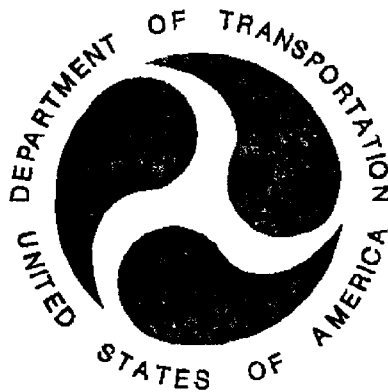


REPORT NO. KAR-97-16

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
FRONTAL BARRIER (FMVSS 208) IMPACT TEST

DODGE MOTOR CORPORATION
1996 DODGE NEON
4-DOOR SEDAN
NHTSA NO. MT0308

PREPARED BY:
KARCO ENGINEERING
9270 HOLLY ROAD
ADELANTO, CALIFORNIA 92301



NOVEMBER 2, 1997
FINAL REPORT

PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
SAFETY PERFORMANCE STANDARDS
OFFICE OF CRASHWORTHINESS STANDARDS
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Date of Acceptance

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Date of Acceptance

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16. <i>Abstract</i> A 48.3 km/h frontal barrier impact test was conducted on a 1996 Dodge Neon 4-door sedan at KARCO Engineering on September 9, 1997. This test was conducted to obtain data indicant of FMVSS 208, 212, 219 (partial), 301 and footwell intrusion performance. The impact velocity was 48.88 km/h. The ambient temperature at the barrier face at the time of impact was 28.6 °C. The vehicle's maximum post-test static crush was 395 mm, located at the left edge of the front bumper. The test vehicle was equipped with a 3-point continuous belt system and supplemental airbags at both frontal outboard-seating positions. With respect to FMVSS 208 "Occupant Crash Protection - Injury Criteria" the occupant injury response data summary is as follows: <table border="1"> <thead> <tr> <th><u>Injury Criteria</u></th> <th><u>Threshold Value</u></th> <th><u>Driver Dummy</u></th> <th><u>Passenger Dummy</u></th> </tr> </thead> <tbody> <tr> <td>Head Injury Criteria (HIC)</td> <td>1000</td> <td>136.9</td> <td>806.3</td> </tr> <tr> <td>Chest Resultant Peak 3 msec clip</td> <td>60 G's</td> <td>46.8</td> <td>49.0</td> </tr> <tr> <td>Left Femur Force</td> <td>10009 N</td> <td>-3161.0</td> <td>-3605.4</td> </tr> <tr> <td>Right Femur Force</td> <td>10009 N</td> <td>-2963.6</td> <td>-3620.2</td> </tr> <tr> <td>Chest Displacement (cm)</td> <td></td> <td>-2.90</td> <td>-2.36</td> </tr> </tbody> </table>						<u>Injury Criteria</u>	<u>Threshold Value</u>	<u>Driver Dummy</u>	<u>Passenger Dummy</u>	Head Injury Criteria (HIC)	1000	136.9	806.3	Chest Resultant Peak 3 msec clip	60 G's	46.8	49.0	Left Femur Force	10009 N	-3161.0	-3605.4	Right Femur Force	10009 N	-2963.6	-3620.2	Chest Displacement (cm)		-2.90	-2.36
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SECTION 1

PURPOSE, TEST PROCEDURE AND SUMMARY OF TEST MT0308

1.1 PURPOSE

This 30.0 mph (48.3 km/h) frontal barrier impact test is part of the FY' 97 FMVSS 208 frontal barrier crash worthiness evaluation program sponsored by the National Highway Traffic Safety Administration (NHTSA) under contract No. DTNH22-97-D-02007. The purpose of this test was to obtain vehicle crashworthiness and occupant restraint system performance data for frontal barrier impacts with the vehicle impacting a solid barrier at an impact speed in excess of the current 30 mph (48 km/h) FMVSS 208/212/219/301 requirements. The test program will be used to develop a standard for driver footwell intrusion data during frontal offset collisions.

1.2 TEST PROCEDURE

This 48.3 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 September 1996 and corresponding KARCO Engineering Test Procedure KTP-001, dated September 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.

This test was conducted at KARCO Engineering on September 9, 1997, at a speed of 48.88 km/h. The test vehicle was instrumented with eight (8) accelerometers to measure longitudinal axis and rotational 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 47.47 to 49.07 km/h. The frontal barrier impact event was documented by one (1) real-time panning motion picture camera and seventeen (17) high-speed motion picture cameras. The pre- and post-test conditions were recorded by one (1) real-time motion picture camera. Pre- and post-test photographs of the vehicle and dummies can be found in Appendix A.

The test vehicle contained two (2) part 572E 5th percentile adult female anthropomorphic test devices (ATDs). Both ATDs were instrumented with head, chest, pelvic tri-axial accelerometers, left/right femur load cells and left/right lower leg sensors. In addition, chest displacement and neck six-axis load 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-six 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. 202) and the right-front passenger ATD (serial No. 274) were used in two previous tests since their last calibration. Injury criteria were not exceeded by either ATD during this frontal barrier impact test.

1.3 SUMMARY OF FRONTAL BARRIER IMPACT TEST

Twenty-four (24) load cell barrier data channels were obtained in conducting this frontal barrier impact test on September 9, 1997. The barrier was impacted by a 1996 Dodge Neon at a velocity of 48.88 km/h. The test vehicle was equipped with a transverse mounted 2.0 liter, four cylinder engine and a three speed automatic transmission. The test weight, with two (2) 5th percentile female ATDs, was 1277 kg.

The driver's Head Injury Criteria (HIC) was 136.9, the maximum chest deceleration over three (3) milliseconds was 46.8 g and the left and right femur loads were -3161.0 and -2963.6 Newtons, respectively. Chest deflection for the driver ATD was -29.0 mm. The driver ATD head contacted the airbag and headrest; its chest and abdomen contacted the airbag, and both knees contacted the lower dash knee bolster.

The right front passenger's HIC was 806.3, maximum chest deceleration over three (3) milliseconds was 49.0 g, and the left and right femur loads were -3605.4 and -3620.2 Newtons respectively. Chest deflection for the passenger ATD was -23.6 mm. The passenger ATD head contacted the airbag and headrest, the chest and abdomen contacted the airbag, both knees contacted the glove box and knee bolster.

Seat belt spoolout, measured by on-board pullout potentiometers was 51.9 mm for the driver ATD and 58.2 mm for the passenger ATD. Shoulder belt stretch was 0.034 cm/cm for the driver ATD and 0.026 cm/cm for the passenger ATD.

There was 100 percent windshield retention, no intrusion into the protected or unprotected zone of the windshield, and no Stoddard solvent leakage occurred after impact or during any phase of the rollover.

The test vehicle sustained a maximum static crush of 395 mm at the left side of the front bumper. The driver side and passenger side front doors were jammed. The rear doors opened without the aid of tools.

1.4 GENERAL COMMENTS

The 1996 Dodge Neon 4-door sedan passed the requirements of 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. The dummy and vehicle response data traces are presented in Appendix B. Appendix C contains the load cell barrier measurement data. Appendix D is for test equipment and instrument calibration data. Appendix E contains the dummy calibration data and Appendix F the owner's manual instructions for the occupant restraint systems.

SECTION 2.

OCCUPANT AND VEHICLE INFORMATION/DATA SHEETS

TEST MODE: 48.3 km/h FMVSS 208 Frontal Barrier Impact

CONVERSION FACTORS USED IN THIS REPORT:

2.2 pounds (lb.)	=	1 kilogram (kg)
1 mile (mi.)	=	1.609 kilometer (km)
1 gallon (gal.)	=	3.785 liters (L)
1 pound/square inch (psi)	=	7000 Pascal (kPa)

DATA SHEET NO. 1

CRASH TEST SUMMARY

TEST MODE: 48.3 km/h FMVSS 208 Frontal Barrier Impact NHTSA NO. MT0308

TEST DATE: September 9, 1997 TIME: 2:20 PM TEMPERATURE: 28.6° C

VEHICLE YEAR/MAKE/MODEL/BODY STYLE: 1996 DODGE NEON 4-DOOR SEDAN

TEST WEIGHT: 1277 kg IMPACT VELOCITY: 48.88 km/h

VEHICLE REBOUND AND STATIC CRUSH; REBOUND ANGLE = 0°

	Left	Center	Right
Vehicle Rebound (mm)	1140	1130	1120
Pre-test Measurements (mm)	4170	4340	4170
Post-test Measurements (mm)	3860	3945	3820
Static Crush (mm)	310	395	350

DOOR OPENING AND SEAT TRACK INFORMATION

	Driver	Passenger
Door Opening (Front)	JAMMED	JAMMED
Door Opening (Rear)	OPENED	OPENED
Seat Track Shift (mm of shift)	1.0	0
Seat Back Failure	NO	NO

DUMMY INFORMATION

	Driver	Passenger
Dummy Type/No.	5% Female Hybrid III (S/N 202)	5% Female Hybrid III (S/N 274)
Data Channels	44	44
Visible Contact Points		
Head	AIR BAG, HEAD REST	AIR BAG, HEAD REST
Chest	AIR BAG	AIR BAG
Abdomen	AIR BAG	AIR BAG
Left Knee	KNEE BOLSTER, STEERING COLUMN	KNEE BOLSTER
Right Knee	KNEE BOLSTER	KNEE BOLSTER

DATA SHEET NO. 2

GENERAL TEST AND VEHICLE PARAMETER DATA

VEHICLE YEAR/MAKE/MODEL/BODY STYLE: 1996 DODGE NEON 4-DOOR SEDAN

TEST VEHICLE INFORMATION			
Manufacturer	CHRYSLER CORPORATION	VIN	1B3ES47C1T0600127
Manufacturing Date	1/96	Delivery Date	7/18/97
Dealer	Pomona Dodge Pomona, CA	NHTSA No.	MT0308
Odometer Reading	28,832 mi.	Fuel Type	Unleaded Gasoline
Engine Displacement	2.0 Liter	Cylinders	4
Transmission	4-speed Automatic	Final Drive	Front Wheel Drive
Engine Placement	Transverse	Color	Blue
Tire Press./Max. Cap. Front	220 kPa	Cold Tire Press. Front	220 kPa
Tire Press./Max. Cap. Rear	220 kPa	Cold Tire Press. Rear	220 kPa
Recommend Tire Size	165/80R13	Type of Spare	T135/90/R14 Temporal Spare
Tire Size on Vehicle	P185/65R14	Manufacturer	Goodyear
GVWR	1584 kg	Cargo Capacity	52 kg
GAWR Front	0887 kg	GAWR Rear	0731 kg
Air Conditioning	YES	Power Steering	YES
Power Brakes	YES	AM/FM/Cassette	YES
Disc Brakes (Front)	YES	Disc Brakes (Rear)	NO
Power Windows	NO	Tilt Steering	NO
Anti-lock Brakes (ABS)	NO	Power Seats	NO
Driver Airbag	YES	Passenger Airbag	YES

VEHICLE CAPACITY DATA:

TYPE OF FRONT SEATS Bucket Seats

TOTAL NUMBER OF OCCUPANTS 5 OCCUPANTS x 68 kg. 340 kg

WEIGHT OF VEHICLE AS RECEIVED AT KARCO (with maximum fluids): 1125 kg

Data Sheet No. 2... (Continued)

VEHICLE CAPACITY WEIGHT (kg):
 Vehicle Capacity Weight 392 kg
 Occupant Weight 340 kg
 Rated Cargo/Luggage Weight (RCLW) 52 kg

	FRONT	REAR	TOTAL
Right	363	203	
Left	376	183	
Total	739	386	1125
Percent of Total	65.7	34.3	

CALCULATION OF TEST
 TARGET WEIGHT (kg):

Total Delivered Weight 1125 kg
 RCLW 52 kg
 Weight of 2 P572 ATDs 104 kg
 TARGET TEST WEIGHT 1281 kg

TEST WEIGHT OF VEHICLE WITH 2 ATDs AND BALLAST

	FRONT	REAR	TOTAL
Right	409	229	
Left	418	221	
Total	827	450	1277
Percent of Total	64.8	35.2	

Weight of Ballast secured in cargo area: 22 kg

Includes cameras, instrumentation, brake abort and bags containing lead shot secured in the right and left rear fender wells.

Vehicle Components Removed For Weight Reduction:

Side mirrors, jack, tools, rear seat assembly, rear bumper, molding and spare tire.

TEST VEHICLE ATTITUDE (mm)

ATTITUDE	LF	RF	LR	RR
As Delivered	654	654	673	667
As Tested	642	638	654	654

Vehicle Wheelbase: 2642 mm

FUEL SYSTEM DATA:

Fuel System Capacity From Owner's Manual = 47.5 liters

Usable Capacity Figure Furnished by COTR = N/A liters

Test Volume Range (92 to 94% of Usable Capacity) = 43.7 to 44.7 liters

ACTUAL TEST VOLUME = 44.4 liters (With entire fuel system filled)

Test Fluid Type = Stoddard Solvent

Specific Gravity = 0.764

Kinematic Viscosity = as per ASTM Standard D484-71

Color = Red

Type of Fuel Pump = Electric X Mechanical

Does electric pump operate with ignition switch "ON" & engine "OFF"? Yes X No

DETAILS OF FUEL SYSTEM: Electrically operated, ignition key activated, with automatic shutoff

DATA SHEET NO. 3

POST IMPACT DATA

VEHICLE YEAR/MAKE/MODEL/BODY STYLE: 1996 DODGE NEON 4-DOOR SEDAN

TEST MODE: 48.3 km/h FMVSS 208 Frontal Barrier Impact NHTSA NO. MT0308

TEST DATE: September 9, 1997 TIME: 2:20 PM TEMPERATURE: 28.6° C

REQUIRED IMPACT VELOCITY RANGE: 59.53 km/h to 61.14 km/h

BARRIER IMPACT VELOCITY: (speed traps within 5 feet of impact plane)

Trap No. 1 = 48.88 km/h Trap No. 2 = 48.90 km/h

Distance from vehicle to barrier - -

A. entering trap = 1818 mm

B. leaving trap = 599 mm

VEHICLE STATIC CRUSH: (for Frontal and Rear Impacts Only)

Vehicle Length	Left	Center	Right
Pre-test Measurements (mm)	4170	4340	4170
Post-test Measurements (mm)	3860	3945	3820
Static Crush (mm)	310	395	350
Average	352		

VEHICLE REBOUND: (from rigid barrier with rotational movement)

	Left	Center	Right
Vehicle Rebound (mm)	1140	1130	1120
Average	1120		

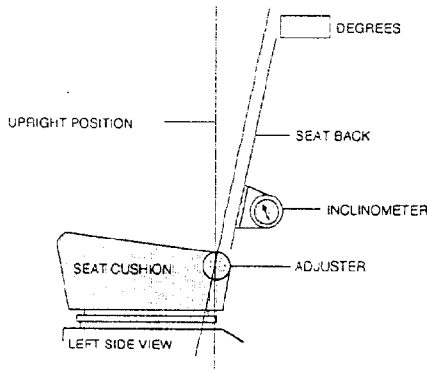
DATA SHEET NO. 4

TEST VEHICLE INFORMATION

TEST VEHICLE: 1996 DODGE NEON 4-DOOR SEDAN

NHTSA NO. MT0308

1. NOMINAL DESIGN RIDING POSITION -



FRONT SEAT ASSEMBLY

For adjustable driver and passenger seat backs. Please describe how to position the inclinometer to measure the seat back angle. Include description of the location of the adjustment latch detent if applicable. Indicate, if applicable, how the detents are numbered (Is the first detent "0" or "1"?).

Measurement Instructions: A special application tool with pointed probes was 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. The inclinometer was placed against the flat surface of the tool and the seat back angle was measured directly from the dial face. For reference purposes the first detent from the front of the seat was identified as number "1".

Seat back angle for driver's seat = 18.0° set to the upright position.

Measurement Instructions: A special application tool with pointed probes was 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. The inclinometer was placed against the flat surface of the tool and the seat back angle was measured directly from the dial face. For reference purposes the first detent from the front of the seat was identified as number "1".

flat surface of the tool and the seat back angle was measured directly from the dial face. For reference purposes the first detent from the front of the seat was identified as number "1".

Seat back angle for passenger's seat = 18.0°; set to the upright position.

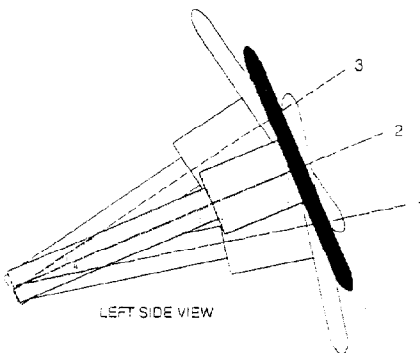
2. SEAT FORE & AFT POSITIONS -

Provide instructions for positioning the driver and front outboard passenger seat(s) in the center of fore and aft travel. For example, provide information to locate the detent in which the seat track is to be locked.

Positioning of the driver's seat: 22 seating positions; set to full forward (1st) seating position.

Positioning of the passenger's seat (if applicable): 22 seating positions; set to full forward (1st) seating position.

3. STEERING COLUMN ADJUSTMENTS:



STEERING COLUMN ASSEMBLY

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 driving positions. If the tested vehicle has any of these adjustments, does your company use any specific procedures to determine the geometric center.

Operational Instructions:

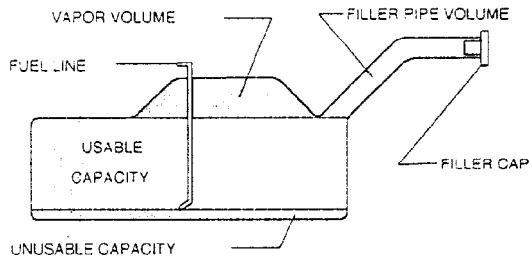
- Position No. 1 is at 20°
- Position No. 2 is at 23°
- Position No. 3 is at 26°

4. SEAT BELT UPPER ANCHORAGE:

Belt adjuster set to mid-position.

DATA SHEET NO. 4 (continued)

5. FUEL TANK CAPACITY DATA



5.1 A. "Usable Capacity" of standard equipment fuel tank = 47.5 liters.

B. "Usable Capacity" of optional equipment fuel tank = N/A liters.

C. "Usable Capacity" of vehicle(s) used for certification testing to requirements of FMVSS 301 = 43.7 to 44.7 liters.

VEHICLE FUEL TANK ASSEMBLY

Operational Instructions:

5.2 Amount of Stoddard solvent added to vehicle(s) used for certification test(s) = 44.4 liters

5.3 Is vehicle equipped with electric fuel pump?

Yes X No

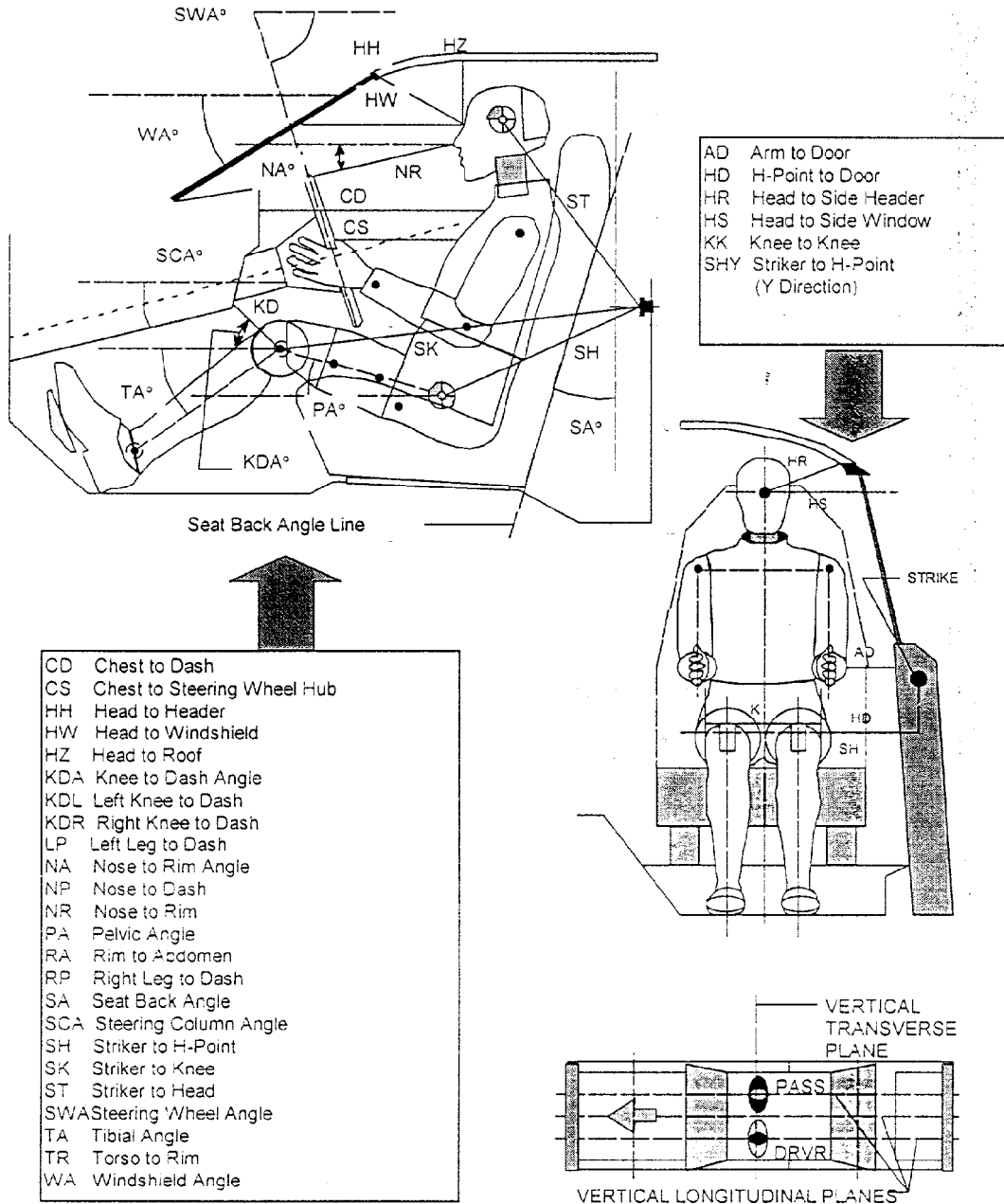
If YES, explain the vehicle operating conditions under which the fuel pump will pump fuel.

Fuel pump is activated when ignition key is turned to the "ON" (operational) position.

DATA SHEET NO. 5

DUMMY POSITIONING IN VEHICLE

DUMMY MEASUREMENT FOR FRONT SEAT PASSENGERS



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

VEHICLE YR/MAKE/MODEL/BODY: 1996 Dodge Neon 4 Door Sedan NHTSA No.: MT0308

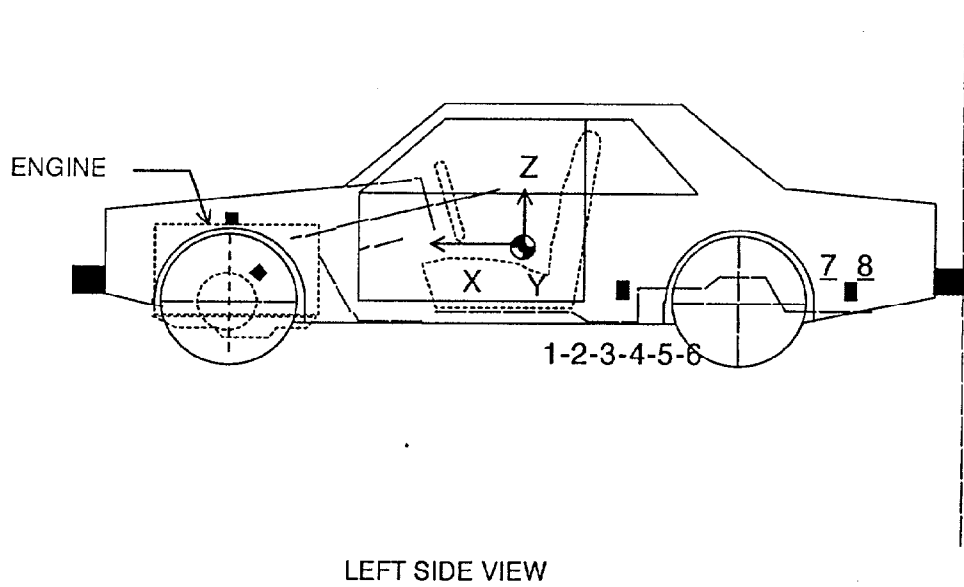
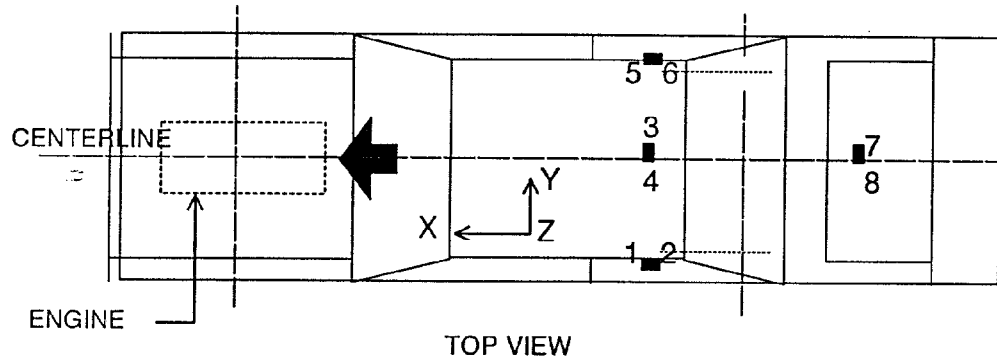
TEST PROGRAM: 1997 48.4 km/h Frontal Impact (Female) TEST DATE: 9/9/97

VEHICLE ACCELEROMETER LOCATIONS AND PEAK ACCELERATIONS

No.	Accelerometer Locations	Measurements (mm)			Peak Values				
		X	Y	Z	Units	Max	Time	Min	Time
1	Left Rear Sill X	1925	-645	290	G's	1.4	112.2	-38.5	35.9
2	Left Rear Sill Y	1855	-645	290	G's	6.1	34.3	-5.2	39.8
3	Center Console Rear X	1845	35	260	G's	1.8	20.3	-47.8	35.7
4	Center Console Rear Y	1878	0	260	G's	8.5	39.6	-2.3	62.5
5	Right Rear Sill X	1925	645	290	G's	0.7	159.5	-39.4	38.3
6	Right Rear Sill Y	1855	645	290	G's	11.9	42.4	-8.6	53.1
7	Center Rear Trunk X	120	-95	590	G's	4.1	108.7	-48.1	37.3
8	Center Rear Trunk Y	120	95	590	G's	5.4	76.6	-6.1	38.6

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

VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY



DATA SHEET NO. 8 - HYBRID III 5TH FEMALE ATD INJURY CRITERA AND SENSOR DATA

VEHICLE YR/MAKE/MODEL/BODY: 1996 Dodge Neon 4 Door Sedan

NHTSA No.: MT0308

TEST PROGRAM: 1997 48.4 km/h Frontal Impact (Female)

TEST DATE: 9/9/97

HEAD PRIMARY PEAK ACCELERATIONS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Head CG	X	G's	9.8	159.8	-38.8	37.0	10.4	212.0	-76.8	58.7
Head CG	Y	G's	6.8	87.5	-5.3	25.9	8.8	53.6	-21.2	48.6
Head CG	Z	G's	19.5	26.6	-18.4	29.2	20.5	76.2	-33.8	48.9
Head CG Resultant	N/A	G's	39.5	36.7			80.0	58.8		

CHEST PRIMARY PEAK ACCELERATIONS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Chest CG	X	G's	6.0	132.1	-47.5	59.3	2.4	178.1	-49.1	57.0
Chest CG	Y	G's	6.0	52.6	-1.9	64.1	5.7	48.6	-7.8	84.3
Chest CG	Z	G's	14.1	96.3	-6.7	28.1	9.6	49.9	-13.7	77.9
Chest CG Resultant	N/A	G's	47.5	59.2			49.6	56.9		

FEMUR PEAK FORCES

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Left Femur	Z	Newtons	107.9	19.3	-3161.0	47.6	61.9	19.7	-3605.4	49.2
Right Femur	Z	Newtons	694.3	17.7	-2963.6	62.4	86.0	19.1	-3620.2	55.6

SEAT BELT PEAK FORCES

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Lap Belt	N/A	Newtons	3490.1	55.2	1.7	3.3	2553.5	54.4	-2.6	279.5
Shoulder Belt	N/A	Newtons	3844.8	62.0	-4.1	167.5	6096.0	60.5	-9.0	254.2

HEAD INJURY CRITERA (HIC)

Location	Driver				Passenger			
	HIC	Avg G's	T ¹	T ²	HIC	Avg G's	T ¹	T ²
Head CG Primary	136.9	27.0	28.5	64.4	806.3	63.3	51.1	76.3

CHEST CLIP (3MSEC)

Location	Driver			Passenger		
	CLIP	T ¹	T ²	CLIP	T ¹	T ²
Chest CG Primary	46.8	58.1	61.1	49.0	54.6	57.6

DATA SHEET NO. 8... (continued)

VEHICLE YR/MAKE/MODEL/BODY: 1996 Dodge Neon 4 Door Sedan

NHTSA No.: MT0308

TEST PROGRAM: 1997 48.4 km/h Frontal Impact (Female)

TEST DATE: 9/9/97

PELVIC PEAK ACCELERATIONS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Pelvis	X	G's	4.0	117.9	-57.6	52.1	4.0	122.6	-50.9	49.3
Pelvis	Y	G's	7.0	93.4	-13.3	52.1	4.7	44.3	-4.7	97.8
Pelvis	Z	G's	4.2	149.1	-13.5	82.0	3.2	241.0	-13.1	78.7

UPPER NECK PEAK FORCES AND MOMENTS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Neck Force	X	Newtons	265.8	31.3	-301.3	44.6	106.3	77.9	-503.2	49.0
Neck Force	Y	Newtons	128.7	188.2	-136.7	55.0	134.5	65.3	-180.5	143.6
Neck Force	Z	Newtons	1757.0	38.2	-456.2	97.8	1437.0	64.4	-304.4	91.2
Neck Moment	X	Joules	5.3	33.8	-9.0	89.7	10.7	78.3	-5.5	91.4
Neck Moment	Y	Joules	17.3	45.7	-15.9	33.6	28.8	49.5	-14.8	74.0
Neck Moment	Z	Joules	2.1	139.8	-6.0	68.5	12.7	92.5	-5.7	179.1

CHEST PEAK DISPLACEMENTS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Chest	X	CM	0.01	11.1	-2.90	62.6	0.01	12.7	-2.36	64.0

CHEST REDUNDANT PEAK ACCELERATIONS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Chest CG	X	G's	7.6	131.5	-48.6	59.5	2.7	178.0	-53.1	59.0
Chest CG	Y	G's	7.7	55.8	-1.3	21.6	3.5	47.4	-8.5	84.2
Chest CG	Z	G's	14.0	96.4	-5.8	28.0	8.4	58.5	-11.2	77.7
Chest CG Resultant	N/A	G's	48.9	59.4			53.8	59.0		

REDUNDANT CHEST CLIP (3MSEC)

Location	Driver			Passenger		
	CLIP	T ¹	T ²	CLIP	T ¹	T ²
Chest CG Redundant	48.2	58.1	61.1	52.2	57.2	60.2

DATA SHEET NO. 8...(continued)

VEHICLE YR/MAKE/MODEL/BODY: 1996 Dodge Neon 4 Door Sedan

NHTSA No.: MT0308

TEST PROGRAM: 1997 48.4 km/h Frontal Impact (Female)

TEST DATE: 9/9/97

FOOT PEAK ACCELERATIONS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Left Foot Aft	X	G's	177.6	46.5	-101.8	64.8	132.1	44.9	-17.4	57.5
Left Foot Aft	Z	G's	144.3	63.1	-167.9	47.6	25.8	53.7	-78.2	48.4
Left Foot Fore	Z	G's	154.4	61.3	-186.8	47.8	19.9	75.1	-112.5	44.3
Right Foot Aft	X	G's	182.2	53.8	-35.8	72.6	62.7	44.1	-18.0	72.6
Right Foot Aft	Z	G's	50.0	59.8	-186.0	48.9	11.5	70.7	-75.3	43.3
Right Foot Fore	Z	G's	85.8	51.0	-236.2	54.2	20.5	69.9	-129.1	43.0

UPPER AND LOWER TIBIA PEAK FORCES AND MOMENTS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Left Lower Force	X	Newtons	1641.2	49.4	-34.6	119.3	72.1	110.3	-918.6	46.5
Left Lower Force	Z	Newtons	50.3	0.8	-4874.6	47.1	72.9	27.7	-3067.2	65.8
Left Lower Moment	X	Joules	25.0	48.3	-25.3	59.7				
Left Lower Moment	Y	Joules	106.6	61.9	-34.7	49.3	51.7	45.5	-43.6	72.2
Left Upper Force	X	Newtons	619.9	47.0	-102.9	32.8				
Left Upper Force	Z	Newtons	59.7	120.4	-3536.8	48.2				
Left Upper Moment	X	Joules	14.3	48.2	-19.9	59.9	31.8	61.6	-14.2	47.8
Left Upper Moment	Y	Joules	19.7	61.5	-160.6	49.3	102.0	46.3	-10.8	207.3
Right Lower Force	X	Newtons	1540.1	54.3	-40.8	37.9	0.0	0.0	0.0	0.0
Right Lower Force	Z	Newtons	92.4	38.2	-5602.1	53.1	0.0	0.0	0.0	0.0
Right Lower Moment	X	Joules	80.8	53.7	-8.6	50.4				
Right Lower Moment	Y	Joules	101.4	65.6	-52.7	47.6	0.0	0.0	0.0	0.0
Right Upper Force	X	Newtons	985.3	63.7	-451.4	47.7				
Right Upper Force	Z	Newtons	145.1	40.0	-3982.5	52.9				
Right Upper Moment	X	Joules	51.1	56.9	-20.7	50.0	15.5	44.1	-45.5	66.7
Right Upper Moment	Y	Joules	8.5	216.1	-133.6	54.4	77.2	57.2	-16.3	145.2

DATA SHEET NO. 9

SEAT BELT PERFORMANCE ASSESSMENT TEST DATA

TEST VEHICLE: 1996 DODGE NEON 4-DOOR SEDAN

NHTSA NO. MT0308

BELT LENGTH DATA (mm)	DRIVER	PASSENGER
Total belt length for continuous webbing systems.	2770	2770
Retractor reel to 'D' ring	630	580
Shoulder belt length as measured on Part 572 Dummy	860	870
Lap belt length as measured on Part 572 Dummy	790	800
Remainder of belt on reel	490	520

SHOULDER BELT SPOOL-OFF DATA (mm)	DRIVER	PASSENGER
As determined mechanically	50.0	58.0
As determined electronically	51.9	58.2

BELT STRETCH DATA (cm/cm)	DRIVER	PASSENGER
Measured electronically between shoulder belt load cell and the "D" ring	0.034	0.026
Measured mechanically	0.0	0.0

DATA SHEET NO. 12

FMVSS 301 FUEL SYSTEM INTEGRITY POST IMPACT DATA

VEHICLE YEAR/MAKE/MODEL/BODY STYLE: 1996 DODGE NEON 4-DOOR SEDAN

TEST MODE: 48.3 km/h FMVSS 208 Frontal Barrier Impact

NHTSA NO. MT0308

TEST DATE: September 9, 1997

TIME: 2:20 PM

TEMPERATURE: 28.6° C

STODDARD SOLVENT SPILLAGE MEASUREMENT:

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

DATA SHEET NO. 13

FMVSS 301 STATIC ROLLOVER DATA SHEET

VEHICLE YEAR/MAKE/MODEL/BODY STYLE: 1996 DODGE NEON 4-DOOR SEDAN

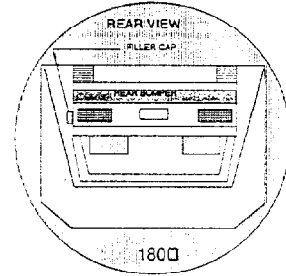
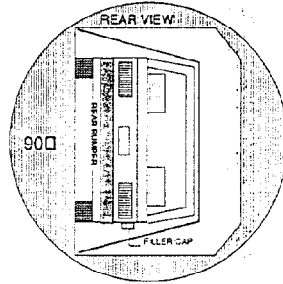
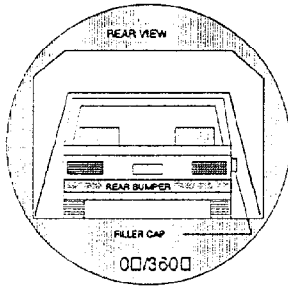
TEST MODE: 48.3 km/h FMVSS 208 Frontal Barrier Impact

NHTSA NO. MT0308

TEST DATE: September 9, 1997

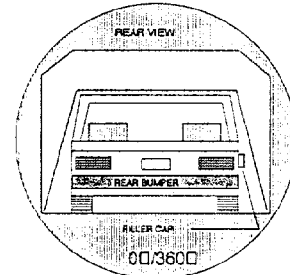
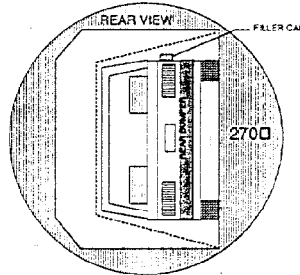
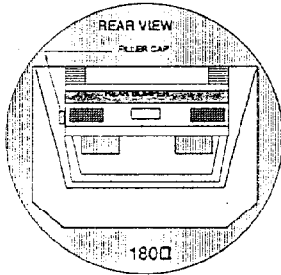
TIME: 2:20 PM

TEMPERATURE: 28.6° C



0° TO 90°

90° TO 180°



180° TO 270°

270° TO 0°

1. The specified fixture rollover rate for each 90° of rotation = 1 to 3 minutes.
2. The position hold time at each position = 5 minutes (minimum)

TEST PHASE	ROTATION TIME (sec.)	POSITION HOLD TIME (sec)	STODDARD SPILLAGE (oz.)
0° TO 90°	81	356	0.0
90° TO 180°	84	350	0.0
180° TO 270°	87	344	0.0
270° TO 360°	89	358	0.0

3. Provide Details of Stoddard Solvent Spillage Locations--

No solvent leakage occurred during rollover tests.

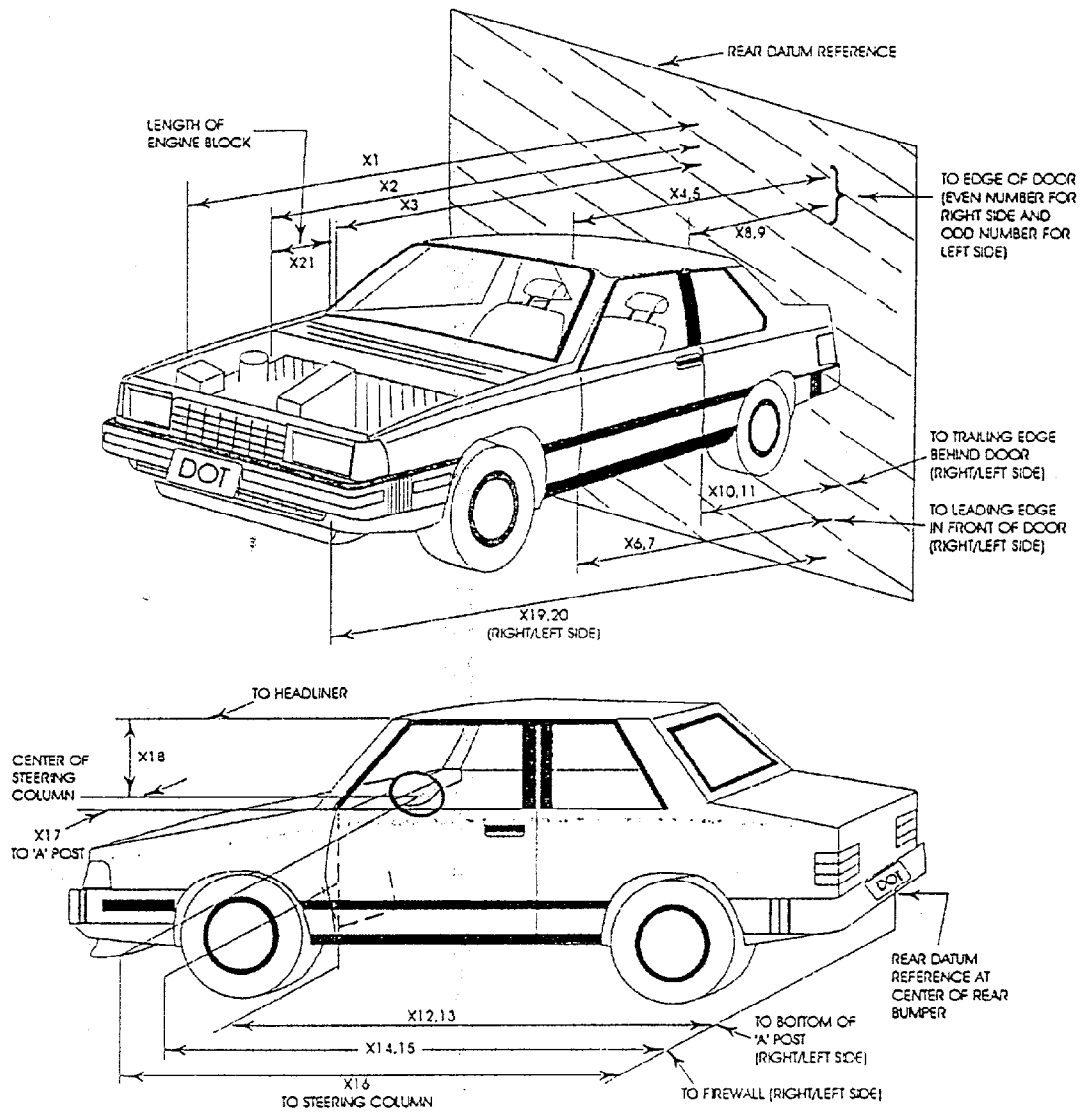
DATA SHEET NO. 14

VEHICLE MEASUREMENTS

TEST VEHICLE: 1996 DODGE NEON 4-DOOR SEDAN

NHTSA NO. MT0308

NO.	MEASUREMENT DESCRIPTION	DIMENSIONS IN MM		
		PRE-TEST	POST-TEST	DIFFERENCE
1	Total length of vehicle at centerline	4340	3945	395
2	Rear surface of vehicle (RSOV) to front of engine	3910	3710	200
3	RSOV to firewall centerline	3330	3240	90
4	RSOV to leading edge of right door	2980	2990	+10
5	RSOV to leading edge of left door	2970	2970	0
6	RSOV to lower leading edge of right door	3040	3010	30
7	RSOV to lower leading edge of left door	3050	3050	0
8	RSOV to upper trailing edge of right door	1980	1980	0
9	RSOV to upper trailing edge of left door	1970	1970	0
10	RSOV to lower trailing edge of right door	1990	1975	15
11	RSOV to lower trailing edge of left door	1990	1990	0
12	RSOV to bottom of right 'A' pillar	3050	3000	50
13	RSOV to bottom of left 'A' pillar	3050	3000	50
14	RSOV to firewall on right side	3260	3280	+20
15	RSOV to firewall of left side	3260	3230	30
16	RSOV to steering column	2560	2540	20
17	Center of steering column to left 'A' pillar	330	310	20
18	Center of steering column to headlining	420	460	+40
19	RSOV to right side of front bumper	4170	3820	350
20	RSOV to left side of front bumper	4170	3860	310
21	Length of engine block	480	480	0
22	RSOV to right side of dash panel	2740	2720	20
23	RSOV to center of dash panel	2750	2735	15
24	RSOV to left side of dash panel	2740	2725	15



DATA SHEET NO. 15

CAMERA LOCATIONS

TEST VEHICLE: 1996 DODGE NEON 4-DOOR SEDAN

NHTSA NO. MT0308

CAMERA NO.	VIEW	CAMERA POSITIONS (mm) *			ANGLE (Deg.)	FILM PLANE TO HEAD TARGET (mm)	LENS (mm)	SPEED (fps)
		X	Y	Z				
1	Right Side View-Real Time	---	---	---	---	---	Zoom	24
2	Left Side View No. 1	152	-8382	1473	3	7772	13	1000
3	Left Side View No. 2	6909	-11582	2438	9	12344	50	1000
4	Left Side View No. 3	3099	-2464	2070	24	2362	19	1000
5	Left Side View No. 4	1881	-8255	3175	15	8153	25	1000
6	Left Side View No. 5	1881	8255	2515	12	7874	25	700
7	Right Side View No. 1	1881	8306	1105	1	7747	13	1000
8	Right Side View No. 2	965	4572	1473	9	4064	25	1000
9	Right Side View No. 3	610	1219	851	0	1188	80	1000
10	Right Side View No. 4	1397	7798	1168	0	7239	50	1300
11	Right Side View No. 5	1575	9703	1346	10	8103	19	1100
12	Overhead No. 1	1524	305	2934	90	N/A	5.6	425
13	Overhead No. 2	-406	305	3645	40	N/A	35	600
14	Front View No. 1	-406	-254	6096	43	N/A	50	1000
15	Front View No. 2	-305	356	997	40	N/A	19	1000
16	Front View No. 3	-711	1575	1346	55	N/A	19	900
17	Driver Side Interior	2591	-432	1143	12	N/A	13	1000
18	Passenger Side Interior	2616	406	1067	16	N/A	13	1100

* X - film plane to barrier face Y - film plane to monorail centerline Z - film plane to ground

DATA SHEET NO. 16

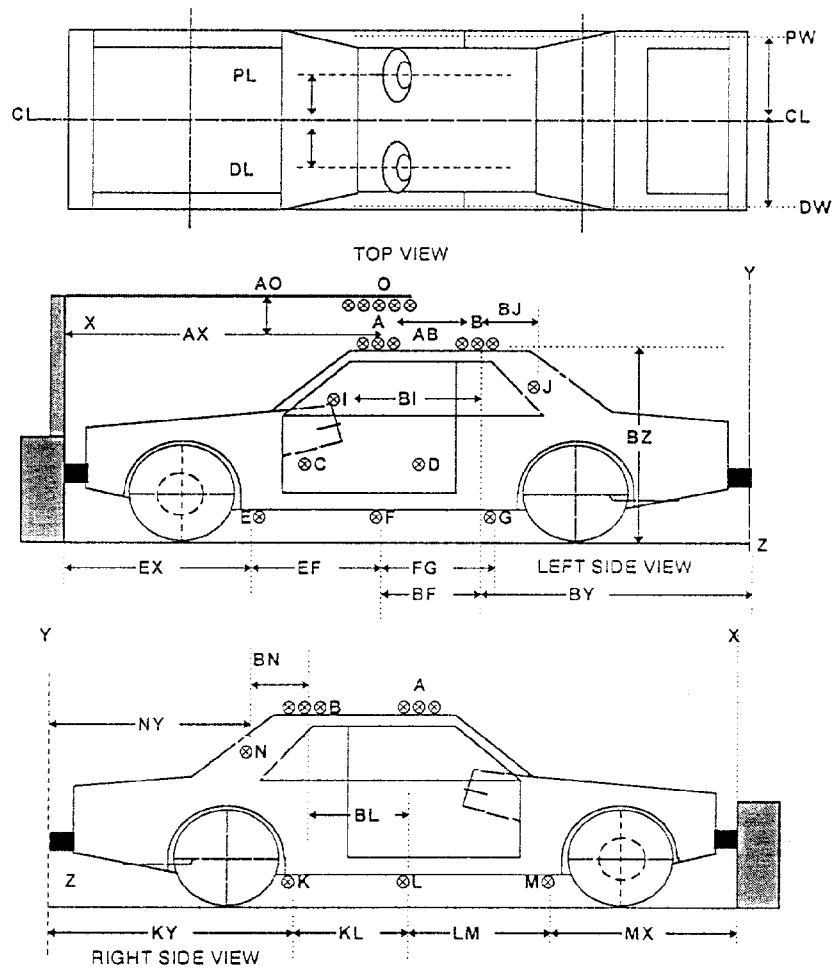
REFERENCE PHOTOGRAPH TARGETS

TEST VEHICLE: 1996 DODGE NEON 4-DOOR SEDAN

NHTSA NO. MT0308

ITEM	DESCRIPTION	VALUE	ITEM	DESCRIPTION	VALUE
AX	TARGET A TO BARRIER	2515	NY	TARGET N TO REAR BUMPER	1295
AB	TARGET A TO TARGET B	610	BN	TARGET B TO TARGET N	400
AO	VERTICAL DISTANCE A TO O	152	KY	TARGET K TO REAR BUMPER	1210
BJ	TARGET B TO TARGET J	430	KL	TARGET K TO TARGET L	871
BI	TARGET B TO STEERING COLUMN	1230	BL	TARGET B TO TARGET L	951
BZ	TARGET B TO GROUND LEVEL	1400	LM	TARGET L TO TARGET M	883
EX	TARGET E TO BARRIER	1386	MX	TARGET M TO BARRIER	1375
EF	TARGET E TO TARGET F	869	CL/PL	VEHICLE CENTERLINE TO PASSENGER	680
FG	TARGET F TO TARGET G	880	CL/PW	VEHICLE CENTERLINE TO RIGHT SILL	725
BF	TARGET B TO TARGET F	990	CL/DL	VEHICLE CENTERLINE TO DRIVER	680
BY	TARGET B TO REAR BUMPER	1215	CL/DW	VEHICLE CENTERLINE TO LEFT SILL	725

Distances in mm



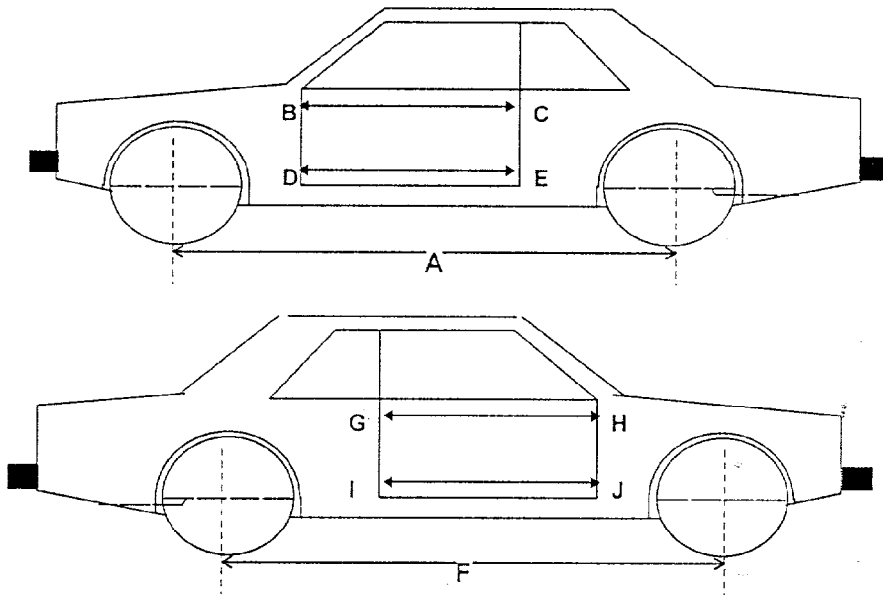
DATA SHEET NO. 17

VEHICLE INTRUSION MEASUREMENTS

TEST VEHICLE: 1996 DODGE NEON 4-DOOR SEDAN

NHTSA NO. MT0308

DOOR OPENING WIDTH



UNITS (mm)	LEFT SIDE		RIGHT SIDE	
MEASUREMENT	BC	DE	GH	IJ
PRE-TEST	1000	1060	1000	1050
POST-TEST	1000	1060	1010	1035
DIFFERENCE	0	0	+10	15

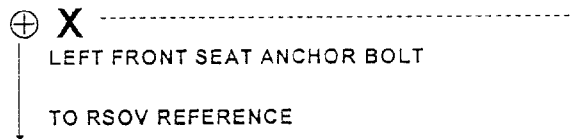
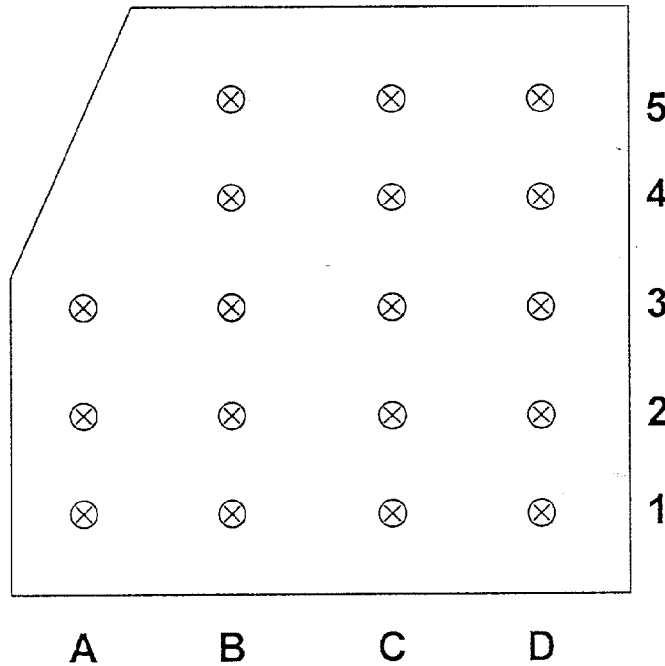
VEHICLE WHEELBASE CHANGE

UNITS (mm)	A = LEFT SIDE WHEELBASE	F = RIGHT SIDE WHEELBASE
PRE-TEST	2642	2642
POST-TEST	2553	2489
DIFFERENCE	89	153

Data Sheet No. 17(Continued)

FLOOR PAN INTRUSION (Distances in mm)

TARGET COLUMN	A		B		C		D	
TARGET ROW	PRE-TEST	POST-TEST	PRE-TEST	POST-TEST	PRE-TEST	POST-TEST	PRE-TEST	POST-TEST
1	N/A	N/A	700	580	700	590	700	650
2	560	558	560	560	560	560	560	550
3	420	420	420	420	420	420	420	420
4	280	280	280	280	280	280	280	280
5	140	140	140	140	140	140	140	140
REF. POINT	RSOV TO ANCHOR BOLT (PRE-TEST)		2480		RSOV TO ANCHOR BOLT (POST-TEST)		2480	



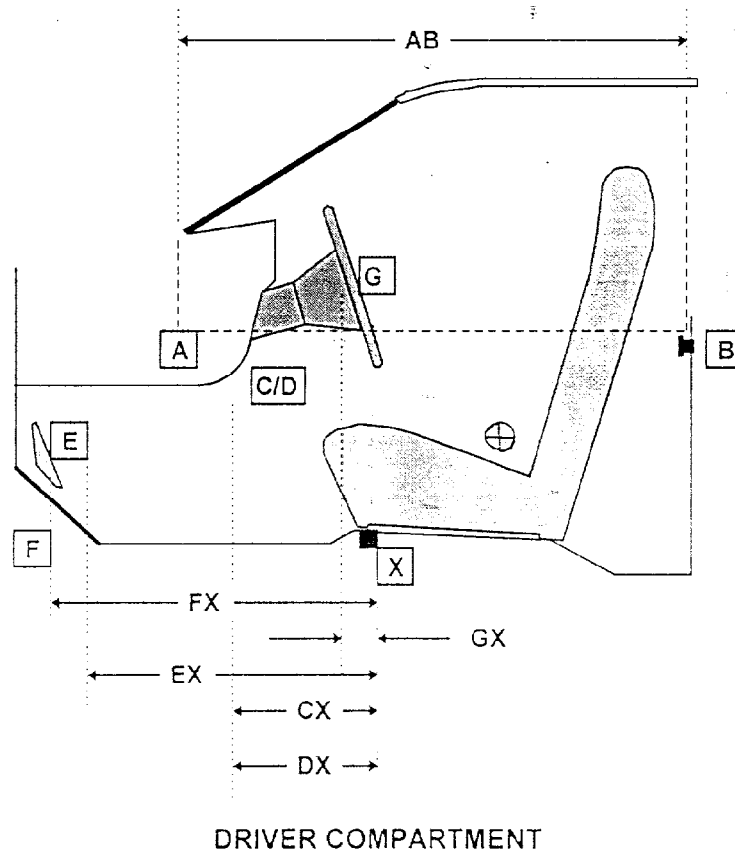
DRIVER SIDE FLOOR PLAN

(Data Sheet No. 17Continued)

DRIVER COMPARTMENT INTRUSION (Distances in mm)

REF.	DESCRIPTION	PRE-TEST	POST-TEST
AB	DOOR OPENING (INSIDE WINDOW JAM)	960	945
CX	LOWER LEFT KNEE BOLSTER TO X	380	365
DX	LOWER RIGHT KNEE BOLSTER TO X	380	365
EX	BRAKE PEDAL TO X	595	500
FX	FOOT REST TO X	N/A	N/A
GX	STEERING COLUMN HUB (CENTER) TO X	50	30

X = LEFT FRONT SEAT ANCHOR BOLT



DATA SHEET NO. 18

OFFSET BARRIER ORIENTATION

TEST VEHICLE: 1996 DODGE NEON 4-DOOR SEDAN

NHTSA NO. MT0308

NO OFFSET OR DEFORMABLE BARRIER USED FOR THIS TEST

DATA SHEET NO. 19

ACCIDENT INVESTIGATION DIVISION DATA

TEST VEHICLE: 1996 DODGE NEON 4-DOOR SEDAN NHTSA NO. MT0308

VIN: 1B3ES47C1T0600127

TEST DATE: 09/09/97

WHEELBASE: 2642 mm

TEST WEIGHT: 1277 kg

VEHICLE SIZE CATEGORY: 4-DOOR PASSENGER SEDAN

ACCELEROMETER DATA:

LOCATION: Left and right side passenger compartment

CALIBRATION PROCEDURE: 6 months/ drop test

LINEARITY: Good

INTEGRATION ALGORITHM: NHTSA Standard

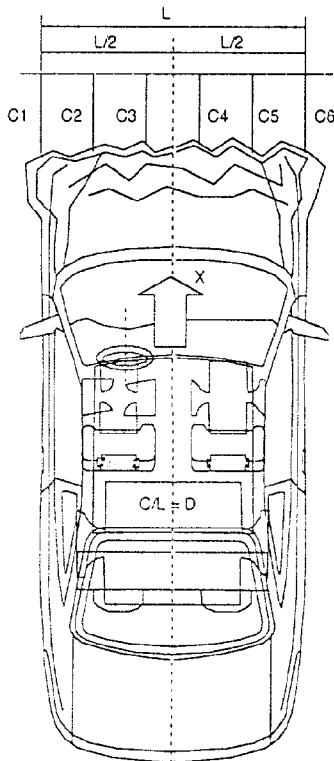
VEHICLE IMPACT SPEED: 48.3 km/h

TIME OF SEPARATION: 68.3 msec

VELOCITY CHANGE: 59.7 km/h

COLLISION DEFORMATION CLASSIFICATION (CDC) CODE: F (frontal)

IMPACT MODE: Frontal Barrier



CRUSH DEPTH DIMENSIONS:

C1 = 263 mm

C2 = 355 mm

C3 = 390 mm

C4 = 390 mm

C5 = 375 mm

C6 = 310 mm

MIDPOINT OF DAMAGE: D = vehicle centerline

LENGTH OF DAMAGE REGION:

L = 1400 mm

DATA SHEET NO. 20

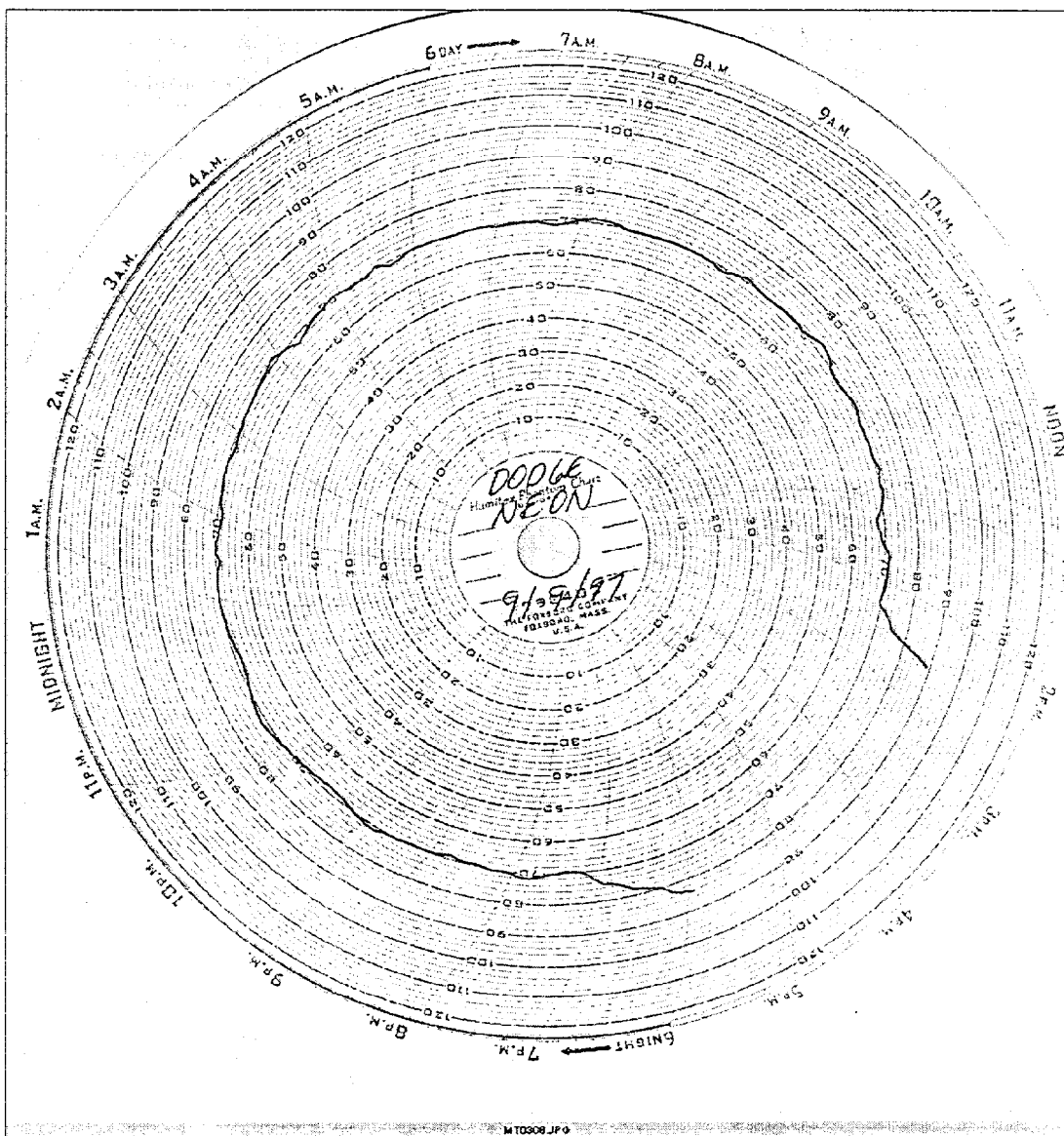
DUMMY/VEHICLE TEMPERATURE STABILIZATION

TEST VEHICLE: 1996 DODGE NEON 4-DOOR SEDAN

NHTSA NO. MT0308

VIN: 1B3ES47C1T0600127

TEST DATE: 07/17/97



APPENDIX A
PHOTOGRAPHS

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A-52	Passenger Head Contact Point	A-52

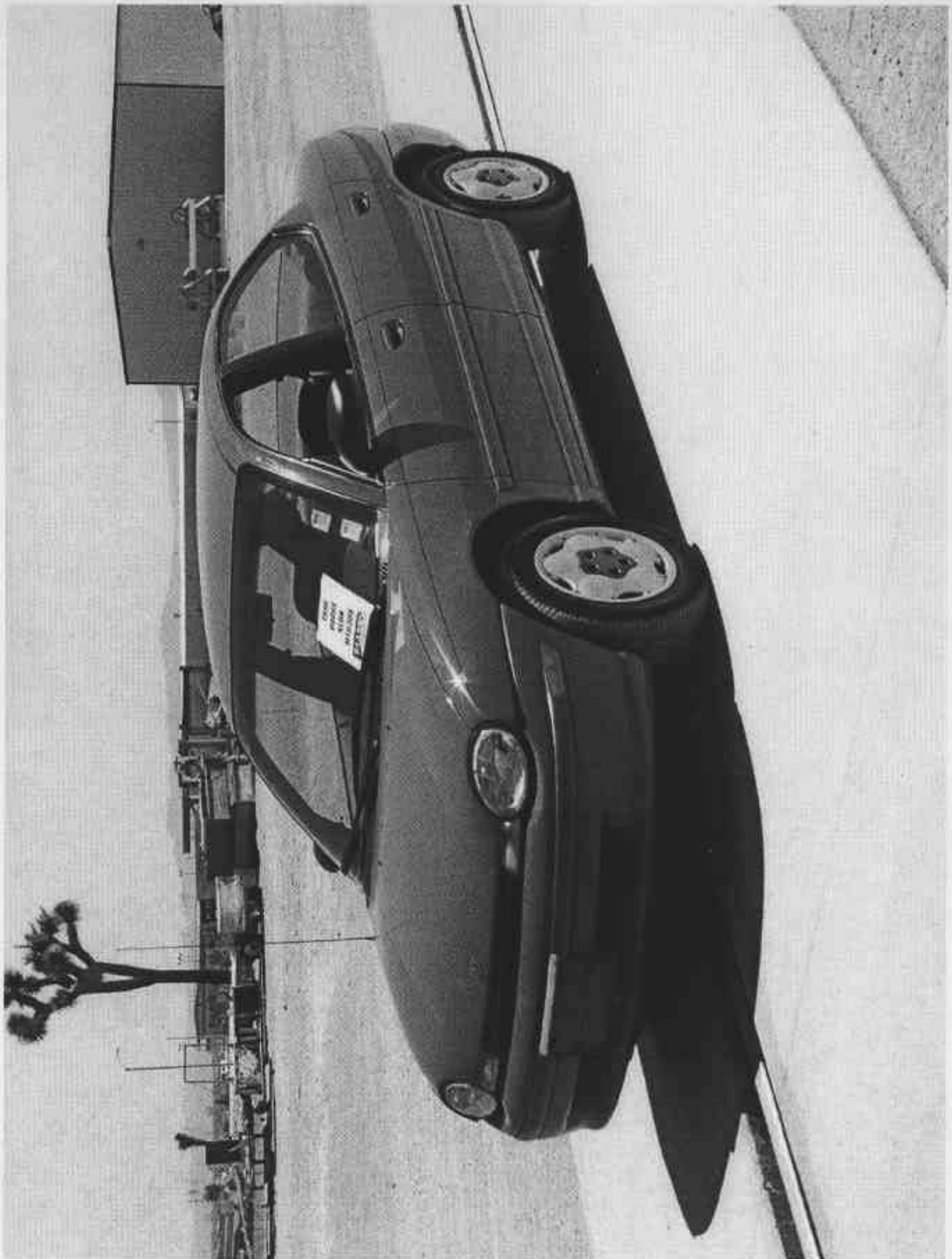


FIGURE A-1. LEFT FRONT AS RECEIVED

A-1

KAR-97-R97015-08

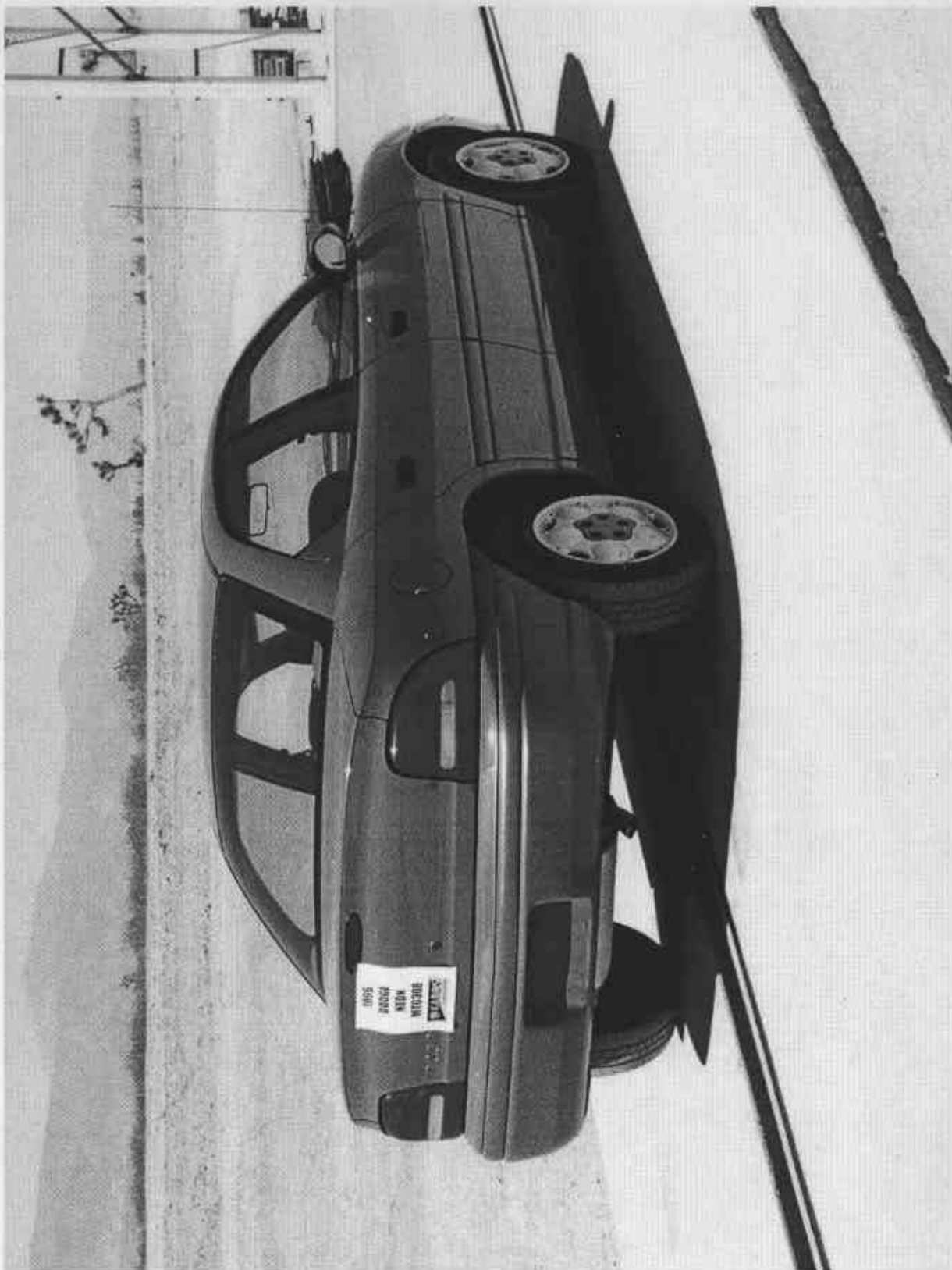


FIGURE A-2. RIGHT REAR AS RECEIVED

A-2

KAR-97-R97015-08

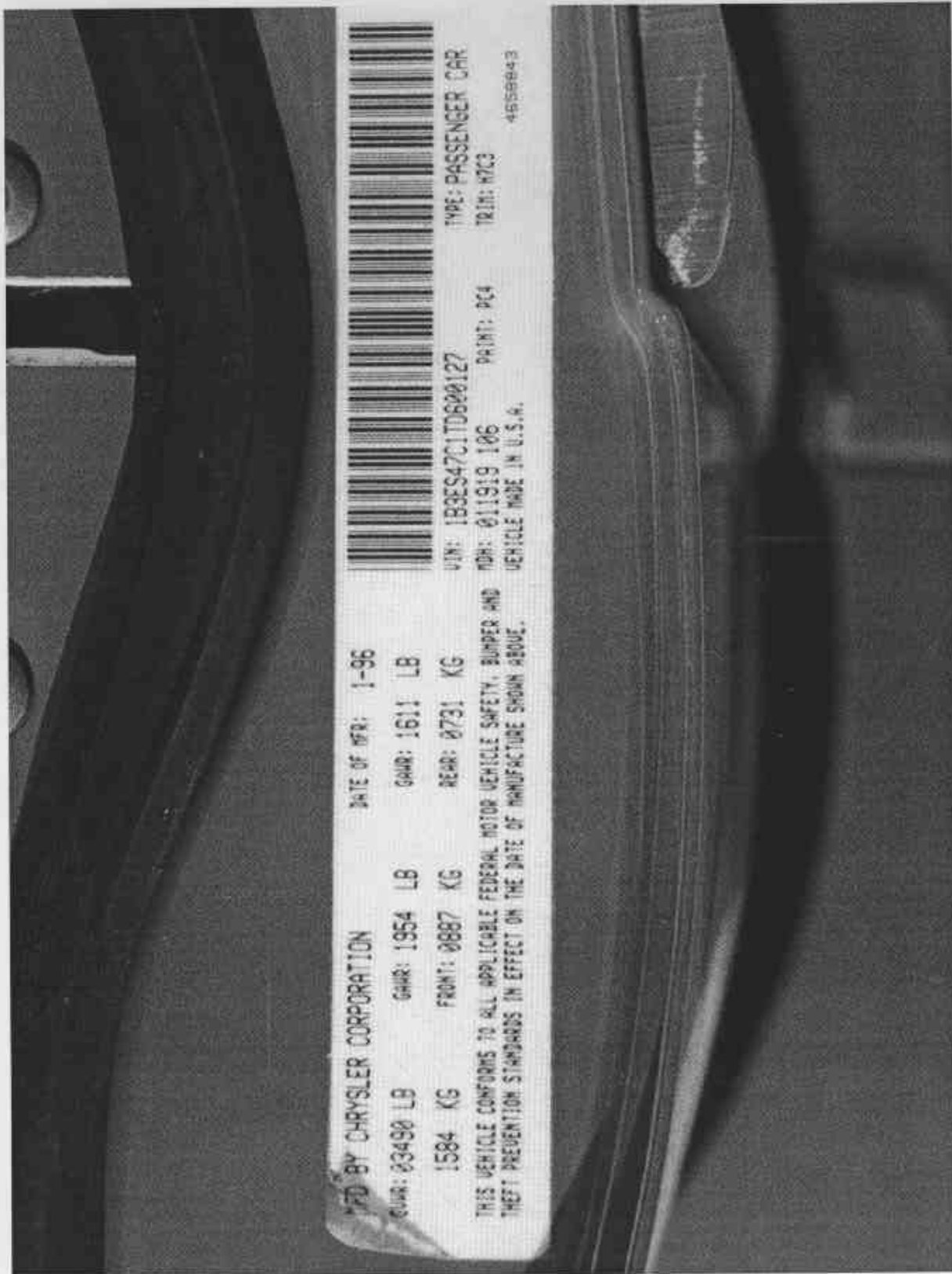


FIGURE A-3. VEHICLE CERTIFICATION LABEL

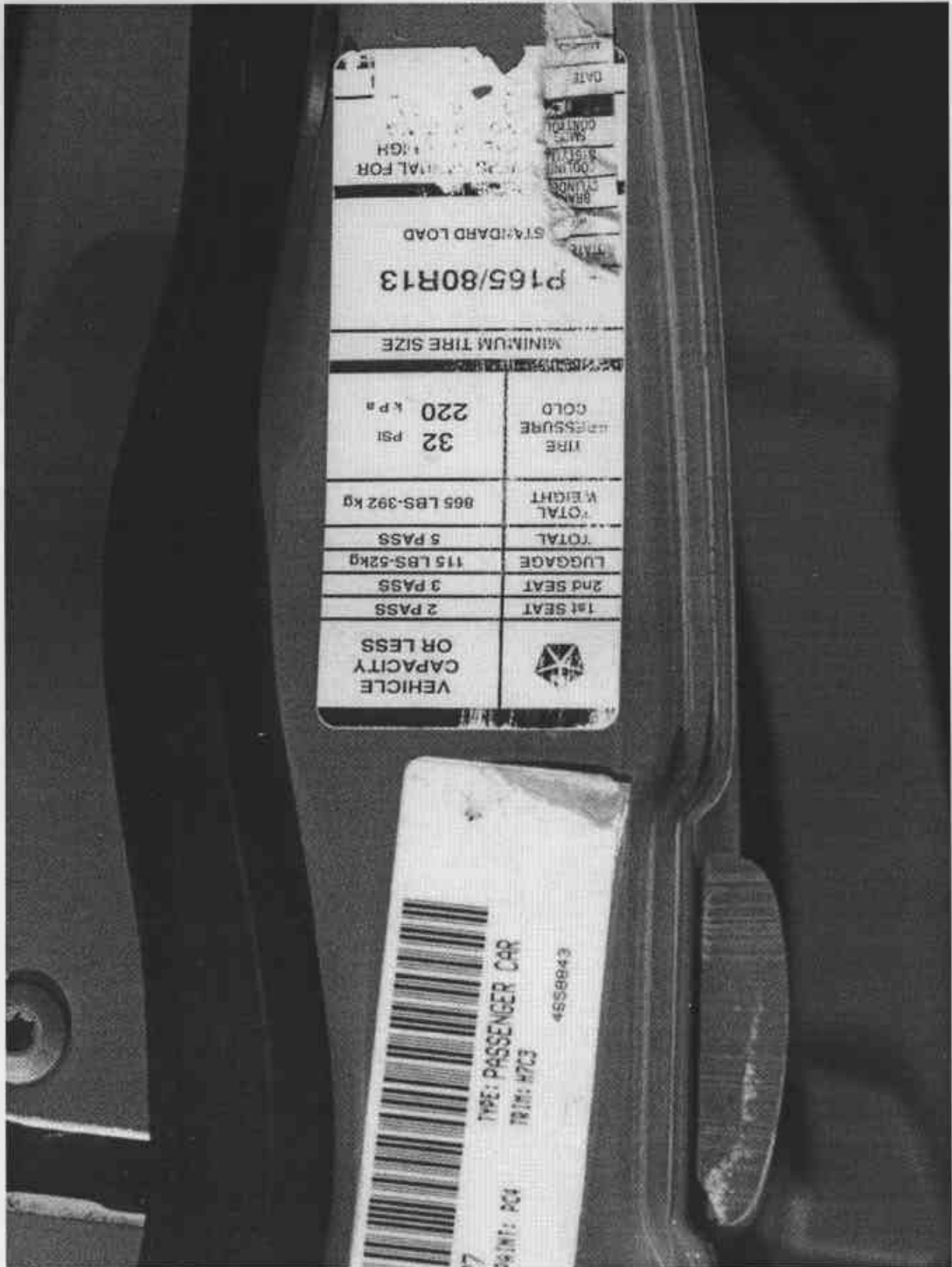


FIGURE A-4. VEHICLE TIRE PLACARD

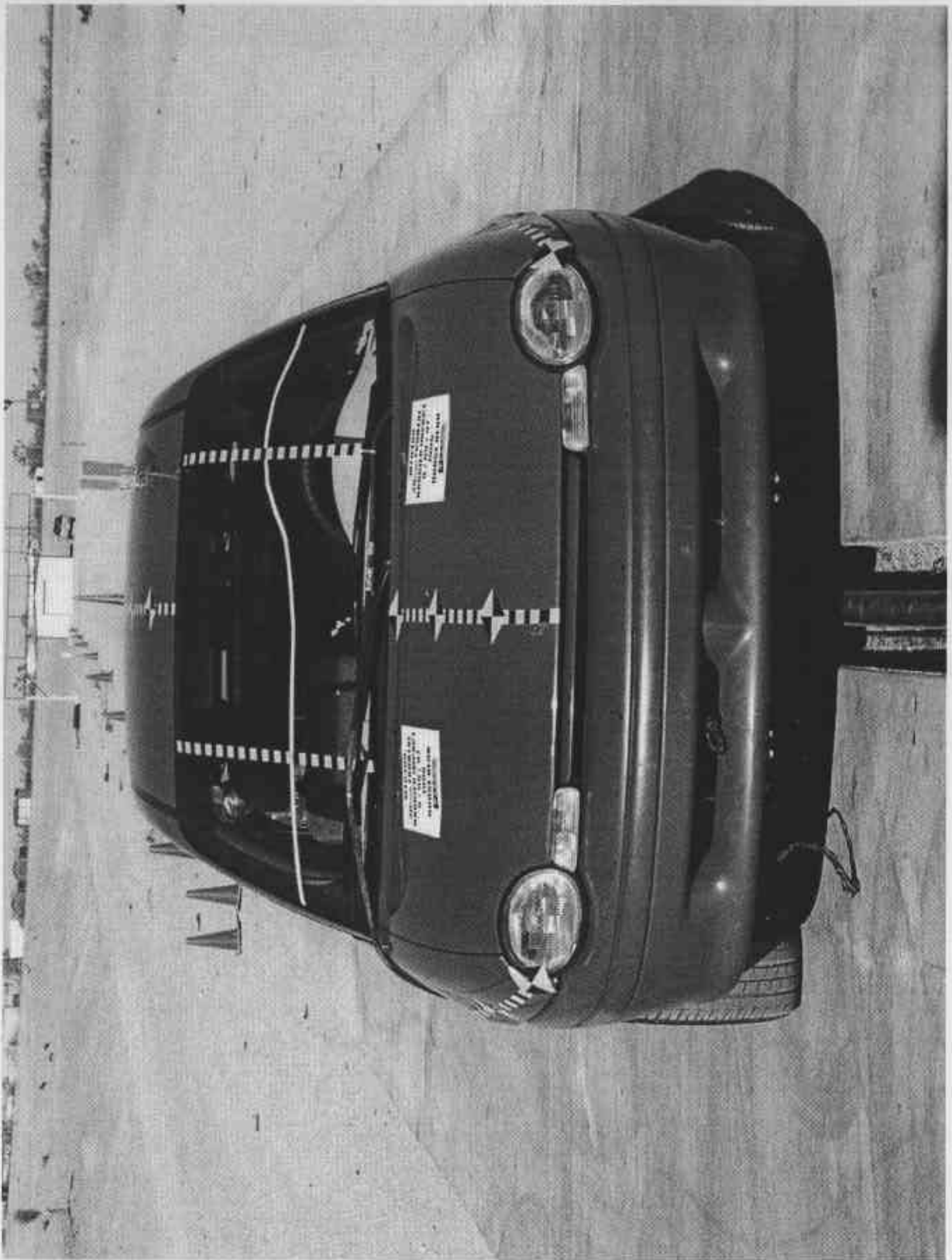


FIGURE A-5. PRETEST FRONT VIEW

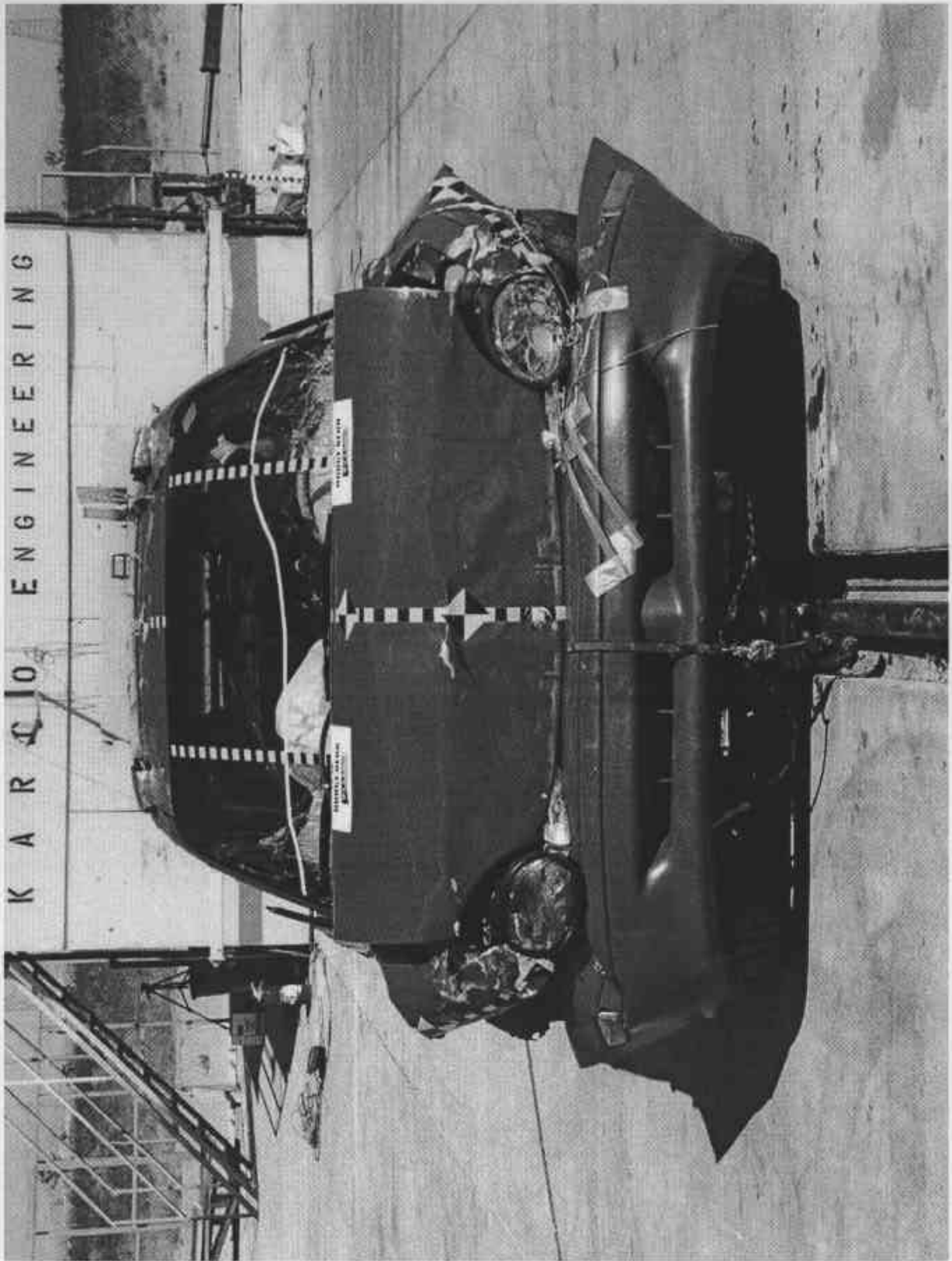


FIGURE A-6. POST TEST FRONT VIEW

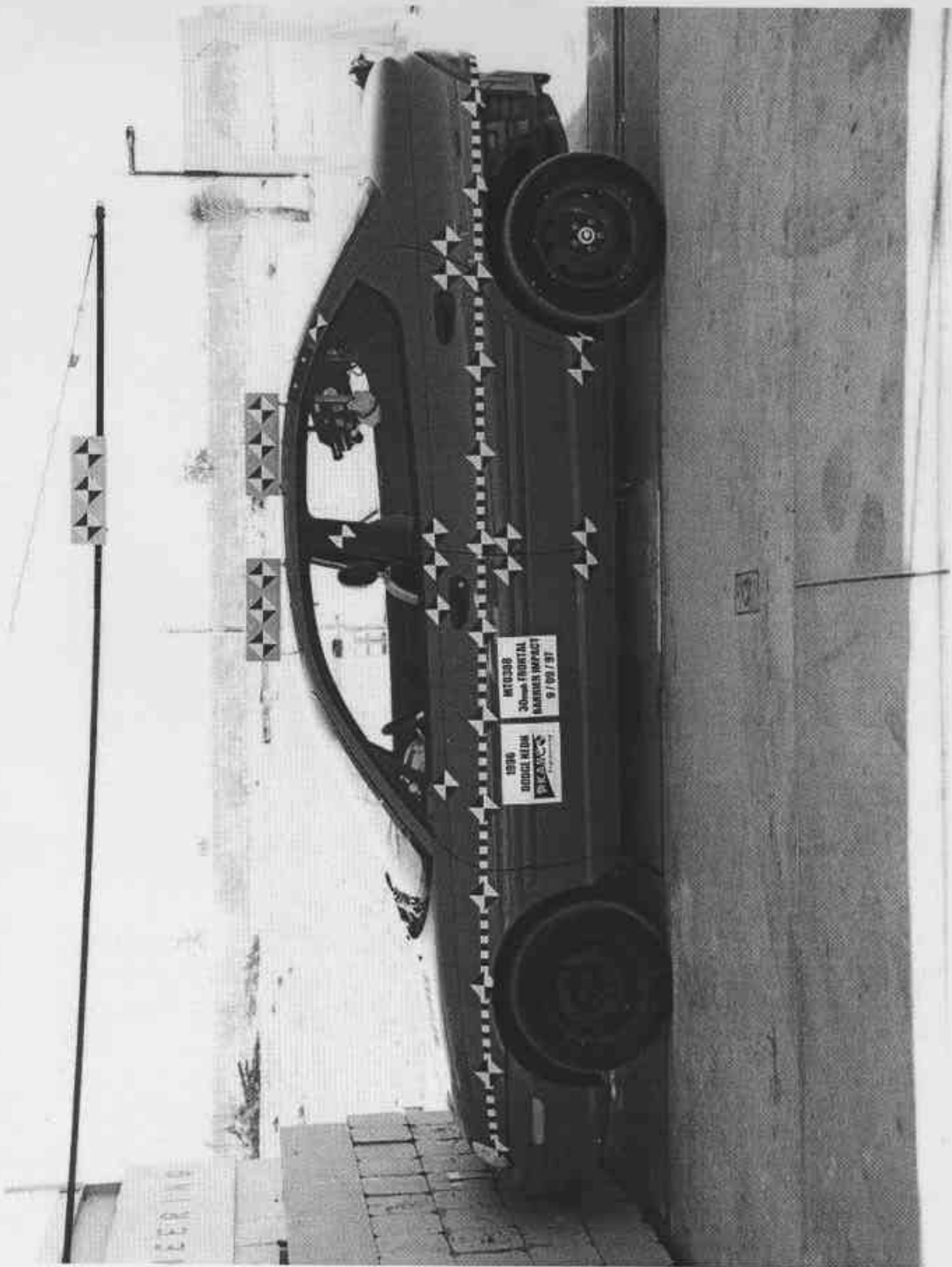


FIGURE A-7. PRETEST LEFT SIDE VIEW

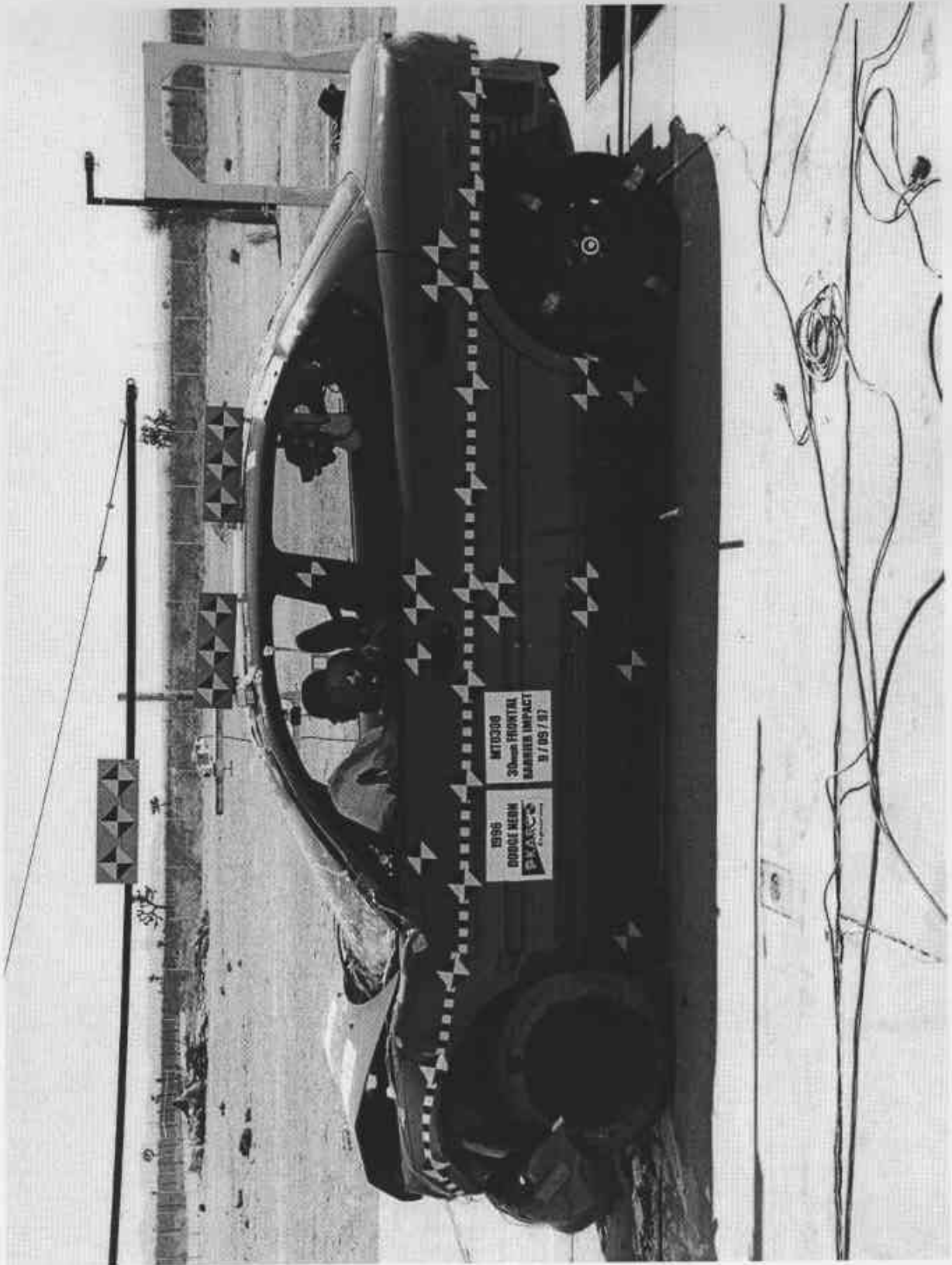


FIGURE A-8. POST TEST LEFT SIDE VIEW



FIGURE A-9 PRETEST RIGHT SIDE VIEW

A-9

KAR-97-R97015-08

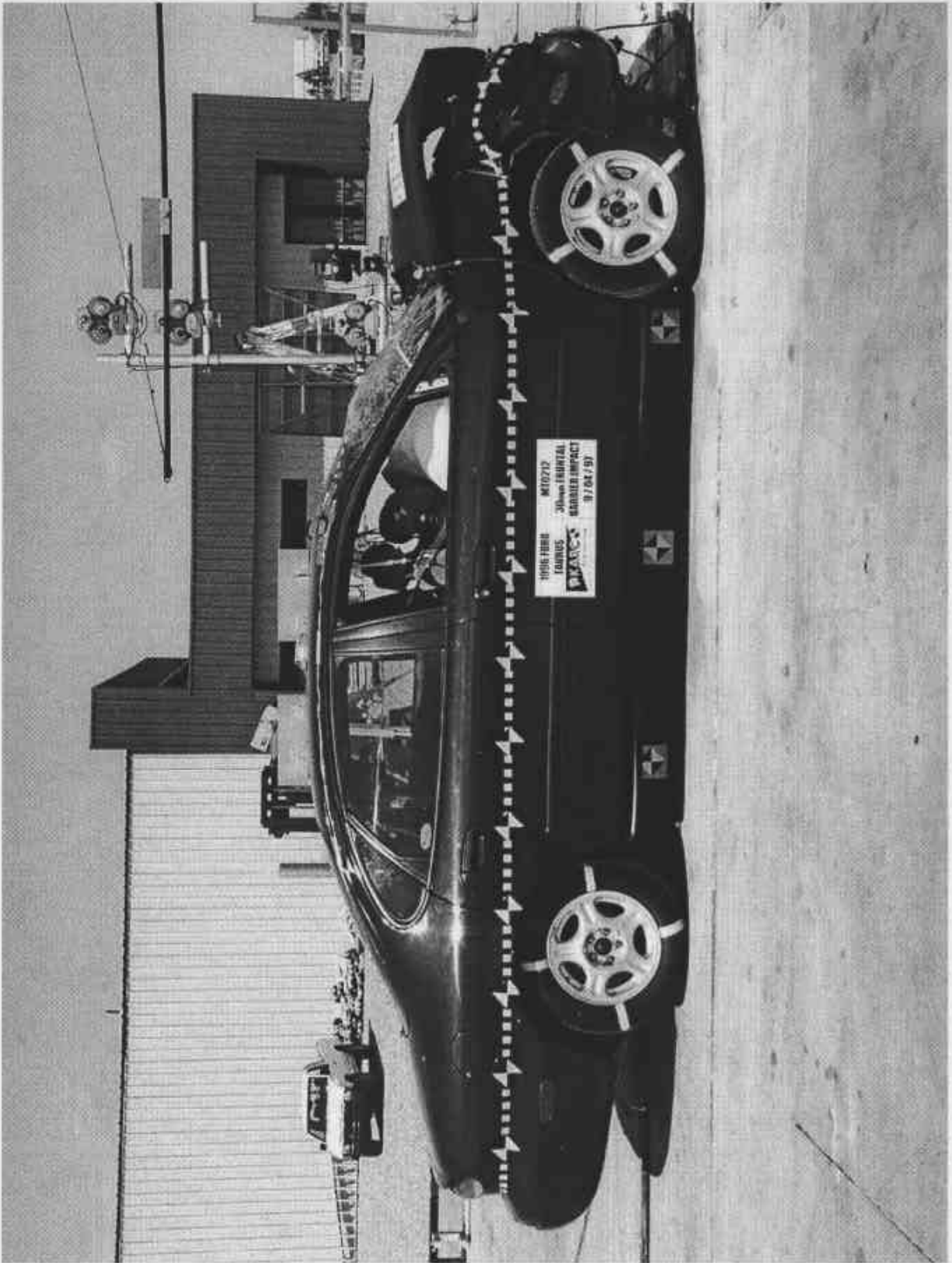


FIGURE A-10. POST TEST RIGHT SIDE VIEW



FIGURE A-11. PRETEST LEFT FRONT VIEW

A-11

KAR-97-R97015-08

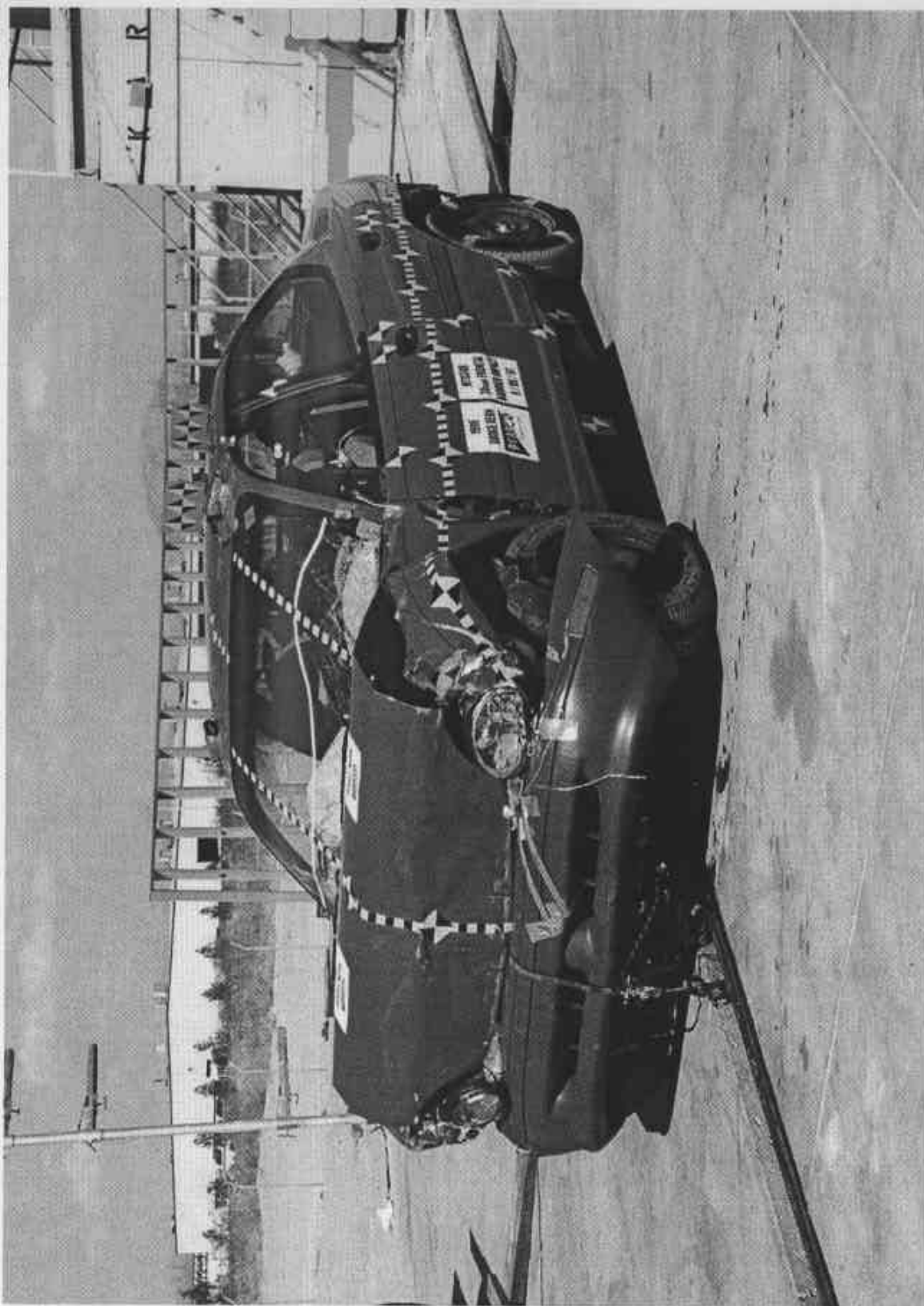


FIGURE A-12. POST TEST LEFT FRONT VIEW

A-12

KAR-97-R97015-08



FIGURE A-13. PRETEST RIGHT REAR VIEW

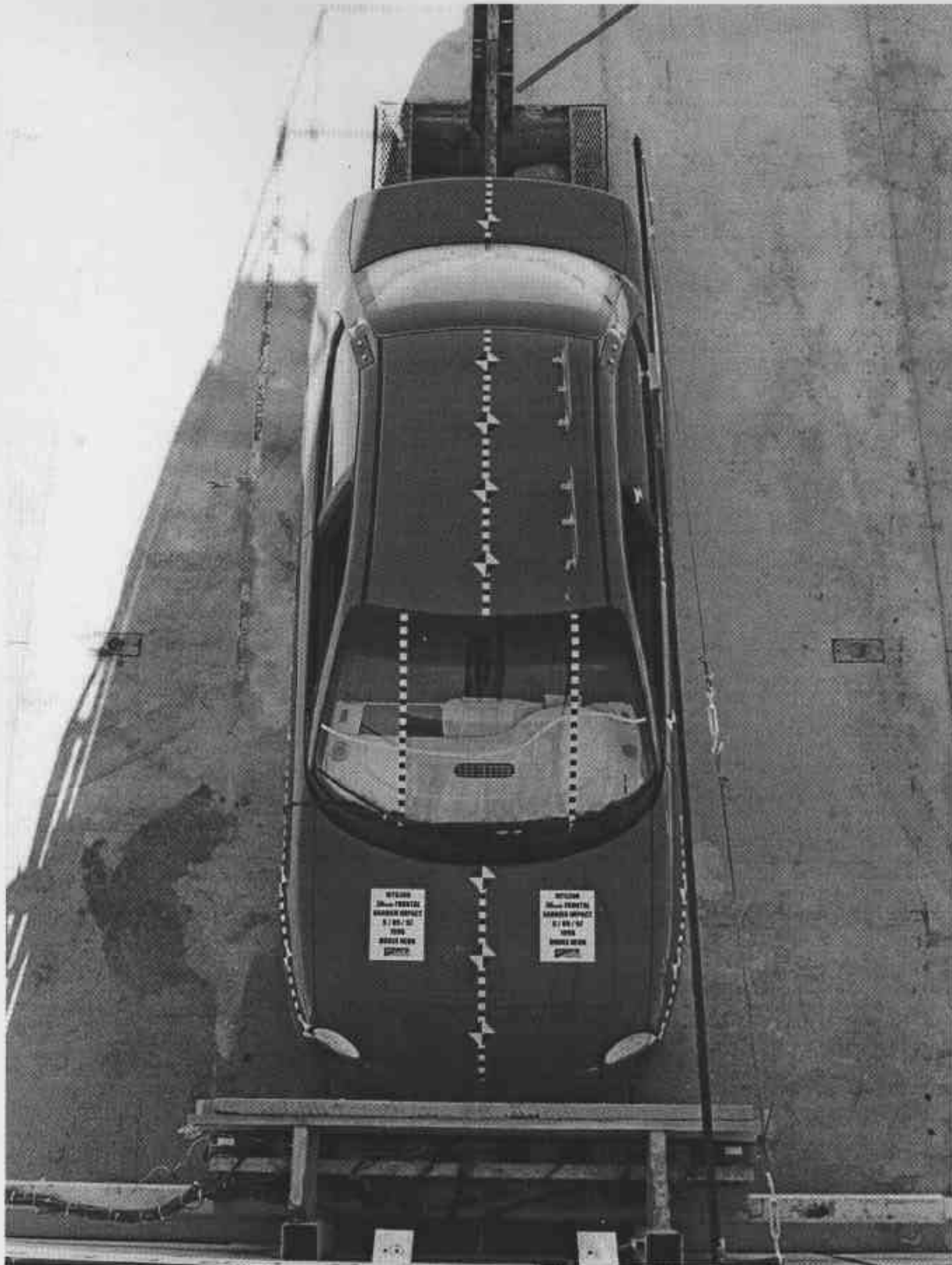


FIGURE A-15. PRETEST OVERHEAD VIEW

A-15

KAR-97-R97015-08

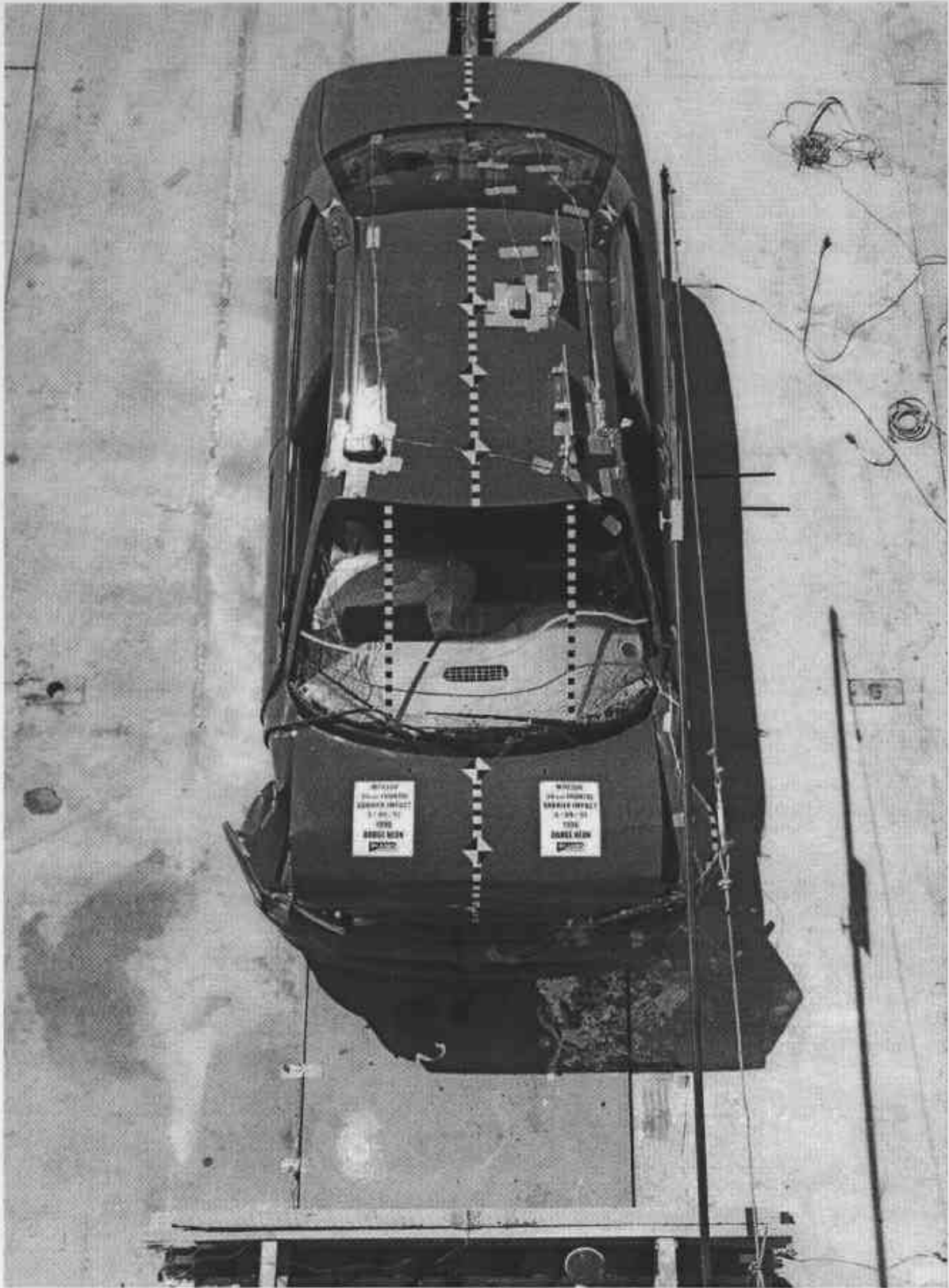


FIGURE A-16. POST TEST OVERHEAD VIEW

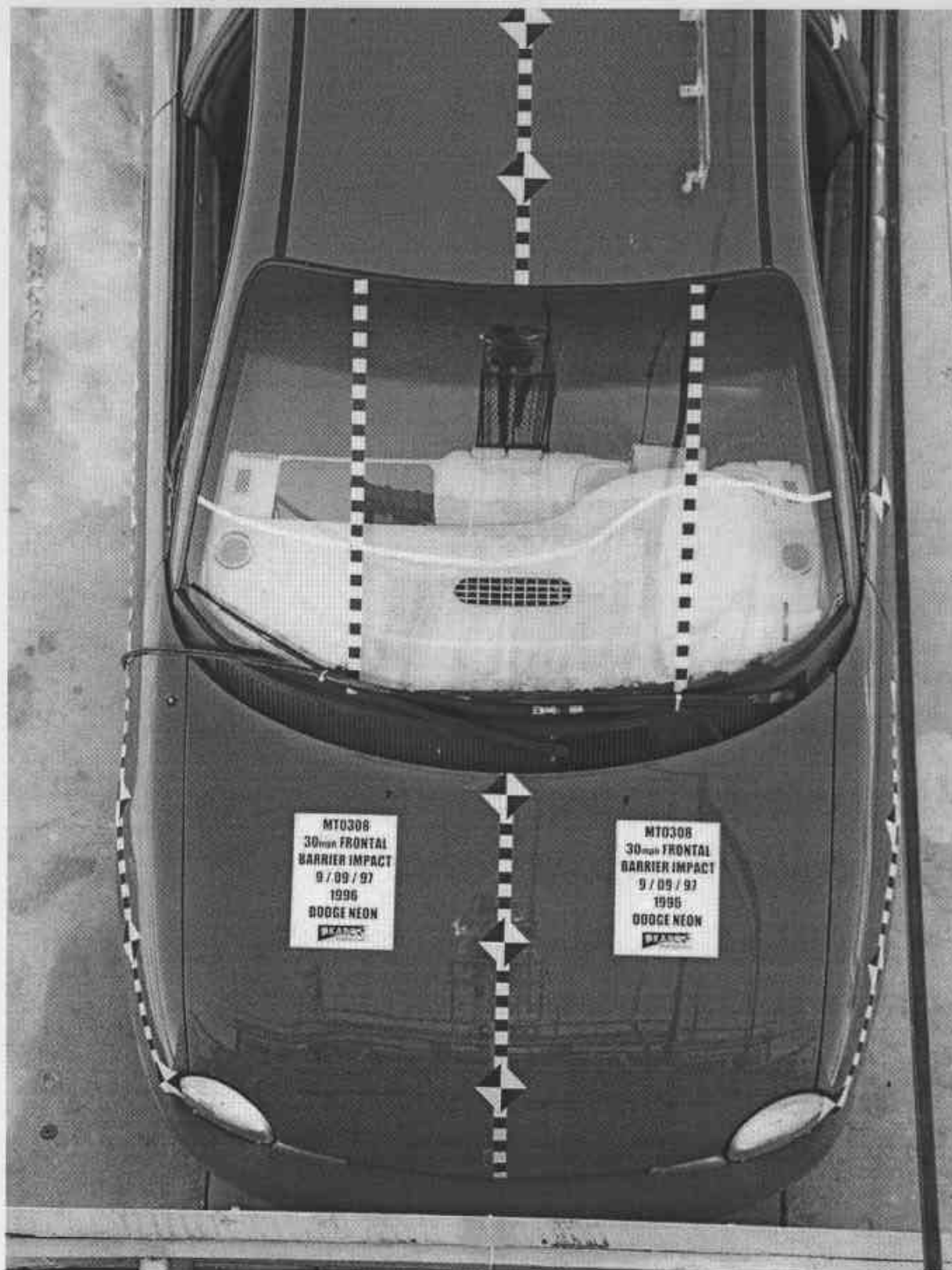


FIGURE -17. PRETEST OVERHEAD CLOSE-UP

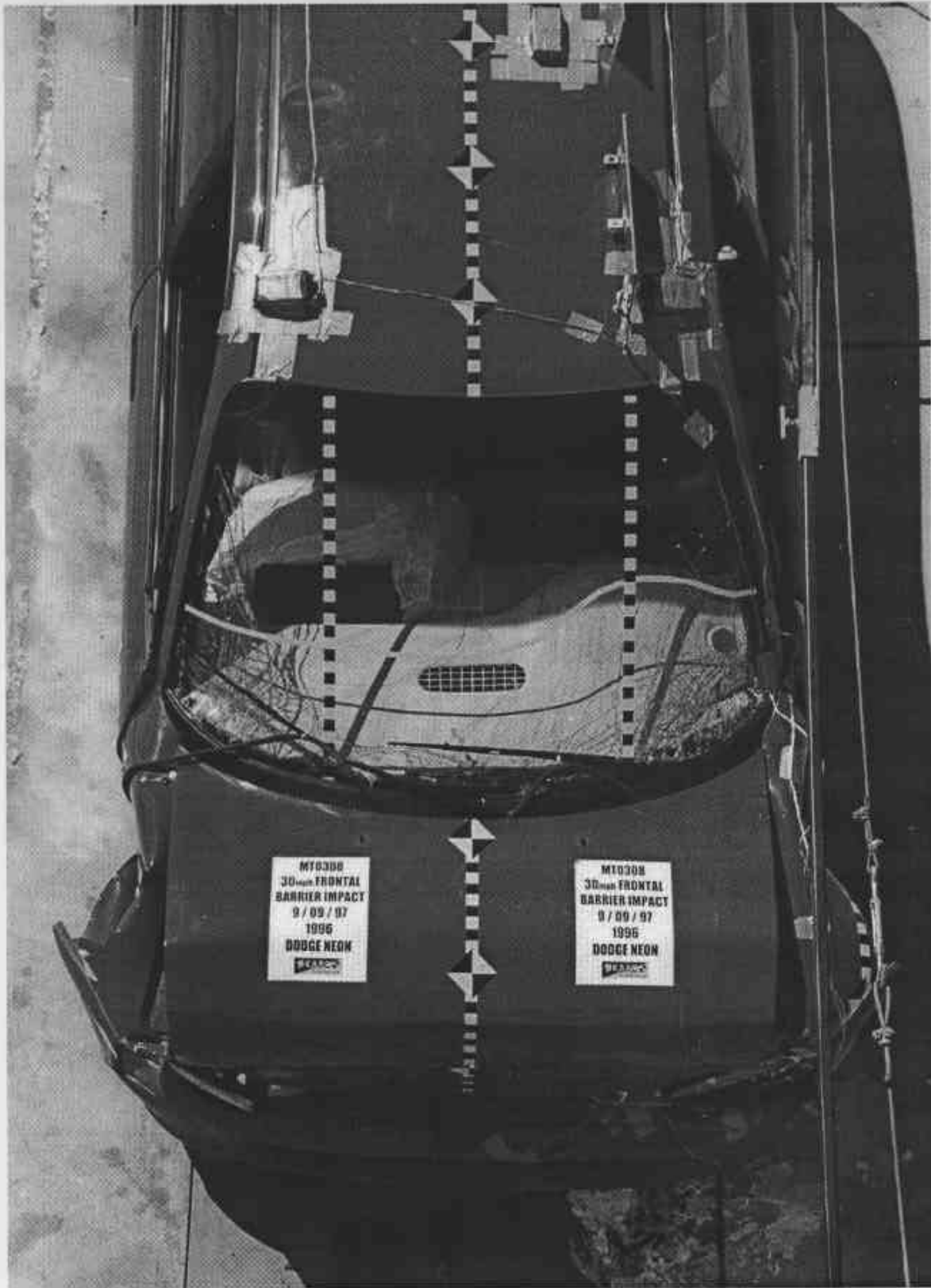


FIGURE A-18. POST TEST OVERHEAD CLOSE-UP

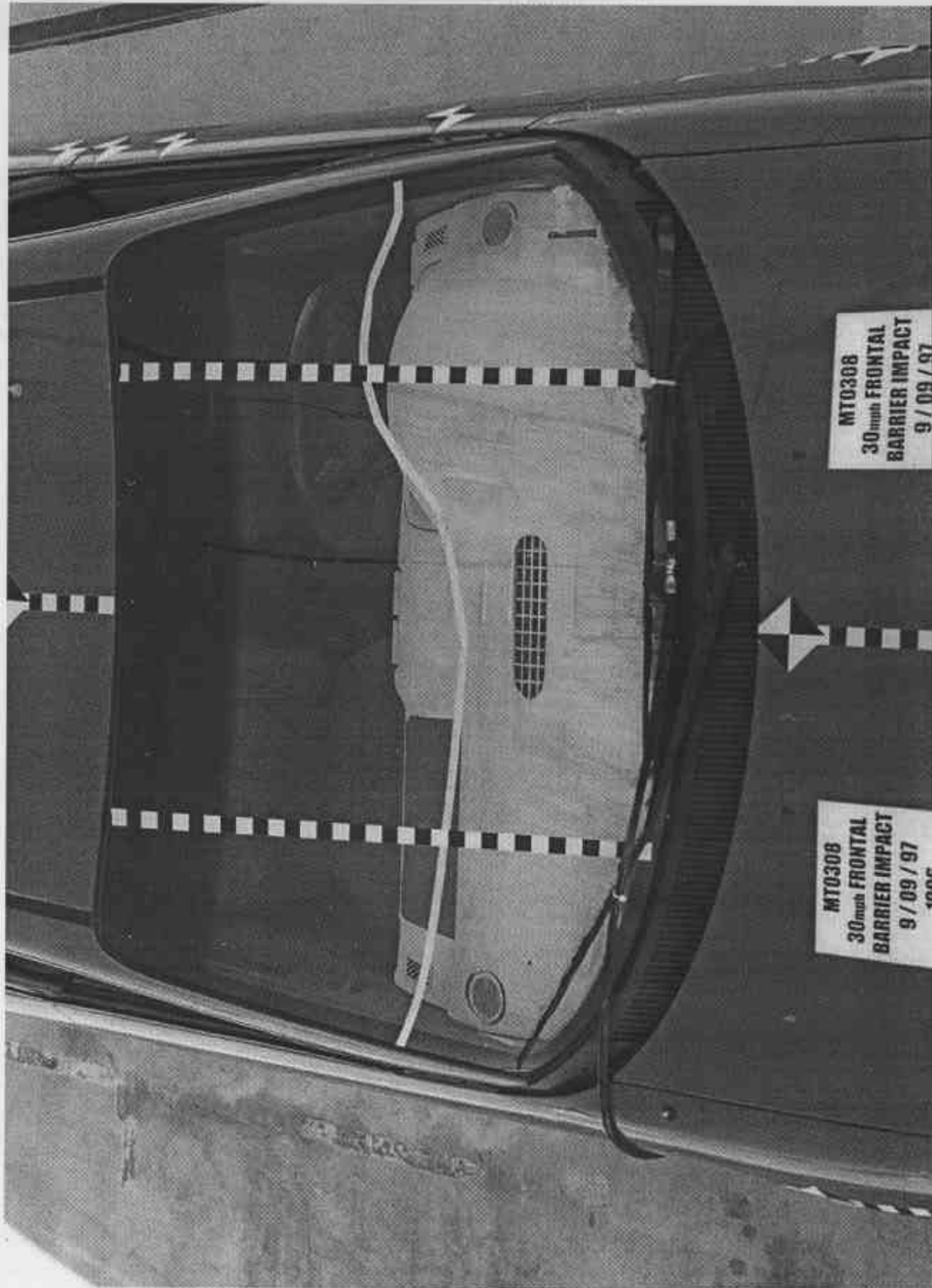


FIGURE A-19. PRETEST WINDSHIELD



FIGURE A-20. POST TEST WINDSHIELD

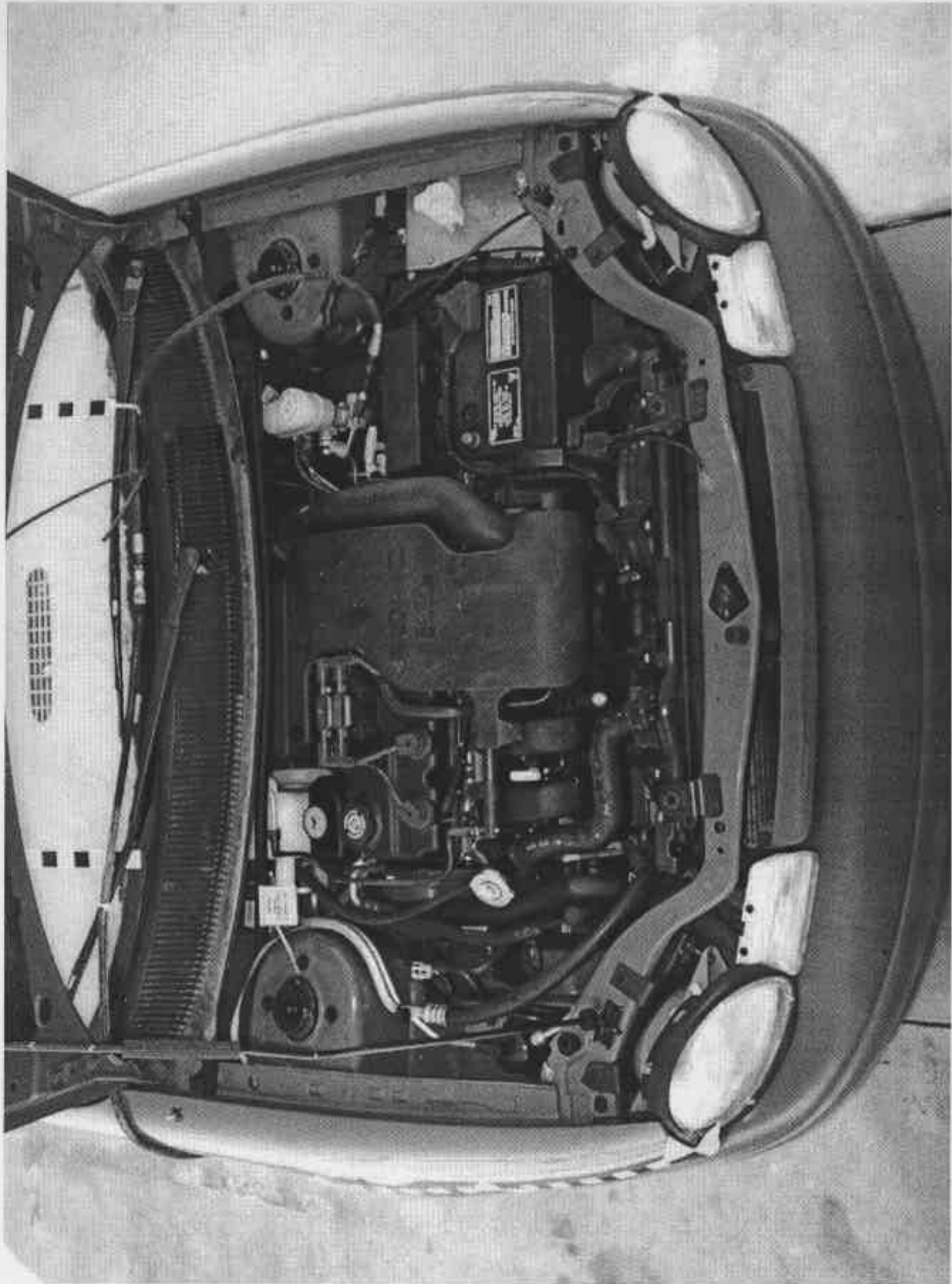


FIGURE-21. PRETEST ENGINE COMPARTMENT

A-21

KAR-97-R97015-08

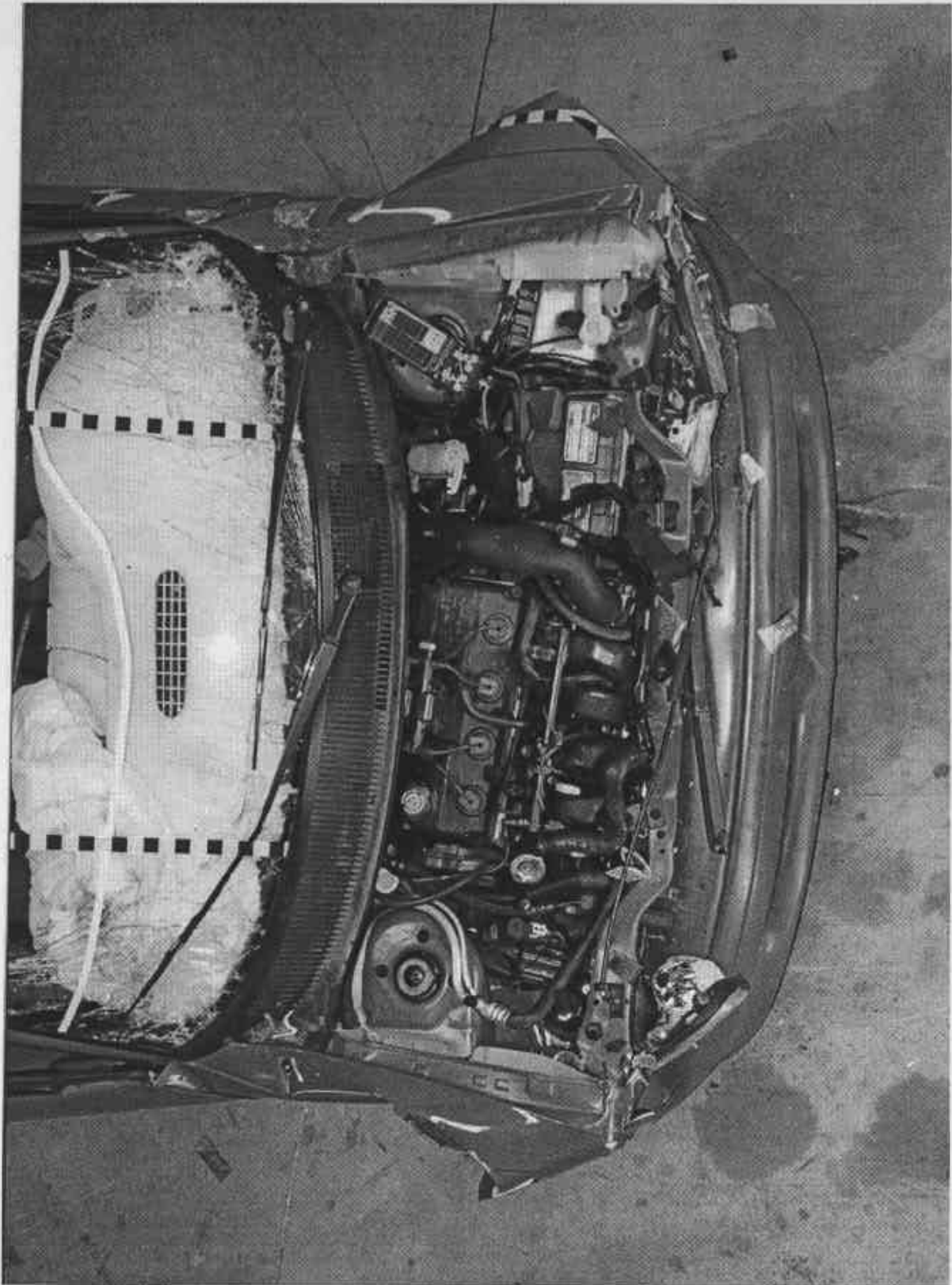


FIGURE A-22. POST TEST ENGINE COMPARTMENT

A-22

KAR-97-R97015-08

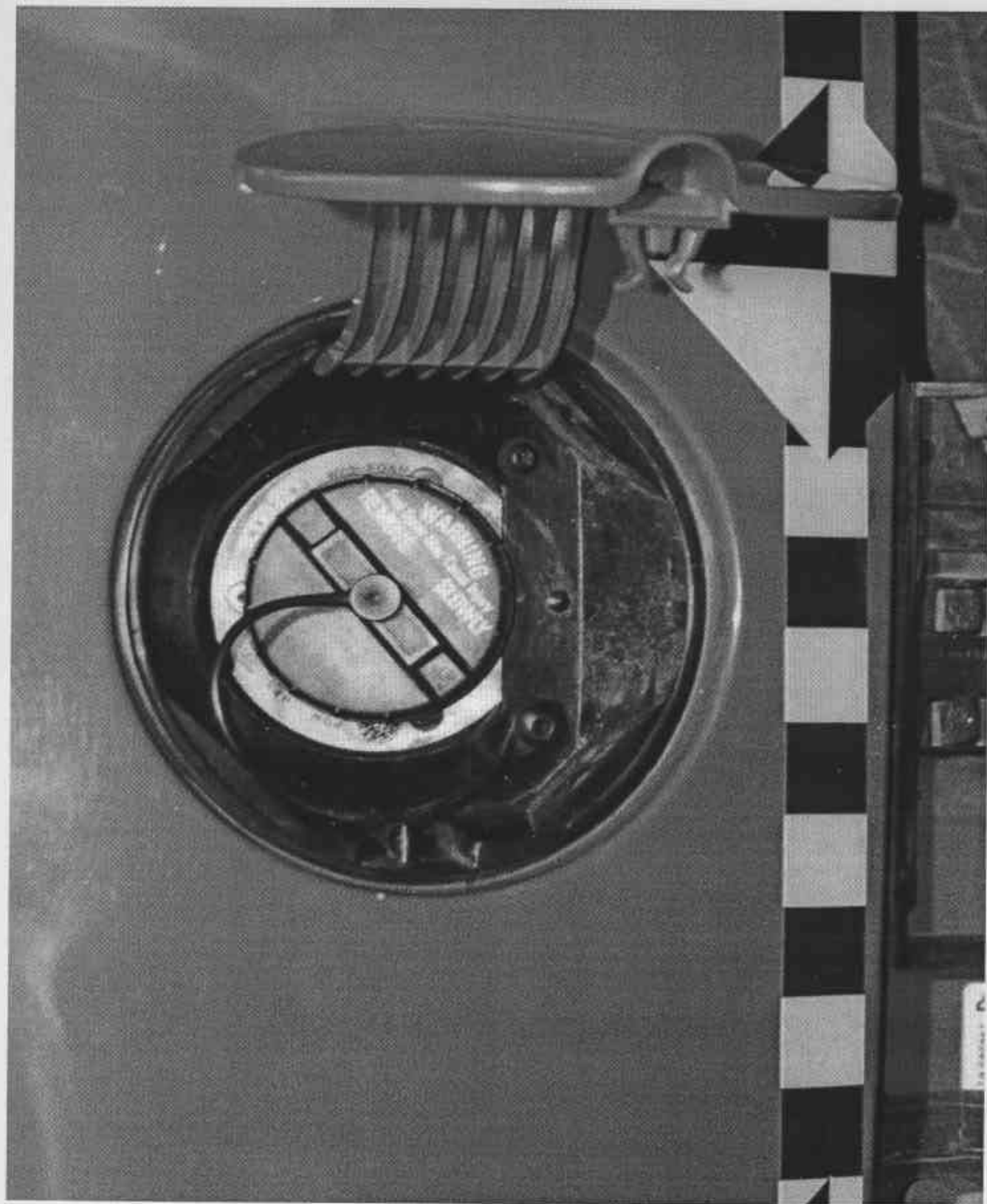


FIGURE A-23. FUEL CAP

A-23

KAR-97-R97015-08

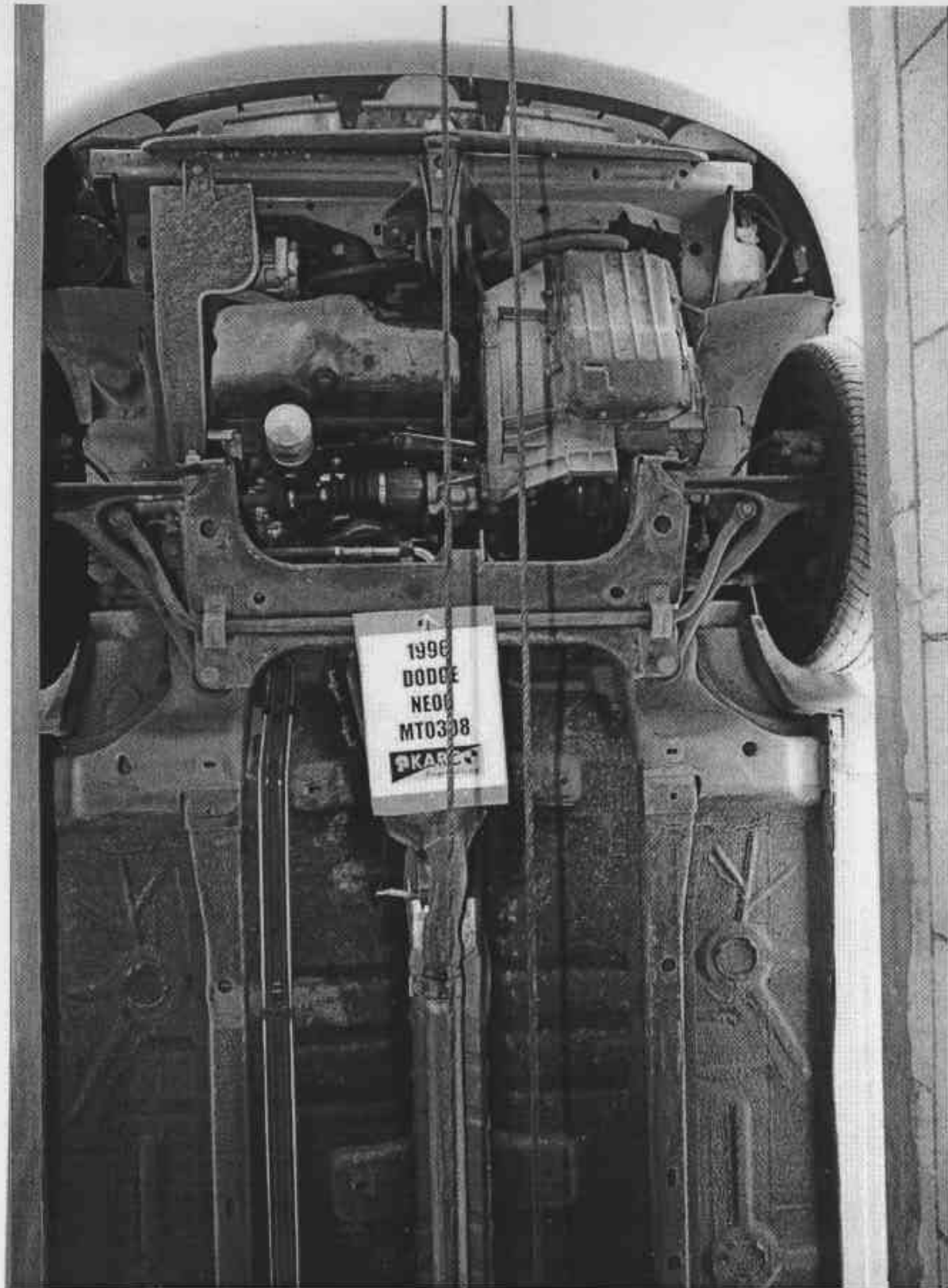


FIGURE A-24.PRETEST FRONT UNDERBODY

A-24

KAR-97-R97015-08



FIGURE A-25. POST TEST FRONT UNDERBODY

A-25

KAR-97-R97015-08

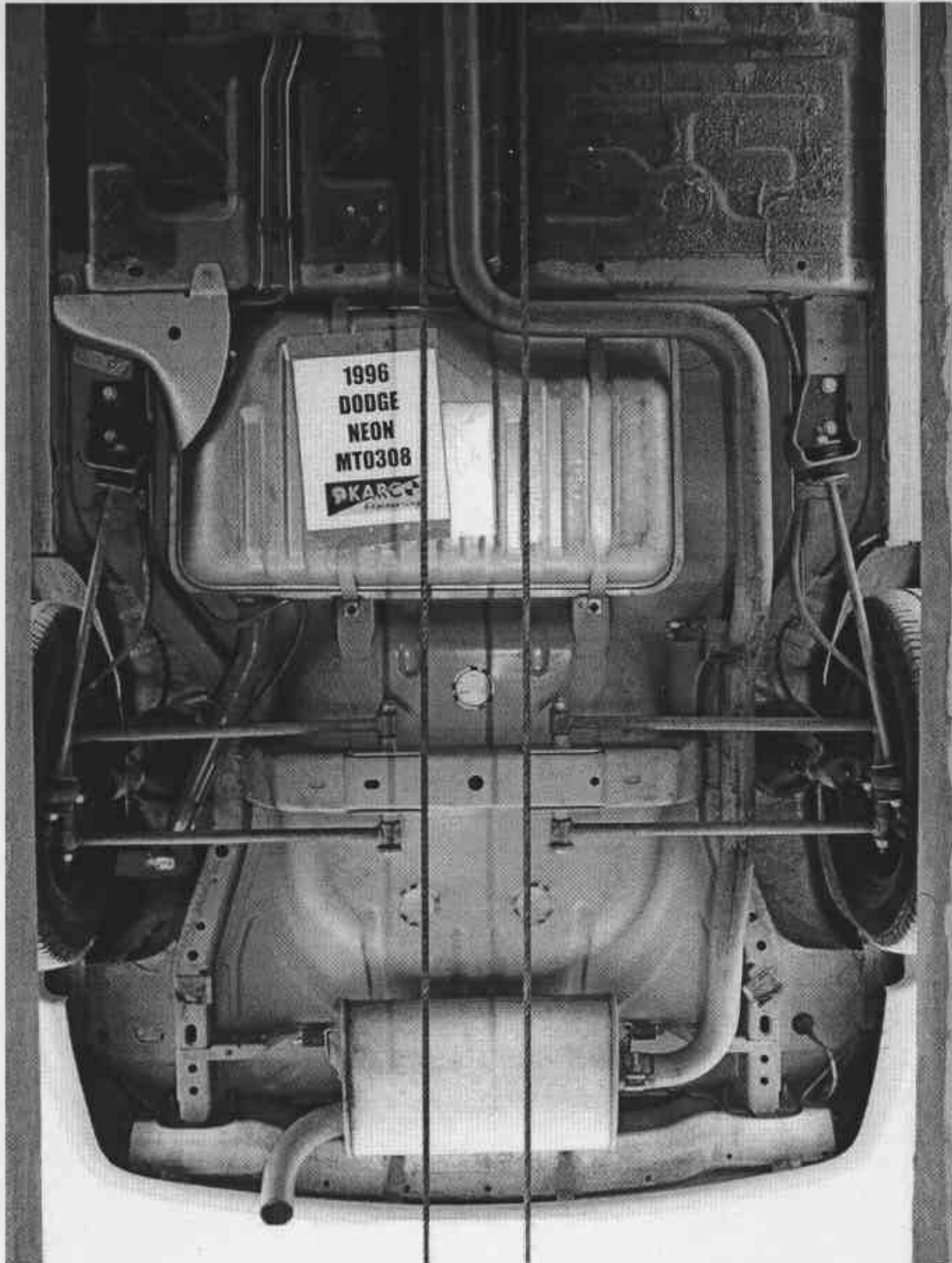


FIGURE A-26. PRETEST REAR UNDERBODY

A-26

KAR-97-R97015-08

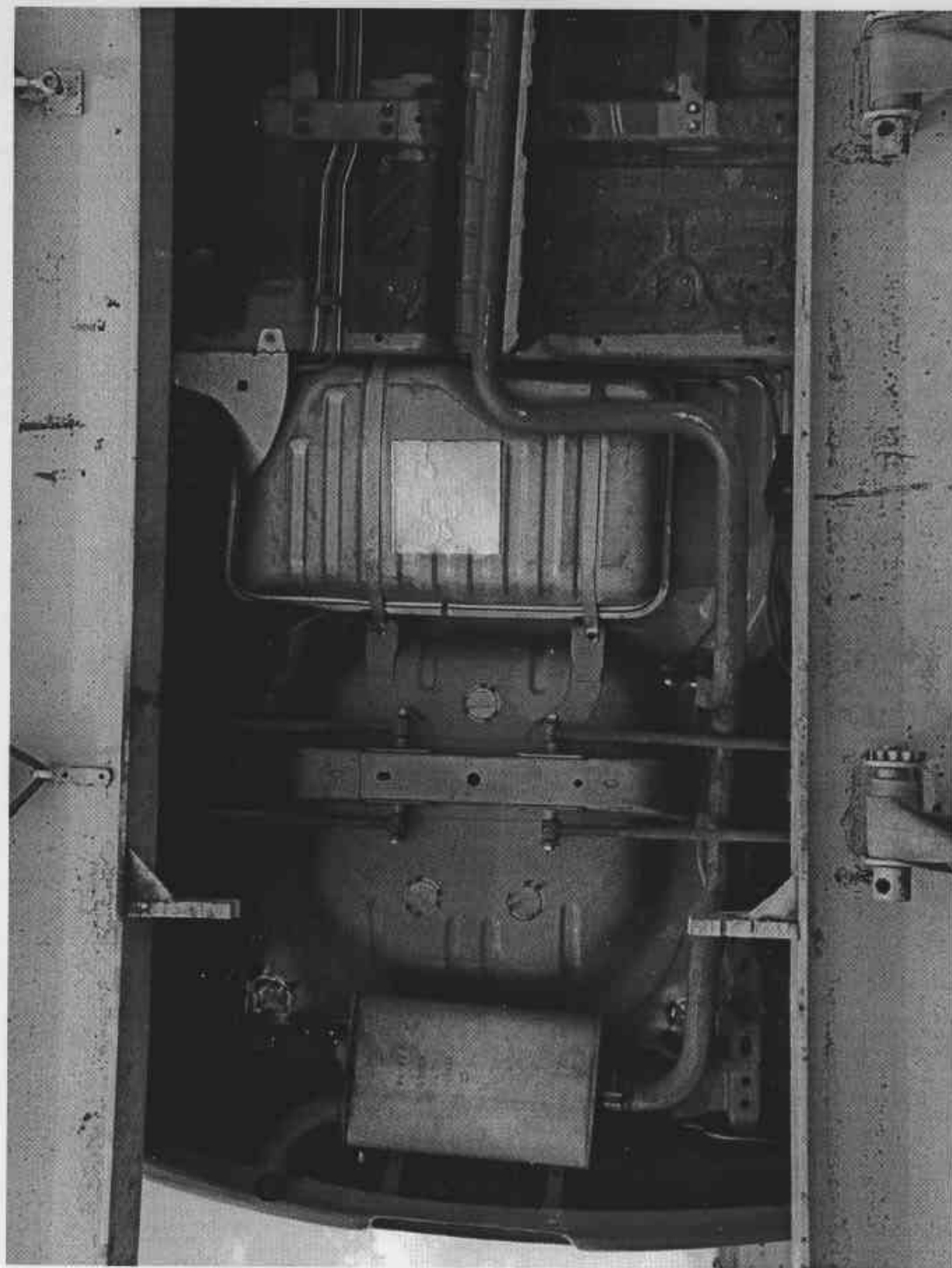


FIGURE A-27. POST TEST REAR UNDERBODY

A-27

KAR-97-R97015-08

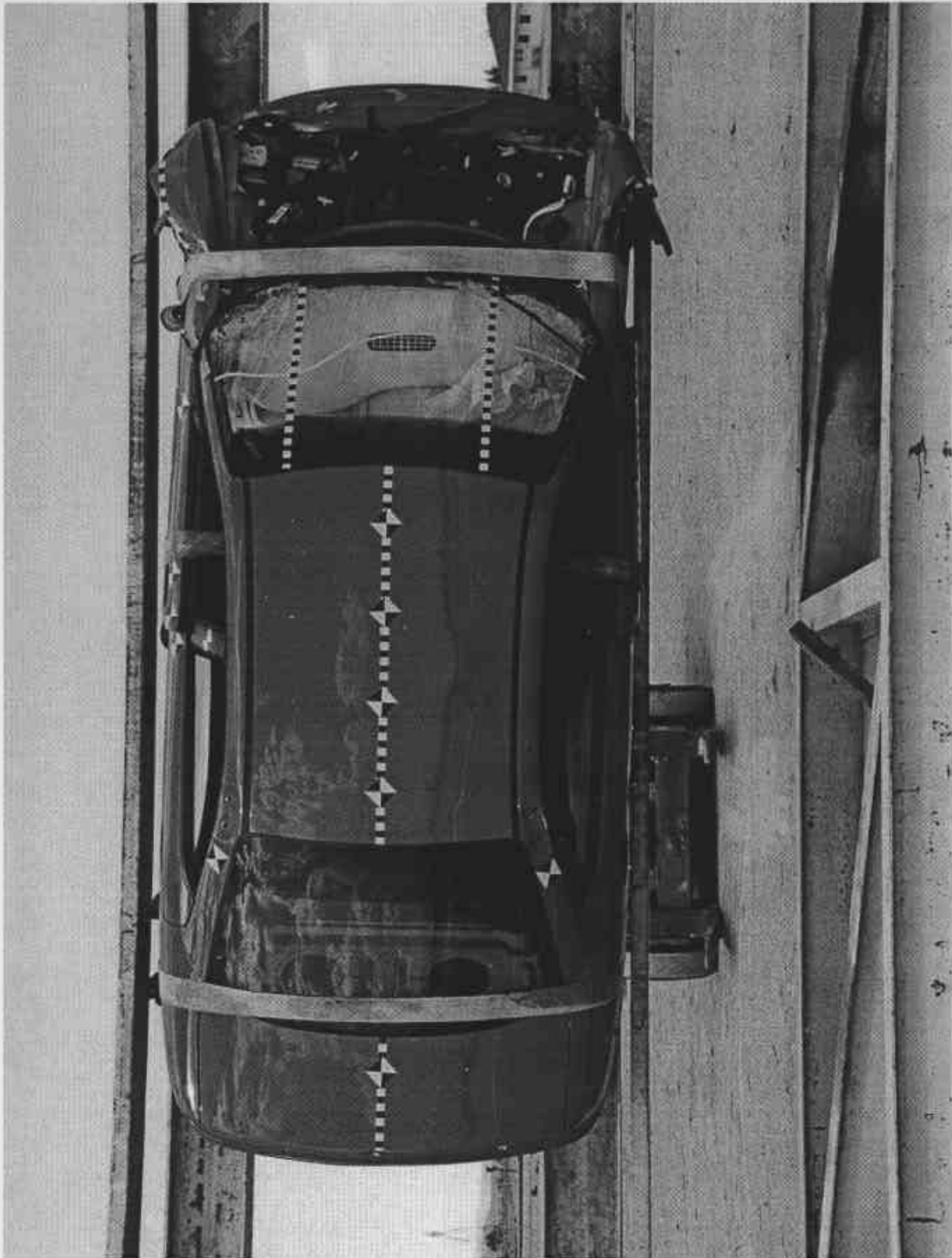


FIGURE A-28. VEHICLE ON ROLLOVER DEVICE



FIGURE A29. PRETEST DRIVER DUMMY (THRU WINDOW)



FIGURE A-30. POST TEST DRIVER DUMMY (THRU WINDOW)



FIGURE A-31. PRETEST DRIVER DUMMY (DOOR OPEN)



FIGURE A-32. POST TEST DRIVER DUMMY (DOOR OPEN)



FIGURE A-33. PRE TEST DRIVER DUMMY (90° TO VEHICLE)



FIGURE A-34. POST TEST DRIVER DUMMY (90° TO VEHICLE)



FIGURE A-35. PRETEST DRIVER DUMMY FEET



FIGURE A-36. POST TEST DRIVER DUMMY FEET



FIGURE A-37. PRETEST DRIVER SIDE FLOOR

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FIGURE A-38.POST TEST DRIVER SIDE FLOOR

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FIGURE A-39. PRETEST DRIVER KNEE BOLSTER

A-39

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FIGURE A-40. POST TEST DRIVER KNEE BOLSTER AND DUMMY CONTACT

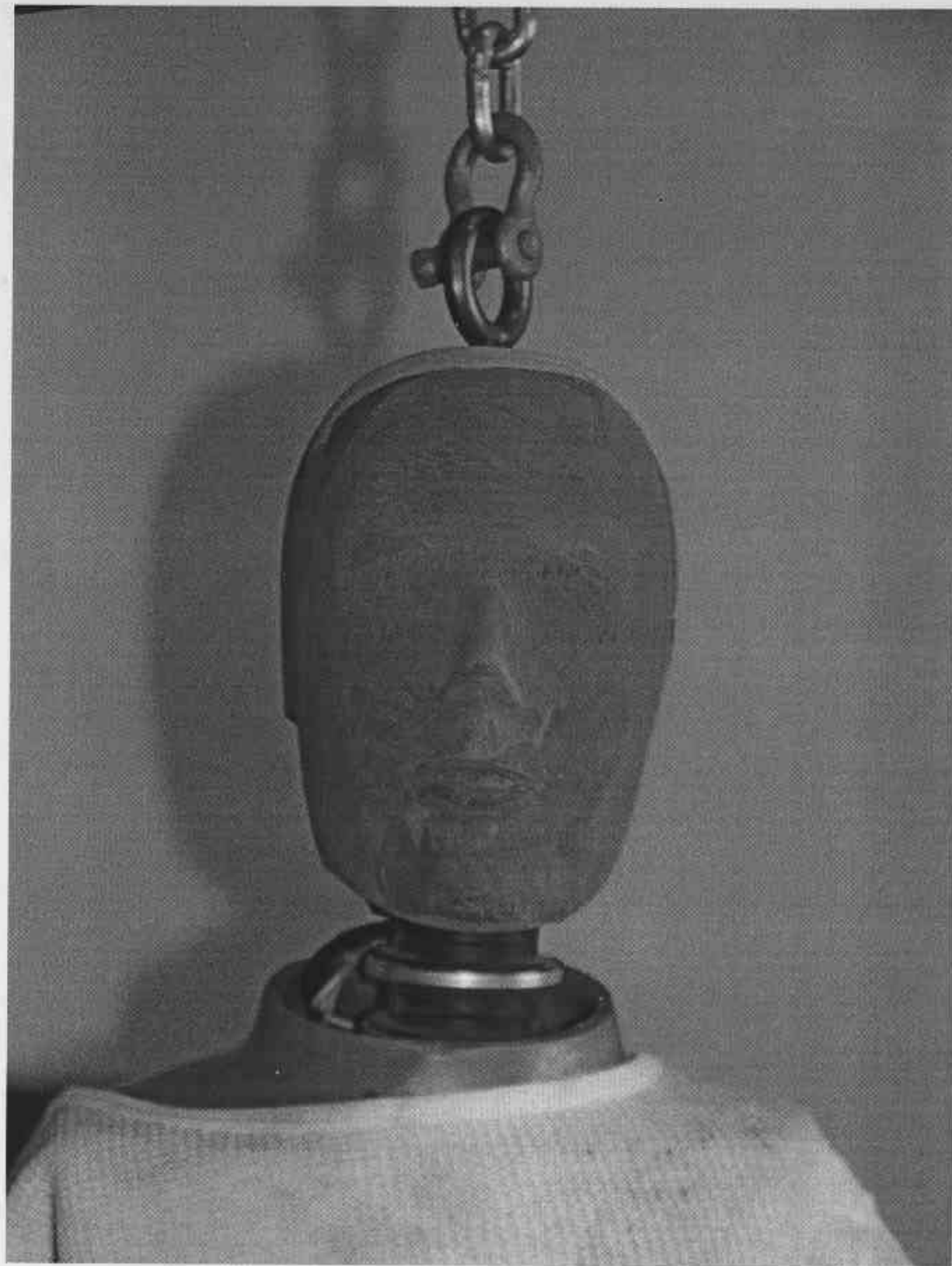


FIGURE A-41. DRIVER HEAD POST TEST

A-41

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FIGURE A-42. DRIVER DUMMY HEAD CONTACT POINT



FIGURE A-43. PRETEST PASSENGER DUMMY (THRU WINDOW)



FIGURE A-44. POST TEST PASSENGER DUMMY (THRU WINDOW)



FIGURE A-45. PRETEST PASSENGER DUMMY (DOOR OPEN)

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FIGURE A-46. POST TEST PASSENGER DUMMY (DOOR OPEN)



FIGURE A-47. PRETEST PASSENGER DUMMY (90° TO VEHICLE)



FIGURE A-48. POST TEST PASSENGER DUMMY (90° TO VEHICLE)

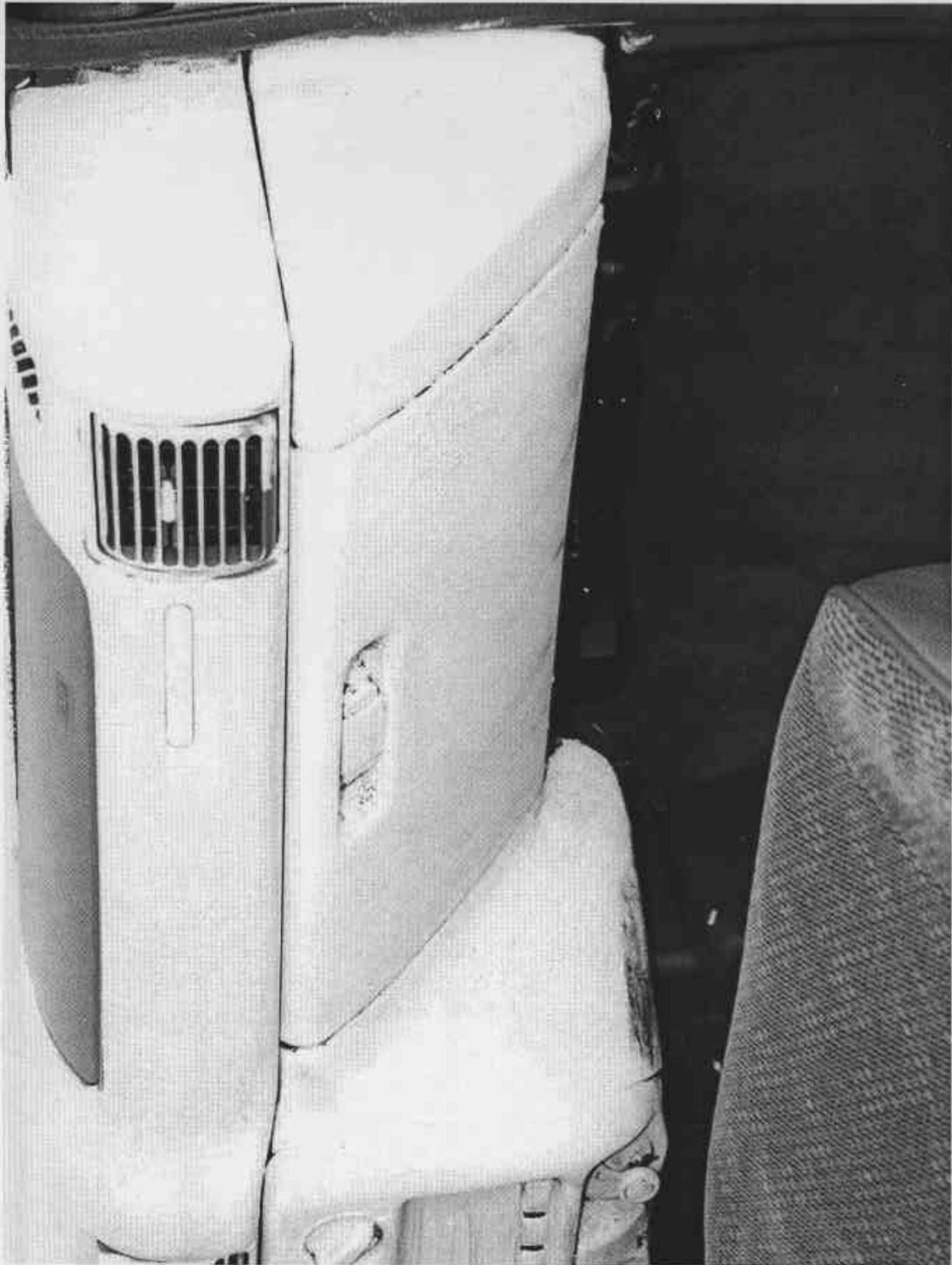


FIGURE A-49.PRETEST PASSENGER KNEE BOLSTER

A-49

KAR-97-R97015-08



FIGURE A-50. POST TEST PASSENGER DUMMY KNEE BOLSTER AND DUMMY CONTACT

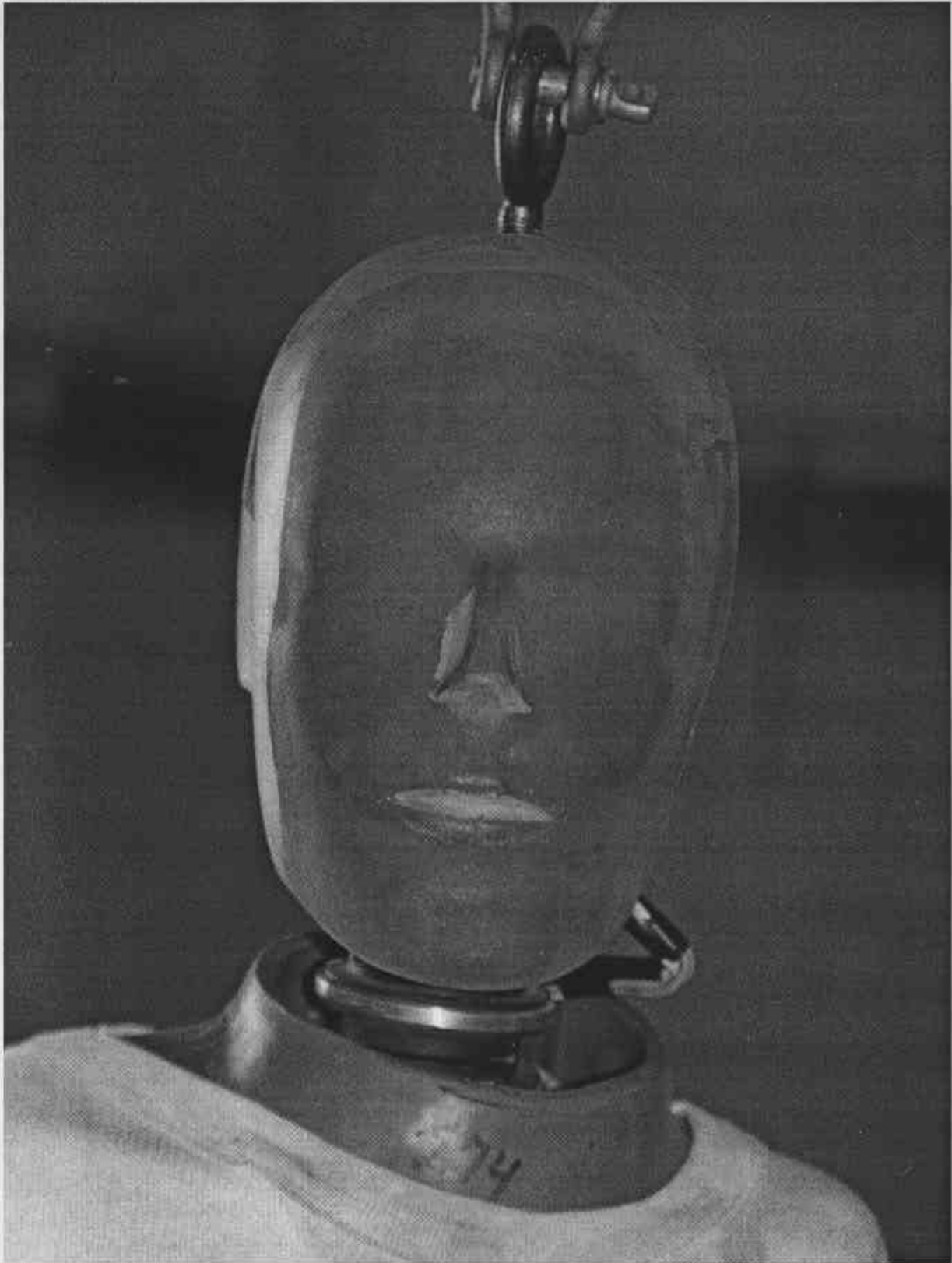


FIGURE A-51.PASSENGER HEAD POST TEST

A-51

KAR-97-R97015-08

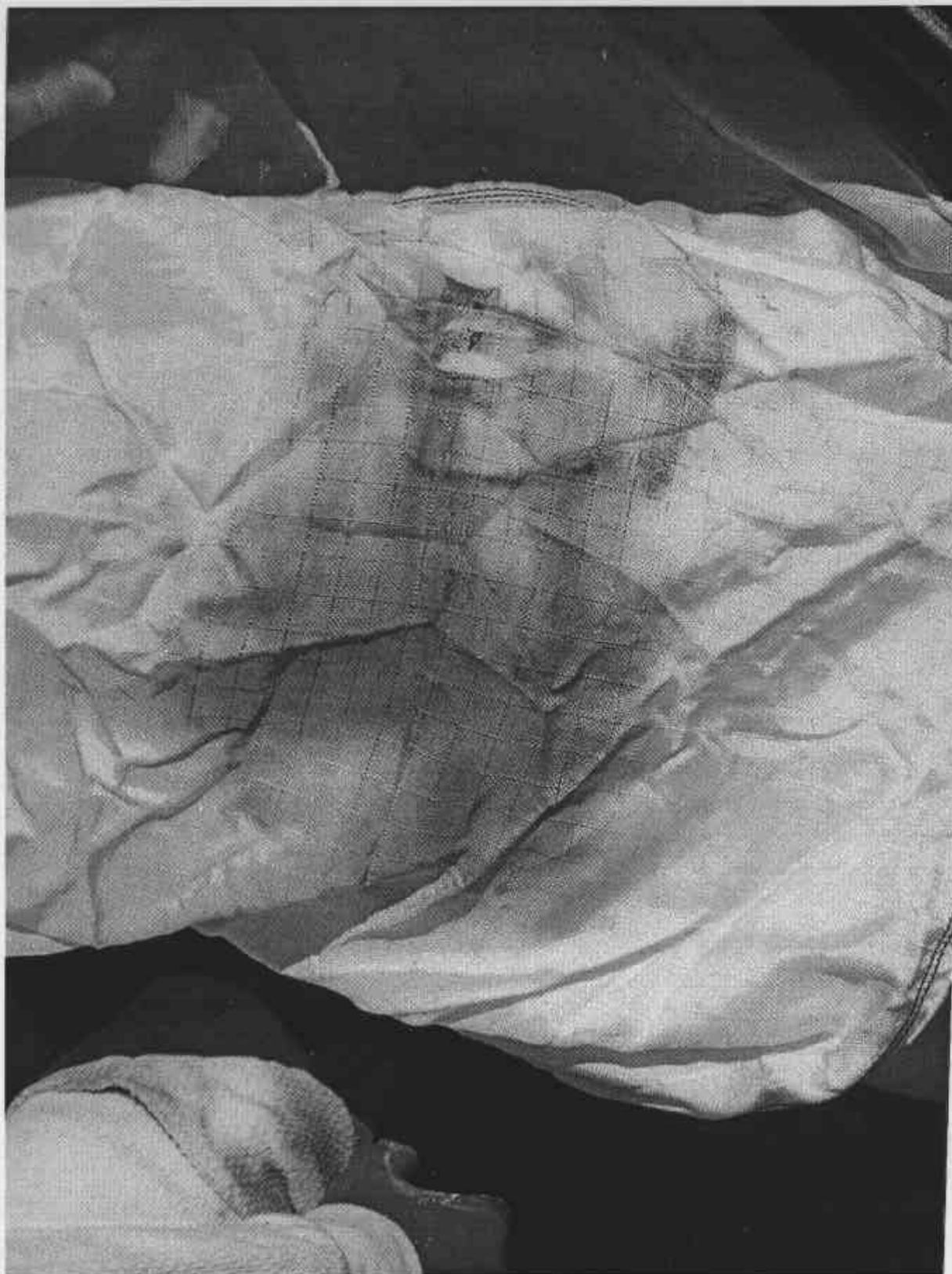


FIGURE A-52. PASSENGER HEAD CONTACT POINT

A-52

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APPENDIX B
DUMMY, VEHICLE AND RESPONSE DATA TRACES

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B-33	Driver Pelvis Resultant	B-33
B-34	Driver Left Femur Force	B-34
B-35	Driver Right Femur Force	B-35

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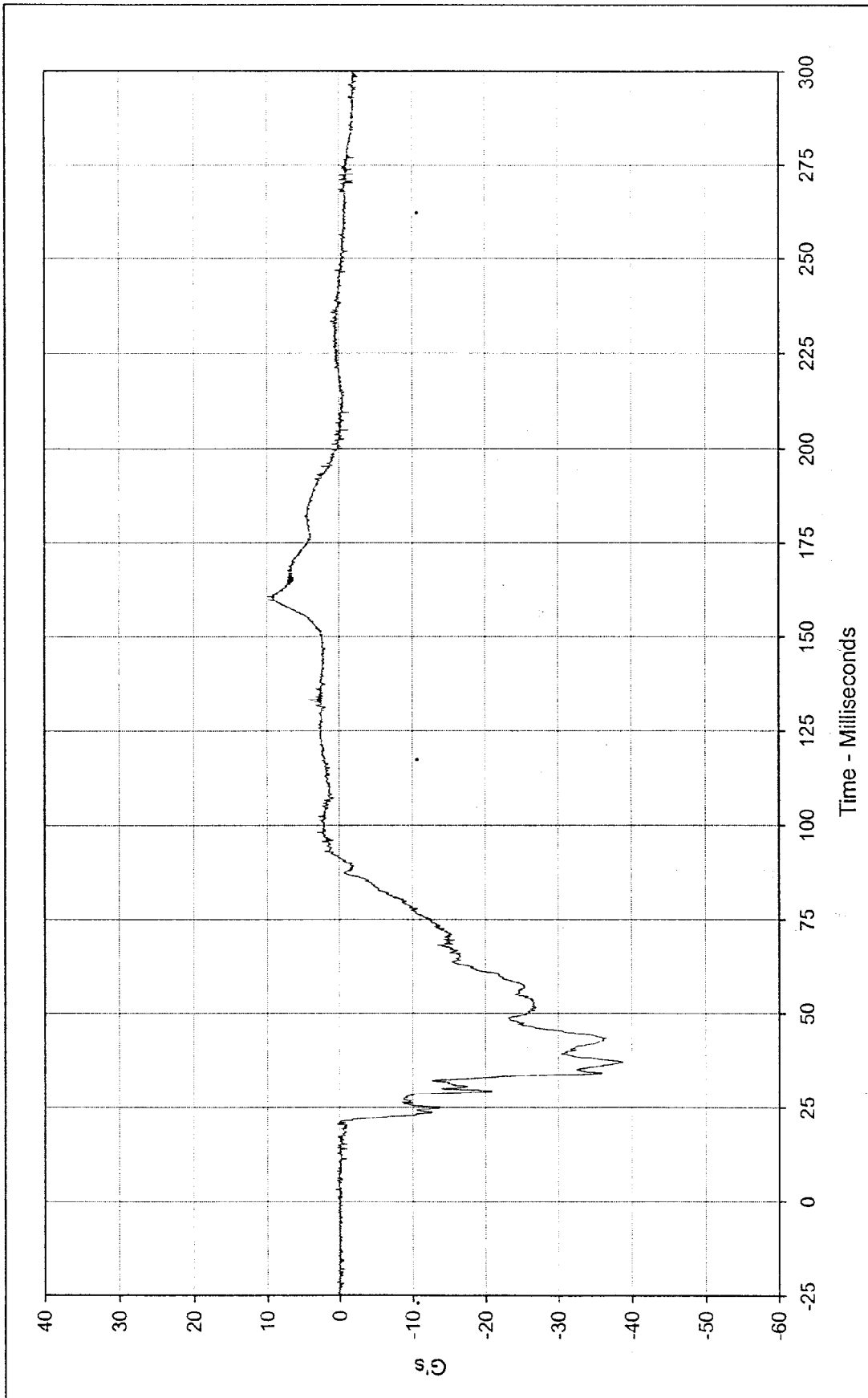
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B-39	Driver Left Upper Tibia Moment Y	B-39
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B-46	Driver Right Upper Tibia Moment X	B-46
B-47	Driver Right Upper Tibia Moment Y	B-47
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Data Plot		Page
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B-103	Passenger Left Lower Tibia Moment Y	B-103
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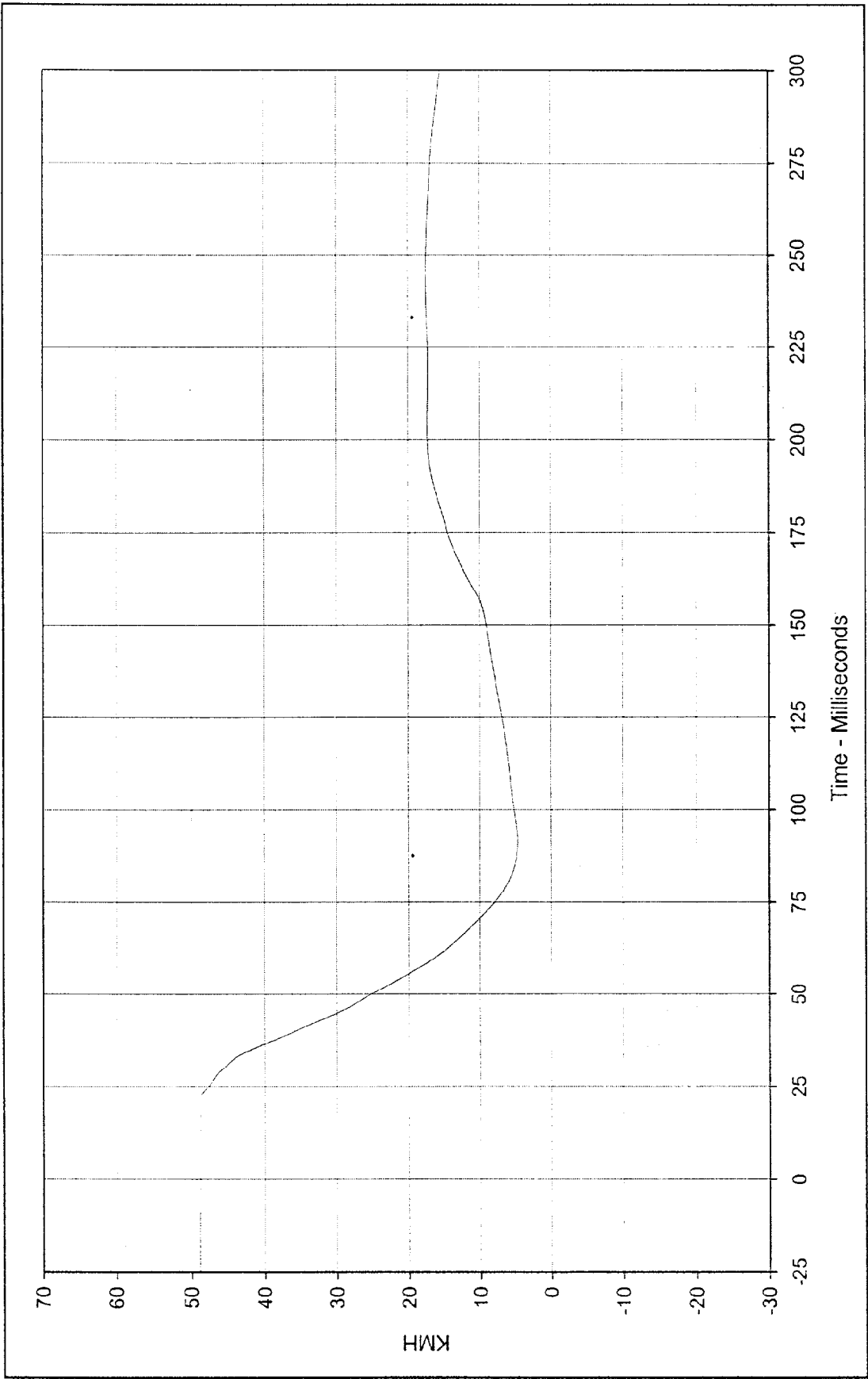
LIST OF DATA PLOTS...(Continued)

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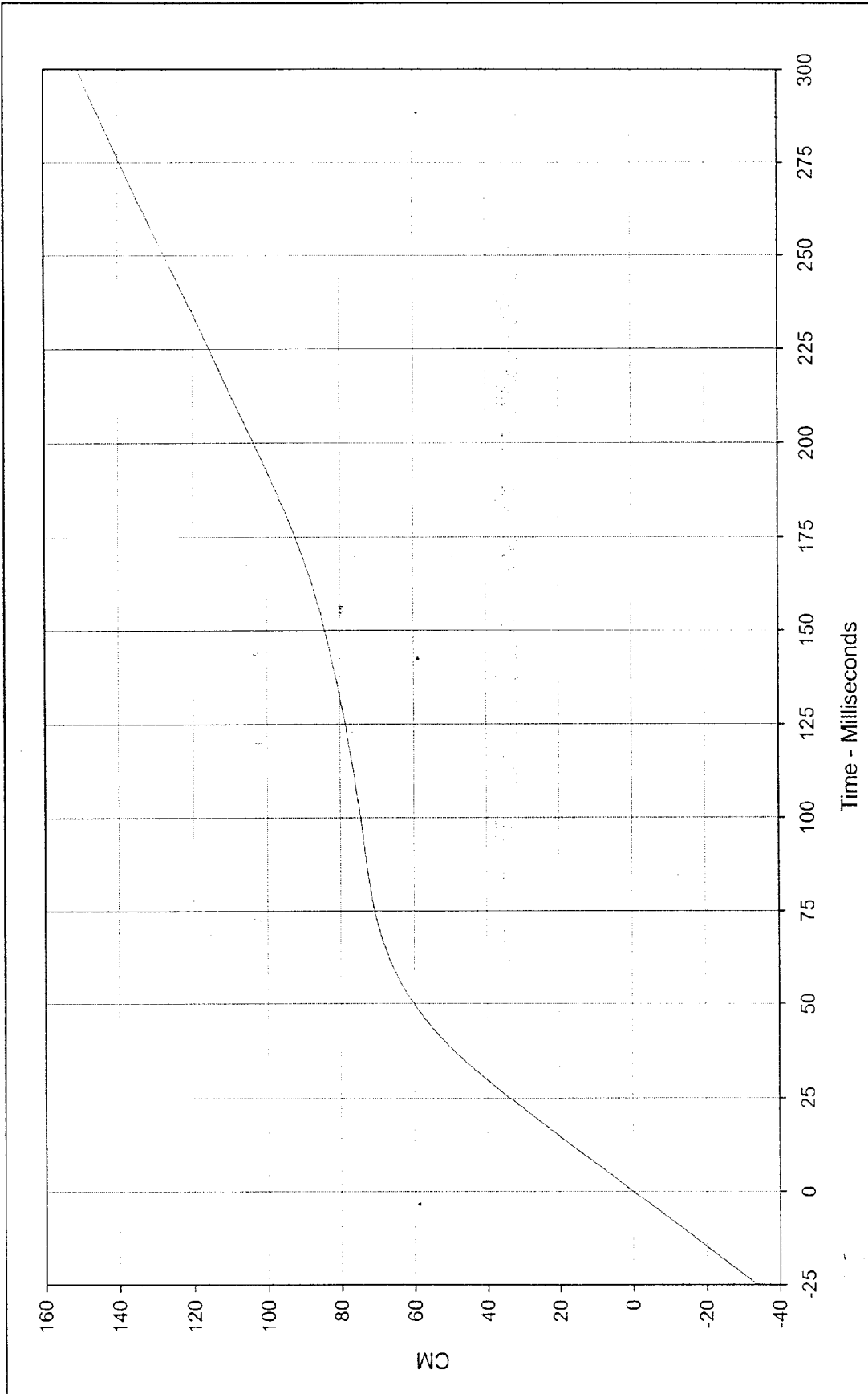
Curve Description:	Driver Head Primary X	Testing Program:	1997 48.4 km/h Frontal Impact (Female)
Maximum Value:	9.8 at 159.8 Milliseconds	Test Vehicle:	1996 Dodge Neon 4 Door Sedan
Minimum Value:	-38.8 at 37.0 Milliseconds		
SAE Filter Class:	1000		
Date of Test:	9/9/97		
Curve Number:	FIL-001		





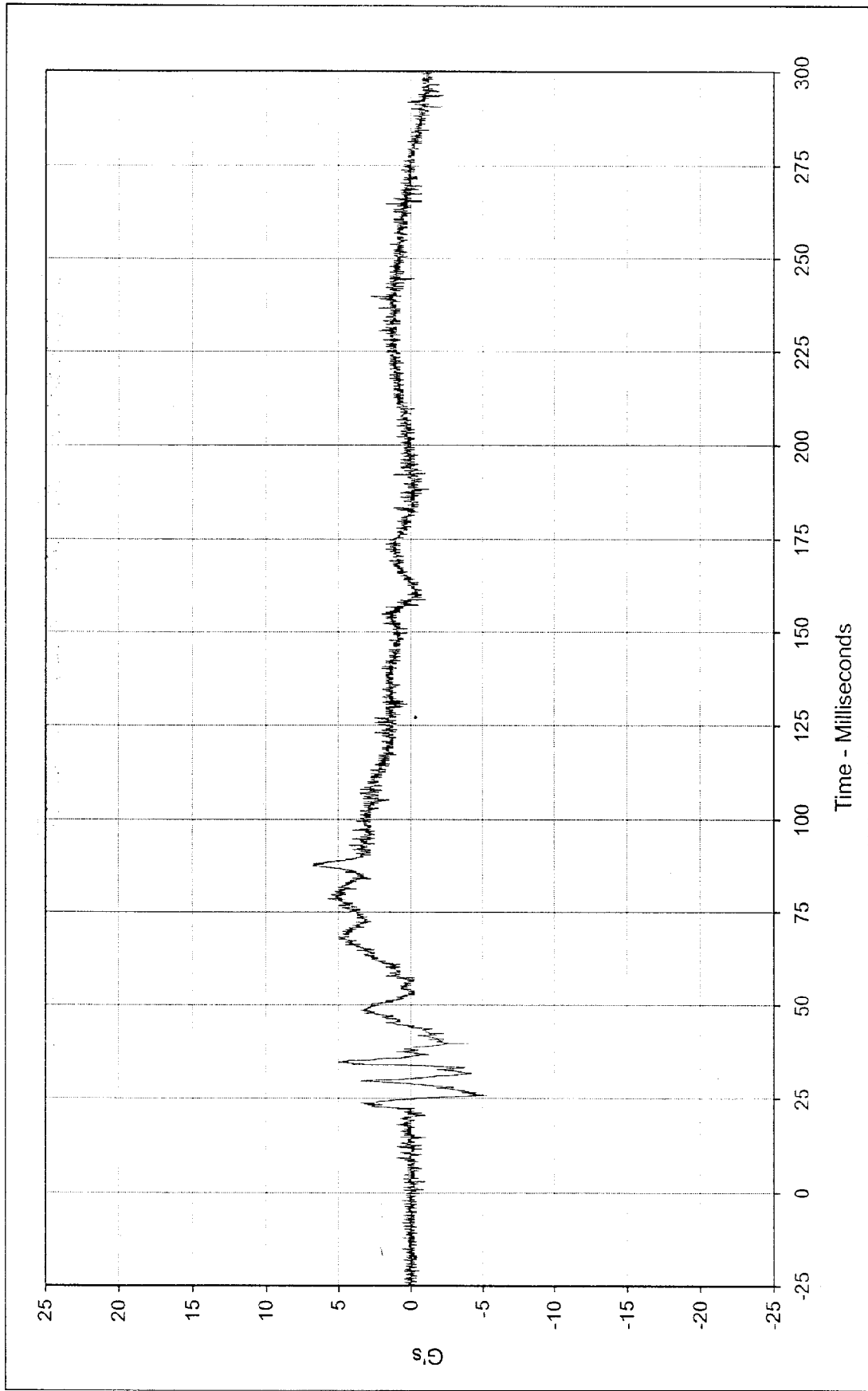
Curve Description: Driver Head Primary X Velocity Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 48.9 at 1.1 Milliseconds Test Vehicle: 1996 Dodge Neon Door Sedan
 Minimum Value: 4.7 at 91.5 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN1-001





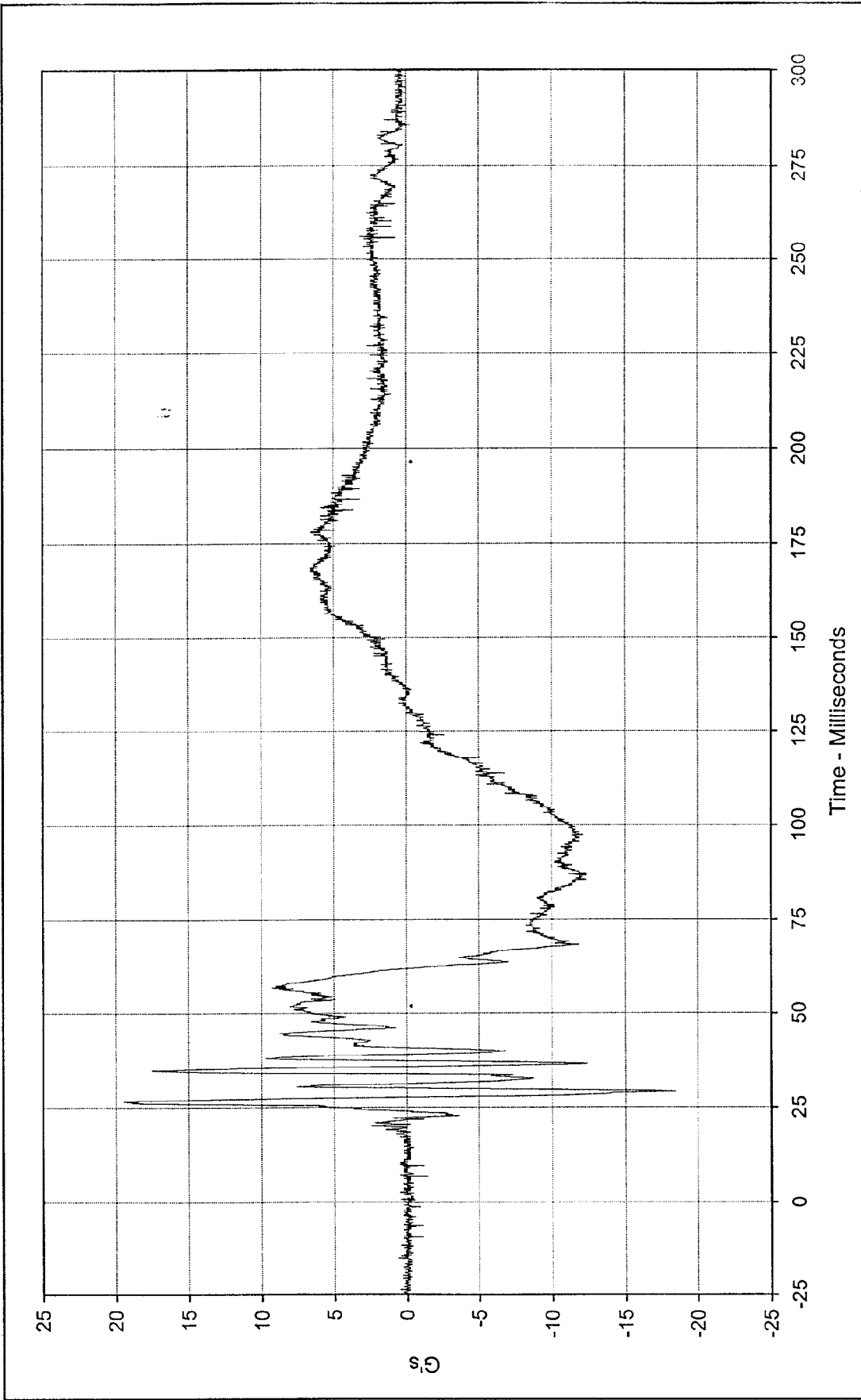
Curve Description: Driver Head Primary X Displ. Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 150.5 at 299.9 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: 0.0 at 0.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN2-001





Curve Description: Driver Head Primary Y Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 6.8 at 87.5 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -5.3 at 25.9 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 9/9/97
 Curve Number: FIL-002





Curve Description: Driver Head Primary Z Testing Program: 1997 48.4 km/h Frontal Impact (Female)

Maximum Value: 19.5 at 26.6 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan

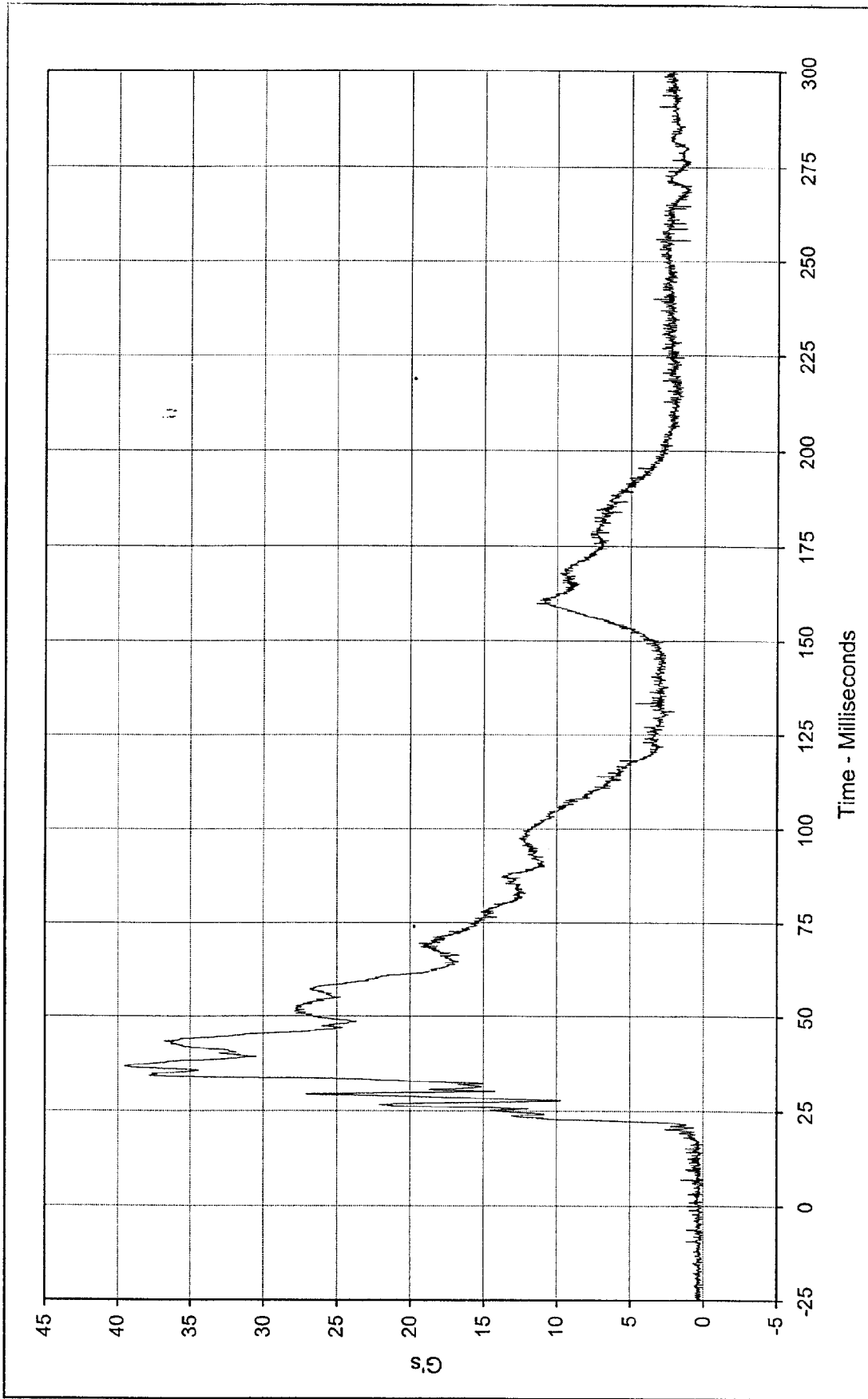
Minimum Value: -18.4 at 29.2 Milliseconds

SAE Filter Class: 1000

Date of Test: 9/9/97

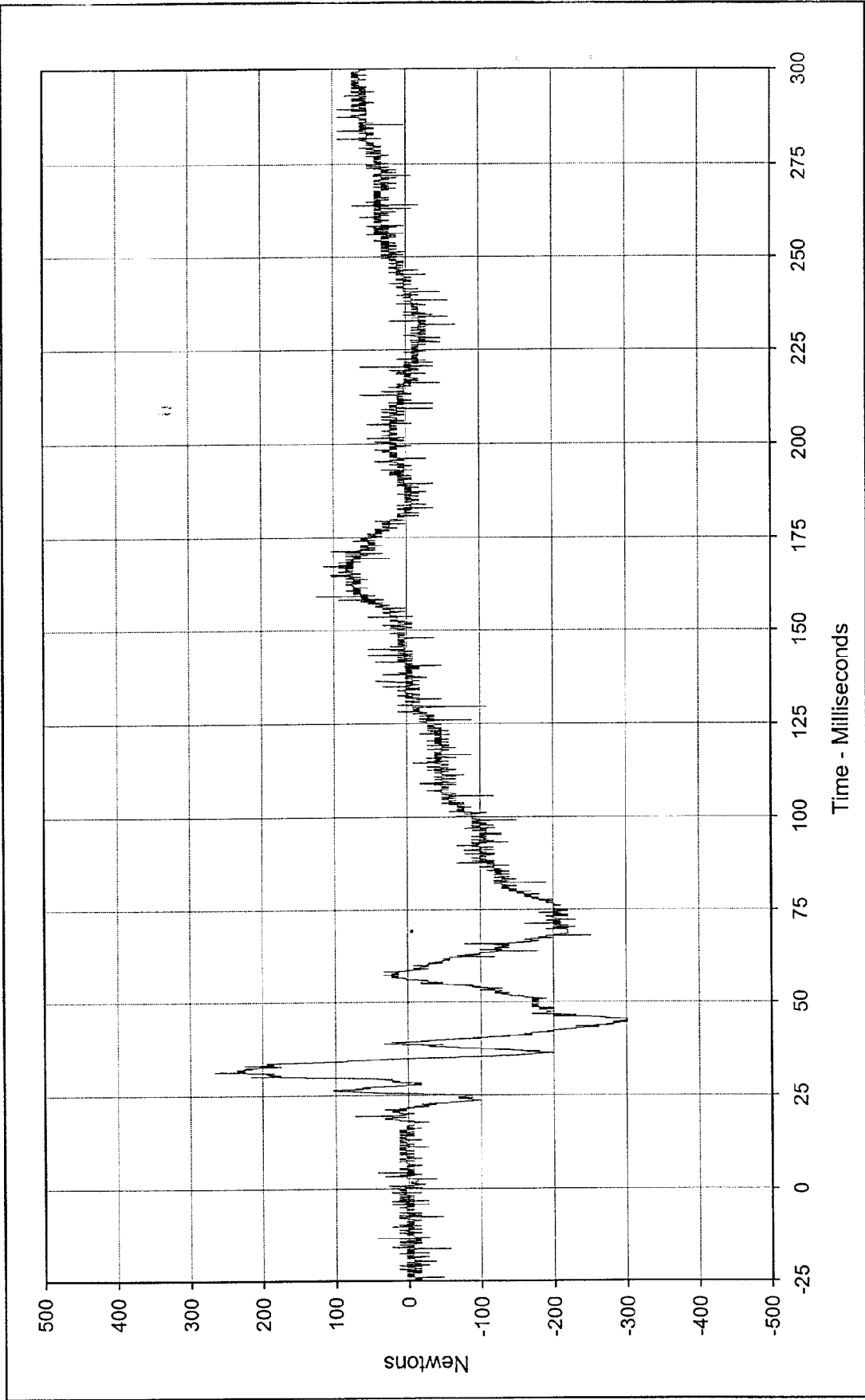
Curve Number: FIL-003





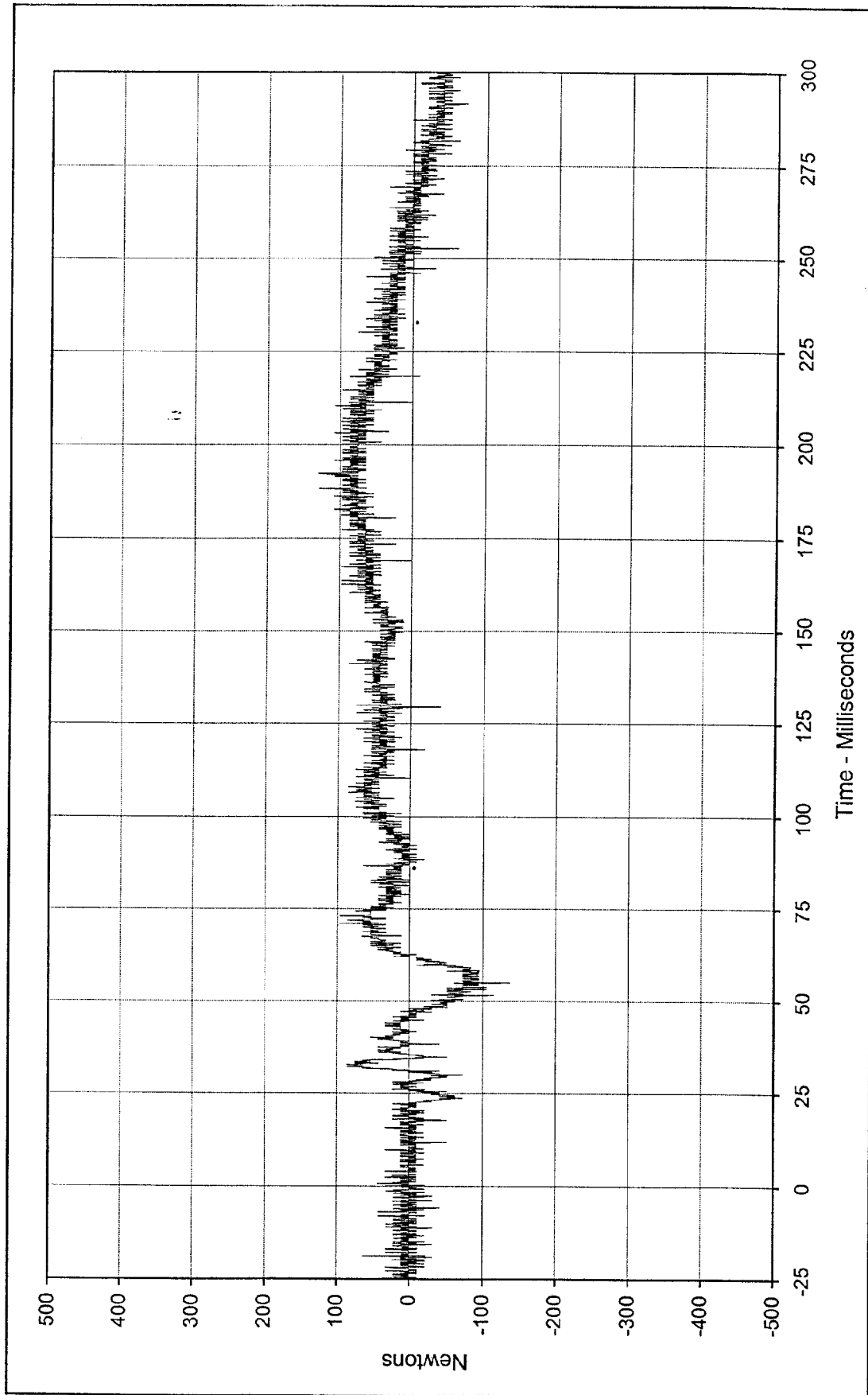
Curve Description: Driver Head Resultant Primary Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 39.5 at 36.7 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: 0.0 at 5.5 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 9/9/97
 Curve Number: RES-001





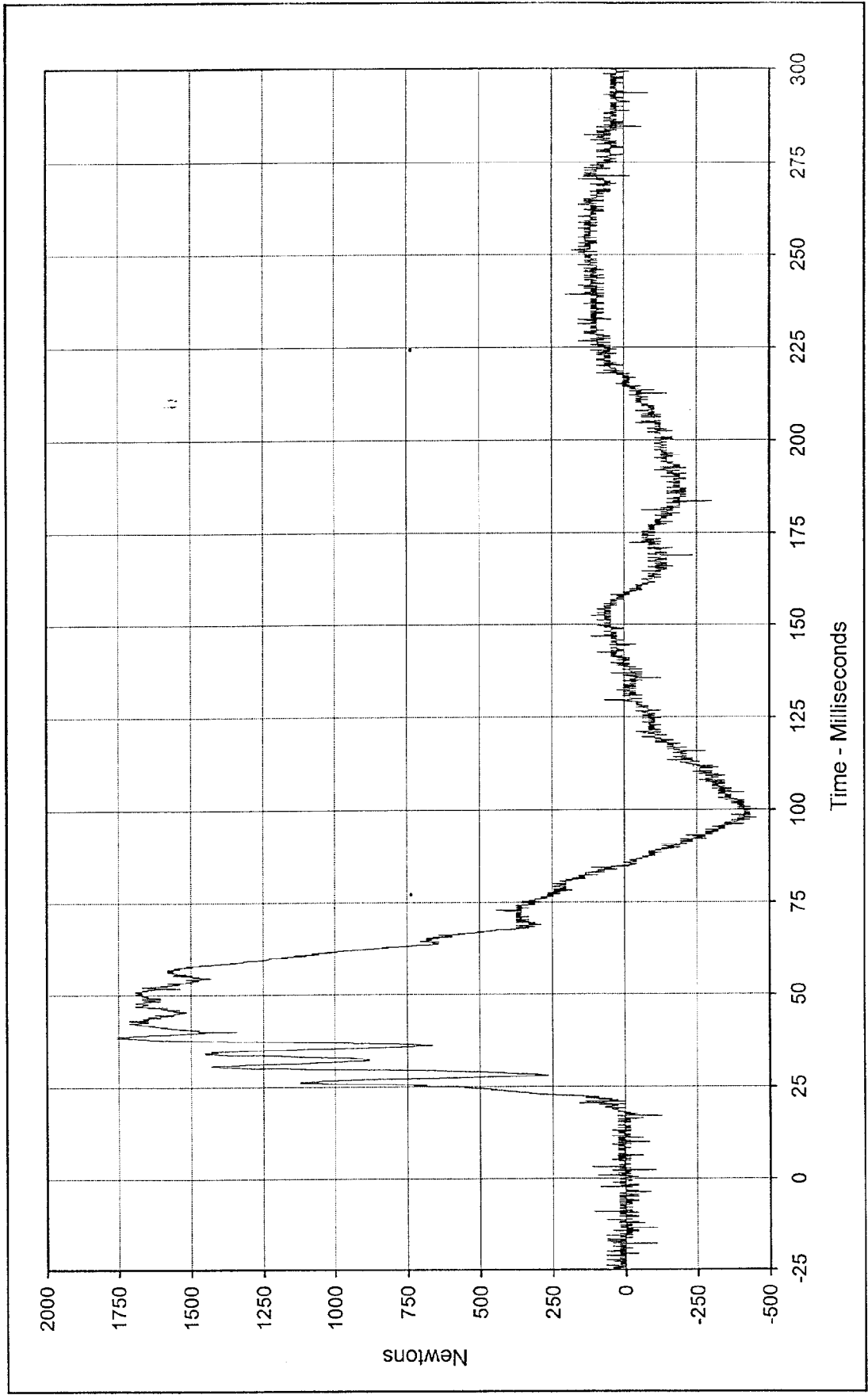
Curve Description: Driver Neck Force X Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 265.8 at 31.3 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -301.3 at 44.6 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 9/9/97
 Curve Number: FIL-004





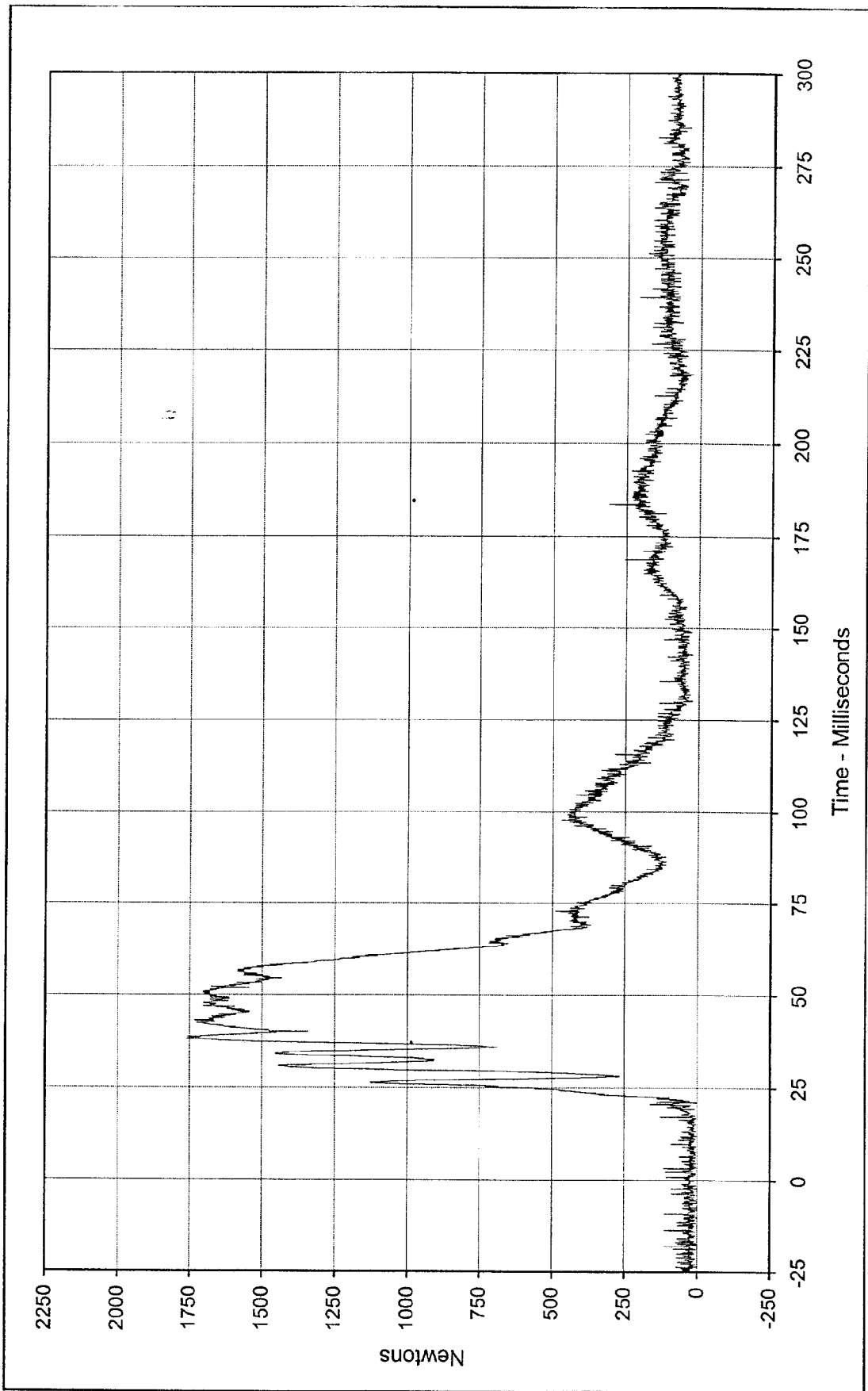
Curve Description: Driver Neck Force Y Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 128.7 at 188.2 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -136.7 at 55.0 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 9/9/97
 Curve Number: FIL-005





Curve Description: Driver Neck Force Z Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 1757.0 at 38.2 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -456.2 at 97.8 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 9/9/97
 Curve Number: FIL-006





Curve Description: Driver Neck Force Resultant Testing Program 1997 48.4 km/h Frontal Impact (Female)

Maximum Value: 1757.2 at 38.2 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan

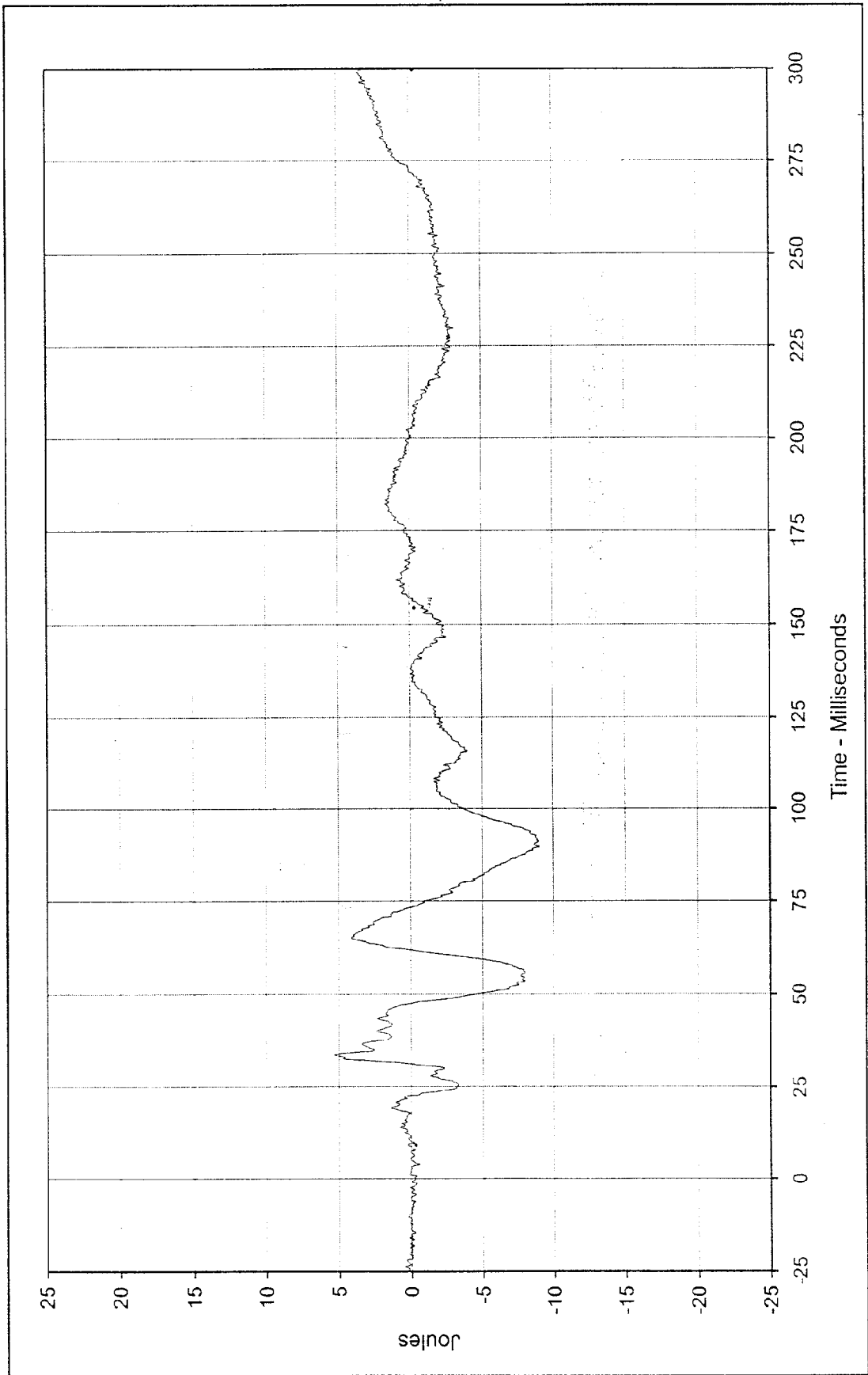
Minimum Value: 4.8 at 1.5 Milliseconds

SAE Filter Class: 1000

Date of Test: 9/9/97

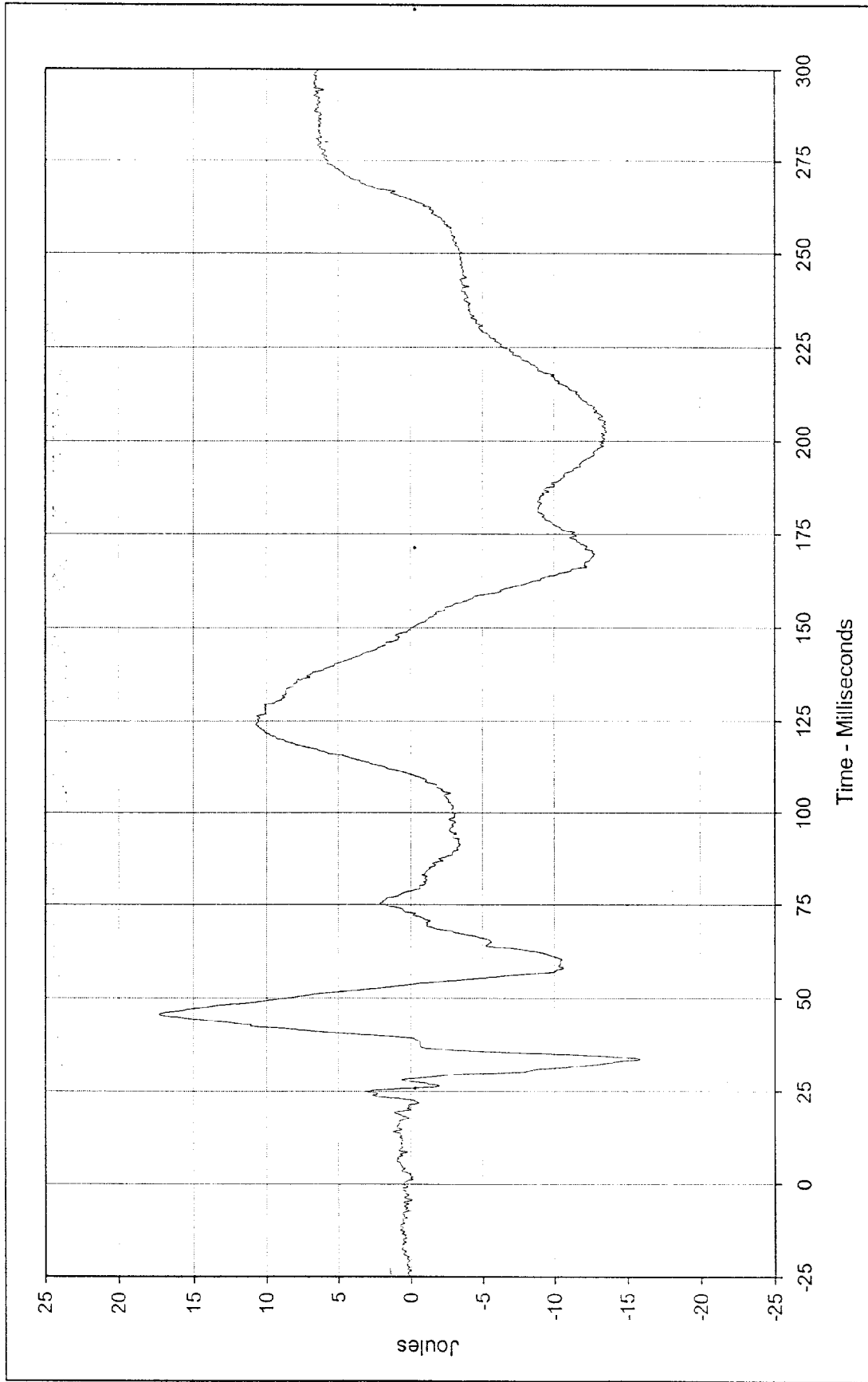
Curve Number: RES-004





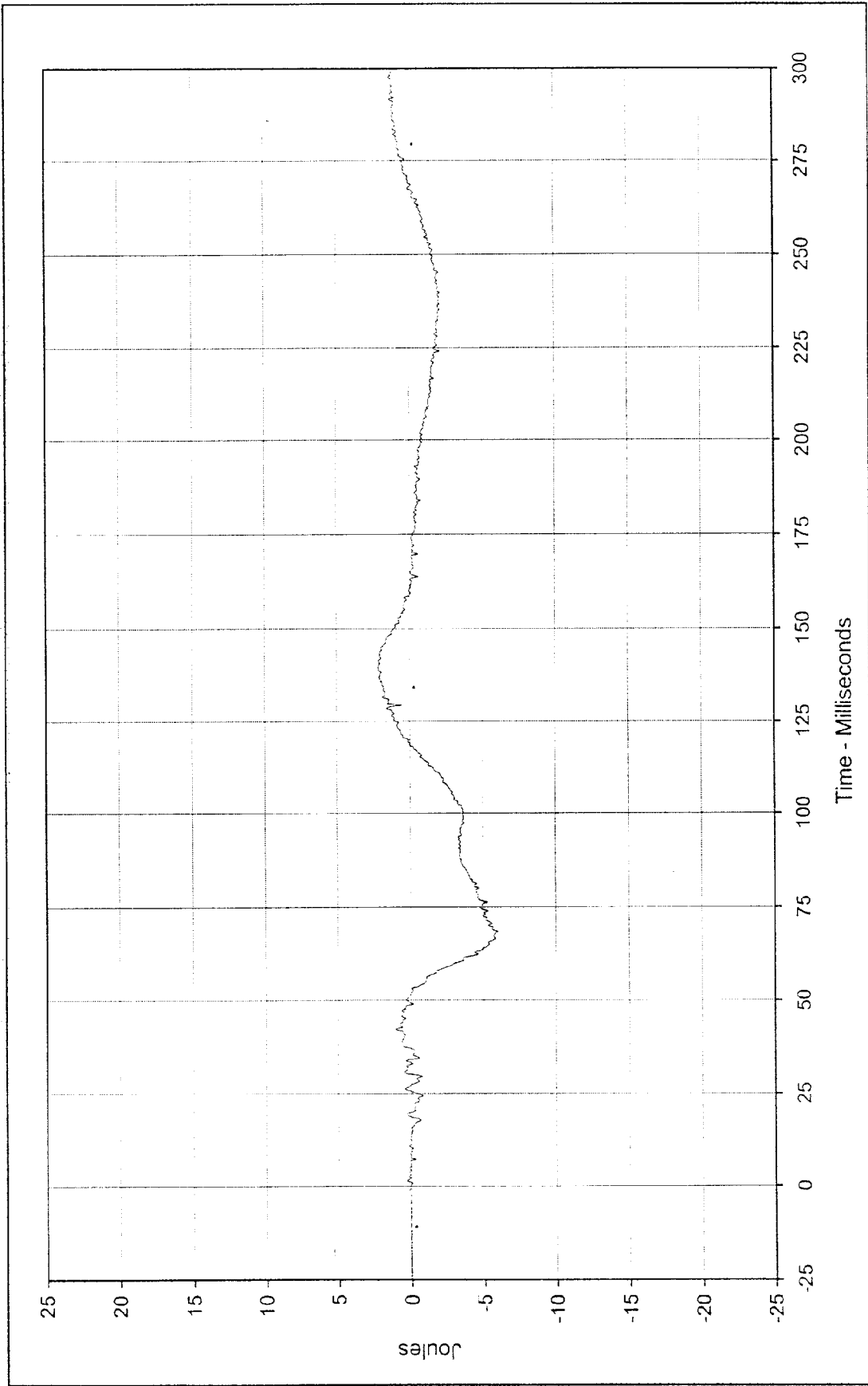
Curve Description: Driver Neck Moment X Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 5.3 at 33.8 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -9.0 at 89.7 Milliseconds
 SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-007





Curve Description: Driver Neck Moment Y Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 17.3 at 45.7 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -15.9 at 33.6 Milliseconds
 SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-008

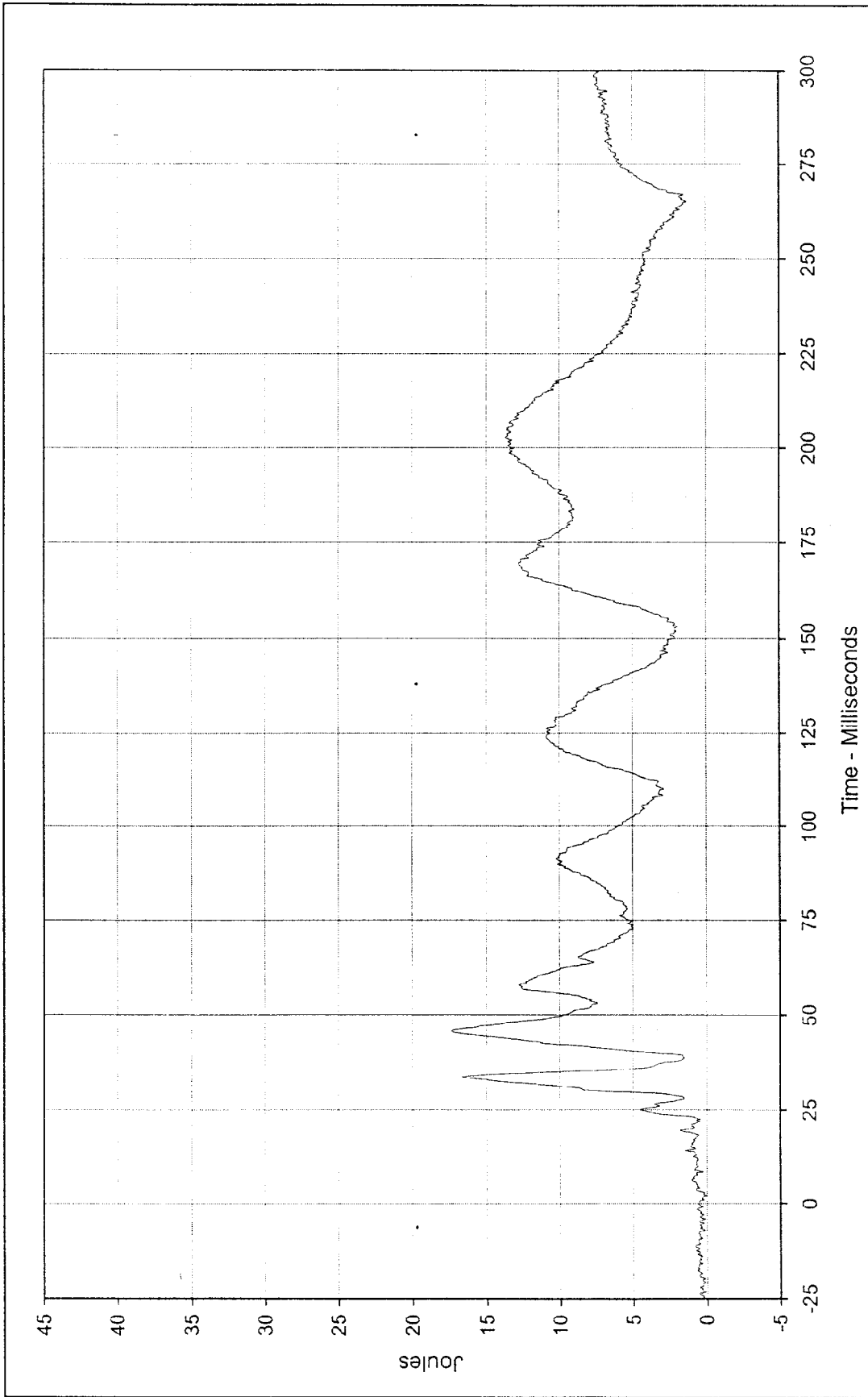




Curve Description: Driver Neck Moment Z
 Maximum Value: 2.1 at 139.8 Milliseconds
 Minimum Value: -6.0 at 68.5 Milliseconds
 SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-009

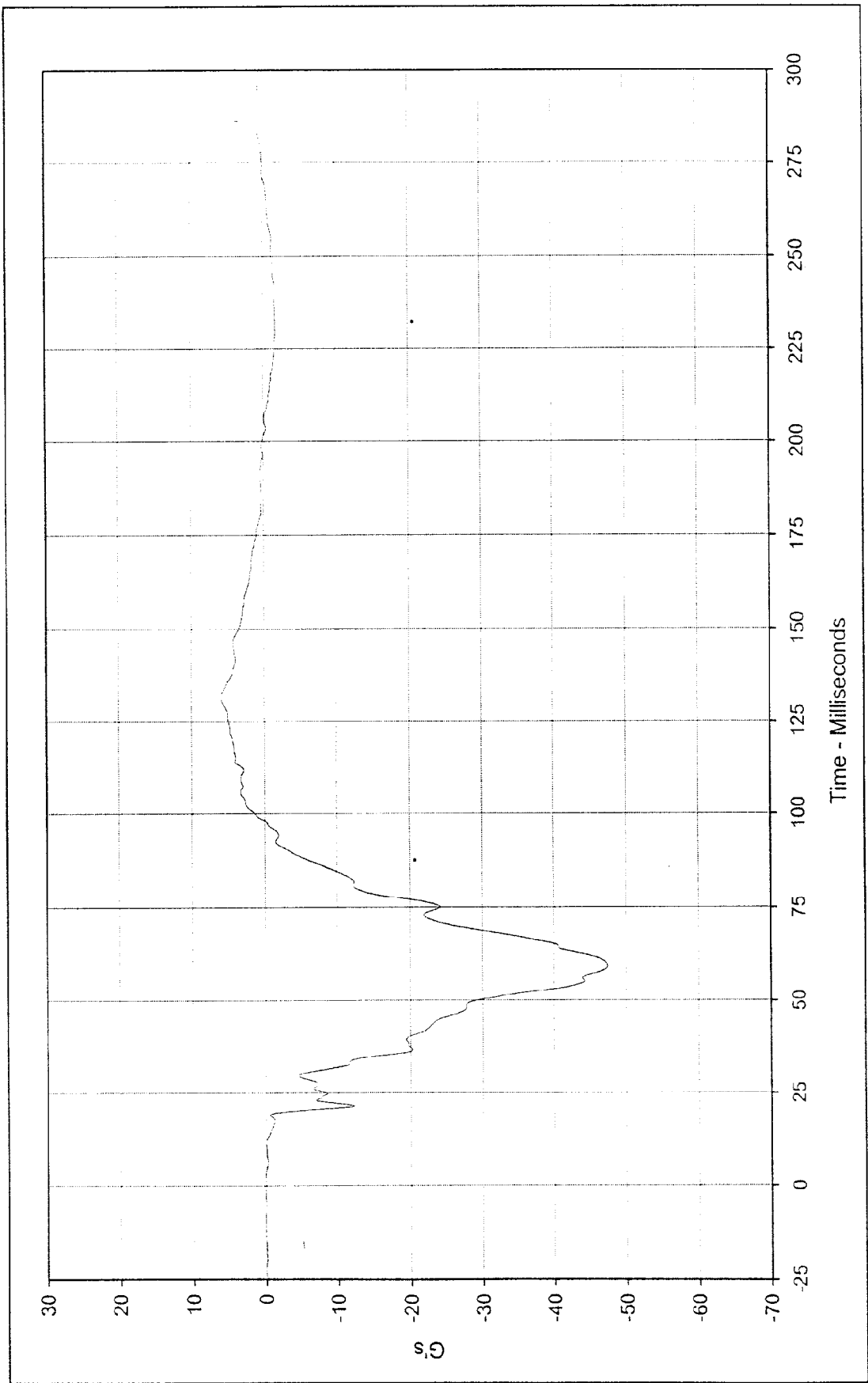
Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan





Curve Description:	Driver Neck Moment Resultant	Testing Program	1997 48.4 km/h Frontal Impact (Female)
Maximum Value:	17.4 at 45.7 Milliseconds	Test Vehicle:	1996 Dodge Neon 4 Door Sedan
Minimum Value:	0.1 at 2.2 Milliseconds		
SAE Filter Class:	600		
Date of Test:	9/9/97		
Curve Number:	RES-007		

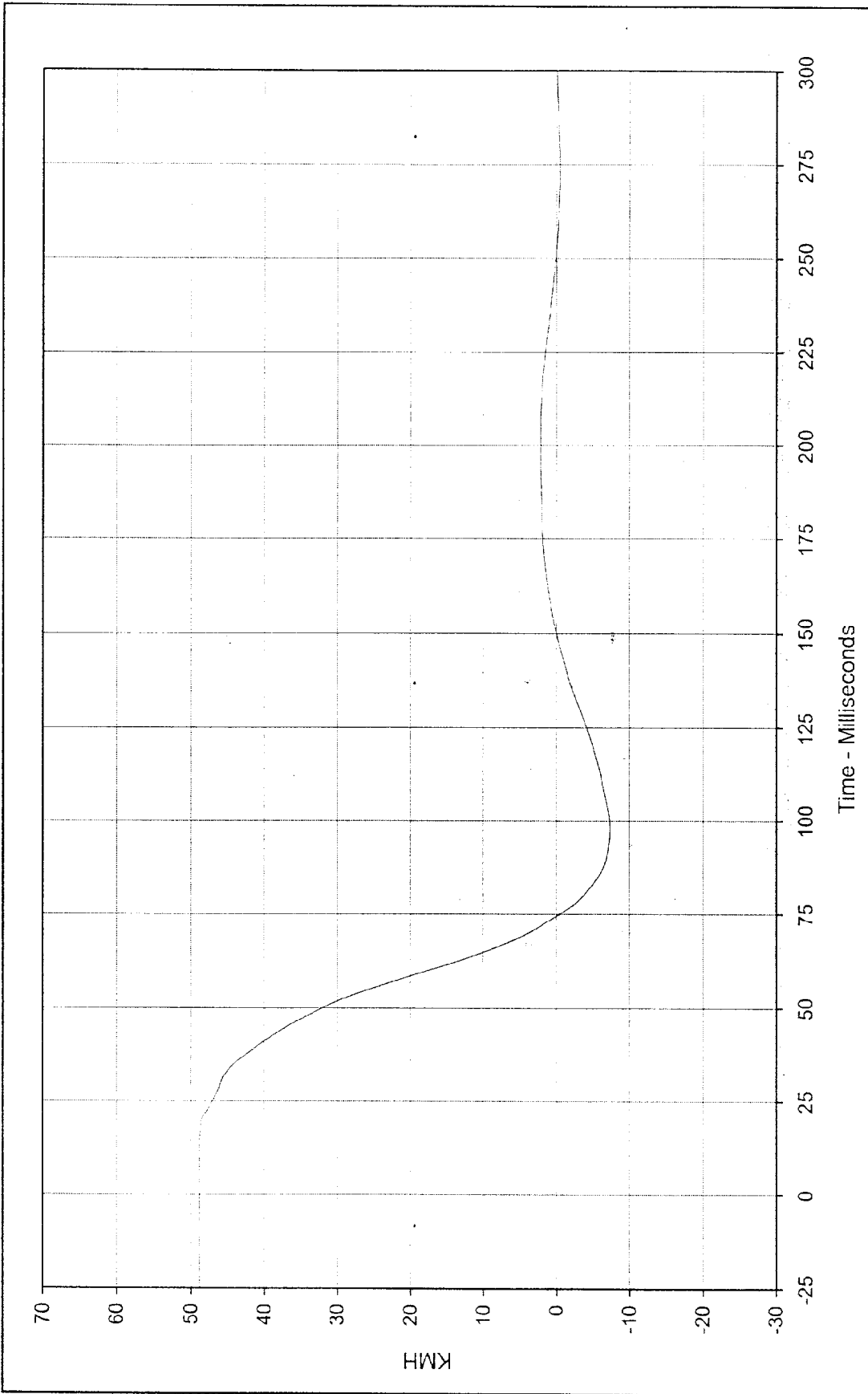




Curve Description: Driver Chest Primary X
 Maximum Value: 6.0 at 132.1 Milliseconds
 Minimum Value: -47.5 at 59.3 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: FIL-010

Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan

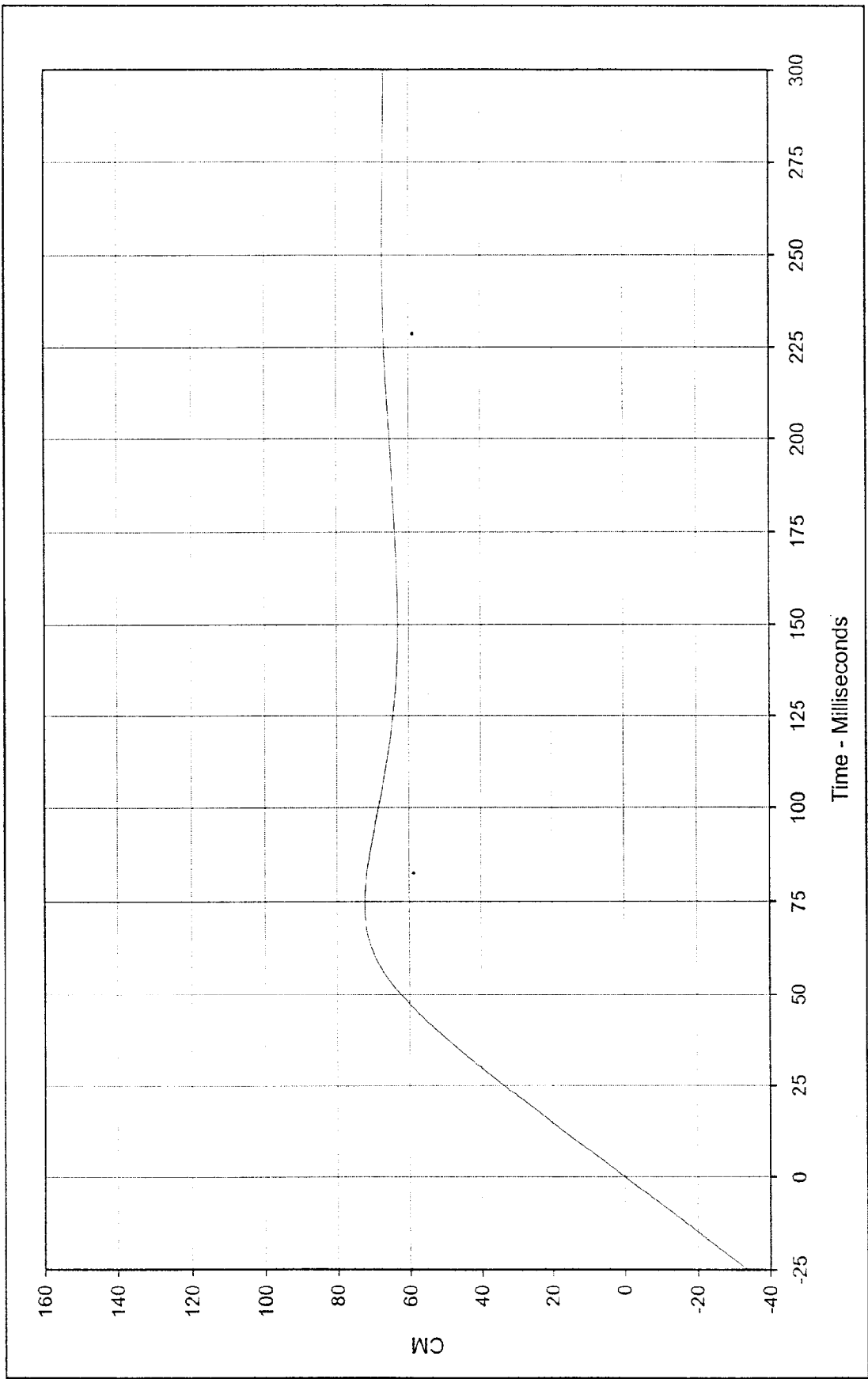




Curve Description: Driver Chest Primary X Velocity Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 48.9 at 3.6 Milliseconds Test Vehicle: 1996 Dodge Neon Door Sedan
 Minimum Value: -7.3 at 98.1 Milliseconds

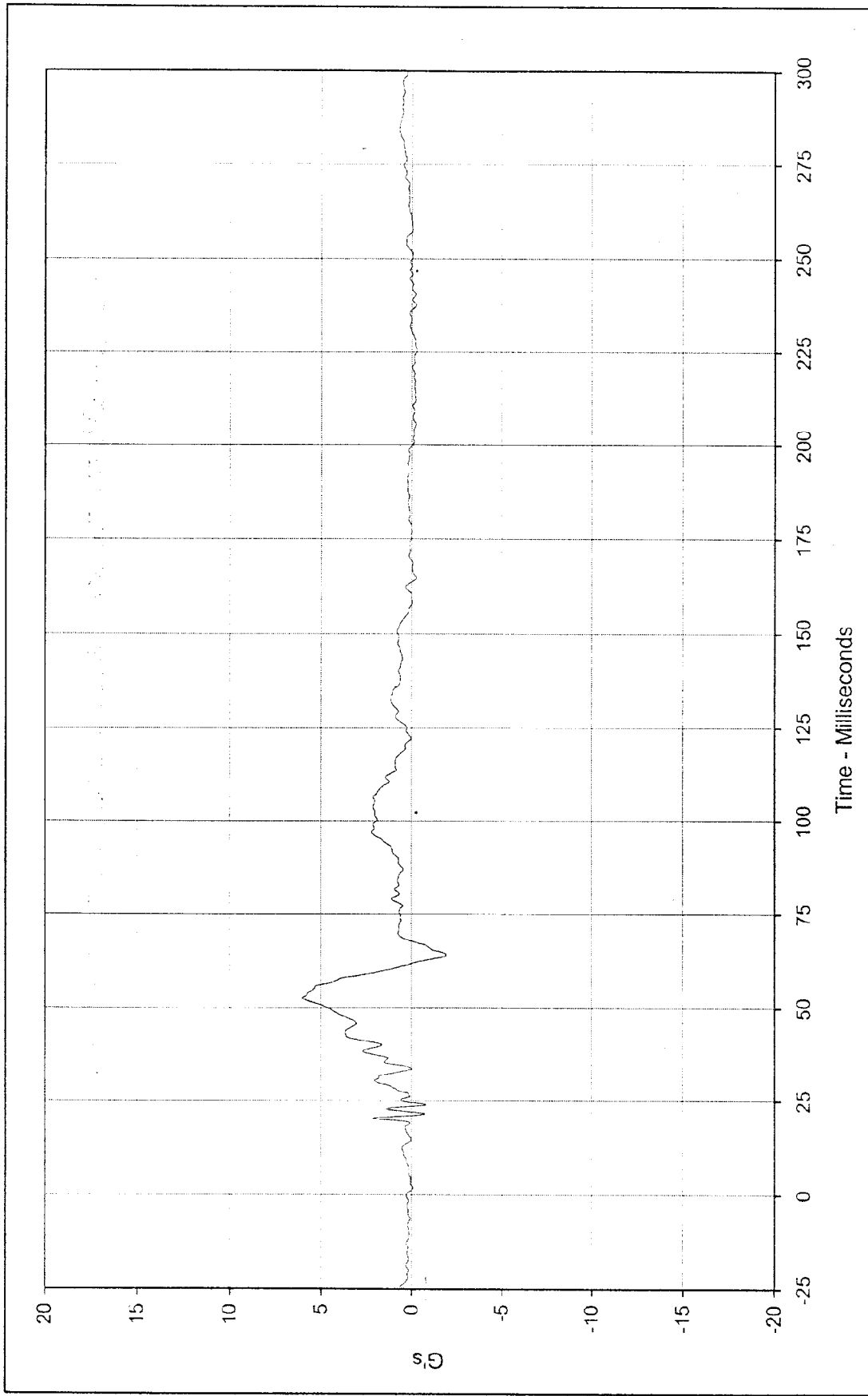


SAE Filler Class: 180
 Date of Test: 9/9/97
 Curve Number: IN1-010



Curve Description: Driver Chest Primary X Displ. Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 72.4 at 74.5 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: 0.0 at 0.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN2-010

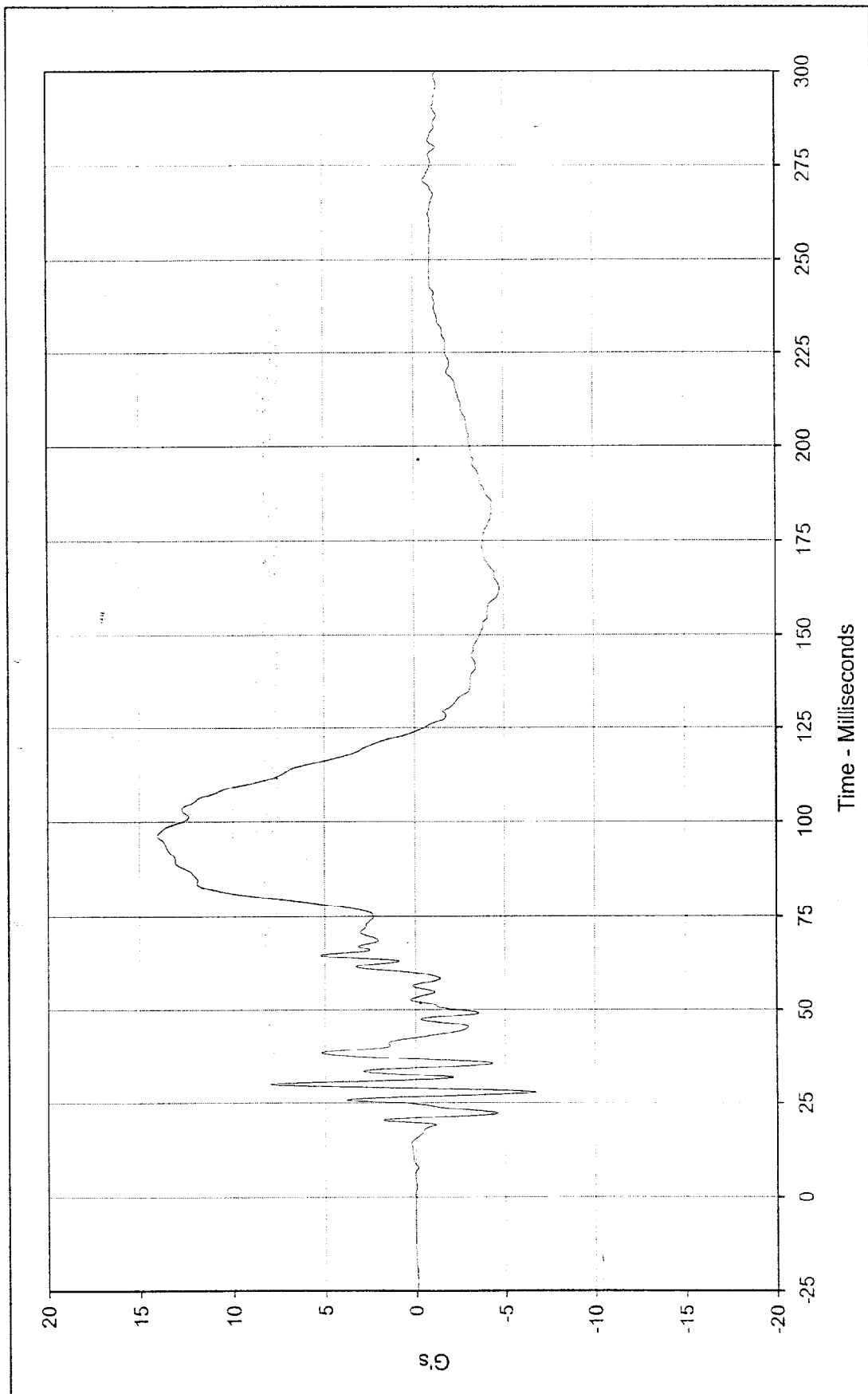




Curve Description: Driver Chest Primary Y
 Maximum Value: 6.0 at 52.6 Milliseconds
 Minimum Value: -1.9 at 64.1 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: FIL-011

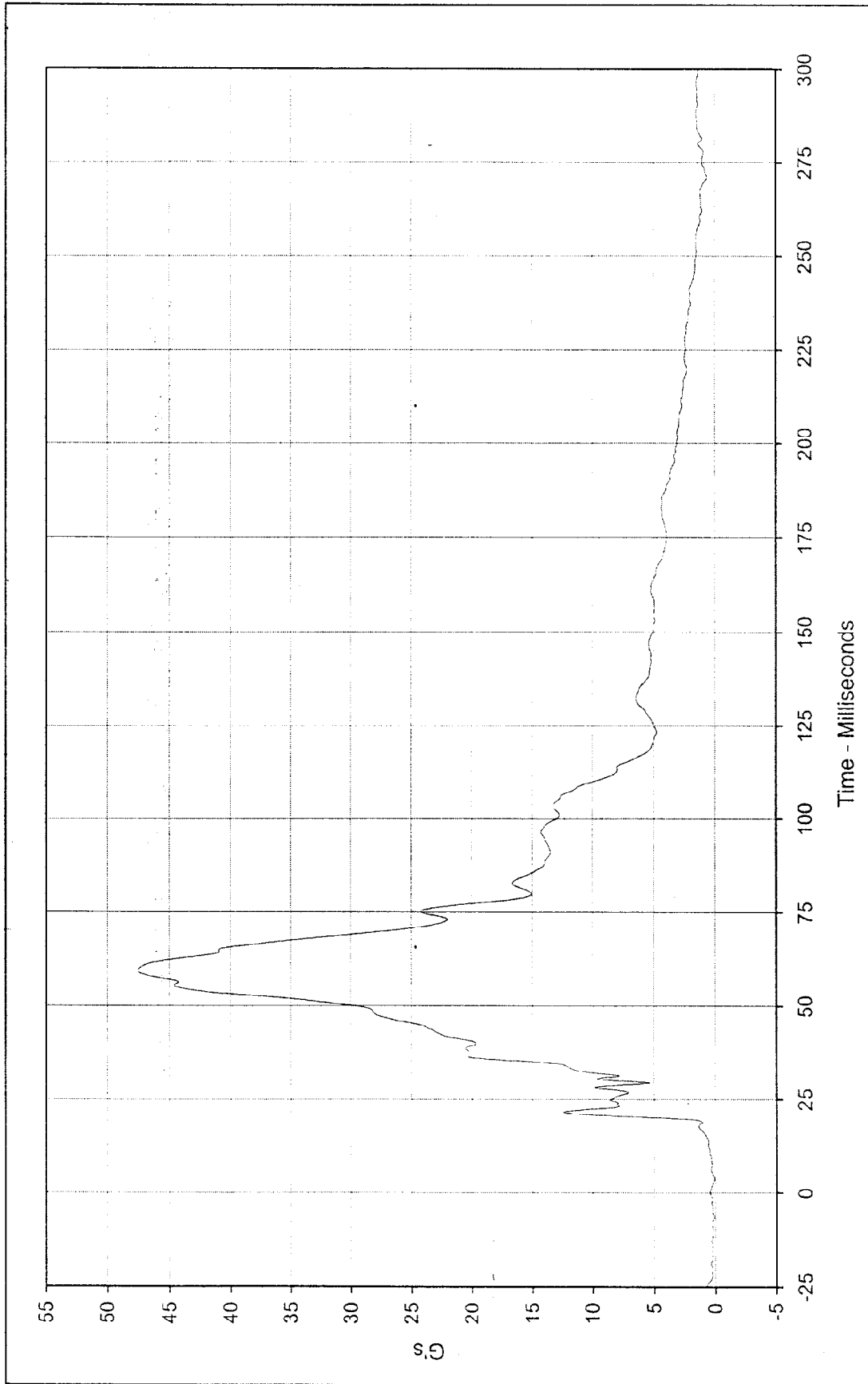
Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan





Curve Description: Driver Chest Primary Z Testing Program: 1997 48.4 km/h Frontal Impact (Female)
Maximum Value: 14.1 at 96.3 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
Minimum Value: -6.7 at 28.1 Milliseconds
SAE Filter Class: 180
Date of Test: 9/9/97
Curve Number: FIL-012

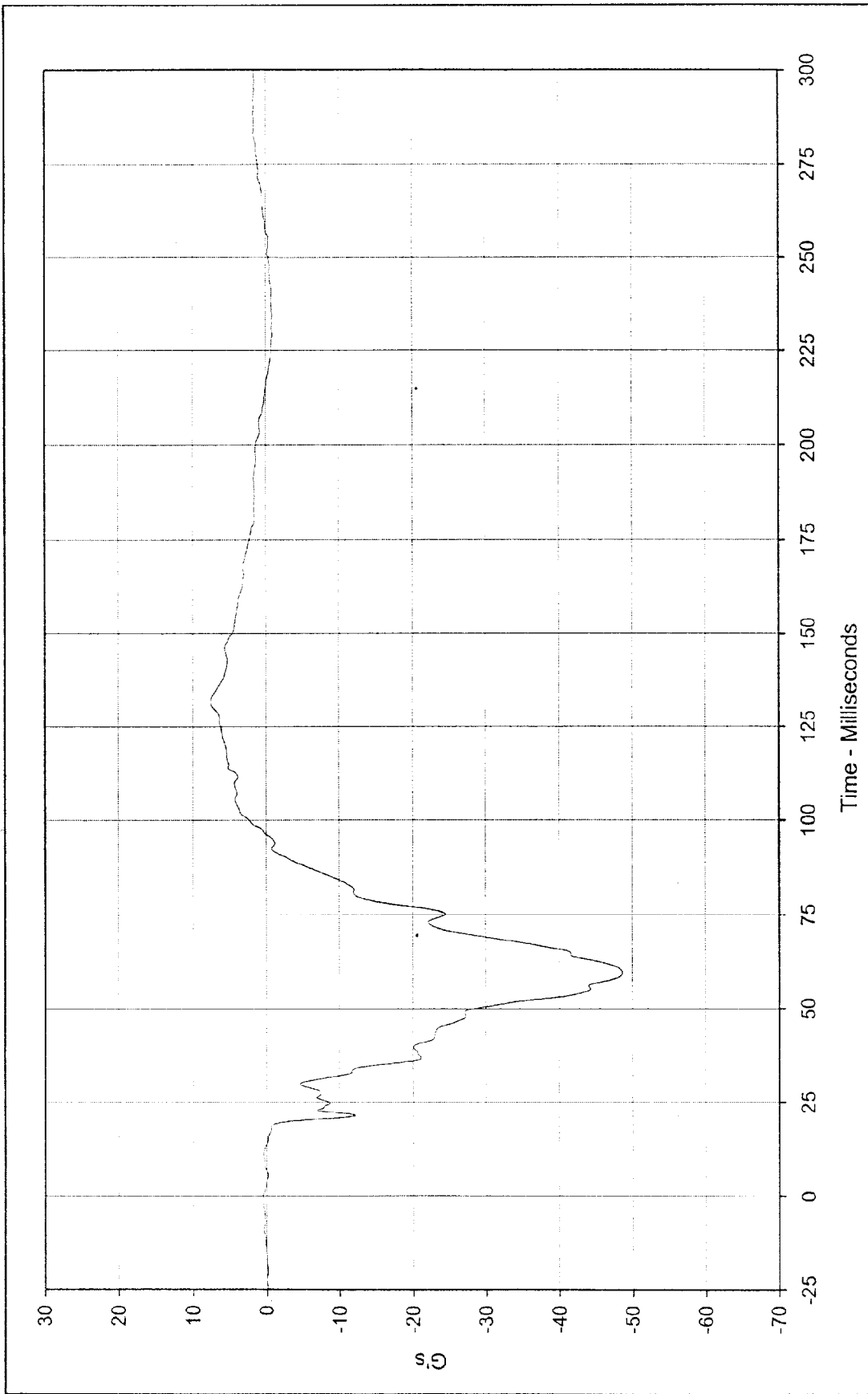




Curve Description: Driver Chest Resultant Primary
 Maximum Value: 47.5 at 59.2 Milliseconds
 Minimum Value: 0.1 at 3.8 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: RES-010

Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan





Curve Description: Driver Chest Redundant X Testing Program 1997 48.4 km/h Frontal Impact (Female)

Maximum Value: 7.6 at 131.5 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan

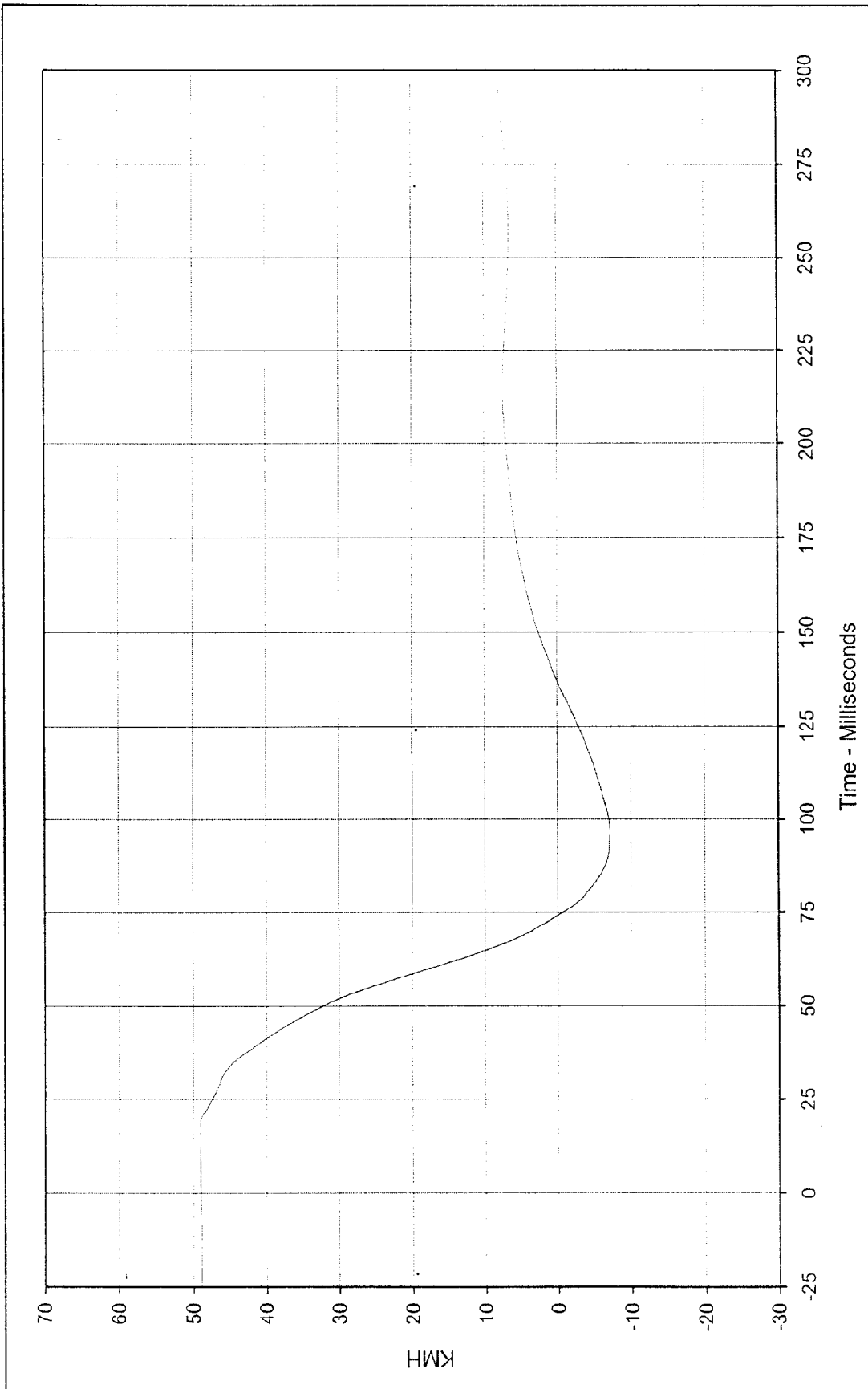
Minimum Value: -48.6 at 59.5 Milliseconds

SAE Filter Class: 180

Date of Test: 9/9/97

Curve Number: FIL-013

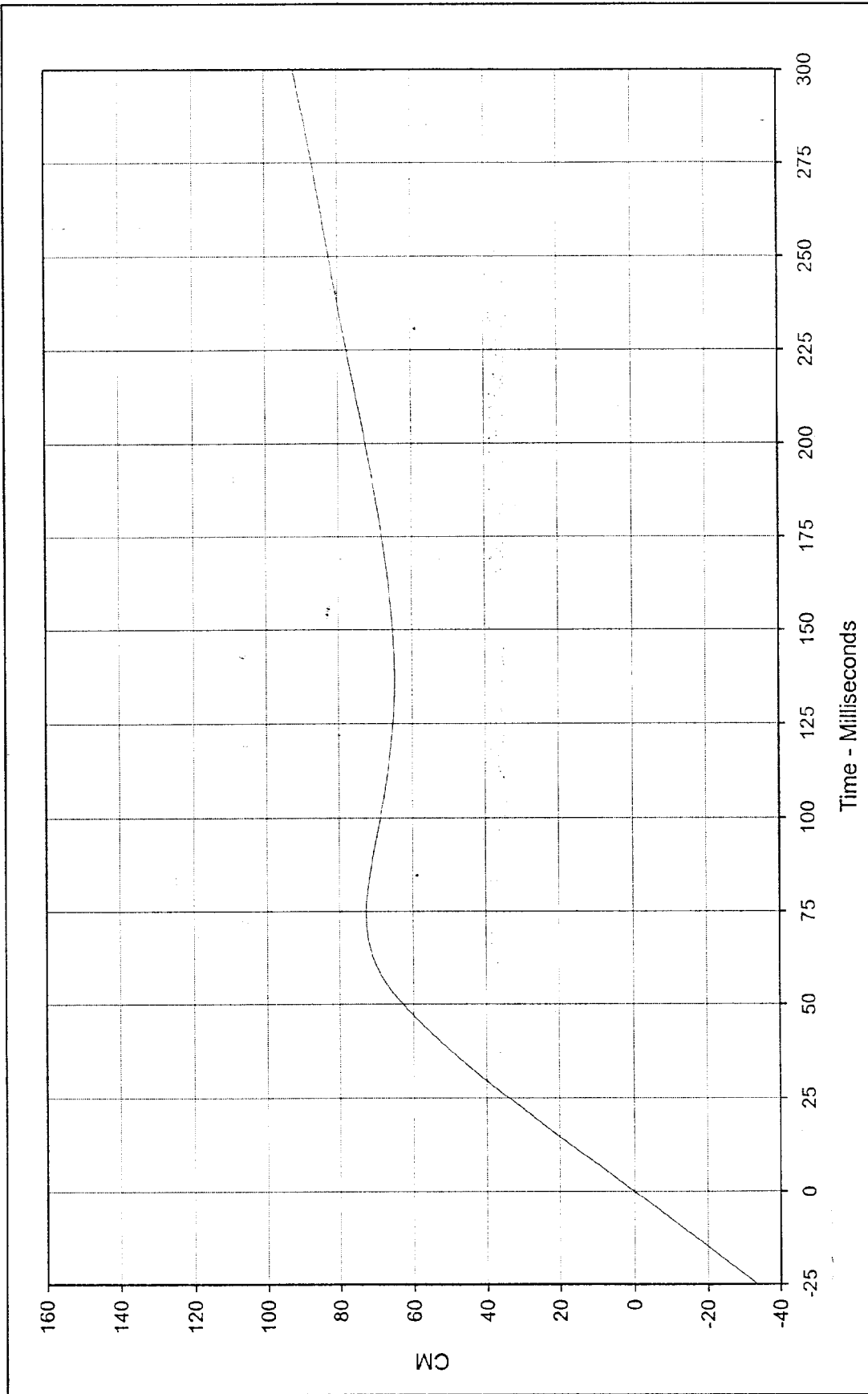




Curve Description: Driver Chest Redundant X Velocity Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 49.1 at 13.8 Milliseconds Test Vehicle: 1996 Dodge Neon Door Sedan
 Minimum Value: -7.2 at 96.3 Milliseconds

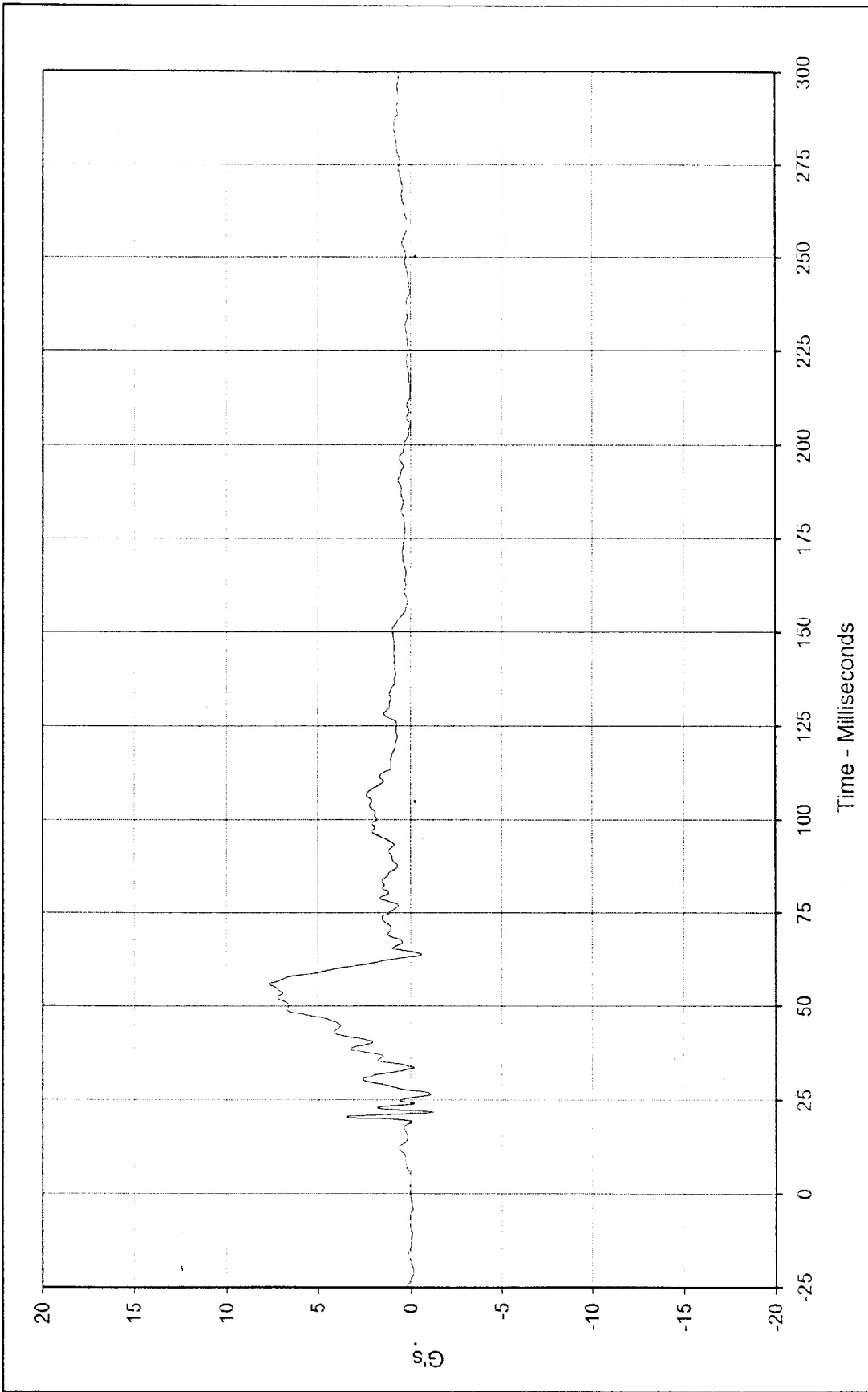


SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN1-013



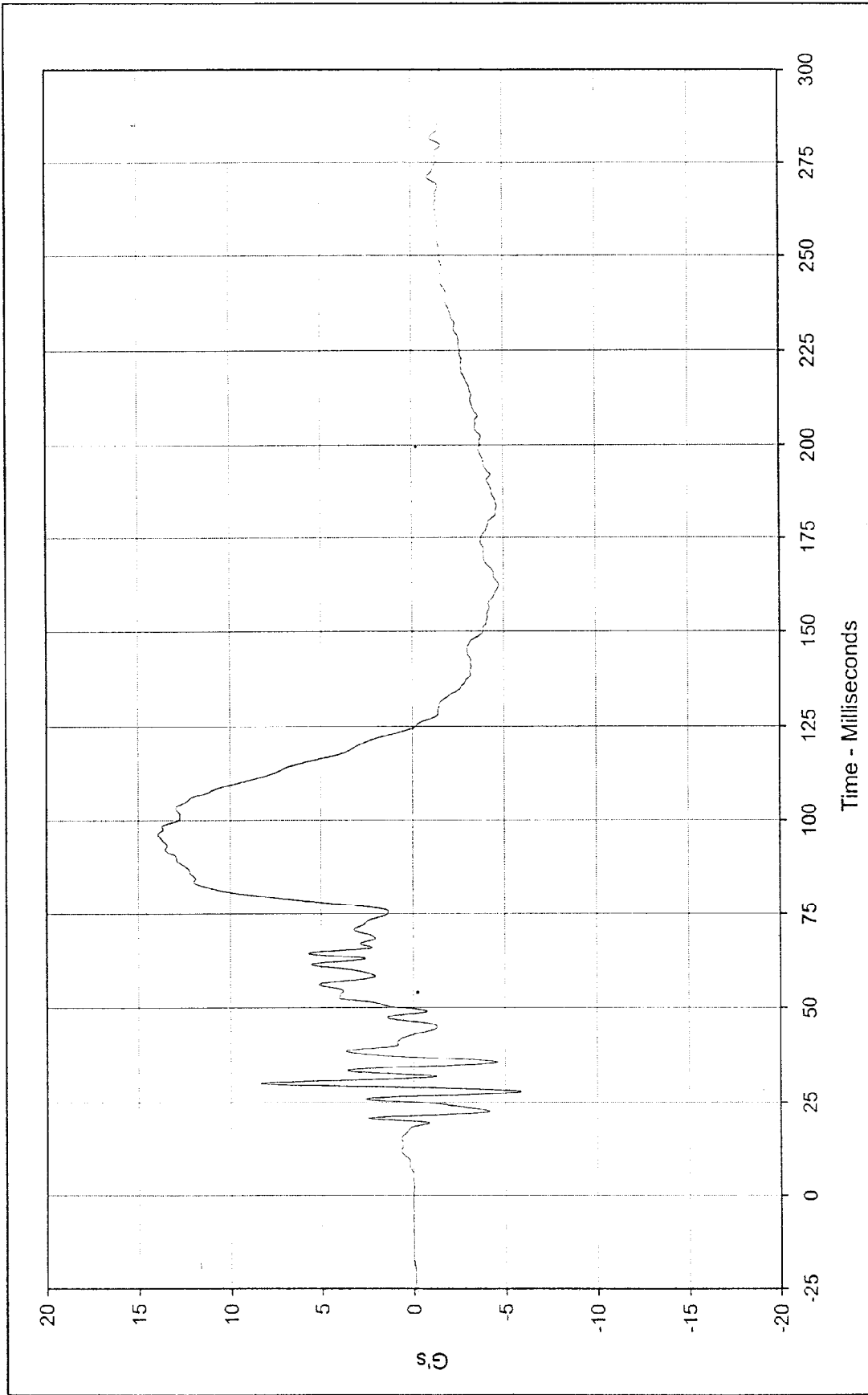
Curve Description: Driver Chest Redundant X Displ. Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 92.1 at 299.9 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: 0.0 at 0.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN2-013





Curve Description: Driver Chest Redundant Y Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 7.7 at 55.8 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -1.3 at 21.6 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: FIL-014

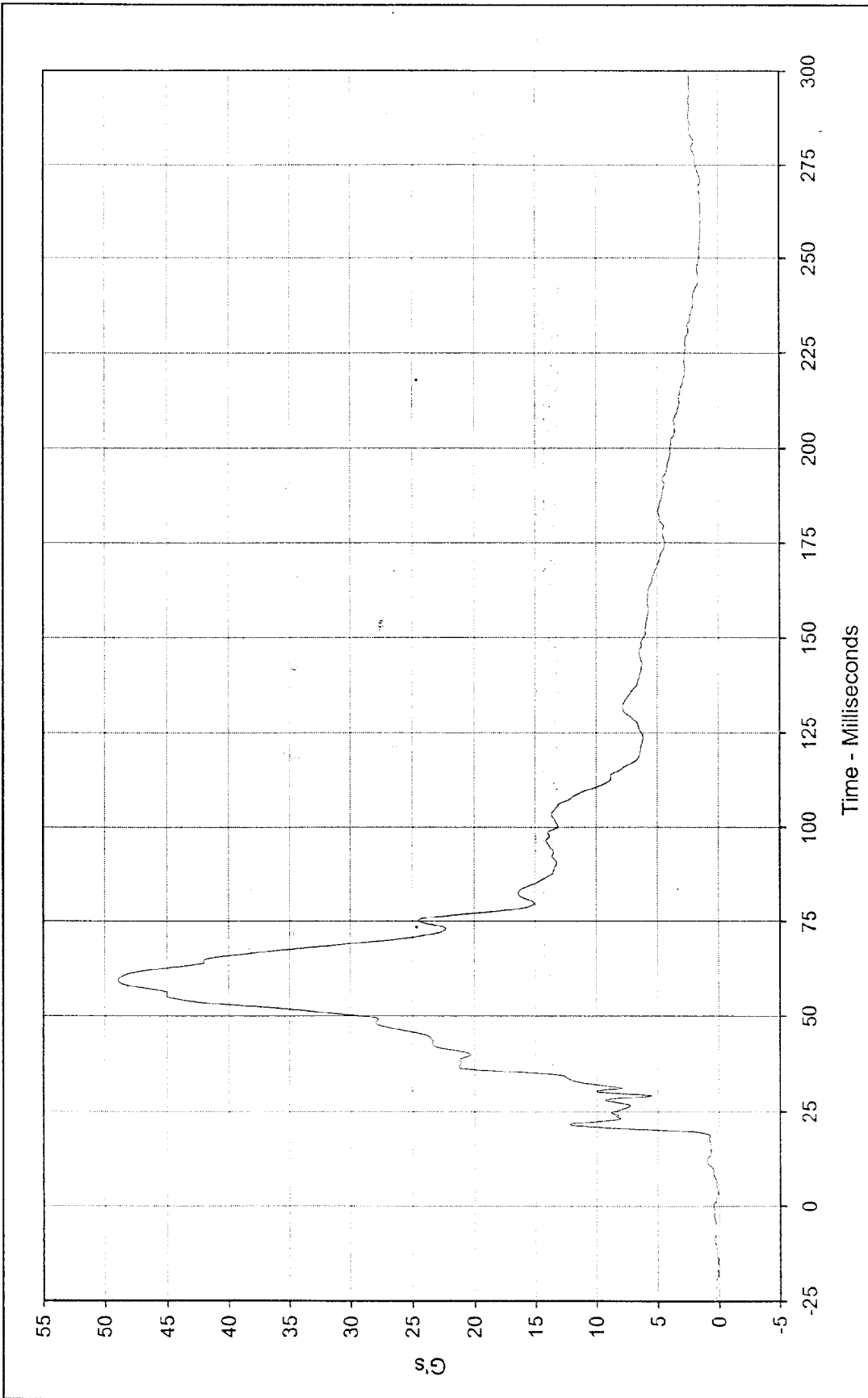




Curve Description: Driver Chest Redundant Z Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 14.0 at 96.4 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -5.8 at 28.0 Milliseconds



SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: FIL-015



Curve Description: Driver Chest Resultant Redundant Testing Program: 1997 48.4 km/h Frontal Impact (Female)

Maximum Value: 48.9 at 59.4 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan

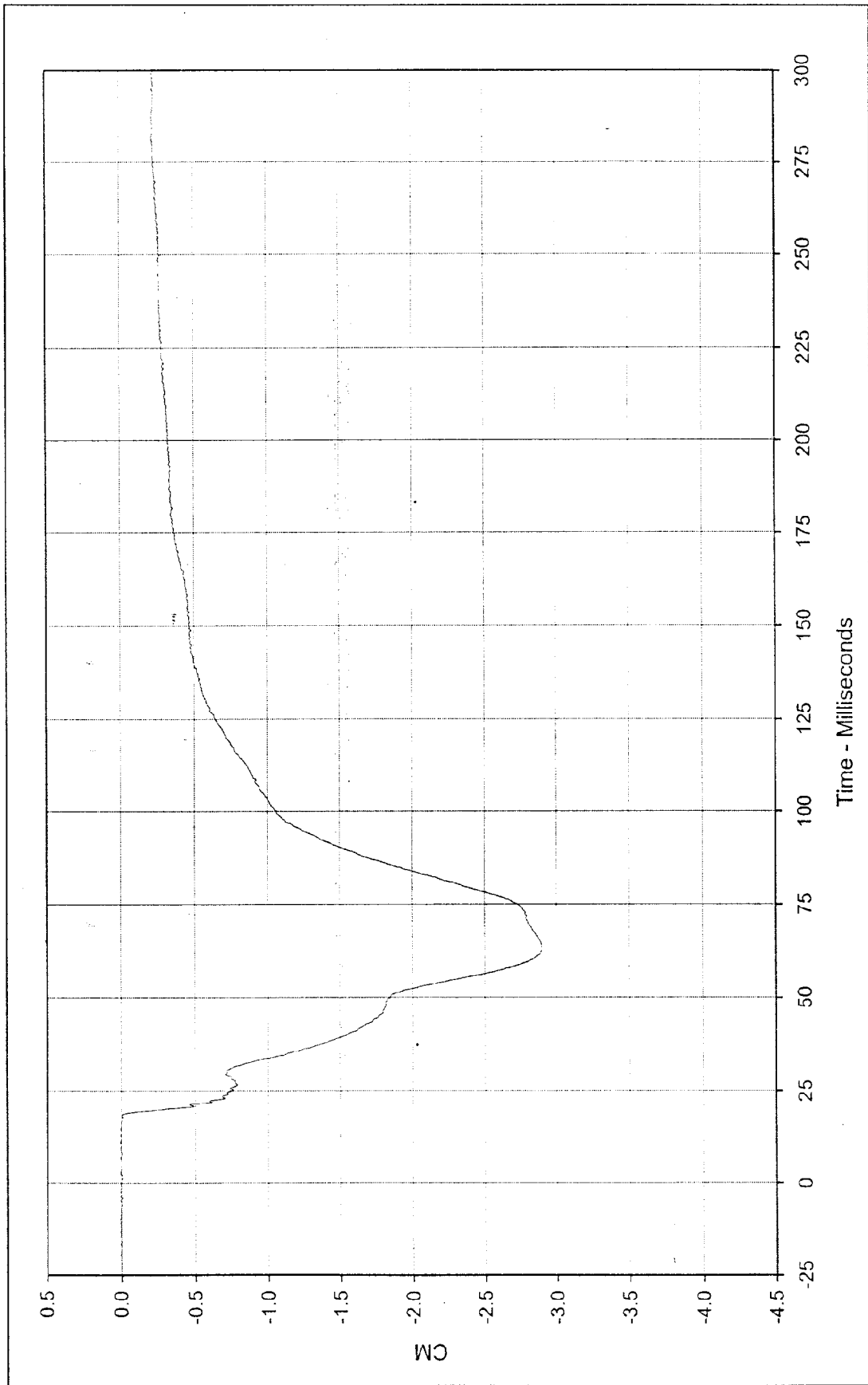
Minimum Value: 0.1 at 3.6 Milliseconds

SAE Filter Class: 180

Date of Test: 9/9/97

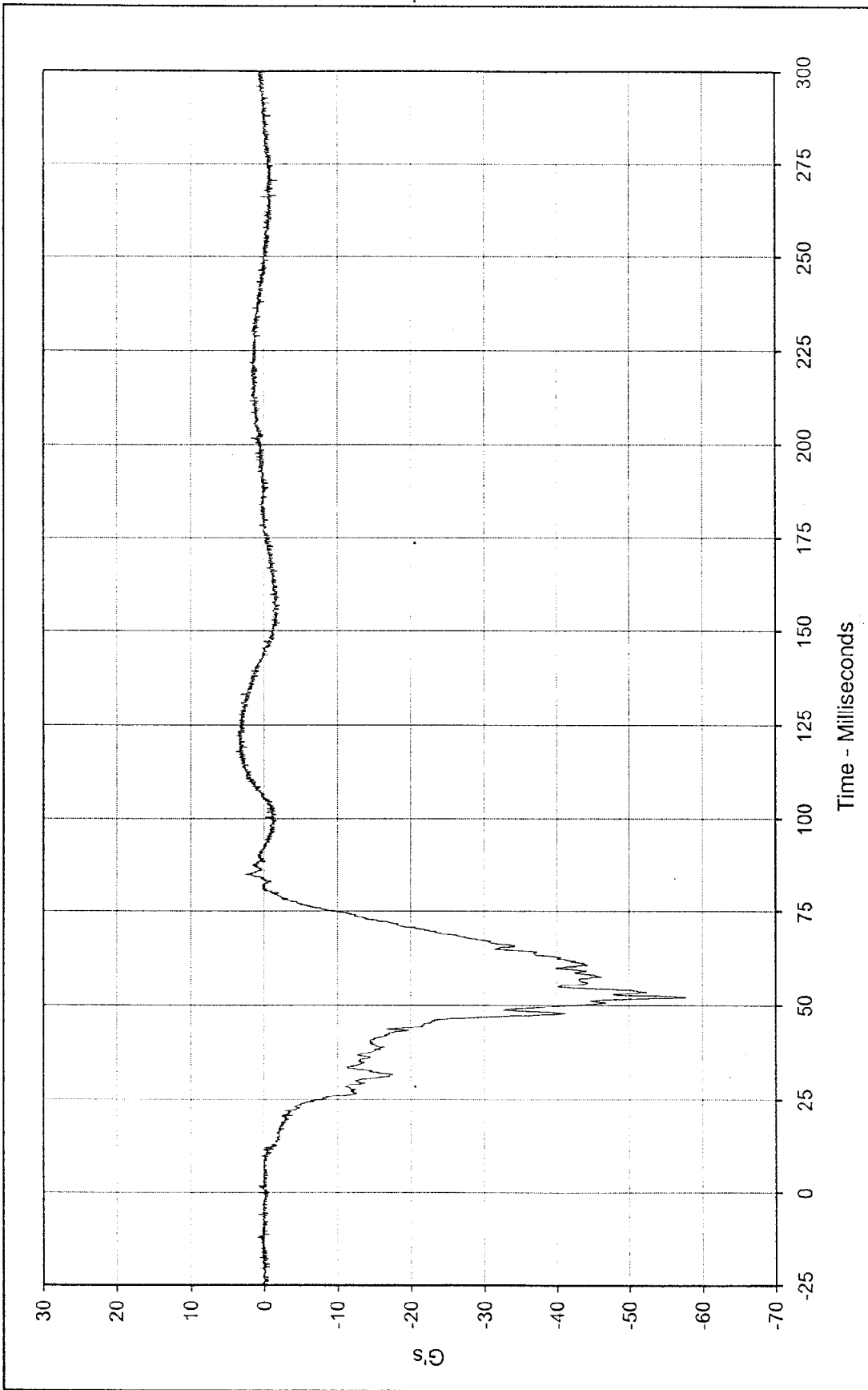
Curve Number: RES-013





Curve Description: Driver Chest Displacement X Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 0.01 at 11.1 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -2.90 at 62.6 Milliseconds
 SAE Filter Class: 600
 Date of Test: 8/28/97
 Curve Number: FIL-016

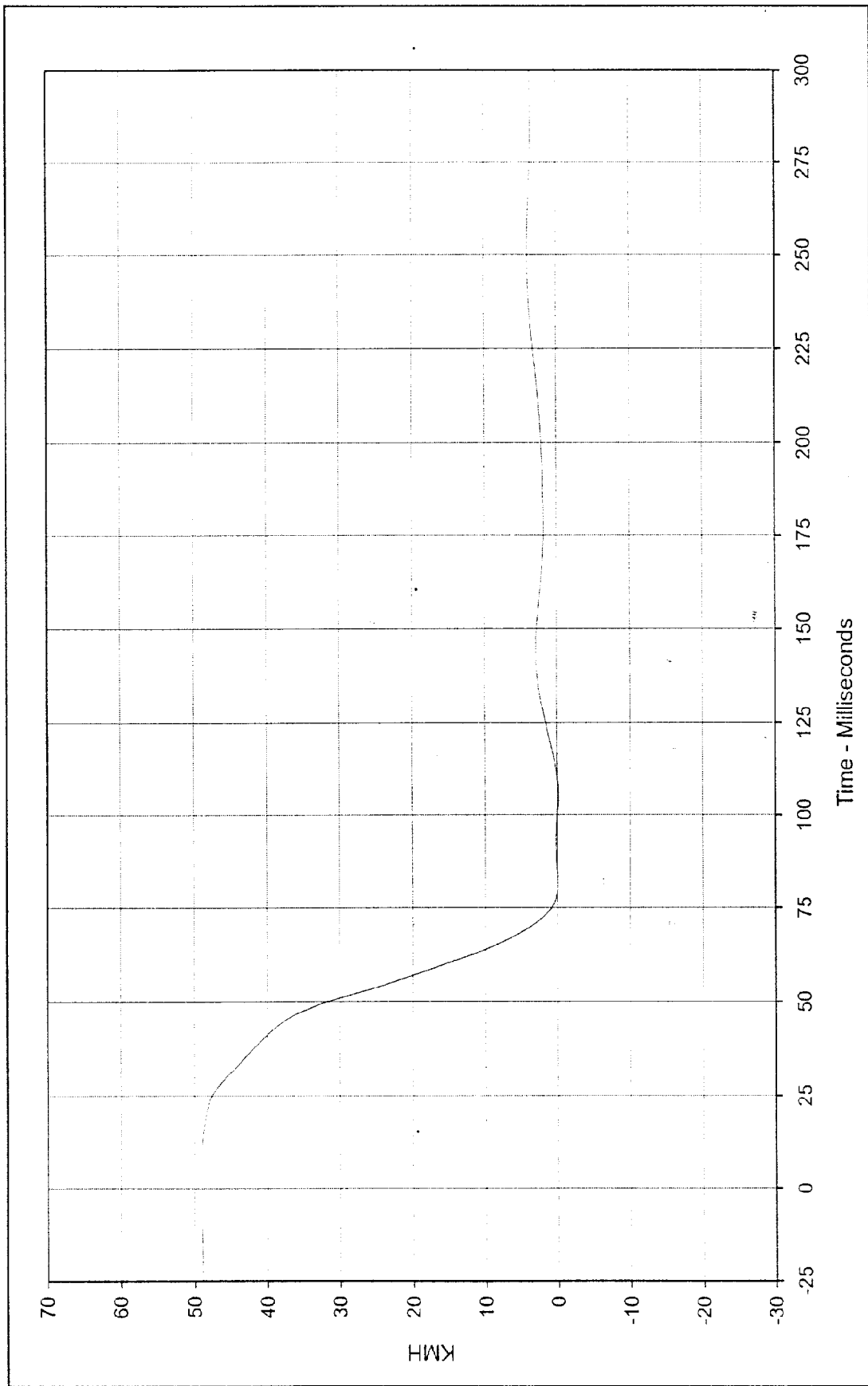




Curve Description: Driver Pelvis X Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 4.0 at 117.9 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -57.6 at 52.1 Milliseconds



SAE Filter Class: 1000
 Date of Test: 8/28/97
 Curve Number: FIL-017



Curve Description: Driver Peivis X Velocity Testing Program 1997 48.4 km/h Frontal Impact (Female)

Maximum Value: 49.0 at 8.6 Milliseconds Test Vehicle: 1996 Dodge Neon Door Sedan

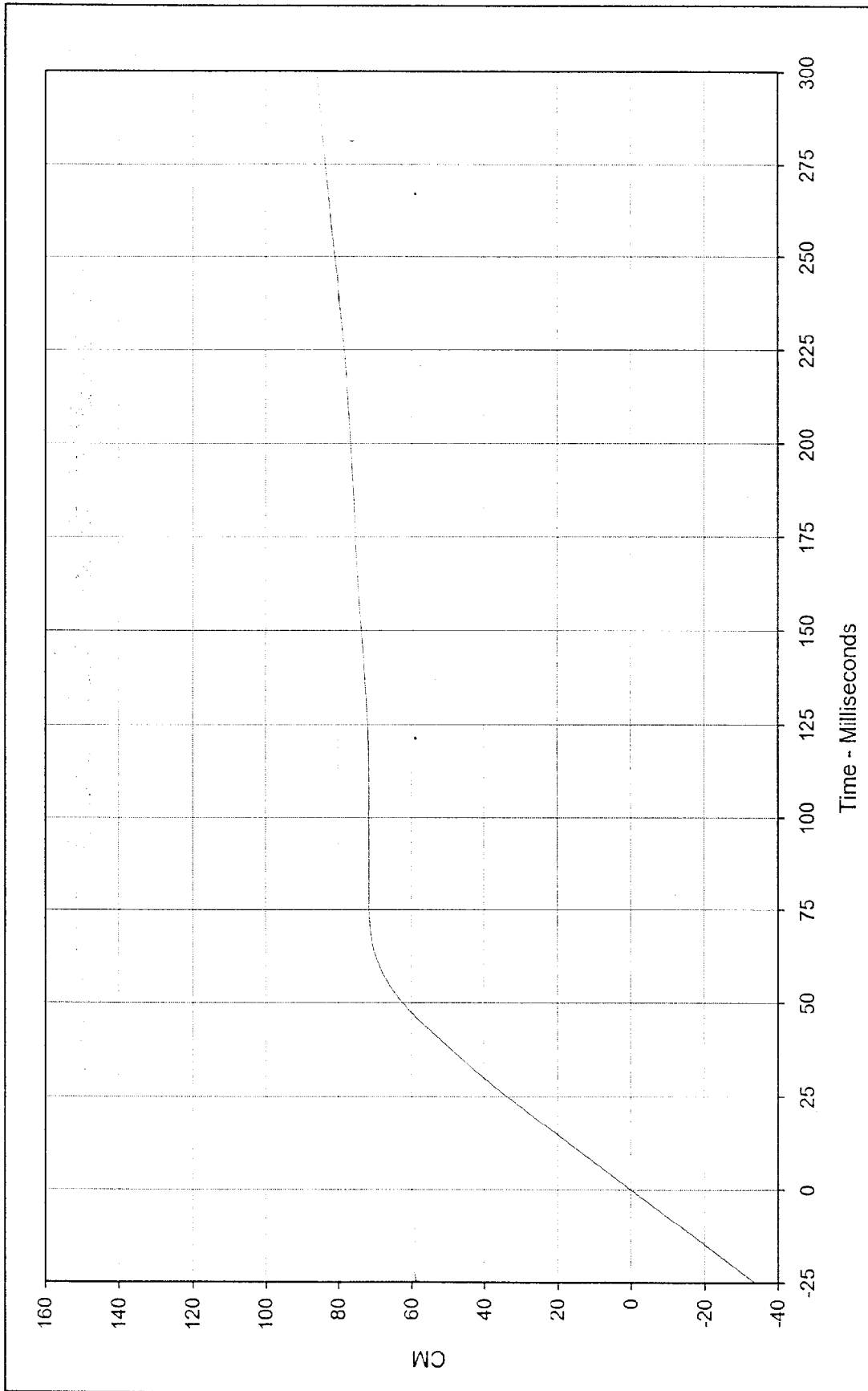
Minimum Value: -0.1 at 105.5 Milliseconds

SAE Filter Class: 180

Date of Test: 9/9/97

Curve Number: IN1-017

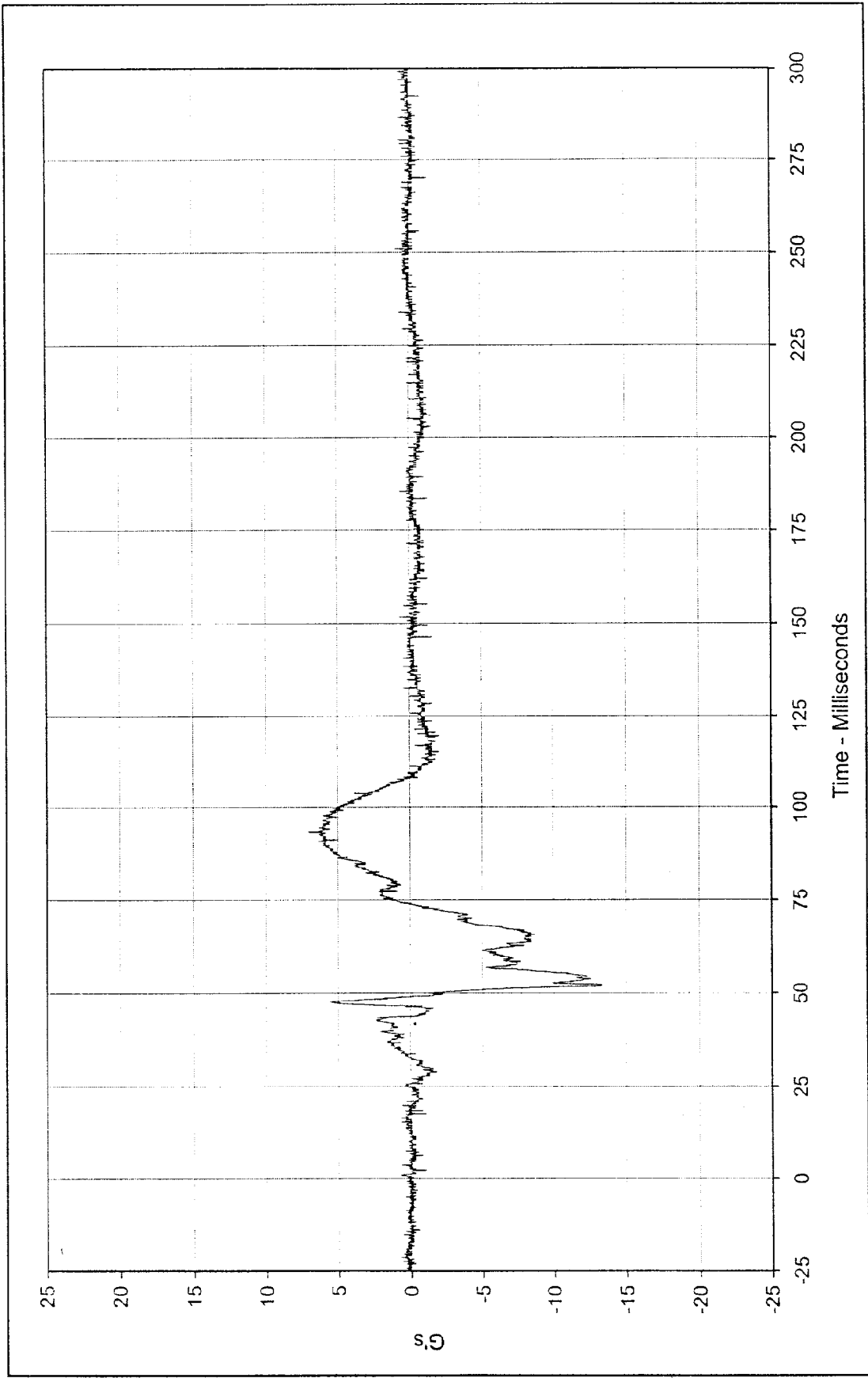




Curve Description: Driver Pelvis X Displ. Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 86.0 at 299.9 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: 0.1 at 0.0 Milliseconds

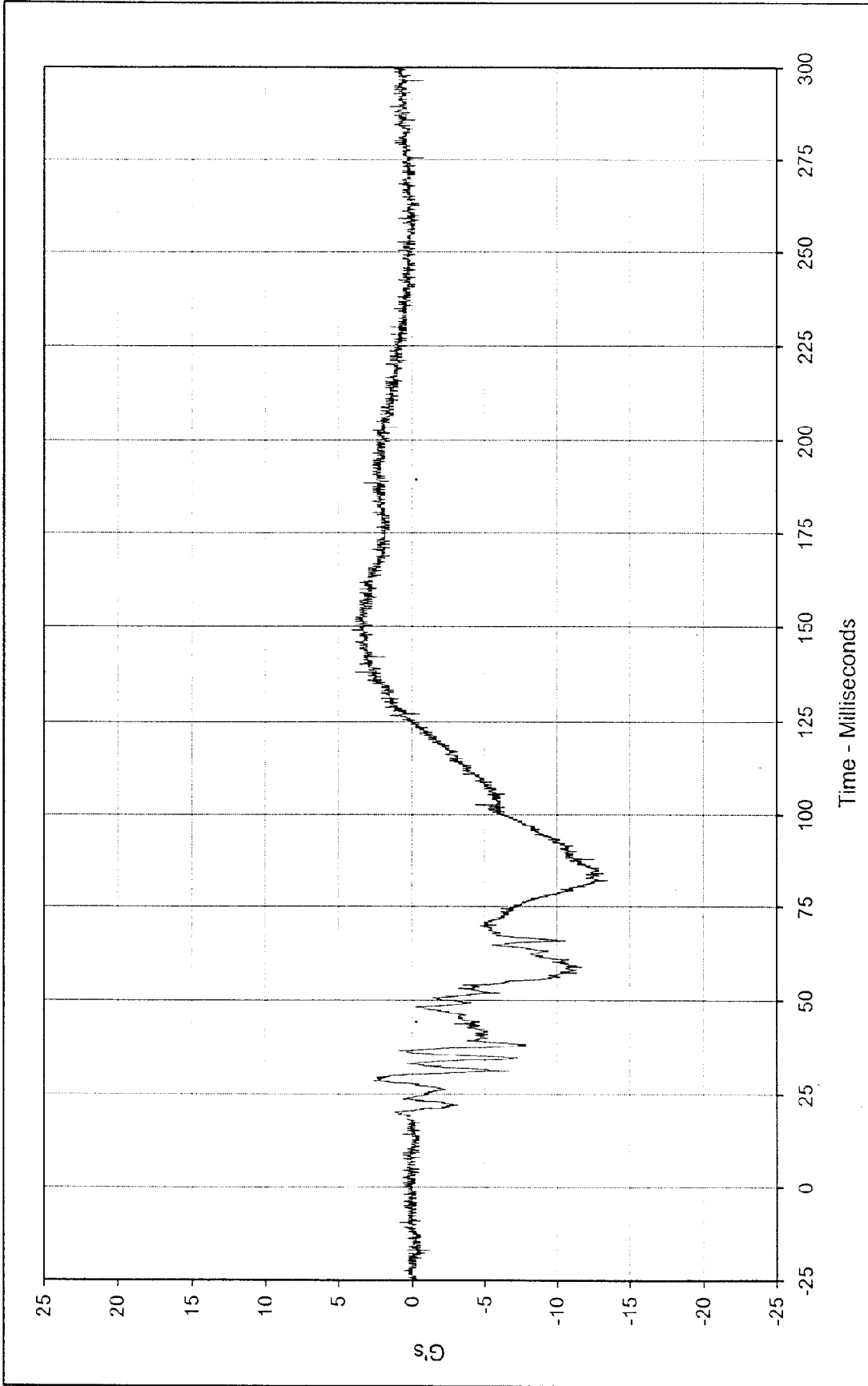


SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN2-017



Curve Description: Driver Pelvis Y Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 7.0 at 93.4 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -13.3 at 52.1 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 8/28/97
 Curve Number: FIL-018

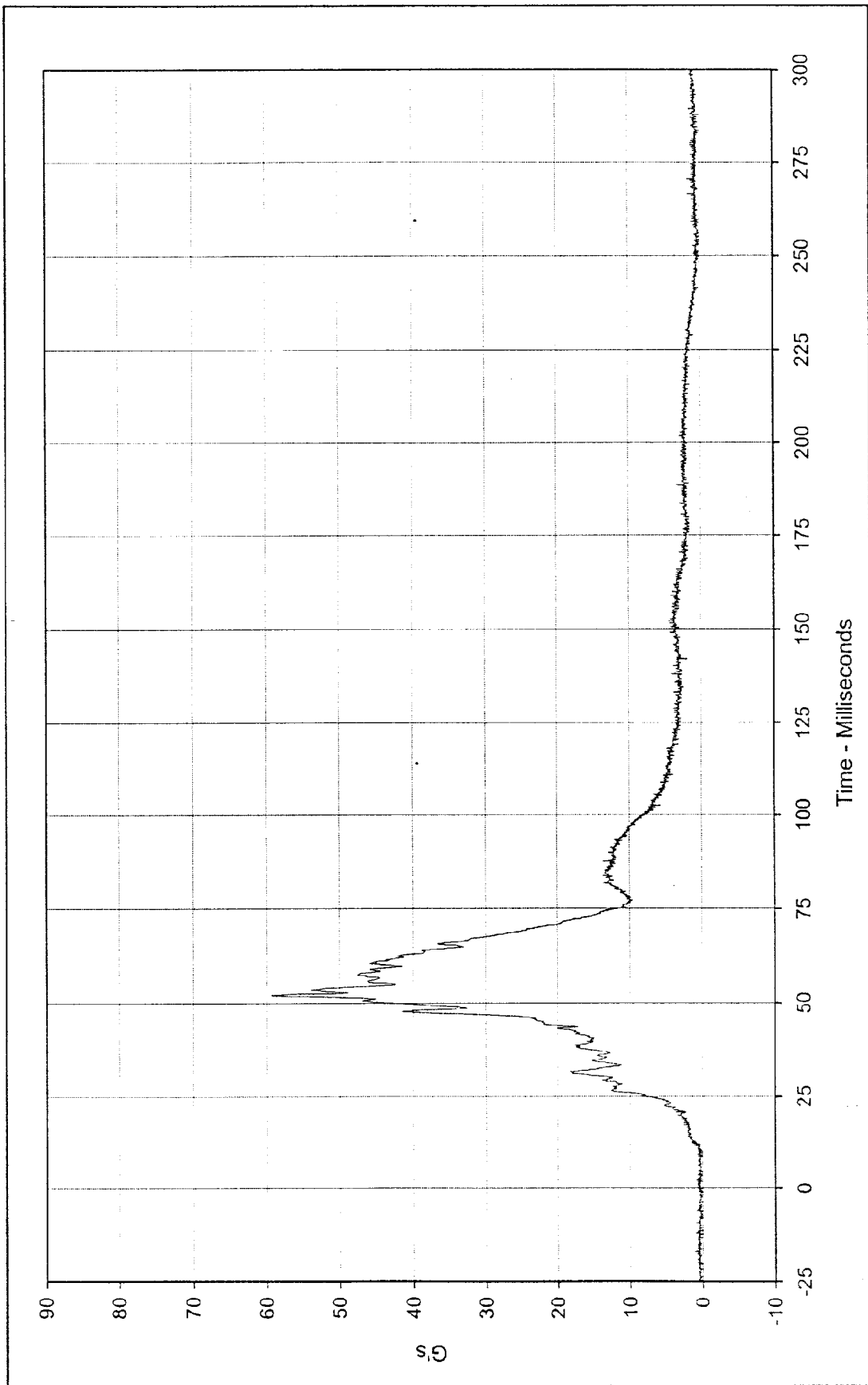




Curve Description: Driver Pelvis Z Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 4.2 at 149.1 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -13.5 at 82.0 Milliseconds

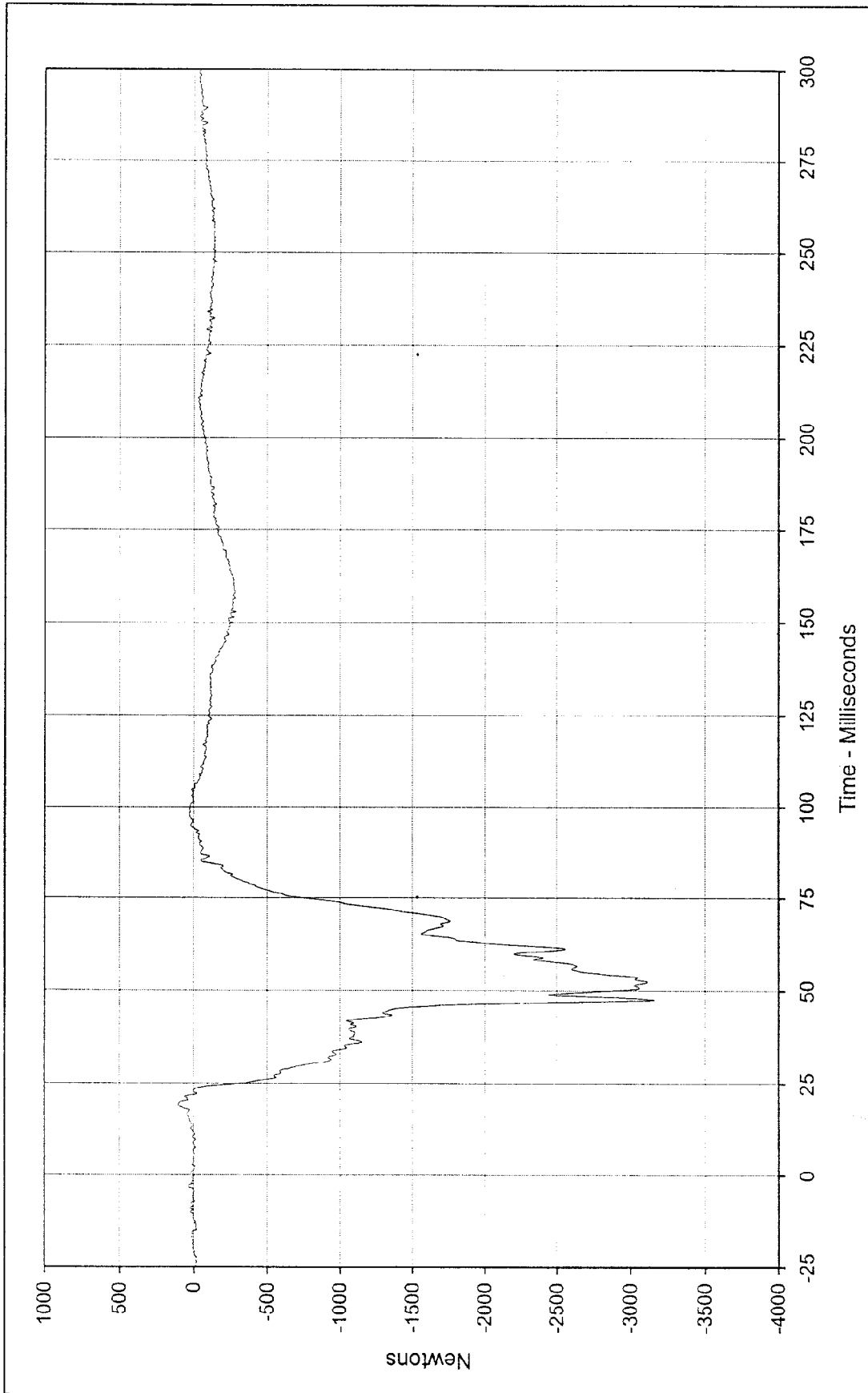


SAE Filter Class: 1000
 Date of Test: 8/28/97
 Curve Number: FIL-019



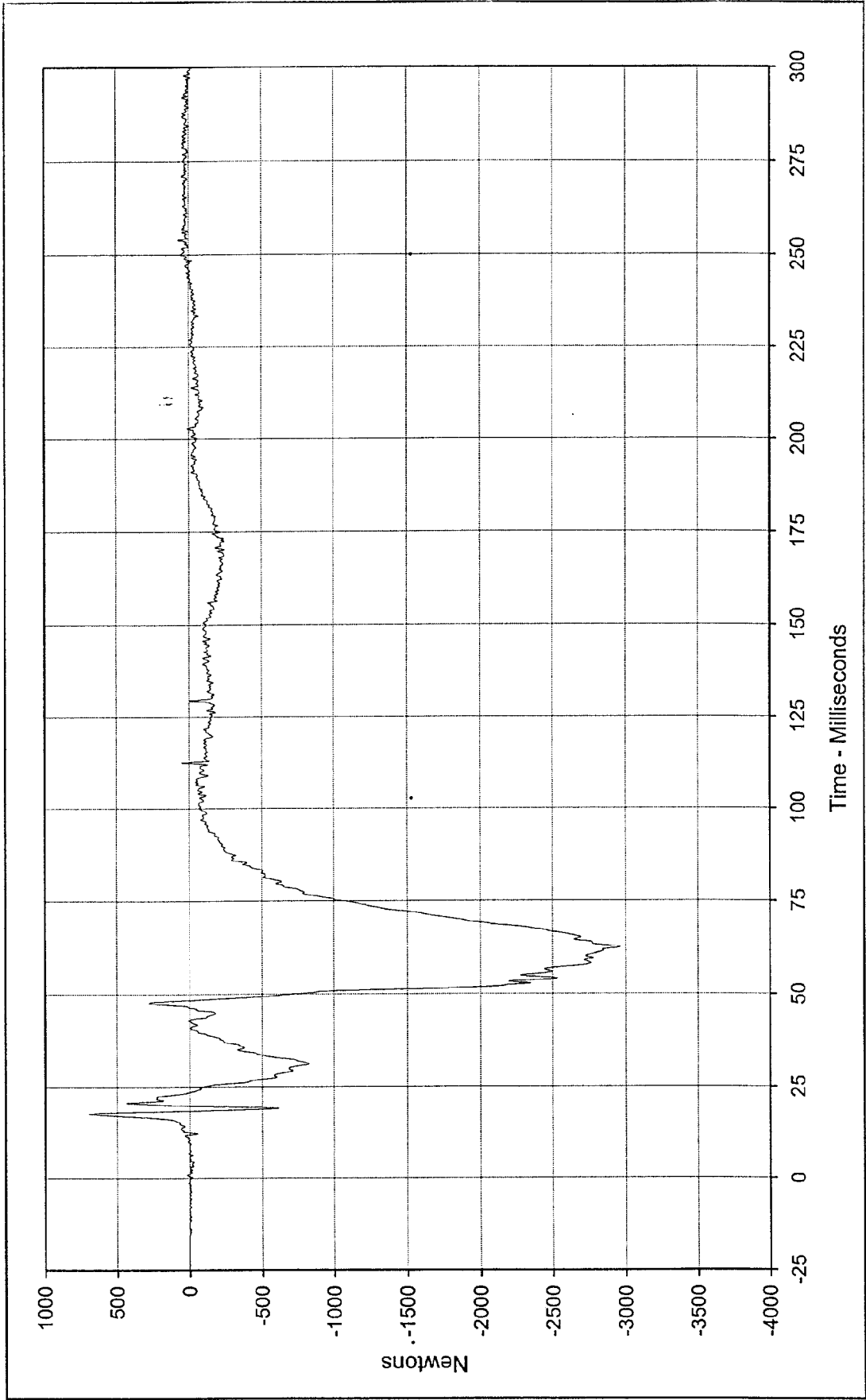
Curve Description: Driver Pelvis Resultant Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 59.4 at 52.1 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: 0.1 at 3.4 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 9/9/97
 Curve Number: RES-017





Curve Description:	Driver Left Femur Force	Testing Program:	1997 48.4 km/h Frontal Impact (Female)
Maximum Value:	107.9 at 19.3 Milliseconds	Test Vehicle:	1996 Dodge Neon 4 Door Sedan
Minimum Value:	-3161.0 at 47.6 Milliseconds		
SAE Filter Class:	600		
Date of Test:	9/9/97		
Curve Number:	FIL-020		

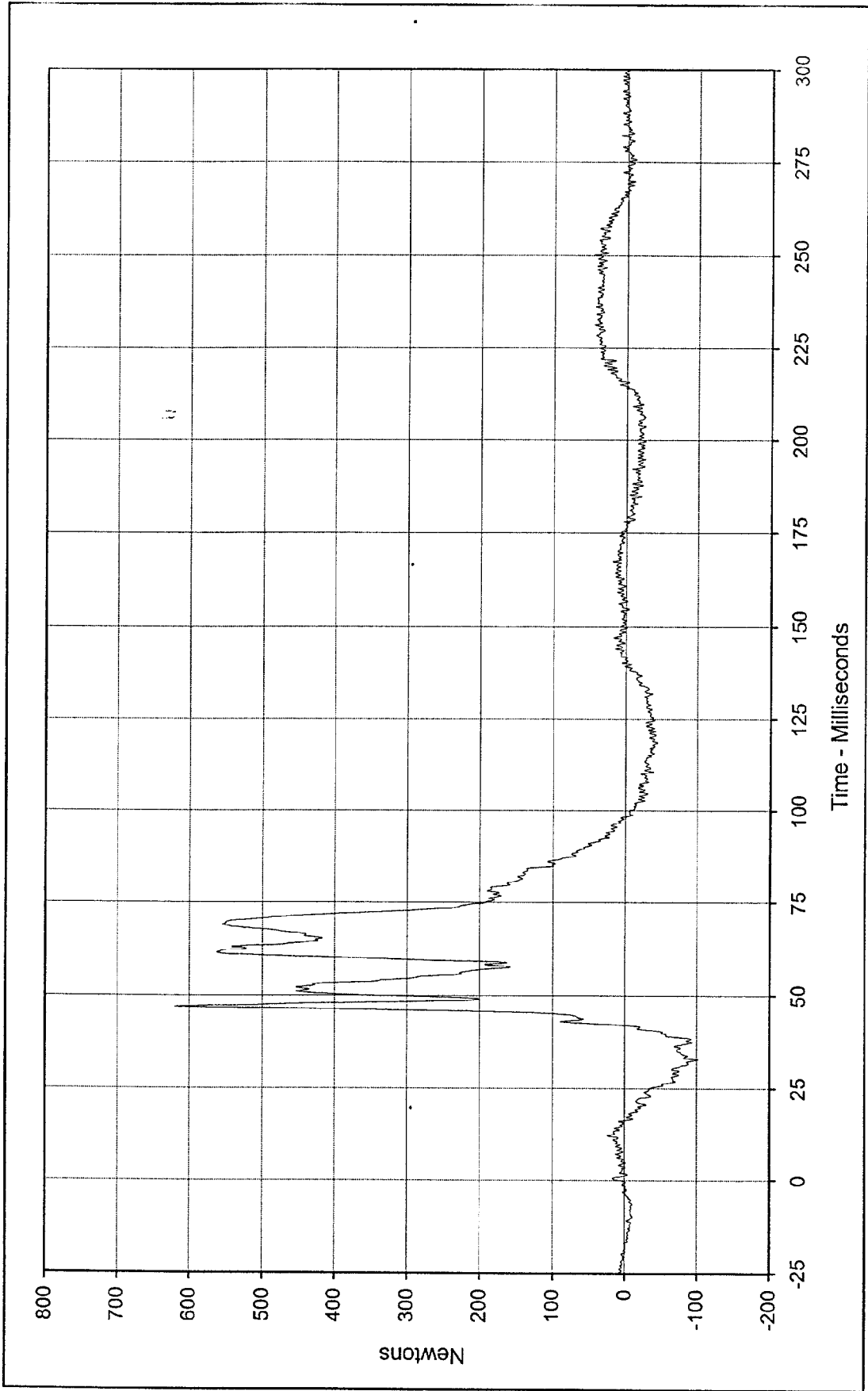




Curve Description: Driver Right Femur Force
 Maximum Value: 694.3 at 17.7 Milliseconds
 Minimum Value: -2963.6 at 62.4 Milliseconds
 SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-021

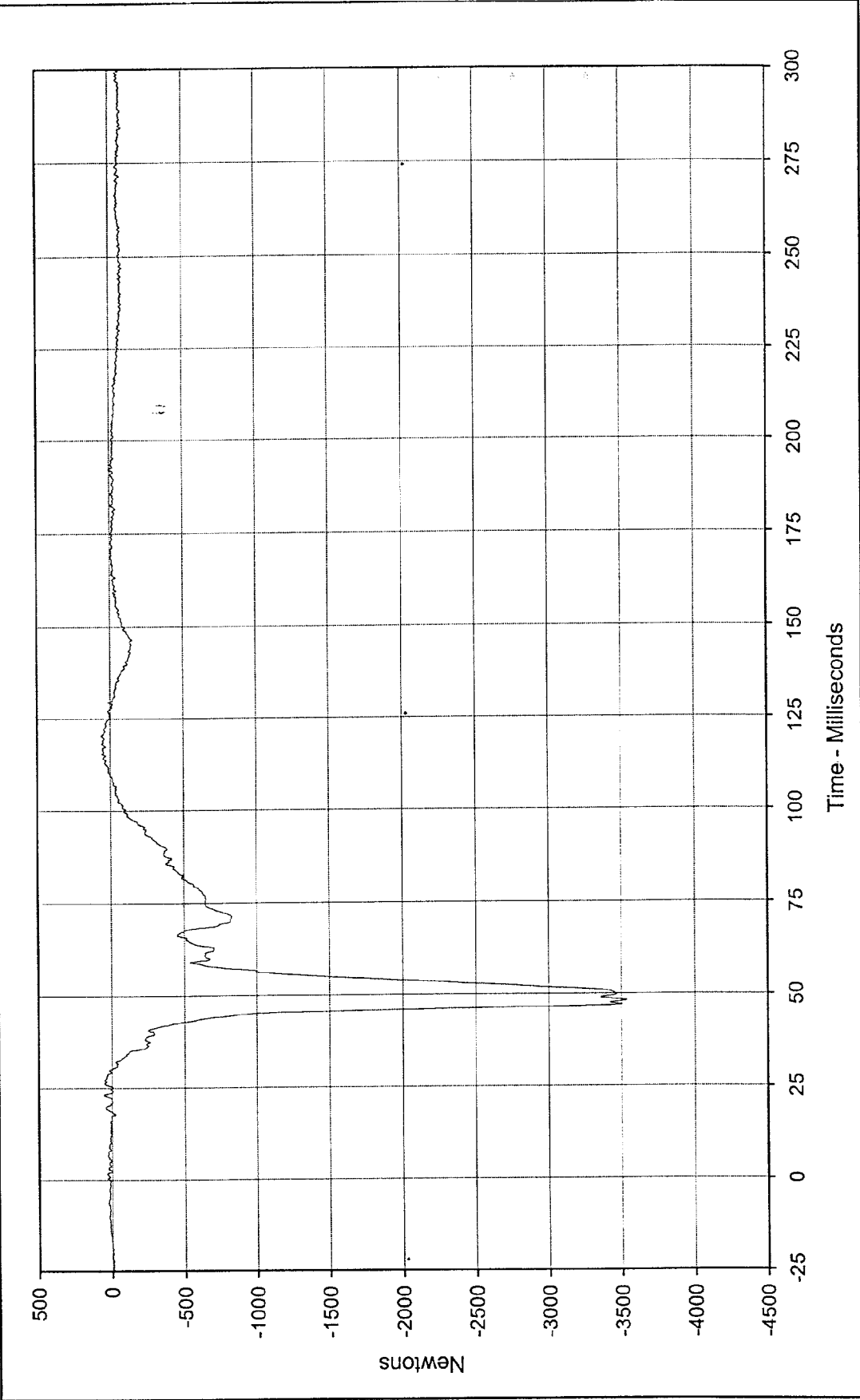
Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan





Curve Description: Driver Left Upper Tibia Force X Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 619.9 at 47.0 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -102.9 at 32.8 Milliseconds
 SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-022

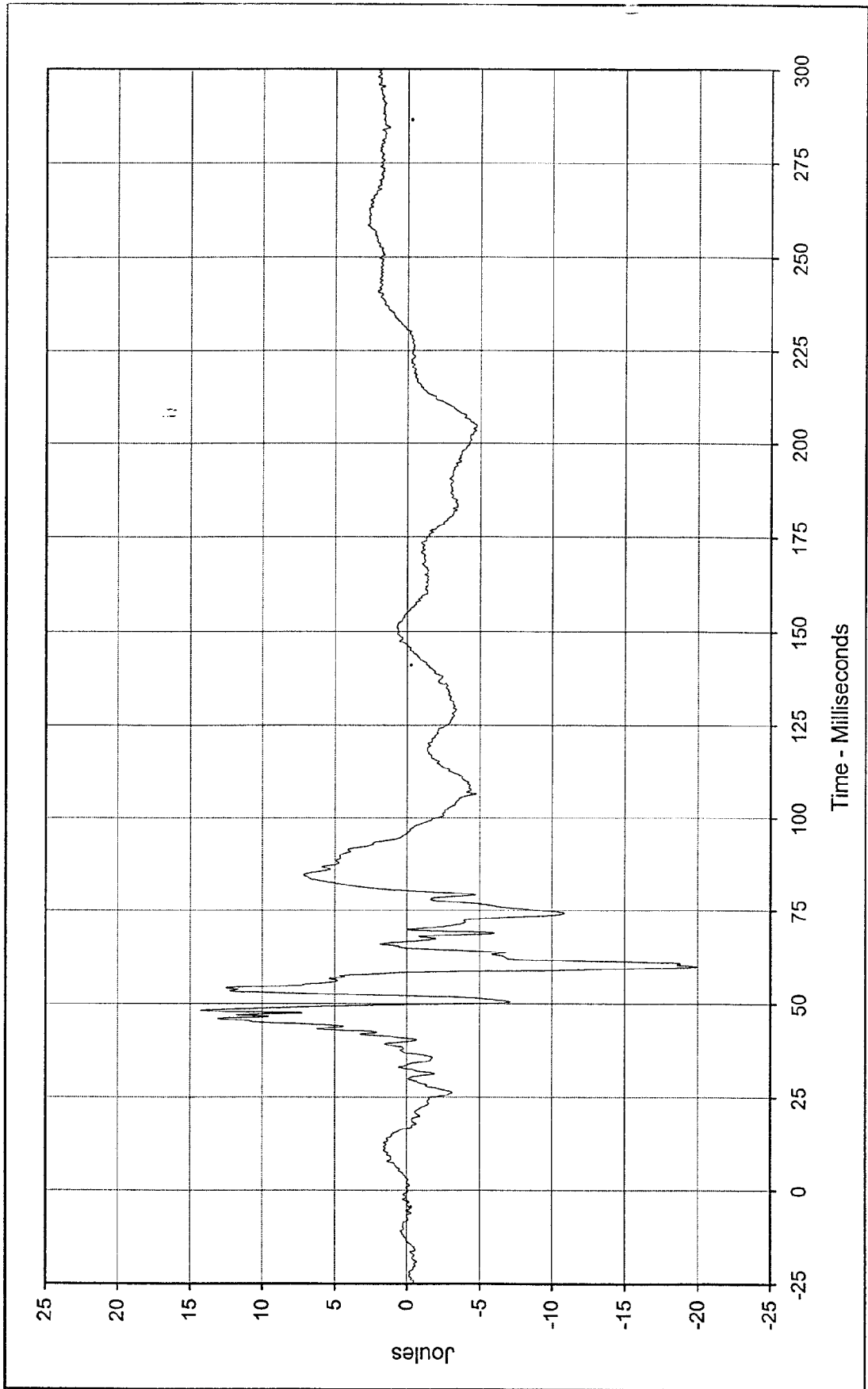




Curve Description: Driver Left Upper Tibia Force Z Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 59.7 at 120.4 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -3536.8 at 48.2 Milliseconds

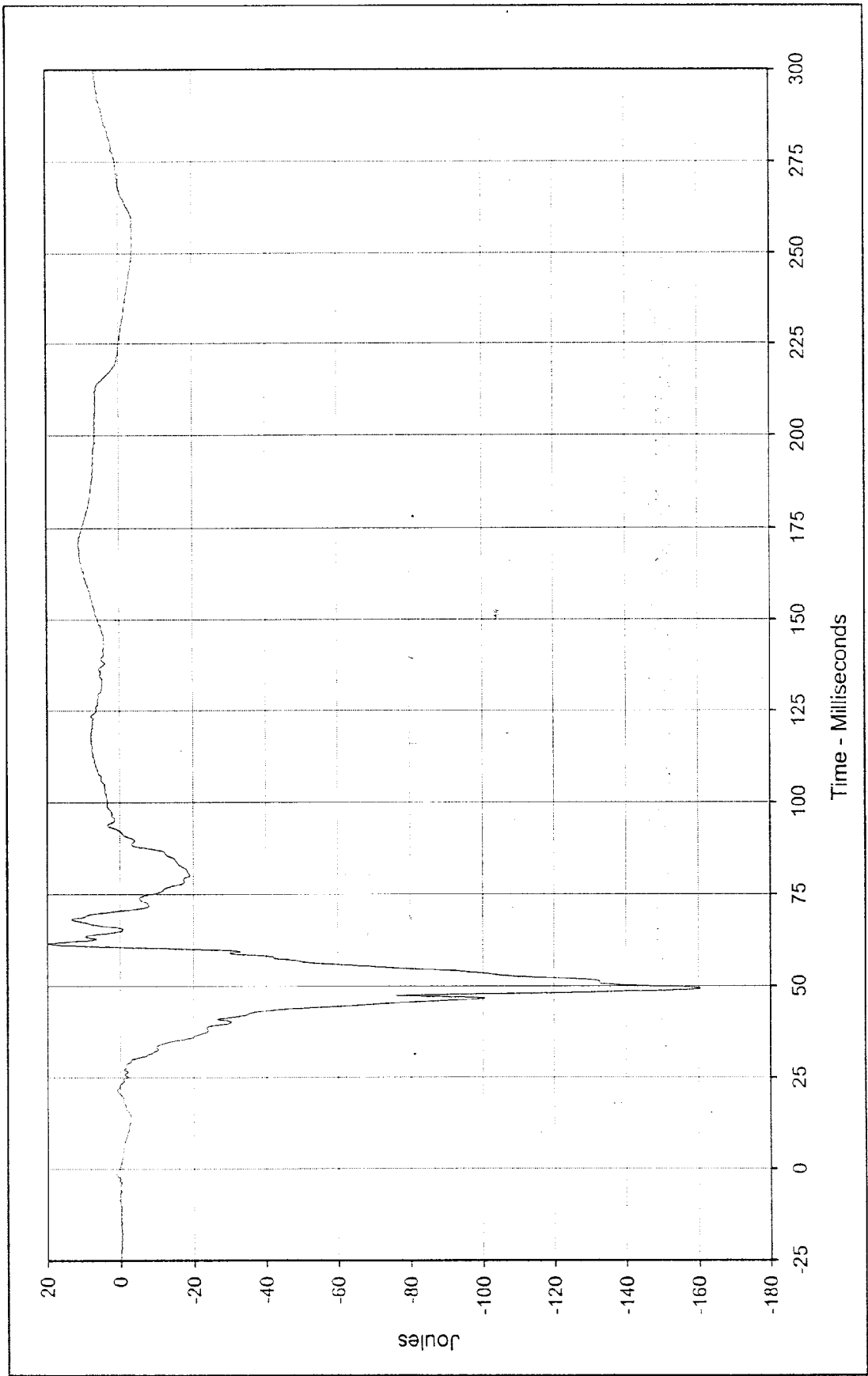
SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-023





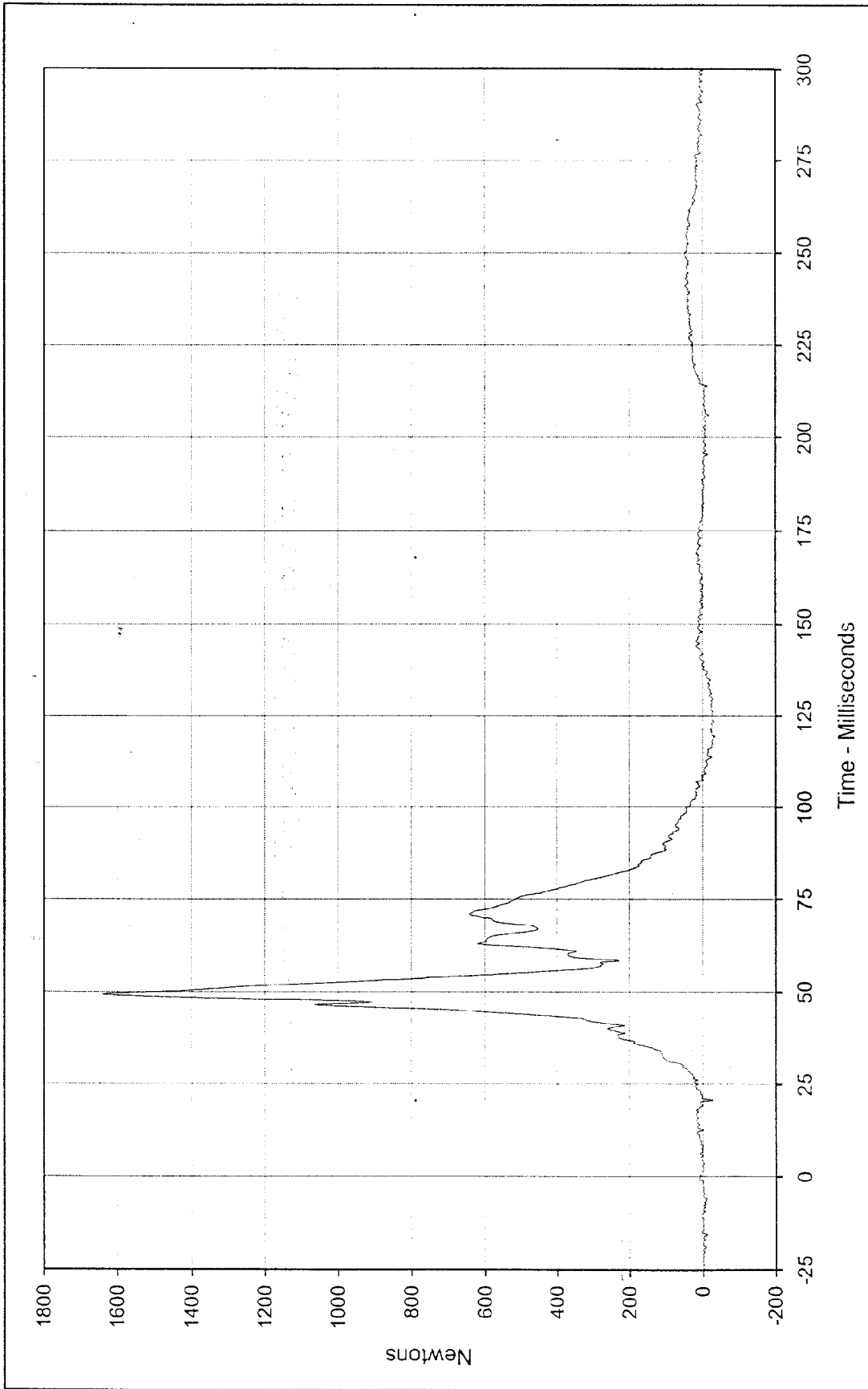
Curve Description: Driver Left Upper Tibia Moment X Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 14.3 at 48.2 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -19.9 at 59.9 Milliseconds
 SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-024





Curve Description: Driver Left Upper Tibia Moment Y Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 19.7 at 61.5 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -160.6 at 49.3 Milliseconds
 SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-025

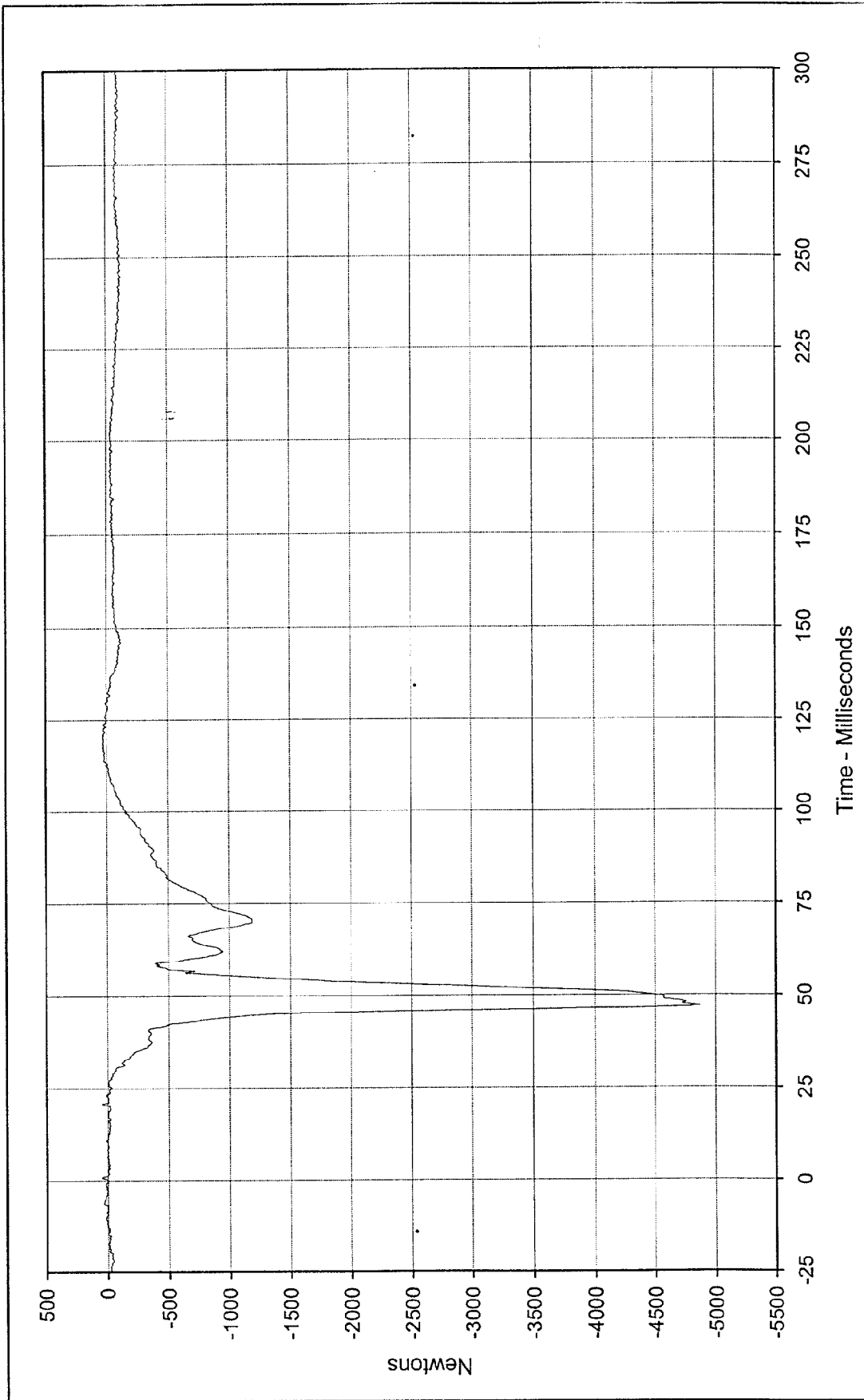




Curve Description: Driver Left Lower Tibia Force X
 Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan

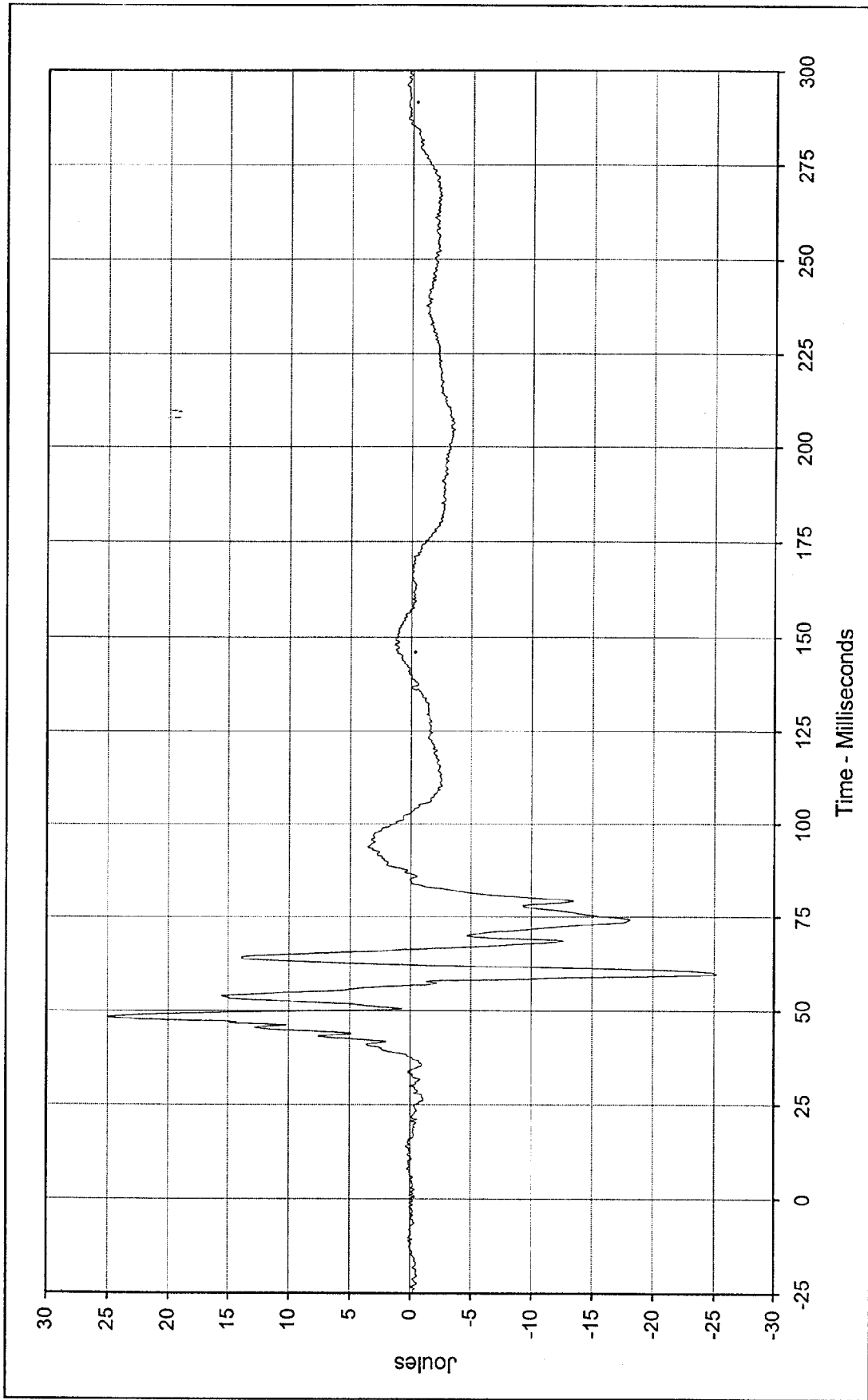
Maximum Value: 1641.2 at 49.4 Milliseconds
 Minimum Value: -34.6 at 119.3 Milliseconds
 SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-026





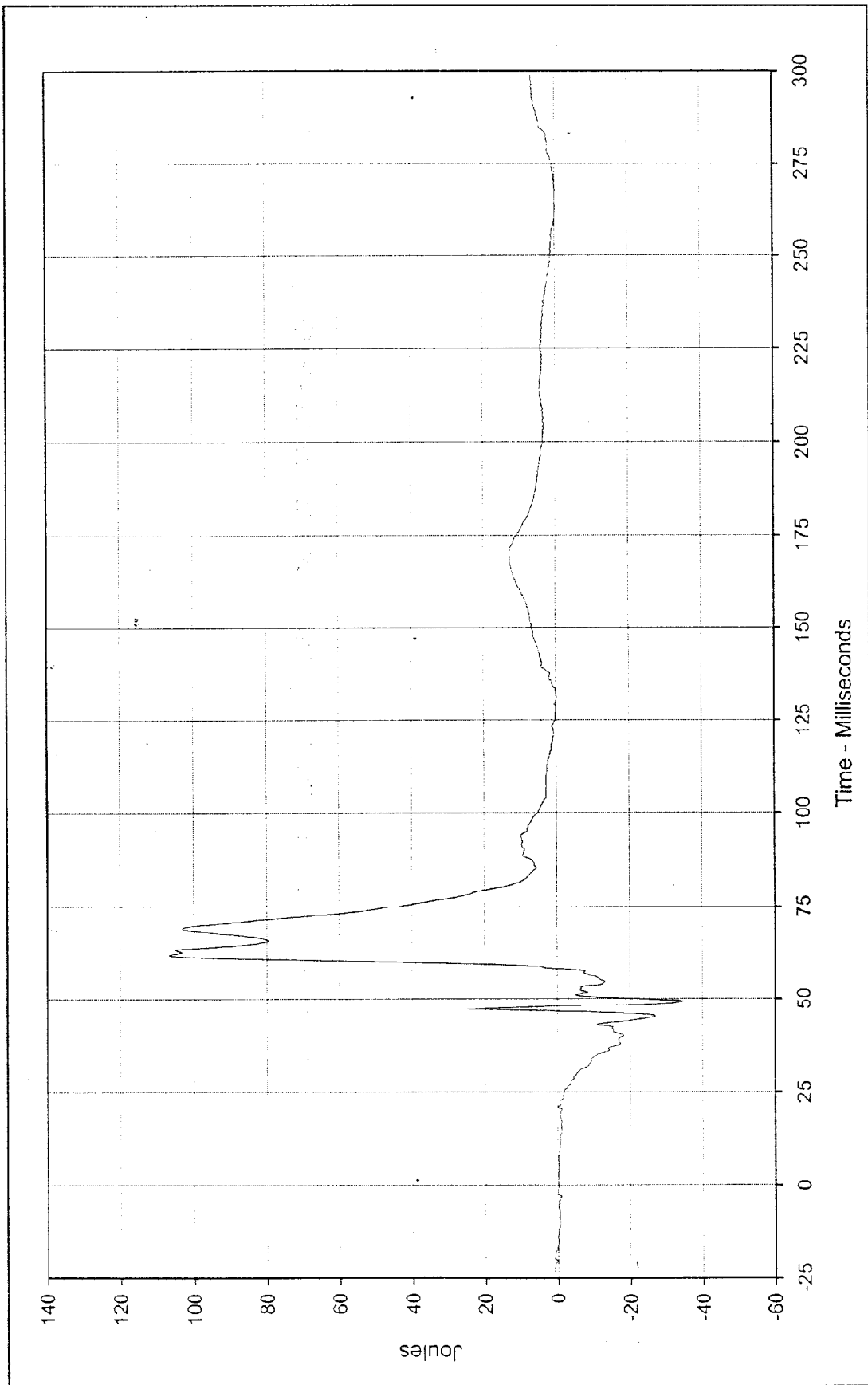
Curve Description: Driver Left Lower Tibia Force Z Testing Program 1997 48.4 km/h Frontal Impact (Female)
Maximum Value: 50.3 at 0.8 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
Minimum Value: -4874.6 at 47.1 Milliseconds
SAE Filter Class: 600
Date of Test: 9/9/97
Curve Number: FIL-027





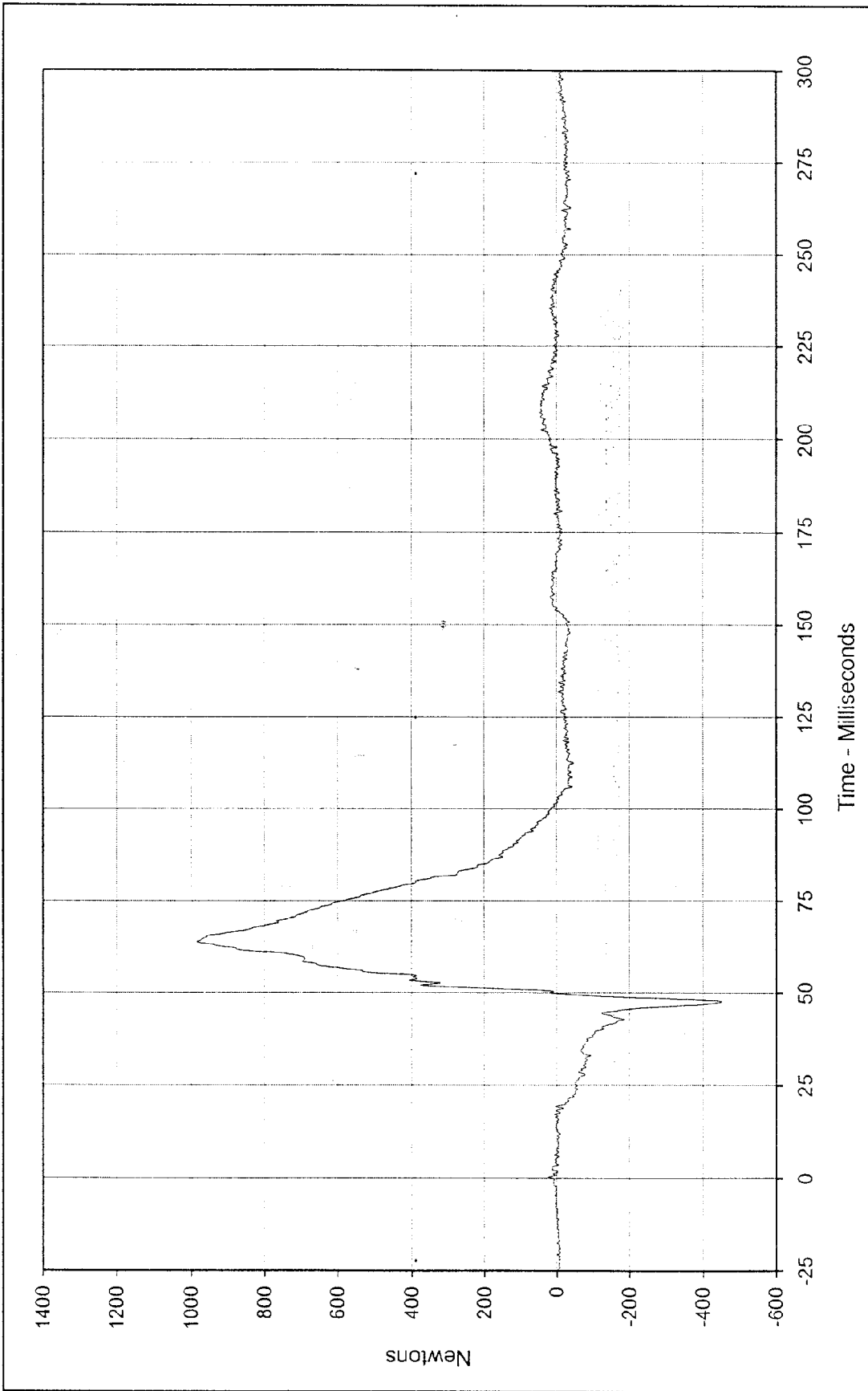
Curve Description: Driver Left Lower Tibia Moment X Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 25.0 at 48.3 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -25.3 at 59.7 Milliseconds
 SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-028





Curve Description: Driver Left Lower Tibia Moment Y Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 106.6 at 61.9 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -34.7 at 49.3 Milliseconds
 SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-029

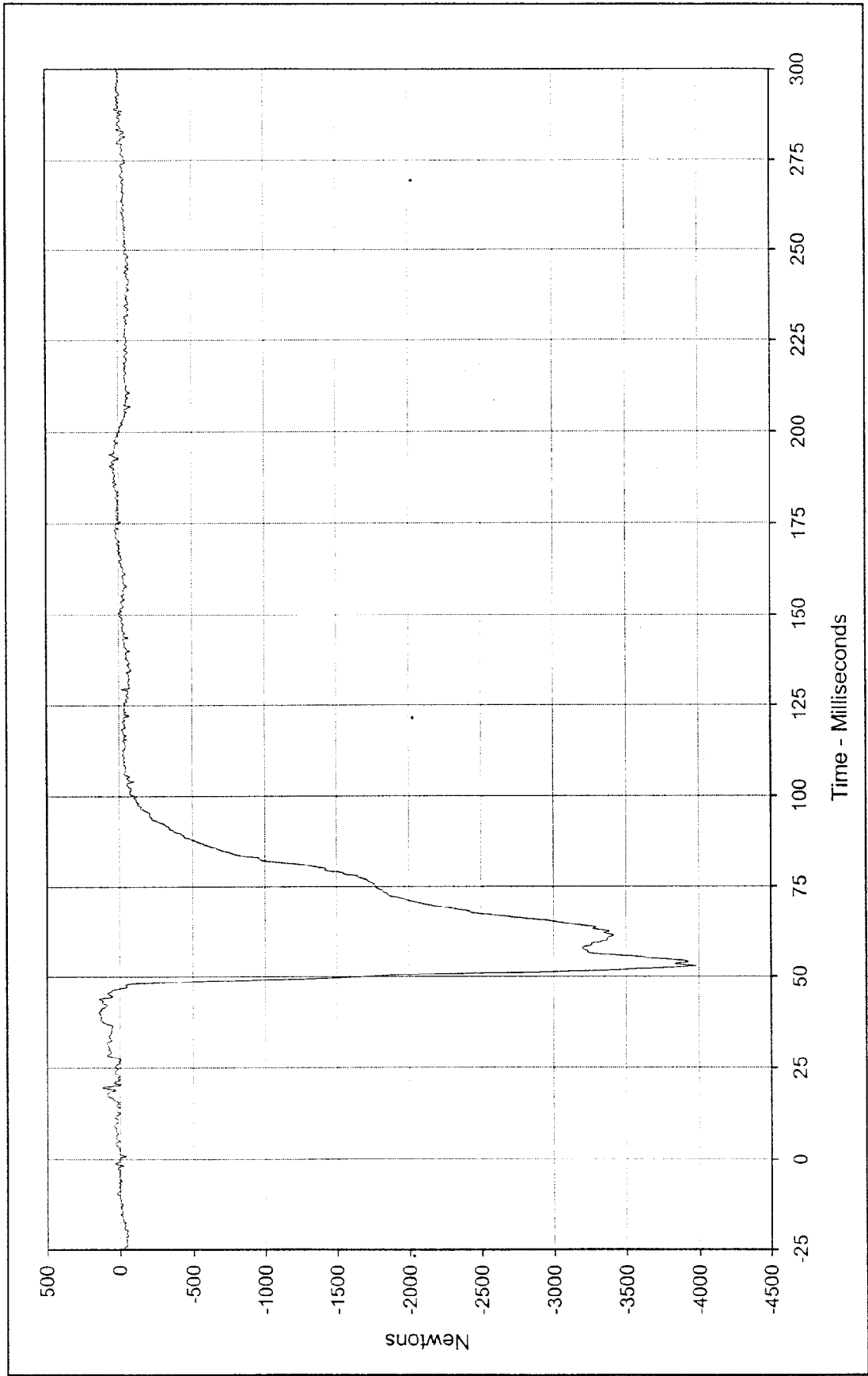




Curve Description: Driver Right Upper Tibia Force X Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 985.3 at 63.7 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -451.4 at 47.7 Milliseconds

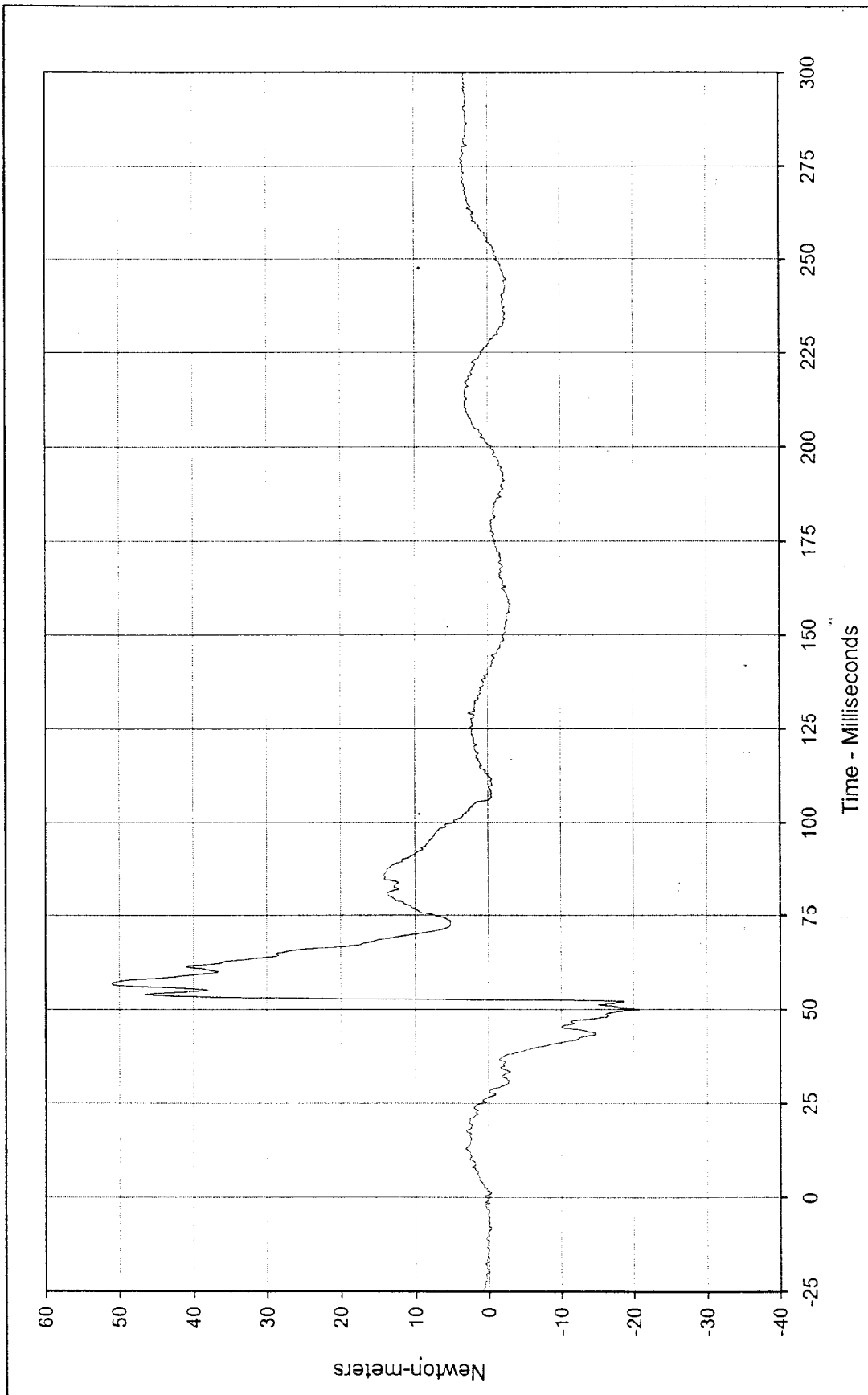


SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-030



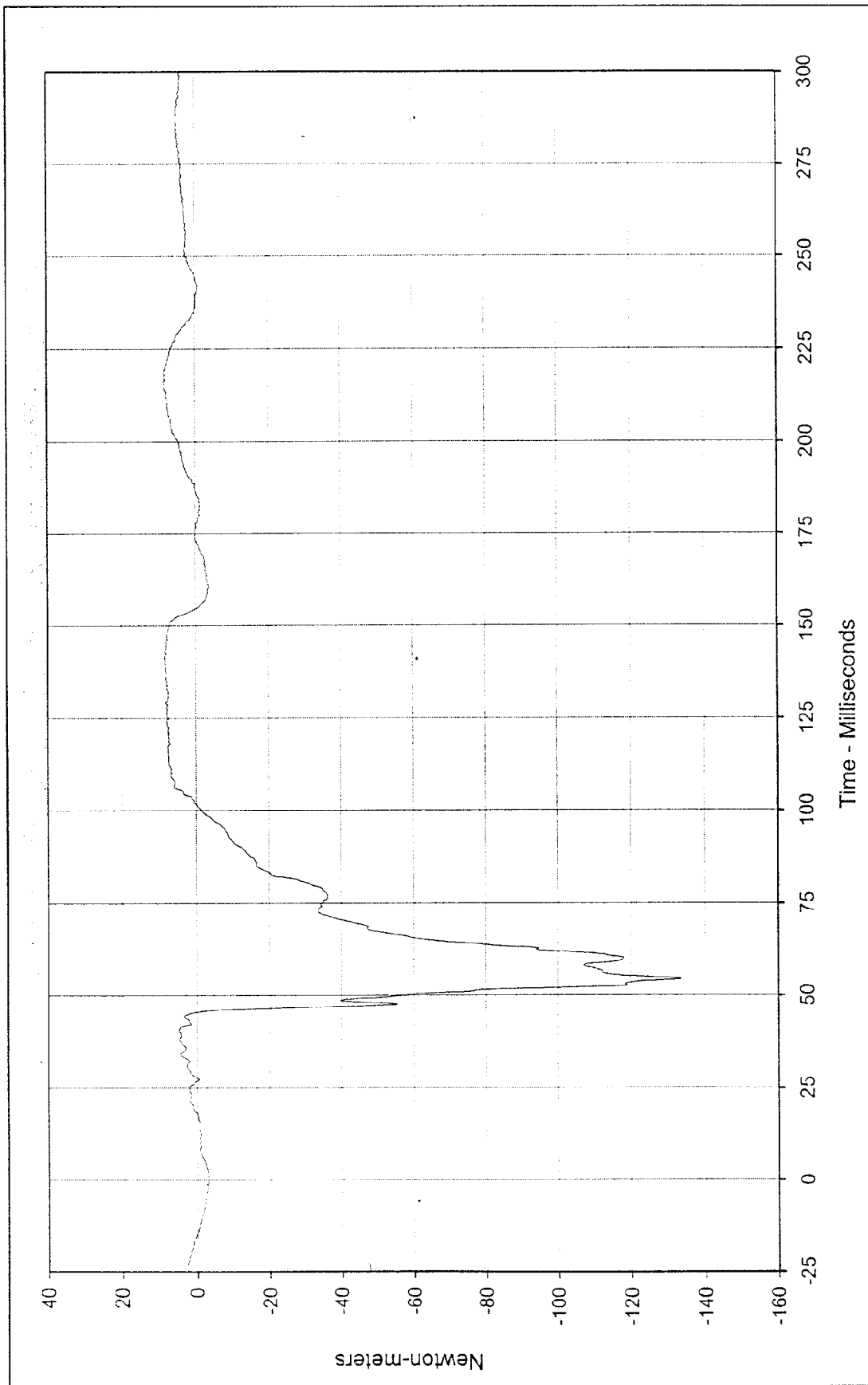
Curve Description: Driver Right Upper Tibia Force Z Testing Program 1997 48.4 km/h Frontal Impact (Female)
Maximum Value: 145.1 at 40.0 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
Minimum Value: -3982.5 at 52.9 Milliseconds
SAE Filter Class: 600
Date of Test: 9/9/97
Curve Number: FIL-031





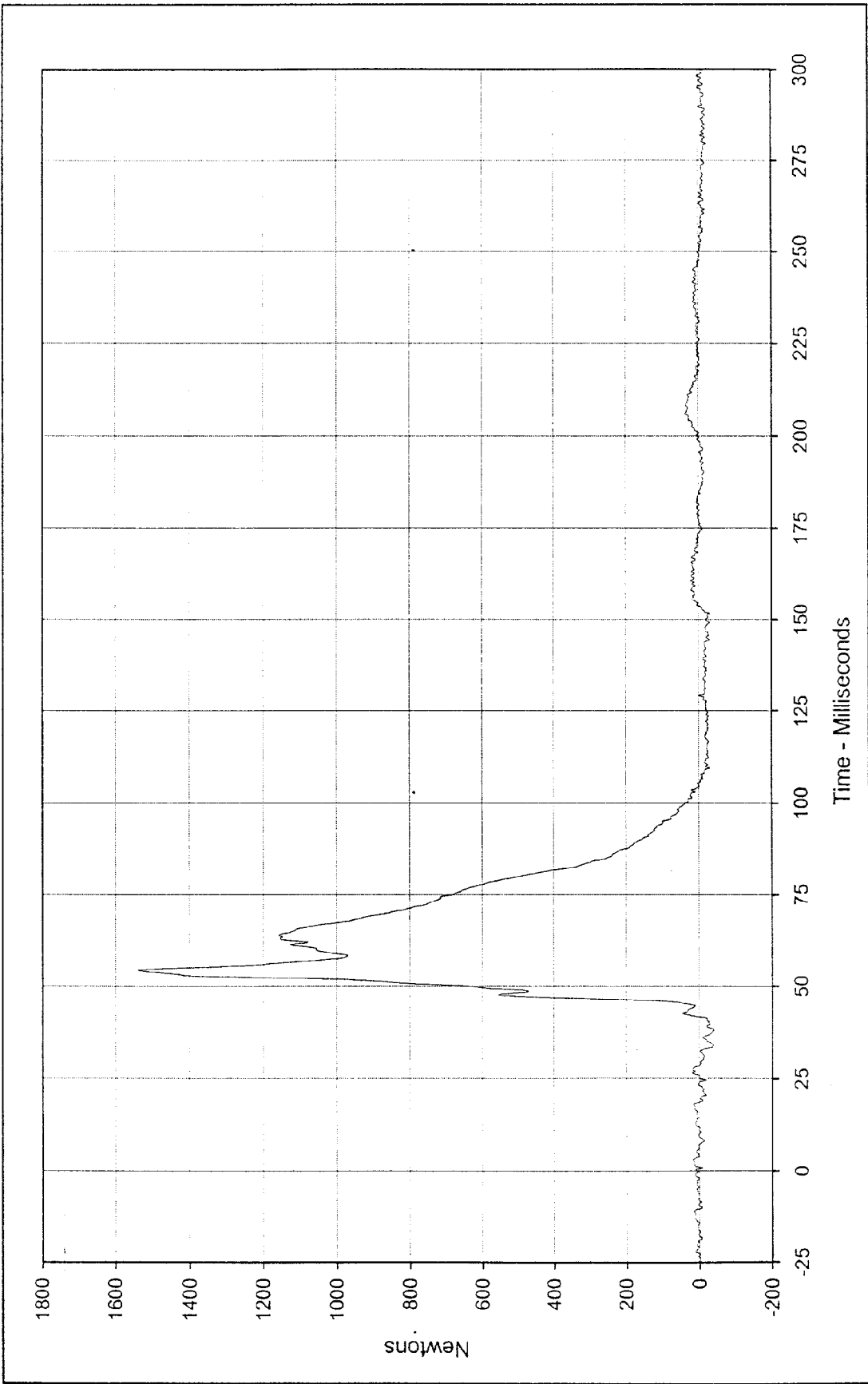
Curve Description: Driver Right Upper Tibia Moment X Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 51.1 at 56.9 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -20.7 at 50.0 Milliseconds
 SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-032





Curve Description: Driver Right Upper Tibia Moment Y Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 8.5 at 216.1 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -133.6 at 54.4 Milliseconds
 SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-033





Curve Description: Driver Right Lower Tibia Force X Testing Program: 1997 48.4 km/h Frontal Impact (Female)

Maximum Value: 1540.1 at 54.3 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan

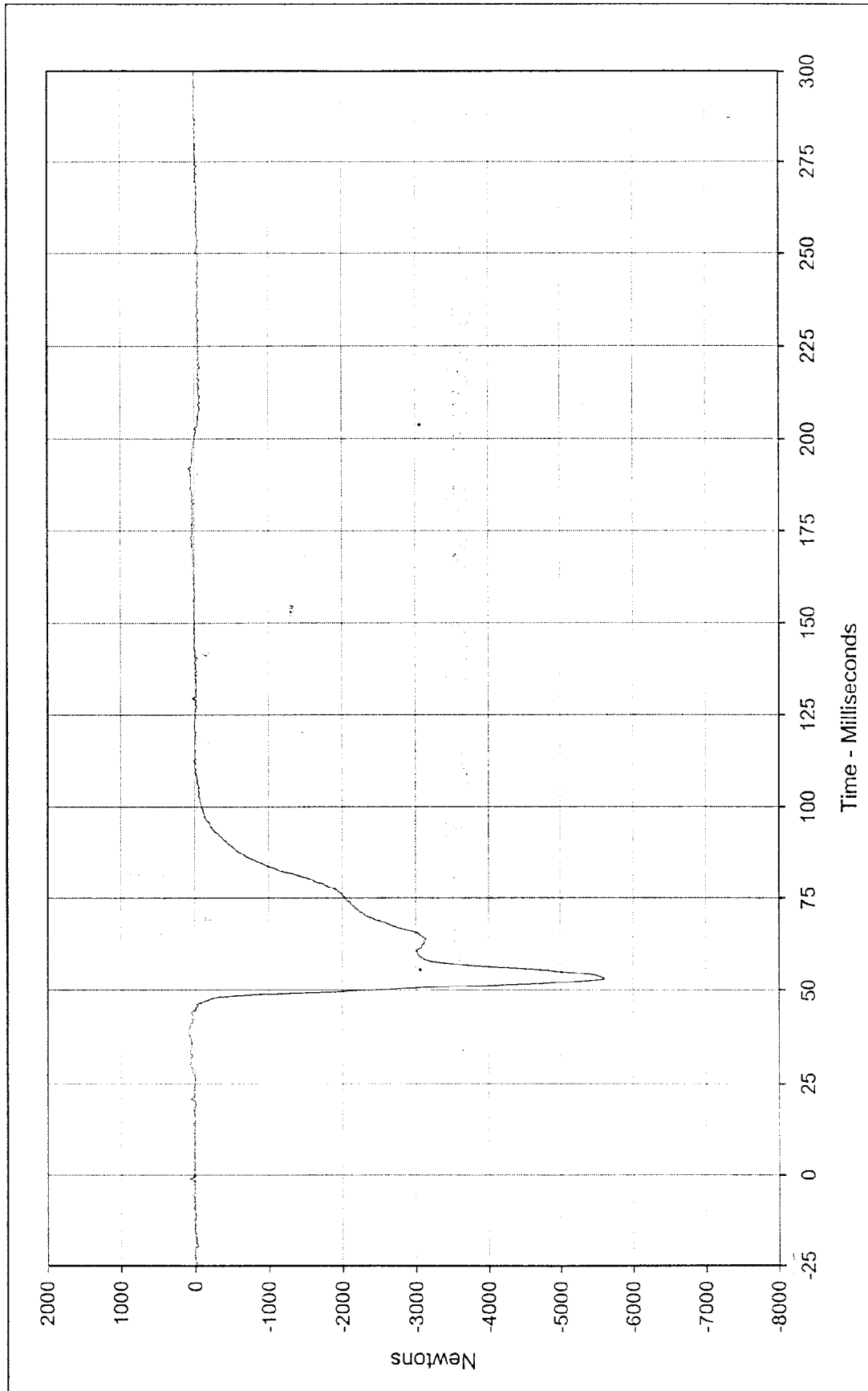
Minimum Value: -40.8 at 37.9 Milliseconds

SAE Filter Class: 600

Date of Test: 9/9/97

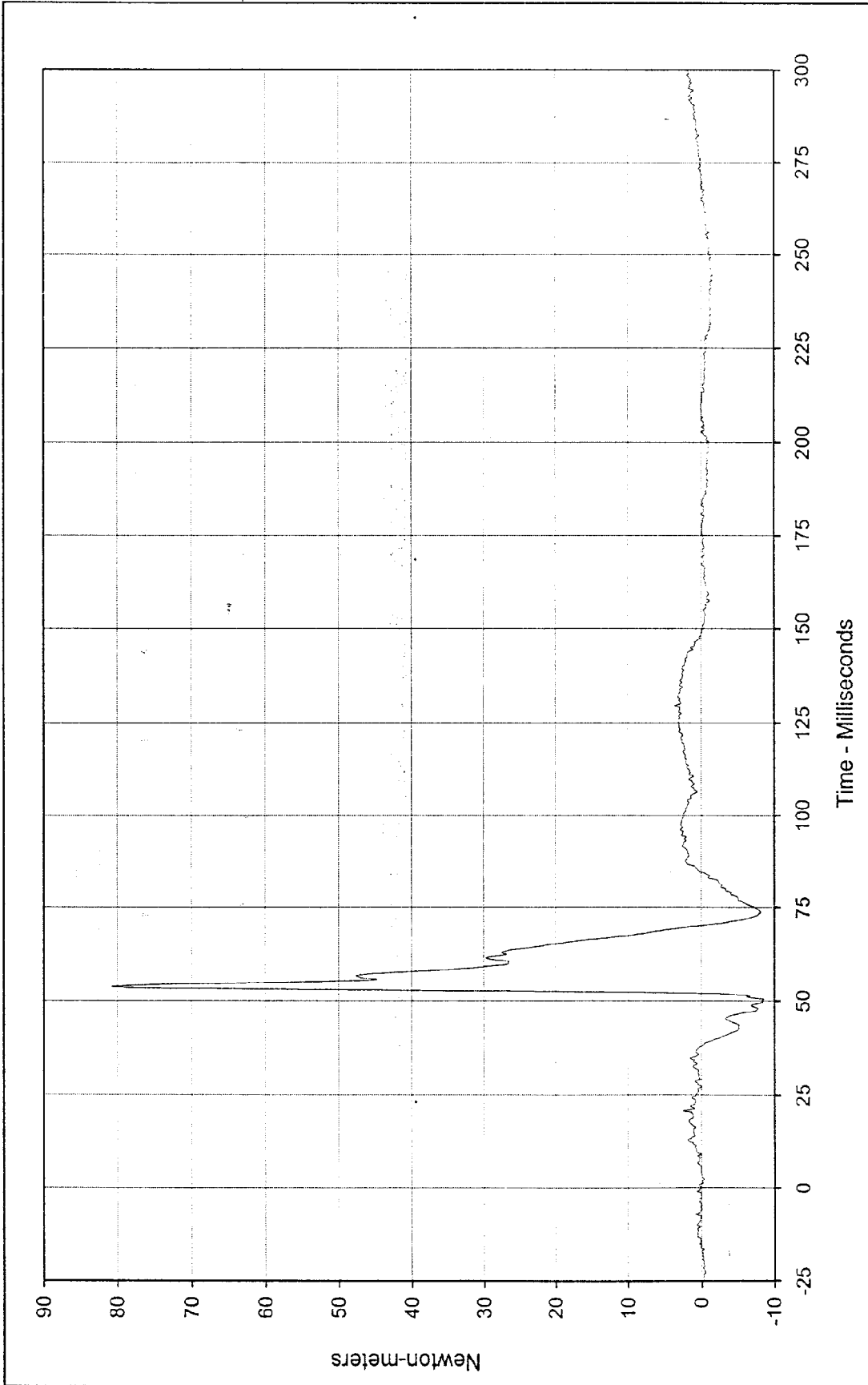
Curve Number: FIL-034





Curve Description: Driver Right Lower Tibia Force Z Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 92.4 at 38.2 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -5602.1 at 53.1 Milliseconds
 SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-035

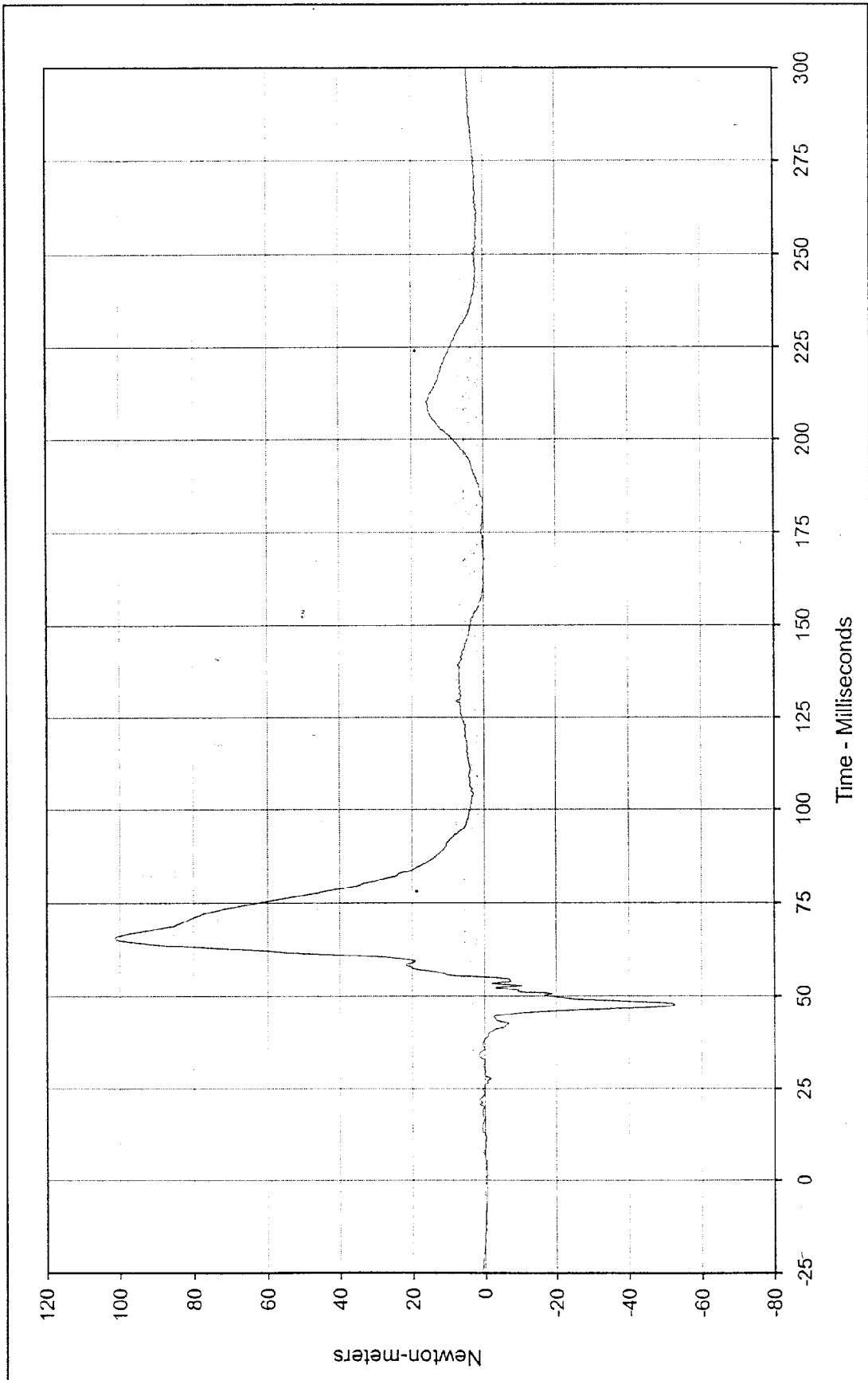




Curve Description: Driver Right Lower Tibia Moment X Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 80.8 at 53.7 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -8.6 at 50.4 Milliseconds



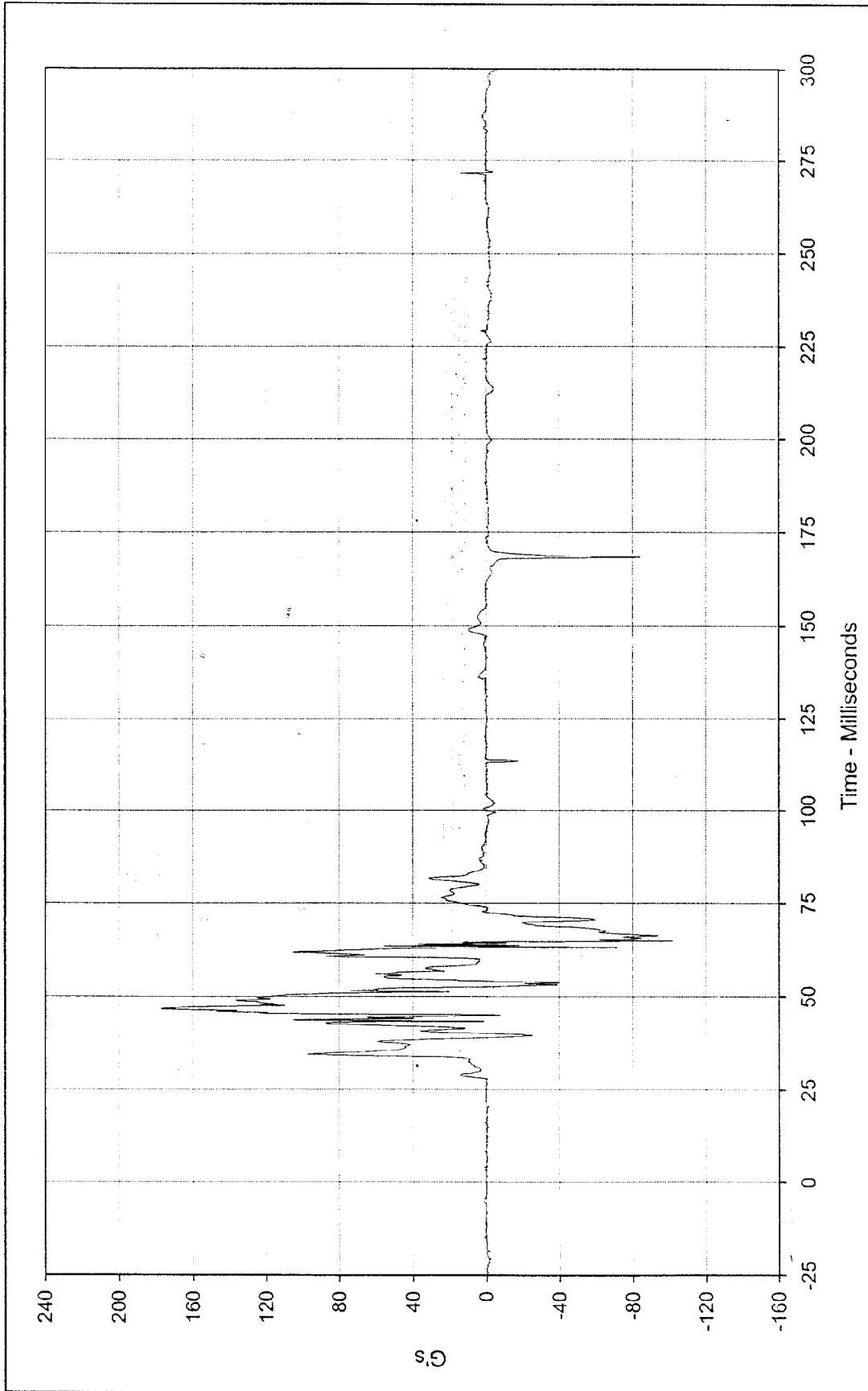
SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-036



Curve Description: Driver Right Lower Tibia Moment Y
 Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan

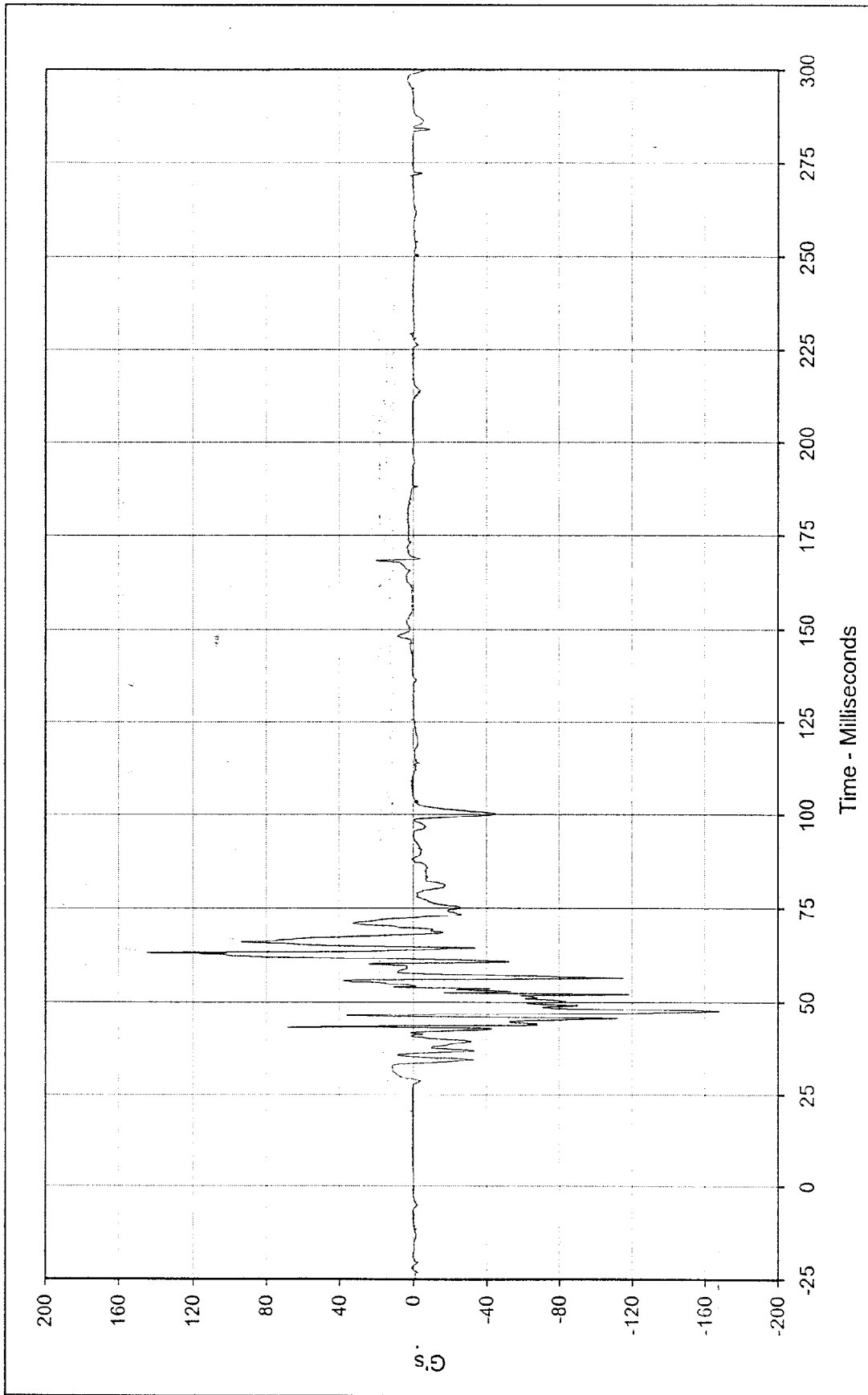
Maximum Value: 101.4 at 65.6 Milliseconds
 Minimum Value: -52.7 at 47.6 Milliseconds
 SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-037





Curve Description:	Driver Left Foot Aft X	Testing Program	1997 48.4 km/h Frontal Impact (Female)
Maximum Value:	177.6 at 46.5 Milliseconds	Test Vehicle:	1996 Dodge Neon 4 Door Sedan
Minimum Value:	-101.8 at 64.8 Milliseconds		
SAE Filter Class:	1000		
Date of Test:	9/9/97		
Curve Number:	FIL-038		

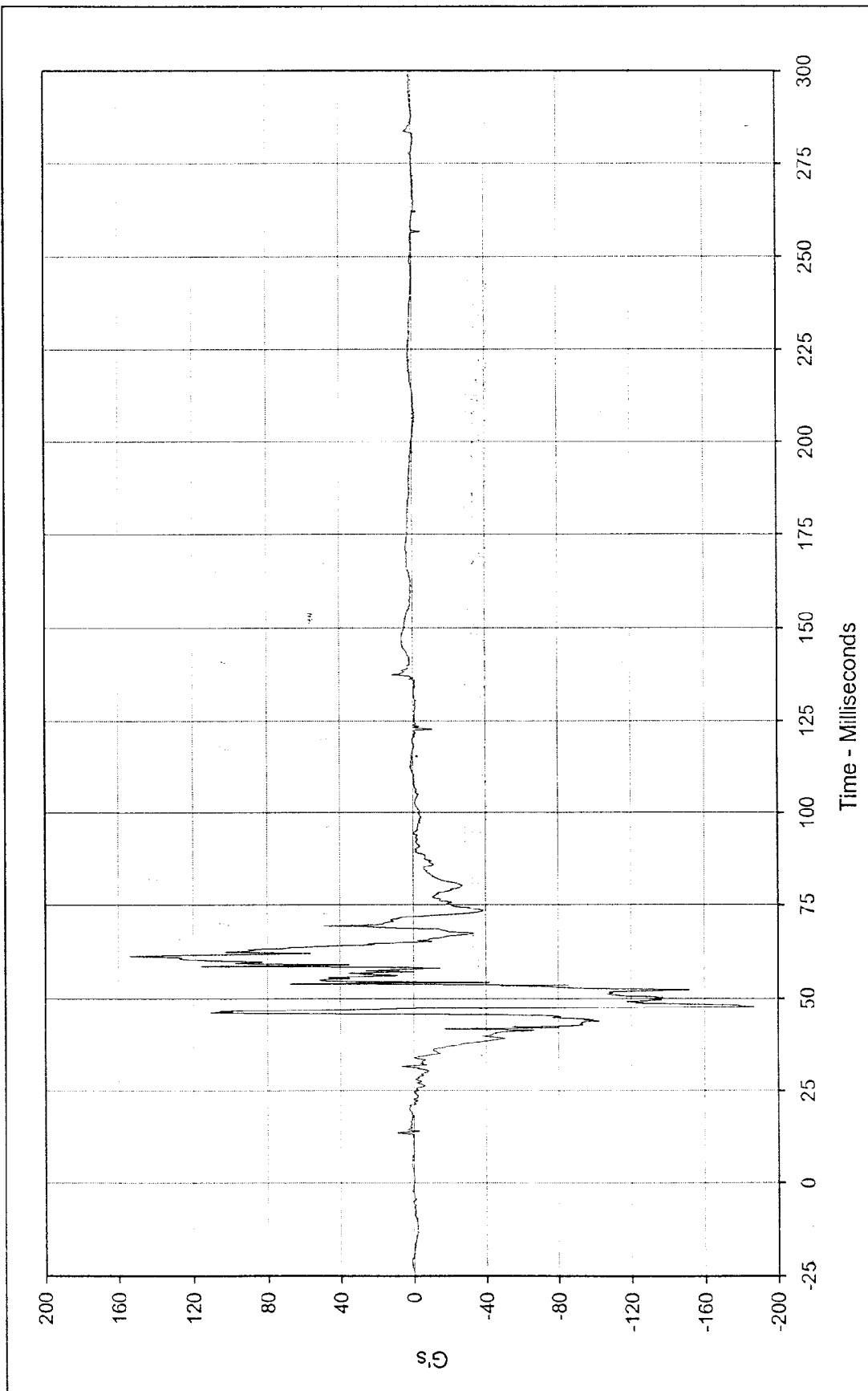




Curve Description: Driver Left Foot Aft Z Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 144.3 at 63.1 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -167.9 at 47.6 Milliseconds

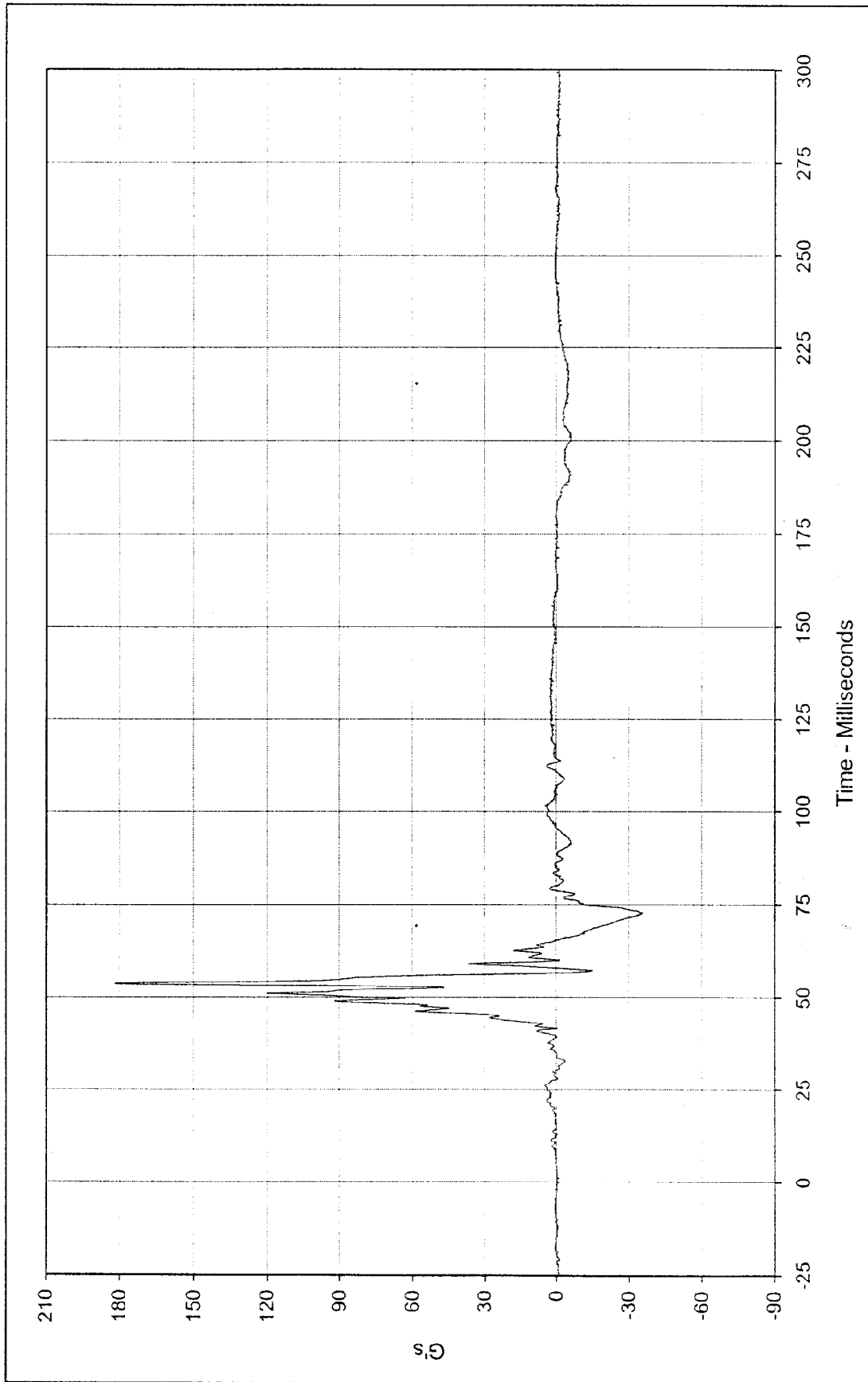


SAE Filter Class: 1000
 Date of Test: 9/9/97
 Curve Number: FIL-039



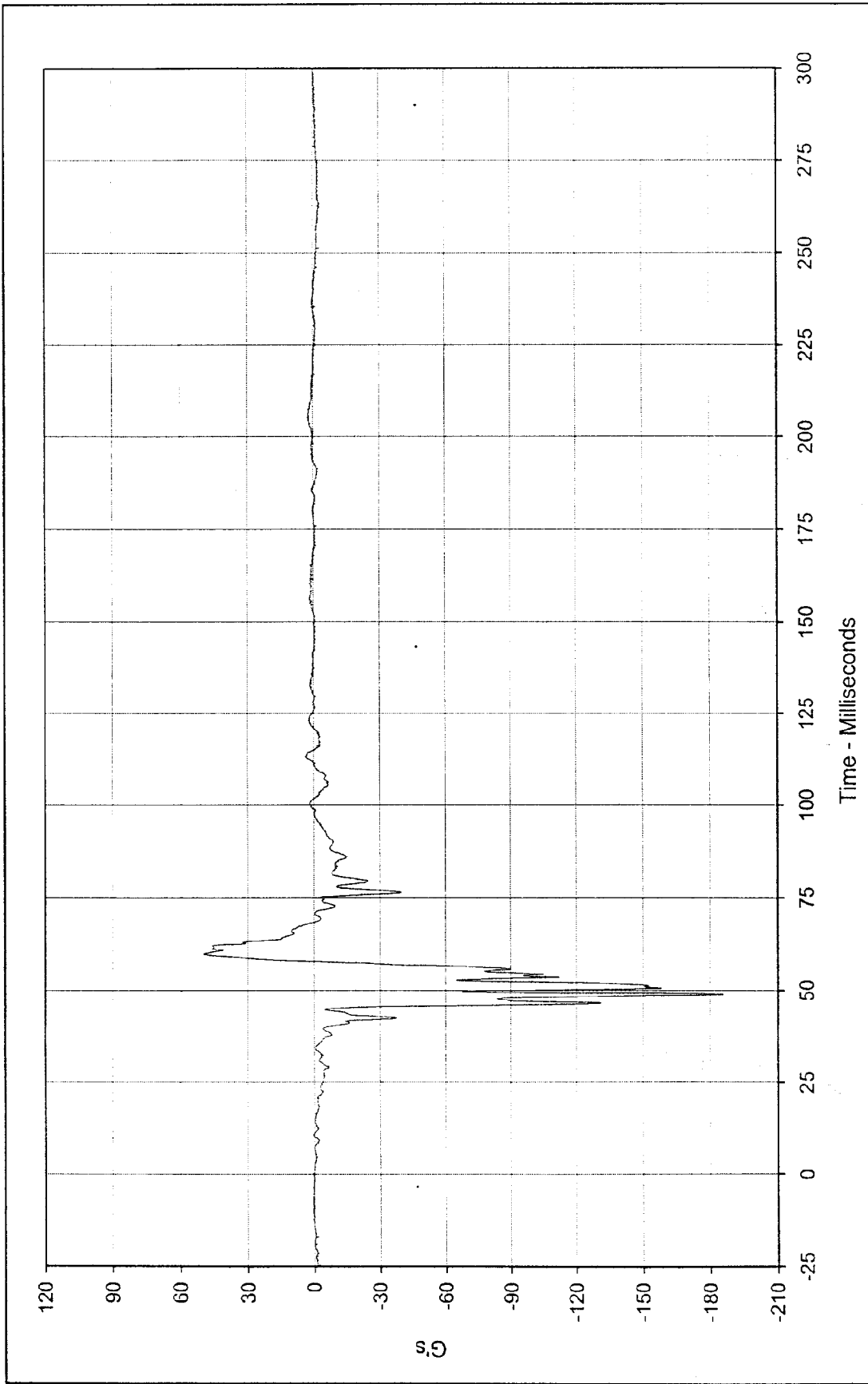
Curve Description: Driver Left Foot Fore Z Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 154.4 at 61.3 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -186.8 at 47.8 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 9/9/97
 Curve Number: FIL-040





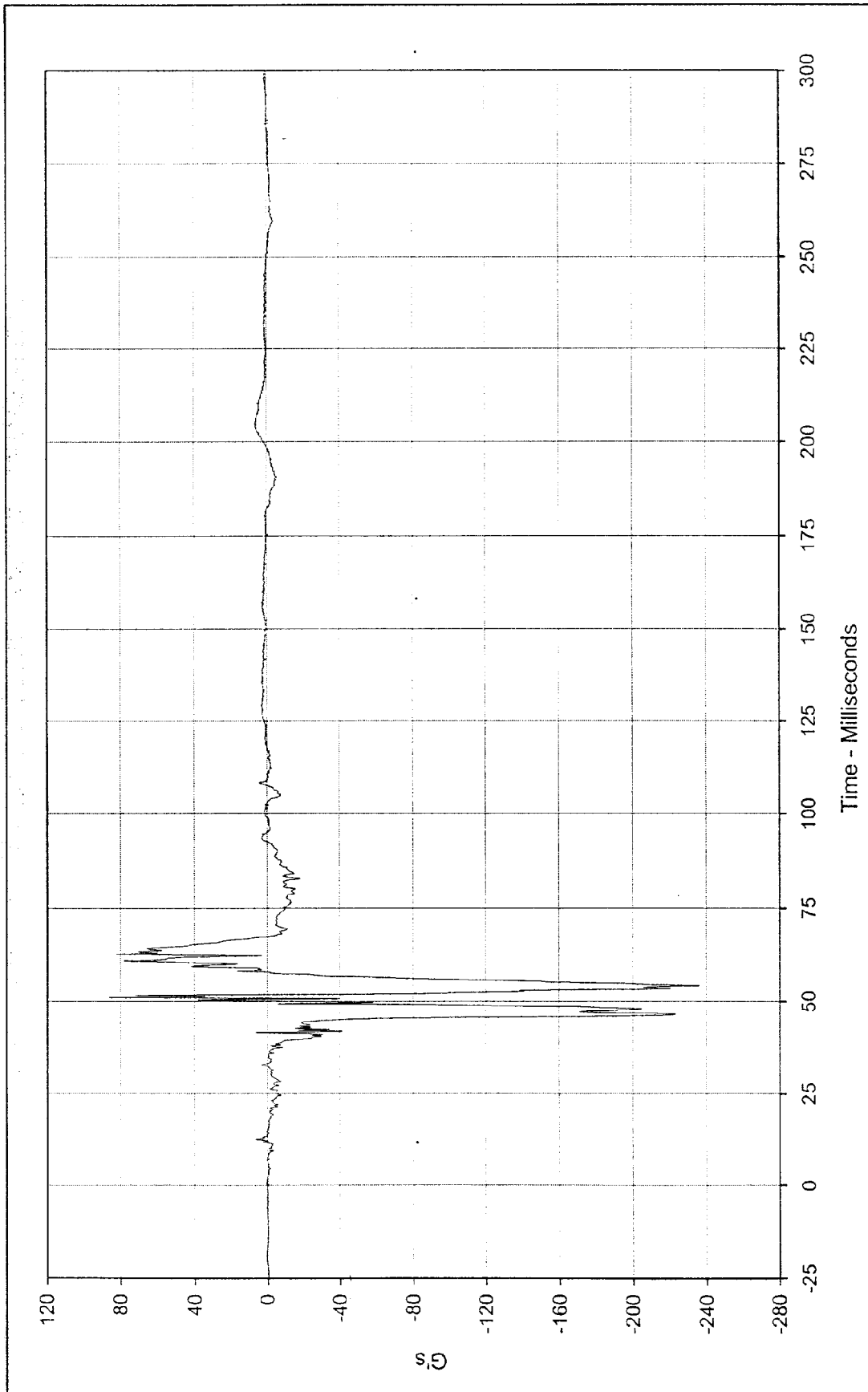
Curve Description: Driver Right Foot Aft X Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 182.2 at 53.8 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -35.8 at 72.6 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 9/9/97
 Curve Number: FIL-041





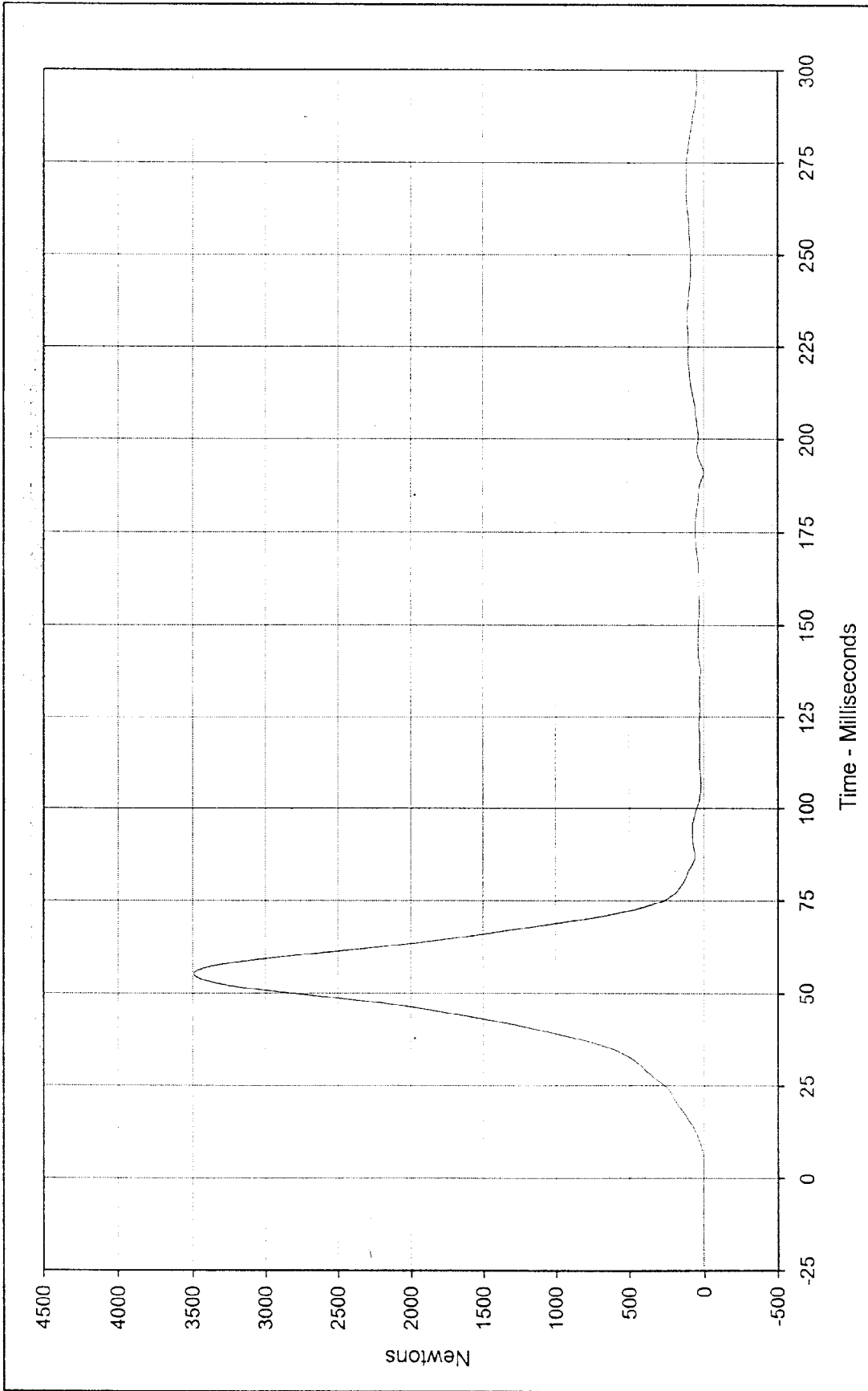
Curve Description: Driver Right Foot Aft Z Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 50.0 at 59.8 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -186.0 at 48.9 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 9/9/97
 Curve Number: FIL-042





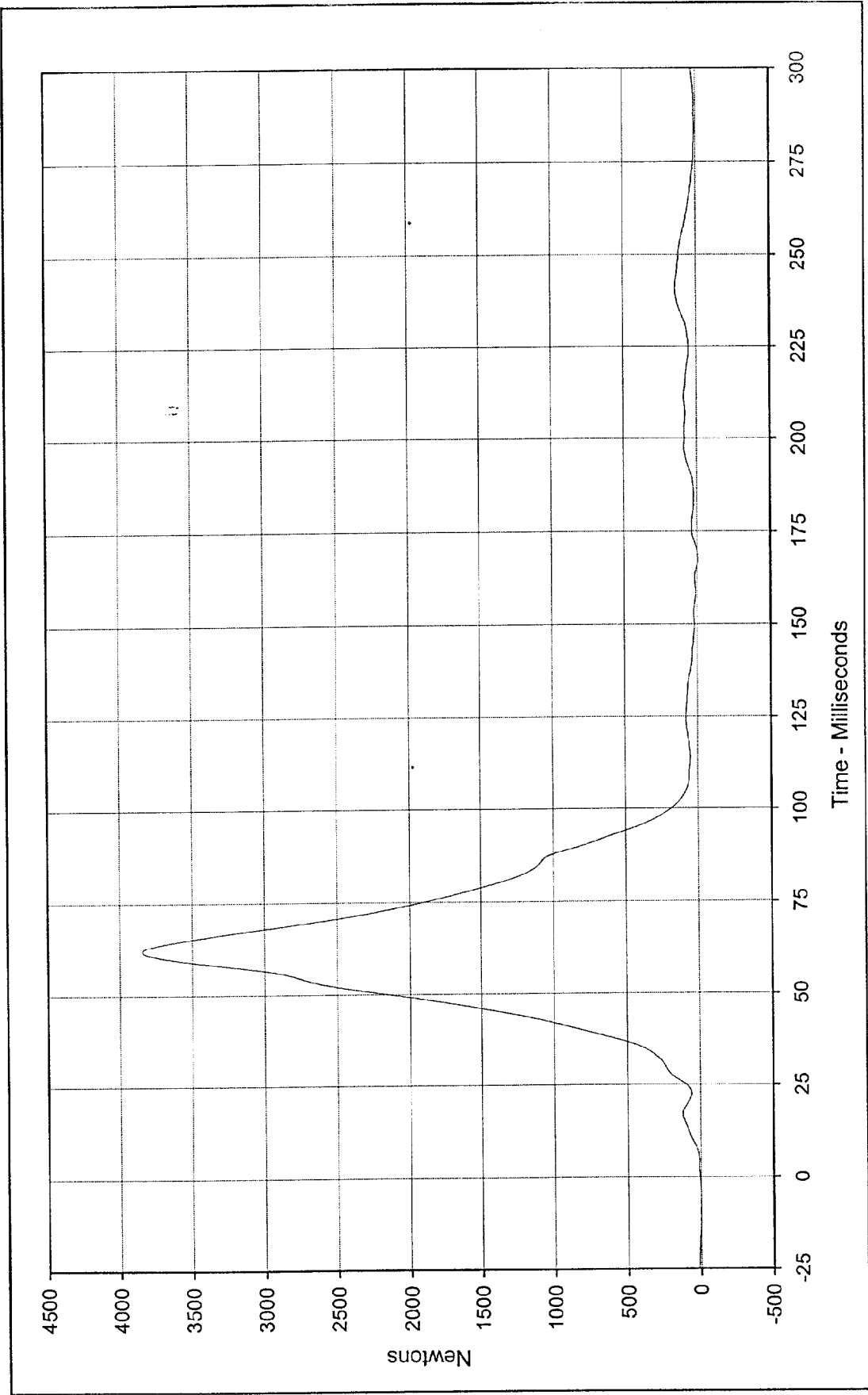
Curve Description: Driver Right Foot Fore Z Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 85.8 at 51.0 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -236.2 at 54.2 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 9/9/97
 Curve Number: FIL-043





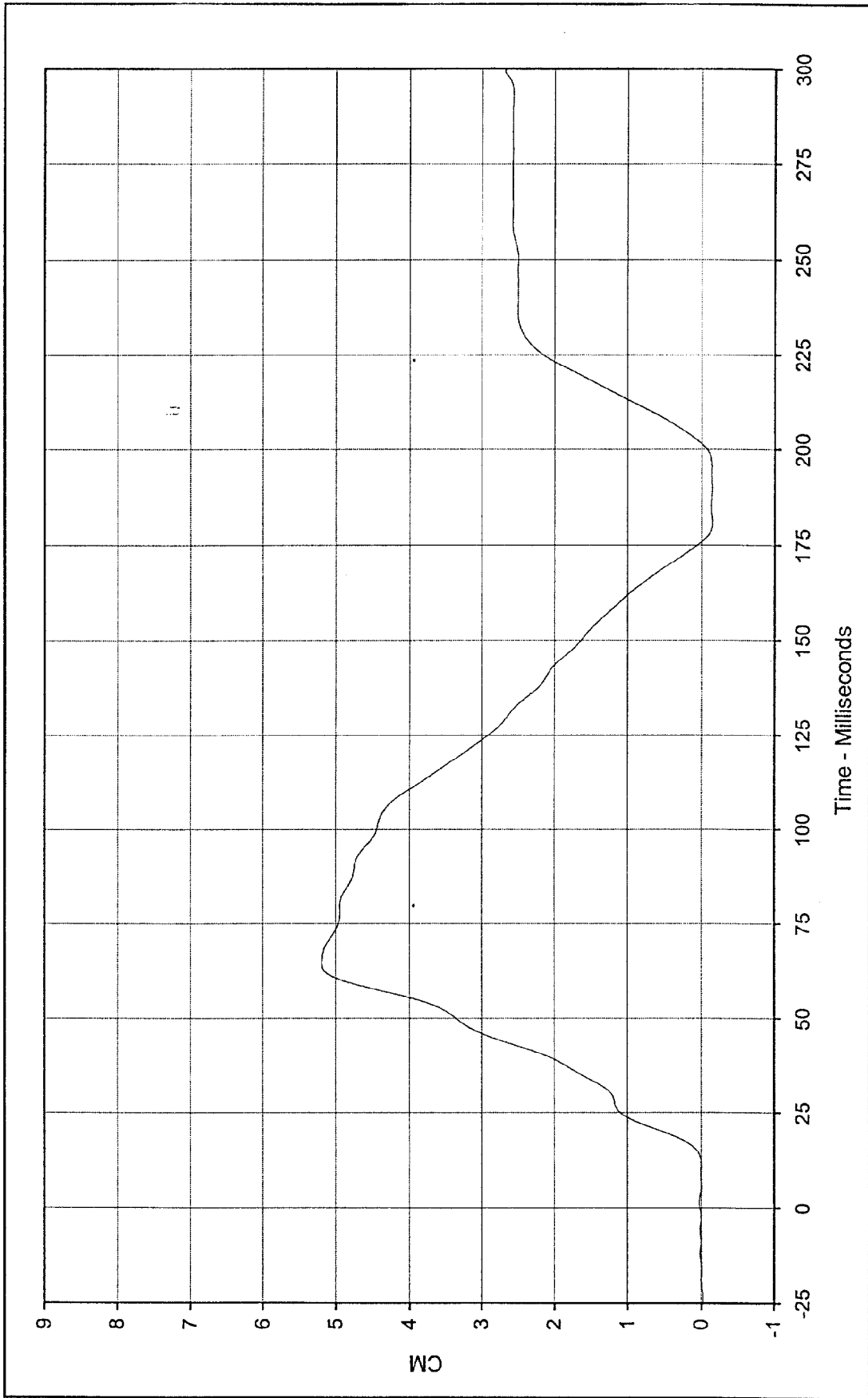
Curve Description: Driver Lap Belt Force Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 3490.1 at 55.2 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: 1.7 at 3.3 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-044





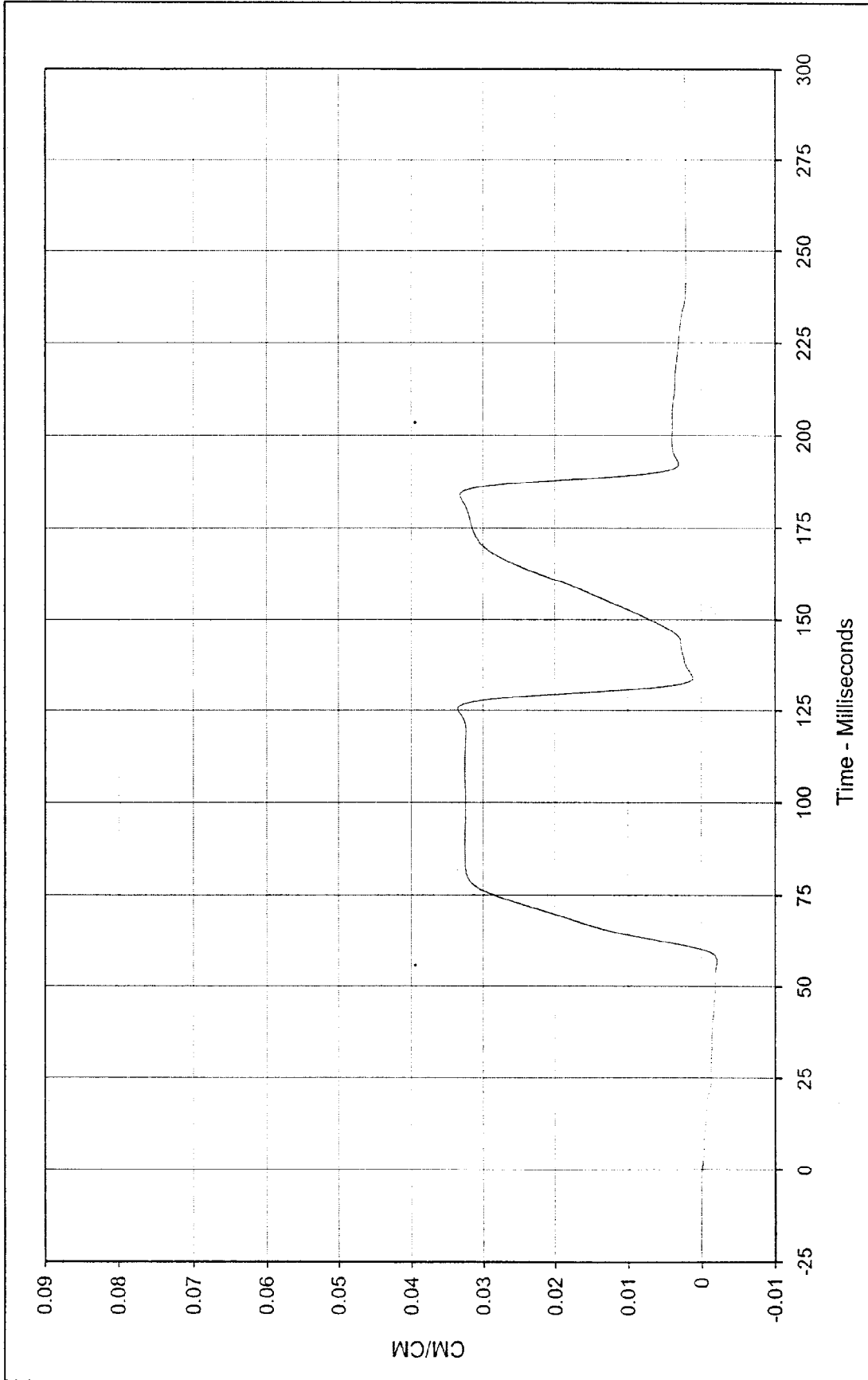
Curve Description: Driver Shoulder Belt Force Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 3844.8 at 62.0 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -4.1 at 167.5 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-045





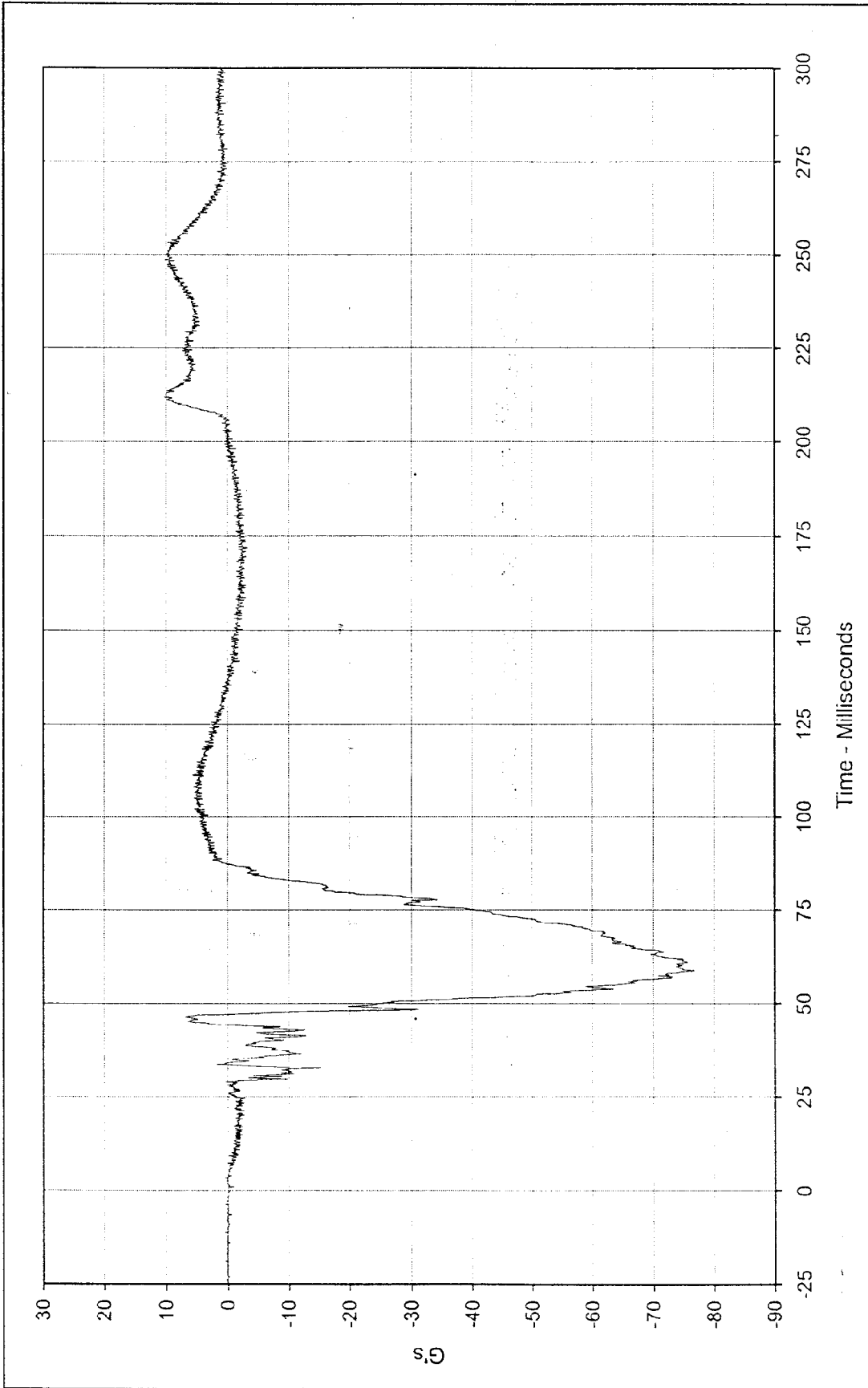
Curve Description: Driver Shoulder Belt Pullout Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 5.19 at 64.5 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -0.15 at 180.6 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-046





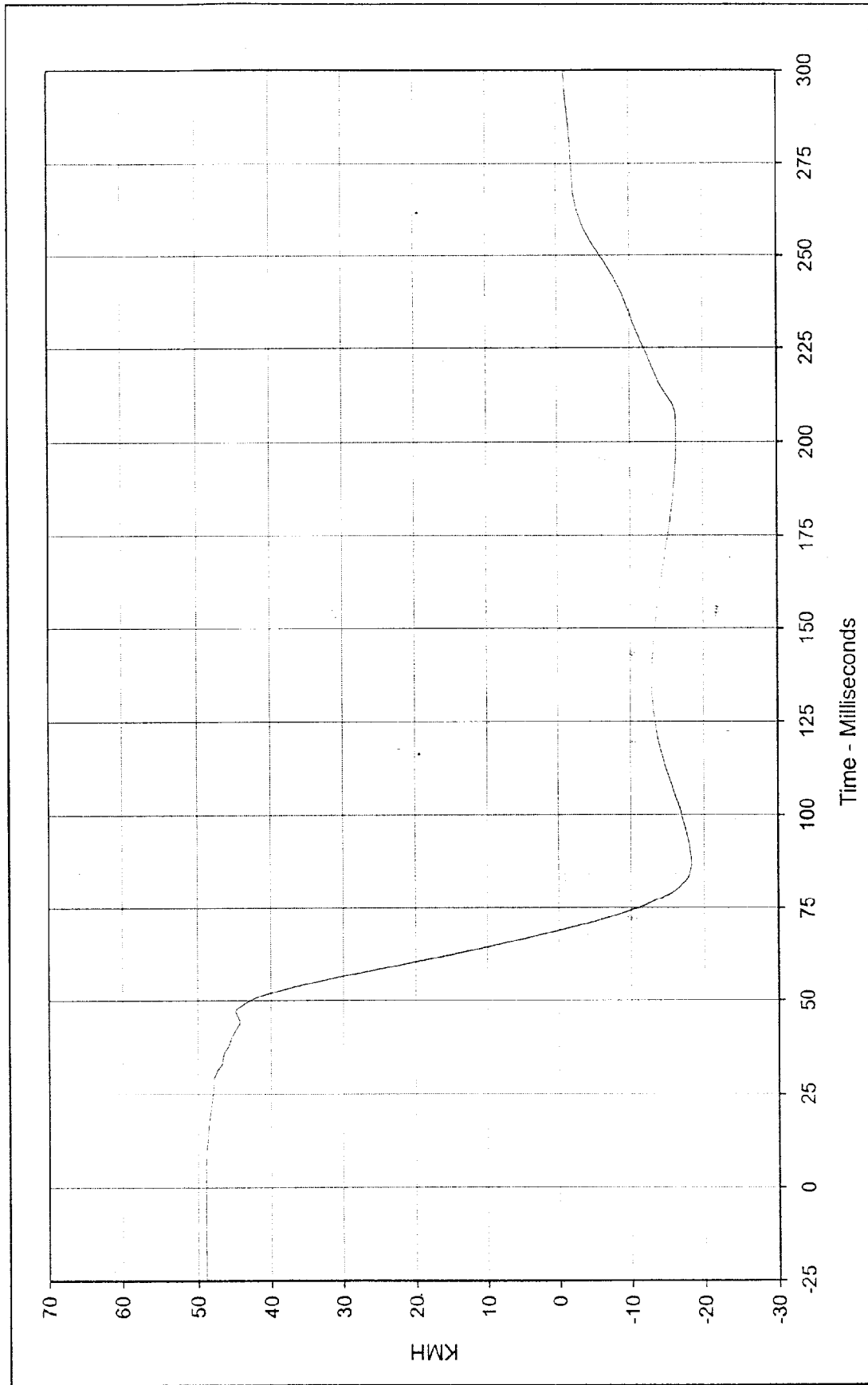
Curve Description: Driver Shoulder Belt Elongation Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 0.034 at 125.4 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -0.002 at 57.1 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-047





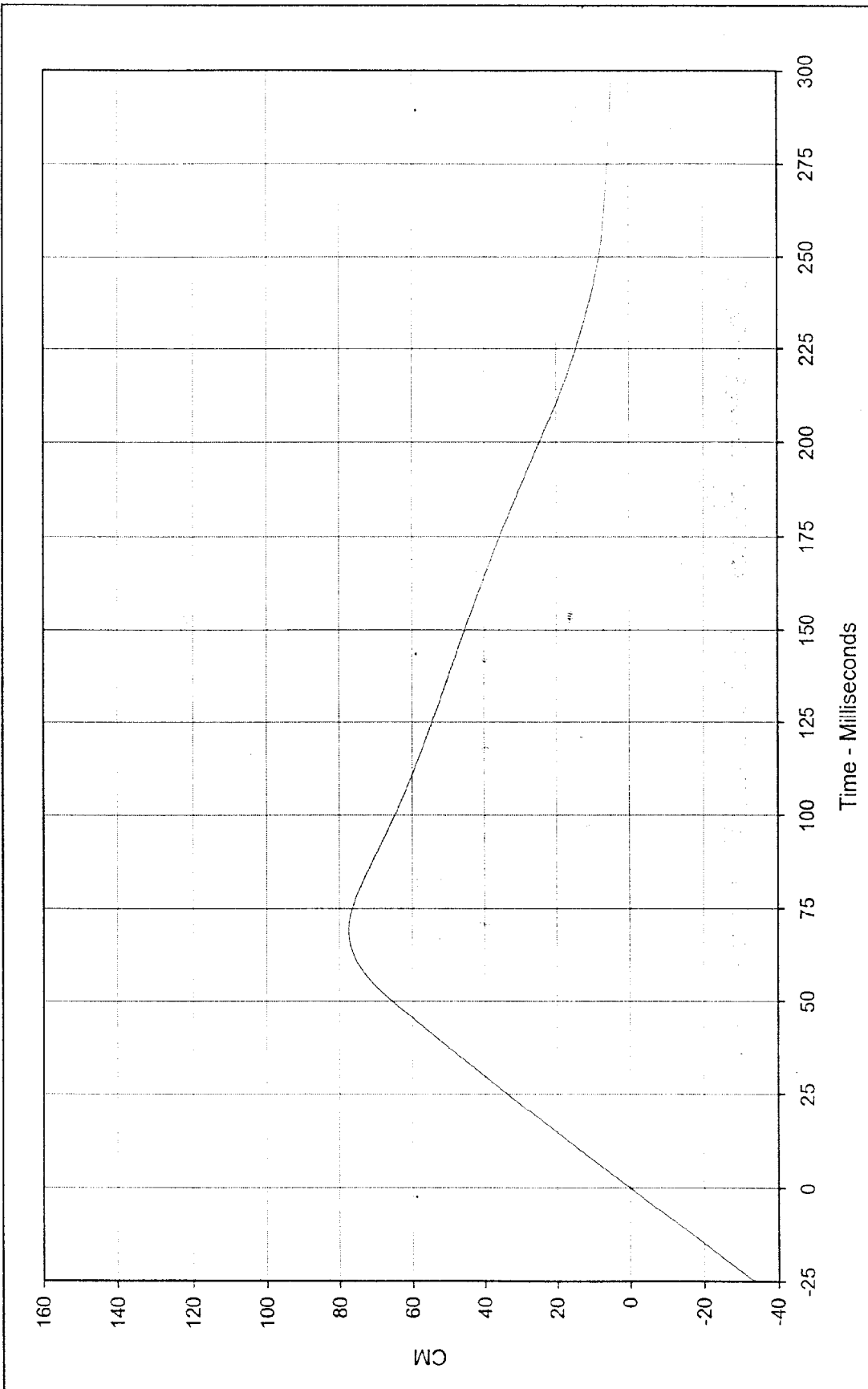
Curve Description: Passenger Head Primary X Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 10.4 at 212.0 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -76.8 at 58.7 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 9/9/97
 Curve Number: FIL-048





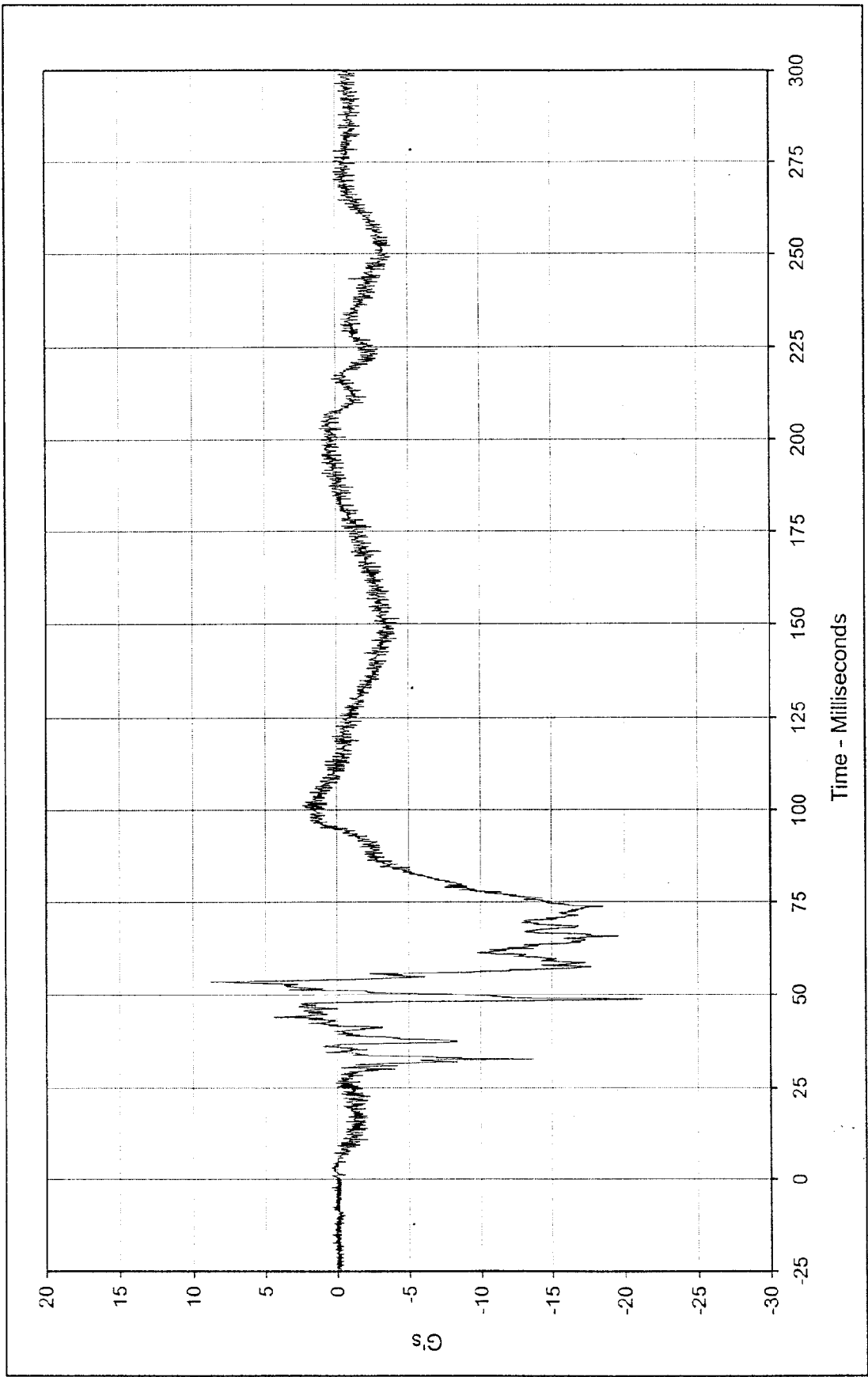
Curve Description: Passenger Head Primary X Velocity Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 48.9 at 0.0 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -18.3 at 87.2 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN1-048





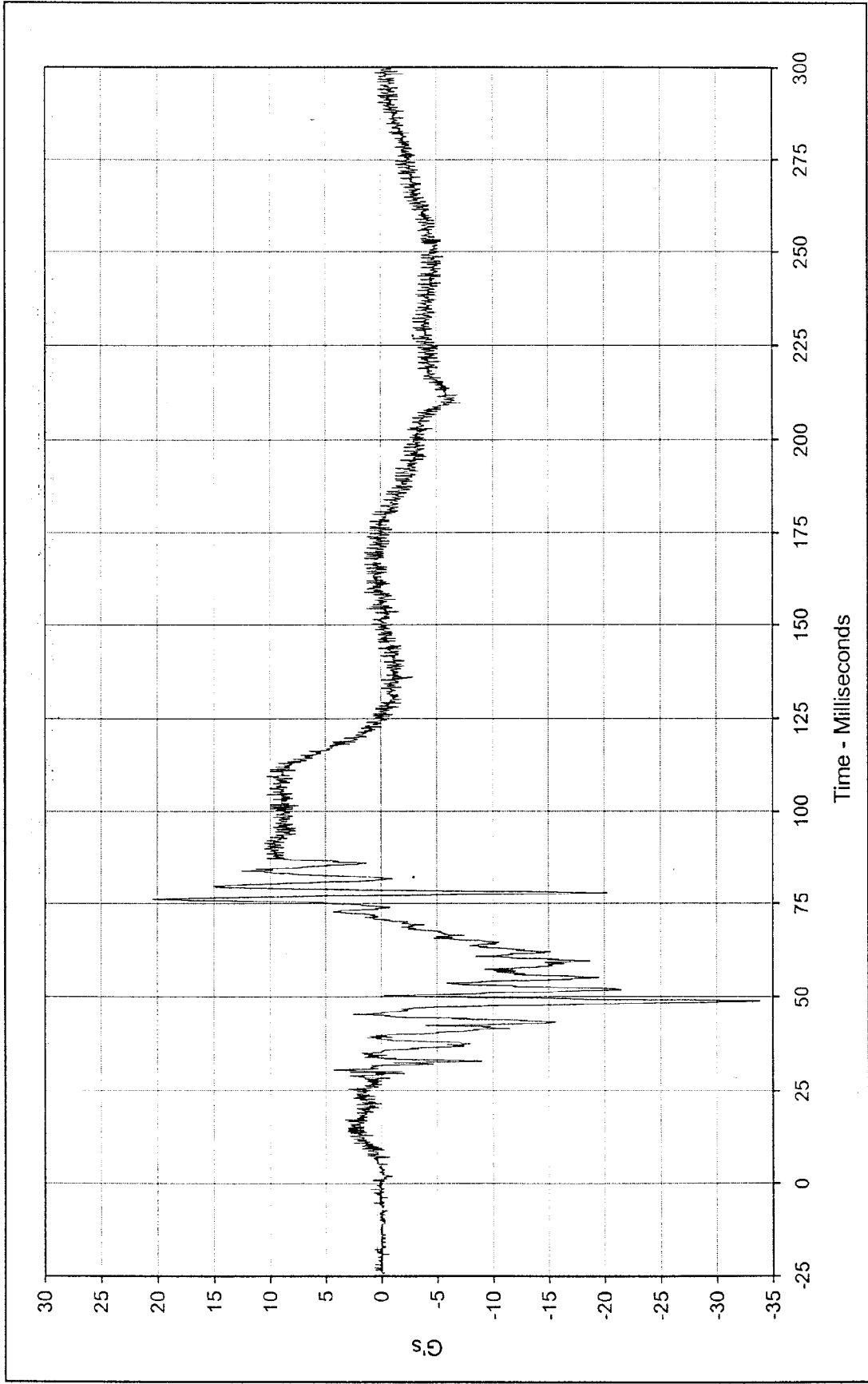
Curve Description: Passenger Head Primary X Displ. Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 77.5 at 69.0 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: 0.1 at 0.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN2-048





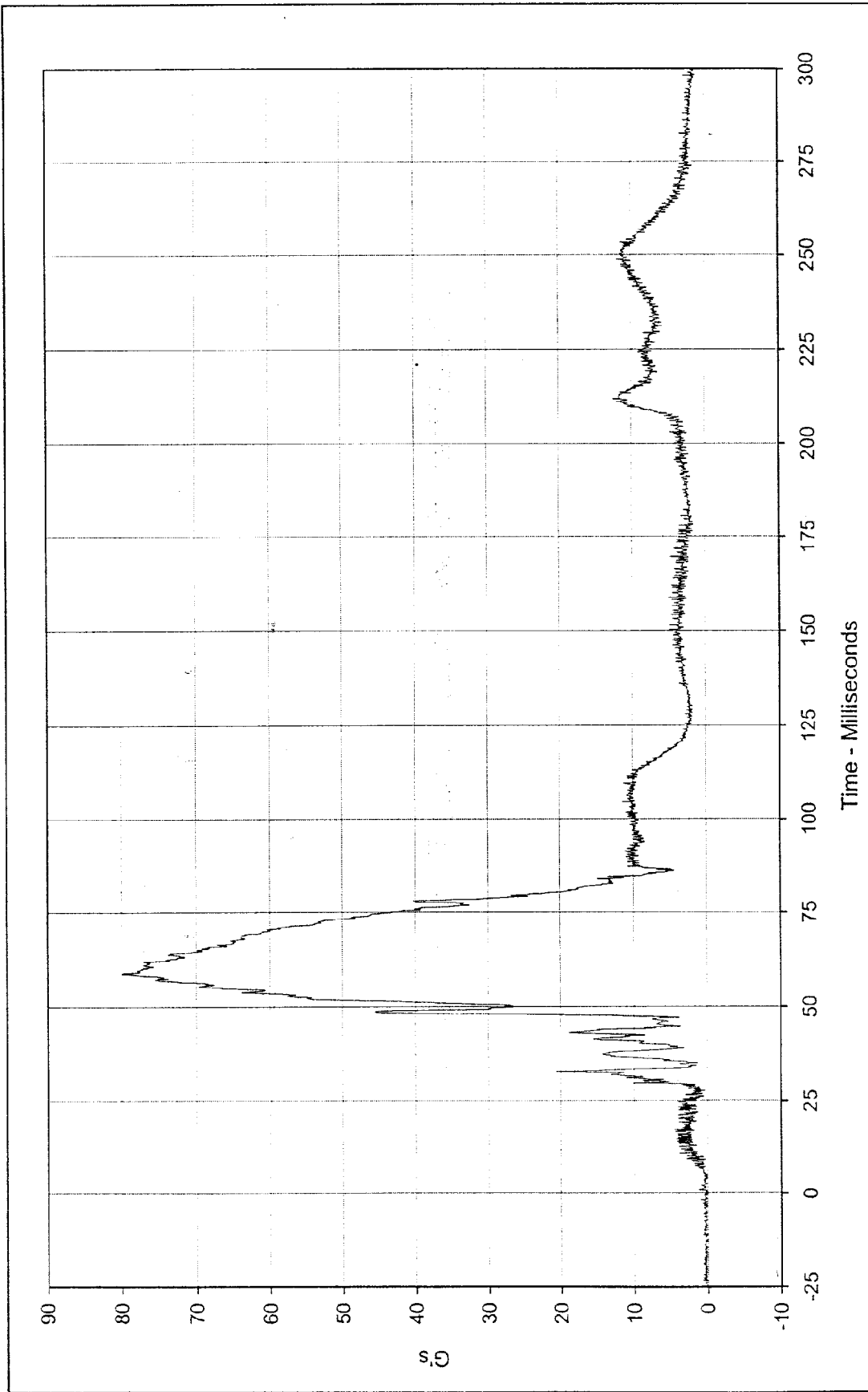
Curve Description: Passenger Head Primary Y Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 8.8 at 53.6 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -21.2 at 48.6 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 9/9/97
 Curve Number: FIL-049





Curve Description: Passenger Head Primary Z Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 20.5 at 76.2 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -33.8 at 48.9 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 9/9/97
 Curve Number: FIL-050





Curve Description: Passenger Head Resultant Primary

Testing Program: 1997 48.4 km/h Frontal Impact (Female)

Maximum Value: 80.0 at 58.8 Milliseconds

Test Vehicle: 1996 Dodge Neon 4 Door Sedan

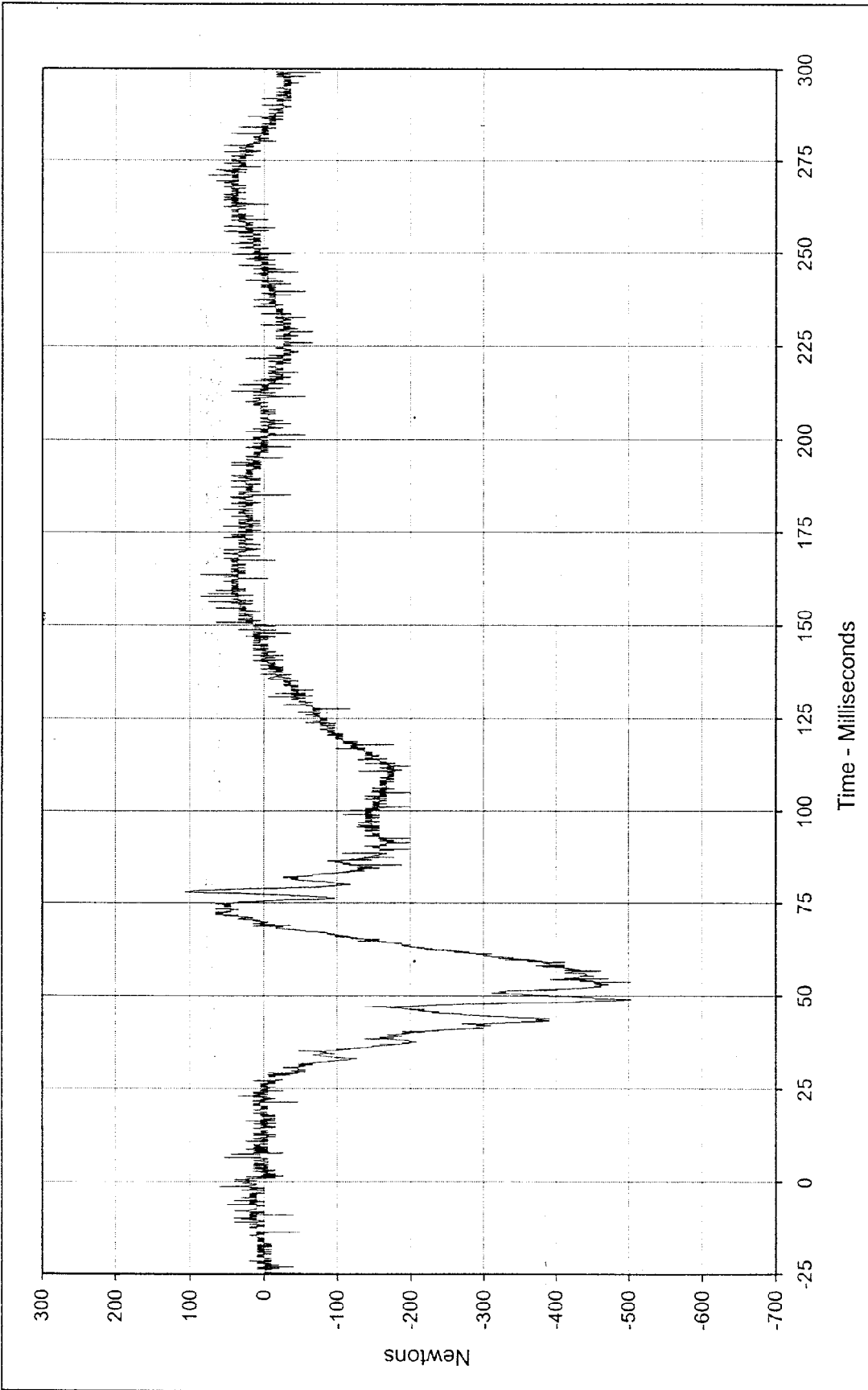
Minimum Value: 0.0 at 4.0 Milliseconds

SAE Filter Class: 1000

Date of Test: 9/9/97

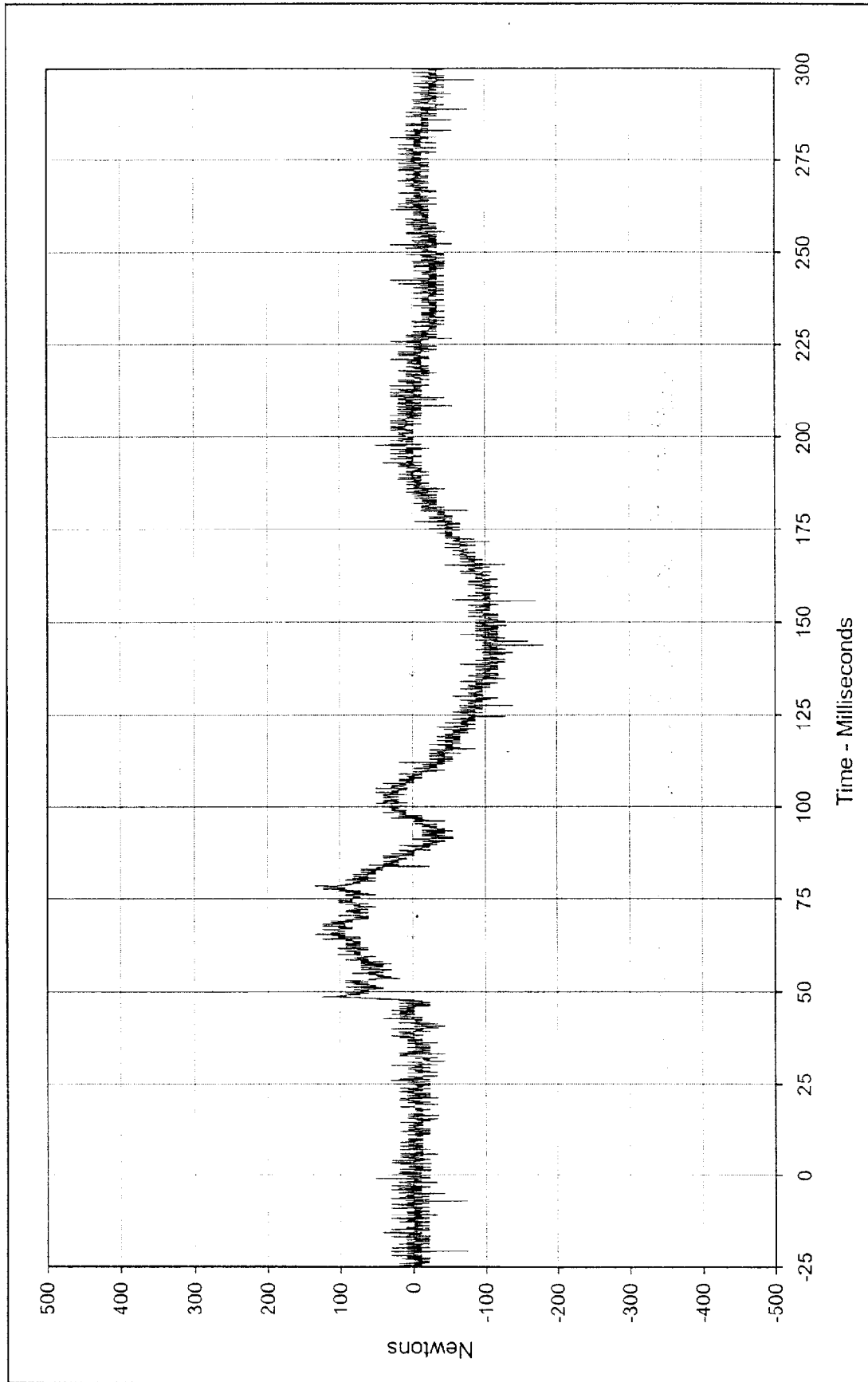
Curve Number: RES-048





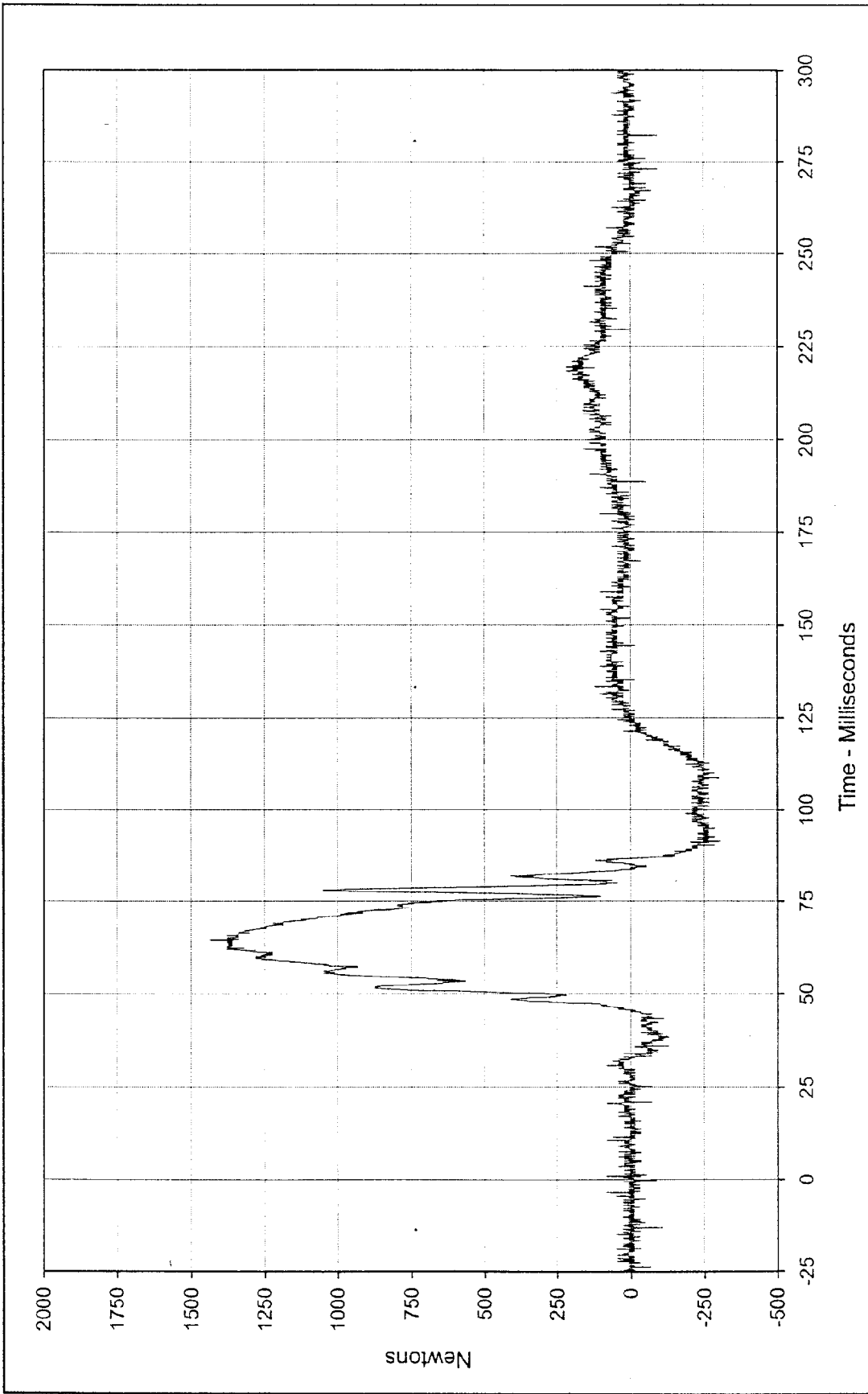
Curve Description: Passenger Neck Force X Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 106.3 at 77.9 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -503.2 at 49.0 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 9/9/97
 Curve Number: FIL-051





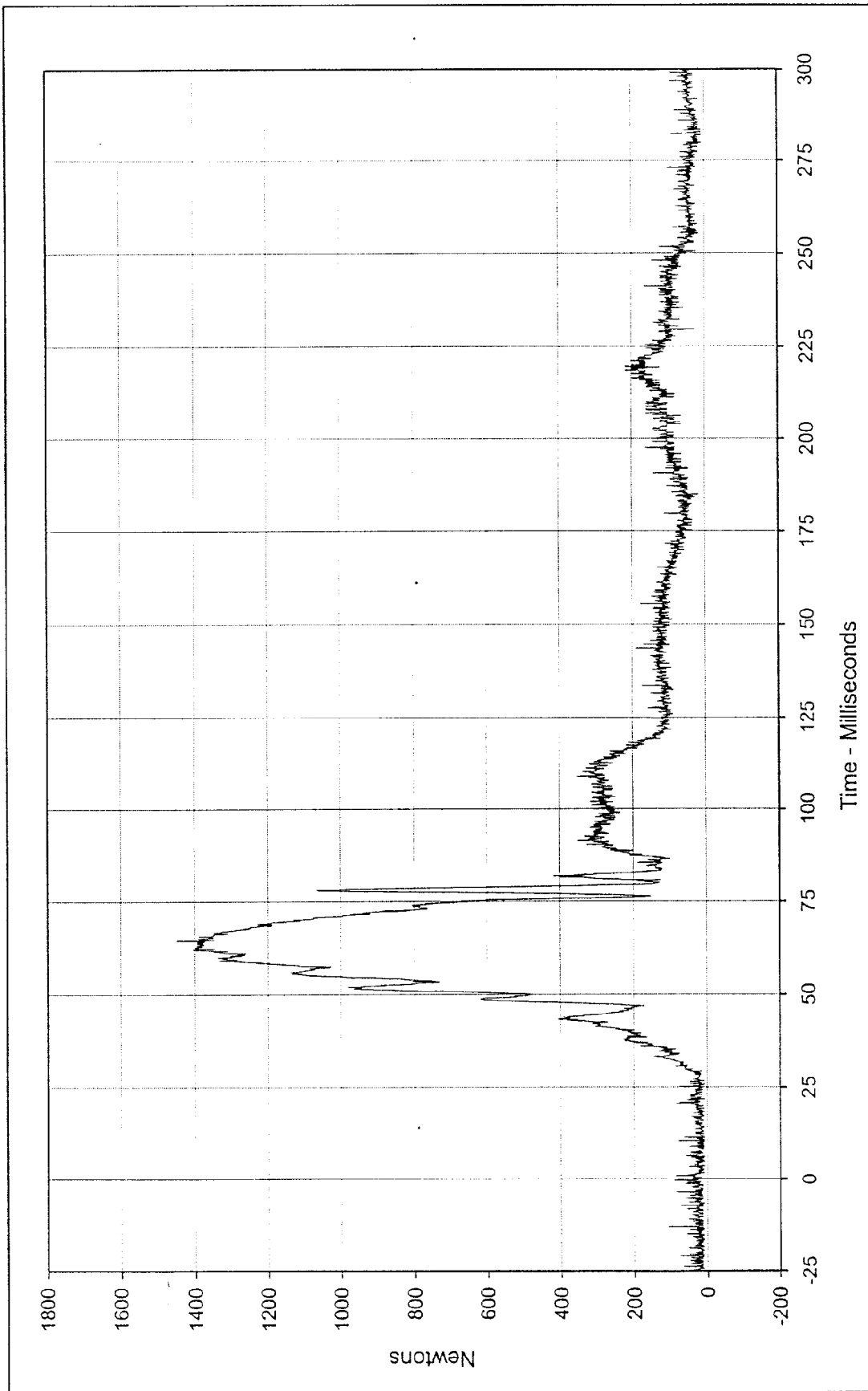
Curve Description: Passenger Neck Force Y Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 134.5 at 65.3 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -180.5 at 143.6 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 9/9/97
 Curve Number: FIL-052





Curve Description: Passenger Neck Force Z Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 1437.0 at 64.4 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -304.4 at 91.2 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 9/9/97
 Curve Number: FIL-053





Curve Description: Passenger Neck Force Resultant Testing Program: 1997 48.4 km/h Frontal Impact (Female)

Maximum Value: 1449.7 at 64.4 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan

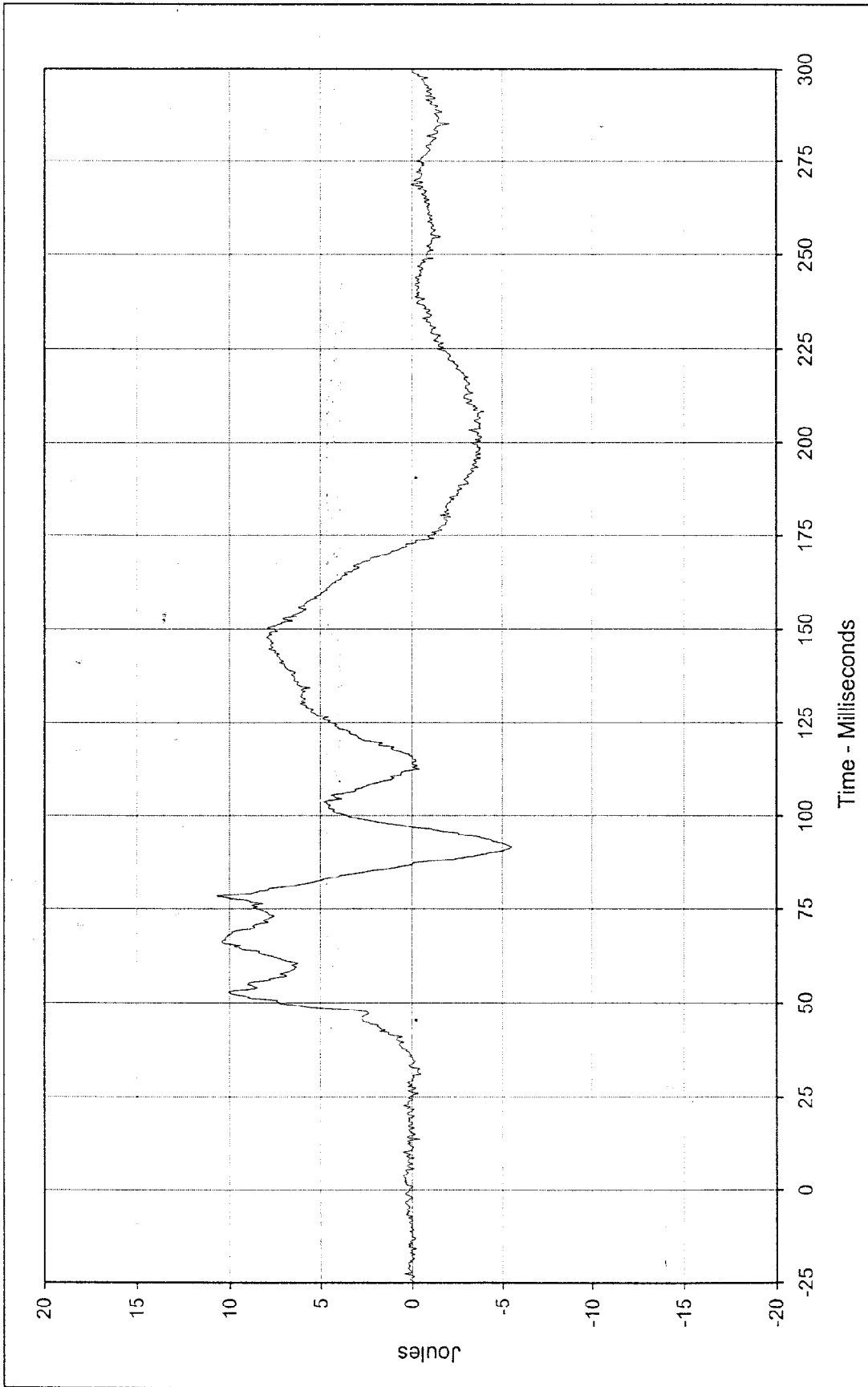
Minimum Value: 7.3 at 1.7 Milliseconds

SAE Filter Class: 1000

Date of Test: 9/9/97

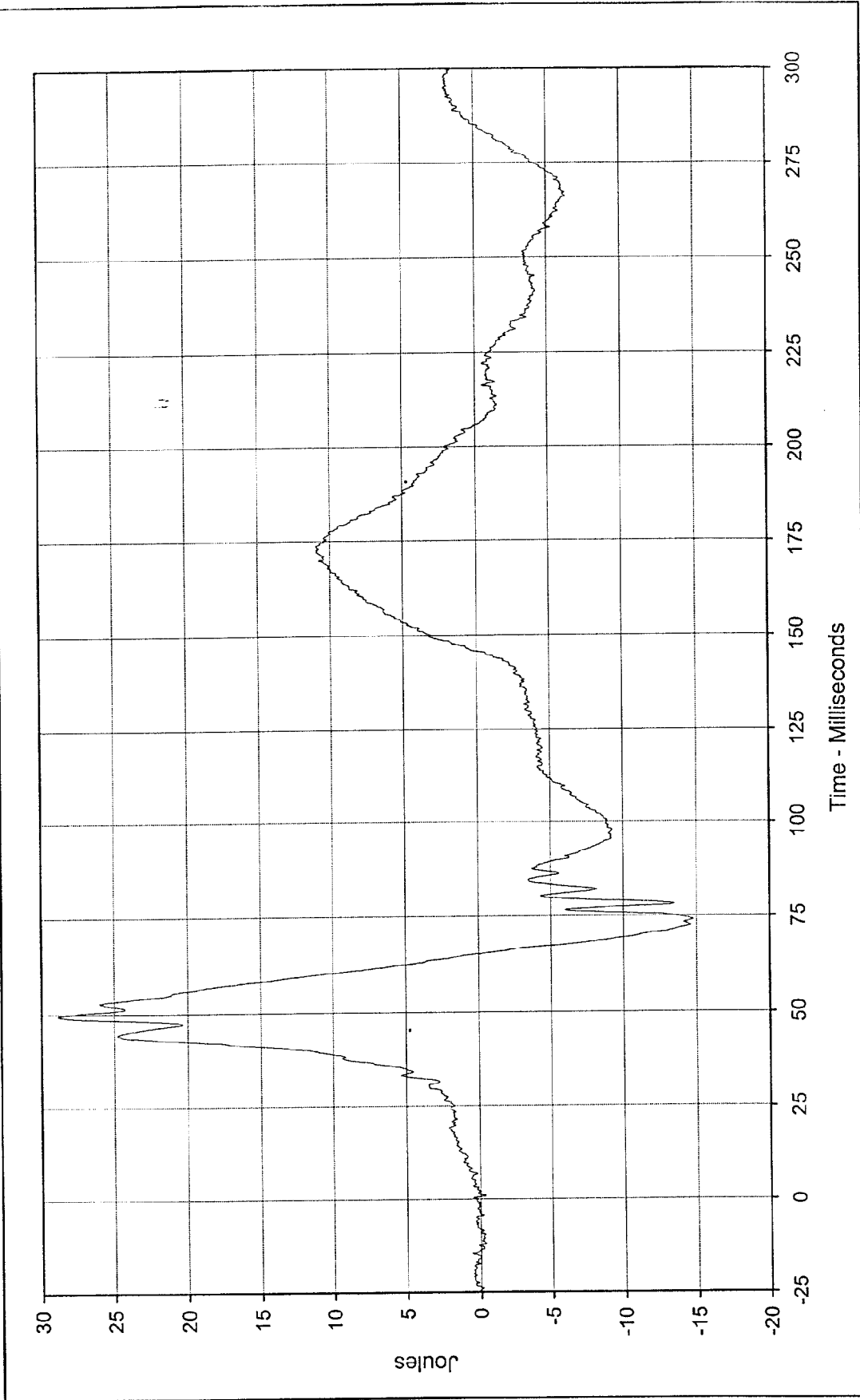
Curve Number: RES-051





Curve Description: Passenger Neck Moment X Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 10.7 at 78.3 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -5.5 at 91.4 Milliseconds
 SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-054

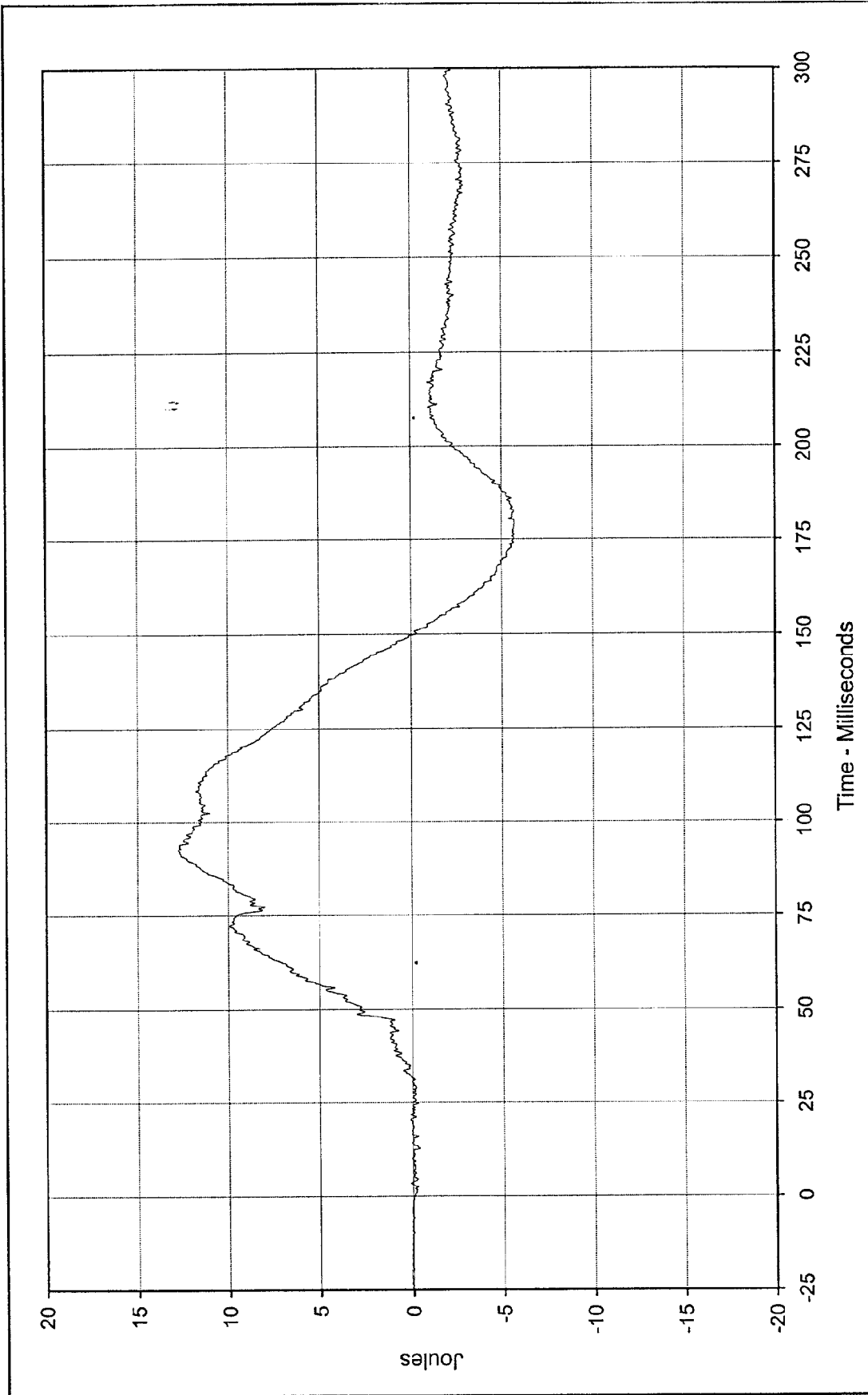




Curve Description: Passenger Neck Moment Y Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 28.8 at 49.5 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -14.8 at 74.0 Milliseconds



SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-055



Curve Description: Passenger Neck Moment Z Testing Program 1997 48.4 km/h Frontal Impact (Female)

Maximum Value: 12.7 at 12.5 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan

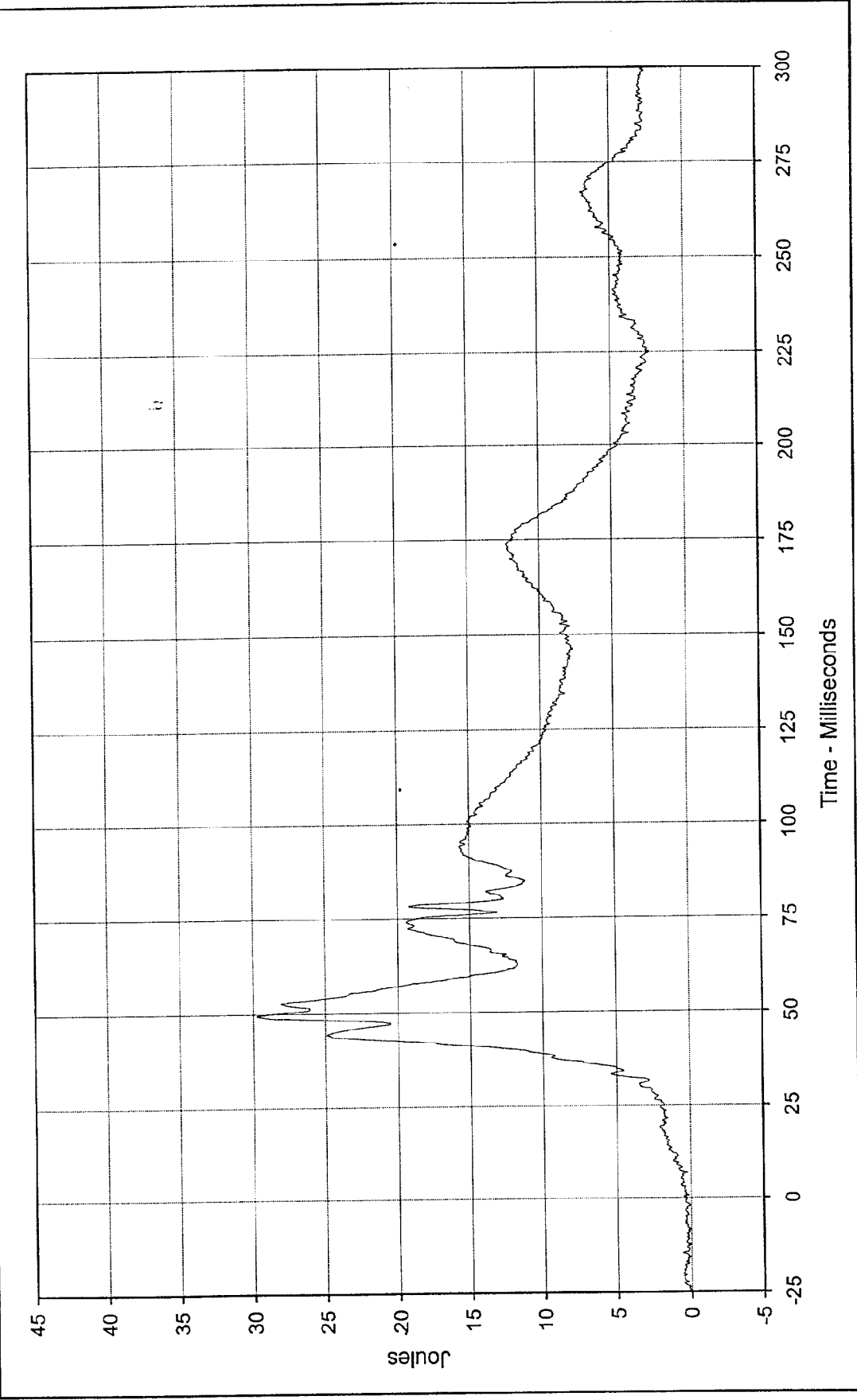
Minimum Value: -5.7 at 179.1 Milliseconds

SAE Filter Class: 600

Date of Test: 9/9/97

Curve Number: FIL-056

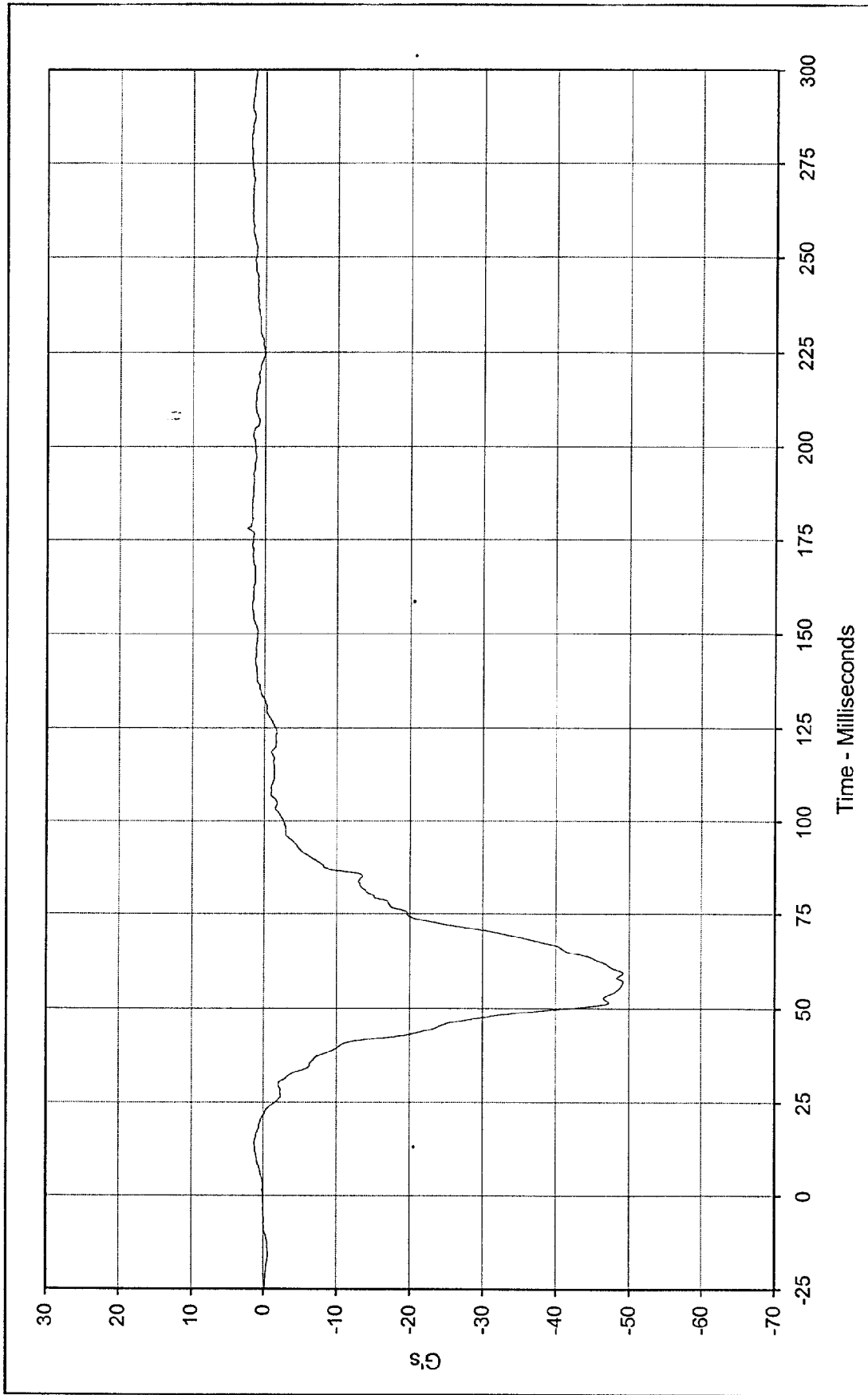




Curve Description: Passenger Neck Moment Resultant
 Maximum Value: 29.8 at 49.6 Milliseconds
 Minimum Value: 0.1 at 0.7 Milliseconds
 SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: RES-054

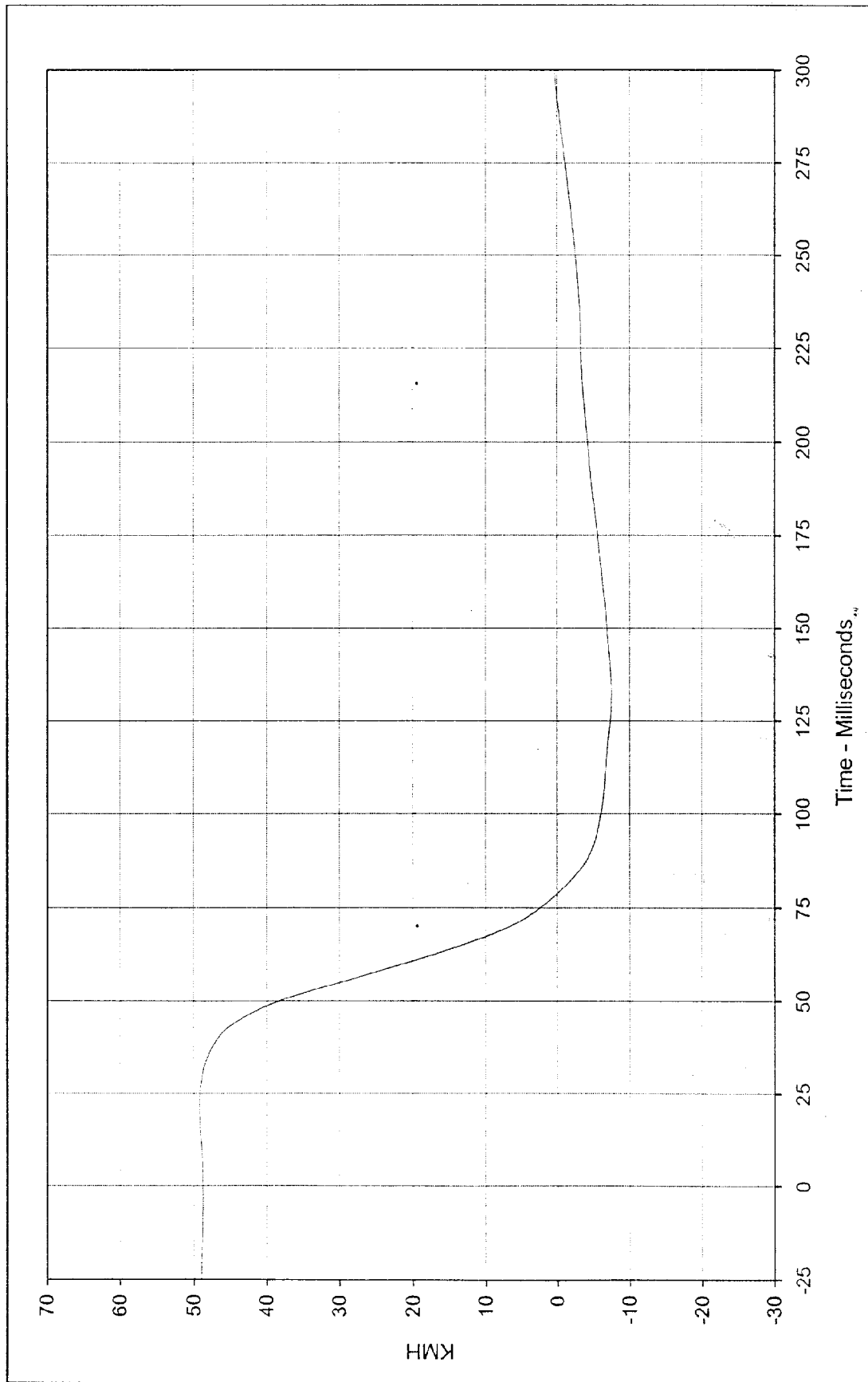
Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan





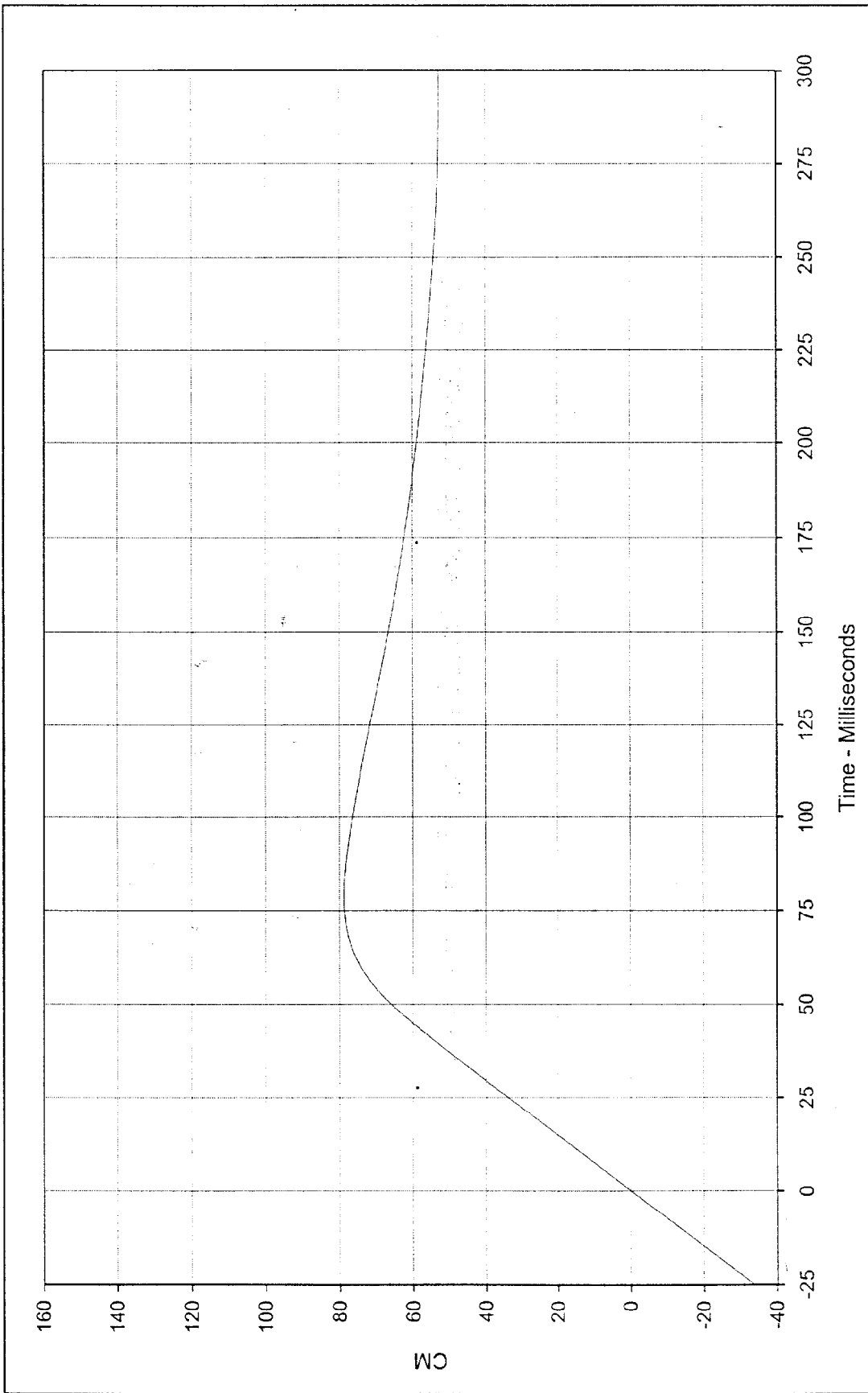
Curve Description: Passenger Chest Primary X Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 2.4 at 178.1 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -49.1 at 57.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: FIL-057





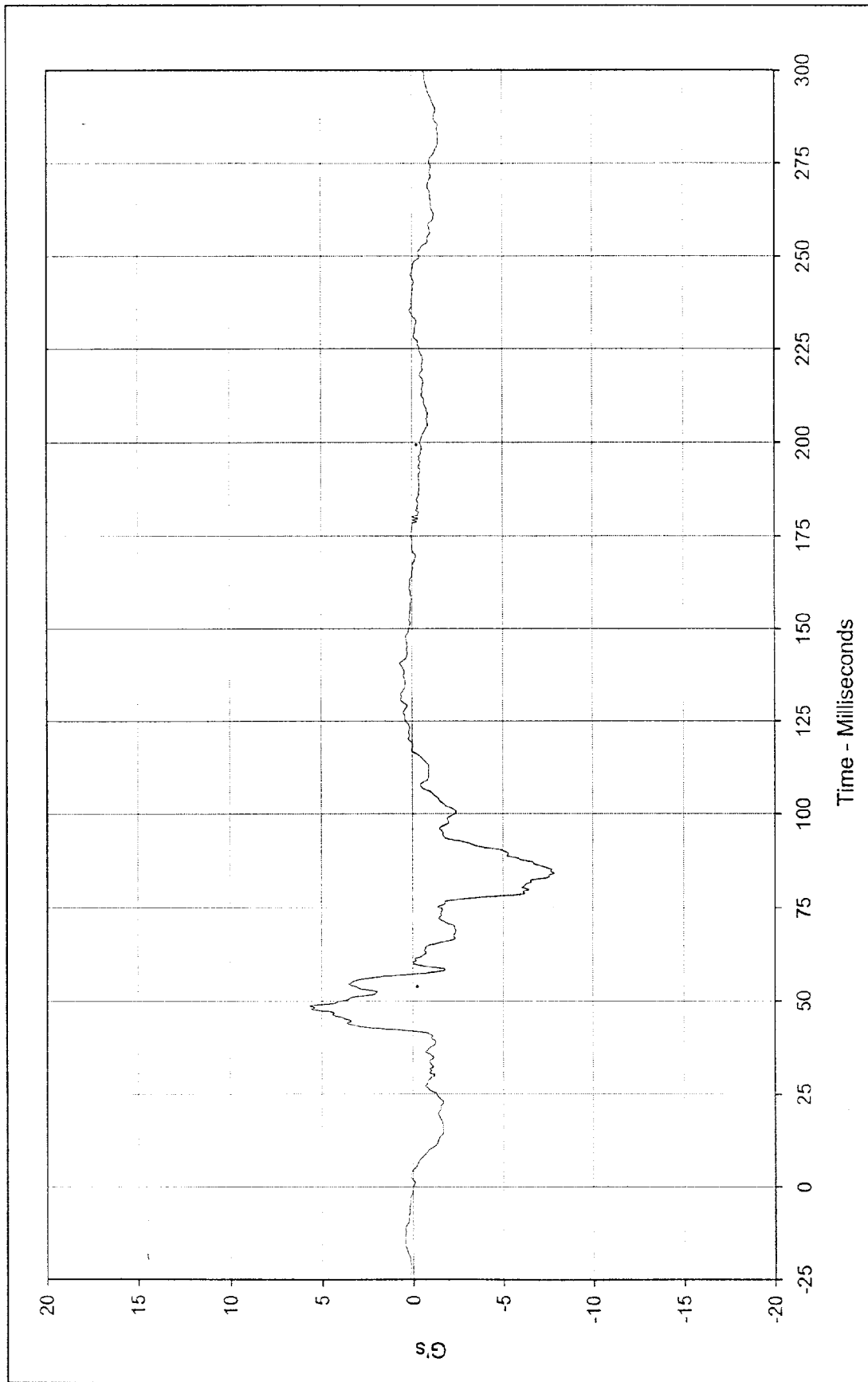
Curve Description: Passenger Chest Primary X Velocity Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 49.2 at 21.7 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -7.5 at 132.7 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN1-057





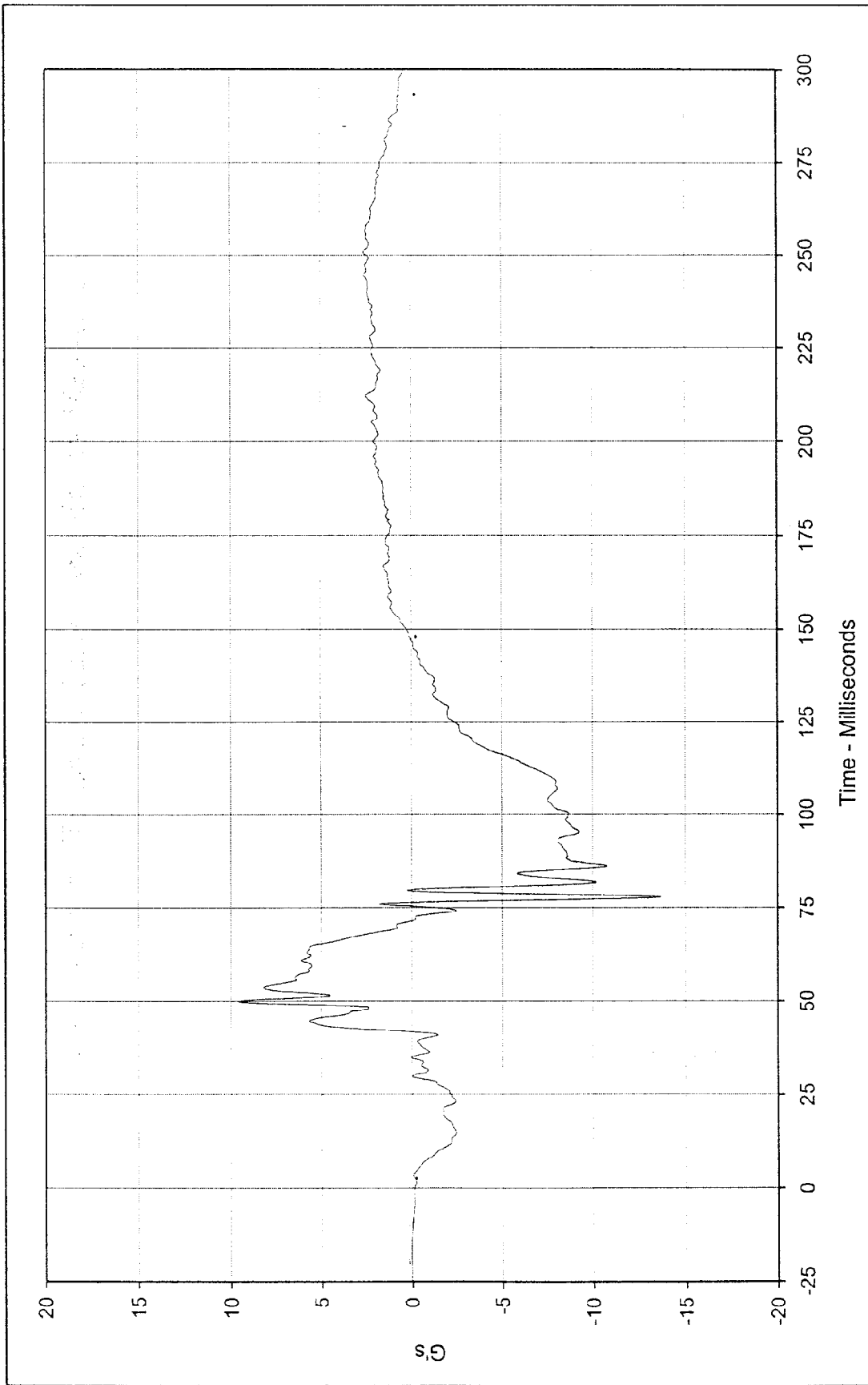
Curve Description: Passenger Chest Primary X Displ. Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 78.7 at 78.8 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: 0.0 at 0.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN2-057





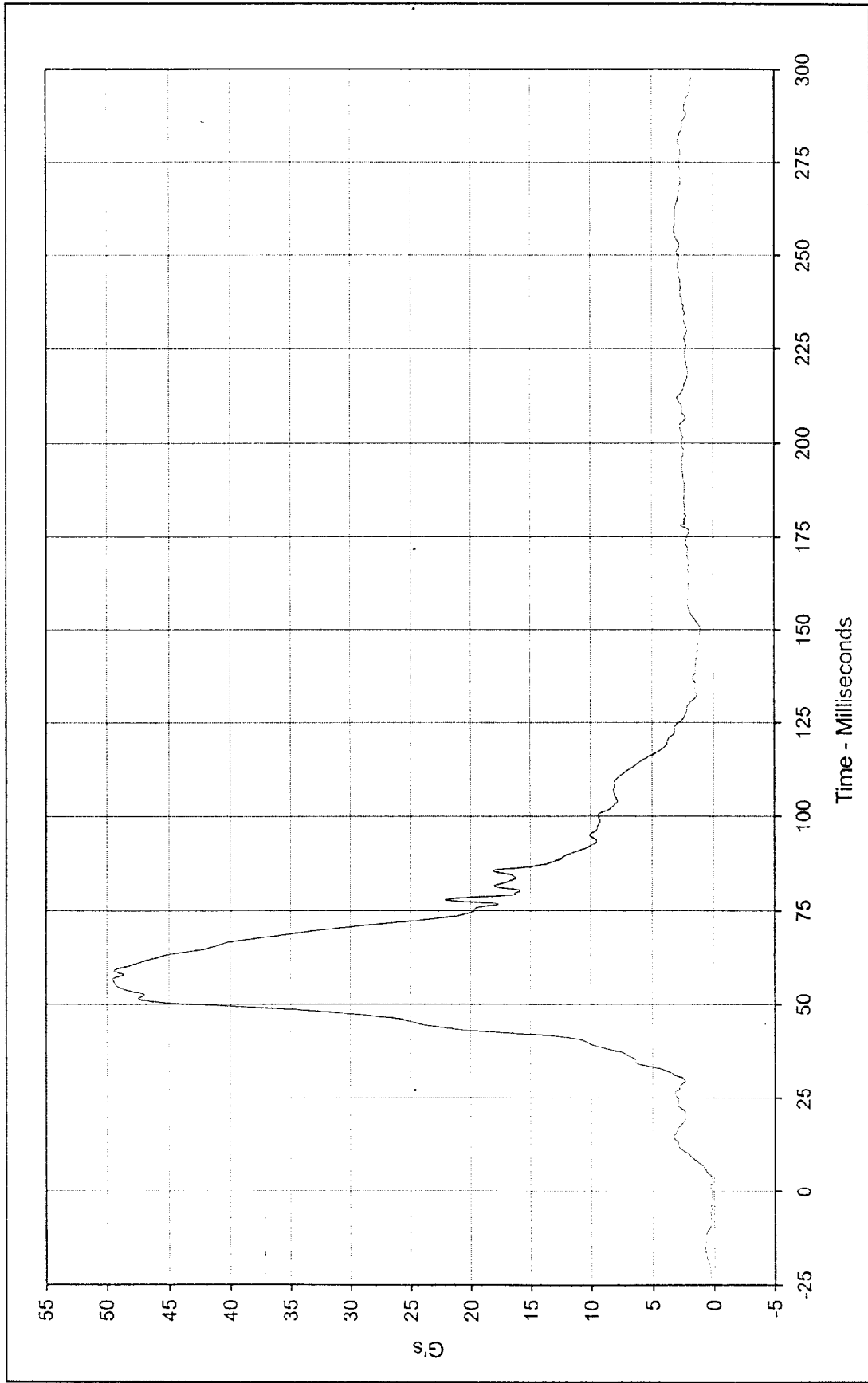
Curve Description: Passenger ChestPrimary Y Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 5.7 at 48.6 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -7.8 at 84.3 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: FIL-058





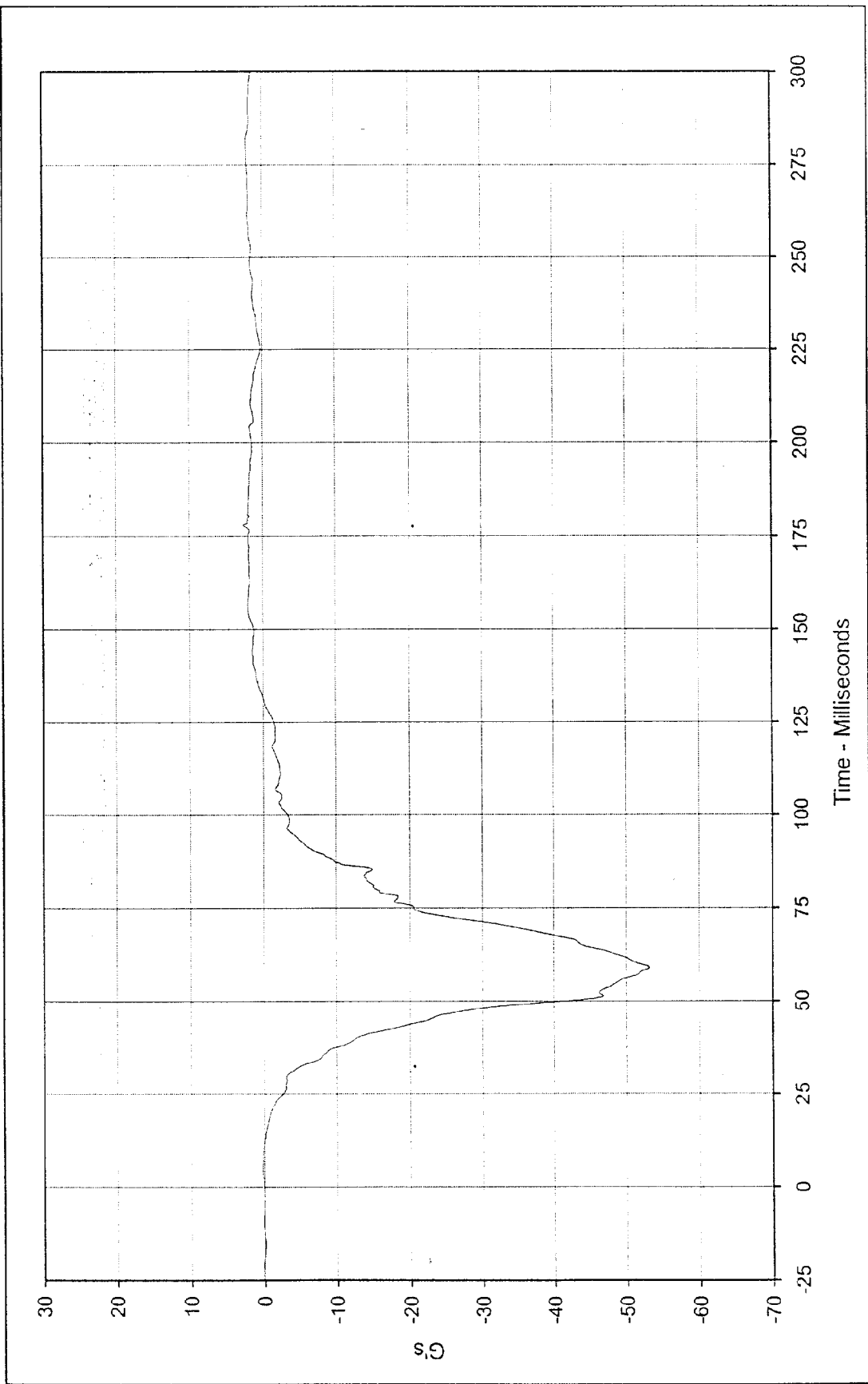
Curve Description: Passenger Chest Primary Z Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 9.6 at 49.9 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -13.7 at 77.9 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: FIL-059





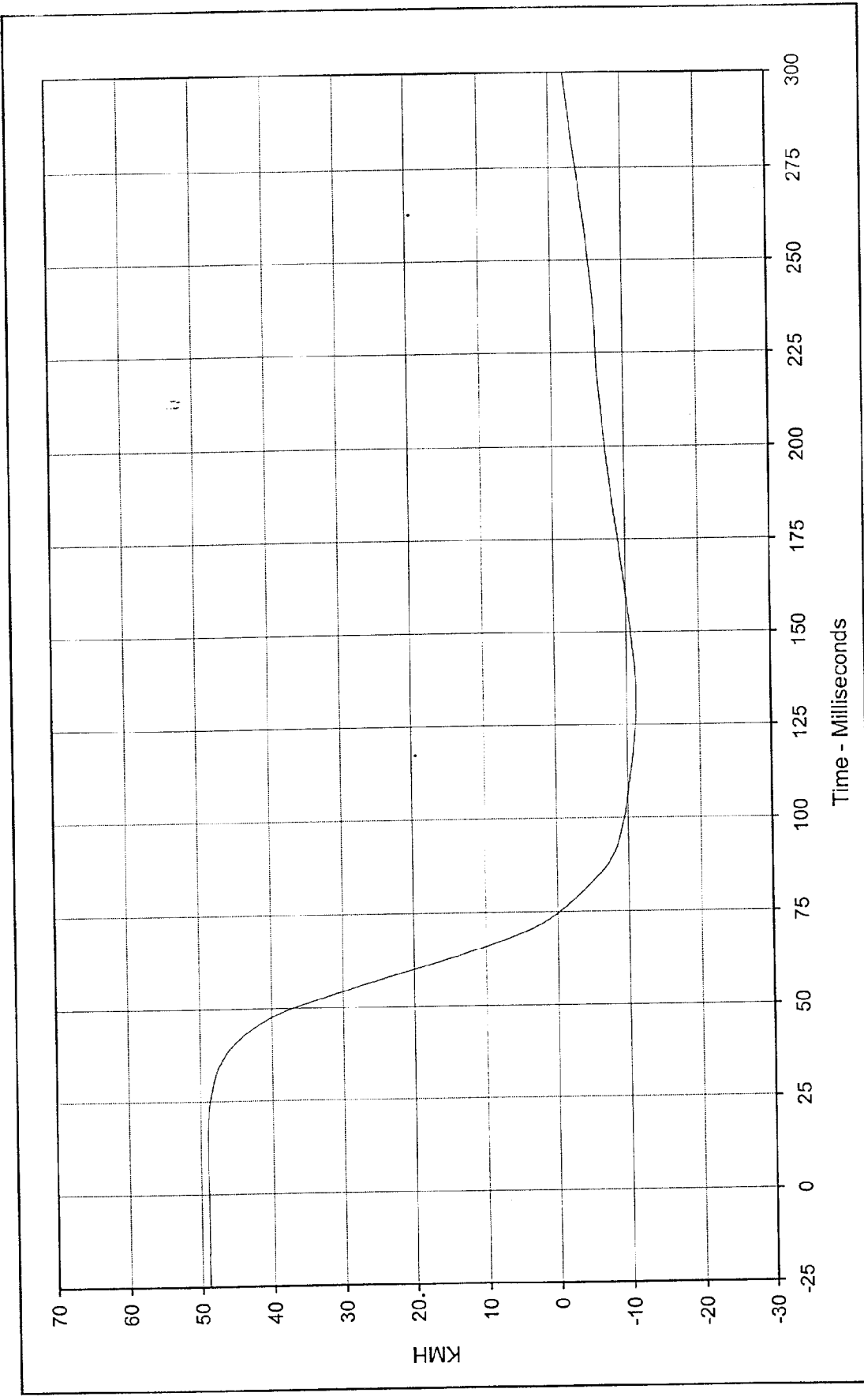
Curve Description: Passenger Chest Resultant Primary Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 49.6 at 56.9 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: 0.1 at 0.1 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: RES-057





Curve Description: Passenger Chest Redundant X Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 2.7 at 178.0 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -53.1 at 59.0 Milliseconds
 SAE Filler Class: 180
 Date of Test: 9/9/97
 Curve Number: FIL-060

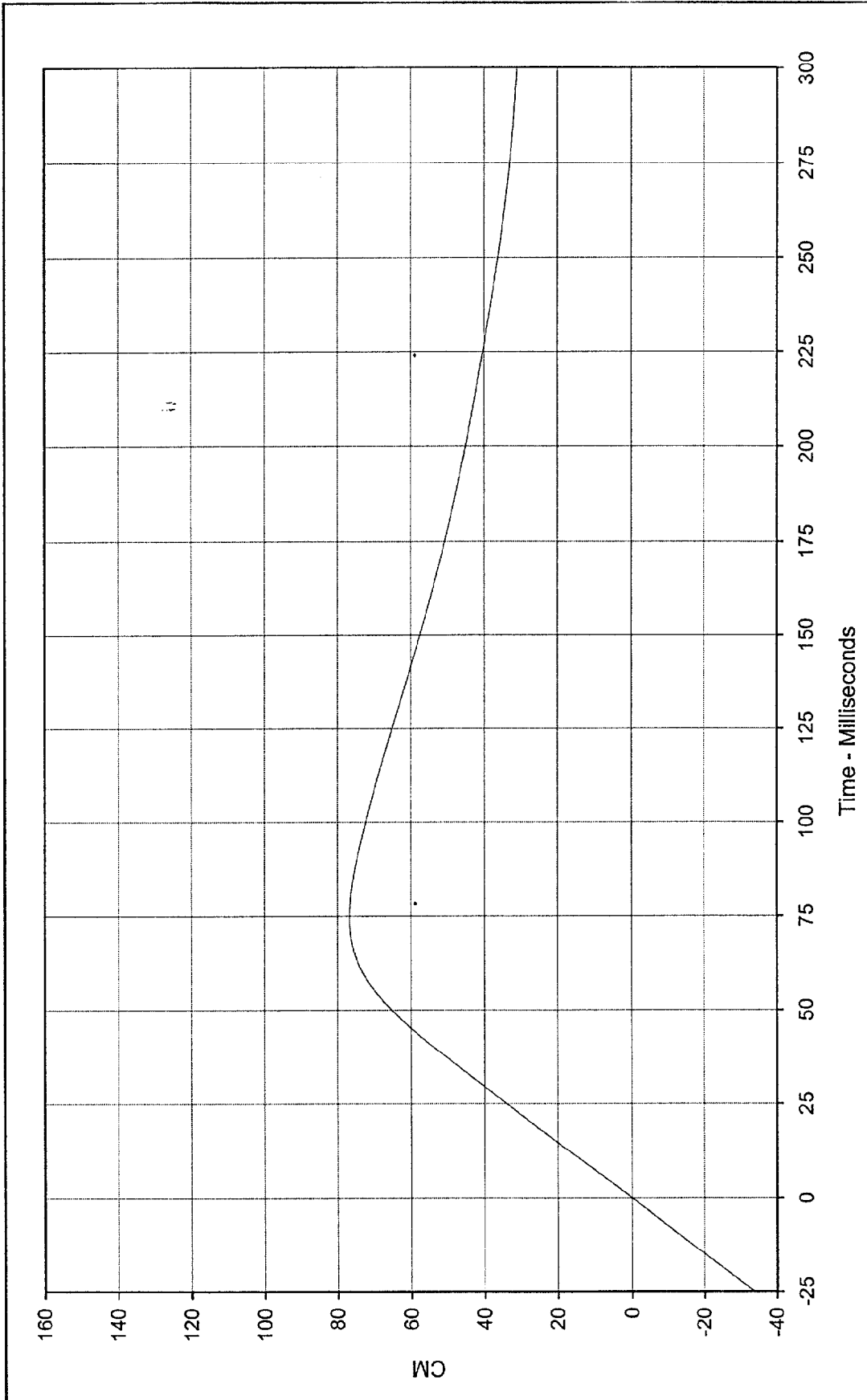




Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan

Curve Description: Passenger Chest Redundant X Velocity
 Maximum Value: 49.0 at 11.6 Milliseconds
 Minimum Value: -11.3 at 131.5 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN1-060

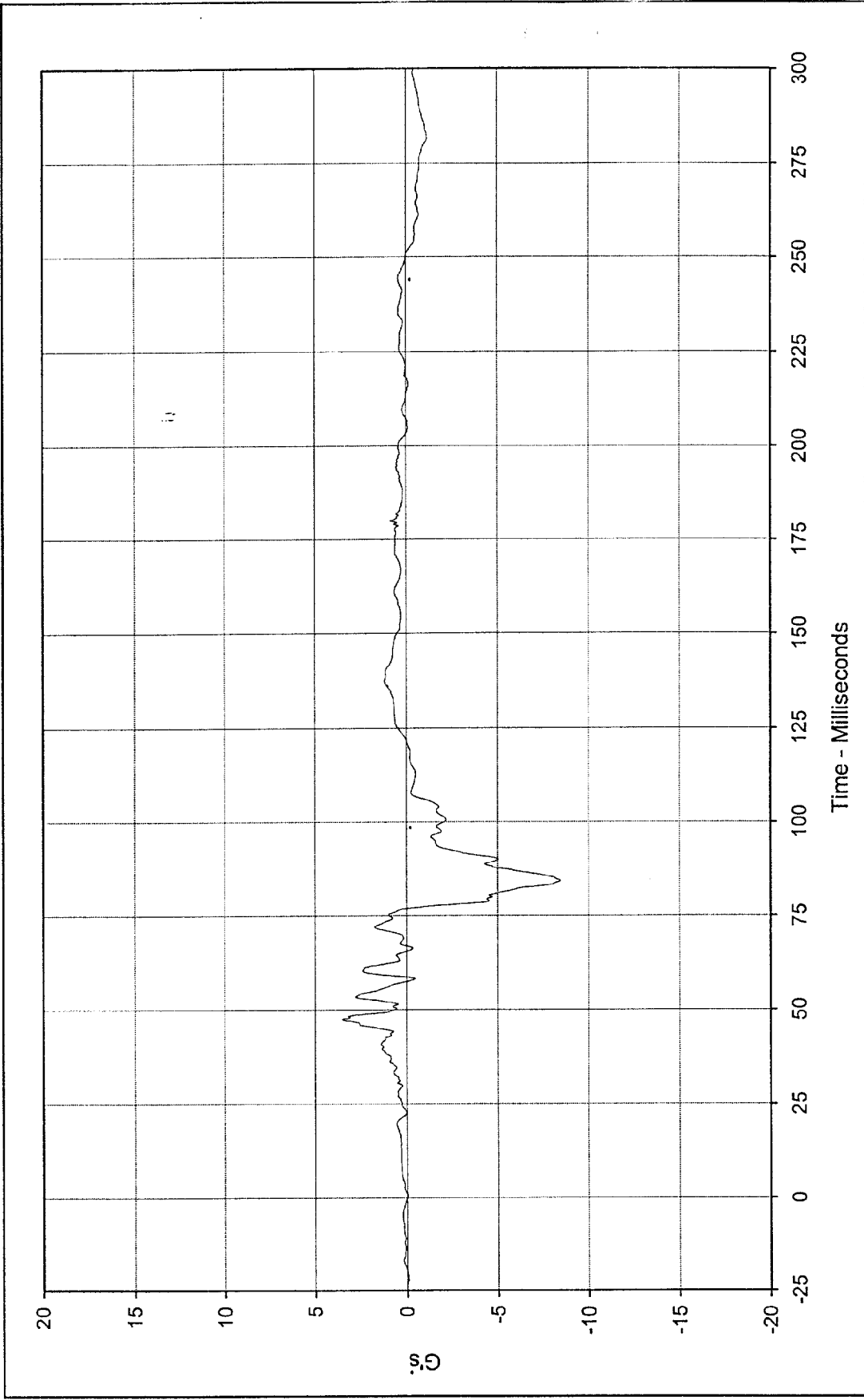




Curve Description: Passenger Chest Redundant X Displ.
 Maximum Value: 76.7 at 74.6 Milliseconds
 Minimum Value: 0.1 at 0.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN2-060

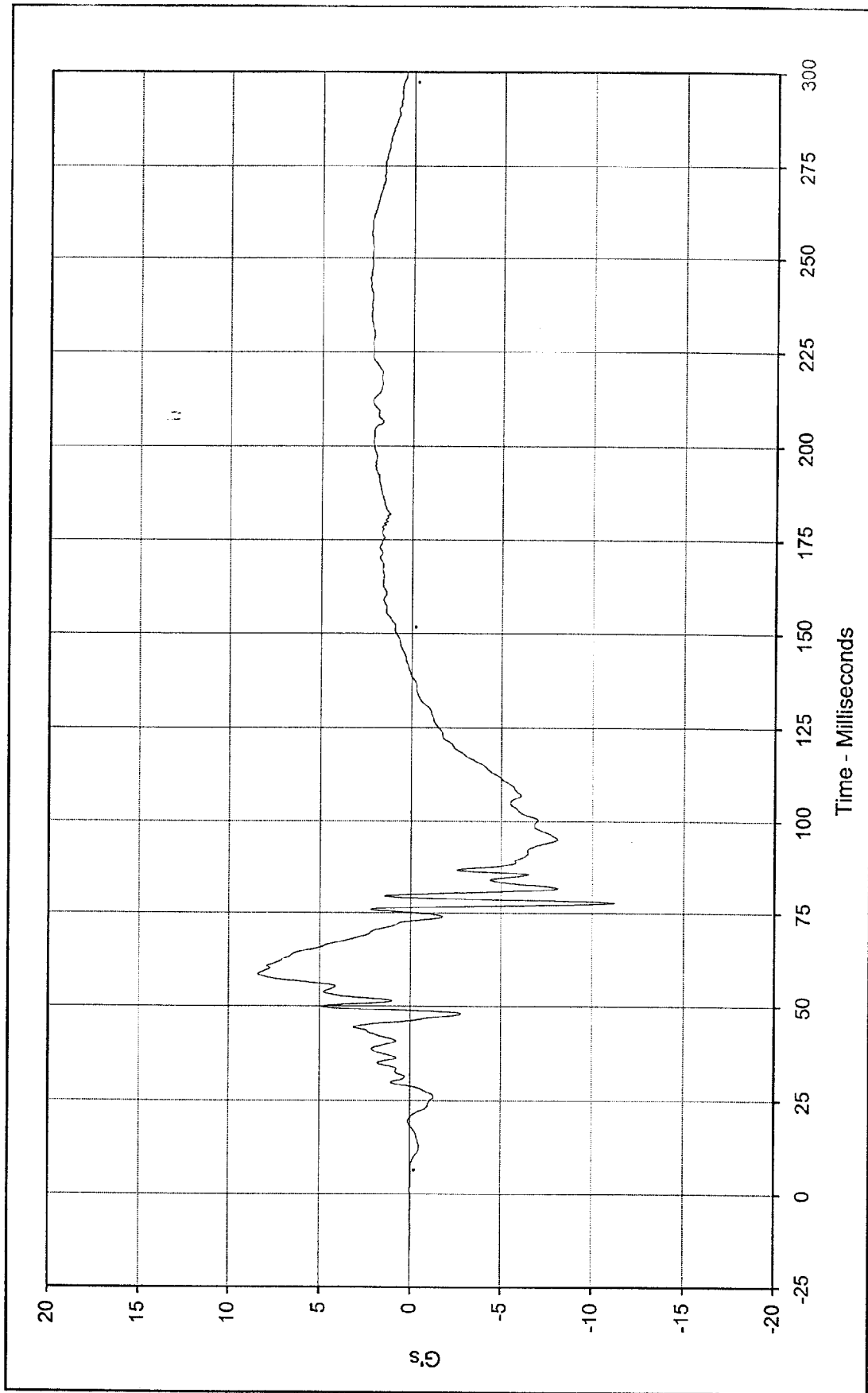
Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan





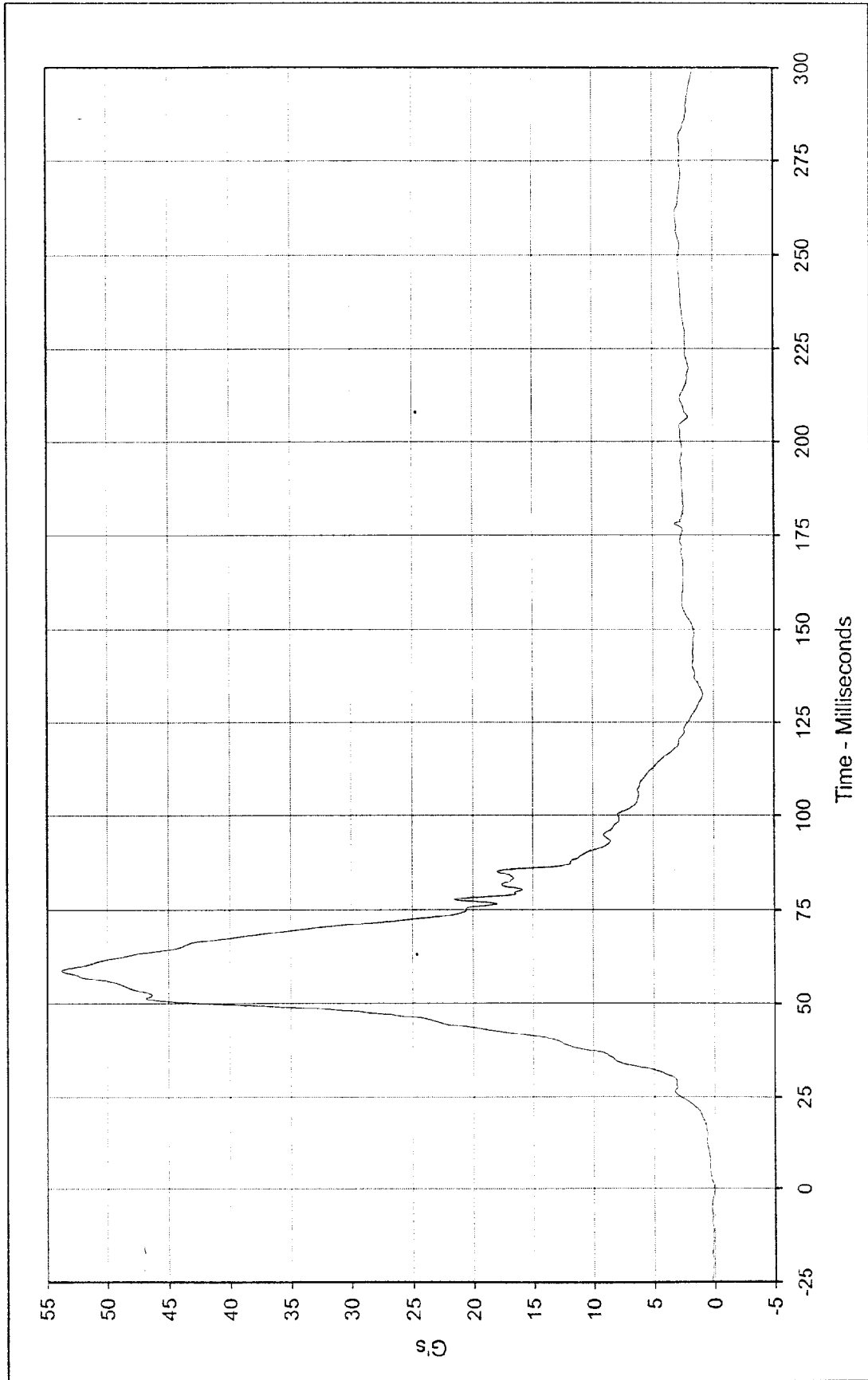
Curve Description: Passenger Chest Redundant Y Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 3.5 at 47.4 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -8.5 at 84.2 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: FIL-061





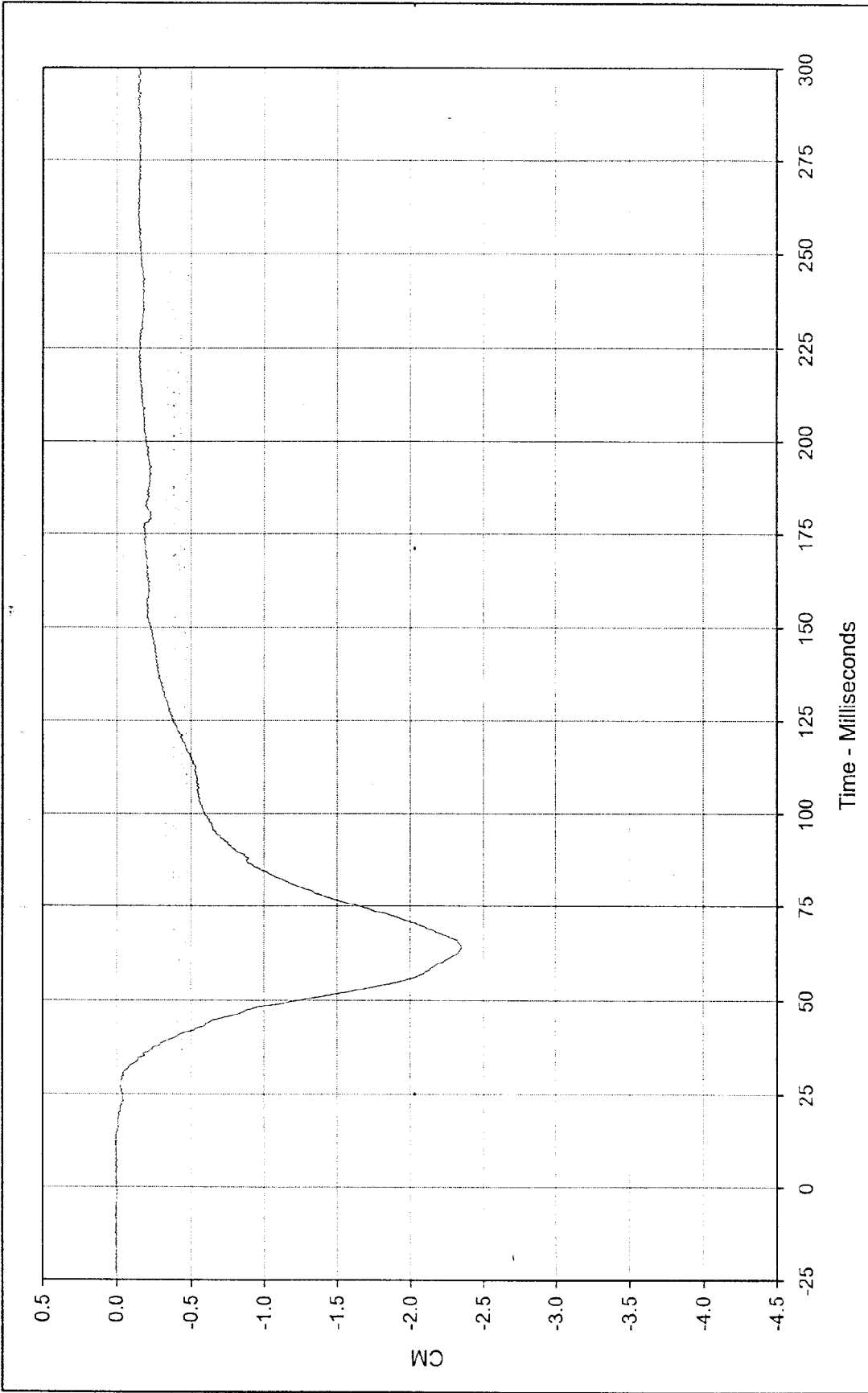
Curve Description: Passenger Chest Redundant Z Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 8.4 at 58.5 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -11.2 at 77.7 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: FIL-062





Curve Description: Passenger Chest Resultant Redundant Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 53.8 at 59.0 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: 0.1 at 0.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: RES-060

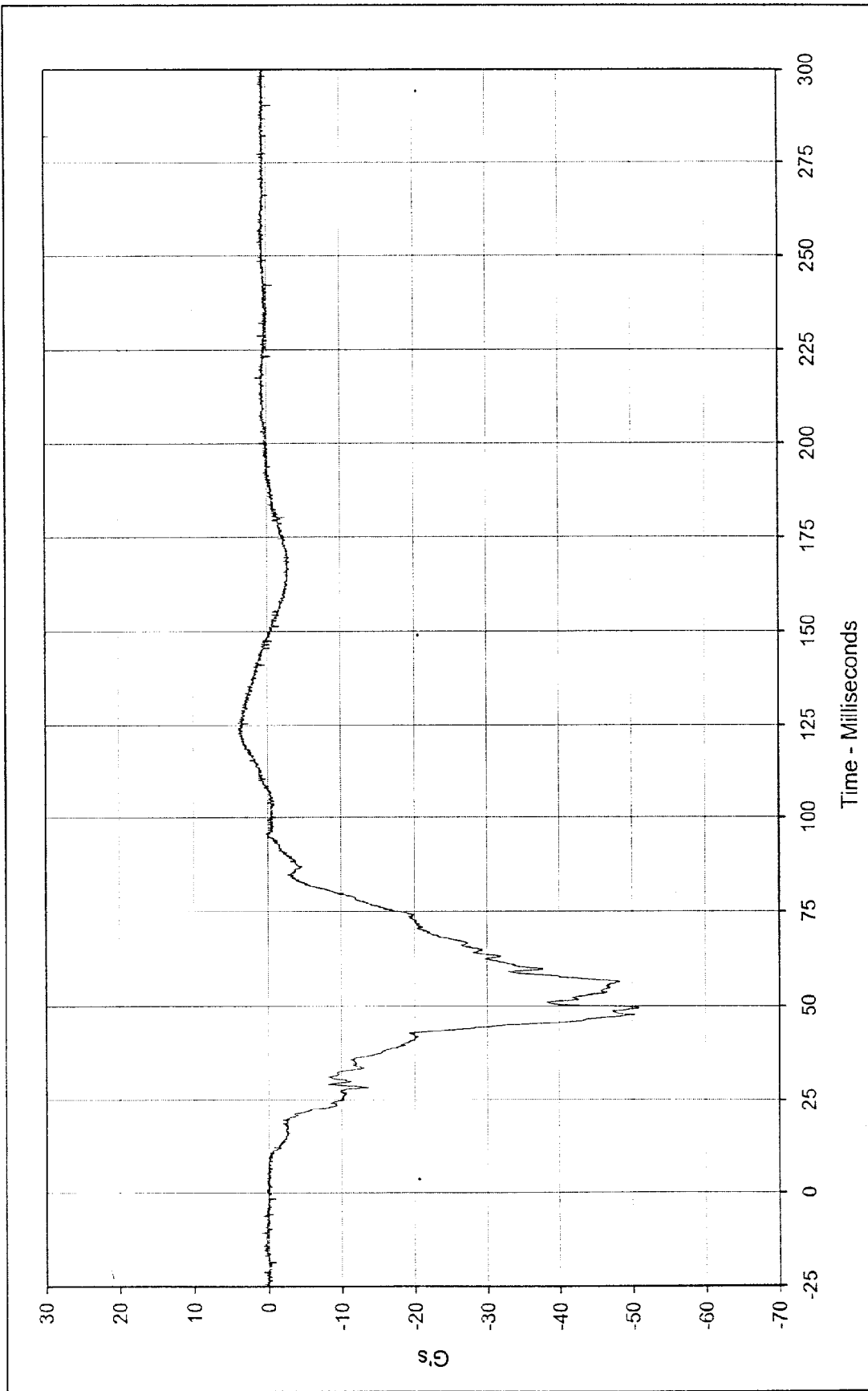




Curve Description: Passenger Chest Displacement X
 Maximum Value: 0.01 at 12.7 Milliseconds
 Minimum Value: -2.36 at 64.0 Milliseconds
 SAE Filter Class: 600
 Date of Test: 8/28/97
 Curve Number: FIL-063

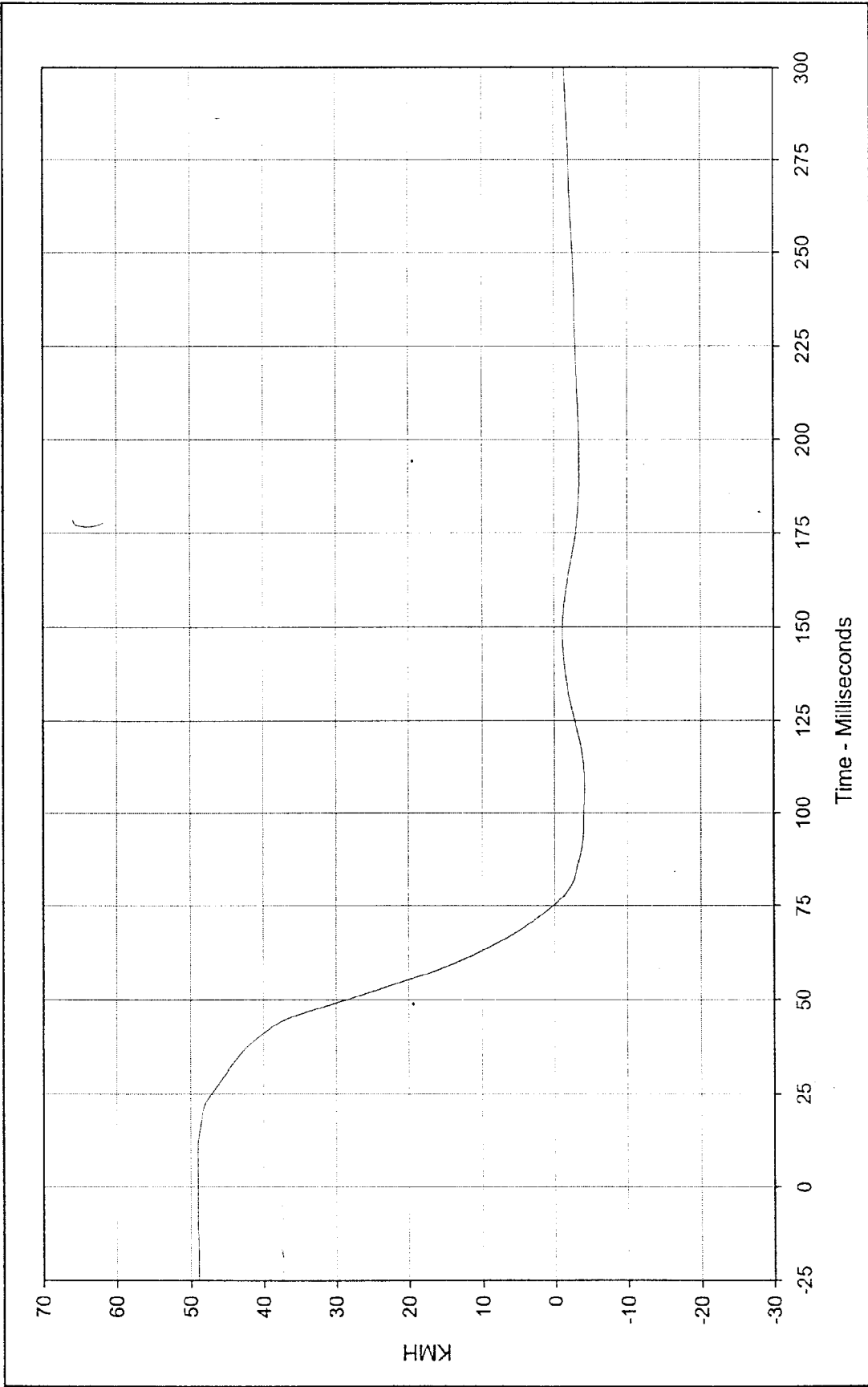
Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan





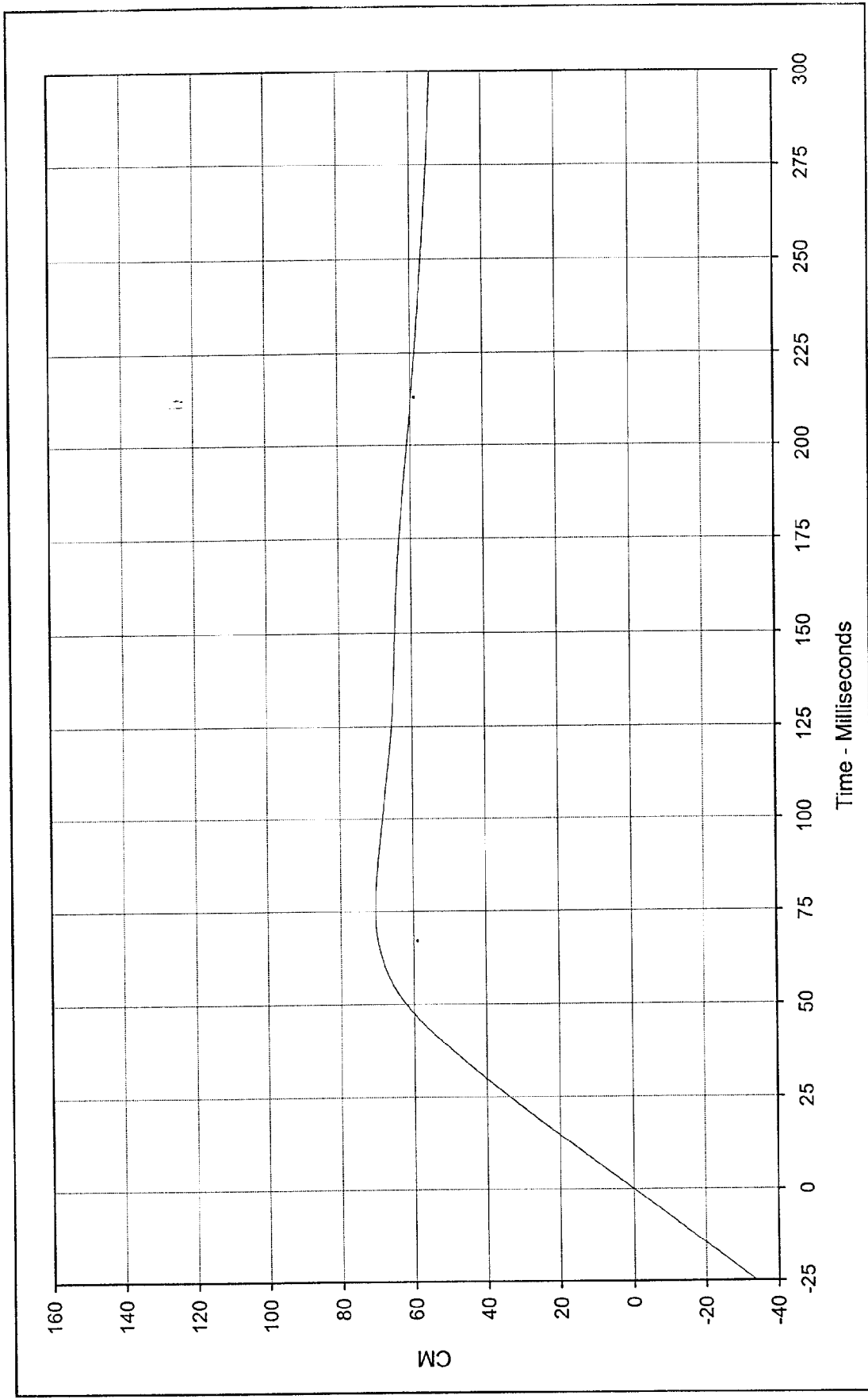
Curve Description:	Passenger Pelvis X	Testing Program	1997 48.4 km/h Frontal Impact (Female)
Maximum Value:	4.0 at 122.6 Milliseconds	Test Vehicle:	1996 Dodge Neon 4 Door Sedan
Minimum Value:	-50.9 at 49.3 Milliseconds		
SAE Filter Class:	1000		
Date of Test:	8/28/97		
Curve Number:	FIL-064		





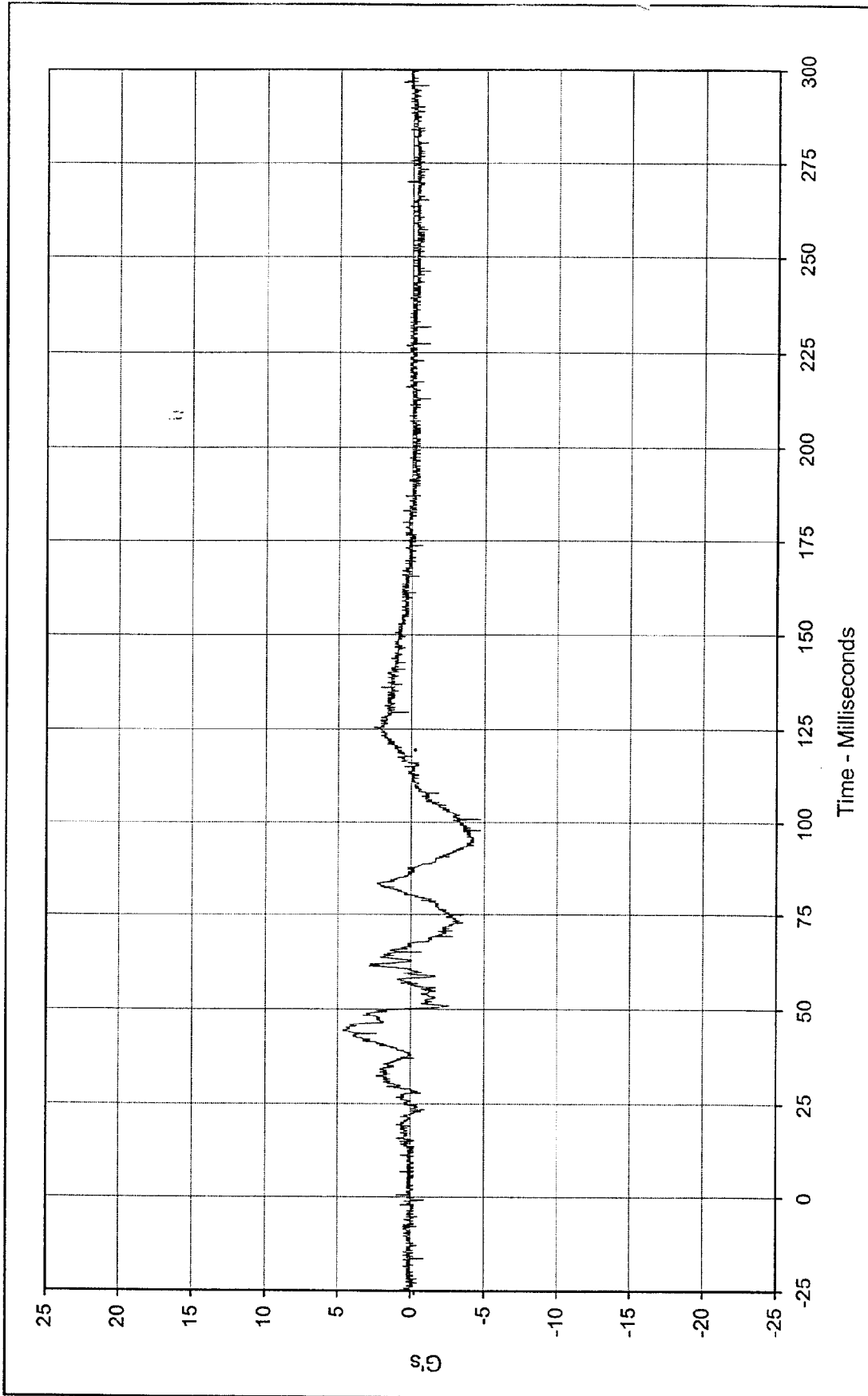
Curve Description: Passenger Pelvis X Velocity Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 49.0 at 4.1 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -4.1 at 107.6 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN1-064





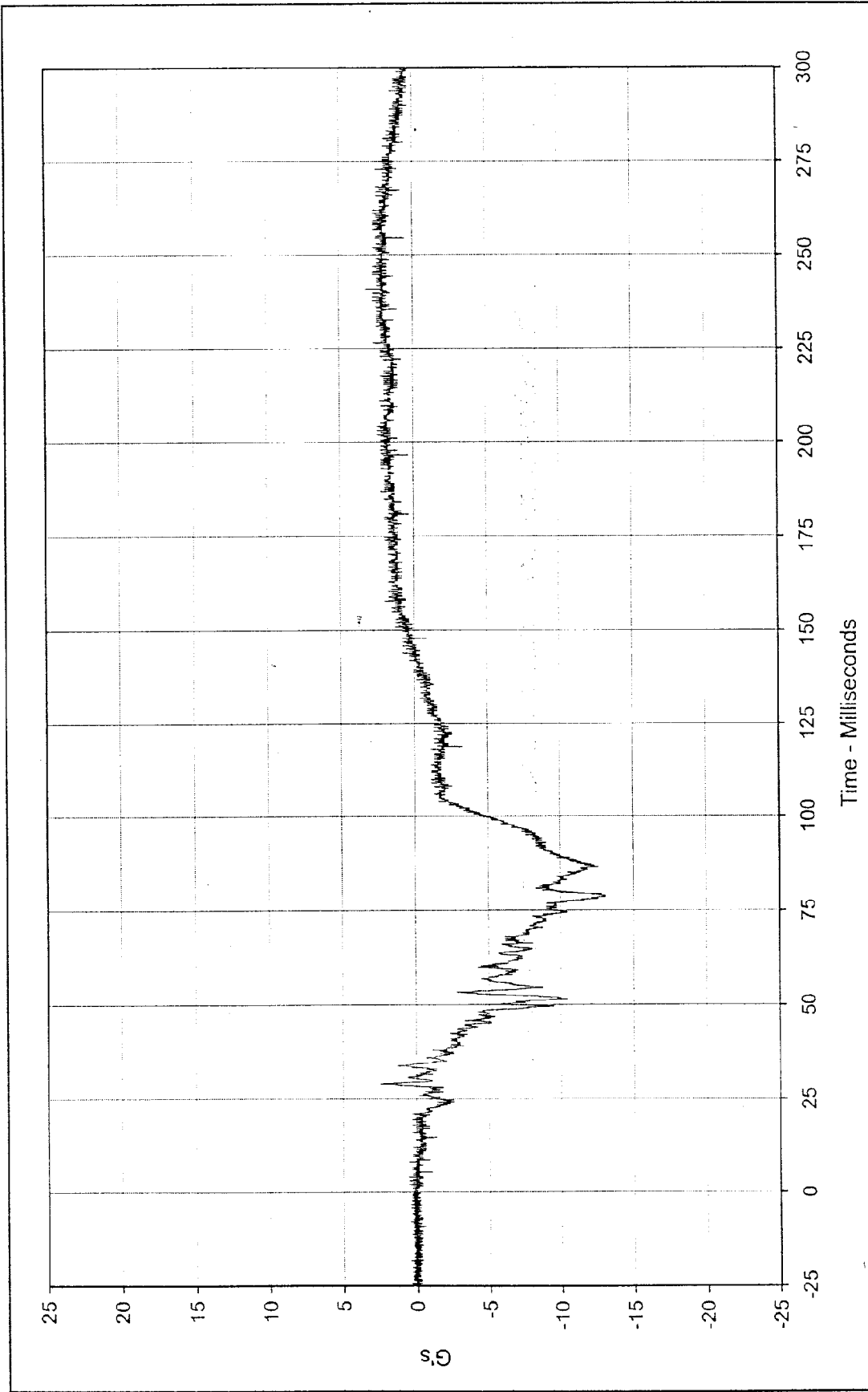
Curve Description: Passenger Pelvis X Displ. Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 70.5 at 75.3 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: 0.1 at 0.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN2-064





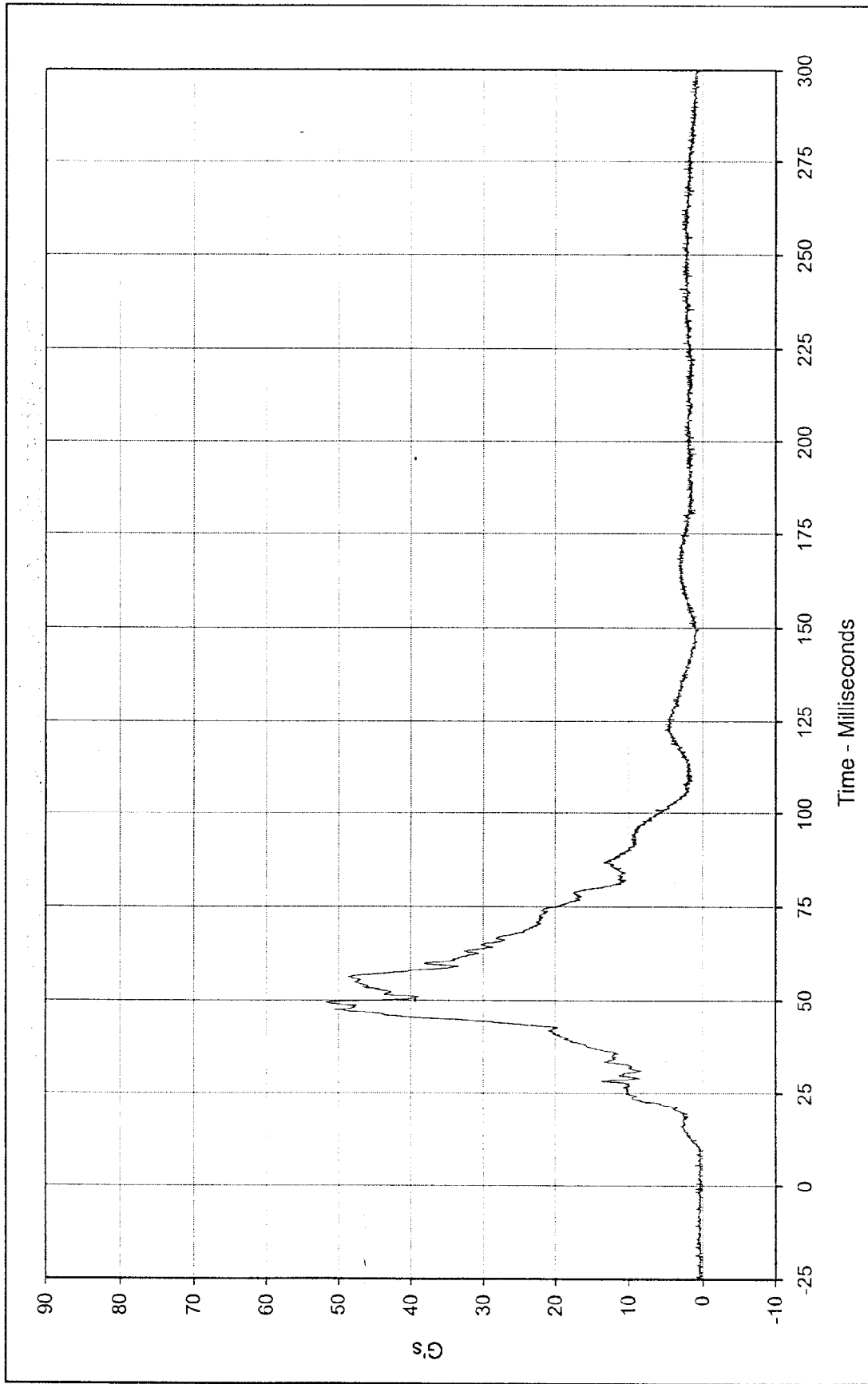
Curve Description: Passenger Pelvis Y Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 4.7 at 44.3 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -4.7 at 97.8 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 8/28/97
 Curve Number: FIL-065





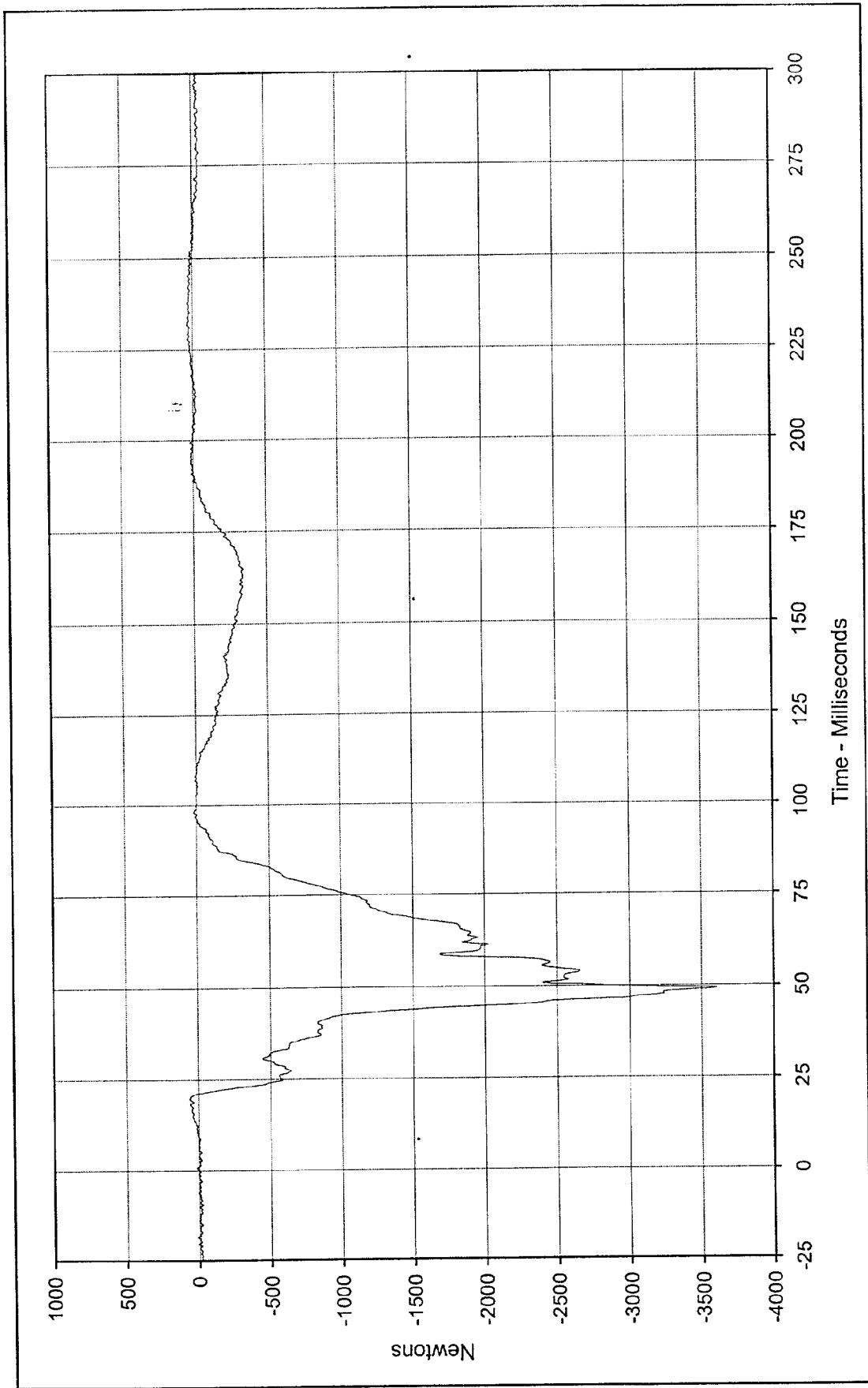
Curve Description:	Passenger Pelvis Z		Testing Program	1997 48.4 km/h Frontal Impact (Female)
Maximum Value:	3.2	at 241.0 Milliseconds	Test Vehicle:	1996 Dodge Neon 4 Door Sedan
Minimum Value:	-13.1	at 78.7 Milliseconds		
SAE Filter Class:	1000			
Date of Test:	8/28/97			
Curve Number:	FIL-066			





Curve Description: Passenger Pelvis Resultant Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 51.8 at 49.5 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: 0.1 at 0.8 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 9/9/97
 Curve Number: RES-064

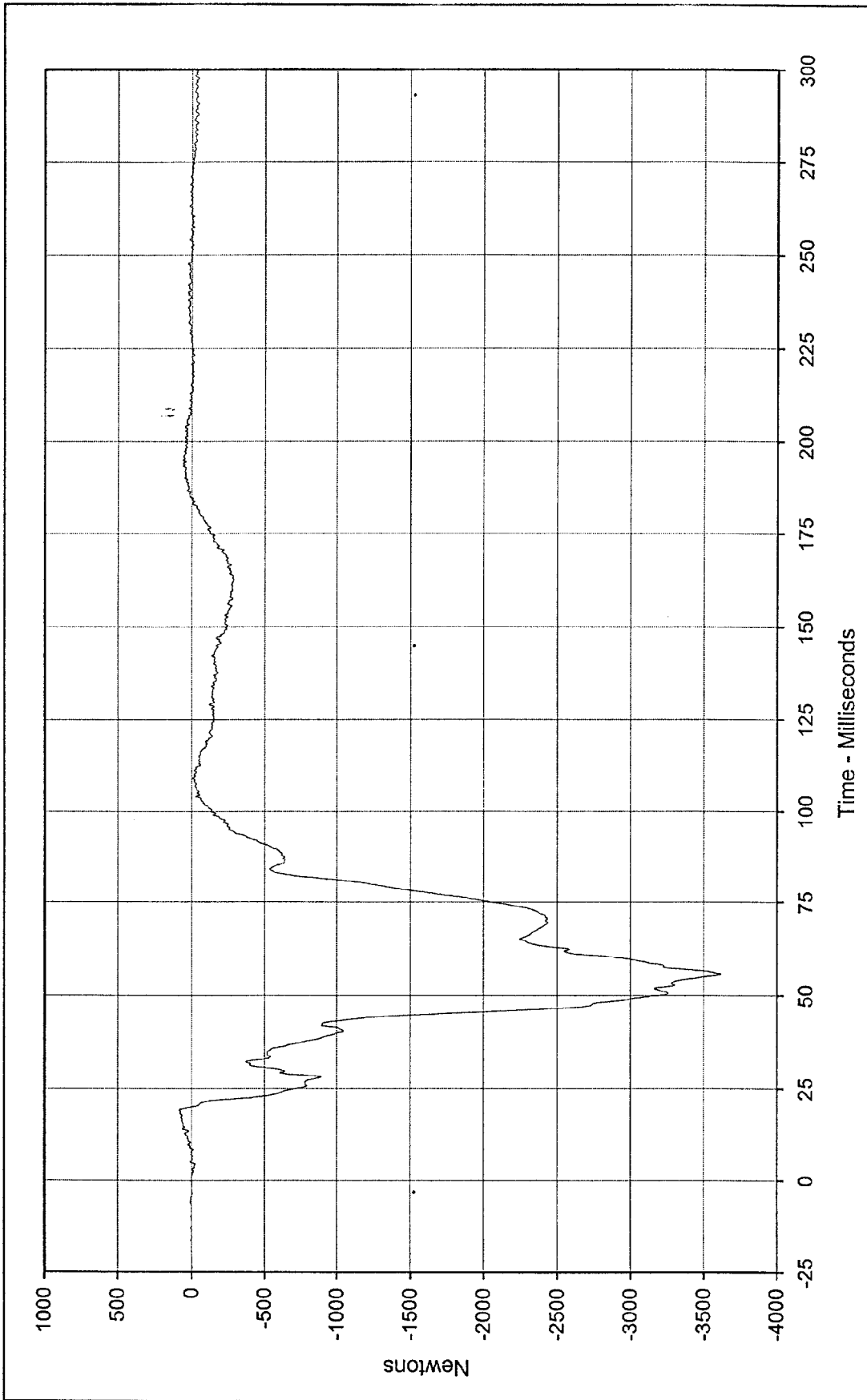




Curve Description: Passenger Left Femur Force Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 61.9 at 19.7 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -3605.4 at 49.2 Milliseconds

SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-067





Curve Description: Passenger Right Femur Force Testing Program 1997 48.4 km/h Frontal Impact (Female)

Maximum Value: 86.0 at 19.1 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan

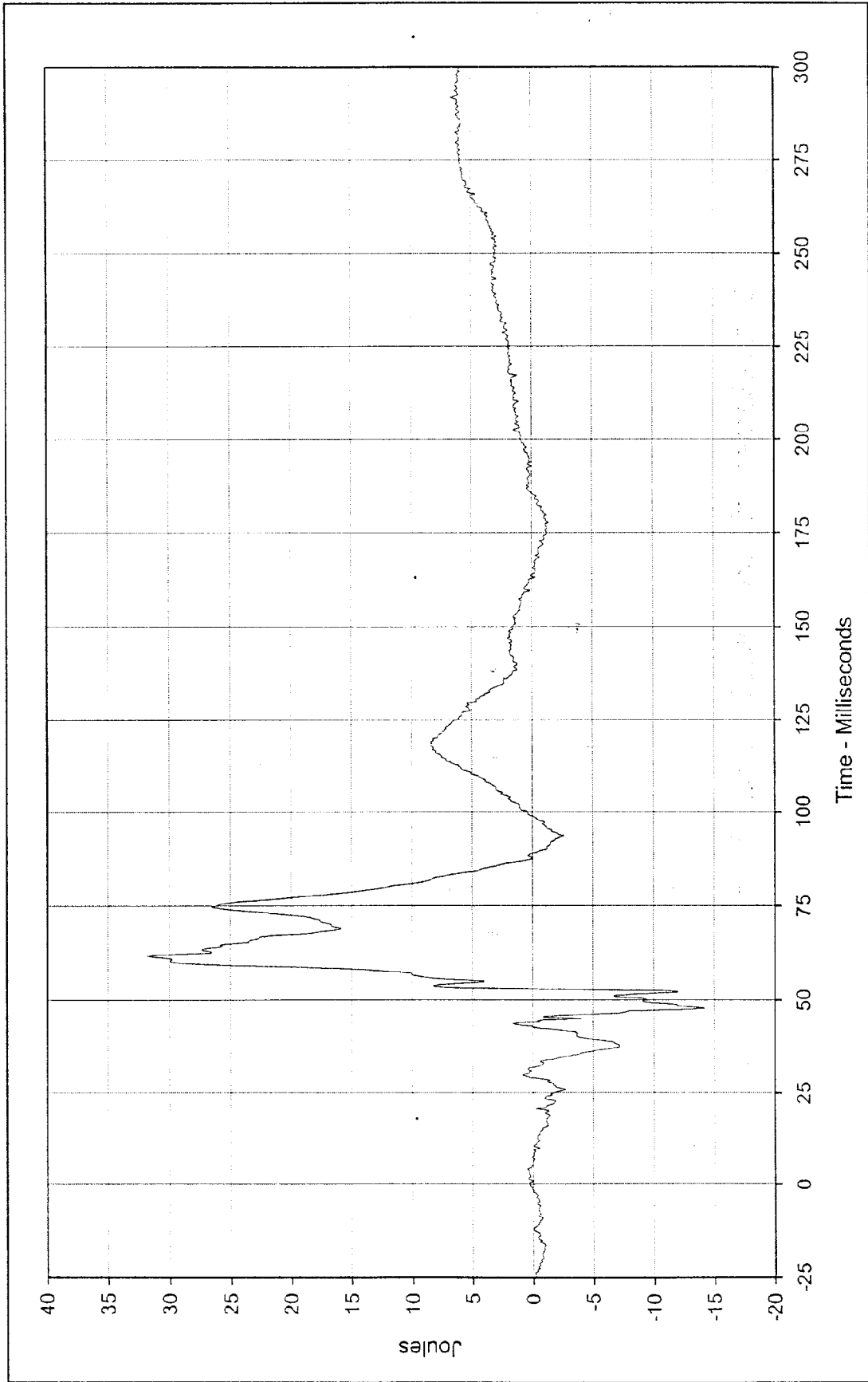
Minimum Value: -3620.2 at 55.6 Milliseconds

SAE Filter Class: 600

Date of Test: 9/9/97

Curve Number: FII -068

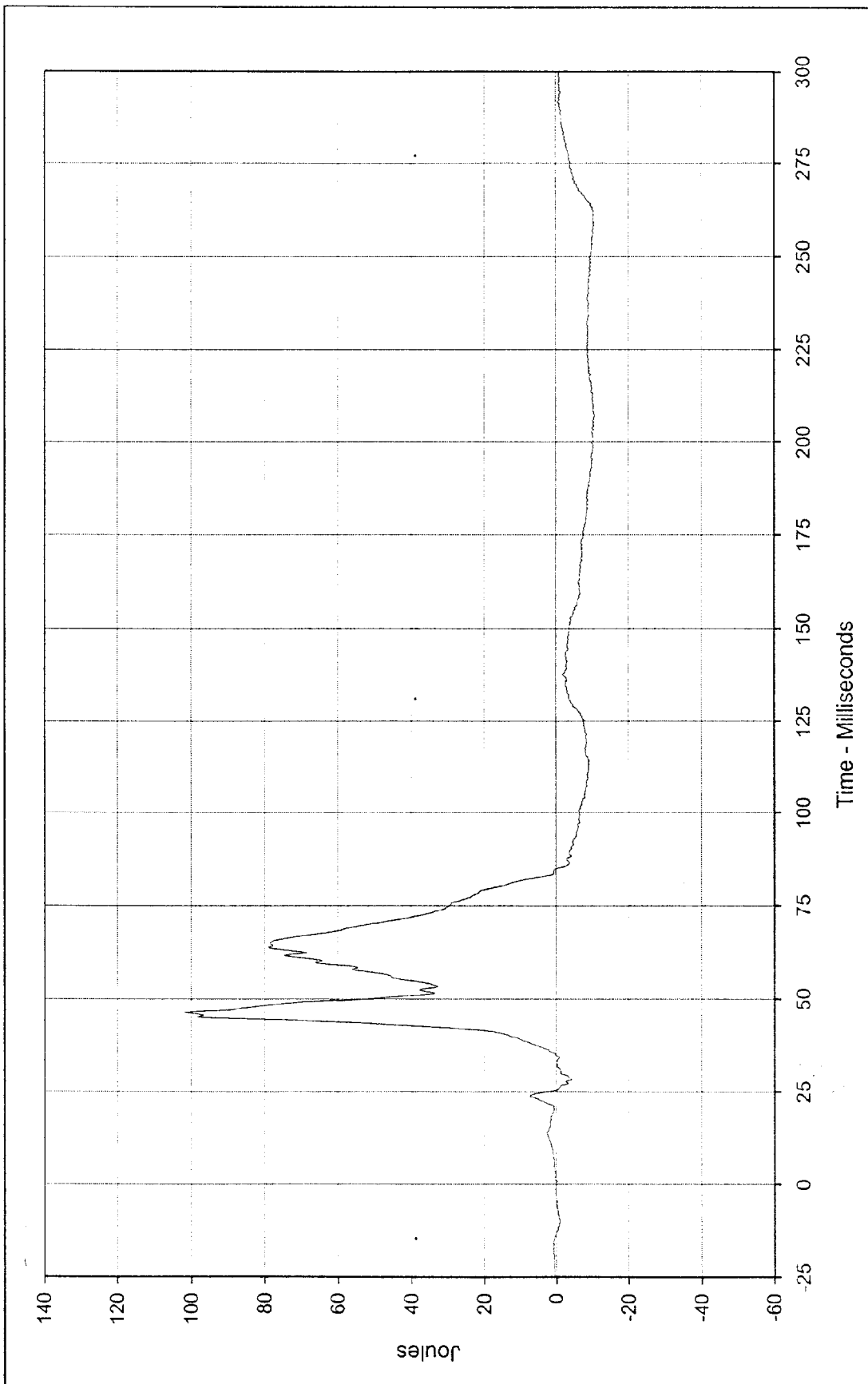




Curve Description: Passenger Left Upper Tibia Moment X Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 31.8 at 61.6 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -14.2 at 47.8 Milliseconds

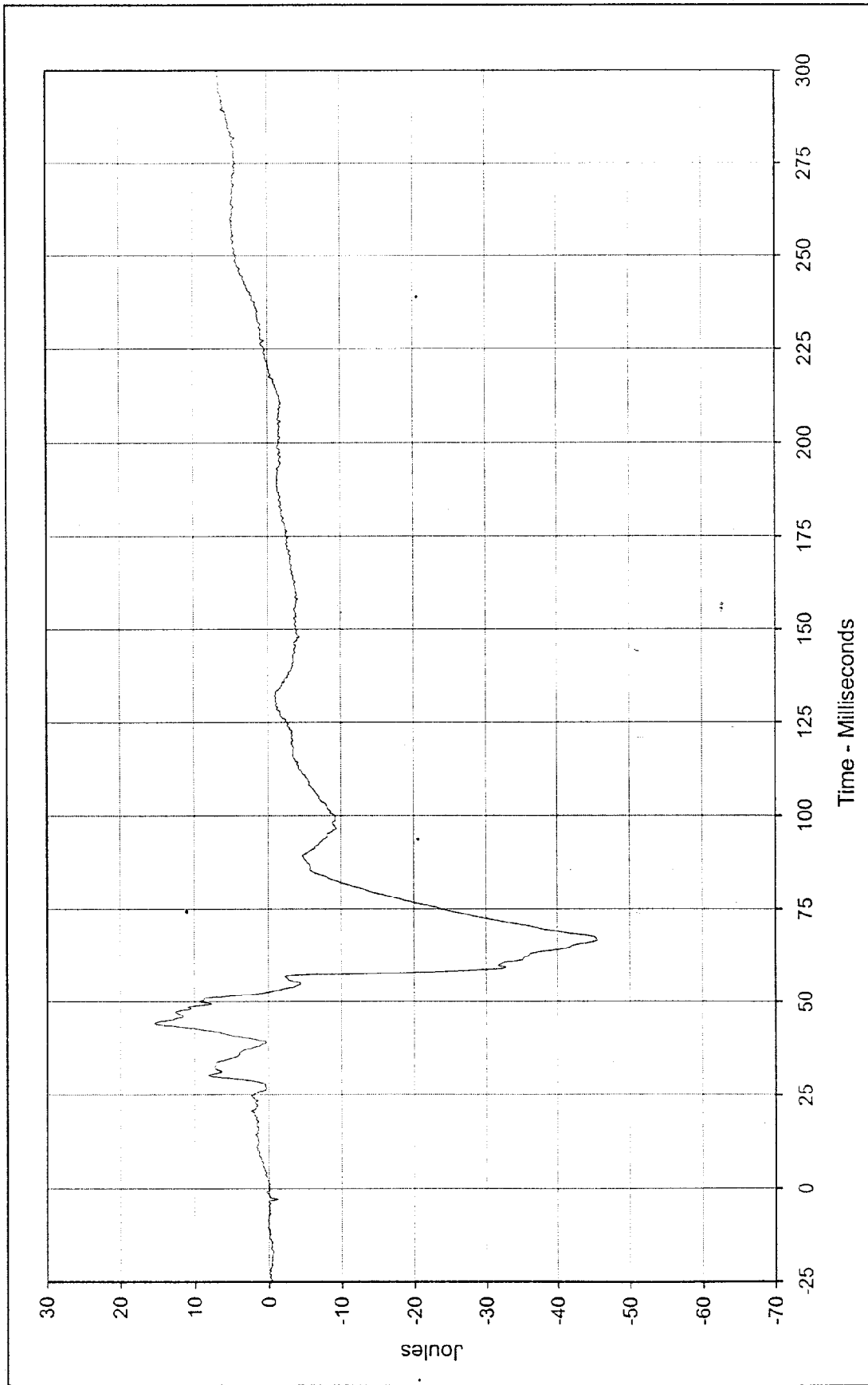
SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-069





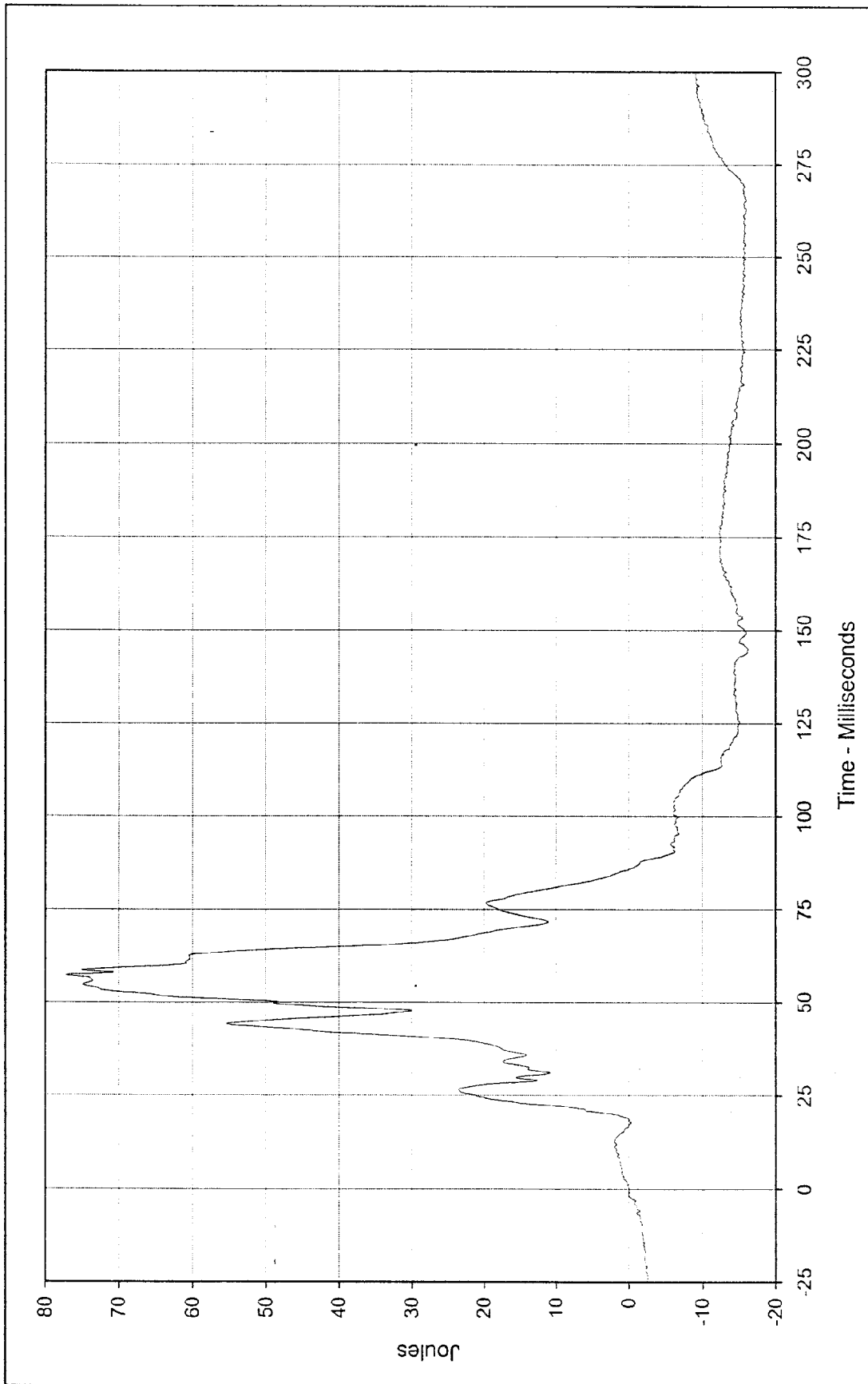
Curve Description: Passenger Left Upper Tibia Moment Y Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 102.0 at 46.3 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -10.8 at 207.3 Milliseconds
 SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-070





Curve Description: Passenger Right Upper Tibia Moment X Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 15.5 at 44.1 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -45.5 at 66.7 Milliseconds
 SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-071

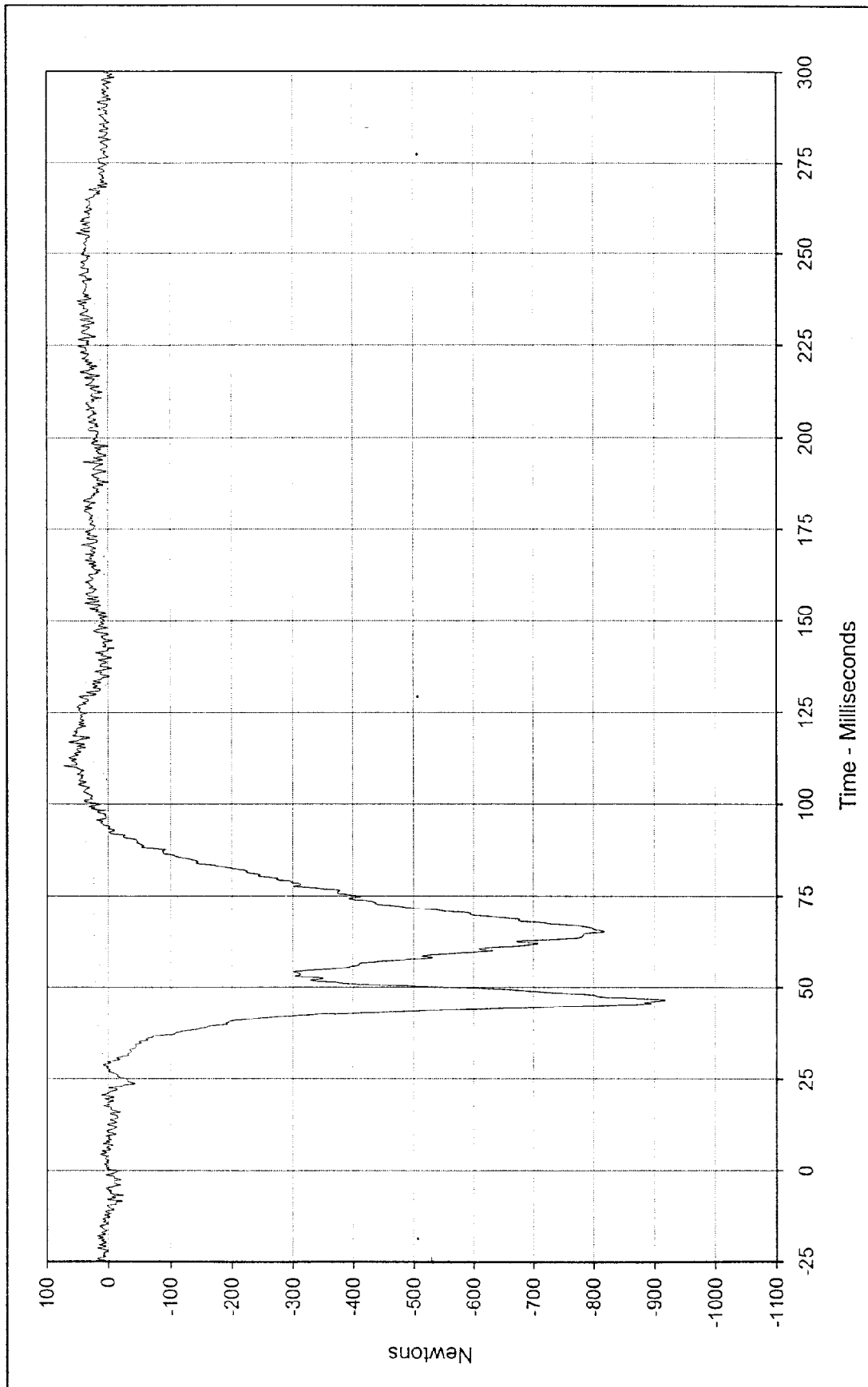




Curve Description: Passenger Right Upper Tibia Moment Y
 Maximum Value: 77.2 at 57.2 Milliseconds
 Minimum Value: -16.3 at 145.2 Milliseconds
 SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-072

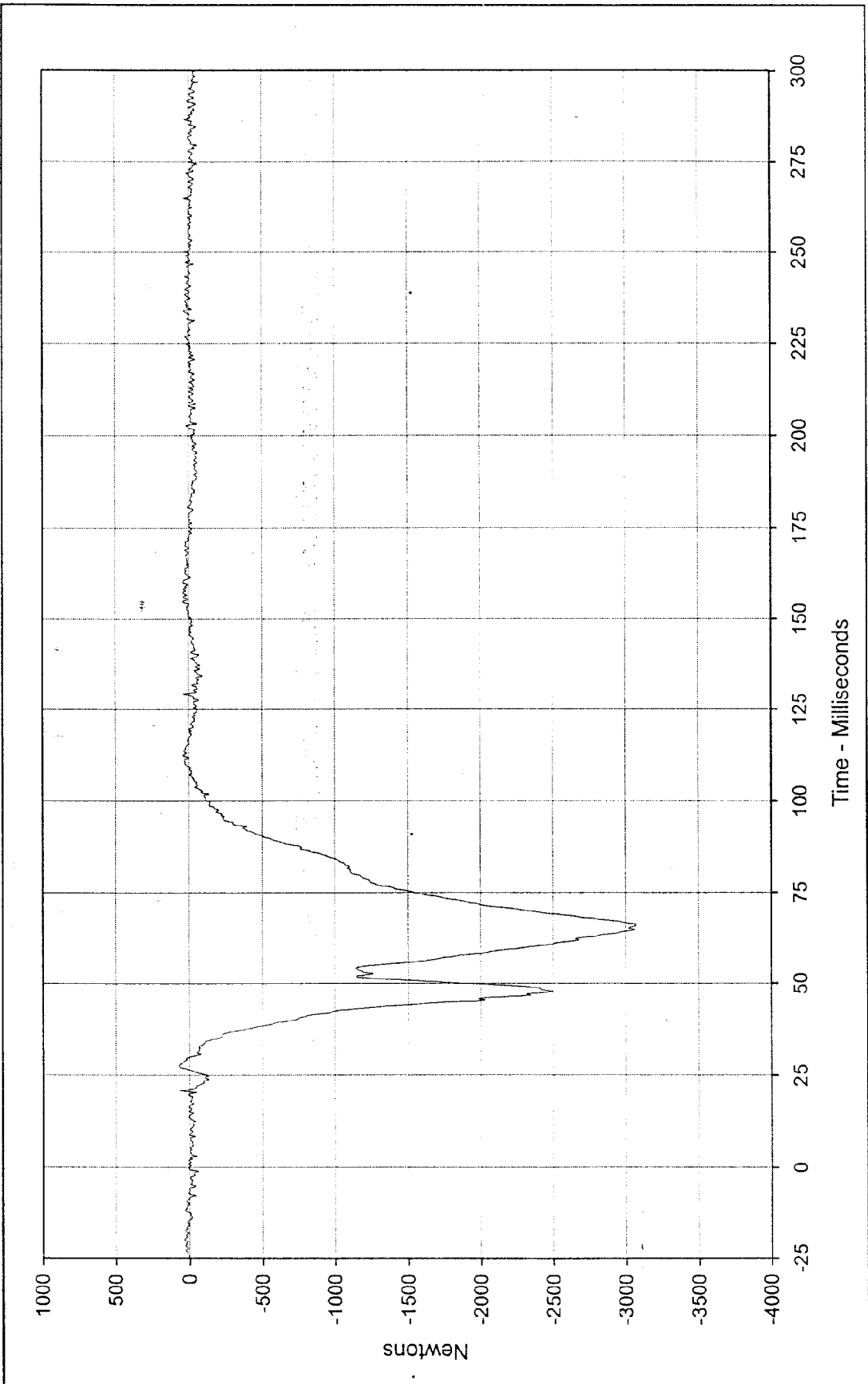
Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan





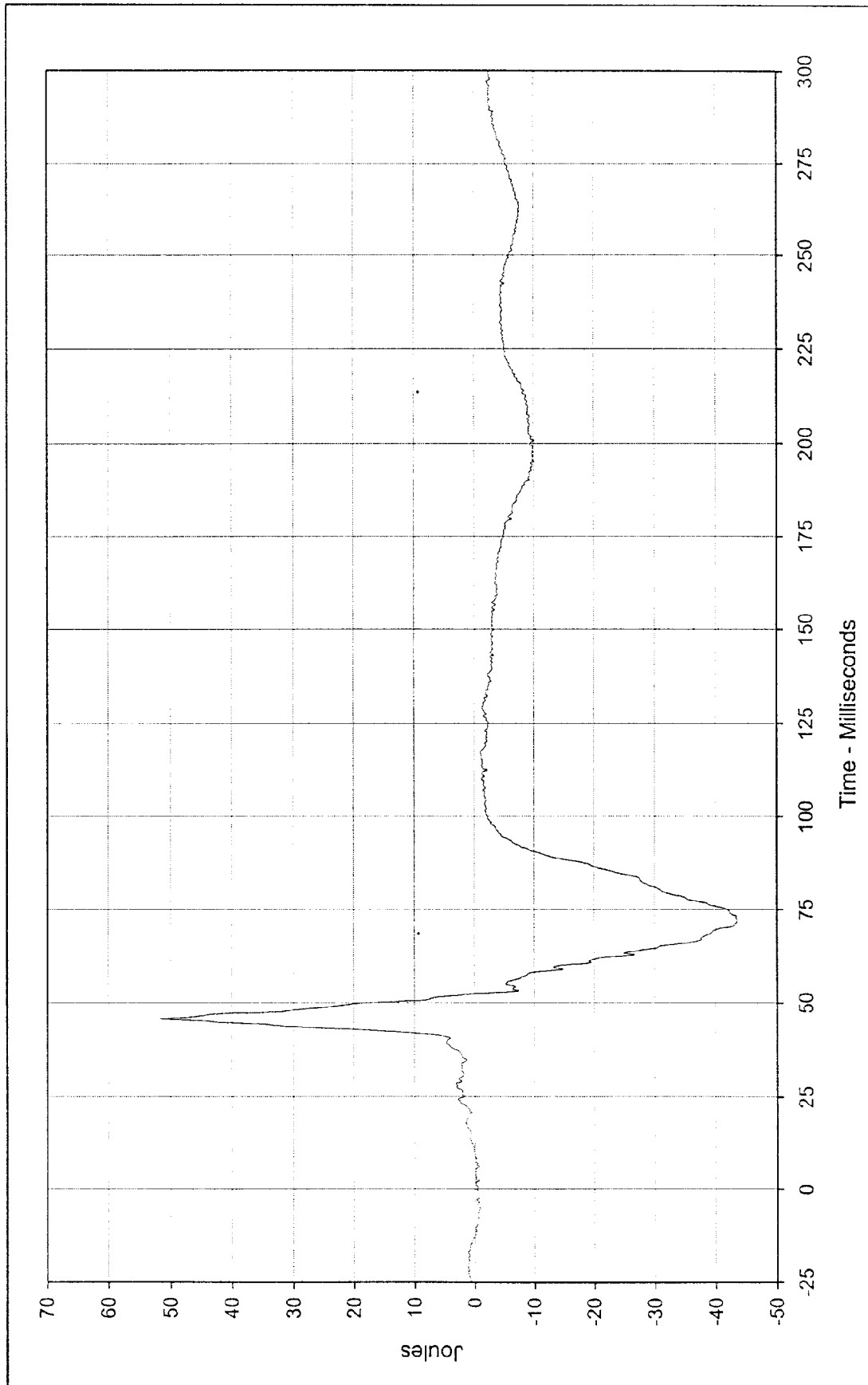
Curve Description: Passenger Left Lower Tibia Force X Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 72.1 at 110.3 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -918.6 at 46.5 Milliseconds
 SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-073





Curve Description: Passenger Left Lower Tibia force Z Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 72.9 at 27.7 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -3067.2 at 65.8 Milliseconds
 SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-074





Curve Description: Passenger Left Lower Tibia Moment Y Testing Program: 1997 48.4 km/h Frontal Impact (Female)

Maximum Value: 51.7 at 45.5 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan

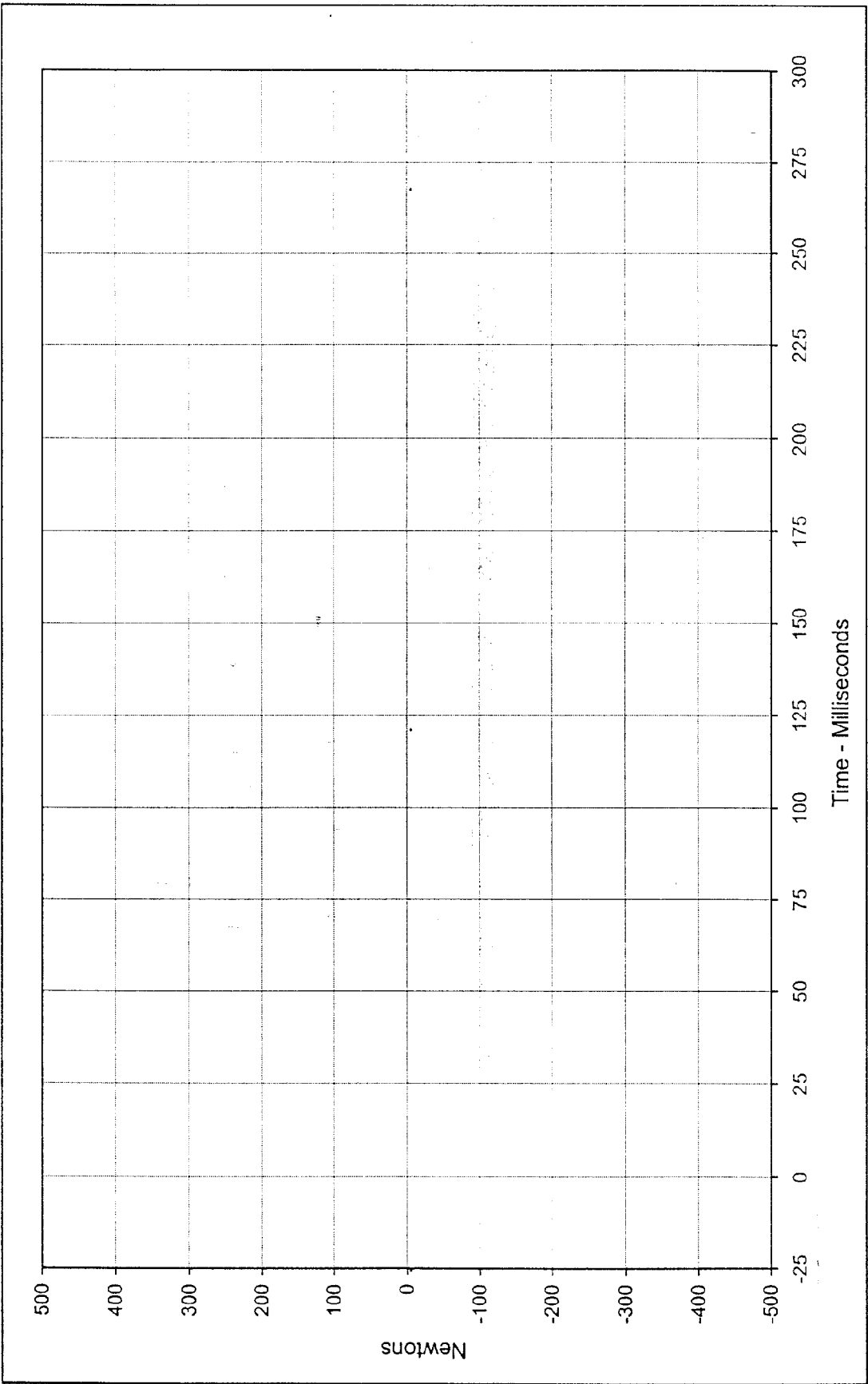
Minimum Value: -43.6 at 72.2 Milliseconds

SAE Filter Class: 600

Date of Test: 9/9/97

Curve Number: FIL-075

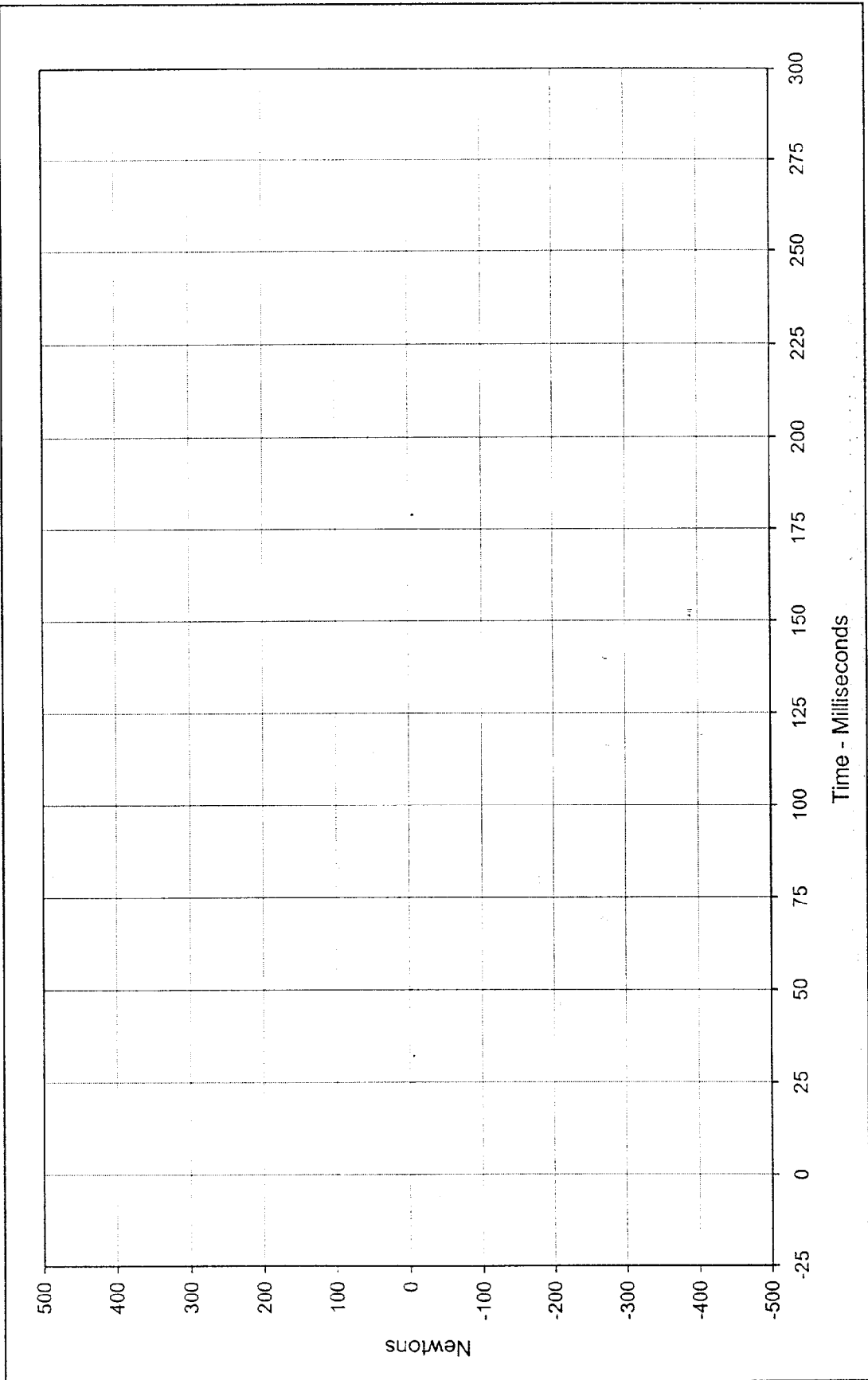




Curve Description: Passenger Right Lower Tibia Force X * Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 0.0 at 0.0 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: 0.0 at 0.0 Milliseconds
 SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-076



* Channel Failed, No Data



Curve Description: Passenger Right Lower Tibia Force Z * Testing Program 1997 48.4 km/h Frontal Impact (Female)

Maximum Value: 0.0 at 0.0 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan

Minimum Value: 0.0 at 0.0 Milliseconds

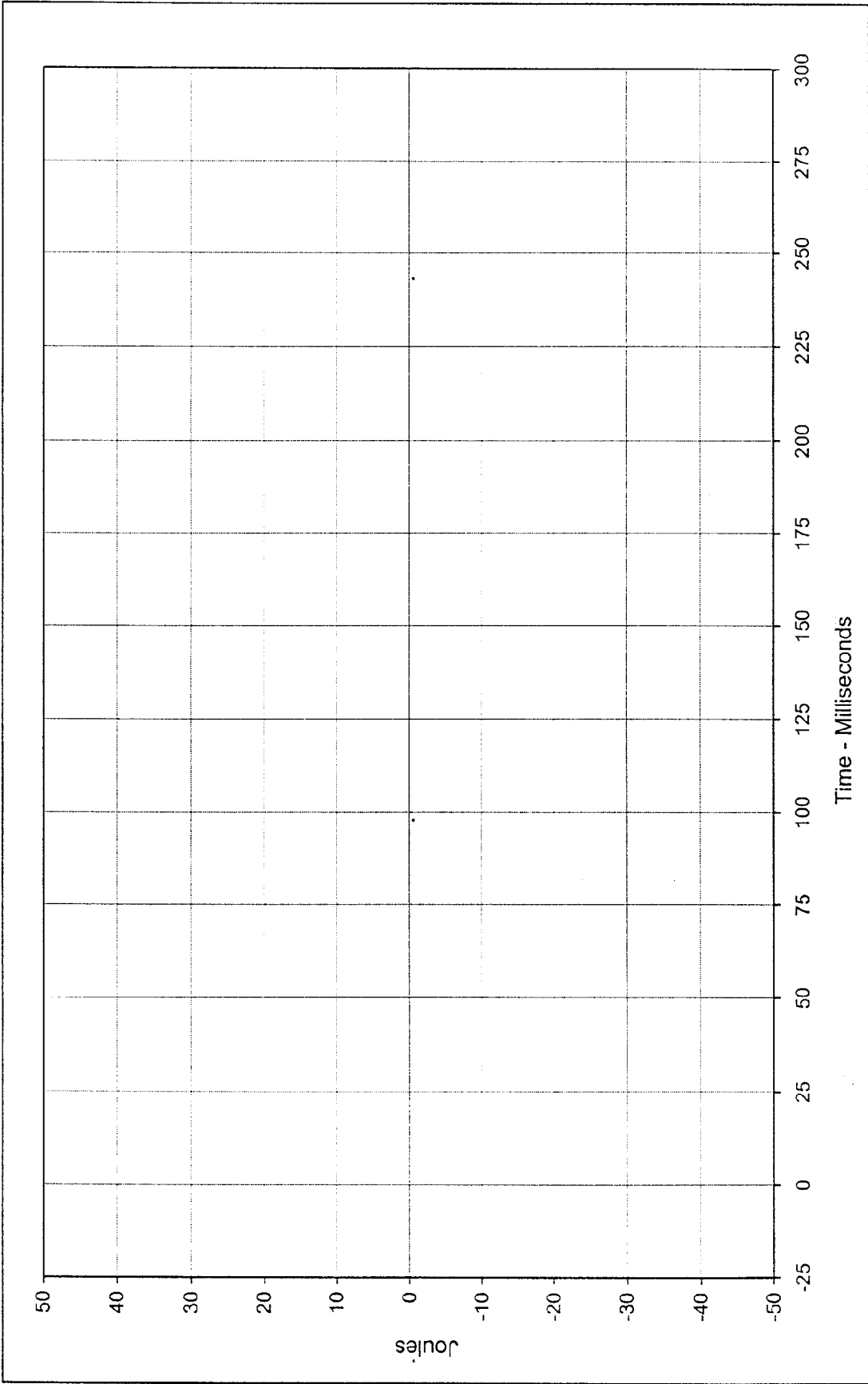
SAE Filter Class: 600

Date of Test: 9/9/97

Curve Number: FIL-077



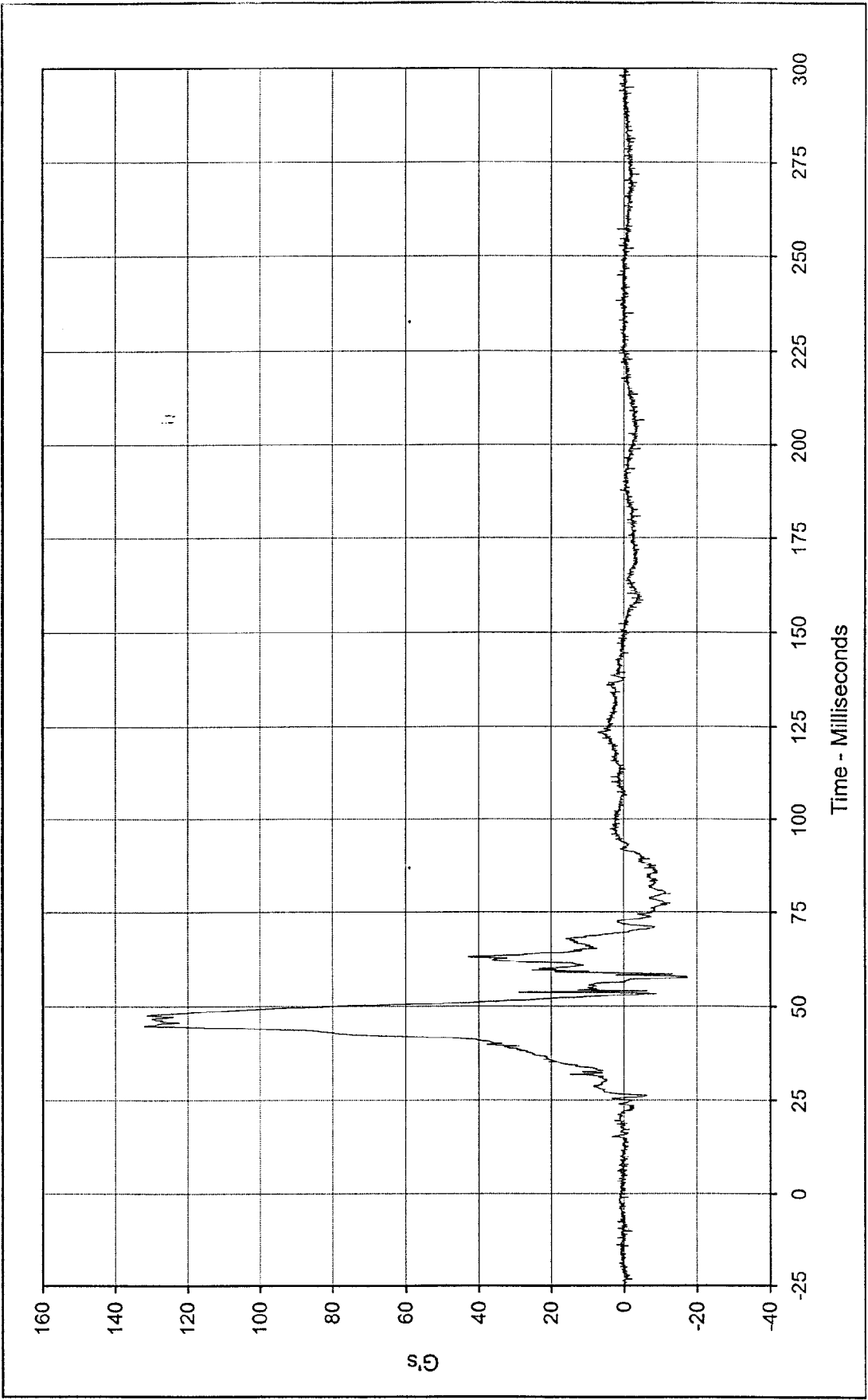
* Channel Failed, No Data



Curve Description: Passenger Right lower Tibia Moment Y * Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 0.0 at 0.0 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: 0.0 at 0.0 Milliseconds
 SAE Filter Class: 600
 Date of Test: 9/9/97
 Curve Number: FIL-078

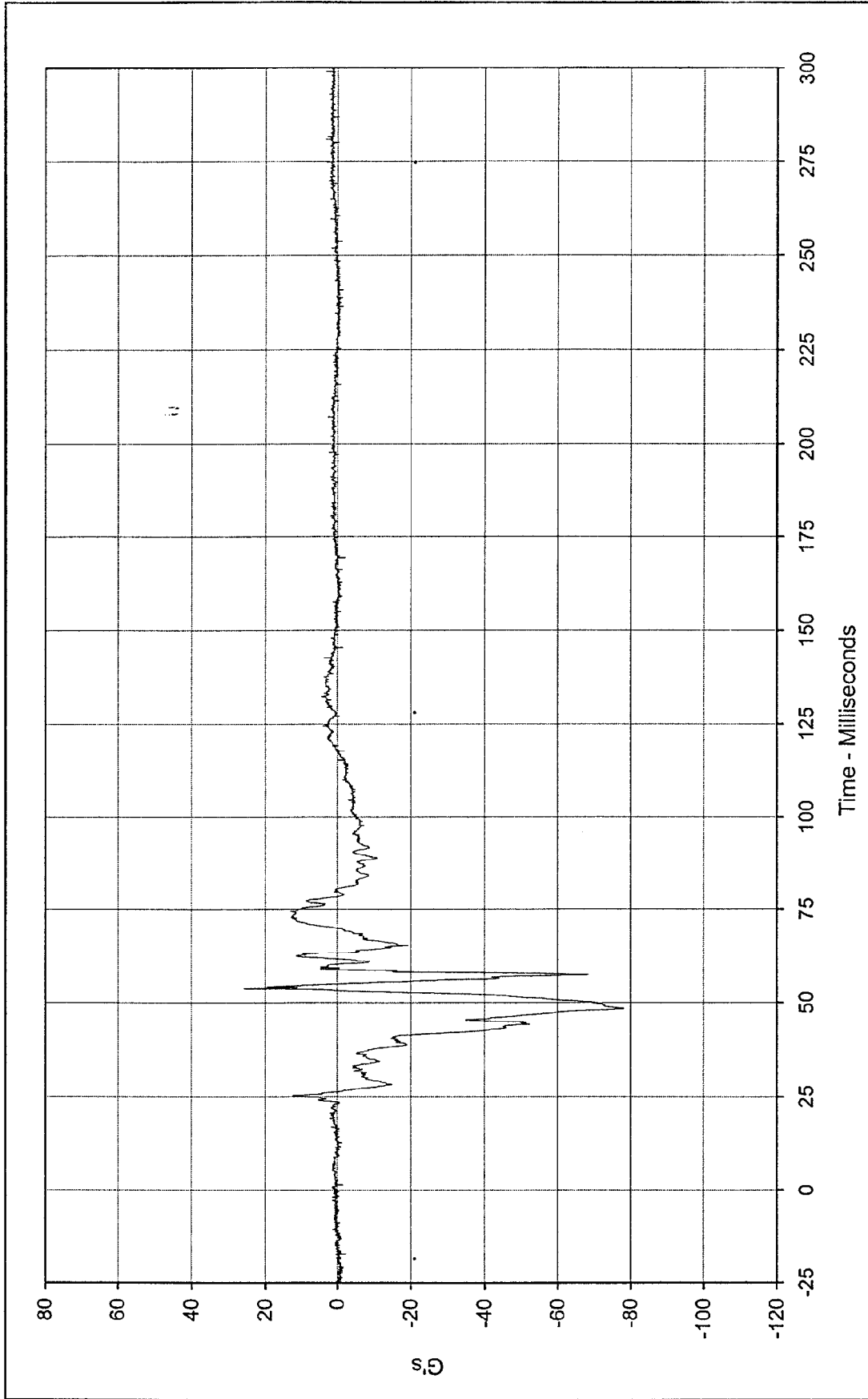


* Channel Failed, No Data



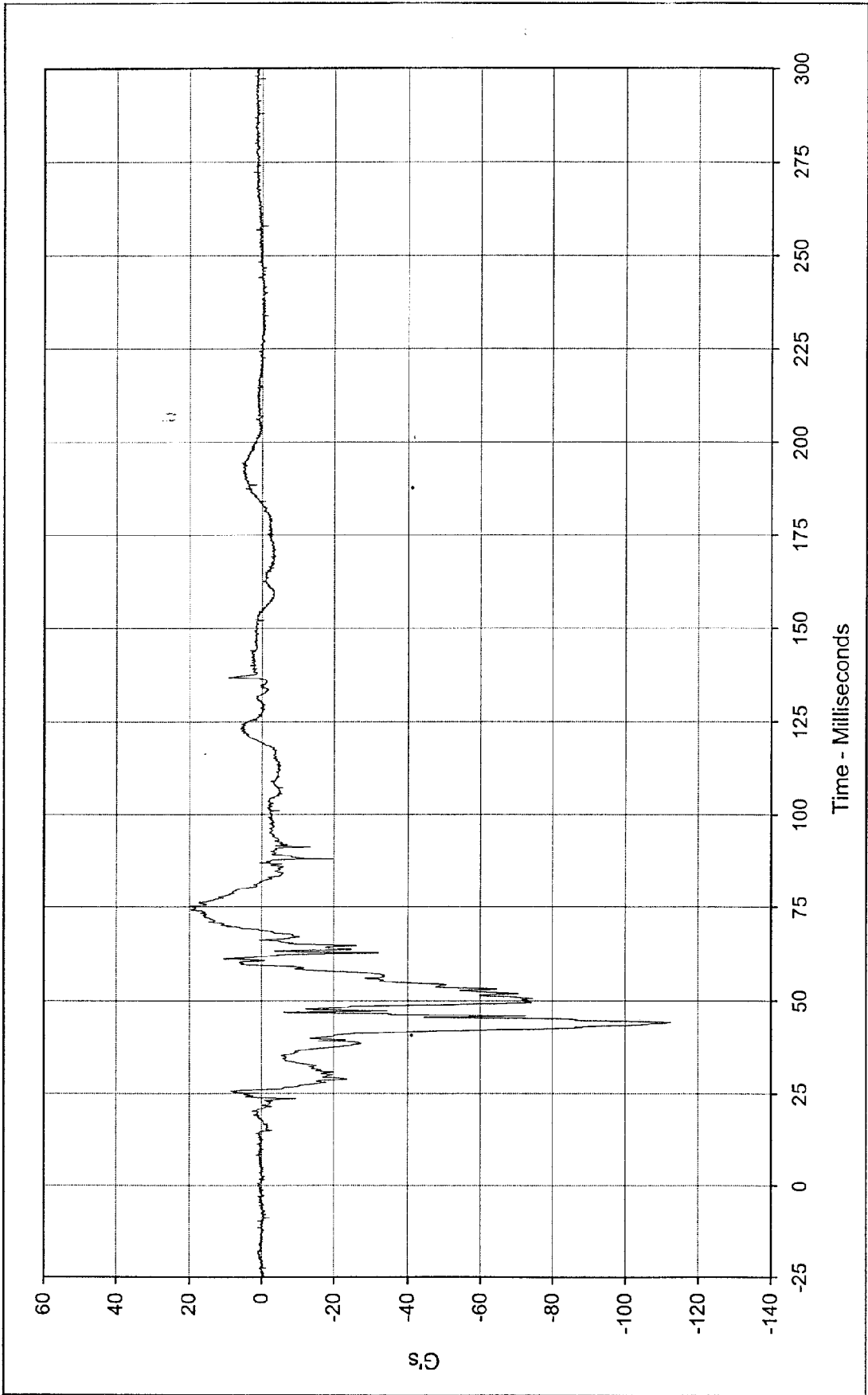
Curve Description: Passenger Left Foot Aft X Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 132.1 at 44.9 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -17.4 at 57.5 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 9/9/97
 Curve Number: FIL-079





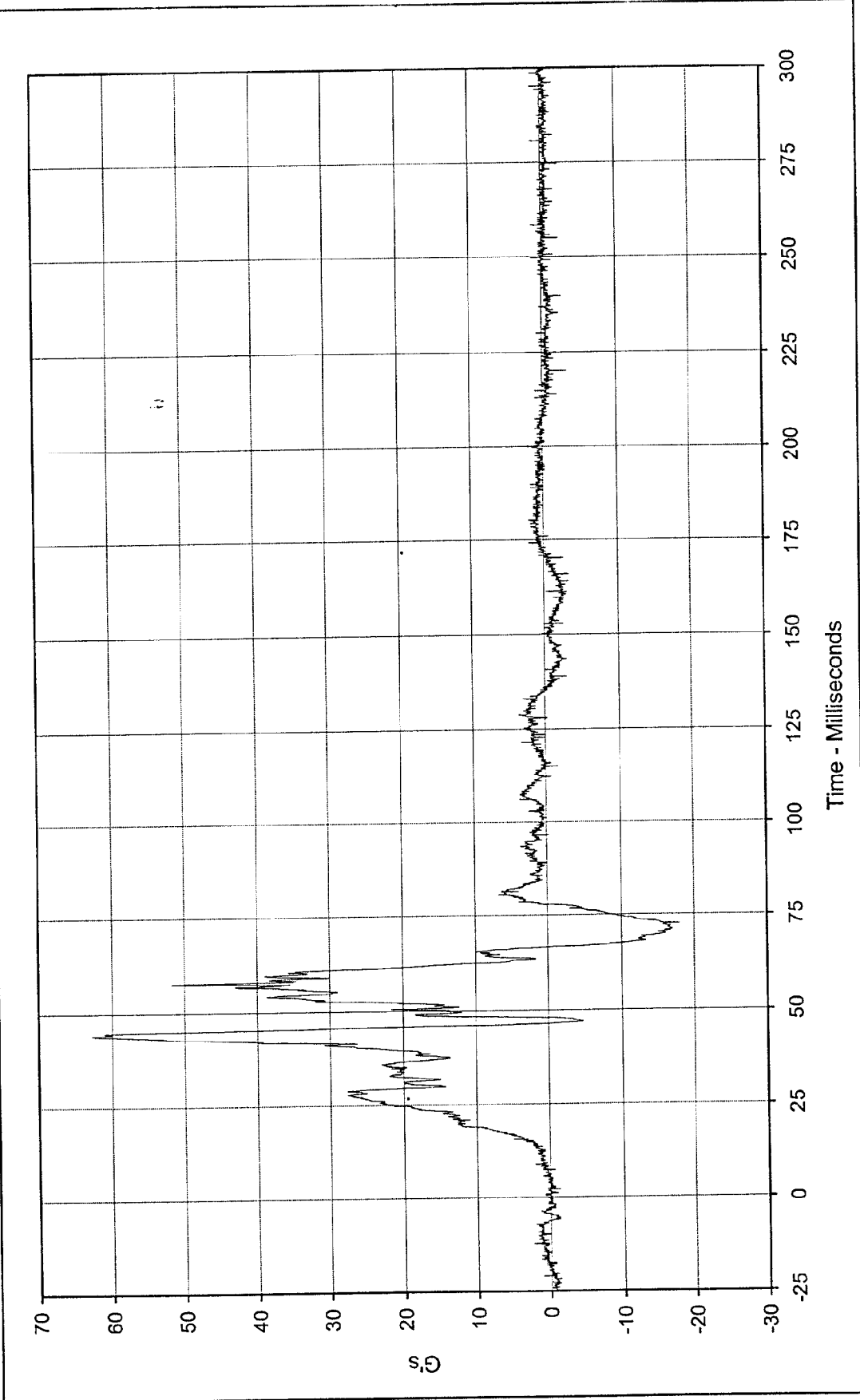
Curve Description: Passenger Left Foot Aft Z Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 25.8 at 53.7 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -78.2 at 48.4 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 9/9/97
 Curve Number: FIL-080





Curve Description: Passenger Left Foot Fore Z Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 19.9 at 75.1 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -112.5 at 44.3 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 9/9/97
 Curve Number: FIL-081

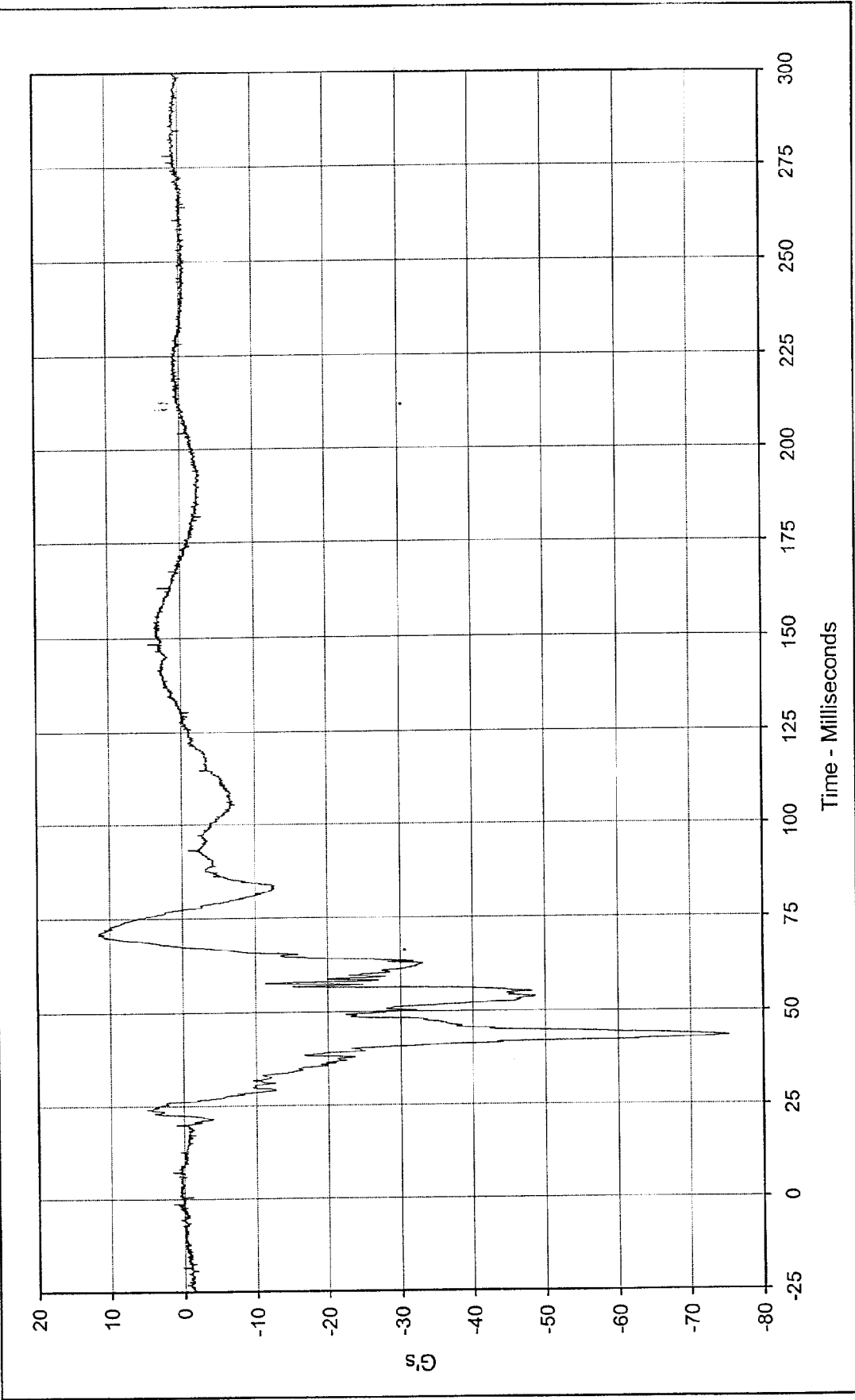




Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan

Curve Description: Passenger Right Foot Aft X
 Maximum Value: 62.7 at 44.1 Milliseconds
 Minimum Value: -18.0 at 72.6 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 9/9/97
 Curve Number: Fit -082





Curve Description: Passenger Right Foot Aft Z Testing Program 1997 48.4 km/h Frontal Impact (Female)

Maximum Value: 11.5 at 70.7 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan

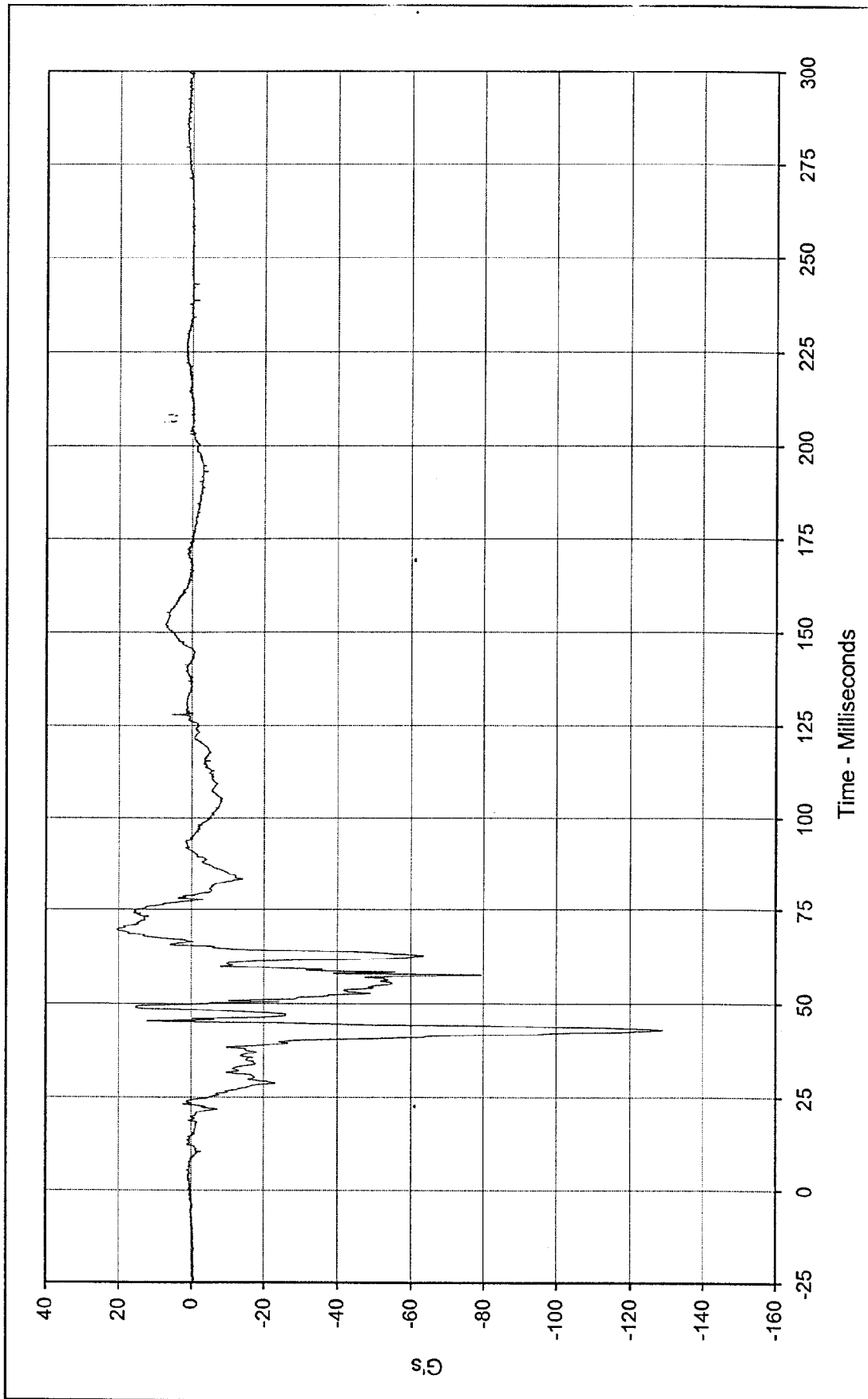
Minimum Value: -75.3 at 43.3 Milliseconds

SAE Filter Class: 1000

Date of Test: 9/9/97

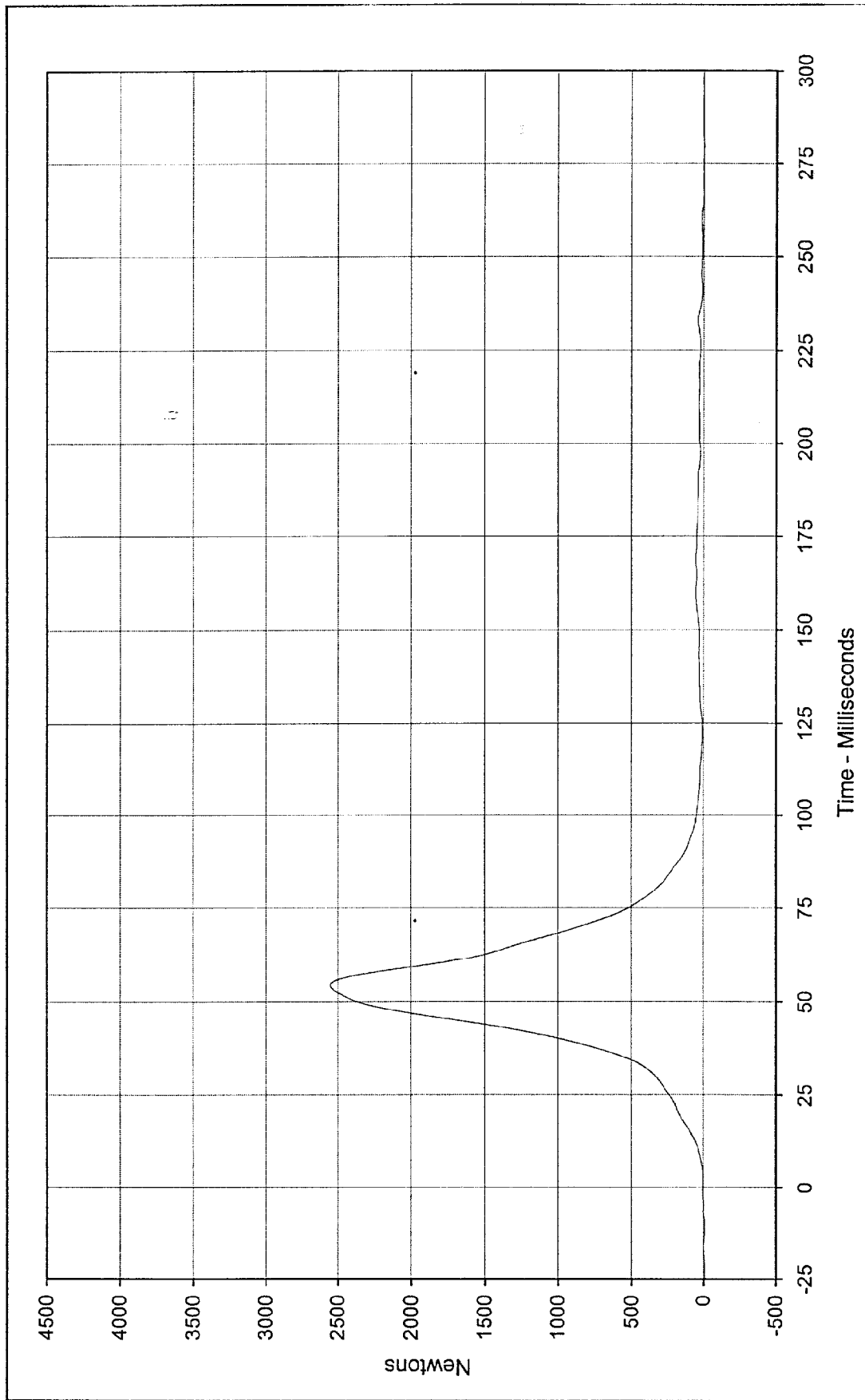
Curve Number: FIL-083





Curve Description: Passenger Right Foot Fore Z Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 20.5 at 69.9 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -129.1 at 43.0 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 9/9/97
 Curve Number: FIL-084





Curve Description: Passenger Lap Belt Force Testing Program 1997 48.4 km/h Frontal Impact (Female)

Maximum Value: 2553.5 at 54.4 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan

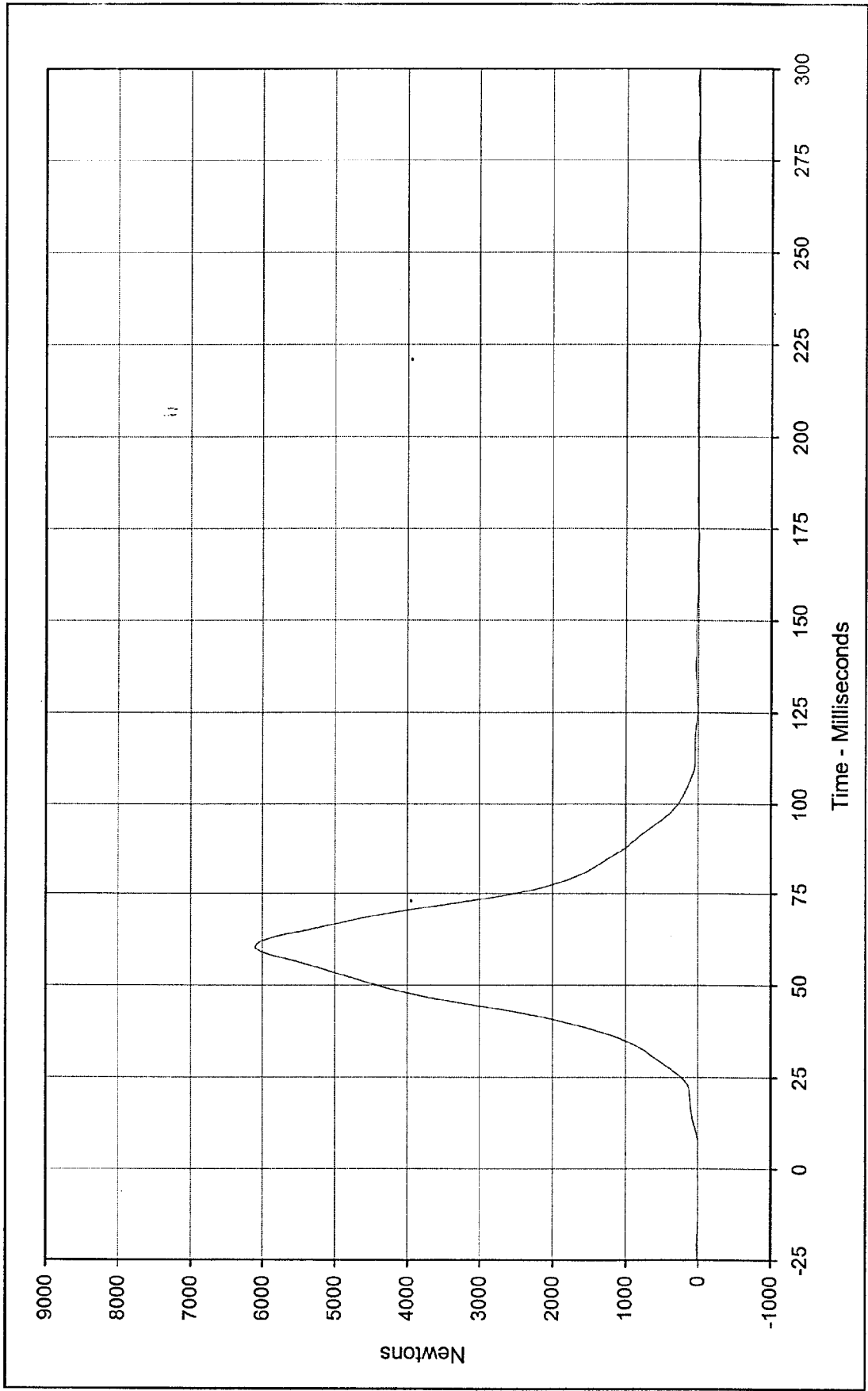
Minimum Value: -2.6 at 279.5 Milliseconds

SAE Filter Class: 60

Date of Test: 9/9/97

Curve Number: FIL-085

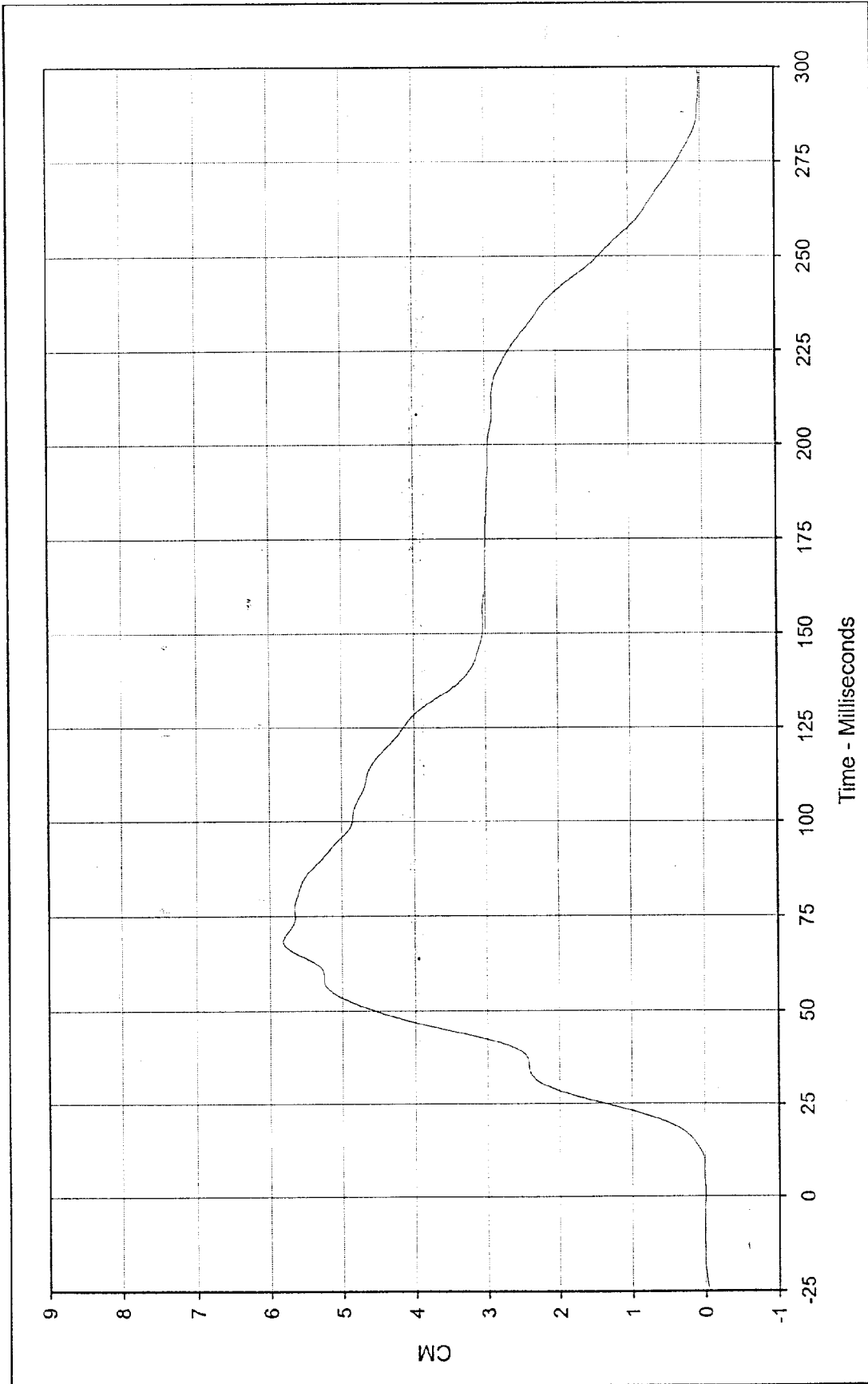




Curve Description: Passenger Shoulder Belt Force Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 6096.0 at 60.5 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -9.0 at 254.2 Milliseconds

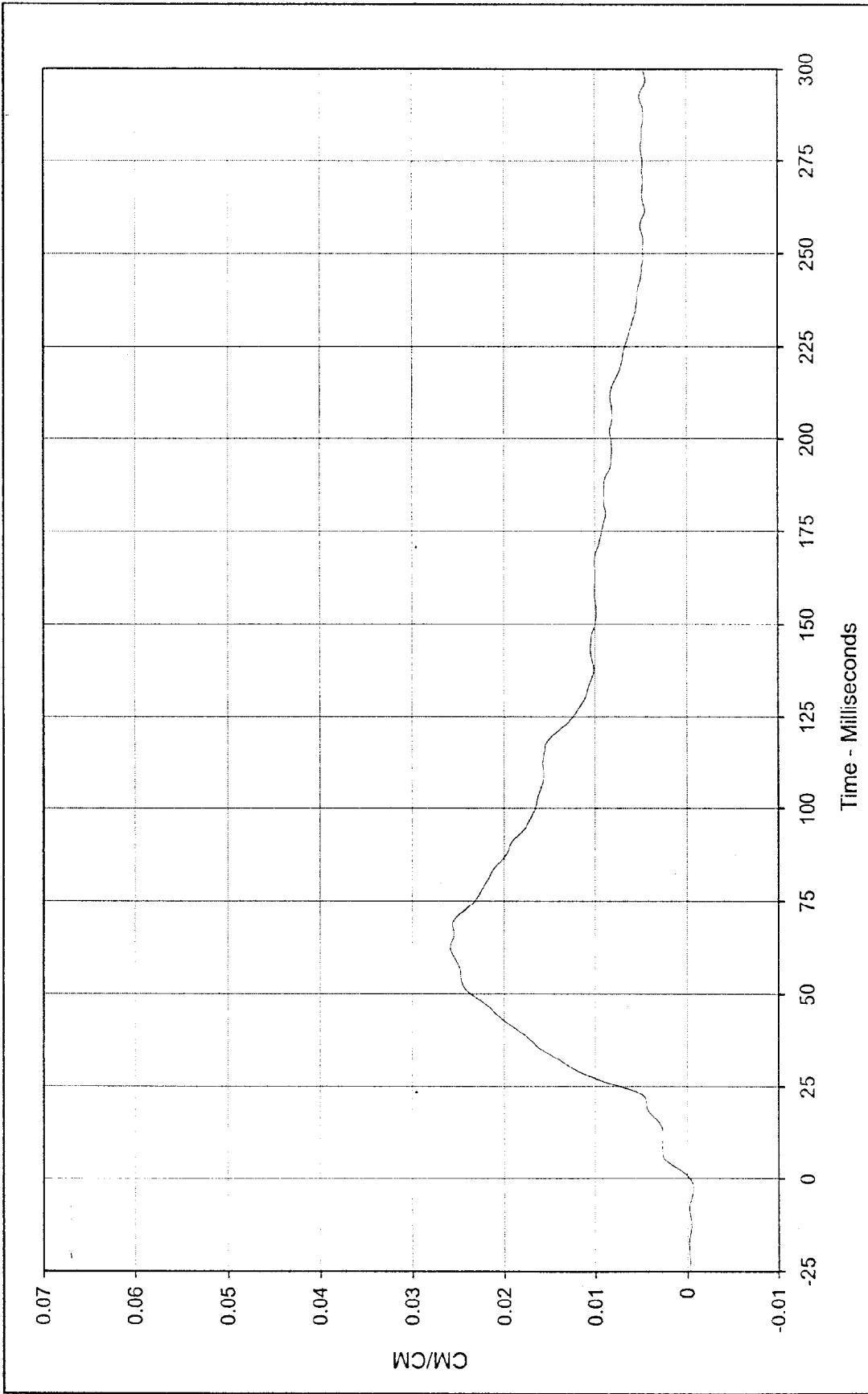


SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-086



Curve Description: Passenger Shoulder Belt Pullout Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 5.82 at 68.4 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -0.01 at 1.2 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-087

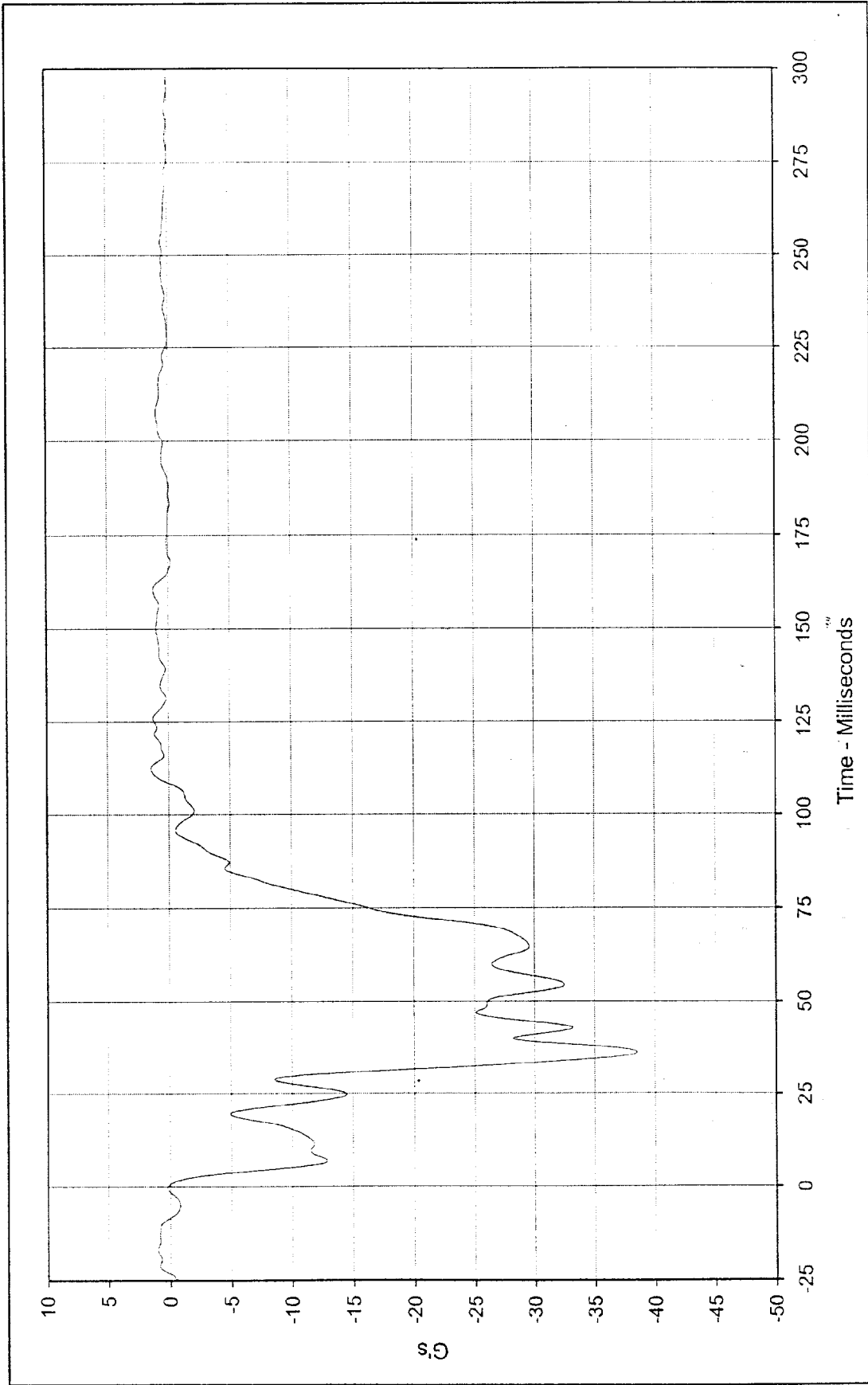




Curve Description: Passenger Shoulder Belt Elongation Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 0.026 at 62.5 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: 0.000 at 0.0 Milliseconds

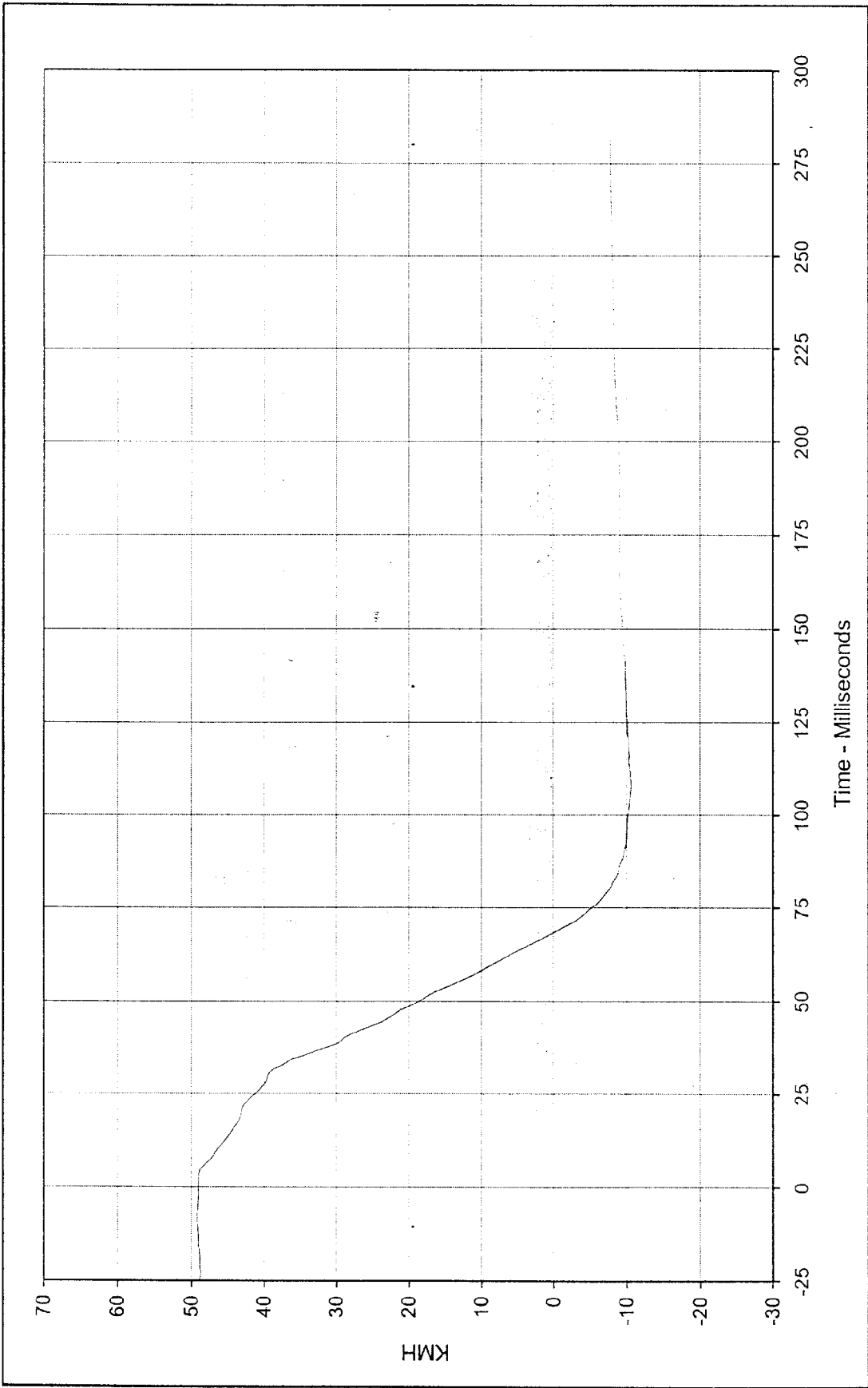


SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-088



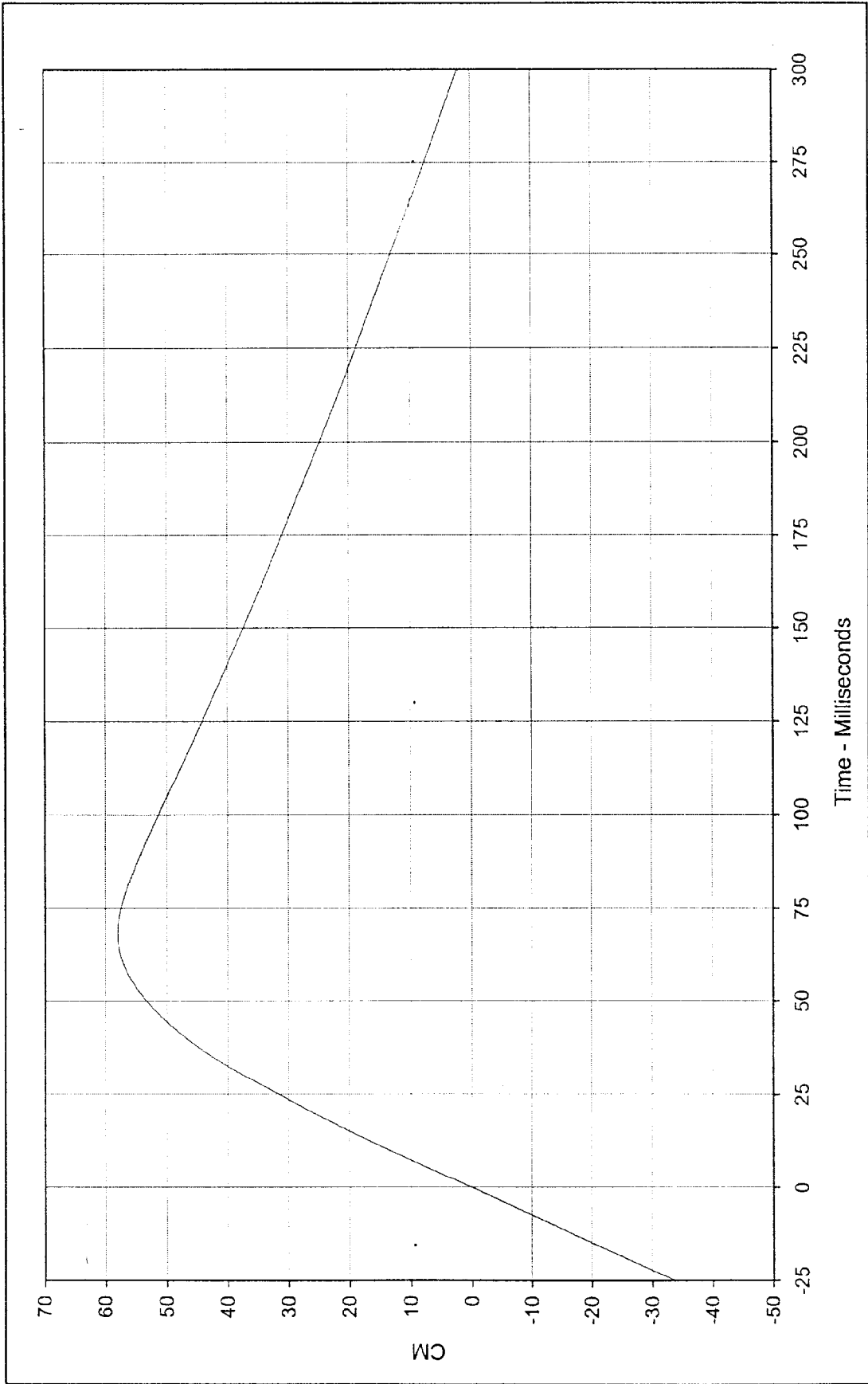
Curve Description: Vehicle Left Rear Sill X Testing Program 1997 48.4 km/h Frontal Impact (Fcmale)
 Maximum Value: 1.4 at 112.2 Milliseconds Test Vehicle: 1996 Dodge Neon Door Sedan
 Minimum Value: -38.5 at 35.9 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-089





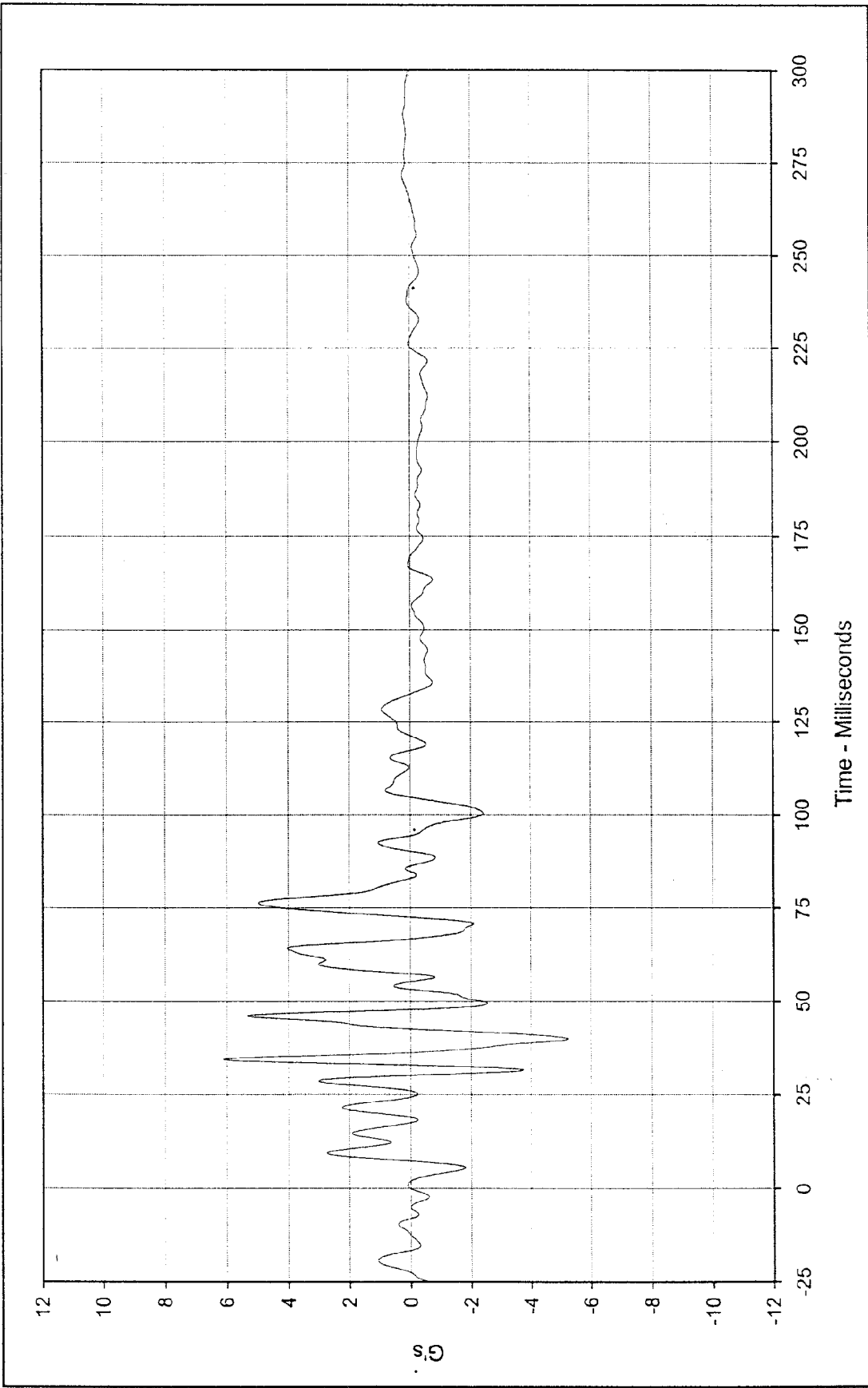
Curve Description: Vehicle Left Rear Sill X Velocity Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 49.0 at 0.1 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -10.6 at 108.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN1-089





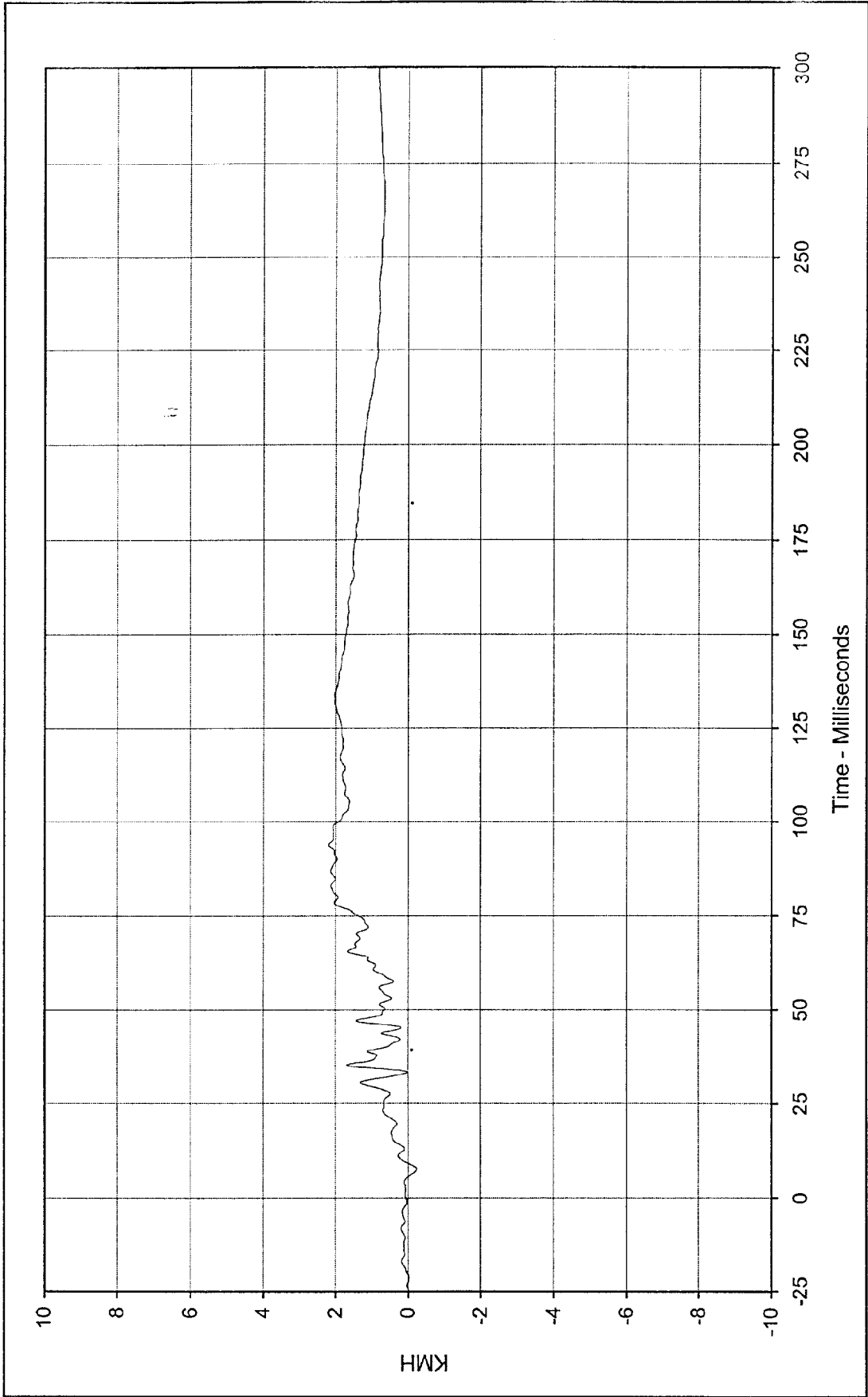
Curve Description: Vehicle Left Rear Sill X Displ. Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 58.0 at 68.3 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: 0.1 at 0.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN2-089





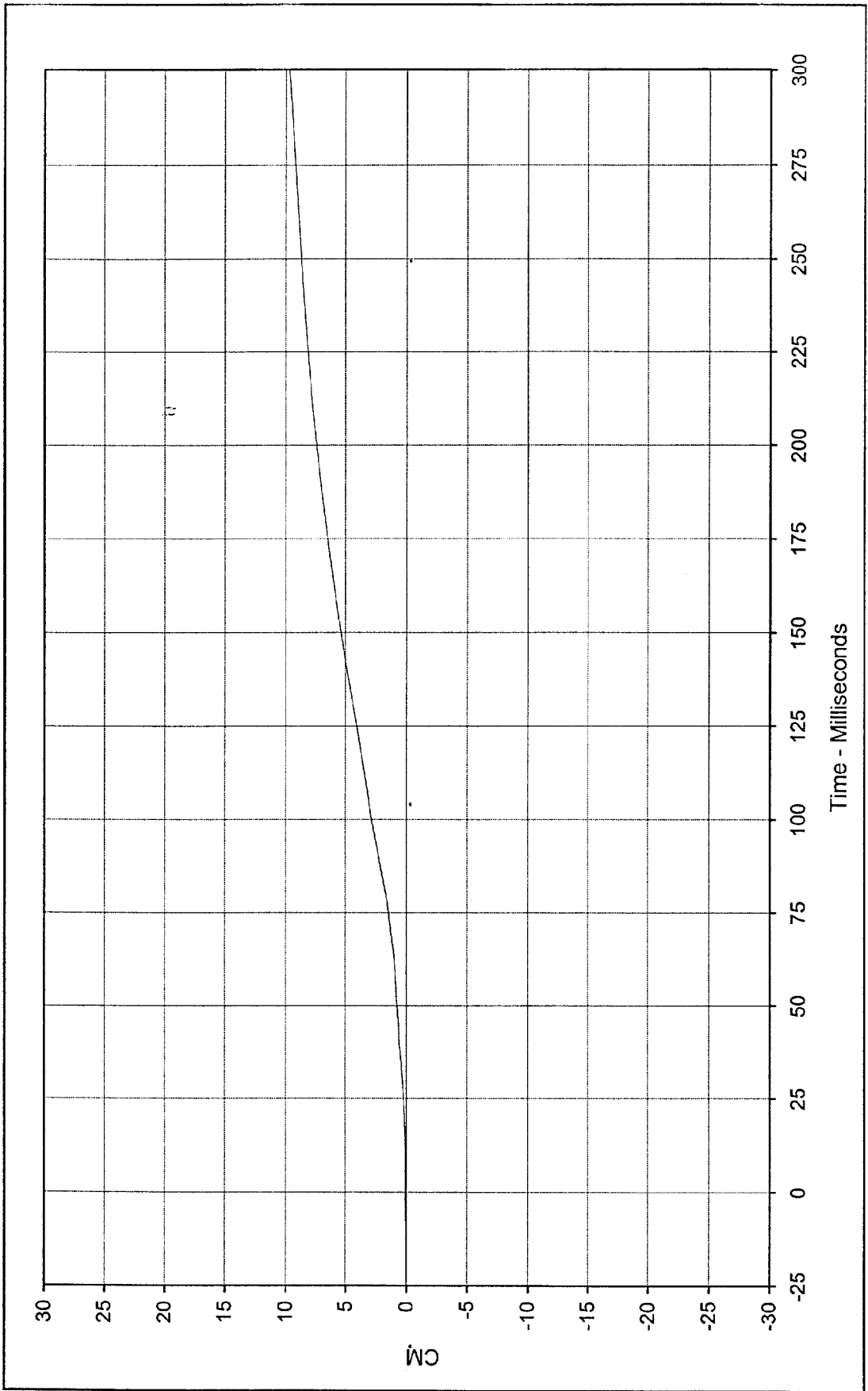
Curve Description: Vehicle Left Rear Sill Y Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 6.1 at 34.3 Milliseconds Test Vehicle: 1996 Dodge Neon Door Sedan
 Minimum Value: -5.2 at 39.8 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-090





Curve Description: Vehicle Left Rear Sill Y Velocity Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 2.2 at 93.8 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -0.2 at 7.5 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN1-090

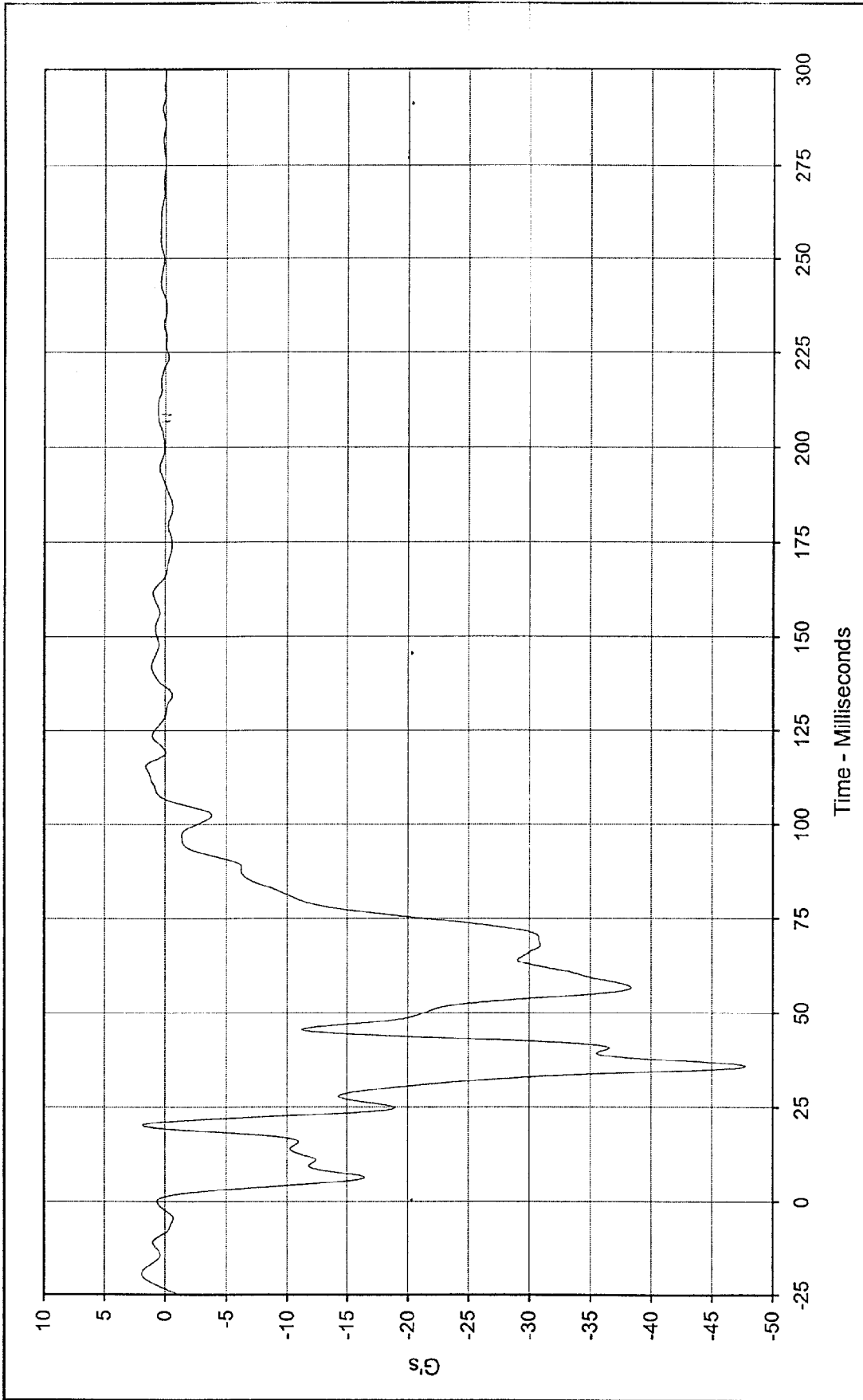




Curve Description: Vehicle Left Rear Sill Y Displ.
 Maximum Value: 9.7 at 299.9 Milliseconds
 Minimum Value: 0.1 at 9.1 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN2-090

Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan



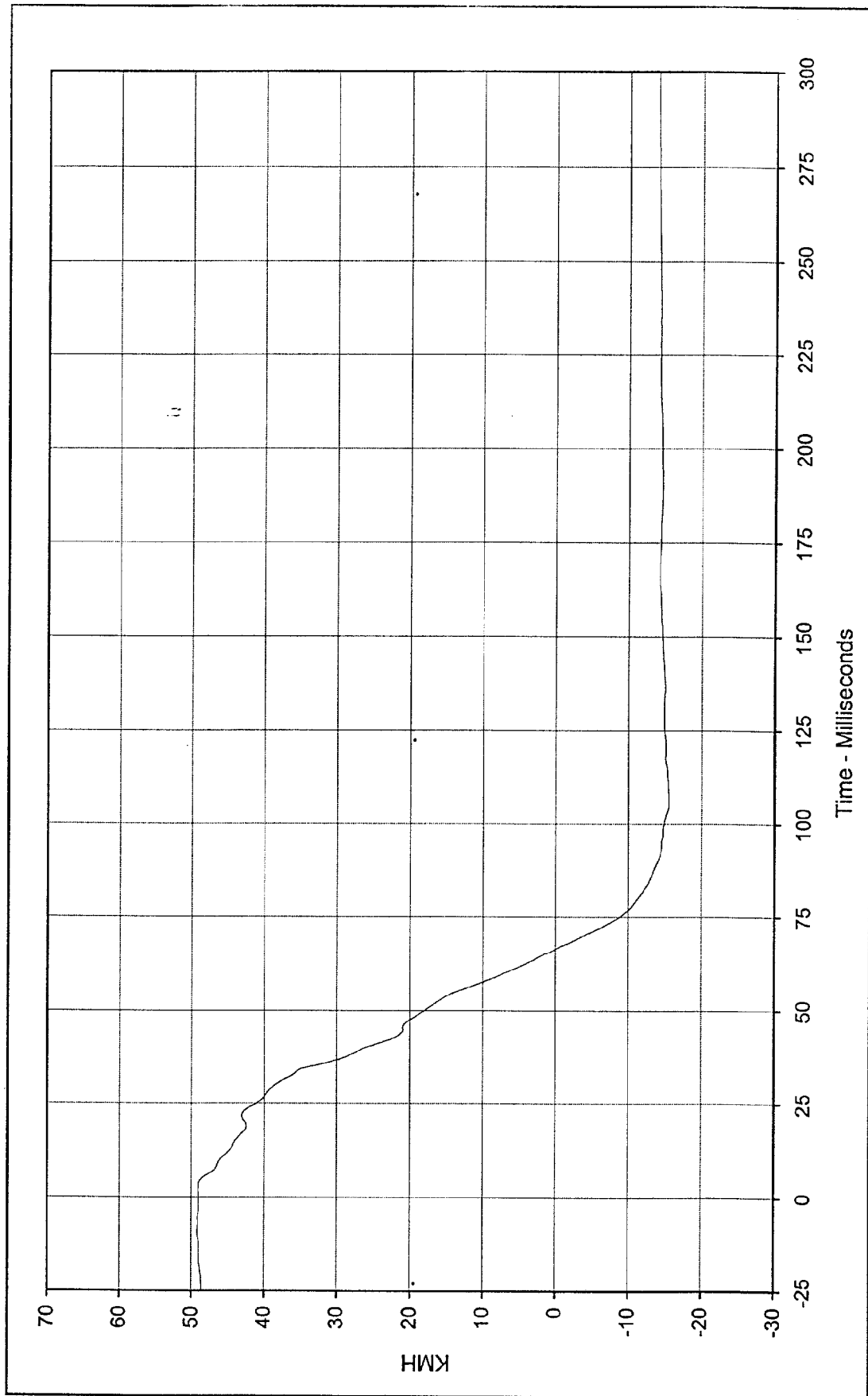


Time - Milliseconds

Curve Description: Vehicle Center Console Rear X Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 1.8 at 20.3 Milliseconds Test Vehicle: 1996 Dodge Neon Door Sedan
 Minimum Value: -47.8 at 35.7 Milliseconds

SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-091





Curve Description: Vehicle Center Rear Console X Velocity Testing Program: 1997 48.4 km/h Frontal Impact (Female)

Maximum Value: 49.1 at 2.1 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan

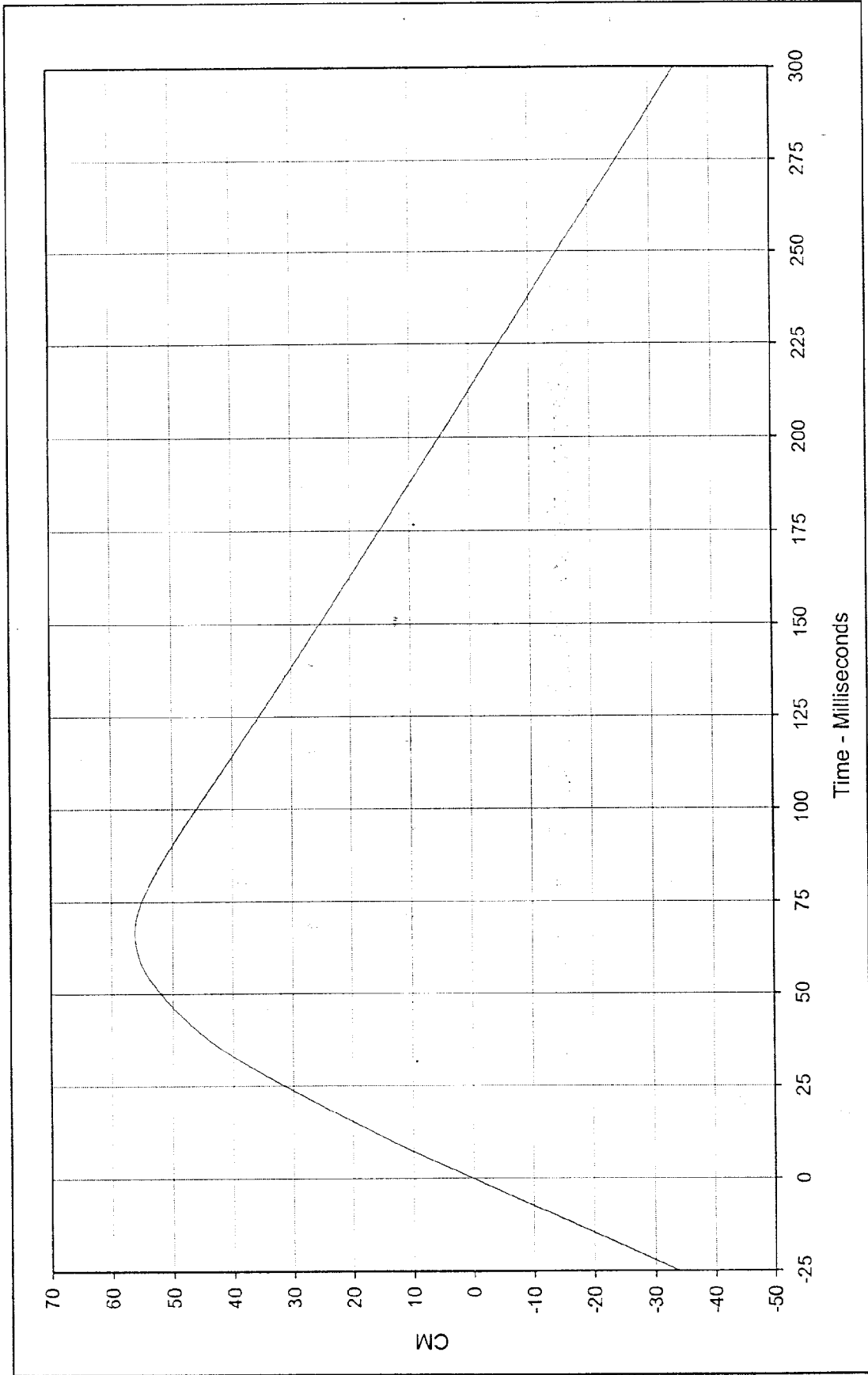
Minimum Value: -15.5 at 105.4 Milliseconds

SAE Filter Class: 180

Date of Test: 9/9/97

Curve Number: IN1-091

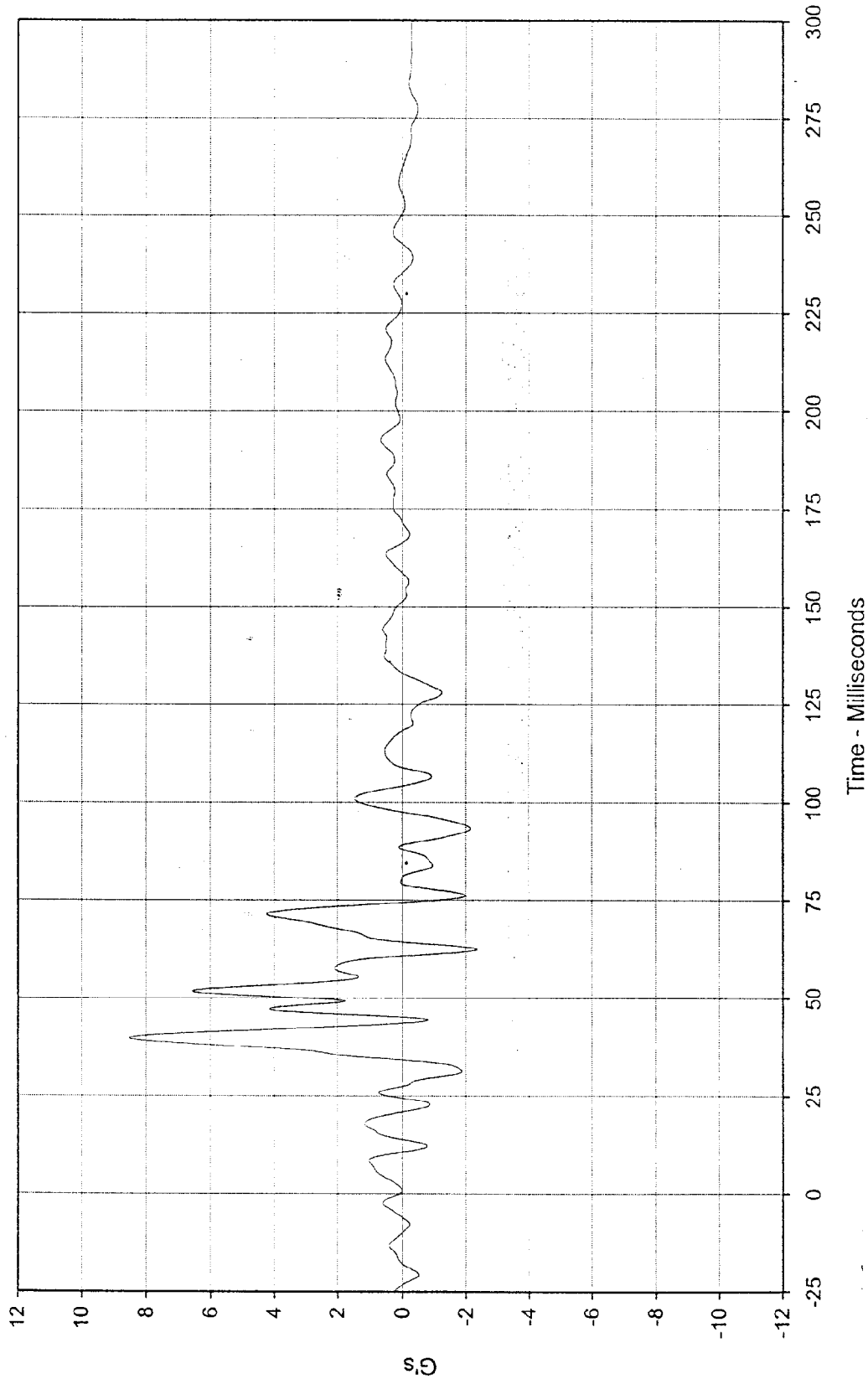




Curve Description: Vehicle Center Rear Console X Displ. Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 56.1 at 66.4 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -34.2 at 299.9 Milliseconds

SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN2-091





Curve Description: Vehicle Center Console Rear Y Testing Program 1997 48.4 km/h Frontal Impact (Female)

Maximum Value: 8.5 at 39.6 Milliseconds Test Vehicle: 1996 Dodge Neon Door Sedan

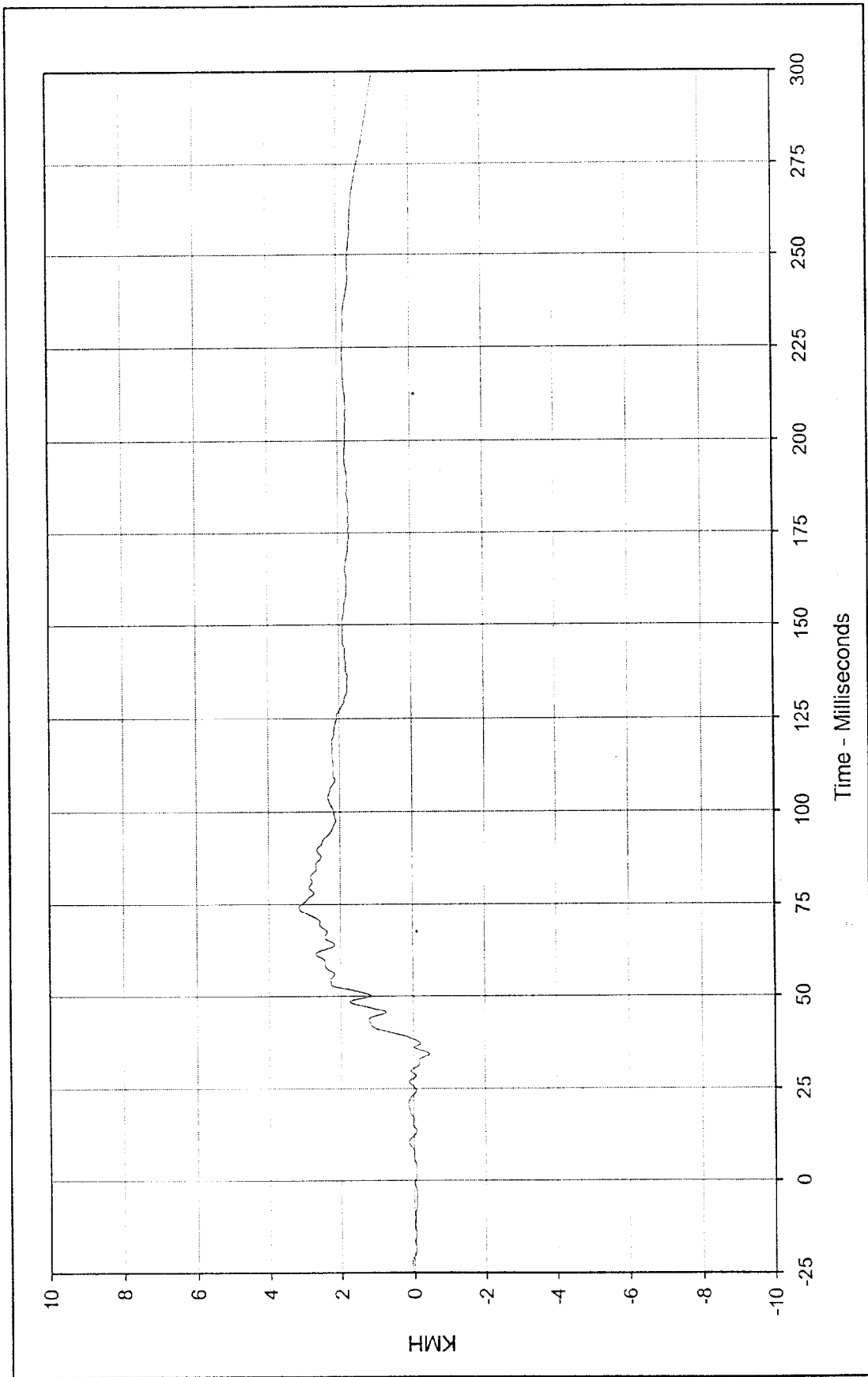
Minimum Value: -2.3 at 62.5 Milliseconds

SAE Filter Class: 60

Date of Test: 9/9/97

Curve Number: FIL-092





Curve Description: Vehicle Center Rear Console Y Velocity Testing Program: 1997 48.4 km/h Frontal Impact (Female)

Maximum Value: 3.2 at 74.0 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan

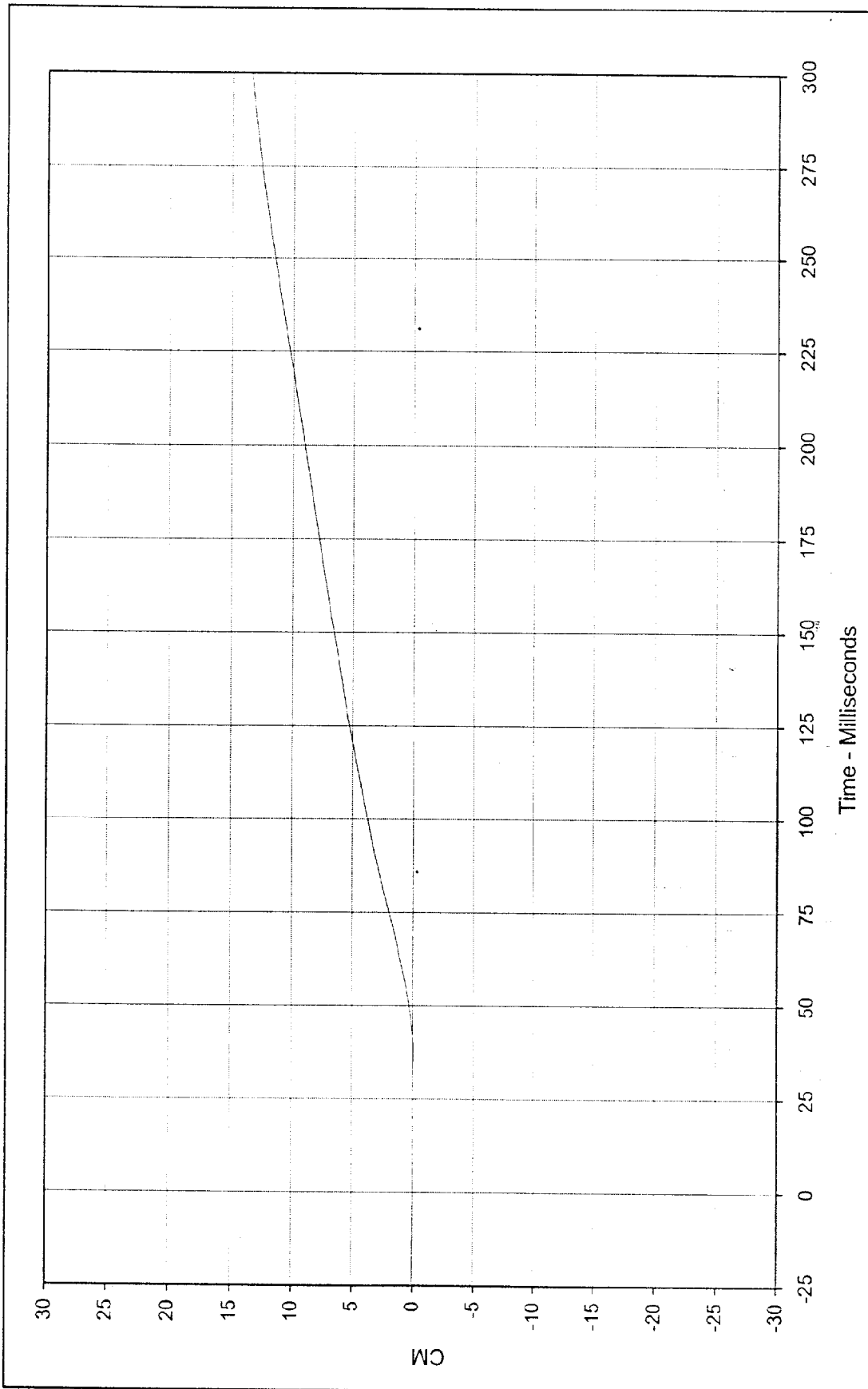
Minimum Value: -0.4 at 34.3 Milliseconds

SAE Filter Class: 180

Date of Test: 9/9/97

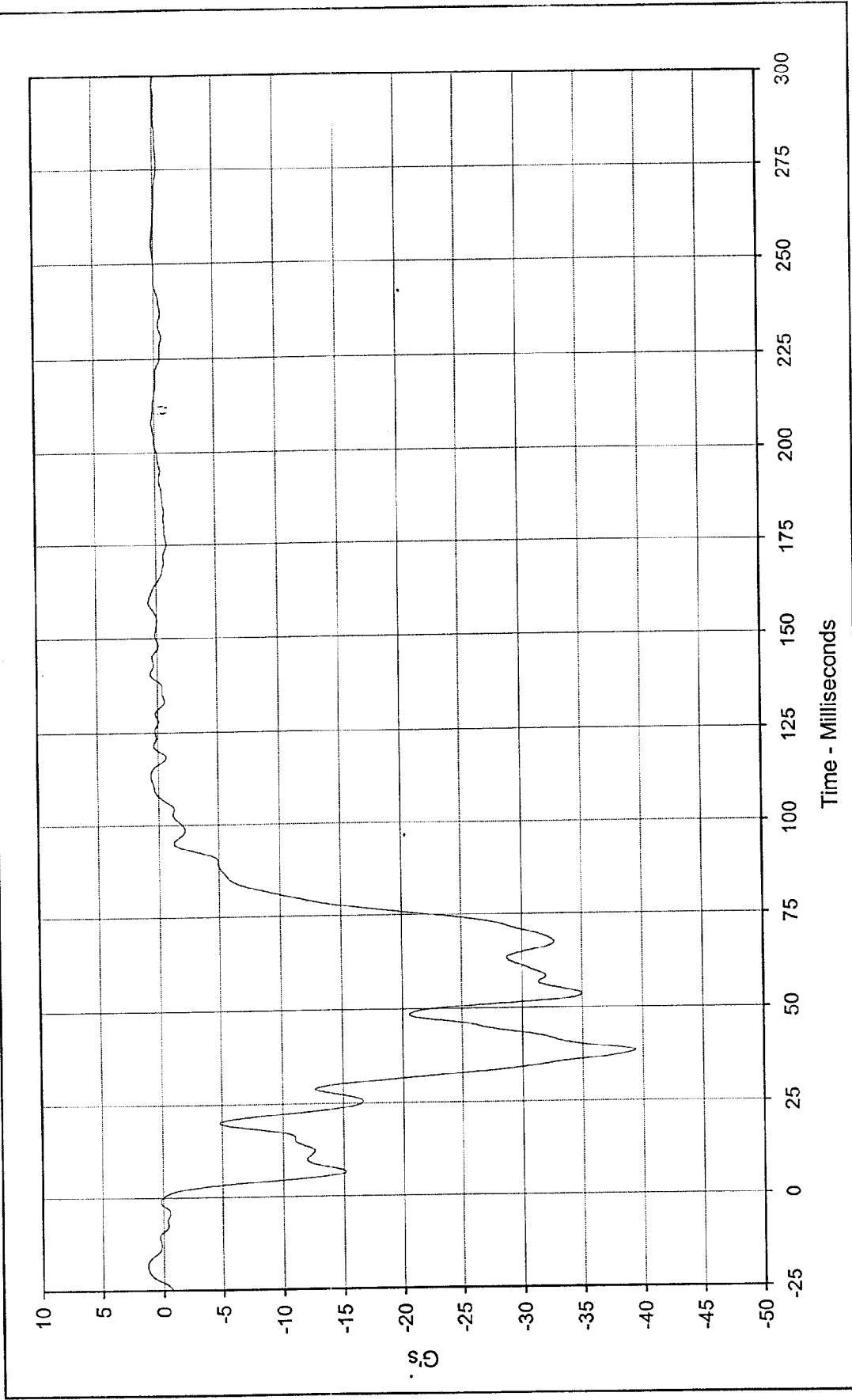
Curve Number: IN1-092





Curve Description: Vehicle Center Rear Console Y Displ. Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 13.4 at 299.9 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: 0.0 at 38.1 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN2-092

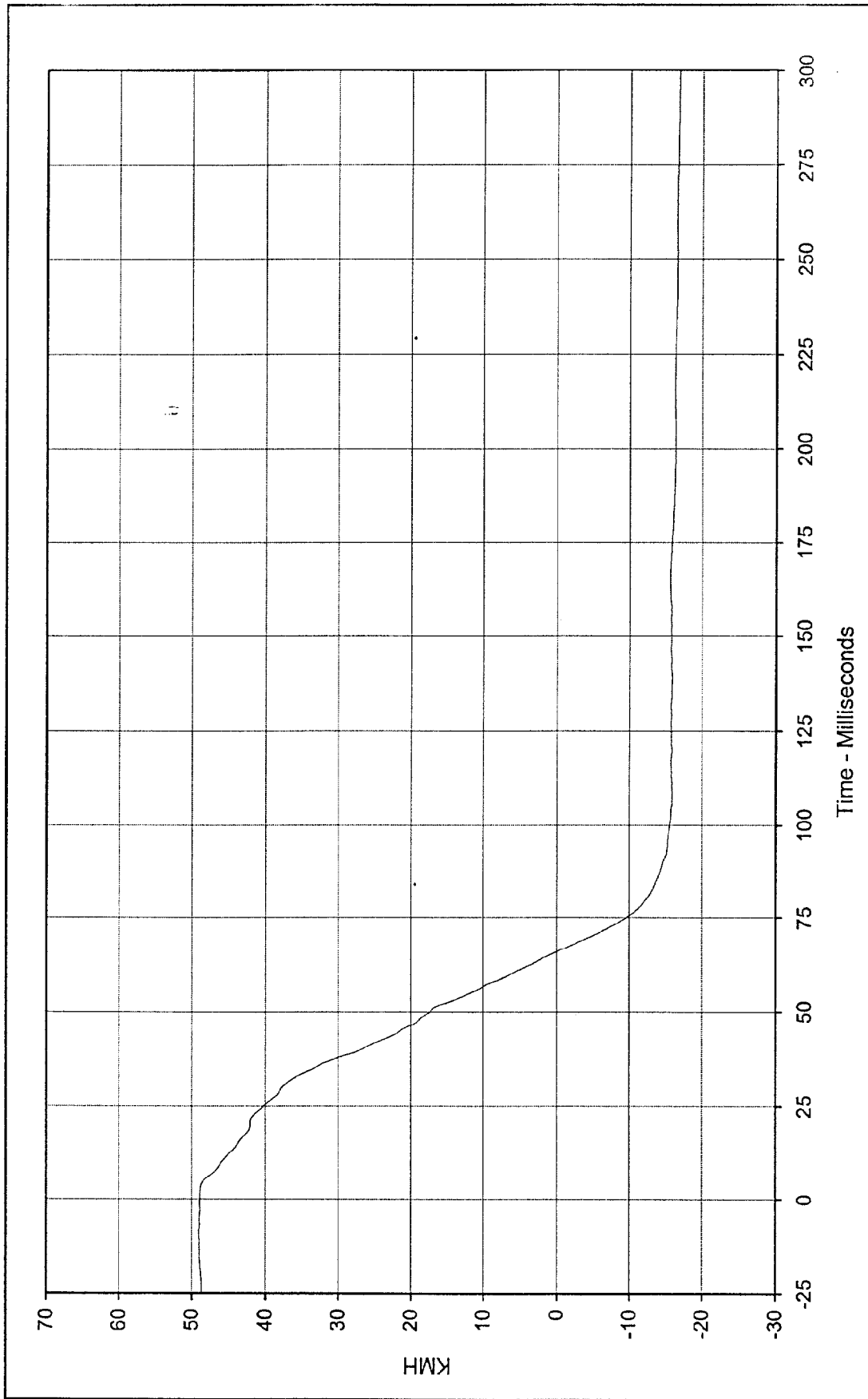




Curve Description: Vehicle Right Rear Sill X Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 0.7 at 159.5 Milliseconds Test Vehicle: 1996 Dodge Neon Door Sedan
 Minimum Value: -39.4 at 38.3 Milliseconds



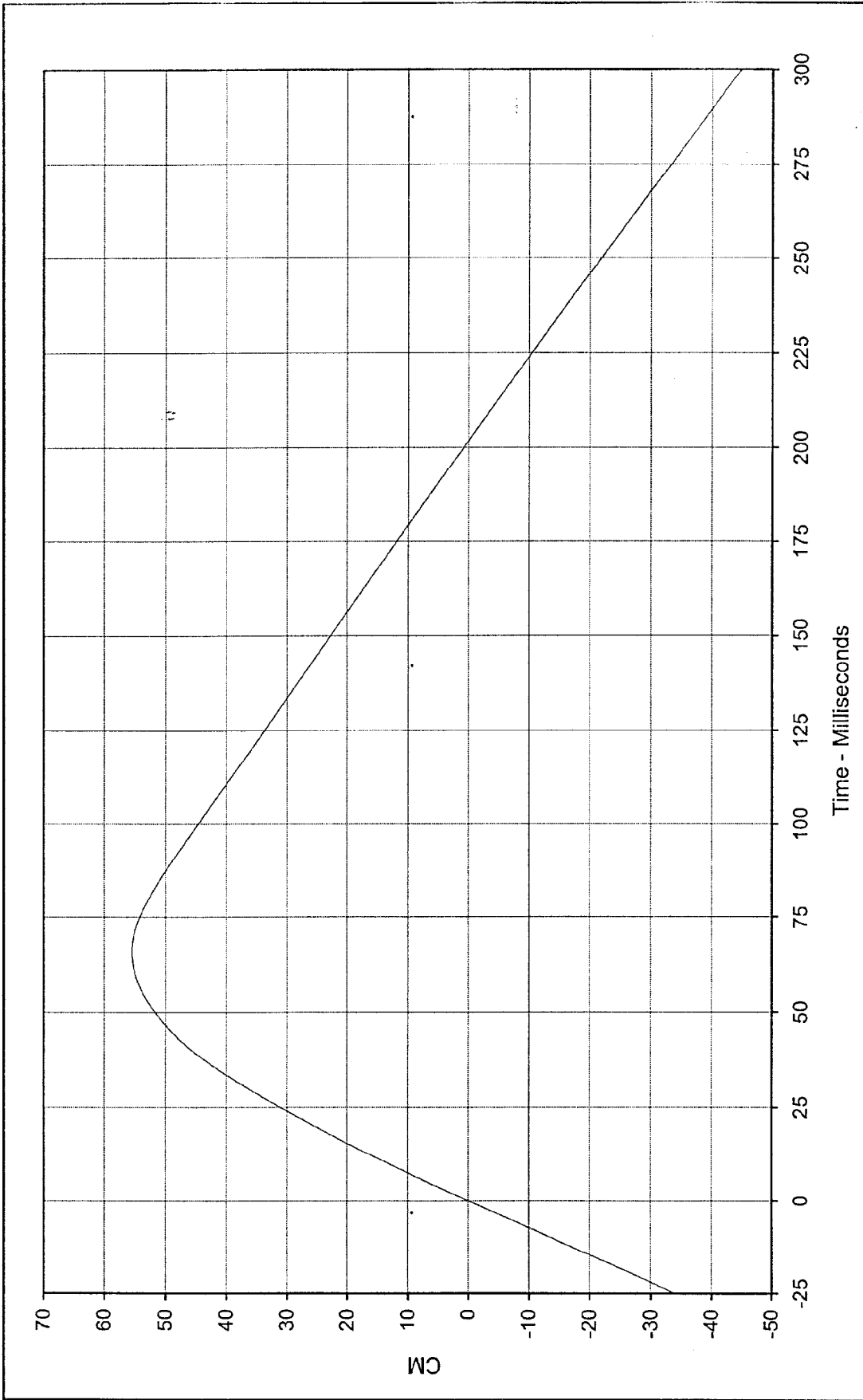
SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-093



Curve Description: Vehicle Right Rear Sill X Velocity
 Maximum Value: 48.9 at 0.0 Milliseconds
 Minimum Value: -16.7 at 299.9 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN1-093

Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan

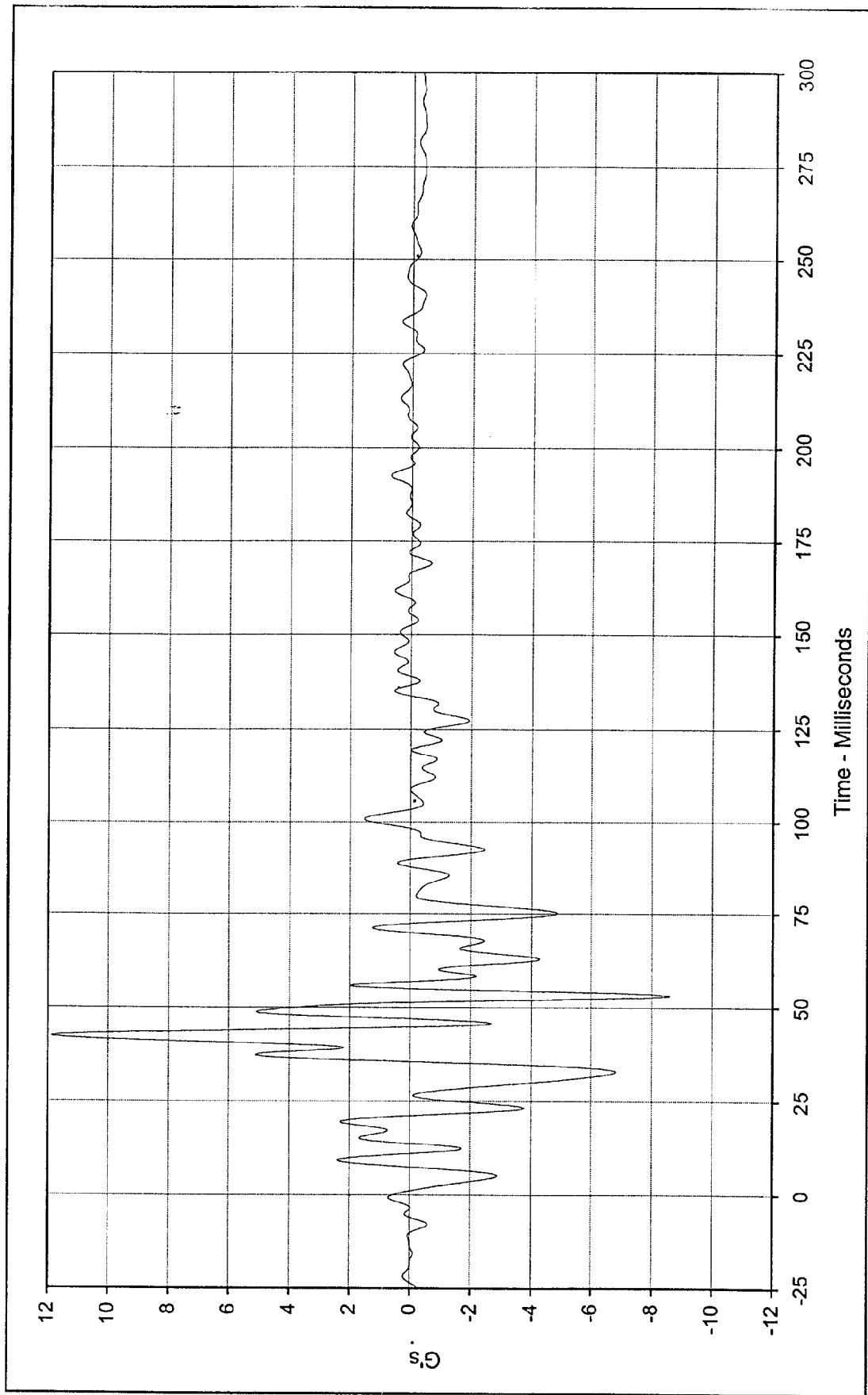




Curve Description: Vehicle Right Rear Sill X Displ. Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 55.5 at 65.9 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -44.8 at 299.9 Milliseconds

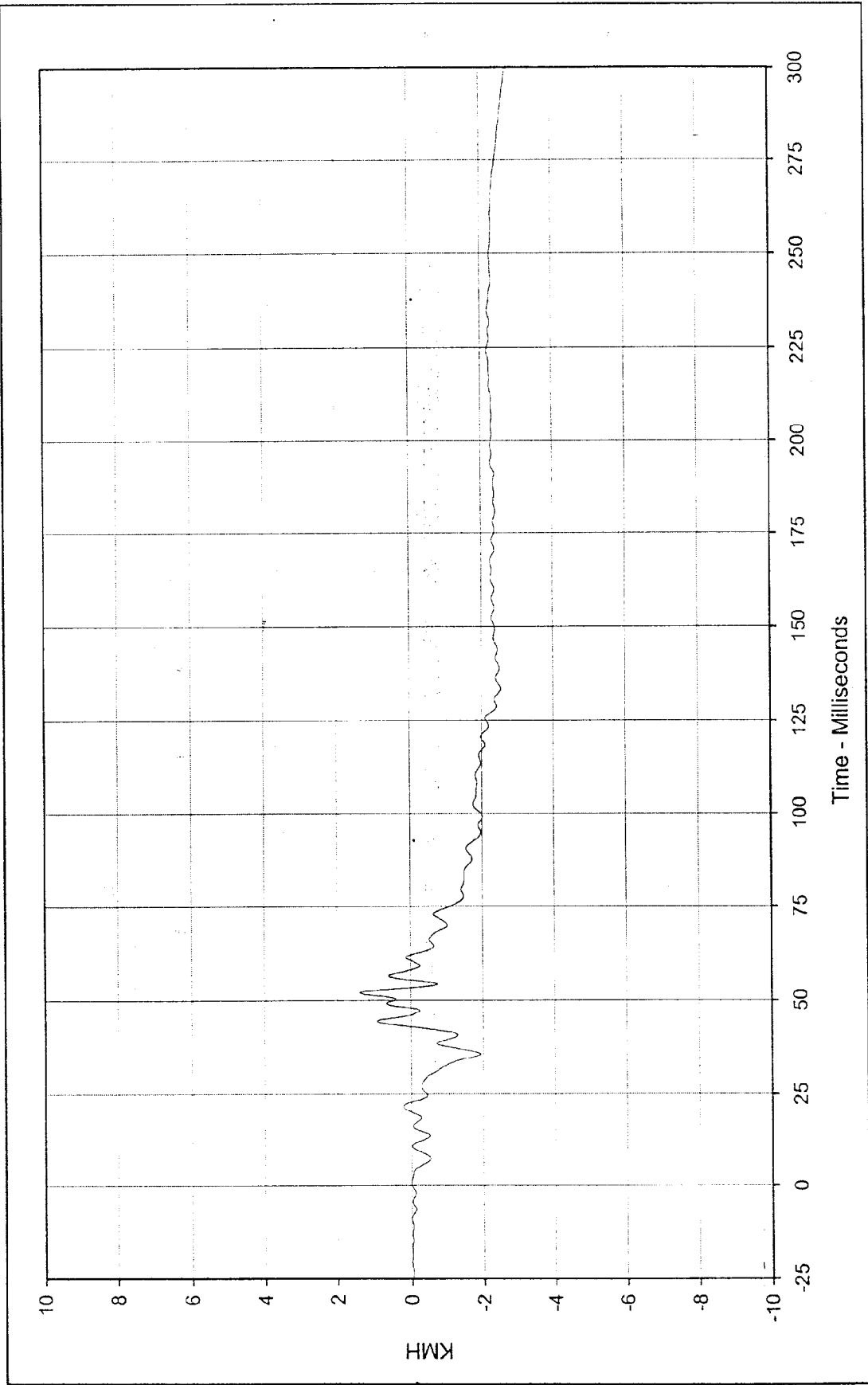


SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN2-093



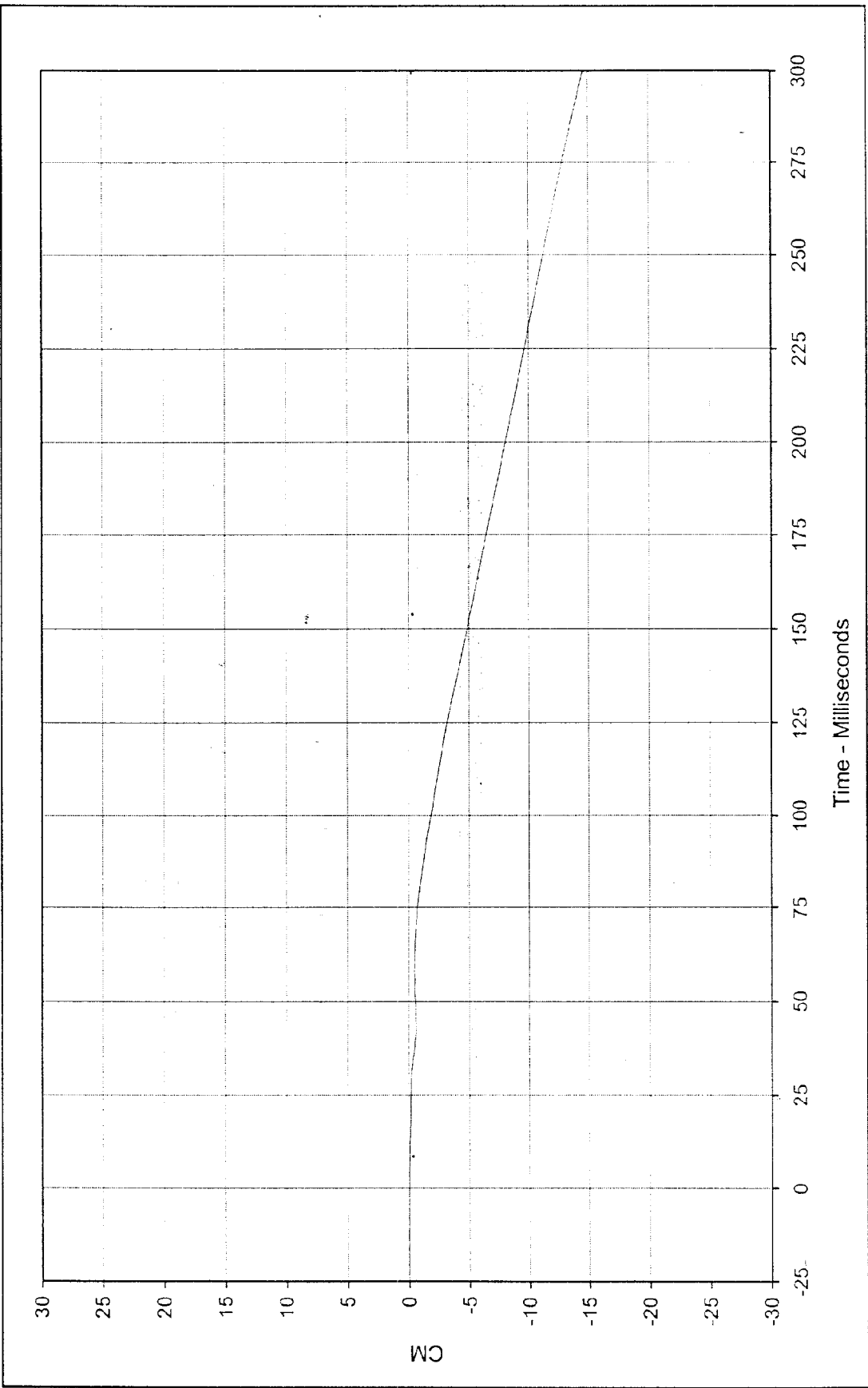
Curve Description: Vehicle Right Rear Sill Y Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 11.9 at 42.4 Milliseconds Test Vehicle: 1996 Dodge Neon Door Sedan
 Minimum Value: -8.6 at 53.1 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-094





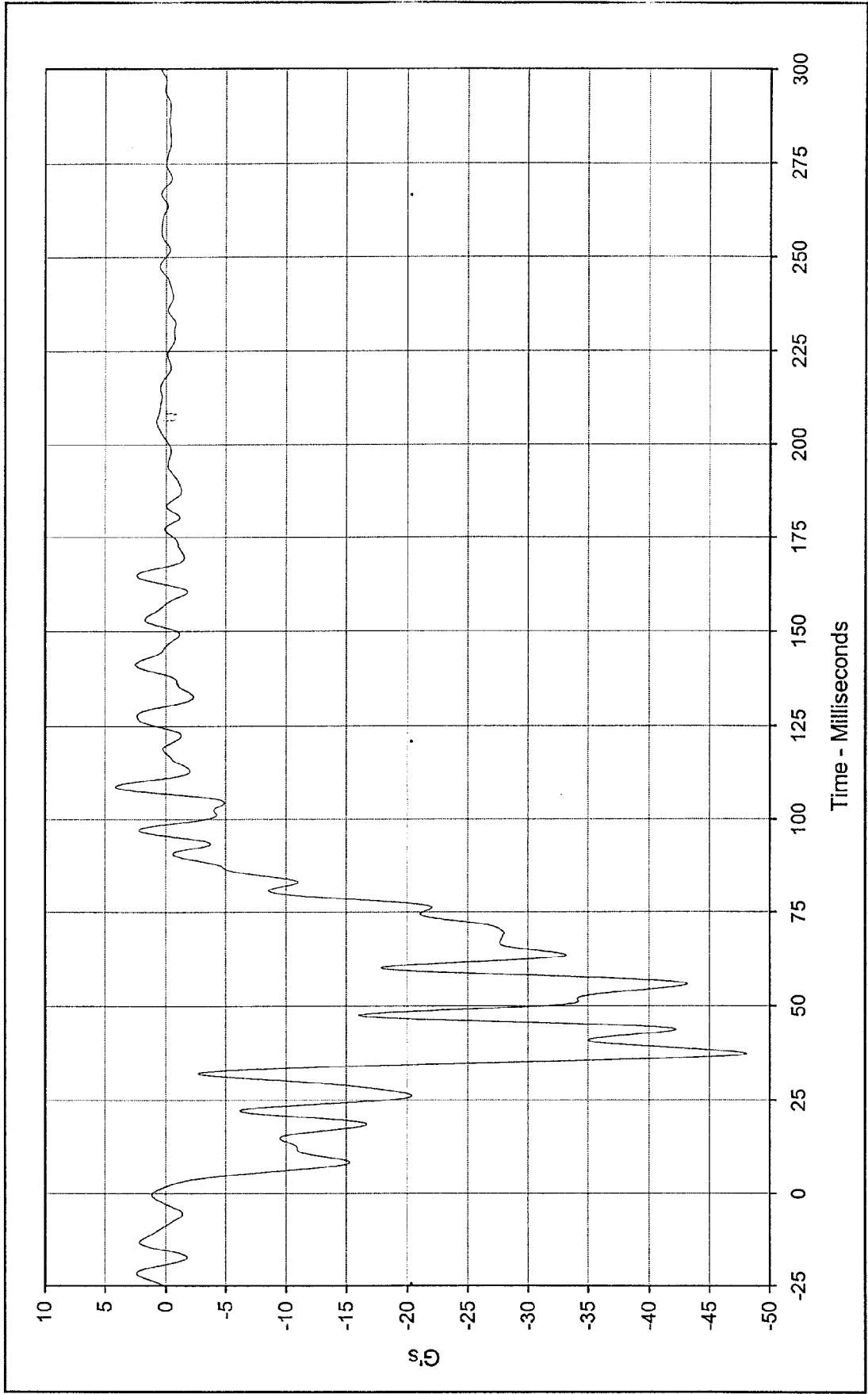
Curve Description: Vehicle Right Rear Sill Y Velocity Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 1.4 at 52.0 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -2.7 at 299.9 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN1-094





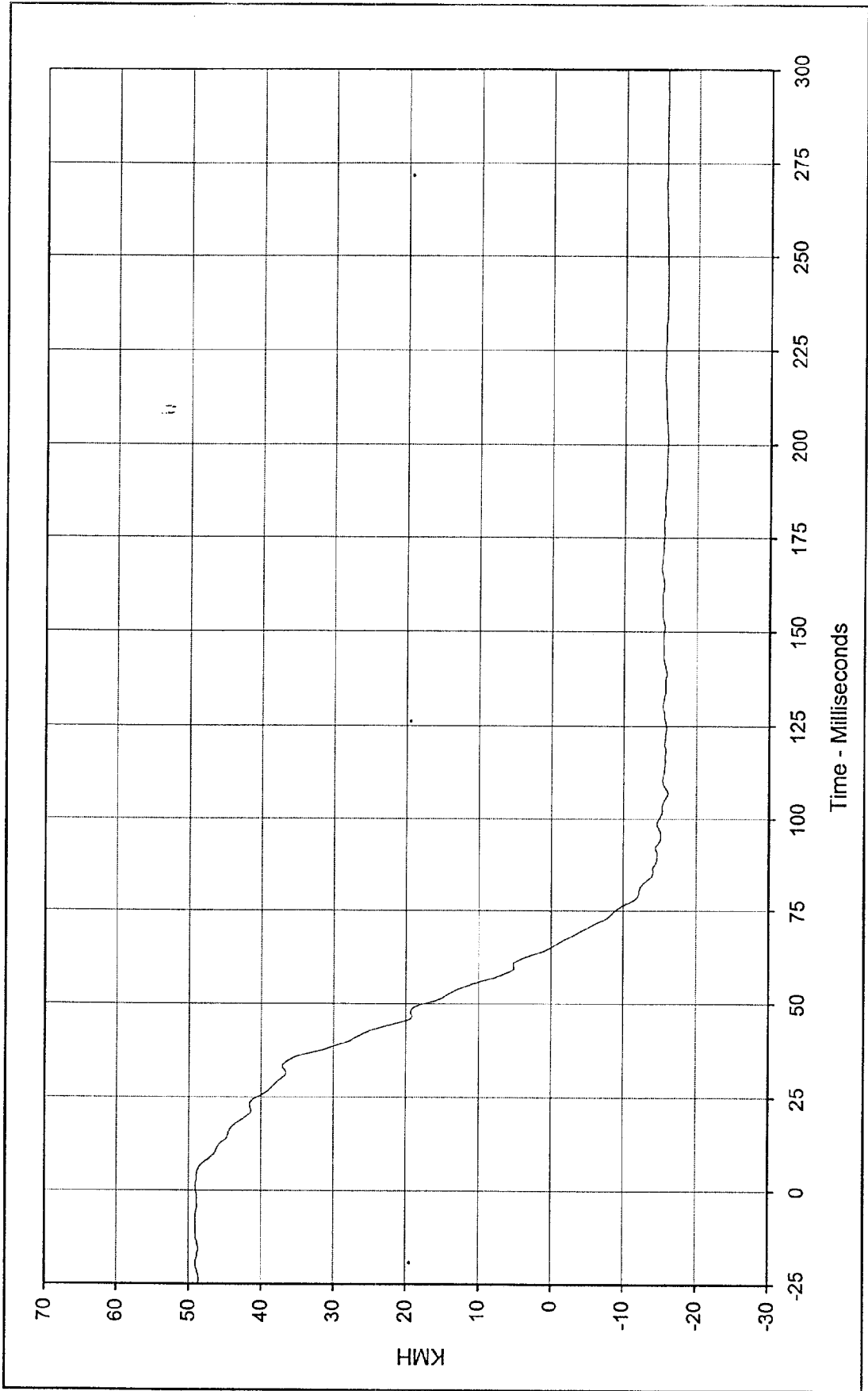
Curve Description: Vehicle Right Rear Sil Y Displ. Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 0.0 at 1.3 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -14.6 at 299.9 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN2-094





Curve Description: Vehicle Center Rear Trunk X Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 4.1 at 108.7 Milliseconds Test Vehicle: 1996 Dodge Neon Door Sedan
 Minimum Value: -48.1 at 37.3 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-095

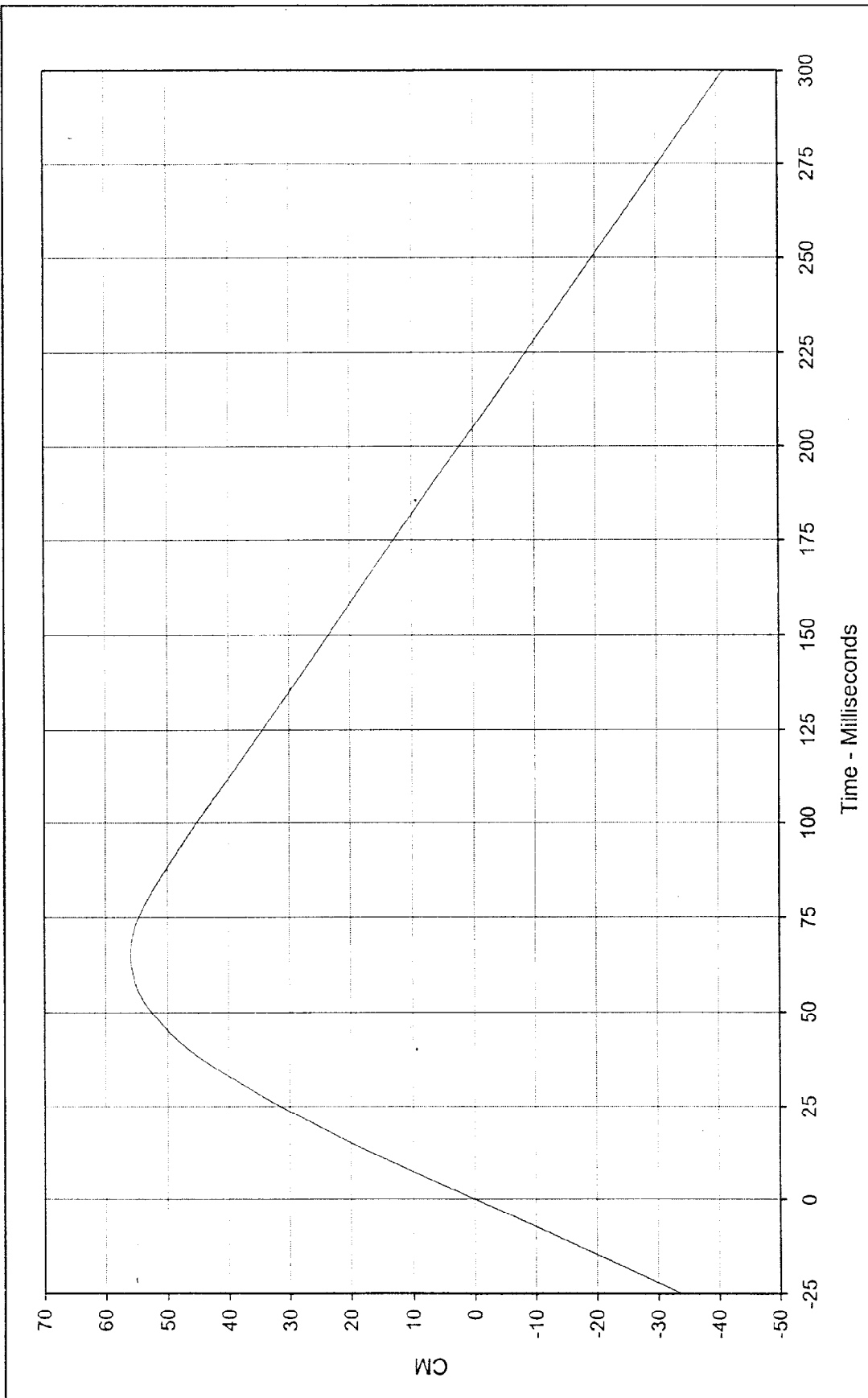




Curve Description: Vehicle Center Rear Trunk X Velocity
 Maximum Value: 49.1 at 1.1 Milliseconds
 Minimum Value: -16.1 at 106.9 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN1-095

Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan

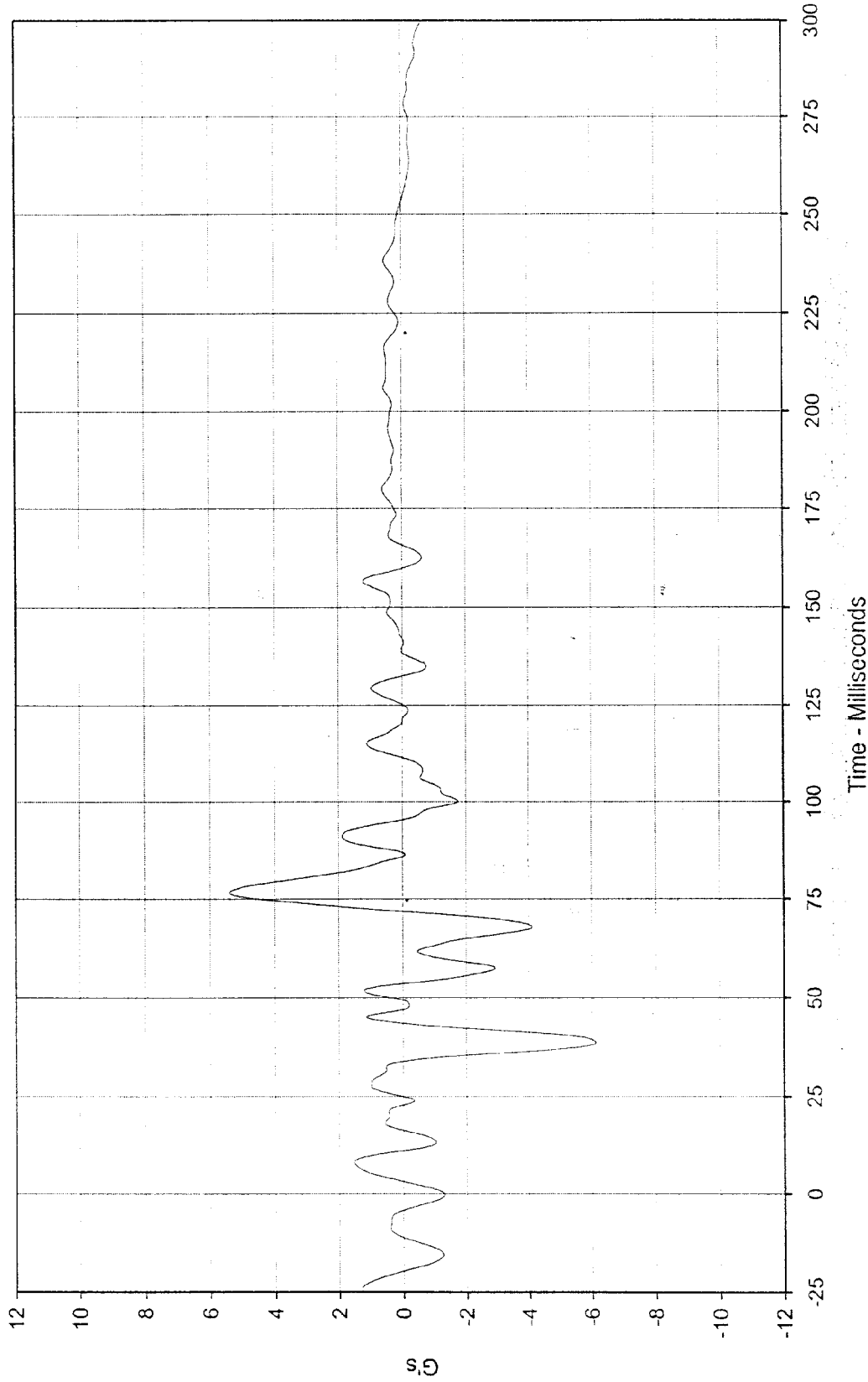




Curve Description: Vehicle Center Rear Trunk X Displ. Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 55.9 at 64.9 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -41.1 at 299.9 Milliseconds

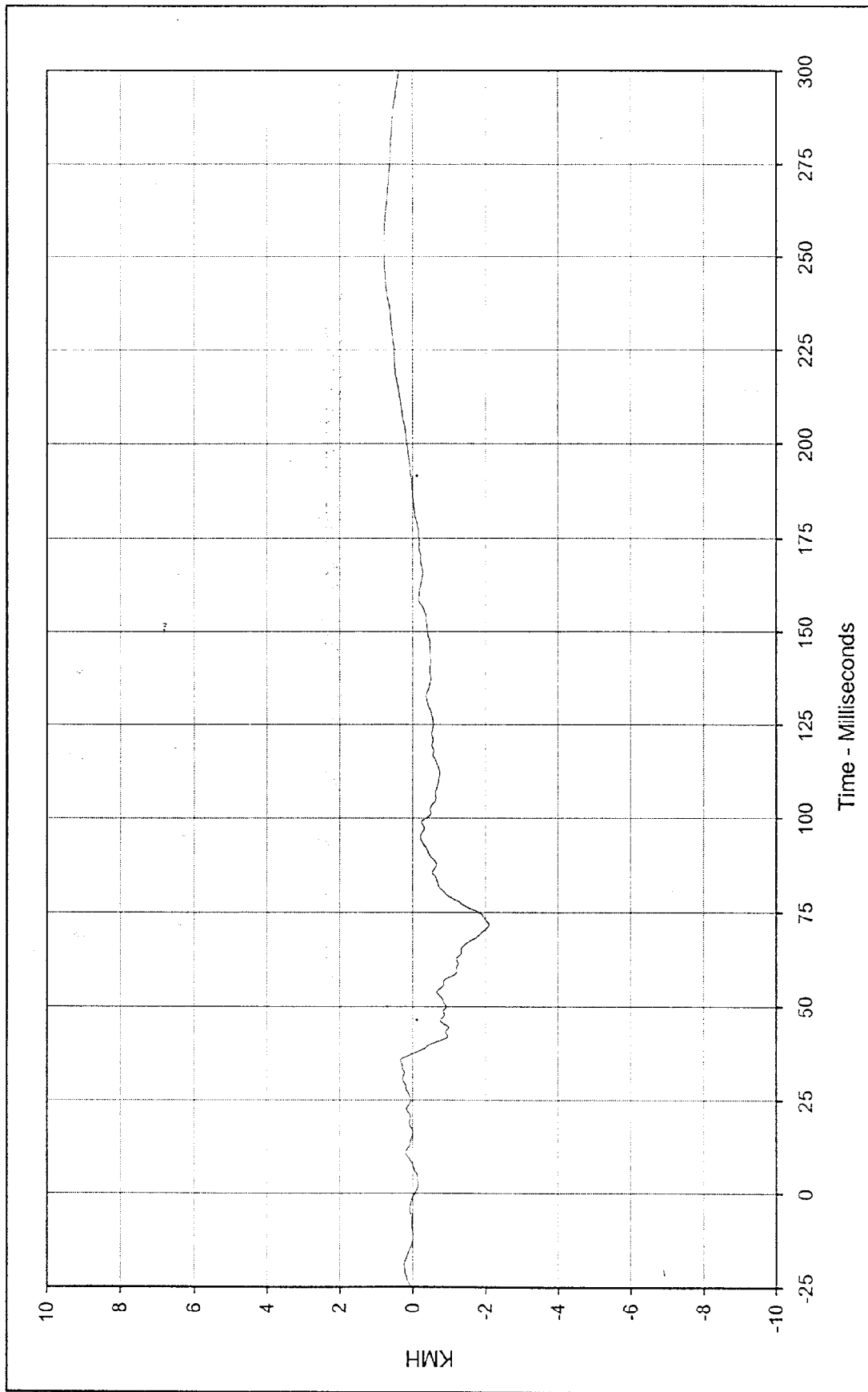


SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN2-095



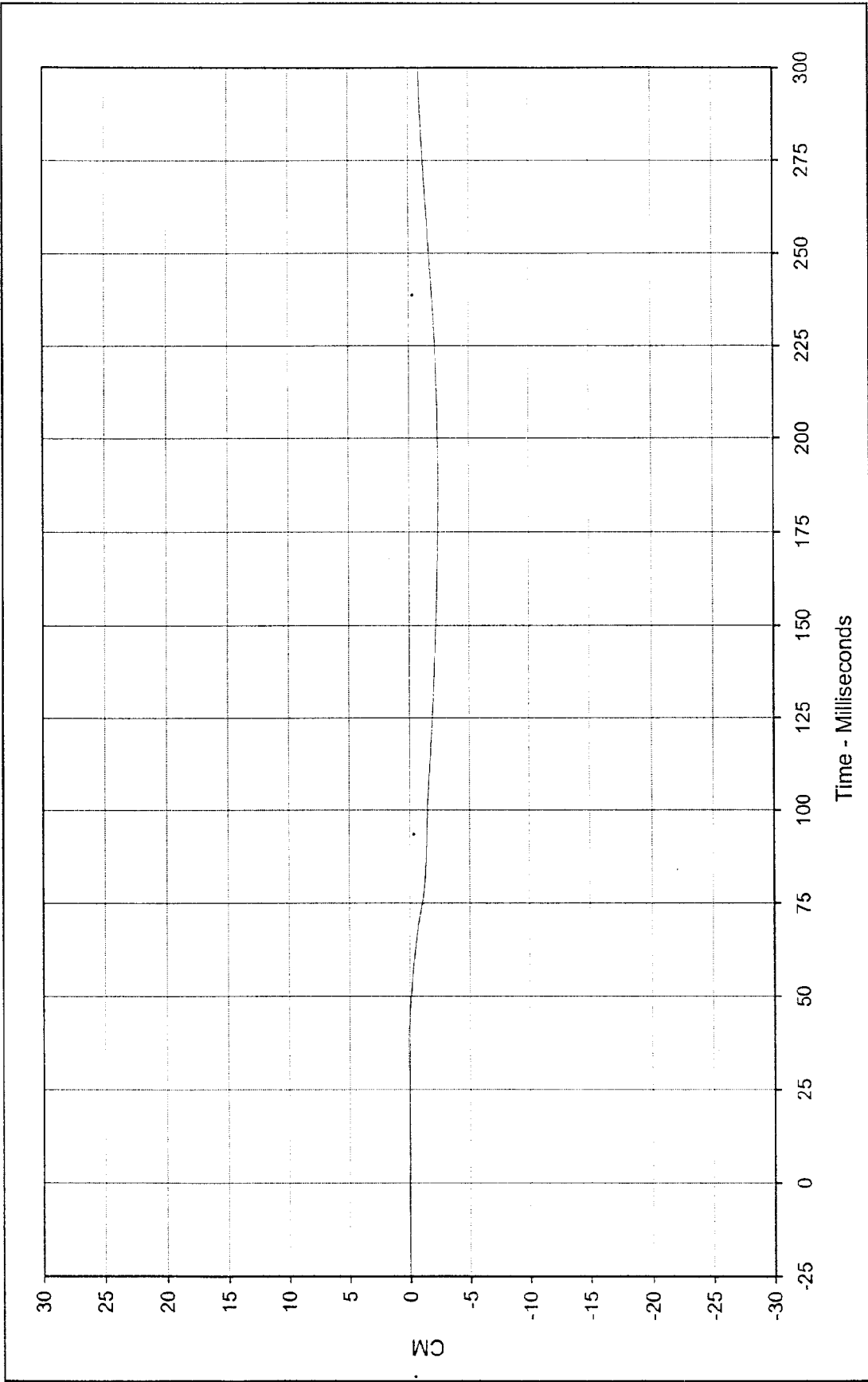
Curve Description:	Vehicle Center Rear Trunk Y	Testing Program	1997 48.4 km/h Frontal Impact (Female)
Maximum Value:	5.4 at 76.6 Milliseconds	Test Vehicle:	1996 Dodge Neon Door Sedan
Minimum Value:	-6.1 at 38.6 Milliseconds		
SAE Filter Class:	60		
Date of Test:	9/9/97		
Curve Number:	FIL-096		





Curve Description: Vehicle Center Rear Trunk Y Velocity Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 0.8 at 252.9 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -2.1 at 71.5 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN1-096

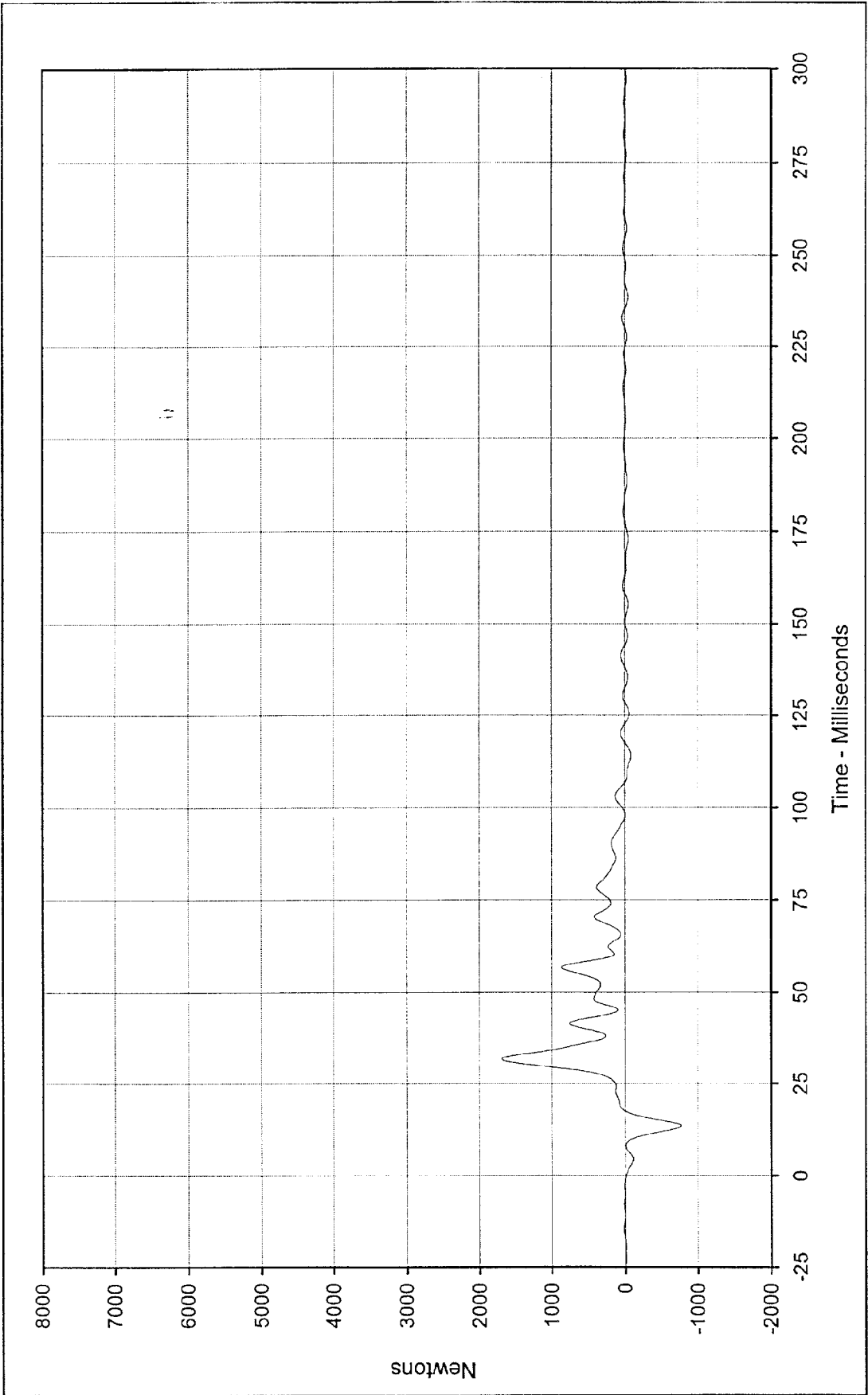




Curve Description: Vehicle Center Rear Trunk Y Displ. Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 0.1 at 37.3 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -2.4 at 187.1 Milliseconds
 SAE Filter Class: 180
 Date of Test: 9/9/97
 Curve Number: IN2-096



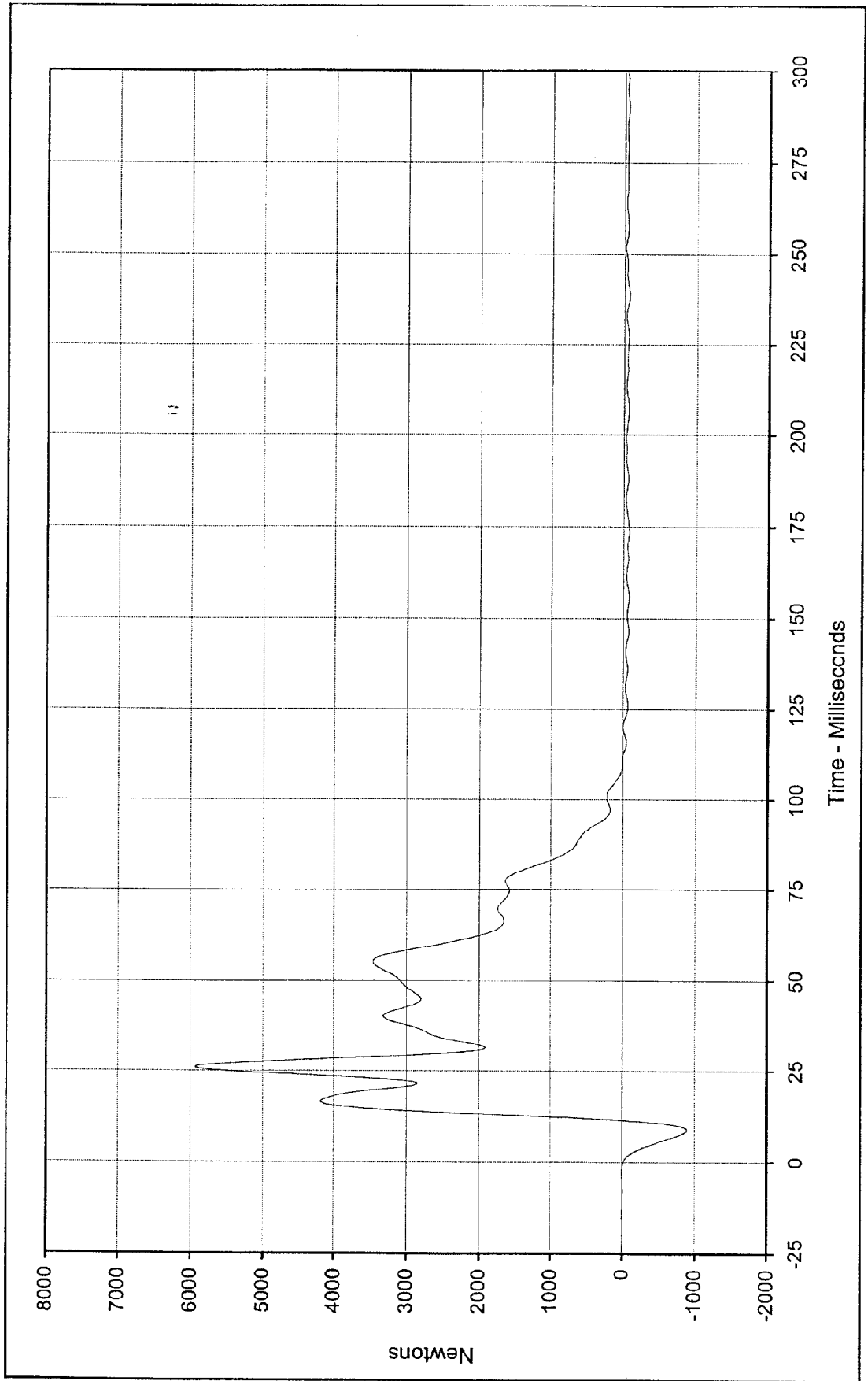
APPENDIX C
LOAD CELL BARRIER DATA



Curve Description: Barrier Force A2
 Maximum Value: 1697.1 at 31.6 Milliseconds
 Minimum Value: -774.2 at 13.6 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-001

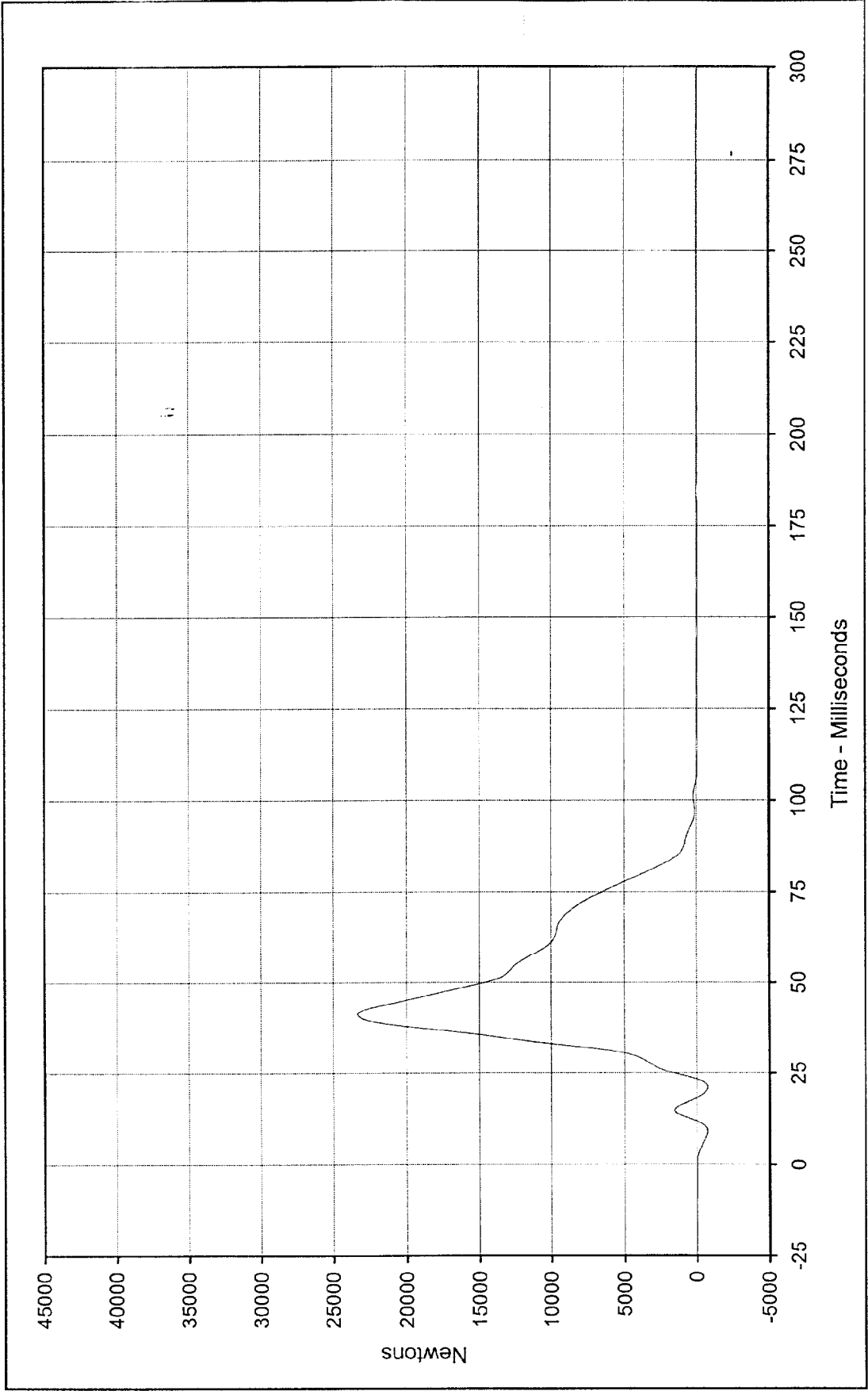
Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan





Curve Description: Barrier Force B2 Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 5937.4 at 26.0 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -899.8 at 8.9 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-002

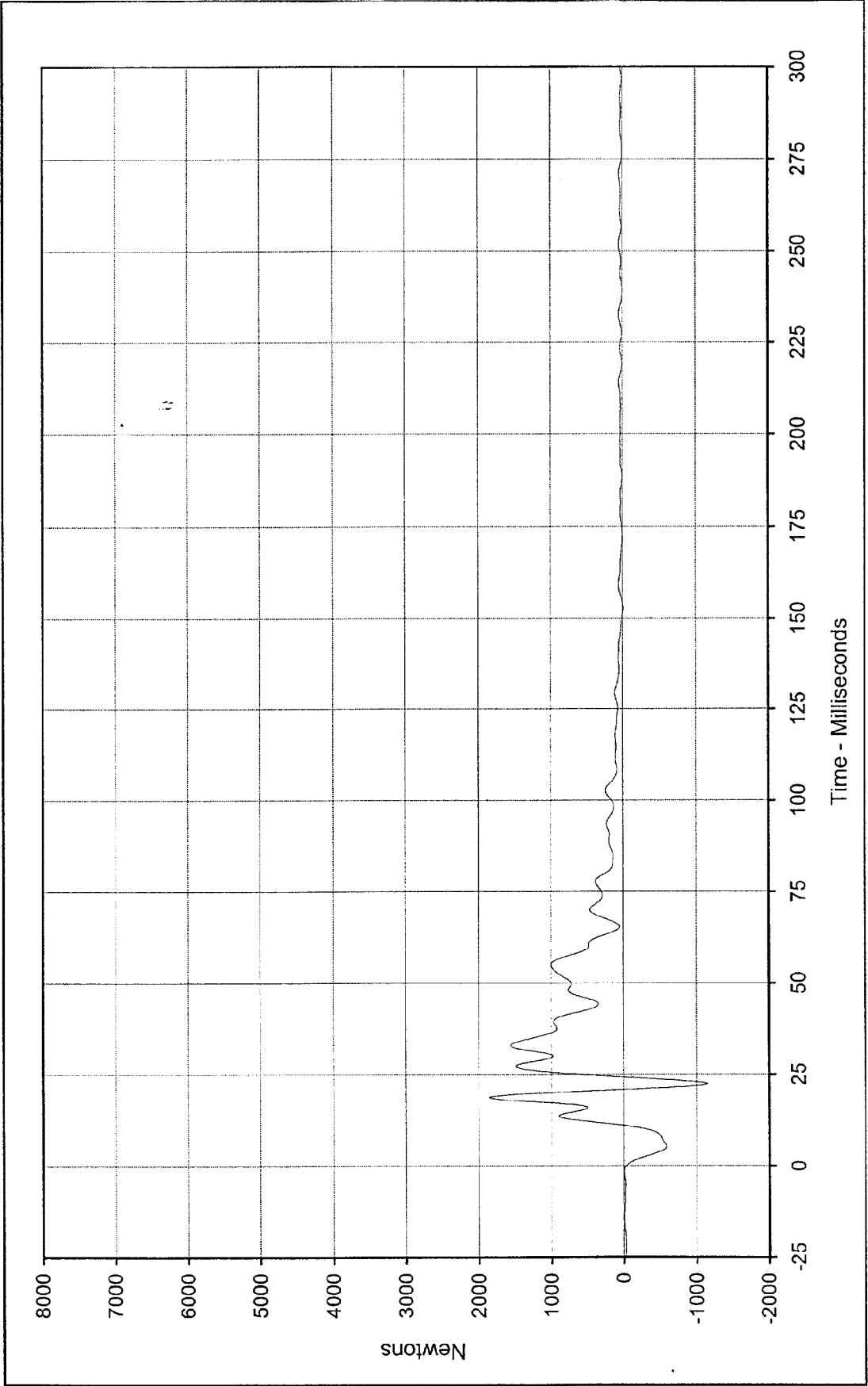




Curve Description: Barrier Force C2
 Maximum Value: 23341.3 at 41.3 Milliseconds
 Minimum Value: -778.9 at 21.1 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-003

Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan

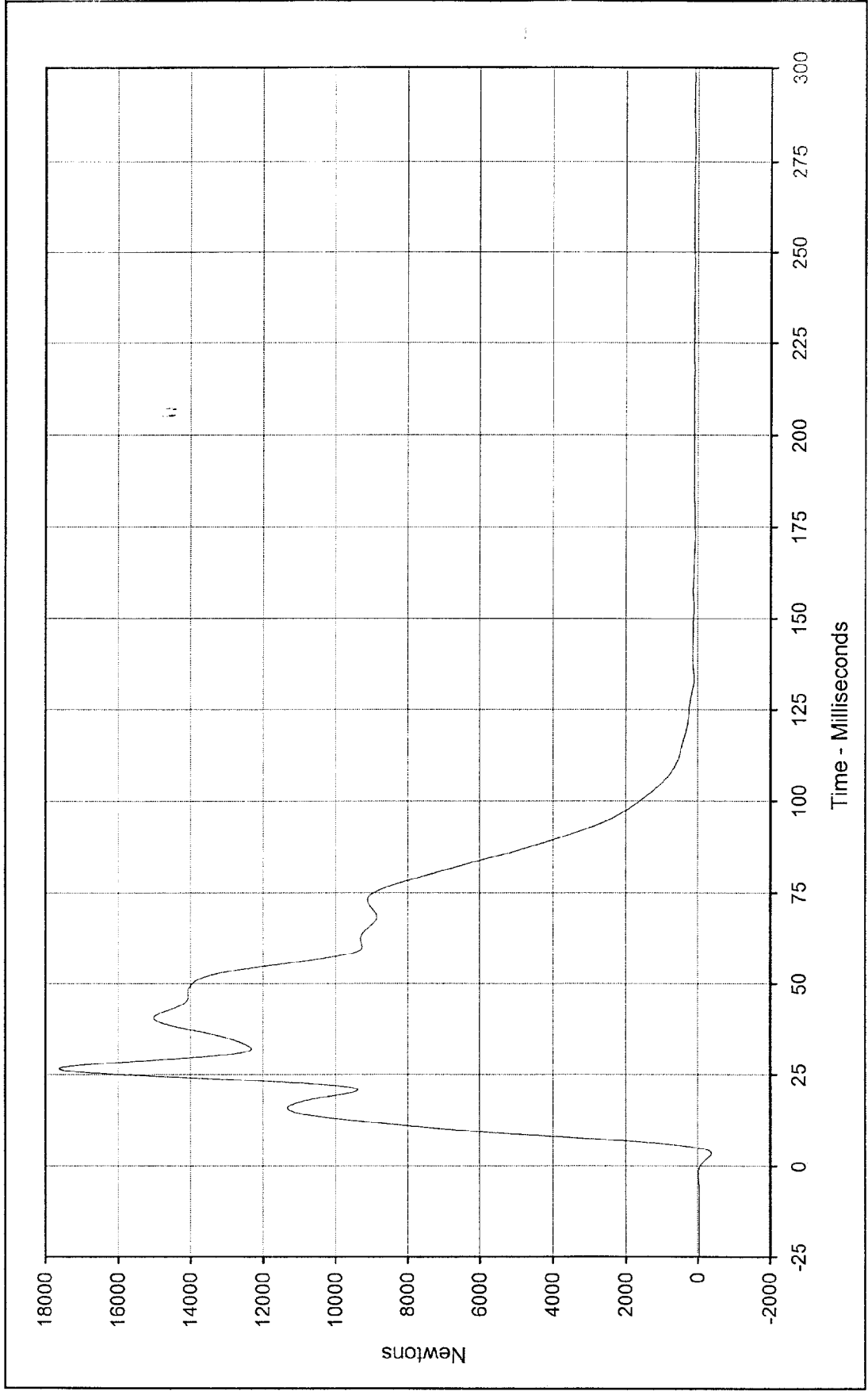




Curve Description: Barrier Force A3 Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 1854.6 at 18.7 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -1152.7 at 22.4 Milliseconds



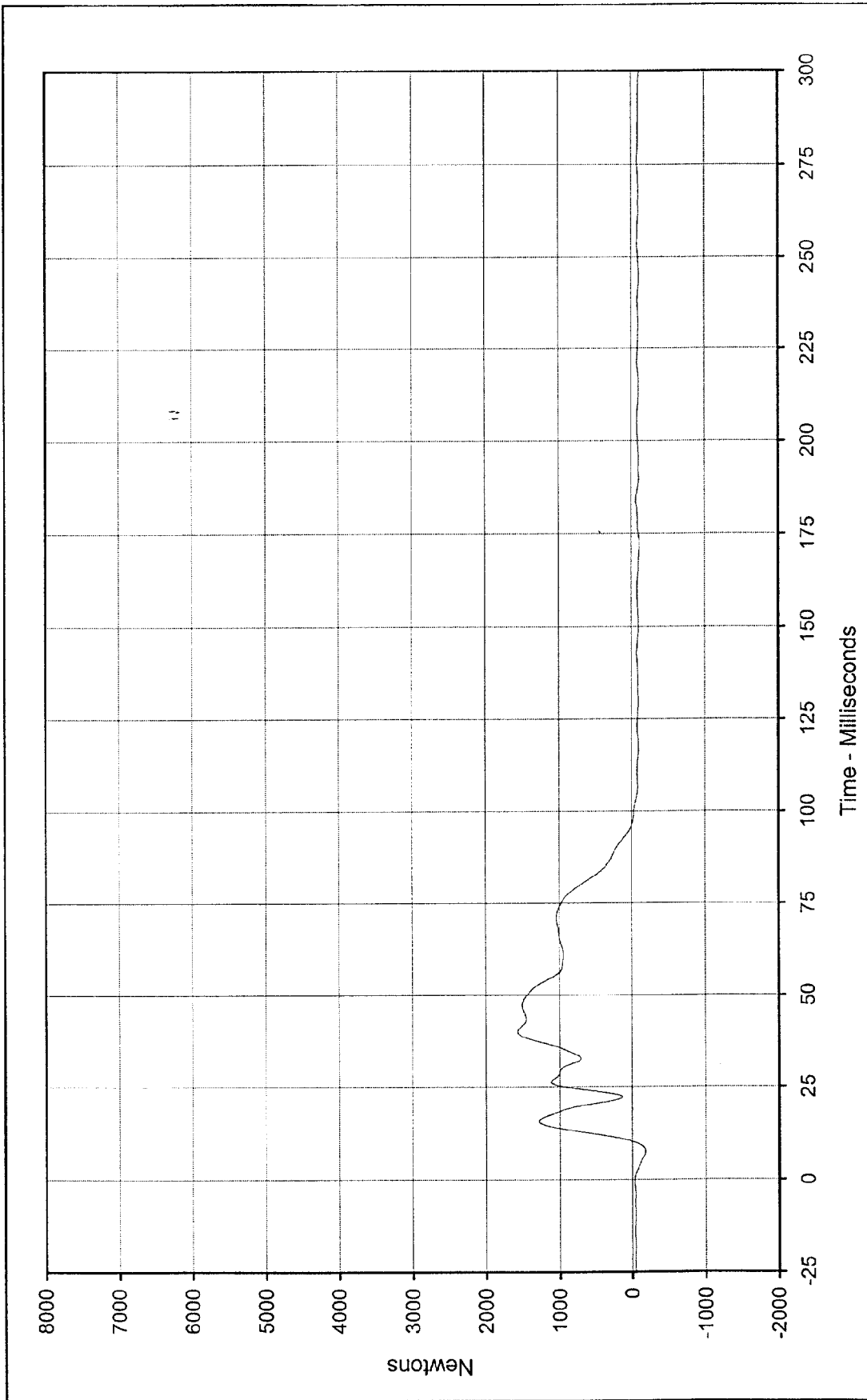
SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-004



Curve Description: Barrier Force B3 Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 17618.6 at 26.6 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -381.2 at 3.5 Milliseconds

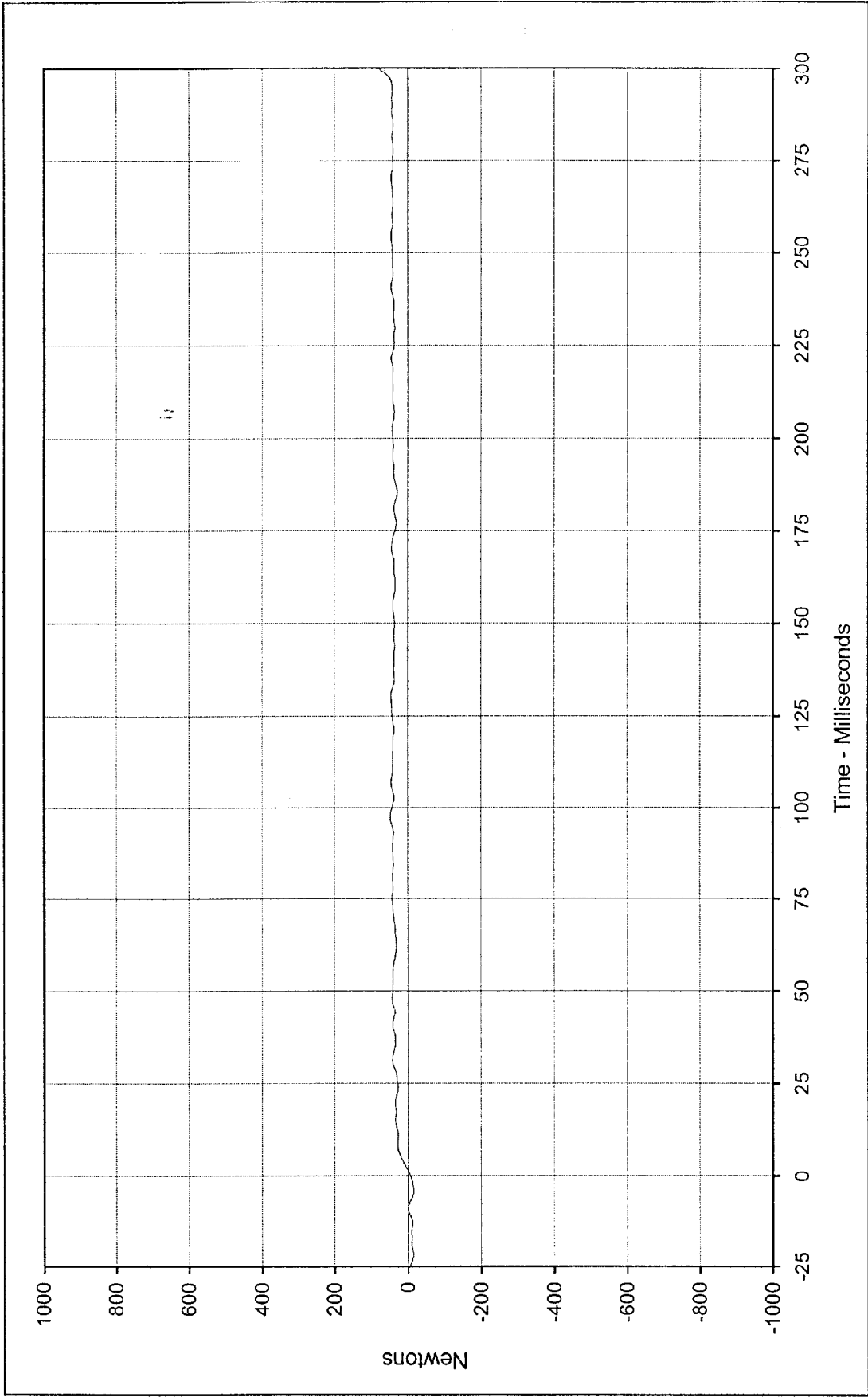


SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-005



Curve Description: Barrier Force C3 Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 1570.8 at 40.1 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -182.2 at 7.7 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-006

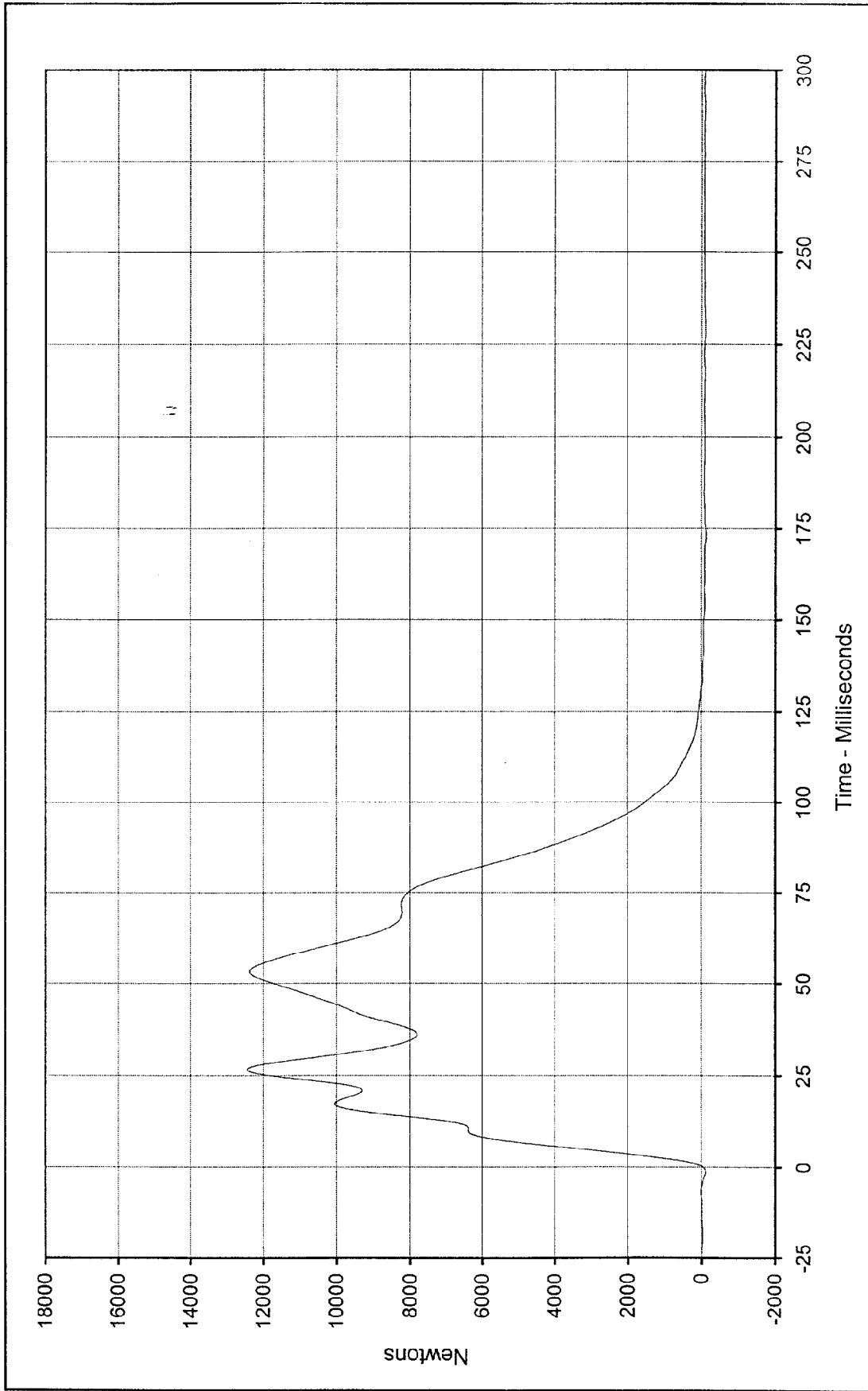




Curve Description: Barrier Force A4 * 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 82.1 at 299.9 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -7.6 at 0.0 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-007



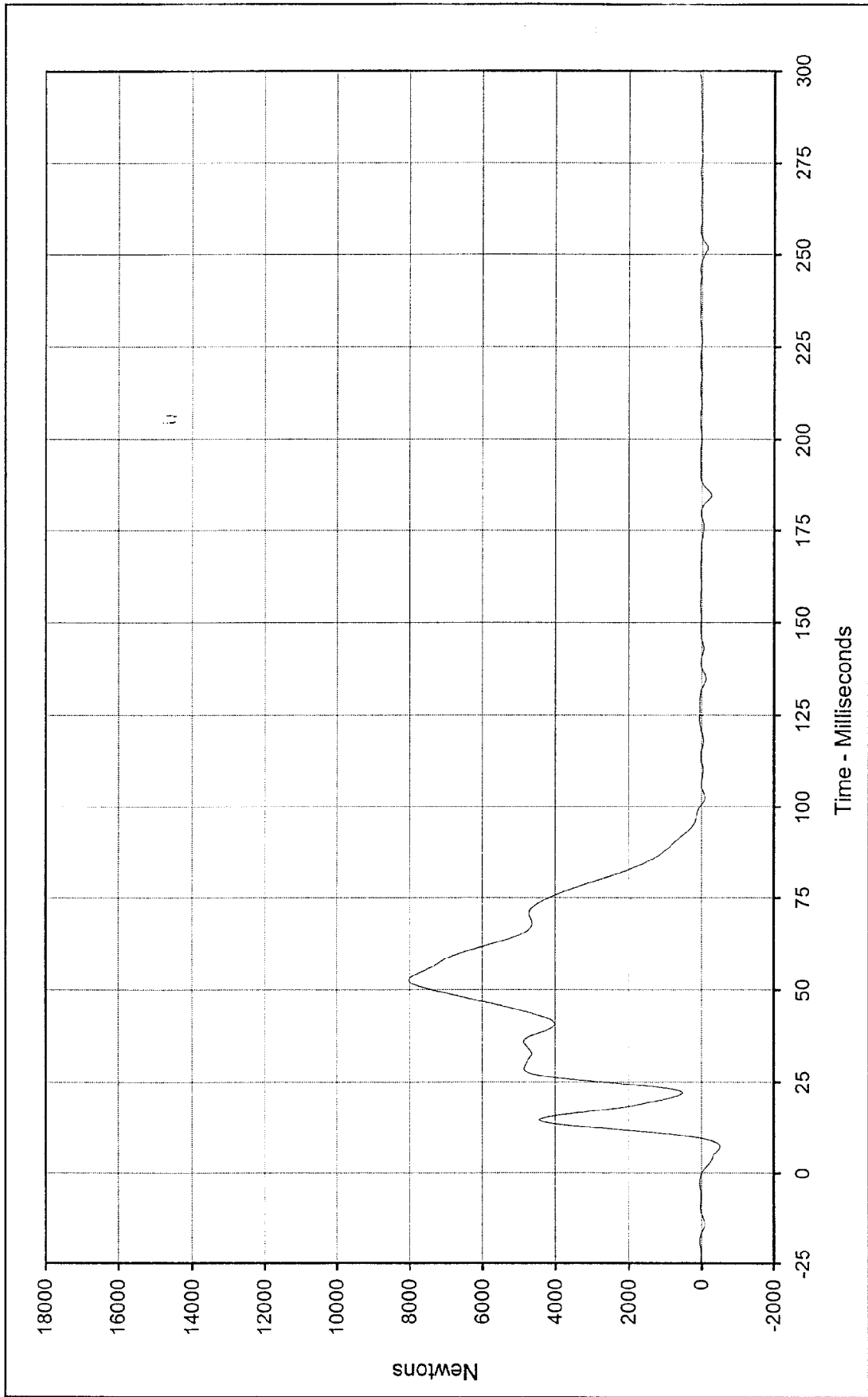
* Channel Failed, No Data



Curve Description: Barrier Force B4
 Maximum Value: 12442.4 at 26.6 Milliseconds
 Minimum Value: -137.5 at 173.1 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-008

Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan

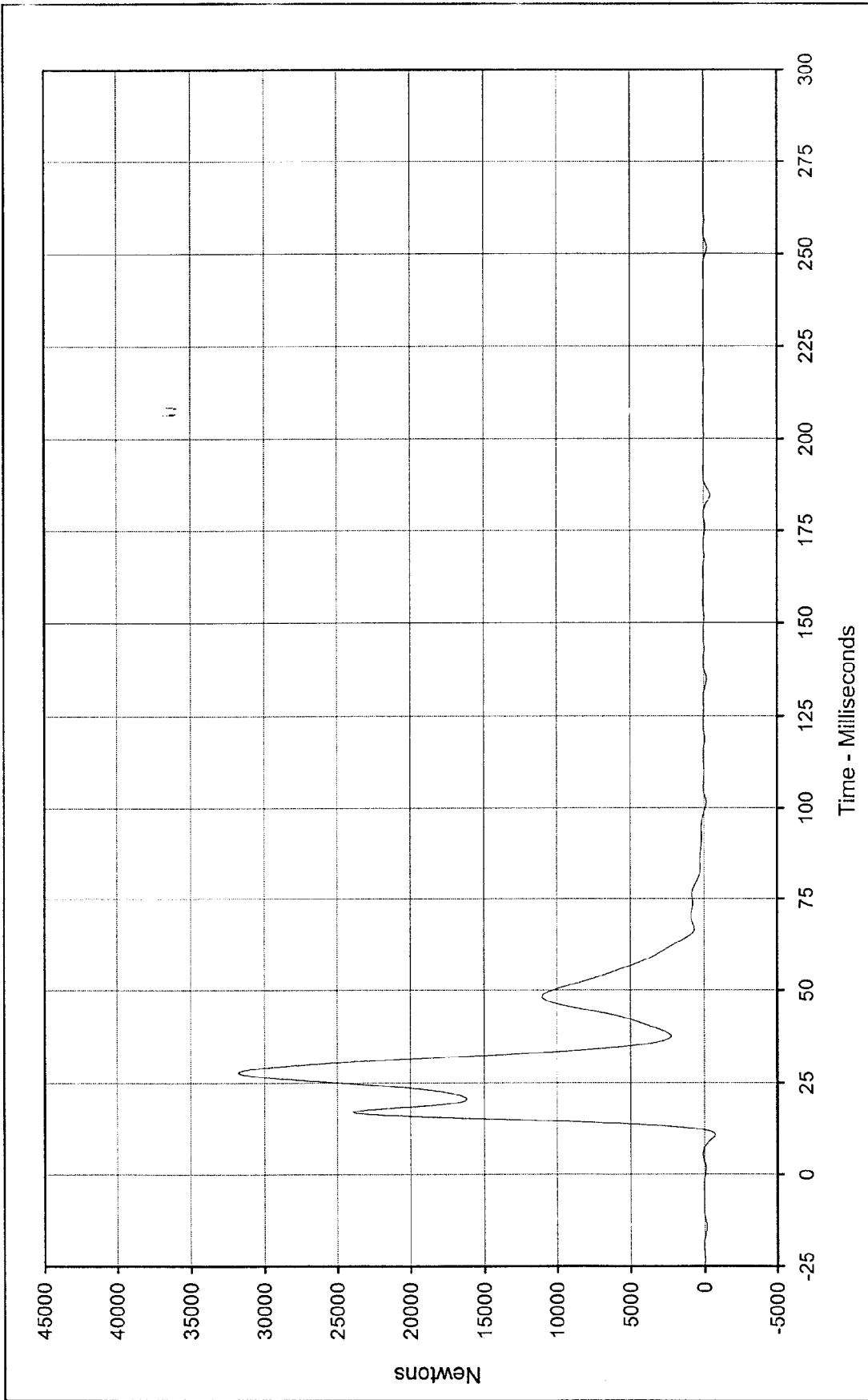




Curve Description: Barrier Force C4
 Maximum Value: 8020.0 at 52.5 Milliseconds
 Minimum Value: -506.7 at 7.4 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-009

Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan



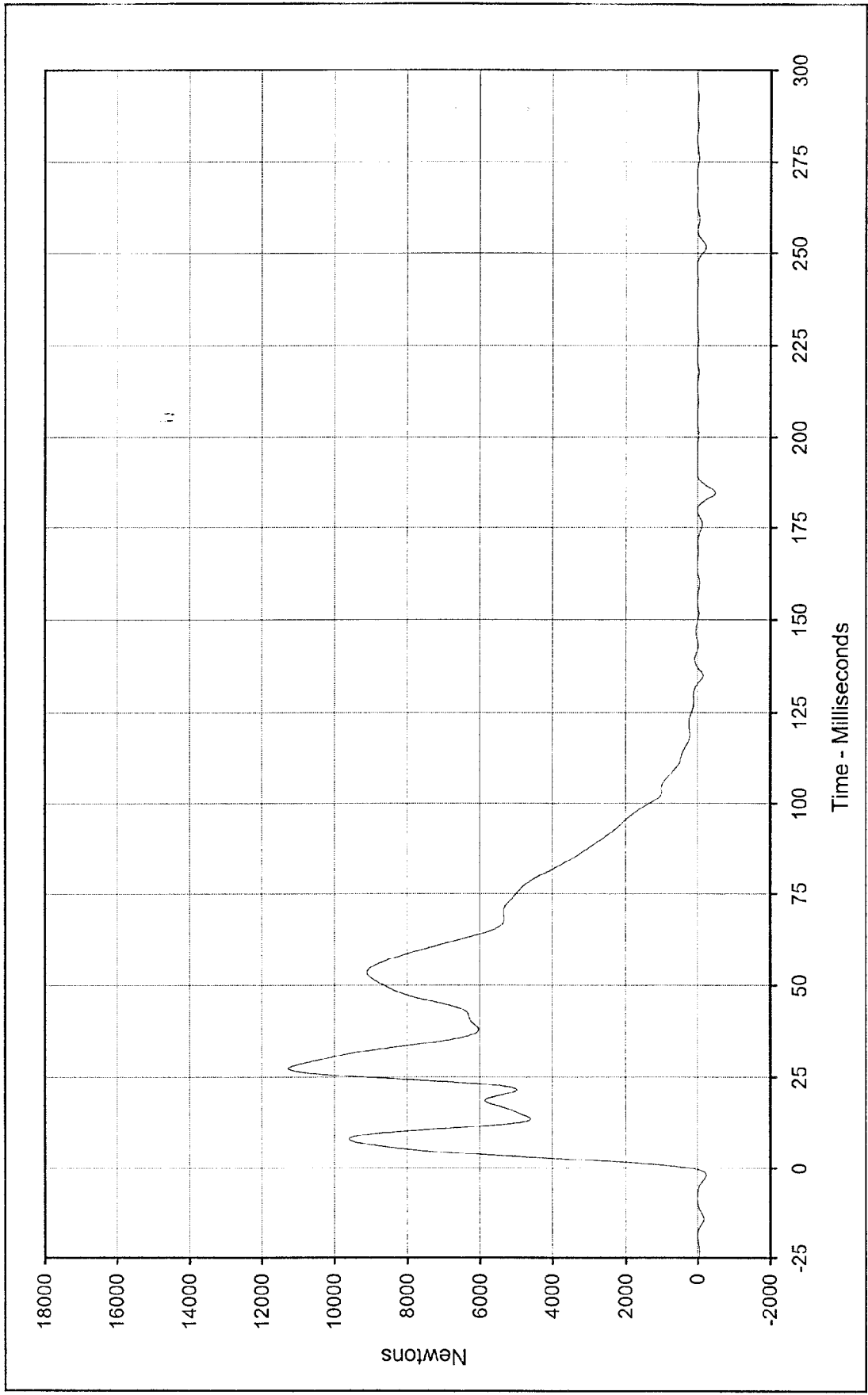


Curve Description: Barrier Force A5
 Maximum Value: 31777.8 at 27.7 Milliseconds
 Minimum Value: -704.2 at 11.0 Milliseconds

Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan



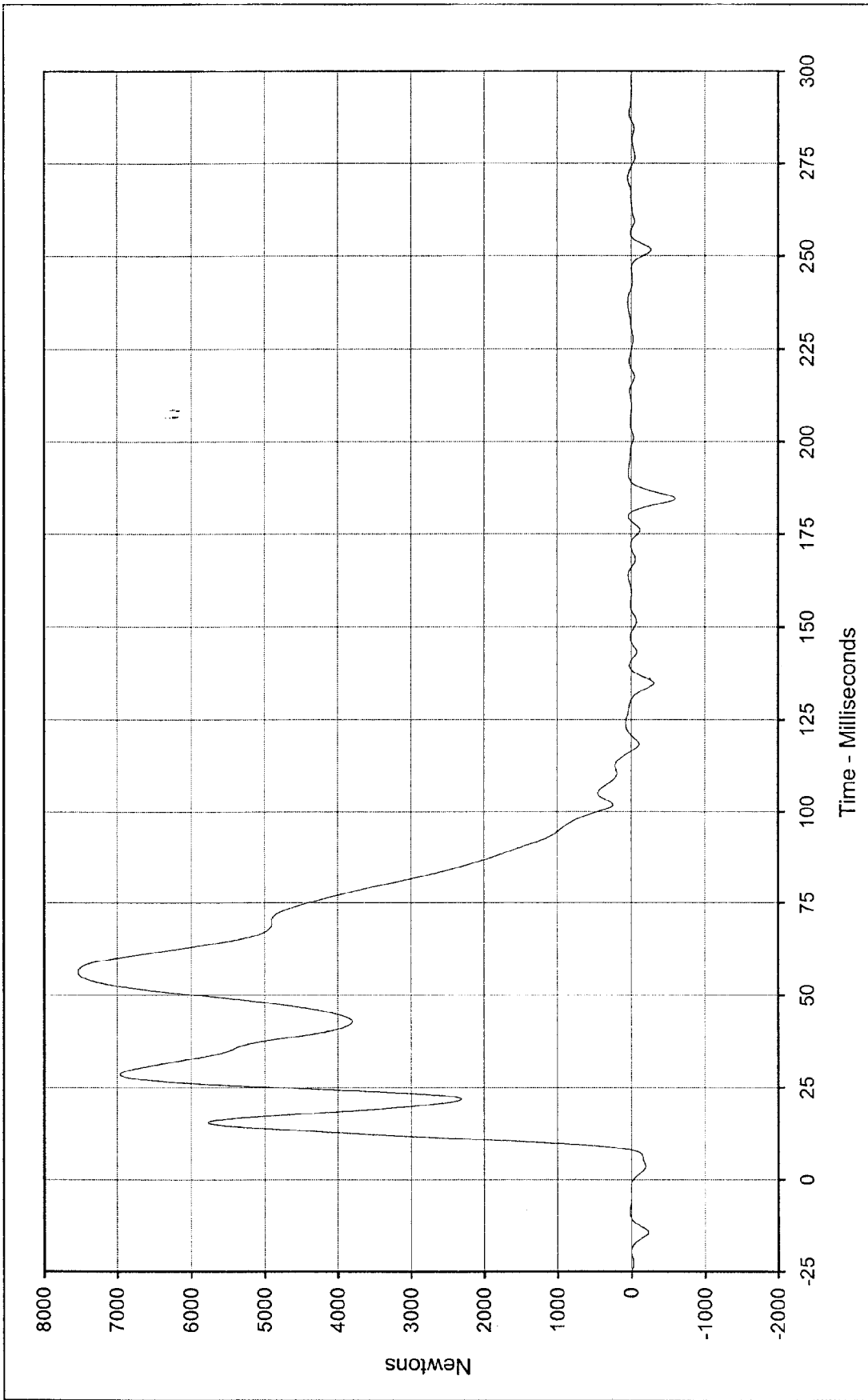
SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-010



Curve Description: Barrier Force B5
 Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 11266.9 at 27.4 Milliseconds
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -496.3 at 184.5 Milliseconds

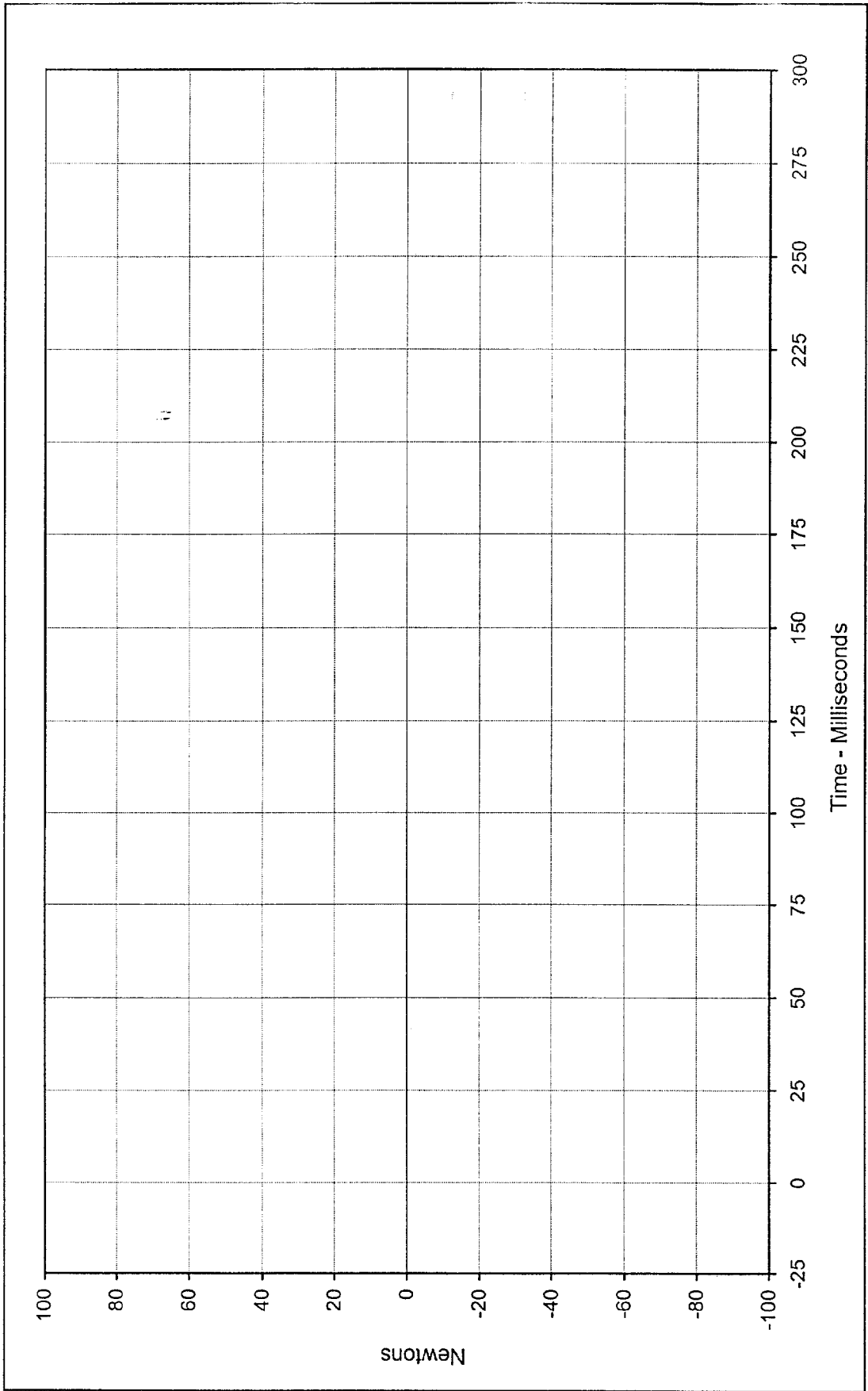


SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-011



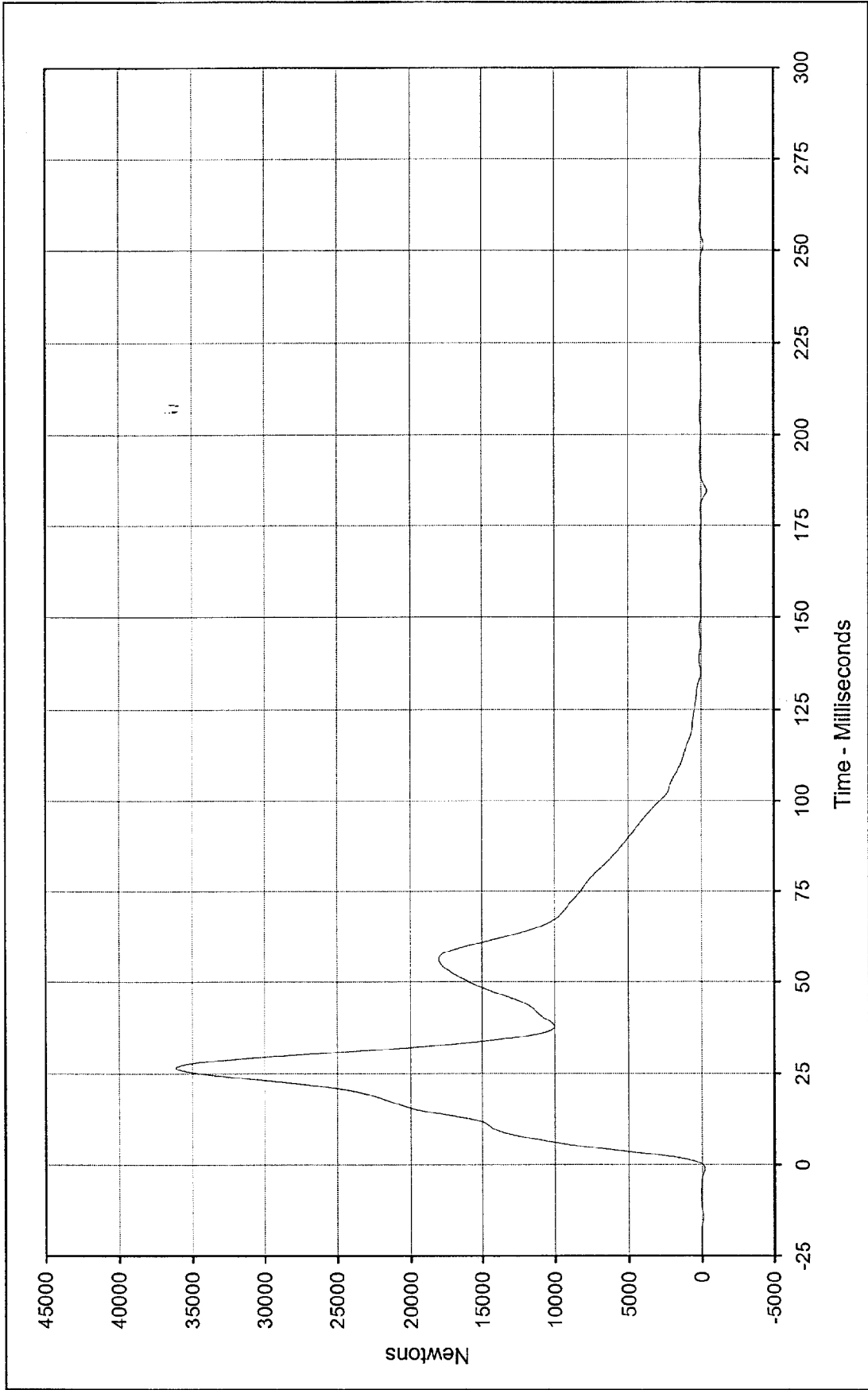
Curve Description: Barrier Force C5 Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 7532.6 at 56.2 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -600.3 at 184.5 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-012





Curve Description: Barrier Force A6 * Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 0.0 at 0.0 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: 0.0 at 0.0 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-013 * Channel Failed, No Data

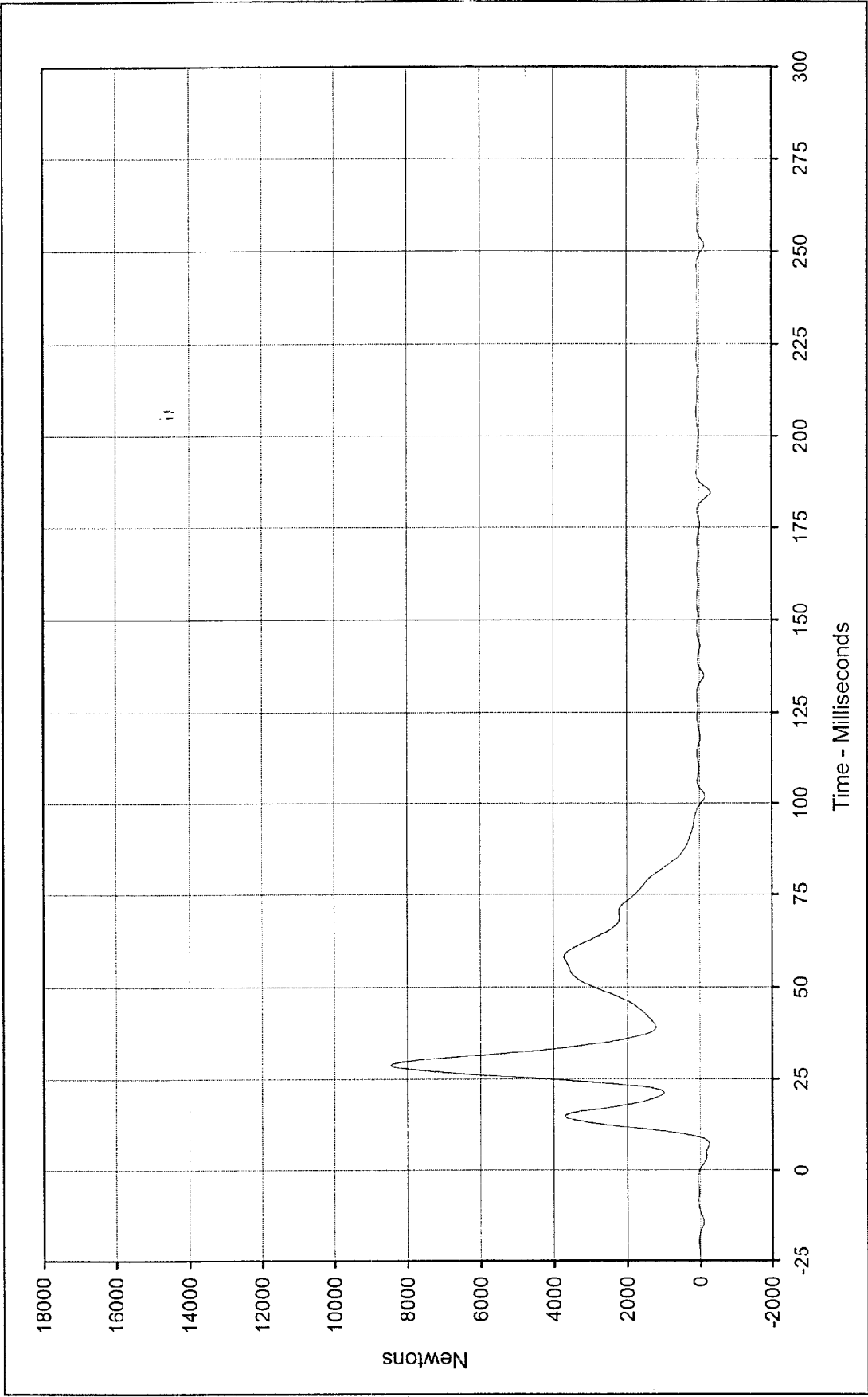




Curve Description: Barrier Force B6 Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 36150.3 at 26.6 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -399.4 at 184.5 Milliseconds

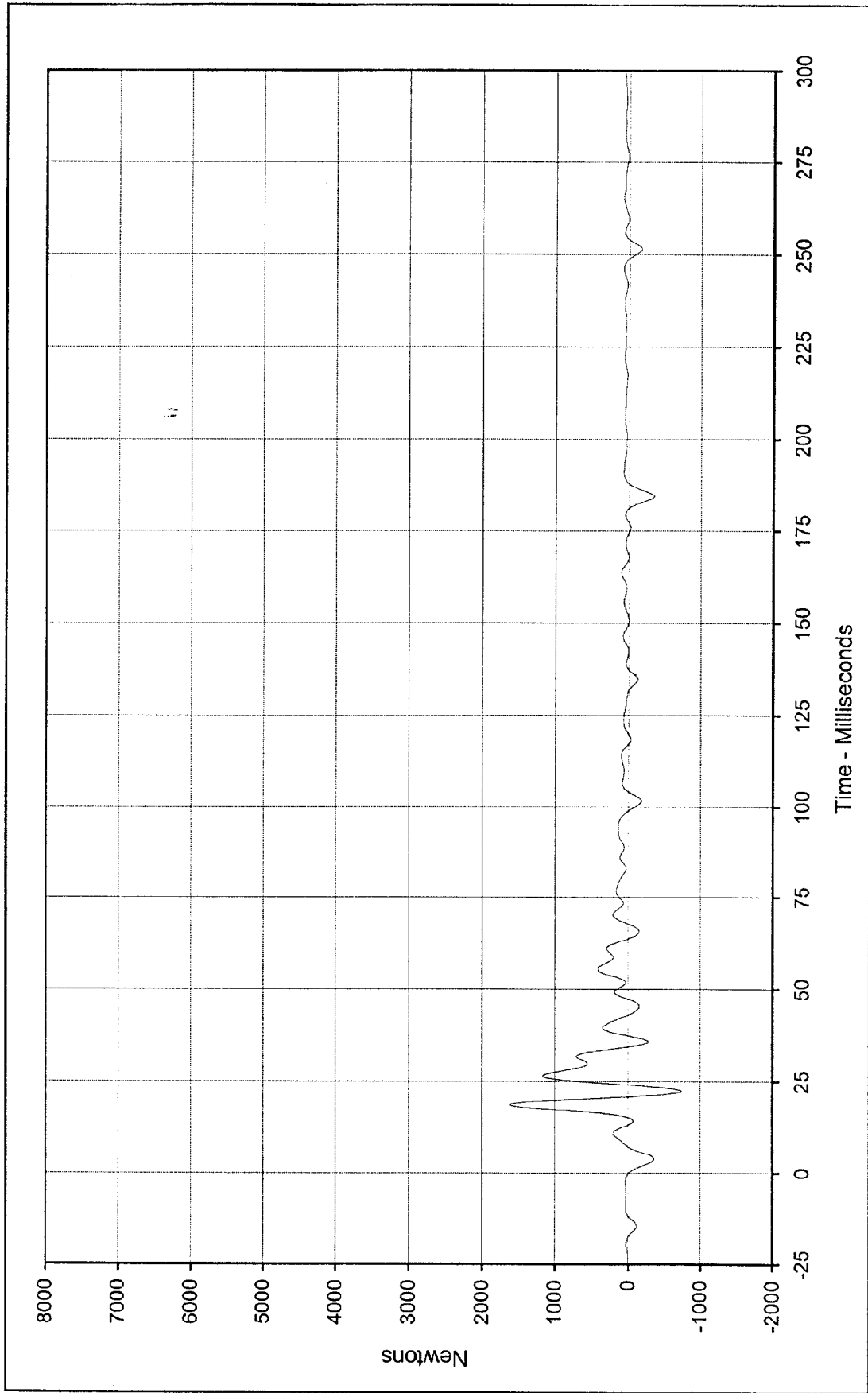


SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-014



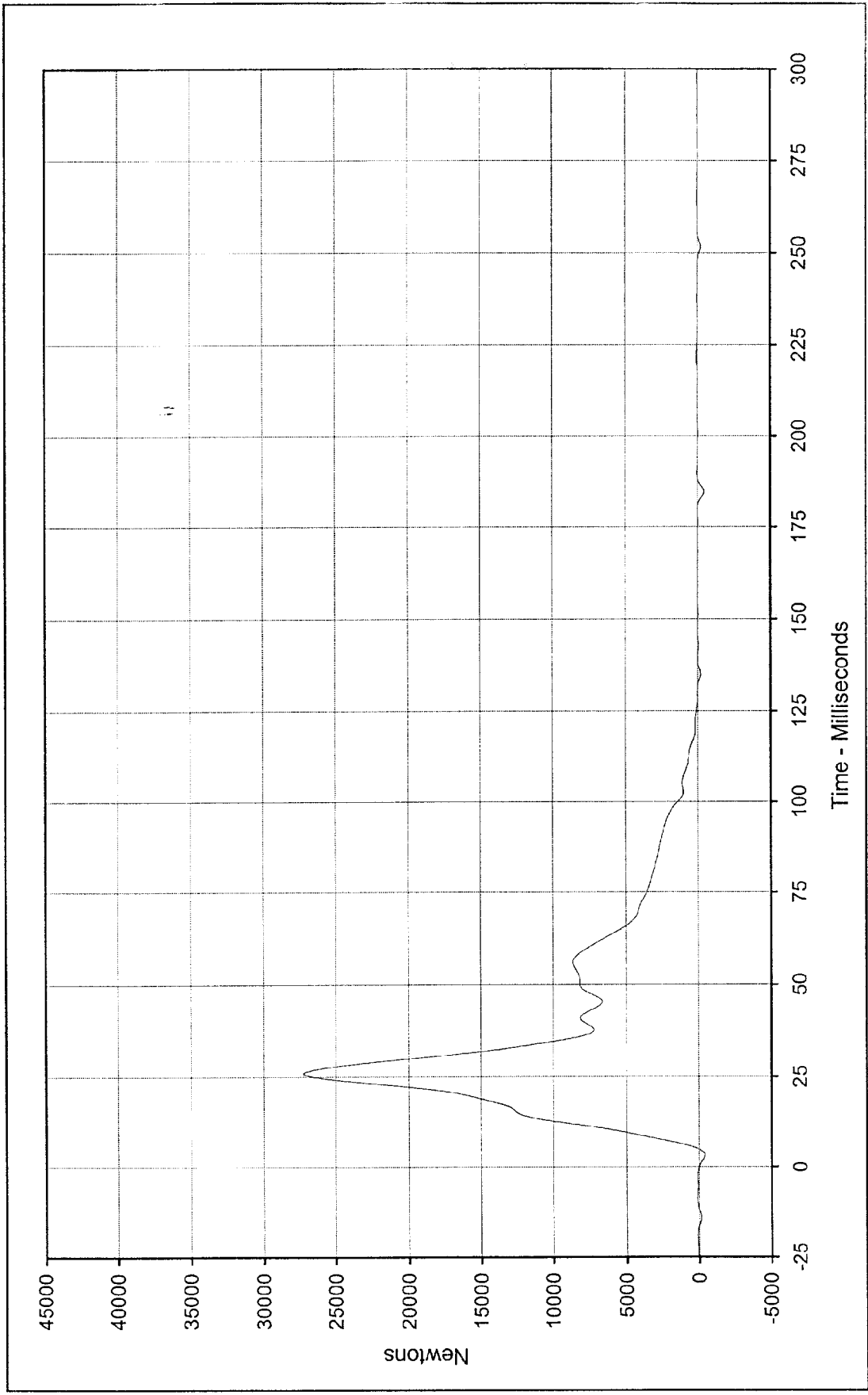
Curve Description: Barrier Force C6 Testing Program 1997 48.4 km/h Frontal Impact (Female)
Maximum Value: 8450.1 at 28.8 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
Minimum Value: -309.9 at 184.4 Milliseconds
SAE Filter Class: 60
Date of Test: 9/9/97
Curve Number: FIL-015





Curve Description: Barrier Force A7 Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 1622.7 at 18.7 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -741.3 at 22.4 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-016

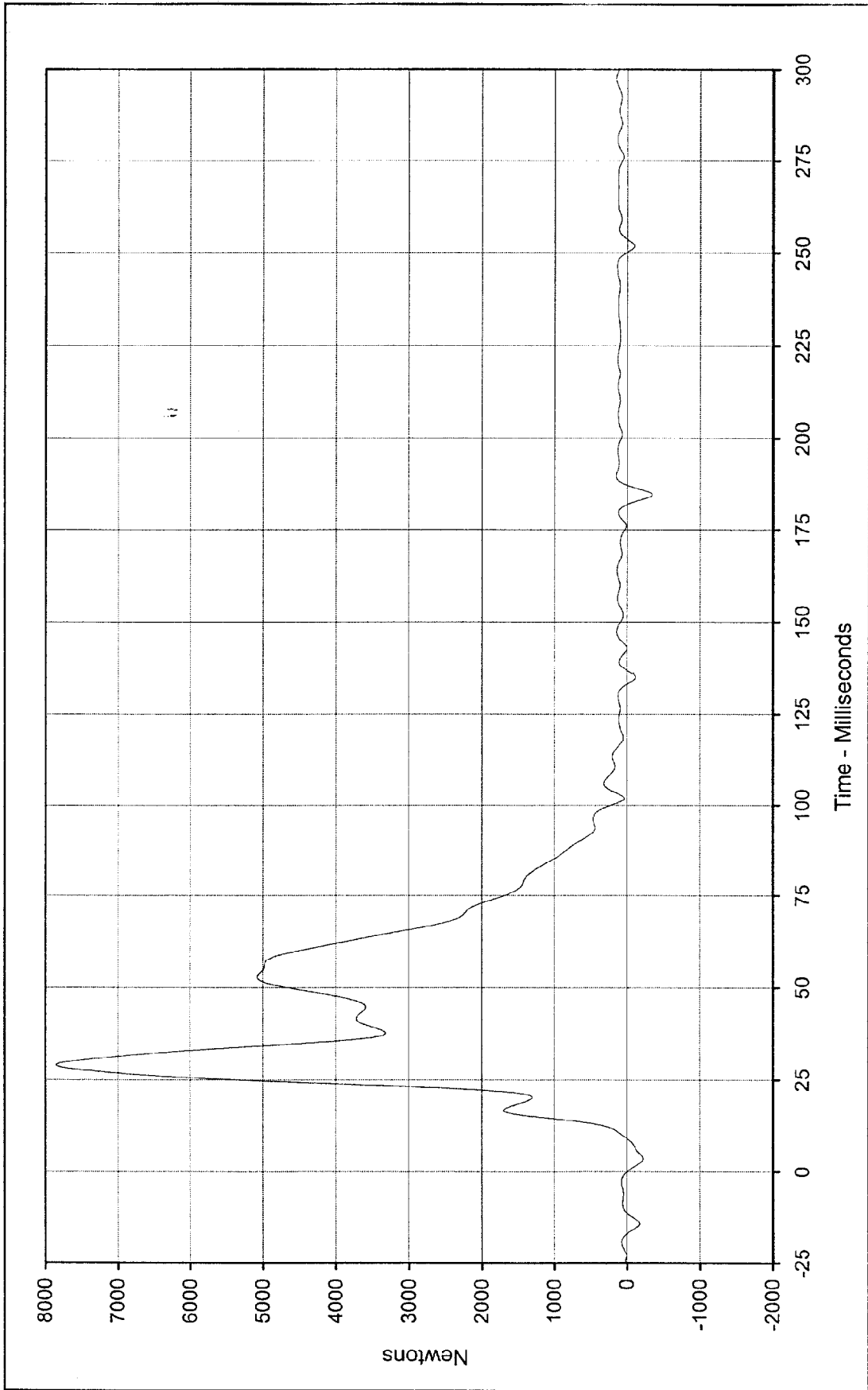




Curve Description: Barrier Force B7
 Maximum Value: 27230.5 at 25.9 Milliseconds
 Minimum Value: -431.3 at 184.5 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-017

Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan

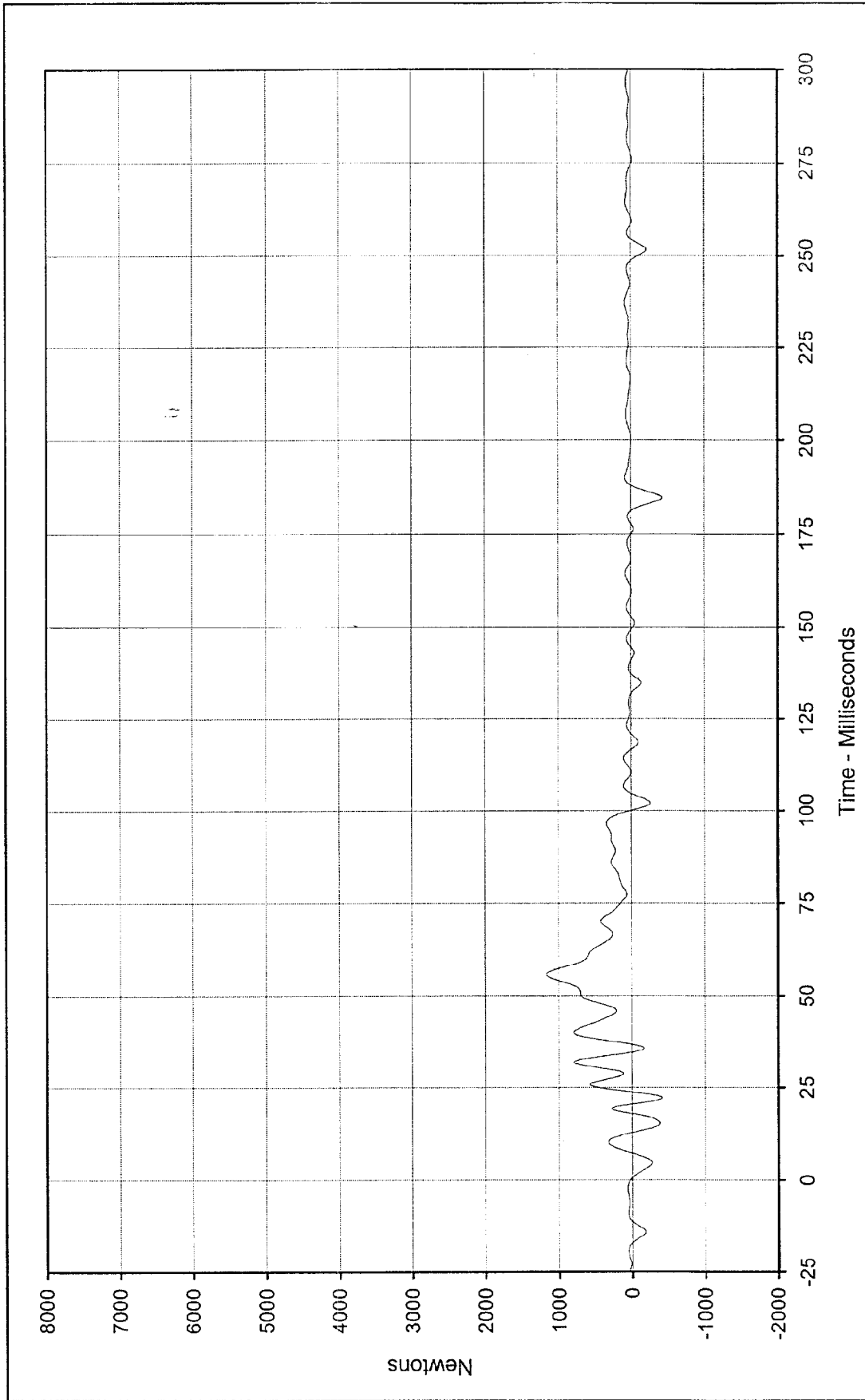




Curve Description: Barrier Force C7
 Maximum Value: 7851.9 at 29.0 Milliseconds
 Minimum Value: -347.7 at 184.5 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-018

Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan

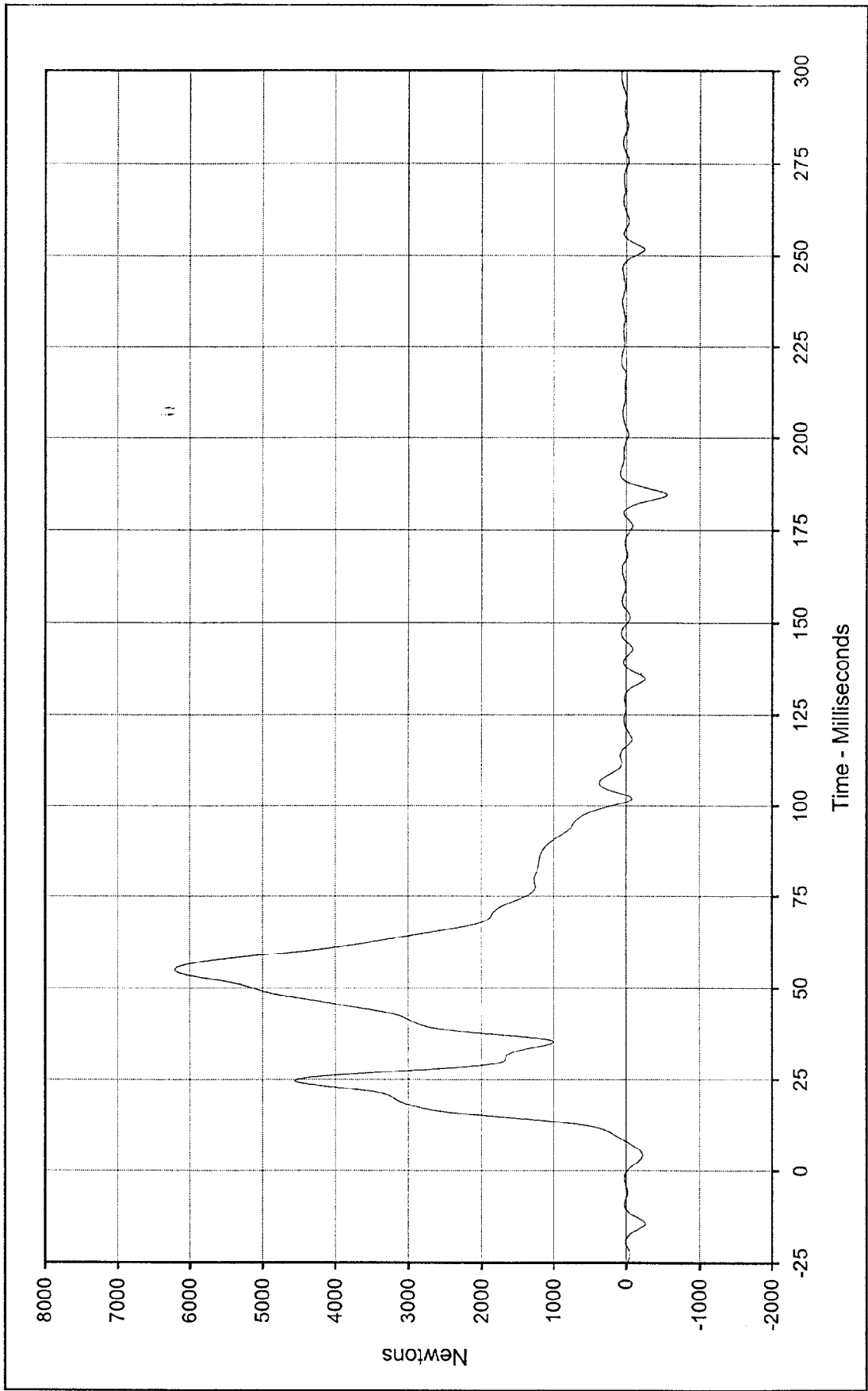




Curve Description: Barrier Force A8
 Maximum Value: 1167.8 at 55.8 Milliseconds
 Minimum Value: -425.7 at 184.5 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-019

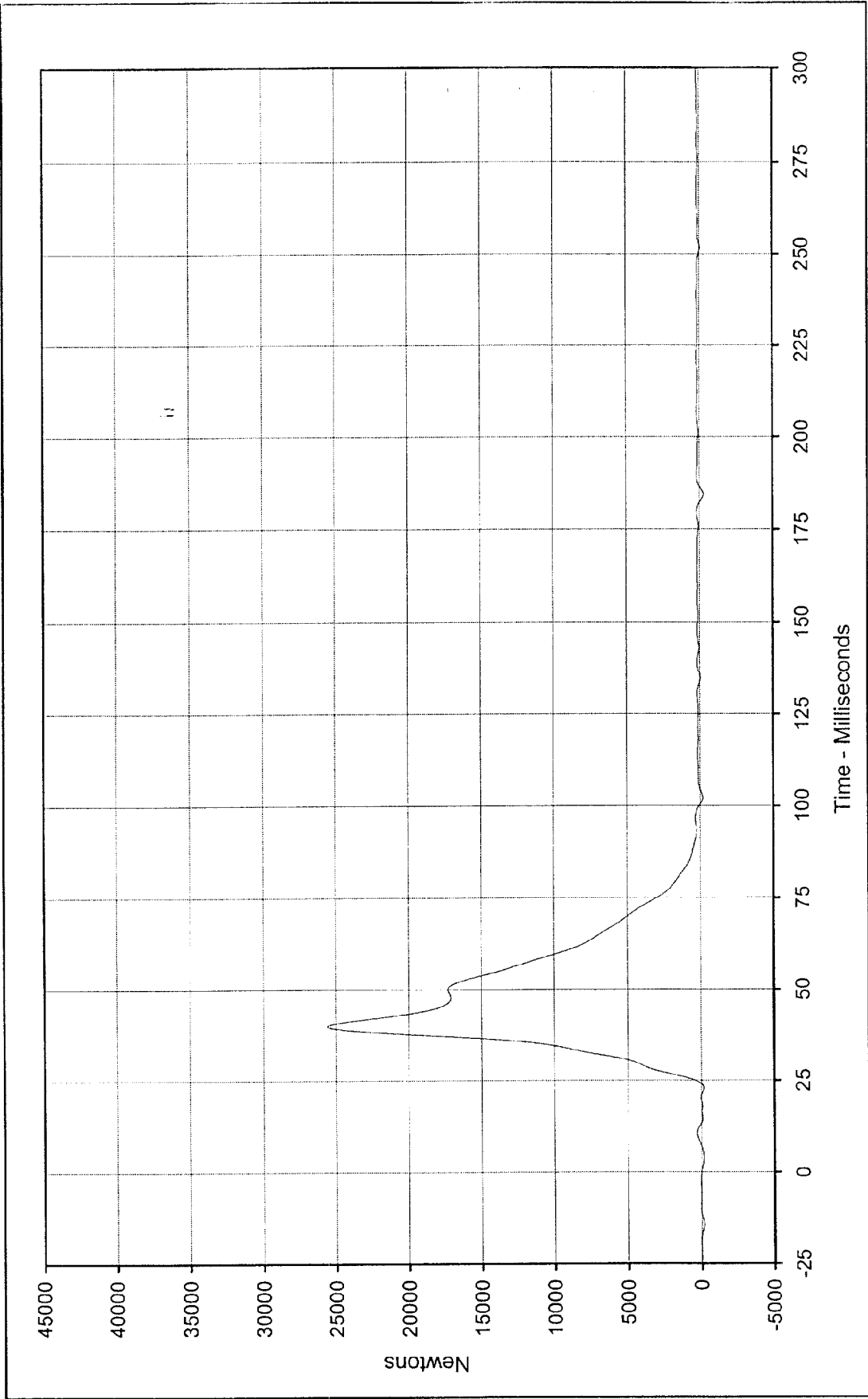
Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan





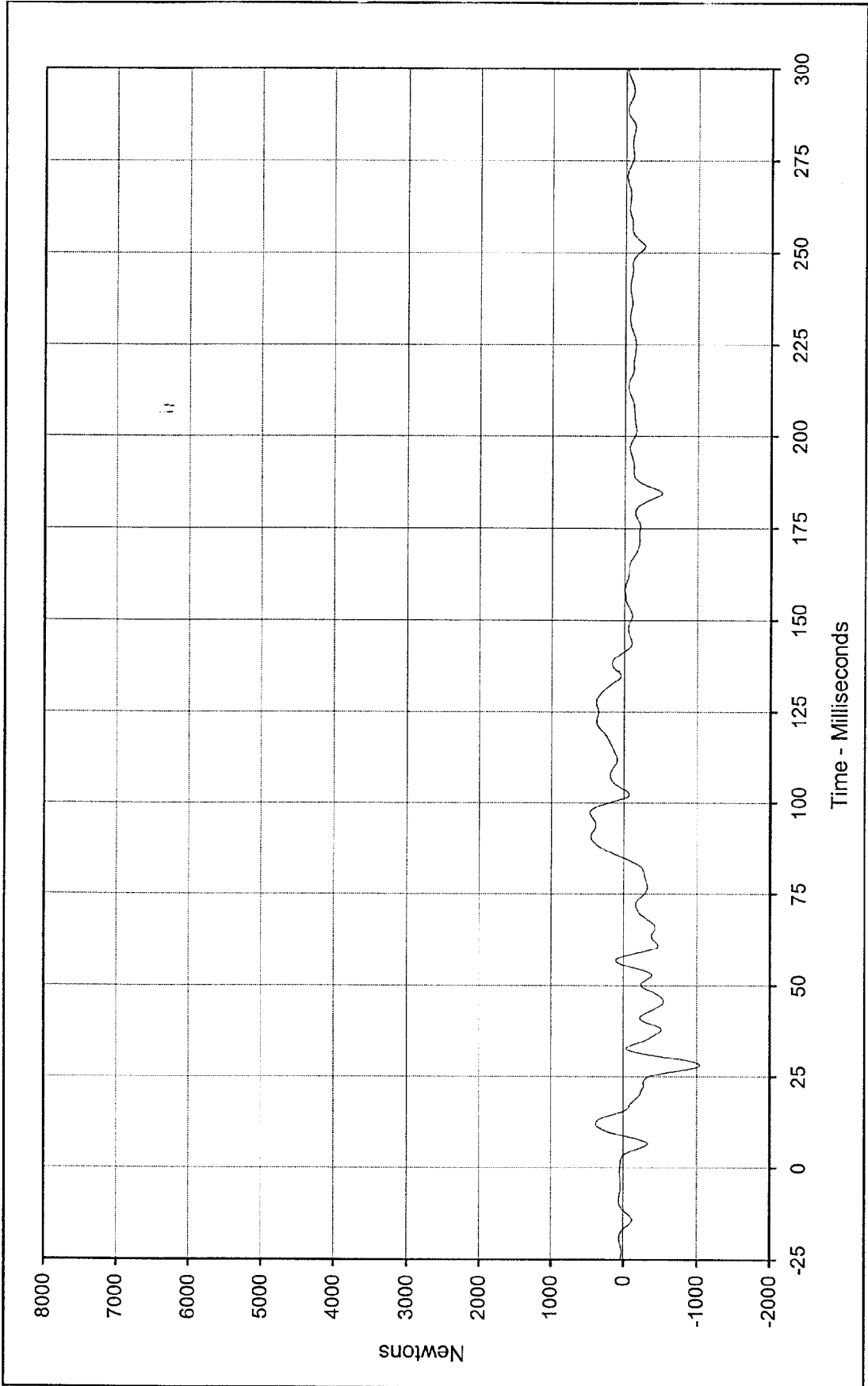
Curve Description: Barrier Force B8 Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 6209.4 at 54.9 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -559.7 at 184.5 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FII -020





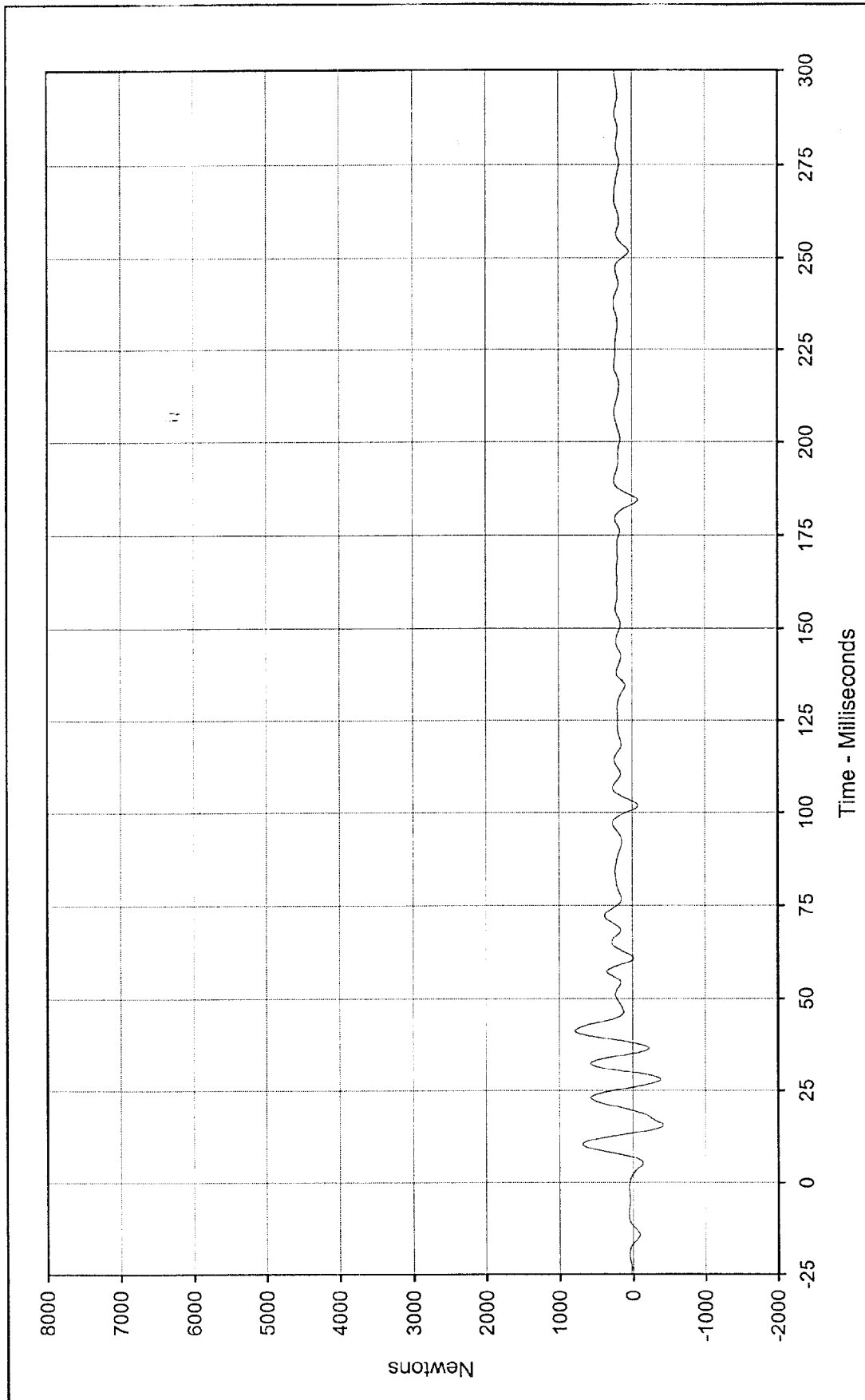
Curve Description: Barrier Force C8 Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 25597.5 at 40.1 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -275.4 at 184.5 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-021





Curve Description: Barrier Force A9 Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 467.4 at 97.3 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -1048.3 at 28.2 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-022

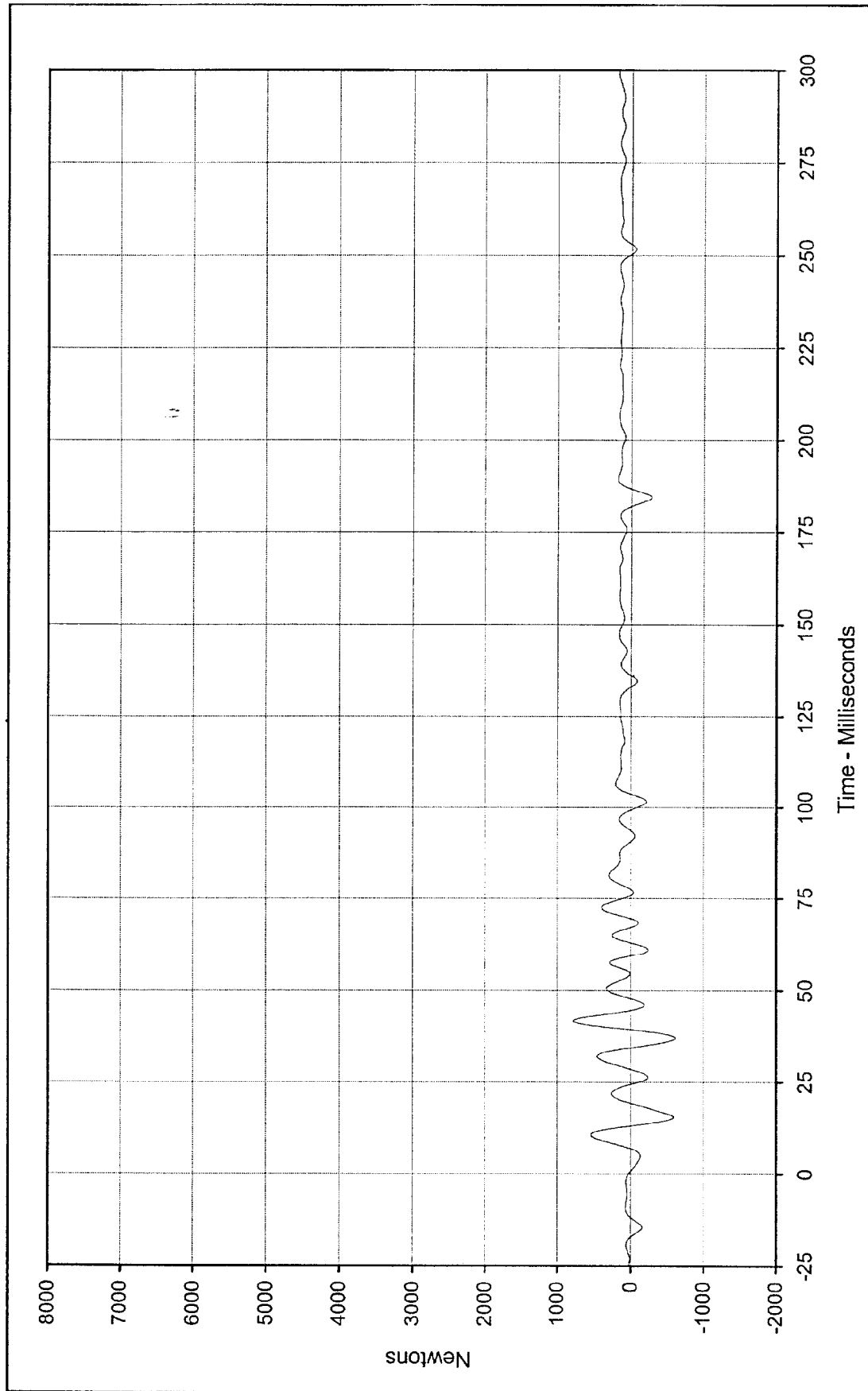




Curve Description: Barrier Force B9
 Maximum Value: 786.3 at 41.3 Milliseconds
 Minimum Value: -421.8 at 15.6 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-023

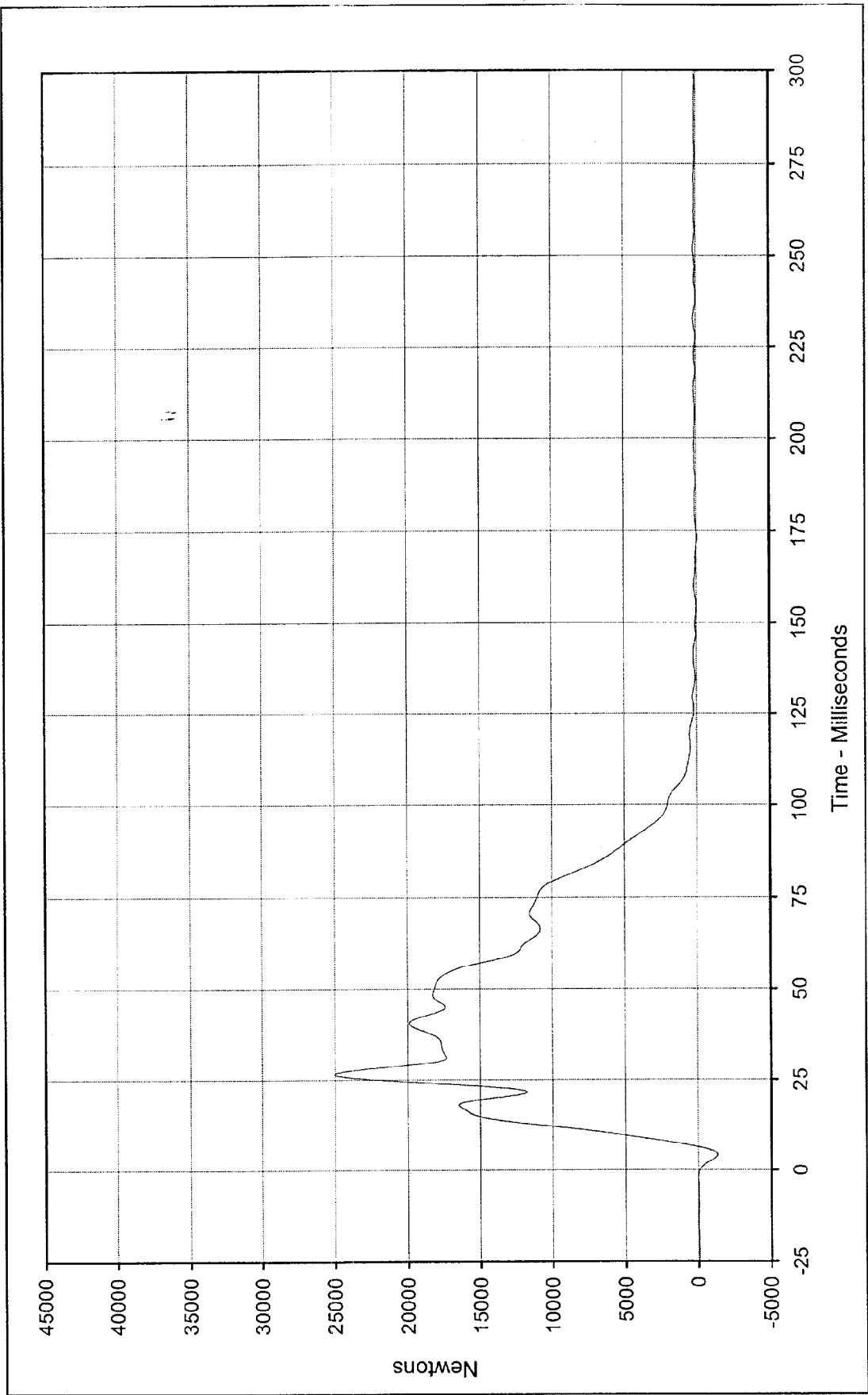
Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan





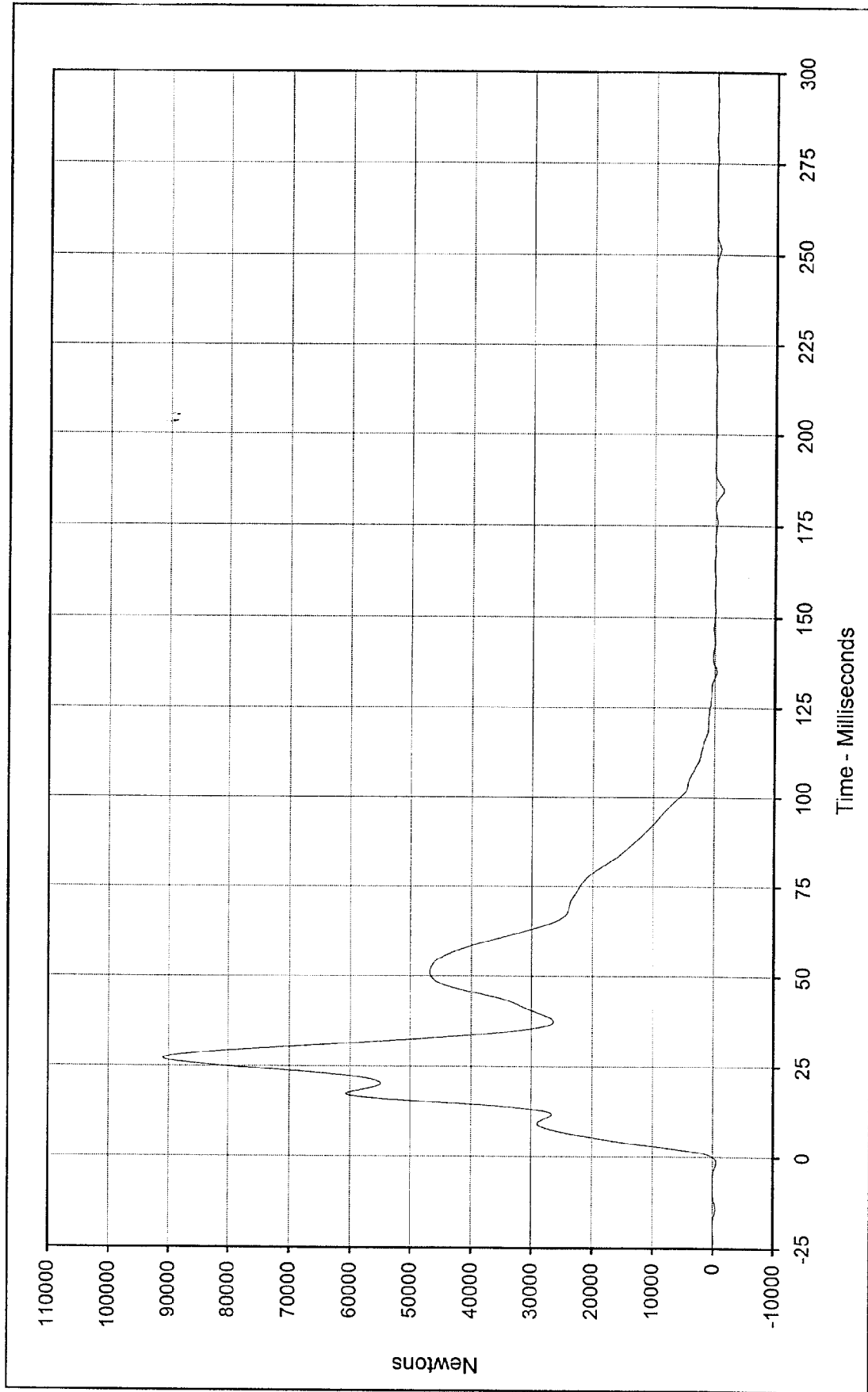
Curve Description: Barrier Force C9
 Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 780.1 at 41.8 Milliseconds
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -617.3 at 37.1 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: FIL-024





Curve Description: Barrier Force Sum No.1 Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 25072.3 at 26.5 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -1337.9 at 4.3 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: SUM-001

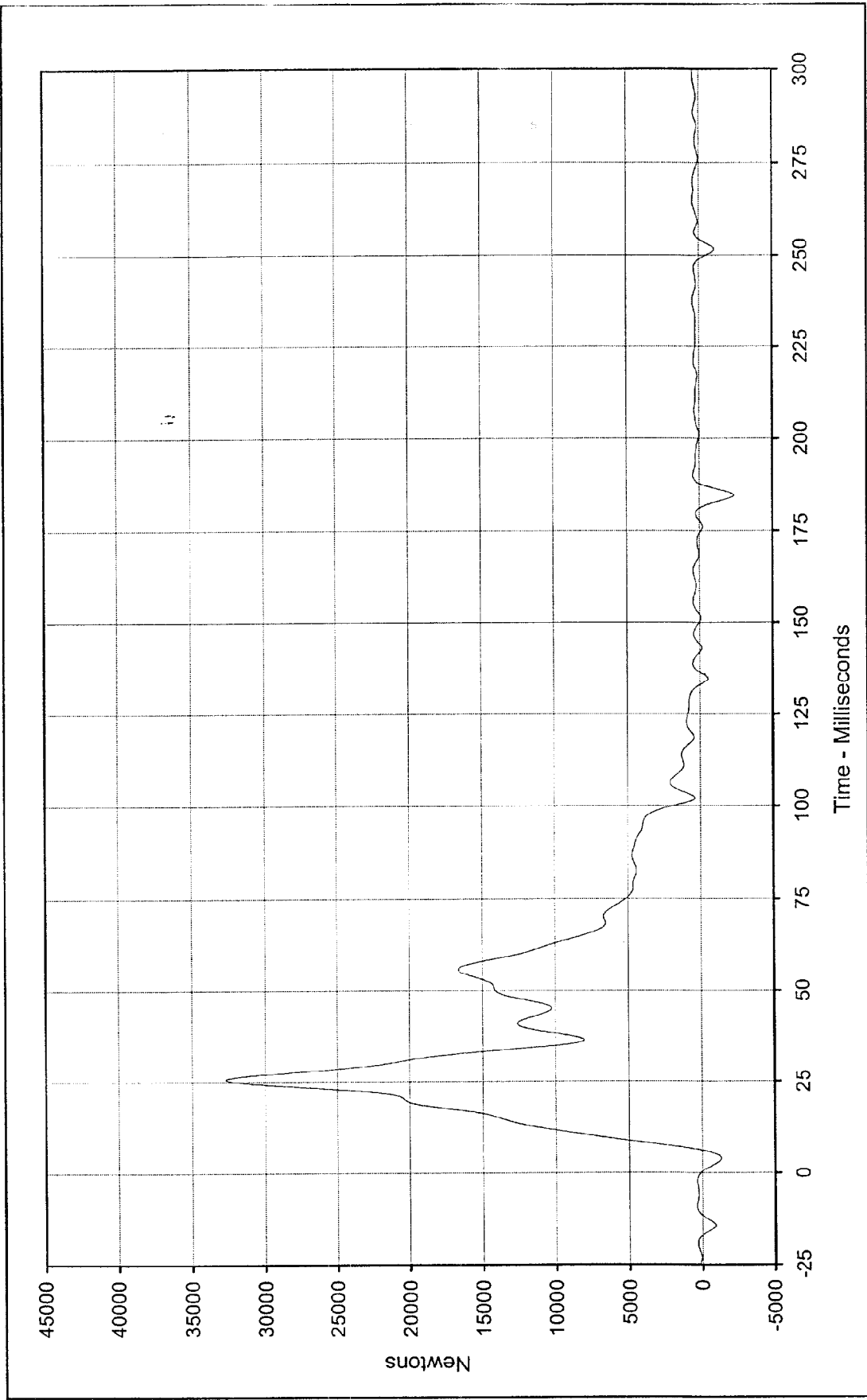




Curve Description: Barrier Force Sum No.2
 Maximum Value: 90968.5 at 27.2 Milliseconds
 Minimum Value: -13777.6 at 184.5 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: SUM-002

Testing Program: 1997 48.4 km/h Frontal Impact (Female)
 Test Vehicle: 1996 Dodge Neon 4 Door Sedan

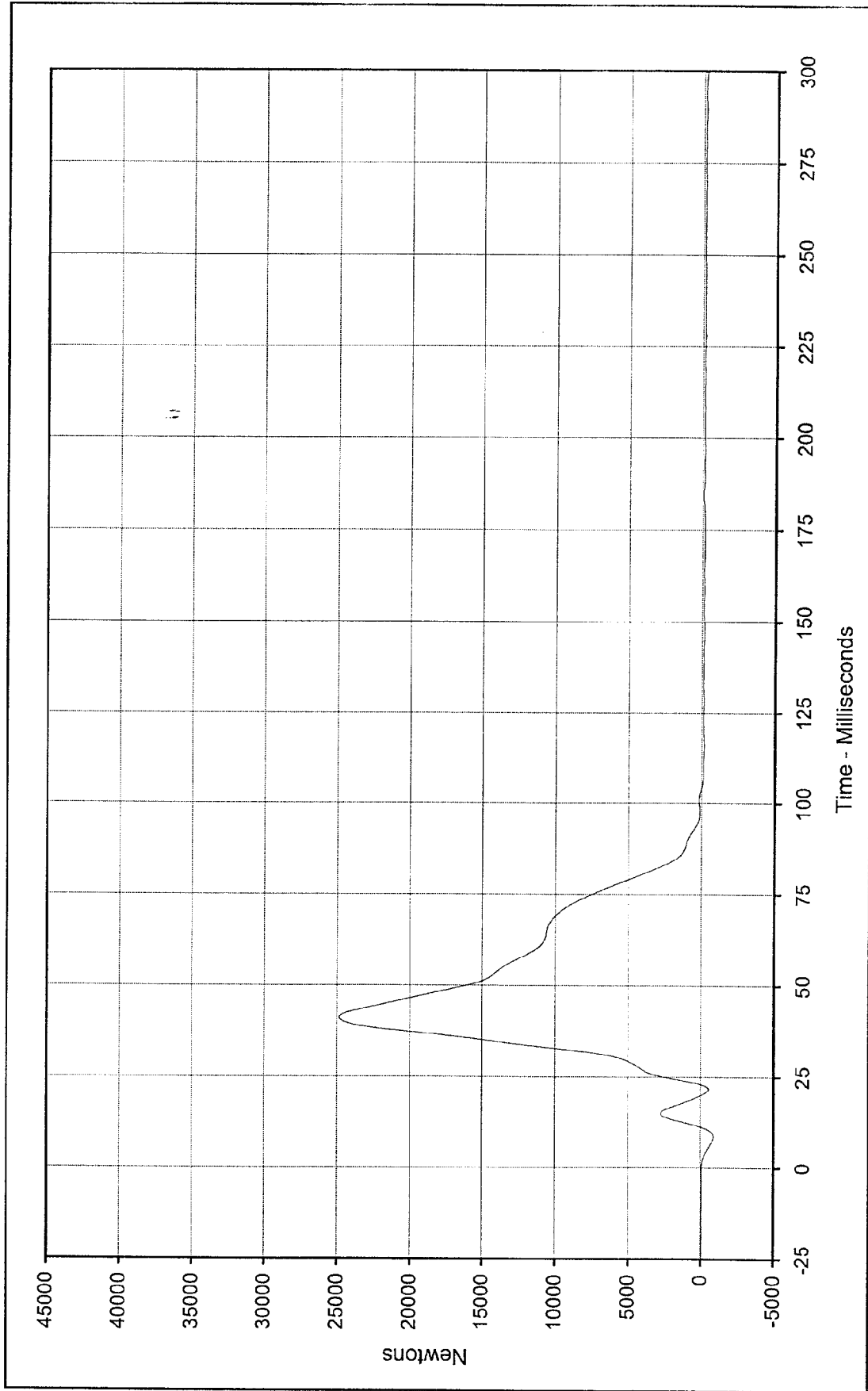




Curve Description: Barrier Force Sum No.3 Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 32700.8 at 25.6 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -2348.2 at 184.5 Milliseconds

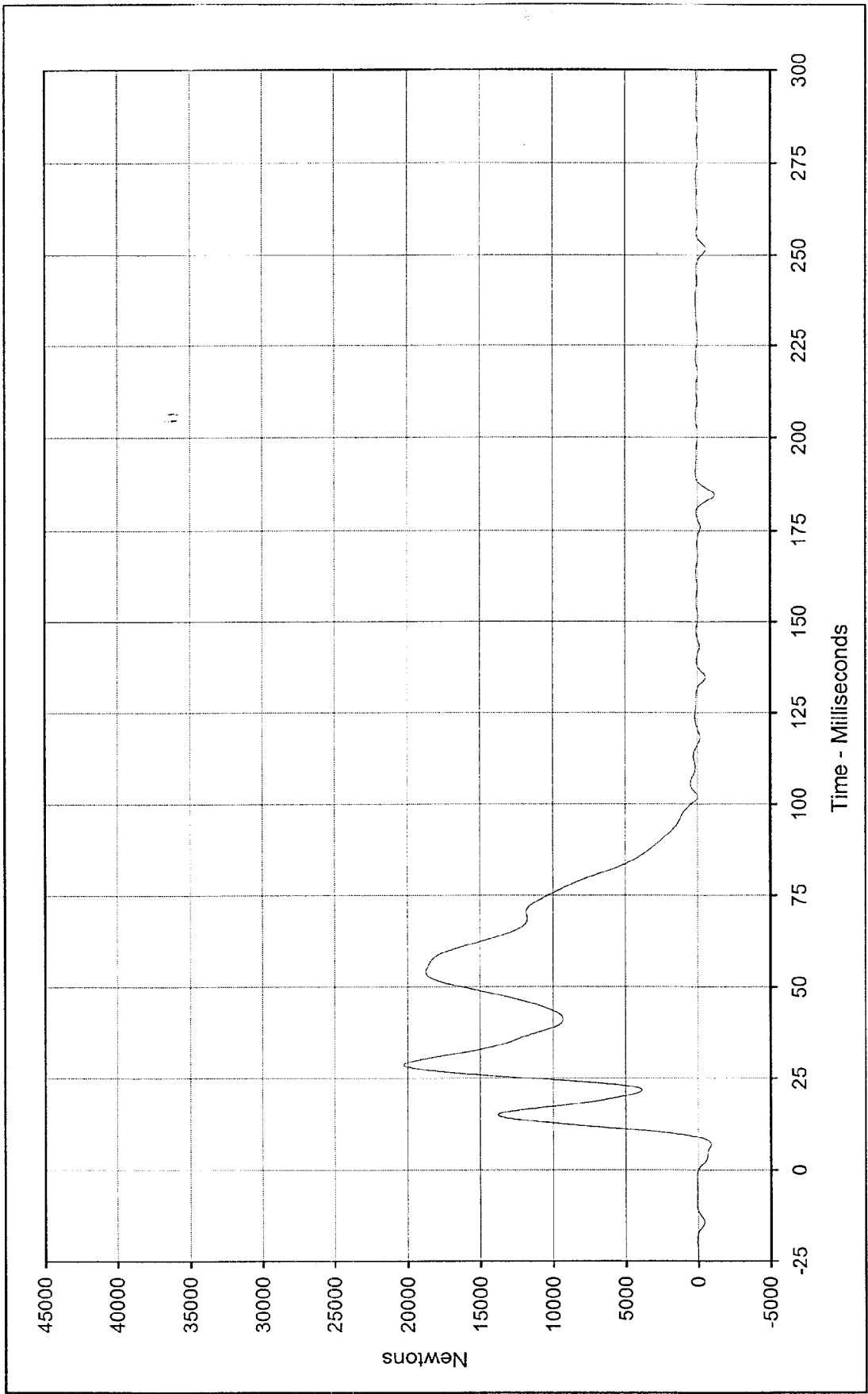
SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: SUM-003





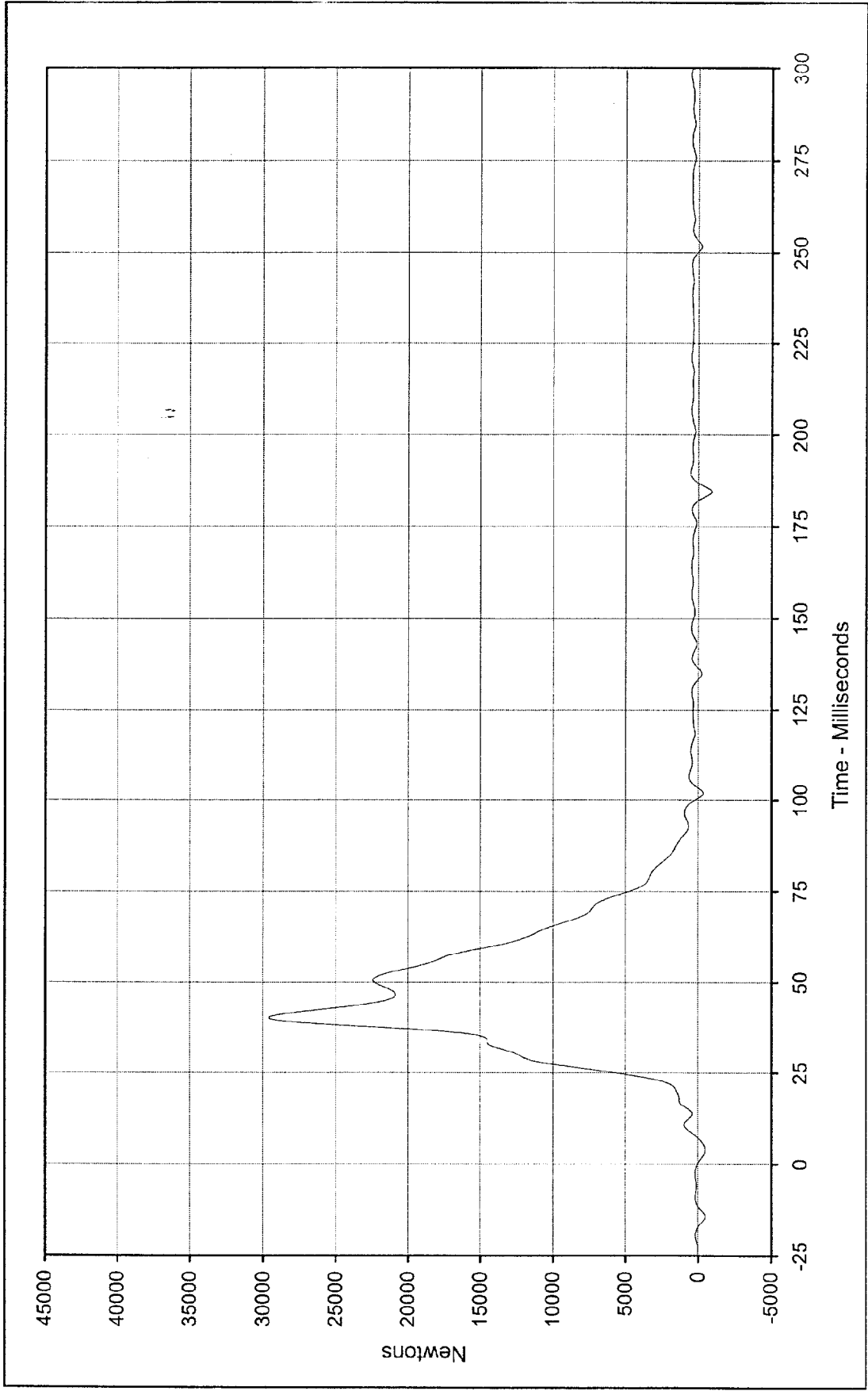
Curve Description: Barrier Force Sum No.4 Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 24872.2 at 41.2 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -912.8 at 8.8 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: SUM-004





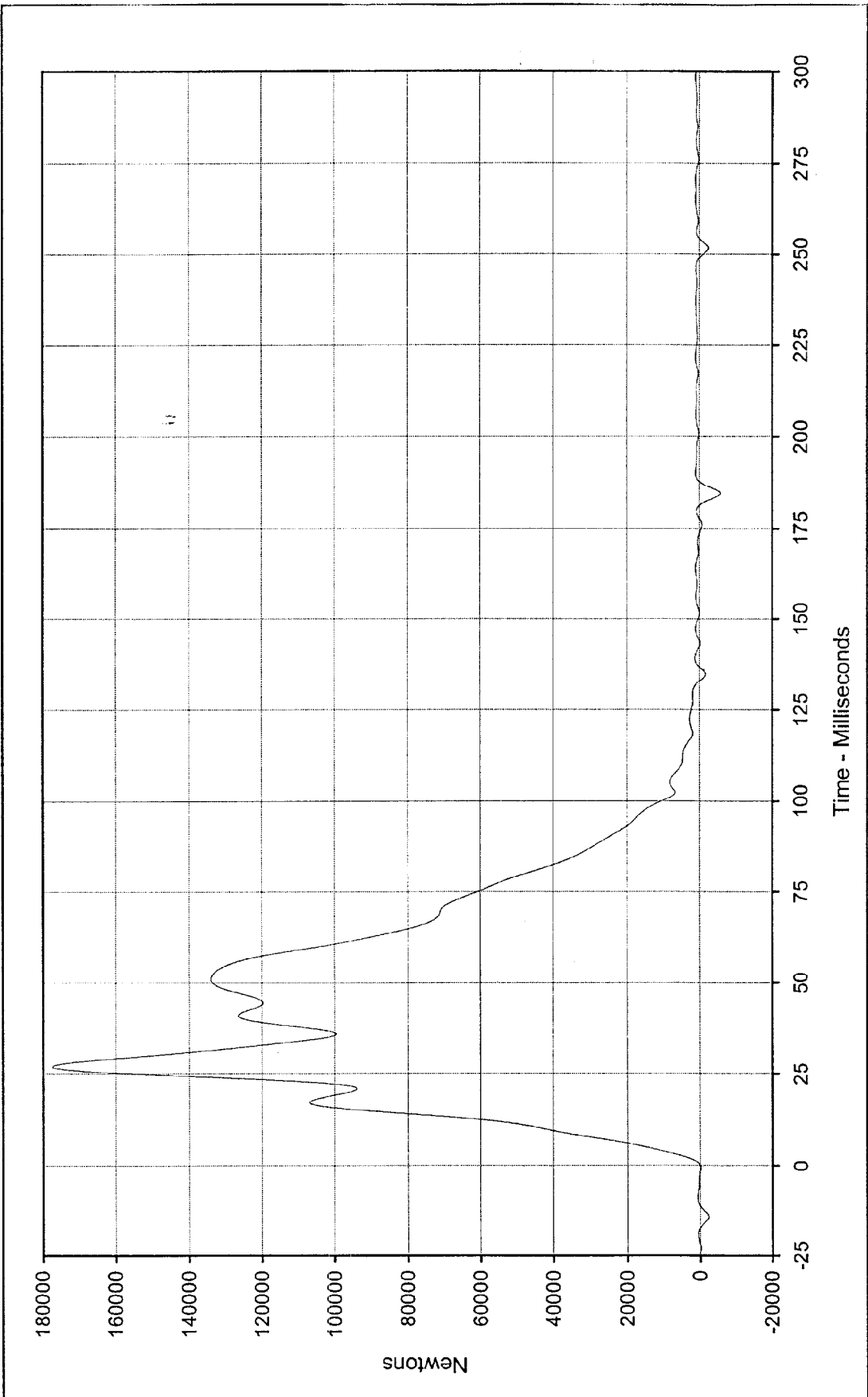
Curve Description: Barrier Force Sum No.5 Testing Program 1997 48.4 km/h Frontal Impact (Female)
Maximum Value: 20266.4 at 28.7 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
Minimum Value: -1182.4 at 184.5 Milliseconds
SAE Filter Class: 60
Date of Test: 9/9/97
Curve Number: SUM-005





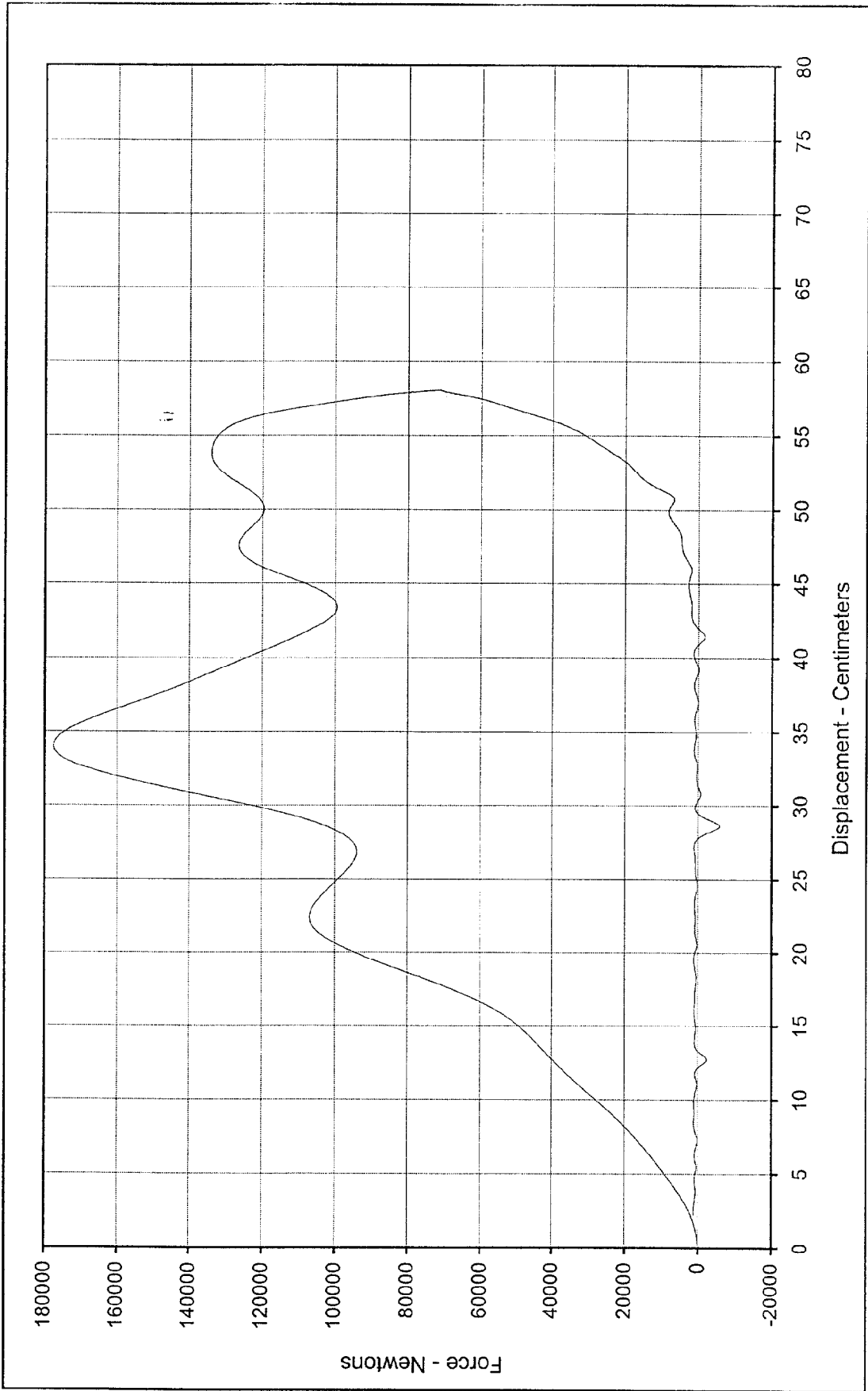
Curve Description: Barrier Force Sum No.6 Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 29622.4 at 40.3 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -900.3 at 184.4 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: SUM-006





Curve Description: Barrier Force Sum Total Testing Program 1997 48.4 km/h Frontal Impact (Female)
 Maximum Value: 177435.4 at 27.1 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan
 Minimum Value: -5758.6 at 184.5 Milliseconds
 SAE Filter Class: 60
 Date of Test: 9/9/97
 Curve Number: SUM-007





Curve Description: Sum Force Total vs. Dynamic Crush Testing Program 1997 48.4 km/h Frontal Impact (Female)

Maximum Displ.: 58.0 at 68.3 Milliseconds Test Vehicle: 1996 Dodge Neon 4 Door Sedan

Maximum Force: 177435.4 at 27.1 Milliseconds

SAE Filter Class: N/A

Date of Test: 9/9/97

Curve Number: XVY-001



APPENDIX D
INSTRUMENTATION DATA CHANNEL ASSIGNMENTS

**48.4 kmh Frontal Impact Test With Hybrid III Female 5th Percentile ATD
Instrumentation Data Channel Assignments
Driver A.T.D Serial Number 202**

Test Date: 9/9/97

Vehicle: 1996 Dodge Neon 4 Door Sedan

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
1	HEAD, PRIMARY	X	GPAC027	Accel., 1/2 bridge	Endevco	7264-2000	G
2	HEAD, PRIMARY	Y	GPAC002	Accel., 1/2 bridge	Endevco	7264-2000	G
3	HEAD, PRIMARY	Z	GPAC003	Accel., 1/2 bridge	Endevco	7264-2000	G
4	NECK FORCE	X	GPUN01FX	Load cell, six axis neck	R. A. Denton	1716A	N
5	NECK FORCE	Y	GPUN01FY	Load cell, six axis neck	R. A. Denton	1716A	N
6	NECK FORCE	Z	GPUN01FZ	Load cell, six axis neck	R. A. Denton	1716A	N
7	NECK MOMENT	X	GPUN01MX	Load cell, six axis neck	R. A. Denton	1716A	N.m
8	NECK MOMENT	Y	GPUN01MY	Load cell, six axis neck	R. A. Denton	1716A	N.m
9	NECK MOMENT	Z	GPUN01MZ	Load cell, six axis neck	R. A. Denton	1716A	N.m
10	CHEST, PRIMARY	X	GPAC005	Accel., 1/2 bridge	Endevco	7264-2000	G
11	CHEST, PRIMARY	Y	GPAC011	Accel., 1/2 bridge	Endevco	7264-2000	G
12	CHEST, PRIMARY	Z	GPAC010	Accel., 1/2 bridge	Endevco	7264-2000	G
13	CHEST, REDUNDANT	X	GPAC034	Accel., 1/2 bridge	Endevco	7264-2000	G
14	CHEST, REDUNDANT	Y	GPAC023	Accel., 1/2 bridge	Endevco	7264-2000	G
15	CHEST, REDUNDANT	Z	GPAC020	Accel., 1/2 bridge	Endevco	7264-2000	G
16	CHEST DISPLACEMENT	X	GPRP001	Potentiometer, Rotary	Servo	14CBI	CM
17	PELVIS, PRIMARY	X	GPAC025	Accel., 1/2 bridge	Endevco	7264-2000	G
18	PELVIS, PRIMARY	Y	GPAC022	Accel., 1/2 bridge	Endevco	7264-2000	G
19	PELVIS, PRIMARY	Z	GPAC019	Accel., 1/2 bridge	Endevco	7264-2000	G
20	LEFT FEMUR FORCE	Z	KEFF001	Load cell, Femur	R.A. Denton	2121	N
21	RIGHT FEMUR FORCE	Z	GPLC001	Load cell, Femur	G.S.E.	2430	N

48.4 kmh Frontal Impact Test With Hybrid III Female 5th Percentile ATD

Instrumentation Data Channel Assignments

Driver A.T.D Serial Number 202

Test Date: 9/9/97

Vehicle: 1996 Dodge Neon 4 Door Sedan

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
22	UP. TIBIA LEFT FORCE	X	GPU105FX	4 ch., Upper Tibia Gage	R. A. Denton	3115	N.m
23	UP. LEFT TIBIA FORCE	Z	GPU105FZ	4 ch., Upper Tibia Gage	R. A. Denton	3115	N.m
24	UP. TIBIA LEFT MOM.	X	GPU105MX	4 ch., Upper Tibia Gage	R. A. Denton	3115	N.m
25	UP. TIBIA LEFT MOM.	Y	GPU105MY	4 ch., Upper Tibia Gage	R. A. Denton	3115	N.m
26	LWR. TIBIA LEFT FORCE	X	GPL105FX	4 ch., lower tibia gage	R. A. Denton	3287	N
27	LWR. LEFT TIBIA FORCE	Z	GPL105FZ	4 ch., lower tibia gage	R. A. Denton	3287	N
28	LWR. TIBIA LEFT MOM.	X	GPL105MX	4 ch., lower tibia gage	R. A. Denton	3287	N.m
29	LWR. TIBIA LEFT MOM.	Y	GPL105MY	4 ch., lower tibia gage	R. A. Denton	3287	N.m
30	UP. TIBIA RIGHT FORCE	X	GPU106FX	4 ch., Upper Tibia Gage	R. A. Denton	3115	N
31	UP. RIGHT TIBIA FORCE	Z	GPU106FZ	4 ch., Upper Tibia Gage	R. A. Denton	3115	N
32	UP. TIBIA RIGHT MOM.	X	GPU106MX	4 ch., Upper Tibia Gage	R. A. Denton	3115	N.m
33	UP. TIBIA RIGHT MOM.	Y	GPU106MY	4 ch., Upper Tibia Gage	R. A. Denton	3115	N.m
34	LWR. TIBIA RIGHT FORCE	X	GPL106FX	4 ch., lower tibia gage	R. A. Denton	3287	N
35	LWR. RIGHT TIBIA FORCE	Z	GPL106FZ	4 ch., lower tibia gage	R. A. Denton	3287	N
36	LWR. TIBIA RIGHT MOM.	X	GPL106MX	4 ch., lower tibia gage	R. A. Denton	3287	N.m
37	LWR. TIBIA RIGHT MOM.	Y	GPL106MY	4 ch., lower tibia gage	R. A. Denton	3287	N.m
38	FOOT LEFT	X	KEIC002X	Accel., Foot Triax	I.C. Sensor	3031-500	G
39	FOOT LEFT	Y	KEIC002Y	Accel., Foot Triax	I.C. Sensor	3031-500	G
40	FOOT LEFT	Z	KEIC002Z	Accel., Foot Triax	I.C. Sensor	3031-500	G
41	FOOT RIGHT	X	KEIC001X	Accel., Foot Triax	I.C. Sensor	3031-500	G
42	FOOT RIGHT	Y	KEIC001Y	Accel., Foot Triax	I.C. Sensor	3031-500	G
43	FOOT RIGHT	Z	KEIC001Z	Accel., Foot Triax	I.C. Sensor	3031-500	G
44	LAP BELT FORCE	X	KELC001	Load cell, Seat belt	Lebow	3371	N
45	SHOULDER BELT FORCE	X	KELC002	Load cell, Seat belt	Lebow	3371	N
46	SHOULDER BELT SPOOL	X	KEPP001	Pullout pot	Calesco	PTX101-0030	CM
47	SHOULDER BELT ELONG.	X	KEEP001	Linear pot., belt stretch	E.T.I.	LCP8-10 10K	CM/CM

48.4 kmh Frontal Impact Test With Hybrid III Female 5th Percentile ATD
Instrumentation Data Channel Assignments
Passenger A.T.D Serial Number 274
Test Date: 9/9/97

Vehicle: 1996 Dodge Neon 4 Door Sedan

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
48	HEAD, PRIMARY	X	KEAC039	Accel., 1/2 bridge	Endevco	7264-2000	G
49	HEAD, PRIMARY	Y	KEAC038	Accel., 1/2 bridge	Endevco	7264-2000	G
50	HEAD, PRIMARY	Z	KEAC027	Accel., 1/2 bridge	Endevco	7264-2000	G
51	NECK FORCE	X	GPUN02FX	Load cell, six axis neck	R. A. Denton	1716A	N
52	NECK FORCE	Y	GPUN02FY	Load cell, six axis neck	R. A. Denton	1716A	N
53	NECK FORCE	Z	GPUN02FZ	Load cell, six axis neck	R. A. Denton	1716A	N
54	NECK MOMENT	X	GPUN02MX	Load cell, six axis neck	R. A. Denton	1716A	N.m
55	NECK MOMENT	Y	GPUN02MY	Load cell, six axis neck	R. A. Denton	1716A	N.m
56	NECK MOMENT	Z	GPUN02MZ	Load cell, six axis neck	R. A. Denton	1716A	N.m
57	CHEST, PRIMARY	X	GPAC031	Accel., 1/2 bridge	Endevco	7264-2000	G
58	CHEST, PRIMARY	Y	GPAC024	Accel., 1/2 bridge	Endevco	7264-2000	G
59	CHEST, PRIMARY	Z	GPAC029	Accel., 1/2 bridge	Endevco	7264-2000	G
60	CHEST, REDUNDANT	X	KEAC023	Accel., 1/2 bridge	Endevco	7264-200	G
61	CHEST, REDUNDANT	Y	KEAC022	Accel., 1/2 bridge	Endevco	7264-200	G
62	CHEST, REDUNDANT	Z	KEAC024	Accel., 1/2 bridge	Endevco	7264-200	G
63	CHEST DISPLACEMENT	X	GPRP002	Potentiometer, Rotary	Servo	14CBI	CM
64	PELVIS, PRIMARY	X	GPAC009	Accel., 1/2 bridge	Endevco	7264-2000	G
65	PELVIS, PRIMARY	Y	GPAC017	Accel., 1/2 bridge	Endevco	7264-2000	G
66	PELVIS, PRIMARY	Z	GPAC018	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	KEFF002	Load cell, Femur	R.A. Denton	2121	N

48.4 kmh Frontal Impact Test With Hybrid III Female 5th Percentile ATD

Instrumentation Data Channel Assignments

Passenger A.T.D Serial Number 274

Test Date: 9/9/97

Vehicle: 1996 Dodge Neon 4 Door Sedan

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
69	UP. TIBIA LEFT MOM.	X	GPU107MX	2 ch., Upper tibia gage	R. A. Denton	1583	N.m
70	UP. TIBIA LEFT MOM.	Y	GPU107MY	2 ch., Upper tibia gage	R. A. Denton	1583	N.m
71	UP. TIBIA RIGHT MOM.	X	GPU108MX	2 ch., Upper tibia gage	R. A. Denton	1583	N.m
72	UP. TIBIA RIGHT MOM.	Y	GPU108MY	2 ch., Upper tibia gage	R. A. Denton	1583	N.m
73	LWR. TIBIA LEFT FORCE	X	GPLT07FY	3 ch., lower tibia gage	R. A. Denton	1584	N
74	LWR. TIBIA LEFT FORCE	Z	GPLT07FZ	3 ch., lower tibia gage	R. A. Denton	1584	N
75	LWR. TIBIA LEFT MOM.	Y	GPLT07MY	3 ch., lower tibia gage	R. A. Denton	1584	N.m
76	LWR. TIBIA RIGHT FORCE	X	GPLT08FY	3 ch., lower tibia gage	R. A. Denton	1584	N
77	LWR. TIBIA RIGHT FORCE	Z	GPLT08FZ	3 ch., lower tibia gage	R. A. Denton	1584	N
78	LWR. TIBIA RIGHT MOM.	Y	GPLT08MY	3 ch., lower tibia gage	R. A. Denton	1584	N.m
79	FOOT LEFT	X	KEIC003X	Accel., Foot Triax	I.C. Sensor	3031-500	G
80	FOOT LEFT	Y	KEIC003Y	Accel., Foot Triax	I.C. Sensor	3031-500	G
81	FOOT LEFT	Z	KEIC003Z	Accel., Foot Triax	I.C. Sensor	3031-500	G
82	FOOT RIGHT	X	KEIC004X	Accel., Foot Triax	I.C. Sensor	3031-500	G
83	FOOT RIGHT	Y	KEIC004Y	Accel., Foot Triax	I.C. Sensor	3031-500	G
84	FOOT RIGHT	Z	KEIC004Z	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	Celisco	PTX101-0030	CM
88	SHOULDER BELT ELONG.	X	KEEP001	Linear pot, belt stretch	E.T.I.	LGP8-10 10K	CM/CM

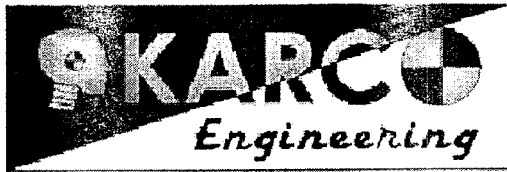
48.4 kmh Frontal Impact Test With Hybrid III Female 5th Percentile ATD
Instrumentation Data Channel Assignments
Vehicle Accelerometers

Test Date: 9/9/97

Vehicle: 1996 Dodge Neon 4 Door Sedan

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
89	LEFT REAR SILL	X	KEVA005	Accel., Vehicle block	I.C. Sensor	3031-500	G
90	LEFT REAR SILL	Y	KEVA006	Accel., Vehicle block	I.C. Sensor	3031-200	G
91	CENTER CONSOLE REAR	X	KEVA001	Accel., Vehicle block	I.C. Sensor	3031-500	G
92	CENTER CONSOLE REAR	Y	KEVA002	Accel., Vehicle block	I.C. Sensor	3031-500	G
93	RIGHT REAR SILL	X	KEVA010	Accel., Vehicle block	I.C. Sensor	3031-500	G
94	RIGHT REAR SILL	Y	KEVA004	Accel., Vehicle block	I.C. Sensor	3031-500	G
95	CENTER TRUNK REAR	X	KEVA007	Accel., Vehicle block	I.C. Sensor	3031-200	G
96	CENTER TRUNK REAR	Y	KEVA011	Accel., Vehicle block	I.C. Sensor	3031-200	G

APPENDIX E
DUMMY CALIBRATION DATA



Hybrid III Calibration Data Sheet

5TH Percentile Female

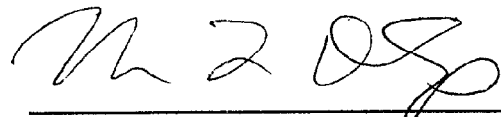
Head Drop Calibration

ATD Serial No.: 202

Part Serial No.: N/A

Test I.D.: FH005

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	31	Pass
Peak Resultant Acceleration	G's	240.0 to 295.0	284.5	Pass
Peak Lateral Acceleration	G's	≤15.0	7.0	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Overall Test Results				Pass



Laboratory Technician

August 26, 1997

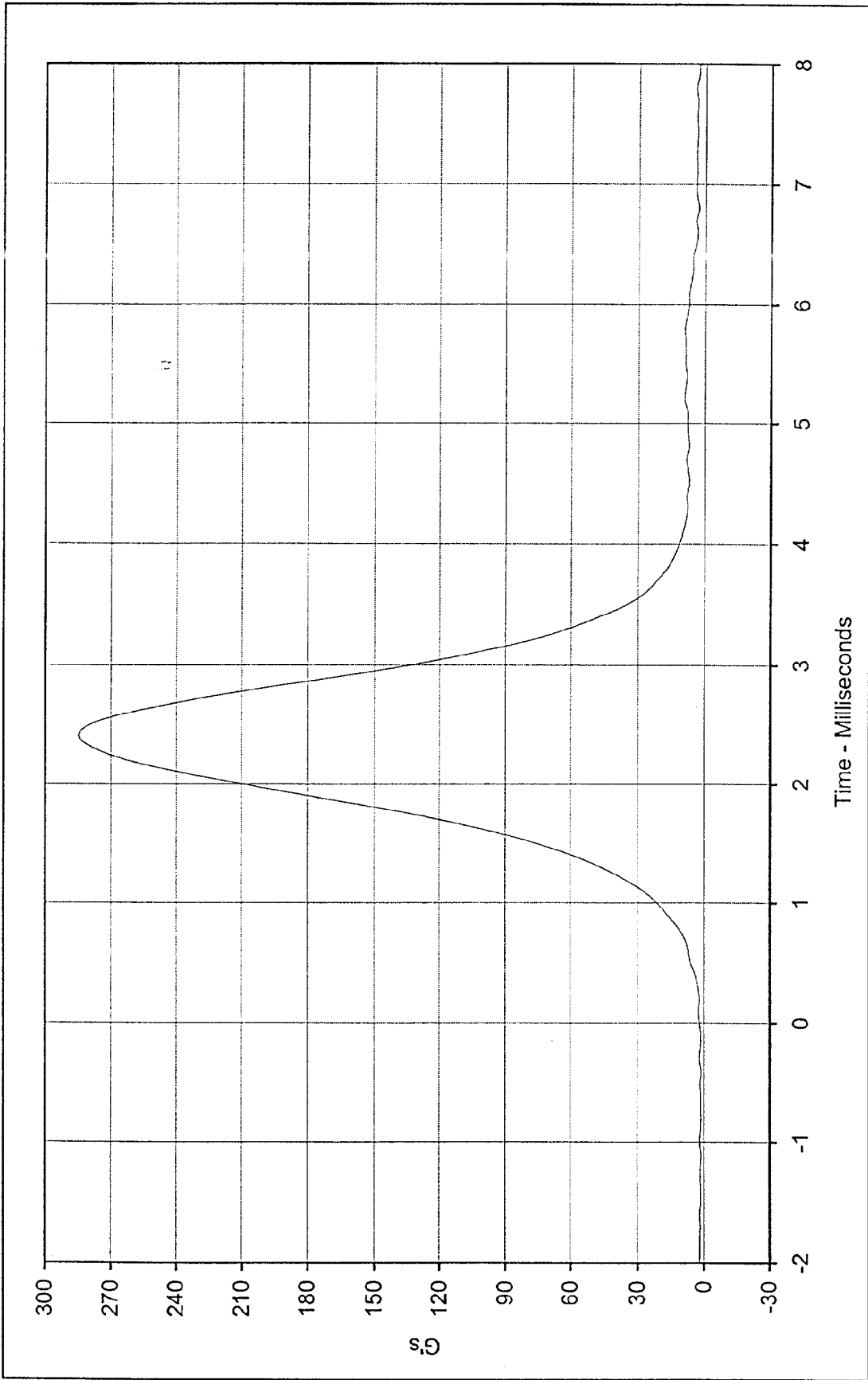
Test Date



Approved By

8/26/97

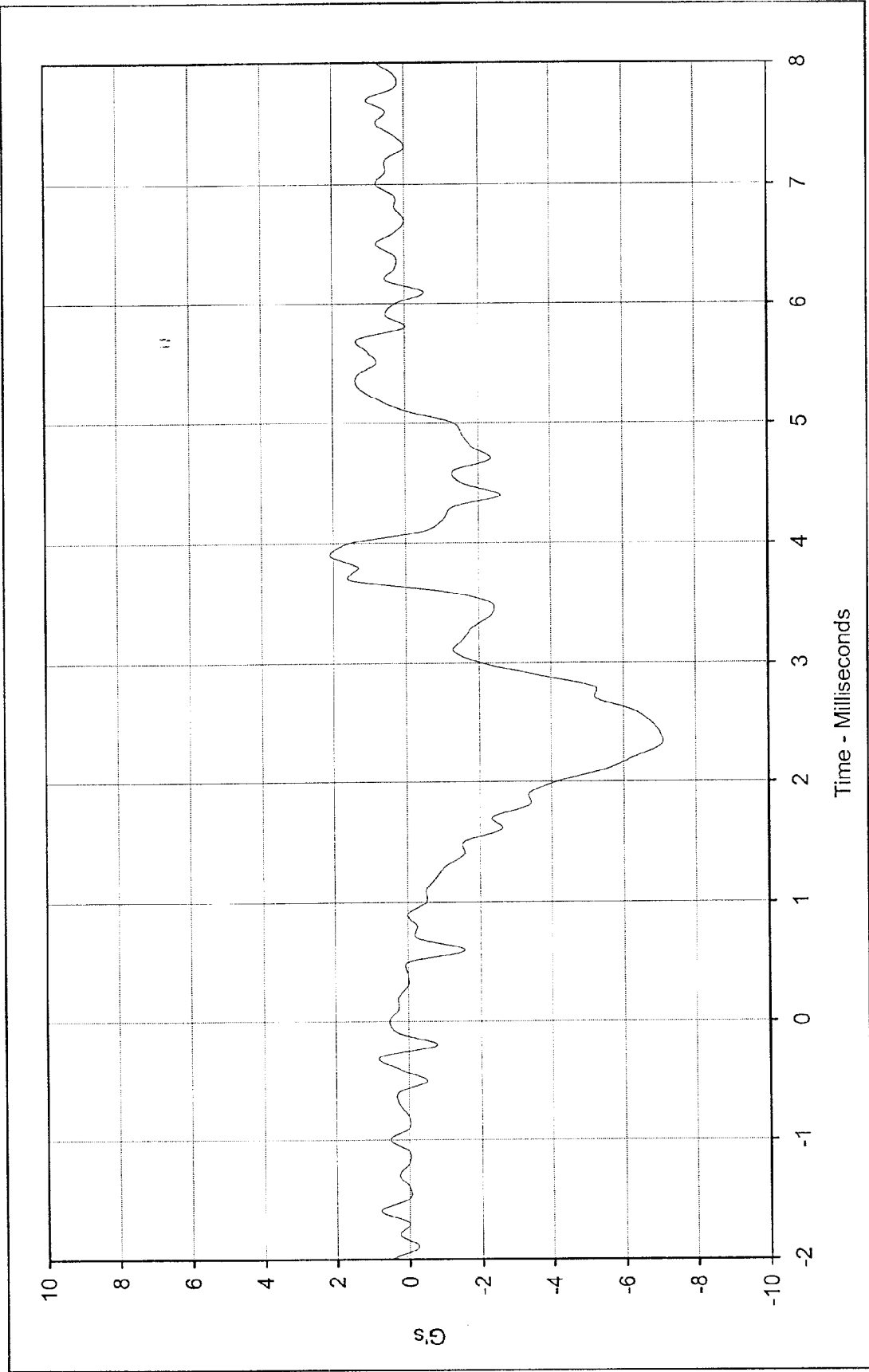
Date



Curve Description: Head Resultant Acceleration
 Maximum Value: 284.5 at 2.4 Milliseconds
 Minimum Value: 1.3 at -1.1 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 8/26/96
 ATD Serial No.: 202

Testing Program Hybrid III Head Drop Calibration (Female)
 Test Information: S/N of Part: N/A Test I.D.: FH005





Curve Description: Head Acceleration Y Axis
 Maximum Value: 2.1 at 3.9 Milliseconds
 Minimum Value: -7.0 at 2.3 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 8/26/96
 ATD Serial No.: 202

Testing Program Hybrid III Head Drop Calibration (Female)
 Test Information: S/N of Part: N/A Test I.D.: FH005





Hybrid III Calibration Data Sheet

5TH Percentile Female


Thorax Impact Test

ATD Serial No.: 202

Part Serial No.: N/A

Test I.D.: FC004

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	22.0	Pass
Laboratory Relative Humidity	%	10 to 70	34	Pass
Peak Probe Force	Newtons	3800 to 4300	4253	Pass
Peak Sternum Displacement	CM	5.1 to 5.8	5.1	Pass
Internal Hysteresis	%	69 to 85	78.3	Pass
Overall Test Results				Pass



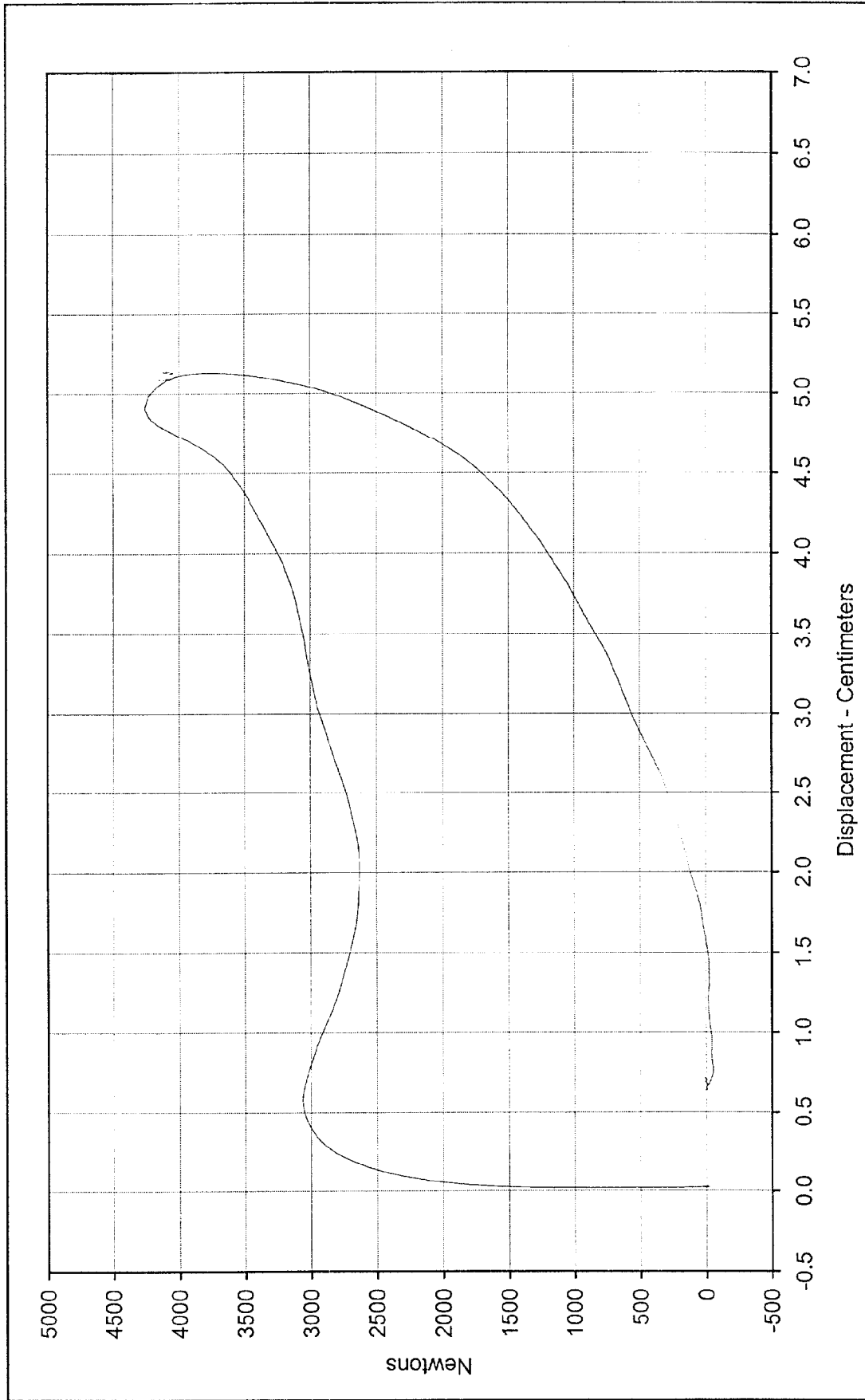
Laboratory Technician



Approved By

August 26, 1997
Test Date

8/26/97
Date



Curve Description: Probe Force vs. Chest Displacement Testing Program: Hybrid III Thorax Impact Test (5th Female)
 Probe Force: 4253.3 Newtons Test Information: S/N of Part: N/A Test I.D.: FC004

Chest Displ.: 5.13 Centimeters
 SAE Filter Class: 180
 Date of Test: 8/26/97
 ATD Serial No.: 202





Hybrid III Calibration Data Sheet

5TH Percentile Female

Neck Flexion Test

ATD Serial No.: 202

Part Serial No.: N/A

Test I.D.: FNF04

Tested Parameter	Units	Specification	Result	Pass/Fail	
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass	
Laboratory Relative Humidity	%	10 to 70	36	Pass	
Pendulum Velocity	m/s	6.89 to 7.13	7.02	Pass	
Pendulum Deceleration	10 Msec	m/s	2.10 to 2.50	2.10	Pass
	20 Msec	m/s	4.00 to 5.00	4.45	Pass
	30 Msec	m/s	5.80 to 7.00	6.39	Pass
Maximum "D" Plane Rotation	Degrees	78.0 to 96.0	92.4	Pass	
"D" Plane Rotation Decay, Time From Peak Value To Zero Crossing	Msec.	57.0 to 69.0	66.1	Pass	
Moment About Occipital Condyle	N • m	69.0 to 84.0	77.5	Pass	
Moment About Occipital Condyle Decay, Time From Peak Value To Zero Crossing	Msec.	41.0 to 50.0	43.6	Pass	
Time of Peak Rotation With Respect to Peak Moment	Msec.	2.0 to 12.0	2.3	Pass	
Overall Test Results				Pass	

[Handwritten Signature]

Laboratory Technician

August 27, 1997

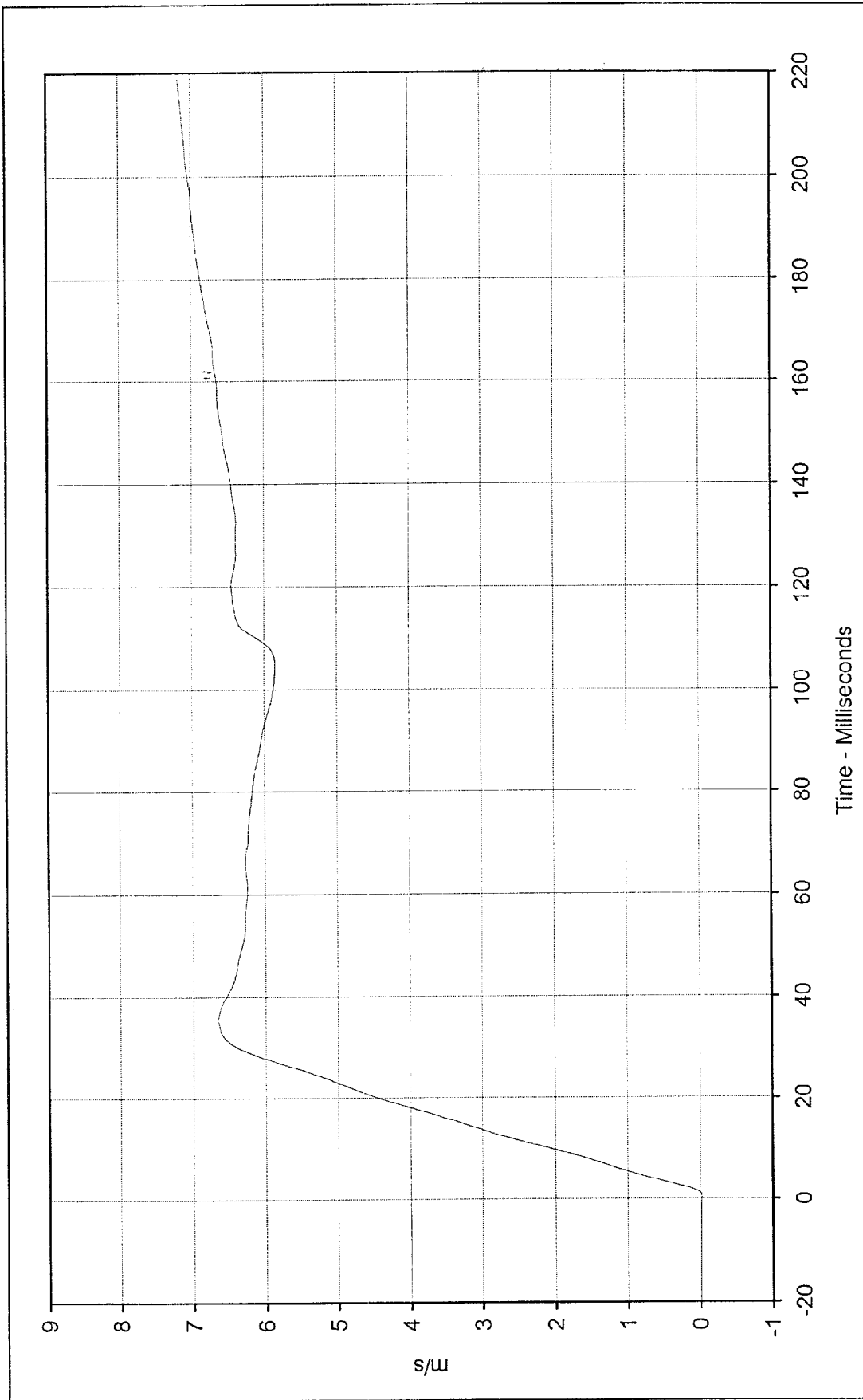
Test Date

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Approved By

8/27/97

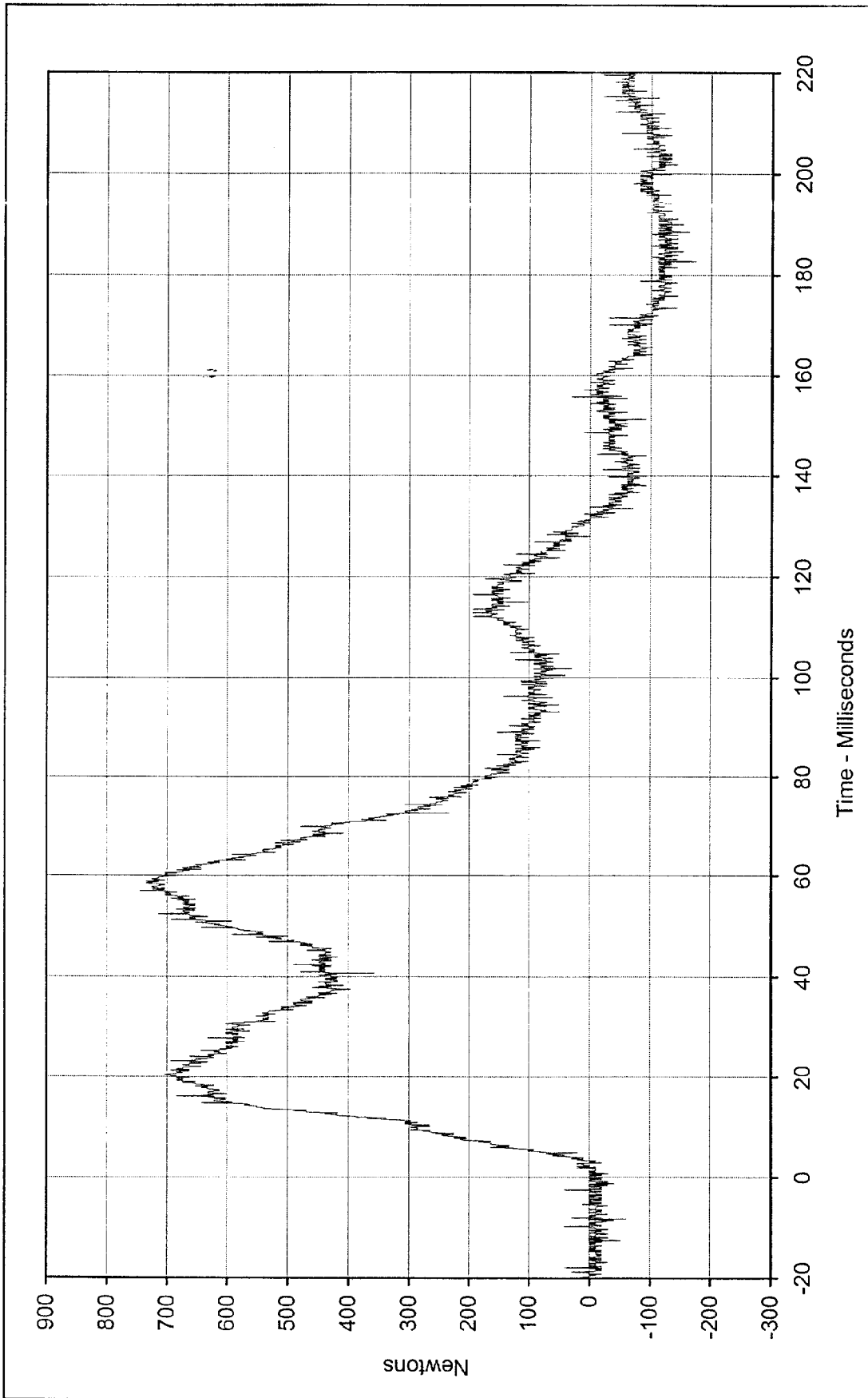
Date



Curve Description: Hybrid III Neck Flexion Test (Female)
 Testing Program: Hybrid III Neck Flexion Test (Female)
 Test Information: S/N of Part: N/A Test I.D.: FNF04

Pendulum Velocity
 Maximum Value: 7.2 at 220.0 Milliseconds
 Minimum Value: 0.0 at 0.3 Milliseconds
 SAE Filter Class: 180
 Date of Test: 8/27/97
 ATD Serial No.: 202

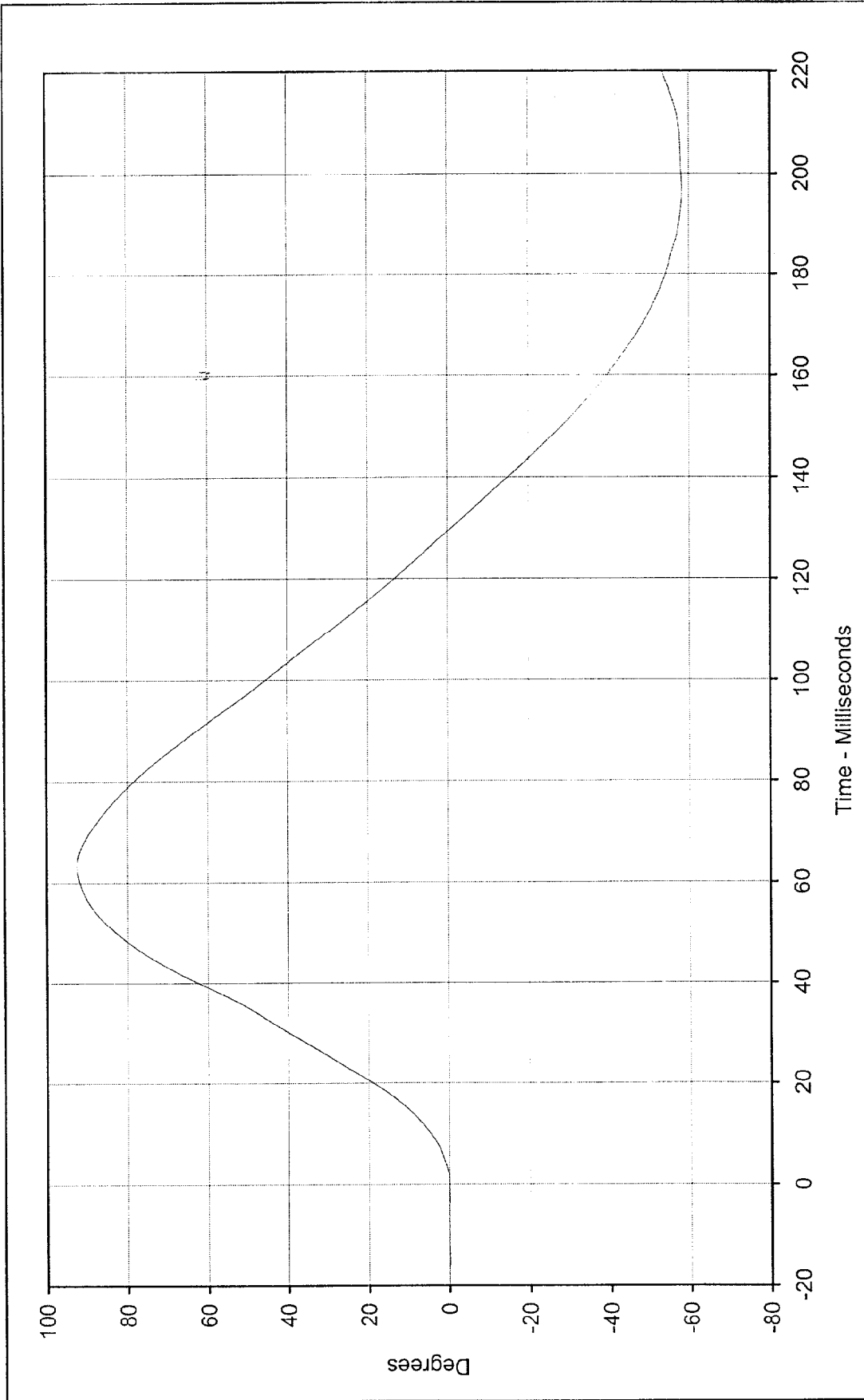




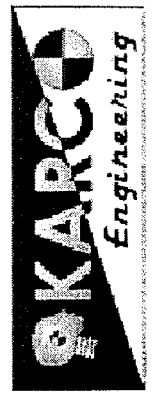
Curve Description: Neck Force X
 Testing Program: Hybrid III Neck Flexion Test (Female)
 Maximum Value: 745.0 at 57.0 Milliseconds
 Minimum Value: -173.5 at 182.7 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 8/27/97
 ATD Serial No.: 202

Test Information: S/N of Part: N/A Test I.D.: FNF04

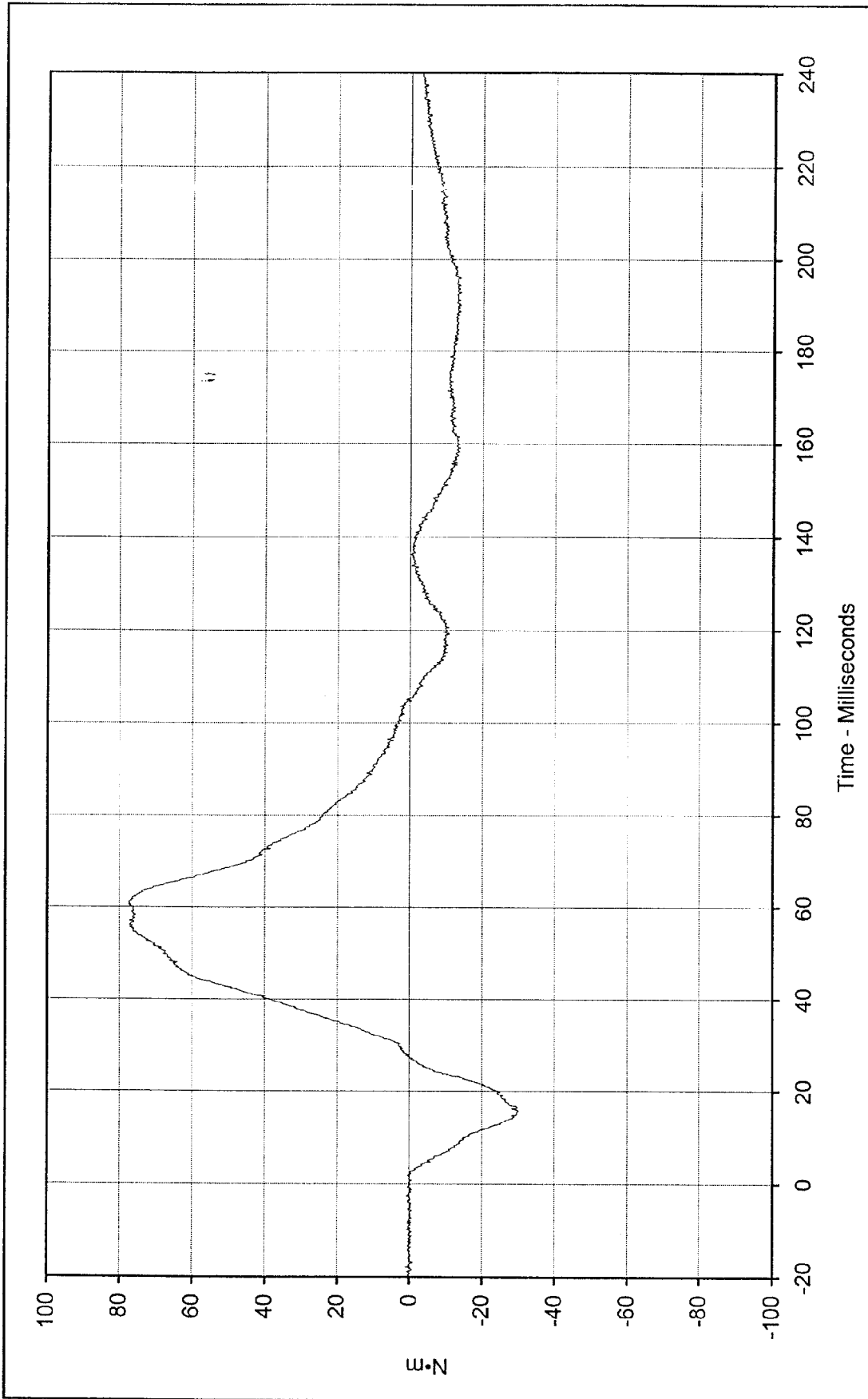




Curve Description: "D" Plane Rotation Testing Program Hybrid III Neck Flexion Test (Female)
 Maximum Value: 92.4 at 63.4 Milliseconds Test Information: S/N of Part: N/A Test I.D.: FNF04
 Minimum Value: -58.3 at 196.7 Milliseconds



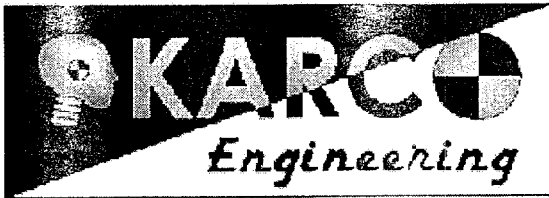
SAE Filter Class: 60
 Date of Test: 8/27/97
 ATD Serial No.: 202



Curve Description: Moment About Occipital Concyles Testing Program Hybrid III Neck Flexion Test (Female)
 Maximum Value: 77.5 at 61.1 Milliseconds Test Information: S/N of Part: N/A Test I.D.: FNF04
 Minimum Value: -30.1 at 15.9 Milliseconds



SAE Filter Class: 600
 Date of Test: 8/27/97
 ATD Serial No.: 202



Hybrid III Calibration Data Sheet

5TH Percentile Female

Neck Extension Test

ATD Serial No.: 202

Part Serial No.: N/A

Test I.D.: FNE02

Tested Parameter	Units	Specification	Result	Pass/Fail	
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass	
Laboratory Relative Humidity	%	10 to 70	40	Pass	
Pendulum Velocity	m/s	5.95 to 6.19	6.09	Pass	
Pendulum Deceleration	10 Msec	m/s	1.50 to 1.90	1.51	Pass
	20 Msec	m/s	3.10 to 3.90	3.73	Pass
	30 Msec	m/s	4.60 to 5.60	5.51	Pass
Maximum "D" Plane Rotation	Degrees	97.0 to 119.0	104.6	Pass	
"D" Plane Rotation Decay, Angle When the Decaying Y Moment is at -10 N•m	Degrees	80.0 to 96.0	89.6	Pass	
Calculated Moment About Occipital Condyle	N•m	-54.0 to -67.0	-64.4	Pass	
Moment About Occipital Condyle Decay, Time From Negative Peak Value To -10 N•m	Msec.	28.0 to 38.0	30.3	Pass	
Overall Test Results				Pass	

[Handwritten Signature]

Laboratory Technician

August 24, 1997

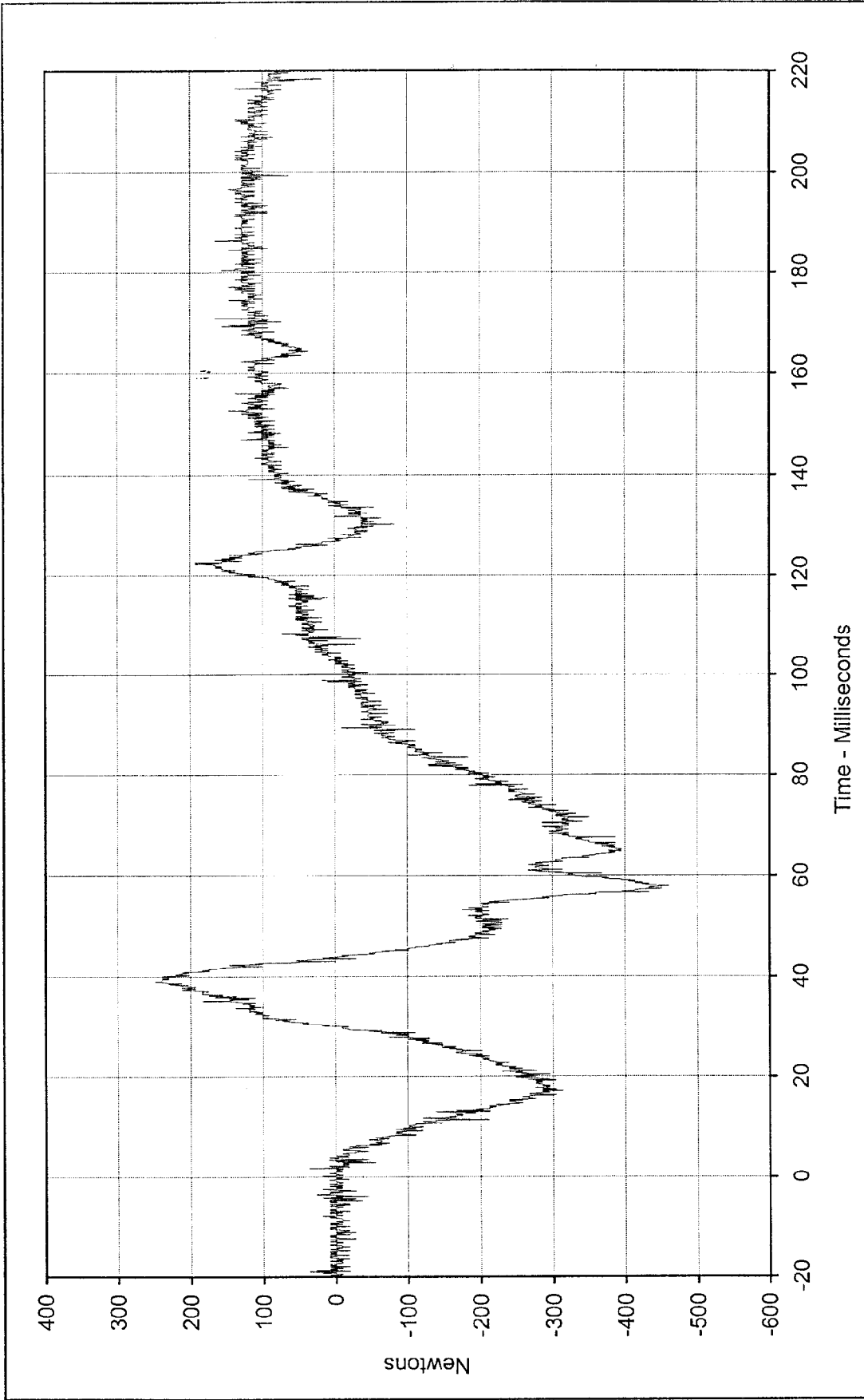
Test Date

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Approved By

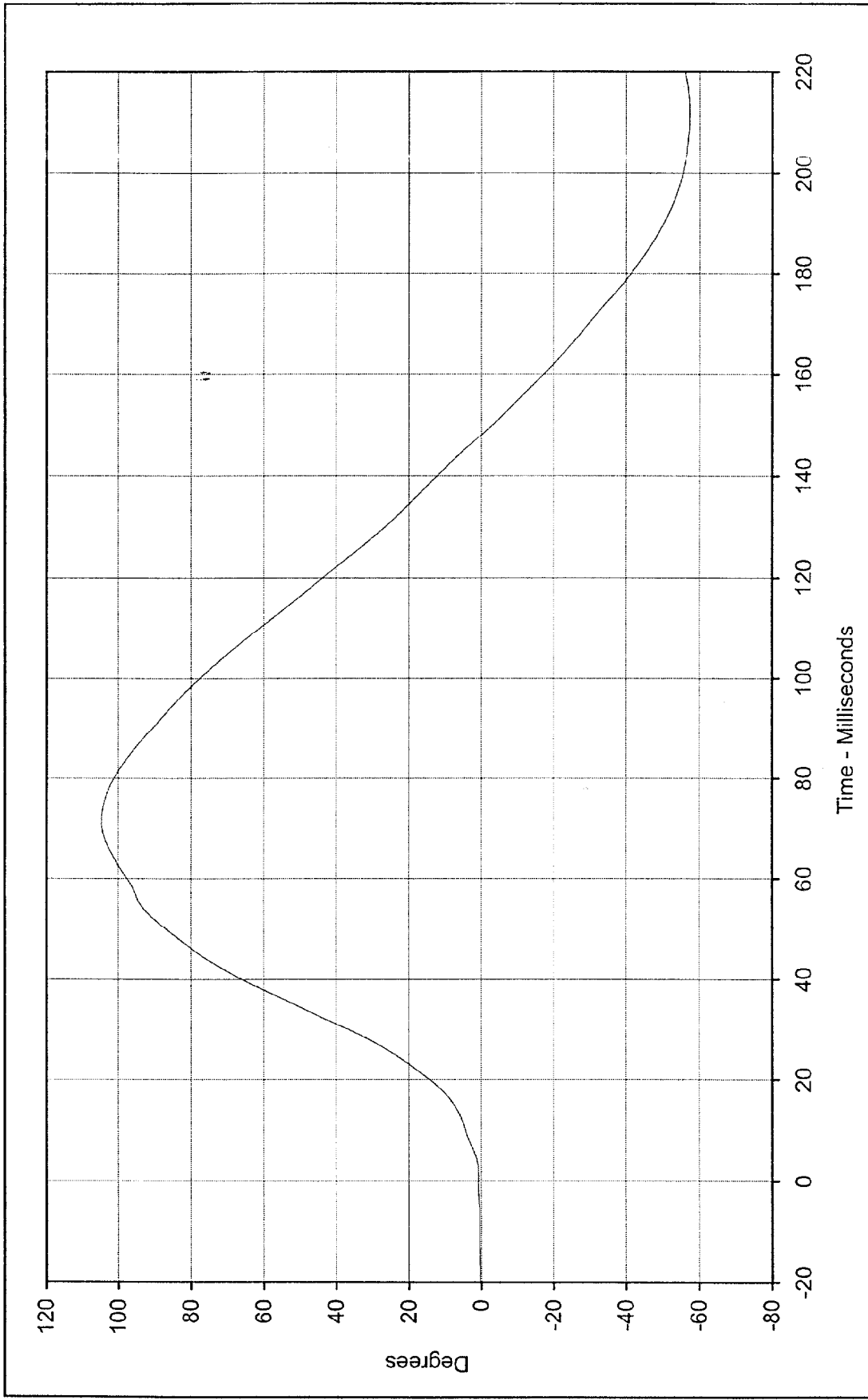
8/24/97

Date



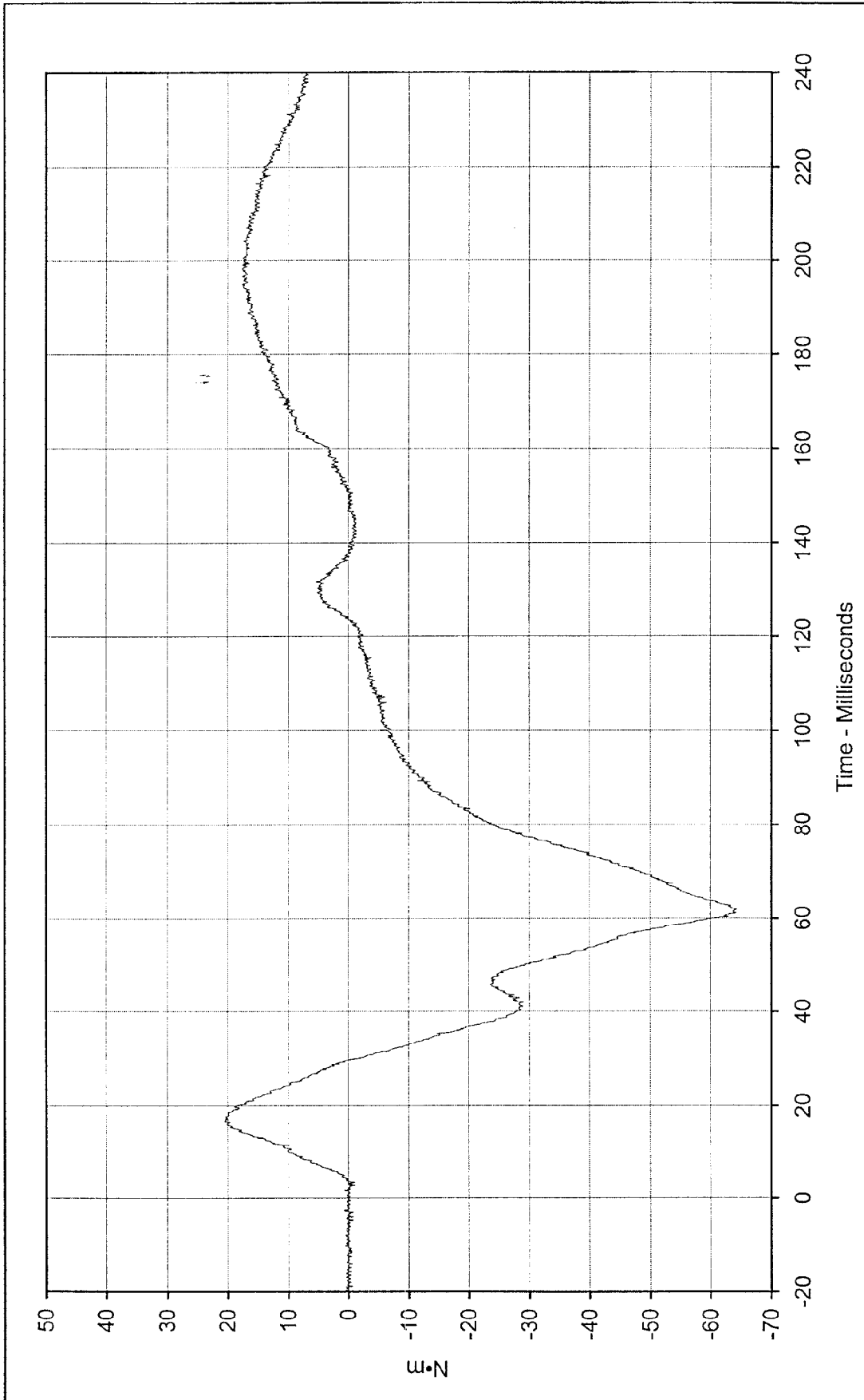
Curve Description: Neck Force X Testing Program: Hybrid III Neck Extension Test (Female)
 Maximum Value: 248.2 at 39.0 Milliseconds Test Information: S/N of Part: N/A Test I.D.: FNE02
 Minimum Value: -460.2 at 57.9 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 8/24/97
 ATD Serial No.: 202





Curve Description: "D" Plane Rotation Testing Program: Hybrid III Neck Extension Test (Female)
 Maximum Value: 104.6 at 71.6 Milliseconds Test Information: S/N of Part: N/A Test I.D.: FNE02
 Minimum Value: -57.2 at 210.8 Milliseconds
 SAE Filter Class: 60
 Date of Test: 8/24/97
 ATD Serial No.: 202





Curve Description: Moment About Occipital Condyles Testing Program: Hybrid III Neck Extension Test (Female)
 Maximum Value: 20.5 at 16.6 Milliseconds Test Information: S/N of Part: N/A Test I.D.: FNE02
 Minimum Value: -64.4 at 61.9 Milliseconds
 SAE Filter Class: 600
 Date of Test: 8/24/97
 ATD Serial No.: 202





Hybrid III Calibration Data Sheet

50TH Percentile Female

External Measurements

ATD Serial No.: 202

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	21.0	Pass
Laboratory relative humidity	%	10 to 70	43	Pass
A - Total sitting height	mm	785.0 to 795.0	786.0	Pass
B - Shoulder pivot height	mm	434.0 to 450.0	444.0	Pass
C - "H" point height	mm	81.5 to 86.5	85.5	Pass
D - "H" point from seat back	mm	144.5 to 149.5	147.0	Pass
E - Shoulder pivot from back	mm	71.0 to 81.0	79.0	Pass
F - Thigh clearance	mm	114.0 to 130.0	116.0	Pass
G - Elbow to finger tip	mm	393.0 to 409.0	397.0	Pass
H - Skull cap to back line	mm	43.2 to 48.5	46.0	Pass
I - Shoulder to elbow length	mm	287.0 to 303.0	298.0	Pass
J - Elbow rest height	mm	191.0 to 211.0	209.0	Pass
K - Buttock to knee length	mm	509.5 to 533.5	532.0	Pass
L - Popliteal height	mm	349.5 to 373.5	360.0	Pass
M - Knee to floor height	mm	449.0 to 465.0	450.0	Pass
N - Buttock popliteal length	mm	399.5 to 423.5	421.0	Pass
O - Chest depth	mm	183.0 to 200.0	197.0	Pass
P - Foot length	mm	216.0 to 232.0	229.0	Pass
R - Foot width	mm	76.0 to 92.0	89.0	Pass
V - Shoulder width	mm	348.0 to 364.0	355.0	Pass
W - Hip width at "H" point	mm	299.0 to 315.0	299.0	Pass
X - Chest circumference	mm	783.0 to 813.0	801.0	Pass
Y - Waist circumference	mm	757.0 to 787.0	780.0	Pass
AA - Location for chest circumference	mm	300.0 to 310.0	306.0	Pass
BB - Location for waist circumference	mm	160.0 to 170.0	168.0	Pass
Overall Test Results				Pass


 Laboratory Technician

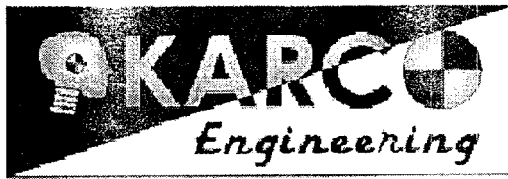
August 27, 1997

Test Date


 Approved By

8/27/97

Date



Hybrid III Calibration Data Sheet

5TH Percentile Female

Head Drop Calibration

ATD Serial No.: 274


Part Serial No.: N/A

Test I.D.: FH007

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	31	Pass
Peak Resultant Acceleration	G's	240.0 to 295.0	261.8	Pass
Peak Lateral Acceleration	G's	≤15.0	6.3	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Overall Test Results				Pass



Laboratory Technician



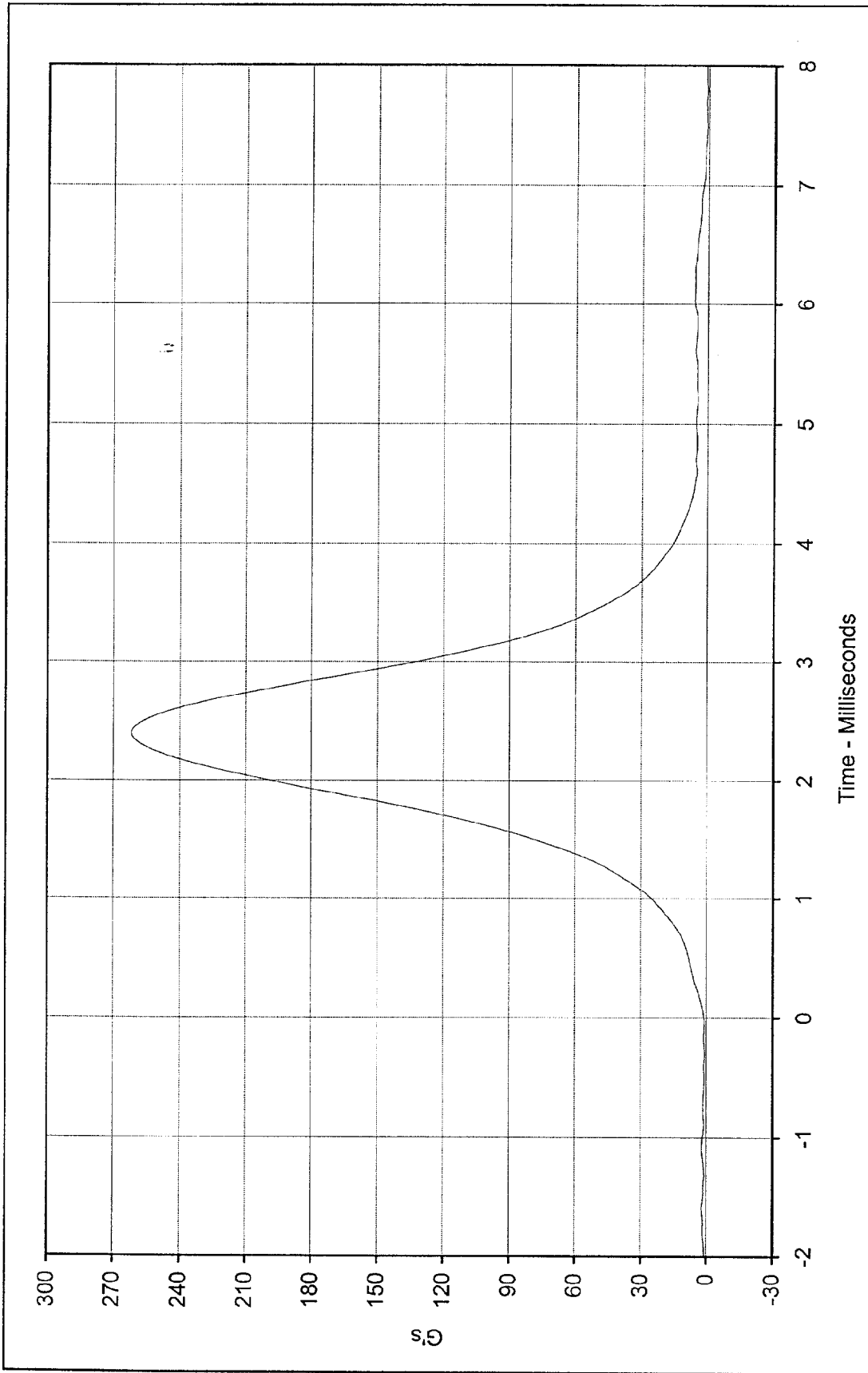
Approved By

August 25, 1997

Test Date

8/25/97

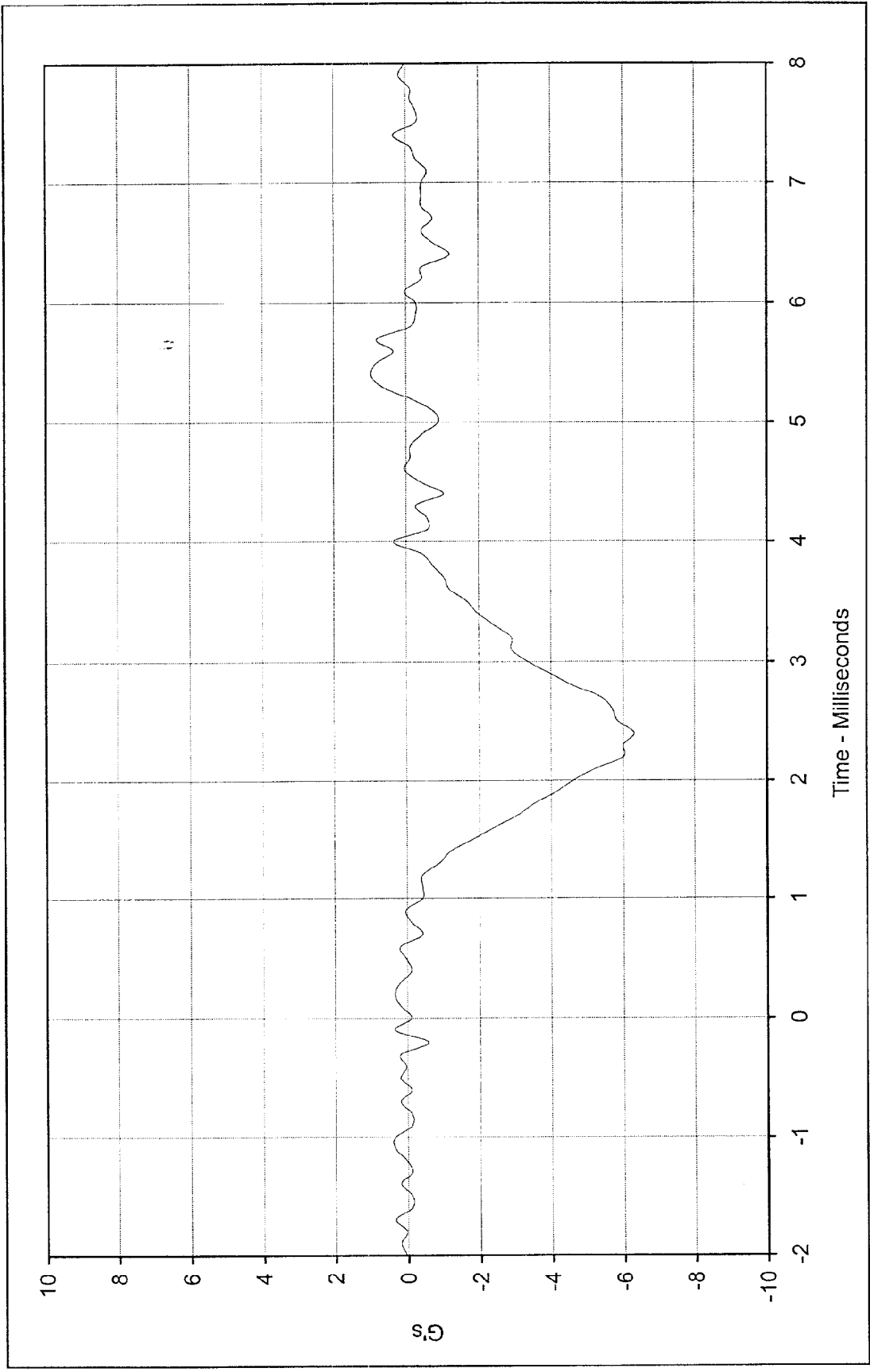
Date



Curve Description: Head Resultant Acceleration
 Maximum Value: 261.8 at 2.4 Milliseconds
 Minimum Value: 0.5 at 7.8 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 8/25/97
 ATD Serial No.: 274



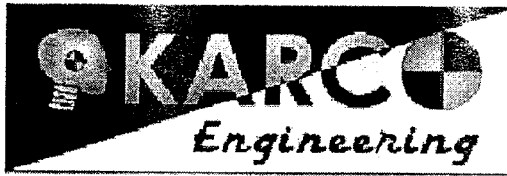
Testing Program: Hybrid III Head Drop Calibration (Female)
 Test Information: S/N of Part: N/A Test I.D.: FH007



Testing Program: Hybrid III Head Drop Calibration (Female)
 Test Information: S/N of Part: N/A Test I.D.: FH007

Curve Description: Head Acceleration Y Axis
 Maximum Value: 1.0 at 5.4 Milliseconds
 Minimum Value: -6.3 at 2.4 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 8/25/97
 ATD Serial No.: 274





Hybrid III Calibration Data Sheet

5TH Percentile Female

Thorax Impact Test

ATD Serial No.: 274

Part Serial No.: N/A

Test I.D.: FC002

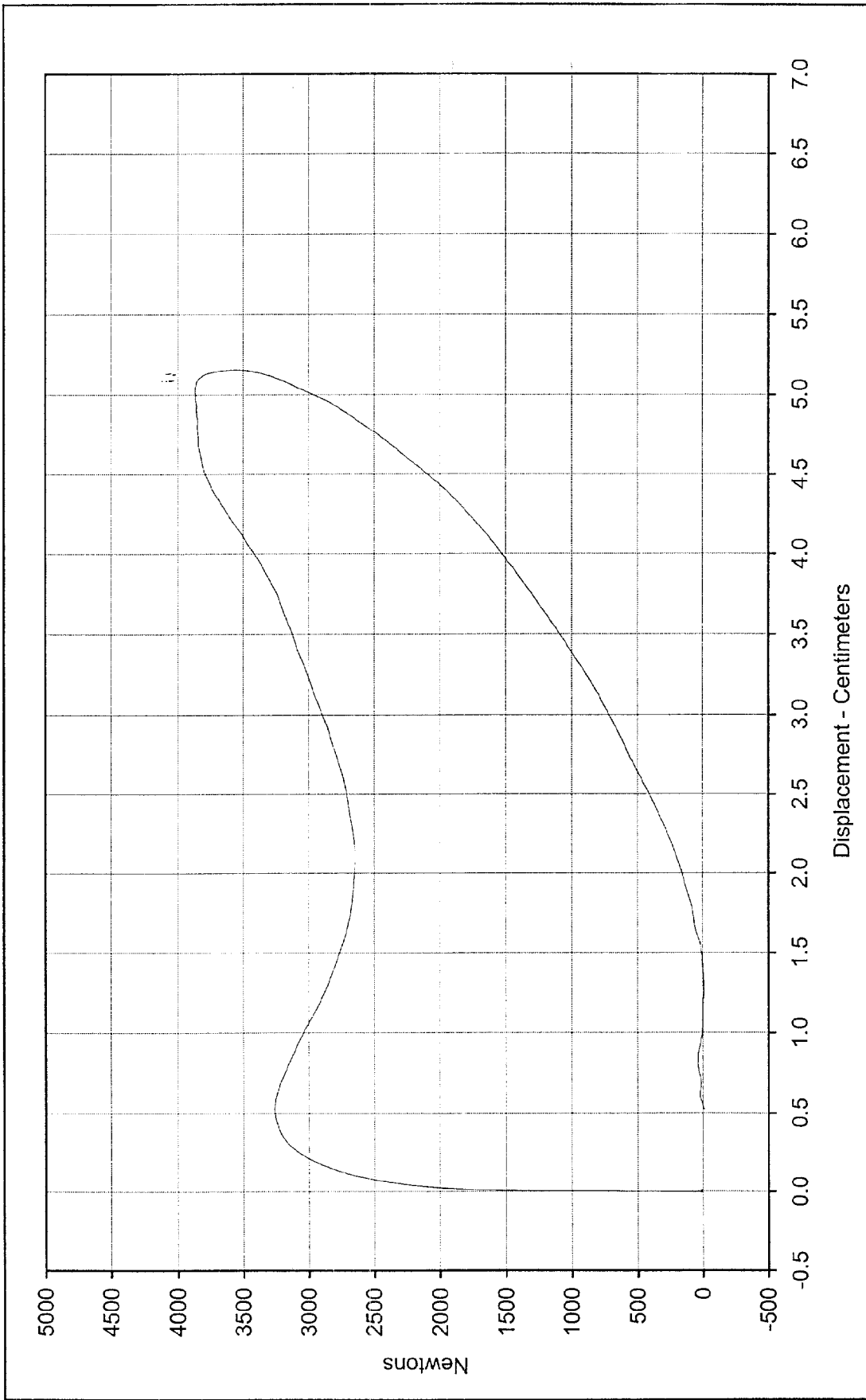
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	31	Pass
Peak Probe Force	Newtons	3800 to 4300	3867	Pass
Peak Sternum Displacement	CM	5.1 to 5.8	5.2	Pass
Internal Hysteresis	%	69 to 85	73.8	Pass
Overall Test Results				Pass

N. Z. O. J.
 Laboratory Technician

J. W. Anderson
 Approved By

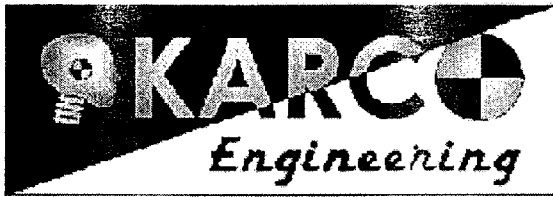
August 26, 1997
 Test Date

8/26/97
 Date



Curve Description: Probe Force vs. Chest Displacement Testing Program Hybrid III Thorax Impact Test (5TH Female)
 Probe Force: 3867.4 Newtons Test Information: S/N of Part: N/A Test I.D.: FC002
 Chest Displ.: 5.15 Centimeters
 SAE Filter Class: 180
 Date of Test: 8/26/97
 ATD Serial No.: 274





Hybrid III Calibration Data Sheet

5TH Percentile Female

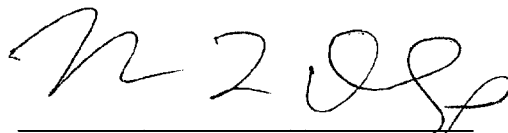
Neck Flexion Test

ATD Serial No.: 274

Part Serial No.: N/A

Test I.D.: 274N1

Tested Parameter	Units	Specification	Result	Pass/Fail	
Laboratory Temperature	°C	20.6 to 22.2	21.7	Pass	
Laboratory Relative Humidity	%	10 to 70	31	Pass	
Pendulum Velocity	m/s	6.89 to 7.13	7.06	Pass	
Pendulum Deceleration	10 Msec	m/s	2.10 to 2.50	2.12	Pass
	20 Msec	m/s	4.00 to 5.00	4.52	Pass
	30 Msec	m/s	5.80 to 7.00	6.60	Pass
Maximum "D" Plane Rotation	Degrees	78.0 to 96.0	88.6	Pass	
"D" Plane Rotation Decay, Time From Peak Value To Zero Crossing	Msec.	57.0 to 69.0	67.6	Pass	
Moment About Occipital Condyle	N • m	69.0 to 84.0	71.9	Pass	
Moment About Occipital Condyle Decay, Time From Peak Value To Zero Crossing	Msec.	41.0 to 50.0	50.0	Pass	
Time of Peak Rotation With Respect to Peak Moment	Msec.	2.0 to 12.0	9.3	Pass	
Overall Test Results				Pass	



 Laboratory Technician



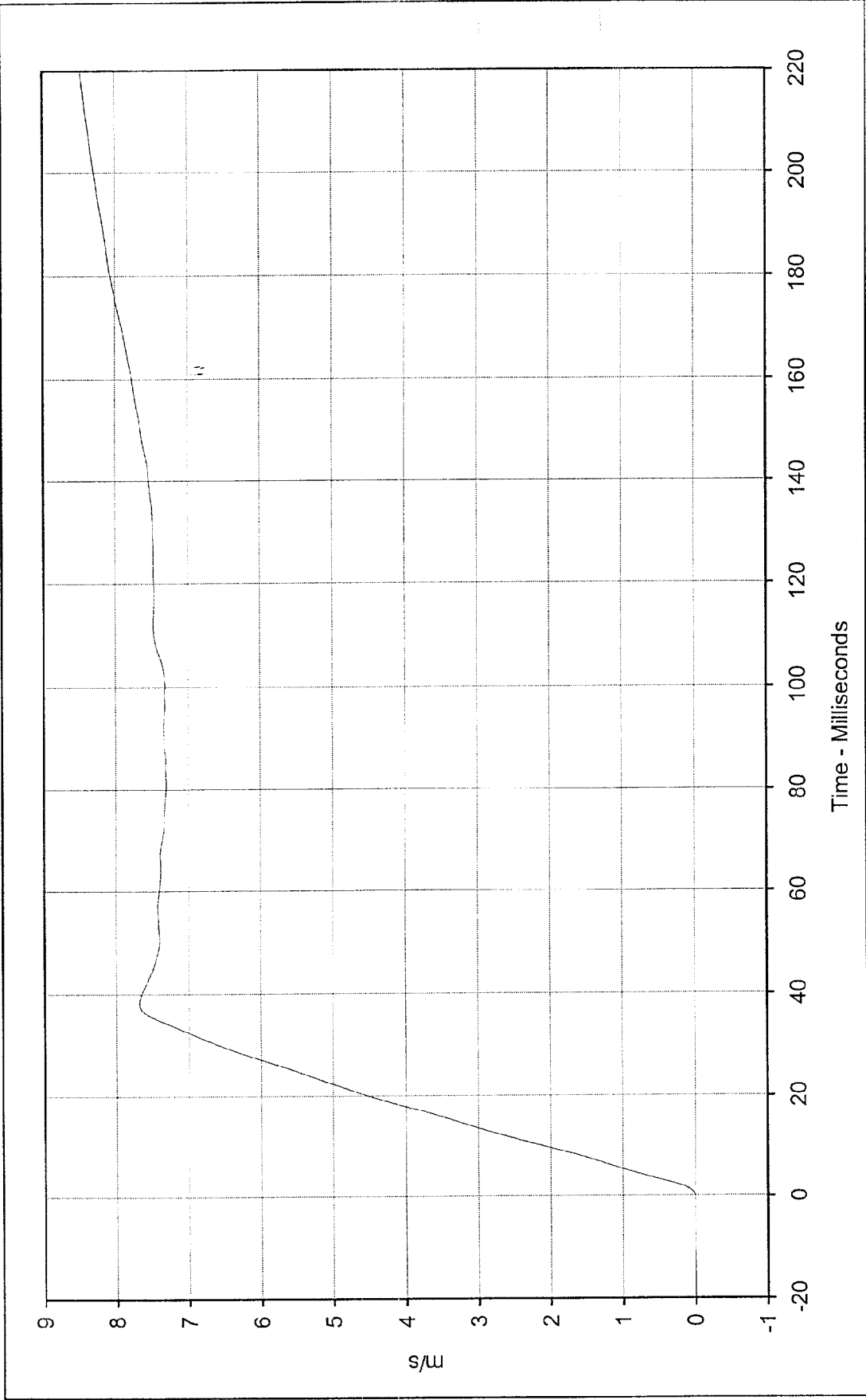
 Approved By

August 24, 1997

Test Date

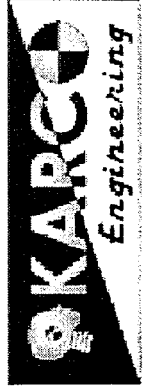
8/24/97

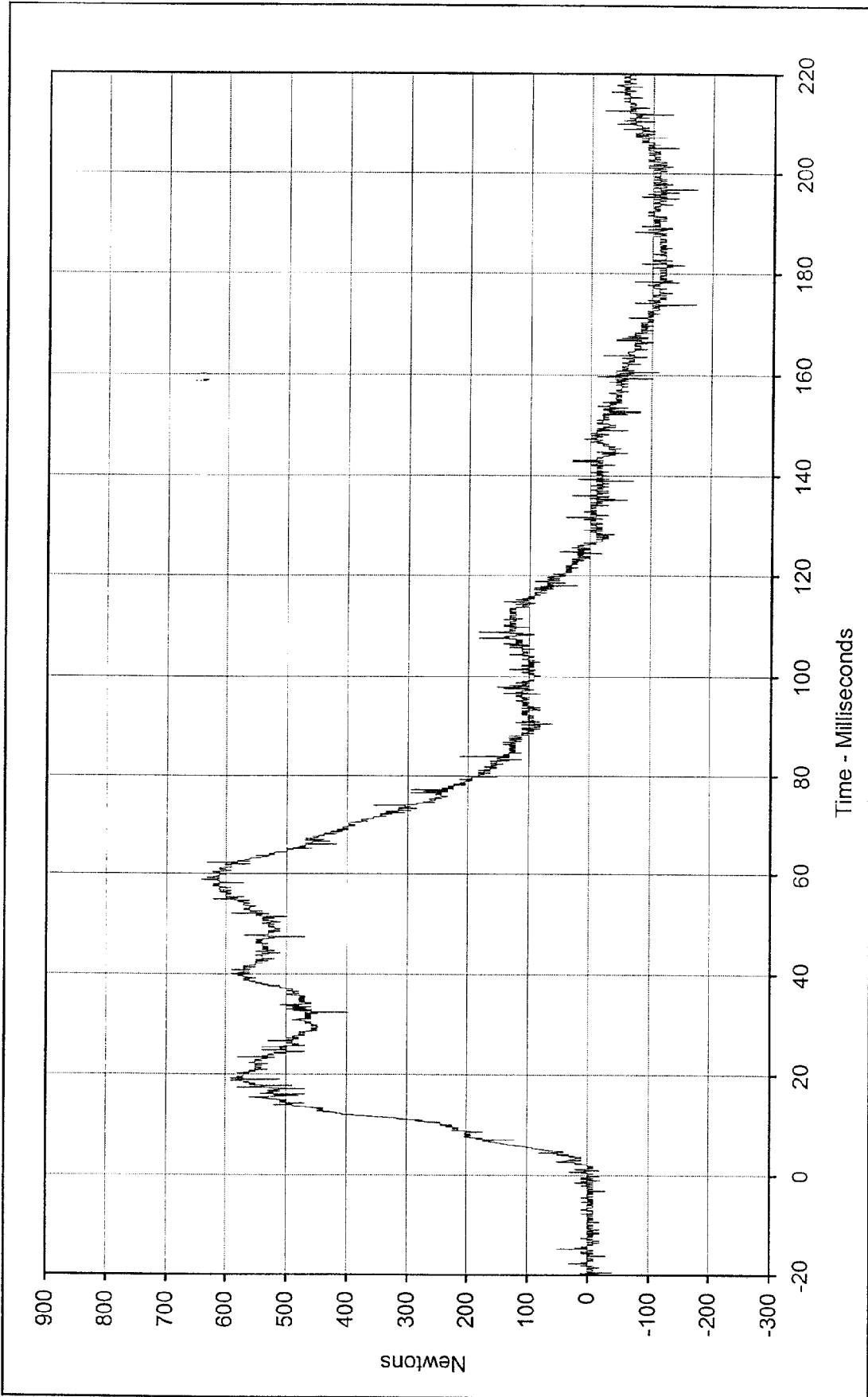
Date



Curve Description: Hybrid III Neck Flexion Test (Female)
 Testing Program: Hybrid III Neck Flexion Test (Female)
 Test Information: S/N of Part: N/A Test I.D.: 274N1

Pendulum Velocity
 Maximum Value: 8.5 at 220.0 Milliseconds
 Minimum Value: 0.0 at 0.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 8/24/97
 ATD Serial No.: 274

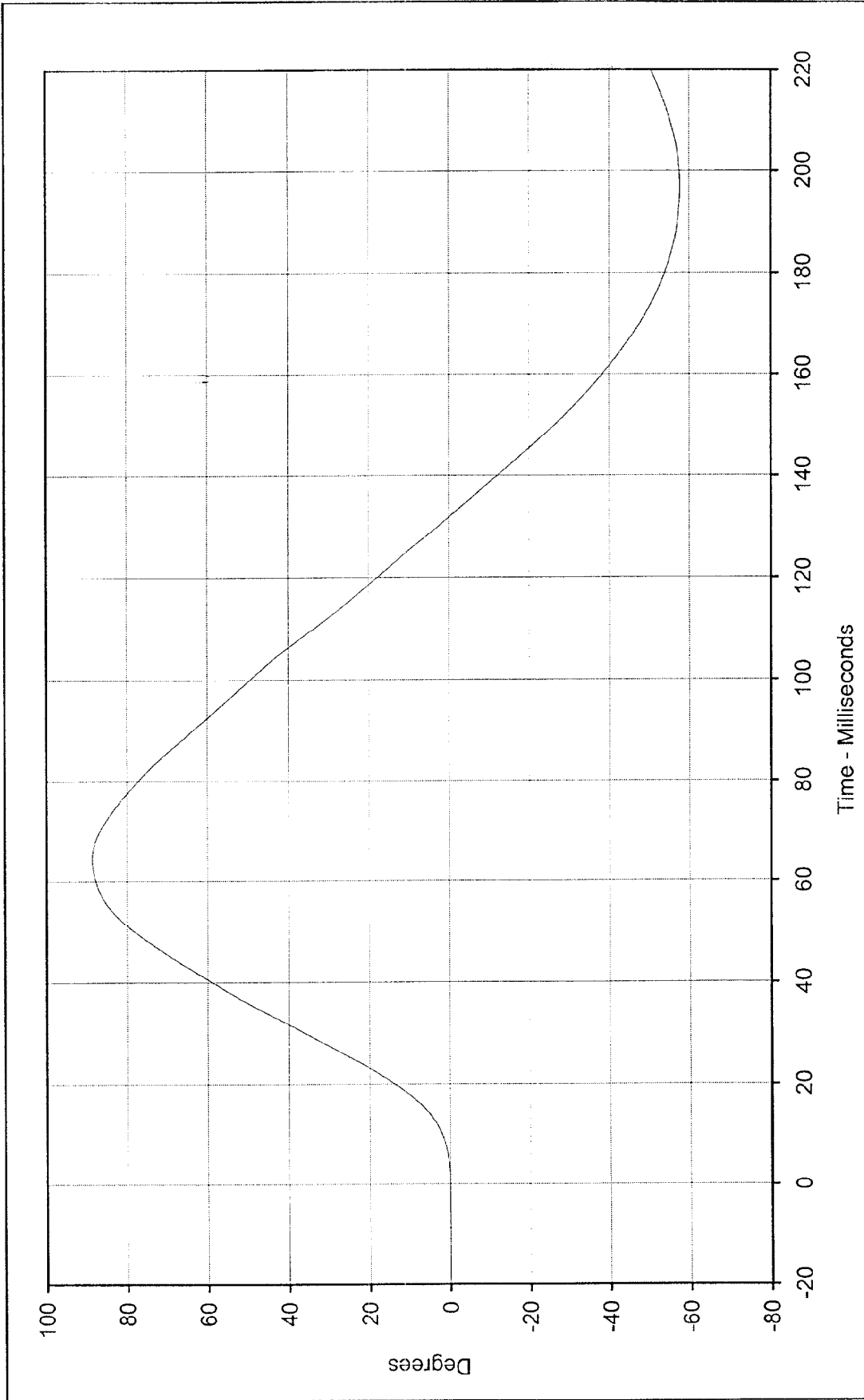




Curve Description: Neck Force X
 Maximum Value: 642.0 at 58.8 Milliseconds
 Minimum Value: -173.2 at 174.0 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 8/24/97
 ATD Serial No.: 274

Testing Program: Hybrid III Neck Flexion Test (Female)
 Test Information: S/N of Part: N/A Test I.D.: 274N1

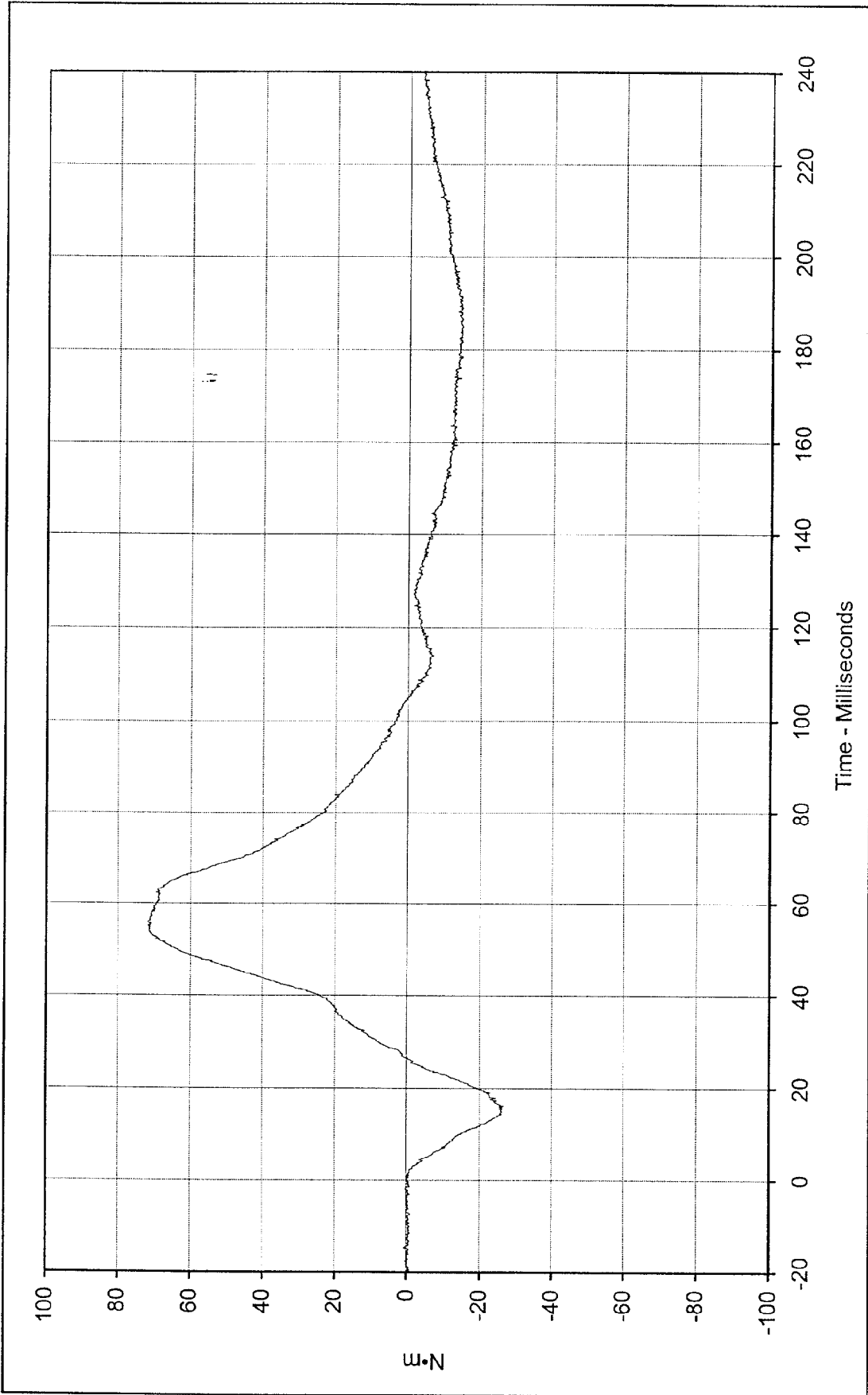




Curve Description: "D" Plane Rotation Testing Program: Hybrid III Neck Flexion Test (Female)
 Maximum Value: 88.6 at 64.3 Milliseconds Test Information: S/N of Part: N/A Test I.D.: 274N1
 Minimum Value: -57.7 at 196.8 Milliseconds



SAE Filter Class: 60
 Date of Test: 8/24/97
 ATD Serial No.: 274



Curve Description: Moment About Occipital Condyles
 Maximum Value: 71.9 at 55.0 Milliseconds
 Minimum Value: -26.8 at 16.2 Milliseconds
 SAE Filter Class: 600
 Date of Test: 8/24/97
 ATD Serial No.: 274

Testing Program: Hybrid III Neck Flexion Test (Female)
 Test Information: S/N of Part: N/A Test I.D.: 274N1





Hybrid III Calibration Data Sheet

5TH Percentile Female

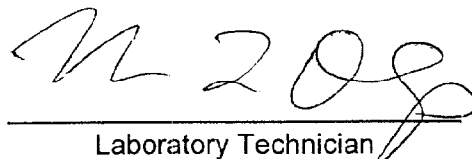
Neck Extension Test

ATD Serial No.: 274

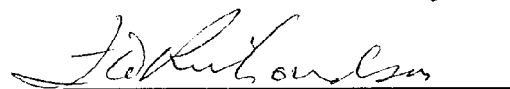
Part Serial No.: N/A

Test I.D.: FNE04

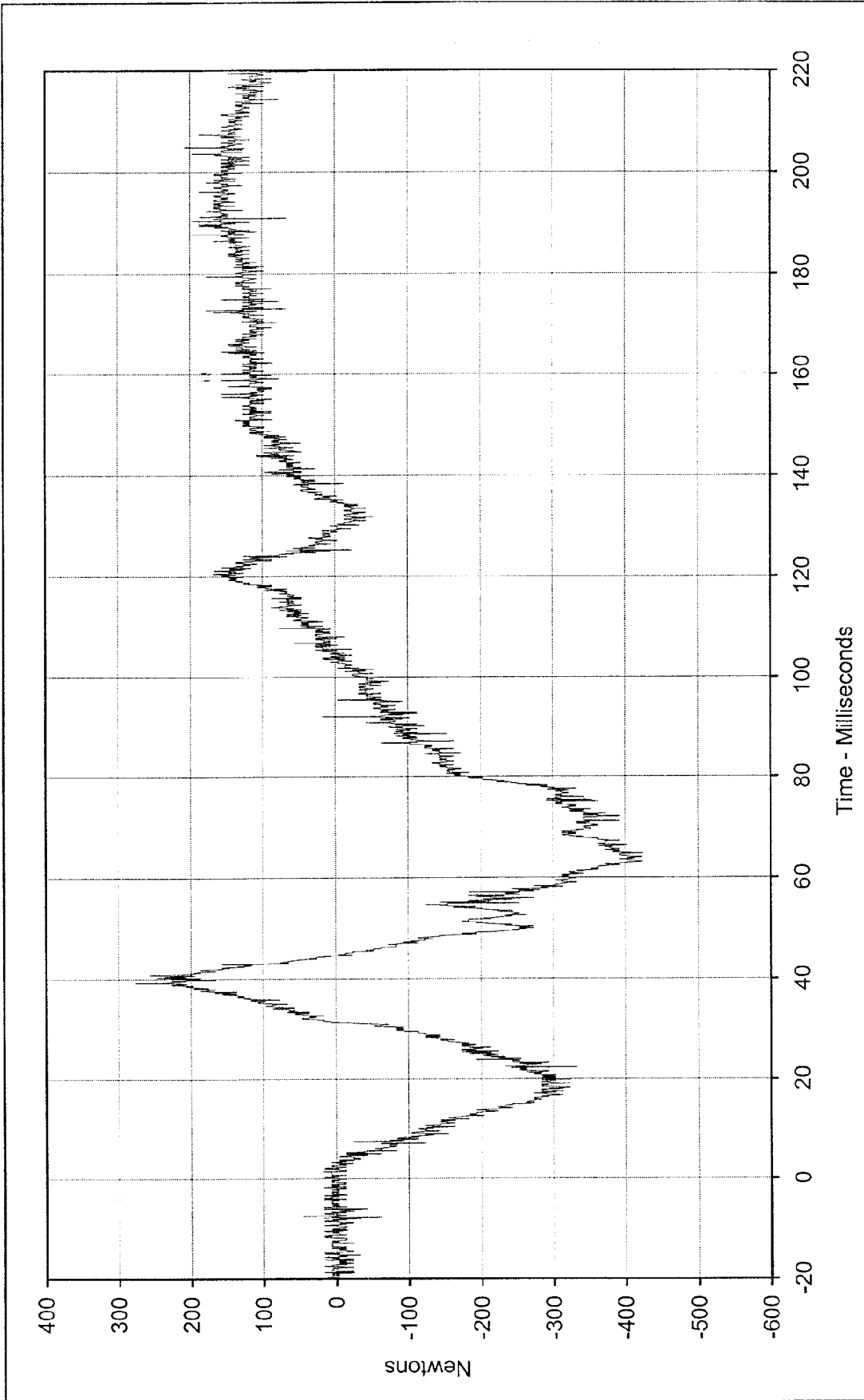
Tested Parameter	Units	Specification	Result	Pass/Fail	
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass	
Laboratory Relative Humidity	%	10 to 70	40	Pass	
Pendulum Velocity	m/s	5.95 to 6.19	6.09	Pass	
Pendulum Deceleration	10 Msec	m/s	1.50 to 1.90	1.52	Pass
	20 Msec	m/s	3.10 to 3.90	3.63	Pass
	30 Msec	m/s	4.60 to 5.60	5.47	Pass
Maximum "D" Plane Rotation	Degrees	97.0 to 119.0	99.5	Pass	
"D" Plane Rotation Decay, Angle When the Decaying Y Moment is at -10 N•m	Degrees	80.0 to 96.0	83.5	Pass	
Calculated Moment About Occipital Condyle	N•m	-54 to -67	-61.0	Pass	
Moment About Occipital Condyle Decay, Time From Negative Peak Value To -10 N•m	Msec.	28.0 to 38.0	35.8	Pass	
Overall Test Results				Pass	


 Laboratory Technician

August 27, 1997
 Test Date

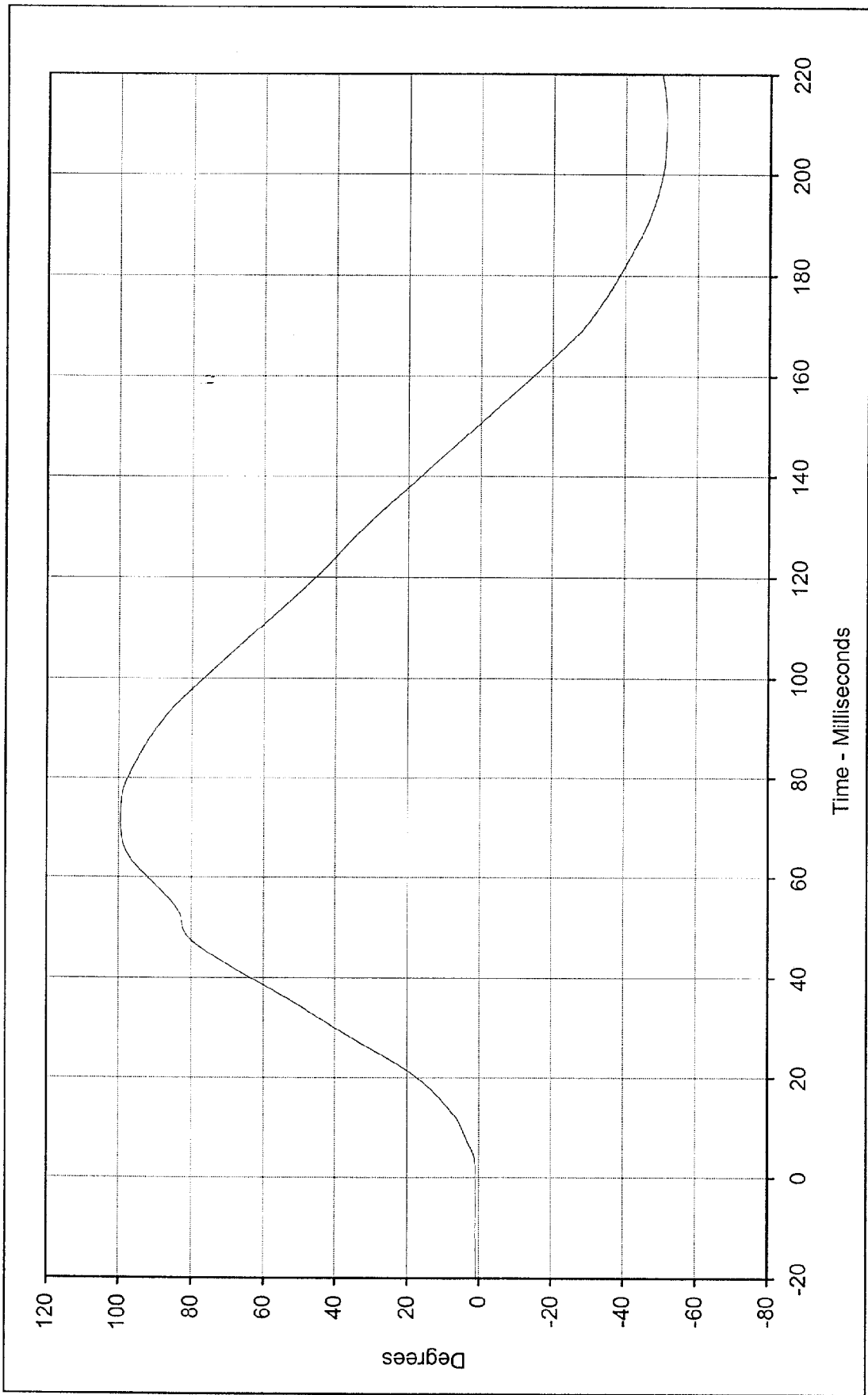

 Approved By

8/27/97
 Date



Curve Description: Neck Force X Testing Program: Hybrid III Neck Extension Test (Female)
 Maximum Value: 276.5 at 39.3 Milliseconds Test Information: S/N of Part: N/A Test I.D.: FNE04
 Minimum Value: -422.5 at 63.0 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 8/27/97
 ATD Serial No.: 274

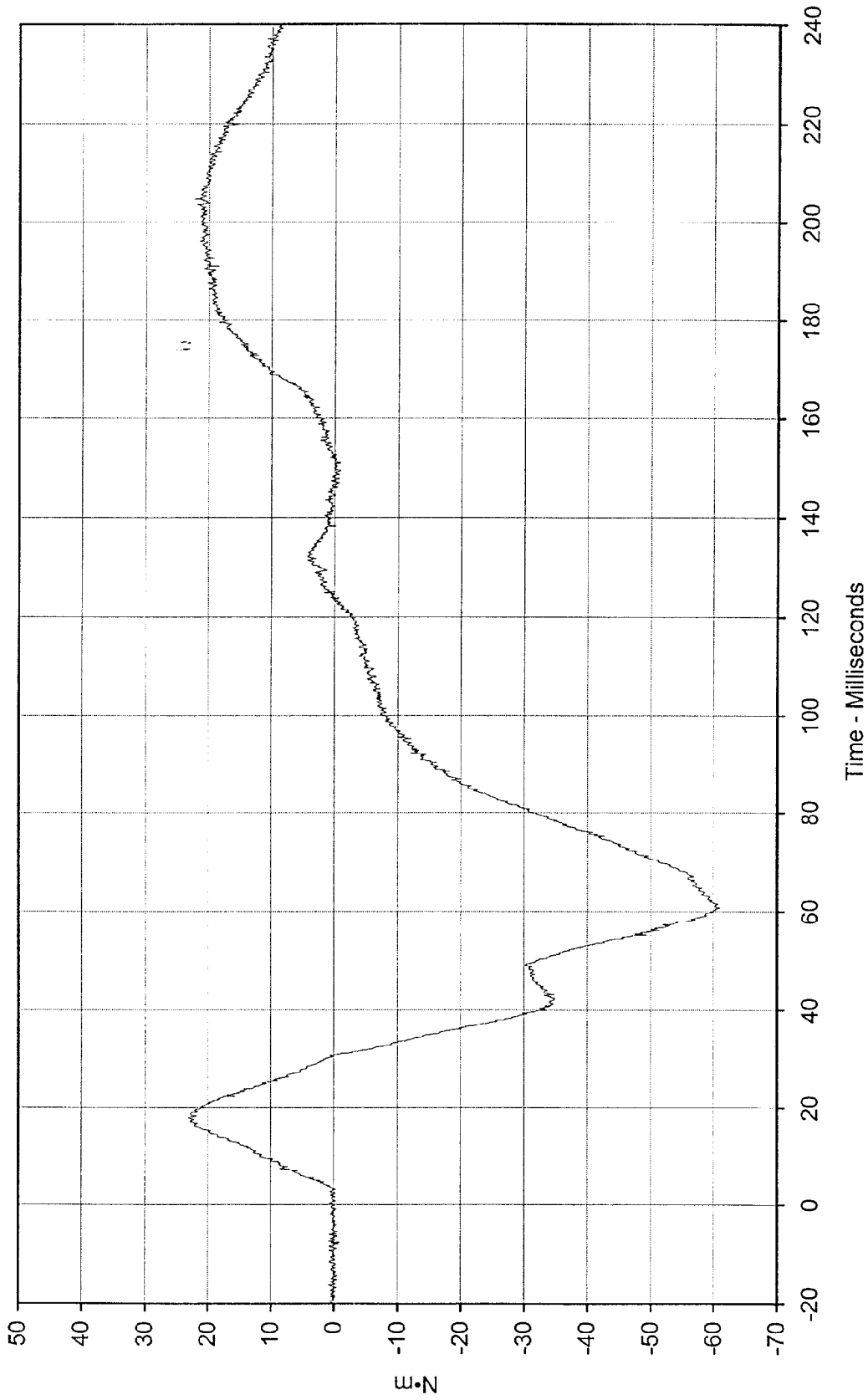




Curve Description: "D" Plane Rotation Testing Program: Hybrid III Neck Extension Test (Female)
 Maximum Value: 99.5 at 71.4 Milliseconds Test Information: S/N of Part: N/A Test I.D.: FNE04
 Minimum Value: -51.1 at 210.9 Milliseconds

SAE Filter Class: 60
 Date of Test: 8/27/97
 ATD Serial No.: 274





Curve Description: Moment About Occipital Concyles Testing Program: Hybrid III Neck Extension Test (Female)

Maximum Value: 23.1 at 17.9 Milliseconds Test Information: S/N of Part: N/A Test I.D.: FNE04

Minimum Value: -61.0 at 60.7 Milliseconds

SAE Filter Class: 600

Date of Test: 8/27/97

ATD Serial No.: 274





Hybrid III Calibration Data Sheet

50TH Percentile Female

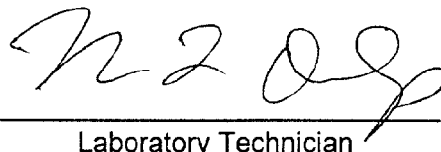
External Measurements

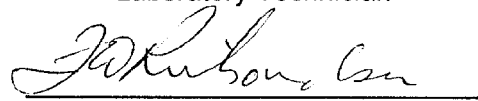
ATD Serial No.: 274

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	21.0	Pass
Laboratory relative humidity	%	10 to 70	43	Pass
A - Total sitting height	mm	785.0 to 795.0	791.0	Pass
B - Shoulder pivot height	mm	434.0 to 450.0	446.0	Pass
C - "H" point height	mm	81.5 to 86.5	84.0	Pass
D - "H" point from seat back	mm	144.5 to 149.5	148.0	Pass
E - Shoulder pivot from back	mm	71.0 to 81.0	80.0	Pass
F - Thigh clearance	mm	114.0 to 130.0	125.0	Pass
G - Elbow to finger tip	mm	393.0 to 409.0	400.0	Pass
H - Skull cap to back line	mm	43.2 to 48.5	46.0	Pass
I - Shoulder to elbow length	mm	287.0 to 303.0	298.0	Pass
J - Elbow rest height	mm	191.0 to 211.0	291.0	Pass
K - Buttock to knee length	mm	509.5 to 533.5	532.0	Pass
L - Popliteal height	mm	349.5 to 373.5	370.0	Pass
M - Knee to floor height	mm	449.0 to 465.0	463.0	Pass
N - Buttock popliteal length	mm	399.5 to 423.5	422.0	Pass
O - Chest depth	mm	183.0 to 200.0	197.0	Pass
P - Foot length	mm	216.0 to 232.0	229.0	Pass
R - Foot width	mm	76.0 to 92.0	90.0	Pass
V - Shoulder width	mm	348.0 to 364.0	361.0	Pass
W - Hip width at "H" point	mm	299.0 to 315.0	311.0	Pass
X - Chest circumference	mm	783.0 to 813.0	785.0	Pass
Y - Waist circumference	mm	757.0 to 787.0	785.0	Pass
AA - Location for chest circumference	mm	300.0 to 310.0	305.0	Pass
BB - Location for waist circumference	mm	160.0 to 170.0	164.0	Pass
Overall Test Results				Pass


 Laboratory Technician


 Approved By

August 27, 1997
 Test Date

8/27/97
 Date

APPENDIX F
VEHICLE OWNER'S MANUAL
OCCUPANT RESTRAINT INSTRUCTIONS

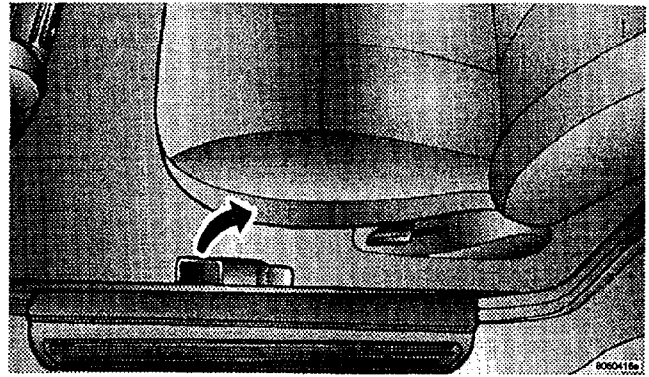
NOTE: For emergency exit with the system engaged, move the lock plunger up (unlocked position), roll down window and open the door with the outside door handle.

POWER WINDOWS — OPTIONAL

The window switches on the driver's door panel control both front windows. The switch on the passenger's door panel controls the passenger's window.

TRUNK LOCK AND RELEASE — OPTIONAL

Use the key to open the trunk from outside the vehicle. From inside the vehicle the trunk lid can be released by lifting the remote cable release lever. The lever is just outboard of the driver's seat riser, next to the sill trim.



OCCUPANT RESTRAINTS

One of the most important safety features in your vehicle is the restraint system. This system includes the front and rear seat belts, and for the driver and right front passenger. Your seat belts also can be used to hold infant and child restraint systems if you will be carrying children too small for adult-size belts.

Please pay careful attention to the information in this section. It tells you how to use your restraint system properly to keep you and your passengers as safe as possible.

WARNING!

In a collision, you and your passengers can suffer much greater injuries if you are not properly buckled up. You can strike the interior of your vehicle or other passengers, or you can be thrown out of the vehicle. Always be sure you and others in your vehicle are buckled up properly.

Buckle up even though you are an excellent driver. Even on short trips. Someone on the road may be a poor driver and cause a collision which includes you. And this can happen far away from home or on your own street.

Research has shown that seat belts save lives. And they can reduce the seriousness of injuries in a collision. Some of the worst injuries happen when people are thrown from the vehicle. Seat belts provide protection from that,

and they reduce the risk of injury caused by striking the inside of the vehicle. Everyone in a motor vehicle needs to be buckled up all the time.

Unibelts

The seats next to the front and rear doors of your vehicle are equipped with Unibelts.

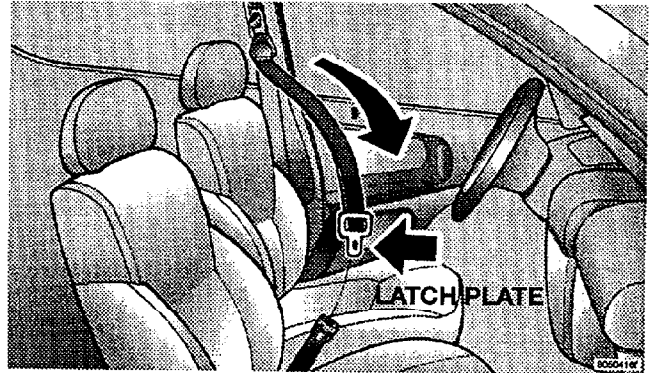
Each unibelt is a combined lap/shoulder belt system. The belt webbing retractor will lock only during very sudden stops or impacts. This feature allows the shoulder part of the belt to move freely with you under normal conditions. But in a collision, the belt will lock and reduce the risk of your striking the inside of the vehicle or being thrown out.

WARNING!

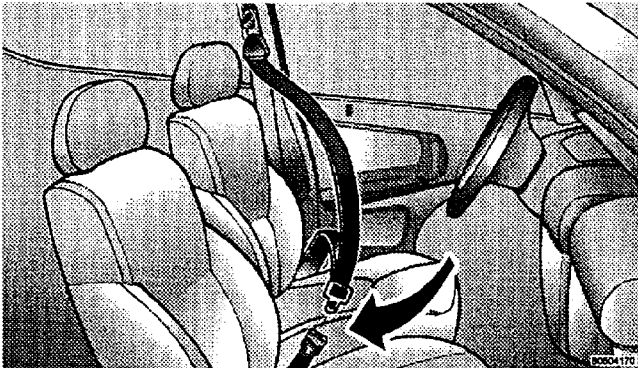
- Wearing a seat belt incorrectly is dangerous. Seat belts are designed to go around the large bones of your body. These are the strongest parts of your body and can take the forces of a collision the best.
- Wearing your belt in the wrong place could make your injuries in a collision much worse. You might suffer internal injuries, or you could even slide out of part of the belt. Follow these instructions to wear your seat belt safely and to keep your passengers safe, too.
- Belting two people into one seat belt can lead to greater injury. People belted together can crash into one another in an accident, hurting one another badly. Never use a unbelt or a lap belt for more than one person, no matter what their size.

Unibelt Operating Instructions

1. Enter the vehicle and close the door. Sit back and adjust the seat.
2. The seat belt latch plate is above the back of your seat. Grasp the latch plate and pull out the belt. Slide the latch plate up the webbing as far as necessary to make the belt go around your lap.



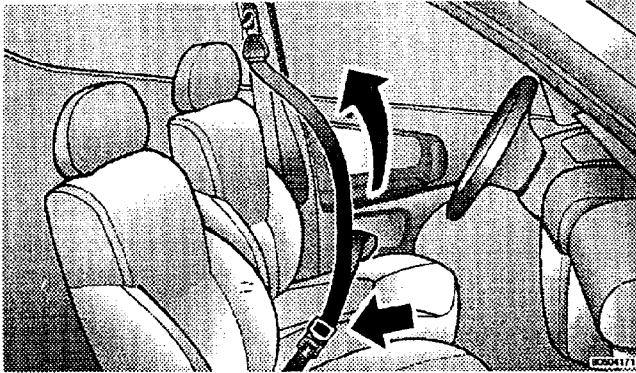
3. When the belt is long enough to fit, insert the latch plate into the buckle until you hear a "click".

**WARNING!**

- A belt that is buckled into the wrong buckle will not protect you properly. The lap portion could ride too high on your body, possibly causing internal injuries. Always buckle your belt into the buckle nearest you.
- A belt that is too loose will not protect you as well. In a sudden stop you could move too far forward, increasing the possibility of injury. Wear your seat belt snugly.
- A belt that is worn under your arm is very dangerous. Your body could fall into the inside surfaces of the vehicle in a collision, increasing head and neck injury. And a belt worn under the arm can cause internal injuries. Ribs aren't as strong as shoulder bones. Wear the belt over your shoulder so that your strongest bones will take the force in a collision.

2

4. Position the lap belt across your thighs, below your abdomen. To remove slack in the lap belt portion, pull up a bit on the shoulder belt, as shown. To loosen the lap belt if it is too tight, tilt the latch plate and pull on the lap belt. A snug belt reduces the risk of sliding under the belt in a collision.



WARNING!

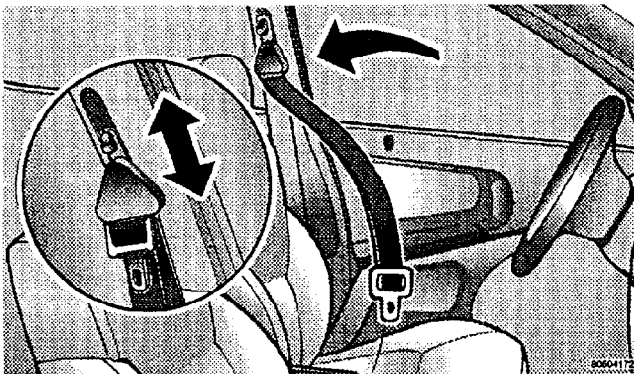
- A lap belt worn too high can increase the risk of internal injury in a collision. The belt forces won't be at the strong hip and pelvic bones, but across your abdomen. Always wear the lap belt as low as possible and keep it snug.
- A twisted belt can't do its job as well. In a collision it could even cut into you. Be sure the belt is straight. Use the Unibelt Untwisting Procedure. If you can't straighten a belt in your vehicle, take it to your dealer and have it fixed.

5. Position the shoulder belt on your chest so that it is comfortable and not resting on your neck. The retractor will withdraw any slack in the belt.

6. Adjustable Upper Shoulder Belt Anchorage

4 Door Models

In the front seat, the shoulder belt can be adjusted upward or downward to position the belt away from your neck. Push up or down on the anchorage control to release the anchorage, and move it up or down to the position that serves you best.



As a guide, if you are shorter than average, you will prefer a lower position, and if you are taller than average, you'll prefer a higher position. When you release the anchorage, try to move it up or down to make sure that it is locked in position.

2

2 Door Models

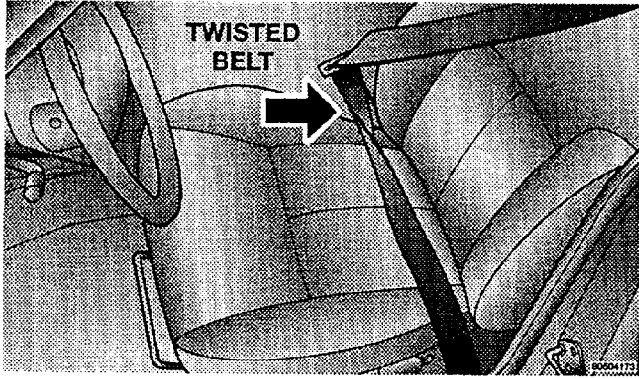
In the front seats, the shoulder belt upper anchorage adjusts automatically to your height as you position the shoulder belt on your chest. If the belt is not comfortable, pull the shoulder belt webbing forward from the retractor and guide it over the desired point on your shoulder belt as it retracts.

In the rear seat, move toward the center of the seat to position the belt away from your neck.

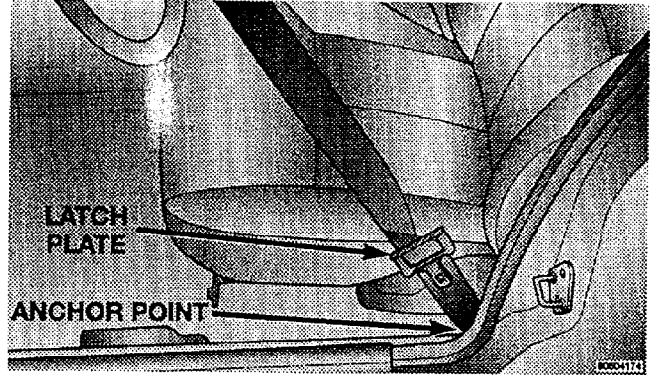
To release the belt, push the red button marked PRESS on the buckle. The belt will automatically retract to its stowed position. If necessary, slide the latch plate down the webbing to allow it to retract fully.

Unibelt Untwisting Procedure

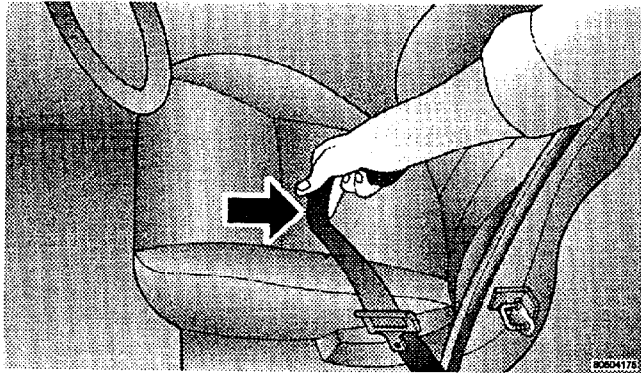
Use the following procedure to untwist a twisted unibelt.



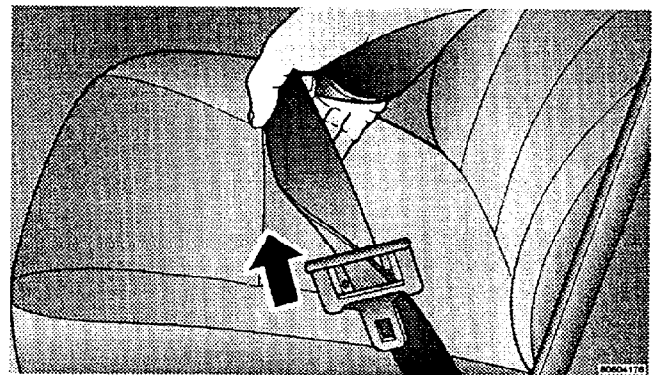
1. Position the latchplate as close as possible to the anchor point.



2. At about 6 to 12 inches above the latchplate, grasp and twist the belt webbing 180° to create a fold that begins immediately above the latchplate.



3. Slide the latchplate upward over the folded webbing. The folded webbing must enter the slot at the top of the latchplate.



4. Continue to slide the latchplate up until it clears the folded webbing.

Seat Belts And Pregnant Women

We recommend that pregnant women use the seat belts throughout their pregnancy. Keeping the mother safe is the best way to keep the baby safe.

Pregnant women should wear the lap part of the belt across the thighs and as snug across the hips as possible.

Keep the belt low so that it does not come across the abdomen. That way the strong bones of the hips will take the force if there is a collision.

Rear Center Lap Belts

The center rear seating position has a lap belt only. To fasten a lap belt, slip the latch plate into the buckle.

To lengthen a lap belt, tilt the latch plate and pull. To remove slack, pull the loose end of the webbing. Wear the belt snug against the hips. Sit back and erect in the seat, then adjust the belt as tightly as is comfortable.

WARNING!

A lap belt worn too loose or too high is dangerous. A belt worn too loose can allow you to slip down and under the belt in a collision. A belt that is too high will apply crash forces to the abdomen, not to the stronger hip bones. In either case, the risk of internal injuries is greater. Wear the lap belt low and snug.

WARNING!

A frayed or torn belt could rip apart in a collision and leave you with no protection. Inspect the belt system periodically, checking for cuts, frays, or loose parts. Damaged parts must be replaced immediately. Do not disassemble or modify the system. Seat belt assemblies must be replaced after an accident if they have been damaged (bent retractor, torn webbing, etc).

Seat Belt Extender

If a seat belt is too short, even when fully extended, your dealer can provide you with a seat belt extender. This extender should be used only if the existing belt is not long enough.

WARNING!

Using a seat belt extender when not needed can increase the risk of injury in a collision. Only use the extender when a lap belt is not long enough when it is worn low and snug, and in the recommended seating positions. Remove and stow the seat belt extender when it is not needed.

Child Restraint

Everyone in your vehicle needs to be buckled up all the time, babies and children, too.

WARNING!

In a collision, an unrestrained child, even a tiny baby, can become a missile inside the vehicle. The force required to hold even an infant on your lap could become so great that you could not hold the child, no matter how strong you are. The child and others could be badly injured. Any child riding in your vehicle should be in a proper restraint for the child's size. All states and Canadian provinces require small children to ride in proper restraint systems. This is the law, and you can be prosecuted for ignoring it.

Chrysler Integrated Child Seat — Optional

Operating Instructions for this seat are included with the seat. If the instructions are not with the seat or in the owner's manual package, replacement instructions can be obtained.

To obtain replacement instructions:

Use the order form at the rear of this manual and specify publication N-016-9470.

Infants And Small Children

There are different sizes and types of restraints for children from newborn size to the bigger child almost large enough for an adult safety belt. Use the restraint that is correct for your child.

Two different child restraint systems are generally available:

- The infant carrier for babies weighing up to 20 lbs. (9 kg.)
- The child seat for small children over 20 lbs.

In addition, some manufacturers make systems that can be first used as an infant carrier, and then converted to a child seat as the child grows.

Here are some tips on getting the most out of your child restraint:

- Before buying any restraint system, make sure that it has a label certifying that it meets Motor Vehicle Safety Standard 213. Chrysler also recommends that before you buy a child restraint, you try it in the vehicle seats where you will use it.

- The restraint must be appropriate for your child's weight and height. Check the label on the restraint for this too.

WARNING!

- A rearward facing infant restraint should only be used in a rear seat. A rearward facing infant restraint in the front seat may be struck by a deploying passenger airbag which may cause severe or fatal injury to the infant.
- Improper installation can lead to failure of an infant or child restraint. It could come loose in a collision. The child could be badly injured or killed. Follow the manufacturer's directions exactly when installing an infant or child restraint.
- If possible, install the restraint in the rear seat. According to accident statistics, children are safer when properly restrained in the rear seats than in the front.

- Carefully follow the instructions that come with the restraint. If you install the restraint improperly, it may not work when you need it.
- Infant and child restraints are secured in the vehicle seats by the lap belt or the lap part of the lap/shoulder belt.

In the rear seats, you may have trouble tightening the belt on the child restraint because the buckle or latch plate interferes with the belt path opening on the restraint. Disconnect the latch plate from the buckle and twist the short buckle-end belt several turns to shorten it. Reassemble the latch plate to the buckle with the release button facing out.

In the front seat, move the seat forward to reposition the buckle against the side of the child restraint.

In the center rear seat if the belt still can't be tightened, or if pulling and pushing on the restraint loosens the belt, you may need to do something more. Disconnect the latch plate from the buckle, turn it over, and reconnect it to the buckle. If you still can't make the child restraint secure, try a different seating position.

- Some child seat manufacturers recommend the use of a top anchorage (tether) strap in addition to the lap belt. Your vehicle has tether strap anchorages behind the rear seating positions for use with these child seats. Your dealer can provide you with anchorage hardware and installation instructions.
- Buckle the child into the seat exactly as the seat manufacturer's directions tell you. The latch plate will keep the belt tight.
- When your infant carrier or child seat is not in use, secure it with the seat belt or remove it from the vehicle. Don't leave it loose in the vehicle. In a sudden stop or collision, it could strike occupants and injure them.

Children Too Large For Child Seats

Children who are too large for child seats and who can sit upright by themselves should use the available lap/shoulder belts for best protection.

- Make sure that the child is seated upright in the seat.
- The lap belt should be fastened low on the hips and as snug as possible.

- Check belt fit periodically. A child's squirming or slouching can move the belt out of position.

If the shoulder belt contacts the face or neck, move the child closer to the middle of the vehicle. If this doesn't solve the problem, move the child to the center rear seating position and use the lap belt.

Booster seats that may help overcome this problem are also available for use with lap/shoulder belts. Before buying a booster seat, make sure that it has a label certifying that it meets applicable Motor Vehicle Safety Standards. Make sure that it is satisfactory for use in this vehicle.

Driver and Right Front Passenger Supplemental Restraint System (SRS) - Airbag

This vehicle has airbags for the driver and right front passenger as a supplement to the seat belt restraint systems. The driver's airbag is mounted in the steering wheel. The passenger side airbag is mounted in the instrument panel, above the glove compartment, under a cover marked SRS/AIRBAG. These airbags inflate in higher speed impacts. They work with the instrument panel knee bolsters and the seat belts to provide im-

proved protection for the driver and right front passenger.

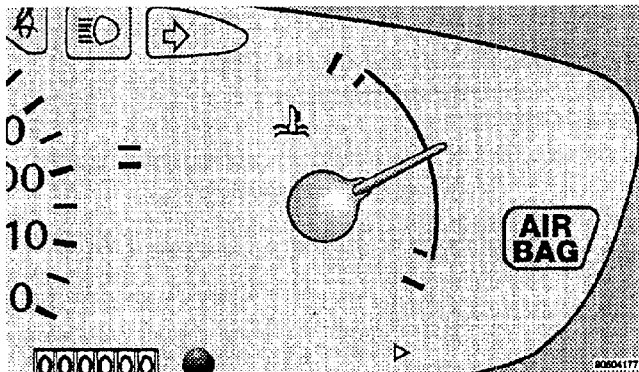
WARNING!

- Relying on the airbags alone could lead to more severe injuries in a collision. The airbags work with your seat belt to restrain you properly. In some collisions the airbags won't deploy at all. Wear your seat belts even though you have airbags.
- Being too close to the steering wheel or instrument panel during airbag deployment could cause serious injury. Airbags need room to inflate. Sit back, comfortably extending your arms to reach the steering wheel or instrument panel.

The seat belts are designed to protect you in many types of collisions. The airbags deploy only in frontal collisions and will not deploy in collisions at slow speed. But even in collisions where the airbags work, you need the seat belts to keep you in the right position for the airbags to protect you properly.

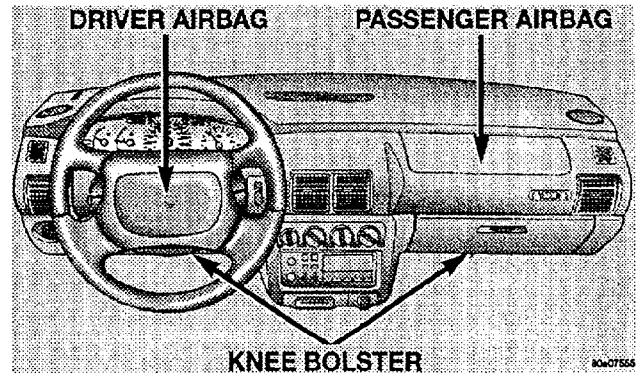
The airbag system consists of the following:

- Crash Sensors
- Diagnostic Unit
- AIRBAG Readiness Light.



- Driver and Passenger Airbag/Inflator Units
- Unique Steering Wheel and Column
- Unique Instrument Panel
- Interconnecting Wiring

- Knee Impact Bolster.



How The Airbag System Works

- Crash Sensors in the front of the vehicle and in the occupant compartment determine if a frontal impact is severe enough to require the airbag. The sensors will not detect side, rollover, or rear impacts. Switches in the sensors are connected to the diagnostic unit and to the airbag/inflator unit.
- The Diagnostic Unit monitors the readiness of the electronic parts of the system whenever the ignition

switch is in the START or RUN positions. These include all of the items listed previously except the knee bolster, instrument panel, and steering column. The Diagnostic Unit also turns on the AIRBAG light in the instrument panel for 6 to 8 seconds when the ignition is first turned on, then turns the light off. If it detects a malfunction in any part of the system, it turns on the light either momentarily or continuously

WARNING!

Ignoring the AIRBAG light in your instrument panel could mean you won't have the airbags to protect you in a collision. If the light does not come on, stays on after you start the vehicle, or if it comes on as you drive, have the airbag system checked right away.

- The Airbag/Inflator Units are in the center of the steering wheel and in the instrument panel. The words SRS/AIRBAG are embossed on the airbag covers.

WARNING!

Do not put anything on or around the airbag covers or attempt to manually open them. You may damage the airbags and you could be injured because the airbags are not there to protect you. These protective covers for the airbag cushions are designed to open only when the airbags are inflating.

- When the crash sensors detect an impact requiring the airbags, they signal the inflator units. A large quantity of non-toxic nitrogen gas is generated to inflate the airbags. The airbag covers separate and fold out of the way as the airbags inflate to their full size. The airbags fully inflate in about 50 milliseconds. This is only about half of the time it takes you to blink your eyes. The airbags then quickly deflate while helping to restrain the driver and right front passenger. The airbag gas is vented through the airbag material towards the instrument panel. In this way the airbags do not interfere with your control of the vehicle.
- The Knee Impact Bolsters help protect the knees and position you for the best interaction with the airbags.

If A Deployment Occurs

The airbag system is designed to deploy when the impact sensors detect a moderate-to-severe frontal collision, to help restrain the driver and right front passenger, and then to immediately deflate.

NOTE: A frontal collision that is not severe enough to need airbag protection will not activate the system. This does not mean something is wrong with the airbag system.

If you do have a collision which deploys the airbags, any or all of the following may occur:

- The nylon airbag material may sometimes cause abrasions and/or skin reddening to the driver and right front passenger as the airbags deploy and unfold. The abrasions are similar to friction rope burns or those you might get sliding along a carpet or gymnasium floor. They are not caused by contact with chemicals. They are not permanent and normally heal quickly. However, if you haven't healed significantly within a few days, or if you have any blistering, see your doctor immediately.

- As the airbags deflate you may see some smoke-like particles. The particles are a normal by-product of the process that generates the non-toxic nitrogen gas used for airbag inflation. These airborne particles may irritate the skin, eyes, nose, or throat. If you have skin or eye irritation, rinse the area with cool water. For nose or throat irritation, move to fresh air. If the irritation continues, see your doctor. If these particles settle on your clothing, follow the garment manufacturer's instructions for cleaning.
- Your vehicle may be safely driveable after the airbags deploy. If so, you can tuck the deployed airbags inside the opening in the steering wheel hub and instrument panel trim covers to make driving somewhat easier.

WARNING!

Deployed airbags can't protect you in another collision. Have the airbags replaced by an authorized dealer as soon as possible.

2

Transporting Pets

Airbags deploying in the front seat could harm your pet. An unrestrained pet will be thrown about and possibly injured, or injure a passenger during panic braking or in a collision.

Pets should be restrained in the rear seat in pet harnesses or pet carriers that are secured by seat belts.

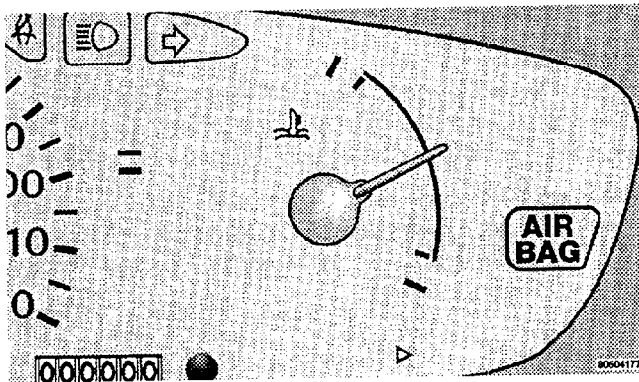
Maintaining Your Airbag System**WARNING!**

- Modifications to any part of the airbag system could cause it to fail when you need it. You could be injured because the airbag is not there to protect you. Do not modify the components or wiring, including adding any kind of badges or stickers to the airbag covers. Do not modify the front bumper or vehicle body structure.
- You need proper knee impact protection in a collision. Do not mount or locate any aftermarket equipment on or behind the knee bolsters.
- It is dangerous to try to repair any part of the airbag system yourself. Don't try to repair the airbag system. Be sure to tell anyone who works on your vehicle that it has airbags.

You will want to have the airbags ready for your protection in a collision. The airbag Supplemental Restraint System (SRS) is designed to be maintenance free.

If any of the following occurs, have an authorized dealer service the system immediately.

- The AIRBAG light does not come on or flickers during the 6 to 8 seconds when the ignition switch is first turned on.



- The light remains on or flickers after the 6 to 8 second interval.
- The light flickers or comes on and remains on while driving.

ENGINE BREAK-IN RECOMMENDATIONS

The engine in your new vehicle does not require a long break-in period.

Drive moderately during the first 300 miles (500 km). After the initial 60 miles (100 km), speeds up to 50 or 55 mph (80 or 90 km/h) are desirable.

While cruising, brief full-throttle acceleration, within the limits of local traffic laws, contributes to a good break-in.

Wide open throttle acceleration in low gear can be detrimental and should be avoided.

The crankcase oil installed in the engine at the factory is a high quality energy conserving type lubricant. Oil changes should be consistent with expected climate conditions under which vehicle operations will occur. The recommended viscosity and quality grades are in Section 7 of this manual.

Do not use non-detergent or straight mineral oils.

A new engine may consume some oil during its first few thousand miles of operation. This is a normal part of the break-in and not an indication of a problem.

2

SAFETY TIPS**Exhaust Gas****WARNING!**

Exhaust gases can injure or kill. They contain carbon monoxide (CO) which is colorless and odorless. Breathing it can make you unconscious and can eventually poison you. To avoid breathing (CO) follow the safety tips below.

Do not run the engine in a closed garage or in confined areas any longer than needed to move your vehicle in or out of the area.

If it is necessary to sit in a parked vehicle with the engine running, adjust your heating or cooling controls to force outside air into the vehicle. Set the blower at high speed.

To avoid drawing exhaust gases into the vehicle, close the trunk while driving. However, if for some reason it must remain open, close all windows. Adjust the heating or cooling system to force outside air into the vehicle. Set the blower at high speed.

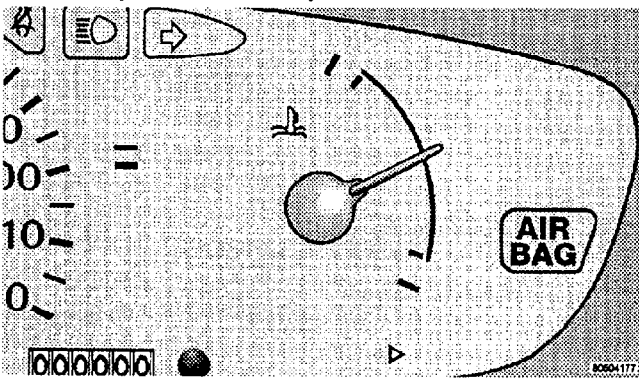
Safety Checks You Should Make Inside The Vehicle**Seat Belts**

Inspect the belt system periodically, checking for cuts, frays and loose parts. Damaged parts must be replaced immediately. Do not disassemble or modify the system.

Safety belt assemblies must be replaced after an accident if they have been damaged (bent retractor, torn webbing, etc.). If there is any question regarding belt or retractor condition, replace the belt.

Airbag Light

The light should come on and remain on for 6 to 8 seconds as a bulb check when the ignition switch is first turned ON. If the bulb is not lit during starting, have it replaced. If the light stays on or comes on while driving, have the system checked by an authorized dealer.

**Defrosters**

Check operation by selecting the defrost mode and place the blower control on high speed. You should be able to feel the air directed against the windshield.

Periodic Safety Checks You Should Make Outside The Vehicle**Tires**

Examine tires for excessive tread wear or uneven wear patterns. Check for stones, nails, glass, or other objects lodged in the tread. Inspect for tread cuts or sidewall cracks. Check wheel nuts for tightness, and tires (including spare) for proper pressure.

Lights

Have someone observe the operation of exterior lights while you work the controls. Check turn signal and high beam indicator lights on the instrument panel.

Fluid Leaks

Check area under vehicle after overnight parking for fuel, water, oil, or other fluid leaks. Also, if gasoline fumes are present, the cause should be corrected immediately.

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