Difference
A	Wheelbase	2624	2608	16
B	Front Axle to FSOV	850	842	8
C	Rear Axle to RSOV	910	888	22
D	Total Length at Centerline	4384	4338	46
E	Front Bumper Thickness	202	202	0
F	Front Bumper Bottom to Ground	511	528	-17
G	Sill Height at Front Wheel Well	242	275	-33
H	Sill Height at Front Door Leading Edge	265	252	13
I	Sill Height at "B" Pillar	278	292	-14
J1	Sill Height at Rear Wheel Well	252	290	-38
J2	Pinch Weld Height at Rear Wheel Well	279	260	19
K	Sill Height Aft of Rear Wheel Well	358	368	-10
L	Rear Bumper Thickness	254	254	0
M	Rear Bumper Bottom to Ground	408	410	-2
N	Sill Height to Window Bottom Sill	705	669	36
O	Front Door Leading Edge to Impact CL	692	688	4
P	Rear Door Trailing Edge to Impact CL	1144	1067	77
Q	Front Window Opening	484	468	16
R	Right Side Length	3733	3736	-3
S	Left Side Length	3734	3695	39
T	Vehicle Width at "B" Post	1775	1544	231

DATA SHEET NO. 7

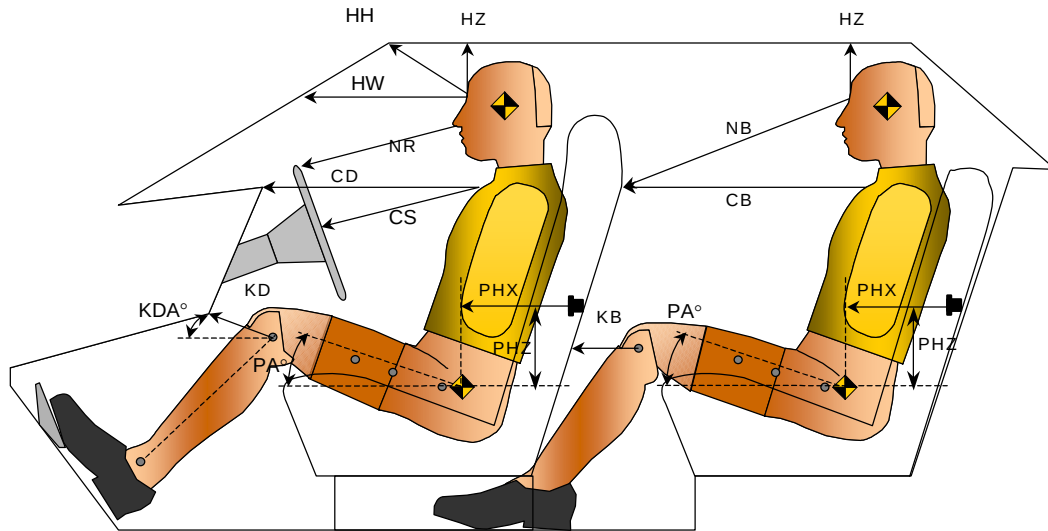
SID LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2001/Mazda/Tribute/SUV

NHTSA No.: C15402

Test Program: FMVSS 214

Test Date: January 3, 2001



Driver Code	Pass. Code	Measurement Description	Driver 048		Passenger 049	
			Length(mm)	Angle(°)	Length(mm)	Angle(°)
HH		Head to Header	409			
HW		Head to Windshield	611			
HZ	HZ	Head to Roof	216		186	
NR	NB	Nose to Rim/Nose to Seatback	510		578	
CD	CB	Chest to Dash or Seatback	506		526	
CS		Chest to Steering Wheel	345			
KDL	KBL	Left Knee to Dash or Seatback	402	0.0	234	0.0
KDR	KBR	Right Knee to Dash or Seatback	502	0.0	240	0.0
PA	PA	Pelvic Angle		24.2		23.3
PHX	PHX	H-Point to Striker (X-Axis)	181		226	
PHZ	PHZ	H-Point to Striker (Z-Axis)	103		285	

DATA SHEET NO. 8

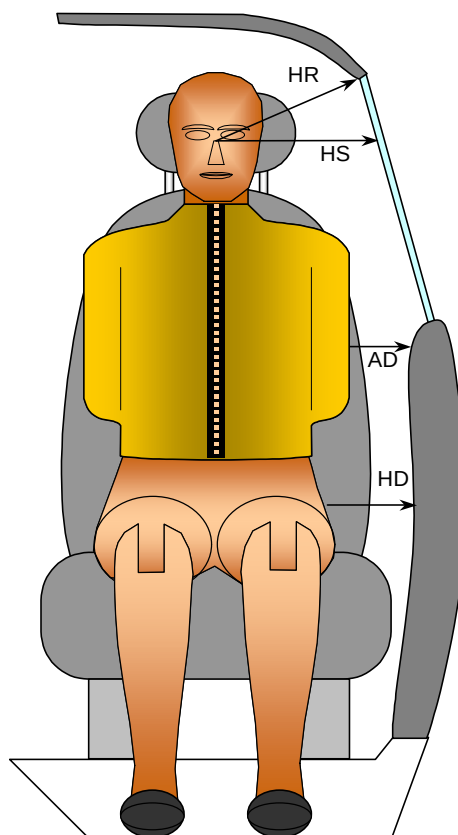
SID LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2001/Mazda/Tribute/SUV

NHTSA No.: C15402

Test Program: FMVSS 214

Test Date: January 3, 2001



FRONT VIEW OF DUMMY

Code	Measurement Description	Units	Driver 048	Passenger 049
HR	Head to Side Header	mm	243	241
HS	Head to Side Window	mm	339	368
AD	Arm to Door	mm	100	123
HD	H-Point to Door	mm	124	168

DATA SHEET NO. 9

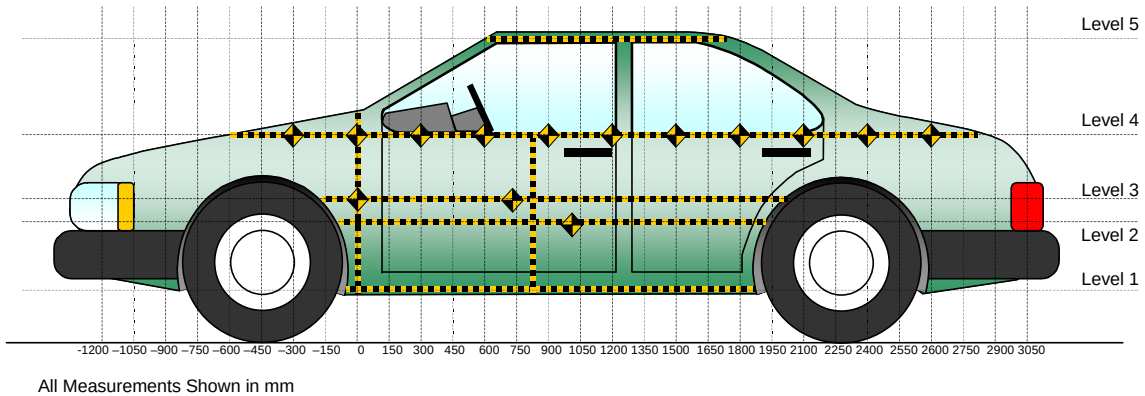
VEHICLE SIDE MEASUREMENTS

Test Vehicle: 2001/Mazda/Tribute/SUV

NHTSA No.: C15402

Test Program: FMVSS 214

Test Date: January 3, 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	1577
4	Window Sill	1053
3	Mid Door	734
2	Occupant H-Point	705
1	Sill Top	384

DATA SHEET NO. 10

VEHICLE EXTERIOR CRUSH PROFILES

Test Vehicle: 2001/Mazda/Tribute/SUV

NHTSA No.: C15402

Test Program: FMVSS 214

Test Date: January 3, 2001

	Pre-Test					Post-Test					Difference				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
-900															
-750				502					524					22	
-600				460					510					50	
-450				474					500					26	
-300				467					492					25	
-150				460					486					26	
0		404	400	458			501	505	485			97	105	27	
150	467	413	413	457		592	671	666	510		125	258	253	53	
300	498	422	424	457		631	700	696	518		133	278	272	61	
450	507	420	425	453		646	704	708	532		139	284	283	79	
600	507	420	425	453		652	706	710	540		147	286	285	87	
750	507	418	422	453	675	663	706	711	550	709	156	288	289	97	34
900	506	417	421	453	670	668	705	712	564	721	162	288	291	111	51
1050	507	416	421	455	668	668	705	710	586	736	161	289	289	131	68
1200	507	418	422	455	668	662	714	737	662	740	155	296	315	207	72
1350	507	419	423	456	670	647	704	730	630	729	140	285	307	174	59
1500	502	420	424	457	672	636	688	713	595	721	134	268	289	138	49
1650	481	418	417	457	673	617	670	692	561	715	136	252	275	104	42
1800	450	409	406	460	672	604	630	541	529	709	154	221	235	69	37
1950		409	401	460	672		508	535	512	701		99	134	52	29
2100				462	673				499	699				37	26
2250				464	675				515	700				51	25
2400				465	682				509	701				44	19
2550				468	686				500	703				32	17
2700				475					494					19	
2850				485					502					17	
3000															

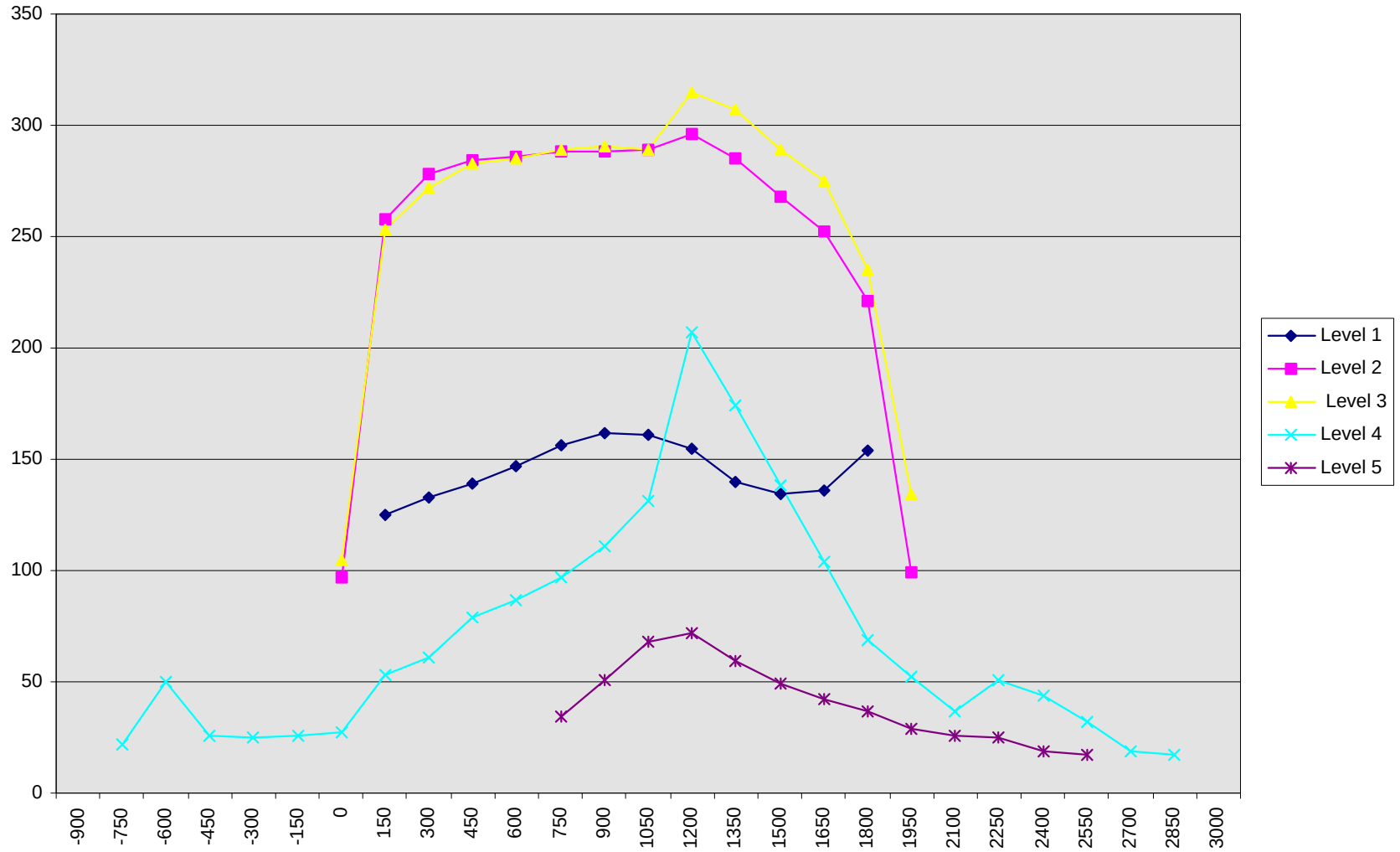
Reference plane is parallel to test vehicle longitudinal centerline

Given dimensions = Reference plane to car body

DATA SHEET NO. 10...(continued)

VEHICLE EXTERIOR CRUSH PROFILES

Test Vehicle: 2001/Mazda/Tribute/SUV NHTSA No.: C15402
Test Program: FMVSS 214 Test Date: January 3, 2001



DATA SHEET NO. 11

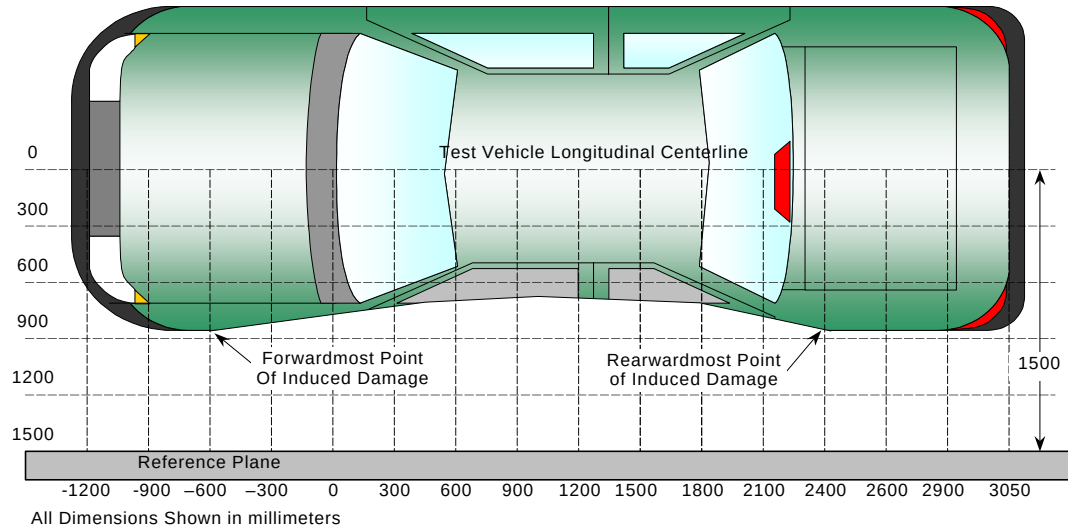
VEHICLE DAMAGE PROFILE DISTANCES

Test Vehicle: 2001/Mazda/Tribute/SUV

NHTSA No.: C15402

Test Program: FMVSS 214

Test Date: January 3, 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	475	494	19
2	2007 mm	4	401	515	114
3	1315 mm	3	423	736	313
4	546 mm	3	425	706	281
5	-20 mm	3	460	486	26
6	-750 mm	4	502	524	22

Reference plane is parallel to test vehicle longitudinal centerline

Given dimensions = Reference plane to car body

DATA SHEET NO. 12

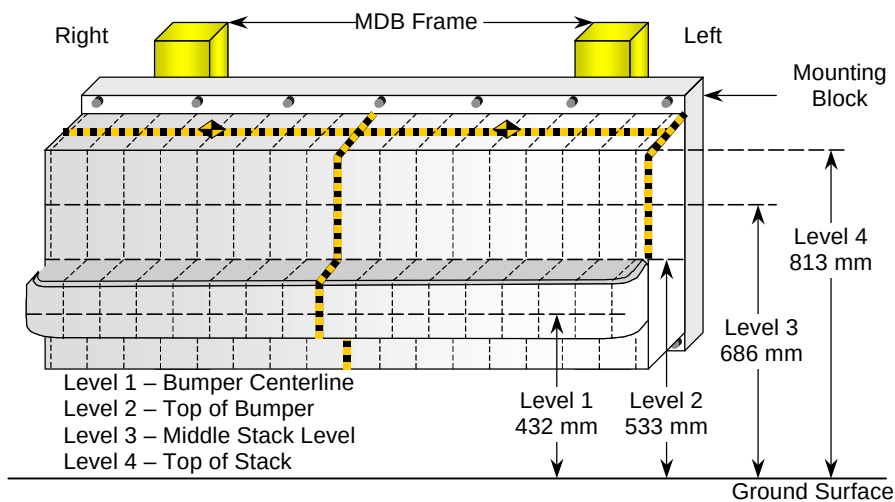
DEFORMABLE BARRIER HONEYCOMB FACE STATIC CRUSH

Test Vehicle: 2001/Mazda/Tribute/SUV

NHTSA No.: C15402

Test Program: FMVSS 214

Test Date: January 3, 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	210	203	187	169	153	151	146	145	141	140	138	136	133	131	135	144	149
2	160	140	127	114	107	106	94	90	81	82	84	79	77	75	77	85	96
3	80	61	43	34	25	19	26	23	18	18	19	20	22	26	33	45	75
4	90	54	32	12	4	13	7	10	14	22	28	34	46	67	84	117	142

All Dimensions in mm

DATA SHEET NO. 13

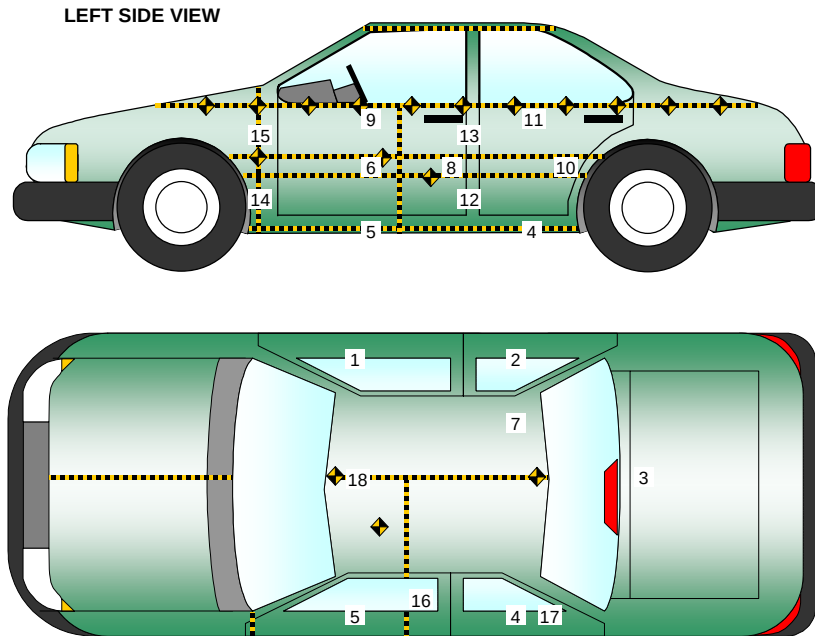
VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Test Vehicle: 2001/Mazda/Tribute/SUV

NHTSA No.: C15402

Test Program: FMVSS 214

Test Date: January 3, 2001



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/Mazda/Tribute/SUV

NHTSA No.: C15402

Test Program: FMVSS 214

Test Date: January 3, 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	2394	676	310	X	1.8	53	5.4	14
					Y	33.1	11	3.4	102
					Z	3.9	107	14.4	12
					RES	35.8	11		
2	Right Sill at Rear Seat	1599	640	325	X	2.6	54	4.6	15
					Y	42.2	10	4.4	103
					Z *				
					RES				
3	Rear Floorpan Above Axle	1012	0	684	X	2.8	54	5.6	14
					Y	33.9	10	3.7	103
					Z	13.6	12	4.5	35
					RES	35.4	10		
4	Left Sill at Rear Seat	1578	-675	315	Y	35.3	9	5.8	86
5	Left Sill at Front Seat	2415	-698	300	Y	44.9	9	5.1	21
7	Rear Occupant Compartment	1654	345	477	Y	37.9	10	3.4	103
12	Left B-Post Lower	1925	-696	530	Y	197.7	10	63.8	19
13	Left B-Post Middle	1933	-722	1060	Y	171.1	14	45.6	21
14	Left A-Post Lower	2908	-710	452	Y **	82.6	8		
15	Left A-Post Middle	2950	-752	1020	Y	30.6	10	10.1	24
16	Left Front Seat Track	2160	-552	550	Y	74.2	17	20.7	54
18	Vehicle CG	2228	0	332	X	1.2	68	8.7	11
					Y	33.4	10	3.3	103
					Z	9.5	29	9.9	42
					RES	34.4	10		

Reference Points

X - Rear of Vehicle (+ forward)

Y - Vehicle Centerline (+ right)

Z - Ground Plane (+ up)

* No valid data collected

** No valid data collected after 14 msec

DATA SHEET NO. 14

MDB ACCELEROMETER LOCATIONS AND DATA SUMMARY

Test Vehicle: 2001/Mazda/Tribute/SUV

NHTSA No.: C15402

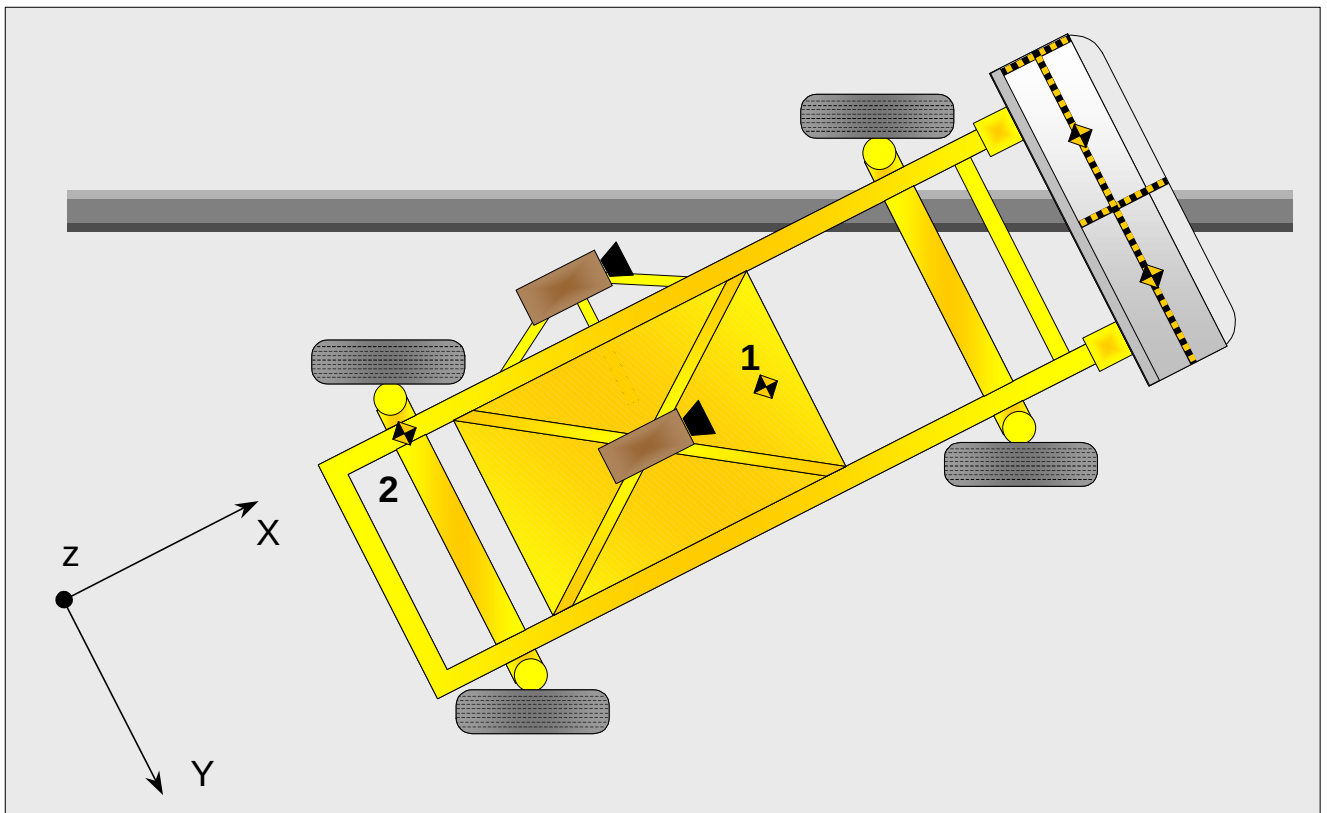
Test Program: FMVSS 214

Test Date: January 3, 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	1.3	142	18.9	42
					Y	1.6	83	8.4	37
					Z	31.1	59	21.5	66
					RES	32.0	59		
2	MDB Rear	-2591	-625	622	X	1.6	83	23.7	39
					Y	3.9	28	1.7	55

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



DATA SHEET NO. 15

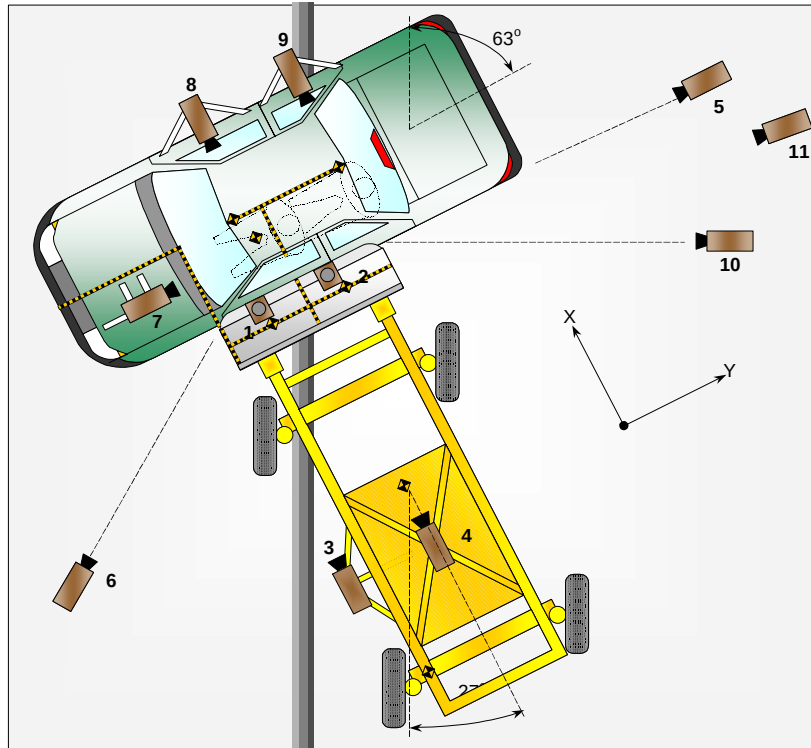
HIGH SPEED CAMERA LOCATIONS AND DATA

Test Vehicle: 2001/Mazda/Tribute/SUV

NHTSA No.: C15402

Test Program: FMVSS 214

Test Date: January 3, 2001



No.	Camera View	Location (mm)			Lens (mm)	Film Speed (fps)
		X	Y	Z		
1	Overhead Overall	-120	1210	5000	8	885
2	Overhead Close-up	-490	-260	5000	13	870
3	MDB Onboard, Impact Point Close-up				35	1058
4	MDB Onboard, Centerline of Impact				13	1042
5	Right Side, Ground Level, Overall	-800	10200	1850	25	995
6	Left Side, Ground Level, Overall	-420	-1740	1720	13	1015
7	Vehicle Onboard Front SID, Front				13	1081
8	Vehicle Onboard Front SID, Side				8	1010
9	Vehicle Onboard Rear SID, Side				13	1020
10	Real Time Coverage				10	24

Reference (from impact point):

+X = Forward

+Y = To Right

+Z = Upward From Floor Level

DATA SHEET NO. 16

FMVSS 301 FUEL SYSTEM INTEGRITY POST IMPACT DATA

Test Vehicle: 2001/Mazda/Tribute/SUV

NHTSA No.: C15402

Test Program: FMVSS 214

Test Date: January 3, 2001

Test Time: 1:10 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

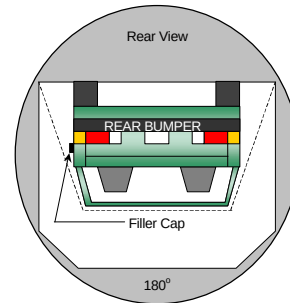
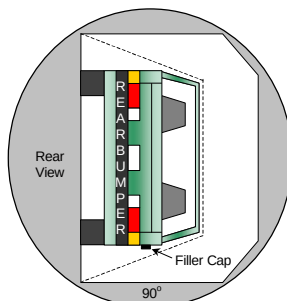
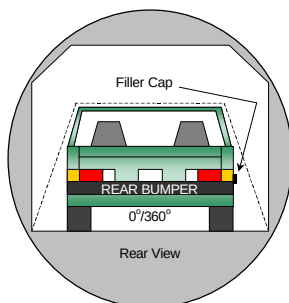
FMVSS 301 STATIC ROLLOVER DATA SHEET

Test Vehicle: 2001/Mazda/Tribute/SUV

NHTSA No.: C15402

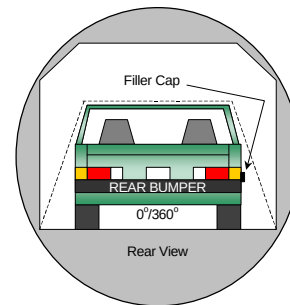
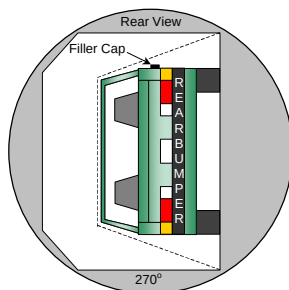
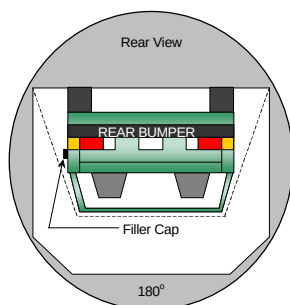
Test Program: FMVSS 214

Test Date: January 3, 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°	169	300	0
90° TO 180°	153	300	0
180° TO 270°	137	300	0
270° TO 360°	159	300	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

A-6



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



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

mga
mga research corporation
PRE-TEST
INDICANT 90° SIDE IMPACT
#C1 5402 JAN. 3, 2001
2001 MAZDA TRIBUTE

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

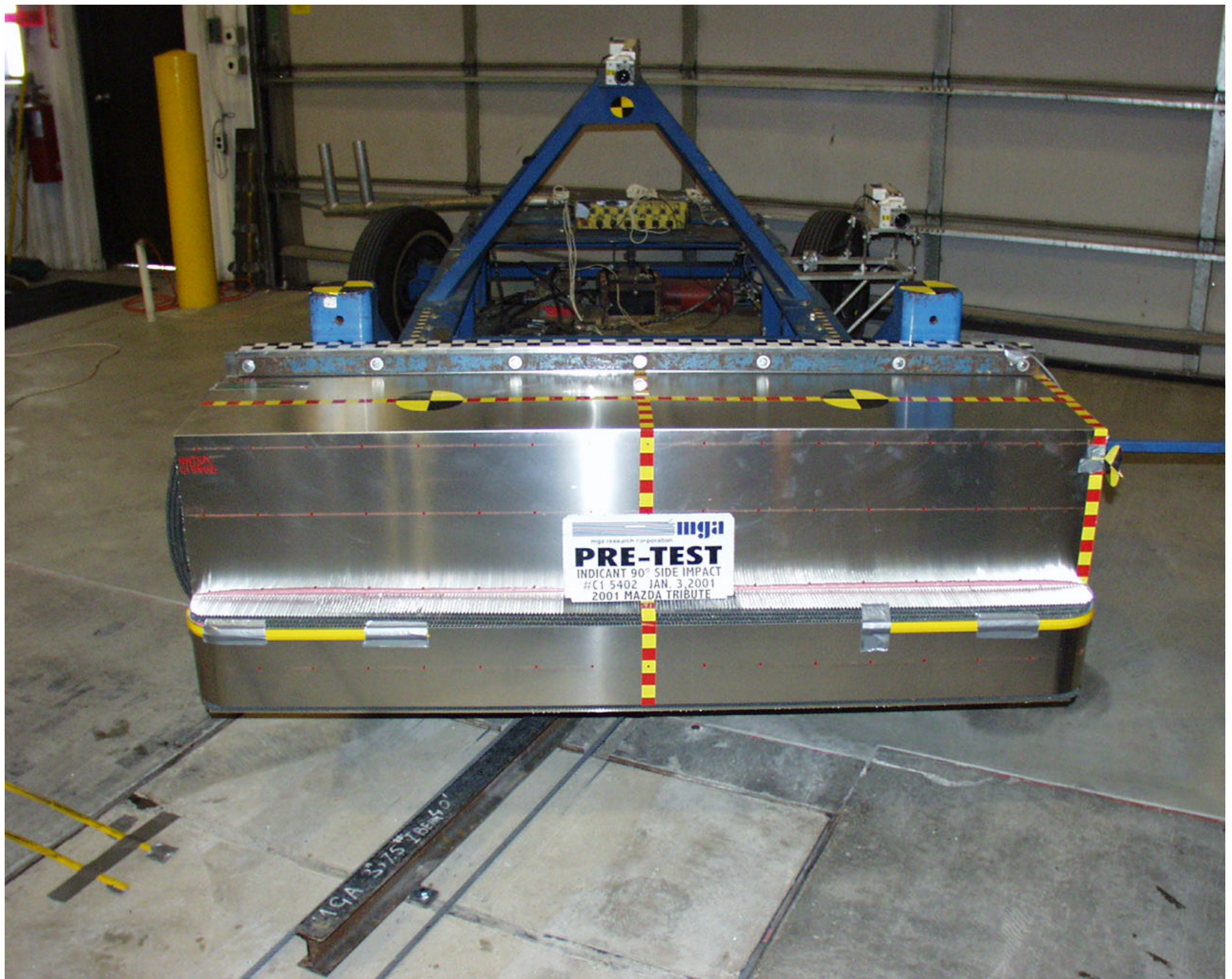


Photo No. A-14 - Pre-Test MDB Front View

A-15



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

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



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

A-20



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

A-21



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



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)

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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

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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

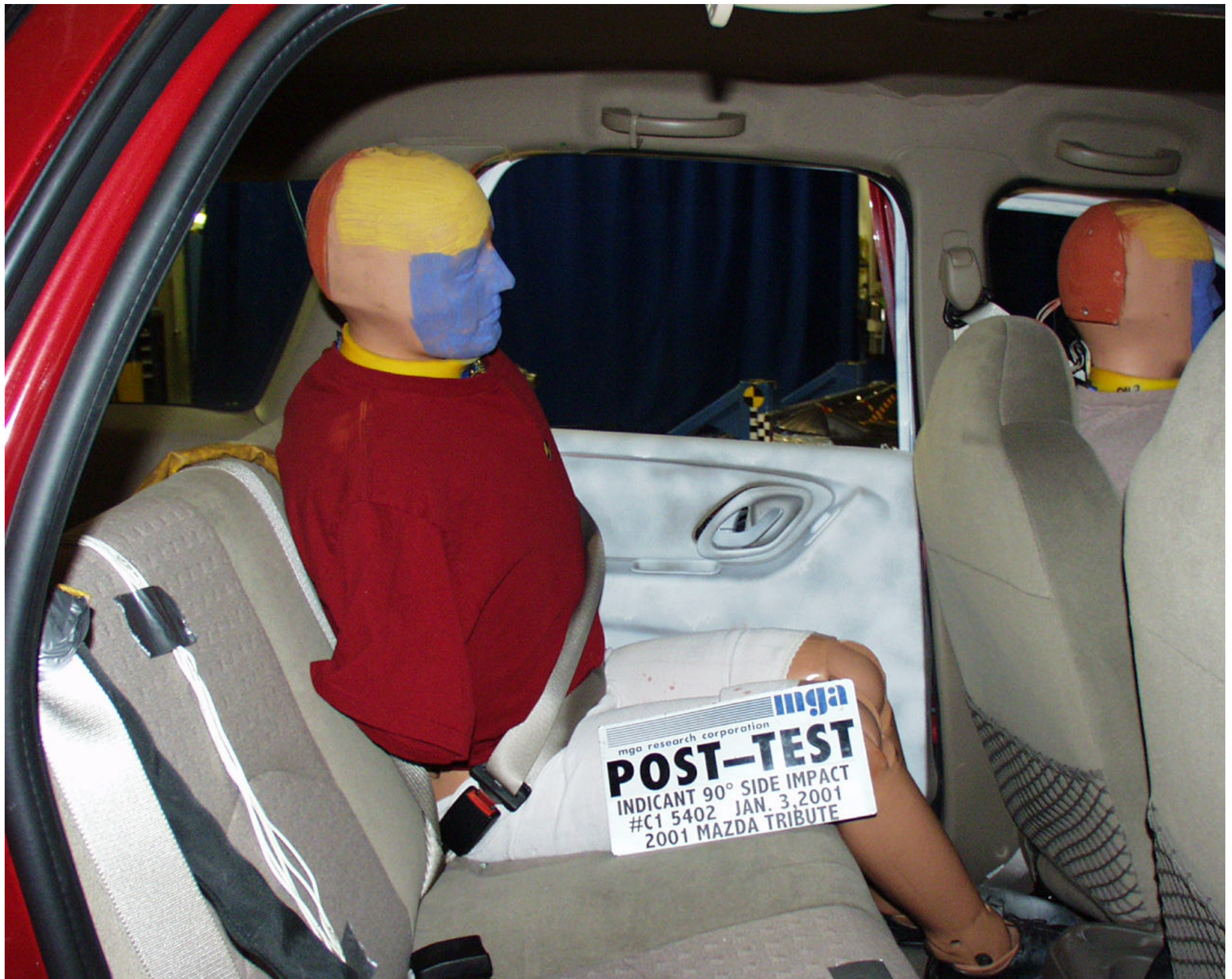


Photo No. A-30 - Post-Test Passenger Dummy Right Side View

A-31



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

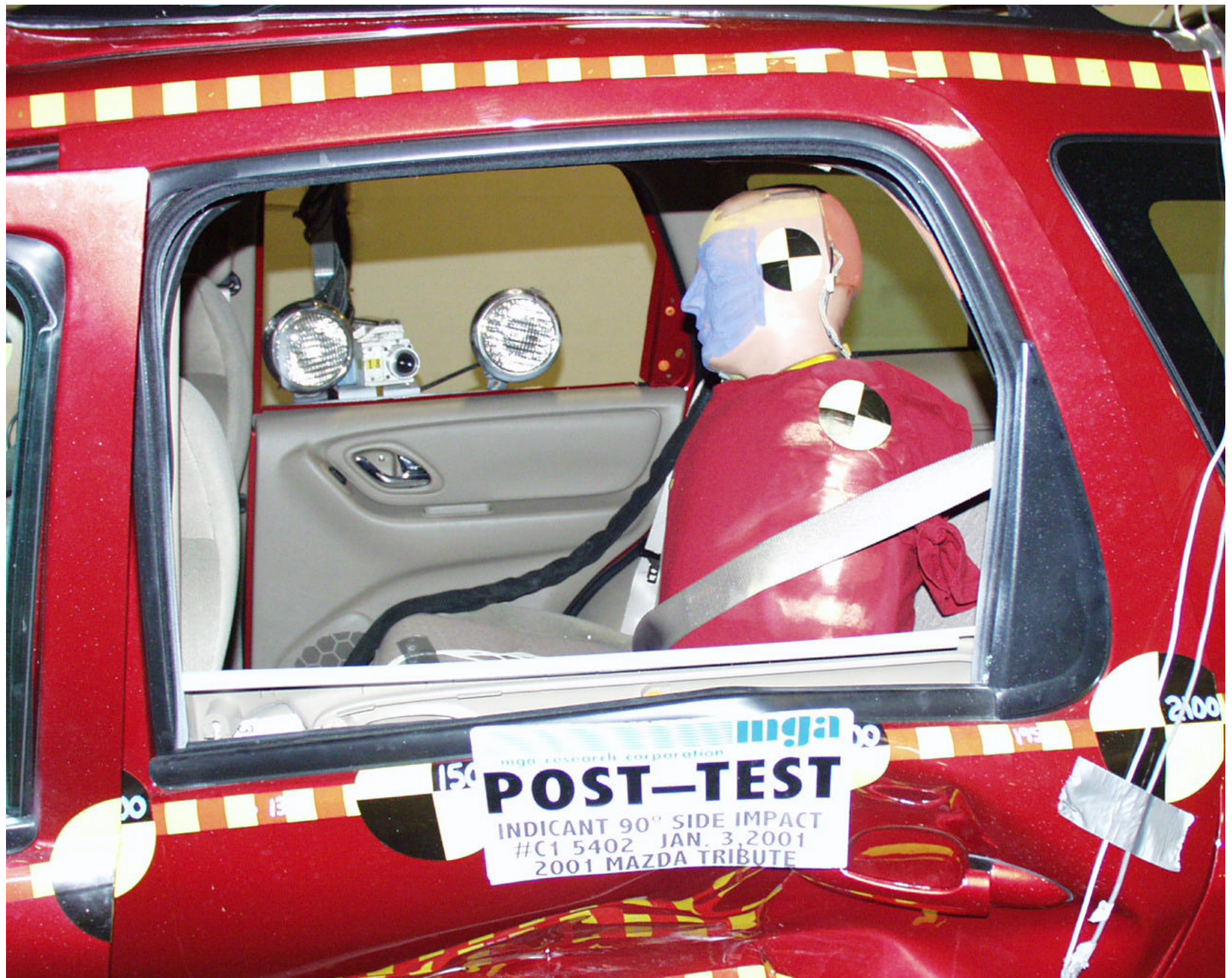


Photo No. A-32 - Post-Test Passenger Dummy Left Side View



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



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

A-36



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



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

mga research corporation

PRE-TEST

INDICANT 90° SIDE IMPACT

#C1 5402 JAN. 3, 2001

2001 MAZDA TRIBUTE

DE IN
1. 3.2
TRIB
CH CORP.



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



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

A-40



Photo No. A-40 - Impact

MFD. BY FORD MOTOR CO. IN U.S.A.

FOR **MAZDA MOTOR CORPORATION**

DATE: 11/00

FRONT GAWR: 2129LB

965KG

P215/70R16AS

16X6.5J

AT 200 kPa/ 29 PSI COLD

WITH
TIRES
RIMS

GVWR: 4076LB/ 1848KG

REAR GAWR: 2039LB

924KG

P215/70R16AS

16X6.5J

AT 200 kPa/ 29 PSI COLD

WITH
TIRES
RIMS

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

VIN: 4F2YU07B31KM29279

TYPE: MPV



1200011032617

ZTC

▽YL84-1520472-AA

RECOMMENDED TIRE SIZE AND INFLATION PRESSURE (COLD)
DIMENSIONS DES PNEUS ET PRESSIONS DE GONFLAGE
(À FROID) RECOMMANDÉES

TIRE SIZE DIMENSIONS DES PNEUS	TIRE PRESSURE FRONT/REAR	PRESSION DES PNEUS AVANT/ARRIÈRE
P215/70R16 99T P225/70R15 100S P235/70R16 104T	200 kPa 29 PSI	200 kPa 29 lb/po ²

VEHICLE CAPACITY WEIGHT 899 lbs
 CAPACITÉ MAXIMALE DU VÉHICULE 408 kg

SEATING CAPACITY NOMBRE DE PLACES	FRONT SEAT SIÈGE AVANT	BACK SEAT SIÈGE ARRIÈRE	TOTAL TOTAL
	2	3	5

⚠ WARNING / AVERTISSEMENT

TO AVOID SERIOUS INJURY OR DEATH FROM LOSS OF VEHICLE CONTROL: REPLACE TIRES WITH THE SAME SIZE, TYPE, AND SPEED RATED TIRES AS SHOWN ON THE CERTIFICATION LABEL.

POUR PRÉVENIR LES BLESSURES GRAVES OU MORTELLES RÉSULTANT DE LA PERTE DE CONTRÔLE DU VÉHICULE : REMPLACER LES PNEUS PAR DES PNEUS DE MÊMES DIMENSIONS, TYPE, ET INDICE DE VITESSE QUE CEUX INDIQUÉS SUR L'ÉTIQUETTE D'HOMOLOGATION.

1U5A-1532-AA



A-43

Photo No. A-43 - Rollover 90°



INDICANT 90° SIDE IMPACT
#C1 5402 JAN. 3, 2001
2001 MAZDA TRIBUTE
MGA RESEARCH CORP.

Photo No. A-44 - Rollover 180°

A-45

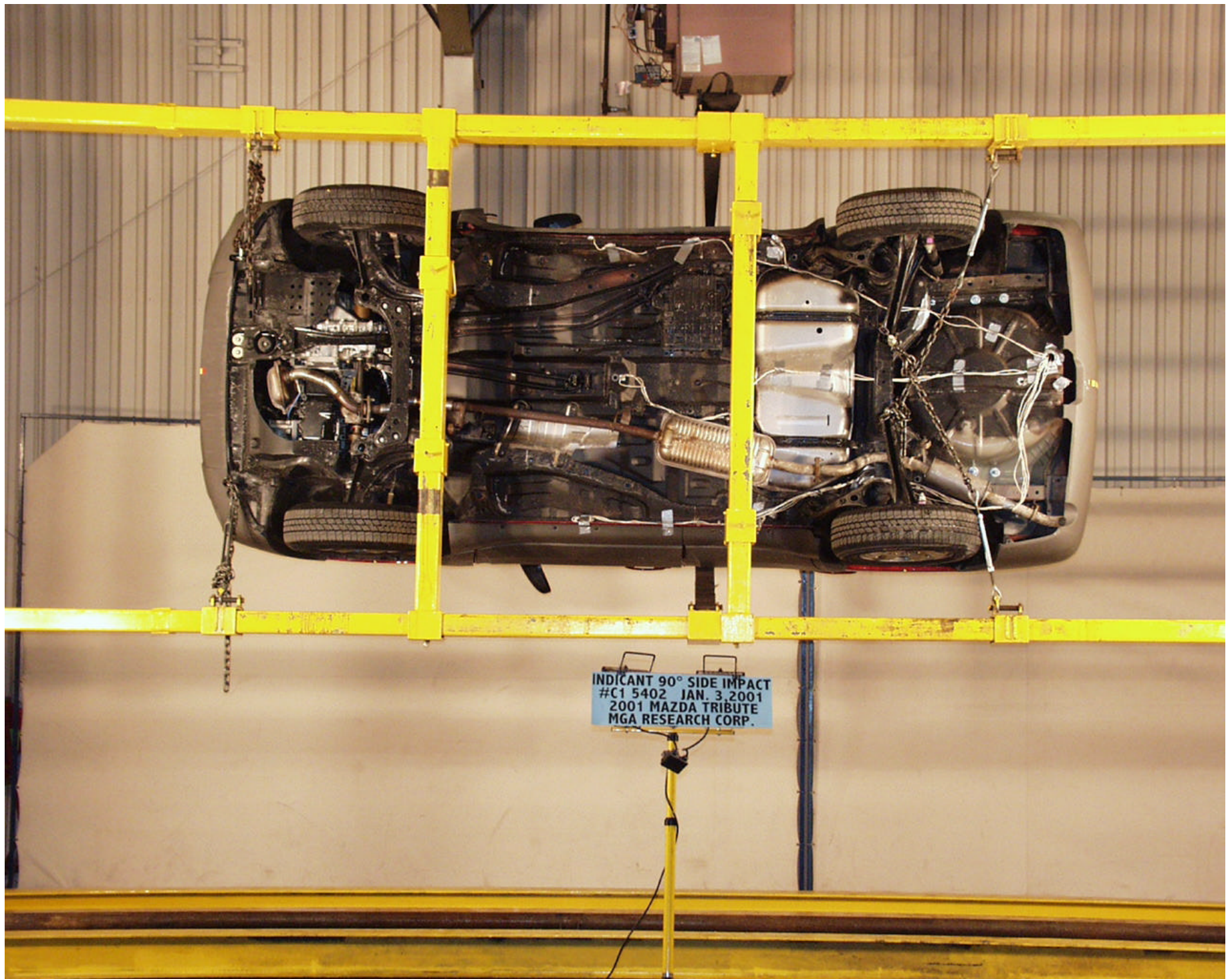


Photo No. A-45 - Rollover 270°



Photo No. A-46 - Rollover 360°



Photo No. A-47 - Left Front Attitude Point

A-48



Photo No. A-48 - Right Front Attitude Point



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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* No valid data collected

** No valid data collected after 14 msec.

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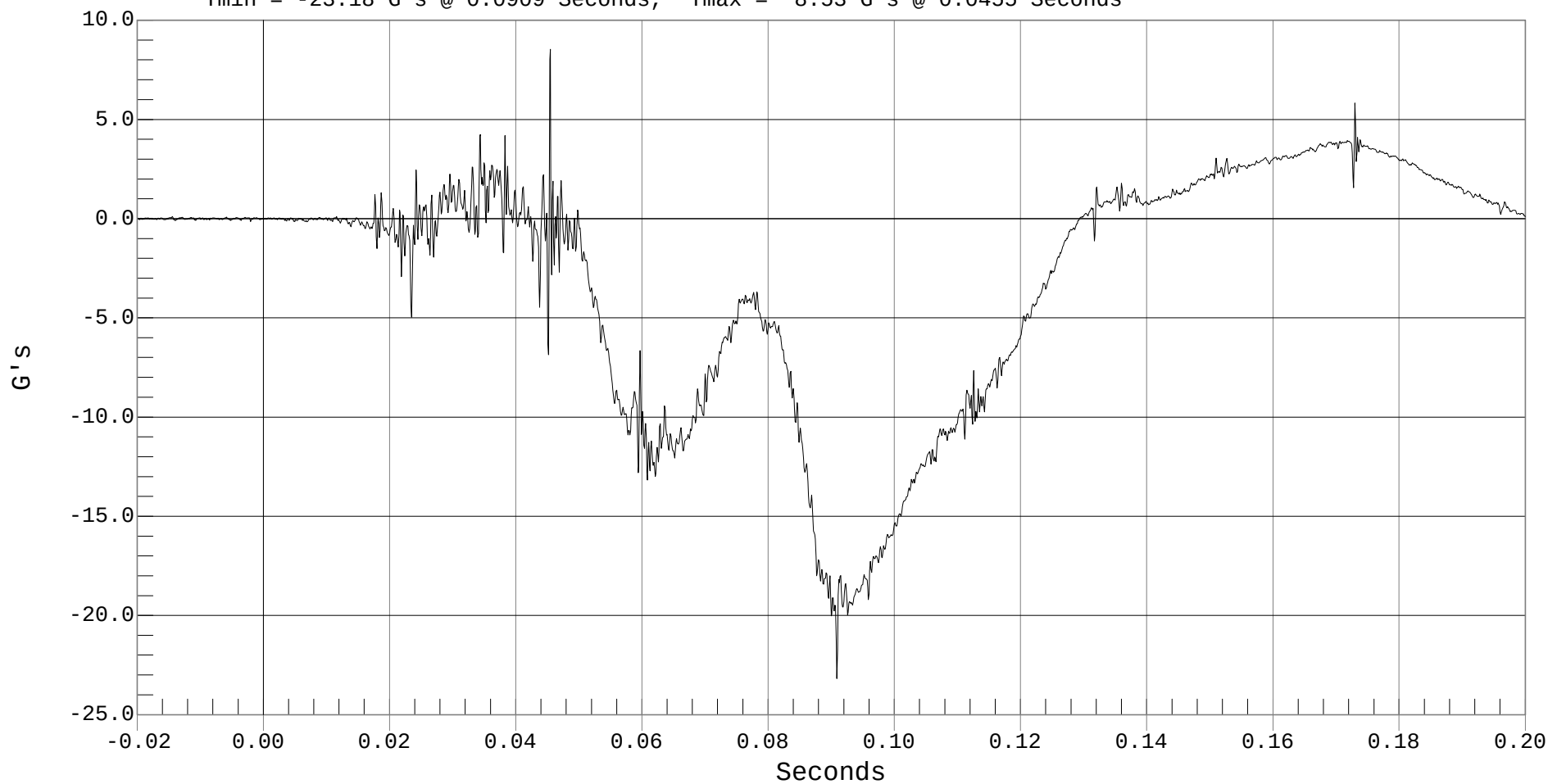
DRIVER HEAD X ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 1000

— 1 DRIVER HEAD X, B01001AT.A01

Ymin = -23.18 G's @ 0.0909 Seconds, Ymax = 8.53 G's @ 0.0455 Seconds





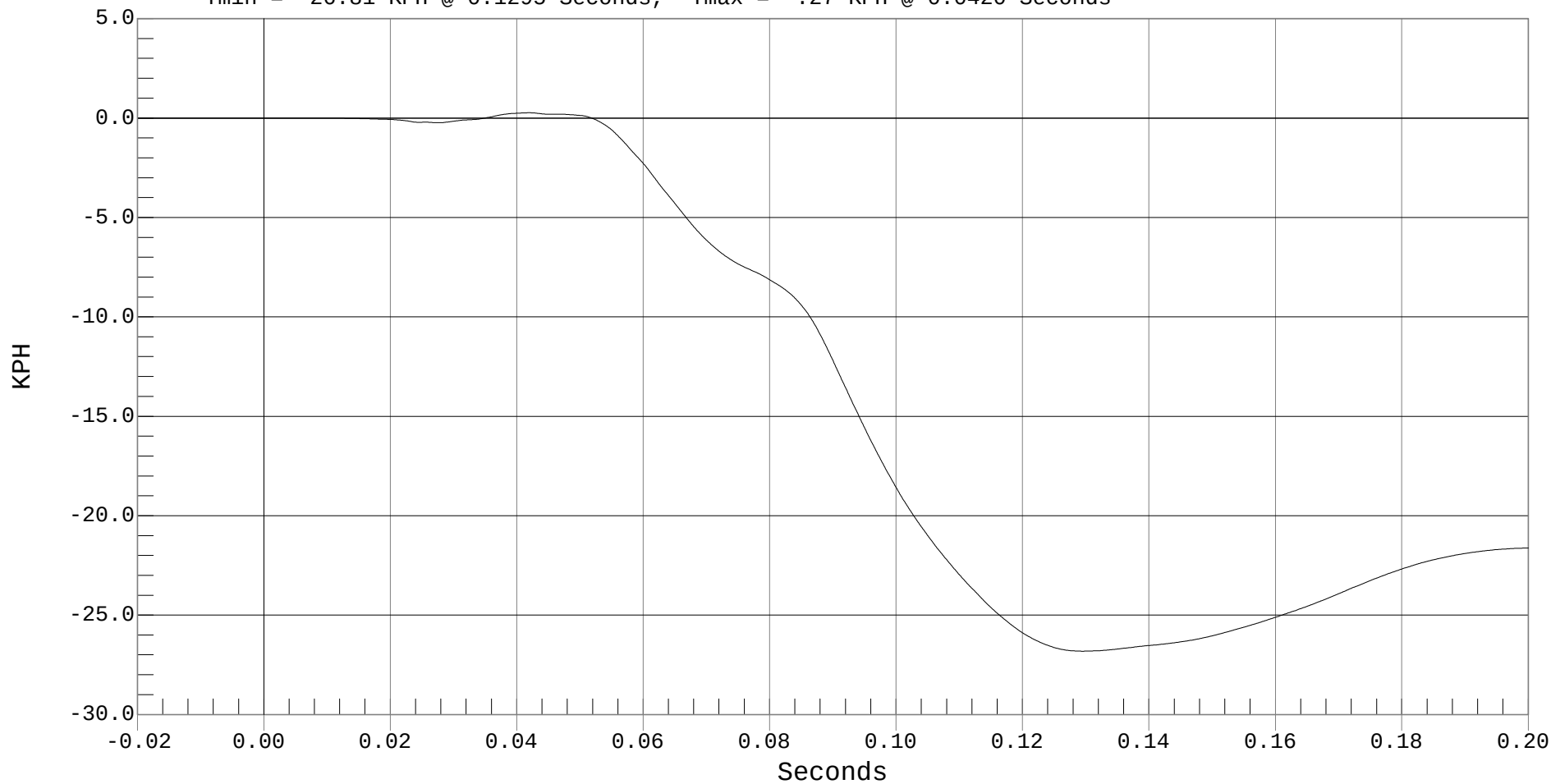
DRIVER HEAD X VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 180

— 1 DRIVER HEAD X VELOCITY, B01001AI.V01

Ymin = -26.81 KPH @ 0.1295 Seconds, Ymax = .27 KPH @ 0.0420 Seconds





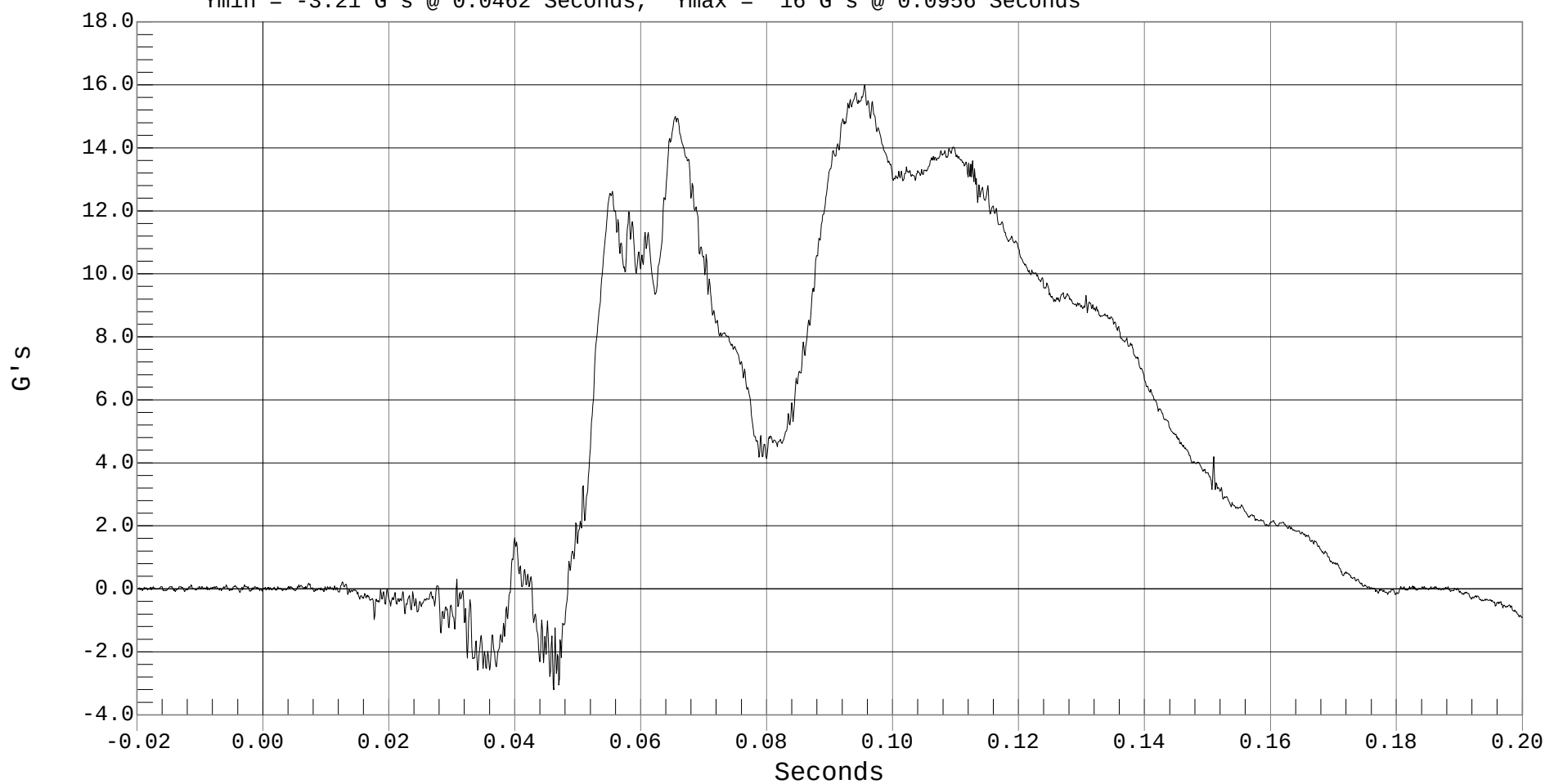
DRIVER HEAD Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 1000

— 1 DRIVER HEAD Y, B01001AT.A02

Ymin = -3.21 G's @ 0.0462 Seconds, Ymax = 16 G's @ 0.0956 Seconds



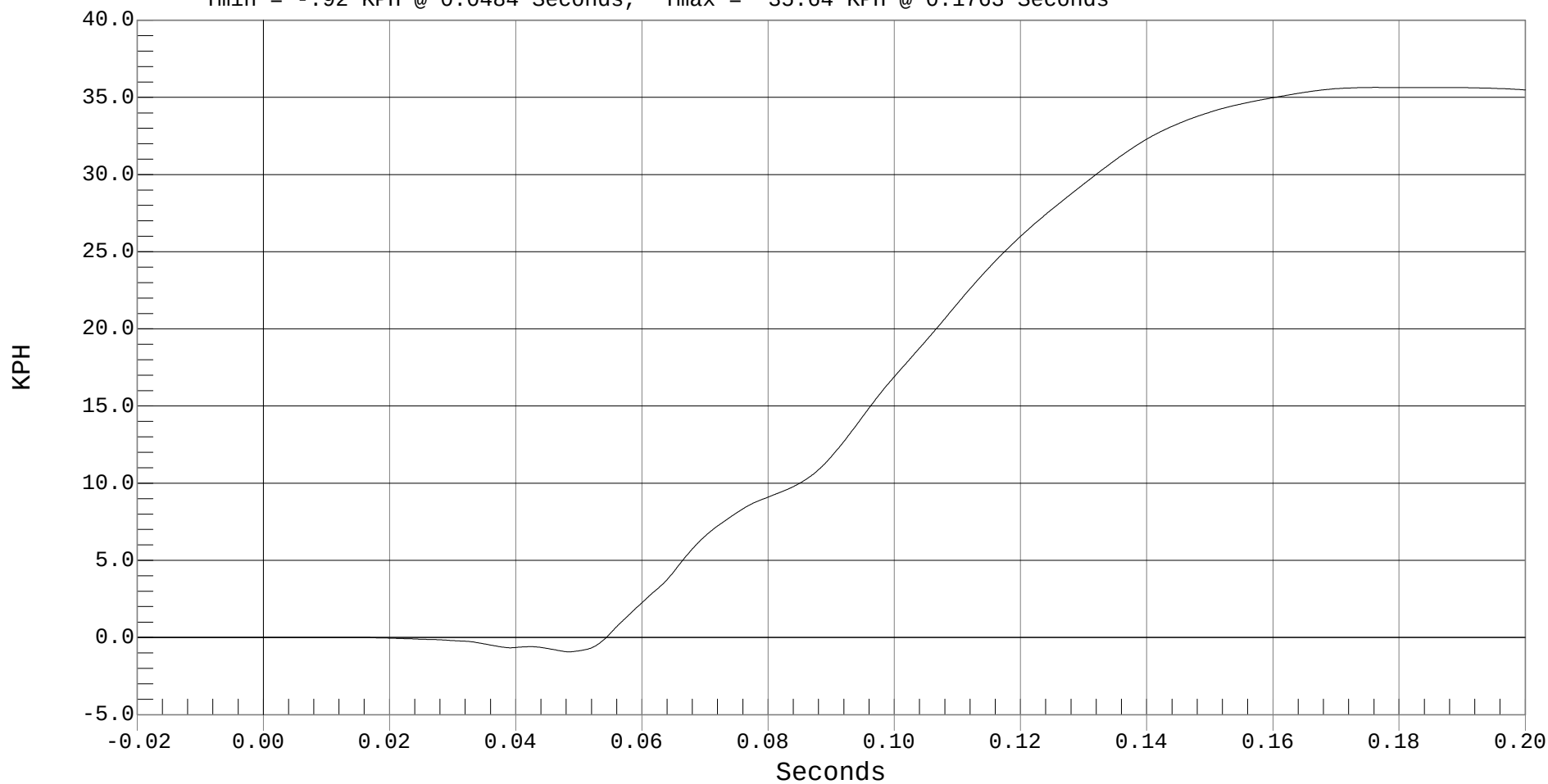


DRIVER HEAD Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 180

Ymin = -.92 KPH @ 0.0484 Seconds, Ymax = 35.64 KPH @ 0.1763 Seconds





DRIVER HEAD Z ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

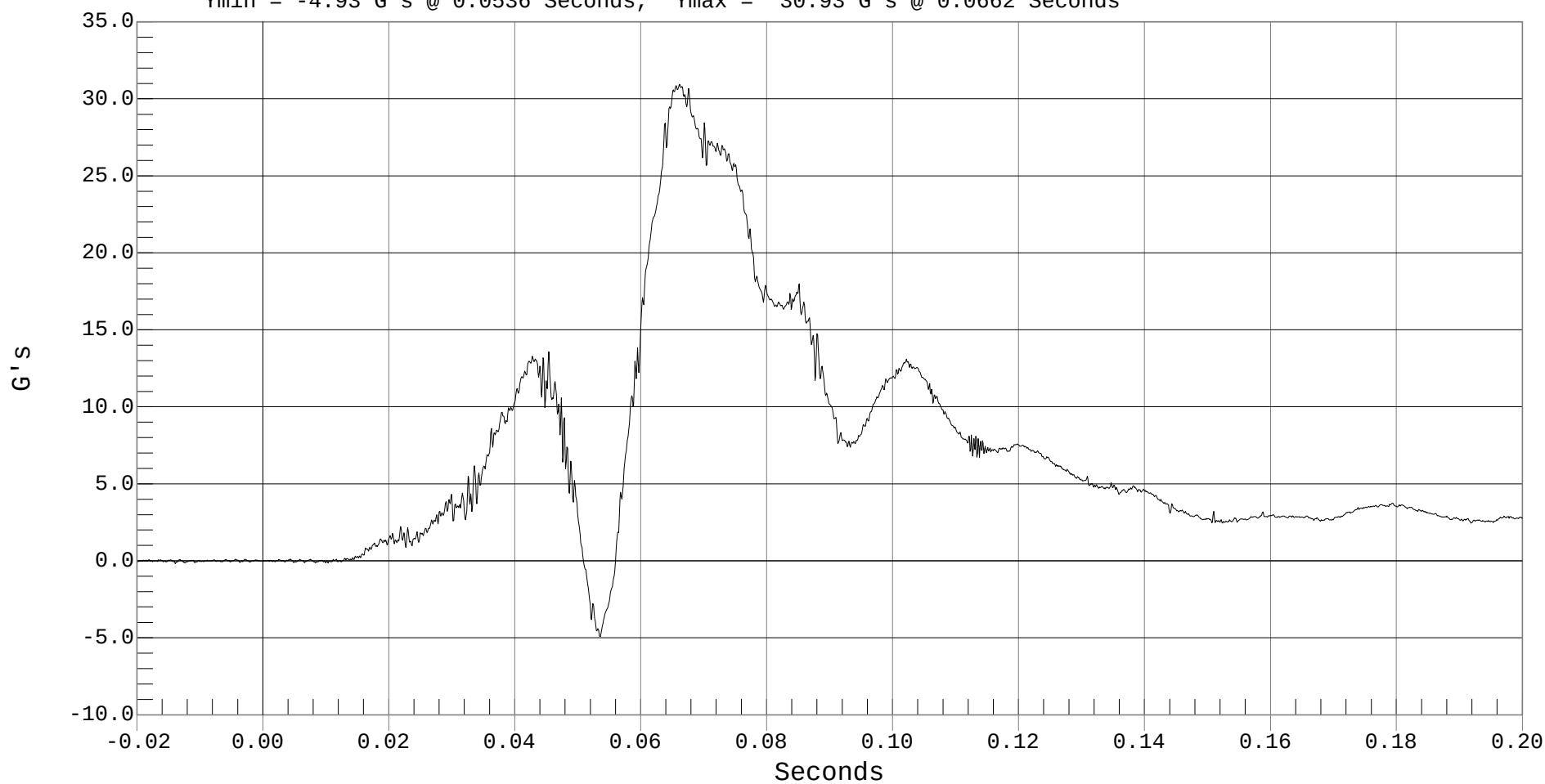
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 1000

1 DRIVER HEAD Z, B01001AT.A03

Ymin = -4.93 G's @ 0.0536 Seconds, Ymax = 30.93 G's @ 0.0662 Seconds





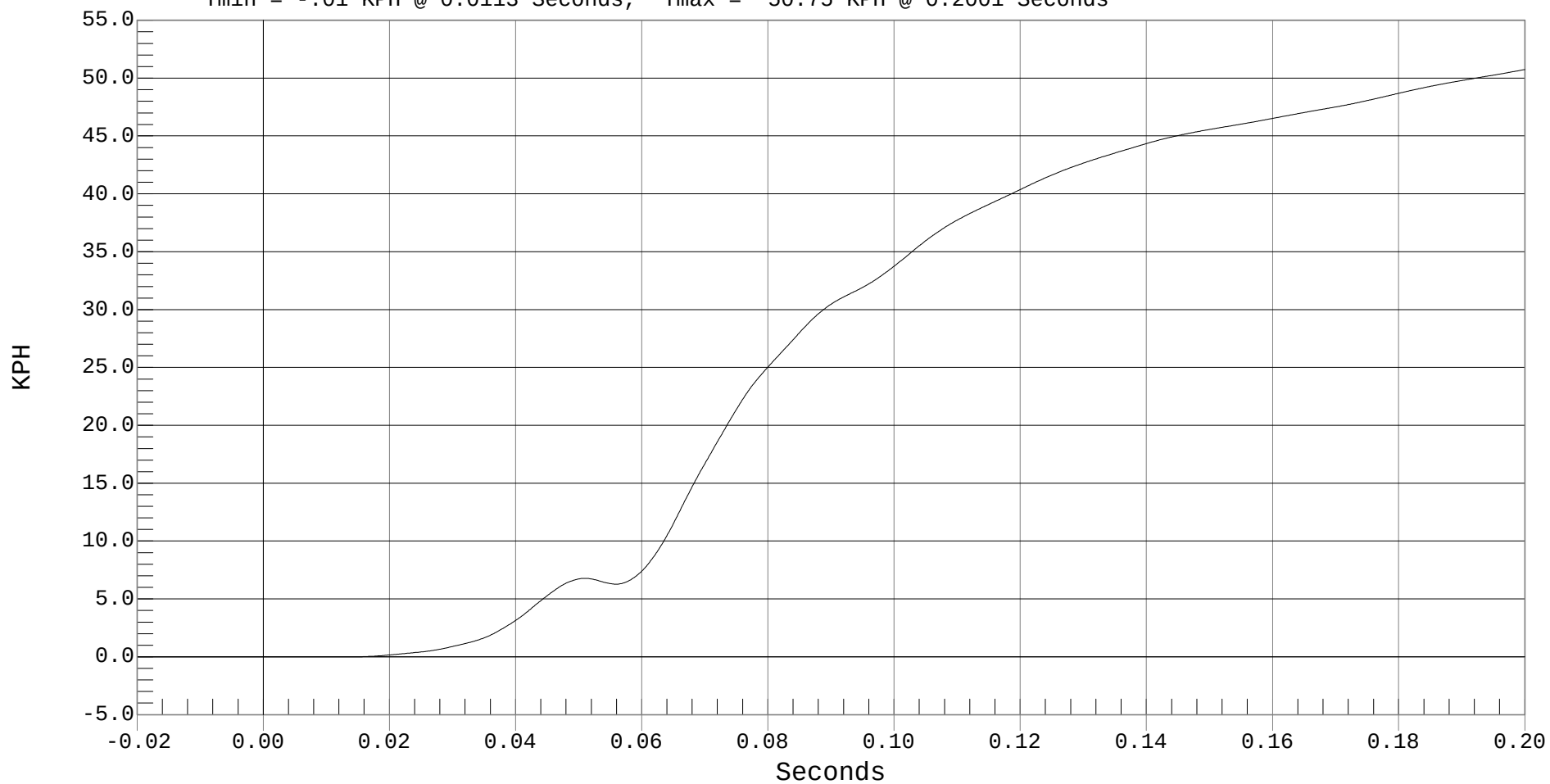
DRIVER HEAD Z VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 180

— 1 DRIVER HEAD Z VELOCITY, B01001AI.V03

Ymin = -.01 KPH @ 0.0113 Seconds, Ymax = 50.75 KPH @ 0.2001 Seconds





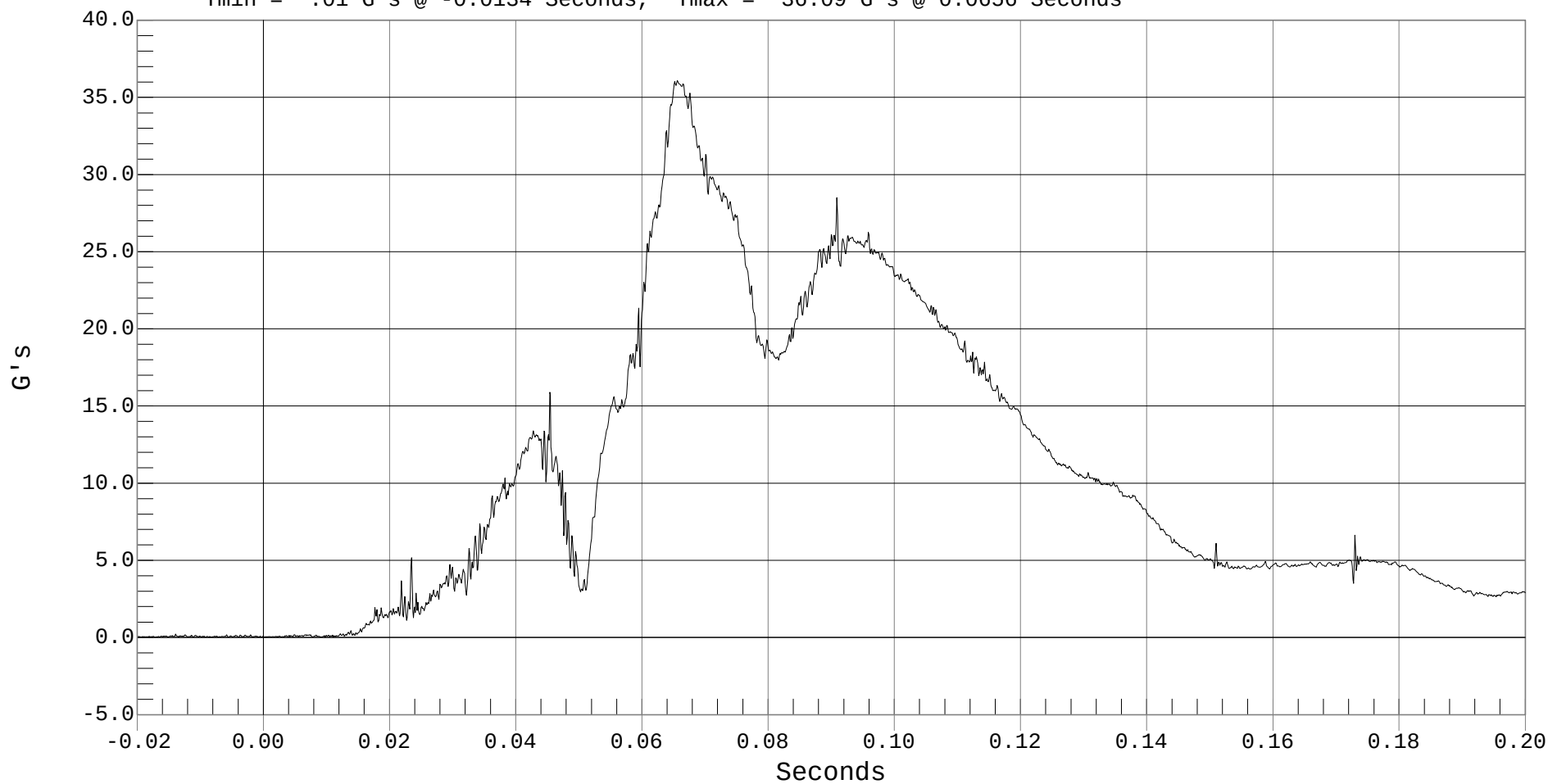
DRIVER HEAD RESULTANT ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 1000

— 1 DRIVER HEAD RESULTANT, B01001AV.A01

Ymin = .01 G's @ -0.0134 Seconds, Ymax = 36.09 G's @ 0.0656 Seconds





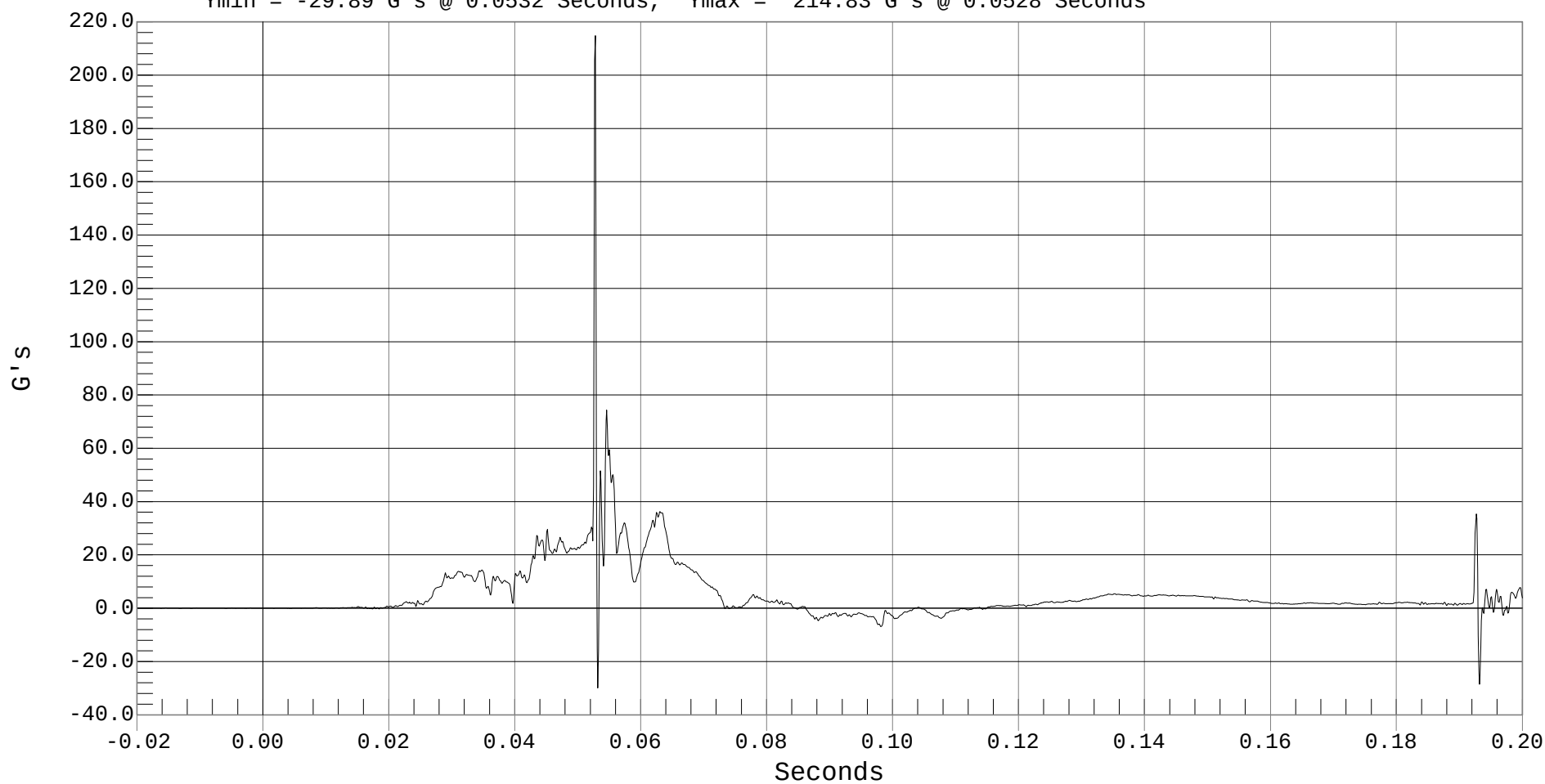
DRIVER UPPER RIB Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 1000

— 1 DRIVER UPPER RIB Y, B01001AT.A04

Ymin = -29.89 G's @ 0.0532 Seconds, Ymax = 214.83 G's @ 0.0528 Seconds





DRIVER UPPER RIB Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

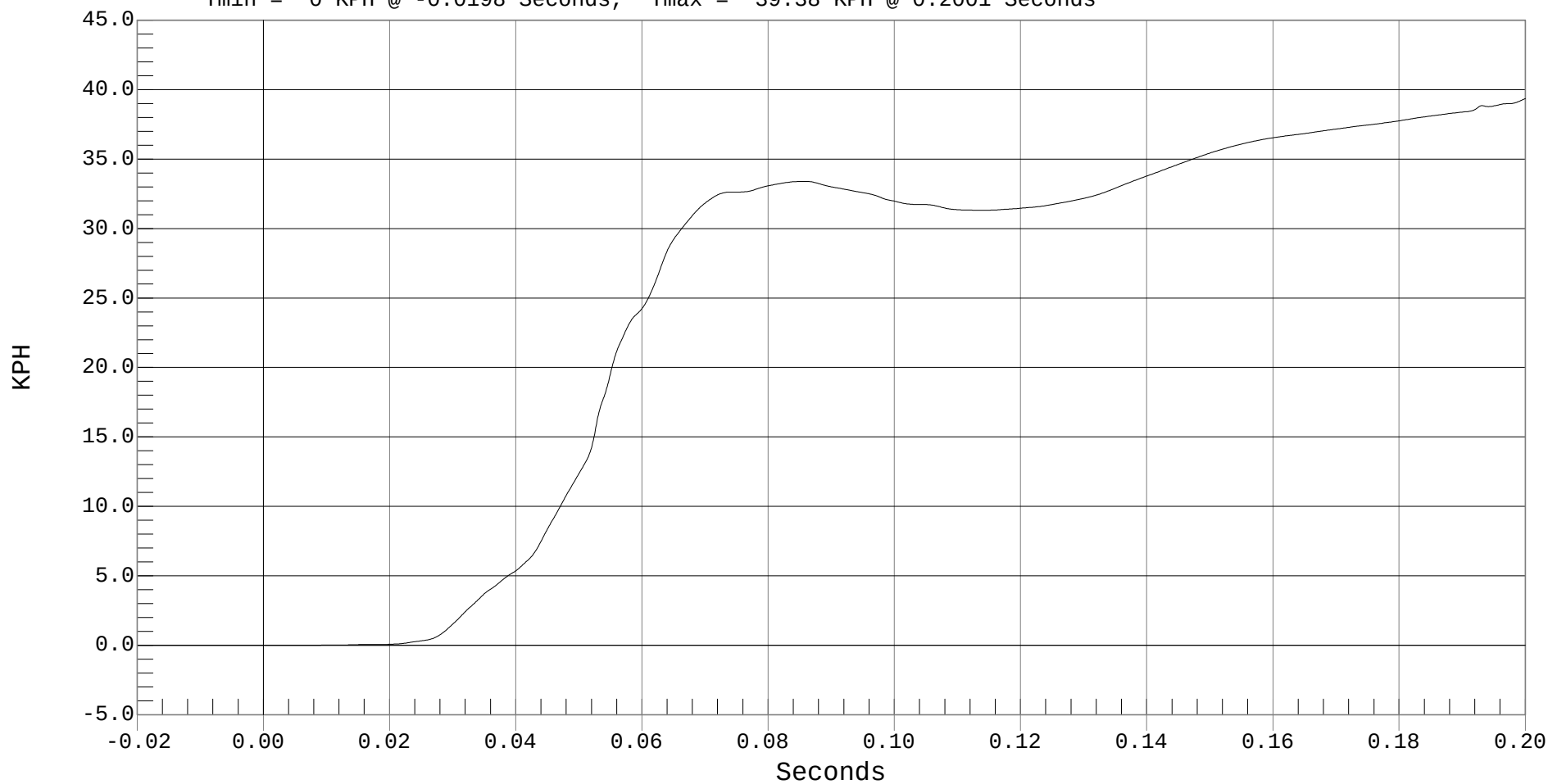
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 DRIVER UPPER RIB Y VELOCITY, B01001AI.V04

Ymin = 0 KPH @ -0.0198 Seconds, Ymax = 39.38 KPH @ 0.2001 Seconds





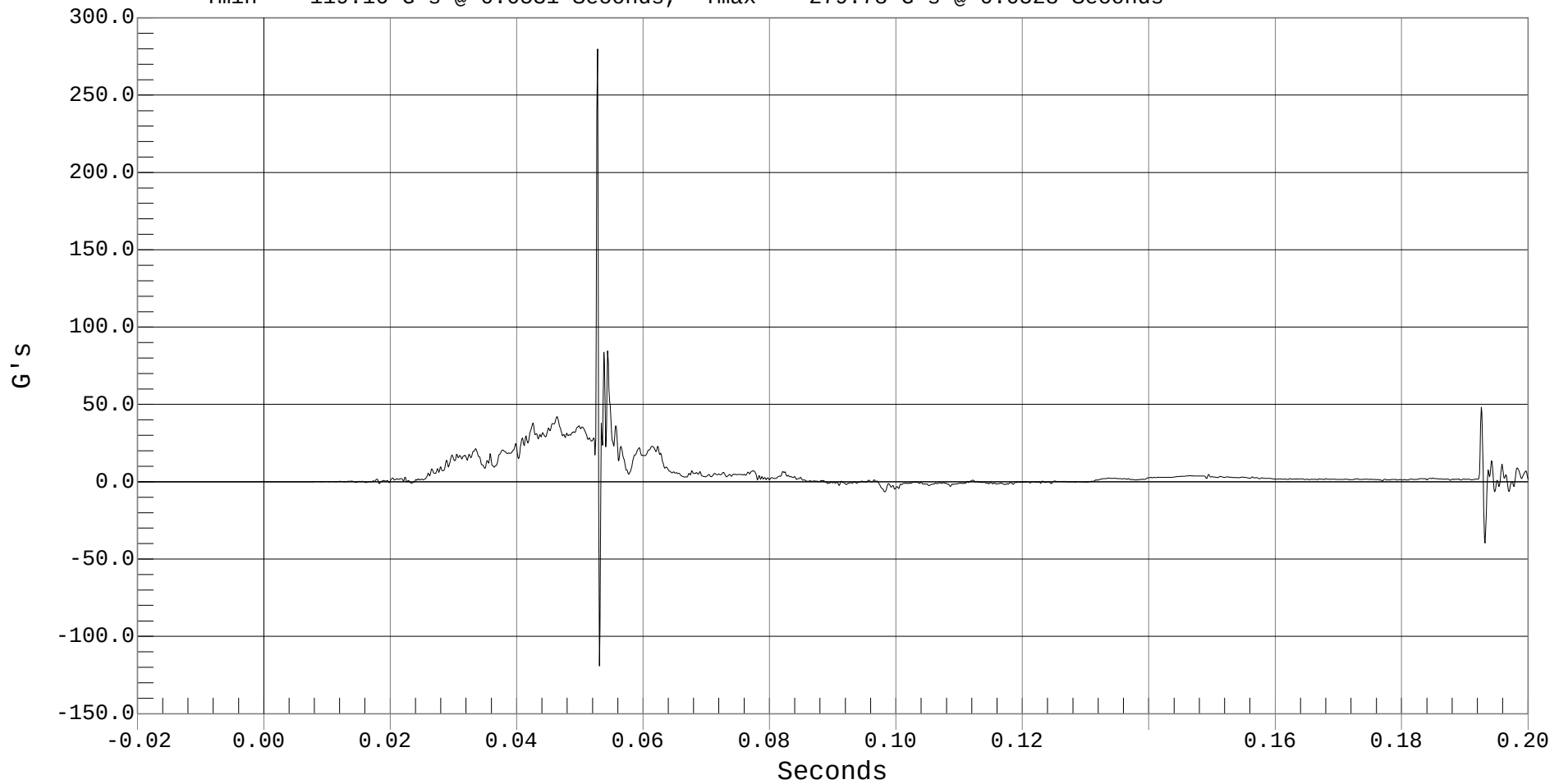
DRIVER LOWER RIB Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 1000

— 1 DRIVER LOWER RIB Y, B01001AT.A05

Ymin = -119.16 G's @ 0.0531 Seconds, Ymax = 279.78 G's @ 0.0528 Seconds





DRIVER LOWER RIB Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

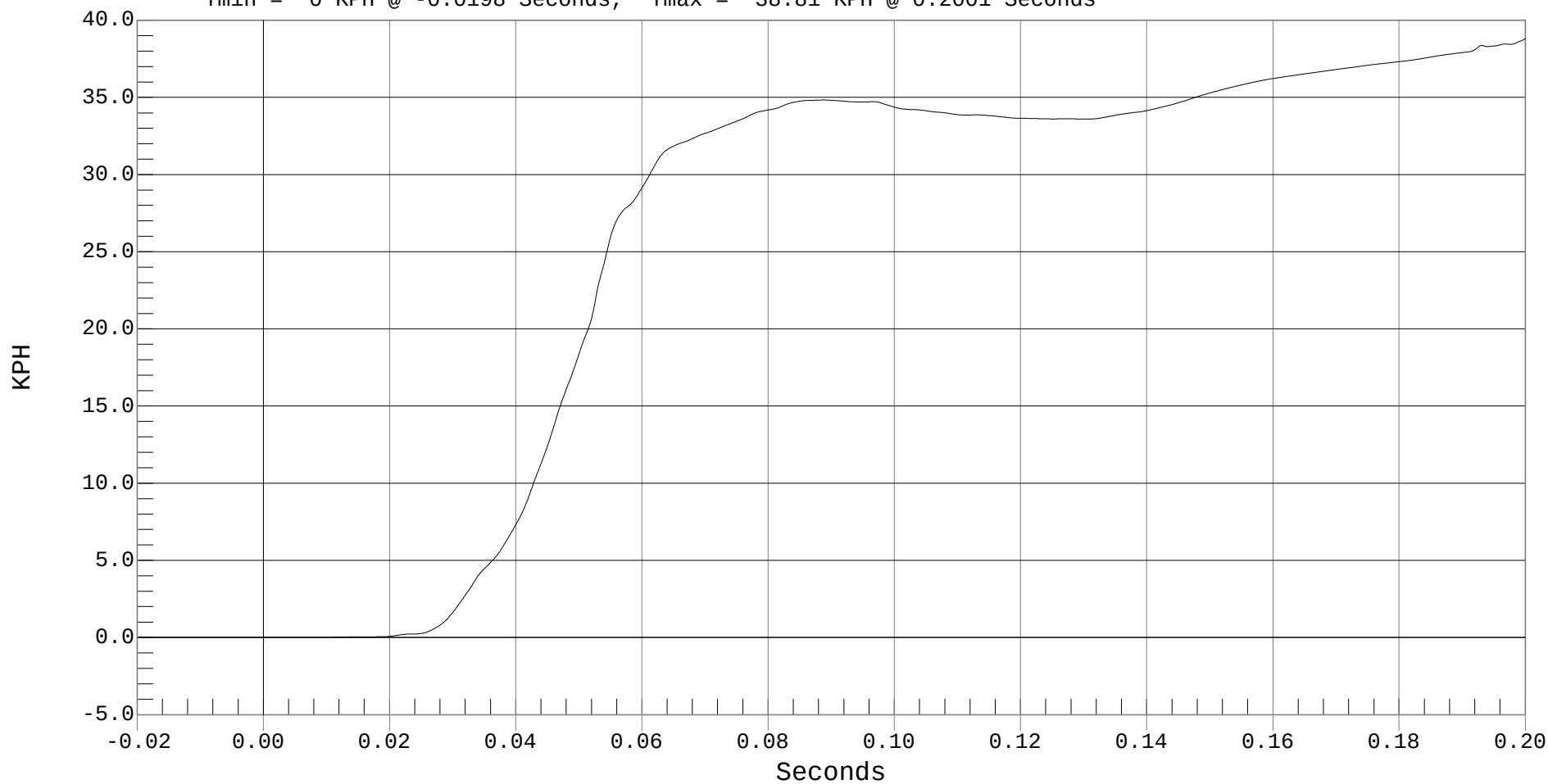
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 DRIVER LOWER RIB Y VELOCITY, B01001AI.V05

Ymin = 0 KPH @ -0.0198 Seconds, Ymax = 38.81 KPH @ 0.2001 Seconds





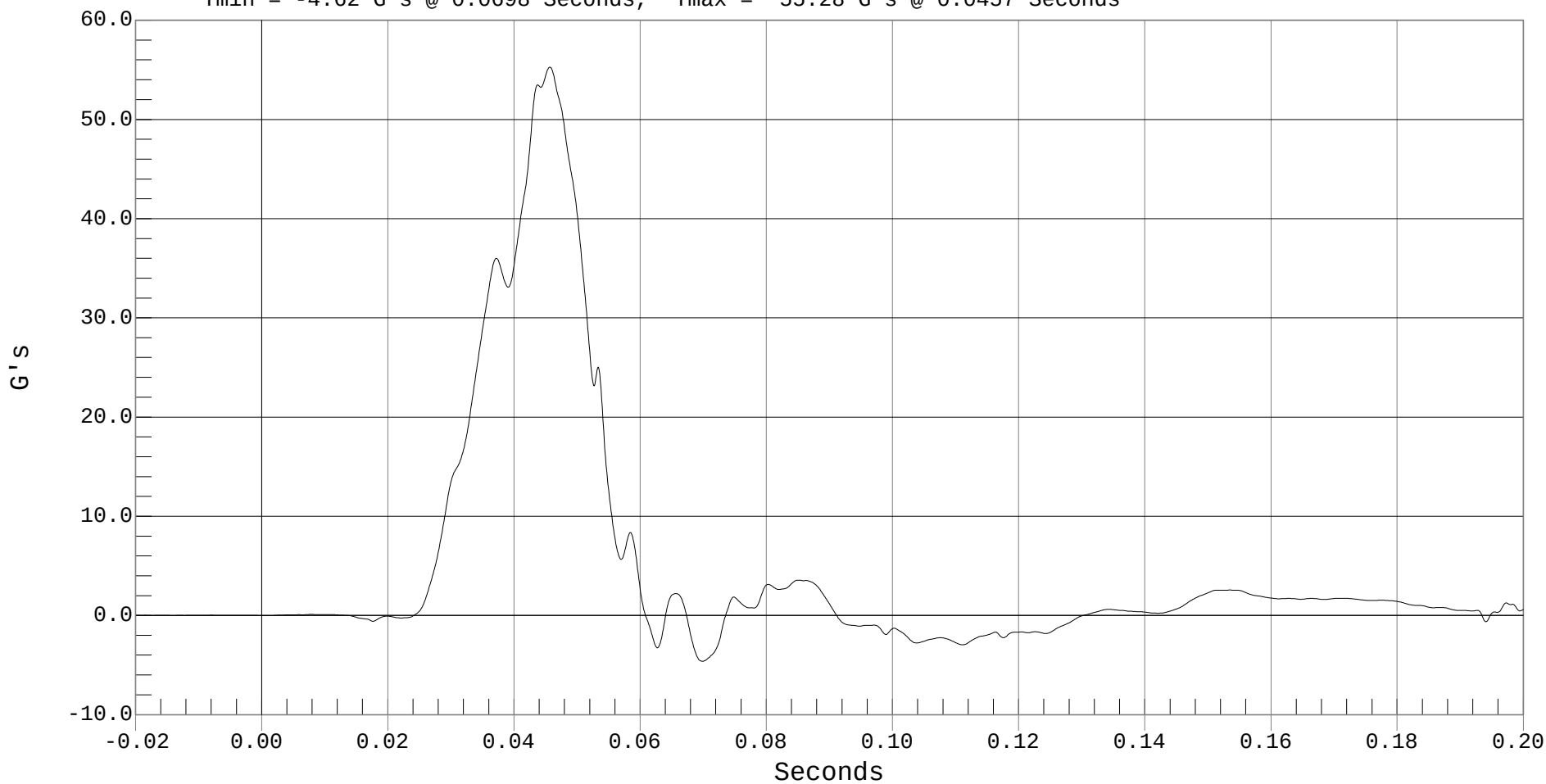
DRIVER LOWER SPINE Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 180

— 1 DRIVER LOWER SPINE Y, B01001AF.A06

Ymin = -4.62 G's @ 0.0698 Seconds, Ymax = 55.28 G's @ 0.0457 Seconds





DRIVER LOWER SPINE Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

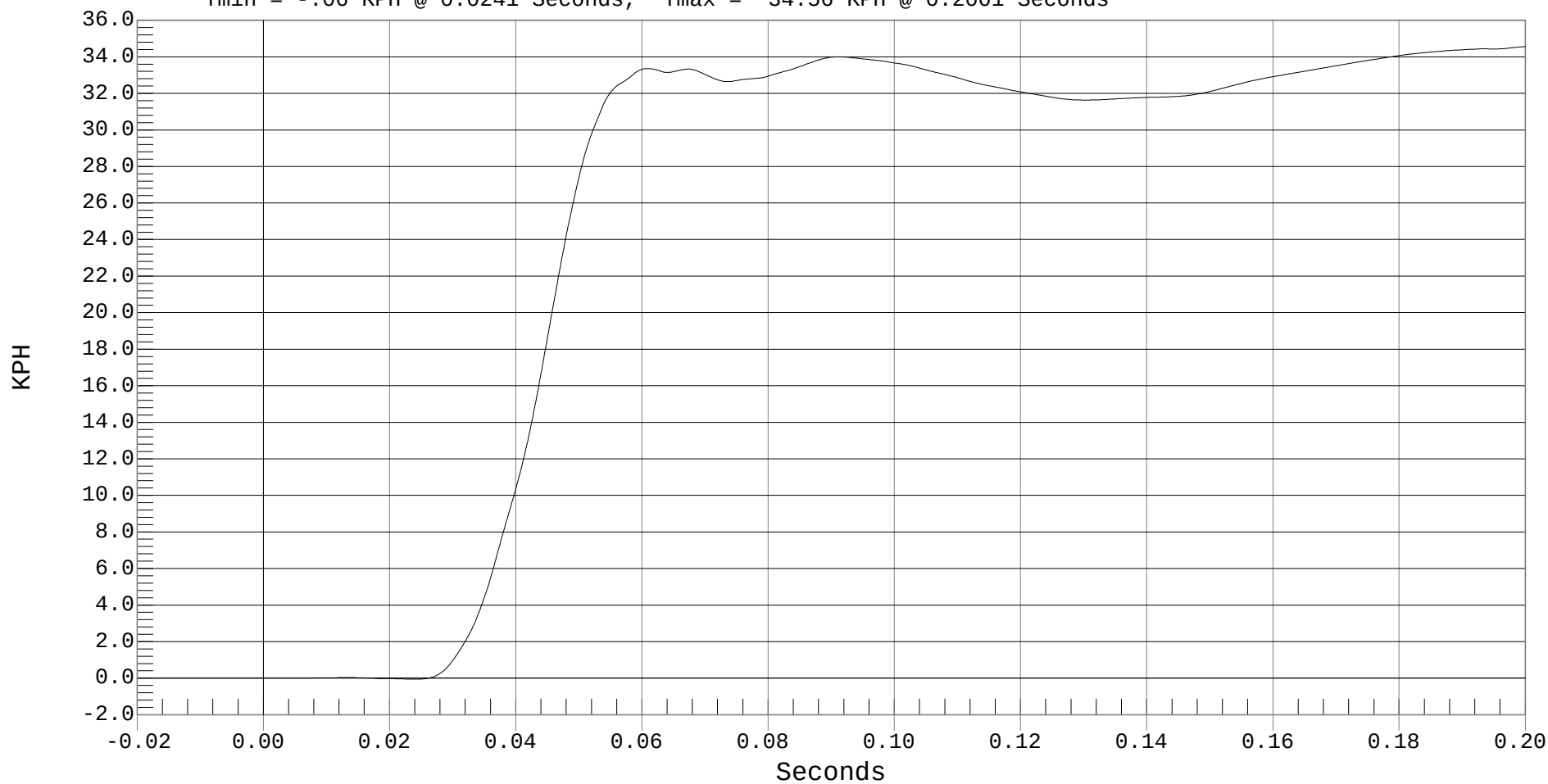
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 DRIVER LOWER SPINE Y VELOCITY, B01001AI.V06

Ymin = -.06 KPH @ 0.0241 Seconds, Ymax = 34.56 KPH @ 0.2001 Seconds





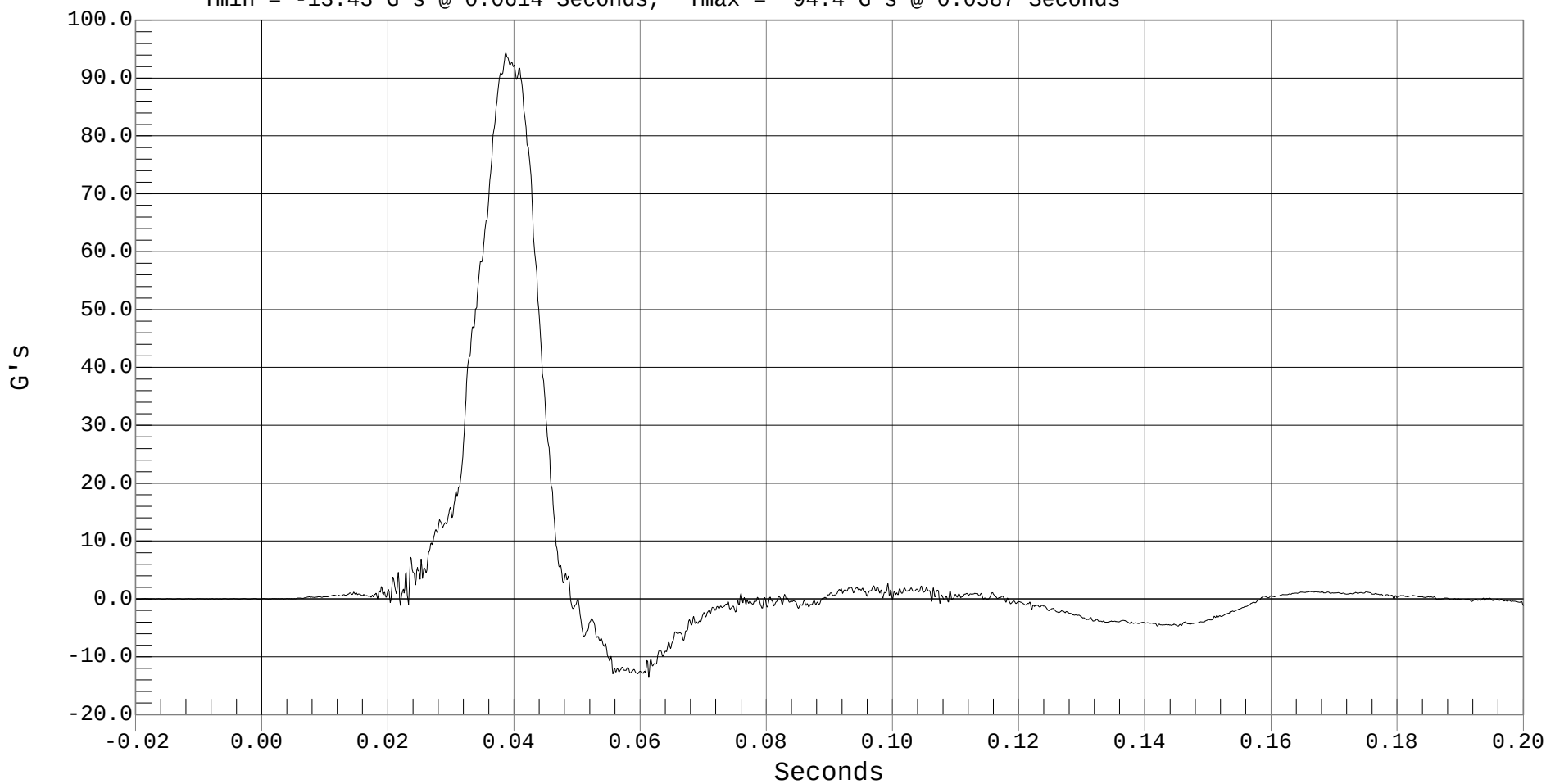
DRIVER PELVIS Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 1000

— 1 DRIVER PELVIS Y, B01001AT.A07

Ymin = -13.43 G's @ 0.0614 Seconds, Ymax = 94.4 G's @ 0.0387 Seconds





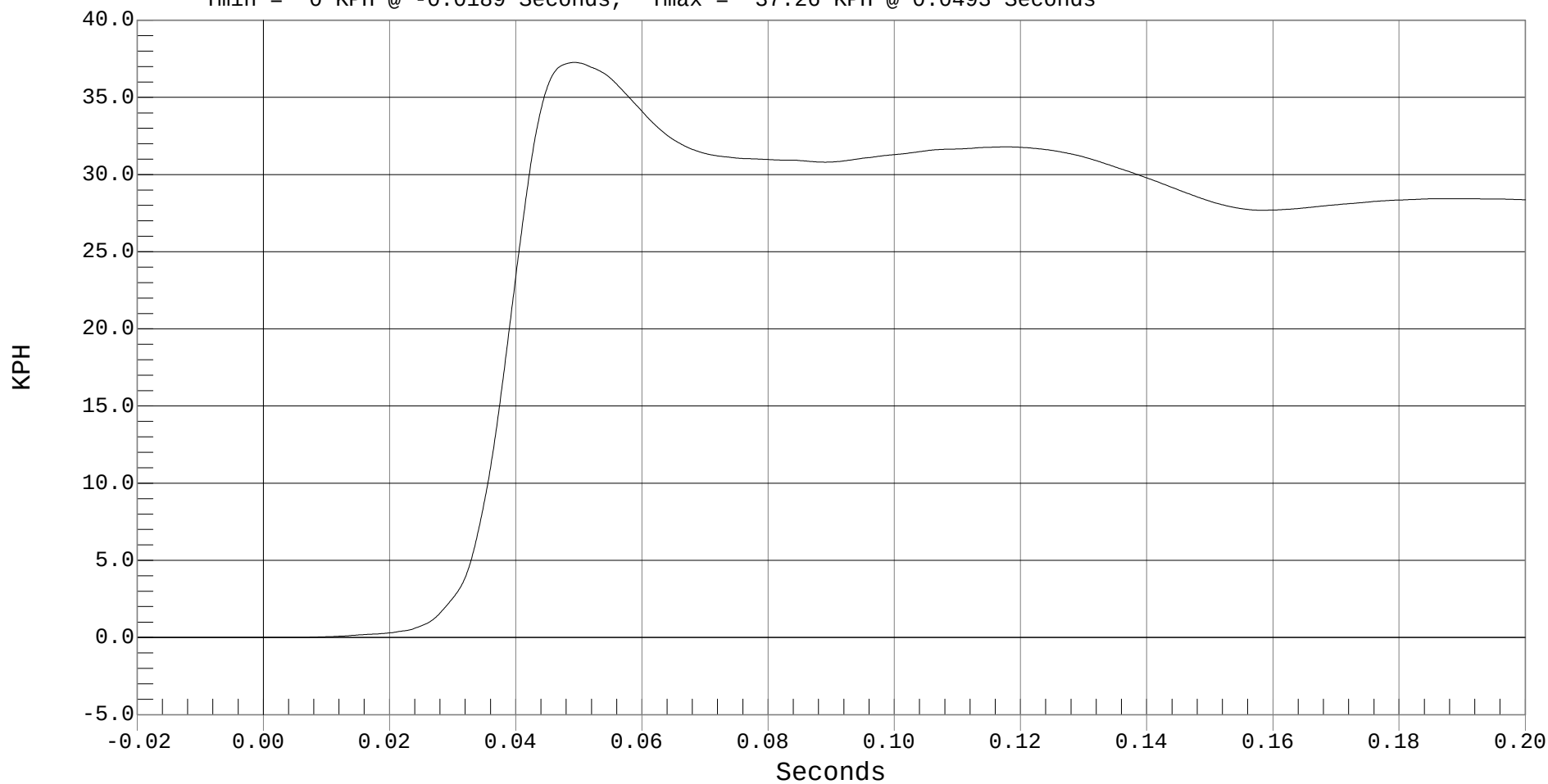
DRIVER PELVIS Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 180

— 1 DRIVER PELVIS Y VELOCITY, B01001AI.V07

Ymin = 0 KPH @ -0.0189 Seconds, Ymax = 37.26 KPH @ 0.0493 Seconds





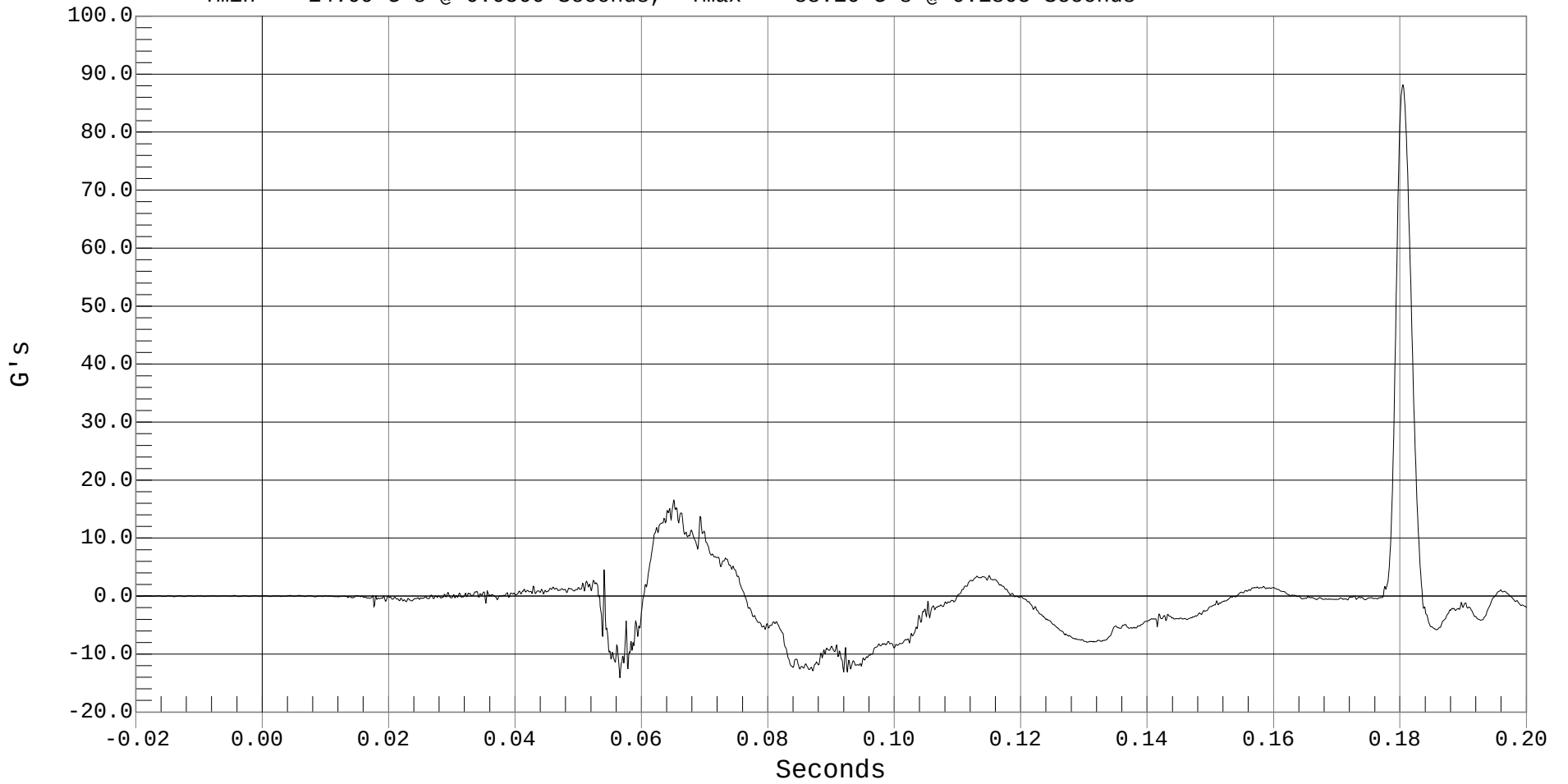
REAR PASSENGER HEAD X ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 1000

— 1 PASSENGER HEAD X, B01001AT.A08

Ymin = -14.09 G's @ 0.0566 Seconds, Ymax = 88.16 G's @ 0.1805 Seconds





REAR PASSENGER HEAD X VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

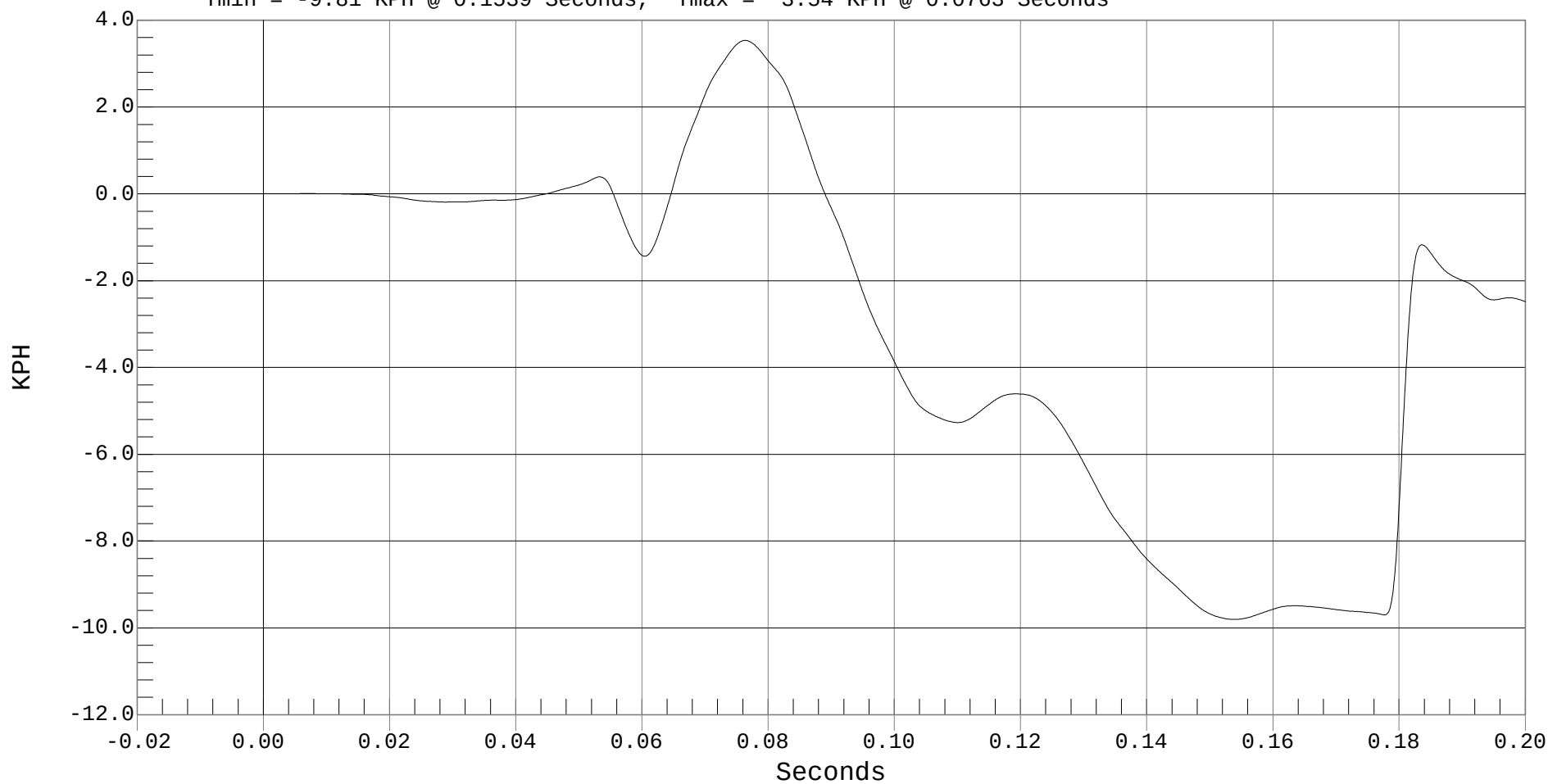
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 REAR PASSENGER HEAD X VELOCITY, B01001AI.V08

Ymin = -9.81 KPH @ 0.1539 Seconds, Ymax = 3.54 KPH @ 0.0763 Seconds





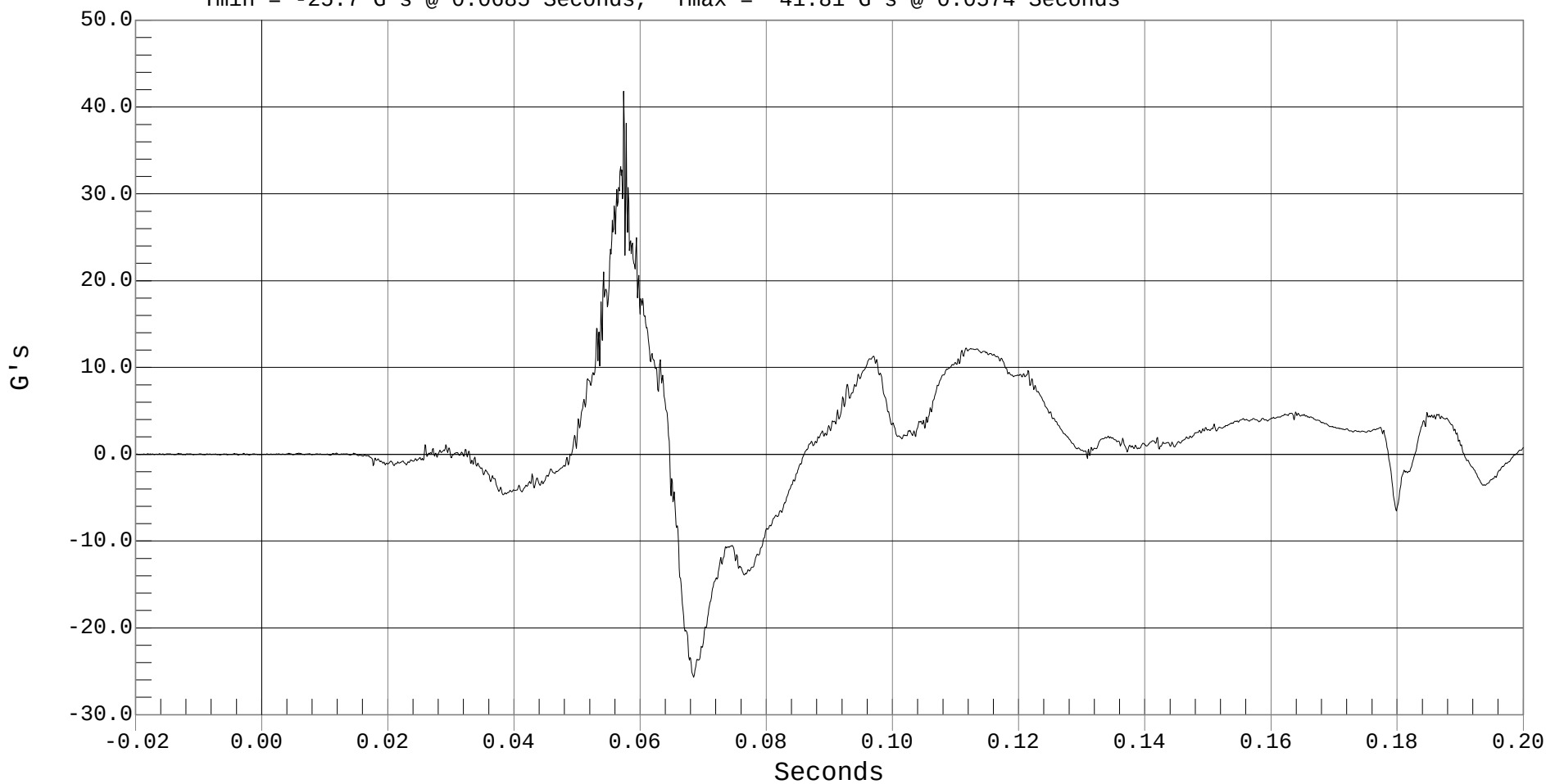
REAR PASSENGER HEAD Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 1000

— 1 PASSENGER HEAD Y, B01001AT.A09

Ymin = -25.7 G's @ 0.0685 Seconds, Ymax = 41.81 G's @ 0.0574 Seconds





REAR PASSENGER HEAD Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

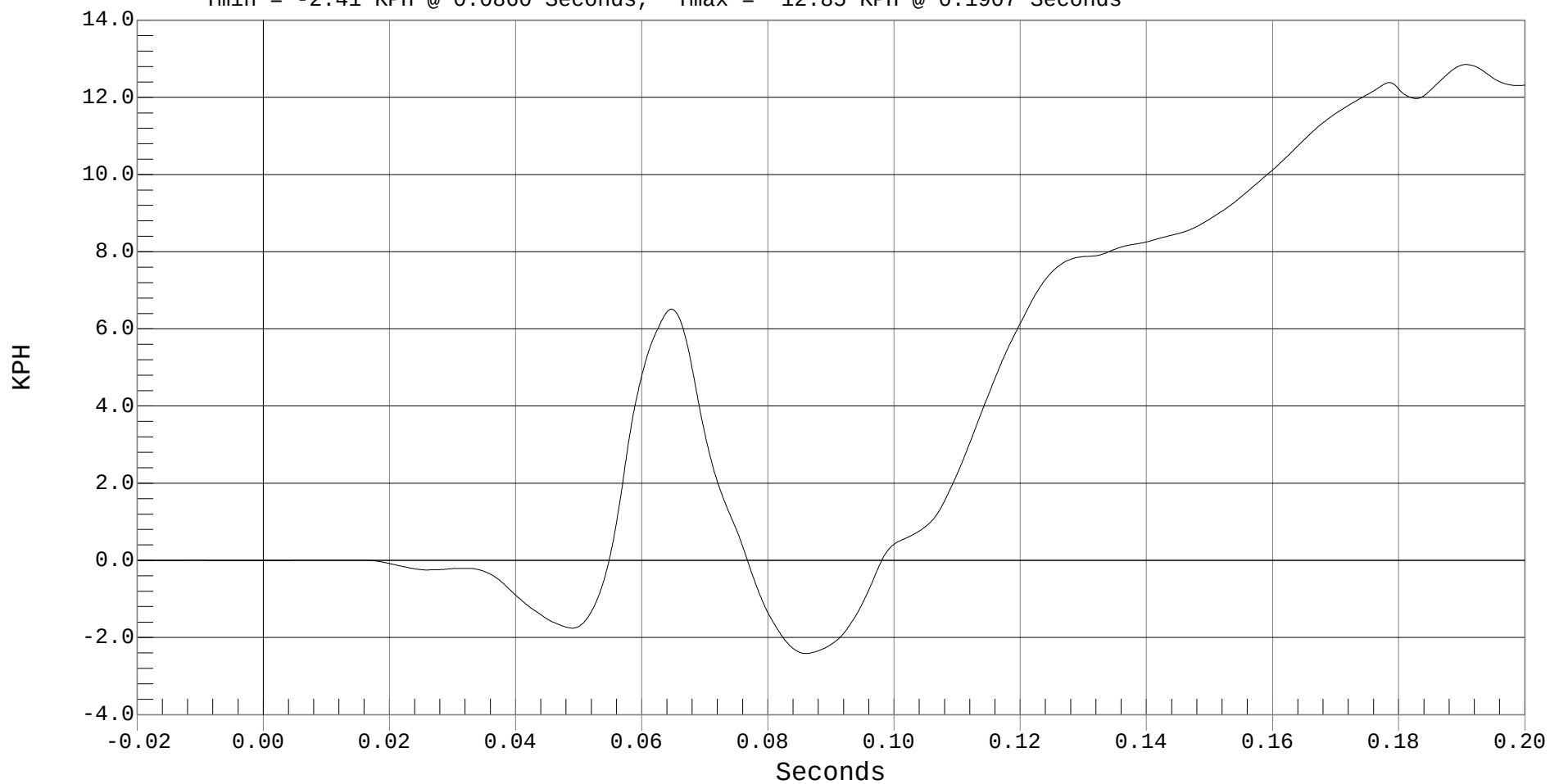
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 REAR PASSENGER HEAD Y VELOCITY, B01001AI.V09

Ymin = -2.41 KPH @ 0.0860 Seconds, Ymax = 12.85 KPH @ 0.1907 Seconds





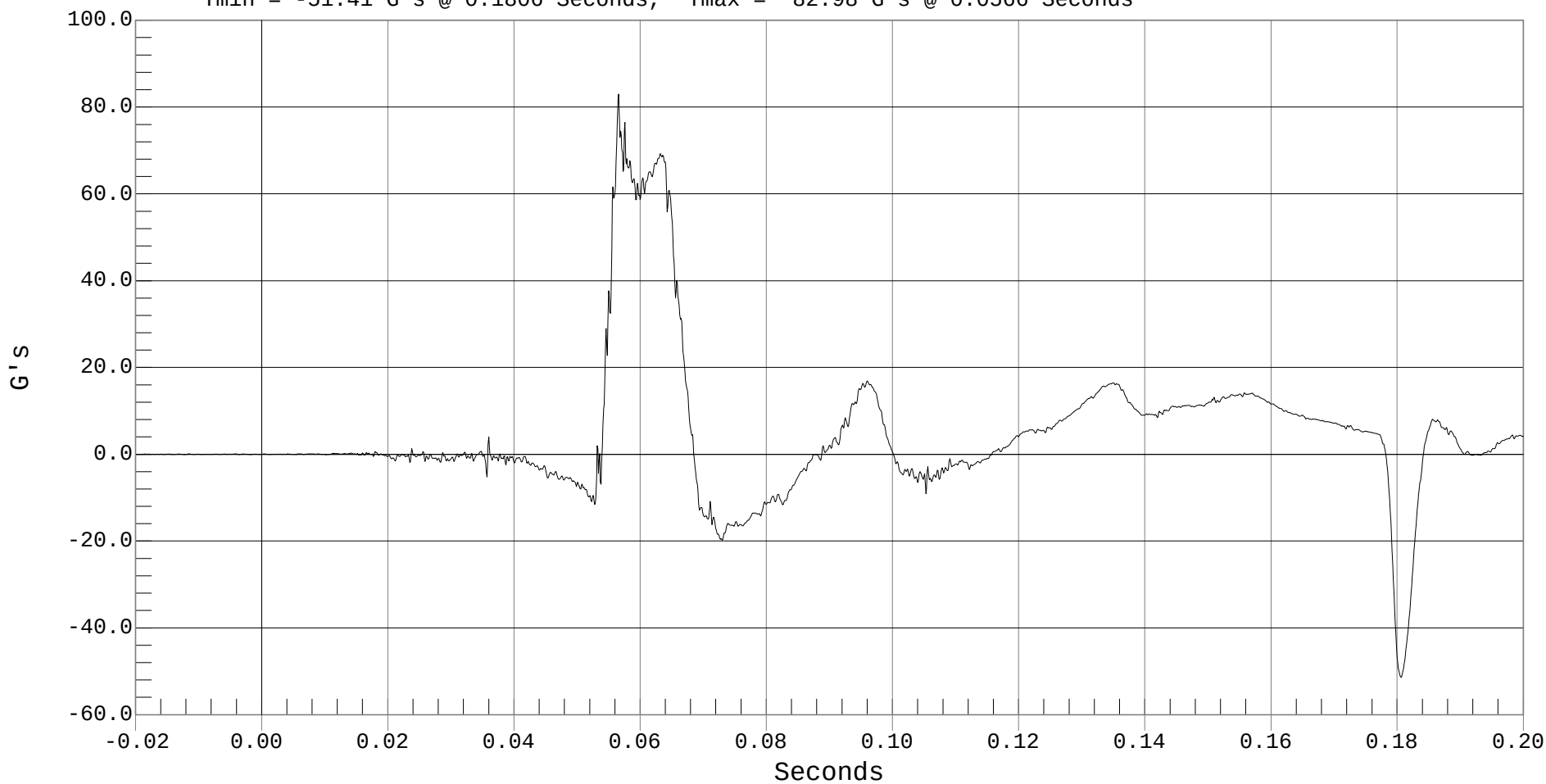
REAR PASSENGER HEAD Z ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 1000

— 1 PASSENGER HEAD Z, B01001AT.A10

Ymin = -51.41 G's @ 0.1806 Seconds, Ymax = 82.98 G's @ 0.0566 Seconds





REAR PASSENGER HEAD Z VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

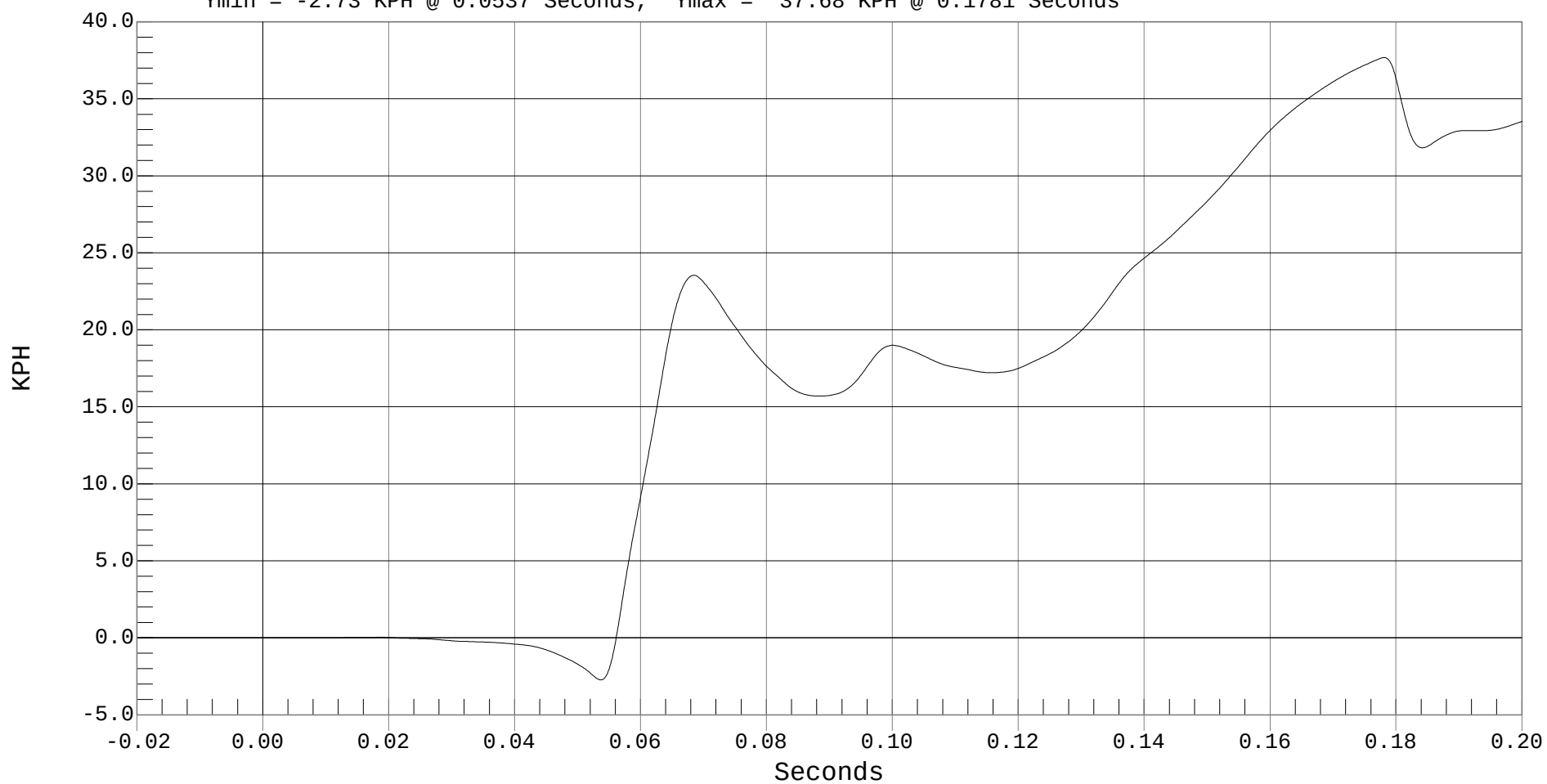
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 REAR PASSENGER HEAD Z VELOCITY, B01001AI.V10

Ymin = -2.73 KPH @ 0.0537 Seconds, Ymax = 37.68 KPH @ 0.1781 Seconds





REAR PASSENGER HEAD RESULTANT ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

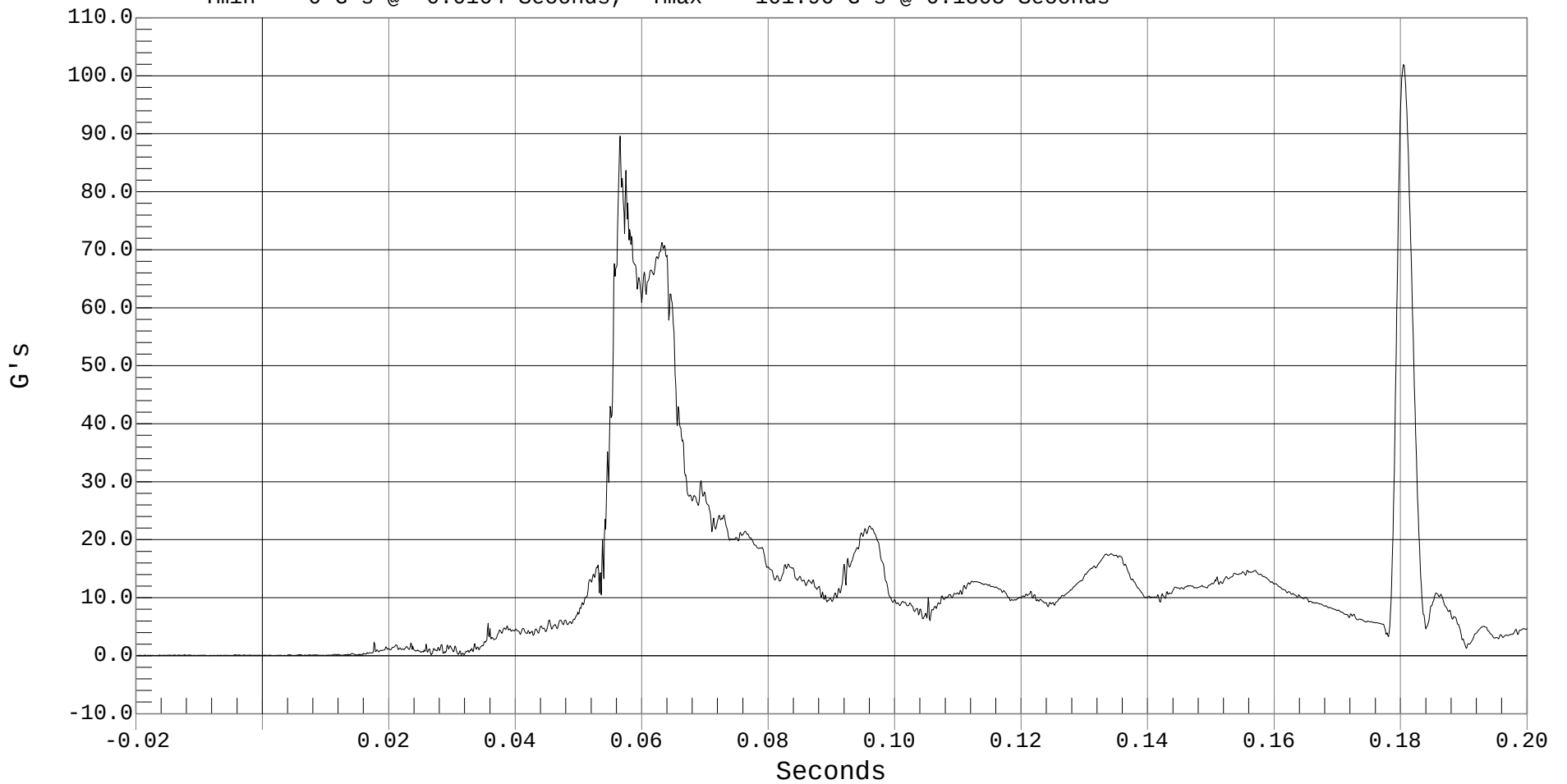
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 1000

— 1 REAR PASSENGER HEAD RESULTANT, B01001AV.A08

Ymin = 0 G's @ -0.0164 Seconds, Ymax = 101.96 G's @ 0.1805 Seconds





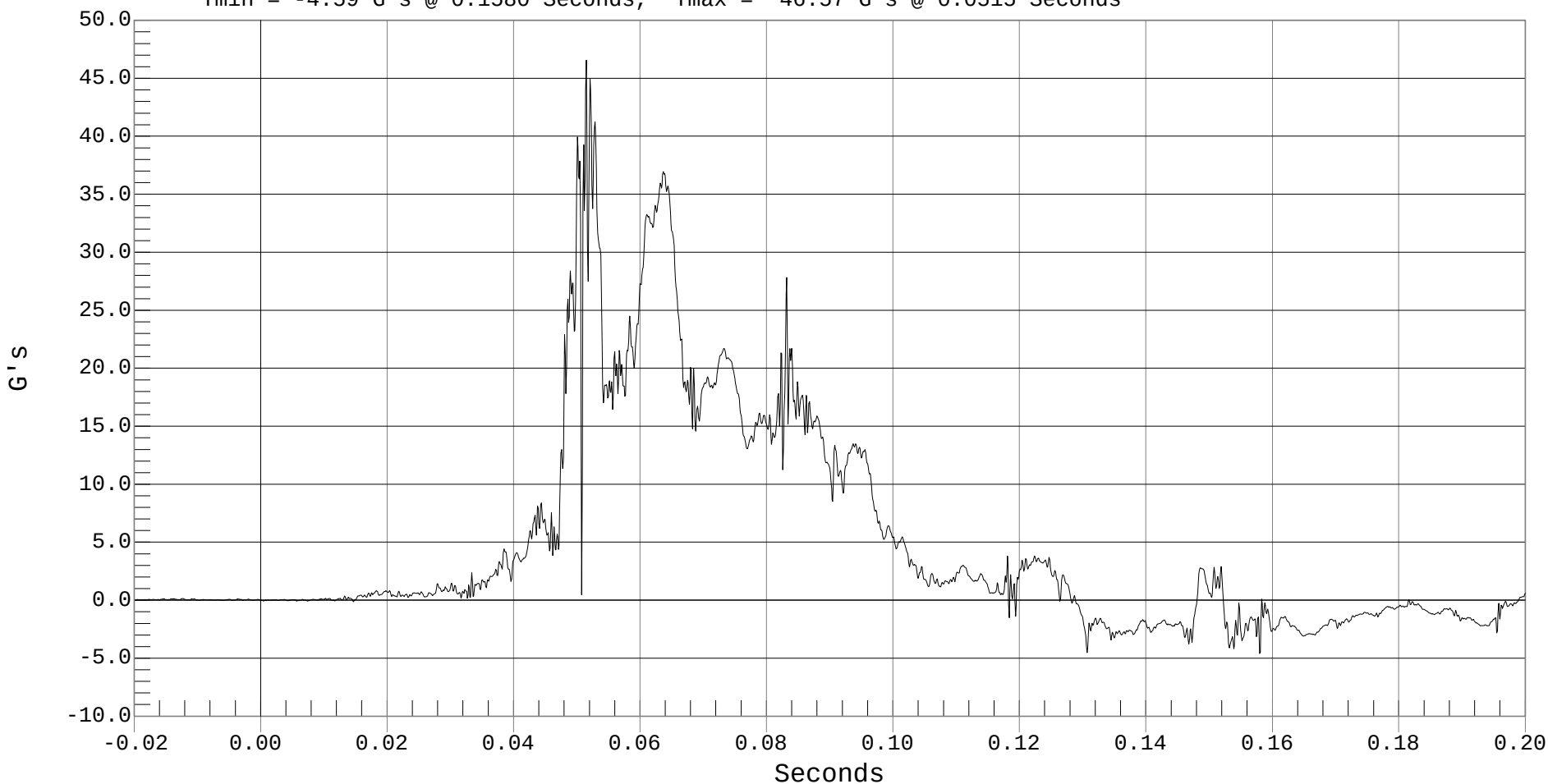
REAR PASSENGER UPPER RIB Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 1000

— 1 PASSENGER UPPER RIB Y, B01001AT.A11

Ymin = -4.59 G's @ 0.1580 Seconds, Ymax = 46.57 G's @ 0.0515 Seconds





REAR PASSENGER UPPER RIB Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

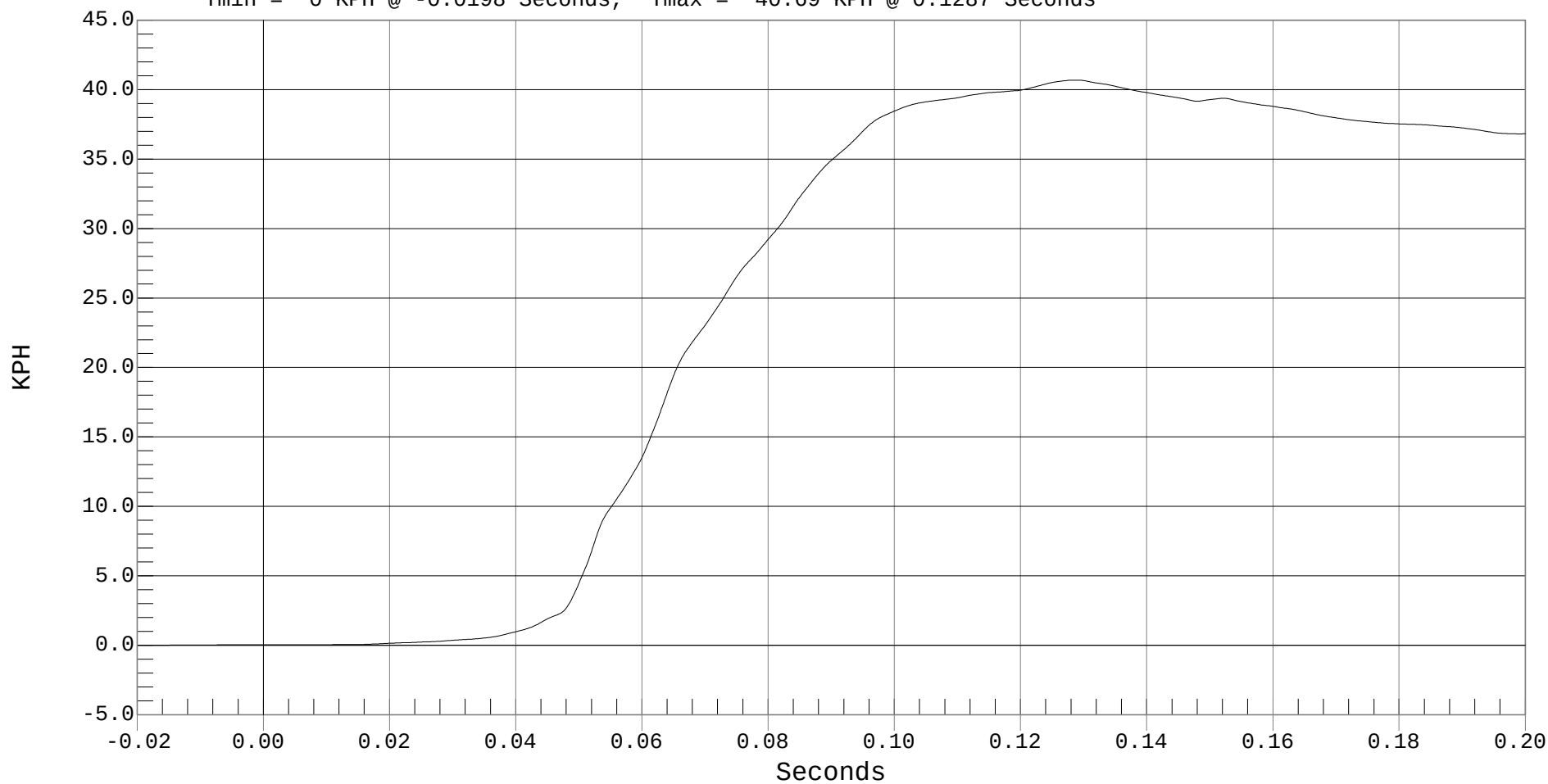
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 REAR PASSENGER UPPER RIB Y VELOCITY, B01001AI.V11

Ymin = 0 KPH @ -0.0198 Seconds, Ymax = 40.69 KPH @ 0.1287 Seconds





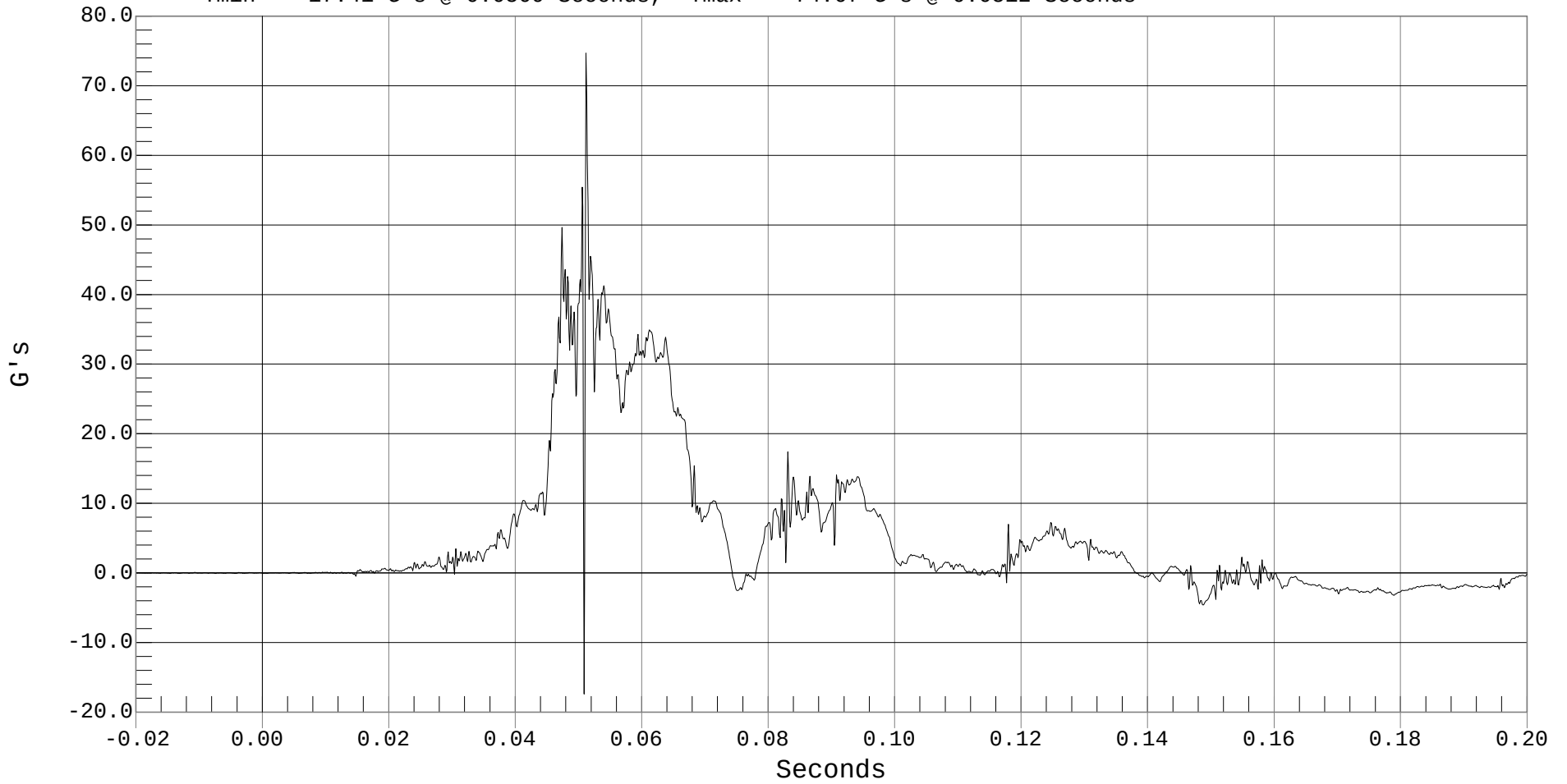
REAR PASSENGER LOWER RIB Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 1000

— 1 PASSENGER LOWER RIB Y, B01001AT.A12

Ymin = -17.41 G's @ 0.0509 Seconds, Ymax = 74.67 G's @ 0.0512 Seconds





REAR PASSENGER LOWER RIB Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

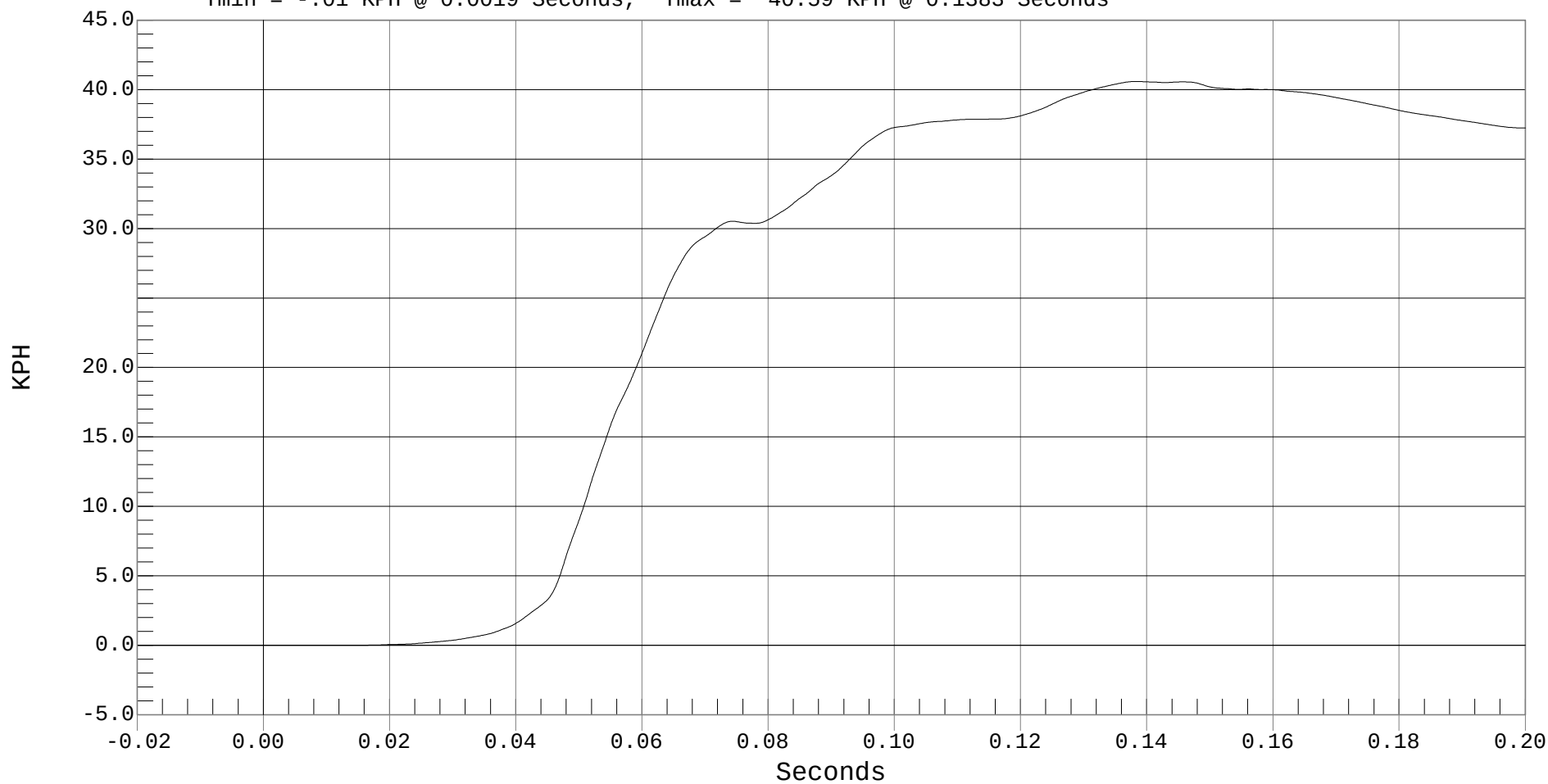
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 REAR PASSENGER LOWER RIB Y VELOCITY, B01001AI.V12

Ymin = -.01 KPH @ 0.0019 Seconds, Ymax = 40.59 KPH @ 0.1383 Seconds





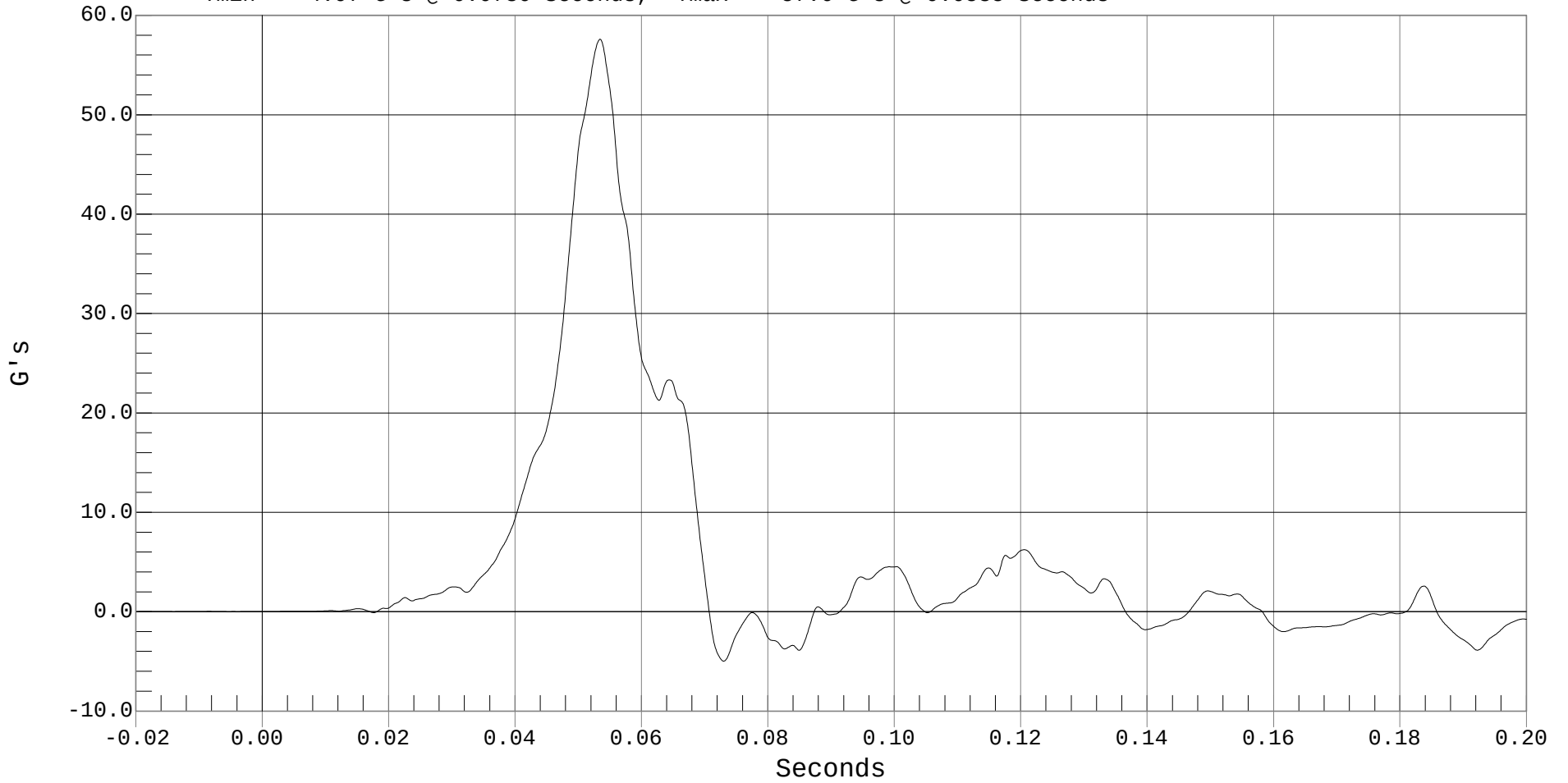
REAR PASSENGER LOWER SPINE Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 180

— 1 PASSENGER LOWER SPINE Y, B01001AF.A13

Ymin = -4.97 G's @ 0.0730 Seconds, Ymax = 57.6 G's @ 0.0535 Seconds





REAR PASSENGER LOWER SPINE Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

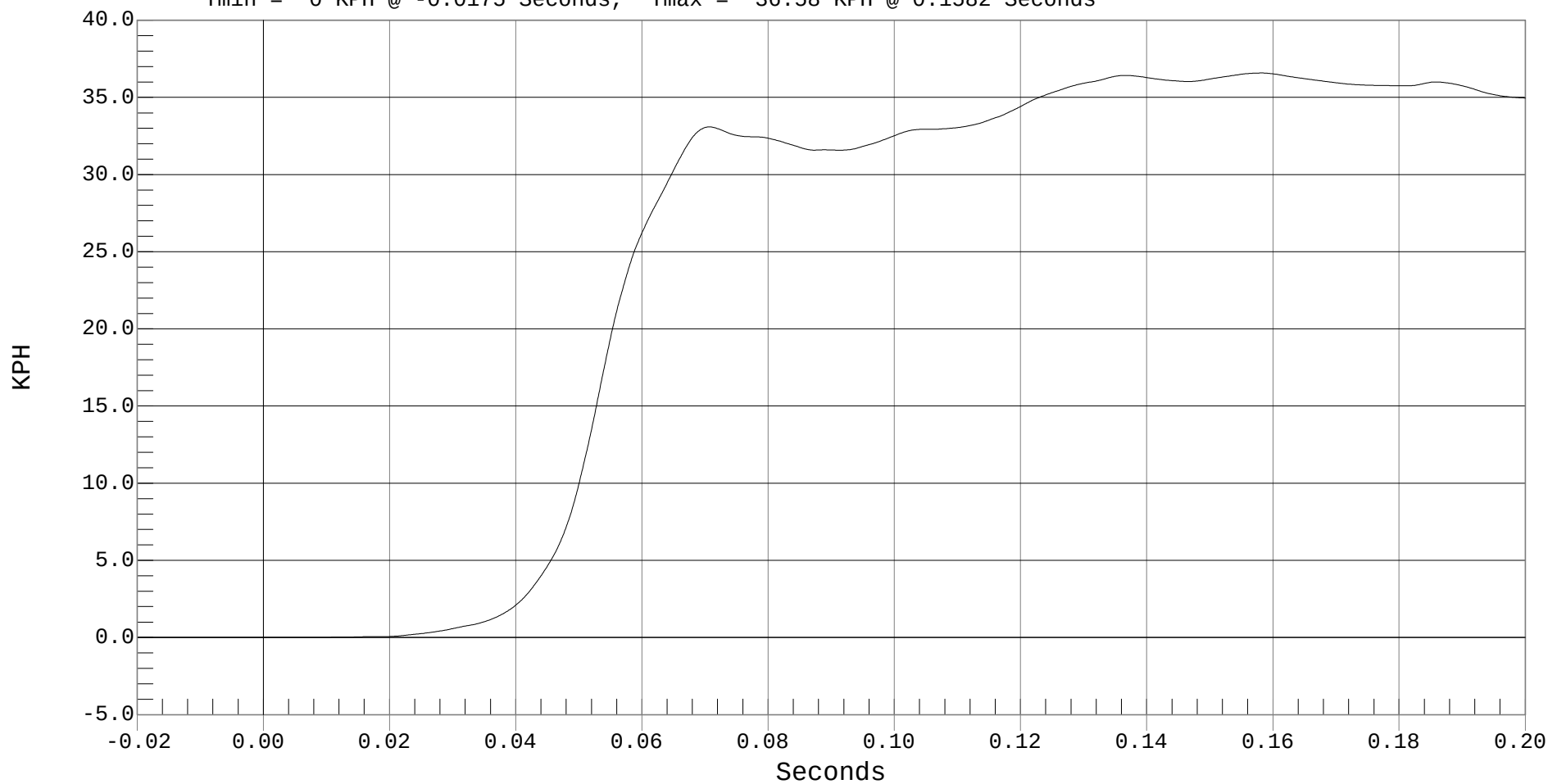
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 REAR PASSENGER LOWER SPINE Y VELOCITY, B01001AI.V13

Ymin = 0 KPH @ -0.0175 Seconds, Ymax = 36.58 KPH @ 0.1582 Seconds





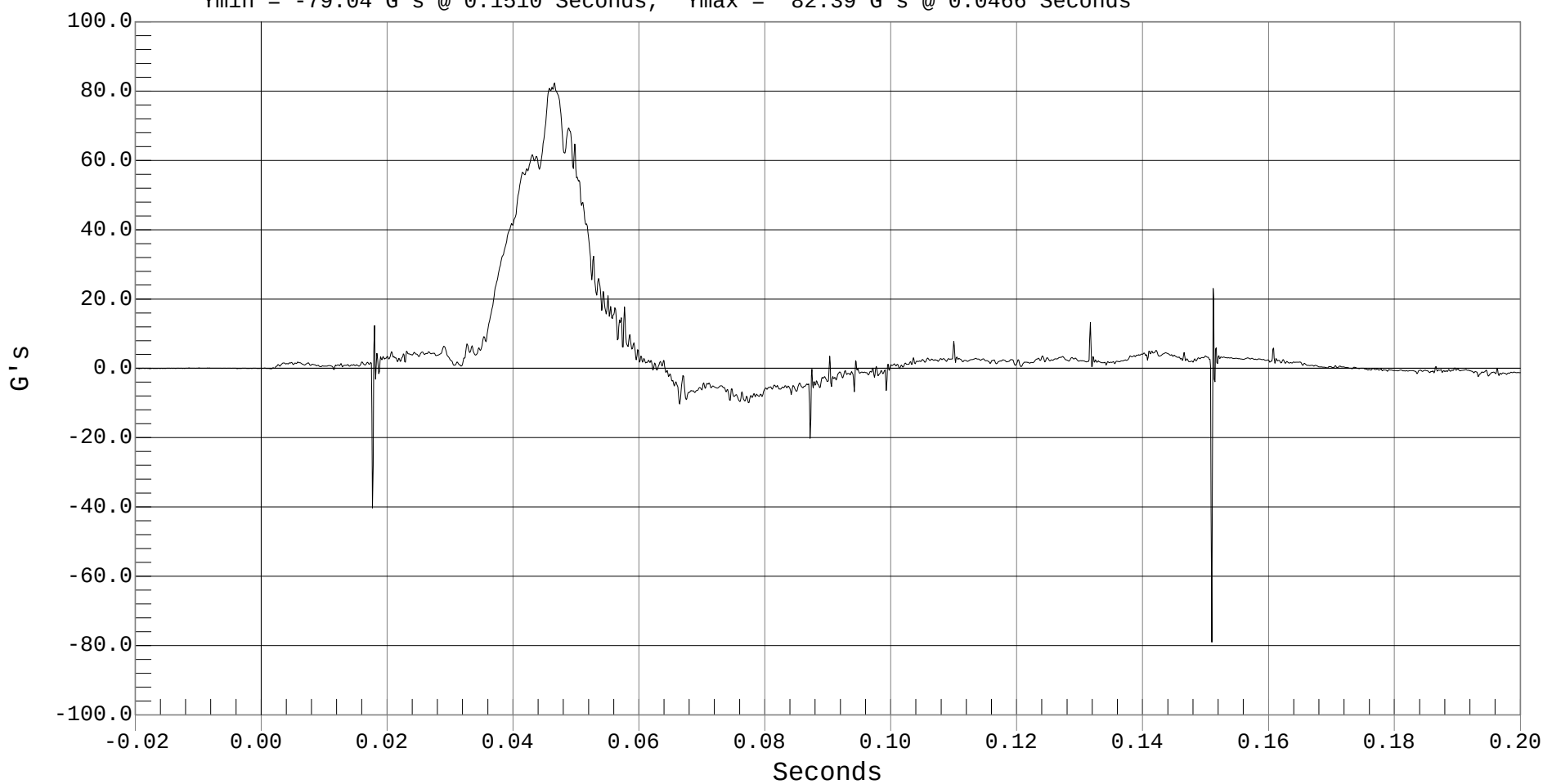
REAR PASSENGER PELVIS Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 1000

— 1 PASSENGER PELVIS Y, B01001AT.A14

Ymin = -79.04 G's @ 0.1510 Seconds, Ymax = 82.39 G's @ 0.0466 Seconds





REAR PASSENGER PELVIS Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

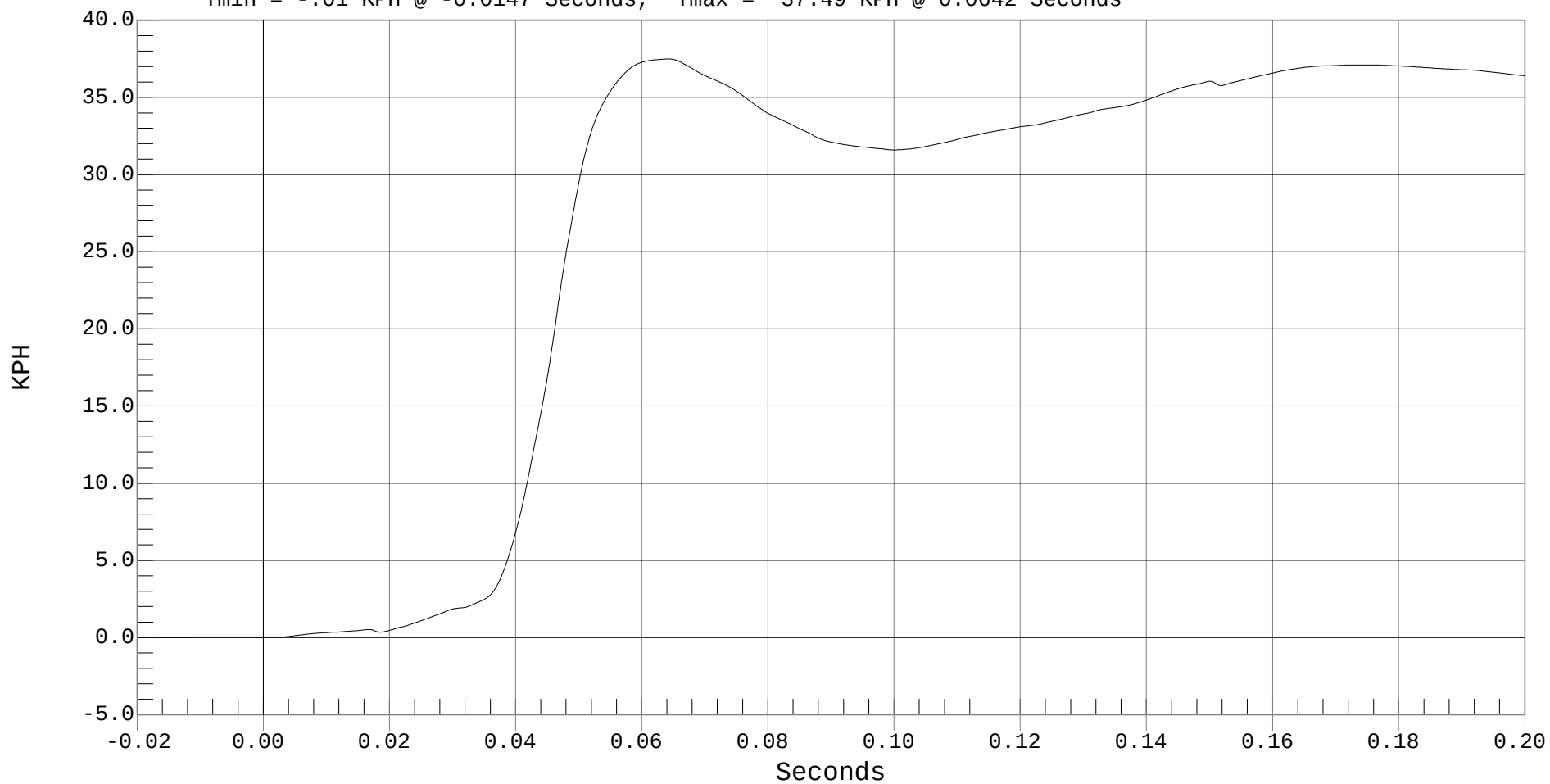
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 REAR PASSENGER PELVIS Y VELOCITY, B01001AI.V14

Ymin = -.01 KPH @ -0.0147 Seconds, Ymax = 37.49 KPH @ 0.0642 Seconds





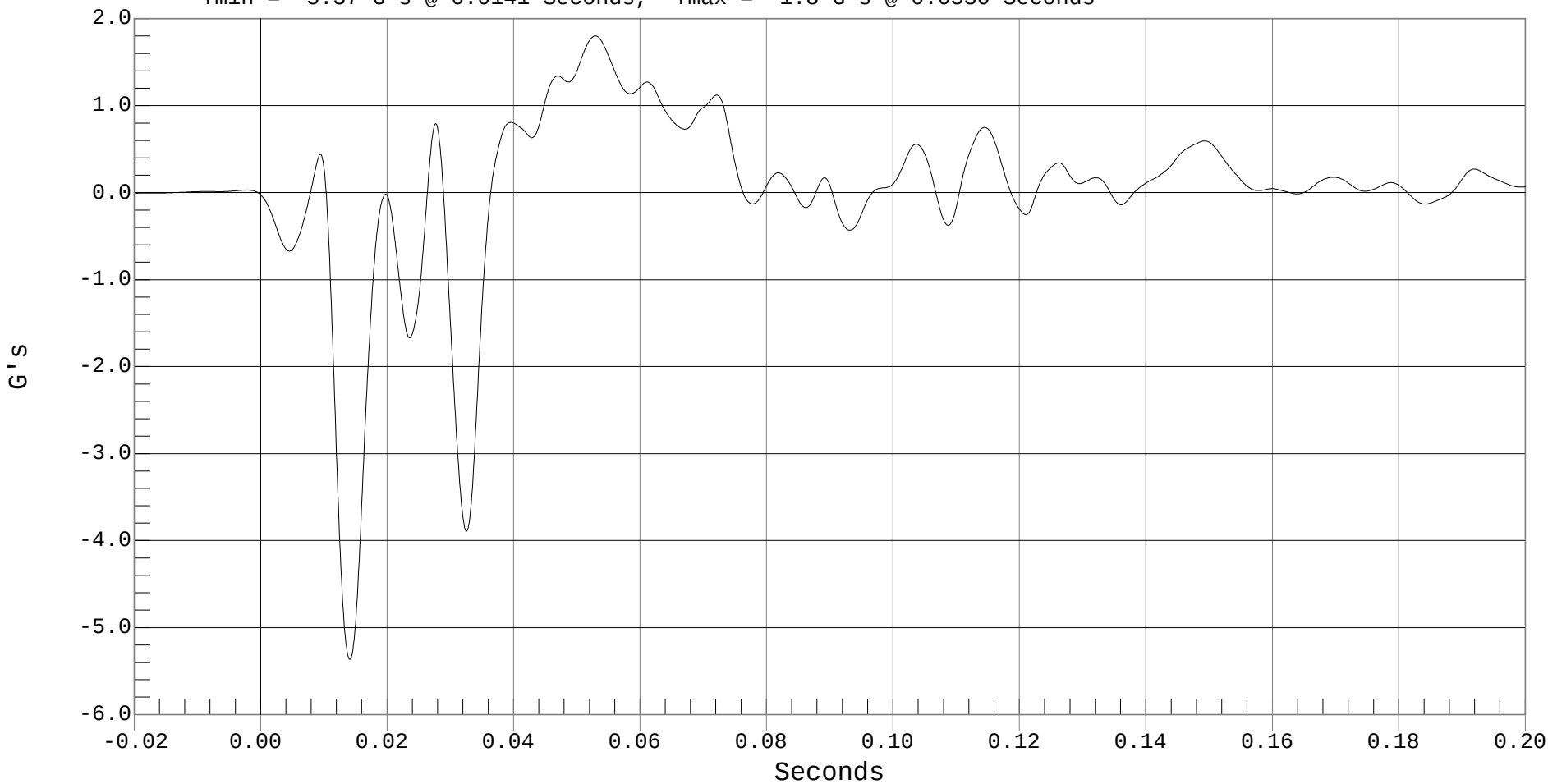
RIGHT SIDE SILL AT FRONT SEAT X ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 60

— 1 RIGHT FRONT SILL X, B01001AF.A15

Ymin = -5.37 G's @ 0.0141 Seconds, Ymax = 1.8 G's @ 0.0530 Seconds





RIGHT SIDE SILL AT FRONT SEAT X VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

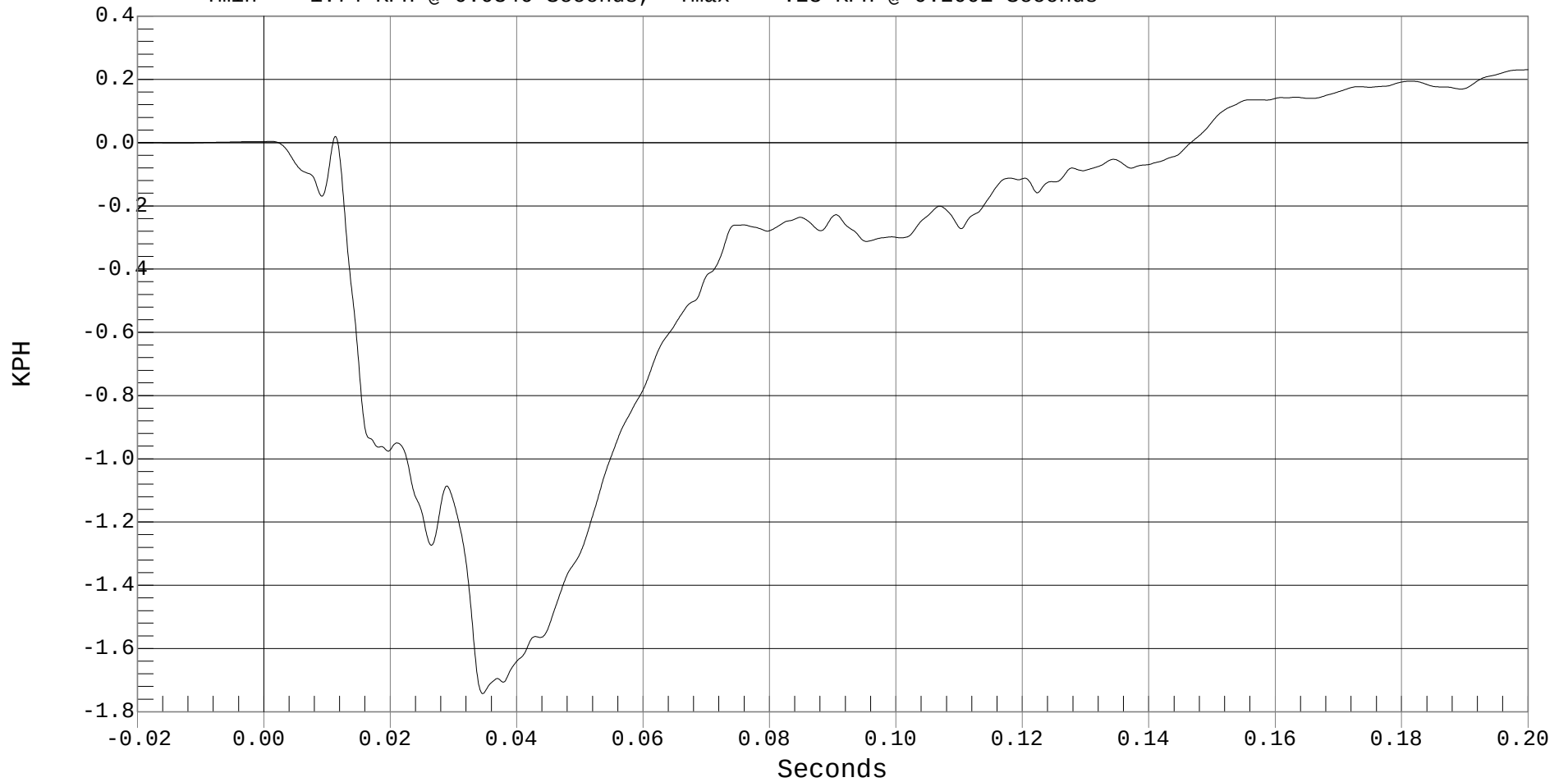
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 RIGHT SIDE SILL AT FRONT SEAT X VELOCITY, B01001AI.V15

Ymin = -1.74 KPH @ 0.0346 Seconds, Ymax = .23 KPH @ 0.2001 Seconds





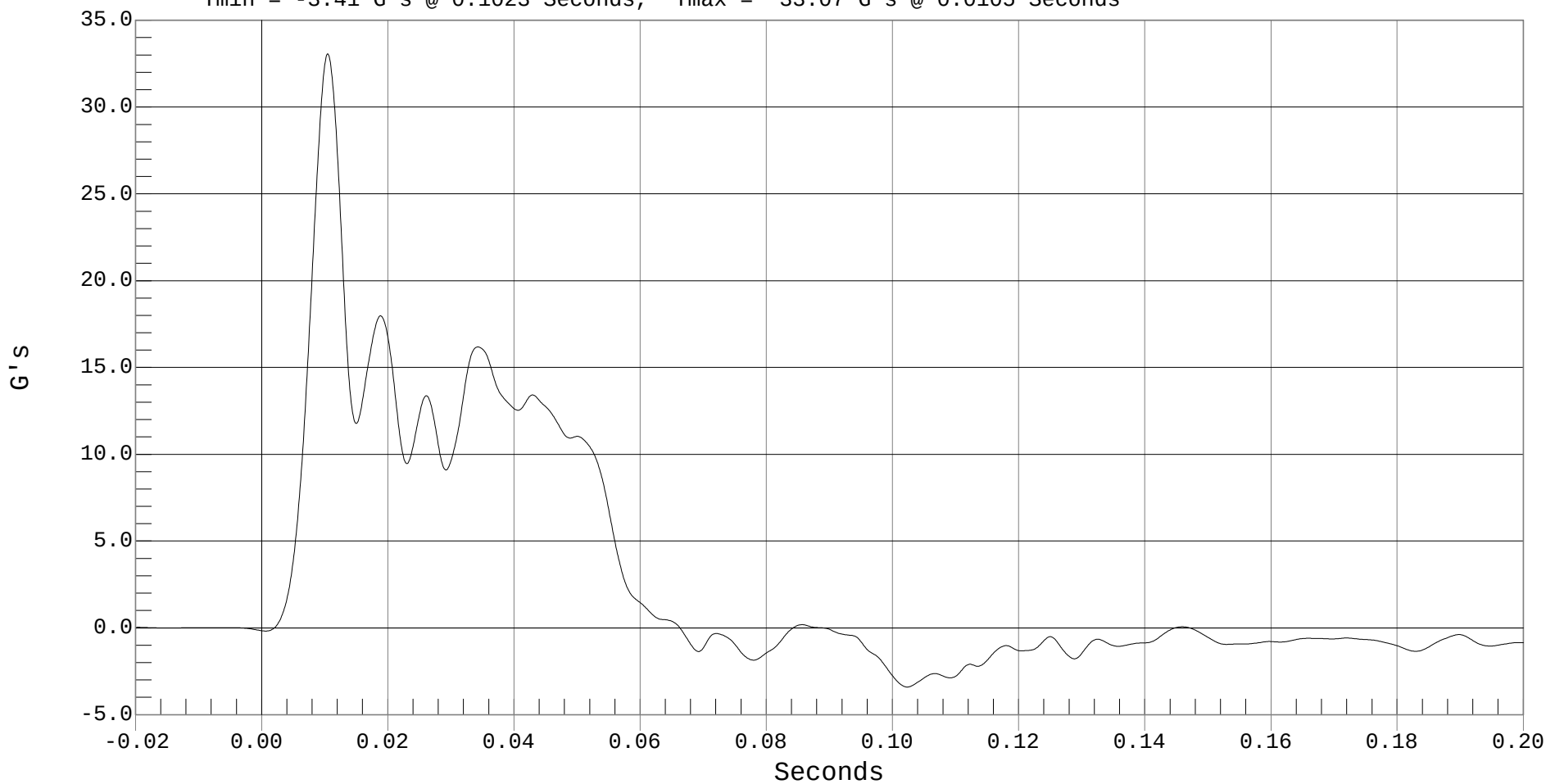
RIGHT SIDE SILL AT FRONT SEAT Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 60

— 1 RIGHT FRONT SILL Y, B01001AF.A16

Ymin = -3.41 G's @ 0.1023 Seconds, Ymax = 33.07 G's @ 0.0105 Seconds





RIGHT SIDE SILL AT FRONT SEAT Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

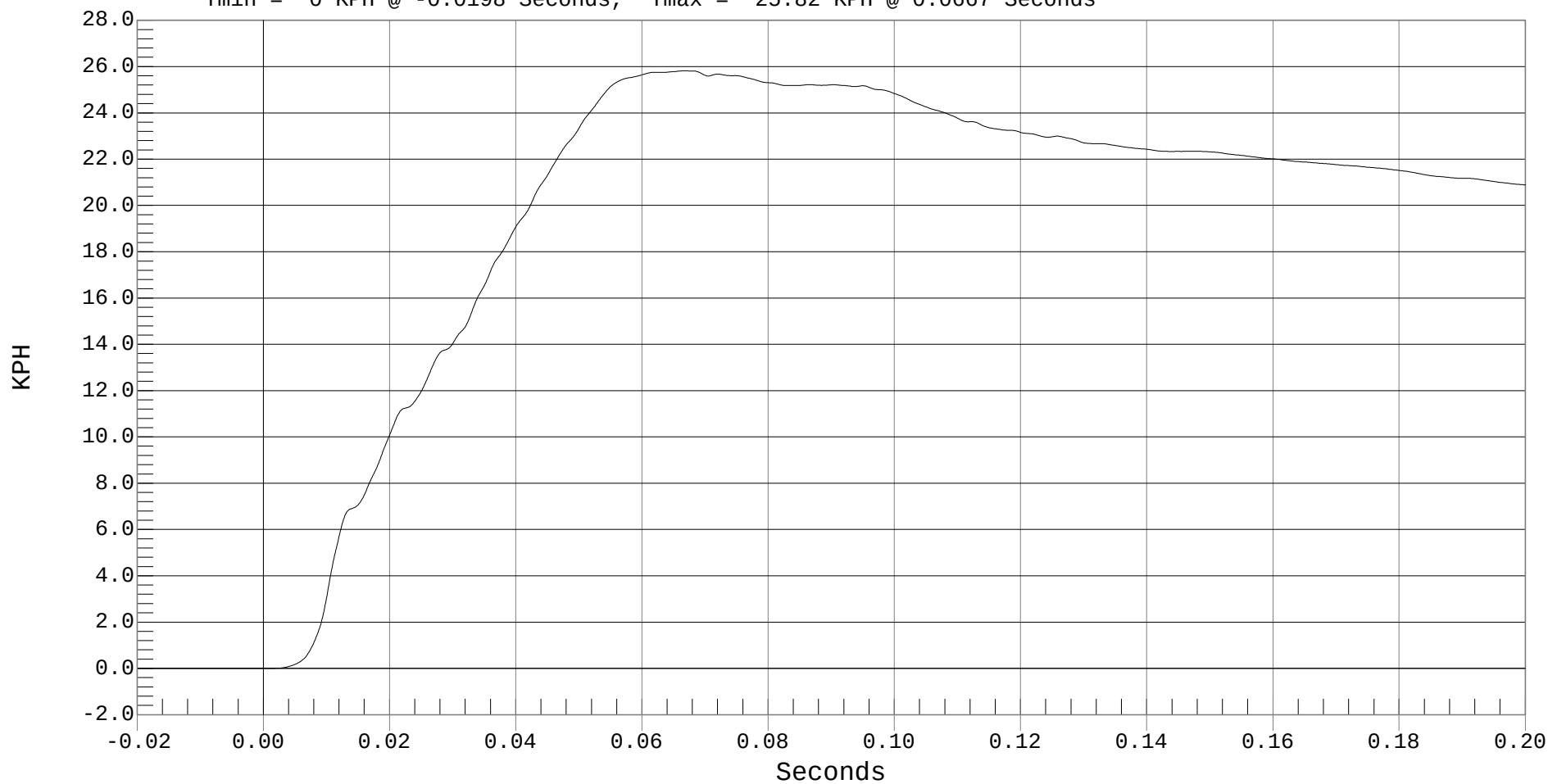
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 RIGHT SIDE SILL AT FRONT SEAT Y VELOCITY, B01001AI.V16

Ymin = 0 KPH @ -0.0198 Seconds, Ymax = 25.82 KPH @ 0.0667 Seconds





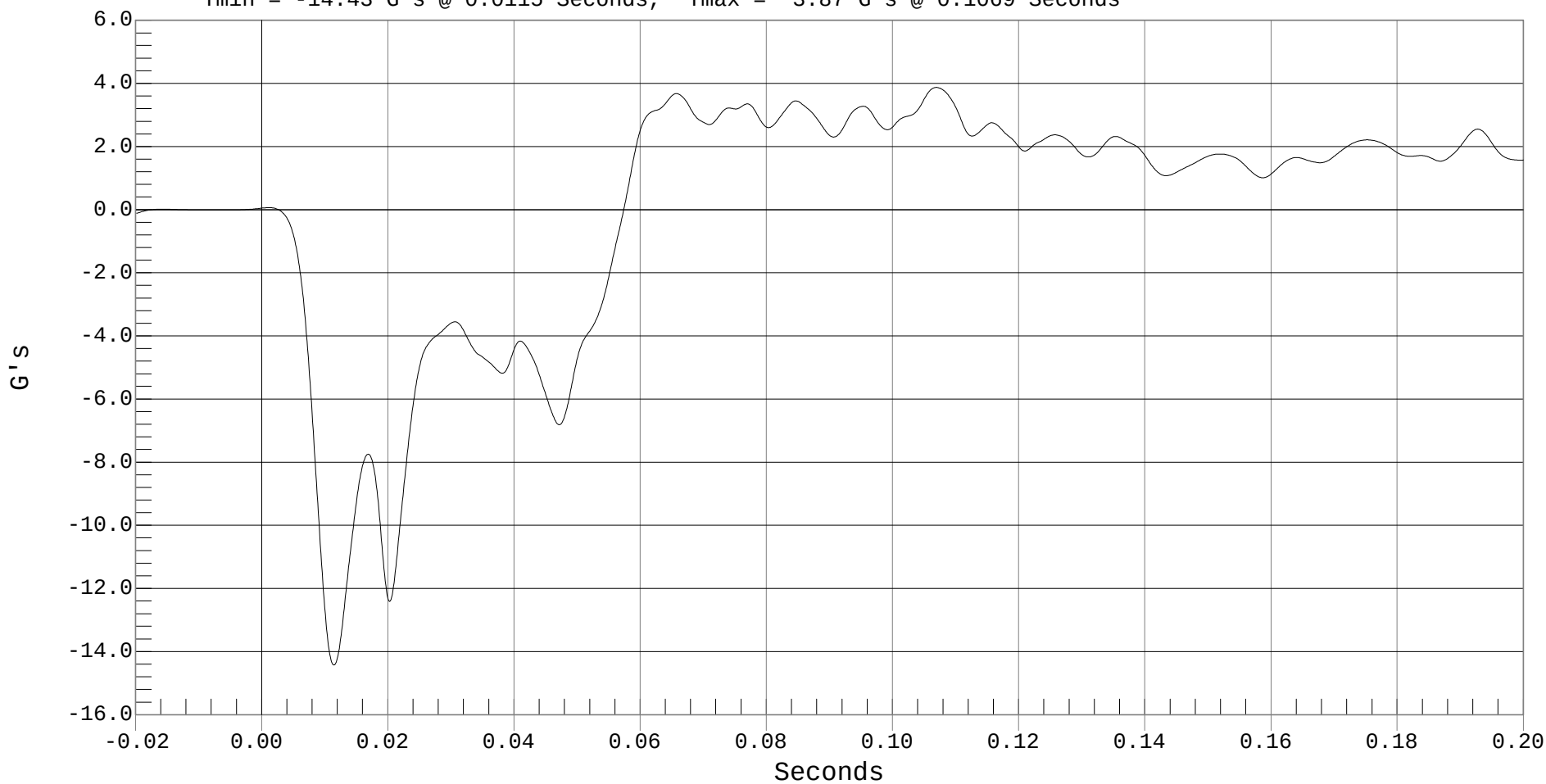
RIGHT SIDE SILL AT FRONT SEAT Z ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 60

— 1 RIGHT FRONT SILL Z, B01001AF.A17

Ymin = -14.43 G's @ 0.0115 Seconds, Ymax = 3.87 G's @ 0.1069 Seconds





RIGHT SIDE SILL AT FRONT SEAT Z VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

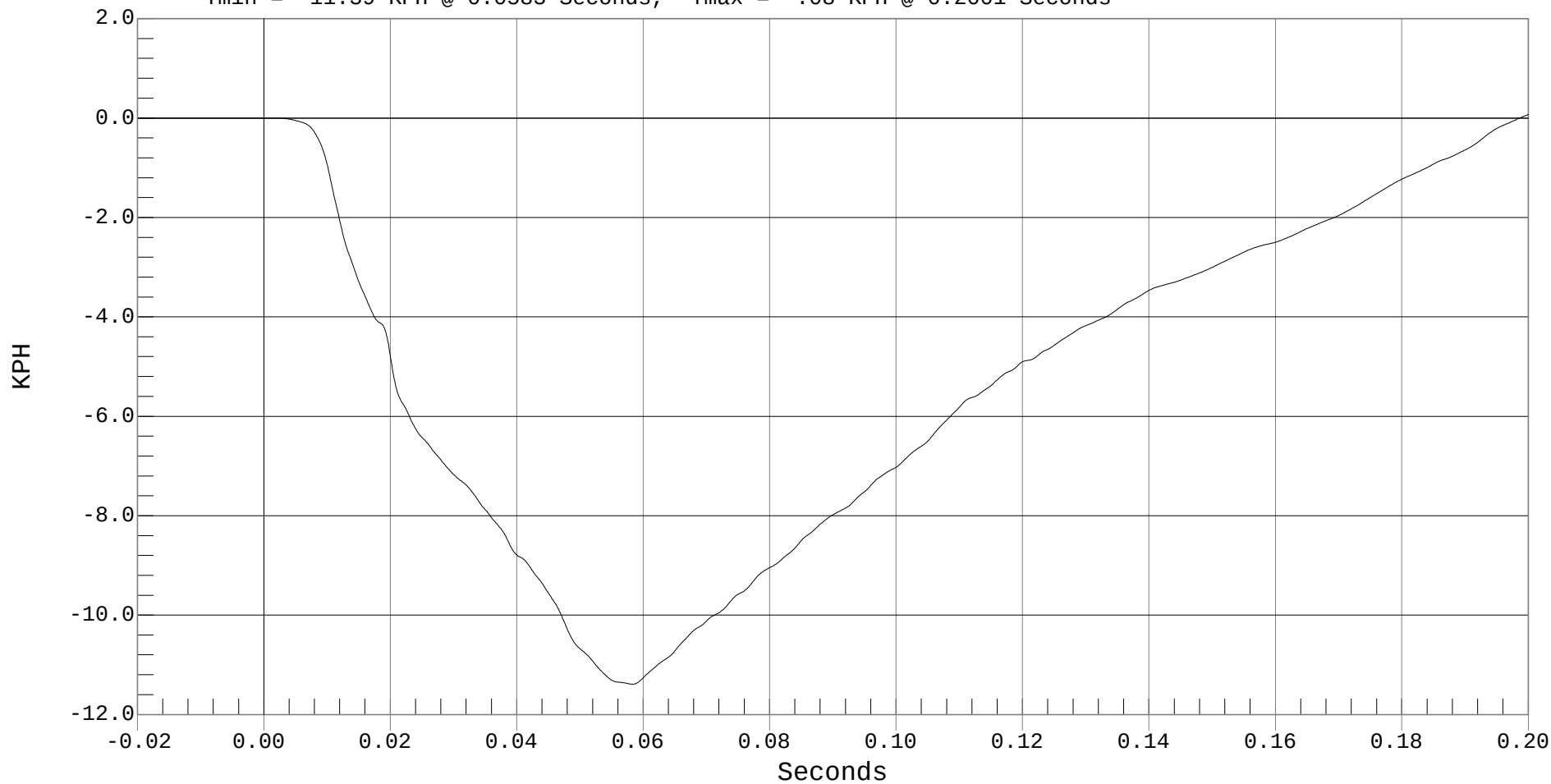
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 RIGHT SIDE SILL AT FRONT SEAT Z VELOCITY, B01001AI.V17

Ymin = -11.39 KPH @ 0.0583 Seconds, Ymax = .08 KPH @ 0.2001 Seconds





RIGHT SIDE SILL AT FRONT SEAT RESULTANT ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Test Date: 01-03-01

Component: 2001 MAZDA TRIBUTE (C15402)

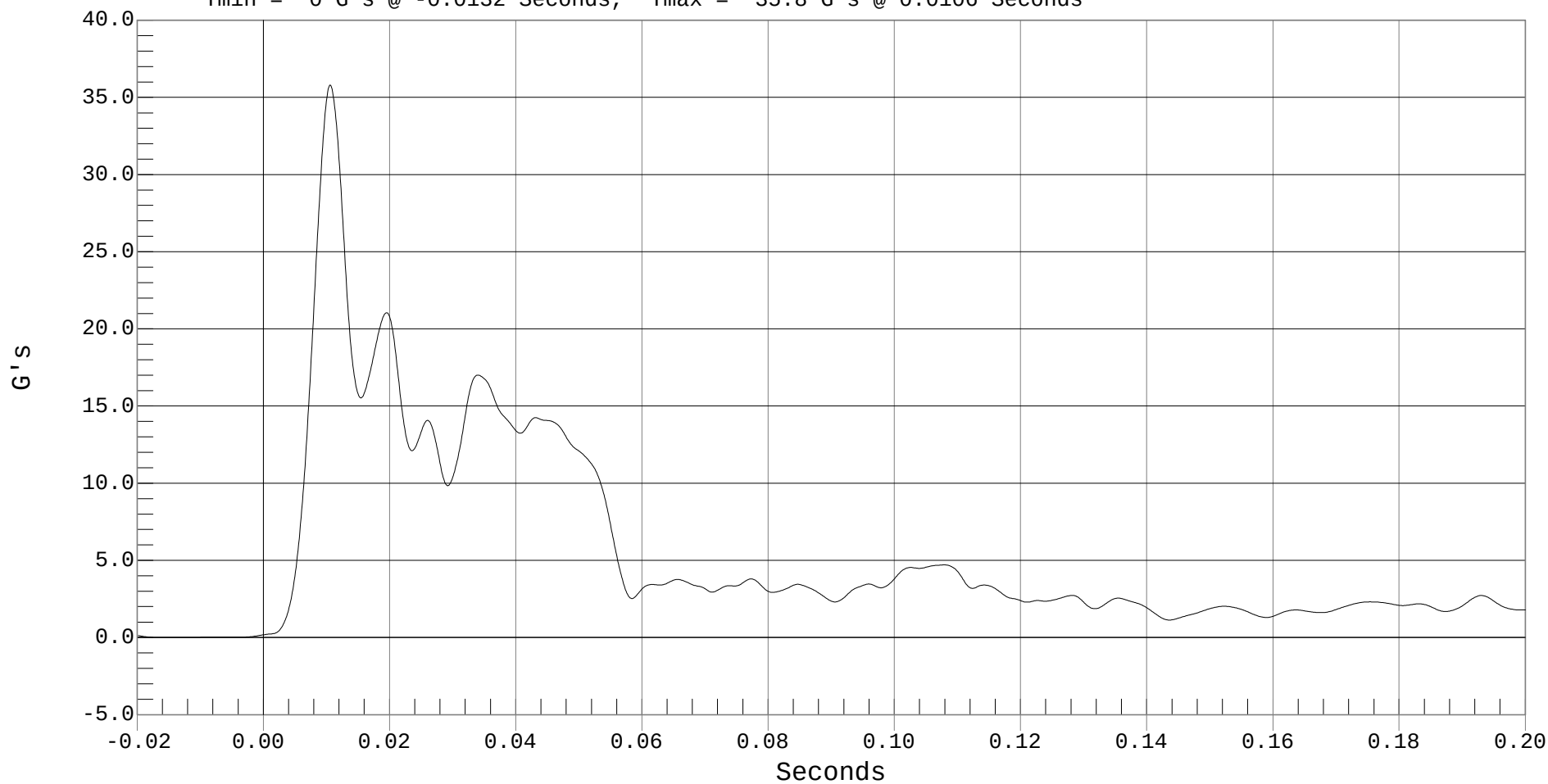
Speed: 38.5 MPH, 62.0 KPH

Other Info:

Filter Class: 60

1 RIGHT SIDE SILL AT FRONT SEAT RESULTANT ACCELERATION, B01001AV.A15

Ymin = 0 G's @ -0.0132 Seconds, Ymax = 35.8 G's @ 0.0106 Seconds





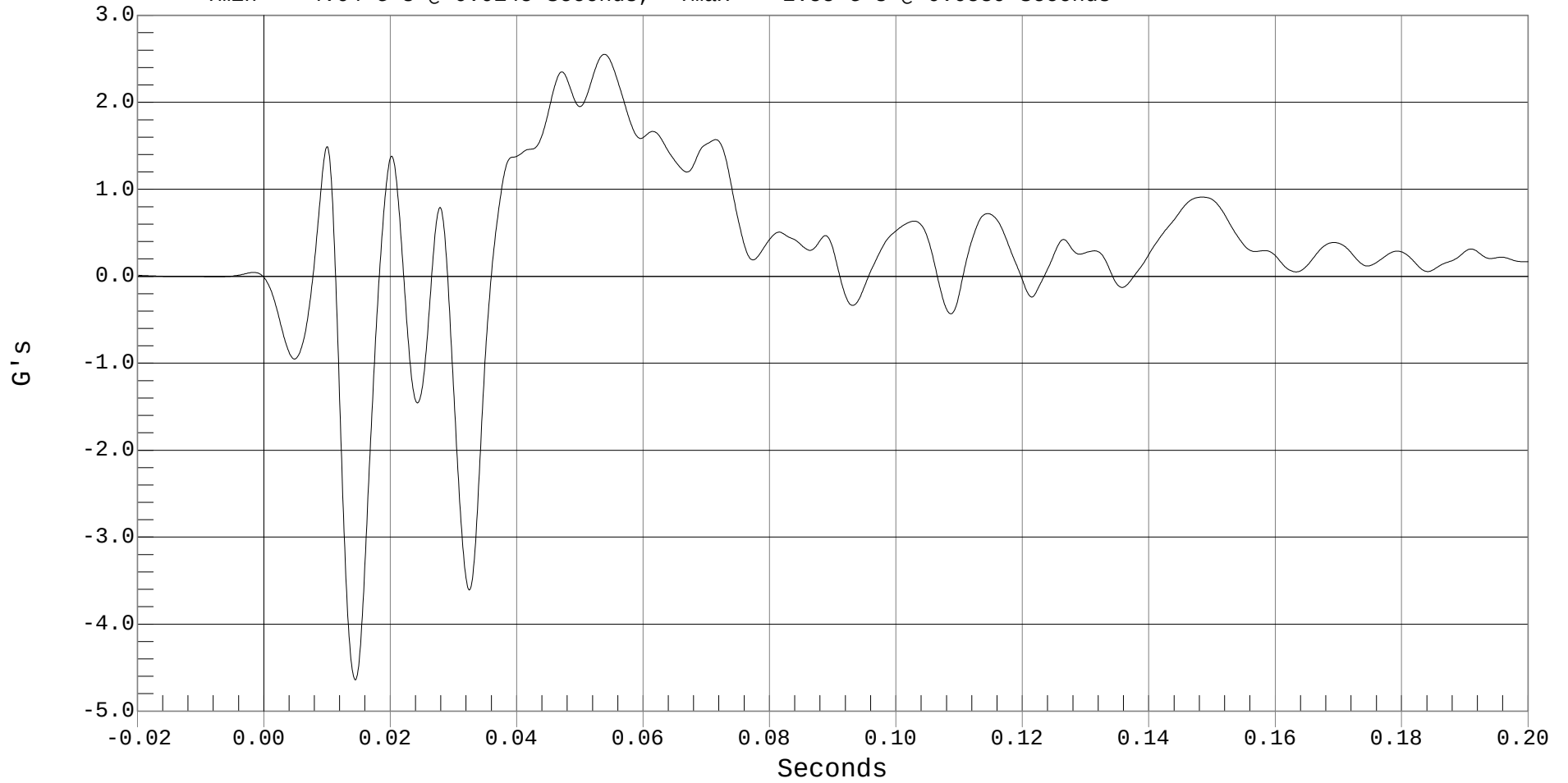
RIGHT SIDE SILL AT REAR SEAT X ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 60

— 1 RIGHT REAR SILL X, B01001AF.A18

Ymin = -4.64 G's @ 0.0145 Seconds, Ymax = 2.55 G's @ 0.0539 Seconds





RIGHT SIDE SILL AT REAR SEAT X VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

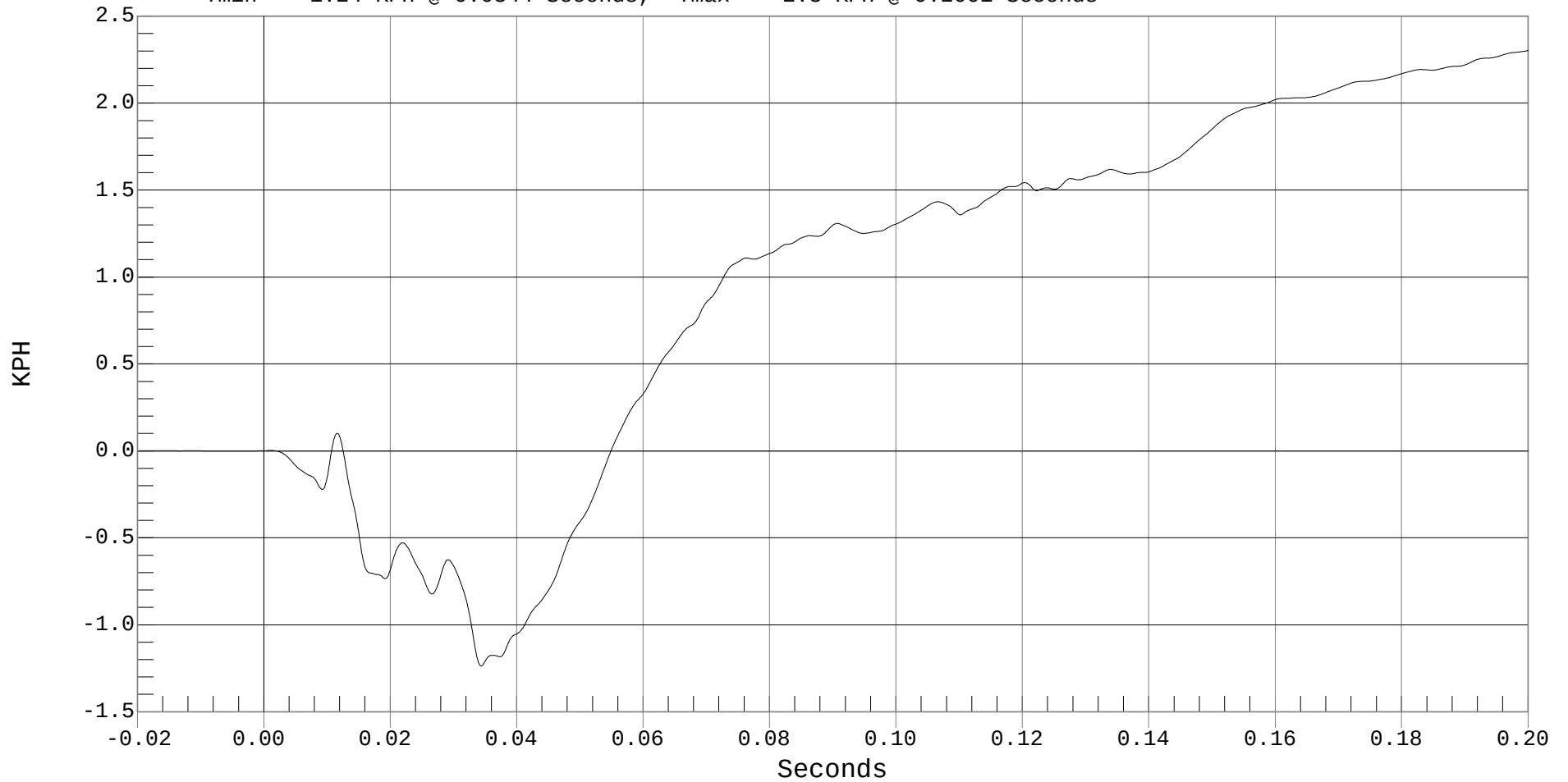
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 RIGHT SIDE SILL AT REAR SEAT X VELOCITY, B01001AI.V18

Ymin = -1.24 KPH @ 0.0344 Seconds, Ymax = 2.3 KPH @ 0.2001 Seconds





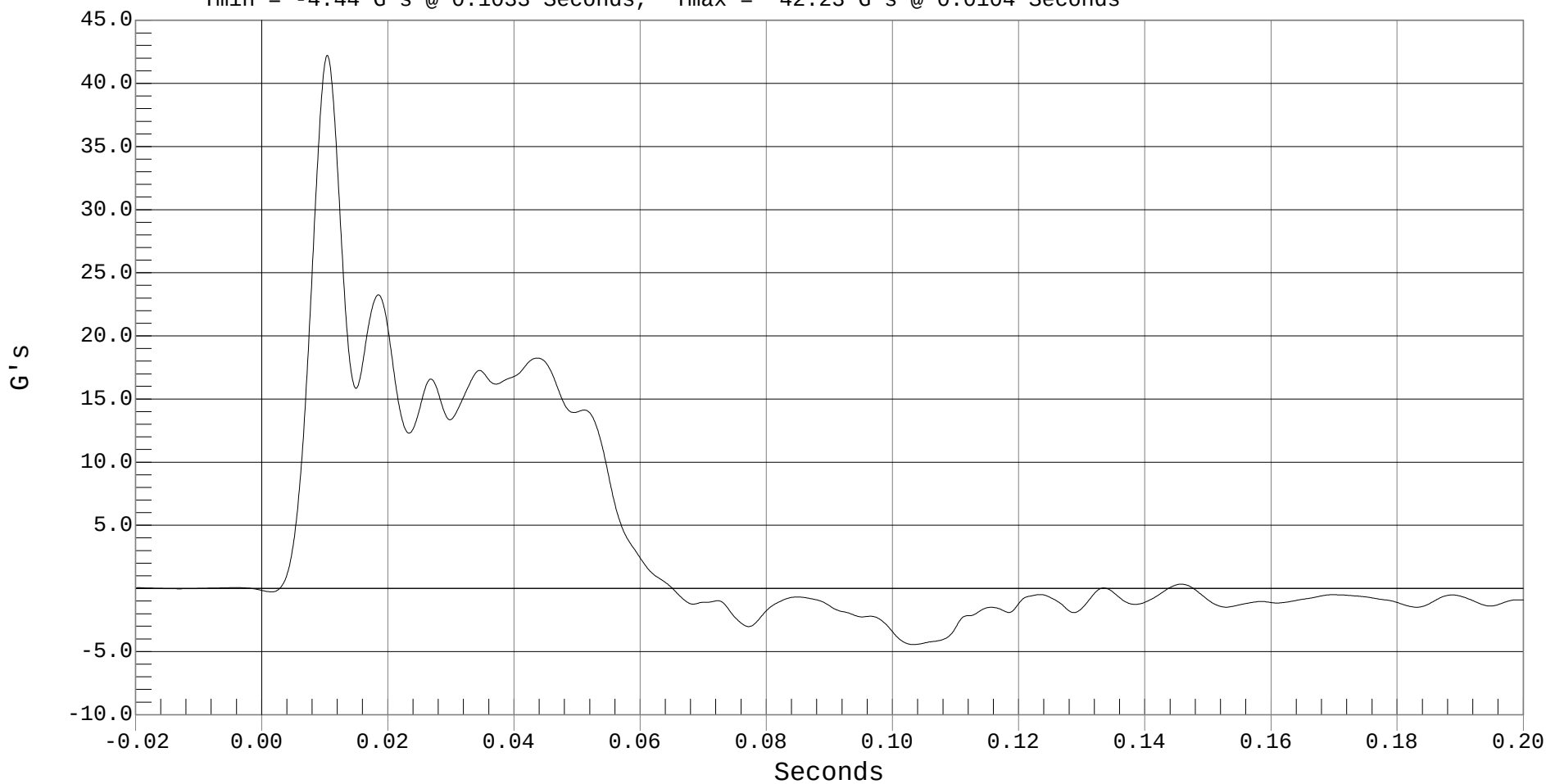
RIGHT SIDE SILL AT REAR SEAT Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 60

— 1 RIGHT REAR SILL Y, B01001AF.A20

Ymin = -4.44 G's @ 0.1033 Seconds, Ymax = 42.23 G's @ 0.0104 Seconds





RIGHT SIDE SILL AT REAR SEAT Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

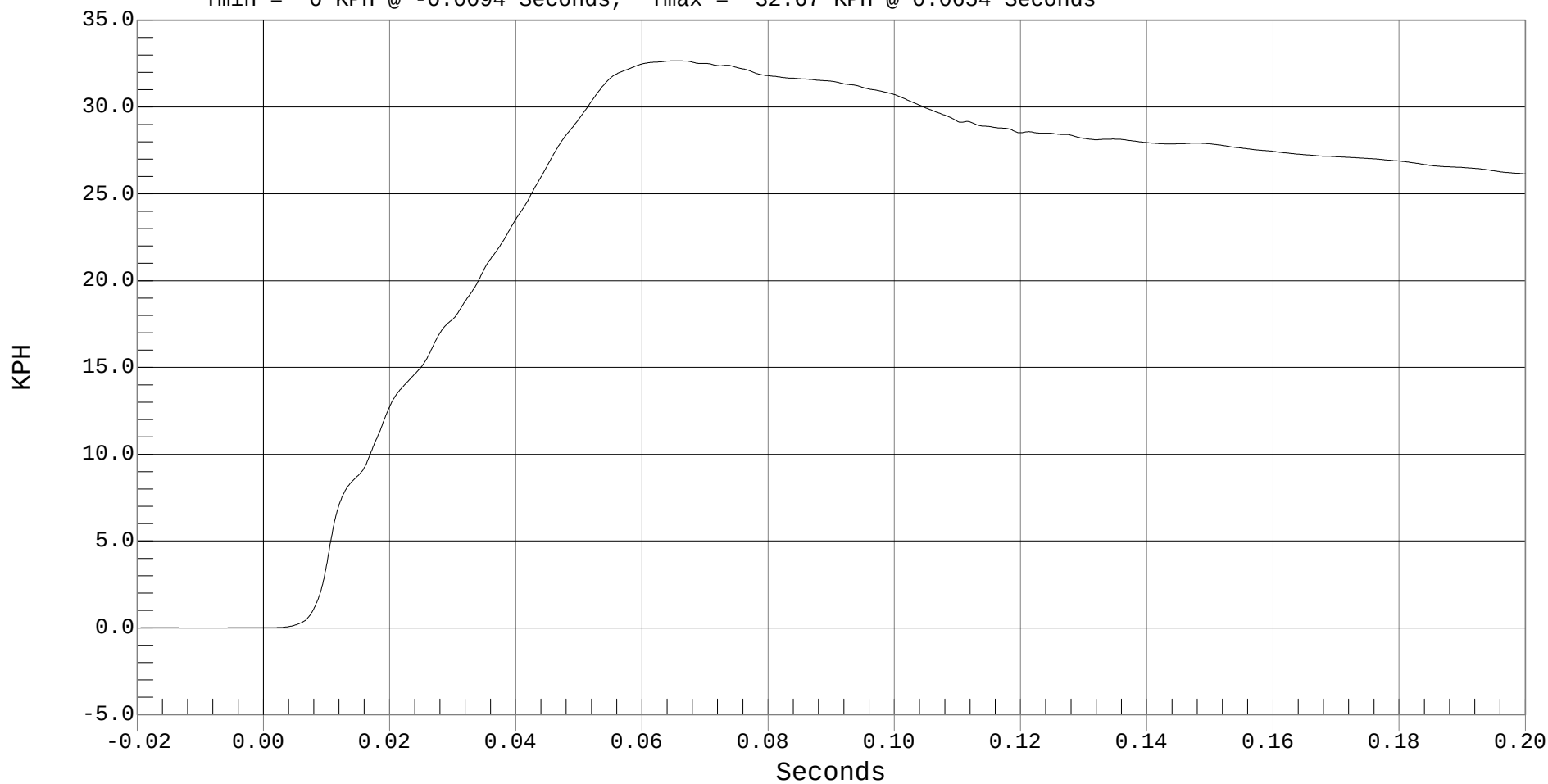
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 RIGHT SIDE SILL AT REAR SEAT Y VELOCITY, B01001AI.V20

Ymin = 0 KPH @ -0.0094 Seconds, Ymax = 32.67 KPH @ 0.0654 Seconds



RIGHT SIDE SILL AT REAR SEAT Z ACCELERATION VS. TIME
NO VALID DATA COLLECTED



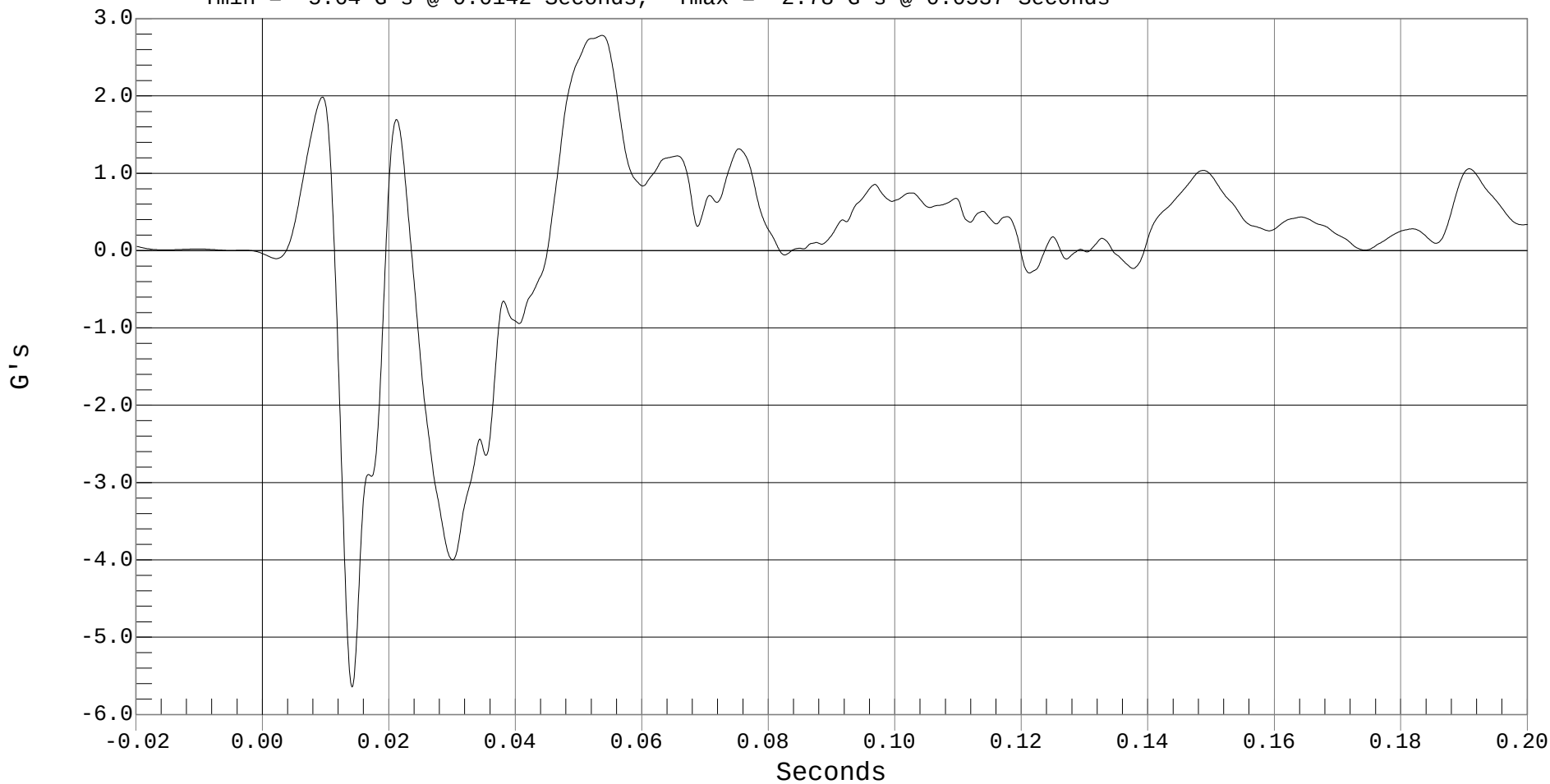
REAR FLOORPAN ABOVE AXLE X ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 60

— 1 FLOORPAN @ REAR AXLE X, B01001AF.A23

Ymin = -5.64 G's @ 0.0142 Seconds, Ymax = 2.78 G's @ 0.0537 Seconds





REAR FLOORPAN ABOVE AXLE X VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

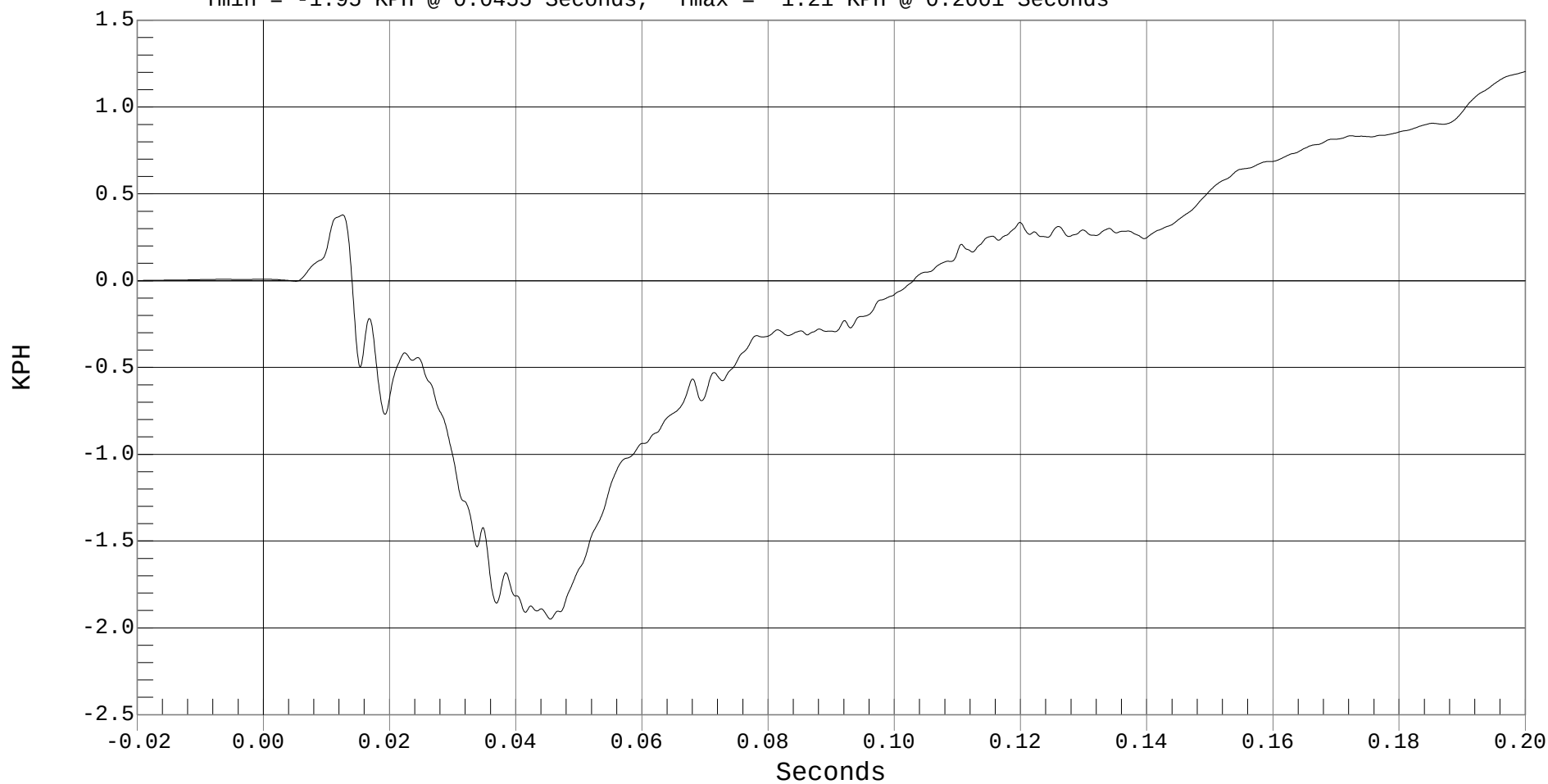
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

1 REAR FLOORPAN ABOVE AXLE X VELOCITY, B01001AI.V23

Ymin = -1.95 KPH @ 0.0455 Seconds, Ymax = 1.21 KPH @ 0.2001 Seconds





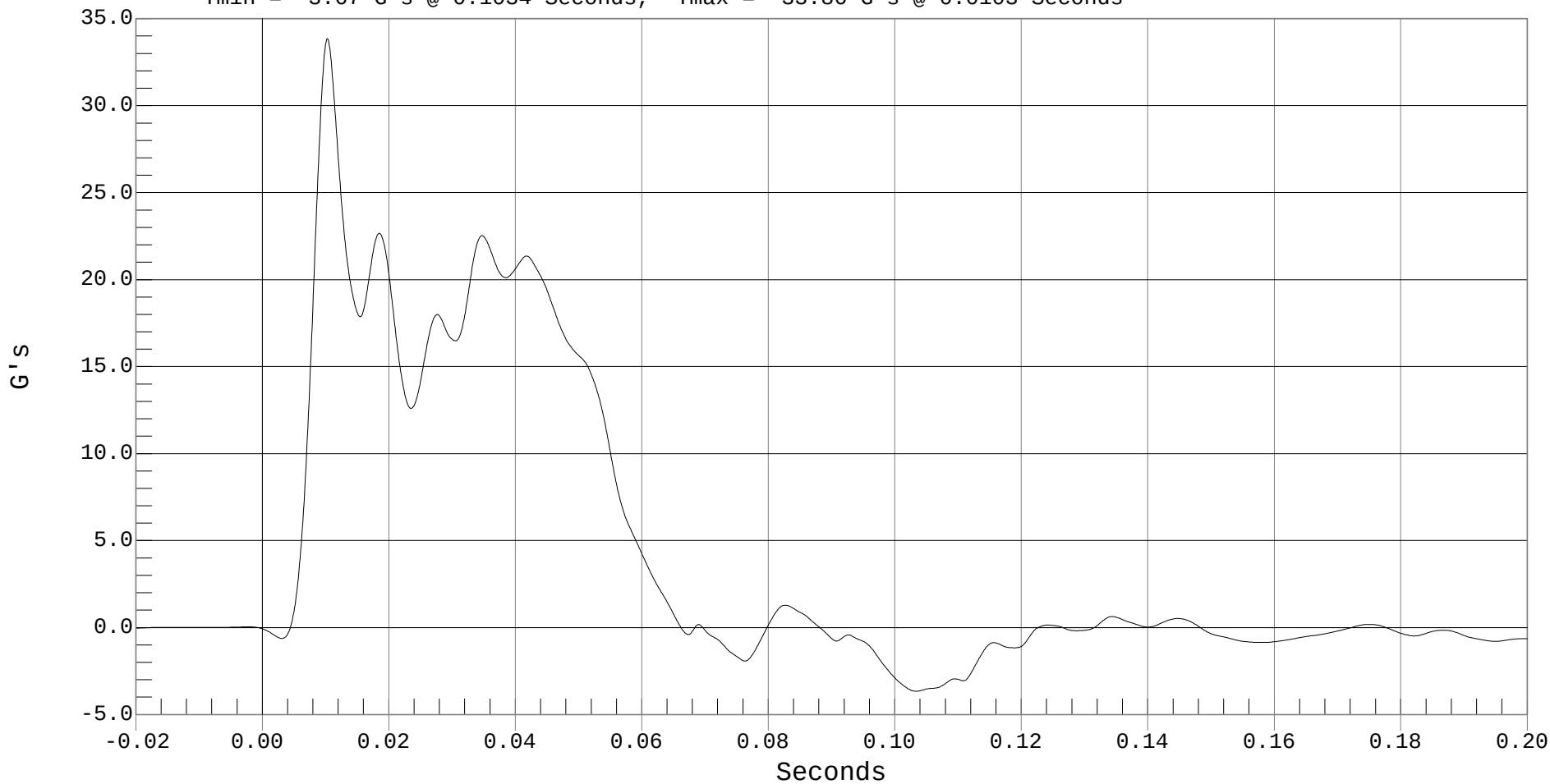
REAR FLOORPAN ABOVE AXLE Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 60

— 1 FLOORPAN @ REAR AXLE Y, B01001AF.A24

Ymin = -3.67 G's @ 0.1034 Seconds, Ymax = 33.86 G's @ 0.0103 Seconds





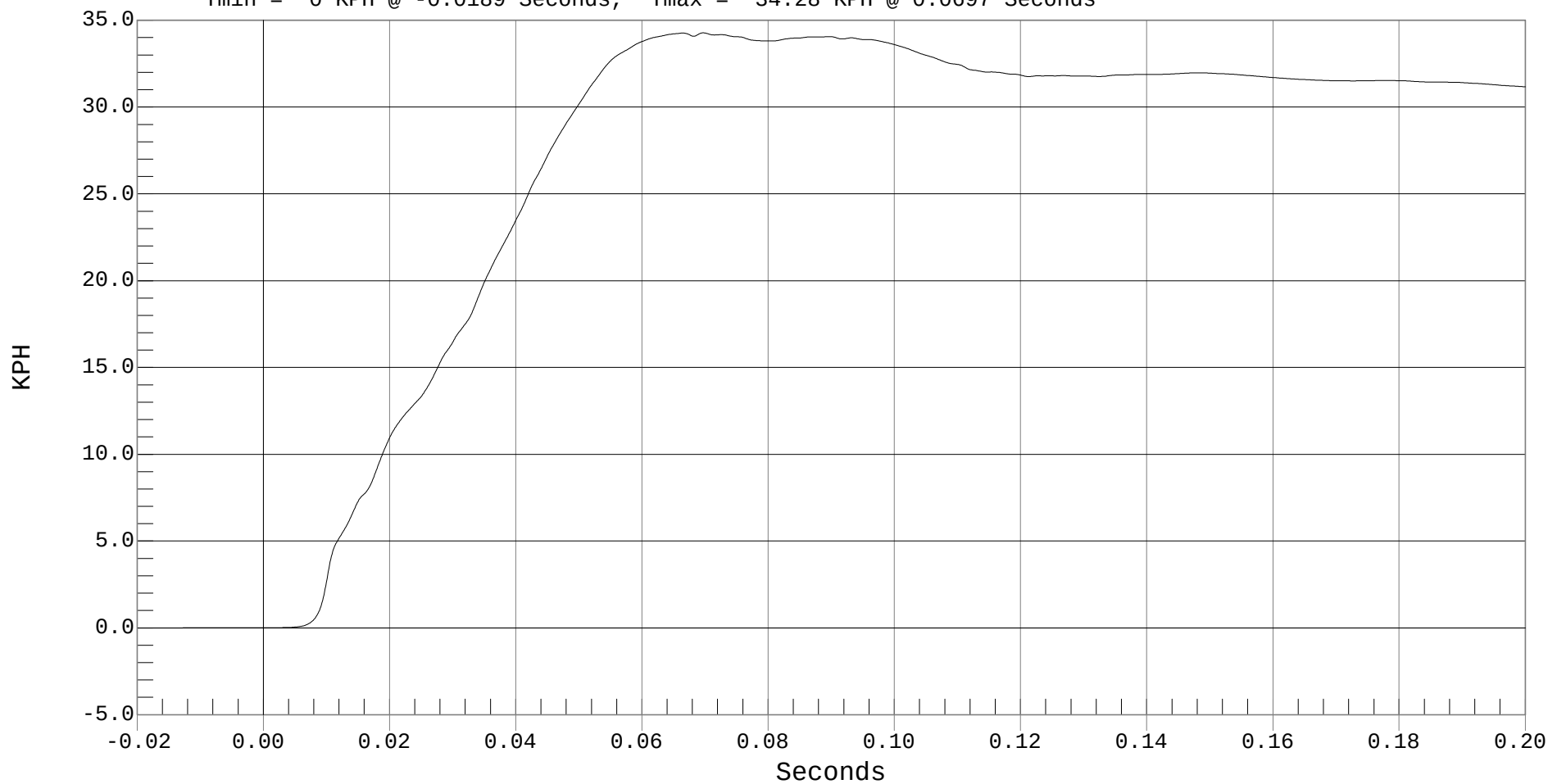
REAR FLOORPAN ABOVE AXLE Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 180

1 REAR FLOORPAN ABOVE AXLE Y VELOCITY, B01001AI.V24

Ymin = 0 KPH @ -0.0189 Seconds, Ymax = 34.28 KPH @ 0.0697 Seconds





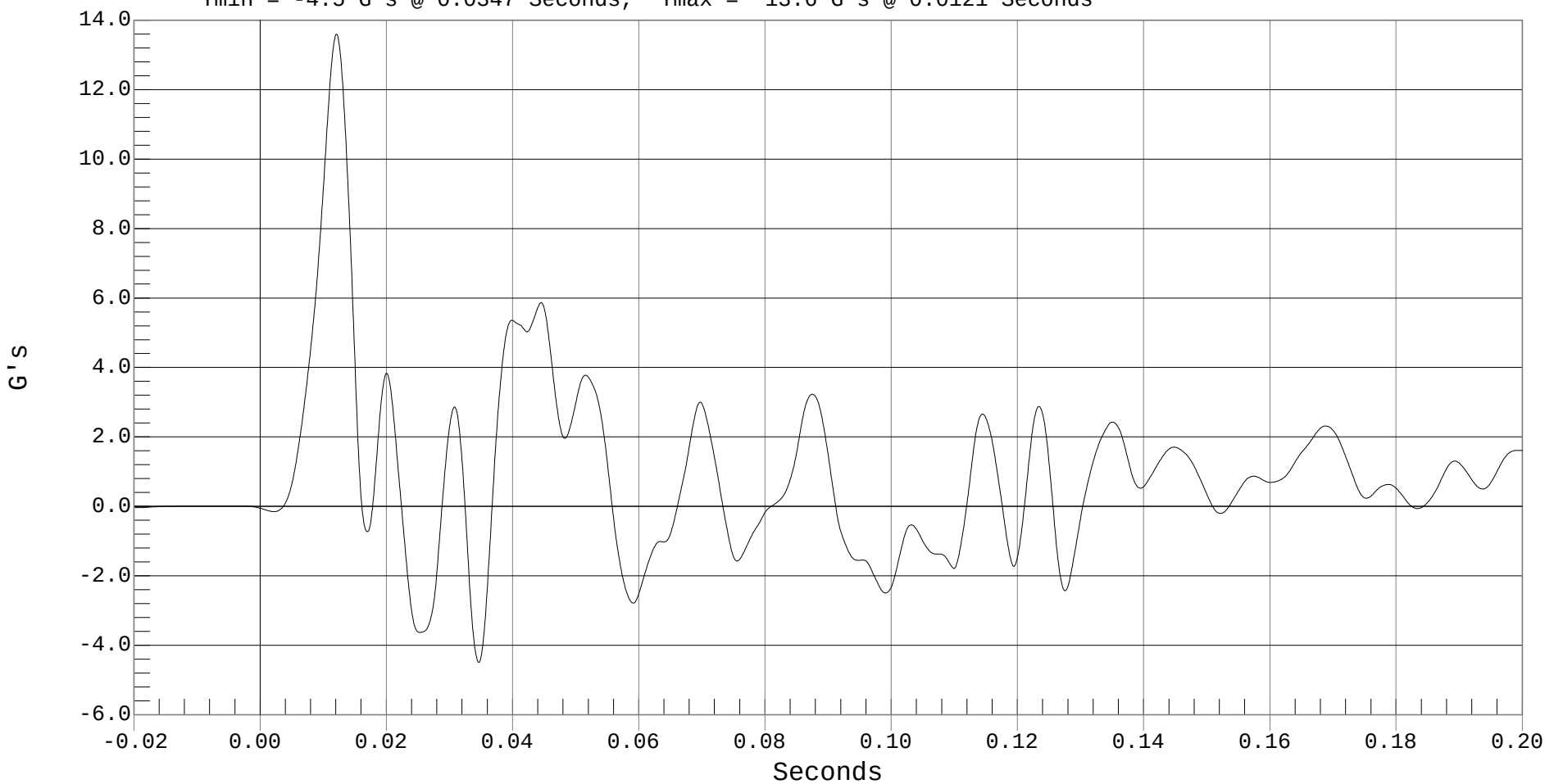
REAR FLOORPAN ABOVE AXLE Z ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 60

— 1 FLOORPAN @ REAR AXLE Z, B01001AF.A25

Ymin = -4.5 G's @ 0.0347 Seconds, Ymax = 13.6 G's @ 0.0121 Seconds





REAR FLOORPAN ABOVE AXLE Z VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

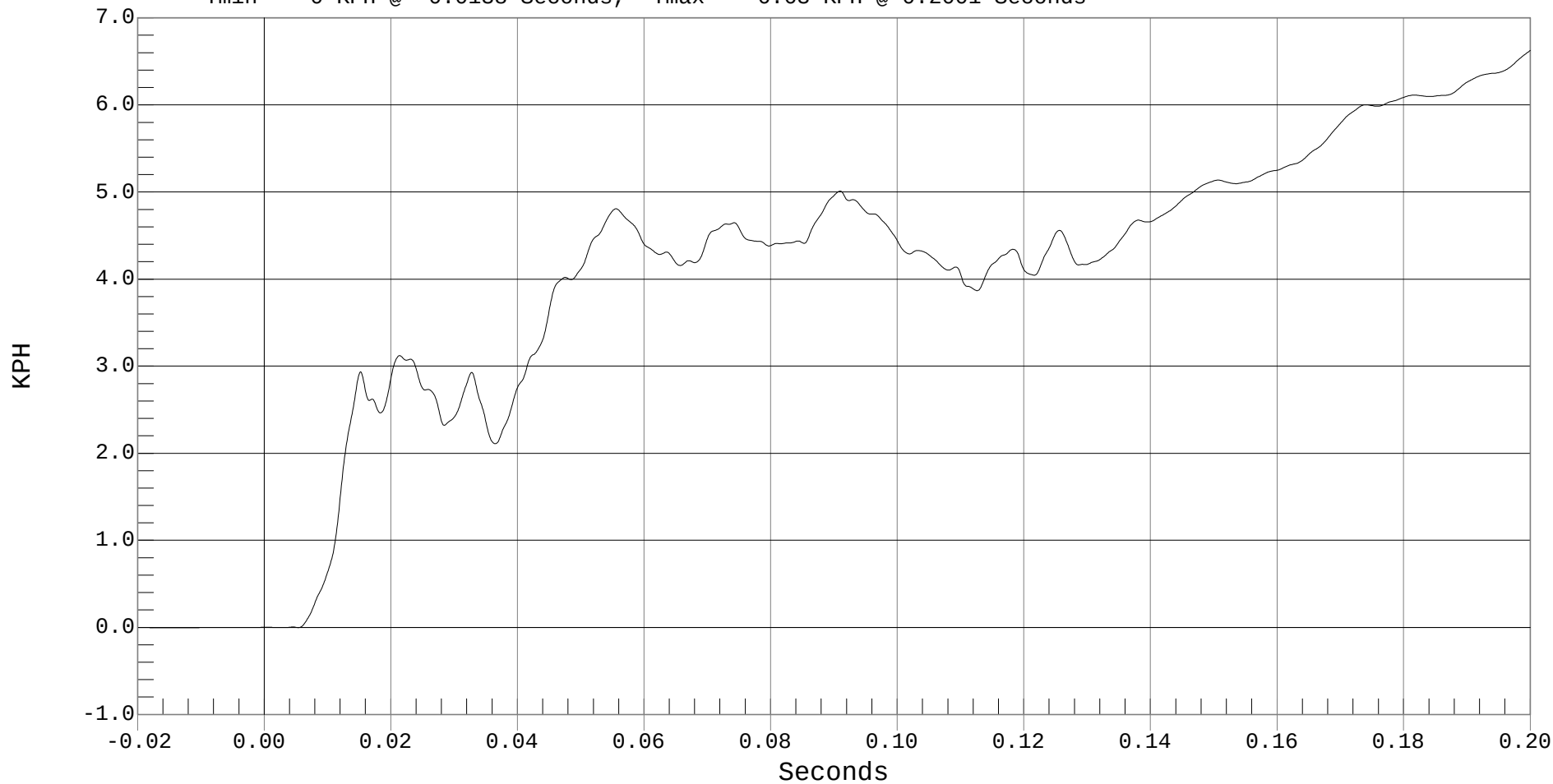
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

1 REAR FLOORPAN ABOVE AXLE Z VELOCITY, B01001AI.V25

Ymin = 0 KPH @ -0.0138 Seconds, Ymax = 6.63 KPH @ 0.2001 Seconds





REAR FLOORPAN ABOVE AXLE RESULTANT ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

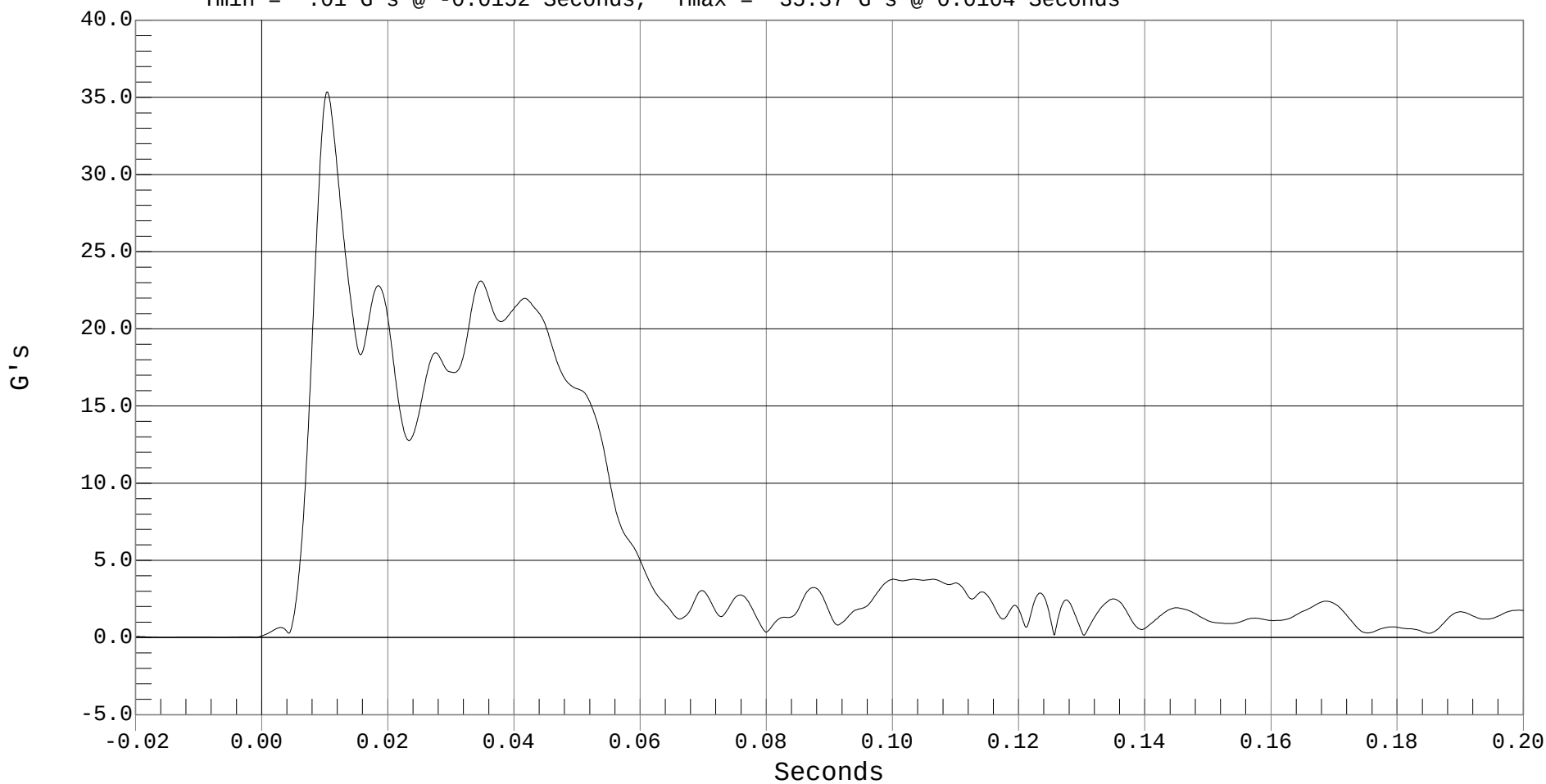
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 60

1 REAR FLOORPAN ABOVE AXLE RESULTANT ACCELERATION, B01001AV.A23

Ymin = .01 G's @ -0.0152 Seconds, Ymax = 35.37 G's @ 0.0104 Seconds





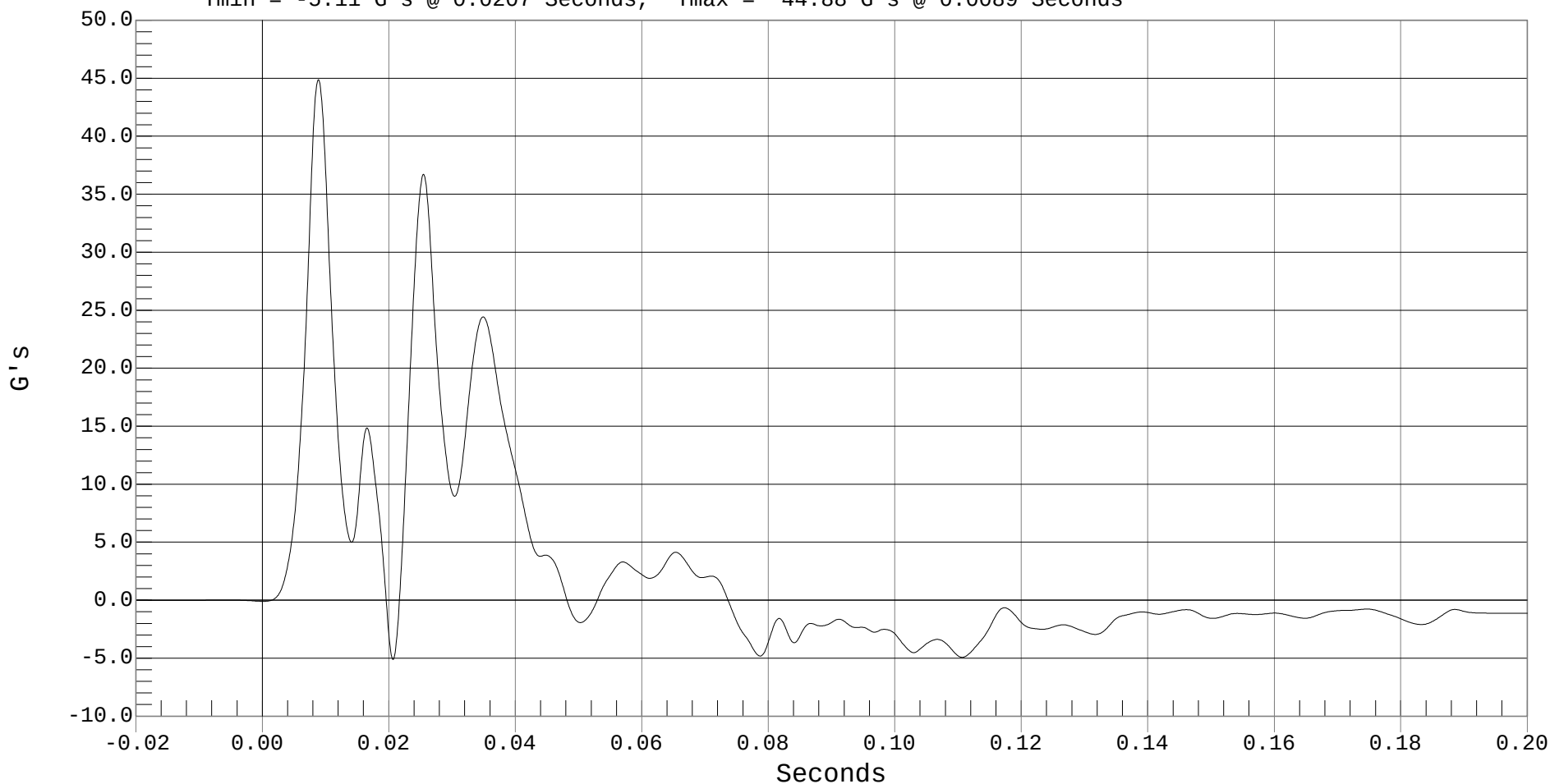
LEFT SIDE SILL AT FRONT SEAT Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 60

— 1 LEFT FRONT SILL Y, B01001AF.A21

Ymin = -5.11 G's @ 0.0207 Seconds, Ymax = 44.88 G's @ 0.0089 Seconds





LEFT SIDE SILL AT FRONT SEAT Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

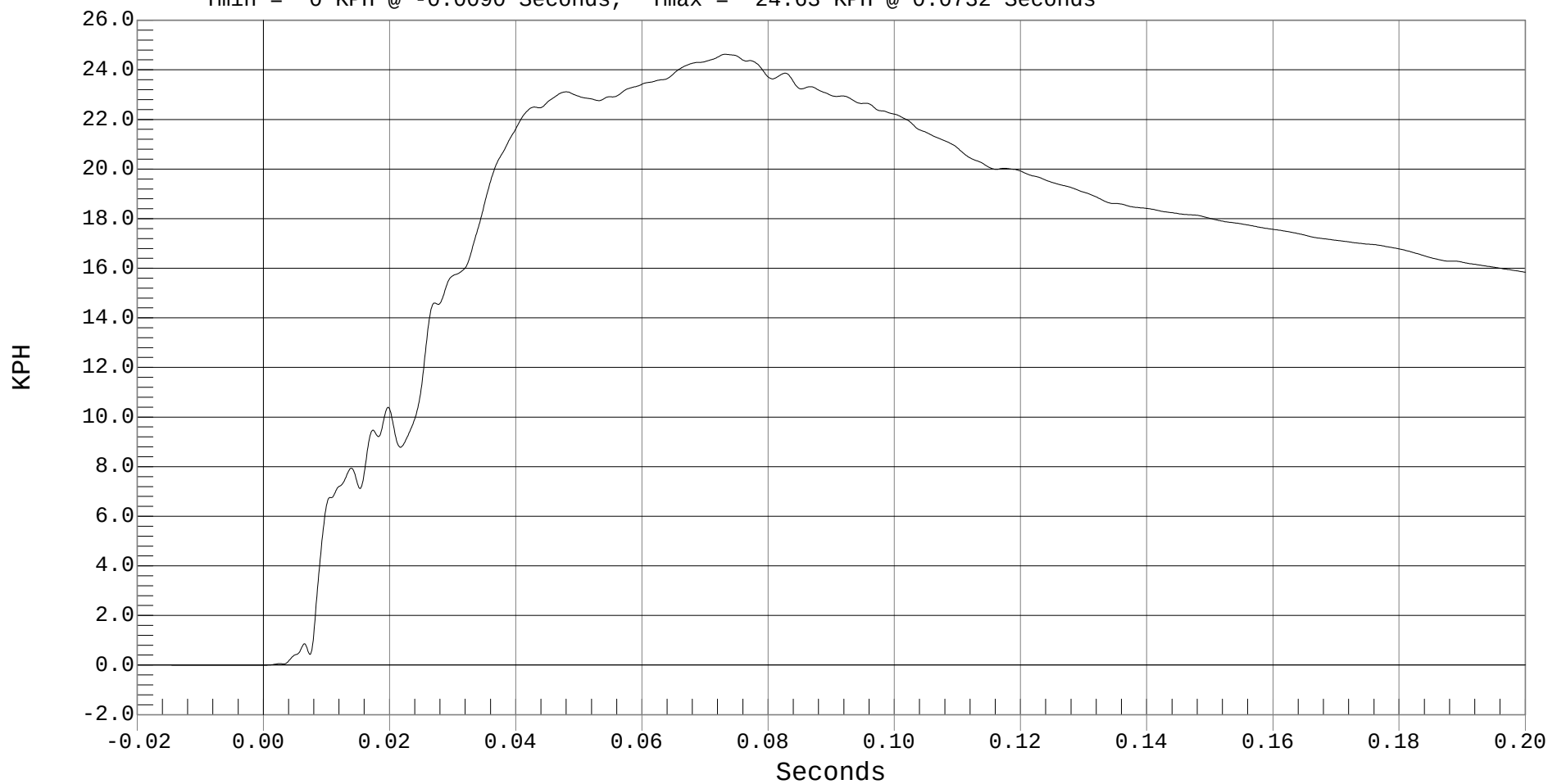
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 LEFT SIDE SILL AT FRONT SEAT Y VELOCITY, B01001AI.V21

Ymin = 0 KPH @ -0.0090 Seconds, Ymax = 24.63 KPH @ 0.0732 Seconds





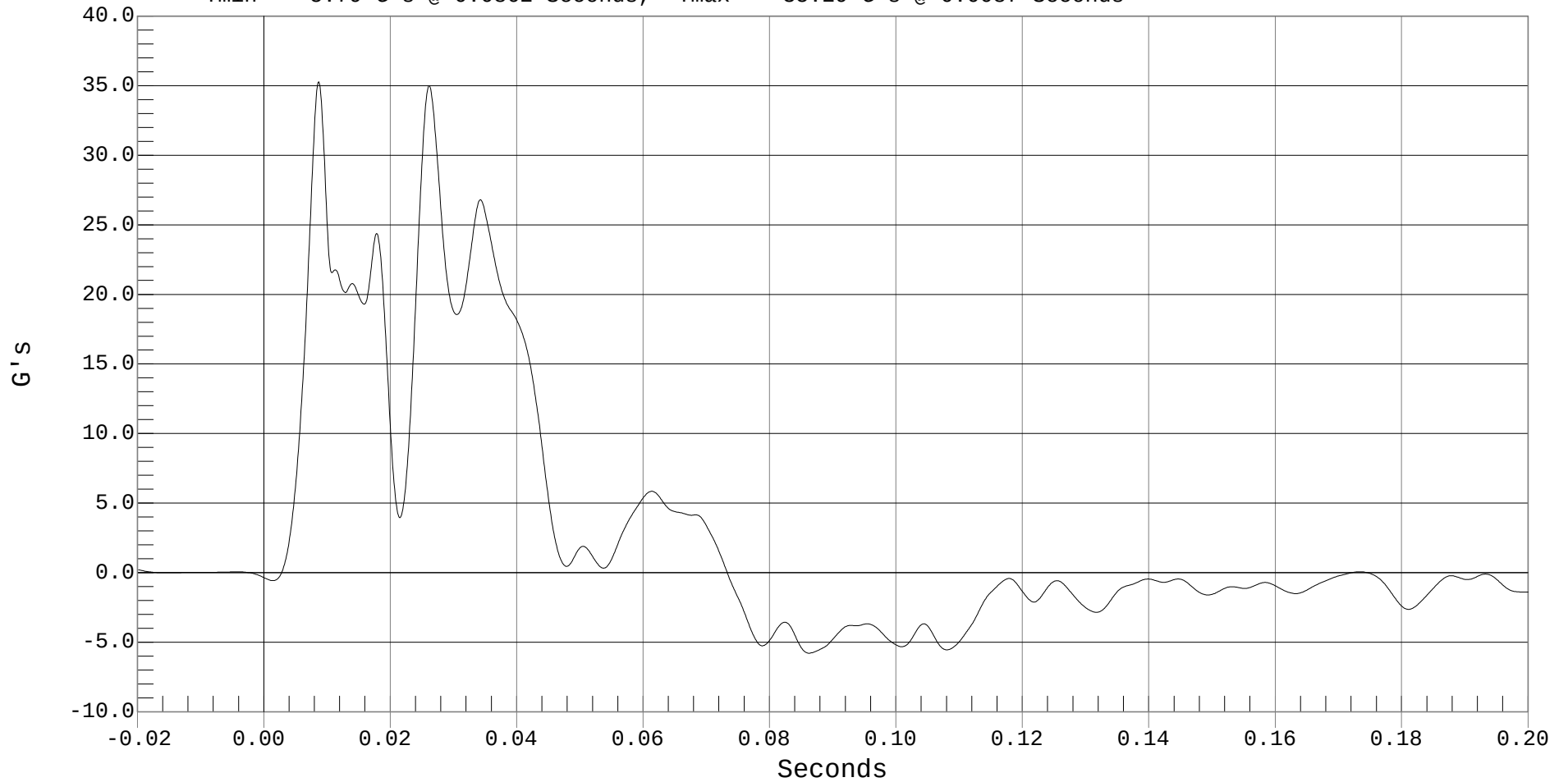
LEFT SIDE SILL AT REAR SEAT Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 60

— 1 LEFT REAR SILL Y, B01001AF.A22

Ymin = -5.79 G's @ 0.0862 Seconds, Ymax = 35.29 G's @ 0.0087 Seconds





LEFT SIDE SILL AT REAR SEAT Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Test Date: 01-03-01

Component: 2001 MAZDA TRIBUTE (C15402)

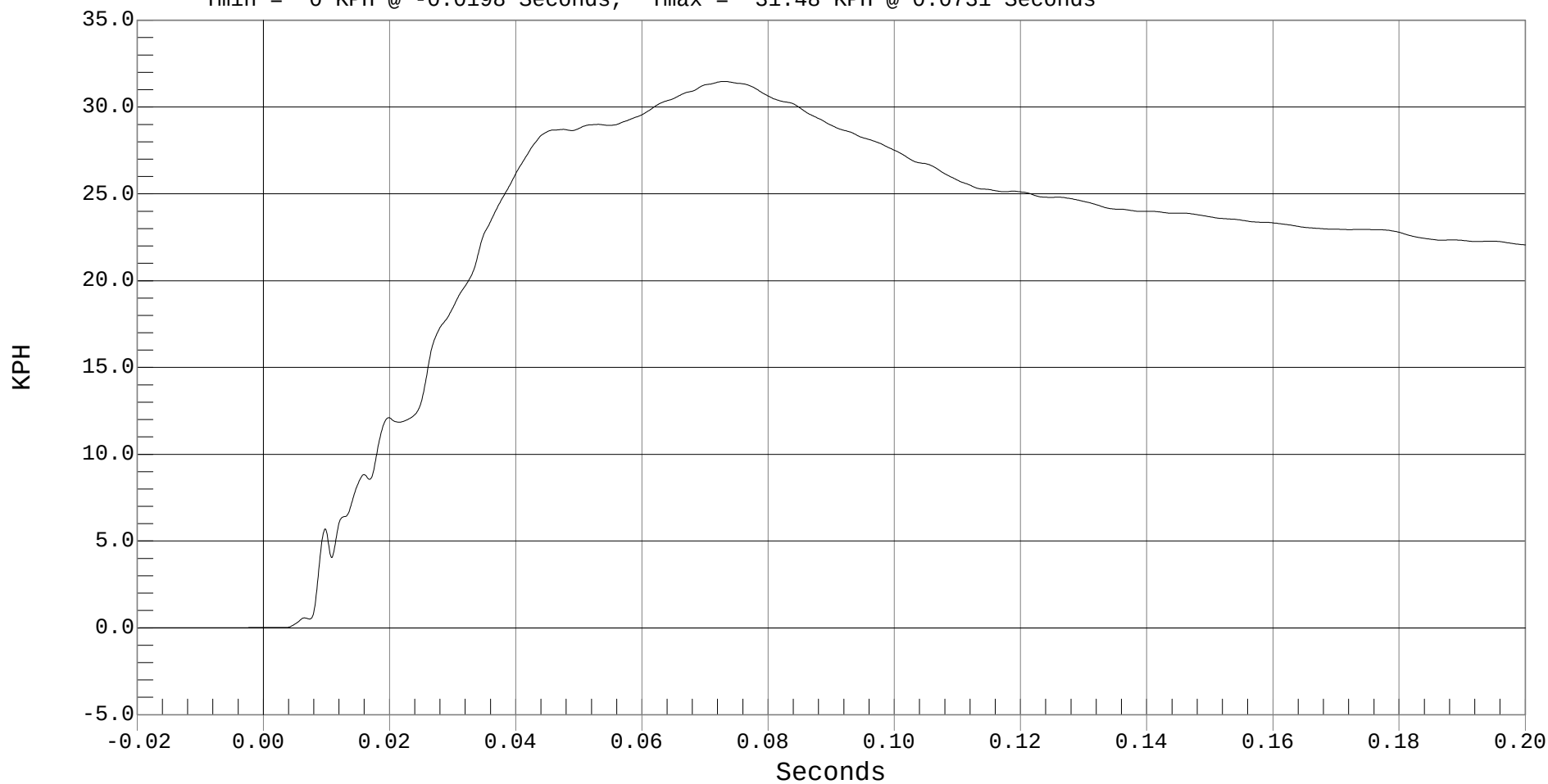
Speed: 38.5 MPH, 62.0 KPH

Other Info:

Filter Class: 180

— 1 LEFT SIDE SILL AT REAR SEAT Y VELOCITY, B01001AI.V22

Ymin = 0 KPH @ -0.0198 Seconds, Ymax = 31.48 KPH @ 0.0731 Seconds





RIGHT REAR OCCUPANT COMPARTMENT Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

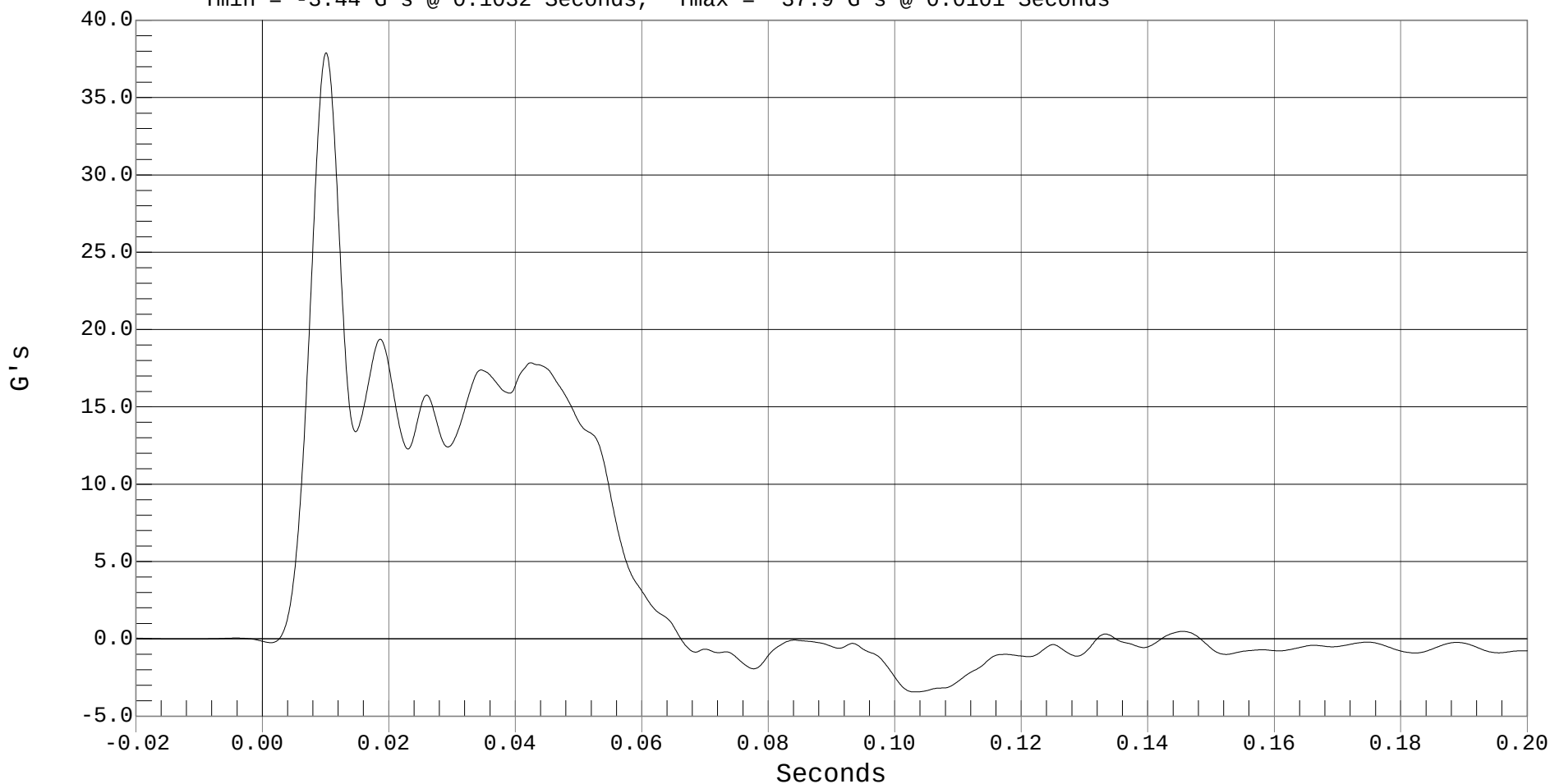
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 60

— 1 RIGHT REAR OCCUPANT COMPARTMENT Y, B01001AF.A31

Ymin = -3.44 G's @ 0.1032 Seconds, Ymax = 37.9 G's @ 0.0101 Seconds





RIGHT REAR OCCUPANT COMPARTMENT Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Test Date: 01-03-01

Component: 2001 MAZDA TRIBUTE (C15402)

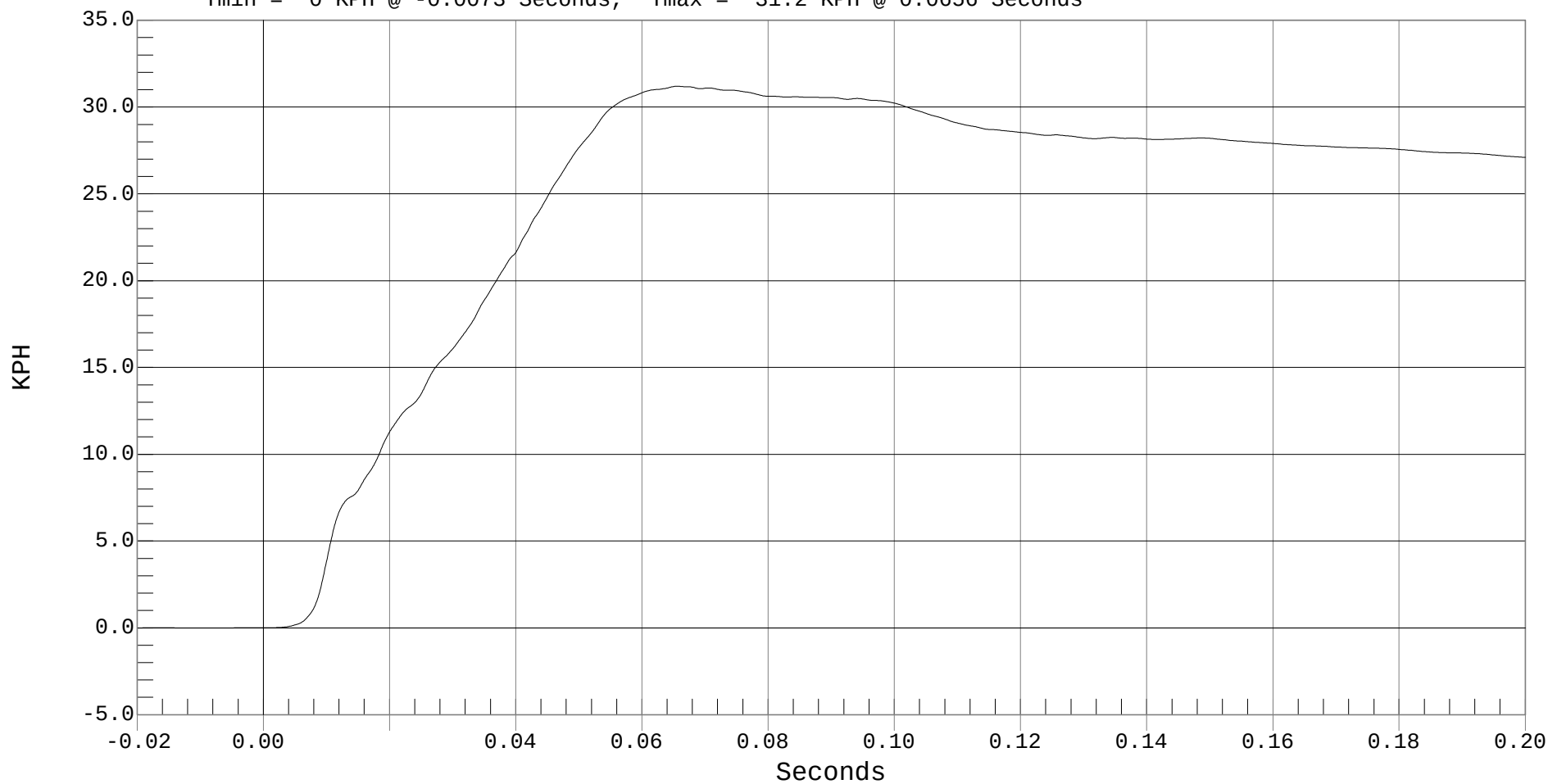
Speed: 38.5 MPH, 62.0 KPH

Other Info:

Filter Class: 180

1 RIGHT REAR OCCUPANT COMPARTMENT Y VELOCITY, B01001AI.V31

Ymin = 0 KPH @ -0.0073 Seconds, Ymax = 31.2 KPH @ 0.0656 Seconds





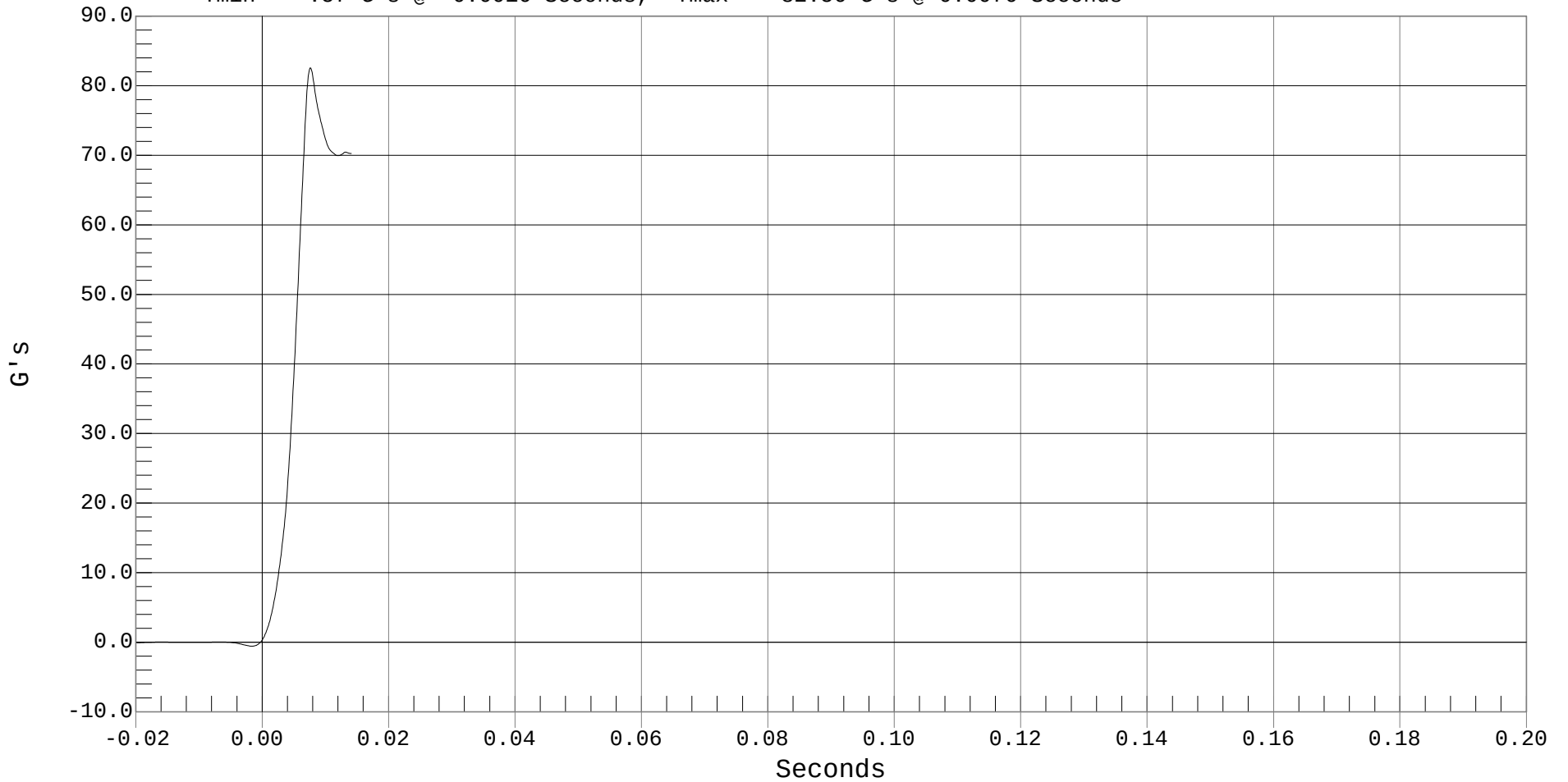
LEFT LOWER A-POST Y ACCELERATION (QD AFTER 14 MSEC)

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 60

— 1 LEFT LOWER A-POST Y, B01001AF.A27

Ymin = -.57 G's @ -0.0016 Seconds, Ymax = 82.56 G's @ 0.0076 Seconds





LEFT LOWER A-POST Y VELOCITY (QD AFTER 14 MSEC)

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

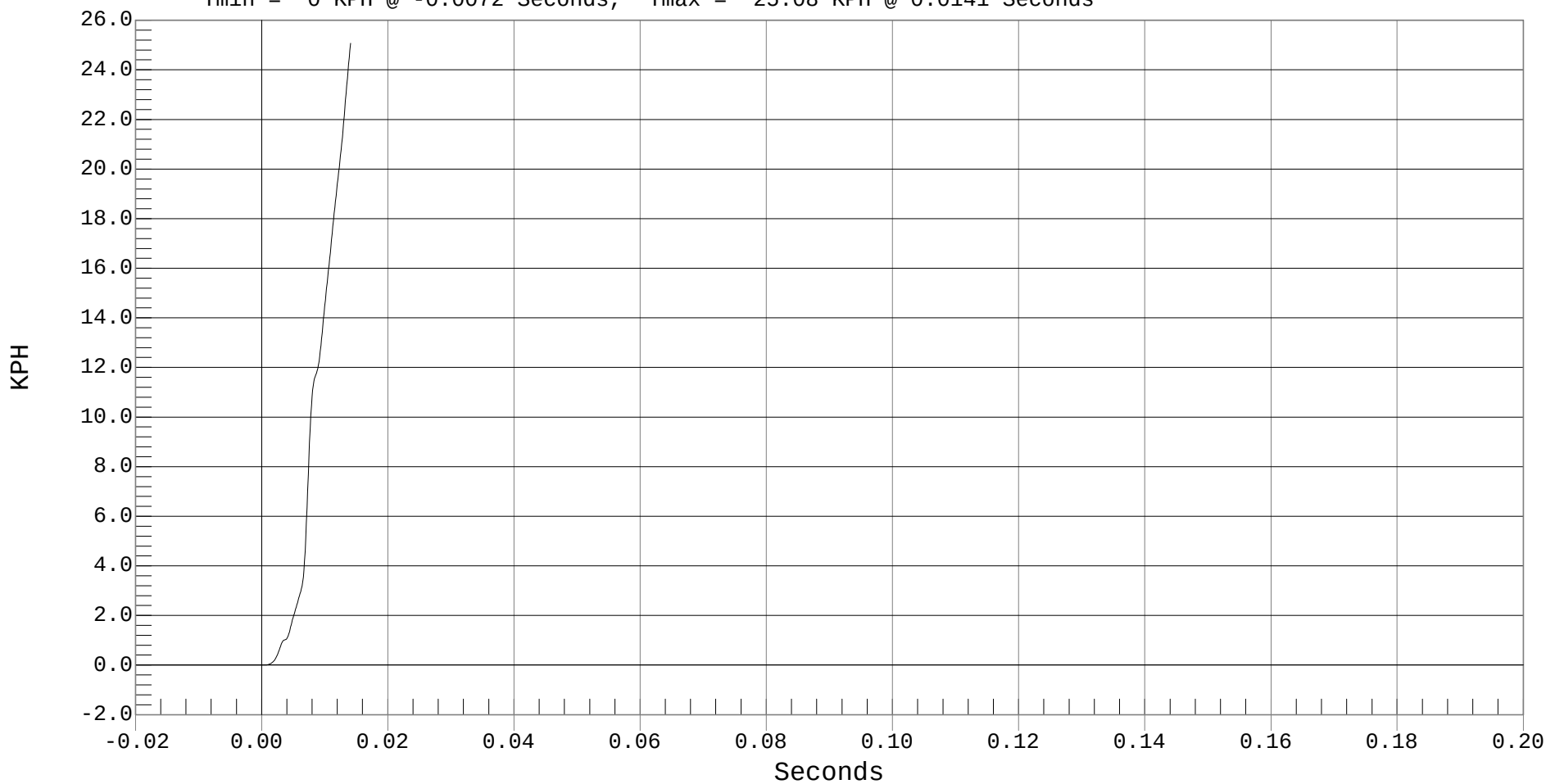
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

1 LEFT LOWER A-POST Y VELOCITY, B01001AI.V27

Ymin = 0 KPH @ -0.0072 Seconds, Ymax = 25.08 KPH @ 0.0141 Seconds





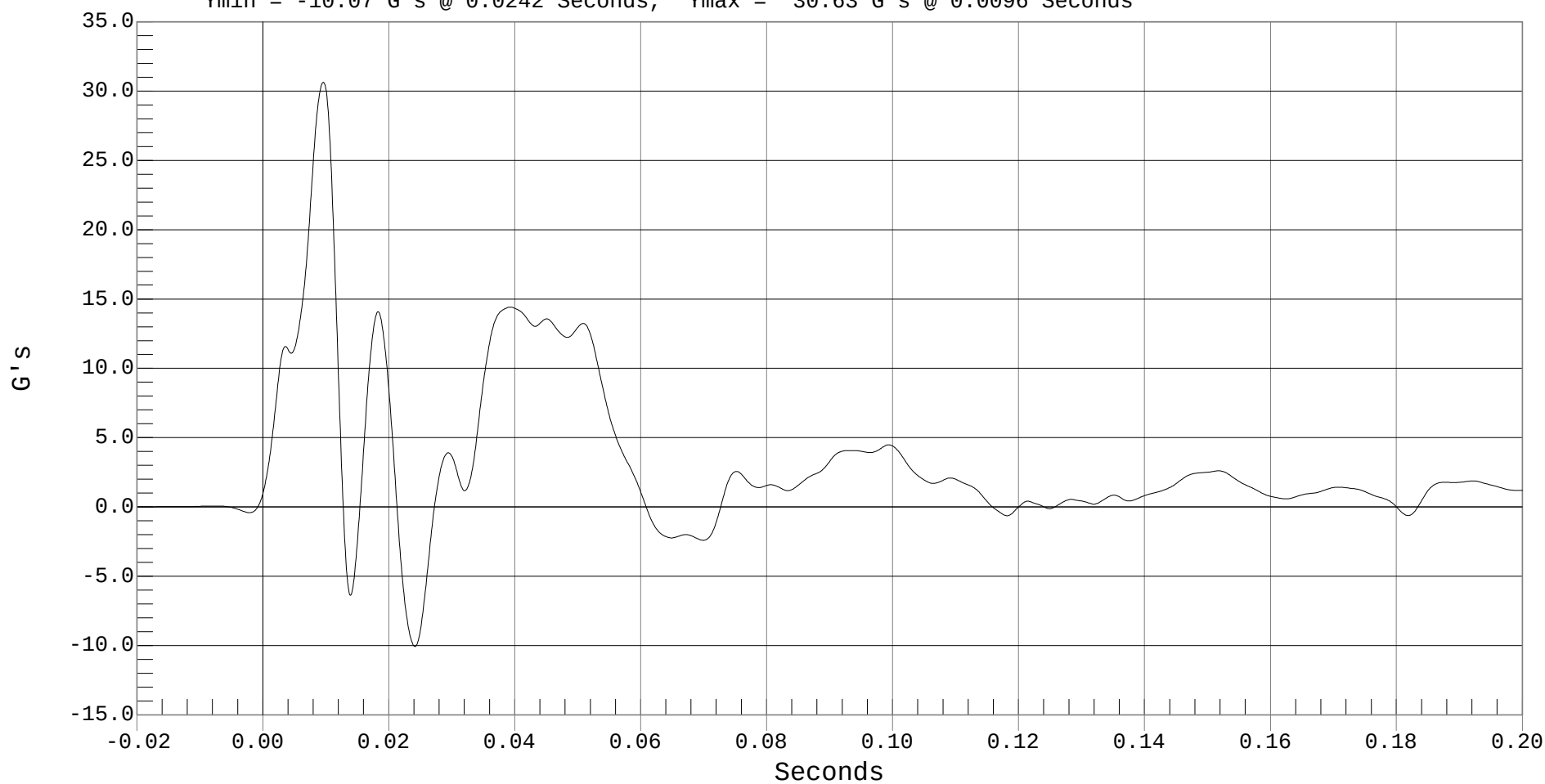
LEFT MID A-POST Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 60

— 1 LEFT MID A-POST Y, B01001AF.A26

Ymin = -10.07 G's @ 0.0242 Seconds, Ymax = 30.63 G's @ 0.0096 Seconds





LEFT MID A-POST Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

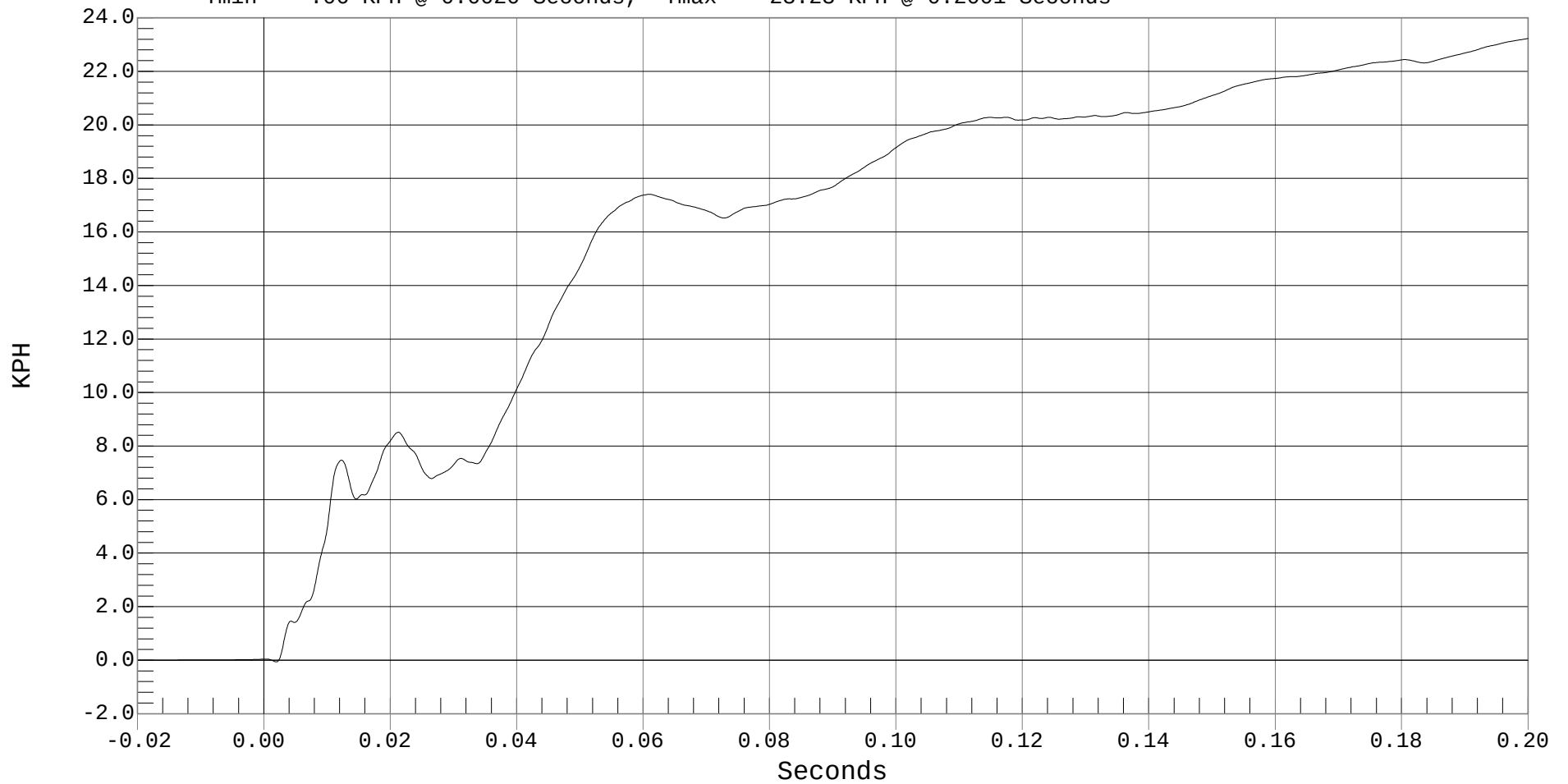
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 LEFT MID A-POST Y VELOCITY, B01001AI.V26

Ymin = -.06 KPH @ 0.0020 Seconds, Ymax = 23.23 KPH @ 0.2001 Seconds





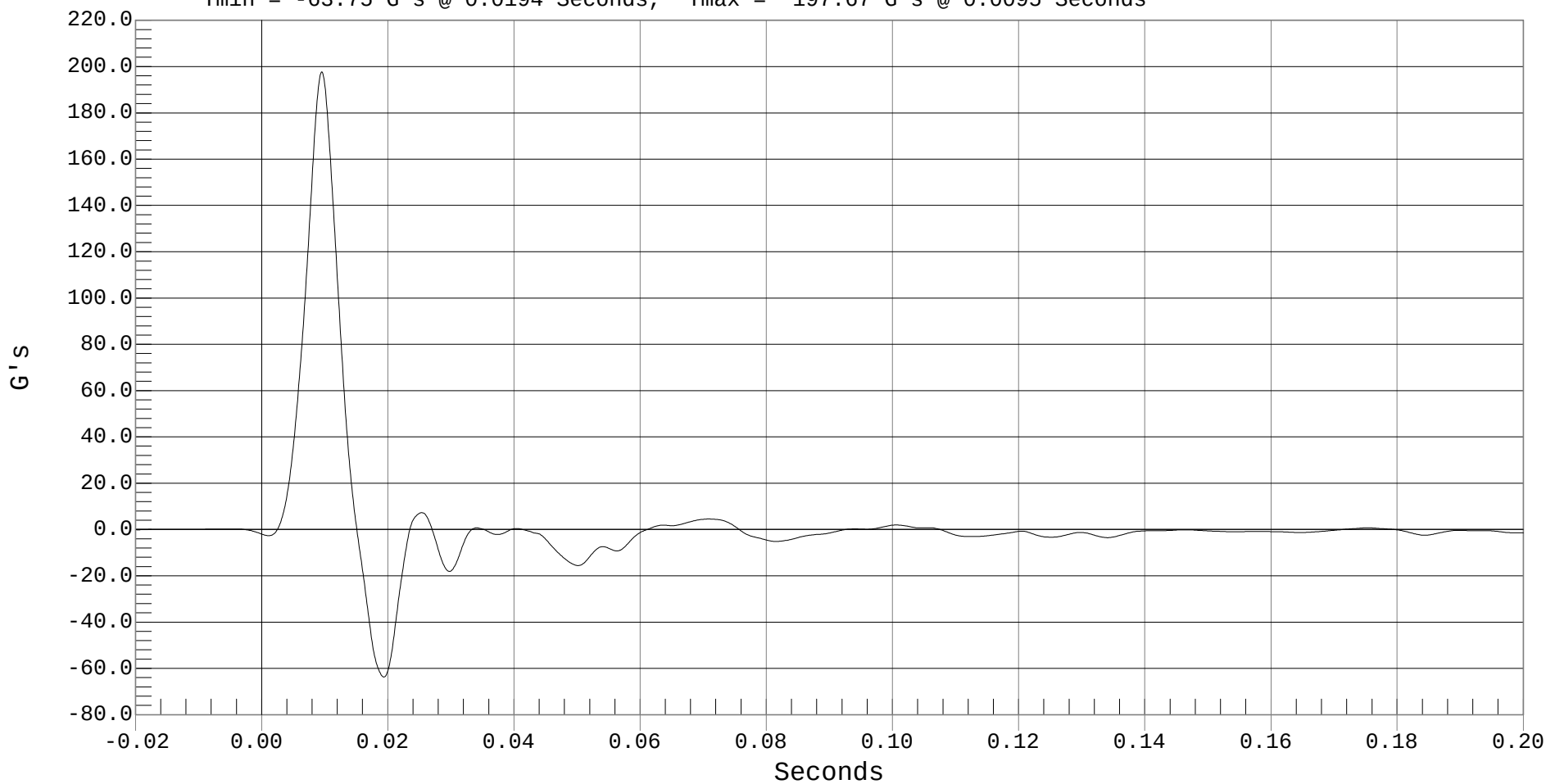
LEFT LOWER B-POST Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 60

— 1 LEFT LOWER B-POST, B01001AF.A29

Ymin = -63.75 G's @ 0.0194 Seconds, Ymax = 197.67 G's @ 0.0095 Seconds





LEFT LOWER B-POST Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

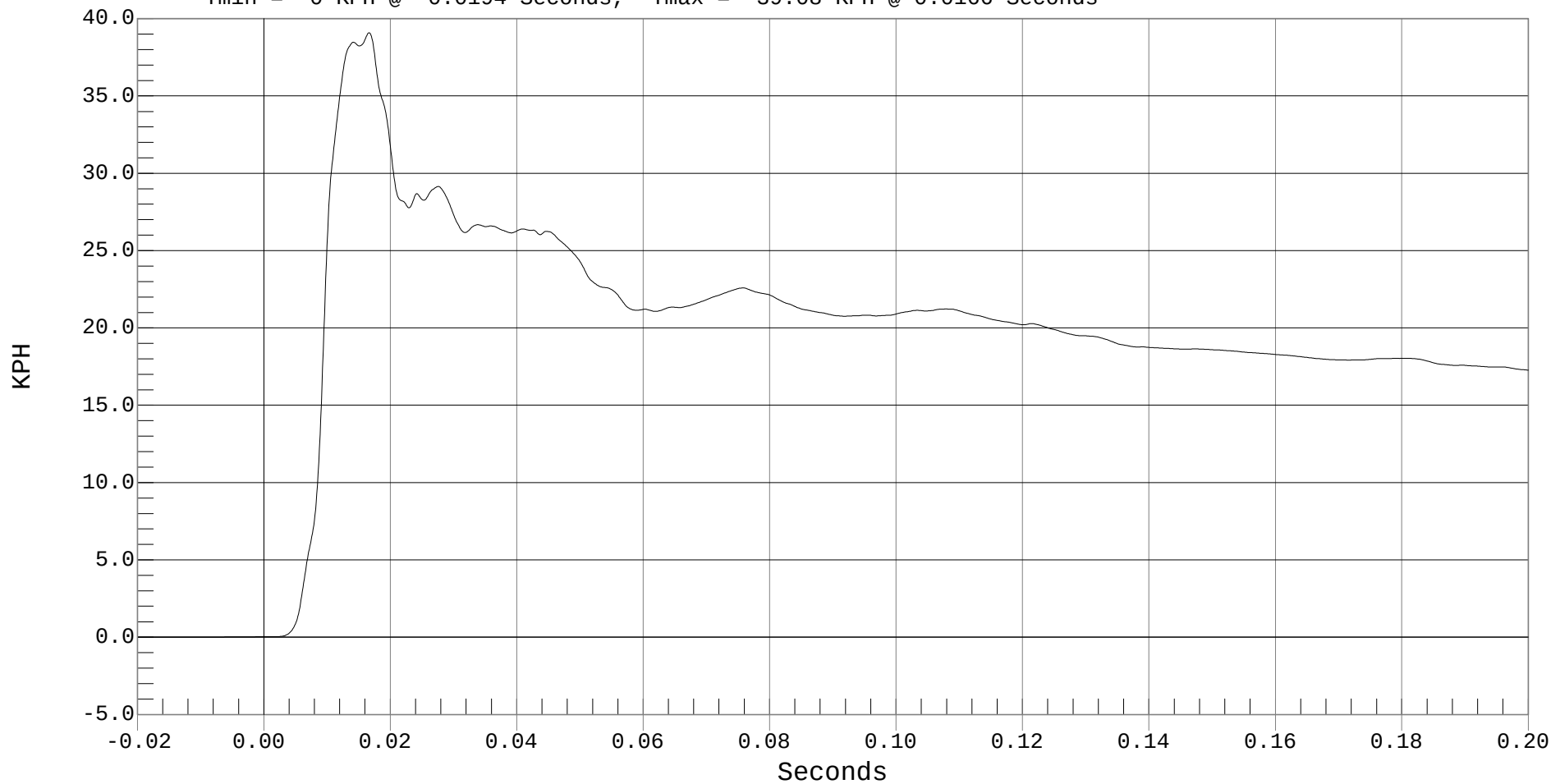
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 LEFT LOWER B-POST Y VELOCITY, B01001AI.V29

Ymin = 0 KPH @ -0.0194 Seconds, Ymax = 39.08 KPH @ 0.0166 Seconds





LEFT MID B-POST Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

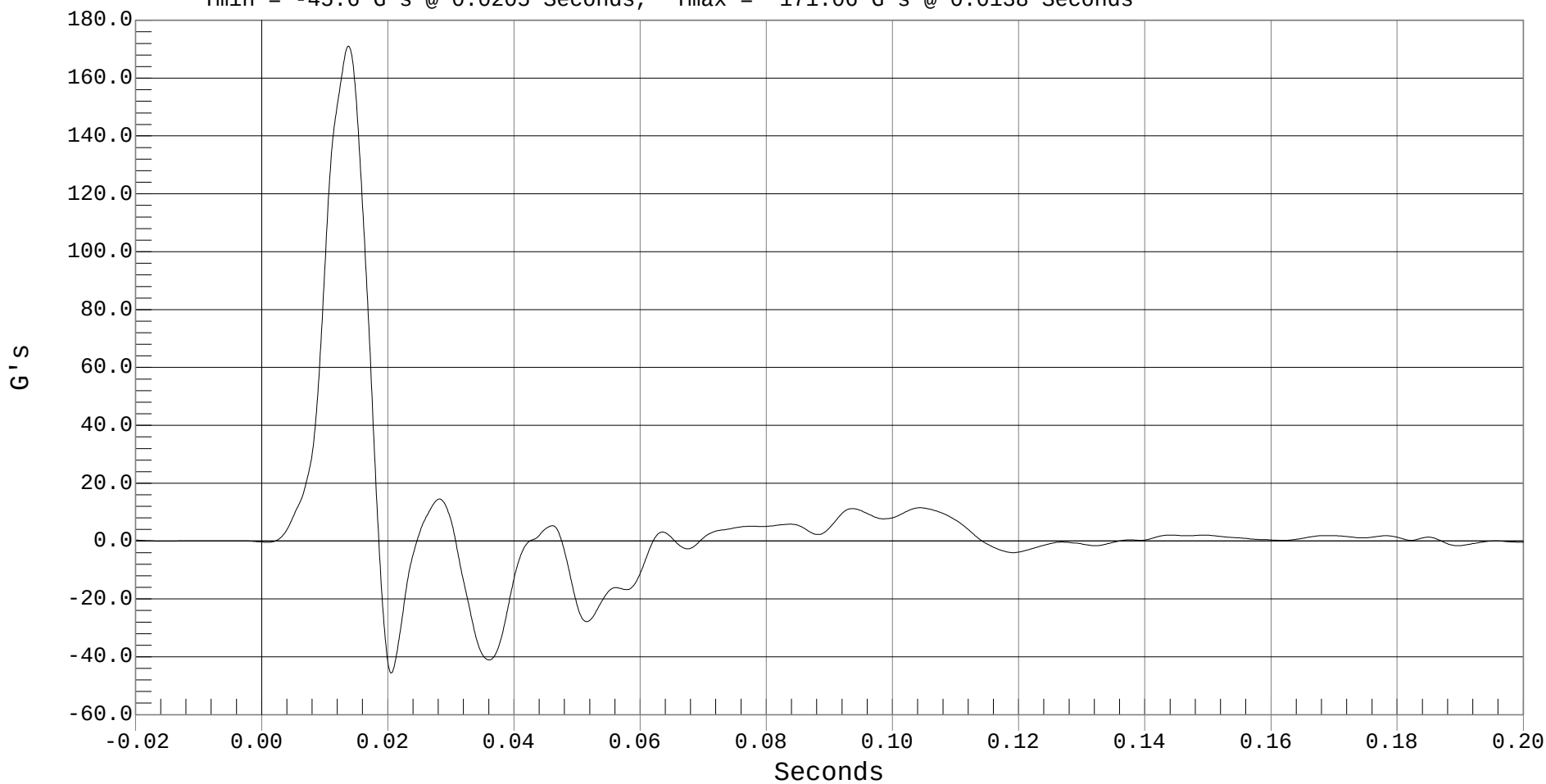
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 60

— 1 LEFT MID B-POST, B01001AF.A28

Ymin = -45.6 G's @ 0.0205 Seconds, Ymax = 171.06 G's @ 0.0138 Seconds





LEFT MID B-POST Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

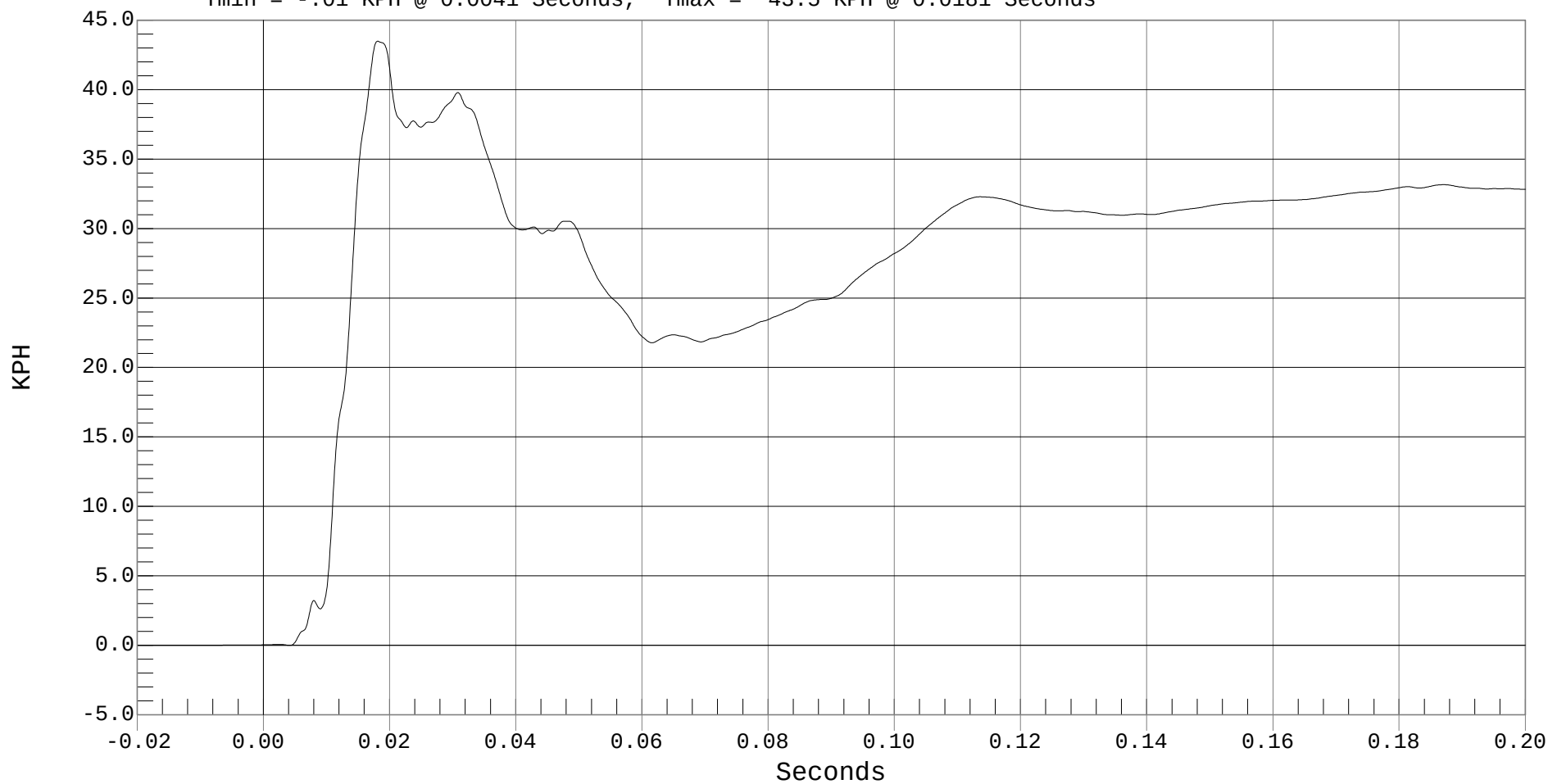
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 LEFT MID B-POST Y VELOCITY, B01001AI.V28

Ymin = -.01 KPH @ 0.0041 Seconds, Ymax = 43.5 KPH @ 0.0181 Seconds





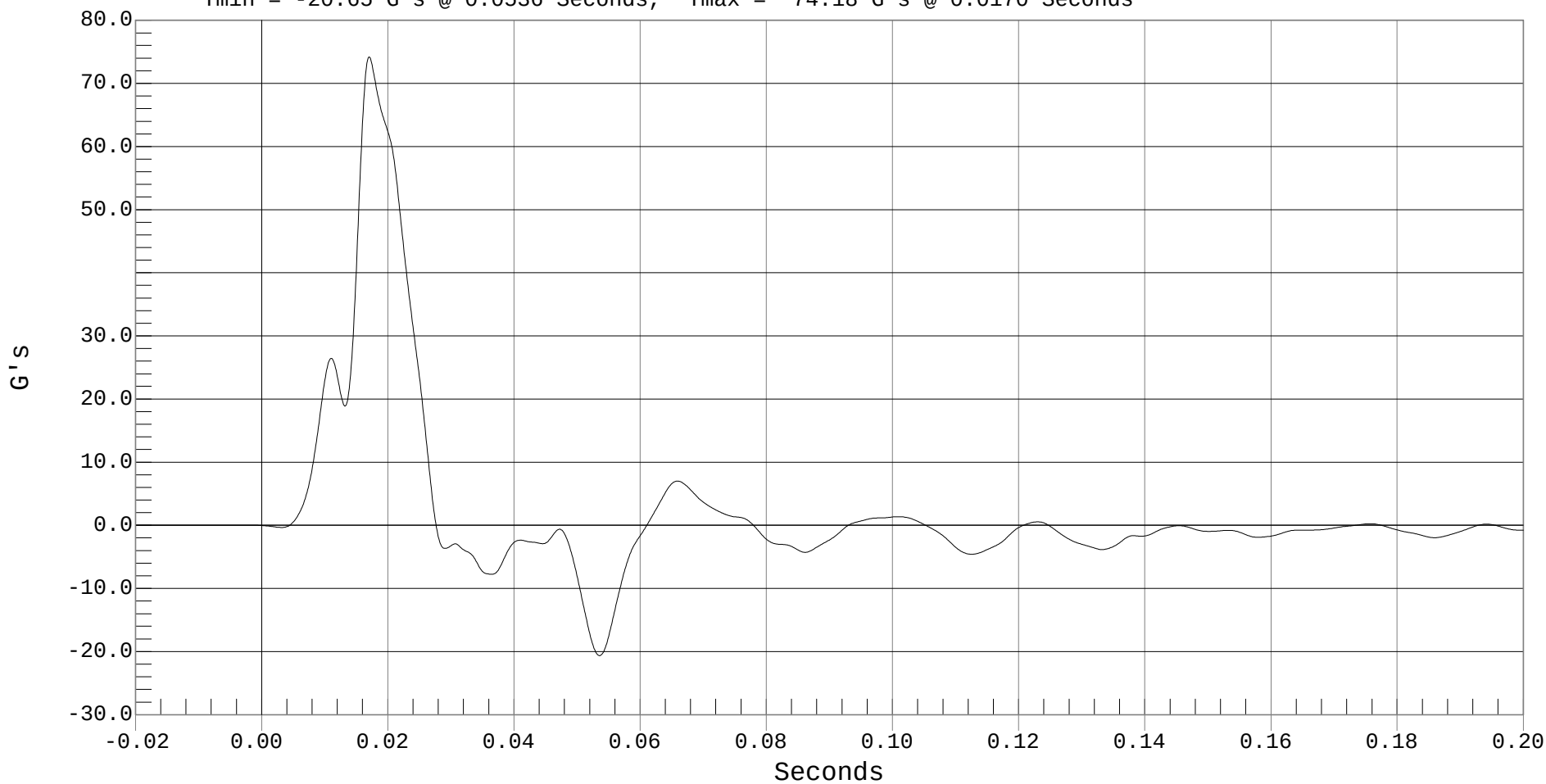
LEFT DRIVER SEAT TRACK Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 60

— 1 DRIVER SEAT TRACK Y, B01001AF.A30

Ymin = -20.65 G's @ 0.0536 Seconds, Ymax = 74.18 G's @ 0.0170 Seconds





LEFT DRIVER SEAT TRACK Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

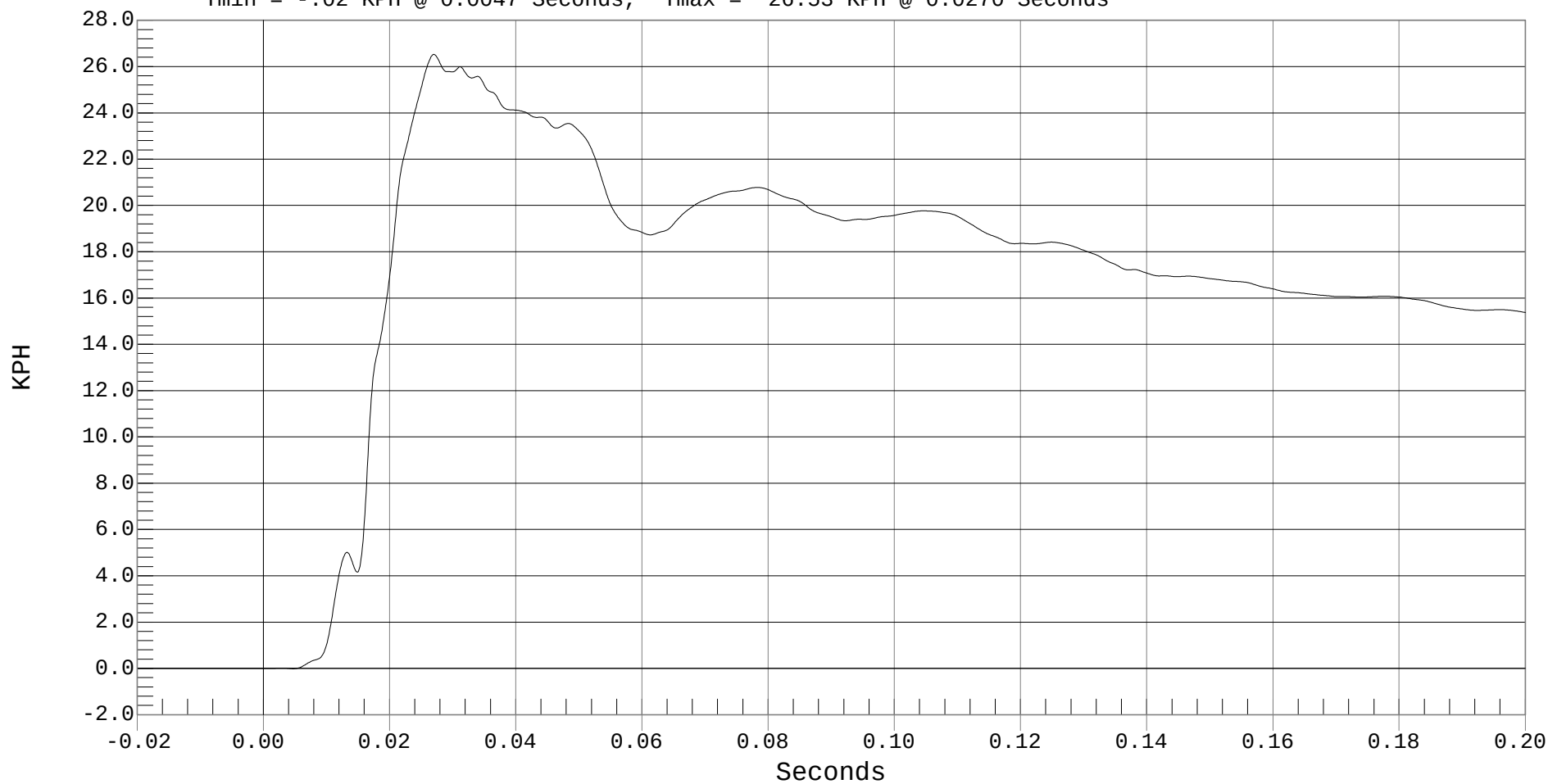
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 DRIVER SEAT TRACK Y VELOCITY, B01001AI.V30

Ymin = -.02 KPH @ 0.0047 Seconds, Ymax = 26.53 KPH @ 0.0270 Seconds





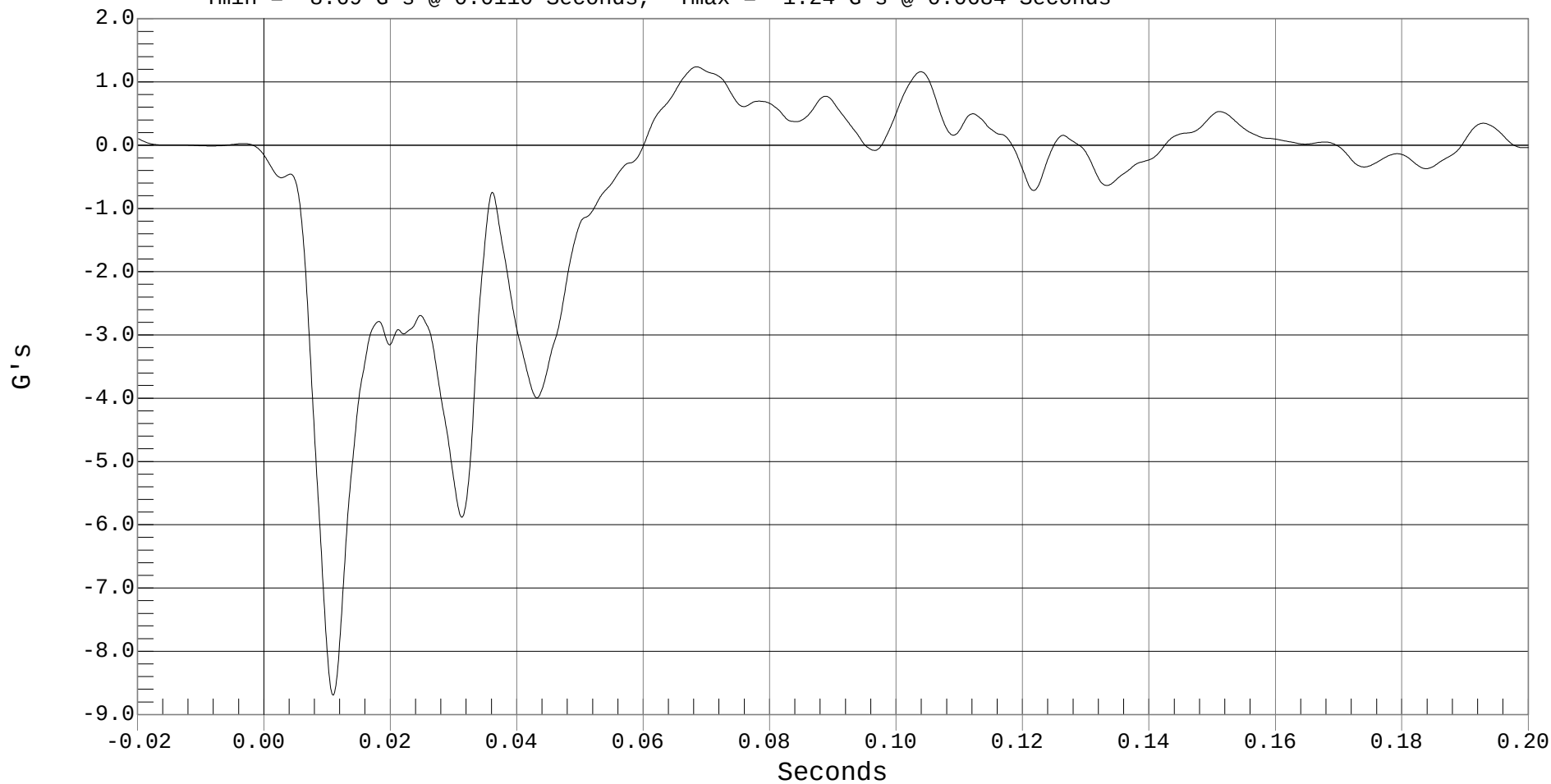
VEHICLE CG X ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 60

— 1 VEHICLE CG X, B01001AF.A33

Ymin = -8.69 G's @ 0.0110 Seconds, Ymax = 1.24 G's @ 0.0684 Seconds





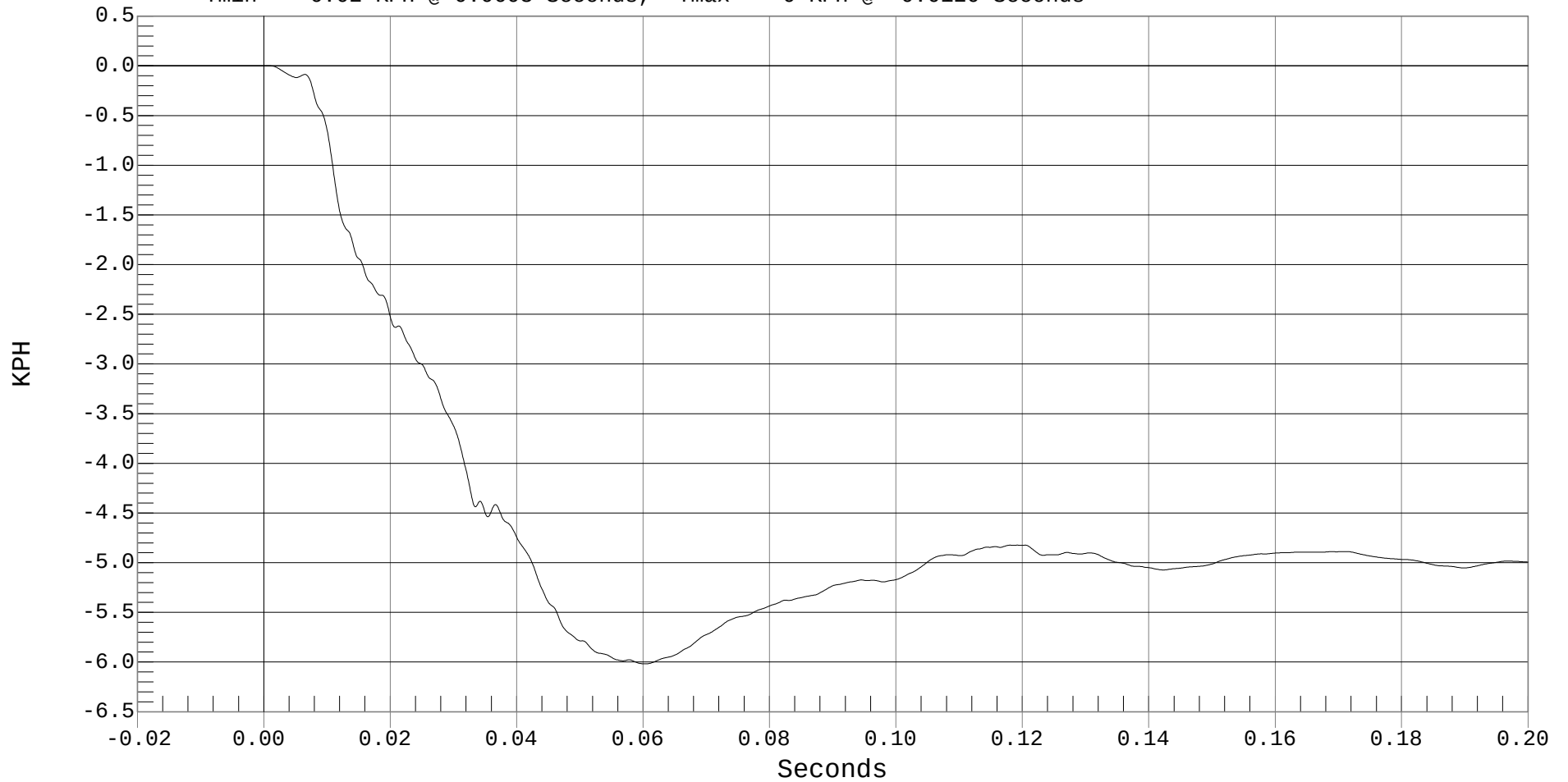
VEHICLE CG X VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 180

— 1 VEHICLE CG X VELOCITY, B01001AI.V33

Ymin = -6.02 KPH @ 0.0603 Seconds, Ymax = 0 KPH @ -0.0120 Seconds





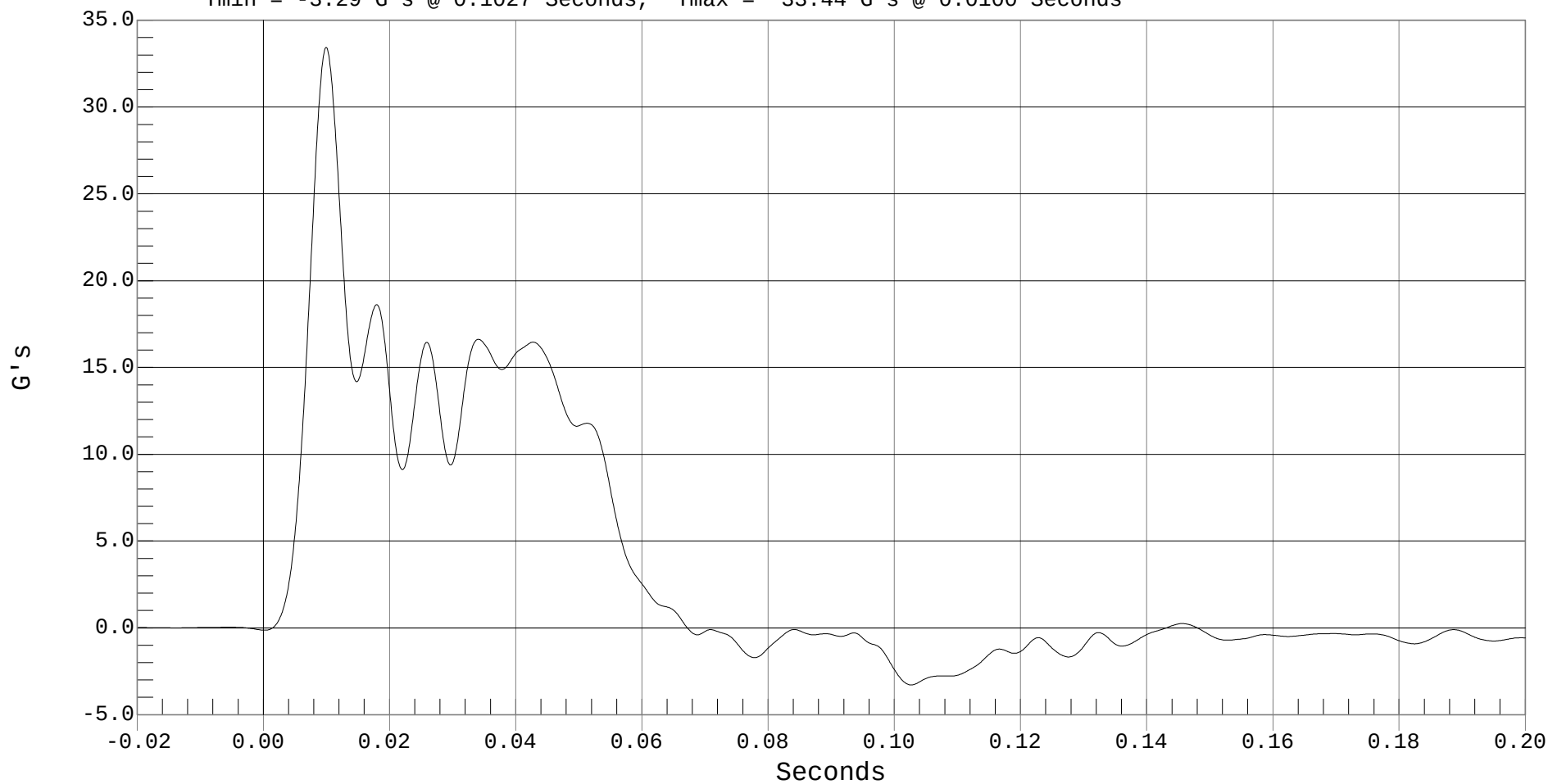
VEHICLE CG Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 60

— 1 VEHICLE CG Y, B01001AF.A34

Ymin = -3.29 G's @ 0.1027 Seconds, Ymax = 33.44 G's @ 0.0100 Seconds





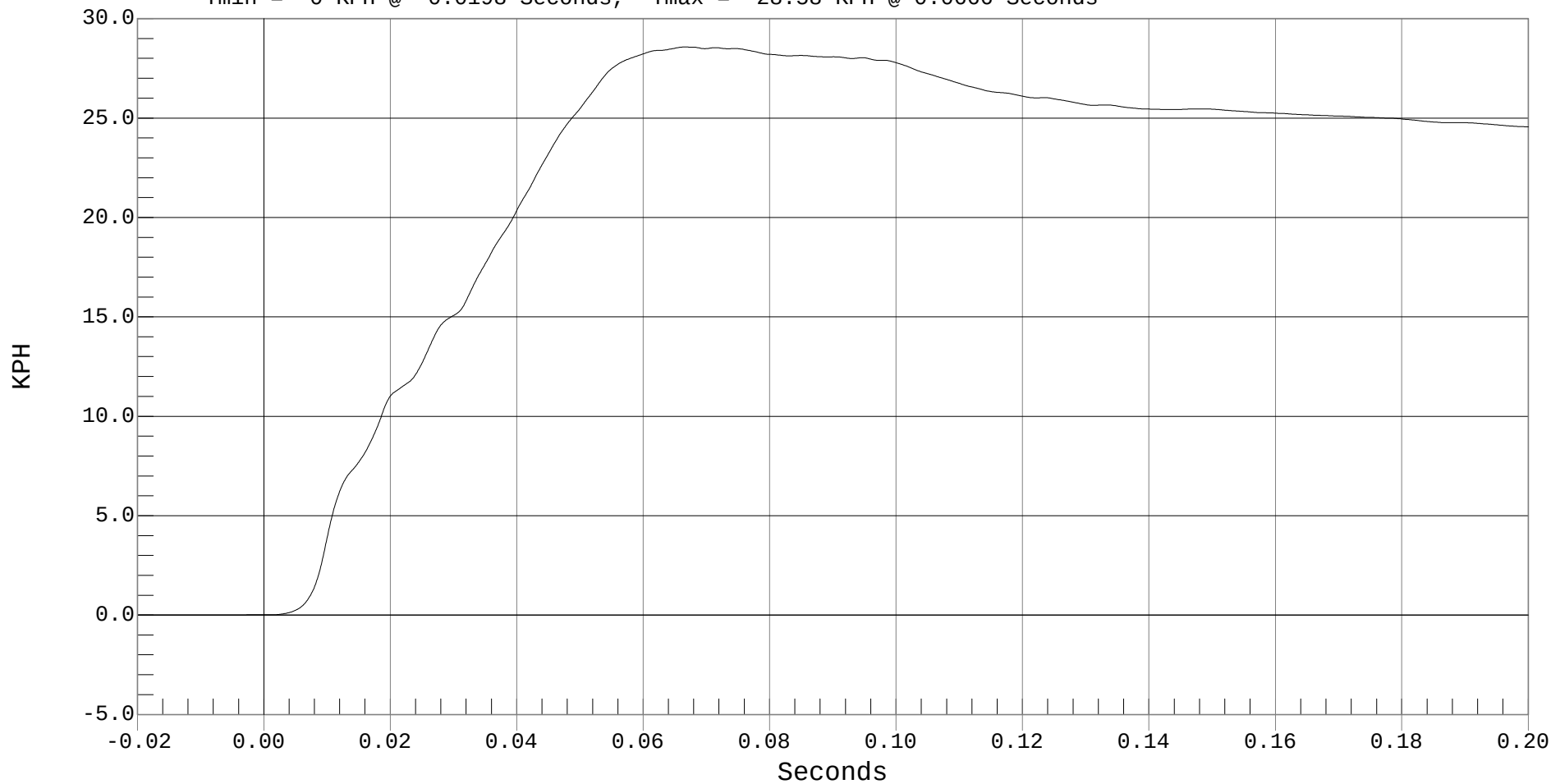
VEHICLE CG Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 180

— 1 VEHICLE CG Y VELOCITY, B01001AI.V34

Ymin = 0 KPH @ -0.0198 Seconds, Ymax = 28.58 KPH @ 0.0666 Seconds





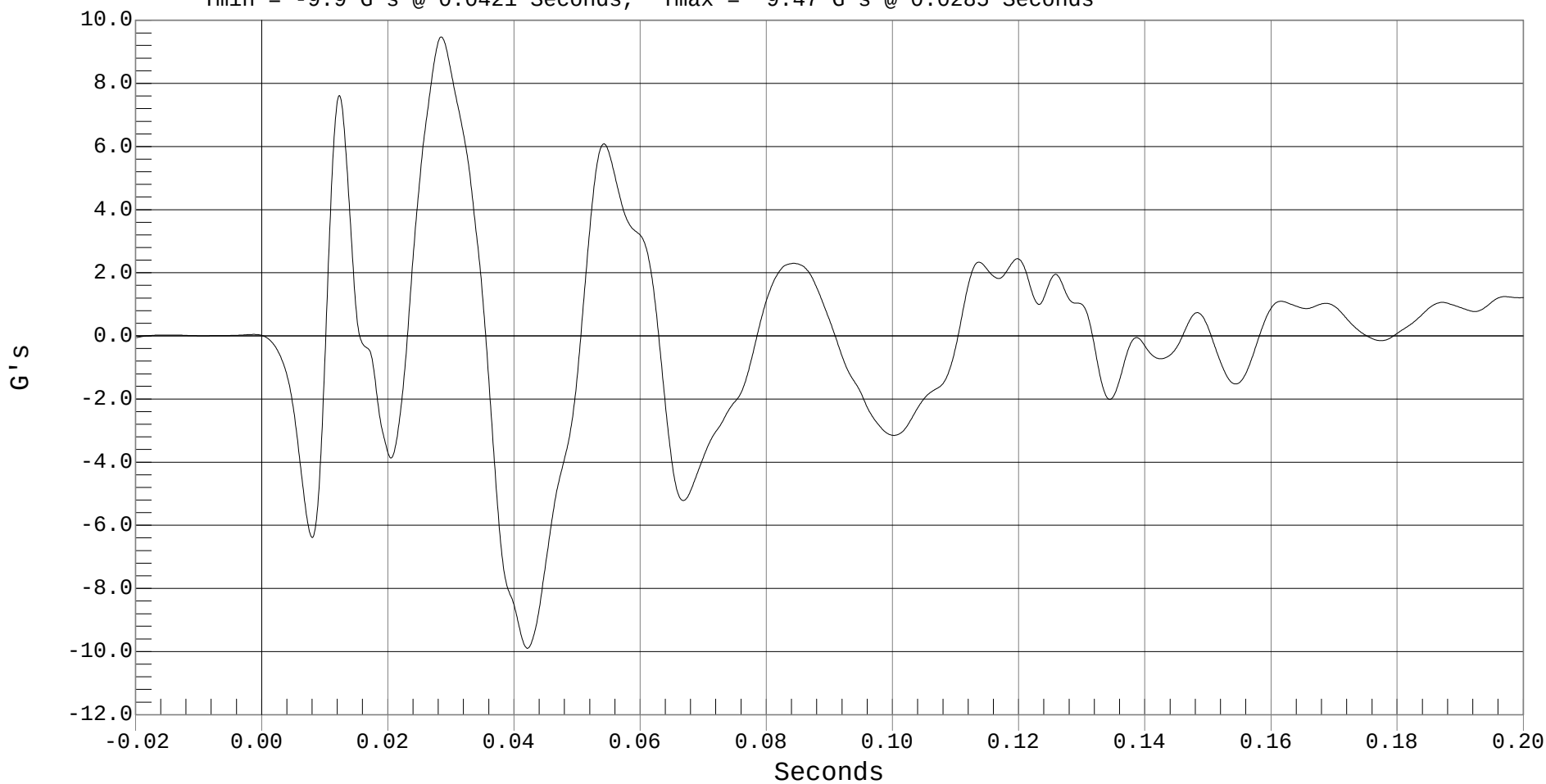
VEHICLE CG Z ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 60

— 1 VEHICLE CG Z, B01001AF.A35

Ymin = -9.9 G's @ 0.0421 Seconds, Ymax = 9.47 G's @ 0.0285 Seconds



B-70



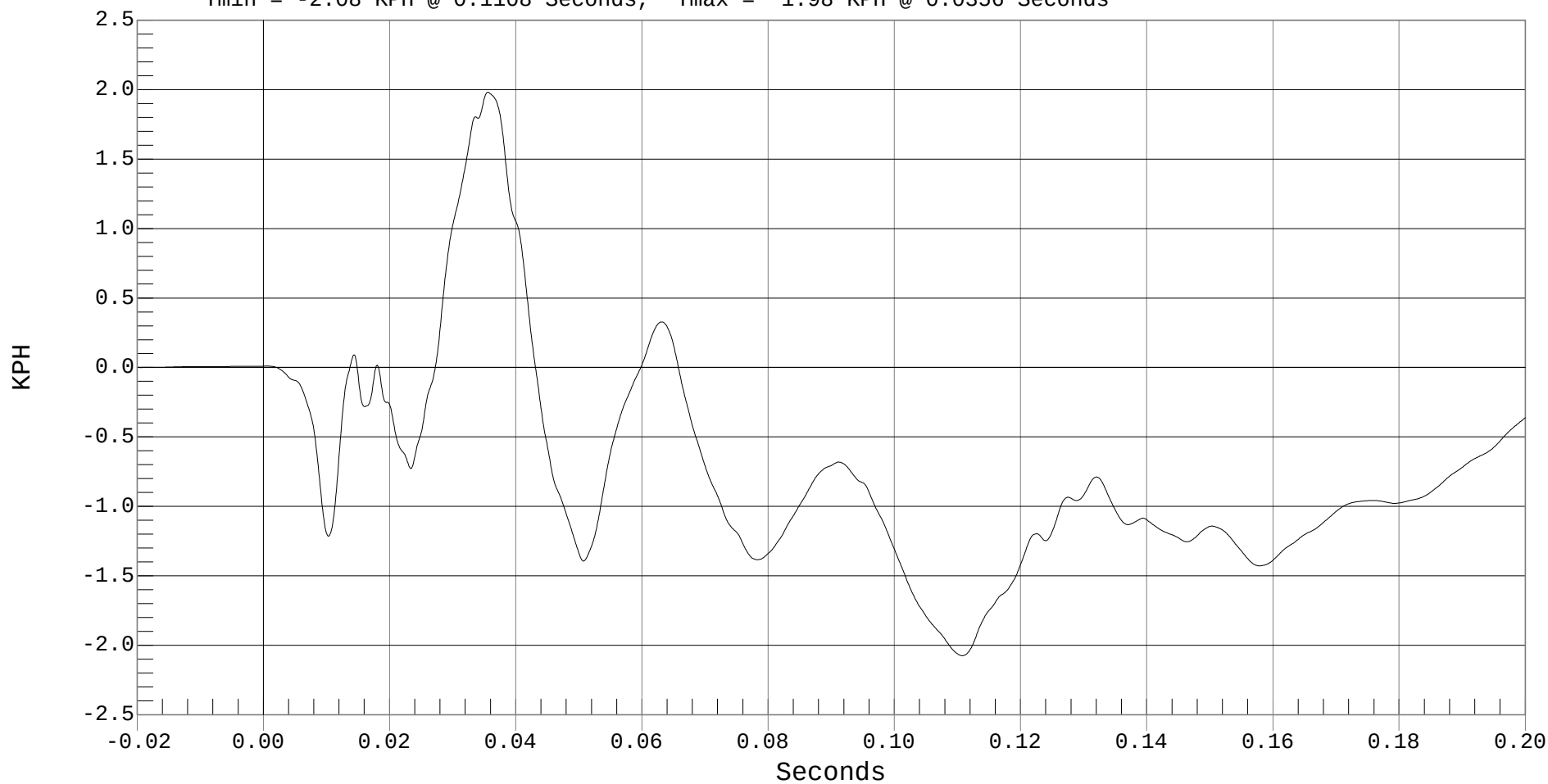
VEHICLE CG Z VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 180

— 1 VEHICLE CG Z VELOCITY, B01001AI.V35

Ymin = -2.08 KPH @ 0.1108 Seconds, Ymax = 1.98 KPH @ 0.0356 Seconds





VEHICLE CG RESULTANT ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

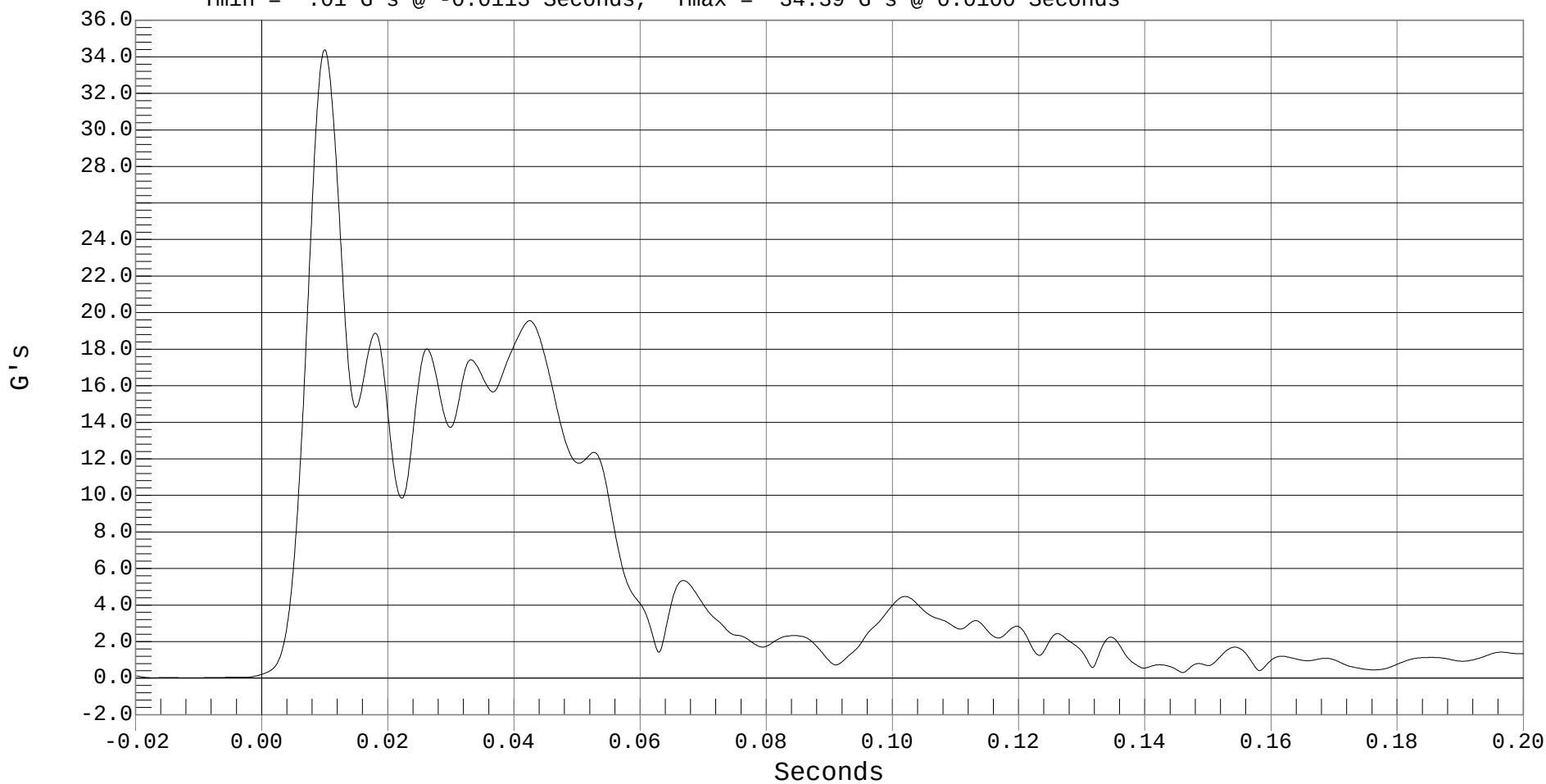
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 60

— 1 VEHICLE CG RESULTANT ACCELERATION, B01001AV.A33

Ymin = .01 G's @ -0.0113 Seconds, Ymax = 34.39 G's @ 0.0100 Seconds





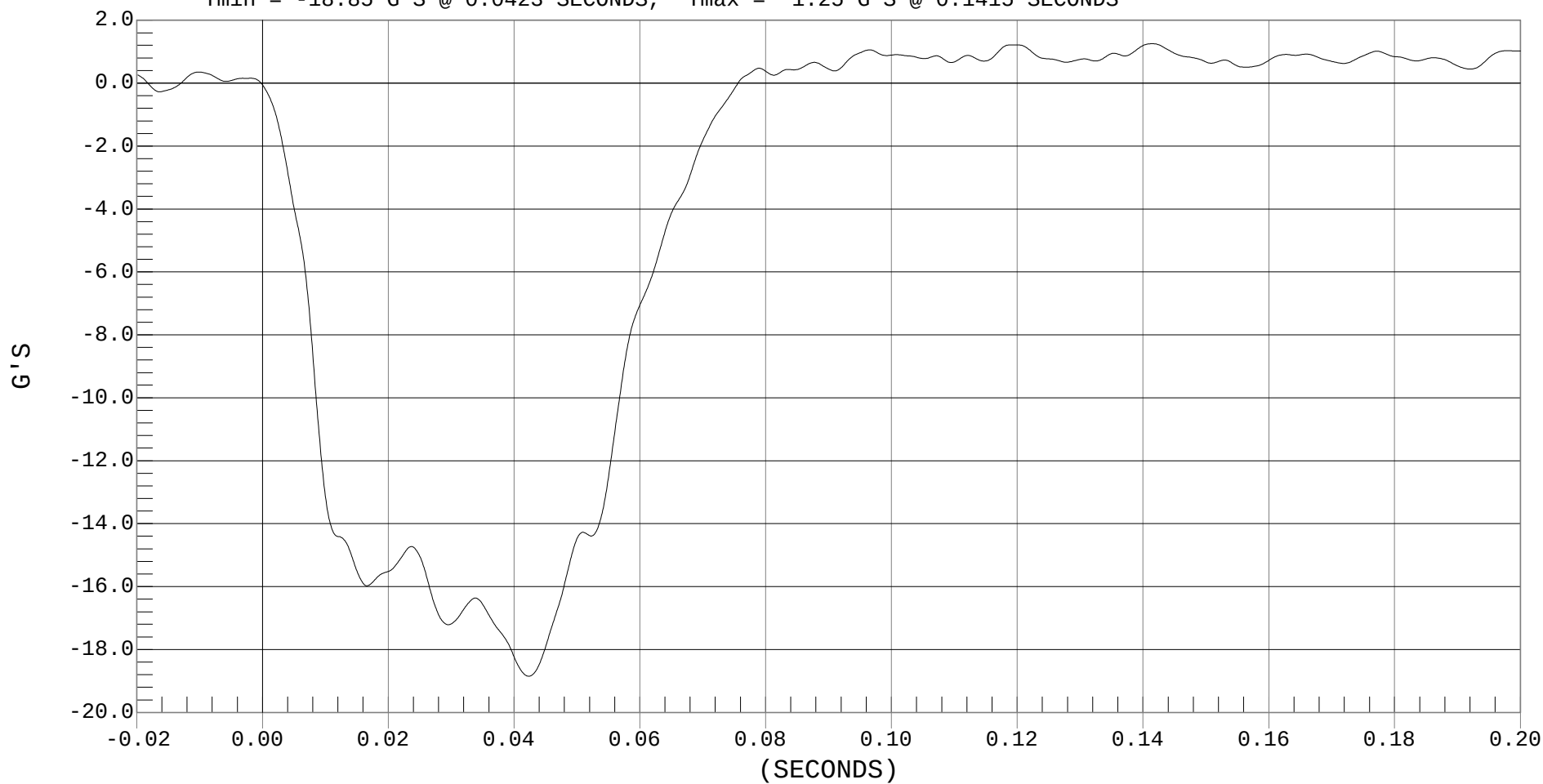
MOVING BARRIER CG X ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 60

— 1 CART CG X, C01001AF.A02

Ymin = -18.85 G'S @ 0.0423 SECONDS, Ymax = 1.25 G'S @ 0.1415 SECONDS





MOVING BARRIER CG X VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

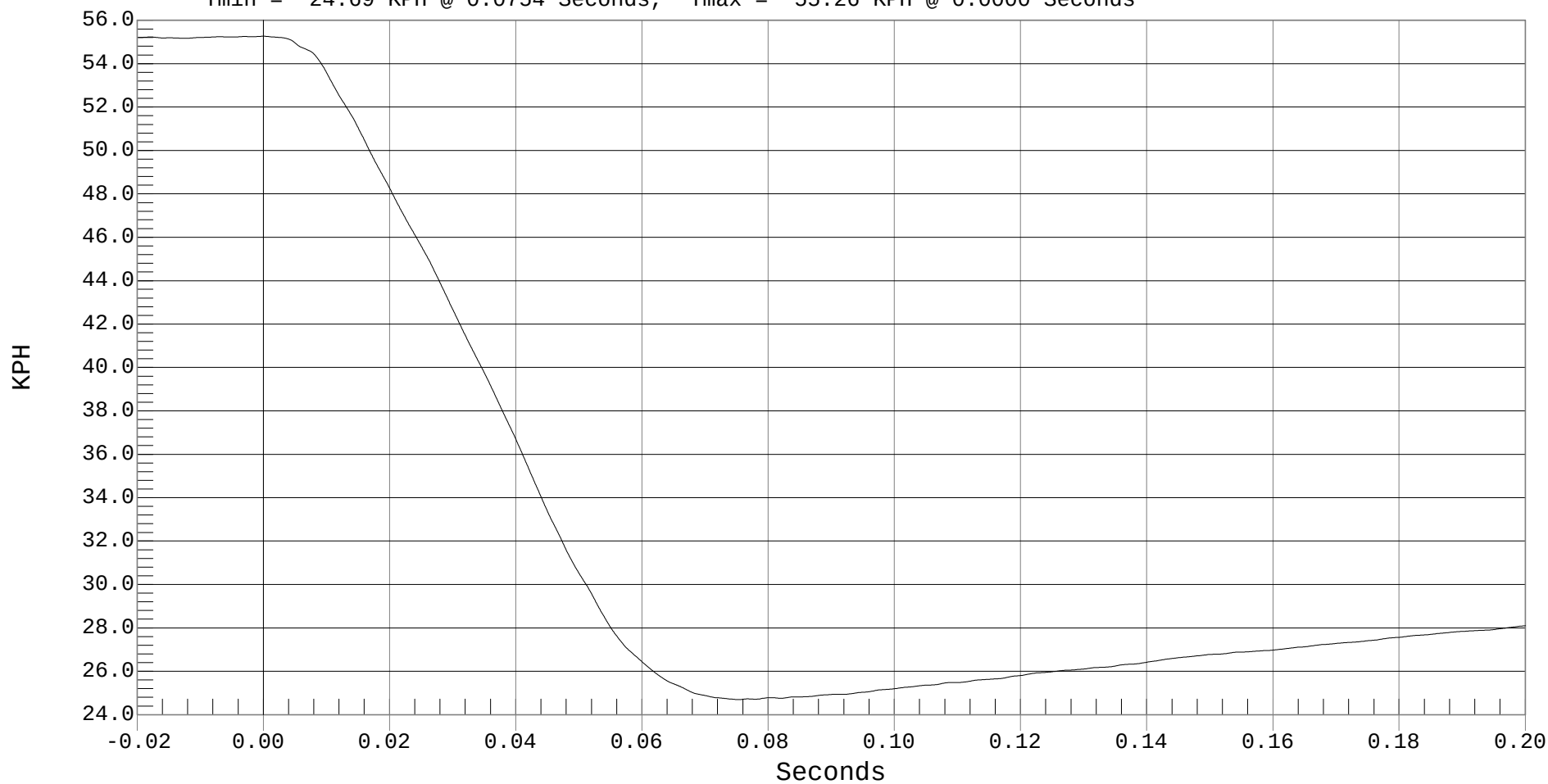
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 MOVING BARRIER CG X VELOCITY, C01001AI.V02

Ymin = 24.69 KPH @ 0.0754 Seconds, Ymax = 55.26 KPH @ 0.0000 Seconds





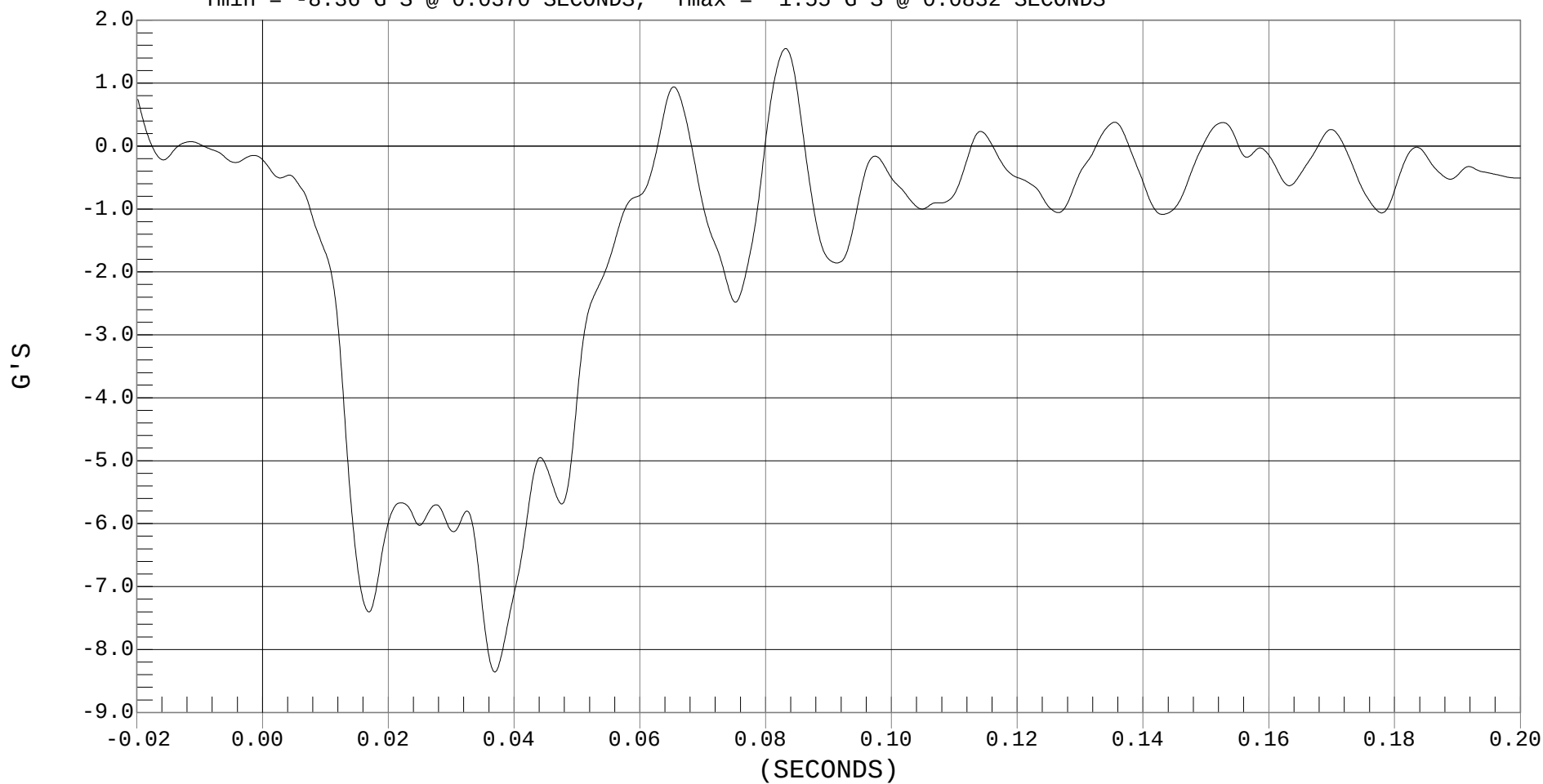
MOVING BARRIER CG Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 60

— 1 CART CG Y, C01001AF.A03

Ymin = -8.36 G'S @ 0.0370 SECONDS, Ymax = 1.55 G'S @ 0.0832 SECONDS





MOVING BARRIER CG Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

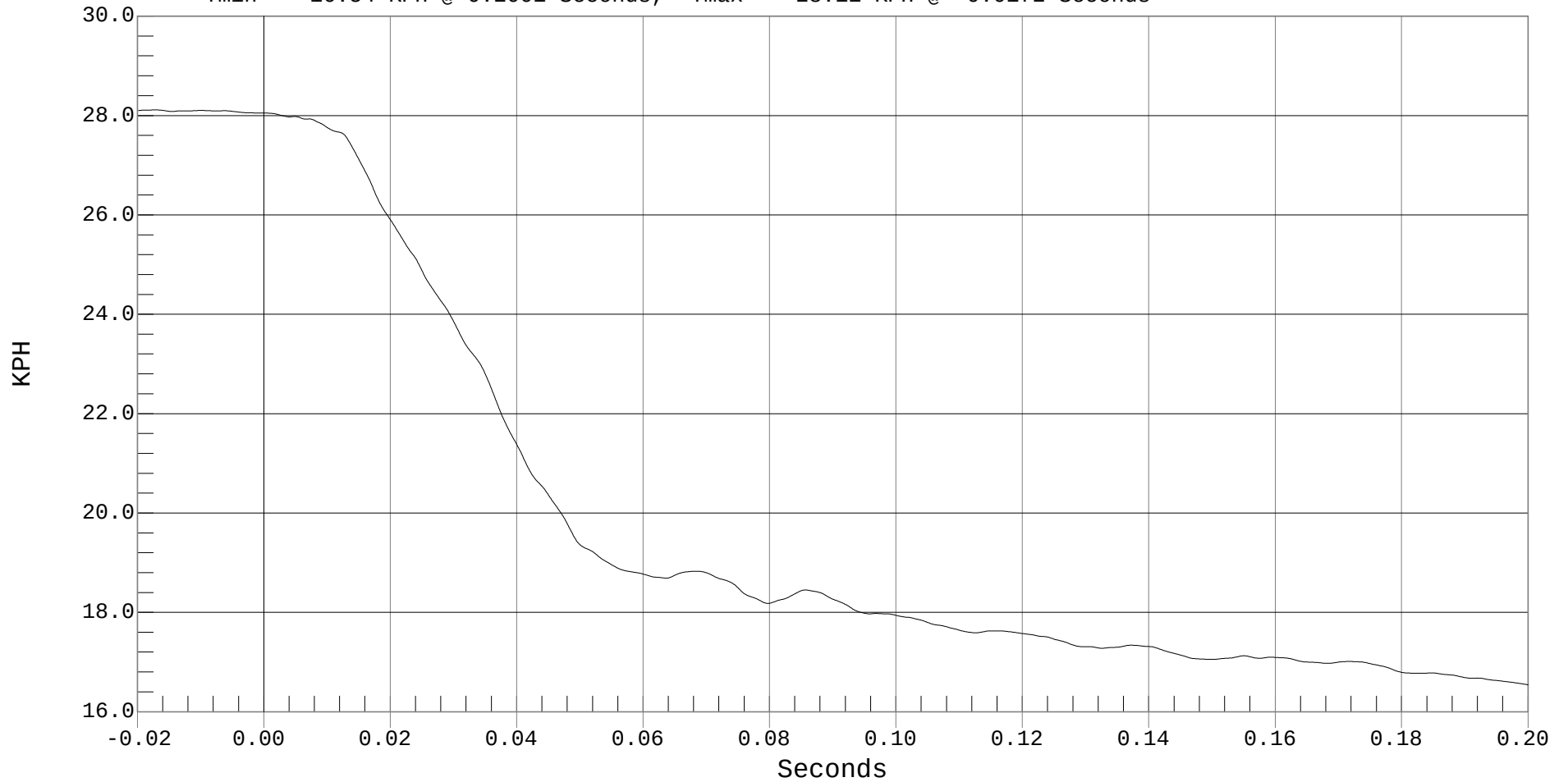
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 MOVING BARRIER CG Y VELOCITY, C01001AI.V03

Ymin = 16.54 KPH @ 0.2001 Seconds, Ymax = 28.11 KPH @ -0.0172 Seconds





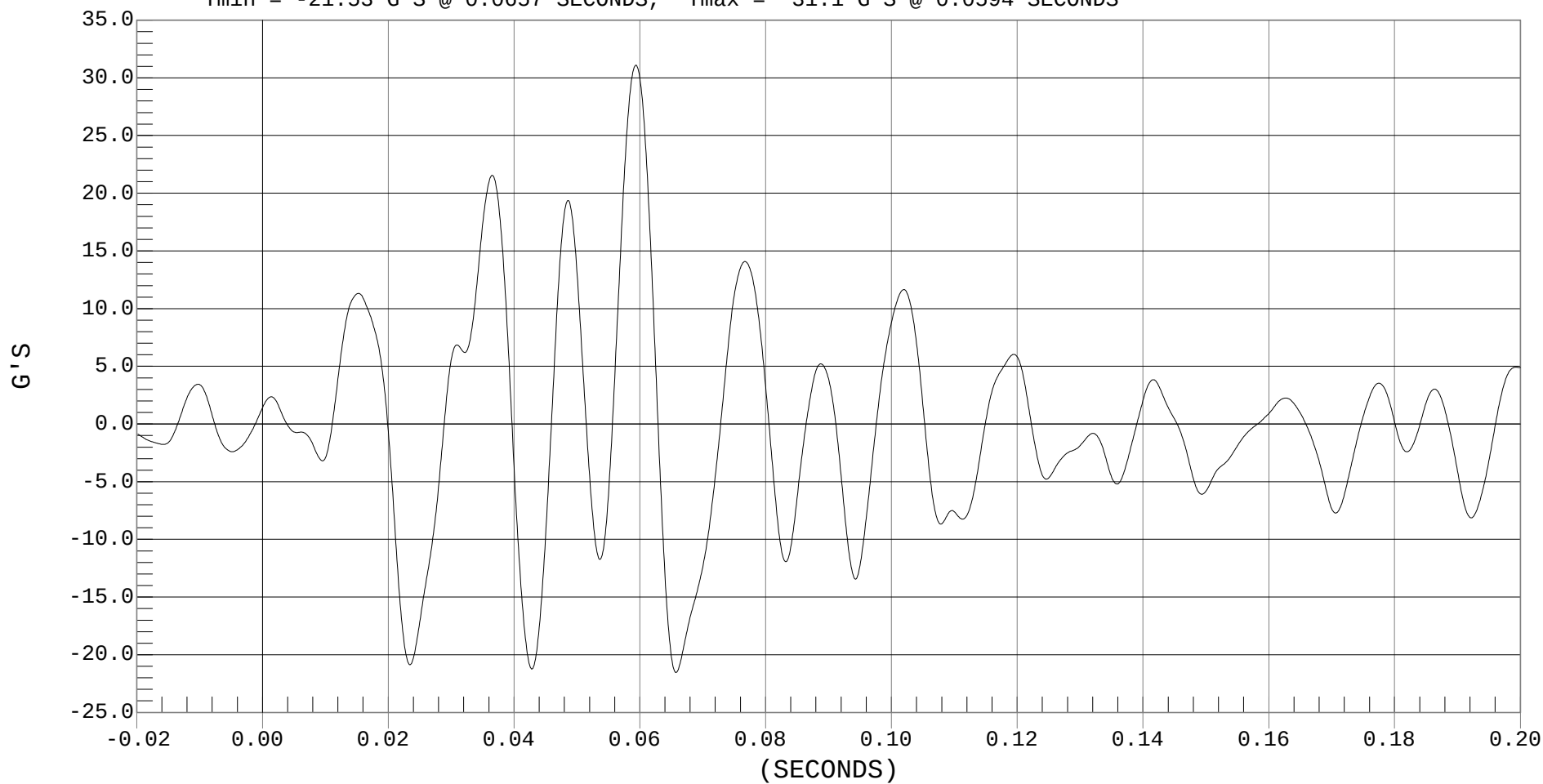
MOVING BARRIER CG Z ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 60

— 1 CART CG Z, C01001AF.A04

Ymin = -21.53 G'S @ 0.0657 SECONDS, Ymax = 31.1 G'S @ 0.0594 SECONDS





MOVING BARRIER CG Z VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

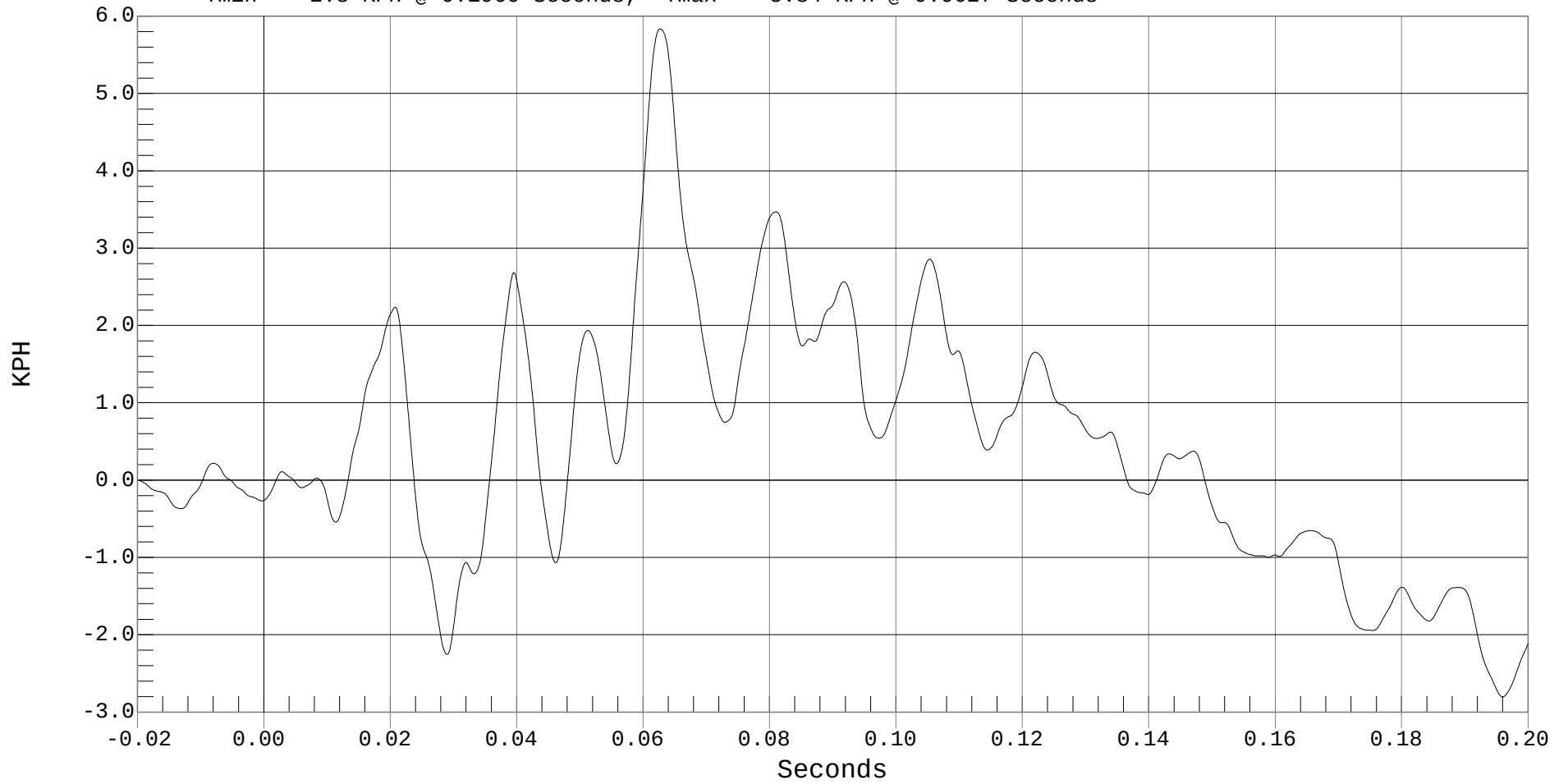
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 MOVING BARRIER CG Z VELOCITY, C01001AI.V04

Ymin = -2.8 KPH @ 0.1960 Seconds, Ymax = 5.84 KPH @ 0.0627 Seconds





MOVING BARRIER CG RESULTANT ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

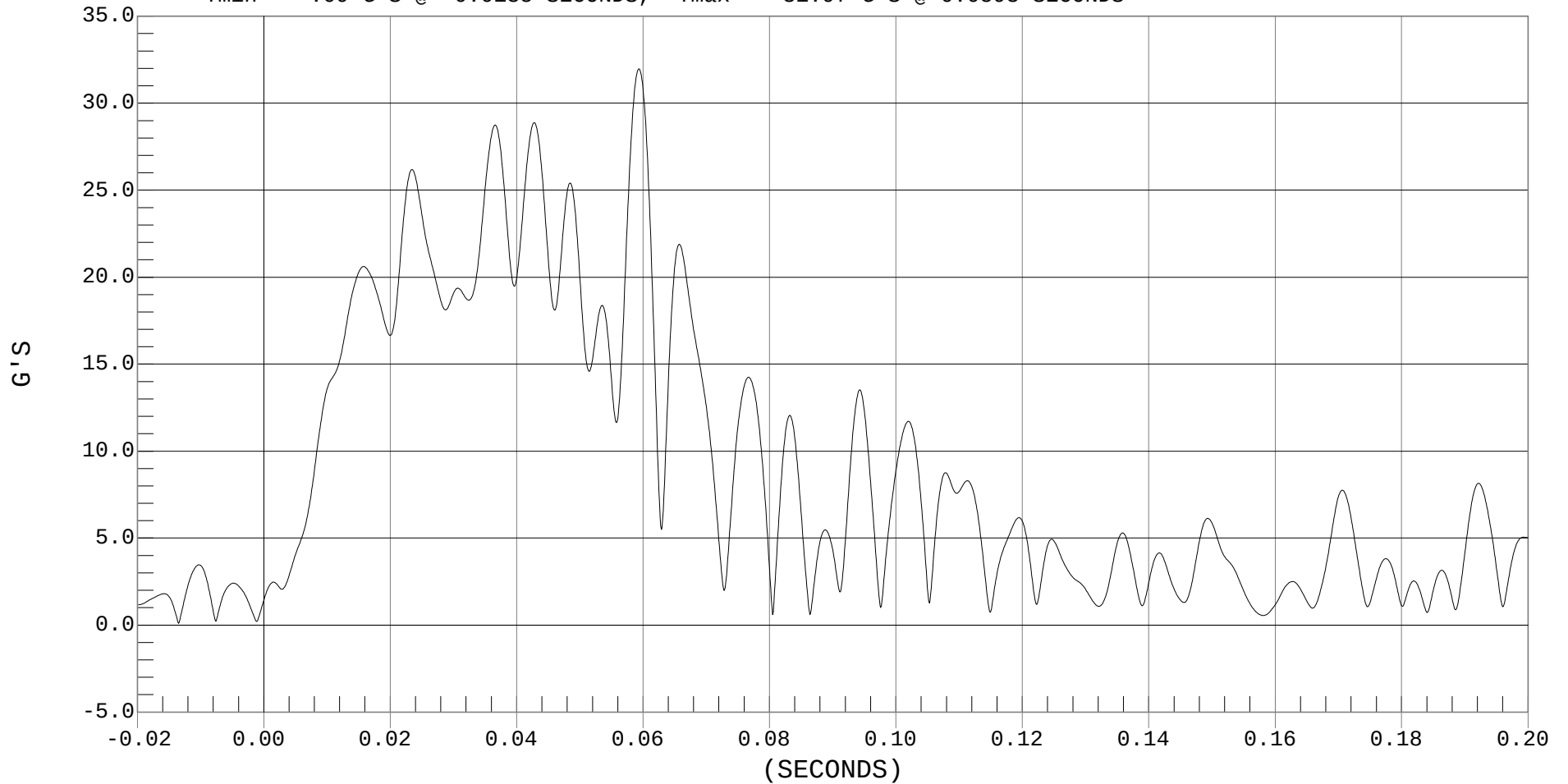
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 60

— 1 MOVING BARRIER CG RESULTANT ACCELERATION, C01001AV.A02

Ymin = .09 G'S @ -0.0135 SECONDS, Ymax = 31.97 G'S @ 0.0593 SECONDS





MOVING BARRIER REAR AXLE X ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

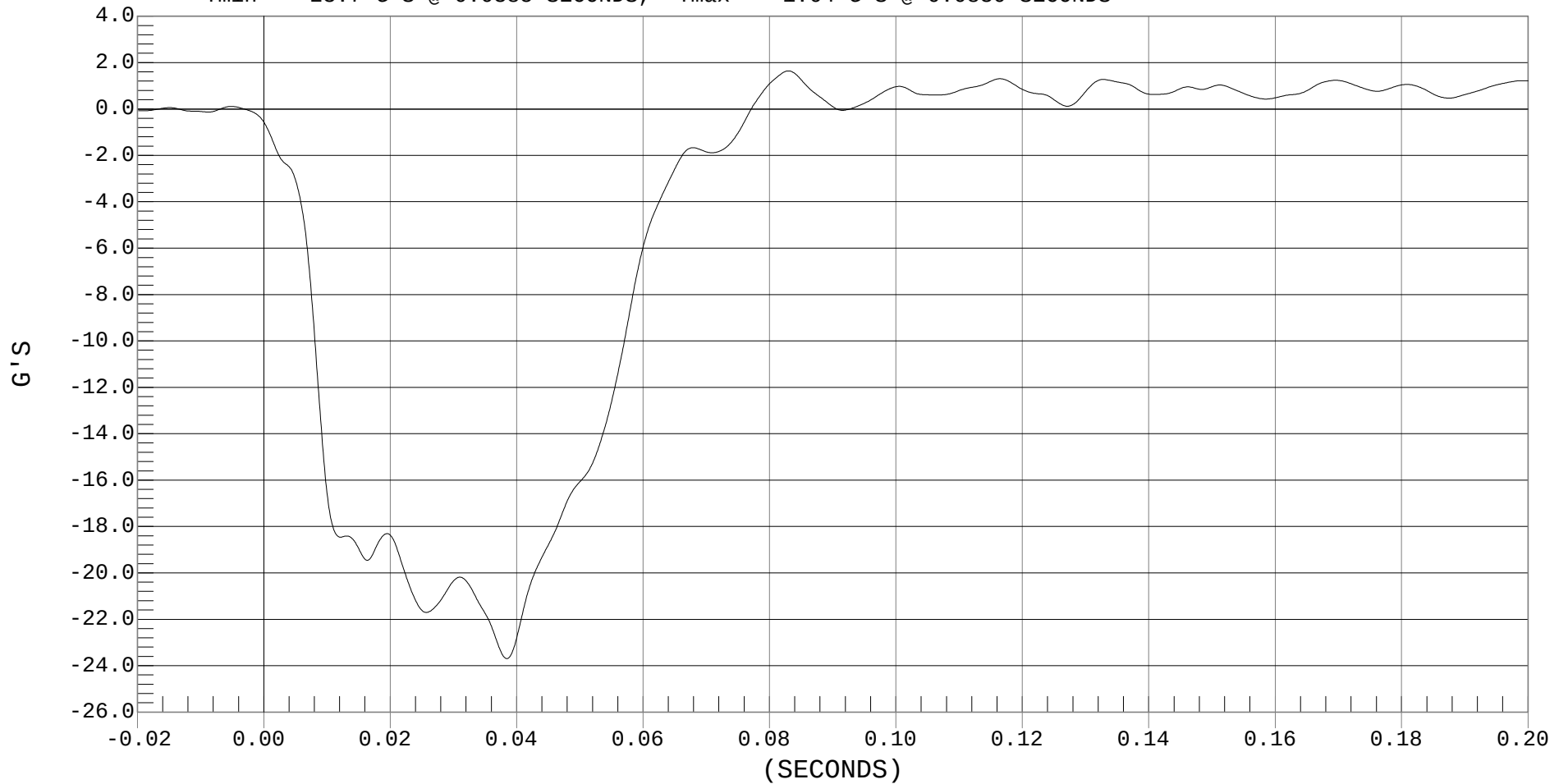
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 60

— 1 CART REAR X, C01001AF.A05

Ymin = -23.7 G'S @ 0.0385 SECONDS, Ymax = 1.64 G'S @ 0.0830 SECONDS





MOVING BARRIER REAR AXLE X VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

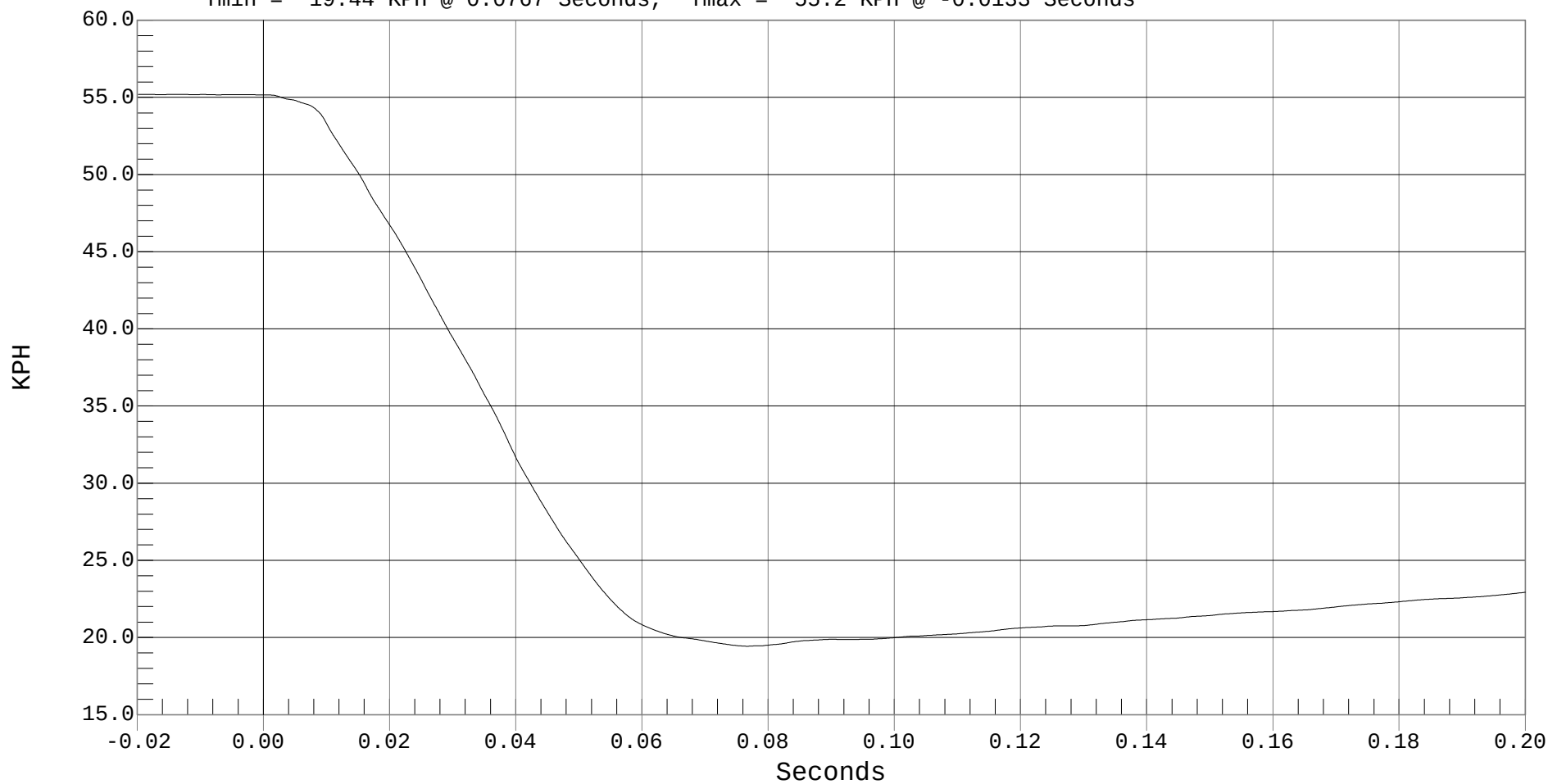
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 MOVING BARRIER REAR AXLE X VELOCITY, C01001AI.V05

Ymin = 19.44 KPH @ 0.0767 Seconds, Ymax = 55.2 KPH @ -0.0133 Seconds





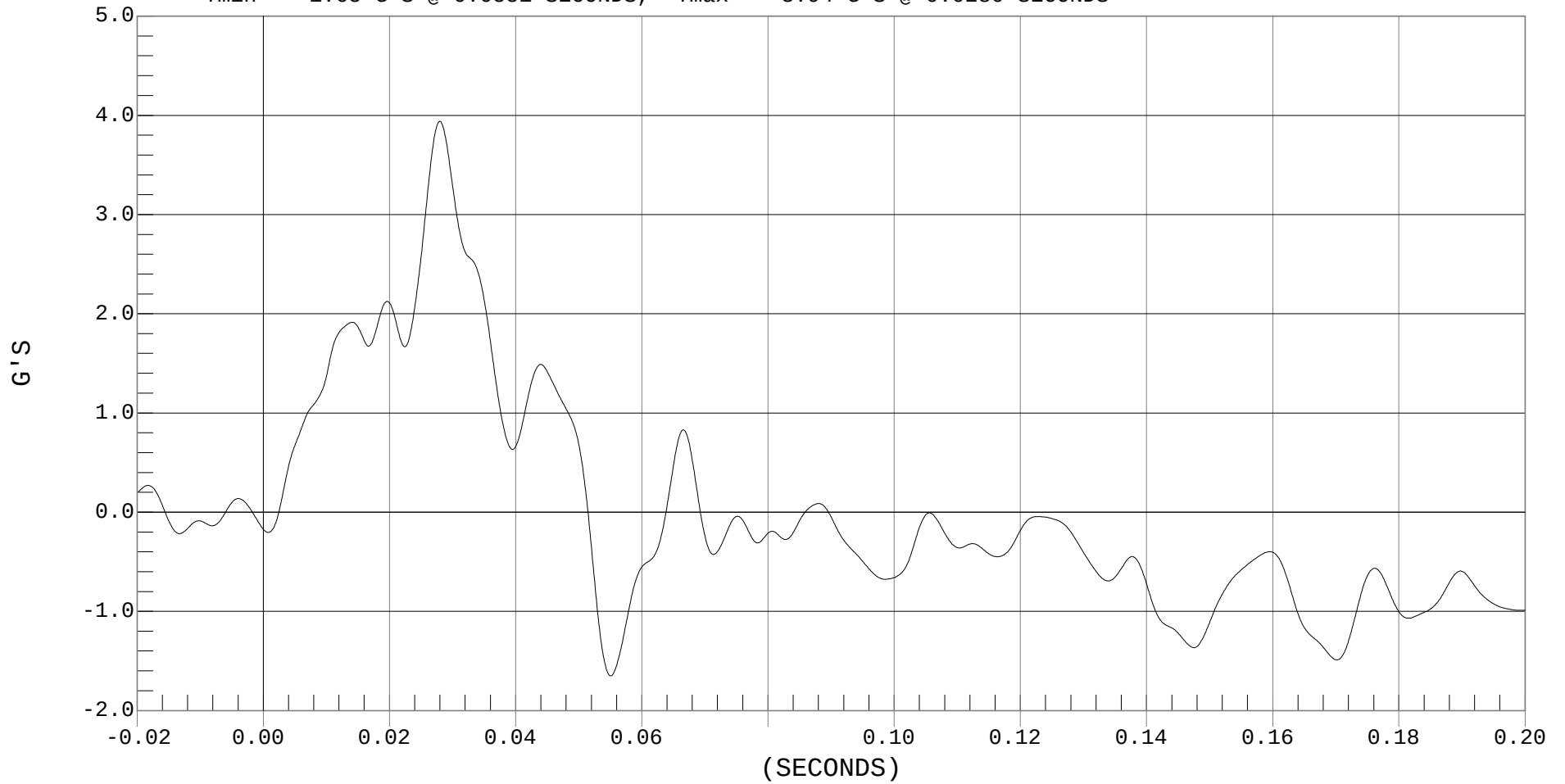
MOVING BARRIER REAR AXLE Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 60

— 1 CART REAR Y, C01001AF.A06

Ymin = -1.65 G'S @ 0.0551 SECONDS, Ymax = 3.94 G'S @ 0.0280 SECONDS





MOVING BARRIER REAR AXLE Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

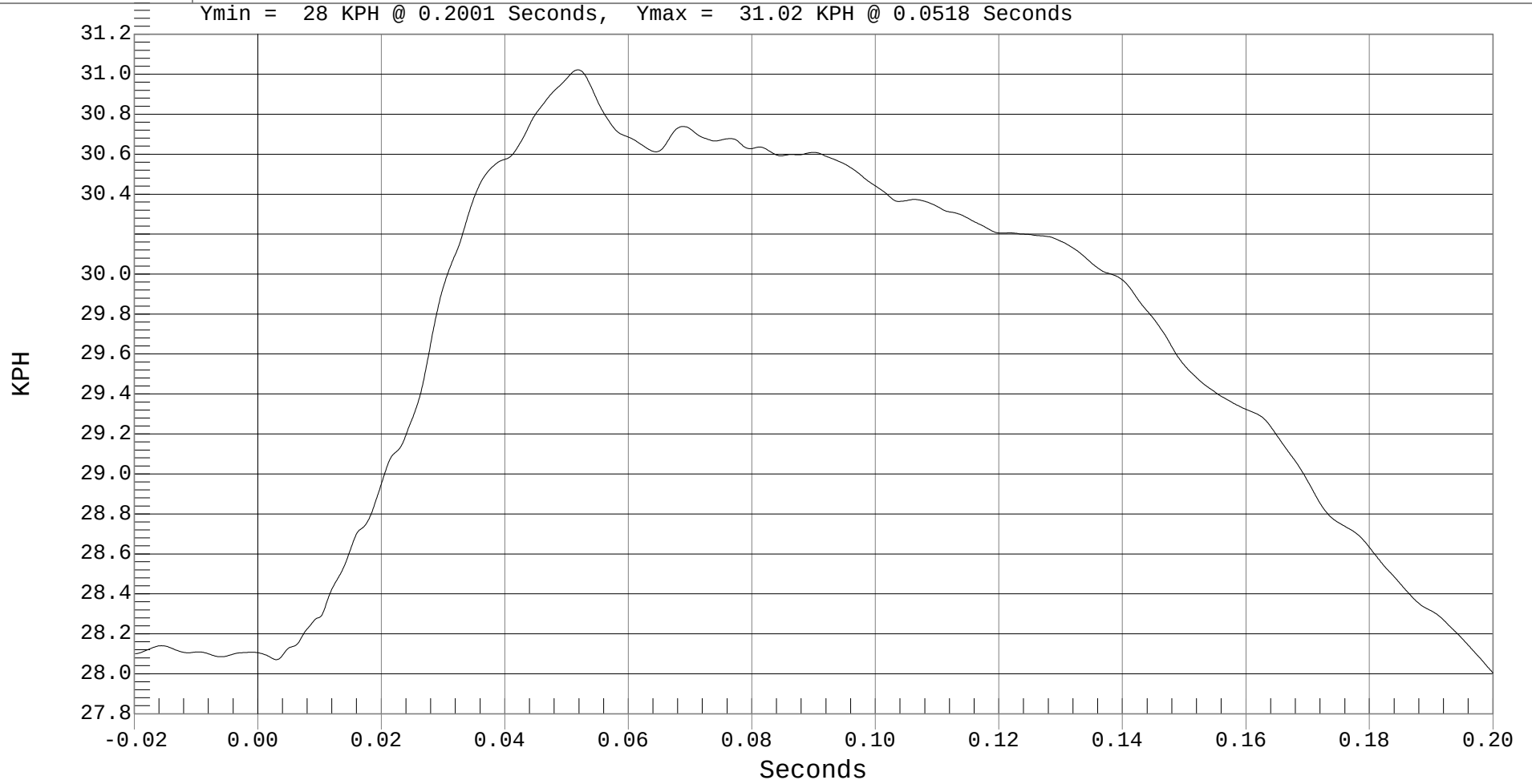
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 MOVING BARRIER REAR AXLE Y VELOCITY, C01001AI.V06

Ymin = 28 KPH @ 0.2001 Seconds, Ymax = 31.02 KPH @ 0.0518 Seconds





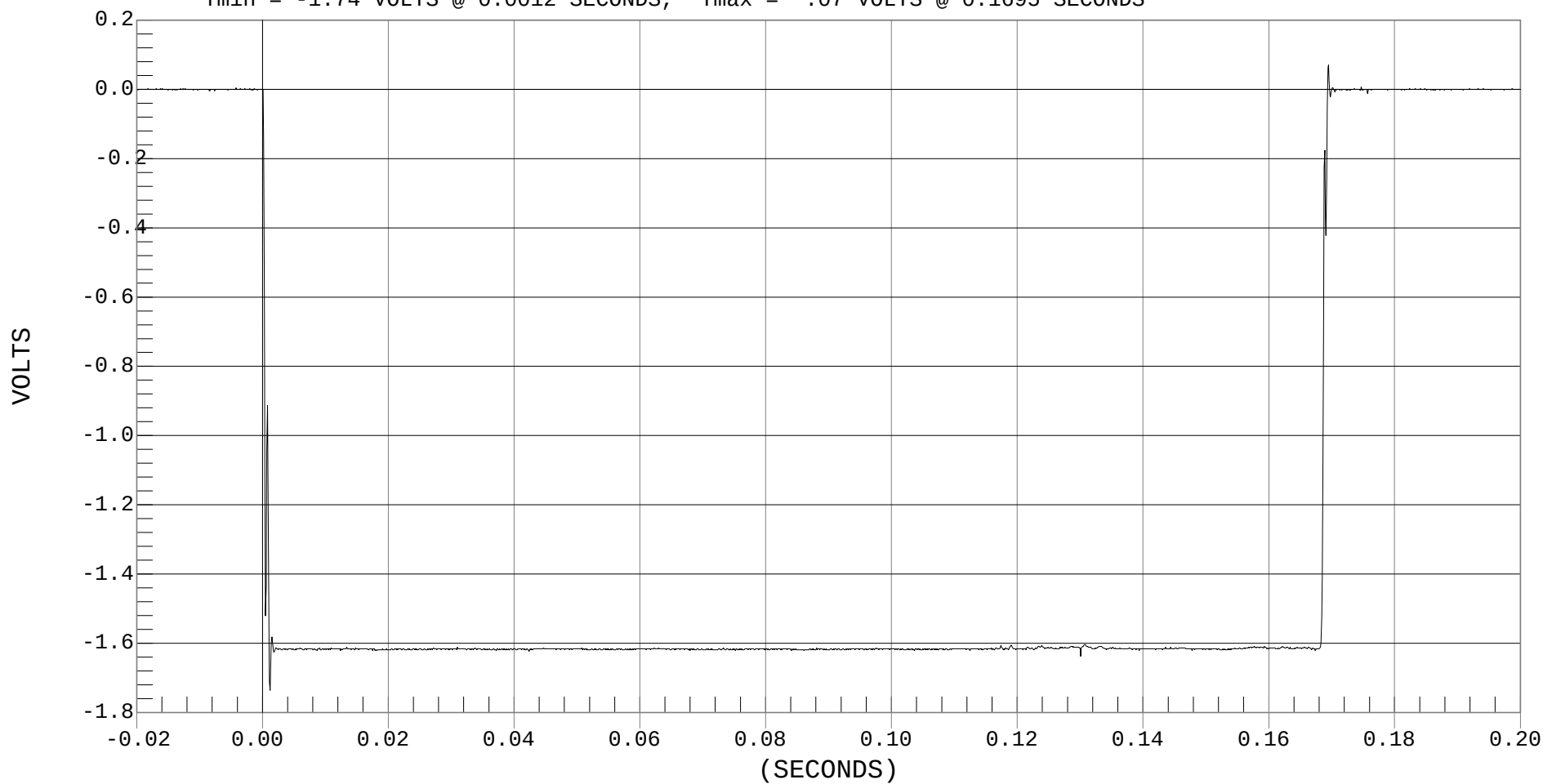
LEFT BARRIER CONTACT

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 1000

— 1 LEFT BARRIER CONTACT, C010010T.009

Ymin = -1.74 VOLTS @ 0.0012 SECONDS, Ymax = .07 VOLTS @ 0.1695 SECONDS





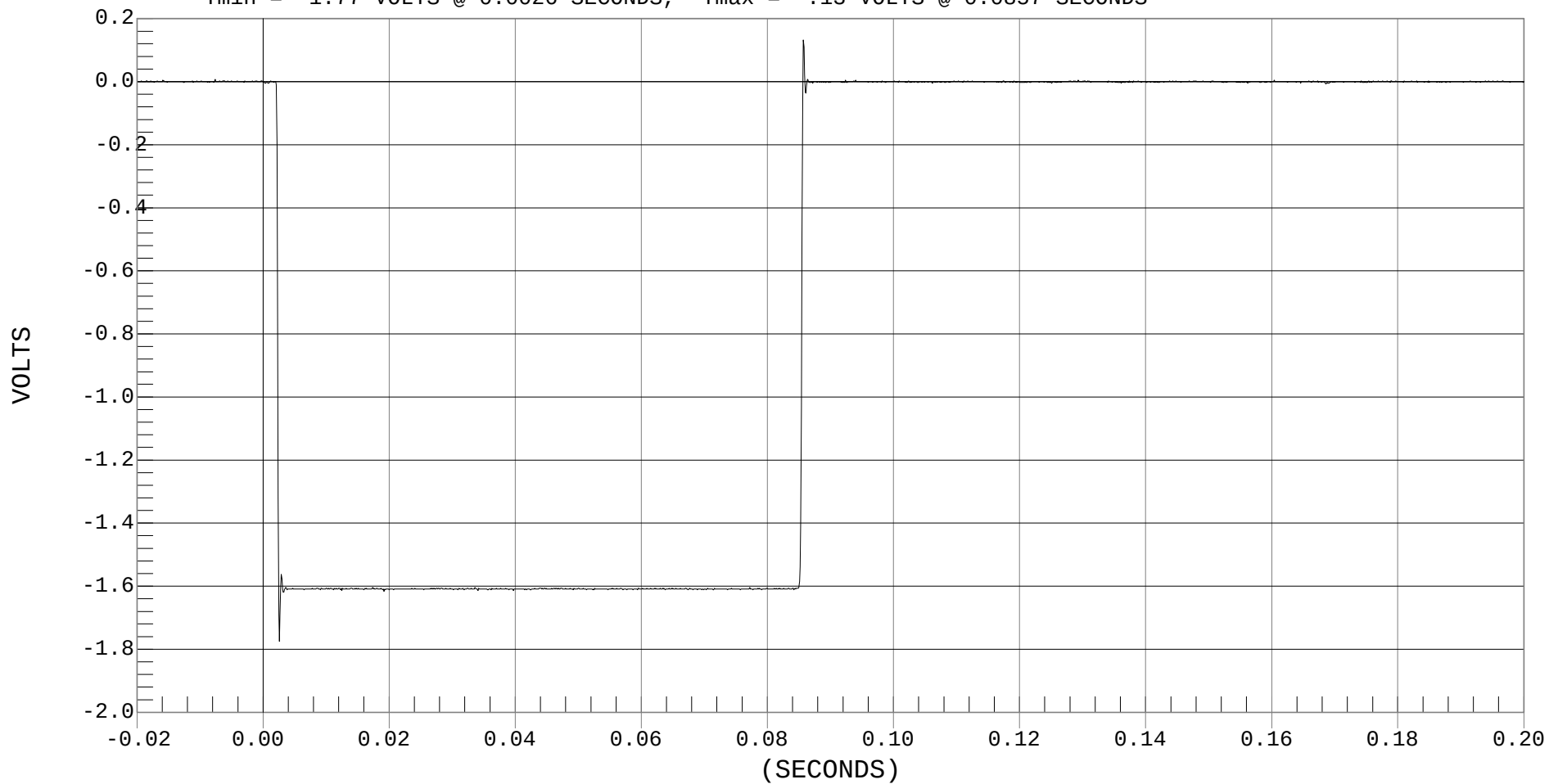
RIGHT BARRIER CONTACT

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 1000

— 1 RIGHT BARRIER CONTACT, C010010T.010

Ymin = -1.77 VOLTS @ 0.0026 SECONDS, Ymax = .13 VOLTS @ 0.0857 SECONDS





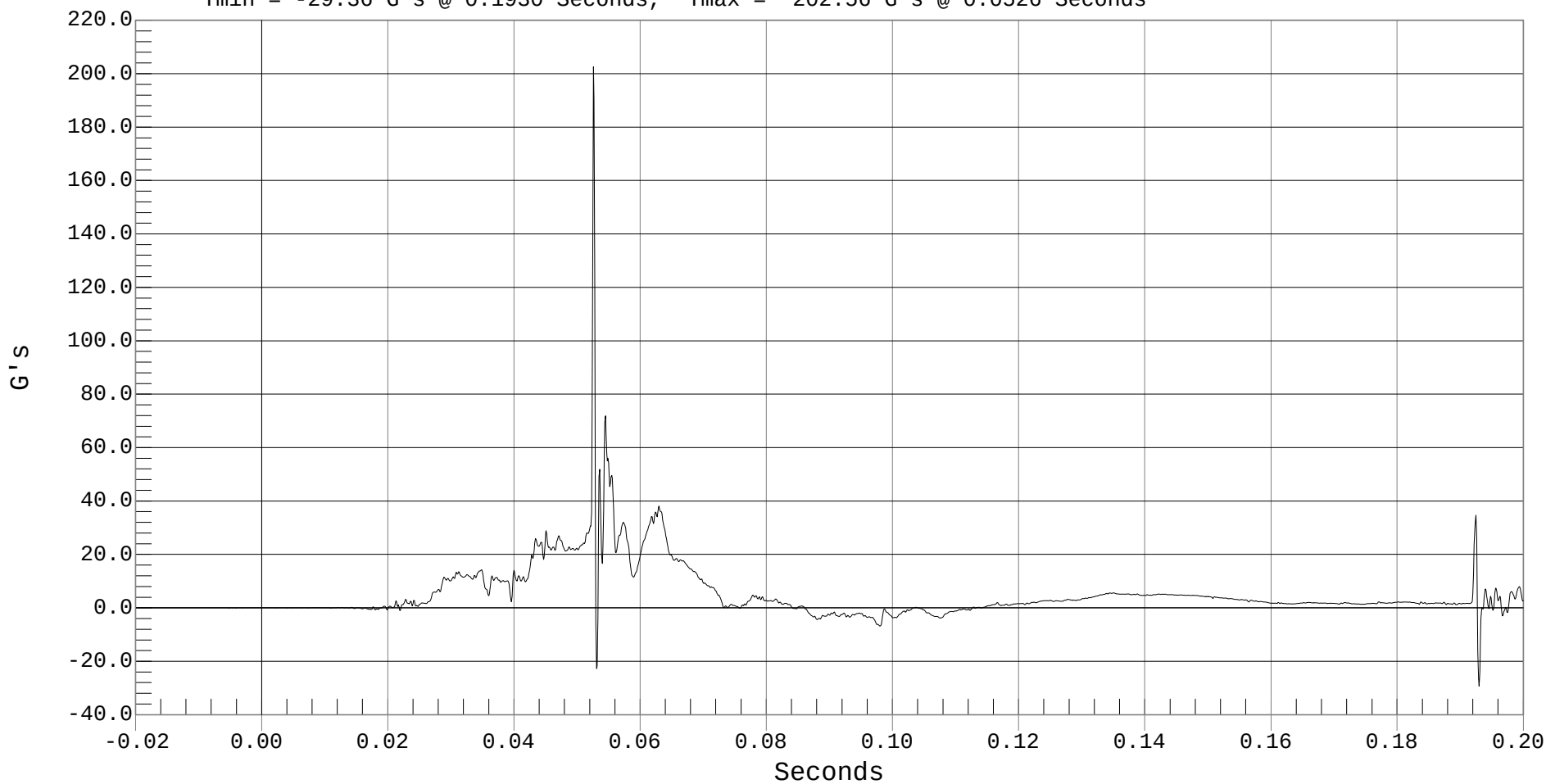
DRIVER UPPER RIB REDUNDANT Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 1000

— 1 DRIVER UPPER RIB Yr, B01001AT.A41

Ymin = -29.36 G's @ 0.1930 Seconds, Ymax = 202.56 G's @ 0.0526 Seconds





DRIVER UPPER RIB REDUNDANT Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

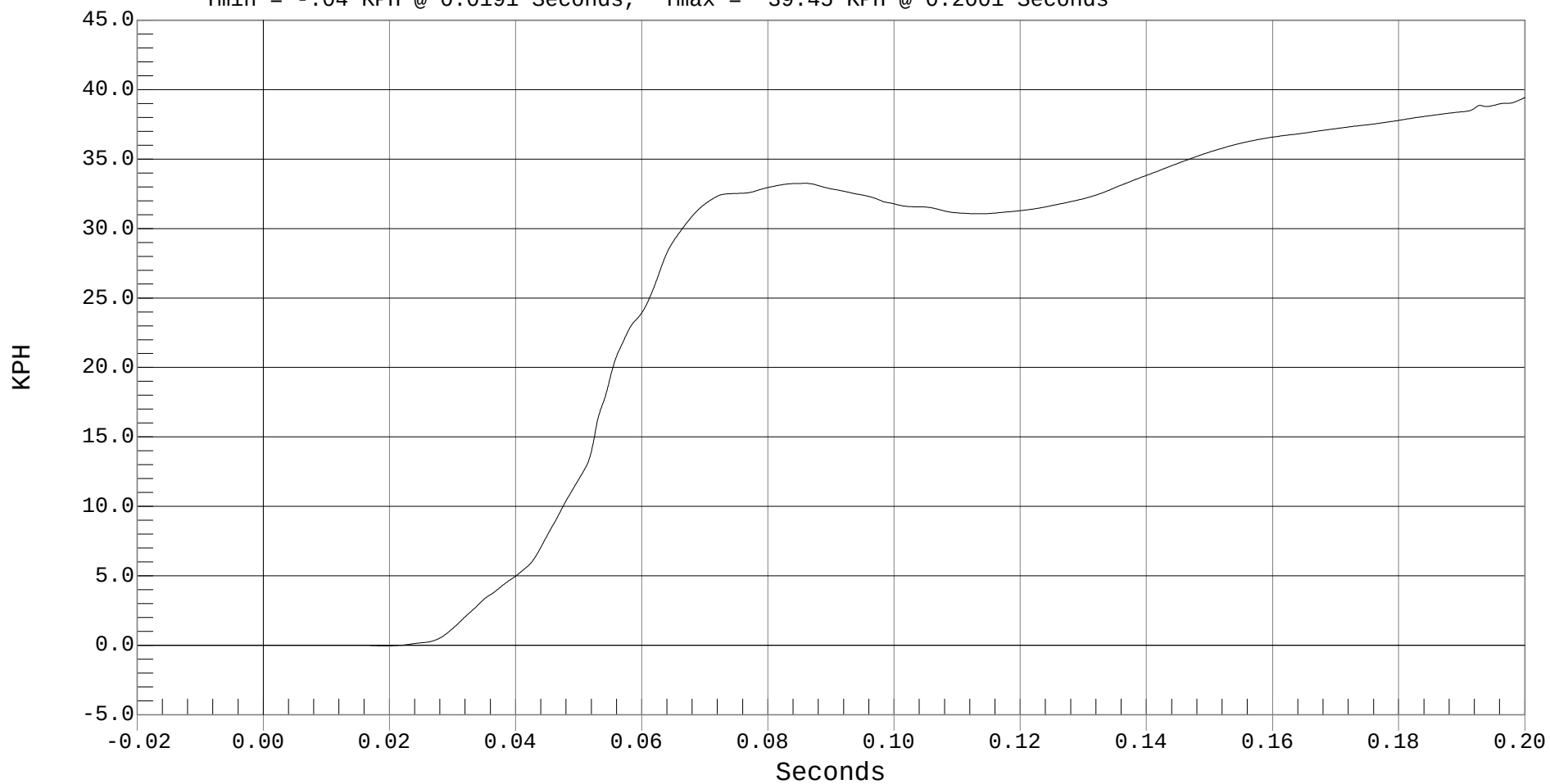
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 DRIVER UPPER RIB Y REDUNDANT VELOCITY, B01001AI.V41

Ymin = -.04 KPH @ 0.0191 Seconds, Ymax = 39.45 KPH @ 0.2001 Seconds





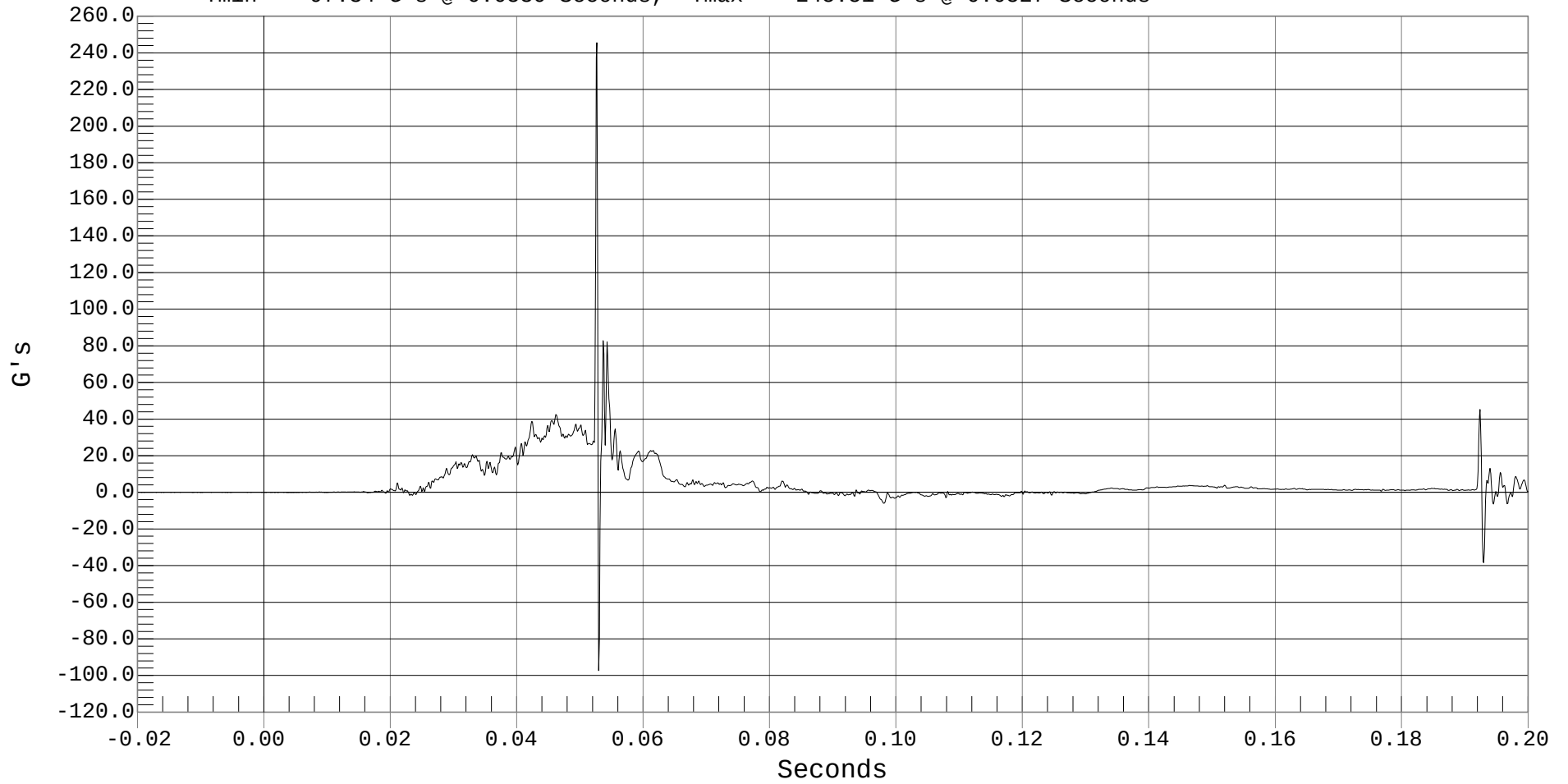
DRIVER LOWER RIB REDUNDANT Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 1000

— 1 DRIVER LOWER RIB Yr, B01001AT.A42

Ymin = -97.34 G's @ 0.0530 Seconds, Ymax = 245.51 G's @ 0.0527 Seconds





DRIVER LOWER RIB REDUNDANT Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

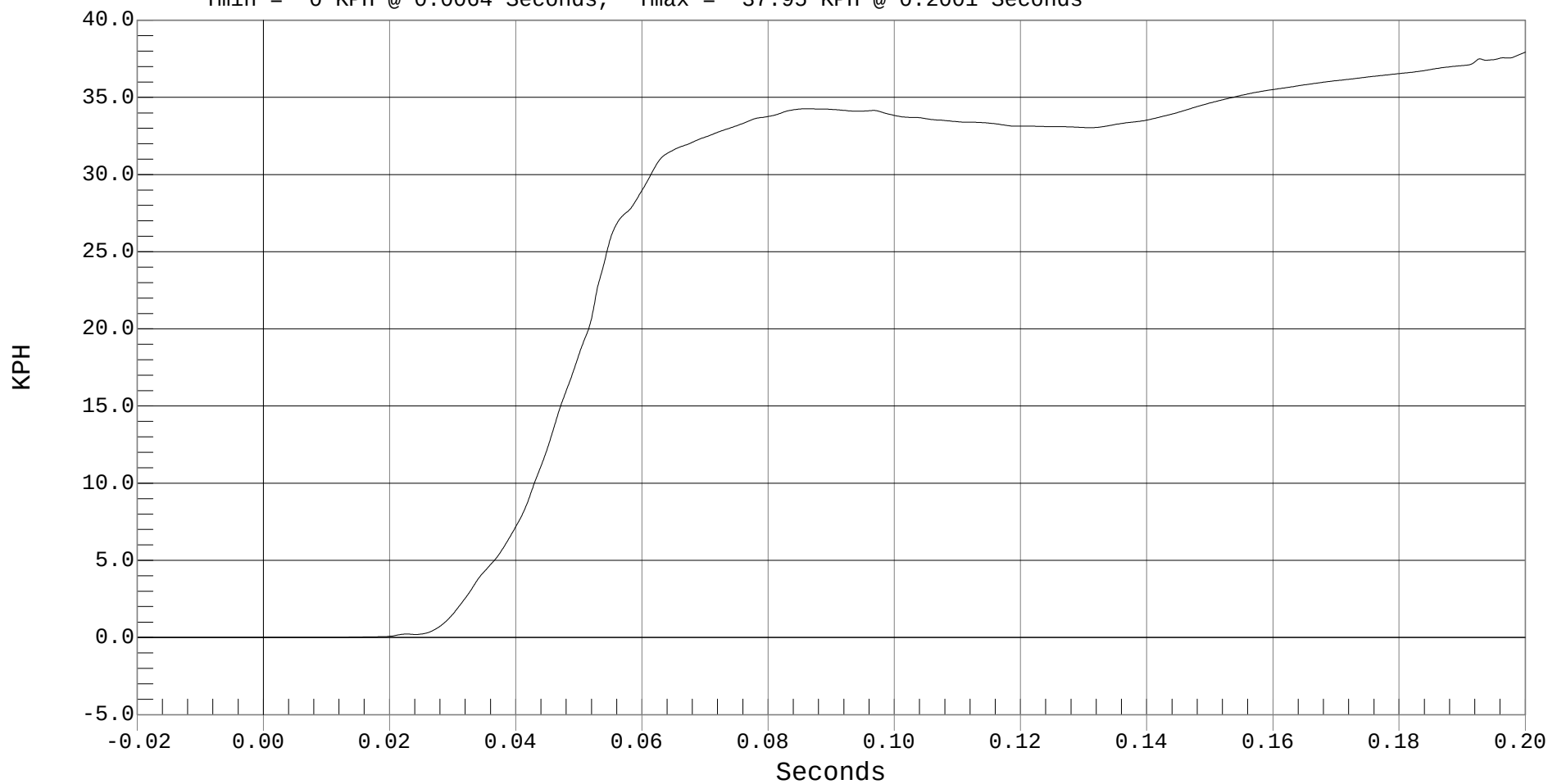
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 DRIVER LOWER RIB Y REDUNDANT VELOCITY, B01001AI.V42

Ymin = 0 KPH @ 0.0064 Seconds, Ymax = 37.95 KPH @ 0.2001 Seconds





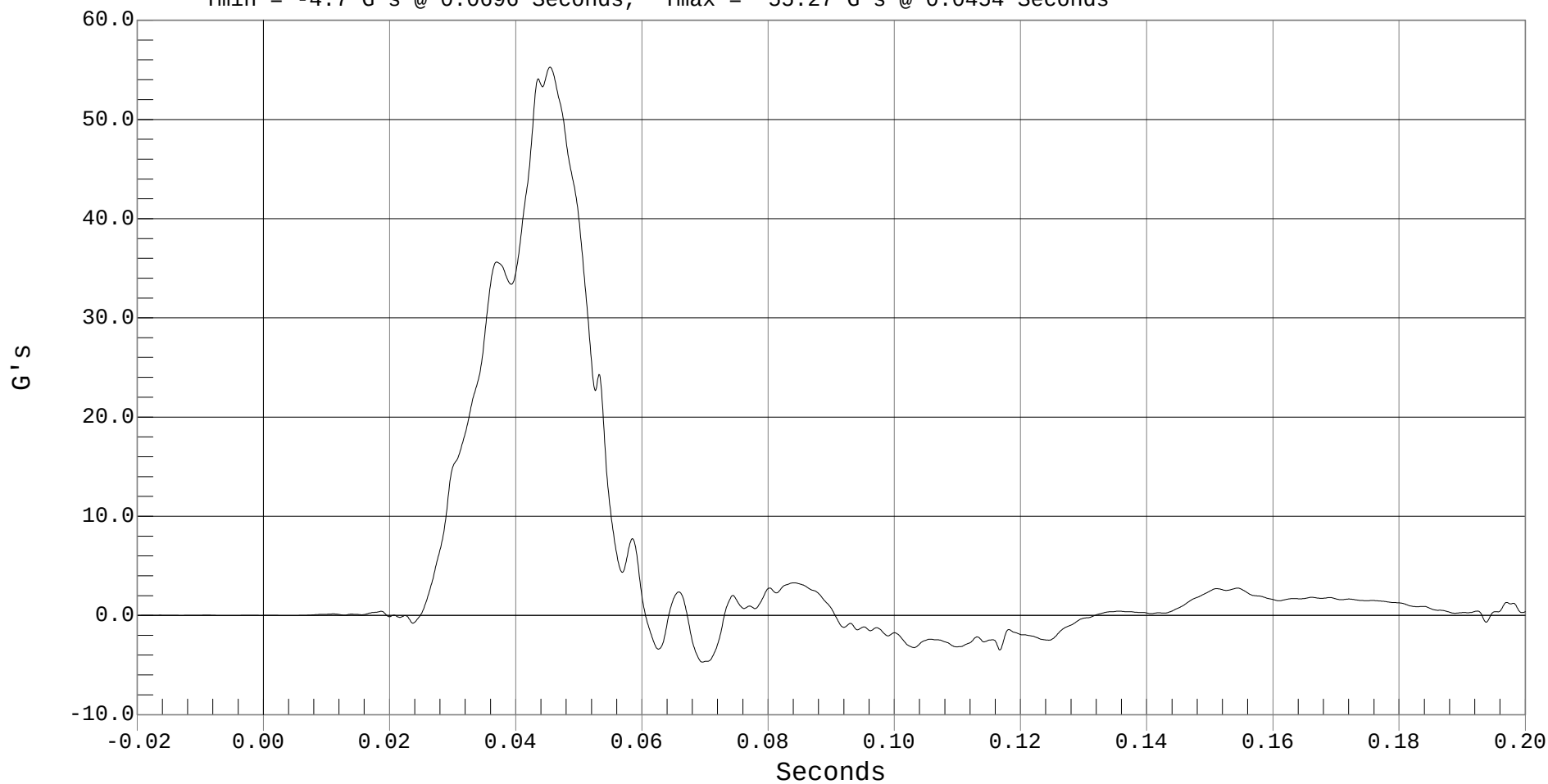
DRIVER LOWER SPINE REDUNDANT Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 180

— 1 DRIVER LOWER SPINE Yr, B01001AF.A43

Ymin = -4.7 G's @ 0.0696 Seconds, Ymax = 55.27 G's @ 0.0454 Seconds





DRIVER LOWER SPINE REDUNDANT Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Test Date: 01-03-01

Component: 2001 MAZDA TRIBUTE (C15402)

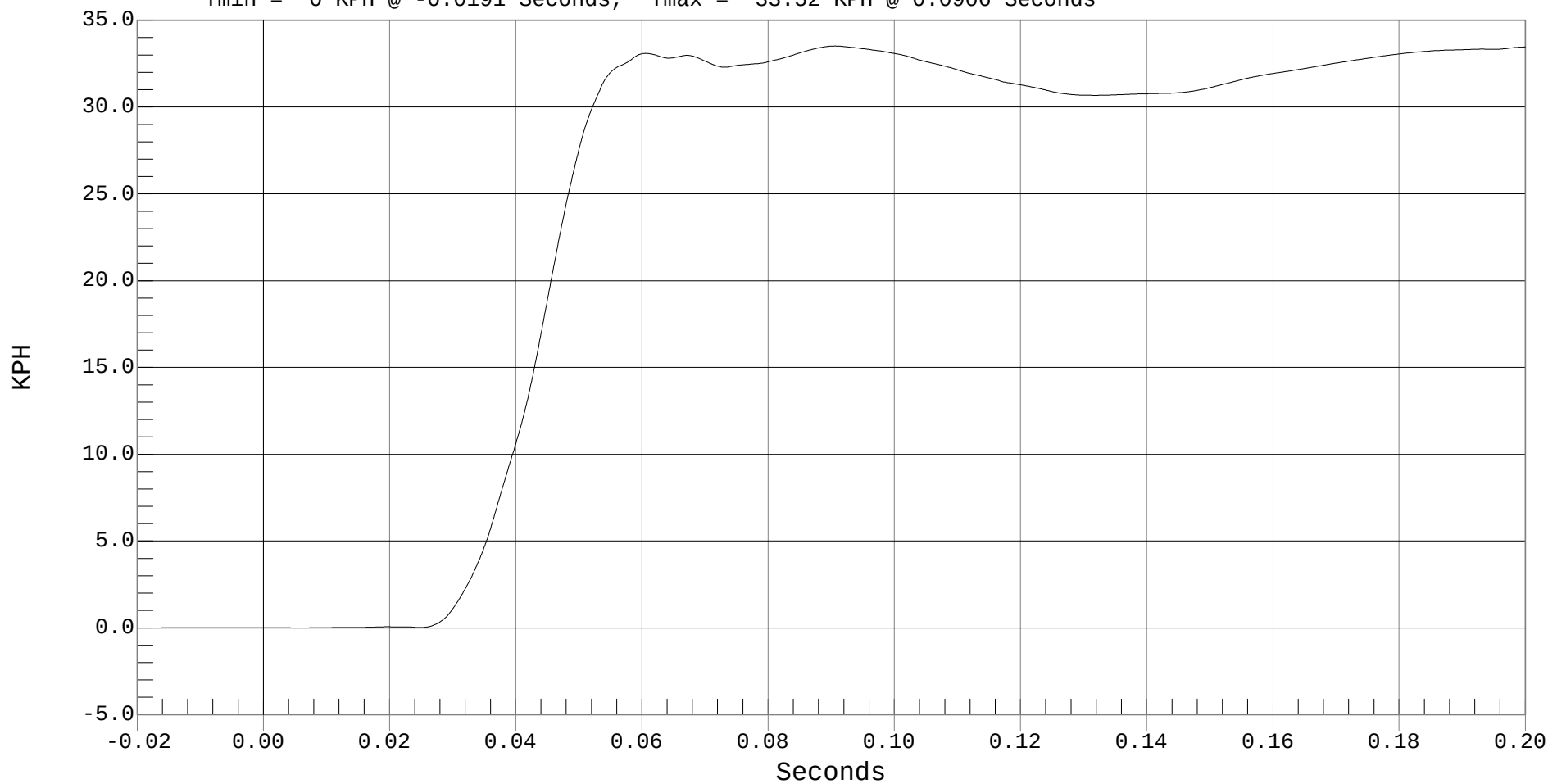
Speed: 38.5 MPH, 62.0 KPH

Other Info:

Filter Class: 180

— 1 DRIVER LOWER SPINE Y REDUNDANT VELOCITY, B01001AI.V43

Ymin = 0 KPH @ -0.0191 Seconds, Ymax = 33.52 KPH @ 0.0906 Seconds





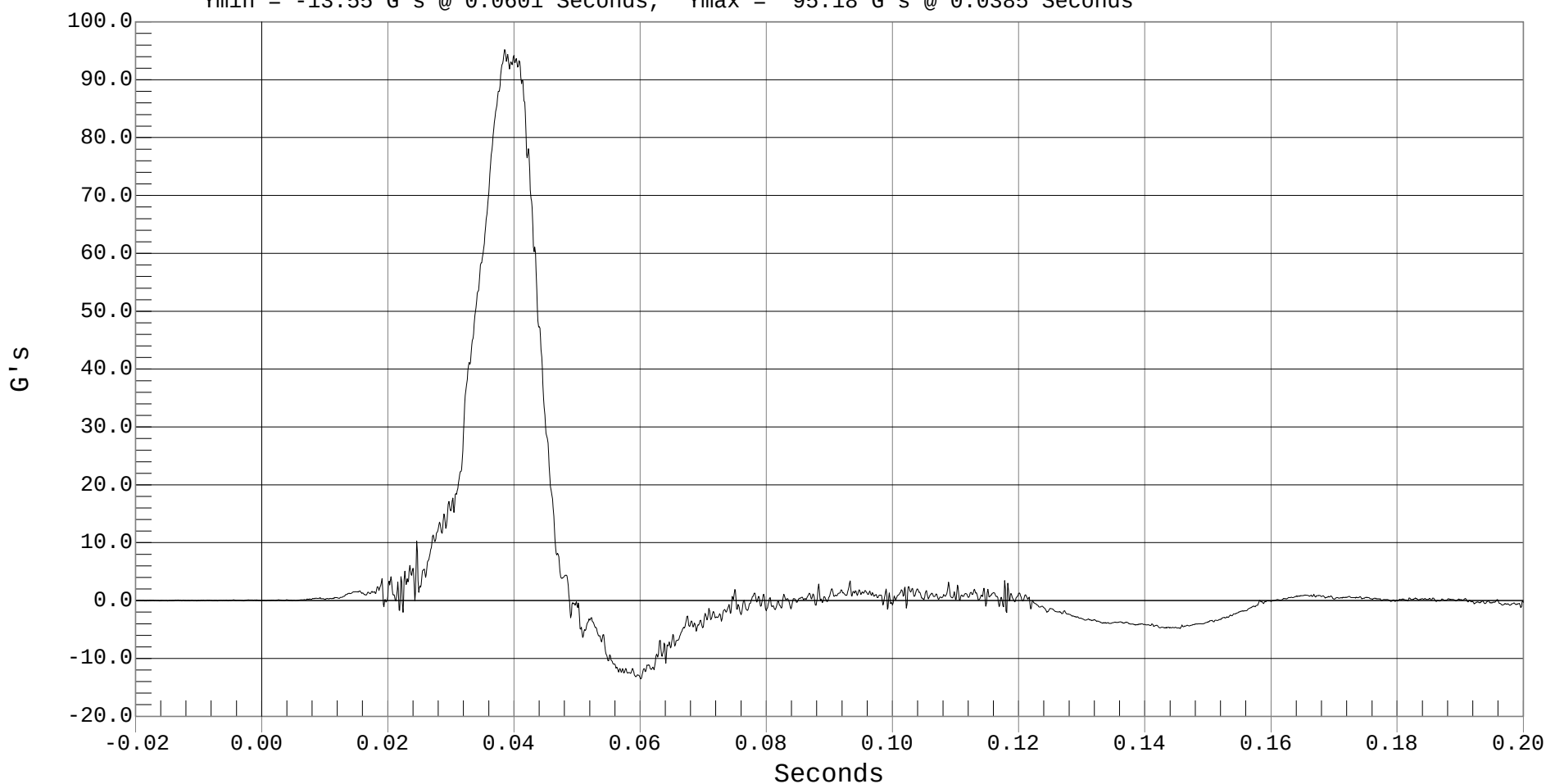
DRIVER PELVIS REDUNDANT Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 1000

— 1 DRIVER PELVIS Yr, B01001AT.A44

Ymin = -13.55 G's @ 0.0601 Seconds, Ymax = 95.18 G's @ 0.0385 Seconds





DRIVER PELVIS REDUNDANT Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

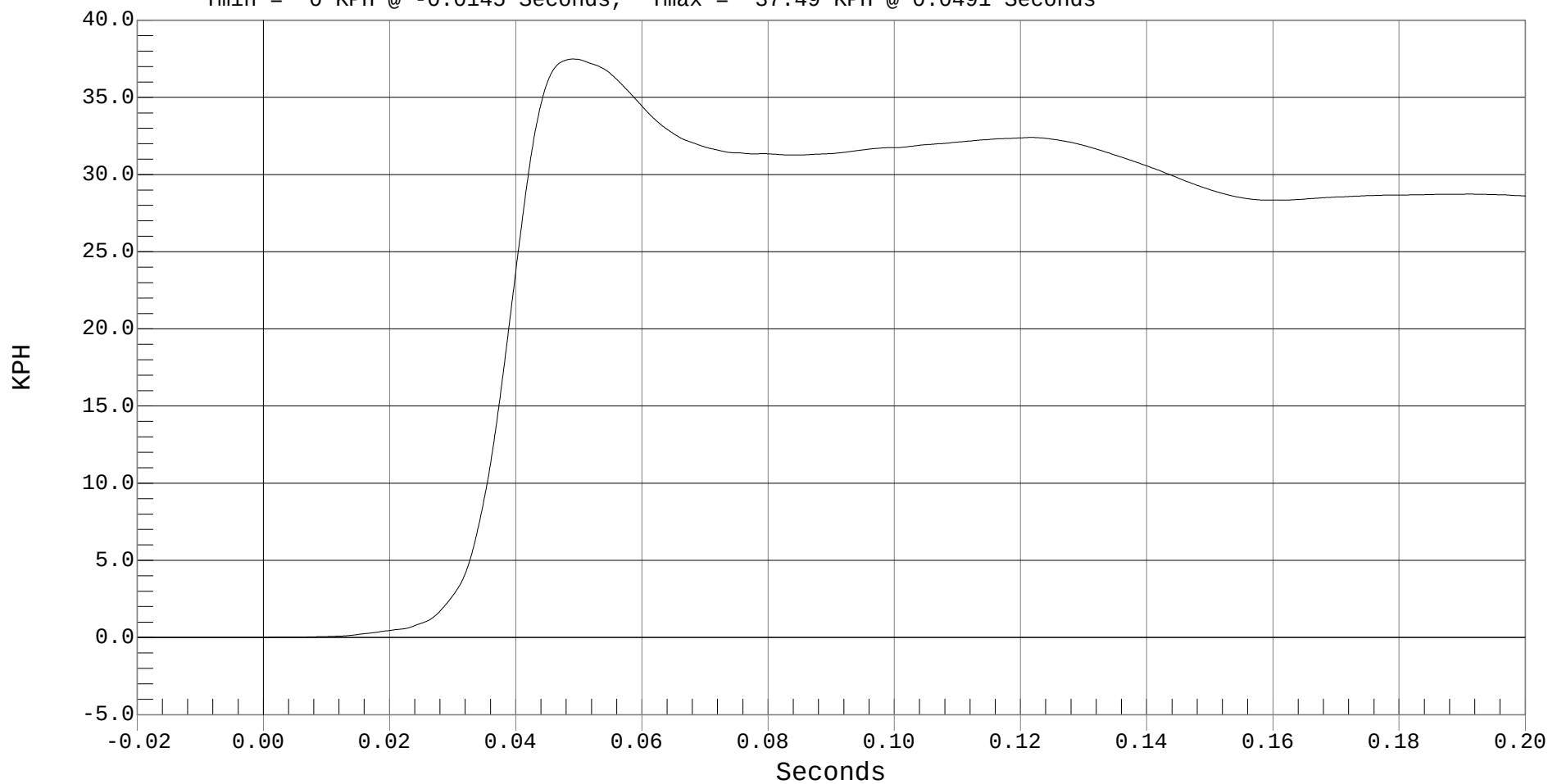
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 DRIVER PELVIS Y REDUNDANT VELOCITY, B01001AI.V44

Ymin = 0 KPH @ -0.0145 Seconds, Ymax = 37.49 KPH @ 0.0491 Seconds





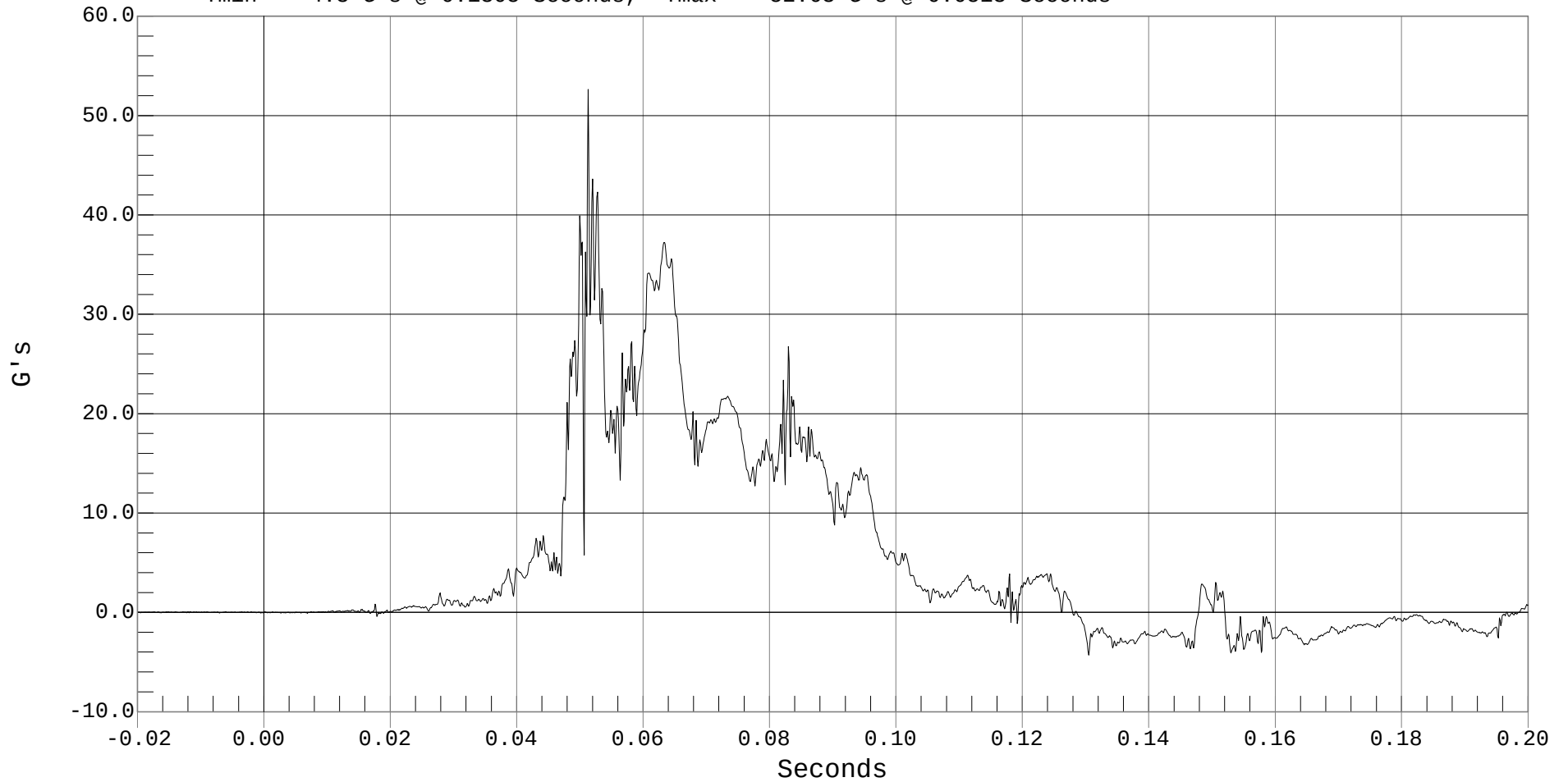
PASSENGER UPPER RIB REDUNDANT Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 1000

— 1 PASSENGER UPPER RIB Yr, B01001AT.A45

Ymin = -4.3 G's @ 0.1305 Seconds, Ymax = 52.63 G's @ 0.0513 Seconds





PASSENGER UPPER RIB REDUNDANT Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

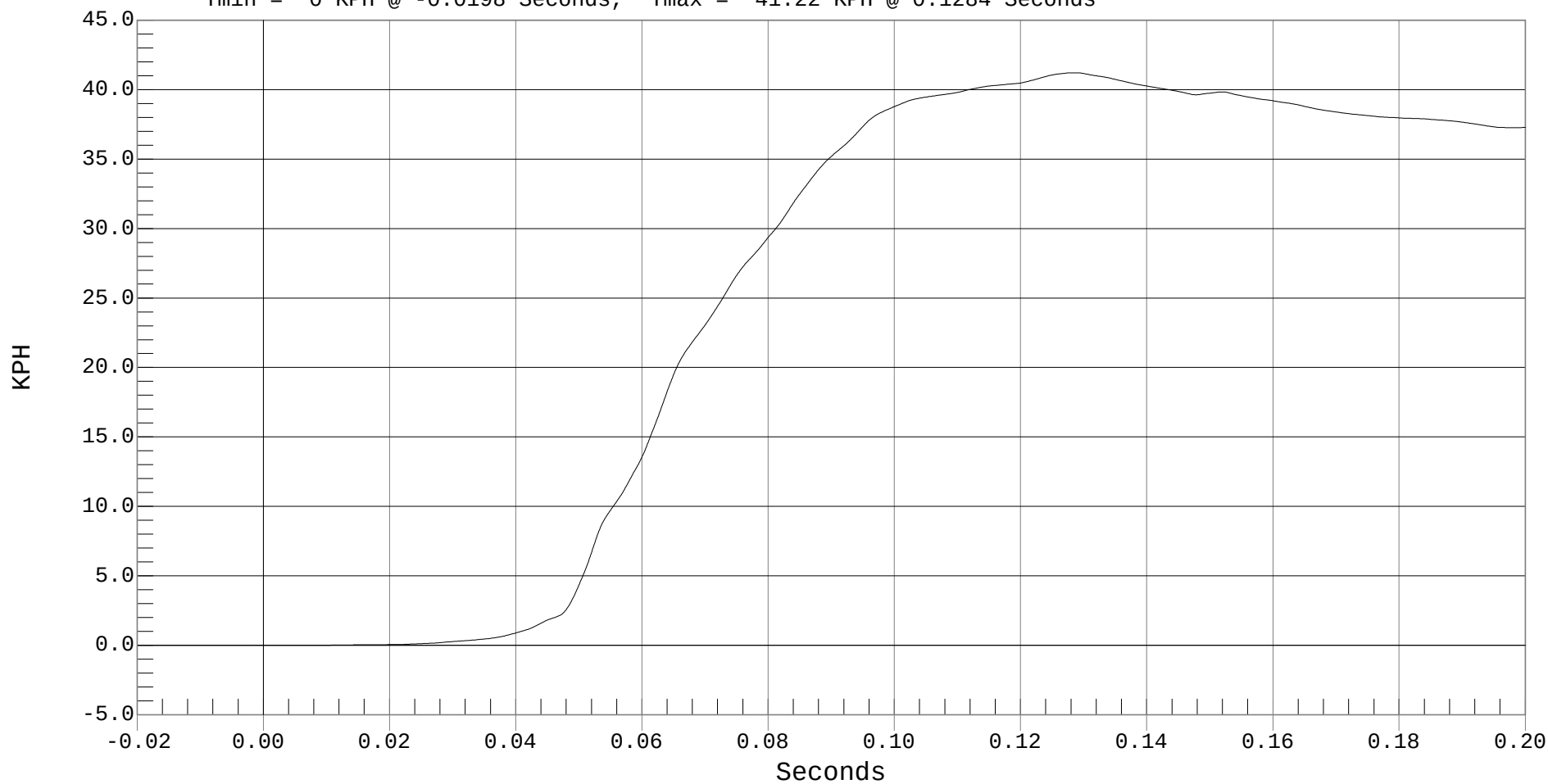
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 REAR PASSENGER UPPER RIB Y REDUNDANT VELOCITY, B01001AI.V45

Ymin = 0 KPH @ -0.0198 Seconds, Ymax = 41.22 KPH @ 0.1284 Seconds





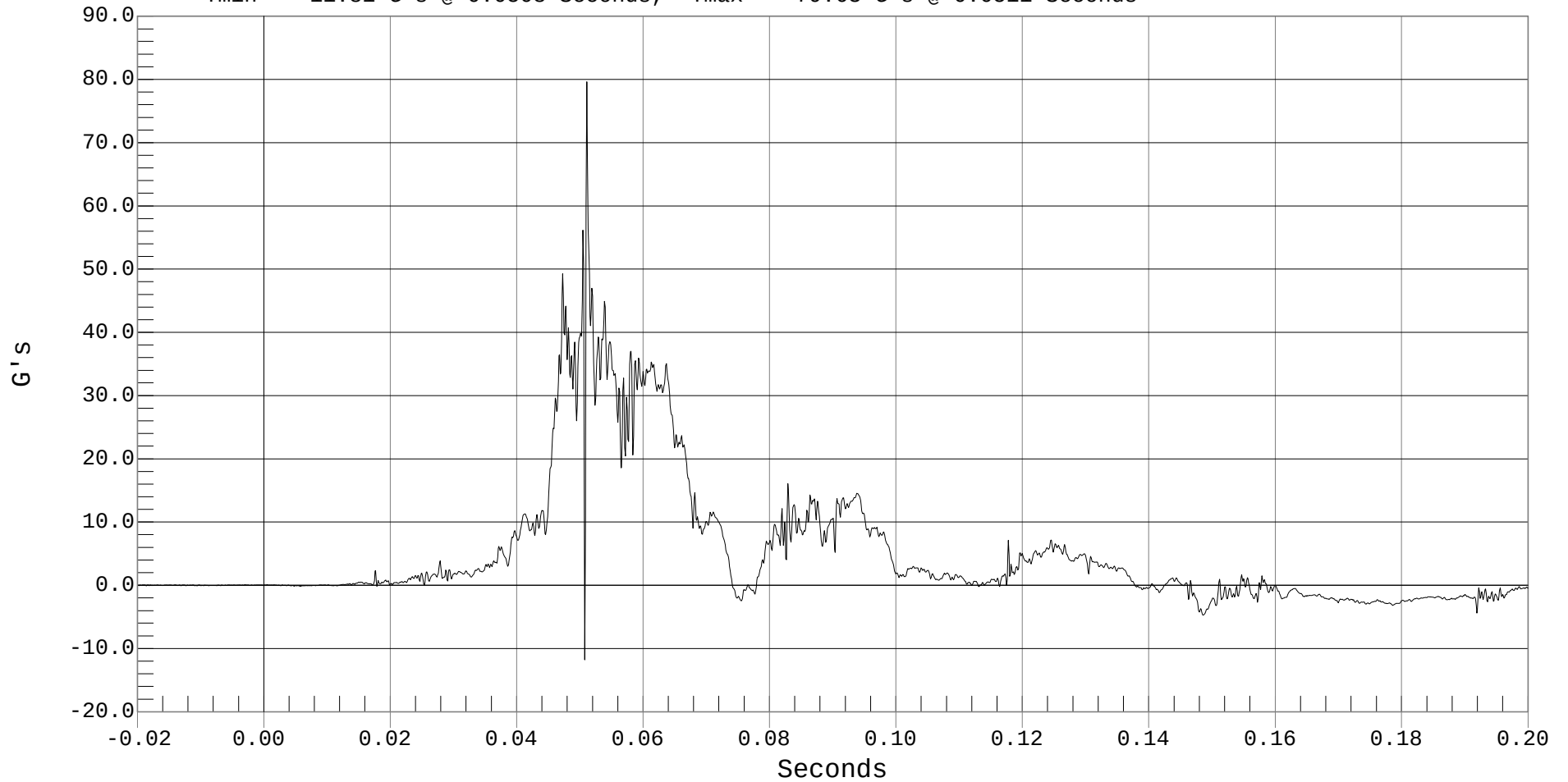
PASSENGER LOWER RIB REDUNDANT Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 1000

— 1 PASSENGER LOWER RIB Yr, B01001AT.A46

Ymin = -11.81 G's @ 0.0508 Seconds, Ymax = 79.63 G's @ 0.0511 Seconds





PASSENGER LOWER RIB REDUNDANT Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

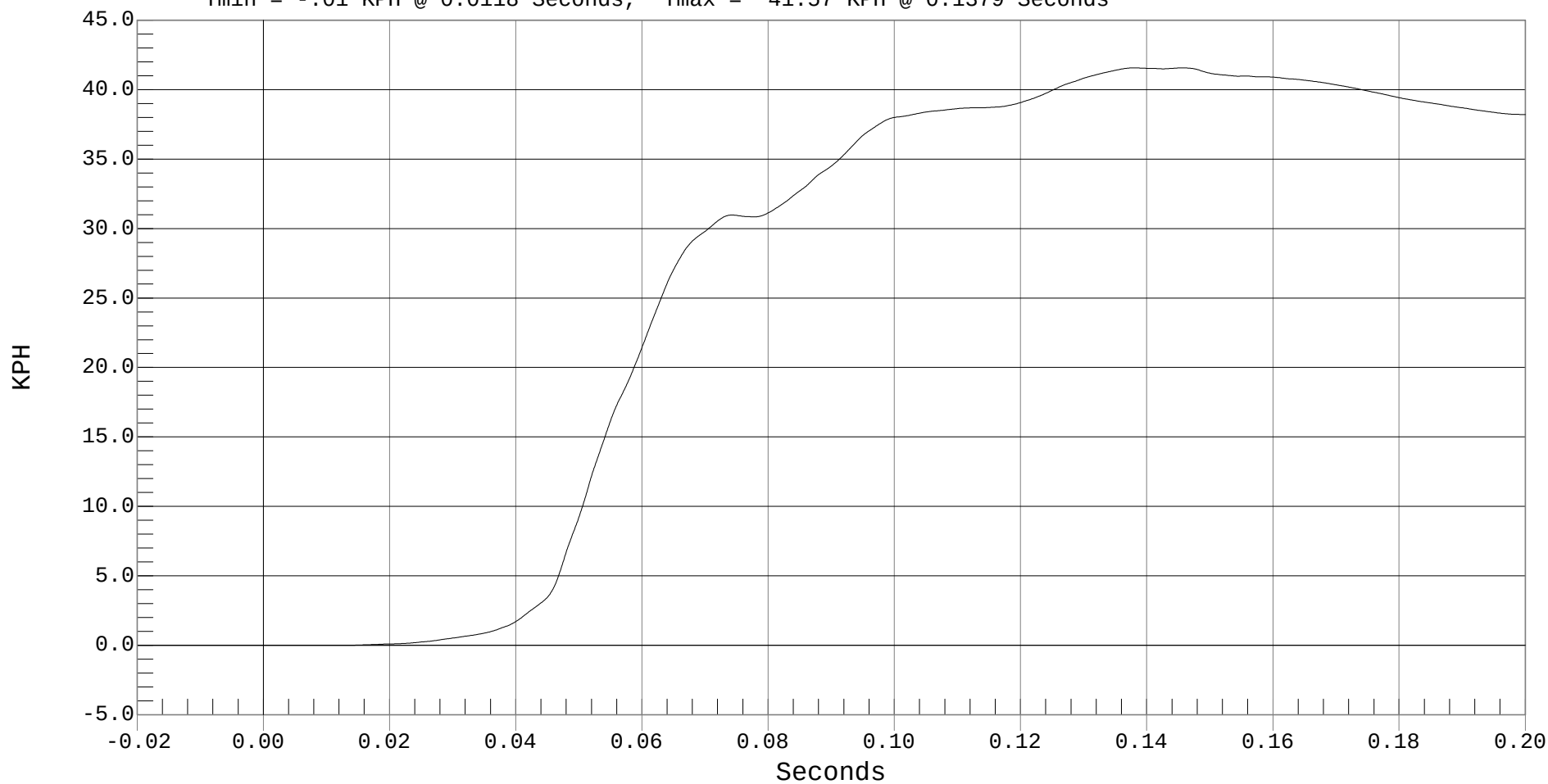
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 REAR PASSENGER LOWER RIB Y REDUNDANT VELOCITY, B01001AI.V46

Ymin = -.01 KPH @ 0.0118 Seconds, Ymax = 41.57 KPH @ 0.1379 Seconds





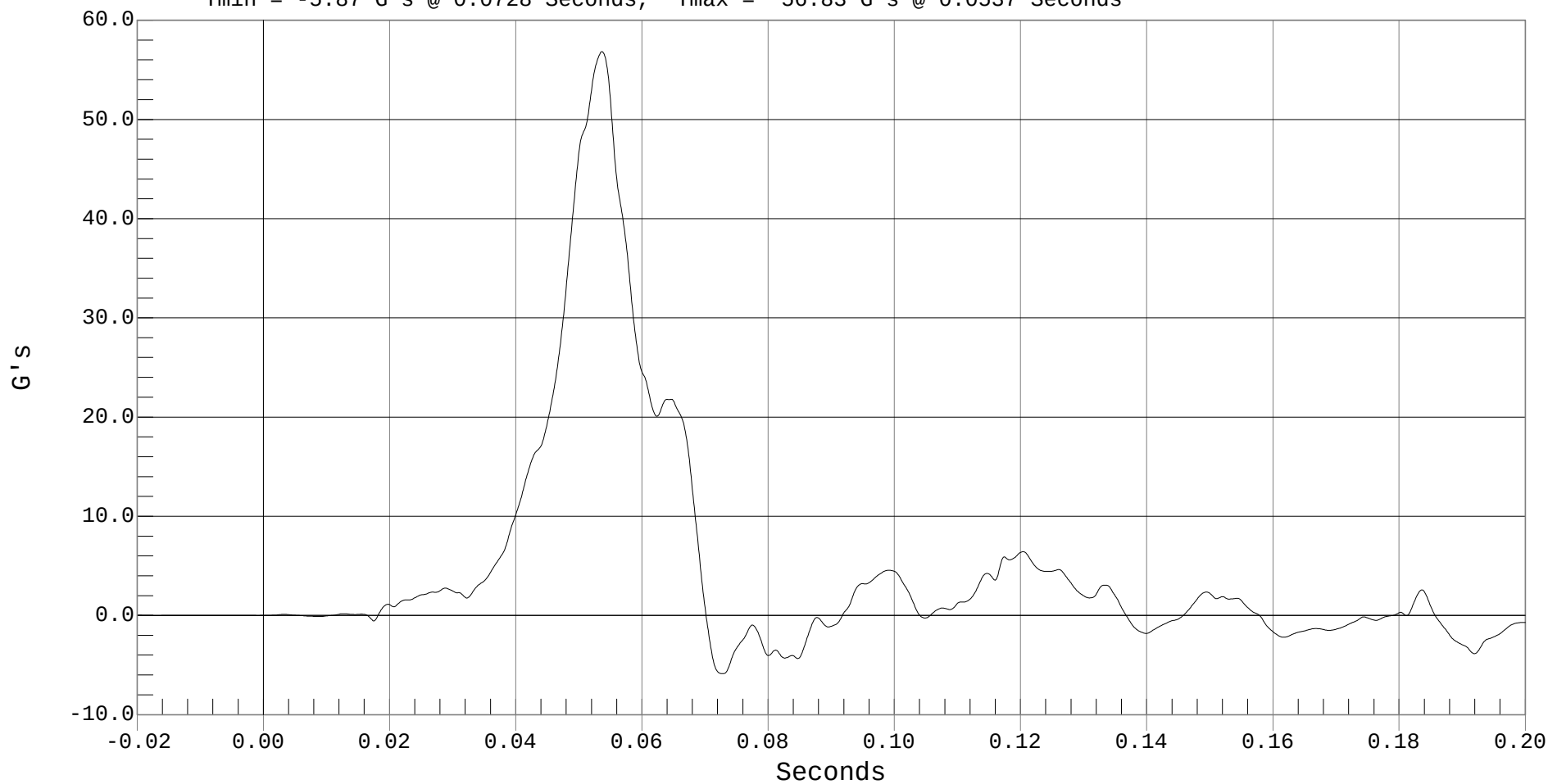
PASSENGER LOWER SPINE REDUNDANT Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 180

— 1 PASSENGER LOWER SPINE Yr, B01001AF.A47

Ymin = -5.87 G's @ 0.0728 Seconds, Ymax = 56.83 G's @ 0.0537 Seconds





PASSENGER LOWER SPINE REDUNDANT Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

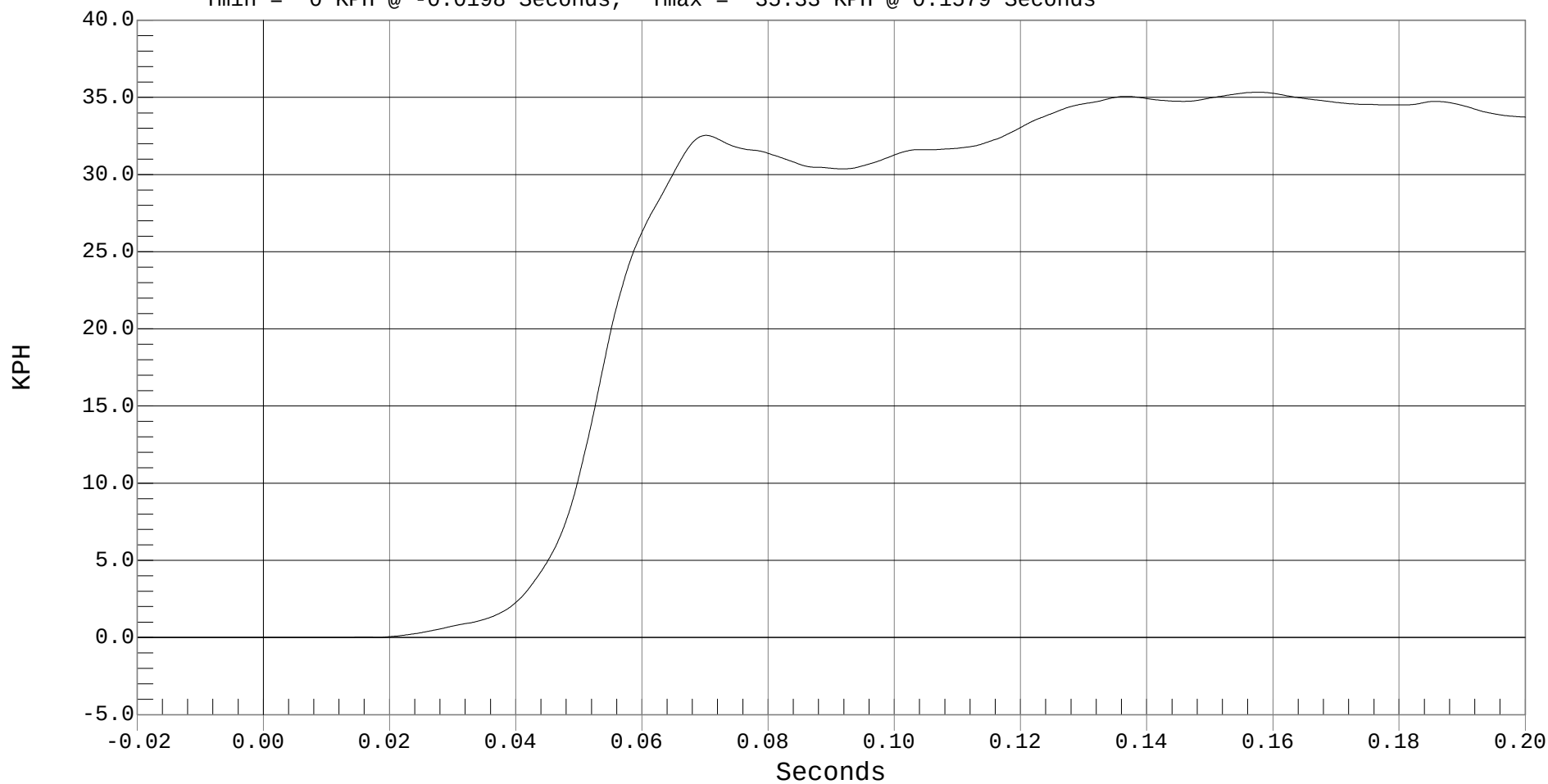
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 REAR PASSENGER LOWER SPINE Y REDUNDANT VELOCITY, B01001AI.V47

Ymin = 0 KPH @ -0.0198 Seconds, Ymax = 35.33 KPH @ 0.1579 Seconds





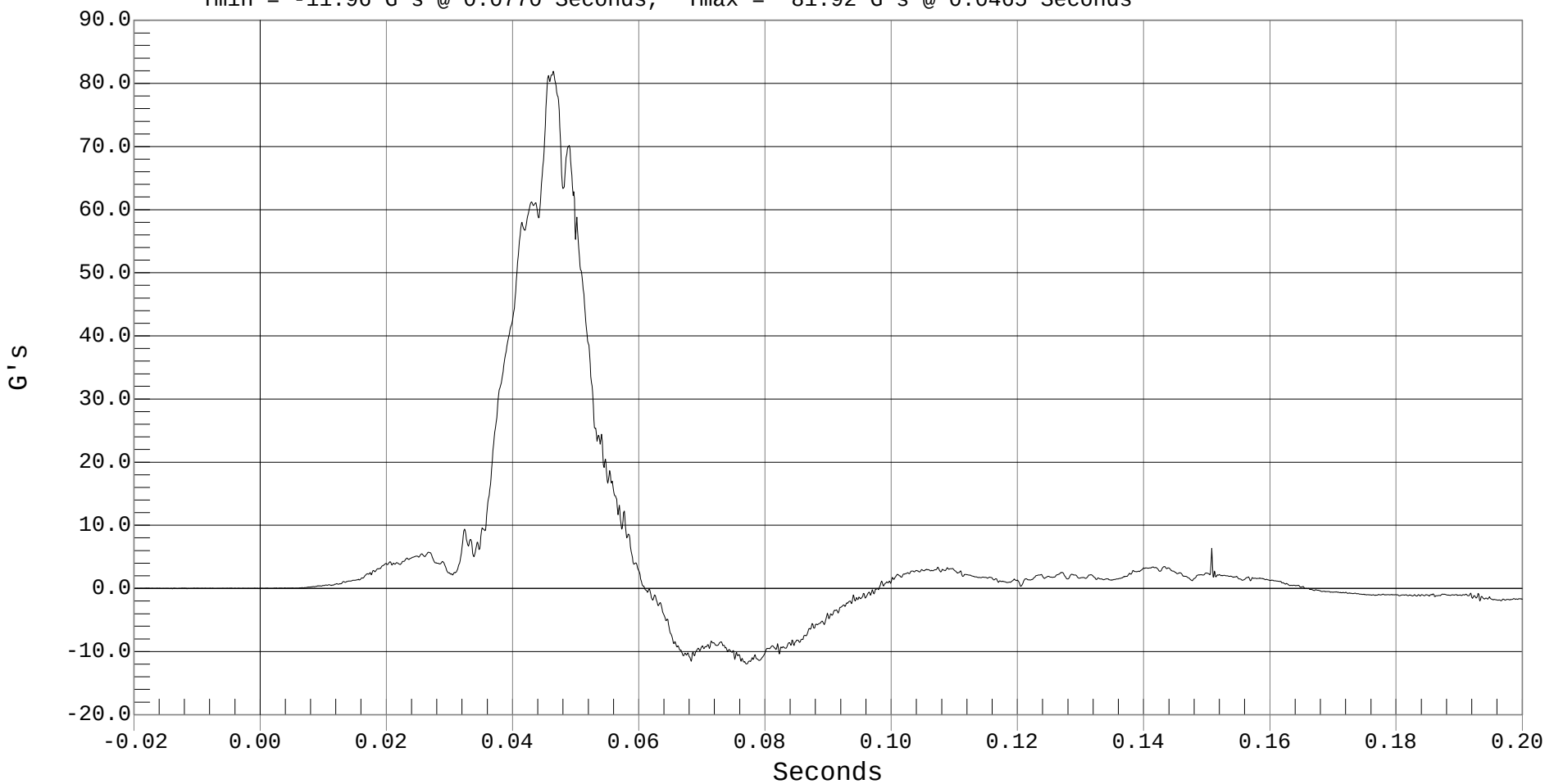
PASSENGER PELVIS REDUNDANT Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Filter Class: 1000

— 1 PASSENGER PELVIS Yr, B01001AT.A48

Ymin = -11.96 G's @ 0.0770 Seconds, Ymax = 81.92 G's @ 0.0465 Seconds





PASSENGER PELVIS REDUNDANT Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

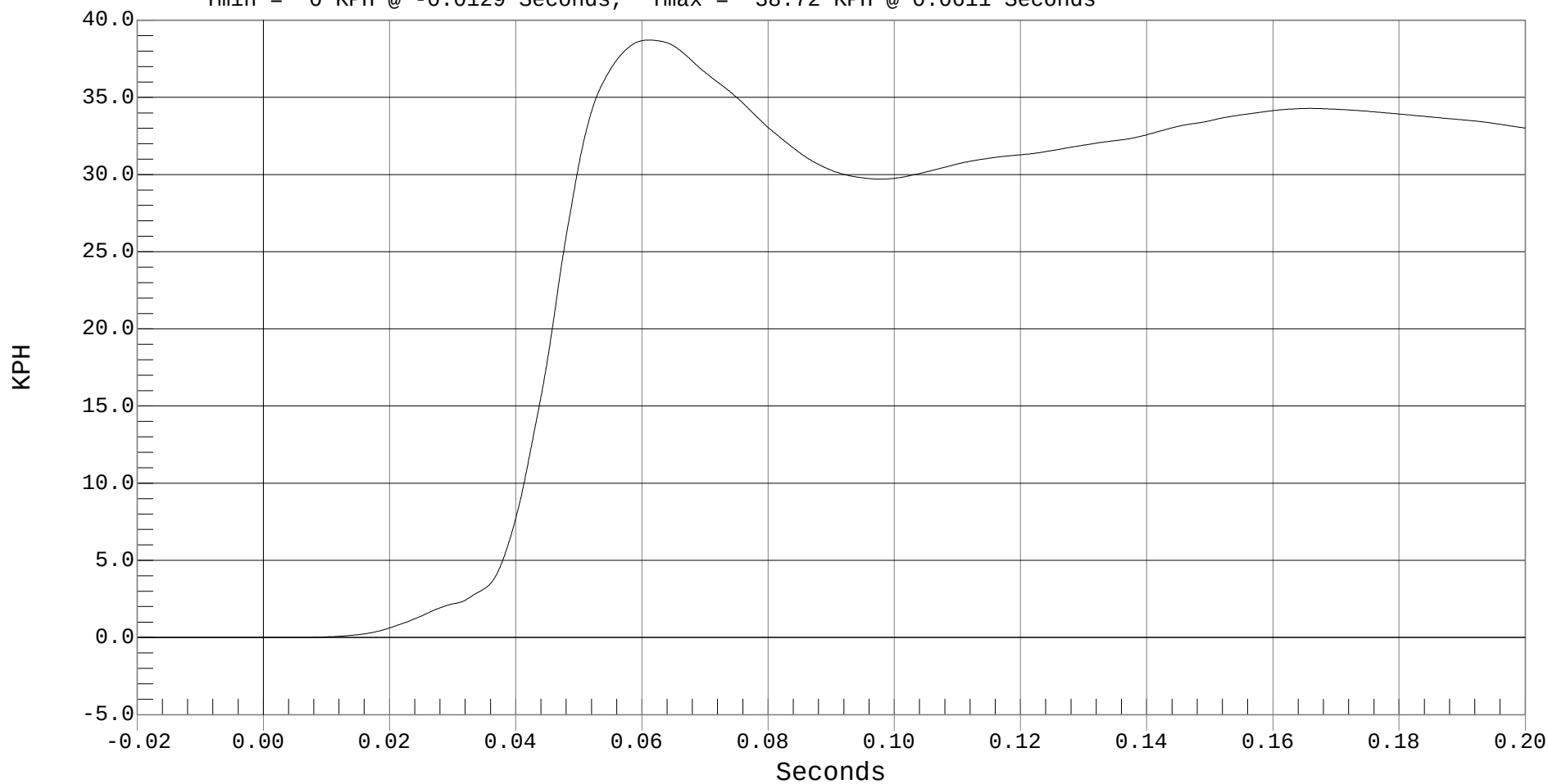
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Filter Class: 180

— 1 REAR PASSENGER PELVIS Y REDUNDANT VELOCITY, B01001AI.V48

Ymin = 0 KPH @ -0.0129 Seconds, Ymax = 38.72 KPH @ 0.0611 Seconds





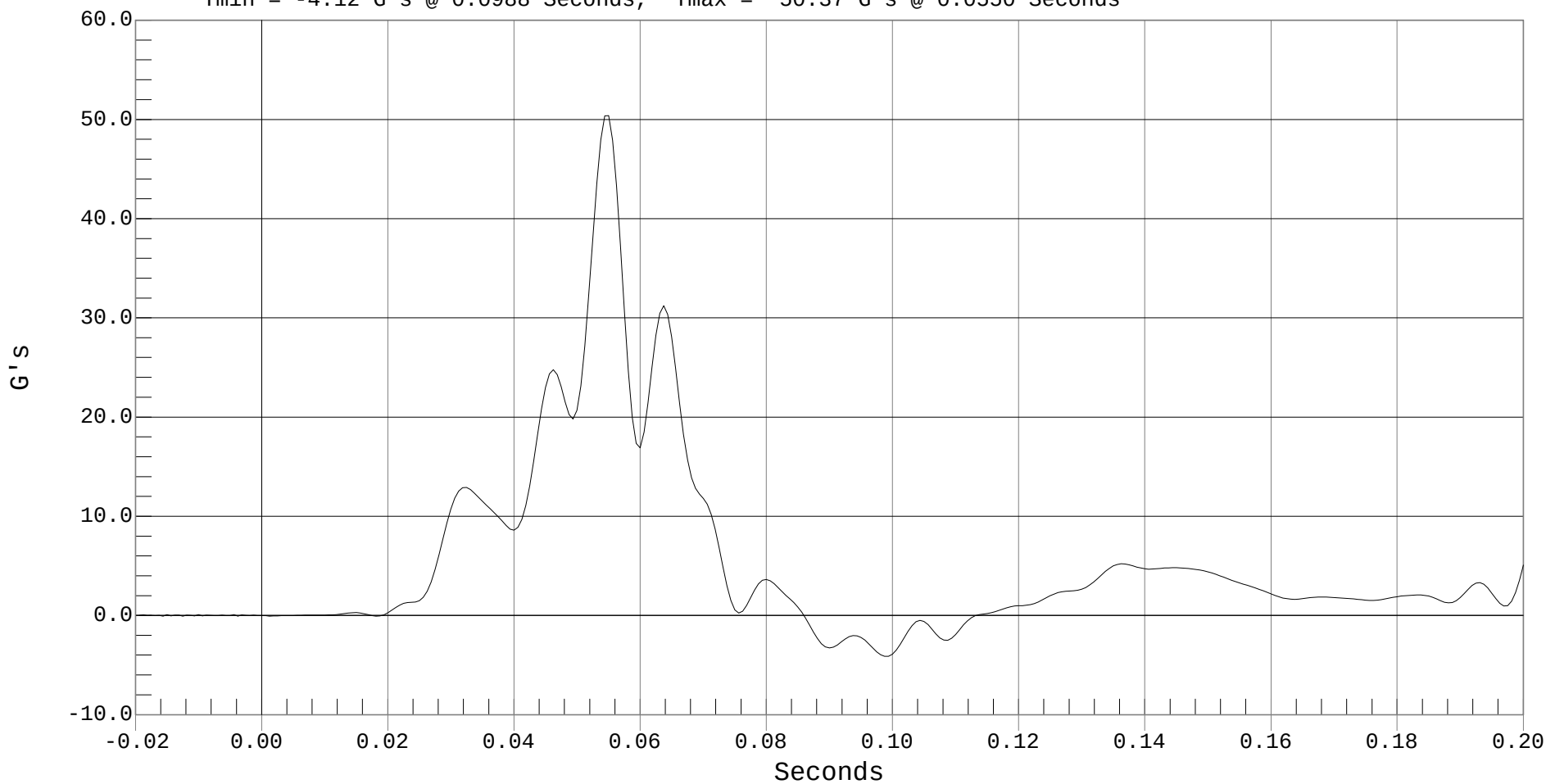
DRIVER UPPER RIB Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Fir Filtered

— 1 DRIVER UPPER RIB Y, B01001FI.R04

Ymin = -4.12 G's @ 0.0988 Seconds, Ymax = 50.37 G's @ 0.0550 Seconds





DRIVER UPPER RIB Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

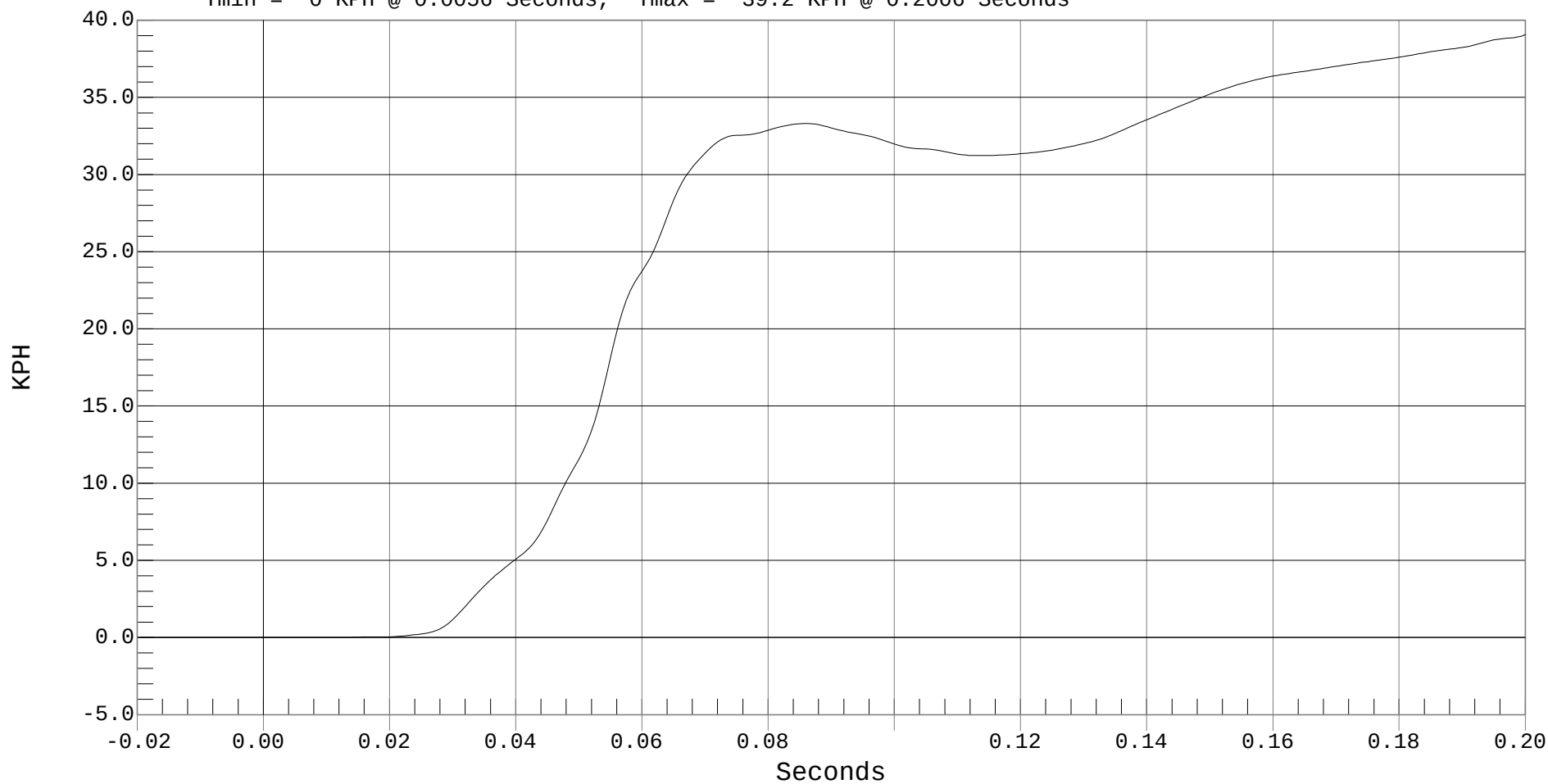
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Fir Filtered

— 1 DRIVER UPPER RIB Y VELOCITY, B01001FI.V04

Ymin = 0 KPH @ 0.0056 Seconds, Ymax = 39.2 KPH @ 0.2006 Seconds





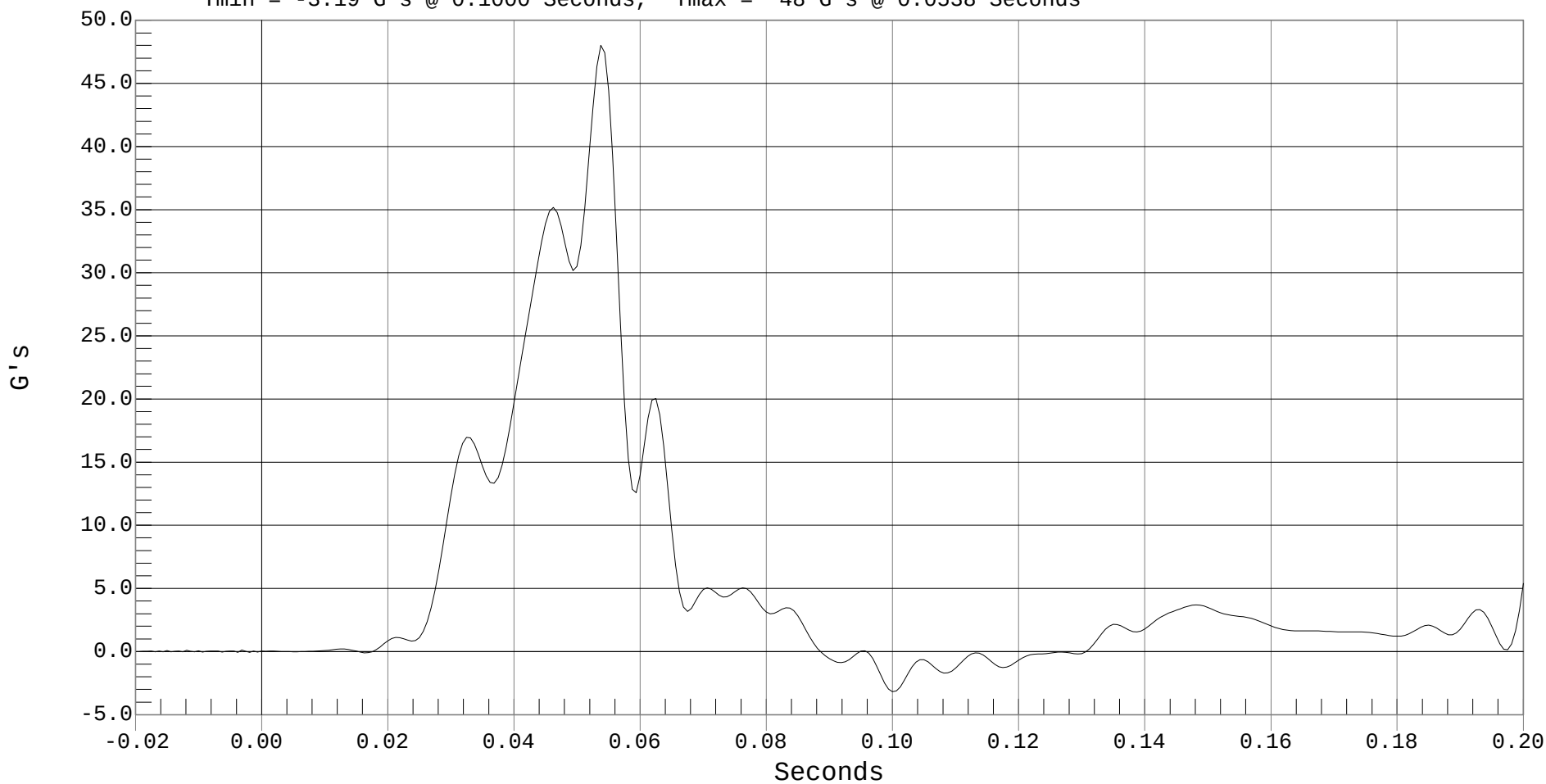
DRIVER LOWER RIB Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Fir Filtered

— 1 DRIVER LOWER RIB Y, B01001FI.R05

Ymin = -3.19 G's @ 0.1000 Seconds, Ymax = 48 G's @ 0.0538 Seconds





DRIVER LOWER RIB Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

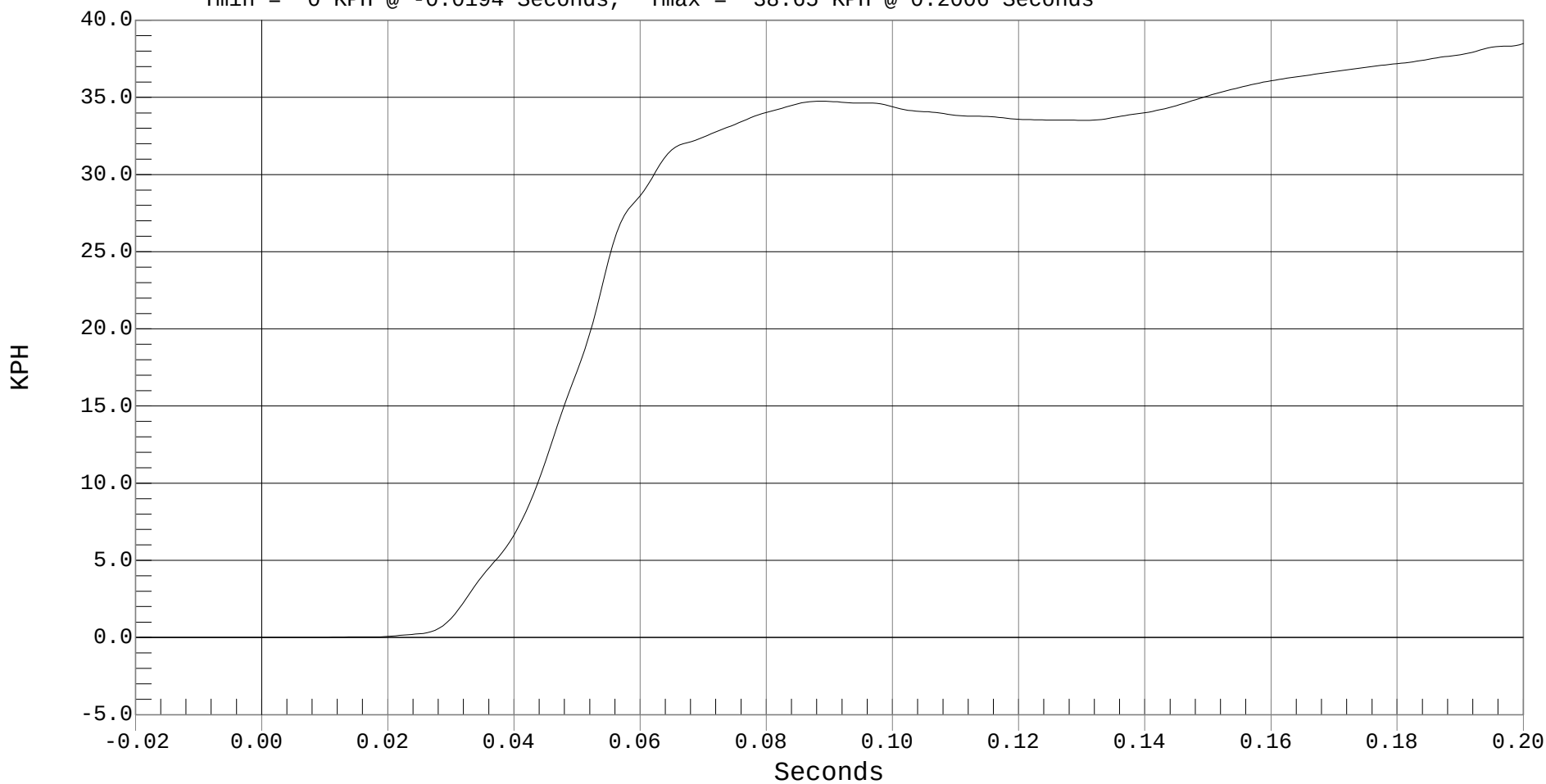
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Fir Filtered

— 1 DRIVER LOWER RIB Y VELOCITY, B01001FI.V05

Ymin = 0 KPH @ -0.0194 Seconds, Ymax = 38.65 KPH @ 0.2006 Seconds





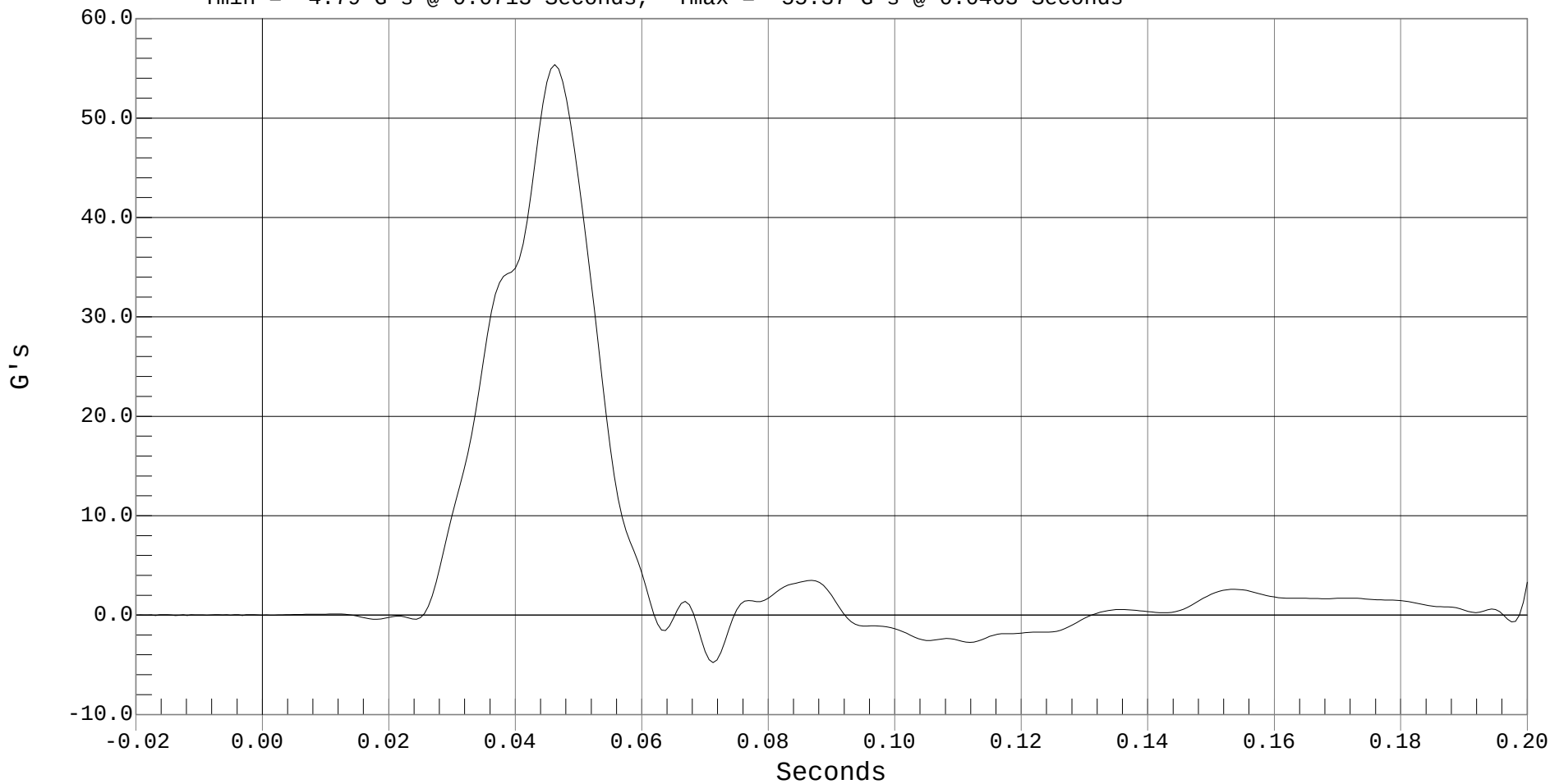
DRIVER LOWER SPINE Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Fir Filtered

— 1 DRIVER LOWER SPINE Y, B01001FI.R06

Ymin = -4.79 G's @ 0.0713 Seconds, Ymax = 55.37 G's @ 0.0463 Seconds





DRIVER LOWER SPINE Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

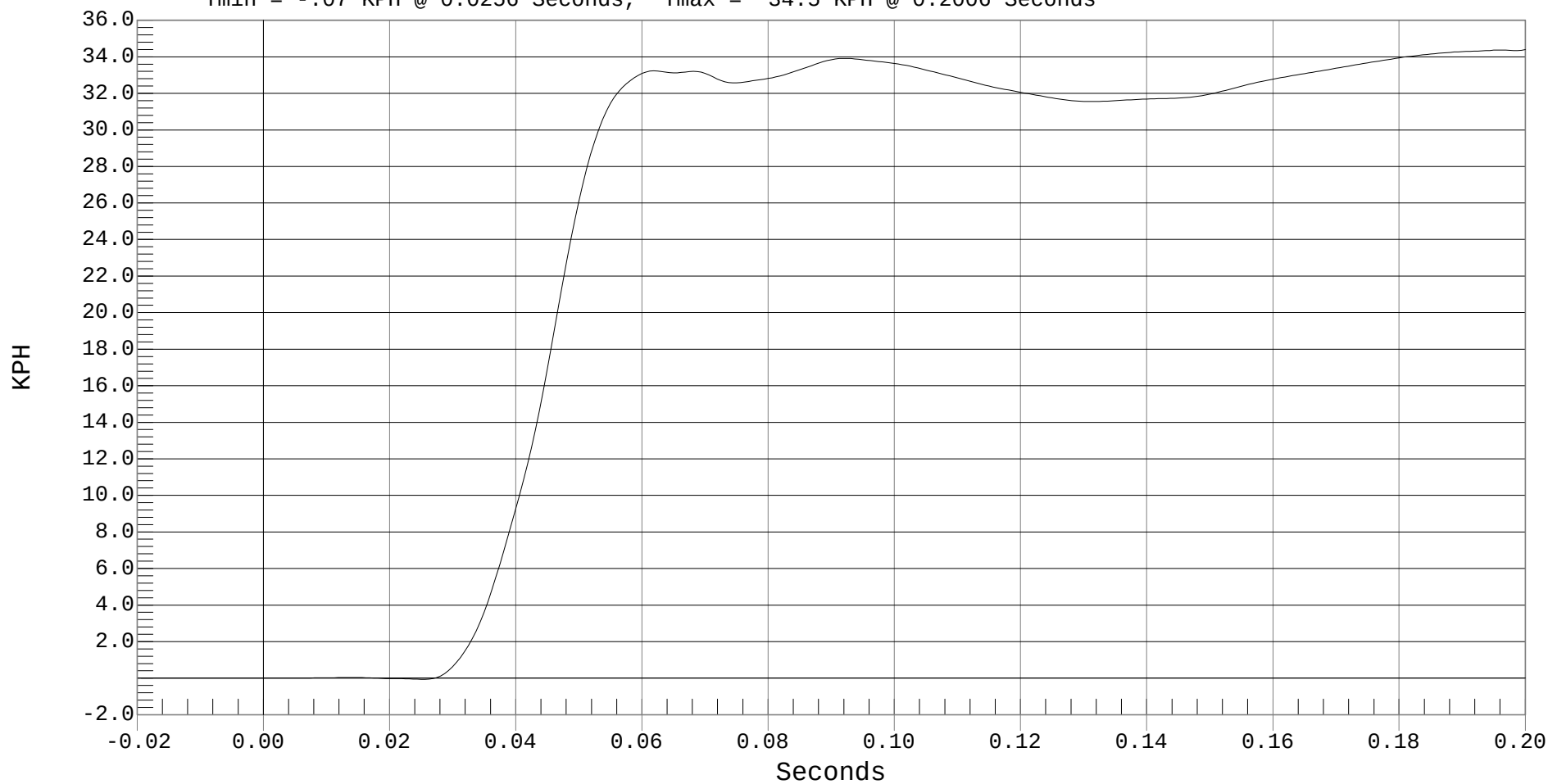
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Fir Filtered

— 1 DRIVER LOWER SPINE Y VELOCITY, B01001FI.V06

Ymin = -.07 KPH @ 0.0256 Seconds, Ymax = 34.5 KPH @ 0.2006 Seconds





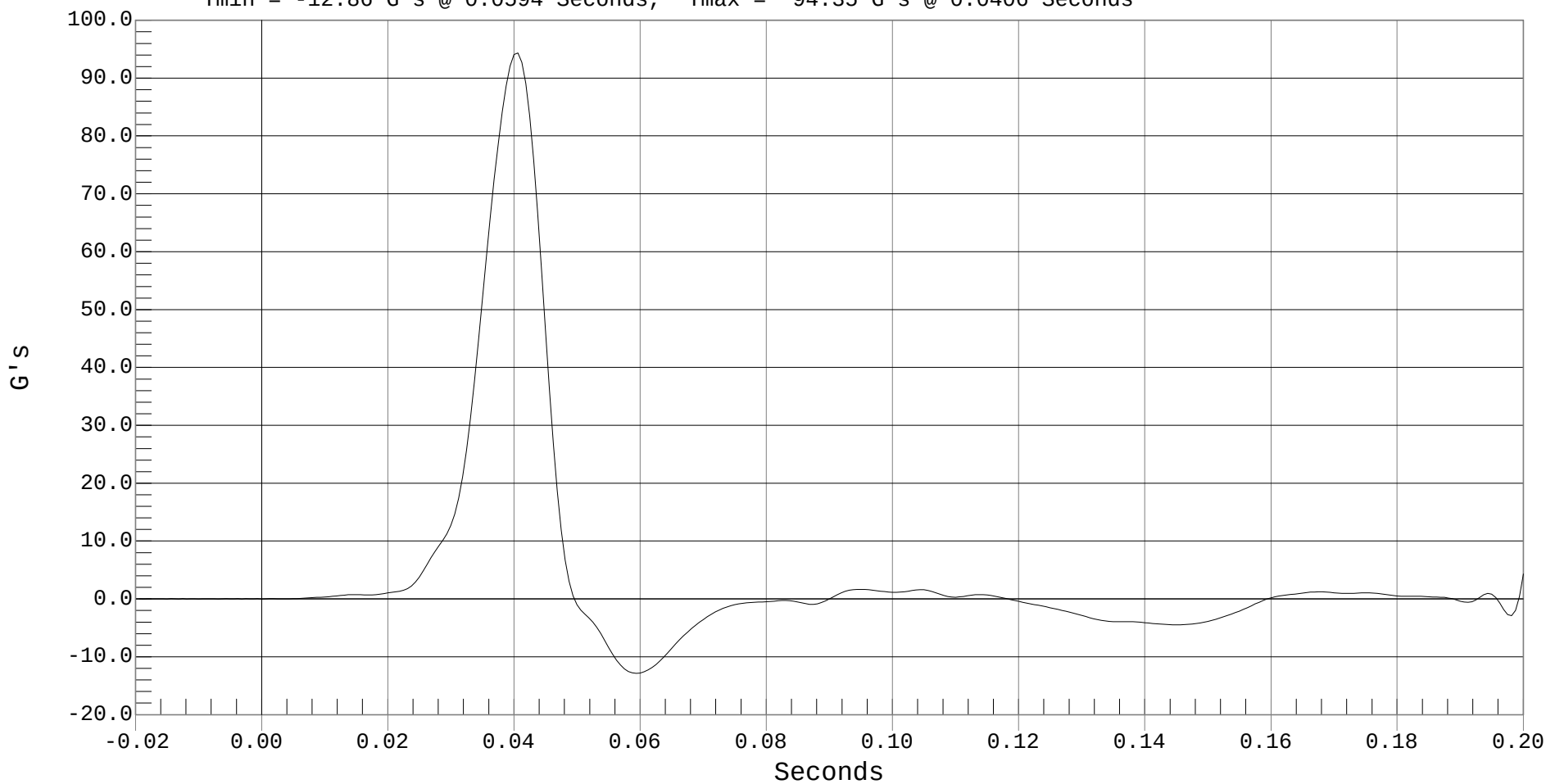
DRIVER PELVIS Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Fir Filtered

— 1 DRIVER PELVIS Y, B01001FI.R07

Ymin = -12.86 G's @ 0.0594 Seconds, Ymax = 94.35 G's @ 0.0406 Seconds





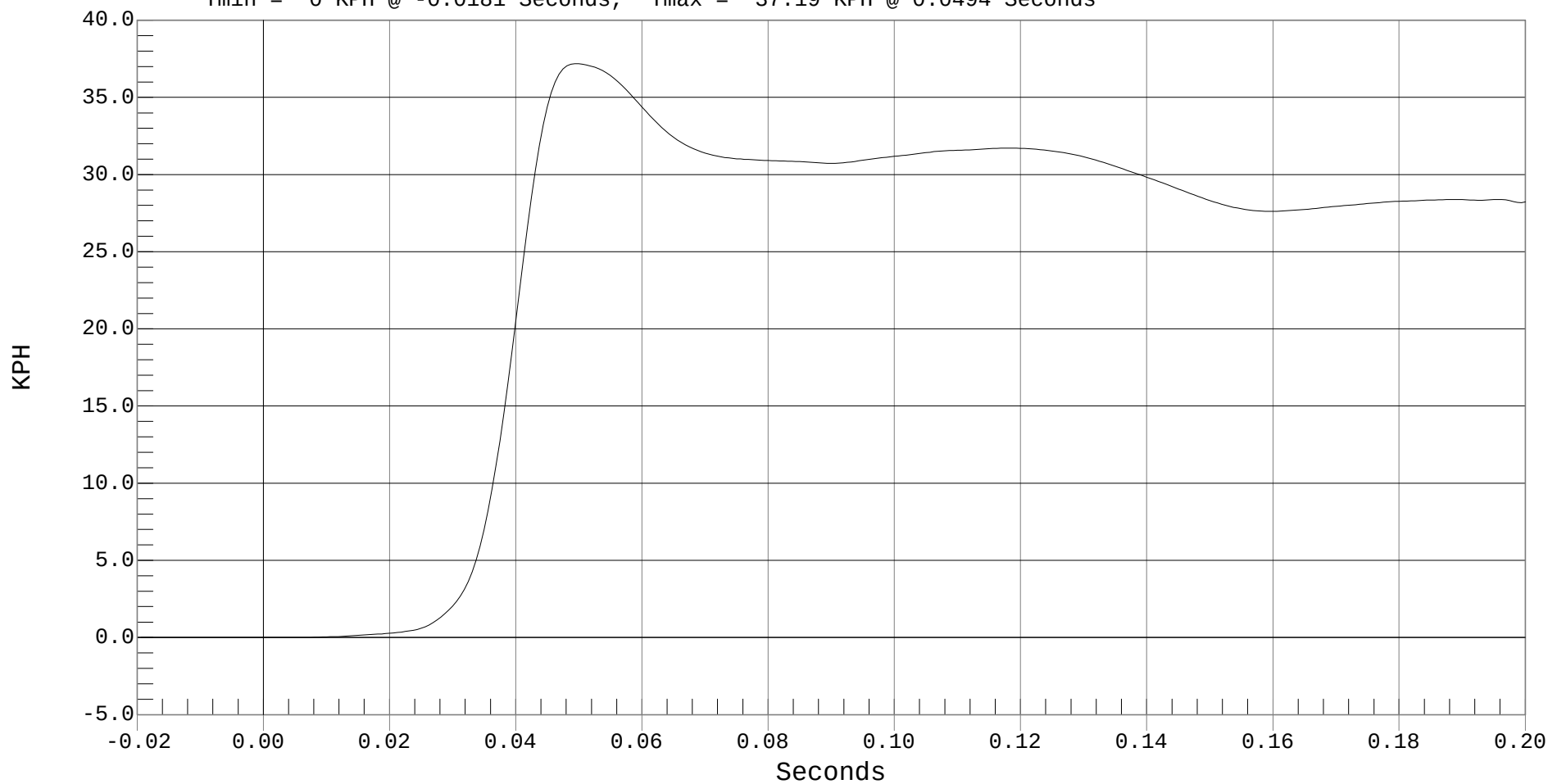
DRIVER PELVIS Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Fir Filtered

— 1 DRIVER PELVIS Y VELOCITY, B01001FI.V07

Ymin = 0 KPH @ -0.0181 Seconds, Ymax = 37.19 KPH @ 0.0494 Seconds





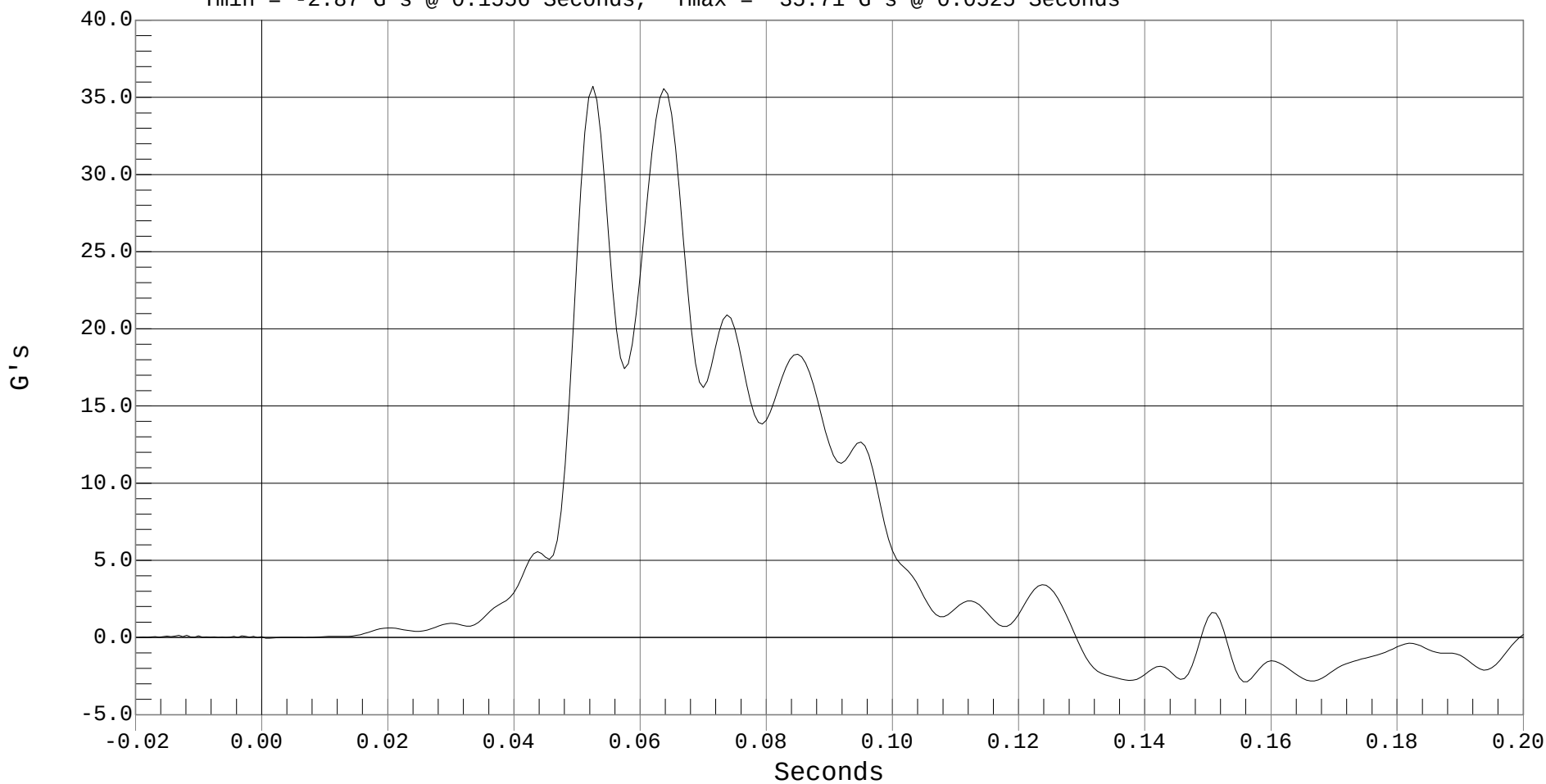
REAR PASSENGER UPPER RIB Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Fir Filtered

— 1 PASSENGER UPPER RIB Y, B01001FI.R11

Ymin = -2.87 G's @ 0.1556 Seconds, Ymax = 35.71 G's @ 0.0525 Seconds





REAR PASSENGER UPPER RIB Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

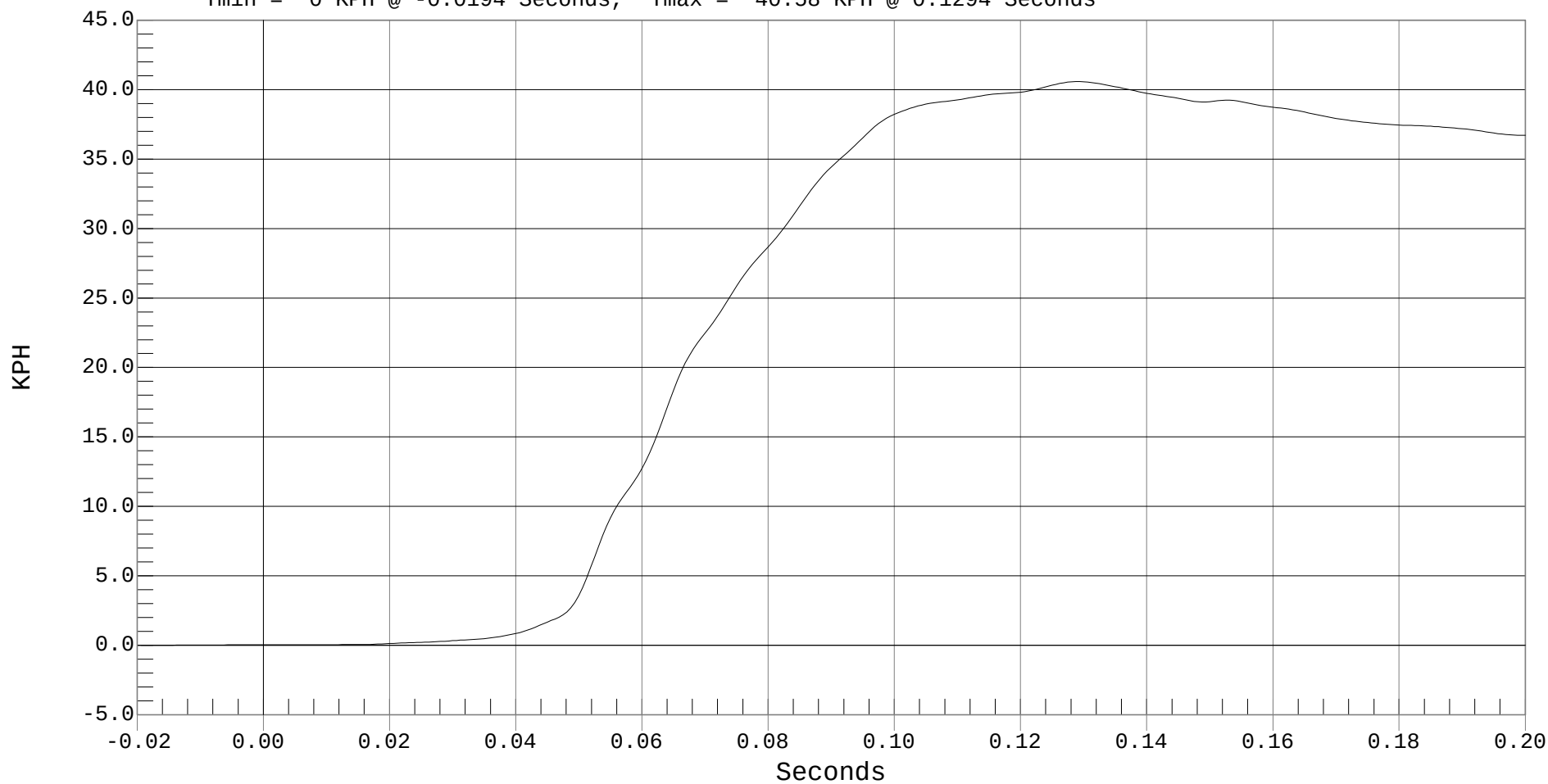
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Fir Filtered

— 1 REAR PASSENGER UPPER RIB Y VELOCITY, B01001FI.V11

Ymin = 0 KPH @ -0.0194 Seconds, Ymax = 40.58 KPH @ 0.1294 Seconds





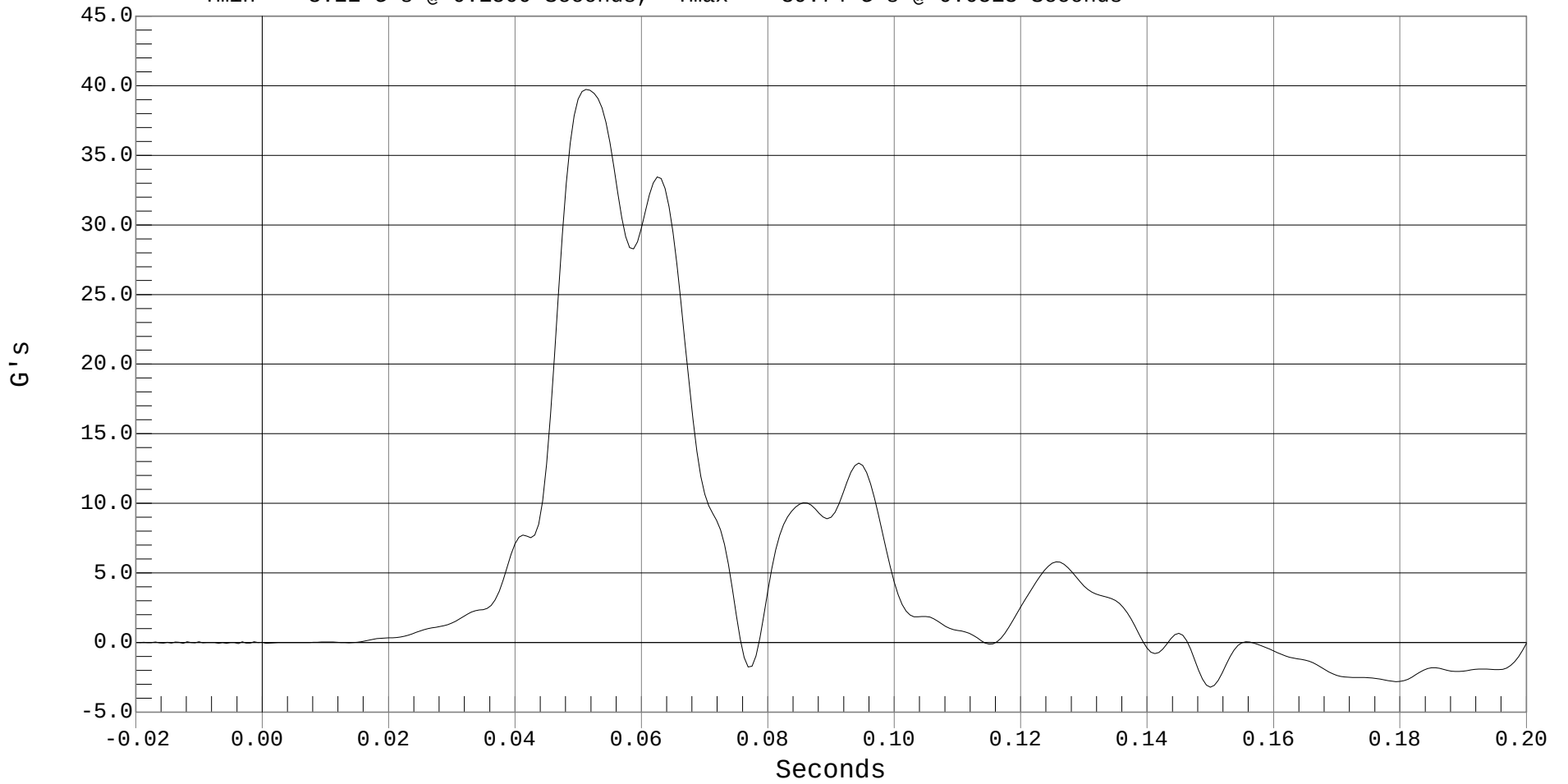
REAR PASSENGER LOWER RIB Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Fir Filtered

— 1 PASSENGER LOWER RIB Y, B01001FI.R12

Ymin = -3.21 G's @ 0.1500 Seconds, Ymax = 39.74 G's @ 0.0513 Seconds





REAR PASSENGER LOWER RIB Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

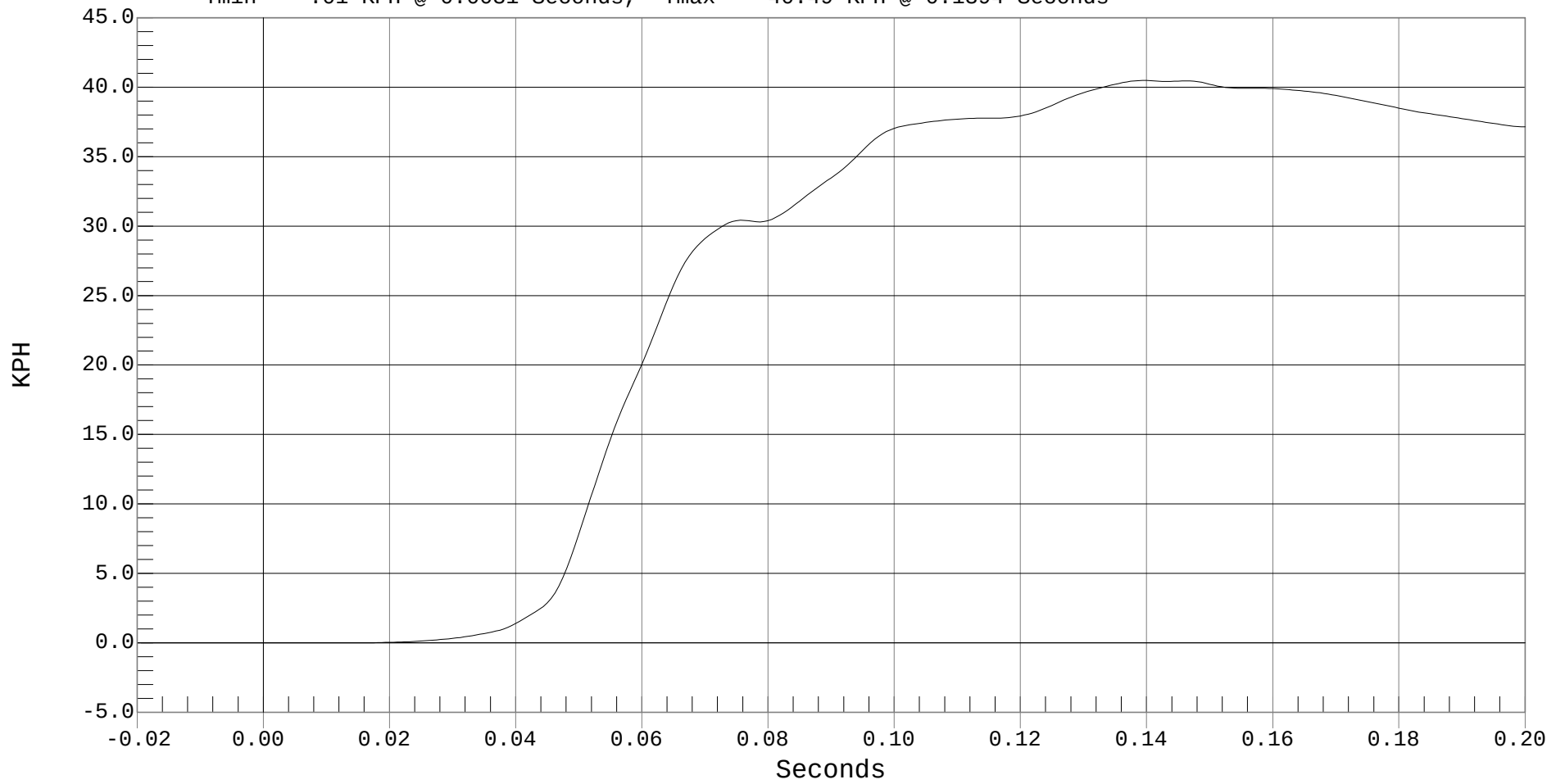
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Fir Filtered

— 1 REAR PASSENGER LOWER RIB Y VELOCITY, B01001FI.V12

Ymin = -.01 KPH @ 0.0031 Seconds, Ymax = 40.49 KPH @ 0.1394 Seconds





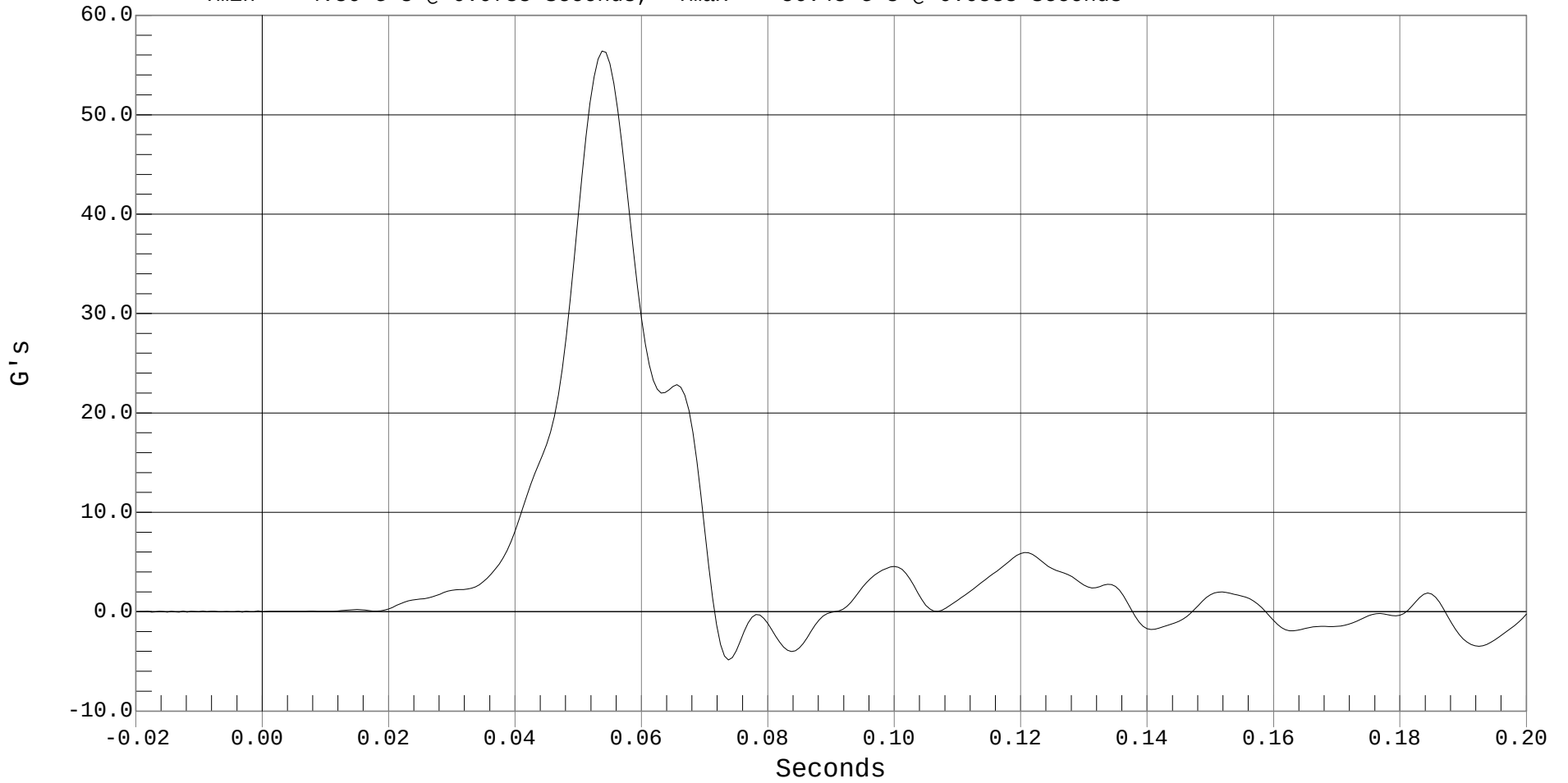
REAR PASSENGER LOWER SPINE Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Fir Filtered

— 1 PASSENGER LOWER SPINE Y, B01001FI.R13

Ymin = -4.86 G's @ 0.0738 Seconds, Ymax = 56.43 G's @ 0.0538 Seconds





REAR PASSENGER LOWER SPINE Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

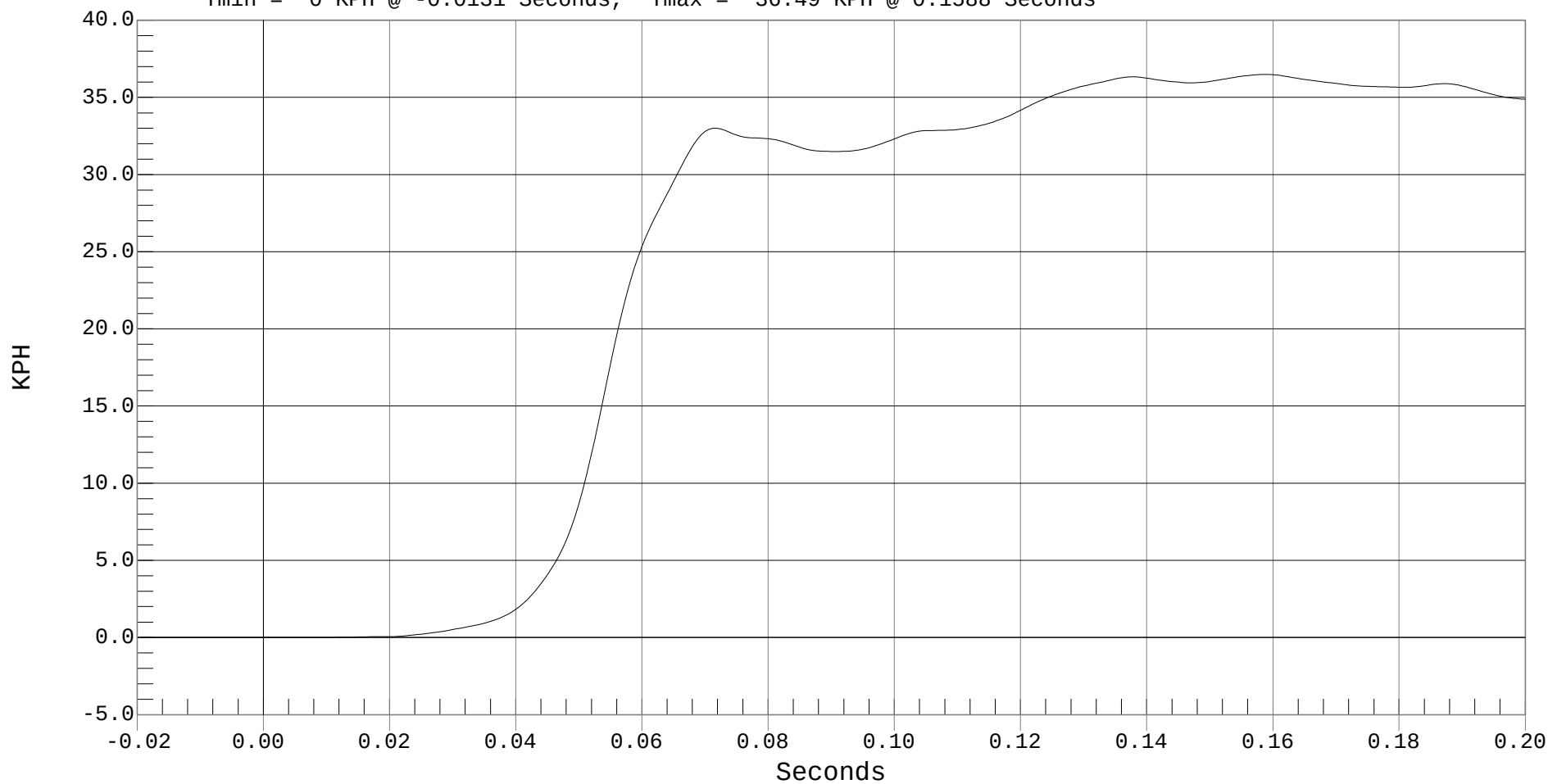
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Fir Filtered

— 1 REAR PASSENGER LOWER SPINE Y VELOCITY, B01001FI.V13

Ymin = 0 KPH @ -0.0131 Seconds, Ymax = 36.49 KPH @ 0.1588 Seconds





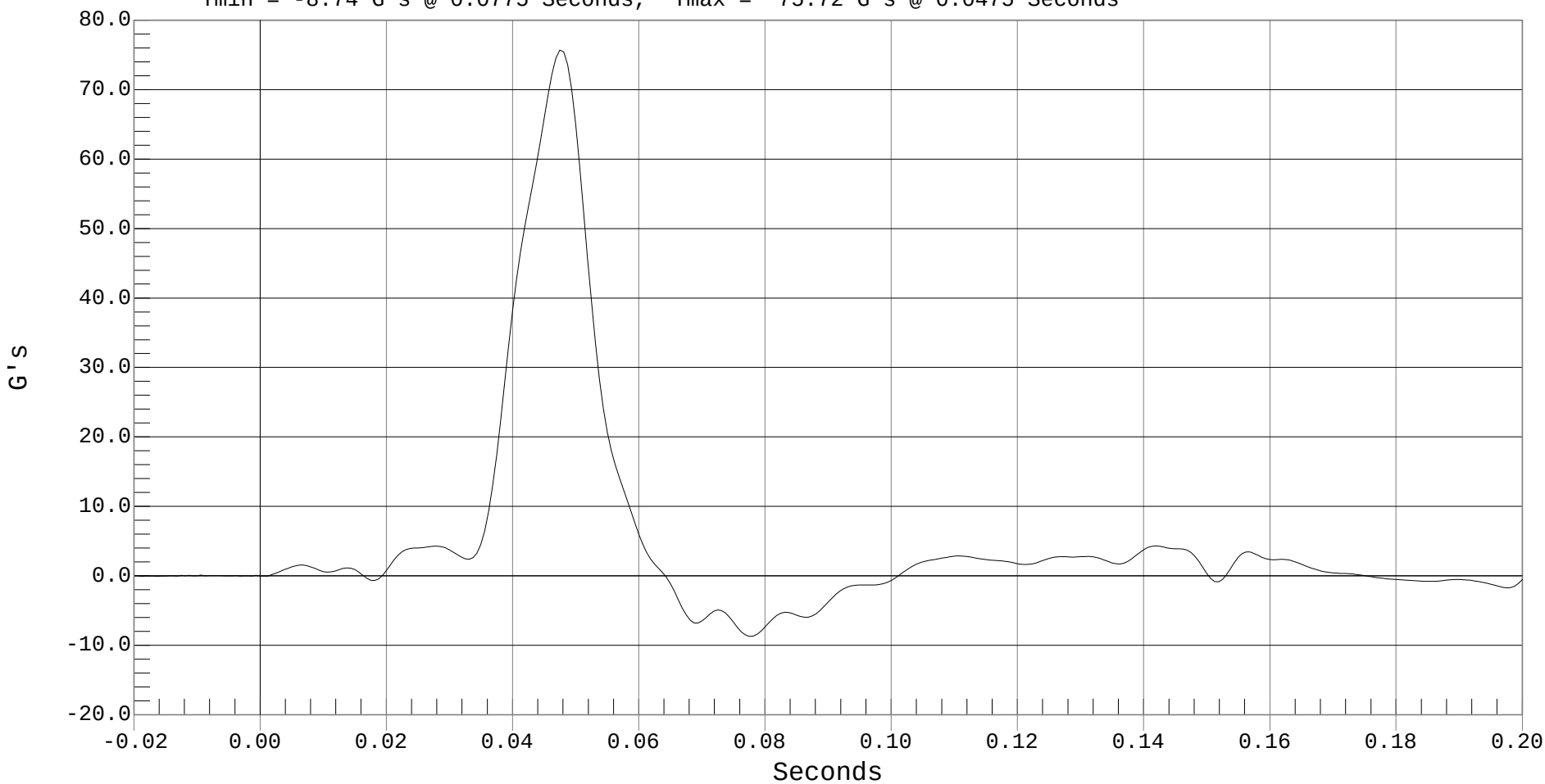
REAR PASSENGER PELVIS Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Fir Filtered

— 1 PASSENGER PELVIS Y, B01001FI.R14

Ymin = -8.74 G's @ 0.0775 Seconds, Ymax = 75.72 G's @ 0.0475 Seconds





REAR PASSENGER PELVIS Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

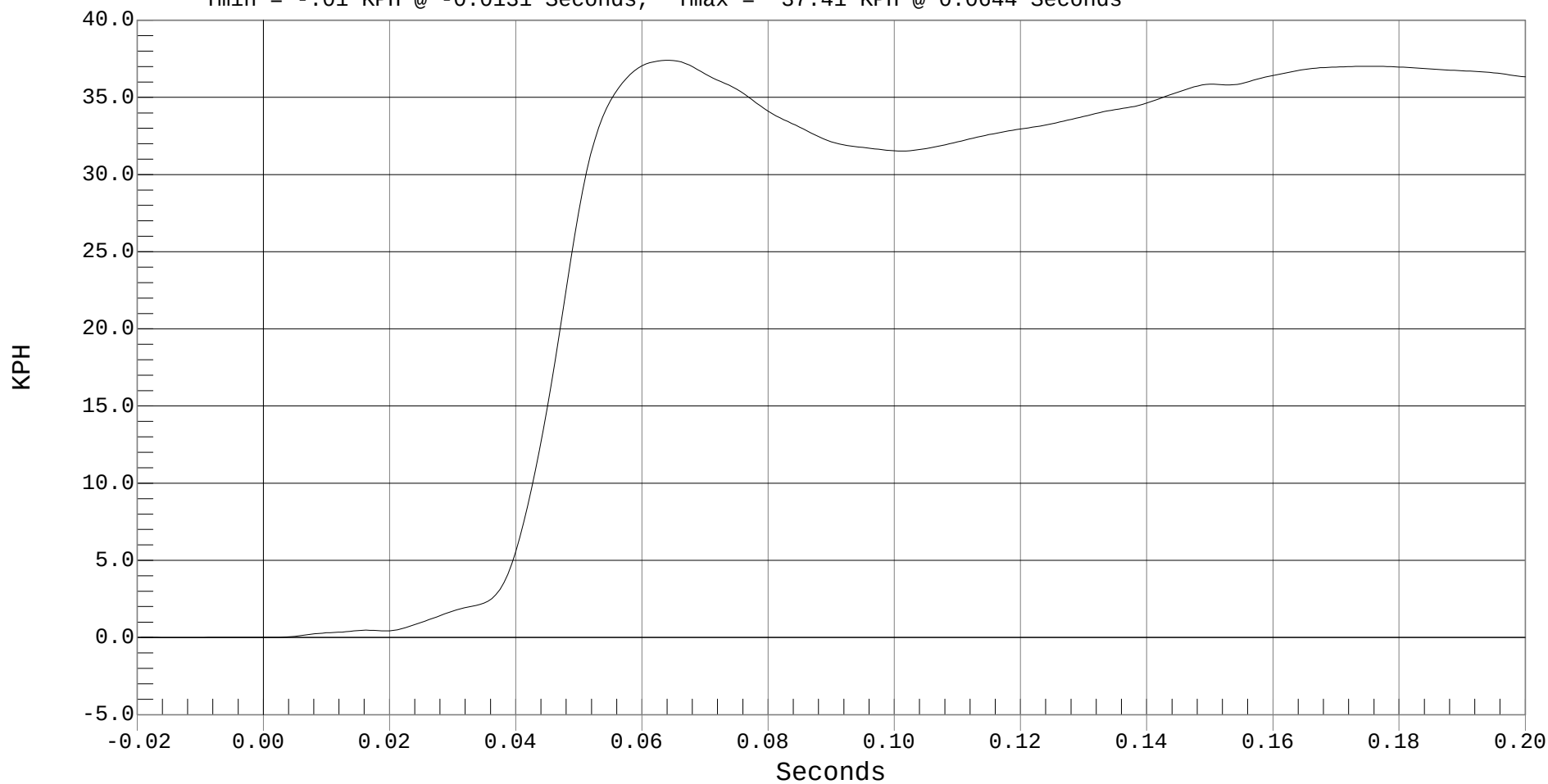
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Fir Filtered

— 1 REAR PASSENGER PELVIS Y VELOCITY, B01001FI.V14

Ymin = -.01 KPH @ -0.0131 Seconds, Ymax = 37.41 KPH @ 0.0644 Seconds





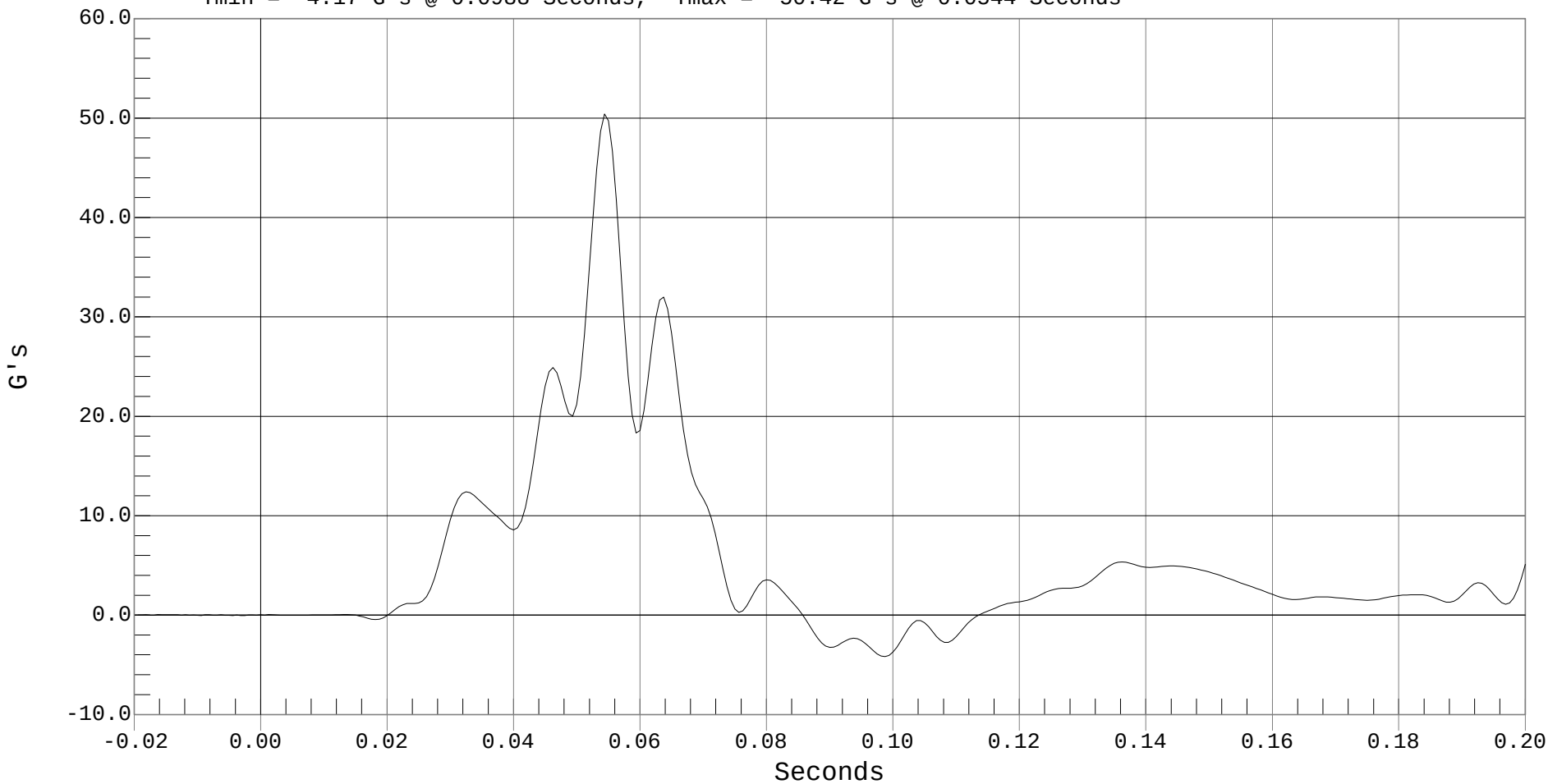
DRIVER UPPER RIB REDUNDANT Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Fir Filtered

— 1 DRIVER UPPER RIB Yr, B01001FI.R41

Ymin = -4.17 G's @ 0.0988 Seconds, Ymax = 50.42 G's @ 0.0544 Seconds





DRIVER UPPER RIB REDUNDANT Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Test Date: 01-03-01

Component: 2001 MAZDA TRIBUTE (C15402)

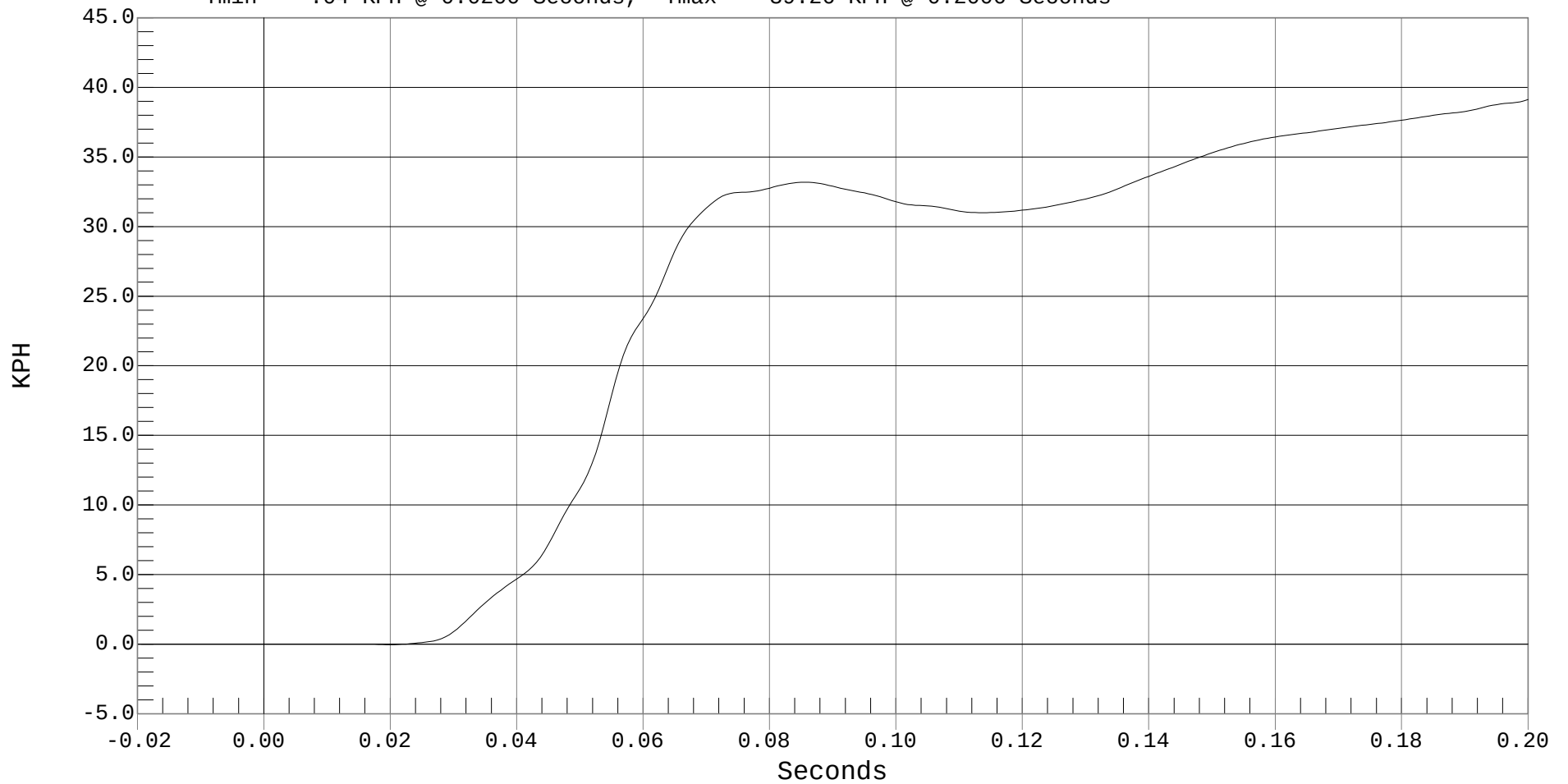
Speed: 38.5 MPH, 62.0 KPH

Other Info:

Fir Filtered

— 1 DRIVER UPPER RIB Y REDUNDANT VELOCITY, B01001FI.V41

Ymin = -.04 KPH @ 0.0200 Seconds, Ymax = 39.26 KPH @ 0.2006 Seconds





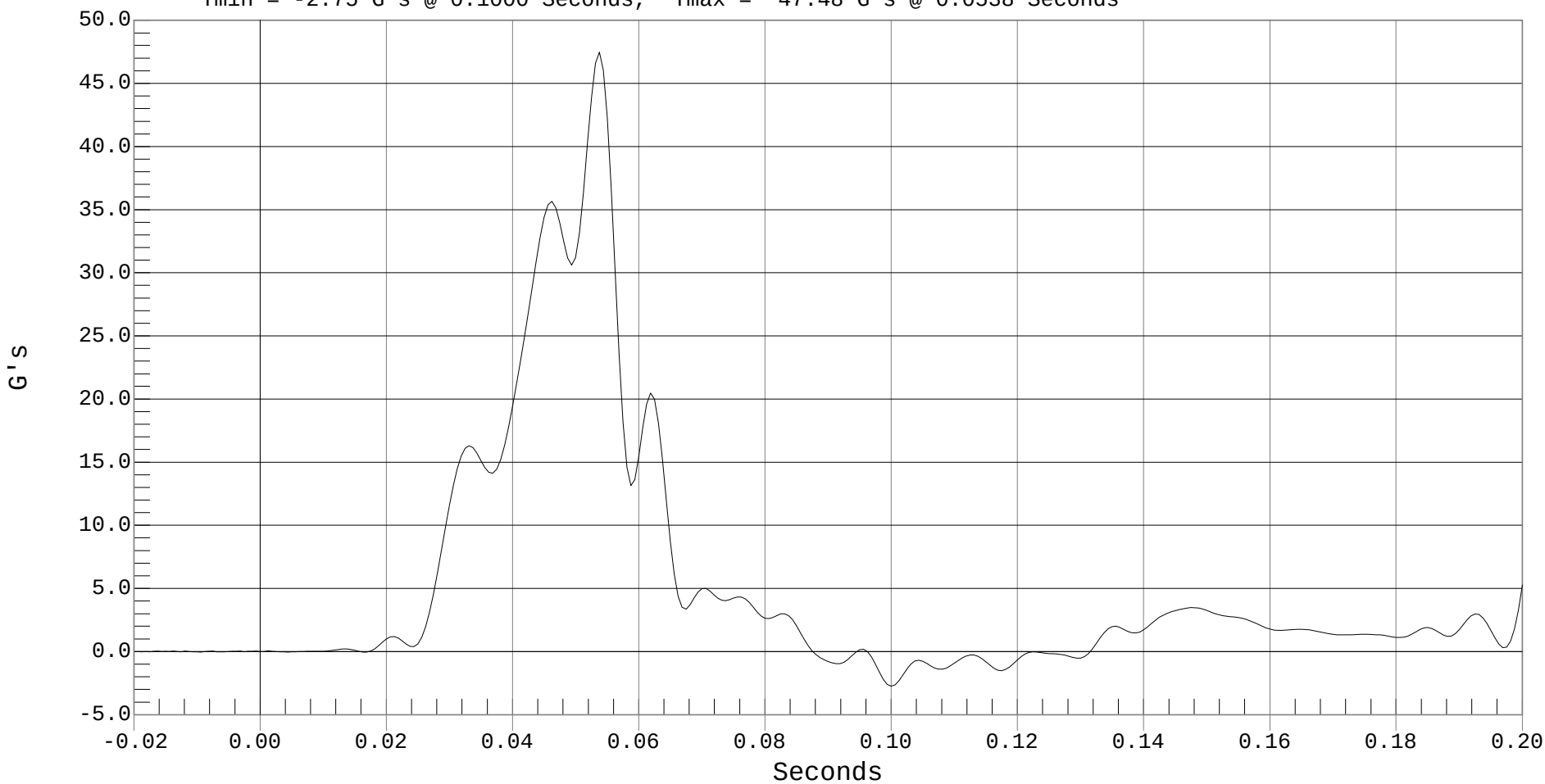
DRIVER LOWER RIB REDUNDANT Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Fir Filtered

— 1 DRIVER LOWER RIB Yr, B01001FI.R42

Ymin = -2.75 G's @ 0.1000 Seconds, Ymax = 47.48 G's @ 0.0538 Seconds





DRIVER LOWER RIB REDUNDANT Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

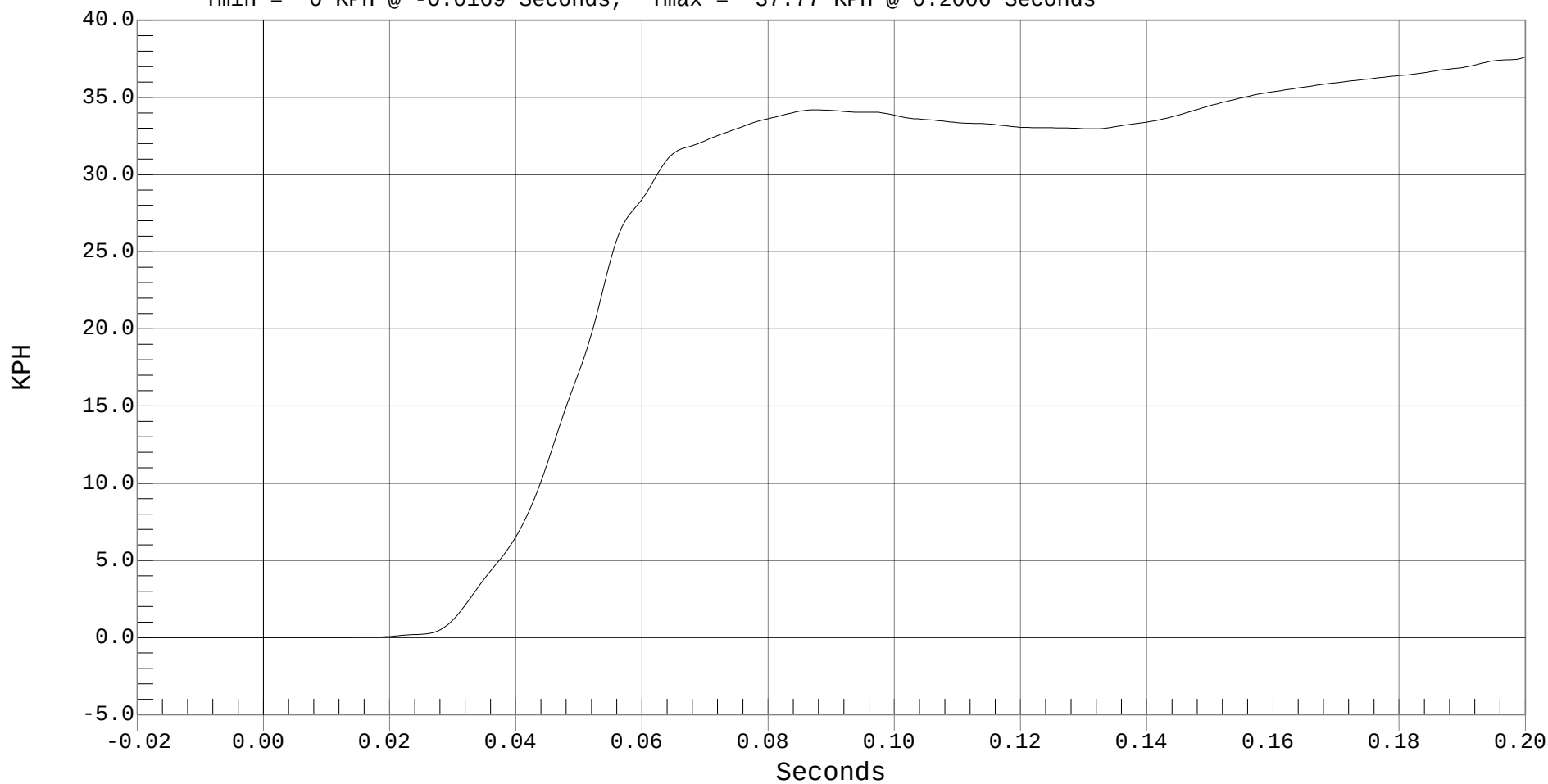
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Fir Filtered

— 1 DRIVER LOWER RIB Y REDUNDANT VELOCITY, B01001FI.V42

Ymin = 0 KPH @ -0.0169 Seconds, Ymax = 37.77 KPH @ 0.2006 Seconds





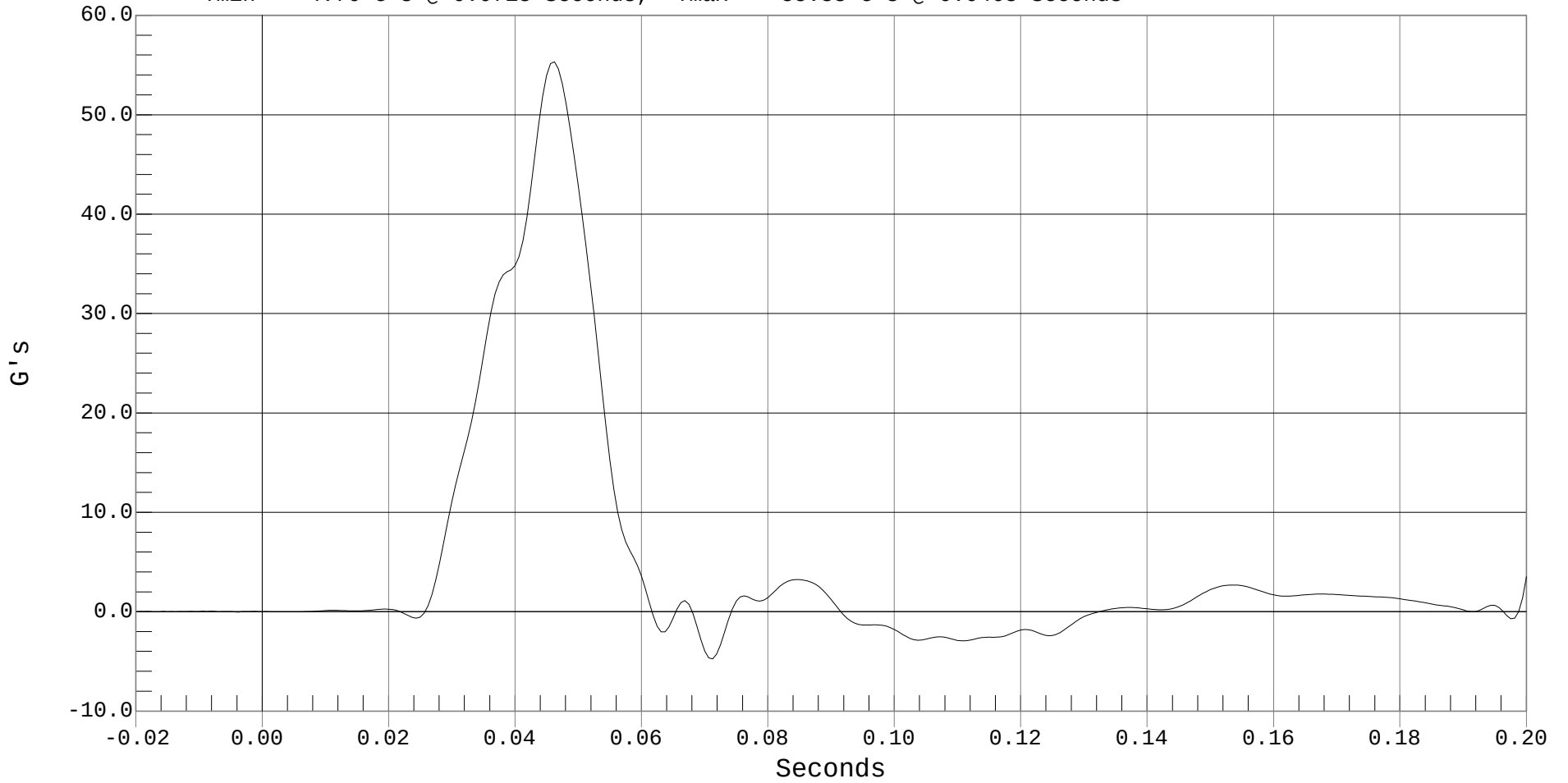
DRIVER LOWER SPINE REDUNDANT Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Fir Filtered

— 1 DRIVER LOWER SPINE Yr, B01001FI.R43

Ymin = -4.76 G's @ 0.0713 Seconds, Ymax = 55.33 G's @ 0.0463 Seconds





DRIVER LOWER SPINE REDUNDANT Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

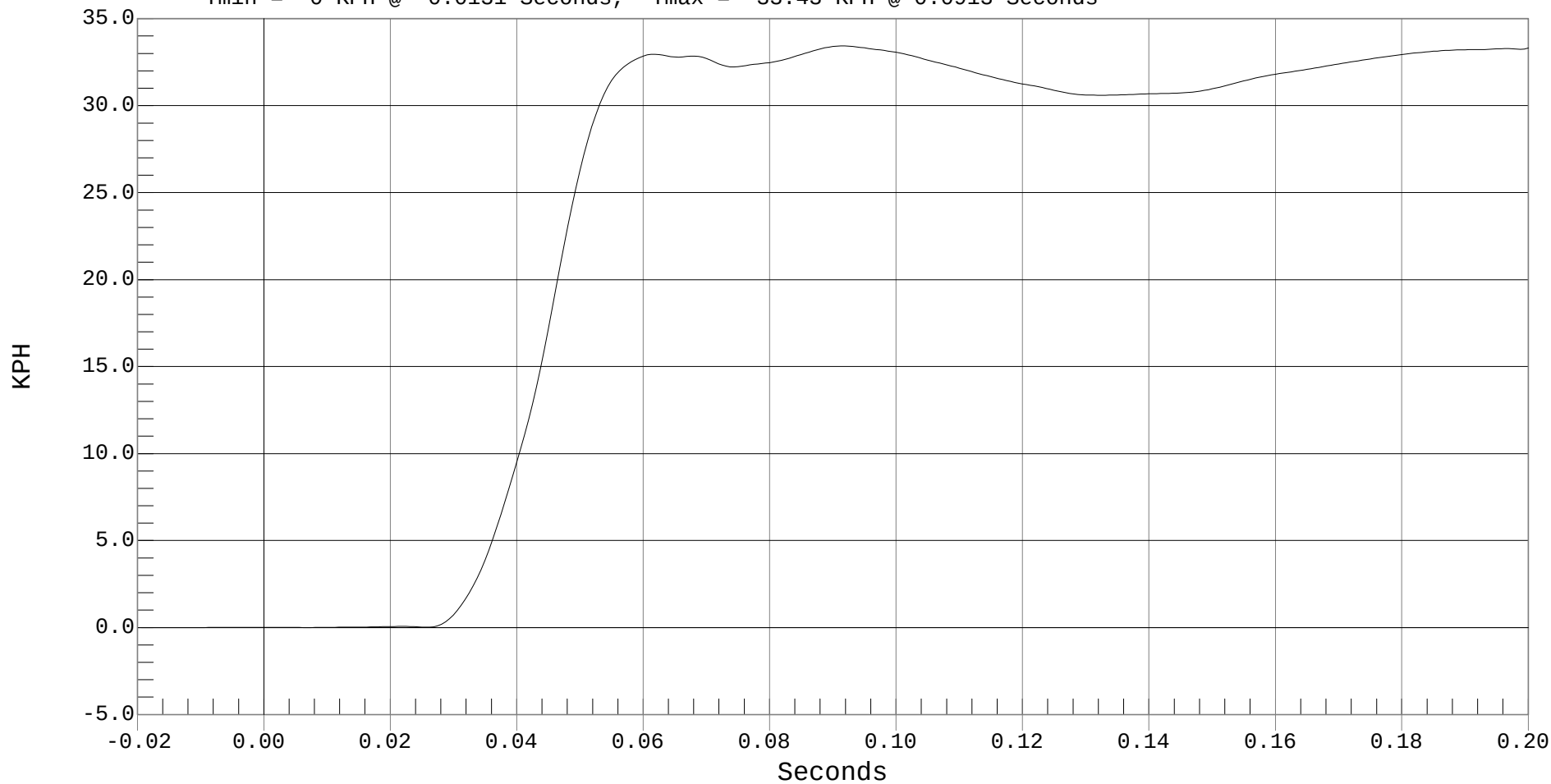
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Fir Filtered

— 1 DRIVER LOWER SPINE Y REDUNDANT VELOCITY, B01001FI.V43

Ymin = 0 KPH @ -0.0131 Seconds, Ymax = 33.43 KPH @ 0.0913 Seconds





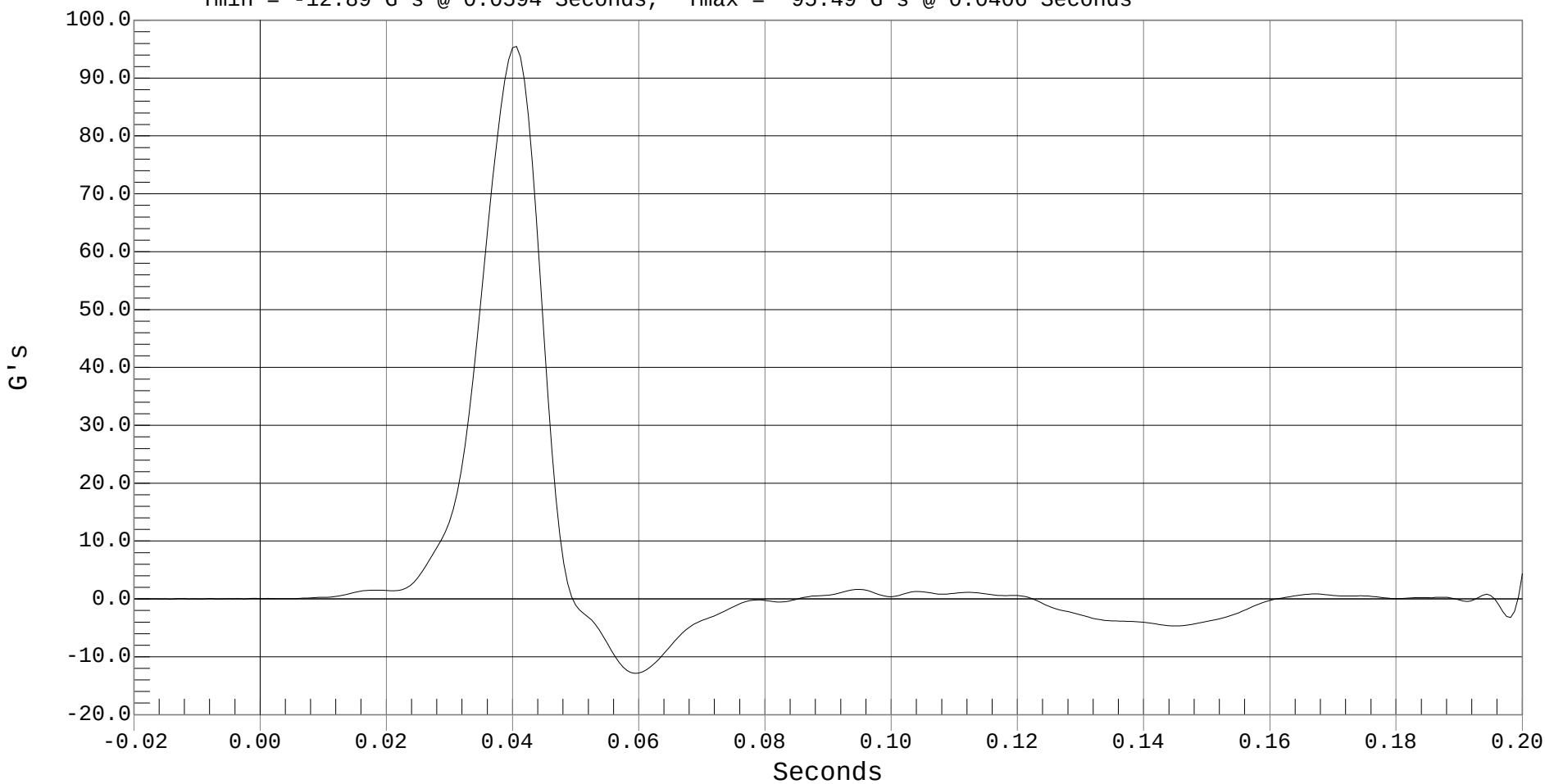
DRIVER PELVIS REDUNDANT Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Fir Filtered

— 1 DRIVER PELVIS Yr, B01001FI.R44

Ymin = -12.89 G's @ 0.0594 Seconds, Ymax = 95.49 G's @ 0.0406 Seconds





DRIVER PELVIS REDUNDANT Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

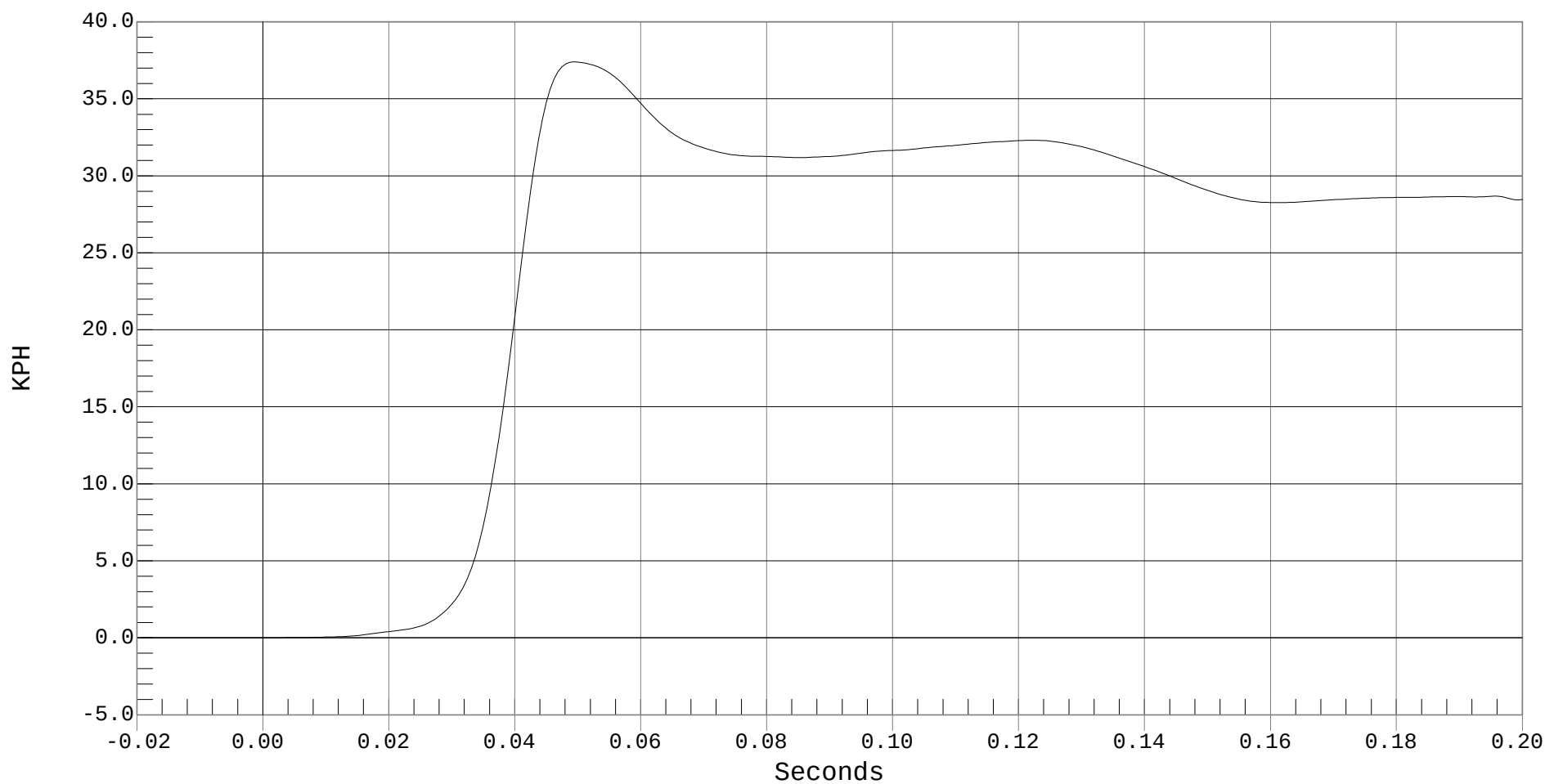
Other Info:

Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Fir Filtered

— 1 DRIVER PELVIS Y REDUNDANT VELOCITY, B01001FI.V44





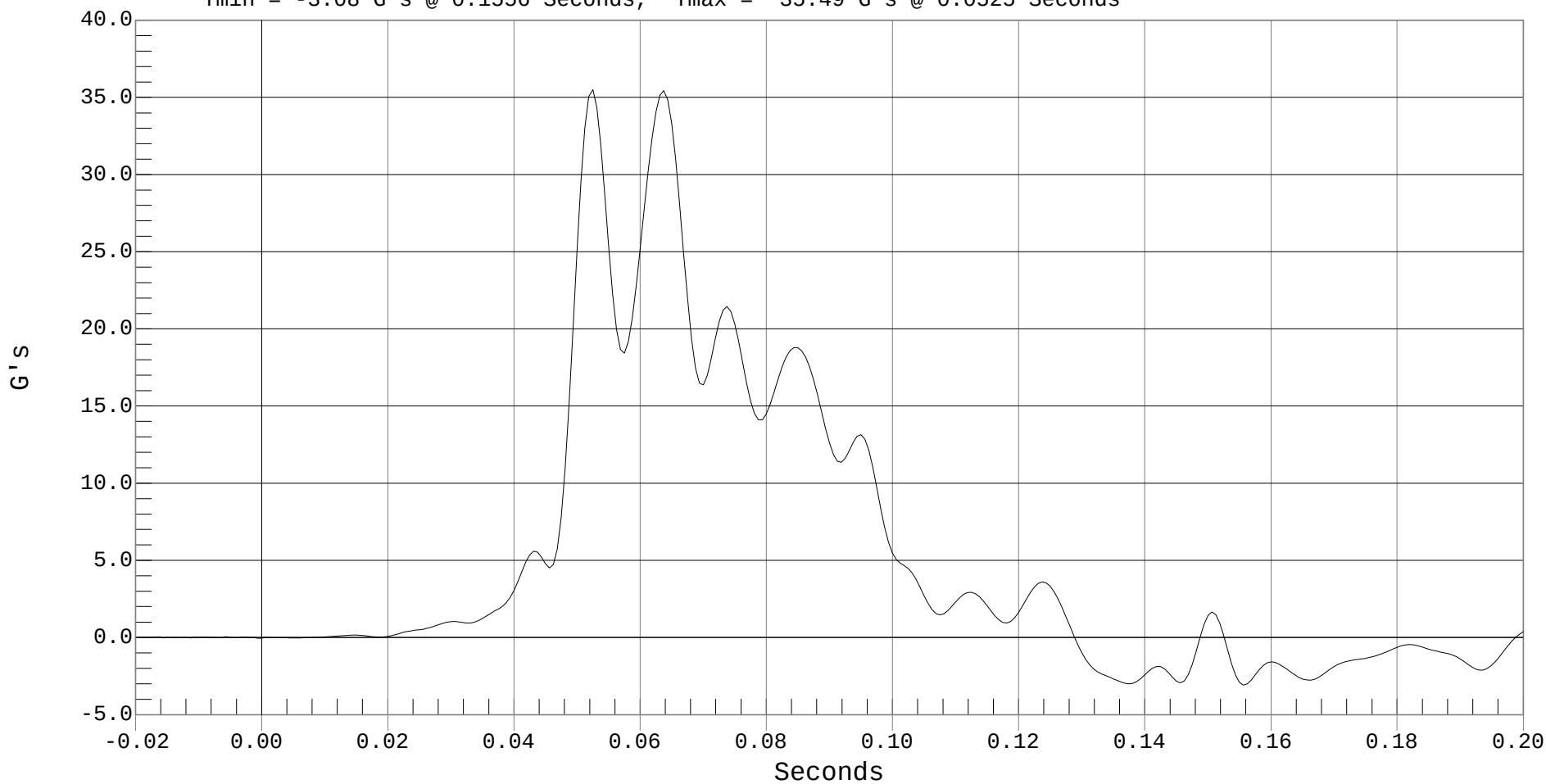
REAR PASSENGER UPPER RIB REDUNDANT Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Fir Filtered

— 1 PASSENGER UPPER RIB Yr, B01001FI.R45

Ymin = -3.08 G's @ 0.1556 Seconds, Ymax = 35.49 G's @ 0.0525 Seconds





REAR PASSENGER UPPER RIB REDUNDANT Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

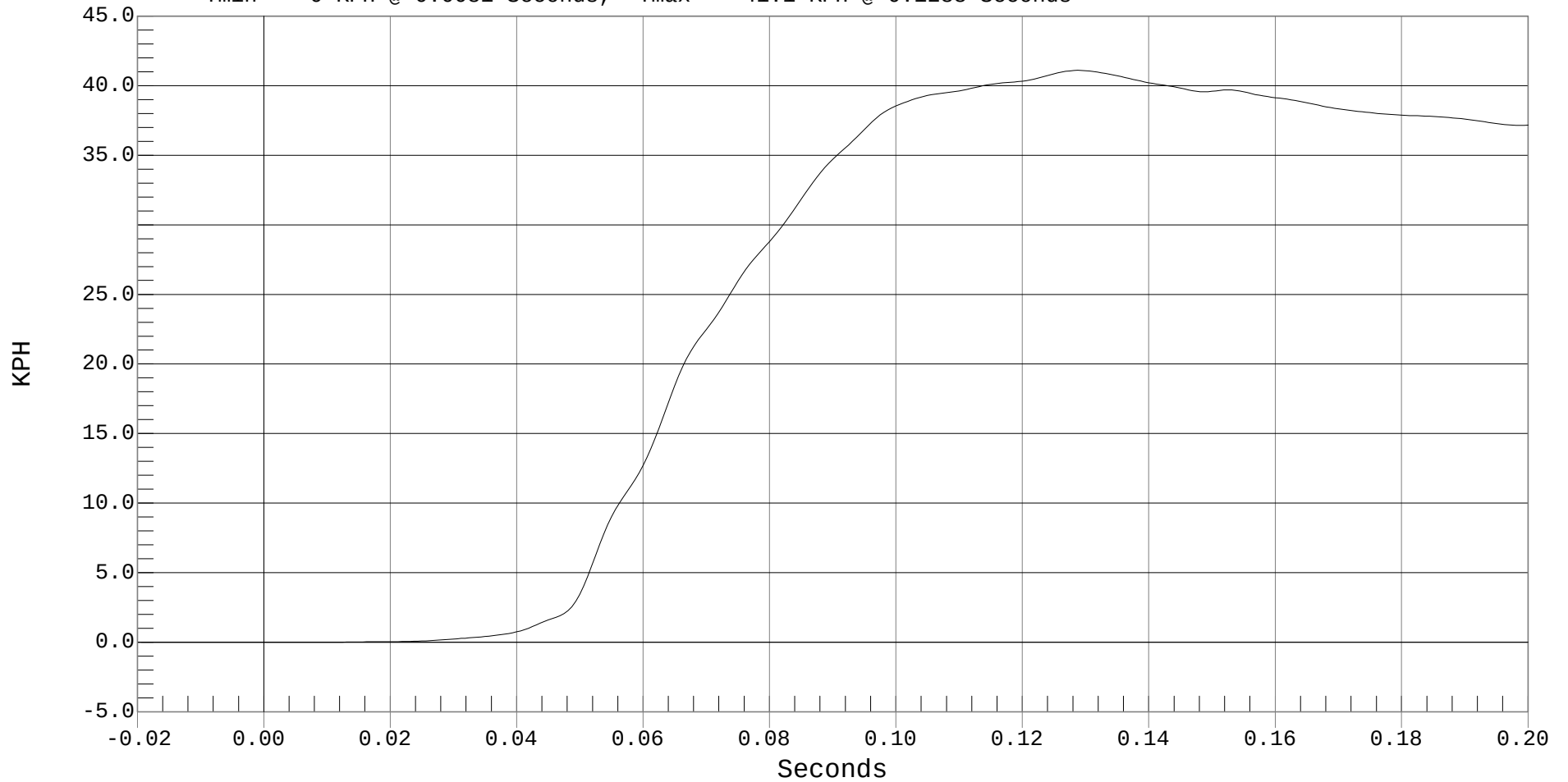
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Fir Filtered

— 1 REAR PASSENGER UPPER RIB Y REDUNDANT VELOCITY, B01001FI.V45

Ymin = 0 KPH @ 0.0081 Seconds, Ymax = 41.1 KPH @ 0.1288 Seconds





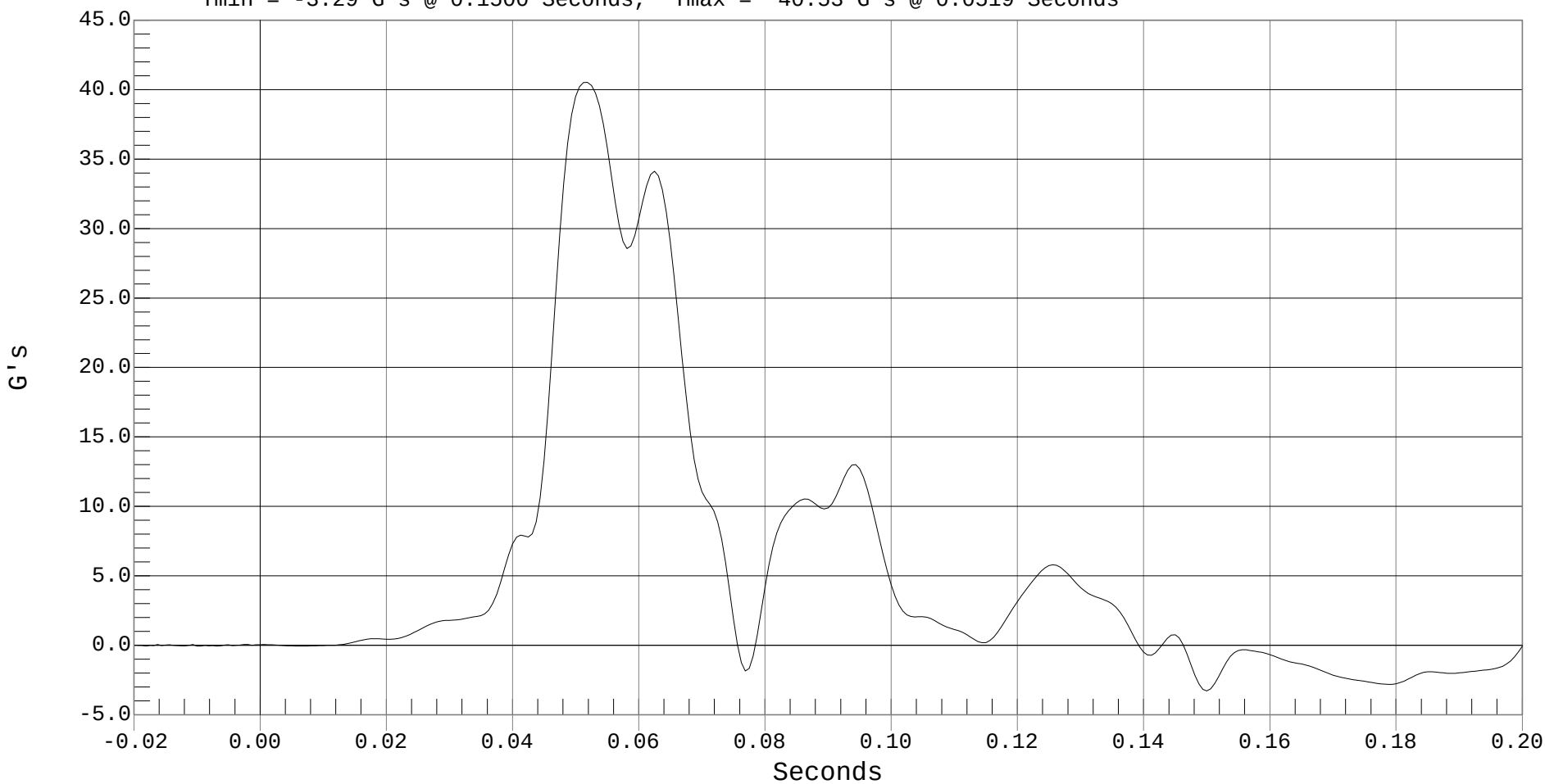
REAR PASSENGER LOWER RIB REDUNDANT Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Fir Filtered

— 1 PASSENGER LOWER RIB Yr, B01001FI.R46

Ymin = -3.29 G's @ 0.1500 Seconds, Ymax = 40.53 G's @ 0.0519 Seconds





REAR PASSENGER LOWER RIB REDUNDANT Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

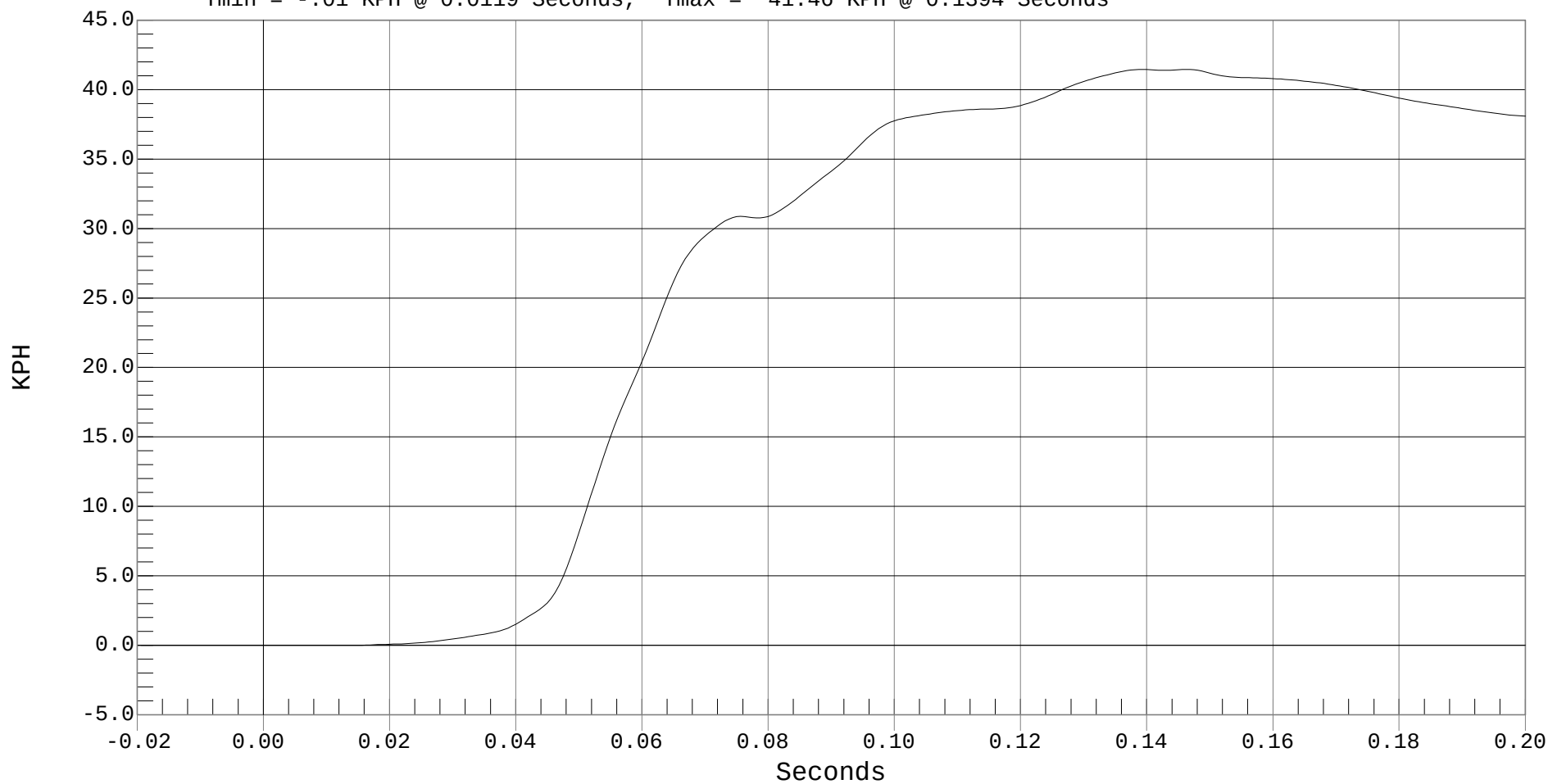
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Fir Filtered

— 1 REAR PASSENGER LOWER RIB Y REDUNDANT VELOCITY, B01001FI.V46

Ymin = -.01 KPH @ 0.0119 Seconds, Ymax = 41.46 KPH @ 0.1394 Seconds





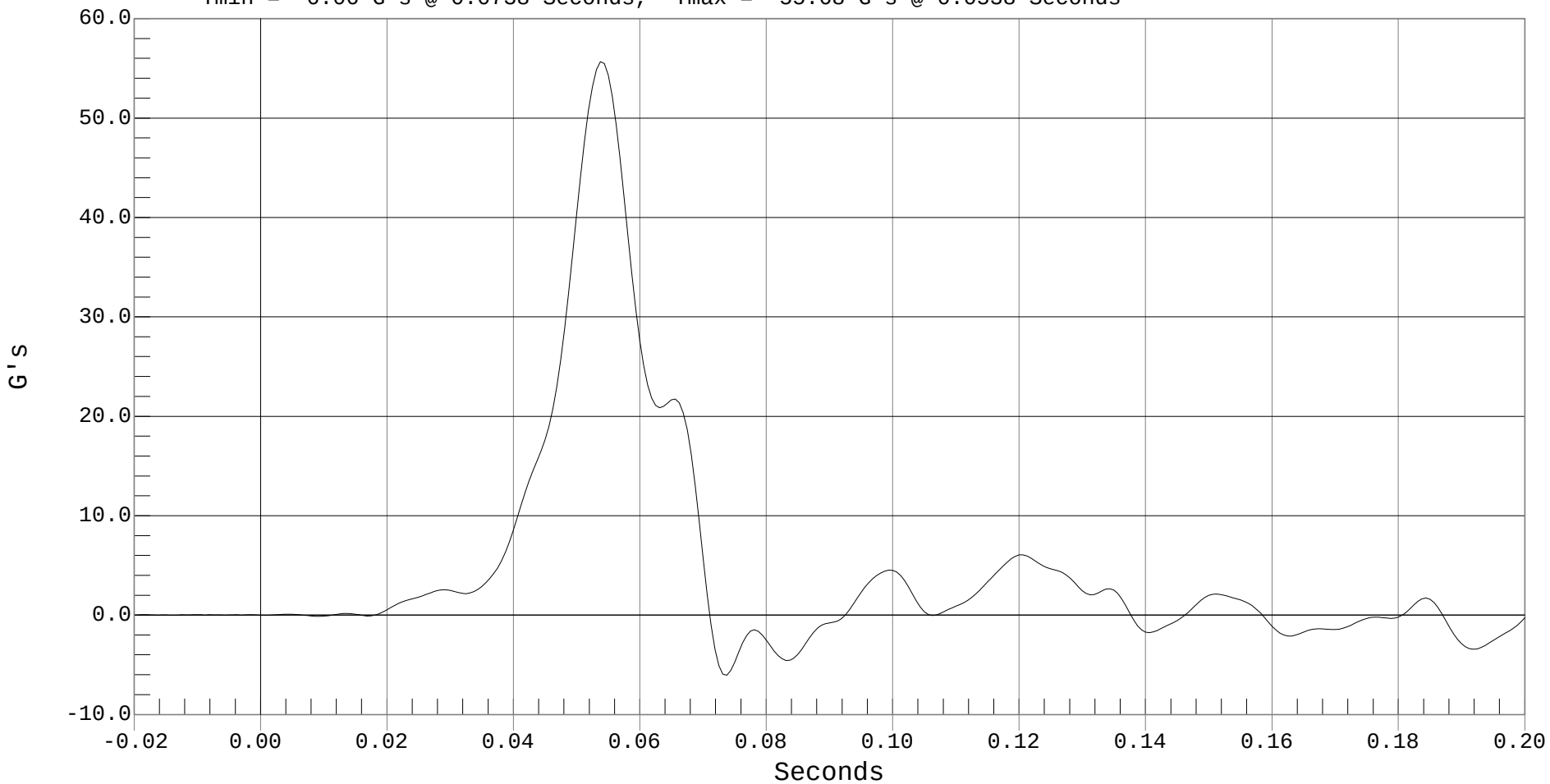
REAR PASSENGER LOWER SPINE REDUNDANT Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Fir Filtered

— 1 PASSENGER LOWER SPINE Yr, B01001FI.R47

Ymin = -6.06 G's @ 0.0738 Seconds, Ymax = 55.68 G's @ 0.0538 Seconds





REAR PASSENGER LOWER SPINE REDUNDANT Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Test Date: 01-03-01

Component: 2001 MAZDA TRIBUTE (C15402)

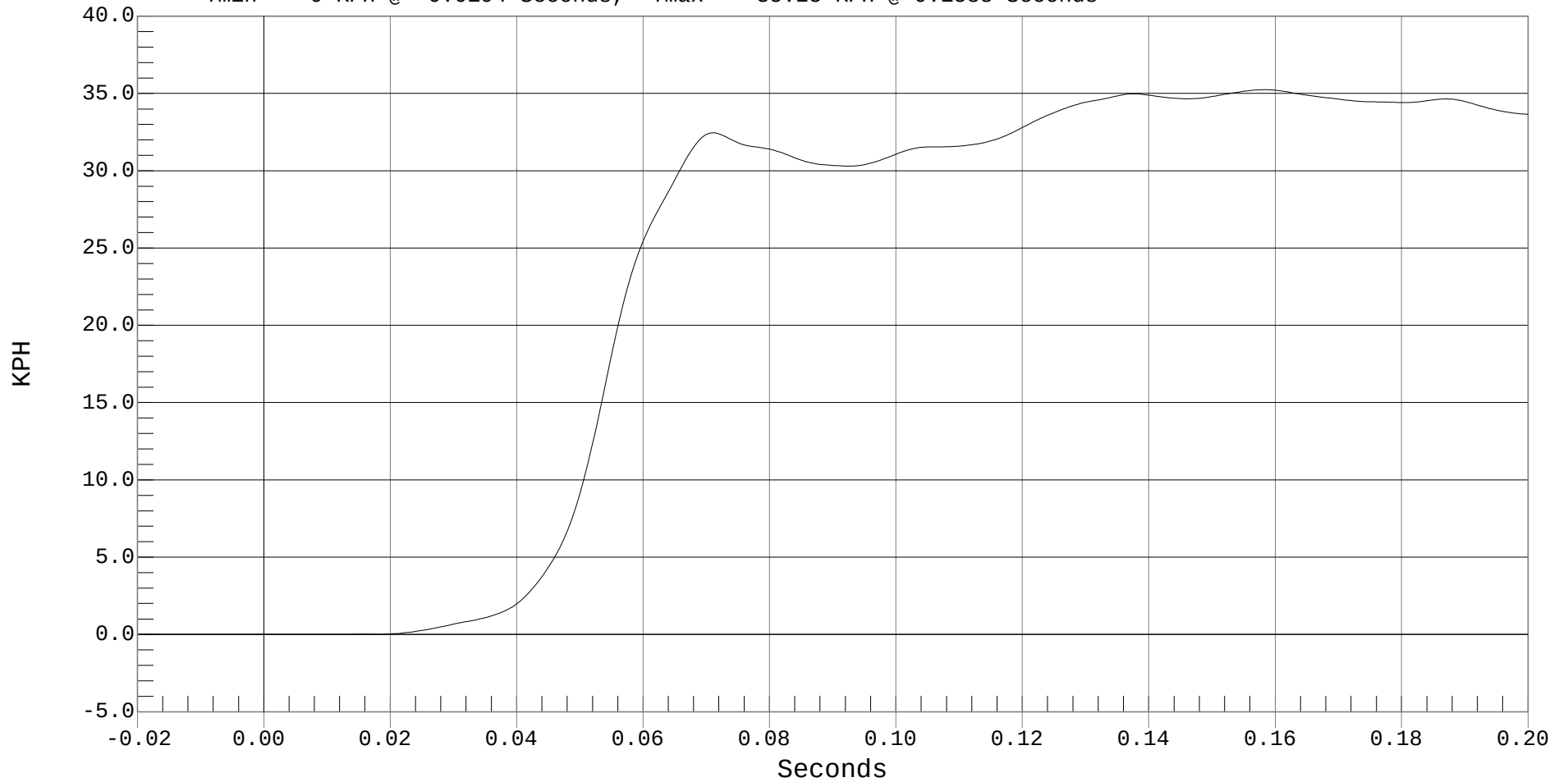
Speed: 38.5 MPH, 62.0 KPH

Other Info:

Fir Filtered

— 1 REAR PASSENGER LOWER SPINE Y REDUNDANT VELOCITY, B01001FI.V47

Ymin = 0 KPH @ -0.0194 Seconds, Ymax = 35.25 KPH @ 0.1588 Seconds





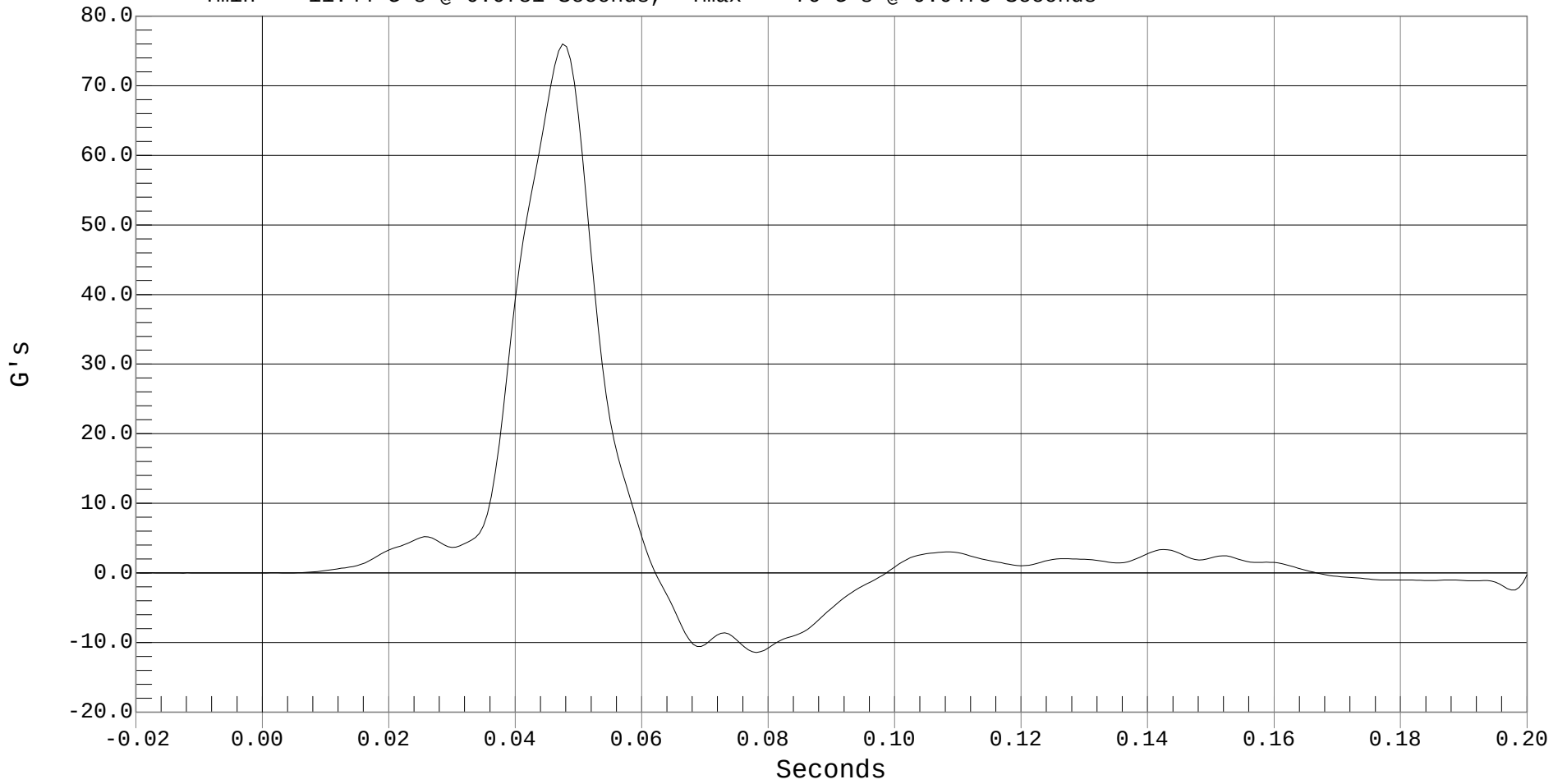
REAR PASSENGER PELVIS REDUNDANT Y ACCELERATION

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT
Component: 2001 MAZDA TRIBUTE (C15402)
Other Info:

Test Date: 01-03-01
Speed: 38.5 MPH, 62.0 KPH
Fir Filtered

— 1 PASSENGER PELVIS Yr, B01001FI.R48

Ymin = -11.44 G's @ 0.0781 Seconds, Ymax = 76 G's @ 0.0475 Seconds





REAR PASSENGER PELVIS REDUNDANT Y VELOCITY

Test Desc.: 90 DEGREE INDICANT SIDE IMPACT

Component: 2001 MAZDA TRIBUTE (C15402)

Other Info:

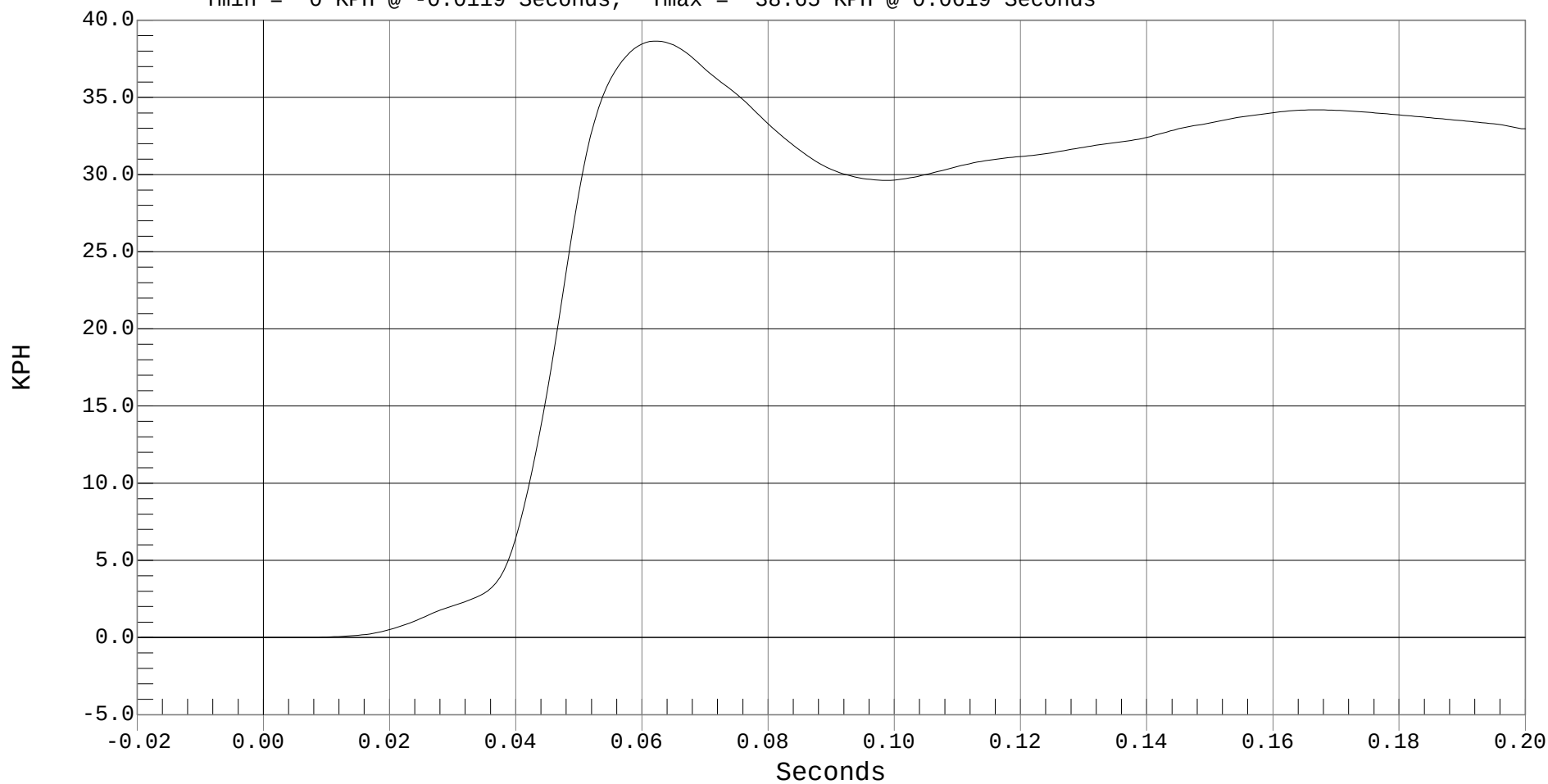
Test Date: 01-03-01

Speed: 38.5 MPH, 62.0 KPH

Fir Filtered

— 1 REAR PASSENGER PELVIS Y REDUNDANT VELOCITY, B01001FI.V48

Ymin = 0 KPH @ -0.0119 Seconds, Ymax = 38.65 KPH @ 0.0619 Seconds



APPENDIX C

SID CONFIGURATION AND PERFORMANCE VERIFICATION DATA

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

Report Date: 1/17/01

Technician: Tim Michnay

Calibration Date: 1/18/01

Test# D0103

Test Parameter	Specification	Dummy Serial Number: 049		Dummy Serial Number: 048	
		Pre-Test	Post-Test	Pre-Test	Post-Test
SH-Seated Height (mm)	889 – 909	900	900	903	903
RH-Rib Height (mm)	501 – 521	517	517	515	515
HP-Hip Pivot Height (mm)	99 ref.	99	99	99	99
RD-Rib from Back Line (mm)	229 – 241	234	234	238	238
KV-Knee Pivot from Back Line (mm)	511 – 526	522	522	521	521
SW-Knee Pivot to Floor (mm)	490 – 505	492	492	493	493
HW-Hip Width (mm)	356 - 391	369	369	365	365
Thorax Impact					
Temperature (°C)	18.9 – 25.5	21.2	21.2	21.3	21.2
Relative Humidity (%)	10 – 70	18	25	18	26
Probe Speed (m/s)	4.27 – 4.33	4.31	4.30	4.27	4.28
Upper Rib (g's)	37 – 46	41	38	43	38
Lower Rib (g's)	37 – 46	41	41	39	39
Lower Spine (g's)	15 – 22	21	20	20	21
Pelvis Impact					
Temperature (°C)	18.9 – 25.5	21.2	21.2	21.3	21.2
Relative Humidity (%)	10 – 70	18	25	18	26
Probe Speed (m/s)	4.27 – 4.33	4.31	4.30	4.28	4.30
Pelvis (g's)	40 - 60	47	48	49	53

REMARKS:

CERTIFICATION DATA

Dummy Serial Number: 049

Calibration Test Results Summary

Dummy Serial Number: 049

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: 049
 Date of Verification: 12/22/00
 Test Number: D00159

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH-Seated Height (mm)	889 – 909	900
RH-Rib Height (mm)	501 – 521	517
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	522
SW-Knee Pivot to Floor (mm)	490 – 505	492
HW – Hip Width (mm)	356 – 391	369

Technician: _____

Approved By:_____

MGA RESEARCH CORPORATION

HEAD DROP TEST

SIDE IMPACT DUMMY (SID)

Date: 12/22/00

Dummy Serial Number: 049

Test Number: D001591

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 - 25.5	21.0
Relative Humidity (%)	10 - 70	16
Peak Resultant Acceleration	210 - 260 g's	218
Peak Lateral Acceleration	< 10 g's	-7
Time Above 100 g.	0.9 - 1.5 msec.	1.2

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



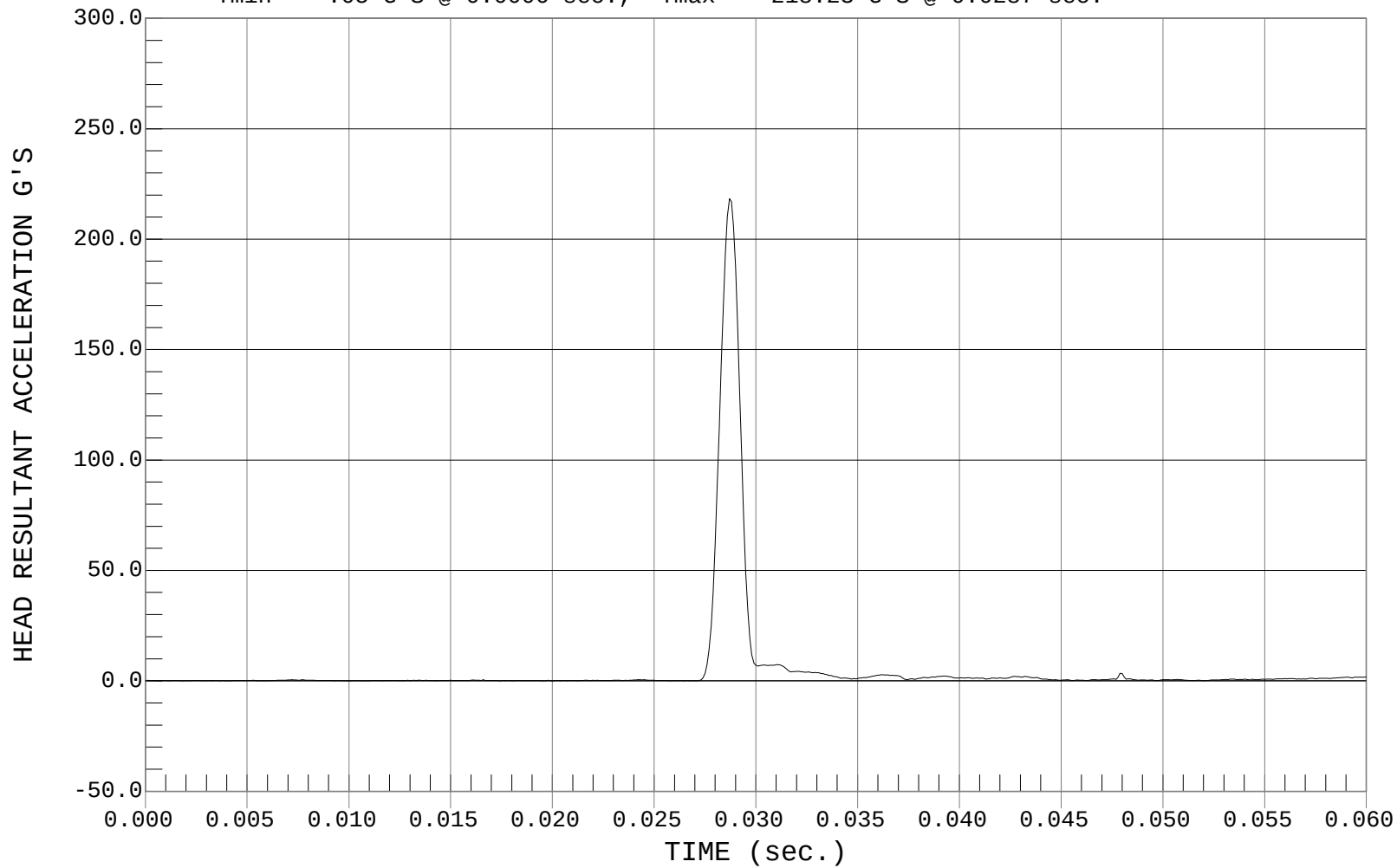
PEAK RESULTANT ACCELERATION

Test Desc.: Dummy Calibration - Head Drop
Component: Dummy #049

Test Date: 12-22-00
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 HEAD RESULTANT ACCELERATION, D00591av.a01

Ymin = .05 G'S @ 0.0006 sec., Ymax = 218.23 G'S @ 0.0287 sec.





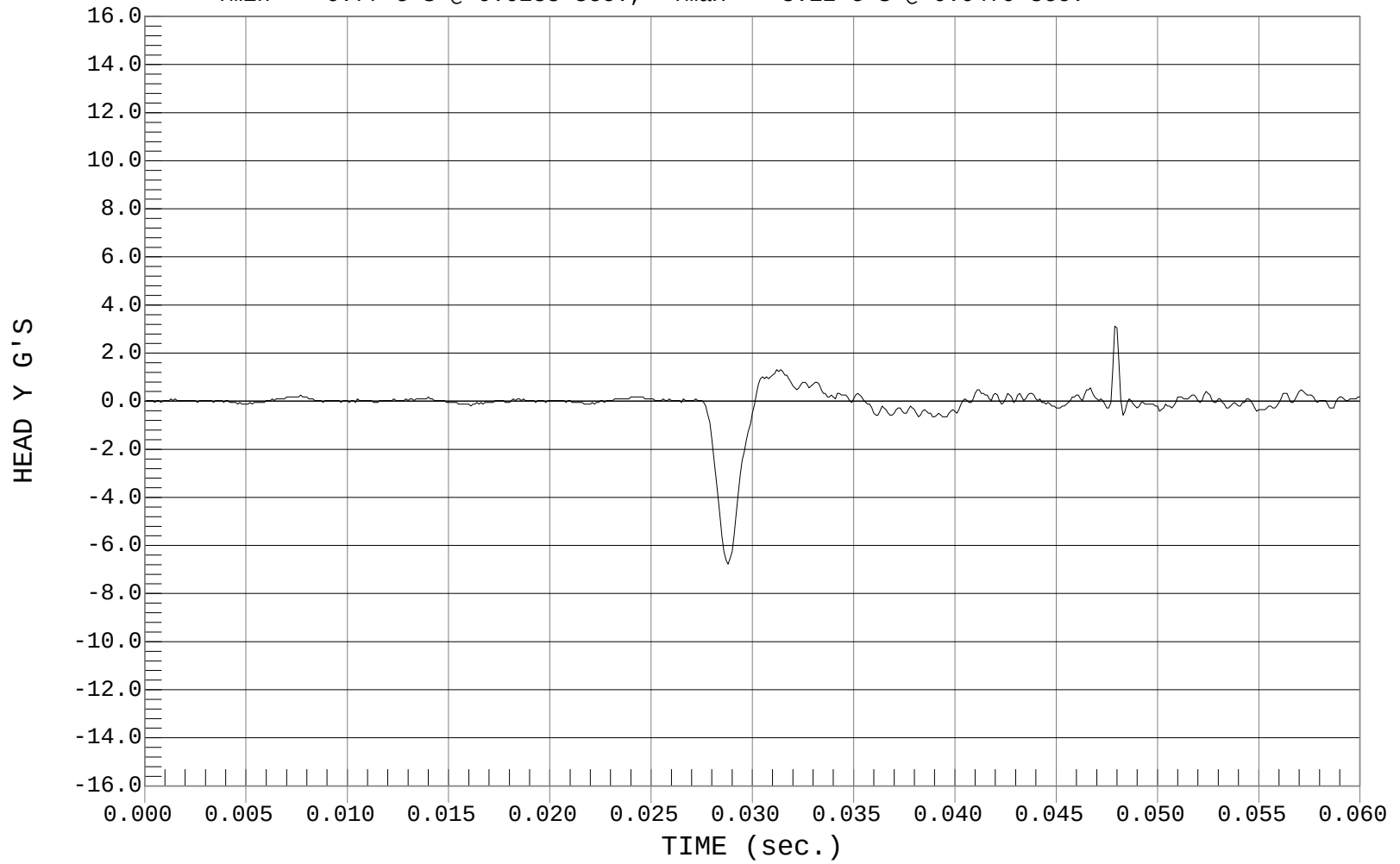
PEAK LATERAL ACCELARATION

Test Desc.: Dummy Calibration - Head Drop
Component: Dummy #049

Test Date: 12-22-00
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 HEAD Y, D00591AR.A02

Ymin = -6.77 G'S @ 0.0288 sec., Ymax = 3.12 G'S @ 0.0479 sec.



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

Date: 12/21/00

Dummy Serial Number: 049

Test Number: D001592

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.2
Relative Humidity (%)	10 – 70	18
Probe Speed (m/s)	4.27 – 4.33	4.31
Upper Rib (g's)	37 – 46	41
Lower Rib (g's)	37 – 46	41
Lower Spine (g's)	15 - 22	21

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



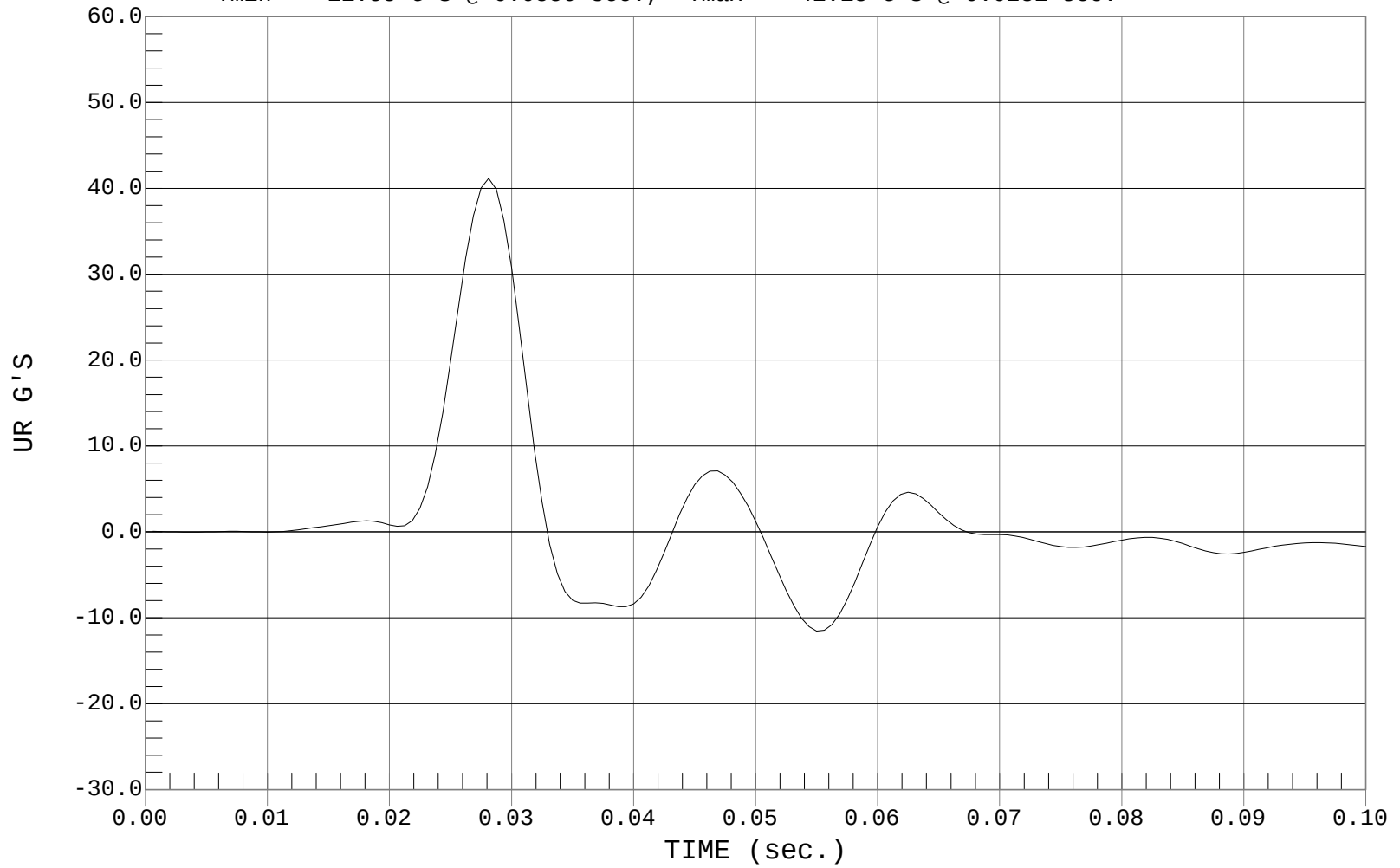
UPPER RIB ACCELERATION

Test Desc.: Dummy Calibration - Thorax Impact
Component: Dummy #049

Test Date: 12-21-00
Speed: 14.15 FT/SEC, 4.31 M/SEC

— 1 UR, D00592FI.R08

Ymin = -11.55 G'S @ 0.0550 sec., Ymax = 41.18 G'S @ 0.0281 sec.





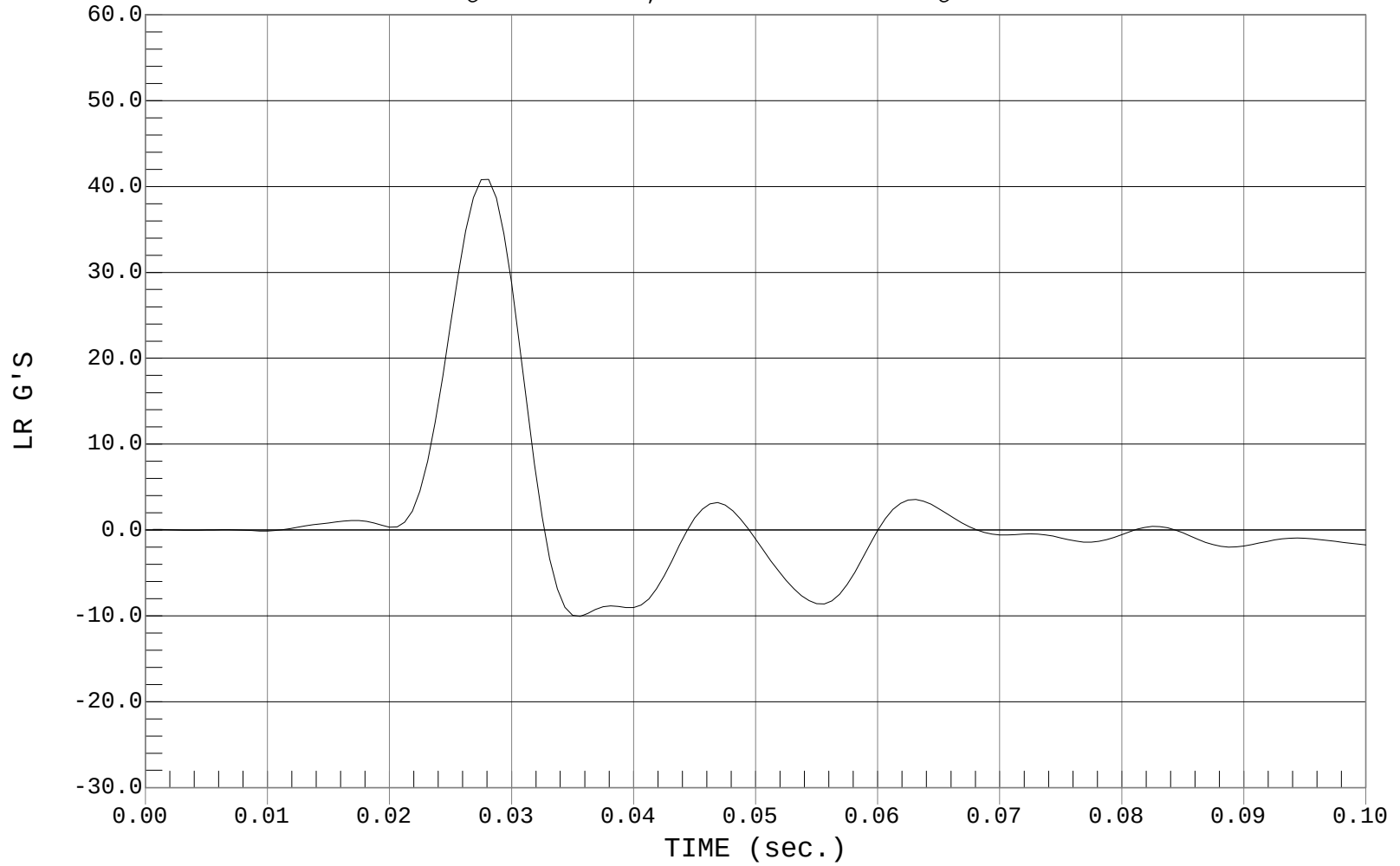
LOWER RIB ACCELERATION

Test Desc.: Dummy Calibration - Thorax Impact
Component: Dummy #049

Test Date: 12-21-00
Speed: 14.15 FT/SEC, 4.31 M/SEC

— 1 LR, D00592FI.R09

Ymin = -10.06 G'S @ 0.0356 sec., Ymax = 40.82 G'S @ 0.0281 sec.





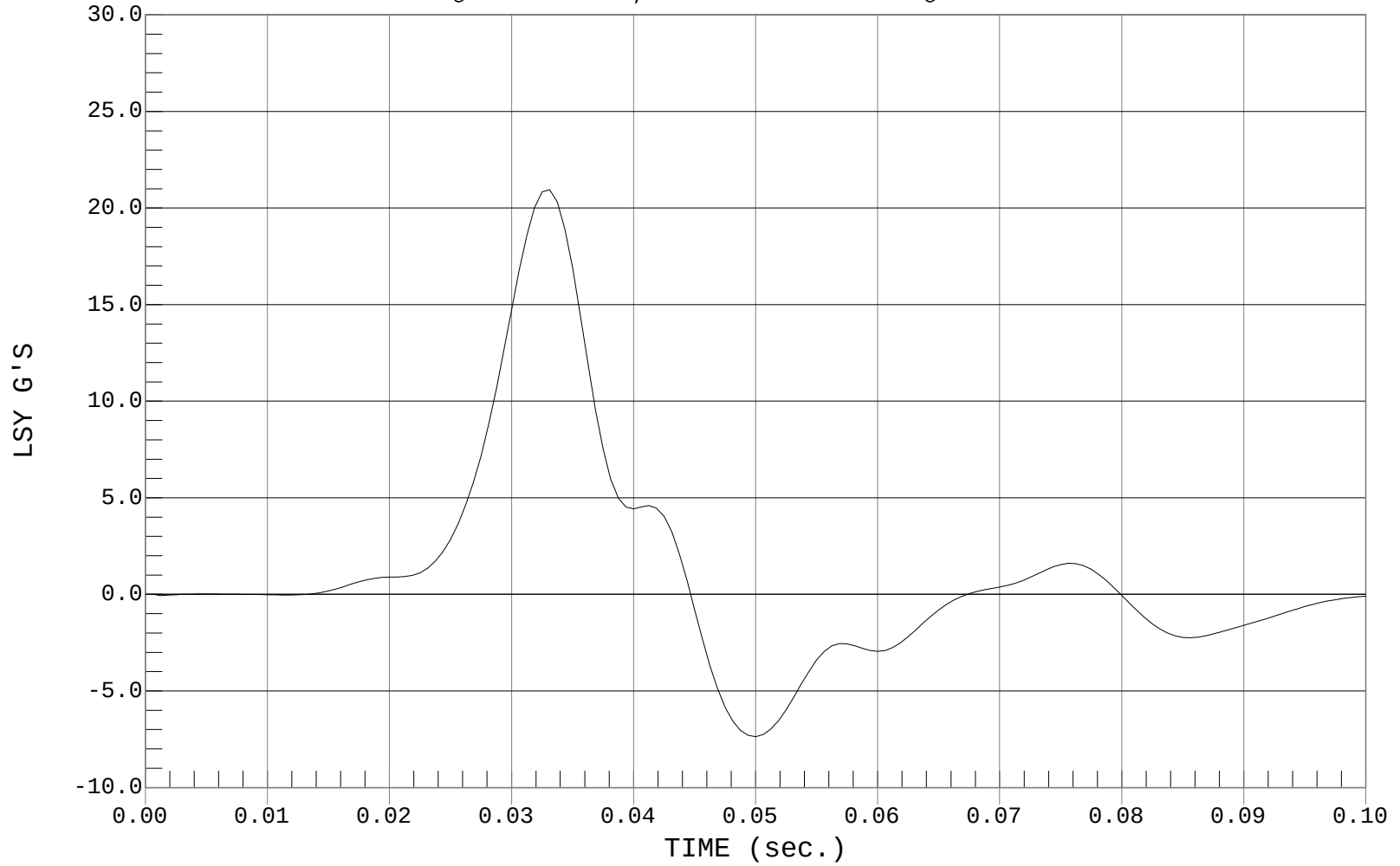
LOWER SPINE ACCELERATION

Test Desc.: Dummy Calibration - Thorax Impact
Component: Dummy #049

Test Date: 12-21-00
Speed: 14.15 FT/SEC, 4.31 M/SEC

— 1 LSY, D00592FI.R10

Ymin = -7.36 G'S @ 0.0500 sec., Ymax = 20.95 G'S @ 0.0331 sec.



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

Date: 12/21/00

Dummy Serial Number: 049

Test Number: D001593

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.2
Relative Humidity (%)	10 – 70	18
Probe Speed (m/s)	4.27 – 4.33	4.31
Pelvis Acceleration (g's)	40 – 60	47

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



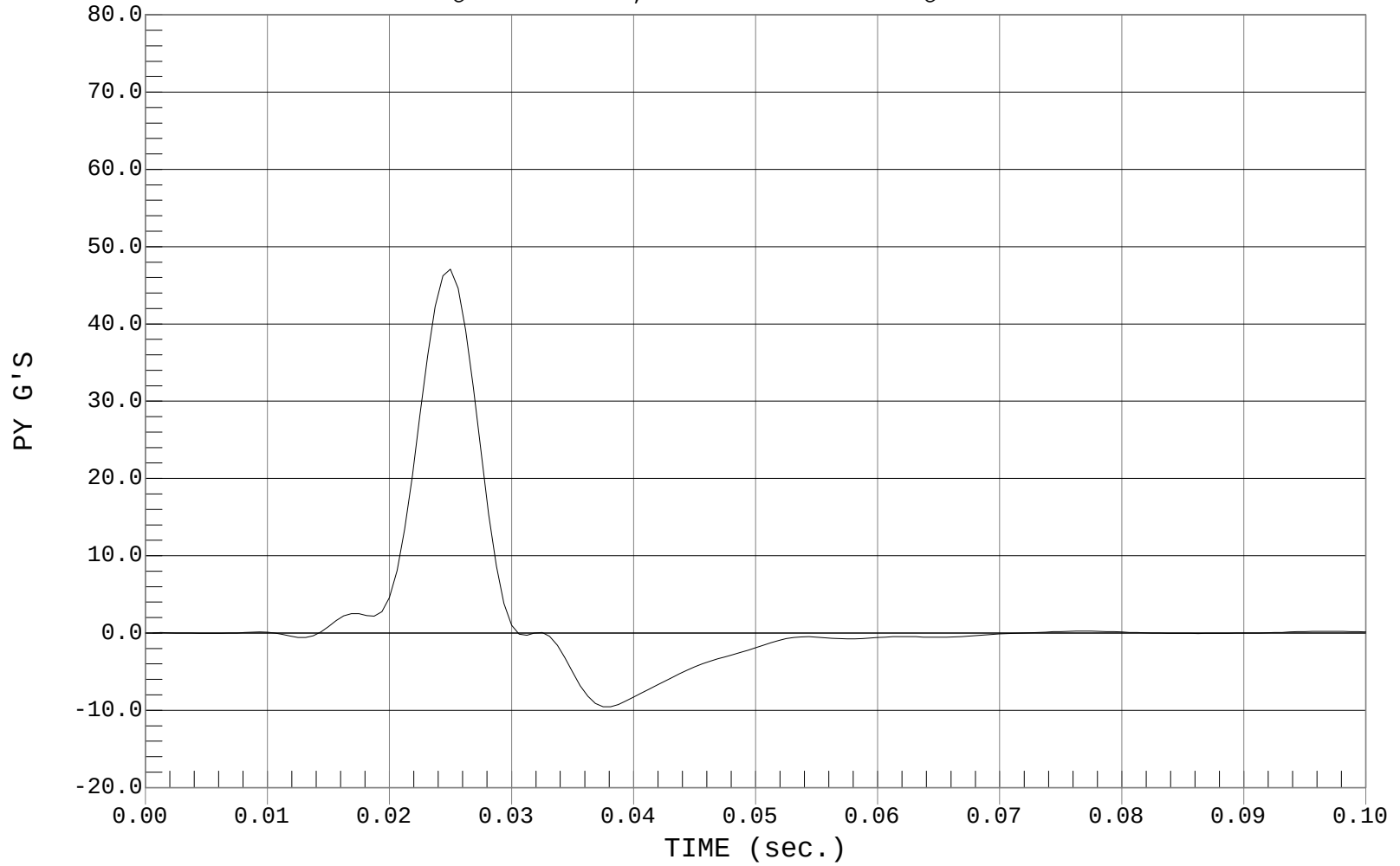
PELVIS ACCELERATION

Test Desc.: Dummy Calibration - Pelvis Impact
Component: Dummy #049

Test Date: 12-21-00
Speed: 14.15 FT/SEC, 4.31 M/SEC

— 1 PY, D00593FI.R11

Ymin = -9.53 G'S @ 0.0381 sec., Ymax = 47.09 G'S @ 0.0250 sec.



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

Date: 12/21/00

Dummy Serial Number: 049

Test Number: D001594

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.4
Relative Humidity (%)	10 – 70	18
Force @ 12.7 mm	104 – 162	142
Force @ 19 mm	163 – 222	195
Force @ 25.4 mm	222 – 280	255
Force @ 33 mm	325 - 391	336

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



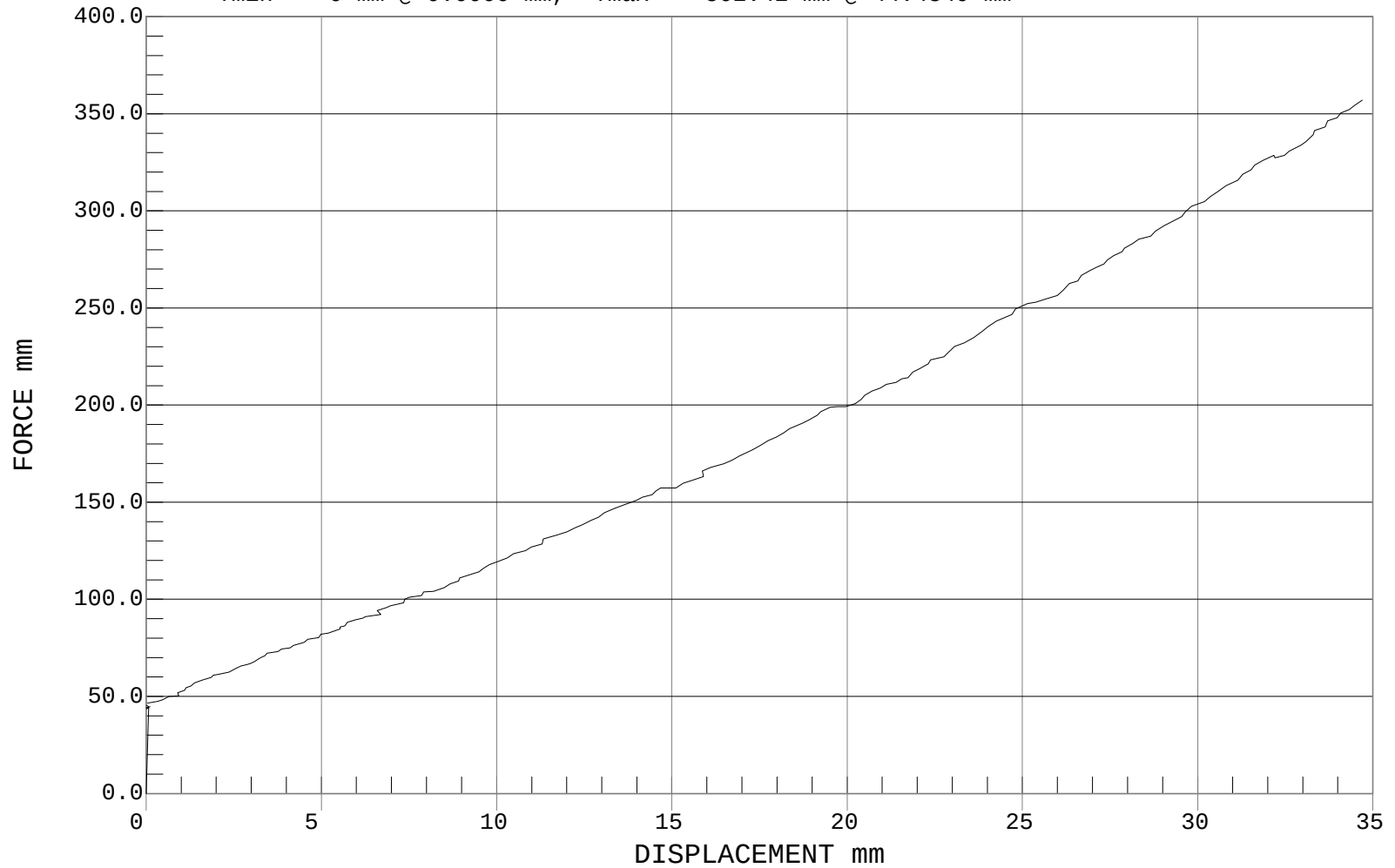
ABDOMEN COMPRESSION

Test Desc.: DUMMY CALIBRATION - ABDOMEN COMPRESSION
Component: DUMMY # 049

Test Date: 12-21-00
Speed: 0.00 FT/SEC, 0.00 M/SEC

1 FORCE, D00594FC.F16

Ymin = 0 mm @ 0.0000 mm, Ymax = 502.42 mm @ 44.4849 mm



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

Date: 12/21/00

Dummy Serial Number: 049

Test Number: D001595

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.6
Relative Humidity (%)	10 – 70	18
Force @ 0°	0 – 26.7	0
Force @ 20°	97.9 – 151.2	98.5
Force @ 30°	151.2 – 204.6	166.7
Force @ 40°	204.6 – 258.0	234.6
Return Angle	12° maximum	6

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



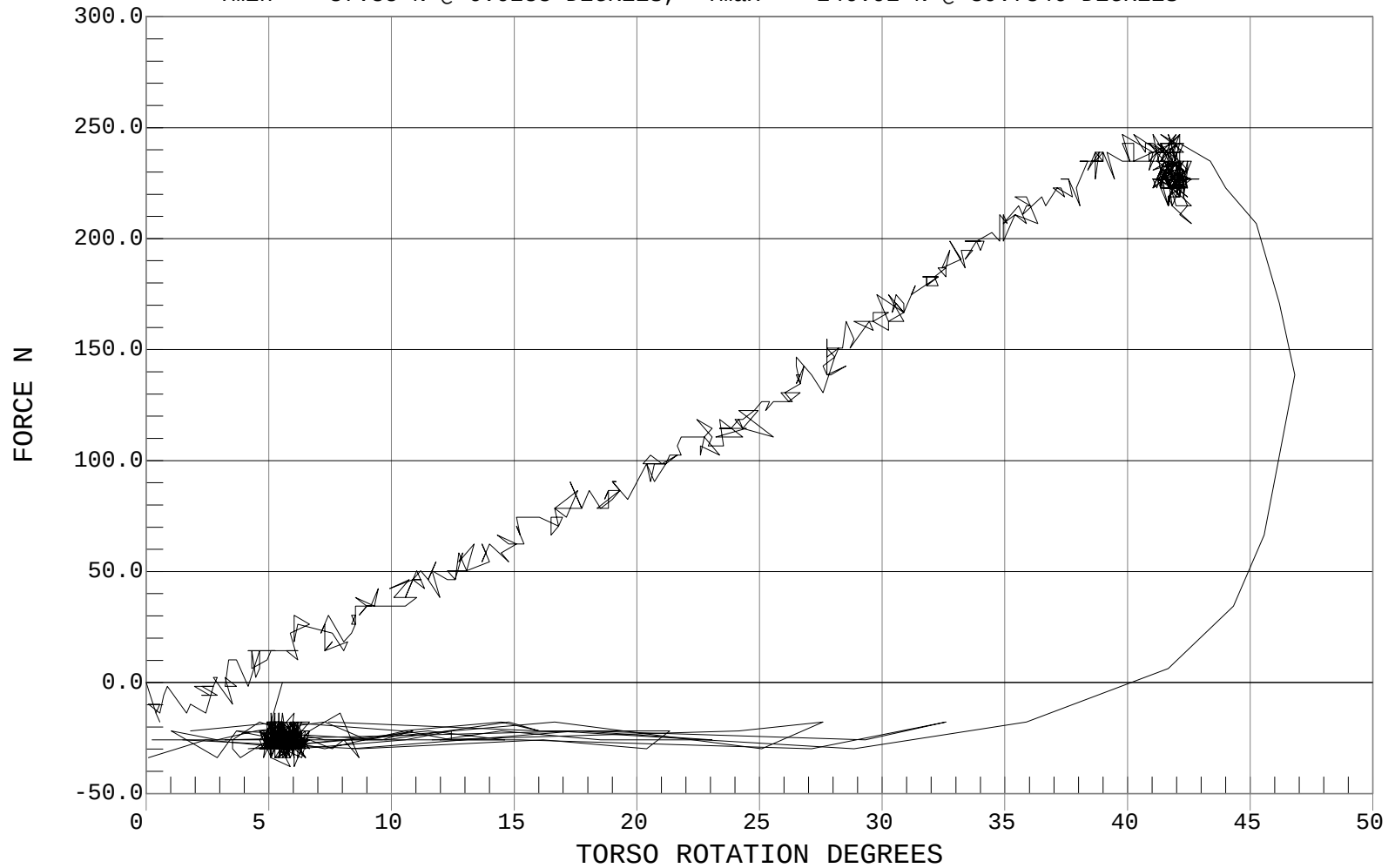
LUMBAR FLEXION

Test Desc.: DUMMY CALIBRATION - LUMBAR FLEXION
Component: DUMMY # 049

Test Date: 12-21-00
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 FORCE, D00595FC.F14

Ymin = -37.85 N @ 6.0288 DEGREES, Ymax = 246.92 N @ 39.7846 DEGREES



DUMMY INSPECTION CHECKLIST

Type: Side Impact Dummy

Dummy Serial Number: 049

Inspected By: Tim Michnay

Date: 12/22/00

<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: 048

Calibration Test Results Summary

Dummy Serial Number: 048

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: 048
 Date of Verification: 12/22/00
 Test Number: D00158

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH-Seated Height (mm)	889 – 909	903
RH-Rib Height (mm)	501 – 521	515
HP-Hip Pivot Height (mm)	99 ref.	99
RD-Rib From Back Line (mm)	229 - 241	238
KV-Knee Pivot From Back Line (mm)	511 – 526	521
SW-Knee Pivot to Floor (mm)	490 – 505	493
HW – Hip Width (mm)	356 – 391	365

Technician: _____

Approved By: _____

MGA RESEARCH CORPORATION

HEAD DROP TEST

SIDE IMPACT DUMMY (SID)

Date: 12/22/00

Dummy Serial Number: 048

Test Number: D001581

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 - 25.5	20.9
Relative Humidity (%)	10 - 70	13
Peak Resultant Acceleration	210 - 260 g's	213
Peak Lateral Acceleration	< 10 g's	-3
Time Above 100 g.	0.9 - 1.5 msec.	1.2

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



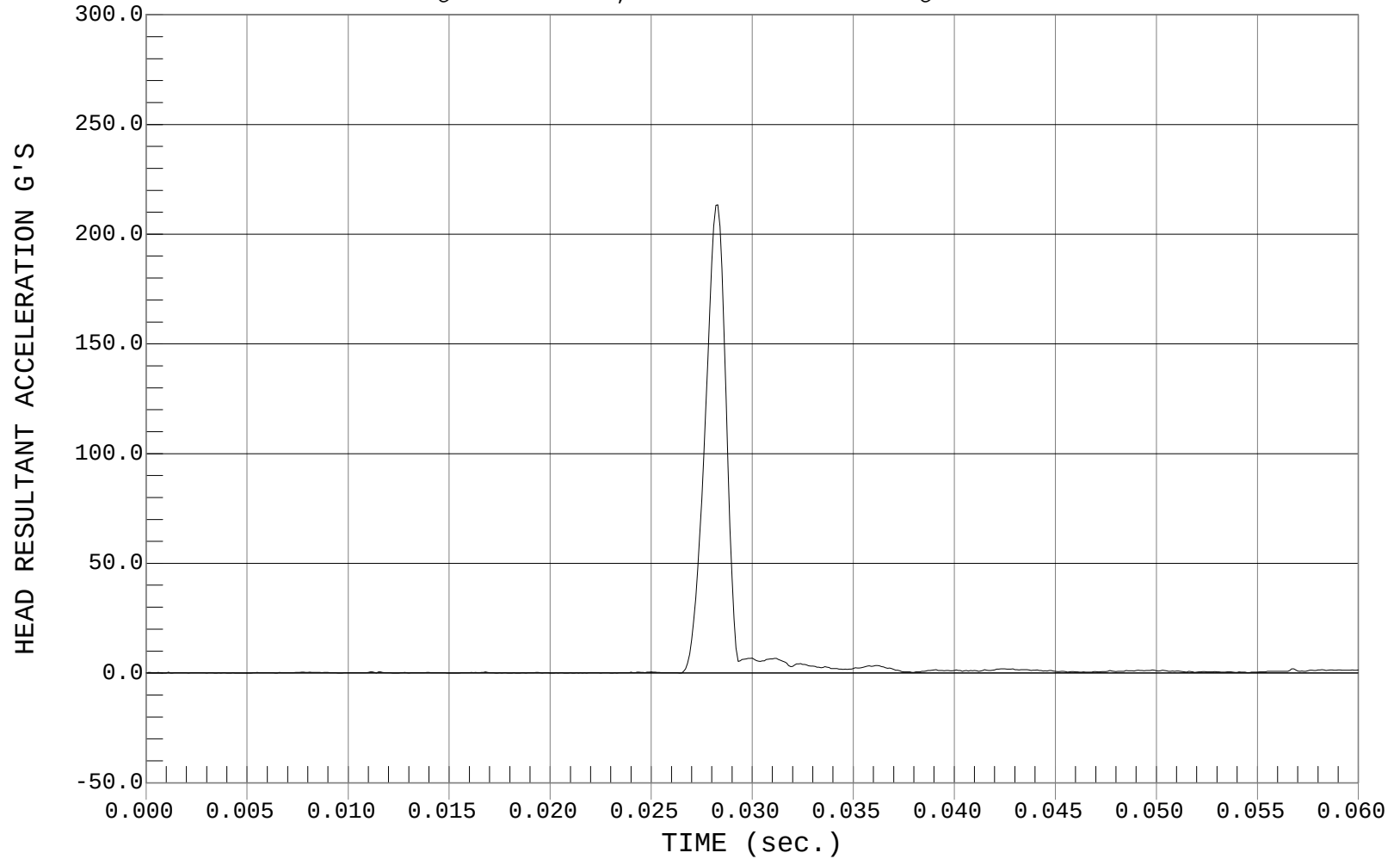
PEAK RESULTANT ACCELERATION

Test Desc.: Dummy Calibration - Head Drop
Component: Dummy #048

Test Date: 12-22-00
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 HEAD RESULTANT ACCELERATION, D00581av.a01

Ymin = .04 G'S @ 0.0010 sec., Ymax = 213.38 G'S @ 0.0283 sec.





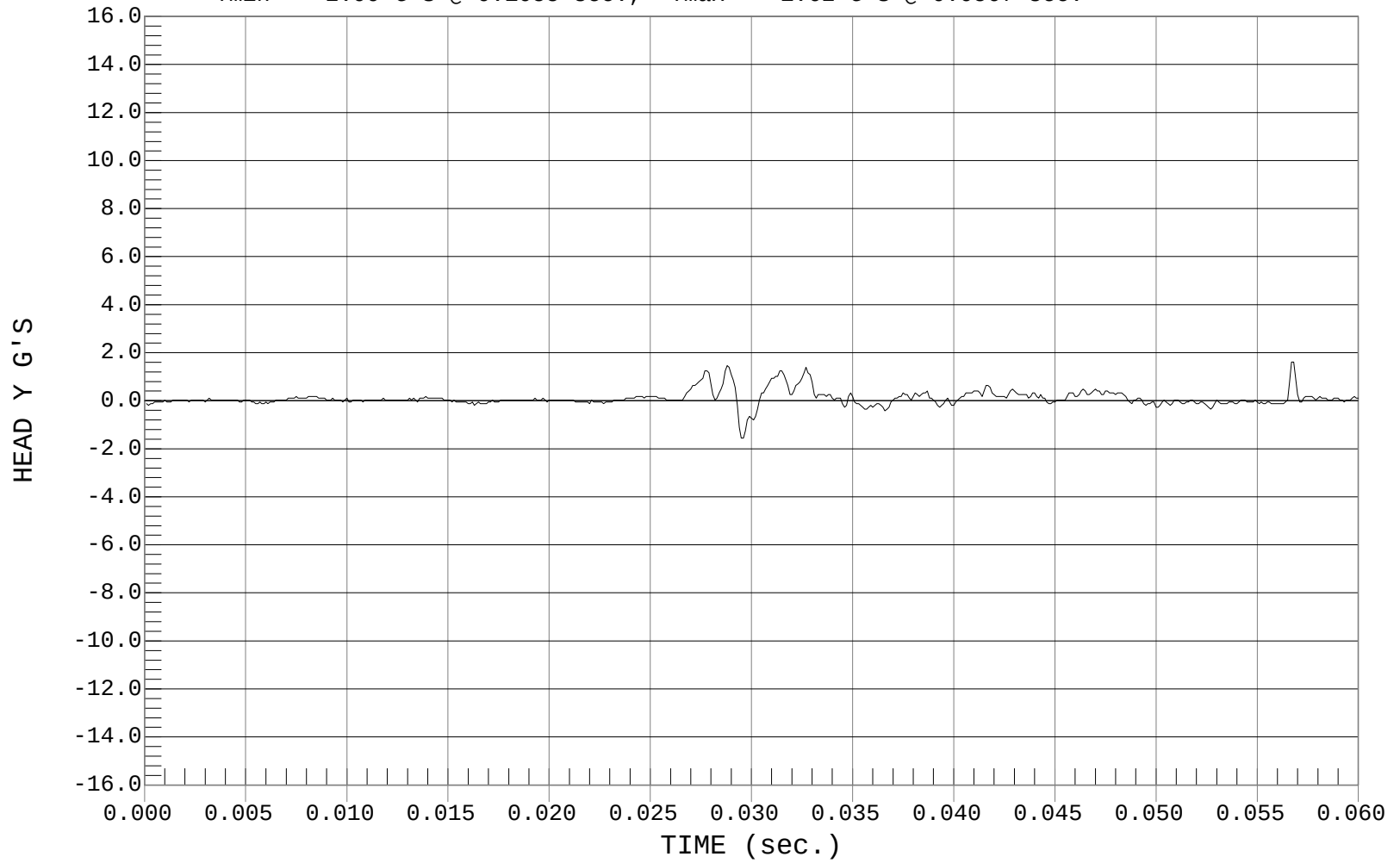
PEAK LATERAL ACCELARATION

Test Desc.: Dummy Calibration - Head Drop
Component: Dummy #048

Test Date: 12-22-00
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 HEAD Y, D00581AR.A02

Ymin = -2.99 G'S @ 0.1055 sec., Ymax = 1.62 G'S @ 0.0567 sec.



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

Date: 12/21/00

Dummy Serial Number: 048

Test Number: D001582

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.3
Relative Humidity (%)	10 – 70	18
Probe Speed (m/s)	4.27 – 4.33	4.27
Upper Rib (g's)	37 – 46	43
Lower Rib (g's)	37 – 46	39
Lower Spine (g's)	15 - 22	20

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



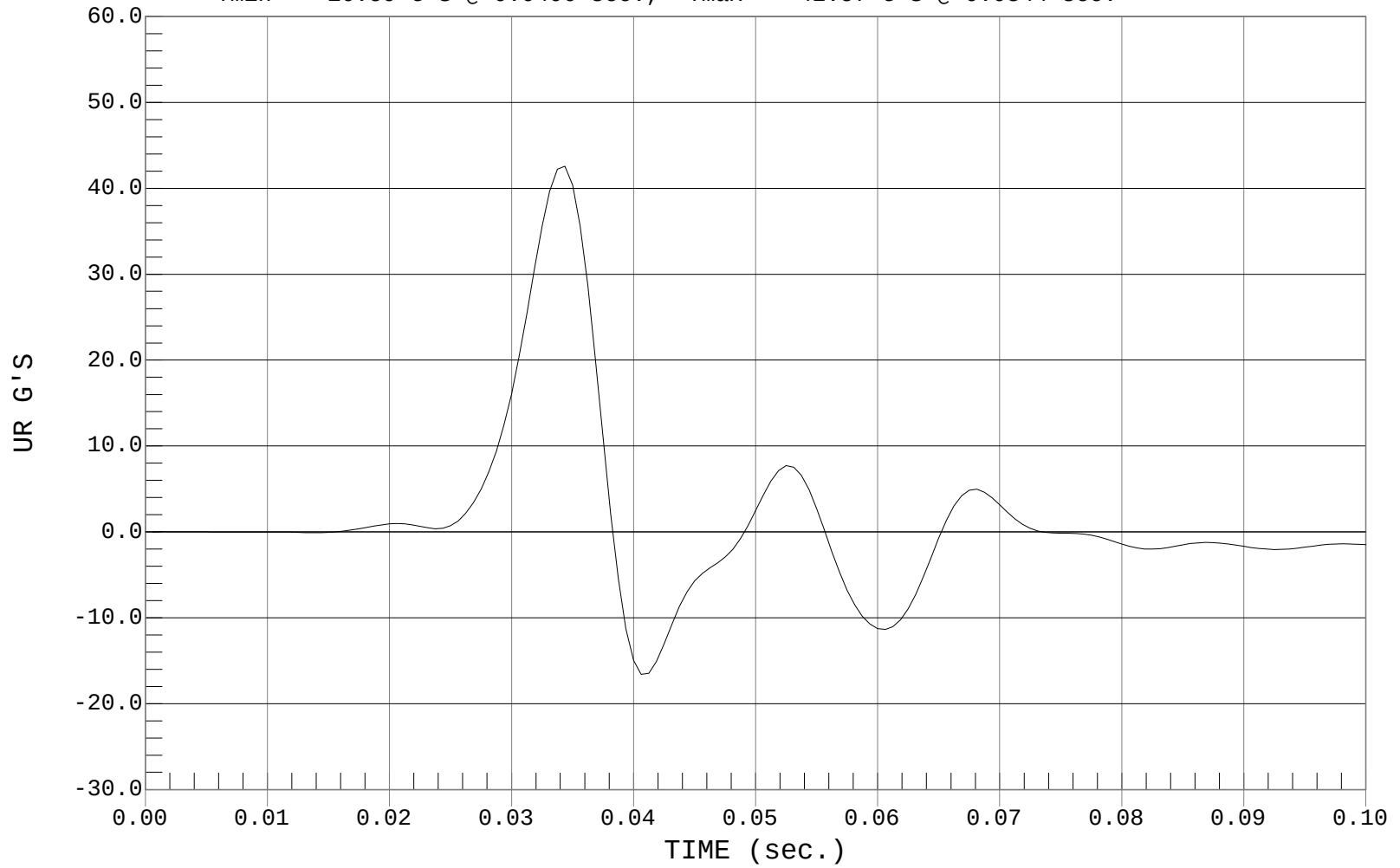
UPPER RIB ACCELERATION

Test Desc.: Dummy Calibration - Thorax Impact
Component: Dummy #048

Test Date: 12-21-00
Speed: 14.01 FT/SEC, 4.27 M/SEC

— 1 UR, D00582FI.R08

Ymin = -16.59 G'S @ 0.0406 sec., Ymax = 42.57 G'S @ 0.0344 sec.





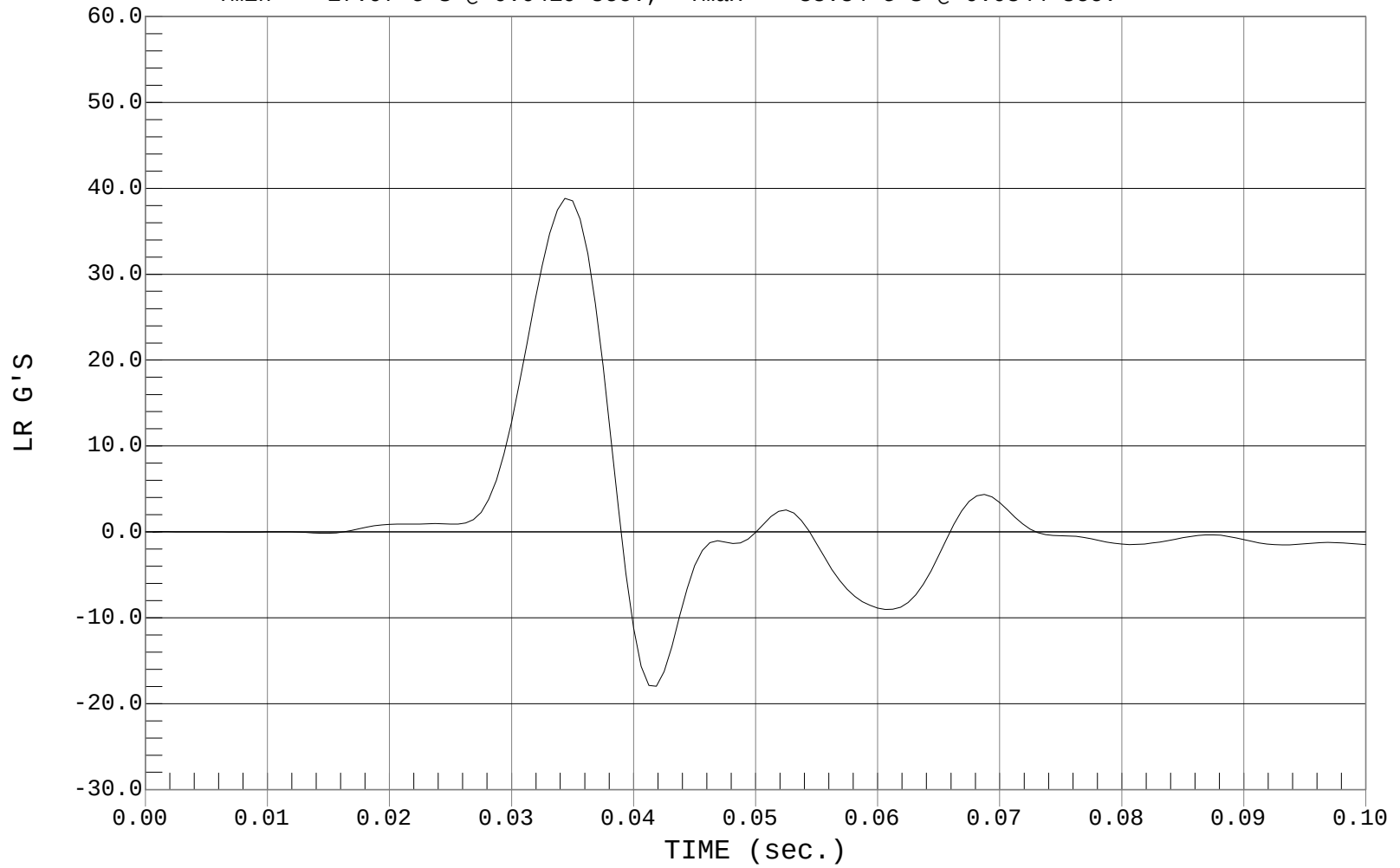
LOWER RIB ACCELERATION

Test Desc.: Dummy Calibration - Thorax Impact
Component: Dummy #048

Test Date: 12-21-00
Speed: 14.01 FT/SEC, 4.27 M/SEC

— 1 LR, D00582FI.R09

Ymin = -17.97 G'S @ 0.0419 sec., Ymax = 38.84 G'S @ 0.0344 sec.





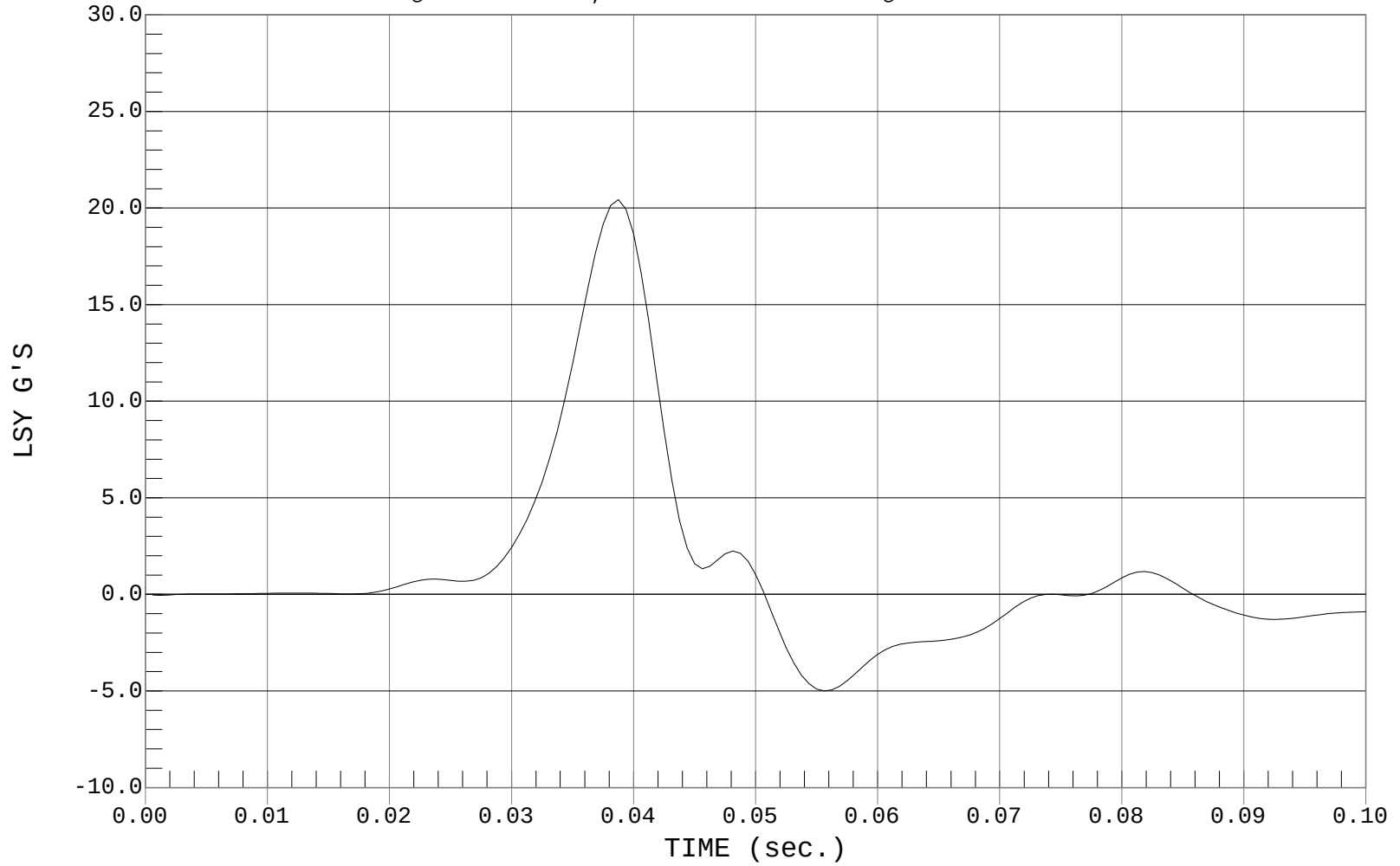
LOWER SPINE ACCELERATION

Test Desc.: Dummy Calibration - Thorax Impact
Component: Dummy #048

Test Date: 12-21-00
Speed: 14.01 FT/SEC, 4.27 M/SEC

— 1 LSY, D00582FI.R10

Ymin = -5 G'S @ 0.0556 sec., Ymax = 20.43 G'S @ 0.0388 sec.



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

Date: 12/21/00

Dummy Serial Number: 048

Test Number: D001583

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.3
Relative Humidity (%)	10 – 70	18
Probe Speed (m/s)	4.27 – 4.33	4.28
Pelvis Acceleration (g's)	40 – 60	49

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



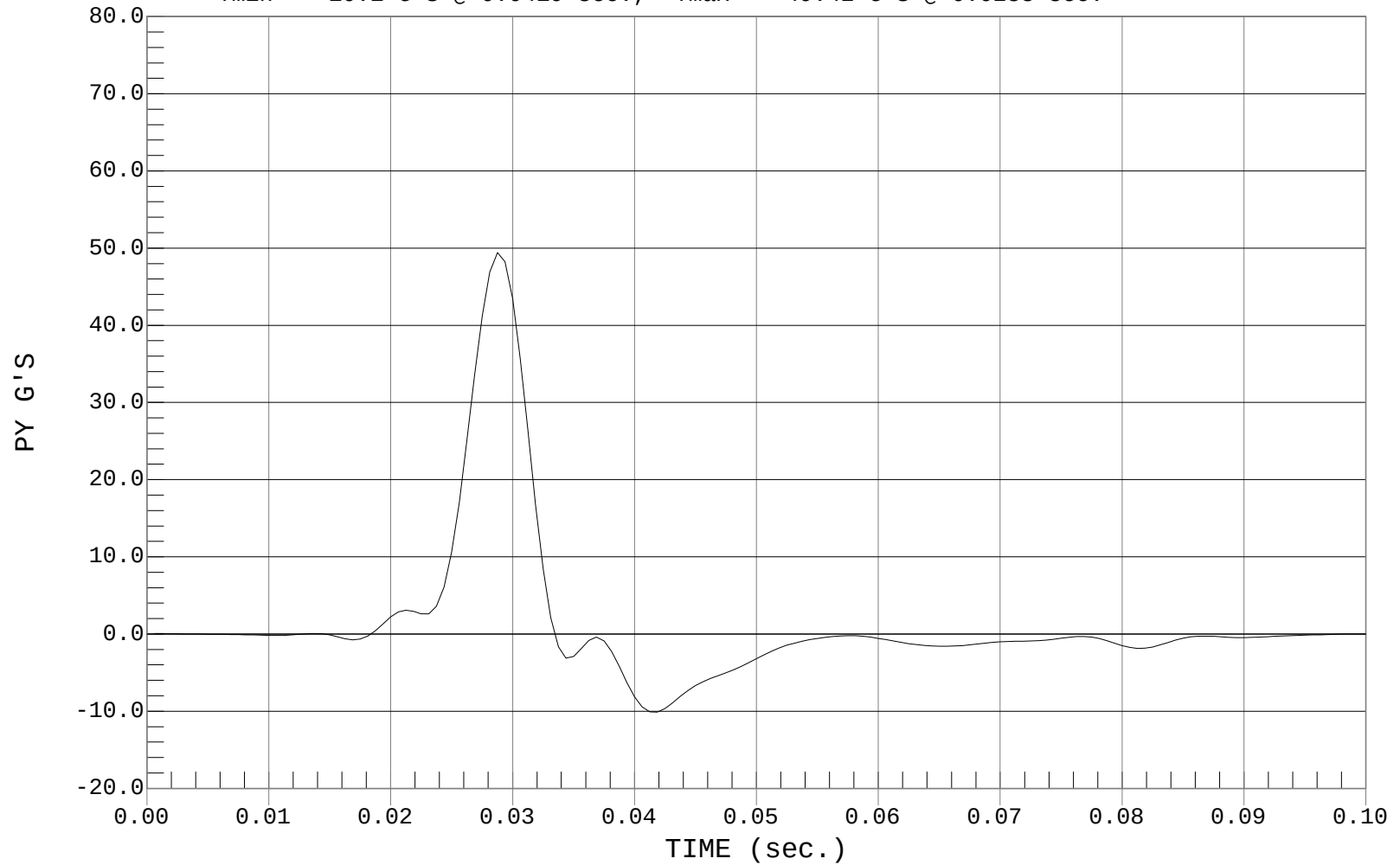
PELVIS ACCELERATION

Test Desc.: Dummy Calibration - Pelvis Impact
Component: Dummy #048

Test Date: 12-21-00
Speed: 14.05 FT/SEC, 4.28 M/SEC

— 1 PY, D00583FI.R11

Ymin = -10.1 G'S @ 0.0419 sec., Ymax = 49.42 G'S @ 0.0288 sec.



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

Date: 12/21/00

Dummy Serial Number: 048

Test Number: D001584

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.4
Relative Humidity (%)	10 – 70	18
Force @ 12.7 mm	104 – 162	146
Force @ 19 mm	163 – 222	204
Force @ 25.4 mm	222 – 280	270
Force @ 33 mm	325 - 391	368

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



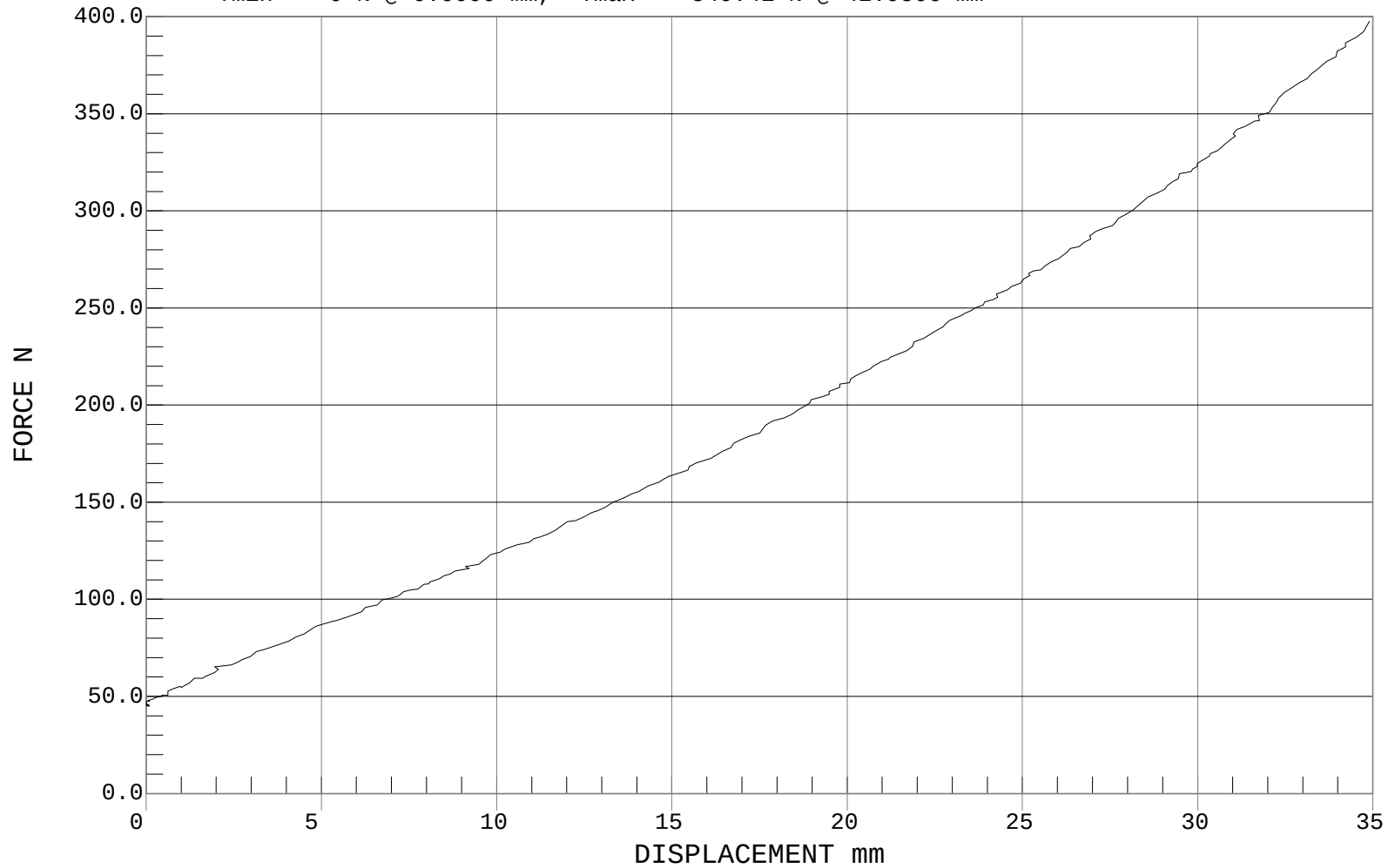
ABDOMEN COMPRESSION

Test Desc.: DUMMY CALIBRATION - ABDOMEN COMPRESSION
Component: DUMMY # 048

Test Date: 12-21-00
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 FORCE, D00584FC.F16

Ymin = 0 N @ 0.0000 mm, Ymax = 540.41 N @ 42.9506 mm



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

Date: 12/21/00

Dummy Serial Number: 048

Test Number: D001585

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.4
Relative Humidity (%)	10 – 70	18
Force @ 0°	0 – 26.7	0
Force @ 20°	97.9 – 151.2	110.8
Force @ 30°	151.2 – 204.6	163.0
Force @ 40°	204.6 – 258.0	235.2
Return Angle	12° maximum	4

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



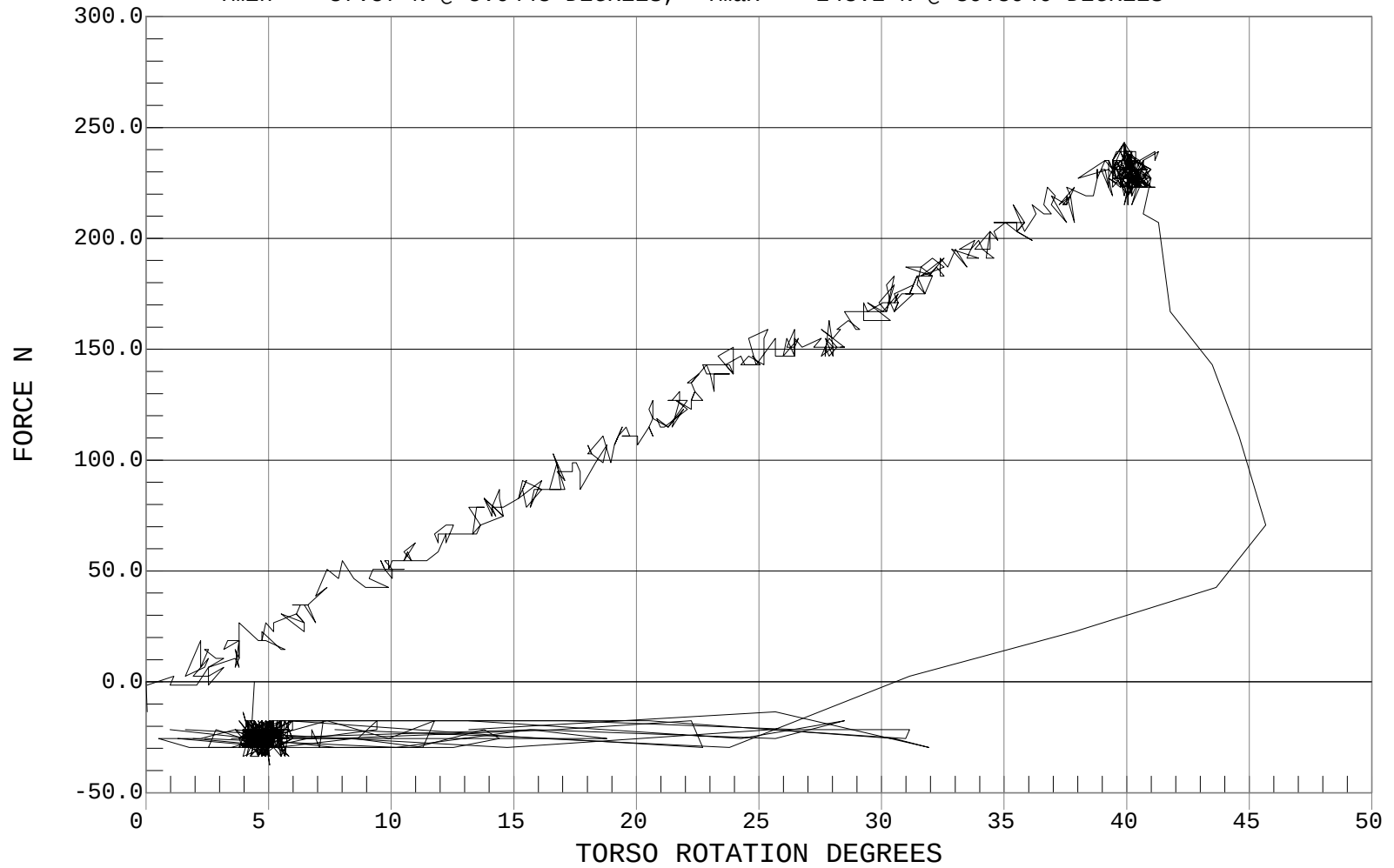
LUMBAR FLEXION

Test Desc.: DUMMY CALIBRATION - LUMBAR FLEXION
Component: DUMMY # 048

Test Date: 12-21-00
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 FORCE, D00585FC.F14

Ymin = -37.57 N @ 5.0443 DEGREES, Ymax = 243.2 N @ 39.8940 DEGREES



DUMMY INSPECTION CHECKLIST

Type: Side Impact Dummy

Dummy Serial Number: 048

Inspected By: Tim Michnay

Date: 12/22/00

<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: 049

Calibration Test Results Summary

Dummy Serial Number: 049

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: 049
 Date of Verification: 1/18/01
 Test Number: D0103

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH-Seated Height (mm)	889 – 909	900
RH-Rib Height (mm)	501 – 521	517
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	522
SW-Knee Pivot to Floor (mm)	490 – 505	492
HW – Hip Width (mm)	356 – 391	369

Technician: _____

Approved By:_____

MGA RESEARCH CORPORATION

HEAD DROP TEST

SIDE IMPACT DUMMY (SID)

Date: 1/18/00

Dummy Serial Number: 049

Test Number: D01031

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	230
Peak Lateral Acceleration	< 10 g's	-5
Time Above 100 g.	0.9 - 1.5 msec.	1.1

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



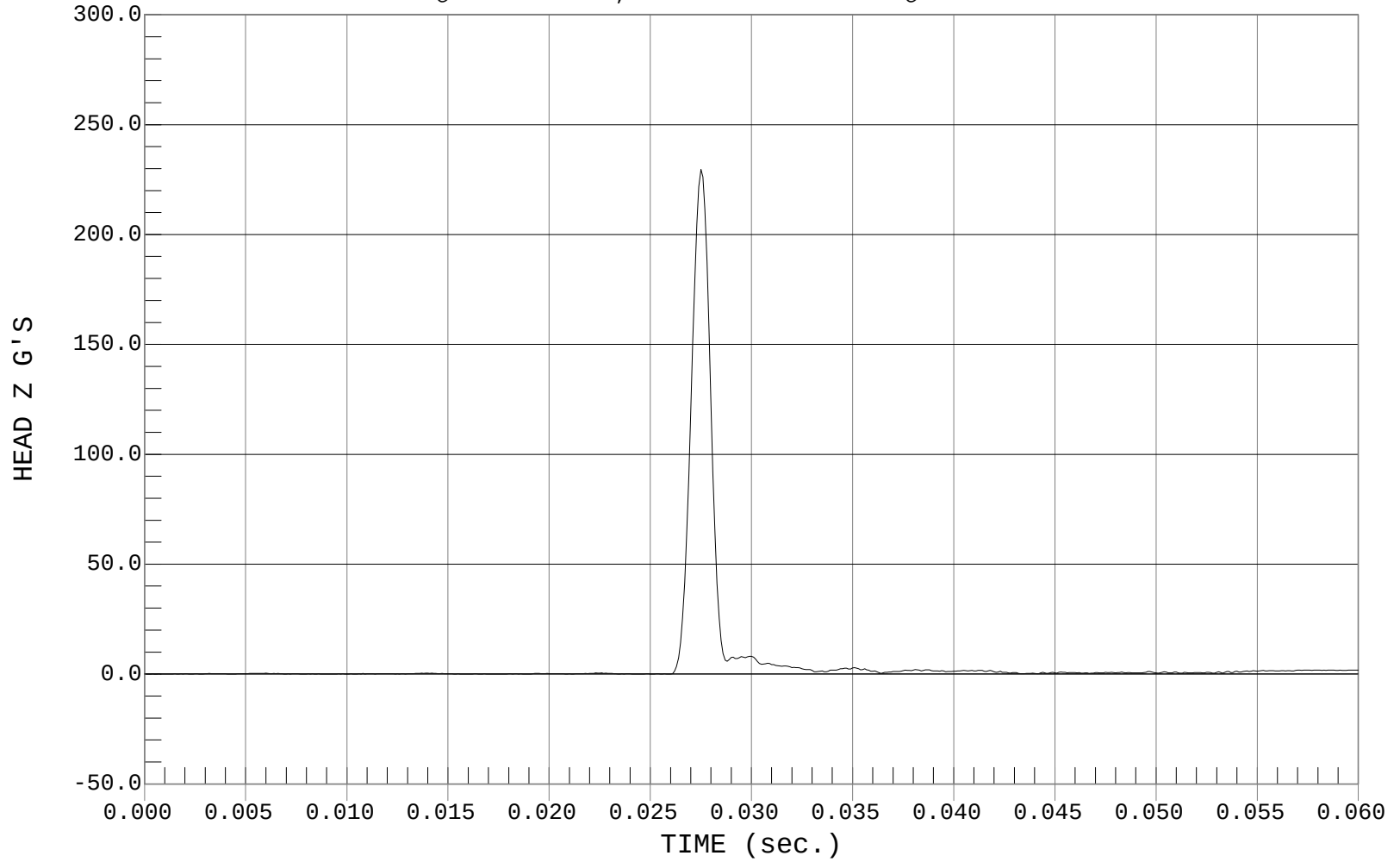
PEAK RESULTANT ACCELERATION

Test Desc.: Dummy Calibration - Head Drop
Component: Dummy #049

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

— 1 HEAD Z, D01031av.a01

Ymin = .07 G'S @ 0.0001 sec., Ymax = 229.6 G'S @ 0.0275 sec.





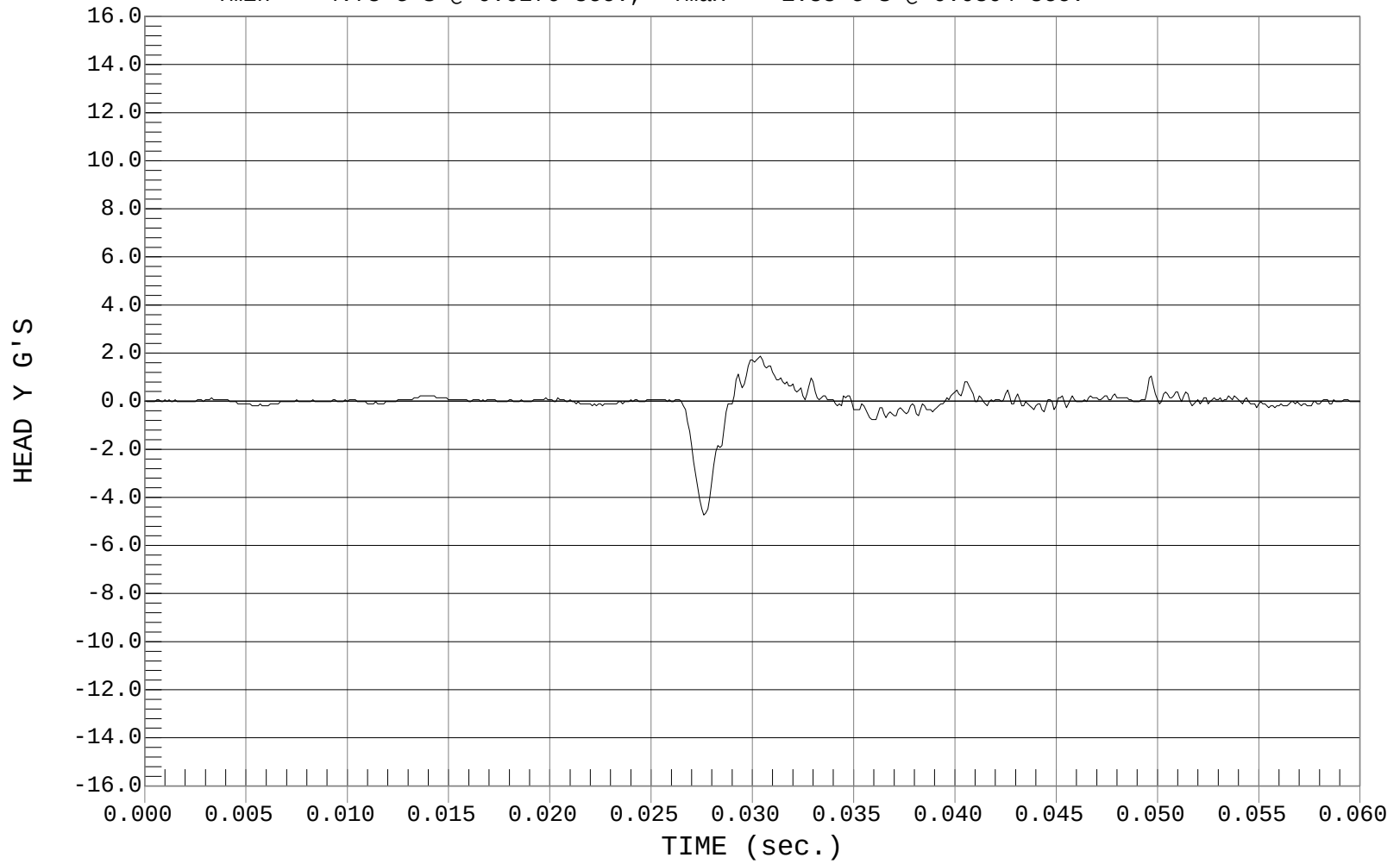
PEAK LATERAL ACCELARATION

Test Desc.: Dummy Calibration - Head Drop
Component: Dummy #049

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

— 1 HEAD Y, D01031AR.A02

Ymin = -4.73 G'S @ 0.0276 sec., Ymax = 1.88 G'S @ 0.0304 sec.



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

Date: 1/5/00
Dummy Serial Number: 049
Test Number: D01032

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.2
Relative Humidity (%)	10 – 70	25
Probe Speed (m/s)	4.27 – 4.33	4.30
Upper Rib (g's)	37 – 46	38
Lower Rib (g's)	37 – 46	41
Lower Spine (g's)	15 - 22	20

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



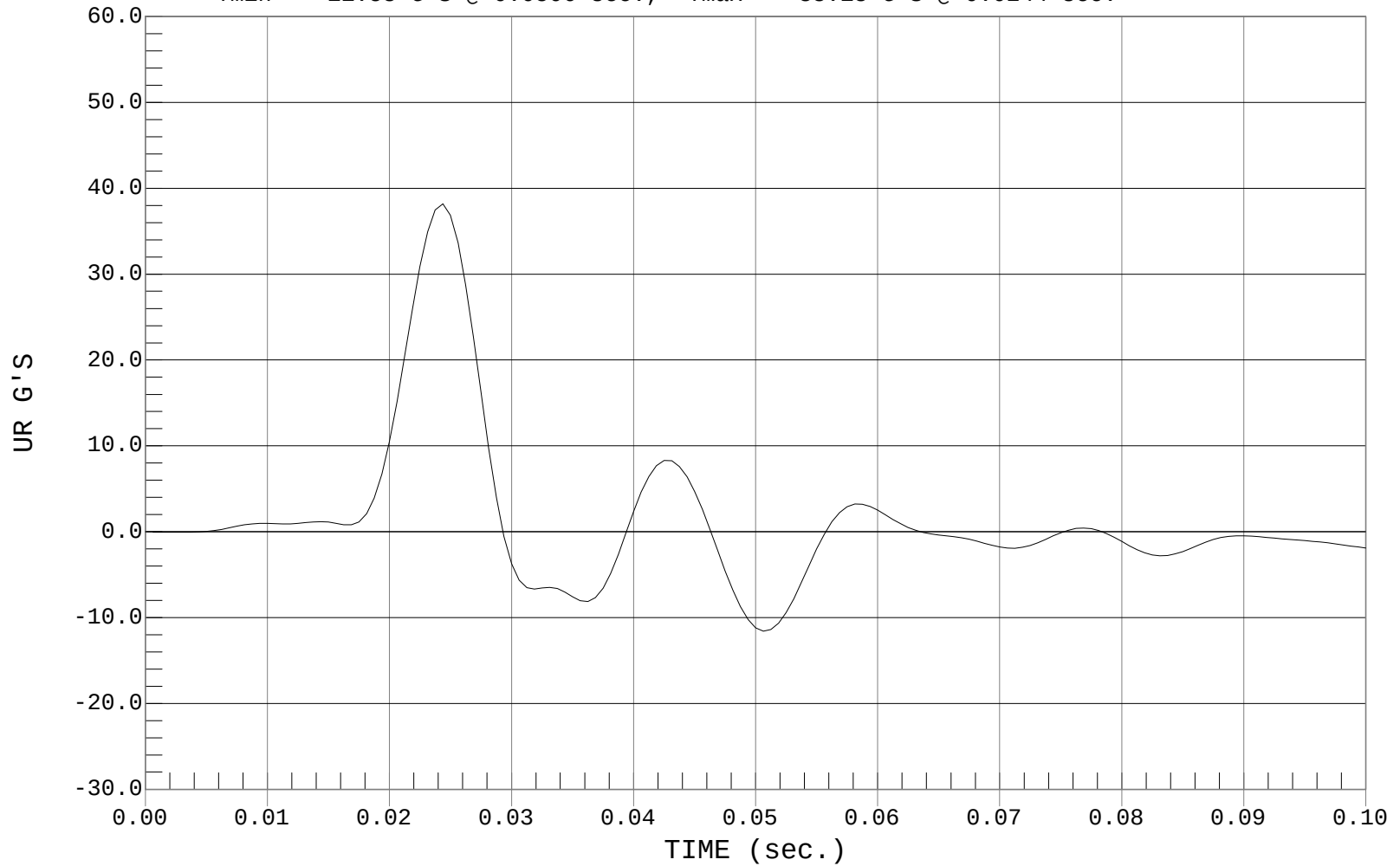
UPPER RIB ACCELERATION

Test Desc.: Dummy Calibration - Thorax Impact
Component: Dummy #049

Test Date: 01-05-01
Speed: 14.12 FT/SEC, 4.30 M/SEC

— 1 UR, D01032FI.R08

Ymin = -11.58 G'S @ 0.0506 sec., Ymax = 38.18 G'S @ 0.0244 sec.





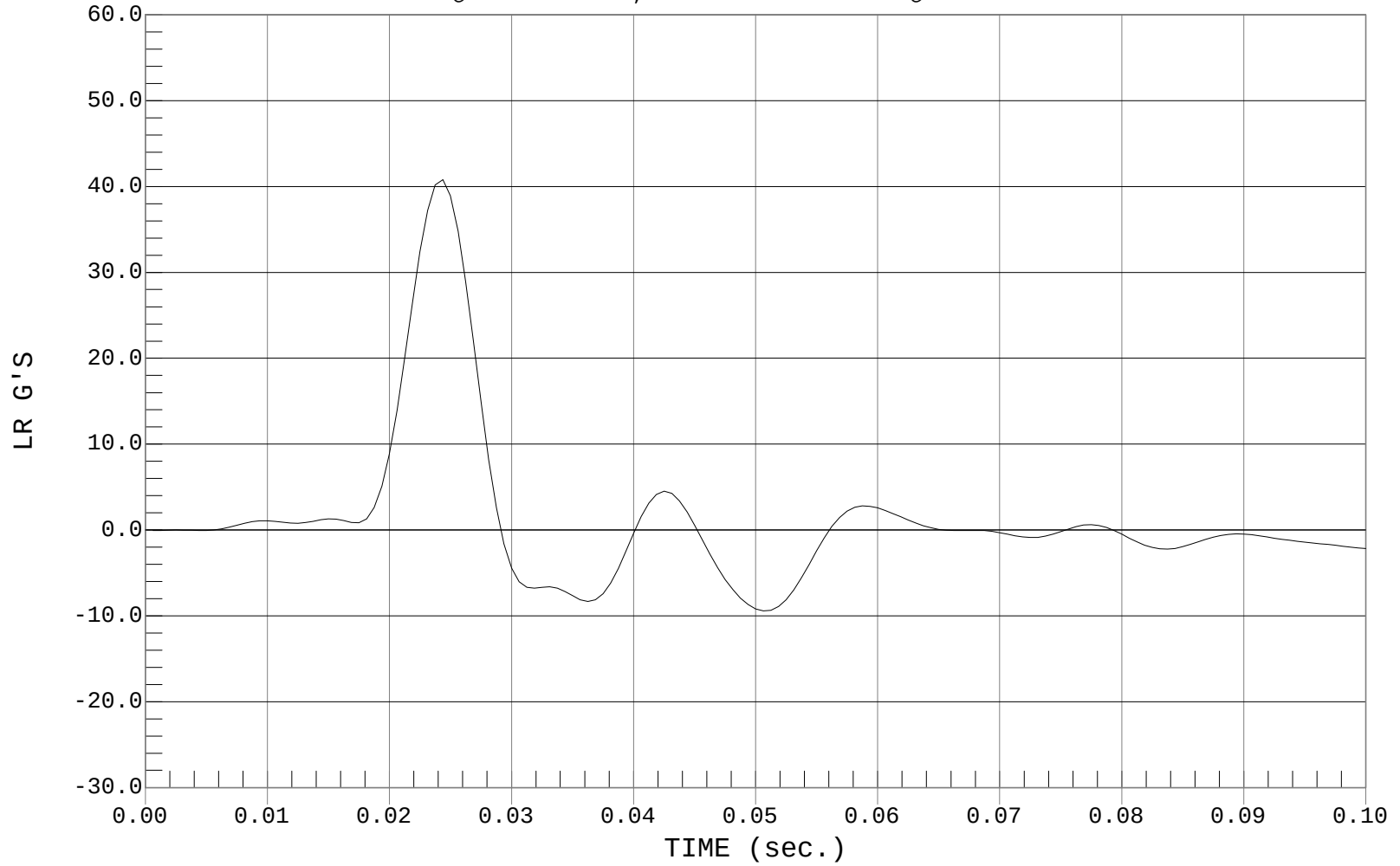
LOWER RIB ACCELERATION

Test Desc.: Dummy Calibration - Thorax Impact
Component: Dummy #049

Test Date: 01-05-01
Speed: 14.12 FT/SEC, 4.30 M/SEC

— 1 LR, D01032FI.R09

Ymin = -9.43 G'S @ 0.0506 sec., Ymax = 40.8 G'S @ 0.0244 sec.





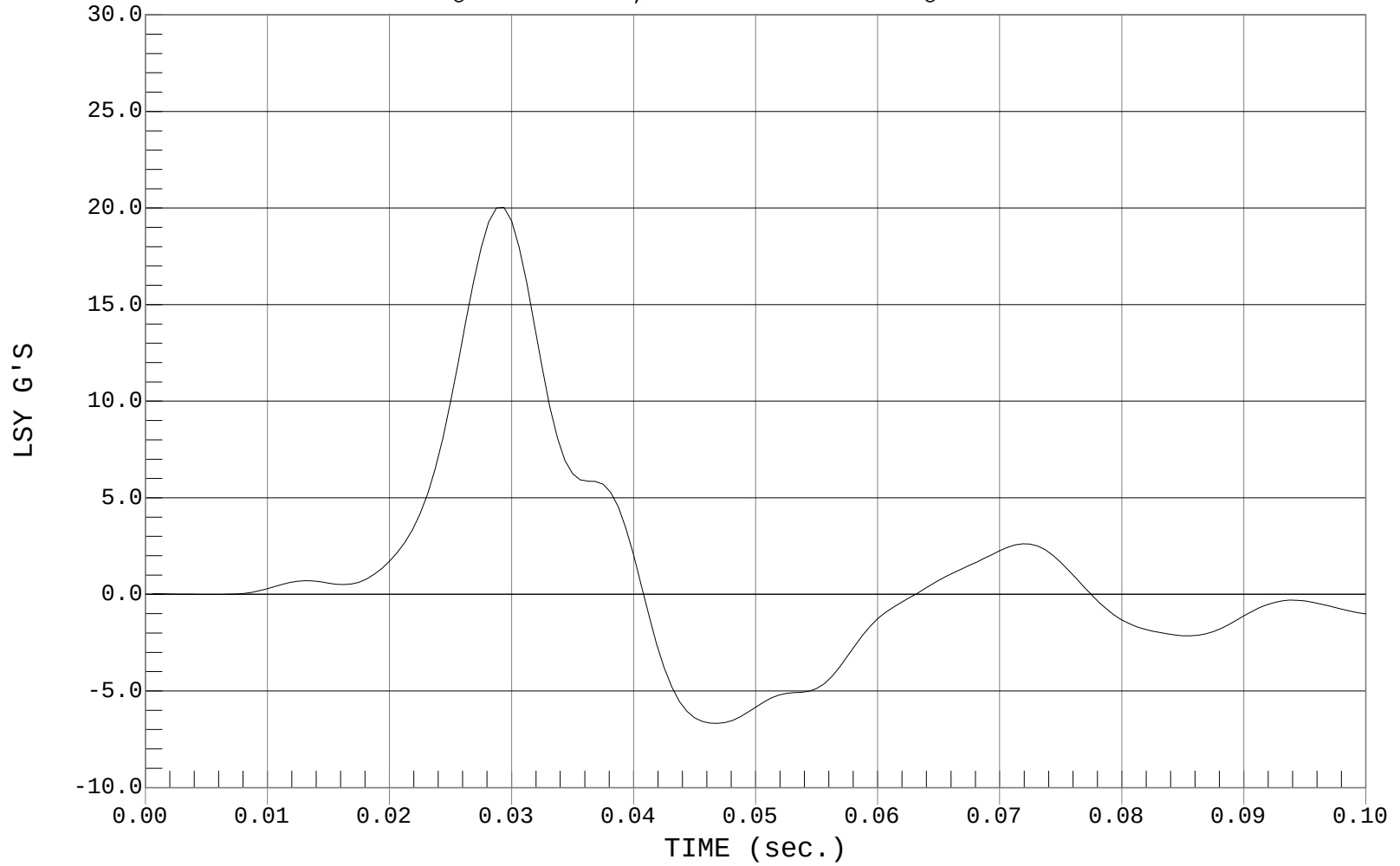
LOWER SPINE ACCELERATION

Test Desc.: Dummy Calibration - Thorax Impact
Component: Dummy #049

Test Date: 01-05-01
Speed: 14.12 FT/SEC, 4.30 M/SEC

— 1 LSY, D01032FI.R10

Ymin = -6.68 G'S @ 0.0469 sec., Ymax = 20.03 G'S @ 0.0294 sec.



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

Date: 1/5/01
Dummy Serial Number: 049
Test Number: D01033

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.2
Relative Humidity (%)	10 – 70	25
Probe Speed (m/s)	4.27 – 4.33	4.30
Pelvis Acceleration (g's)	40 – 60	48

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



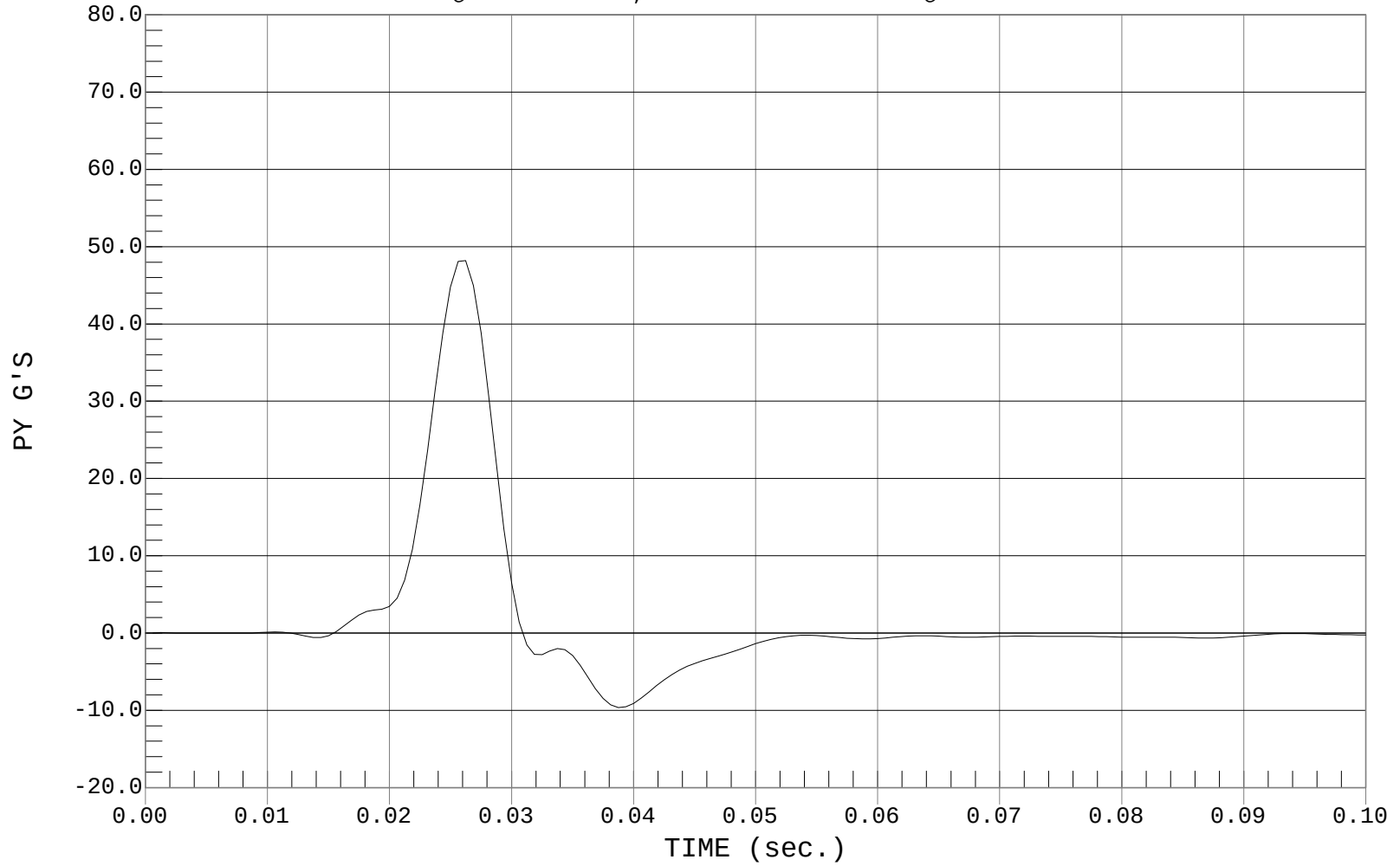
PELVIS ACCELERATION

Test Desc.: Dummy Calibration - Pelvis Impact
Component: Dummy #049

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

— 1 PY, D01033FI.R11

Ymin = -9.65 G'S @ 0.0388 sec., Ymax = 48.19 G'S @ 0.0263 sec.



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

Date: 1/17/01

Dummy Serial Number: 049

Test Number: D01034

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.4
Relative Humidity (%)	10 – 70	20
Force @ 12.7 mm	104 – 162	136
Force @ 19 mm	163 – 222	186
Force @ 25.4 mm	222 – 280	248
Force @ 33 mm	325 - 391	339

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



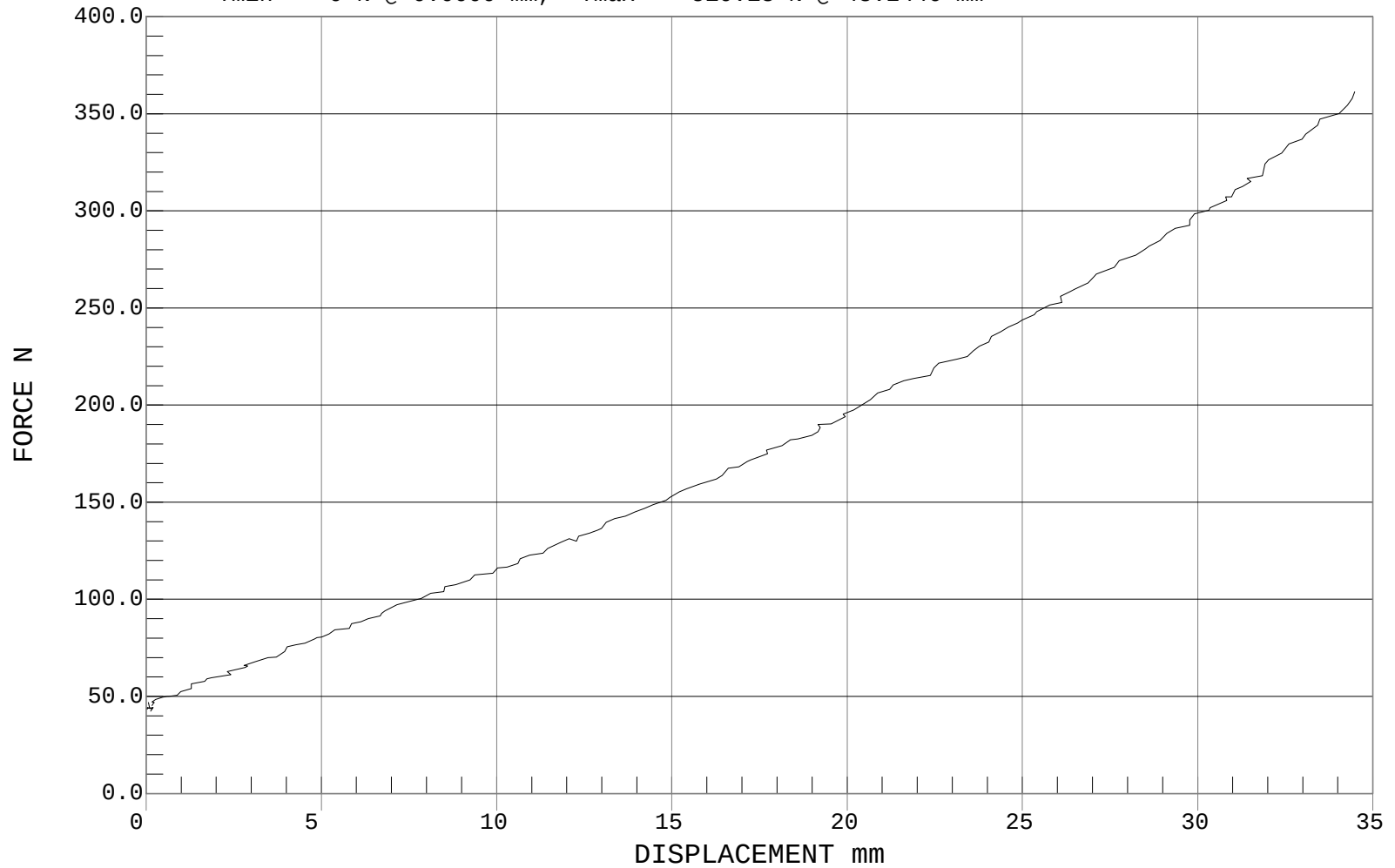
ABDOMEN COMPRESSION

Test Desc.: DUMMY CALIBRATION - ABDOMEN COMPRESSION
Component: DUMMY # 049

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

1 FORCE, D01034FC.F16

Ymin = 0 N @ 0.0000 mm, Ymax = 510.13 N @ 43.2446 mm



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

Date: 1/17/01

Dummy Serial Number: 049

Test Number: D01035

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	126.0
Force @ 30°	151.2 – 204.6	173.3
Force @ 40°	204.6 – 258.0	224.5
Return Angle	12° maximum	1

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



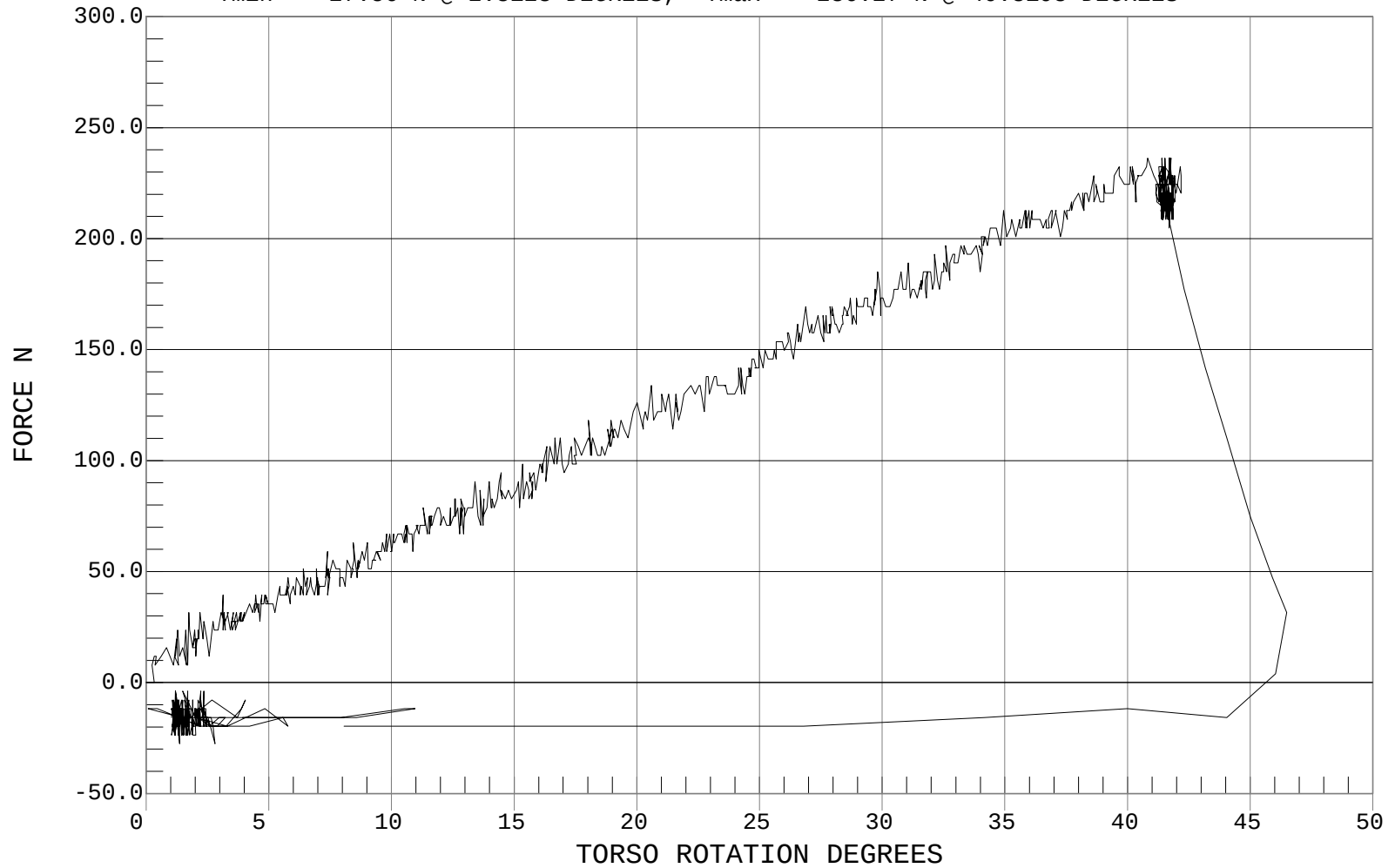
LUMBAR FLEXION

Test Desc.: DUMMY CALIBRATION - LUMBAR FLEXION
Component: DUMMY # 049

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

— 1 FORCE, D01035FC.F14

Ymin = -27.56 N @ 2.8123 DEGREES, Ymax = 236.27 N @ 40.8198 DEGREES



DUMMY INSPECTION CHECKLIST

Type: Side Impact Dummy

Dummy Serial Number: 049

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: 048

Calibration Test Results Summary

Dummy Serial Number: 048

Post-Test Calibration

External Dimensions:	The dummy passed all external dimension requirements.
Head Drop Test:	The head passed all drop test requirements.
Neck Pendulum Test:	The neck passed all pendulum 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: 048
 Date of Verification: 1/18/01
 Test Number: D0102

DESCRIPTION	SPECIFICATION	TEST RESULTS
SH-Seated Height (mm)	889 – 909	903
RH-Rib Height (mm)	501 – 521	515
HP-Hip Pivot Height (mm)	99 ref.	99
RD-Rib From Back Line (mm)	229 - 241	238
KV-Knee Pivot From Back Line (mm)	511 – 526	521
SW-Knee Pivot to Floor (mm)	490 – 505	493
HW – Hip Width (mm)	356 – 391	365

Technician: _____

Approved By:_____

MGA RESEARCH CORPORATION
HEAD DROP TEST
SIDE IMPACT DUMMY (SID)

Date: 1/18/01

Dummy Serial Number: 048

Test Number: D01021

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	218
Peak Lateral Acceleration	< 10 g's	2
Time Above 100 g.	0.9 - 1.5 msec.	1.1

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



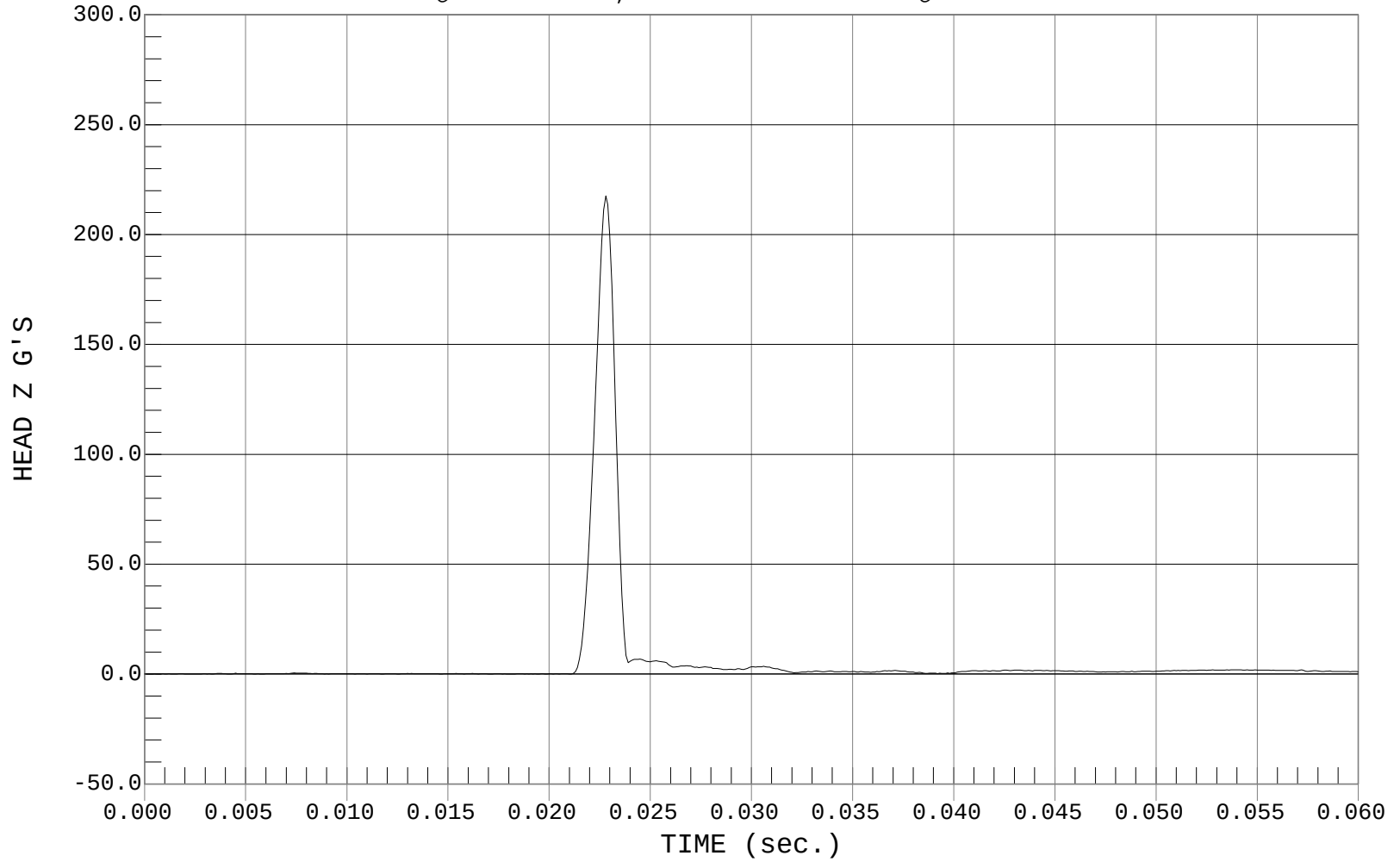
PEAK RESULTANT ACCELERATION

Test Desc.: Dummy Calibration - Head Drop
Component: Dummy #048

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

— 1 HEAD Z, D01021av.a01

Ymin = .04 G'S @ 0.0004 sec., Ymax = 217.52 G'S @ 0.0228 sec.





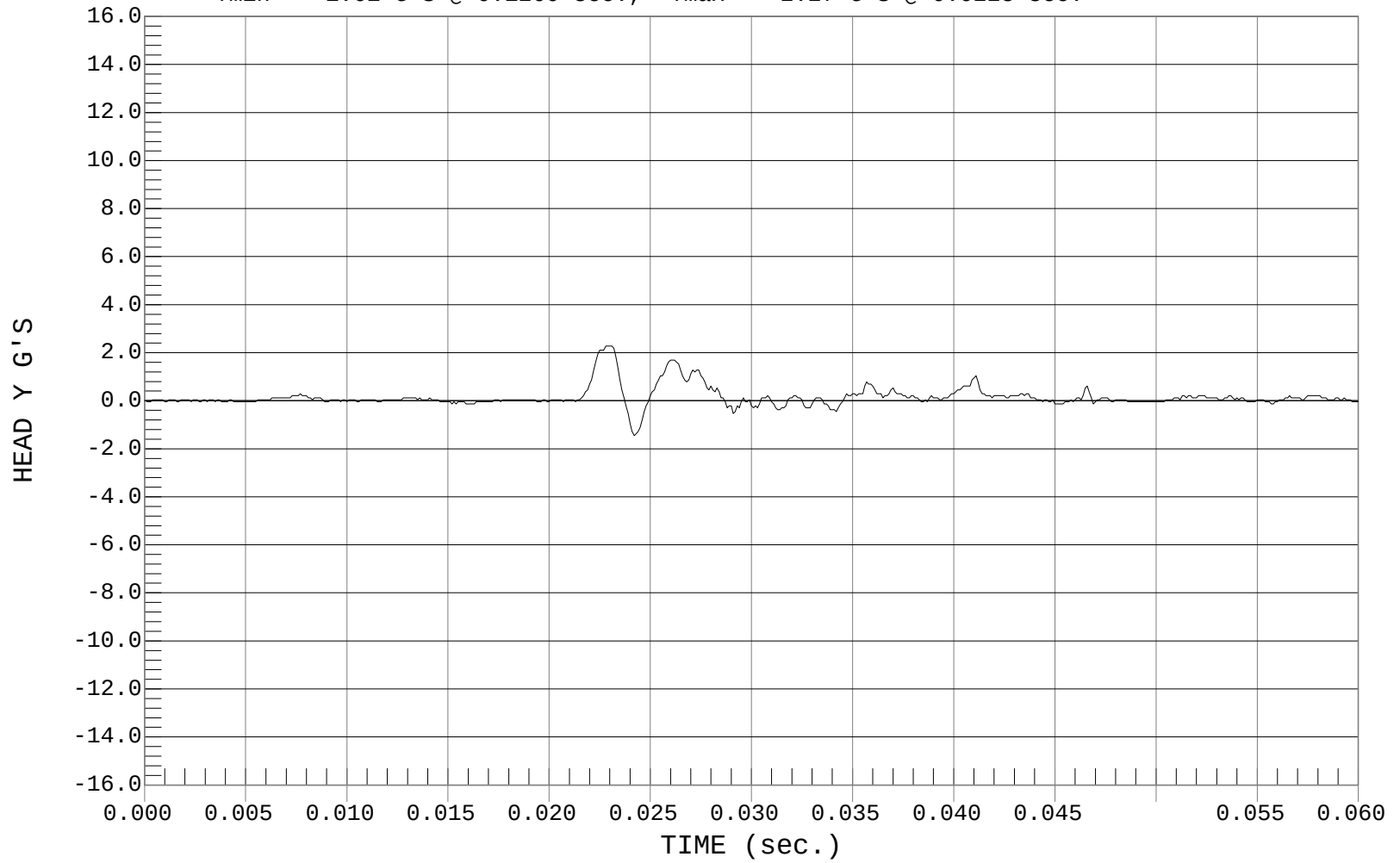
PEAK LATERAL ACCELARATION

Test Desc.: Dummy Calibration - Head Drop
Component: Dummy #048

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

— 1 HEAD Y, D01021AR.A02

Ymin = -1.61 G'S @ 0.1260 sec., Ymax = 2.27 G'S @ 0.0228 sec.



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

Date: 1/5/01
Dummy Serial Number: 048
Test Number: D01022

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.2
Relative Humidity (%)	10 – 70	26
Probe Speed (m/s)	4.27 – 4.33	4.28
Upper Rib (g's)	37 – 46	38
Lower Rib (g's)	37 – 46	39
Lower Spine (g's)	15 - 22	21

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



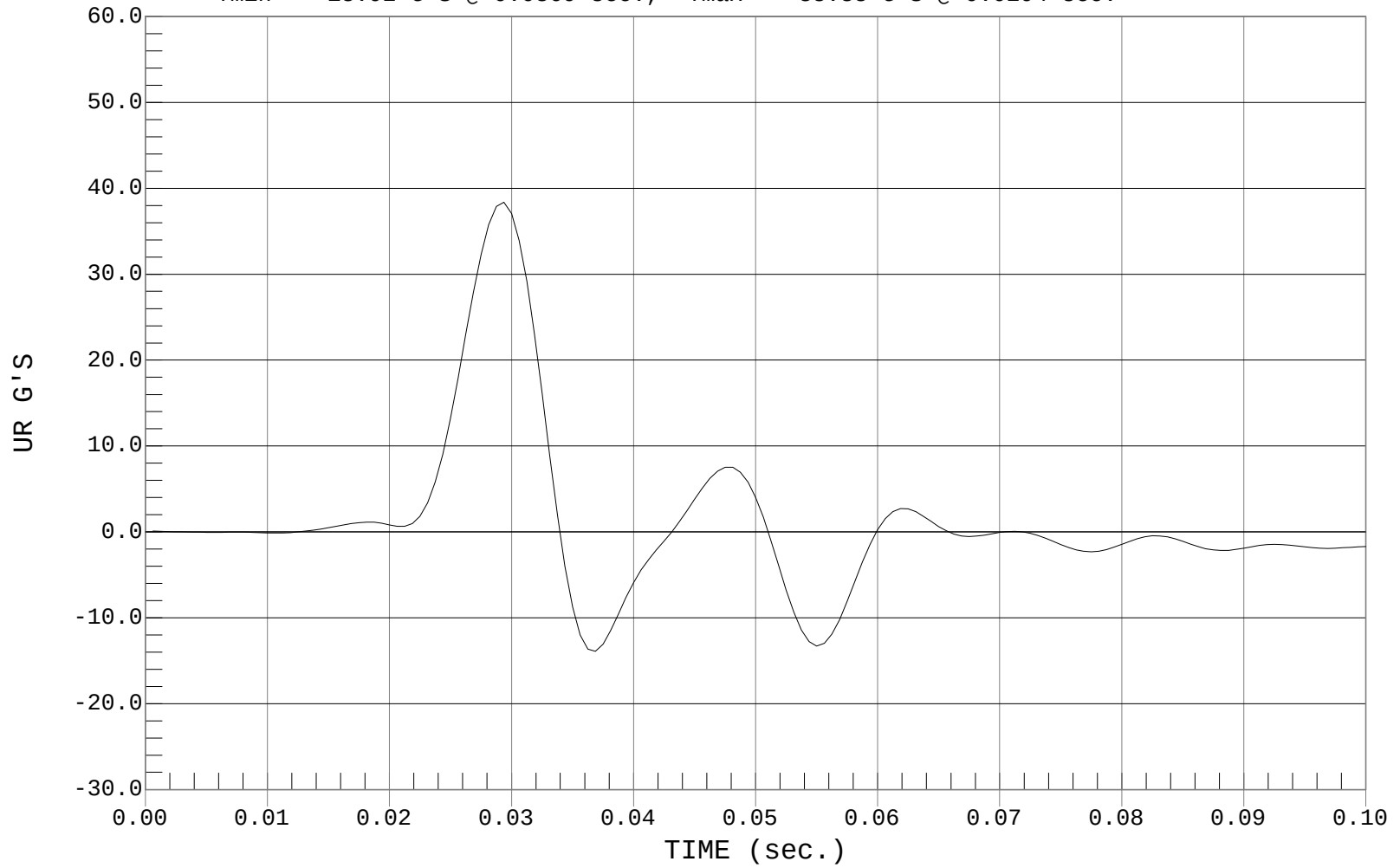
UPPER RIB ACCELERATION

Test Desc.: Dummy Calibration - Thorax Impact
Component: Dummy #048

Test Date: 01-05-01
Speed: 14.04 FT/SEC, 4.28 M/SEC

— 1 UR, D01022FI.R08

Ymin = -13.92 G'S @ 0.0369 sec., Ymax = 38.38 G'S @ 0.0294 sec.





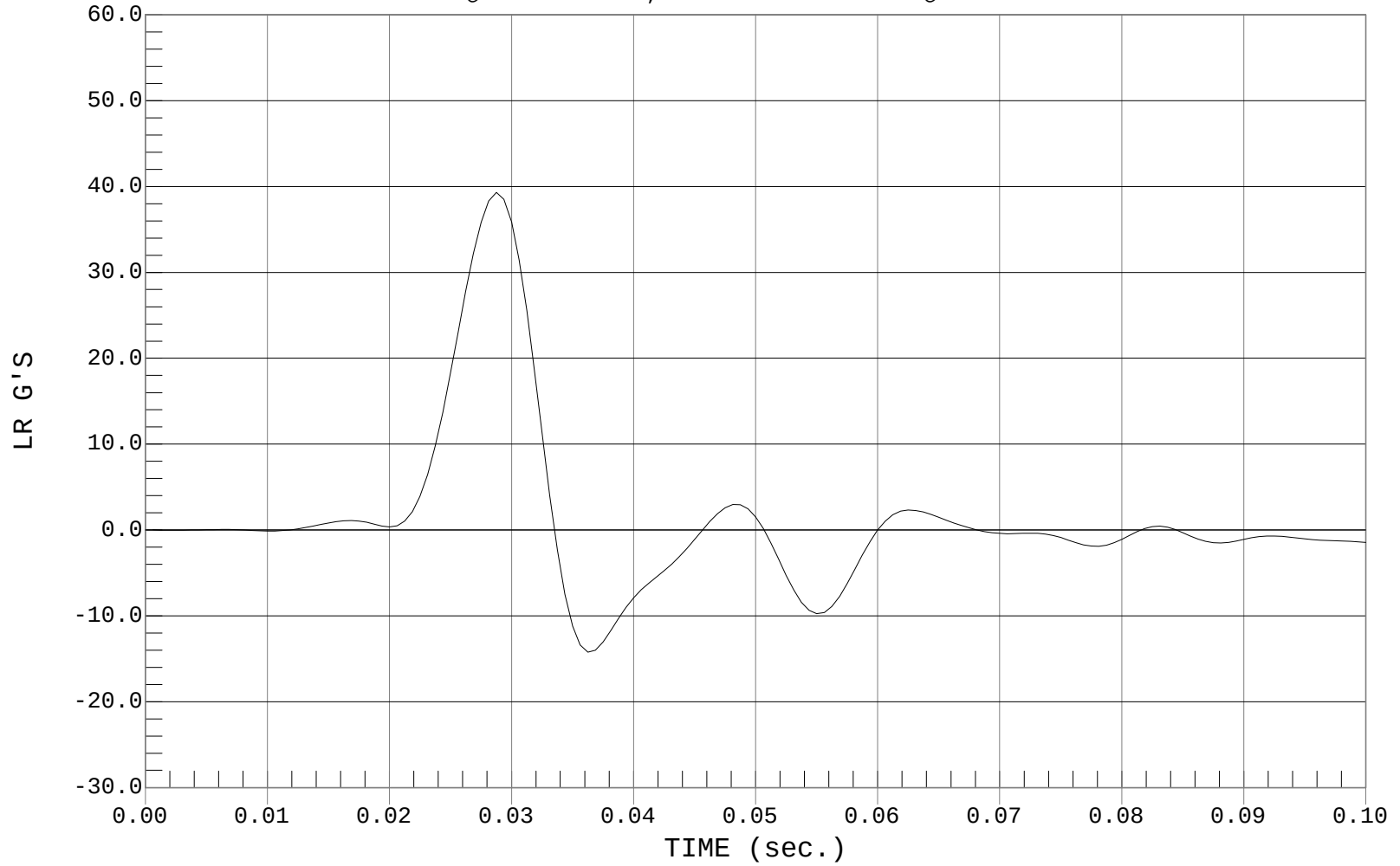
LOWER RIB ACCELERATION

Test Desc.: Dummy Calibration - Thorax Impact
Component: Dummy #048

Test Date: 01-05-01
Speed: 14.41 FT/SEC, 4.39 M/SEC

1 LR, D01022FI.R09

Ymin = -14.22 G'S @ 0.0363 sec., Ymax = 39.3 G'S @ 0.0288 sec.





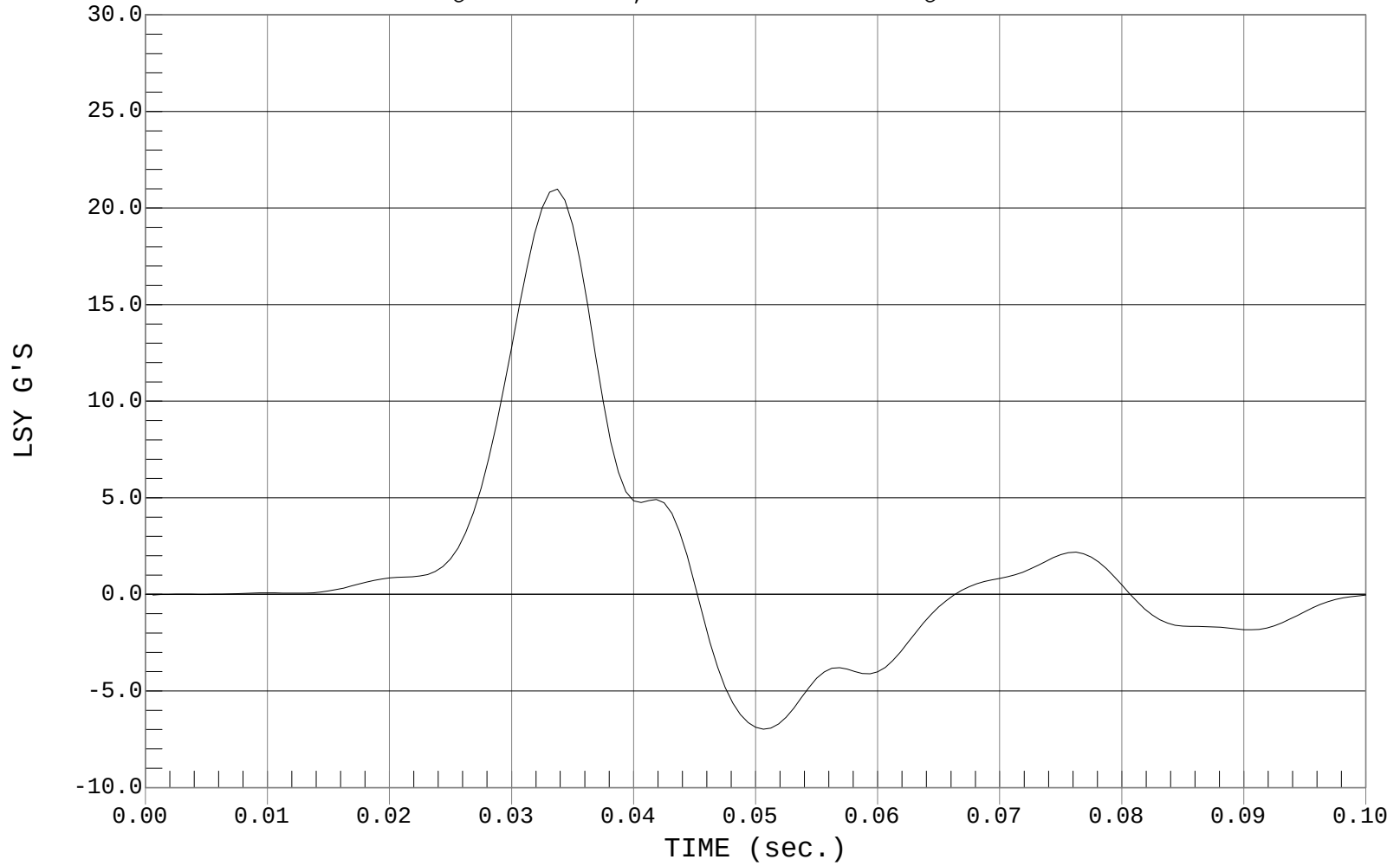
LOWER SPINE ACCELERATION

Test Desc.: Dummy Calibration - Thorax Impact
Component: Dummy #048

Test Date: 01-05-01
Speed: 14.41 FT/SEC, 4.39 M/SEC

— 1 LSY, D01022FI.R10

Ymin = -6.97 G'S @ 0.0506 sec., Ymax = 20.98 G'S @ 0.0338 sec.



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

Date: 1/5/01
Dummy Serial Number: 048
Test Number: D01023

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.1
Relative Humidity (%)	10 – 70	26
Probe Speed (m/s)	4.27 – 4.33	4.30
Pelvis Acceleration (g's)	40 – 60	53

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



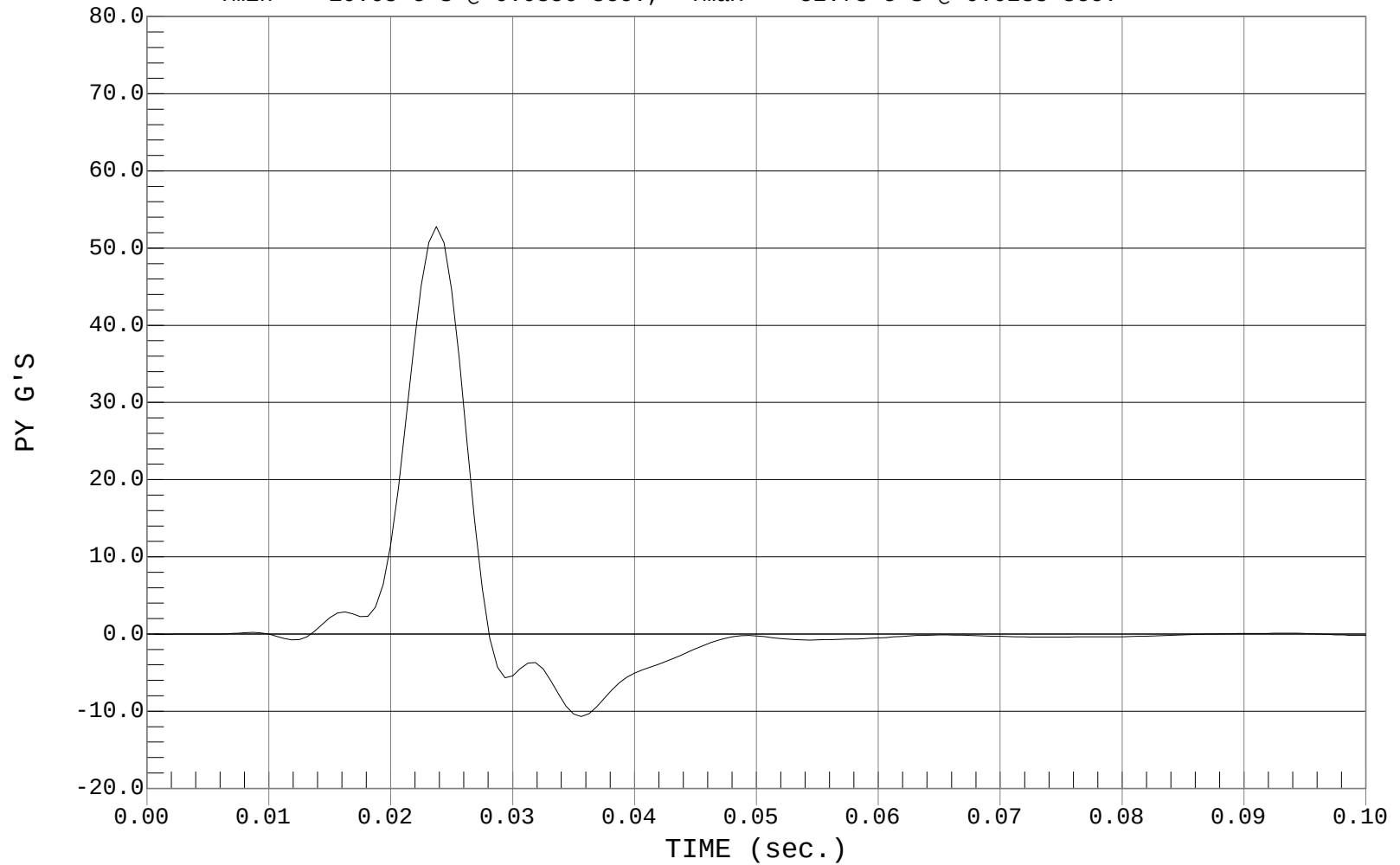
PELVIS ACCELERATION

Test Desc.: Dummy Calibration - Pelvis Impact
Component: Dummy #048

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

— 1 PY, D01023FI.R11

Ymin = -10.68 G'S @ 0.0356 sec., Ymax = 52.78 G'S @ 0.0238 sec.



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

Date: 1/17/01

Dummy Serial Number: 048

Test Number: D01024

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature (°C)	18.9 – 25.5	21.4
Relative Humidity (%)	10 – 70	20
Force @ 12.7 mm	104 – 162	143
Force @ 19 mm	163 – 222	199
Force @ 25.4 mm	222 – 280	264
Force @ 33 mm	325 - 391	362

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



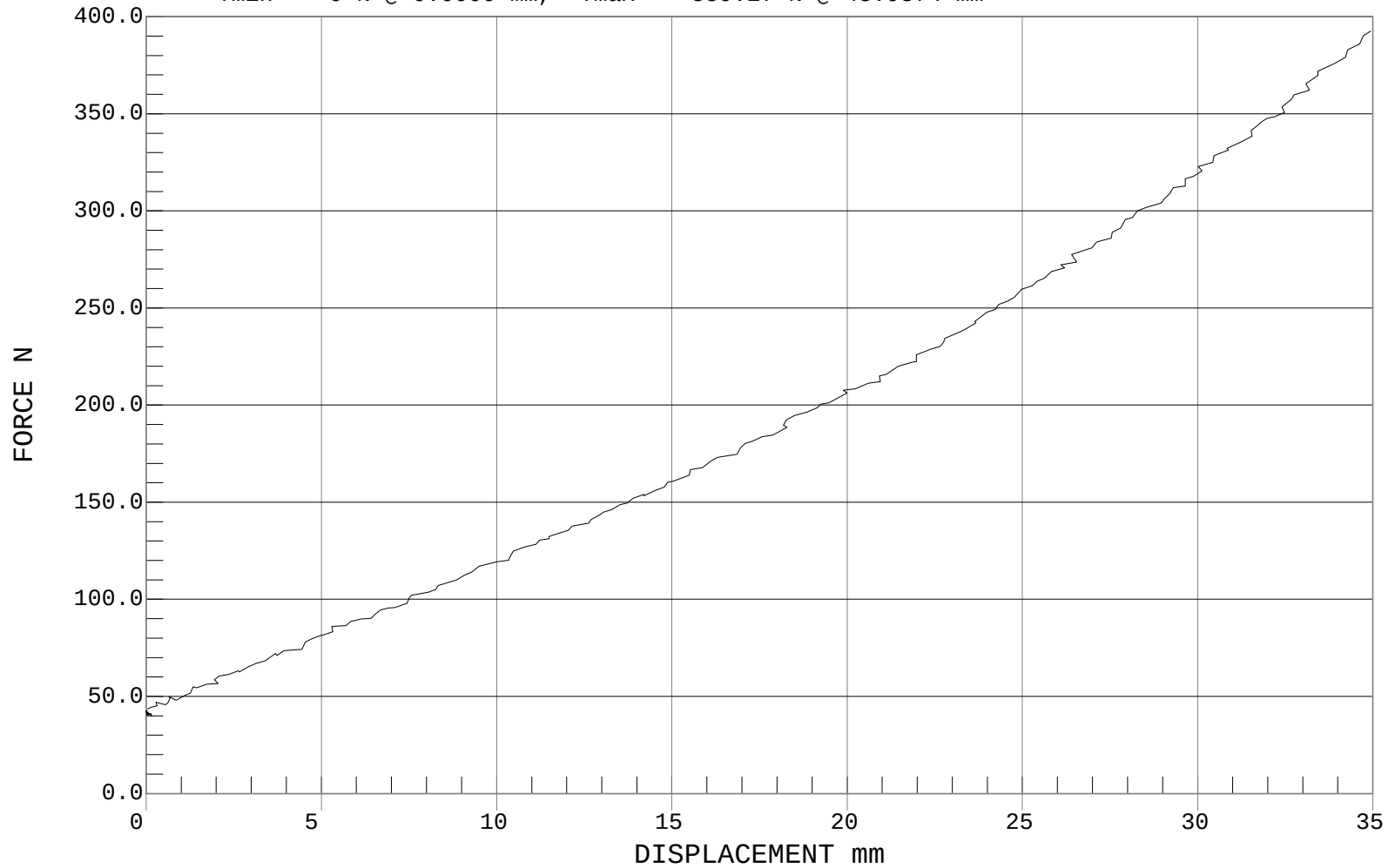
ABDOMEN COMPRESSION

Test Desc.: DUMMY CALIBRATION - ABDOMEN COMPRESSION
Component: DUMMY # 048

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

1 FORCE, D01024FC.F16

Ymin = 0 N @ 0.0000 mm, Ymax = 559.27 N @ 43.9374 mm



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

Date: 1/17/01

Dummy Serial Number: 048

Test Number: D01025

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	102.2
Force @ 30°	151.2 – 204.6	161.3
Force @ 40°	204.6 – 258.0	232.2
Return Angle	12° maximum	1

TEST MEETS SPECIFICATIONS

Technician: _____

Approved By: _____



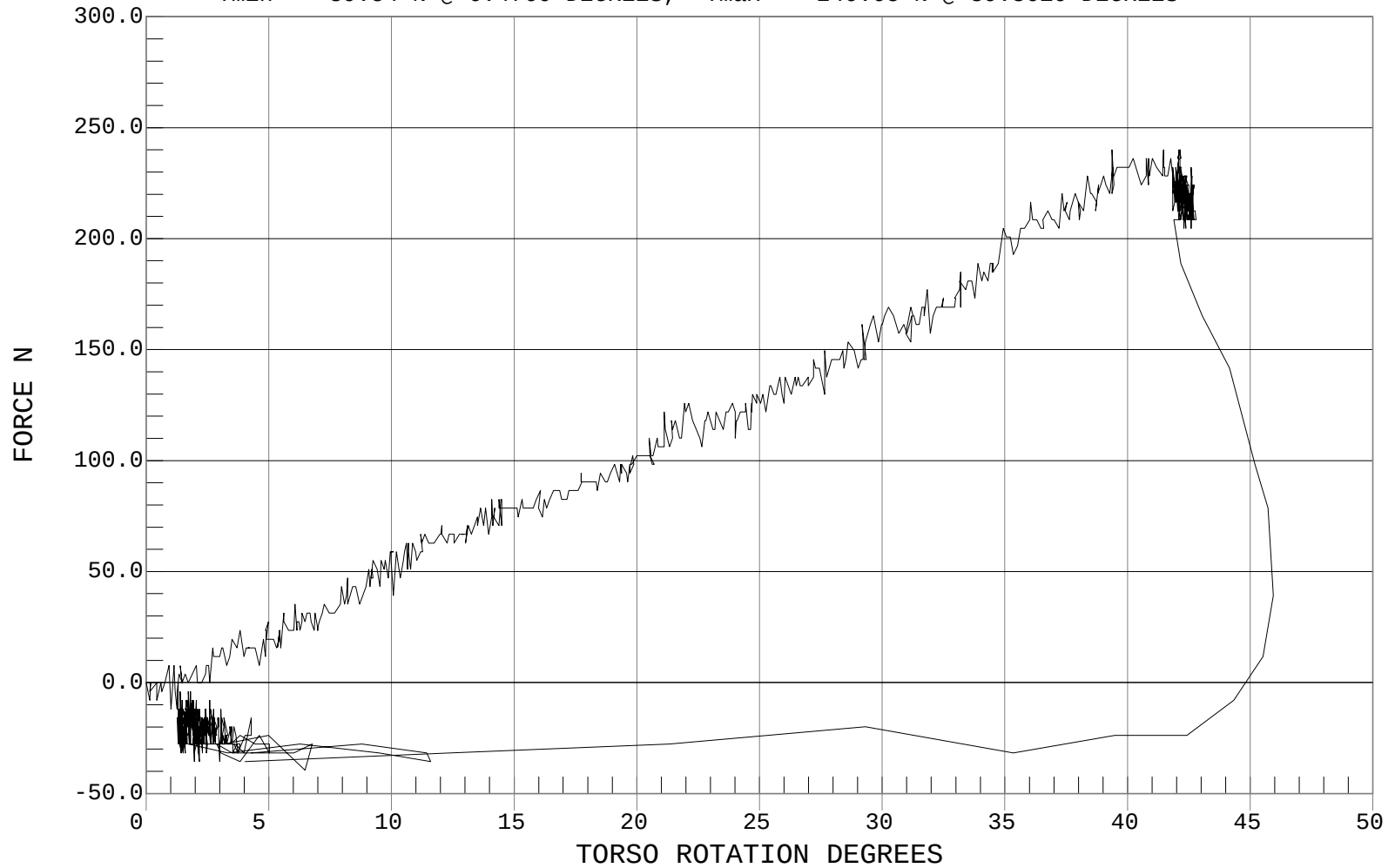
LUMBAR FLEXION

Test Desc.: DUMMY CALIBRATION - LUMBAR FLEXION
Component: DUMMY # 048

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

— 1 FORCE, D01025FC.F14

Ymin = -39.54 N @ 6.4760 DEGREES, Ymax = 240.05 N @ 39.3610 DEGREES



DUMMY INSPECTION CHECKLIST

Type: Side Impact Dummy

Dummy Serial Number: 048

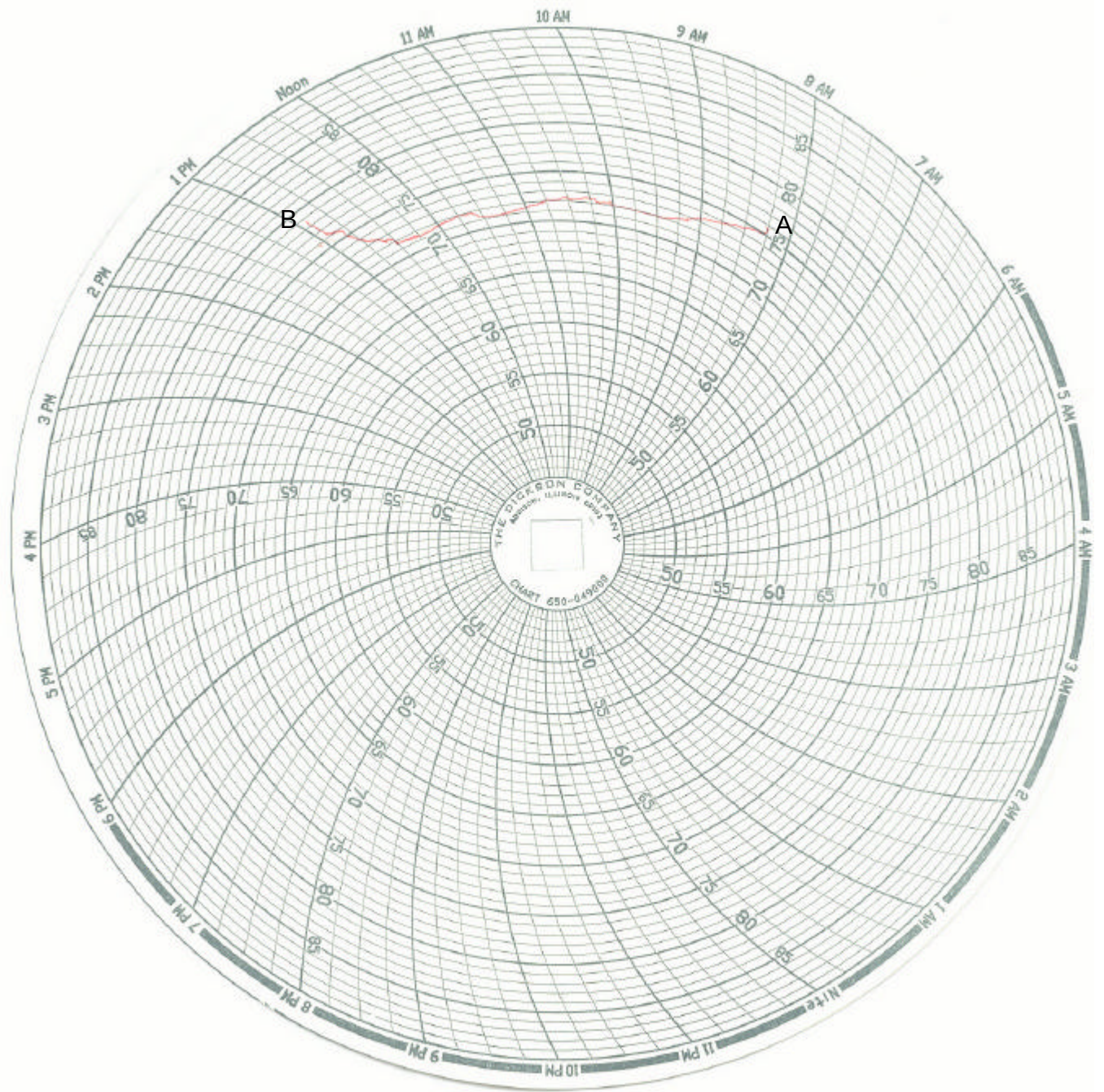
Inspected By: Tim Michnay

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):

VEHICLE AND DUMMY TEMPERATURE



A = Dummies installed in vehicle at 8:15 a.m.

B = Test conducted at 1:10 p.m.

APPENDIX D

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

DUMMY AND VEHICLE CALIBRATION DATA

	INSTRUMENTS FOR DRIVER DUMMY NO. 048		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Upper Rib Y	AN8L6	Endevco	9/5/00
Lower Rib Y	AC913	Endevco	12/14/00
Lower Spine Y	J11784	Endevco	12/12/00
Pelvis Y	J11047	Endevco	12/12/00
Upper Rib Redundant Y	APY13	Endevco	9/5/00
Lower Rib Redundant Y	AGTT3	Endevco	11/17/00
Lower Spine Redundant Y	J11046	Endevco	12/12/00
Pelvis Redundant Y	AMP95	Endevco	10/3/00
Head Center of Gravity X	J13930	Endevco	12/12/00
Head Center of Gravity Y	J13631	Endevco	12/12/00
Head Center of Gravity Z	J13990	Endevco	12/12/00

	INSTRUMENTS FOR PASSENGER DUMMY NO. 049		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Upper Rib Y	AGTB5	Endevco	9/19/00
Lower Rib Y	ANBP7	Endevco	10/2/00
Lower Spine Y	AHT13	Endevco	12/12/00
Pelvis Y	AKAA6	Endevco	10/2/00
Upper Rib Redundant Y	AGTM2	Endevco	9/19/00
Lower Rib Redundant Y	AP1C6	Endevco	10/2/00
Lower Spine Redundant Y	ADAB3	Endevco	10/12/00
Pelvis Redundant Y	AP2C4	Endevco	10/2/00
Head Center of Gravity X	J22055	Endevco	10/3/00
Head Center of Gravity Y	J22107	Endevco	10/3/00
Head Center of Gravity Z	J20965	Endevco	10/3/00

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	K19-A15	Entran	7/11/00
Moving Barrier Rear Axle Y	G13-F10	Entran	8/14/00
Left Mid A-Post Y	K16-X05	Entran	8/8/00
Left Lower A-Post Y	J13-F22	Entran	11/17/00
Left Mid B-Post Y	E10-F18	Entran	7/11/00
Left Lower B-Post Y	K16-X08	Entran	7/11/00
Rear Floorpan Above Axle X	I25-J10	Entran	9/14/00
Rear Floorpan Above Axle Y	G13-F07	Entran	8/15/00
Rear Floorpan Above Axle Z	G01-J14	Entran	7/11/00
Driver Seat Track Y	I25-J02	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	D06-A03	Entran	8/15/00
Right Side Sill at Rear Seat Y	C05-Z13	Entran	8/15/00
Right Side Sill at Rear Seat Z	C14-Z07	Entran	8/15/00
Left Side Sill at Front Seat Y	C18-G12	Entran	8/8/00
Left Side Sill at Rear Seat Y	G01-J12	Entran	9/12/00
Right Rear Occupant Compartment Y	G01-J11	Entran	9/12/00
Vehicle CG X	G13-F01	Entran	8/14/00
Vehicle CG Y	G13-F09	Entran	8/14/00
Vehicle CG Z	E23-R11	Entran	9/12/00

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

All Entran accelerometers are Model No. EGE-72