

REPORT NUMBER: 201-MGA-2001-002

**SAFETY COMPLIANCE TESTING FOR FMVSS 201
RIGID POLE SIDE IMPACT TEST**

**Volkswagen of Mexico
2001 Volkswagen Jetta 4 Door
NHTSA NUMBER: C15801**

**PREPARED BY:
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June 8, 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 rigid pole side impact test was conducted on the subject 2001 Volkswagen Jetta 4 Door in accordance with FMVSS 201, "Occupant Protection in Interior Impact", S6(b)(3) and the Office of Vehicle Safety Compliance Test Procedure No. TP-201P-02 "Rigid Pole Side Impact Test". The test was conducted at MGA Research Corporation, in Burlington, Wisconsin, on June 8, 2001. The impact velocity of the vehicle was 28.6 kph, and the ambient temperature at the struck(driver's) side of the target vehicle at the time of impact was 21.°C. The post-test maximum crush was 449 mm at level 3. The test vehicle's occupant performance is as follows: <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%; text-align: center;"><u>REQUIREMENTS</u></td> <td style="width: 33%; text-align: center;"><u>DRIVER</u></td> </tr> <tr> <td style="text-align: center;">HIC</td> <td style="text-align: center;">≤ 1000</td> <td style="text-align: center;">444</td> </tr> </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>REQUIREMENTS</u>	<u>DRIVER</u>	HIC	≤ 1000	444
	<u>REQUIREMENTS</u>	<u>DRIVER</u>									
HIC	≤ 1000	444									
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SECTION 1
PURPOSE AND TEST PROCEDURE

1.1 PURPOSE

This rigid pole 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 occupant protection in interior impact in a 2001 Volkswagen Jetta 4 Door manufactured by Volkswagen of Mexico.

1.2 TEST PROCEDURE

The rigid pole 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-201P-02, dated April 21, 2000 and the corresponding MGA Research Corporation Test Procedure MGA-NHTSA8. 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 RIGID POLE SIDE IMPACT TEST

2.1 SUMMARY OF SIDE IMPACT TEST

A rigid pole side impact test was performed on a model year 2001 Volkswagen Jetta 4 Door. The subject vehicle was towed into a rigid pole at a velocity of 28.6 km/h. The specified impact velocity range is from 27.1 to 28.9 km/h. The test vehicle was positioned at 90° to the line of forward motion. The weight of the vehicle as tested was 1451.5 kg. The test was conducted at MGA Research Corporation in Burlington, Wisconsin, on June 8, 2001.

One (1) real-time motion picture camera and twelve (12) 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 SID/HIII can be found in Appendix A. One SID/HIII was placed in the left front outboard designated seating position according to instructions specified in TP-201P-02 dated April 21, 2000. The SID/HIII was instrumented in the following locations:

- Head Center of Gravity (CG) tri-axial accelerometers (X, Y, and Z axes)
- Upper Neck 6 channel load cell (X, Y, and Z force and moment)
- Left Upper Rib (LUR) uni-axial accelerometer (Y-axis and redundant)
- Left Lower Rib (LLR) uni-axial accelerometer (Y-axis 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)

The test vehicle was instrumented with twenty (20) structural accelerometers. 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 449 mm at level 3, at the impact point. The driver SID/HIII, Serial No. 037, was calibrated just prior to this test. The SID/HIII's injury criteria is summarized as follows:

Measurements	Units	Driver
HIC		444
TTI*	G	38
Pelvis*	G	41
Neck Force X*	N	-365
Neck Force Y*	N	493
Neck Force Z*	N	-489
Neck Moment X*	Nm	-62.8
Neck Moment Y*	Nm	33.2
Neck Moment Z*	Nm	24.2

* Information Purposes Only.

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 SID/HIII and vehicle data traces. Appendix C contains the SID/HIII's configuration and performance verification data. Appendix D contains the test equipment information.

TEST NOTES

The following accelerometers were not used for this test:

A Pillar Upper
B Pillar Upper
Left Roof
Right Roof

SECTION 3

SIDE IMPACT DUMMY (SID/HIII) AND VEHICLE TEST DATA

Test Vehicle: 2001/Volkswagen/Jetta/4 door

NHTSA No.: C15801

Test Program: FMVSS 201

Test Date: June 8, 2001

CONVERSION FACTORS USED IN THIS REPORT*

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

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

DATA SHEET NO. 1**GENERAL TEST AND VEHICLE PARAMETER DATA**Test Vehicle: 2001/Volkswagen/Jetta/4 doorNHTSA No.: C15801Test Program: FMVSS 201Test Date: June 8, 2001**TEST VEHICLE INFORMATION**

Make	Volkswagen
Model	Jetta
Body Style	4 door
NHTSA No.	C15801
VIN	3VWRB69M21M101207
Color	blue
Delivery Date	4/19/01
Odometer Reading (mile)	116
Dealer	Concours, Inc.
Transmission	5 spd. overdrive manual
Final Drive	front
Number of Cylinders	4
Engine Displacement (L)	2.0
Engine Placement	transverse

TEST VEHICLE OPTIONS

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

DATA FROM CERTIFICATION LABEL

Manufactured By	Volkswagen of Mexico	GVWR (kg)	1730.4
Date of Manufacture	11/00	GAWR Front (kg)	900.4
		GAWR Rear (kg)	870.0

DATA FROM TIRE PLACARD

Measured Parameter	Front	Rear
Maximum Tire Pressure (kPa)	210	287
Cold Pressure (kPa)	182	182
Recommend Tire Size	195/65R15	195/65R15
Tire Size on Vehicle	195/65R15	195/65R15
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)				406.0
Cargo Weight (RCLW) (kg)				65.8

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

Test Vehicle: 2001/Volkswagen/Jetta/4 door
 Test Program: FMVSS 201

NHTSA No.: C15801
 Test Date: June 8, 2001

TEST VEHICLE WEIGHTS

	Units	As Delivered (UVW)			As Tested (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	384.7	269.4		422.3	307.5	
Right	kg	387.8	271.3		410.5	311.2	
Ratio	%	58.8	41.2		57.4	42.6	
Totals	kg	772.5	540.7	1313.2	832.8	618.7	1451.5

TARGET TEST WEIGHT CALCULATION*

Measured Parameter	Units	Value
Total Delivered Weight (UVW)	kg	1313.2
Weight of SID/HIII Side Impact Dummy	kg	80.7
Rated Cargo/Luggage Weight (RCLW)	kg	65.8
Calculated Vehicle Target Weight (TVTW)	kg	1459.7

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

TEST VEHICLE ATTITUDES AND CG

	Units	As Delivered	Fully Loaded	Ready for Test
Right Front	mm	687	681	684
Left Front	mm	694	683	683
Right Rear	mm	697	674	686
Left Rear	mm	702	674	682
Right Door Sill Angle	deg	0.7 ND	0.2 BD	0.2 ND
Left Door Sill Angle	deg	0.4 ND	0.1 ND	0.2 ND
Front Bumper Angle	deg	0.4 LD	0.3 LD	0.3 LD
Rear Bumper Angle	deg	0.4 LD	0.4 LD	0.4 LD

ND = Nose Down, BD = Back Down, LD = Left Down, RD = Right Down

GENERAL TEST VEHICLE DATA

Measurement Description	Units	Value
Test Vehicle Wheel Base	mm	2526
Total Vehicle Length at Left Side	mm	3903
Total Vehicle Length at Centerline	mm	4347
Total Vehicle Length at Right Side	mm	3903
Total Vehicle Width at B-Post	mm	1718
Weight of Ballast in Cargo Area	kg	0
Amount of Stoddard Solvent in Fuel Tank	liters	50.7

DATA SHEET NO. 1...(continued)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2001/Volkswagen/Jetta/4 door

NHTSA No.: C15801

Test Program: FMVSS 201

Test Date: June 8, 2001

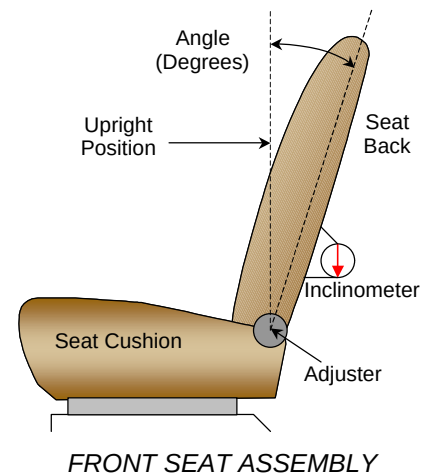
TEST VEHICLE VERTICAL IMPACT LINE DATA

Measurement Description	Units	Value
Target Impact Point Aft of Front Axle	mm	1272
Actual Impact Point Aft of Front Axle	mm	1274

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: An inclinometer is firmly placed against the flat portion of the seat back surface and then adjusted to the manufacturer's designated angle.

Driver seat back angle: 18.2E



SEAT FORE/AFT POSITIONS

The driver's seat is manually operated. The fore/aft is set to the middle position for the driver's seat. The first detent is numbered "1".

Driver seat fore/aft total travel: 235 mm

Driver seat fore/aft position: 8th detent rearward of 14 total, 1st detent as 1

SEAT BELT UPPER ANCHORAGE

The test vehicle is equipped with adjustable "D" ring anchorage for the driver's seat position. There are 5 positions or detents, with the uppermost position numbered "1". The driver's "D" ring anchorage is placed in position 3 or middle position.

DATA SHEET NO. 1...(continued)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2001/Volkswagen/Jetta/4 door

NHTSA No.: C15801

Test Program: FMVSS 201

Test Date: June 8, 2001

FUEL TANK CAPACITY DATA

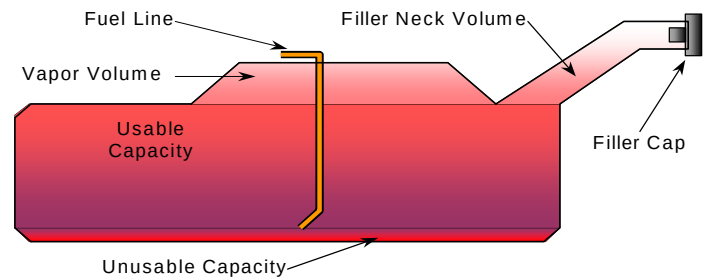
The "Usable Capacity" of the standard equipment fuel tank is: 54.9 liters

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

92-94% of "Usable Capacity" for certification to FMVSS 301 requirement: 50.5 - 51.6 liters

Actual amount of Stoddard solvent added to vehicle for certification test: 50.7 liters

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



VEHICLE FUEL TANK ASSEMBLY

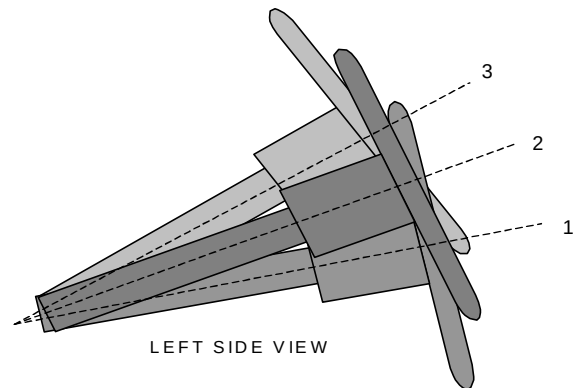
STEERING COLUMN ADJUSTMENT

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.

Lowermost, position 1: 22.7°

Geometric center, position 2: 24.5°

Uppermost, position 3: 26.4°



LEFT SIDE VIEW

STEERING COLUMN ASSEMBLY

DATA SHEET NO. 2**TEST VEHICLE SUMMARY OF RESULTS**Test Vehicle: 2001/Volkswagen/Jetta/4 doorNHTSA No.: C15801Test Program: FMVSS 201Test Date: June 8, 2001**TEST VEHICLE WEIGHTS**

	Units	As Delivered (UVW)			As Tested (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	384.7	269.4		422.3	307.5	
Right	kg	387.8	271.3		410.5	311.2	
Weight Ratio	%	58.8	41.2		57.4	42.6	
Totals	kg	772.5	540.7	1313.2	832.8	618.7	1451.5

MAXIMUM EXTERIOR STATIC CRUSH

Level	Measured Parameter	Units	Maximum Crush	Above Ground
Level 1	Sill Top Height	mm	410	287
Level 2	Occupant H-Point	mm	431	514
Level 3	Mid Door	mm	449	625
Level 4	Window Sill	mm	402	906
Level 5	Window Top	mm	202	1386
N/A	Maximum Penetration	mm	449	625

INSTRUMENTATION

SID/HIII Instrumentation	20
Vehicle Structure Accelerometers	20
Total	40

CAMERAS

Onboard Vehicle	3
Offboard Vehicle	10
Total	13

IMPACT POINT DATA

Measured Parameter	Units	Requirement	Value
Horizontal Offset	mm	+/- 50	2 rearward

DATA SHEET NO. 3**POST TEST OBSERVATIONS**Test Vehicle: 2001/Volkswagen/Jetta/4 doorNHTSA No.: C15801Test Program: FMVSS 201Test Date: June 8, 2001**TEST DUMMY INFORMATION AND CONTACT POINTS**

Description	Driver
Dummy Type / Serial No.	SID/HIII / 037
Head Contact	inflatable curtain
Upper Torso Contact	side airbag
Lower Torso Contact	armrest
Left Knee Contact	door panel
Right Knee Contact	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	0 mm	n/a
Seat Back Failure	none	n/a

POST TEST STRUCTURAL OBSERVATIONS

Critical Areas of Performance	Observations and Conclusions
Pillar Performance	no failure noted
Sill Separation	none
Windshield Damage	broken
Window Damage	left front door glass broken
Other Notable Effects	none noted

AIRBAG DEPLOYMENT

	Driver
Front	no
Side	yes
Curtain	yes

ARM REST LOCATION AND SEAT CRUSH

	Driver
Front Armrest (from bottom of window) (mm)	228
Front Seat Back Crush (mm)	129
Front Seat Cushion Crush (mm)	63

SECTION 4
OCCUPANT AND VEHICLE INFORMATION

DATA SHEET NO. 4

SID/HIII INJURY CRITERIA AND SENSOR DATA

Test Vehicle: 2001/Volkswagen/Jetta/4 door

NHTSA No.: C15801

Test Program: FMVSS 201

Test Date: June 8, 2001

THORAX AND PELVIS PEAK ACCELERATIONS (FIR 100 Filtered)

Location	Axis	Units	Driver			
			Max	Time	Min	Time
Upper Rib (LUR)	Y	G's	41.5	46	11.7	111
Upper Rib (LUR) (R)	Y	G's	40.4	46	11.2	111
Lower Rib (LLR)	Y	G's	38.6	47	11.0	111
Lower Rib (LLR) (R)	Y	G's	38.6	48	10.7	110
Lower Spine (T ₁₂)	Y	G's	34.8	39	6.6	84
Lower Spine (T ₁₂) (R)	Y	G's	34.3	39	7.2	85
Pelvis (PEV)	Y	G's	40.5	37	6.3	77
Pelvis (PEV) (R)	Y	G's	40.5	37	6.3	76

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

Location	Driver			
	LUR	T ₁₂	TTI(g)	PEV(g)
Rib, Spine, and Pelvis	41.5	34.8	38	40.5
Rib, Spine, and Pelvis (R)	40.4	34.3	37	40.5

UPPER NECK FORCES AND MOMENTS (SAE CLASS 1000/600 Filtered)

Location	Axis	Units	Driver			
			Max	Time	Min	Time
Neck Force	X	N	26.5	183	365.1	64
Neck Force	Y	N	492.9	57	404.9	137
Neck Force	Z	N	382.6	49	489.3	66
Neck Moment	X	Nm	8.2	110	62.8	58
Neck Moment	Y	Nm	33.2	63	7.7	82
Neck Moment	Z	Nm	24.2	68	15.6	145

HEAD CG PEAK ACCELERATIONS (SAE CLASS 1000 Filtered)

Location	Axis	Units	Driver			
			Max	Time	Min	Time
Head CG	X	G's	1.2	85	20.5	63
Head CG	Y	G's	63.7	60	10.1	145
Head CG	Z	G's	9.5	116	4.3	66
Head CG Resultant		G's	66.0	60		

HEAD INJURY CRITERIA (SAE CLASS 1000 Filtered)

Location	Driver			
	HIC	T ¹	T ²	Avg G's
Head CG	444	49.6	72.2	52.2

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

= + Forward
= + Right
= + Down

DATA SHEET NO. 5

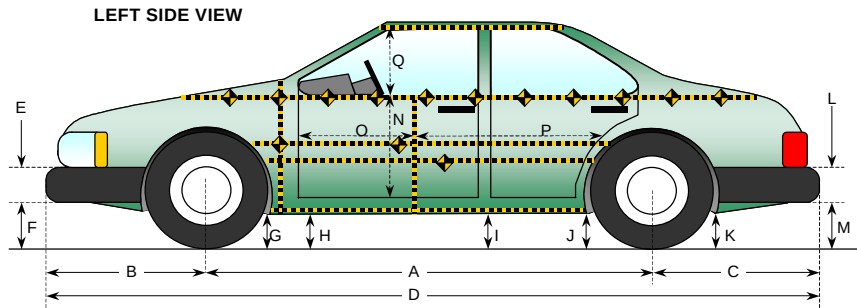
VEHICLE PRE-TEST AND POST-TEST MEASUREMENTS

Test Vehicle: 2001/Volkswagen/Jetta/4 door

NHTSA No.: C15801

Test Program: FMVSS 201

Test Date: June 8, 2001



All Measurements in mm

Code	Measurement Description	Pre-Test	Post-Test	Difference
A	Wheelbase	2526	2420	-106
B	Front Axle to FSOV	881	866	-15
C	Rear Axle to RSOV	940	952	12
D	Total Length at Centerline	4347	4238	-109
E	Front Bumper Thickness	280	280	0
F	Front Bumper Bottom to Ground	279	298	19
G	Sill Height at Front Wheel Well	191	210	19
H	Sill Height at Front Door Leading Edge	200	226	26
I	Sill Height at "B" Pillar	216	251	35
J1	Sill Height at Rear Wheel Well	222	255	33
J2	Pinch Weld Height at Rear Wheel Well	225	257	32
K	Sill Height Aft of Rear Wheel Well	253	295	42
L	Rear Bumper Thickness	356	356	0
M	Rear Bumper Bottom to Ground	338	365	27
N	Sill Height to Window Bottom Sill	642	628	-14
O	Front Door Leading Edge to Impact CL	922	825	-97
P	Rear Door Trailing Edge to Impact CL	849	735	-114
Q	Front Window Opening	476	451	-25
R	Right Side Length	3903	3867	-36
S	Left Side Length	3903	3757	-146
T	Vehicle Width at "B" Post	1718	1415	-303

DATA SHEET NO. 6

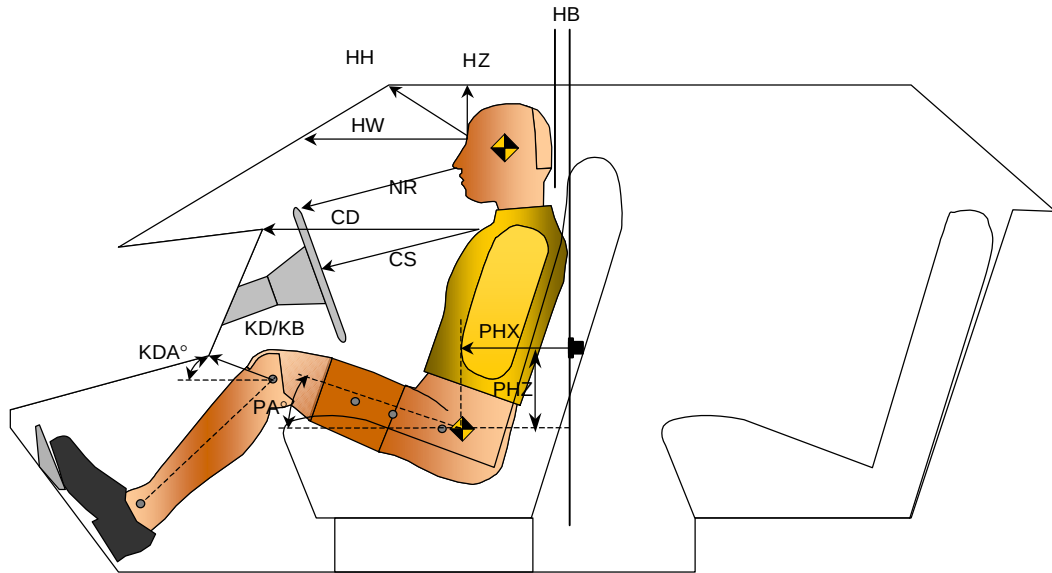
SID/HIII LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2001/Volkswagen/Jetta/4 door

NHTSA No.: C15801

Test Program: FMVSS 201

Test Date: June 8, 2001



Driver Code	Measurement Description	Driver 037	
		Length(mm)	Angle(°)
HB	Back of Head to Back of Window @ Head CG	51	
HH	Head to Header	313	
HW	Head to Windshield	575	
HZ	Head to Roof	175	
NR	Nose to Rim	388	
CD	Chest to Dash	474	
CS	Chest to Steering Wheel	306	
KDL	Left Knee to Dash	200	0.0
KDR	Right Knee to Dash	197	0.0
PA	Pelvic Angle		23.5
PHX	H-Point to Striker (X-Axis)	152	
PHZ	H-Point to Striker (Z-Axis)	192	

DATA SHEET NO. 7

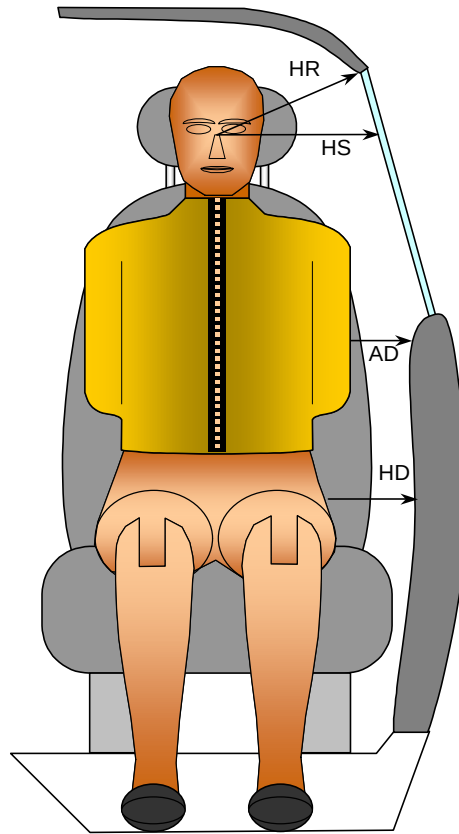
SID/HIII LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2001/Volkswagen/Jetta/4 door

NHTSA No.: C15801

Test Program: FMVSS 201

Test Date: June 8, 2001



FRONT VIEW OF DUMMY

Code	Measurement Description	Units	Driver 037
HR	Head to Side Header	mm	209
HS	Head to Side Window	mm	366
AD	Arm to Door	mm	107
HD	H-Point to Door	mm	152

DATA SHEET NO. 8

VEHICLE SIDE MEASUREMENTS

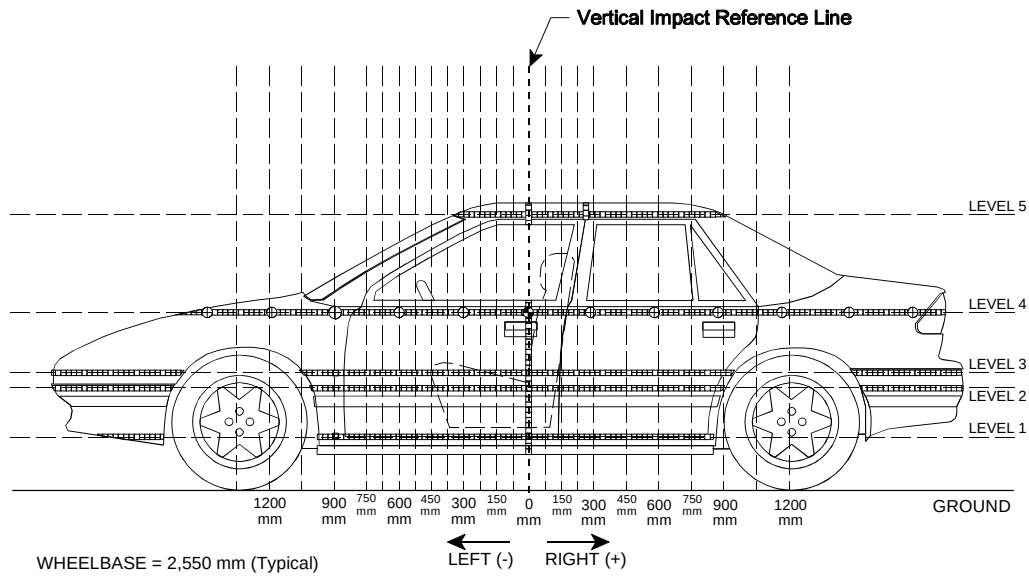
Test Vehicle: 2001/Volkswagen/Jetta/4 door

NHTSA No.: C15801

Test Program: FMVSS 201

Test Date: June 8, 2001

PRETEST AND POST TEST EXTERIOR PROFILE MEASUREMENTS



LEFT SIDE VIEW

Measurements are taken with vehicle in the as tested condition.

Measurements along the vertical 800 mm.

Level	Measurement Description	Units	Height Above Ground
5	Window	mm	1386
4	Window Sill	mm	906
3	Mid Door	mm	625
2	Occupant H-Point	mm	514
1	Sill Top	mm	287

DATA SHEET NO. 9

VEHICLE EXTERIOR CRUSH PROFILES

Test Vehicle: 2001/Volkswagen/Jetta/4 door

NHTSA No.: C15801

Test Program: FMVSS 201

Test Date: June 8, 2001

	Pre-Test					Post-Test					Difference				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
-1950			498					507					9		
-1800			460	536				479	553				19	17	
-1650			416	513				439	540				23	27	
-1500				495					530					35	
-1350				480					519					39	
-1200				470					515					45	
-1125															
-1050			392	462				454	514				62	52	
-975															
-900	423	408	405	456		499	470	466	510		76	62	61	54	
-825	422	408	405	455		517	493	490	519		95	85	85	64	
-750	423	407	403	454		537	517	515	538		114	110	112	84	
-675	422	407	402	455		557	541	539	563		135	134	137	108	
-600	420	406	401	455		576	564	563	587		156	158	162	132	
-525	421	406	400	455		598	588	590	624		177	182	190	169	
-450	420	406	400	451		621	613	617	657		201	207	217	206	
-375	419	406	400	453		645	640	645	693		226	234	245	240	
-300	418	405	400	453	684	675	677	697	729	782	257	272	297	276	98
-225	417	405	401	453	686	719	729	750	765	803	302	324	349	312	117
-150	417	405	400	452	686	781	781	793	805	840	364	376	393	353	154
-75	418	405	400	453	685	815	827	829	847	884	397	422	429	394	199
0	417	405	400	453	690	827	836	849	855	892	410	431	449	402	202
75	420	406	400	455	692	794	802	815	830	878	374	396	415	375	186
150	420	408	400	456	692	740	743	748	800	865	320	335	348	344	173
225					694					852					158
300	422	410	405	460	694	662	665	669	731	835	240	255	264	271	141
450	425	413	406	464	698	597	598	602	672	796	172	185	196	208	98
600	430	416	410	471	702	543	532	538	612	693	113	116	128	141	-9
750	433	420	415	475	710	487	467	475	549	664	54	47	60	74	-46
900			403	480	725			457	492	752			54	12	27
1050				490					435					-55	
1200				500					378					-12	
1350			401	508				432	535				31	27	
1500			456	518				479	539				23	21	
1650			478	540				499	550				21	10	
1800			500	565				516	570				16	5	
1950			533					542					9		
2100															

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

DATA SHEET NO. 9...(continued)

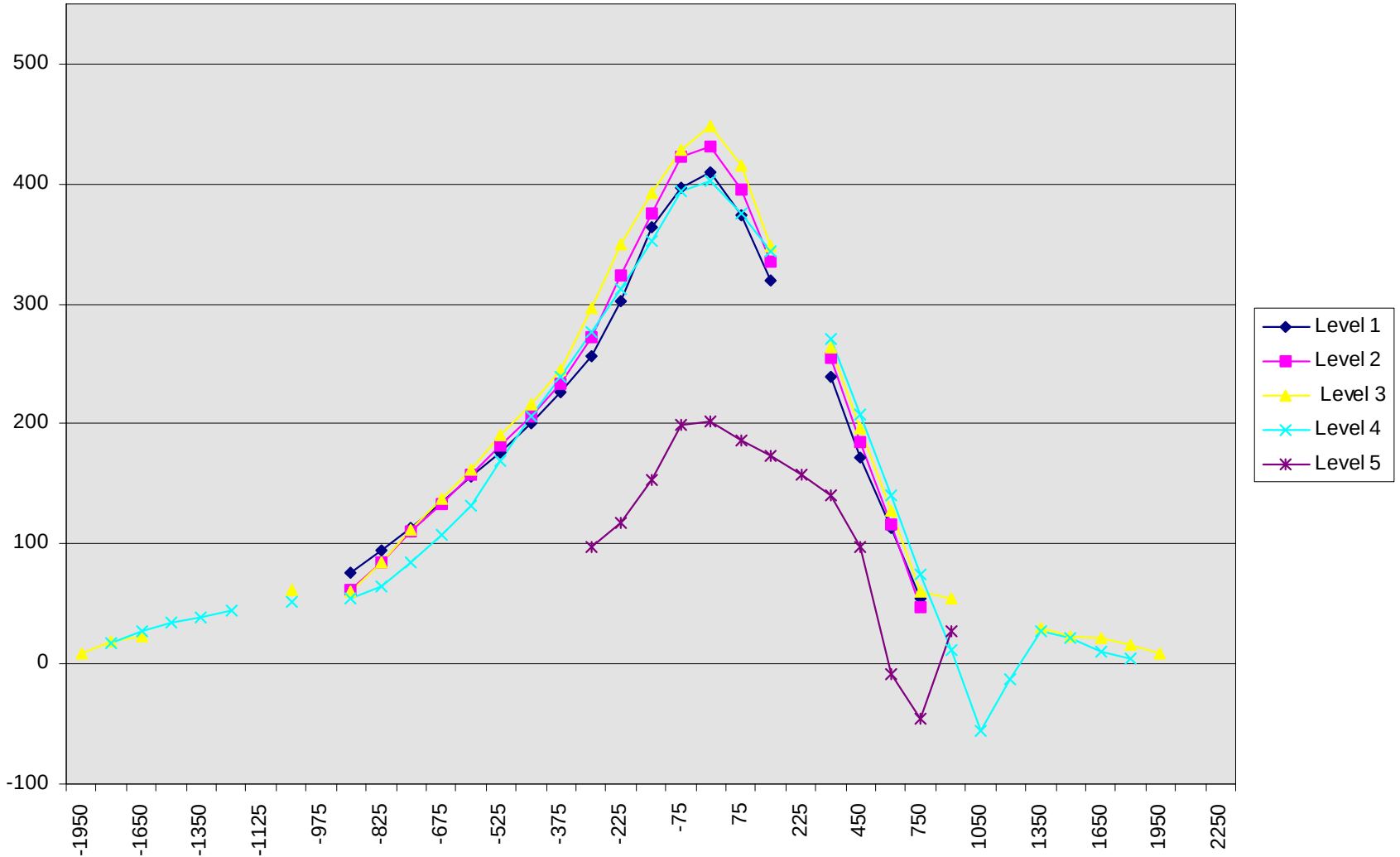
VEHICLE EXTERIOR CRUSH PROFILES

Test Vehicle: 2001/Volkswagen/Jetta/4 door

NHTSA No.: C15801

Test Program: FMVSS 201

Test Date: June 8, 2001



DATA SHEET NO. 10

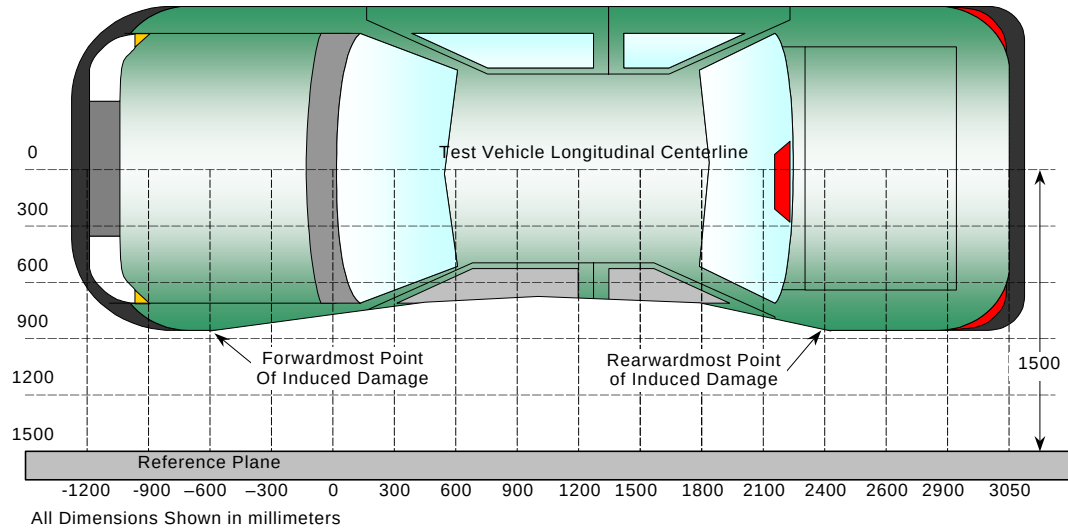
VEHICLE DAMAGE PROFILE DISTANCES

Test Vehicle: 2001/Volkswagen/Jetta/4 door

NHTSA No.: C15801

Test Program: FMVSS 201

Test Date: June 8, 2001



Damage Profile Distances

DPD	Distance from Impact Point in mm	Level	Pre-Test (mm)	Post-Test (mm)	Max Static Crush (mm)
1	1800 mm	4	565	570	5
2	1184 mm	4	498	382	-116
3	429 mm	3	406	614	208
4	-387 mm	3	400	642	242
5	-1106 mm	4	465	512	47
6	-1800 mm	4	536	553	17

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

DATA SHEET NO. 11

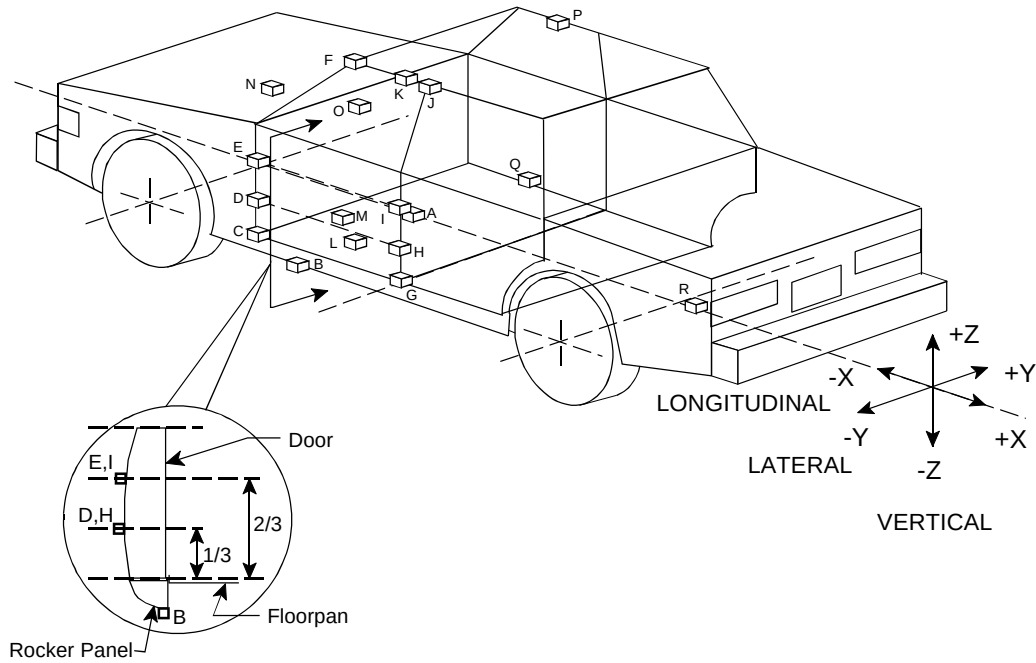
VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Test Vehicle: 2001/Volkswagen/Jetta/4 door

NHTSA No.: C15801

Test Program: FMVSS 201

Test Date: June 8, 2001



No.	Location
A	Vehicle CG
B	Left Floor Sill
C	A Pillar Sill
D	A Pillar Low
E	A Pillar Mid
G	B Pillar Sill
H	B Pillar Low
I	B Pillar Low

No.	Location
L	Driver Seat
M1	Driver Door Upper
M2	Driver Door Mid
M3	Driver Door Lower
N	Engine
O	Firewall
Q	Right Floor Sill
R	Rear Deck

DATA SHEET NO. 11...(continued)

VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY

Test Vehicle: 2001/Volkswagen/Jetta/4 door

NHTSA No.: C15801

Test Program: FMVSS 201

Test Date: June 8, 2001

VEHICLE ACCELEROMETER PEAK DATA

Loc. No.	Accelerometer Location	Peak Values (G's)				
		Axis	Max	Time	Min	Time
A	Vehicle CG	X	9.8	29	15.7	33
		Y	37.7	30	10.0	66
		Z	28.1	35	28.3	40
		RES	45.1	40		
B	Left Floor Sill	Y	15.3	38	0.8	170
C	A Pillar Sill	Y	11.3	38	0.2	171
D	A Pillar Low	Y	12.5	14	0.2	170
E	A Pillar Mid	Y	10.3	83	1.7	14
G	B Pillar Sill	Y	23.1	37	6.2	60
H	B Pillar Low	Y	81.8	5	5.2	19
I	B Pillar Mid	Y	62.0	5	1.7	69
L	Driver Seat	Y	42.3	23	10.9	29
M1	Driver Door Upper	Y	29.5	5	16.9	31
M2	Driver Door Mid	Y	42.3	11	47.6	16
M3	Driver Door Lower *	Y	72.6	6	35.6	19
N	Engine	X	4.9	83	4.6	33
		Y	10.6	71	0.1	7
O	Firewall	Y	9.2	76	0.8	4
Q	Right Floor Sill	Y	12.6	95	0.4	190
R	Rear Deck	X	4.0	188	0.8	4
		Y	10.7	70	1.3	189

Reference Points X - Rear of Vehicle (+ forward)
 Y - Vehicle Centerline (+ to right)
 Z - Ground Plane (+ up)

* No valid data after 25 msec.

DATA SHEET NO. 11...(continued)

VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY

Test Vehicle: 2001/Volkswagen/Jetta/4 door

NHTSA No.: C15801

Test Program: FMVSS 201

Test Date: June 8, 2001

VEHICLE ACCELEROMETER LOCATIONS

Loc. No.	Accelerometer Location	Measurements (mm)			
		Axis	Pre-Test	Post-Test	Difference
A	Vehicle CG	X	2334	2316	18
		Y	0	0	0
		Z	476	414	62
B	Left Floor Sill	X	2789	2666	123
		Y	-711	-681	-30
		Z	203	237	-34
C	A Pillar Sill	X	3066	2910	156
		Y	-712	-688	-24
		Z	205	219	-14
D	A Pillar Low	X	2976	2902	74
		Y	-677	-654	-23
		Z	328	259	69
E	A Pillar Mid	X	2970	2876	94
		Y	-764	-688	-76
		Z	888	905	-17
G	B Pillar Sill	X	2012	1961	51
		Y	-542	-421	-121
		Z	180	200	-20
H	B Pillar Low	X	2045	1985	60
		Y	-754	-467	-287
		Z	508	536	-28
I	B Pillar Mid	X	2004	1916	88
		Y	-711	-430	-281
		Z	824	857	-33
L	Driver Seat	X	2222	2193	29
		Y	-430	-353	-77
		Z	206	231	-25

DATA SHEET NO. 11...(continued)

VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY

Test Vehicle: 2001/Volkswagen/Jetta/4 door

NHTSA No.: C15801

Test Program: FMVSS 201

Test Date: June 8, 2001

VEHICLE ACCELEROMETER LOCATIONS

Loc. No.	Accelerometer Location	Measurements (mm)			
		Axis	Pre-Test	Post-Test	Difference
M1	Driver Door Upper	X	2752	2646	106
		Y	-758	-677	-81
		Z	825	856	-28
M2	Driver Door Mid	X	2696	2541	155
		Y	-797	-680	-117
		Z	690	710	-20
M3	Driver Door Lower	X	2551	2404	147
		Y	-772	-633	-139
		Z	465	506	-41
N	Engine	X	3474	3385	89
		Y	106	100	6
		Z	832	875	-43
O	Firewall	X	3379	3249	130
		Y	-195	-217	22
		Z	868	890	-22
Q	Right Floor Sill	X	2174	2143	31
		Y	750	616	134
		Z	210	242	-32
R	Rear Deck	X	1130	1115	15
		Y	100	100	0
		Z	470	508	-38

DATA SHEET NO. 12

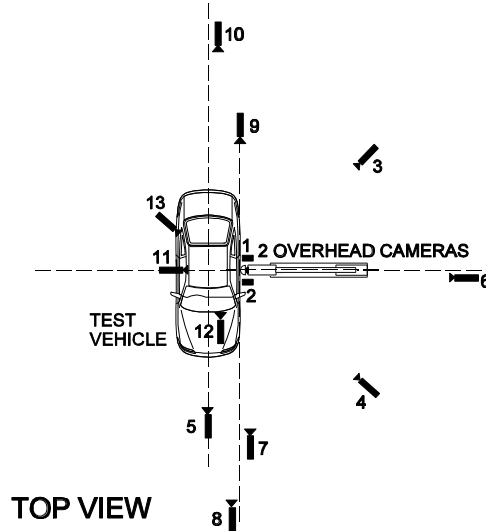
HIGH SPEED CAMERA LOCATIONS AND DATA

Test Vehicle: 2001/Volkswagen/Jetta/4 door

NHTSA No.: C15801

Test Program: FMVSS 201

Test Date: June 8, 2001



No.	Camera View	Location (mm)			Lens (mm)	Film Speed (fps)
		X	Y	Z		
1	Overhead Overall	-580	0	5140	7.5	1005
2	Overhead Close-up	0	0	5140	13	1058
3	Left Side 45° Rearward Pole View	4500	-7500	1490	50	1005
4	Left Side 45° Forward Pole View	4440	6850	1460	50	858
5	Real Time				13	32
6	Left Side Rear Pole View	2800	0	2600	8	1020
7	Front Ground Level Vehicle/Pole Impact	320	8600	1670	25	1026
8	Front Ground Level Vehicle Roof Targets and Vehicle/Pole Impact	-740	8540	1700	25	1005
9	Rear Ground Level Vehicle/Pole Impact	590	-7800	1550	25	1026
10	Rear Ground Level	-770	-8510	1520	25	1010
11	Test Vehicle Onboard Driver Side View				8	1015
12	Test Vehicle Onboard Driver Front View				13	1000
13	Test Vehicle Onboard Driver 3/4 Rear View				13	885

Reference Points X - + Forward of Impact
 Y - + Right of Impact
 Z - + Up from Ground

DATA SHEET NO. 13

FMVSS 301 FUEL SYSTEM INTEGRITY POST IMPACT DATA

Test Vehicle: 2001/Volkswagen/Jetta/4 door

NHTSA No.: C15801

Test Program: FMVSS 201

Test Date: June 8, 2001

Test Time: 1:06 p.m.

Temperature at Time of Impact: 21.4 °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. 14

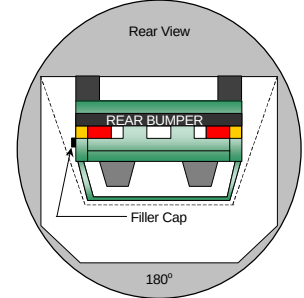
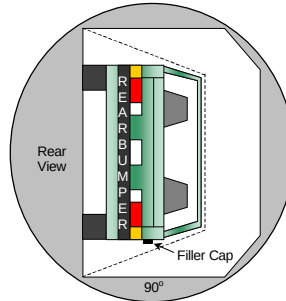
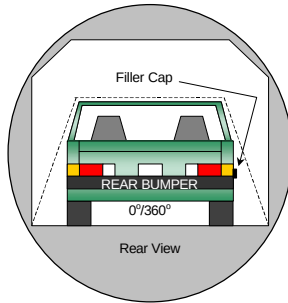
FMVSS 301 STATIC ROLLOVER DATA SHEET

Test Vehicle: 2001/Volkswagen/Jetta/4 door

NHTSA No.: C15801

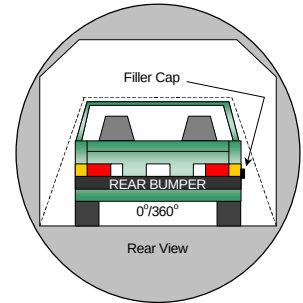
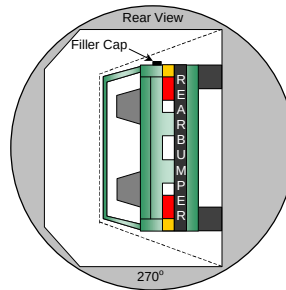
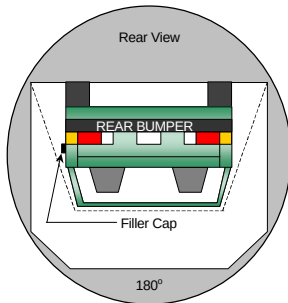
Test Program: FMVSS 201

Test Date: June 8, 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°	160	300	0
90° TO 180°	162	300	0
180° TO 270°	155	300	0
270° TO 360°	165	300	0

APPENDIX A

PHOTOGRAPHS

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

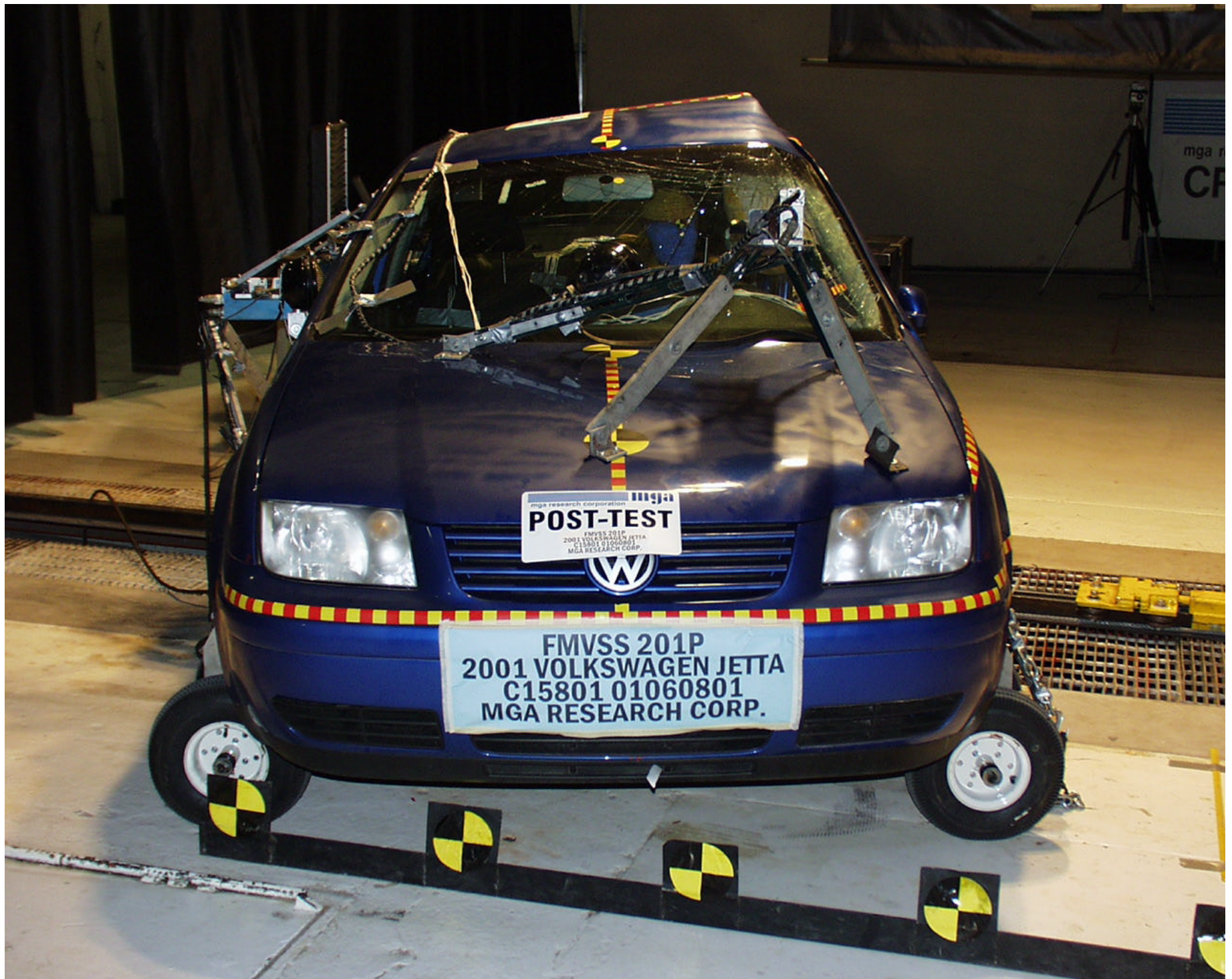


Photo No. A-2 - Post-Test Front View of Test Vehicle



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



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

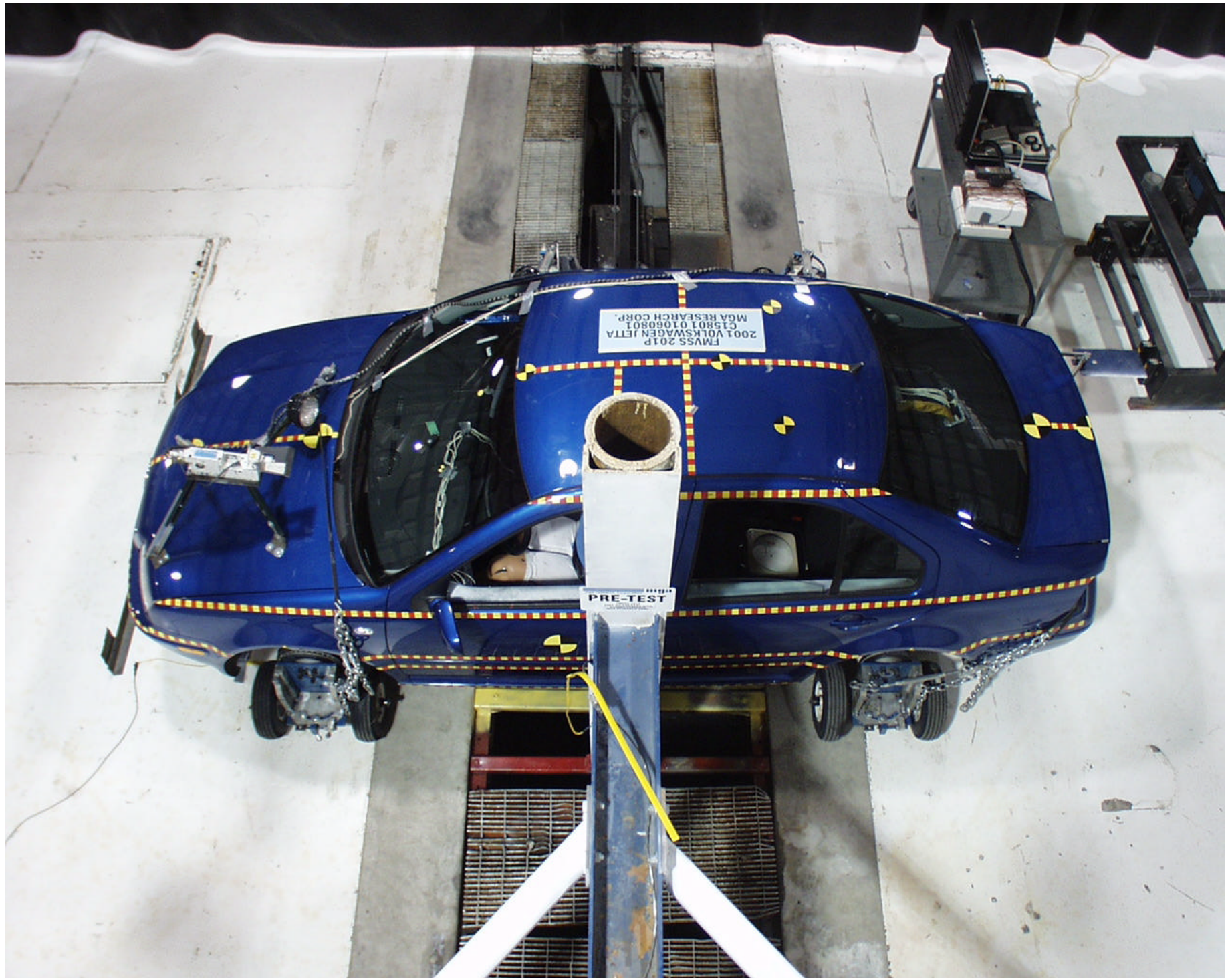


Photo No. A-5 - Pre-Test Left Side View of Test Vehicle

A-6

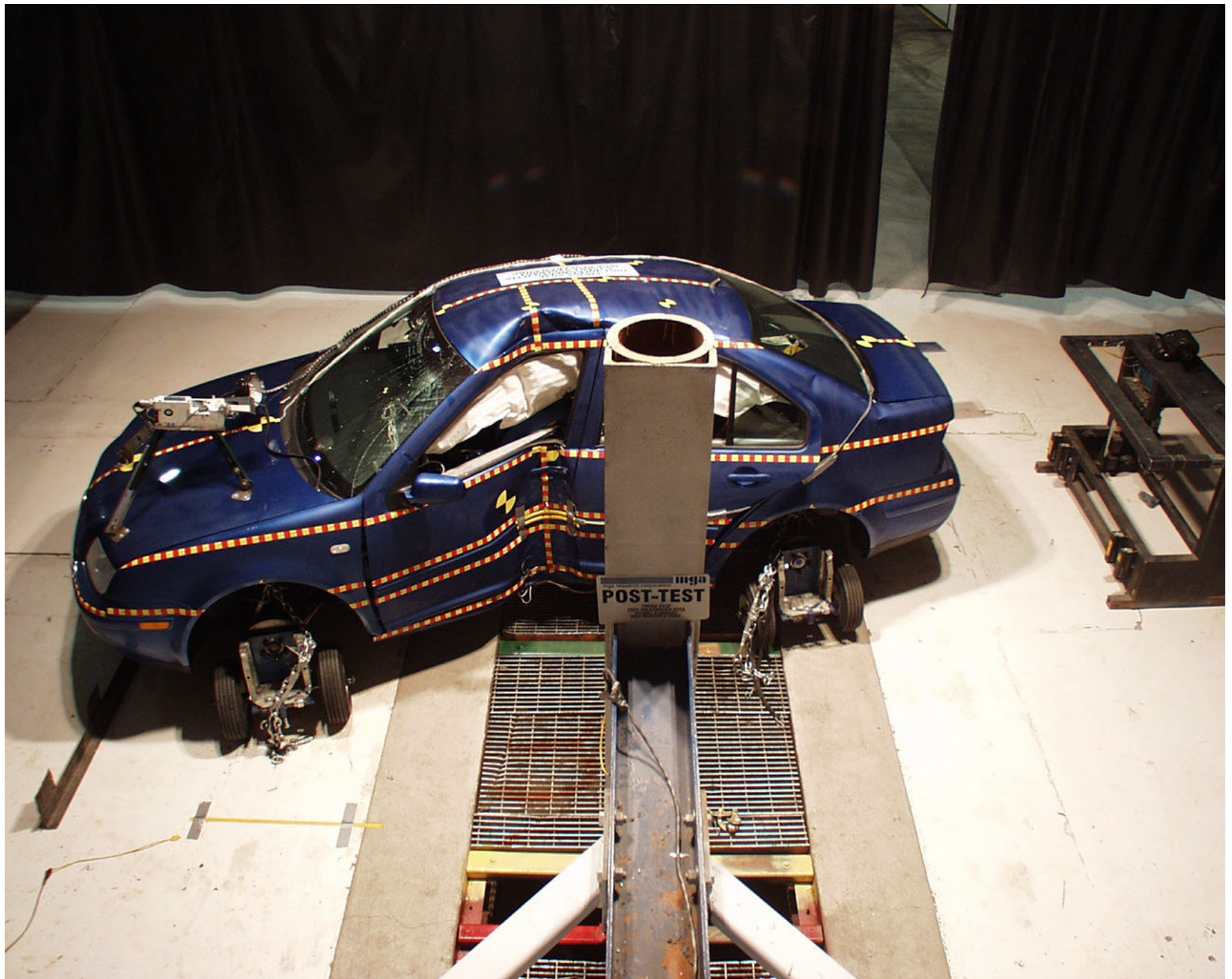


Photo No. A-6 - Post-Test Left Side View of Test Vehicle



Photo No. A-7 - Pre-Test Left Front View of Test Vehicle



Photo No. A-8 - Post-Test Left Front View of Test Vehicle



Photo No. A-9 - Pre-Test Left Rear View of Test Vehicle

A-10



Photo No. A-10 - Post-Test Left Rear View of Test Vehicle

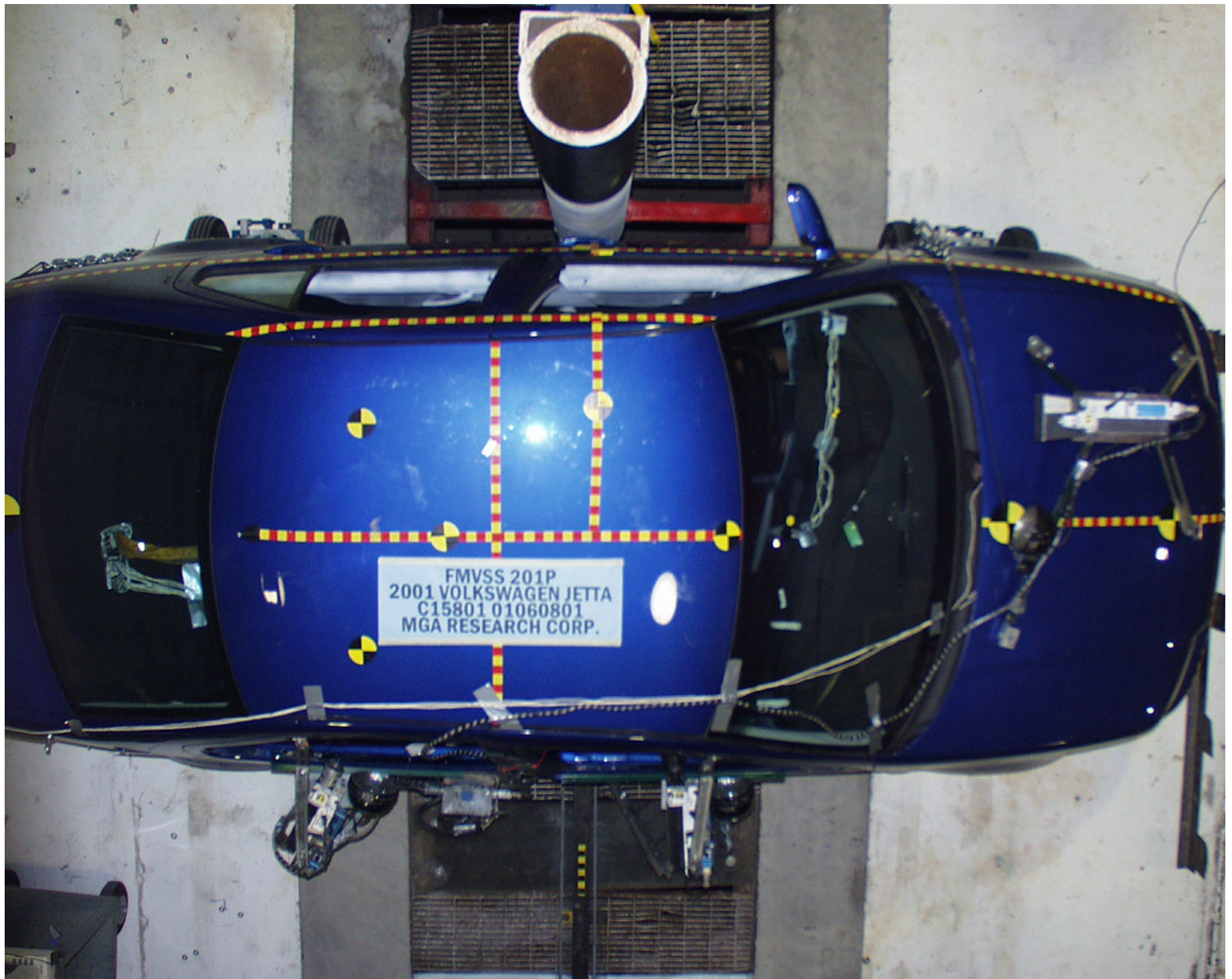


Photo No. A-11 - Pre-Test Overhead View of Test Vehicle

A-12

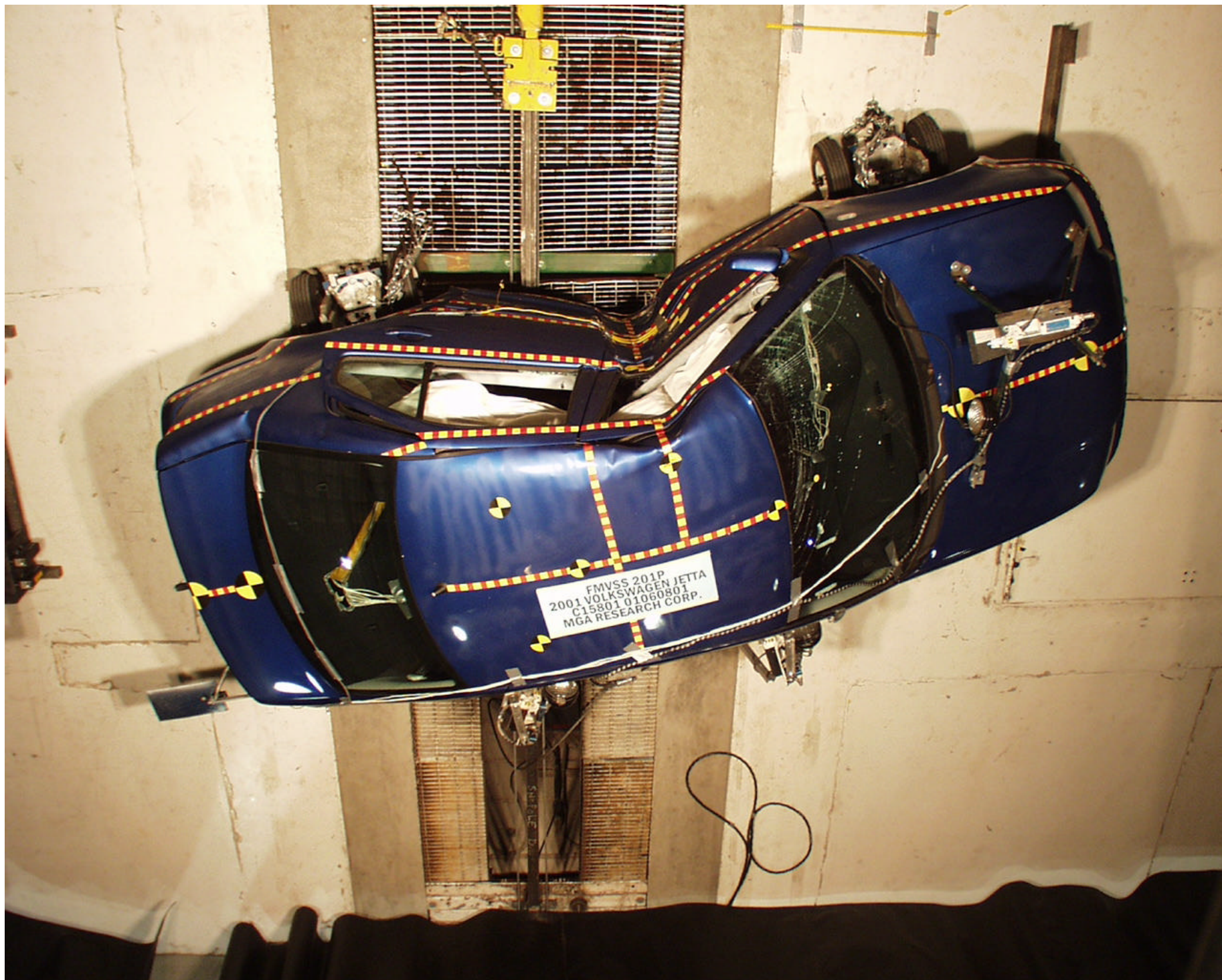


Photo No. A-12 - Post-Test Overhead View of Test Vehicle

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Photo No. A-13 - Pre-Test Overhead View of Test Vehicle (Close-up)



Photo No. A-14 - Post-Test Overhead View of Test Vehicle (Close-up)

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Photo No. A-15 - Pre-Test Driver Dummy Right Side



Photo No. A-16 - Post-Test Driver Dummy Right Side



Photo No. A-17 - Pre-Test Driver Dummy Left Side



Photo No. A-18 - Post-Test Driver Dummy Left Side



Photo No. A-19 - Pre-Test Driver Dummy Left Side (Door Open)



Photo No. A-20 - Pre-Test Driver Dummy Windshield View

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Photo No. A-21 - Post-Test Driver Dummy Windshield View



Photo No. A-22 – Impact

A-23



Photo No. A-23 - Post-Test Driver Dummy Head Contact



Photo No. A-24 - Post-Test Driver Dummy Thorax Contact

A-25



Photo No. A-25 - Post-Test Impact Zone Side Close-up View

MANUFACTURED BY VOLKSWAGEN DE MEXICO S.A. DE C.V. DATE 11.00
GVWR 3815 LBS GAWR FRONT 1985 LBS GAWR REAR 1918 LBS
THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY, BUMPER,
AND THEFT PREVENTION STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.
VEHICLE I.D. NO. 3VWRB69M21M101207 TYPE: PASSENGER CAR



COUNTRY OF ORIGIN: MEXICO

A 900 010 205 / 00
Cd'autres remarques importantes
400 010 142 A

NORMALE MNRON 91



MAX. LOAD (VEHICLE CAPACITY WEIGHTS)

IF PROVIDED	SHIFT TR.	AUT. TR.
LBS	895	895

DESIGNATED SEATING CAPACITY: 5

2 FRONT/ 3 REAR

COLD TIRE INFLATION PRESSURE PSI

TIRE SIZE	RIM	HALF LOAD		MAX. LOAD	
		FRONT	REAR	FRONT	REAR
195/65 R15 91H	6J				
205/55 R16 91H	6 1/2J				
225/45 R17 91H	7J	26	26	30	41
225/45 R17 90H	7J	28	26	30	41

C: 2 / 00

1J0 010 285 J

A-27

Photo No. A-27 - Tire Placard



Photo No. A-28 - Pre-Test Left Front Wheel Dolly



Photo No. A-29 - Pre-Test Right Front Wheel Dolly

A-30



Photo No. A-30 - Pre-Test Left Rear Wheel Dolly



Photo No. A-31 - Pre-Test Right Rear Wheel Dolly



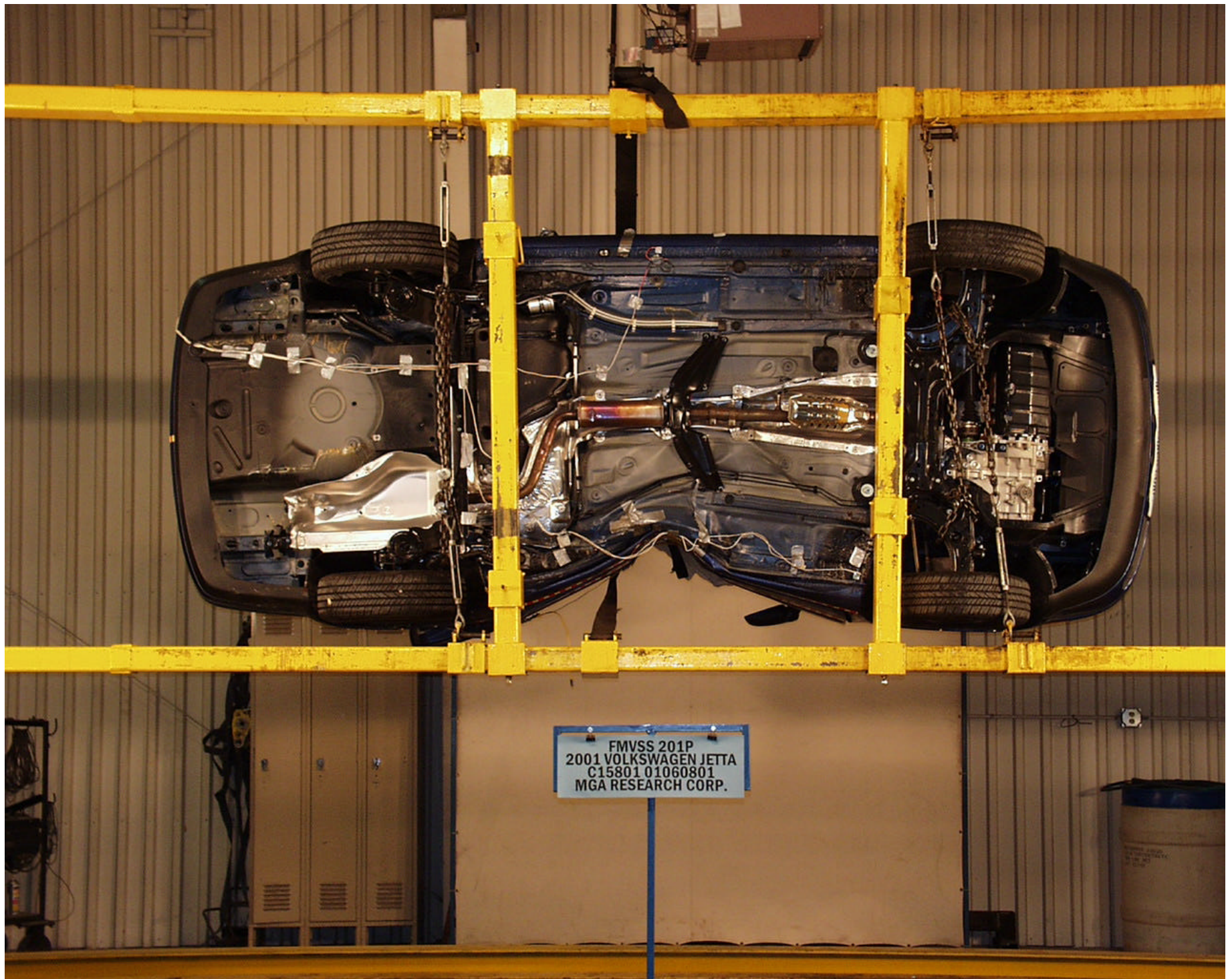
Photo No. A-32 - Rollover 90°



A-33

Photo No. A-33 - Rollover 180°

A-34



FMVSS 201P
2001 VOLKSWAGEN JETTA
C15801 01060801
MGA RESEARCH CORP.

Photo No. A-34 - Rollover 270°

A-35



Photo No. A-35 - Rollover 360°

APPENDIX B

SID, VEHICLE, AND MDB RESPONSE DATA

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* Data not valid after 25 msec.

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DRIVER HEAD X ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

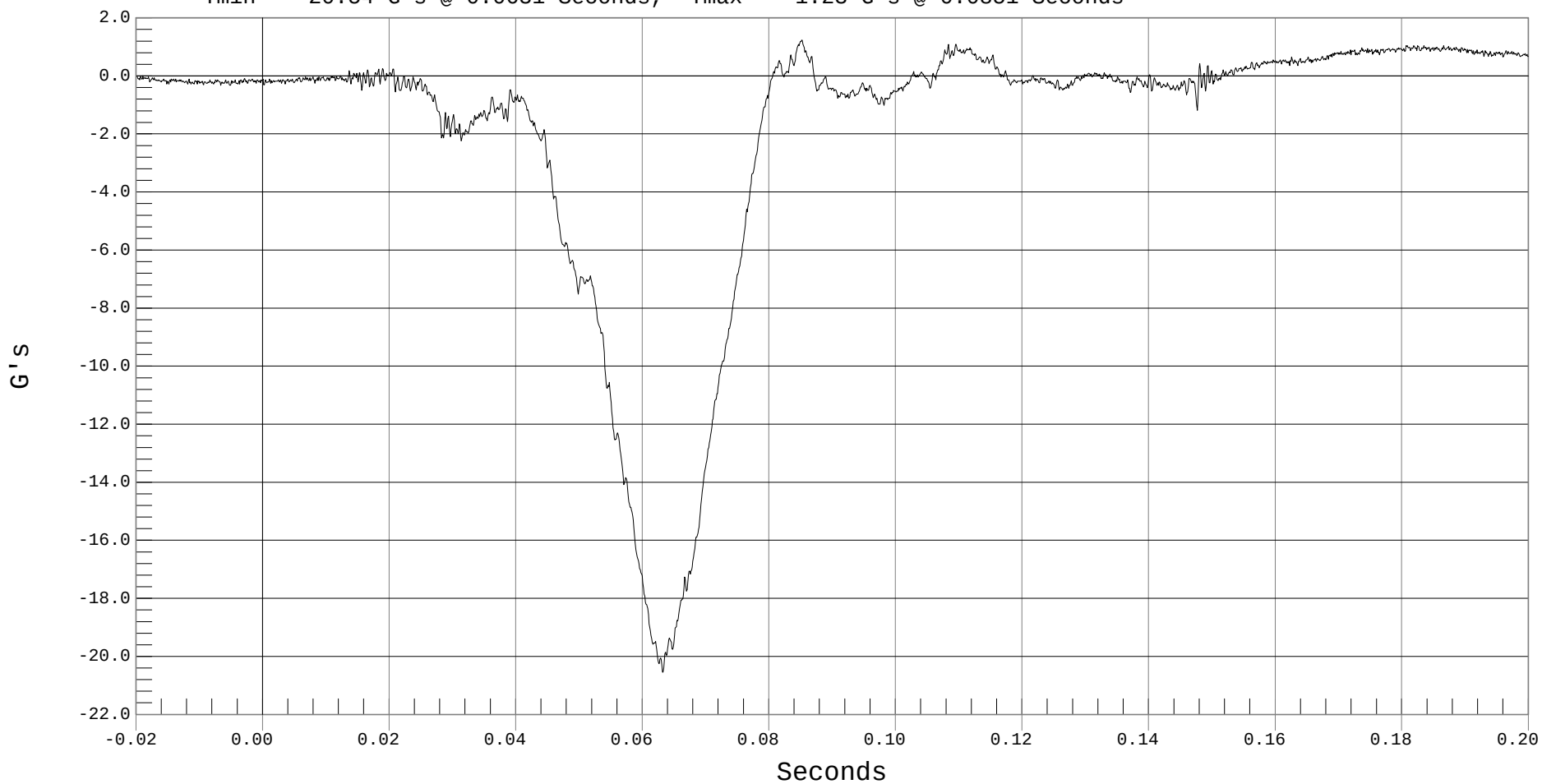
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 1000

— 1 DRIVER HEAD X, b01063AT.A01

Ymin = -20.54 G's @ 0.0631 Seconds, Ymax = 1.23 G's @ 0.0851 Seconds





DRIVER HEAD X VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Test Date: 06-08-01

Component: 2001 VW JETTA 4 DOOR SEDAN

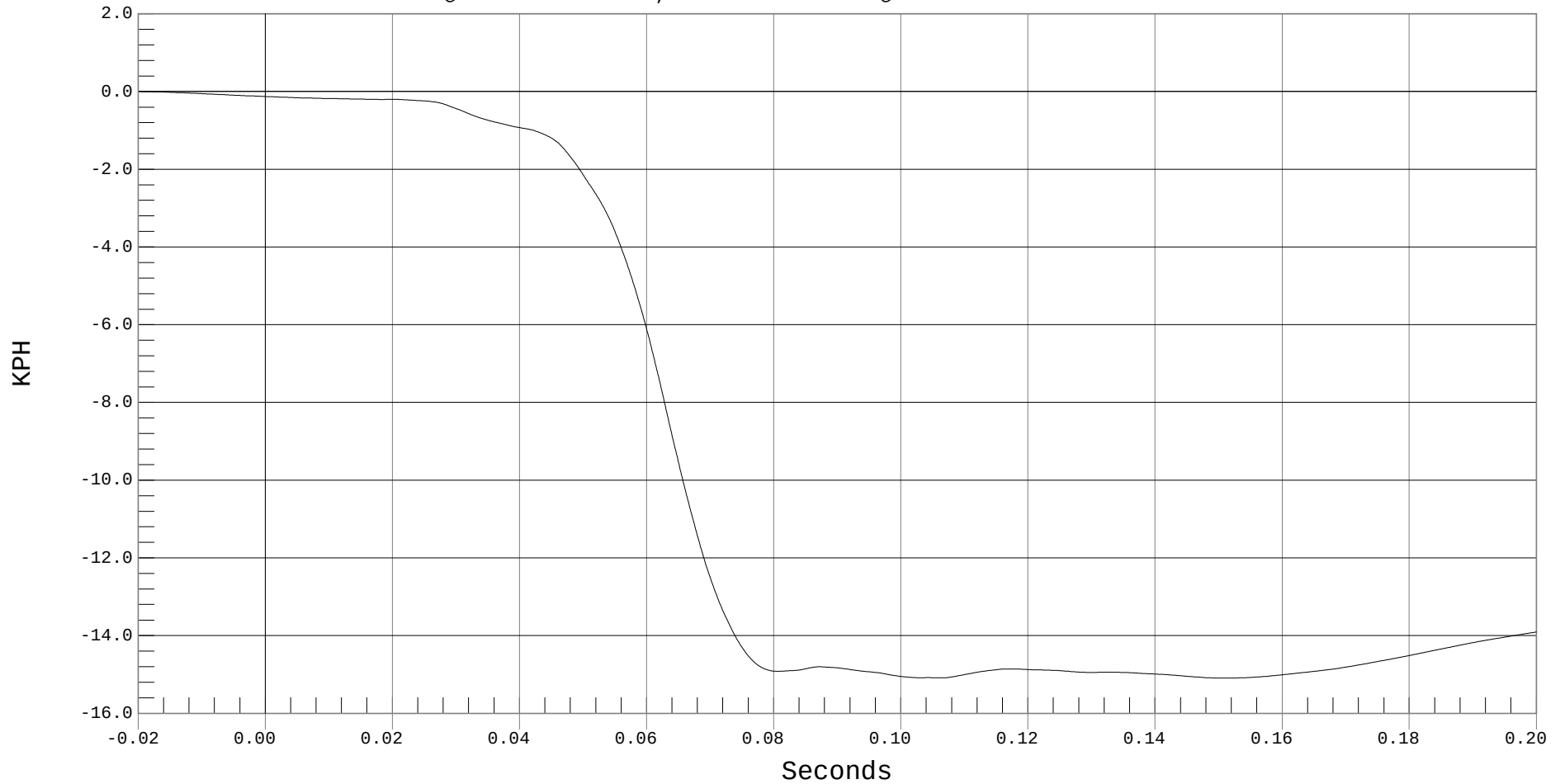
Speed: 17.8 MPH, 28.6 KPH

Other Info:

Filter Class: 180

— 1 DRIVER HEAD X VELOCITY, b01063AI.V01

Ymin = -15.09 KPH @ 0.1515 Seconds, Ymax = 0 KPH @ -0.0199 Seconds





DRIVER HEAD Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Test Date: 06-08-01

Component: 2001 VW JETTA 4 DOOR SEDAN

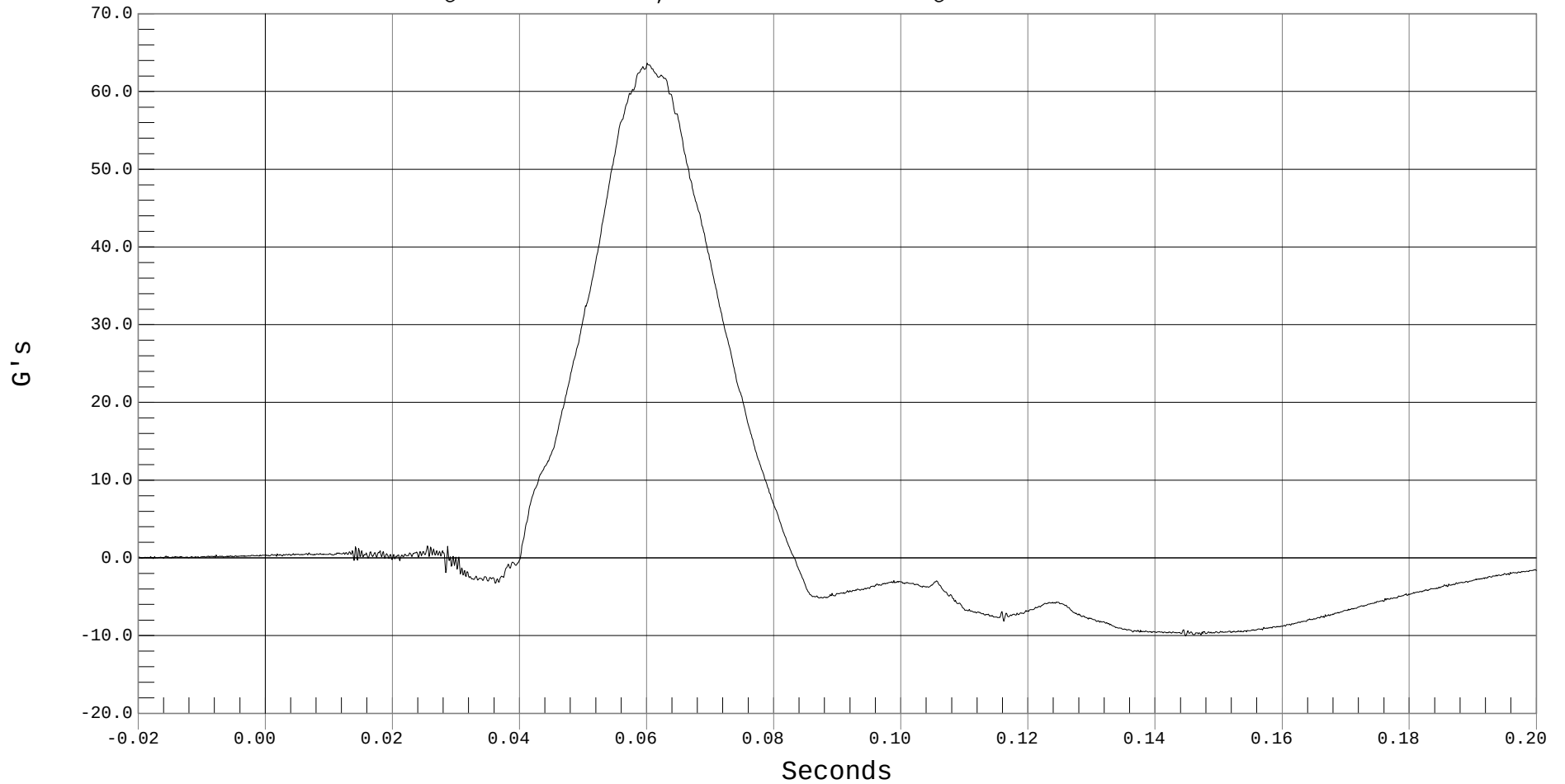
Speed: 17.8 MPH, 28.6 KPH

Other Info:

Filter Class: 1000

1 DRIVER HEAD Y, b01063AT.A02

Ymin = -10.05 G's @ 0.1447 Seconds, Ymax = 63.65 G's @ 0.0600 Seconds





DRIVER HEAD Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Test Date: 06-08-01

Component: 2001 VW JETTA 4 DOOR SEDAN

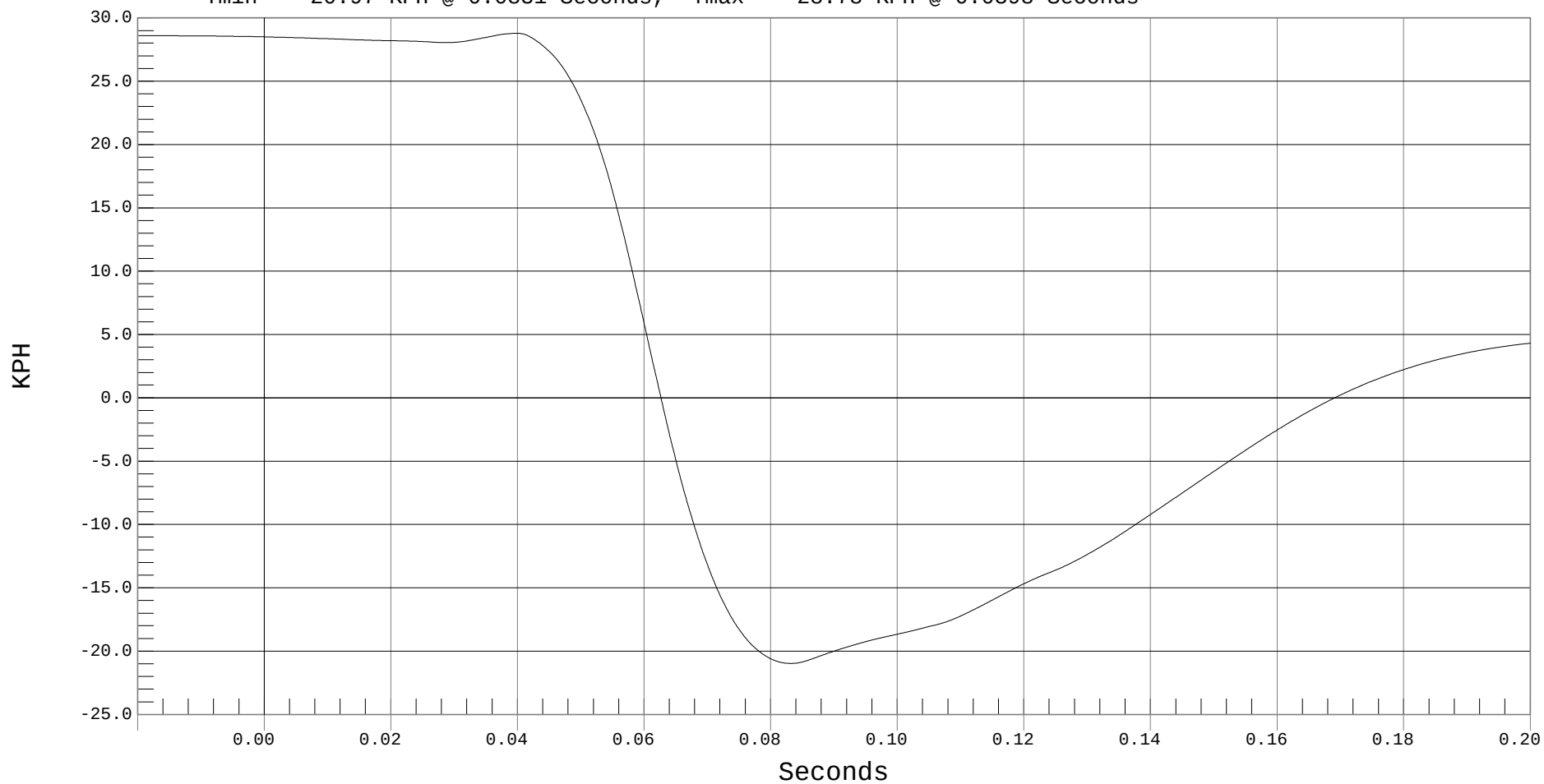
Speed: 17.8 MPH, 28.6 KPH

Other Info:

Filter Class: 180

— 1 DRIVER HEAD Y VELOCITY, b01063AI.V02

Ymin = -20.97 KPH @ 0.0831 Seconds, Ymax = 28.78 KPH @ 0.0398 Seconds





DRIVER HEAD Z ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Test Date: 06-08-01

Component: 2001 VW JETTA 4 DOOR SEDAN

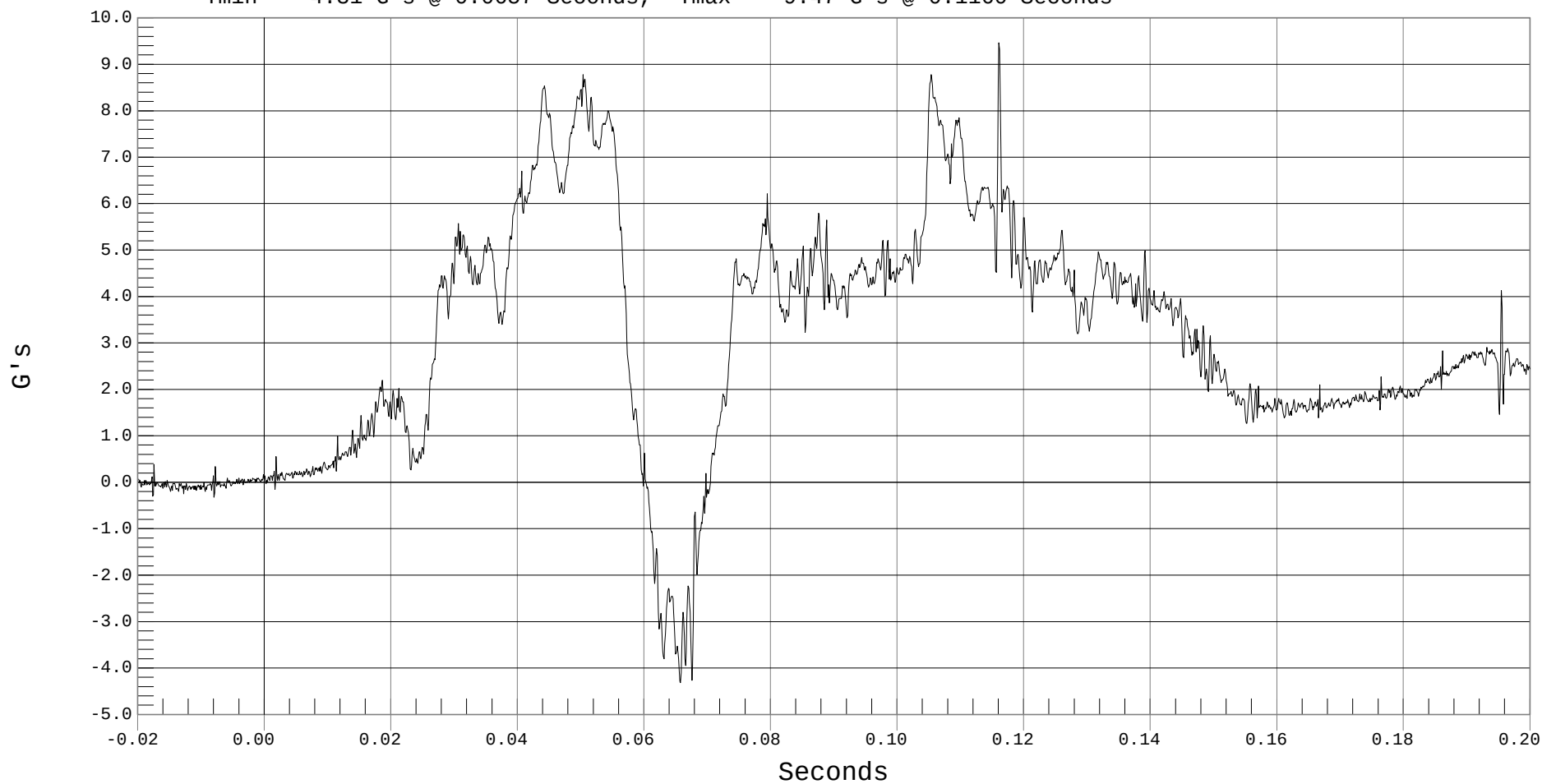
Speed: 17.8 MPH, 28.6 KPH

Other Info:

Filter Class: 1000

— 1 DRIVER HEAD Z, b01063AT.A03

Ymin = -4.31 G's @ 0.0657 Seconds, Ymax = 9.47 G's @ 0.1160 Seconds





DRIVER HEAD Z VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Test Date: 06-08-01

Component: 2001 VW JETTA 4 DOOR SEDAN

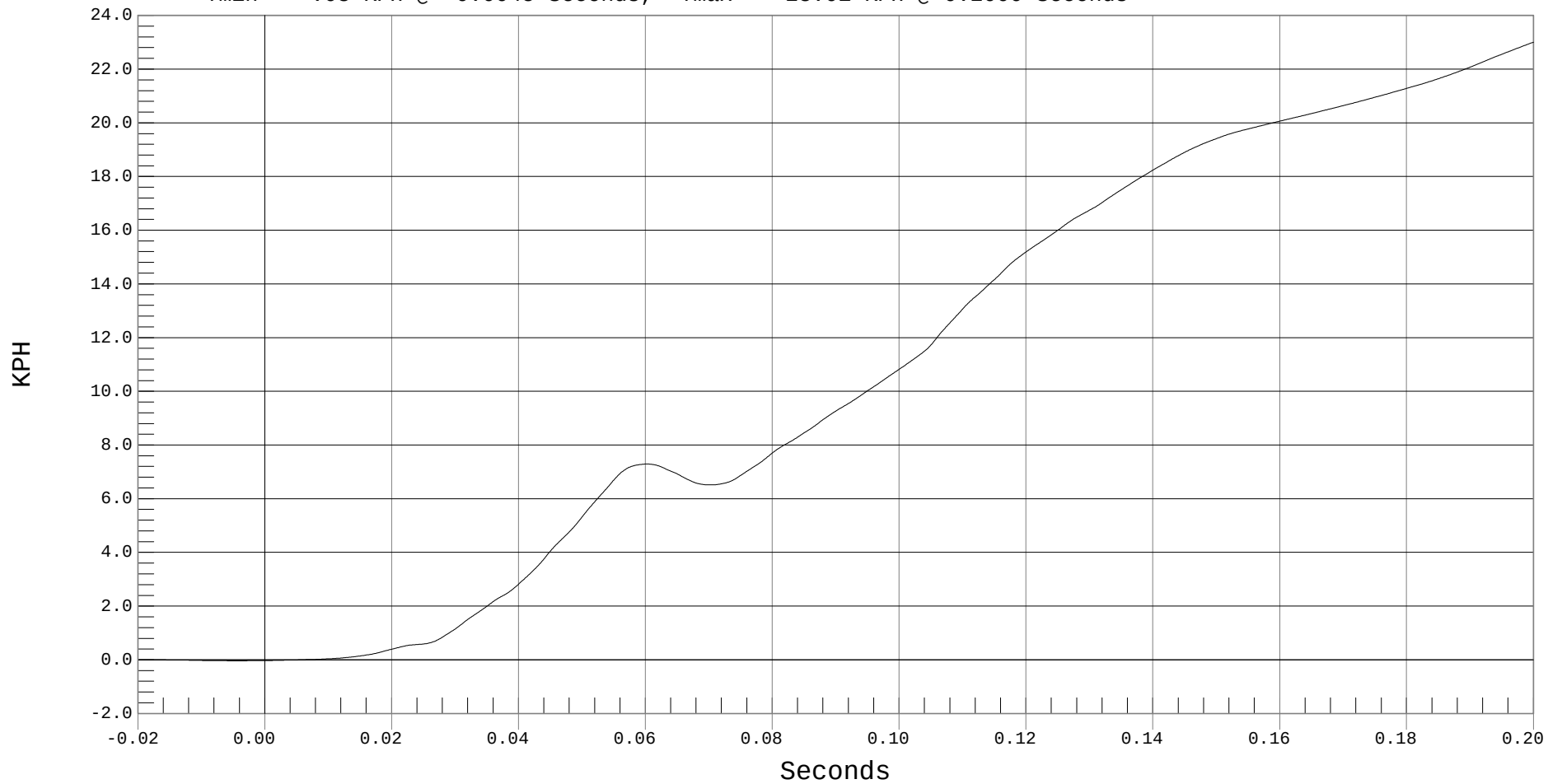
Speed: 17.8 MPH, 28.6 KPH

Other Info:

Filter Class: 180

— 1 DRIVER HEAD Z VELOCITY, b01063AI.V03

Ymin = -.03 KPH @ -0.0045 Seconds, Ymax = 23.01 KPH @ 0.2000 Seconds





DRIVER HEAD RESULTANT ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

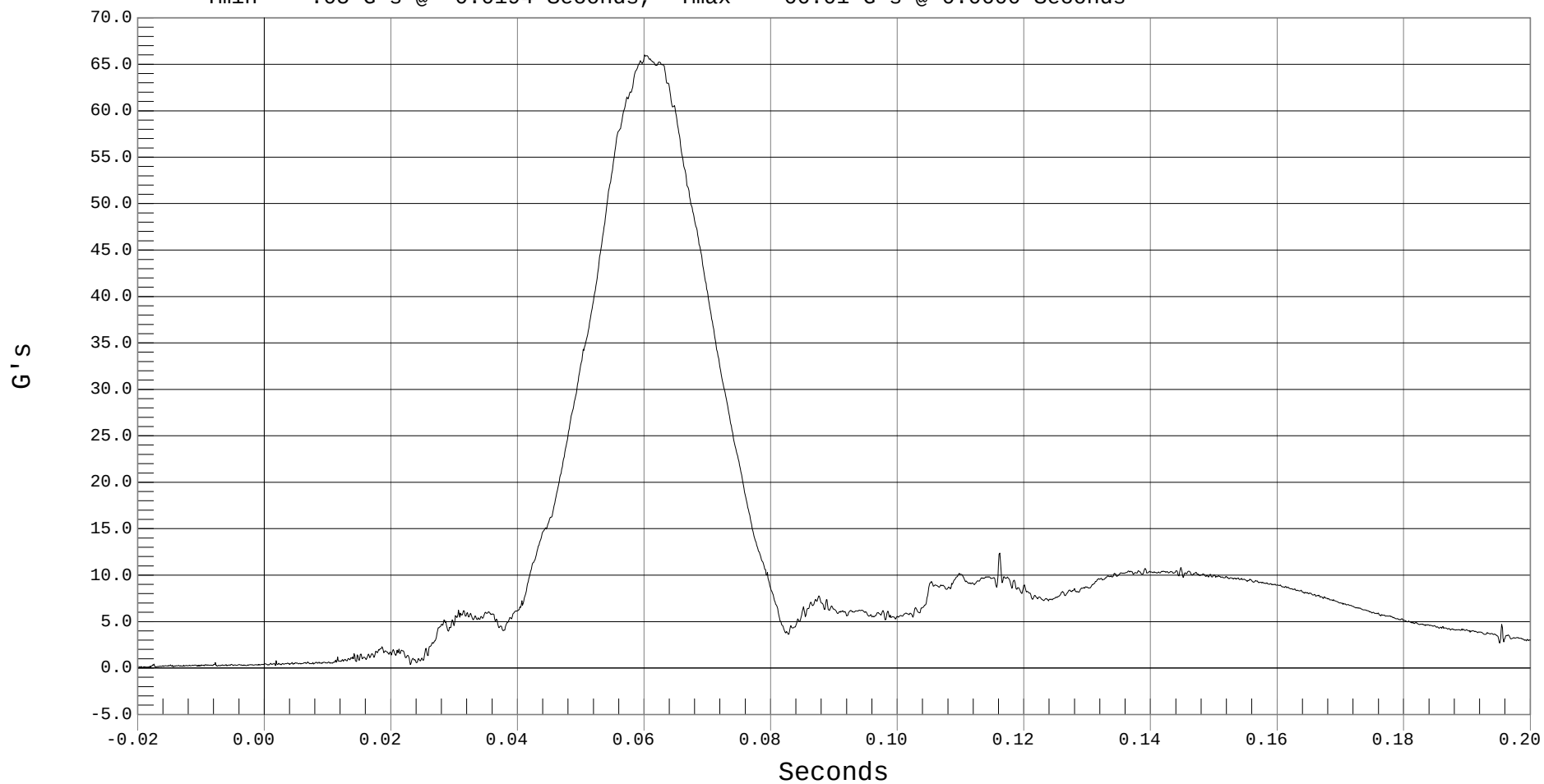
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 1000

— 1 DRIVER HEAD RESULTANT, b01063AV.A01

Ymin = .05 G's @ -0.0194 Seconds, Ymax = 66.01 G's @ 0.0600 Seconds





DRIVER NECK FORCE X

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

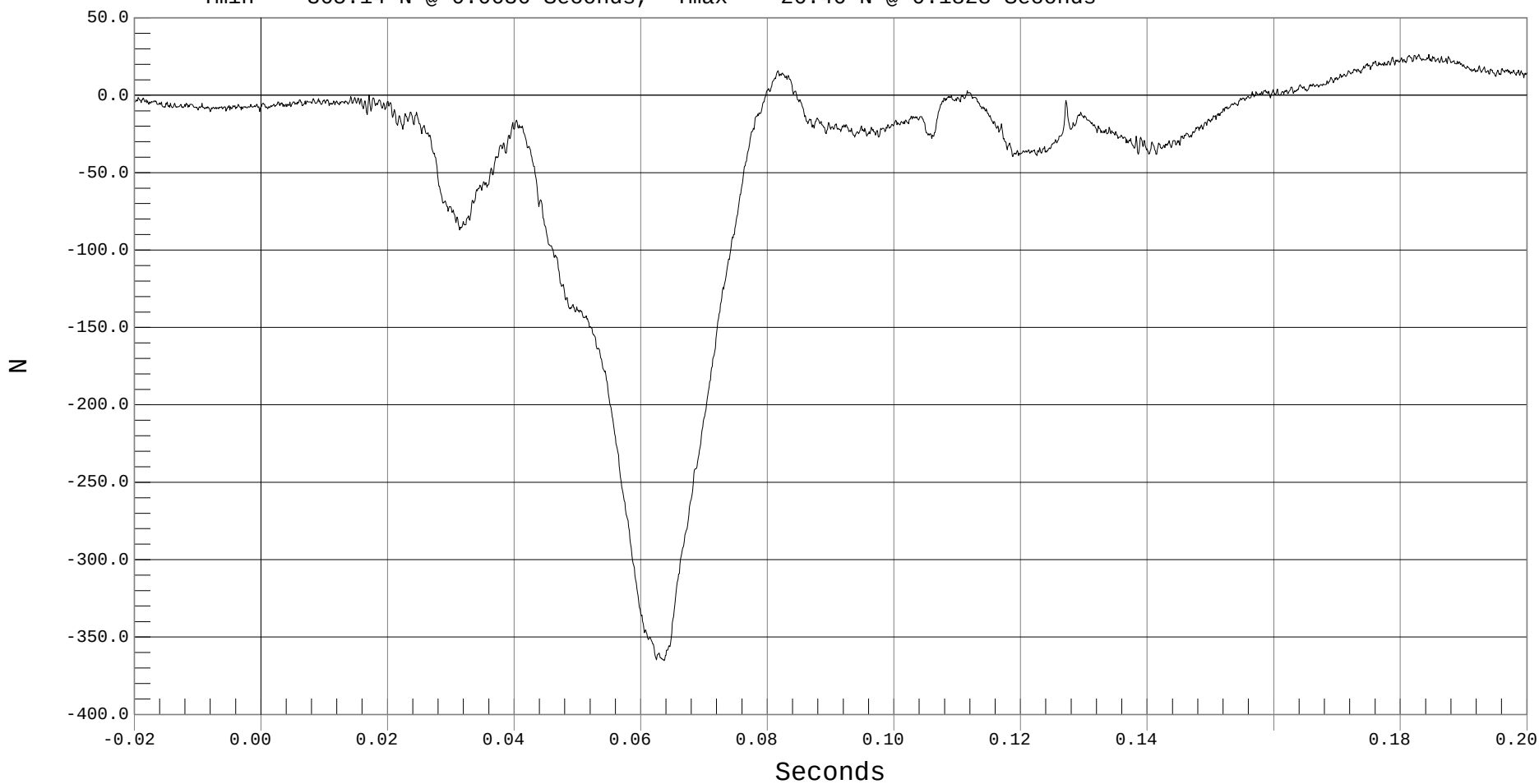
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 1000

— 1 DRIVER NECK FORCE X, b01063FT.F04

Ymin = -365.14 N @ 0.0636 Seconds, Ymax = 26.46 N @ 0.1828 Seconds





DRIVER NECK FORCE Y

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

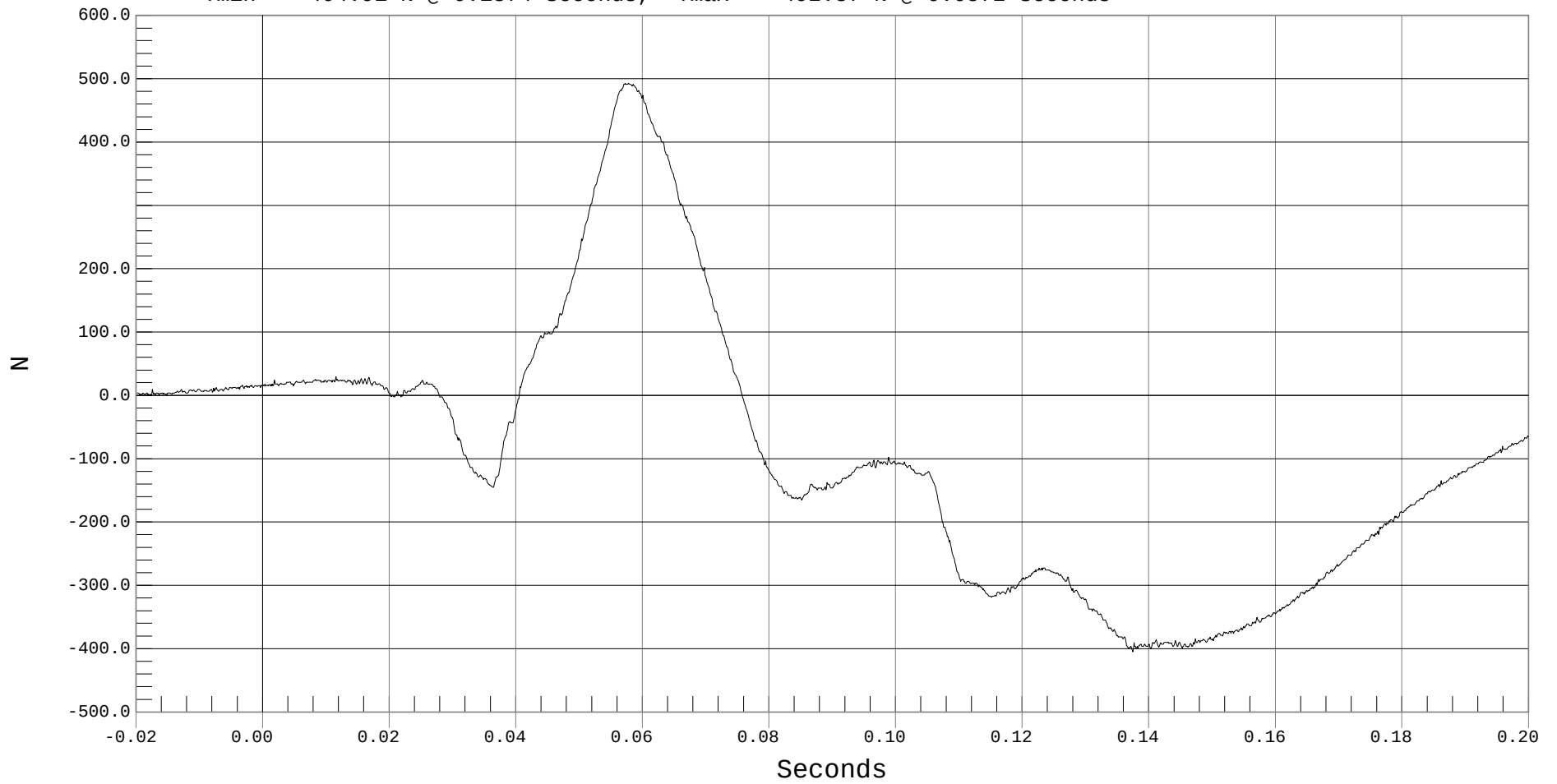
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 1000

— 1 DRIVER NECK FORCE Y, b01063FT.F05

Ymin = -404.91 N @ 0.1374 Seconds, Ymax = 492.87 N @ 0.0572 Seconds





DRIVER NECK FORCE Z

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

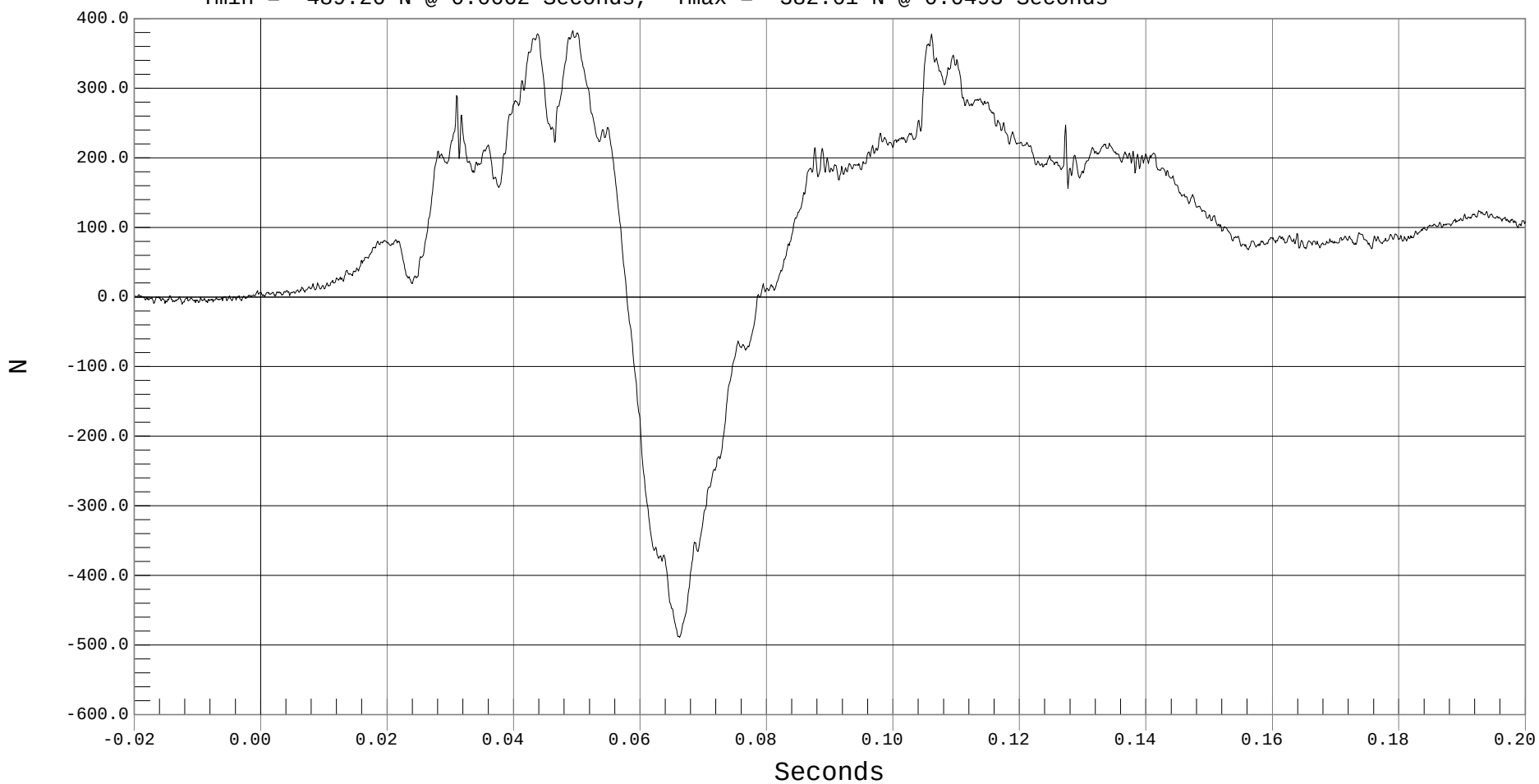
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 1000

— 1 DRIVER NECK FORCE Z, b01063FT.F06

Ymin = -489.26 N @ 0.0662 Seconds, Ymax = 382.61 N @ 0.0493 Seconds





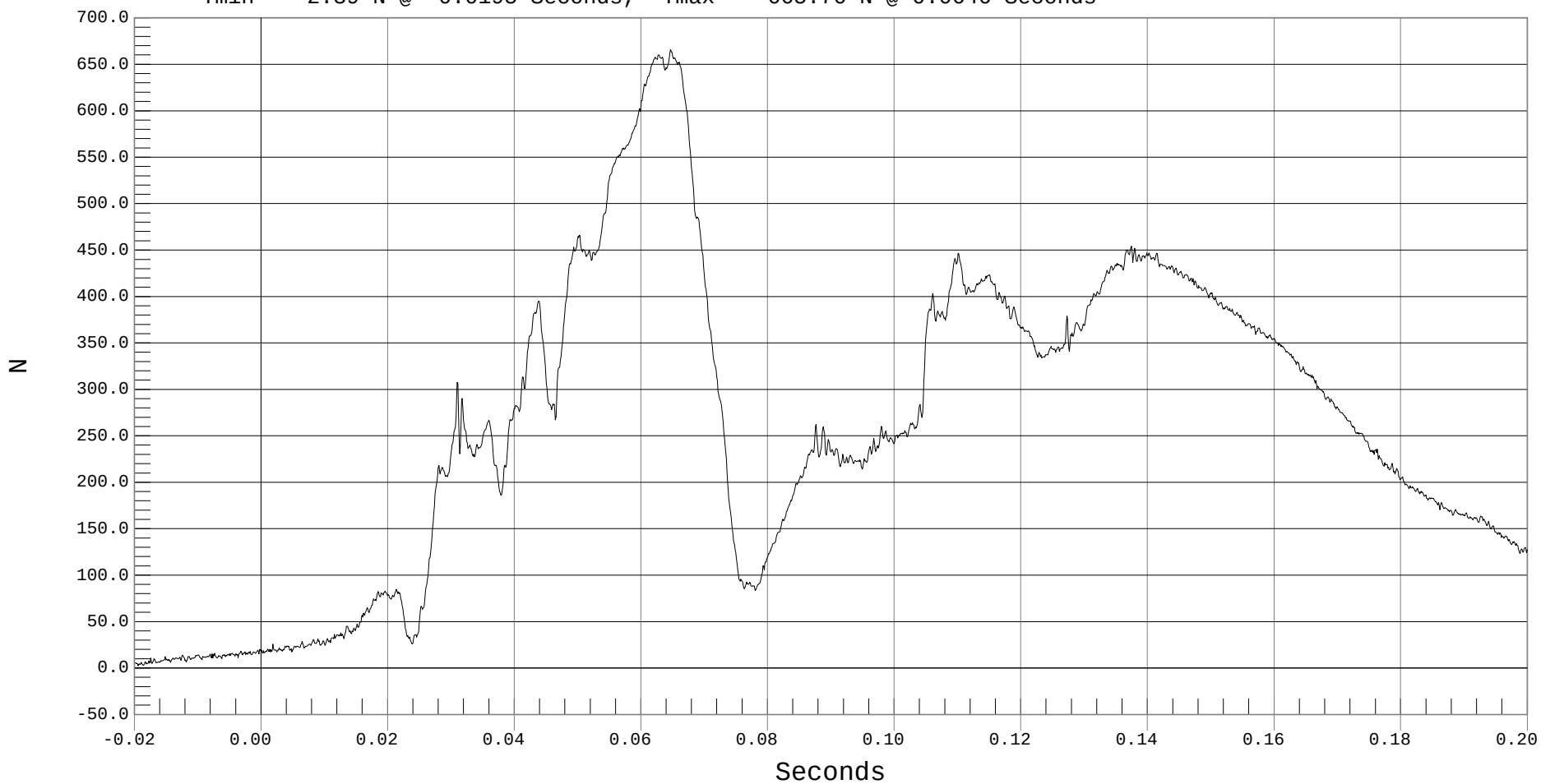
DRIVER NECK FORCE RESULTANT

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)
Component: 2001 VW JETTA 4 DOOR SEDAN
Other Info:

Test Date: 06-08-01
Speed: 17.8 MPH, 28.6 KPH
Filter Class: 1000

— 1 DRIVER NECK FORCE RESULTANT, b01063FV.F04

Ymin = 2.39 N @ -0.0195 Seconds, Ymax = 665.76 N @ 0.0646 Seconds





DRIVER NECK MOMENT X

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

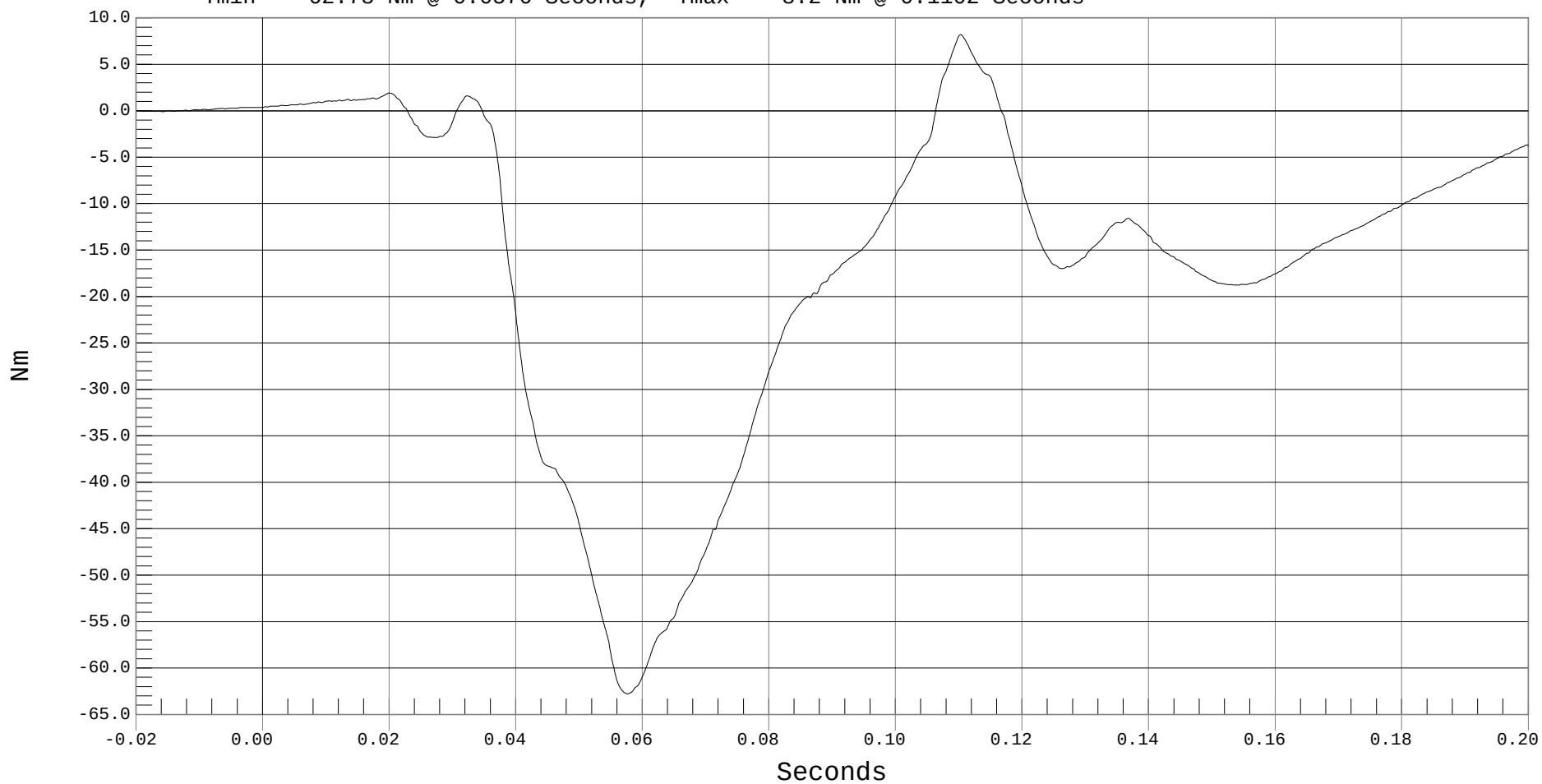
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 600

— 1 DRIVER NECK MOMENT X, b01063MF.M07

Ymin = -62.78 Nm @ 0.0576 Seconds, Ymax = 8.2 Nm @ 0.1102 Seconds





DRIVER NECK MOMENT Y

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

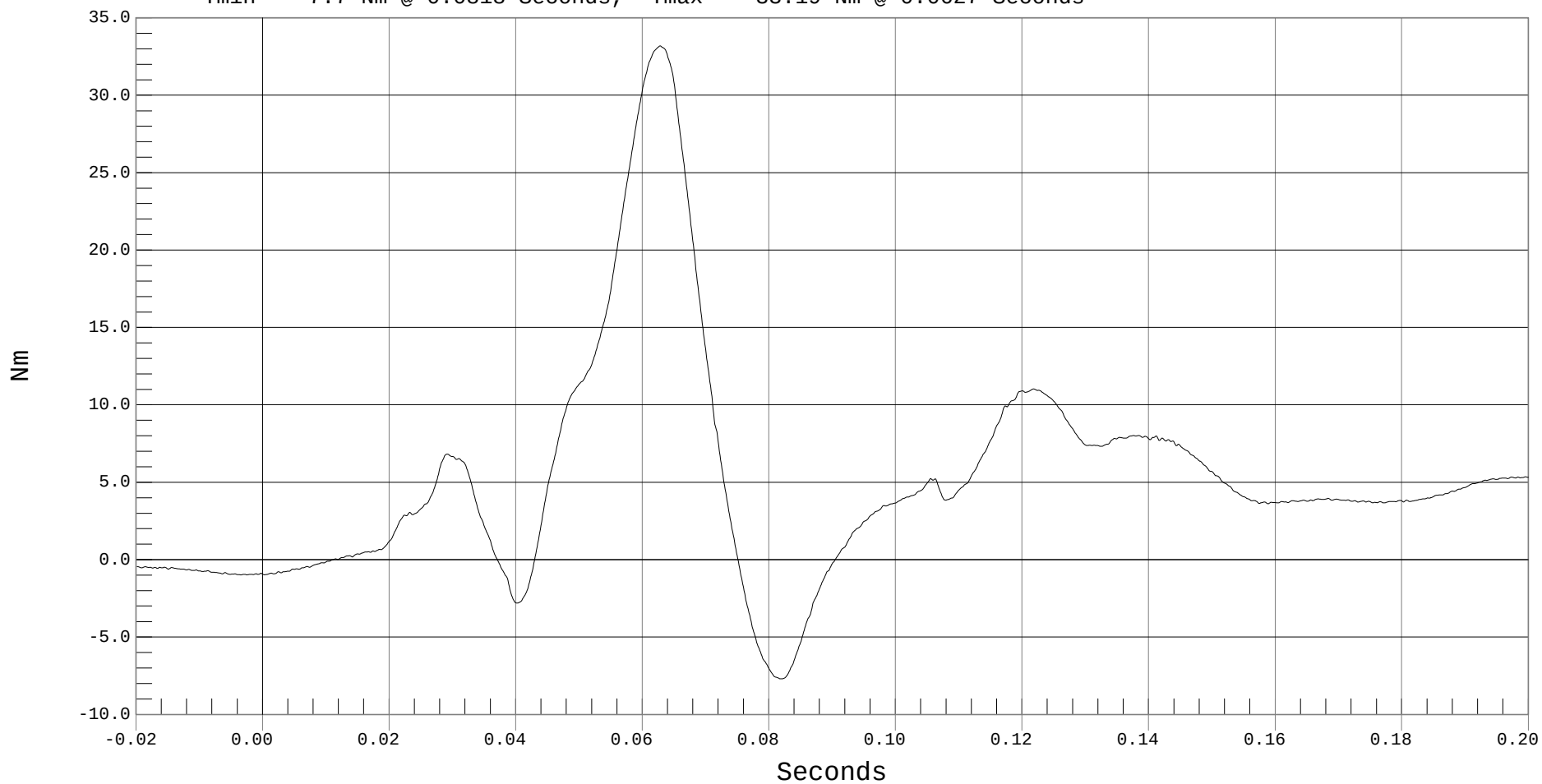
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 600

— 1 DRIVER NECK MOMENT Y, b01063MF.M08

Ymin = -7.7 Nm @ 0.0818 Seconds, Ymax = 33.19 Nm @ 0.0627 Seconds





DRIVER NECK MOMENT Z

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

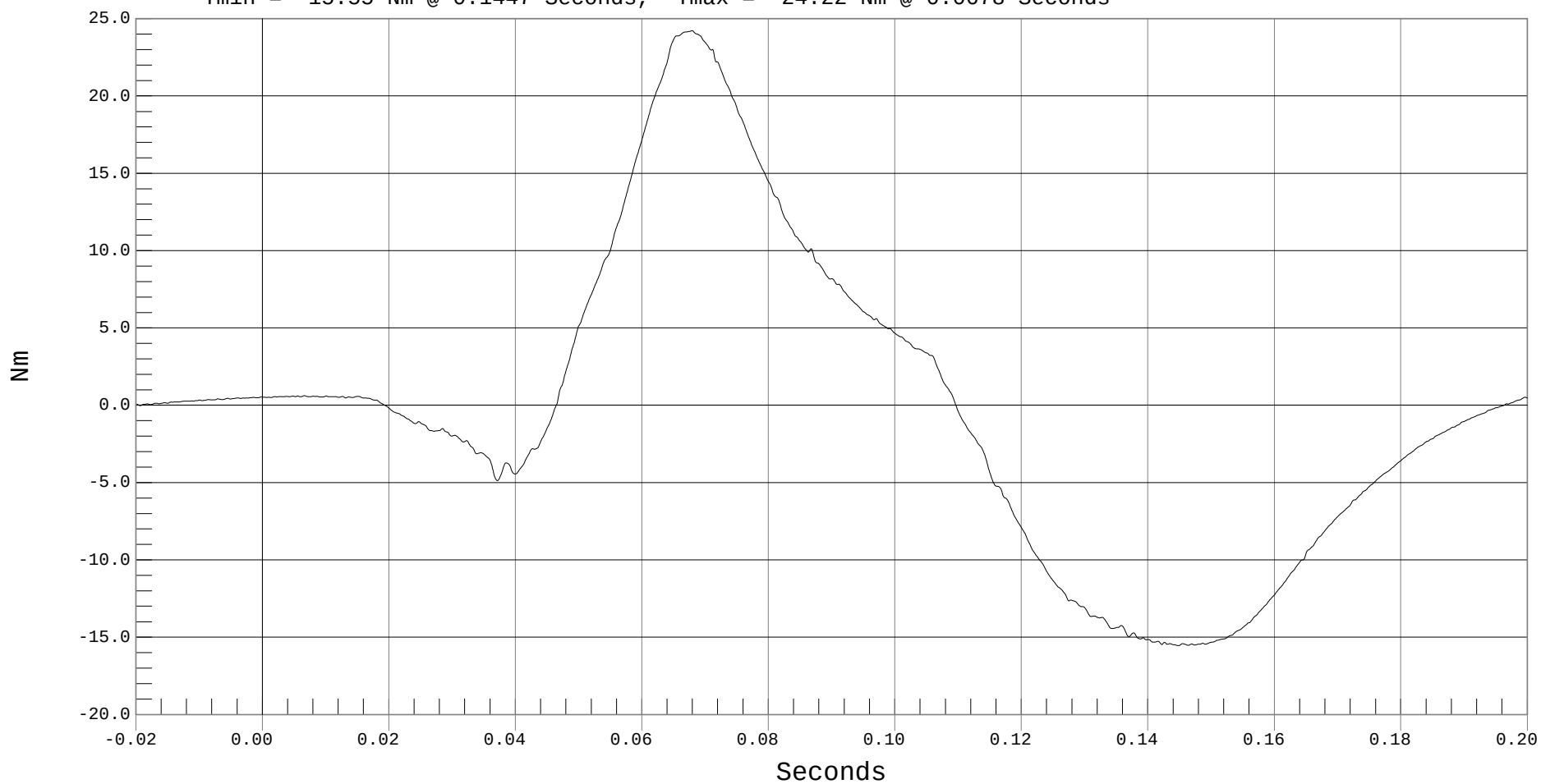
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 600

— 1 DRIVER NECK MOMENT Z, b01063MF.M09

Ymin = -15.55 Nm @ 0.1447 Seconds, Ymax = 24.22 Nm @ 0.0678 Seconds





DRIVER NECK MOMENT RESULTANT

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

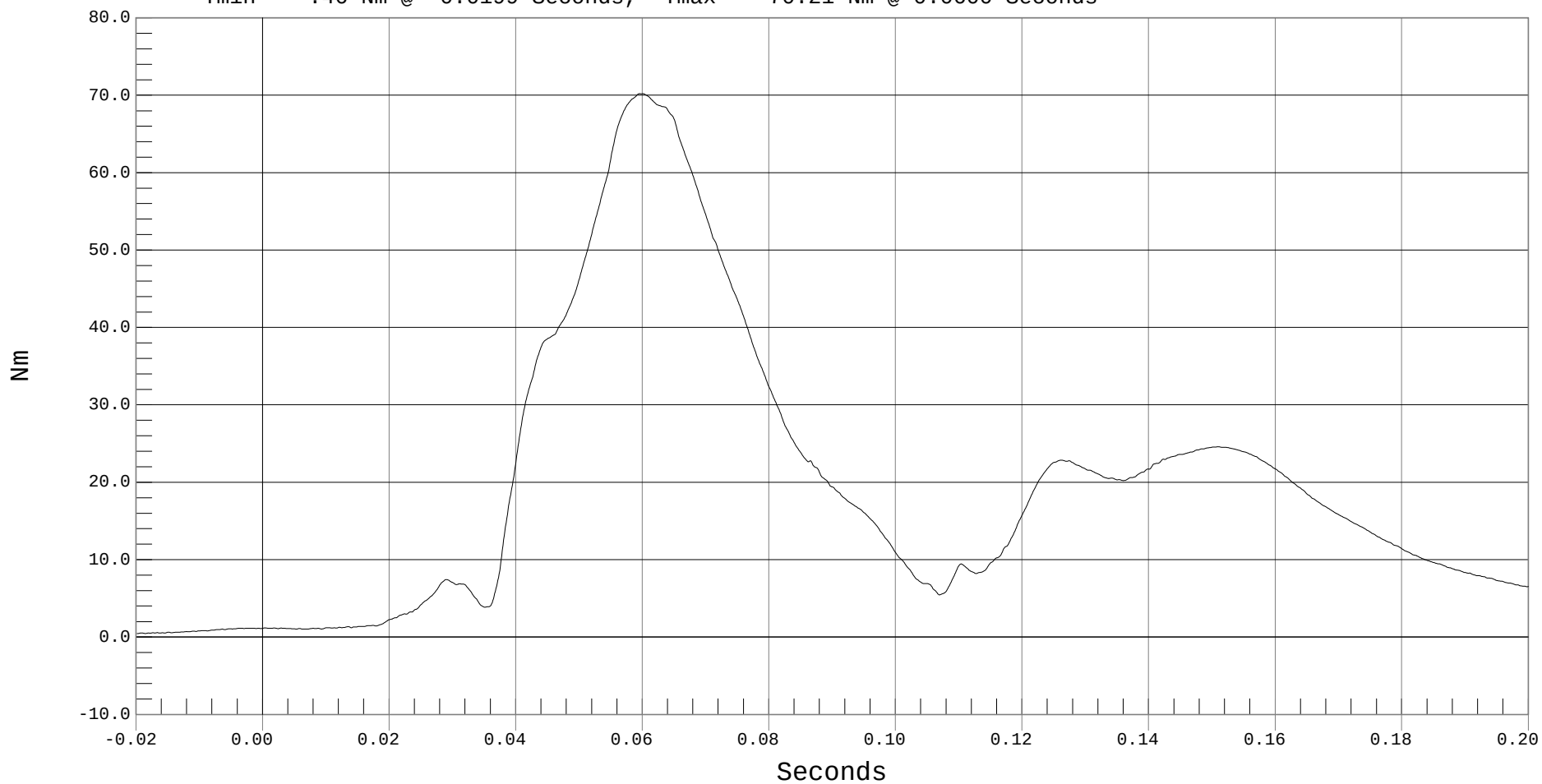
Other Info:

Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 600

Ymin = .46 Nm @ -0.0199 Seconds, Ymax = 70.21 Nm @ 0.0600 Seconds





DRIVER UPPER RIB Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

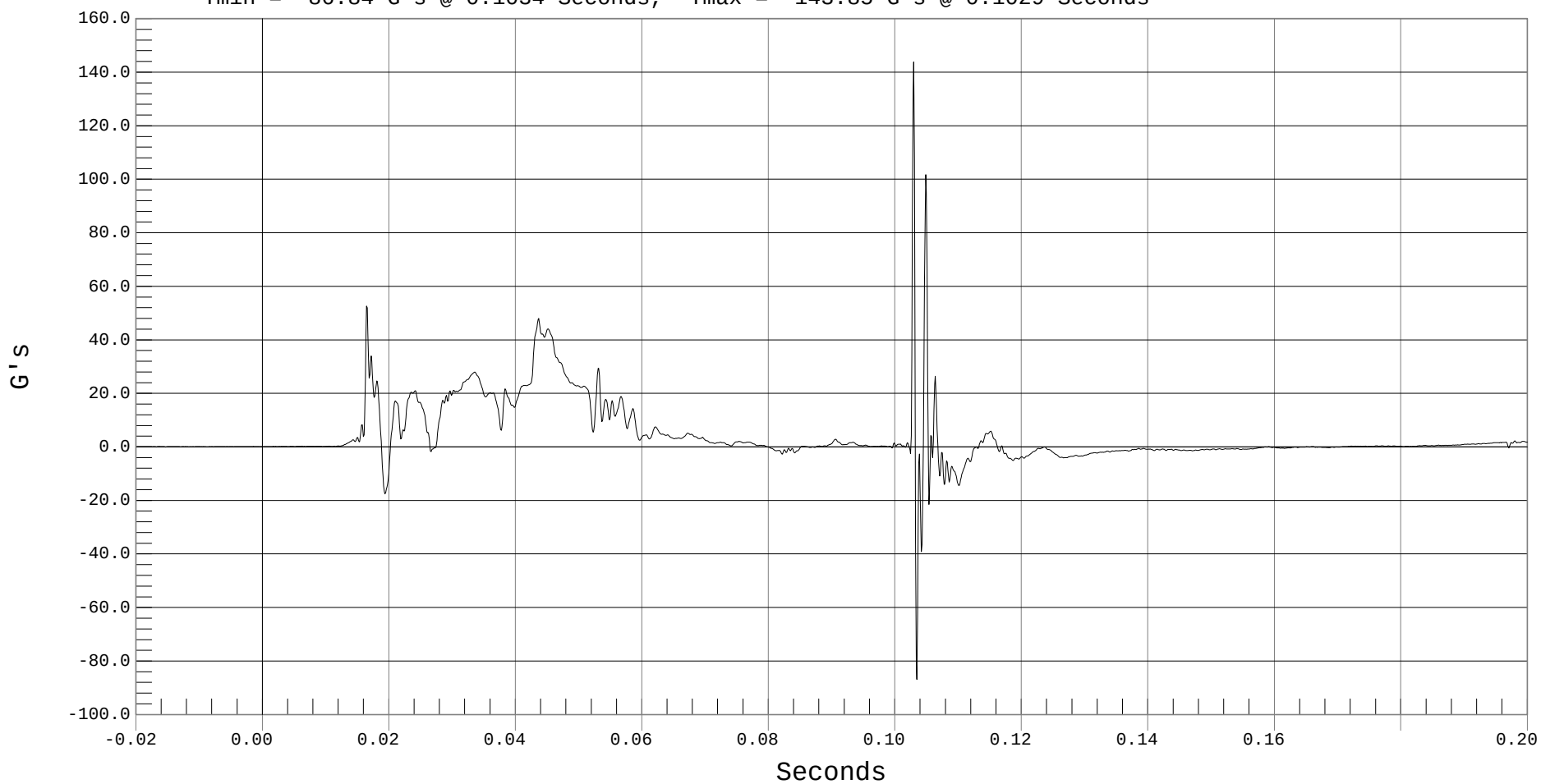
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 1000

— 1 DRIVER UPPER RIB Y, b01063AT.A10

Ymin = -86.84 G's @ 0.1034 Seconds, Ymax = 143.85 G's @ 0.1029 Seconds





DRIVER UPPER RIB Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

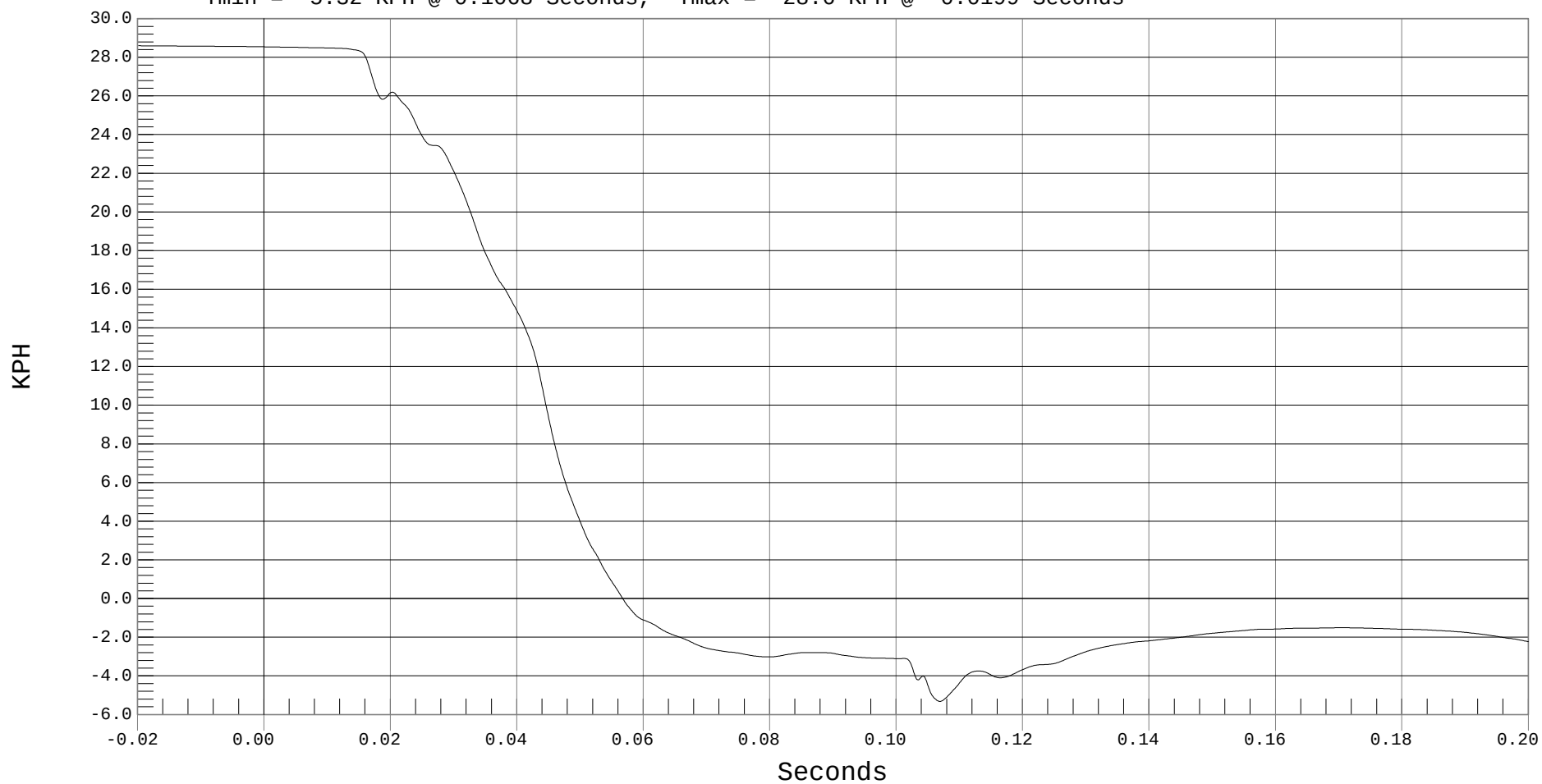
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

— 1 DRIVER UPPER RIB Y VELOCITY, b01063AI.V10

Ymin = -5.32 KPH @ 0.1068 Seconds, Ymax = 28.6 KPH @ -0.0199 Seconds





DRIVER LOWER RIB Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

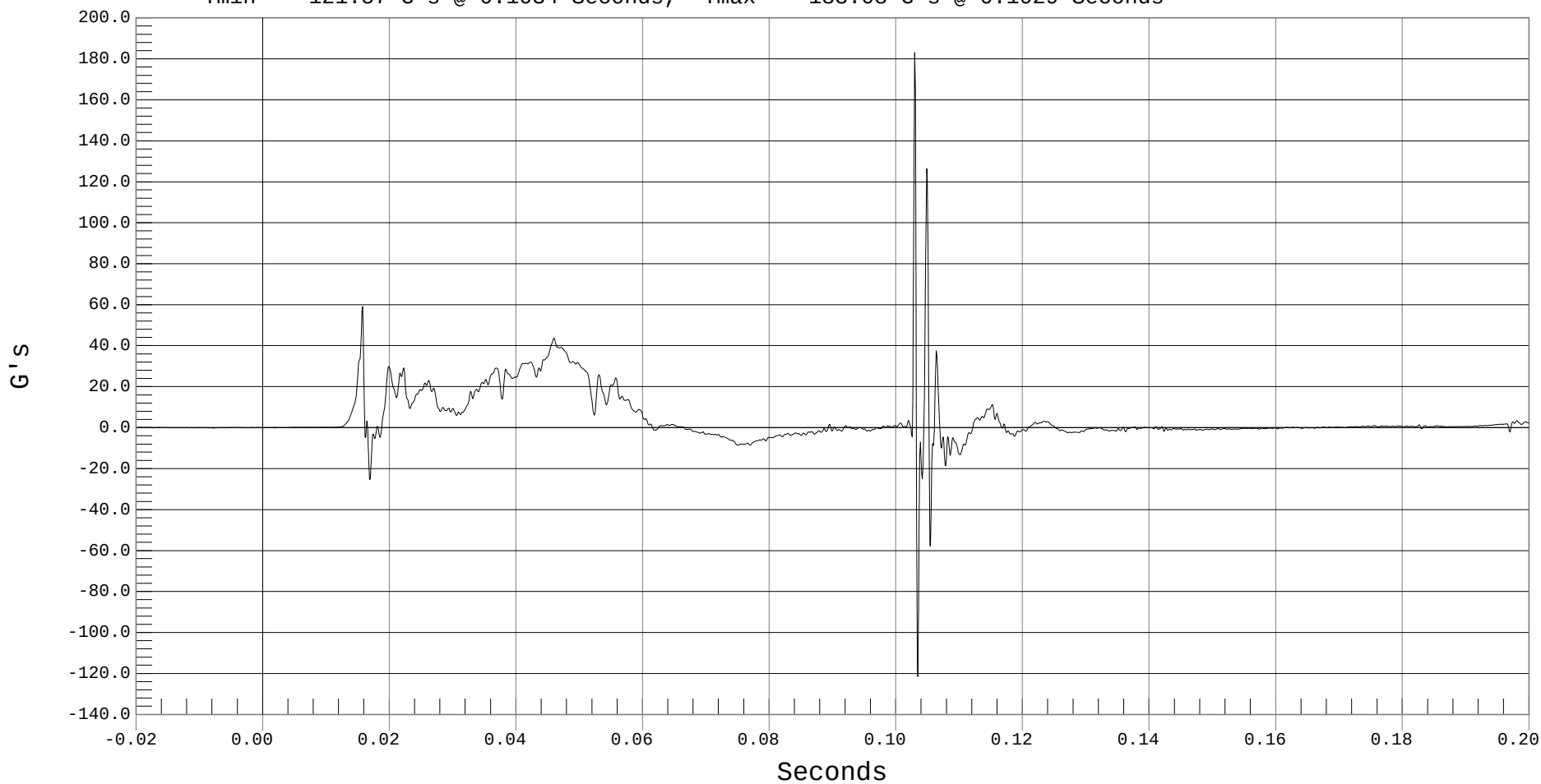
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 1000

— 1 DRIVER LOWER RIB Y, b01063AT.A11

Ymin = -121.57 G's @ 0.1034 Seconds, Ymax = 183.08 G's @ 0.1029 Seconds





DRIVER LOWER RIB Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

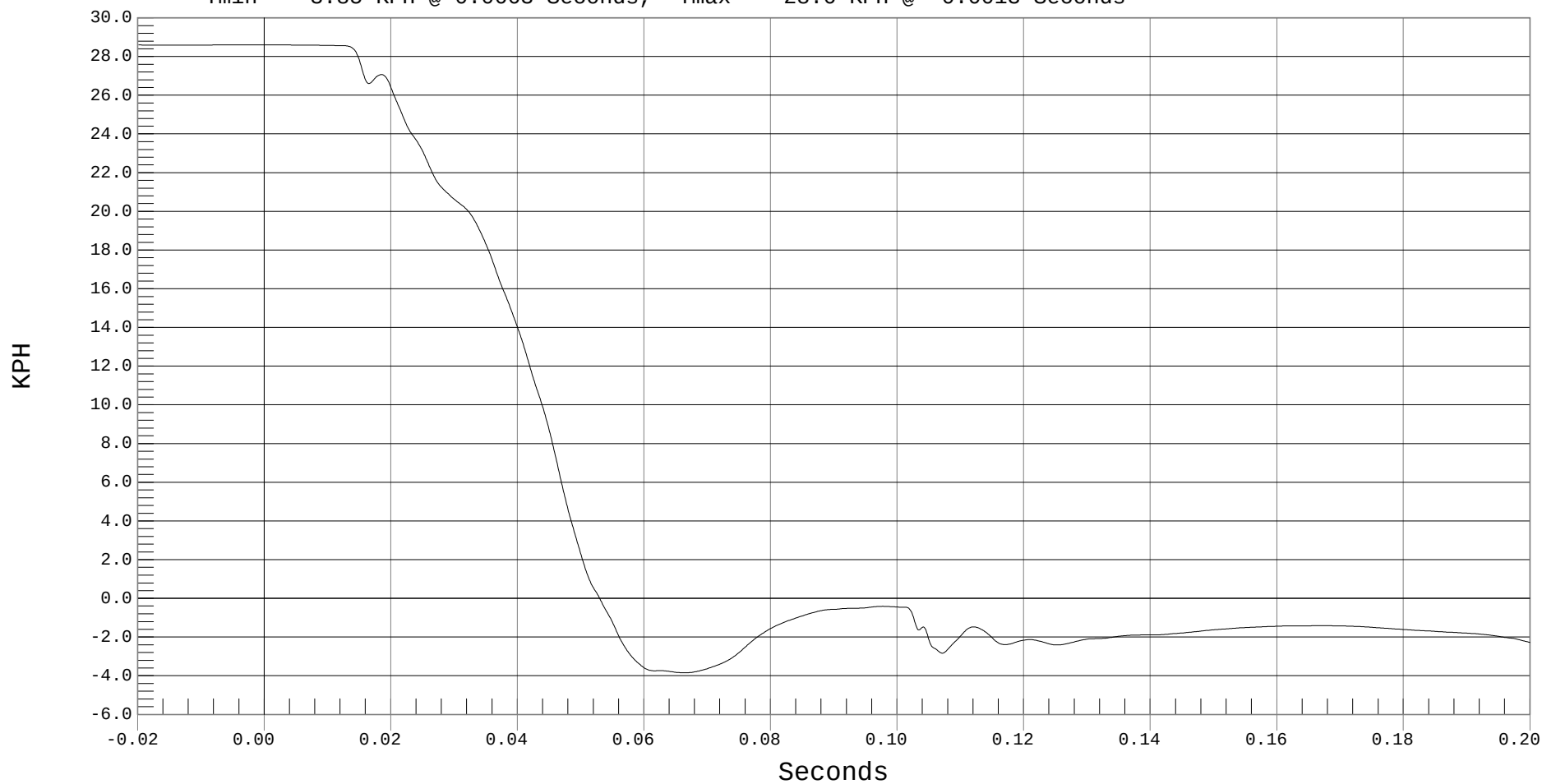
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

— 1 DRIVER LOWER RIB Y VELOCITY, b01063AI.V11

Ymin = -3.85 KPH @ 0.0663 Seconds, Ymax = 28.6 KPH @ -0.0013 Seconds





DRIVER LOWER SPINE Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Test Date: 06-08-01

Component: 2001 VW JETTA 4 DOOR SEDAN

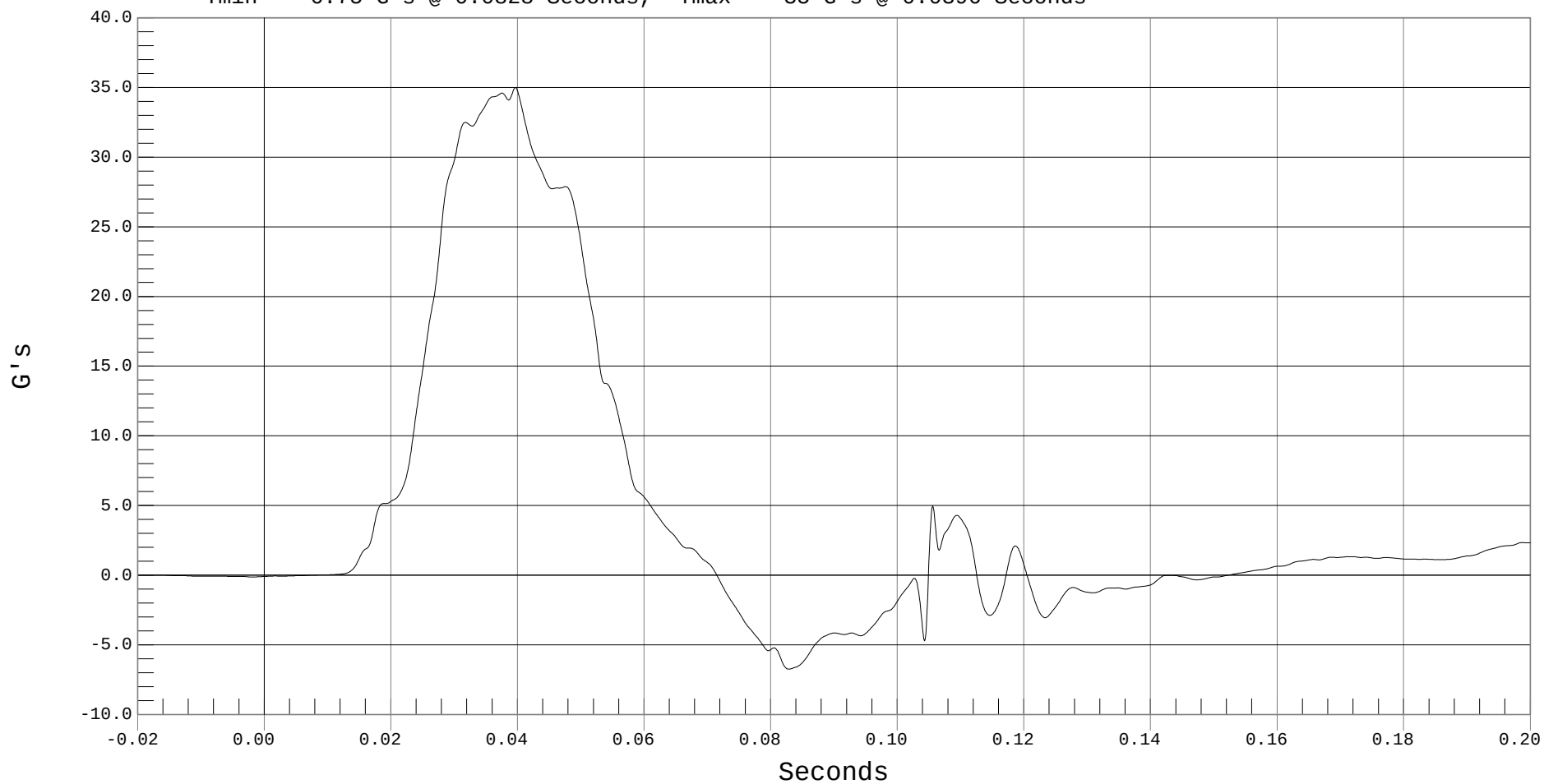
Speed: 17.8 MPH, 28.6 KPH

Other Info:

Filter Class: 180

— 1 DRIVER LOWER SPINE Y, b01063AF.A12

Ymin = -6.75 G's @ 0.0828 Seconds, Ymax = 35 G's @ 0.0396 Seconds





DRIVER LOWER SPINE Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

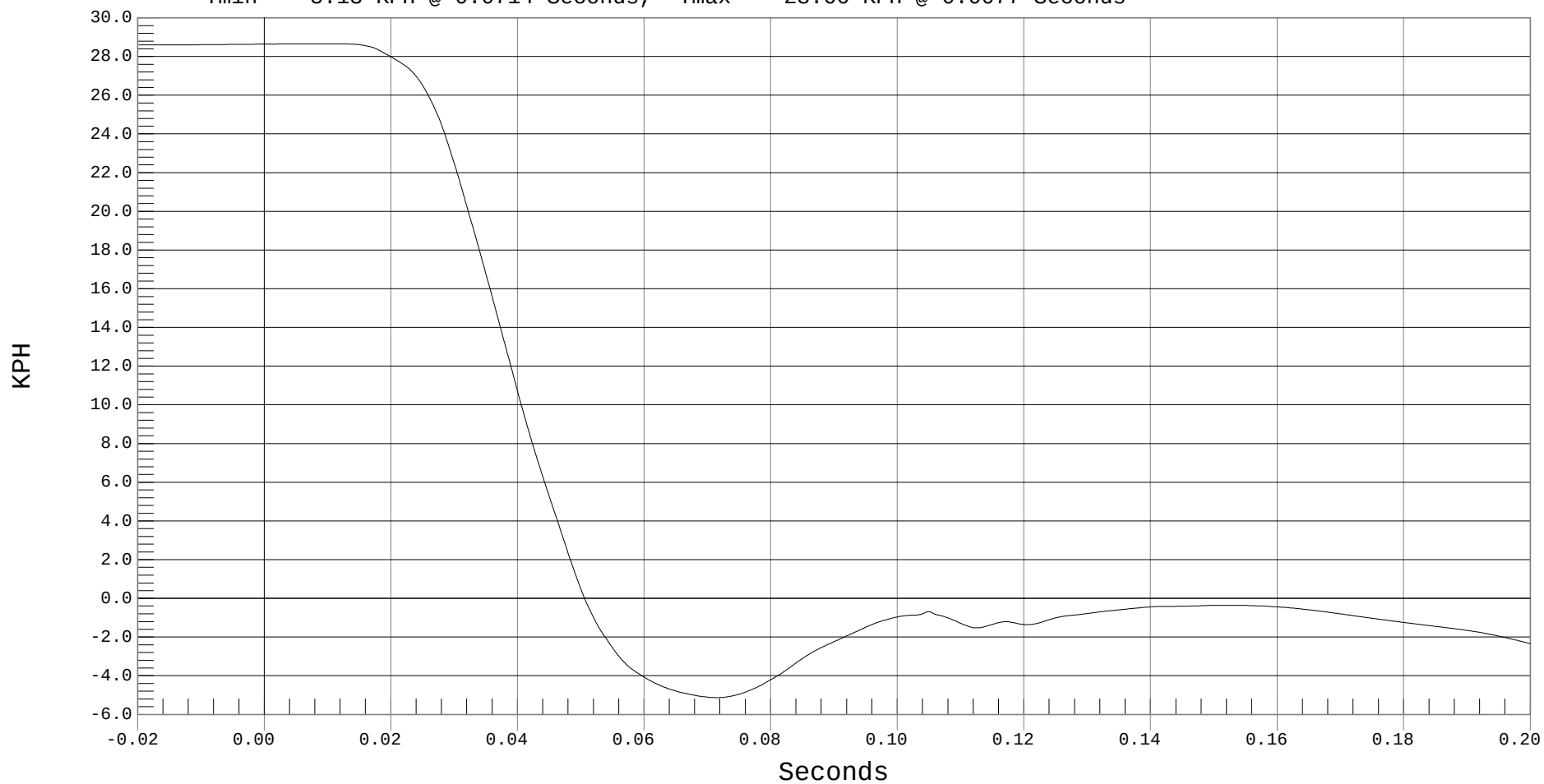
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

1 DRIVER LOWER SPINE Y VELOCITY, b01063AI.V12

Ymin = -5.13 KPH @ 0.0714 Seconds, Ymax = 28.66 KPH @ 0.0077 Seconds





DRIVER PELVIS Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

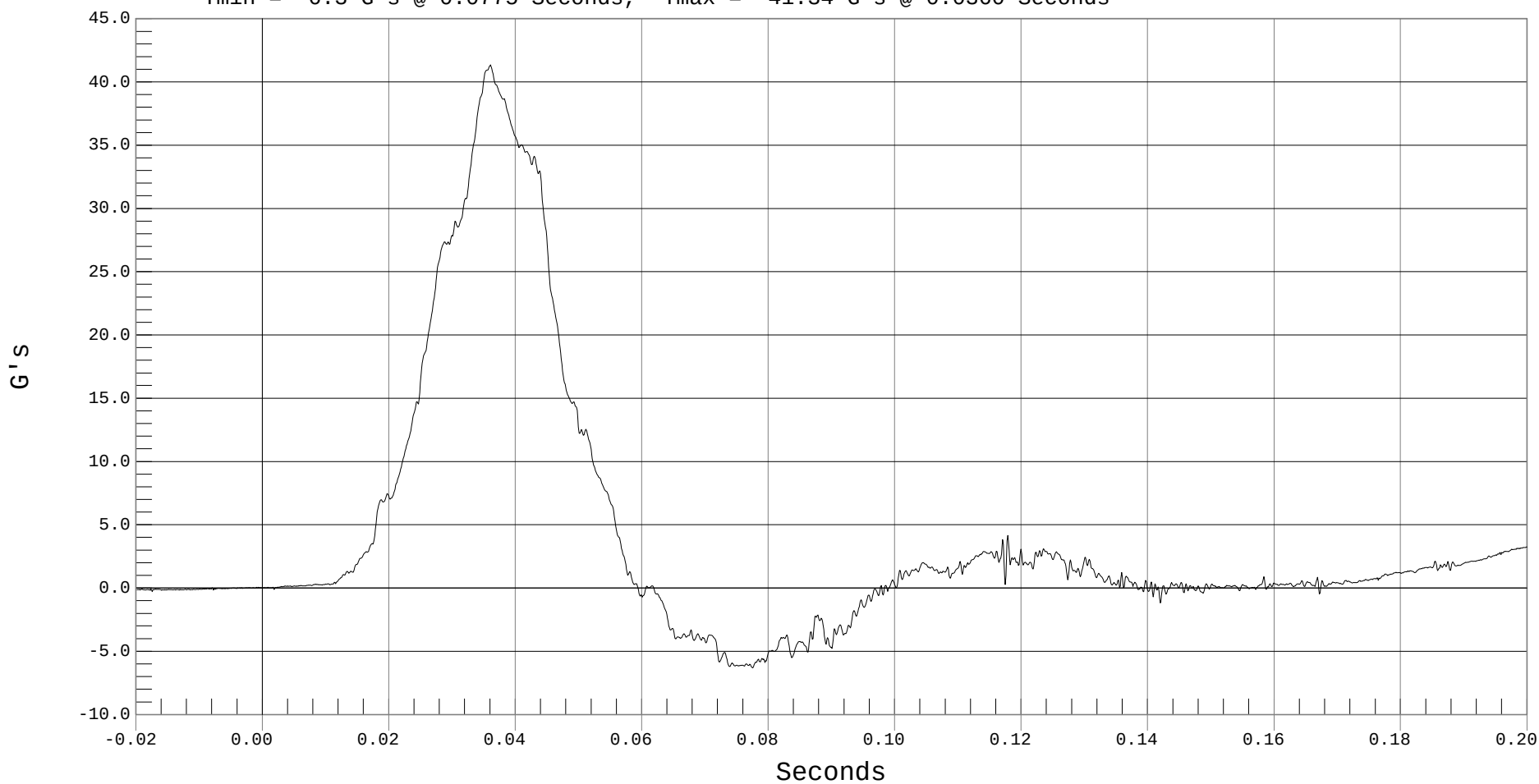
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 1000

— 1 DRIVER PELVIS Y, b01063AT.A13

Ymin = -6.3 G's @ 0.0775 Seconds, Ymax = 41.34 G's @ 0.0360 Seconds





DRIVER PELVIS Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

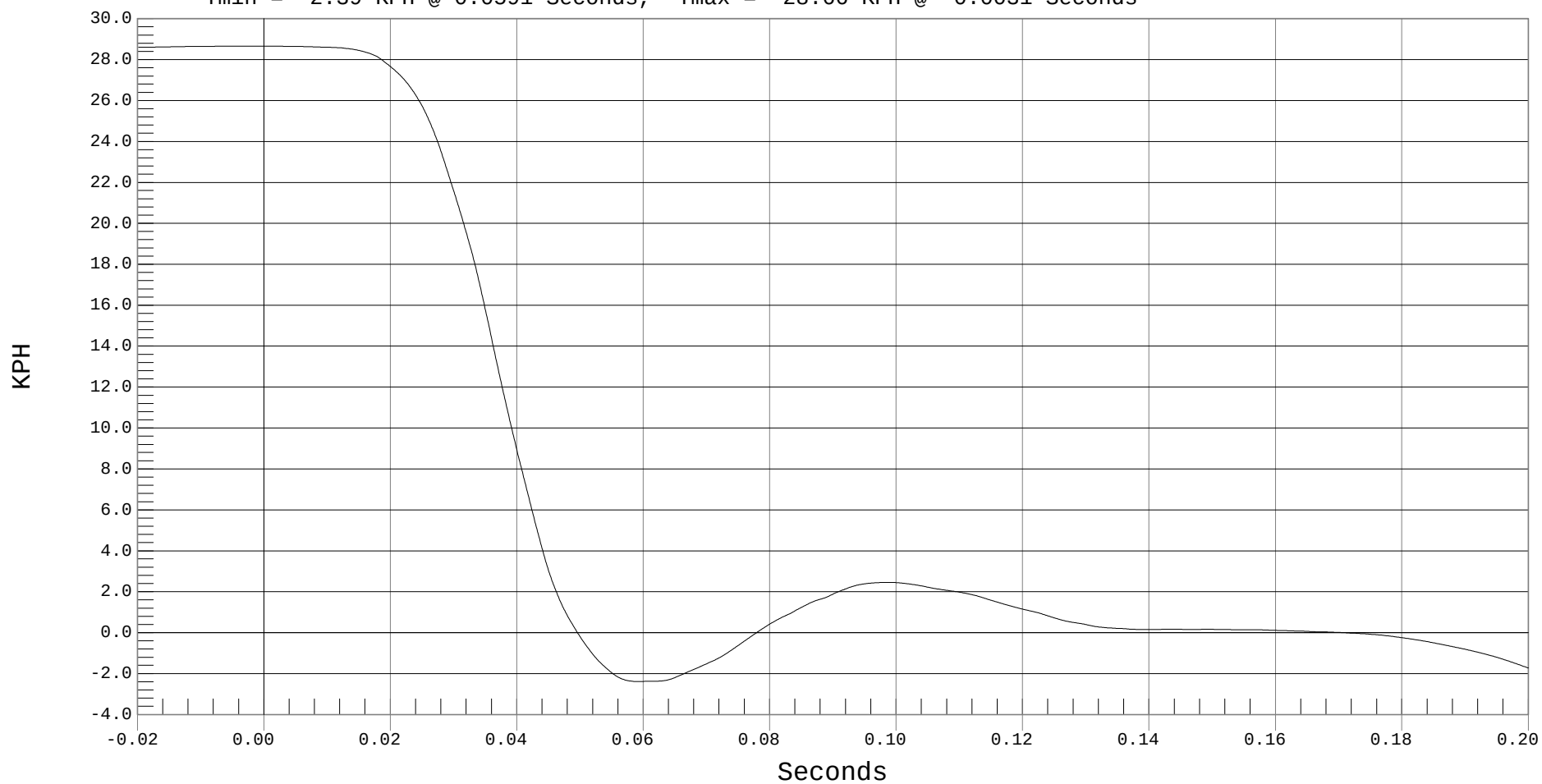
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

— 1 DRIVER PELVIS Y VELOCITY, b01063AI.V13

Ymin = -2.39 KPH @ 0.0591 Seconds, Ymax = 28.66 KPH @ -0.0031 Seconds





VEHICLE CG X ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

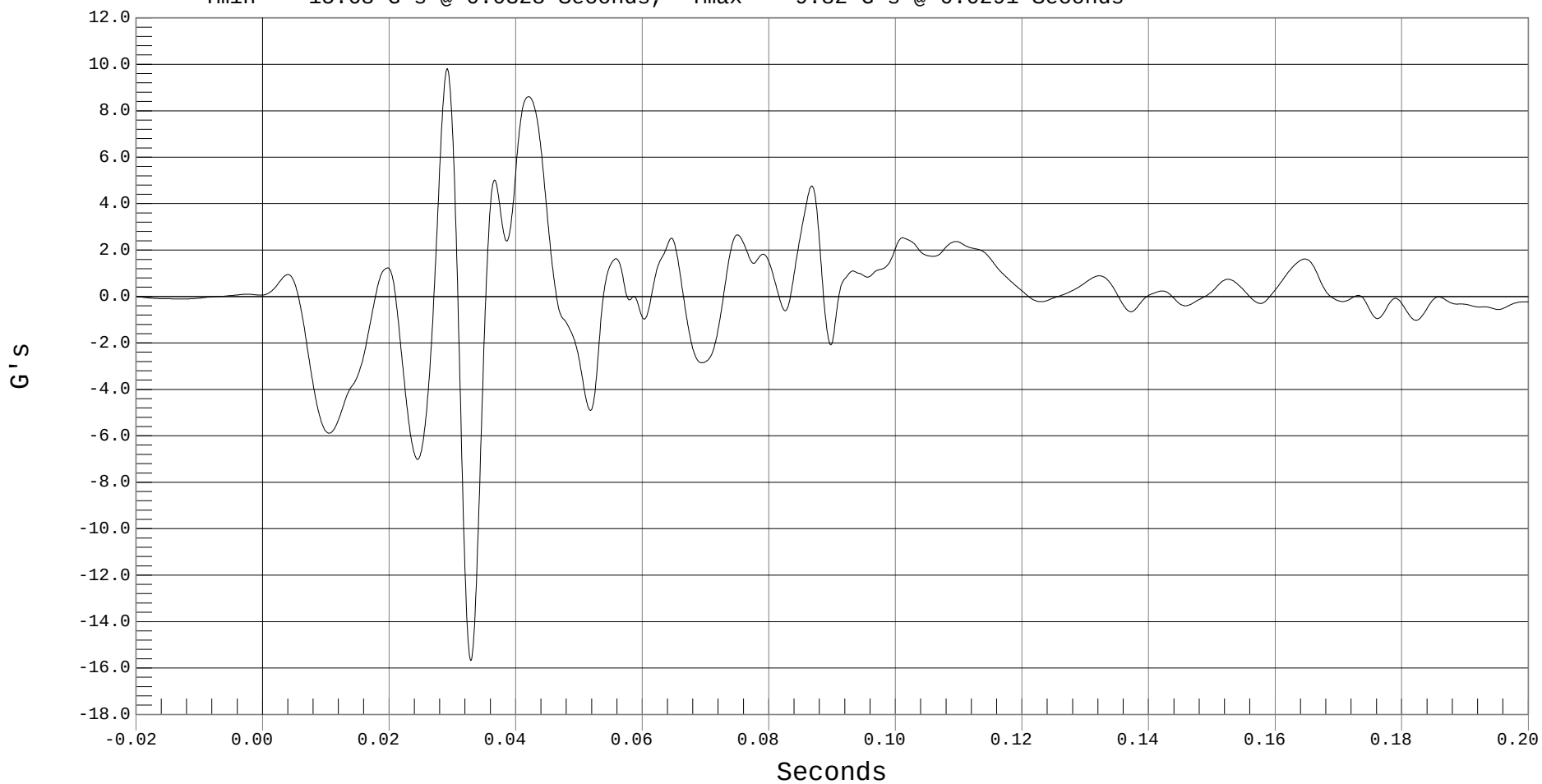
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 60

— 1 VEHICLE CG X, b01063AF.A14

Ymin = -15.68 G's @ 0.0328 Seconds, Ymax = 9.82 G's @ 0.0291 Seconds





VEHICLE CG X VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

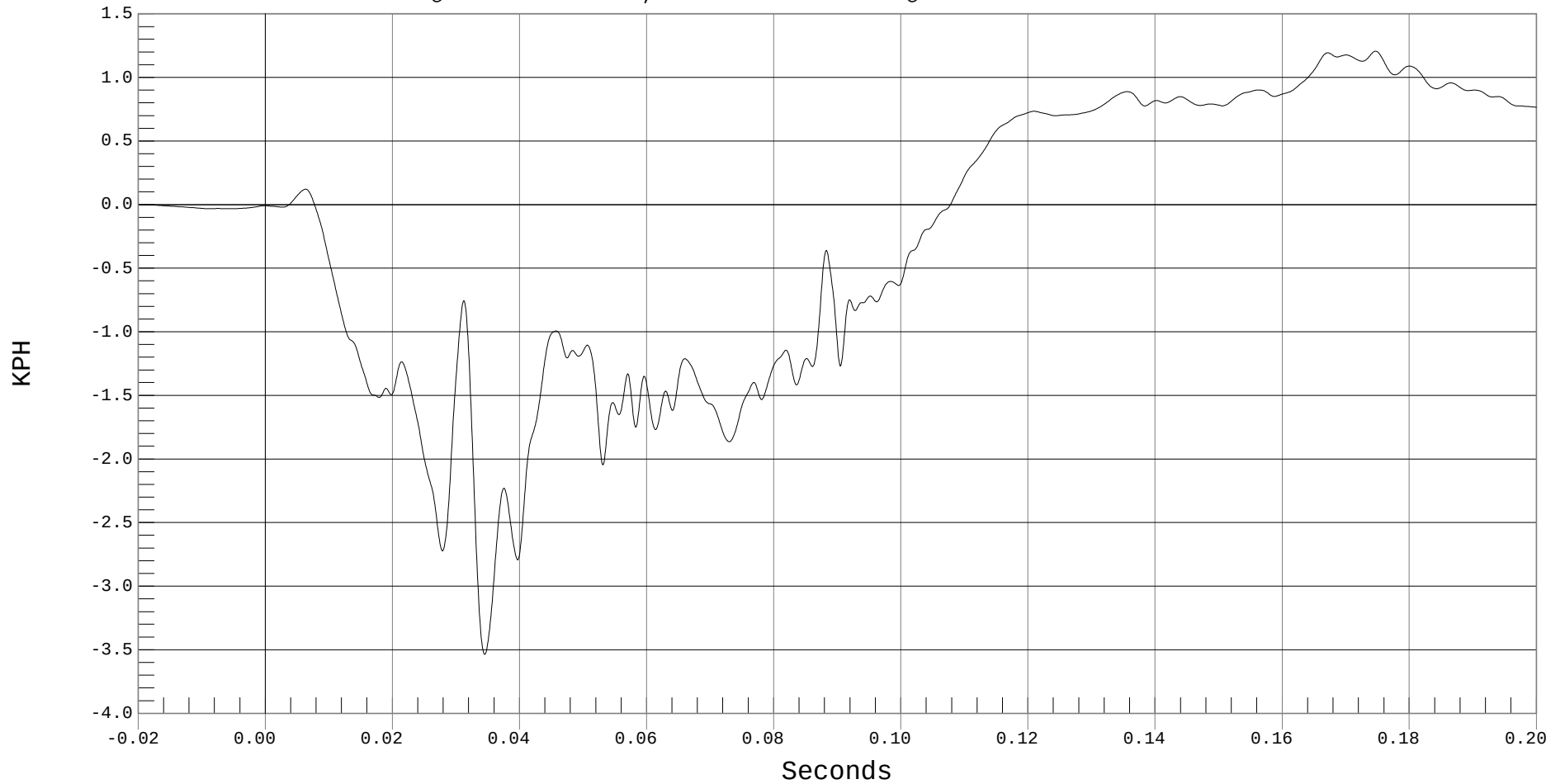
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

— 1 VEHICLE CG X VELOCITY, b01063AI.V14

Ymin = -3.54 KPH @ 0.0344 Seconds, Ymax = 1.21 KPH @ 0.1746 Seconds





VEHICLE CG Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

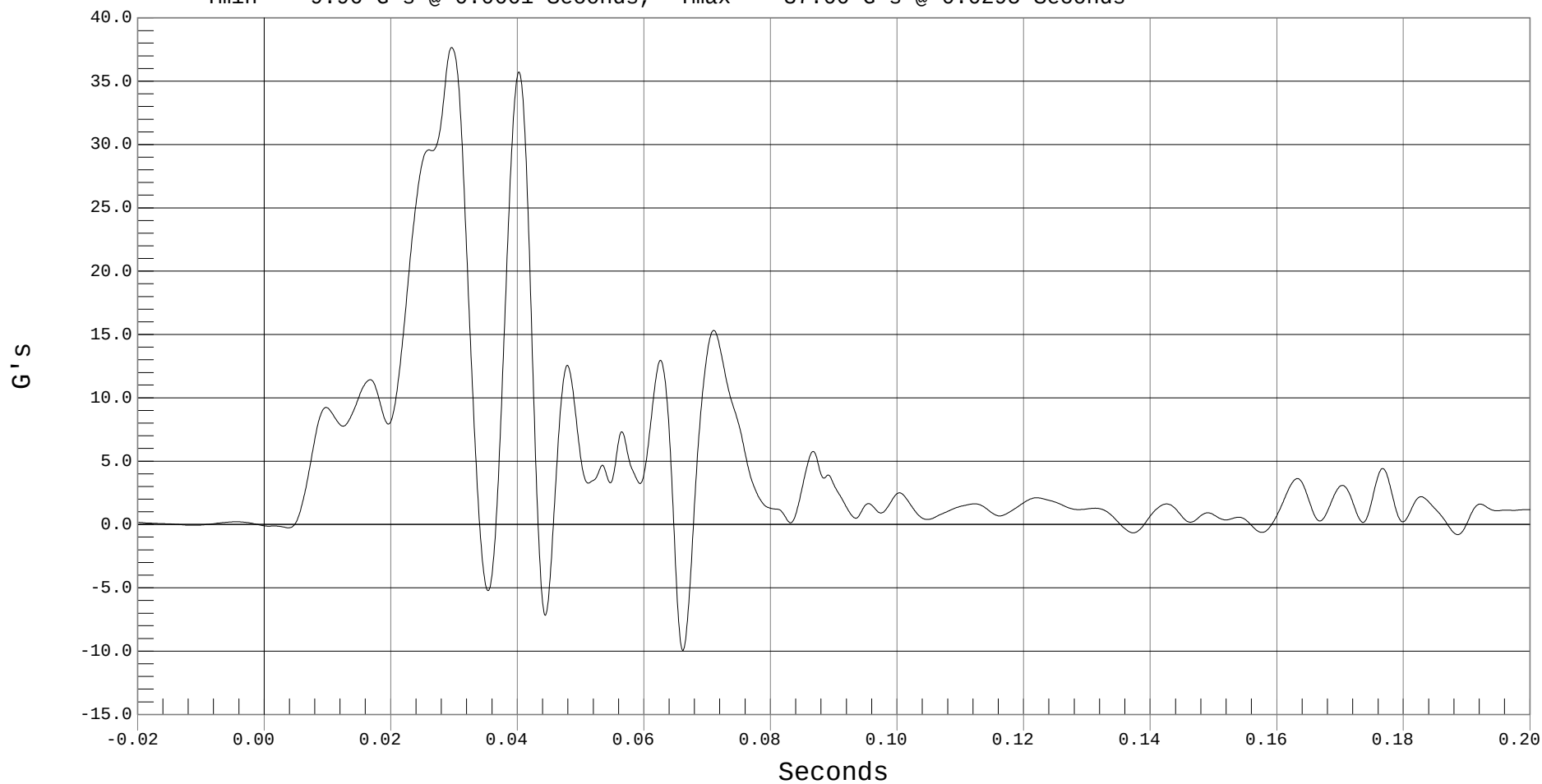
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 60

— 1 VEHICLE CG Y, b01063AF.A15

Ymin = -9.96 G's @ 0.0661 Seconds, Ymax = 37.66 G's @ 0.0295 Seconds





VEHICLE CG Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

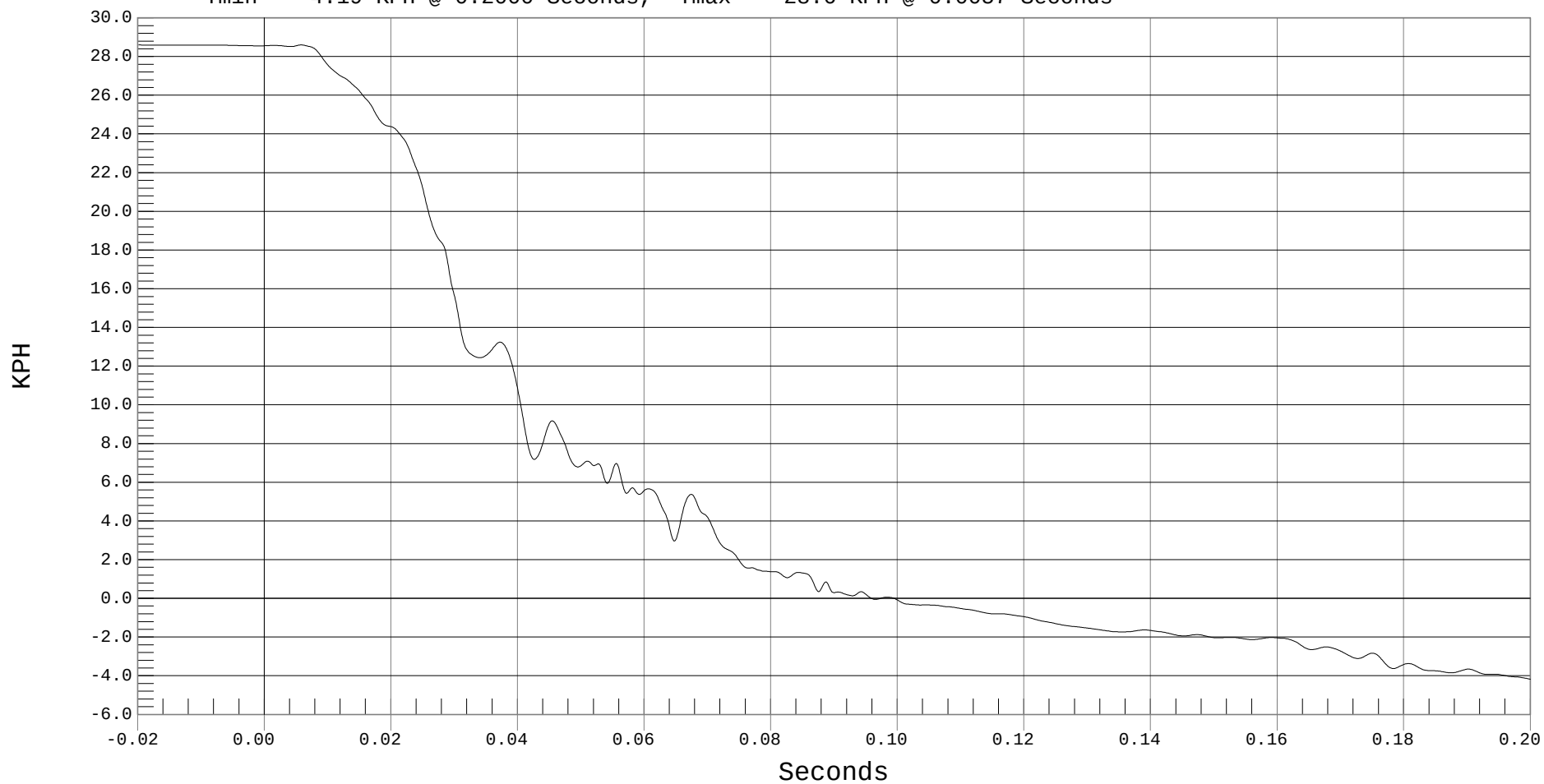
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

— 1 VEHICLE CG Y VELOCITY, b01063AI.V15

Ymin = -4.19 KPH @ 0.2000 Seconds, Ymax = 28.6 KPH @ 0.0057 Seconds





VEHICLE CG Z ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Test Date: 06-08-01

Component: 2001 VW JETTA 4 DOOR SEDAN

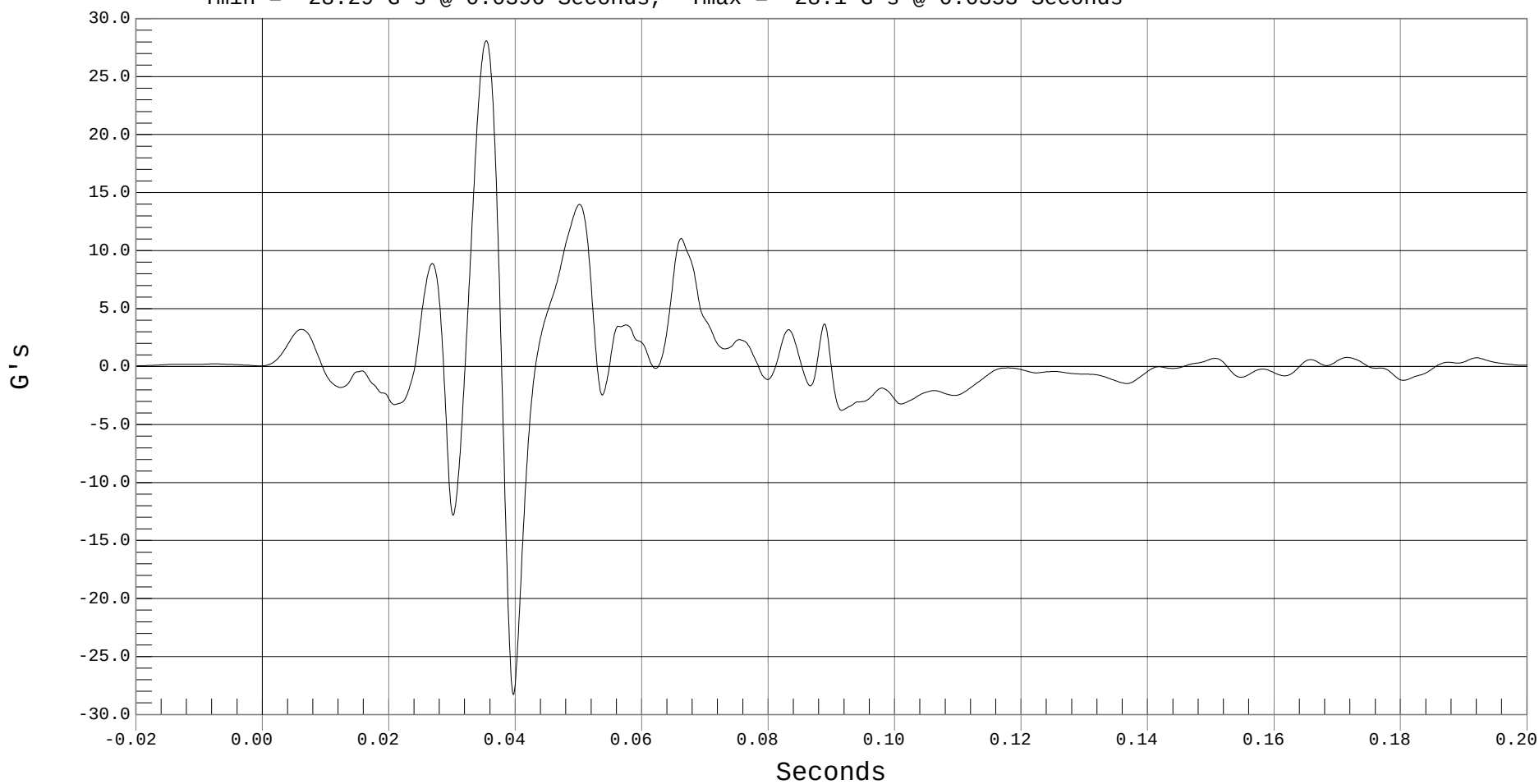
Speed: 17.8 MPH, 28.6 KPH

Other Info:

Filter Class: 60

— 1 VEHICLE CG Z, b01063AF.A16

Ymin = -28.29 G's @ 0.0396 Seconds, Ymax = 28.1 G's @ 0.0353 Seconds





VEHICLE CG Z VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Test Date: 06-08-01

Component: 2001 VW JETTA 4 DOOR SEDAN

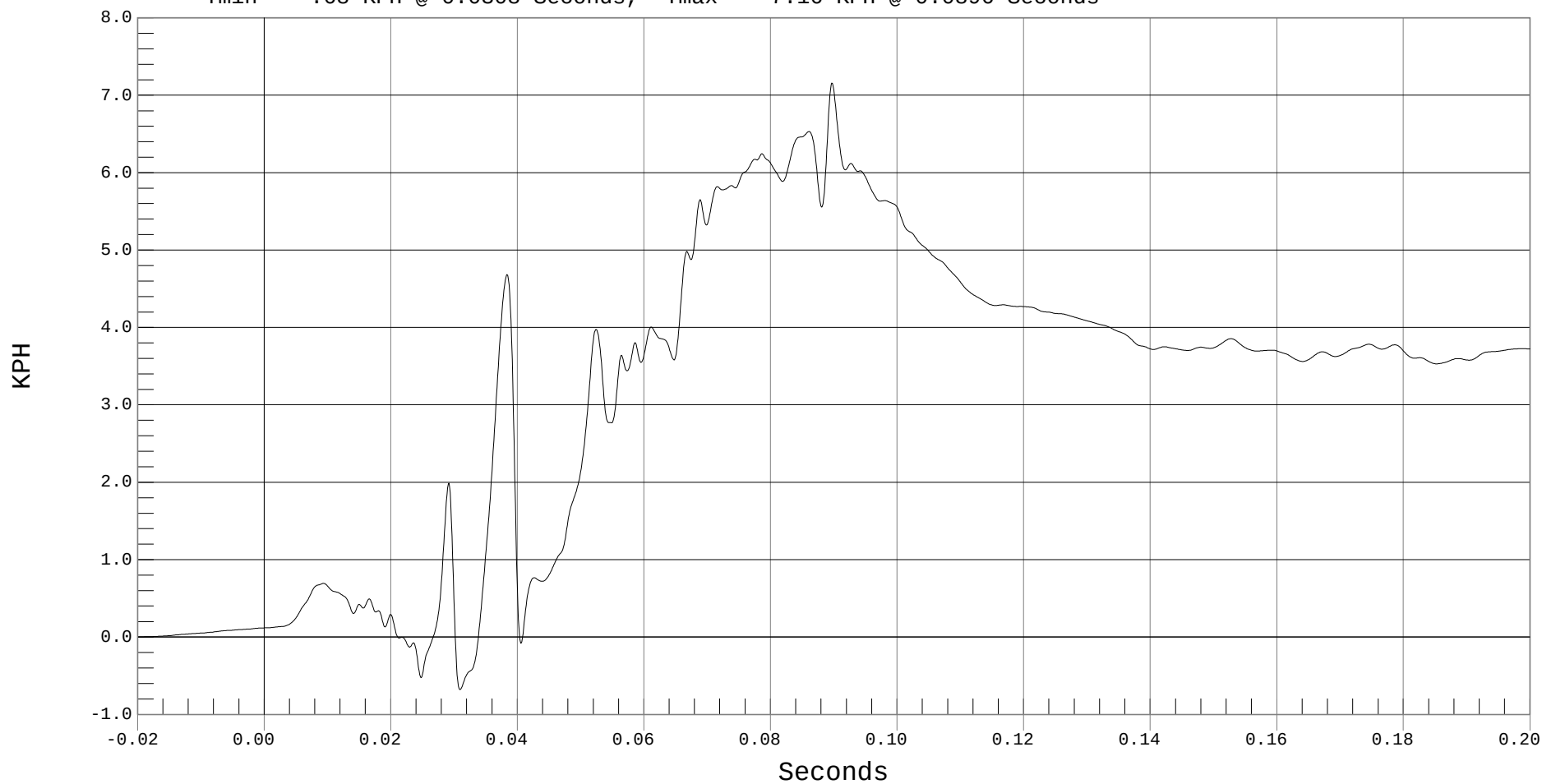
Speed: 17.8 MPH, 28.6 KPH

Other Info:

Filter Class: 180

— 1 VEHICLE CG Z VELOCITY, b01063AI.V16

Ymin = -.68 KPH @ 0.0308 Seconds, Ymax = 7.16 KPH @ 0.0896 Seconds





VEHICLE CG RESULTANT ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Test Date: 06-08-01

Component: 2001 VW JETTA 4 DOOR SEDAN

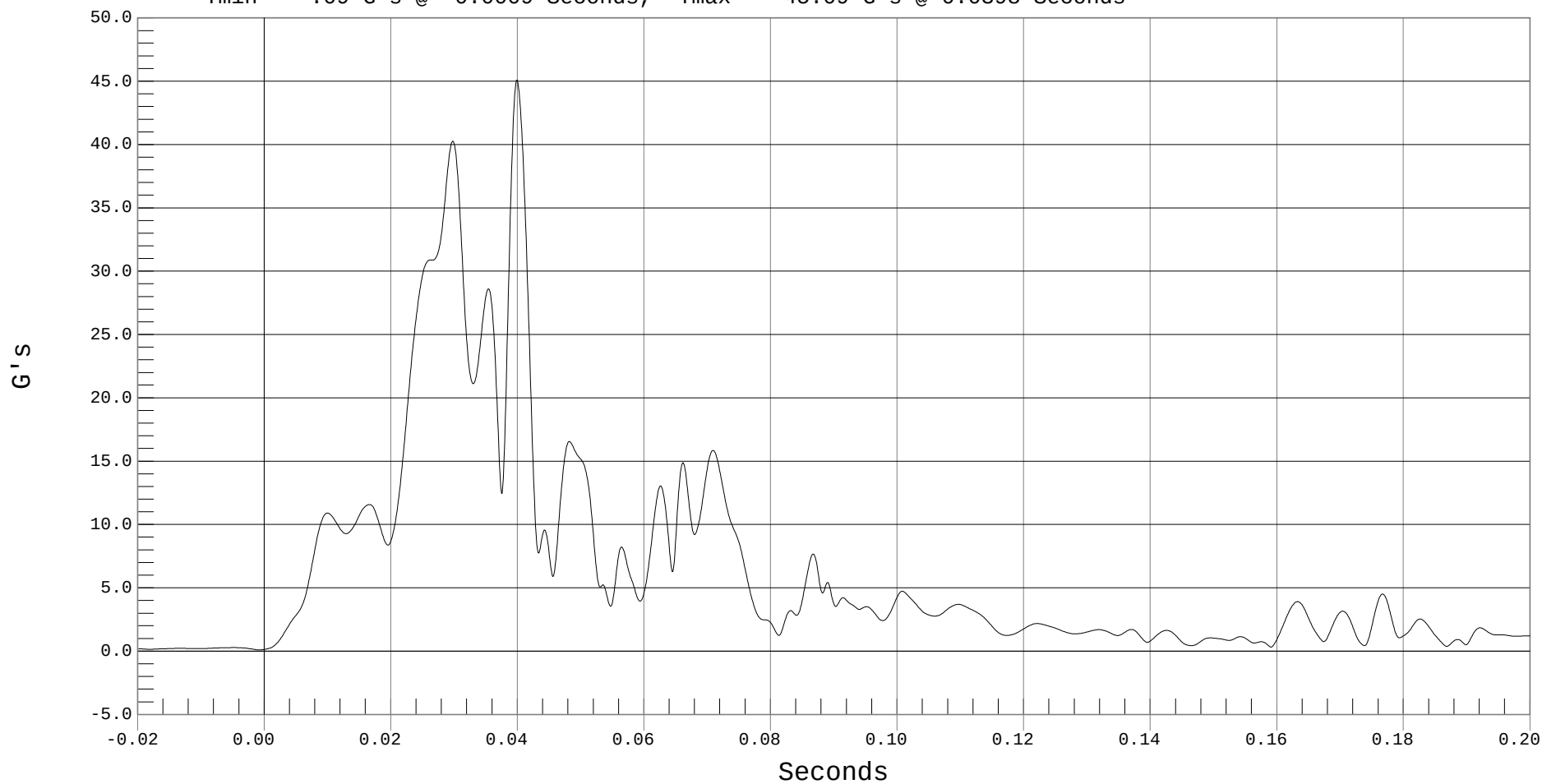
Speed: 17.8 MPH, 28.6 KPH

Other Info:

Filter Class: 60

— 1 VEHICLE CG RESULTANT ACCELERATION, b01063AV.A14

Ymin = .09 G's @ -0.0009 Seconds, Ymax = 45.09 G's @ 0.0398 Seconds





LEFT FLOOR @ SILL Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Test Date: 06-08-01

Component: 2001 VW JETTA 4 DOOR SEDAN

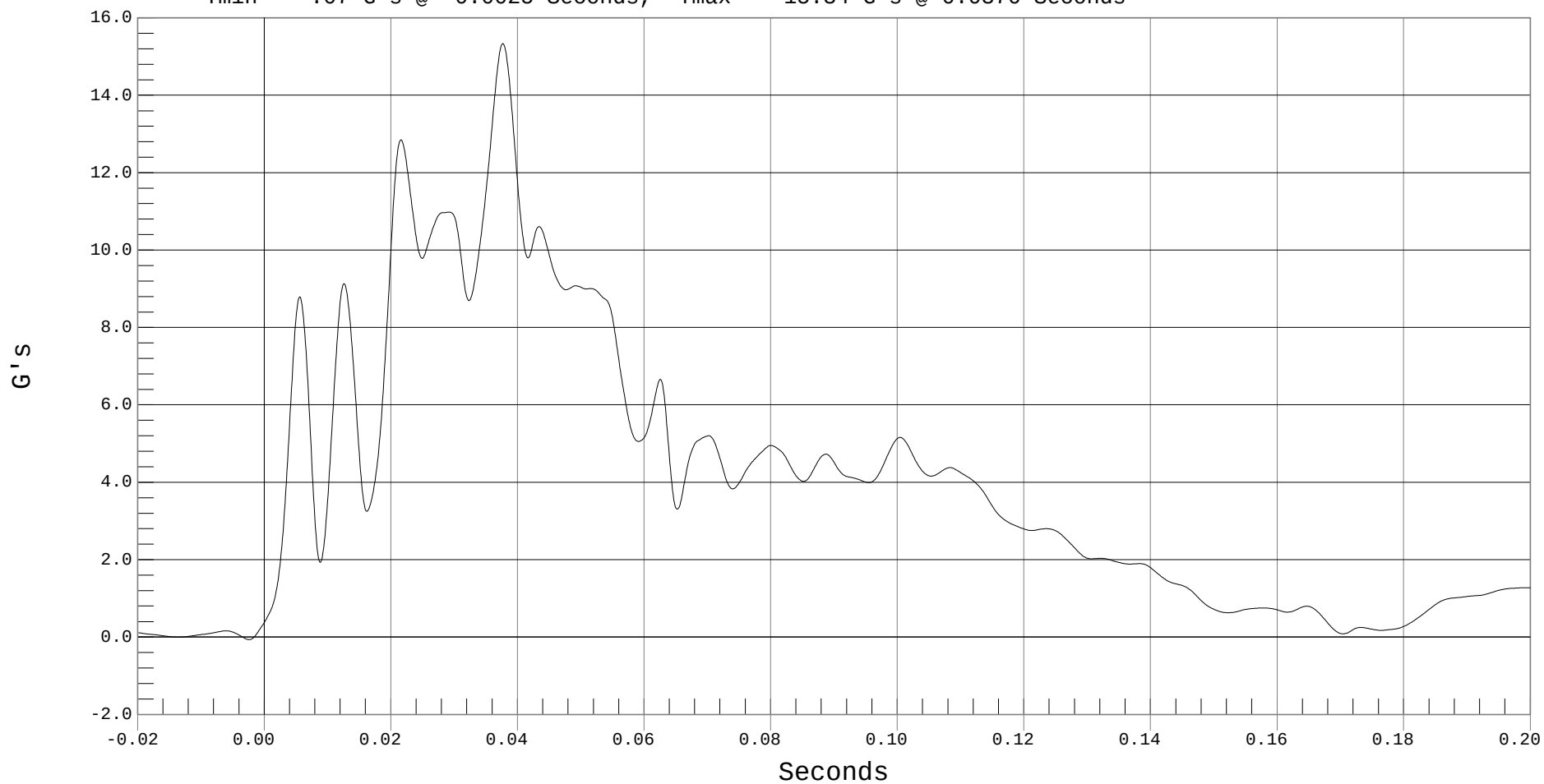
Speed: 17.8 MPH, 28.6 KPH

Other Info:

Filter Class: 60

— 1 LEFT FLOOR SILL Y, b01063AF.A17

Ymin = -.07 G's @ -0.0025 Seconds, Ymax = 15.34 G's @ 0.0376 Seconds





LEFT FLOOR @ SILL Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

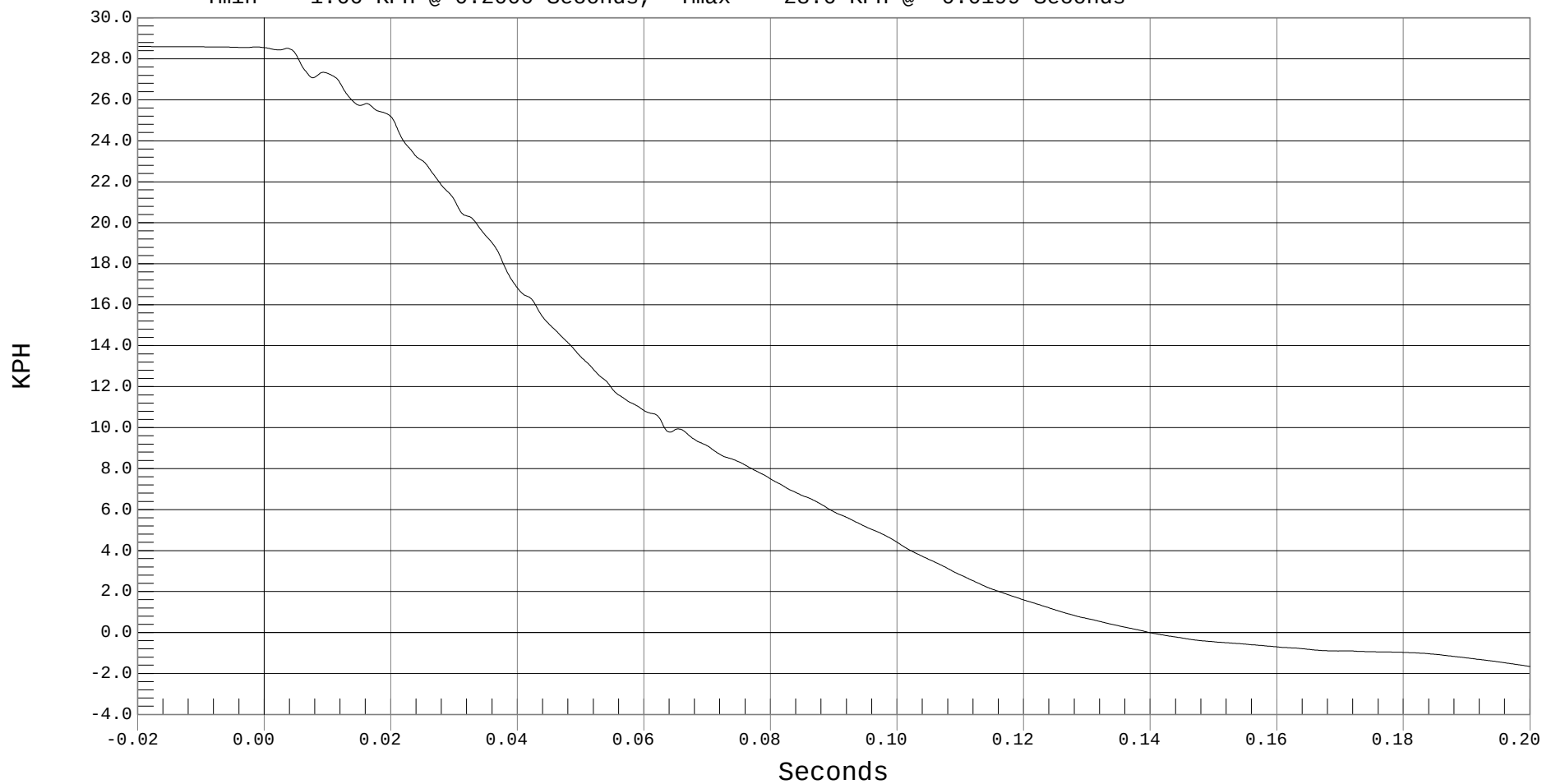
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

— 1 LEFT FLOOR SILL Y VELOCITY, b01063AI.V17

Ymin = -1.66 KPH @ 0.2000 Seconds, Ymax = 28.6 KPH @ -0.0199 Seconds





LEFT A-PILLAR @ SILL Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

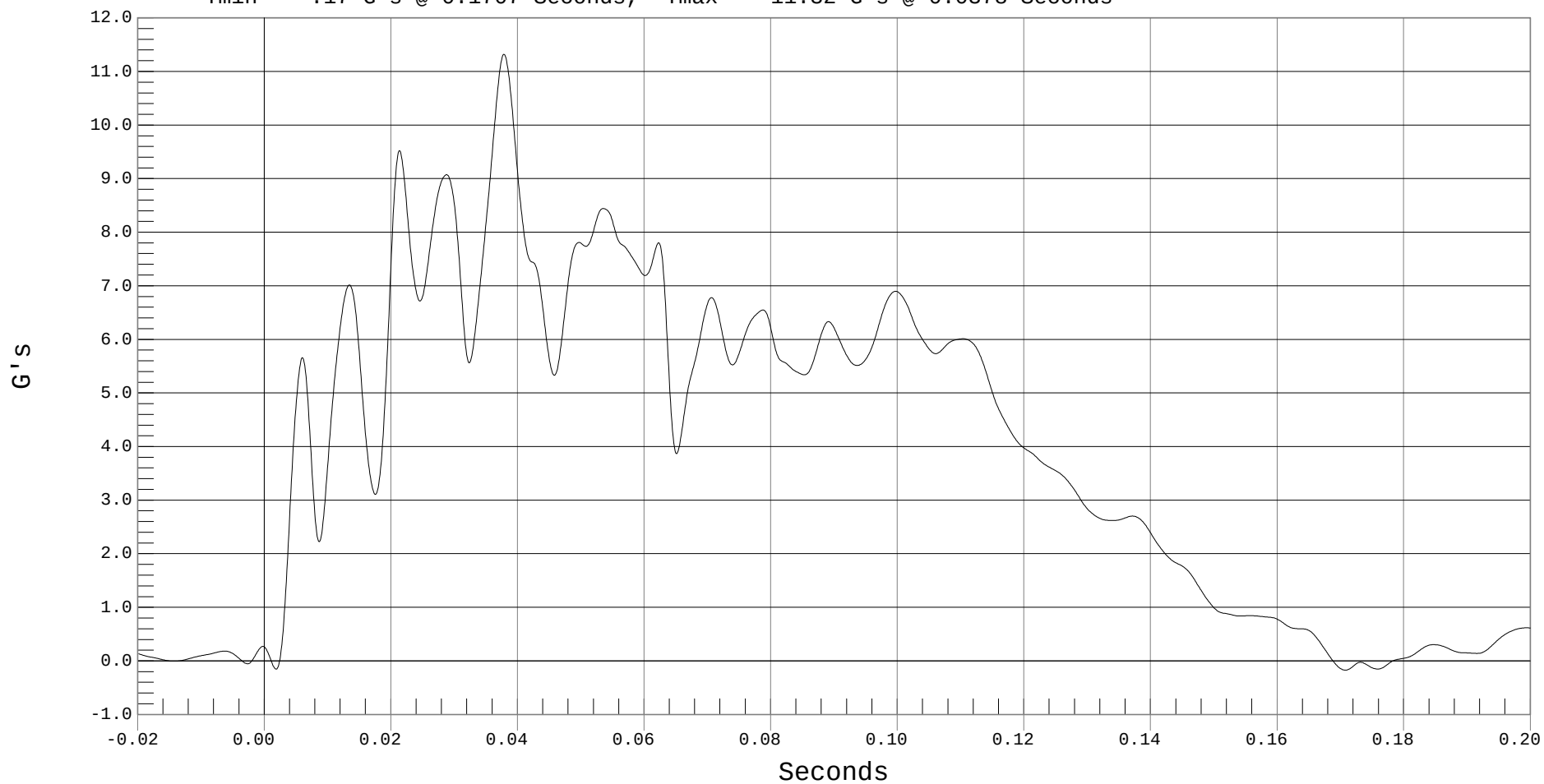
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 60

— 1 LEFT A-PILLAR @ SILL Y, b01063AF.A18

Ymin = -.17 G's @ 0.1707 Seconds, Ymax = 11.32 G's @ 0.0378 Seconds





LEFT A-PILLAR @ SILL Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

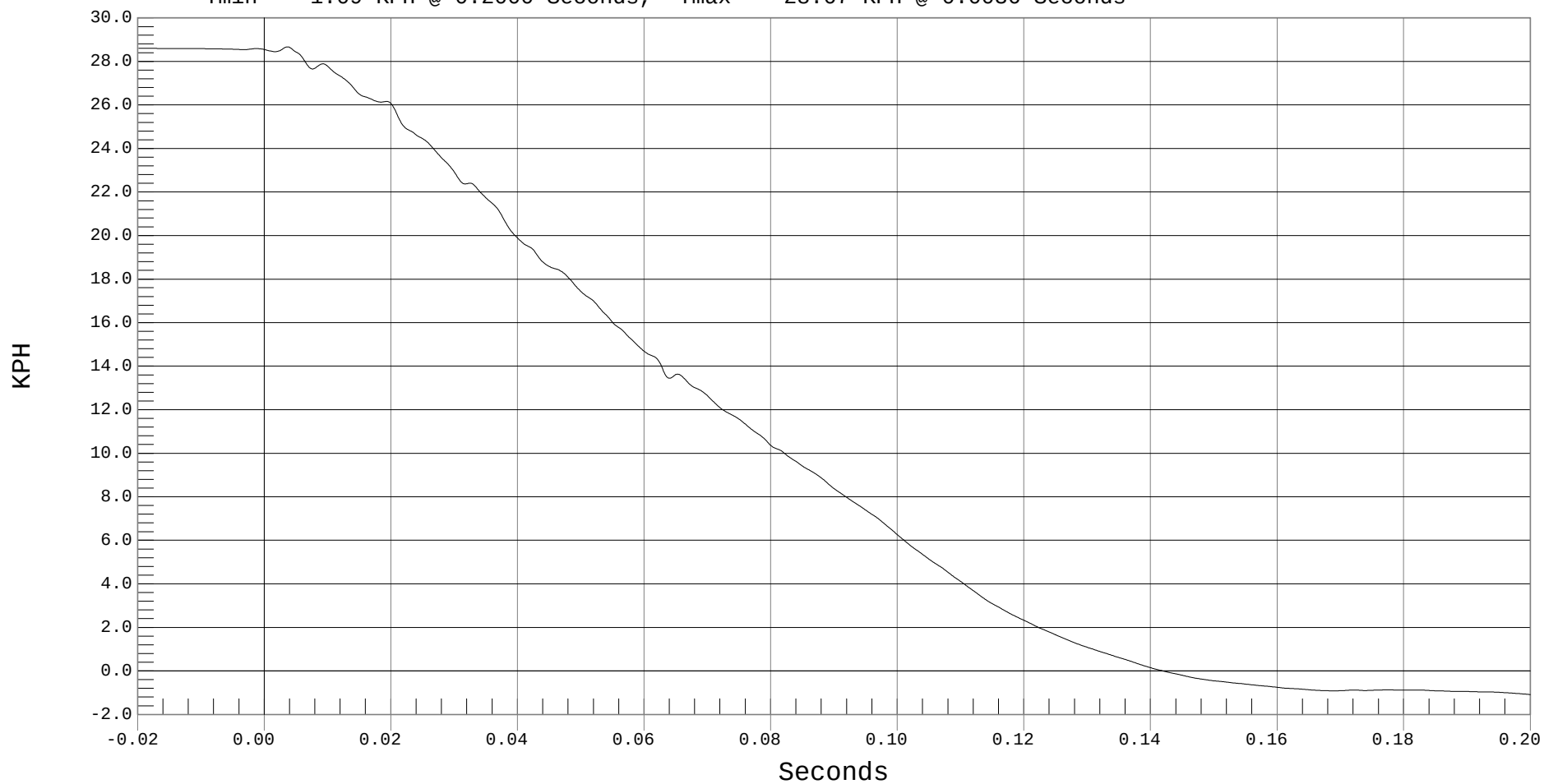
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

— 1 A PILLAR SILL Y VELOCITY, b01063AI.V18

Ymin = -1.09 KPH @ 0.2000 Seconds, Ymax = 28.67 KPH @ 0.0036 Seconds





LEFT A-PILLAR LOWER Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

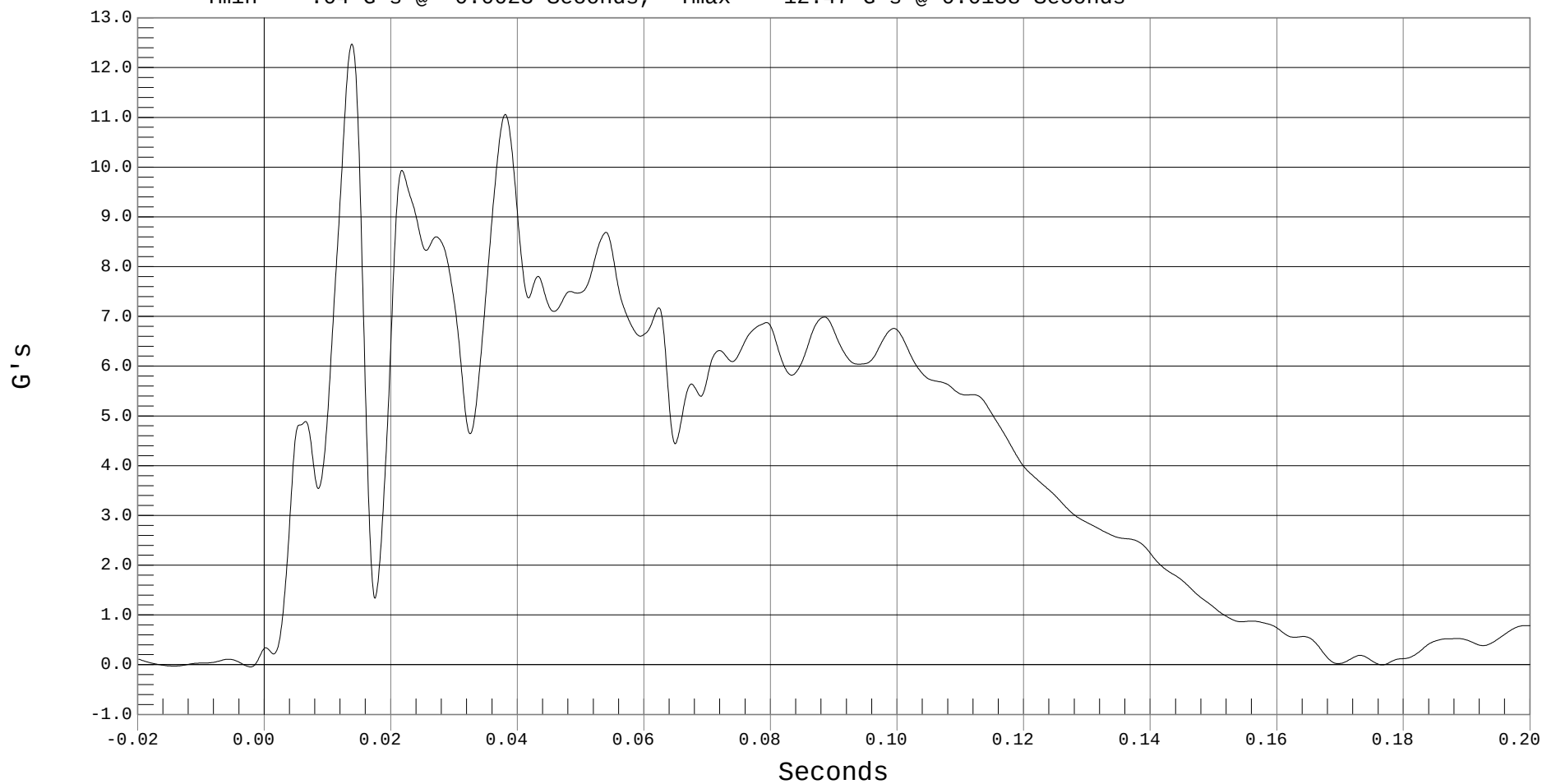
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 60

— 1 LEFT A-PILLAR LOWER Y, b01063AF.A19

Ymin = -.04 G's @ -0.0023 Seconds, Ymax = 12.47 G's @ 0.0138 Seconds





LEFT A-PILLAR LOWER Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

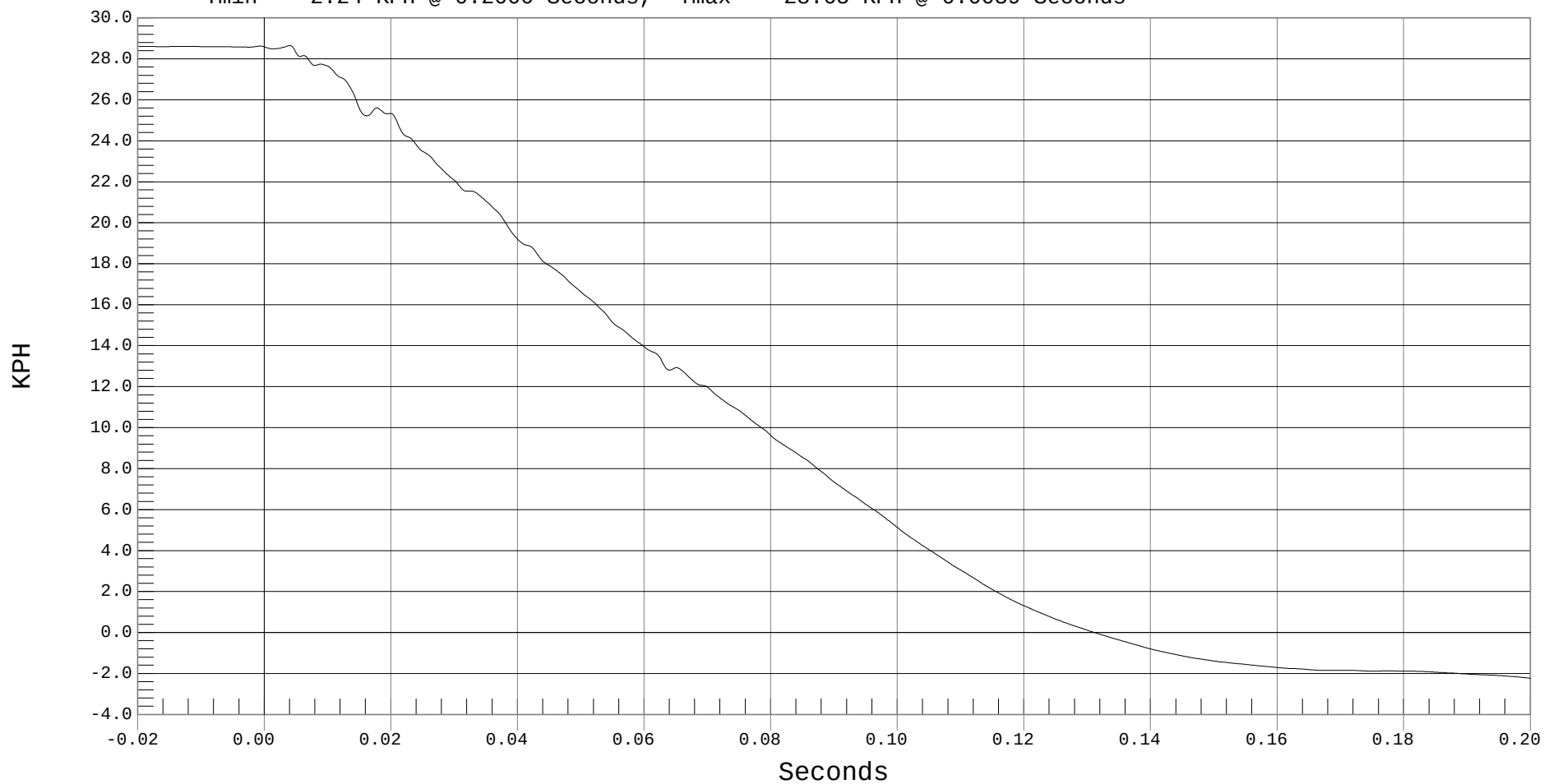
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

— 1 A PILLAR LOW Y VELOCITY, b01063AI.V19

Ymin = -2.24 KPH @ 0.2000 Seconds, Ymax = 28.65 KPH @ 0.0039 Seconds





LEFT A-PILLAR MID Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

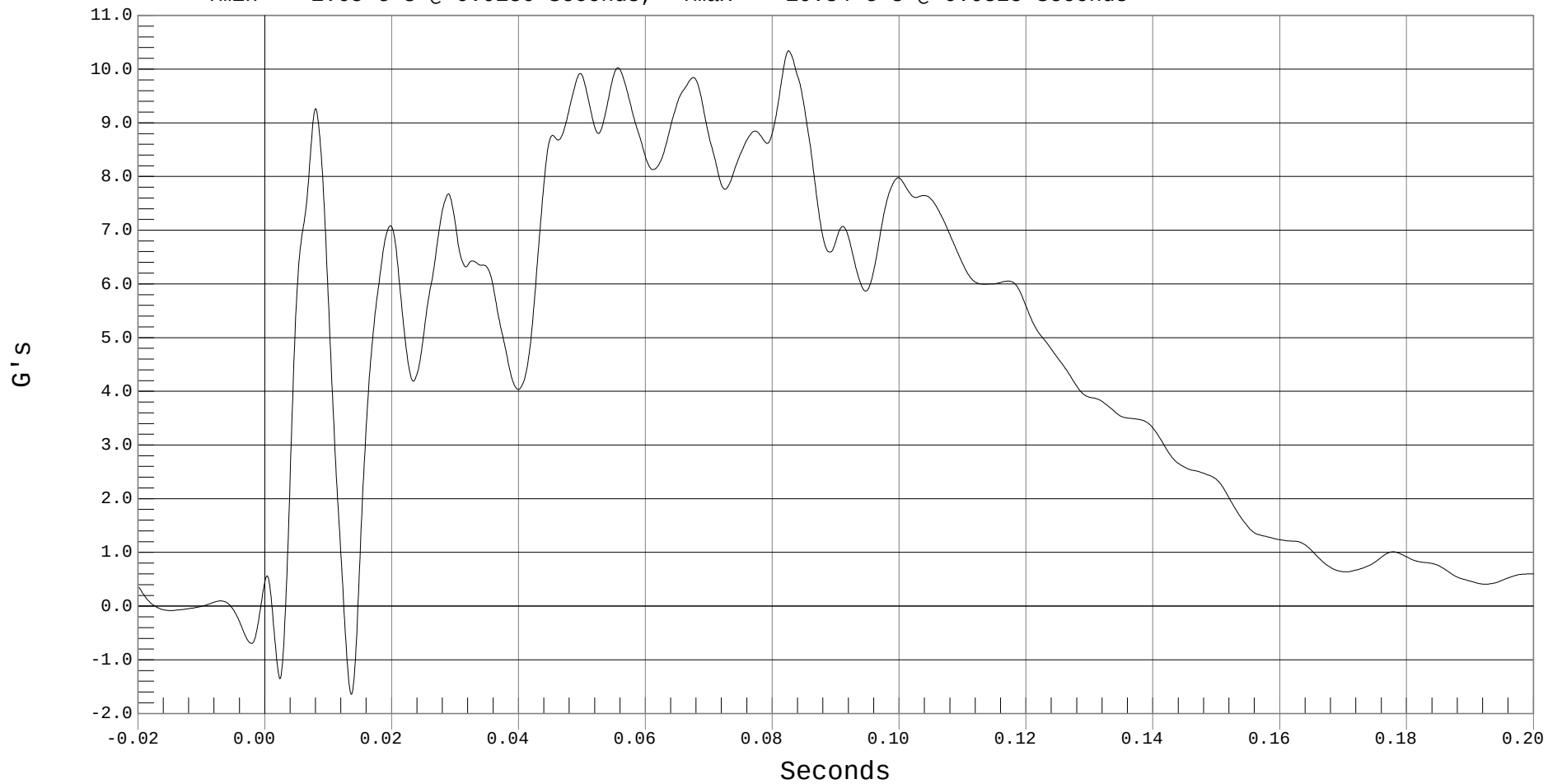
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 60

— 1 LEFT A-PILLAR MID Y, b01063AF.A20

Ymin = -1.65 G's @ 0.0136 Seconds, Ymax = 10.34 G's @ 0.0825 Seconds





LEFT A-PILLAR MID Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

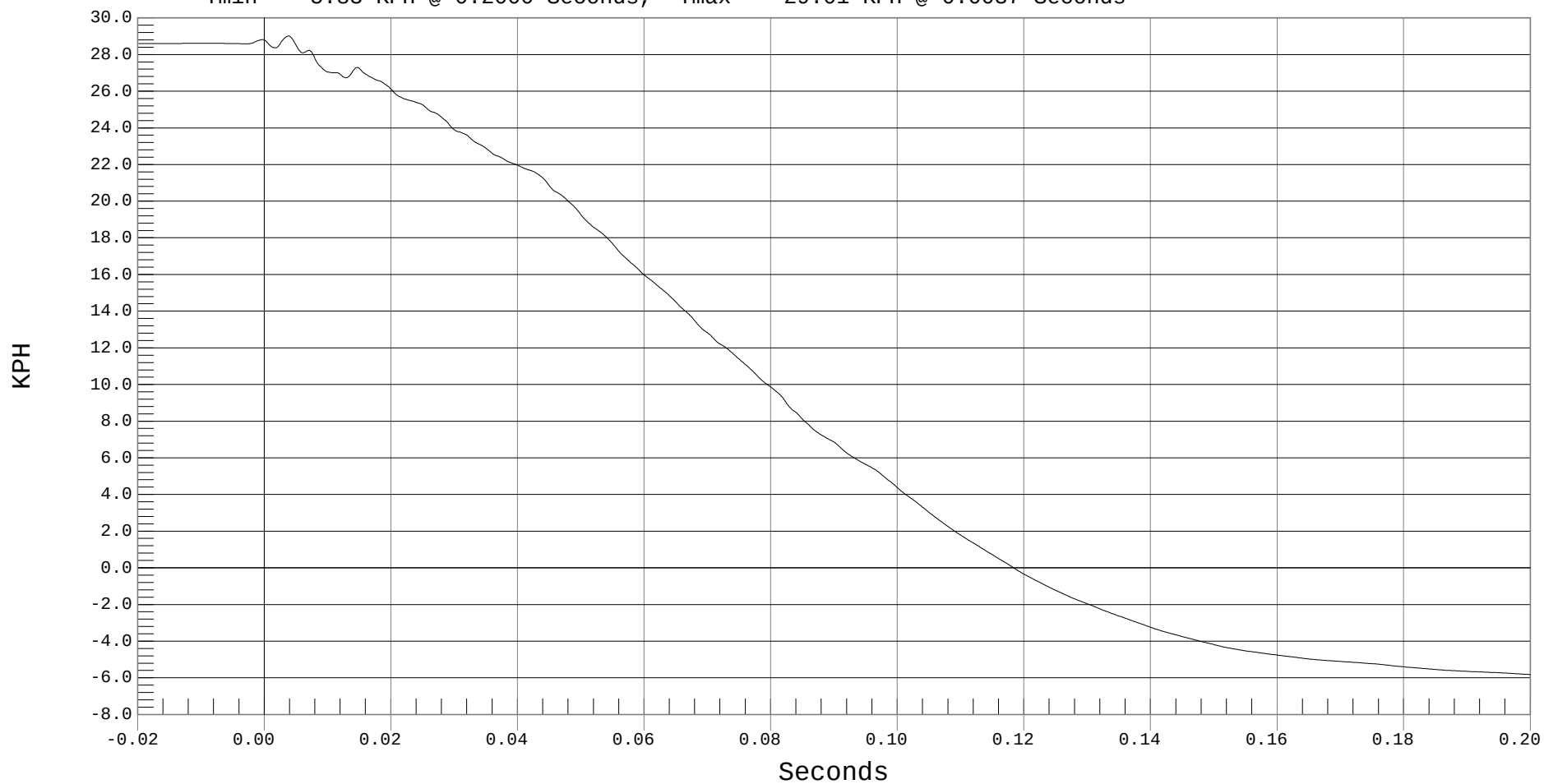
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

— 1 A PILLAR MID Y VELOCITY, b01063AI.V20

Ymin = -5.83 KPH @ 0.2000 Seconds, Ymax = 29.01 KPH @ 0.0037 Seconds





LEFT B-PILLAR @ SILL Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

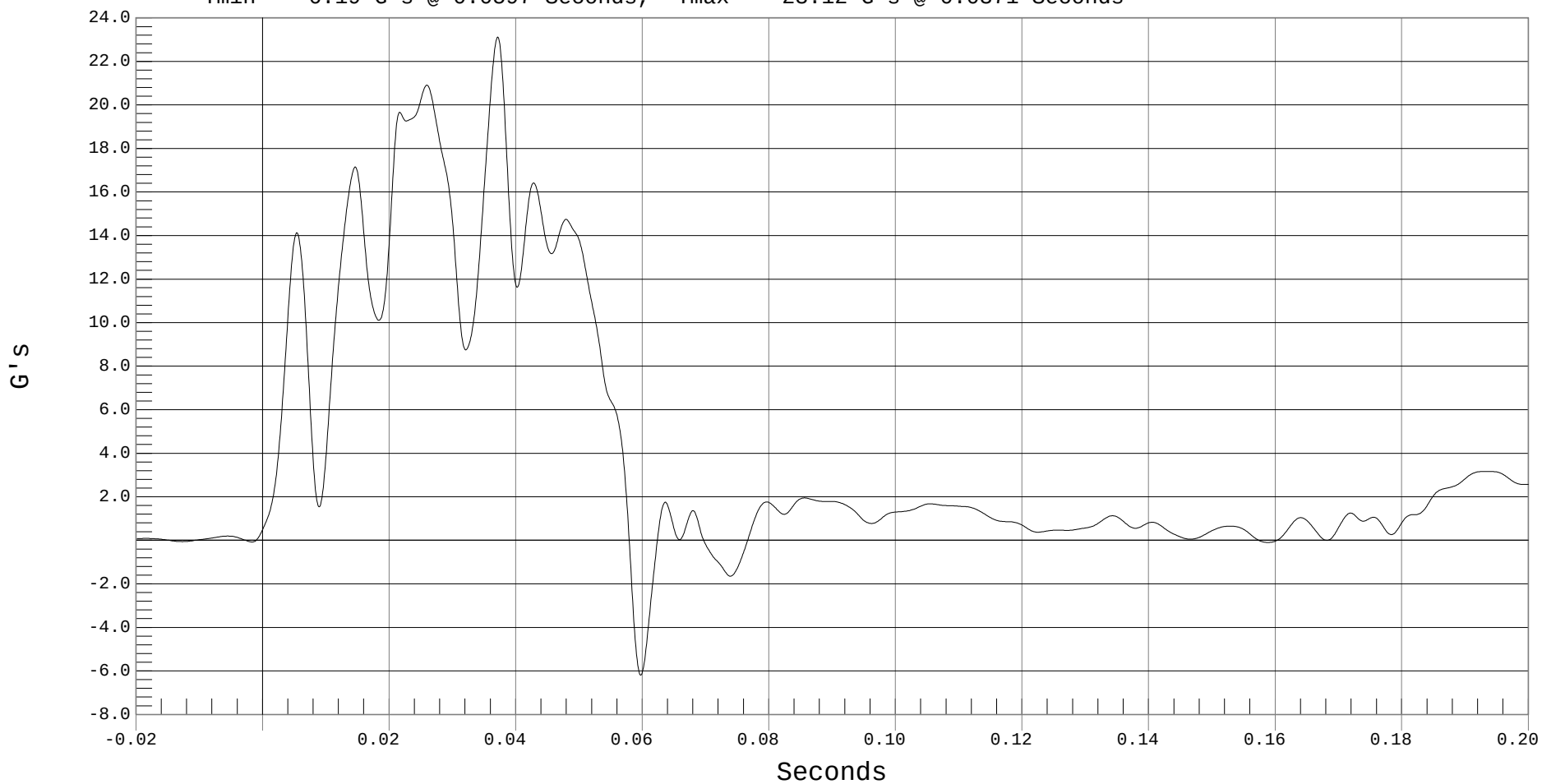
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 60

— 1 LEFT B-PILLAR @ SILL Y, b01063AF.A22

Ymin = -6.19 G's @ 0.0597 Seconds, Ymax = 23.12 G's @ 0.0371 Seconds





LEFT B-PILLAR @ SILL Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

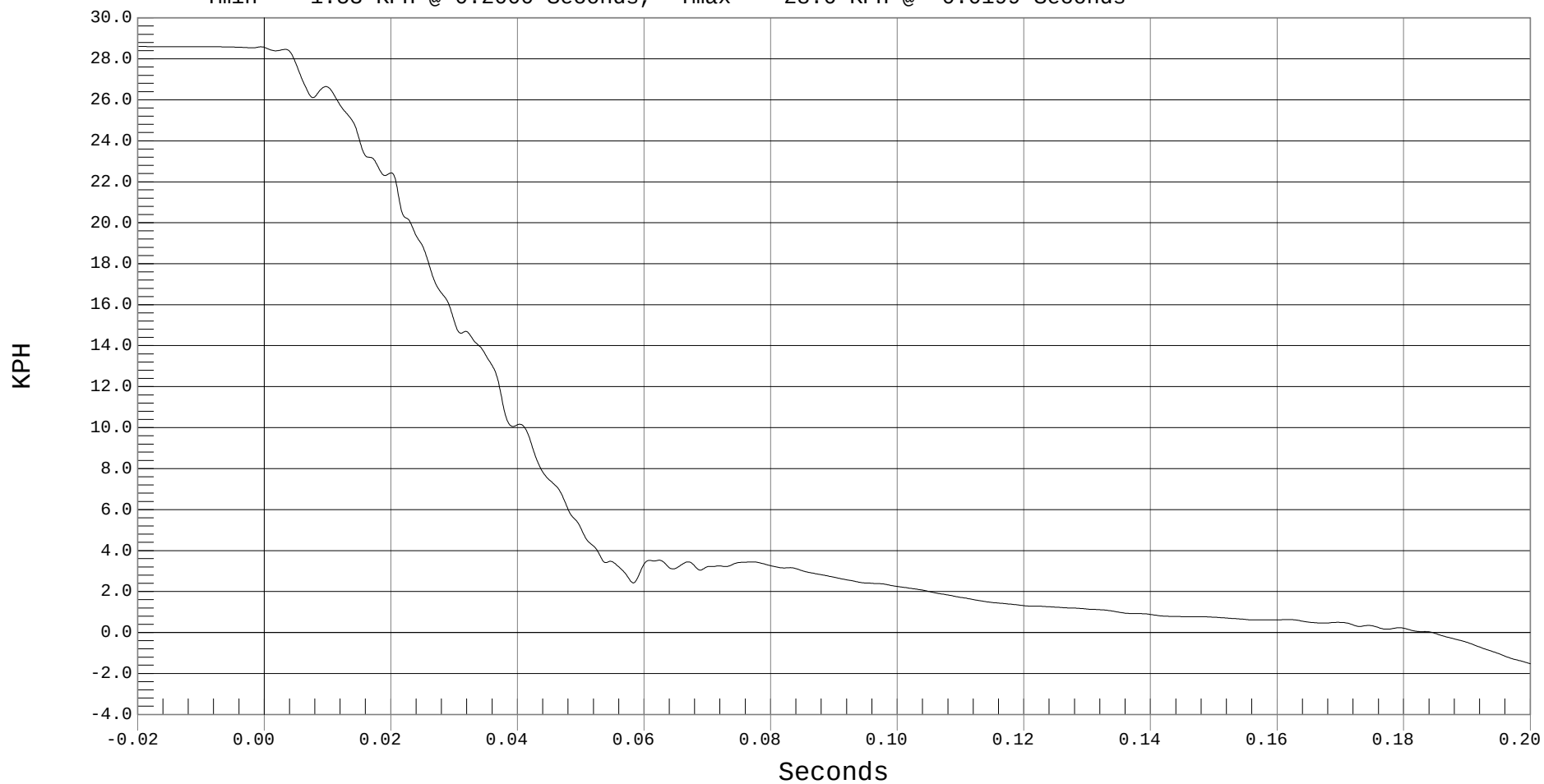
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

— 1 B PILLAR SILL Y VELOCITY, b01063AI.V22

Ymin = -1.53 KPH @ 0.2000 Seconds, Ymax = 28.6 KPH @ -0.0199 Seconds





LEFT B-PILLAR LOWER Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

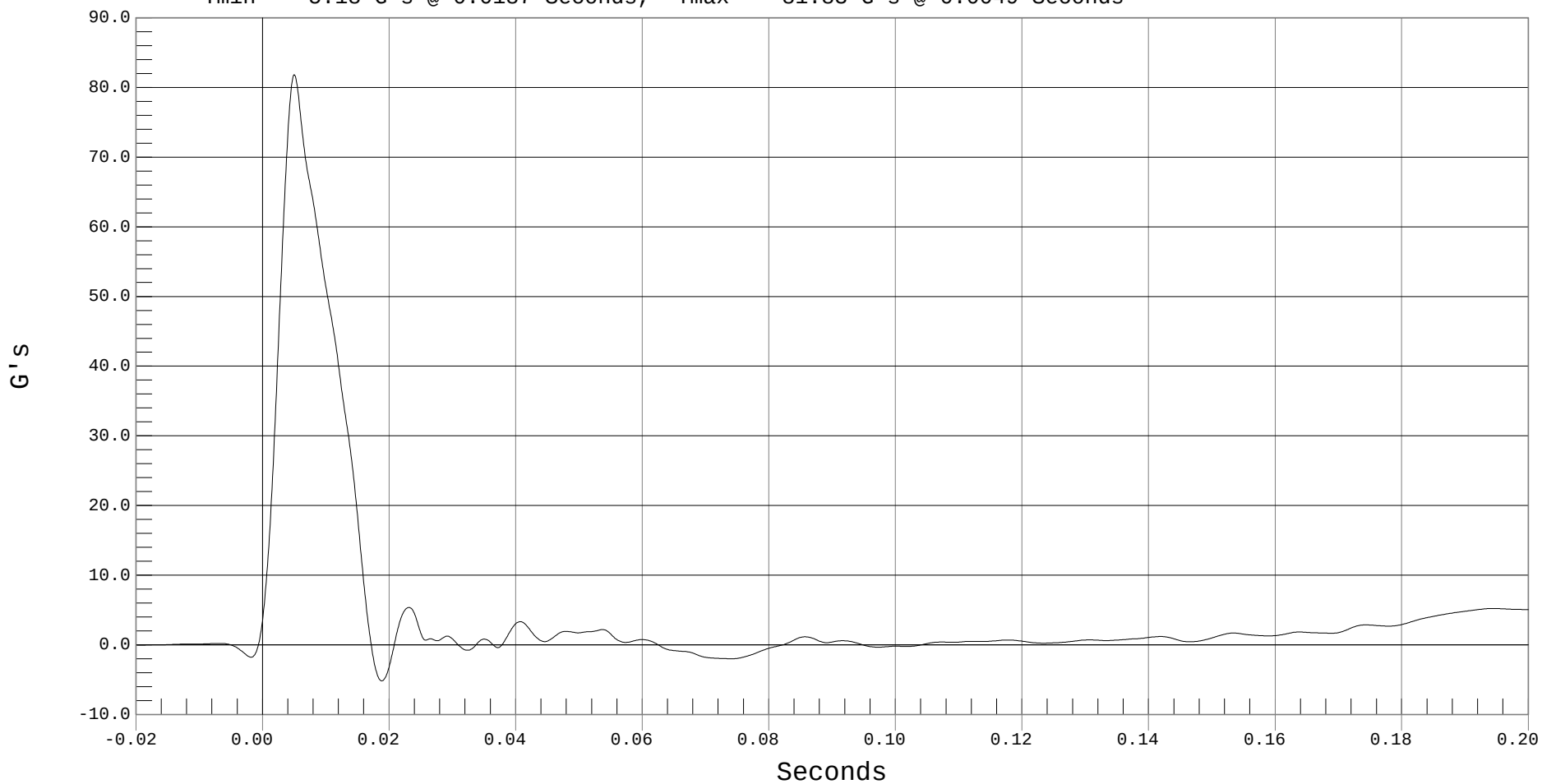
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 60

— 1 LEFT B-PILLAR LOWER Y, b01063AF.A23

Ymin = -5.18 G's @ 0.0187 Seconds, Ymax = 81.83 G's @ 0.0049 Seconds





LEFT B-PILLAR LOWER Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

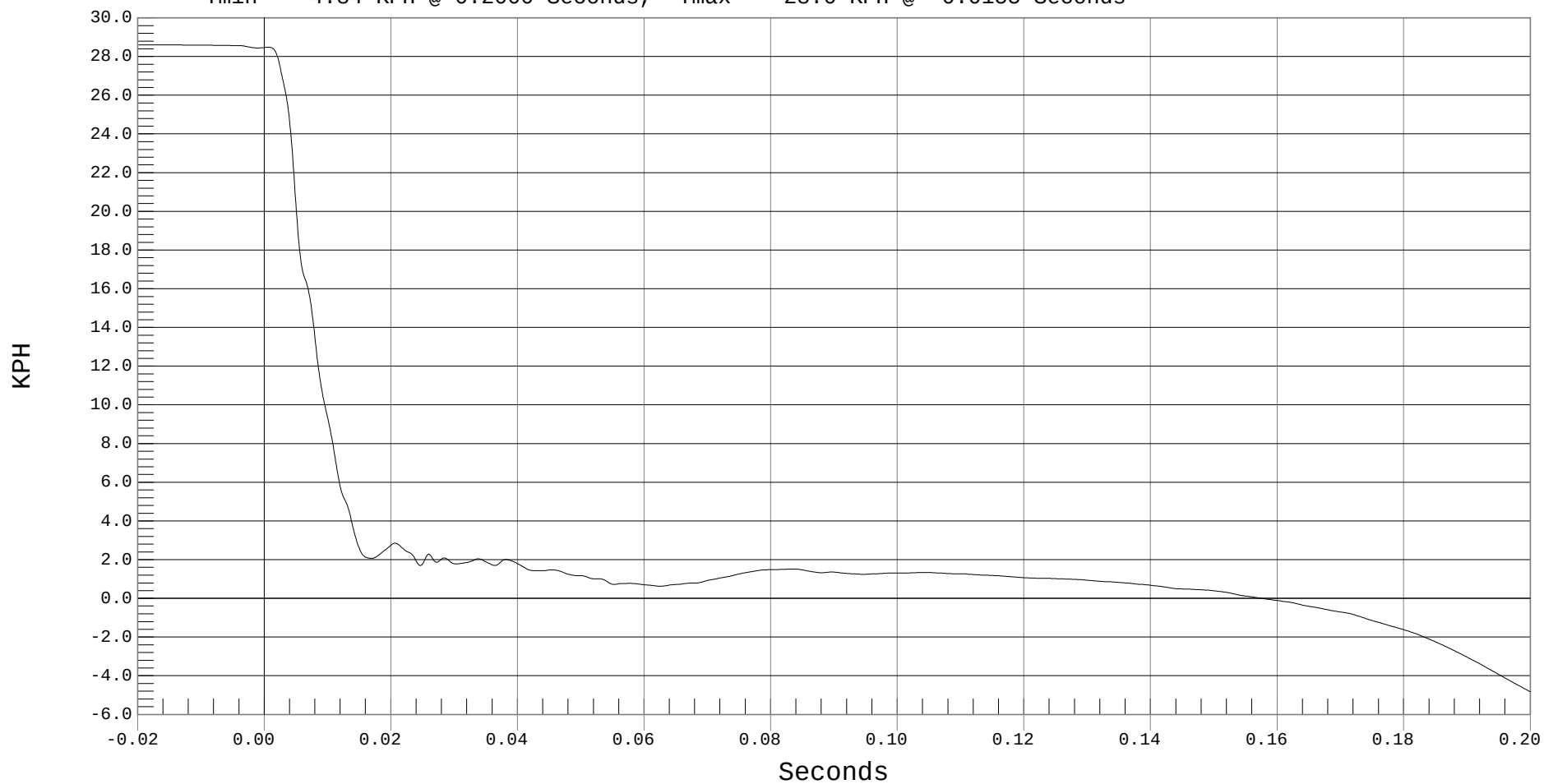
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

— 1 B PILLAR LOW Y VELOCITY, b01063AI.V23

Ymin = -4.84 KPH @ 0.2000 Seconds, Ymax = 28.6 KPH @ -0.0155 Seconds





LEFT B-PILLAR MID Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

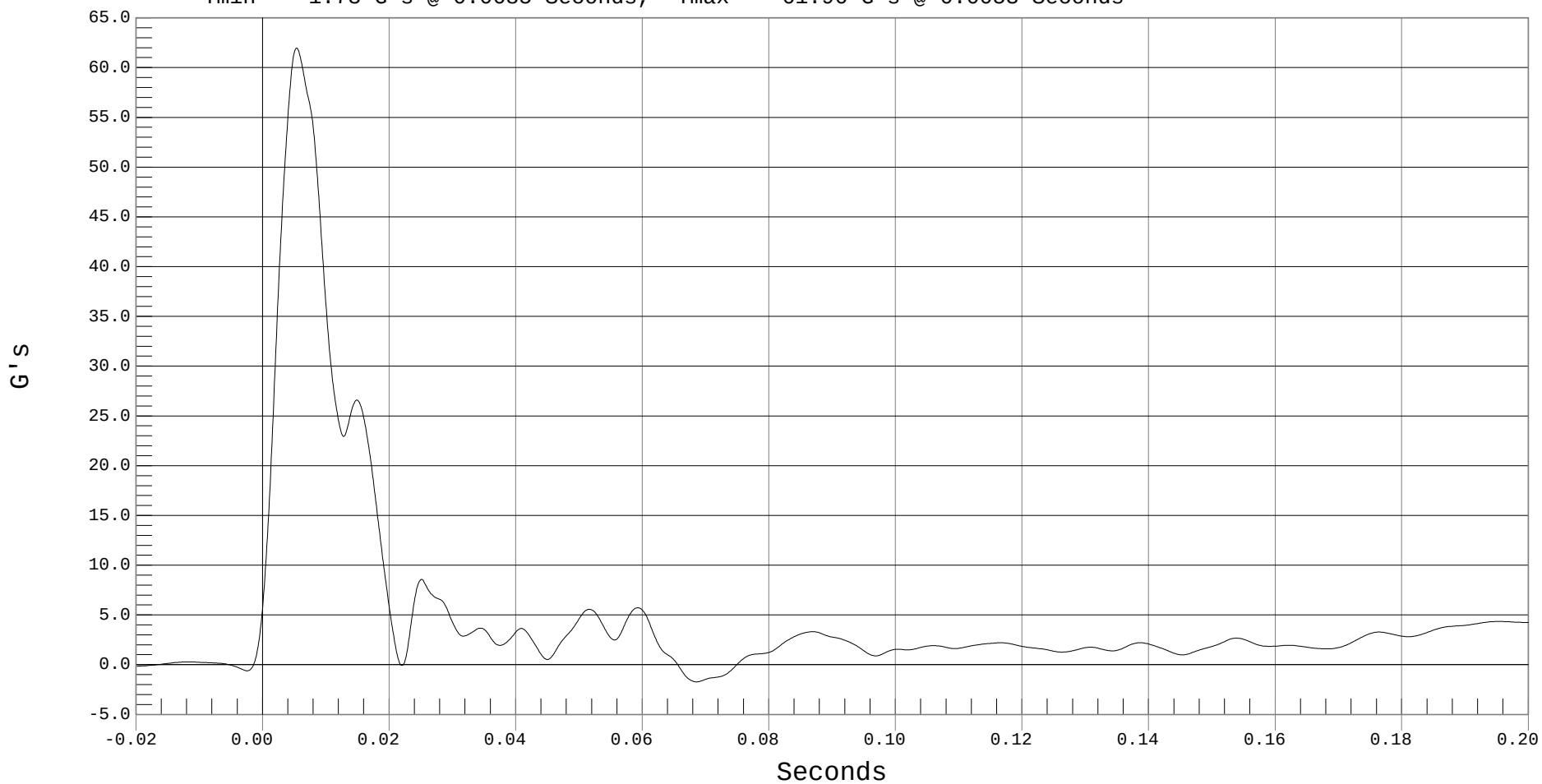
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 60

1 LEFT B-PILLAR MID Y, b01063AF.A24

Ymin = -1.73 G's @ 0.0685 Seconds, Ymax = 61.96 G's @ 0.0053 Seconds





LEFT B-PILLAR MID Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

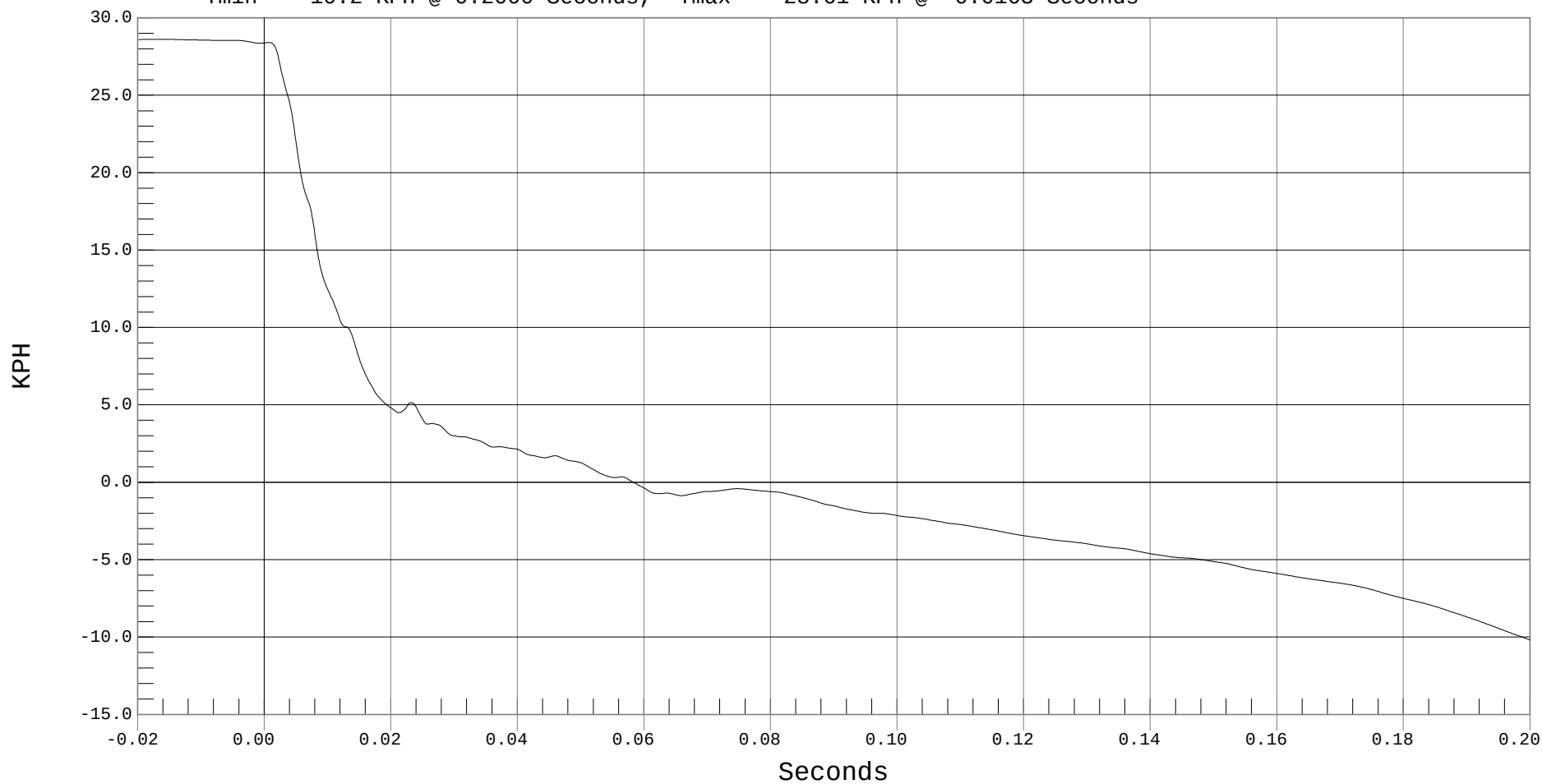
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

— 1 B PILLAR MID Y VELOCITY, b01063AI.V24

Ymin = -10.2 KPH @ 0.2000 Seconds, Ymax = 28.61 KPH @ -0.0163 Seconds





LEFT DRIVER SEAT TRACK Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

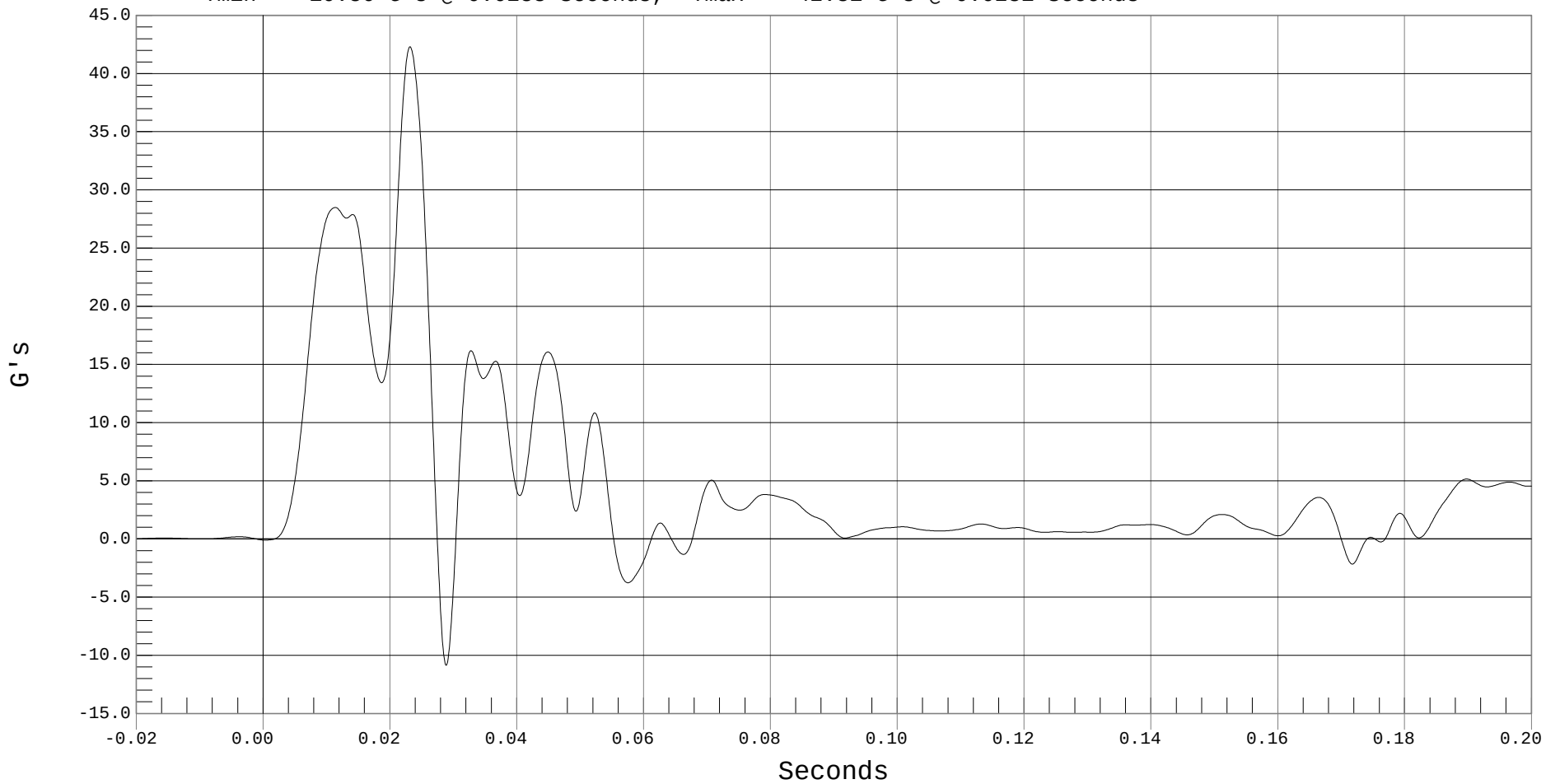
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 60

— 1 DRIVER SEAT Y, b01063AF.A27

Ymin = -10.86 G's @ 0.0288 Seconds, Ymax = 42.31 G's @ 0.0231 Seconds





LEFT DRIVER SEAT TRACK Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

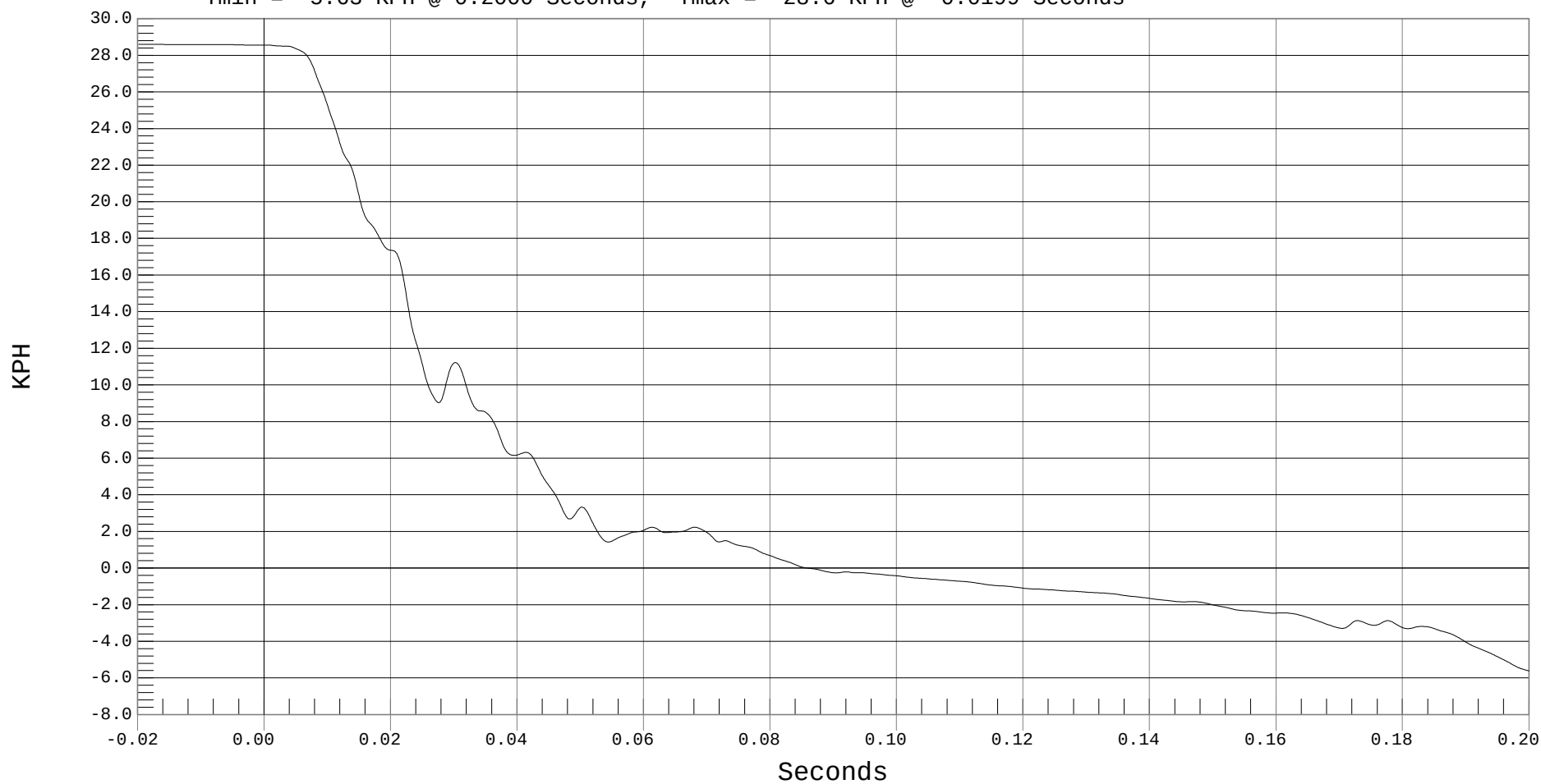
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

— 1 DRIVER SEAT Y VELOCITY, b01063AI.V27

Ymin = -5.63 KPH @ 0.2000 Seconds, Ymax = 28.6 KPH @ -0.0199 Seconds





DRIVER DOOR UPPER Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

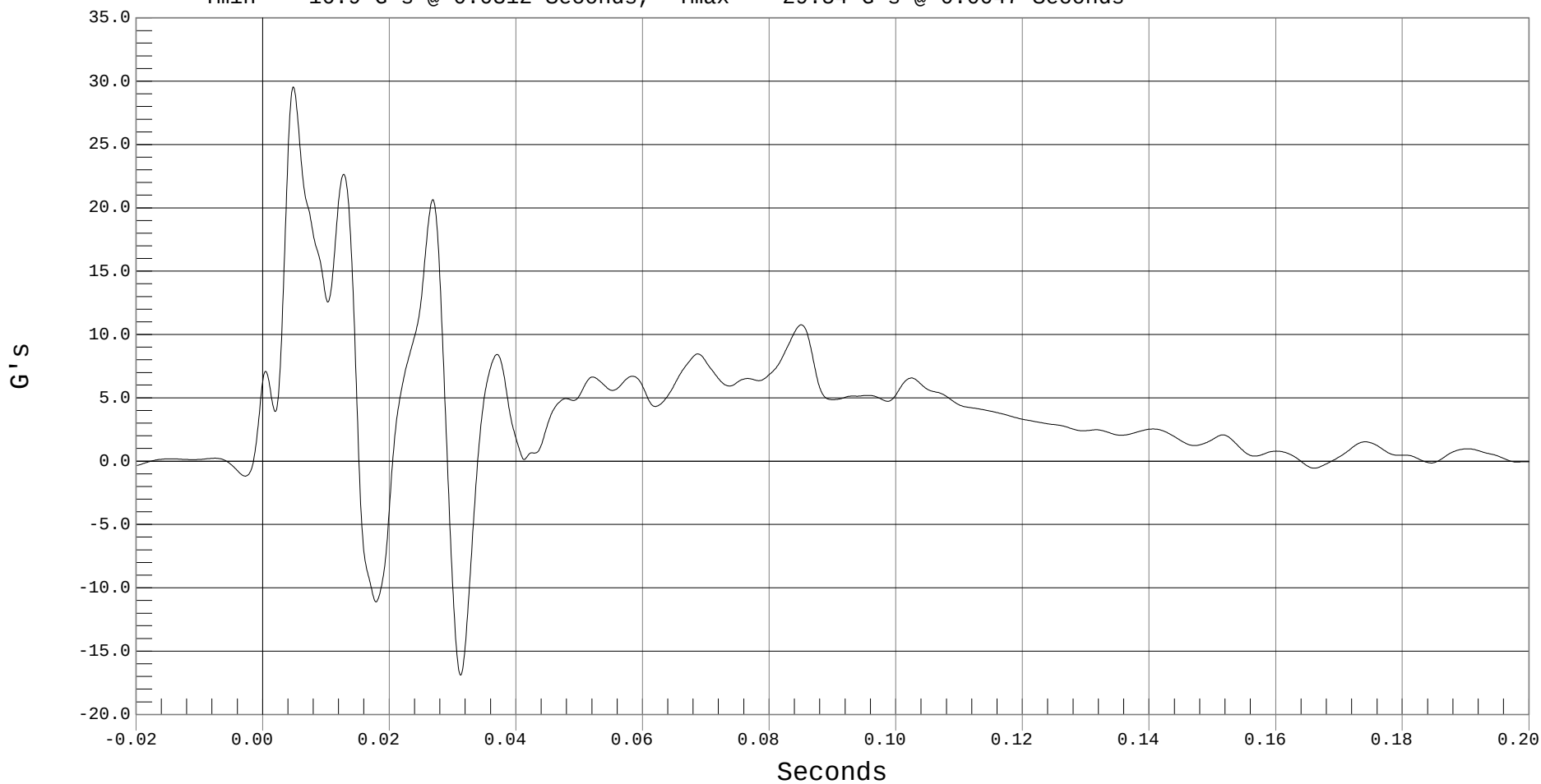
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 60

— 1 DRIVER DOOR UPPER Y, b01063AF.A28

Ymin = -16.9 G's @ 0.0312 Seconds, Ymax = 29.54 G's @ 0.0047 Seconds





DRIVER DOOR UPPER Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

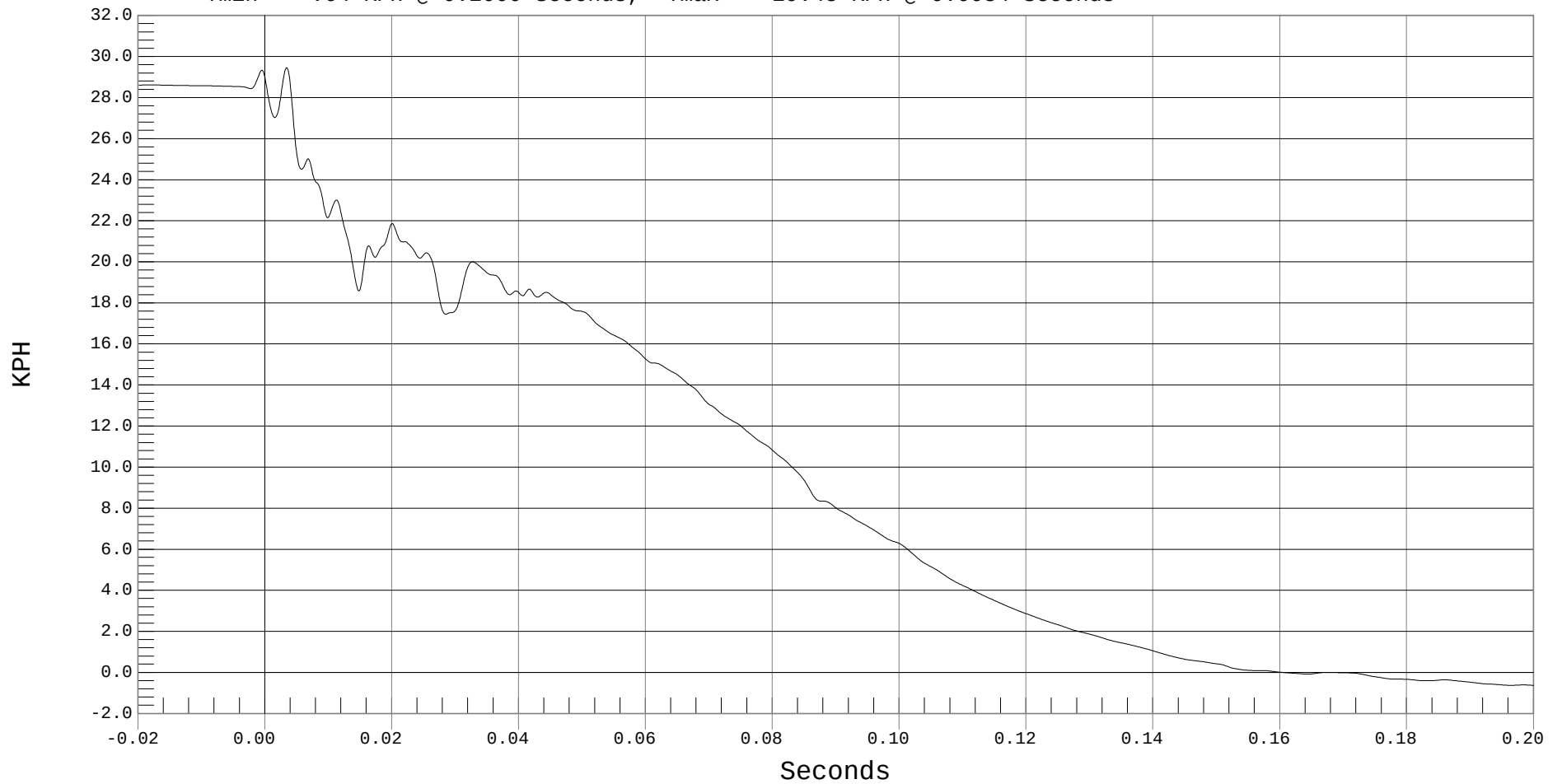
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

— 1 DRIVER DOOR UPPER Y VELOCITY, b01063AI.V28

Ymin = -.64 KPH @ 0.2000 Seconds, Ymax = 29.45 KPH @ 0.0034 Seconds





DRIVER DOOR MID Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Test Date: 06-08-01

Component: 2001 VW JETTA 4 DOOR SEDAN

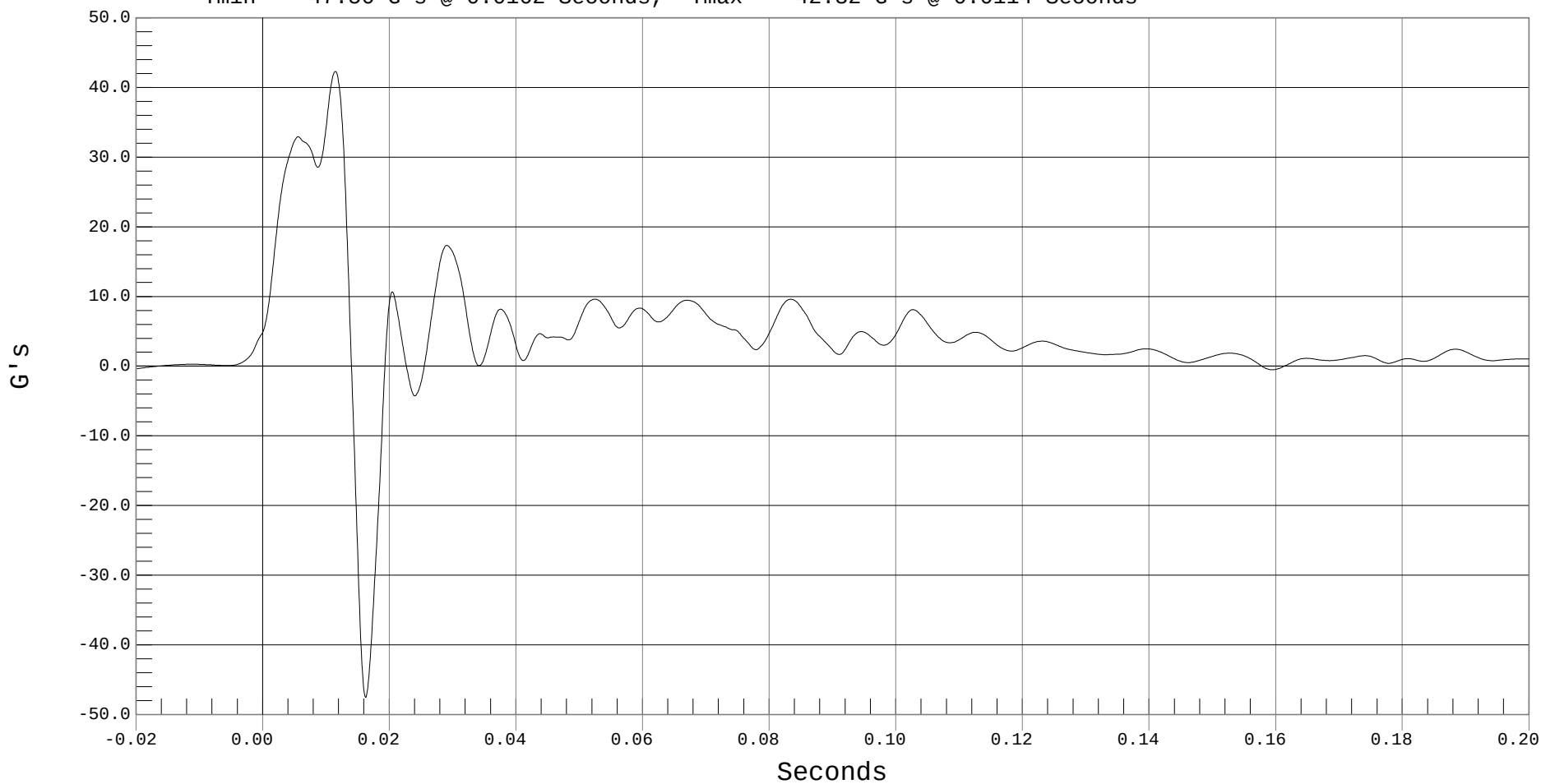
Speed: 17.8 MPH, 28.6 KPH

Other Info:

Filter Class: 60

1 DRIVER DOOR MID Y, b01063AF.A29

Ymin = -47.56 G's @ 0.0162 Seconds, Ymax = 42.32 G's @ 0.0114 Seconds





DRIVER DOOR MID Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

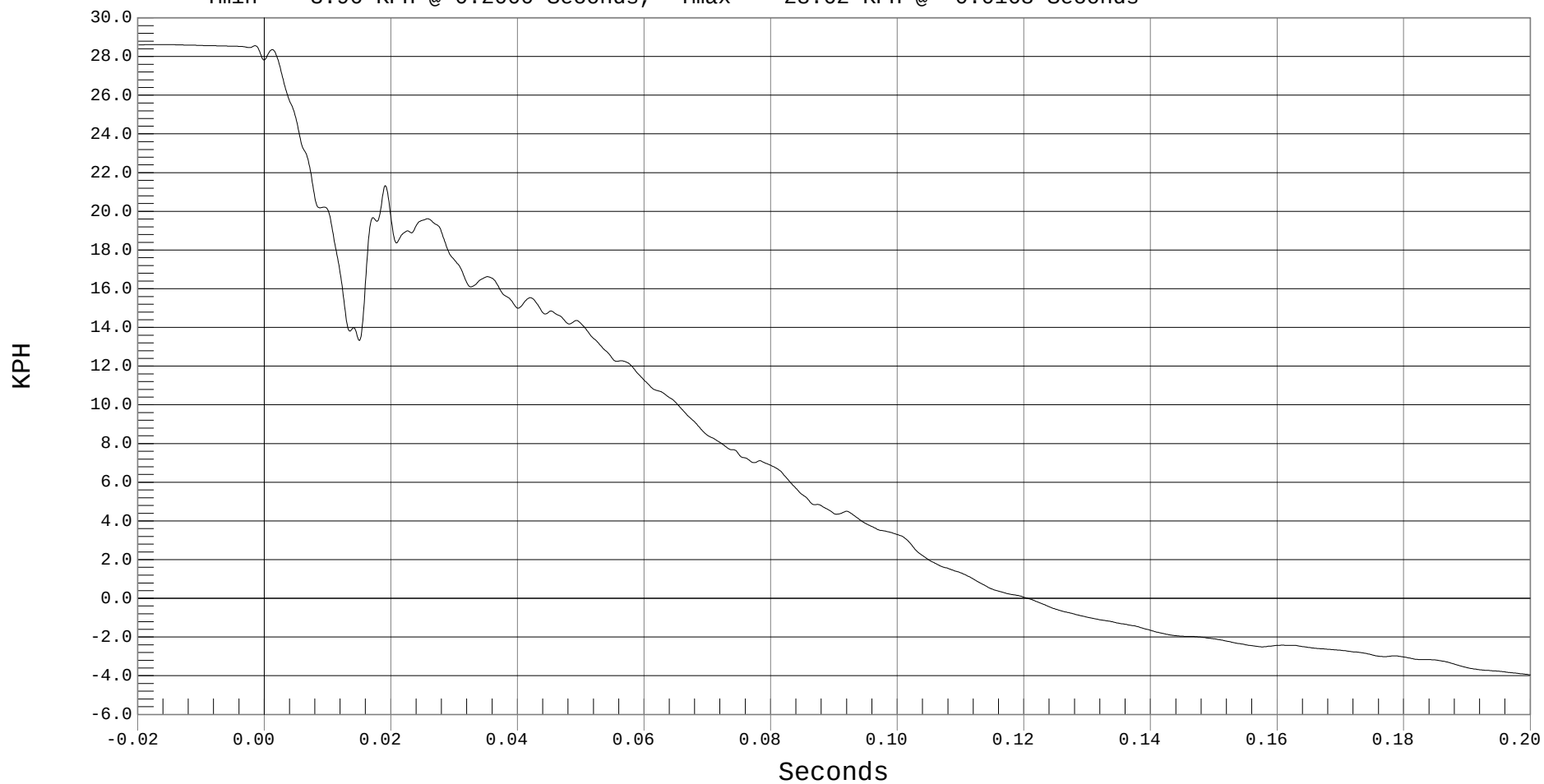
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

1 DRIVER DOOR MID Y VELOCITY, b01063AI.V29

Ymin = -3.96 KPH @ 0.2000 Seconds, Ymax = 28.62 KPH @ -0.0168 Seconds





DRIVER DOOR LOWER Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

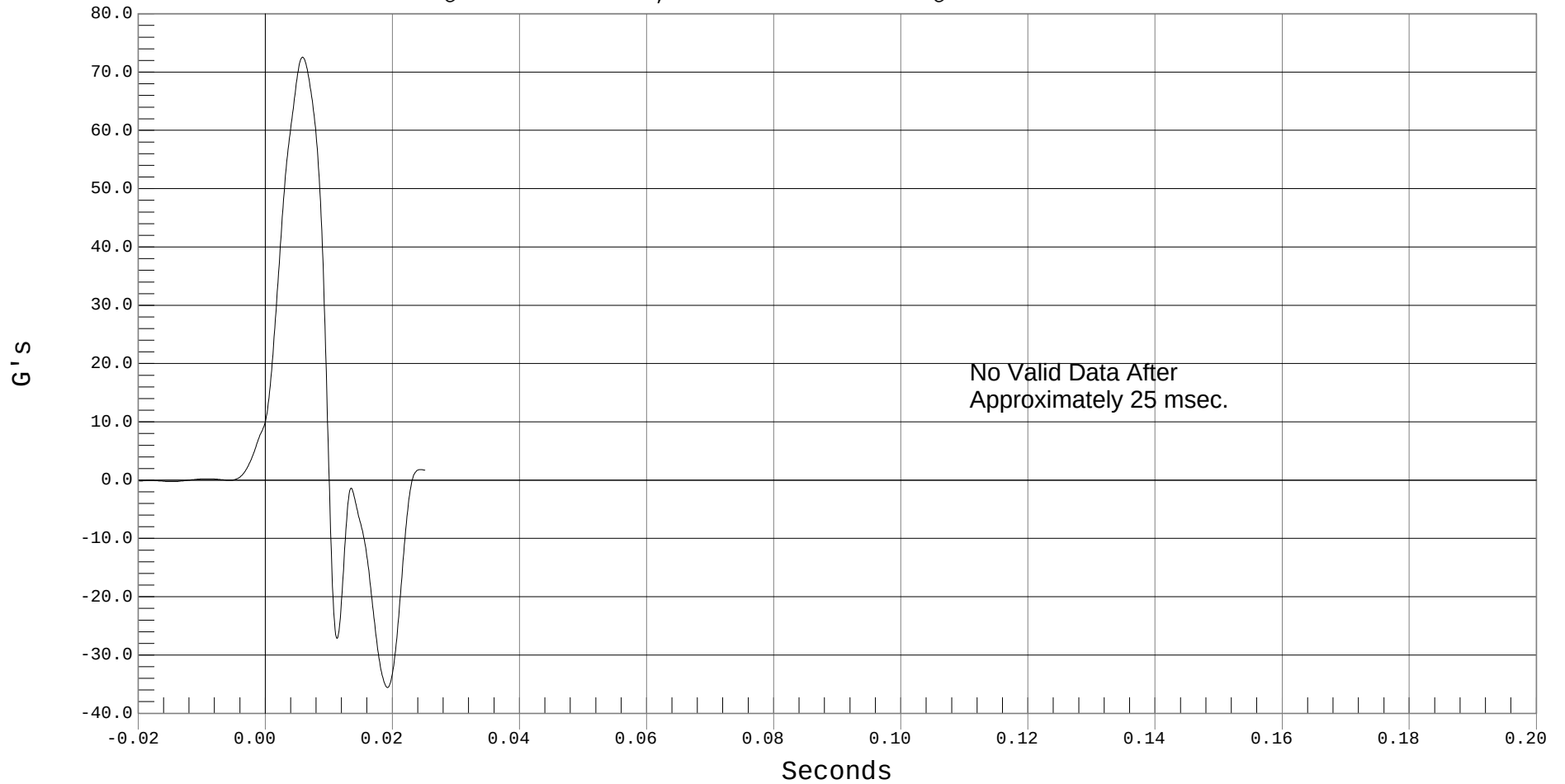
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 60

— 1 DRIVER DOOR LOWER Y, b01063AF.A30

Ymin = -35.57 G's @ 0.0191 Seconds, Ymax = 72.56 G's @ 0.0058 Seconds





DRIVER DOOR LOWER Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

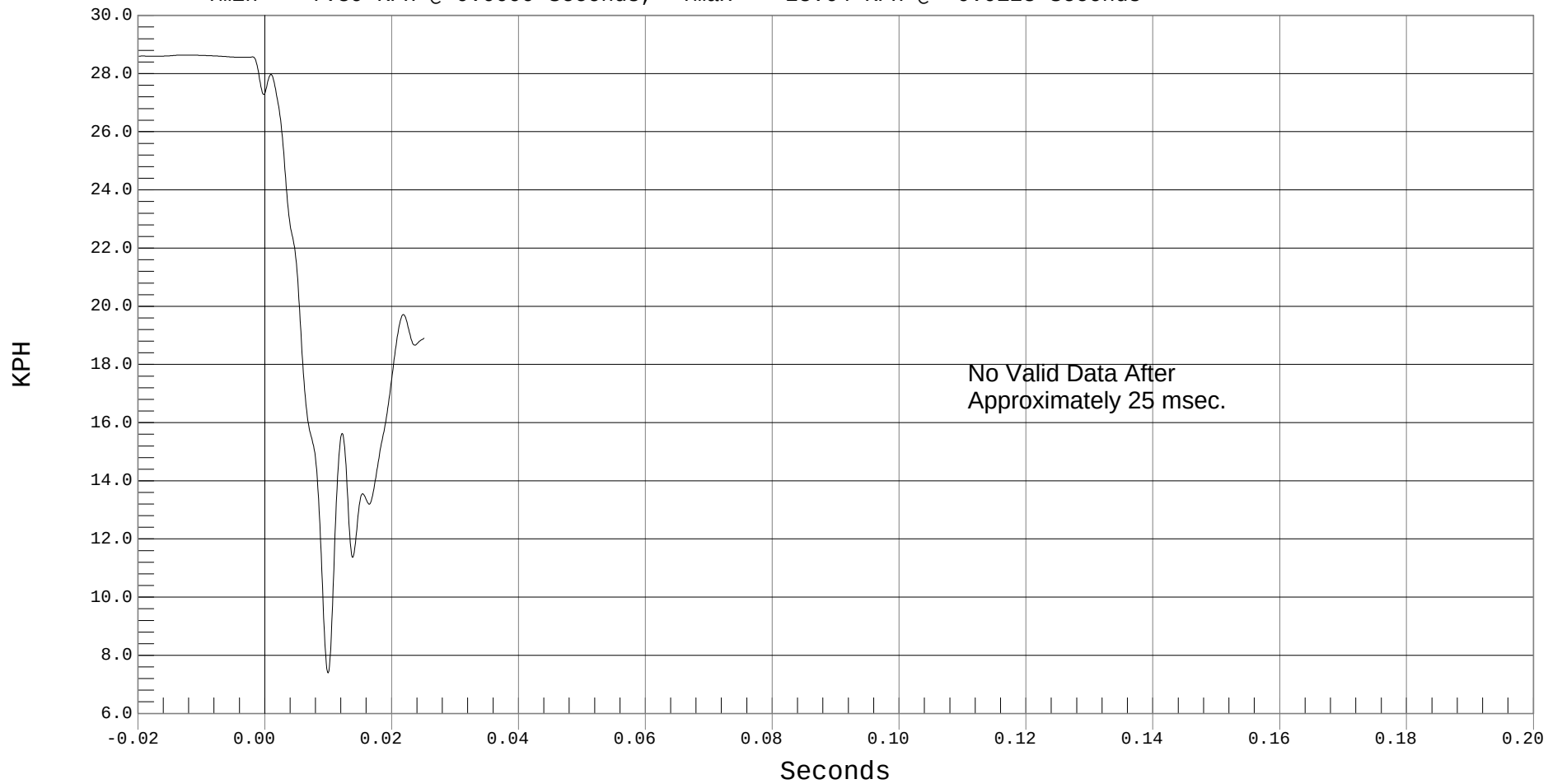
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

— 1 DRIVER DOOR LOWER Y VELOCITY, b01063AI.V30

Ymin = 7.39 KPH @ 0.0099 Seconds, Ymax = 28.64 KPH @ -0.0123 Seconds





ENGINE X ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

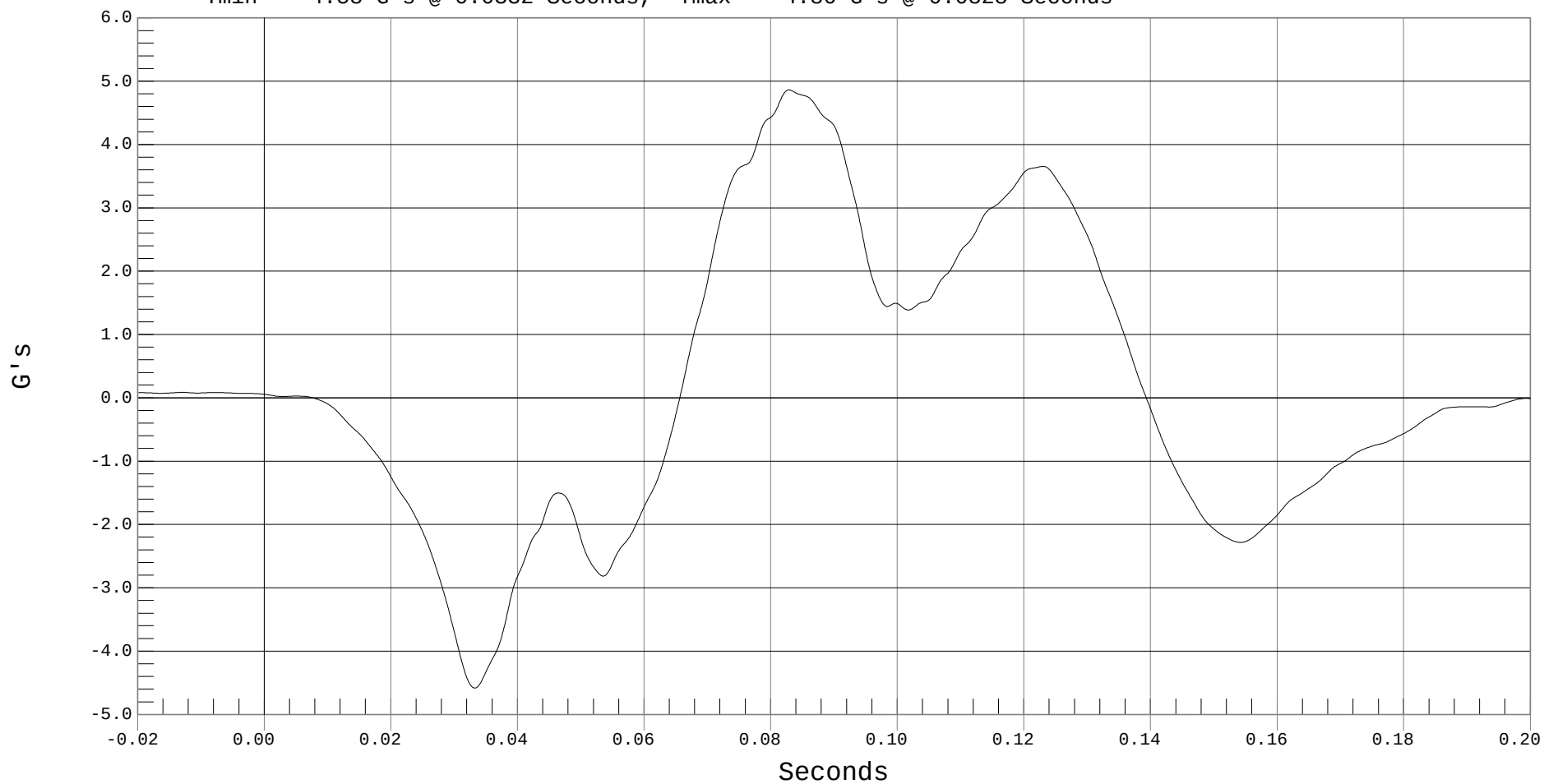
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 60

— 1 ENGINE Y, b01063AF.A33

Ymin = -4.58 G's @ 0.0332 Seconds, Ymax = 4.86 G's @ 0.0828 Seconds





ENGINE X VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

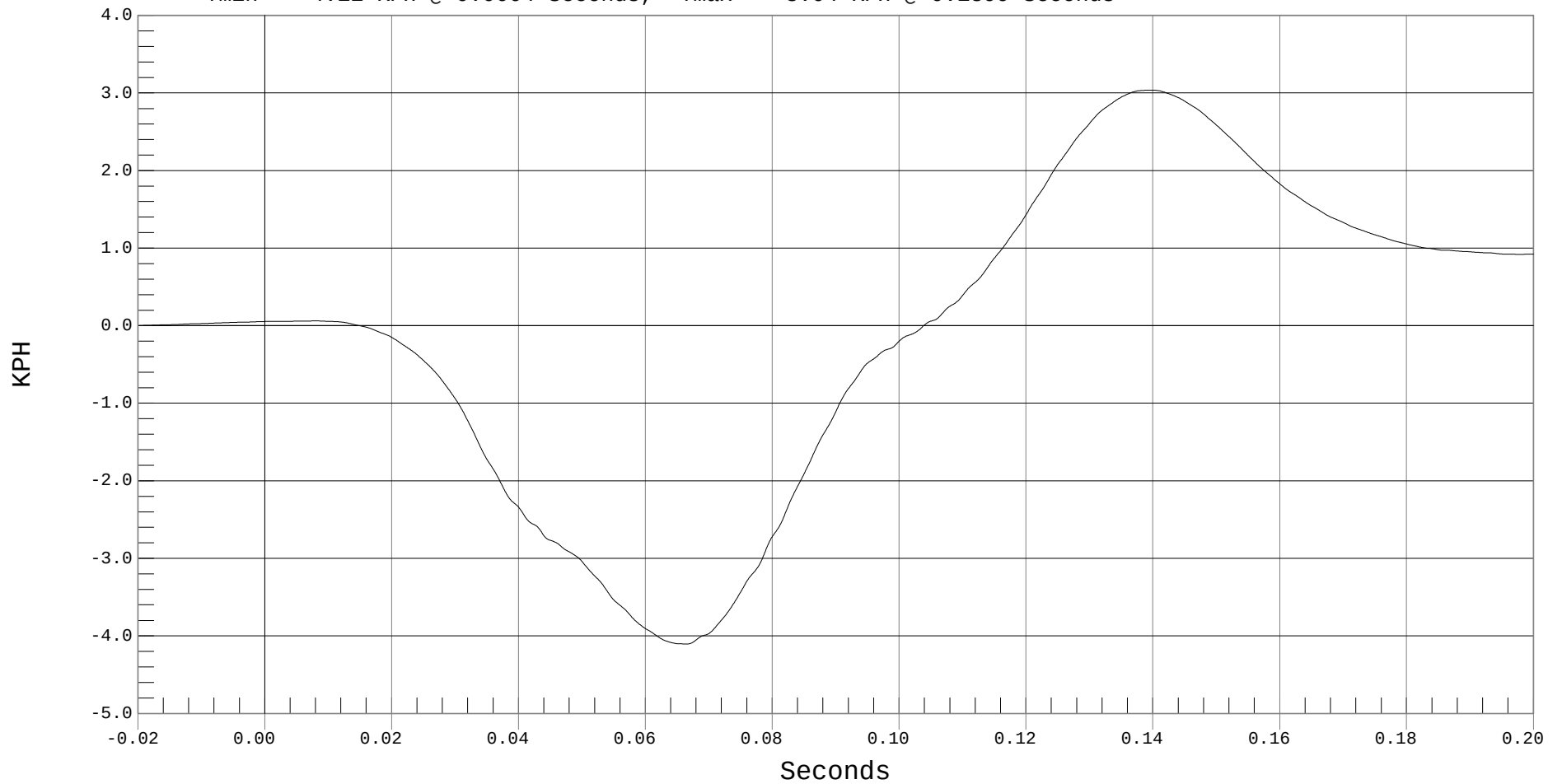
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

— 1 ENGINE X VELOCITY, b01063AI.V33

Ymin = -4.11 KPH @ 0.0664 Seconds, Ymax = 3.04 KPH @ 0.1399 Seconds





ENGINE Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

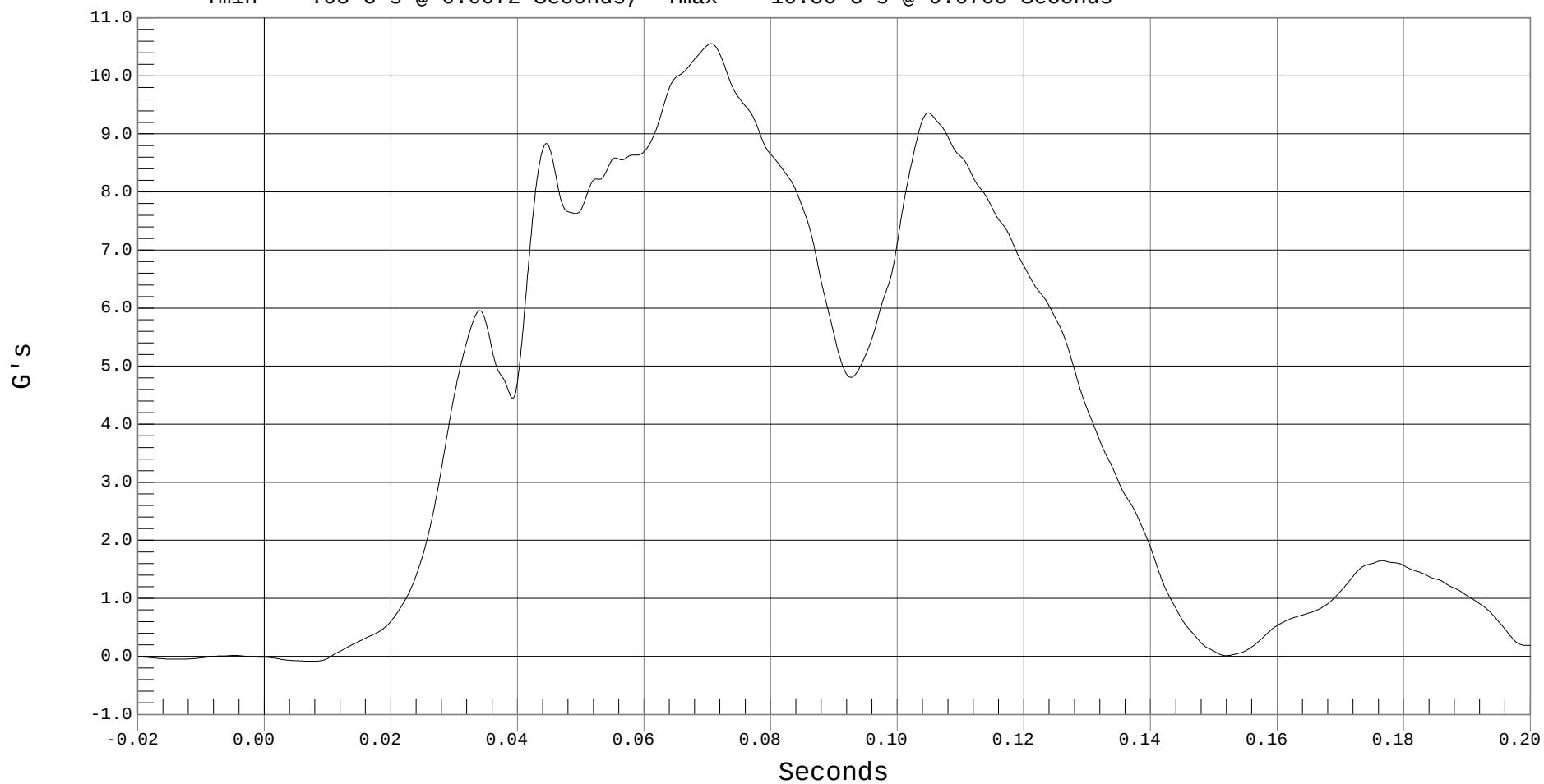
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 60

— 1 ENGINE X, b01063AF.A31

Ymin = -.08 G's @ 0.0072 Seconds, Ymax = 10.56 G's @ 0.0705 Seconds





ENGINE Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Test Date: 06-08-01

Component: 2001 VW JETTA 4 DOOR SEDAN

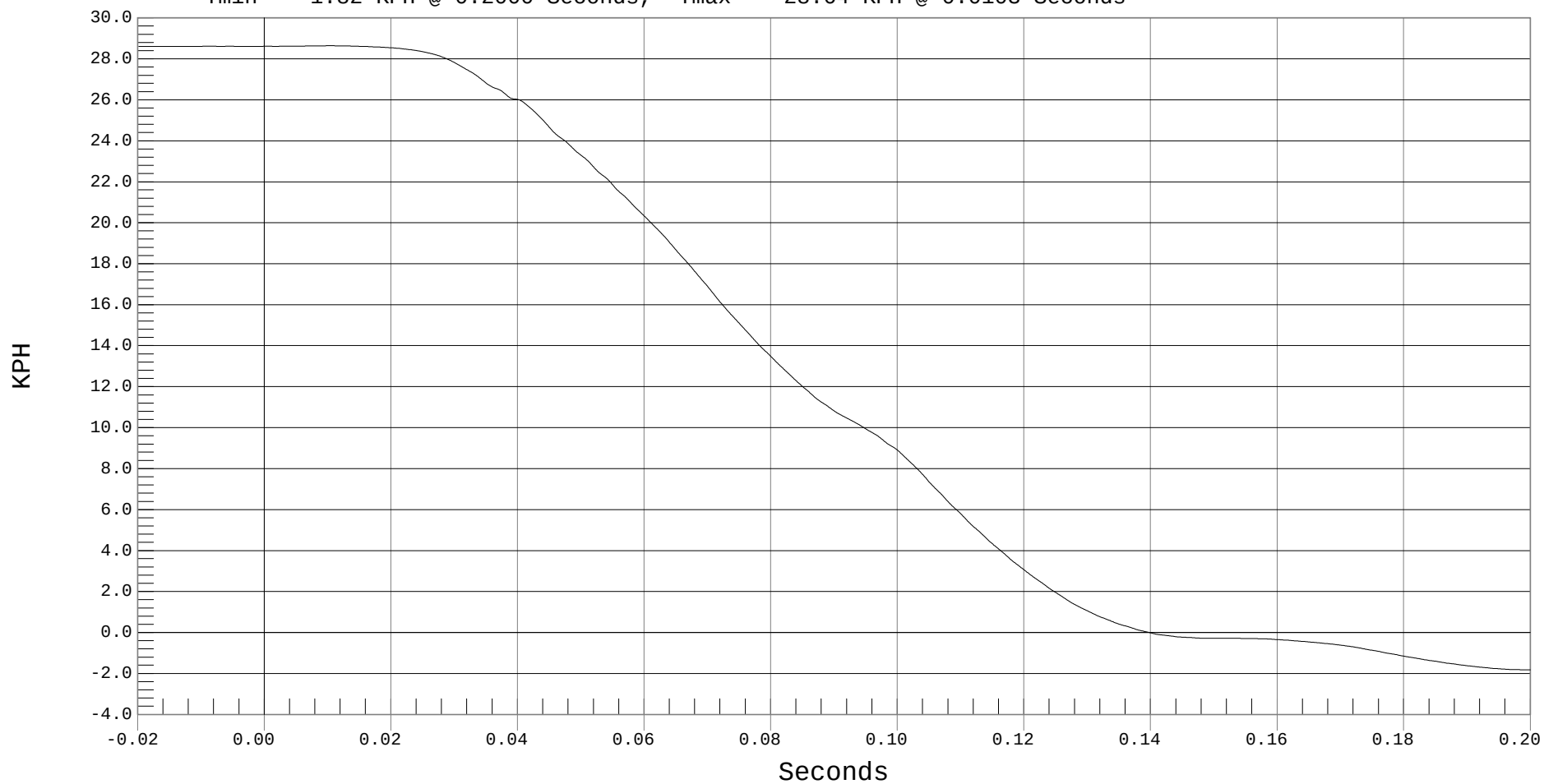
Speed: 17.8 MPH, 28.6 KPH

Other Info:

Filter Class: 180

— 1 ENGINE Y VELOCITY, b01063AI.V31

Ymin = -1.82 KPH @ 0.2000 Seconds, Ymax = 28.64 KPH @ 0.0103 Seconds





FIREWALL Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

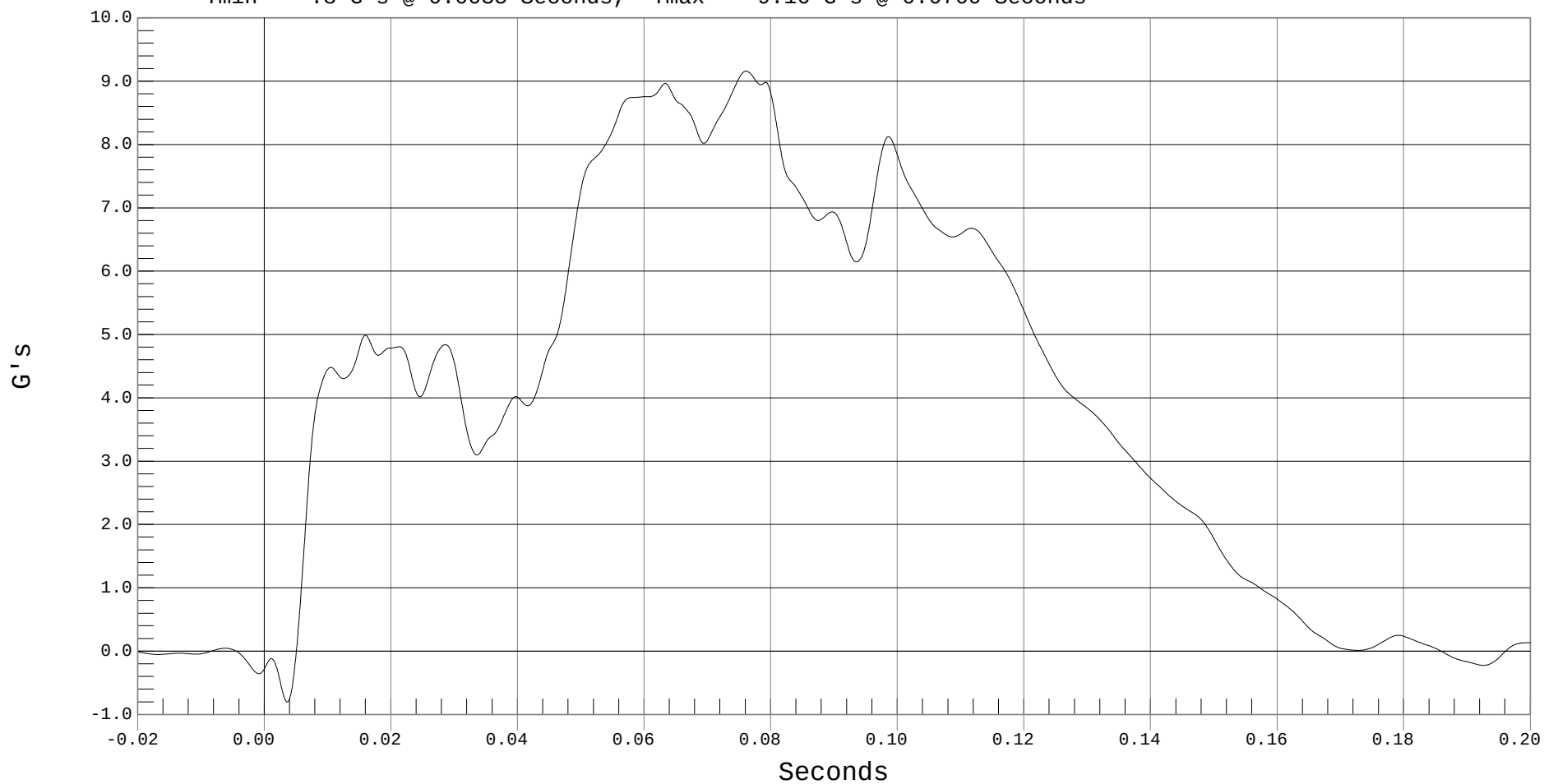
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 60

— 1 FIREWALL Y, b01063AF.A34

Ymin = -0.8 G's @ 0.0035 Seconds, Ymax = 9.16 G's @ 0.0760 Seconds





FIREWALL Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Test Date: 06-08-01

Component: 2001 VW JETTA 4 DOOR SEDAN

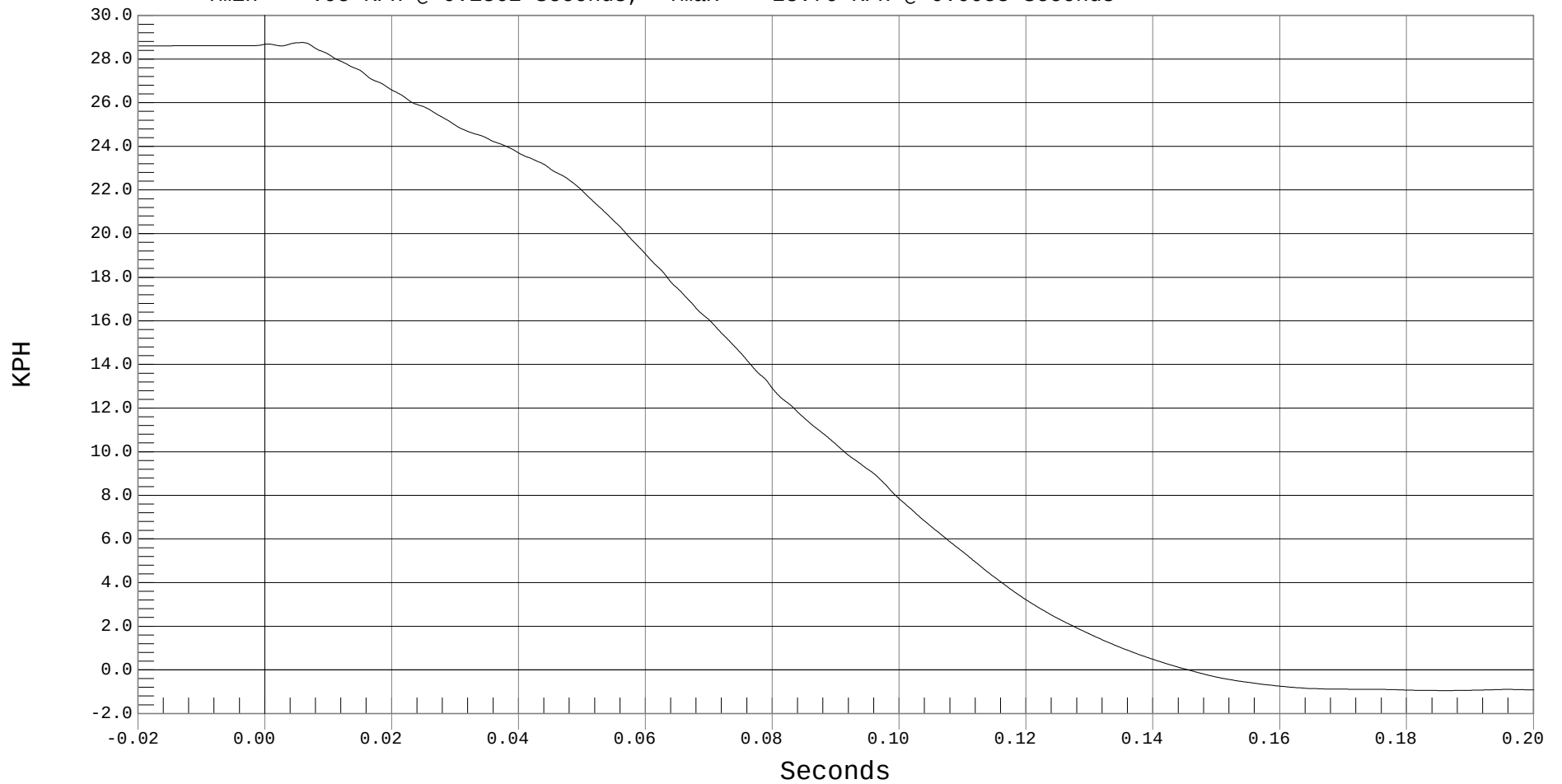
Speed: 17.8 MPH, 28.6 KPH

Other Info:

Filter Class: 180

— 1 FIREWALL Y VELOCITY, b01063AI.V34

Ymin = -.95 KPH @ 0.1862 Seconds, Ymax = 28.76 KPH @ 0.0058 Seconds





RIGHT FLOOR @ SILL Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

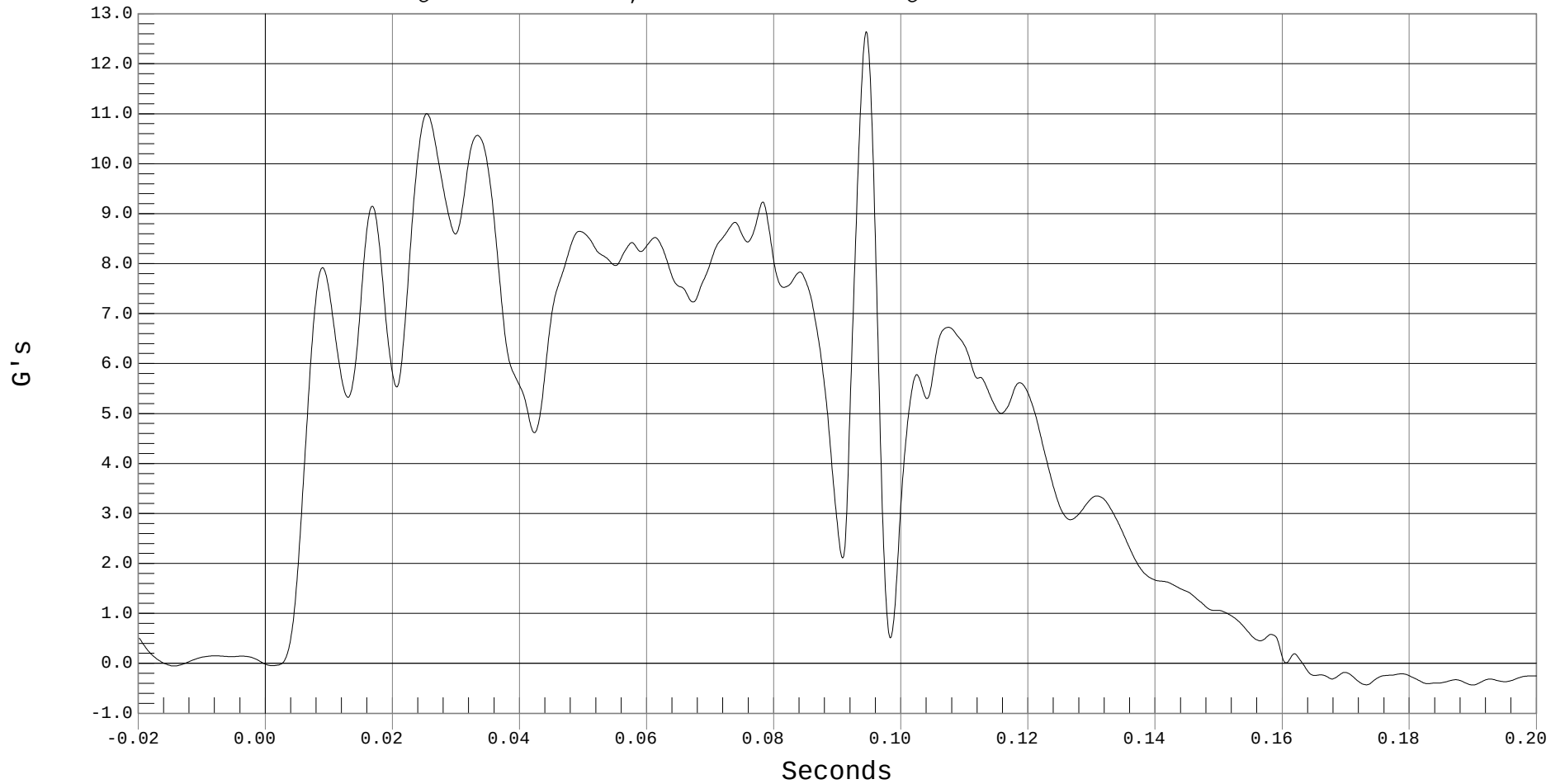
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 60

1 RIGHT FLOOR @ SILL Y, b01063AF.A36

Ymin = -.43 G's @ 0.1899 Seconds, Ymax = 12.64 G's @ 0.0945 Seconds





RIGHT FLOOR @ SILL Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

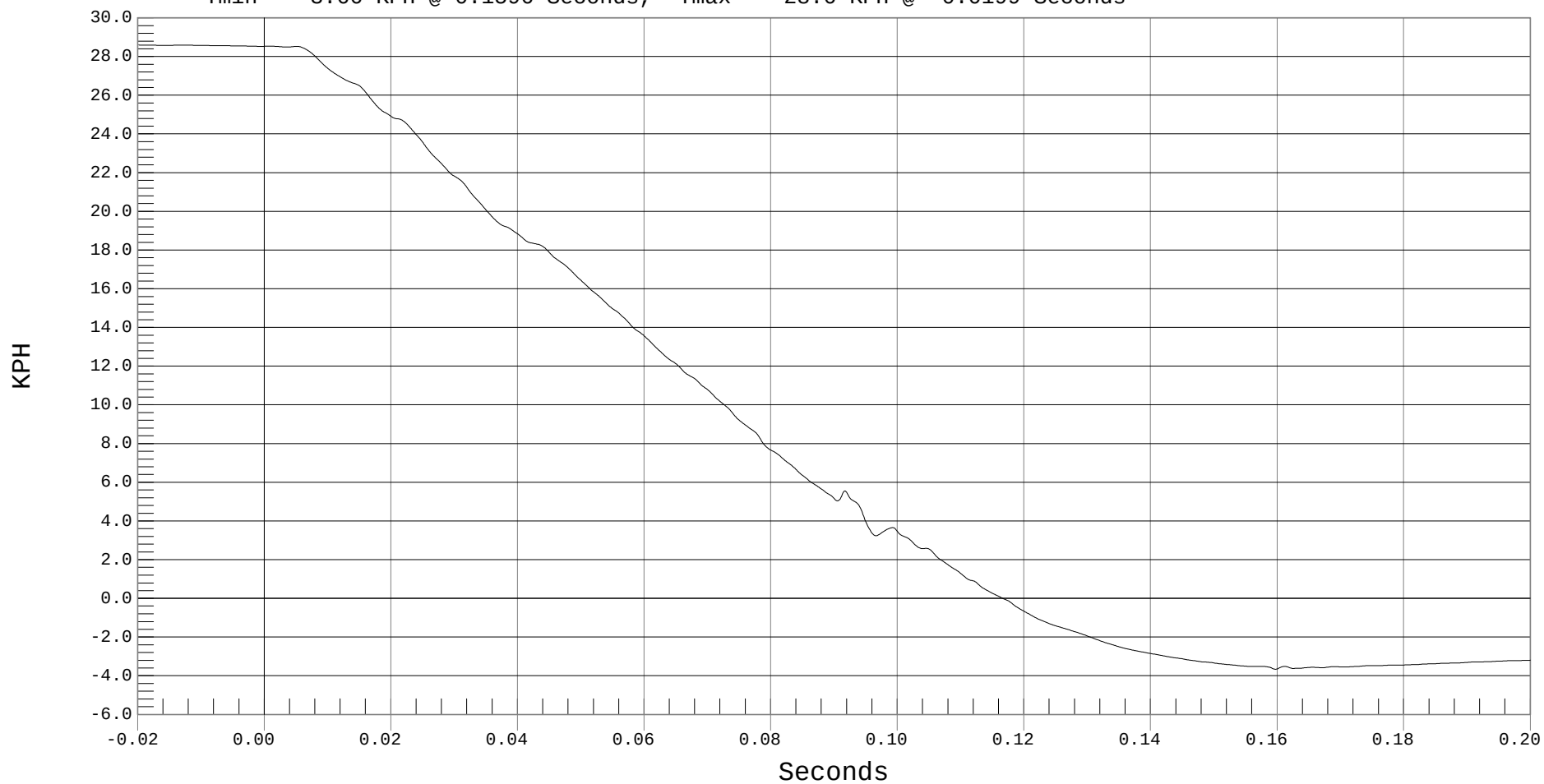
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

— 1 RIGHT FLOOR SILL Y VELOCITY, b01063AI.V36

Ymin = -3.66 KPH @ 0.1596 Seconds, Ymax = 28.6 KPH @ -0.00199 Seconds





REAR DECK X ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

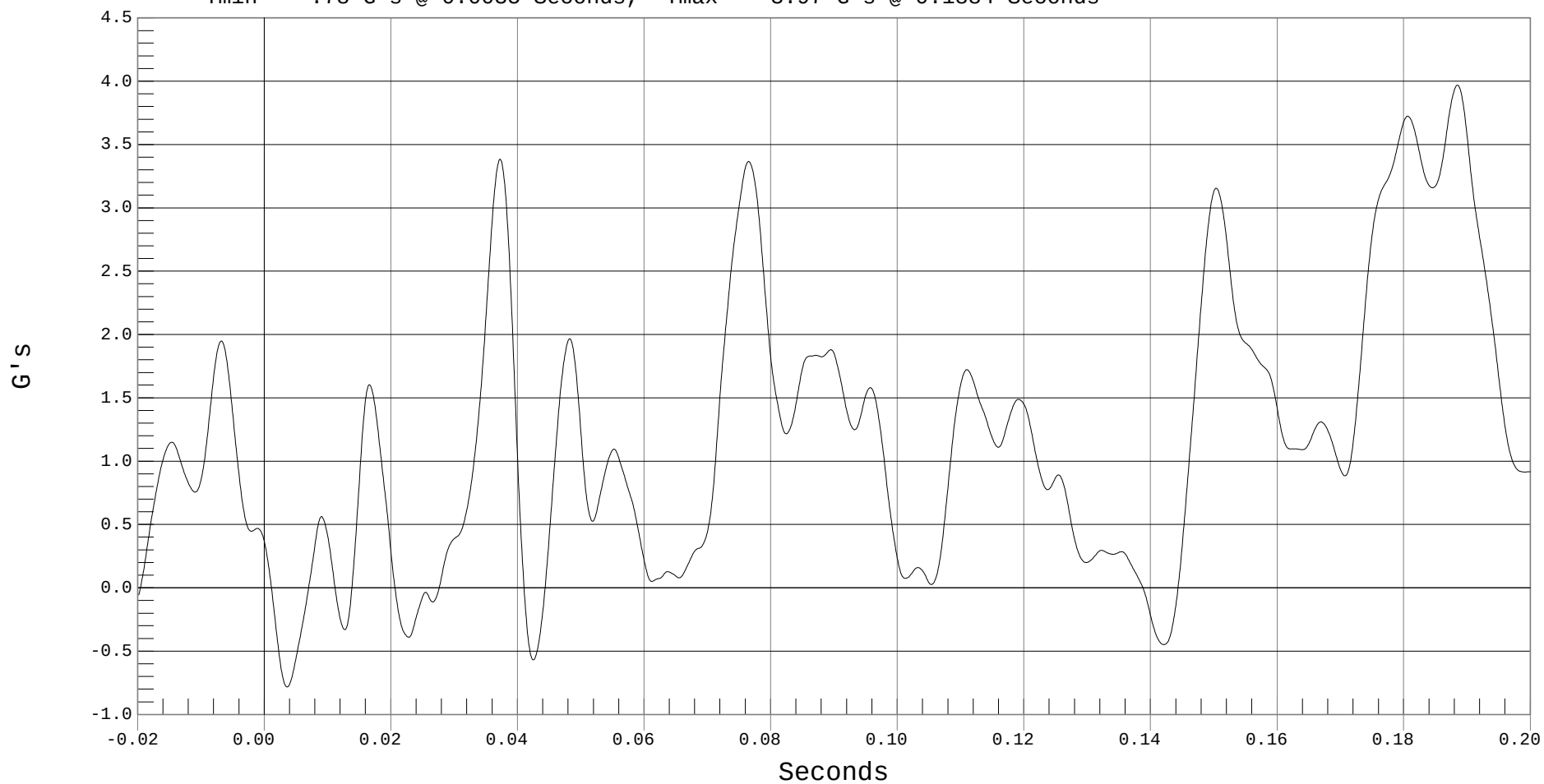
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 60

— 1 REAR DECK X, b01063AF.A37

Ymin = -.78 G's @ 0.0035 Seconds, Ymax = 3.97 G's @ 0.1884 Seconds





REAR DECK X VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

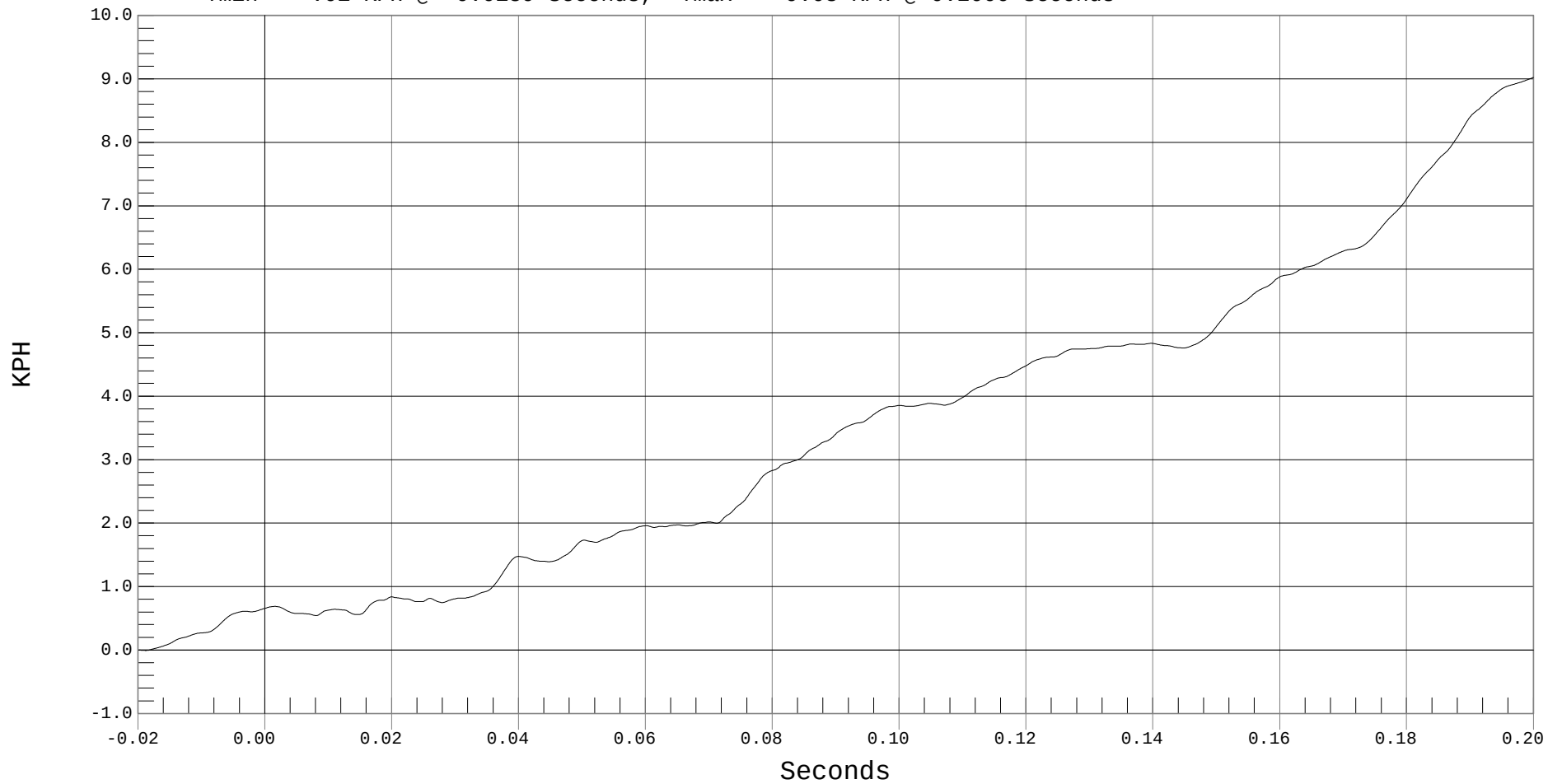
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

— 1 REAR DECK X VELOCITY, b01063AI.V37

Ymin = -.01 KPH @ -0.0189 Seconds, Ymax = 9.03 KPH @ 0.2000 Seconds





REAR DECK Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Test Date: 06-08-01

Component: 2001 VW JETTA 4 DOOR SEDAN

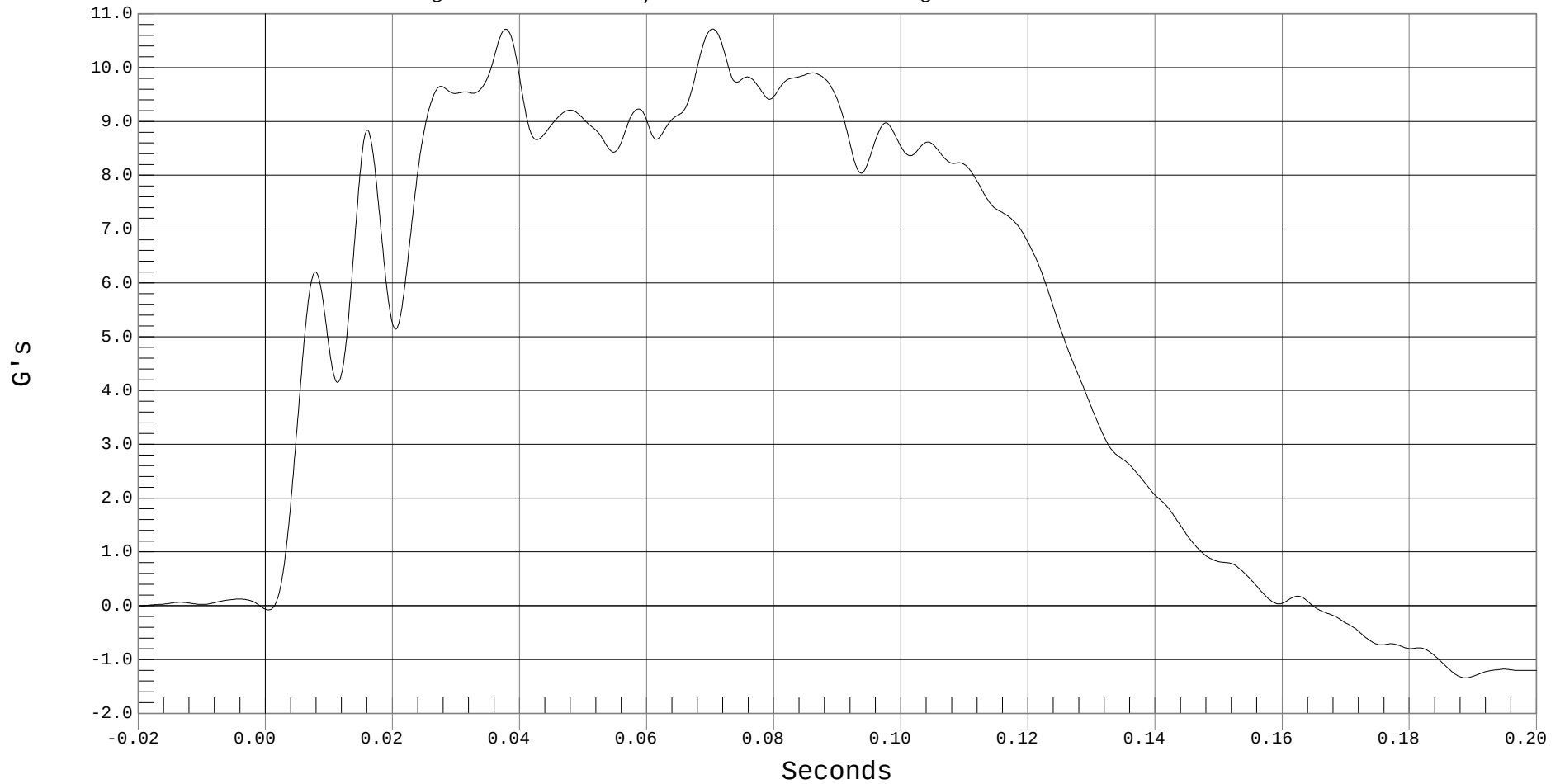
Speed: 17.8 MPH, 28.6 KPH

Other Info:

Filter Class: 60

— 1 REAR DECK Y, b01063AF.A38

Ymin = -1.34 G's @ 0.1887 Seconds, Ymax = 10.72 G's @ 0.0703 Seconds





REAR DECK Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

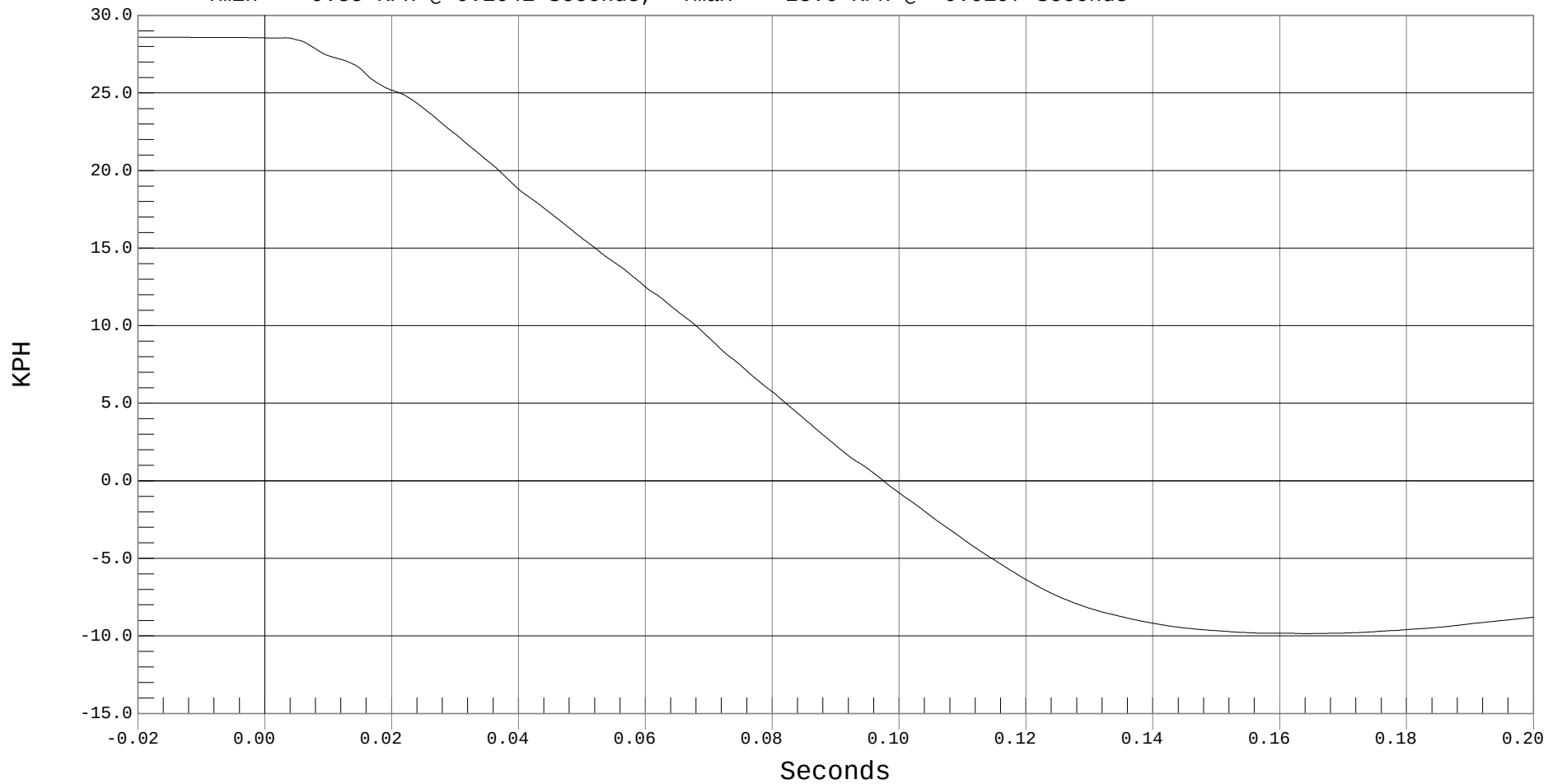
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

— 1 REAR DECK Y VELOCITY, b01063AI.V38

Ymin = -9.85 KPH @ 0.1641 Seconds, Ymax = 28.6 KPH @ -0.0197 Seconds





DRIVER HEAD REDUNDANT X ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Test Date: 06-08-01

Component: 2001 VW JETTA 4 DOOR SEDAN

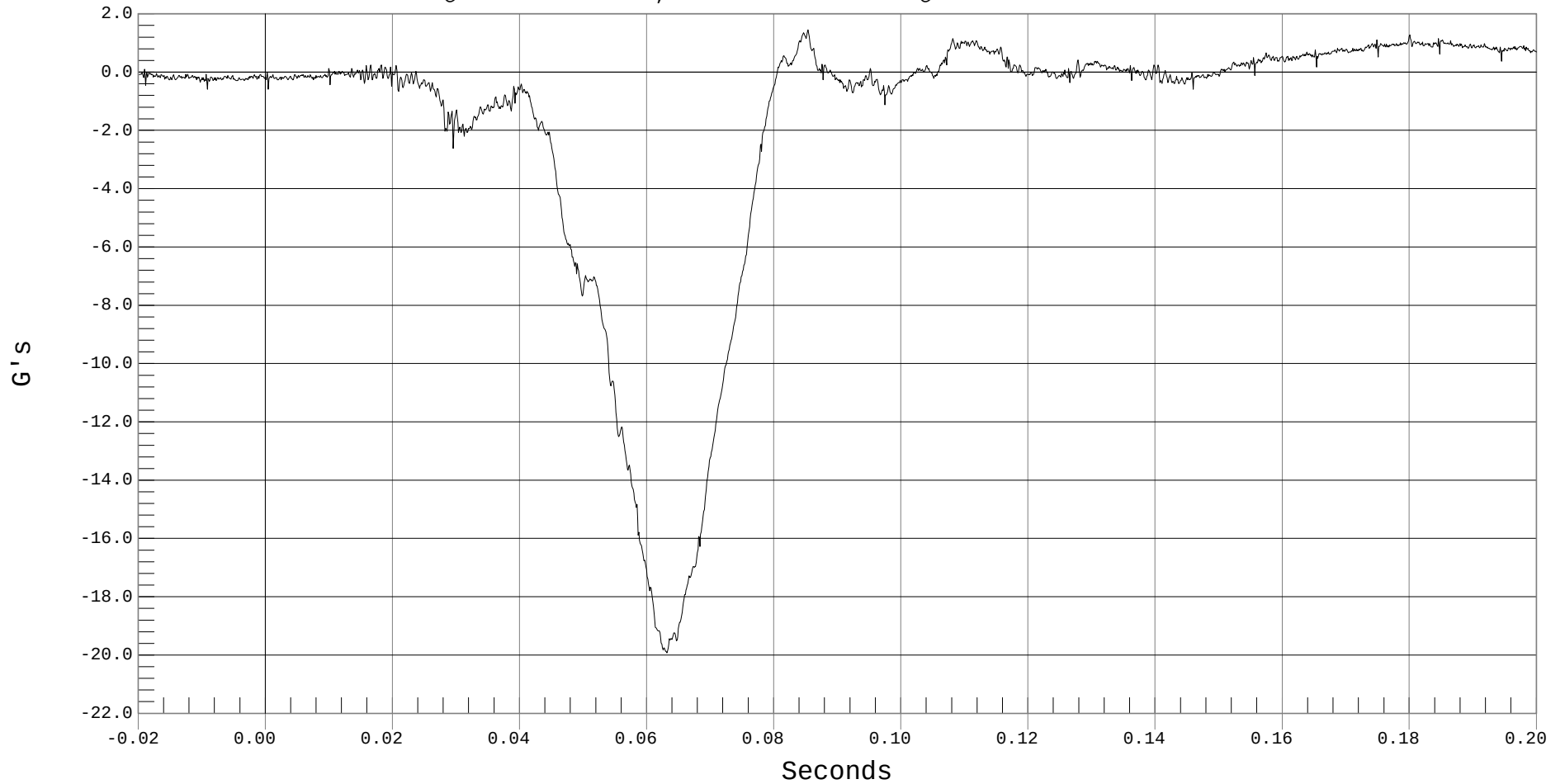
Speed: 17.8 MPH, 28.6 KPH

Other Info:

Filter Class: 1000

— 1 DRIVER HEAD Xr, b01063AT.A39

Ymin = -19.93 G's @ 0.0631 Seconds, Ymax = 1.45 G's @ 0.0853 Seconds





DRIVER HEAD REDUNDANT X VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Test Date: 06-08-01

Component: 2001 VW JETTA 4 DOOR SEDAN

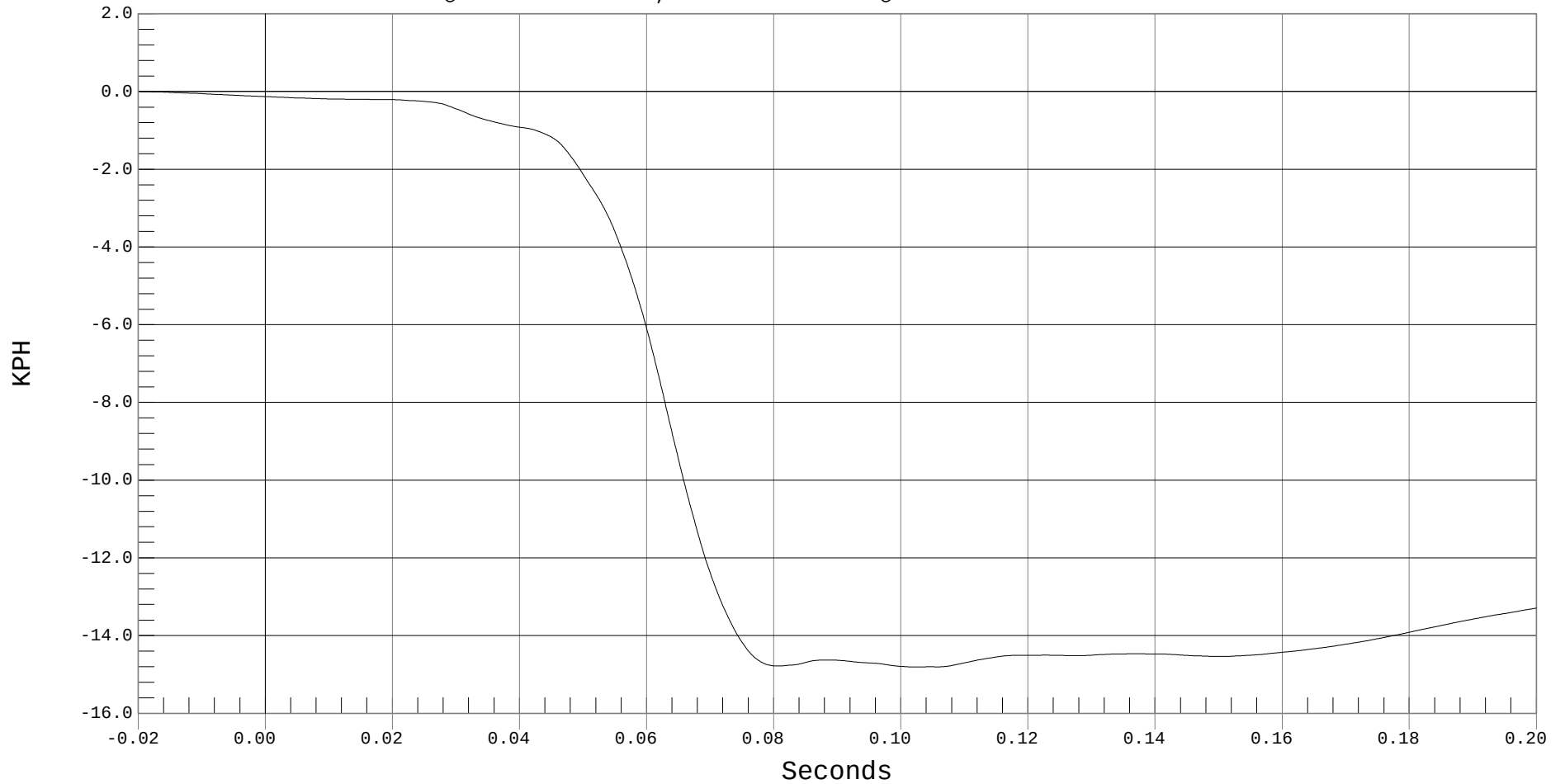
Speed: 17.8 MPH, 28.6 KPH

Other Info:

Filter Class: 180

— 1 DRIVER HEAD X REDUNDANT VELOCITY, b01063AI.V39

Ymin = -14.81 KPH @ 0.1022 Seconds, Ymax = 0 KPH @ -0.0199 Seconds





DRIVER HEAD REDUNDANT Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

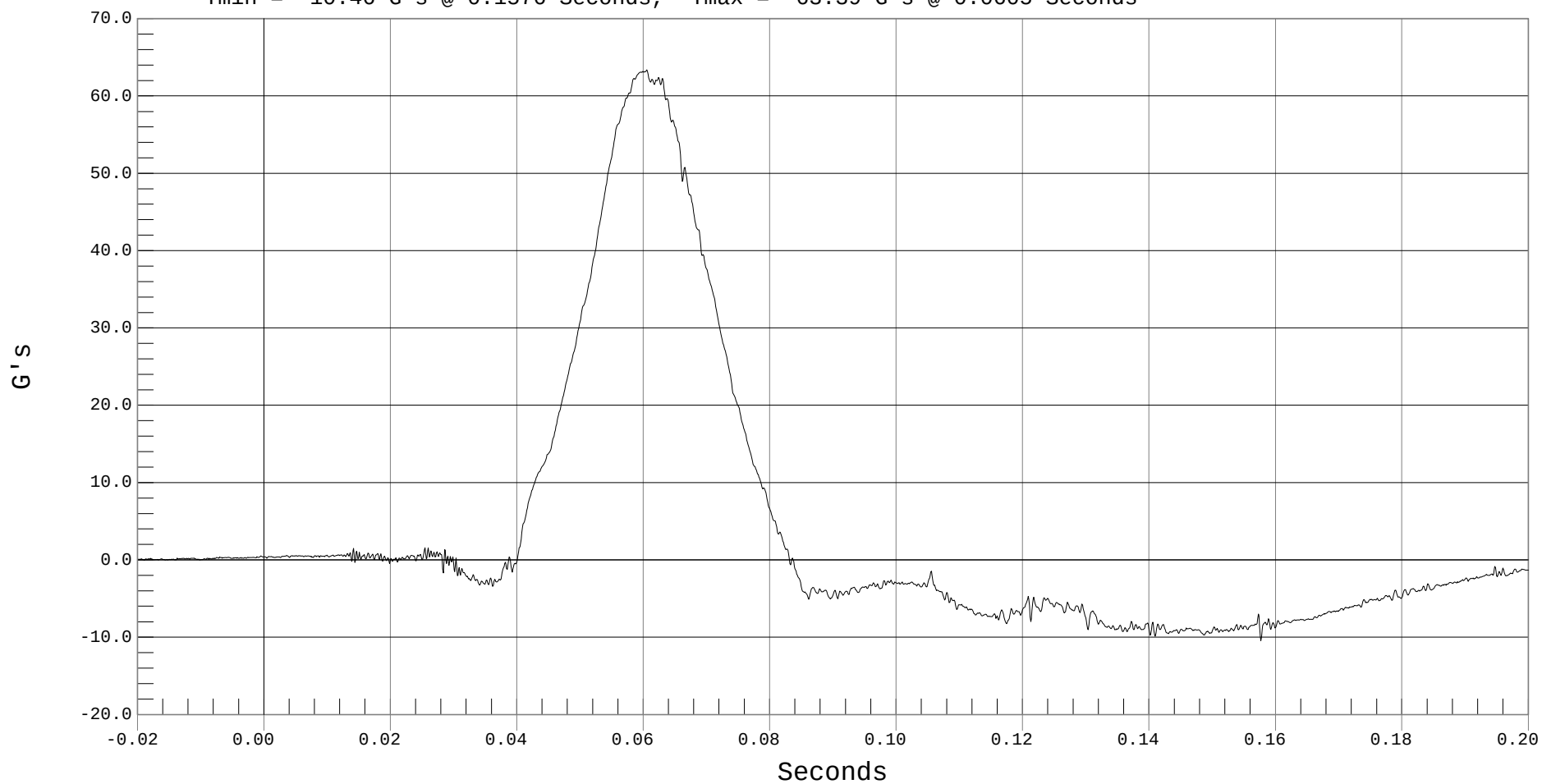
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 1000

— 1 DRIVER HEAD Yr, b01063AT.A40

Ymin = -10.46 G's @ 0.1576 Seconds, Ymax = 63.39 G's @ 0.0605 Seconds





DRIVER HEAD REDUNDANT Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

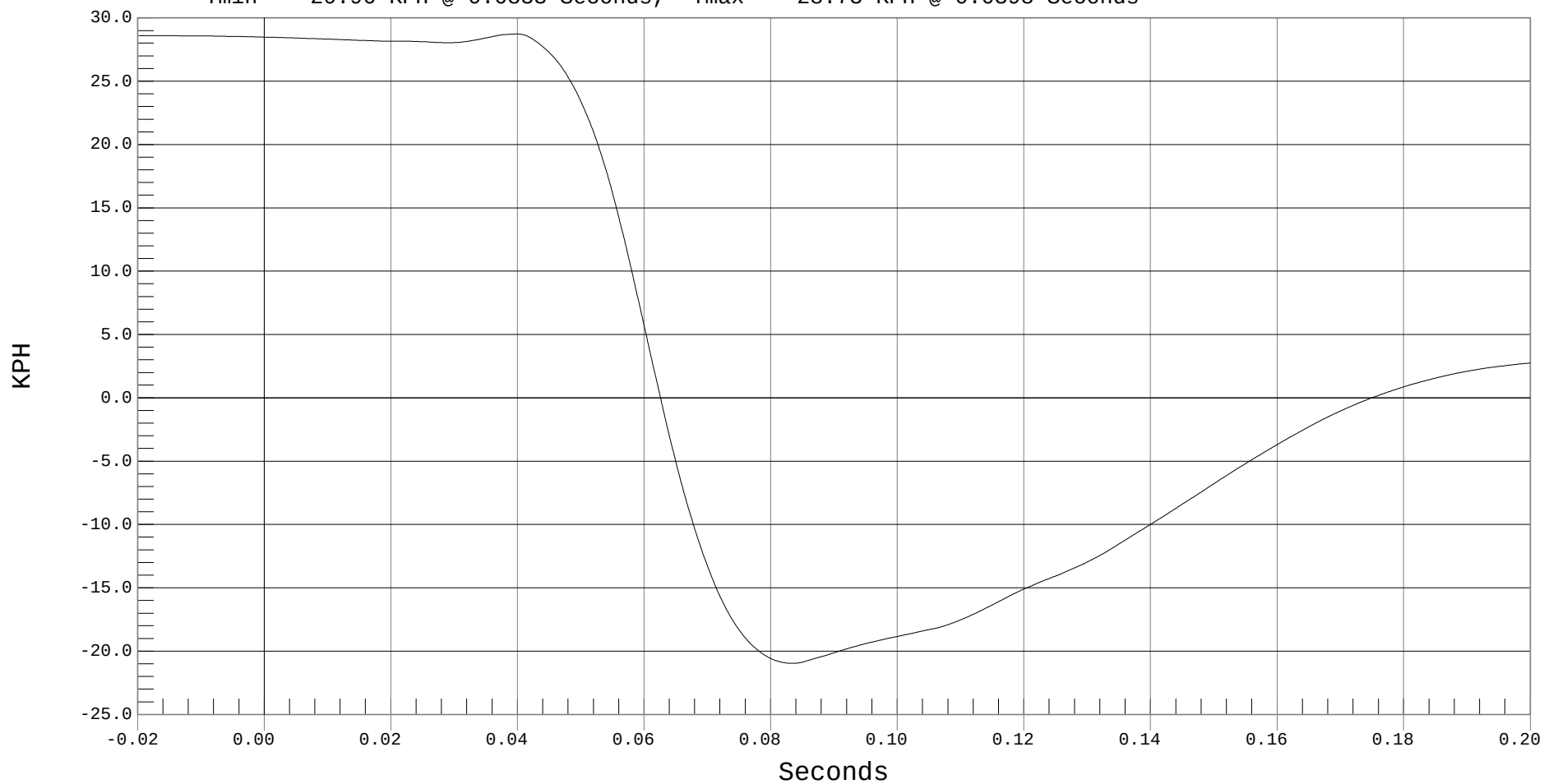
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

— 1 DRIVER HEAD Y REDUNDANT VELOCITY, b01063AI.V40

Ymin = -20.96 KPH @ 0.0833 Seconds, Ymax = 28.73 KPH @ 0.0398 Seconds





DRIVER HEAD REDUNDANT Z ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Test Date: 06-08-01

Component: 2001 VW JETTA 4 DOOR SEDAN

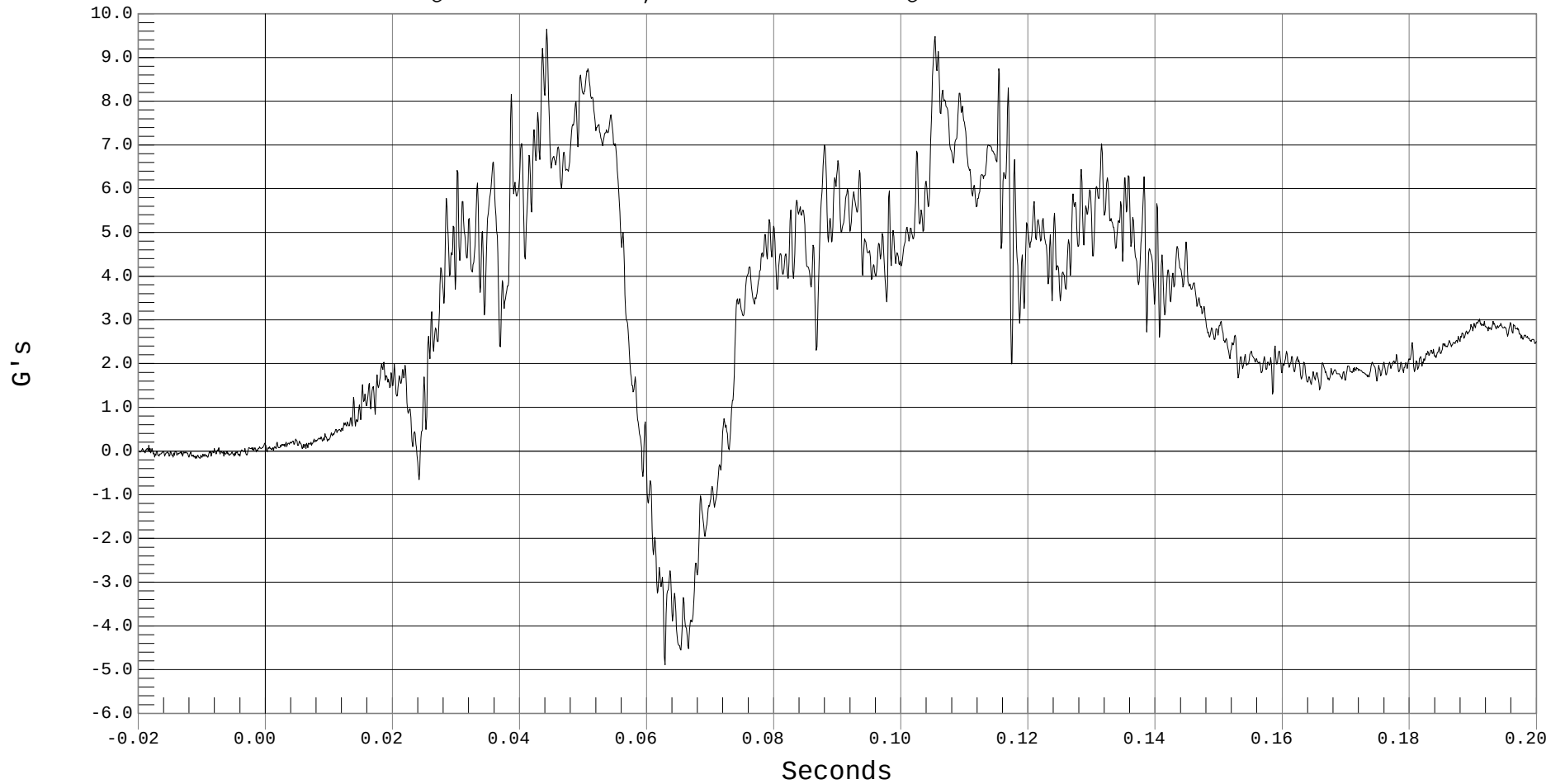
Speed: 17.8 MPH, 28.6 KPH

Other Info:

Filter Class: 1000

— 1 DRIVER HEAD Zr, b01063AT.A41

Ymin = -4.89 G's @ 0.0628 Seconds, Ymax = 9.65 G's @ 0.0442 Seconds





DRIVER HEAD REDUNDANT Z VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

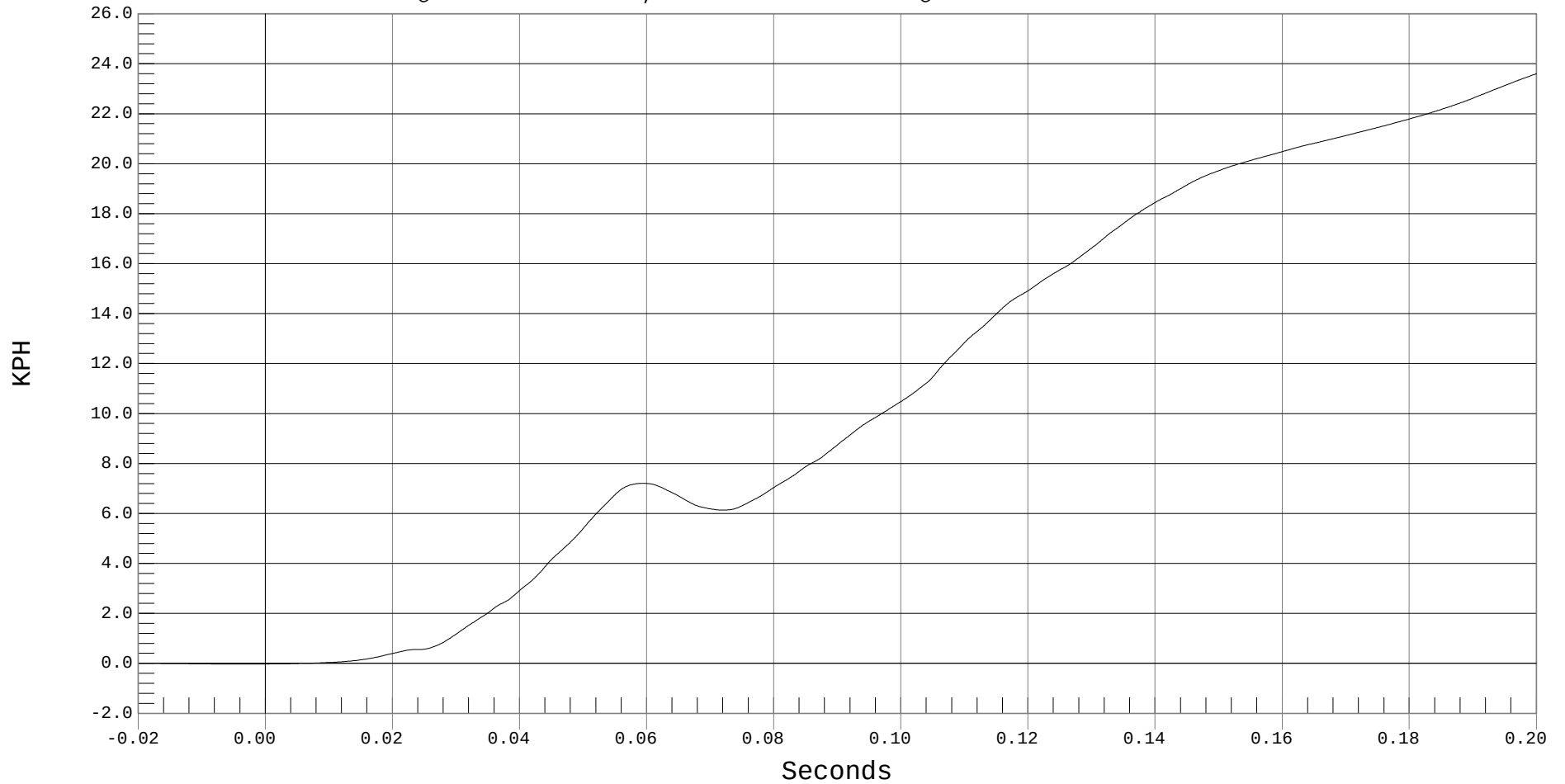
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

— 1 DRIVER HEAD Z REDUNDANT VELOCITY, b01063AI.V41

Ymin = -.03 KPH @ -0.0031 Seconds, Ymax = 23.61 KPH @ 0.2000 Seconds





DRIVER HEAD REDUNDANT RESULTANT ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

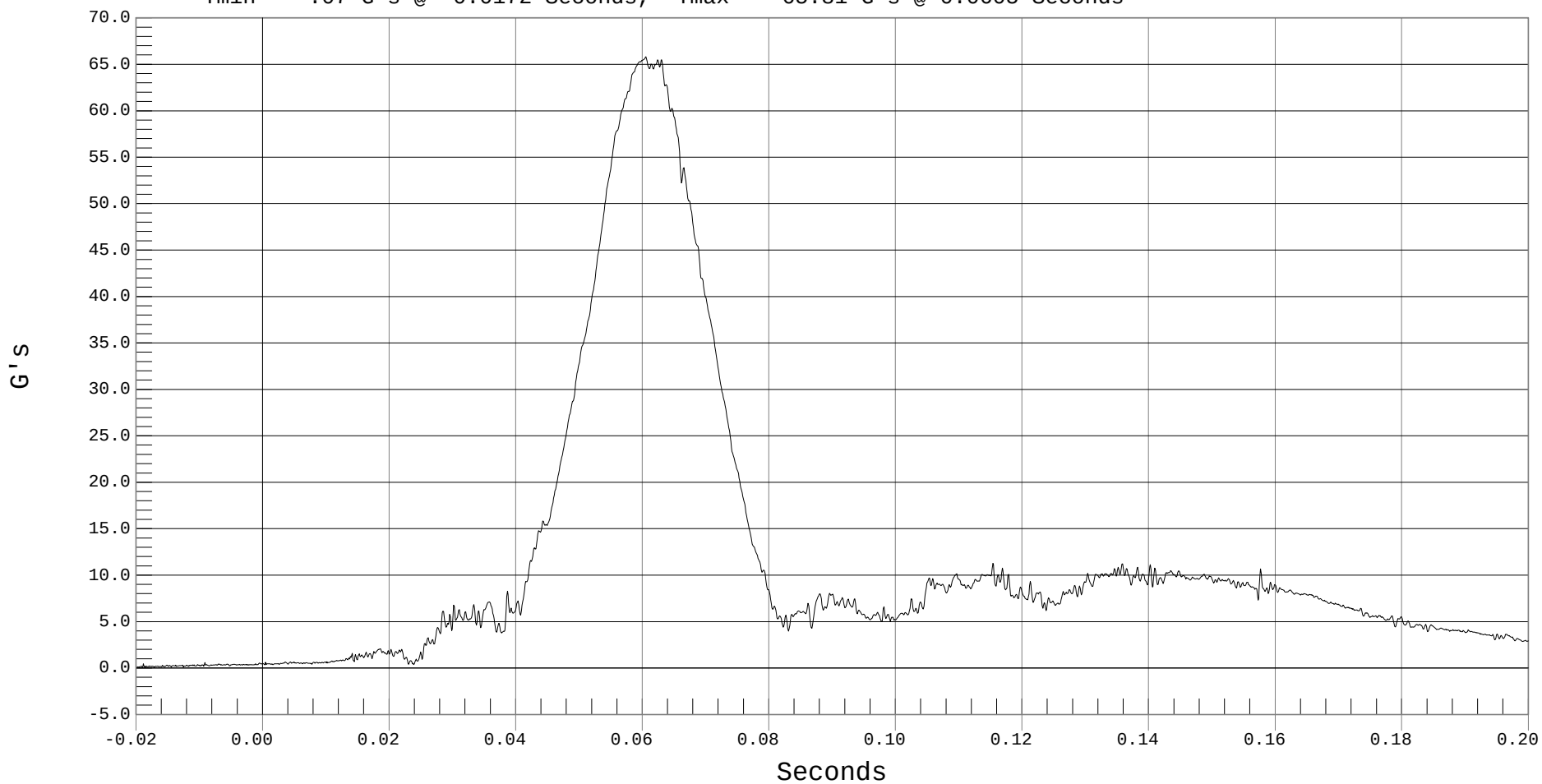
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 1000

— 1 DRIVER HEAD REDUNDANT RESULTANT, b01063AV.A39

Ymin = .07 G's @ -0.0172 Seconds, Ymax = 65.81 G's @ 0.0605 Seconds





DRIVER UPPER RIB REDUNDANT Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

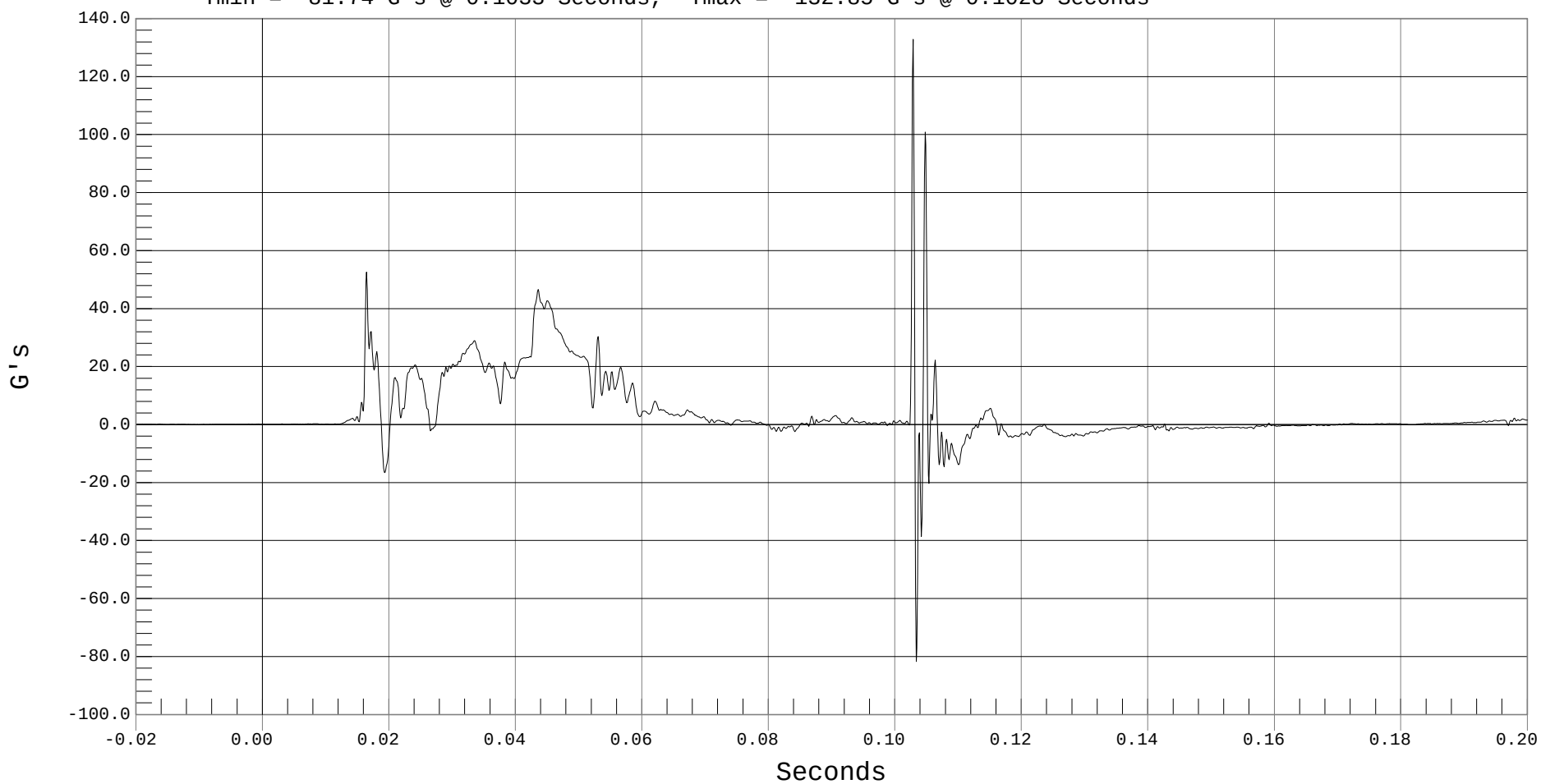
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 1000

— 1 DRIVER UPPER RIB Yr, b01063AT.A42

Ymin = -81.74 G's @ 0.1033 Seconds, Ymax = 132.85 G's @ 0.1028 Seconds





DRIVER UPPER RIB REDUNDANT Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

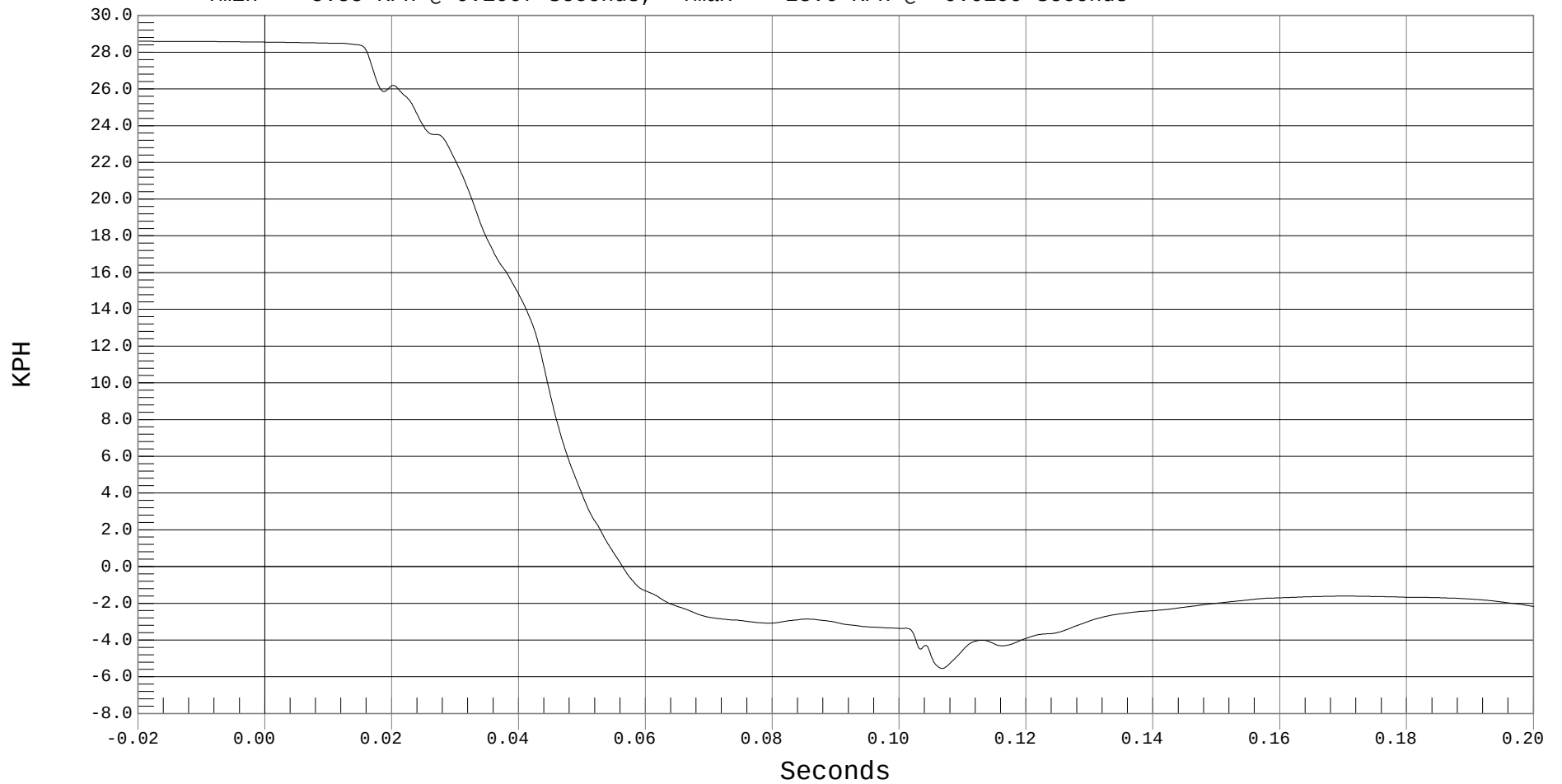
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

— 1 DRIVER UPPER RIB Y REDUNDANT VELOCITY, b01063AI.V42

Ymin = -5.55 KPH @ 0.1067 Seconds, Ymax = 28.6 KPH @ -0.0199 Seconds





DRIVER LOWER RIB REDUNDANT Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

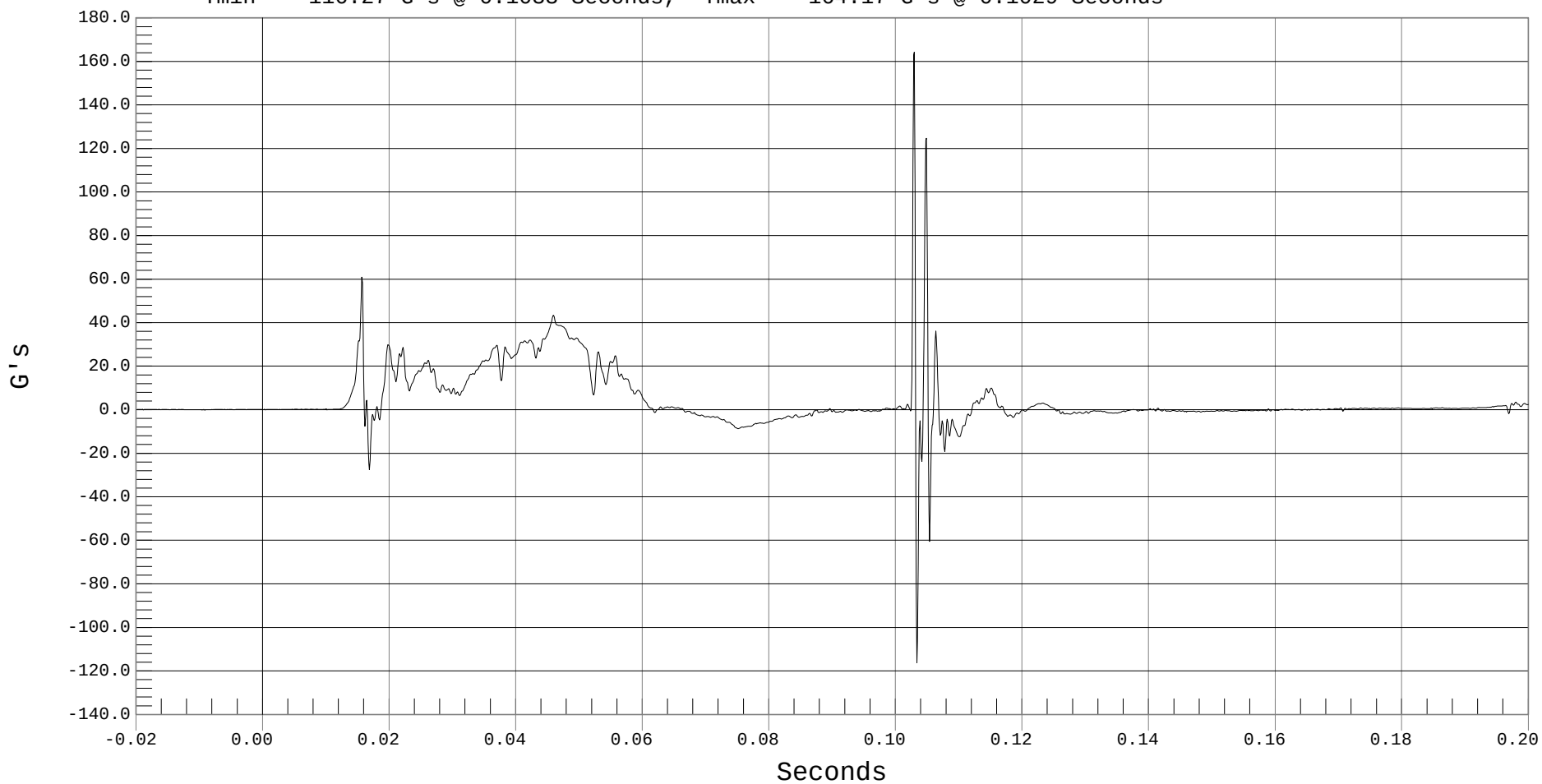
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 1000

— 1 DRIVER LOWER RIB Yr, b01063AT.A43

Ymin = -116.27 G's @ 0.1033 Seconds, Ymax = 164.17 G's @ 0.1029 Seconds





DRIVER LOWER RIB REDUNDANT Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

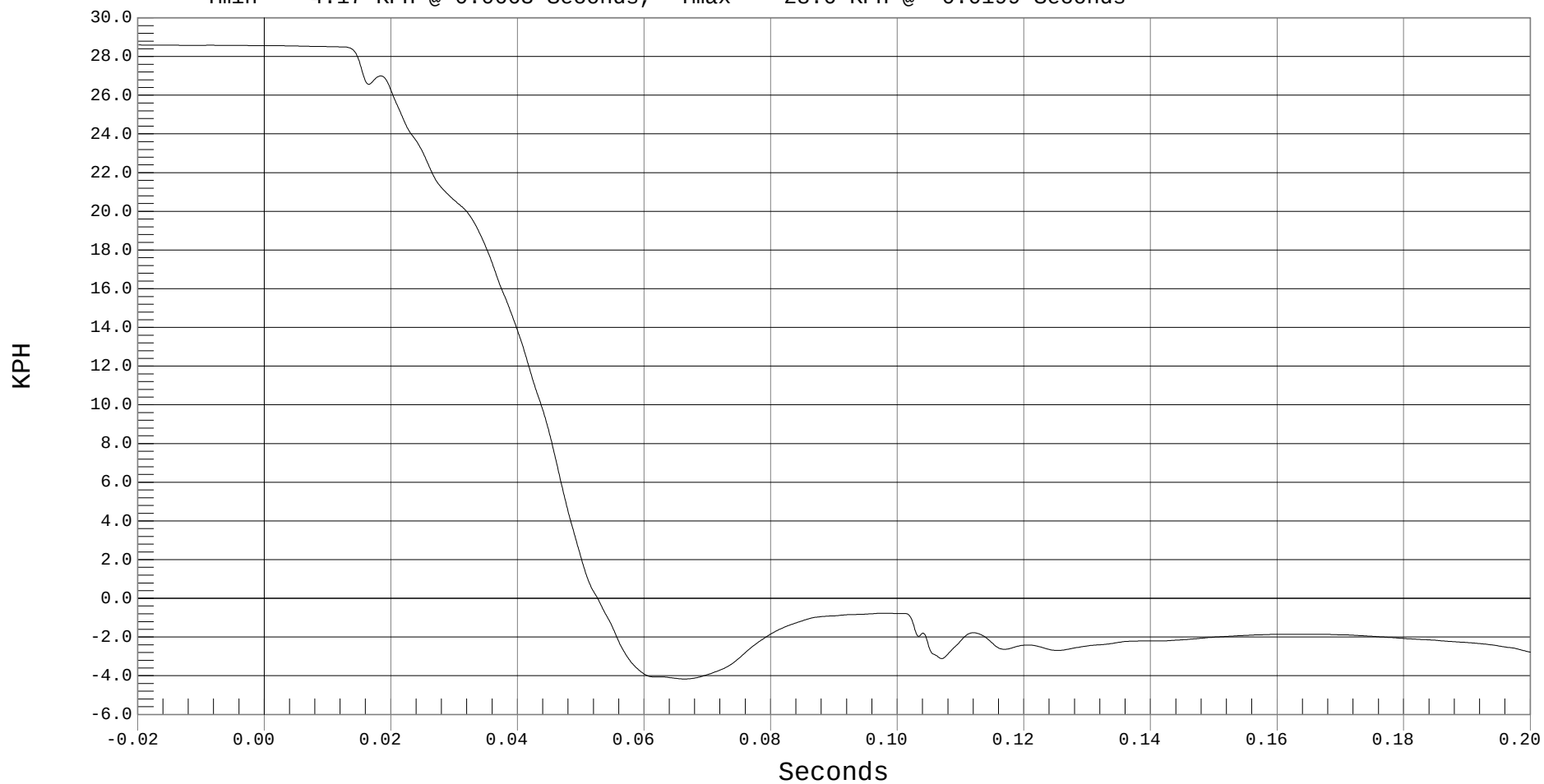
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

1 DRIVER LOWER RIB Y REDUNDANT VELOCITY, b01063AI.V43

Ymin = -4.17 KPH @ 0.0663 Seconds, Ymax = 28.6 KPH @ -0.0199 Seconds





DRIVER LOWER SPINE REDUNDANT Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

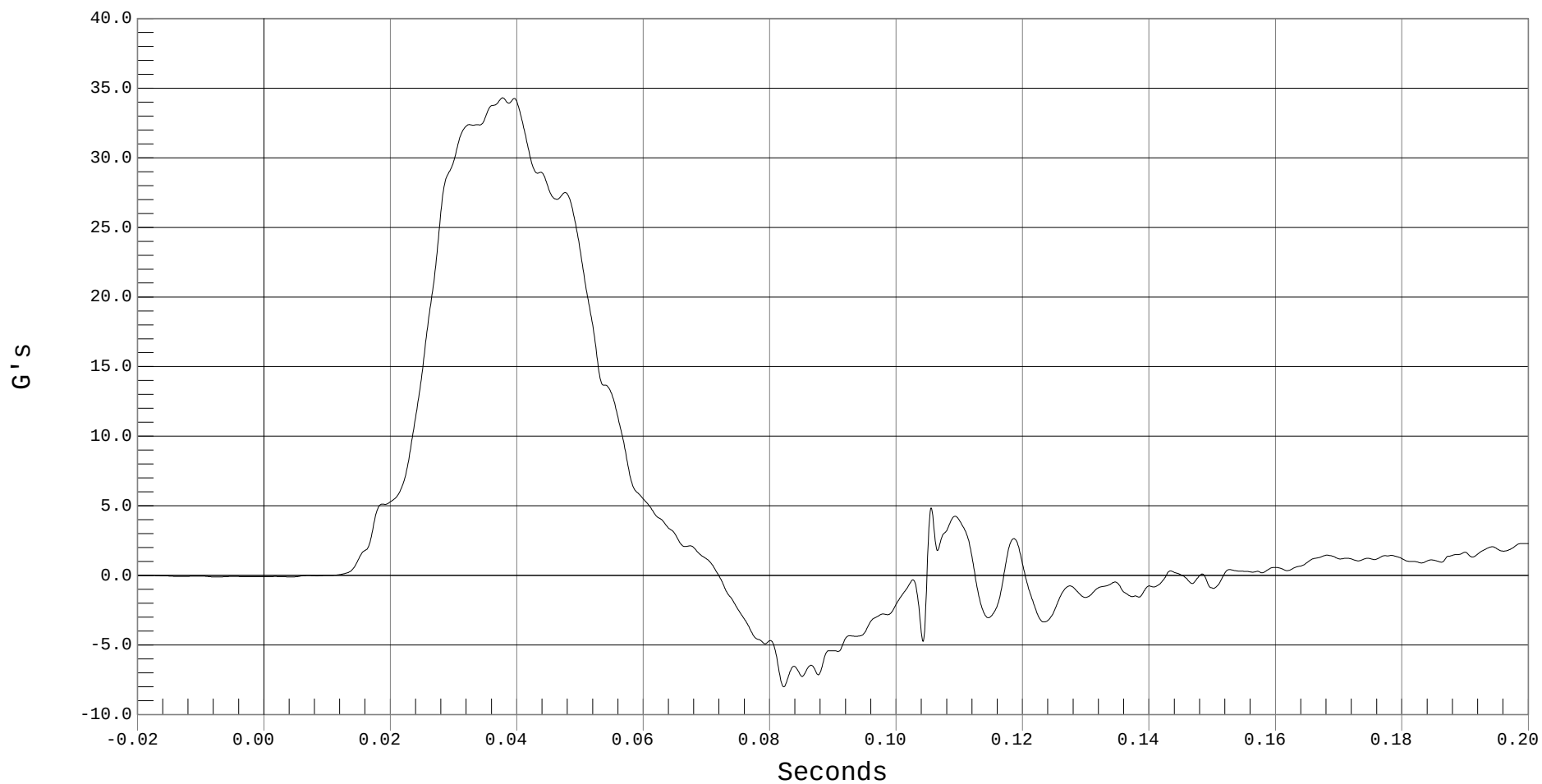
Other Info:

Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

— 1 DRIVER LOWER SPINE Yr, b01063AF.A44





DRIVER LOWER SPINE REDUNDANT Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Test Date: 06-08-01

Component: 2001 VW JETTA 4 DOOR SEDAN

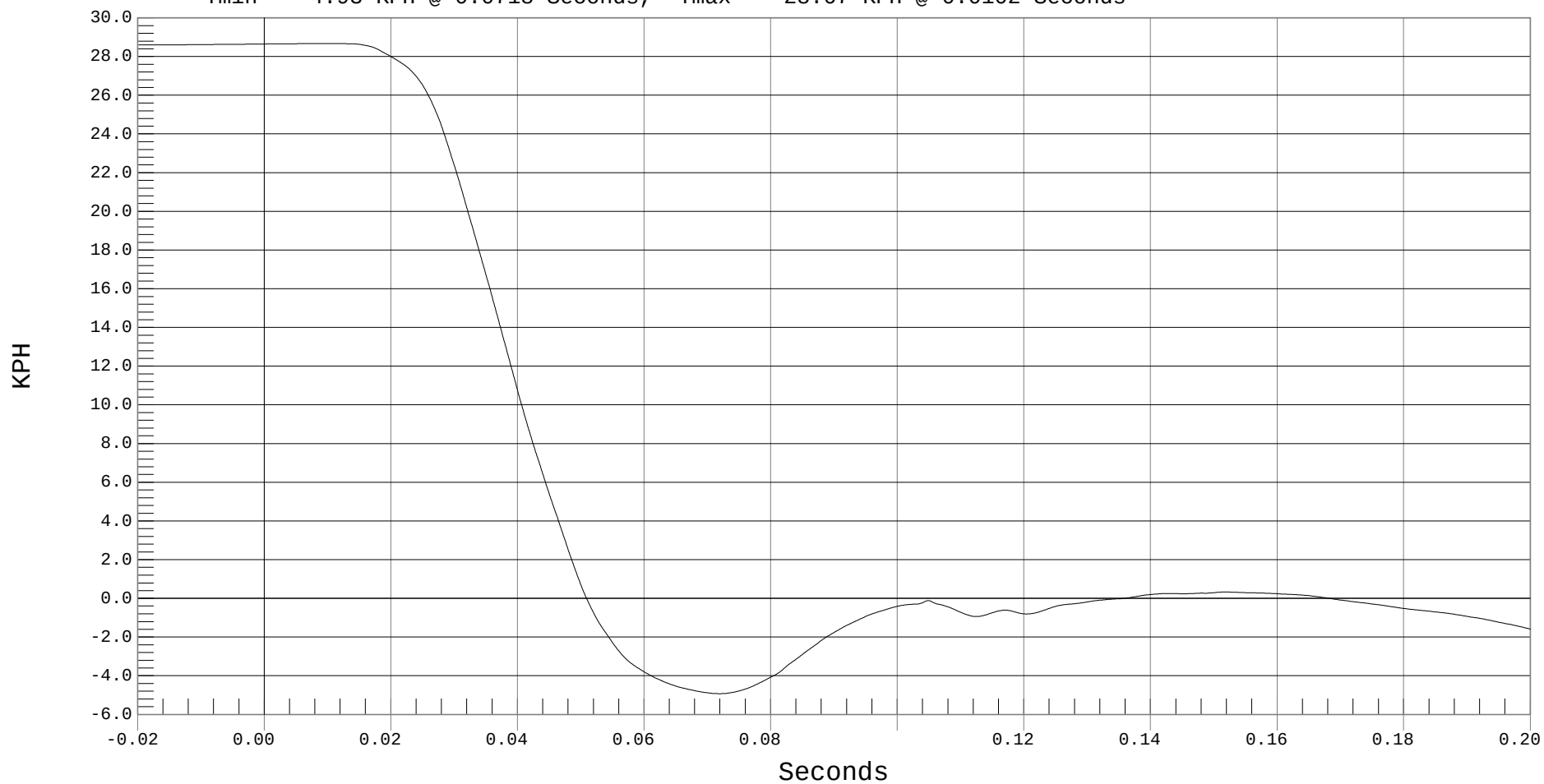
Speed: 17.8 MPH, 28.6 KPH

Other Info:

Filter Class: 180

1 DRIVER LOWER SPINE Y REDUNDANT VELOCITY, b01063AI.V44

Ymin = -4.93 KPH @ 0.0718 Seconds, Ymax = 28.67 KPH @ 0.0102 Seconds





DRIVER PELVIS REDUNDANT Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

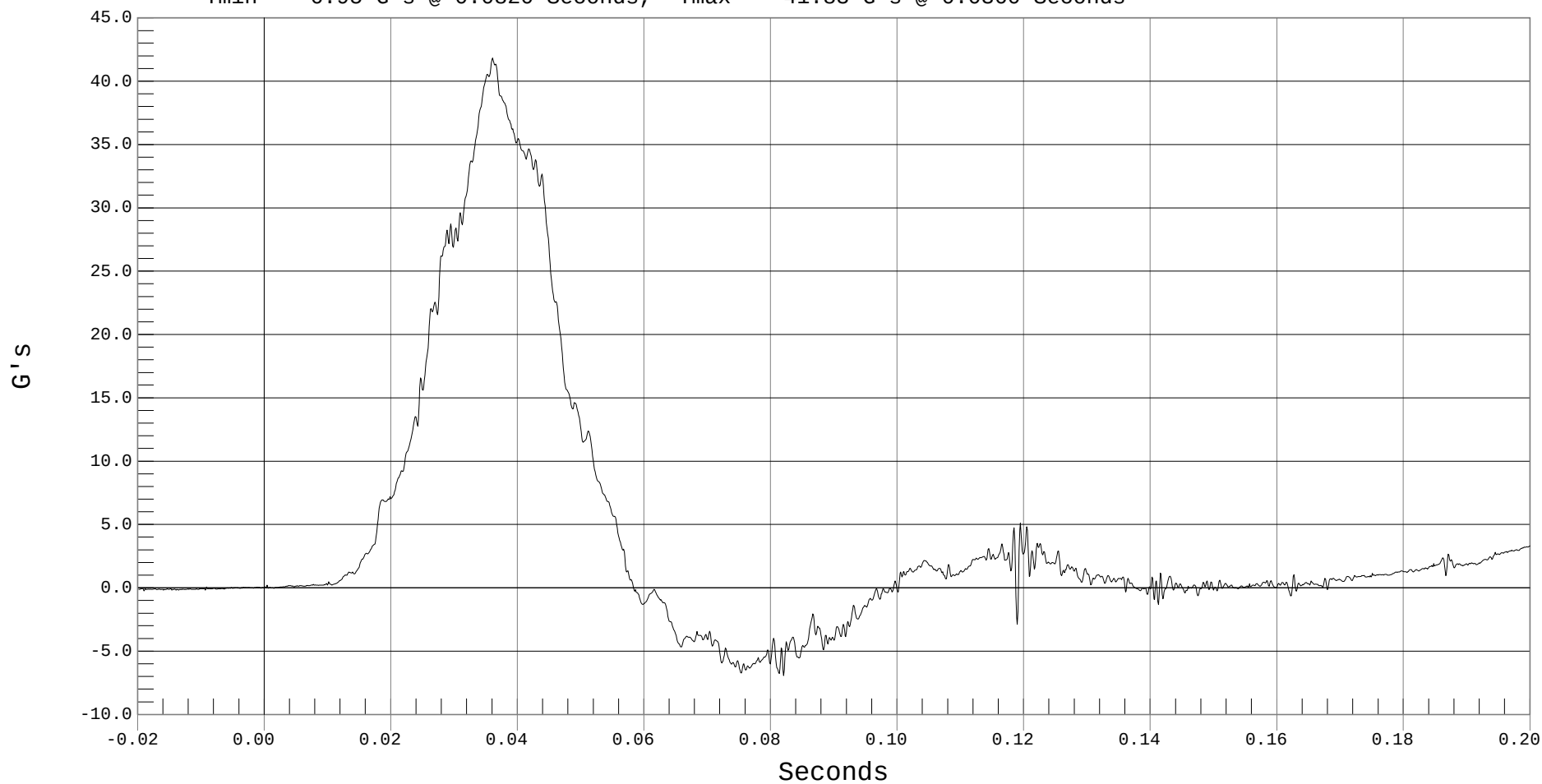
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 1000

— 1 DRIVER PELVIS Yr, b01063AT.A45

Ymin = -6.95 G's @ 0.0820 Seconds, Ymax = 41.83 G's @ 0.0360 Seconds





DRIVER PELVIS REDUNDANT Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

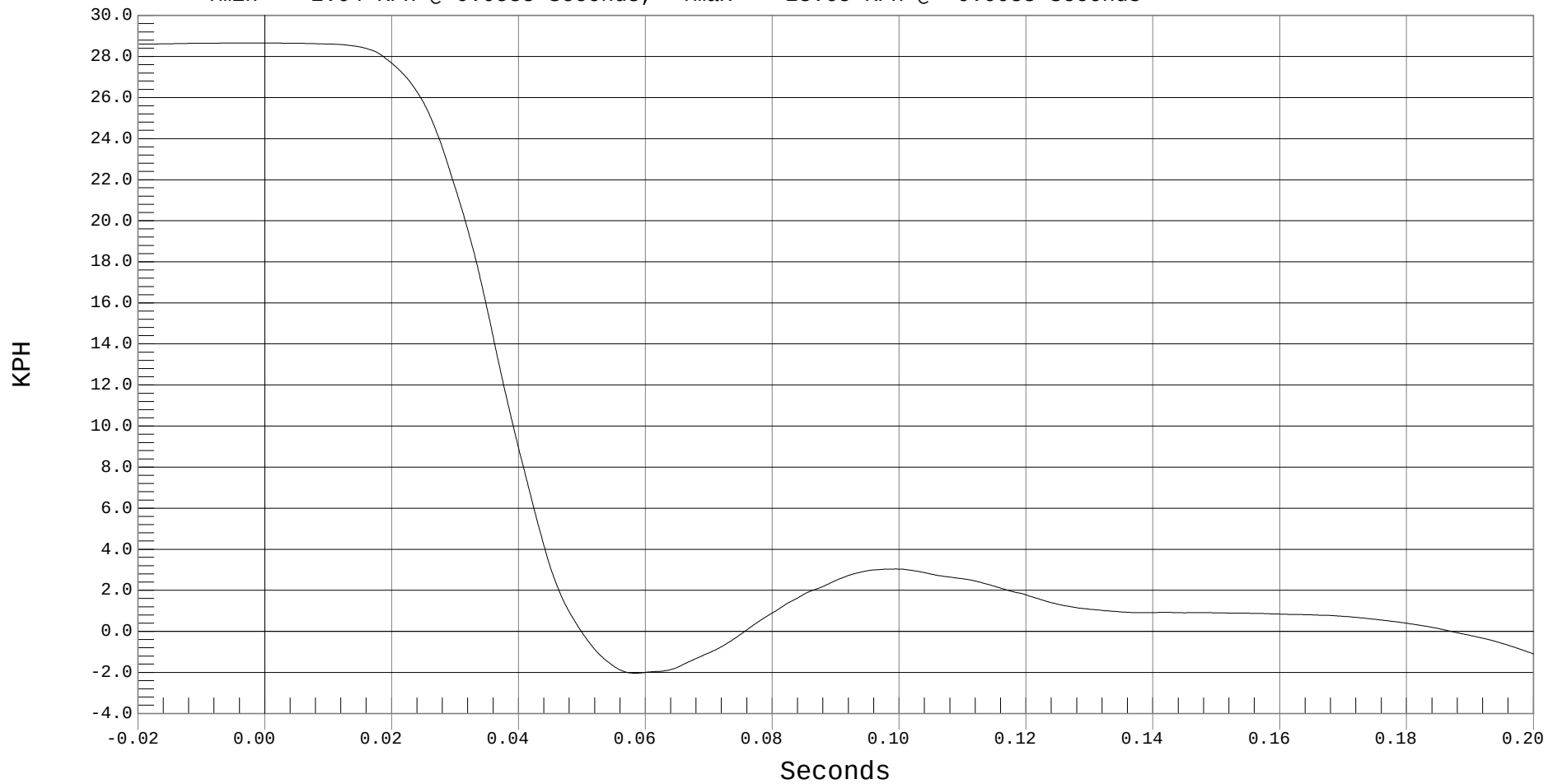
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Filter Class: 180

— 1 DRIVER PELVIS Y REDUNDANT VELOCITY, b01063AI.V45

Ymin = -2.04 KPH @ 0.0583 Seconds, Ymax = 28.65 KPH @ -0.0038 Seconds





DRIVER UPPER RIB Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

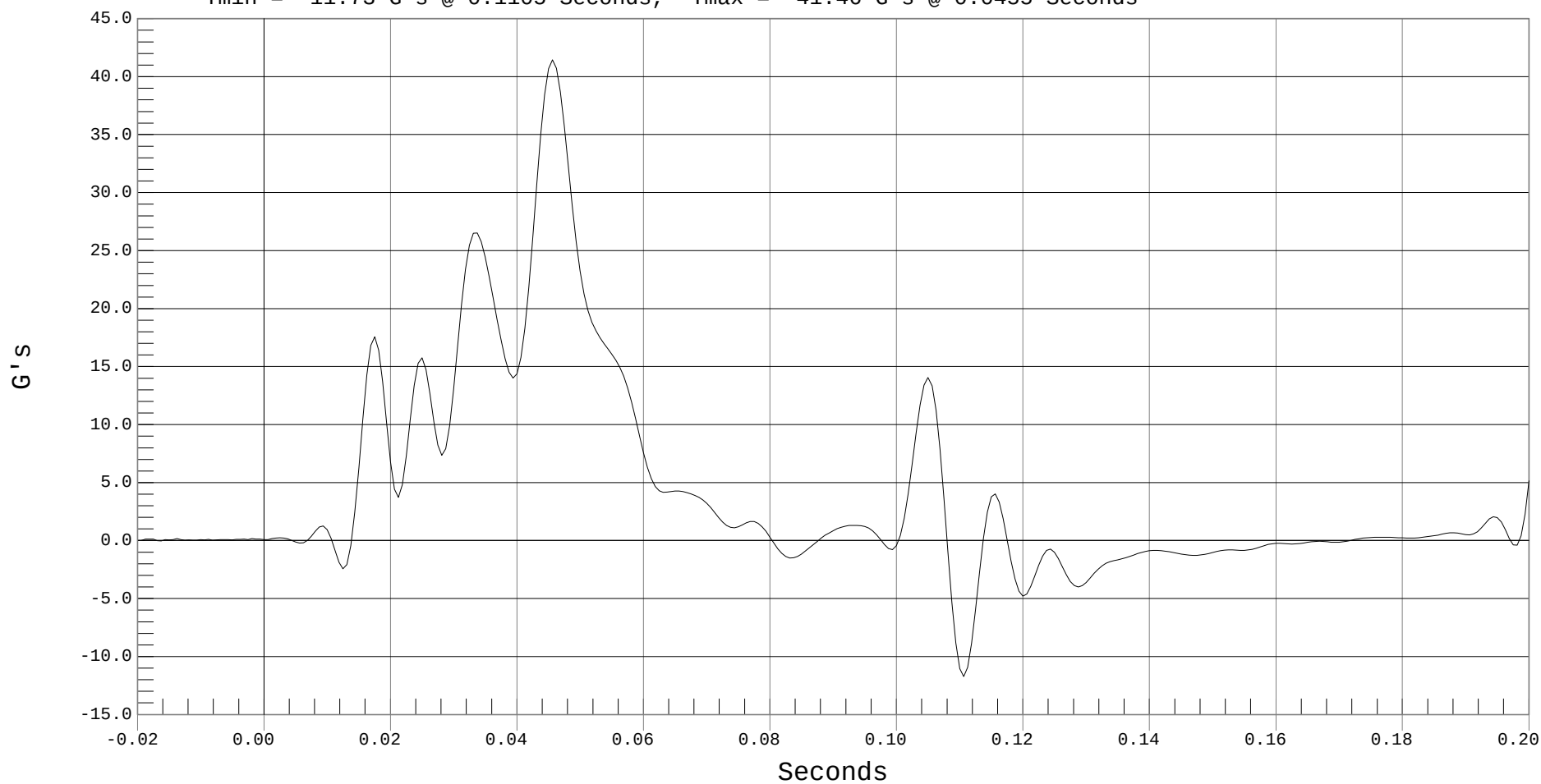
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Fir Filtered

— 1 DRIVER UPPER RIB Y, b01063FI.R10

Ymin = -11.73 G's @ 0.1105 Seconds, Ymax = 41.46 G's @ 0.0455 Seconds





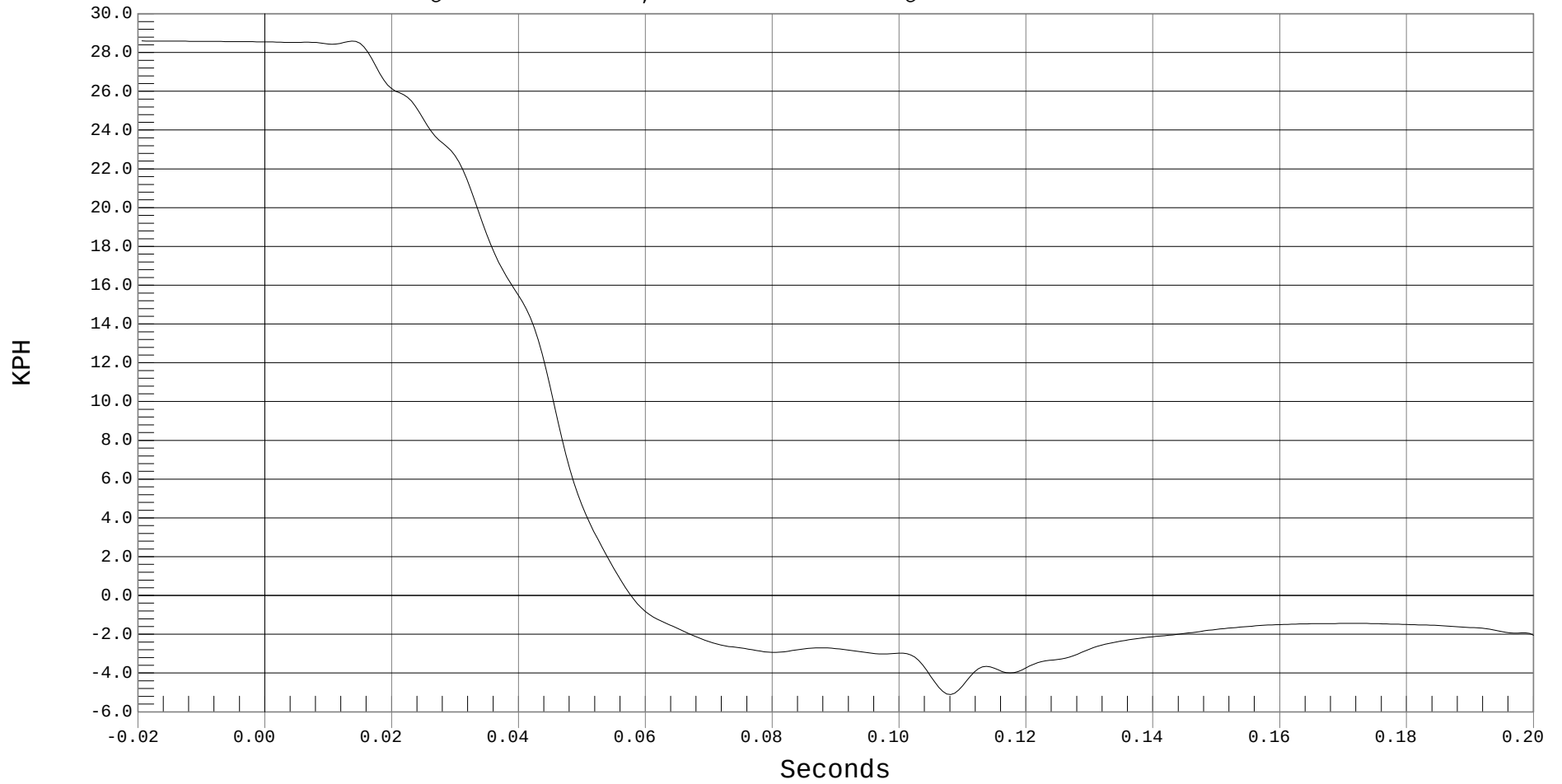
DRIVER UPPER RIB Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)
Component: 2001 VW JETTA 4 DOOR SEDAN
Other Info:

Test Date: 06-08-01
Speed: 17.8 MPH, 28.6 KPH
Fir Filtered

— 1 DRIVER UPPER RIB Y VELOCITY, b01063FI.V10

Ymin = -5.11 KPH @ 0.1080 Seconds, Ymax = 28.6 KPH @ -0.0195 Seconds





DRIVER LOWER RIB Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

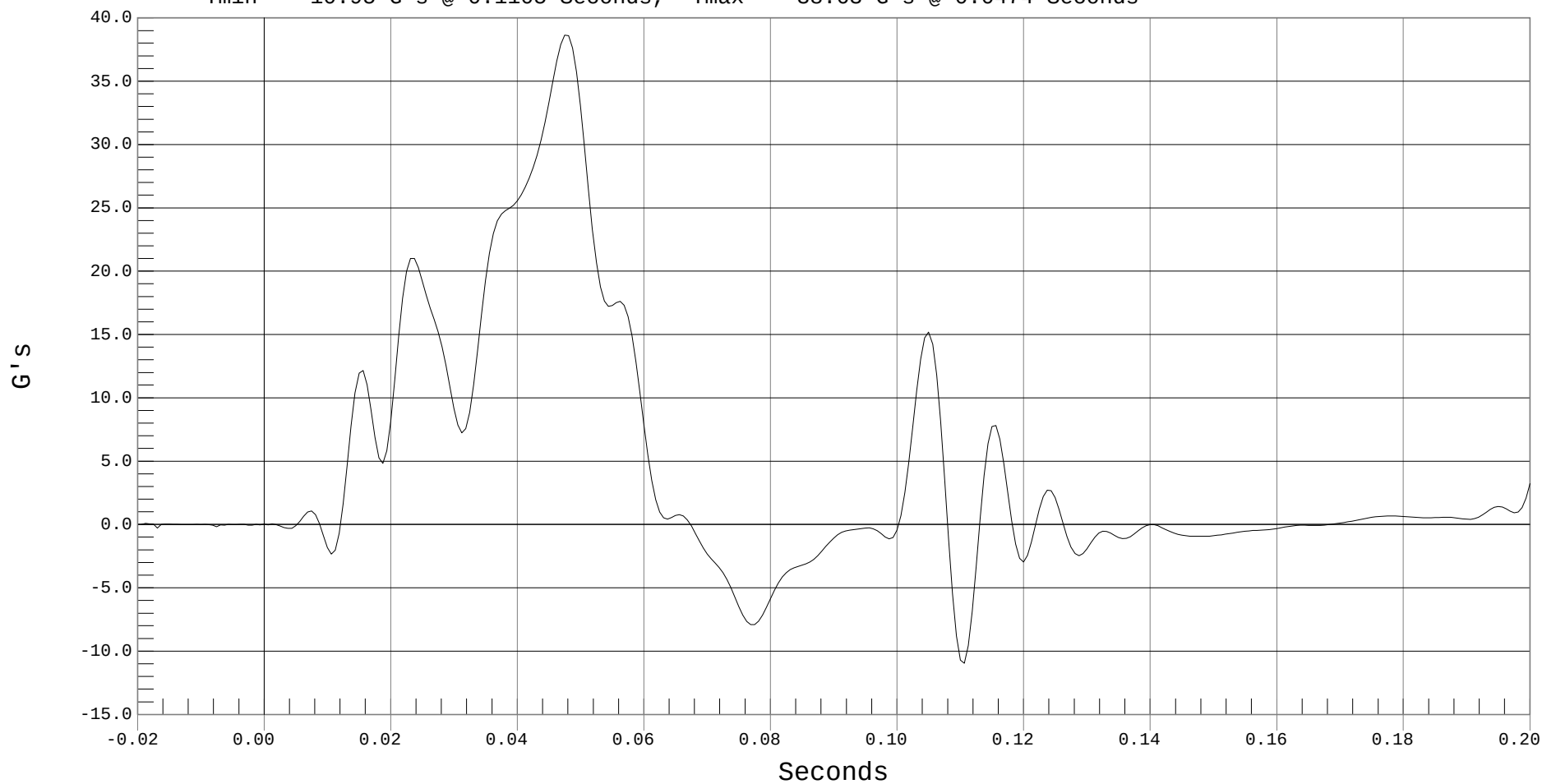
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Fir Filtered

— 1 DRIVER LOWER RIB Y, b01063FI.R11

Ymin = -10.95 G's @ 0.1105 Seconds, Ymax = 38.63 G's @ 0.0474 Seconds





DRIVER LOWER RIB Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

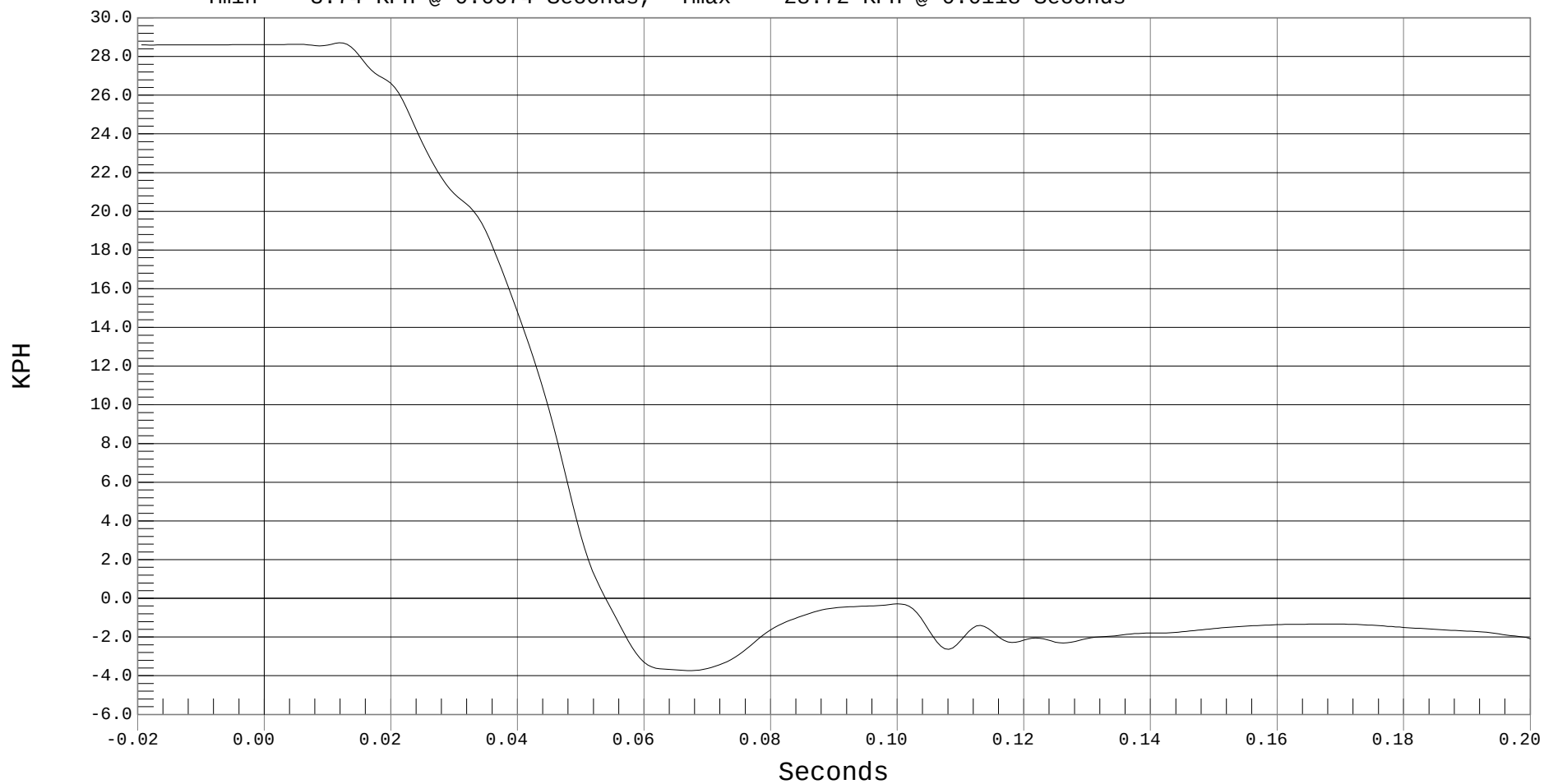
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Fir Filtered

1 DRIVER LOWER RIB Y VELOCITY, b01063FI.V11

Ymin = -3.74 KPH @ 0.0674 Seconds, Ymax = 28.72 KPH @ 0.0118 Seconds





DRIVER LOWER SPINE Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

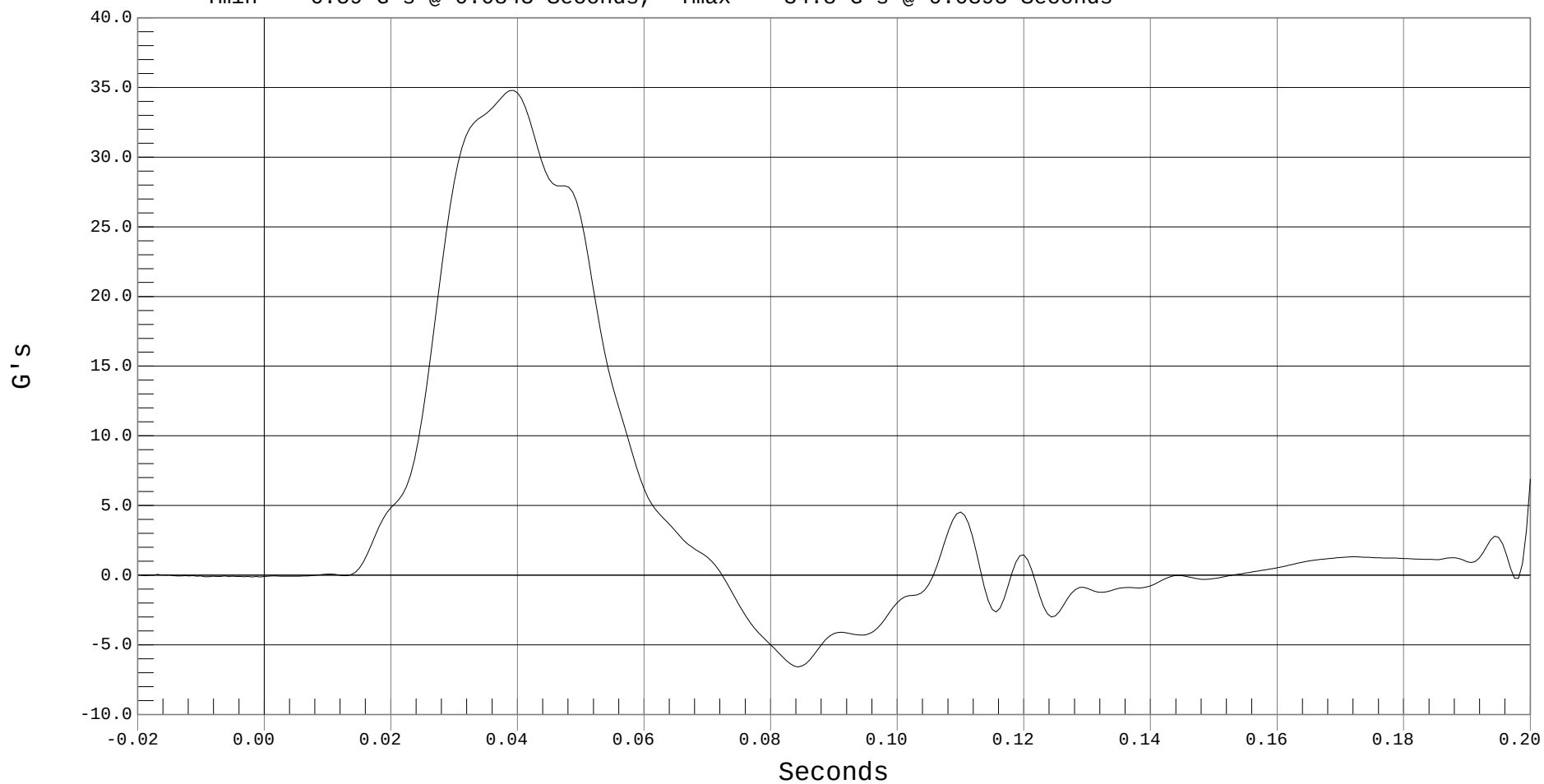
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Fir Filtered

1 DRIVER LOWER SPINE Y, b01063FI.R12

Ymin = -6.59 G's @ 0.0843 Seconds, Ymax = 34.8 G's @ 0.0393 Seconds





DRIVER LOWER SPINE Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

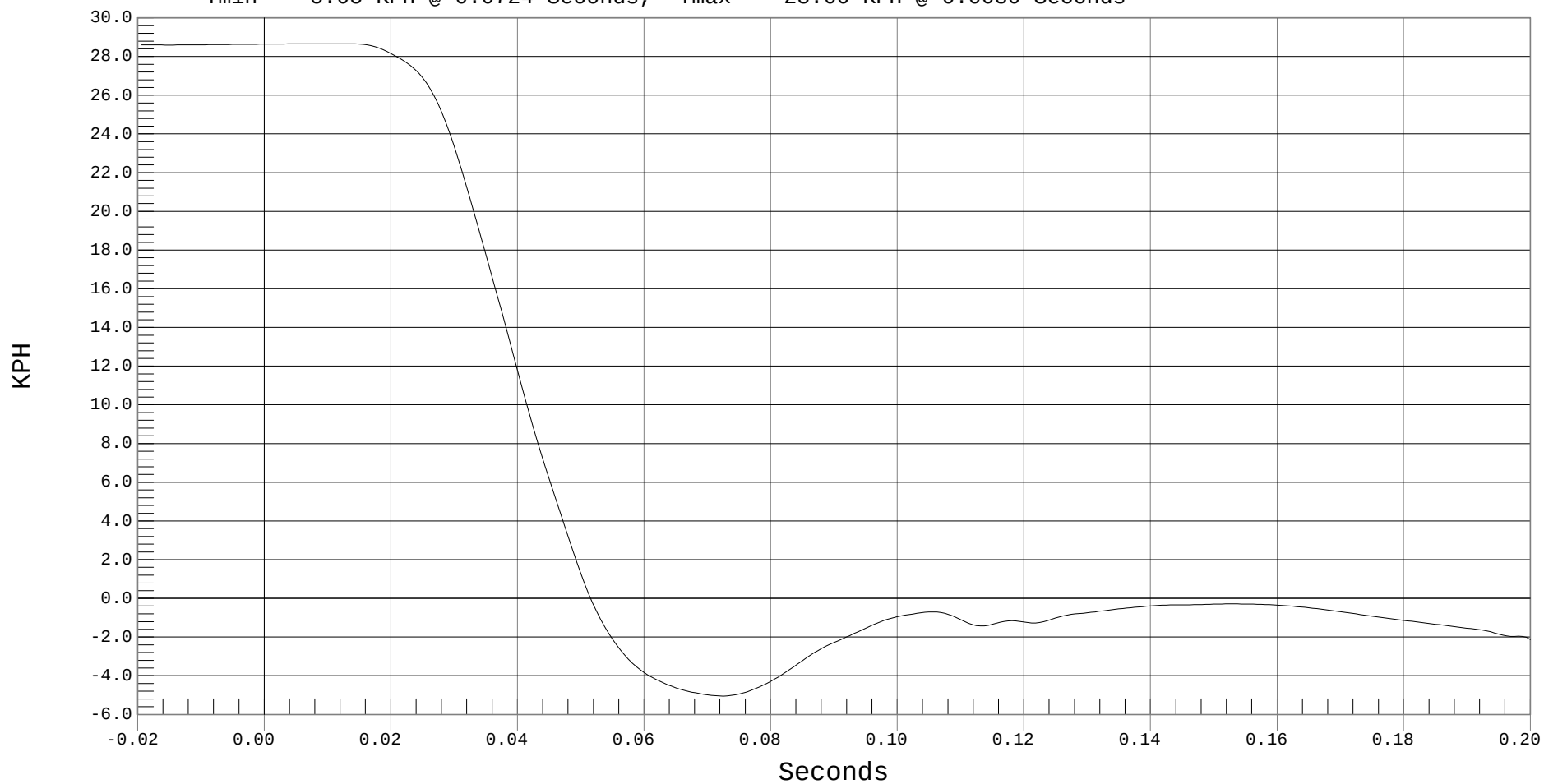
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Fir Filtered

1 DRIVER LOWER SPINE Y VELOCITY, b01063FI.V12

Ymin = -5.05 KPH @ 0.0724 Seconds, Ymax = 28.66 KPH @ 0.0080 Seconds





DRIVER PELVIS Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

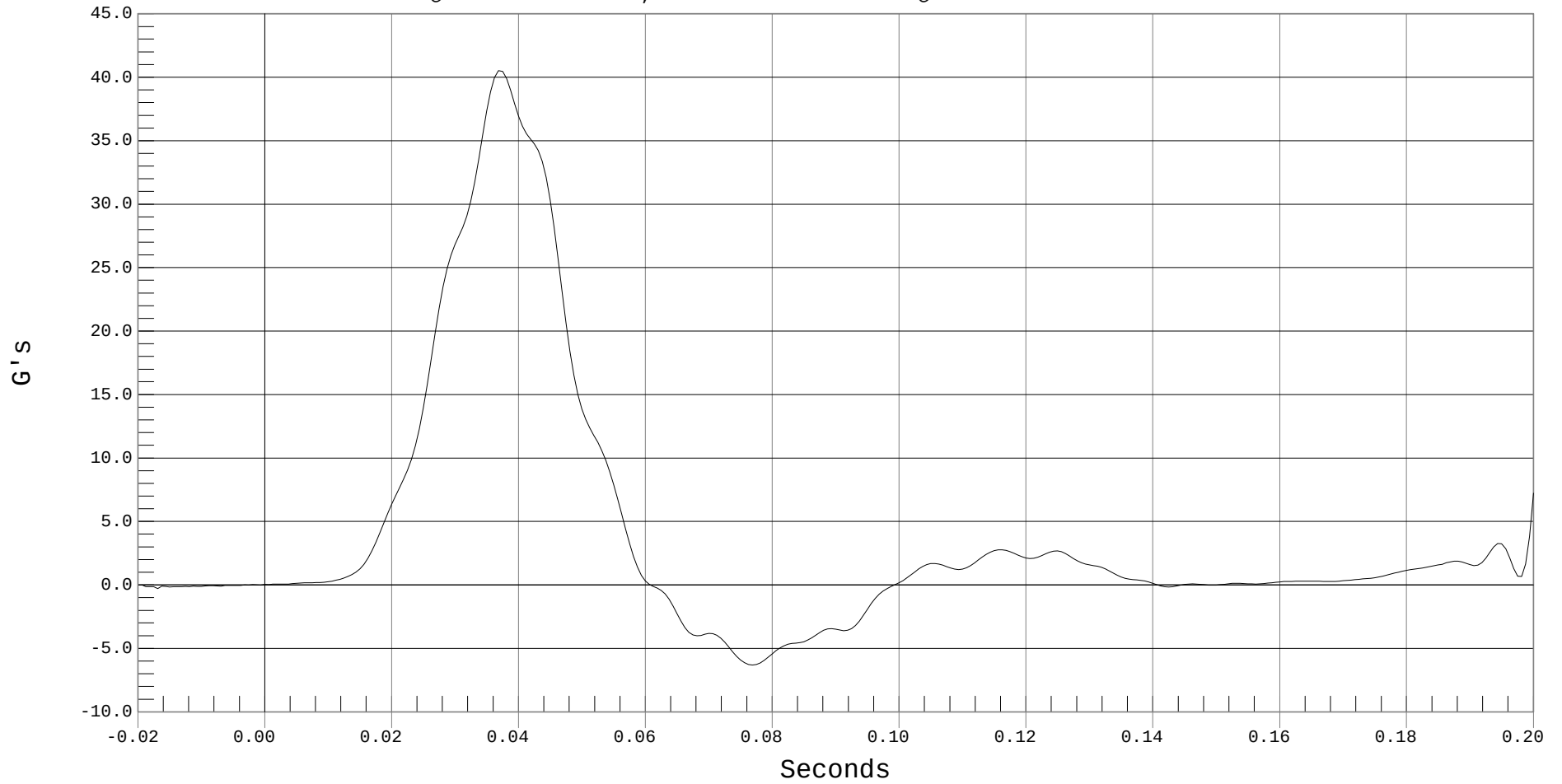
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Fir Filtered

— 1 DRIVER PELVIS Y, b01063FI.R13

Ymin = -6.31 G's @ 0.0768 Seconds, Ymax = 40.52 G's @ 0.0368 Seconds





DRIVER PELVIS Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

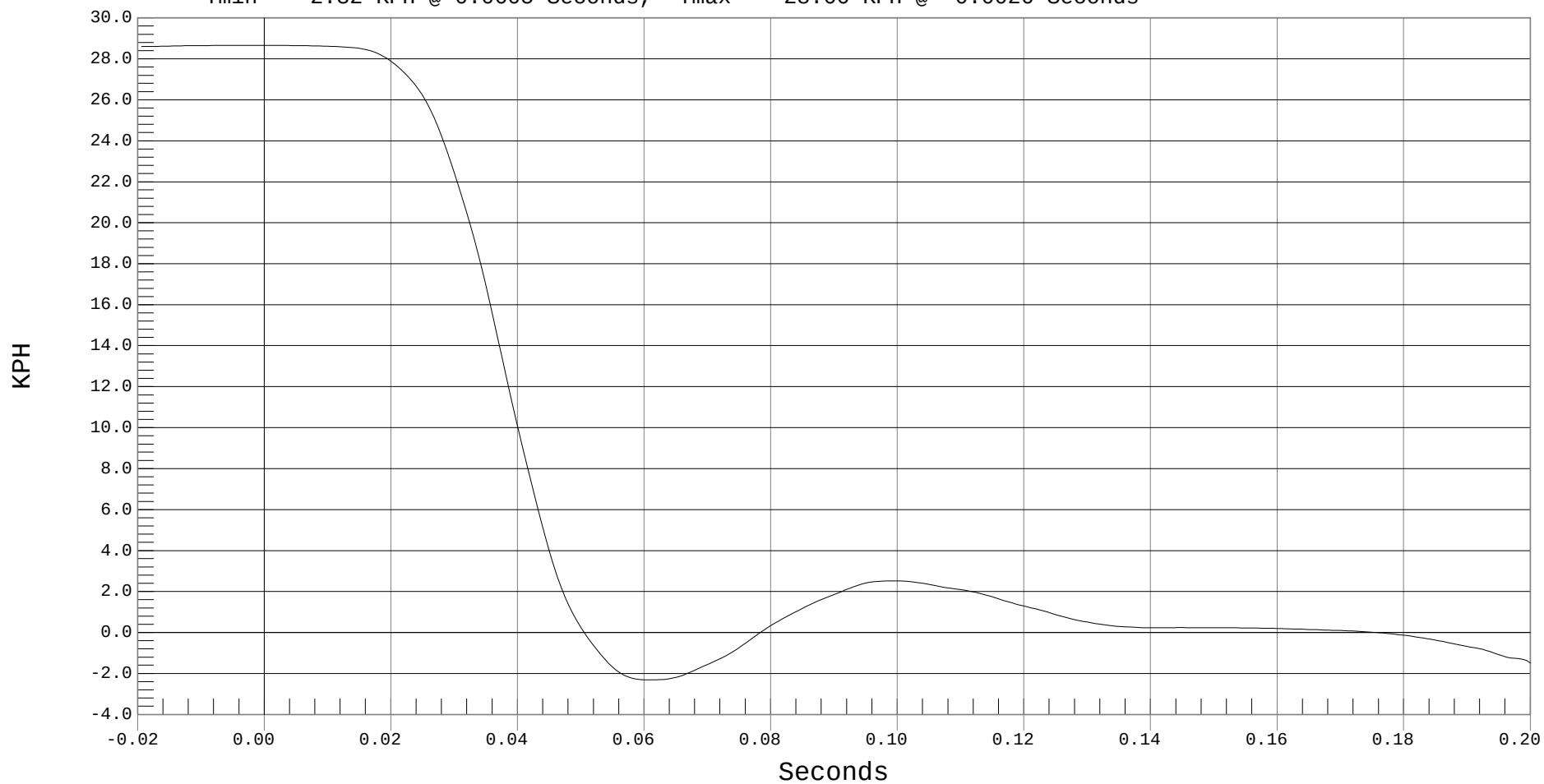
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Fir Filtered

1 DRIVER PELVIS Y VELOCITY, b01063FI.V13

Ymin = -2.32 KPH @ 0.0605 Seconds, Ymax = 28.66 KPH @ -0.0026 Seconds





DRIVER UPPER RIB REDUNDANT Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

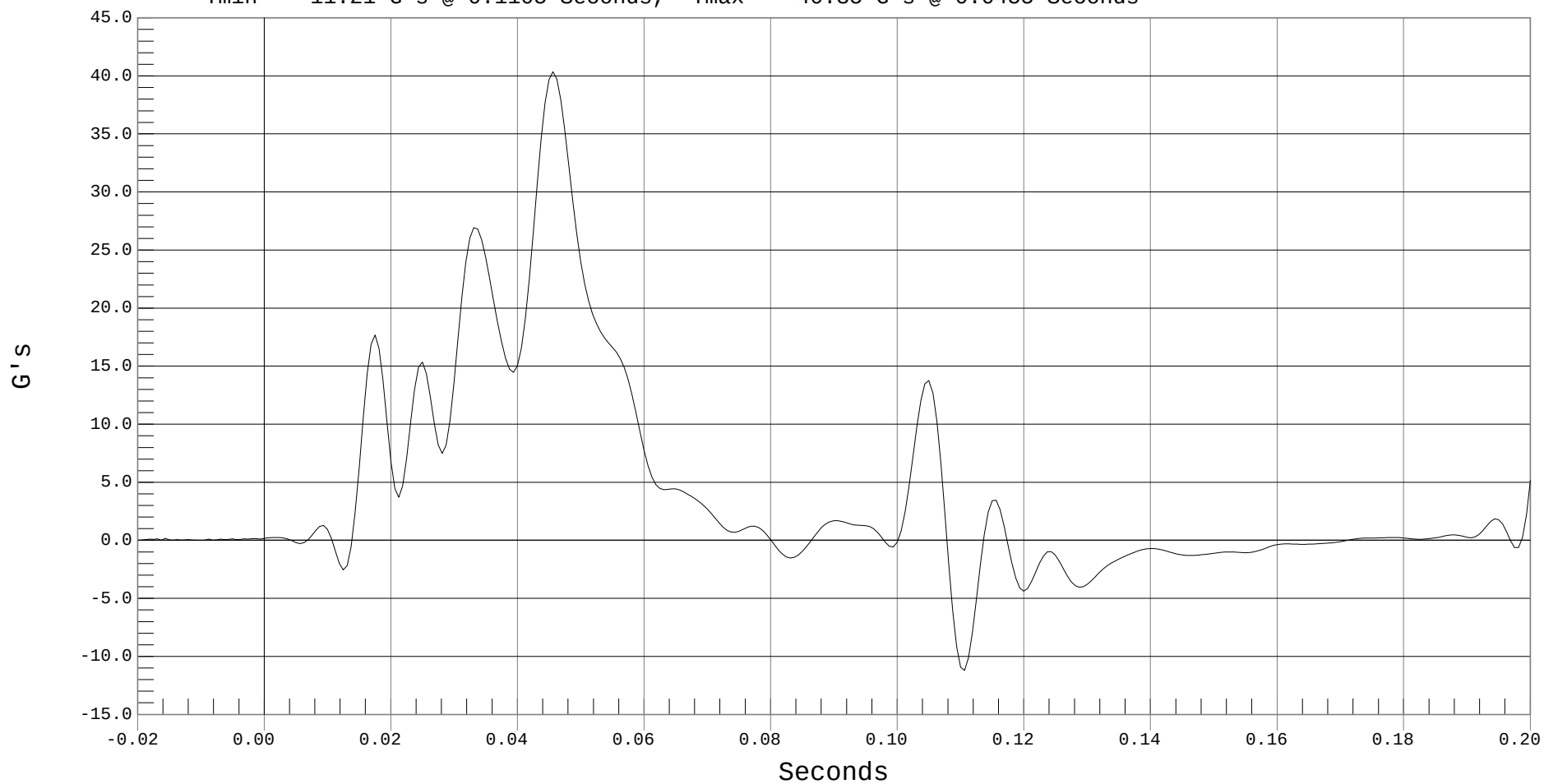
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Fir Filtered

— 1 DRIVER UPPER RIB Yr, b01063FI.R42

Ymin = -11.21 G's @ 0.1105 Seconds, Ymax = 40.35 G's @ 0.0455 Seconds





DRIVER UPPER RIB REDUNDANT Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Test Date: 06-08-01

Component: 2001 VW JETTA 4 DOOR SEDAN

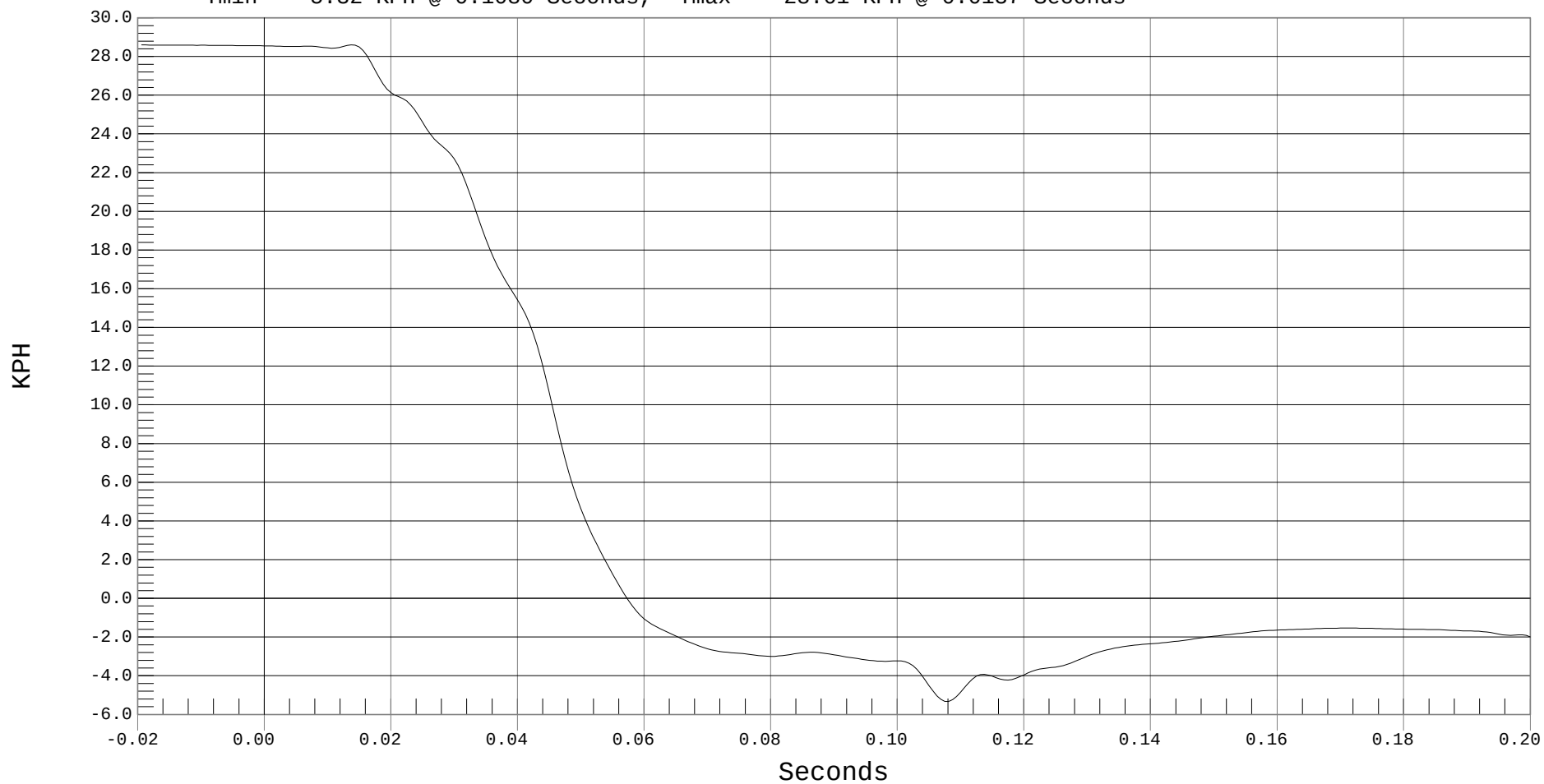
Speed: 17.8 MPH, 28.6 KPH

Other Info:

Fir Filtered

1 DRIVER UPPER RIB Y REDUNDANT VELOCITY, b01063FI.V42

Ymin = -5.32 KPH @ 0.1080 Seconds, Ymax = 28.61 KPH @ 0.0137 Seconds





DRIVER LOWER RIB REDUNDANT Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

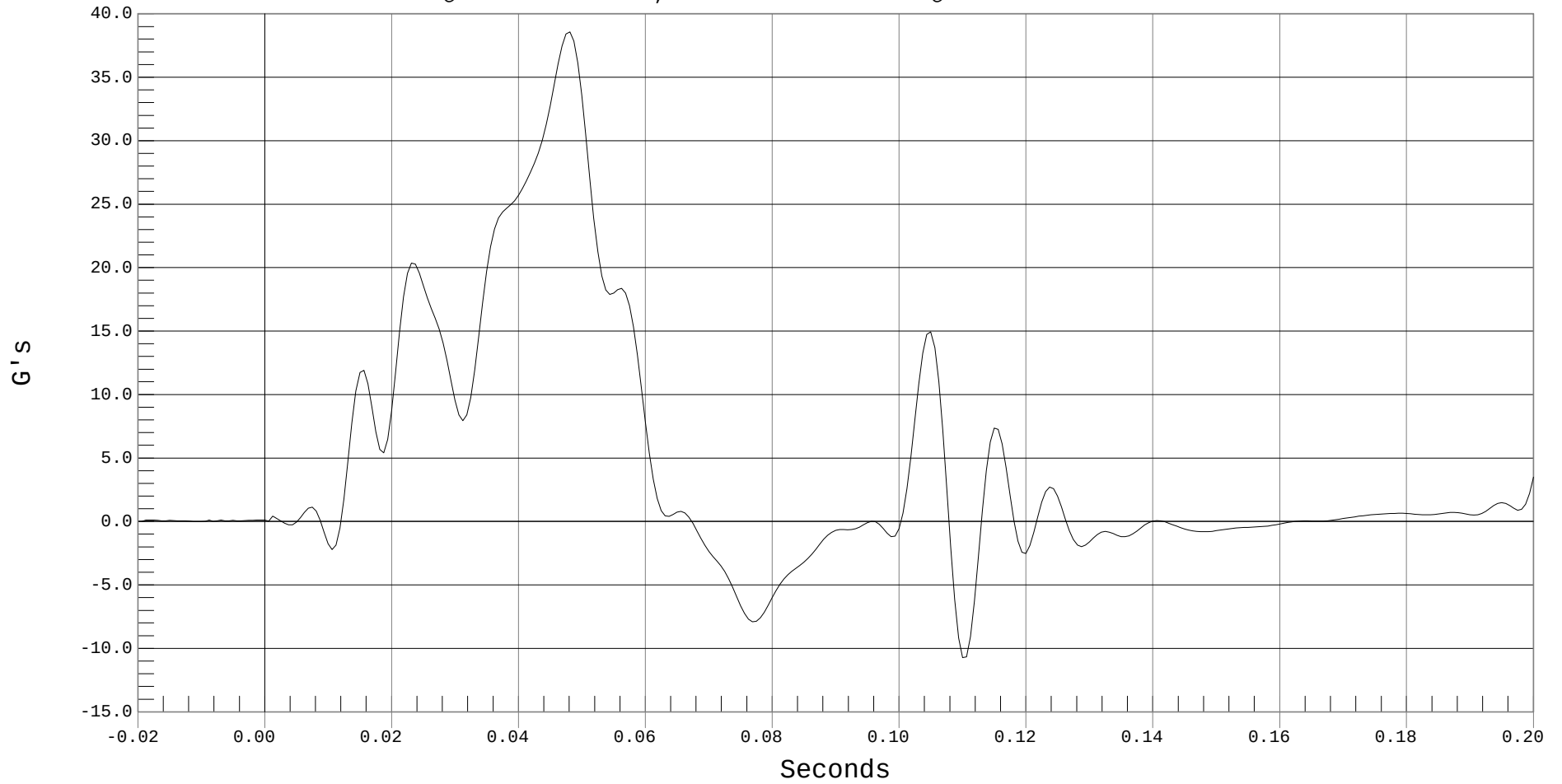
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Fir Filtered

— 1 DRIVER LOWER RIB Yr, b01063FI.R43

Ymin = -10.73 G's @ 0.1099 Seconds, Ymax = 38.58 G's @ 0.0480 Seconds





DRIVER LOWER RIB REDUNDANT Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Test Date: 06-08-01

Component: 2001 VW JETTA 4 DOOR SEDAN

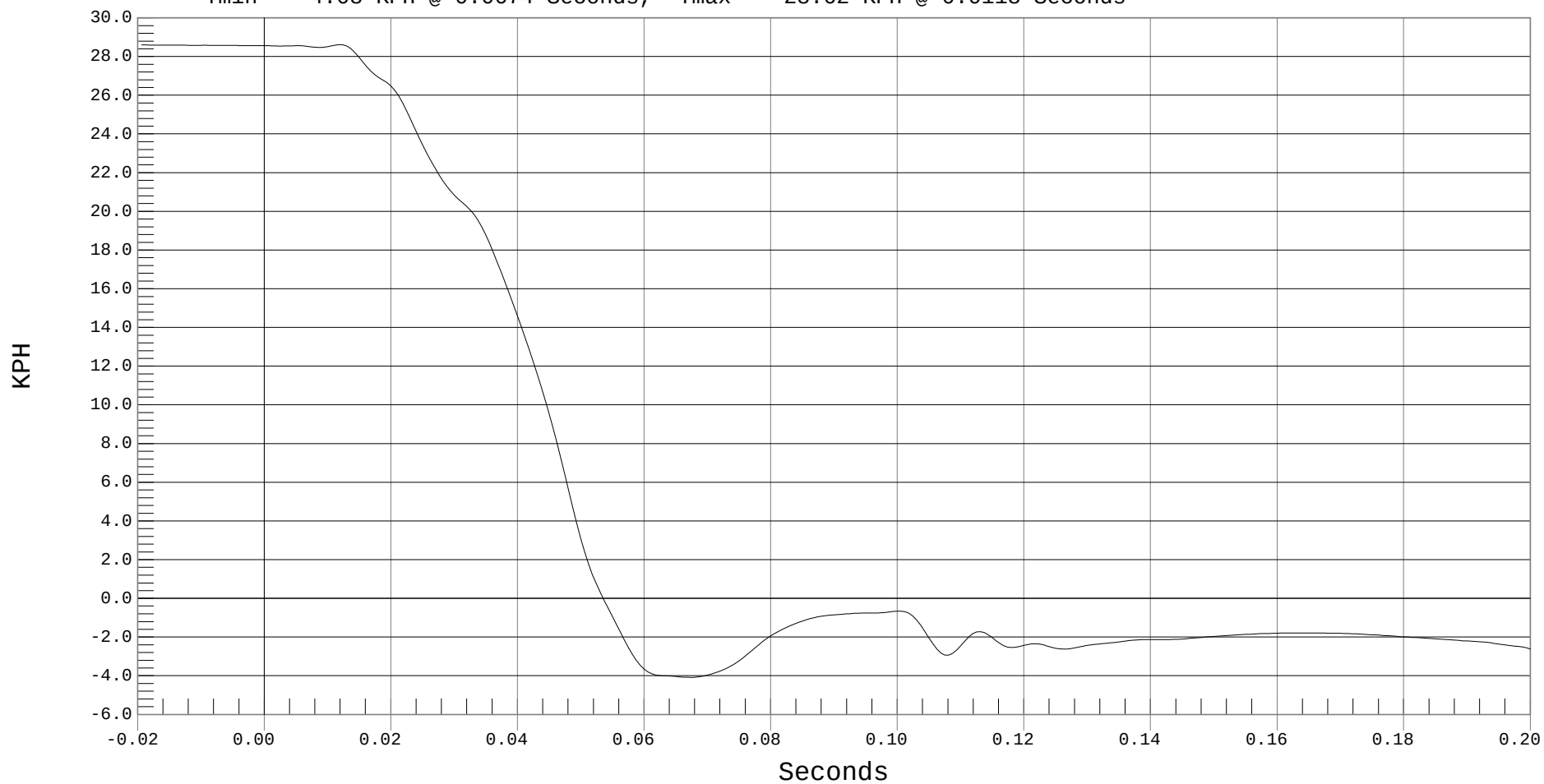
Speed: 17.8 MPH, 28.6 KPH

Other Info:

Fir Filtered

1 DRIVER LOWER RIB Y REDUNDANT VELOCITY, b01063FI.V43

Ymin = -4.08 KPH @ 0.0674 Seconds, Ymax = 28.62 KPH @ 0.0118 Seconds





DRIVER LOWER SPINE REDUNDANT Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

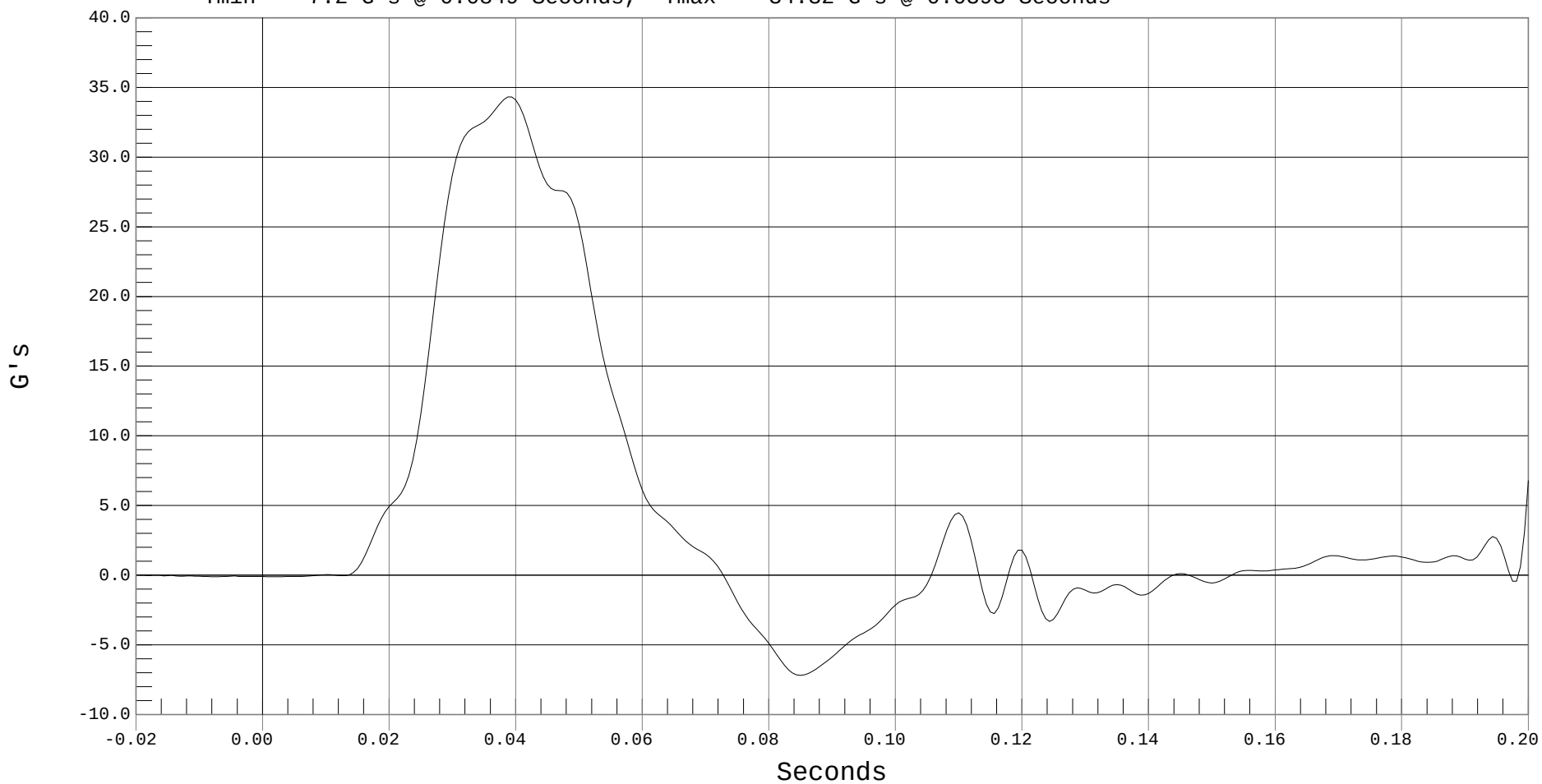
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Fir Filtered

— 1 DRIVER LOWER SPINE Yr, b01063FI.R44

Ymin = -7.2 G's @ 0.0849 Seconds, Ymax = 34.32 G's @ 0.0393 Seconds





DRIVER LOWER SPINE REDUNDANT Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Test Date: 06-08-01

Component: 2001 VW JETTA 4 DOOR SEDAN

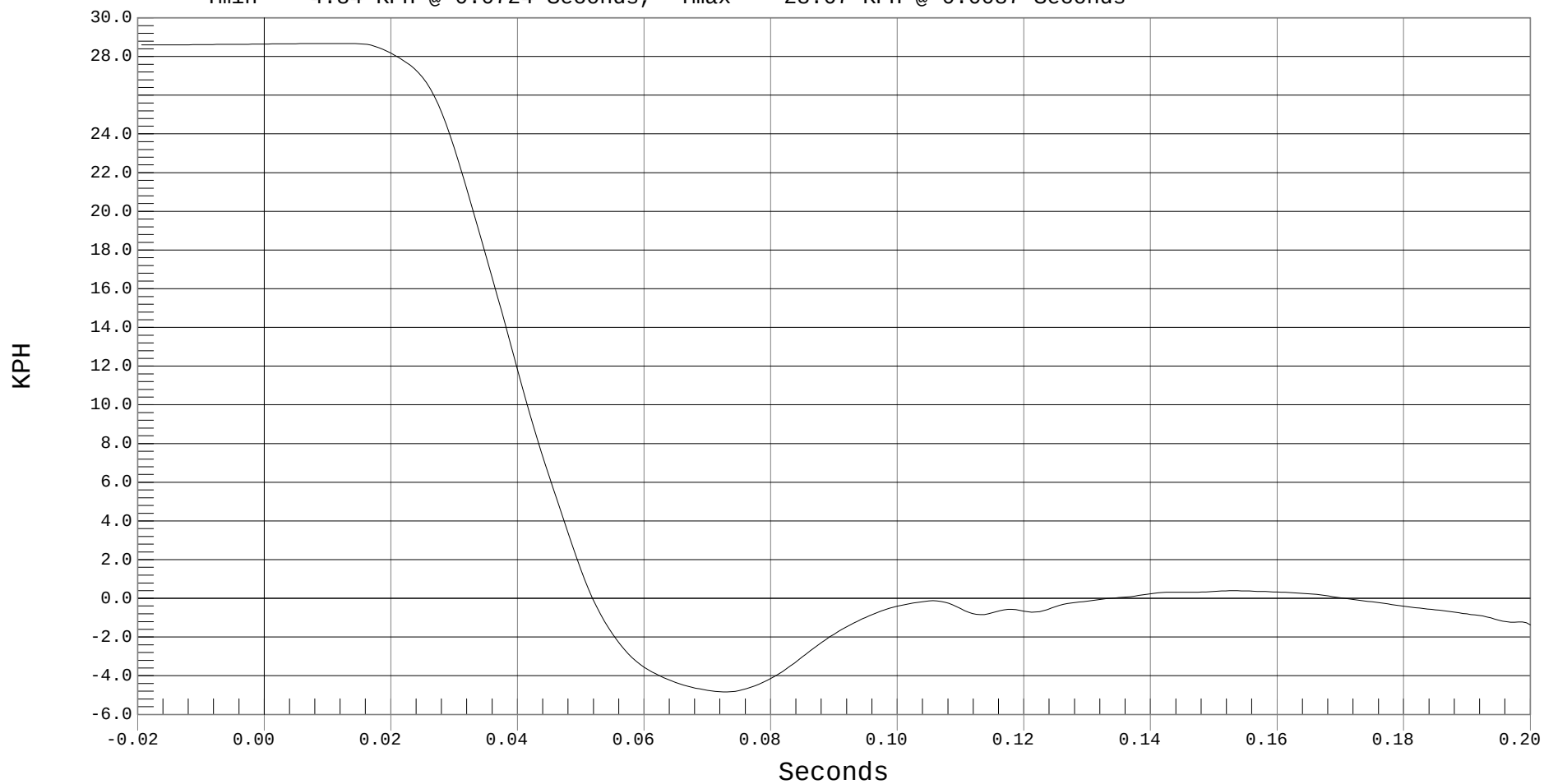
Speed: 17.8 MPH, 28.6 KPH

Other Info:

Fir Filtered

1 DRIVER LOWER SPINE Y REDUNDANT VELOCITY, b01063FI.V44

Ymin = -4.84 KPH @ 0.0724 Seconds, Ymax = 28.67 KPH @ 0.0087 Seconds





DRIVER PELVIS REDUNDANT Y ACCELERATION

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

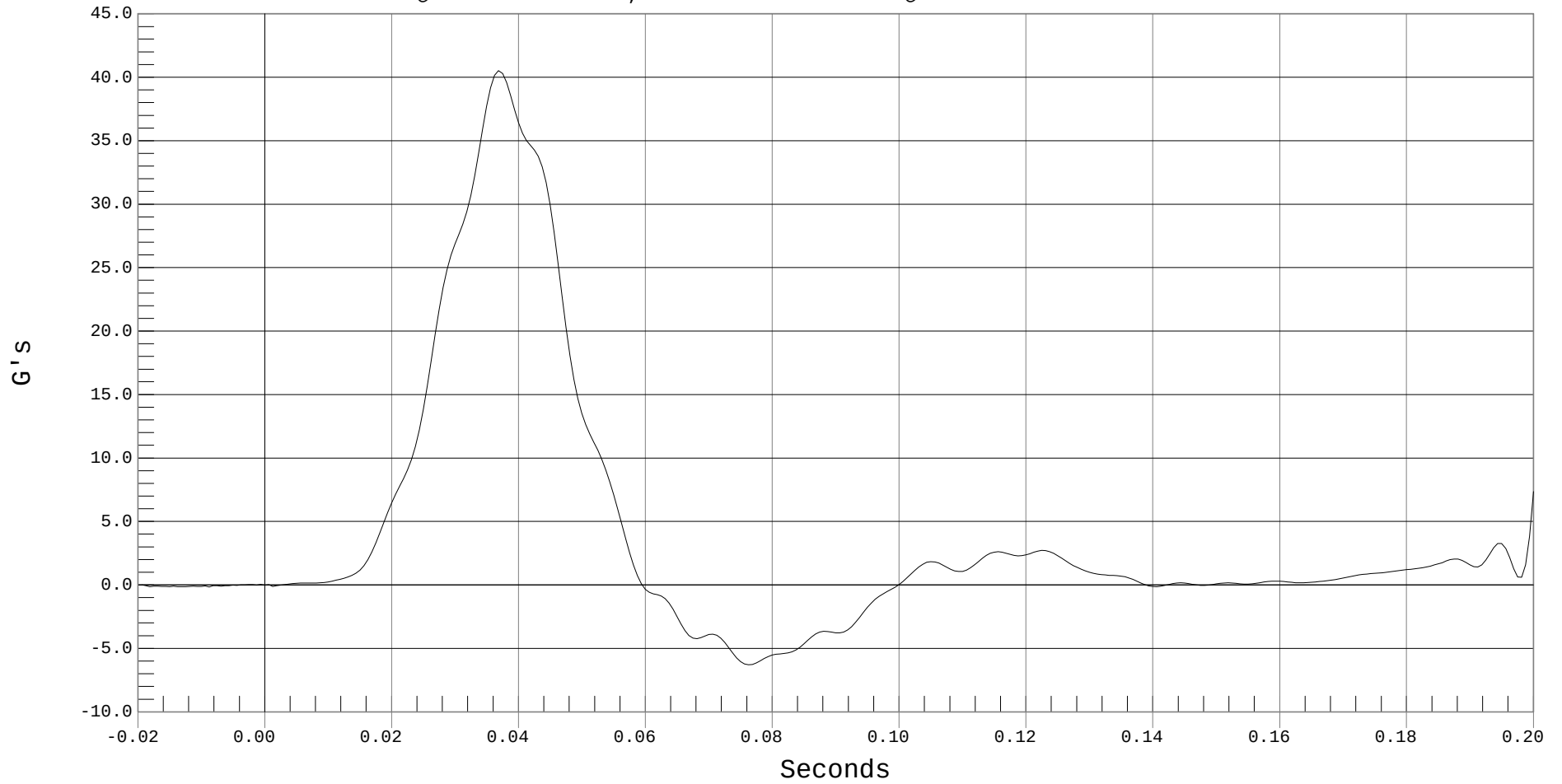
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Fir Filtered

— 1 DRIVER PELVIS Yr, b01063FI.R45

Ymin = -6.3 G's @ 0.0762 Seconds, Ymax = 40.51 G's @ 0.0368 Seconds





DRIVER PELVIS REDUNDANT Y VELOCITY

Test Desc.: FMVSS 201P SIDE POLE IMPACT (C15801)

Component: 2001 VW JETTA 4 DOOR SEDAN

Other Info:

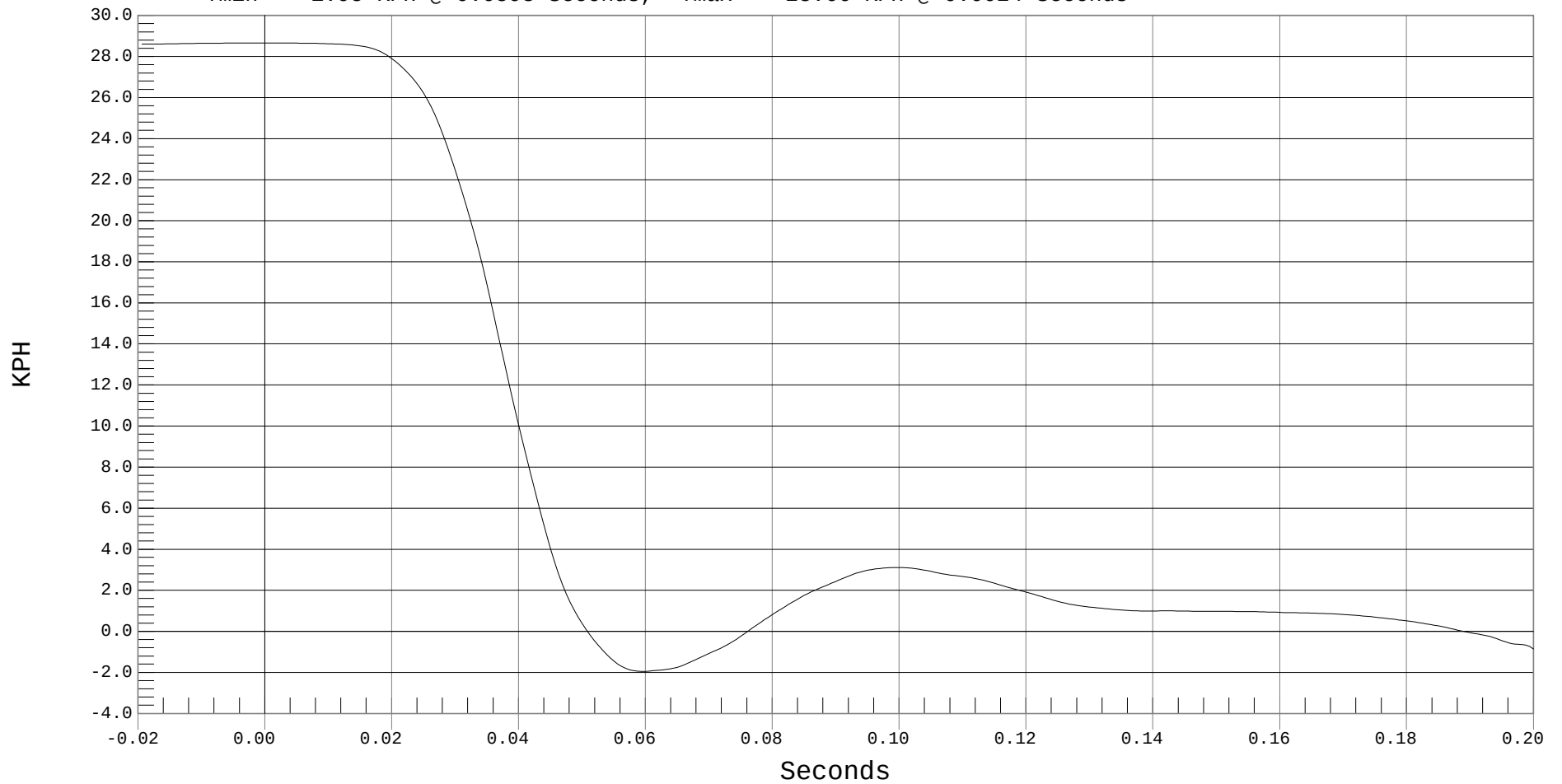
Test Date: 06-08-01

Speed: 17.8 MPH, 28.6 KPH

Fir Filtered

— 1 DRIVER PELVIS Y REDUNDANT VELOCITY, b01063FI.V45

Ymin = -1.95 KPH @ 0.0593 Seconds, Ymax = 28.66 KPH @ 0.0024 Seconds



APPENDIX C

SID CONFIGURATION AND PERFORMANCE VERIFICATION DATA

SID/HIII Calibration Data Sheet
Side Impact Dummy
Configured to Left Side Impact

Calibration Date: 6/5/01

Technician: Tim Michnay

Tested Parameter	Units	Specification	Dummy Serial Number: 037	
			Pre-Test	Post-Test
SH – Seated Height	mm	889 - 909	900	900
RH – Rib Height	mm	501 – 521	511	511
HP – Hip Pivot Height	mm	99 ref.	99	99
RD-Rib from Back Line	mm	229 – 241	236	236
KV – Knee Pivot from Back Line	mm	511 – 526	520	520
SW – Knee Pivot to Floor	mm	490 – 505	494	494
HW – Hip Width	mm	356 – 391	380	380
Laboratory Temperature	°C	18.9 to 25.5	22.1	21.2
Laboratory Relative Humidity	%	10 to 70	53	57
Probe Velocity	m/s	4.27 – 4.33	4.28	4.29
Upper Rib	G's	37 – 46	40	41
Lower Rib	G's	37 – 46	38	43
Lower Spine	G's	15 – 22	20	22
Laboratory Temperature	°C	18.9 to 25.5	22.1	21.2
Laboratory Relative Humidity	%	10 to 70	53	54
Probe Velocity	m/s	4.27 – 4.33	4.29	4.29
Pelvis	G's	40 - 60	53	43

SID/HIII Calibration Data Sheet
Side Impact Dummy
Pre-Test External Measurements

ATD Serial No.: 037

Test Number: D0179

Tested Parameter	Units	Specification	Result	Pass/Fail
SH – Seated Height	mm	889 - 909	900	Pass
RH – Rib Height	mm	501 – 521	511	Pass
HP – Hip Pivot Height	mm	99 ref.	99	Pass
RD-Rib from Back Line	mm	229 – 241	236	Pass
KV – Knee Pivot from Back Line	mm	511 – 526	520	Pass
SW – Knee Pivot to Floor	mm	490 – 505	494	Pass
HW – Hip Width	mm	356 – 391	380	Pass
Overall Test Results				Pass

Laboratory Technician

6/6/01
Test Date

Approved By

SID/HIII Calibration Data Sheet
Side Impact Dummy
Pre-Test Head Drop (Lateral) Calibration

ATD Serial No.: 037

Test I.D.: D01791

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.5	21.7	Pass
Laboratory Relative Humidity	%	10 to 70	47	Pass
Peak Resultant Acceleration	G's	120 to 150	140	Pass
Peak Longitudinal Acceleration	G's	±15.0	-9	Pass
Is Resultant Curve Unimodal?	Yes/No	within 15% of Peak	Yes	Pass
Overall Test Results				Pass

Laboratory Technician

6/5/01

Test Date

Approved By



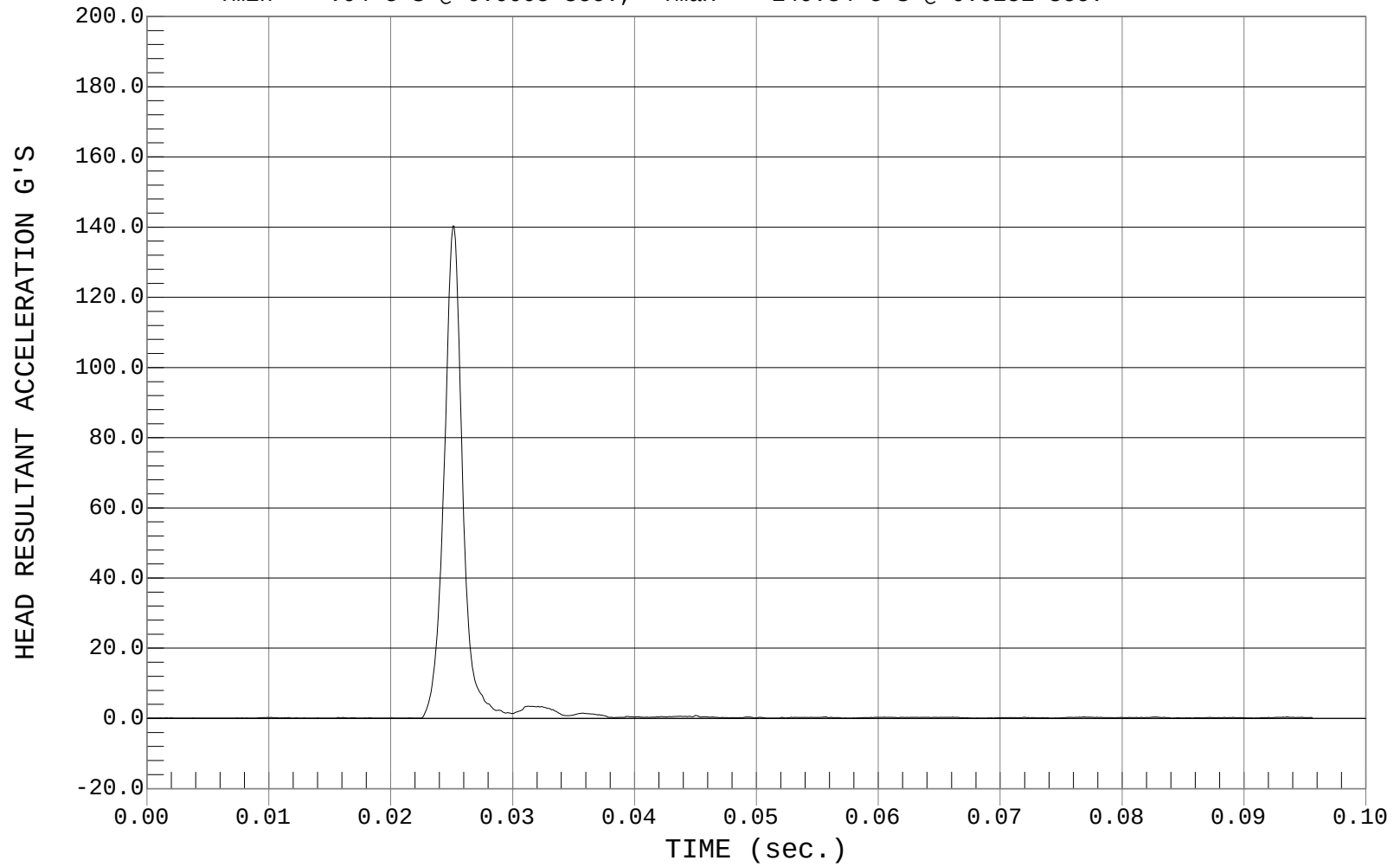
PEAK RESULTANT ACCELERATION

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

Test Date: 06-05-01
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 HEAD RESULTANT ACCELERATION, D01791AV.A01

Ymin = .04 G'S @ 0.0005 sec., Ymax = 140.34 G'S @ 0.0251 sec.





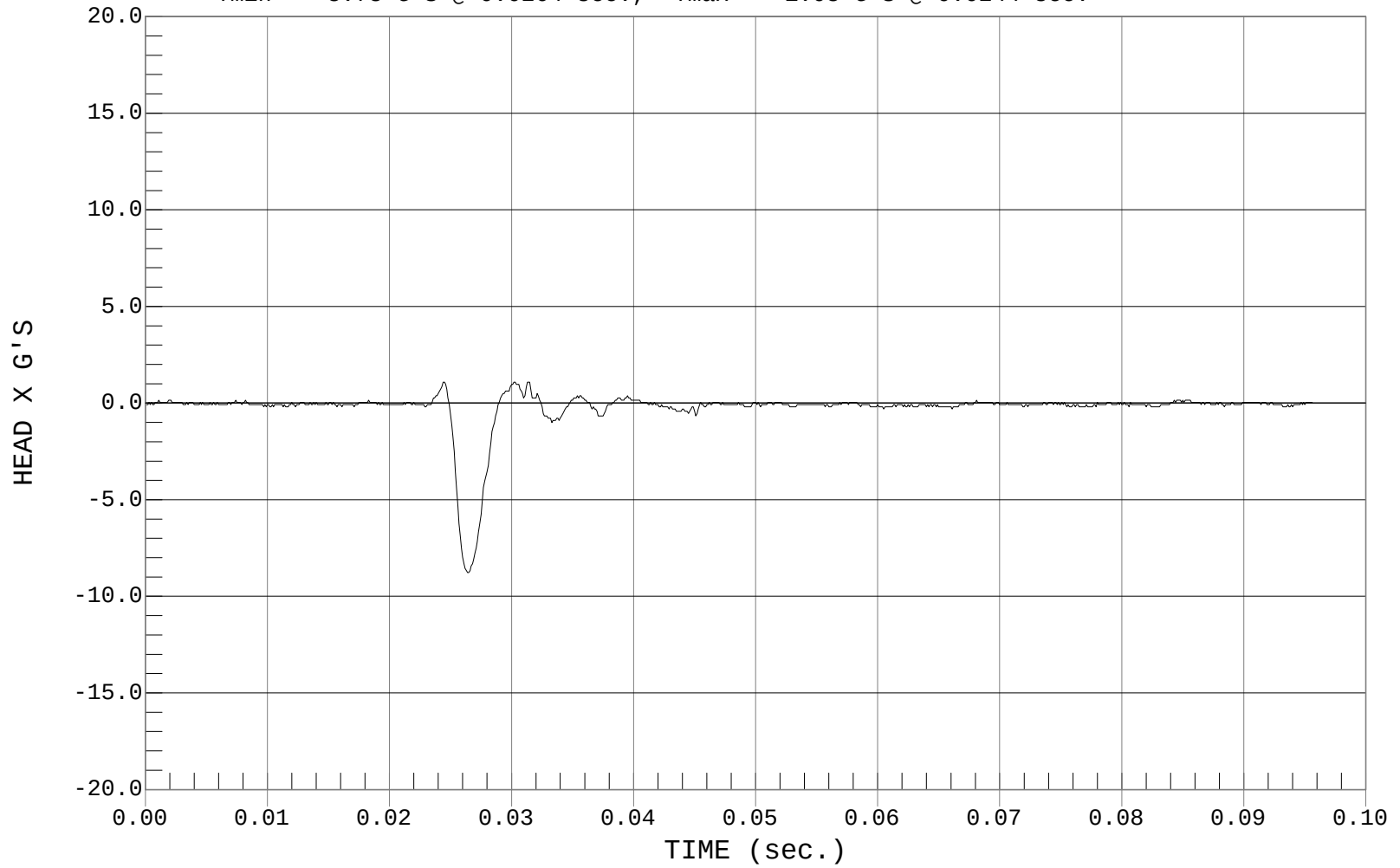
PEAK LONGITUDINAL ACCELERATION

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

Test Date: 06-05-01
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 HEAD X, D01791AT.A01

Ymin = -8.78 G'S @ 0.0264 sec., Ymax = 1.08 G'S @ 0.0244 sec.



SID/HIII Calibration Data Sheet
Side Impact Dummy
Pre-Test Neck Pendulum Calibration

ATD Serial No.: 037

Test I.D.: D01799

Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 – 22.2	22.1	Pass
Laboratory Relative Humidity		%	10 to 70	50	Pass
Impact Velocity		m/s	6.89 to 7.13	7.02	Pass
Pendulum Deceleration	10 ms	ms	1.96 – 2.55	2.18	Pass
	20 ms	ms	4.12 – 5.10	4.57	Pass
	30 ms	ms	5.73 – 7.01	6.48	Pass
	40 - 70 ms	ms	6.27 – 7.64	6.64	Pass
Midsaggital Plane Max Rotation		Degrees	66 - 82	76	Pass
Head Rotation Peak to Zero – Decay Time		ms	58 – 67	61	Pass
Max. M _x at Occipital Condyles		Nm	73 – 88	74	Pass
M _x Peak to Zero – Decay Time		ms	49 – 64	59	Pass
M _x Peak to Max. Head Rotation		ms	2 - 16	14	Pass
Overall Test Results				Pass	

Laboratory Technician

6/6/01

Test Date

Approved By



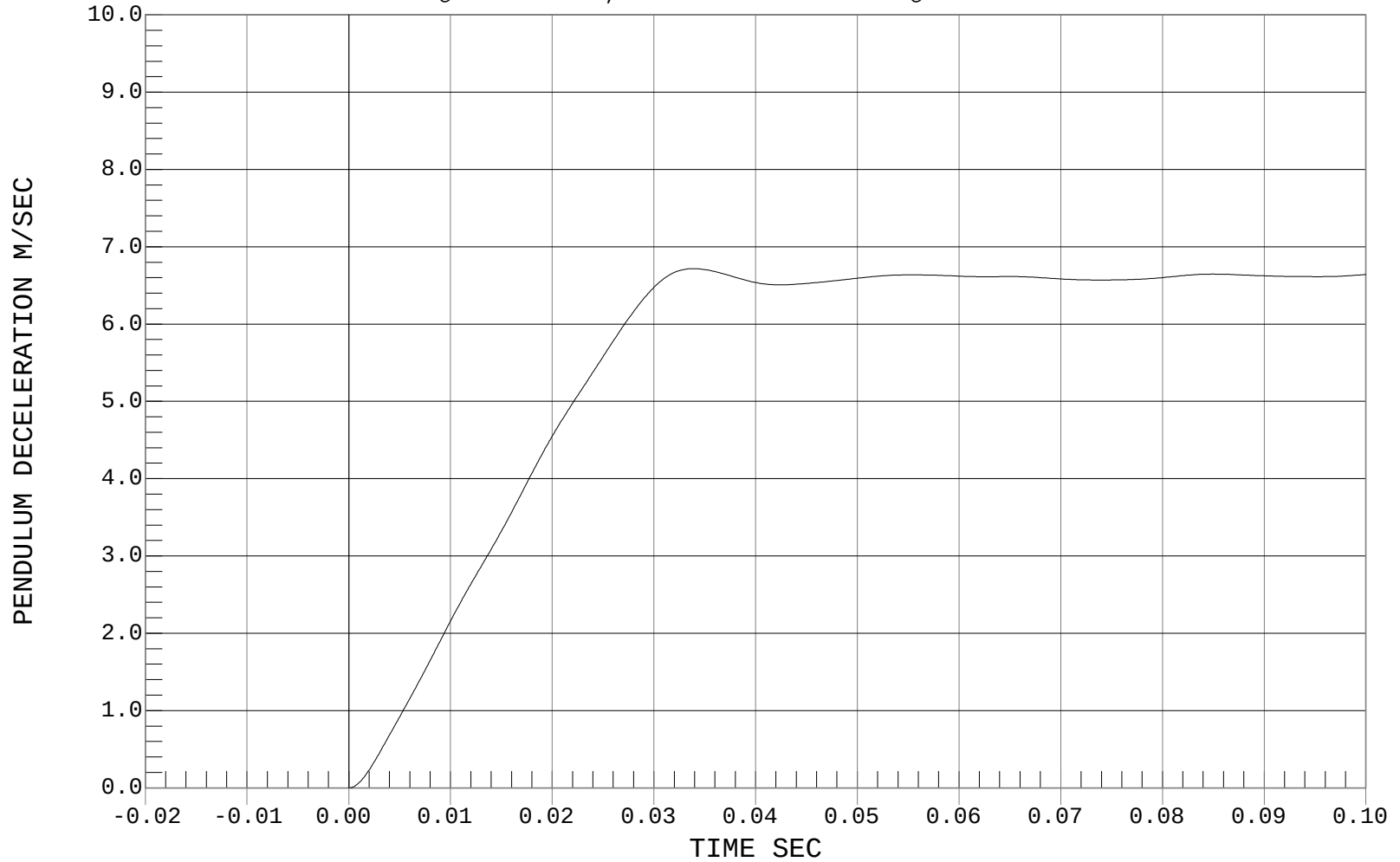
PENDULUM DECELERATION

Test Desc.: Dummy Calibration - Neck Bending
Component: Dummy #037

Test Date: 06-06-01
Speed: 23.02 FT/SEC, 7.02 M/SEC

— 1 PENDULUM DECELERATION, D01799AI.V04

Ymin = 0 M/SEC @ 0.0001 SEC, Ymax = 8.23 M/SEC @ 0.1862 SEC





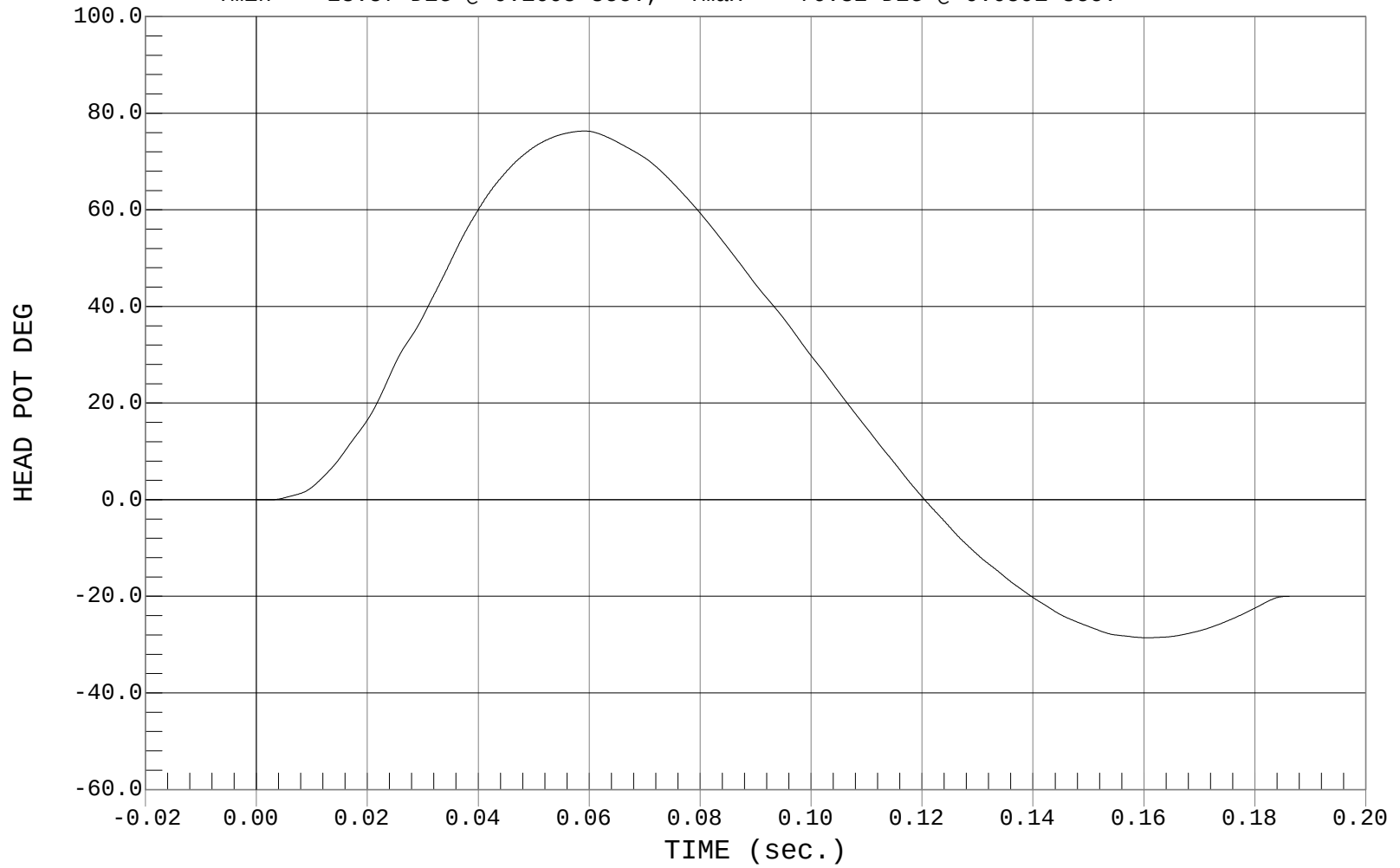
NECK ROTATION

Test Desc.: Dummy Calibration - Neck Bending
Component: Dummy #037

Test Date: 06-06-01
Speed: 23.02 FT/SEC, 7.02 M/SEC

— 1 HEAD POT, D01799DU.D05

Ymin = -28.57 DEG @ 0.1605 sec., Ymax = 76.32 DEG @ 0.0591 sec.



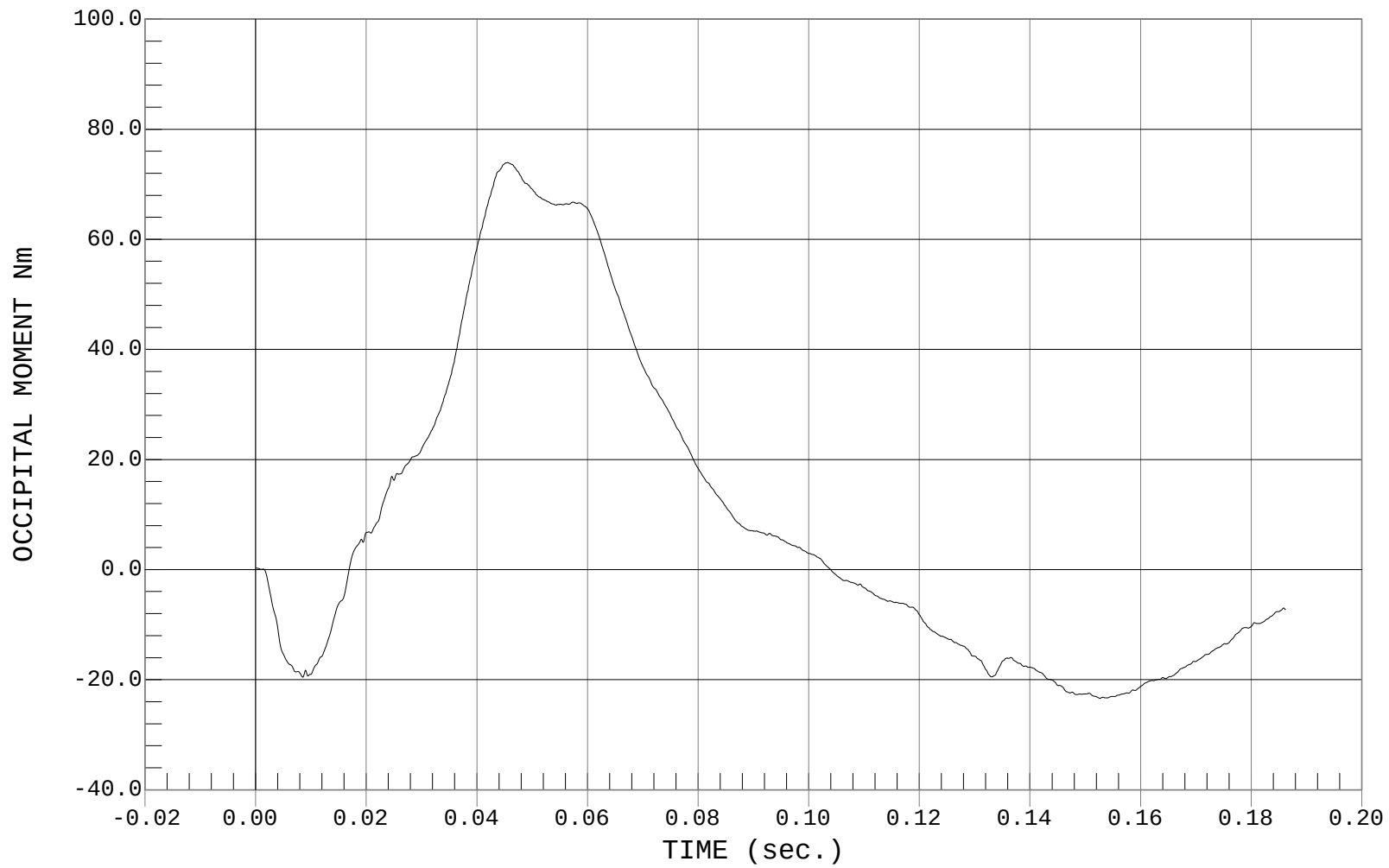


OCCIPITAL MOMENT

Test Desc.: Dummy Calibration - Neck Bending
Component: Dummy #037

Test Date: 06-06-01
Speed: 23.02 FT/SEC, 7.02 M/SEC

— 1 OCCIPITAL MOMENT, D01799NK.MNT



SID/HIII Calibration Data Sheet
Side Impact Dummy
Pre-Test Thorax Impact Calibration

ATD Serial No.: 037

Test I.D.: D01792

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 – 25.5	22.1	Pass
Laboratory Relative Humidity	%	10 to 70	53	Pass
Probe Velocity	m/s	4.27 – 4.33	4.28	Pass
Upper Rib	G's	37 – 46	40	Pass
Lower Rib	G's	37 – 46	38	Pass
Lower Spine	G's	15 - 22	20	Pass
Overall Test Results				Pass

Laboratory Technician

6/6/01

Test Date

Approved By



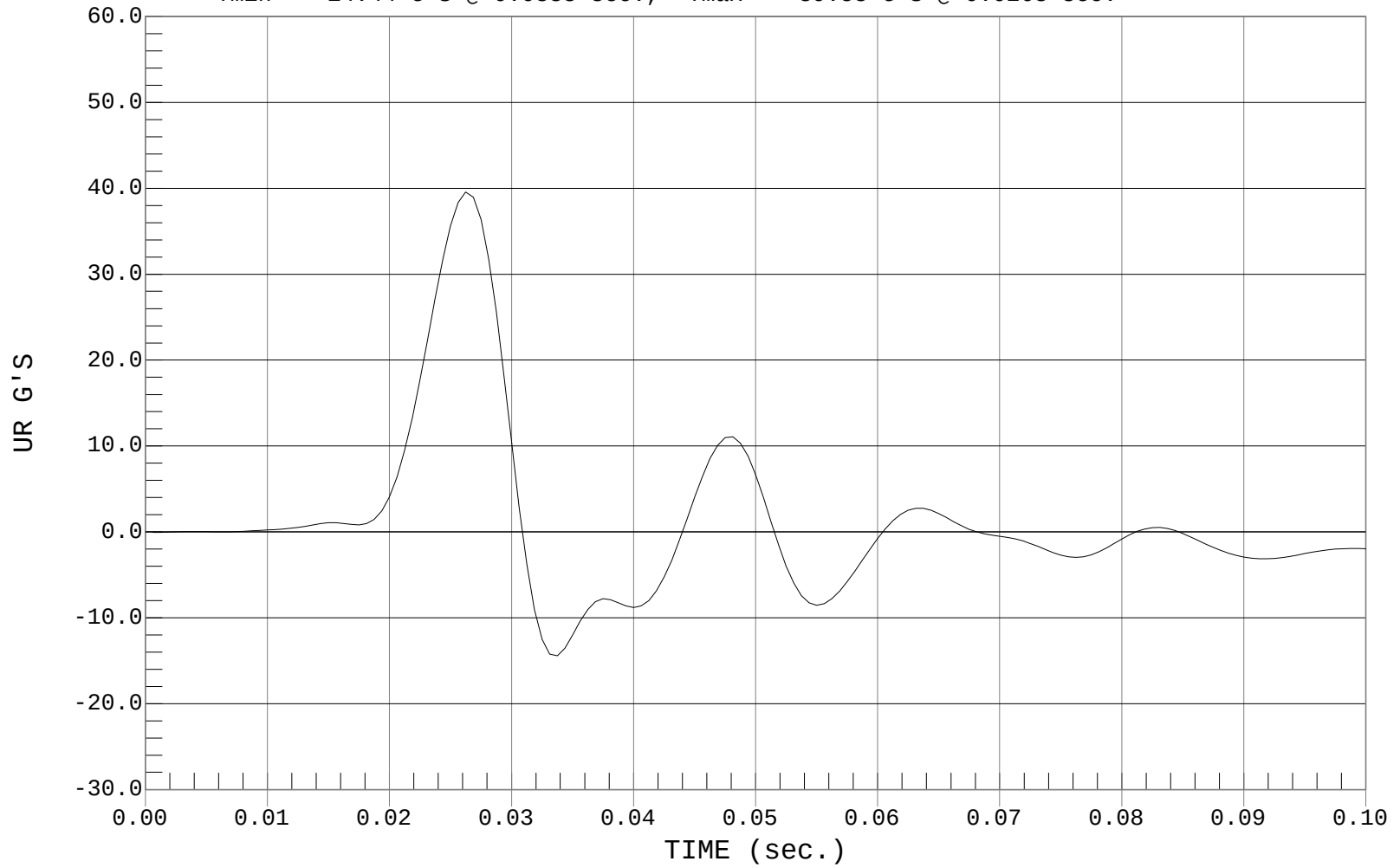
UPPER RIB ACCELERATION

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

Test Date: 06-06-01
Speed: 14.06 FT/SEC, 4.28 M/SEC

— 1 UR, D01792FI.R08

Ymin = -14.44 G'S @ 0.0338 sec., Ymax = 39.58 G'S @ 0.0263 sec.





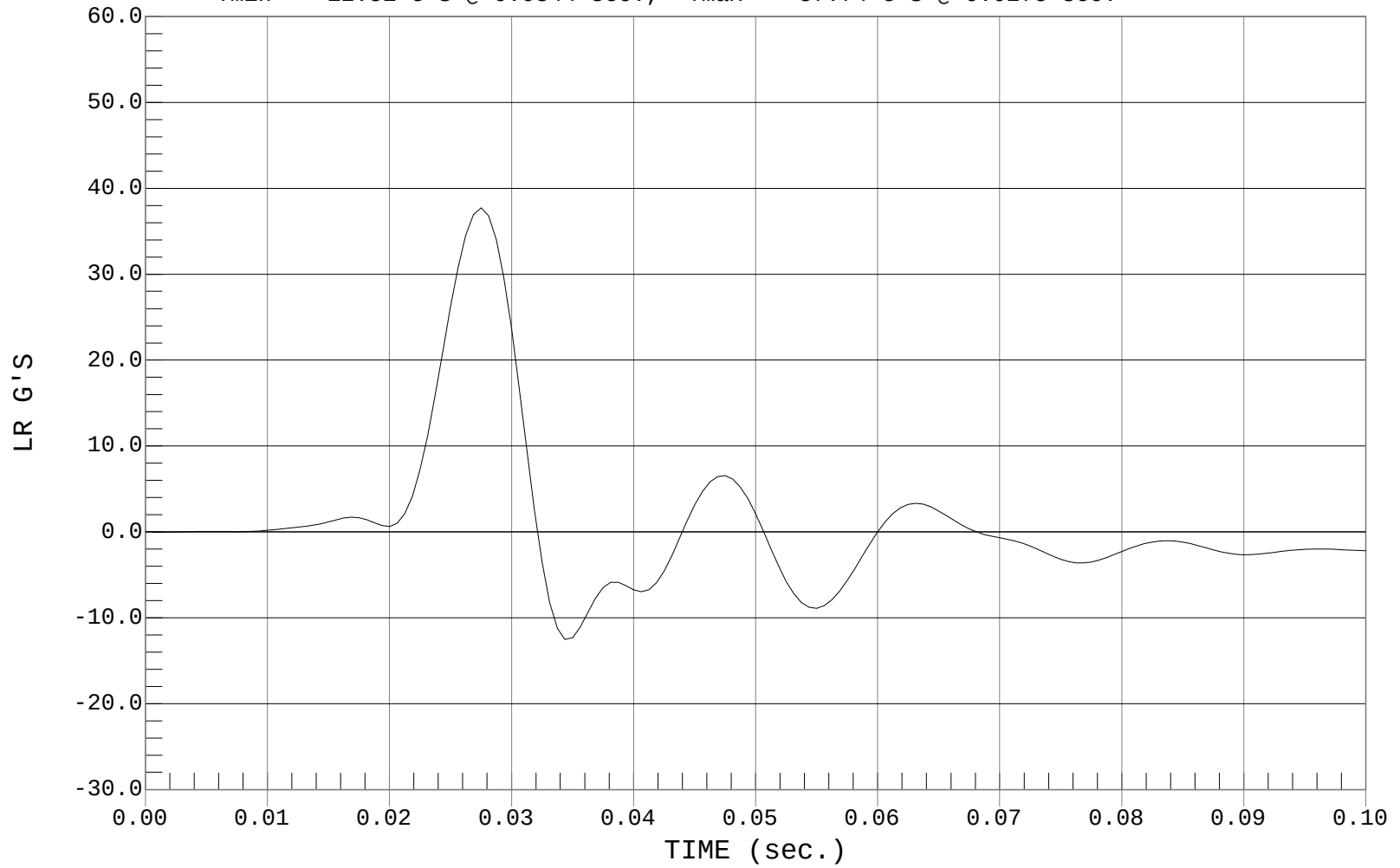
LOWER RIB ACCELERATION

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

Test Date: 06-06-01
Speed: 14.06 FT/SEC, 4.28 M/SEC

— 1 LR, D01792FI.R09

Ymin = -12.51 G'S @ 0.0344 sec., Ymax = 37.74 G'S @ 0.0275 sec.





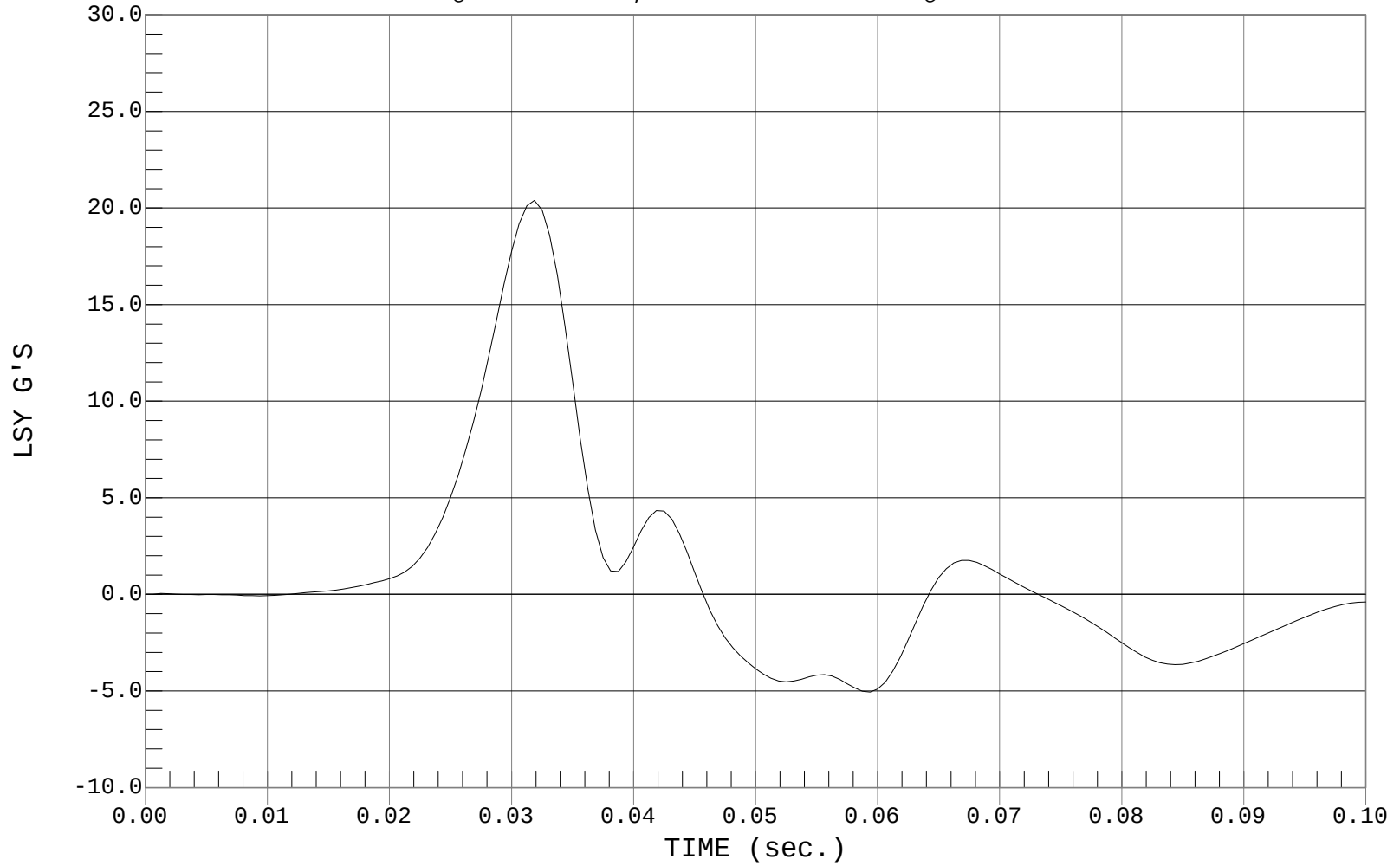
LOWER SPINE ACCELERATION

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

Test Date: 06-06-01
Speed: 14.06 FT/SEC, 4.28 M/SEC

— 1 LSY, D01792FI.R10

Ymin = -5.05 G'S @ 0.0594 sec., Ymax = 20.39 G'S @ 0.0319 sec.



SID/HIII Calibration Data Sheet
Side Impact Dummy
Pre-Test Pelvis Impact Calibration

ATD Serial No.: 037

Test I.D.: D01793

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 – 25.5	22.1	Pass
Laboratory Relative Humidity	%	10 to 70	53	Pass
Probe Speed	m/s	4.27 – 4.33	4.29	Pass
Pelvis Acceleration	G's	40 - 60	53	Pass
Overall Test Results				Pass

Laboratory Technician

6/6/01

Test Date

Approved By



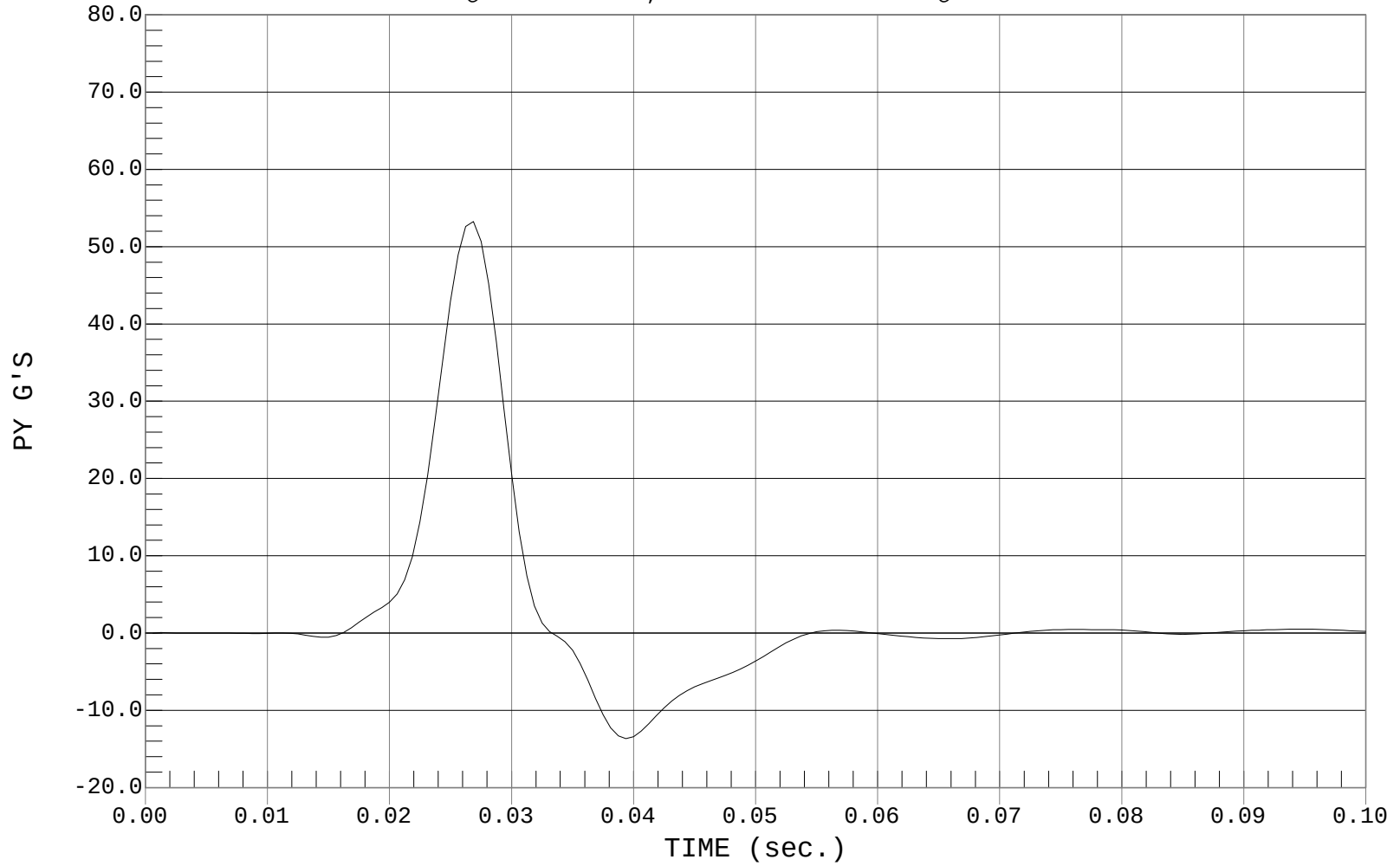
PELVIS ACCELERATION

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

Test Date: 06-06-01
Speed: 14.08 FT/SEC, 4.29 M/SEC

— 1 PY, D01793FI.R11

Ymin = -13.68 G'S @ 0.0394 sec., Ymax = 53.25 G'S @ 0.0269 sec.



SID/HIII Calibration Data Sheet
Side Impact Dummy
Pre-Test Abdominal Compression Calibration (Preload = 10 lbs)

ATD Serial No.: 037

Test I.D.: D01794

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 – 25.5	21.5	Pass
Laboratory Relative Humidity	%	10 to 70	45	Pass
Force @ 12.7 mm	N	104 – 162	133	Pass
Force @ 19 mm	N	163 – 222	184	Pass
Force @ 25.4 mm	N	222 – 280	250	Pass
Force @ 33 mm	N	325 - 391	349	Pass
Overall Test Results				Pass

Laboratory Technician

6/5/01

Test Date

Approved By



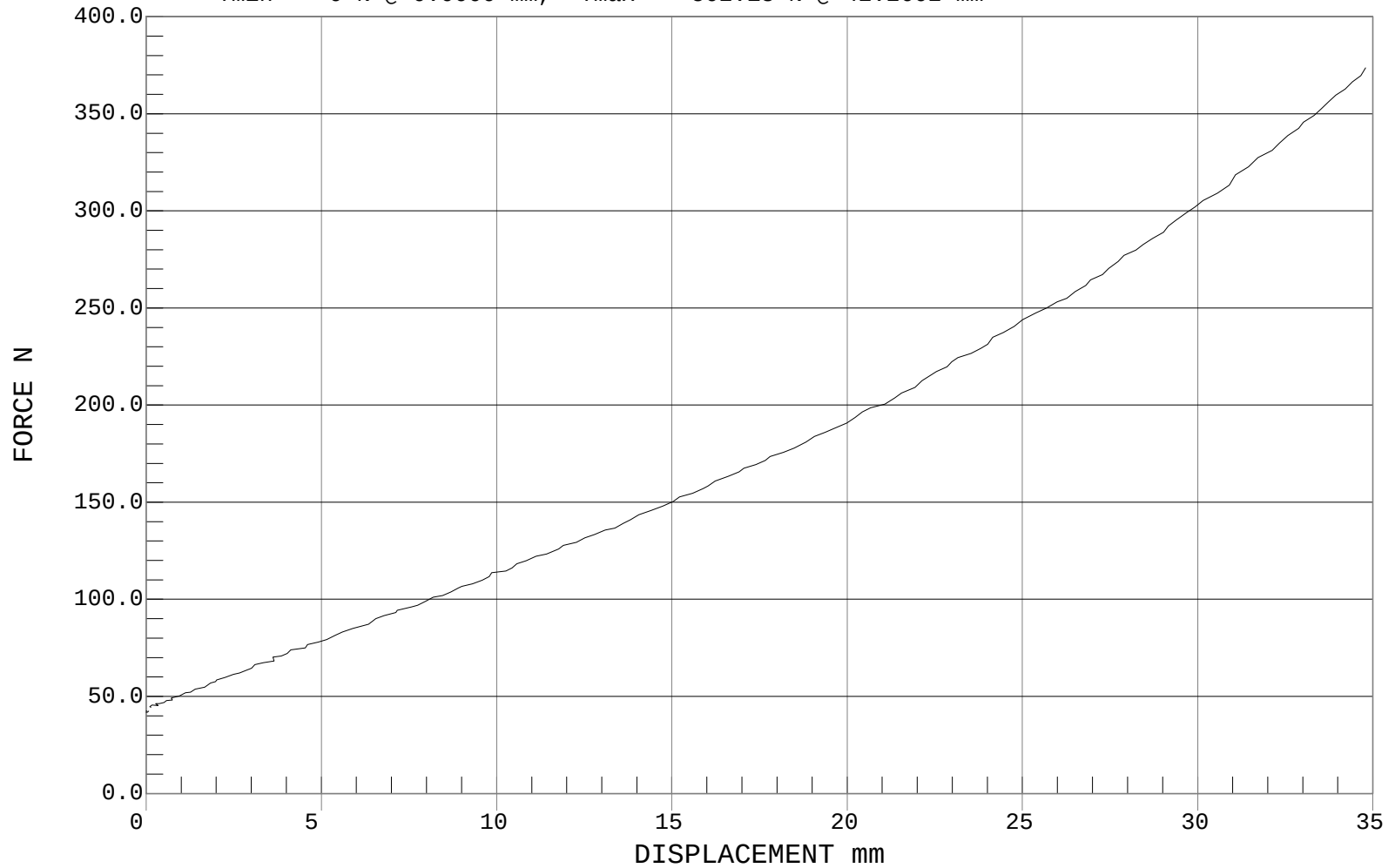
ABDOMEN COMPRESSION

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

Test Date: 06-05-01
Speed: 0.00 FT/SEC, 0.00 M/SEC

1 FORCE, D01794FC.F16

Ymin = 0 N @ 0.0000 mm, Ymax = 502.18 N @ 42.2602 mm



SID/HIII Calibration Data Sheet
Side Impact Dummy
Pre-Test Lumbar Flexion Calibration

ATD Serial No.: 037

Test I.D.: D01795

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 – 25.5	21.5	Pass
Laboratory Relative Humidity	%	10 to 70	42	Pass
Force @ 0°	N	0 – 26.7	0	Pass
Force @ 20°	N	97.9 – 151.2	102.6	Pass
Force @ 30°	N	151.2 – 204.6	155.1	Pass
Force @ 40°	N	204.6 – 258.0	207.4	Pass
Return Angle	Degrees	12° Maximum	7	Pass
Overall Test Results				Pass

Laboratory Technician

6/5/01
Test Date

Approved By



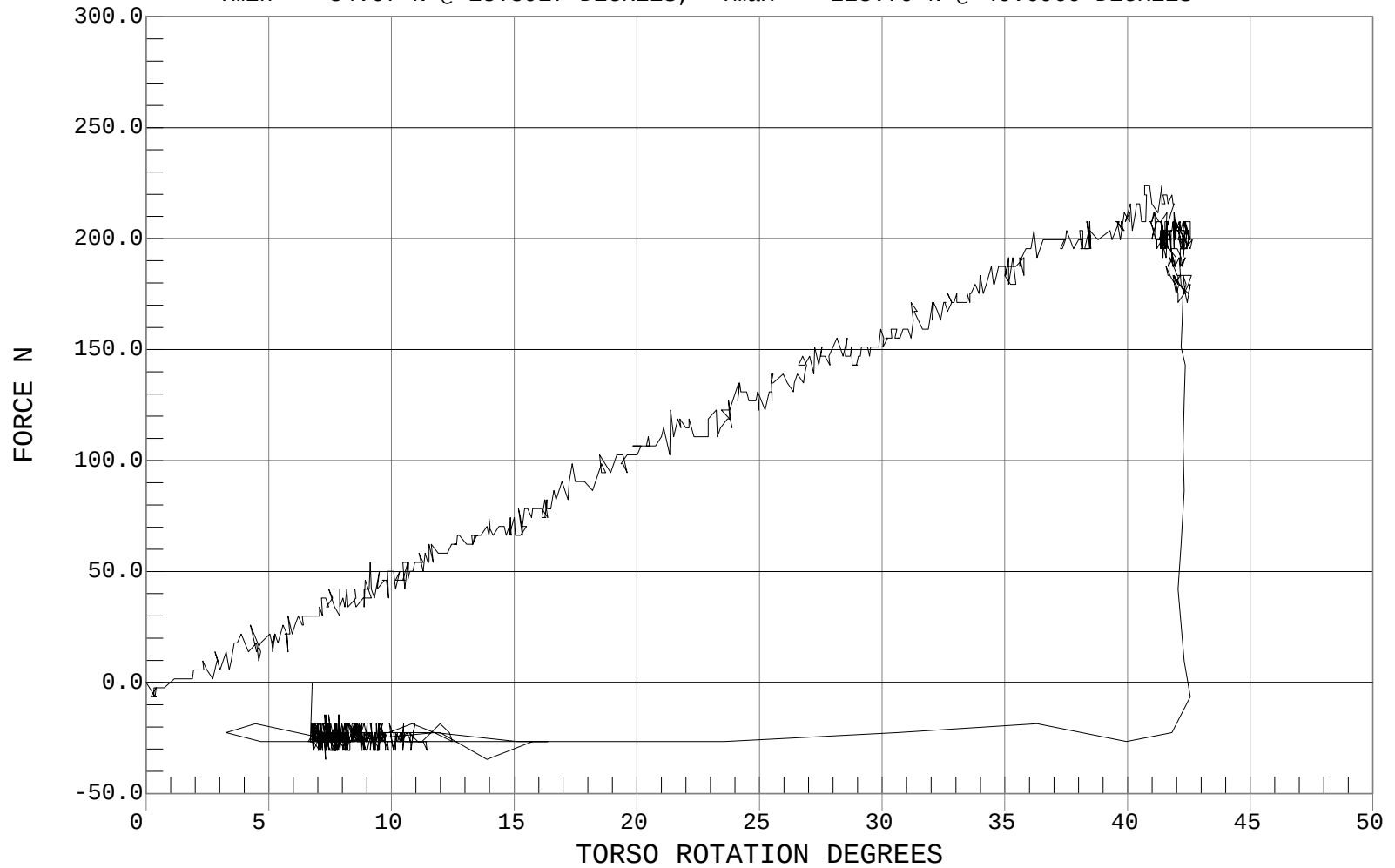
LUMBAR FLEXION

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

Test Date: 06-05-01
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 FORCE, D01795FC.F14

Ymin = -34.67 N @ 13.8917 DEGREES, Ymax = 223.79 N @ 40.6960 DEGREES



SID/HIII Calibration Data Sheet
Side Impact Dummy
Pre-Test Inspection Checklist

ATD Serial No.: 037

Test Part	Items Checked	Result
Skin	Visual inspection	Pass
Head	Visual, ballast, accelerometer mount	Pass
Neck	Visual	Pass
Spine Box	Visual, ballast, weldment, accelerometer mount	Pass
Rib Cage	Visual, measure	Pass
Sternum	Visual	Pass
Lumbar Spine	Visual	Pass
Abdomen	Visual	Pass
Pelvis	Visual, palpate, accelerometer mount	Pass
Upper Legs	Visual	Pass
Knees	Visual	Pass
Lower Legs	Visual, range of motion	Pass
Ankles	Visual, range of motion	Pass
Feet	Visual, range of motion	Pass
Joints	1 to 2 g range	Pass
Other		

Pass

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

Laboratory Technician

6/6/01
Test Date

Approved By

Approved By SID/HIII Calibration Data Sheet
Side Impact Dummy
Post-Test External Measurements

ATD Serial No.: 037

Test Number: D0185

Tested Parameter	Units	Specification	Result	Pass/Fail
SH – Seated Height	mm	889 - 909	900	Pass
RH – Rib Height	mm	501 – 521	511	Pass
HP – Hip Pivot Height	mm	99 ref.	99	Pass
RD-Rib from Back Line	mm	229 – 241	236	Pass
KV – Knee Pivot from Back Line	mm	511 – 526	520	Pass
SW – Knee Pivot to Floor	mm	490 – 505	494	Pass
HW – Hip Width	mm	356 – 391	380	Pass
Overall Test Results				Pass

Laboratory Technician

6/12/01

Test Date

Approved By

SID/HIII Calibration Data Sheet
Side Impact Dummy
Post-Test Head Drop (Lateral) Calibration

ATD Serial No.: 037

Test I.D.: D01851

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.5	20.7	Pass
Laboratory Relative Humidity	%	10 to 70	52	Pass
Peak Resultant Acceleration	G's	120 to 150	140	Pass
Peak Longitudinal Acceleration	G's	±15.0	-9	Pass
Is Resultant Curve Unimodal?	Yes/No	within 15% of Peak	Yes	Pass
Overall Test Results				Pass

Laboratory Technician

6/12/01

Test Date

Approved By



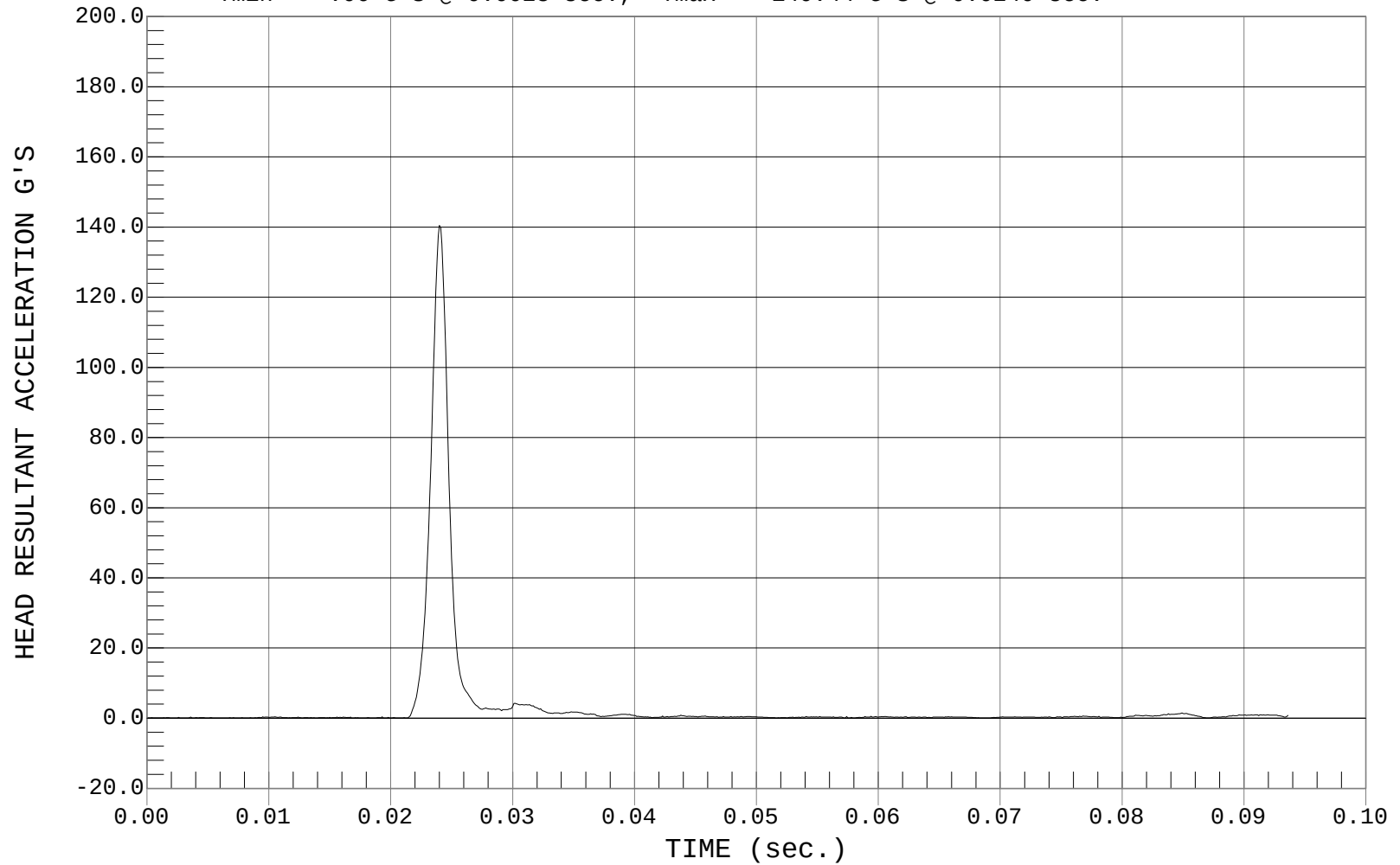
PEAK RESULTANT ACCELERATION

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

Test Date: 06-12-01
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 HEAD RESULTANT ACCELERATION, D01851AV.A01

Ymin = .06 G'S @ 0.0028 sec., Ymax = 140.44 G'S @ 0.0240 sec.





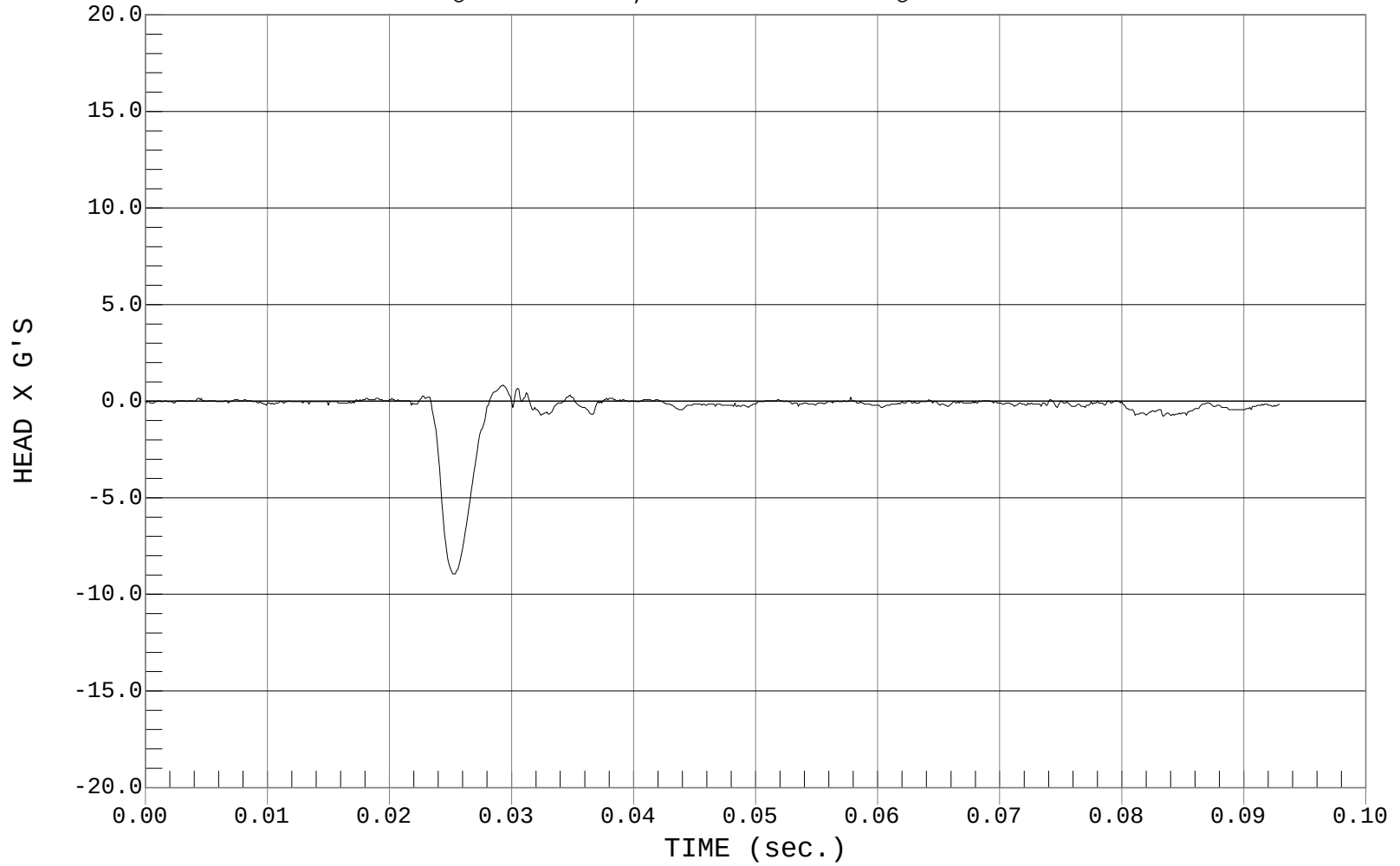
PEAK LONGITUDINAL ACCELERATION

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

Test Date: 06-12-01
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 HEAD X, D01851AT.A01

Ymin = -8.95 G'S @ 0.0252 sec., Ymax = .84 G'S @ 0.0293 sec.



SID/HIII Calibration Data Sheet
Side Impact Dummy
Post-Test Neck Pendulum Calibration

ATD Serial No.: 037

Test I.D.: D01859

Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 – 22.2	20.7	Pass
Laboratory Relative Humidity		%	10 to 70	51	Pass
Impact Velocity		m/s	6.89 to 7.13	7.04	Pass
Pendulum Deceleration	10 ms	ms	1.96 – 2.55	2.25	Pass
	20 ms	ms	4.12 – 5.10	4.72	Pass
	30 ms	ms	5.73 – 7.01	6.62	Pass
	40 - 70 ms	ms	6.27 – 7.64	6.70	Pass
Midsaggital Plane Max Rotation		Degrees	66 - 82	78	Pass
Head Rotation Peak to Zero – Decay Time		ms	58 – 67	62	Pass
Max. M _x at Occipital Condyles		Nm	73 – 88	77	Pass
M _x Peak to Zero – Decay Time		ms	49 – 64	58	Pass
M _x Peak to Max. Head Rotation		ms	2 - 16	14	Pass
Overall Test Results				Pass	

Laboratory Technician

6/12/01

Test Date

Approved By



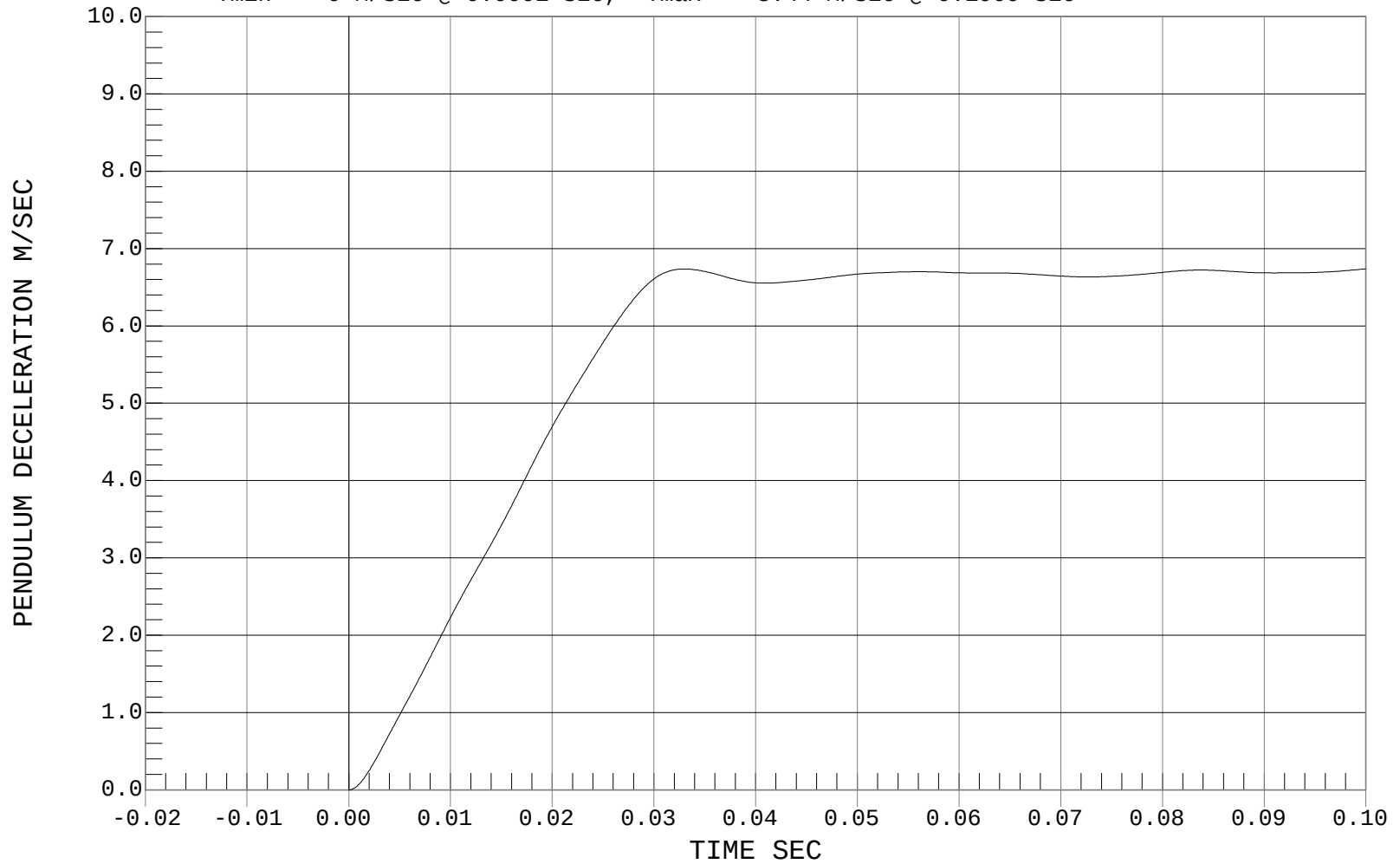
PENDULUM DECELERATION

Test Desc.: Dummy Calibration - Neck Bending
Component: Dummy #037

Test Date: 06-12-01
Speed: 23.10 FT/SEC, 7.04 M/SEC

— 1 PENDULUM DECELERATION, D01859A1.V04

Ymin = 0 M/SEC @ 0.0001 SEC, Ymax = 8.44 M/SEC @ 0.1909 SEC





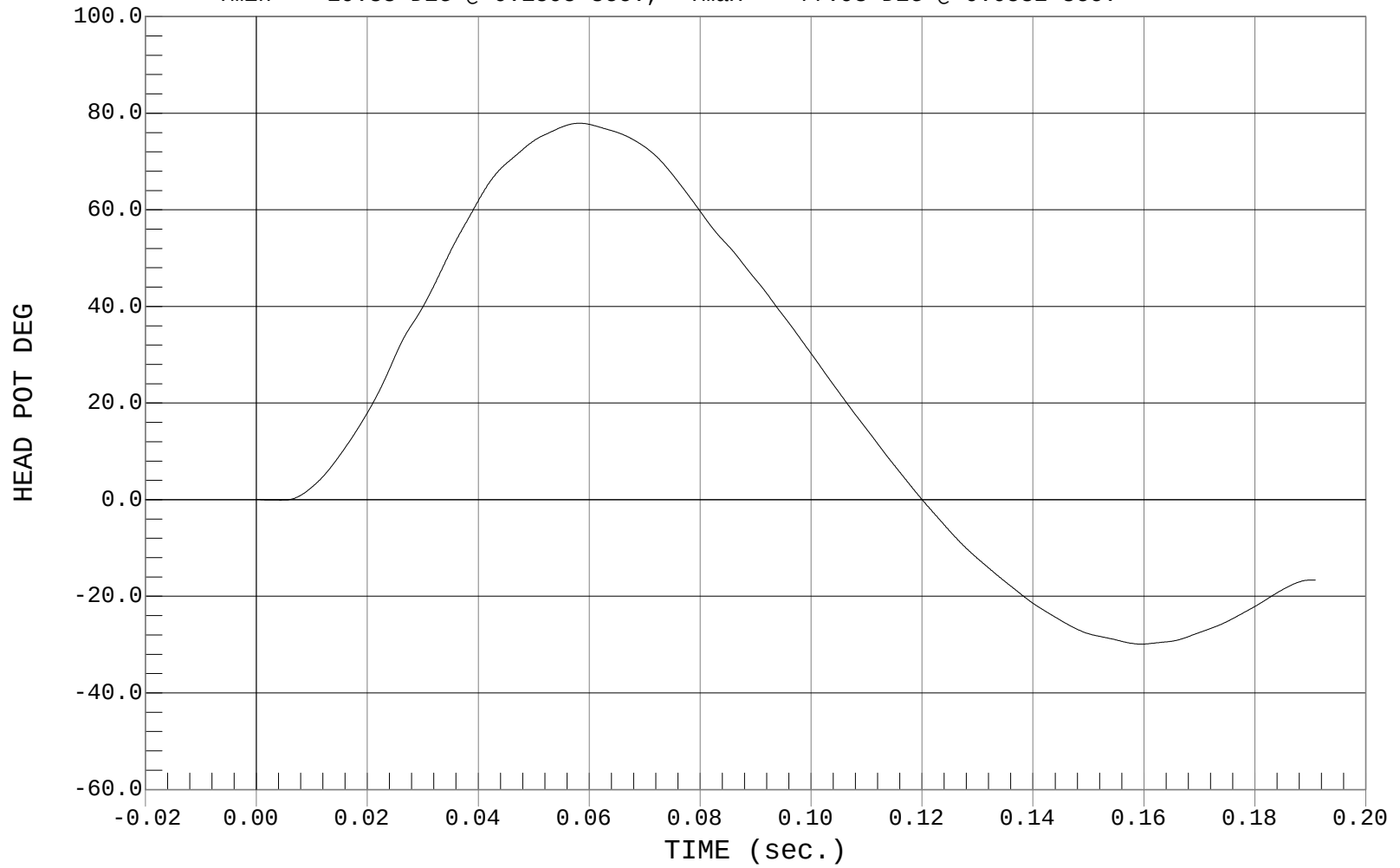
NECK ROTATION

Test Desc.: Dummy Calibration - Neck Bending
Component: Dummy #037

Test Date: 06-12-01
Speed: 23.10 FT/SEC, 7.04 M/SEC

— 1 HEAD POT, D01859DU.D05

Ymin = -29.88 DEG @ 0.1595 sec., Ymax = 77.93 DEG @ 0.0582 sec.





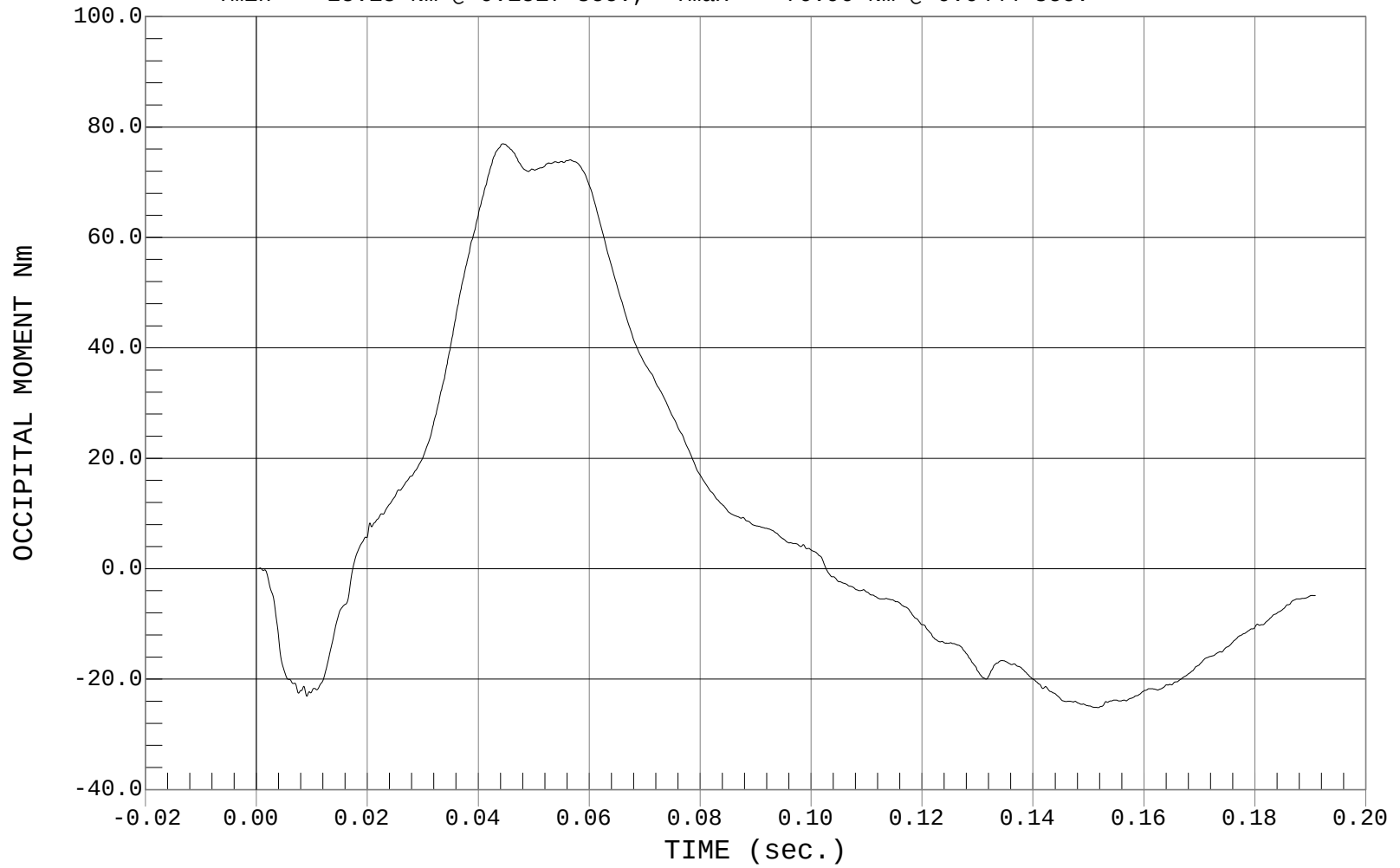
OCCIPITAL MOMENT

Test Desc.: Dummy Calibration - Neck Bending
Component: Dummy #037

Test Date: 06-12-01
Speed: 23.10 FT/SEC, 7.04 M/SEC

— 1 OCCIPITAL MOMENT, D01859NK.MNT

Ymin = -25.15 Nm @ 0.1517 sec., Ymax = 76.96 Nm @ 0.0444 sec.



SID/HIII Calibration Data Sheet
Side Impact Dummy
Post-Test Thorax Impact Calibration

ATD Serial No.: 037

Test I.D.: D01852

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 – 25.5	21.2	Pass
Laboratory Relative Humidity	%	10 to 70	57	Pass
Probe Velocity	m/s	4.27 – 4.33	4.29	Pass
Upper Rib	G's	37 – 46	41	Pass
Lower Rib	G's	37 – 46	43	Pass
Lower Spine	G's	15 - 22	22	Pass
Overall Test Results				Pass

Laboratory Technician

6/10/01

Test Date

Approved By



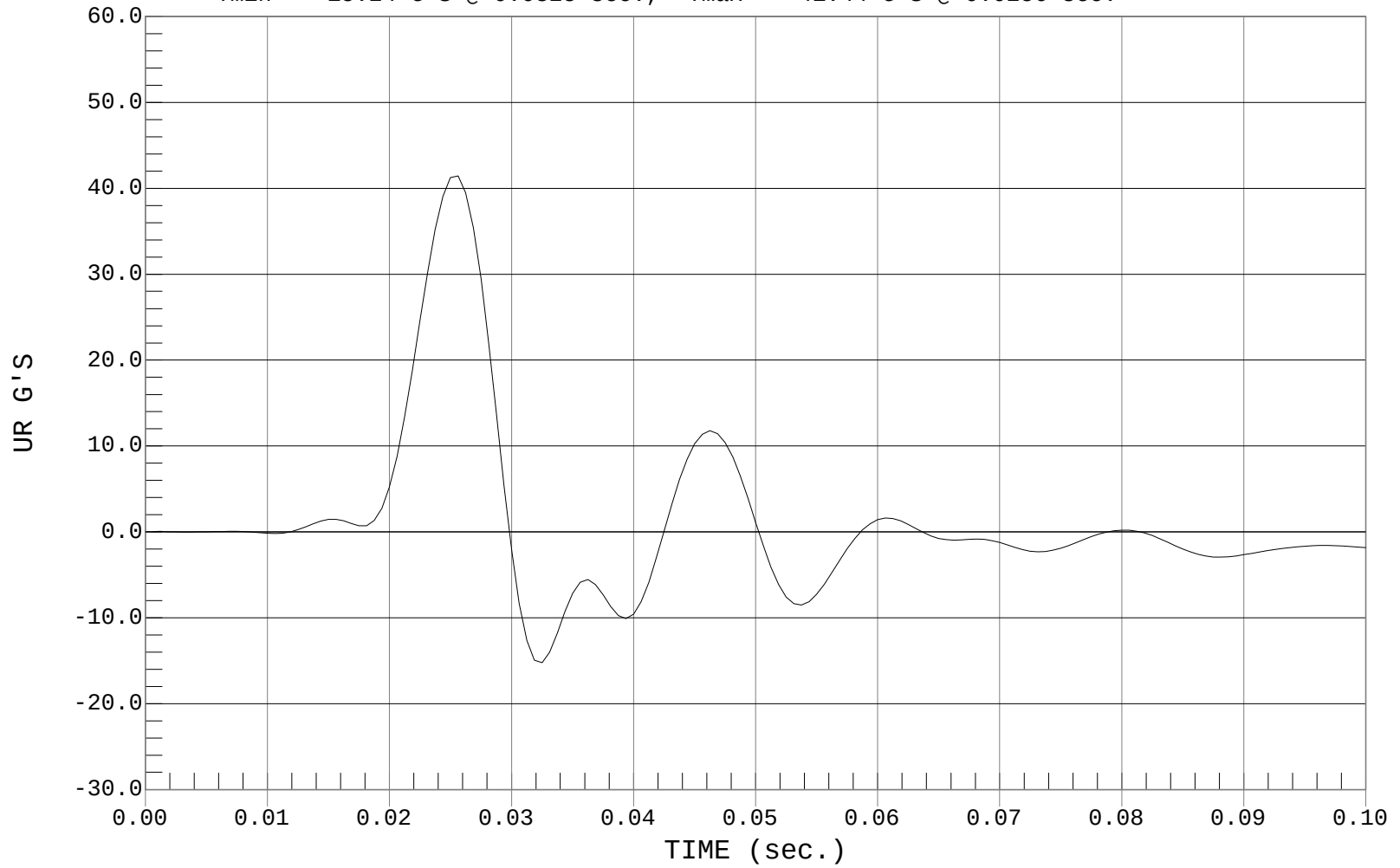
UPPER RIB ACCELERATION

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

Test Date: 06-10-01
Speed: 14.07 FT/SEC, 4.29 M/SEC

— 1 UR, D01852FI.R08

Ymin = -15.24 G'S @ 0.0325 sec., Ymax = 41.44 G'S @ 0.0256 sec.





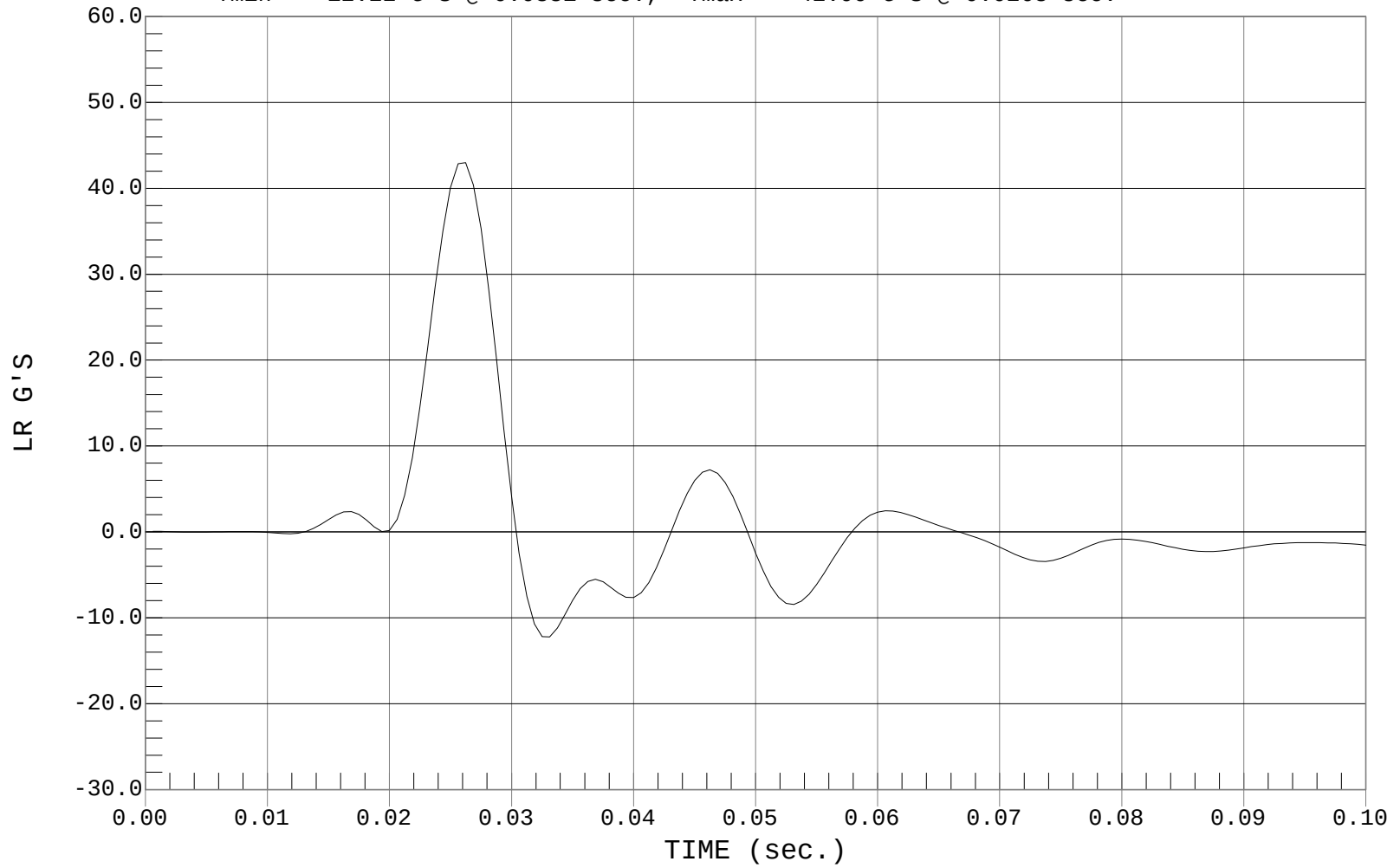
LOWER RIB ACCELERATION

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

Test Date: 06-10-01
Speed: 14.07 FT/SEC, 4.29 M/SEC

— 1 LR, D01852FI.R09

Ymin = -12.22 G'S @ 0.0331 sec., Ymax = 42.99 G'S @ 0.0263 sec.





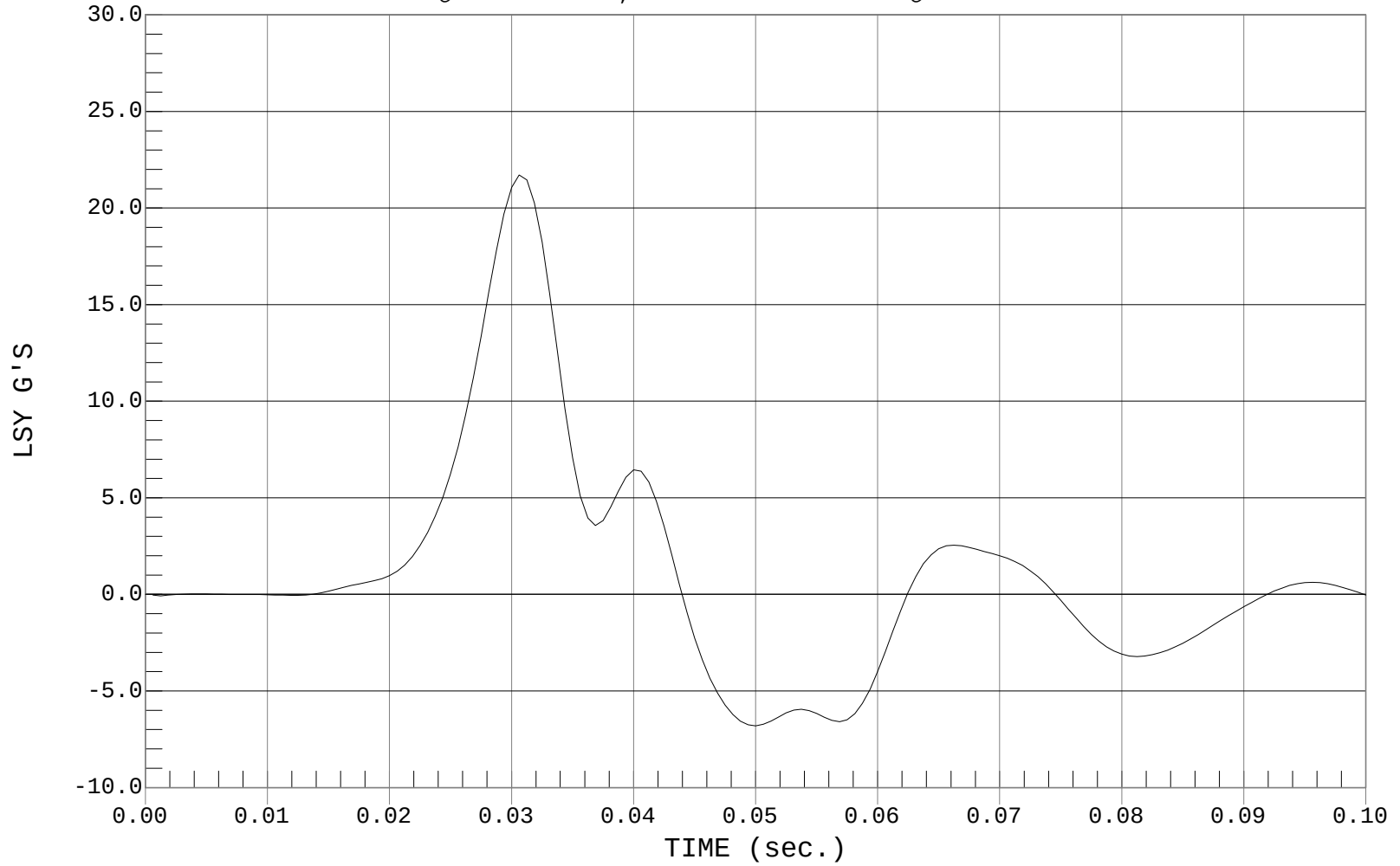
LOWER SPINE ACCELERATION

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

Test Date: 06-10-01
Speed: 14.07 FT/SEC, 4.29 M/SEC

— 1 LSY, D01852FI.R10

Ymin = -6.8 G'S @ 0.0500 sec., Ymax = 21.71 G'S @ 0.0306 sec.



SID/HIII Calibration Data Sheet
Side Impact Dummy
Post-Test Pelvis Impact Calibration

ATD Serial No.: 037

Test I.D.: D01853

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 – 25.5	21.2	Pass
Laboratory Relative Humidity	%	10 to 70	54	Pass
Probe Speed	m/s	4.27 – 4.33	4.29	Pass
Pelvis Acceleration	G's	40 - 60	43	Pass
Overall Test Results				Pass

Laboratory Technician

6/10/01

Test Date

Approved By



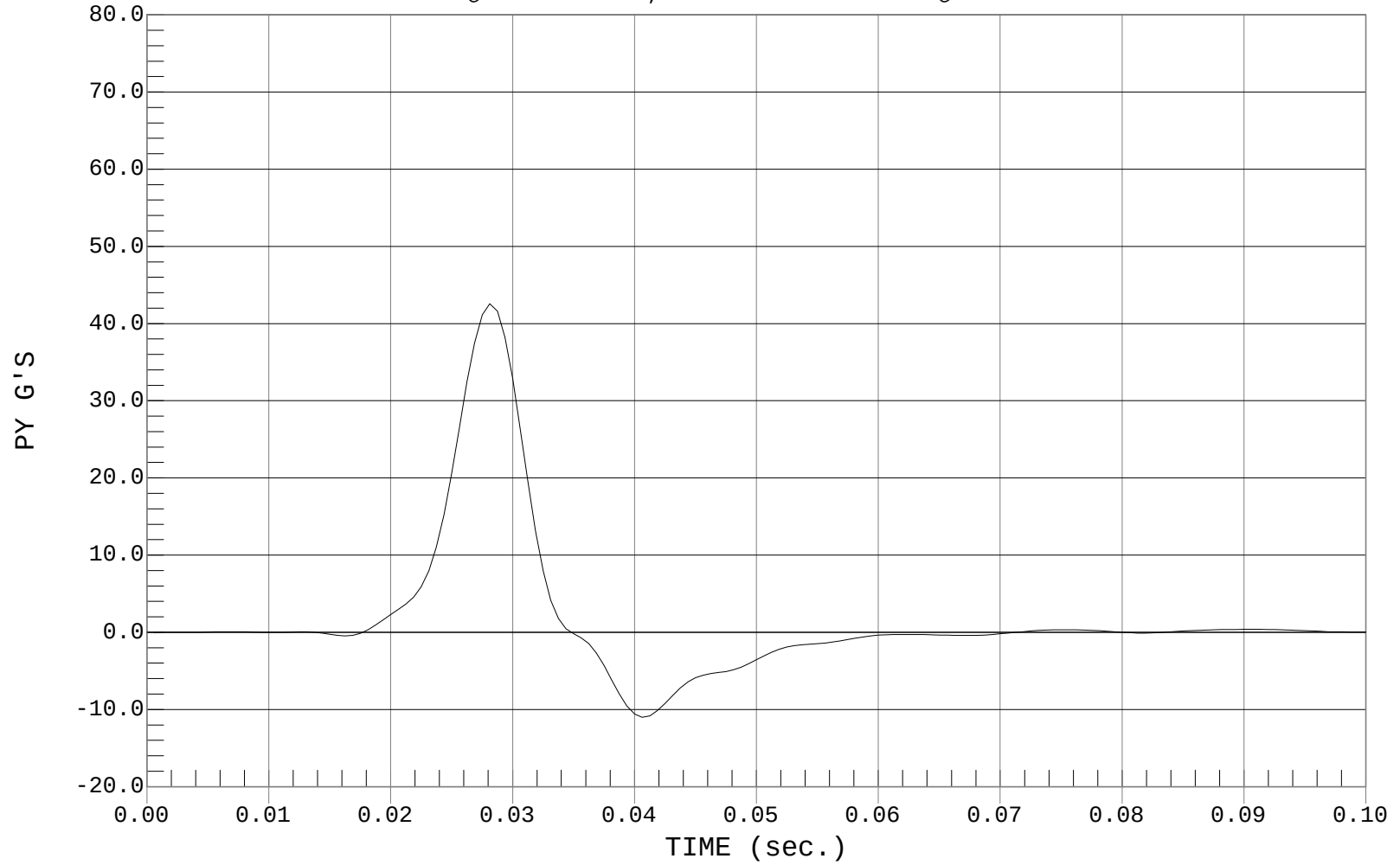
PELVIS ACCELERATION

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

Test Date: 06-10-01
Speed: 14.09 FT/SEC, 4.29 M/SEC

— 1 PY, D01853FI.R11

Ymin = -11.01 G'S @ 0.0406 sec., Ymax = 42.58 G'S @ 0.0281 sec.



SID/HIII Calibration Data Sheet
Side Impact Dummy
Post-Test Abdominal Compression Calibration (Preload = 10 lbs)

ATD Serial No.: 037

Test I.D.: D01844

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 – 25.5	21.2	Pass
Laboratory Relative Humidity	%	10 to 70	52	Pass
Force @ 12.7 mm	N	104 – 162	134	Pass
Force @ 19 mm	N	163 – 222	184	Pass
Force @ 25.4 mm	N	222 – 280	248	Pass
Force @ 33 mm	N	325 - 391	347	Pass
Overall Test Results				Pass

Laboratory Technician

6/11/01

Test Date

Approved By



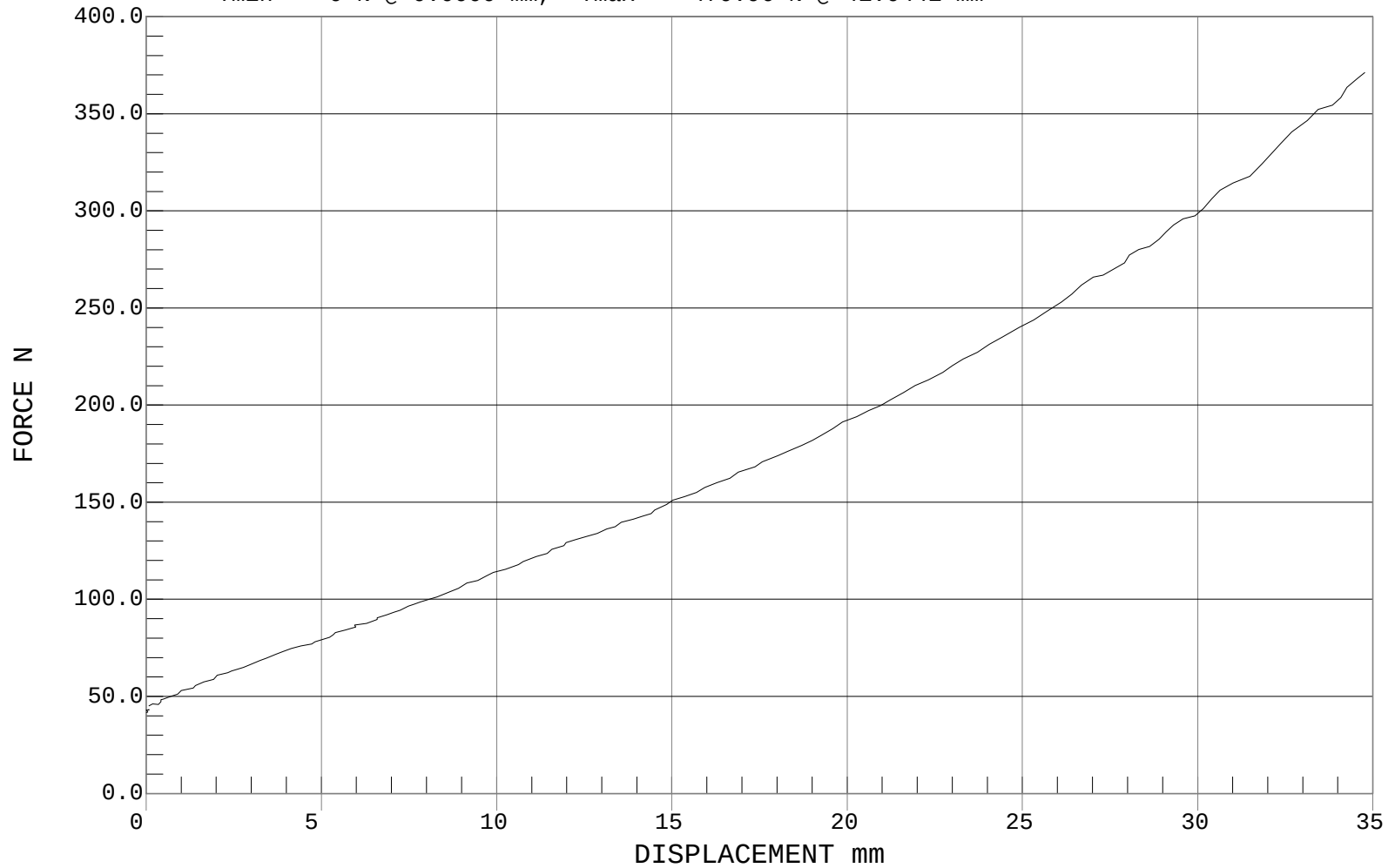
ABDOMEN COMPRESSION

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

Test Date: 06-11-01
Speed: 0.00 FT/SEC, 0.00 M/SEC

1 FORCE, D01854FC.F16

Ymin = 0 N @ 0.0000 mm, Ymax = 470.96 N @ 41.0441 mm



SID/HIII Calibration Data Sheet
Side Impact Dummy
Post-Test Lumbar Flexion Calibration

ATD Serial No.: 037

Test I.D.: D01845

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 – 25.5	21.2	Pass
Laboratory Relative Humidity	%	10 to 70	52	Pass
Force @ 0°	N	0 – 26.7	0	Pass
Force @ 20°	N	97.9 – 151.2	101.4	Pass
Force @ 30°	N	151.2 – 204.6	178.1	Pass
Force @ 40°	N	204.6 – 258.0	242.8	Pass
Return Angle	Degrees	12° Maximum	3	Pass
Overall Test Results				Pass

Laboratory Technician

6/11/01

Test Date

Approved By



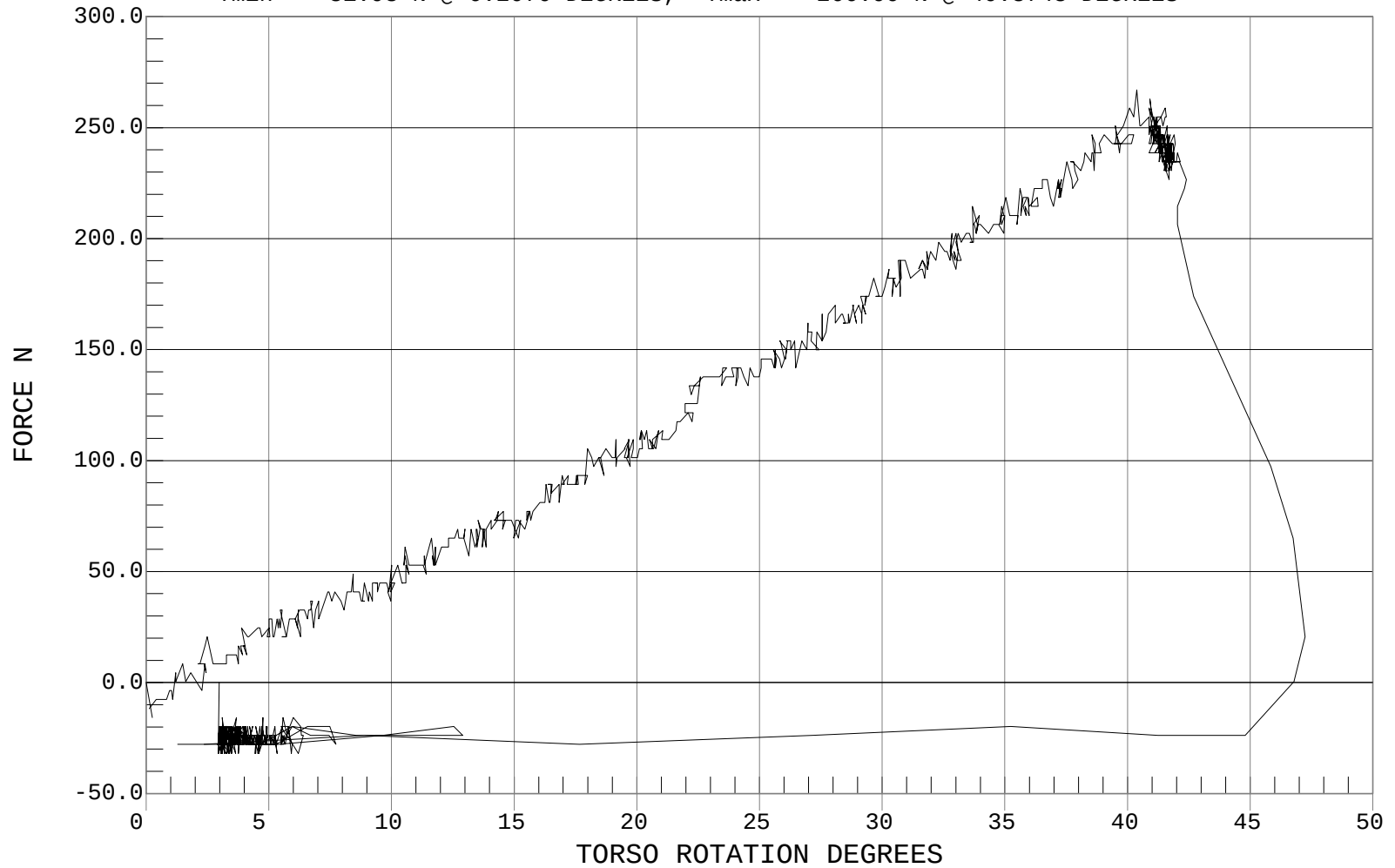
LUMBAR FLEXION

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

Test Date: 06-11-01
Speed: 0.00 FT/SEC, 0.00 M/SEC

— 1 FORCE, D01855FC.F14

Ymin = -31.93 N @ 6.2070 DEGREES, Ymax = 266.99 N @ 40.3743 DEGREES



SID/HIII Calibration Data Sheet
Side Impact Dummy
Post-Test Inspection Checklist

ATD Serial No.: 037

Test Part	Items Checked	Result
Skin	Visual inspection	Pass
Head	Visual, ballast, accelerometer mount	Pass
Neck	Visual	Pass
Spine Box	Visual, ballast, weldment, accelerometer mount	Pass
Rib Cage	Visual, measure	Pass
Sternum	Visual	Pass
Lumbar Spine	Visual	Pass
Abdomen	Visual	Pass
Pelvis	Visual, palpate, accelerometer mount	Pass
Upper Legs	Visual	Pass
Knees	Visual	Pass
Lower Legs	Visual, range of motion	Pass
Ankles	Visual, range of motion	Pass
Feet	Visual, range of motion	Pass
Joints	1 to 2 g range	Pass
Other		

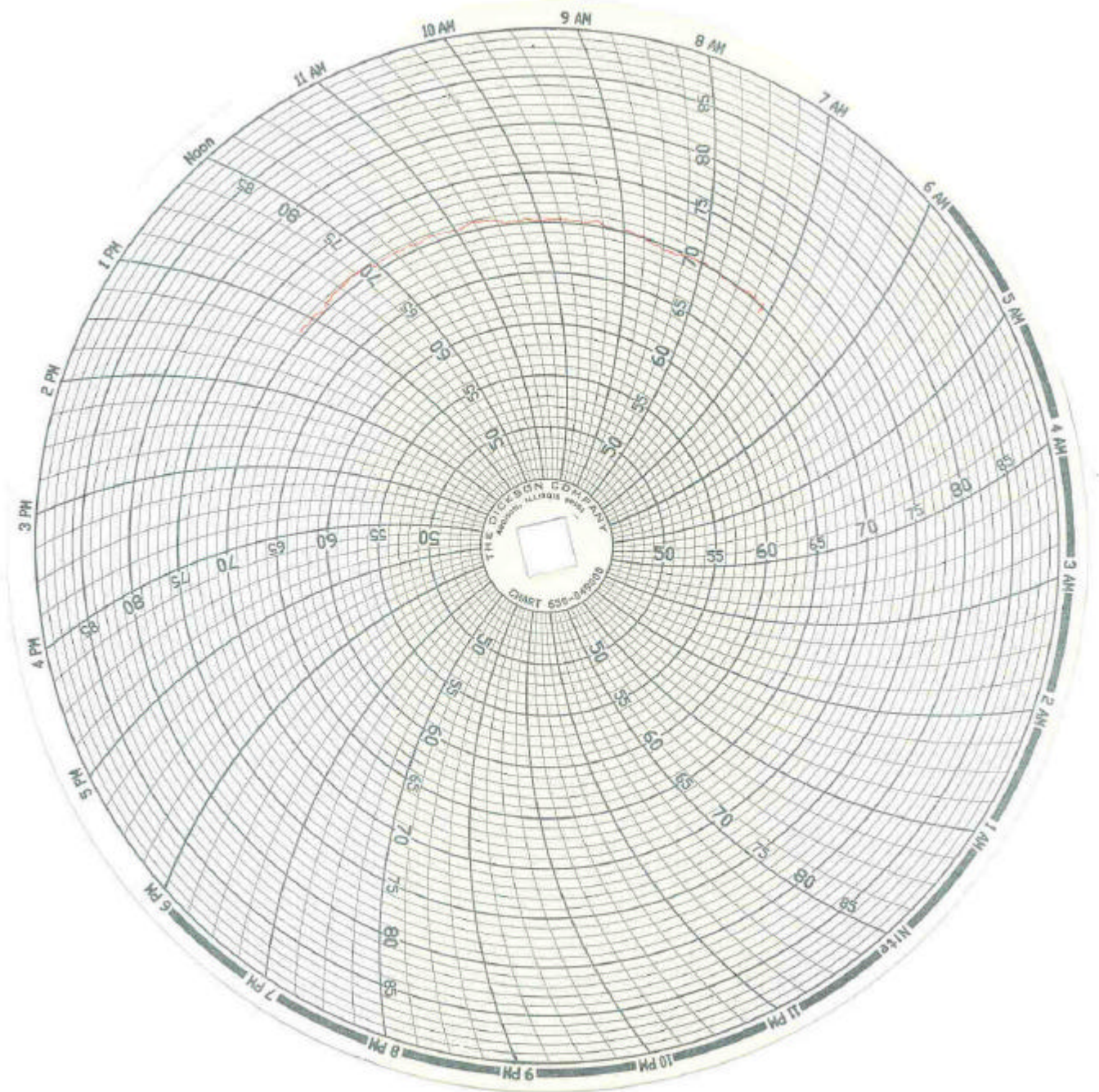
Notes (include component/problem/section/reason):

Laboratory Technician

6/12/01
Test Date

Approved By

VEHICLE AND DUMMY TEMPERATURE



Dummy installed at 7:10 a.m.

Test conducted at 1:06 p.m.

APPENDIX D

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

DUMMY AND VEHICLE CALIBRATION DATA
INSTRUMENTS FOR DRIVER DUMMY

	INSTRUMENTS FOR DRIVER DUMMY NO. 037		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head CG X	J14006	Endevco	3/20/01
Head CG Y	J13628	Endevco	3/20/01
Head CG Z	J13652	Endevco	3/20/01
Neck Force X	376	Denton	4/28/01
Neck Force Y	376	Denton	4/28/01
Neck Force Z	376	Denton	4/28/01
Neck Moment X	376	Denton	4/28/01
Neck Moment Y	376	Denton	4/28/01
Neck Moment Z	376	Denton	4/28/01
Head CG Redundant X	J20392	Endevco	5/31/01
Head CG Redundant Y	AGT18	Endevco	5/31/01
Head CG Redundant Z	ALDD6	Endevco	5/31/01
Upper Rib Y	AHR15	Endevco	6/1/01
Lower Rib Y	AP170	Endevco	1/8/01
Lower Spine Y	J10420	Endevco	3/13/01
Pelvis Y	AGM32	Endevco	5/31/01
Upper Rib Redundant Y	AHW95	Endevco	6/1/01
Lower Rib Redundant Y	AP2G9	Endevco	1/8/01
Lower Spine Redundant Y	AKAF2	Endevco	3/13/01
Pelvis Redundant Y	AKAH3	Endevco	5/31/01

DUMMY AND VEHICLE CALIBRATION DATA
VEHICLE INSTRUMENT CALIBRATION

	VEHICLE ACCELEROMETERS		
	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Vehicle CG X	G13-F18	Entran	4/4/01
Vehicle CG Y	G13-F16	Entran	4/4/01
Vehicle CG Z	G13-F03	Entran	4/4/01
Left Floor Sill Y	G13-F02	Entran	2/7/01
A Pillar Sill Y	G13-F12	Entran	2/7/01
A Pillar Low Y	K11-J18	Entran	3/21/01
A Pillar Mid Y	F18-G07	Entran	9/14/00
B Pillar Sill Y	E10-F19	Entran	3/21/01
B Pillar Low Y	K11-G07	Entran	3/21/01
B Pillar Mid Y	A08-A13	Entran	2/8/01
Driver Seat Y	D11-F01	Entran	5/30/01
Driver Door Upper Y	I18-G02	Entran	2/15/01
Engine X	K16-X08	Entran	3/21/01
Engine Y	J07-X16	Entran	3/21/01
Firewall Y	F07-A14	Entran	8/18/00
Driver Door Mid Y	B13-Z02	Entran	3/21/01
Driver Door Lower Y	J16-F02	Entran	2/7/01
Right Floor Sill Y	G13-F15	Entran	2/7/01
Rear Deck X	E10-F05	Entran	3/21/01
Rear Deck Y	MGA045	Entran	3/21/01

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

All Entran accelerometers are Model No. EGE-72.