

REPORT NUMBER KAR21049-01

**NEW CAR ASSESSMENT PROGRAM
FRONTAL BARRIER IMPACT TEST**

**TOYOTA MOTOR MANUFACTURING
2001 TOYOTA TACOMA SR5 EXTENDED CAB PICKUP
NHTSA NUMBER: TOY001**

**PREPARED BY:
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MAY 9, 2001

FINAL REPORT

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Technical Report Documentation Page

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16. Abstract A 35 mph (56.3 km/h) frontal barrier impact was conducted on a 2001 Toyota Tacoma SR5 Extended Cab Pickup at KARCO Engineering on 5/9/01. This test was conducted to obtain data indicant of FMVSS 208, 212, 219 (partial), 301, and footwell intrusion performance. The impact velocity is 56.16 km/h. The ambient temperature at the barrier face at the time of impact is 33.9 degrees Celcius. The vehicle's maximum post test static crush is 464 mm located at the vehicle centerline. The test vehicle is equipped with a 3-point continuous belt system and supplemental airbags in both front outboard seating positions. With respect to FMVSS 208 "Occupant Crash Protection", the occupant injury criteria summary is as follows:					
Measurement Description		Units	Threshold	Driver ATD	Passenger ATD
Head Injury Criteria (HIC)		N/A	1000	752.0	753.6
Max. Thorax Accel. (3 msec Clip)		G's	60	55.7	49.1
Left Femur force		Newtons	10009	-4936.6	-3512.1
Right Femur Force		Newtons	10009	-3256.2	-3631.0
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SECTION 1

PURPOSE, TEST PROCEDURE AND SUMMARY OF TEST TOY001

1.1 PURPOSE

The purpose of this 35 mph (56.3 km/h) frontal barrier impact test is to obtain vehicle crashworthiness, occupant restraint system performance, and lower leg data for frontal barrier impacts. The impact velocity used in this test is in excess of the current 30 mph (48.3 km/h) FMVSS 208/212/219/301 requirements.

1.2 TEST PROCEDURE

This 56.3-km/h frontal barrier impact test was conducted in accordance with the Office of Crashworthiness Standards (OCS) New Car Assessment Program (NCAP) Laboratory Indicant Test Procedure, dated 01 October 1996 and the corresponding KARCO Engineering Test Procedure KTP-001, dated October 18, 1996. Data was obtained indicant of FMVSS 208, "Occupant Crash Protection"; FMVSS 212, "Windshield Retention"; FMVSS 219, "Windshield Zone Intrusion (Partial)"; and FMVSS 301 "Fuel System Integrity" performance. Procedures for receiving, inspection testing and reporting of test results are described in the test procedures and are not repeated in this report.

The test was conducted at KARCO Engineering on May 9, 2001 at a speed of 56.16 km/h. The test vehicle was instrumented with eight (8) accelerometers to measure longitudinal axis accelerations. The driver and passenger's restraint systems were instrumented with four (4) seat belt load cells to measure lap and shoulder belt tension. The specified impact velocity range was 55.5 to 57.1 km/h. The frontal barrier impact event was documented by one (1) real-time panning motion picture camera and sixteen (16) high-speed motion picture cameras. The pre- and post-test conditions were recorded by one (1) real-time motion picture camera. Camera locations and pertinent camera information is documented in the data sheets. Pre- and post-test photographs of the vehicle and dummies can be found in Appendix A.

The test vehicle contained two (2) part 572E 50th percentile adult male anthropomorphic test devices (ATDs). Both ATDs were instrumented with head, chest, and pelvic tri-axial accelerometers, left and right femur load cells, upper and lower tibia sensors, and foot accelerometers. In addition, chest displacement and upper neck six-axis force and moment sensors were utilized. The ATDs were positioned in the front outboard seating positions according to the dummy placement procedures specified in the Laboratory Indicant Test Procedure. Ninety-four (94) channels of data were recorded with a PC based (TDAS) on-board data acquisition system. The data was digitally sampled at 10,000 samples per second and processed per section IP11 of the Laboratory Indicant Test Procedure.

The Driver ATD (Serial No. 35) and the right-front passenger ATD (Serial No. 34) were re-calibrated two (2) tests prior to this test. FMVSS 208 "Occupant Crash Protection" injury criteria were not exceeded by either ATD during this frontal barrier impact test.

1.3 SUMMARY OF FRONTAL BARRIER IMPACT TEST

A rigid load cell barrier was impacted by a 2001 Toyota Tacoma SR5 Extended Cab Pickup at a velocity of 56.16 km/h. The test vehicle weight is 1675 kilograms with two (2) part 572E 50th percentile adult male ATDs. Twenty-four (24) load cell barrier data channels were obtained in conducting the May 9, 2001 NCAP test. The test vehicle is a gasoline vehicle, equipped with a longitudinal mounted, 4-cylinder engine and a 4-speed automatic transmission.

The driver Head Injury Criteria (HIC) is 752.0. The maximum resultant chest deceleration over three (3) milliseconds is 55.7 g's. The left and right femur loads are -4936.6 and -3256.2 Newton's, respectively. Chest deflection for the driver ATD peaked at -33.3 mm. The driver ATD head contacted the airbag/headrest, its chest contacted the airbag/belt, the abdomen contacted the belt, the left knee contacted the bolster and steering column, while the right knee only contacted the bolster.

The right front passenger's HIC is 753.6. The maximum resultant chest deceleration over three (3) milliseconds is 49.1 g's. The left and right femur loads are -3512.1 and -3631.0 Newton's respectively. Chest deflection for the passenger ATD peaked at -30.1 mm. The passenger ATD head contacted the airbag and headrest, the chest and abdomen contacted the airbag/belt, the left knee contacted the glove box and dashboard, the right knee contacted the glove box.

Maximum shoulder belt spool out as measured by on-board potentiometers is 194.6 mm for the driver ATD and 225.2 mm for the passenger ATD. Shoulder belt stretch is not measured with pretensioners.

There was 100 percent windshield retention (minimum 50 percent required for passive restraint systems). No intrusion occurred into the protected or unprotected zone of the windshield. No Stoddard solvent leakage occurred after impact or during any phase of the rollover.

The test vehicle sustained a maximum static crush of 464 mm at the vehicle centerline. Both the driver and passenger side doors opened without the aid of tools.

1.4 GENERAL COMMENTS

The 2001 Toyota Tacoma SR5 Extended Cab Pickup passed the requirements of FMVSS 208, FMVSS 212, FMVSS 219 and FMVSS 301-75. Data pertaining to these standards are presented in the data sheets.

The vehicle, occupant, camera and measurement data are presented in Section 2. Appendix A contains the still photograph prints. Appendix B contains the dummy and vehicle response data traces. Appendix C contains Load Cell Barrier information. Appendix D contains the instrumentation data channel assignments. Appendix E contains the dummy calibration data and Appendix F contains the owner's manual instructions for the occupant seating and restraint systems.

SECTION 2
OCCUPANT AND VEHICLE INFORMATION/DATA SHEETS

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

NHTSA No.: TOY001

Test Program: 2001 NHTSA 35 mph NCAP

Test Date: 5/9/01

CONVERSION FACTORS USED IN THIS REPORT*

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

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

**DATA SHEET NO. 1
CRASH TEST SUMMARY**

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup
Test Program: 2001 NHTSA 35 mph NCAP

NHTSA No.: TOY001
Test Date: 05/09/01

PRIMARY IMPACT DATA

Measured Parameter	Units	Value
Velocity at Impact	km/h	56.16
Test Weight	kg	1675
Impact Angle	degrees	0
Average Rebound	mm	376
Maximum Static Crush	mm	464

DOOR OPENING AND SEAT TRACK INFORMATION

Description	Driver	Passenger
Front Door Opening	Opened	Opened
Rear Door Opening	N/A	N/A
Seat Track Shift (mm)	None	None
Seat Back Failure	None	None

TEST DUMMY INFORMATION

Description	Driver	Passenger
Dummy Type / Serial No.	50% Male Hybrid III / No. 35	50% Male Hybrid III / No. 34
Head Contact	Airbag/Headrest	Airbag/Headrest
Chest Contact	Airbag/Belt	Airbag/Belt
Abdomen Contact	Belt	Airbag/Belt
Left Knee Contact	Bolster/Column	Dash/Glove Box
Right Knee Contact	Bolster	Glove Box

16mm MOVIE COVERAGE

High Speed	16
Real Time	1
Total	17

DATA CHANNELS

Driver ATD Sensors	40
Passenger ATD Sensors	40
Belt Assessment Sensors	6
Vehicle Structure Accelerometers	8
Rigid Barrier Load Cells	24
Total	118

DATA SHEET NO. 2
GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

NHTSA No.: TOY001

Test Program: 2001 NHTSA 35 mph NCAP

Test Date: 05/09/01

TEST VEHICLE INFORMATION

Make	Toyota
Model	Tacoma SR5
Body Style	Extended Cab Pickup
NHTSA No.	TOY001
VIN	STEVL52N11Z796083
Color	Gold
Delivery Date	4/25/01
Odometer Reading (mile)	22
Dealer	Valley High Toyota Honda
Transmission	4-Speed Automatic
Final Drive	Rear
Number of Cylinders	4
Engine Displacement (L)	2.4
Engine Placement	Longitudinal

TEST VEHICLE OPTIONS

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

DATA FROM CERTIFICATION LABEL

Manufactured By	Toyota Motor Manufacturing, Ca., Inc.	GVWR (kg)	2041
Date of Manufacture	March-01	GAWR Front (kg)	998
		GAWR Rear (kg)	1134

DATA FROM TIRE PLACARD

Measured Parameter	Front	Rear
Maximum Tire Pressure (kPa)	200	200
Cold Pressure (kPa)	200	200
Recommend Tire Size	P205/75R15	P205/75R15
Tire Size on Vehicle	P205/75R15	P205/75R15
Tire Manufacturer	Firestone	Firestone

VEHICLE SEATING AND CAPACITY WEIGHT INFORMATION

Measured Parameter	Front	Rear	Third	Total
Type of Seats	Split Bench	Bench	None	
Number of Occupants	3	2	0	5
Capacity Wt. (VCW) (kg)				662
Cargo Weight (RCLW) (kg)				136

DATA SHEET NO. 2...(continued)
GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

NHTSA No.: TOY001

Test Program: 2001 NHTSA 35 mph NCAP

Test Date: 05/09/01

TEST VEHICLE WEIGHTS

	Units	As Delivered (UVW)			As Tested (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	403	311		431	406	
Right	kg	378	287		448	390	
Ratio	%	56.6	43.4		52.5	47.5	
Totals	kg	781	598	1379	879	796	1675

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value
Total Delivered Weight (UVW)	kg	1379
Weight of 2 P572 ATD's	kg	167
Rated Cargo/Luggage Weight (RCLW)	kg	136
Calculated Vehicle Target Weight (TVTW)	kg	1682

TEST VEHICLE ATTITUDE AND CG

	Units	LF	RF	LR	RR	CG (aft of front axle)
As Delivered	mm	767	774	805	815	1346
As Tested	mm	736	743	770	775	1473

Vehicle Wheel base (mm): 3102

Weight of Ballast secured in cargo area (kg): 41

Vehicle Components Removed: Side mirrors, jack, tools, and paneling.

* Ballast weight does not include cameras, instrumentation, and brake abort system.

FUEL SYSTEM DATA

Fuel System Capacity From Owner's Manual (L): N/A

Usable Capacity Figure Furnished by COTR (L): 60.6

Actual Test Volume with entire fuel System Filled (L): 56.3

Test Fluid Type: Stoddard Solvent ; Specific Gravity: 0.764

Kinematic Viscosity: as per ASTM Standard D484-71 ; Color: Red

Is Vehicle Fuel Pump Electric or Mechanical?: Electric

If electric, does pump operate with ignition switch "ON" & engine "OFF"? Yes

Fuel System Particulars: Driver side filler door, tank mounted on driver's side.

**DATA SHEET NO. 3
POST IMPACT DATA**

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

NHTSA No.: TOY001

Test Program: 2001 NHTSA 35 mph NCAP

Test Date: 05/09/01

SPEED TRAP DATA

Measured Parameter	Units	Requirement	Value
Trap No. 1 Velocity (Primary)	km/h	55.51 to 57.12	56.16
Trap No. 1 Entry Distance	mm	< 1524	1524
Trap No. 1 Exit Distance	mm	< 1524	305
Trap No. 2 Velocity (Redundant)	km/h	55.51 to 57.12	56.58
Trap No. 2 Entry Distance	mm	< 1524	1524
Trap No. 2 Exit Distance	mm	< 1524	305

VEHICLE STATIC CRUSH

Measured Parameter	Units	Pre-Test	Post-Test	Difference
Left Side	mm	4909	4565	-344
Center	mm	5157	4693	-464
Right Side	mm	4909	4573	-336

VEHICLE REBOUND FROM BARRIER

Measured Parameter	Units	Value
Left Side	mm	433
Center	mm	270
Right Side	mm	425
Average	mm	376

DATA SHEET NO. 4
TEST VEHICLE INFORMATION

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

NHTSA No.: TOY001

Test Program: 2001 NHTSA 35 mph NCAP

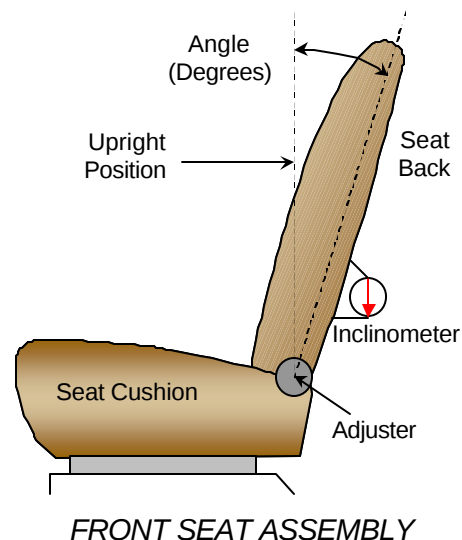
Test Date: 5/9/01

NOMINAL DESIGN RIDING POSITION

The driver and passenger seat backs are positioned to the manufacturers designated angle. The procedure is as follows: A special application tool with pointed probes is inserted through the fabric to make contact with the rigid portion of the lower seat frame assembly, approximately 13 inches above the pivot point of the seat back. An inclinometer is placed against the flat surface of the tool and the seat back angle is measured directly from the dial face.

Driver seat back angle: 11.0° with a seated dummy

Passenger seat back angle: 11.0° with a seated dummy



SEAT FORE/AFT POSITIONS

The driver and passenger seats have 17 detents. The first or forward most position is counted as number one (1). The fore/aft position is set aft of the middle position for both.

Driver seat fore/aft total travel: 14 seating positions or detents

Passenger seat fore/aft total travel: 14 seating positions or detents

Driver seat fore/aft position: 8th detent from forward most

Passenger seat fore/aft position: 8th detent from forward most

SEAT BELT UPPER ANCHORAGE

The test vehicle is equipped with adjustable anchorages for both driver and passenger seat positions. Both have 5 positions and are placed in the 3rd position from the top.

DATA SHEET NO. 4...(continued)

TEST VEHICLE INFORMATION

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

NHTSA No.: TOY001

Test Program: 2001 NHTSA 35 mph NCAP

Test Date: 5/9/01

FUEL TANK CAPACITY DATA

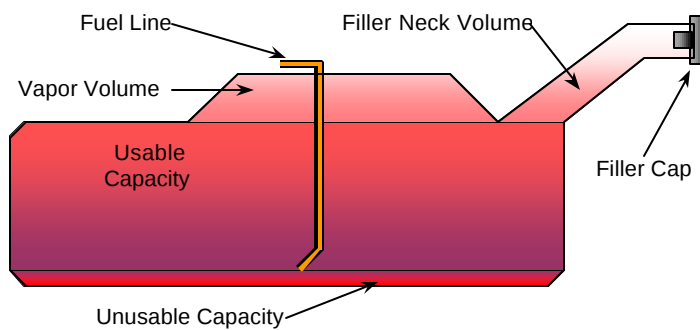
The "Usable Capacity" of the standard equipment fuel tank is: 60.6 liters

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

"Usable Capacity" used for certification tests FMVSS 301 requirements: 55.7 to 56.9 liters

Actual amount of Stoddard solvent added to vehicle for certification test: 56.3 liters

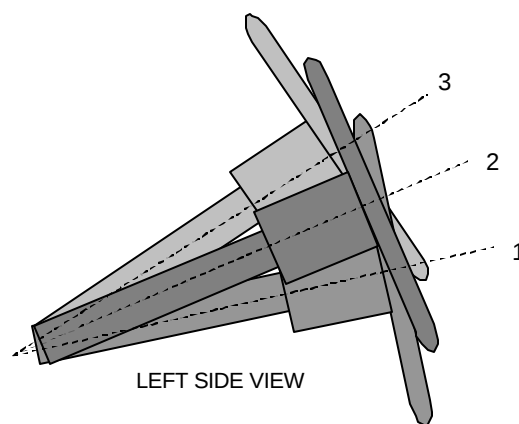
The test vehicle is equipped with an electric fuel pump. The fuel pump operates for approximately two seconds after the ignition is placed to the "ON" position, after which the fuel pump automatically shuts off. The fuel filler door is located on the left rear fender. The standard fuel tank occupies the area under the rear seat. Fuel lines run along the right side of the body to the engine compartment.



VEHICLE FUEL TANK ASSEMBLY

STEERING COLUMN ADJUSTMENT

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



STEERING COLUMN ASSEMBLY

Lowermost, position 1: 14.0°

Geometric center, position 2: 21.5°

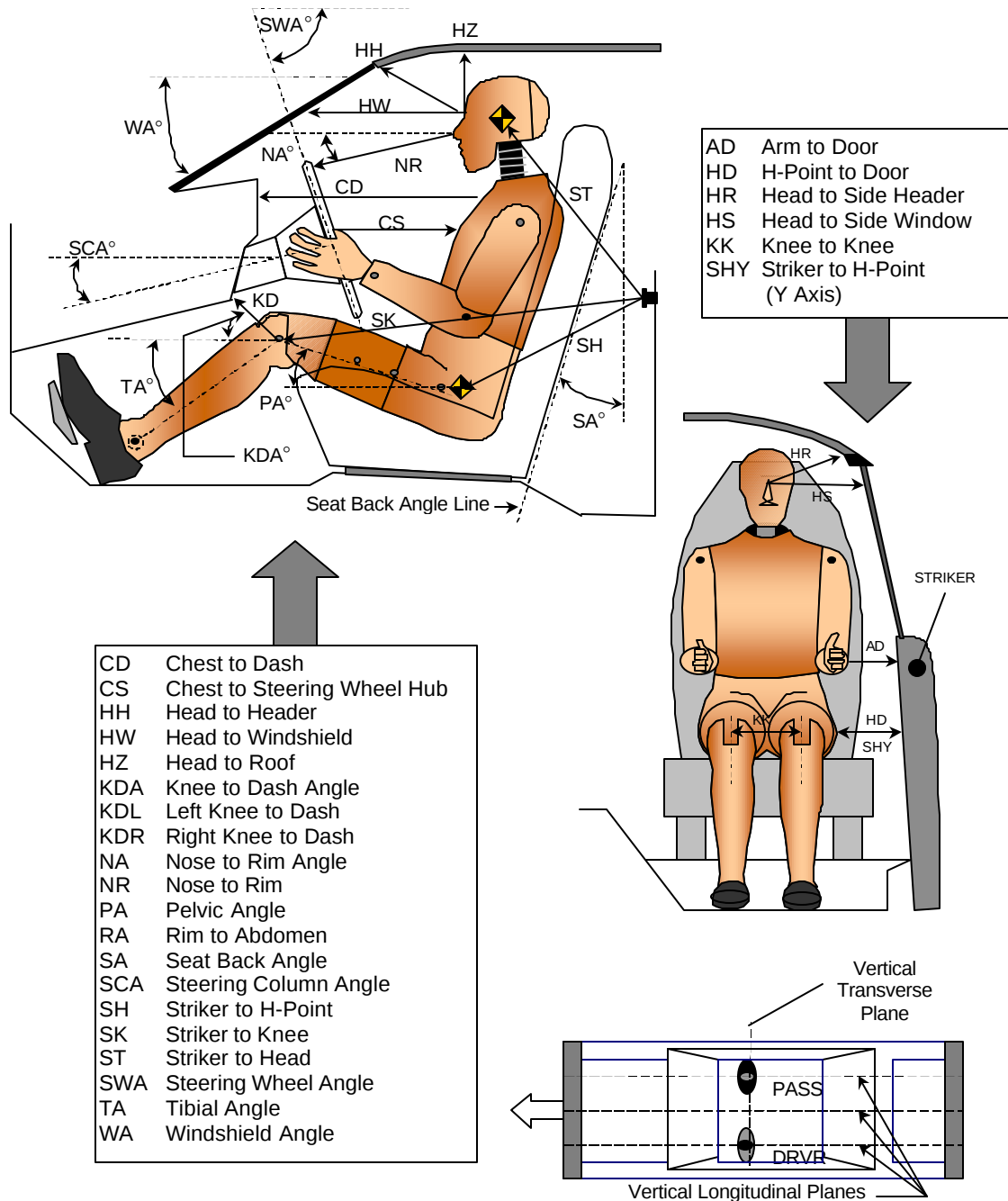
Uppermost, position 3: 29.0°

DATA SHEET NO. 5

DUMMY POSITIONING IN VEHICLE

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup
 Test Program: 2001 NHTSA 35 mph NCAP

NHTSA No.: TOY001
 Test Date: 5/9/01



DUMMY MEASUREMENTS FOR FRONT SEAT OCCUPANTS

DATA SHEET NO. 5...(continued)
DUMMY POSITIONING IN VEHICLE

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

NHTSA No.: TOY001

Test Program: 2001 NHTSA 35 mph NCAP

Test Date: 05/09/01

TEST DUMMY POSITION MEASUREMENTS

Code	Measurement Description	Driver		Passenger	
		Length (mm)	Angle (°)	Length (mm)	Angle (°)
WA	Windshield Angle		39		
SWA	Steering Wheel Angle		22		
SCA	Steering Column Angle		22		
SA	Seat Back Angle		11		11
HZ	Head to Roof (Z)	204	90	210	90
HH	Head to Header	405	0	390	0
HW	Head to Windshield	515	0	562	0
HR	Head to Side Header (Y)	235		263	
NR	Nose to Rim	415	14		
CD	Chest to Dash	565		520	
CS	Chest to Steering Hub	335	0		
RA	Rim to Abdomen	190	0		
KDL	Left Knee to Dash	203	34	165	
KDR	Right Knee to Dash	225		172	39
PA	Pelvic Angle		24		24
TA	Tibia Angle		33		37
KK	Knee to Knee (Y)	280		220	
SK	Striker to Head	725	1	738	3
ST	Striker to Knee	570	20	555	22
SH	Striker to H-Point	346	24	355	26
SHY	Striker to H-Point (Y)	214		207	
HS	Head to Side Window	300		321	
HD	H-Point to Door (Y)	125		111	
AD	Arm to Door (Y)	70		20	

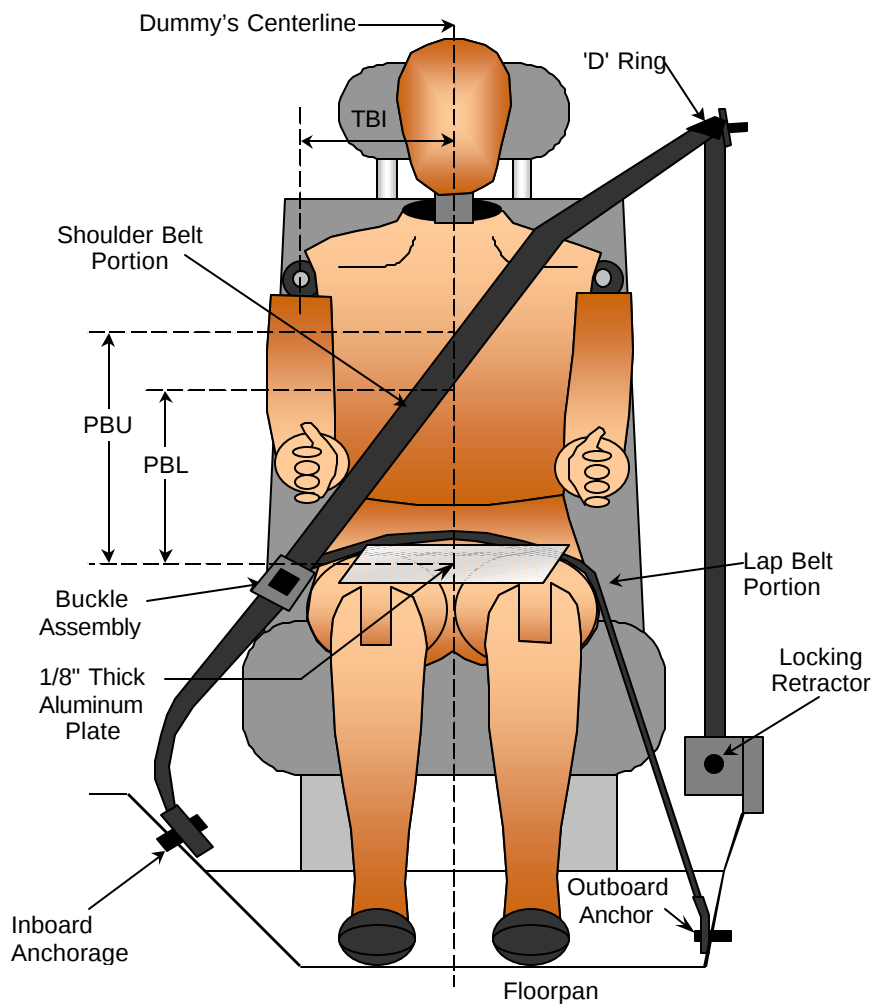
DATA SHEET NO. 6 **SEAT BELT POSITIONING DATA**

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

NHTSA No.: TOY001

Test Program: 2001 NHTSA 35 mph NCAP

Test Date: 5/9/01



SEAT BELT POSITIONING MEASUREMENTS

Measurement Description	Units	Driver	Passenger
TBI - Dummy CL to Lap/Shoulder Belt Intersect	mm	210	220
PBU - Top surface of reference to belt upper edge	mm	310	325
PBL - Top surface of reference to belt lower edge	mm	230	250
Lap Belt tension	Newton's	10	10
Shoulder Belt tension	N/A	Retractor	Retractor

DATA SHEET NO. 7 - VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

NHTSA No.: TOY001

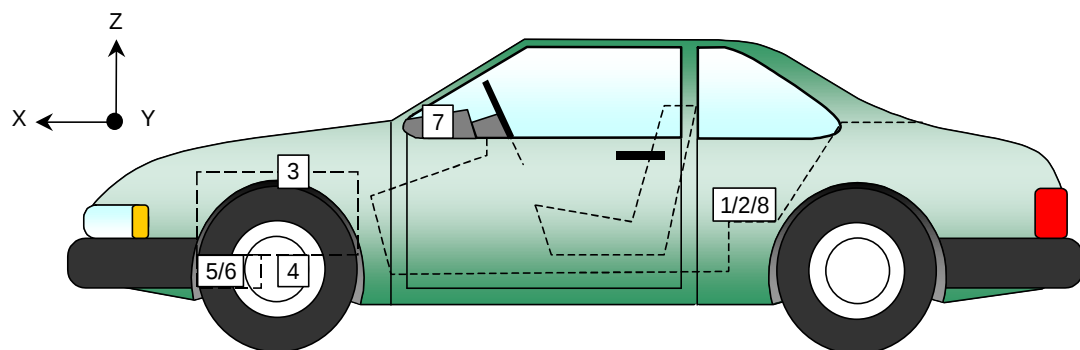
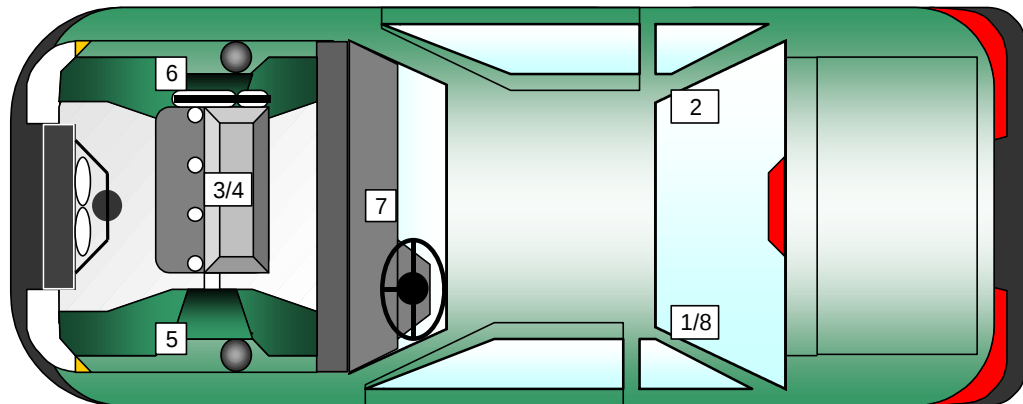
Test Program: 2001 NHTSA 35mph NCAP

Test Date: 5/9/01

VEHICLE X-AXIS ACCELEROMETER PEAK DATA AND PRE-TEST LOCATIONS

No.	Accelerometer Location	Measurements (mm)			Peak Values				
		X	Y	Z	Units	Max	Time	Min	Time
1	Left Rear X-Member (Pri.)	2730	-515	425	G's	2.3	158.5	-43.3	46.9
2	Right Rear X-Member (Pri.)	2760	515	425	G's	3.6	142.4	-42.4	49.1
3	Engine Top	4620	55	885	G's	28.9	38.4	-147.5	28.6
4	Engine Bottom	4570	220	65	G's	70.4	43.0	-130.7	31.5
5	Left Brake Caliper	4170	-670	330	G's	29.0	56.7	-101.3	35.3
6	Right Brake Caliper	4170	670	330	G's	43.7	55.0	-122.9	35.4
7	Instrument Panel	3770	0	1115	G's	21.4	84.5	-75.8	32.1
8	Left Rear X-Member (Rednt.)	2665	515	425	G's	2.0	160.2	-45.7	47.7

Reference Points X - From Rear Surface of Vehicle Y - Vehicle Centerline Z - Ground Plane



DATA SHEET NO. 8 - HYBRID III ATD INJURY CRITERIA AND SENSOR DATA

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

NHTSA No.: TOY001

Test Program: 2001 NHTSA 35mph NCAP

Test Date: 5/9/01

HEAD PRIMARY PEAK ACCELERATIONS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Head CG	X	G's	15.3	183.2	-59.3	65.0	18.3	188.7	-55.3	77.1
Head CG	Y	G's	2.4	42.8	-28.3	82.3	9.7	186.3	-22.7	82.6
Head CG	Z	G's	29.4	57.8	-17.3	82.4	49.9	71.9	-9.2	120.5
Head CG Resultant	N/A	G's	65.3	65.0			73.7	78.6		

CHEST PRIMARY PEAK ACCELERATIONS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Chest CG	X	G's	4.9	167.6	-57.5	57.6	4.1	166.2	-51.5	62.6
Chest CG	Y	G's	2.6	117.9	-3.5	44.8	2.8	64.6	-10.1	73.5
Chest CG	Z	G's	17.0	50.7	-7.1	99.9	17.7	70.5	-13.3	122.6
Chest CG Resultant	N/A	G's	58.0	57.6			51.6	62.6		

FEMUR PEAK FORCES

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Left Femur	Z	Newtons	669.6	41.7	-4936.6	47.0	526.6	42.4	-3512.1	51.5
Right Femur	Z	Newtons	1069.0	40.6	-3256.2	56.5	393.8	63.2	-3631.0	45.4

SEAT BELT SENSOR PEAK VALUES

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Lap Belt Force	N/A	Newtons	9220.9	54.1	-8.3	245.0	9483.7	56.9	5.7	0.0
Shoulder Belt Force	N/A	Newtons	5083.5	75.6	-19.4	169.5	6610.7	75.2	5.5	0.0
Shoulder Belt Pullout	N/A	MM	194.6	76.3	0.0	0.0	225.2	80.7	-13.6	37.5
Shoulder Belt Stretch	N/A	MM/CM	0.000	0.0	0.000	0.0	0.000	0.0	0.000	0.0

* Not used with pre-tensioners.

HEAD INJURY CRITERIA (HIC)

Location	Driver				Passenger			
	HIC	Avg G	T ¹	T ²	HIC	Avg G	T ¹	T ²
Head CG Primary	752.0	53.5	54.0	89.8	753.6	57.2	61.8	92.1

CHEST CLIP (3MSEC)

Location	Driver			Passenger		
	CLIP	T ¹	T ²	CLIP	T ¹	T ²
Chest CG Primary	55.7	56.4	59.4	49.1	61.8	64.8

DATA SHEET NO. 8...(continued)

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

NHTSA No.: TOY001

Test Program: 2001 NHTSA 35mph NCAP

Test Date: 5/9/01

PELVIC PEAK ACCELERATIONS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Pelvis	X	G's	6.6	106.9	-75.3	46.9	9.0	125.6	-67.6	52.8
Pelvis	Y	G's	8.4	49.4	-16.7	46.1	7.2	51.7	-5.5	44.1
Pelvis	Z	G's	4.5	216.3	-24.6	55.6	3.4	229.3	-26.9	61.5

UPPER NECK PEAK FORCES AND MOMENTS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Neck Force	X	Newtons	765.9	67.8	-455.4	45.1	257.9	72.0	-526.2	104.6
Neck Force	Y	Newtons	212.6	57.2	-223.2	80.5	272.1	64.2	-261.7	124.8
Neck Force	Z	Newtons	2176.1	60.6	-813.3	220.1	1176.5	50.5	-617.2	223.8
Neck Moment	X	N•m	16.2	176.9	-17.6	58.0	13.2	237.3	-18.0	62.0
Neck Moment	Y	N•m	55.1	68.9	-31.7	224.4	58.0	93.6	-32.3	223.4
Neck Moment	Z	N•m	24.0	92.1	-9.4	165.5	26.5	93.2	-12.1	137.6

FOOT PEAK ACCELERATIONS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Left Foot Aft	X	G's	9.5	80.6	-46.0	37.4	16.5	77.9	-130.2	39.0 *
Left Foot Aft	Z	G's	2.0	265.9	-83.5	39.0	7.9	61.8	-47.8	39.9 *
Left Foot Fore	Z	G's	50.4	36.0	-87.2	27.7	12.2	58.2	-72.7	40.7 *
Right Foot Aft	X	G's	28.5	49.2	-151.8	40.3	10.9	60.3	-99.5	39.2 *
Right Foot Aft	Z	G's	11.4	68.7	-175.3	41.5	13.4	52.2	-59.7	43.4 *
Right Foot Fore	Z	G's	55.2	48.0	-276.4	39.1	27.2	33.2	-83.4	43.9 *

* Passenger side failed at 82.4 Msec.

UPPER AND LOWER TIBIA PEAK FORCES AND MOMENTS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Left Lower Moment	X	N•m	37.9	39.4	-70.7	43.5	32.4	42.9	-9.9	39.4
Left Lower Moment	Y	N•m	26.4	36.2	-29.2	48.1	46.1	63.9	-35.5	39.4
Left Lower Force	Z	Newtons	97.8	195.2	-3638.0	38.4	157.2	55.1	-3589.4	39.6
Left Upper Moment	X	N•m	71.3	48.7	-17.7	230.5	41.1	71.6	-30.4	40.7
Left Upper Moment	Y	N•m	18.8	120.7	-113.9	41.2	0.0	0.0	0.0	0.0 *
Right Lower Moment	X	N•m	62.4	42.2	-170.4	44.2	9.5	63.4	-67.7	45.0
Right Lower Moment	Y	N•m	110.6	49.8	-106.5	41.0	53.9	56.6	-39.8	38.1
Right Lower Force	Z	Newtons	151.5	203.6	-6347.2	44.7	159.3	151.4	-3583.6	42.9
Right Upper Moment	X	N•m	112.3	43.0	-61.6	49.7	25.4	72.3	-28.7	56.5
Right Upper Moment	Y	N•m	37.4	59.9	-185.7	46.7	19.0	47.0	-126.5	52.0

* Passenger channel failed, no data.

DATA SHEET NO. 8...(continued)Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab PickupNHTSA No.: TOY001Test Program: 2001 NHTSA 35mph NCAPTest Date: 5/9/01**CHEST PEAK DISPLACEMENTS**

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Chest CG	X	MM	0.2	2.4	-33.3	61.7	0.3	10.3	-30.1	79.2

HEAD REDUNDANT PEAK ACCELERATIONS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Head CG	X	G's	15.1	185.6	-59.2	64.6	19.2	187.4	-55.7	76.8
Head CG	Y	G's	3.8	58.6	-26.4	82.7	9.5	186.1	-22.3	83.3
Head CG	Z	G's	29.0	50.7	-8.9	82.5	51.3	71.8	-8.1	119.6
Head CG Resultant	N/A	G's	65.1	64.3			73.9	78.3		

CHEST REDUNDANT PEAK ACCELERATIONS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Chest CG	X	G's	5.5	167.7	-57.6	57.7	4.6	166.2	-51.2	62.5
Chest CG	Y	G's	4.6	61.1	-6.5	45.0	4.3	42.9	-9.0	73.4
Chest CG	Z	G's	15.3	50.7	-6.8	100.0	18.0	70.6	-13.7	122.5
Chest CG Resultant	N/A	G's	58.2	57.7			51.5	62.5		

REDUNDANT HEAD INJURY CRITERIA (HIC)

Location	Driver				Passenger			
	HIC	Avg G	T ¹	T ²	HIC	Avg G	T ¹	T ²
Head CG Redundant	764.4	54.2	53.6	88.8	776.6	58.2	62.0	91.9

REDUNDANT CHEST CLIP (3MSEC)

Location	Driver			Passenger		
	CLIP	T ¹	T ²	CLIP	T ¹	T ²
Chest CG Redundant	56.0	56.7	59.7	48.8	61.8	64.8

DATA SHEET NO. 9**SEAT BELT PERFORMANCE ASSESSMENT TEST DATA**Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab PickupNHTSA No.: TOY001Test Program: 2001 NHTSA 35 mph NCAPTest Date: 5/9/01**SEAT BELT PLACEMENT MEASUREMENTS**

Measurement Description	Units	Driver	Passenger
TCI - Dummy CL to Lap/Shoulder Belt Intersect	mm	210	220
PBU -Top surface of reference to belt upper edge	mm	310	325
PBL - Top surface of reference to belt lower edge	mm	230	250
Lap Belt tension	Newton's	10	10
Shoulder Belt tension	N/A	Retractor	Retractor

BELT LENGTH DATA

Measurement Description	Units	Driver	Passenger
Retractor reel to 'D' ring	mm	680	680
Shoulder belt length as measured on ATD	mm	840	840
Lap belt length as measured on ATD	mm	854	860
Remainder of belt on reel	mm	815	810
Total belt length for continuous webbing systems	mm	3189	3190

SHOULDER BELT SPOOL-OFF DATA

Measurement Description	Units	Driver	Passenger
As determined mechanically	mm	145.0	127.0
As determined electronically	mm	194.6	225.2

BELT STRETCH DATA

Measurement Description	Units	Driver	Passenger
Electronically from shoulder belt load cell and "D" ring	mm/cm	N/A	N/A
Mechanically	mm/cm	N/A	N/A

*Not used with shoulder belt pre-tensioner systems.

DATA SHEET NO. 10
SUMMARY OF FMVSS 212 DATA

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

NHTSA No.: TOY001

Test Program: 2001 NHTSA 35 mph NCAP

Test Date: 5/9/01

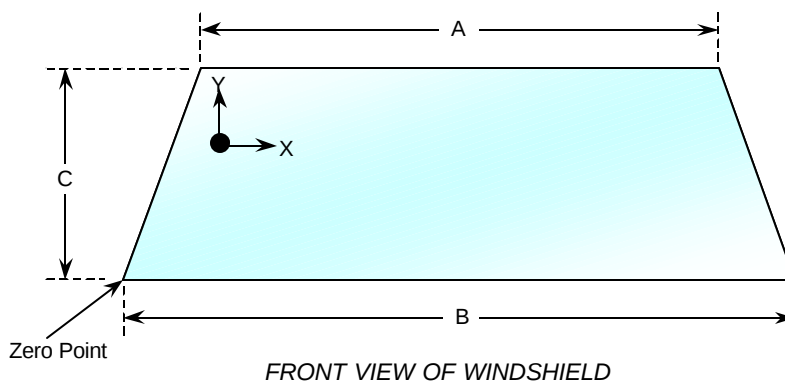
Windshield Mounting Details: Windshield glass is secured to the vehicle frame with a rubber type adhesive. There is no molding that covers the windshield periphery at any point.

The standard requires that the post test retention measurement be a minimum of 75 percent of the pretest total periphery measurement for vehicles not equipped with occupant passive restraints and 50 percent for each side of the windshield for vehicles which are equipped with occupant passive restraints.

Temperature of windshield molding during test: 33.9 °C

WINDSHIELD PERIPHERY MEASUREMENTS

Measurement	Pre-Test(mm)	Post-Test (mm)	% of Retention
Left Side	605.0	605.0	100
Right Side	605.0	605.0	100
Total	1210.0	1210.0	100



WINDSHIELD DIMENSIONS

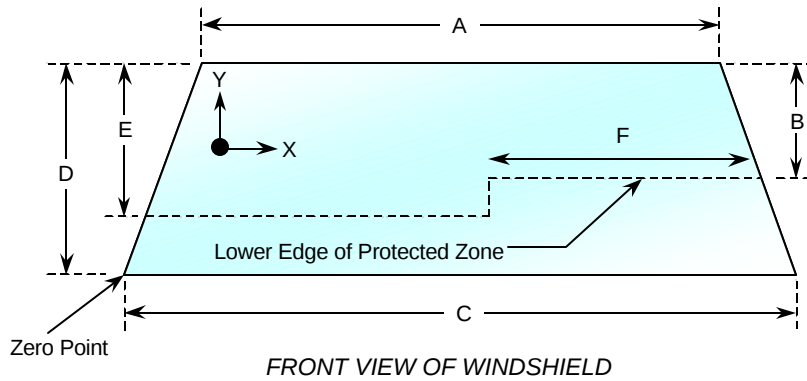
Item	Units	Segment Length	Molding Width
A	mm	1125	15
B	mm	1380	10
C	mm	605	15

DATA SHEET NO. 11

WINDSHIELD ZONE INTRUSION FMVSS 219 (PARTIAL) DATA

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup NHTSA No.: TOY001

Test Program: 2001 NHTSA 35 mph NCAP Test Date: 5/9/01



WINDSHIELD AND PROTECTED ZONE

Item	Units	Value
A	mm	1125
B	mm	350
C	mm	1380
D	mm	605
E	mm	352
F	mm	410

AREA OF PROTECTED ZONE FAILURES

- A. Provide coordinates of the area that the protected zone was penetrated more than 0.25 in. by a vehicle component other than one that is normally in contact with the windshield.

X	Y
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

- B. Provide coordinates of the area beneath the protected zone that the inner surface of the windshield was penetrated by a vehicle component.

X	Y
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

DATA SHEET NO. 12

FMVSS 301 FUEL SYSTEM INTEGRITY POST IMPACT DATA

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

NHTSA No.: TOY001

Test Program: 2001 NHTSA 35 mph NCAP

Test Date: 5/9/01

Test Time: 12:48 PM

Temperature at Time of Impact: 33.9 °C

STODDARD SOLVENT SPILLAGE MEASUREMENT

- A. From impact until vehicle motion ceases: 0.0 oz.
(Maximum Allowable = 1 ounce)
- B. For the 5 minute period after motion ceases: 0.0 oz.
(Maximum Allowable = 5 ounces)
- C. For the following 25 minutes: 0.0 oz.
(Maximum Allowable = 1 oz./minute)
- D. Spillage Details: No leakage occurred

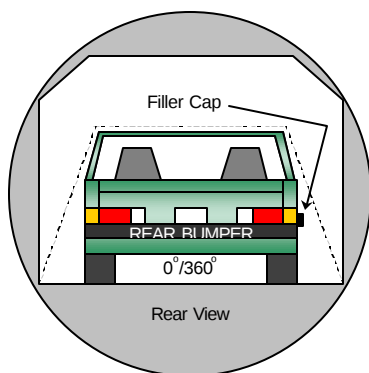
DATA SHEET NO. 13
FMVSS 301 STATIC ROLLOVER DATA SHEET

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

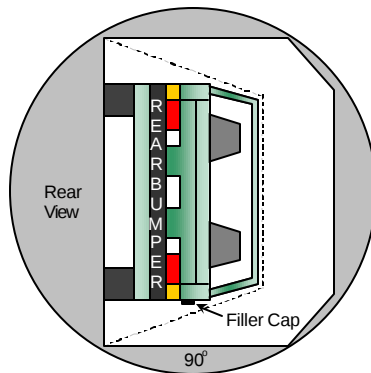
NHTSA No.: TOY001

Test Program: 2001 NHTSA 35 mph NCAP

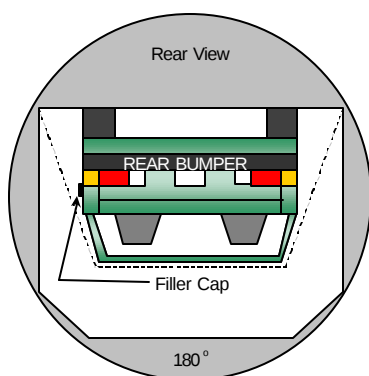
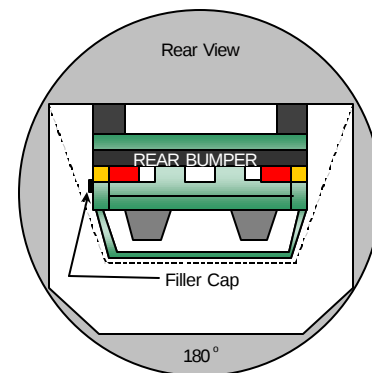
Test Date: 5/9/01



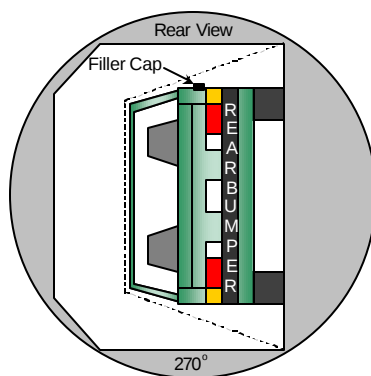
0° TO 90°



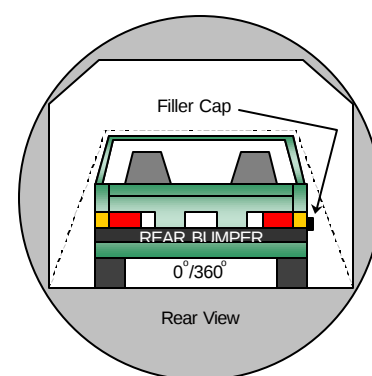
90° TO 180°



180° TO 270°



270° TO 360°



1. The specified fixture rollover rate for each 90° of rotation is 60 to 120 seconds.
2. The position hold time at each position is 300 seconds (minimum).
3. No solvent leakage occurred during rollover.

Test Phase	Rotation Time (sec.)	Hold Time (sec.)	Spillage (oz.)
0° TO 90°	80	300	0.0
90° TO 180°	82	300	0.0
180° TO 270°	76	300	0.0
270° TO 360°	82	300	0.0

DATA SHEET NO. 14
VEHICLE MEASUREMENTS

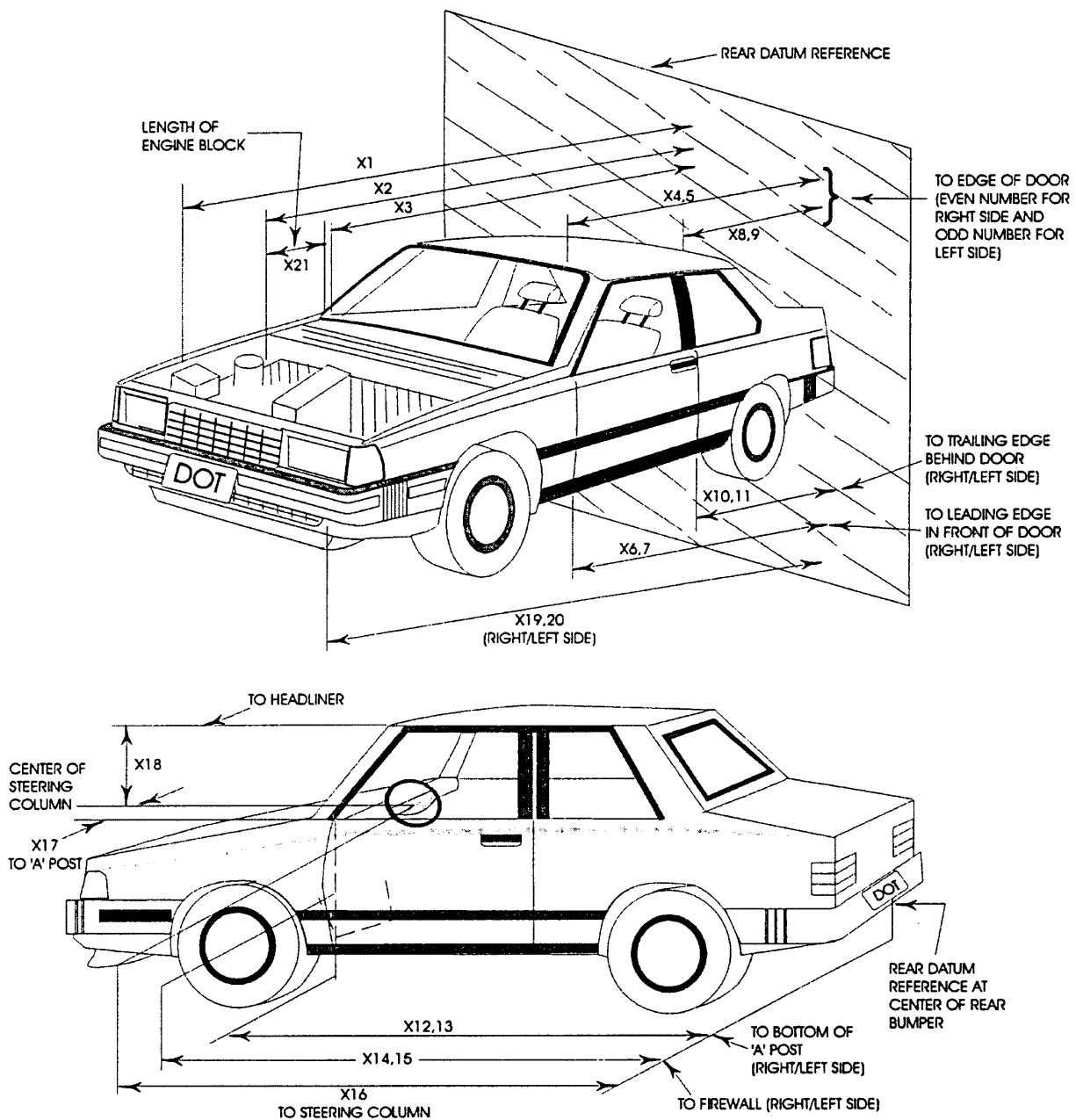
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

NHTSA No.: KAR210049-01

Test Program: 2001 NHTSA 35 mph NCAP

Test Date: 5/9/01

No.	Measurement Description	Units	Pre-Test	Post-Test	Difference
1	Total length of vehicle at centerline	mm	5157	4693	-464
2	RSOV to front of engine	mm	4627	4535	-92
3	RSOV to firewall centerline	mm	4062	4091	29
4	RSOV to leading edge of right door	mm	3799	3809	10
5	RSOV to leading edge of left door	mm	3791	3791	0
6	RSOV to lower leading edge of right door	mm	3768	3766	-2
7	RSOV to lower leading edge of left door	mm	3763	3744	-19
8	RSOV to upper trailing edge of right door	mm	2695	2710	15
9	RSOV to upper trailing edge of left door	mm	2686	2687	1
10	RSOV to lower trailing edge of right door	mm	2695	2693	-2
11	RSOV to lower trailing edge of left door	mm	2687	2671	-16
12	RSOV to bottom of right 'A' pillar	mm	3778	3792	14
13	RSOV to bottom of left 'A' pillar	mm	3770	3771	1
14	RSOV to firewall on right side	mm	4064	4137	73
15	RSOV to firewall of left side	mm	4062	4092	30
16	RSOV to steering column	mm	3391	3414	23
17	Center of steering column to left 'A' pillar	mm	365	334	-31
18	Center of steering column to headlining	mm	395	300	-95
19	RSOV to right side of front bumper	mm	4909	4573	-336
20	RSOV to left side of front bumper	mm	4909	4565	-344
21	Length of engine block	mm	510	510	0
RD	RSOV to right side of dash panel	mm	3595	3604	9
CD	RSOV to center of dash panel	mm	3533	3564	31
LD	RSOV to left side of dash panel	mm	3610	3529	-81



DATA SHEET NO. 15
CAMERA LOCATIONS

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

NHTSA No.: KAR210049-01

Test Program: 2001 NHTSA 35 mph NCAP

Test Date: 5/9/01

No.	Camera View	Location (mm)			Angle (Deg.)	Film Plane to Head	Lens (mm)	Speed (fps)
		X	Y	Z				
1	Right Side, Real Time	N/A	NA	N/A	N/A	N/A	Zoom	24
2	Left Side, No. 1	1960	-8250	880	-1	7942	13	1050
3	Left Side, No. 2	1460	-8250	1460	-4	7954	35	1000
4	Left Side, No. 3	6500	-10580	4640	-16	11576	70	1000
5	Left Side, No. 4	1460	-8250	3100	-16	8129	19	990
6	Left Side, No. 5	1460	-8250	2700	-13	8056	19	970
7	Right Side, No. 1	1960	8150	730	-1	7854	19	1010
8	Right Side, No. 2	1660	8150	1450	-4	7838	50	N/A
9	Right Side, No. 3	7860	8900	2800	-9	10368	80	970
10	Right Side, No. 4	2750	9600	1500	-2	9287	24	1060
11	Overhead Overall	250	0	4460	-86	N/A	13	1080
12	Front View, Driver	-530	-380	2590	-43	N/A	12	1000
13	Front View, Passenger	-530	380	2590	-55	N/A	13	1170
14	Pit Camera, Engine	580	0	-1360	-90	N/A	13	N/A
15	Pit Camera, Fuel Tank	4700	0	-1680	-55	N/A	19	N/A
16	Driver Belt	3130	80	1220	-7	1045	13	960
17	Passenger Belt	3130	-80	1220	-7	1045	13	890
18	Driver Extra	470	-6810	1440	-2	6704	13	N/A

X - Barrier Face Y - Monorail Centerline Z - Ground

DATA SHEET NO. 16
PHOTOGRAPHIC REFERENCE TARGET LOCATIONS

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

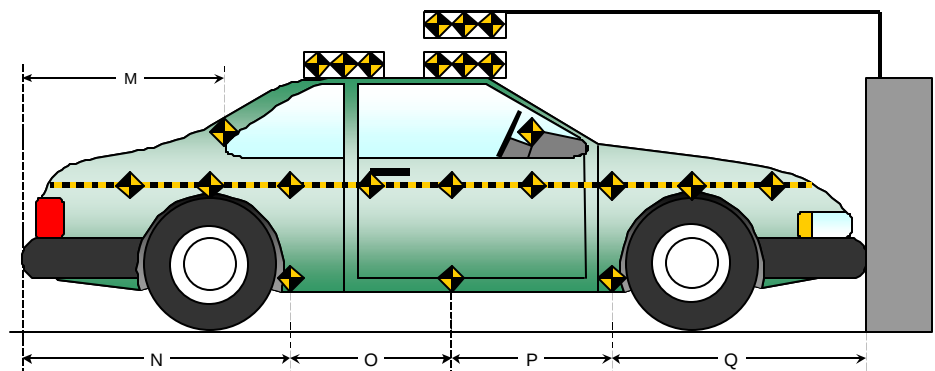
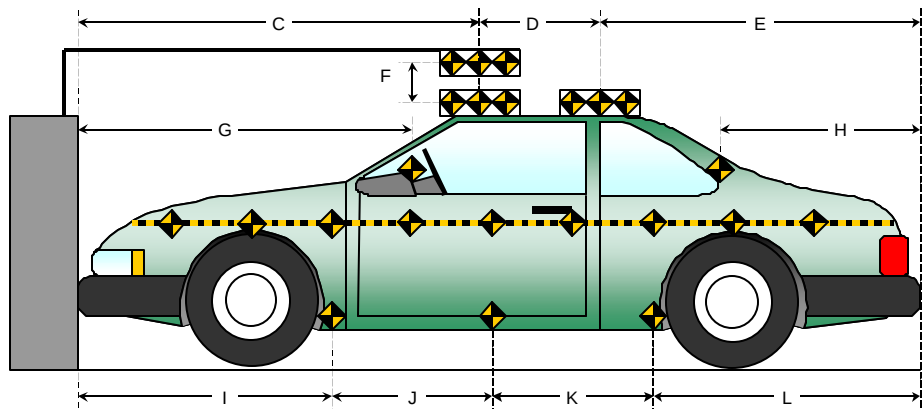
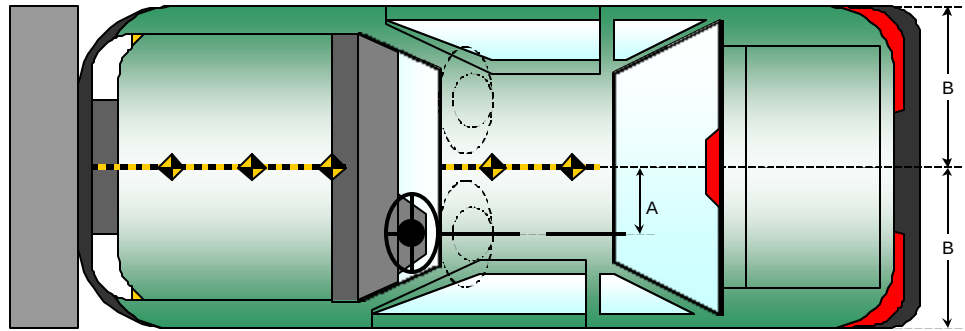
NHTSA No.: KAR210049-01

Test Program: 2001 NHTSA 35 mph NCAP

Test Date: 5/9/01

All Dimensions
in mm

Item	Value
A	370
B	842.5
C	2021
D	608
E	2532
F	155
G	1623
H	2224
I	1328
J	1048
K	1048
L	1737
M	2237
N	1738
O	1047.5
P	1047.5
Q	1323



DATA SHEET NO. 17
VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup NHTSA No.: TOY001

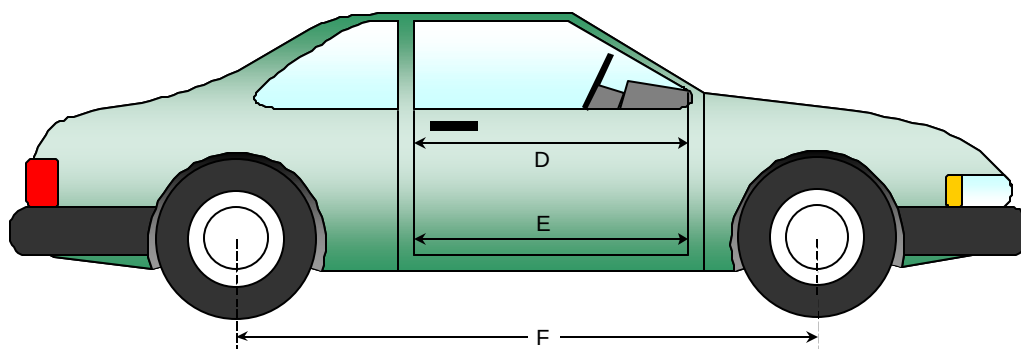
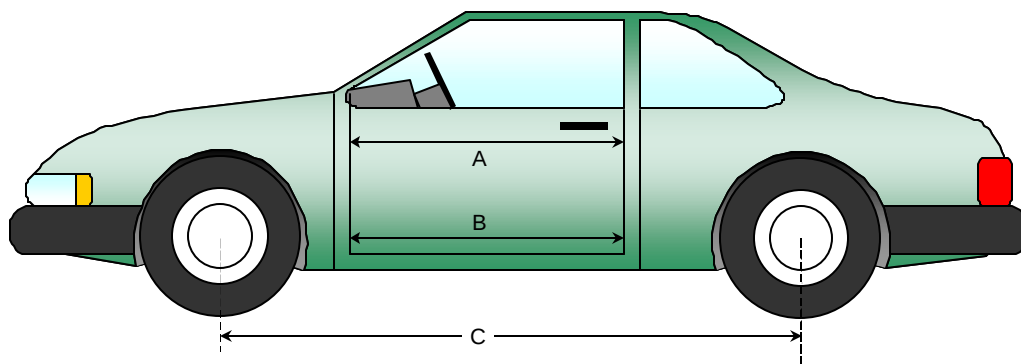
Test Program: 2001 NHTSA 35 mph NCAP Test Date: 5/9/01

DOOR OPENING WIDTH

Item	Description	Units	Pre-Test	Post-Test	Difference
A	Left Side Upper	mm	1065	1059	-6
B	Left Side Lower	mm	1053	1053	0
D	Right Side Upper	mm	1075	1072	-3
E	Right Side Lower	mm	1065	1060	-5

WHEELBASE MEASUREMENTS

Item	Description	Units	Pre-Test	Post-Test	Difference
C	Left Side Wheel base	mm	3102	3014	-88
F	Right Side Wheel base	mm	3102	3012	-90



DATA SHEET NO. 17...(CONTINUED)
VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

NHTSA No.: TOY001

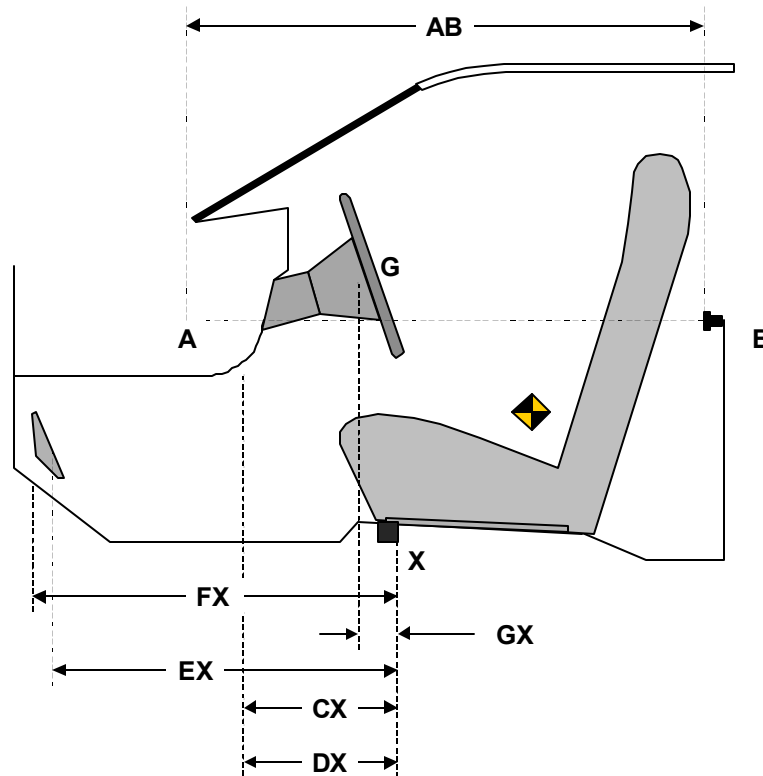
Test Program: 2001 NHTSA 35 mph NCAP

Test Date: 5/9/01

DRIVER COMPARTMENT INTRUSION

Item	Description	Units	Pre-Test	Post-Test	Difference
AB	Door Opening (Inside window jam)	mm	1065	1059	-6
CX	Left Knee Bolster to X	mm	308	314	6
DX	Right Knee Bolster to X	mm	282	244	-38
EX	Brake Pedal to X	mm	587	508	-79
FX	Foot Rest to X	mm	617	606	-11
GX	Center of Steering Wheel Hub to X	mm	62	115	53

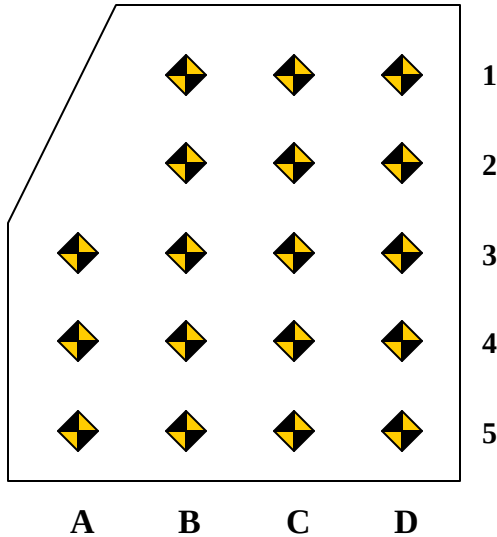
X = Left Front Seat Outboard Anchor Bolt Head



DRIVER COMPARTMENT

DATA SHEET NO. 17...(CONTINUED)
VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup NHTSA No.: TOY001
 Test Program: 2001 NHTSA 35 mph NCAP Test Date: 5/9/01



Measurement reference point for X and Z axis is the forward outboard seat mounting bolt.

Columns A through D are evenly spaced.

Rows 1 and 2 are on the toe kick portion of the floor pan. Rows 3,4, and 5 are located on the most level portion of the floor pan.

Row 3 will be at the intersection of the toe kick and the level sections of the floor pan.

DRIVER FLOOR PAN X-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1		710	719	707		762	760	739		52	41	32
2		652	652	649		660	657	641		8	5	-8
3	548	550	549	549	562	558	555	545	14	8	6	-4
4	448	448	449	449	461	458	457	446	13	10	8	-3
5	345	349	349	349	364	364	359	380	19	15	10	31

DRIVER FLOOR PAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1		54	56	70		90	92	115		36	36	45
2		-26	-24	-18		0	-2	15		26	22	33
3	-50	-47	-45	-45	-55	-57	-57	-35	-5	-10	-12	10
4	-65	-65	-65	-55	-97	-95	-99	-67	-32	-30	-34	-12
5	-75	-75	-75	-65	-94	-98	-91	-122	-19	-23	-16	-57

DATA SHEET NO. 17...(CONTINUED)
VEHICLE INTRUSION MEASUREMENTS

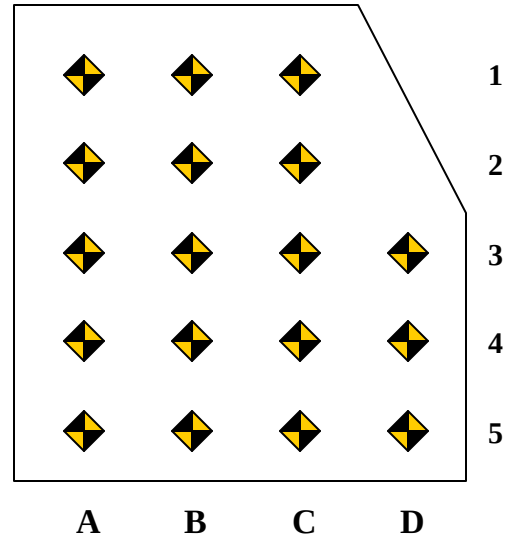
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup NHTSA No.: TOY001
 Test Program: 2001 NHTSA 35 mph NCAP Test Date: 5/9/01

Measurement reference point for X and Z axis is the forward outboard seat mounting bolt.

Columns A through D are evenly spaced.

Rows 1 and 2 are on the toe kick portion of the floor pan. Rows 3,4, and 5 are located on the most level portion of the floor pan.

Row 3 will be at the intersection of the toe kick and the level sections of the floor pan.



PASSENGER FLOOR PAN X-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	722	726	719		701	703	707		-21	-23	-12	
2	624	624	620		604	601	608		-20	-23	-12	
3	523	524	520	518	504	503	509	510	-19	-21	-11	-8
4	423	422	420	417	408	403	410	410	-15	-19	-10	-7
5	323	322	319	317	309	304	308	309	-14	-18	-11	-8

PASSENGER FLOOR PAN Z-AXIS

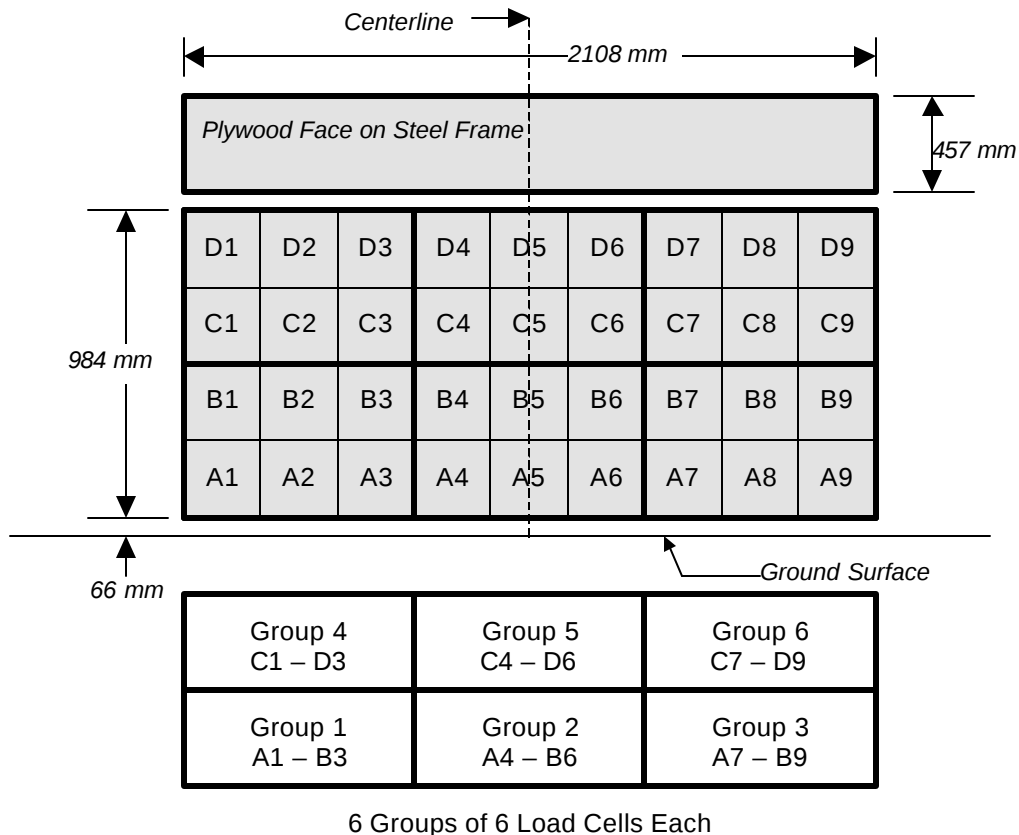
	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	18	8	4		27	17	15		9	9	11	
2	-29	-32	-32		-40	-45	-43		-11	-13	-11	
3	-60	-53	-52	-48	-87	-88	-87	-81	-27	-35	-35	-33
4	-62	-64	-57	-54	-115	-106	-99	-91	-53	-42	-42	-37
5	-59	-66	-69	-69	-116	-114	-105	-111	-57	-48	-36	-42

DATA SHEET NO. 18
FIXED BARRIER TYPE

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup
 Test Program: 2001 NHTSA 35 mph NCAP

NHTSA No.: TOY001
 Test Date: 5/9/01

36 Load Cell Rigid Barrier (NHTSA Standard)
Load Cell Locations on Fixed Barrier



The Data is presented in Appendix C with the following requirements:

- 1.) Data from 36 individual load cells
- 2.) Sum data from 6 groupings shown above (6 cells/group)
- 3.) Total or sum of all 36 individual load cells
- 4.) Sum of all 36 individual load cells vs. vehicle dynamic crush

DATA SHEET NO. 19
ACCIDENT INVESTIGATION DATA

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup
Test Program: 2001 NHTSA 35 mph NCAP

NHTSA No.: TOY001
Test Date: 05/09/01

VEHICLE INFORMATION

VIN: STEVL52N11Z796083
Vehicle Size Category: Extended Cab Pickup

Wheel base (mm): 3102
Test Weight (kg): 1675

ACCELEROMETER DATA

Accelerometer Location: Left rear floor pan
Cal. Procedure/Interval: 6 months / drop test
Integration Algorithm: NHTSA Standard
Impact Velocity (km/h): 56.16
Velocity Change (km/h): 62.73

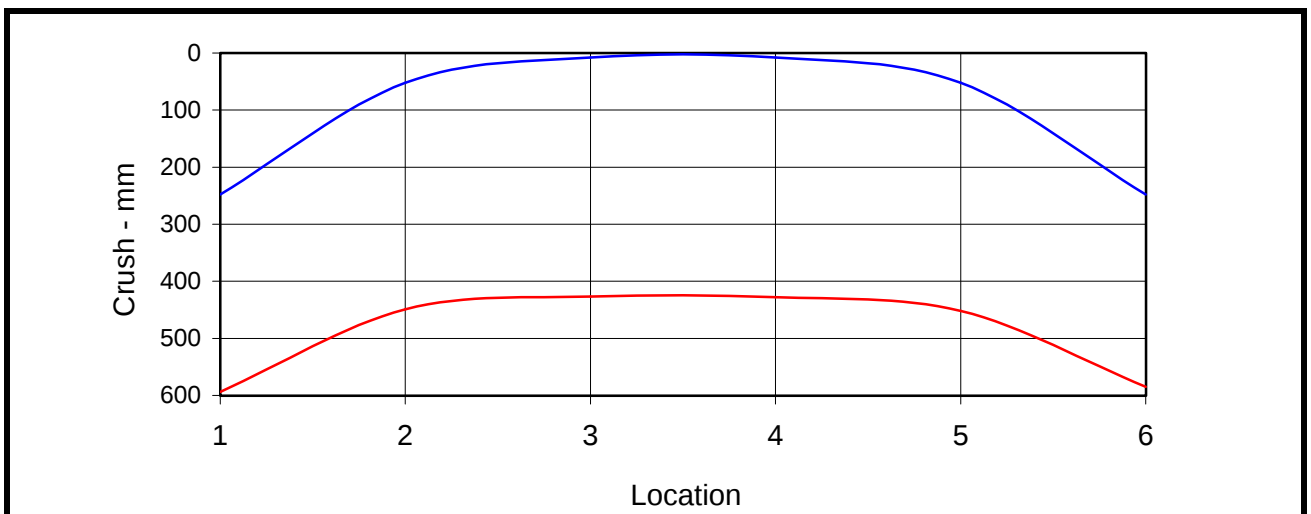
Linearity: Good

Time of Separation (msec): 69.9

CRUSH PROFILE

Collision Deformation Classification: 12FDEW6 ; Midpoint of Damage: Vehicle Centerline
Damage Region Length (mm): 1630 ; Impact Mode: Full Frontal

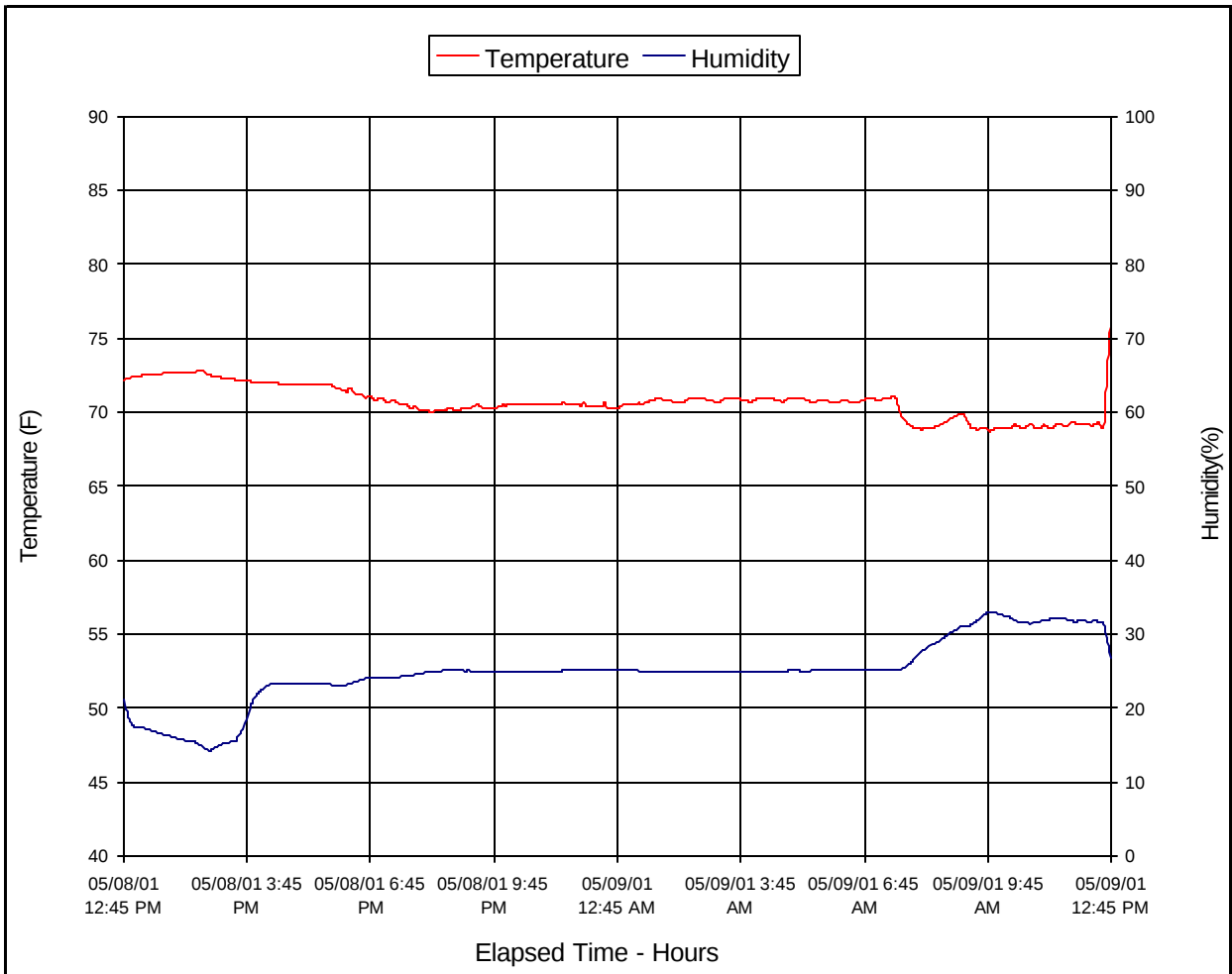
No.	Measurement Description	Units	Pre-Test	Post-Test	Difference
C1	Crush zone 1 at left side	mm	248	594	-346
C2	Crush zone 2 on left side	mm	52	449	-397
C3	Crush zone 3 on left side	mm	8	427	-419
C4	Crush zone 4 on right side	mm	8	428	-420
C5	Crush zone 5 on right side	mm	52	452	-400
C6	Crush zone 6 at right side	mm	248	585	-337



DATA SHEET NO. 20
DUMMY/ VEHICLE TEMPERATURE STABILIZATION

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup NHTSA No.: TOY001

Test Program: 2001 NHTSA 35 mph NCAP Test Date: 5/9/01



APPENDIX A
PHOTOGRAPHS

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Figure A-1: Right Front, as Received



Figure A-2: Left Rear, as Received

MFD. BY TOYOTA MOTOR MANUFACTURING, CALIFORNIA, INC. DATE 03/01
GVWR (LBS) : 4500
GAWR (LBS) : FRT. 2200 WITH P205/75R15 TIRES.
15X6J RIMS, AT 29PSI COLD.
RR. 2500 WITH P205/75R15 TIRES.
15X6J RIMS, AT 29PSI COLD.

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

STEVL52N11Z796083 TRUCK

RZN150L-CRPDKAB
C/TR 4P7/FB45
A/TM A08A/
A44D



Figure A-3: Vehicle Certification Label

RECOMMENDED COLD TIRE INFLATION PRESSURE (kPa) PRESSION DE PNEUS (psi)		
TIRE SIZE DIMENSIONS	FRONT AV	REAR AR
P205/75R15 97S	200 (29)	200 (29)
P235/55R16 96T	200 (29)	220 (32)
See Owner's Manual for additional information. Voir le Manuel du Propriétaire pour de plus amples informations.		
04010		KB

Figure A-4: Vehicle Tire Label



Figure A-5: Front View, Pre-Test



Figure A-6: Front View, Post-Test



Figure A-7: Left Side View, Pre-Test



Figure A-8: Left Side View, Post-Test



Figure A-9: Right Side View, Pre-Test



Figure A-10: Right Side View, Post-Test



Figure A-11: Right Front View, Pre-Test



Figure A-12: Right Front View, Post-Test



Figure A-13: Left Rear View, Pre-Test



Figure A-14: Left Rear View, Post-Test

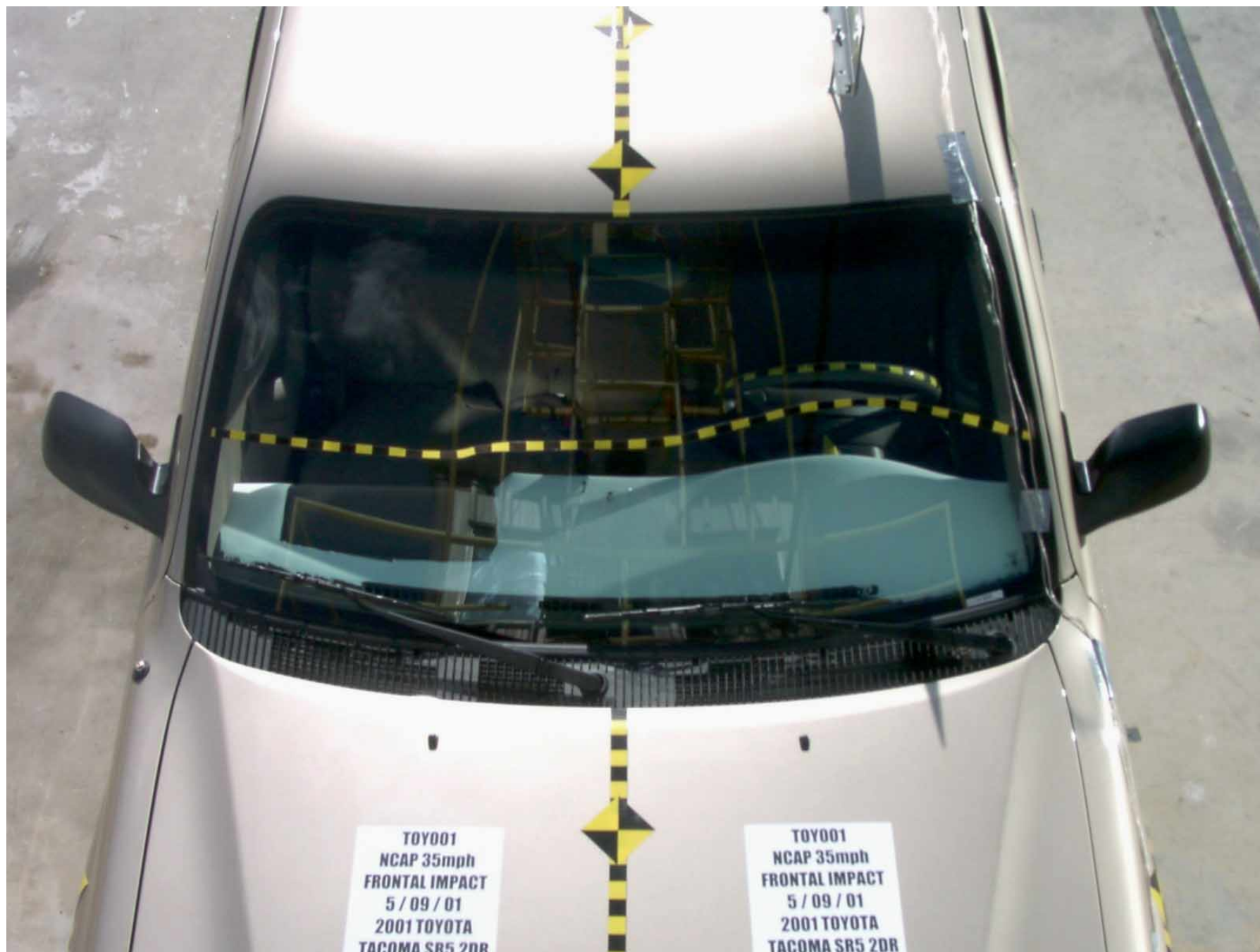


Figure A-15: Windshield, Pre-Test



Figure A-16: Windshield, Post-Test



Figure A-17: Engine Compartment, Pre-Test

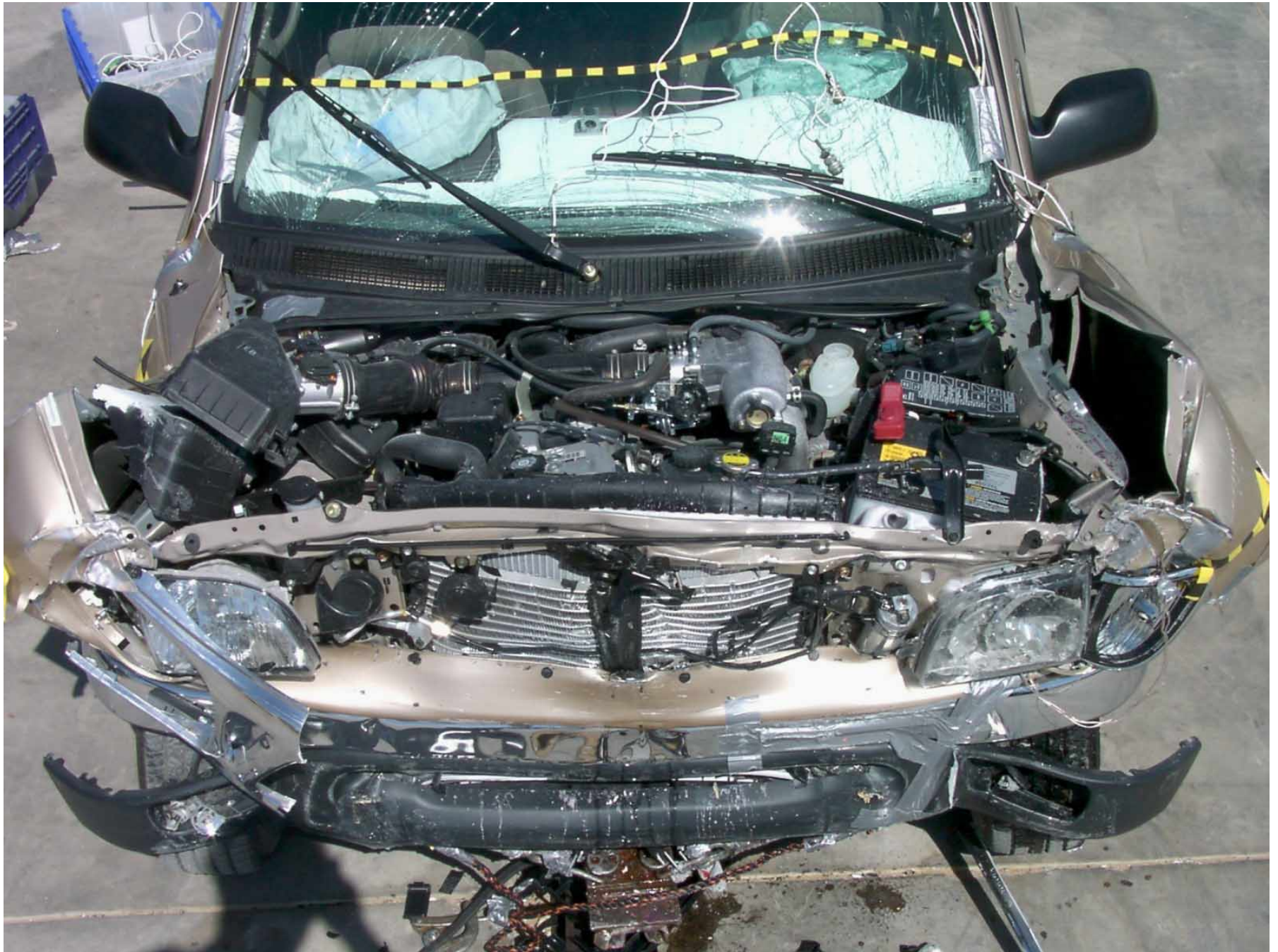


Figure A-18: Engine Compartment, Post-Test



Figure A-19: Fuel Cap, Pre-test



Figure A-20: Fuel Cap, Post-Test

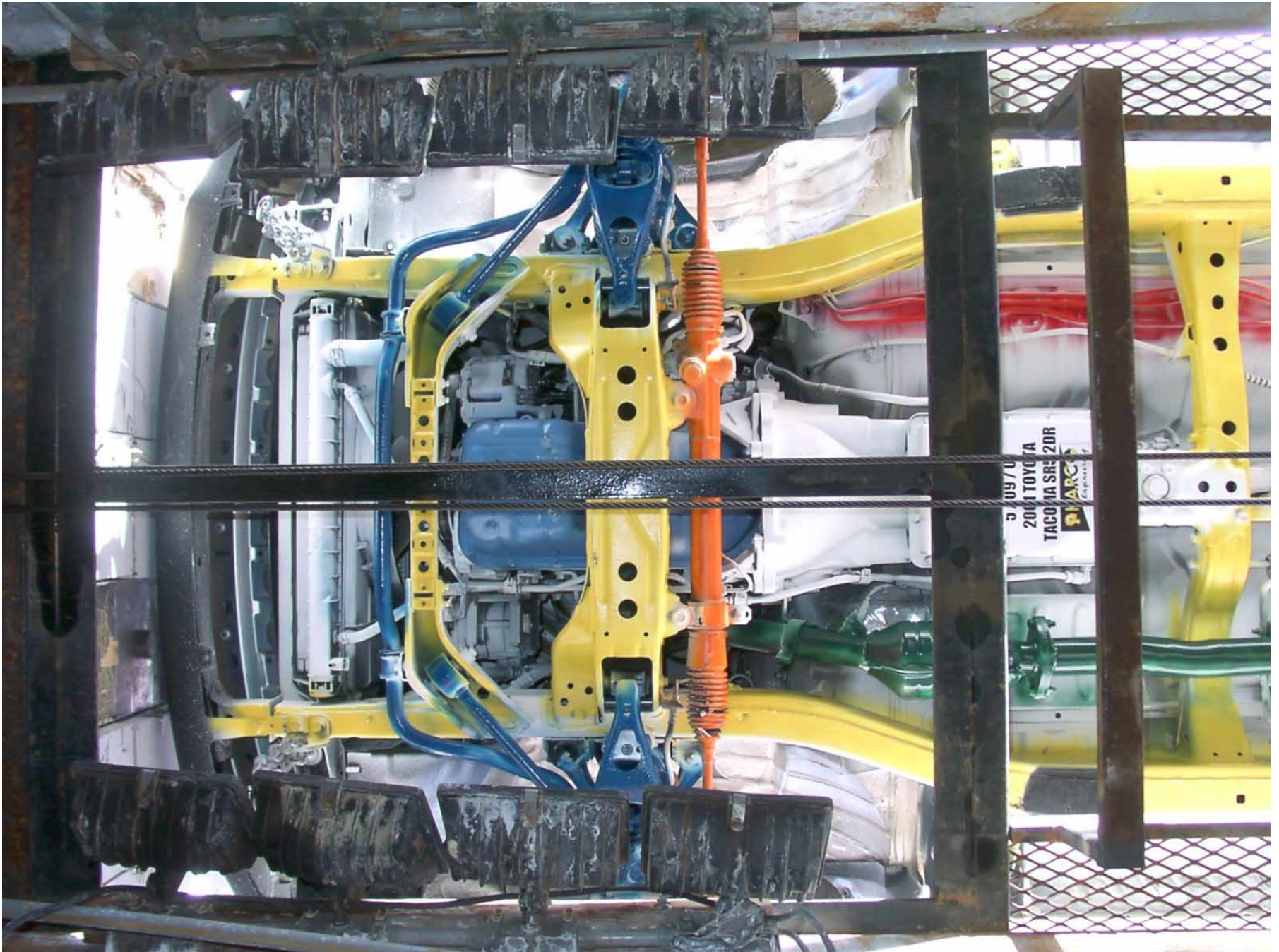


Figure A-21: Front Underside, Pre-Test

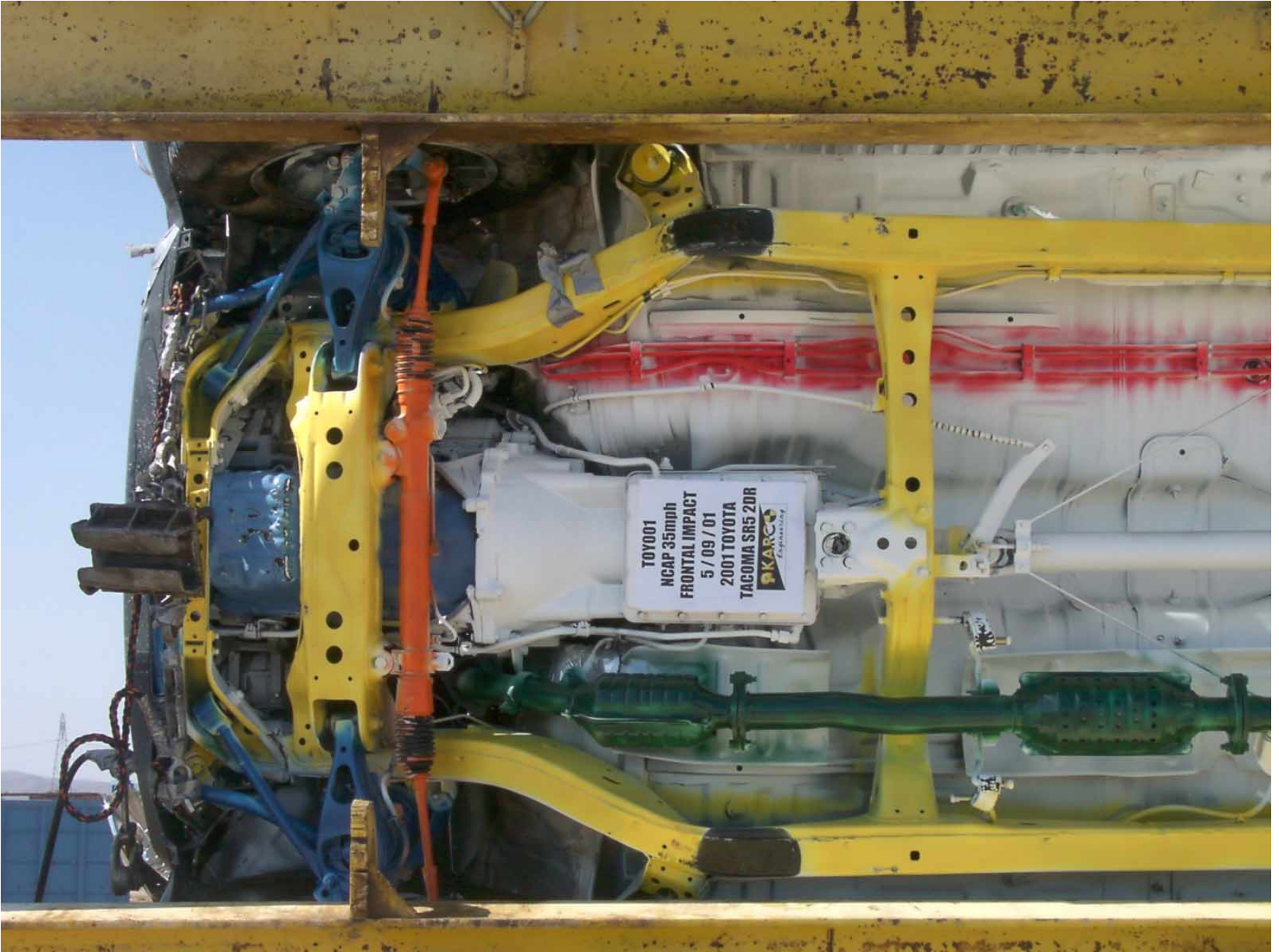


Figure A-22: Front Underside, Post-Test

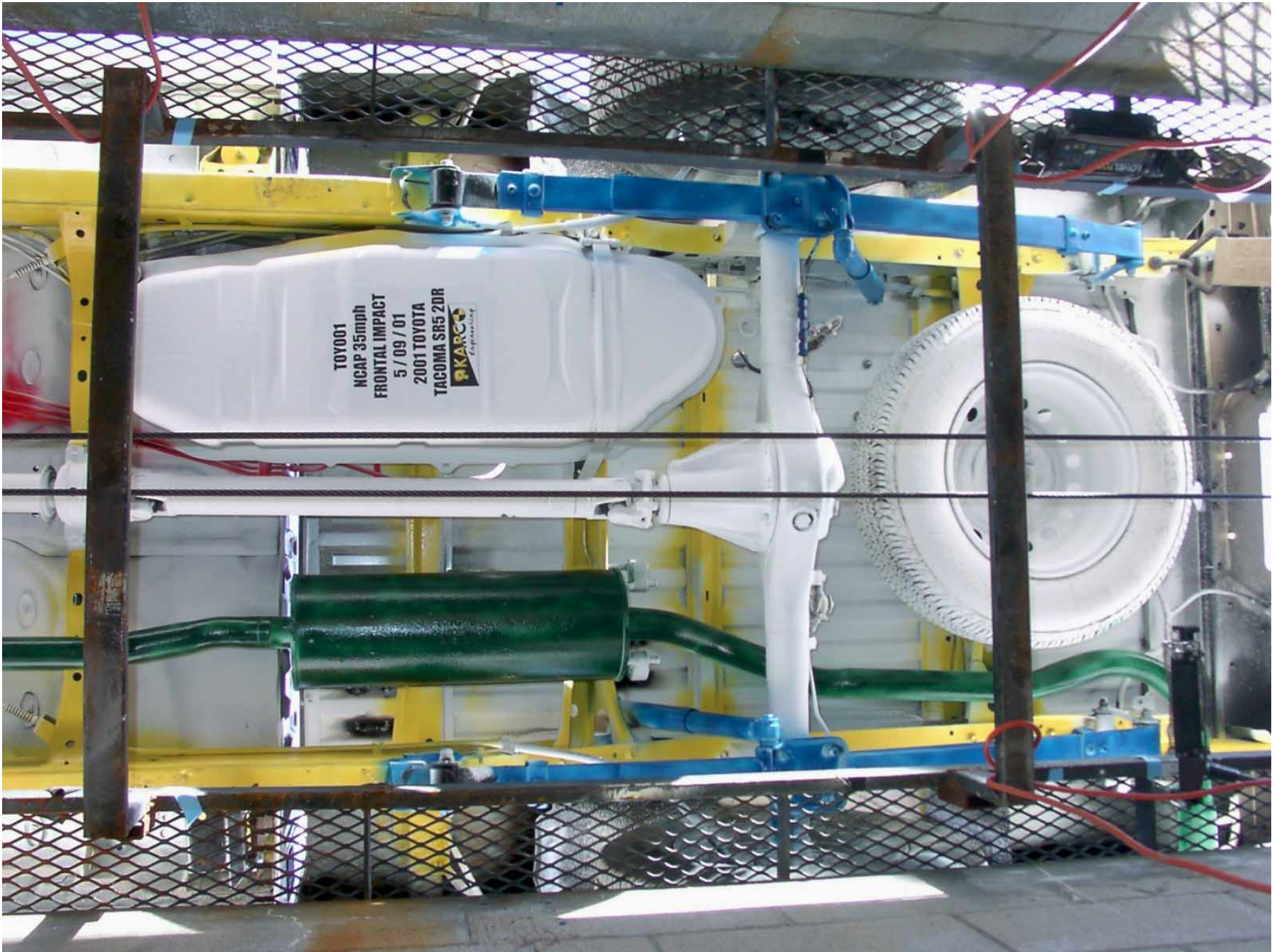


Figure A-23: Rear Underside, Pre-Test

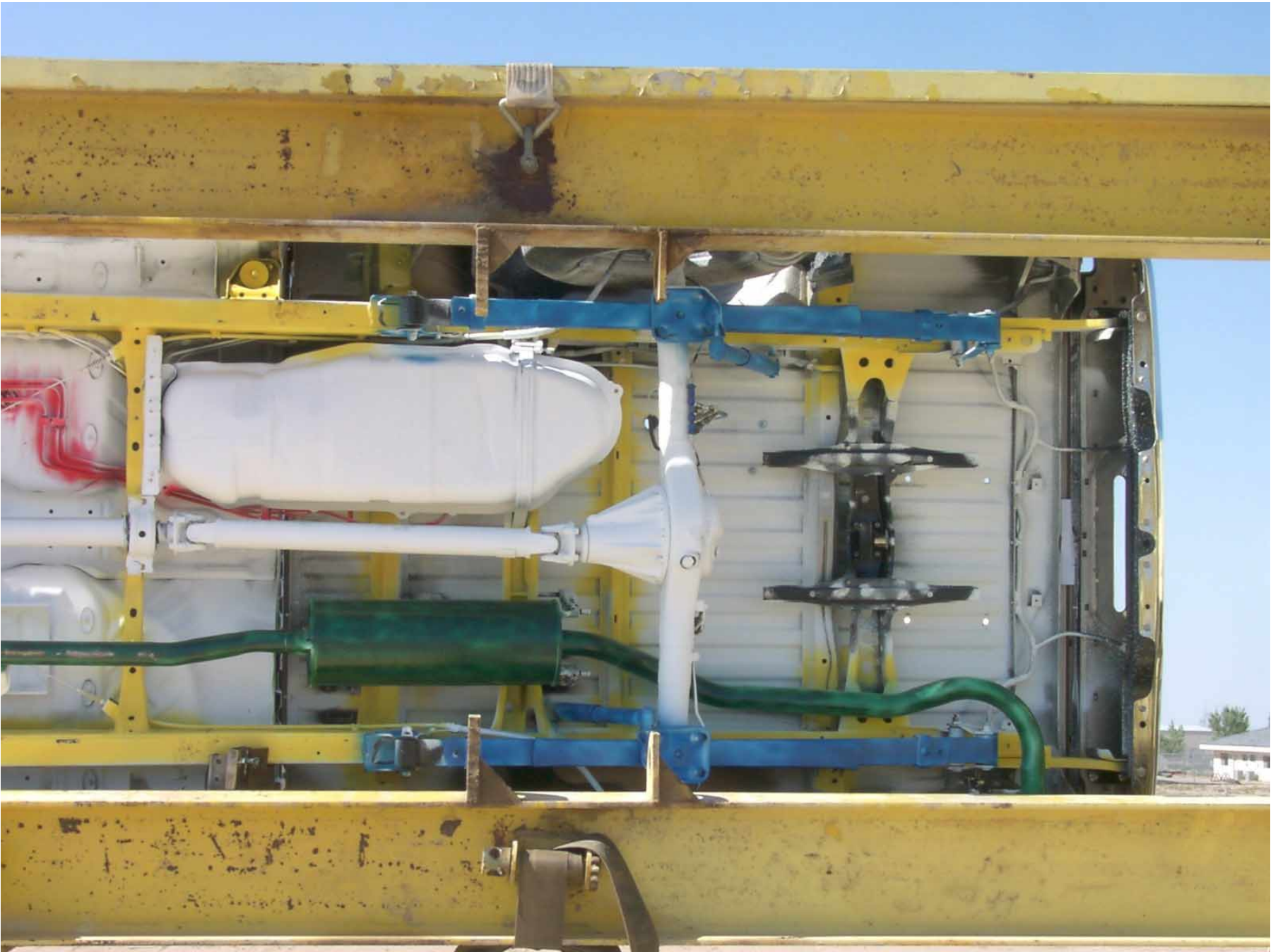


Figure A-24: Rear Underside, Post-Test



Figure A-25: Driver Dummy Front View, Pre-Test



Figure A-26: Driver Dummy Front View, Post-Test



Figure A-27: Driver Dummy Through Window, Pre-Test



Figure A-28: Driver Dummy Through Window, Post-Test



Figure A-29: Driver Dummy Door Open, Pre-Test



Figure A-30: Driver Dummy Door Open, Post-Test



Figure A-31: Driver Dummy 90° To Vehicle, Pre-Test



Figure A-32: Driver Dummy 90° To Vehicle, Post-Test

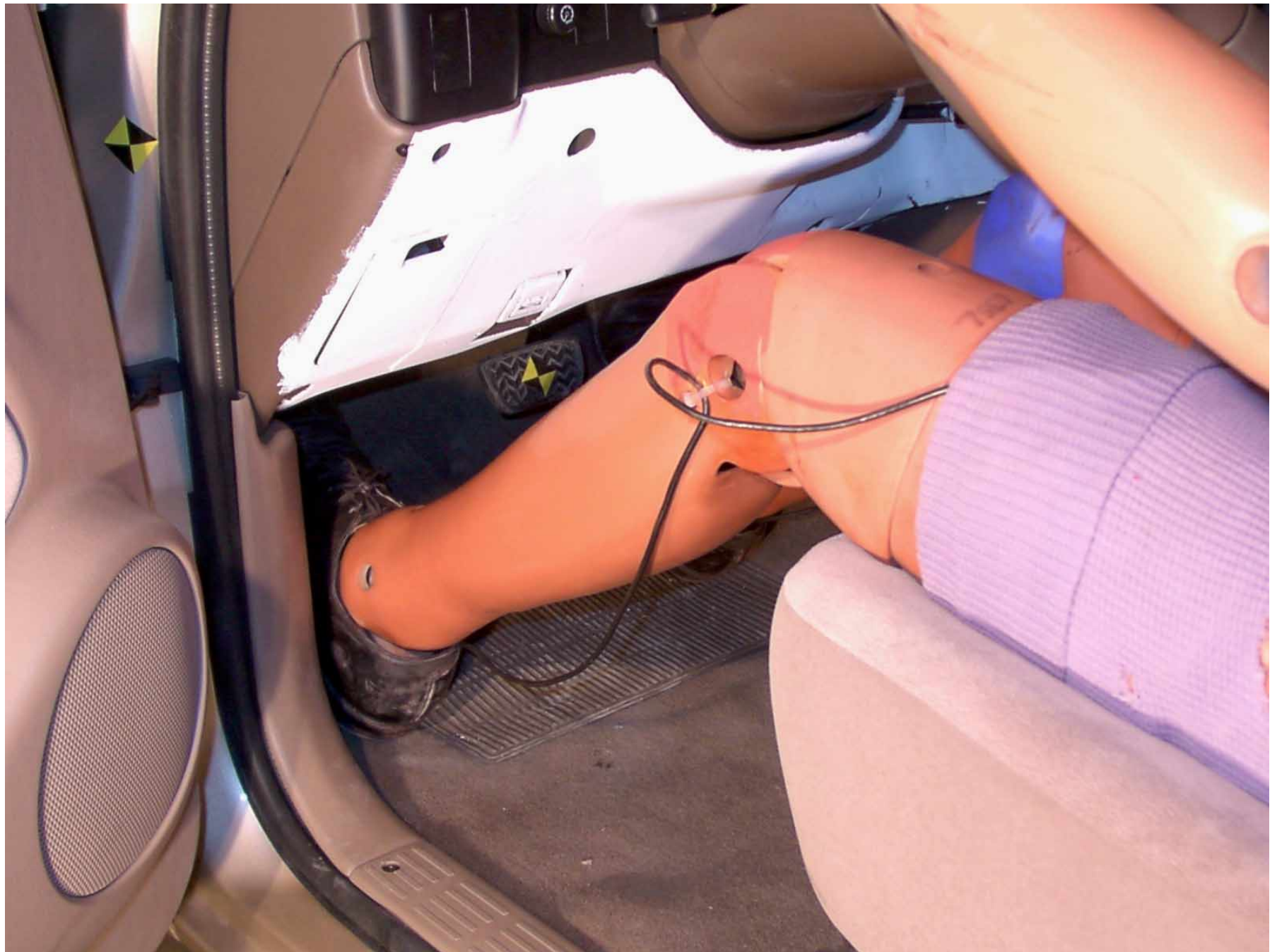


Figure A-33: Driver Dummy Feet, Pre-Test



Figure A-34: Driver Dummy Feet and Knee Contact, Post-Test



Figure A-35: Driver Side Knee Bolster, Pre-Test



Figure A-36: Driver Side Knee Bolster, Post-Test

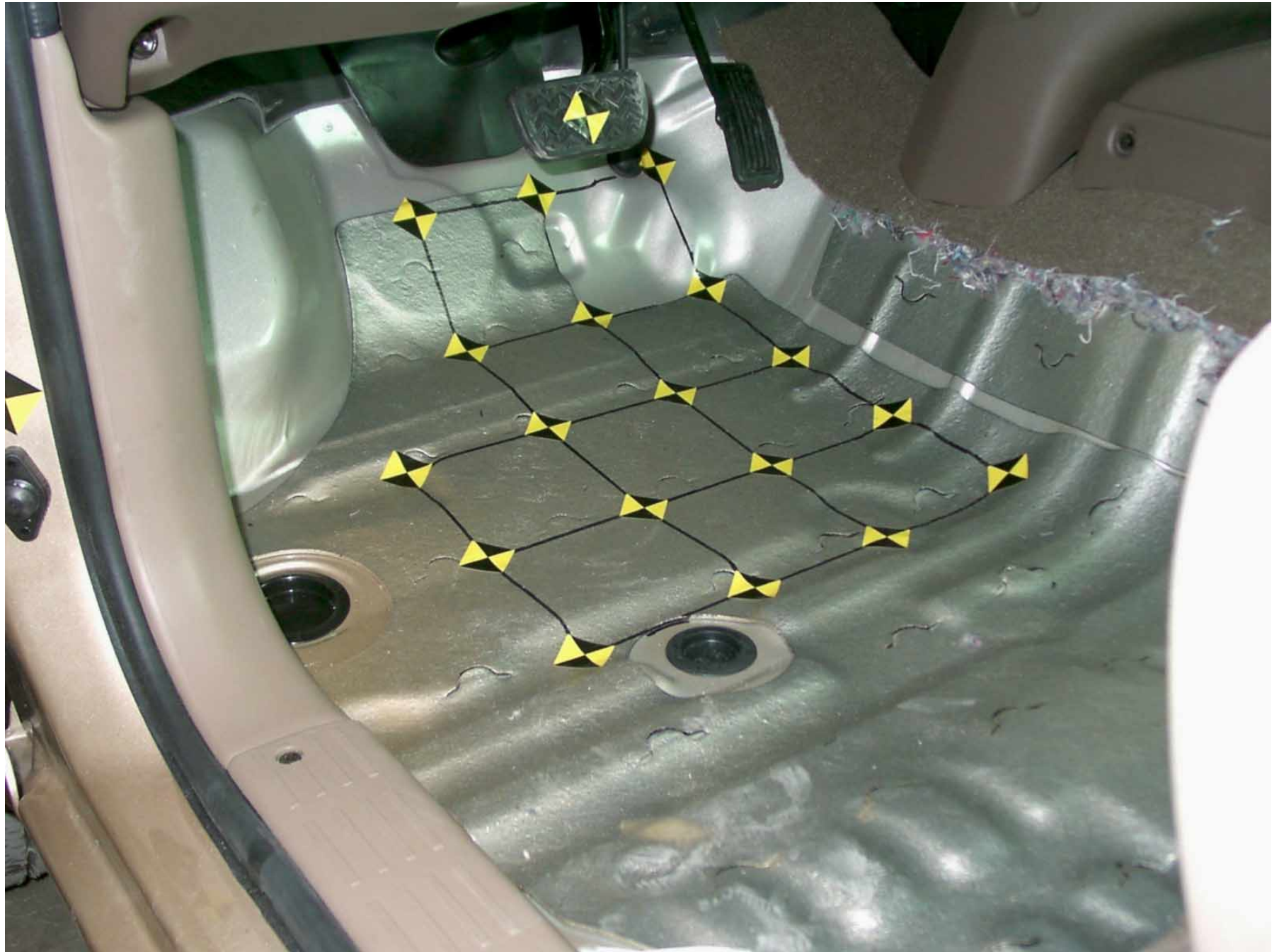


Figure A-37: Driver Side Floor Pan, Pre-Test



Figure A-38: Driver Side Floor Pan, Post-Test

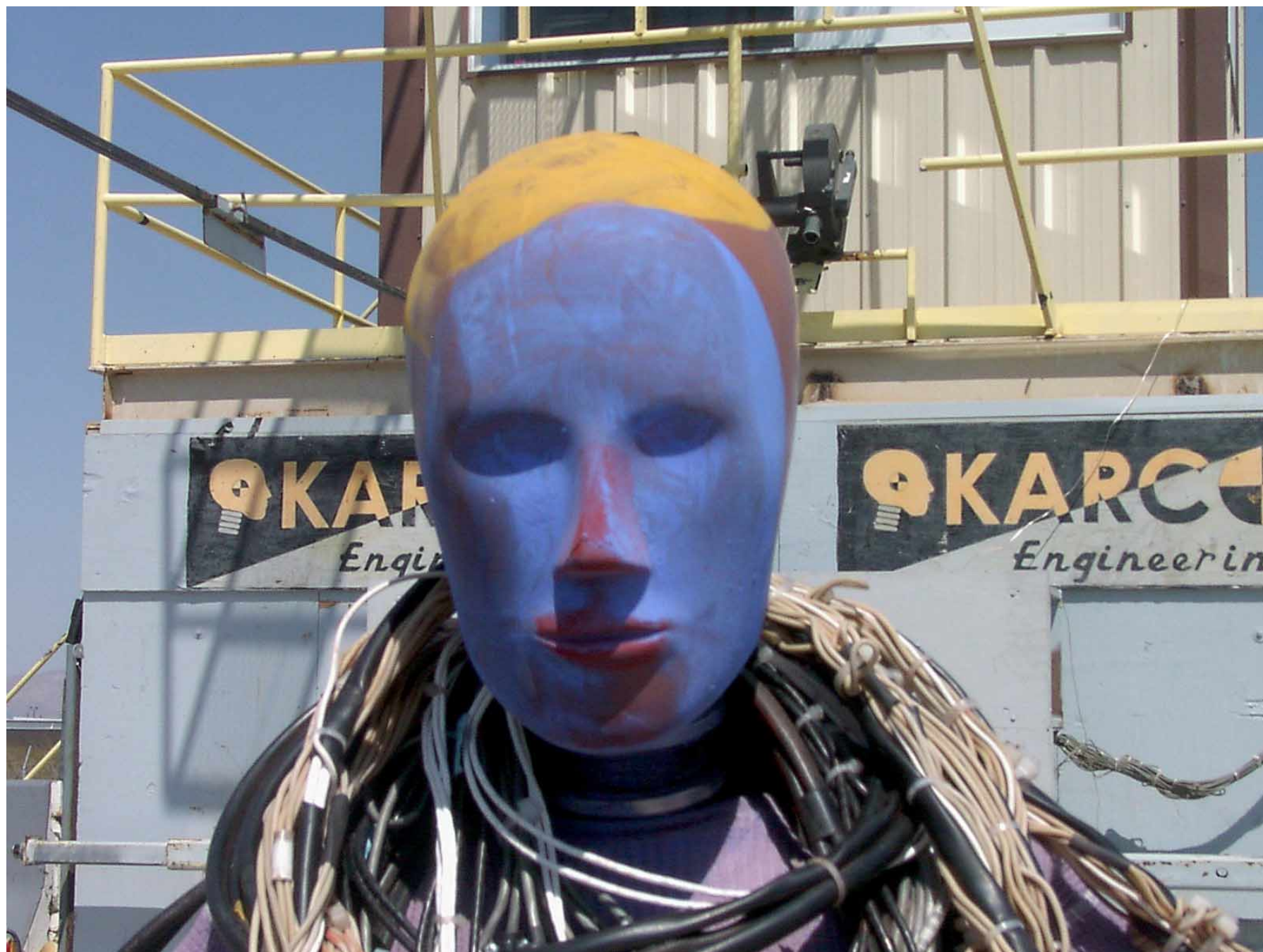


Figure A-39: Driver Dummy Head, Post-Test



Figure A-40: Driver Dummy Contact, Post-Test



Figure A-41: Passenger Dummy Front View, Pre-Test



Figure A-42: Passenger Dummy Front View, Post-Test



Figure A-43: Passenger Dummy Through Window, Pre-Test



Figure A-44: Passenger Dummy Through Window, Post-Test



Figure A-45: Passenger Dummy Door Open, Pre-Test



Figure A-46: Passenger Dummy Door Open, Post-Test



Figure A-47: Passenger Dummy 90° To Vehicle, Pre-Test



Figure A-48: Passenger Dummy 90° To Vehicle, Post-Test



Figure A-49: Passenger Dummy Feet, Pre-Test



Figure A-50: Passenger Dummy Feet and Knee Contact, Post-Test



Figure A-51: Passenger Side Floor Pan, Pre-Test



Figure A-52: Passenger Side Floor Pan, Post-Test



Figure A-53: Passenger Side Knee Bolster, Pre-Test



Figure A-54: Passenger Side Knee Bolster, Post-Test



Figure A-55: Passenger Head, Post-Test



Figure A-56: Passenger Dummy Contact, Post-Test



Figure A-57: Vehicle on Rollover Device



Figure A-58: Vehicle During Impact

APPENDIX B

DUMMY AND VEHICLE RESPONSE DATA TRACES

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B-3	Driver Head Primary X Displacement	B-3
B-4	Driver Head Primary Y	B-4
B-5	Driver Head Primary Z	B-5
B-6	Driver Head Resultant Primary	B-6
B-7	Driver Head Redundant X	B-7
B-8	Driver Head Redundant X Velocity	B-8
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B-10	Driver Head Redundant Y	B-10
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B-12	Driver Head Resultant Redundant	B-12
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B-16	Driver Neck Force Resultant	B-16
B-17	Driver Neck Moment X	B-17
B-18	Driver Neck Moment Y	B-18
B-19	Driver Neck Moment Z	B-19
B-20	Driver Neck Moment Resultant	B-20
B-21	Driver Chest Primary X	B-21
B-22	Driver Chest Primary X Velocity	B-22
B-23	Driver Chest Primary X Displacement	B-23
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B-26	Driver Chest Primary Resultant	B-26
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B-30	Driver Chest Redundant Y	B-30
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B-33	Driver Chest Displacement X	B-33

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B-36 Driver Pelvis X Displacement	B-36
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B-38 Driver Pelvis Z	B-38
B-39 Driver Pelvis Resultant	B-39
B-40 Driver Left Femur Force	B-40
B-41 Driver Right Femur Force	B-41
B-42 Driver Left Upper Tibia Moment X	B-42
B-43 Driver Left Upper Tibia Moment Y	B-43
B-44 Driver Right Upper Tibia Moment X	B-44
B-45 Driver Right Upper Tibia Moment Y	B-45
B-46 Driver Left Lower Tibia Moment X	B-46
B-47 Driver Left Lower Tibia Moment Y	B-47
B-48 Driver Left Lower Tibia Force Z	B-48
B-49 Driver Right Lower Tibia Moment X	B-49
B-50 Driver Right Lower Tibia Moment Y	B-50
B-51 Driver Right Lower Tibia Force Z	B-51
B-52 Driver Left Foot Aft X	B-52
B-53 Driver Left Foot Aft Z	B-53
B-54 Driver Left Foot Fore Z	B-54
B-55 Driver Right Foot Aft X	B-55
B-56 Driver Right Foot Aft Z	B-56
B-57 Driver Right Foot Fore Z	B-57
B-58 Driver Lap Belt Force	B-58
B-59 Driver Shoulder Belt Force	B-59
B-60 Driver Shoulder Belt Pullout	B-60
B-61 Driver Shoulder Belt Elongation	B-61

LIST OF DATA PLOTS...(Continued)

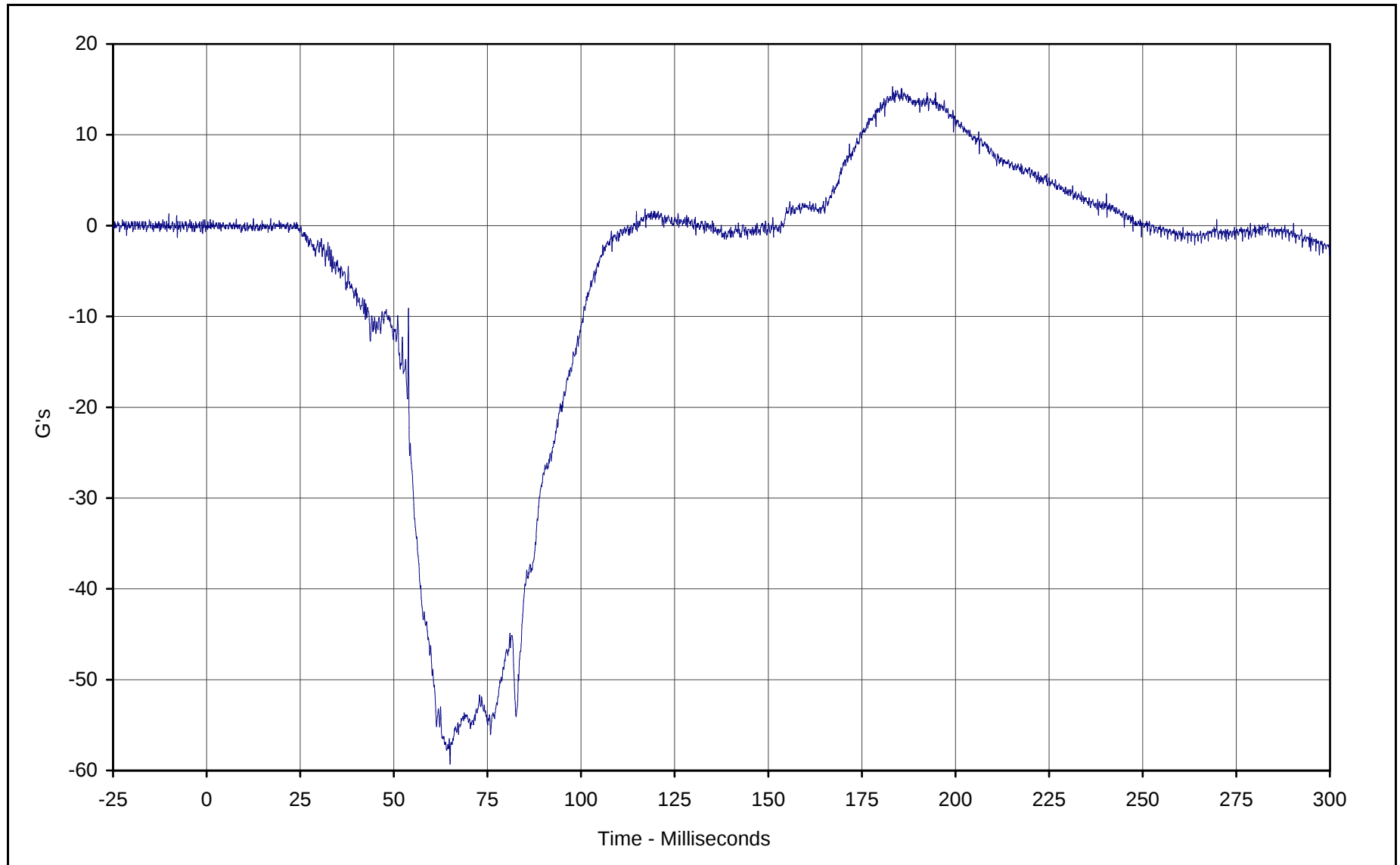
Data Plot		Page
B-62	Passenger Head Primary X	B-62
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B-64	Passenger Head Primary X Displacement	B-64
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B-97	Passenger Pelvis X Displacement
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B-99	Passenger Pelvis Z
B-100	Passenger Pelvis Resultant
B-101	Passenger Left Femur Force
B-102	Passenger Right Femur Force
B-103	Passenger Left Upper Tibia Moment X
B-104	Passenger Left Upper Tibia Moment Y
B-105	Passenger Right Upper Tibia Moment X
B-106	Passenger Right Upper Tibia Moment Y
B-107	Passenger Left Lower Tibia Moment X
B-108	Passenger Left Lower Tibia Moment Y
B-109	Passenger Left Lower Tibia Force Z
B-110	Passenger Right Lower Tibia Moment X
B-111	Passenger Right Lower Tibia Moment Y
B-112	Passenger Right Lower Tibia Force Z
B-113	Passenger Left Foot Aft X
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B-116	Passenger Right Foot Aft X
B-117	Passenger Right Foot Aft Z
B-118	Passenger Right Foot Fore Z
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B-120	Passenger Shoulder Belt Force
B-121	Passenger Shoulder Belt Pullout
B-122	Passenger Shoulder Belt Elongation

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B-146	Vehicle Left Rear Redundant Displacement	B-146

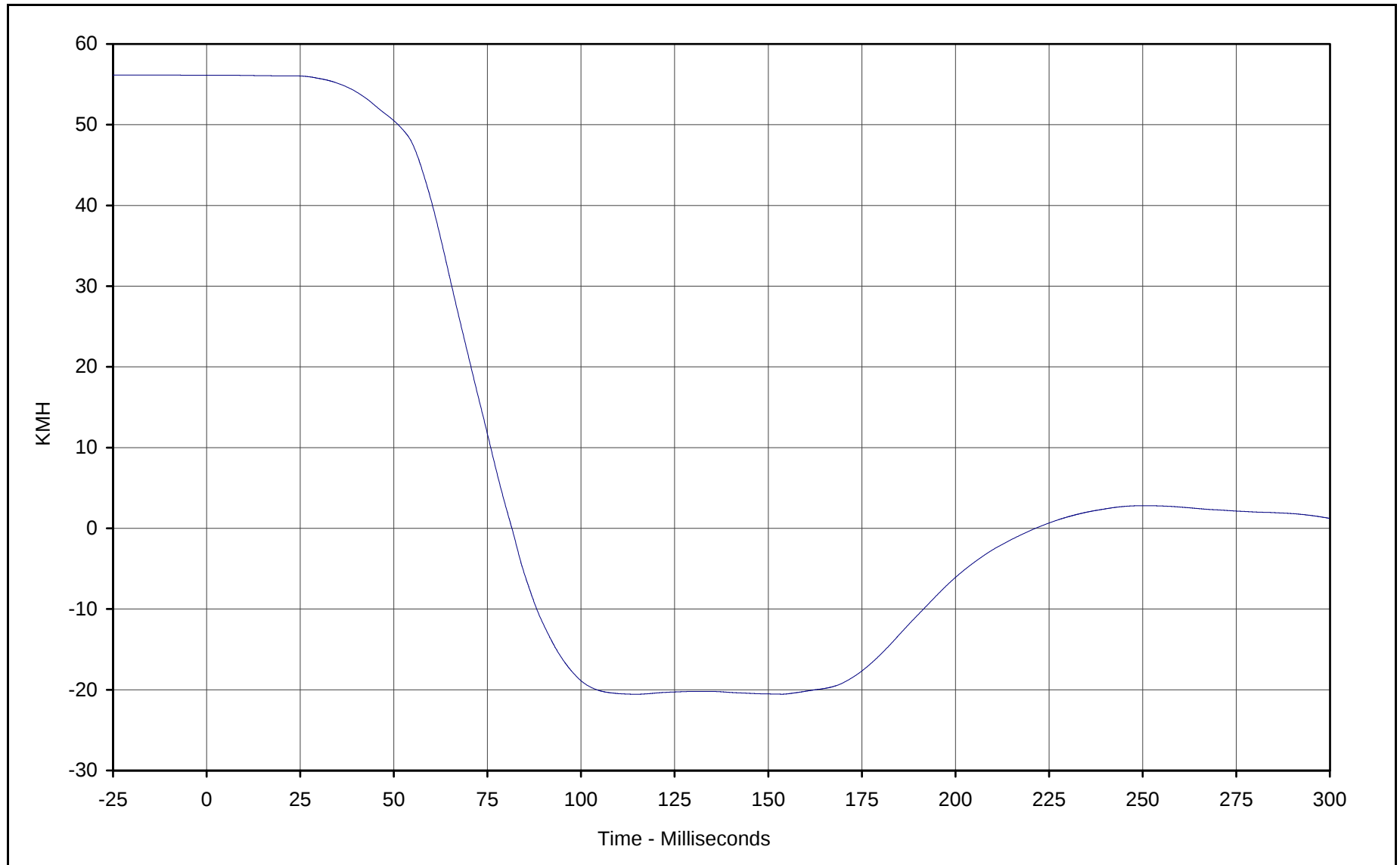


Curve Description: Driver Head Primary X
Maximum Value: 15.3 at 183.2 Milliseconds
Minimum Value: -59.3 at 65.0 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: FIL-001

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



B-2

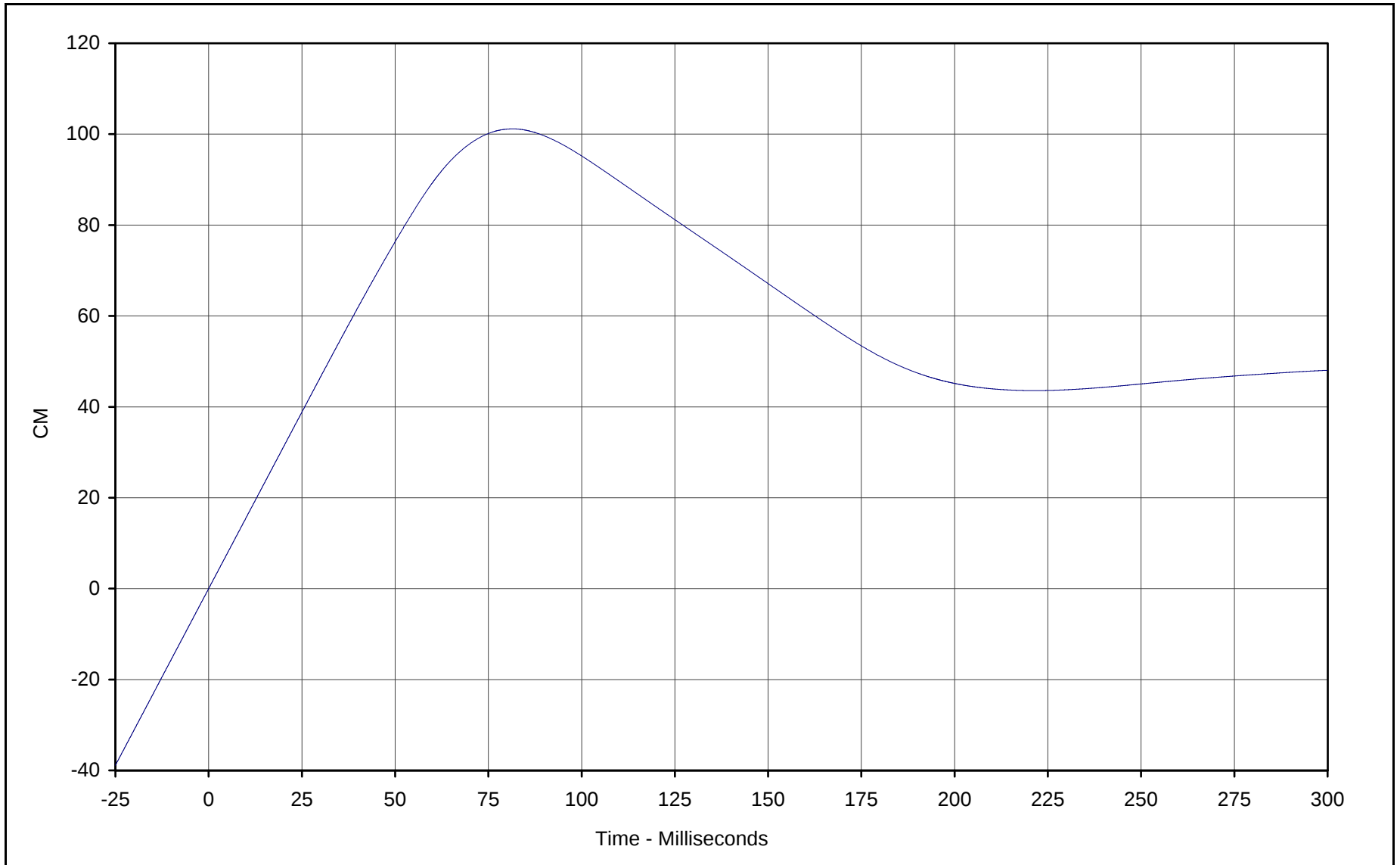


Curve Description: Driver Head Primary X Velocity
Maximum Value: 56.1 at 2.8 Milliseconds
Minimum Value: -20.6 at 114.5 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN1-001

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



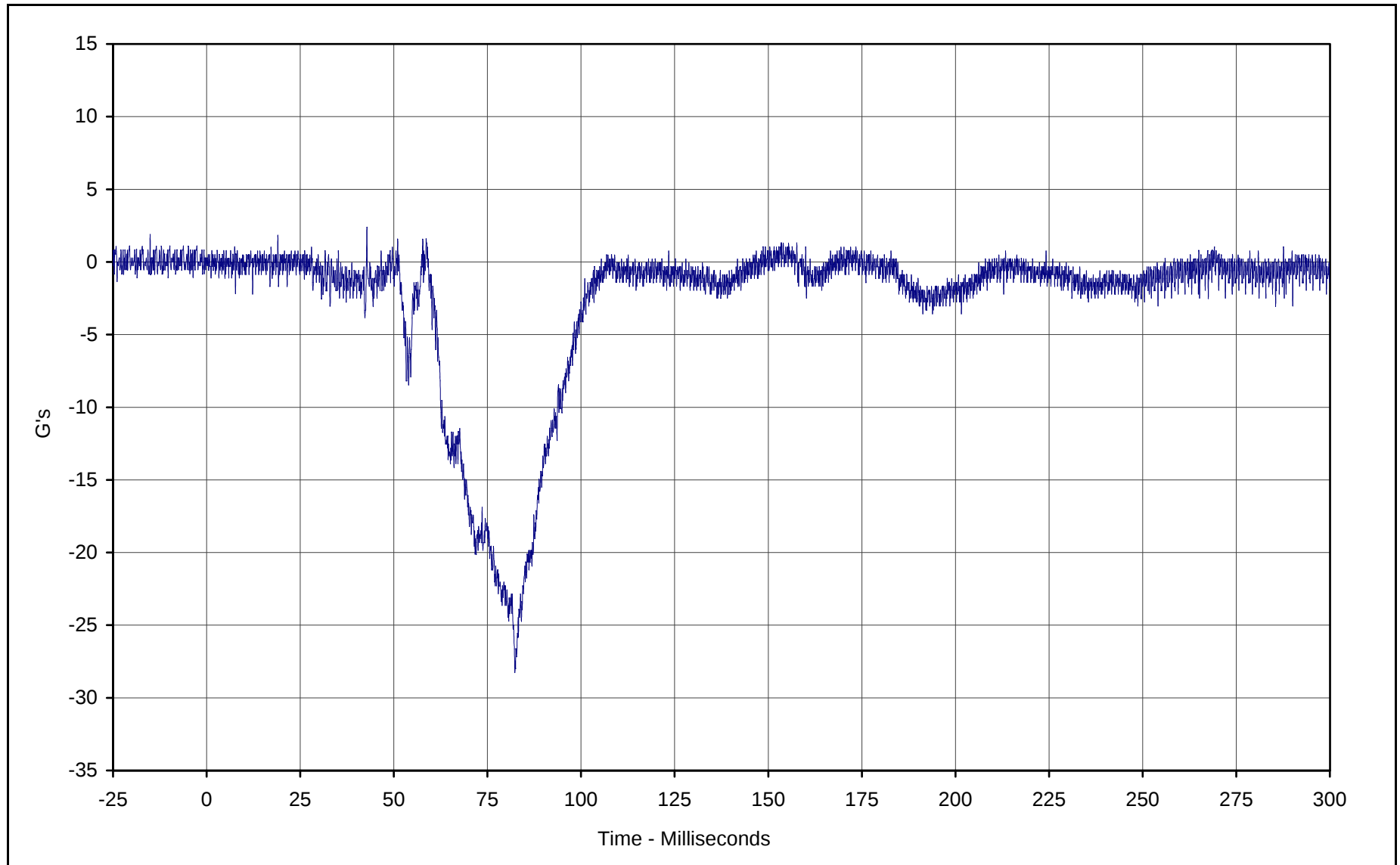
KAR21049-01



Curve Description: Driver Head Primary X Displ.
Maximum Value: 101.2 at 81.5 Milliseconds
Minimum Value: 0.0 at 0.0 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN2-001

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

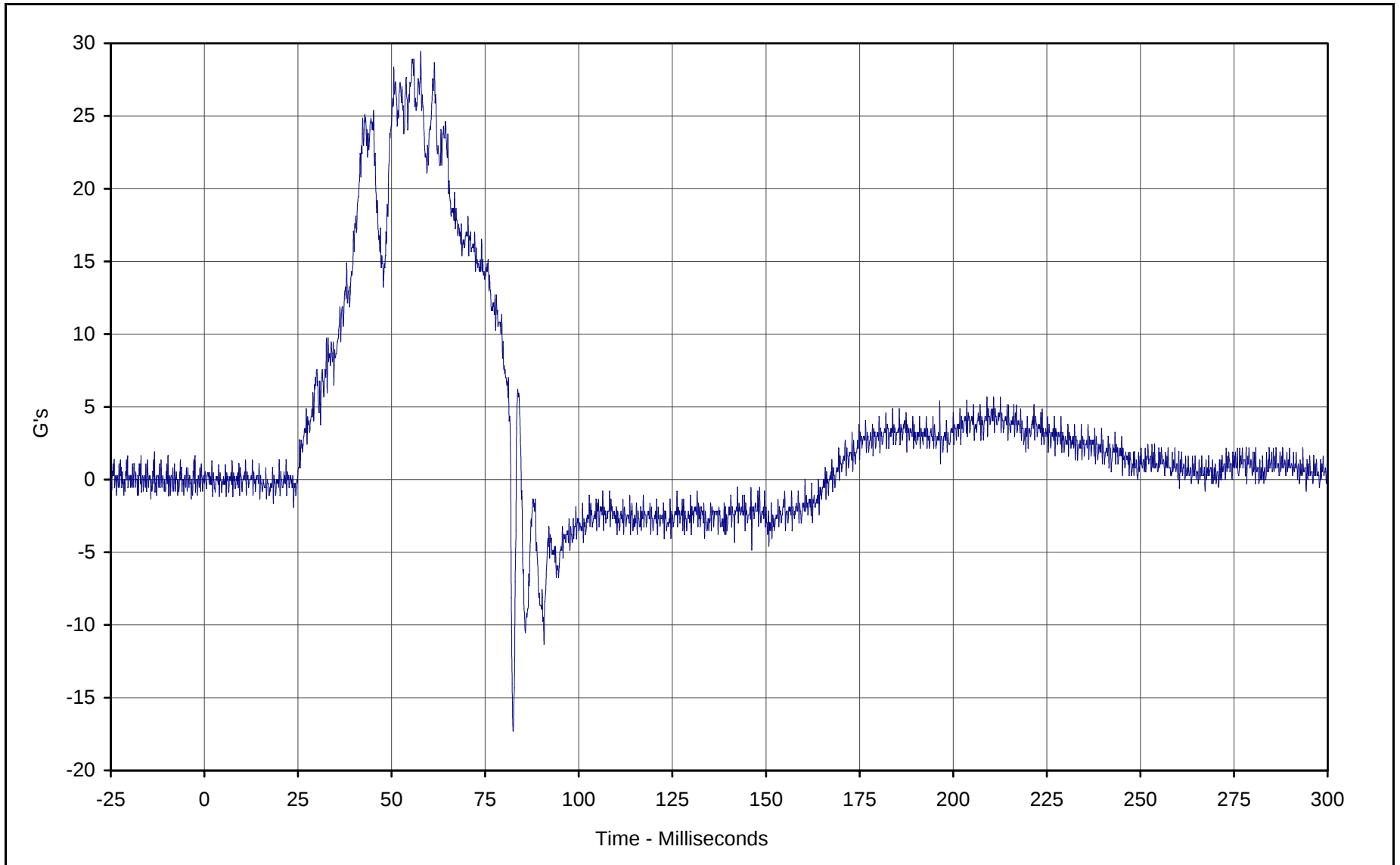




Curve Description: Driver Head Primary Y
Maximum Value: 2.4 at 42.8 Milliseconds
Minimum Value: -28.3 at 82.3 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: FIL-002

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

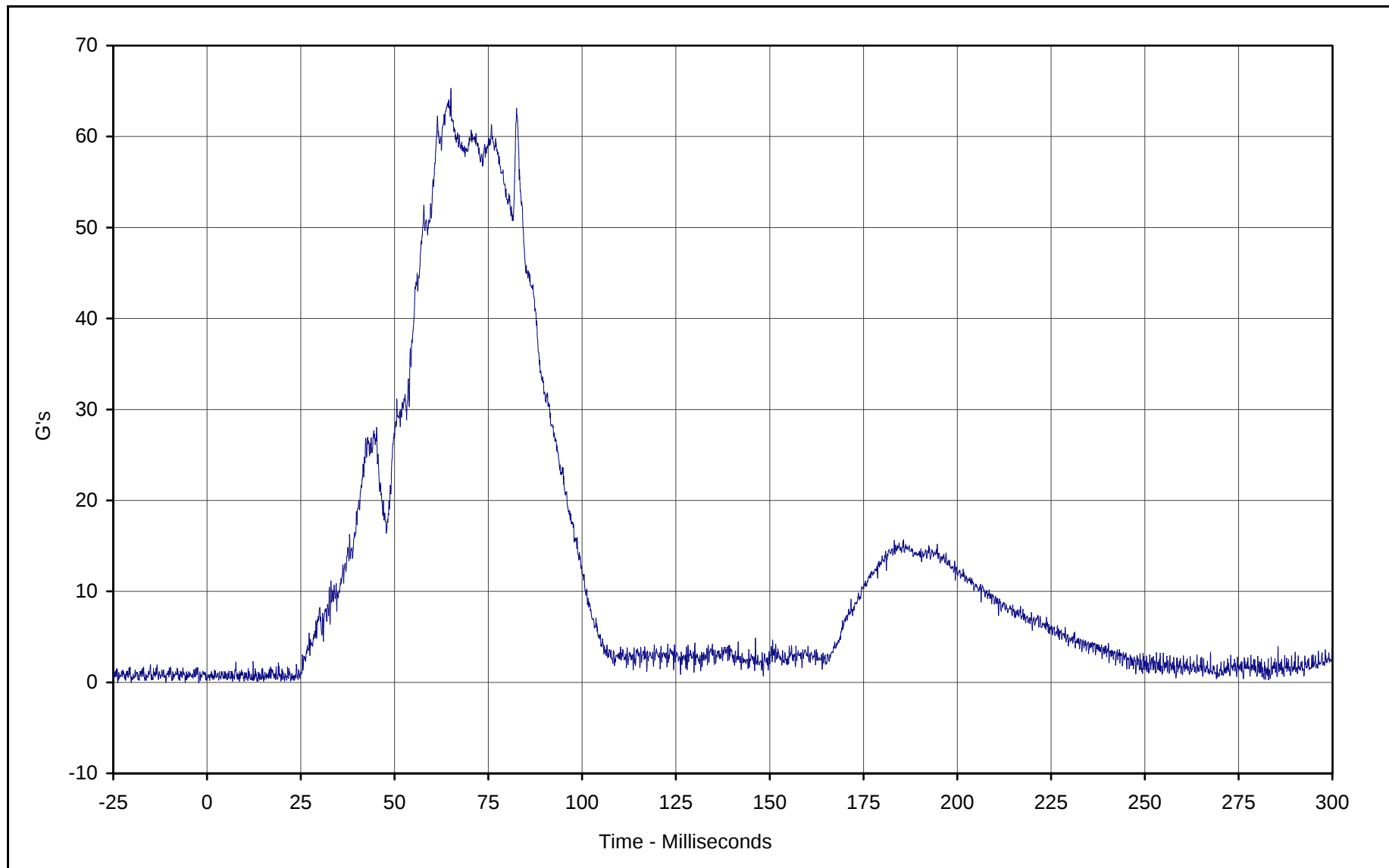




Curve Description: Driver Head Primary Z
Maximum Value: 29.4 at 57.8 Milliseconds
Minimum Value: -17.3 at 82.4 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: FIL-003

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

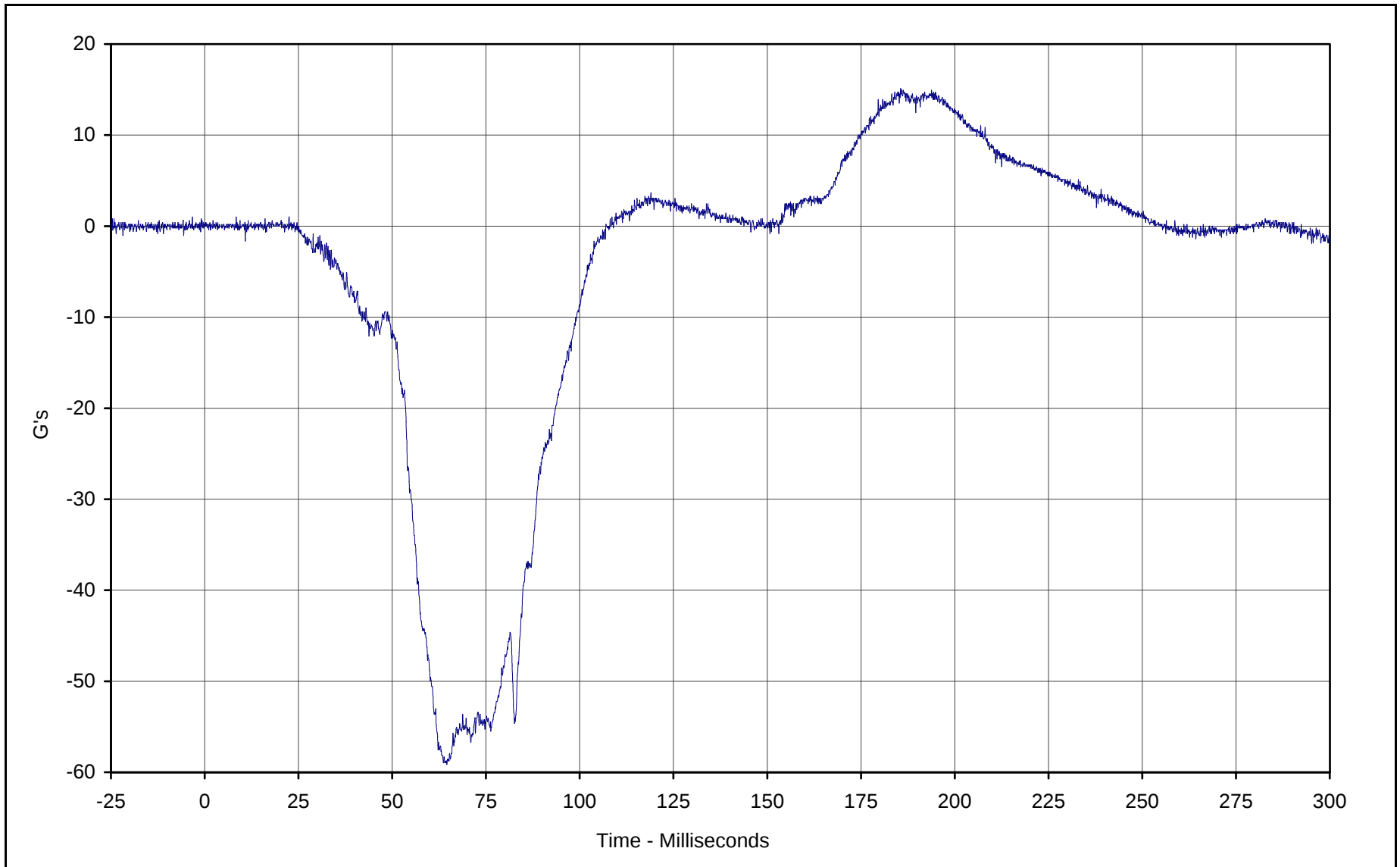




Curve Description: Driver Head Resultant Primary
Maximum Value: 65.3 at 65.0 Milliseconds
Minimum Value: 0.1 at 6.8 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: RES-001

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



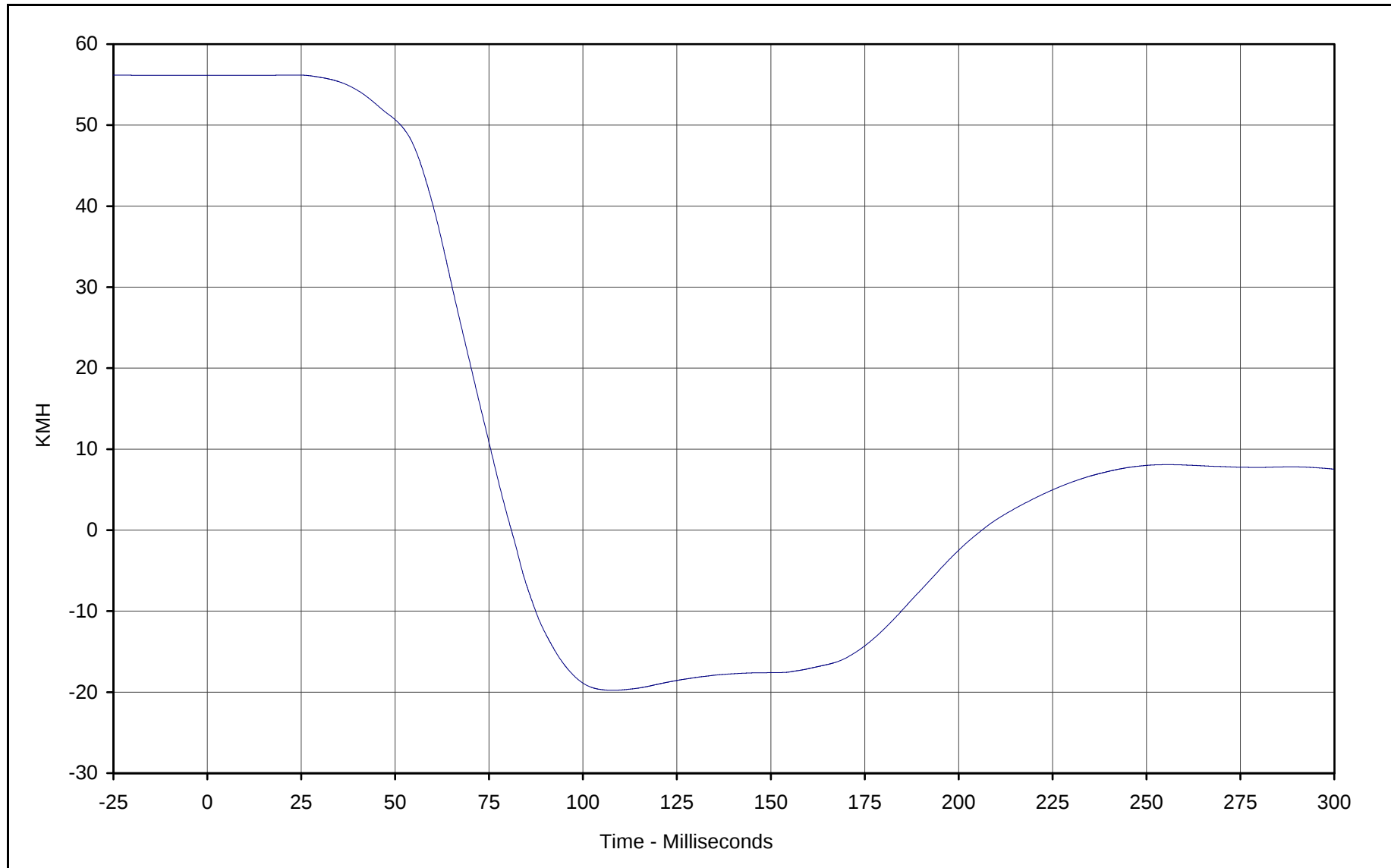


Curve Description: Driver Head Redundant X
Maximum Value: 15.1 at 185.6 Milliseconds
Minimum Value: -59.2 at 64.6 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: FIL-004

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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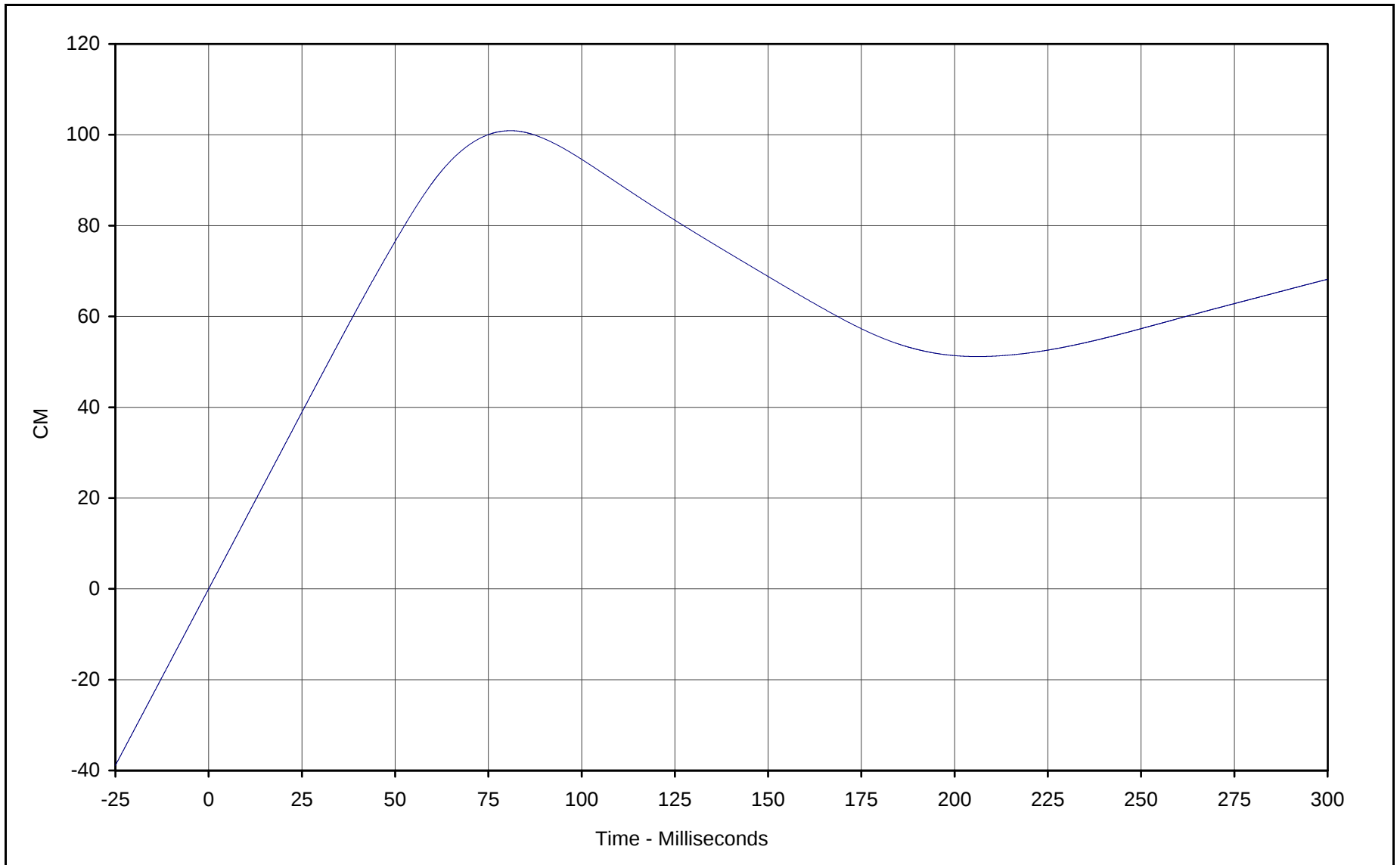


Curve Description: Driver Head Redundant X Velocity
Maximum Value: 56.2 at 23.7 Milliseconds
Minimum Value: -19.8 at 107.8 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN1-004

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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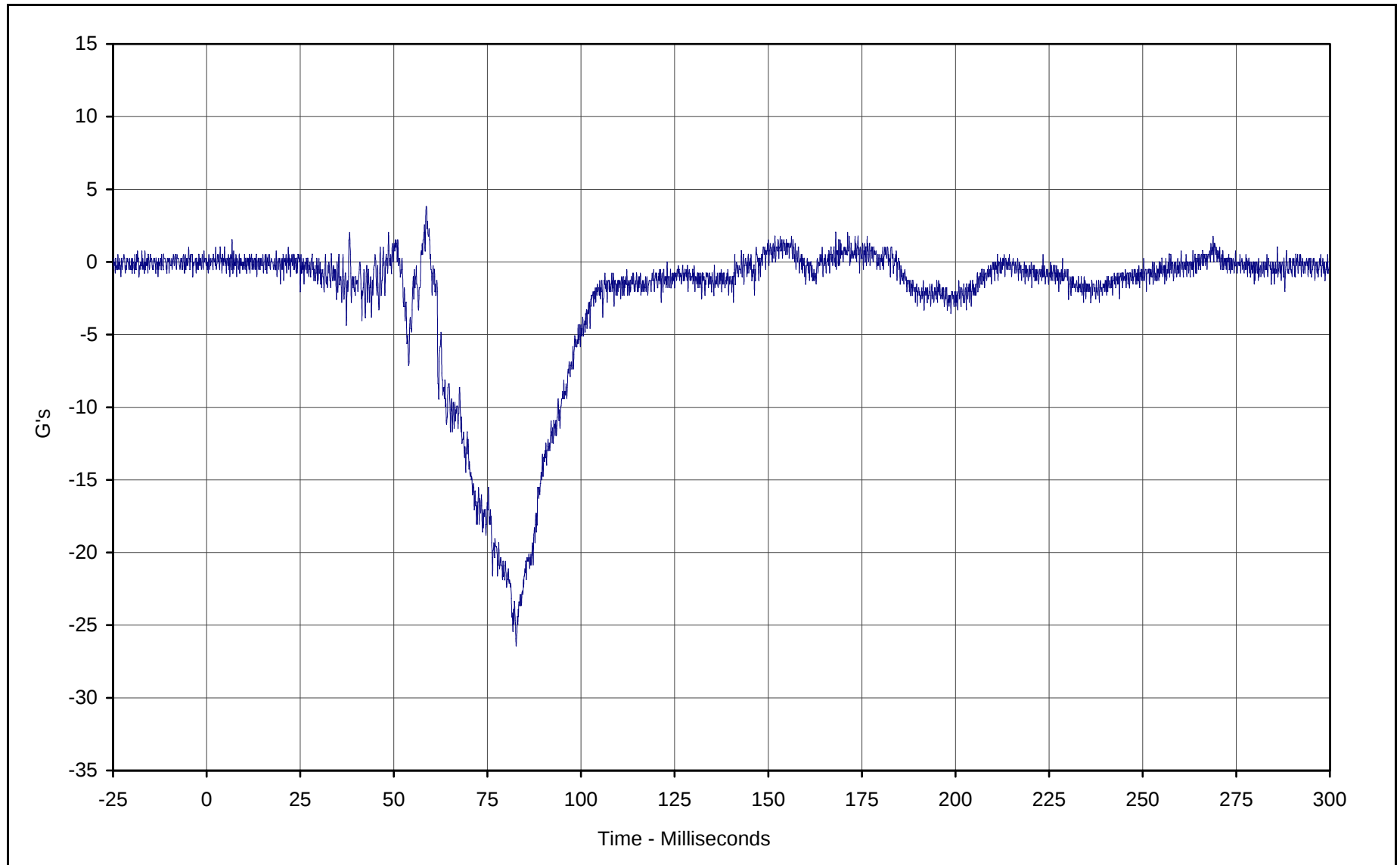


Curve Description: Driver Head Redundant X Displ.
Maximum Value: 100.9 at 80.9 Milliseconds
Minimum Value: 0.0 at 0.0 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN2-004

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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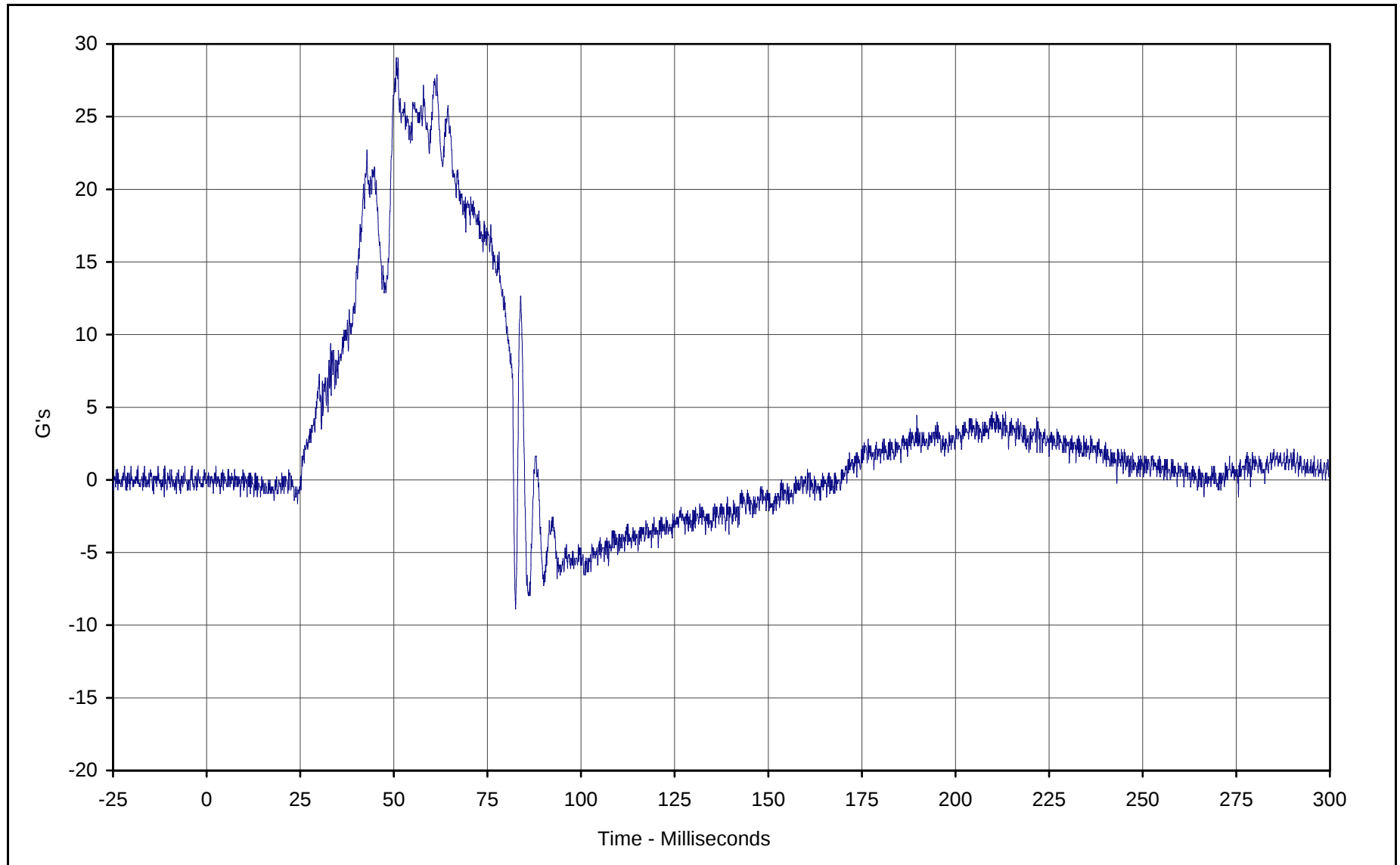


Curve Description: Driver Head Redundant Y
Maximum Value: 3.8 at 58.6 Milliseconds
Minimum Value: -26.4 at 82.7 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: FIL-005

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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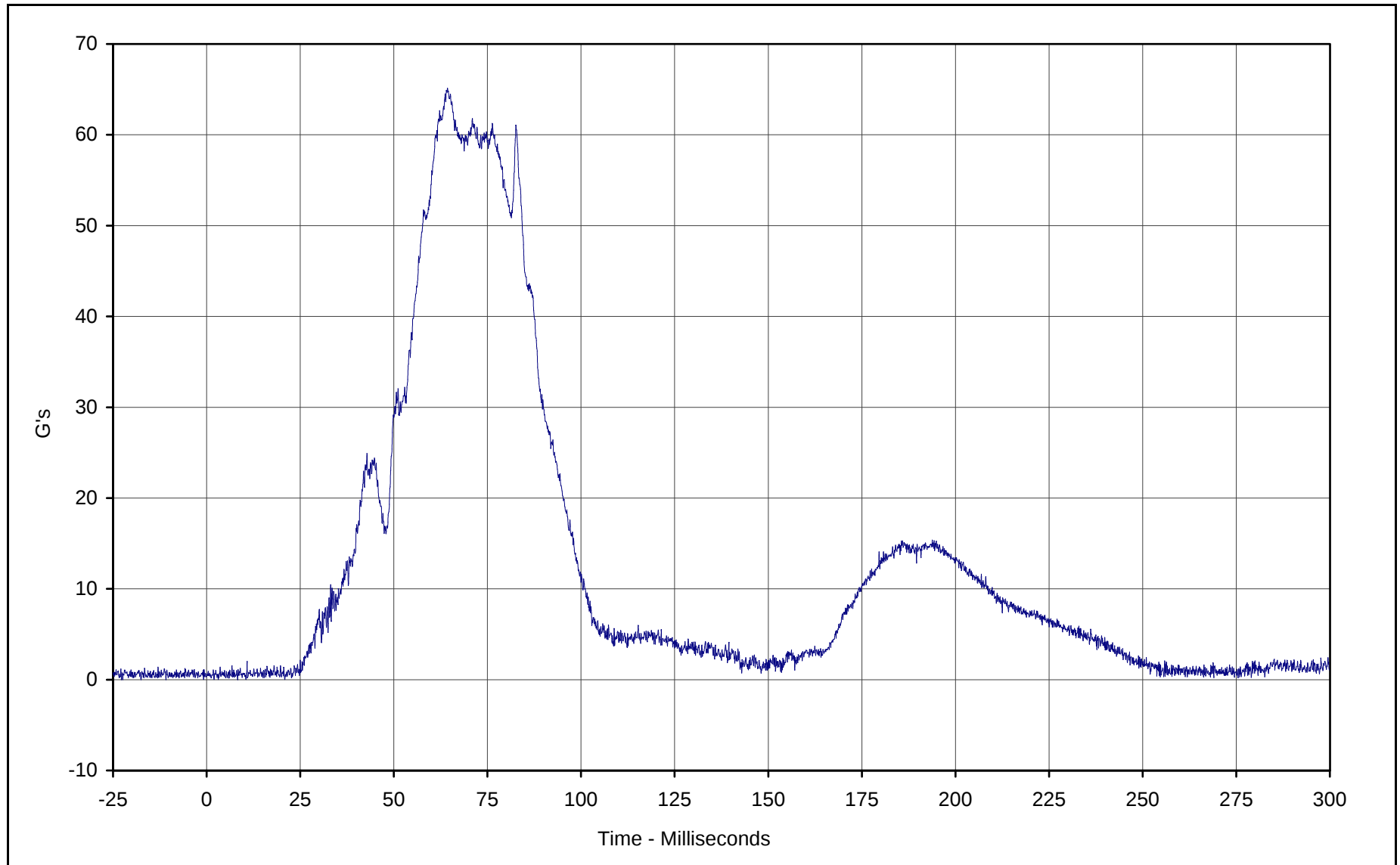


Curve Description: Driver Head Redundant Z
Maximum Value: 29.0 at 50.7 Milliseconds
Minimum Value: -8.9 at 82.5 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: FIL-006

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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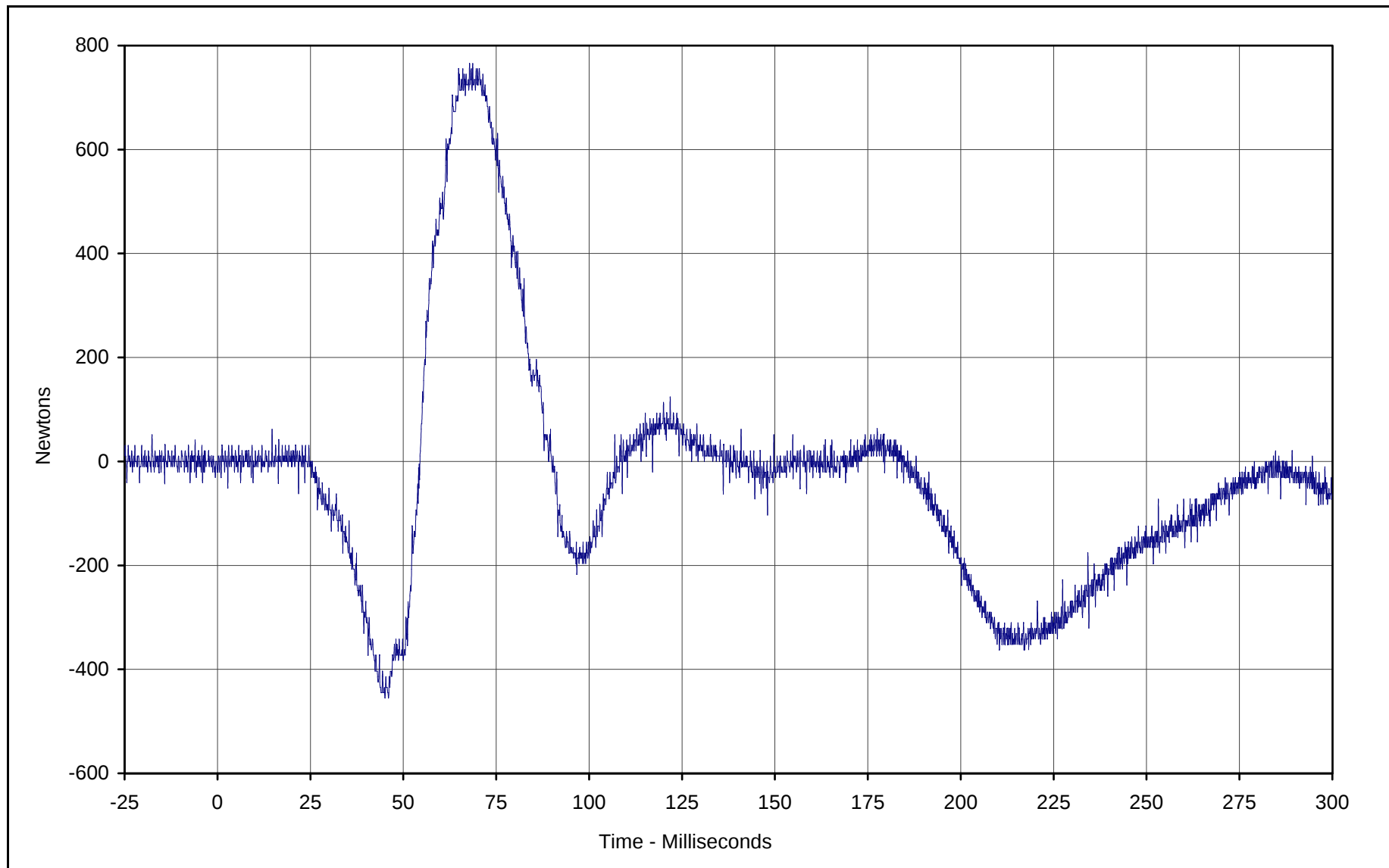


Curve Description: Driver Head Resultant Redundant
Maximum Value: 65.1 at 64.3 Milliseconds
Minimum Value: 0.0 at 2.0 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: RES-004

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



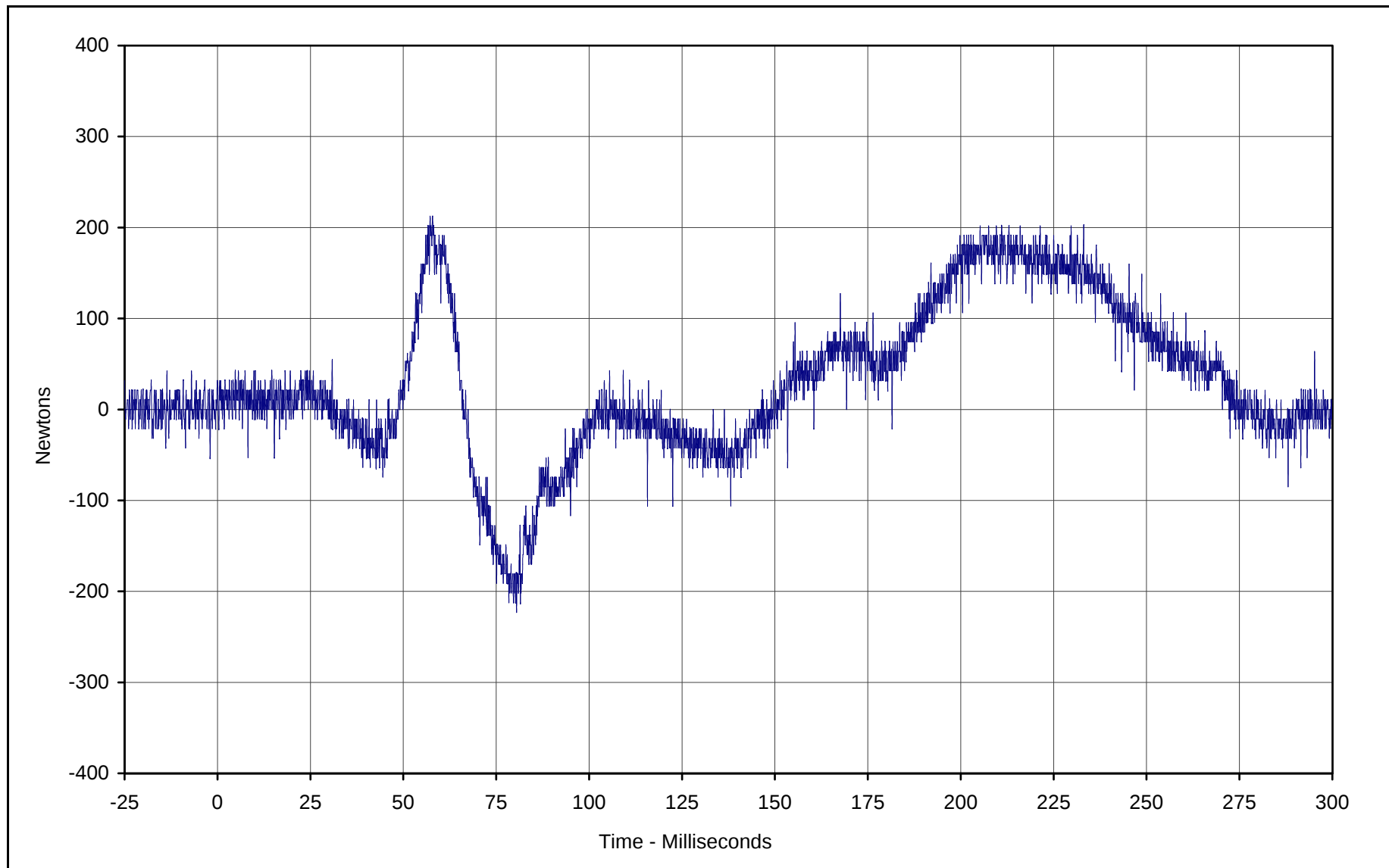
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Curve Description: Driver Neck Force X
Maximum Value: 765.9 at 67.8 Milliseconds
Minimum Value: -455.4 at 45.1 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: FIL-007

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

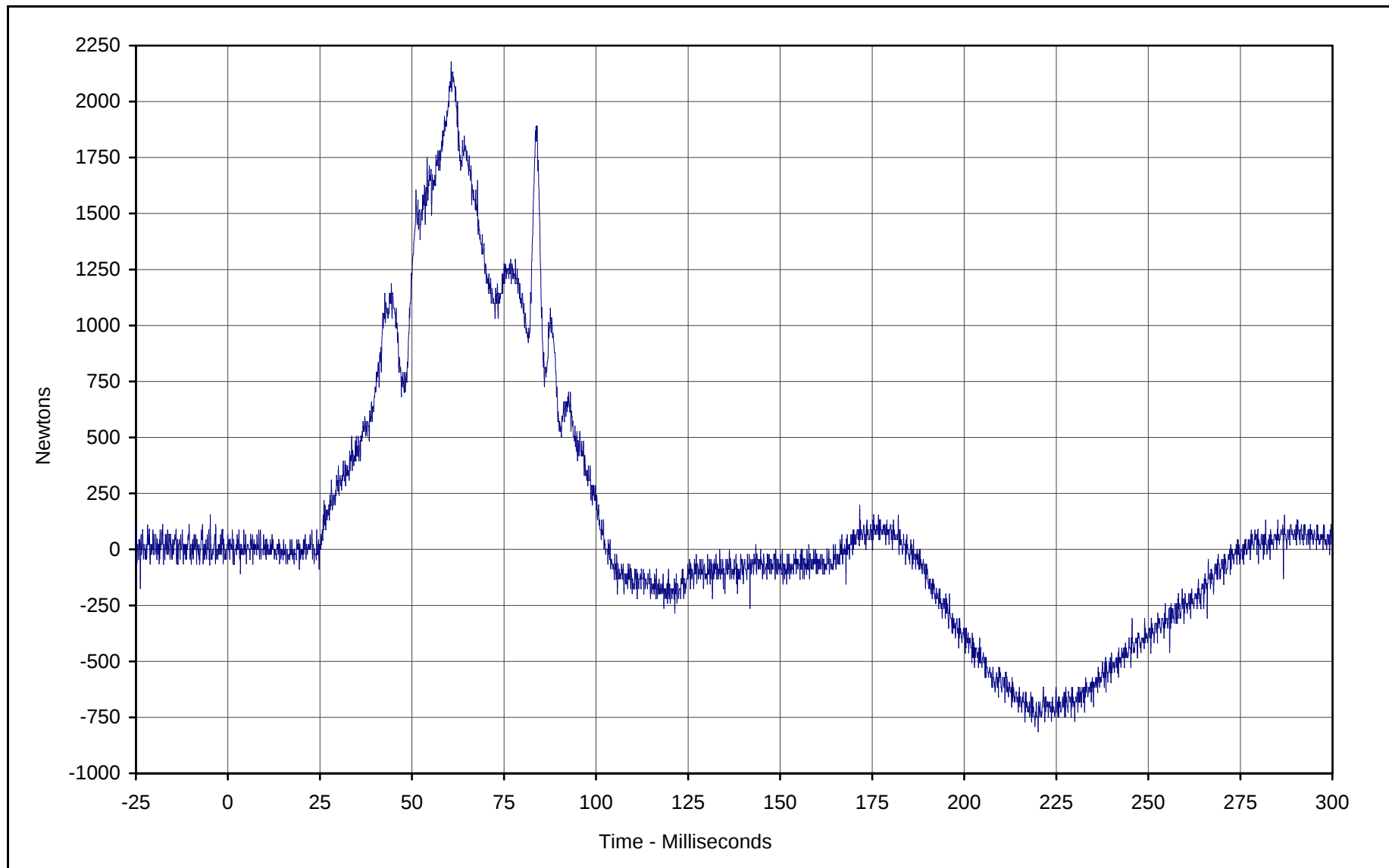




Curve Description: Driver Neck Force Y
Maximum Value: 212.6 at 57.2 Milliseconds
Minimum Value: -223.2 at 80.5 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: FIL-008

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

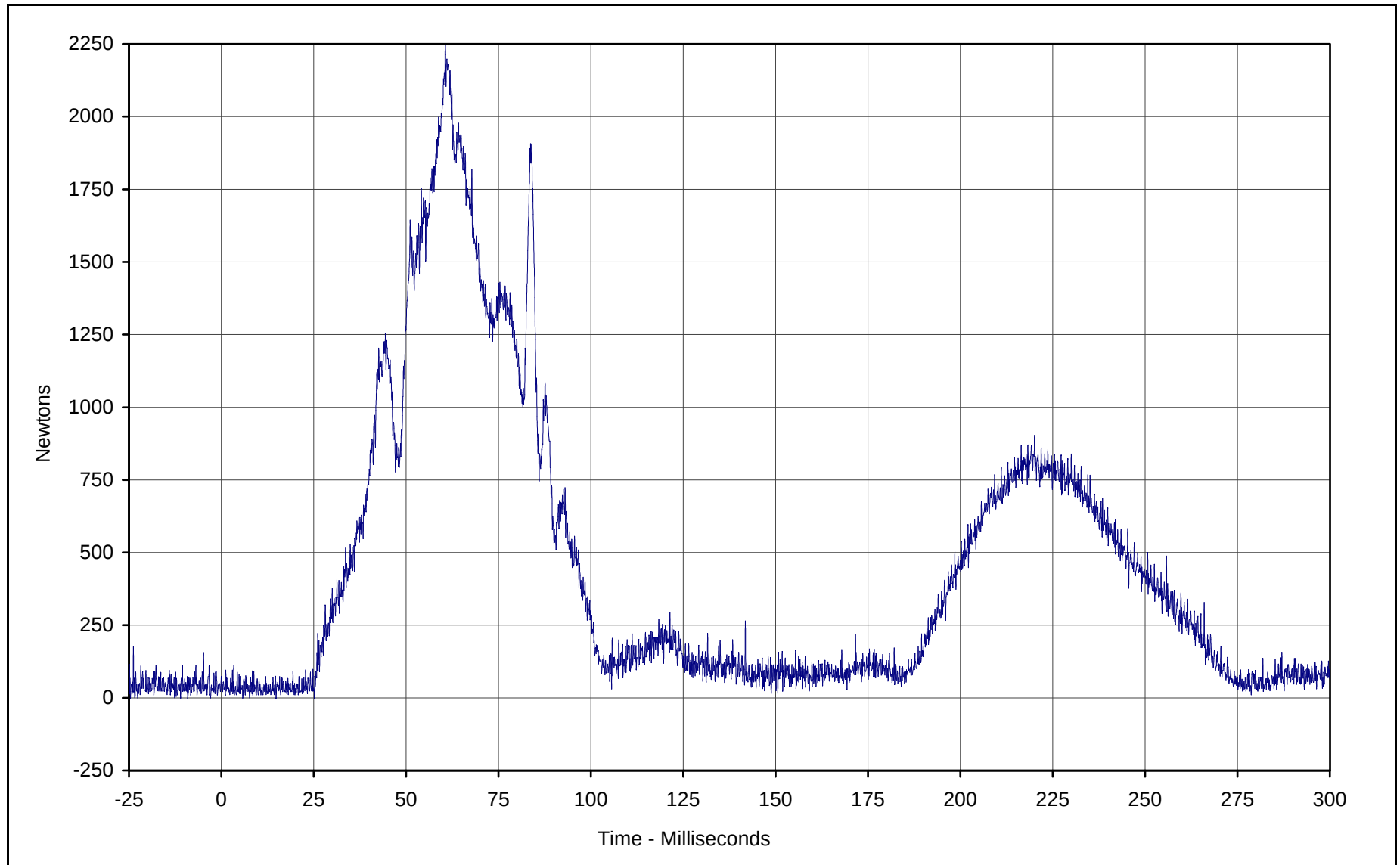




Curve Description: Driver Neck Force Z
Maximum Value: 2176.1 at 60.6 Milliseconds
Minimum Value: -813.3 at 220.1 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: FIL-009

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

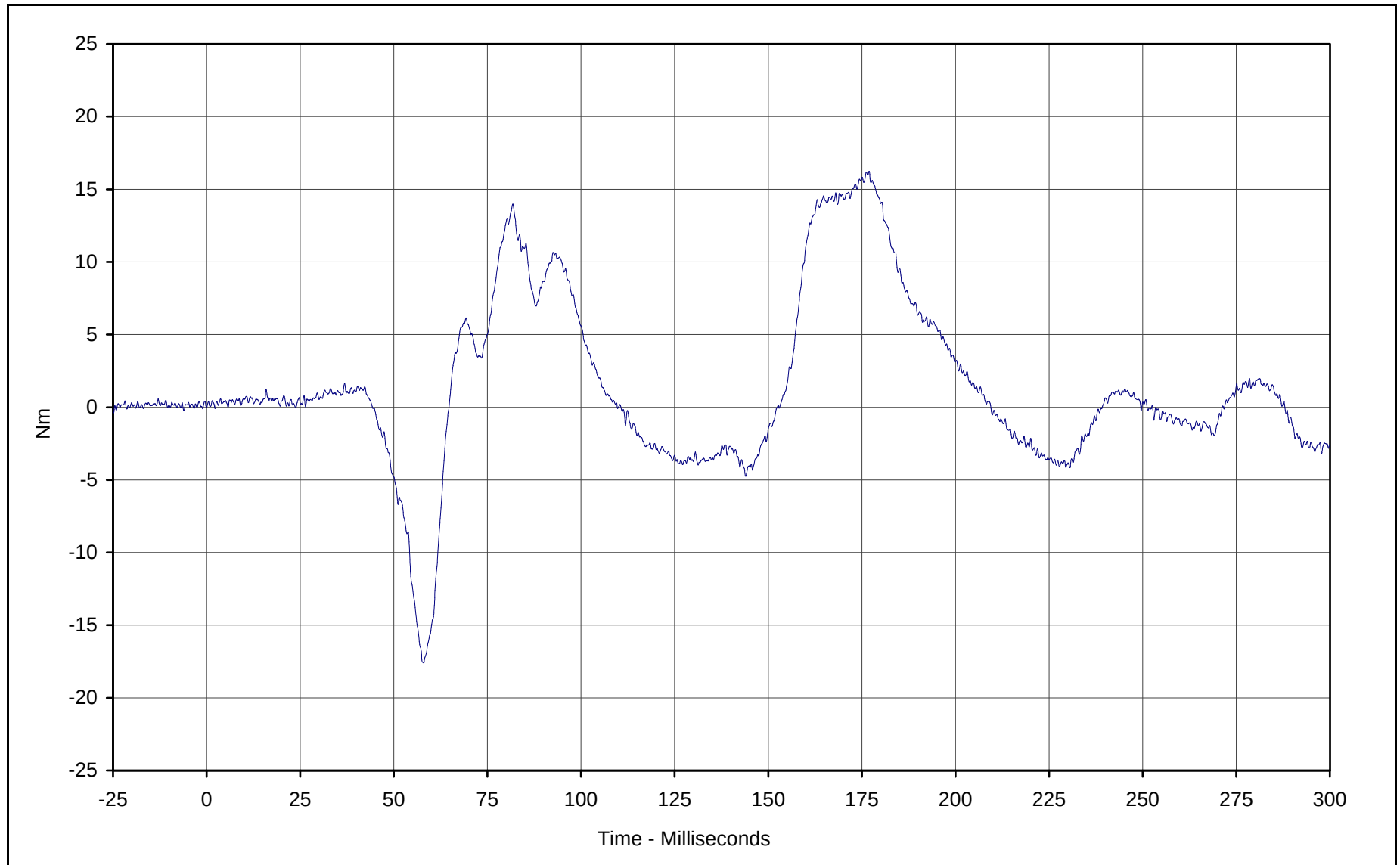




Curve Description: Driver Neck Force Resultant
Maximum Value: 2245.0 at 60.6 Milliseconds
Minimum Value: 0.0 at 5.8 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: RES-007

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

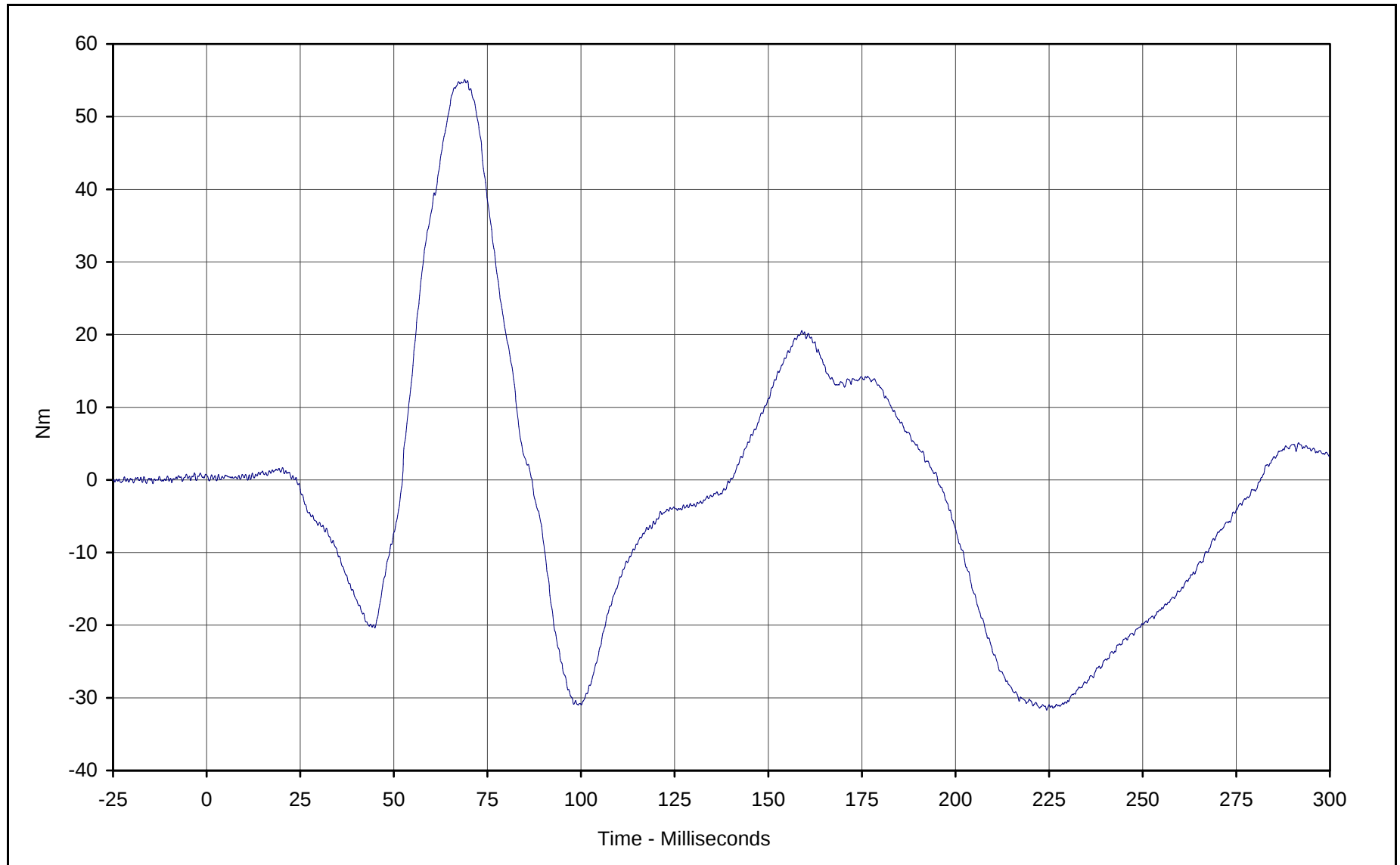




Curve Description: Driver Neck Moment X
Maximum Value: 16.2 at 176.9 Milliseconds
Minimum Value: -17.6 at 58.0 Milliseconds
SAE Filter Class: 600
Date of Test: 5/9/01
Curve Number: FIL-010

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

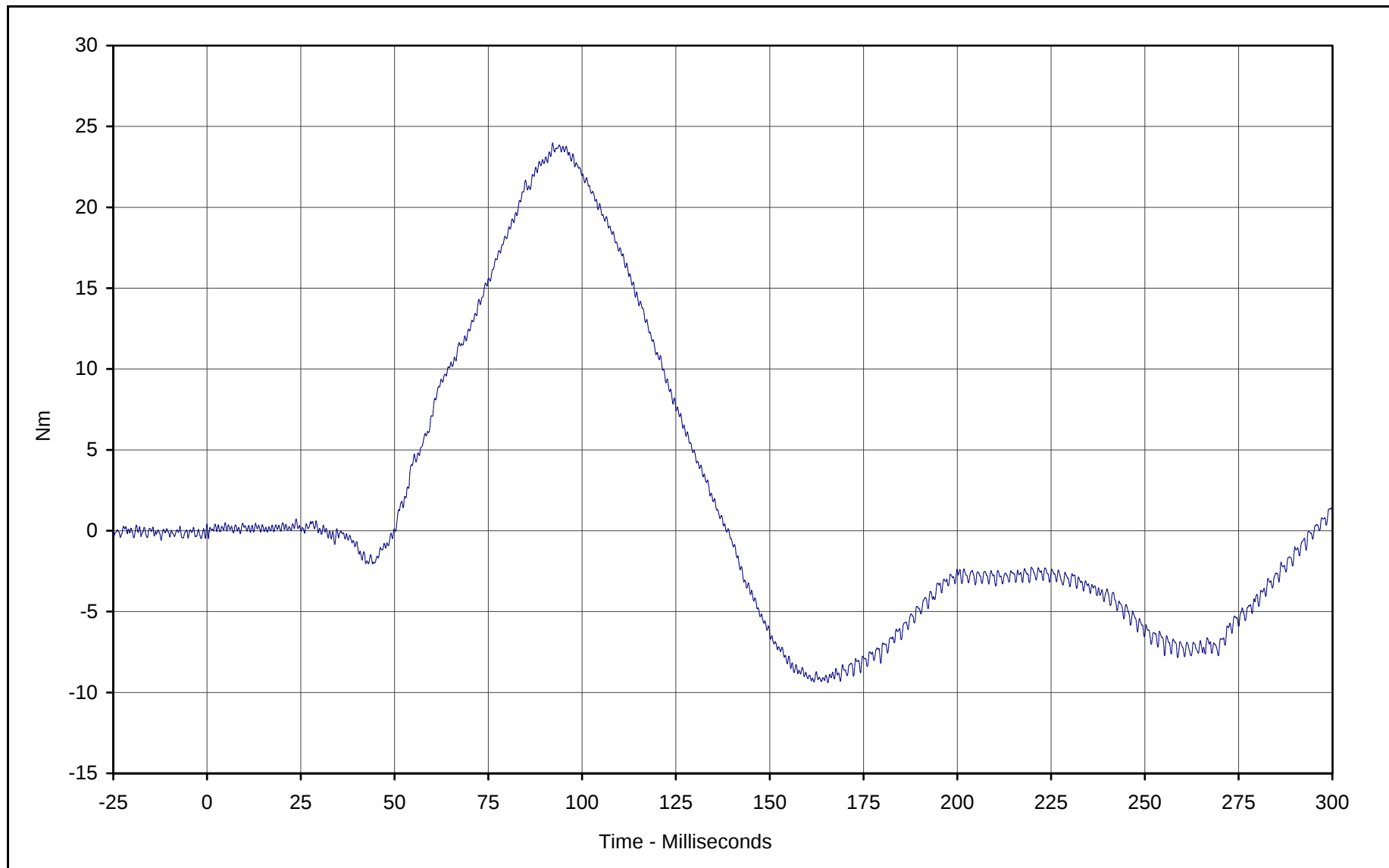




Curve Description: Driver Neck Moment Y
Maximum Value: 55.1 at 68.9 Milliseconds
Minimum Value: -31.7 at 224.4 Milliseconds
SAE Filter Class: 600
Date of Test: 5/9/01
Curve Number: FIL-011

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

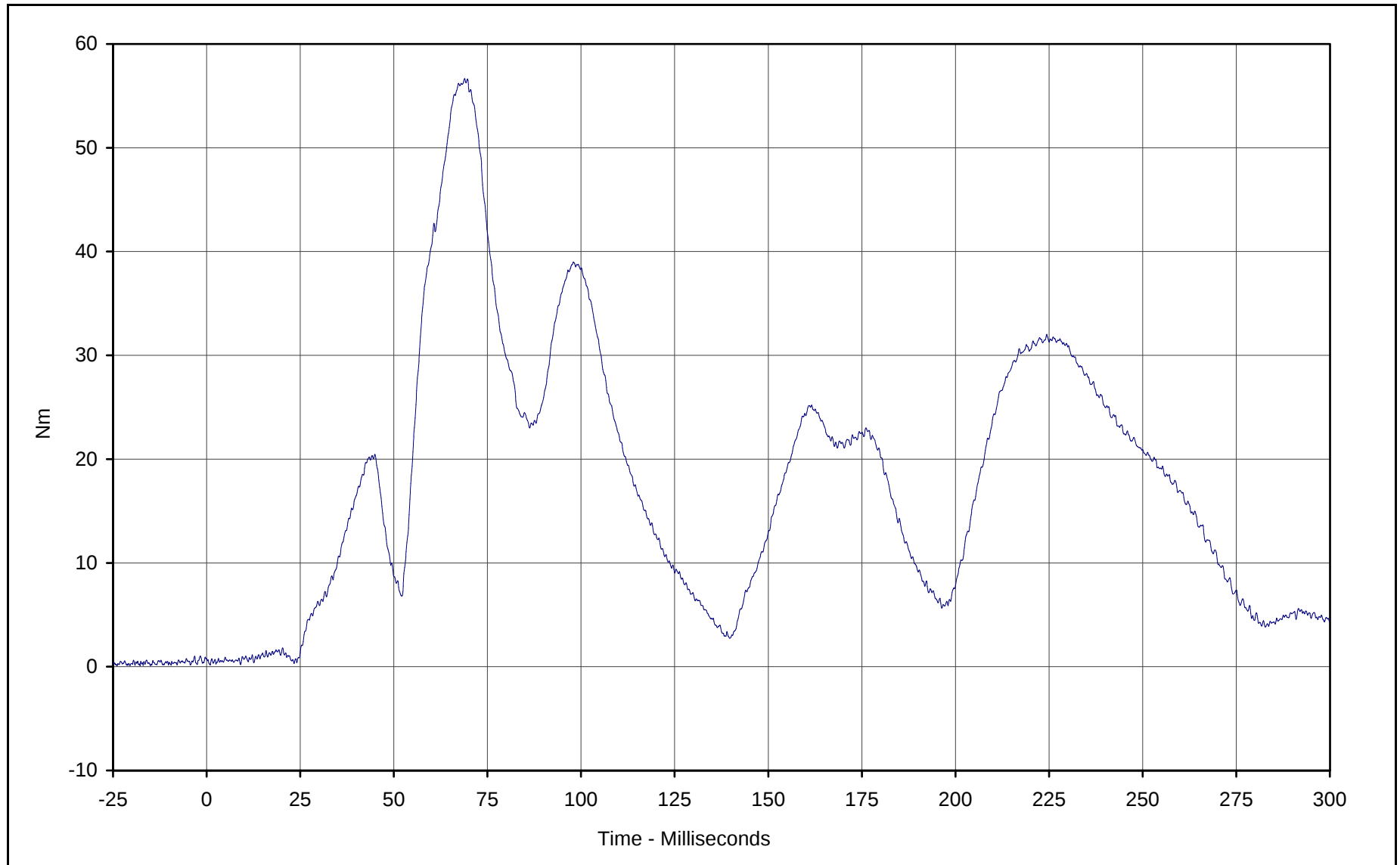




Curve Description: Driver Neck Moment Z
Maximum Value: 24.0 at 92.1 Milliseconds
Minimum Value: -9.4 at 165.5 Milliseconds
SAE Filter Class: 600
Date of Test: 5/9/01
Curve Number: FIL-012

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



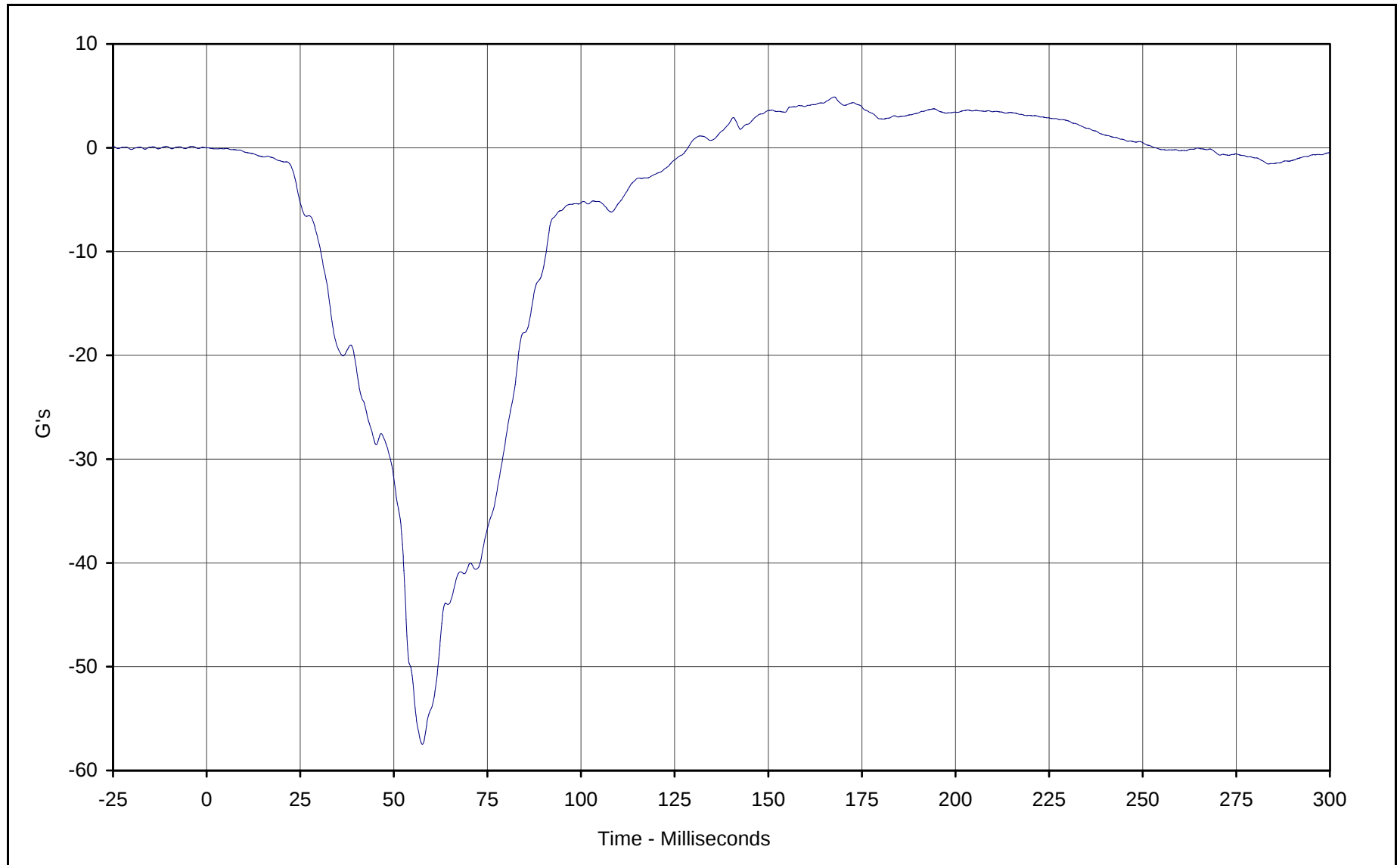


Curve Description: Driver Neck Moment Resultant
Maximum Value: 56.7 at 68.9 Milliseconds
Minimum Value: 0.2 at 0.9 Milliseconds
SAE Filter Class: 600
Date of Test: 5/9/01
Curve Number: RES-010

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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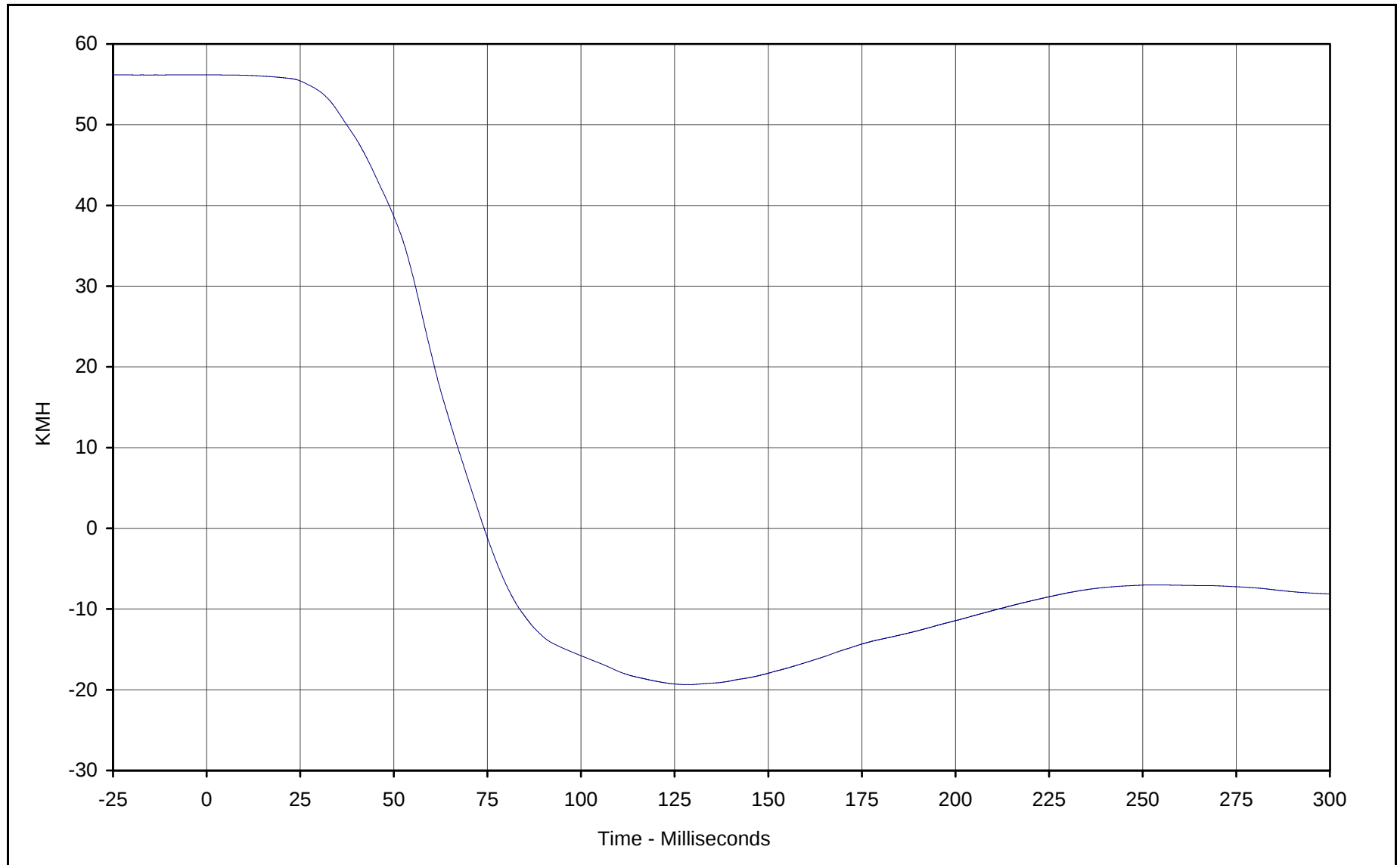
Curve Description: Driver Chest Primary X
Maximum Value: 4.9 at 167.6 Milliseconds
Minimum Value: -57.5 at 57.6 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: FIL-013

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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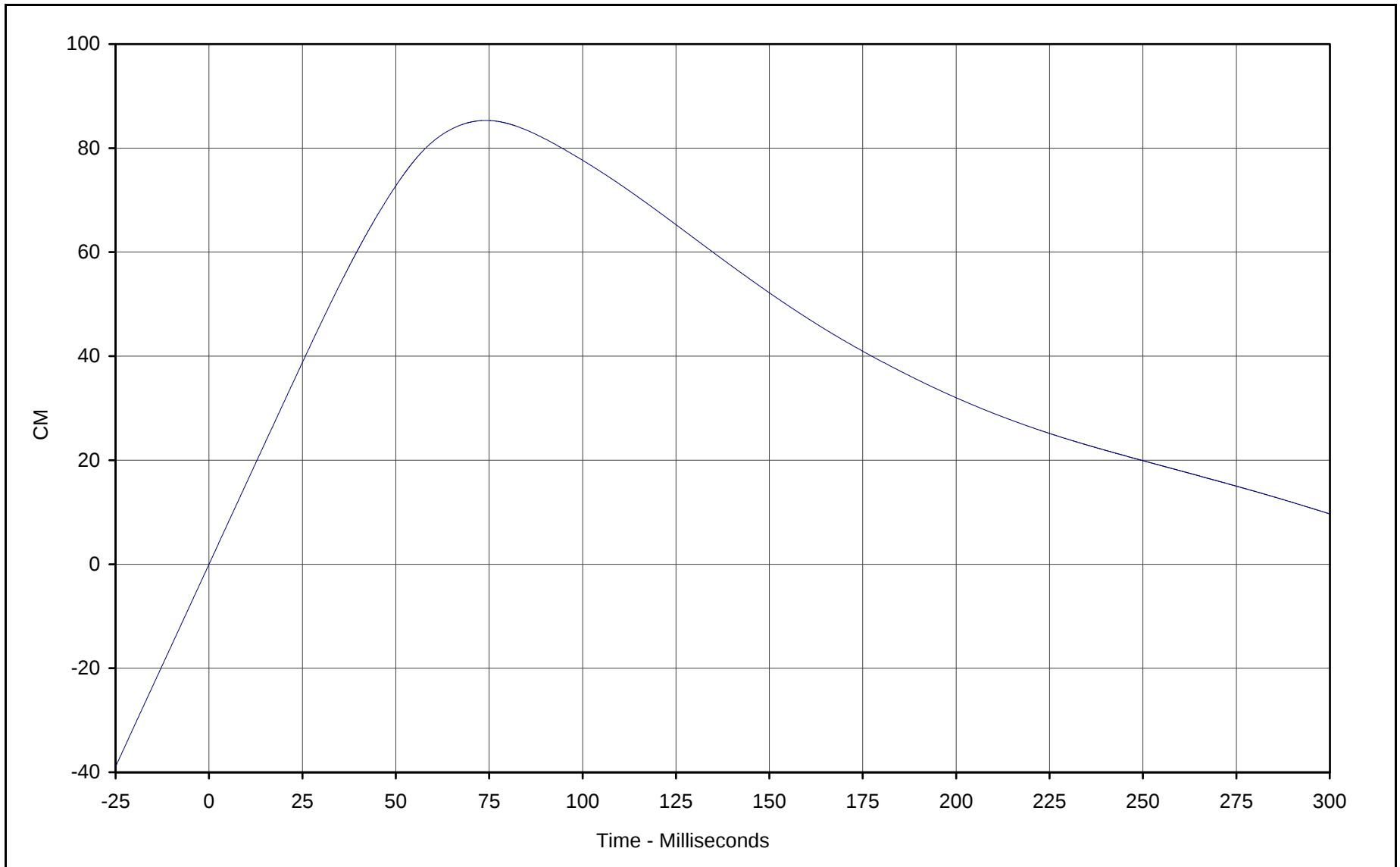
Curve Description: Driver Chest Primary X Velocity
Maximum Value: 56.2 at 0.0 Milliseconds
Minimum Value: -19.4 at 128.5 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN1-013

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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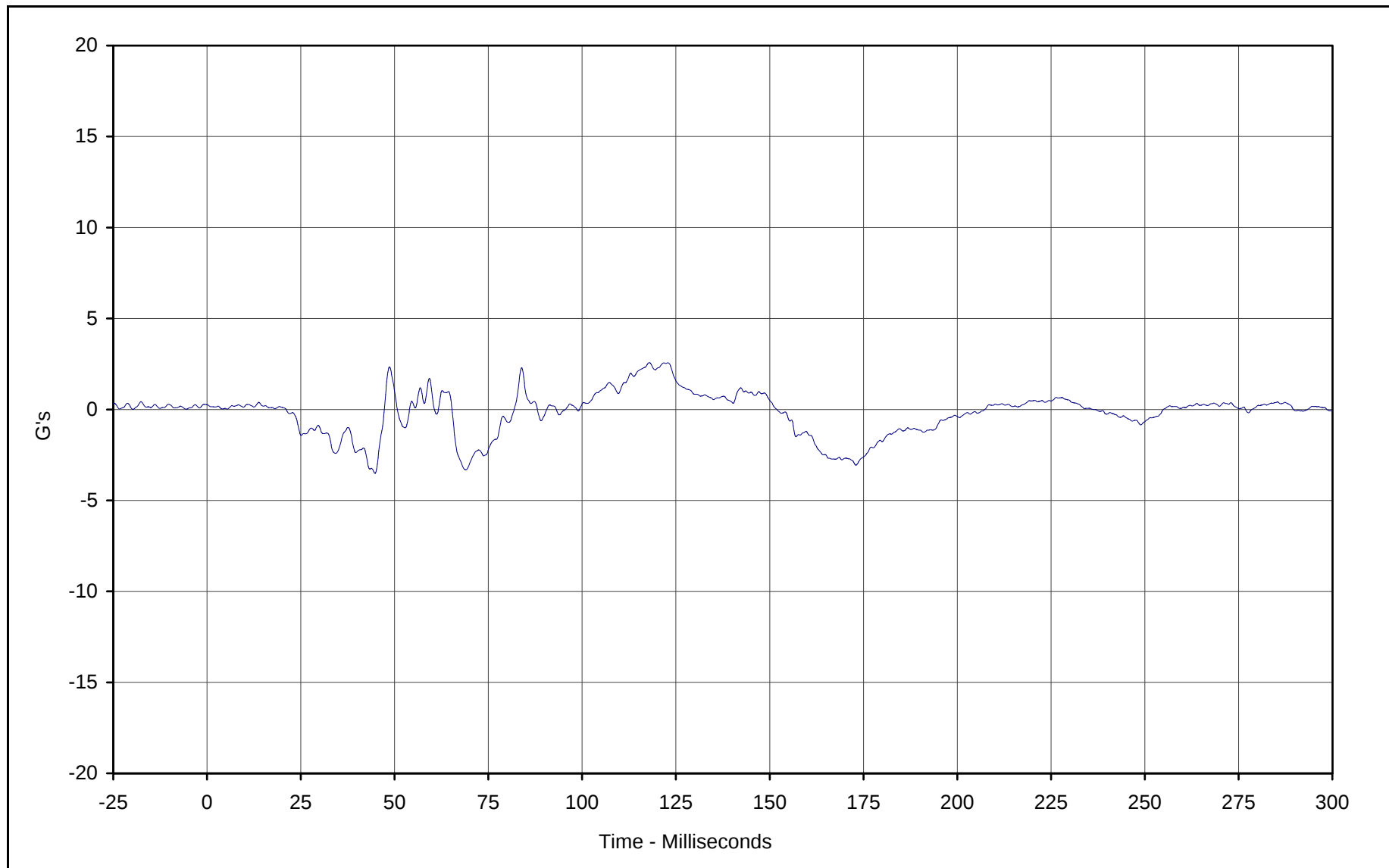


Curve Description: Driver Chest Primary X Displ.
Maximum Value: 85.3 at 74.1 Milliseconds
Minimum Value: 0.0 at 0.0 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN2-013

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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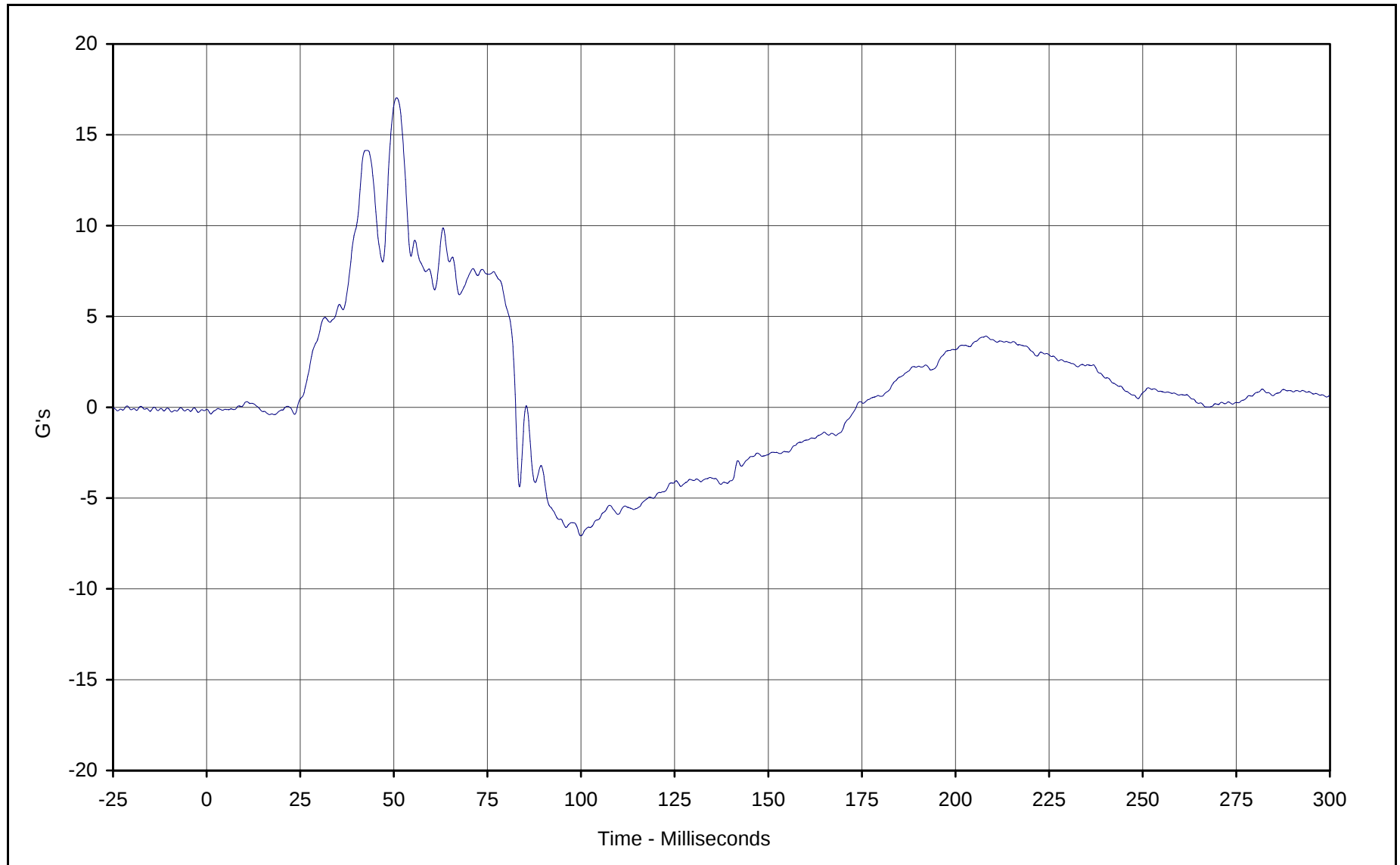


Curve Description: Driver Chest Primary Y
Maximum Value: 2.6 at 117.9 Milliseconds
Minimum Value: -3.5 at 44.8 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: FIL-014

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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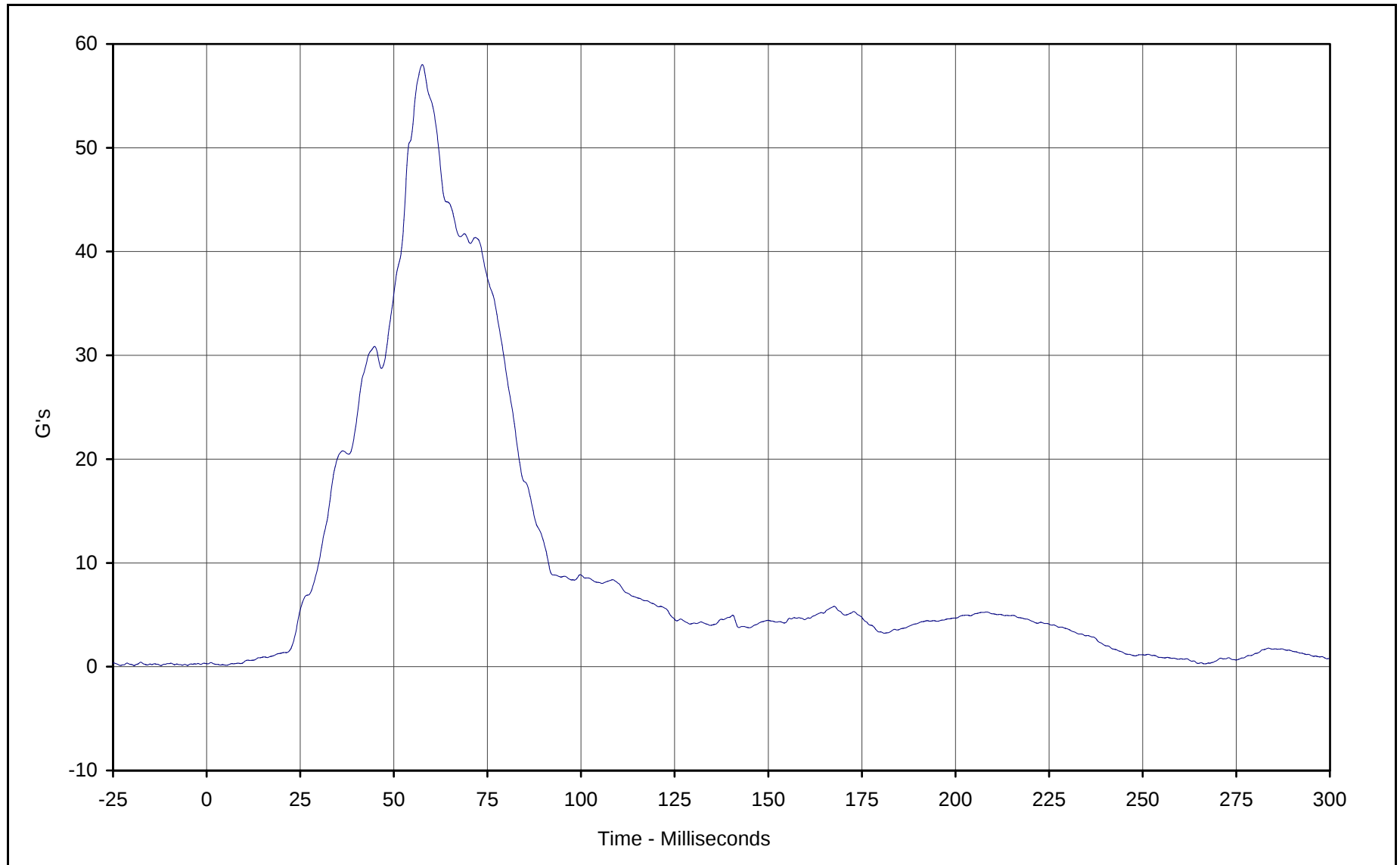


Curve Description: Driver Chest Primary Z
Maximum Value: 17.0 at 50.7 Milliseconds
Minimum Value: -7.1 at 99.9 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: FIL-015

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



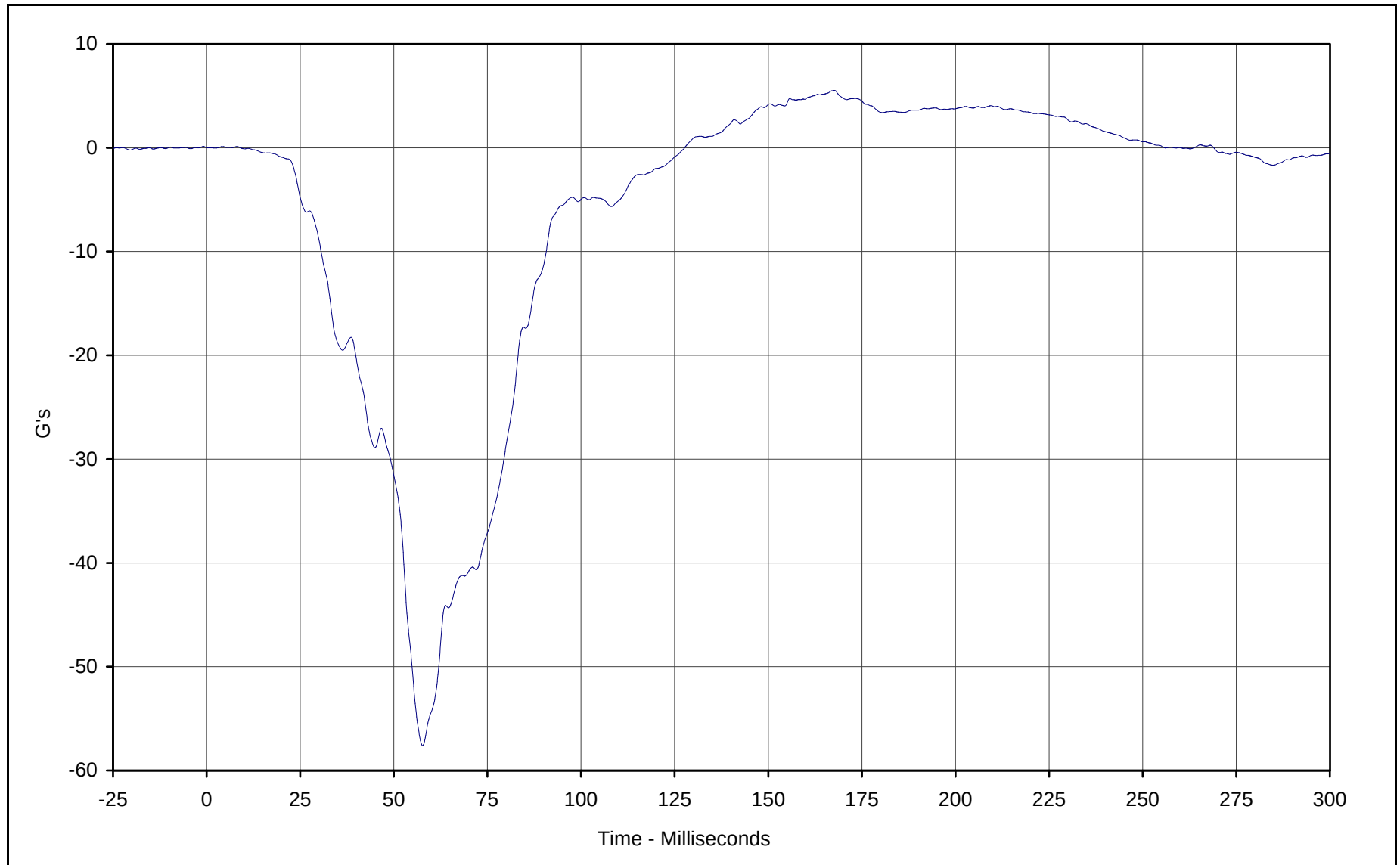
KAR21049-01



Curve Description: Driver Chest Resultant Primary
Maximum Value: 58.0 at 57.6 Milliseconds
Minimum Value: 0.1 at 5.3 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: RES-013

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



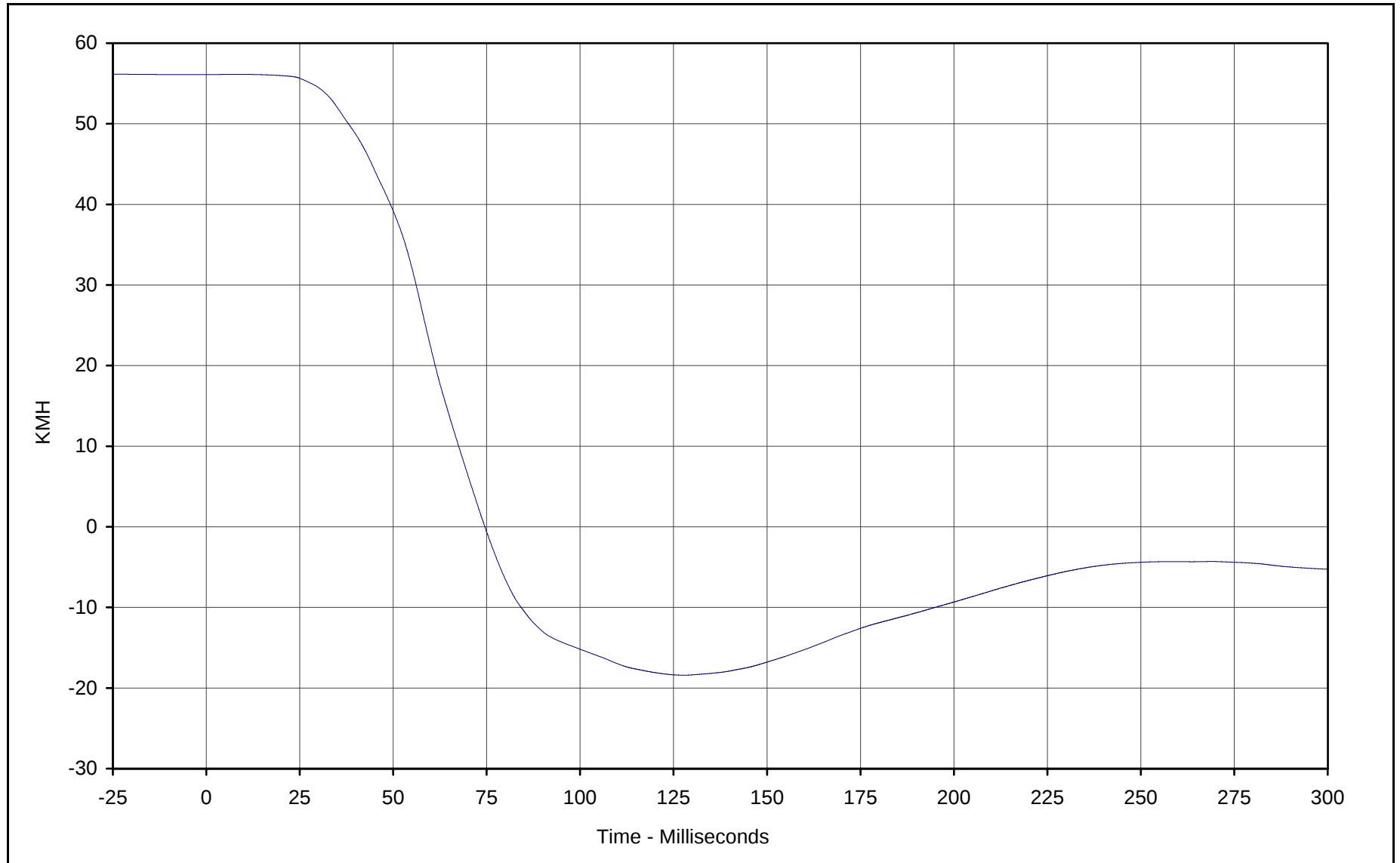


Curve Description: Driver Chest Redundant X
Maximum Value: 5.5 at 167.7 Milliseconds
Minimum Value: -57.6 at 57.7 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: FIL-016

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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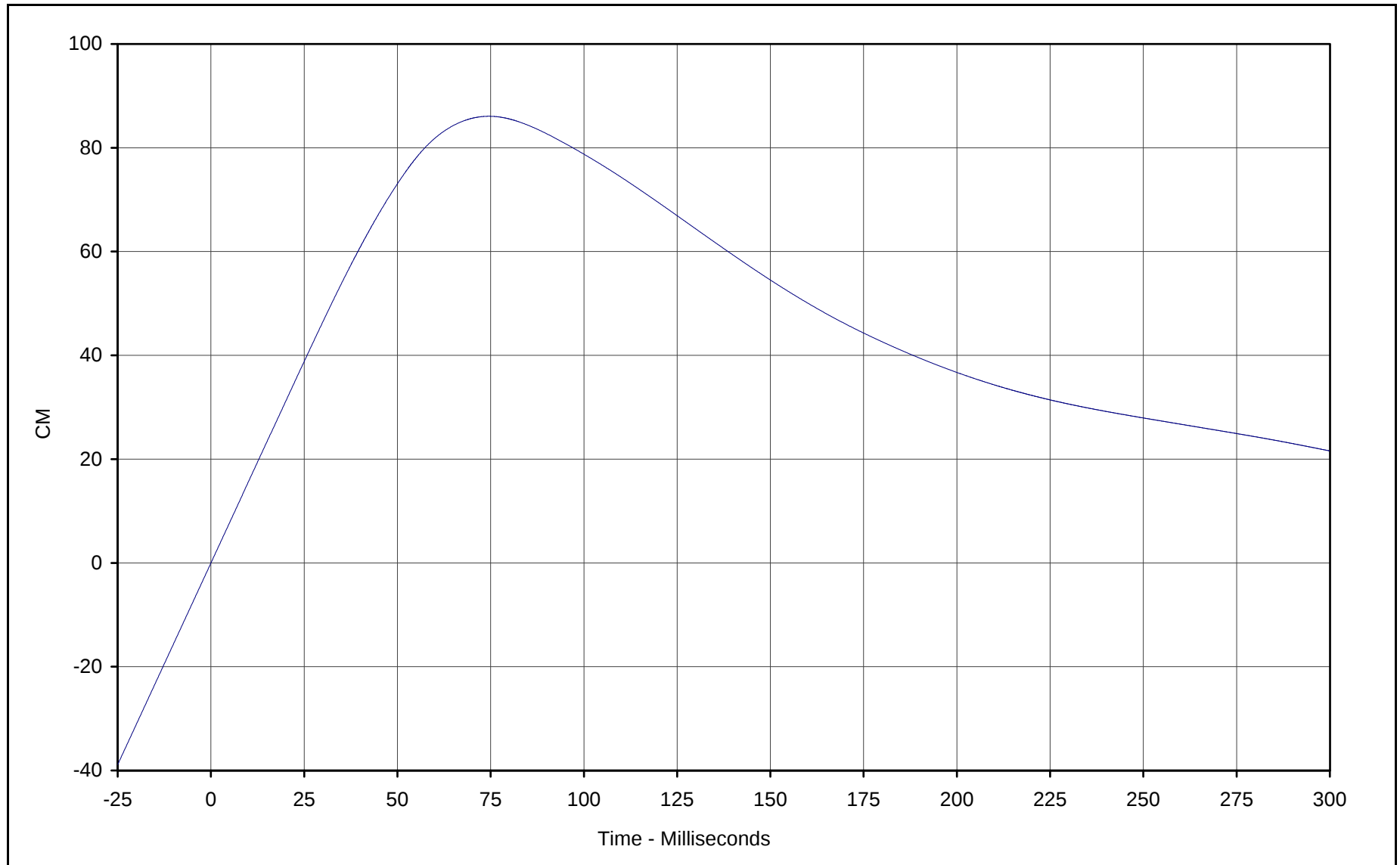


Curve Description: Driver Chest Redundant X Velocity
Maximum Value: 56.1 at 8.9 Milliseconds
Minimum Value: -18.4 at 127.7 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN1-016

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



KAR21049-01

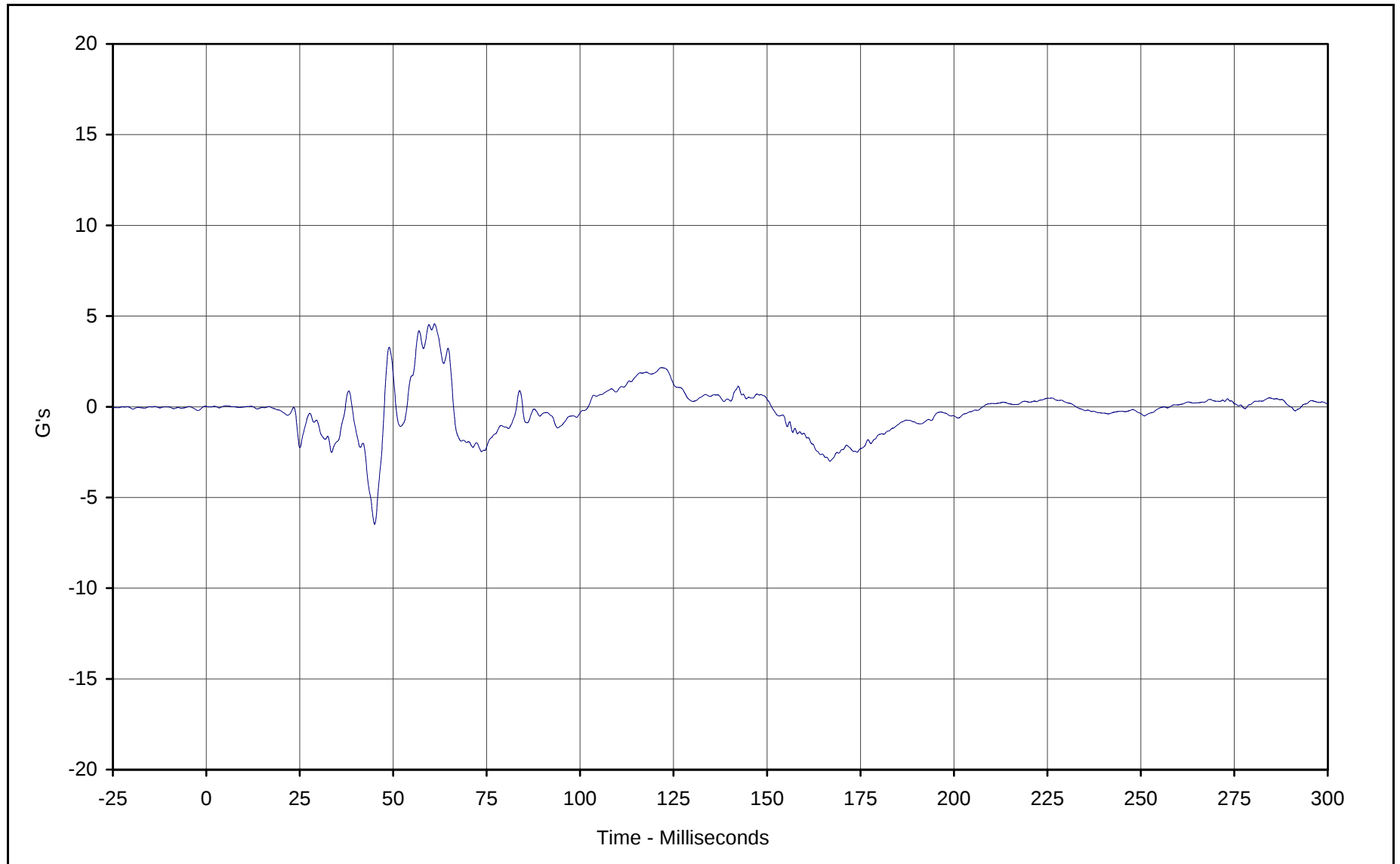


Curve Description: Driver Chest Redundant X Displ.
Maximum Value: 86.1 at 74.5 Milliseconds
Minimum Value: 0.0 at 0.0 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN2-016

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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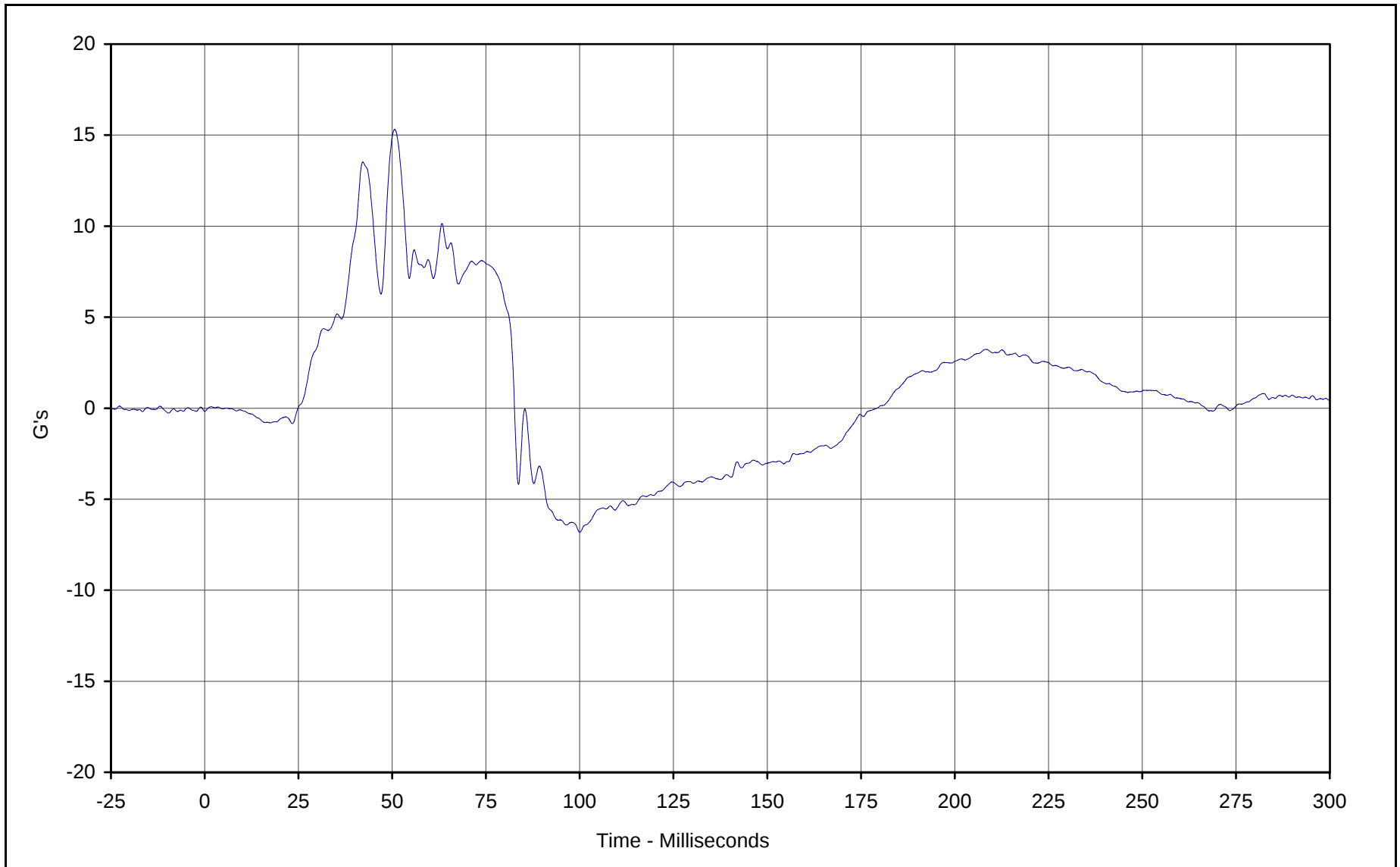


Curve Description: Driver Chest Redundant Y
Maximum Value: 4.6 at 61.1 Milliseconds
Minimum Value: -6.5 at 45.0 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: FIL-017

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



KAR21049-01

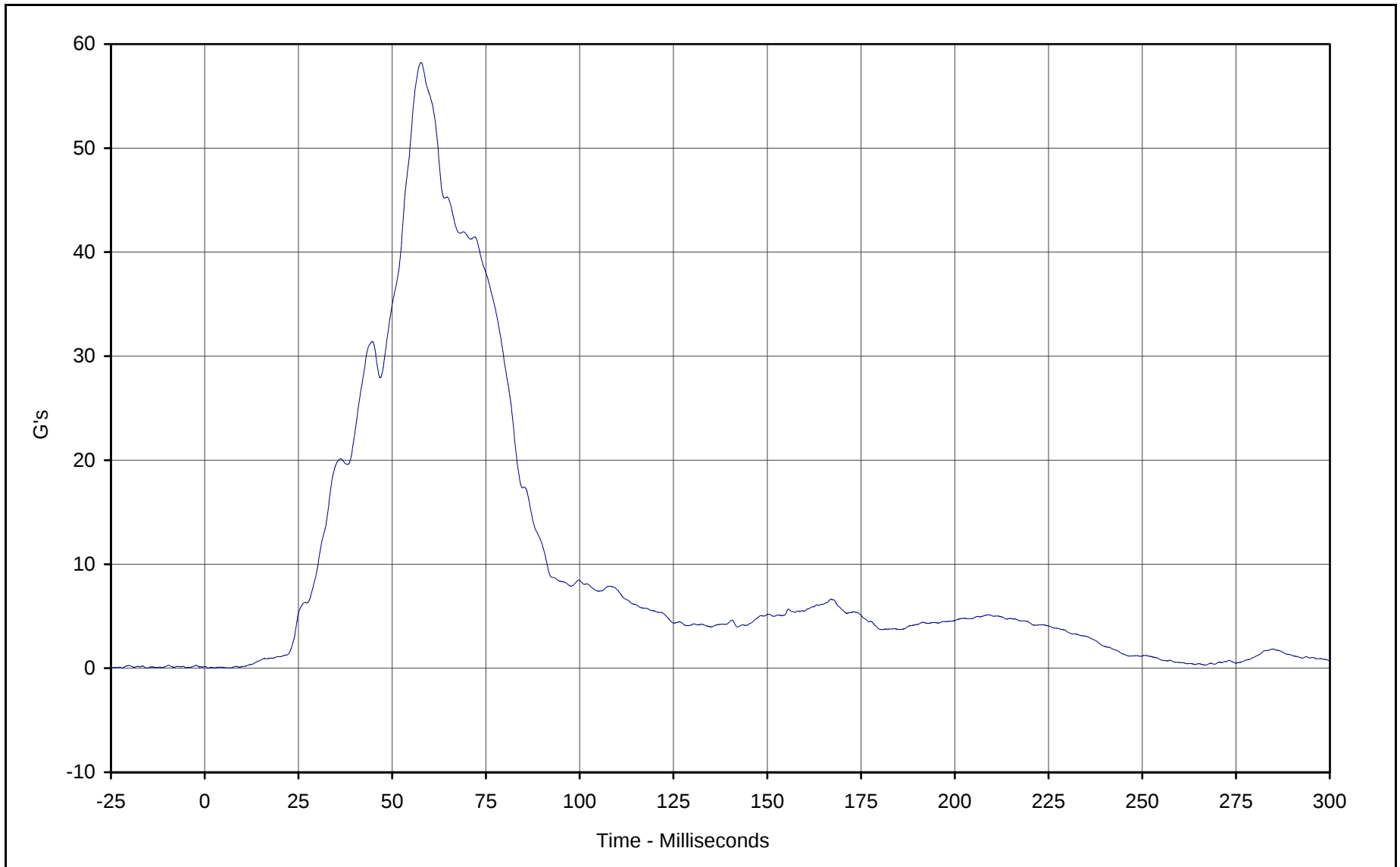


Curve Description: Driver Chest Redundant Z
Maximum Value: 15.3 at 50.7 Milliseconds
Minimum Value: -6.8 at 100.0 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: FIL-018

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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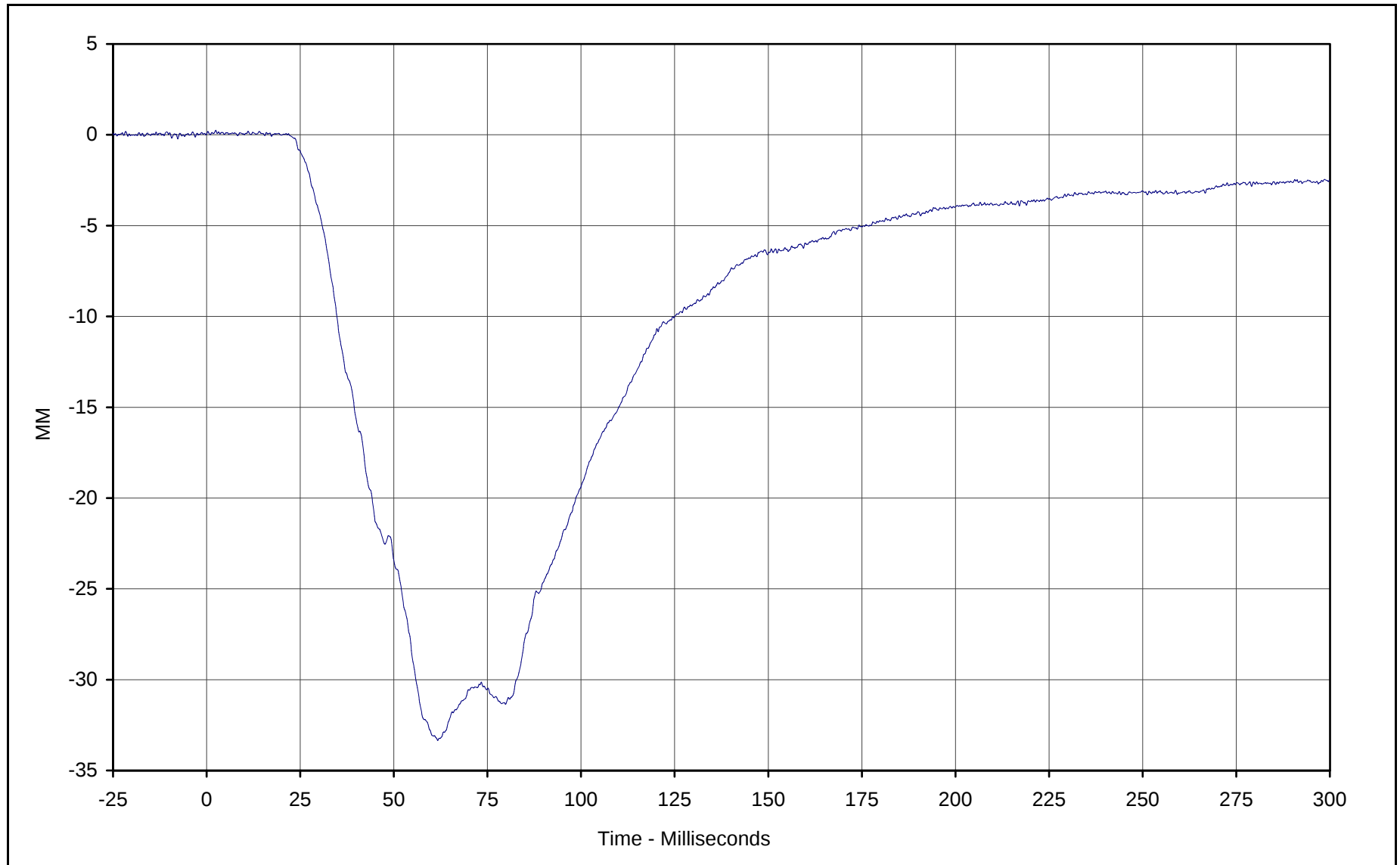


Curve Description: Driver Chest Resultant Redundant
Maximum Value: 58.2 at 57.7 Milliseconds
Minimum Value: 0.0 at 0.9 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: RES-016

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



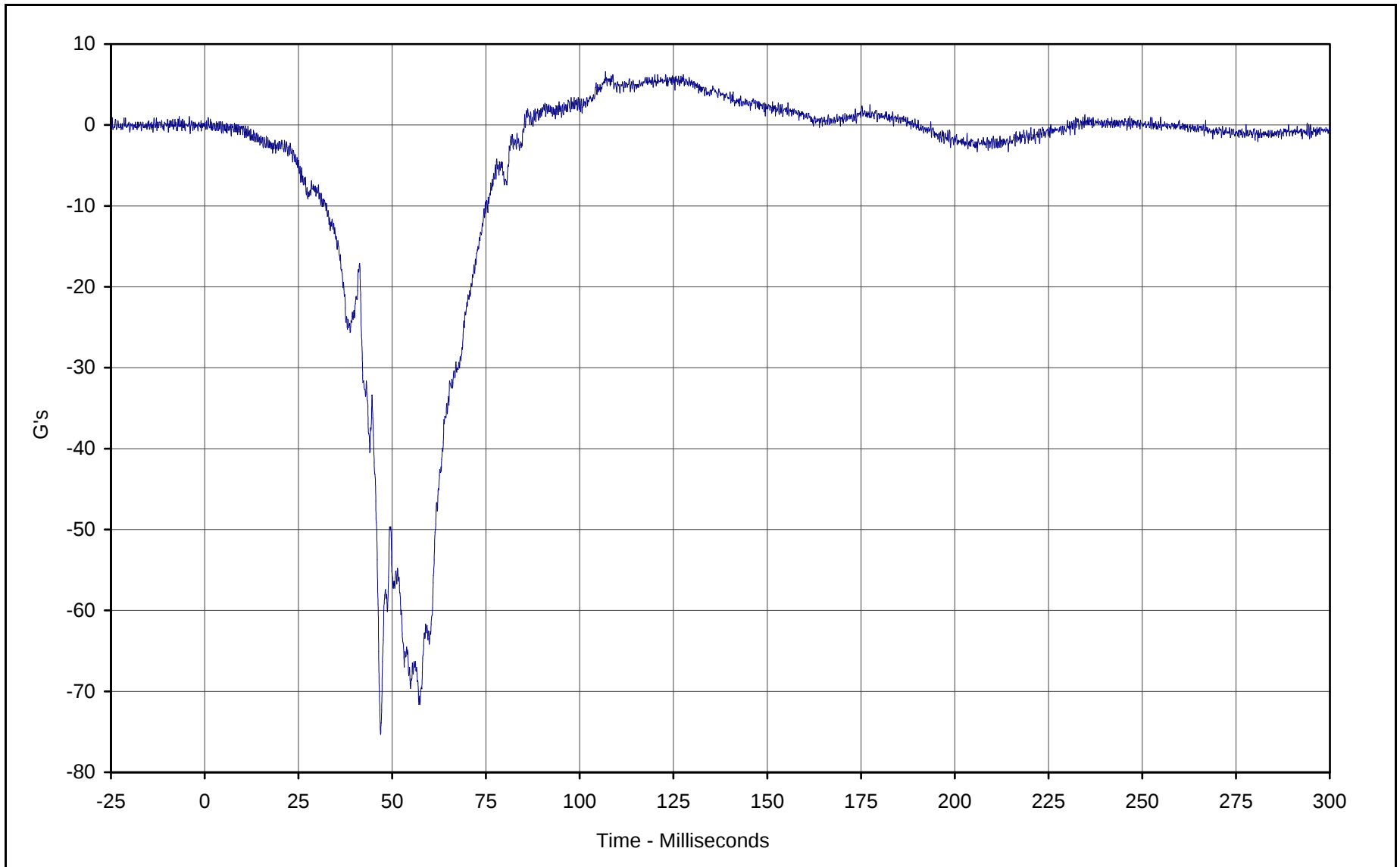
KAR21049-01



Curve Description: Driver Chest Displacement X
Maximum Value: 0.2 at 2.4 Milliseconds
Minimum Value: -33.3 at 61.7 Milliseconds
SAE Filter Class: 600
Date of Test: 5/9/01
Curve Number: FIL-019

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



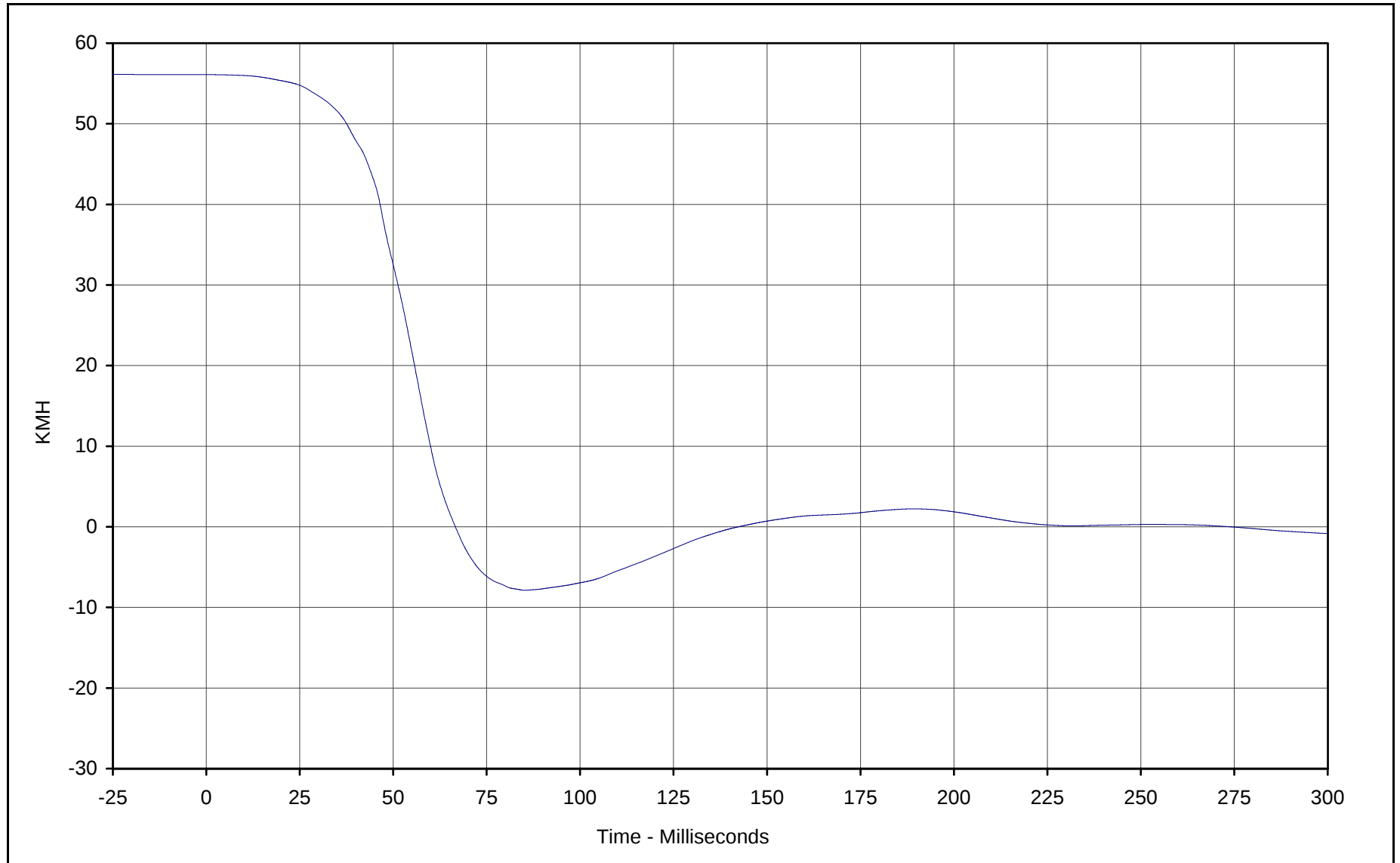


Curve Description: Driver Pelvis X
Maximum Value: 6.6 at 106.9 Milliseconds
Minimum Value: -75.3 at 46.9 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: FIL-020

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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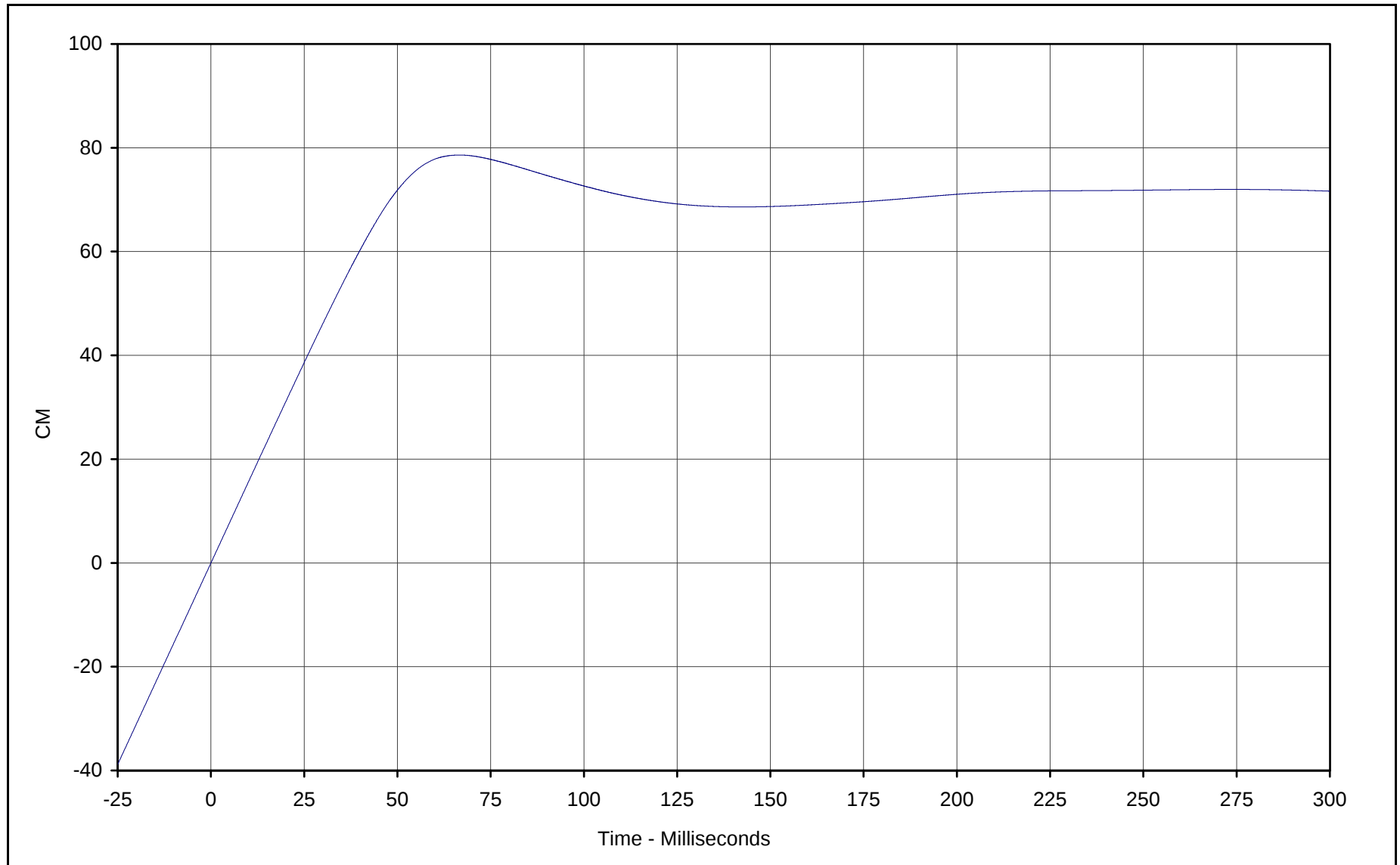


Curve Description: Driver Pelvis X Velocity
Maximum Value: 56.1 at 0.0 Milliseconds
Minimum Value: -7.9 at 85.3 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN1-020

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



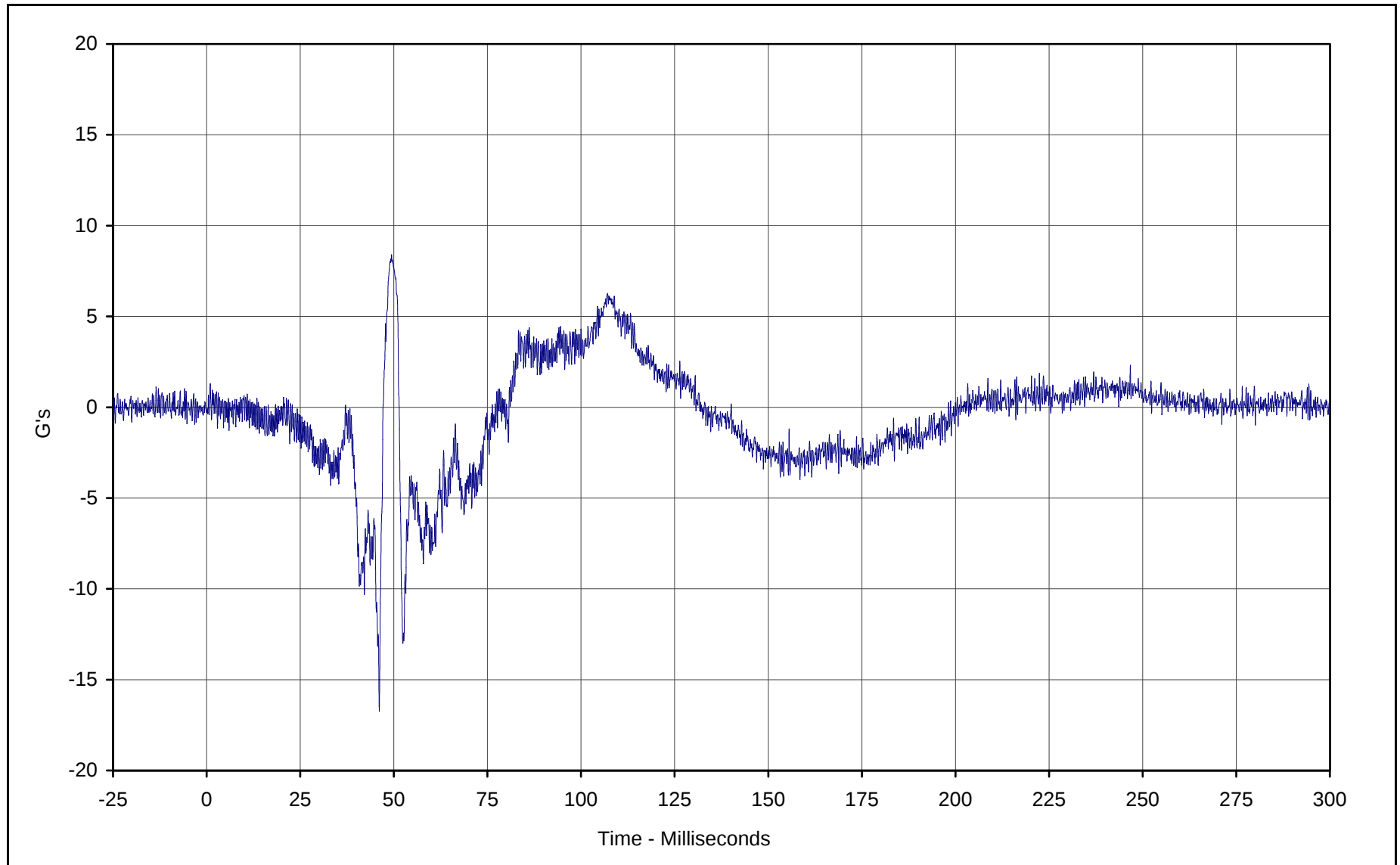
KAR21049-01



Curve Description: Driver Pelvis X Displ.
Maximum Value: 78.6 at 66.6 Milliseconds
Minimum Value: 0.0 at 0.0 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN2-020

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

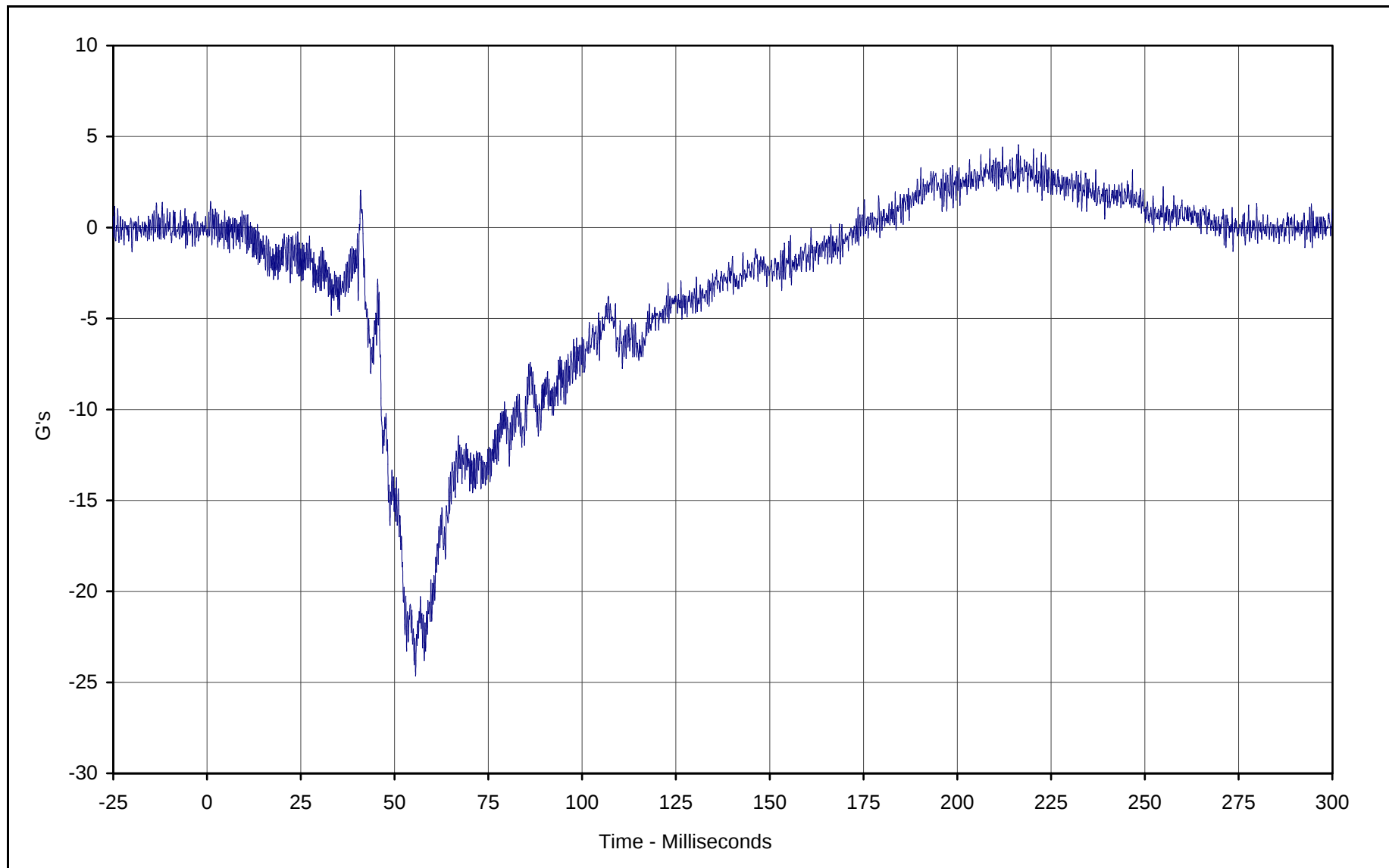




Curve Description: Driver Pelvis Y
Maximum Value: 8.4 at 49.4 Milliseconds
Minimum Value: -16.7 at 46.1 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: FIL-021

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

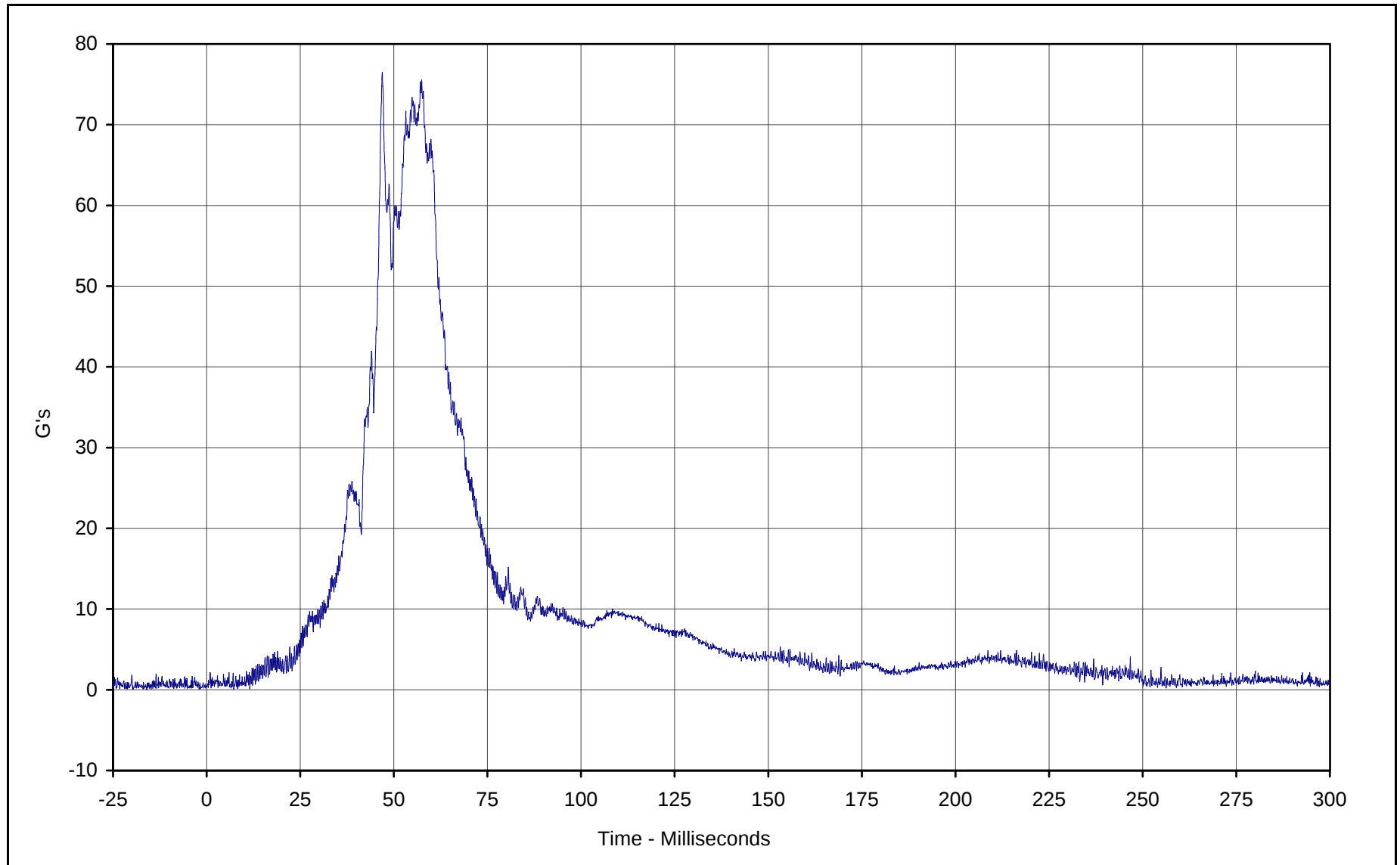




Curve Description: Driver Pelvis Z
Maximum Value: 4.5 at 216.3 Milliseconds
Minimum Value: -24.6 at 55.6 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: FIL-022

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



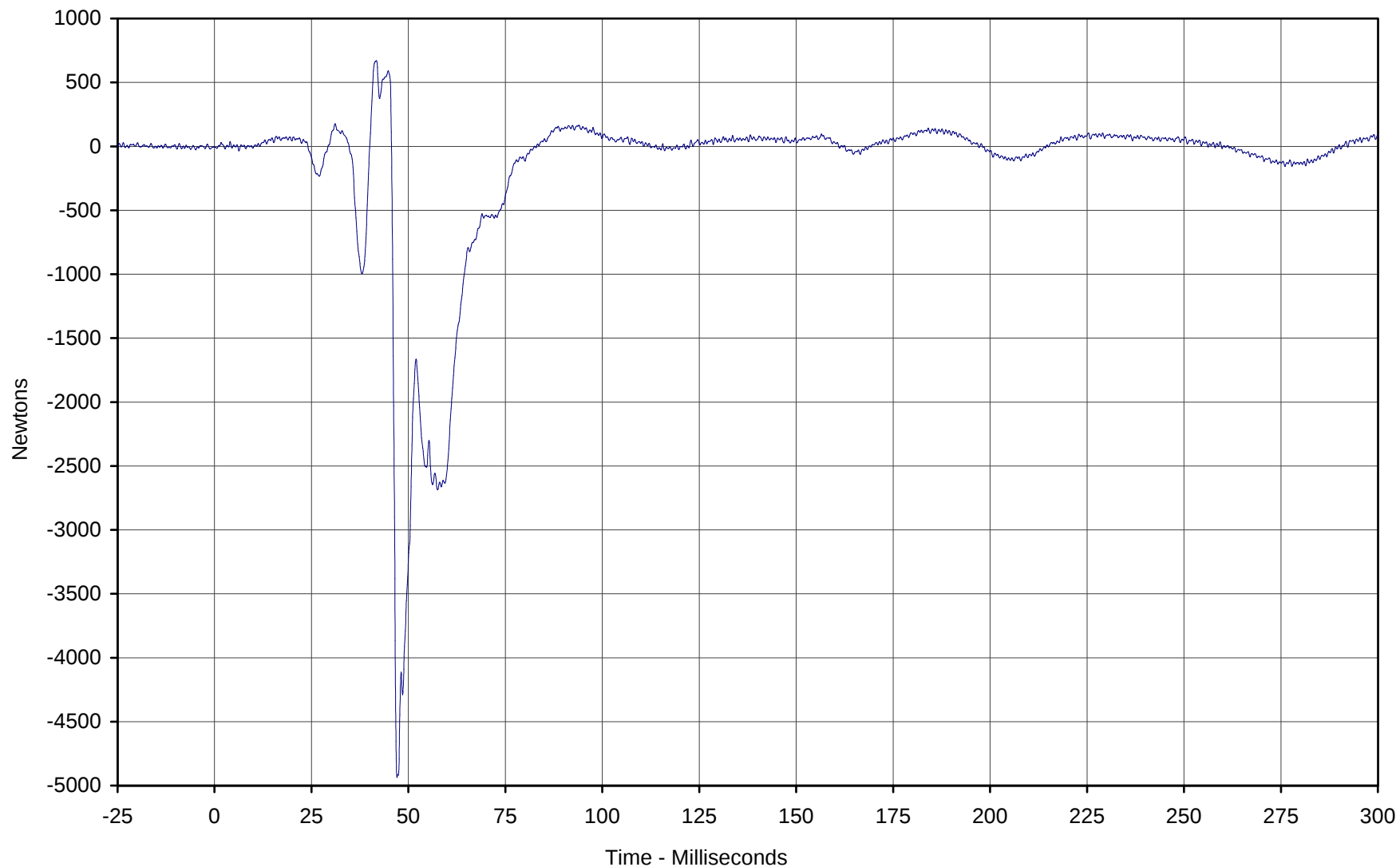


Curve Description: Driver Pelvis Resultant
Maximum Value: 76.4 at 46.9 Milliseconds
Minimum Value: 0.1 at 7.2 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: RES-020

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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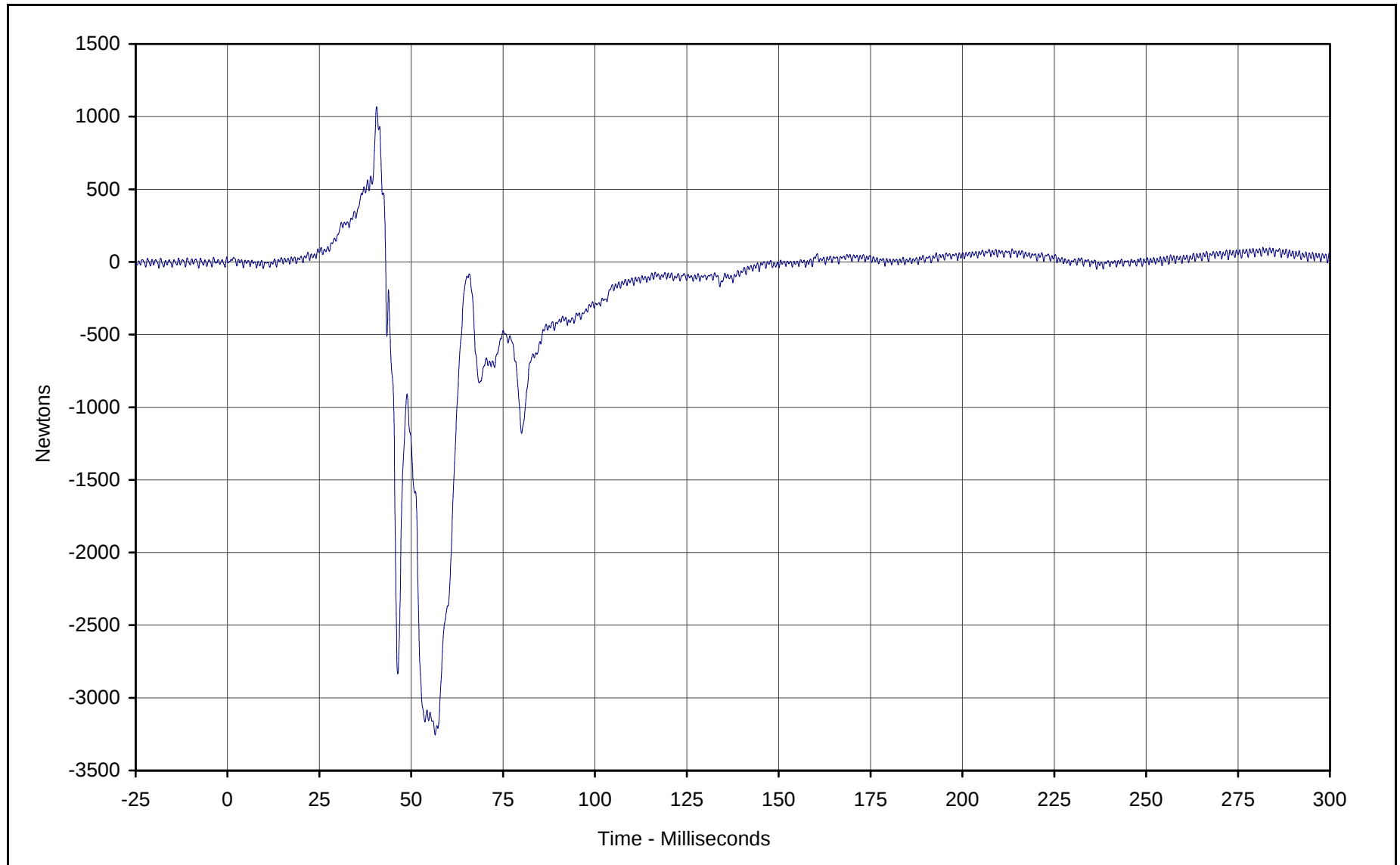
Curve Description: Driver Left Femur Force
Maximum Value: 669.6 at 41.7 Milliseconds
Minimum Value: -4936.6 at 47.0 Milliseconds
SAE Filter Class: 600
Date of Test: 5/9/01
Curve Number: FIL-023

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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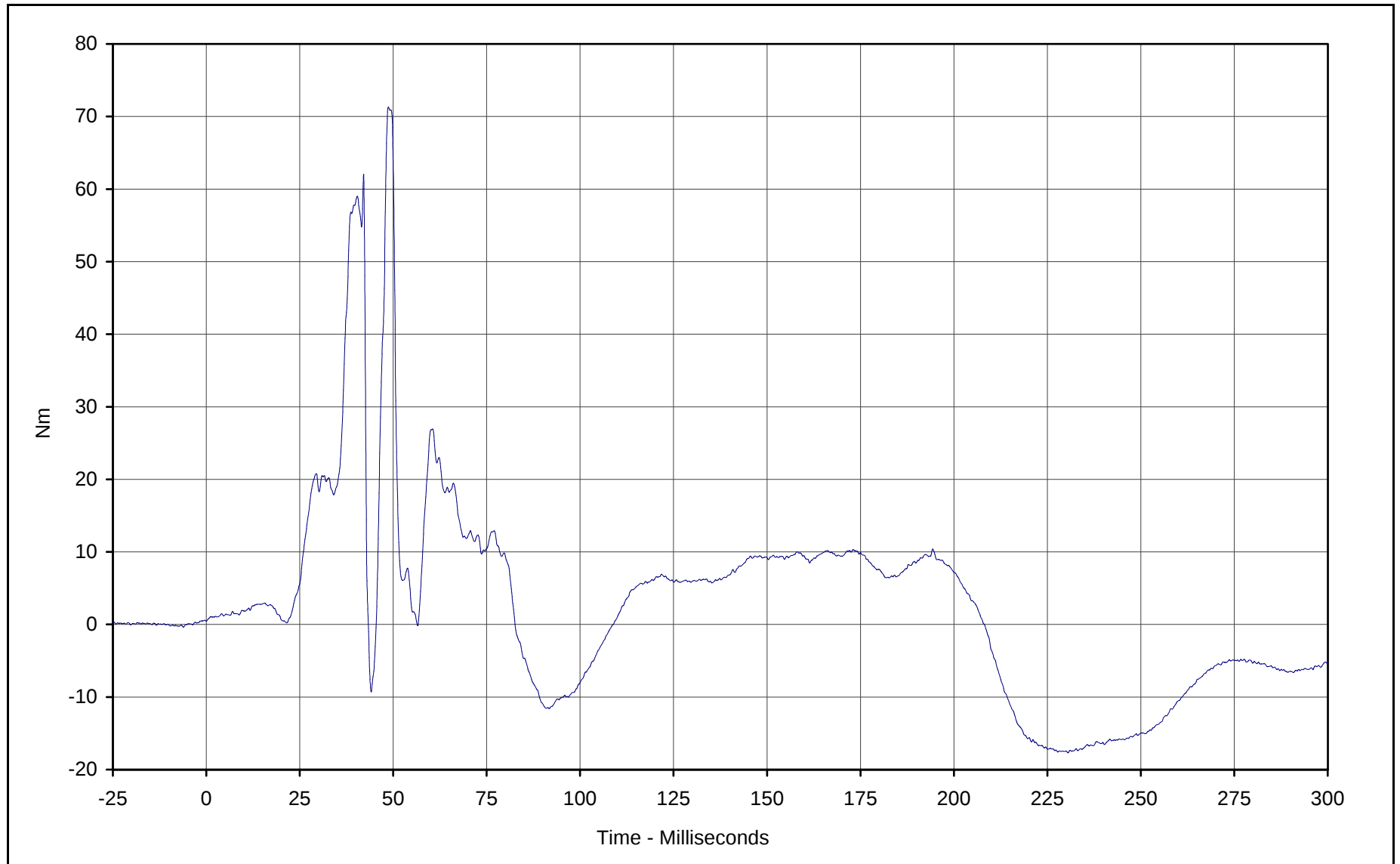
Curve Description: Driver Right Femur Force
Maximum Value: 1069.0 at 40.6 Milliseconds
Minimum Value: -3256.2 at 56.5 Milliseconds
SAE Filter Class: 600
Date of Test: 5/9/01
Curve Number: FIL-024

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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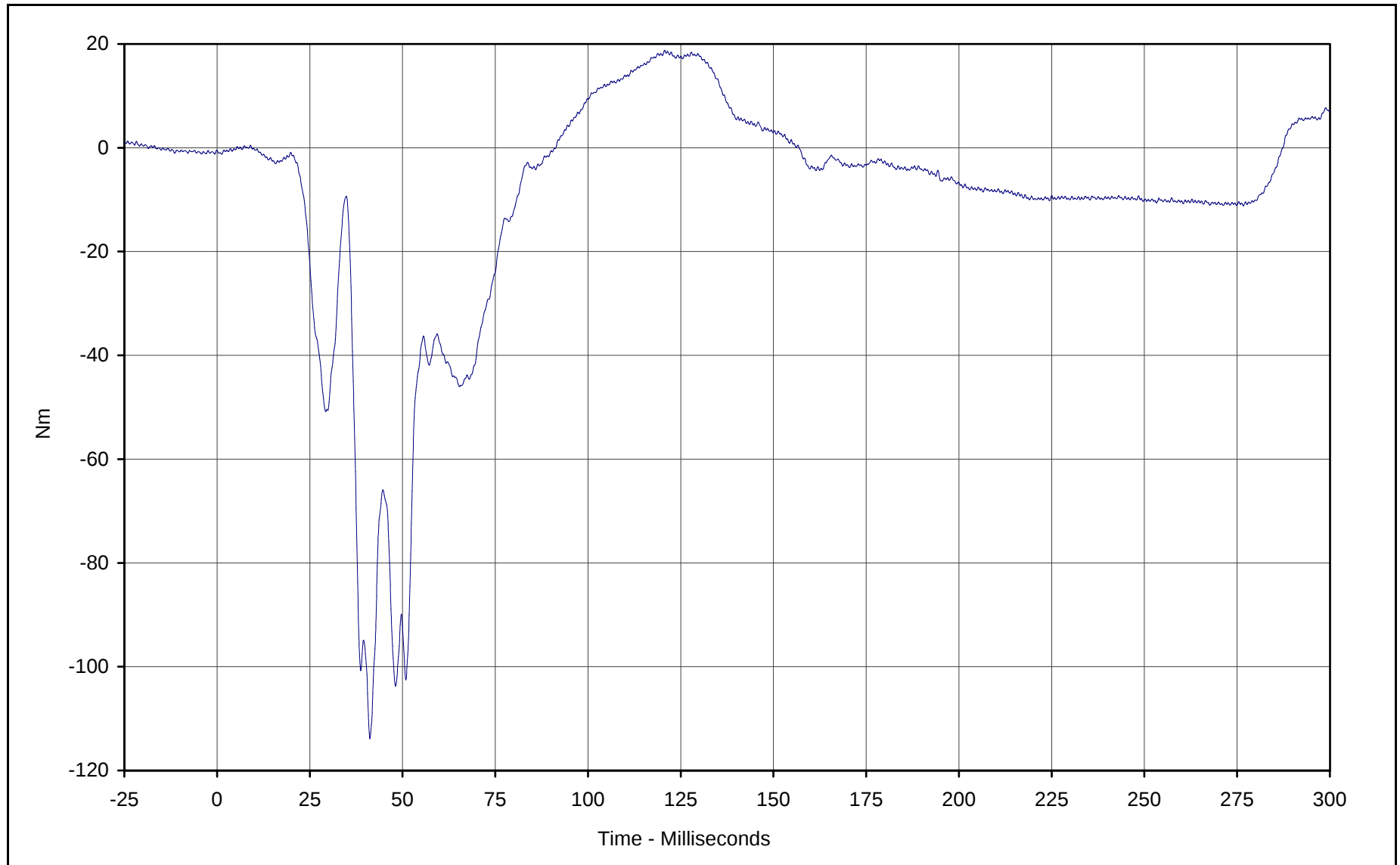


Curve Description: Driver Left Upper Tibia Moment X
Maximum Value: 71.3 at 48.7 Milliseconds
Minimum Value: -17.7 at 230.5 Milliseconds
SAE Filter Class: 600
Date of Test: 5/9/01
Curve Number: FIL-025

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



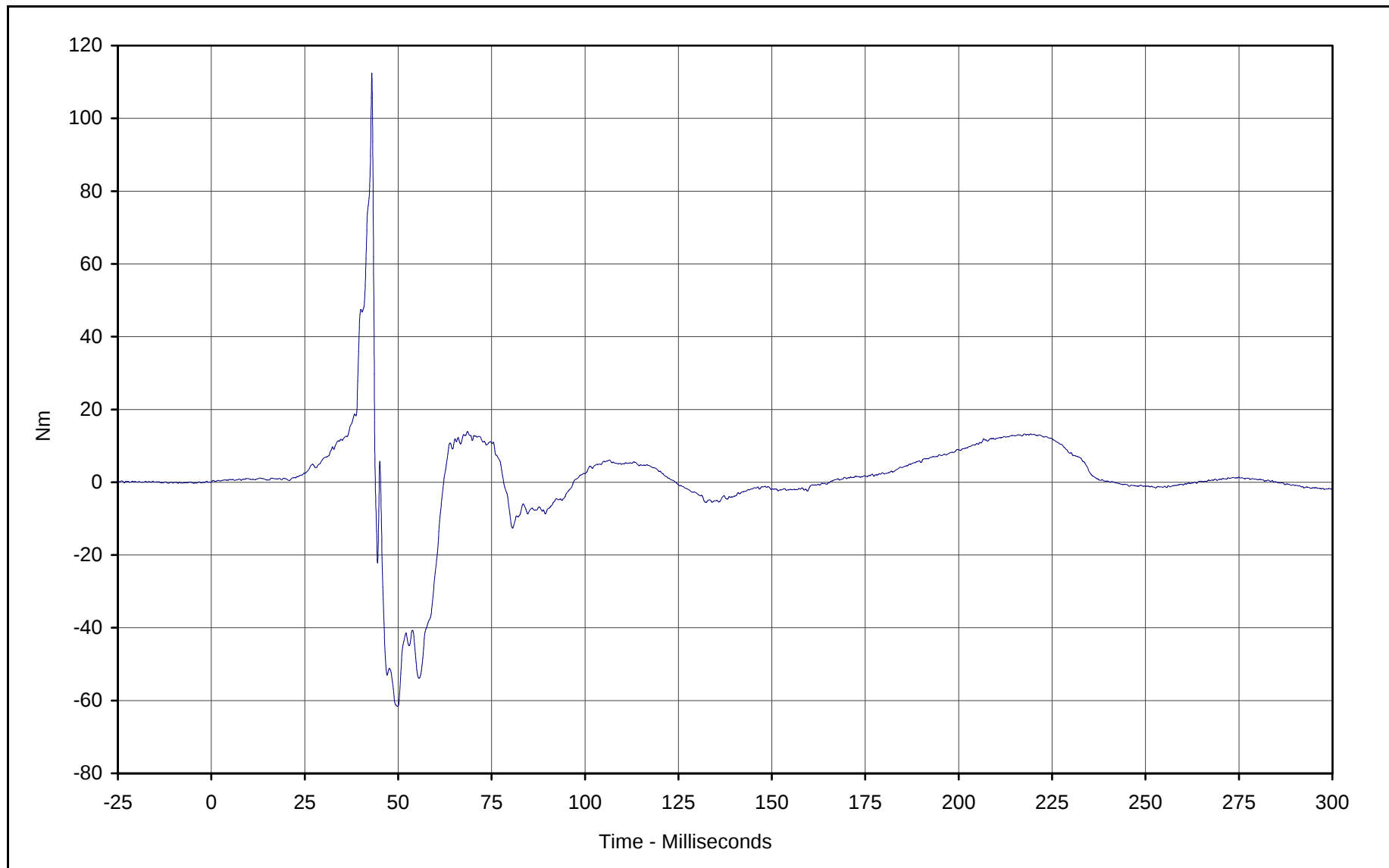
KAR21049-01



Curve Description: Driver Left Upper Tibia Moment Y
Maximum Value: 18.8 at 120.7 Milliseconds
Minimum Value: -113.9 at 41.2 Milliseconds
SAE Filter Class: 600
Date of Test: 5/9/01
Curve Number: FIL-026

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



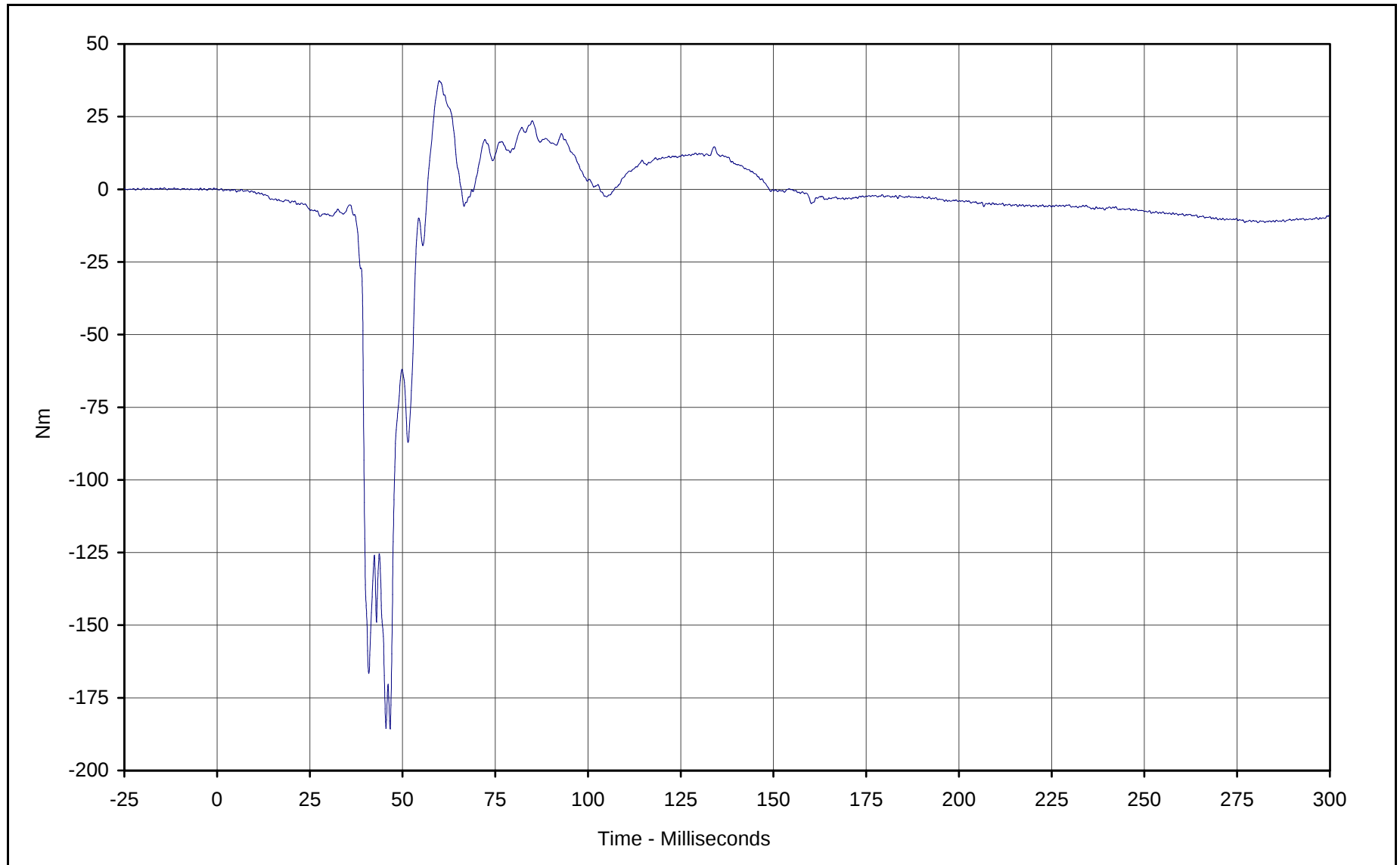


Curve Description: Driver Right Upper Tibia Moment X
Maximum Value: 112.3 at 43.0 Milliseconds
Minimum Value: -61.6 at 49.7 Milliseconds
SAE Filter Class: 600
Date of Test: 5/9/01
Curve Number: FIL-027

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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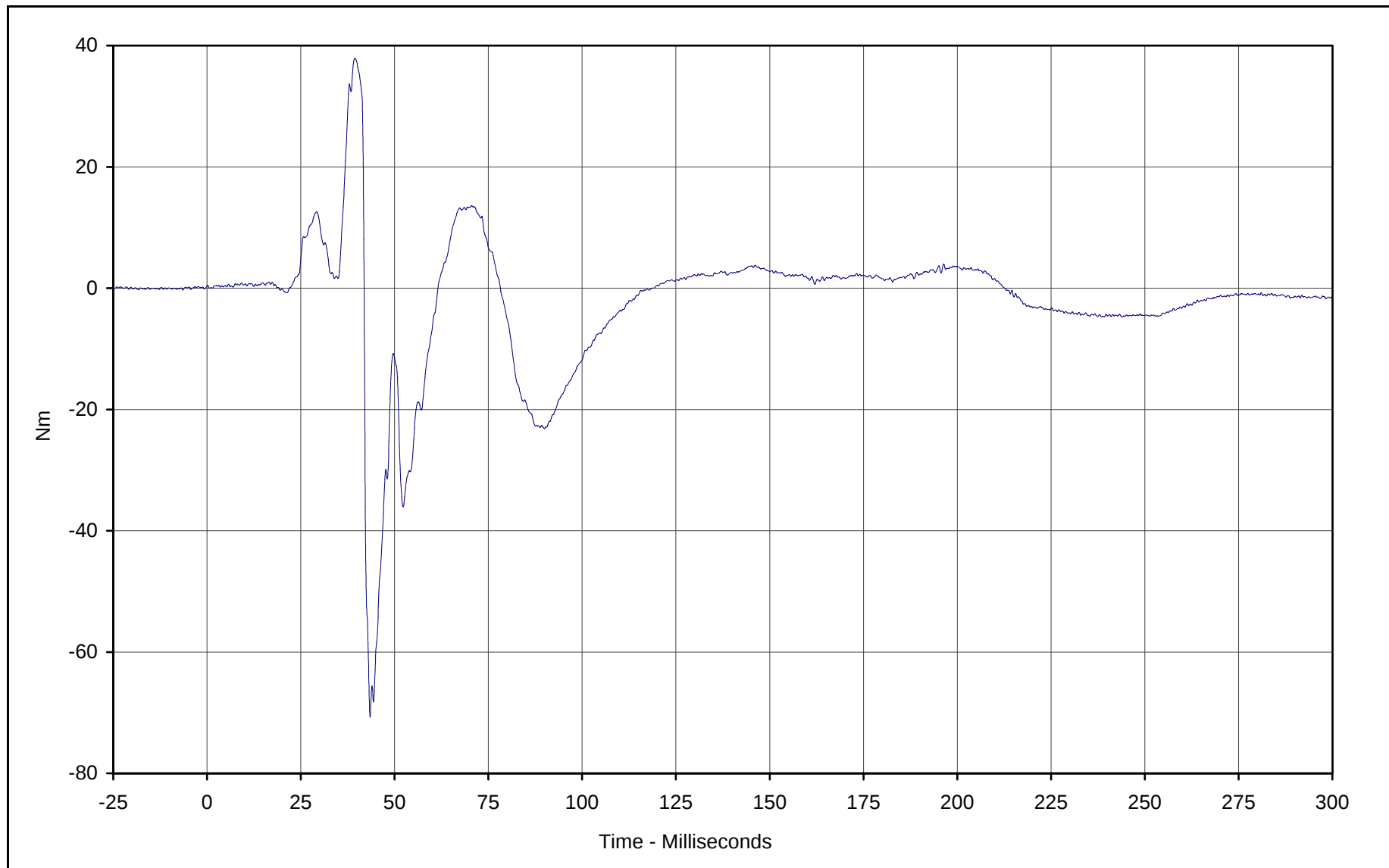


Curve Description: Driver Right Upper Tibia Moment Y
Maximum Value: 37.4 at 59.9 Milliseconds
Minimum Value: -185.7 at 46.7 Milliseconds
SAE Filter Class: 600
Date of Test: 5/9/01
Curve Number: FIL-028

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



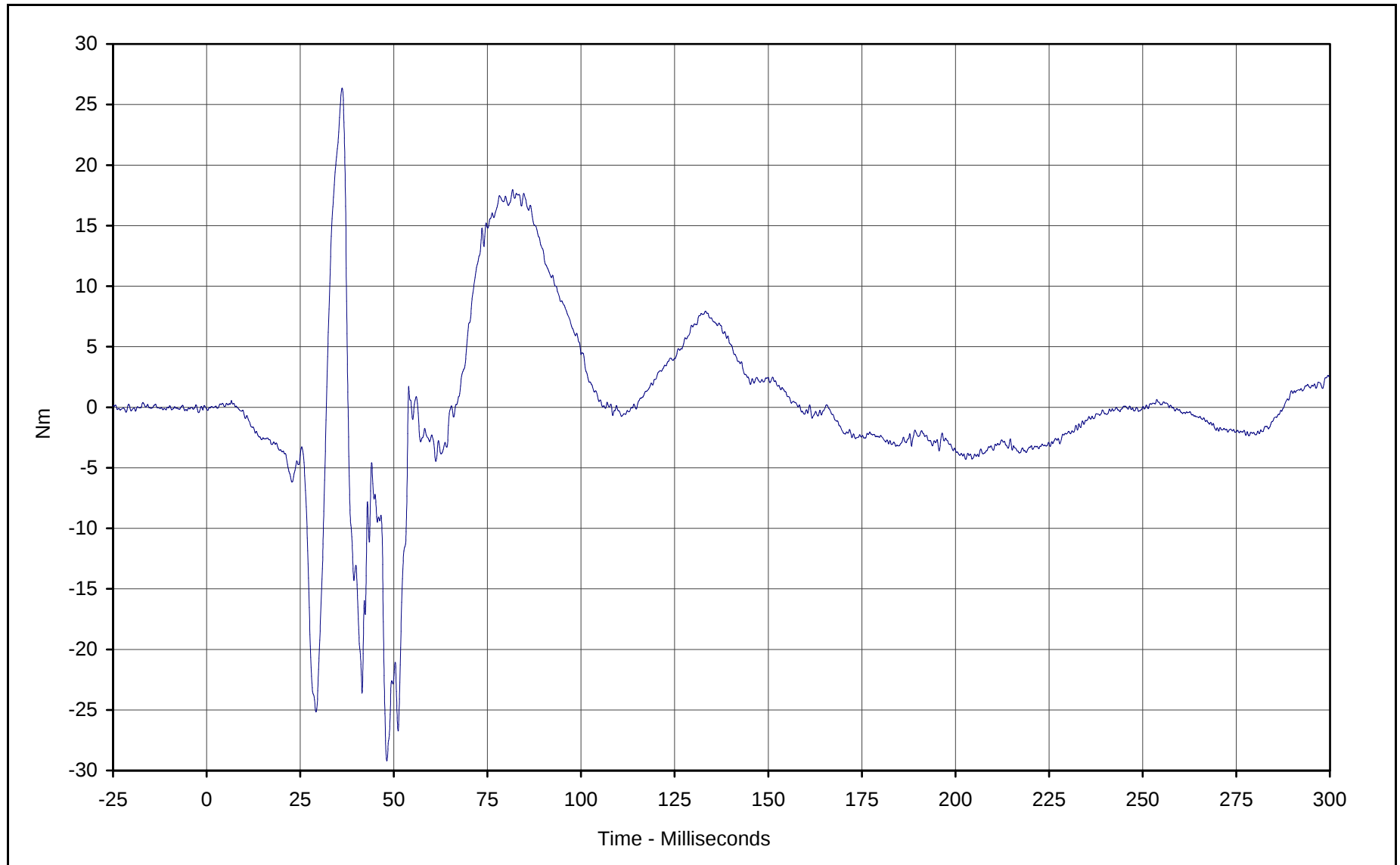
KAR21049-01



Curve Description: Driver Left Lower Tibia Moment X
Maximum Value: 37.9 at 39.4 Milliseconds
Minimum Value: -70.7 at 43.5 Milliseconds
SAE Filter Class: 600
Date of Test: 5/9/01
Curve Number: FIL-029

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

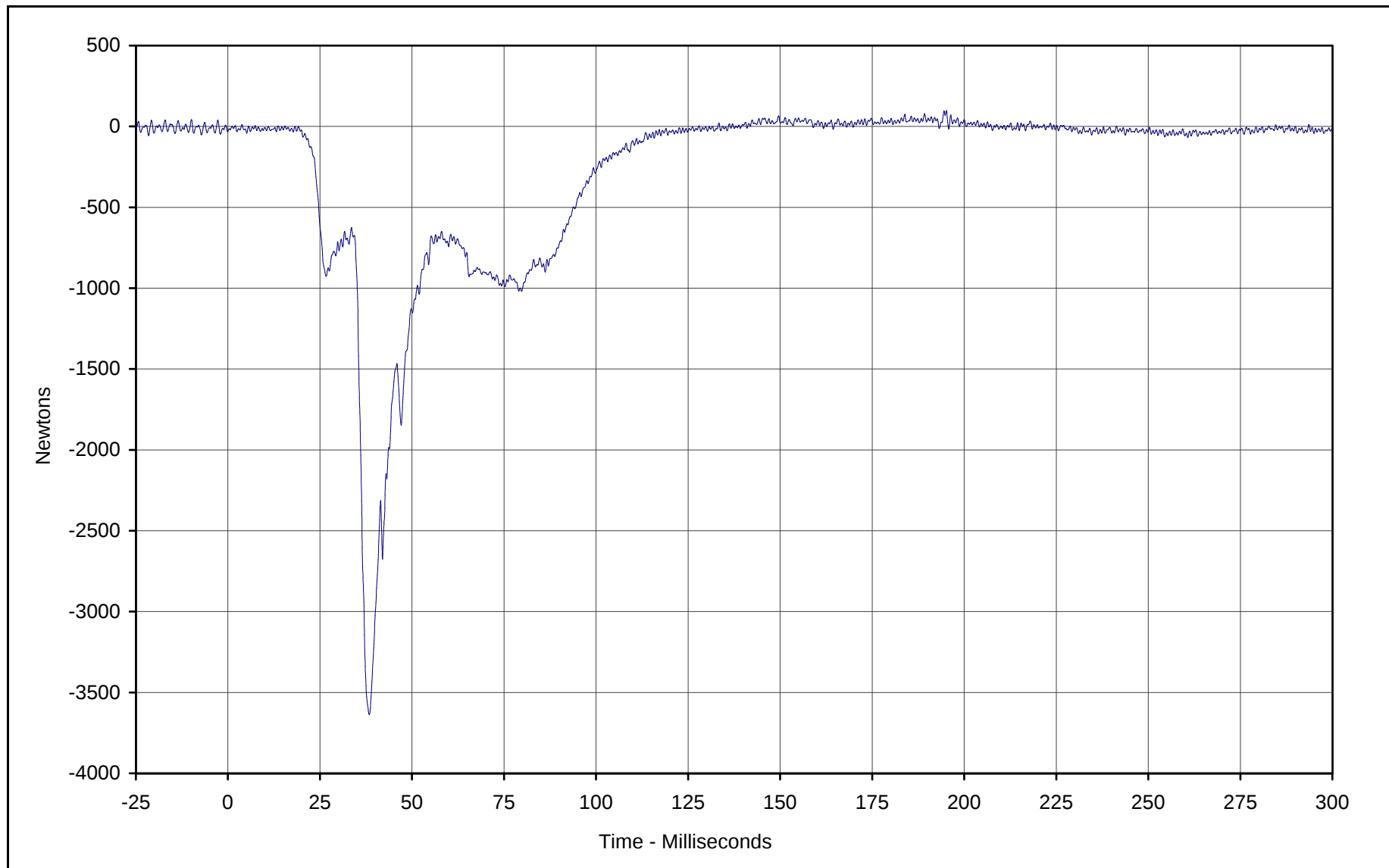




Curve Description: Driver Left Lower Tibia Moment Y
Maximum Value: 26.4 at 36.2 Milliseconds
Minimum Value: -29.2 at 48.1 Milliseconds
SAE Filter Class: 600
Date of Test: 5/9/01
Curve Number: FIL-030

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

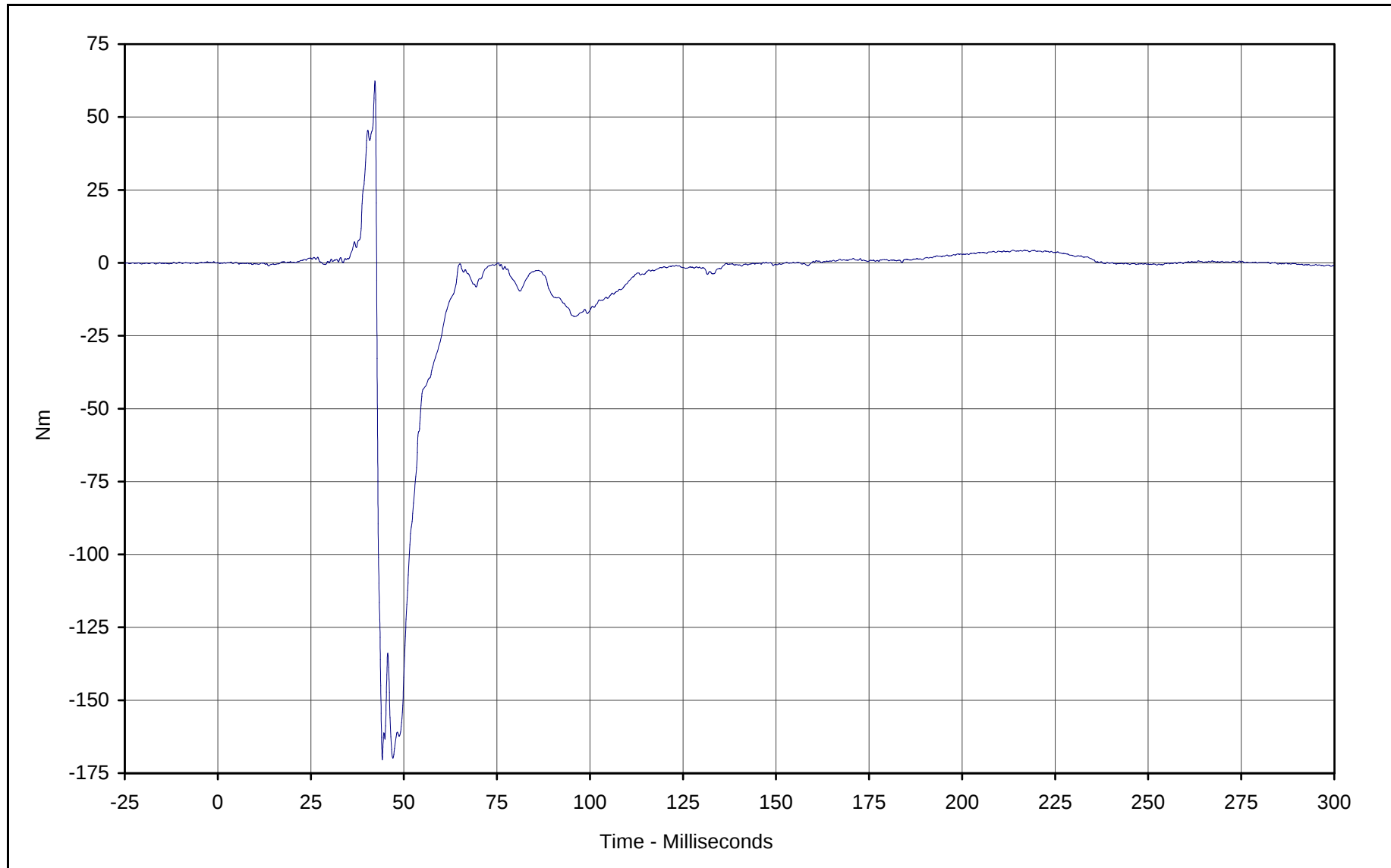




Curve Description: Driver Left Lower Tibia Force Z
Maximum Value: 97.8 at 195.2 Milliseconds
Minimum Value: -3638.0 at 38.4 Milliseconds
SAE Filter Class: 600
Date of Test: 5/9/01
Curve Number: FIL-031

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



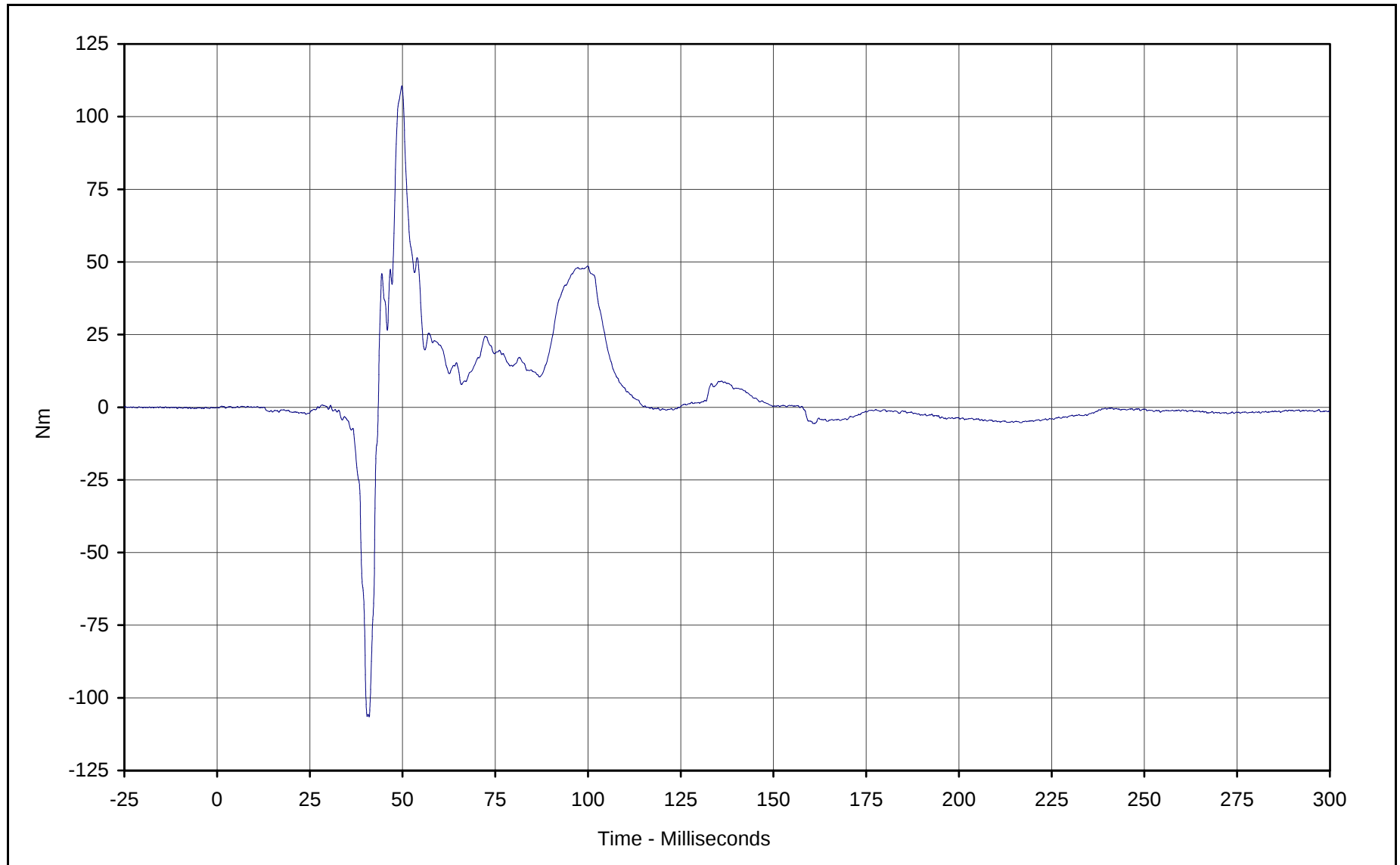


Curve Description: Driver Right Lower Tibia Moment X
Maximum Value: 62.4 at 42.2 Milliseconds
Minimum Value: -170.4 at 44.2 Milliseconds
SAE Filter Class: 600
Date of Test: 5/9/01
Curve Number: FIL-032

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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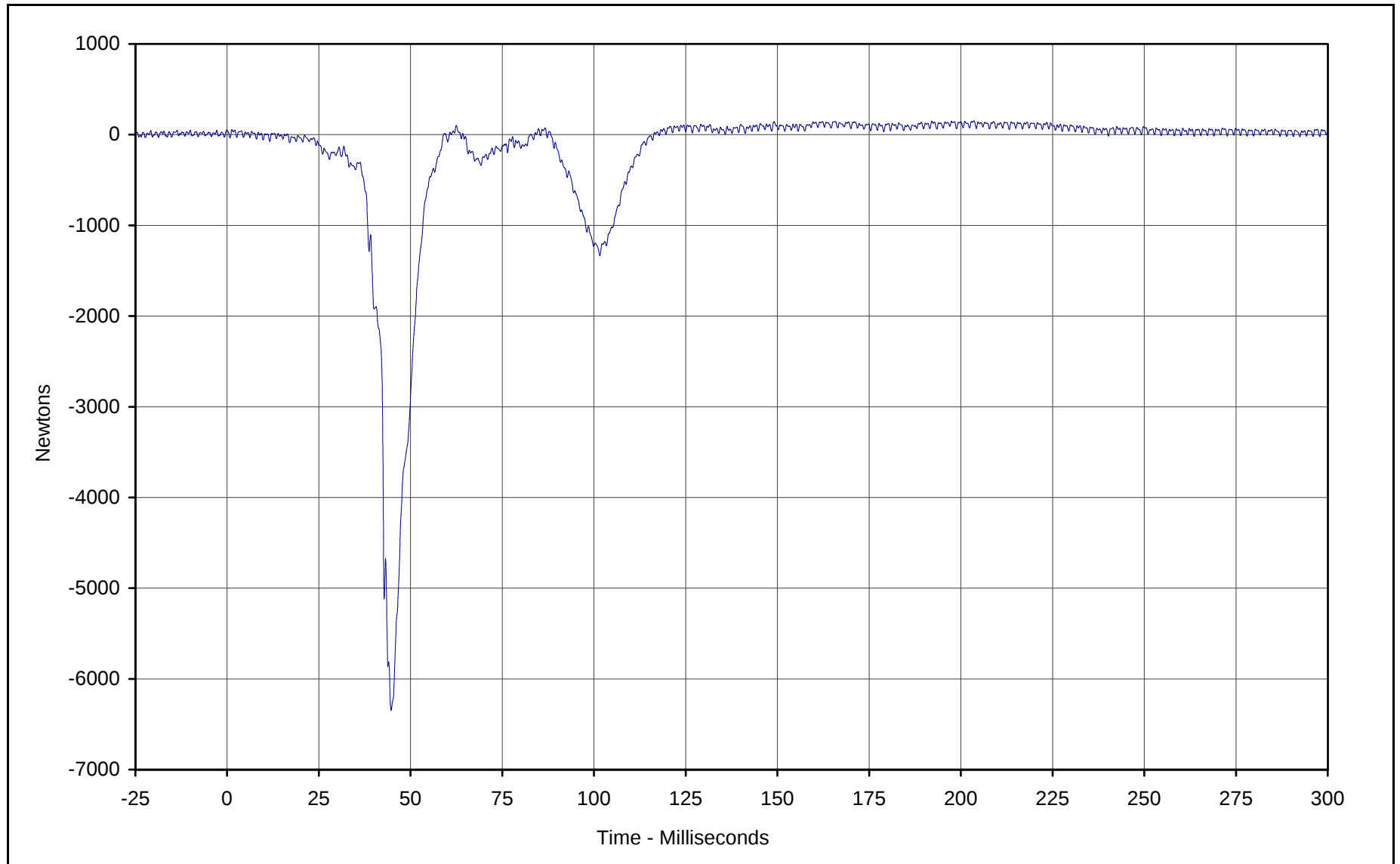
Curve Description: Driver Right Lower Tibia Moment Y
Maximum Value: 110.6 at 49.8 Milliseconds
Minimum Value: -106.5 at 41.0 Milliseconds
SAE Filter Class: 600
Date of Test: 5/9/01
Curve Number: FIL-033

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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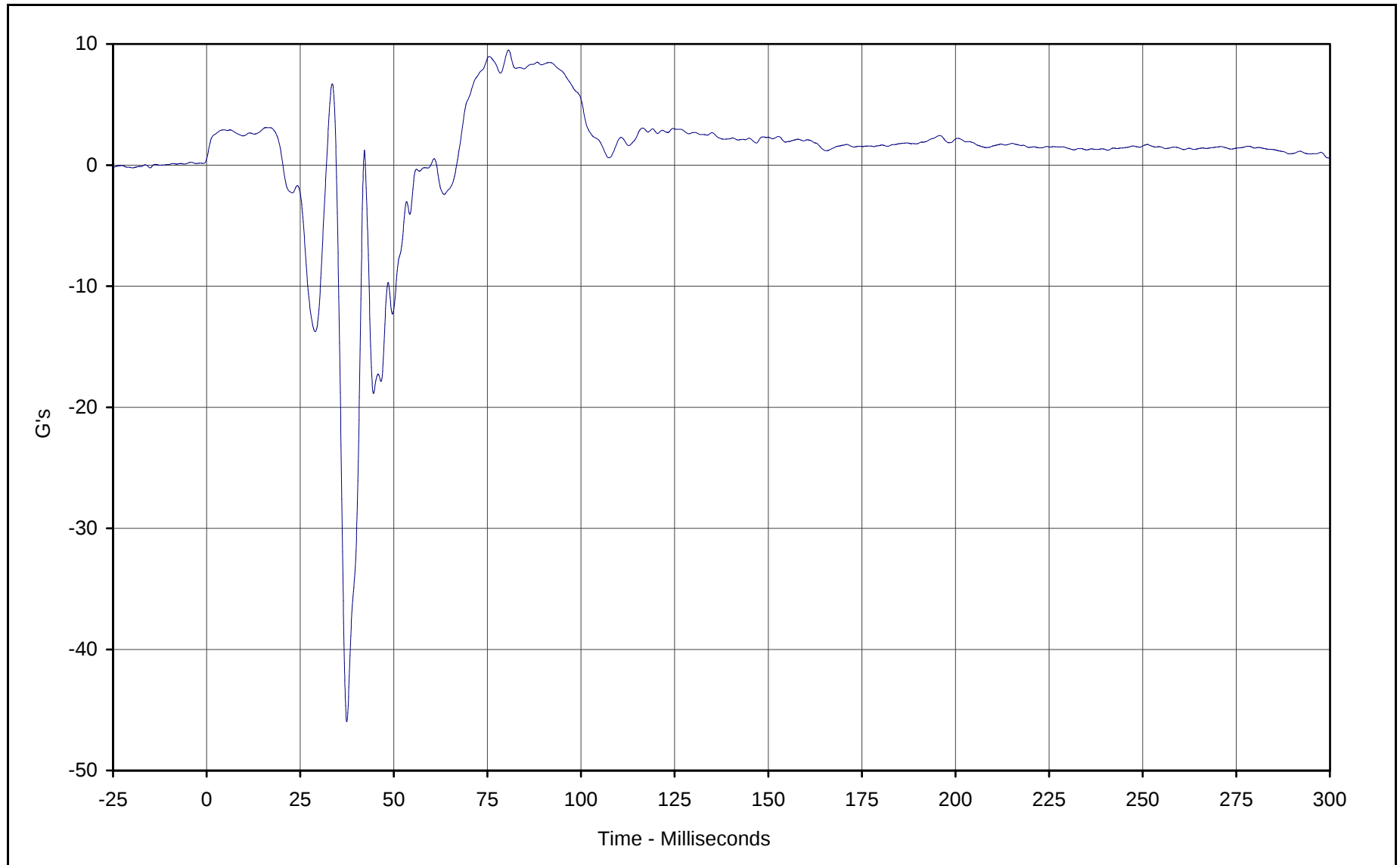
Curve Description: Driver Right Lower Tibia Force Z
Maximum Value: 151.5 at 203.6 Milliseconds
Minimum Value: -6347.2 at 44.7 Milliseconds
SAE Filter Class: 600
Date of Test: 5/9/01
Curve Number: FIL-034

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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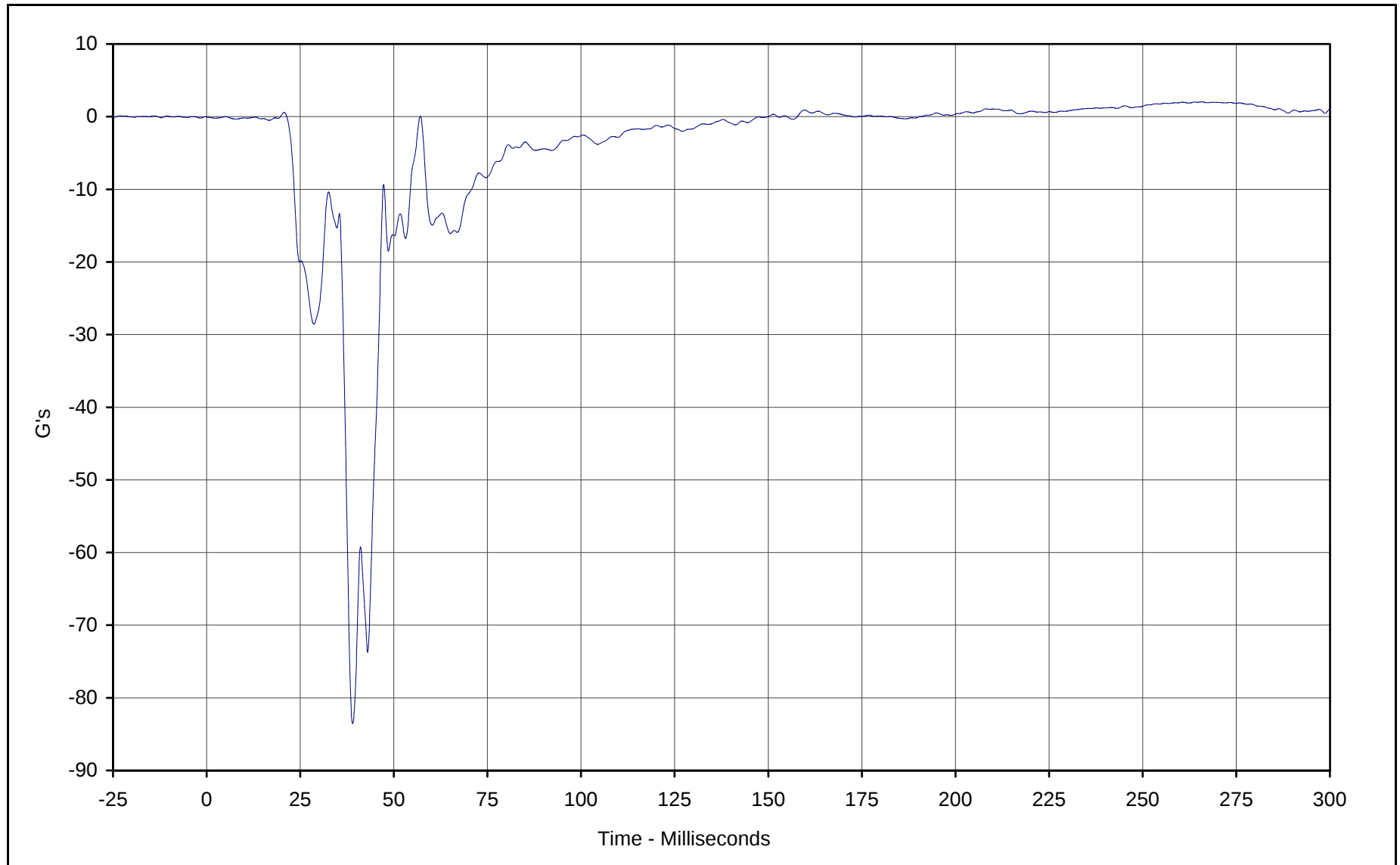
Curve Description: Driver Left Foot Aft X
Maximum Value: 9.5 at 80.6 Milliseconds
Minimum Value: -46.0 at 37.4 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: FIL-035

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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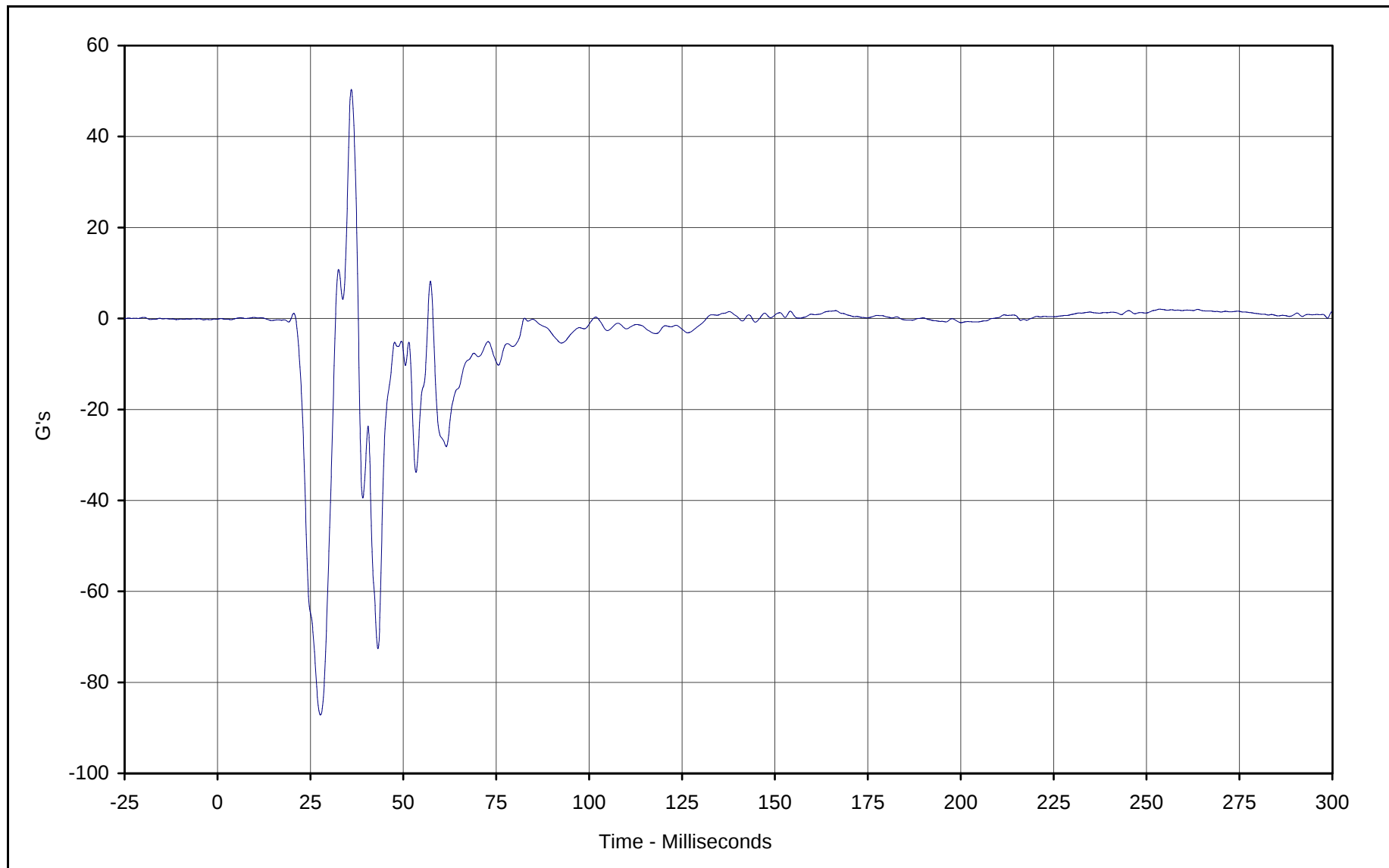
Curve Description: Driver Left Foot Aft Z
Maximum Value: 2.0 at 265.9 Milliseconds
Minimum Value: -83.5 at 39.0 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: FIL-036

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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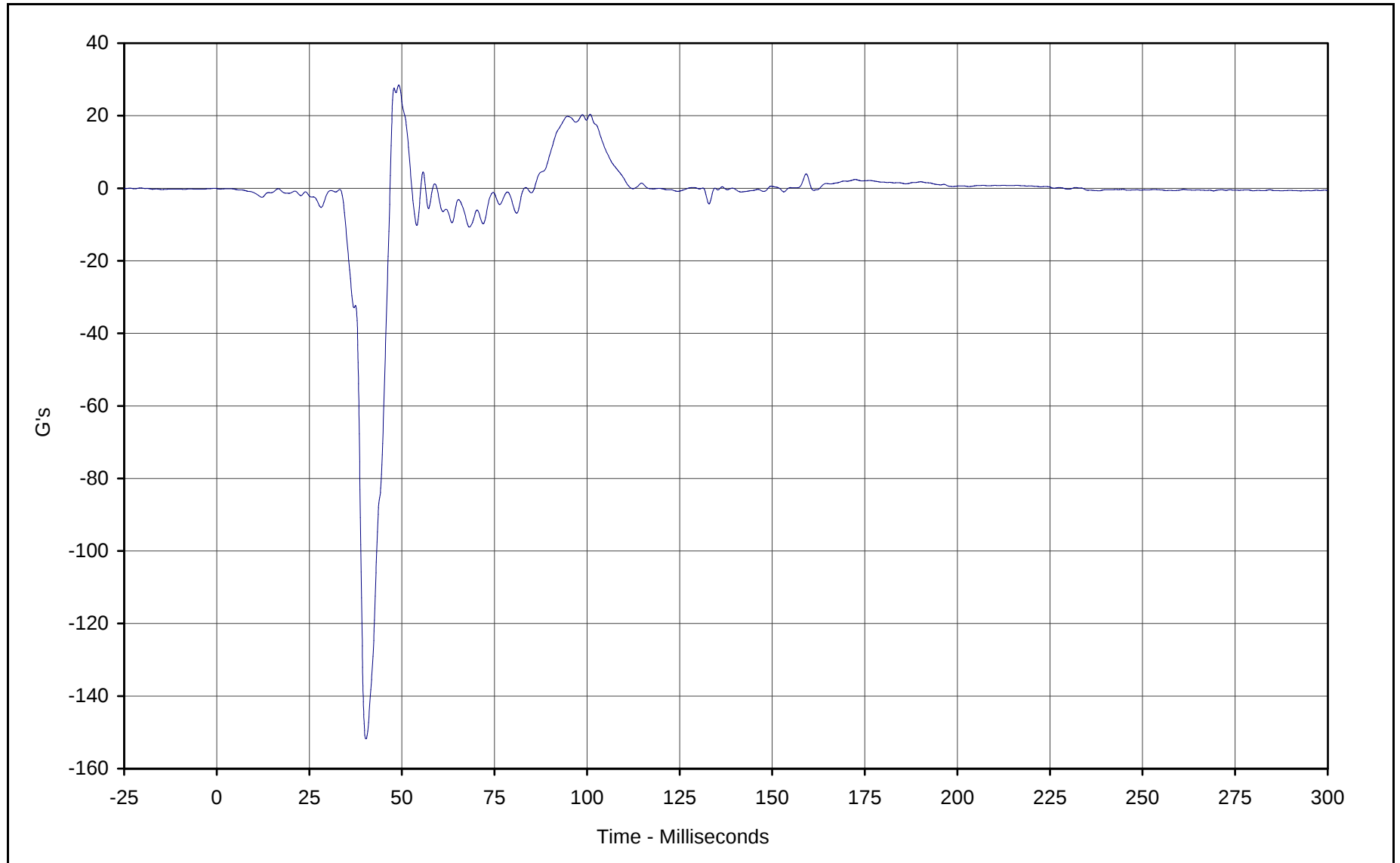
Curve Description: Driver Left Foot Fore Z
Maximum Value: 50.4 at 36.0 Milliseconds
Minimum Value: -87.2 at 27.7 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: FIL-037

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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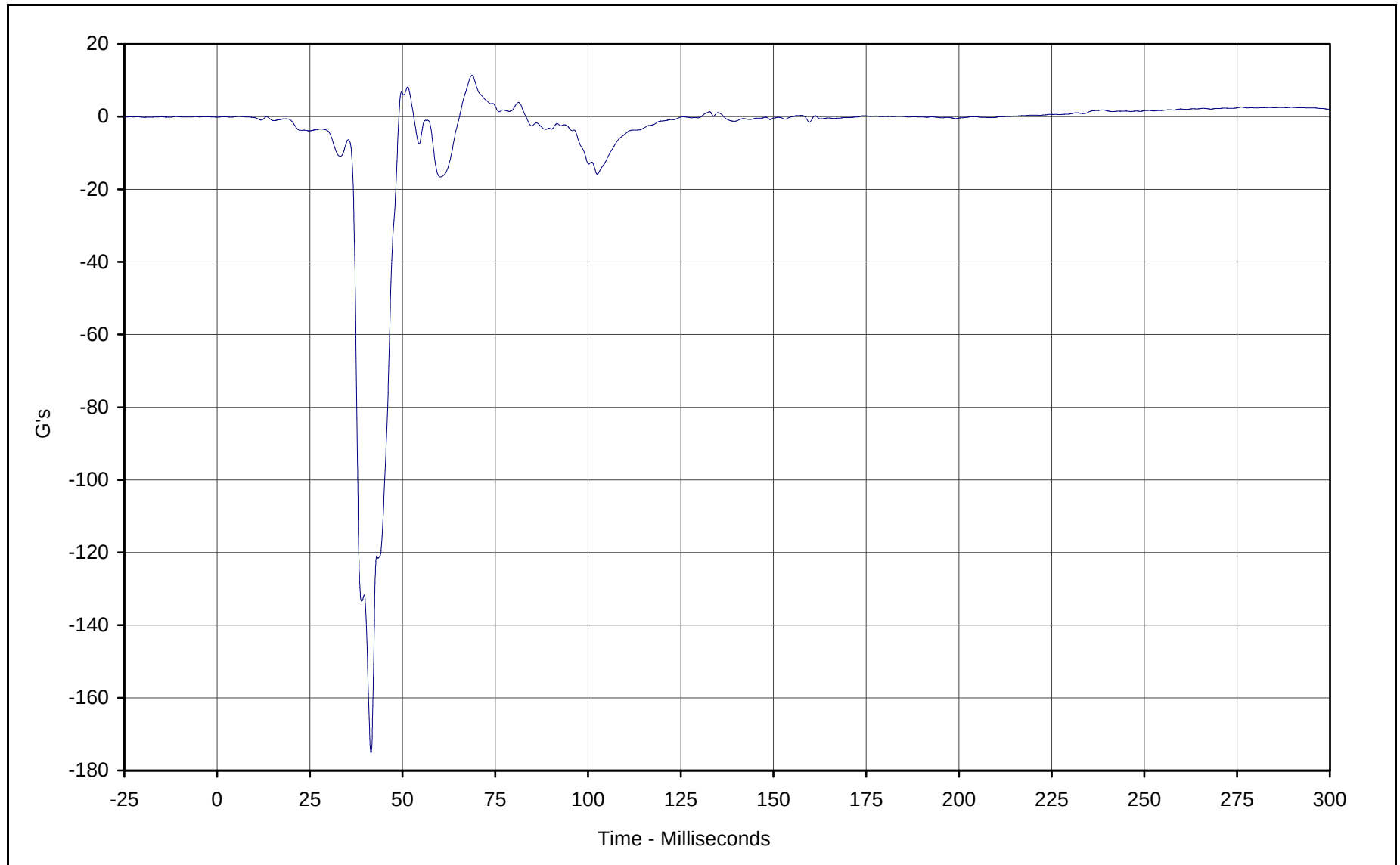


Curve Description: Driver Right Foot Aft X
Maximum Value: 28.5 at 49.2 Milliseconds
Minimum Value: -151.8 at 40.3 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: FIL-038

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



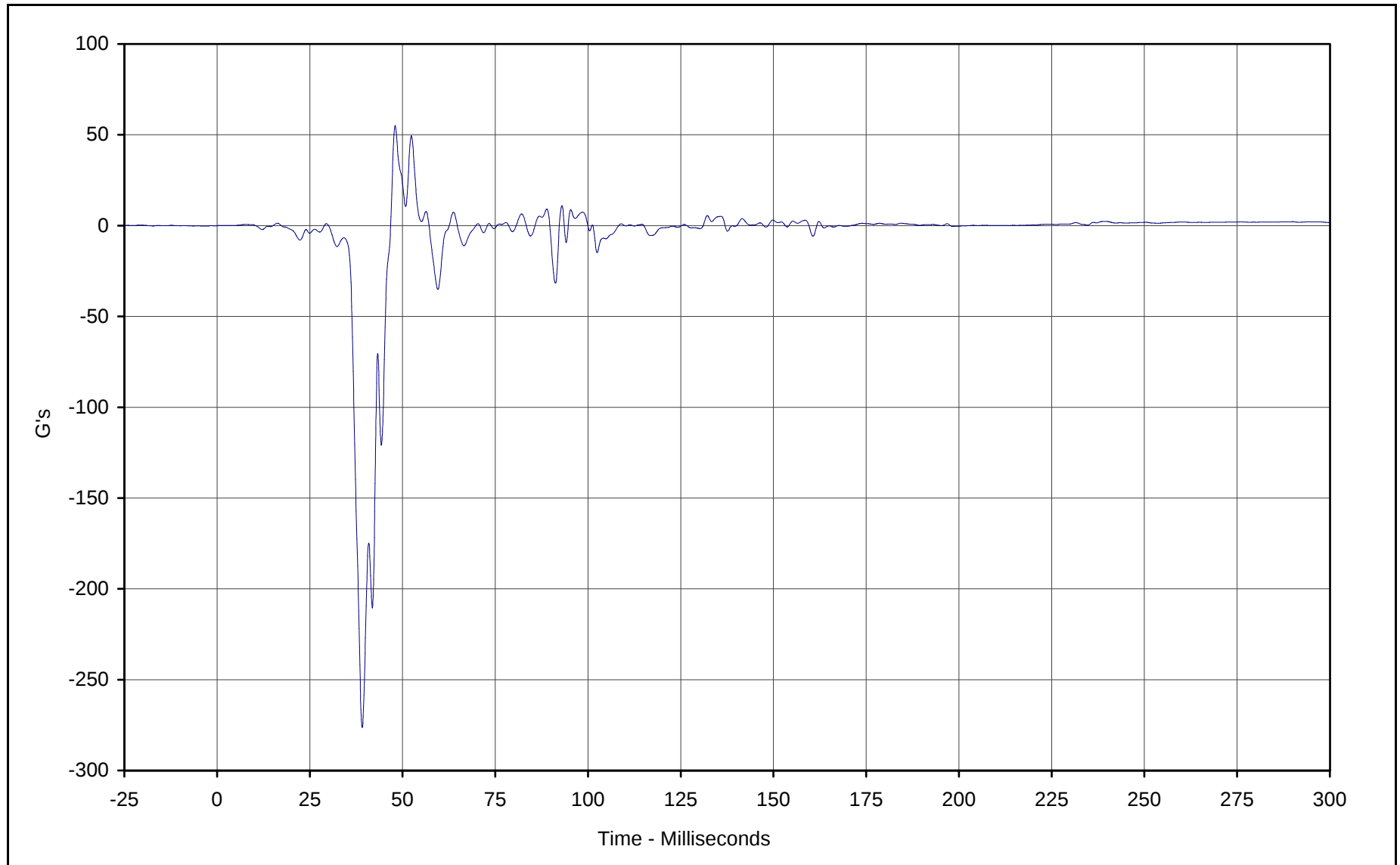
KAR21049-01



Curve Description: Driver Right Foot Aft Z
Maximum Value: 11.4 at 68.7 Milliseconds
Minimum Value: -175.3 at 41.5 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: FIL-039

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

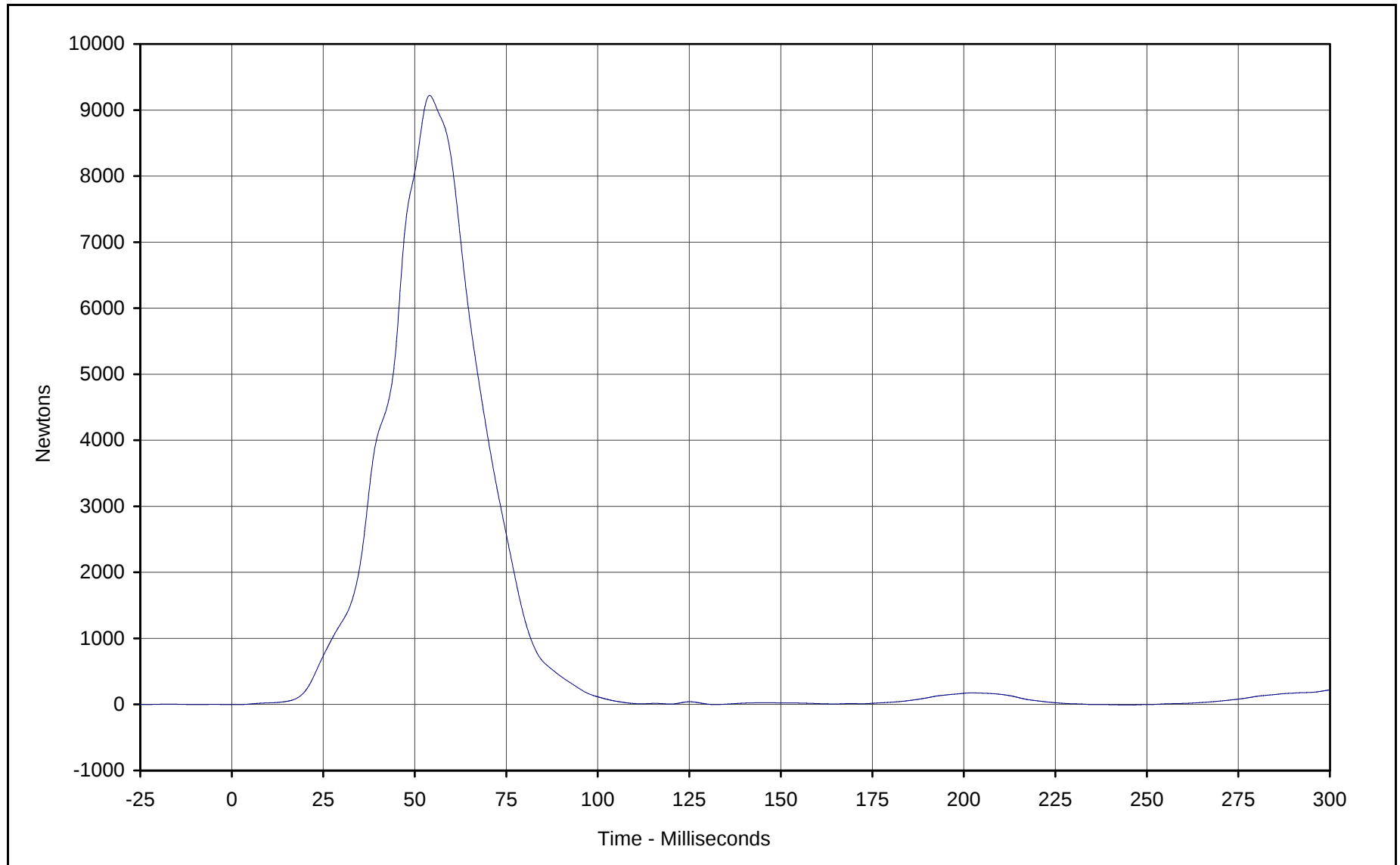




Curve Description: Driver Right Foot Fore Z
Maximum Value: 55.2 at 48.0 Milliseconds
Minimum Value: -276.4 at 39.1 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: FIL-040

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



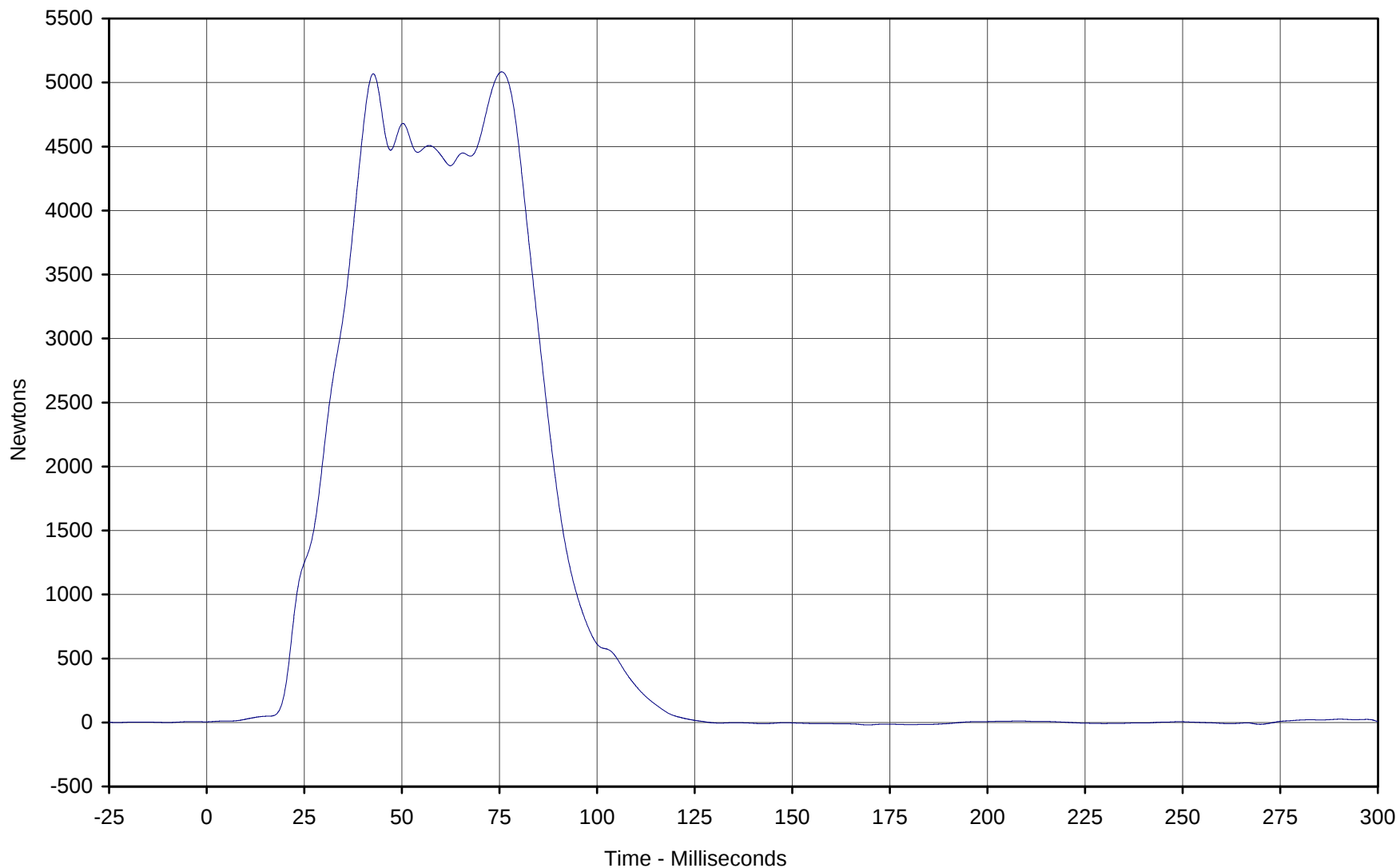


Curve Description: Driver Lap Belt Force
Maximum Value: 9220.9 at 54.1 Milliseconds
Minimum Value: -8.3 at 245.0 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-041

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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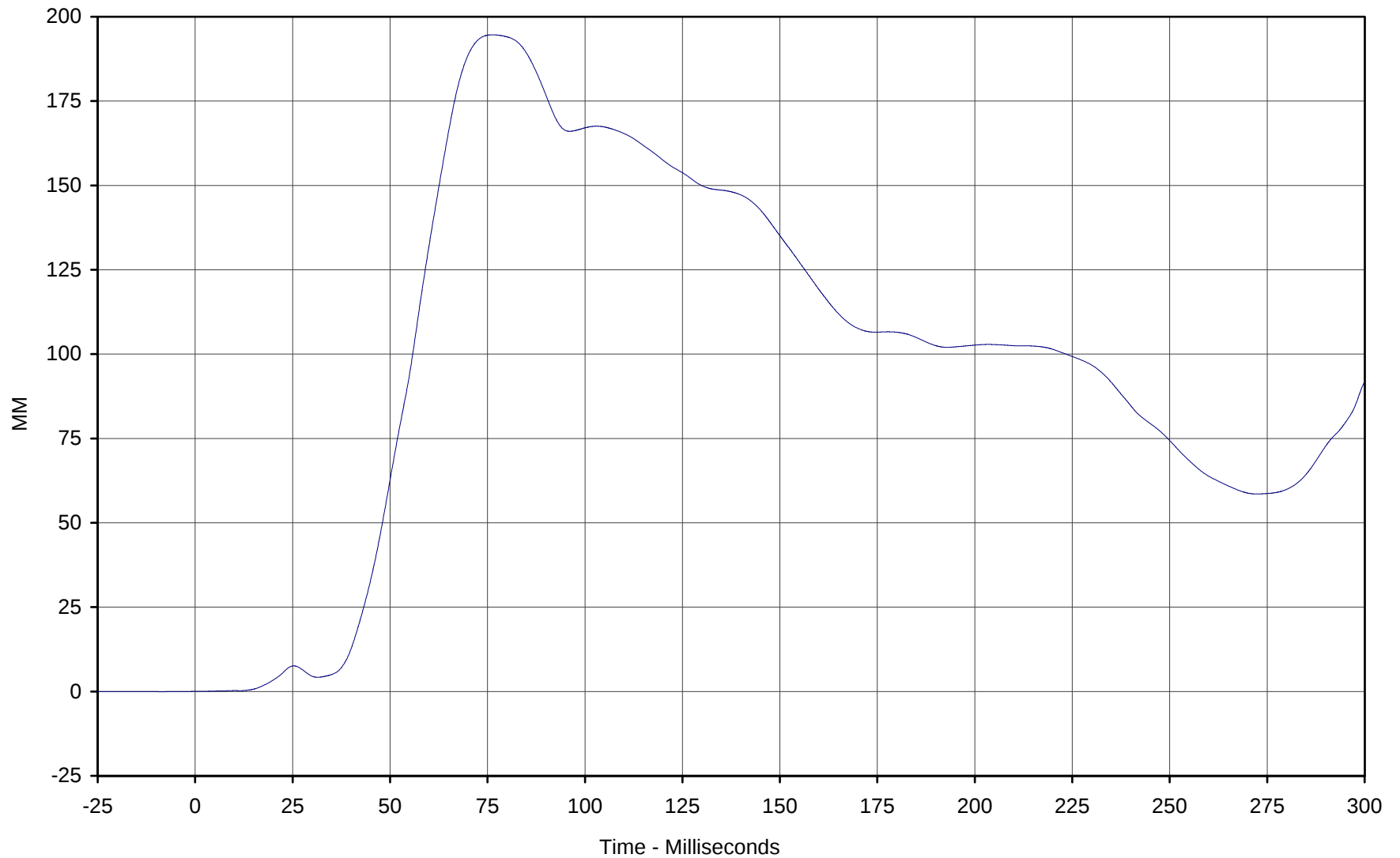
Curve Description: Driver Shoulder Belt Force
Maximum Value: 5083.5 at 75.6 Milliseconds
Minimum Value: -19.4 at 169.5 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-042

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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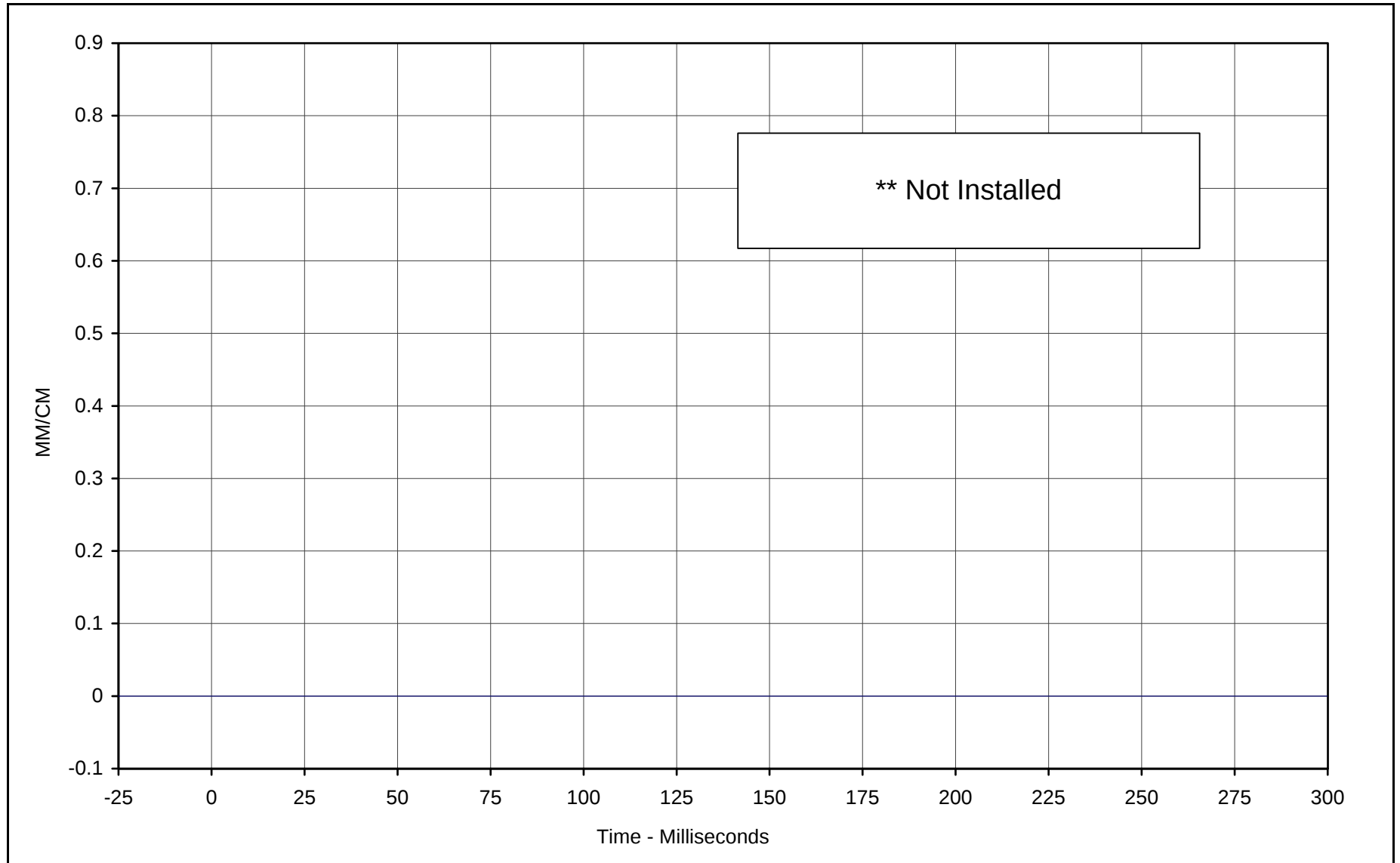


Curve Description: Driver Shoulder Belt Pullout
Maximum Value: 194.6 at 76.3 Milliseconds
Minimum Value: 0.0 at 0.0 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-043

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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Curve Description: Driver Shoulder Belt Elongation **

Maximum Value: 0.0 at 0.0 Milliseconds

Minimum Value: 0.0 at 0.0 Milliseconds

SAE Filter Class: 60

Date of Test: 5/9/01

Curve Number: FIL-044

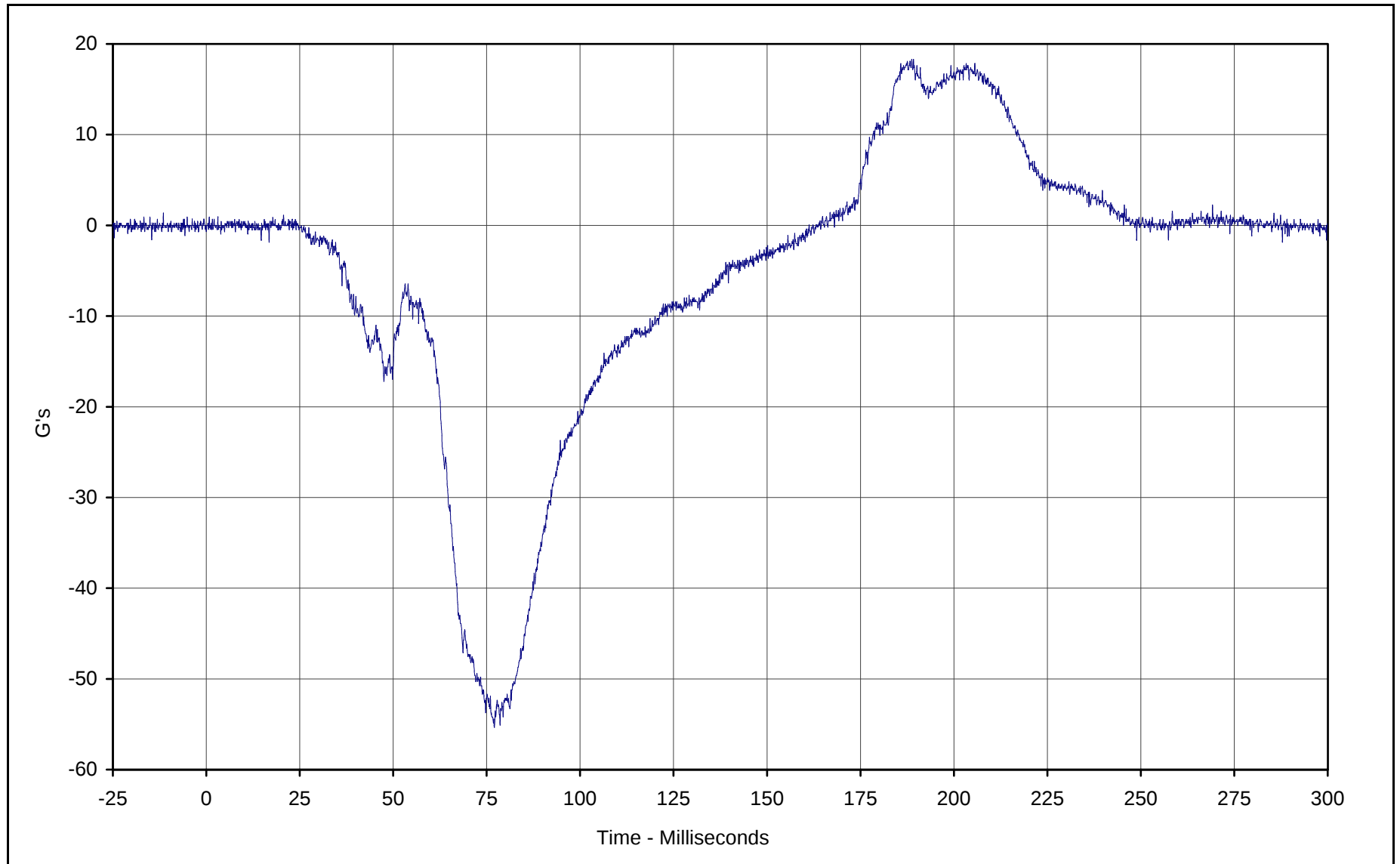
Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

** Not installed



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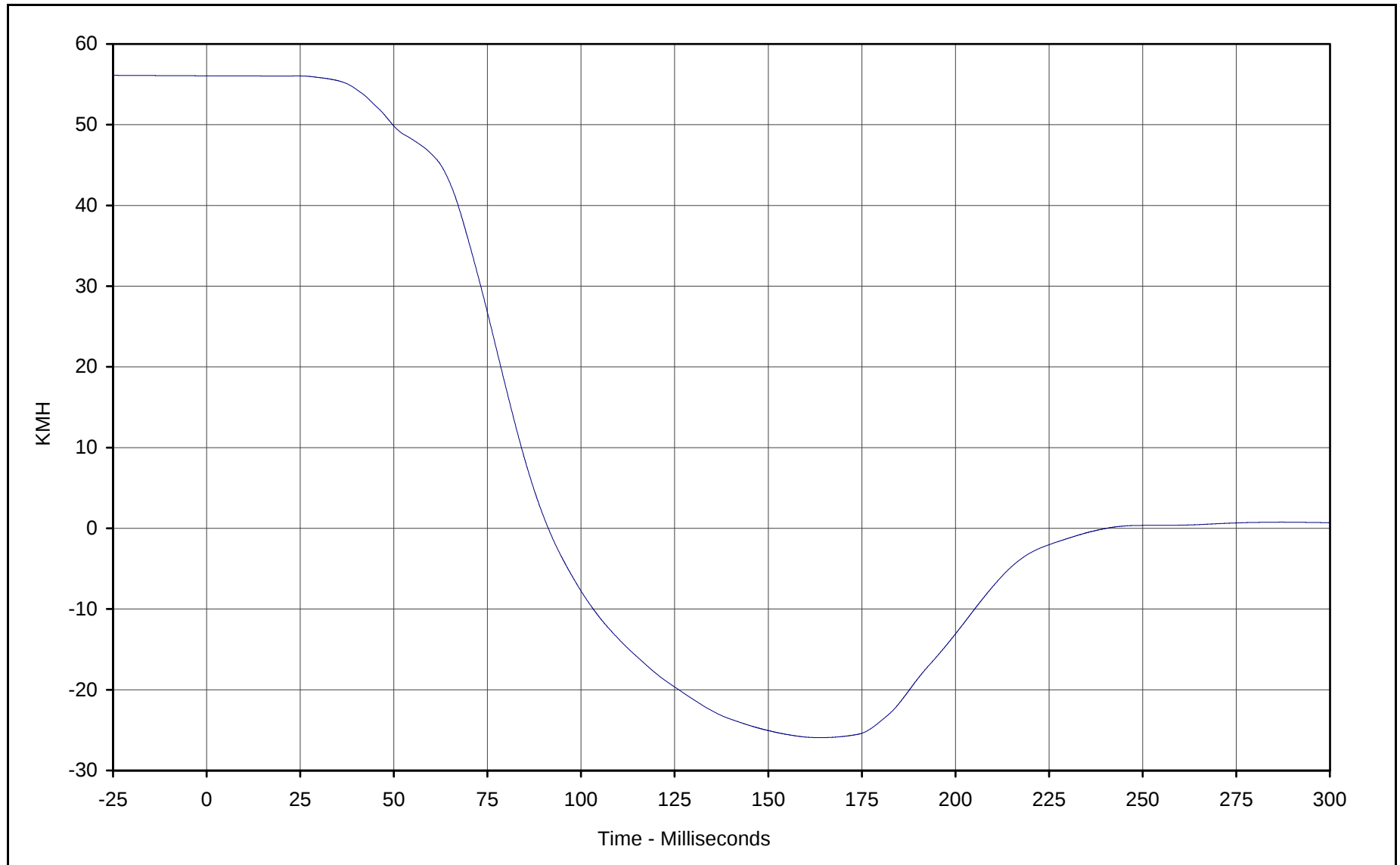
Curve Description: Passenger Head Primary X
Maximum Value: 18.3 at 188.7 Milliseconds
Minimum Value: -55.3 at 77.1 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: FIL-045

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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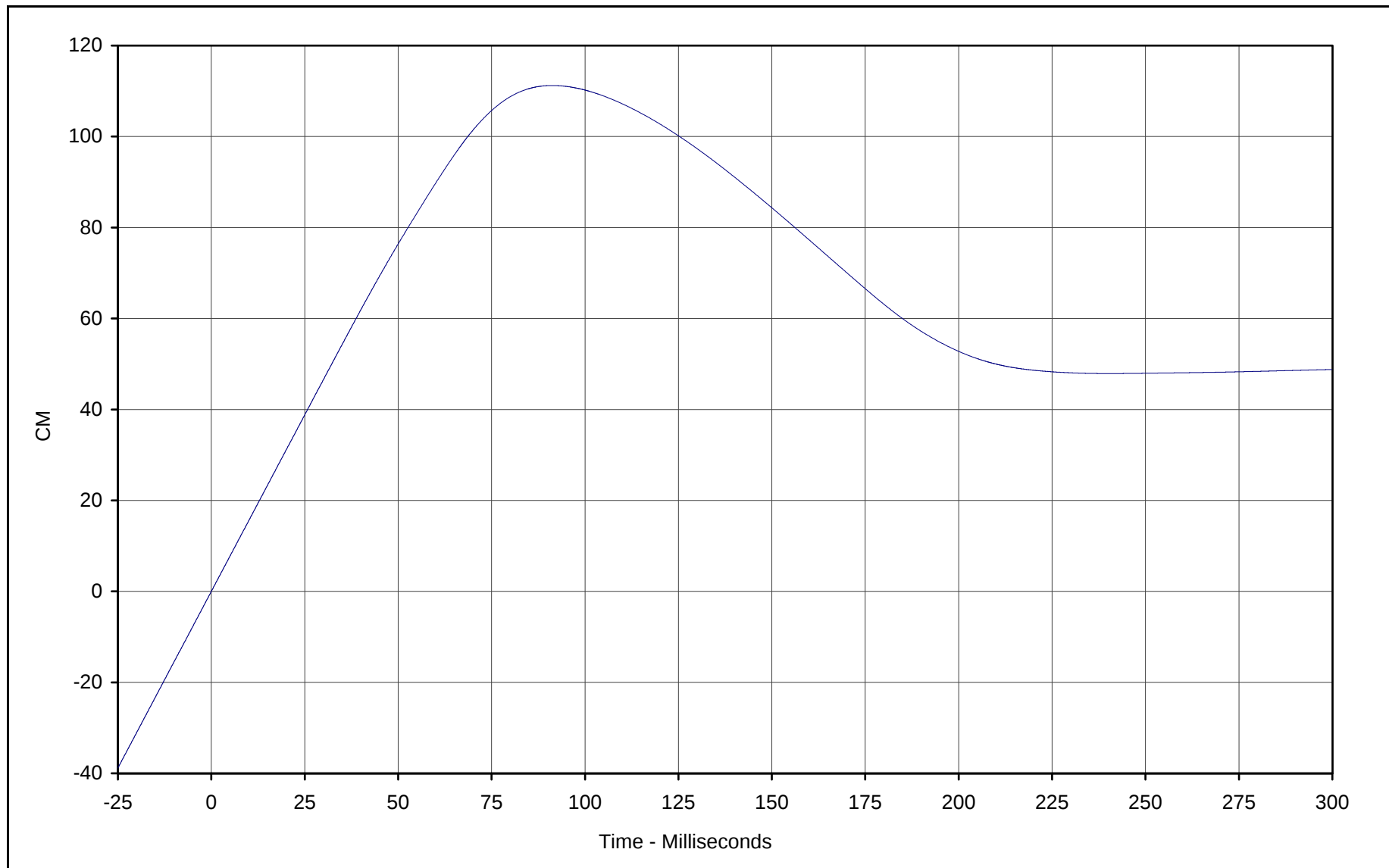
Curve Description: Passenger Head Primary X Velocity
Maximum Value: 56.1 at 10.3 Milliseconds
Minimum Value: -25.9 at 163.7 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN1-045

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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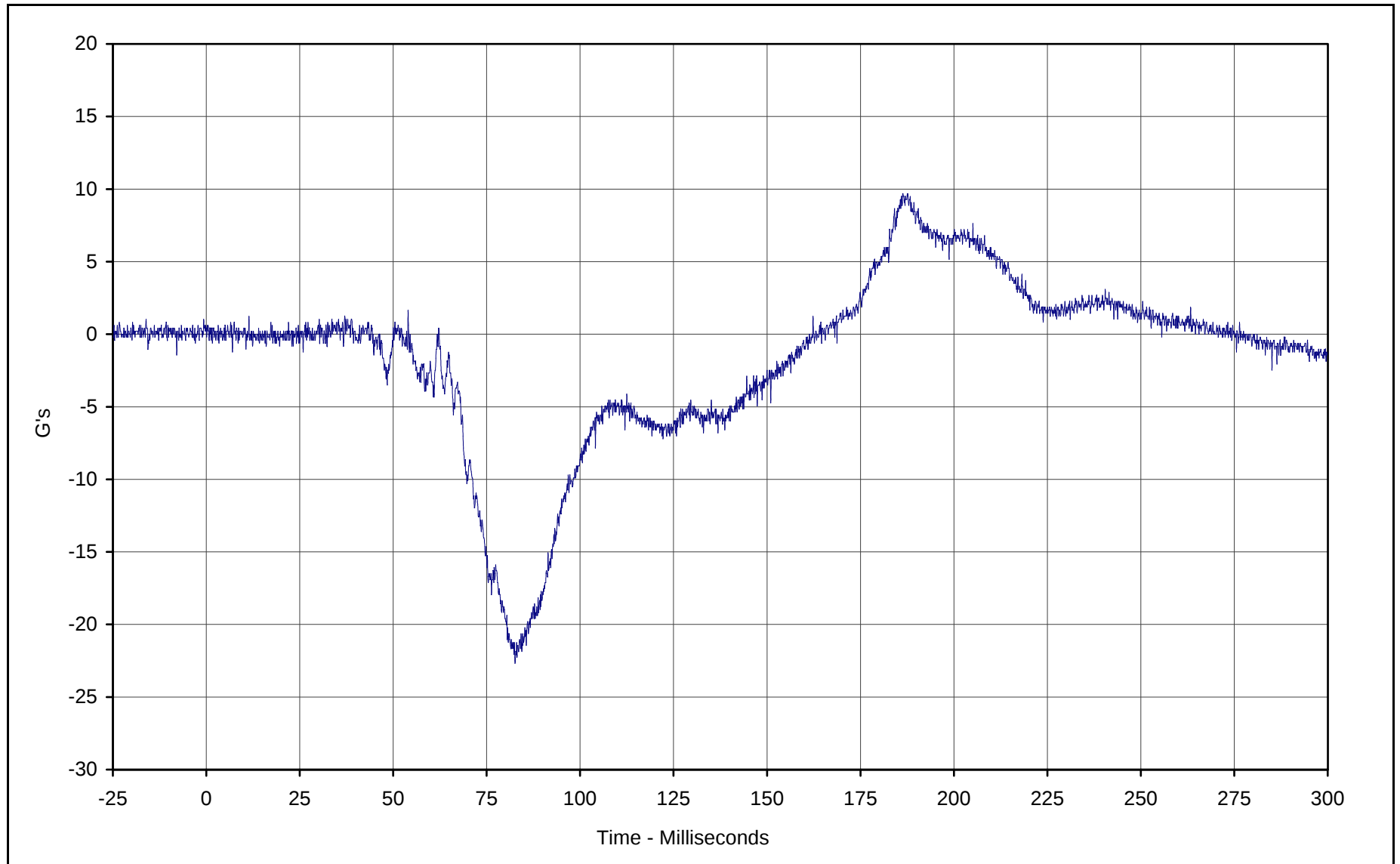
Curve Description: Passenger Head Primary X Displ.
Maximum Value: 111.2 at 91.2 Milliseconds
Minimum Value: 0.0 at 0.0 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN2-045

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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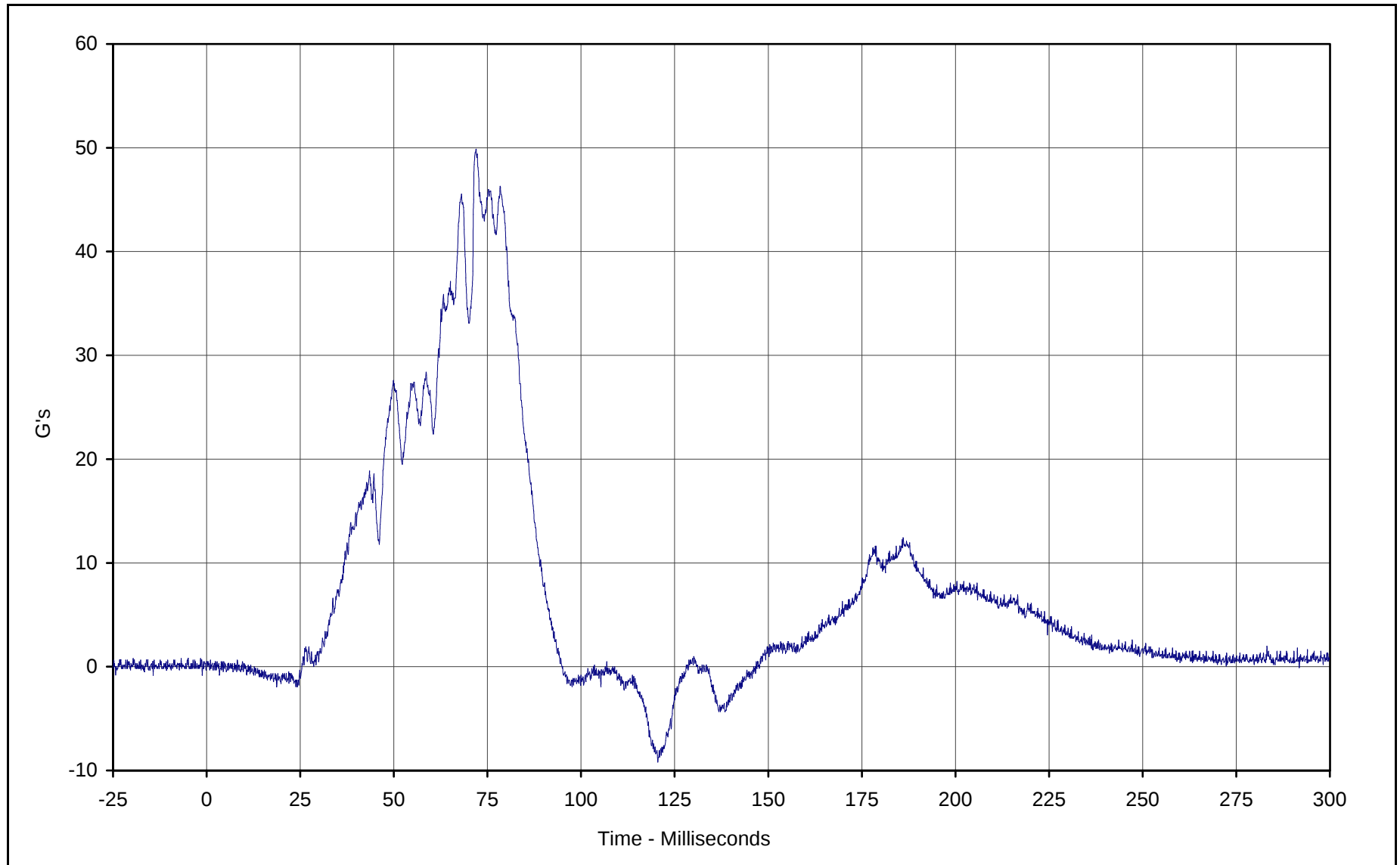


Curve Description: Passenger Head Primary Y
Maximum Value: 9.7 at 186.3 Milliseconds
Minimum Value: -22.7 at 82.6 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: FIL-046

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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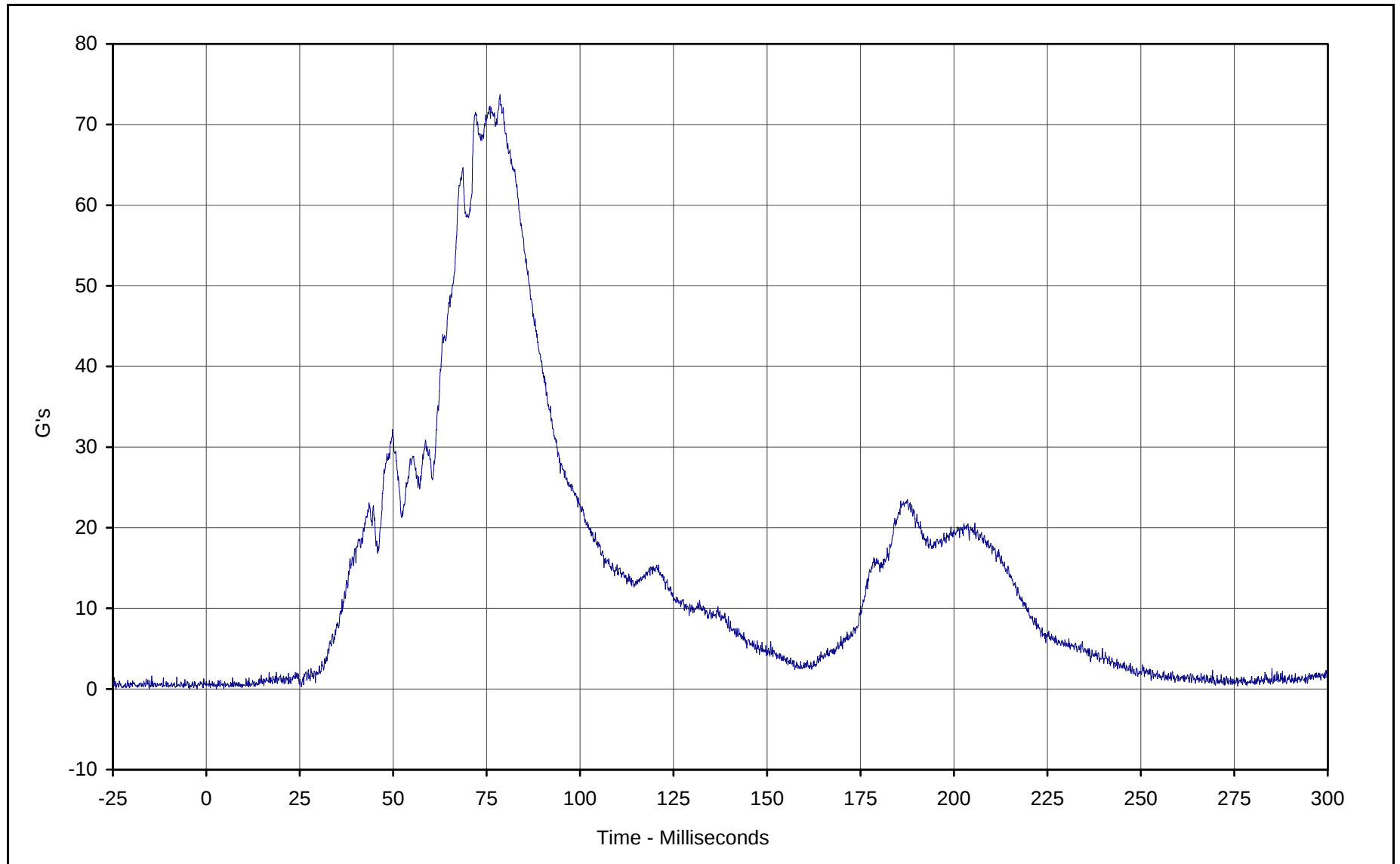


Curve Description: Passenger Head Primary Z
Maximum Value: 49.9 at 71.9 Milliseconds
Minimum Value: -9.2 at 120.5 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: FIL-047

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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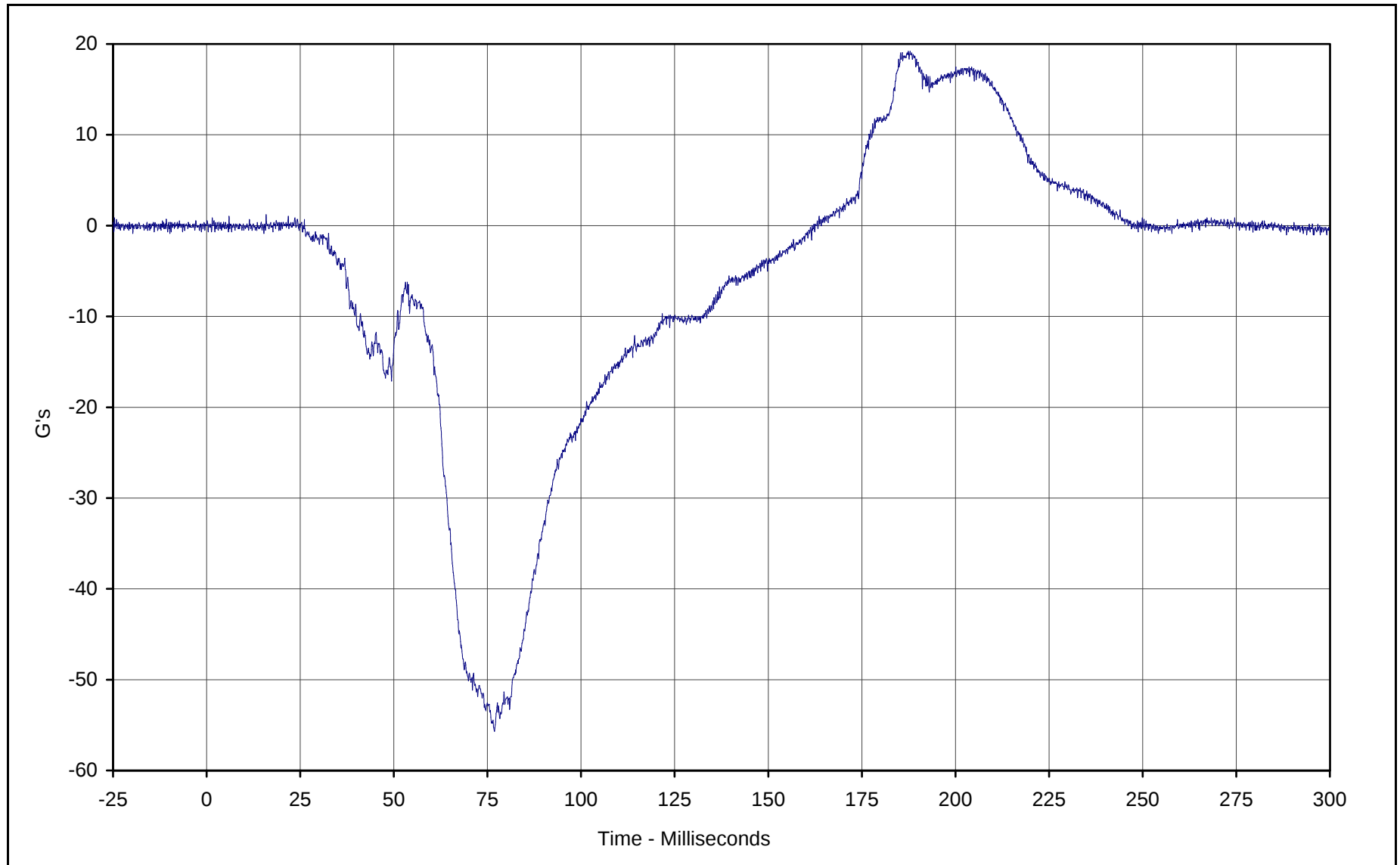
Curve Description: Passenger Head Resultant Primary
Maximum Value: 73.7 at 78.6 Milliseconds
Minimum Value: 0.0 at 2.7 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: RES-045

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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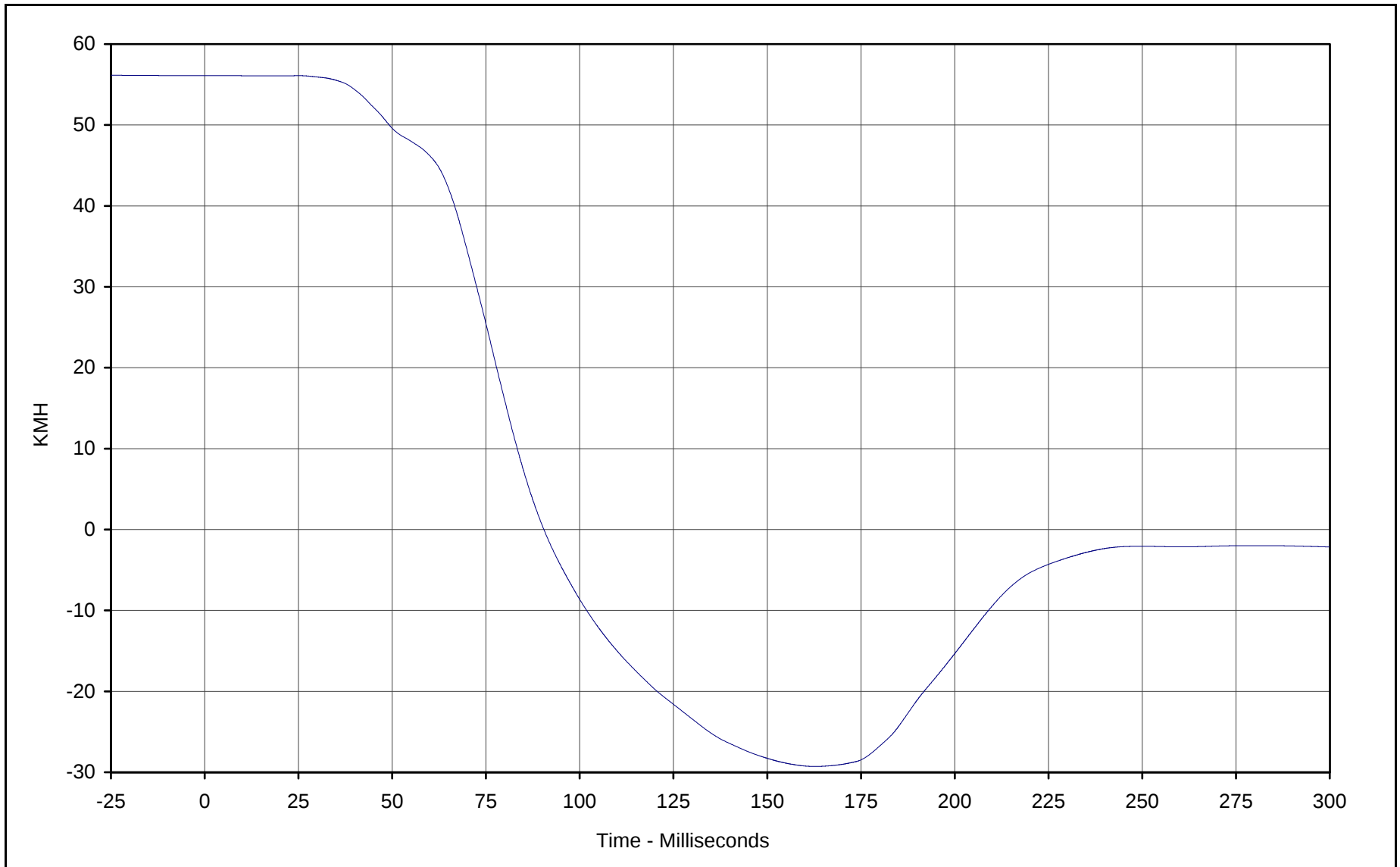
Curve Description: Passenger Head Redundant X
Maximum Value: 19.2 at 187.4 Milliseconds
Minimum Value: -55.7 at 76.8 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: FIL-048

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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Curve Description: Passenger Head Redundant X Velocity

Maximum Value: 56.1 at 2.2 Milliseconds

Minimum Value: -29.3 at 162.8 Milliseconds

SAE Filter Class: 180

Date of Test: 5/9/01

Curve Number: IN1-048

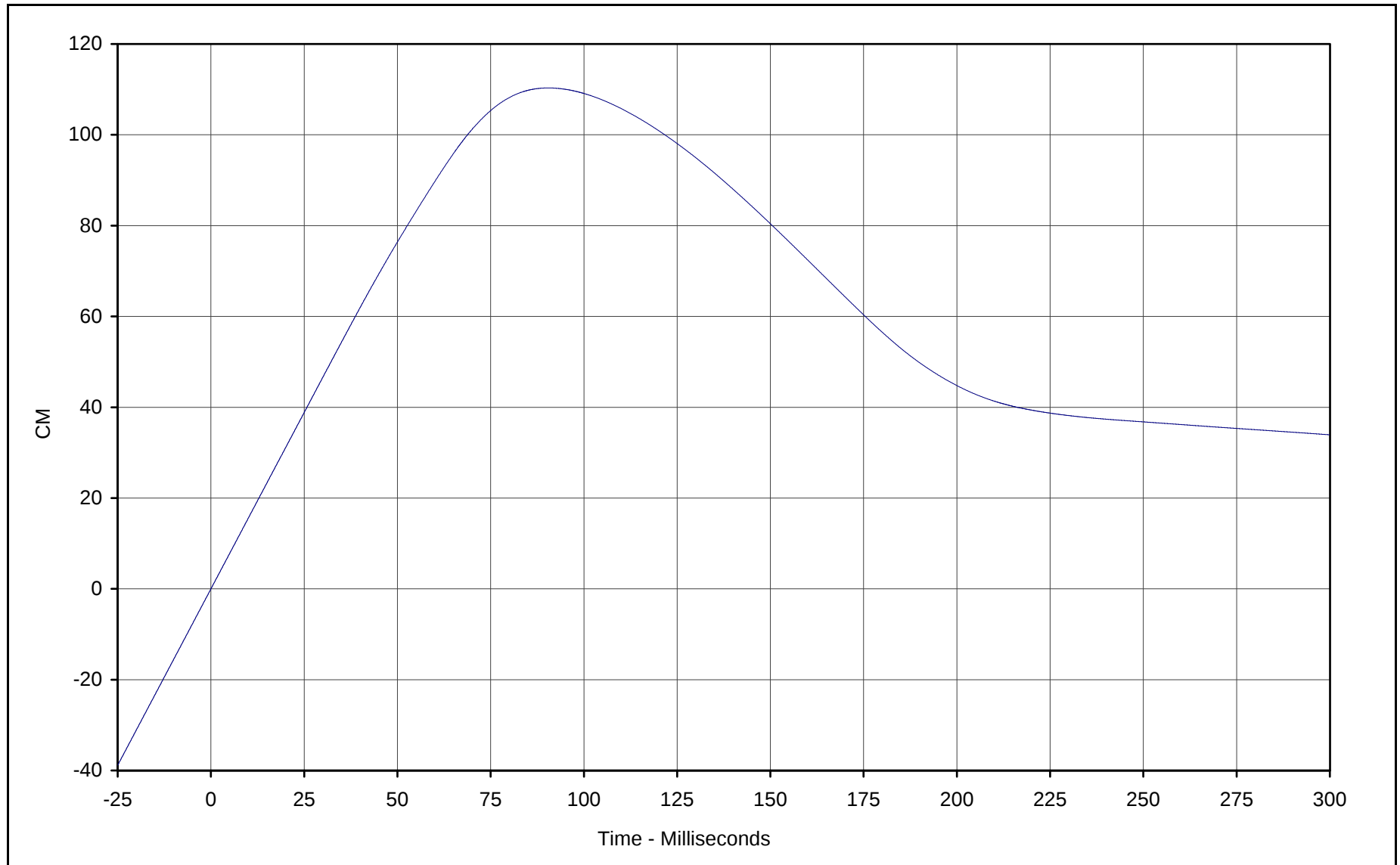
Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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Curve Description: Passenger Head Redundant X Displ.

Maximum Value: 110.3 at 90.4 Milliseconds

Minimum Value: 0.0 at 0.0 Milliseconds

SAE Filter Class: 180

Date of Test: 5/9/01

Curve Number: IN2-048

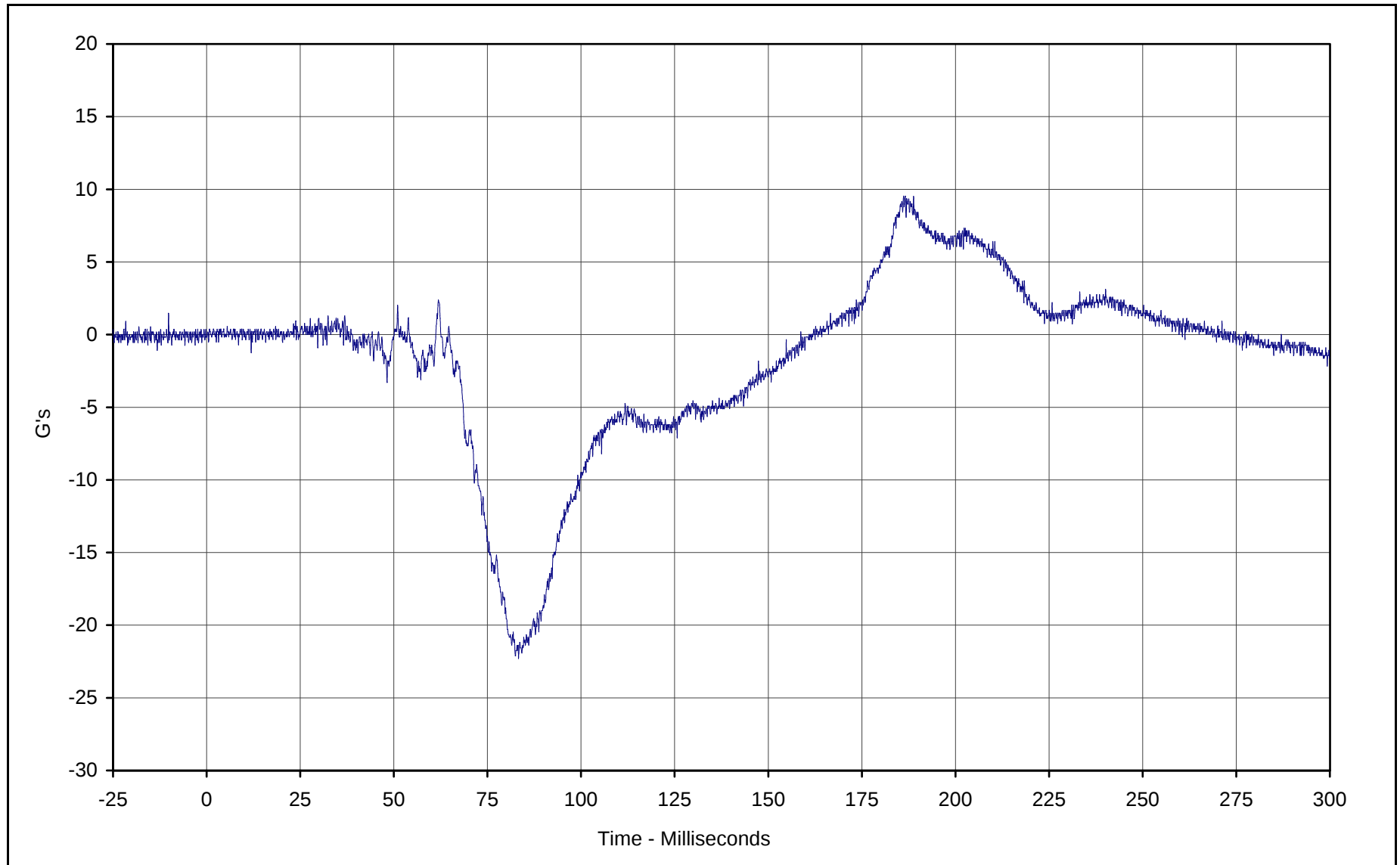
Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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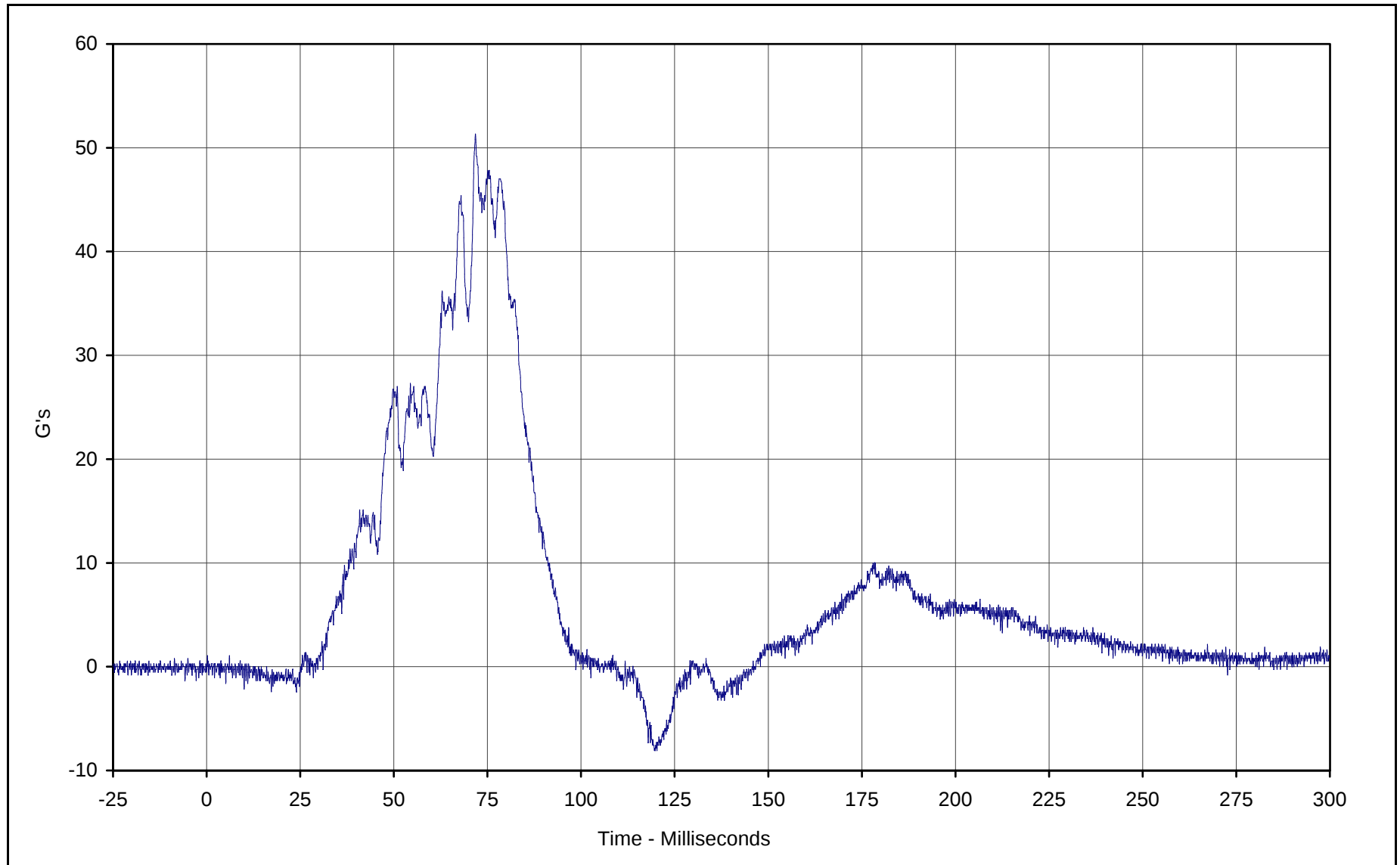


Curve Description: Passenger Head Redundant Y
Maximum Value: 9.5 at 186.1 Milliseconds
Minimum Value: -22.3 at 83.3 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: FIL-049

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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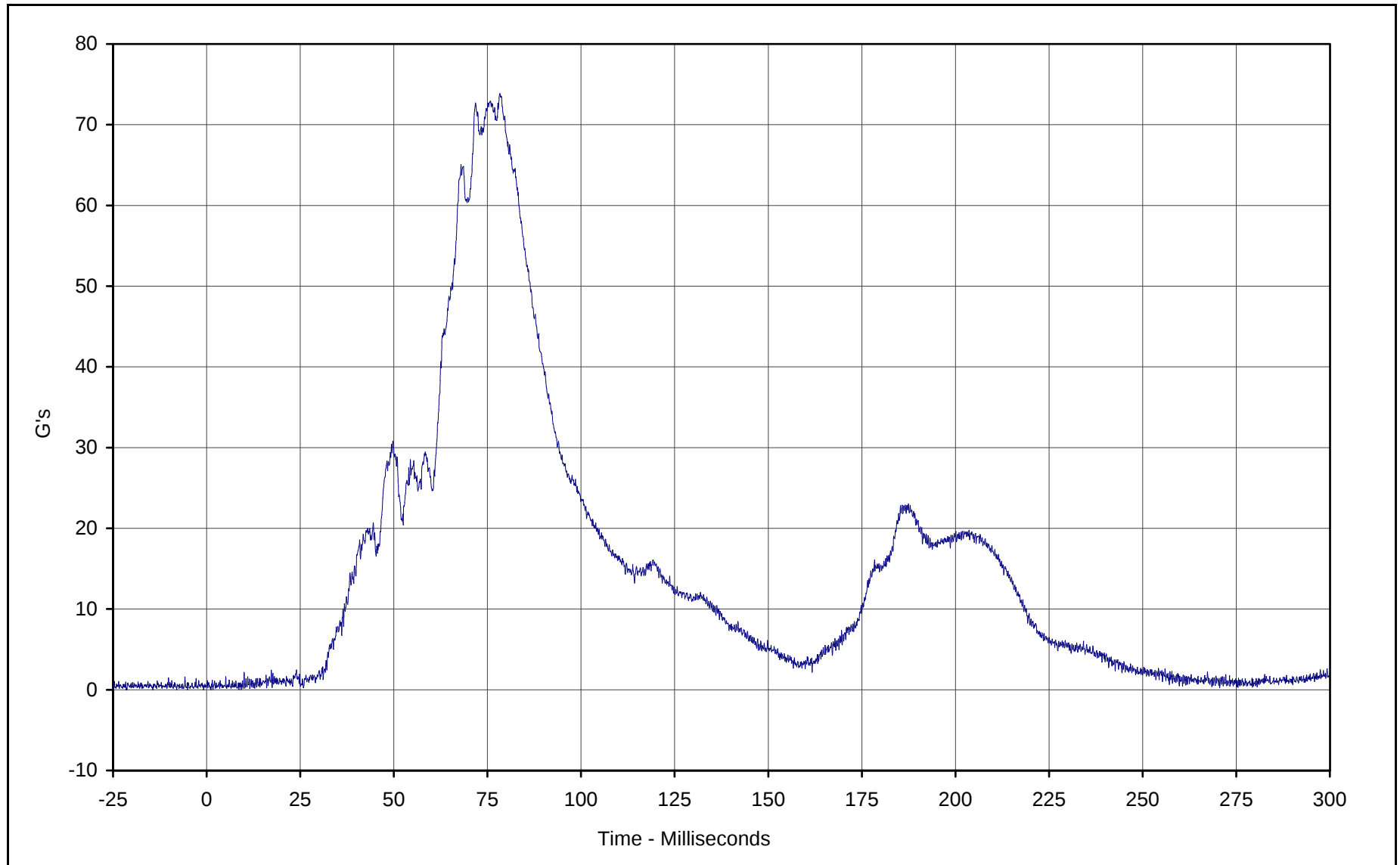


Curve Description: Passenger Head Redundant Z
Maximum Value: 51.3 at 71.8 Milliseconds
Minimum Value: -8.1 at 119.6 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: FIL-050

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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Curve Description: Passenger Head Resultant Redundant

Maximum Value: 73.9 at 78.3 Milliseconds

Minimum Value: 0.0 at 1.2 Milliseconds

SAE Filter Class: 1000

Date of Test: 5/9/01

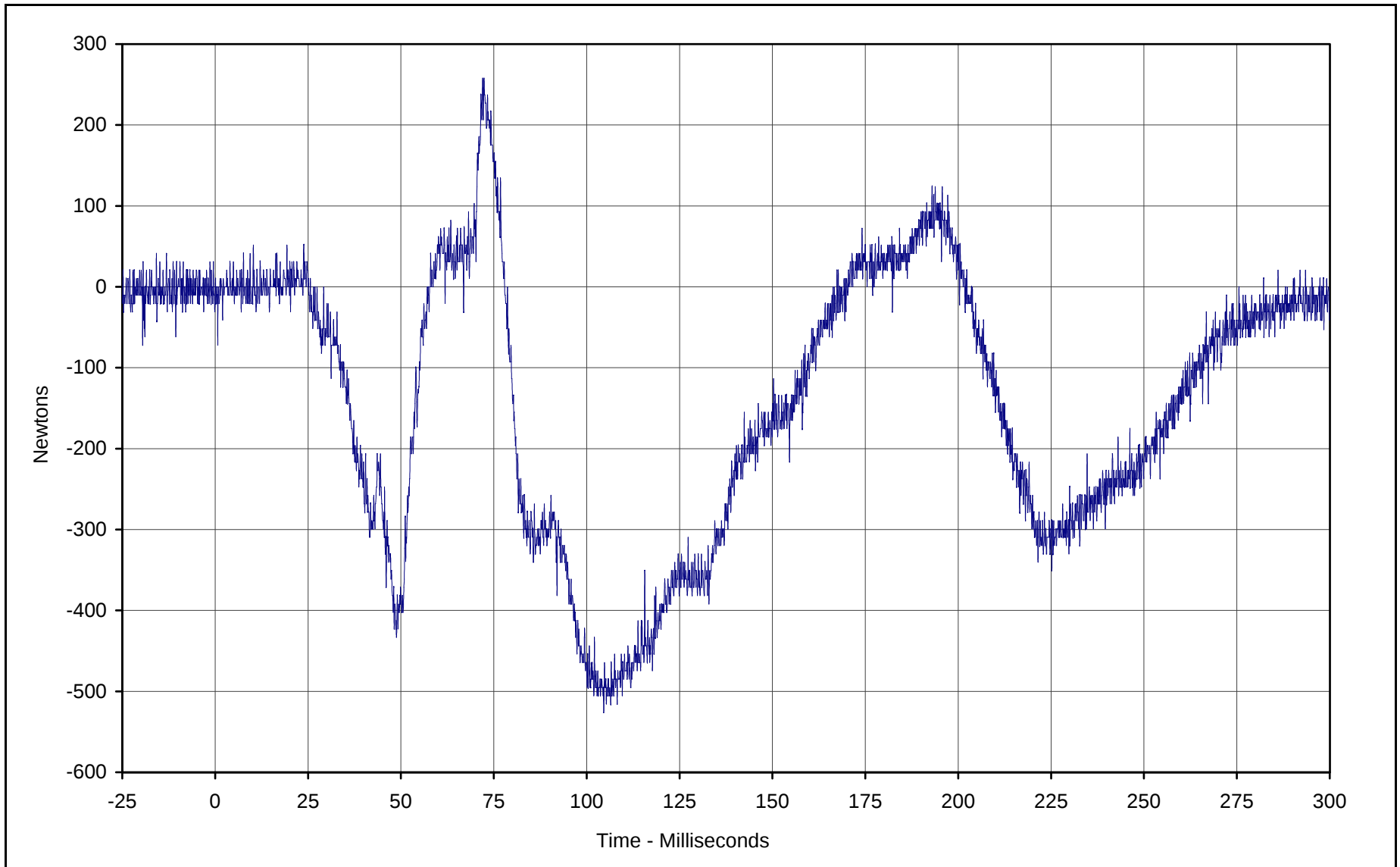
Curve Number: RES-048

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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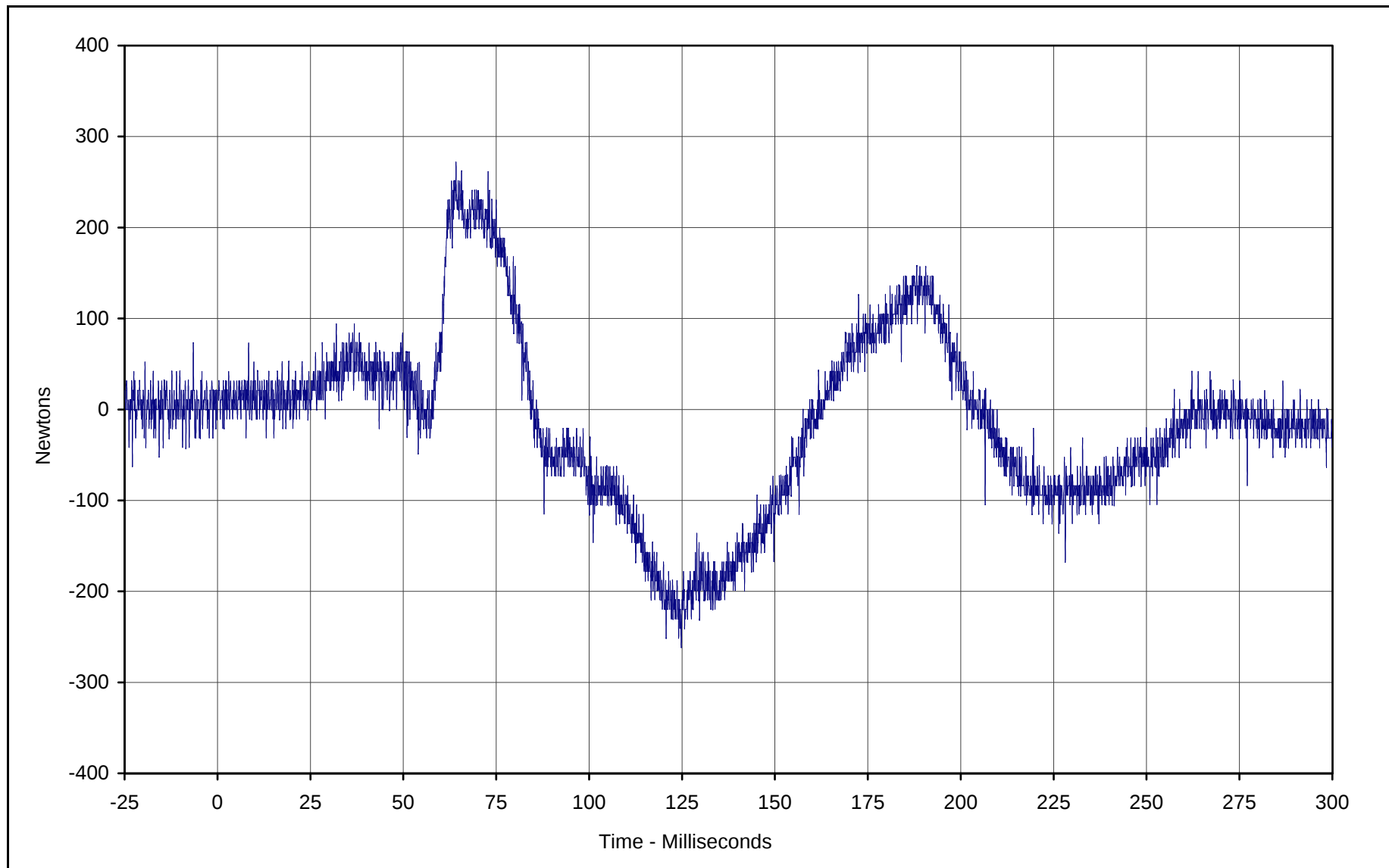


Curve Description: Passenger Neck Force X
Maximum Value: 257.9 at 72.0 Milliseconds
Minimum Value: -526.2 at 104.6 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: FIL-051

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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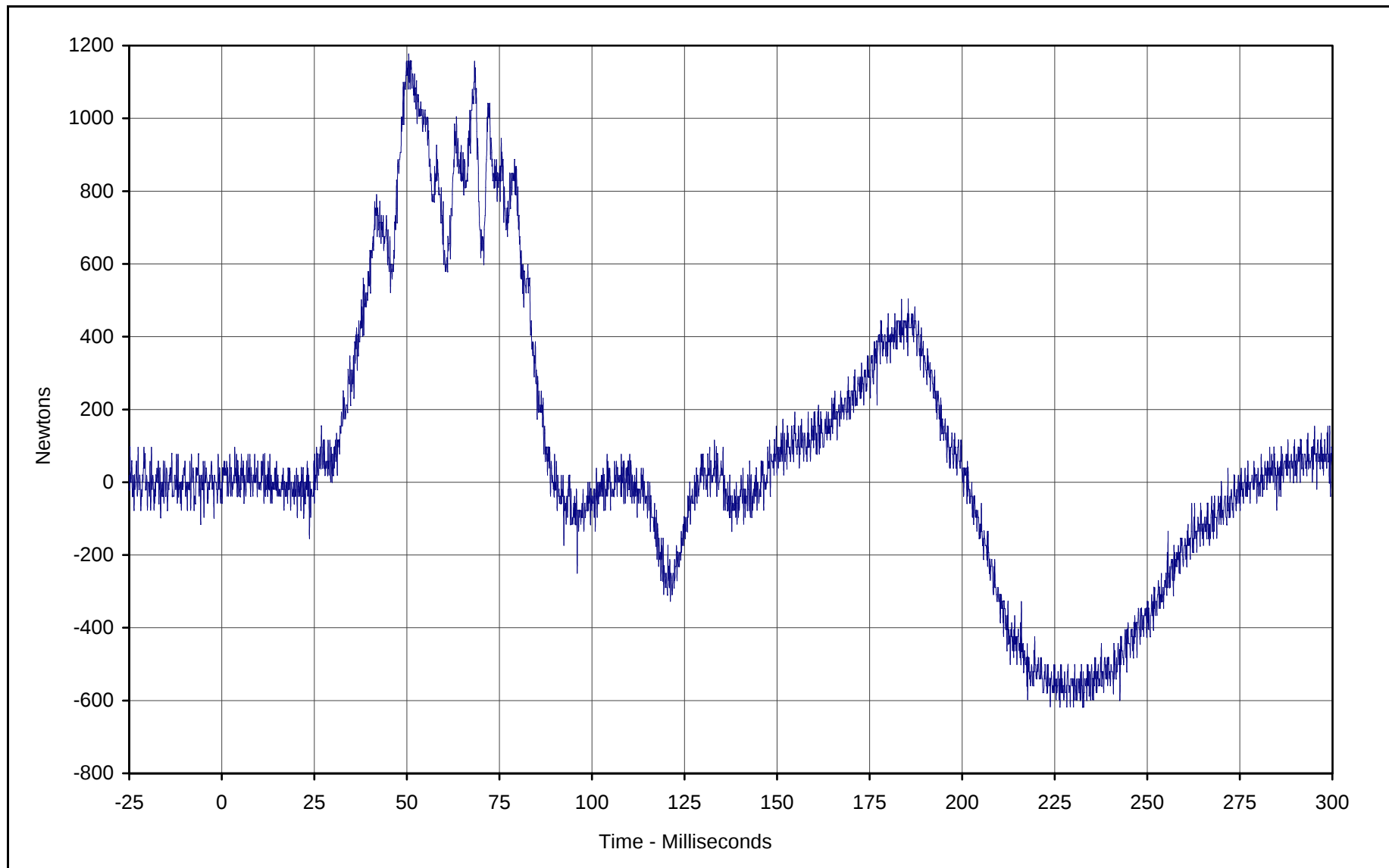


Curve Description: Passenger Neck Force Y
Maximum Value: 272.1 at 64.2 Milliseconds
Minimum Value: -261.7 at 124.8 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: FIL-052

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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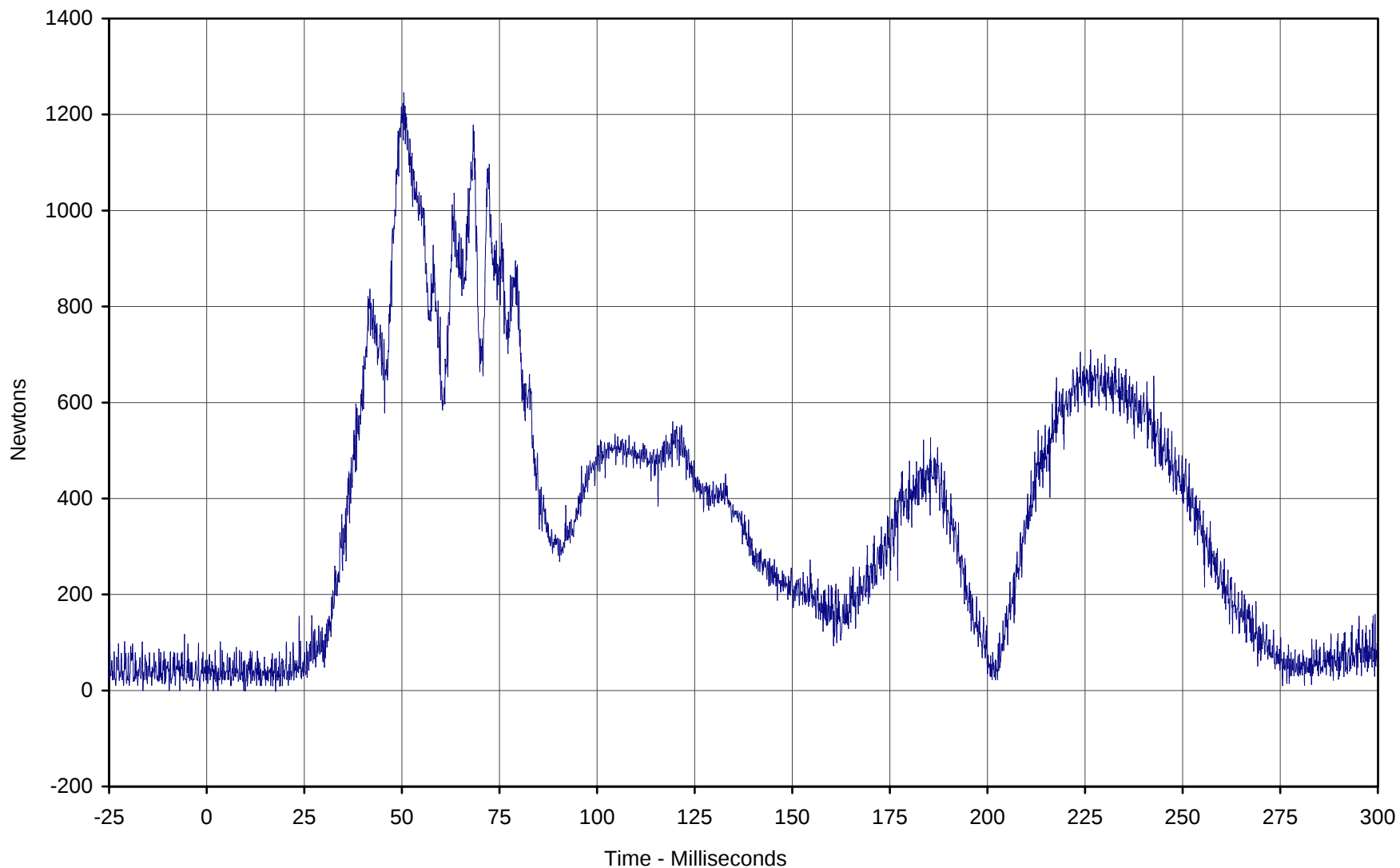


Curve Description: Passenger Neck Force Z
Maximum Value: 1176.5 at 50.5 Milliseconds
Minimum Value: -617.2 at 223.8 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: FIL-053

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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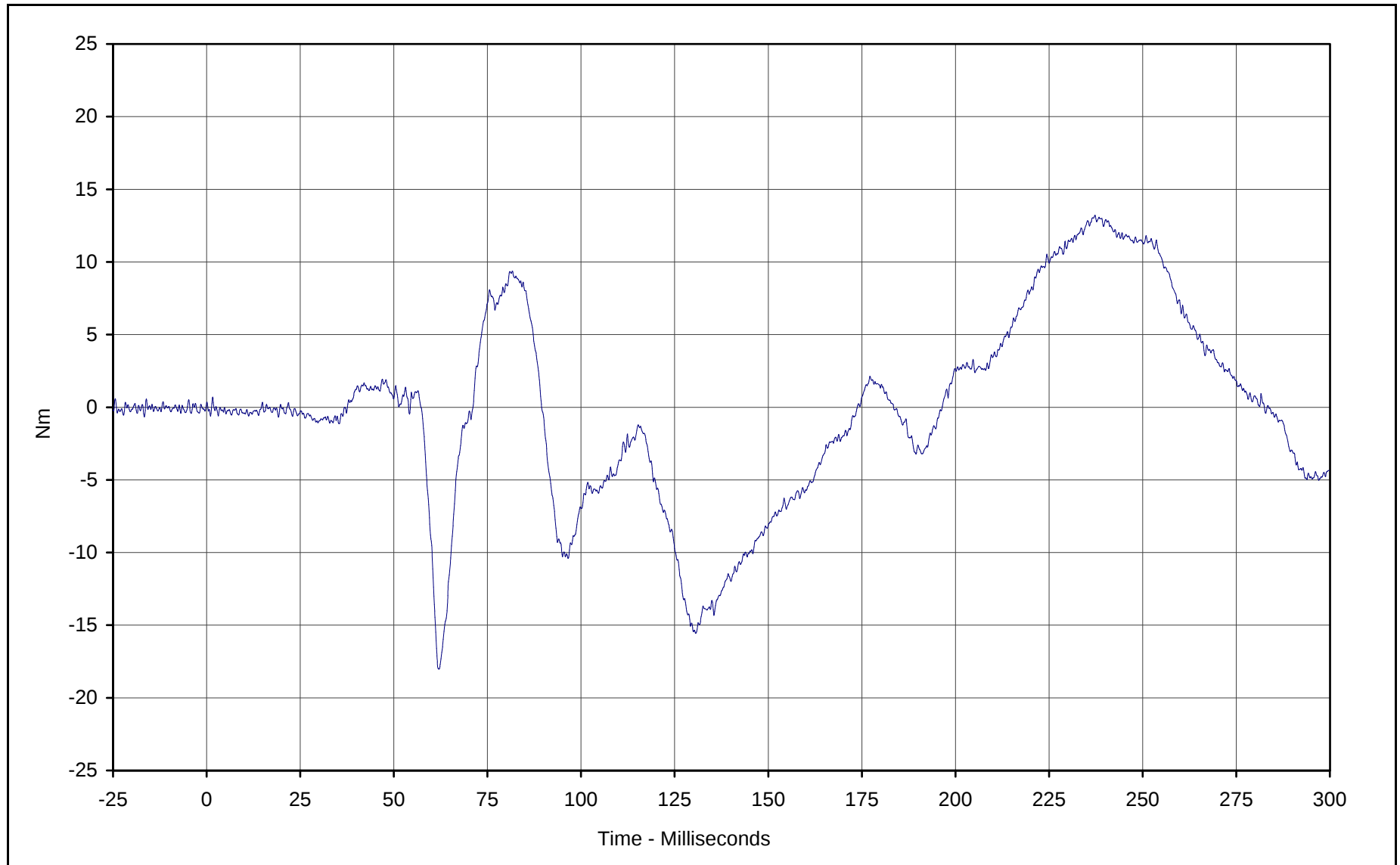
Curve Description: Passenger Neck Force Resultant
Maximum Value: 1244.5 at 50.5 Milliseconds
Minimum Value: 0.0 at 1.7 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: RES-051

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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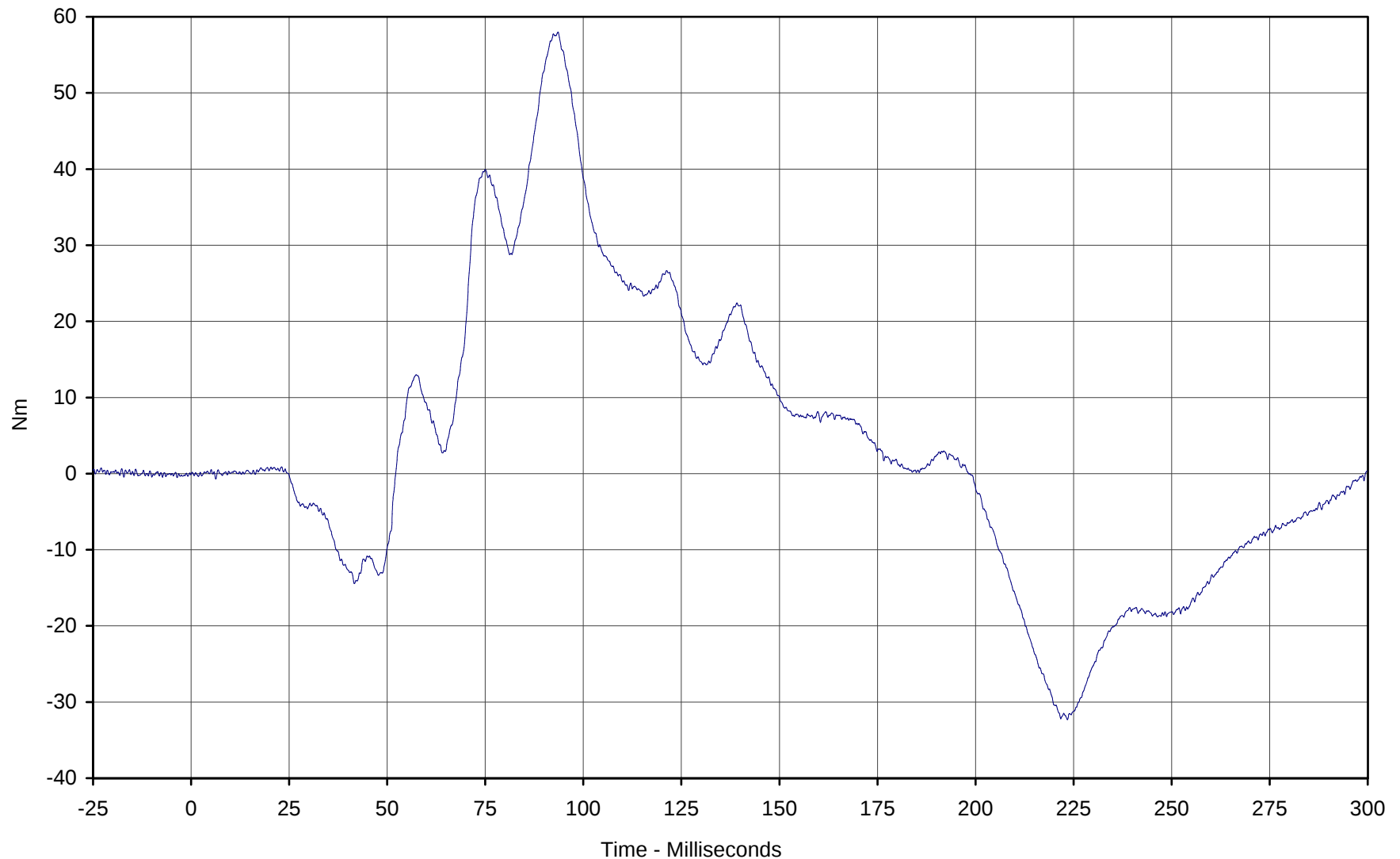
Curve Description: Passenger Neck Moment X
Maximum Value: 13.2 at 237.3 Milliseconds
Minimum Value: -18.0 at 62.0 Milliseconds
SAE Filter Class: 600
Date of Test: 5/9/01
Curve Number: FIL-054

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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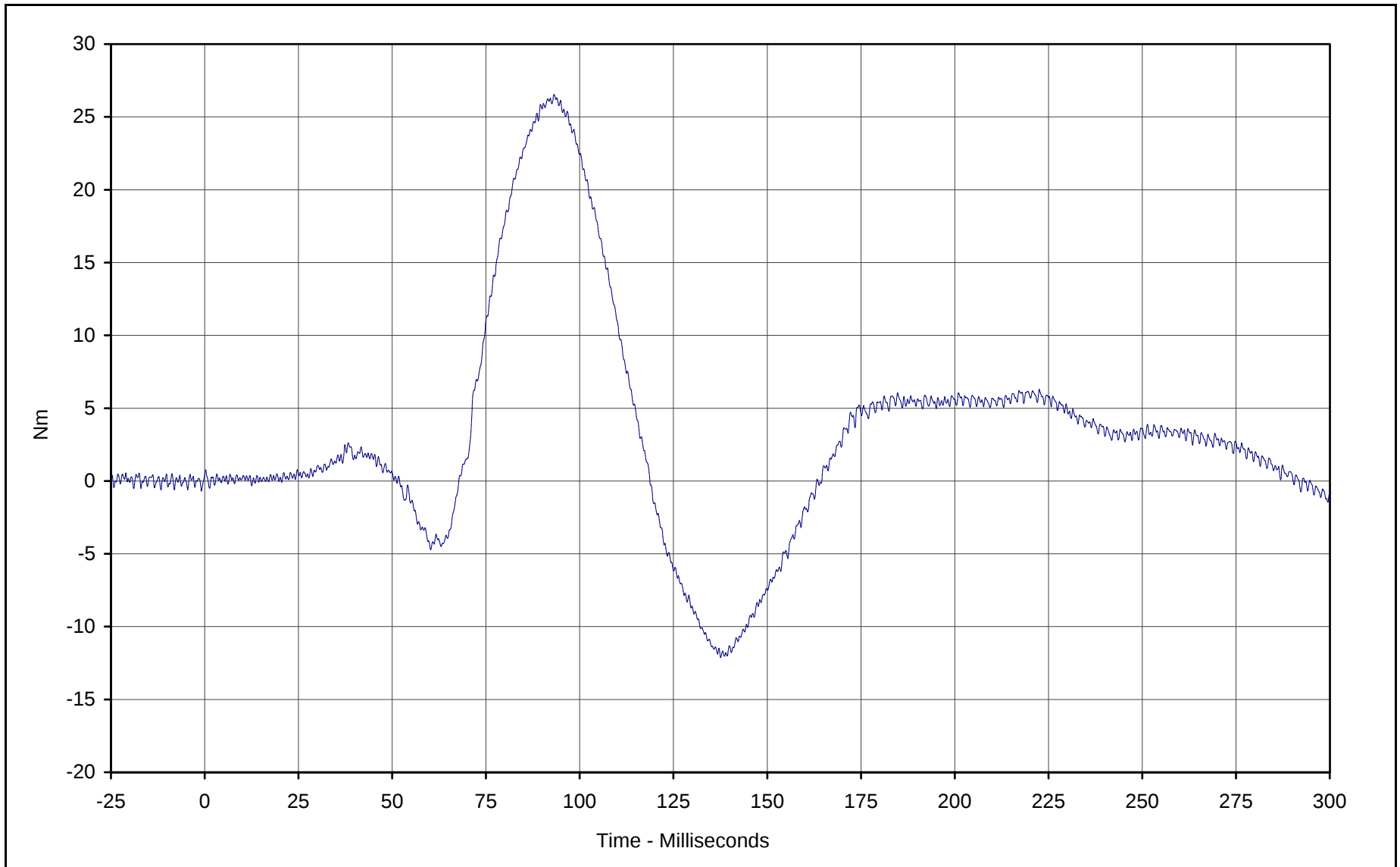
Curve Description: Passenger Neck Moment Y
Maximum Value: 58.0 at 93.6 Milliseconds
Minimum Value: -32.3 at 223.4 Milliseconds
SAE Filter Class: 600
Date of Test: 5/9/01
Curve Number: FIL-055

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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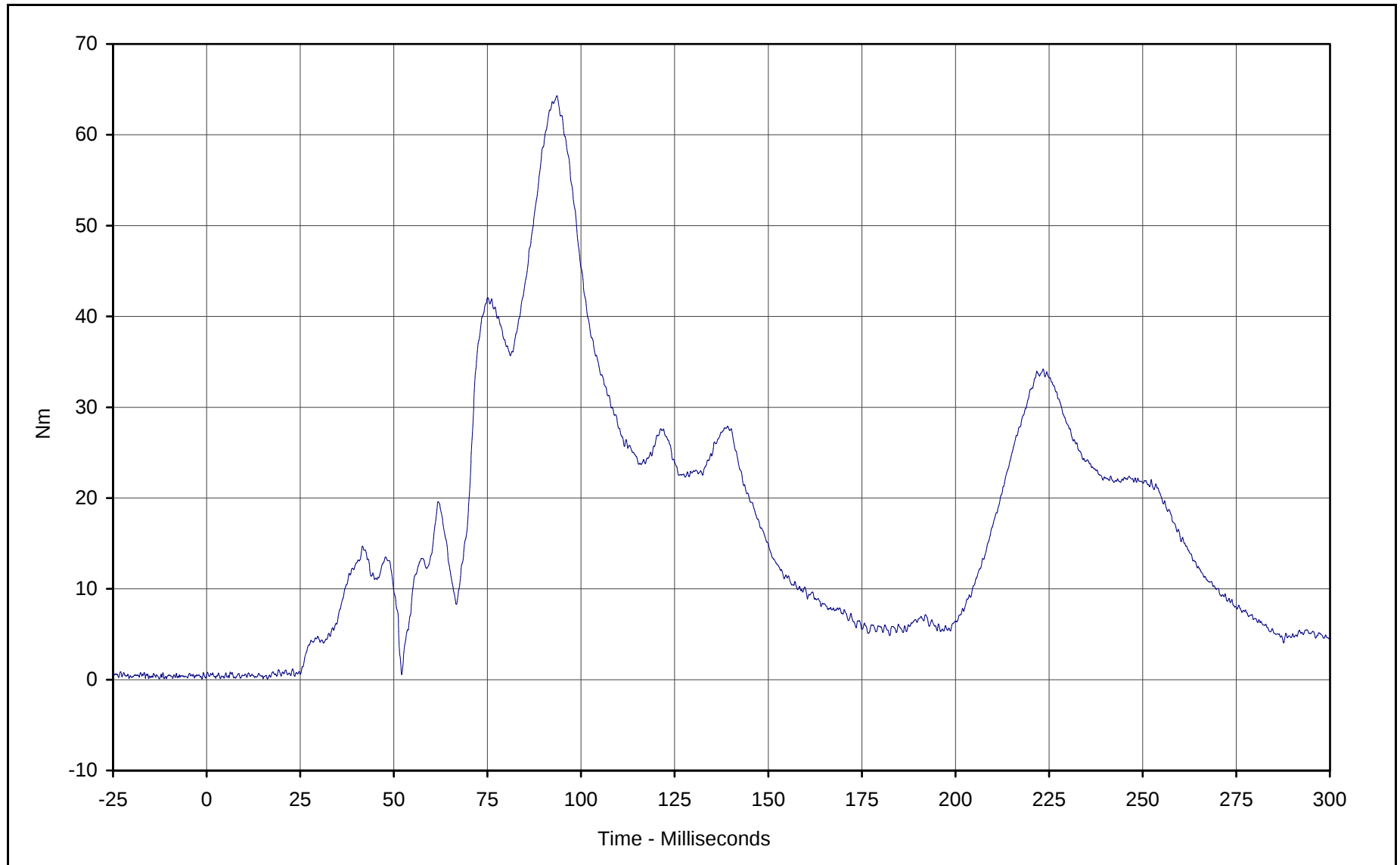


Curve Description: Passenger Neck Moment Z
Maximum Value: 26.5 at 93.2 Milliseconds
Minimum Value: -12.1 at 137.6 Milliseconds
SAE Filter Class: 600
Date of Test: 5/9/01
Curve Number: FIL-056

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



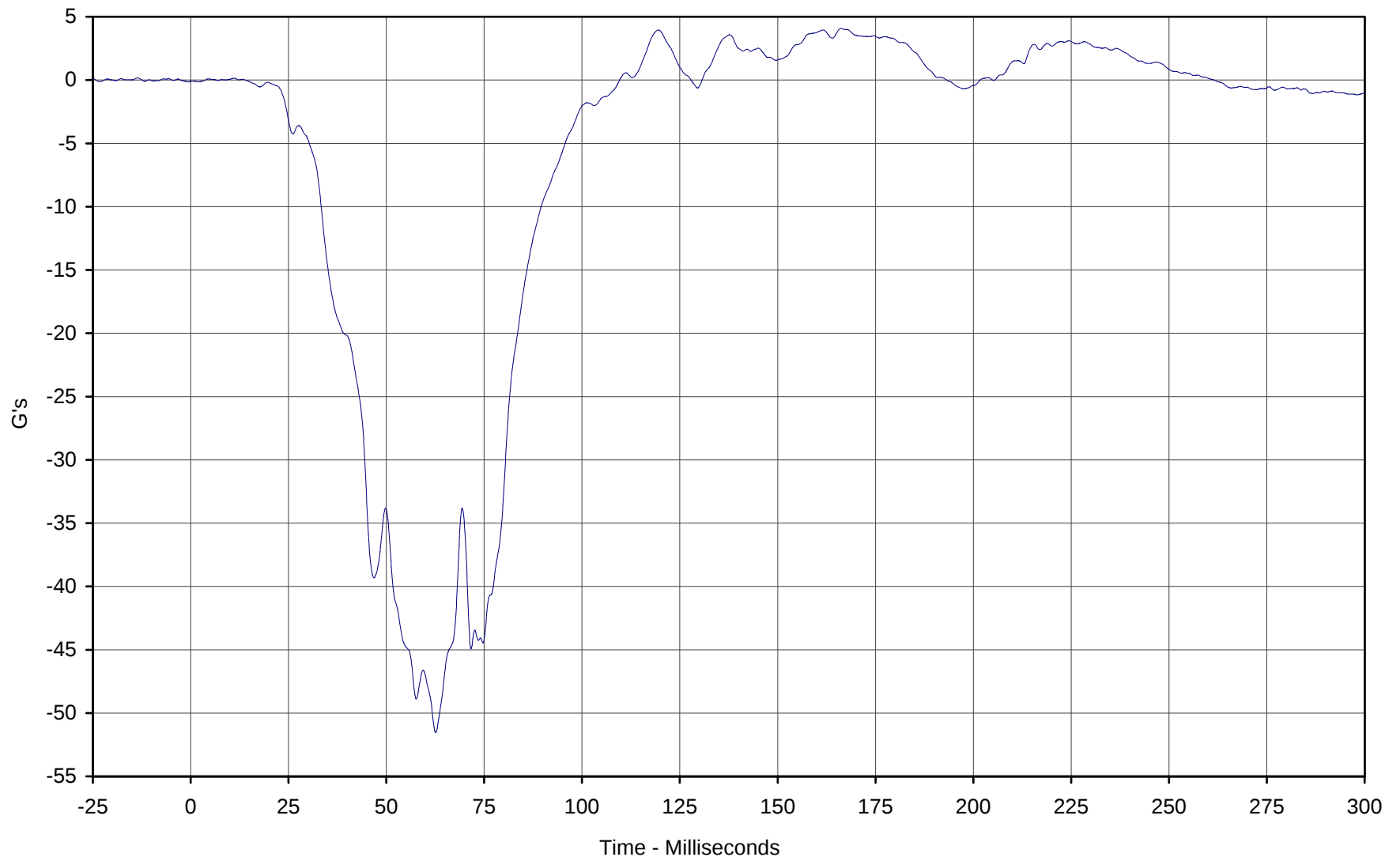
KAR21049-01



Curve Description: Passenger Neck Moment Resultant
Maximum Value: 64.3 at 93.6 Milliseconds
Minimum Value: 0.0 at 16.2 Milliseconds
SAE Filter Class: 600
Date of Test: 5/9/01
Curve Number: RES-054

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



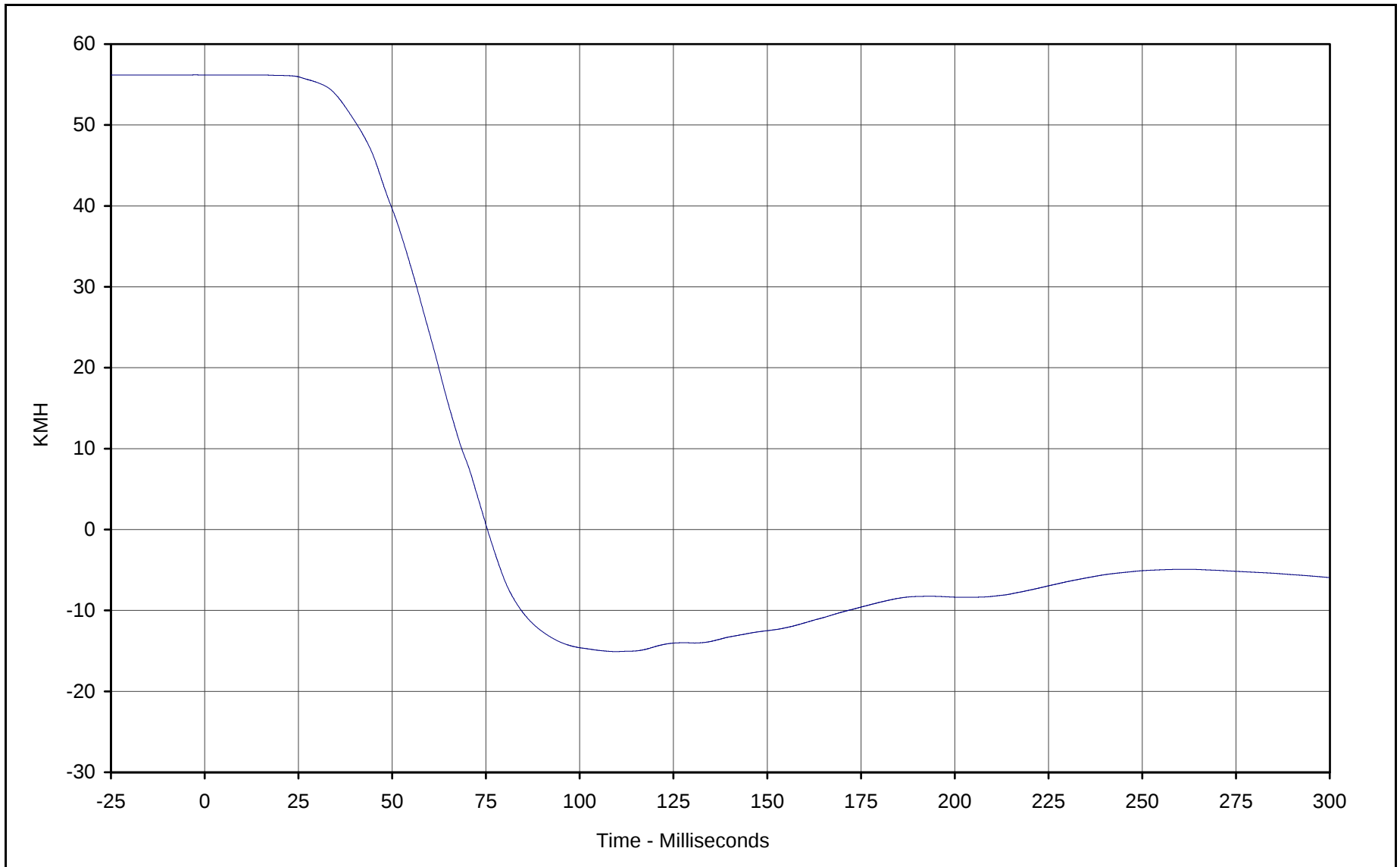


Curve Description: Passenger Chest Primary X
Maximum Value: 4.1 at 166.2 Milliseconds
Minimum Value: -51.5 at 62.6 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: FIL-057

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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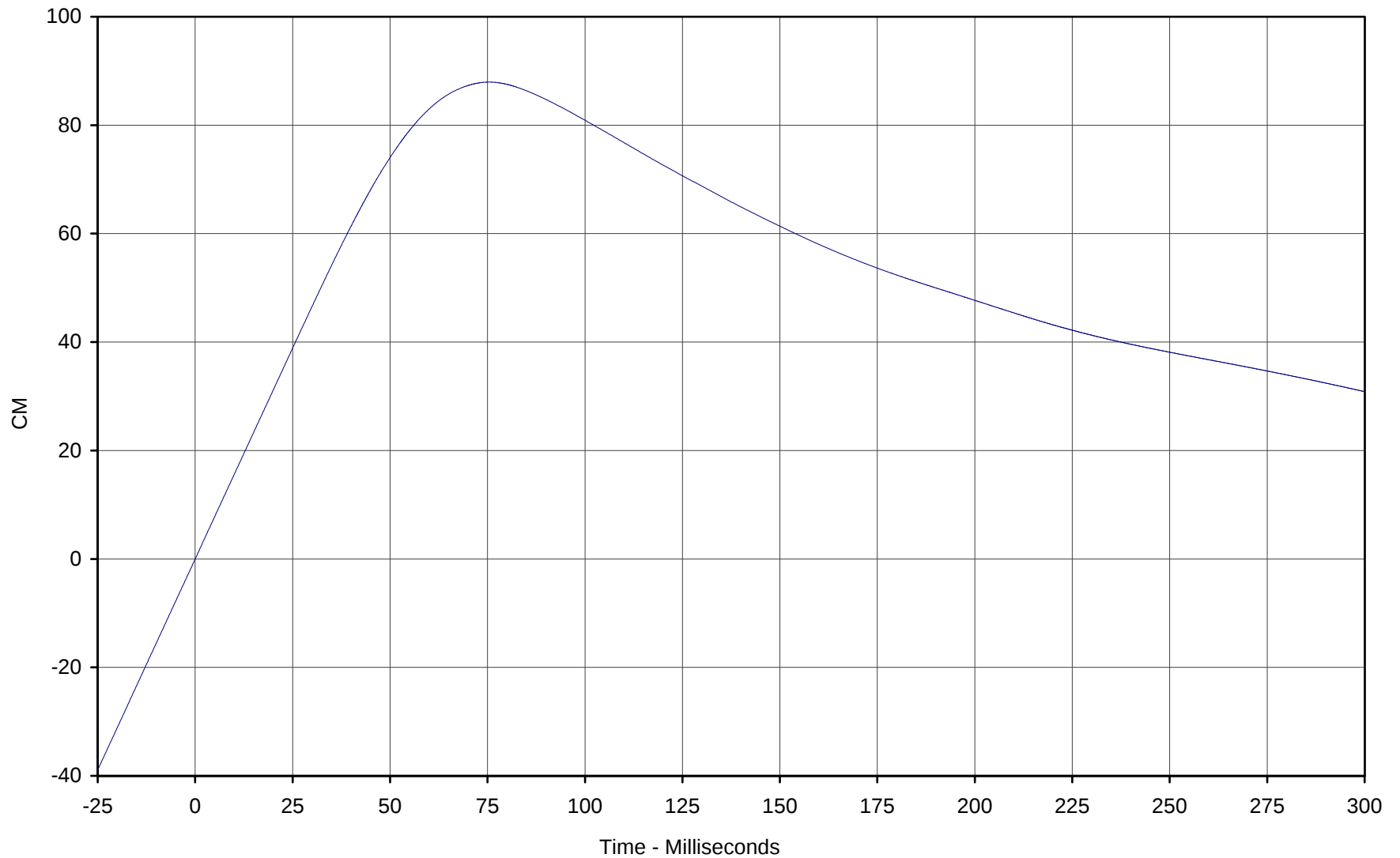
Curve Description: Passenger Chest Primary X Velocity
Maximum Value: 56.2 at 14.0 Milliseconds
Minimum Value: -15.1 at 109.6 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN1-057

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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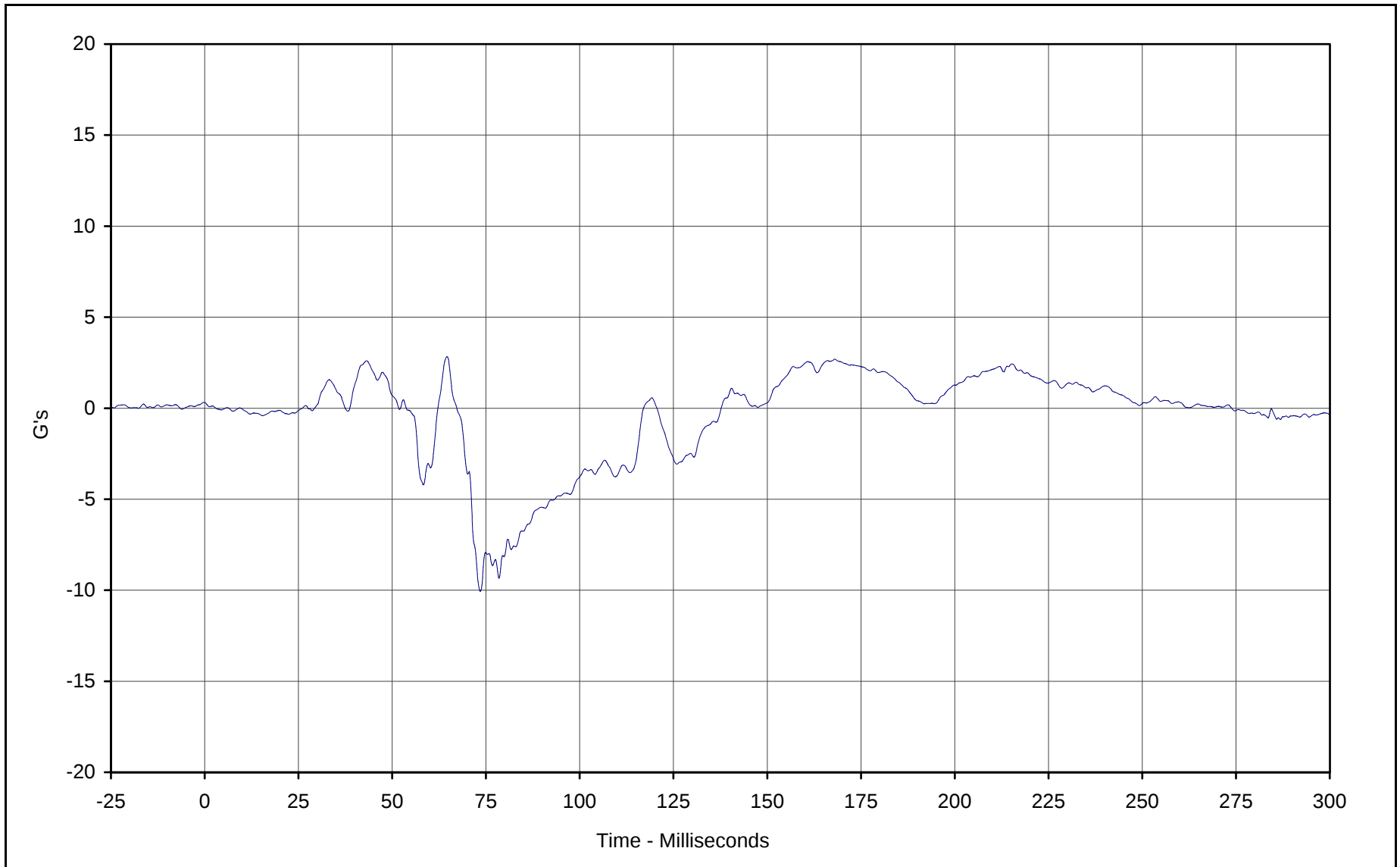
Curve Description: Passenger Chest Primary X Displ.
Maximum Value: 87.9 at 75.4 Milliseconds
Minimum Value: 0.0 at 0.0 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN2-057

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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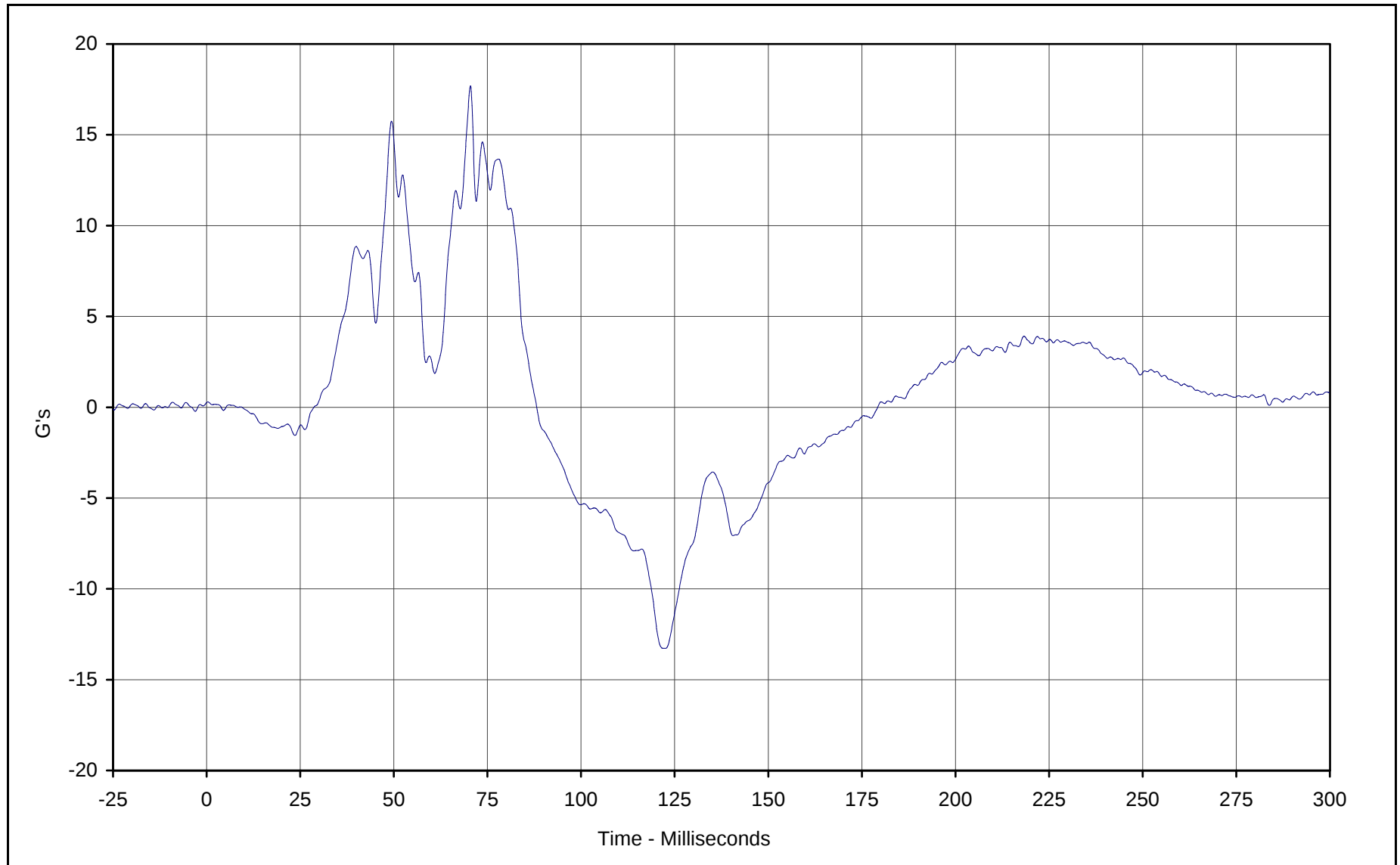


Curve Description: Passenger Chest Primary Y
Maximum Value: 2.8 at 64.6 Milliseconds
Minimum Value: -10.1 at 73.5 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: FIL-058

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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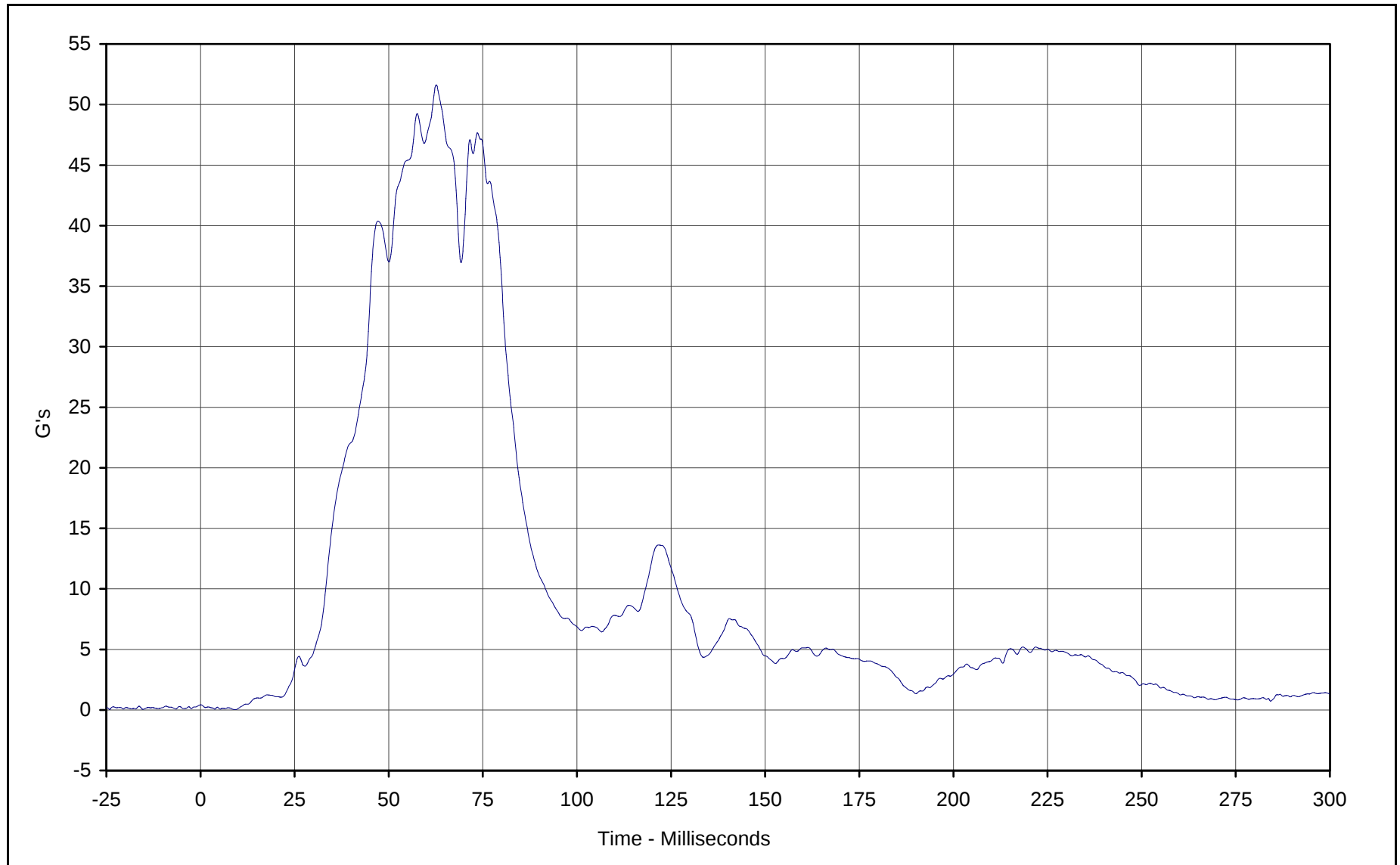


Curve Description: Passenger Chest Primary Z
Maximum Value: 17.7 at 70.5 Milliseconds
Minimum Value: -13.3 at 122.6 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: FIL-059

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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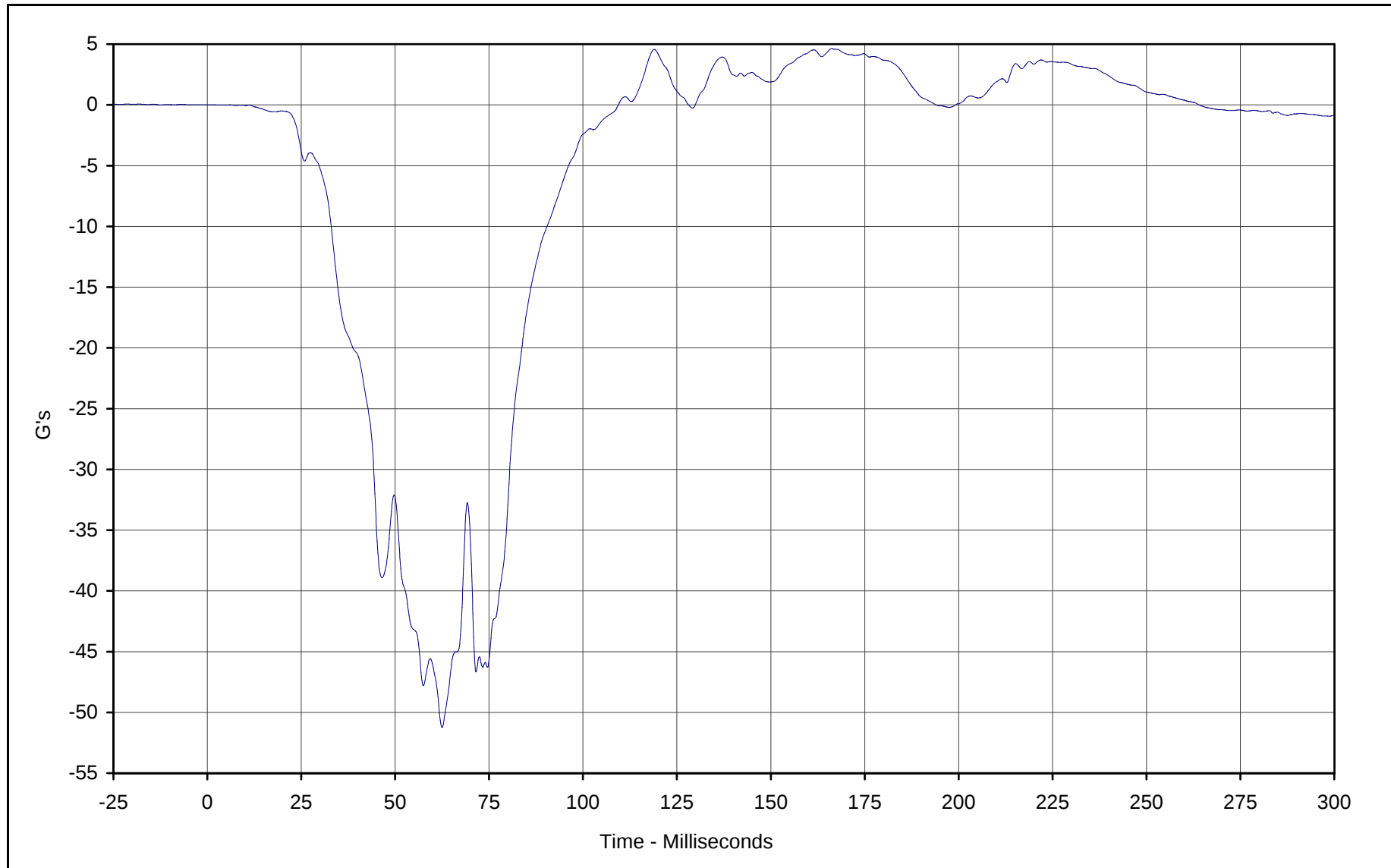
Curve Description: Passenger Chest Resultant Primary
Maximum Value: 51.6 at 62.6 Milliseconds
Minimum Value: 0.0 at 9.1 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: RES-057

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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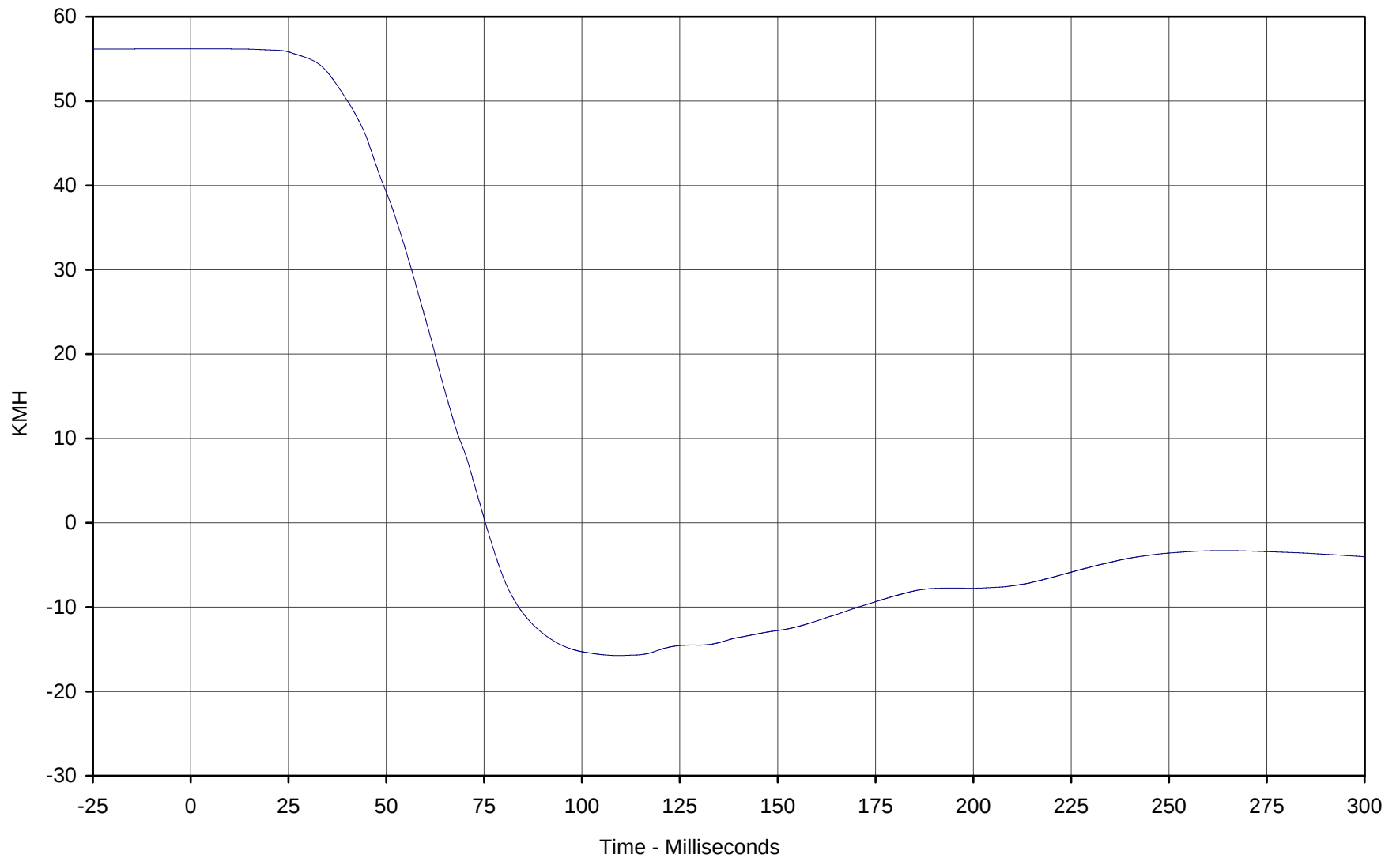
Curve Description: Passenger Chest Redundant X
Maximum Value: 4.6 at 166.2 Milliseconds
Minimum Value: -51.2 at 62.5 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: FIL-060

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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B-89



Curve Description: Passenger Chest Redundant X Velocity

Maximum Value: 56.2 at 0.9 Milliseconds

Minimum Value: -15.7 at 109.4 Milliseconds

SAE Filter Class: 180

Date of Test: 5/9/01

Curve Number: IN1-060

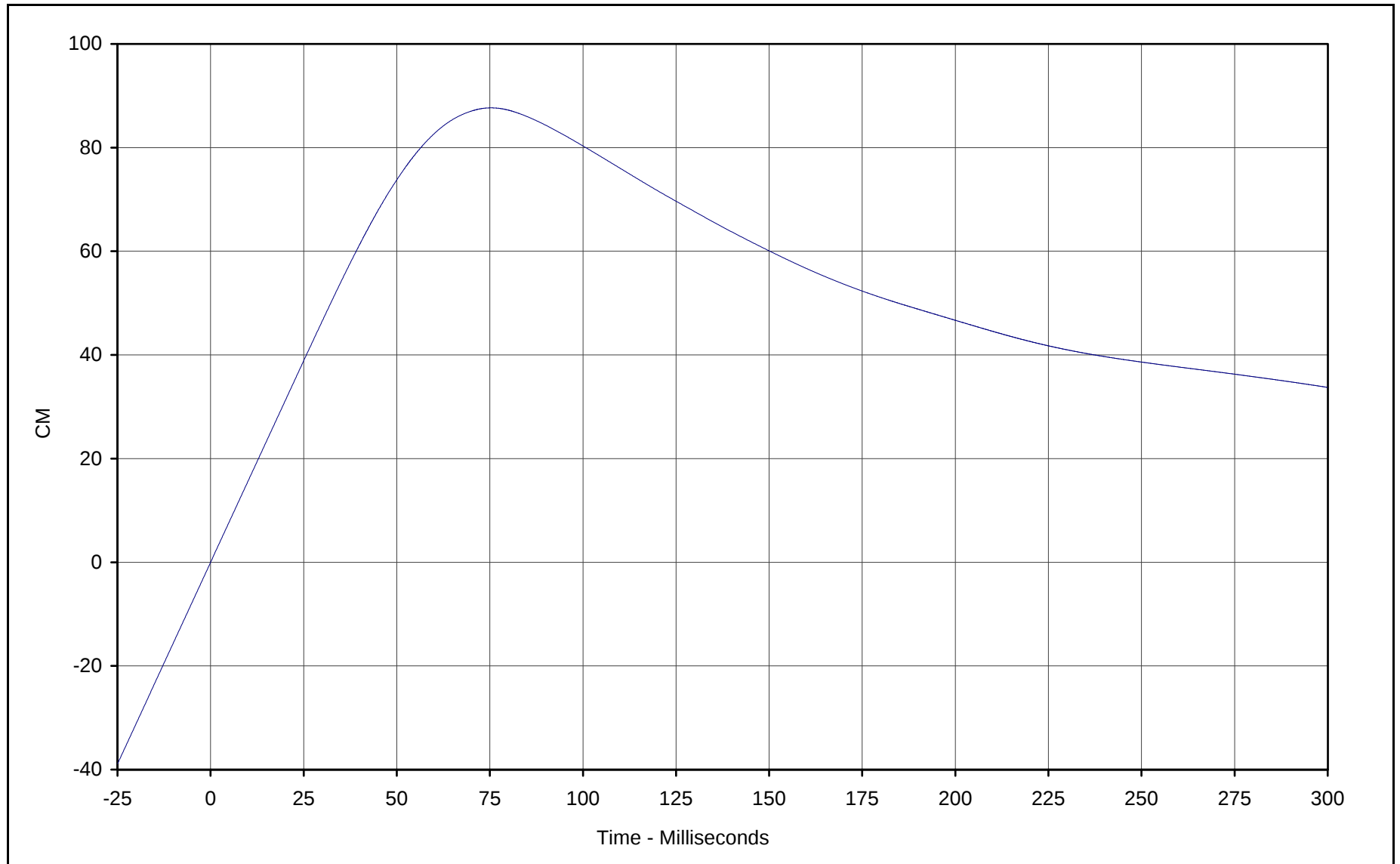
Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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Curve Description: Passenger Chest Redundant X Displ.

Maximum Value: 87.7 at 75.3 Milliseconds

Minimum Value: 0.0 at 0.0 Milliseconds

SAE Filter Class: 180

Date of Test: 5/9/01

Curve Number: IN2-060

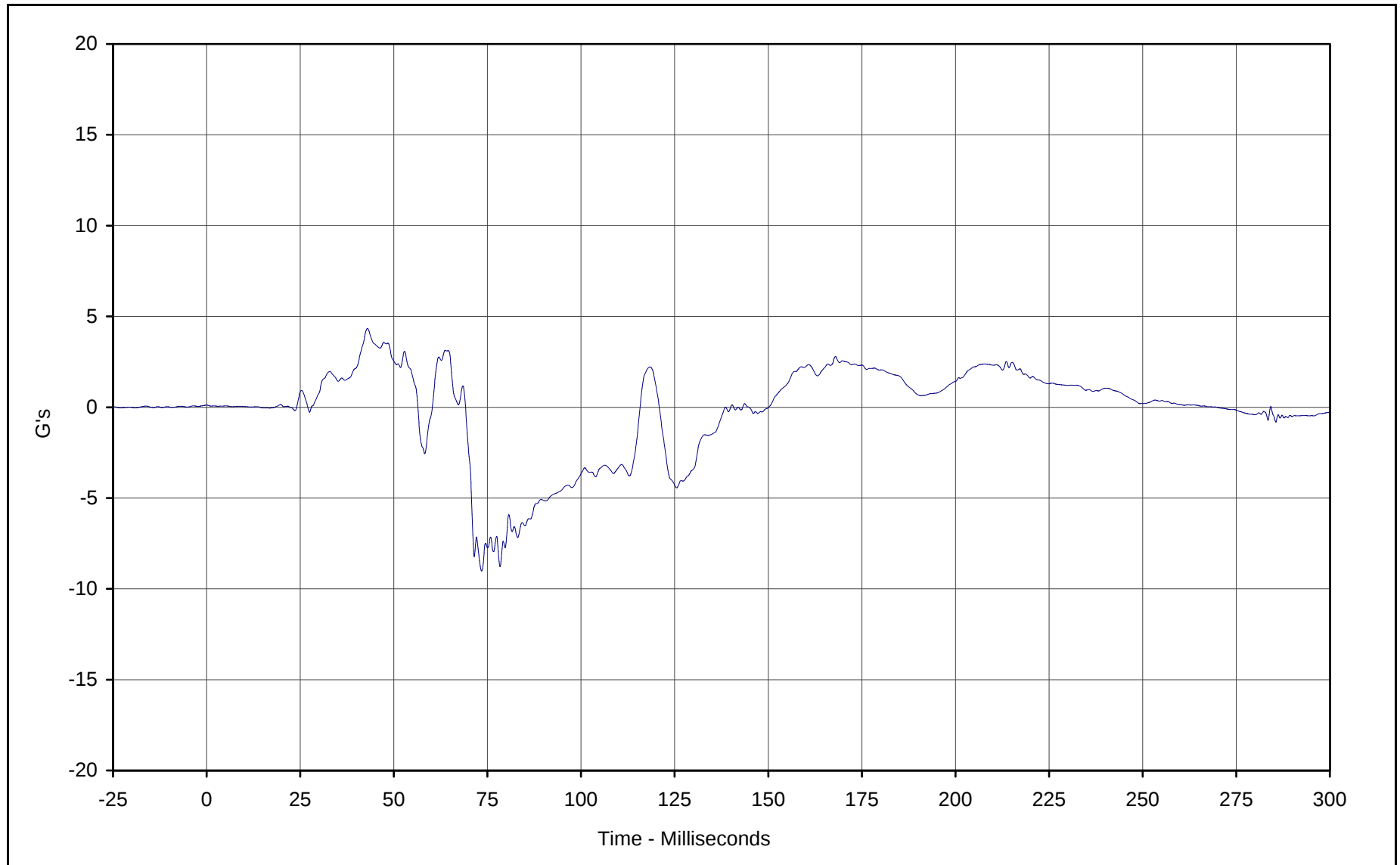
Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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B-91



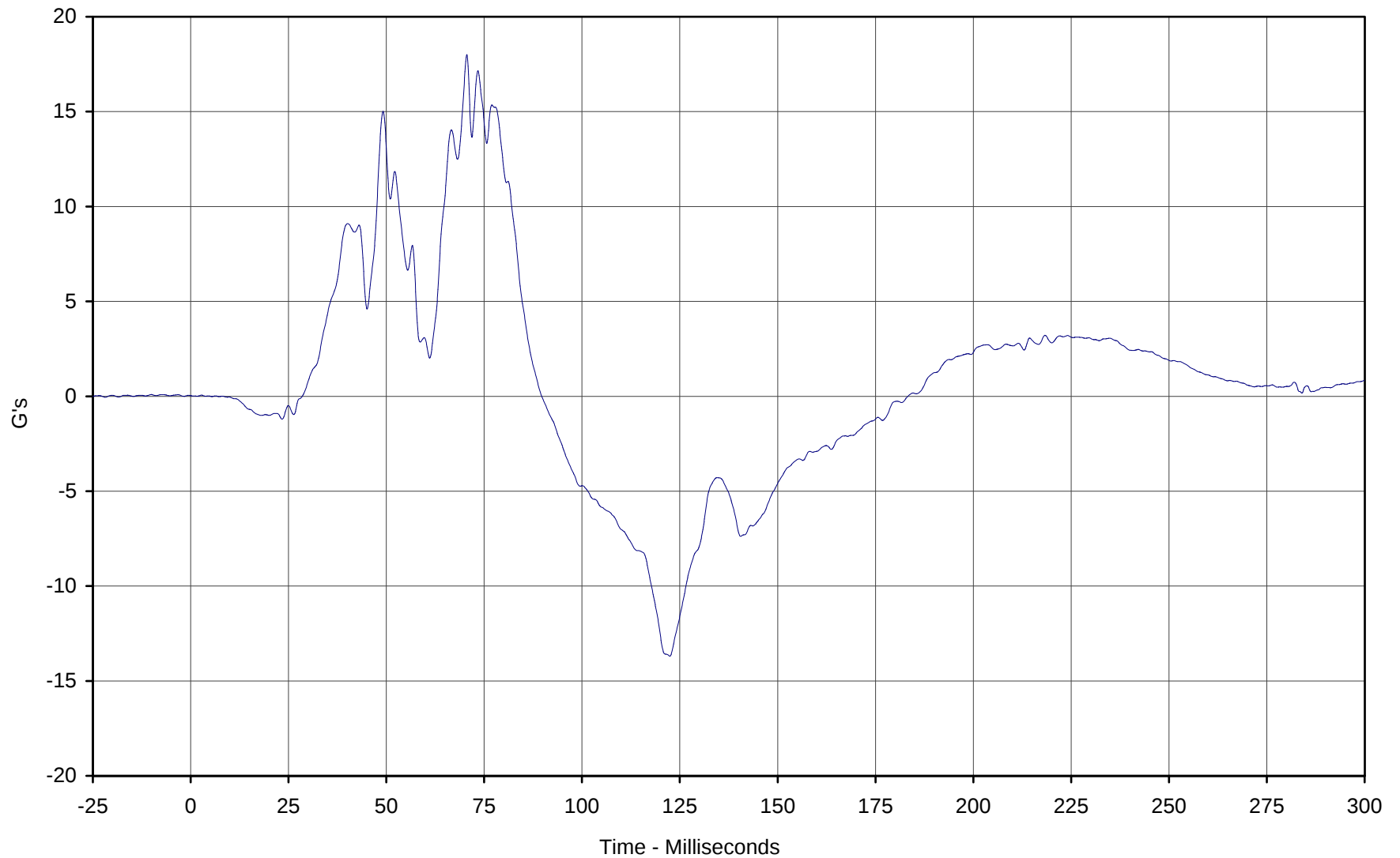
Curve Description: Passenger Chest Redundant Y
Maximum Value: 4.3 at 42.9 Milliseconds
Minimum Value: -9.0 at 73.4 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: FIL-061

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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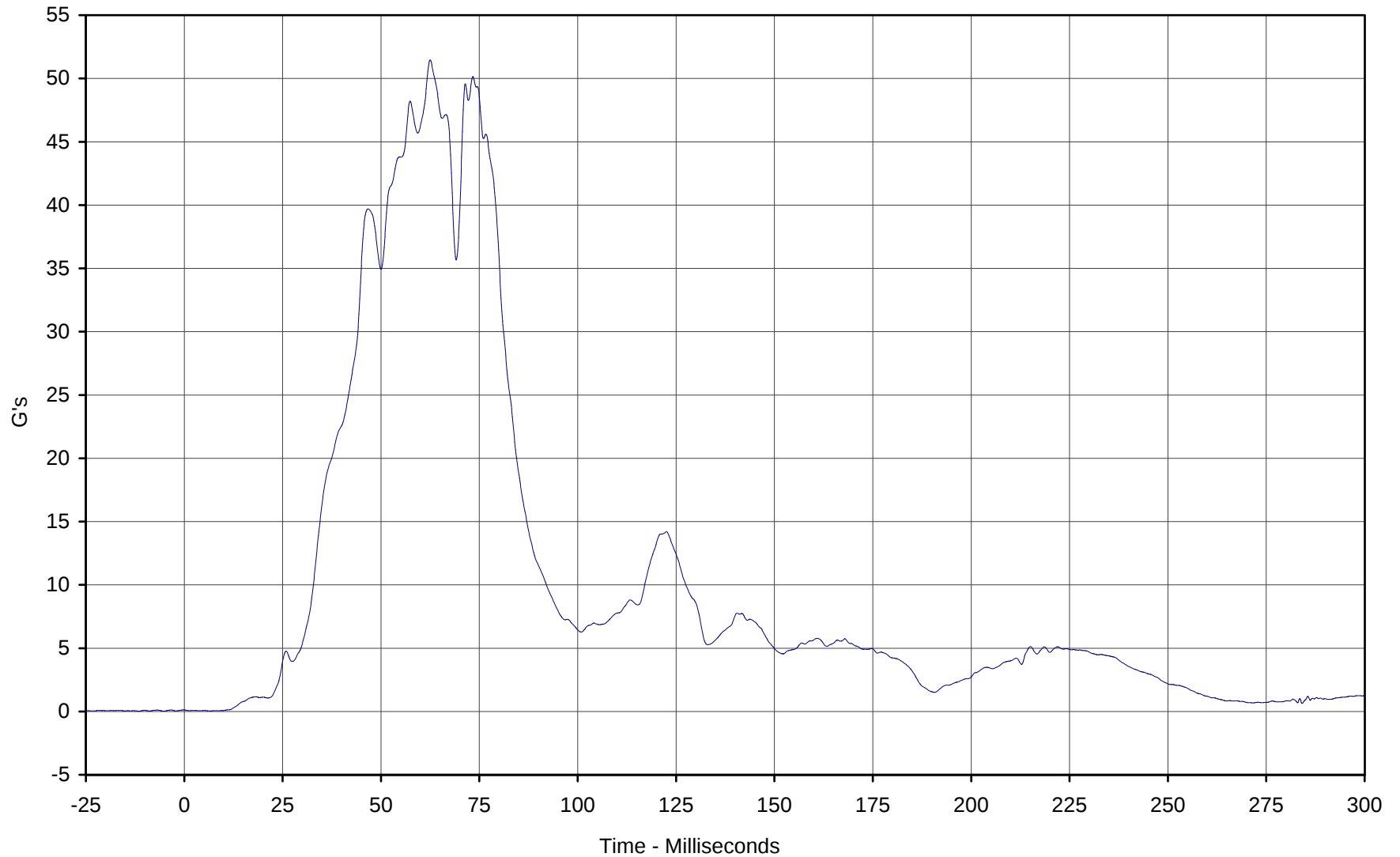
Curve Description: Passenger Chest Redundant Z
Maximum Value: 18.0 at 70.6 Milliseconds
Minimum Value: -13.7 at 122.5 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: FIL-062

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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Curve Description: Passenger Chest Resultant Redundant

Maximum Value: 51.5 at 62.5 Milliseconds

Minimum Value: 0.0 at 6.7 Milliseconds

SAE Filter Class: 180

Date of Test: 5/9/01

Curve Number: RES-060

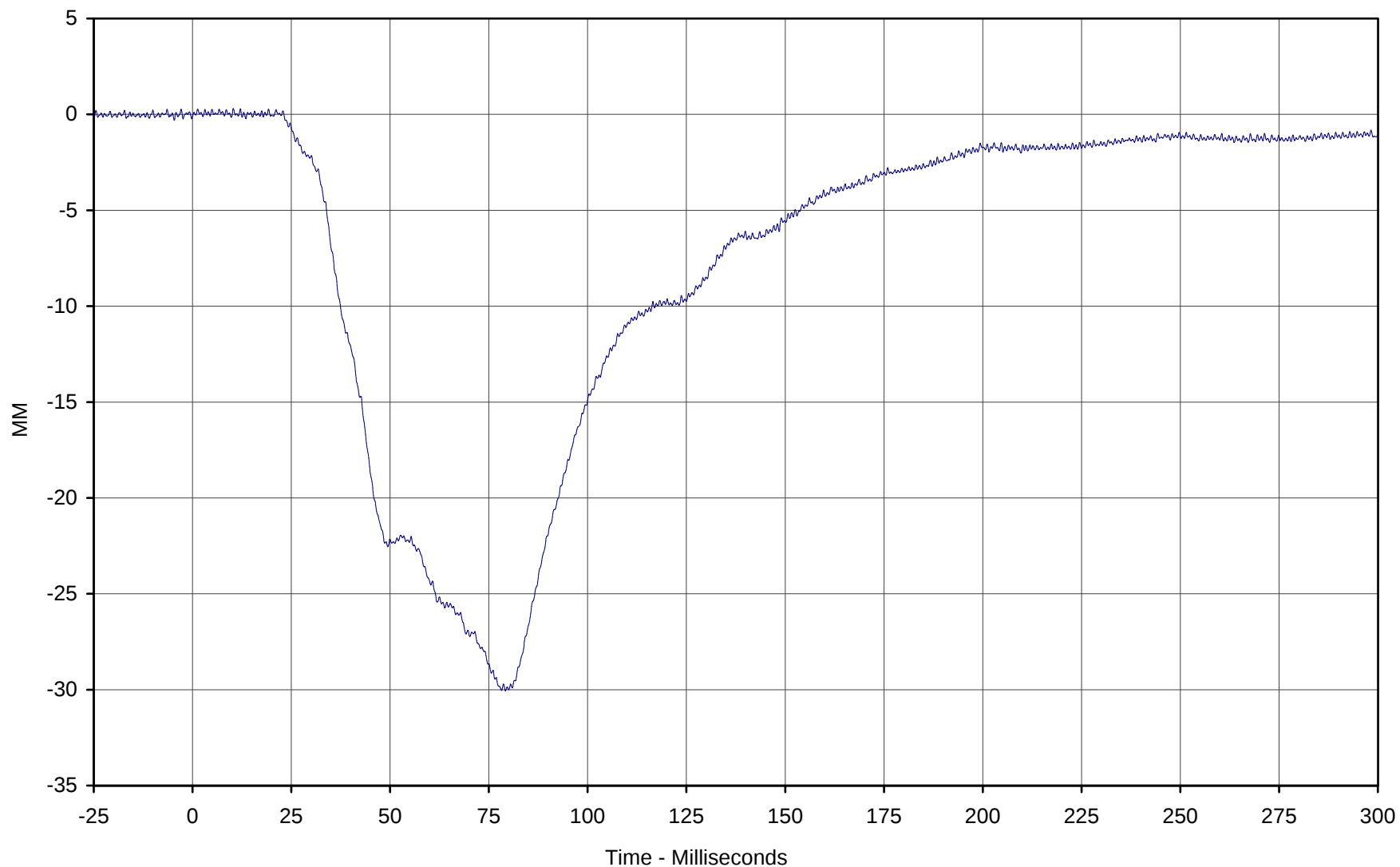
Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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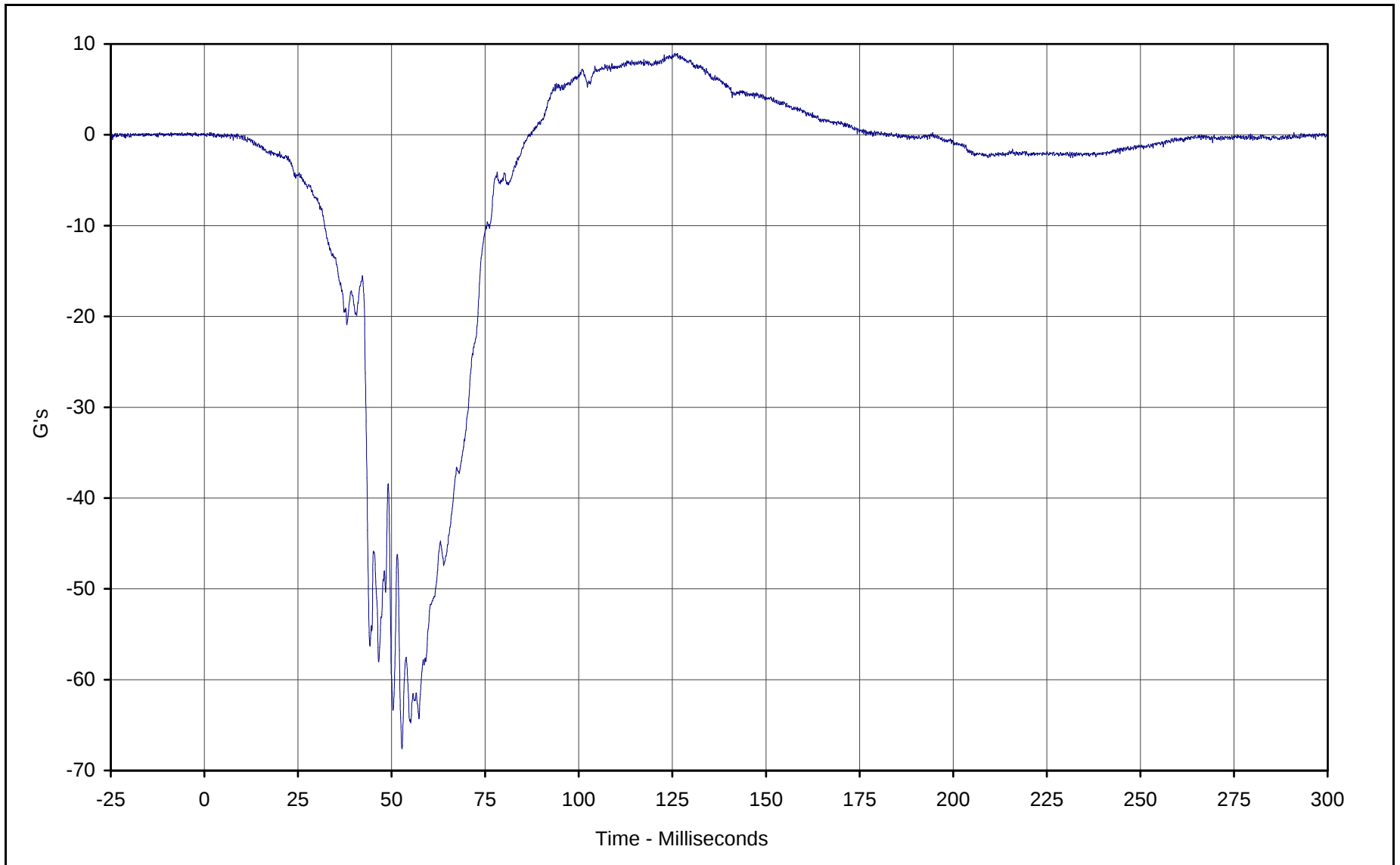
Curve Description: Passenger Chest Displacement X
Maximum Value: 0.3 at 10.3 Milliseconds
Minimum Value: -30.1 at 79.2 Milliseconds
SAE Filter Class: 600
Date of Test: 5/9/01
Curve Number: FIL-063

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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Curve Description: Passenger Pelvis X

Maximum Value: 9.0 at 125.6 Milliseconds

Minimum Value: -67.6 at 52.8 Milliseconds

SAE Filter Class: 1000

Date of Test: 5/9/01

Curve Number: FIL-064

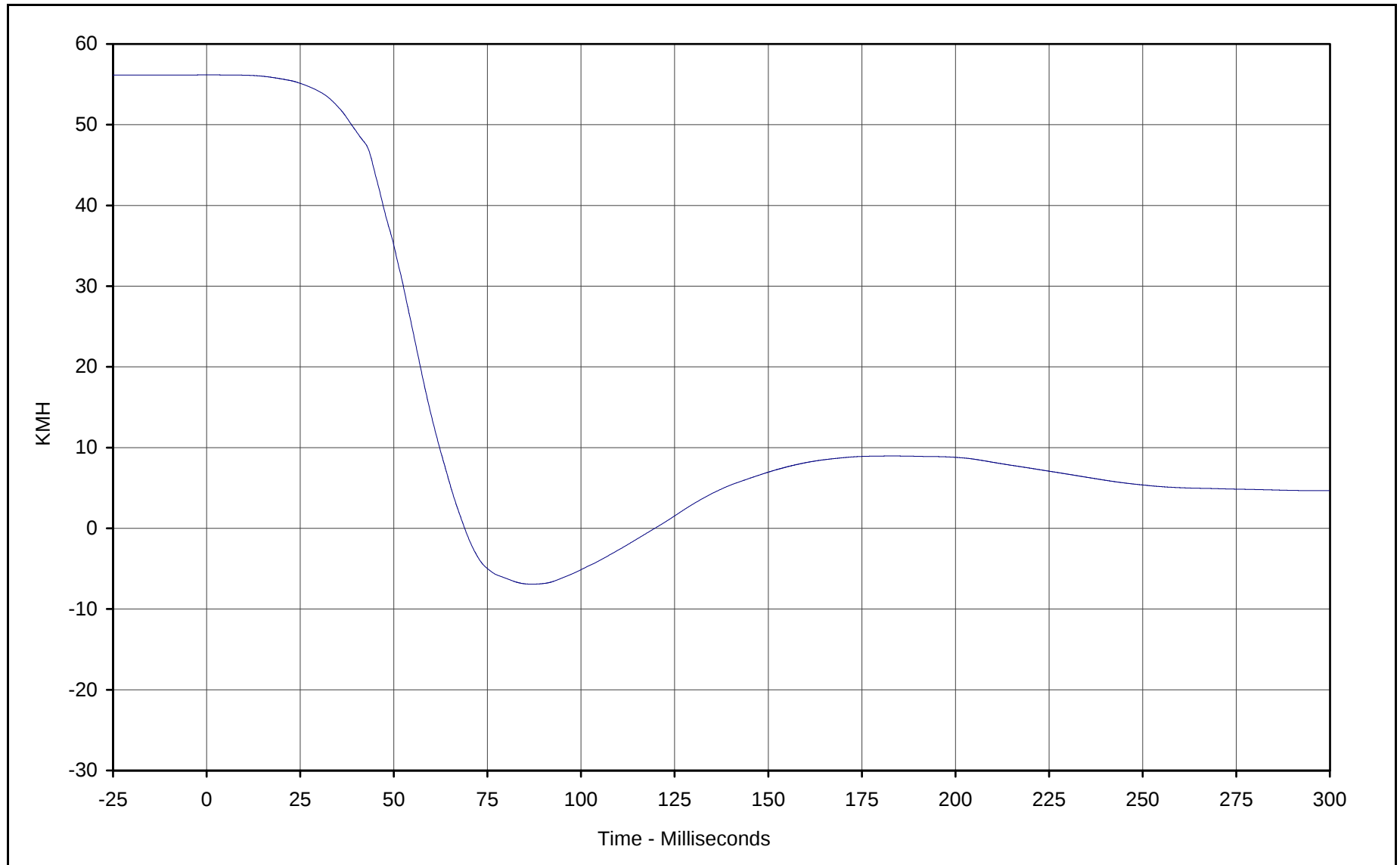
Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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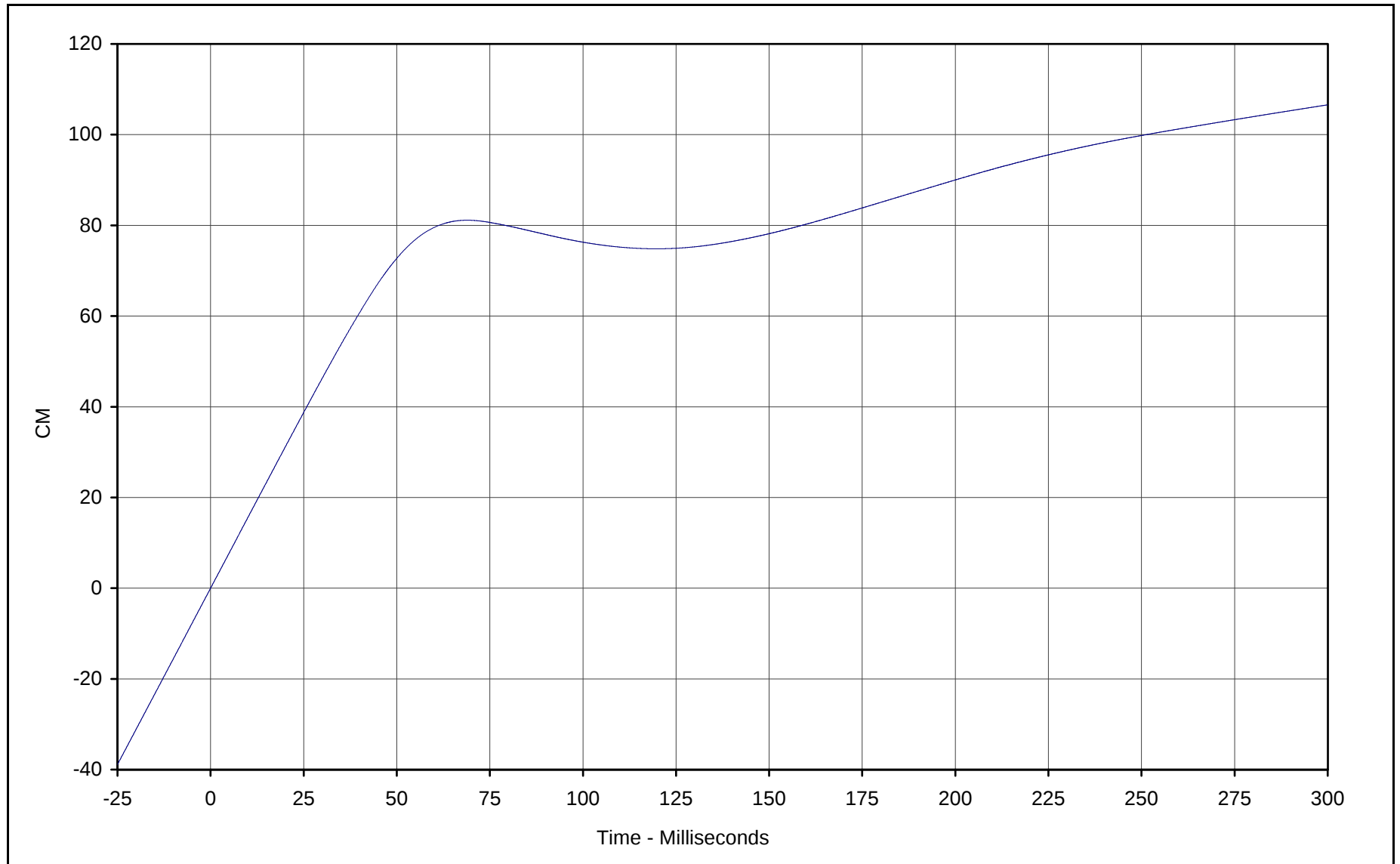
Curve Description: Passenger Pelvis X Velocity
Maximum Value: 56.2 at 2.1 Milliseconds
Minimum Value: -6.9 at 86.9 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN1-064

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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B-97



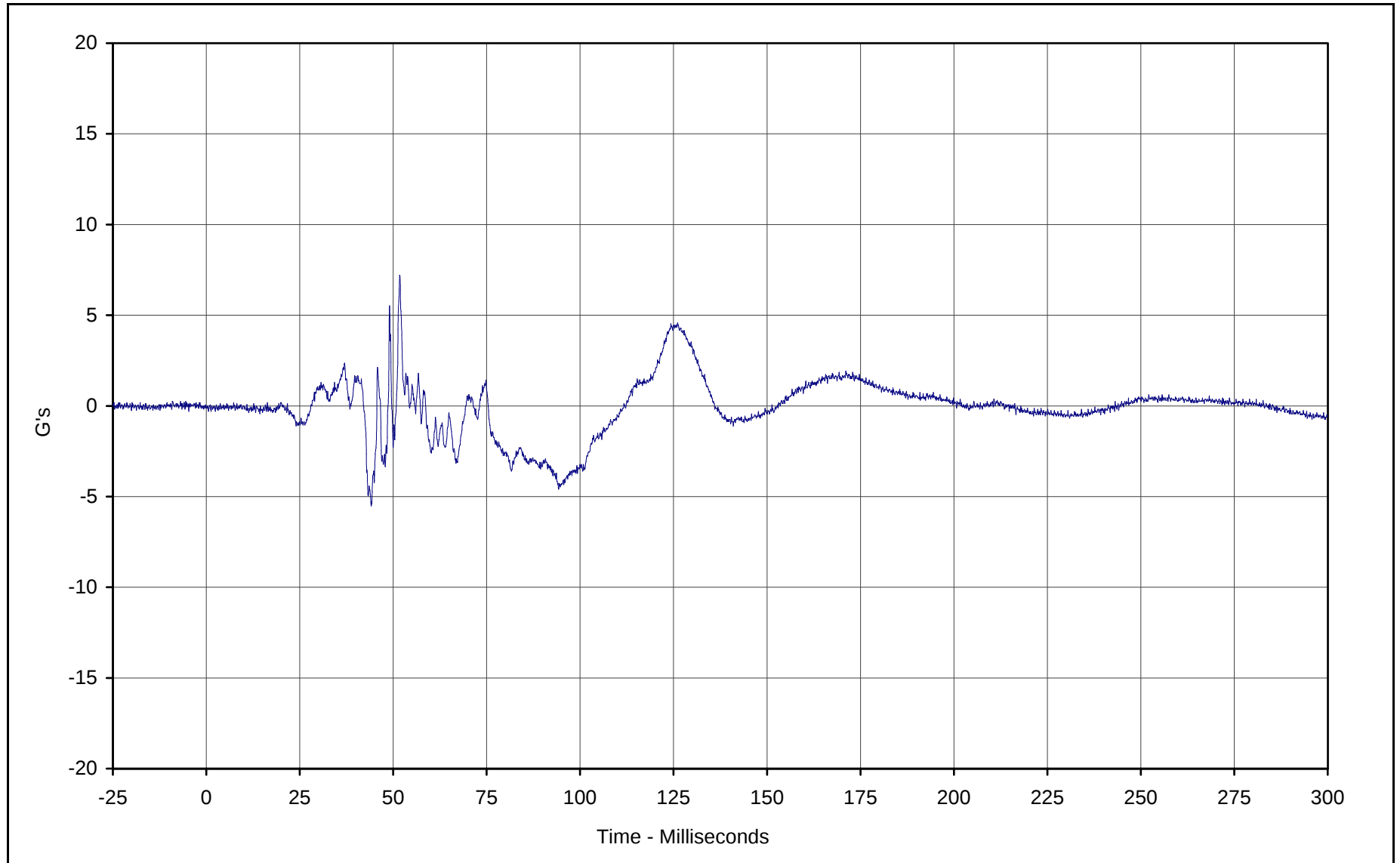
Curve Description: Passenger Pelvis X Displ.
Maximum Value: 106.6 at 299.9 Milliseconds
Minimum Value: 0.0 at 0.0 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN2-064

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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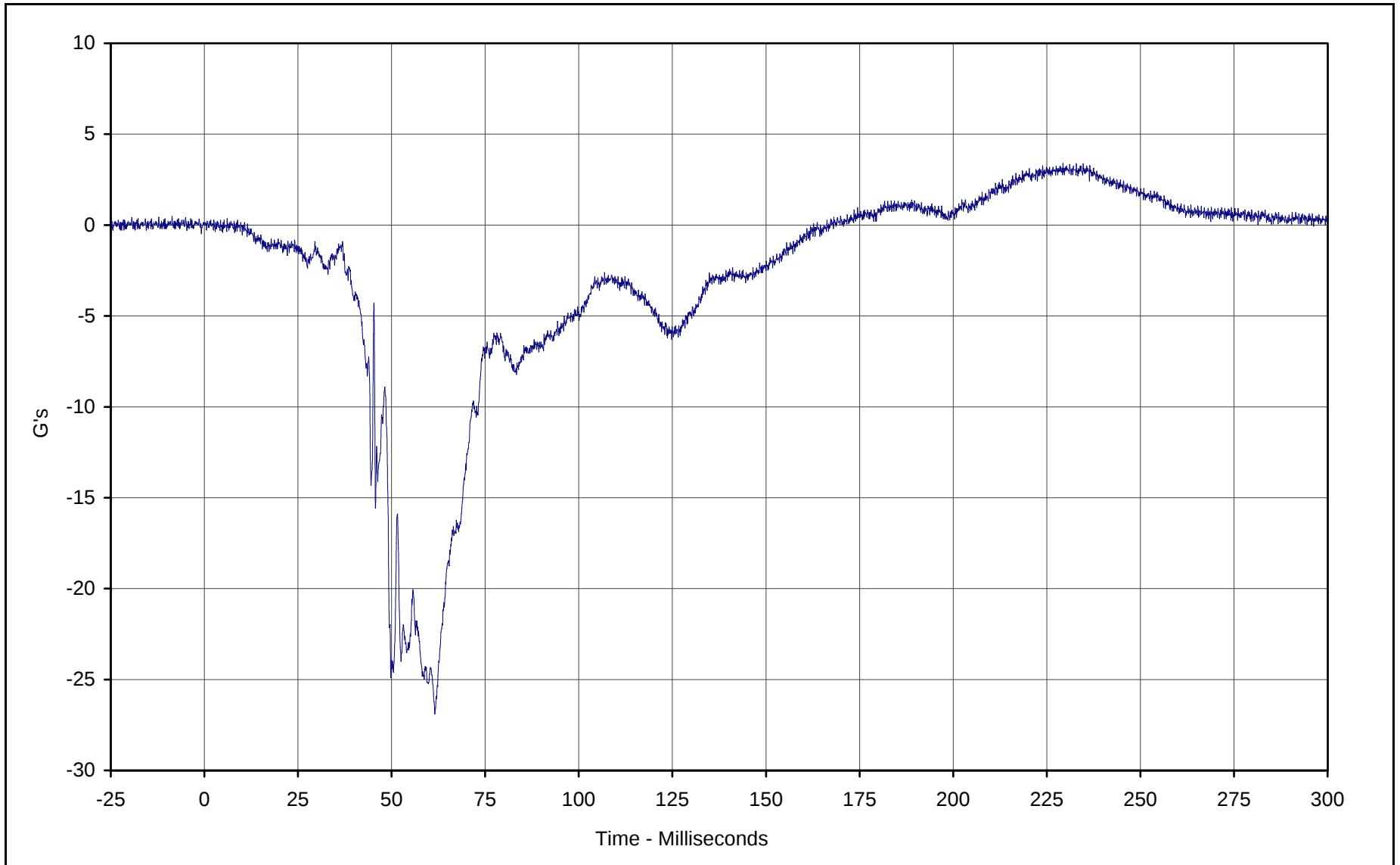
Curve Description: Passenger Pelvis Y
Maximum Value: 7.2 at 51.7 Milliseconds
Minimum Value: -5.5 at 44.1 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: FIL-065

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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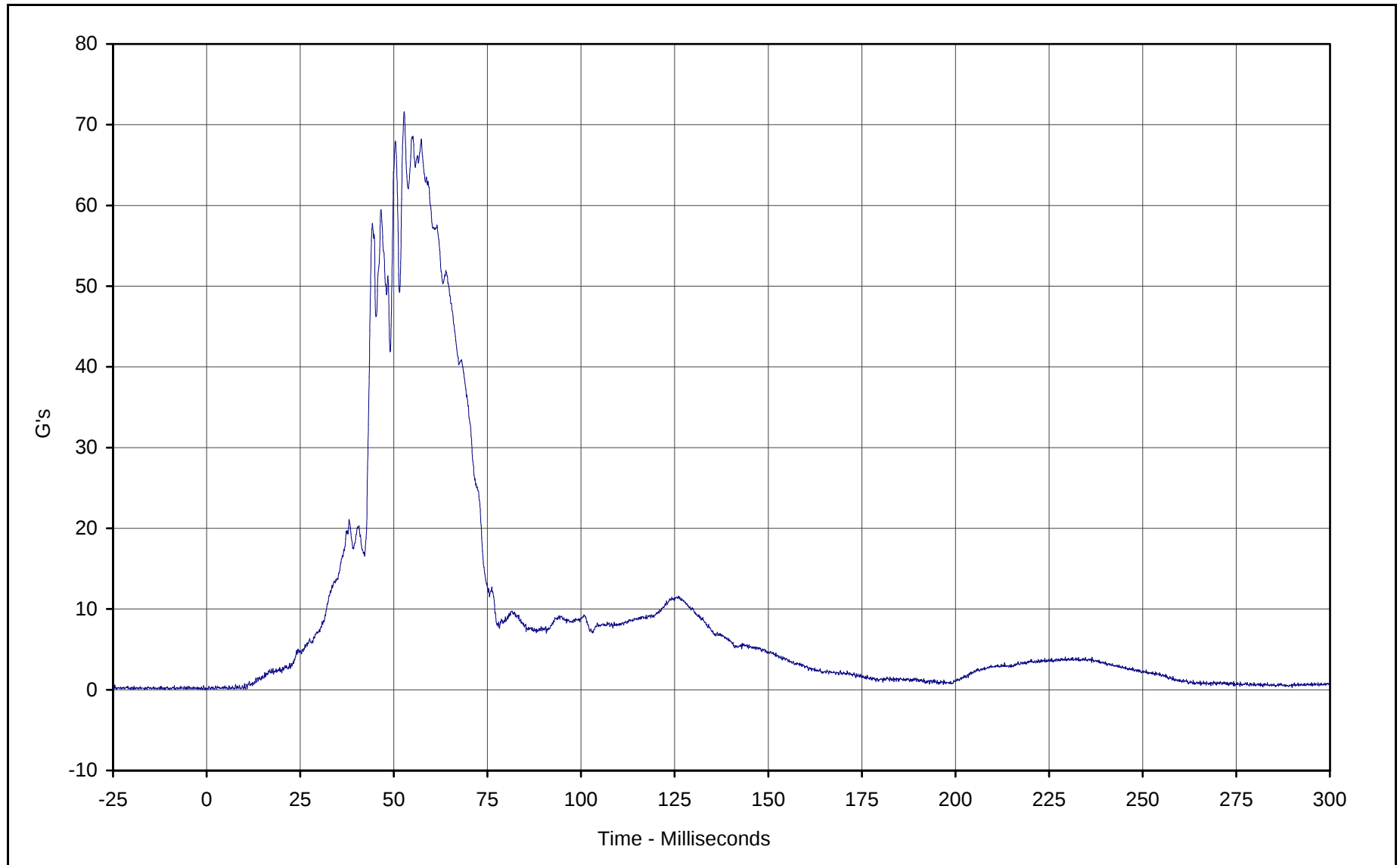
Curve Description: Passenger Pelvis Z
Maximum Value: 3.4 at 229.3 Milliseconds
Minimum Value: -26.9 at 61.5 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: FIL-066

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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B-100



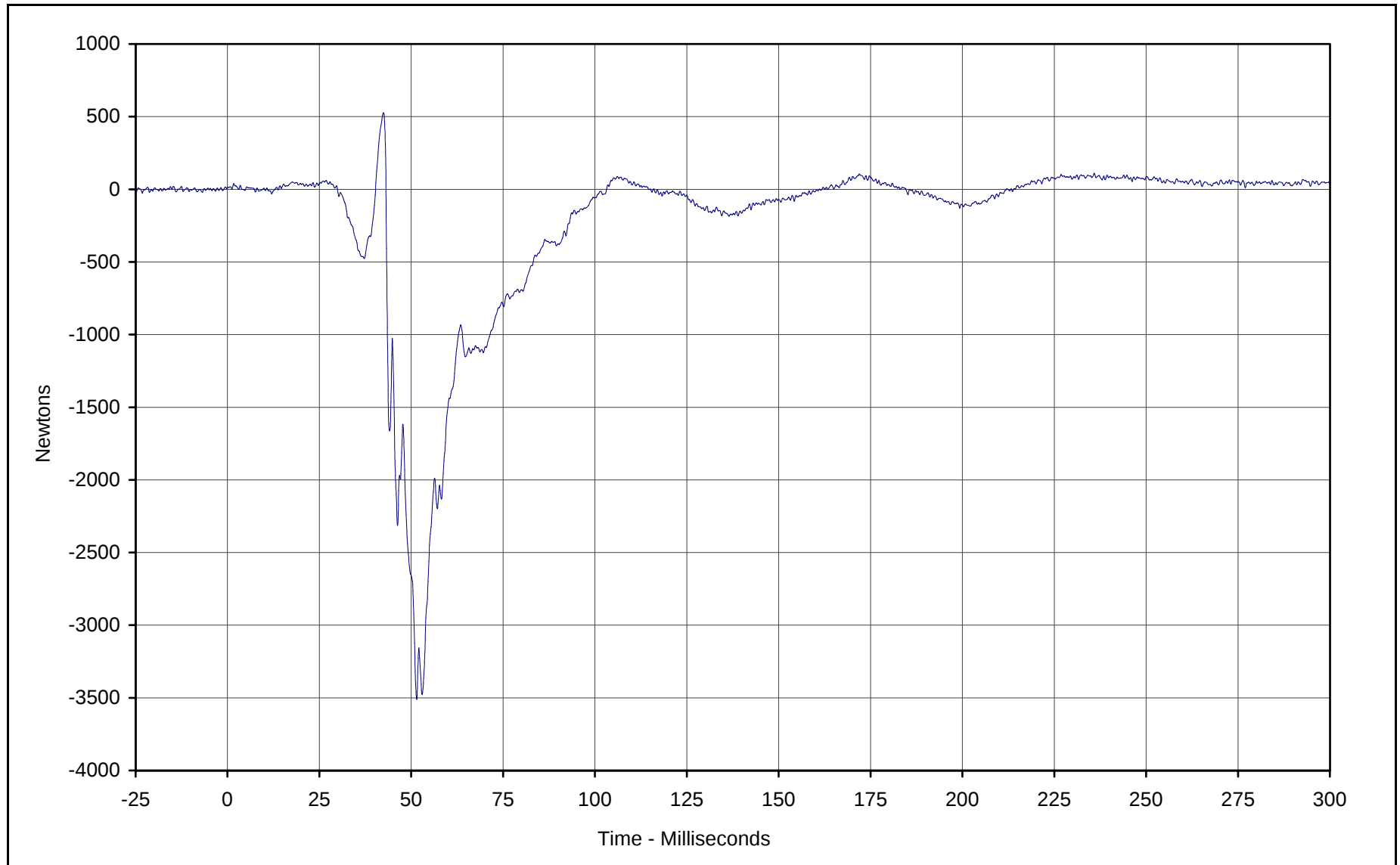
Curve Description: Passenger Pelvis Resultant
Maximum Value: 71.6 at 52.8 Milliseconds
Minimum Value: 0.1 at 5.7 Milliseconds
SAE Filter Class: 1000
Date of Test: 5/9/01
Curve Number: RES-064

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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B-101

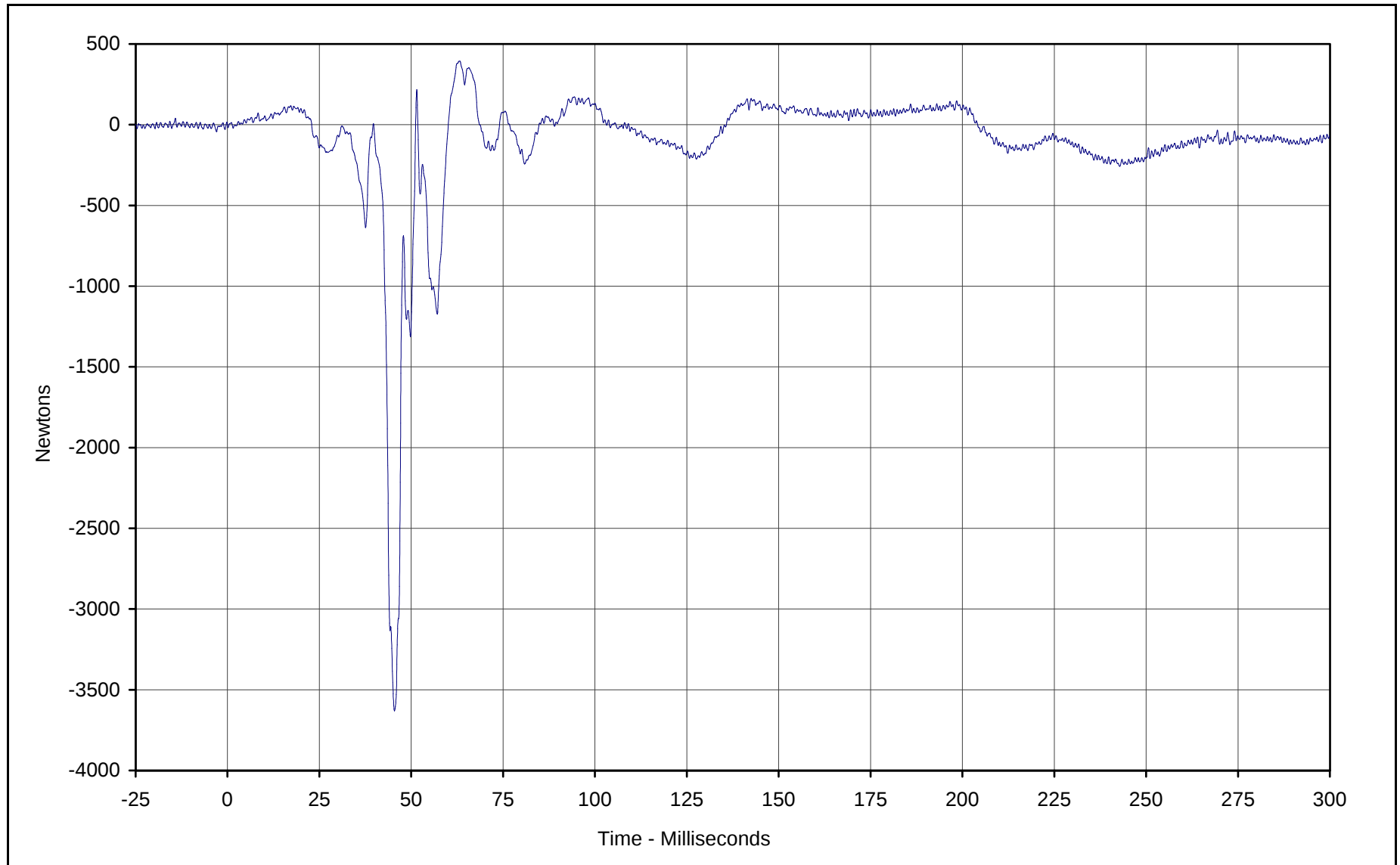


Curve Description: Passenger Left Femur Force
Maximum Value: 526.6 at 42.4 Milliseconds
Minimum Value: -3512.1 at 51.5 Milliseconds
SAE Filter Class: 600
Date of Test: 5/9/01
Curve Number: FIL-067

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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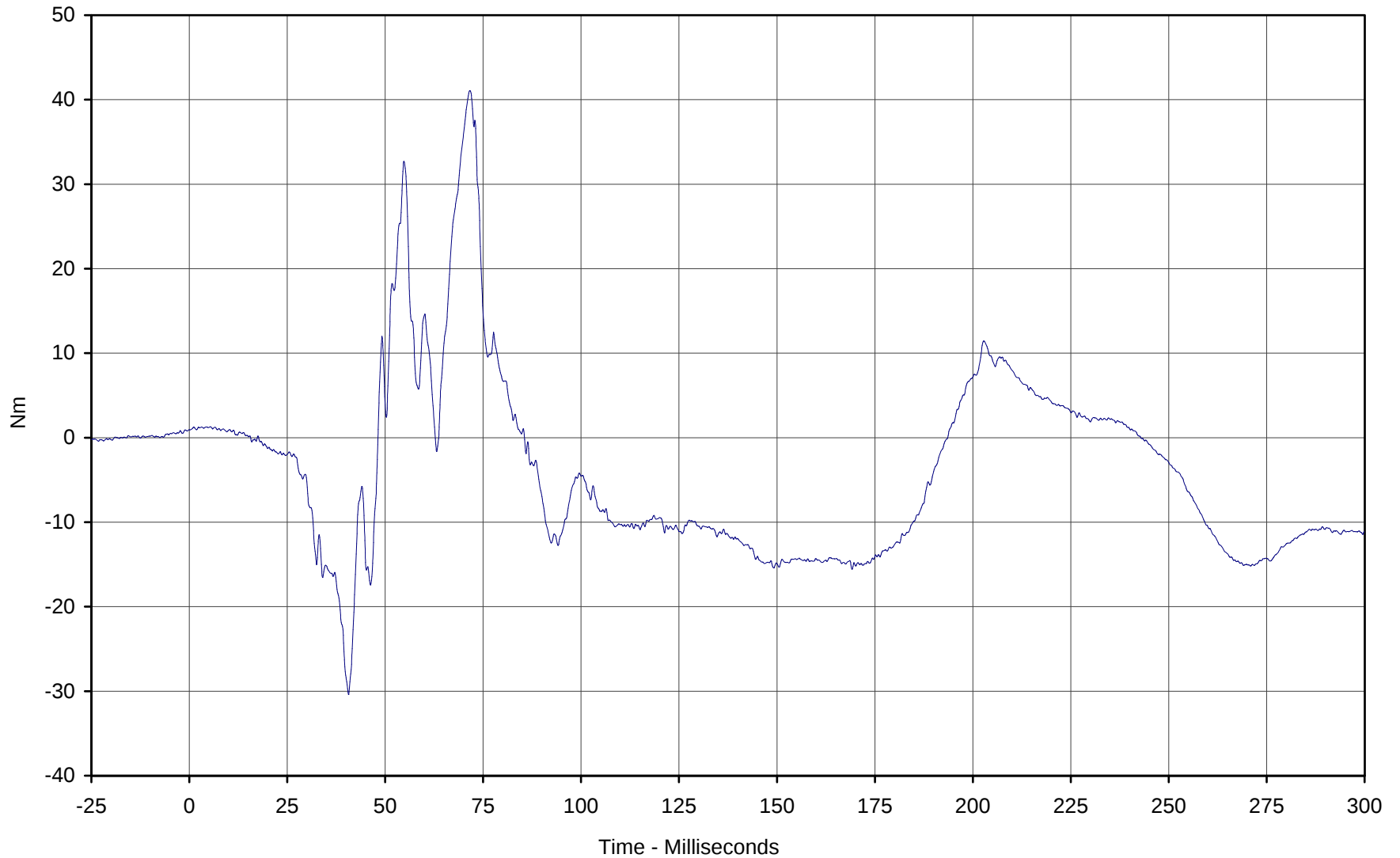


Curve Description: Passenger Right Femur Force
Maximum Value: 393.8 at 63.2 Milliseconds
Minimum Value: -3631.0 at 45.4 Milliseconds
SAE Filter Class: 600
Date of Test: 5/9/01
Curve Number: FIL-068

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



B-103



Curve Description: Passenger Left Upper Tibia Moment X

Maximum Value: 41.1 at 71.6 Milliseconds

Minimum Value: -30.4 at 40.7 Milliseconds

SAE Filter Class: 600

Date of Test: 5/9/01

Curve Number: FIL-069

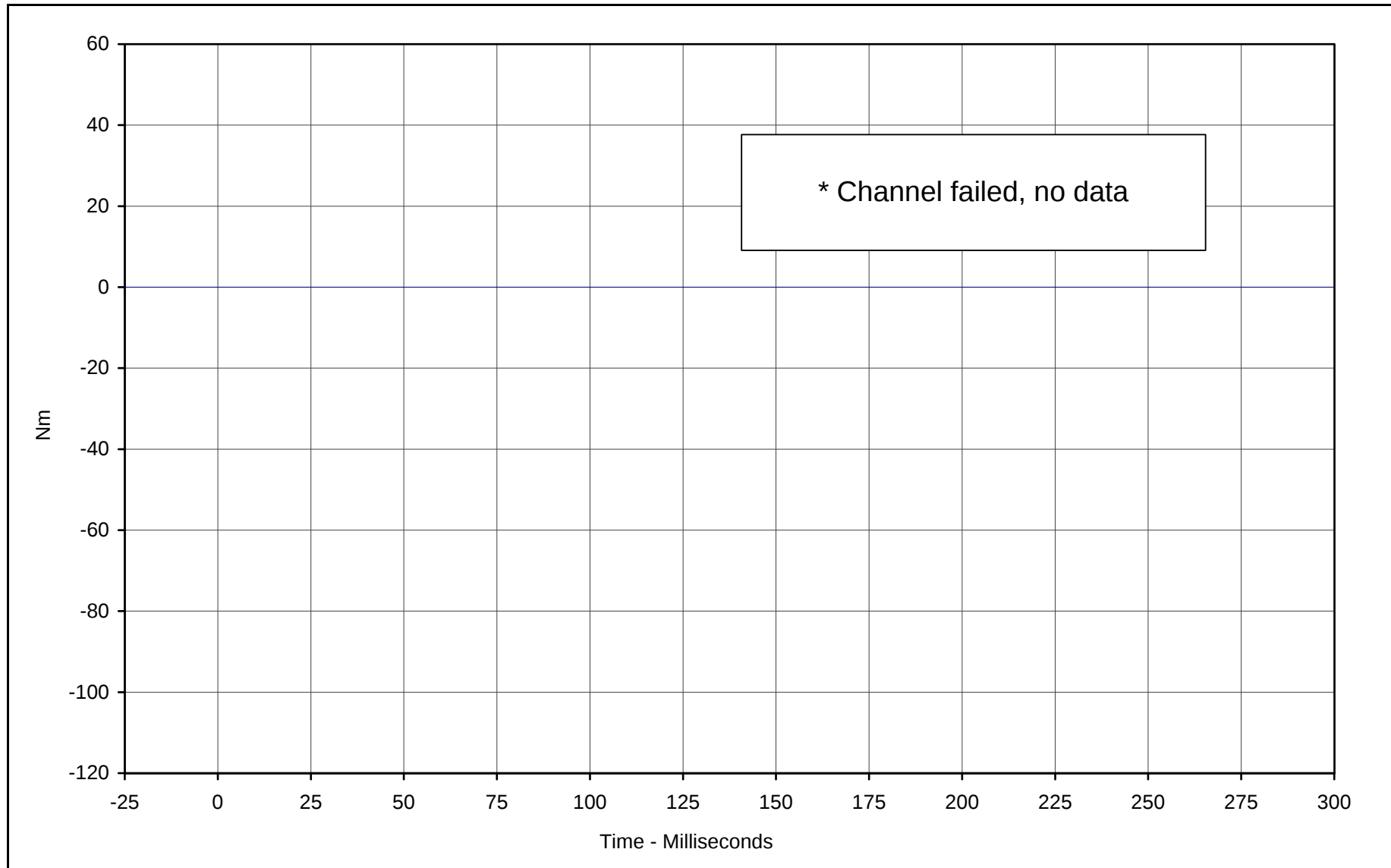
Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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B-104



Curve Description: Passenger Left Upper Tibia Moment Y *

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Maximum Value: 0.0 at 0.0 Milliseconds

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

Minimum Value: 0.0 at 0.0 Milliseconds

SAE Filter Class: 600

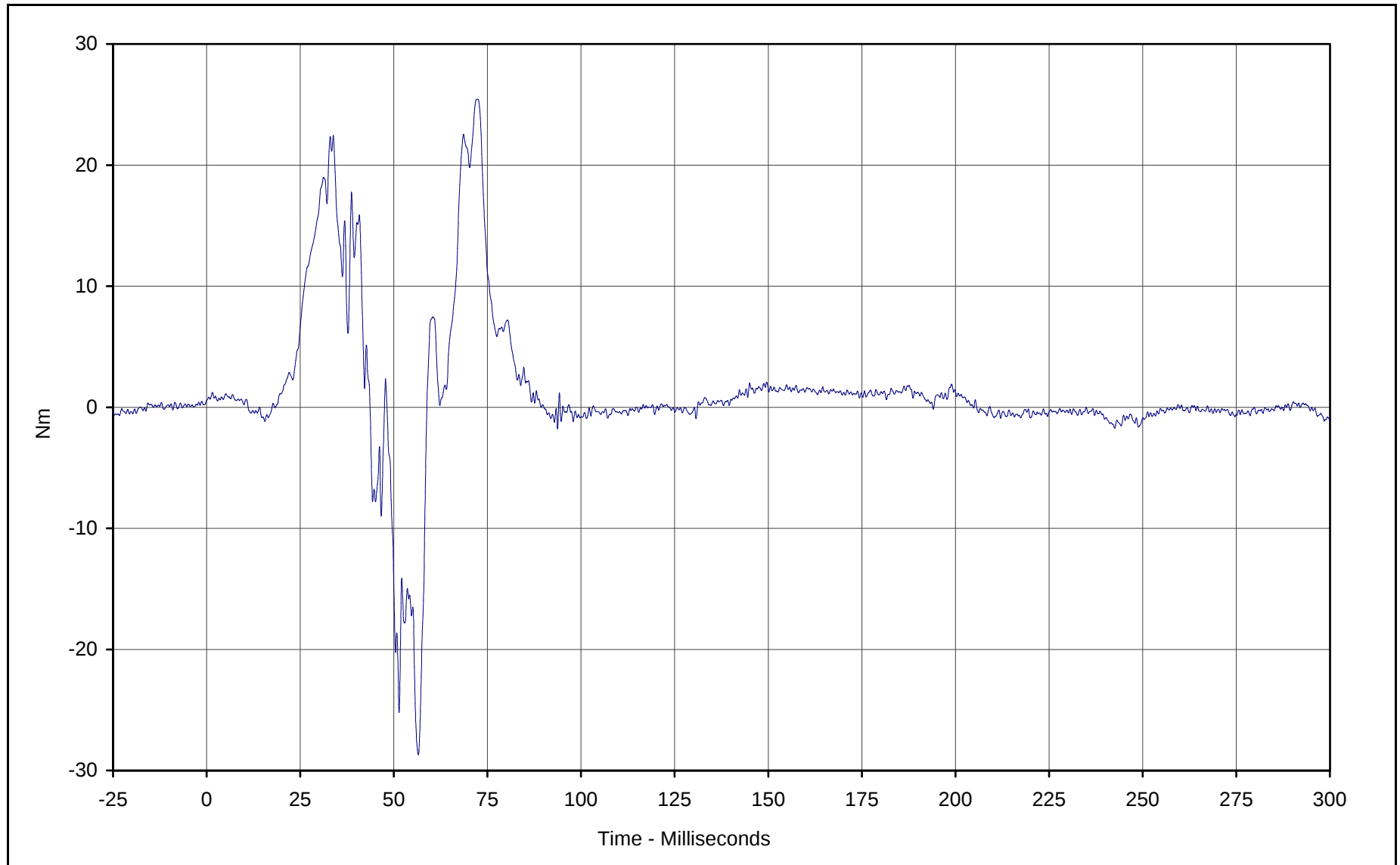
Date of Test: 5/9/01

Curve Number: FIL-070

* Channel failed, no data



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Curve Description: Passenger Right Upper Tibia Moment X

Maximum Value: 25.4 at 72.3 Milliseconds

Minimum Value: -28.7 at 56.5 Milliseconds

SAE Filter Class: 600

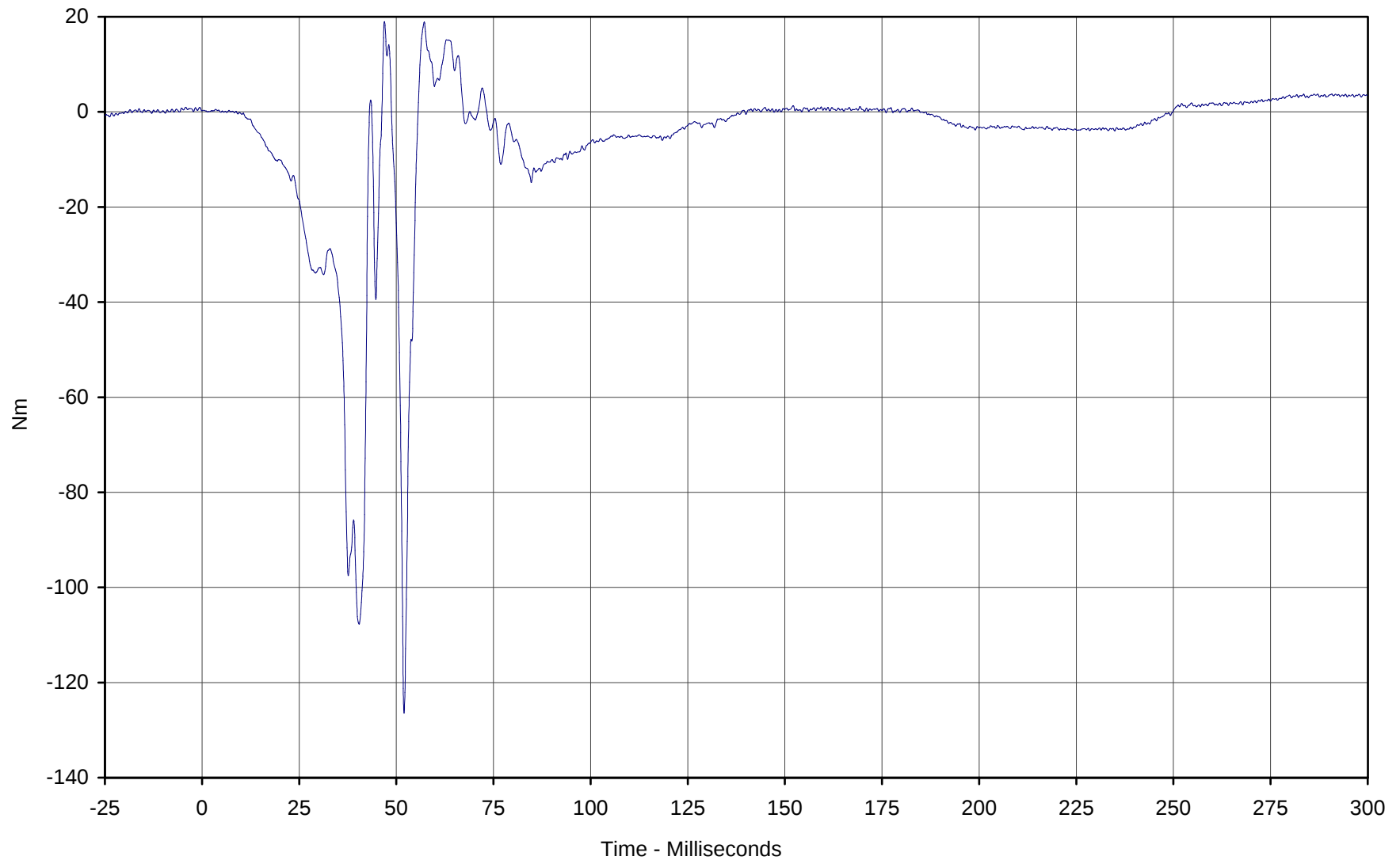
Date of Test: 5/9/01

Curve Number: FIL-071

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup





Curve Description: Passenger Right Upper Tibia Moment Y

Maximum Value: 19.0 at 47.0 Milliseconds

Minimum Value: -126.5 at 52.0 Milliseconds

SAE Filter Class: 600

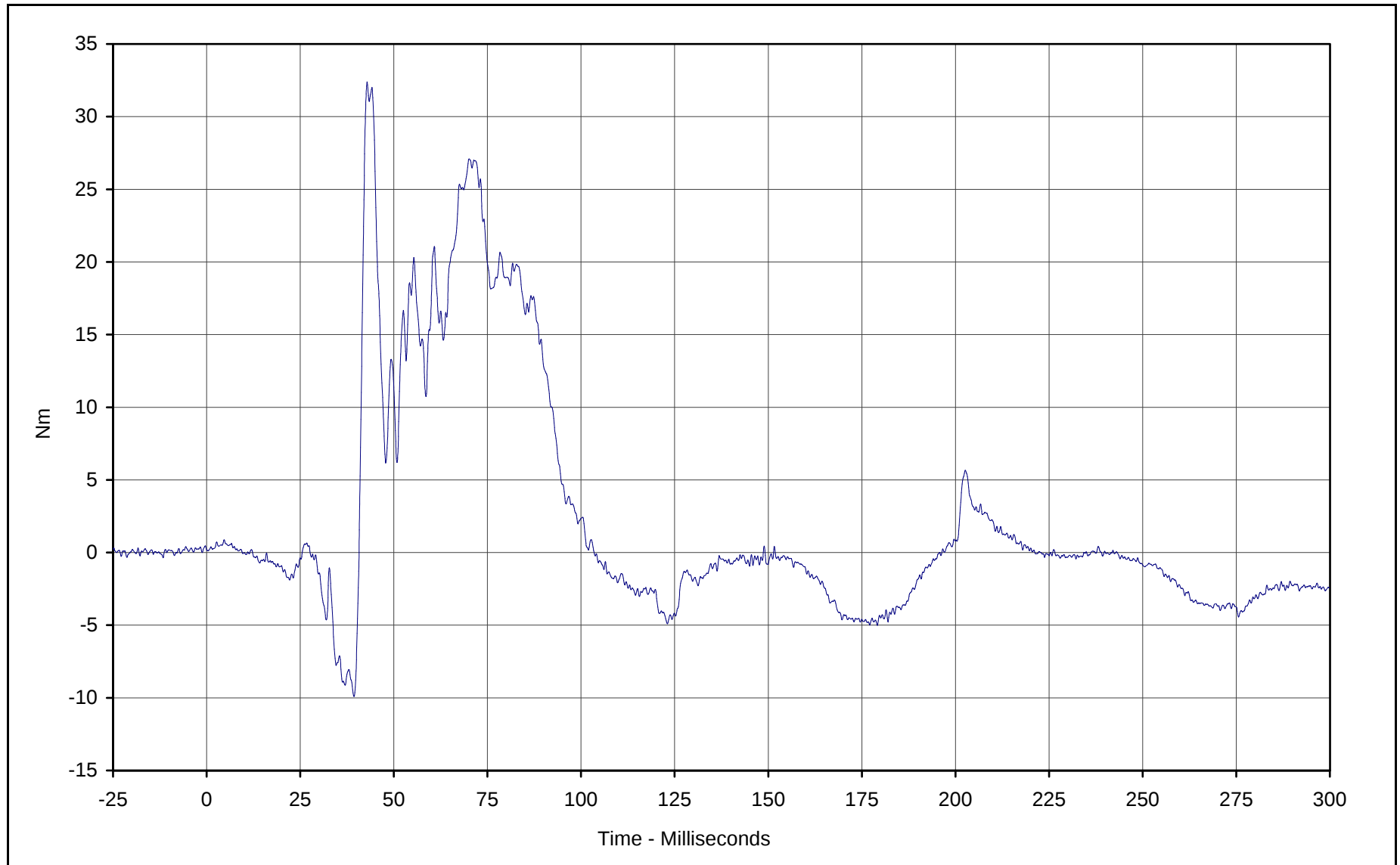
Date of Test: 5/9/01

Curve Number: FIL-072

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup





Curve Description: Passenger Left Lower Tibia Moment X

Maximum Value: 32.4 at 42.9 Milliseconds

Minimum Value: -9.9 at 39.4 Milliseconds

SAE Filter Class: 600

Date of Test: 5/9/01

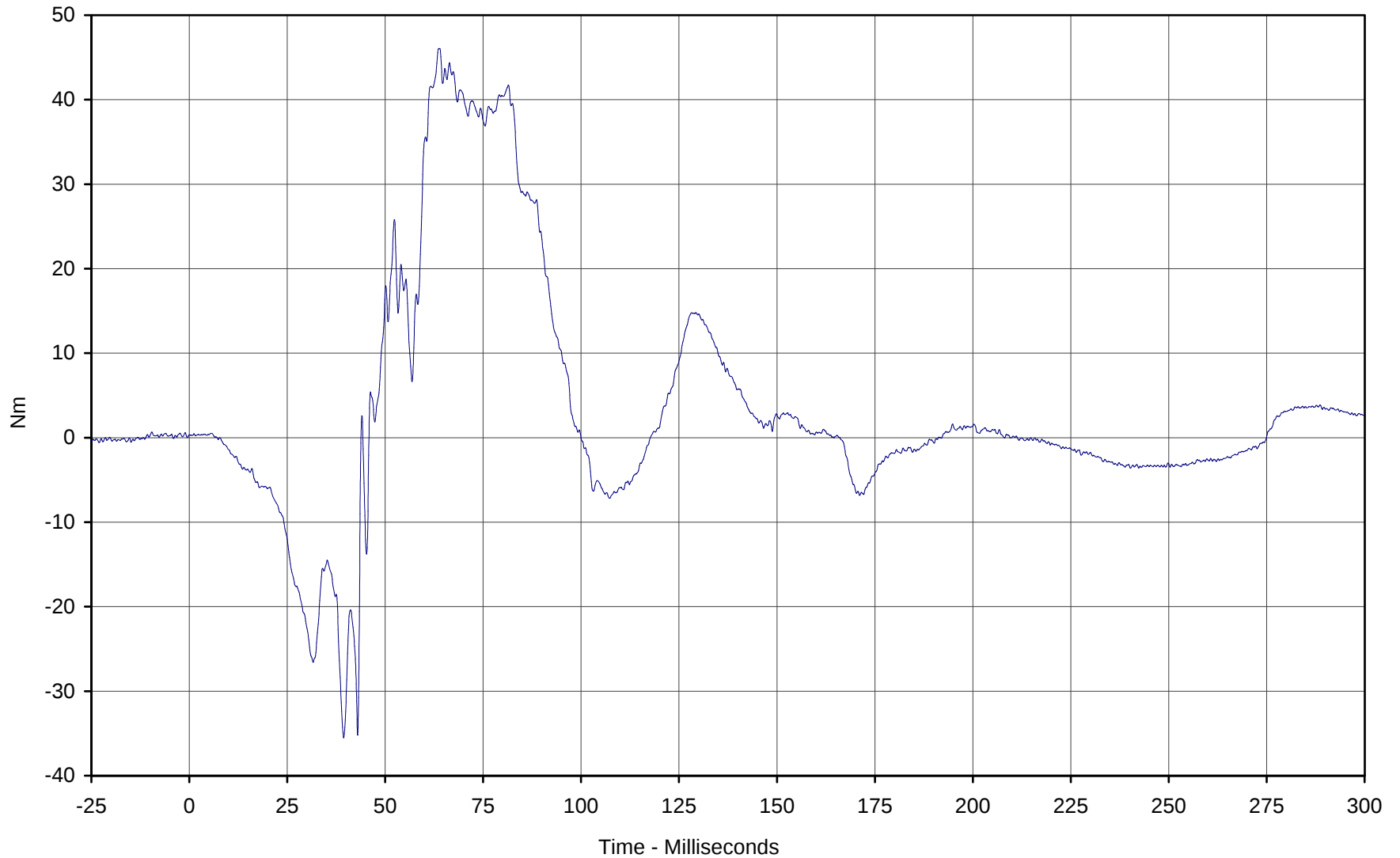
Curve Number: FIL-073

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



B-108



Curve Description: Passenger Left Lower Tibia Moment Y

Maximum Value: 46.1 at 63.9 Milliseconds

Minimum Value: -35.5 at 39.4 Milliseconds

SAE Filter Class: 600

Date of Test: 5/9/01

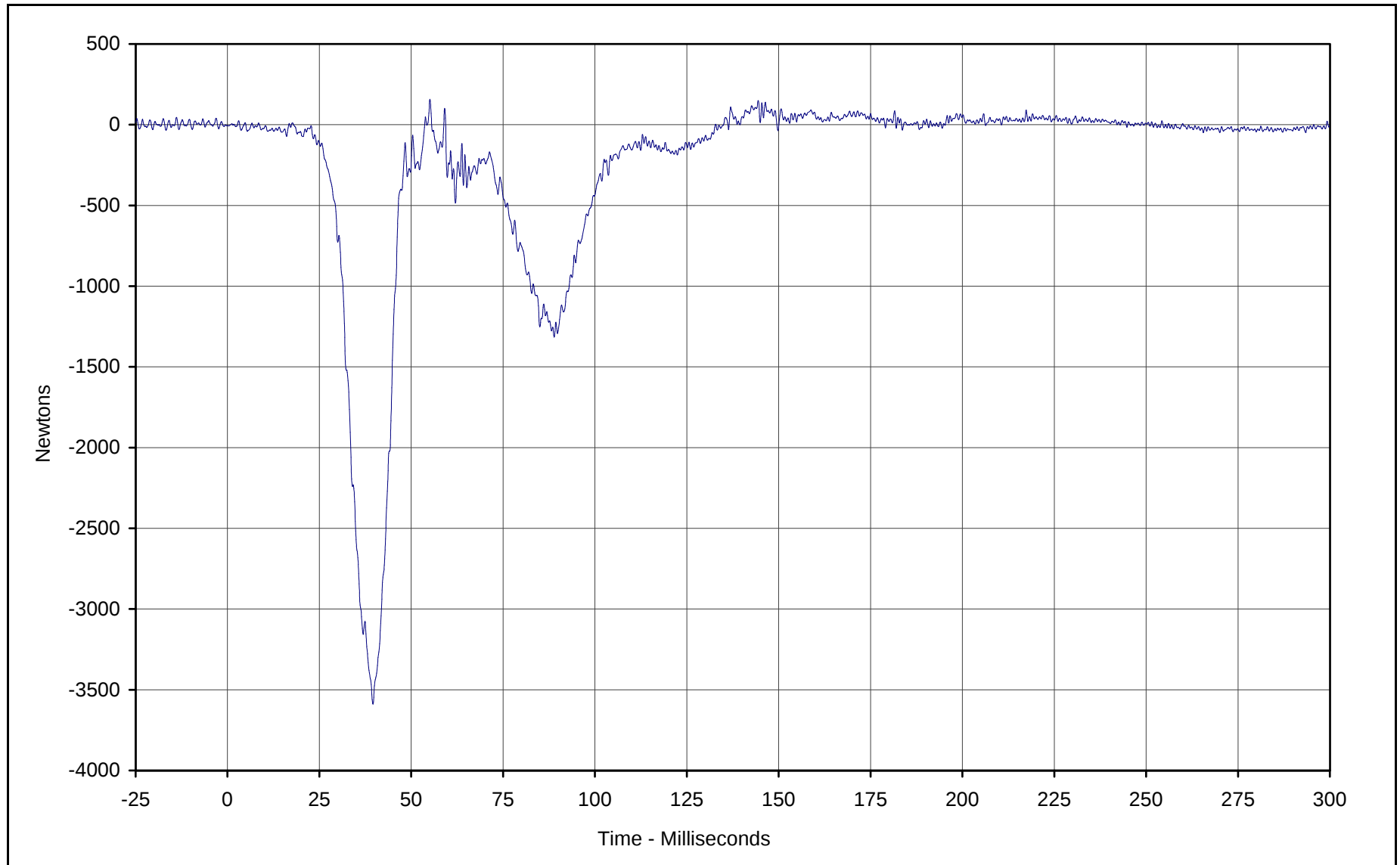
Curve Number: FIL-074

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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Curve Description: Passenger Left Lower Tibia Force Z

Maximum Value: 157.2 at 55.1 Milliseconds

Minimum Value: -3589.4 at 39.6 Milliseconds

SAE Filter Class: 600

Date of Test: 5/9/01

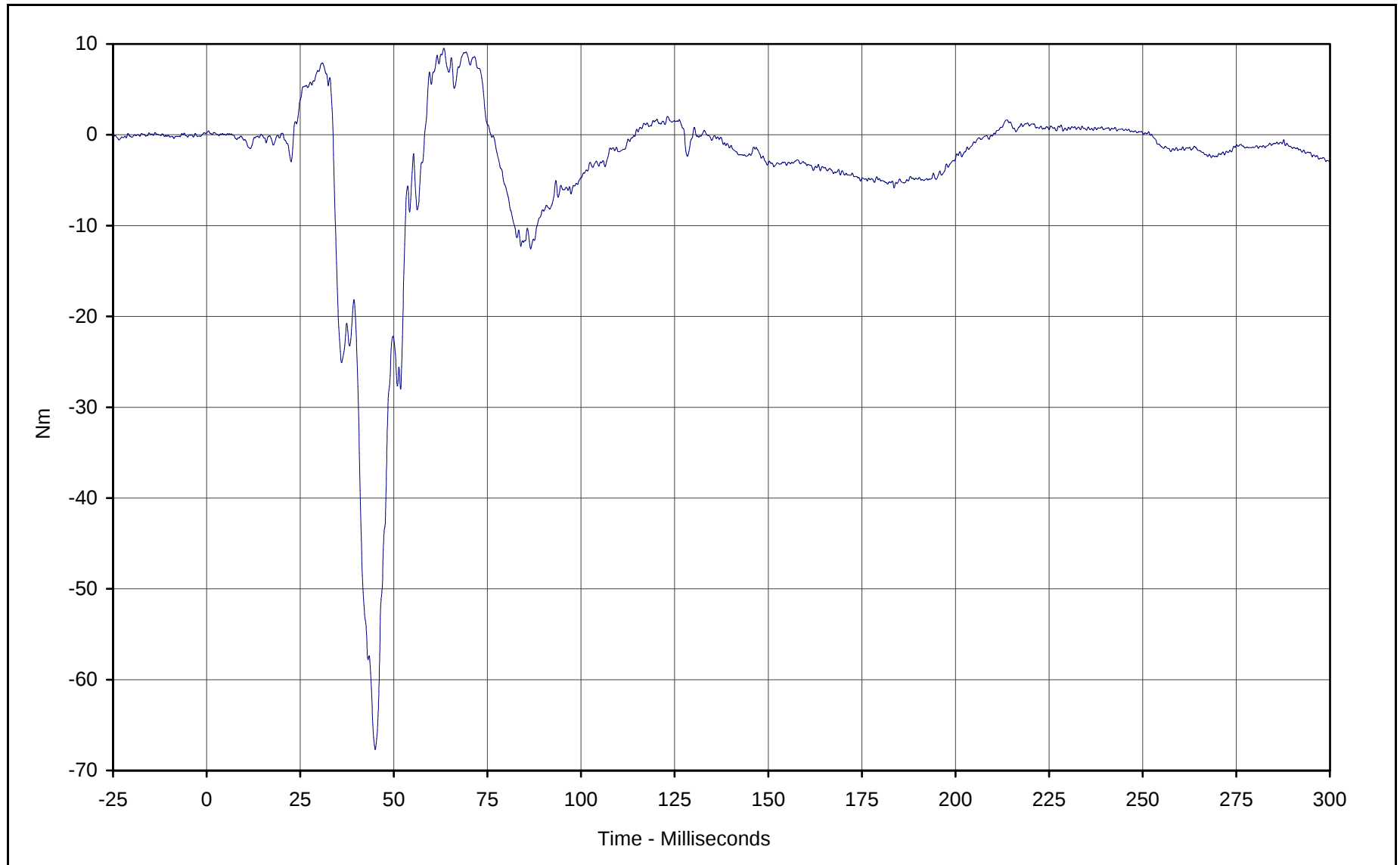
Curve Number: FIL-075

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



B-110



Curve Description: Passenger Right Lower Tibia Moment X

Maximum Value: 9.5 at 63.4 Milliseconds

Minimum Value: -67.7 at 45.0 Milliseconds

SAE Filter Class: 600

Date of Test: 5/9/01

Curve Number: FIL-076

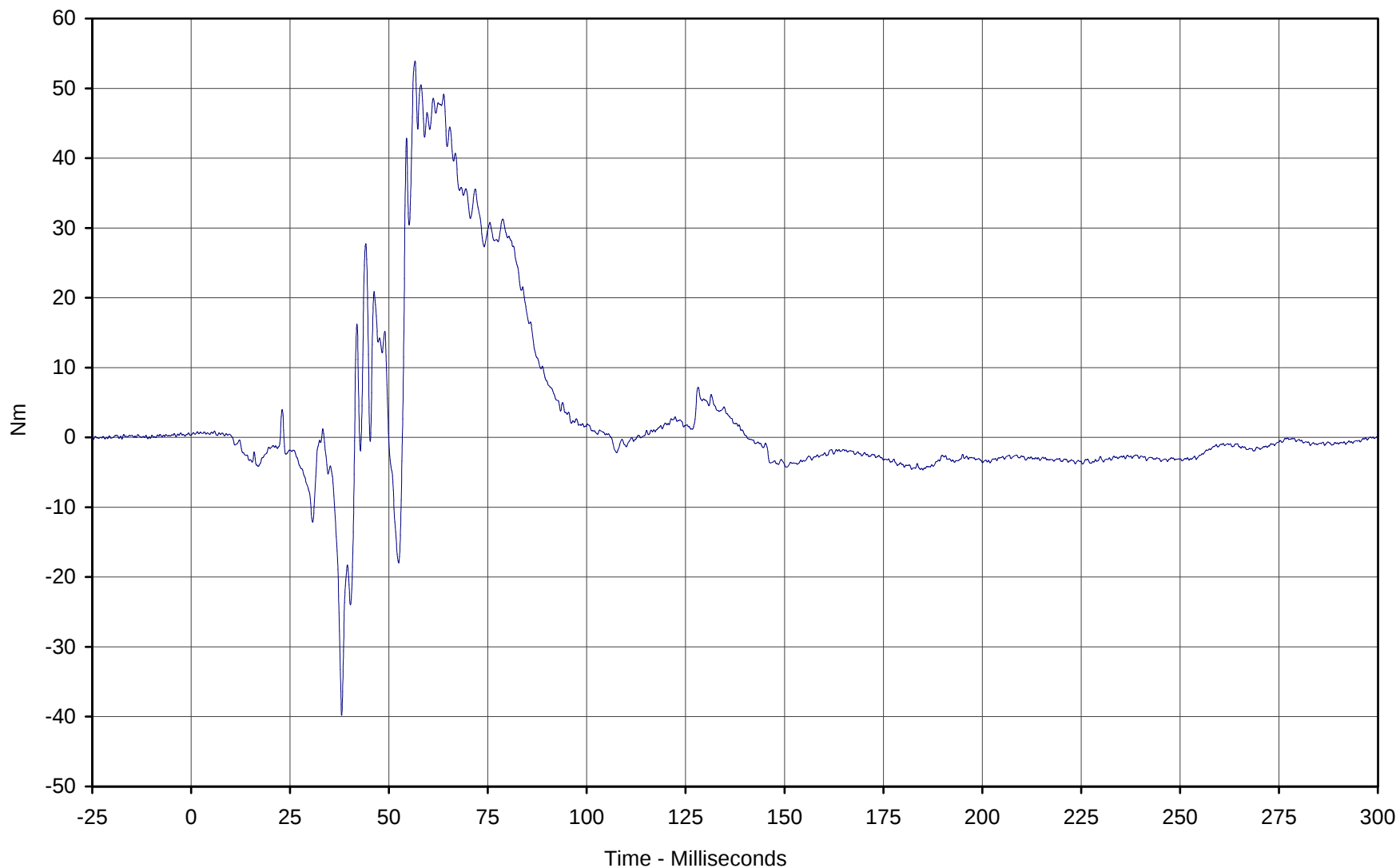
Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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B-111



Curve Description: Passenger Right Lower Tibia Moment Y

Maximum Value: 53.9 at 56.6 Milliseconds

Minimum Value: -39.8 at 38.1 Milliseconds

SAE Filter Class: 600

Date of Test: 5/9/01

Curve Number: FIL-077

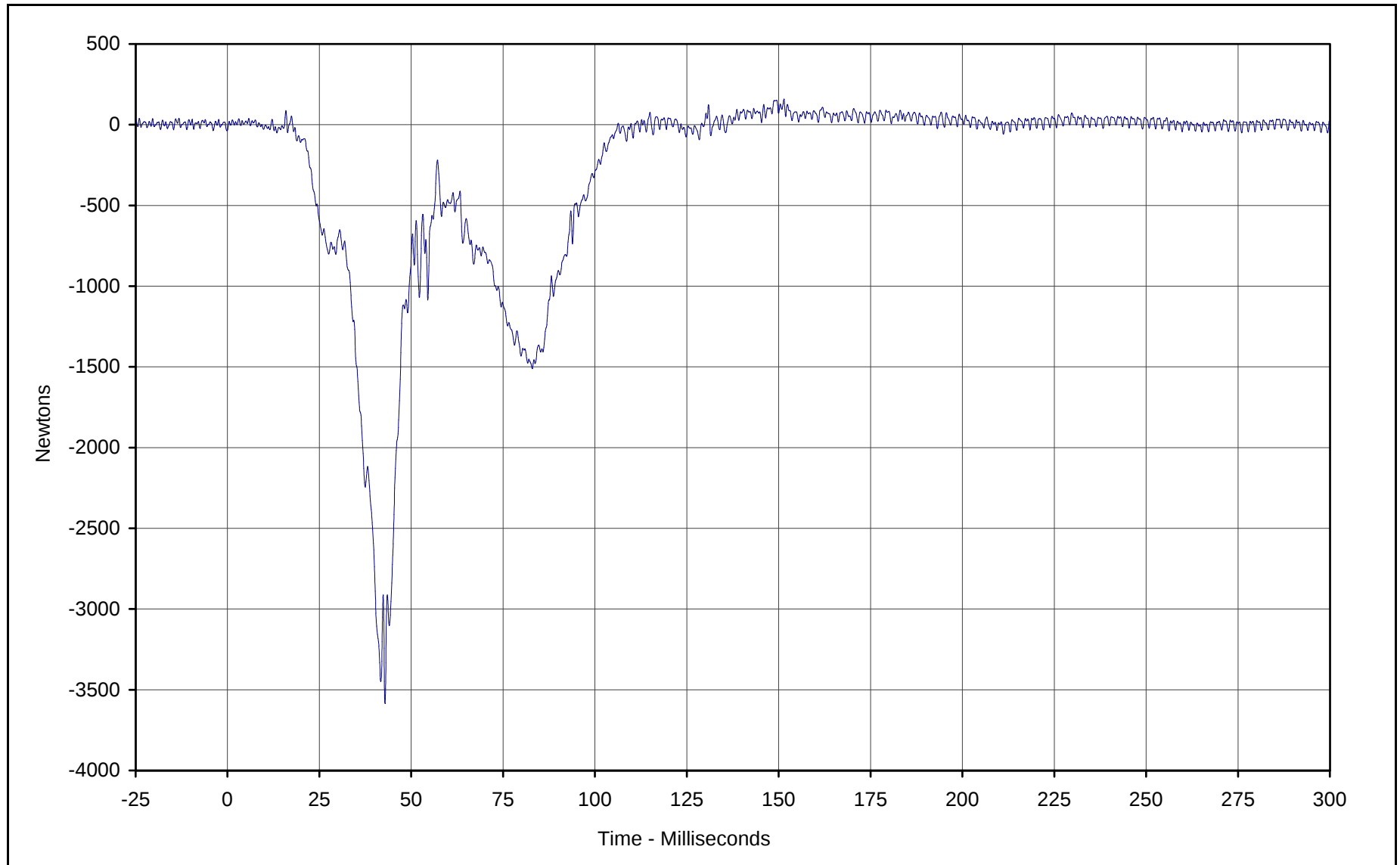
Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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B-112



Curve Description: Passenger Right lower Tibia Force Z

Maximum Value: 159.3 at 151.4 Milliseconds

Minimum Value: -3583.6 at 42.9 Milliseconds

SAE Filter Class: 600

Date of Test: 5/9/01

Curve Number: FIL-078

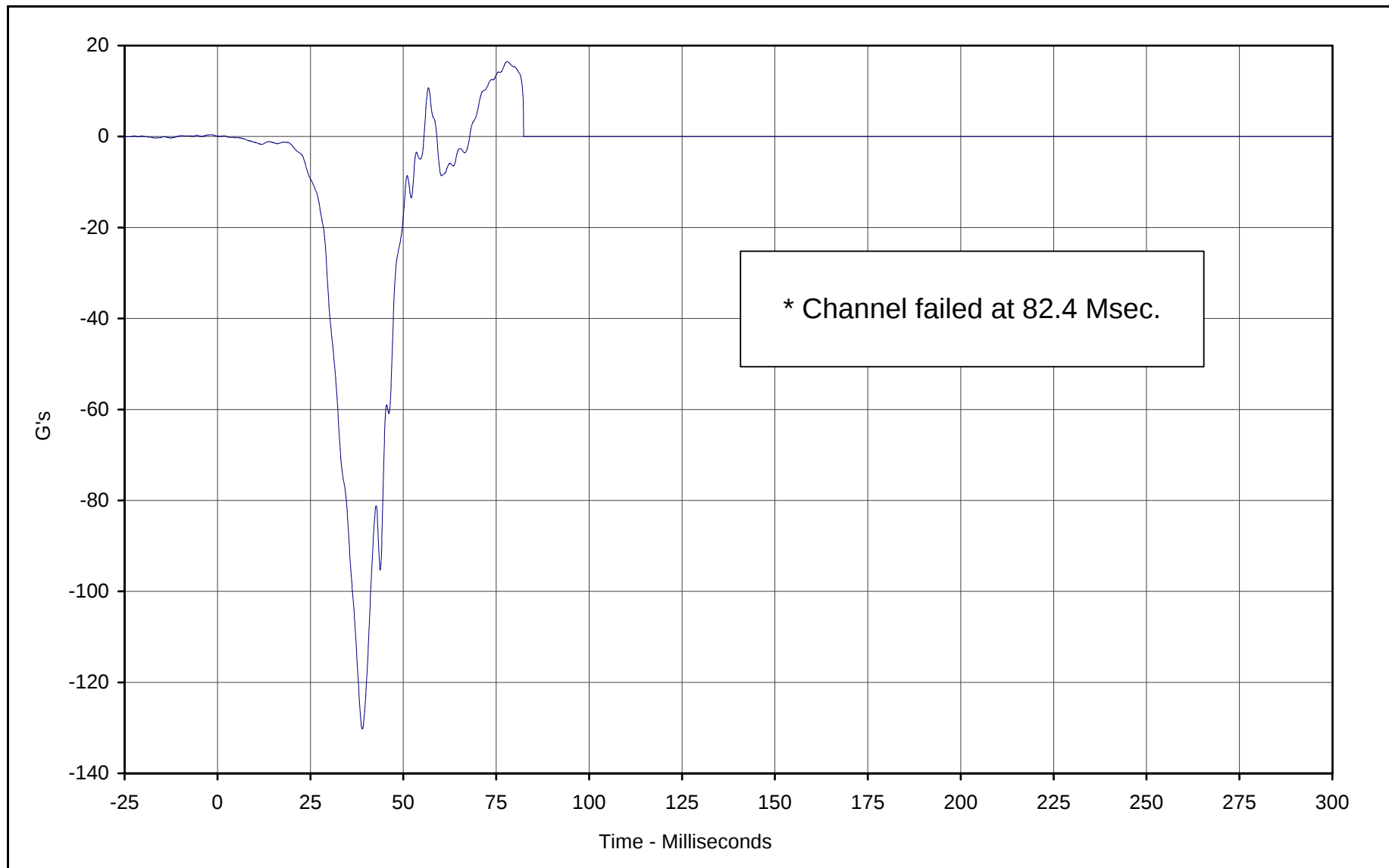
Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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B-113



Curve Description: Passenger Left Foot Aft X *

Maximum Value: 16.5 at 77.9 Milliseconds

Minimum Value: -130.2 at 39.0 Milliseconds

SAE Filter Class: 180

Date of Test: 5/9/01

Curve Number: FIL-079

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

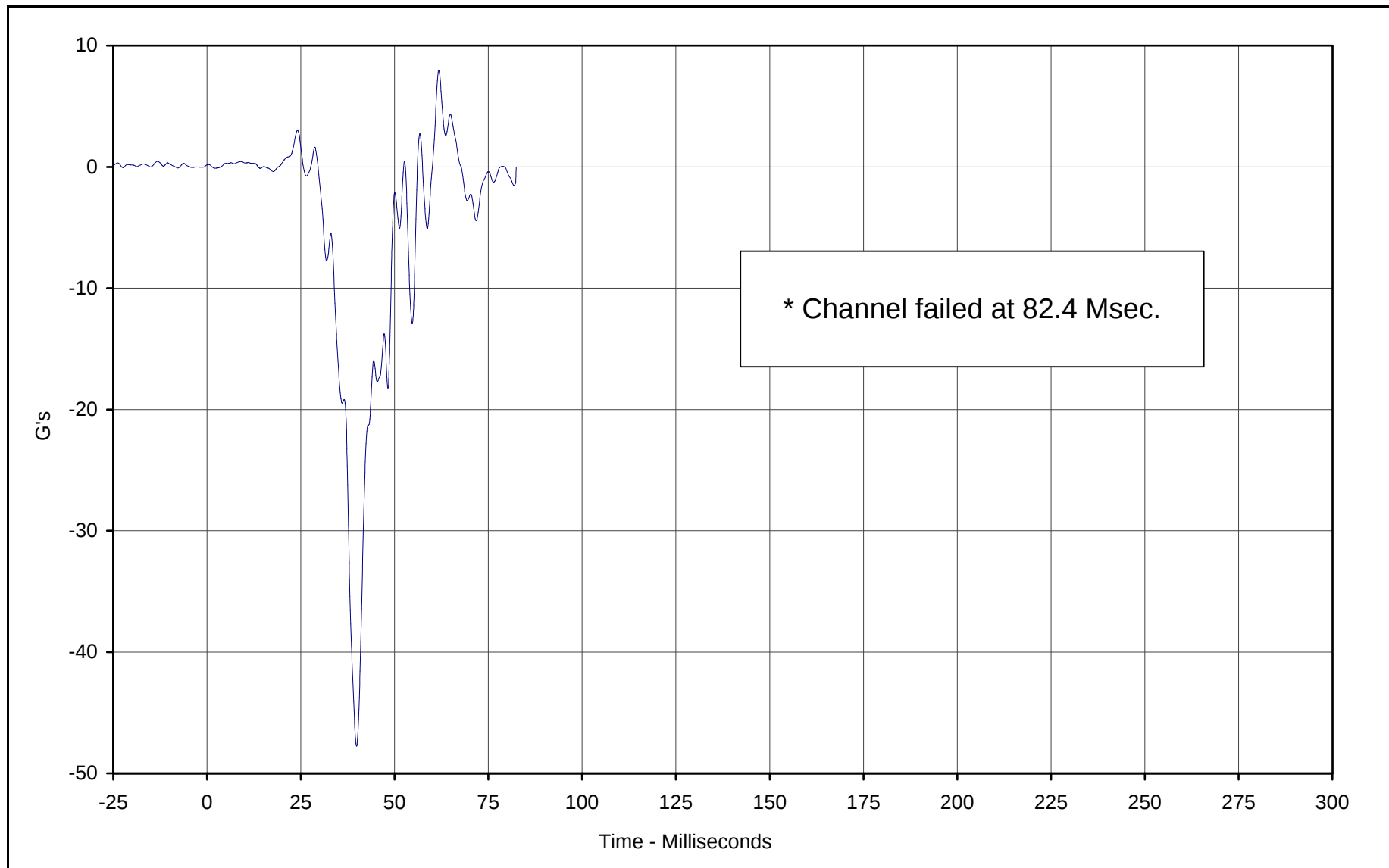
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

* Channel failed at 82.4 Msec.



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B-114



Curve Description: Passenger Left Foot Aft Z *

Maximum Value: 7.9 at 61.8 Milliseconds

Minimum Value: -47.8 at 39.9 Milliseconds

SAE Filter Class: 180

Date of Test: 5/9/01

Curve Number: FIL-080

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

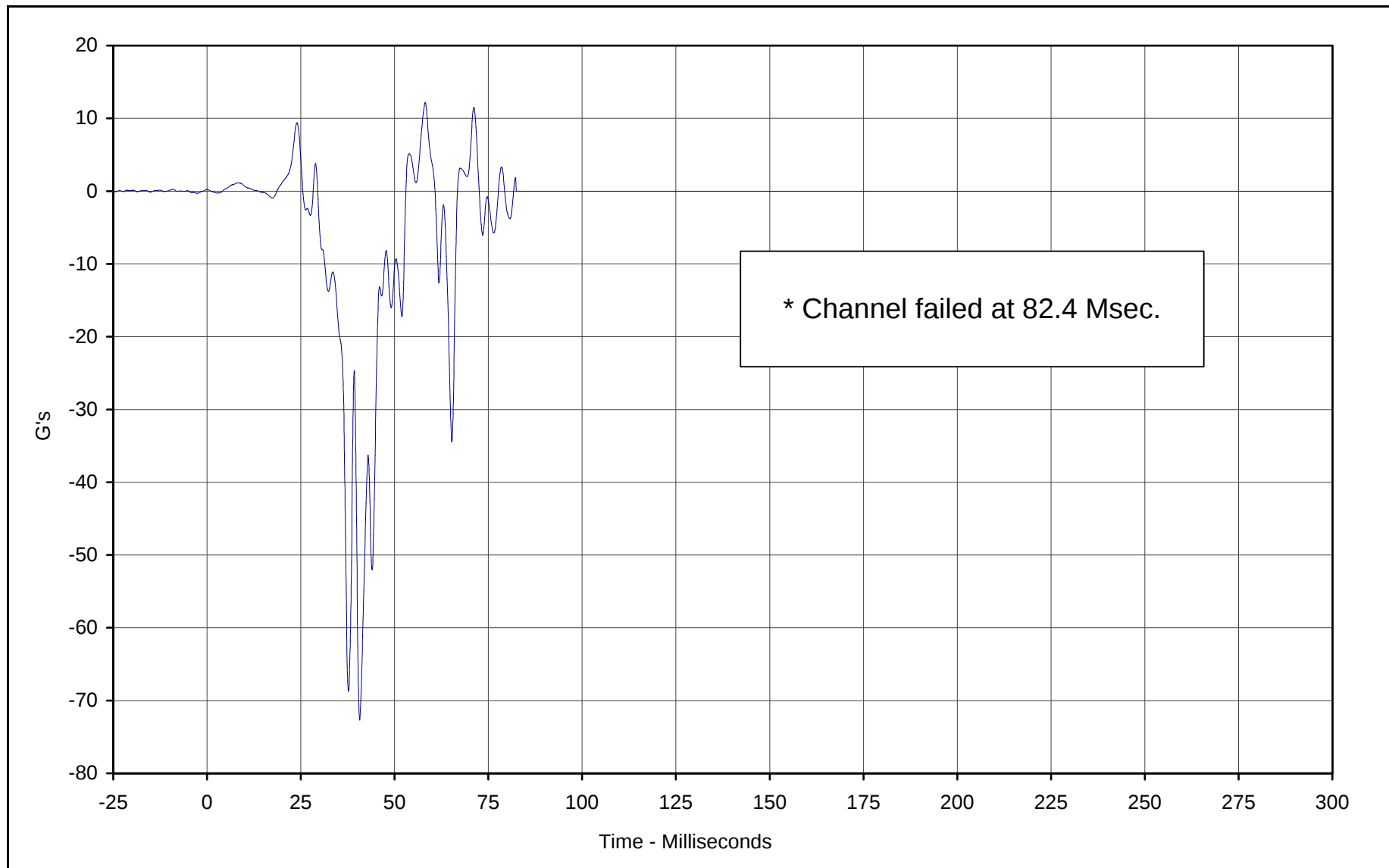
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

* Channel failed at 82.4 Msec.



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B-115



Curve Description: Passenger Left Foot Fore Z *

Maximum Value: 12.2 at 58.2 Milliseconds

Minimum Value: -72.7 at 40.7 Milliseconds

SAE Filter Class: 180

Date of Test: 5/9/01

Curve Number: FIL-081

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

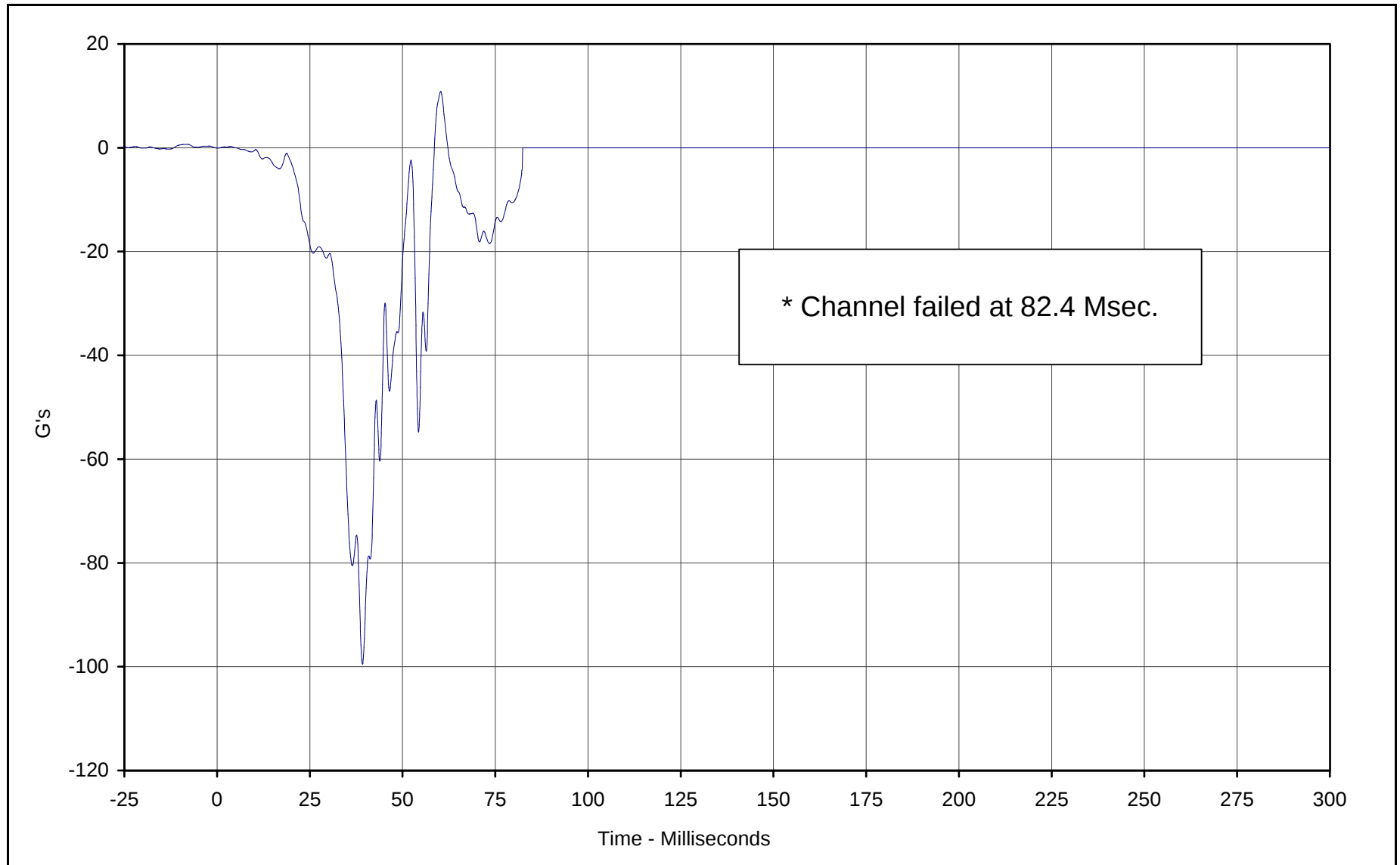
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

* Channel failed at 82.4 Msec.



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Curve Description: Passenger Right Foot Aft X *

Maximum Value: 10.9 at 60.3 Milliseconds

Minimum Value: -99.5 at 39.2 Milliseconds

SAE Filter Class: 180

Date of Test: 5/9/01

Curve Number: FIL-082

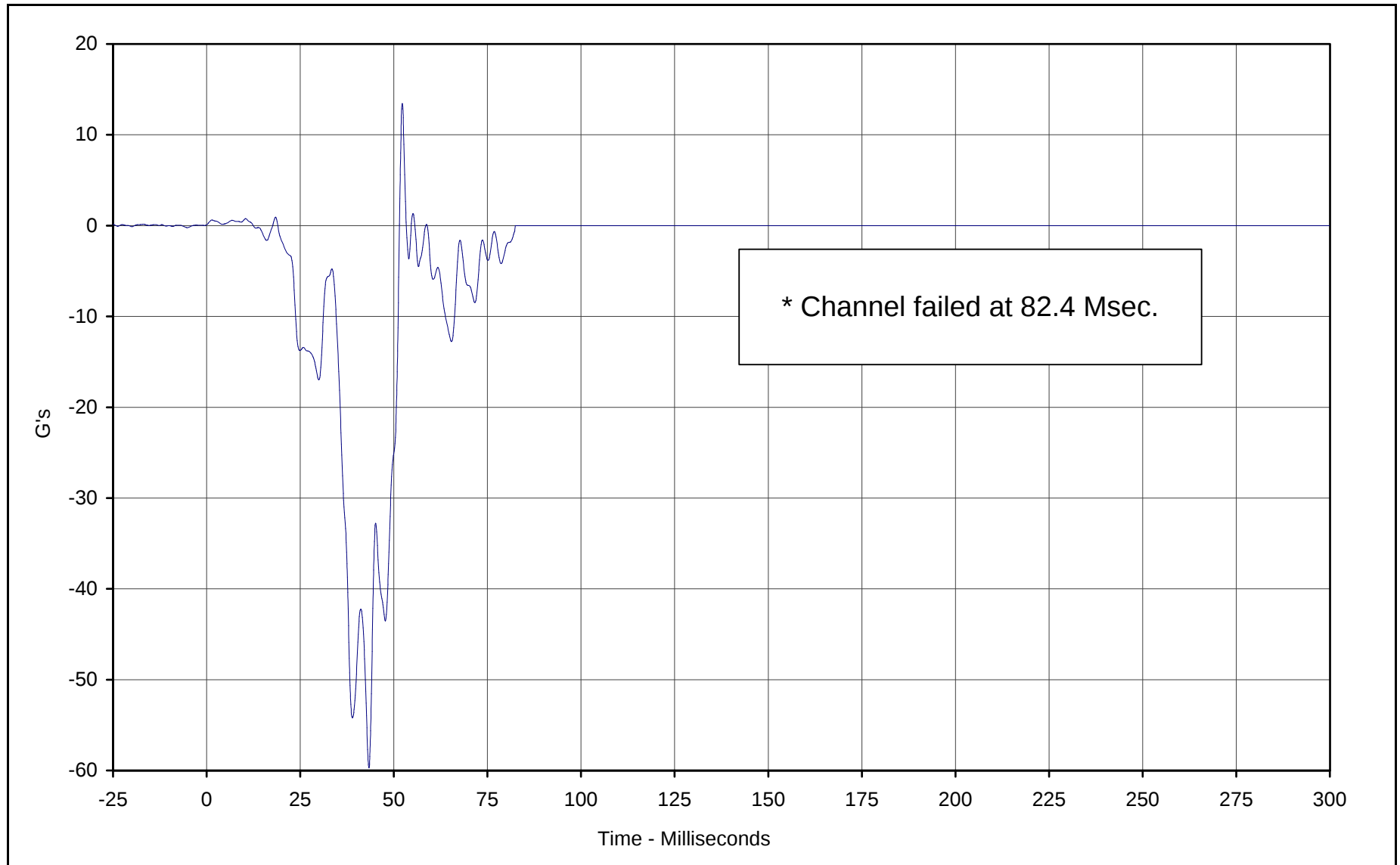
Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

* Channel failed at 82.4 Msec.



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Curve Description: Passenger Right Foot Aft Z *

Maximum Value: 13.4 at 52.2 Milliseconds

Minimum Value: -59.7 at 43.4 Milliseconds

SAE Filter Class: 180

Date of Test: 5/9/01

Curve Number: FIL-083

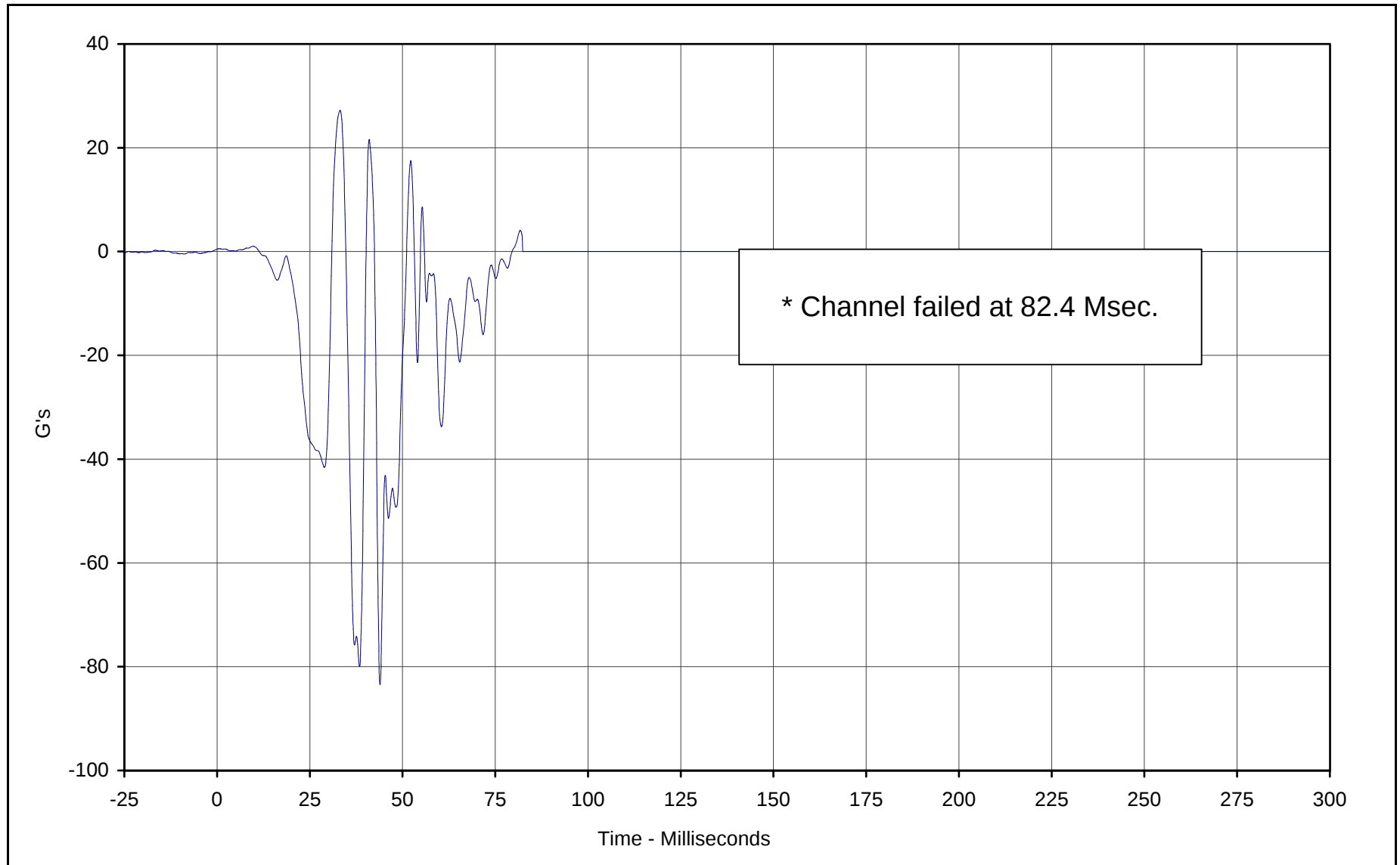
Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

* Channel failed at 82.4 Msec.



B-118



Curve Description: Passenger Right Foot Fore Z *

Maximum Value: 27.2 at 33.2 Milliseconds

Minimum Value: -83.4 at 43.9 Milliseconds

SAE Filter Class: 180

Date of Test: 5/9/01

Curve Number: FIL-084

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

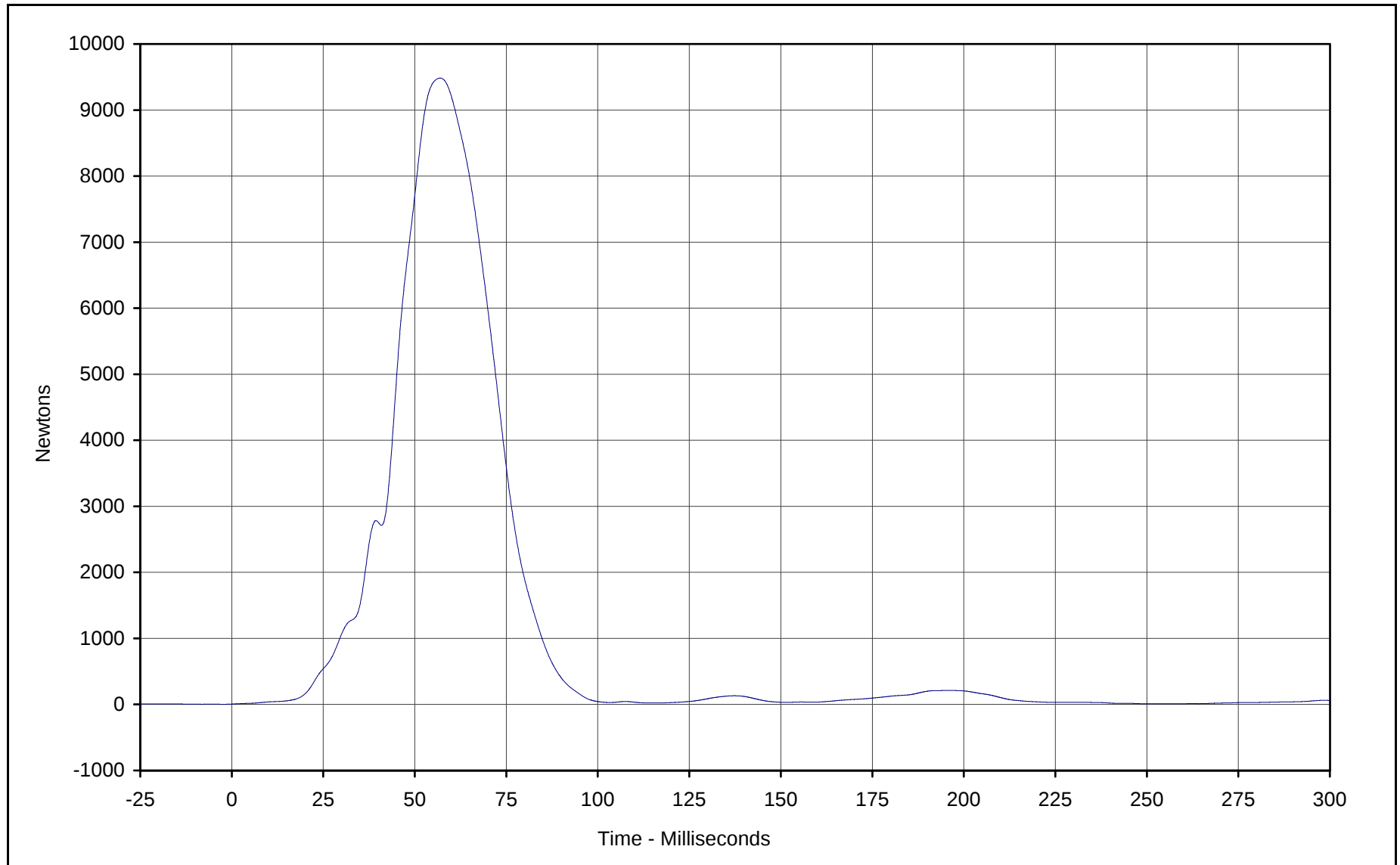
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

* Channel failed at 82.4 Msec.



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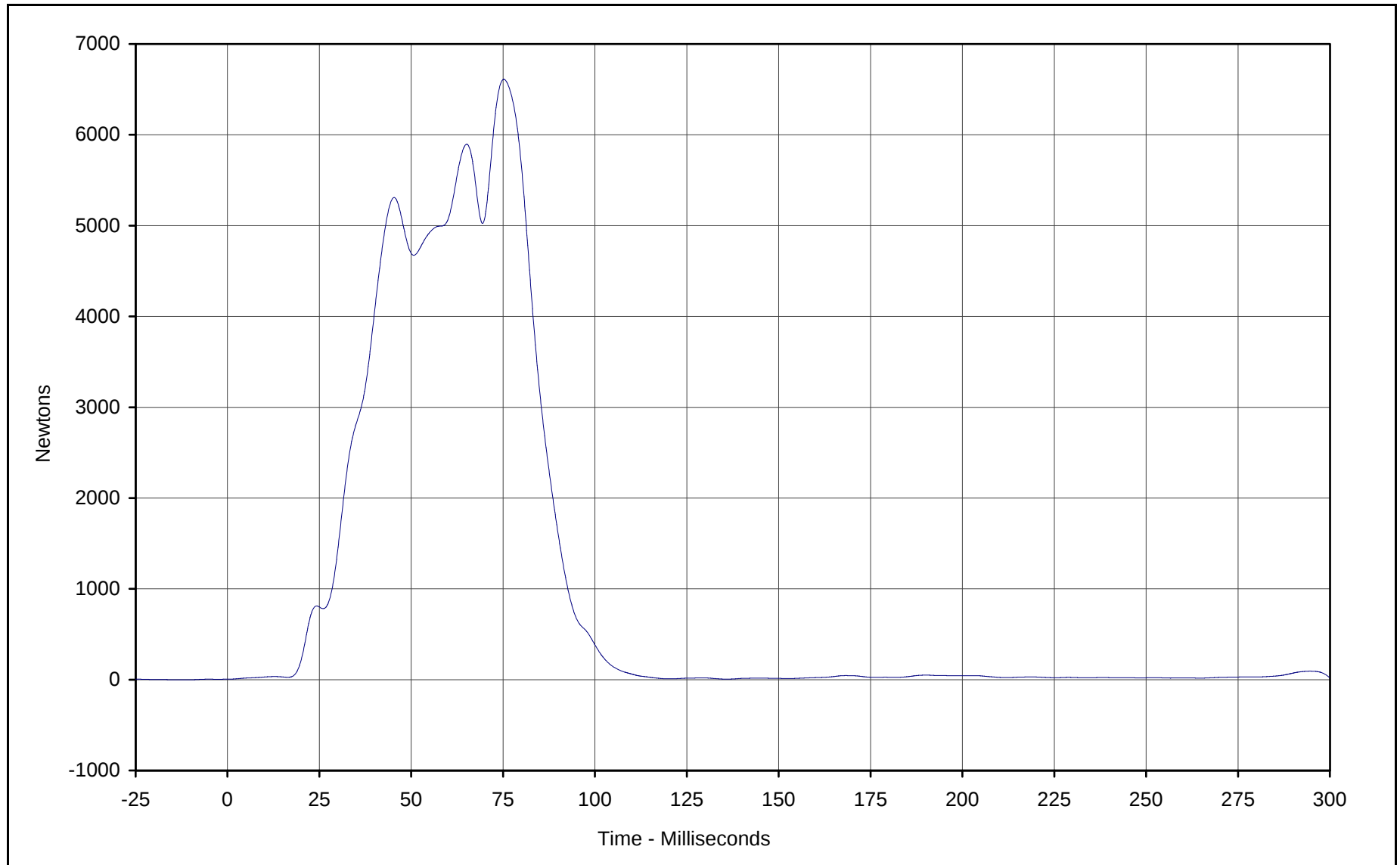
Curve Description: Passenger Lap Belt Force
Maximum Value: 9483.7 at 56.9 Milliseconds
Minimum Value: 5.7 at 0.0 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-085

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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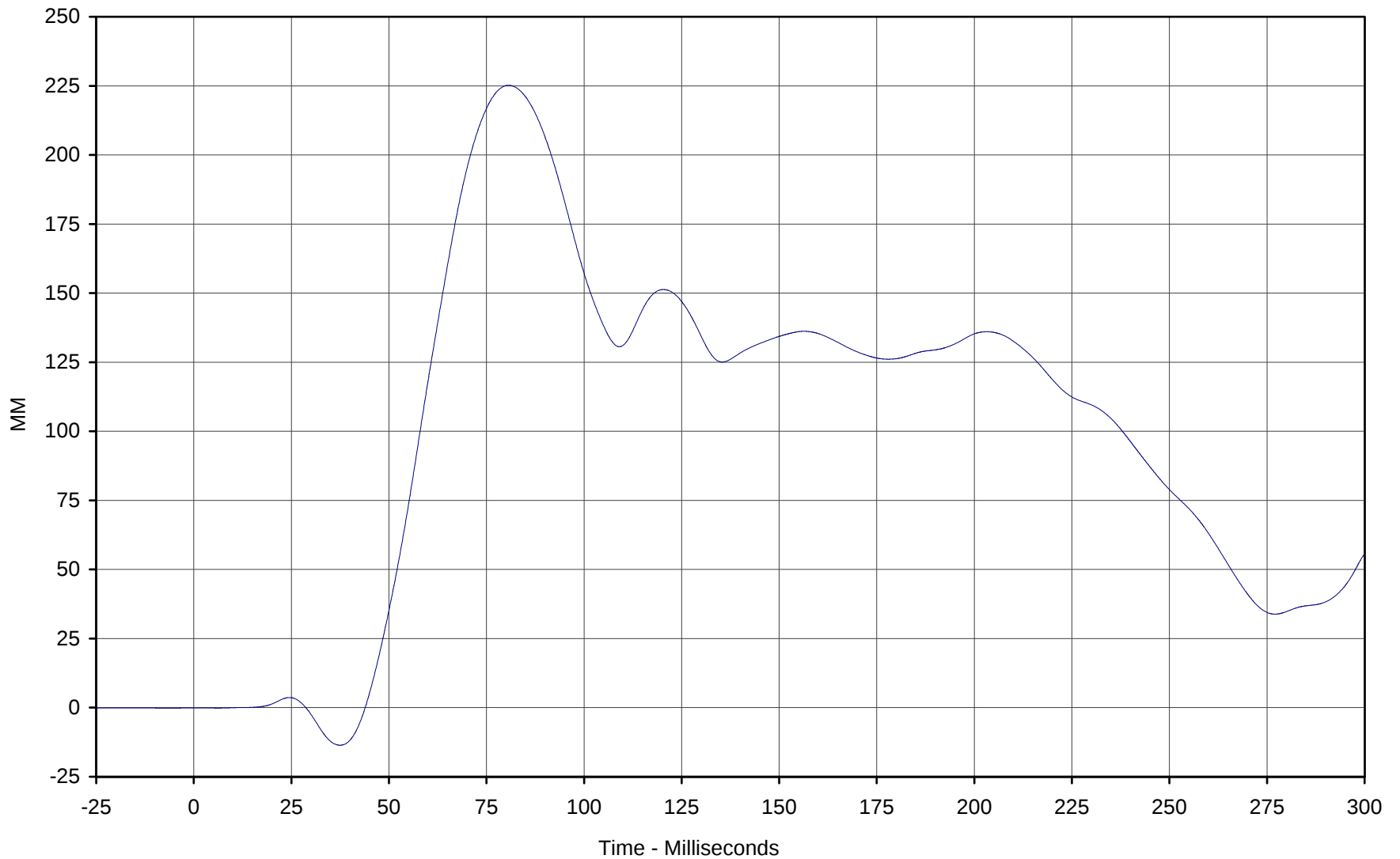
Curve Description: Passenger Shoulder Belt Force
Maximum Value: 6610.7 at 75.2 Milliseconds
Minimum Value: 5.5 at 0.0 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-086

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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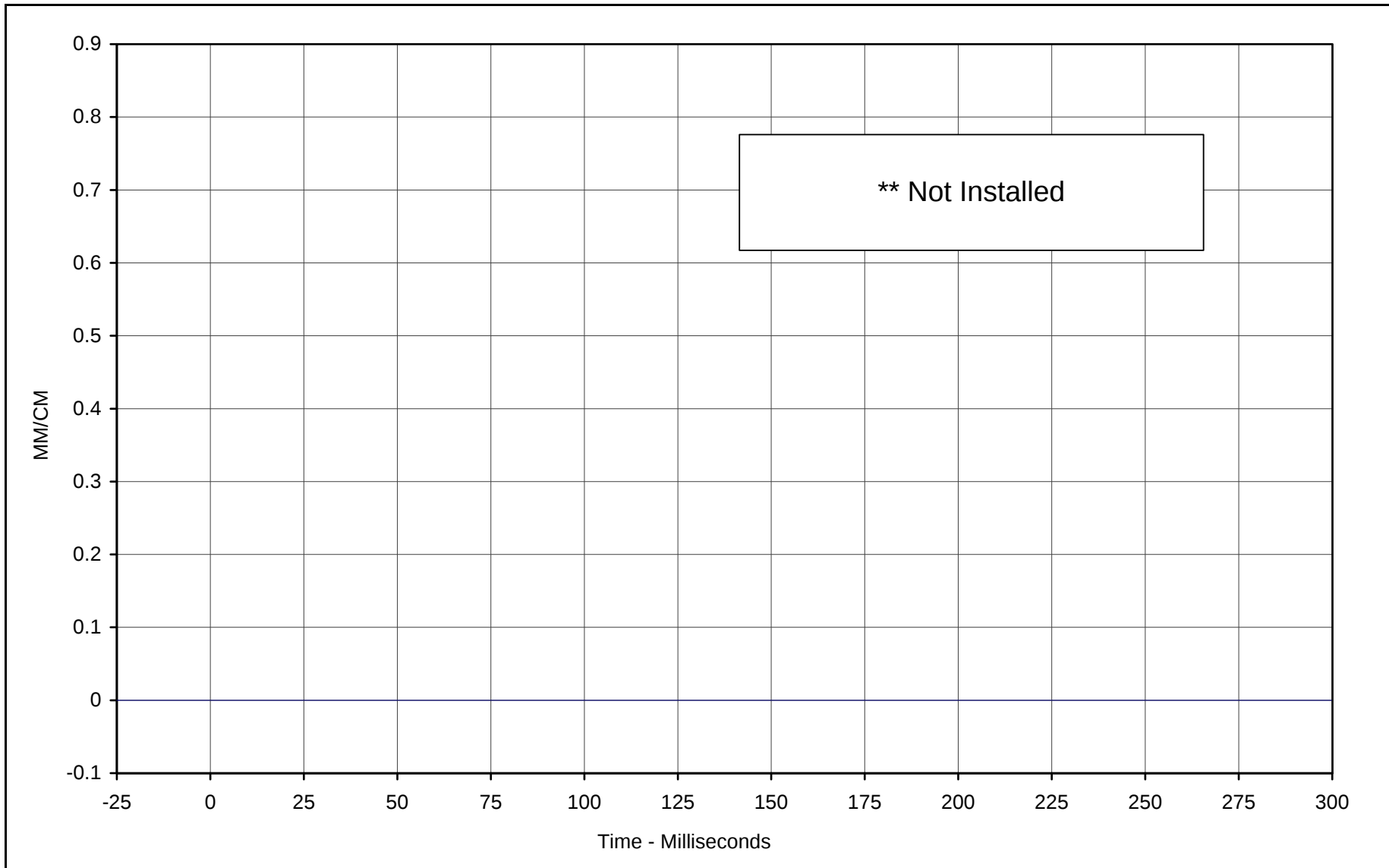
Curve Description: Passenger Shoulder Belt Pullout
Maximum Value: 225.2 at 80.7 Milliseconds
Minimum Value: -13.6 at 37.5 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-087

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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Curve Description: Passenger Shoulder Belt Elongation **

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Maximum Value: 0.0 at 0.0 Milliseconds

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

Minimum Value: 0.0 at 0.0 Milliseconds

SAE Filter Class: 60

Date of Test: 5/9/01

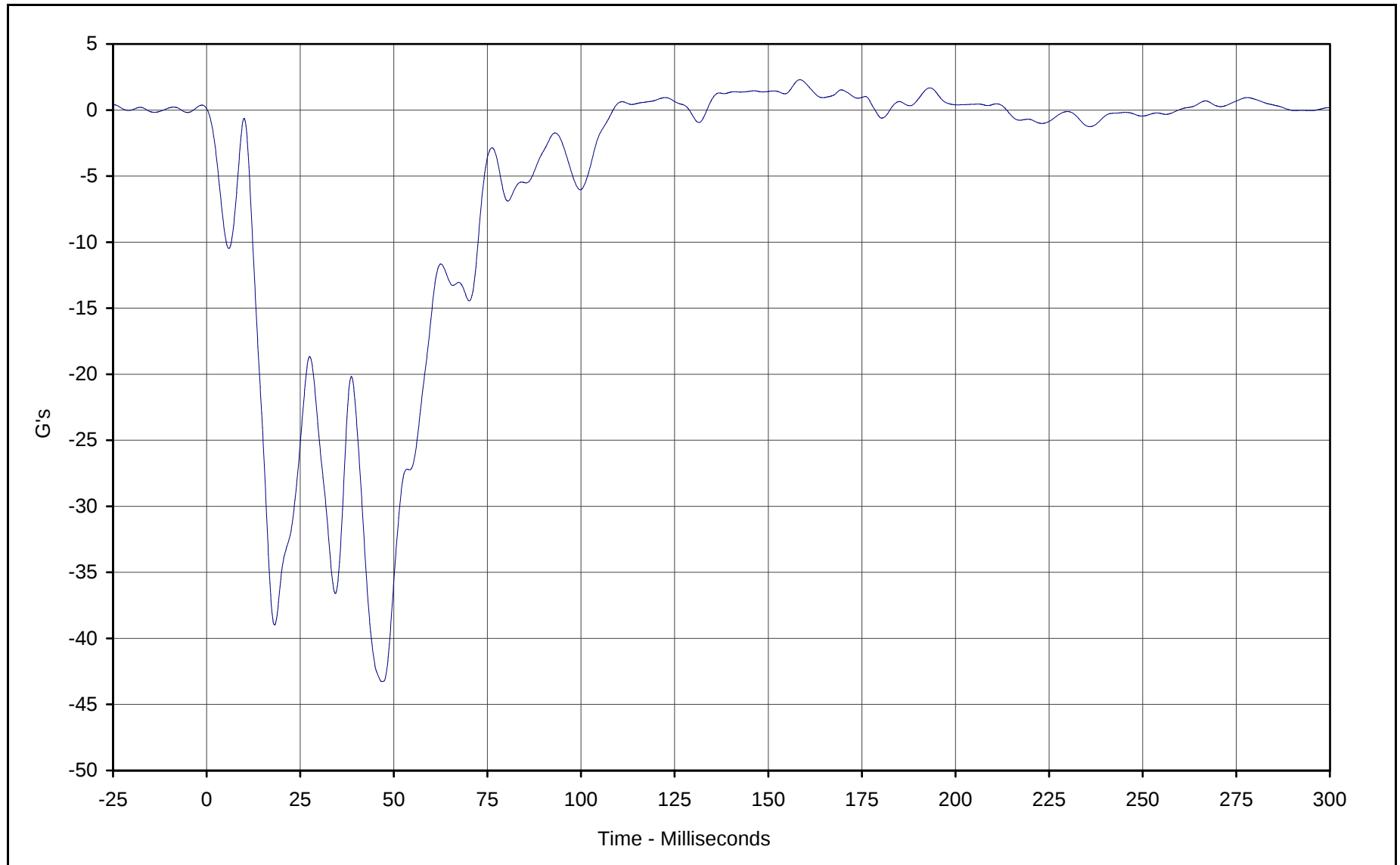
Curve Number: FIL-088

** Not installed



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B-123



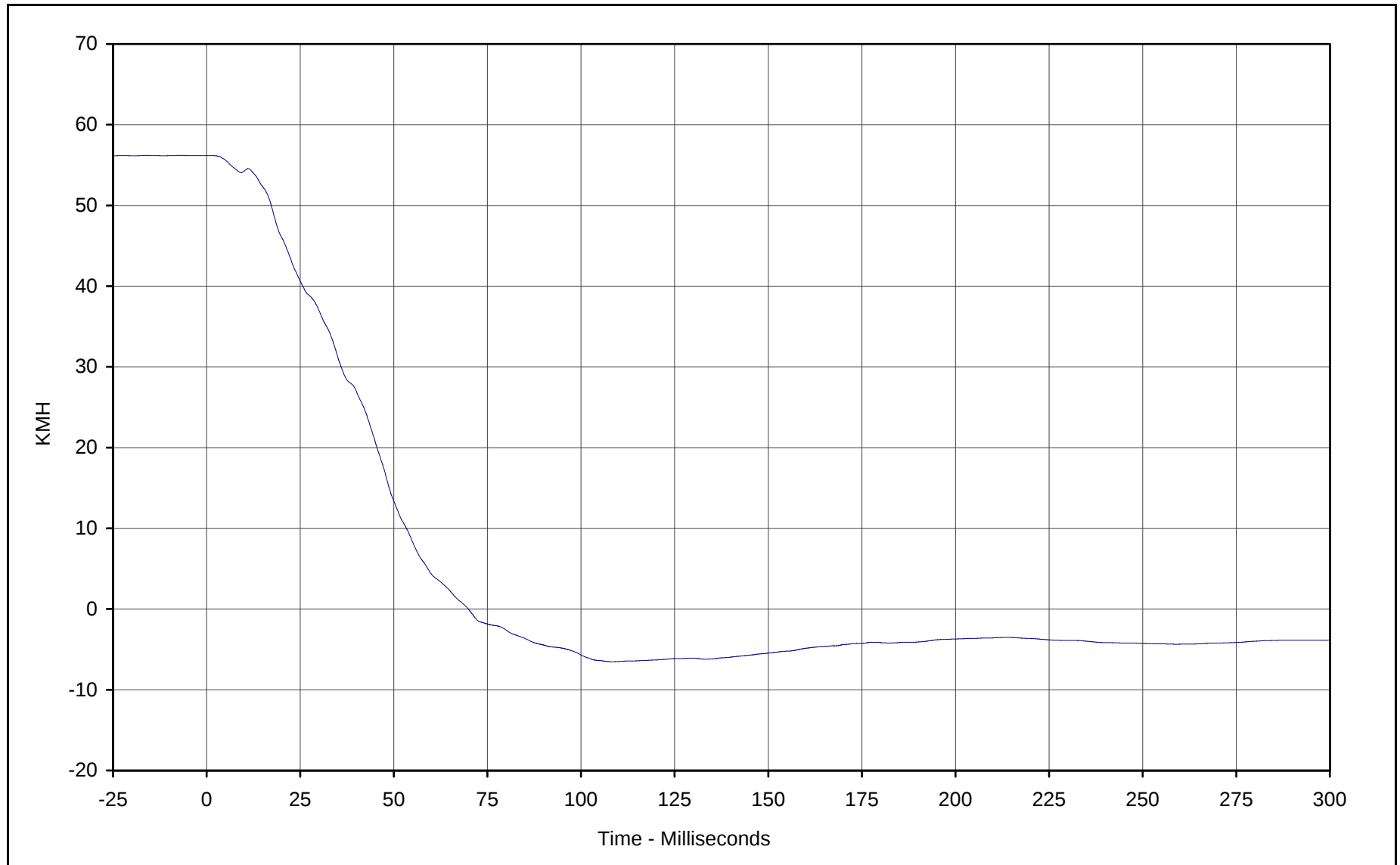
Curve Description: Vehicle Left Rear Primary
Maximum Value: 2.3 at 158.5 Milliseconds
Minimum Value: -43.3 at 46.9 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-089

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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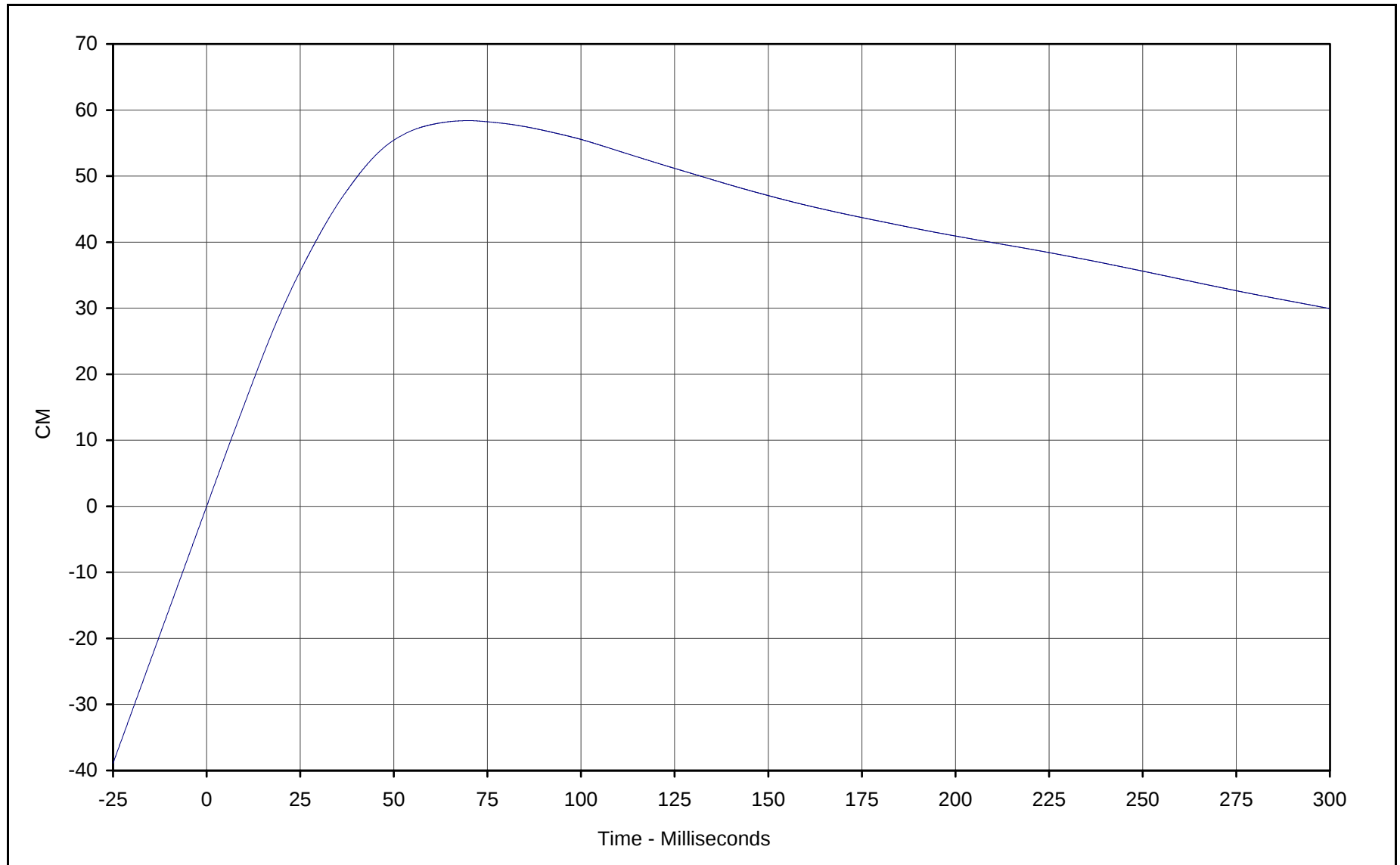
Curve Description: Vehicle Left Rear Primary Velocity
Maximum Value: 56.2 at 0.0 Milliseconds
Minimum Value: -6.5 at 108.4 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN1-089

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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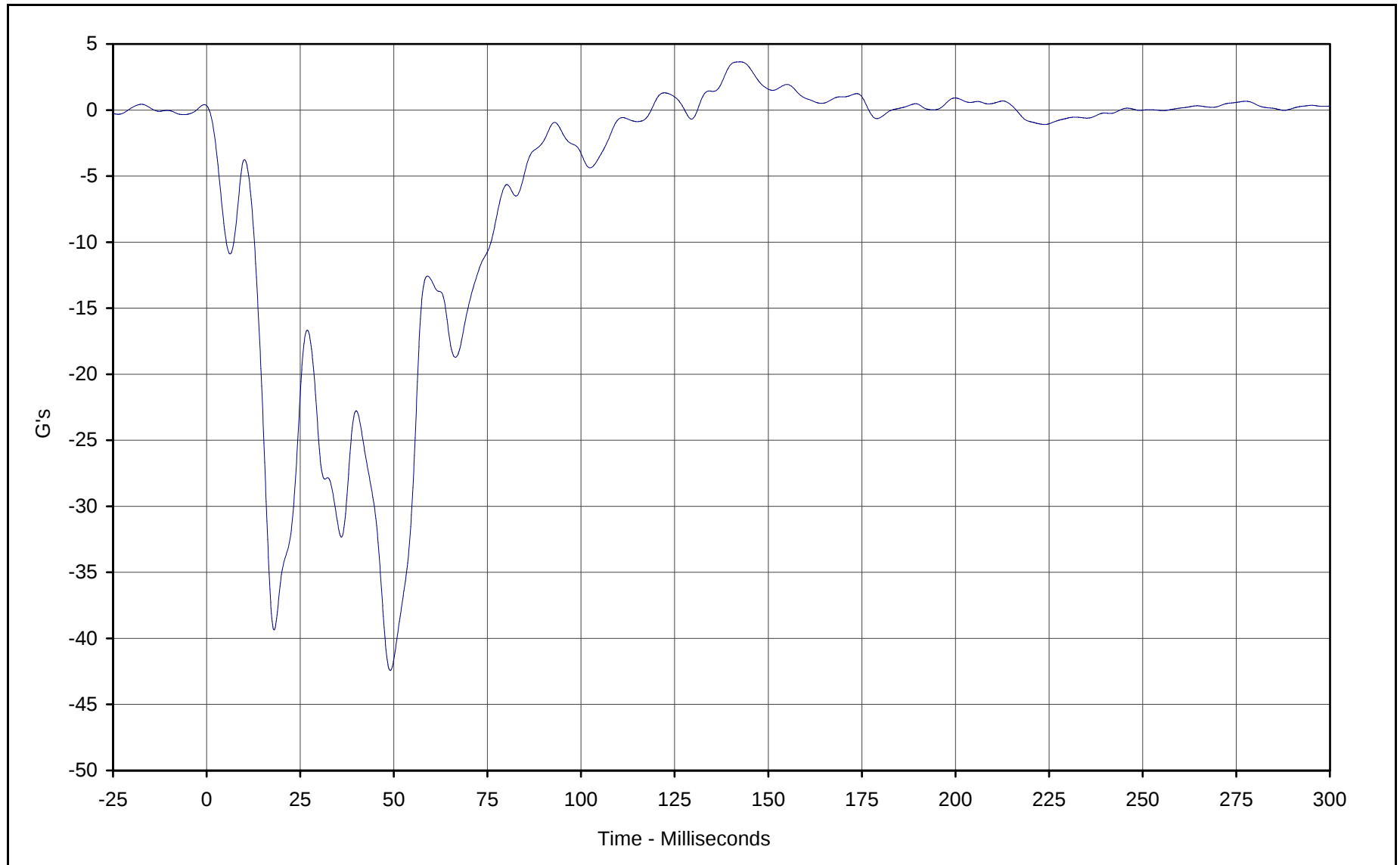


Curve Description: Vehicle Left Rear Primary Displ.
Maximum Value: 58.4 at 69.9 Milliseconds
Minimum Value: 0.0 at 0.0 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN2-089

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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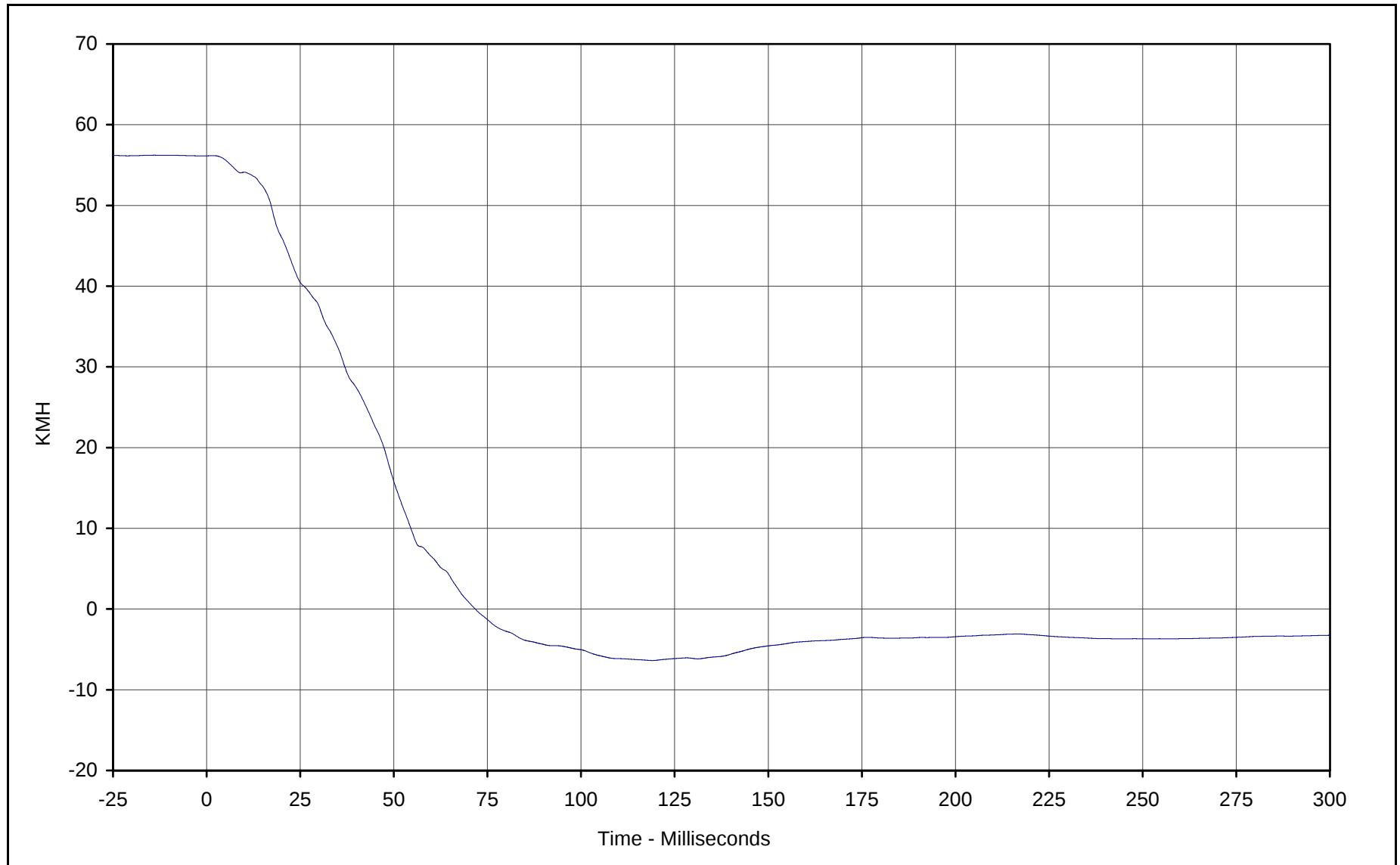


Curve Description: Vehicle Right Rear Primary
Maximum Value: 3.6 at 142.4 Milliseconds
Minimum Value: -42.4 at 49.1 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-090

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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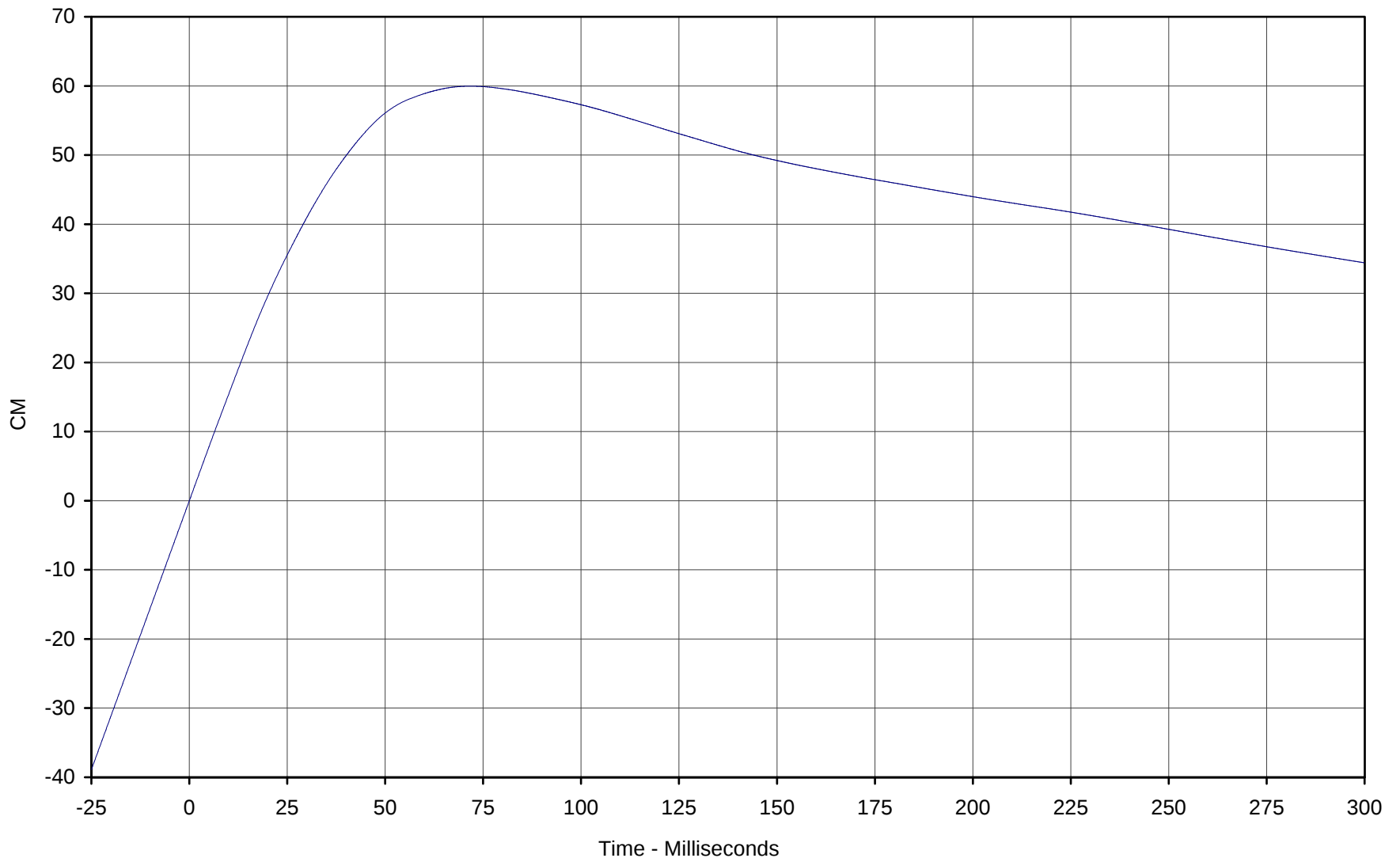
Curve Description: Vehicle Right Rear Primary Velocity
Maximum Value: 56.2 at 1.8 Milliseconds
Minimum Value: -6.4 at 119.0 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN1-090

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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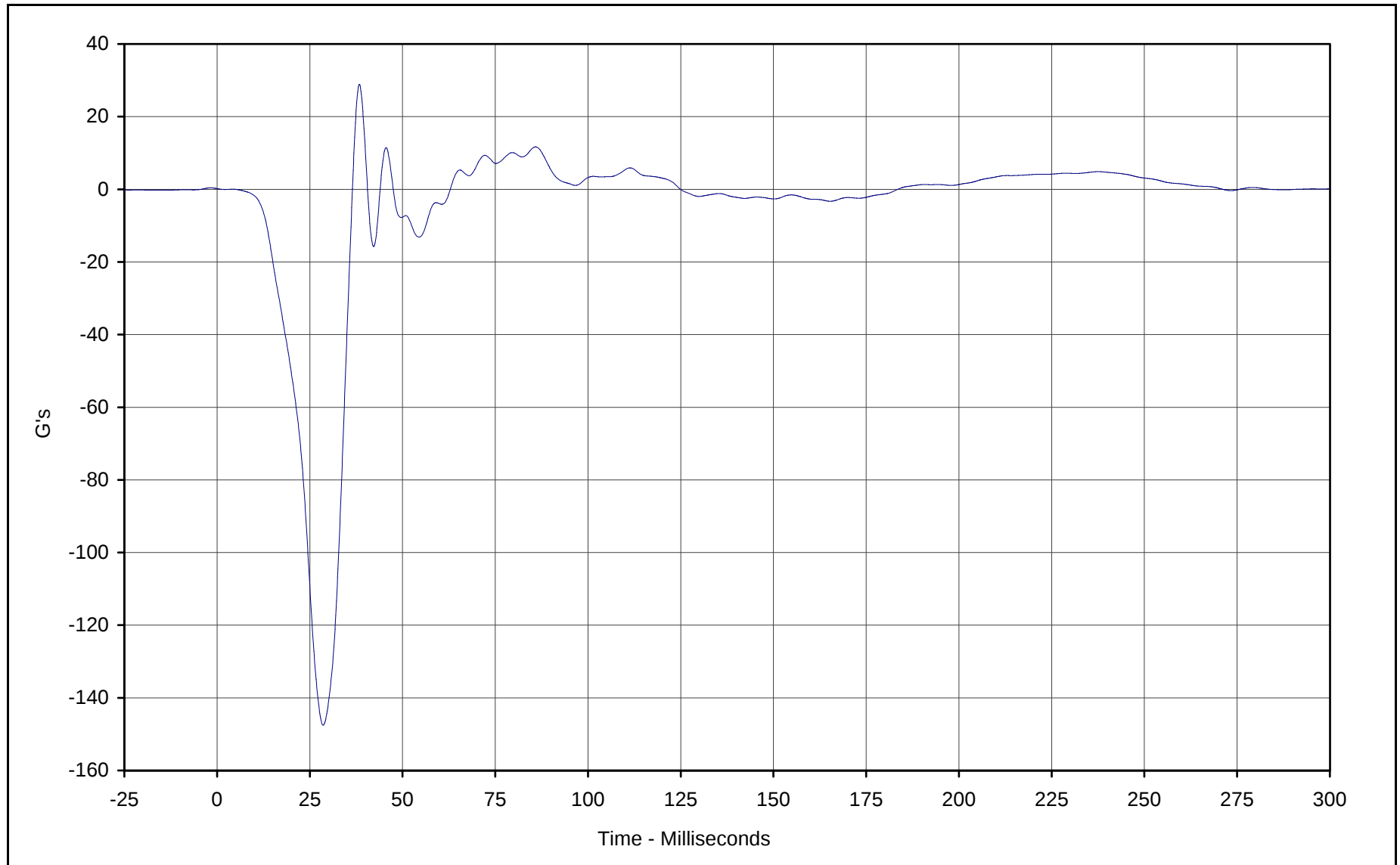
Curve Description: Vehicle Right Rear Primary Displ.
Maximum Value: 60.0 at 71.8 Milliseconds
Minimum Value: 0.0 at 0.0 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN2-090

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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Curve Description: Vehicle Engine Top

Maximum Value: 28.9 at 38.4 Milliseconds

Minimum Value: -147.5 at 28.6 Milliseconds

SAE Filter Class: 60

Date of Test: 5/9/01

Curve Number: FIL-091

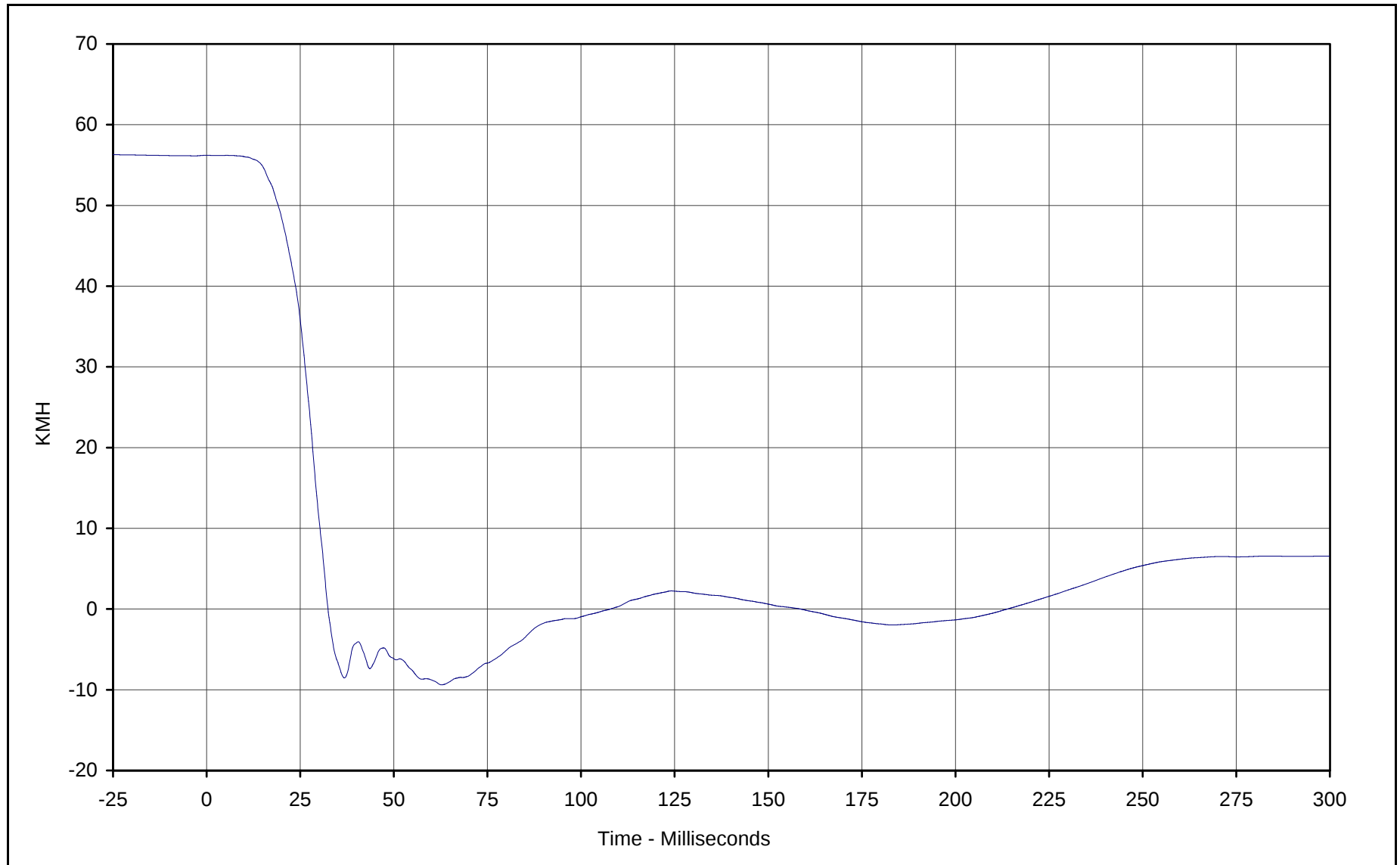
Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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B-130



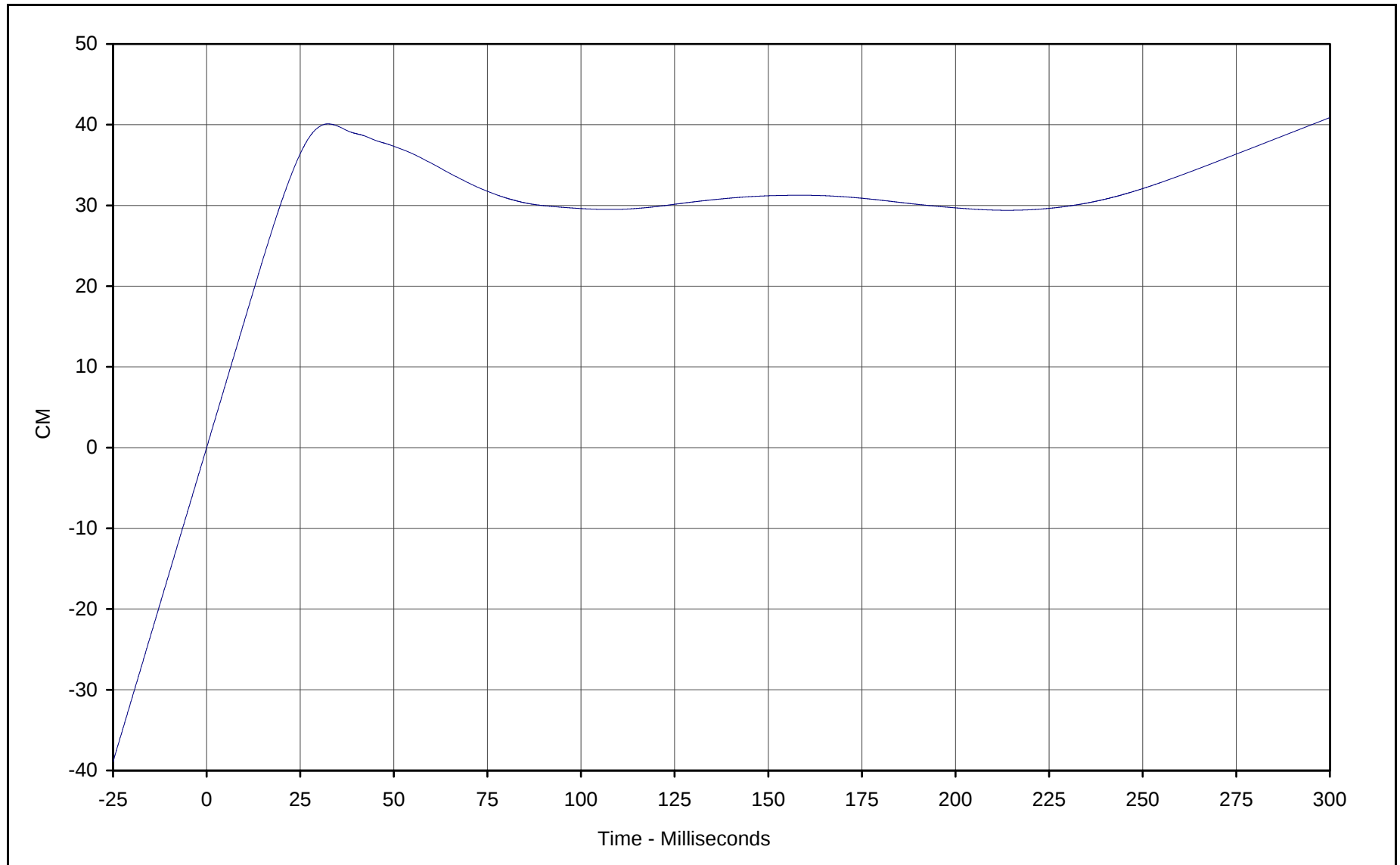
Curve Description: Vehicle Engine Top Velocity
Maximum Value: 56.2 at 0.0 Milliseconds
Minimum Value: -9.4 at 62.8 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN1-091

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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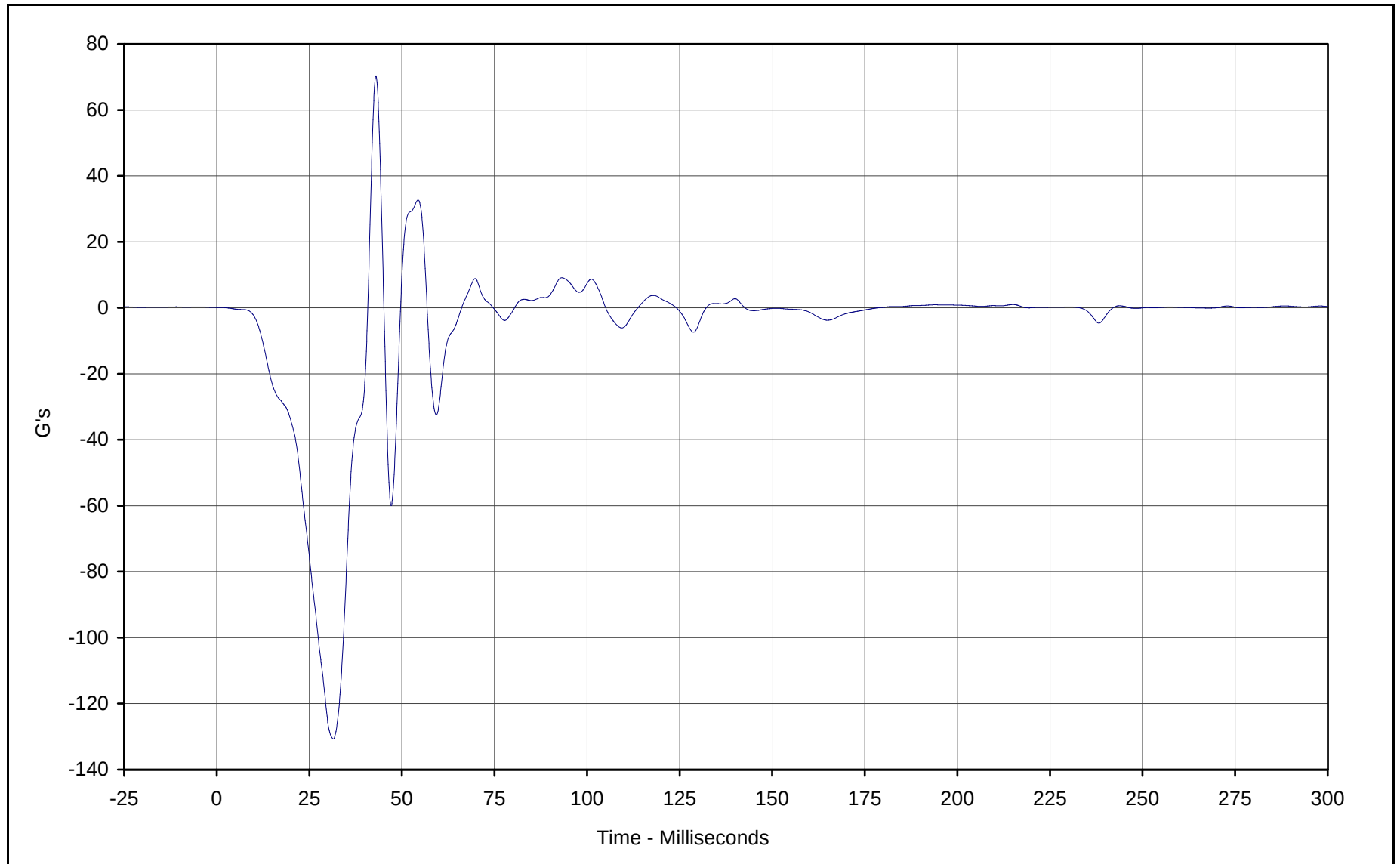
Curve Description: Vehicle Engine Top Displ.
Maximum Value: 40.9 at 299.9 Milliseconds
Minimum Value: 0.0 at 0.0 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN2-091

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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B-132



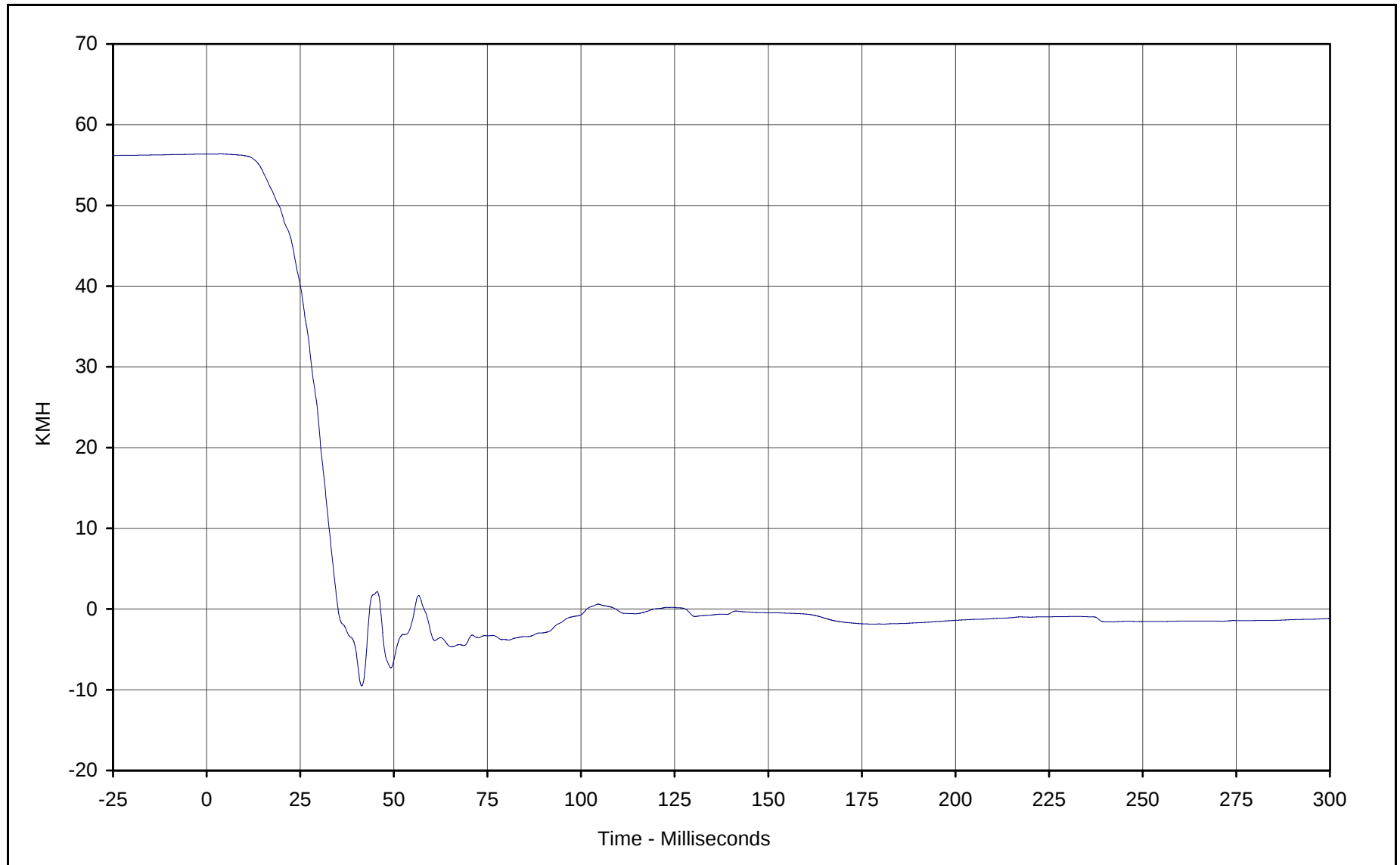
Curve Description: Vehicle Engine Bottom
Maximum Value: 70.4 at 43.0 Milliseconds
Minimum Value: -130.7 at 31.5 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-092

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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B-133



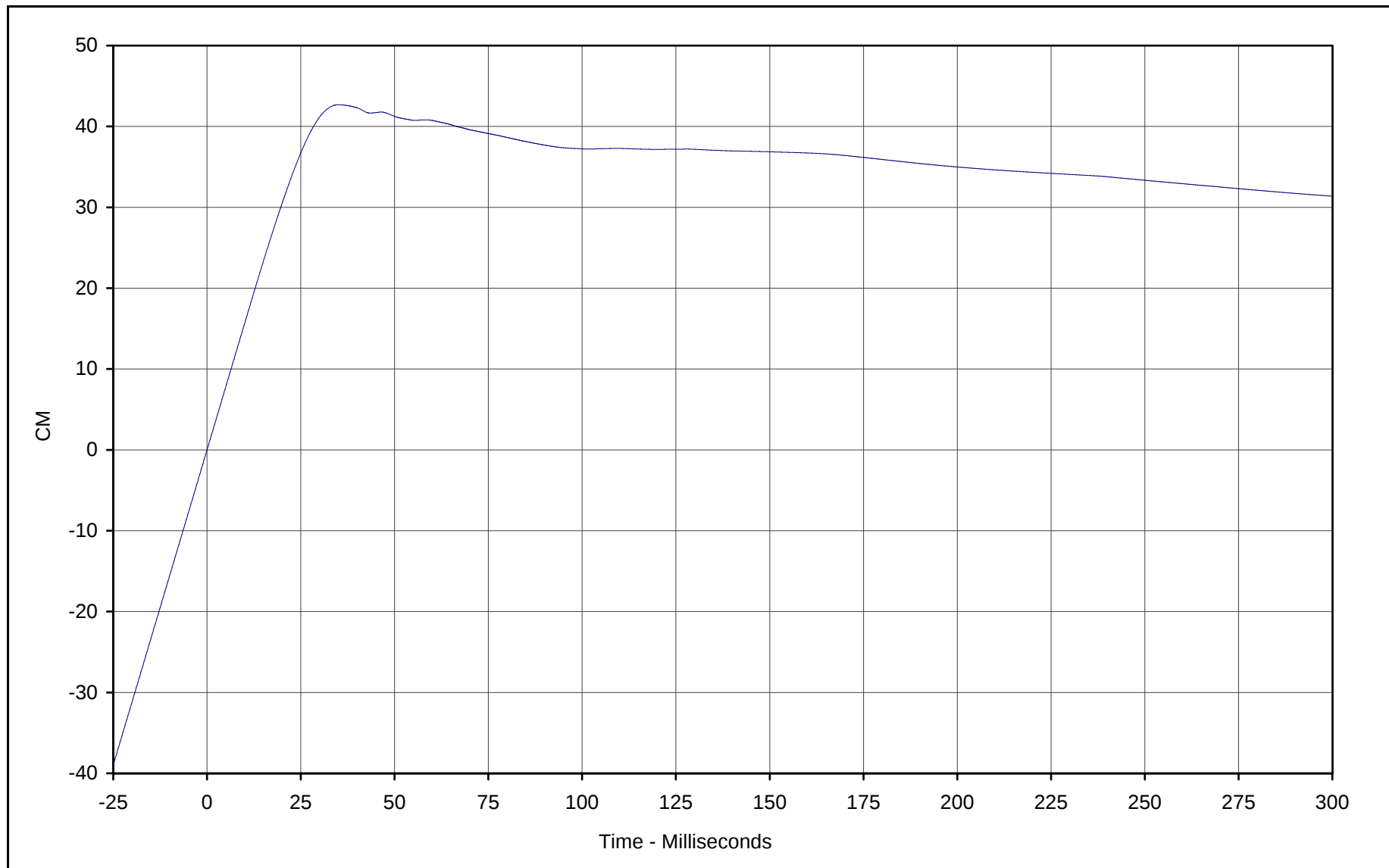
Curve Description: Vehicle Engine Bottom Velocity
Maximum Value: 56.4 at 3.9 Milliseconds
Minimum Value: -9.5 at 41.4 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN1-092

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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B-134



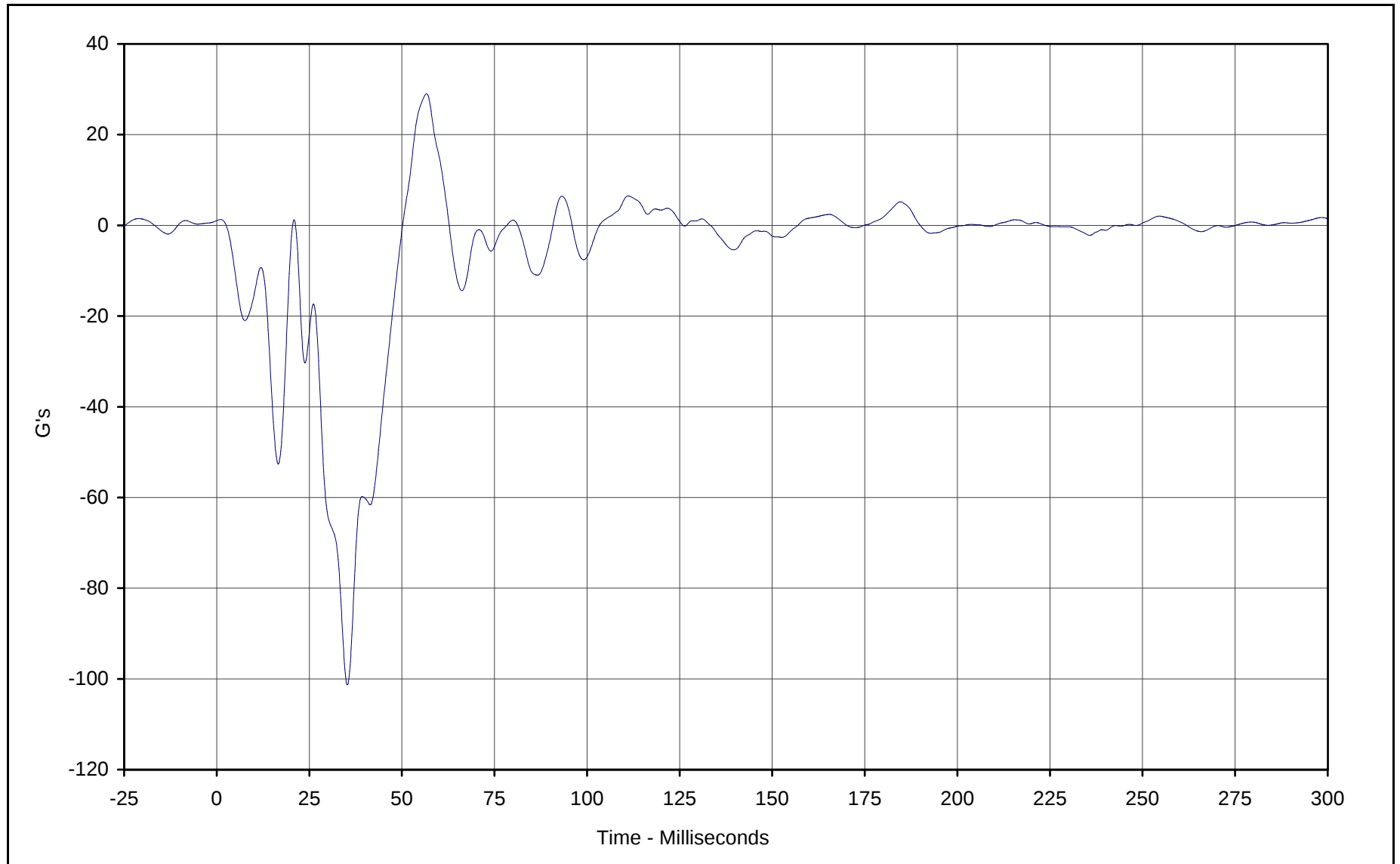
Curve Description: Vehicle Engine Bottom Displ.
Maximum Value: 42.7 at 35.1 Milliseconds
Minimum Value: 0.0 at 0.0 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN2-092

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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B-135



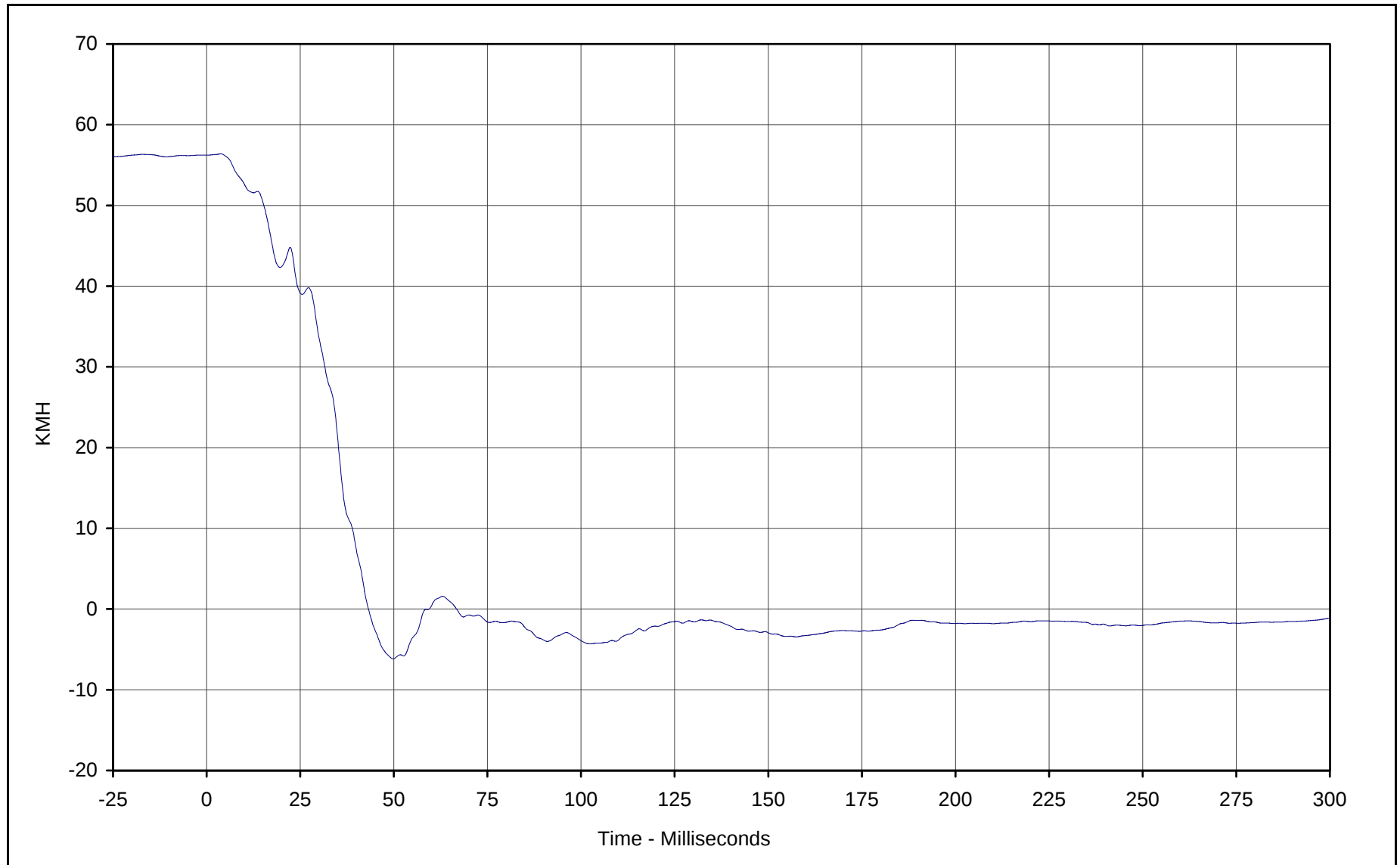
Curve Description: Vehicle Left Brake Caliper
Maximum Value: 29.0 at 56.7 Milliseconds
Minimum Value: -101.3 at 35.3 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-093

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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B-136

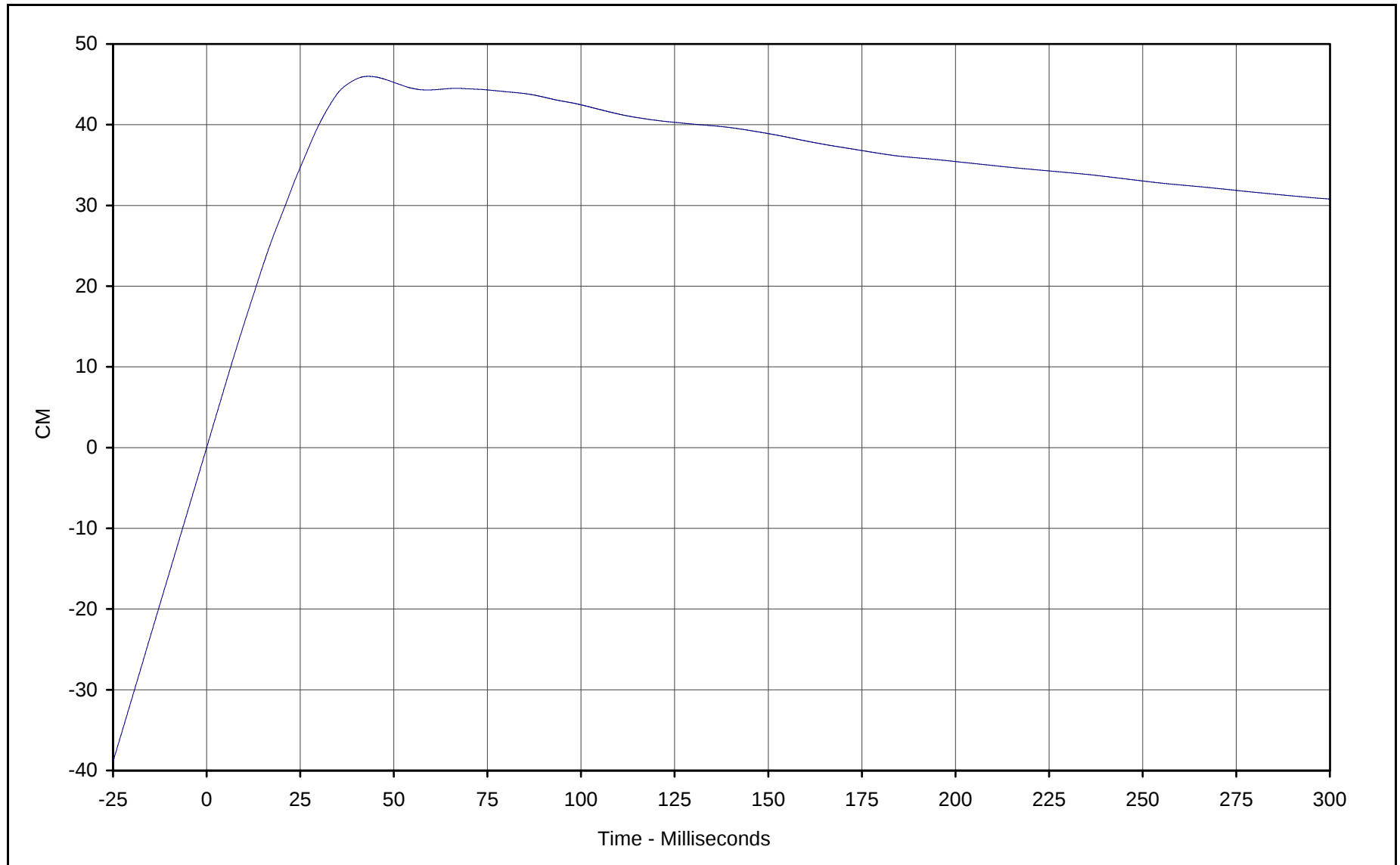


Curve Description: Vehicle Left Brake Caliper Velocity
Maximum Value: 56.4 at 3.8 Milliseconds
Minimum Value: -6.2 at 49.8 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN1-093

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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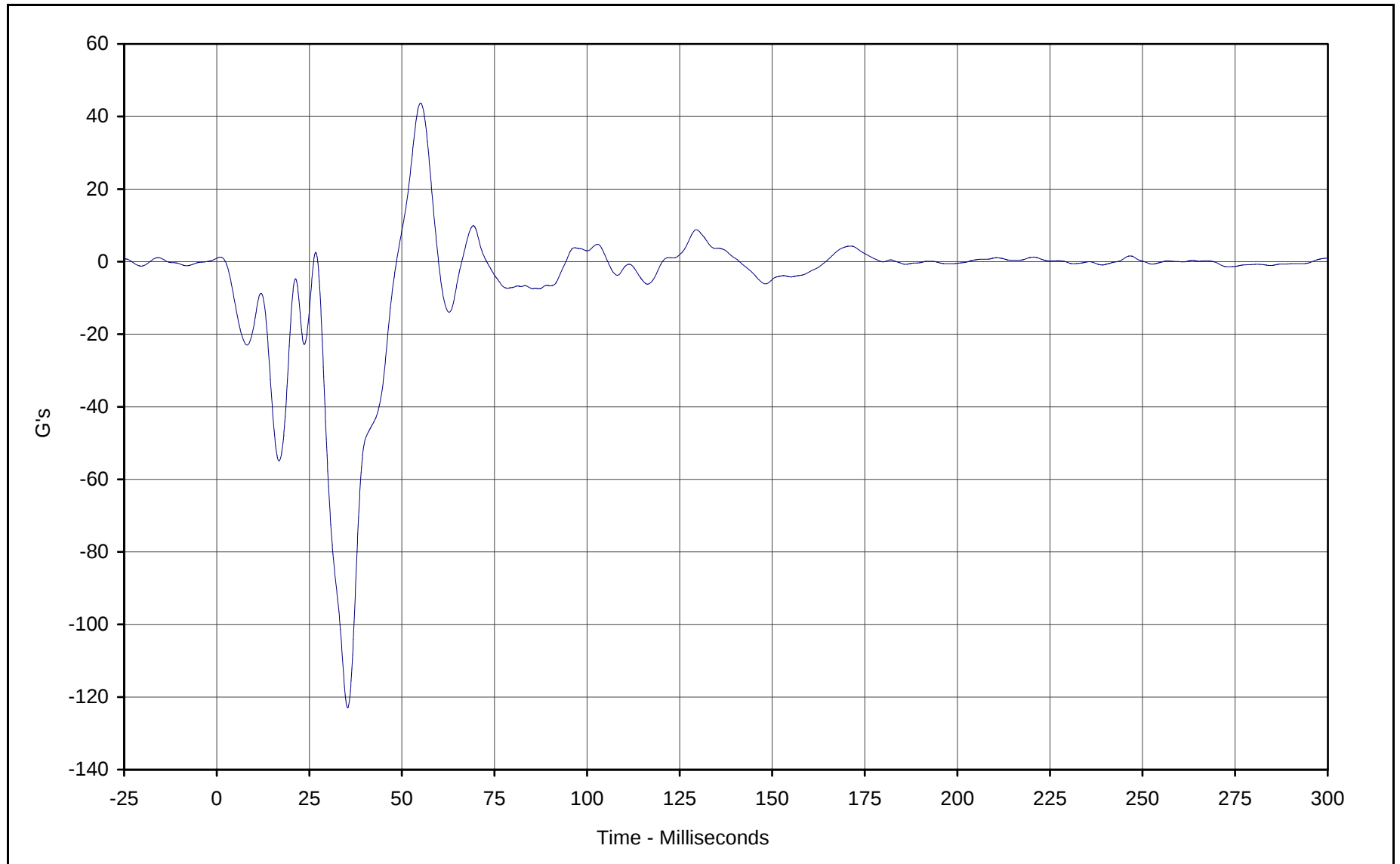


Curve Description: Vehicle Left Brake Caliper Displ.
Maximum Value: 46.0 at 43.2 Milliseconds
Minimum Value: 0.0 at 0.0 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN2-093

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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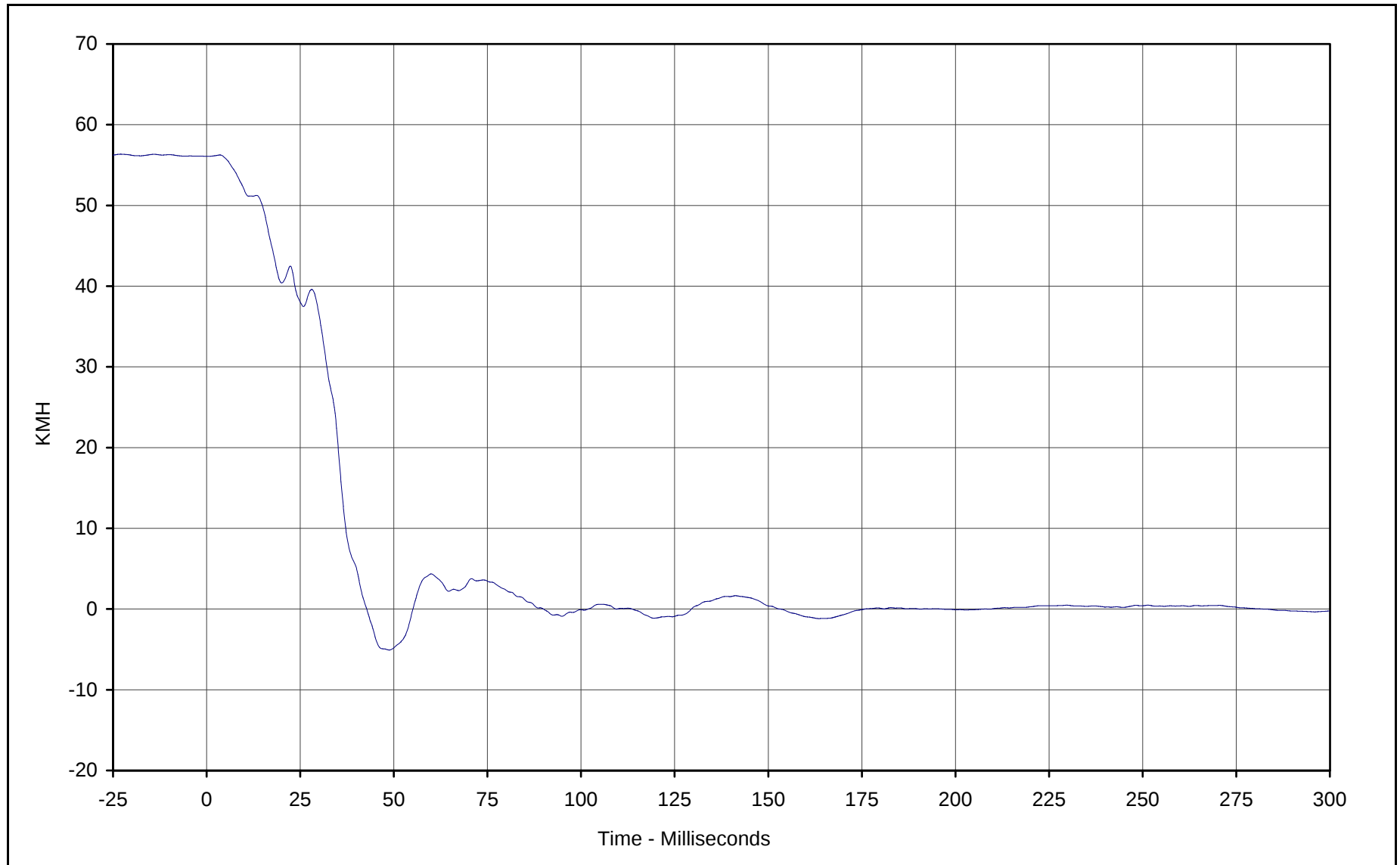
Curve Description: Vehicle Right Brake Caliper
Maximum Value: 43.7 at 55.0 Milliseconds
Minimum Value: -122.9 at 35.4 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-094

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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B-139



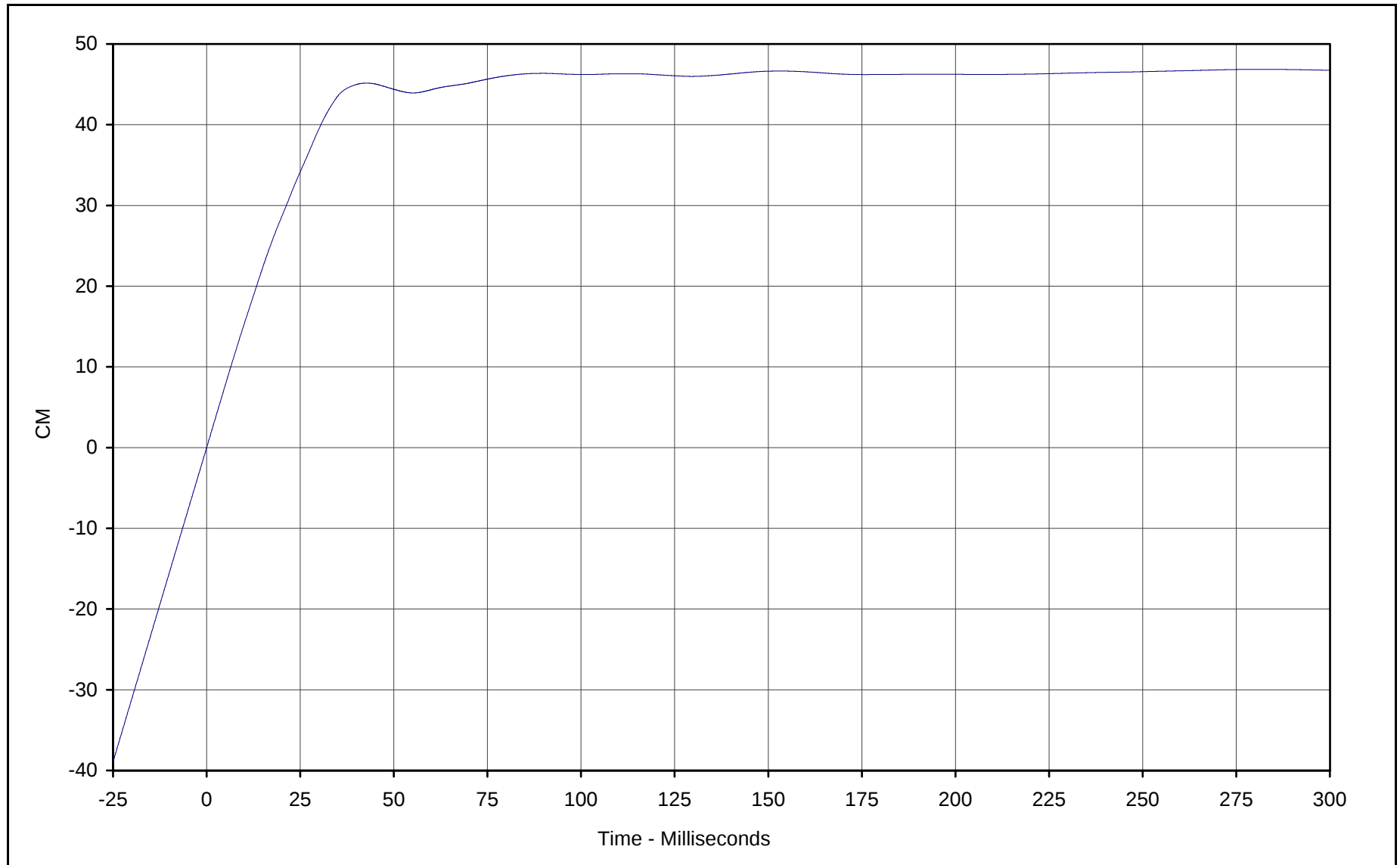
Curve Description: Vehicle Right Brake Caliper Velocity
Maximum Value: 56.3 at 3.6 Milliseconds
Minimum Value: -5.1 at 48.8 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN1-094

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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B-140



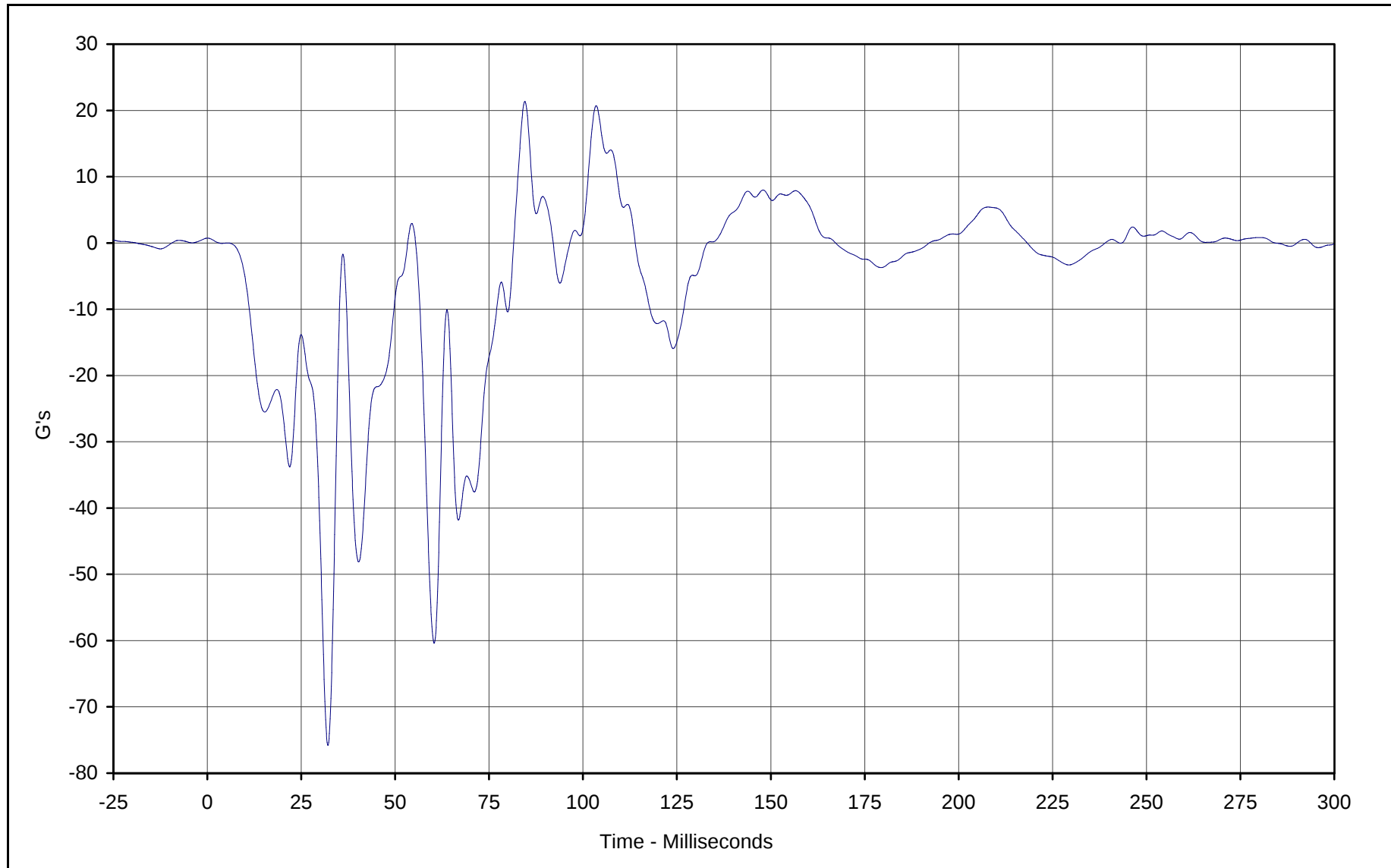
Curve Description: Vehicle Right Brake Caliper Displ.
Maximum Value: 46.9 at 281.9 Milliseconds
Minimum Value: 0.0 at 0.0 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN2-094

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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B-141



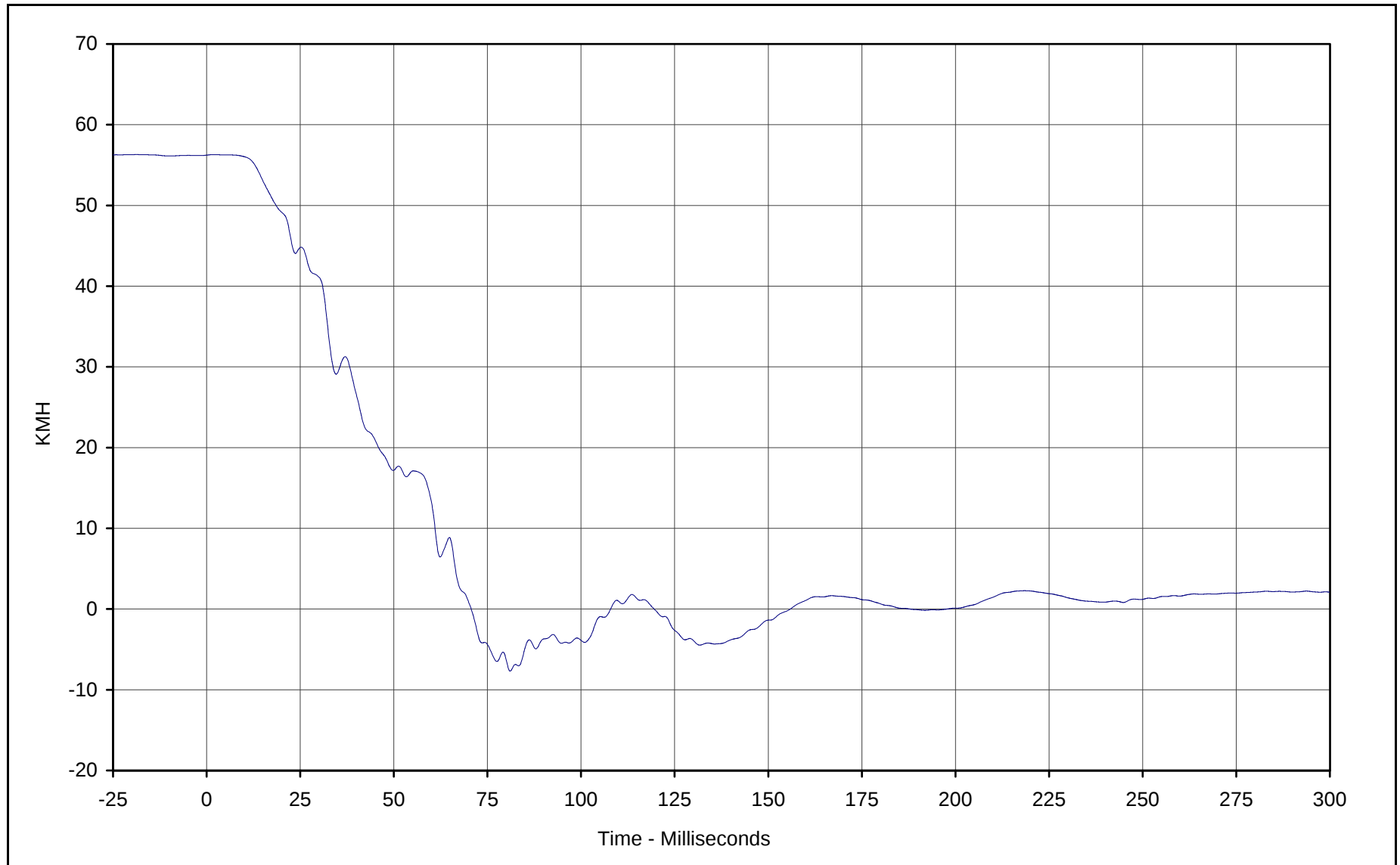
Curve Description: Vehicle Instrument Panel
Maximum Value: 21.4 at 84.5 Milliseconds
Minimum Value: -75.8 at 32.1 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-095

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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B-142



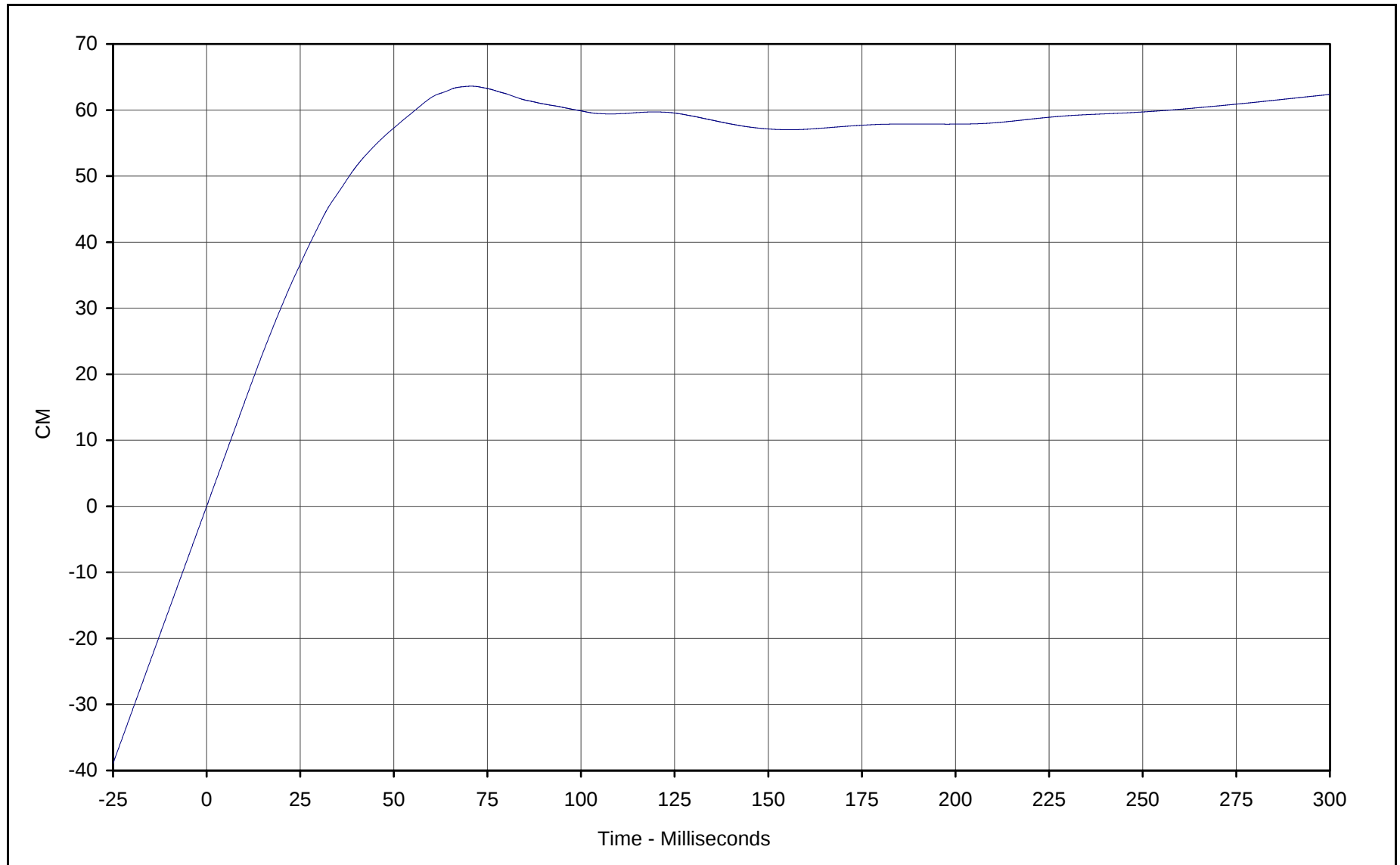
Curve Description: Vehicle Instrument Panel Velocity
Maximum Value: 56.3 at 2.1 Milliseconds
Minimum Value: -7.7 at 81.1 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN1-095

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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B-143



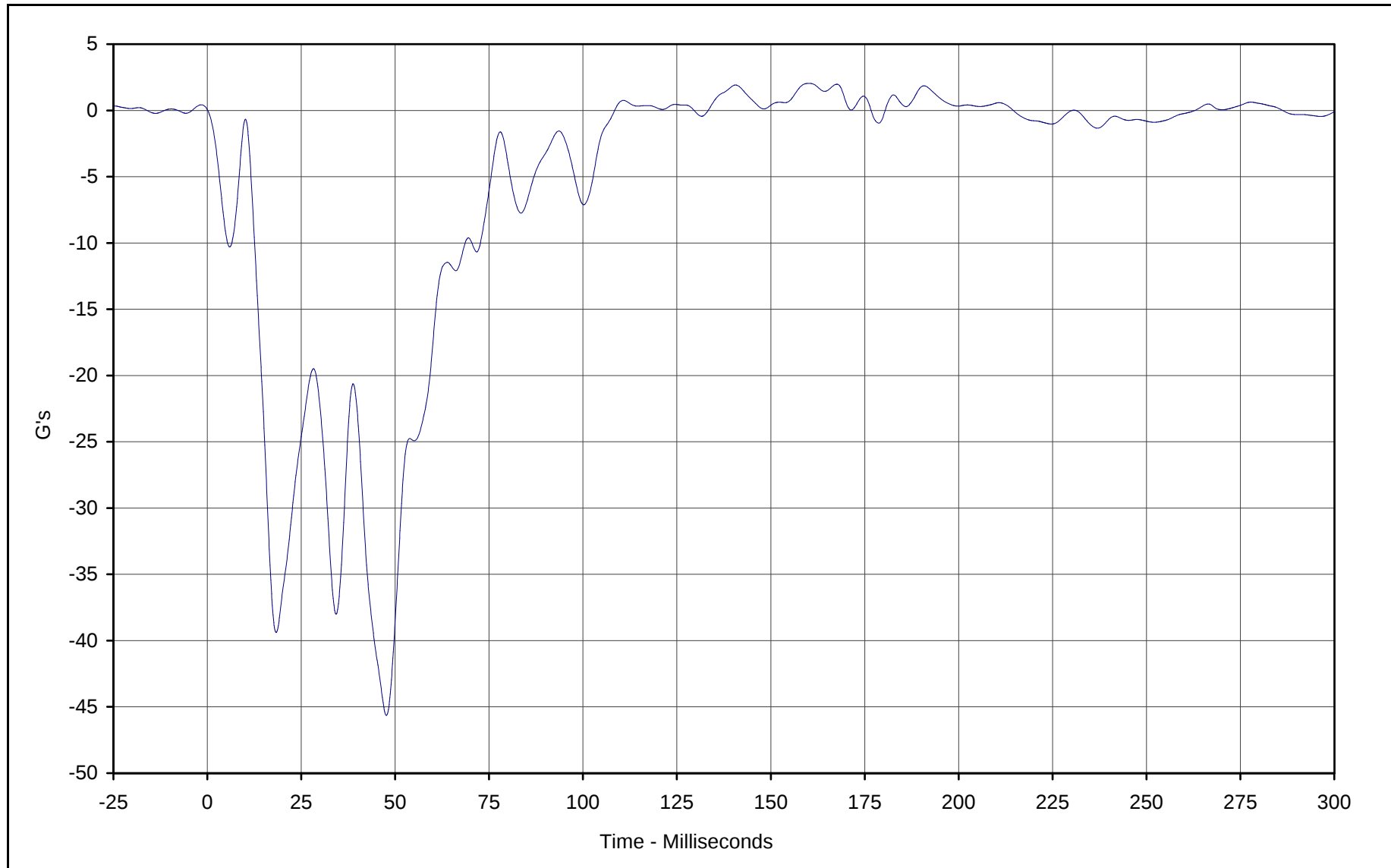
Curve Description: Vehicle Instrument Panel Displ.
Maximum Value: 63.6 at 70.7 Milliseconds
Minimum Value: 0.0 at 0.0 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN2-095

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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B-144



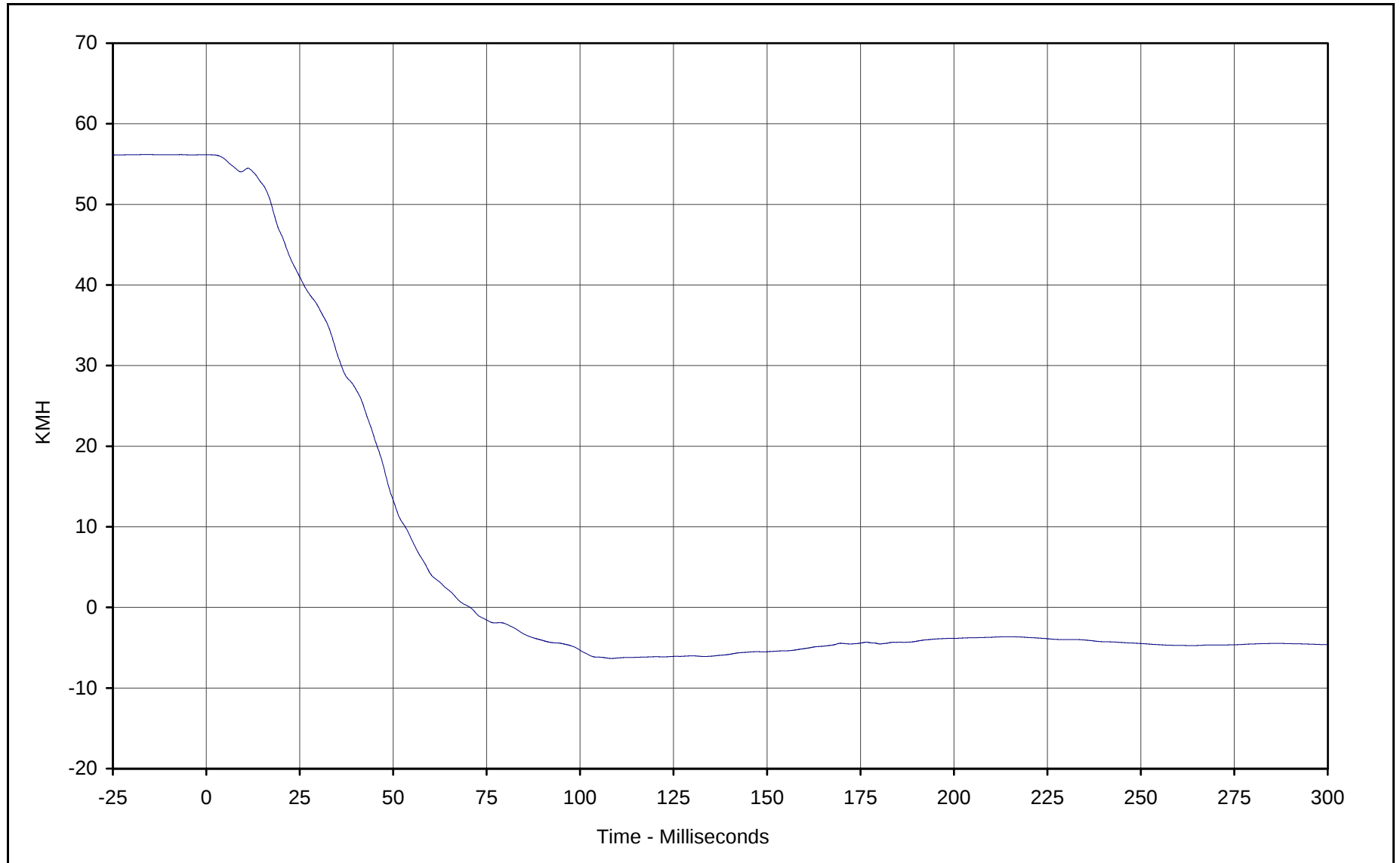
Curve Description: Vehicle Left Rear Redundant
Maximum Value: 2.0 at 160.2 Milliseconds
Minimum Value: -45.7 at 47.7 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-096

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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Curve Description: Vehicle Left Rear Redundant Velocity

Maximum Value: 56.2 at 0.0 Milliseconds

Minimum Value: -6.3 at 108.4 Milliseconds

SAE Filter Class: 180

Date of Test: 5/9/01

Curve Number: IN1-096

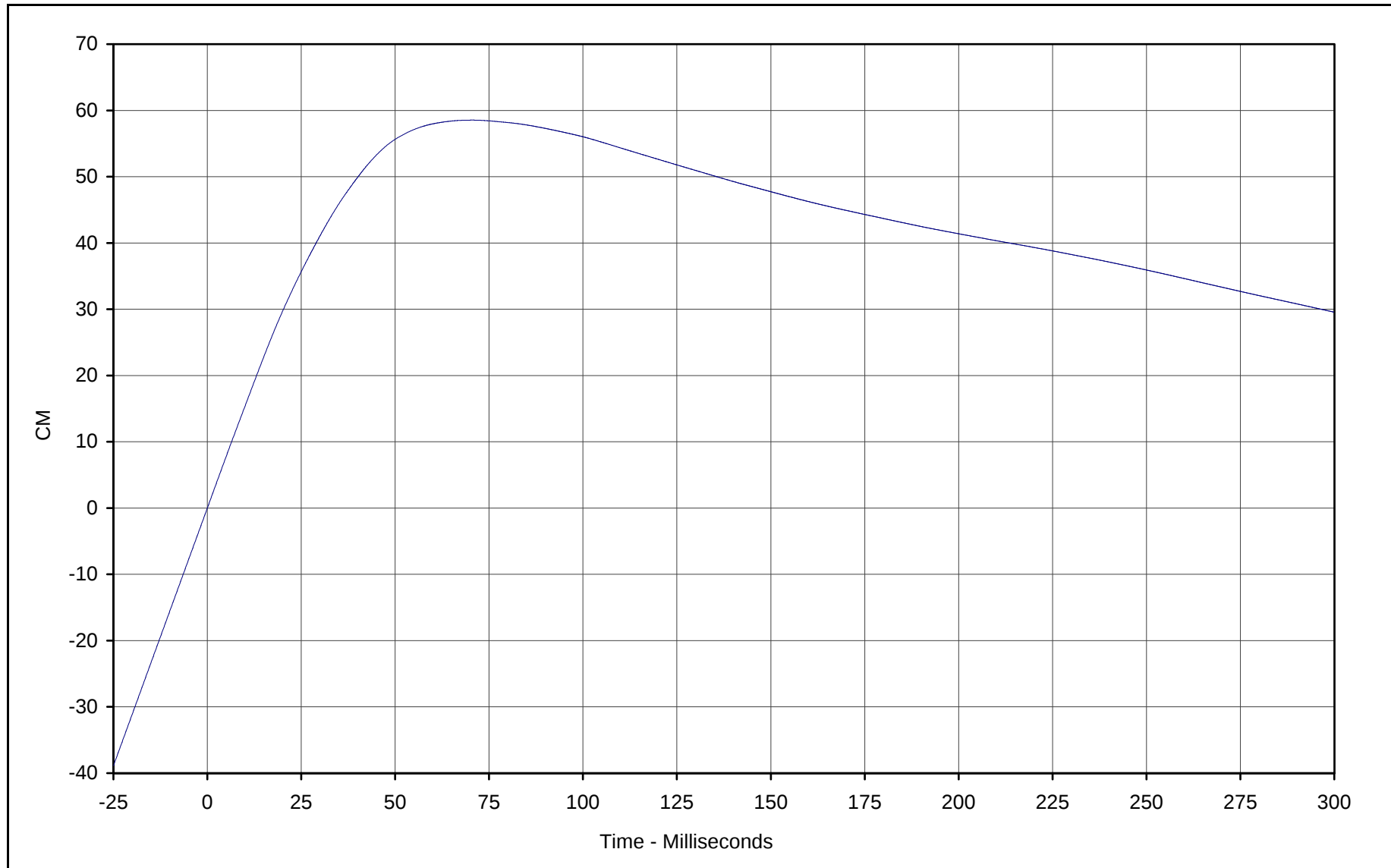
Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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Curve Description: Vehicle Left Rear Redundant Displ.
Maximum Value: 58.5 at 70.6 Milliseconds
Minimum Value: 0.0 at 0.0 Milliseconds
SAE Filter Class: 180
Date of Test: 5/9/01
Curve Number: IN2-096

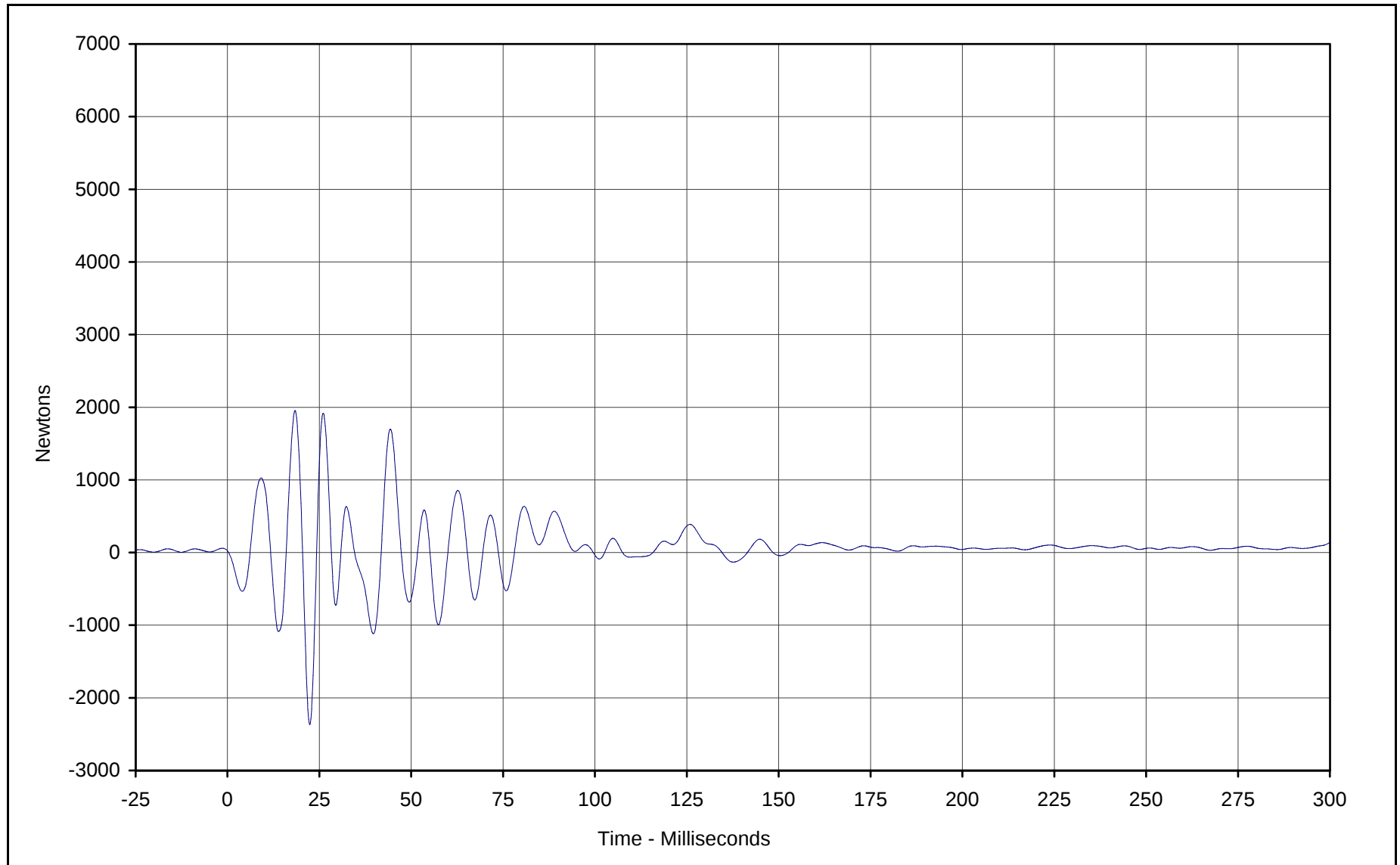
Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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APPENDIX C
LOAD CELL BARRIER INFORMATION

C-1



Curve Description: Barrier Force A2

Maximum Value: 1955.3 at 18.4 Milliseconds

Minimum Value: -2369.0 at 22.4 Milliseconds

SAE Filter Class: 60

Date of Test: 5/9/01

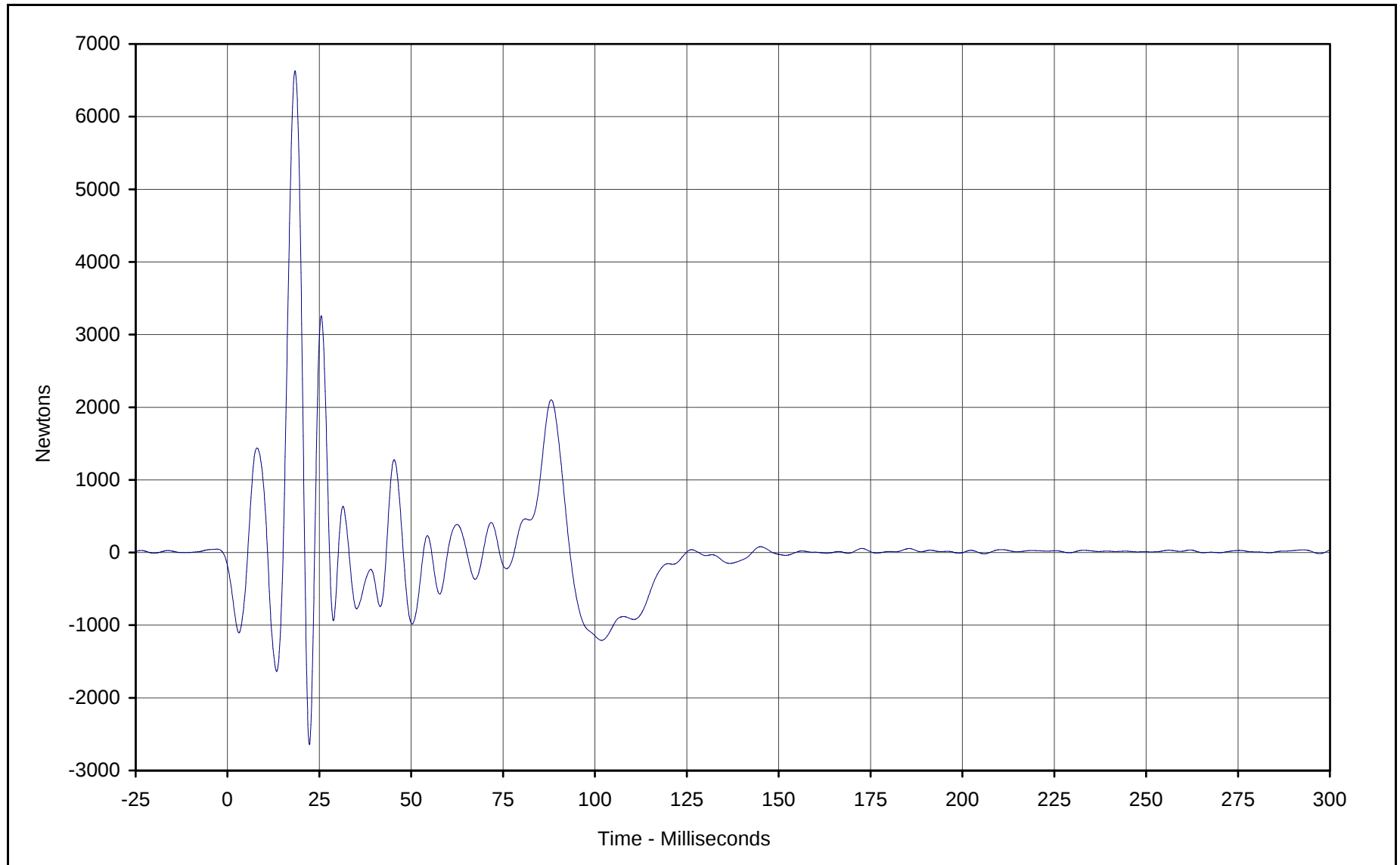
Curve Number: FIL-099

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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Curve Description: Barrier Force A3

Maximum Value: 6629.5 at 18.4 Milliseconds

Minimum Value: -2645.9 at 22.3 Milliseconds

SAE Filter Class: 60

Date of Test: 5/9/01

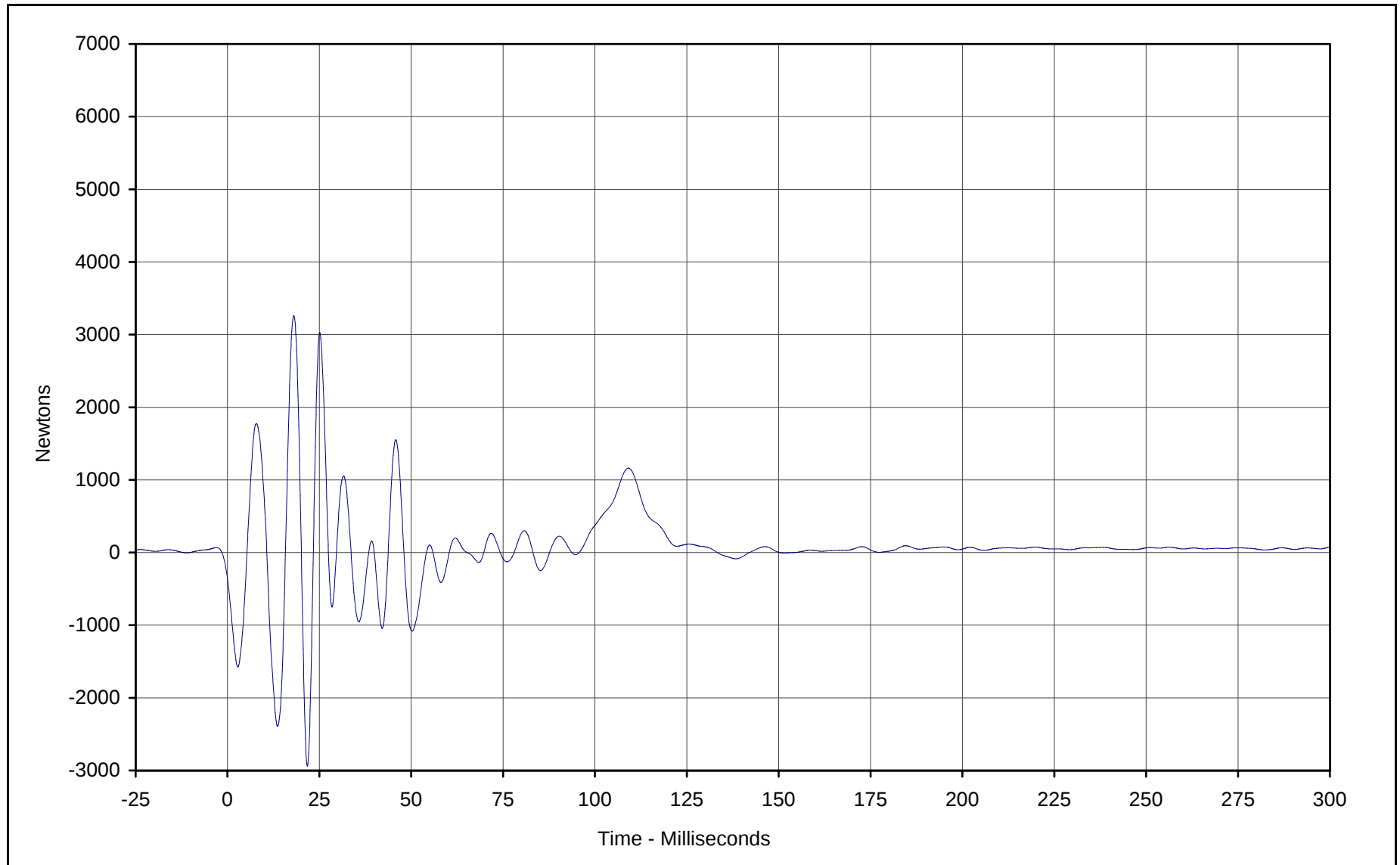
Curve Number: FIL-100

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



C-3



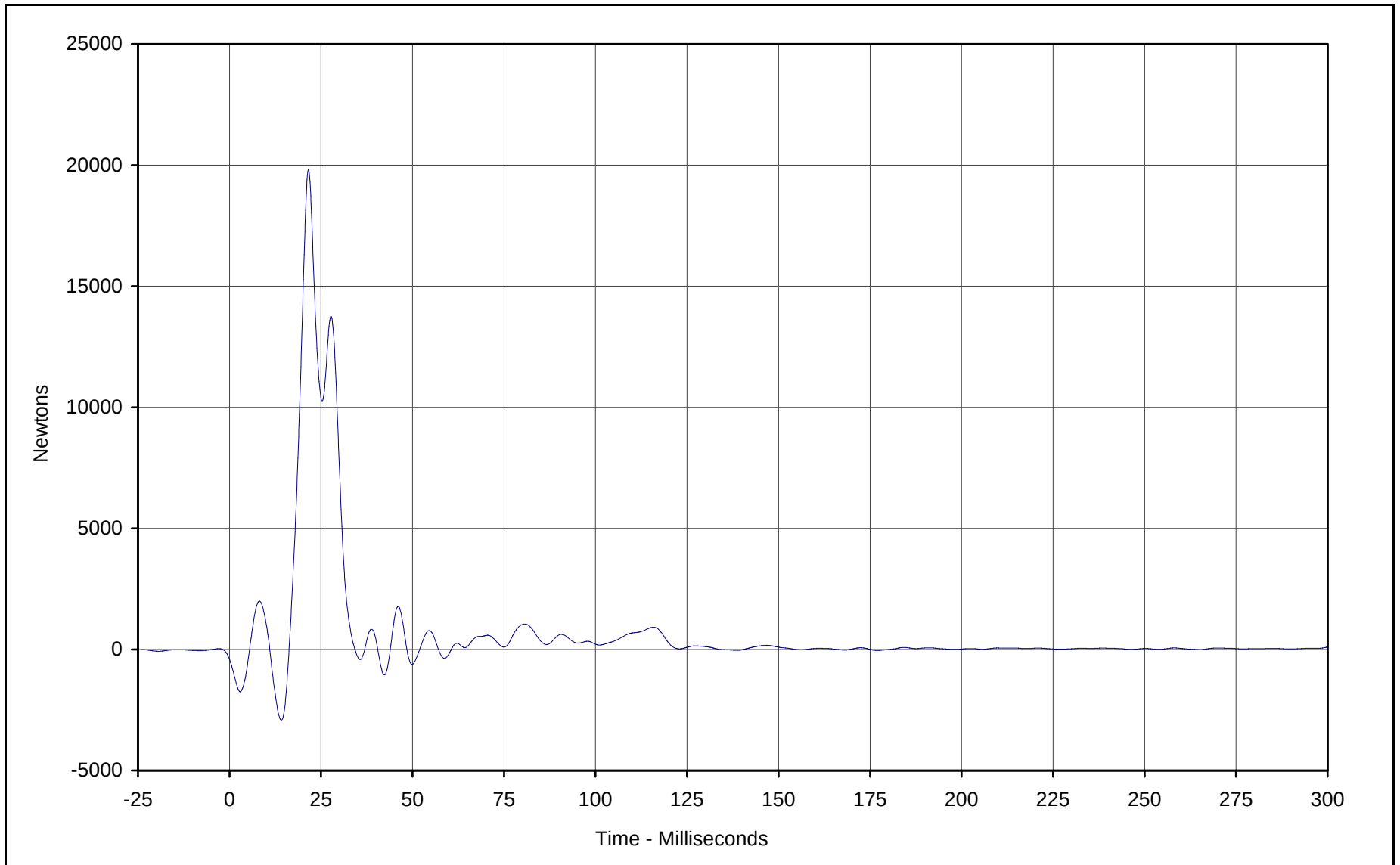
Curve Description: Barrier Force A4
Maximum Value: 3260.5 at 18.0 Milliseconds
Minimum Value: -2942.0 at 21.7 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-101

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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C-4



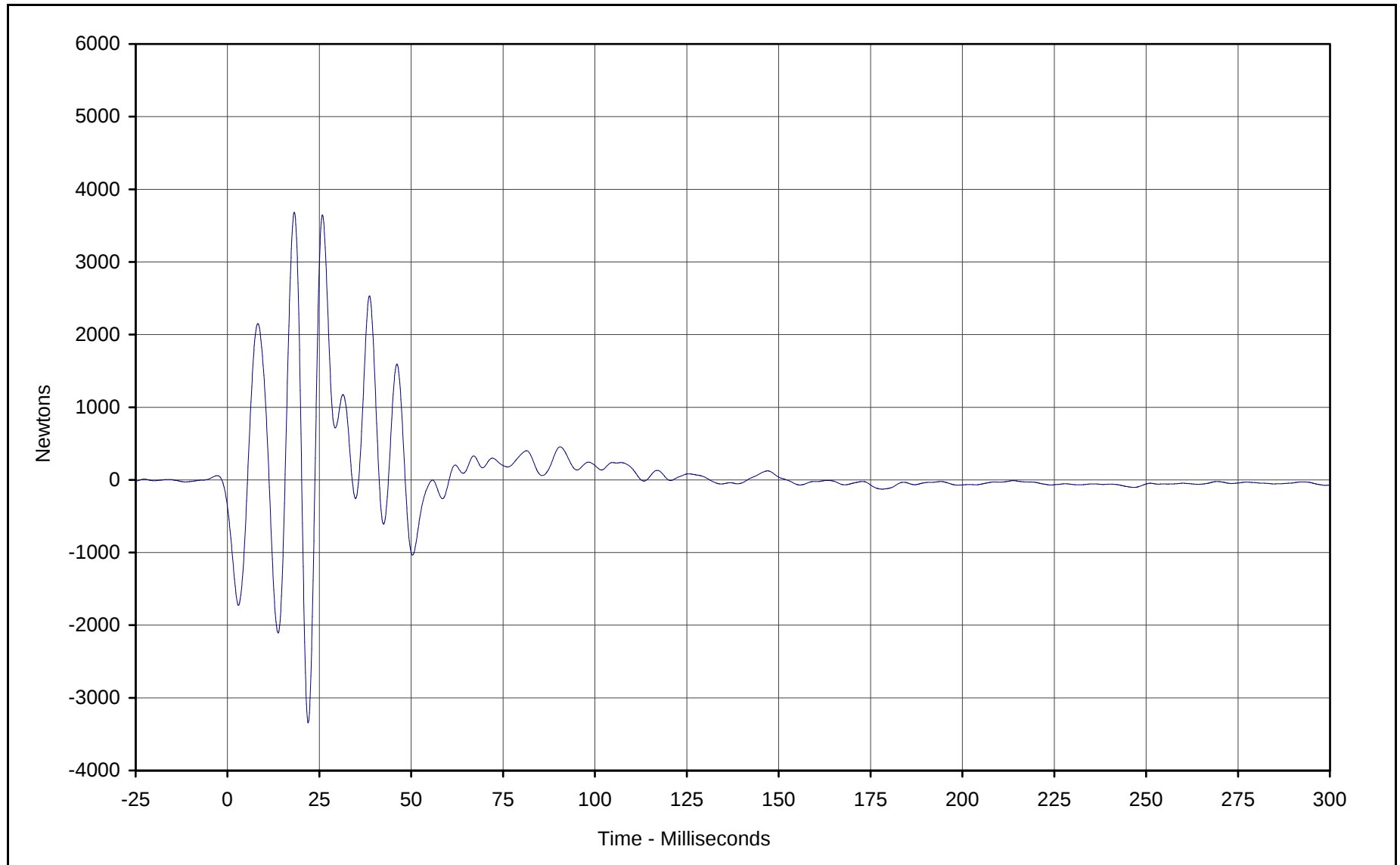
Curve Description: Barrier Force A5
Maximum Value: 19820.5 at 21.6 Milliseconds
Minimum Value: -2919.8 at 14.2 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-102

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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C-5



Curve Description: Barrier Force A6

Maximum Value: 3682.7 at 18.2 Milliseconds

Minimum Value: -3342.8 at 22.0 Milliseconds

SAE Filter Class: 60

Date of Test: 5/9/01

Curve Number: FIL-103

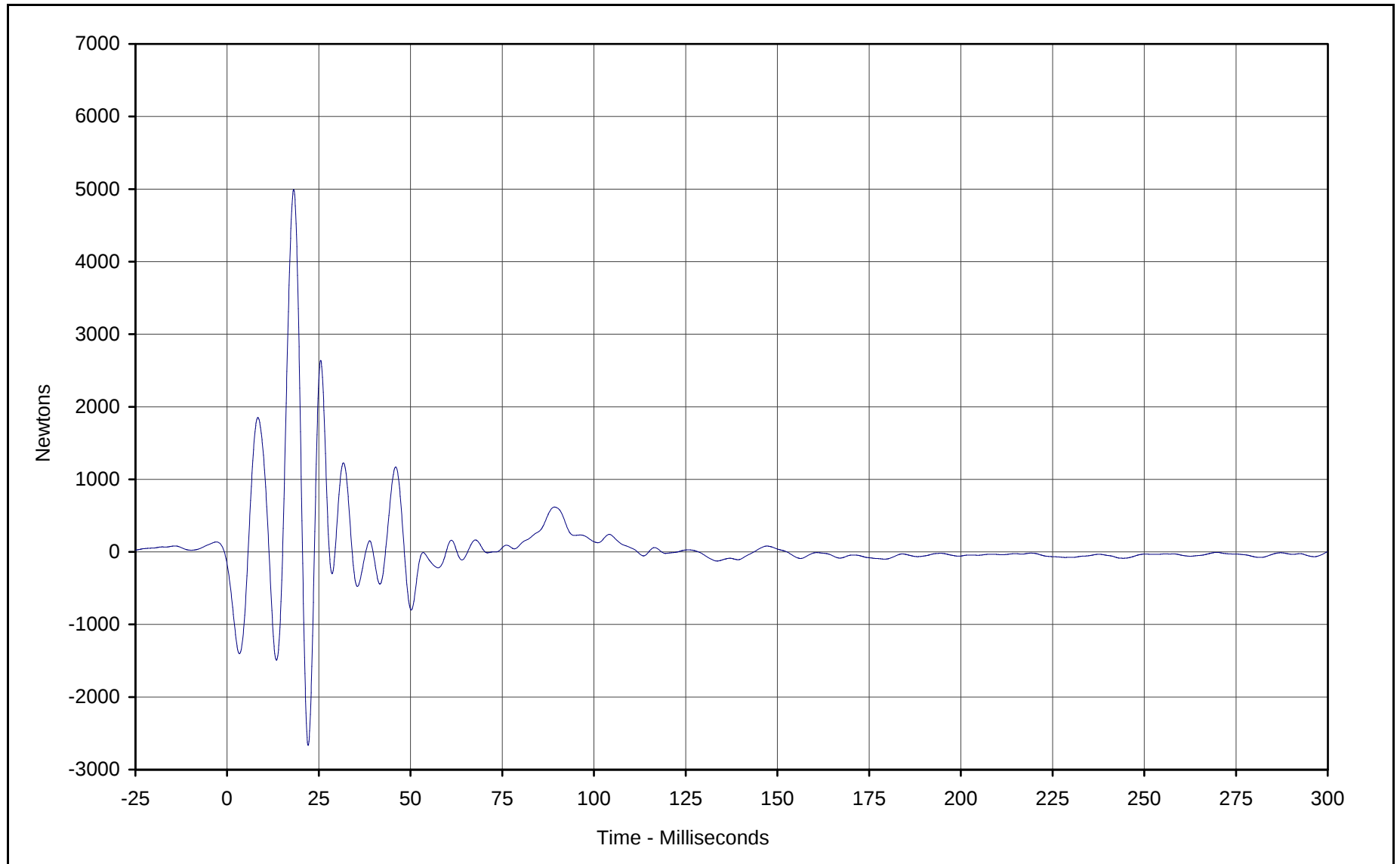
Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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C-6



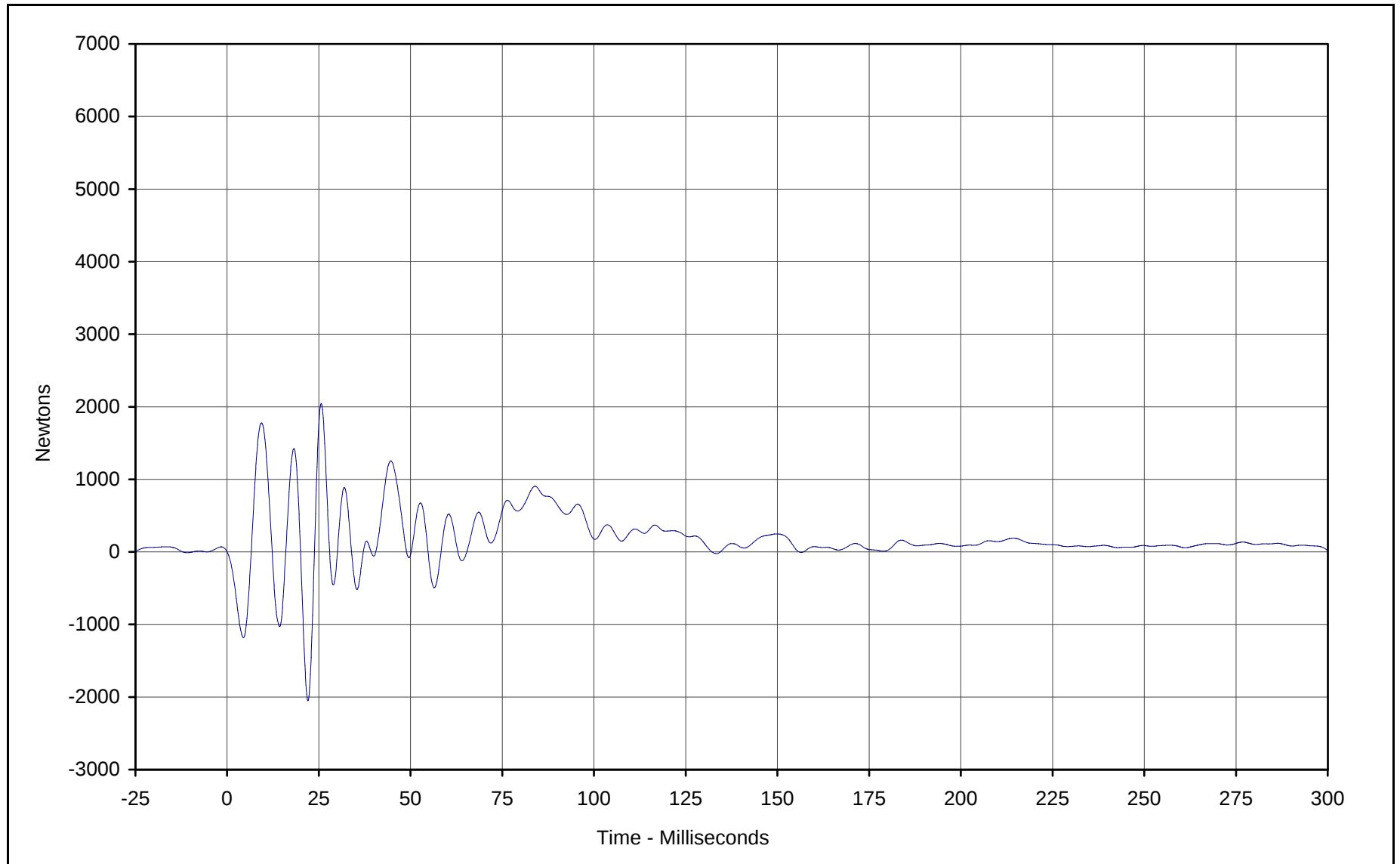
Curve Description:	Barrier Force A7		
Maximum Value:	4993.0	at	18.1 Milliseconds
Minimum Value:	-2666.3	at	22.1 Milliseconds
SAE Filter Class:	60		
Date of Test:	5/9/01		
Curve Number:	FIL-104		

Test Program:	2001 NHTSA 35mph NCAP	No.: TOY001
Test Vehicle:	2001 Toyota Tacoma SR5 Extended Cab Pickup	



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C-7



Curve Description: Barrier Force A8

Maximum Value: 2043.7 at 25.7 Milliseconds

Minimum Value: -2050.9 at 22.0 Milliseconds

SAE Filter Class: 60

Date of Test: 5/9/01

Curve Number: FIL-105

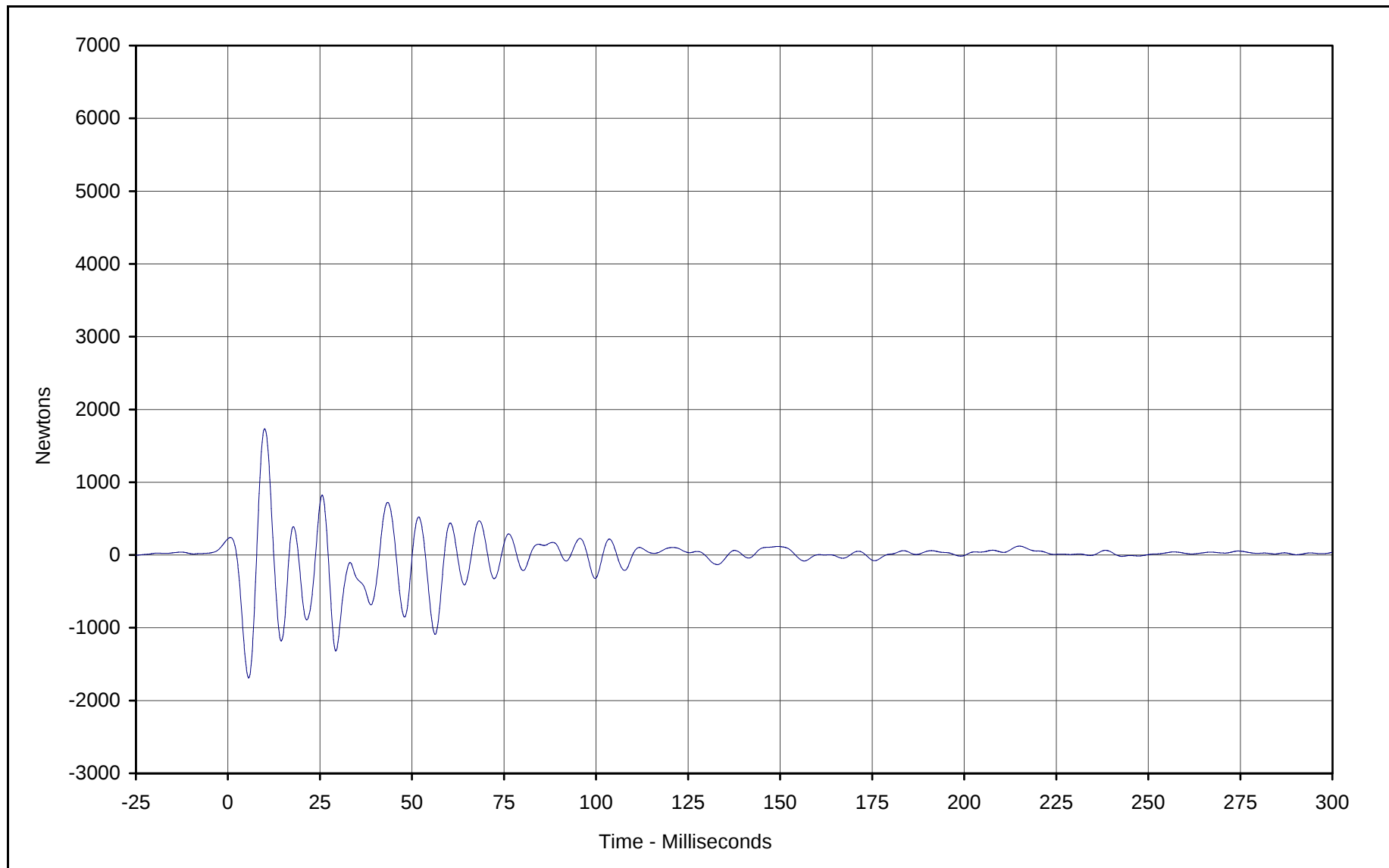
Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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C-8



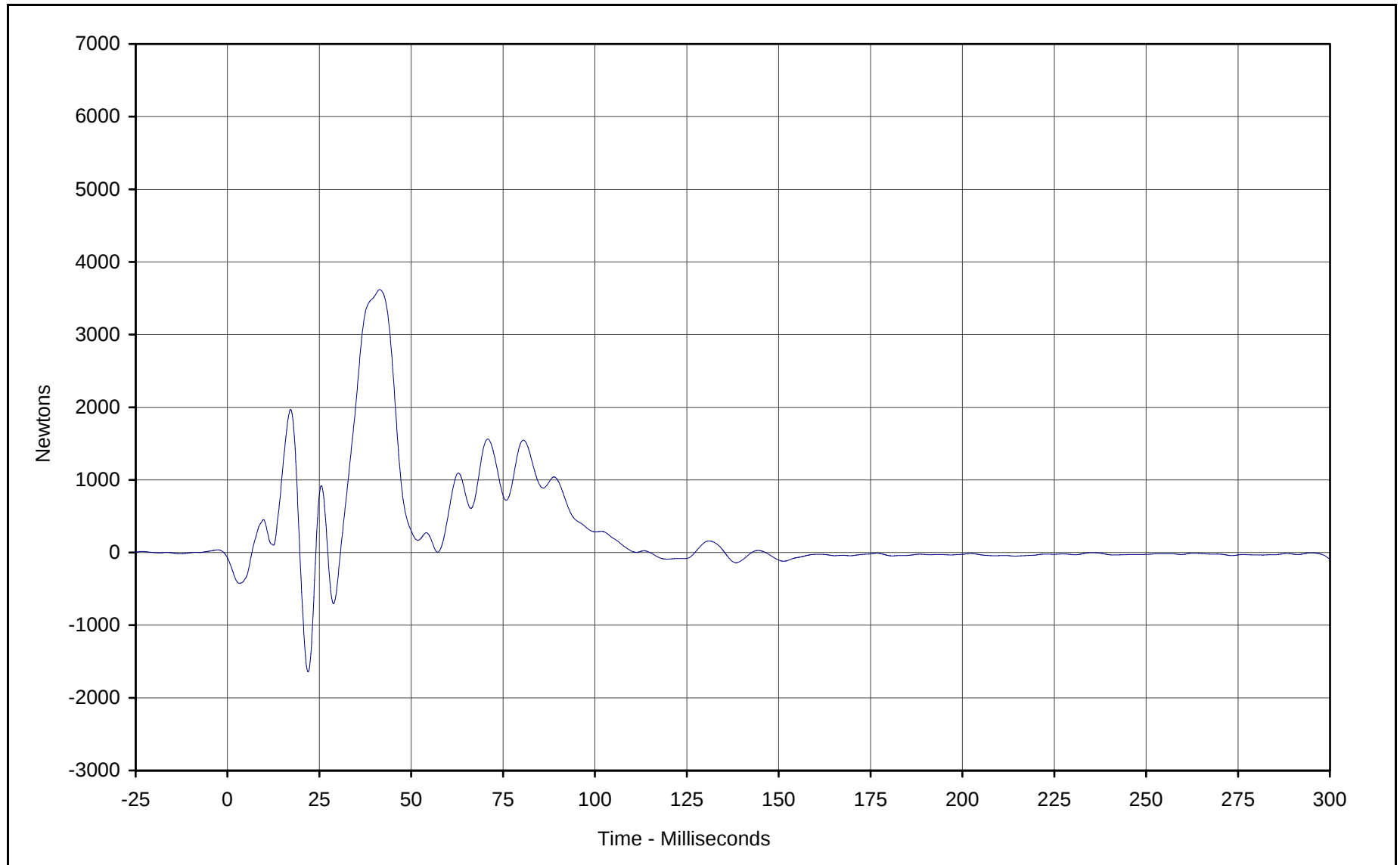
Curve Description: Barrier Force A9
Maximum Value: 1734.8 at 10.0 Milliseconds
Minimum Value: -1688.8 at 5.6 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-106

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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C-9



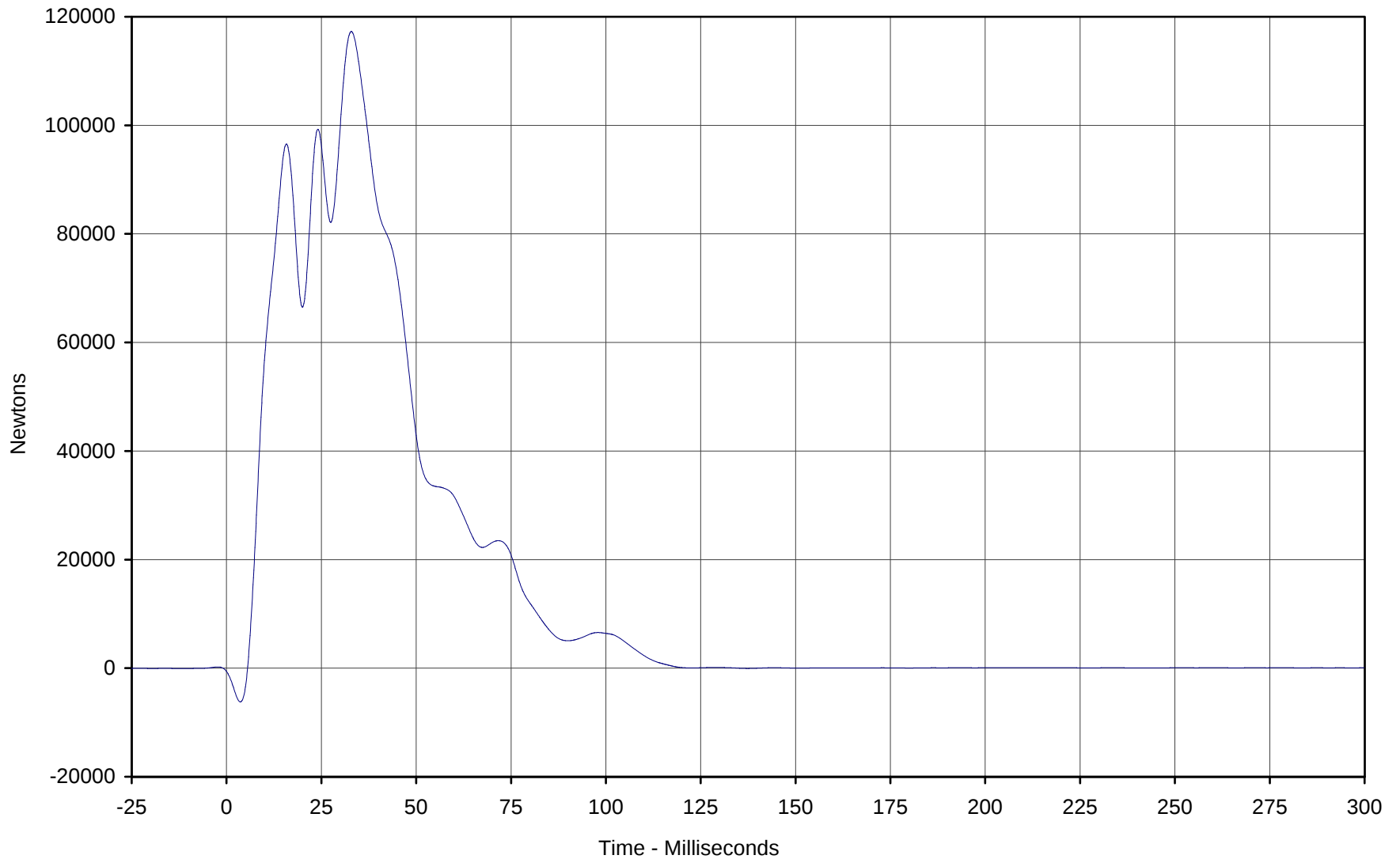
Curve Description: Barrier Force B2
Maximum Value: 3619.6 at 41.4 Milliseconds
Minimum Value: -1642.4 at 21.9 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-108

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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C-10



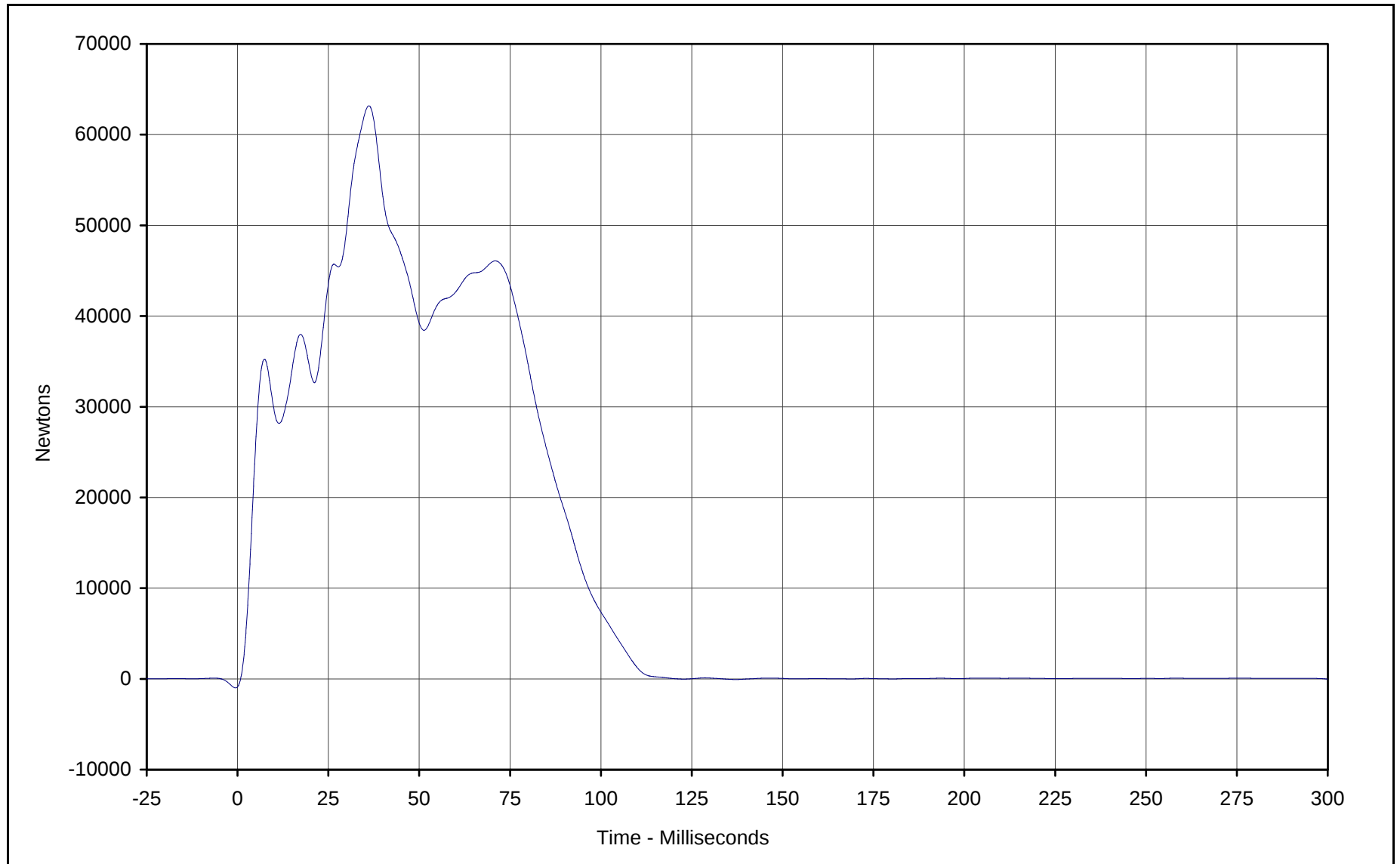
Curve Description: Barrier Force B3
Maximum Value: 117286.7 at 32.9 Milliseconds
Minimum Value: -6212.8 at 3.6 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-109

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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C-11



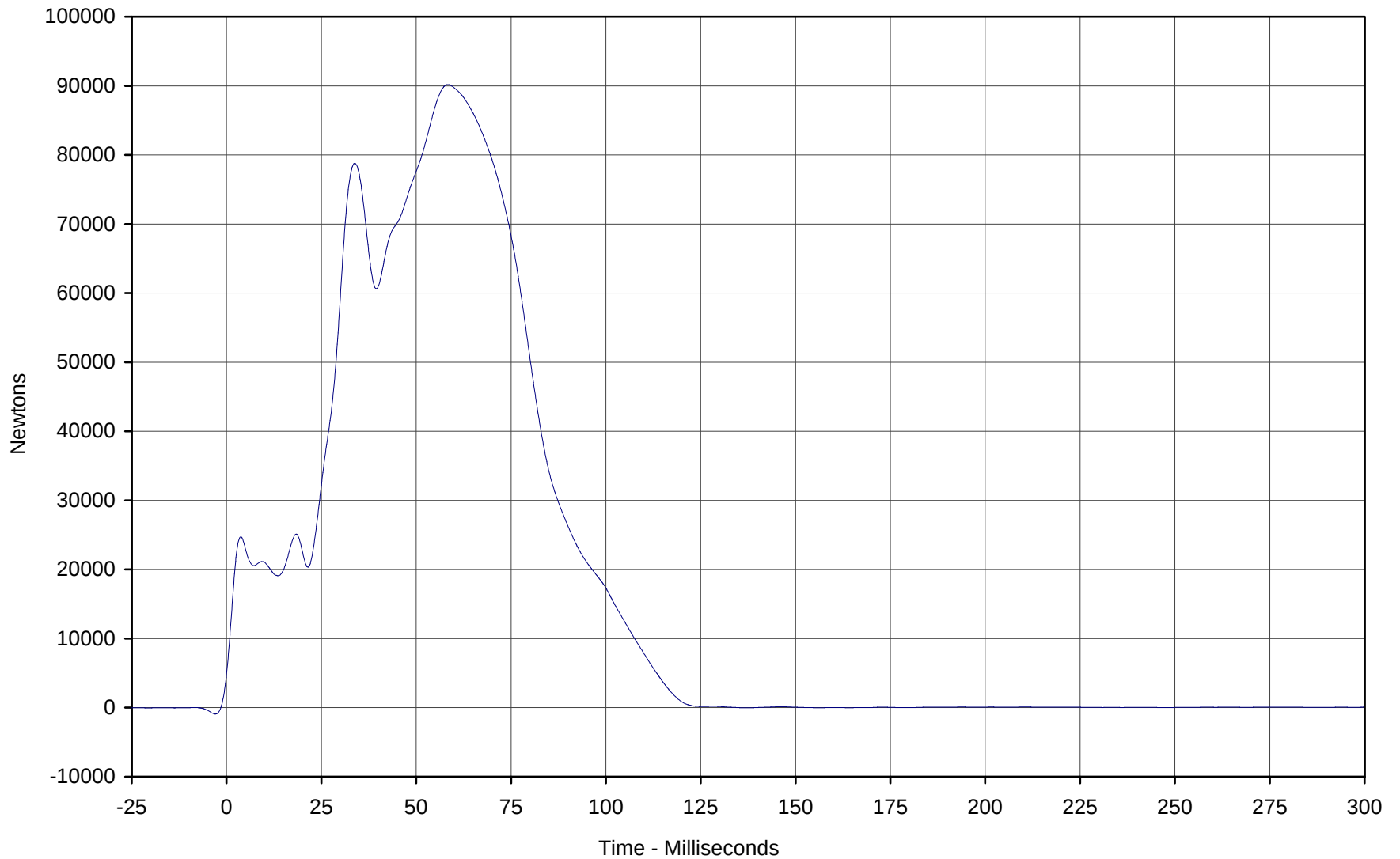
Curve Description: Barrier Force B4
Maximum Value: 63184.3 at 36.1 Milliseconds
Minimum Value: -879.7 at 0.0 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-110

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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C-12



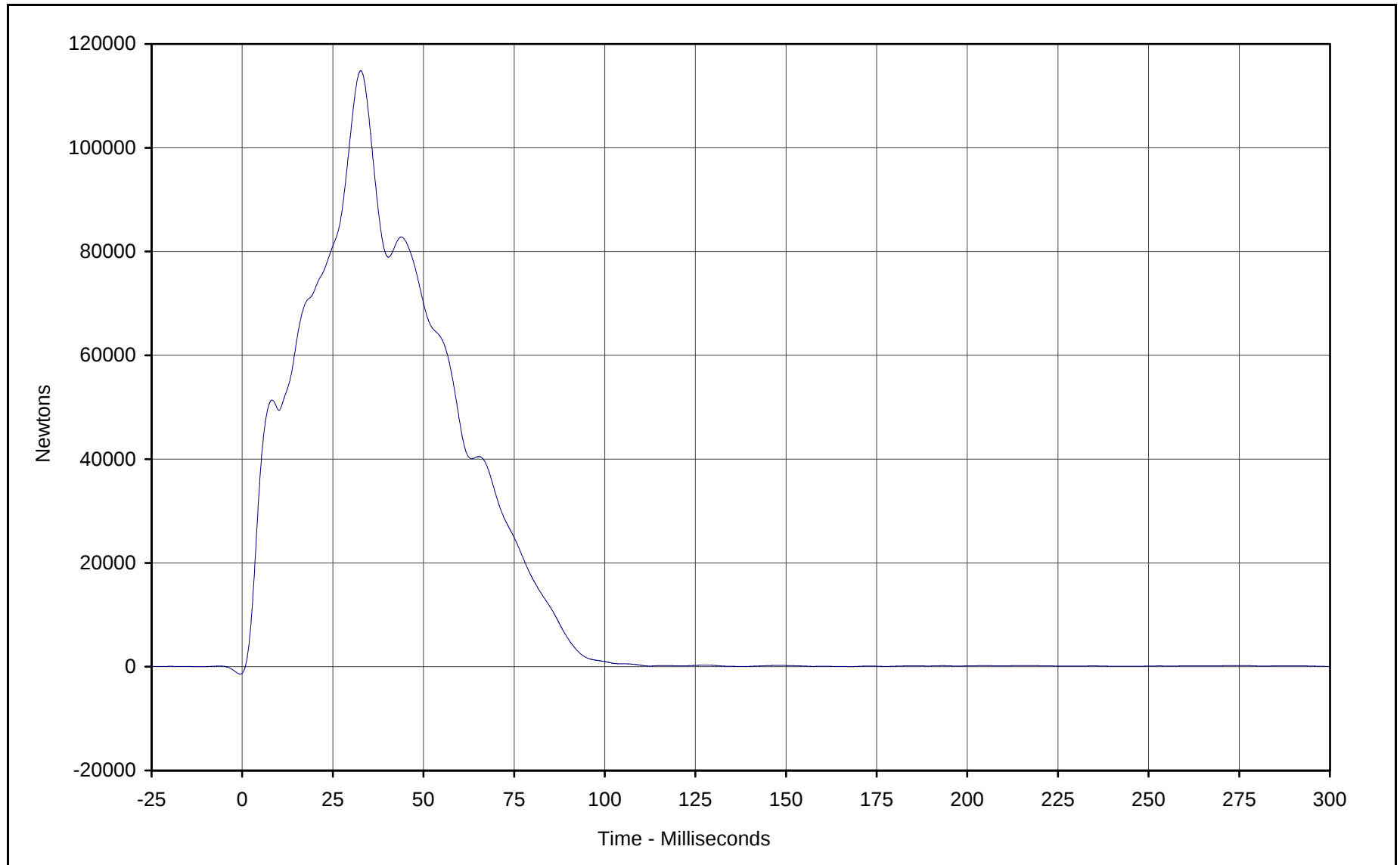
Curve Description: Barrier Force B5
Maximum Value: 90181.0 at 58.3 Milliseconds
Minimum Value: -31.1 at 137.2 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-111

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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C-13



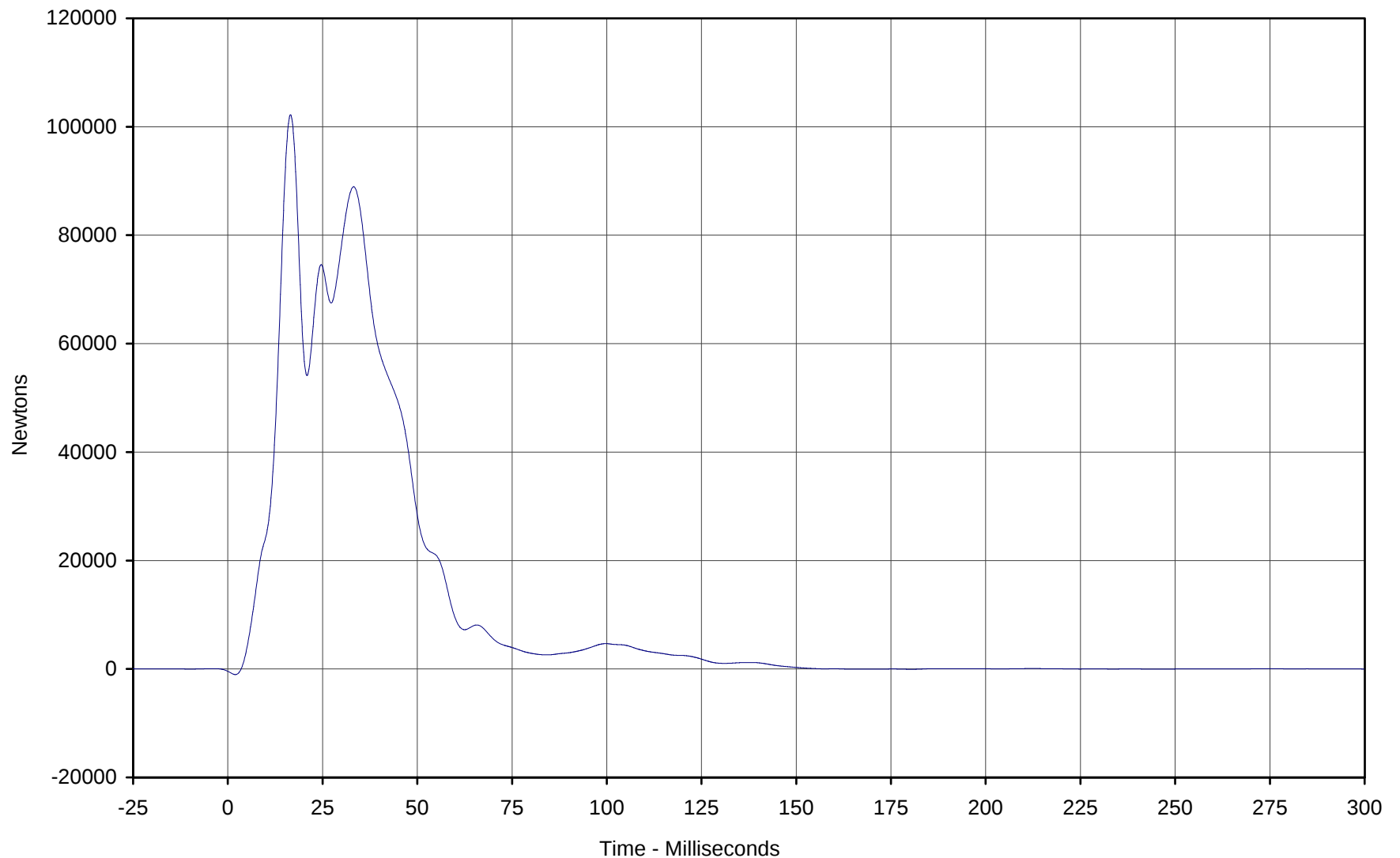
Curve Description: Barrier Force B6
Maximum Value: 114864.3 at 32.7 Milliseconds
Minimum Value: -1261.2 at 0.0 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-112

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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C-14



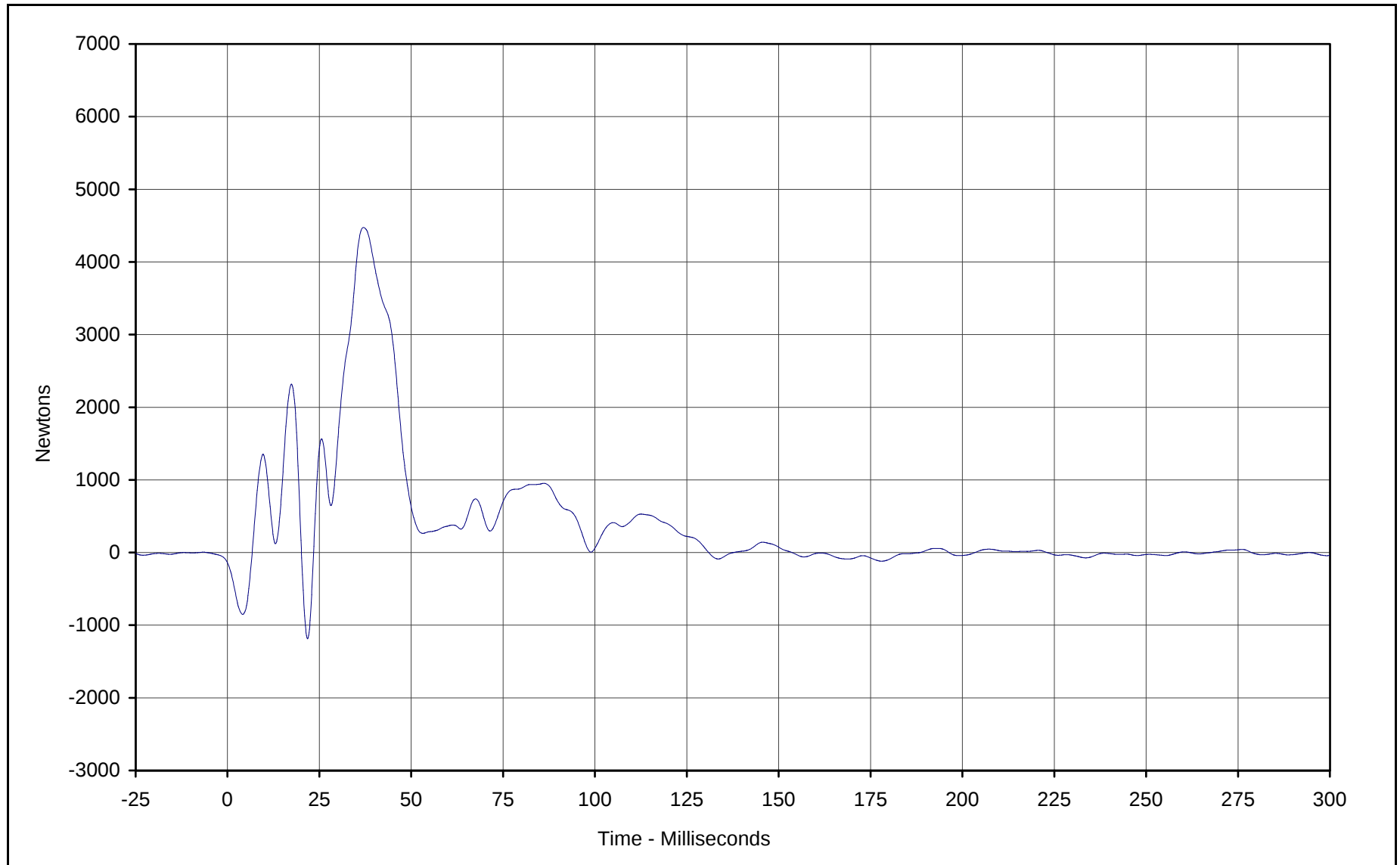
Curve Description: Barrier Force B7
Maximum Value: 102214.1 at 16.5 Milliseconds
Minimum Value: -1030.4 at 2.0 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-113

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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C-15



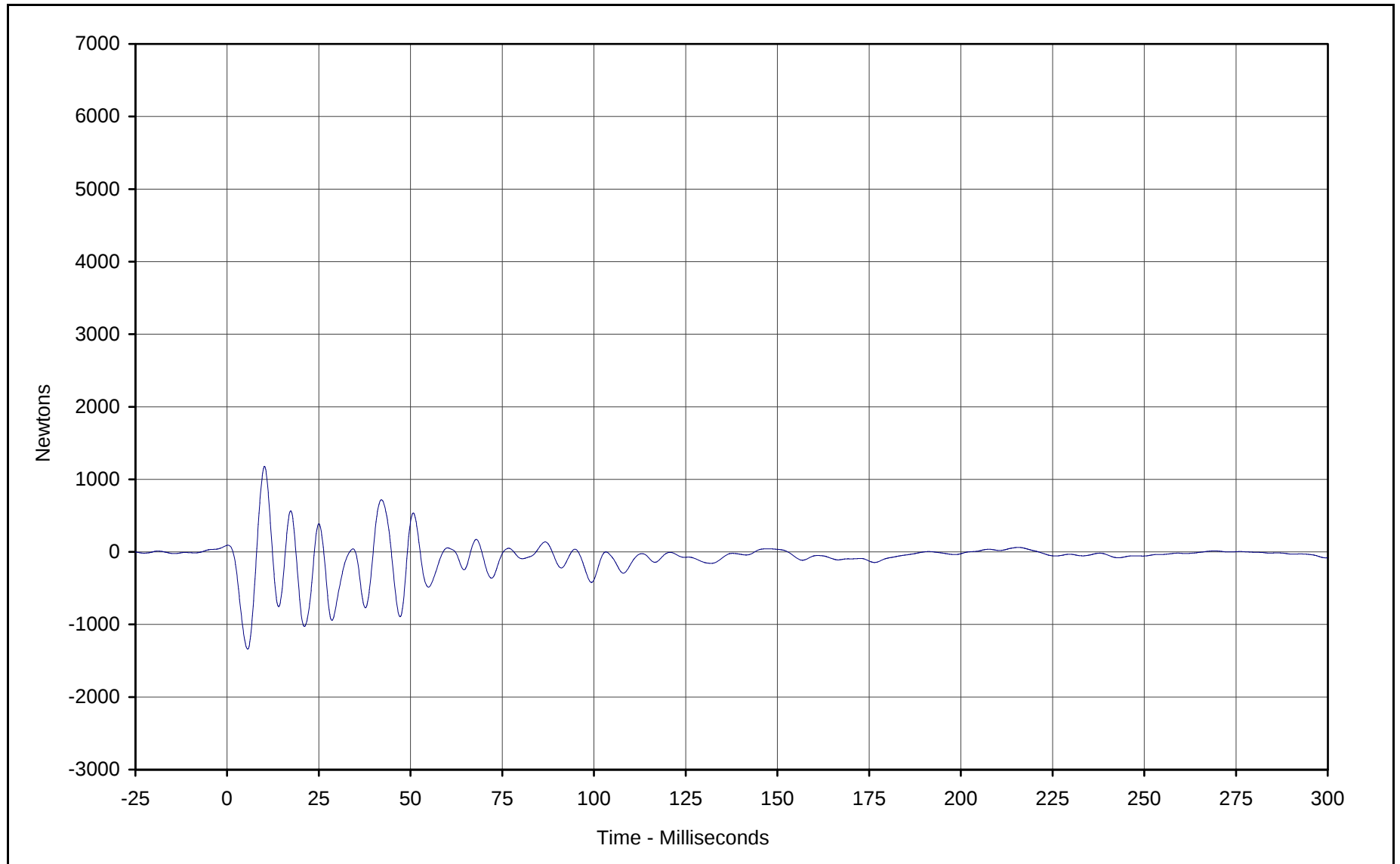
Curve Description: Barrier Force B8
Maximum Value: 4473.9 at 37.0 Milliseconds
Minimum Value: -1186.4 at 21.8 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-114

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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C-16



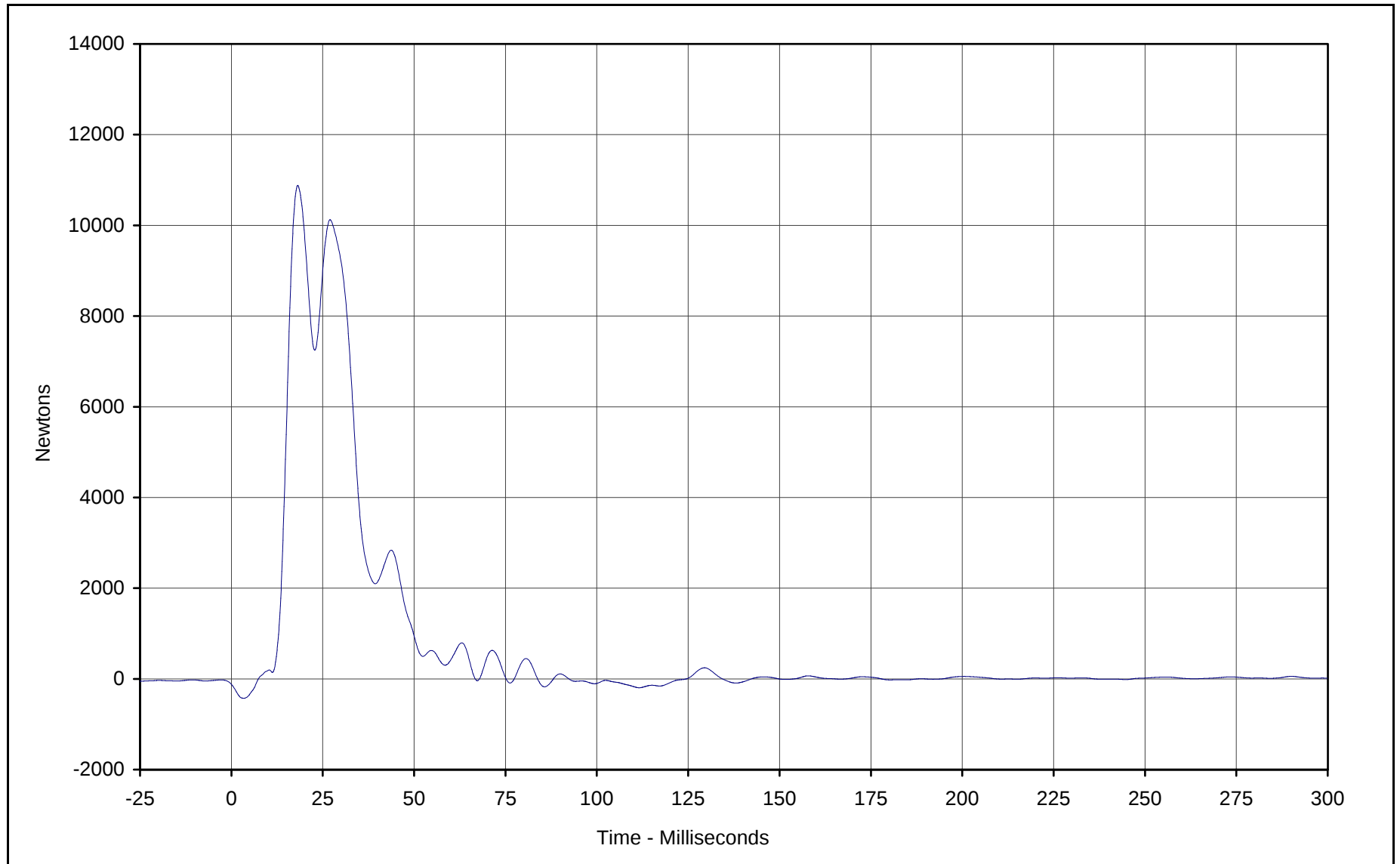
Curve Description: Barrier Force B9
Maximum Value: 1180.5 at 10.2 Milliseconds
Minimum Value: -1340.6 at 5.6 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-115

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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C-17



Curve Description: Barrier Force C2

Maximum Value: 10880.7 at 18.2 Milliseconds

Minimum Value: -429.0 at 3.4 Milliseconds

SAE Filter Class: 60

Date of Test: 5/9/01

Curve Number: FIL-117

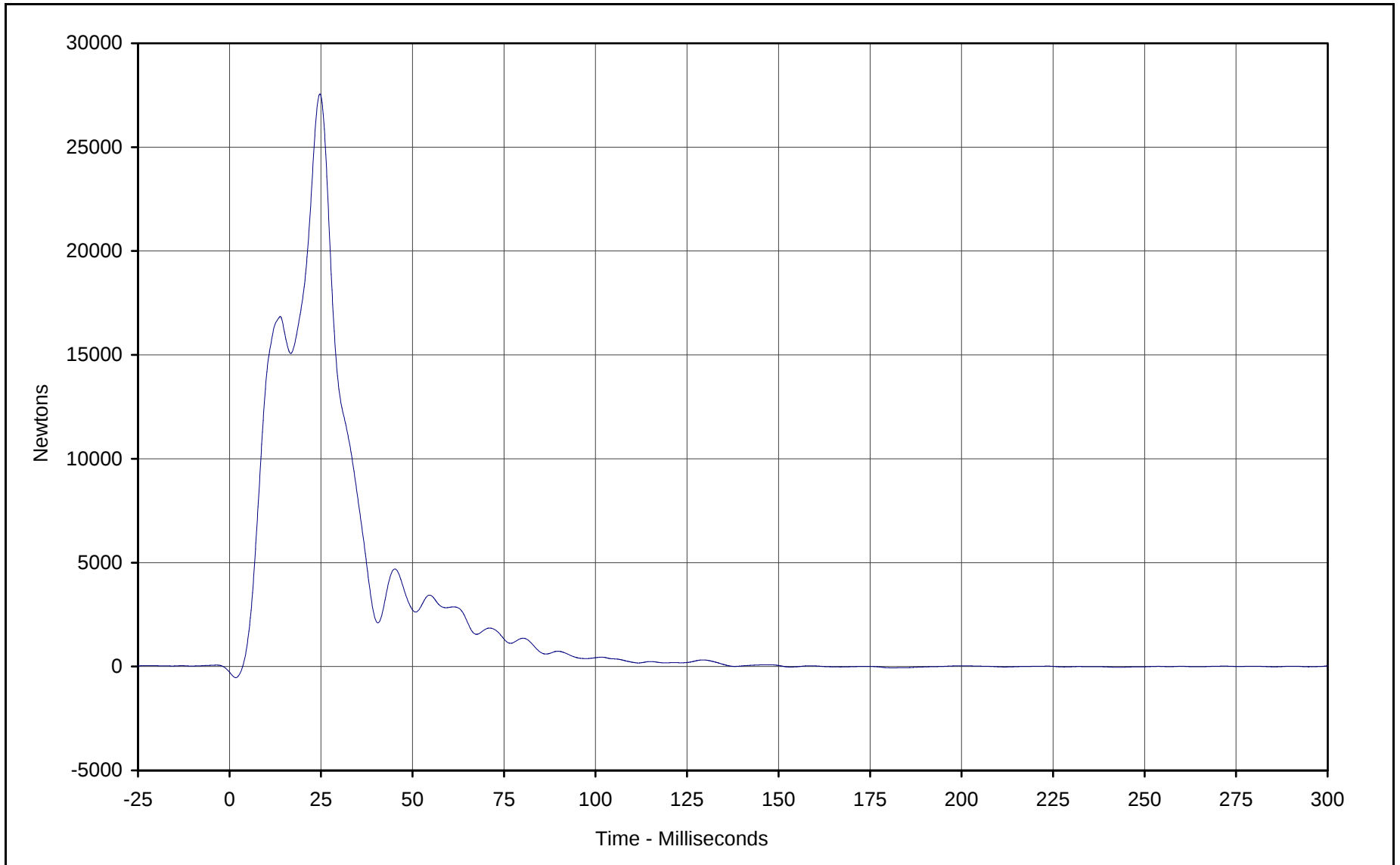
Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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C-18



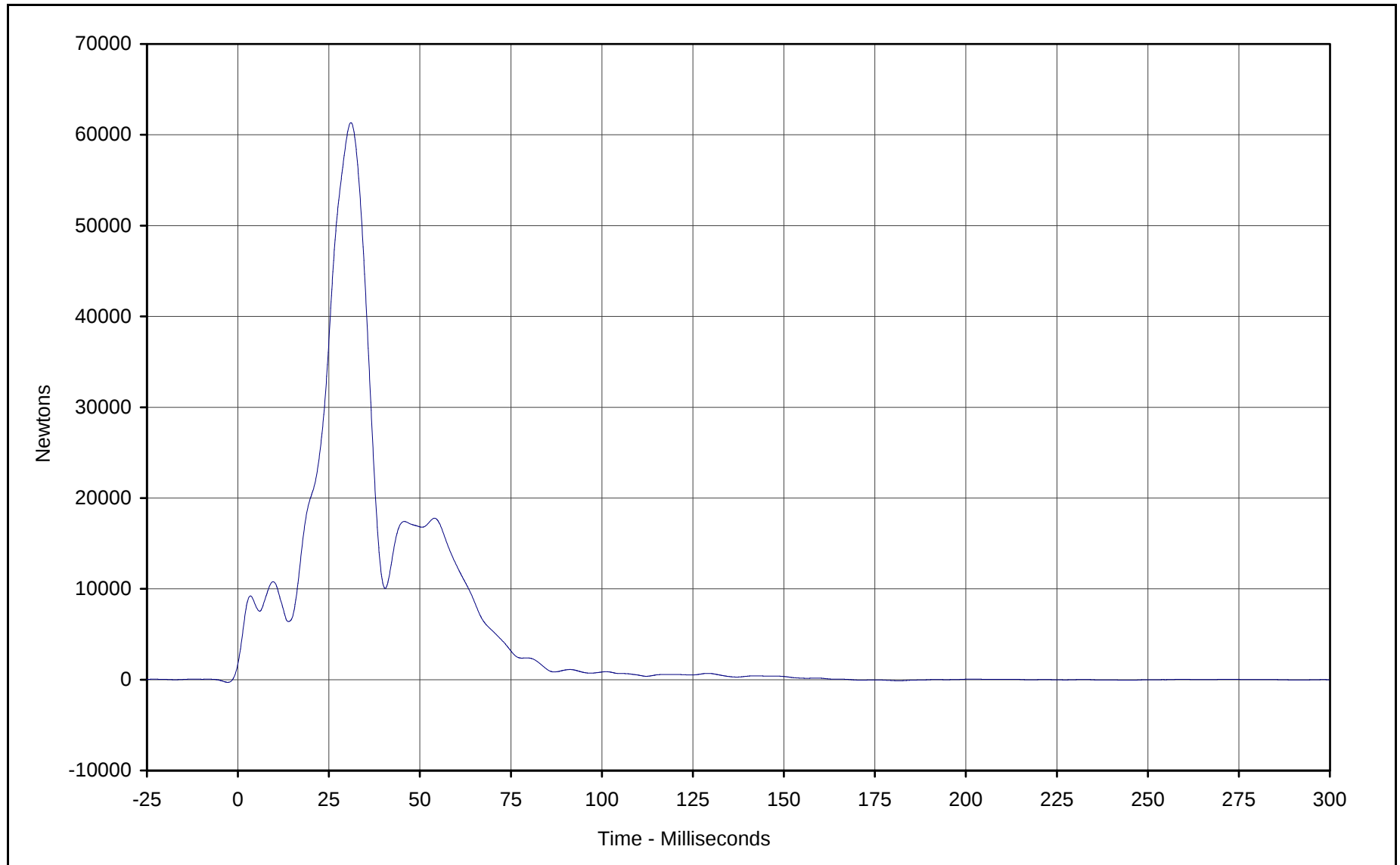
Curve Description: Barrier Force C3
Maximum Value: 27565.3 at 24.7 Milliseconds
Minimum Value: -537.5 at 1.7 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-118

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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C-19



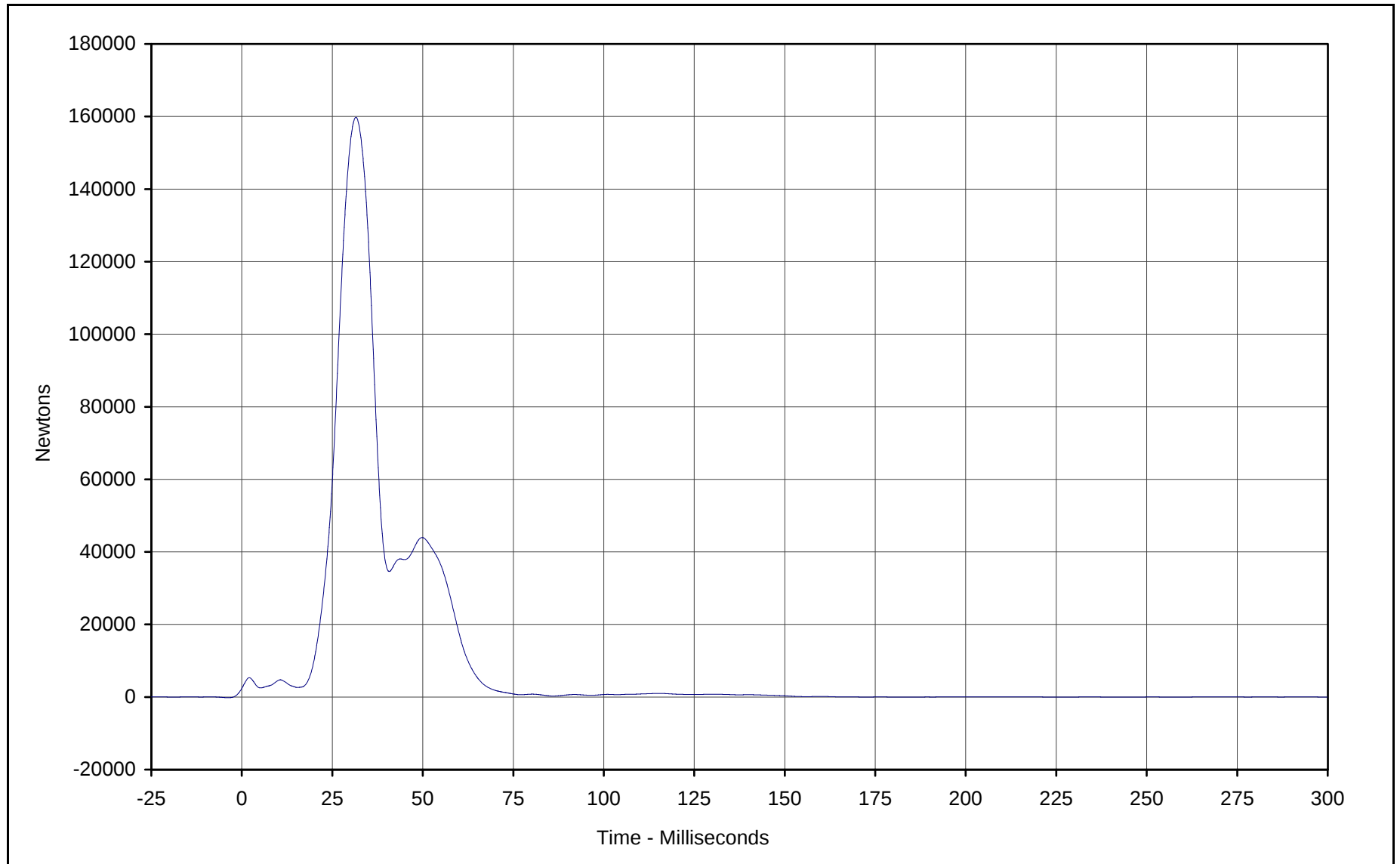
Curve Description: Barrier Force C4
Maximum Value: 61351.2 at 31.0 Milliseconds
Minimum Value: -119.8 at 181.7 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-119

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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C-20



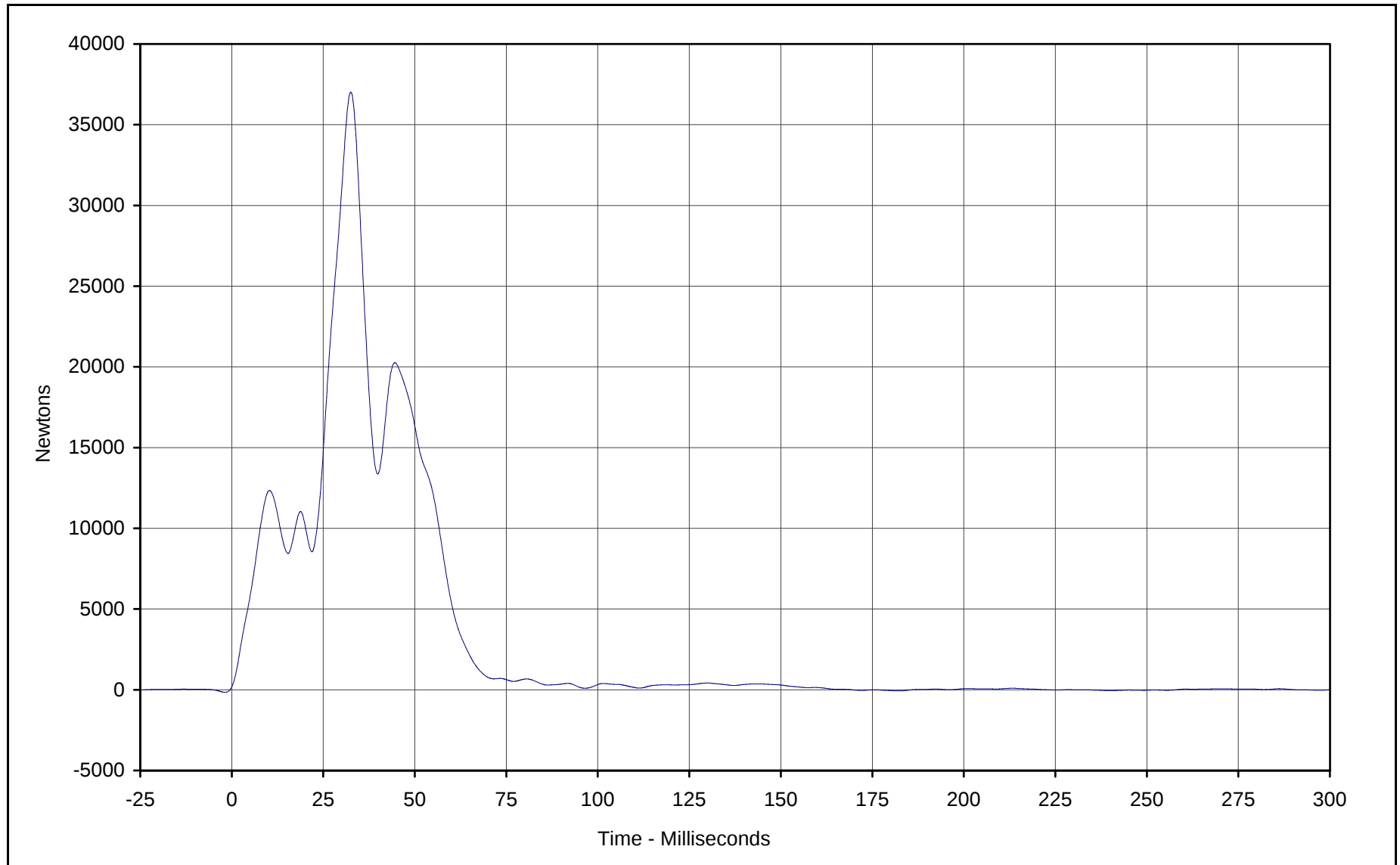
Curve Description: Barrier Force C5
Maximum Value: 159799.9 at 31.5 Milliseconds
Minimum Value: -41.0 at 246.7 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-120

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



KAR21049-01

C-21



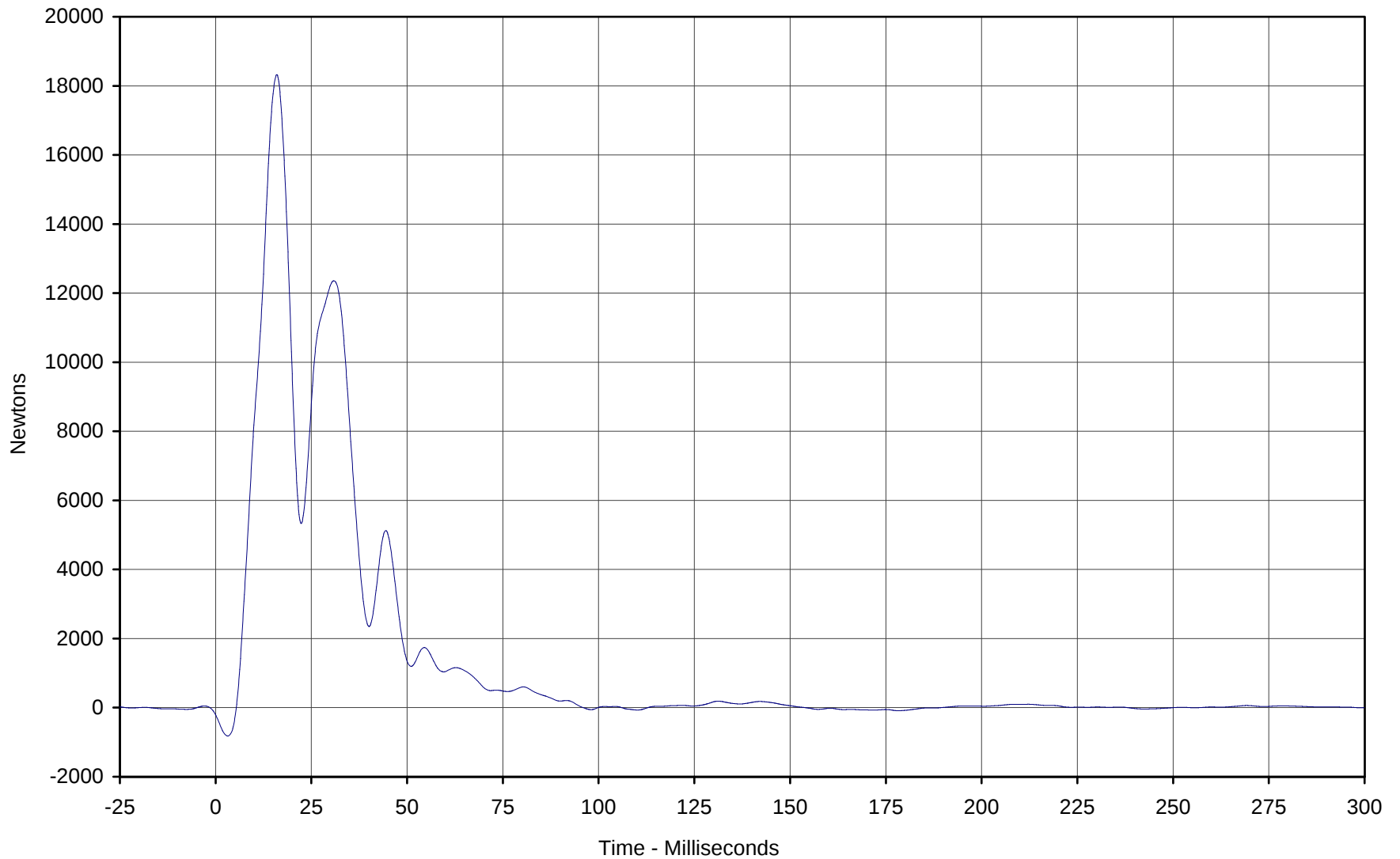
Curve Description: Barrier Force C6
Maximum Value: 37030.0 at 32.5 Milliseconds
Minimum Value: -72.1 at 182.0 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-121

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



KAR21049-01

C-22



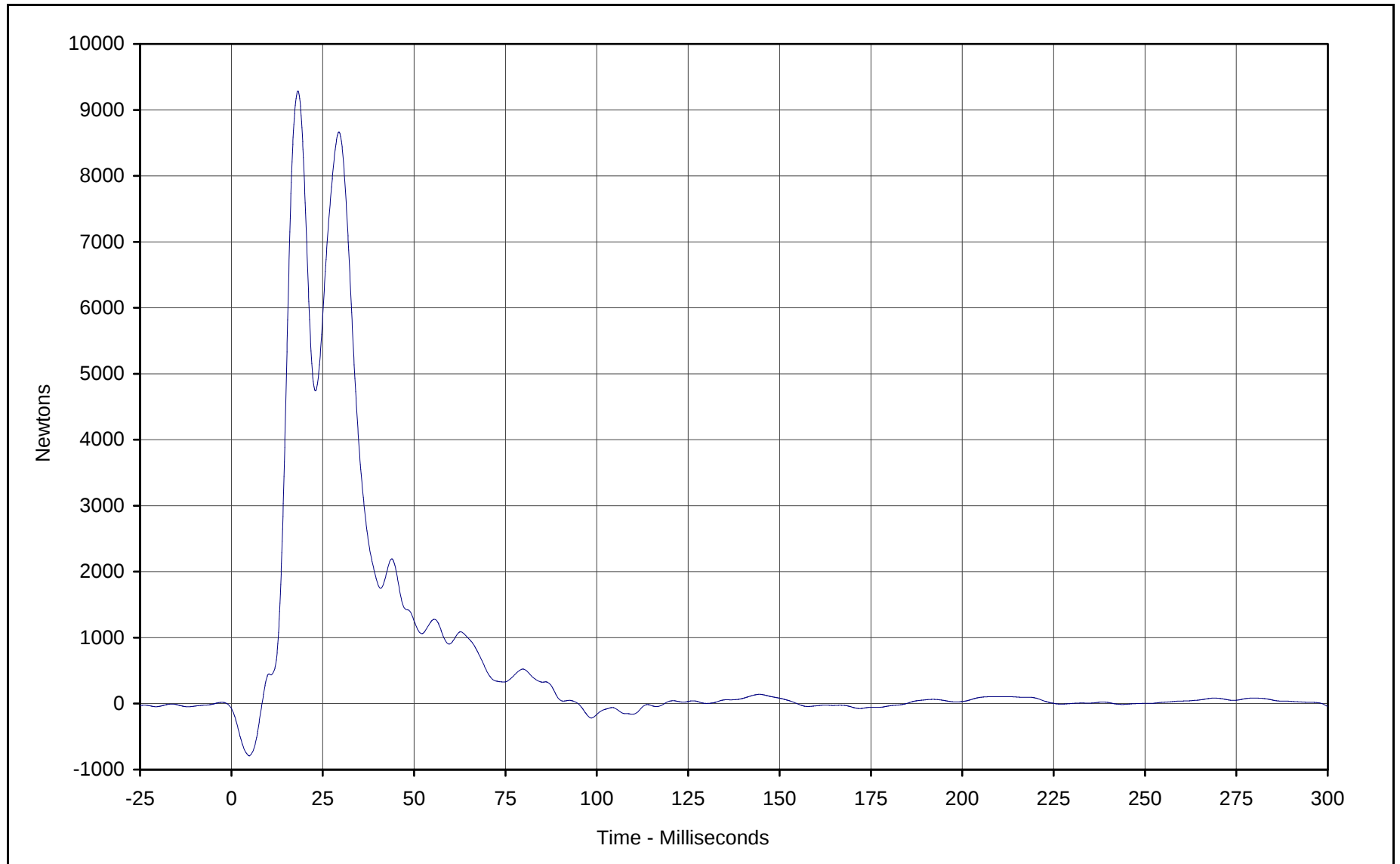
Curve Description: Barrier Force C7
Maximum Value: 18322.6 at 16.0 Milliseconds
Minimum Value: -820.4 at 3.2 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-122

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



KAR21049-01

C-23



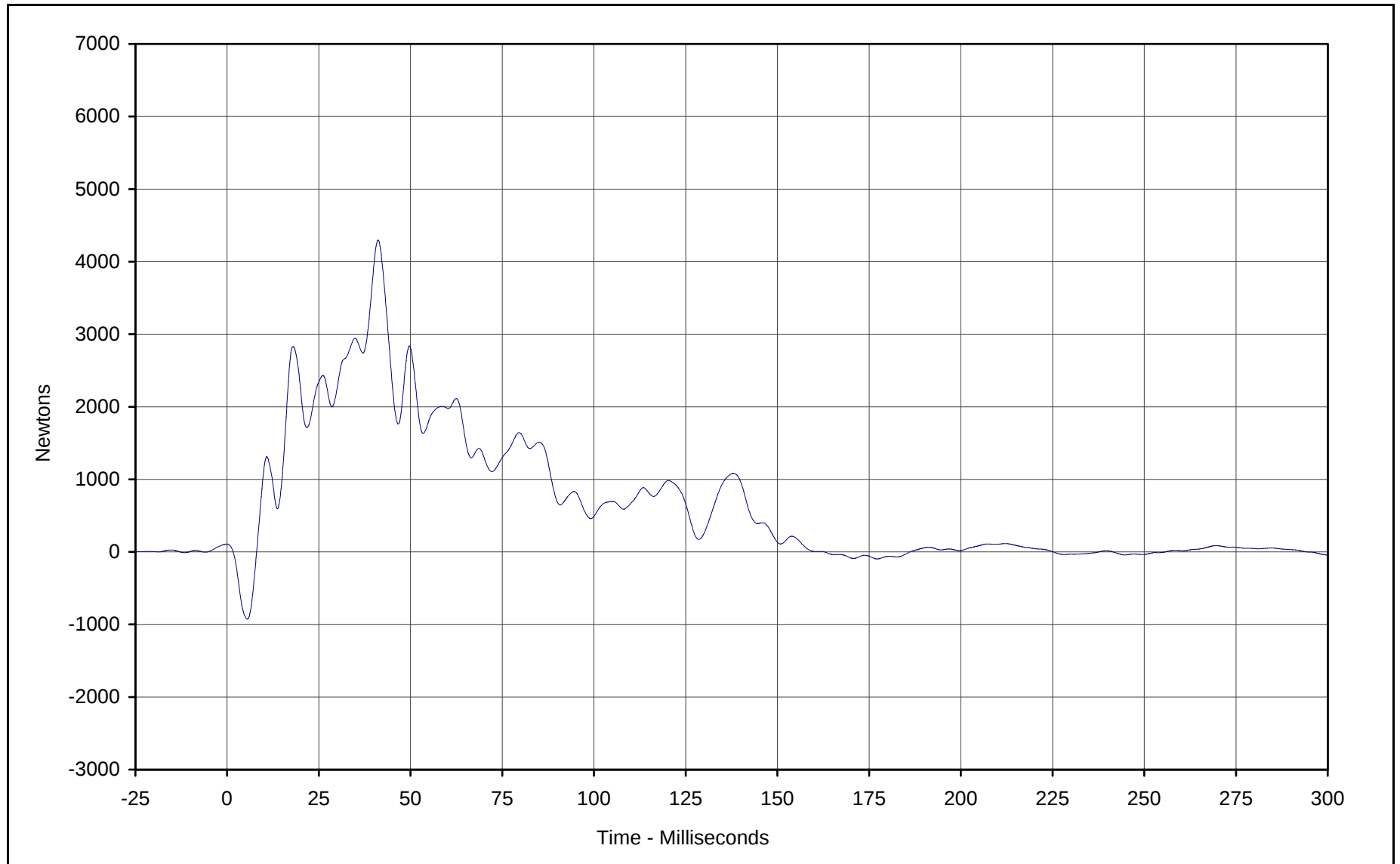
Curve Description: Barrier Force C8
Maximum Value: 9286.2 at 18.2 Milliseconds
Minimum Value: -790.9 at 4.9 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-123

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



KAR21049-01

C-24



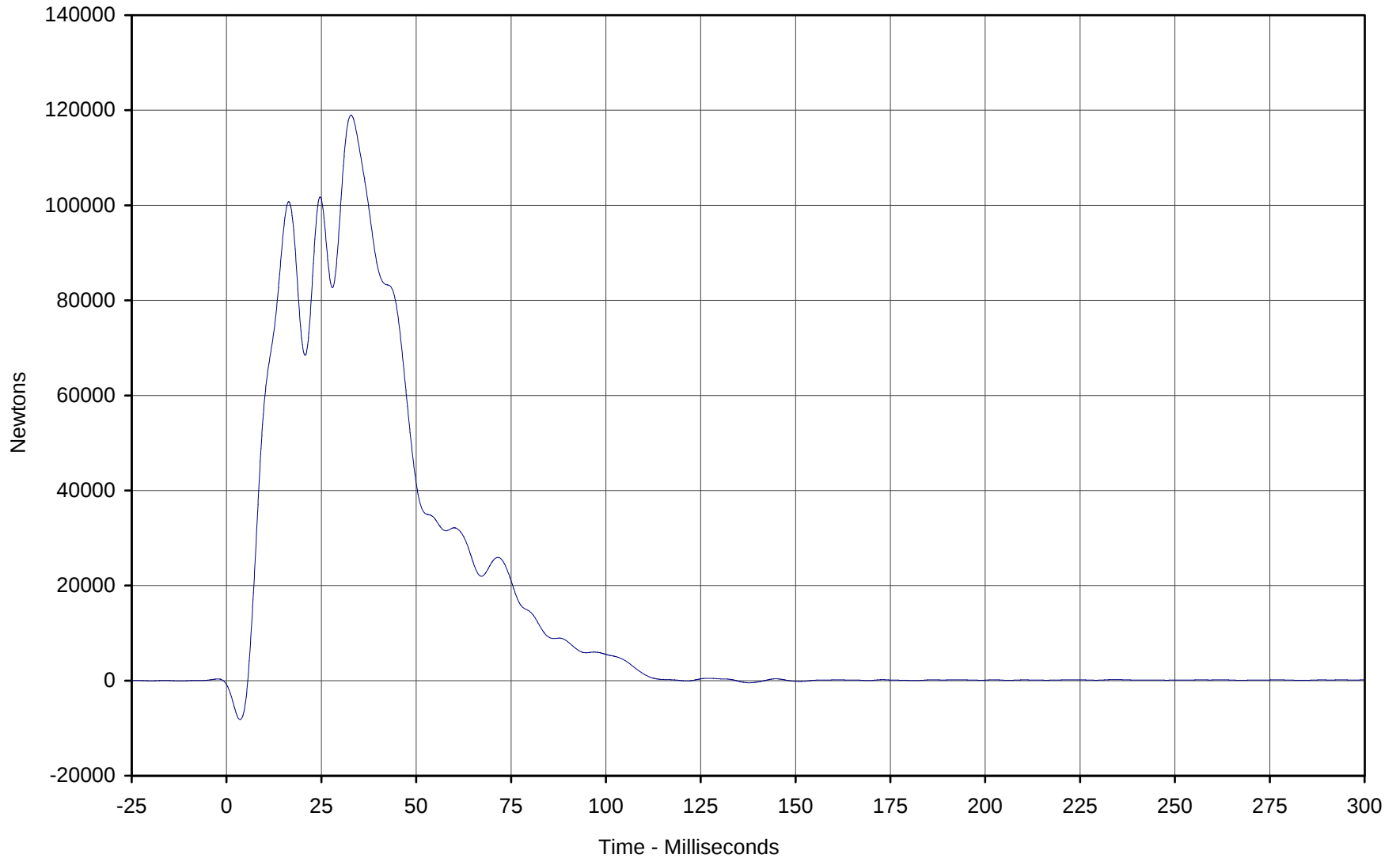
Curve Description: Barrier Force C9
Maximum Value: 4296.7 at 41.1 Milliseconds
Minimum Value: -926.2 at 5.5 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: FIL-124

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



KAR21049-01

C-25

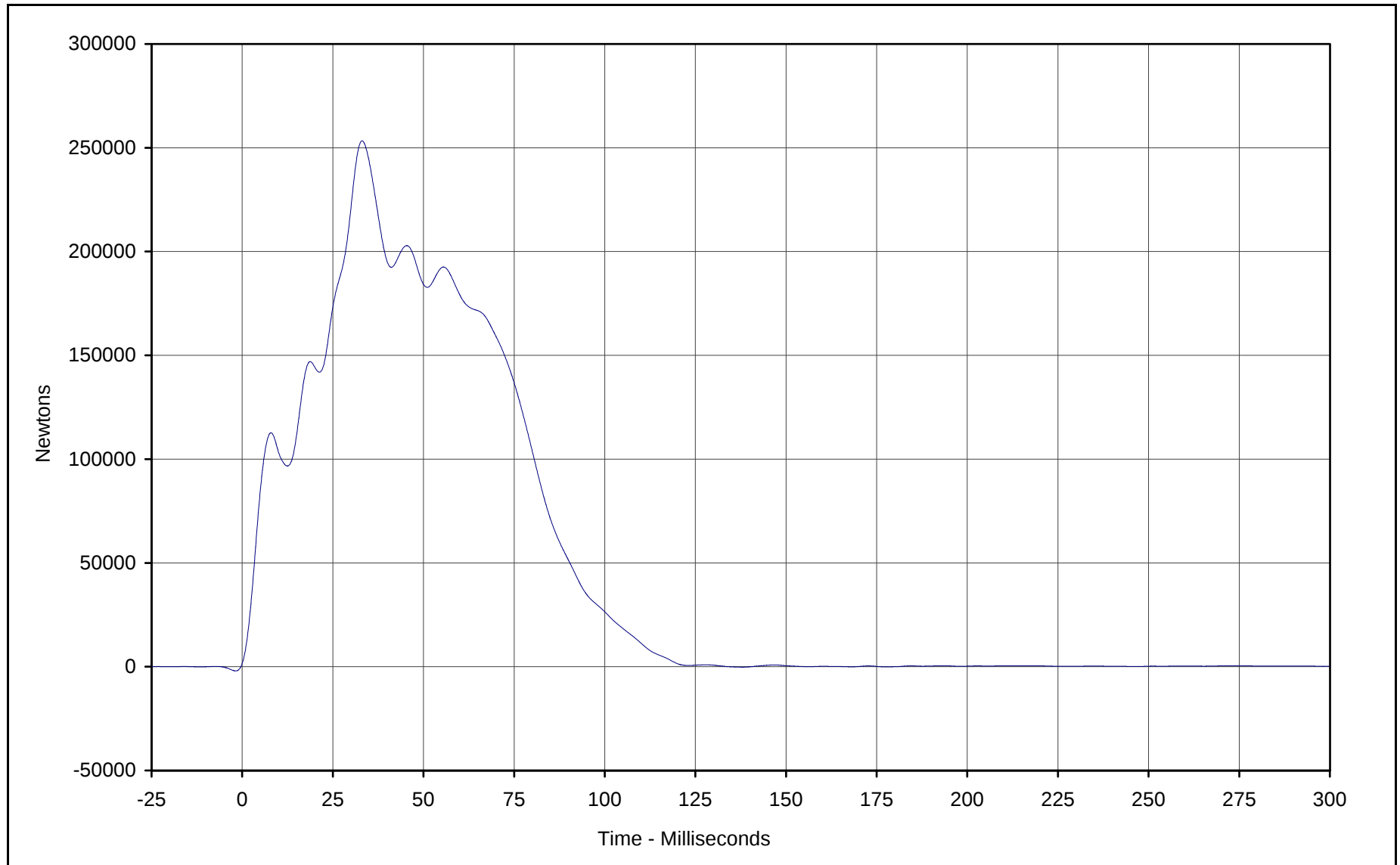


Curve Description: Barrier Force Sum Group 1
Maximum Value: 118984.2 at 32.8 Milliseconds
Minimum Value: -8194.4 at 3.6 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: SUM-001

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



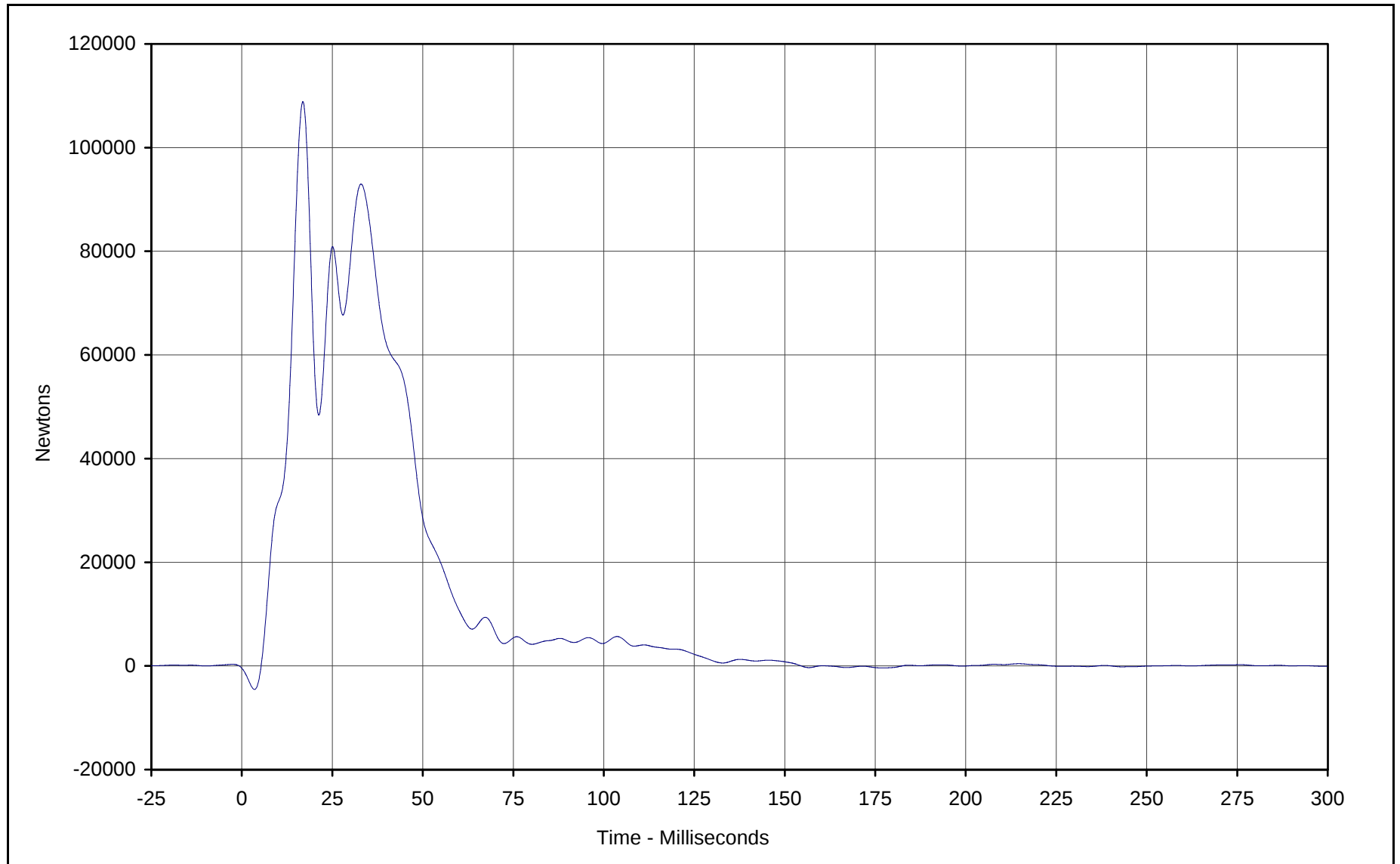
KAR21049-01



Curve Description: Barrier Force Sum Group 2
Maximum Value: 253359.1 at 33.1 Milliseconds
Minimum Value: -222.9 at 138.0 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: SUM-002

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

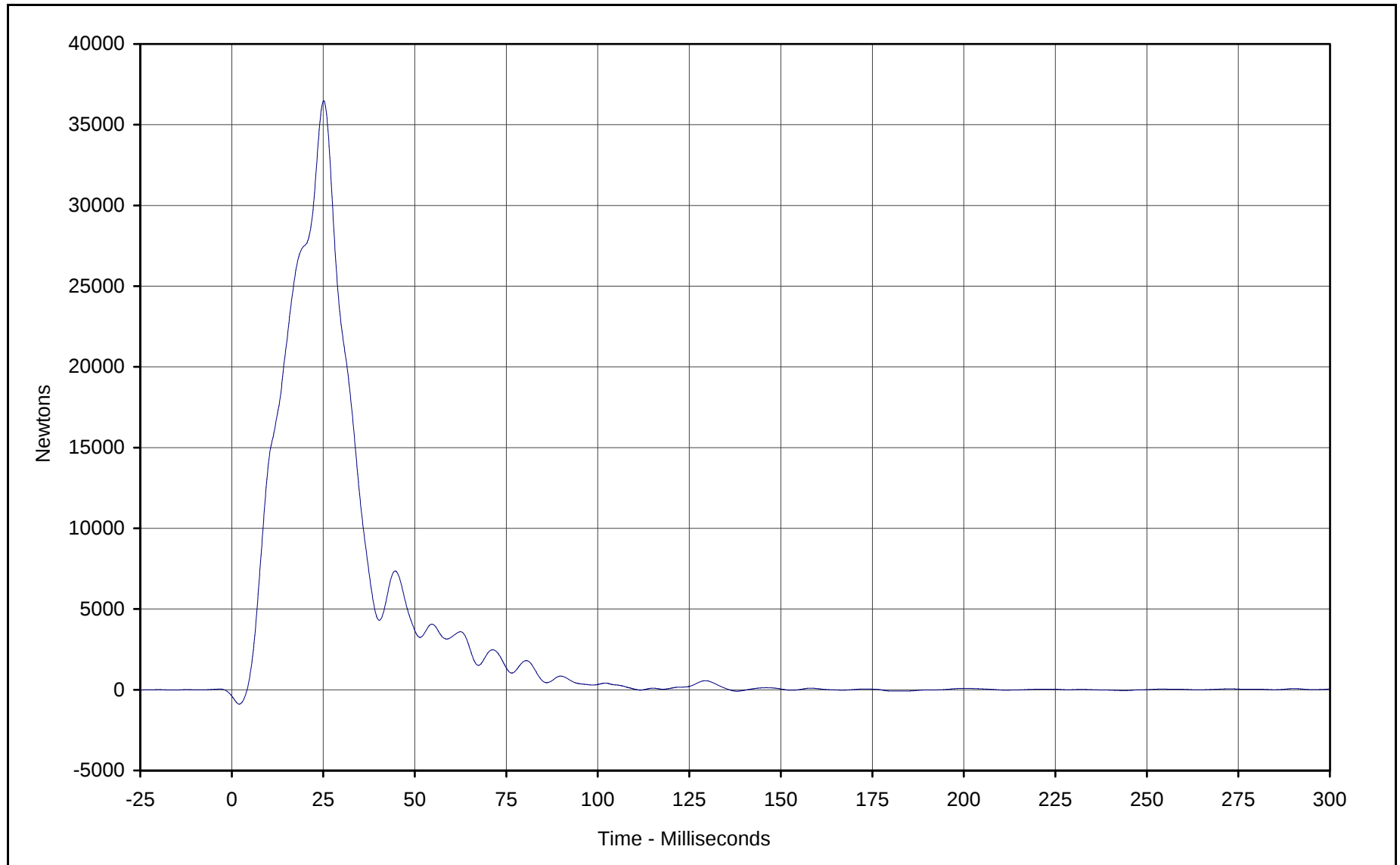




Curve Description: Barrier Force Sum Group 3
 Maximum Value: 108872.1 at 16.9 Milliseconds
 Minimum Value: -4541.0 at 3.5 Milliseconds
 SAE Filter Class: 60
 Date of Test: 5/9/01
 Curve Number: SUM-003

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
 Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup

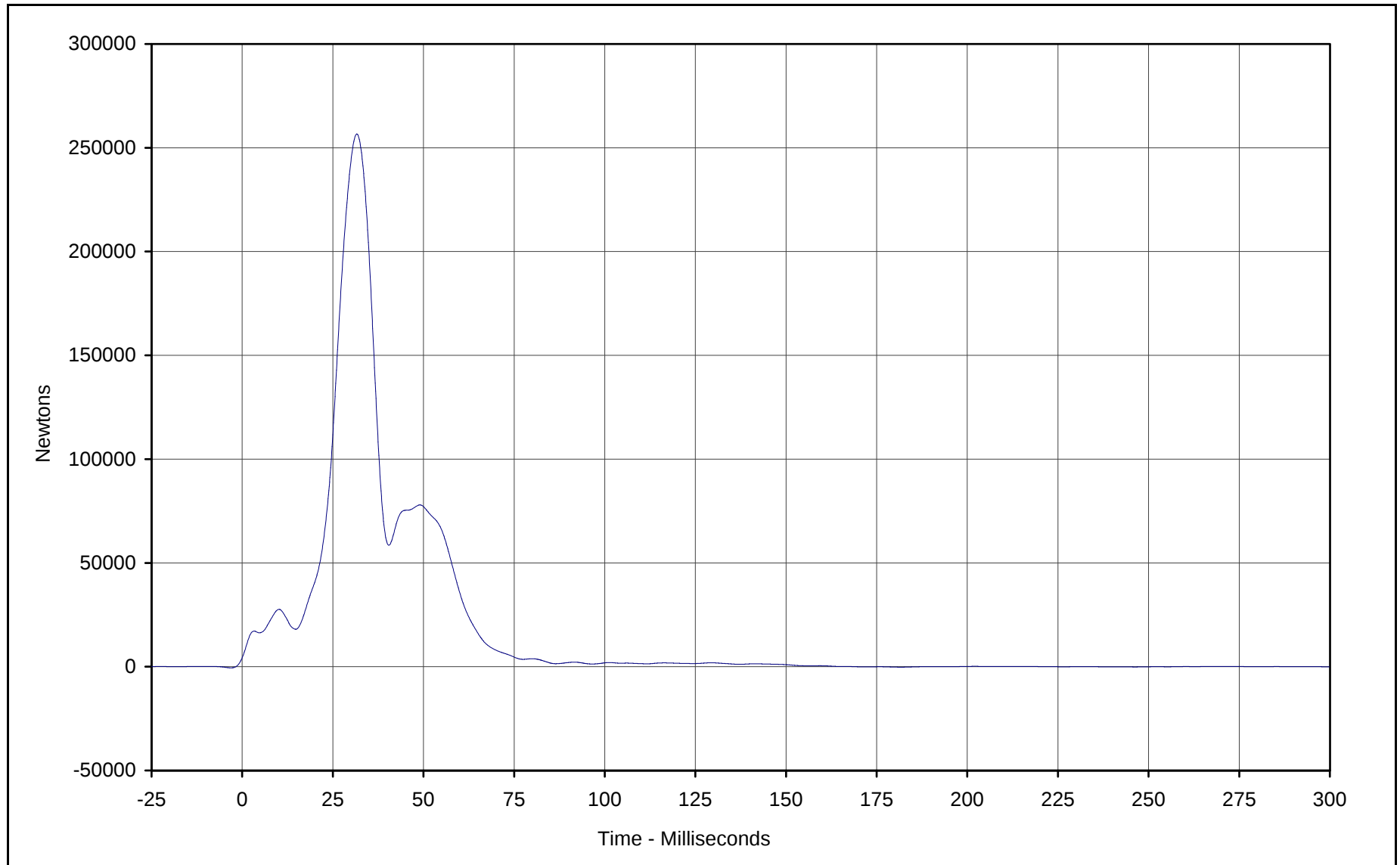




Curve Description: Barrier Force Sum Group 4
Maximum Value: 36486.8 at 25.1 Milliseconds
Minimum Value: -890.2 at 2.0 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: SUM-004

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



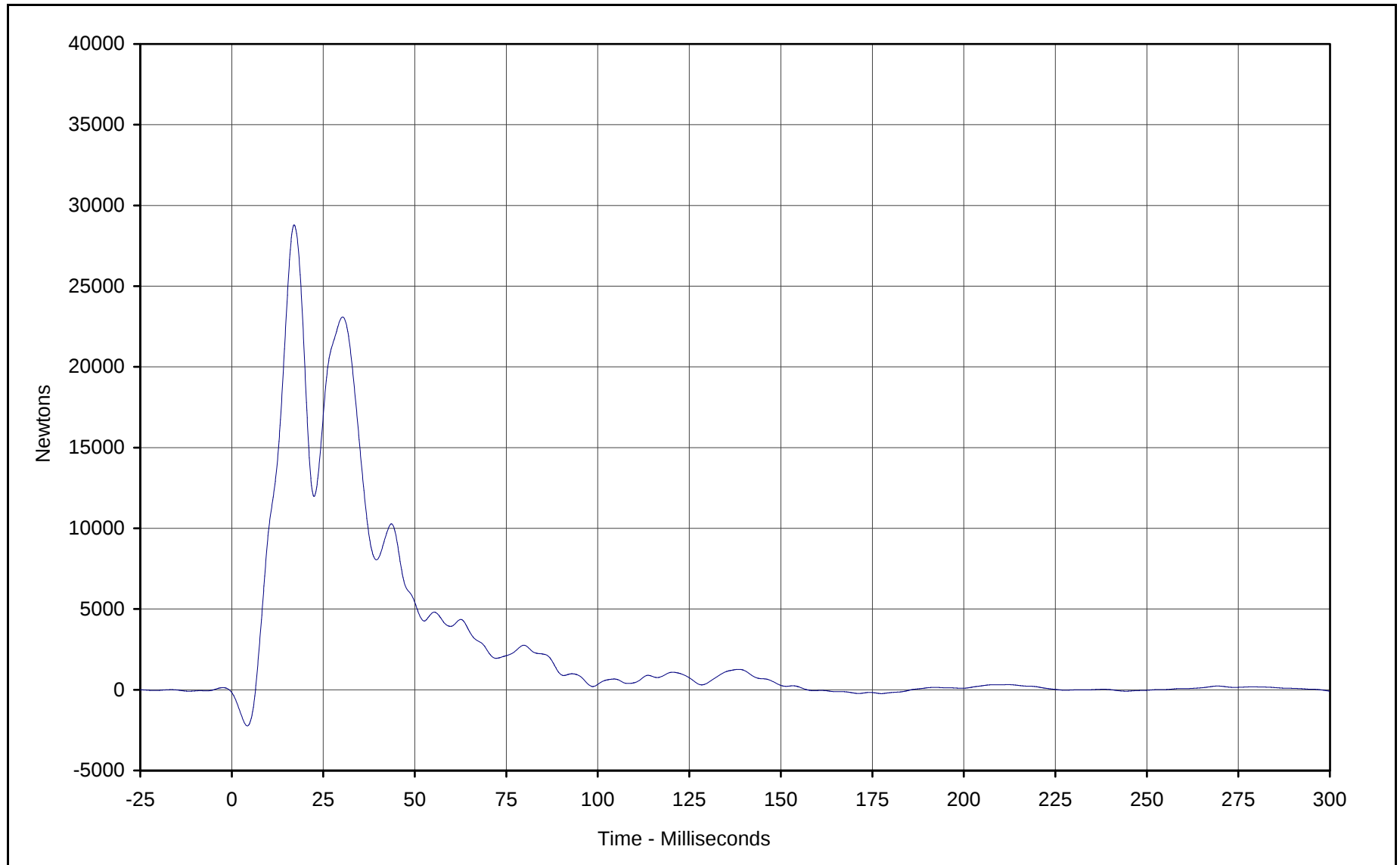


Curve Description: Barrier Force Sum Group 5
Maximum Value: 256639.8 at 31.6 Milliseconds
Minimum Value: -232.3 at 181.7 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: SUM-005

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



C-30



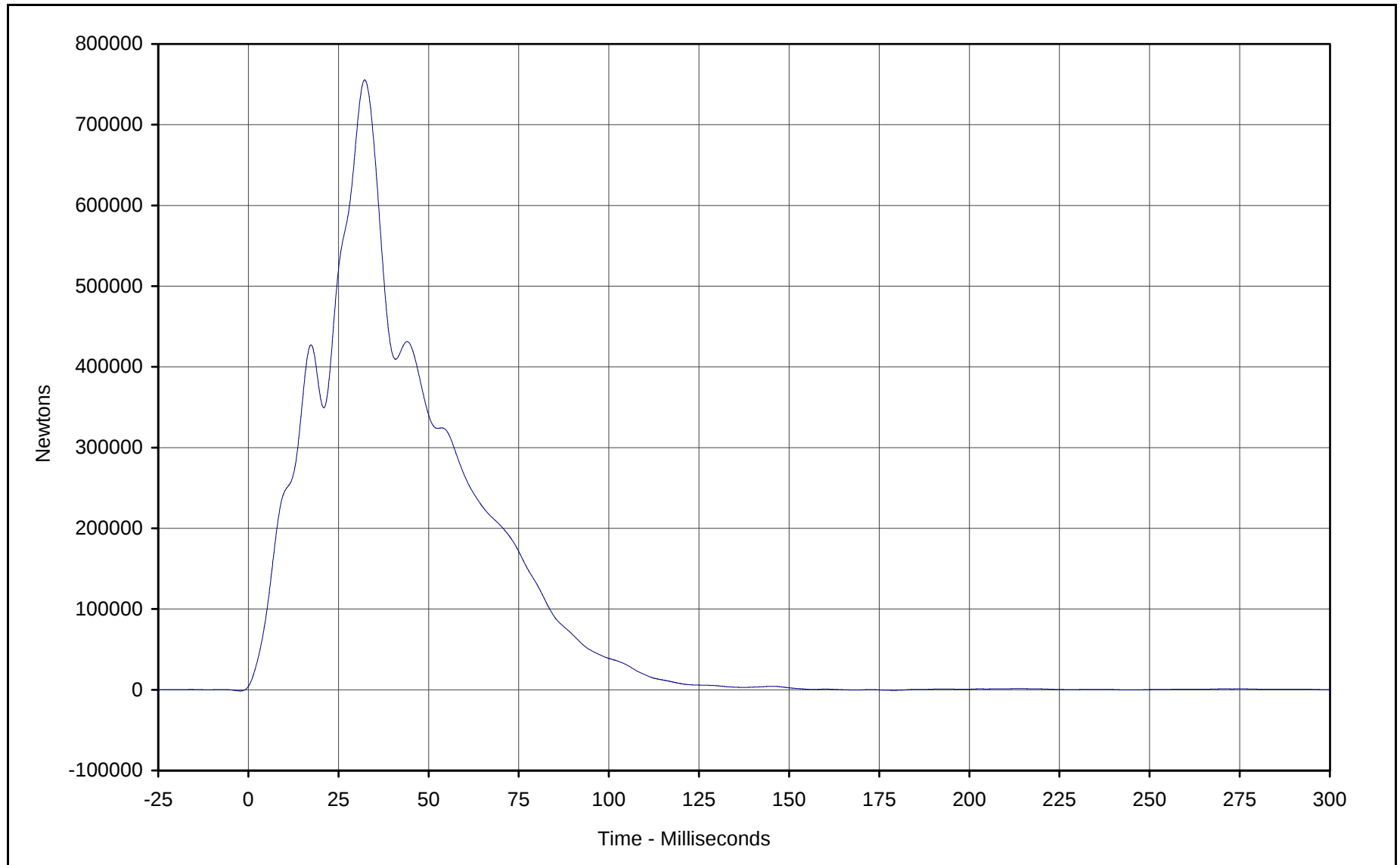
Curve Description: Barrier Force Sum Group 6
Maximum Value: 28792.2 at 17.0 Milliseconds
Minimum Value: -2240.3 at 4.3 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: SUM-006

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



KAR21049-01

C-31



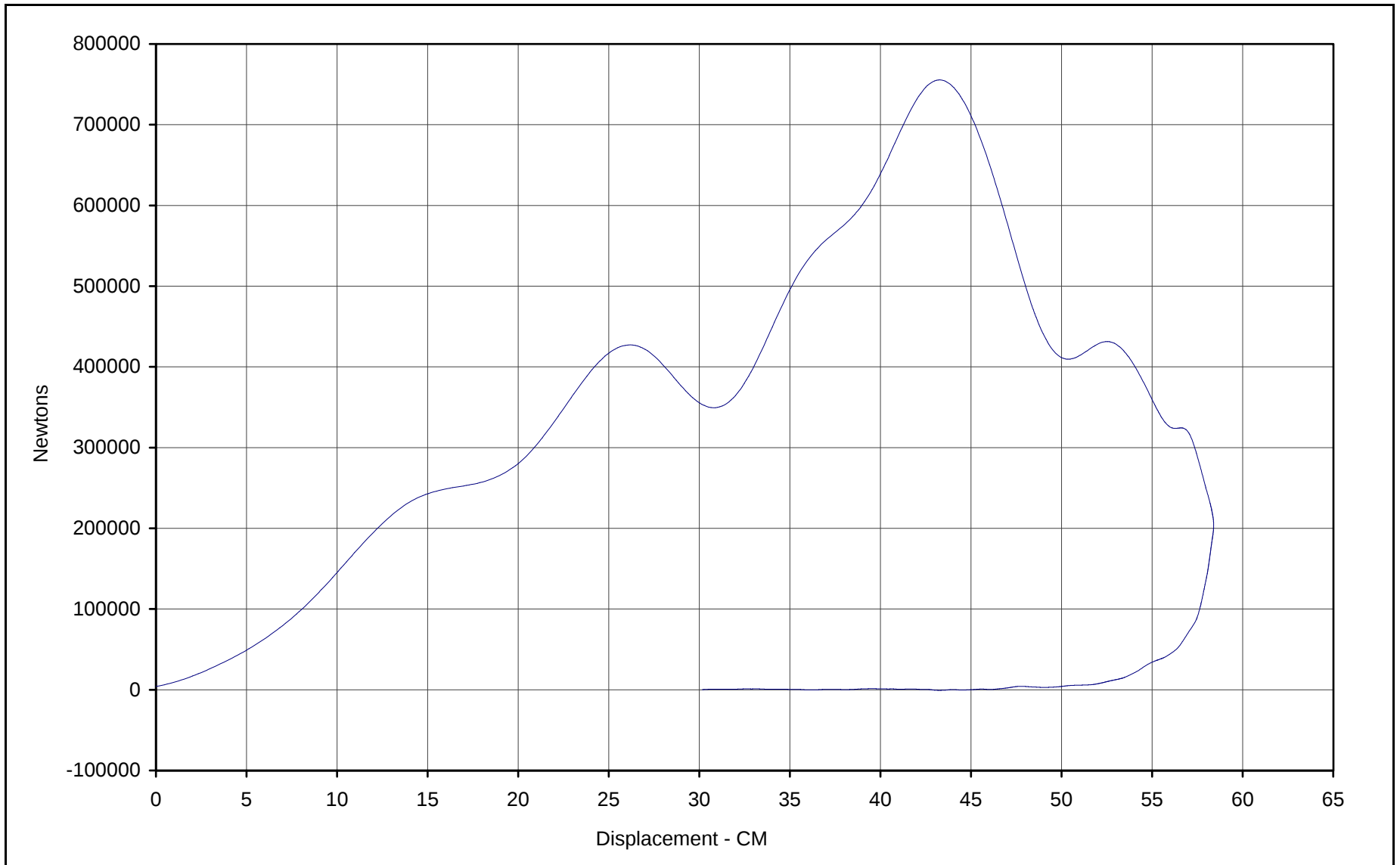
Curve Description: Barrier Force Sum Total
Maximum Value: 755413.4 at 32.3 Milliseconds
Minimum Value: -720.9 at 178.9 Milliseconds
SAE Filter Class: 60
Date of Test: 5/9/01
Curve Number: SUM-007

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001
Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



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C-32



Curve Description: Sum Force Total vs. Dynamic Crush

Maximum Displ.: 58.4 at 69.9 Milliseconds

Maximum Force: 755,413 at 32.3 Milliseconds

Measured Energy: 205,626 joules

Date of Test: 5/9/01

Curve Number: XVY-001

Test Program: 2001 NHTSA 35mph NCAP No.: TOY001

Test Vehicle: 2001 Toyota Tacoma SR5 Extended Cab Pickup



KAR21049-01

BARRIER LOAD CELL SUMMARY DATATest Vehicle: 2001 Toyota Tacoma SR5 Extended Cab PickupNHTSA No.: TOY001Test Program: 2001 NHTSA 35mph NCAPTest Date: 5/9/01**BARRIER LOAD CELL PEAK FORCES**

Location	Units	Max	Time	Min	Time
Barrier Force A2	Newtons	1955.3	18.4	-2369.0	22.4
Barrier Force A3	Newtons	6629.5	18.4	-2645.9	22.3
Barrier Force A4	Newtons	3260.5	18.0	-2942.0	21.7
Barrier Force A5	Newtons	19820.5	21.6	-2919.8	14.2
Barrier Force A6	Newtons	3682.7	18.2	-3342.8	22.0
Barrier Force A7	Newtons	4993.0	18.1	-2666.3	22.1
Barrier Force A8	Newtons	2043.7	25.7	-2050.9	22.0
Barrier Force A9	Newtons	1734.8	10.0	-1688.8	5.6
Barrier Force B2	Newtons	3619.6	41.4	-1642.4	21.9
Barrier Force B3	Newtons	117286.7	32.9	-6212.8	3.6
Barrier Force B4	Newtons	63184.3	36.1	-879.7	0.0
Barrier Force B5	Newtons	90181.0	58.3	-31.1	137.2
Barrier Force B6	Newtons	114864.3	32.7	-1261.2	0.0
Barrier Force B7	Newtons	102214.1	16.5	-1030.4	2.0
Barrier Force B8	Newtons	4473.9	37.0	-1186.4	21.8
Barrier Force B9	Newtons	1180.5	10.2	-1340.6	5.6
Barrier Force C2	Newtons	10880.7	18.2	-429.0	3.4
Barrier Force C3	Newtons	27565.3	24.7	-537.5	1.7
Barrier Force C4	Newtons	61351.2	31.0	-119.8	181.7
Barrier Force C5	Newtons	159799.9	31.5	-41.0	246.7
Barrier Force C6	Newtons	37030.0	32.5	-72.1	182.0
Barrier Force C7	Newtons	18322.6	16.0	-820.4	3.2
Barrier Force C8	Newtons	9286.2	18.2	-790.9	4.9
Barrier Force C9	Newtons	4296.7	41.1	-926.2	5.5
Barrier Force Sum Group 1	Newtons	118984.2	32.8	-8194.4	3.6
Barrier Force Sum Group 2	Newtons	253359.1	33.1	-222.9	138.0
Barrier Force Sum Group 3	Newtons	108872.1	16.9	-4541.0	3.5
Barrier Force Sum Group 4	Newtons	36486.8	25.1	-890.2	2.0
Barrier Force Sum Group 5	Newtons	256639.8	31.6	-232.3	181.7
Barrier Force Sum Group 6	Newtons	28792.2	17.0	-2240.3	4.3
Barrier Force Sum Total	Newtons	755413.4	32.3	-720.9	178.9

Barrier Load cells A1,B1,C1, and D1 through D9 (12 locations) were not recorded.

APPENDIX D

INSTRUMENTATION DATA CHANNEL ASSIGNMENTS

2001 NHTSA 35mph NCAP
Instrumentation Data Channel Assignments
Driver A.T.D. Serial Number 35
5/9/01

2001 Toyota Tacoma SR5 Extended Cab Pickup

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
1	HEAD, PRIMARY	X	KEAC039	Accel., 1/2 bridge	Endevco	7264-2000	G
2	HEAD, PRIMARY	Y	KEAC038	Accel., 1/2 bridge	Endevco	7264-2000	G
3	HEAD, PRIMARY	Z	KEAC027	Accel., 1/2 bridge	Endevco	7264-2000	G
4	HEAD, REDUNDANT	X	KEAC031	Accel., 1/2 bridge	Endevco	7264-2000	G
5	HEAD, REDUNDANT	Y	KEAC032	Accel., 1/2 bridge	Endevco	7264-2000	G
6	HEAD, REDUNDANT	Z	KEAC026	Accel., 1/2 bridge	Endevco	7264-2000	G
7	NECK FORCE	X	GPUN02FX	Load cell, six axis neck	R. A. Denton	1716A	N
8	NECK FORCE	Y	GPUN02FY	Load cell, six axis neck	R. A. Denton	1716A	N
9	NECK FORCE	Z	GPUN02FZ	Load cell, six axis neck	R. A. Denton	1716A	N
10	NECK MOMENT	X	GPUN02MX	Load cell, six axis neck	R. A. Denton	1716A	Nm
11	NECK MOMENT	Y	GPUN02MY	Load cell, six axis neck	R. A. Denton	1716A	Nm
12	NECK MOMENT	Z	GPUN02MZ	Load cell, six axis neck	R. A. Denton	1716A	Nm
13	CHEST , PRIMARY	X	GPAC031	Accel., 1/2 bridge	Endevco	7264-2000	G
14	CHEST , PRIMARY	Y	GPAC024	Accel., 1/2 bridge	Endevco	7264-2000	G
15	CHEST , PRIMARY	Z	GPAC029	Accel., 1/2 bridge	Endevco	7264-2000	G
16	CHEST , REDUNDANT	X	KEAC023	Accel., 1/2 bridge	Endevco	7264-200	G
17	CHEST , REDUNDANT	Y	KEAC022	Accel., 1/2 bridge	Endevco	7264-200	G
18	CHEST , REDUNDANT	Z	KEAC024	Accel., 1/2 bridge	Endevco	7264-200	G
19	CHEST DISPLACEMENT	X	GPCP001	Rotary Pot Chest	Servo	14CBI	MM
20	PELVIS, PRIMARY	X	KEAC019	Accel., 1/2 bridge	Endevco	7264-200	G
21	PELVIS, PRIMARY	Y	KEAC020	Accel., 1/2 bridge	Endevco	7264-200	G
22	PELVIS, PRIMARY	Z	KEAC021	Accel., 1/2 bridge	Endevco	7264-200	G
23	LEFT FEMUR FORCE	Z	KEFF001	Load cell, Femur	R.A. Denton	2121	N
24	RIGHT FEMUR FORCE	Z	KEFF002	Load cell, Femur	R.A. Denton	2121	N

2001 NHTSA 35mph NCAP
Instrumentation Data Channel Assignments
Driver A.T.D. Serial Number 35
5/9/01

2001 Toyota Tacoma SR5 Extended Cab Pickup

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
25	UP. TIBIA LEFT MOM.	X	GPOT09MX	2 ch., Upper tibia gage	R. A. Denton	1583	Nm
26	UP. TIBIA LEFT MOM.	Y	GPOT09MY	2 ch., Upper tibia gage	R. A. Denton	1583	Nm
27	UP. TIBIA RIGHT MOM.	X	GPOT09MX	2 ch., Upper tibia gage	R. A. Denton	1583	Nm
28	UP. TIBIA RIGHT MOM.	Y	GPOT09MY	2 ch., Upper tibia gage	R. A. Denton	1583	Nm
29	LWR. TIBIA LEFT MOM.	X	GPLT09MX	3 ch., lower tibia gage	R. A. Denton	3093	Nm
30	LWR. TIBIA LEFT MOM.	Y	GPLT09MY	3 ch., lower tibia gage	R. A. Denton	3093	Nm
31	LWR. TIBIA LEFT FORCE	Z	GPLT09FZ	3 ch., lower tibia gage	R. A. Denton	3093	N
32	LWR. TIBIA RIGHT MOM.	X	GPLT09MX	3 ch., lower tibia gage	R. A. Denton	3093	Nm
33	LWR. TIBIA RIGHT MOM.	Y	GPLT09MY	3 ch., lower tibia gage	R. A. Denton	3093	Nm
34	LWR. TIBIA RIGHT FORCE	Z	GPLT09FZ	3 ch., lower tibia gage	R. A. Denton	3093	N
35	FOOT LEFT	X	KEIC003X	Accel., Foot Triax	I.C. Sensor	3031-500	G
36	FOOT LEFT	Y	KEIC003Y	Accel., Foot Triax	I.C. Sensor	3031-500	G
37	FOOT LEFT	Z	KEIC003Z	Accel., Foot Triax	I.C. Sensor	3031-500	G
38	FOOT RIGHT	X	KEIC004X	Accel., Foot Triax	I.C. Sensor	3031-500	G
39	FOOT RIGHT	Y	KEIC004Y	Accel., Foot Triax	I.C. Sensor	3031-500	G
40	FOOT RIGHT	Z	KEIC004Z	Accel., Foot Triax	I.C. Sensor	3031-500	G
41	LAP BELT FORCE	X	KELC001	Load cell, Seat belt	Lebow	3371	N
42	SHOULDER BELT FORCE	X	KELC002	Load cell, Seat belt	Lebow	3371	N
43	SHOULDER BELT SPOOL	X	KEPP001	Pullout pot	Celesco	PTX101-0030	CM
44	SHOULDER BELT ELONG.	X	KEEP001	Linear pot., belt stretch	E.T.I.	LCP8-10 10K	MM/CM

2001 NHTSA 35mph NCAP
Instrumentation Data Channel Assignments
Passenger A.T.D. Serial Number 34
5/9/01

2001 Toyota Tacoma SR5 Extended Cab Pickup

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
45	HEAD, PRIMARY	X	GPAC027	Accel., 1/2 bridge	Endevco	7264-2000	G
46	HEAD, PRIMARY	Y	GPAC002	Accel., 1/2 bridge	Endevco	7264-2000	G
47	HEAD, PRIMARY	Z	GPAC003	Accel., 1/2 bridge	Endevco	7264-2000	G
48	HEAD, REDUNDANT	X	GPAC032	Accel., 1/2 bridge	Endevco	7264-2000	G
49	HEAD, REDUNDANT	Y	GPAC021	Accel., 1/2 bridge	Endevco	7264-2000	G
50	HEAD, REDUNDANT	Z	GPAC026	Accel., 1/2 bridge	Endevco	7264-2000	G
51	NECK FORCE	X	GPUN01FX	Load cell, six axis neck	R. A. Denton	1716A	N
52	NECK FORCE	Y	GPUN01FY	Load cell, six axis neck	R. A. Denton	1716A	N
53	NECK FORCE	Z	GPUN01FZ	Load cell, six axis neck	R. A. Denton	1716A	N
54	NECK MOMENT	X	GPUN01MX	Load cell, six axis neck	R. A. Denton	1716A	Nm
55	NECK MOMENT	Y	GPUN01MY	Load cell, six axis neck	R. A. Denton	1716A	Nm
56	NECK MOMENT	Z	GPUN01MZ	Load cell, six axis neck	R. A. Denton	1716A	Nm
57	CHEST , PRIMARY	X	GPAC005	Accel., 1/2 bridge	Endevco	7264-2000	G
58	CHEST , PRIMARY	Y	GPAC011	Accel., 1/2 bridge	Endevco	7264-2000	G
59	CHEST , PRIMARY	Z	GPAC010	Accel., 1/2 bridge	Endevco	7264-2000	G
60	CHEST , REDUNDANT	X	GPAC034	Accel., 1/2 bridge	Endevco	7264-2000	G
61	CHEST , REDUNDANT	Y	GPAC023	Accel., 1/2 bridge	Endevco	7264-2000	G
62	CHEST , REDUNDANT	Z	GPAC020	Accel., 1/2 bridge	Endevco	7264-2000	G
63	CHEST DISPLACEMENT	X	GPCP002	Rotary Pot Chest	Servo	14CBI	MM
64	PELVIS, PRIMARY	X	GPAC025	Accel., 1/2 bridge	Endevco	7264-2000	G
65	PELVIS, PRIMARY	Y	GPAC022	Accel., 1/2 bridge	Endevco	7264-2000	G
66	PELVIS, PRIMARY	Z	GPAC019	Accel., 1/2 bridge	Endevco	7264-2000	G
67	LEFT FEMUR FORCE	Z	KEFF003	Load cell, Femur	R.A. Denton	2121	N
68	RIGHT FEMUR FORCE	Z	KEFF004	Load cell, Femur	R.A. Denton	2121	N

2001 NHTSA 35mph NCAP
Instrumentation Data Channel Assignments
Passenger A.T.D. Serial Number 34
5/9/01

2001 Toyota Tacoma SR5 Extended Cab Pickup

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
69	UP. TIBIA LEFT MOM.	X	GPOT09MX	2 ch., Upper tibia gage	R. A. Denton	1583	Nm
70	UP. TIBIA LEFT MOM.	Y	GPOT09MY	2 ch., Upper tibia gage	R. A. Denton	1583	Nm
71	UP. TIBIA RIGHT MOM.	X	GPOT09MX	2 ch., Upper tibia gage	R. A. Denton	1583	Nm
72	UP. TIBIA RIGHT MOM.	Y	GPOT09MY	2 ch., Upper tibia gage	R. A. Denton	1583	Nm
73	LWR. TIBIA LEFT MOM.	X	GPLT09MX	3 ch., lower tibia gage	R. A. Denton	3093	Nm
74	LWR. TIBIA LEFT MOM.	Y	GPLT09MY	3 ch., lower tibia gage	R. A. Denton	3093	Nm
75	LWR. TIBIA LEFT FORCE	Z	GPLT09FZ	3 ch., lower tibia gage	R. A. Denton	3093	N
76	LWR. TIBIA RIGHT MOM.	X	GPLT09MX	3 ch., lower tibia gage	R. A. Denton	3093	Nm
77	LWR. TIBIA RIGHT MOM.	Y	GPLT09MY	3 ch., lower tibia gage	R. A. Denton	3093	Nm
78	LWR. TIBIA RIGHT FORCE	Z	GPLT09FZ	3 ch., lower tibia gage	R. A. Denton	3093	N
79	FOOT LEFT	X	KEIC002X	Accel., Foot Triax	I.C. Sensor	3031-500	G
80	FOOT LEFT	Y	KEIC002Y	Accel., Foot Triax	I.C. Sensor	3031-500	G
81	FOOT LEFT	Z	KEIC002Z	Accel., Foot Triax	I.C. Sensor	3031-500	G
82	FOOT RIGHT	X	KEIC001X	Accel., Foot Triax	I.C. Sensor	3031-500	G
83	FOOT RIGHT	Y	KEIC001Y	Accel., Foot Triax	I.C. Sensor	3031-500	G
84	FOOT RIGHT	Z	KEIC001Z	Accel., Foot Triax	I.C. Sensor	3031-500	G
85	LAP BELT FORCE	X	KELC003	Load cell, Seat belt	Lebow	3371	N
86	SHOULDER BELT FORCE	X	KELC004	Load cell, Seat belt	Lebow	3371	N
87	SHOULDER BELT SPOOL	X	KEPP001	Pullout pot	Celesco	PTX101-0030	MM
88	SHOULDER BELT ELONG.	X	KEEP001	Linear pot., belt stretch	E.T.I.	LCP8-10 10K	MM/CM

2001 NHTSA 35mph NCAP
Instrumentation Data Channel Assignments
Vehicle Accelerometers and Reference Channel
5/9/01
2001 Toyota Tacoma SR5 Extended Cab Pickup

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
89	Left Rear Primary	X	KEVA010	Accel., Vehicle block	I.C. Sensor	3031-200	G
90	Right Rear Primary	Y	KEVA006	Accel., Vehicle block	I.C. Sensor	3031-200	G
91	Engine Top	X	KEVA001	Accel., Vehicle block	I.C. Sensor	3031-500	G
92	Engine Bottom	Y	KEVA008	Accel., Vehicle block	I.C. Sensor	3031-500	G
93	Left Brake Caliper	X	KEVA004	Accel., Vehicle block	I.C. Sensor	3031-500	G
94	Right Brake Caliper	Y	KEVA009	Accel., Vehicle block	I.C. Sensor	3031-500	G
95	Instrument Panel	X	KEVA003	Accel., Vehicle block	I.C. Sensor	3031-500	G
96	Left Rear Redundant	Y	KEVA011	Accel., Vehicle block	I.C. Sensor	3031-200	G
97	Zero Reference	N/A	N/A	N/A	N/A	N/A	N/A

**2001 NHTSA 35mph NCAP
Instrumentation Data Channel Assignments
Rigid Load Cell Barrier
5/9/01**

2001 Toyota Tacoma SR5 Extended Cab Pickup

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
98	BARRIER FORCE A1	X	BARRIER	Not Used	N/A	N/A	N/A
99	BARRIER FORCE A2	X	BARRIER	Load Cell, LCB	Lebow	1220-FS	N
100	BARRIER FORCE A3	X	BARRIER	Load Cell, LCB	Lebow	1220-FS	N
101	BARRIER FORCE A4	X	BARRIER	Load Cell, LCB	Lebow	1220-FS	N
102	BARRIER FORCE A5	X	BARRIER	Load Cell, LCB	Lebow	1220-FS	N
103	BARRIER FORCE A6	X	BARRIER	Load Cell, LCB	Lebow	1220-FS	N
104	BARRIER FORCE A7	X	BARRIER	Load Cell, LCB	Lebow	1220-FS	N
105	BARRIER FORCE A8	X	BARRIER	Load Cell, LCB	Lebow	1220-FS	N
106	BARRIER FORCE A9	X	BARRIER	Load Cell, LCB	Lebow	1220-FS	N
107	BARRIER FORCE B1	X	BARRIER	Not Used	N/A	N/A	N/A
108	BARRIER FORCE B2	X	BARRIER	Load Cell, LCB	Lebow	1220-FS	N
109	BARRIER FORCE B3	X	BARRIER	Load Cell, LCB	Lebow	1220-FS	N
110	BARRIER FORCE B4	X	BARRIER	Load Cell, LCB	Lebow	1220-FS	N
111	BARRIER FORCE B5	X	BARRIER	Load Cell, LCB	Lebow	1220-FS	N
112	BARRIER FORCE B6	X	BARRIER	Load Cell, LCB	Lebow	1220-FS	N
113	BARRIER FORCE B7	X	BARRIER	Load Cell, LCB	Lebow	1220-FS	N
114	BARRIER FORCE B8	X	BARRIER	Load Cell, LCB	Lebow	1220-FS	N
115	BARRIER FORCE B9	X	BARRIER	Load Cell, LCB	Lebow	1220-FS	N

**2001 NHTSA 35mph NCAP
Instrumentation Data Channel Assignments
Rigid Load Cell Barrier
5/9/01**

2001 Toyota Tacoma SR5 Extended Cab Pickup

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
116	BARRIER FORCE C1	X	BARRIER	Not Used	N/A	N/A	N/A
117	BARRIER FORCE C2	X	BARRIER	Load Cell, LCB	Lebow	1220-FS	N
118	BARRIER FORCE C3	X	BARRIER	Load Cell, LCB	Lebow	1220-FS	N
119	BARRIER FORCE C4	X	BARRIER	Load Cell, LCB	Lebow	1220-FS	N
120	BARRIER FORCE C5	X	BARRIER	Load Cell, LCB	Lebow	1220-FS	N
121	BARRIER FORCE C6	X	BARRIER	Load Cell, LCB	Lebow	1220-FS	N
122	BARRIER FORCE C7	X	BARRIER	Load Cell, LCB	Lebow	1220-FS	N
123	BARRIER FORCE C8	X	BARRIER	Load Cell, LCB	Lebow	1220-FS	N
124	BARRIER FORCE C9	X	BARRIER	Load Cell, LCB	Lebow	1220-FS	N
125	BARRIER FORCE D1	X	BARRIER	Not Used	N/A	N/A	N/A
126	BARRIER FORCE D2	X	BARRIER	Not Used	N/A	N/A	N/A
127	BARRIER FORCE D3	X	BARRIER	Not Used	N/A	N/A	N/A
128	BARRIER FORCE D4	X	BARRIER	Not Used	N/A	N/A	N/A
129	BARRIER FORCE D5	X	BARRIER	Not Used	N/A	N/A	N/A
130	BARRIER FORCE D6	X	BARRIER	Not Used	N/A	N/A	N/A
131	BARRIER FORCE D7	X	BARRIER	Not Used	N/A	N/A	N/A
132	BARRIER FORCE D8	X	BARRIER	Not Used	N/A	N/A	N/A
133	BARRIER FORCE D9	X	BARRIER	Not Used	N/A	N/A	N/A

APPENDIX E
DUMMY CALIBRATION DATA



Hybrid III Calibration Data Sheet

50TH Percentile Male

Left Knee Impact Test

ATD Serial No.: 034

Part Serial No.: N/A

Test I.D.: LK05A

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.5	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	2.073 to 2.134	2.113	Pass
Peak Probe Force	Newtons	4715 to 5782	5430.7	Pass
Overall Test Results				Pass

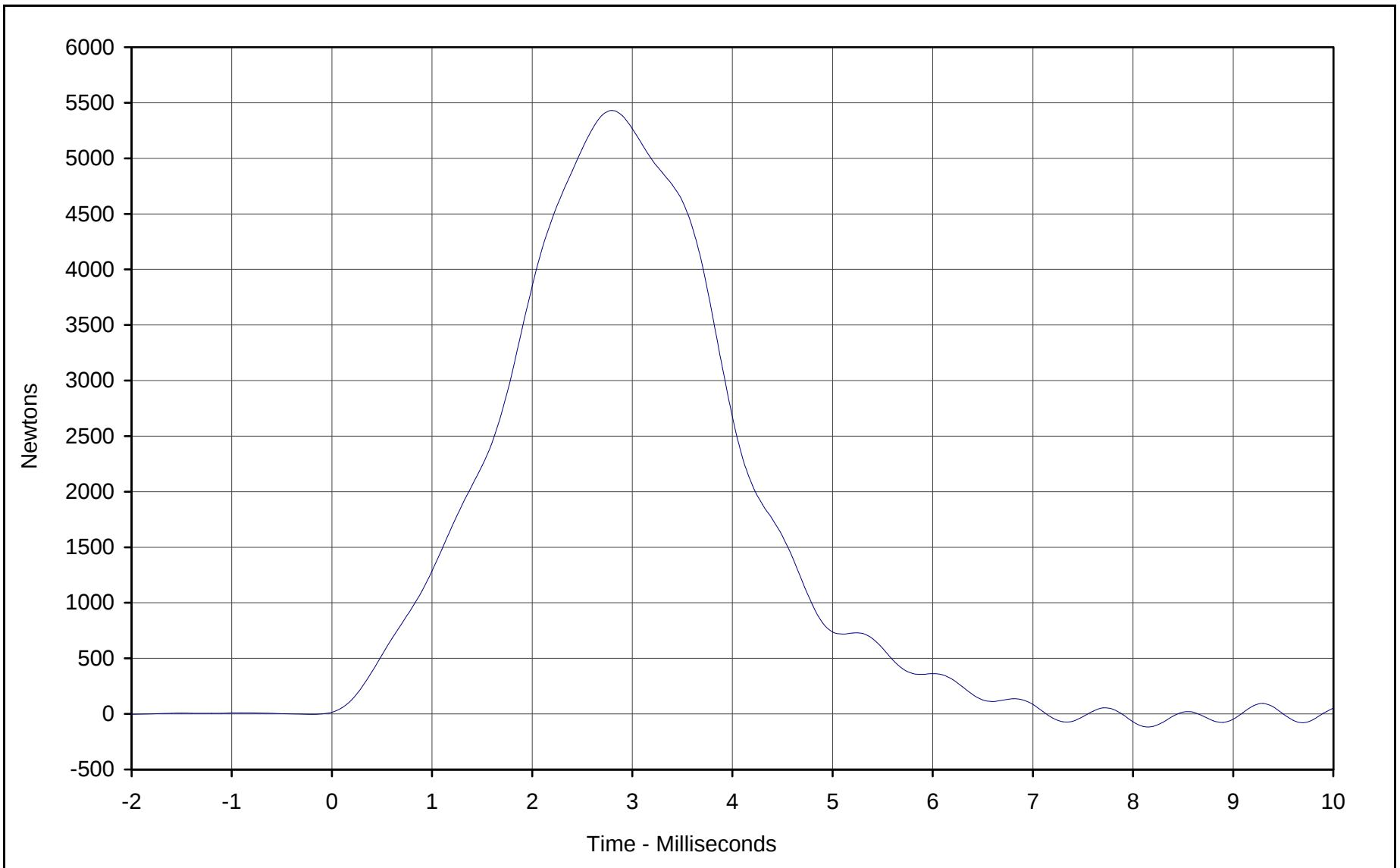
Laboratory Technician

April 16, 2001
Test Date

Approved By

Date

E-2



Curve Description: Probe Force

Maximum Value:	<u>5430.7</u>	at	<u>2.8</u>	Milliseconds
Minimum Value:	<u>-70.9</u>	at	<u>7.3</u>	Milliseconds
SAE Filter Class:	<u>600</u>			
Date of Test:	<u>4/16/01</u>			
ATD Serial No.:	<u>034</u>			

Testing Program: Hybrid III Left Knee Impact Test

Test Information: Part S/N: N/A Test I.D.: LK05A



KAR21049-01



Hybrid III Calibration Data Sheet

50TH Percentile Male

Right Knee Impact Test

ATD Serial No.: 034

Part Serial No.: N/A

Test I.D.: RK05A

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.5	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	2.073 to 2.134	2.113	Pass
Peak Probe Force	Newtons	4715 to 5782	5761.4	Pass
Overall Test Results				Pass

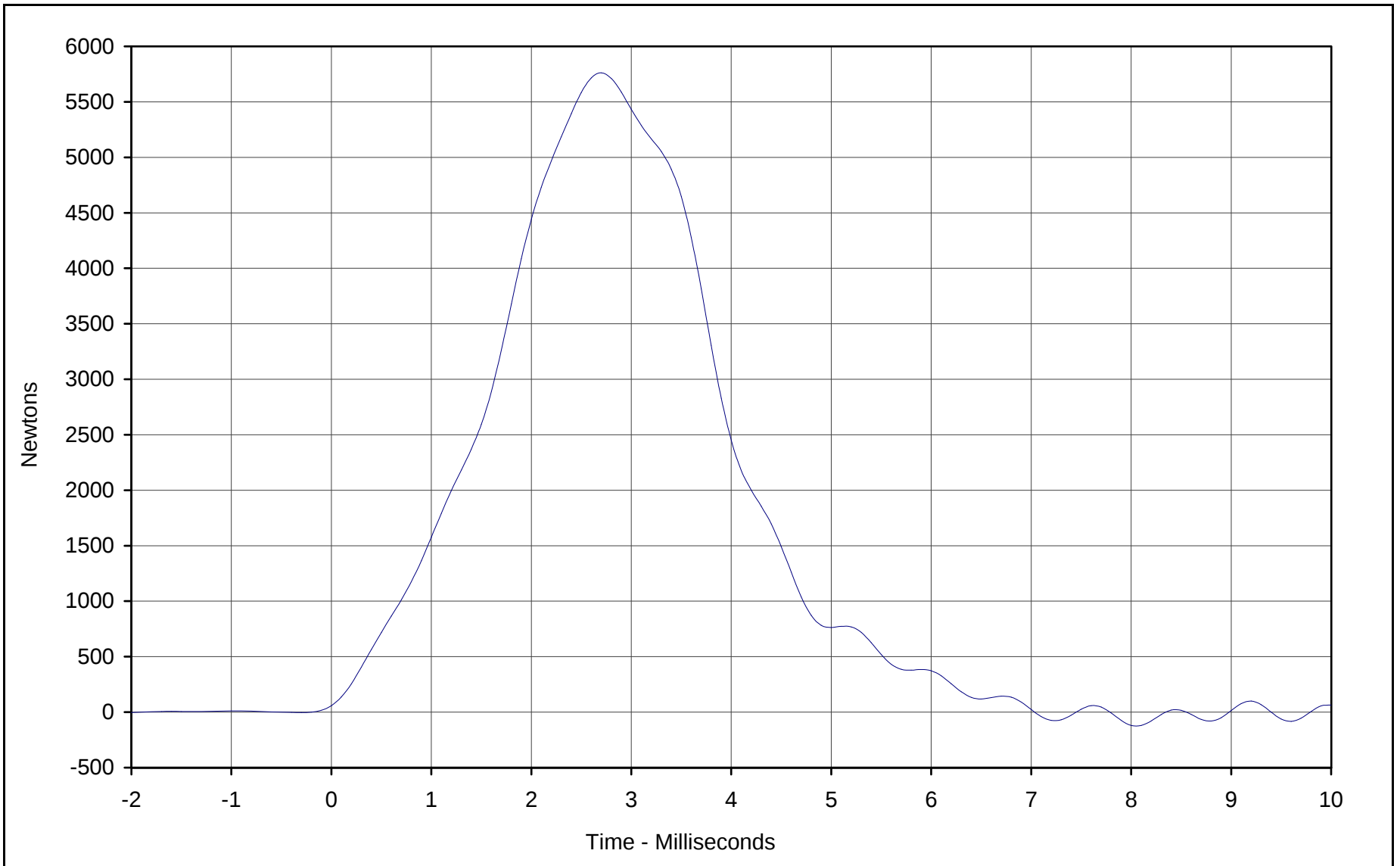
Laboratory Technician

April 16, 2001
Test Date

Approved By

Date

E-4



Curve Description: Probe Force

Maximum Value:	<u>5761.4</u>	at	<u>2.7</u>	Milliseconds
Minimum Value:	<u>-119.4</u>	at	<u>8.0</u>	Milliseconds
SAE Filter Class:	<u>600</u>			
Date of Test:	<u>4/16/01</u>			
ATD Serial No.:	<u>034</u>			

Testing Program: Hybrid III Right Knee Impact Test

Test Information: Part S/N: N/A Test I.D.: RK05A



KAR21049-01



Hybrid III Calibration Data Sheet

50TH Percentile Male

Head Drop Calibration

ATD Serial No.: 034

Part Serial No.: N/A

Test I.D.: HD05A

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Peak Resultant Acceleration	G's	225.0 to 275.0	254.7	Pass
Peak Lateral Acceleration	G's	≤15.0	5.2	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Overall Test Results				Pass

Laboratory Technician

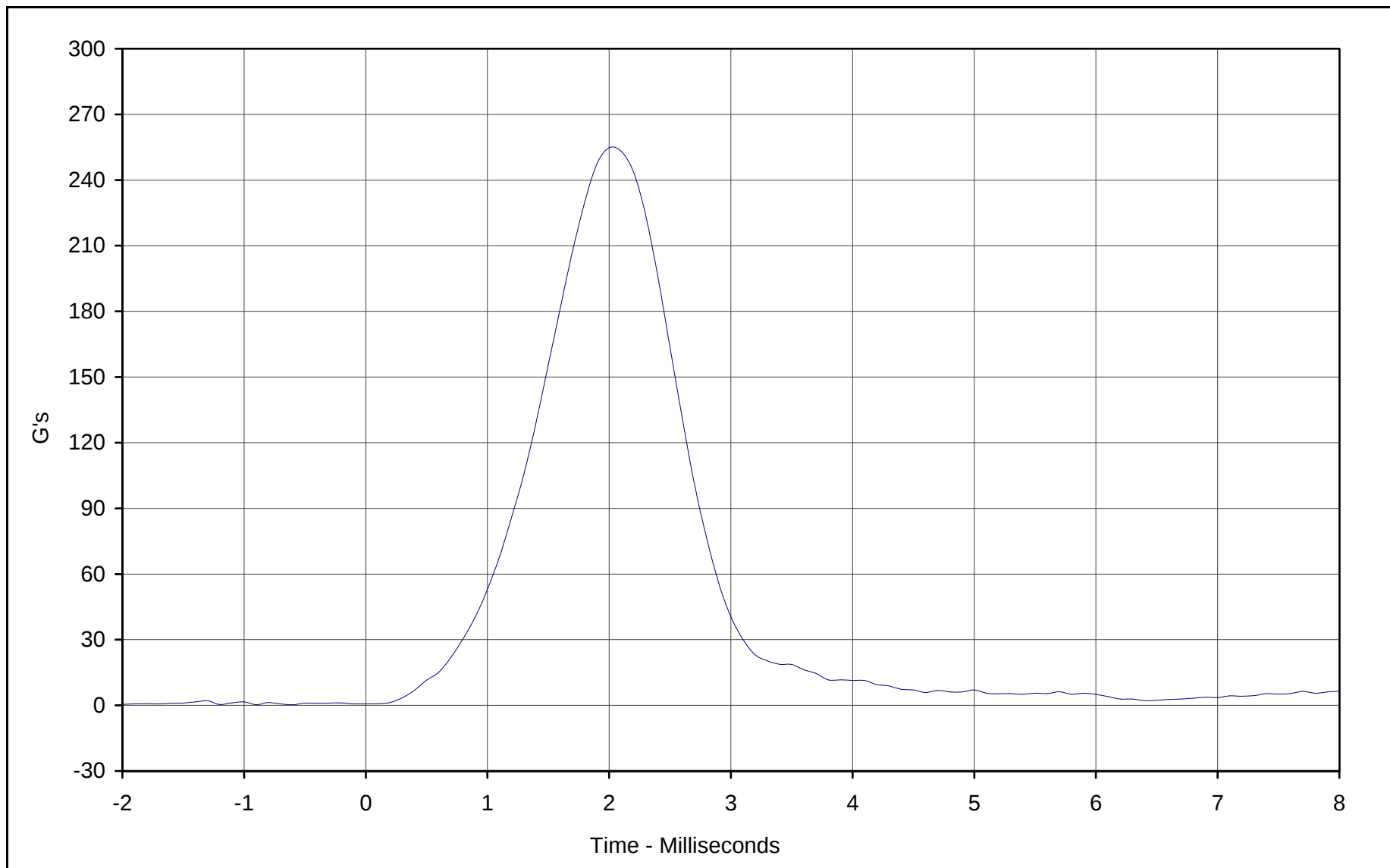
April 19, 2001

Test Date

Approved By

Date

E-6



Curve Description: Head Resultant Acceleration

Maximum Value:	<u>254.7</u>	at	<u>2.0</u>	Milliseconds
Minimum Value:	<u>0.3</u>	at	<u>-0.9</u>	Milliseconds
SAE Filter Class:	<u>1000</u>			
Date of Test:	<u>4/19/01</u>			
ATD Serial No.:	<u>034</u>			

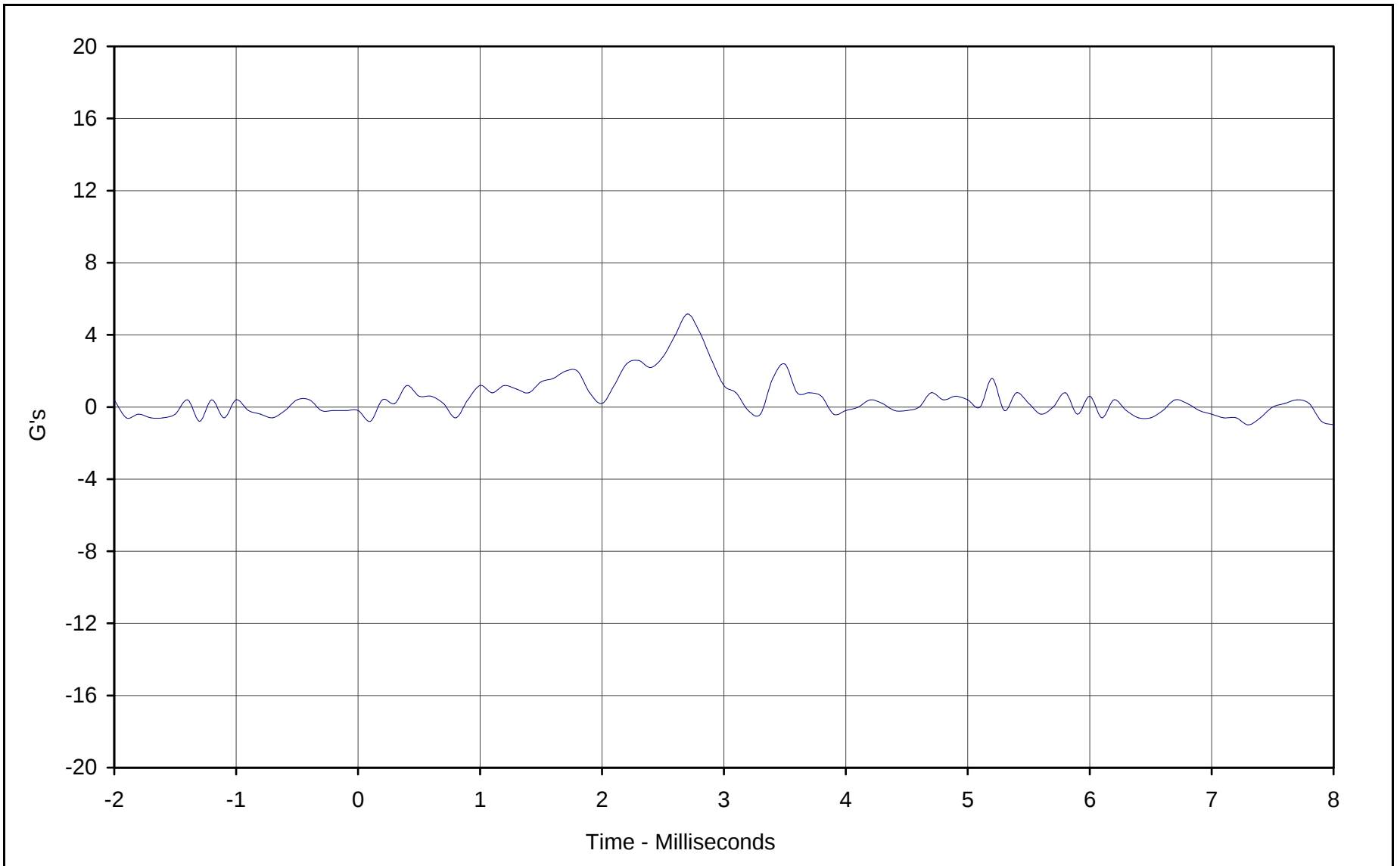
Testing Program: Hybrid III Head Drop Calibration (Male)

Test Information: S/N of Part: N/A Test I.D.: HD05A



KAR21049-01

E-7



Curve Description: Head Acceleration Y Axis

Maximum Value: 5.2 at 2.7 Milliseconds

Minimum Value: -1.0 at 7.3 Milliseconds

SAE Filter Class: 1000

Date of Test: 4/19/01

ATD Serial No.: 034

Testing Program: Hybrid III Head Drop Calibration (Male)

Test Information: S/N of Part: N/A Test I.D.: HD05A



KAR21049-01



Hybrid III Calibration Data Sheet

50TH Percentile Male

Thorax Impact Test

ATD Serial No.: 034

Part Serial No.: N/A

Test I.D.: CH05A

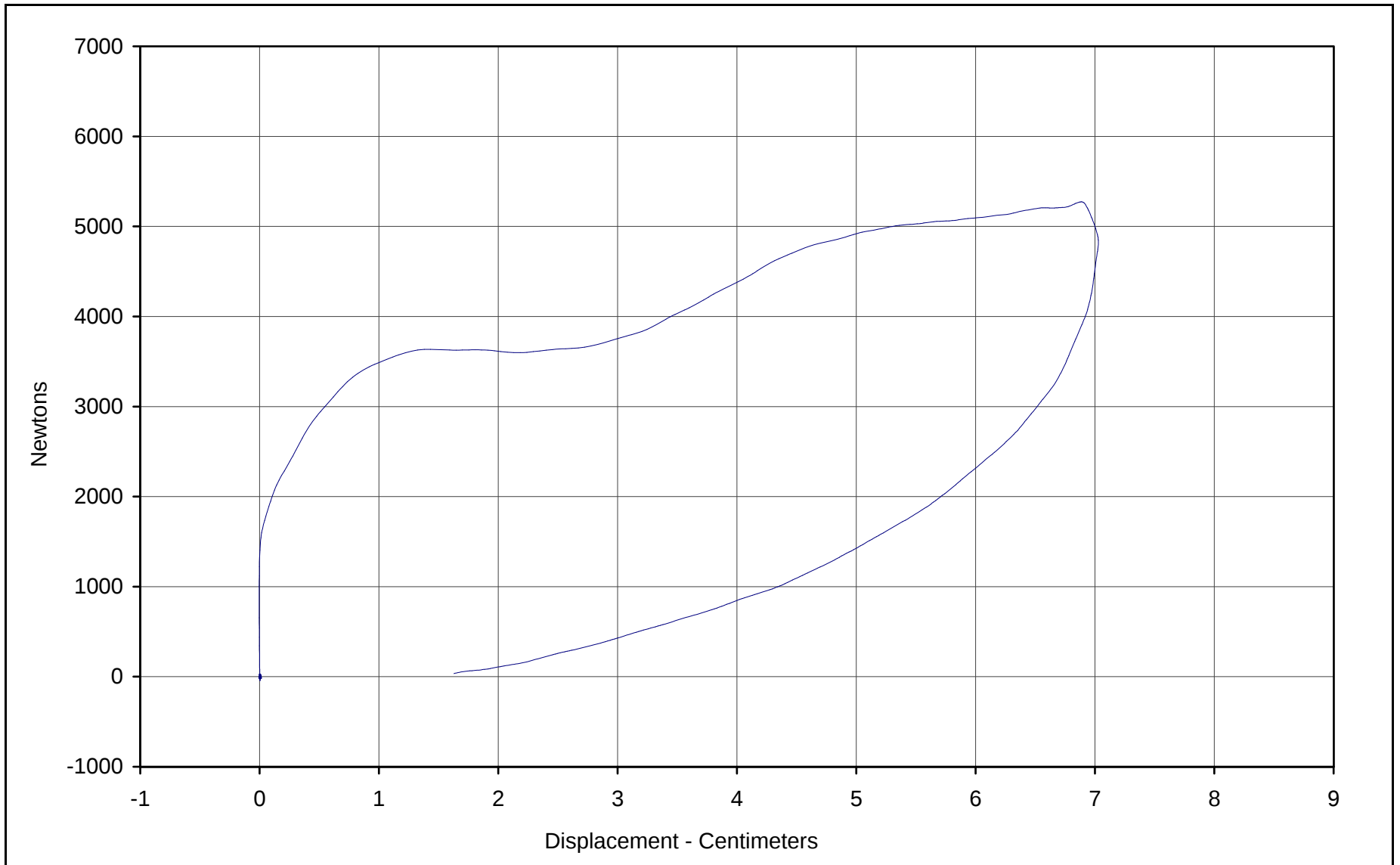
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.2	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	6.58 to 6.82	6.61	Pass
Peak Probe Force	Newtons	5159 to 5893	5273	Pass
Peak Sternum Displacement	CM	6.35 to 7.26	7.03	Pass
Internal Hysteresis	%	69 to 85	75.7	Pass
Overall Test Results				Pass

Laboratory Technician

April 17, 2001
Test Date

Approved By

Date



Curve Description: Probe Force vs. Chest Displacement

Probe Force: 5273.0 Newtons

Chest Displ.: 7.03 Centimeters

SAE Filter Class: 180

Date of Test: 4/17/01

ATD Serial No.: 034

Testing Program: Hybrid III Thorax Impact Test

Test Information: S/N of Part: N/A Test I.D.: CH05A





Hybrid III Calibration Data Sheet

50TH Percentile Male

Neck Flexion Test

ATD Serial No.: 034

Part Serial No.: N/A

Test I.D.: NF05A

Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	6.89 to 7.13	6.91	Pass
Pendulum Deceleration	10 Msec.	G's	22.5 to 27.5	23.8	Pass
	20 Msec.	G's	17.6 to 22.6	21.1	Pass
	30 Msec.	G's	12.5 to 18.5	18.3	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 29.0	18.3	Pass
Deceleration Decay, Time to Cross 5 G's		Msec.	34.0 to 42.0	37.0	Pass
Maximum "D" Plane Rotation	Maximum	Degrees	64.0 to 78.0	64.4	Pass
	Time	Msec.	57.0 to 64.0	62.9	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	113.0 to 128.0	117.5	Pass
Moment About Occipital Condyle	Maximum	N·m	84.1 to 108.5	88.7	Pass
	Time	Msec.	47.0 to 58.0	55.0	Pass
Positive Moment Decay, Time To Zero Crossing		Msec.	97.0 to 107.0	100.8	Pass
Overall Test Results					Pass

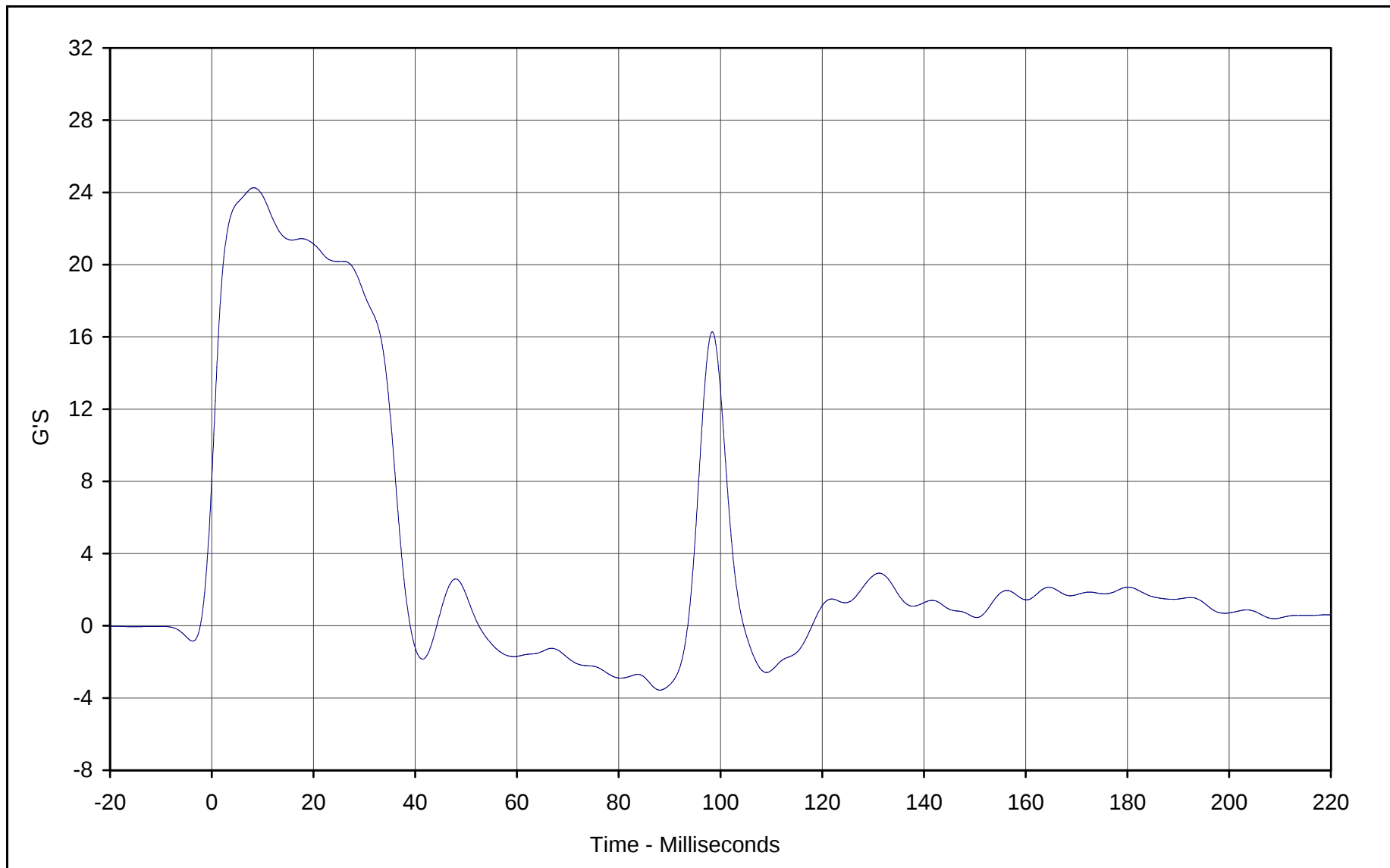
Laboratory Technician

April 18, 2001
Test Date

Approved By

Date

E-11



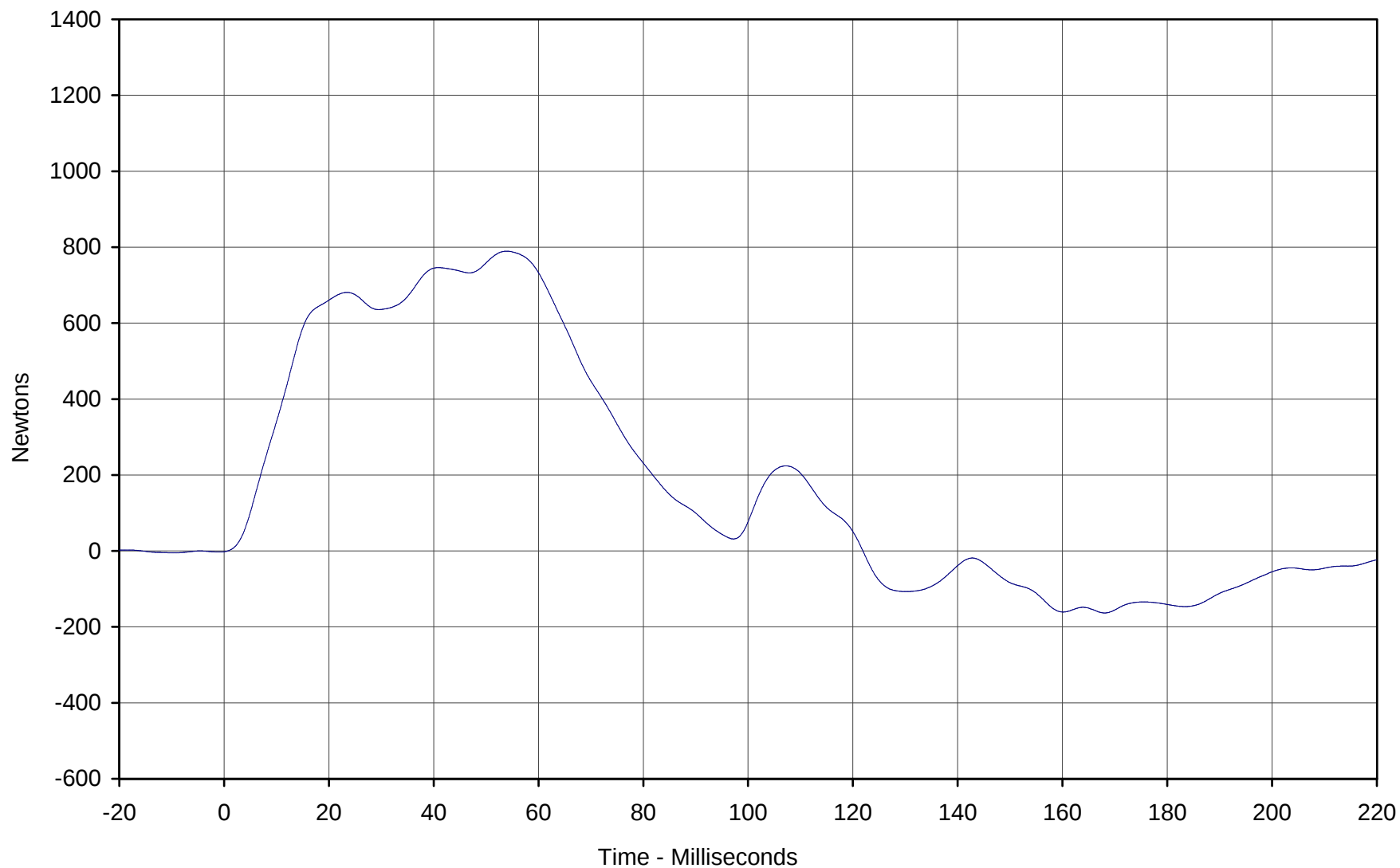
Curve Description:	Pendulum Deceleration		
Maximum Value:	24.3	at	8.2 Milliseconds
Minimum Value:	-3.6	at	88.1 Milliseconds
SAE Filter Class:	60		
Date of Test:	4/18/01		
ATD Serial No.:	034		

Testing Program:	Hybrid III Neck Flexion Test (Male)
Test Information:	S/N of Part: N/A Test I.D.: NF05A



KAR21049-01

E-12



Curve Description: Neck Force X

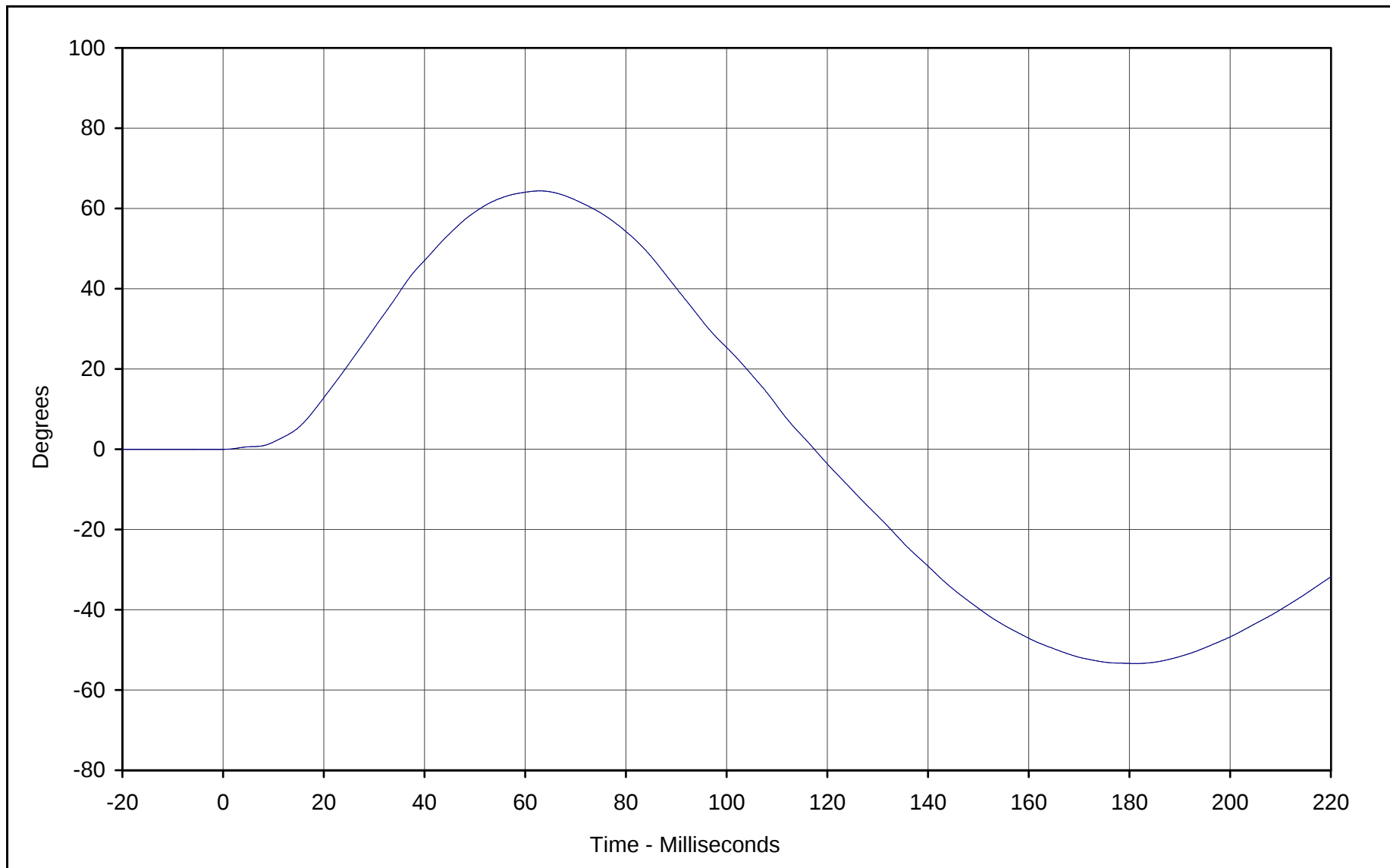
Maximum Value:	789.5	at	53.9	Milliseconds
Minimum Value:	-163.3	at	168.0	Milliseconds
SAE Filter Class:	60			
Date of Test:	4/18/01			
ATD Serial No.:	034			

Testing Program: Hybrid III Neck Flexion Test (Male)

Test Information: S/N of Part: N/A Test I.D.: NF05A



KAR21049-01



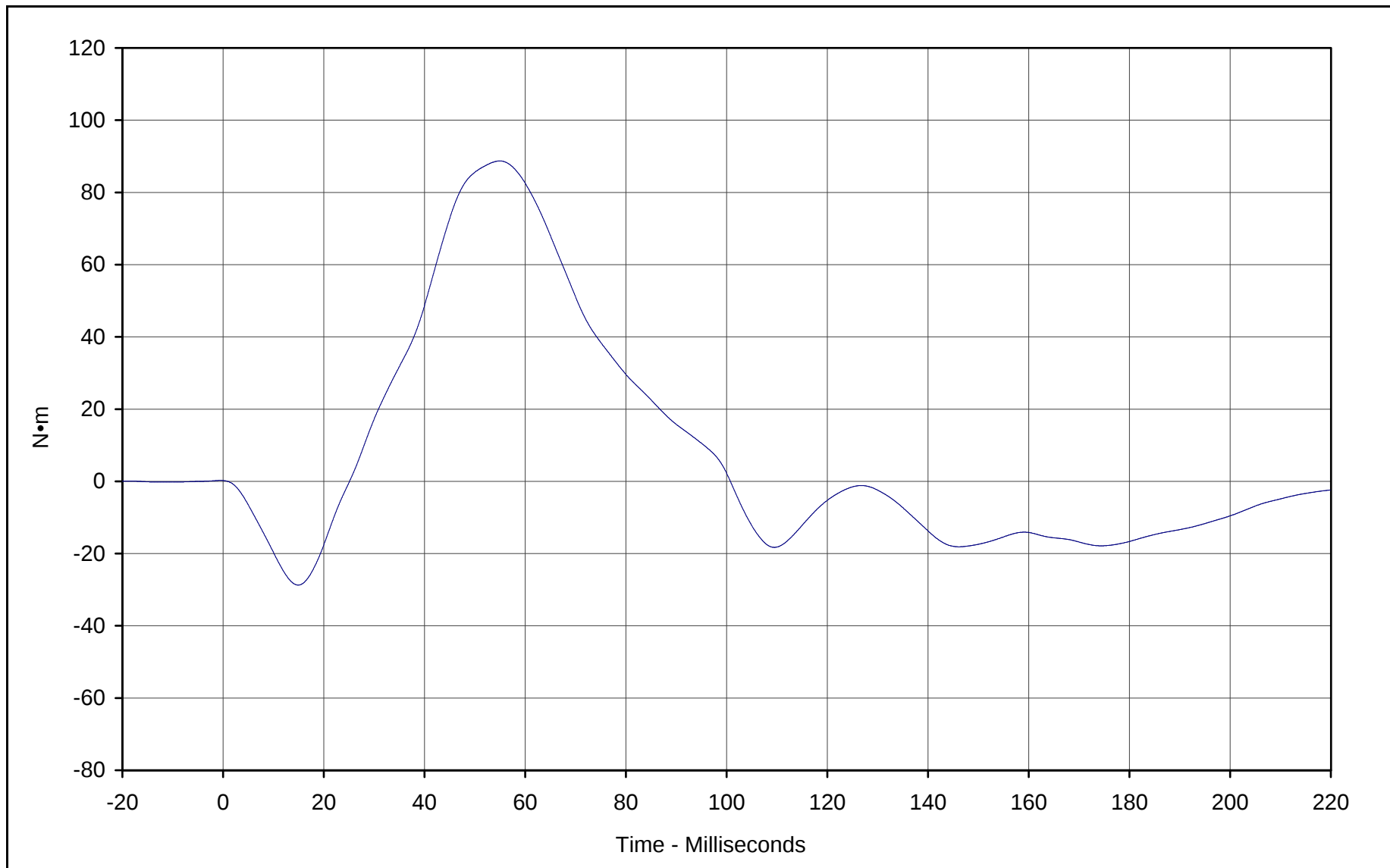
Curve Description: "D" Plane Rotation

Maximum Value:	64.4	at	62.9	Milliseconds
Minimum Value:	-53.4	at	181.3	Milliseconds
SAE Filter Class:	60			
Date of Test:	4/18/01			
ATD Serial No.:	034			

Testing Program: Hybrid III Neck Flexion Test (Male)

Test Information: S/N of Part: N/A Test I.D.: NF05A





Curve Description: Moment About Occipital Condyles

Maximum Value: 88.7 at 55.0 Milliseconds

Minimum Value: -28.7 at 14.9 Milliseconds

SAE Filter Class: 60

Date of Test: 4/18/01

ATD Serial No.: 034

Testing Program: Hybrid III Neck Flexion Test (Male)

Test Information: S/N of Part: N/A Test I.D.: NF05A





Hybrid III Calibration Data Sheet

50TH Percentile Male

Neck Extension Test

ATD Serial No.: 034

Part Serial No.: N/A

Test I.D.: NE05A

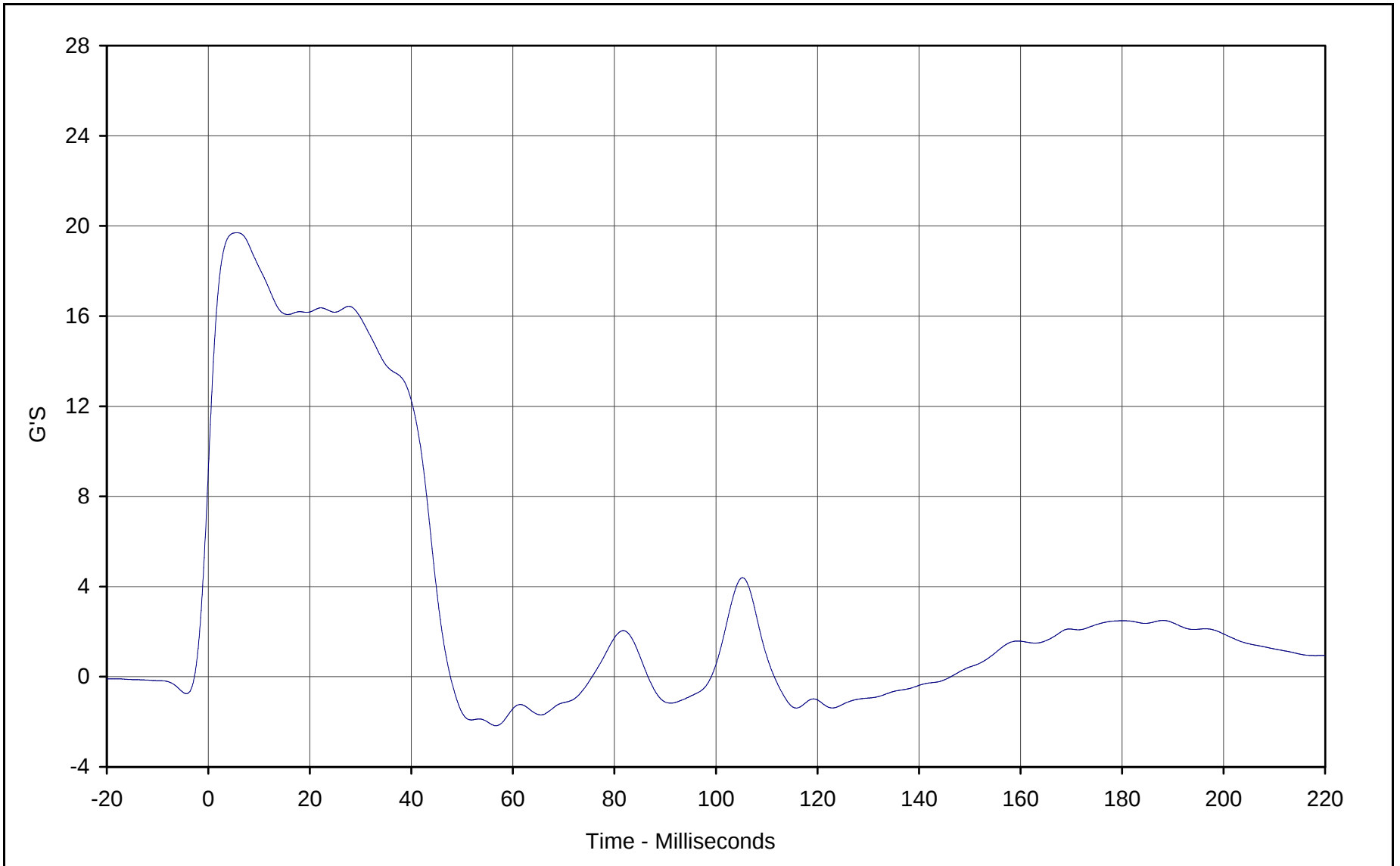
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	5.95 to 6.19	6.16	Pass
Pendulum Deceleration	10 Msec.	G's	17.2 to 21.2	18.2	Pass
	20 Msec.	G's	14.0 to 19.0	16.2	Pass
	30 Msec.	G's	11.0 to 16.0	15.9	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 22.0	15.9	Pass
Deceleration Decay, Time to Cross 5 G's		Msec.	38.0 to 46.0	44.5	Pass
Maximum "D" Plane Rotation	Maximum	Degrees	81.0 to 106.0	100.2	Pass
	Time	Msec.	72.0 to 82.0	79.9	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	147.0 to 174.0	160.1	Pass
Moment About Occipital Condyle	Maximum	N•m	-52.9 to- 79.9	-68.5	Pass
	Time	Msec.	65.0 to 79.0	71.5	Pass
Negative Moment Decay, Time To Zero Crossing		Msec.	120.0 to 148.0	142.8	Pass
Overall Test Results					Pass

Laboratory Technician

April 18, 2001
Test Date

Approved By

Date



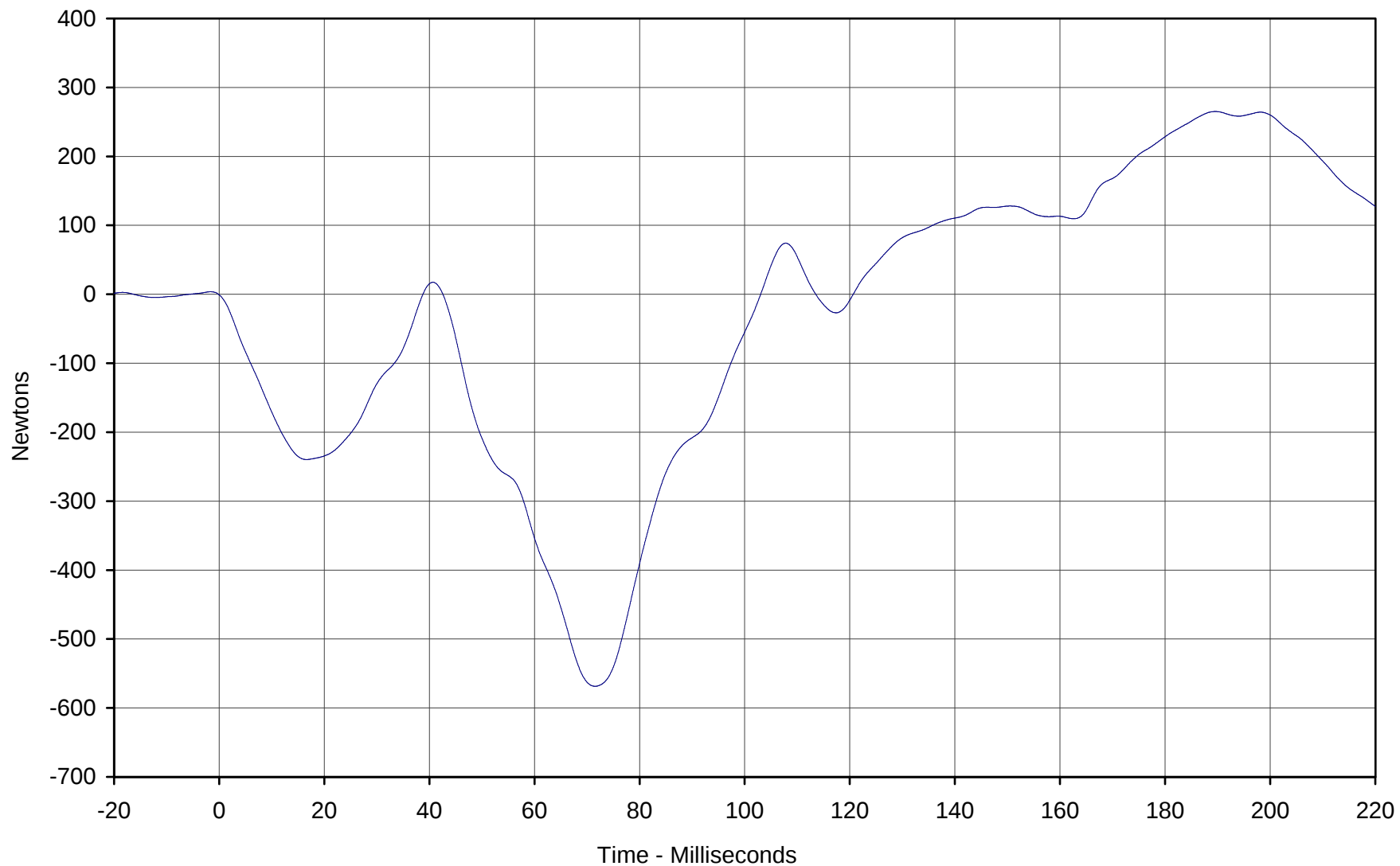
Curve Description: Pendulum Deceleration

Maximum Value:	19.7	at	5.6	Milliseconds
Minimum Value:	-2.2	at	56.7	Milliseconds
SAE Filter Class:	60			
Date of Test:	4/18/01			
ATD Serial No.:	034			

Testing Program: Hybrid III Neck Extension Test (Male)

Test Information: S/N of Part: N/A Test I.D.: NE05A





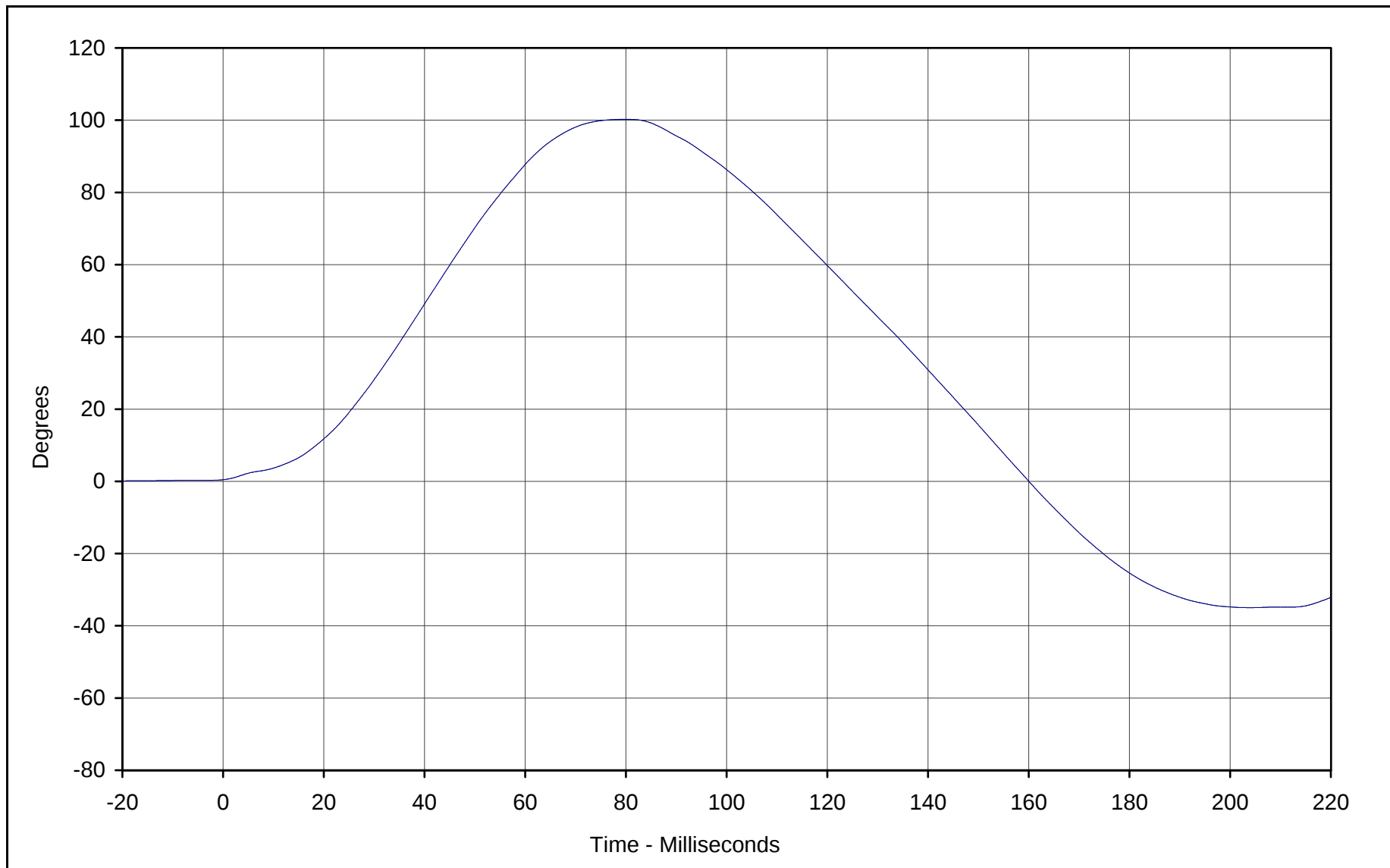
Curve Description: Neck Force X

Maximum Value:	265.1	at	189.6	Milliseconds
Minimum Value:	-568.5	at	71.5	Milliseconds
SAE Filter Class:	60			
Date of Test:	4/18/01			
ATD Serial No.:	034			

Testing Program: Hybrid III Neck Extension Test (Male)

Test Information: S/N of Part: N/A Test I.D.: NE05A





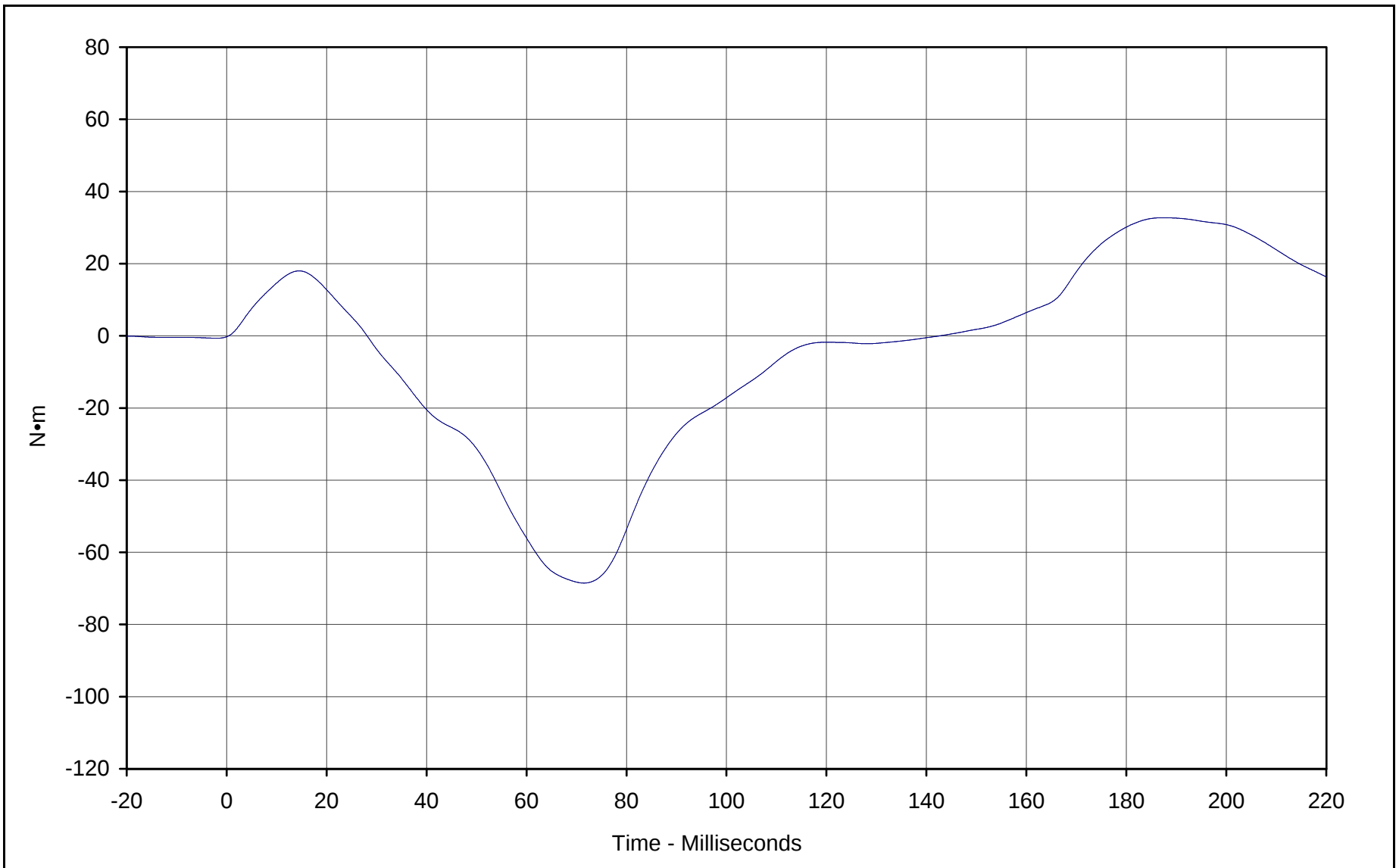
Curve Description: "D" Plane Rotation

Maximum Value:	100.2	at	79.9	Milliseconds
Minimum Value:	-35.0	at	204.0	Milliseconds
SAE Filter Class:	60			
Date of Test:	4/18/01			
ATD Serial No.:	034			

Testing Program: Hybrid III Neck Extension Test (Male)

Test Information: S/N of Part: N/A Test I.D.: NE05A





Curve Description: Moment About Occipital Condyles

Maximum Value: 32.7 at 187.5 Milliseconds

Minimum Value: -68.5 at 71.5 Milliseconds

SAE Filter Class: 60

Date of Test: 4/18/01

ATD Serial No.: 034

Testing Program: Hybrid III Neck Extension Test (Male)

Test Information: S/N of Part: N/A Test I.D.: NE05A





Hybrid III Calibration Data Sheet

50TH Percentile Male

External Measurements

ATD Serial No.: 034

Part Serial No.: N/A

Test I.D.: N/A

External Measurement Data				
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory temperature	°C	20.4 to 22.1	20.9	Pass
Laboratory relative humidity	%	10 to 70	30	Pass
A - Total sitting height	mm	879 to 889	885	Pass
B - Shoulder pivot height	mm	505 to 521	515	Pass
C - "H" point height	mm	84 to 89	85	Pass
D - "H" point from seat back	mm	135 to 140	135	Pass
E - Shoulder pivot from back	mm	84 to 94	90	Pass
F - Thigh clearance	mm	140 to 155	145	Pass
G - Elbow back to wrist pivot	mm	290 to 305	295	Pass
H - Skull cap to back line	mm	41 to 46	45	Pass
I - Shoulder to elbow length	mm	330 to 345	340	Pass
J - Elbow rest height	mm	190 to 211	205	Pass
K - Buttock to knee length	mm	579 to 604	590	Pass
L - Popliteal length	mm	429 to 455	445	Pass
M - Knee pivot height	mm	485 to 500	490	Pass
N - Buttock popliteal length	mm	452 to 477	465	Pass
O - Chest depth	mm	213 to 229	225	Pass
P - Foot length	mm	251 to 267	255	Pass
V - Shoulder breadth	mm	422 to 437	430	Pass
W - Foot breadth	mm	91 to 107	95	Pass
Y - Chest circumference	mm	970 to 1001	990	Pass
Z - Waist circumference	mm	836 to 866	855	Pass
AA - Location for chest circumference	mm	429 to 434	430	Pass
BB - Location for waist circumference	mm	226 to 231	230	Pass
Overall Test Results				Pass

Laboratory Technician

April 20, 2001
Test Date

Approved By

Date



Hybrid III Calibration Data Sheet

50TH Percentile Male

Left Knee Impact Test

ATD Serial No.: 035

Part Serial No.: N/A

Test I.D.: LK05B

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.5	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	2.073 to 2.134	2.113	Pass
Peak Probe Force	Newtons	4715 to 5782	5589.8	Pass
Overall Test Results				Pass

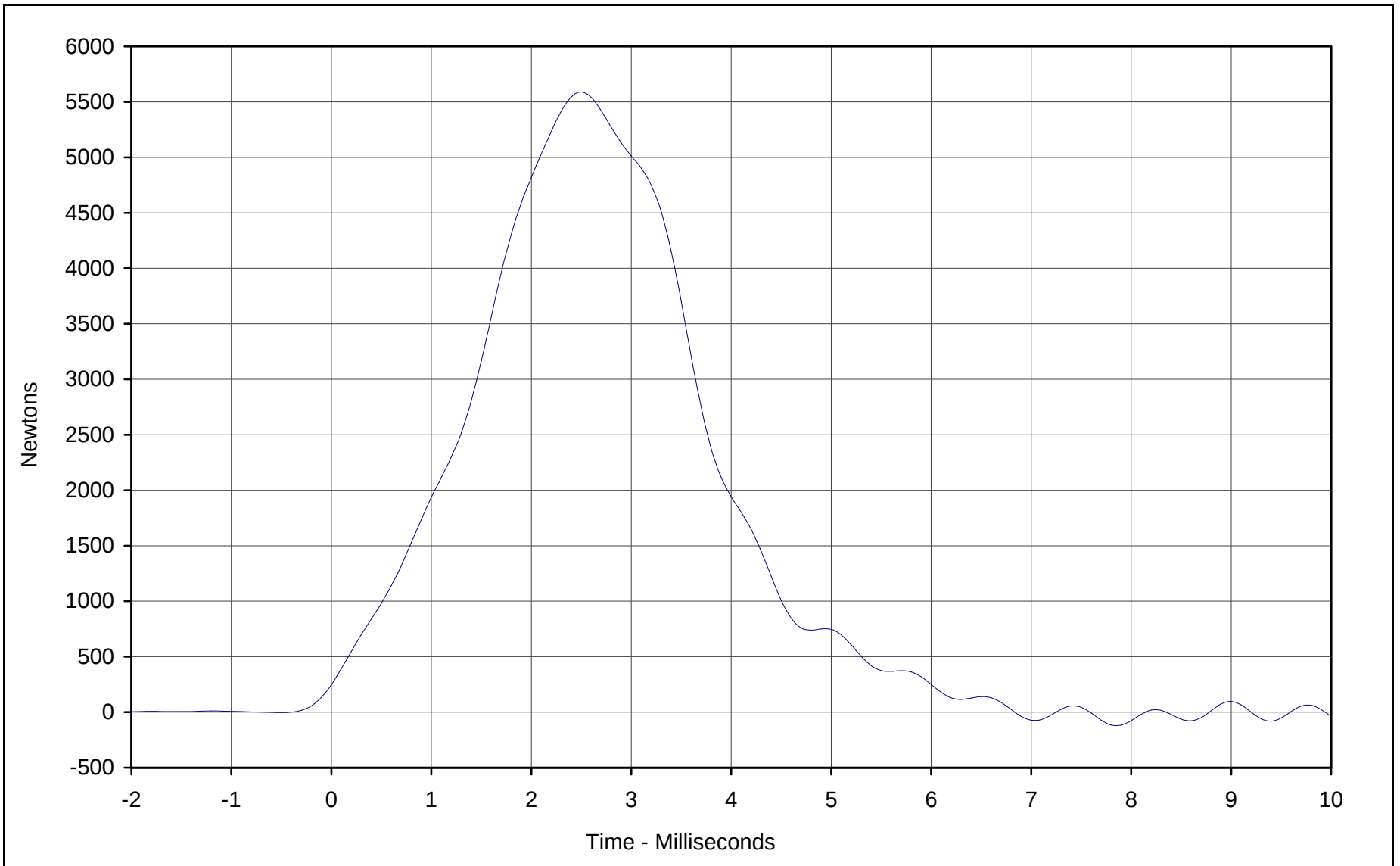
Laboratory Technician

April 16, 2001
Test Date

Approved By

Date

E-22



Curve Description: Probe Force

Maximum Value:	<u>5589.8</u>	at	<u>2.5</u>	Milliseconds
Minimum Value:	<u>-116.7</u>	at	<u>7.9</u>	Milliseconds
SAE Filter Class:	<u>600</u>			
Date of Test:	<u>4/16/01</u>			
ATD Serial No.:	<u>035</u>			

Testing Program: Hybrid III Left Knee Impact Test

Test Information: Part S/N: N/A Test I.D.: LK05B



KAR21049-01



Hybrid III Calibration Data Sheet

50TH Percentile Male

Right Knee Impact Test

ATD Serial No.: 035

Part Serial No.: N/A

Test I.D.: RK05B

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.5	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	2.073 to 2.134	2.113	Pass
Peak Probe Force	Newtons	4715 to 5782	5684.8	Pass
Overall Test Results				Pass

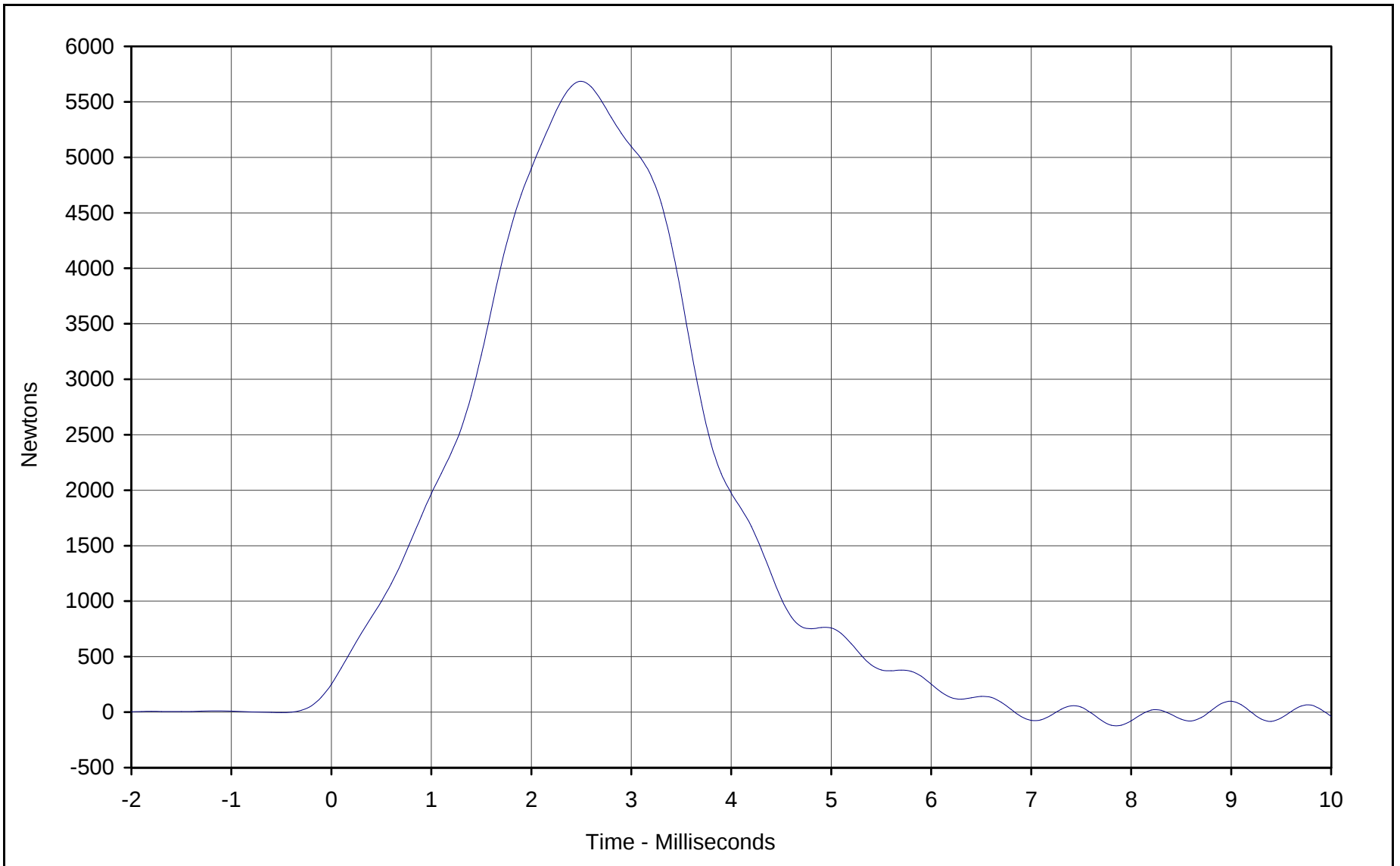
Laboratory Technician

April 16, 2001
Test Date

Approved By

Date

E-24



Curve Description: Probe Force

Maximum Value:	<u>5684.8</u>	at	<u>2.5</u>	Milliseconds
Minimum Value:	<u>-118.6</u>	at	<u>7.9</u>	Milliseconds
SAE Filter Class:	<u>600</u>			
Date of Test:	<u>4/16/01</u>			
ATD Serial No.:	<u>035</u>			

Testing Program: Hybrid III Right Knee Impact Test

Test Information: Part S/N: N/A Test I.D.: RK05B



KAR21049-01



Hybrid III Calibration Data Sheet

50TH Percentile Male

Head Drop Calibration

ATD Serial No.: 035

Part Serial No.: N/A

Test I.D.: HD05B

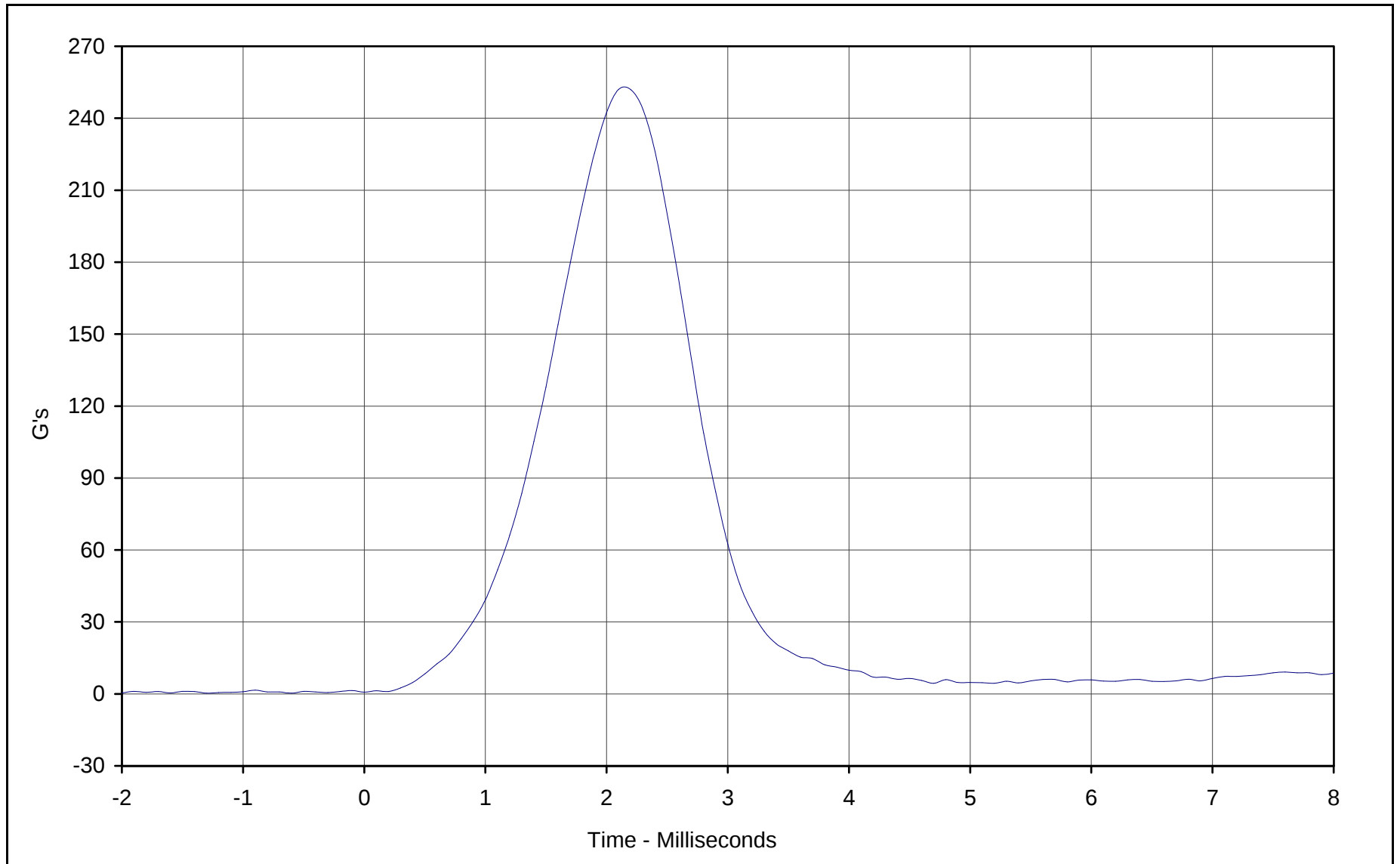
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Peak Resultant Acceleration	G's	225.0 to 275.0	252.1	Pass
Peak Lateral Acceleration	G's	≤15.0	2.4	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Overall Test Results				Pass

Laboratory Technician

April 19, 2001
Test Date

Approved By

Date



Curve Description: Head Resultant Acceleration

Maximum Value: 252.1 at 2.1 Milliseconds

Minimum Value: 0.3 at -1.3 Milliseconds

SAE Filter Class: 1000

Date of Test: 4/19/01

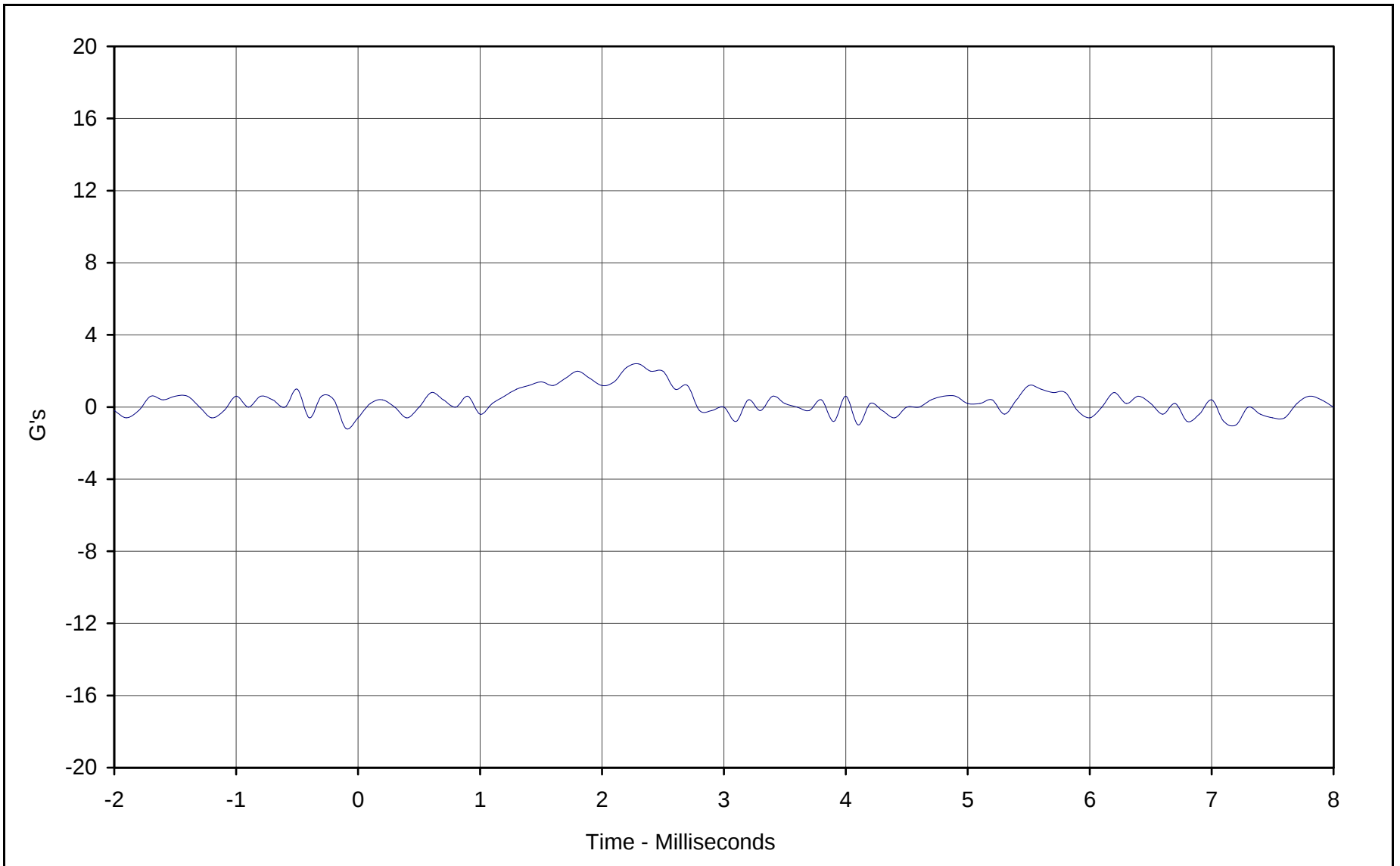
ATD Serial No.: 035

Testing Program: Hybrid III Head Drop Calibration (Male)

Test Information: S/N of Part: N/A Test I.D.: HD05B



E-27



Curve Description: Head Acceleration Y Axis

Maximum Value: 2.4 at 2.3 Milliseconds

Minimum Value: -1.2 at -0.1 Milliseconds

SAE Filter Class: 1000

Date of Test: 4/19/01

ATD Serial No.: 035

Testing Program: Hybrid III Head Drop Calibration (Male)

Test Information: S/N of Part: N/A Test I.D.: HD05B



KAR21049-01



Hybrid III Calibration Data Sheet

50TH Percentile Male

Thorax Impact Test

ATD Serial No.: 035

Part Serial No.: N/A

Test I.D.: CH05B

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.2	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	6.58 to 6.82	6.61	Pass
Peak Probe Force	Newtons	5159 to 5893	5668	Pass
Peak Sternum Displacement	CM	6.35 to 7.26	6.76	Pass
Internal Hysteresis	%	69 to 85	73.3	Pass
Overall Test Results				Pass

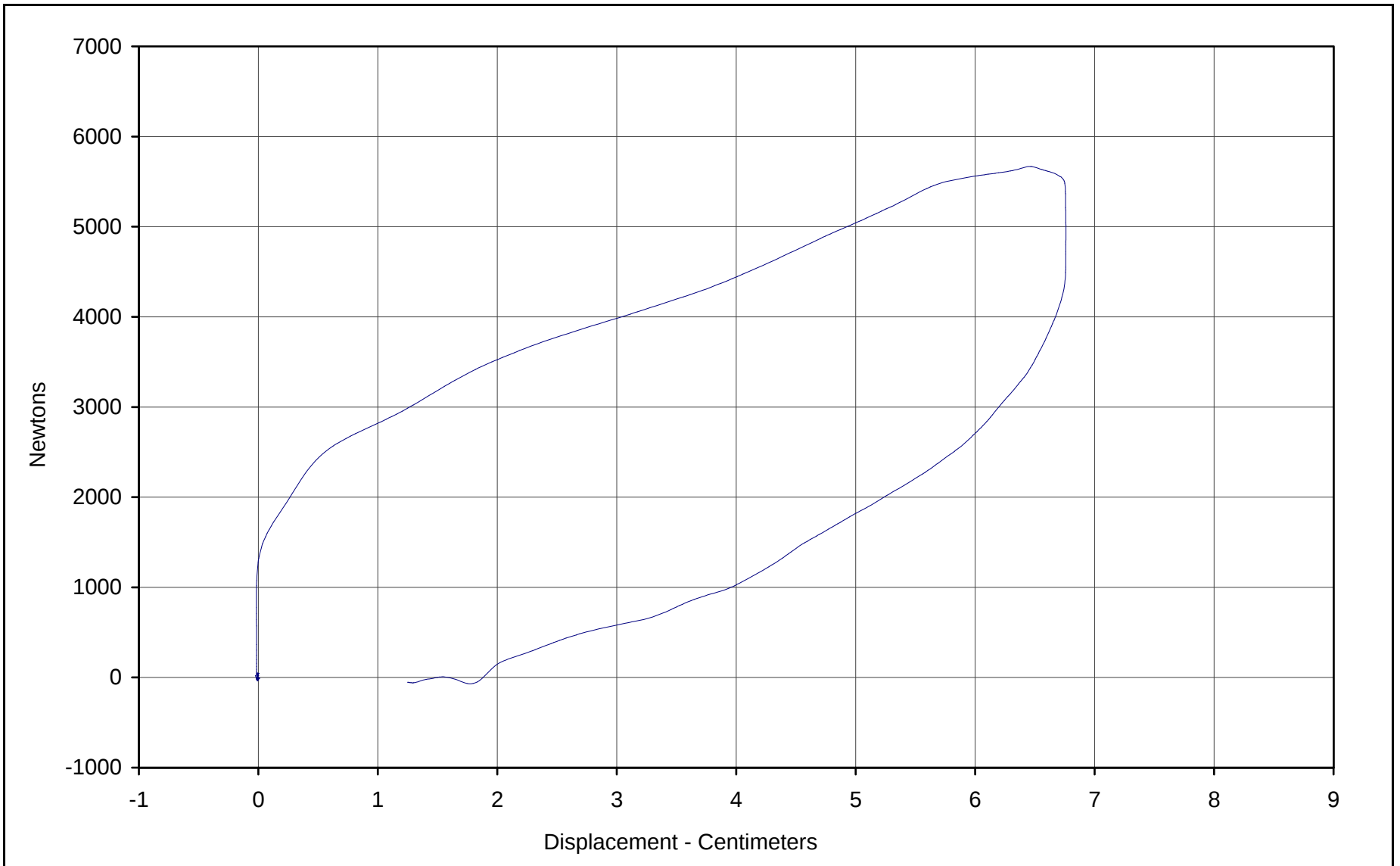
Laboratory Technician

April 17, 2001

Test Date

Approved By

Date



Curve Description: Probe Force vs. Chest Displacement

Probe Force: 5668.0 Newtons

Chest Displ.: 6.76 Centimeters

SAE Filter Class: 180

Date of Test: 4/17/01

ATD Serial No.: 035

Testing Program: Hybrid III Thorax Impact Test

Test Information: S/N of Part: N/A Test I.D.: CH05B





Hybrid III Calibration Data Sheet

50TH Percentile Male

Neck Flexion Test

ATD Serial No.: 035

Part Serial No.: N/A

Test I.D.: NF05B

Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	6.89 to 7.13	6.91	Pass
Pendulum Deceleration	10 Msec.	G's	22.5 to 27.5	23.6	Pass
	20 Msec.	G's	17.6 to 22.6	21.0	Pass
	30 Msec.	G's	12.5 to 18.5	18.2	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 29.0	18.2	Pass
Deceleration Decay, Time to Cross 5 G's		Msec.	34.0 to 42.0	37.0	Pass
Maximum "D" Plane Rotation	Maximum	Degrees	64.0 to 78.0	65.3	Pass
	Time	Msec.	57.0 to 64.0	62.9	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	113.0 to 128.0	117.5	Pass
Moment About Occipital Condyle	Maximum	N·m	84.1 to 108.5	97.6	Pass
	Time	Msec.	47.0 to 58.0	55.0	Pass
Positive Moment Decay, Time To Zero Crossing		Msec.	97.0 to 107.0	100.8	Pass
Overall Test Results					Pass

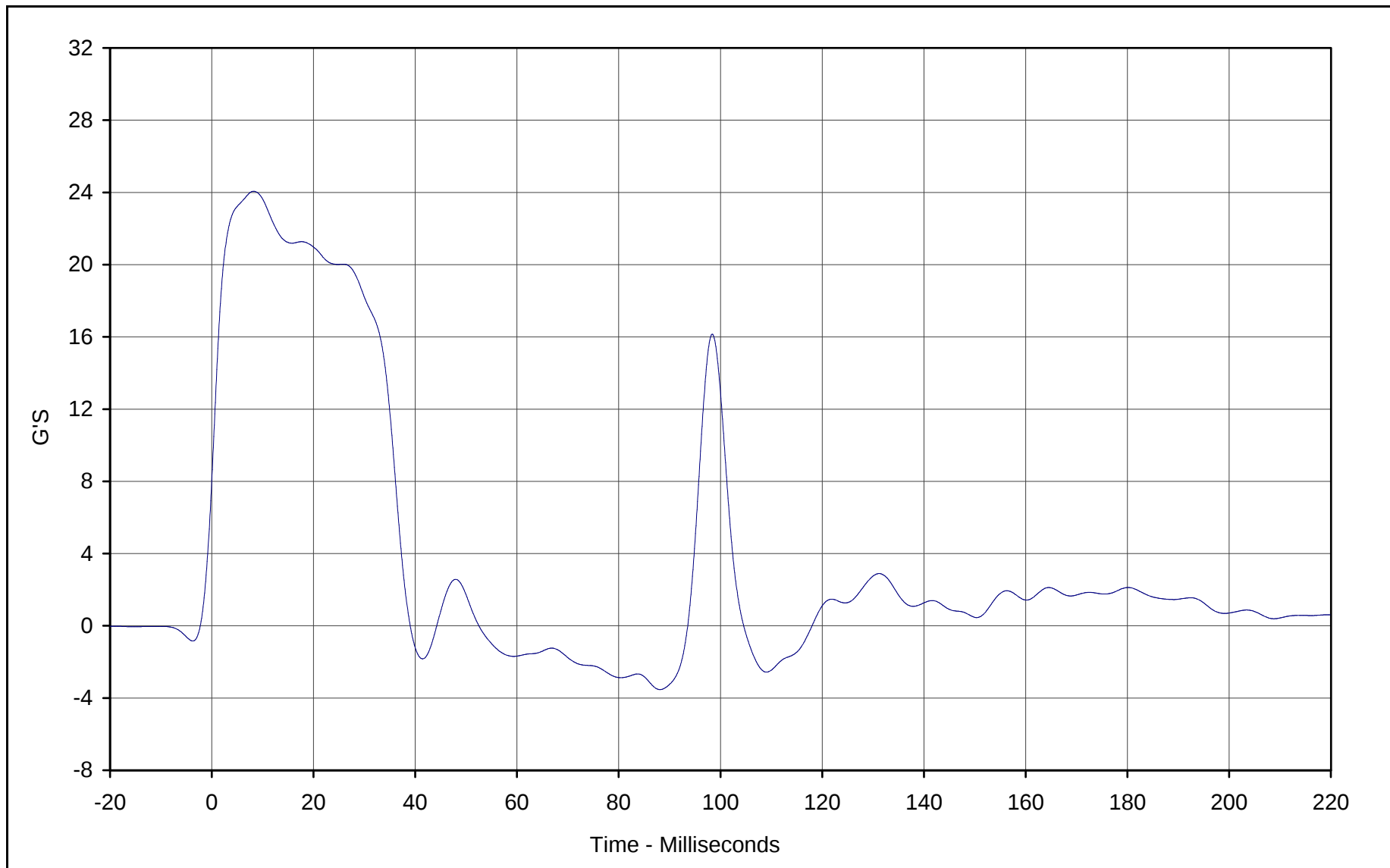
Laboratory Technician

April 18, 2001
Test Date

Approved By

Date

E-31



Curve Description: Pendulum Deceleration

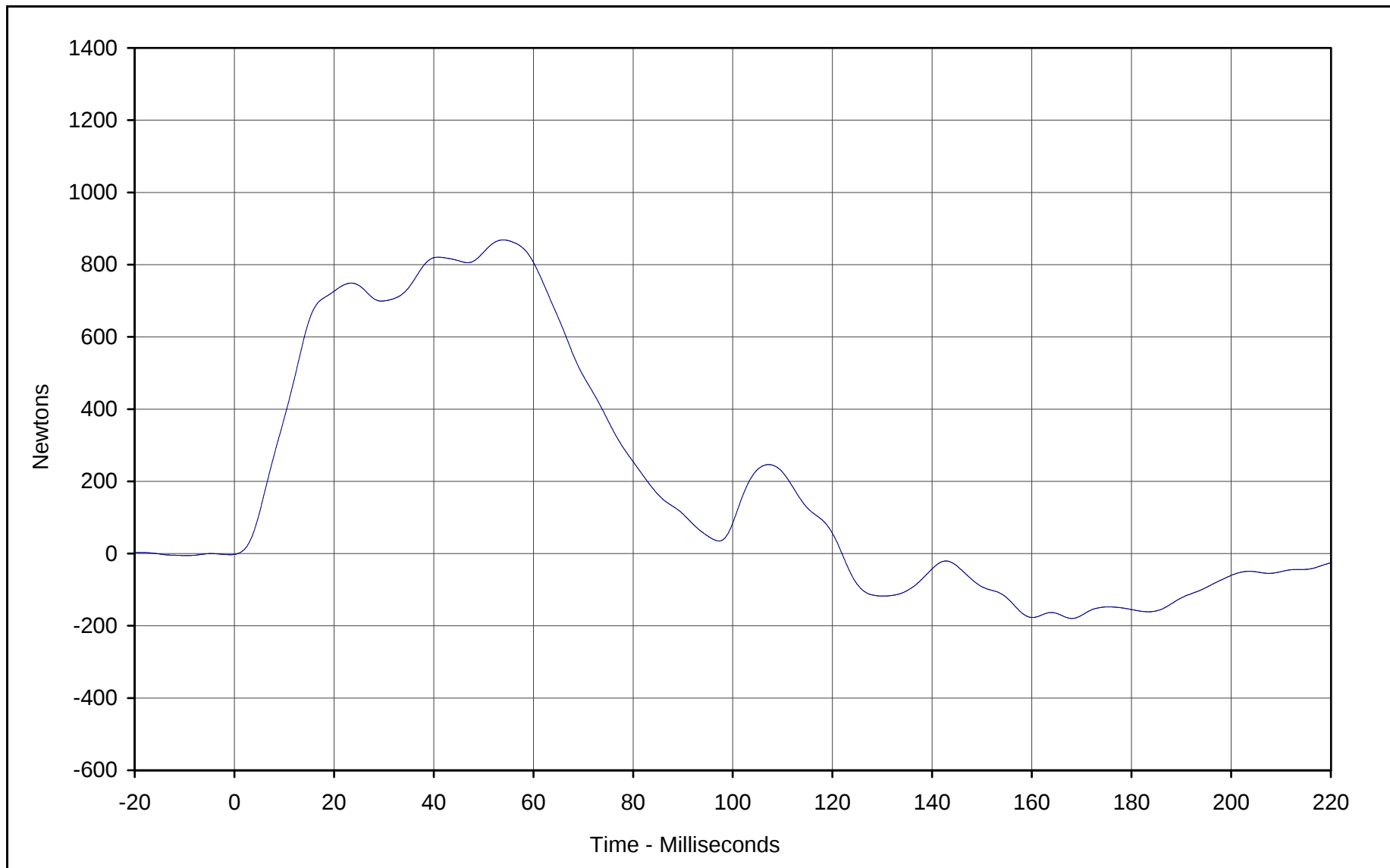
Maximum Value:	<u>24.1</u>	at	<u>8.2</u>	Milliseconds
Minimum Value:	<u>-3.5</u>	at	<u>88.1</u>	Milliseconds
SAE Filter Class:	<u>60</u>			
Date of Test:	<u>4/18/01</u>			
ATD Serial No.:	<u>035</u>			

Testing Program: Hybrid III Neck Flexion Test (Male)

Test Information: S/N of Part: N/A Test I.D.: NF05B



KAR21049-01



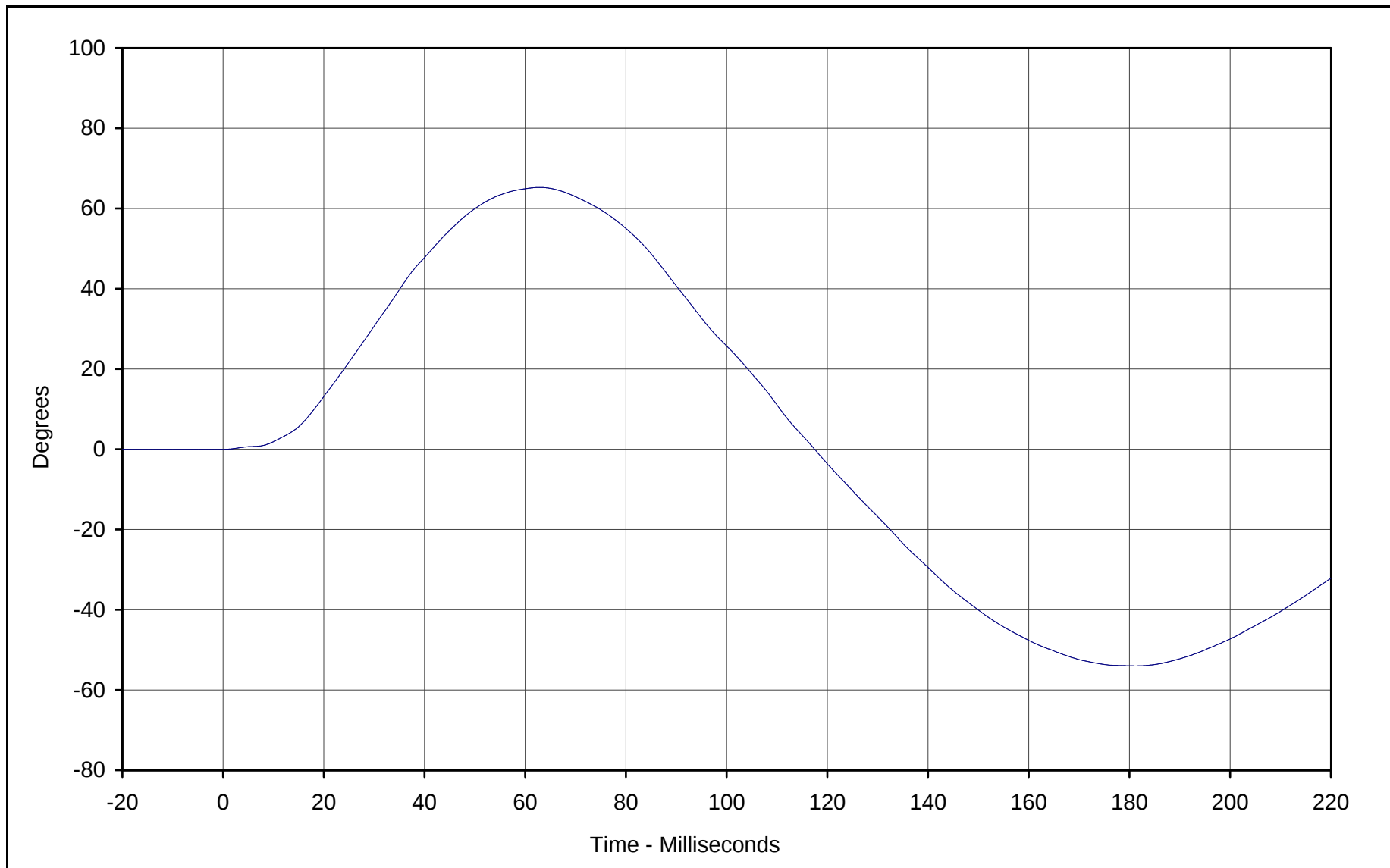
Curve Description: Neck Force X

Maximum Value:	868.5	at	53.9	Milliseconds
Minimum Value:	-179.7	at	168.0	Milliseconds
SAE Filter Class:	60			
Date of Test:	4/18/01			
ATD Serial No.:	035			

Testing Program: Hybrid III Neck Flexion Test (Male)

Test Information: S/N of Part: N/A Test I.D.: NF05B





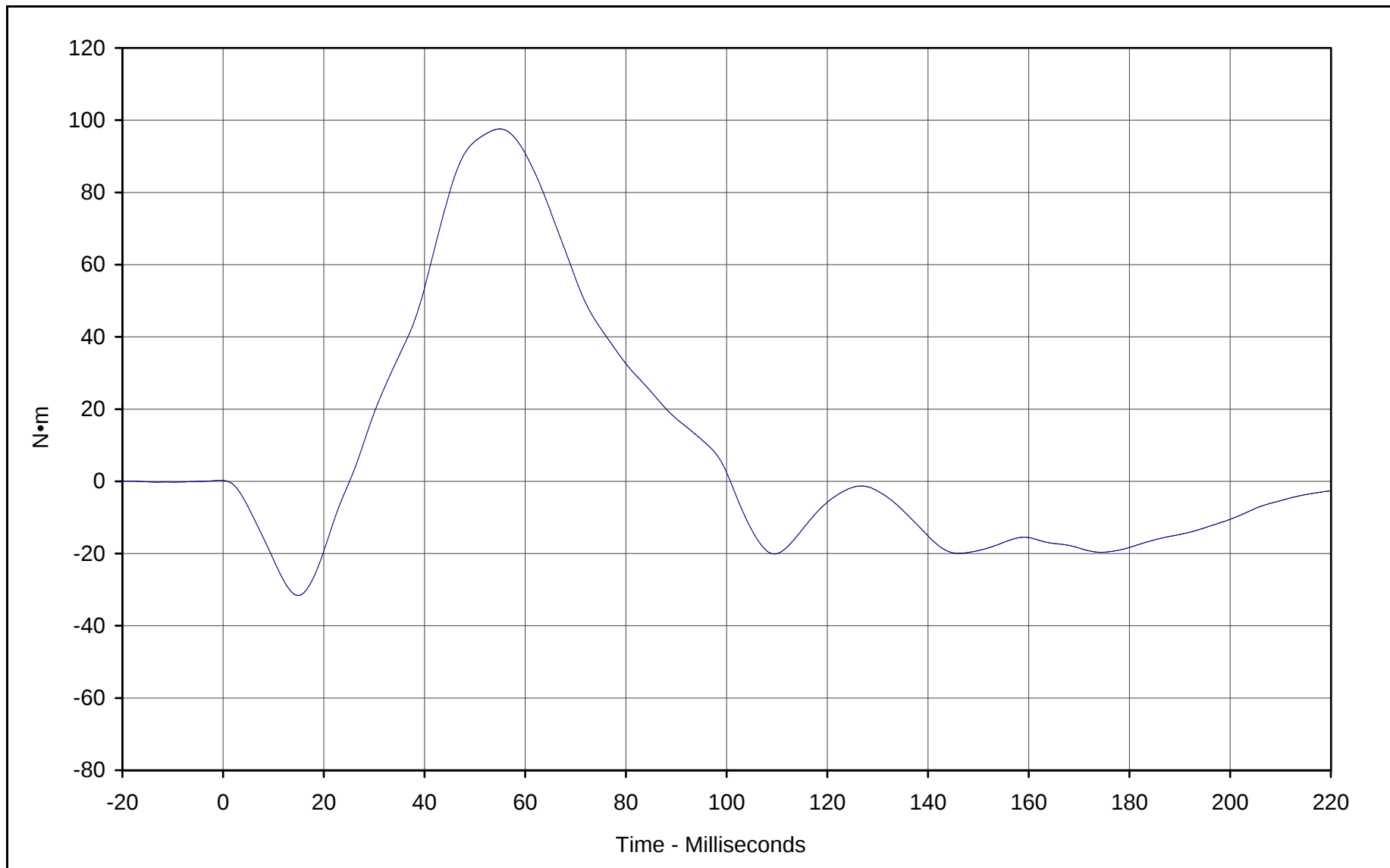
Curve Description: "D" Plane Rotation

Maximum Value:	65.3	at	62.9	Milliseconds
Minimum Value:	-54.0	at	181.3	Milliseconds
SAE Filter Class:	60			
Date of Test:	4/18/01			
ATD Serial No.:	035			

Testing Program: Hybrid III Neck Flexion Test (Male)

Test Information: S/N of Part: N/A Test I.D.: NF05B





Curve Description: Moment About Occipital Condyles

Maximum Value: 97.6 at 55.0 Milliseconds

Minimum Value: -31.6 at 14.9 Milliseconds

SAE Filter Class: 60

Date of Test: 4/18/01

ATD Serial No.: 035

Testing Program: Hybrid III Neck Flexion Test (Male)

Test Information: S/N of Part: N/A Test I.D.: NF05B





Hybrid III Calibration Data Sheet

50TH Percentile Male

Neck Extension Test

ATD Serial No.: 035

Part Serial No.: N/A

Test I.D.: NE05B

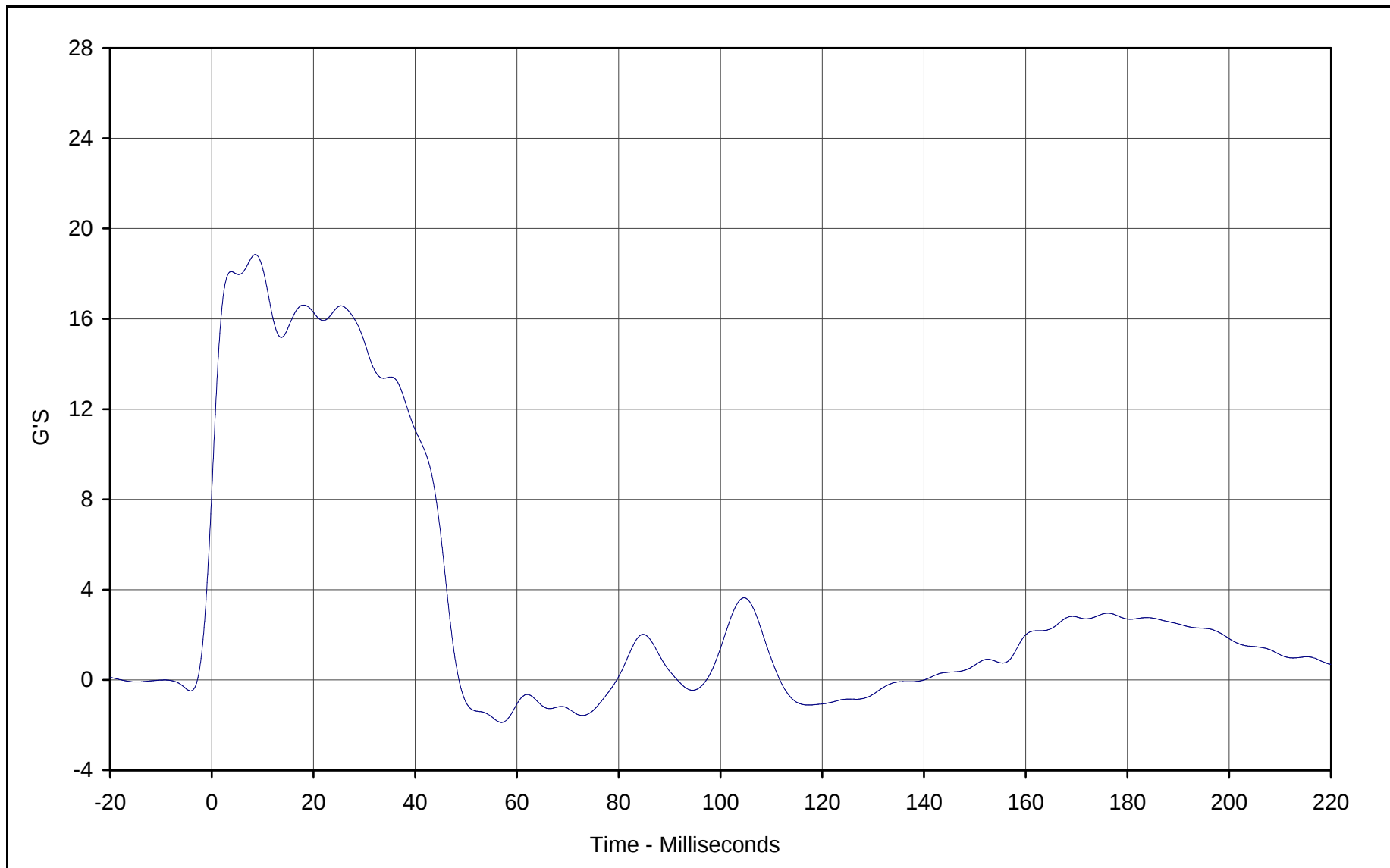
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	5.95 to 6.19	6.16	Pass
Pendulum Deceleration	10 Msec.	G's	17.2 to 21.2	18.2	Pass
	20 Msec.	G's	14.0 to 19.0	16.3	Pass
	30 Msec.	G's	11.0 to 16.0	15.0	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 22.0	15.0	Pass
Deceleration Decay, Time to Cross 5 G's		Msec.	38.0 to 46.0	45.8	Pass
Maximum "D" Plane Rotation	Maximum	Degrees	81.0 to 106.0	91.8	Pass
	Time	Msec.	72.0 to 82.0	76.9	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	147.0 to 174.0	151.3	Pass
Moment About Occipital Condyle	Maximum	N•m	-52.9 to- 79.9	-68.8	Pass
	Time	Msec.	65.0 to 79.0	65.4	Pass
Negative Moment Decay, Time To Zero Crossing		Msec.	120.0 to 148.0	139.9	Pass
Overall Test Results					Pass

Laboratory Technician

April 18, 2001
Test Date

Approved By

Date

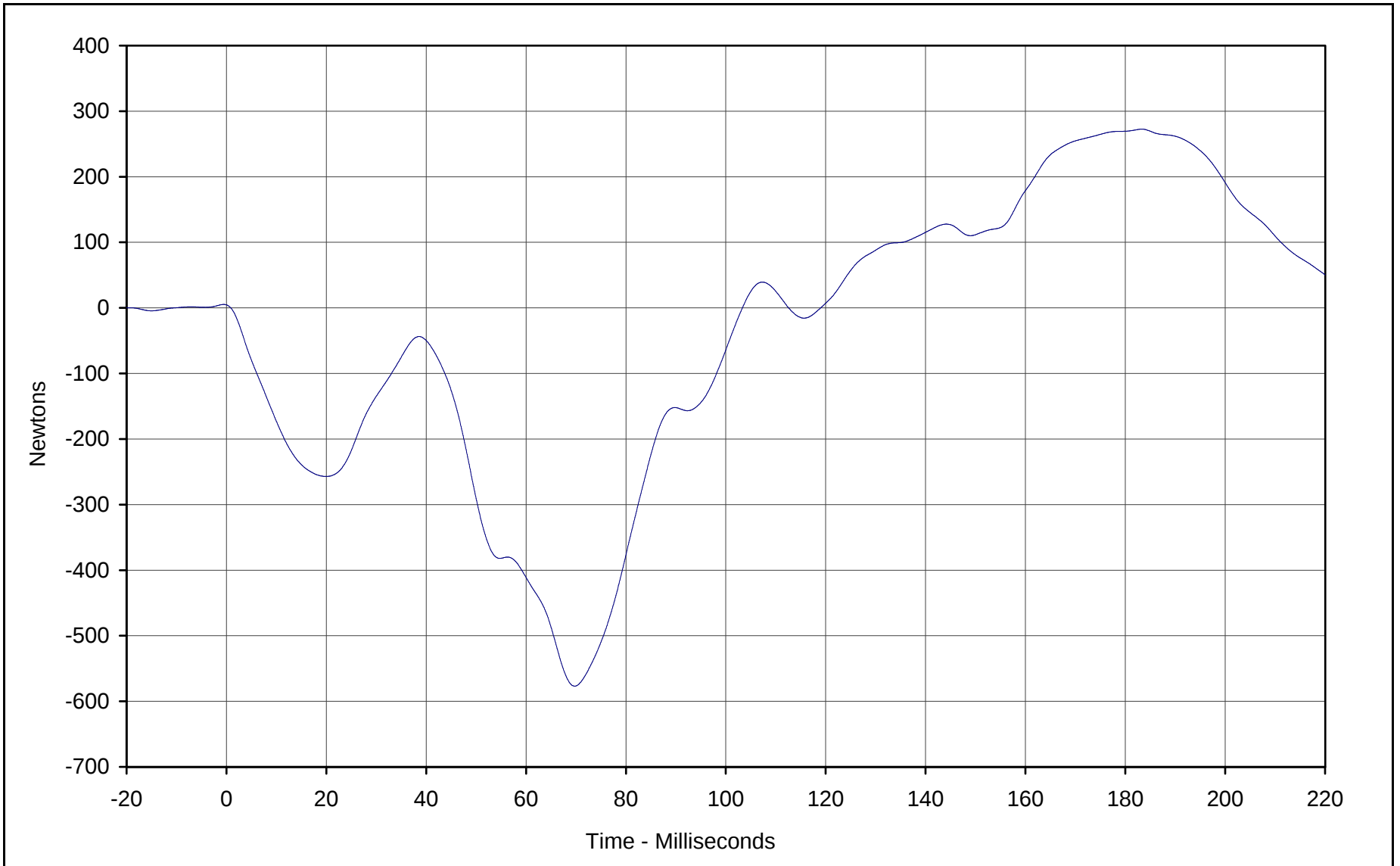


Curve Description:	Pendulum Deceleration		
Maximum Value:	18.8	at	8.6 Milliseconds
Minimum Value:	-1.9	at	57.0 Milliseconds
SAE Filter Class:	60		
Date of Test:	4/18/01		
ATD Serial No.:	035		

Testing Program: Hybrid III Neck Extension Test (Male)

Test Information: S/N of Part: N/A Test I.D.: NE05B





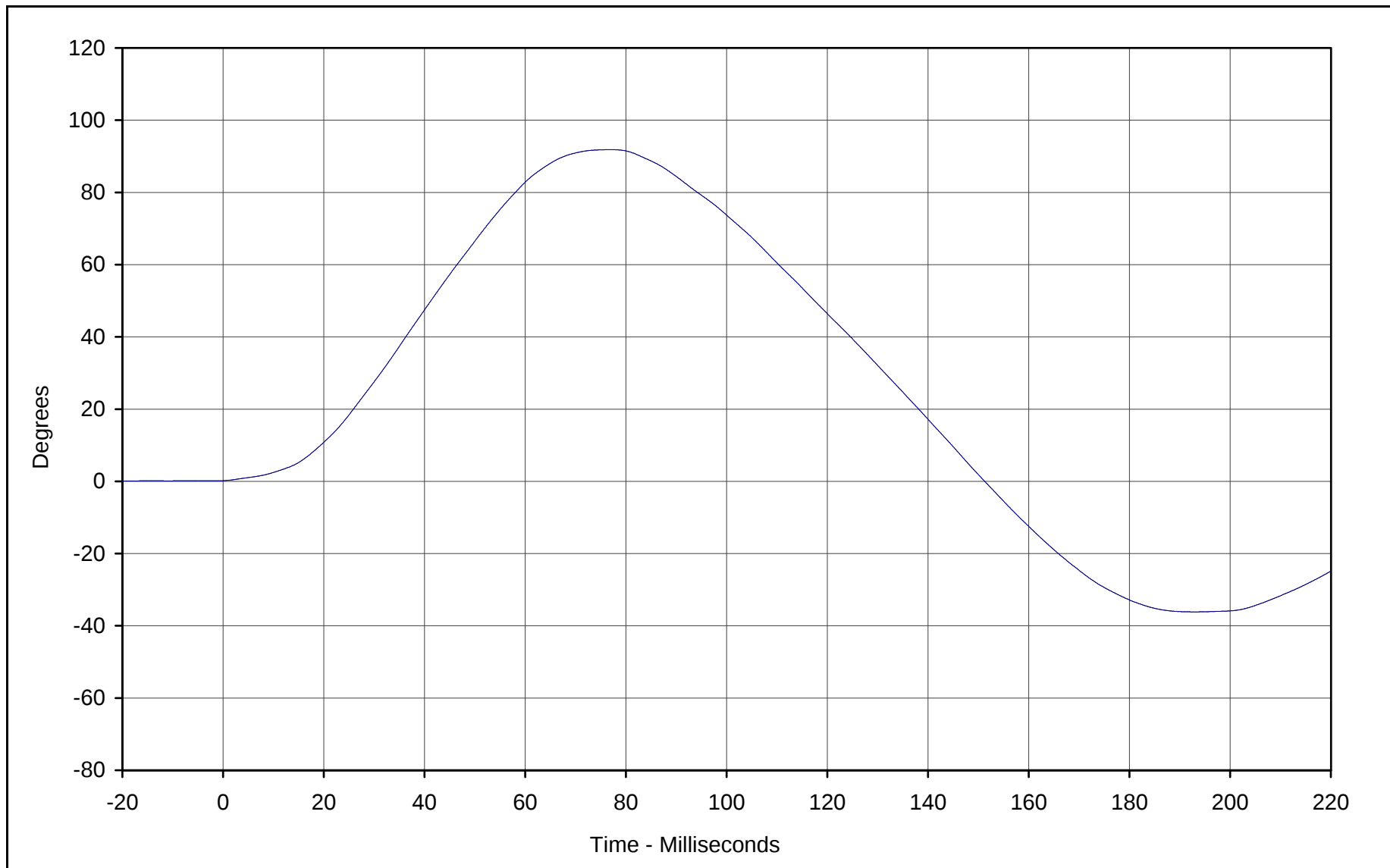
Curve Description: Neck Force X

Maximum Value:	272.6	at	183.3	Milliseconds
Minimum Value:	-576.9	at	69.7	Milliseconds
SAE Filter Class:	60			
Date of Test:	4/18/01			
ATD Serial No.:	035			

Testing Program: Hybrid III Neck Extension Test (Male)

Test Information: S/N of Part: N/A Test I.D.: NE05B





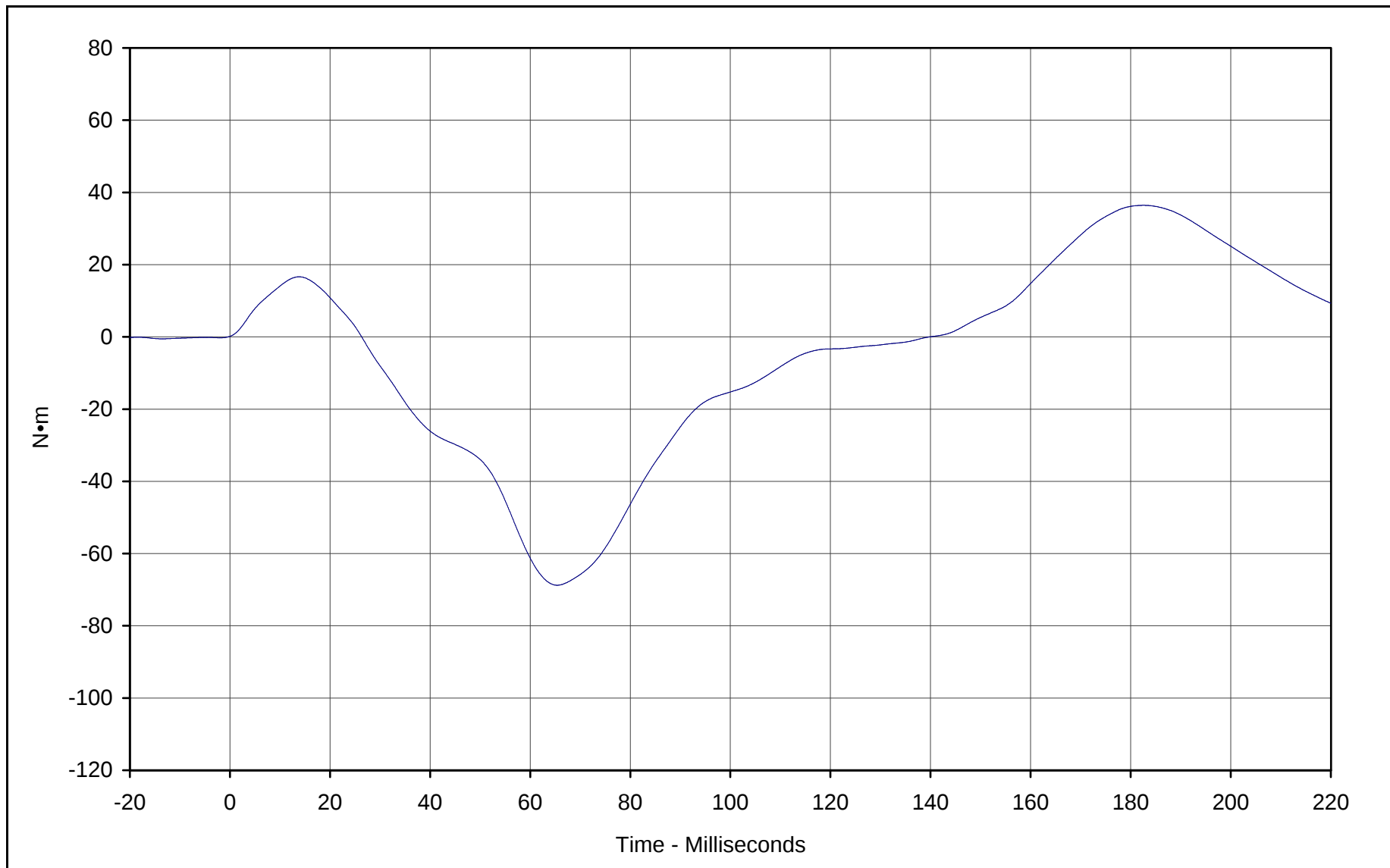
Curve Description: "D" Plane Rotation

Maximum Value:	91.8	at	76.9	Milliseconds
Minimum Value:	-36.1	at	193.0	Milliseconds
SAE Filter Class:	60			
Date of Test:	4/18/01			
ATD Serial No.:	035			

Testing Program: Hybrid III Neck Extension Test (Male)

Test Information: S/N of Part: N/A Test I.D.: NE05B





Curve Description: Moment About Occipital Condyles

Maximum Value: 36.4 at 182.6 Milliseconds

Minimum Value: -68.8 at 65.4 Milliseconds

SAE Filter Class: 60

Date of Test: 4/18/01

ATD Serial No.: 035

Testing Program: Hybrid III Neck Extension Test (Male)

Test Information: S/N of Part: N/A Test I.D.: NE05B





Hybrid III Calibration Data Sheet

50TH Percentile Male

External Measurements

ATD Serial No.: 035

Part Serial No.: N/A

Test I.D.: N/A

External Measurement Data				
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory temperature	°C	20.4 to 22.1	20.9	Pass
Laboratory relative humidity	%	10 to 70	43	Pass
A - Total sitting height	mm	879 to 889	880	Pass
B - Shoulder pivot height	mm	505 to 521	515	Pass
C - "H" point height	mm	84 to 89	85	Pass
D - "H" point from seat back	mm	135 to 140	135	Pass
E - Shoulder pivot from back	mm	84 to 94	85	Pass
F - Thigh clearance	mm	140 to 155	150	Pass
G - Elbow back to wrist pivot	mm	290 to 305	295	Pass
H - Skull cap to back line	mm	41 to 46	45	Pass
I - Shoulder to elbow length	mm	330 to 345	335	Pass
J - Elbow rest height	mm	190 to 211	205	Pass
K - Buttock to knee length	mm	579 to 604	590	Pass
L - Popliteal length	mm	429 to 455	445	Pass
M - Knee pivot height	mm	485 to 500	495	Pass
N - Buttock popliteal length	mm	452 to 477	465	Pass
O - Chest depth	mm	213 to 229	225	Pass
P - Foot length	mm	251 to 267	255	Pass
V - Shoulder breadth	mm	422 to 437	435	Pass
W - Foot breadth	mm	91 to 107	95	Pass
Y - Chest circumference	mm	970 to 1001	985	Pass
Z - Waist circumference	mm	836 to 866	855	Pass
AA - Location for chest circumference	mm	429 to 434	430	Pass
BB - Location for waist circumference	mm	226 to 231	230	Pass
Overall Test Results				Pass

Laboratory Technician

April 20, 2001
Test Date

Approved By

Date

APPENDIX F
VEHICLE OWNER'S MANUAL
OCCUPANT RESTRAINT INSTRUCTIONS

Seats

While the vehicle is being driven, all vehicle occupants should have the seatback upright, sit well back in the seat and properly wear the seat belts provided.

CAUTION

- Do not drive the vehicle unless the occupants are properly seated. Do not allow sitting on top of a folded-down seatback, or in the luggage compartment. Persons not properly seated and/or properly restrained by seat belts can be severely injured in the event of emergency braking or a collision.
- During driving, do not allow passengers to stand up or move around between seats. Severe injuries can occur in the event of emergency braking or a collision.

Front seats- -Seat adjustment precautions

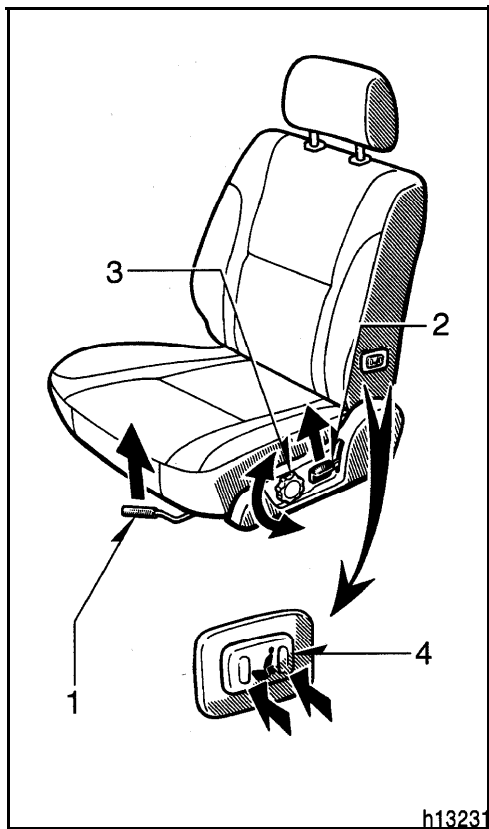
Adjust the driver's seat so that the foot pedals, steering wheel and instrument panel controls are within easy reach of the driver.

CAUTION

- Adjustments should not be made while the vehicle is moving, as the seat may unexpectedly move and cause the driver to lose control of the vehicle.
- When adjusting the seat, be careful not to hit the seat against a passenger or luggage.
- After adjusting the seat position, try sliding it forward and backward to make sure it is locked in position.
- After adjusting the seatback, exert body pressure to make sure it is locked in position.
- Do not put objects under the seats. The objects may interfere with the seat-lock mechanism or unexpectedly push up the seat position adjusting lever; the seat may suddenly move, causing the driver to lose control of the vehicle.

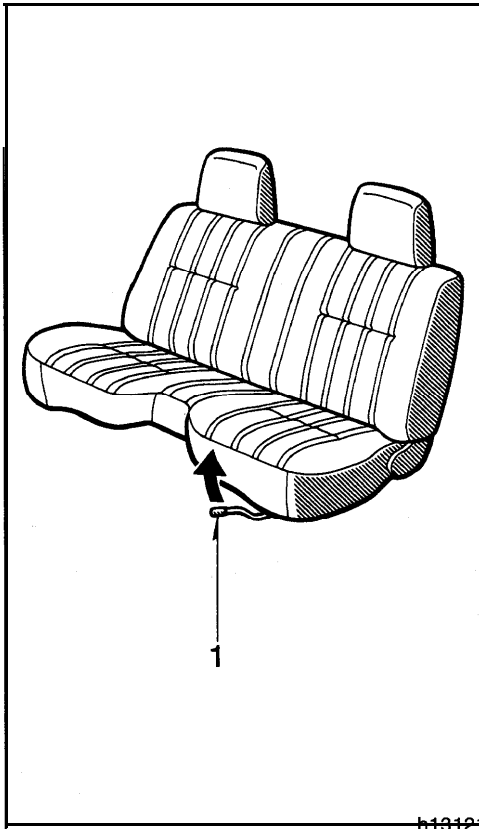
- While adjusting the seat, do not put your hands under the seat or near the moving parts. You may catch and injure your hands or fingers.

-Adjusting front seats



h13231

Separate and split bench seat



h10121

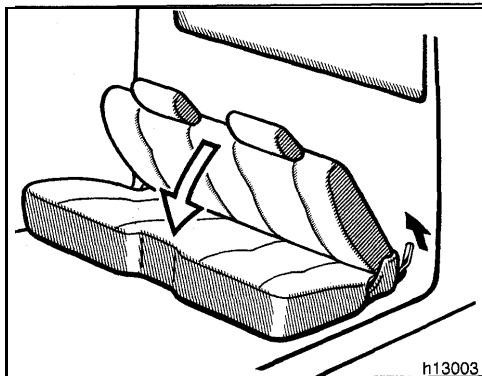
Non-split bench seat

1. SEAT POSITION ADJUSTING LEVER
Pull the lever up. Then slide the seat to the desired position with slight body pressure and release the lever.
2. SEATBACK ANGLE ADJUSTING LEVER (except bench seat)
Lean forward and pull the lever up. Then lean back to the desired angle and release the lever.

CAUTION

To reduce the risk of sliding under the lap belt during a collision, avoid reclining the seatback any more than needed. The seat belts provide maximum protection in a frontal or rear collision when the driver and the passenger are sitting up straight and well back in the seats. If you are reclined, the lap belt may slide past your hips and apply restraint forces directly to the abdomen. Therefore, in the event of a frontal collision, the risk of personal injury may increase with increasing recline of the seatback.

-Folding seatback (regular cab models)



Pull the seatback lock release lever and fold down the seatback.

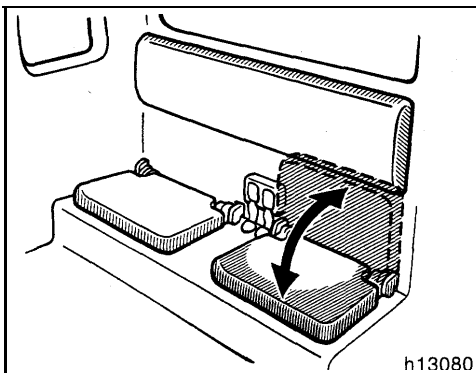
Hold the lever until you have swung the seatback forward slightly.

! CAUTION

When returning the seatback to the upright position:

- Make sure the seat belts are not twisted or caught in the seatback and are arranged in their proper position and are ready to use.
- Make sure the seatback is securely locked by pushing forward and rearward on the top of the seatback.

Swing-up jump seats (Xtra-cab models)



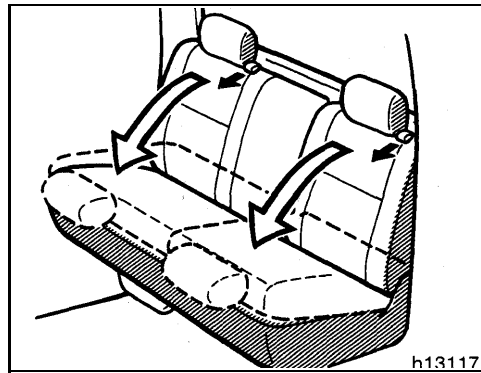
To raise the bottom cushion, pull it up. To lower the bottom cushion, push it down.

See "Luggage stowage precautions" in Section 2 for precautions in loading luggage.

! CAUTION

When returning the bottom cushion to its original position, make sure the seat belts are not twisted or caught under the bottom cushion and are arranged in their proper position and are ready to use.

Folding rear seatback (double cab models)



Pull the seatback lock release belt forward and fold down the seat back.

! CAUTION

When returning the seatback to the upright position:

- Make sure the seat belts are not twisted or caught in the seatback and are arranged in their proper position and are ready to use.
- Make sure the seatback is securely locked by pushing forward and rearward on the top of the seatback. Failure to do so will prevent seat belt from operating properly.

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For your safety and comfort, adjust the head restraint before driving.

To raise: Pull it up.

To lower: Push it down while pressing the lock release button.

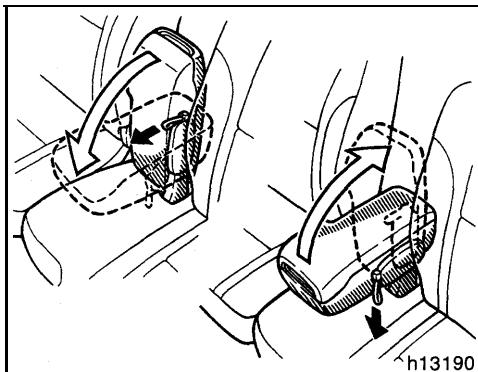
On some models, you can also move the head restraint forward or backward. If such adjustment is desired, pull or push the head restraint.

The head restraint is most effective when it is close to your head. Therefore, using a cushion on the seatback is not recommended.

! CAUTION

- Adjust the center of the head restraint so that it is closest to the top of your ears.
- After adjusting the head restraint, make sure it is locked in position.
- Do not drive with the head restraints removed.

Armrest



To use the armrest, do this.

To lower: Pull the lock release strap and down the armrest.

To raise: Push down the lock release knob and up the armrest.

NOTICE

To prevent damage to the armrest, avoid putting heavy loads on it.

-Seat belt precautions

Toyota strongly urges that the driver and passengers in the vehicle be properly restrained at all times with the seat belts provided. Failure to do so could increase the chance of injury and/or the severity of injury in accidents.

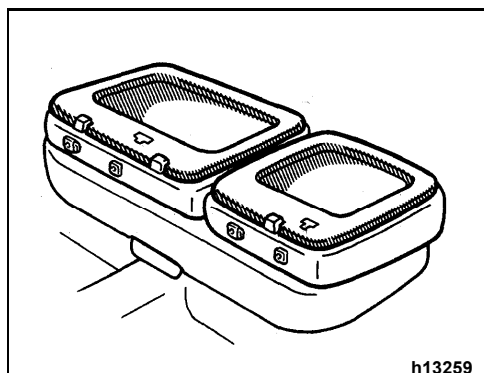
Child. Use a child restraint system appropriate for the child until the child becomes large enough to properly wear the vehicle's seat belts. See "Child restraint" for details.

REGULAR CAB MODELS-

If a child is too large for a child restraint system, the child should sit in the seat and must be restrained using the vehicle's seat belt.

XTRA-CAB and DOUBLE CAB MODELS- If a child is too large for a child restraint system, the child should sit in the rear seat and must be restrained using the vehicle's seat belt. According to accident statistics, the child is safer when properly restrained in the rear seat than in the front seat.

If a child must sit in the front seat, the seat belts should be worn properly. If an accident occurs and the seat belts are not worn properly, the force of the rapid inflation of the airbag may cause death or serious injury to the child.



You can use the rear seatback tray when the vehicle is stopped.

CAUTION

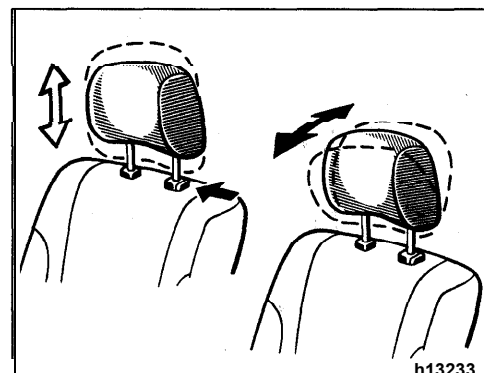
To avoid serious injury:

- Do not set up the rear seatback tray while the vehicle is moving.
- Do not sit on the folded rear seatback tray.

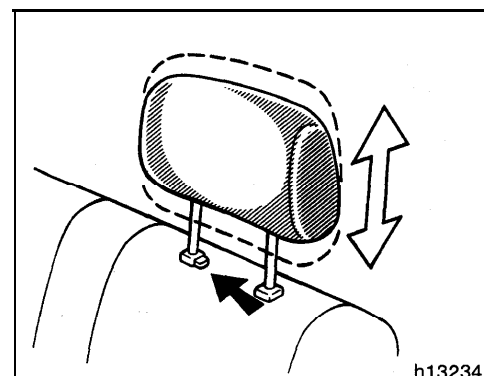
NOTICE

To prevent the seat from damaging, avoid putting heavy loads on the rear seatback tray.

Head restraints



Front



Rear (double cab models only)

Do not allow the child to stand up or kneel on either rear or front seats. An unrestrained child could suffer serious injury or death during emergency braking or a collision. Also, do not let the child sit on your lap. It does not provide sufficient restraint.

Small-framed person or youth in a 3-point type seat belt. On models with a bench seat, have a small-framed person or youth sit slightly closer to the center of the vehicle (so the shoulder belt does not cross over the neck). On models with separate seats, move the seat fully backward.

Pregnant woman. Toyota recommends the use of a seat belt. Ask your doctor for specific recommendations. The lap belt should be worn securely and as low as possible over the hips and not on the waist.

Injured person. Toyota recommends the use of a seat belt. Depending on the injury, first check with your doctor for specific recommendations.

CAUTION

Persons should ride in their seats properly wearing their seat belts whenever the vehicle is moving. Otherwise, they are much more likely to suffer serious bodily injury or death in the event of sudden braking or a collision.

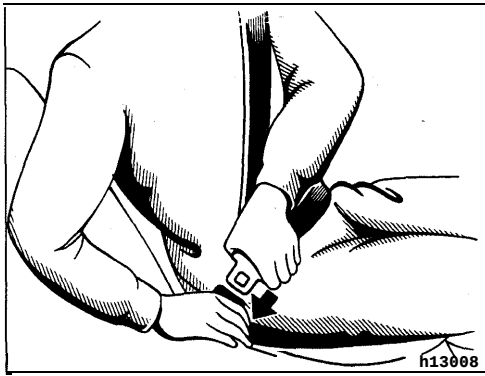
When using the seat belts, observe the following:

- Use the belt for only one person at a time. Do not use a single belt for two or more people—even children.
- Avoid reclining the seatbacks too much. The seat belts provide maximum protection when the seatbacks are in the upright position. (Refer to the seat adjustment instructions.)
- Be careful not to damage the belt webbing or hardware. Take care that they do not get caught or pinched in the seat or side doors.
- Inspect the belt system periodically. Check for cuts, fraying, and loose parts. Damaged parts should be replaced. Do not disassemble or modify the system.

- Keep the belts clean and dry. If they need cleaning, use a mild soap solution or lukewarm water. Never use bleach, dye, or abrasive cleaners—they may severely weaken the belts. (See “Cleaning the interior” in Section 5.)

- Replace the belt assembly (including bolts) if it has been used in a severe impact. The entire assembly should be replaced even if damage is not obvious.

-Front and rear outside seat belts



Adjust the seat as needed (front seats only) and sit up straight and well back in the seat. To fasten your belt, pull it out of the retractor and insert the tab into the buckle.

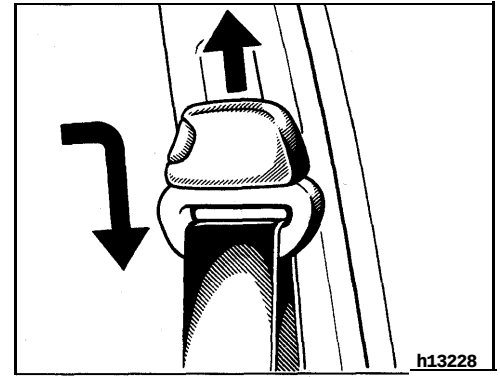
You will hear a click when the tab locks into the buckle.

The seat belt length automatically adjusts to your size and the seat position.

The retractor will lock the belt during a sudden stop or on impact. It also may lock if you lean forward too quickly. A slow, easy motion will allow the belt to extend, and you can move around freely.

If the seat belt cannot be pulled out of the retractor, firmly pull the belt and release it. You will then be able to smoothly pull the belt out of the retractor.

When a passenger's shoulder belt is completely extended and is then retracted even slightly, the belt is locked in that position and cannot be extended. This feature is used to hold the child restraint system securely. (For details, see "Child restraint" in this section.) To free the belt again, fully retract the belt and then pull the belt out once more.



Seat belts with an adjustable shoulder anchor-

Adjust the shoulder anchor position to your size.

To raise: Slide the anchor up.

To lower: Push in the lock release button and slide the anchor down.

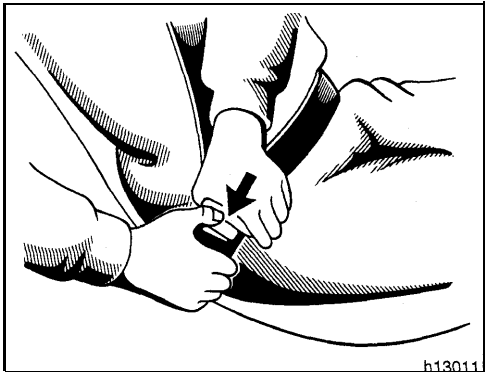
After adjustment, make sure the anchor is locked in position.

CAUTION

- After inserting the tab, make sure the tab and buckle are locked and that the belt is not twisted.
- Do not insert coins, clips, etc. in the buckle as this may prevent you from properly latching the tab and buckle.
- If the seat belt does not function normally, immediately contact your Toyota dealer. Do not use the seat until the seat belt is fixed. It cannot protect an adult occupant or your child from injury.

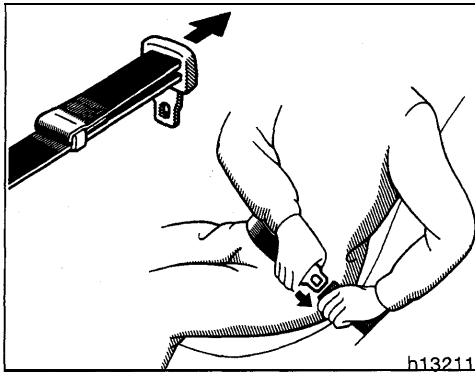
31

Front and rear center seat belt



To release the belt, press the buckle-release button and allow the belt to retract.

If the belt does not retract smoothly, pull it out and check for kinks or twists. Then make sure it remains untwisted as it retracts.



Sit up straight and well back in the seat. To fasten your belt, insert the tab into the buckle.

You will hear a click when the tab locks into the buckle.

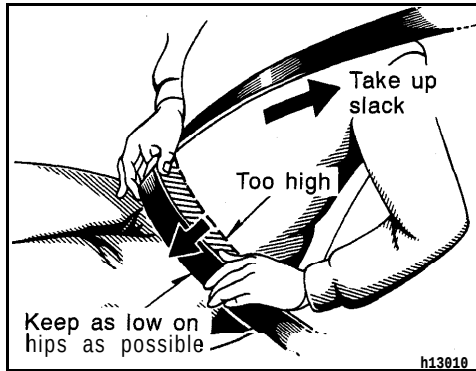
If the belt is not long enough for you, hold the tab at a right angle to the belt and pull on the tab.

CAUTION

- After inserting the tab, make sure the tab and buckle are locked and that the belt is not twisted.
- Do not insert coins, clips, etc. in the buckle as this may prevent you from properly latching the tab and buckle.
- If the seat belt does not function normally, immediately contact your Toyota dealer. Do not use the seat until the seat belt is fixed. It cannot protect an adult occupant or your child from injury.

CAUTION

Always make sure the shoulder belt is positioned across the center of your shoulder. The belt should be kept away from your neck, but not falling off your shoulder. Failure to do so could reduce the amount of protection in an accident and cause severe injuries in a collision.

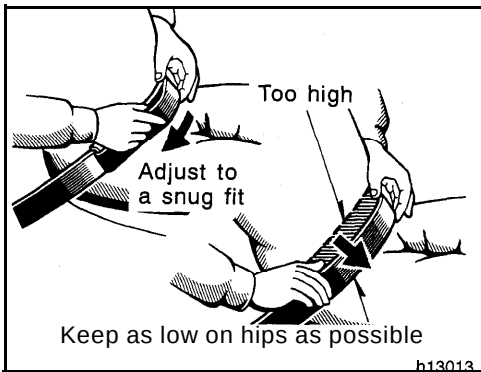


Adjust the position of the lap and shoulder belts.

Position the lap belt as low as possible on your hips- not on your waist, then adjust it to a snug fit by pulling the shoulder portion upward through the latch plate.

CAUTION

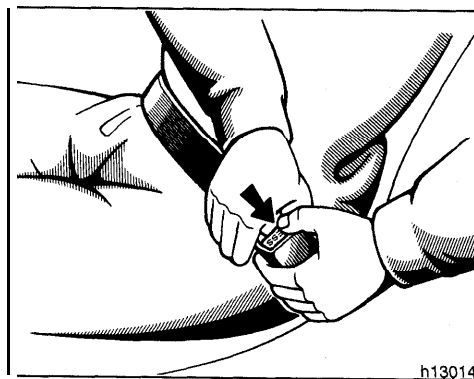
- Both high-positioned lap belts and loose-fitting belts could cause serious injuries due to sliding under the lap belt during a collision or other unintended result. Keep the lap belt positioned as low on hips as possible.
- For your safety, do not place the shoulder belt under your arm.



Remove excess length of the belt and adjust the belt position.

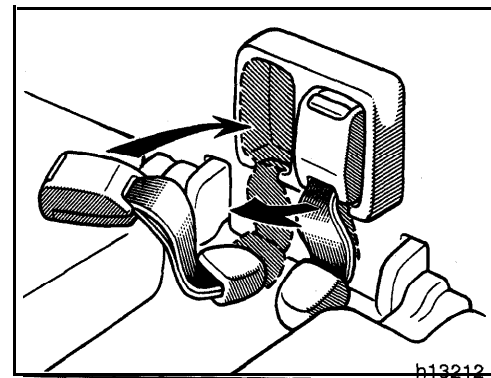
To shorten the belt, pull the free end of the belt.

Position the lap belt as low as possible on your hips- not on your waist, then adjust it to a snug fit.



To release the belt, press the buckle-release button.

-Stowing the rear seat buckles (Xtra-cab models)



The buckles can be fixed when not in use.

When taking out the buckle from the holder, pull on the belt webbing to remove the buckle from the lower portion.

CAUTION

Both high-positioned and loose-fitting lap belts could cause serious injuries due to sliding under the lap belt during a collision or other unintended result. Keep the lap belt positioned as low on hips as possible.

-Seat belt extender

If your seat belt cannot be fastened securely because it is not long enough, a personalized seat belt extender is available from your Toyota dealer free of charge.

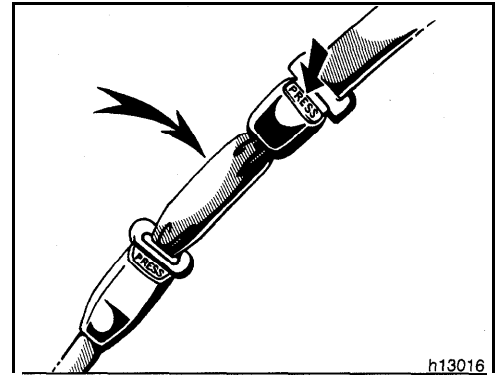
Please contact your local Toyota dealer so that the dealer can order the proper required length for the extender. Bring the heaviest coat you expect to wear for proper measurement and selection of length. Additional ordering information is available at your Toyota dealer.

a CAUTION

When using the seat belt extender, observe the following. Failure to follow these instructions could result in less effectiveness of the seat belt restraint system in case of vehicle accident, increasing the chance of personal injury.

- Never use the seat belt extender if you can fasten the seat belt without it.

- Remember that the extender provided for you may not be safe when used on a different vehicle, or for another person or at a different seating position than the one originally intended for.



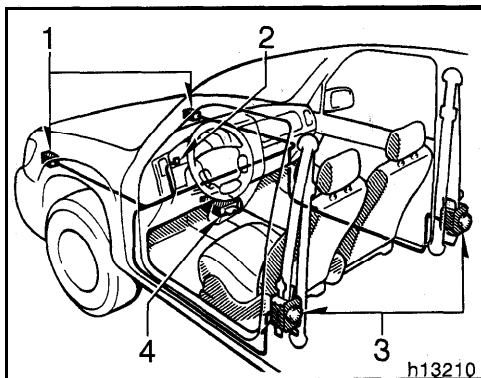
To connect the extender to the seat belt, insert the tab into the seat belt buckle so that the "PRESS" signs on the buckle-release buttons of the extender and the seat belt are both facing outward as shown.

You will hear a click when the tab locks into the buckle.

When releasing the seat belt, press on the buckle-release button on the extender, not on the seat belt. This helps prevent damage to the vehicle interior and extender itself.

When not in use, remove the extender and store in the vehicle for future use.

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The front seat belt pretensioner system mainly consists of the following components and their locations are shown in the illustration.

1. Front airbag sensors
2. SRS warning light
3. Front seat belt pretensioner assemblies
4. Airbag sensor assembly

The front seat belt pretensioners are controlled by the airbag sensor assembly. The airbag sensor assembly consists of a safing sensor and airbag sensor.

When the front seat belt pretensioners are activated, an operating noise may be heard and a small amount of smoke-like gas may be released. This gas is harmless and does not indicate that a fire is occurring.

Once the front seat belt pretensioners have been activated, the seat belt retractors remain locked.

a CAUTION

Do not modify, remove, strike or open the front seat belt pretensioner assemblies, airbag sensor or surrounding area or wiring. Doing any of these may cause sudden operation of the front seat belt pretensioners or disable the system, which could result in death or serious injury. Failure to follow these instructions can result in death or serious injuries.

NOTICE

Do not perform any of the following changes without consulting your Toyota dealer. Such changes can interfere with proper operation of the front seat belt pretensioners in some cases.

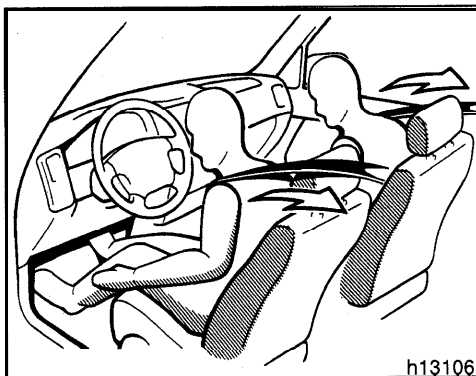
- ◆ Installation of electronic devices such as a mobile two-way radio, cassette tape player or compact disc player
- ◆ Repairs on or near the front seat belt pretensioner assemblies
- ◆ Modification of the suspension system
- ◆ Modification of the front end structure
- ◆ Attachment of a grille guard (bull bar, kangaroo bar, etc.), snowplow, winches or any other equipment to the front end
- ◆ Repairs made on or near the front fenders, front end structure or console

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-Front seat belt pretensioners

CAUTION

- After inserting the tab, make sure the tab and buckle are locked and that the seat belt extender is not twisted.
- Do not insert coins, clips, etc. in the buckle as this may prevent you from properly latching the tab and buckle.
- If the seat belt does not function normally, immediately contact your Toyota dealer. Do not use the seat until the seat belt is fixed. It cannot protect an adult occupant or your child from injury.

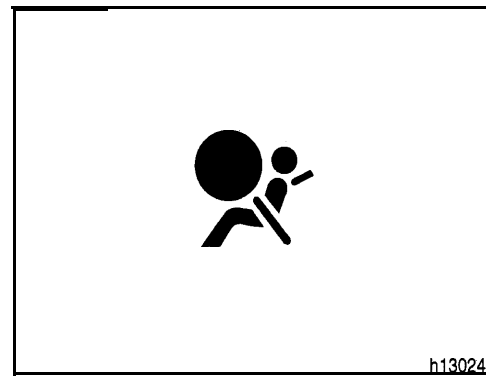


The driver and front passenger's seat belt pretensioners are designed to be activated in response to a severe frontal impact.

When the airbag sensor detects the shock of a severe frontal impact, the front seat belts are quickly drawn back in by the retractors so that the belts snugly restrain the front seat occupants.

The front seat belt pretensioners are activated even with no passenger in the front seat.

Collisions occurring at certain speeds and angles may cause the seat belt pretensioners and SRS airbags not to operate all together.



This indicator comes on when the ignition key is turned to the "ACC" or "ON" position. It goes off after about 6 seconds. This means the front seat belt pretensioners are operating properly.

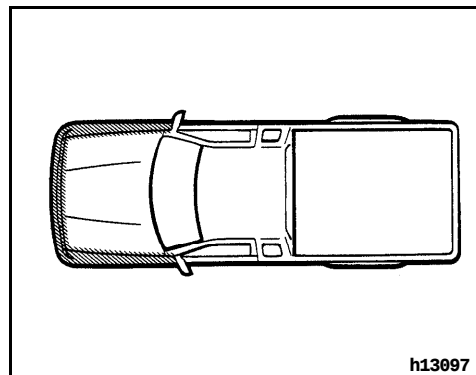
This warning light system monitors the airbag sensor assembly, front airbag sensors, front seat belt pretensioner assemblies, inflators, warning light, interconnecting wiring and power sources. (For details, see "Service reminder indicators and warning buzzers" in Section I-5.)



h13024

This front seat belt pretensioner system has a service reminder indicator to inform the driver of operating problems. If any of the following conditions occurs, this indicates a malfunction of the airbags or pretensioners. Contact your Toyota dealer as soon as possible to service the vehicle.

- The light does not come on when the ignition key is turned to the "ACC" or "ON" position, or the light remains on.
- The light comes on or flashes while driving.
- If either front seat belt does not retract or can not be pulled out due to a malfunction or activation of the relevant front seat belt pretensioner.

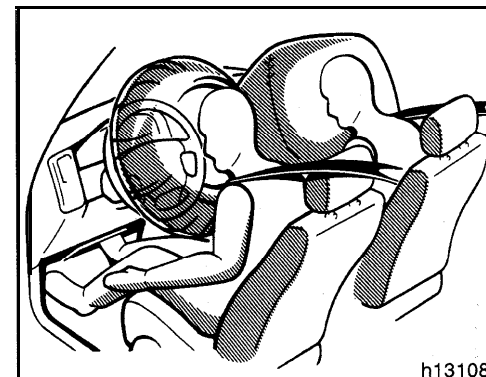


h13097

In the following cases, contact your Toyota dealer as soon as possible:

- The front part of the vehicle (shaded in the illustration) was involved in an accident that was not severe enough to cause the front seat belt pretensioners to operate.
- Either front seat belt pretensioner assembly or surrounding area is scratched, cracked, or otherwise damaged.

SRS driver and front passenger airbags (vehicles with passenger airbag manual on-off switch)



h13108

The SRS (Supplemental Restraint System) airbags are designed to provide further protection for occupants in the following seats in addition to the primary safety protection provided by the seat belts.

- Models with separate front seats-The SRS airbags are designed to protect the driver and front passenger.
- Models with bench front seats-The SRS airbags are designed to protect the driver and right-front passenger. They are not designed to protect occupant in the center position.

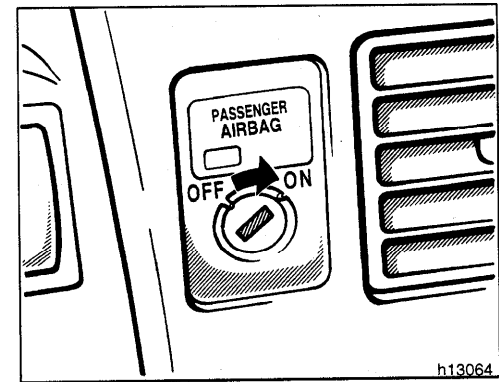
In response to a severe frontal impact, the SRS airbags work together with the seat belts to help prevent or reduce injury by inflating. The SRS airbags help to reduce injuries mainly to the driver's or front passenger's head or chest directly hitting the steering wheel or dashboard. When the passenger airbag manual on-off switch is in the "ON" position, the front passenger airbag is activated even with no passenger in the front seat.

Be sure to wear your seat belt properly. Your vehicle is equipped with a crash sensing and diagnostic module, which will record the use of the seat belt restraint system by the driver when the SRS airbag is inflated.

CAUTION

A driver or front passenger too close to the steering wheel or dashboard during airbag deployment can be killed or seriously injured. Toyota strongly recommends that:

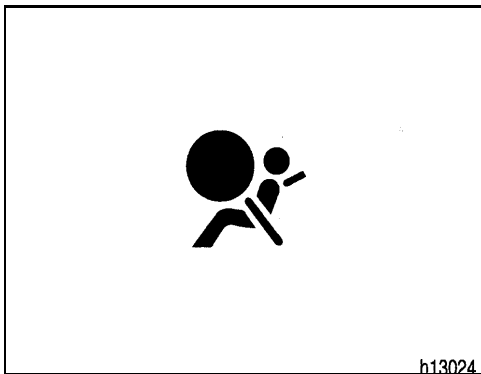
- The driver sit as far back as possible from the steering wheel while still maintaining control of the vehicle.
- The front passenger sit as far back as possible from the dashboard.
- All vehicle occupants be properly restrained using the available seat belts.



The passenger airbag system is equipped with a manual on-off switch and indicator light. Turning the passenger airbag manual on-off switch clockwise to the "ON" position makes the front passenger airbag system operational. Turning the passenger airbag manual on-off switch counterclockwise to the "OFF" position disables the front passenger airbag system. The indicator light on the passenger airbag manual on-off switch will come on when the front passenger airbag system has been disabled.

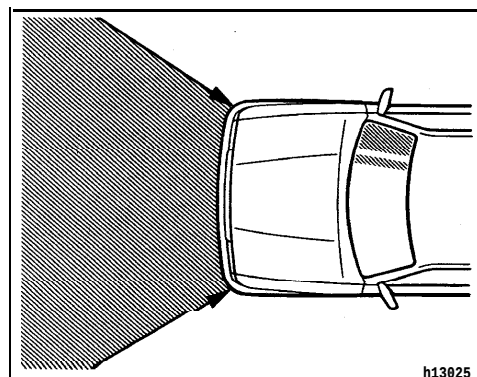
See "Passenger airbag manual on-off switch" in this section for detail.

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This indicator comes on when the ignition key is turned to the "ACC" or "ON" position. It goes off after about 6 seconds. This means the SRS airbags are operating properly.

This warning light system monitors the airbag sensor assembly, front airbag sensors, front seat belt pretensioner assemblies, inflators, warning light, interconnecting wiring and power sources. (For details, see "Service remainder indicators and warning buzzers" in Section I-5.)



The SRS airbag system is designed to activate in response to a severe frontal impact within the shaded area between the arrows in the illustration.

The SRS airbags will deploy if the severity of the impact is above the designed threshold level, comparable to an approximate 25 km/h (15 mph) collision when impacting straight into a fixed barrier that does not move or deform.

If the severity of the impact is below the above threshold level, the SRS airbags may not deploy.

However, this threshold **velocity will be** considerably higher if the vehicle strikes an object, such as a parked vehicle or sign pole, which can move or deform on impact, or if it is **involved in an under-ride collision** (e.g. a collision in which the nose of the vehicle "underrides", or goes under, the bed of a truck, etc.).

It is possible that in some collisions at the lower zone of airbag sensor detection and activation the SRS airbags and seat belt pretensioners will not operate all together.

For the safety of all occupants, always wear your seat belts properly.

CAUTION

- Make sure that the indicator light is off.
- Do not turn off the passenger airbag manual on-off switch except when a member of a passenger risk group identified in TABLE 1 is occupying the right front passenger seating position.
- When the passenger airbag manual on-off switch is turned off, the front passenger airbag will not inflate in a collision and turning off the front passenger airbag can reduce the occupant protection which your vehicle safety systems can provide to you in certain accidents and increase the likelihood of serious personal injuries.

TABLE 1: A PASSENGER RISK GROUP

Infant. An infant (less than 1 year old) who must ride in the front seat because:

- Vehicle has no rear seat;
- Vehicle has a rear seat too small to accommodate a rear-facing infant seat; or
- The infant has a medical condition which, according to the infant's physician, makes it necessary for the infant to ride in the front seat so that the driver can constantly monitor the child's condition.

Child age 1 to 12. A child age 1 to 12 must ride in the front seat because:

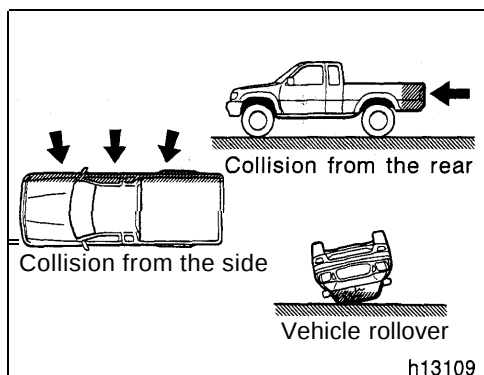
- Vehicle has no rear seat;
- Although children ages 1 to 12 ride in the rear seat(s) whenever possible, children ages 1 to 12 sometimes must ride in the front because no space is available in the rear seat(s) of vehicle; or
- The child has a medical condition which, according to the child's physician, makes it necessary for the child to ride in the front seat so that the driver can constantly monitor the child's condition.

Medical condition. A passenger has a medical condition which according to his or her physician:

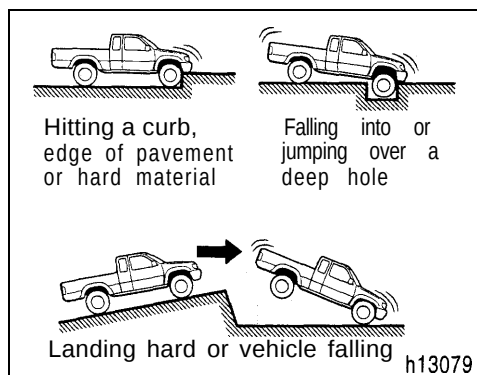
- Causes the passenger airbag to pose a special risk for the passenger: and
- Makes the potential harm from the passenger airbag in a crash greater than the potential harm from turning off the airbag and allowing the passenger, even if belted, to hit the dashboard, or windshield in a crash.

For more detailed information concerning about the passenger risk group, please contact NHTSA at 1-800-424-9393 or Transport Canada at 1-800-333-0371,

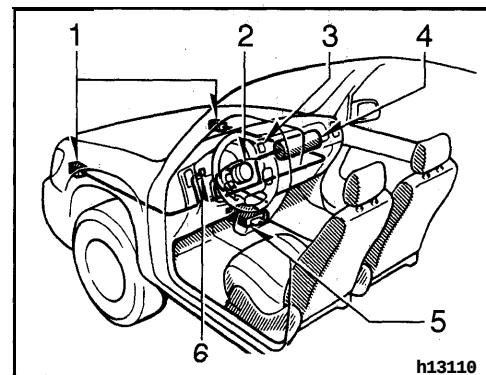
40



The SRS airbags are not designed to inflate if the vehicle is involved in a side or rear collision, if it rolls over, or if it is involved in a low-speed frontal collision.



The SRS airbags may deploy if a serious impact occurs to the underside of your vehicle. Some examples are shown in the illustration.



The SRS airbag system consists mainly of the following components, and their locations are shown in the illustration.

1. Front airbag sensors
2. Airbag module for driver (airbag and inflator)
3. Passenger airbag manual on-off switch
4. Airbag module for front passenger (airbag and inflator)
5. Airbag sensor assembly
6. SRS warning light

The airbag sensor assembly consists of a safing sensor and airbag sensor.

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In a severe frontal impact, the sensors detect deceleration and the system triggers the airbag inflators. Then a chemical reaction in the inflators quickly fills the airbags with non-toxic gas to help restrain the forward motion of the occupants.

When the airbags inflate, they produce a fairly loud noise and release some smoke and residue along with non-toxic gas. This does not indicate a fire. This gas is normally harmless; however, for those who have delicate skin, it may cause a minor skin irritation. Be sure to wash off any residue as soon as possible to prevent any potential skin irritation.

Deployment of the airbags happens in a fraction of a second, so the airbags must inflate with considerable force. While the system is designed to reduce serious injuries, it may also cause minor burns or abrasions and swelling.

Parts of the airbag module (steering wheel hub, dashboard) may be hot for several minutes, but the airbags themselves will not be hot. The airbags are designed to inflate only once.

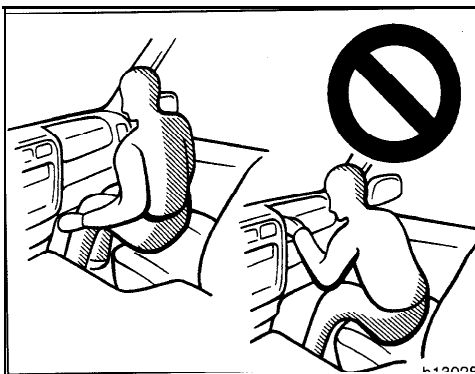
A crash severe enough to inflate the airbags may break the windshield as the vehicle buckles. In vehicles with a passenger airbag the windshield may also be damaged by absorbing some of the force of the inflating airbag.

⚠ CAUTION

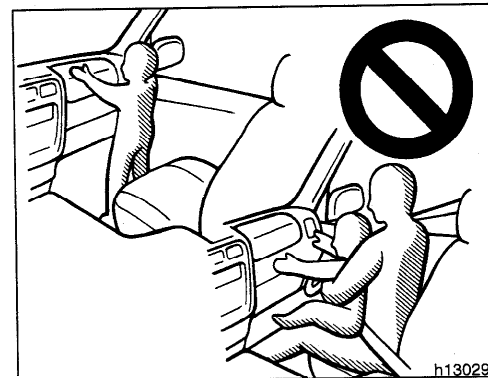
- The SRS airbag system is designed only as a supplement to the primary protection of the driver side and front passenger side seat belt systems. The front seat occupants can be killed or seriously injured by the inflating airbags if they do not wear the available seat belts properly. During sudden braking just before a collision, an unrestrained driver or front passenger can move forward into direct contact with or close proximity to the airbag which may then deploy during the collision. To ensure maximum protection in an accident, the driver and all passengers in the vehicle must wear their seat belts properly. Wearing a seat belt properly during an accident reduces the chances of death or serious injury or being thrown out of the vehicle. For instructions and precautions concerning the seat belt system, see "Seat belts" in this section.

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- ▶ A forward-facing child restraint system which belongs to a passenger risk group should never be put on the right front seat with the passenger airbag manual on-off switch in the "ON" position, because the force of the deploying airbag could cause death or serious injury to the child in forward seating position.
- For instructions concerning the installation of a child restraint system, see "Child restraint" in this section.



- Do not sit on the edge of the seat or lean over the dashboard when the vehicle is in use. The airbags inflate with considerable speed and force; you may be killed or seriously injured. Sit up straight and well back in the seat, and always use your seat belt properly.



- Do not allow a child to stand up, or to kneel on the front passenger seat. The airbag inflates with considerable speed and force; the child may be killed or seriously injured.
- Do not hold a child on your lap or in your arms. Use a child restraint system in the rear seat. For instructions concerning the installation of a child restraint system, see "Child restraint" in this section.

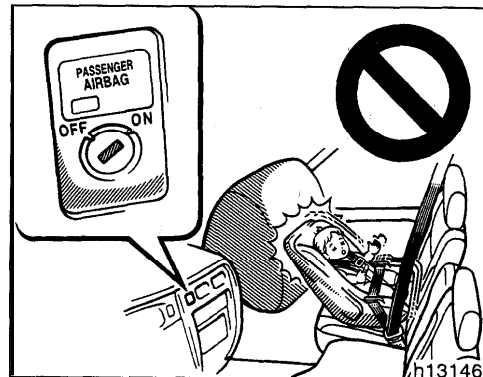
45

- Improperly seated and/or restrained infants and children can be killed or seriously injured by the deploying airbags. An infant or child who is too small to use a seat belt should be properly secured using a child restraint system. As to Xtracab models, Toyota recommends that all infants and children be placed in the rear seat of the vehicle and properly restrained. The rear seat is the safest for infants and children. For instructions concerning the installation of a child restraint system, see "Child restraint" in this section.



CAUTION

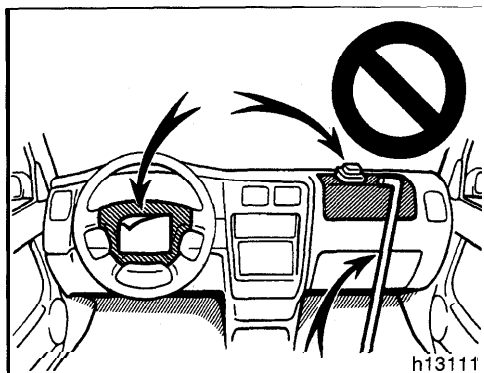
A member of a passenger risk group should never sit or be occupied in the right front passenger seat with airbag manual on-off switch in the "ON" position. (For details, see "SRS driver and front passenger airbags" in this section.)



CAUTION

- Never put a rear-facing child restraint system on the right front seat with the passenger airbag manual on-off switch in the "ON" position. In the event of an accident, the force of the rapid inflation of the front passenger airbag can cause death or serious injury to the child.

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- Do not put objects or your pets on or in front of the dashboard or steering wheel pad that houses the airbag system. They might restrict inflation or cause death or serious injury as they are projected rearward by the force of deploying airbags. Likewise, the driver and front passenger should not hold things in their arms or on their knees.

- Do not modify or remove any wiring. Do not modify, remove, strike or open any components, such as the steering wheel pad, steering wheel, column cover, front passenger airbag cover, front passenger airbag or airbag sensor assembly. Doing any of these may cause sudden SRS airbag inflation or disable the system, which could result in death or serious injury.

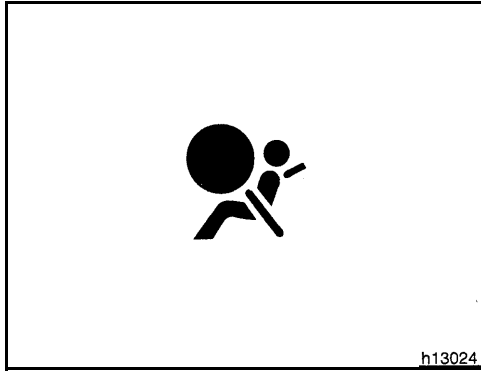
Failure to follow these instructions can result in death or serious injury.

NOTICE

Do not perform any of the following changes without consulting your Toyota dealer. Such changes can interfere with proper operation of the SRS airbag system in some cases.

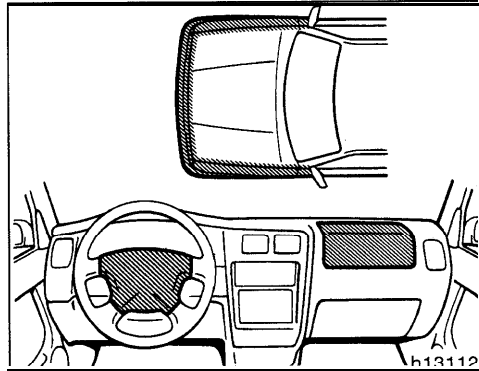
- ◆ *Installation of electronic devices such as a mobile two-way radio, cassette tape player or compact disc player*
- ◆ *Modification of the suspension system*
- ◆ *Modification of the front end structure*
- ◆ *Attachment of a grille guard (bull bar, kangaroo bar, etc.), snowplow, winches or any other equipment to the front end*
- ◆ *Repairs made on or near the front fenders, front end structure, console, steering column, steering wheel or dashboard near the front passenger airbag*

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This SRS airbag system has a service reminder indicator to inform the driver of operating problems. If either of the following conditions occurs, this indicates a malfunction of the airbags. Contact your Toyota dealer as soon as possible to service the vehicle.

- The light does not come on when the ignition key is turned to the "ACC" or "ON" position, or the light remains on.
- The light comes on while driving.



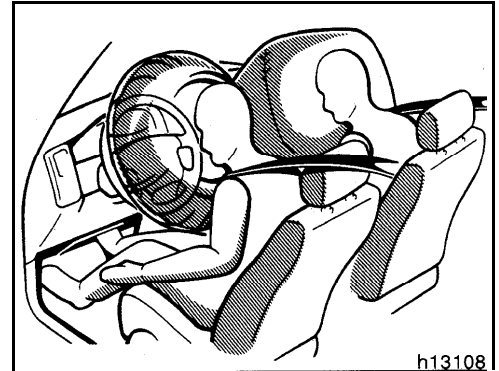
In the following cases, contact your Toyota dealer as soon as possible:

- The SRS airbags have been inflated.
- The front part of the vehicle (shaded in the illustration) was involved in an accident that was not severe enough to cause the SRS airbags to inflate.
- The pad section of the steering wheel or front passenger airbag cover (shaded in the illustration) is scratched, cracked, or otherwise damaged.

NOTICE

Do not disconnect the battery cables before contacting your Toyota dealer.

SRS driver and front passenger airbags (vehicles without passenger airbag manual on-off switch)



The SRS (Supplemental Restraint System) airbags are designed to provide further protection for the driver and front passenger in addition to the primary safety protection provided by the seat belts.

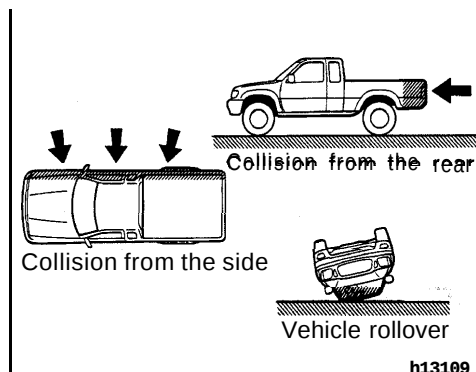
In response to a severe frontal impact, the SRS airbags work together with the seat belts to help reduce injury by inflating. The SRS airbags help to reduce injuries mainly to the driver's or front passenger's head or chest caused by directly hitting the steering wheel or dashboard. The front passenger airbag is activated even with no passenger in the front seat. Be sure to wear your seat belt properly.

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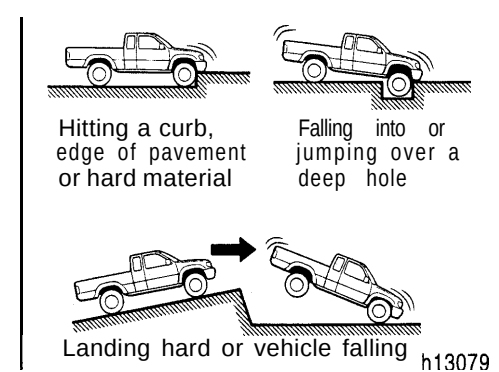
However, this threshold velocity will be considerably higher if the vehicle strikes an object, such as a parked vehicle or sign pole, which can move or deform on impact, or if it is involved in an underride collision (e.g. a collision in which the nose of the vehicle "underrides", or goes under, the bed of a truck, etc.).

It is possible that in some collisions at the lower zone of airbag sensor detection and activation the SRS airbags and seat belt pretensioners will not operate all together.

For the safety of all occupants, always wear your seat belts properly.



The SRS airbags are not designed to inflate if the vehicle is involved in a side or rear collision, if it rolls over, or if it is involved in a low-speed frontal collision.



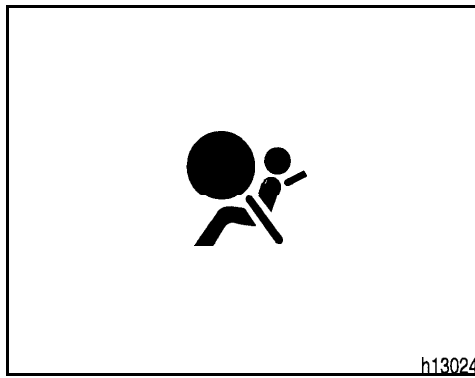
The SRS airbags may deploy if a serious impact occurs to the underside of your vehicle. Some examples are shown in the illustration.

Your vehicle is equipped with a crash sensing and diagnostic module, which will record the use of the seat belt restraint system by the driver when the SRS airbag is inflated.

CAUTION

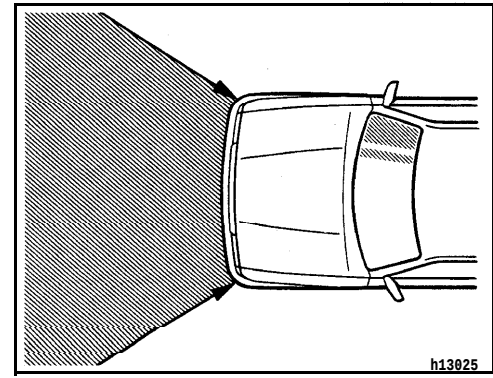
A driver or front passenger too close to the steering wheel or dashboard during airbag deployment can be killed or seriously injured. Toyota strongly recommends that:

- The driver sit as far back as possible from the steering wheel while still maintaining control of the vehicle.
- The front passenger sit as far back as possible from the dashboard.
- All vehicle occupants be properly restrained using the available seat belts.



This indicator comes on when the ignition key is turned to the “ACC” or “ON” position. It goes off after about 6 seconds. This means the SRS airbags are operating properly.

This warning light system monitors the airbag sensor assembly, front airbag sensors, front seat belt pretensioner assemblies, inflators, warning light, interconnecting wiring and power sources. (For details, see “Service reminder indicators and warning buzzers” in Section I-5.)

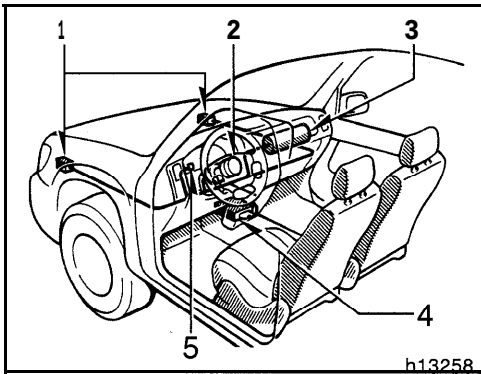


The SRS airbag system is designed to activate in response to a severe frontal impact within the shaded area between the arrows in the illustration.

The SRS airbags will deploy if the severity of the impact is above the designed threshold level, comparable to an approximate 25 km/h (15 mph) collision when impacting straight into a fixed barrier that does not move or deform.

If the severity of the impact is below the above threshold level, the SRS airbags may not deploy.

4%



The SRS airbag system consists mainly of the following components, and their locations are shown in the illustration.

1. Front airbag sensors
2. Airbag module for driver (airbag and inflator)
3. Airbag module for front passenger (airbag and inflator)
4. Airbag sensor assembly
5. SRS warning light

The airbag sensor assembly consists of a safing sensor and airbag sensor.

In a severe frontal impact, the sensors detect deceleration and the system triggers the airbag inflators. Then a chemical reaction in the inflators quickly fills the airbags with non-toxic gas to help restrain the forward motion of the occupants.

When the airbags inflate, they produce a fairly loud noise and release some smoke and residue along with non-toxic gas. This does not indicate a fire. This gas is normally harmless; however, for those who have delicate skin, it may cause a minor skin irritation. Be sure to wash off any residue as soon as possible to prevent any potential skin irritation.

Deployment of the airbags happens in a fraction of a second, so the airbags must inflate with considerable force. While the system is designed to reduce serious injuries, it may also cause minor burns or abrasions and swelling.

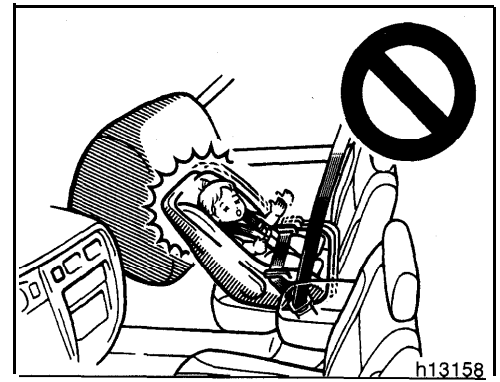
Parts of the airbag module (steering wheel hub, dashboard) may be hot for several minutes, but the airbags themselves will not be hot. The airbags are designed to inflate only once.

A crash severe enough to inflate the airbags may break the windshield as the vehicle buckles. In vehicles with a passenger airbag the windshield may also be damaged by absorbing some of the force of the inflating airbag.

⚠ CAUTION

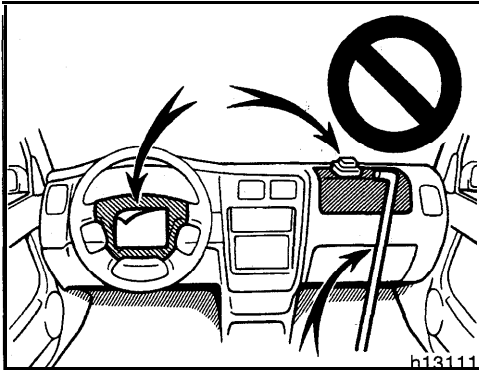
- The SRS airbag system is designed only as a supplement to the primary protection of the driver side and front passenger side seat belt systems. The front seat occupants can be killed or seriously injured by the inflating airbags if they do not wear the available seat belts properly. During sudden braking just before a collision, an unrestrained driver or front passenger can move forward into direct contact with or close proximity to the airbag which may then deploy during the collision. To ensure maximum protection in an accident, the driver and all passengers in the vehicle must wear their seat belts properly. Wearing a seat belt properly during an accident reduces the chances of death or serious injury or being thrown out of the vehicle. For instructions and precautions concerning the seat belt system, see "Seat belts" in this section.

- Improperly seated and/or restrained infants and children can be killed or seriously injured by the deploying airbags. An infant or child who is too small to use a seat belt should be properly secured using a child restraint system. Toyota strongly recommends that all infants and children be placed in the rear seat of the vehicle and properly restrained. The rear seat is the safest for infants and children. For instructions concerning the installation of a child restraint system, see "Child restraint" in this section.



- Never put a rear-facing child restraint system on the front passenger seat because the force of the rapid inflation of the front passenger airbag can cause death or serious injury to the child.

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- Do not put objects or your pets on or in front of the dashboard or steering wheel pad that houses the airbag system. They might restrict inflation or cause death or serious injury as they are projected rearward by the force of deploying airbags. Likewise, the driver and front passenger should not hold things in their arms or on their knees.

- Do not modify or remove any wiring. Do not modify, remove, strike or open any components such as the steering wheel pad, steering wheel, column cover, front passenger airbag cover, front passenger airbag or airbag sensor assembly. Doing any of these may cause sudden SRS airbag inflation or disable the system, which could result in death or serious injury.

Failure to follow these instructions can result in death or serious injury.

NOTICE

Do not perform any of the following changes without consulting your Toyota dealer. Such changes can interfere with proper operation of the SRS airbag system in some cases.

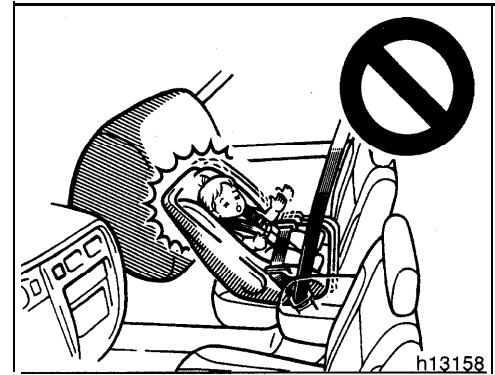
- ◆ Installation of electronic devices such as a mobile two-way radio, cassette tape player or compact disc player
- ◆ Modification of the suspension system
- ◆ Modification of the front end structure
- ◆ Attachment of a grille guard (bull bar, kangaroo bar, etc.), snowplow, winches or any other equipment to the front end
- ◆ Repairs made on or near the front fenders, front end structure, console, steering column, steering wheel or dashboard near the front passenger airbag

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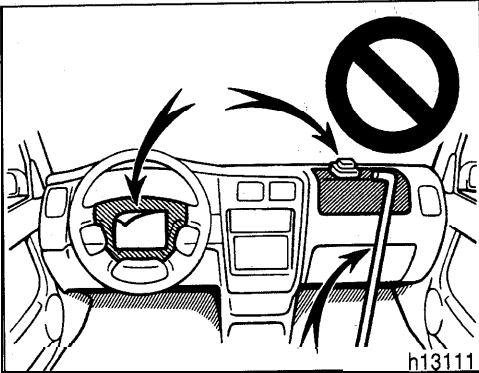
⚠ CAUTION

- The SRS airbag system is designed only as a supplement to the primary protection of the driver side and front passenger side seat belt systems. The front seat occupants can be killed or seriously injured by the inflating airbags if they do not wear the available seat belts properly. During sudden braking just before a collision, an unrestrained driver or front passenger can move forward into direct contact with or close proximity to the airbag which may then deploy during the collision. To ensure maximum protection in an accident, the driver and all passengers in the vehicle must wear their seat belts properly. Wearing a seat belt properly during an accident reduces the chances of death or serious injury or being thrown out of the vehicle. For instructions and precautions concerning the seat belt system, see "Seat belts" in this section.

- Improperly seated and/or restrained infants and children can be killed or seriously injured by the deploying airbags. An infant or child who is too small to use a seat belt should be properly secured using a child restraint system. Toyota strongly recommends that all infants and children be placed in the rear seat of the vehicle and properly restrained. The rear seat is the safest for infants and children. For instructions concerning the installation of a child restraint system, see "Child restraint" in this section.



- Never put a rear-facing child restraint system on the front passenger seat because the force of the rapid inflation of the front passenger airbag can cause death or serious injury to the child.



- Do not put objects or your pets on or in front of the dashboard or steering wheel pad that houses the airbag system. They might restrict inflation or cause death or serious injury as they are projected rearward by the force of deploying airbags. Likewise, the driver and front passenger should not hold things in their arms or on their knees.

- Do not modify or remove any wiring. Do not modify, remove, strike or open any components such as the steering wheel pad, steering wheel, column cover, front passenger airbag cover, front passenger airbag or airbag sensor assembly. Doing any of these may cause sudden SRS airbag inflation or disable the system, which could result in death or serious injury.

Failure to follow these instructions can result in death or serious injury.

NOTICE

Do not perform any of the following changes without consulting your Toyota dealer. Such changes can interfere with proper operation of the SRS airbag system in some cases.

- ◆ Installation of electronic devices such as a mobile two-way radio, cassette tape player or compact disc player
- ◆ Modification of the suspension system
- ◆ Modification of the front end structure
- ◆ Attachment of a grille guard (bull bar, kangaroo bar, etc.), snowplow, winches or any other equipment to the front end
- ◆ Repairs made on or near the front fenders, front end structure, console, steering column, steering wheel or dashboard near the front passenger airbag