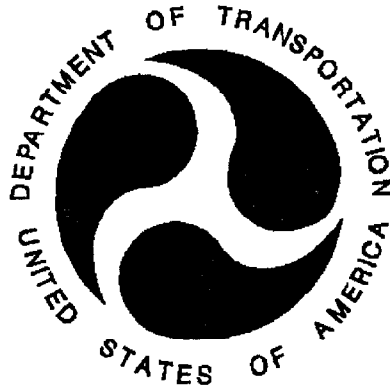


REPORT NO. KAR-97-09

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
FRONTAL BARRIER FORTY PERCENT OFFSET IMPACT TEST

DODGE MOTOR CORPORATION
1996 FORD TAURUS
4-DOOR SEDAN
NHTSA NO. MT0210

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



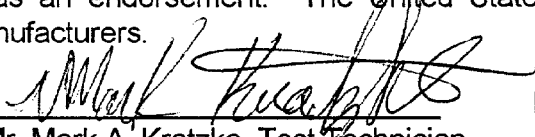
AUGUST 27, 1997
FINAL REPORT

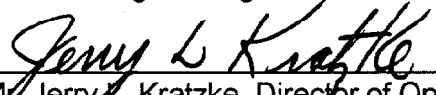
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NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
SAFETY PERFORMANCE STANDARDS
OFFICE OF CRASHWORTHINESS STANDARDS
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WASHINGTON, D.C. 20590


2677

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Date of Acceptance

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16. <i>Abstract</i> A 60 km/h frontal barrier impact test was conducted on a 1996 Ford Taurus 4-door sedan at KARCO Engineering on July 17, 1997. This test was conducted to obtain data indicant of FMVSS 208, 212, 219 (partial), 301 and footwell intrusion performance. The impact velocity was 61.05 km/h. The ambient temperature at the barrier face at the time of impact was 27.8 degrees Celsius. The vehicle's maximum post-test static crush was 750 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>343.2</td> <td>252.0</td> </tr> <tr> <td>Chest Resultant Peak 3 msec clip</td> <td>60 G's</td> <td>30.0</td> <td>31.7</td> </tr> <tr> <td>Left Femur Force</td> <td>10009 N</td> <td>-2577.6</td> <td>-3728.1</td> </tr> <tr> <td>Right Femur Force</td> <td>10009 N</td> <td>-3493.8</td> <td>-1993.9</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	343.2	252.0	Chest Resultant Peak 3 msec clip	60 G's	30.0	31.7	Left Femur Force	10009 N	-2577.6	-3728.1	Right Femur Force	10009 N	-3493.8	-1993.9
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SECTION 1

PURPOSE, TEST PROCEDURE AND SUMMARY OF TEST MT0210

1.1 PURPOSE

This 37.5 mph (60.3 km/h) frontal barrier impact test is part of the FY' 97 Forty Percent Offset 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 deformable 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 60 km/h forty percent frontal barrier offset 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.

The test was conducted at KARCO Engineering on July, 17, 1997 at a speed of 61.05 km/h. The test vehicle was aligned with the deformable barrier such that the right edge of the barrier face was offset to the left of the vehicle centerline by ten percent of the vehicle's width. The test vehicle was instrumented with eight (8) accelerometers to measure longitudinal axis and rotational accelerations. The driver's 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 59.53 to 61.14 km/h. The frontal barrier impact event was documented by one (1) real-time panning motion picture camera and sixteen (16) high-speed motion picture cameras. The pre- and post-test conditions were recorded by one (1) real-time motion picture camera. Pre- and post-test photographs of the vehicle and dummies can be found in Appendix A.

The test vehicle contained two (2) part 572E 50th percentile adult male anthropomorphic test devices (ATDs). Both ATDs were instrumented with head, chest, pelvic triaxial 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. 34) and the right-front passenger ATD (serial No. 35) were re-calibrated prior to use in this program. Injury criteria was not exceeded by either ATD during this frontal offset barrier impact test.

1.3 SUMMARY OF FRONTAL BARRIER IMPACT TEST

A deformable honeycomb barrier was impacted by a 1996 FORD TAURUS 4-DOOR SEDAN at a velocity of 61.05 km/h. The test weight, with two (2) 50th percentile male dummies, was 1753 kg.

The driver's Head Injury Criteria (HIC) was 343.2, the maximum chest deceleration over three (3) milliseconds was 30.0 g and the left and right femur loads were -2577.6 and -3493.8 Newtons, respectively. Chest deflection for the driver ATD was -2.95 mm. The driver ATD head contacted the airbag, head rest and 'B' pillar; its chest contacted the airbag, and both knees contacted the lower dash knee bolster.

The right front passenger's HIC was 252.0, maximum chest deceleration over three (3) milliseconds was 31.7, and the left and right femur loads were -3728.1 and -1993.9 Newtons respectively. Chest deflection for the passenger ATD was -3.00 mm. The passenger ATD head and chest contacted the airbag, both knees contacted the glove box and knee bolster.

Seat belt spoolout, measured by high-speed film analysis, was 80 mm for the driver ATD and 60 mm for the passenger ATD. On-board pullout potentiometers measured 75.6 mm for the driver ATD and 55.8 mm for the passenger ATD. Shoulder belt stretch was 0.032 cm/cm for the driver ATD and 0.054 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 750 mm at the left side of the front bumper. The driver side door was jammed. The passenger side door opened without the aid of tools.

1.4 GENERAL COMMENTS

The 1996 Ford Taurus 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 deformable barrier pre- and post-test 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: 60.3 km/h Forty Percent Offset 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: 60.3 km/h Forty Percent Offset Frontal Barrier Impact NHTSA NO. MT0210

TEST DATE: July 17, 1997 TIME: 7:30 PM TEMPERATURE: 27.8° C

VEHICLE YEAR/MAKE/MODEL/BODY STYLE: 1996 FORD TAURUS 4-DOOR SEDAN

TEST WEIGHT: 1753 kg IMPACT VELOCITY: 61.05 km/h

VEHICLE REBOUND AND STATIC CRUSH; REBOUND ANGLE = 42°

	Left	Center	Right
Vehicle Rebound (mm)	1710	2350	2560
Pre-test Measurements (mm)	4750	5015	4750
Post-test Measurements (mm)	4000	4350	4320
Static Crush (mm)	750	665	430

DOOR OPENING AND SEAT TRACK INFORMATION

	Driver	Passenger
Door Opening (Front)	JAMMED	OPENED
Door Opening (Rear)	OPENED	OPENED
Seat Track Shift (mm of shift)	20	0
Seat Back Failure	NO	NO

DUMMY INFORMATION

	Driver	Passenger
Dummy Type/No.	50% Male Hybrid III (S/N 34)	50% Male Hybrid III (S/N 35)
Data Channels	44	44
Visible Contact Points		
Head	AIR BAG, 'B' PILLAR, HEAD REST	AIR BAG, HEAD REST
Chest	AIR BAG	AIR BAG
Abdomen	AIR BAG	AIR BAG
Left Knee	KNEE BOLSTER	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 FORD TAURUS 4-DOOR SEDAN

TEST VEHICLE INFORMATION			
Manufacturer	FORD MOTOR CO.	VIN	1FALP52U7TA308101
Manufacturing Date	6/96	Delivery Date	6/27/97
Dealer	Fairview Ford San Bernardino, CA	NHTSA No.	MT0210
Odometer Reading	21,837 mi.	Fuel Type	Unleaded Gasoline
Engine Displacement	3.0 Liter	Cylinders	6
Transmission	3-speed Automatic	Final Drive	Front Wheel Drive
Engine Placement	Transverse	Color	Dark Blue
Tire Press./Max. Cap. Front	226 kPa	Cold Tire Press. Front	226 kPa
Tire Press./Max. Cap. Rear	226 kPa	Cold Tire Press. Rear	226 kPa
Recommend Tire Size	P205/65R15	Type of Spare	T135/90/R15 Temporal Spare
Tire Size on Vehicle	P205/65R15	Manufacturer	General Tire
GVWR	2135 kg	Cargo Capacity	91 kg
GAWR Front	1201 kg	GAWR Rear	981 kg
Air Conditioning	YES	Power Steering	YES
Power Brakes	YES	AM/FM/Cassette	YES
Disc Brakes (Front)	YES	Disc Brakes (Rear)	YES
Power Windows	YES	Tilt Steering	YES
Anti-lock Brakes (ABS)	YES	Power Seats	YES (DRIVER SIDE)
Driver Airbag	YES	Passenger Airbag	YES

VEHICLE CAPACITY DATA:

TYPE OF FRONT SEATS Split Bench

TOTAL NUMBER OF OCCUPANTS 6 OCCUPANTS x 68 kg. 408 kg

WEIGHT OF VEHICLE AS RECEIVED AT KARCO (with maximum fluids): 1514 kg

Data Sheet No. 2... (Continued)

VEHICLE CAPACITY WEIGHT (kg):

Vehicle Capacity Weight 499 kg
 Occupant Weight 408 kg
 Rated Cargo/Luggage Weight (RCLW) 91 kg

	FRONT	REAR	TOTAL
Right	485	264	
Left	496	269	
Total	981	533	1514
Percent of Total	64.8	35.2	

CALCULATION OF TEST TARGET WEIGHT (kg):

Total Delivered Weight 1514 kg
 RCLW 91 kg
 Weight of 2 P572 ATDs 152 kg
TARGET TEST WEIGHT 1757 kg

TEST WEIGHT OF VEHICLE WITH 2 ATDs AND BALLAST

	FRONT	REAR	TOTAL
Right	487	391	
Left	488	387	
Total	975	778	1753
Percent of Total	55.6	44.4	

Weight of Ballast secured in cargo area: 74 kg

Includes cameras, instrumentation, brake abort and bags containing lead shot secured in spare tire well in the center of trunk area.

Vehicle Components Removed For Weight Reduction:

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

TEST VEHICLE ATTITUDE (mm)

ATTITUDE	LF	RF	LR	RR
As Delivered	705	705	679	688
As Tested	700	695	630	635

Vehicle Wheelbase: 2769 mm

FUEL SYSTEM DATA:

Fuel System Capacity From Owner's Manual = 60.56 liters

Usable Capacity Figure Furnished by COTR = 60.56 liters

Test Volume Range (92 to 94% of Usable Capacity) = 55.72 to 56.93 liters

ACTUAL TEST VOLUME = 56.3 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 with automatic shutoff

DATA SHEET NO. 3

POST IMPACT DATA

VEHICLE YEAR/MAKE/MODEL/BODY STYLE: 1996 FORD TAURUS 4-DOOR SEDAN

TEST MODE: 60.3 km/h Forty Percent Offset Frontal Barrier Impact NHTSA NO. MT0210

TEST DATE: July 17, 1997 TIME: 7:30 PM TEMPERATURE: 27.8° 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 = 61.05 km/h Trap No. 2 = 61.07 km/h

Distance from vehicle to barrier - -

A. entering trap = 1829 mm

B. leaving trap = 610 mm

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

Vehicle Length	Left	Center	Right
Pre-test Measurements (mm)	4750	5015	4750
Post-test Measurements (mm)	4000	4350	4320
Static Crush (mm)	750	665	430
Average	615		

VEHICLE REBOUND: (from rigid barrier with rotational movement)

	Left	Center	Right
Vehicle Rebound (mm)	1710	2350	2560
Average	2210		

DATA SHEET NO. 4

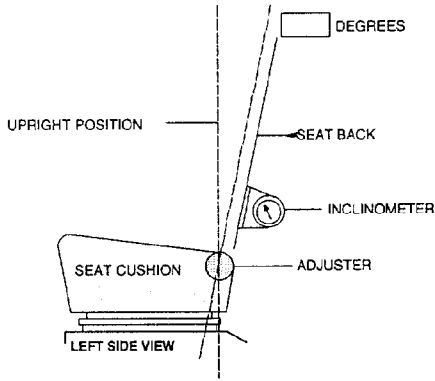
TEST VEHICLE INFORMATION

TEST VEHICLE: 1996 FORD TAURUS 4-DOOR SEDAN

NHTSA NO. MT0210

1. NOMINAL DESIGN RIDING POSITION -

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"?).



FRONT SEAT ASSEMBLY

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 = 26.0 °

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 passenger's seat = 26.0 °

2. SEAT FORE & AFT POSITIONS -

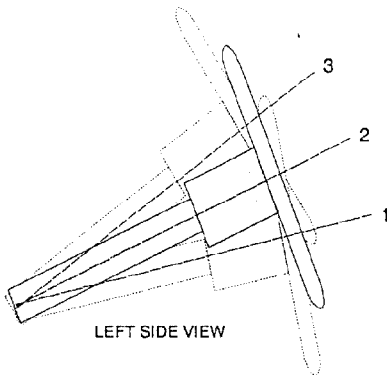
Provide instructions for positioning the driver and front outboard passenger seat(s) in the center of fore and aft travel. For example, provide information to locate the detent in which the seat track is to be locked.

Positioning of the driver's seat: Driver's seat motorized; set 248 mm rear of full forward (mid-position).

Positioning of the passenger's seat (if applicable): 13 seating positions; set to 7th position from front.

3. STEERING COLUMN ADJUSTMENTS:

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.



STEERING COLUMN ASSEMBLY

Operational Instructions:

Position No. 1 is at 13°

Position No. 2 is at 22°

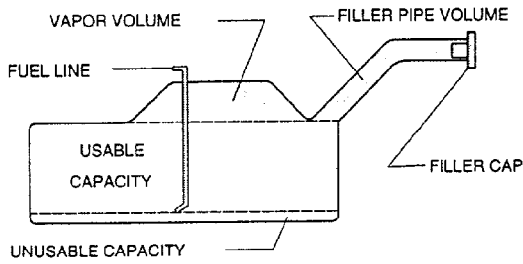
Position No. 3 is at 30°

4. SEAT BELT UPPER ANCHORAGE:

Nominal design riding position:

DATA SHEET NO. 4...(continued)

5. FUEL TANK CAPACITY DATA



VEHICLE FUEL TANK ASSEMBLY

5.1 A. "Usable Capacity" of standard equipment fuel tank = 60.56 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 = 55.72 to 56.93 liters.

Operational Instructions:

5.2 Amount of Stoddard solvent added to vehicle(s) used for certification test(s) = 56.3 liters

5.3 Is vehicle equipped with electric fuel pump?

Yes X No

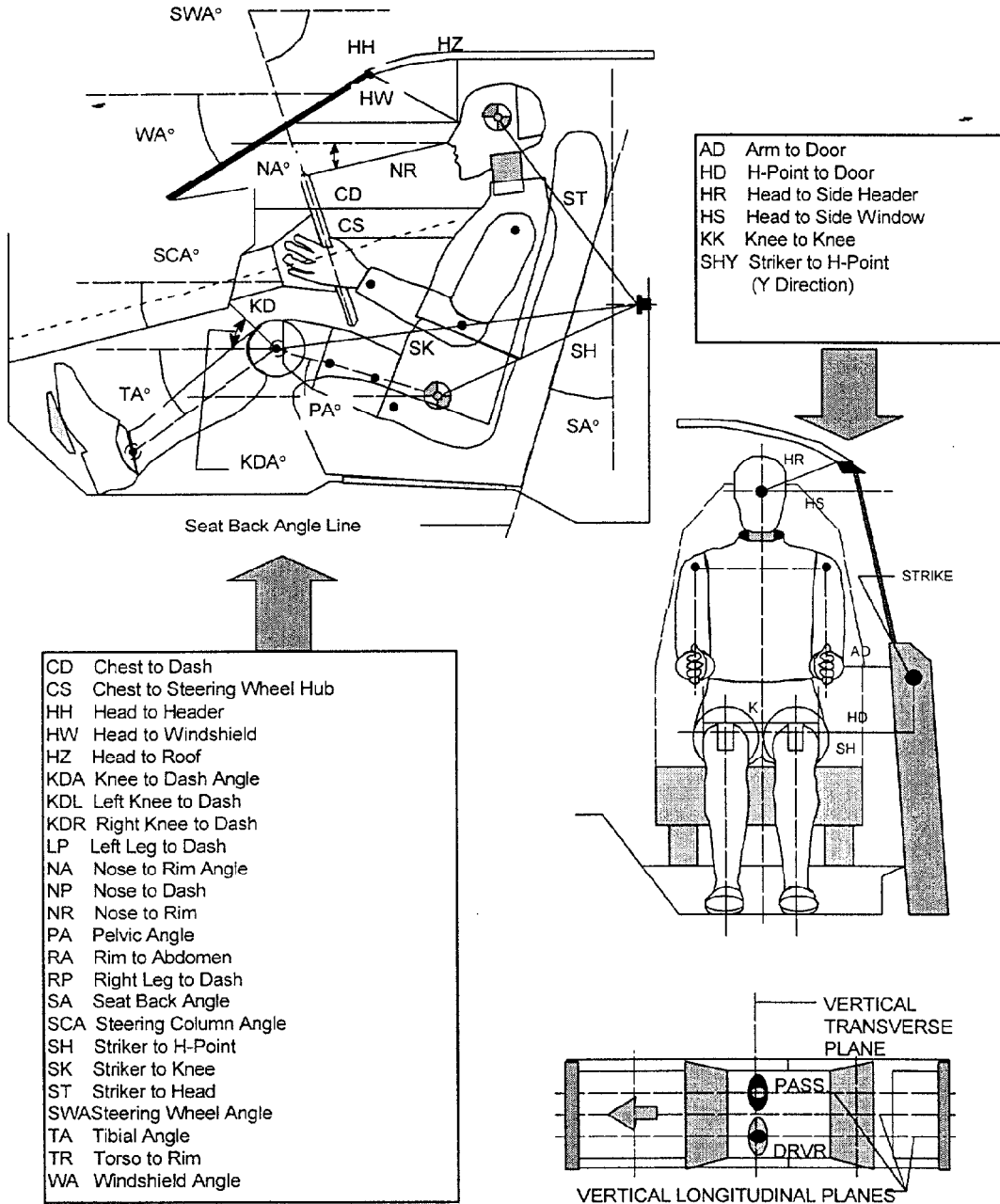
If YES, explain the vehicle operating conditions under which the fuel pump will pump fuel.

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. 5...(continued)

DUMMY POSITIONING IN VEHICLE

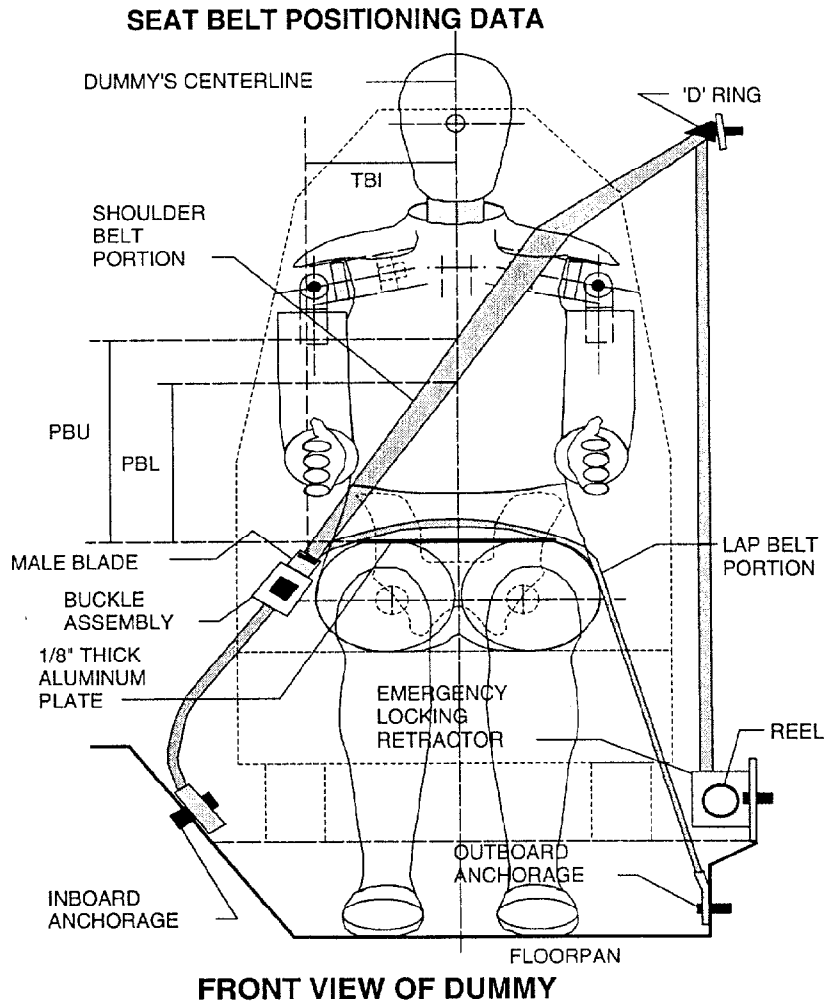
FRONT SEAT MEASUREMENT TABLE

	DRIVER (Serial No. <u>34</u>)		PASS. (Serial No. <u>35</u>)	
	DISTANCE (mm)	ANGLE	DISTANCE	ANGLE (mm)
WA°		25°		
SWA°		68°		
SCA°		22°		
SA°		26.0°		26.0°
HZ	220	90°	220	90°
HH	310	0°	320	0°
HW	635	0°	580	0°
HR	240		200	
NR	378	5°		
CD	550		435	
CS	310	0°		
RA	220	0°		
KDL	200	32°	110	
KDR	110		110	22°
PA°		25.0°		28.0°
TA°		-36.0°		-38.0°
KK	241		203	
ST	560	7.0°	525	7.0°
NP	576			
TR	208	0°		
LP	119		89	
RP	124		89	
SH	120	46.0°	200	34.0°
SHY	285		300	
HS	350		270	
HD	180		210	
AD	132		85	

DATA SHEET NO. 6

SEAT BELT POSITIONING DATA

SEATING POSITION	DRIVER	PASSENGER
TCI -- Dummy centerline to shoulder bolt	100 mm	100 mm
PBU--Top surface of aluminum plate to belt upper edge	265 mm	265 mm
PBL--Top surface of aluminum plate to belt lower edge	190 mm	190 mm
Lap Belt tension	10 Newtons	10 Newtons
Shoulder Belt tension	Retractor	Retractor



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

VEHICLE YR/MAKE/MODEL/BODY: 1996 FORD TAURUS 4 DOOR SEDAN

NHTSA No.: MT0210

TEST PROGRAM: 1997 NCAP 40% OFFSET IMPACT (MALE)

TEST DATE: 7/17/97

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	2280	-670	295	G's	1.9	186.6	-28.0	106.0
2	Left Rear Sill Y	2195	-670	295	G's	9.8	77.9	-12.1	100.1
3	Center Console Rear X	2217	0	325	G's	2.1	200.5	-38.1	94.4
4	Center Console Rear Y	2155	0	325	G's	4.6	75.3	-6.8	99.2
5	Right Rear Sill X	2270	660	295	G's	1.1	187.5	-28.3	92.7
6	Right Rear Sill Y	2179	660	295	G's	11.3	75.3	-14.6	99.6
7	Center Rear Trunk X	325	266	530	G's	4.0	53.8	-26.3	120.6
8	Center Rear Trunk Y	320	-255	525	G's	13.2	108.2	-1.1	183.1

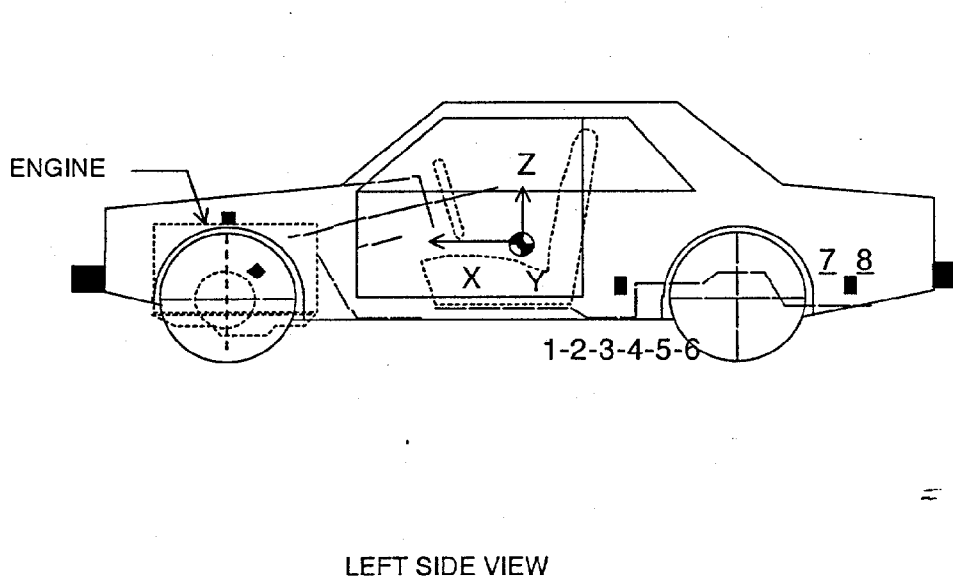
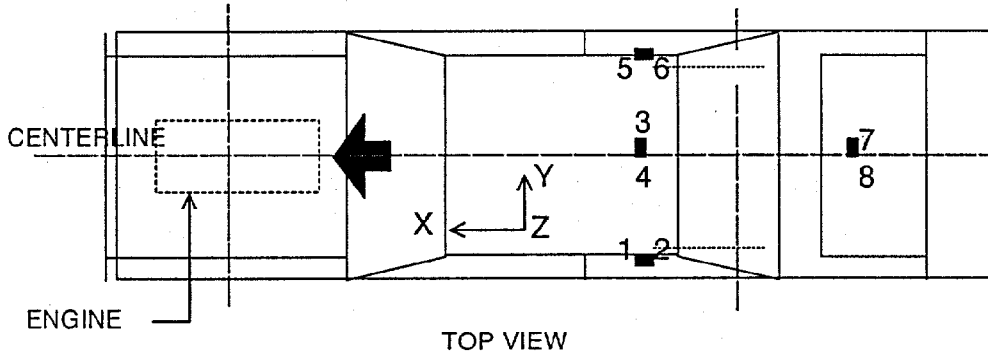
Reference Points

X - From Rear Surface of Vehicle

Y - Vehicle Centerline

Z - Ground Plane

VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY



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

VEHICLE YR/MAKE/MODEL/BODY: 1996 FORD TAURUS 4 DOOR SEDAN

NHTSA No.: MT0210

TEST PROGRAM: 1997 NCAP 40% OFFSET IMPACT (MALE)

TEST DATE: 7/17/97

HEAD PRIMARY PEAK ACCELERATIONS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Head CG	X	G's	14.4	240.2	-46.0	108.4	3.0	281.2	-32.1	115.8
Head CG	Y	G's	11.8	103.4	-12.1	240.2	23.0	128.1	-2.4	53.1
Head CG	Z	G's	16.7	203.3	-9.3	135.2	17.4	104.3	-1.9	51.0
Head CG Resultant	N/A	G's	48.9	108.4			39.4	121.8		

CHEST PRIMARY PEAK ACCELERATIONS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Chest CG	X	G's	5.6	225.1	-29.8	115.7	0.9	215.7	-31.6	120.8
Chest CG	Y	G's	4.8	139.0	-1.3	293.7	9.8	111.0	-0.6	6.8
Chest CG	Z	G's	10.0	144.0	-7.3	96.9	9.0	107.6	-5.9	160.8
Chest CG Resultant	N/A	G's	30.3	116.7			32.6	120.7		

FEMUR PEAK FORCES

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Left Femur	Z	Newtons	519.0	77.5	-2577.6	122.6	149.1	293.7	-3728.1	106.8
Right Femur	Z	Newtons	664.7	81.4	-3493.8	99.2	115.7	35.5	-1993.9	65.8

SEAT BELT PEAK FORCES

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Lap Belt	N/A	Newtons	5856.4	95.6	-7.5	0.0	3804.4	111.6	6.4	9.7
Shoulder Belt	N/A	Newtons	6180.8	106.6	-59.4	204.4	7608.0	119.2	-19.8	289.7

HEAD INJURY CRITERIA (HIC)

Location	Driver				Passenger			
	HIC	Avg G's	T ¹	T ²	HIC	Avg G's	T ¹	T ²
Head CG Primary	343.2	39.1	87.9	123.8	252.0	34.7	101.8	137.7

CHEST CLIP (3MSEC)

Location	Driver			Passenger		
	CLIP	T ¹	T ²	CLIP	T ¹	T ²
Chest CG Primary	30.0	114.9	117.9	31.7	119.2	122.2

DATA SHEET NO. 8...(continued)

VEHICLE YR/MAKE/MODEL/BODY: 1996 FORD TAURUS 4 DOOR SEDAN

NHTSA No.: MT0210

TEST PROGRAM: 1997 NCAP 40% OFFSET IMPACT (MALE)

TEST DATE: 7/17/97

PELVIC PEAK ACCELERATIONS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Pelvis	X	G's	0.0	0.0	0.0	0.0	1.4	170.5	-25.3	105.9*
Pelvis	Y	G's	0.0	0.0	0.0	0.0	8.2	103.0	-6.9	141.4*
Pelvis	Z	G's	0.0	0.0	0.0	0.0	2.3	222.3	-17.0	118.2*

* Driver Channel(s) Failed, See Plots For Time Of Failure

UPPER NECK PEAK FORCES AND MOMENTS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Neck Force	X	Newtons	287.3	253.3	-732.1	117.6	470.1	81.3	-133.0	49.1
Neck Force	Y	Newtons	258.9	187.9	-186.1	247.2	216.9	156.2	-122.9	217.2
Neck Force	Z	Newtons	1445.2	105.9	-611.4	244.5	928.8	106.8	-130.3	193.4
Neck Moment	X	Joules	10.8	110.8	-18.2	187.9	9.5	216.7	-17.5	171.5
Neck Moment	Y	Joules	36.0	115.3	-36.9	252.9	30.7	191.4	-25.8	80.8
Neck Moment	Z	Joules	1.6	204.2	-14.3	152.3	9.5	201.6	-19.4	144.2

FOOT PEAK ACCELERATIONS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Left Foot Aft	X	G's	19.8	41.7	-33.4	89.9	0.0	0.0	0.0	0.0*
Left Foot Aft	Z	G's	105.9	40.4	-53.8	40.8	0.0	0.0	0.0	0.0*
Left Foot Fore	Z	G's	208.8	53.8	-114.0	55.1	0.0	0.0	0.0	0.0*
Right Foot Aft	X	G's	18.7	86.1	-42.7	66.8	10.3	110.2	-42.3	97.4
Right Foot Aft	Z	G's	14.4	71.2	-41.7	102.8	2.8	7.4	-21.8	96.3
Right Foot Fore	Z	G's	28.0	89.7	-61.8	99.7	7.4	71.7	-48.2	95.4

* Passenger Channel(s) Failed, See Plots For Time Of Failure

UPPER AND LOWER TIBIA PEAK FORCES AND MOMENTS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Left Lower Force	Y	Newtons	378.9	92.8	-59.0	207.0	56.3	4.0	-453.9	96.6
Left Lower Force	Z	Newtons	962.0	40.5	-330.6	130.1	135.9	179.9	-1440.5	102.0
Left Lower Moment	X	Joules	14.1	89.7	-41.2	41.8	24.1	96.0	-10.6	154.4
Left Upper Moment	X	Joules	68.4	92.8	-18.9	199.1	33.4	134.4	-20.8	70.2
Left Upper Moment	Y	Joules	55.7	90.8	-22.1	140.5	66.5	124.0	-19.2	172.4
Right Lower Force	Y	Newtons	189.7	95.5	-260.4	92.4	57.5	187.9	-570.1	97.0
Right Lower Force	Z	Newtons	2810.9	103.0	-65.7	233.5	60.9	182.9	-1132.3	124.1
Right Lower Moment	X	Joules	8.6	188.5	-3.1	260.2	25.6	123.5	-8.5	54.9
Right Upper Moment	X	Joules	83.7	94.8	-23.1	113.8	30.5	110.7	-31.9	103.4
Right Upper Moment	Y	Joules	110.4	101.6	-11.8	232.3	60.4	66.9	-15.3	171.3

DATA SHEET NO. 8...(continued)

VEHICLE YR/MAKE/MODEL/BODY: 1996 FORD TAURUS 4 DOOR SEDAN

NHTSA No.: MT0210

TEST PROGRAM: 1997 NCAP 40% OFFSET IMPACT (MALE)

TEST DATE: 7/17/97

CHEST PEAK DISPLACEMENTS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Chest CG	X	CM	0.02	0.2	-2.95	109.2	0.03	3.5	-3.00	136.9

HEAD REDUNDANT PEAK ACCELERATIONS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Head CG	X	G's	16.0	240.2	-44.2	107.7	3.1	293.7	-31.1	116.8
Head CG	Y	G's	9.4	109.8	-13.9	241.7	22.0	130.0	-1.6	206.9
Head CG	Z	G's	17.1	105.1	-7.0	146.0	18.5	113.1	-1.5	48.6
Head CG Resultant	N/A	G's	47.2	107.7			38.8	117.3		

CHEST REDUNDANT PEAK ACCELERATIONS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Chest CG	X	G's	6.3	225.6	-33.6	114.9	1.7	216.1	-32.2	120.9
Chest CG	Y	G's	6.9	135.0	-1.5	214.5	9.8	109.0	-0.2	267.6
Chest CG	Z	G's	10.1	130.9	-5.7	105.6	7.9	107.5	-5.7	162.4
Chest CG Resultant	N/A	G's	34.4	116.6			32.9	120.8		

REDUNDANT HEAD INJURY CRITERIA (HIC)

Location	Driver				Passenger			
	HIC	Avg G's	T ¹	T ²	HIC	Avg G's	T ¹	T ²
Head CG Redundant	341.4	39.0	86.9	122.8	237.6	33.7	101.7	137.6

REDUNDANT CHEST CLIP (3MSEC)

Location	Driver			Passenger		
	CLIP	T ¹	T ²	CLIP	T ¹	T ²
Chest CG Redundant	34.0	114.7	117.7	32.2	119.4	122.4

DATA SHEET NO. 9

SEAT BELT PERFORMANCE ASSESSMENT TEST DATA

TEST VEHICLE: 1996 FORD TAURUS 4-DOOR SEDAN

NHTSA NO. MT0210

BELT LENGTH DATA (mm)	DRIVER	PASSENGER
Belt length from trim panel exit to bolt hole anchor point for continuous webbing systems.	2790	2790
Retractor reel to 'D' ring	675	675
Shoulder belt length as measured on Part 572 Dummy	820	820
Lap belt length as measured on Part 572 Dummy	805	805

SHOULDER BELT SPOOL-OFF DATA (mm)	DRIVER	PASSENGER
As determined by film analysis	80	60
As determined mechanically	75.0	64.0
As determined electronically	75.6	55.8

BELT STRETCH DATA (cm/cm)	DRIVER	PASSENGER
Measured electronically between shoulder belt load cell and the "D" ring	0.032	0.054
Measured mechanically	0.0	0.0

DATA SHEET NO. 10

SUMMARY OF FMVSS 212 DATA

TEST VEHICLE: 1996 FORD TAURUS 4-DOOR SEDAN

NHTSA NO. MT0210

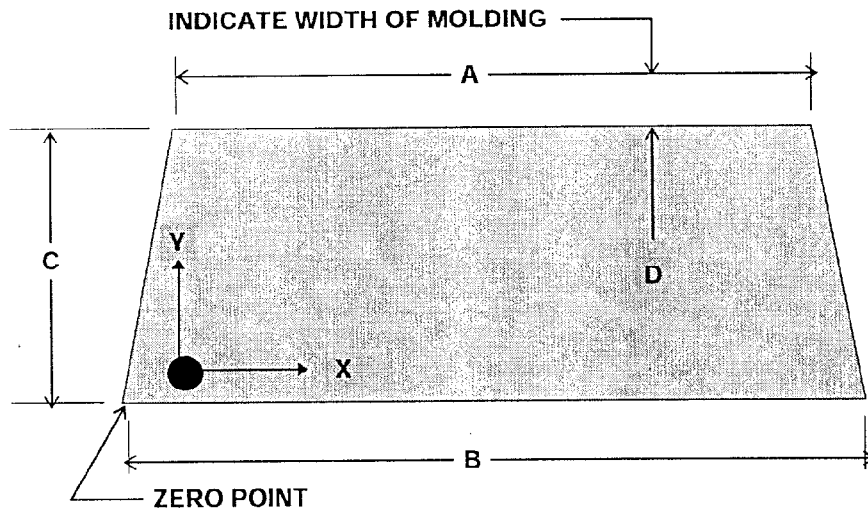
Details of windshield mounting (method of retention, type of trim, etc.):

Windshield glass is secured to the vehicle frame with a rubber type adhesive with rubber molding along the top and sides with rubber and plastic molding along the bottom.

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

WINDSHIELD PERIPHERY MEASUREMENTS (mm)			
	PRETEST	POST TEST	PERCENT RETENTION
Right Side	1810	1810	100%
Left Side	1810	1810	100%
Total	3620	3620	100%

Indicate area of retention failure.



FRONT VIEW OF WINDSHIELD

Width of molding = Top & Sides 20 mm, Bottom 17 mm.

Temperature of windshield molding during test = 27 °C

DATA SHEET NO. 11

WINDSHIELD ZONE INTRUSION FMVSS 219 (PARTIAL) DATA

TEST VEHICLE: 1996 FORD TAURUS 4-DOOR SEDAN

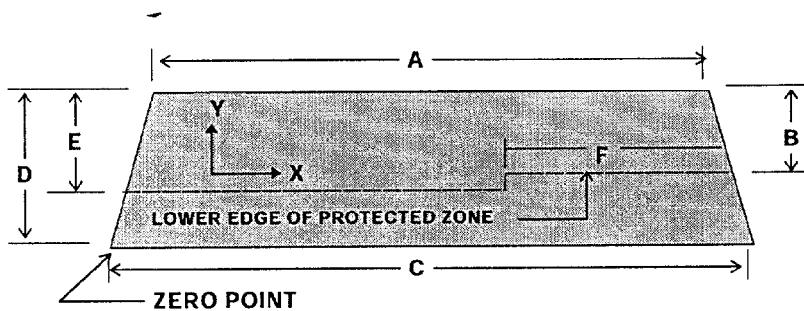
NHTSA NO. MT0210

SKETCH OF FRONT VIEW OF WINDSHIELD:

Provide all dimensions necessary to reproduce the protected area.

MEASUREMENTS:

WINDSHIELD



- A = 1170 mm
- B = 360 mm
- C = 1600 mm
- D = 850 mm
- E = 590 mm
- F = 800 mm

FRONT VIEW OF WINDSHIELD

AREA OF PROTECTED ZONE FAILURES:

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

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

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

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

DATA SHEET NO. 12

FMVSS 301 FUEL SYSTEM INTEGRITY POST IMPACT DATA

VEHICLE YEAR/MAKE/MODEL/BODY STYLE: 1996 FORD TAURUS 4-DOOR SEDAN

TEST MODE: 60.3 km/h Forty Percent Offset Frontal Barrier Impact NHTSA NO. MT0210

TEST DATE: July 17, 1997 TIME: 7:30 PM TEMPERATURE: 27.8° 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

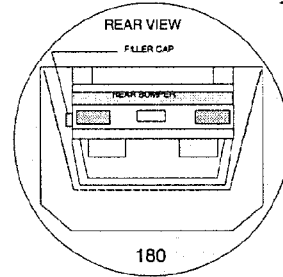
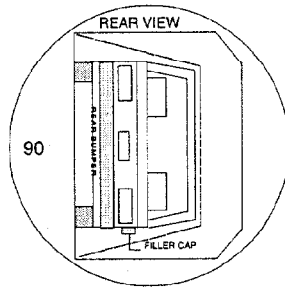
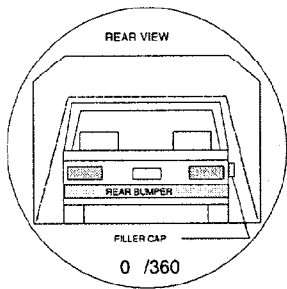
DATA SHEET NO. 13

FMVSS 301 STATIC ROLLOVER DATA SHEET

VEHICLE YEAR/MAKE/MODEL/BODY STYLE: 1996 FORD TAURUS 4-DOOR SEDAN

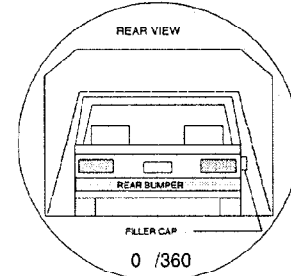
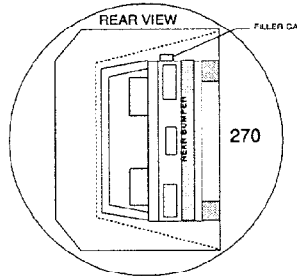
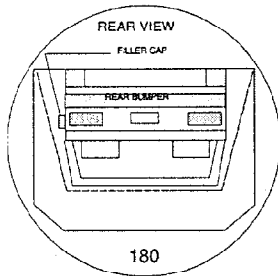
TEST MODE: 60.3 km/h Forty Percent Offset Frontal Barrier Impact NHTSA NO. MT0210

TEST DATE: July 17, 1997 TIME: 7:30 PM TEMPERATURE: 27.8° 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°	77	340	0.0
90° TO 180°	82	344	0.0
180° TO 270°	76	349	0.0
270° TO 360°	77	303	0.0

3. Provide Details of Stoddard Solvent Spillage Locations--

No solvent leakage occurred during rollover tests.

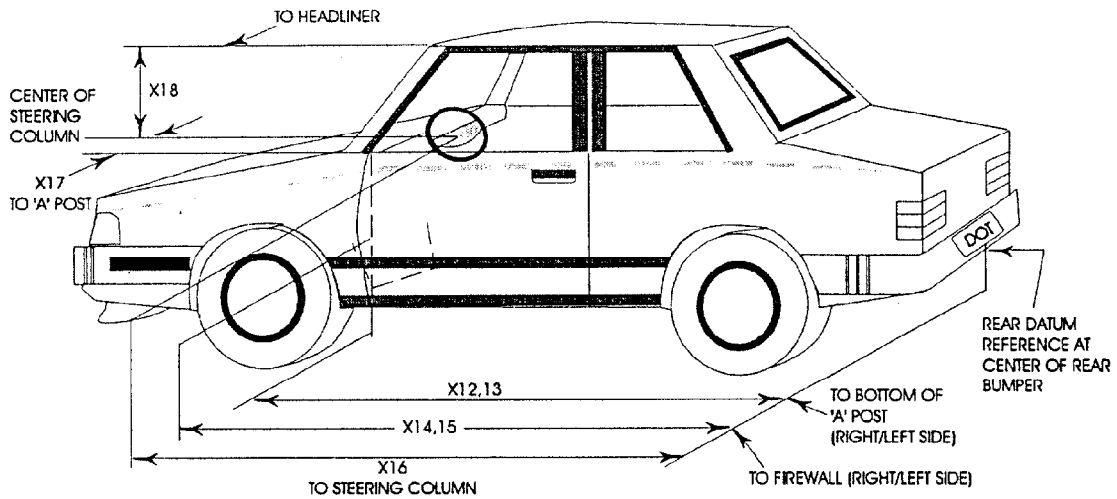
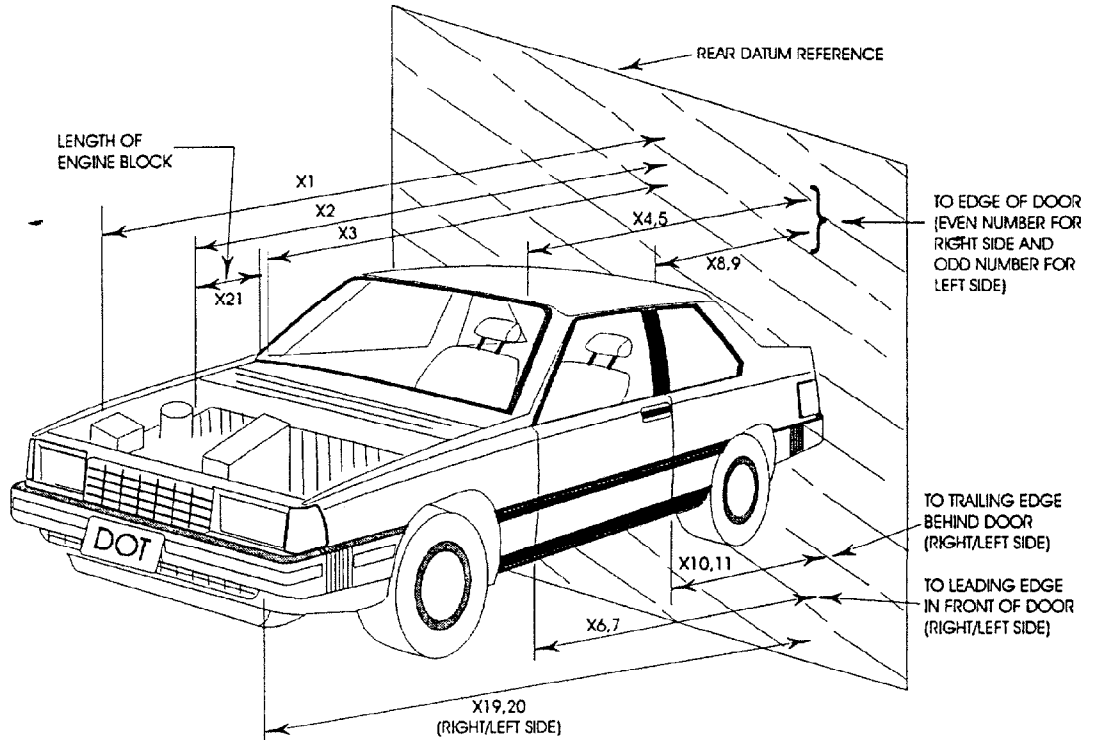
DATA SHEET NO. 14

VEHICLE MEASUREMENTS

TEST VEHICLE: 1996 FORD TAURUS 4-DOOR SEDAN

NHTSA NO. MT0210

NO.	MEASUREMENT DESCRIPTION	DIMENSIONS IN MM		
		PRE-TEST	POST-TEST	DIFFERENCE
1	Total length of vehicle at centerline	5015	4350	665
2	Rear surface of vehicle (RSOV) to front of engine	4380	4000	380
3	RSOV to firewall centerline	3790	3700	90
4	RSOV to leading edge of right door	3450	3450	0
5	RSOV to leading edge of left door	3460	3410	50
6	RSOV to lower leading edge of right door	3415	3415	0
7	RSOV to lower leading edge of left door	3420	3410	10
8	RSOV to upper trailing edge of right door	2385	2385	0
9	RSOV to upper trailing edge of left door	2400	2380	20
10	RSOV to lower trailing edge of right door	2340	2340	0
11	RSOV to lower trailing edge of left door	2390	2320	70
12	RSOV to bottom of right 'A' pillar	3410	3420	+10
13	RSOV to bottom of left 'A' pillar	3410	3405	5
14	RSOV to firewall on right side	3770	3780	+10
15	RSOV to firewall of left side	3745	3630	115
16	RSOV to steering column	3030	2930	100
17	Center of steering column to left 'A' pillar	320	260	60
18	Center of steering column to headlining	430	410	20
19	RSOV to right side of front bumper	4750	4320	430
20	RSOV to left side of front bumper	4750	4000	750
21	Length of engine block	425	425	0
22	Right side to dash panel	3125	3130	+5
23	Center to dash panel	3180	3180	0
24	Left side to dash panel	3200	3140	60



DATA SHEET NO. 15

CAMERA LOCATIONS

TEST VEHICLE: 1996 FORD TAURUS 4-DOOR SEDAN

NHTSA NO. MT0210

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	0	-4572	1473	1	4763	13	1200
3	Left Side View No. 2	813	-12141	794	0	11608	50	1100
4	Left Side View No. 3	4089	-2858	2146	20	3023	19	1000
5	Left Side View No. 4	1880	-8255	3099	17	7925	25	1010
6	Left Side View No. 5	1880	-8255	2489	13	7849	25	1000
7	Right Side View No. 1	1626	8357	838	2	7772	13	950
8	Right Side View No. 2	1676	8357	1448	5	7772	25	1000
9	Right Side View No. 3	7290	7595	2216	11	8788	80	1000
10	Right Side View No. 4	7010	16459	1232	0	17678	50	1300
11	Overhead No. 1	1219	0	6071	90	N/A	5.6	450
12	Overhead No. 2	0	-178	6071	90	N/A	35	600
13	Front View No. 1	-1638	0	3734	49	4826	50	1000
14	Front View No. 2	-1334	406	2616	29	4115	19	1000
15	Front View No. 3	-1334	-406	2591	29	4115	19	900
16	Driver Side Belt	3658	165	508	13	N/A	13	1000
17	Passenger Side Belt	3658	-152	508	14	N/A	13	1000

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

** Timing lights running at 50 Hz; all others 100 Hz.

DATA SHEET NO. 16

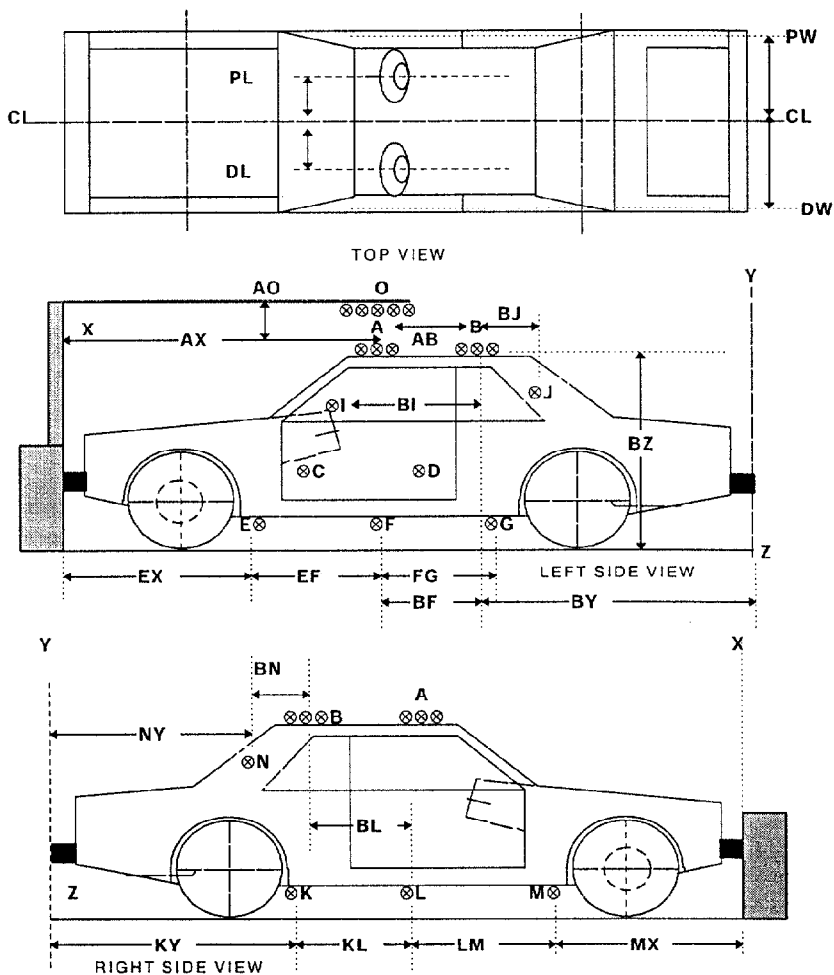
REFERENCE PHOTOGRAPH TARGETS

TEST VEHICLE: 1996 FORD TAURUS 4-DOOR SEDAN

NHTSA NO. MT0210

ITEM	DESCRIPTION	VALUE	ITEM	DESCRIPTION	VALUE
AX	TARGET A TO BARRIER	2340	NY	TARGET N TO REAR BUMPER	1430
AB	TARGET A TO TARGET B	609	BN	TARGET B TO TARGET N	640
AO	VERTICAL DISTANCE A TO O	1650	KY	TARGET K TO REAR BUMPER	207
BJ	TARGET B TO TARGET J	190	KL	TARGET K TO TARGET L	890
BI	TARGET B TO STEERING COLUMN	1700	BL	TARGET B TO TARGET L	610
BZ	TARGET B TO GROUND LEVEL	1500	LM	TARGET L TO TARGET M	890
EX	TARGET E TO BARRIER	1520	MX	TARGET M TO BARRIER	1550
EF	TARGET E TO TARGET F	630	CL/PL	VEHICLE CENTERLINE TO PASSENGER	380
FG	TARGET F TO TARGET G	630	CL/PW	VEHICLE CENTERLINE TO RIGHT SILL	800
BF	TARGET B TO TARGET F	440	CL/DL	VEHICLE CENTERLINE TO DRIVER	380
BY	TARGET B TO REAR BUMPER	1540	CL/DW	VEHICLE CENTERLINE TO LEFT SILL	800

Distances in mm



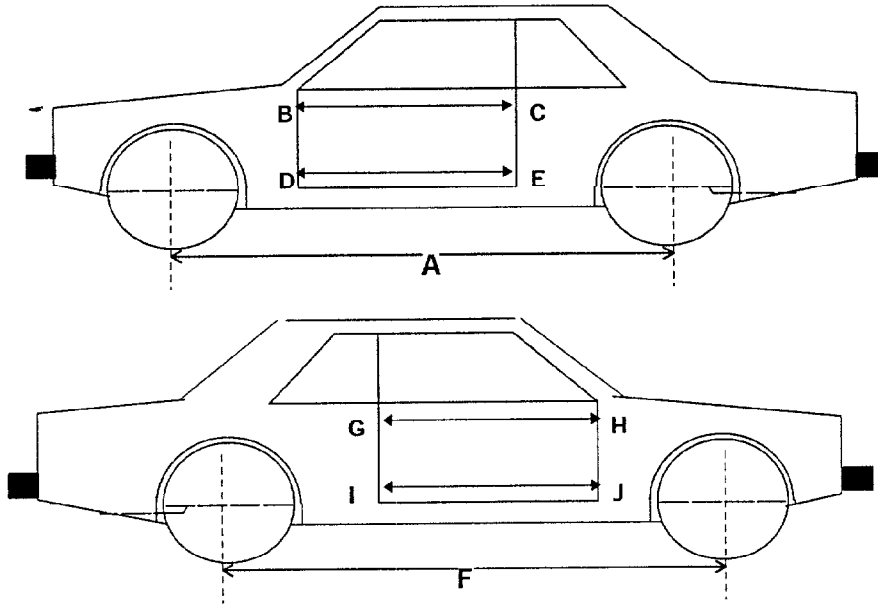
DATA SHEET NO. 17

VEHICLE INTRUSION MEASUREMENTS

TEST VEHICLE: 1996 FORD TAURUS 4-DOOR SEDAN

NHTSA NO. MT0210

DOOR OPENING WIDTH



UNITS (mm)	LEFT SIDE		RIGHT SIDE	
	BC	DE	GH	IJ
PRE-TEST	1060	1080	1065	1075
POST-TEST	1070	1090	1065	1075
DIFFERENCE	+10	+10	0	0

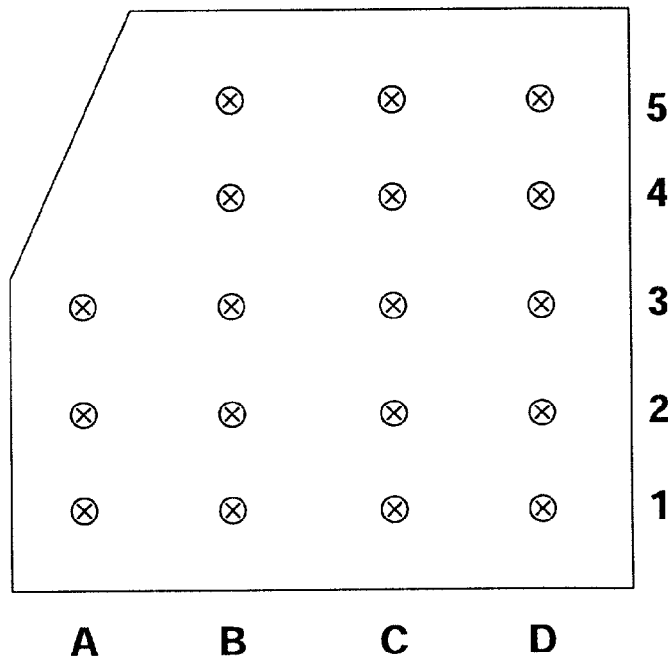
VEHICLE WHEELBASE CHANGE

UNITS (mm)	A = LEFT SIDE WHEELBASE	F = RIGHT SIDE WHEELBASE
PRE-TEST	2769	2769
POST-TEST	2667	2781
DIFFERENCE	102	+12

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			730	580	730	585	730	600
2			610	490	610	475	610	510
3	455	390	455	360	455	370	455	385
4	300	292	300	245	300	260	300	280
5	145	130	145	120	145	125	145	125
REF. POINT	RSOV TO ANCHOR BOLT (PRE-TEST)		2940		RSOV TO ANCHOR BOLT (POST-TEST)		2980	



⊕ X
 ↓ LEFT FRONT SEAT ANCHOR BOLT
 ↓ TO RSOV REFERENCE

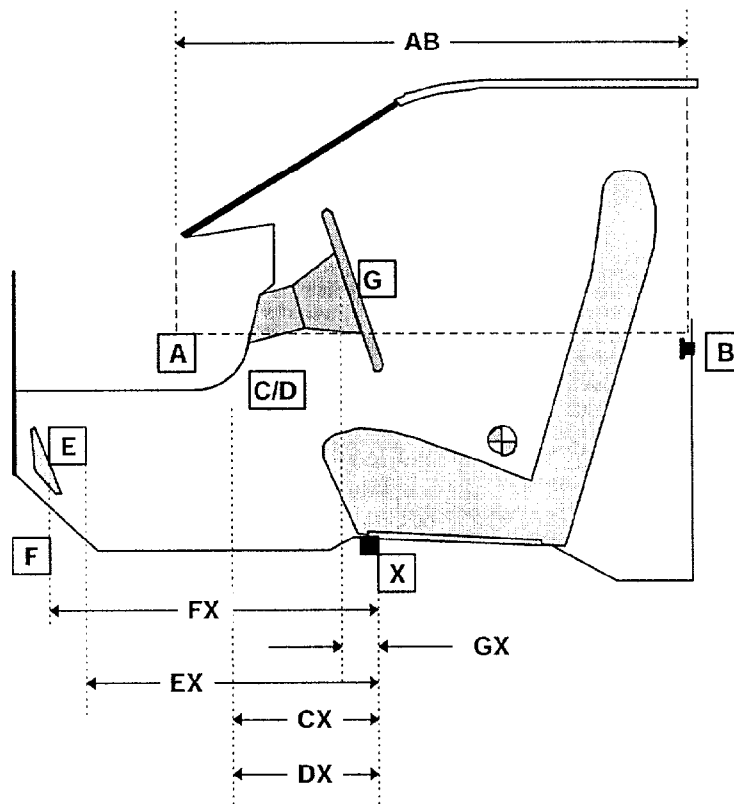
DRIVER SIDE FLOOR PLAN

(Data Sheet No. 17Continued)

DRIVER COMPARTMENT INTRUSION (Distances in mm)

REF.	DESCRIPTION	PRE-TEST	POST-TEST
AB	DOOR OPENING (INSIDE WINDOW JAM)	970	935
CX	LOWER LEFT KNEE BOLSTER TO X	380	340
DX	LOWER RIGHT KNEE BOLSTER TO X	380	360
EX	BRAKE PEDAL TO X	560	400
FX	FOOT REST TO X	580	520
GX	STEERING COLUMN HUB (CENTER) TO X	70	0

X = LEFT FRONT SEAT ANCHOR BOLT



DRIVER COMPARTMENT

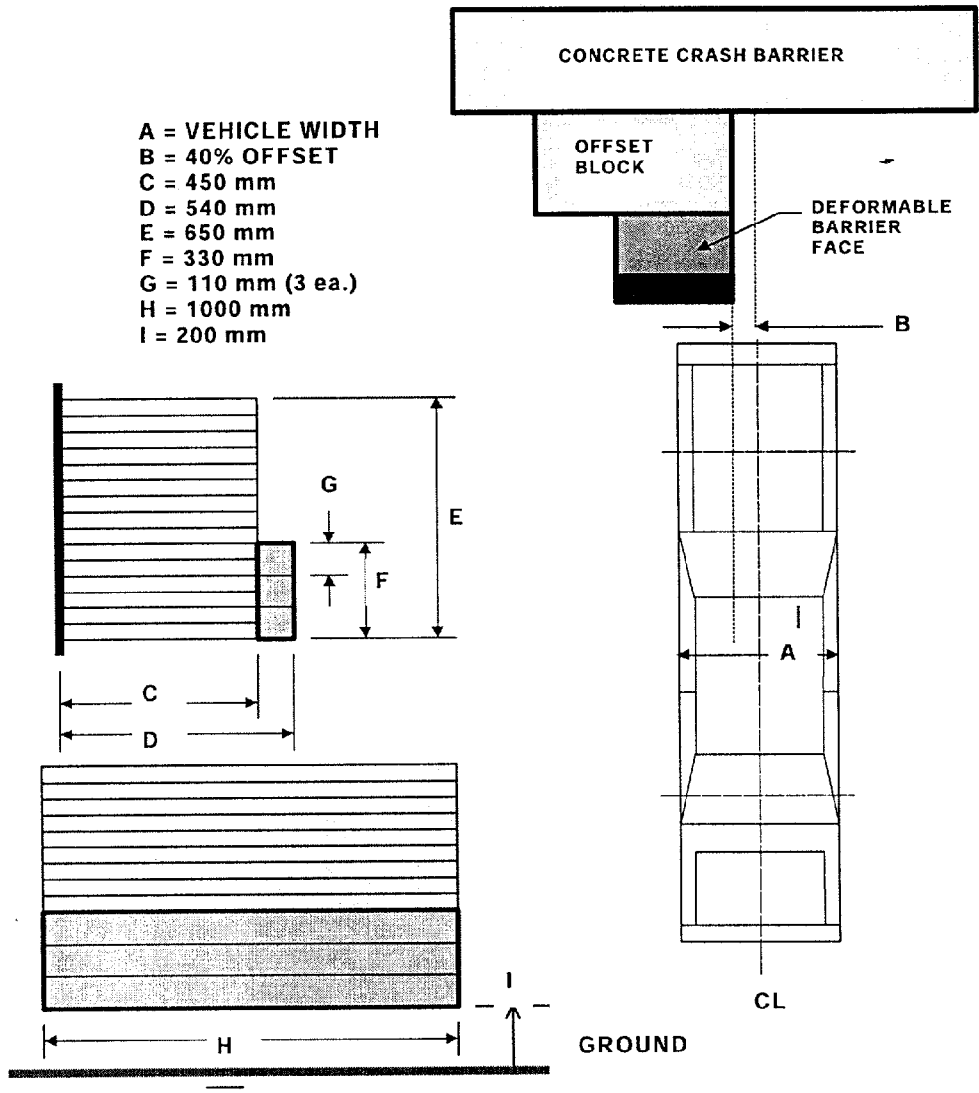
DATA SHEET NO. 18

OFFSET BARRIER ORIENTATION

TEST VEHICLE: 1996 FORD TAURUS 4-DOOR SEDAN

NHTSA NO. MT0210

A = VEHICLE WIDTH MEASURED AT WIDEST POINT 1854 mm



B = 40% OFFSET FROM LEFT EDGE OF VEHICLE
 ACTUAL OFFSET DURING TEST

$$\frac{742}{743} \text{ mm} = \underline{40.08 \%}$$

DATA SHEET NO. 19

ACCIDENT INVESTIGATION DIVISION DATA

TEST VEHICLE: 1996 FORD TAURUS 4-DOOR SEDAN NHTSA NO. MT0210

VIN: 1FALP52U7TA308101 TEST DATE: 07/17/97

WHEELBASE: 2769 mm TEST WEIGHT: 1753 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: 61.05 km/h TIME OF SEPARATION: 118.8 msec

VELOCITY CHANGE: 81.1 km/h

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

IMPACT MODE: Frontal Offset (40%)

CRUSH DEPTH DIMENSIONS:

C1 = 750 mm

C2 = 722 mm

C3 = 703 mm

C4 = 423 mm

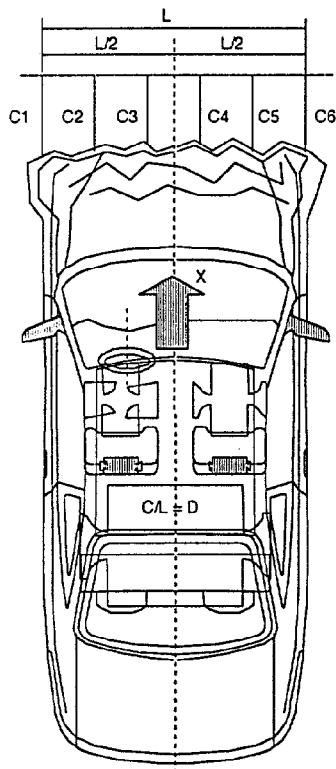
C5 = 203 mm

C6 = 40 mm

MIDPOINT OF DAMAGE: D = vehicle centerline

LENGTH OF DAMAGE REGION:

L = 1524 mm



DATA SHEET NO. 20

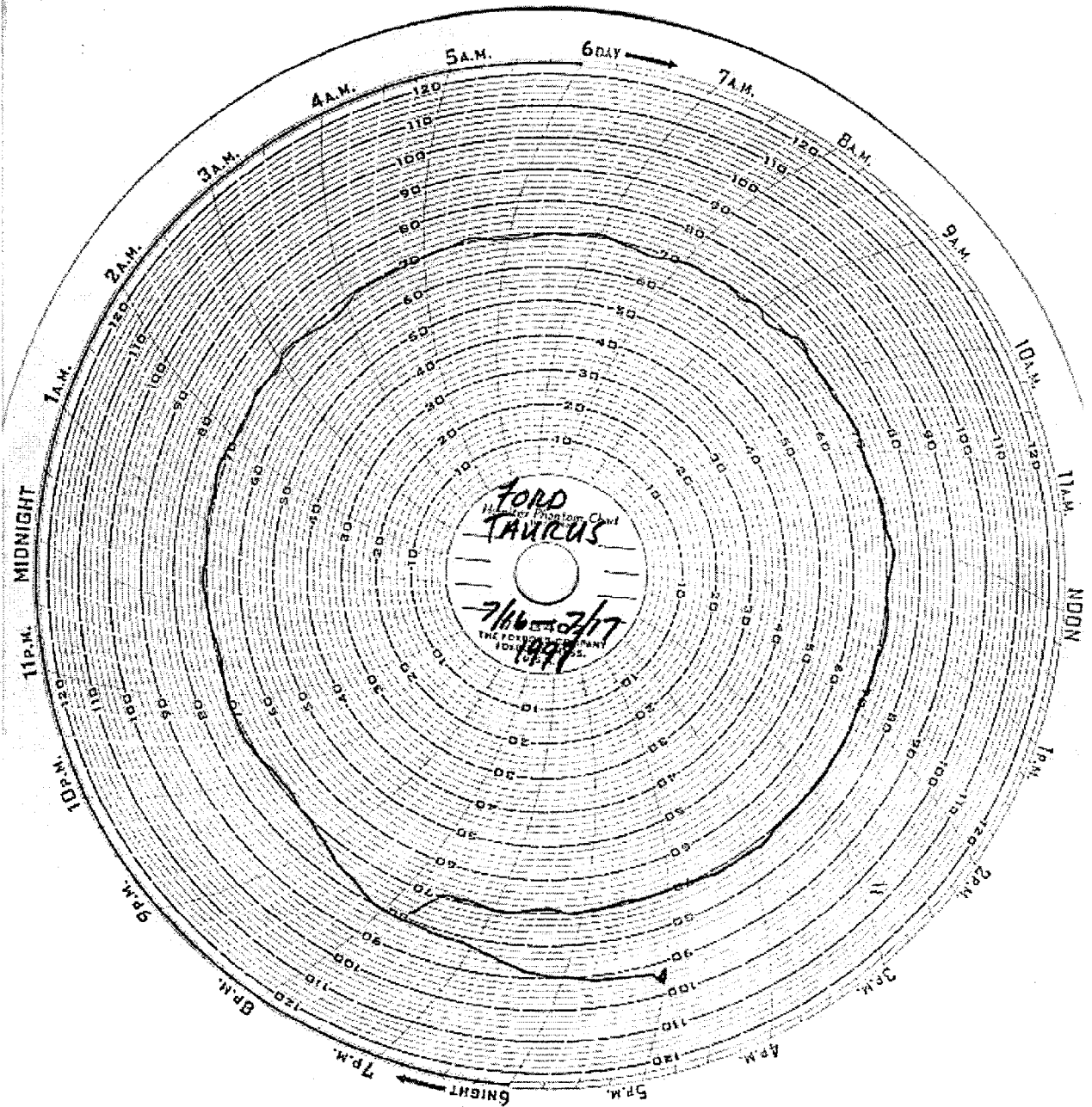
DUMMY/VEHICLE TEMPERATURE STABILIZATION

TEST VEHICLE: 1996 FORD TAURUS 4-DOOR SEDAN

NHTSA NO. MT0210

VIN: 1FALP52U7TA308101

TEST DATE: 07/17/97



APPENDIX A
PHOTOGRAPHS

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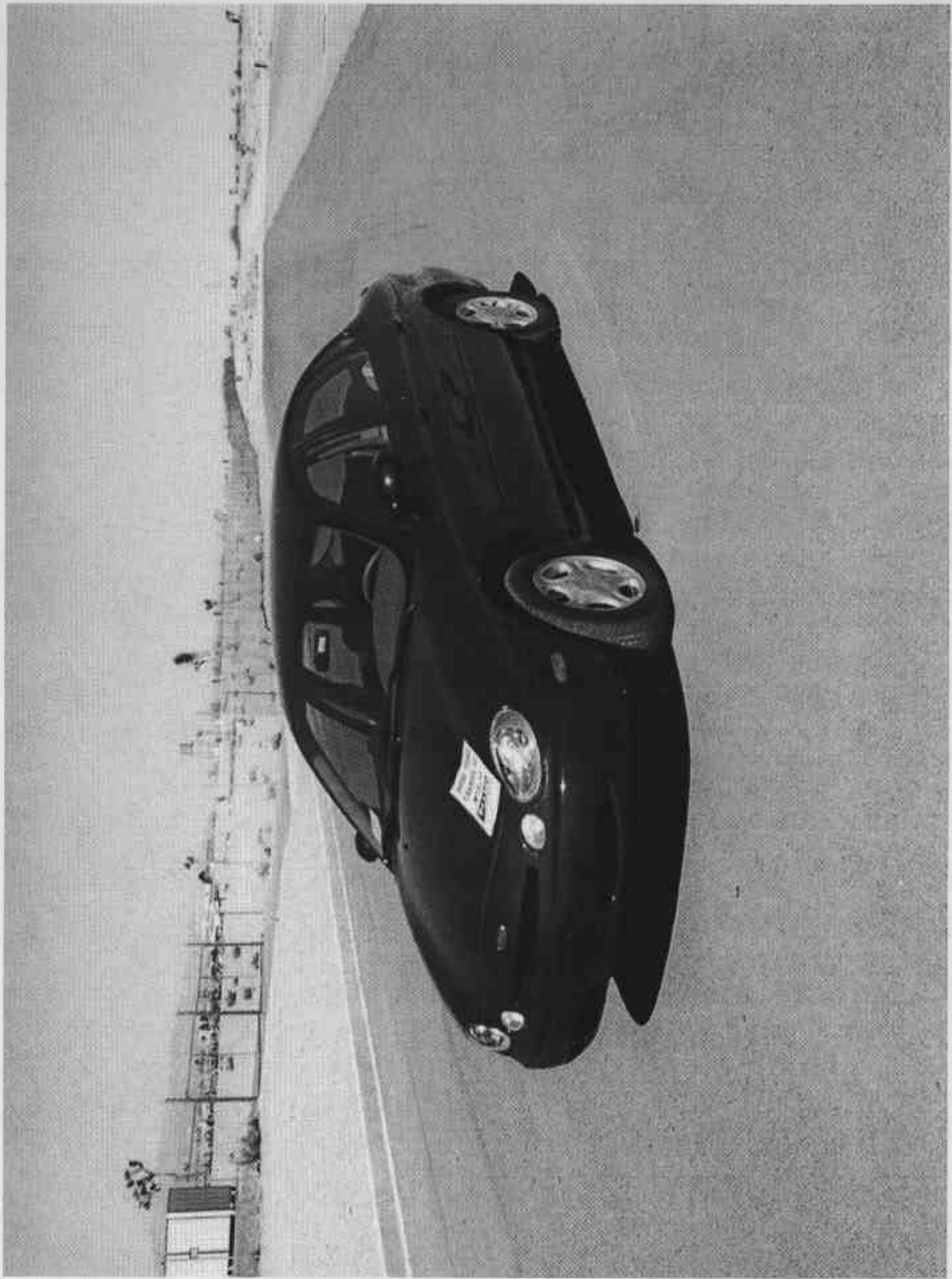


FIGURE A-1. LEFT FRONT AS RECEIVED

A-1

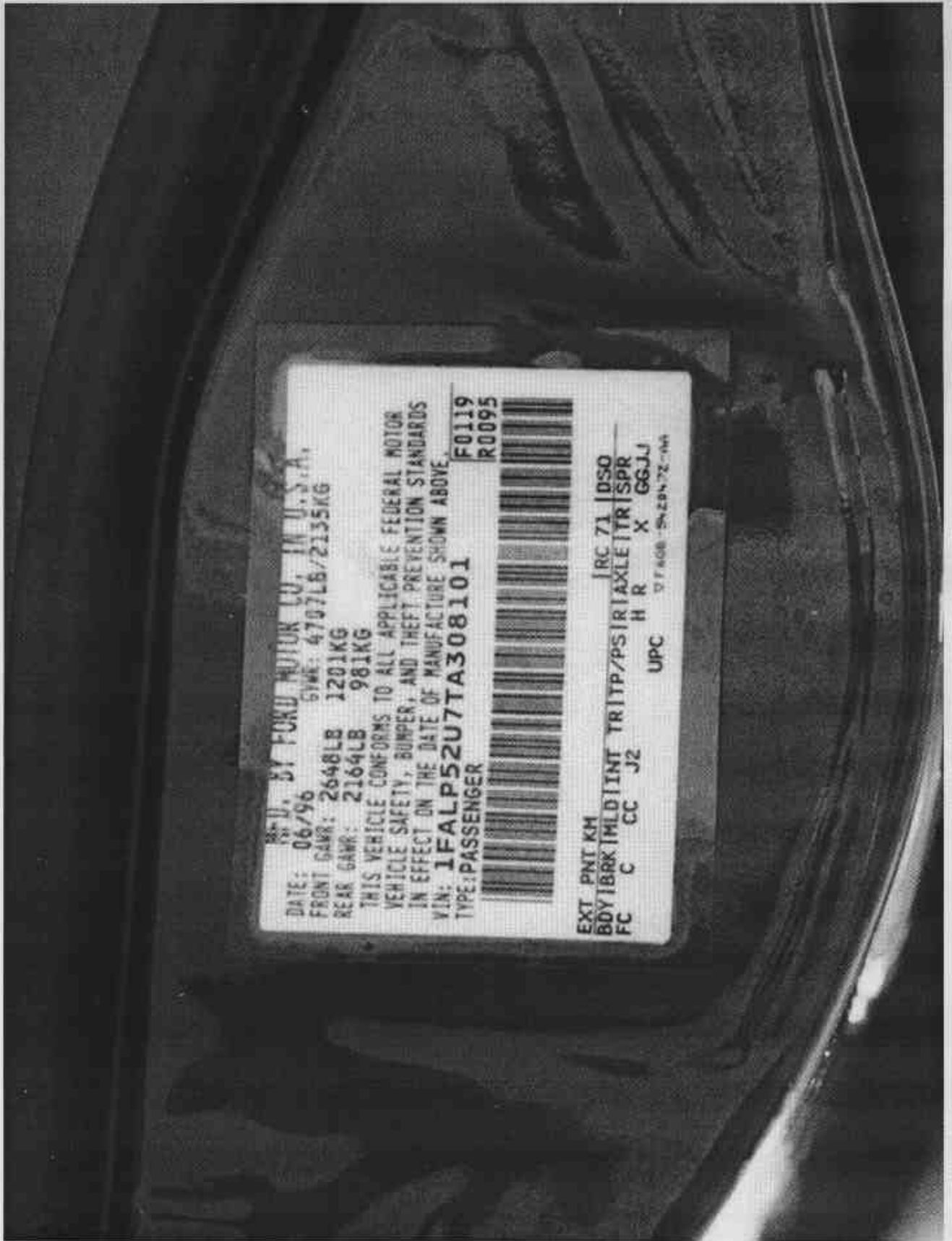
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FIGURE A-2. RIGHT REAR AS RECEIVED

A-2

KAR-97-R97015-01



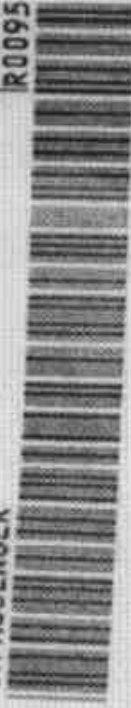
M.D. BY FORD MOTOR CO. IN U.S.A.
DATE: 06/96 GWR: 4707LB/2135KG

FRONT GAWR: 2648LB 1201KG
REAR GAWR: 2164LB 981KG

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

VIN: 1FALP52U7TA308101
TYPE: PASSENGER

F0119
R0095



EXT PNT KM
BODY BRK IMLD INT TR1TP/PSIRIAXLE ITR SPR
FC C CC J2 H R X GGJJ
UPC 01408 54284 72-144

FIGURE A-3. VEHICLE CERTIFICATION LABEL

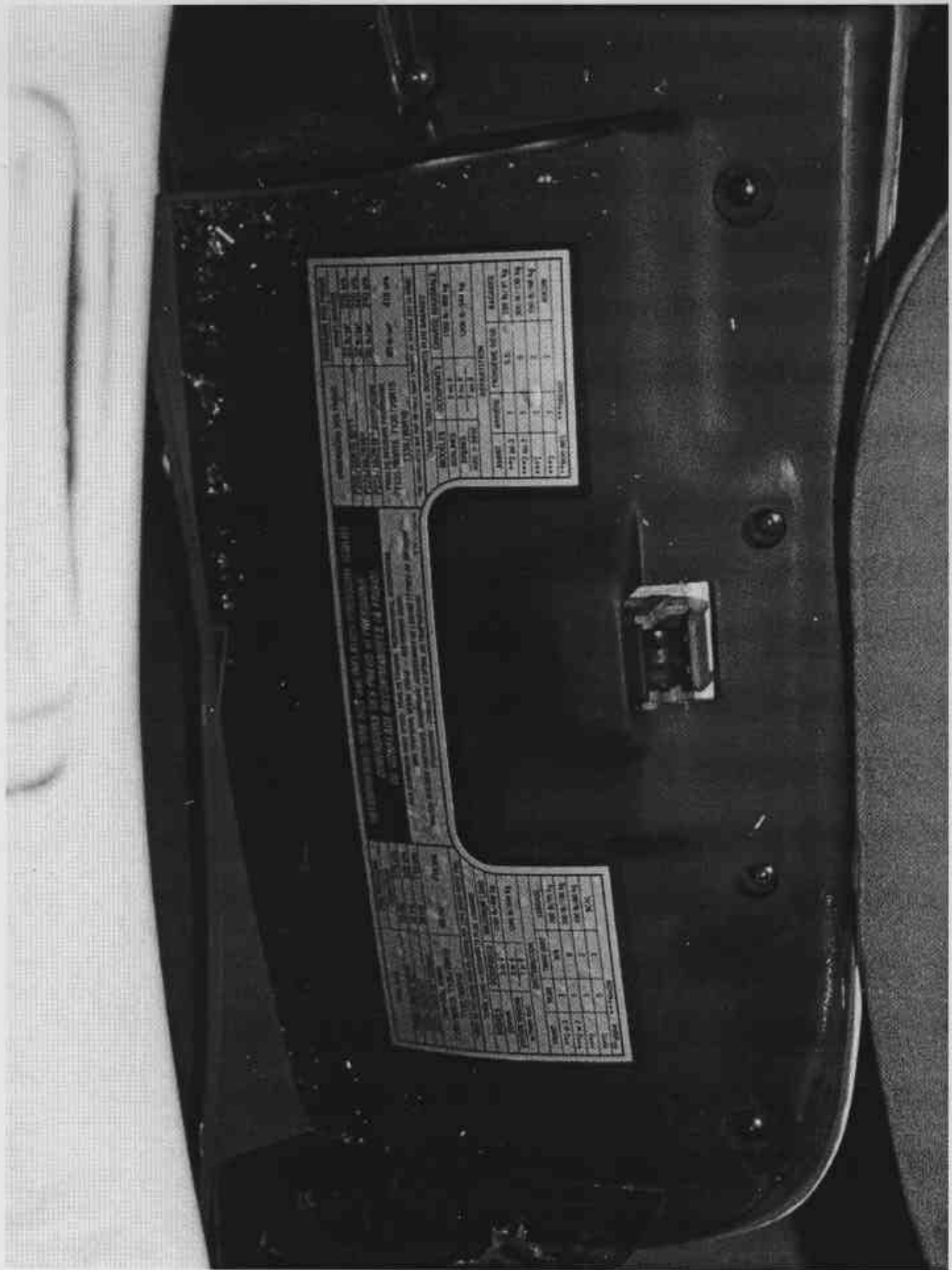


FIGURE A-4. VEHICLE TIRE PLACARD



FIGURE A-5. PRETEST FRONT VIEW

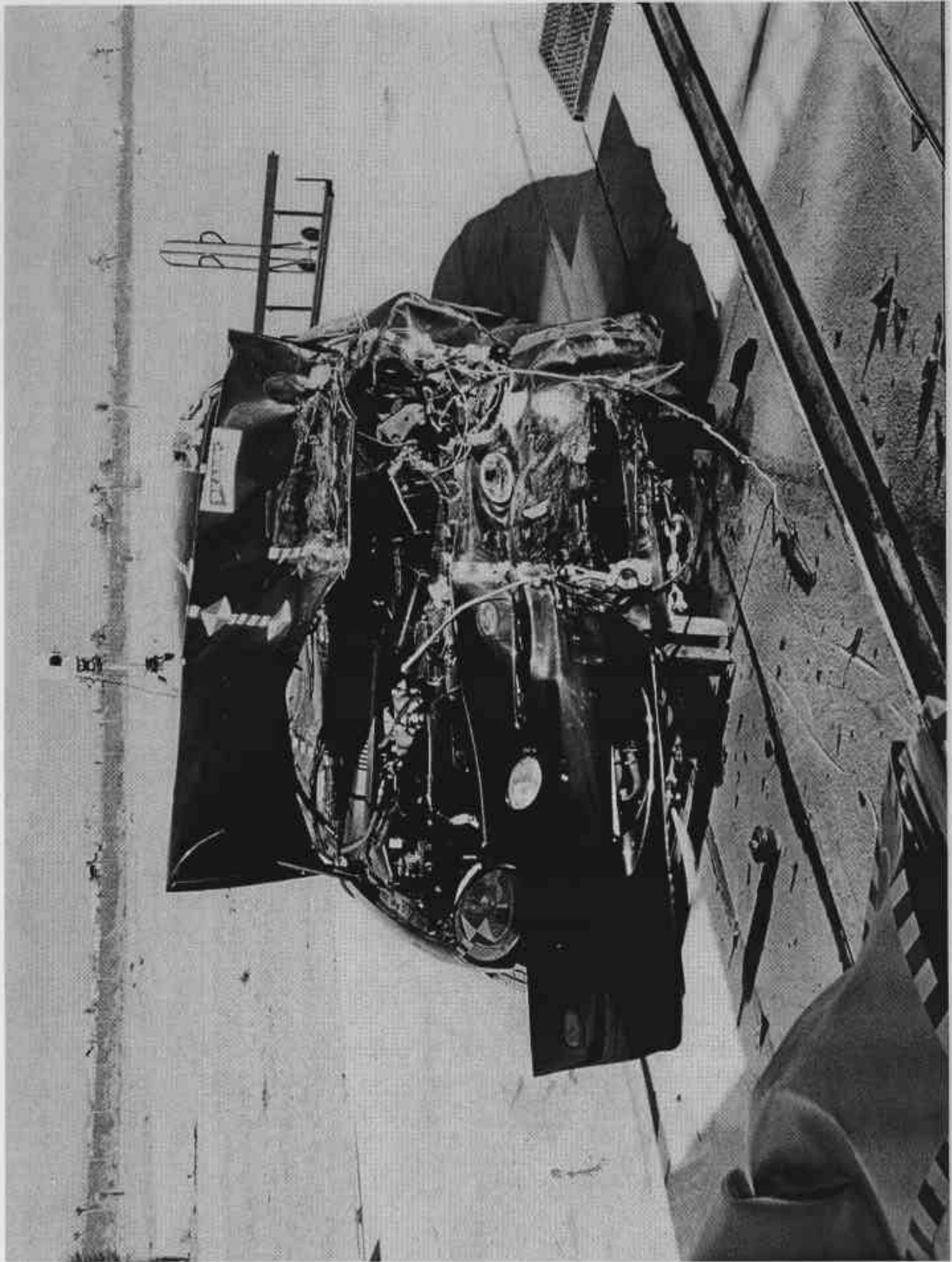


FIGURE A-6. POST TEST FRONT VIEW

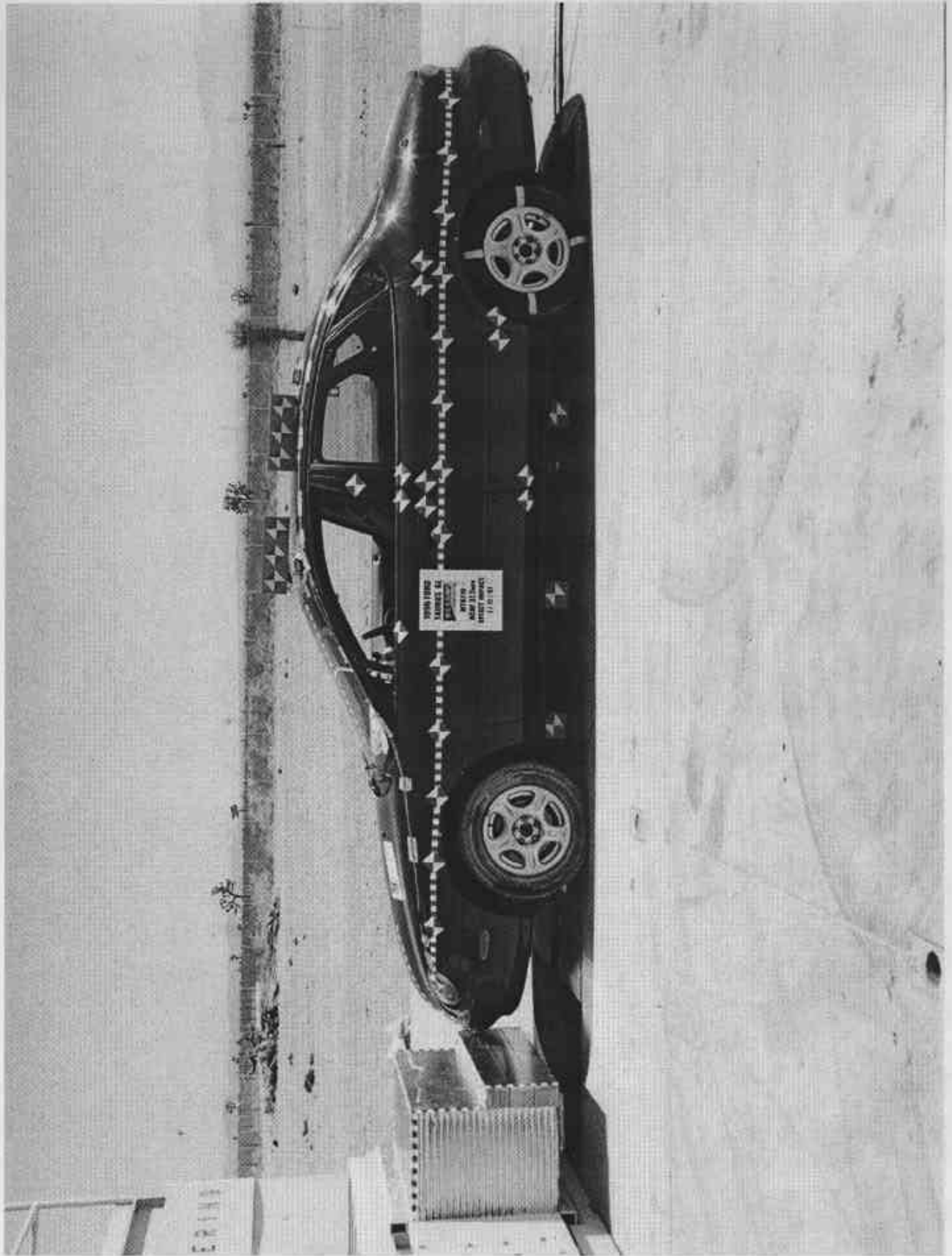


FIGURE A-7. PRETEST LEFT SIDE VIEW

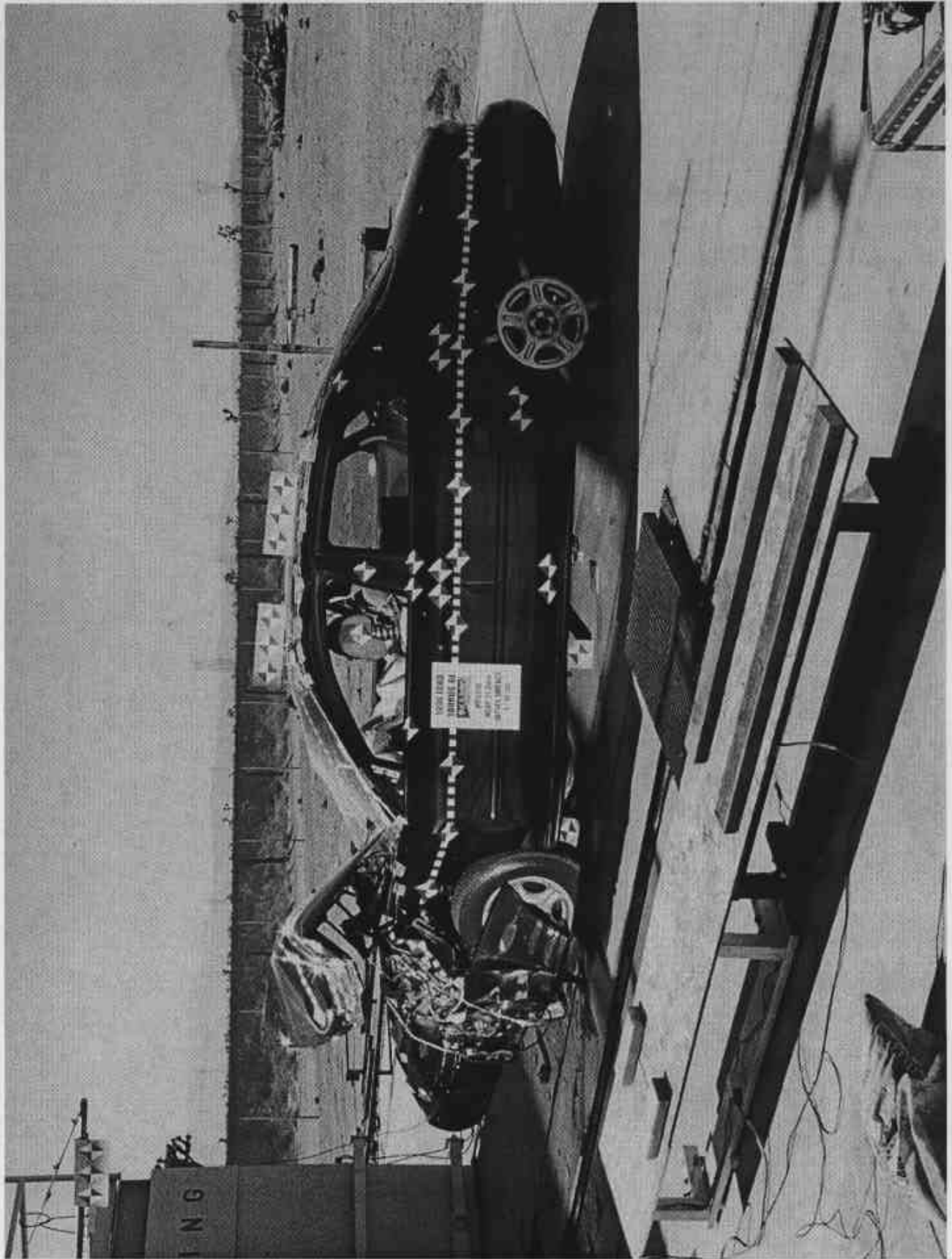


FIGURE A-8. POST TEST LEFT SIDE VIEW

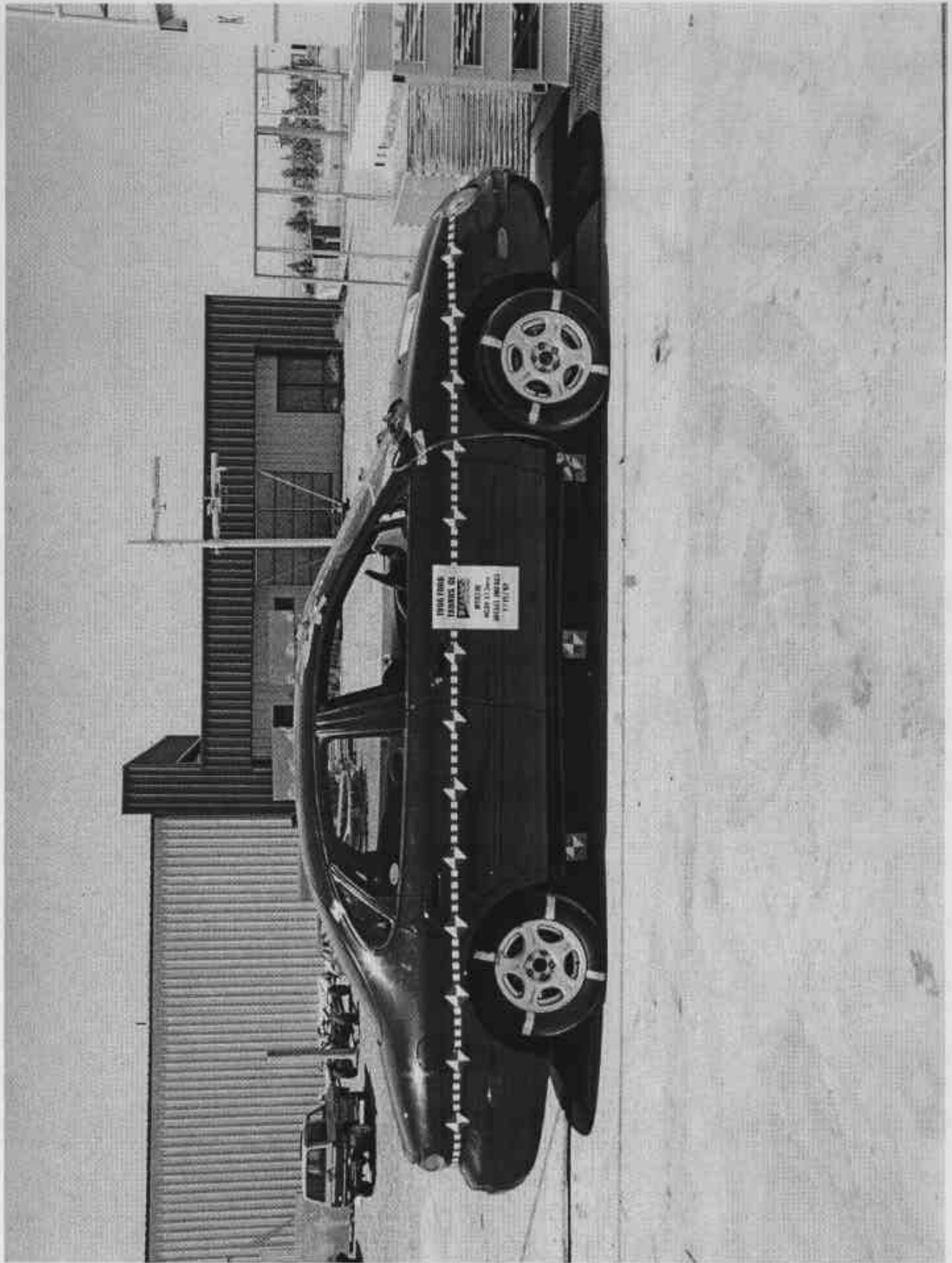


FIGURE A-9 PRETEST RIGHT SIDE VIEW

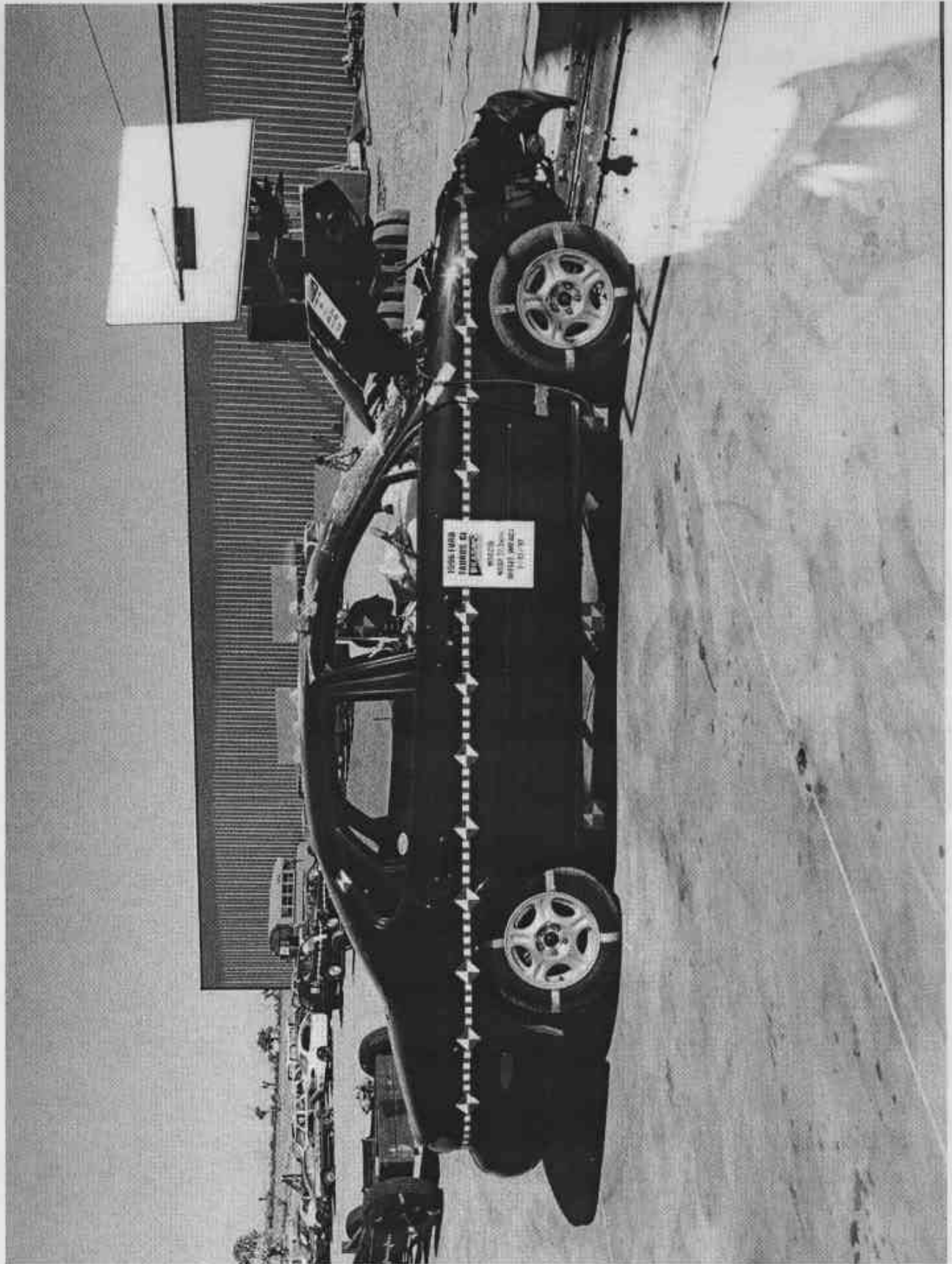


FIGURE A-10. POST TEST RIGHT SIDE VIEW

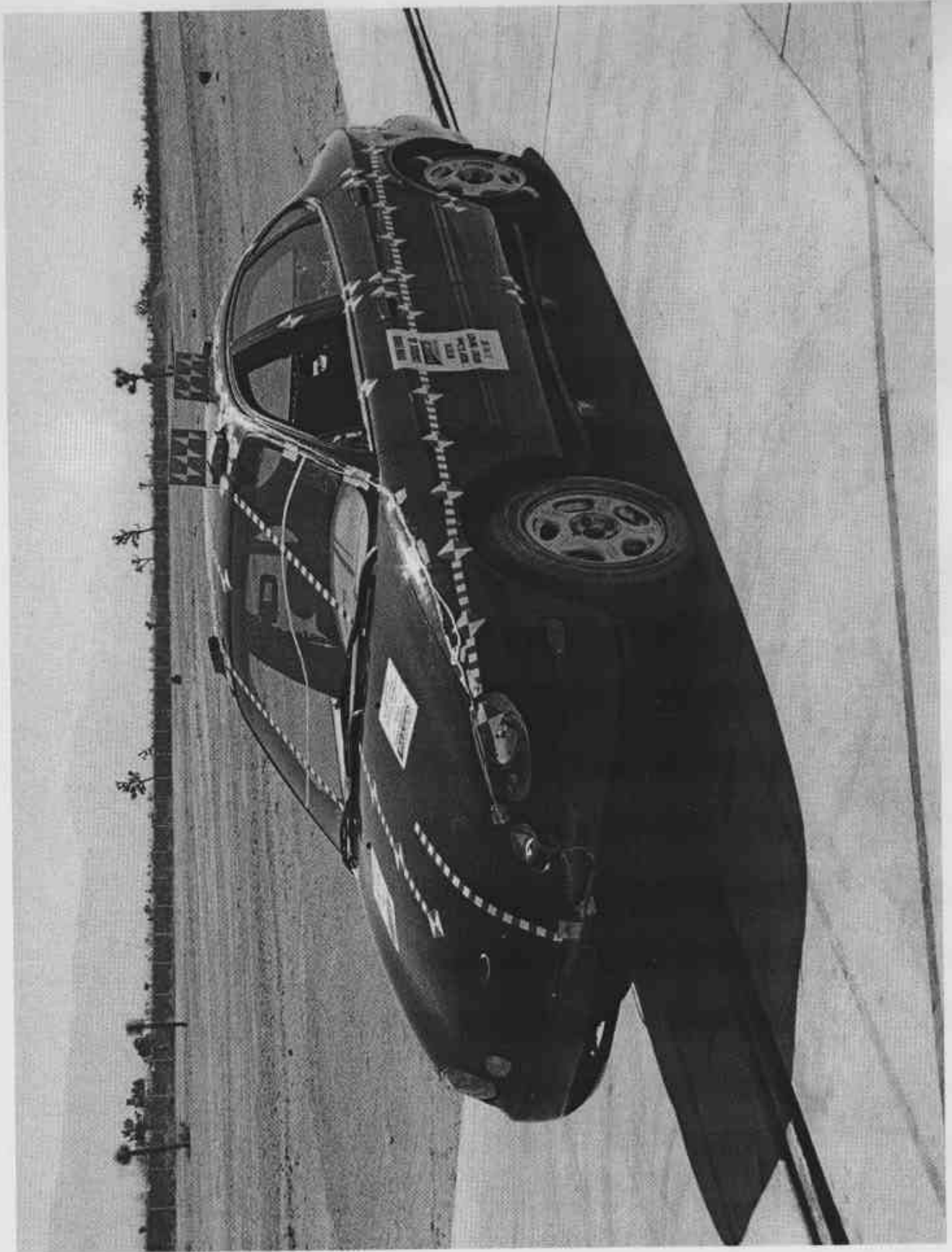


FIGURE A-11. PRETEST LEFT FRONT VIEW

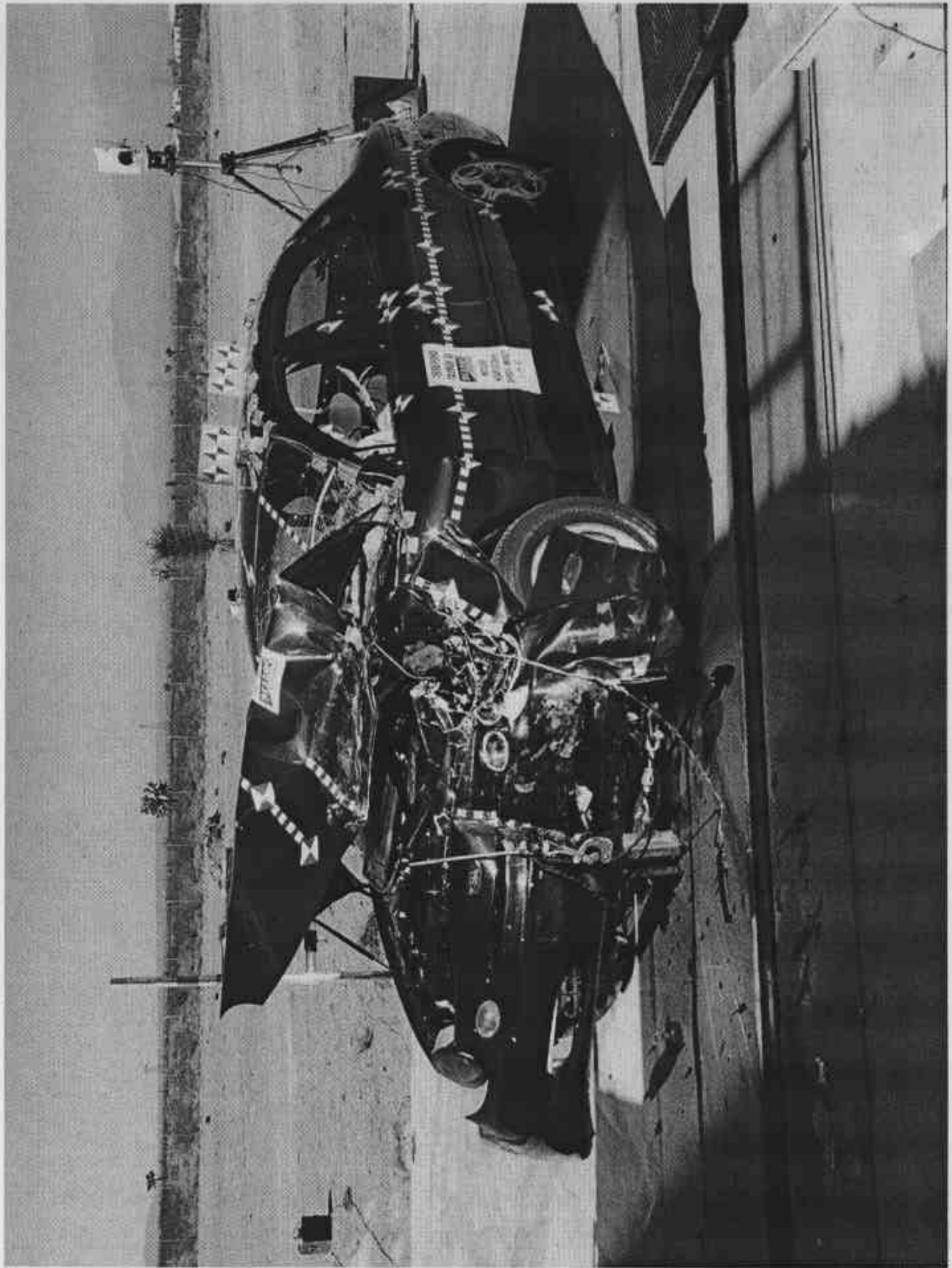


FIGURE A-12. POST TEST LEFT FRONT VIEW

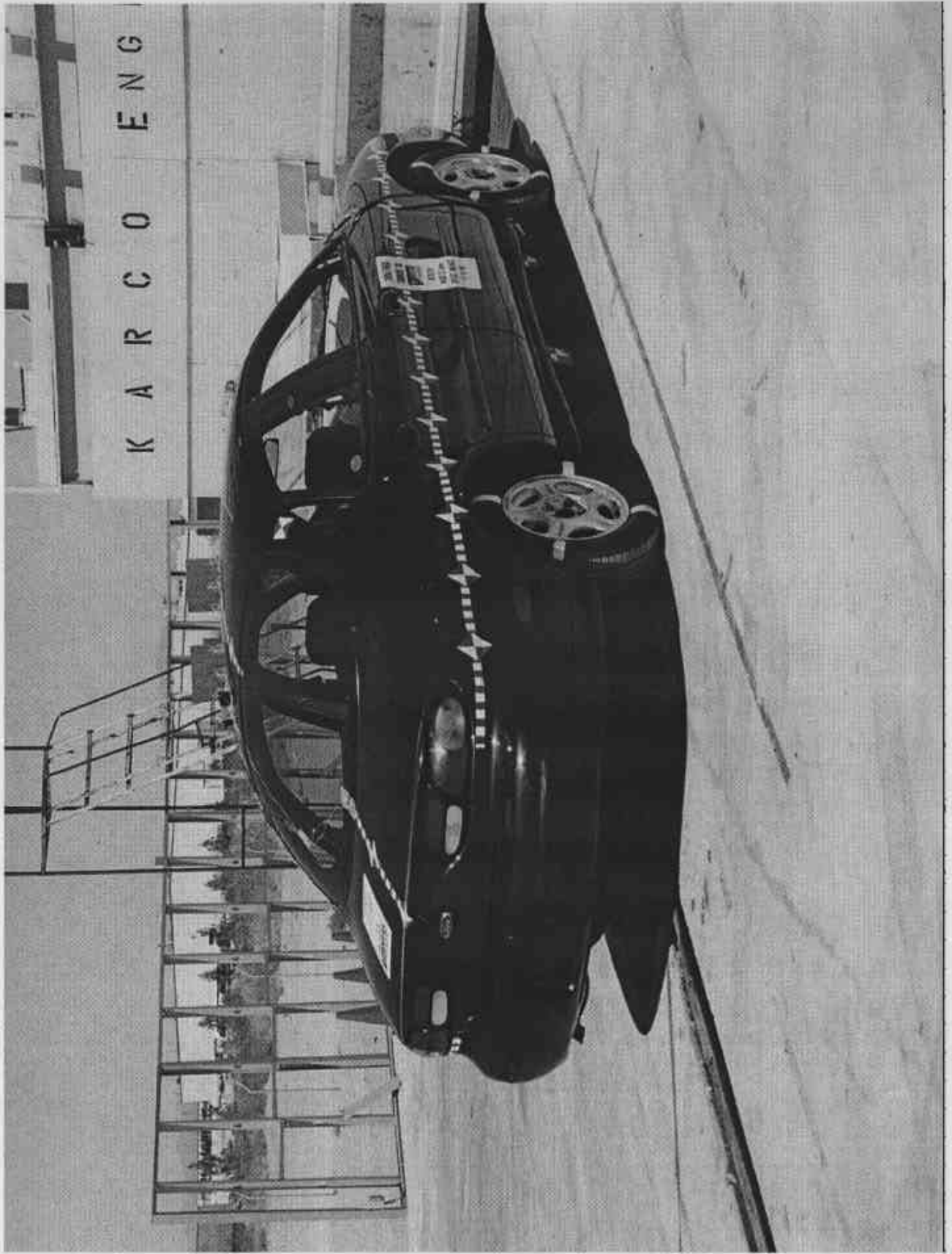


FIGURE A-13. PRETEST RIGHT REAR VIEW

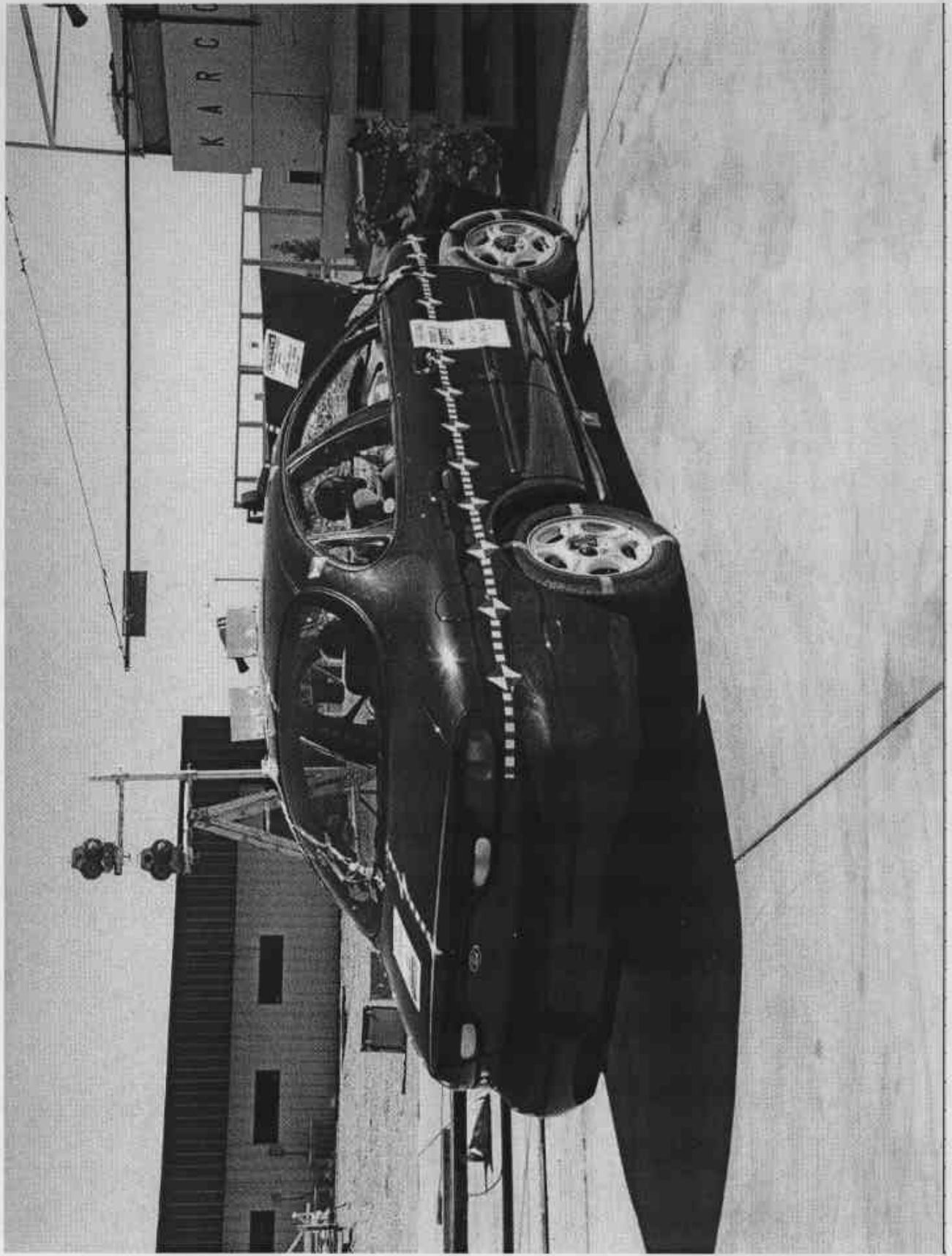


FIGURE A-14 POST TEST RIGHT REAR VIEW

A14

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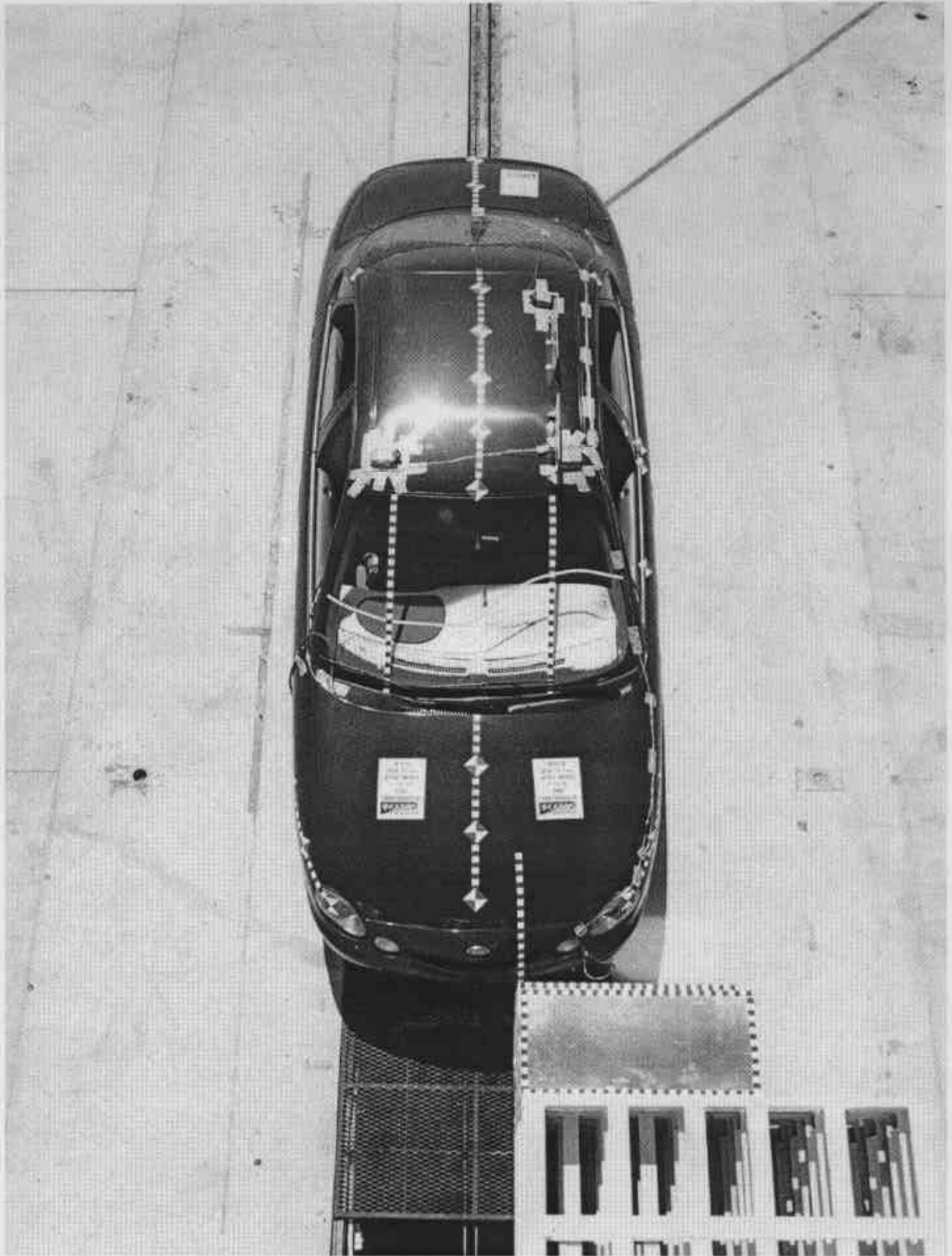


FIGURE A-15. PRETEST OVERHEAD VIEW



FIGURE A-16. POST TEST OVERHEAD VIEW

A-16

KAR-97-R97015-01

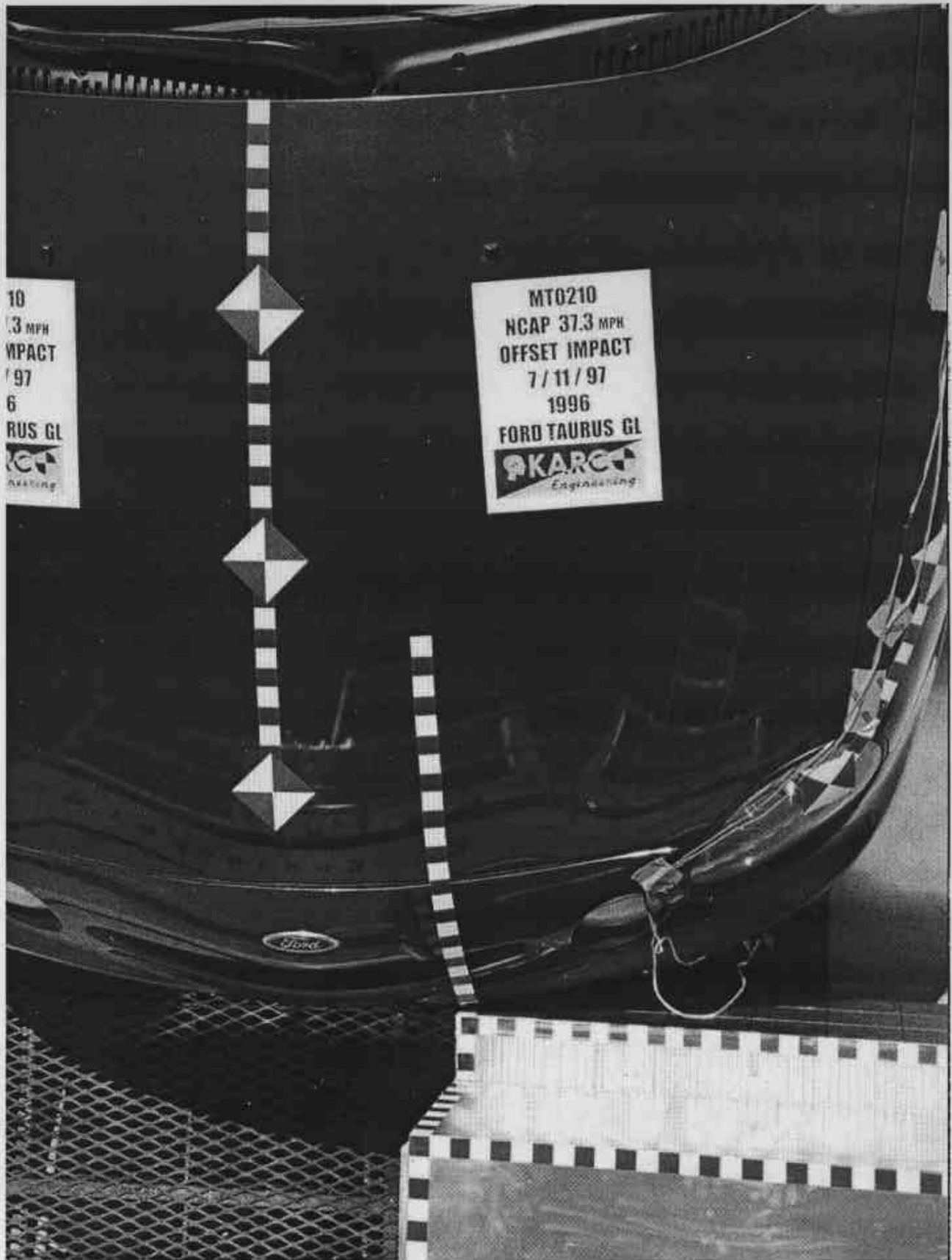


FIGURE -17. PRETEST OVERHEAD CLOSEUP



FIGURE A-18. POST TEST OVERHEAD CLOSEUP

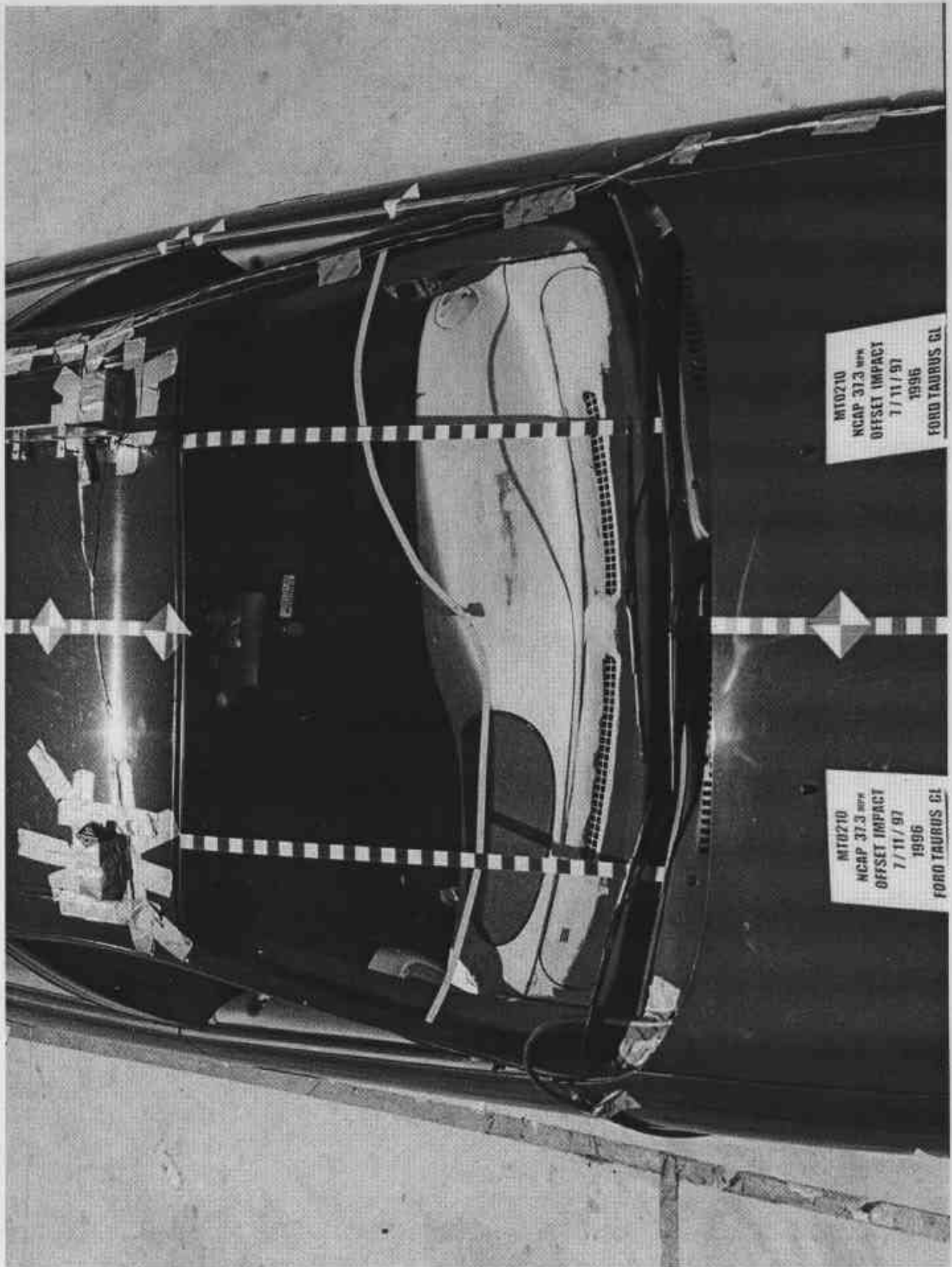


FIGURE A-19. PRETEST WINDSHIELD

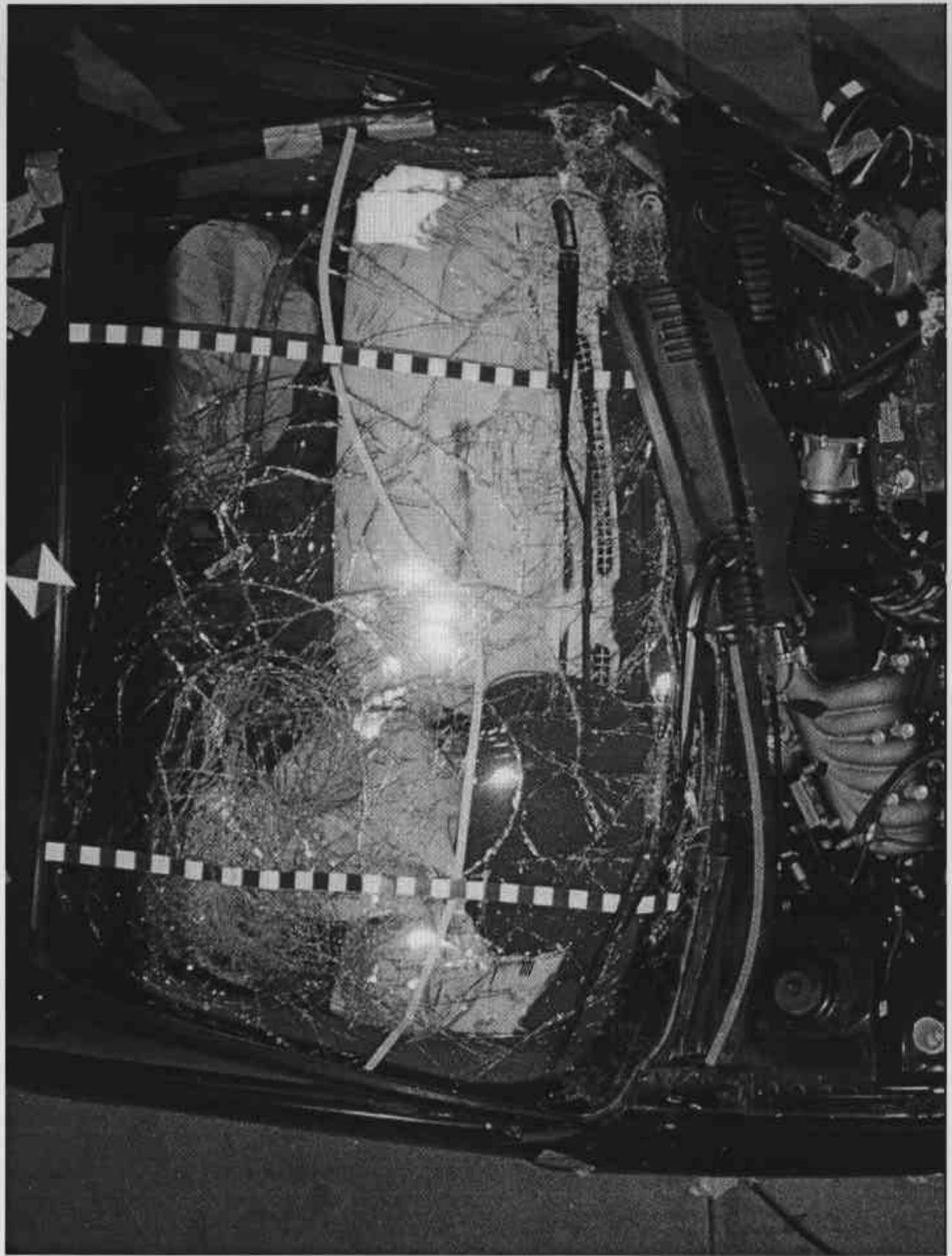


FIGURE A-20. POST TEST WINDSHIELD

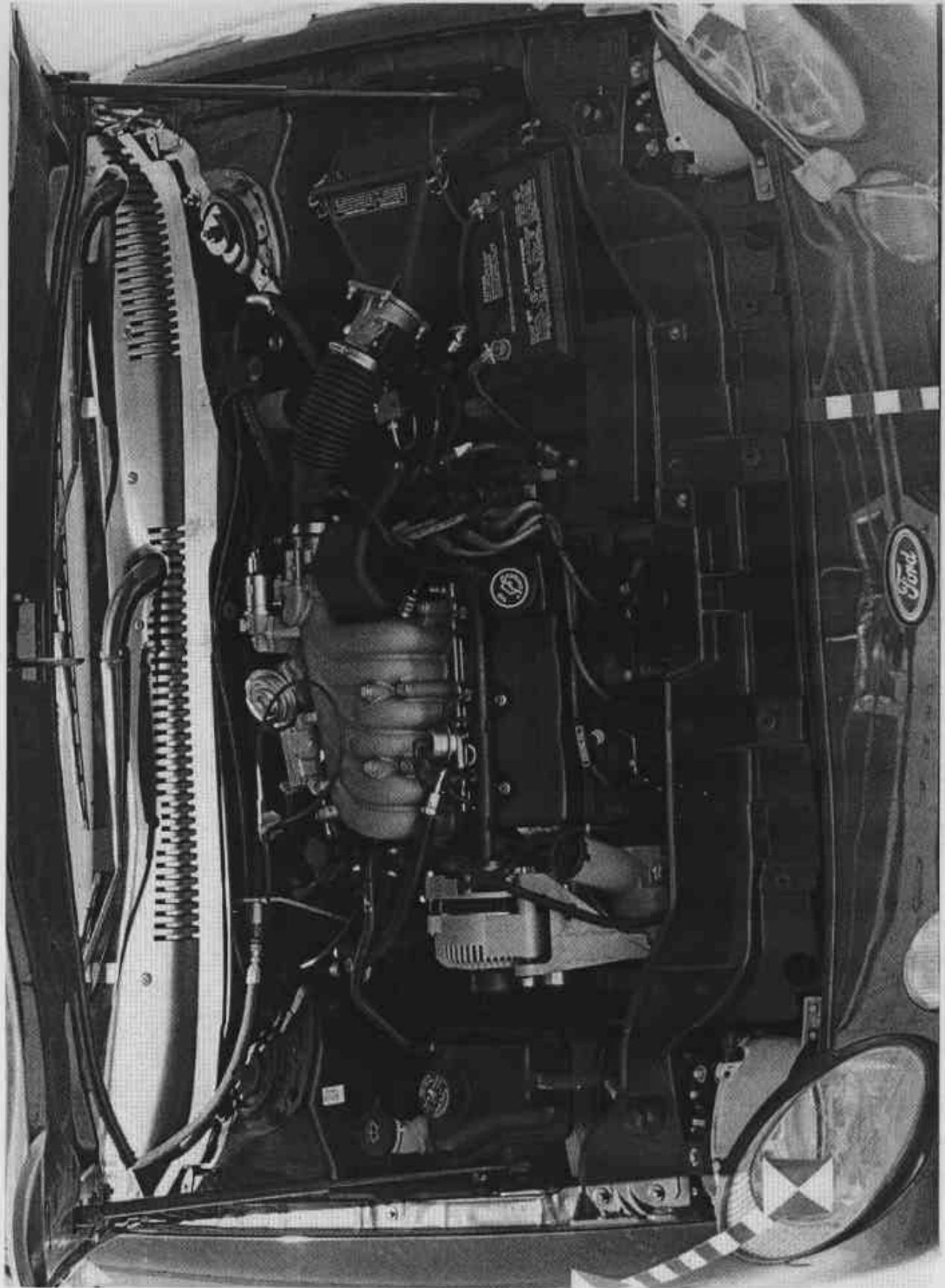


FIGURE-21. PRETEST ENGINE COMPARTMENT

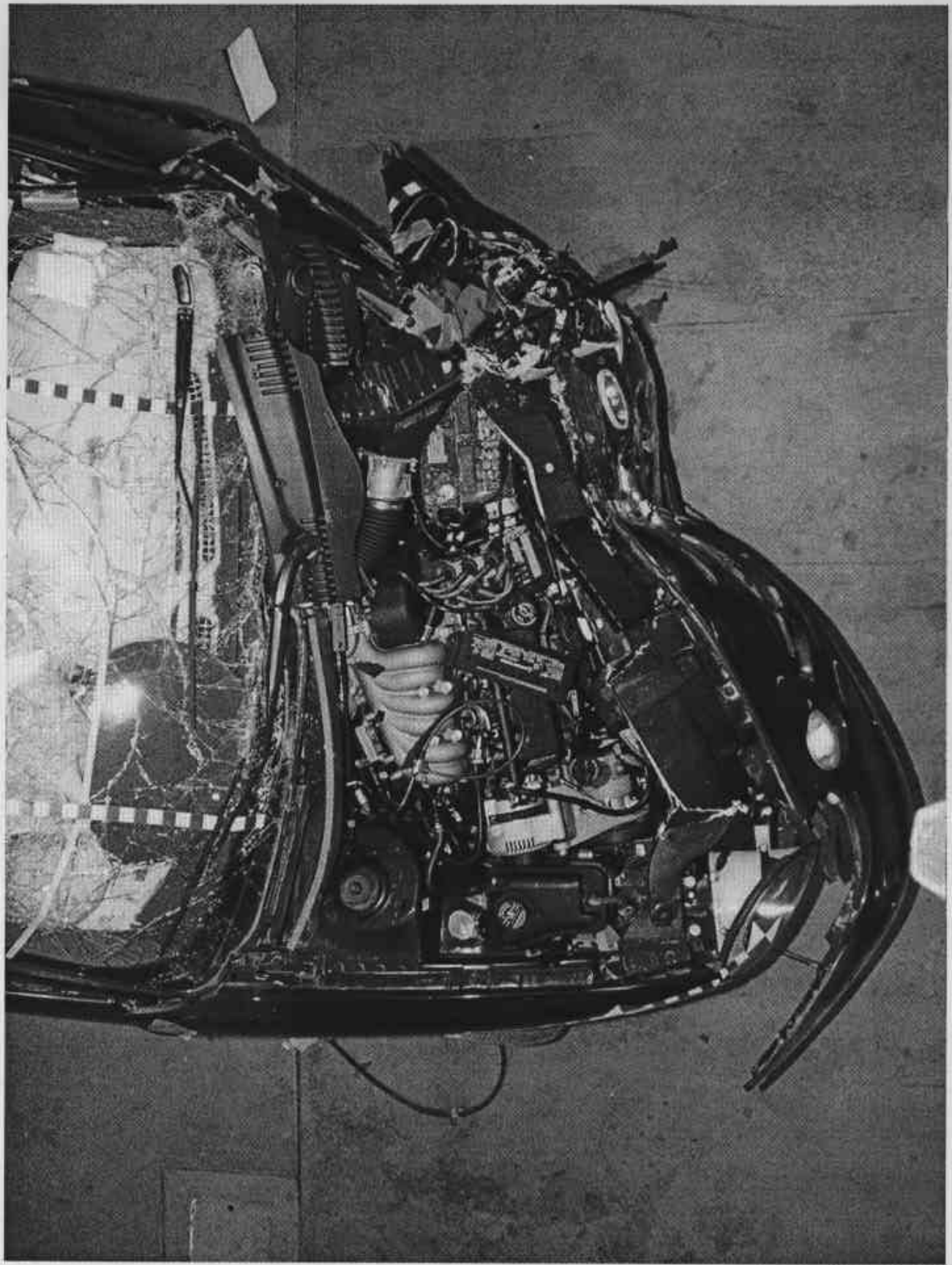


FIGURE A-22. POST TEST ENGINE COMPARTMENT

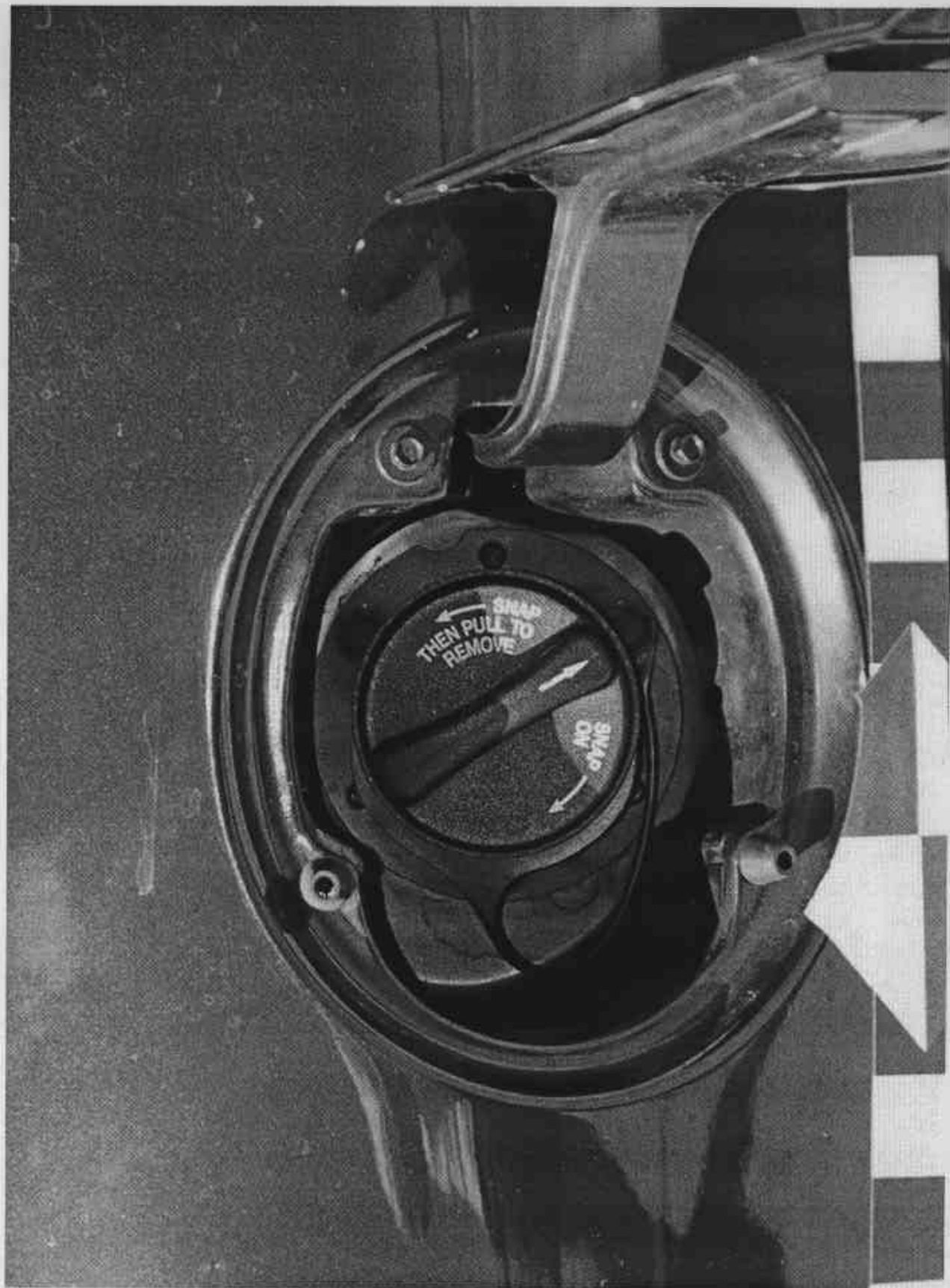


FIGURE A-23. FUEL CAP

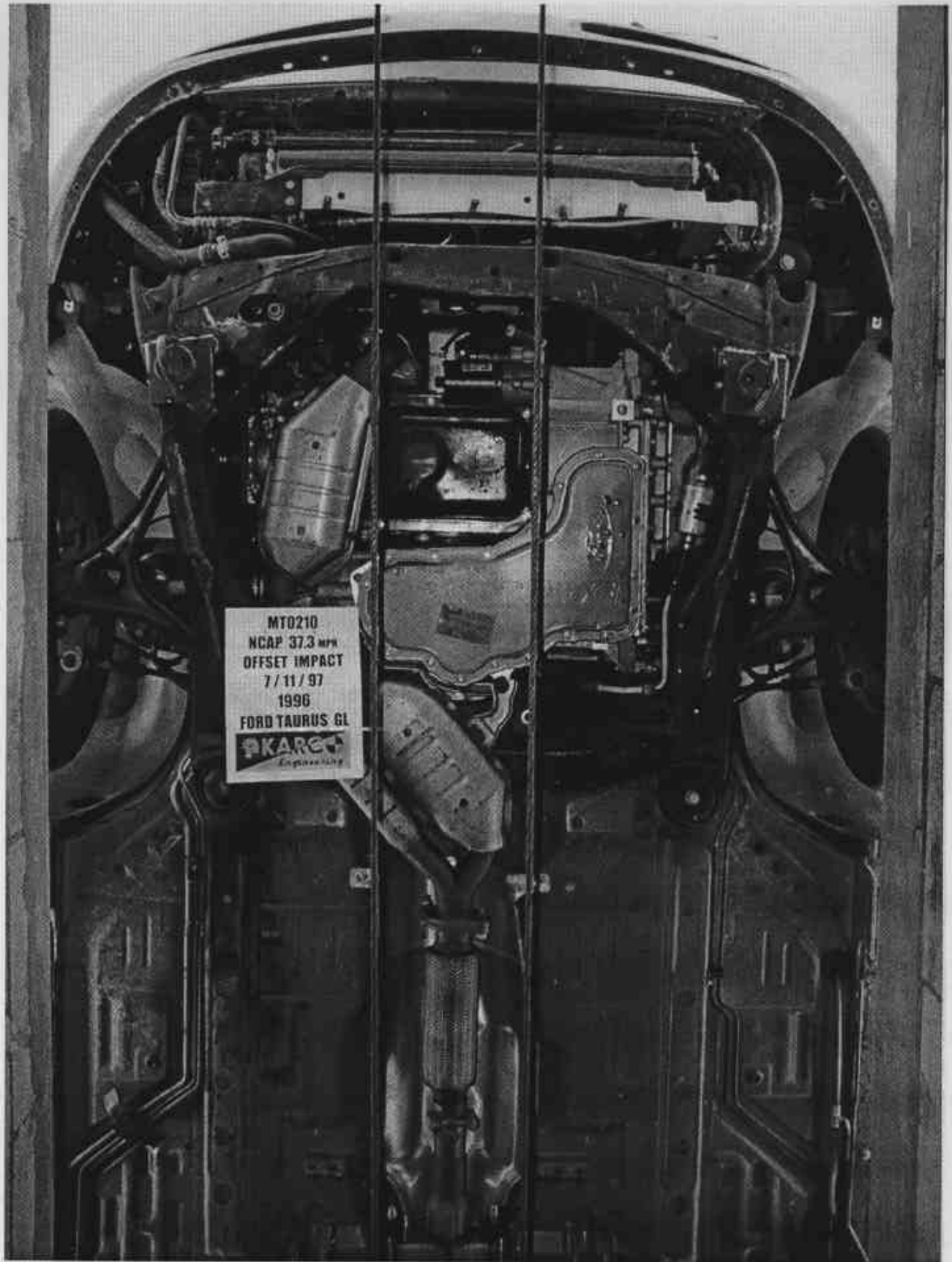


FIGURE A-24.PRETEST FRONT UNDERBODY

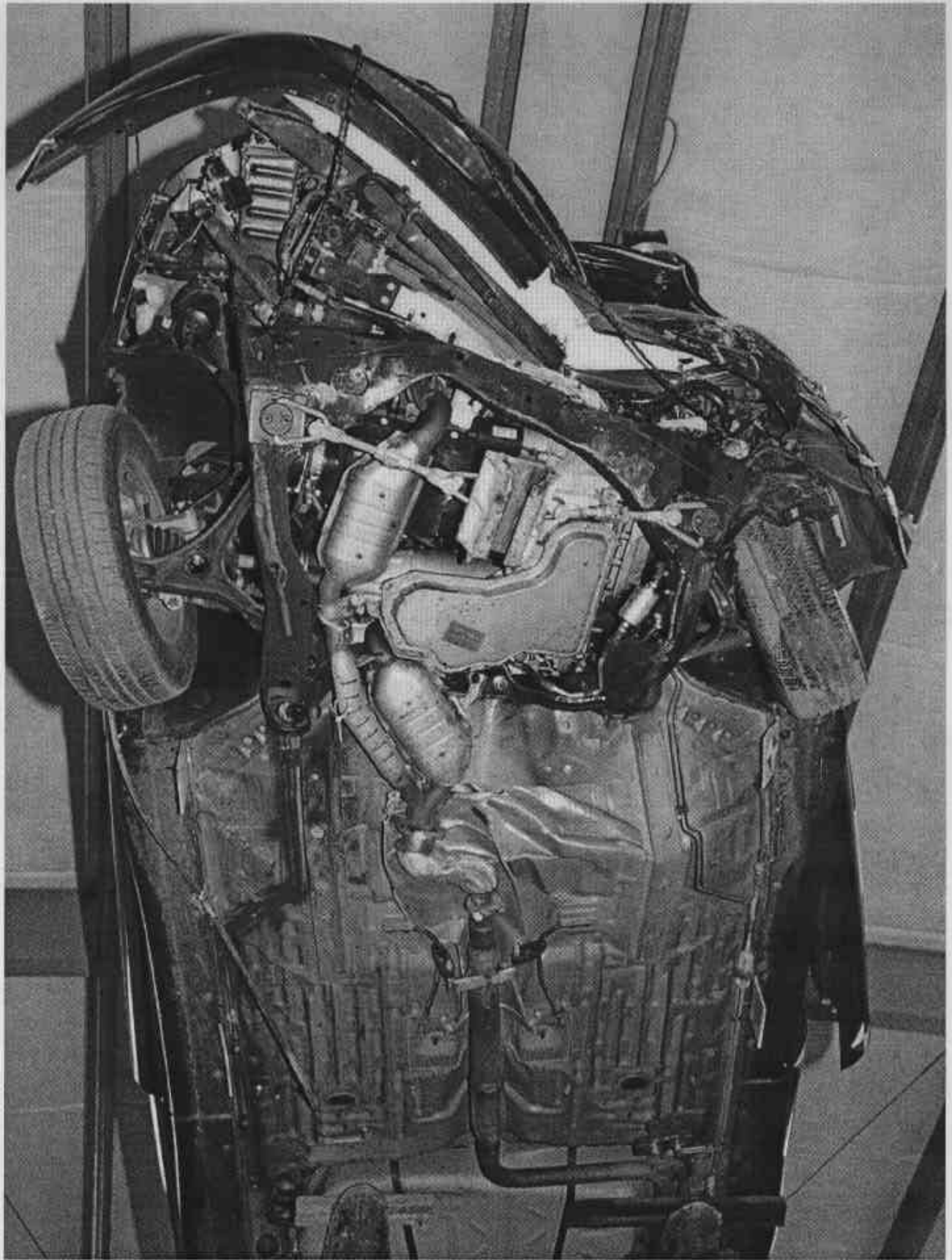


FIGURE A-25. POST TEST FRONT UNDERBODY

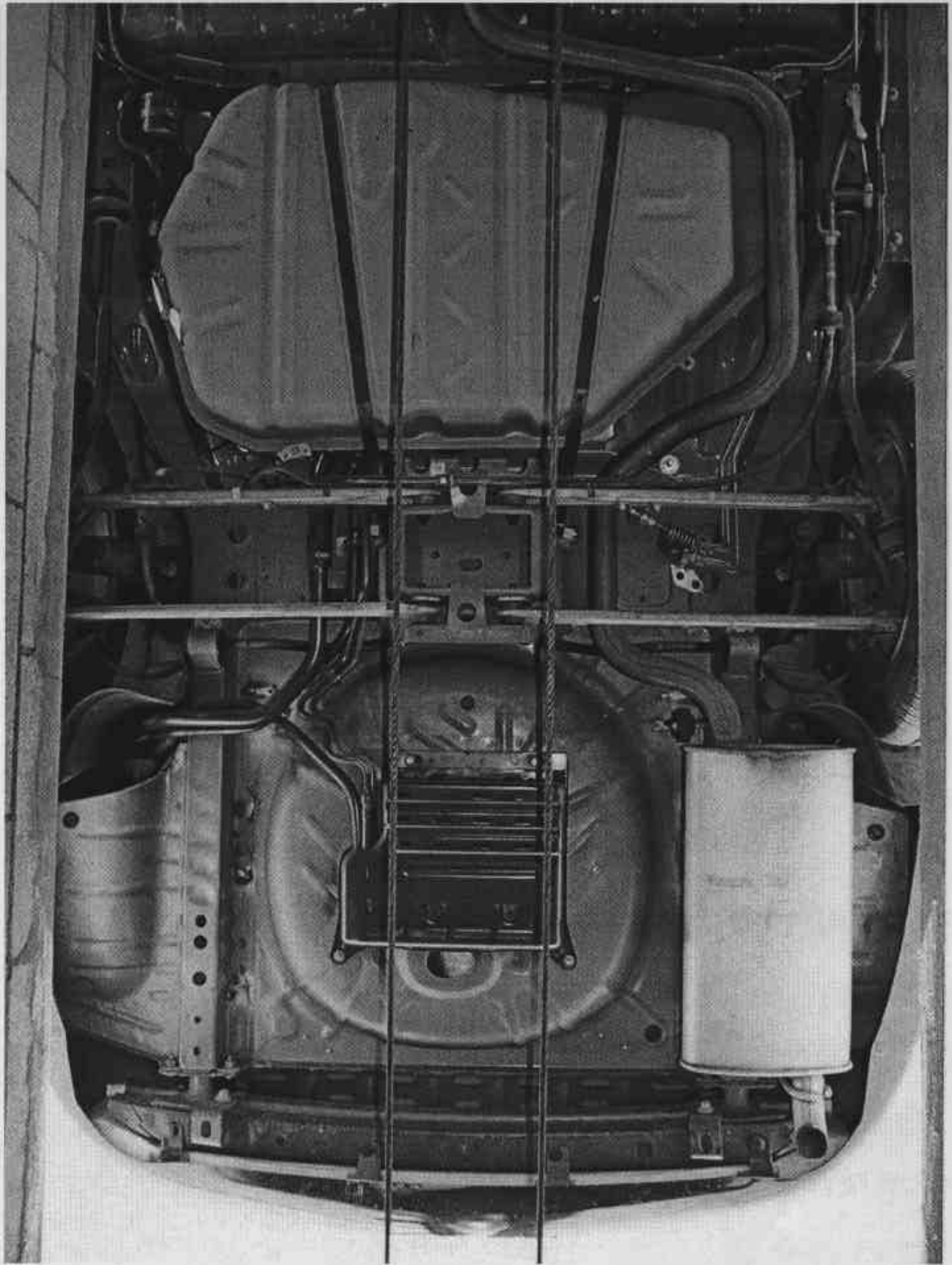


FIGURE A-26. PRETEST REAR UNDERBODY

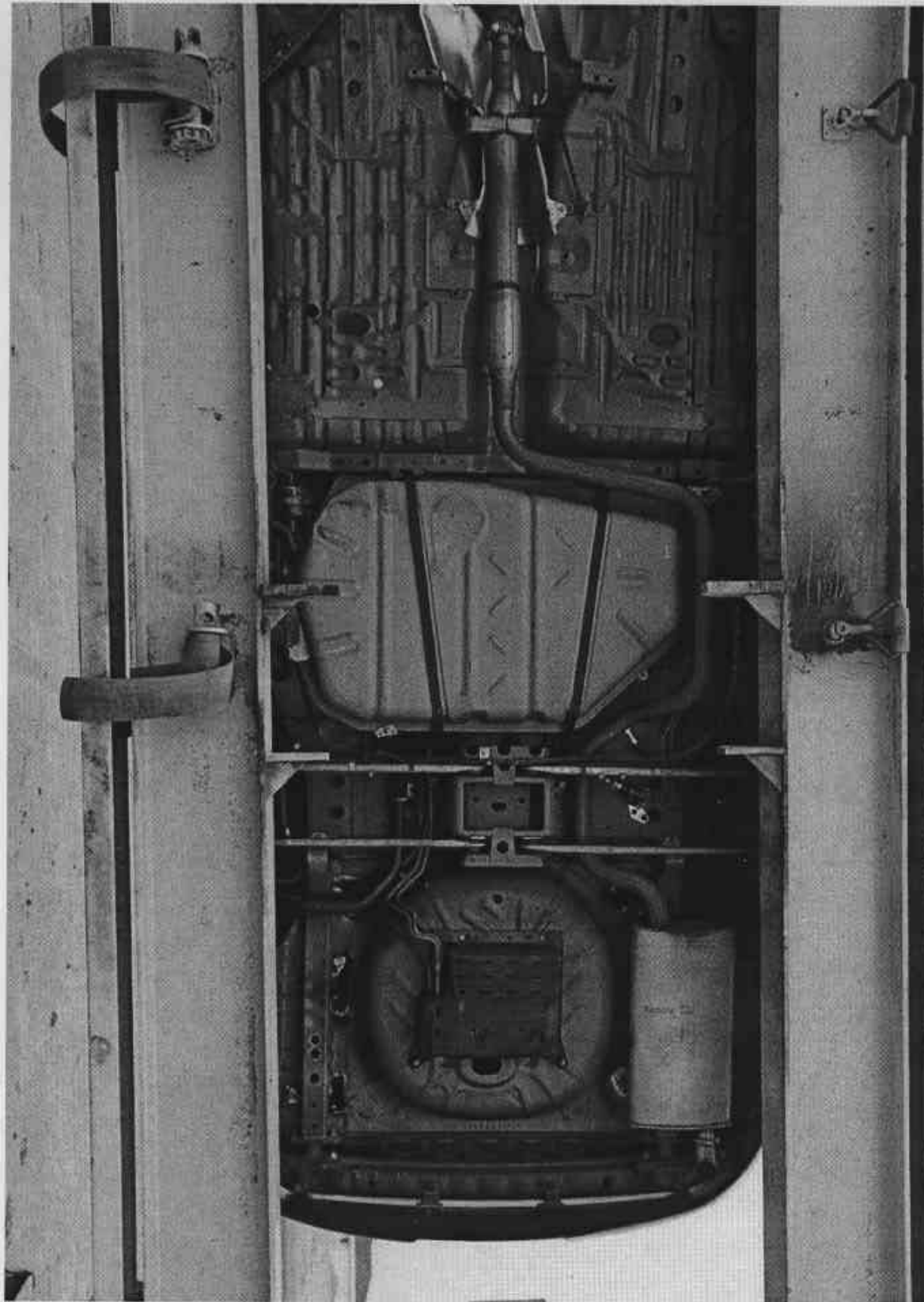


FIGURE A-27. POST TEST REAR UNDERBODY



FIGURE A-28. VEHICLE ON ROLLOVER DEVICE

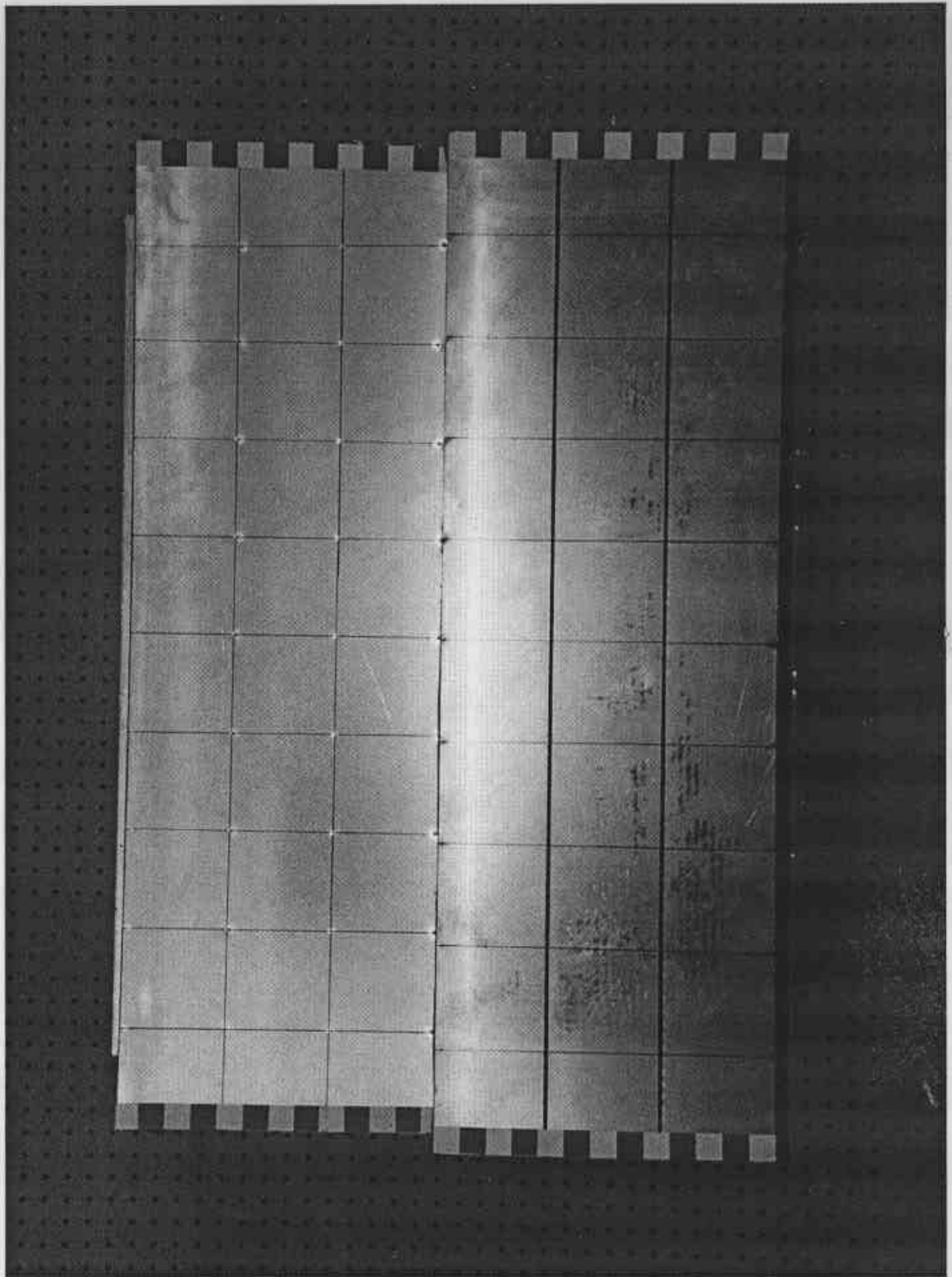


FIGURE A-29. PRETEST BARRIER FRONT VIEW

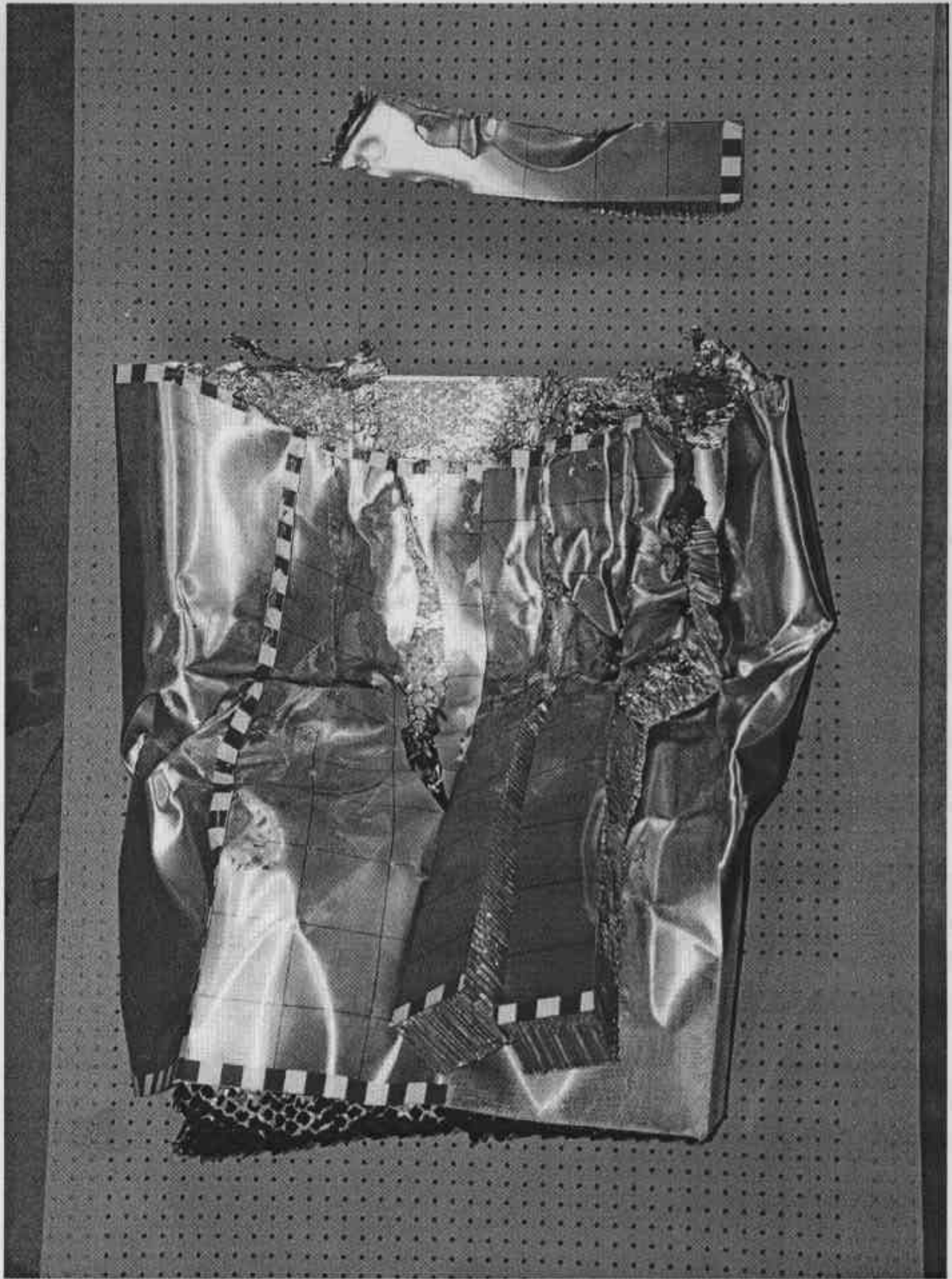


FIGURE A-30. POST TEST BARRIER FRONT VIEW

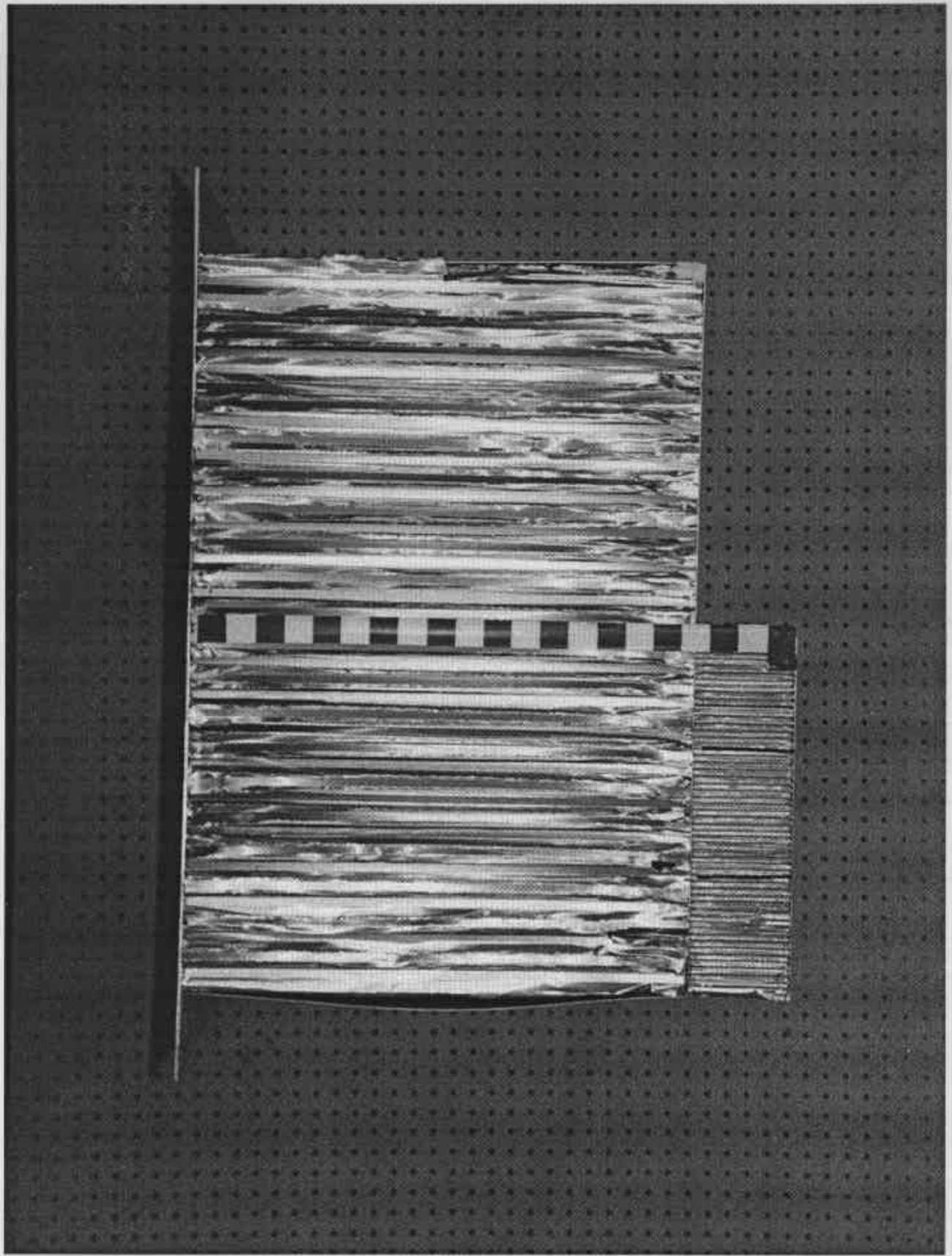


FIGURE A-31. PRE TEST BARRIER LEFT SIDE VIEW

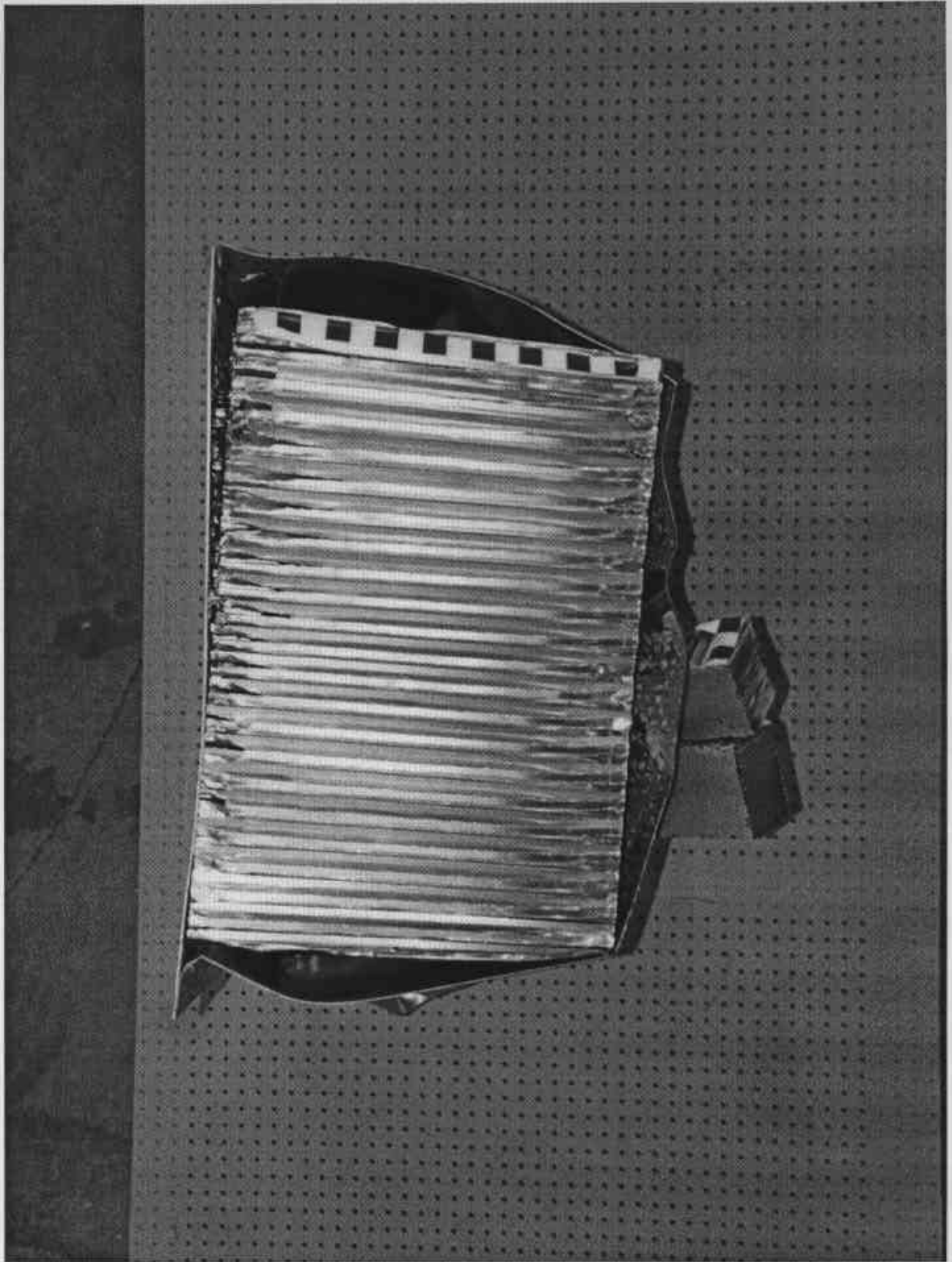


FIGURE A-32. POST TEST BARRIER LEFT SIDE VIEW

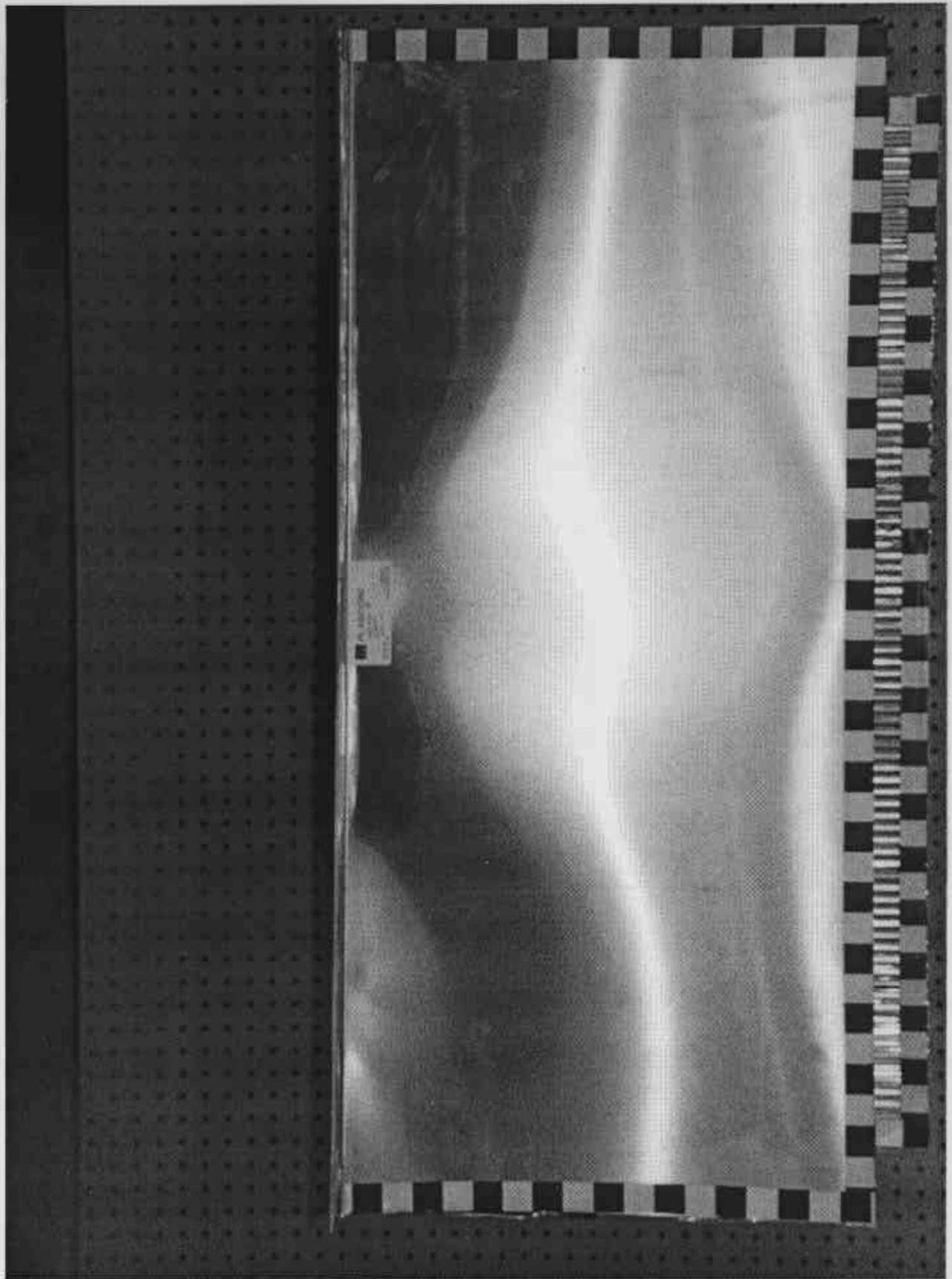


FIGURE A-33. PRETEST BARRIER TOP VIEW

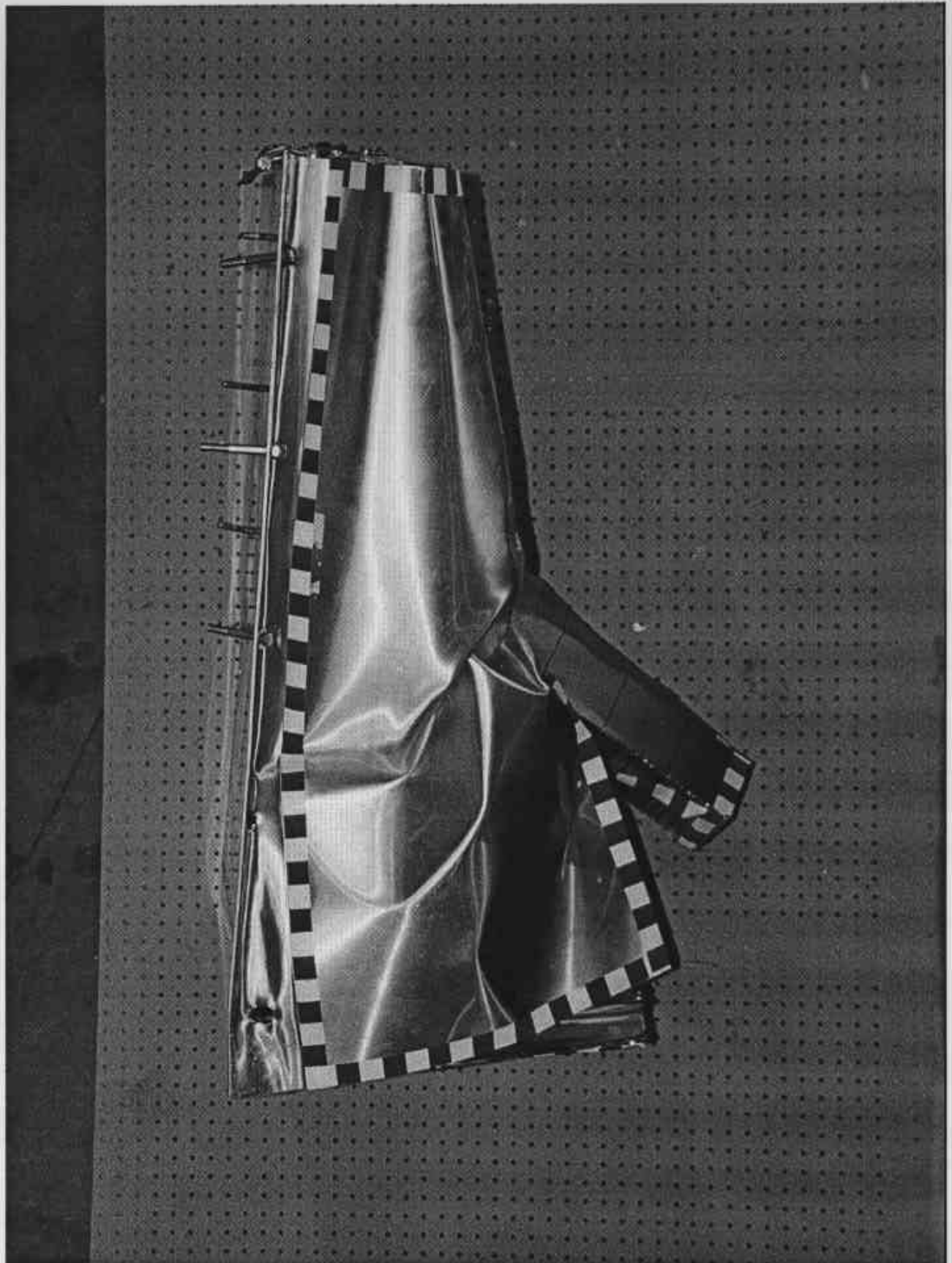


FIGURE A-34. POST TEST BARRIER TOP VIEW

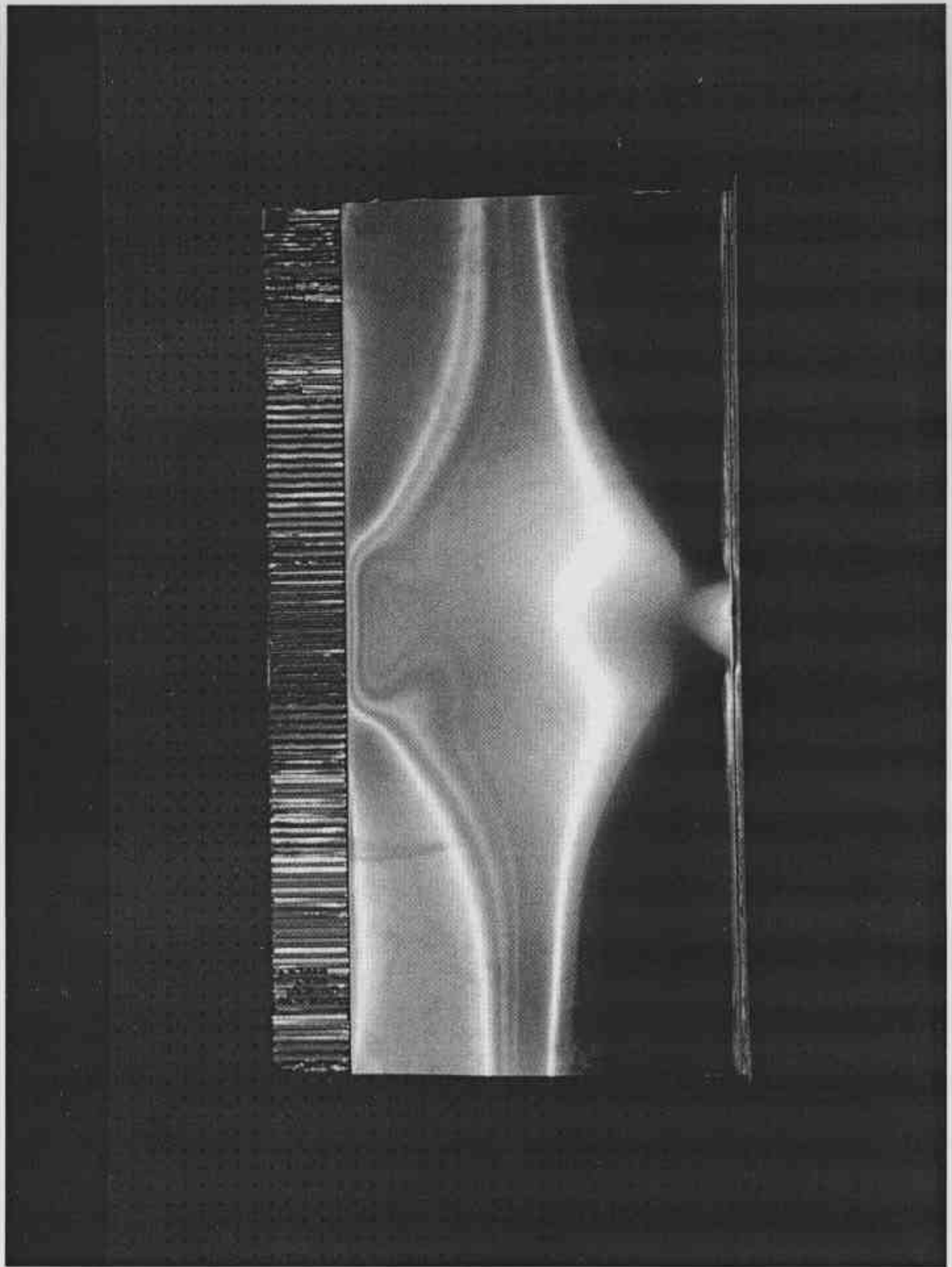


FIGURE A-35. PRETEST BARRIER BOTTOM VIEW

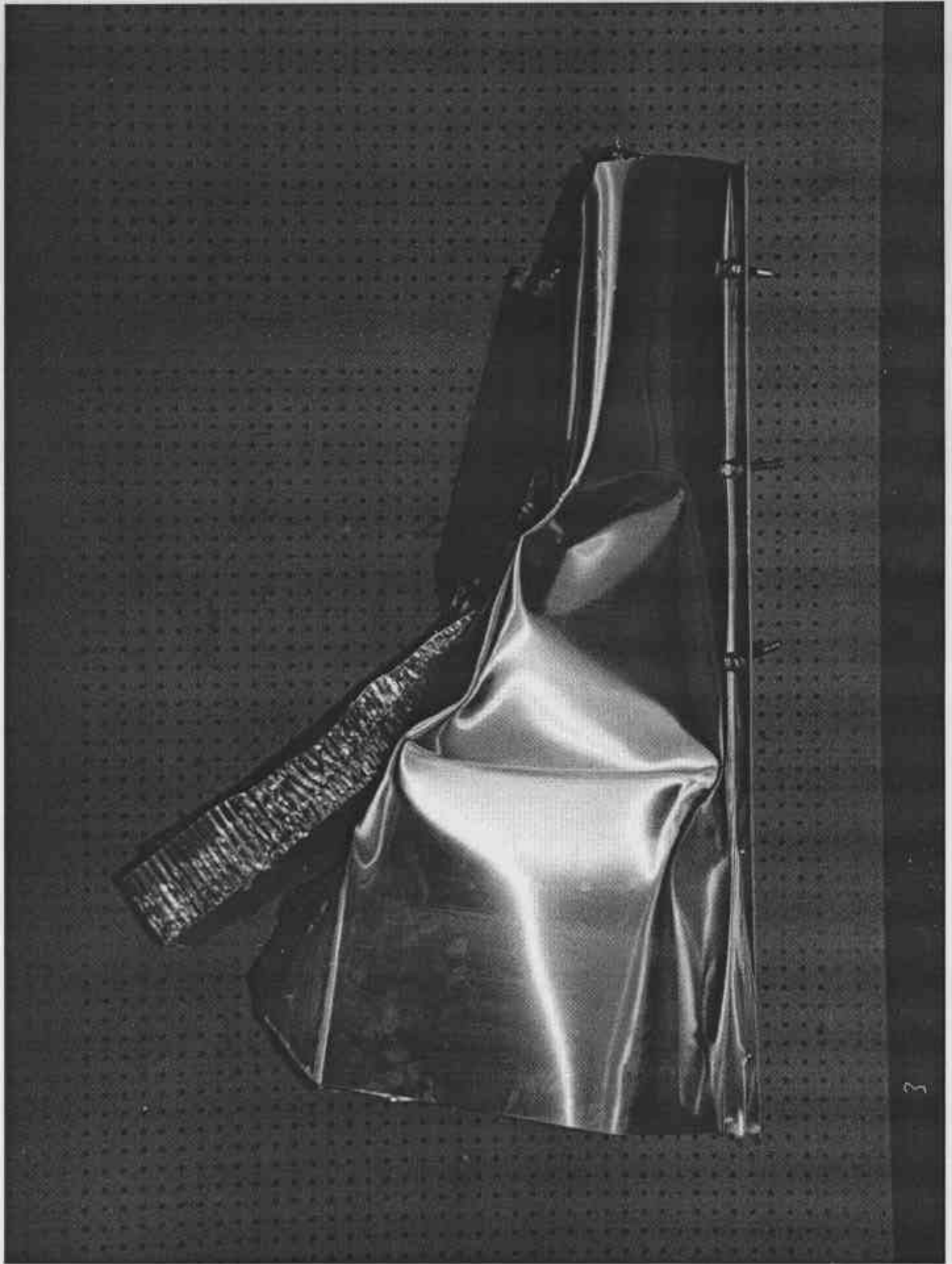


FIGURE A-36. POST TEST BARRIER BOTTOM VIEW

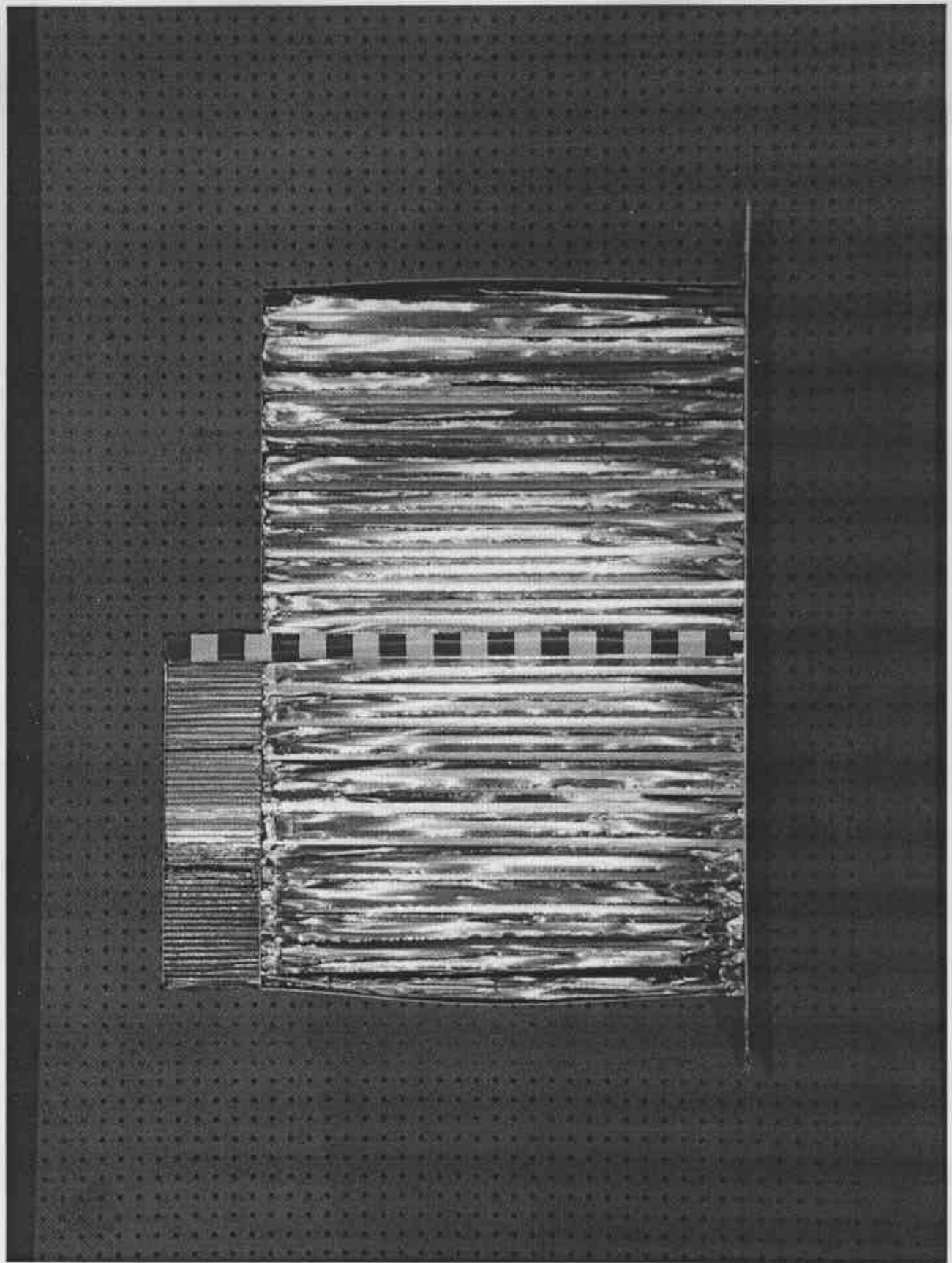


FIGURE A-37. PRETEST BARRIER RIGHT SIDE VIEW

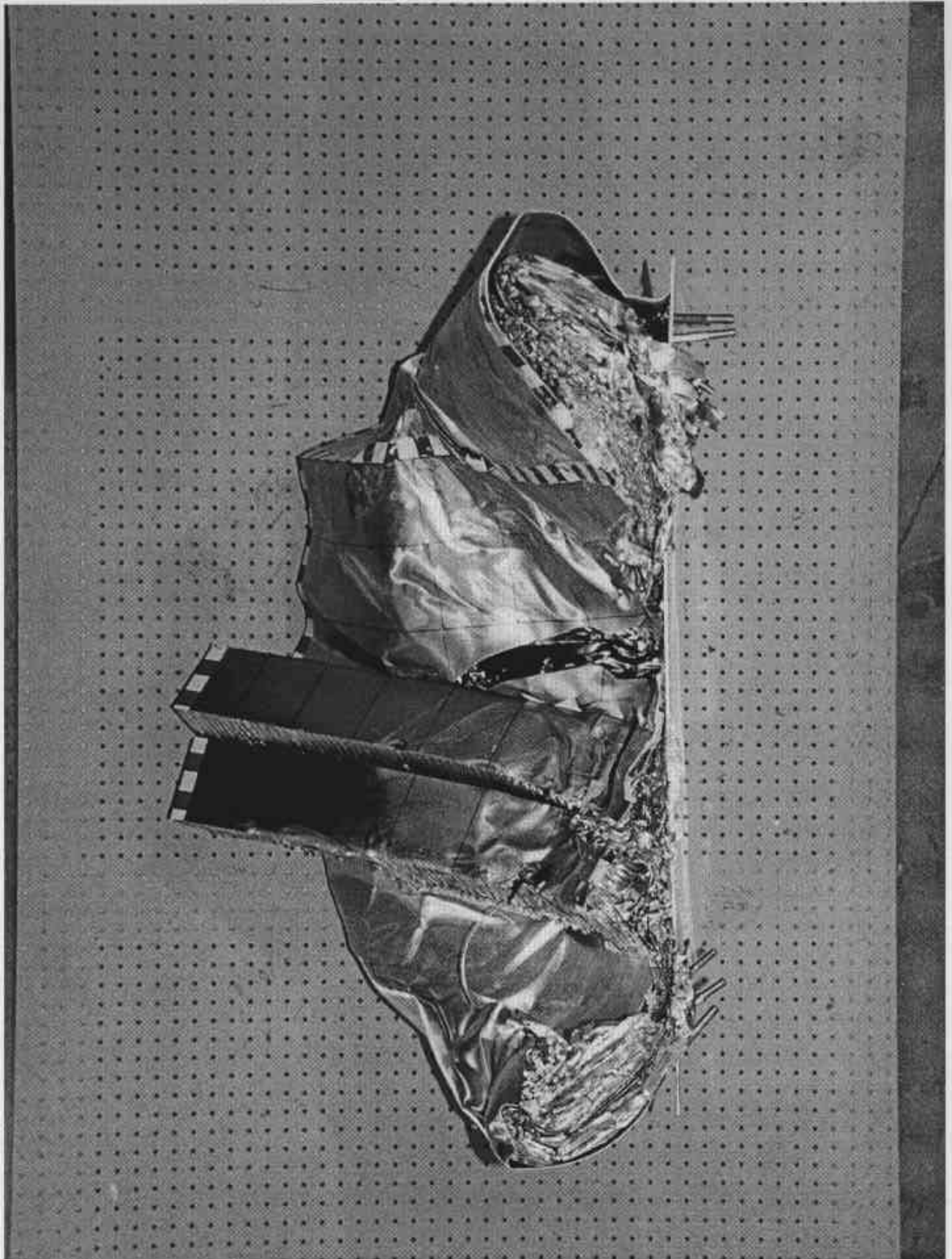


FIGURE A-38. POST TEST BARRIER RIGHT SIDE VIEW



FIGURE A39. PRETEST DRIVER DUMMY (THRU WINDOW)

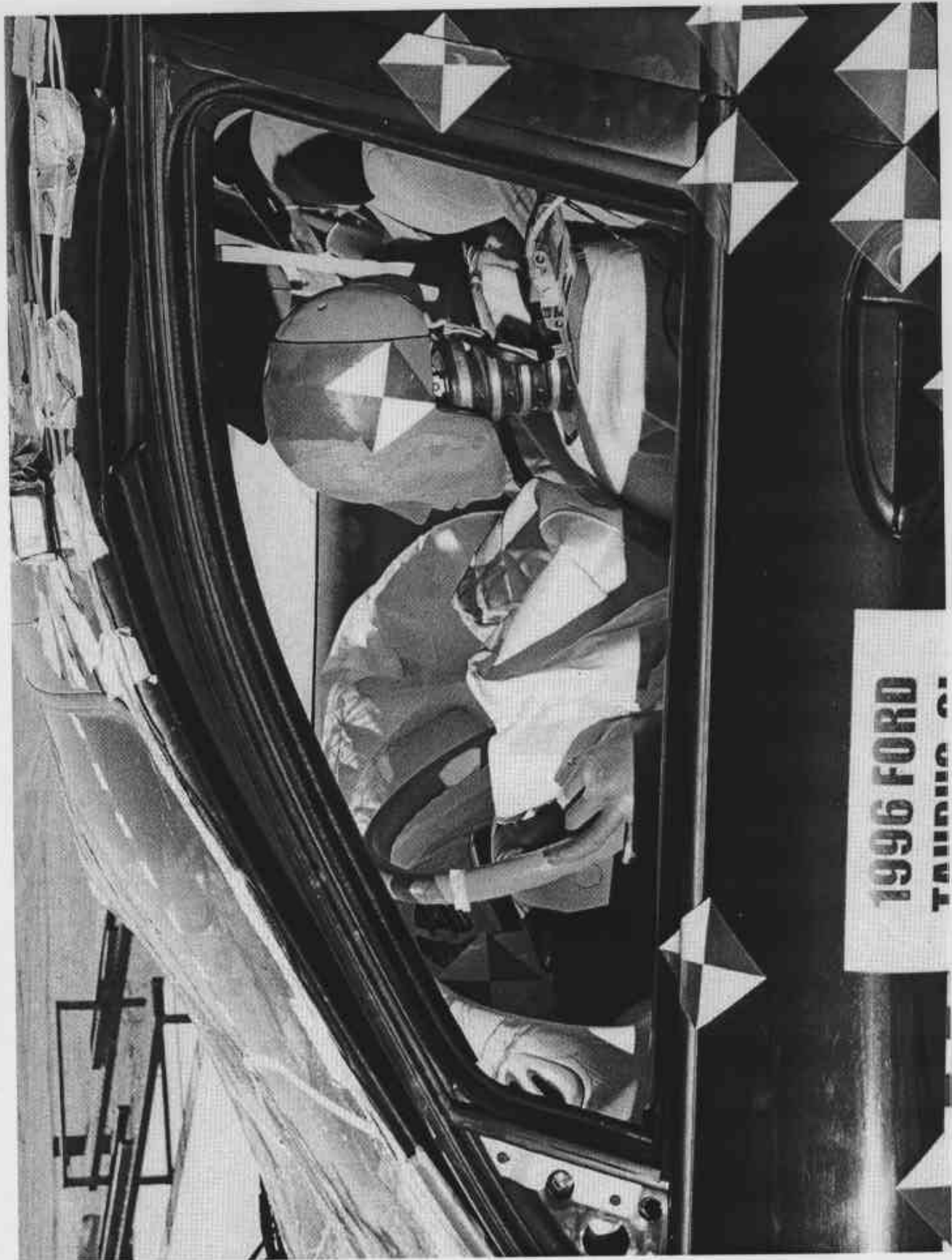


FIGURE A-40. POST TEST DRIVER DUMMY (THRU WINDOW)



FIGURE A-41. PRETEST DRIVER DUMMY (DOOR OPEN)



FIGURE A-42. POST TEST DRIVER DUMMY (DOOR OPEN)

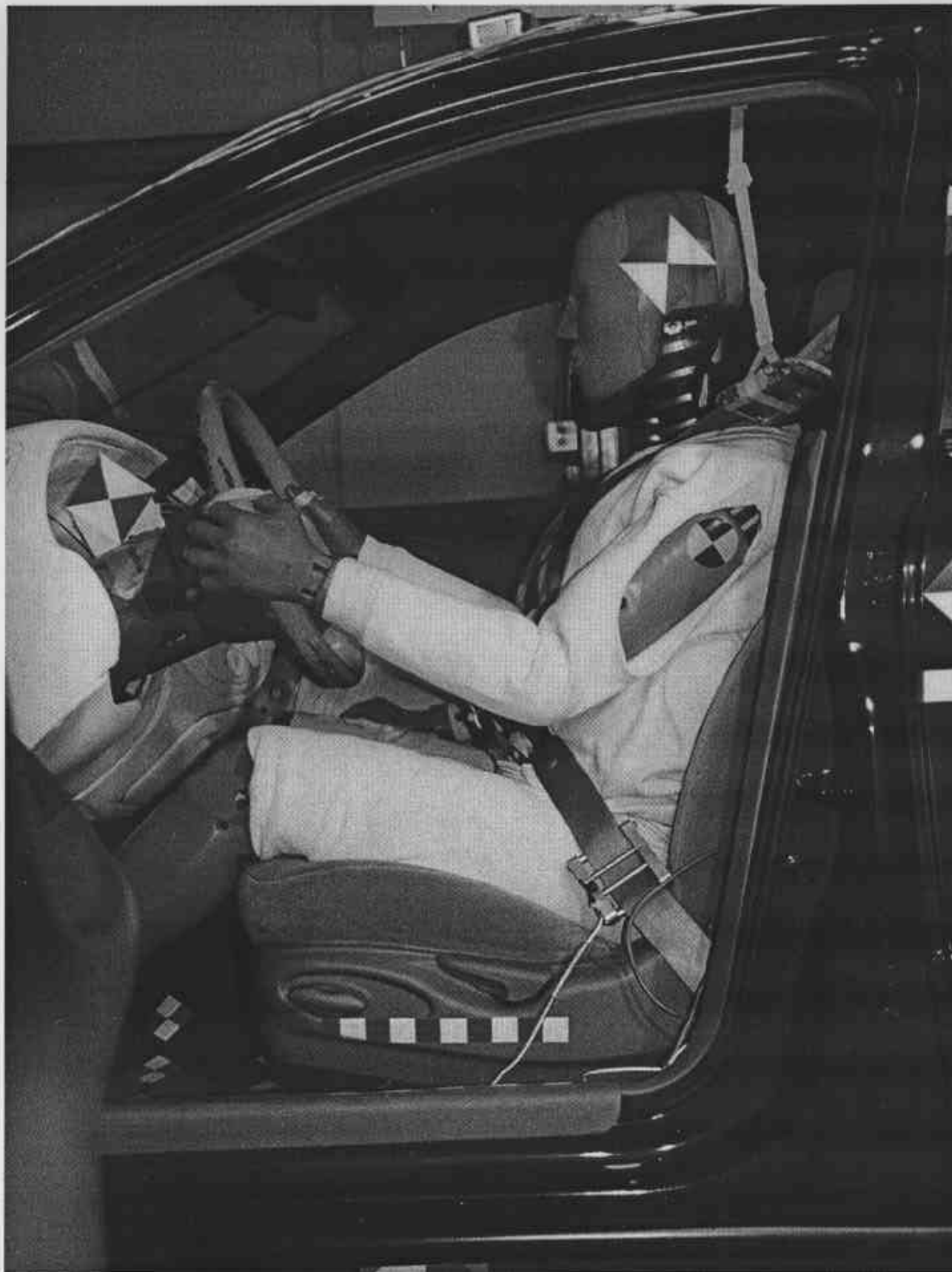


FIGURE A-43. PRE TEST DRIVER DUMMY (90° TO VEHICLE)



FIGURE A-44. POST TEST DRIVER DUMMY (90° TO VEHICLE)



FIGURE A-45. PRETEST DRIVER DUMMY FEET



FIGURE A-46. POST TEST DRIVER DUMMY FEET



FIGURE A-47. PRETEST DRIVER SIDE FLOOR

A-47

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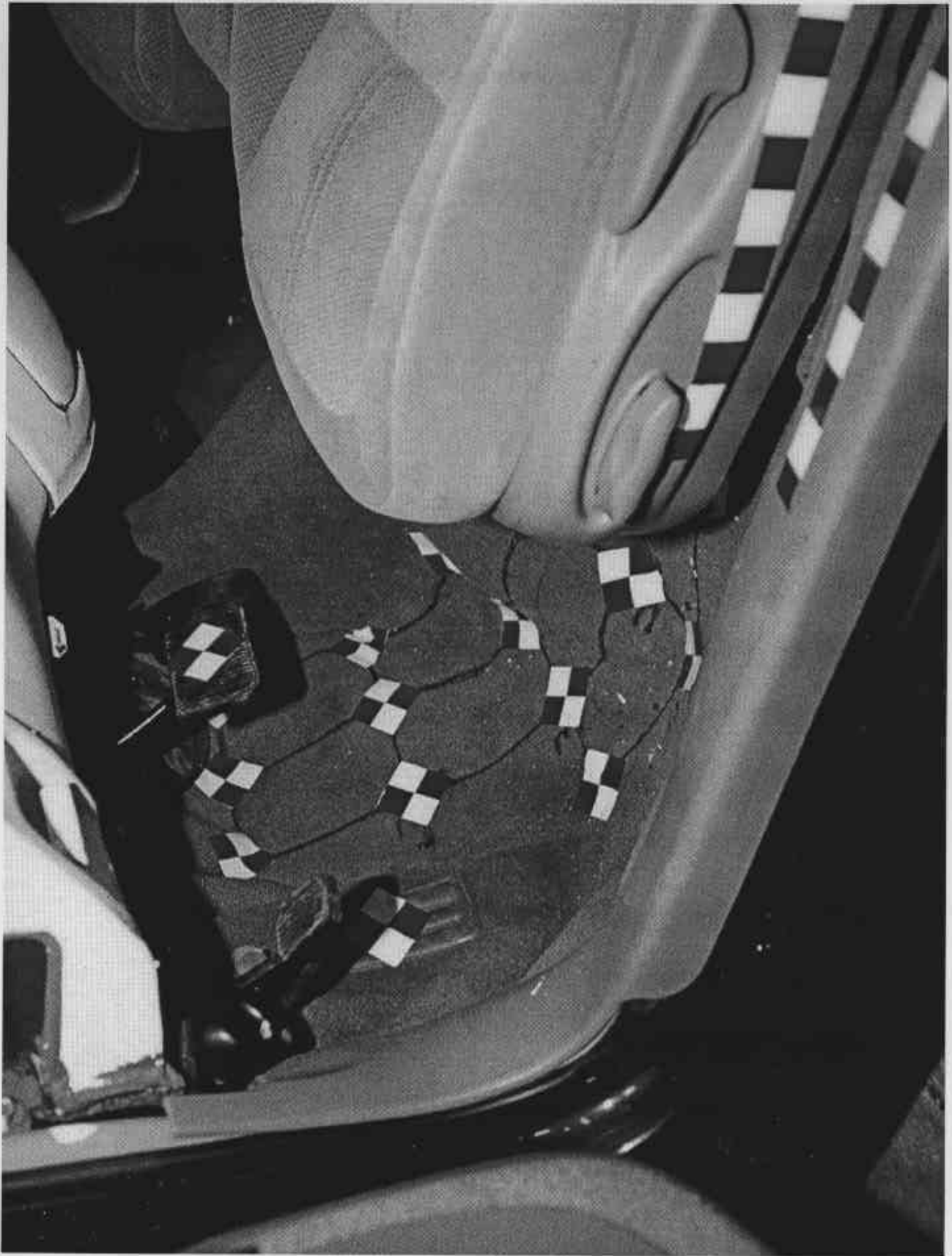


FIGURE A-48.POST TEST DRIVER SIDE FLOOR



FIGURE A-49. PRETEST DRIVER KNEE BOLSTER

A-49

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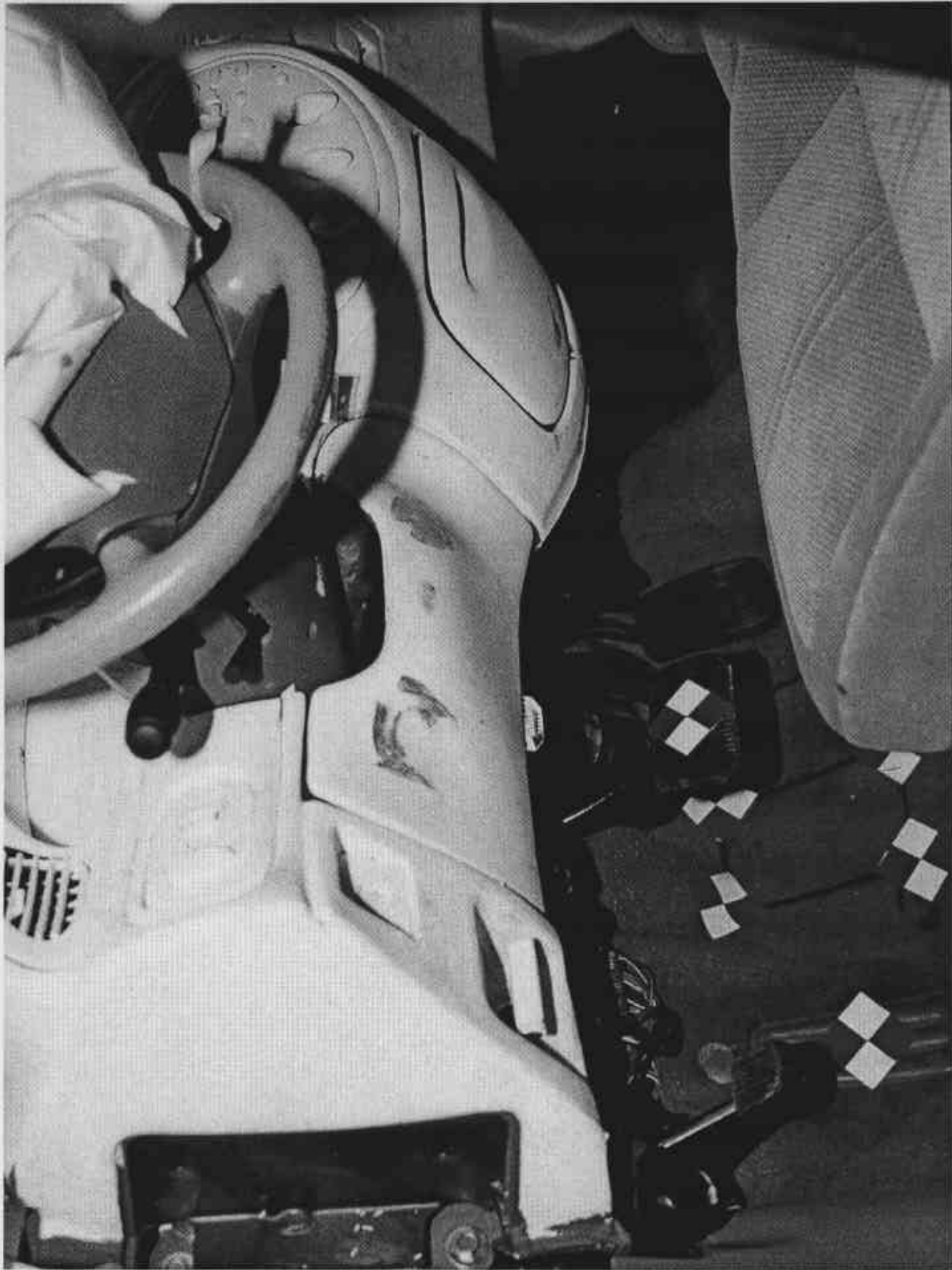


FIGURE A-50. POST TEST DRIVER KNEE BOLSTER AND DUMMY CONTACT

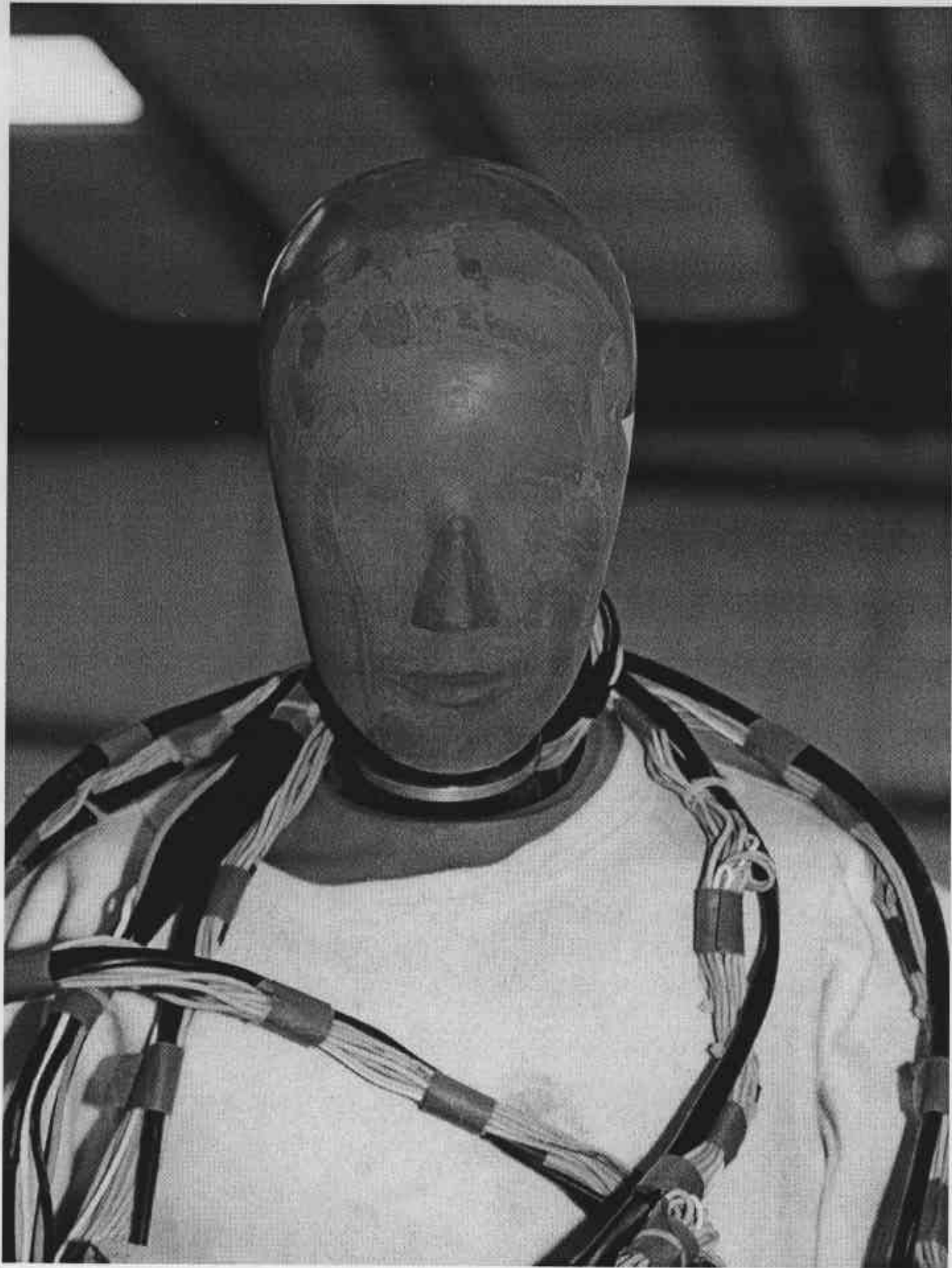


FIGURE A-51. DRIVER HEAD POST TEST



FIGURE A-52. DRIVER DUMMY HEAD CONTACT POINT



FIGURE A-53. PRETEST PASSENGER DUMMY (THRU WINDOW)



FIGURE A-54. POST TEST PASSENGER DUMMY (THRU WINDOW)



FIGURE A-55. PRETEST PASSENGER DUMMY (DOOR OPEN)

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FIGURE A-56. POST TEST PASSENGER DUMMY (DOOR OPEN)



FIGURE A-57. PRETEST PASSENGER DUMMY (90° TO VEHICLE)



FIGURE A-58. POST TEST PASSENGER DUMMY (90° TO VEHICLE)

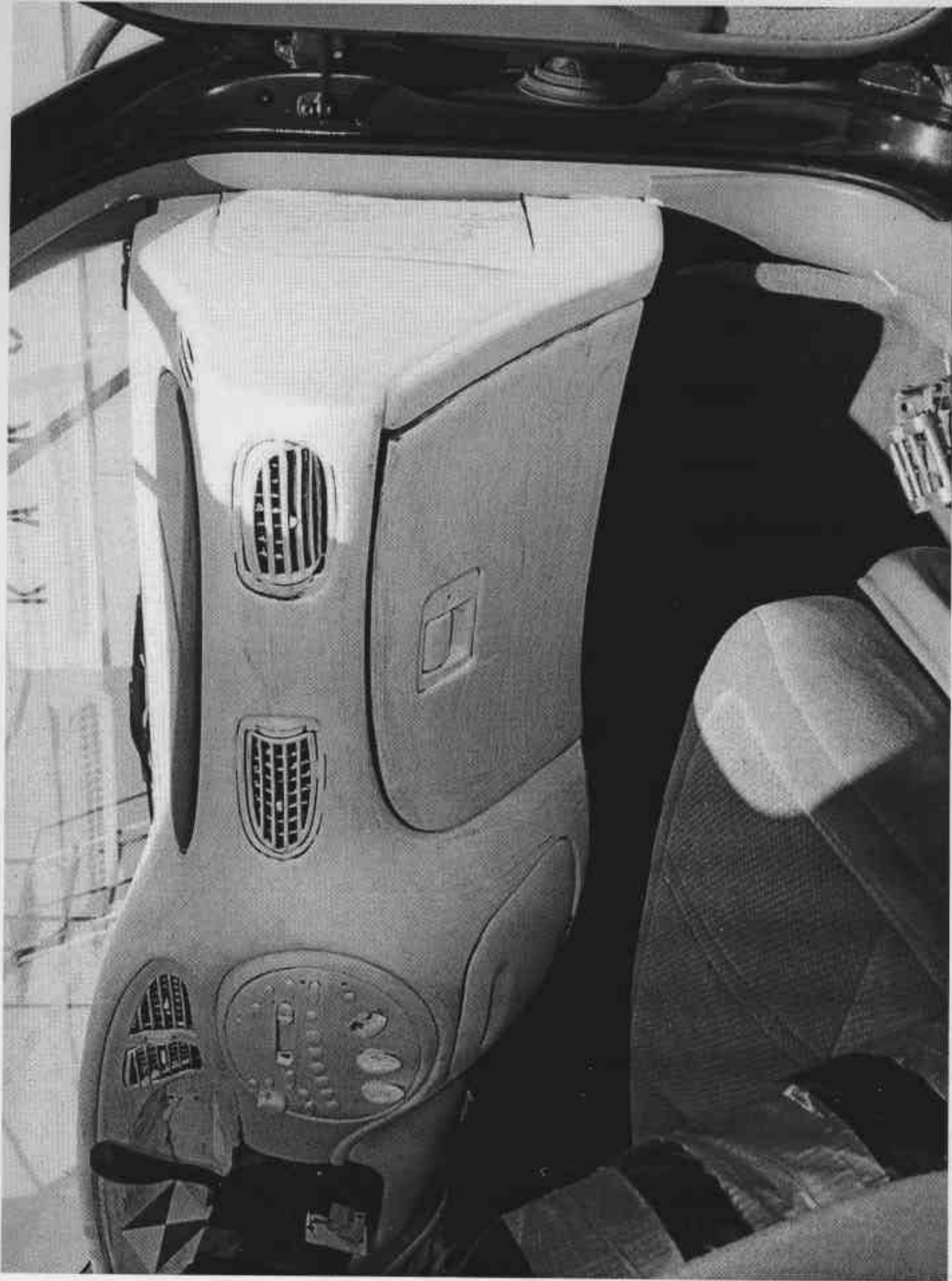


FIGURE A-59. PRETEST PASSENGER KNEE BOLSTER



FIGURE A-60. POST TEST PASSENGER DUMMY KNEE BOLSTER AND DUMMY CONTACT

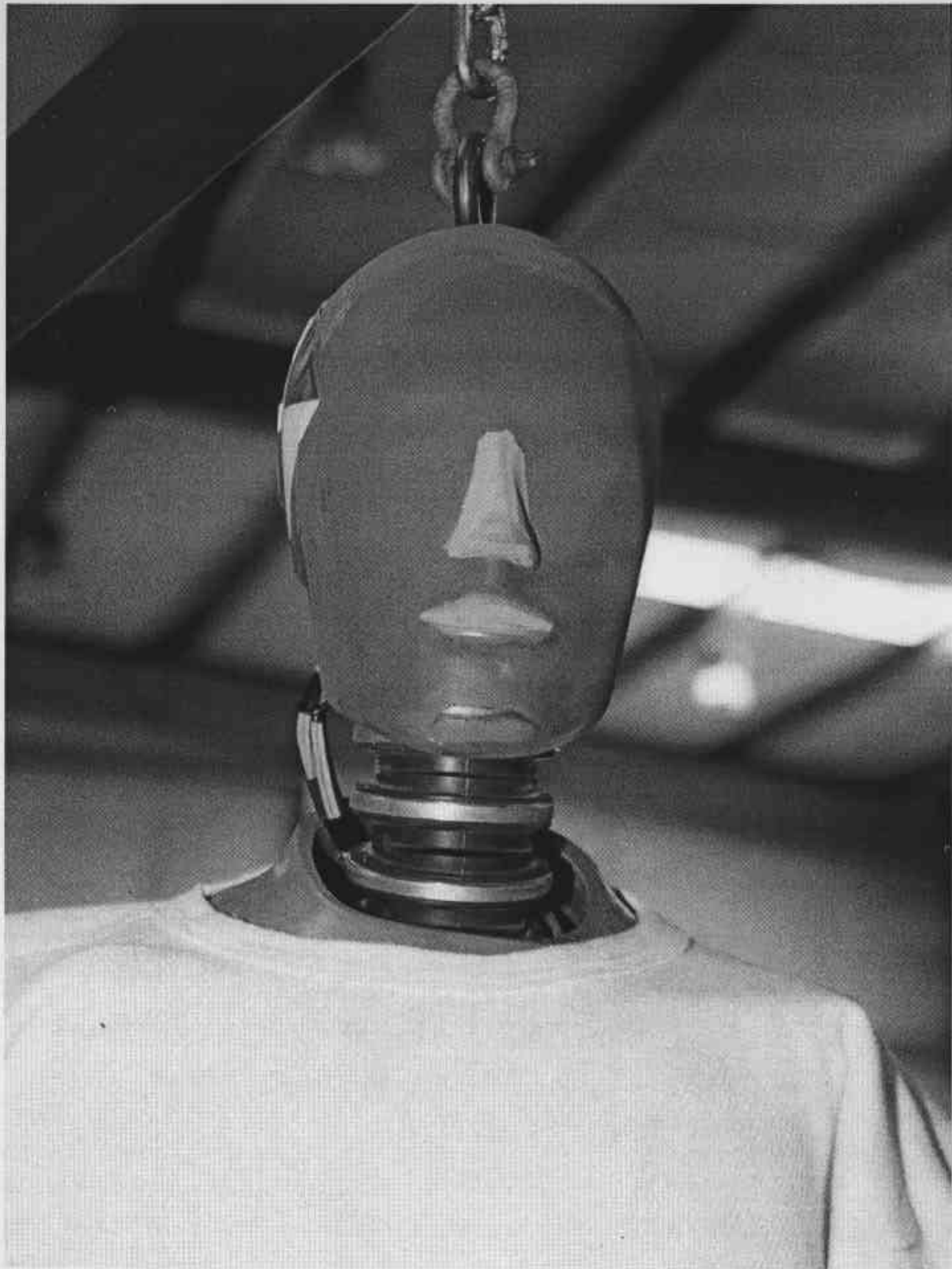


FIGURE A-61.PASSENGER HEAD POST TEST

A-61

KAR-97-R97015-01



FIGURE A-62. PASSENGER HEAD CONTACT POINT

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APPENDIX B
DUMMY, VEHICLE AND RESPONSE DATA TRACES

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B-6	Driver Head Resultant Primary	B-6
B-7	Driver Head Redundant X	B-7
B-8	Driver Head Redundant X Velocity	B-8
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B-11	Driver Head Redundant Z	B-11
B-12	Driver Head Resultant Redundant	B-12
B-13	Driver Neck Force X	B-13
B-14	Driver Neck Force Y	B-14
B-15	Driver Neck Force Z	B-15
B-16	Driver Neck Force Resultant	B-16
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B-18	Driver Neck Moment Y	B-18
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B-25	Driver Chest Primary Z	B-25
B-26	Driver Chest Primary Resultant	B-26
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B-28	Driver Chest Redundant X Velocity	B-28
B-29	Driver Chest Redundant X Displacement	B-29
B-30	Driver Chest Redundant Y	B-30
B-31	Driver Chest Redundant Z	B-31
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B-35	Driver Pelvis X Velocity	B-35

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B-38	Driver Pelvis Z	B-38
B-39	Driver Pelvis X	B-39
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B-44	Driver Right Upper Tibia Moment X	B-44
B-45	Driver Right Upper Tibia Moment Y	B-45
B-46	Driver Left Lower Tibia Force Y	B-46
B-47	Driver Left Lower Tibia Force Z	B-47
B-48	Driver Left Lower Tibia Moment X	B-48
B-49	Driver Right Lower Tibia Force Y	B-49
B-50	Driver Right Lower Tibia Force Z	B-50
B-51	Driver Right Lower Tibia Moment X	B-51
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B-56	Driver Right Foot Aft Z	B-56
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B-67	Passenger Head Resultant Primary	B-67
B-68	Passenger Head Redundant X	B-68
B-69	Passenger Head Redundant X Velocity	B-69
B-70	Passenger Head Redundant X Displacement	B-70

LIST OF DATA PLOTS...(Continued)

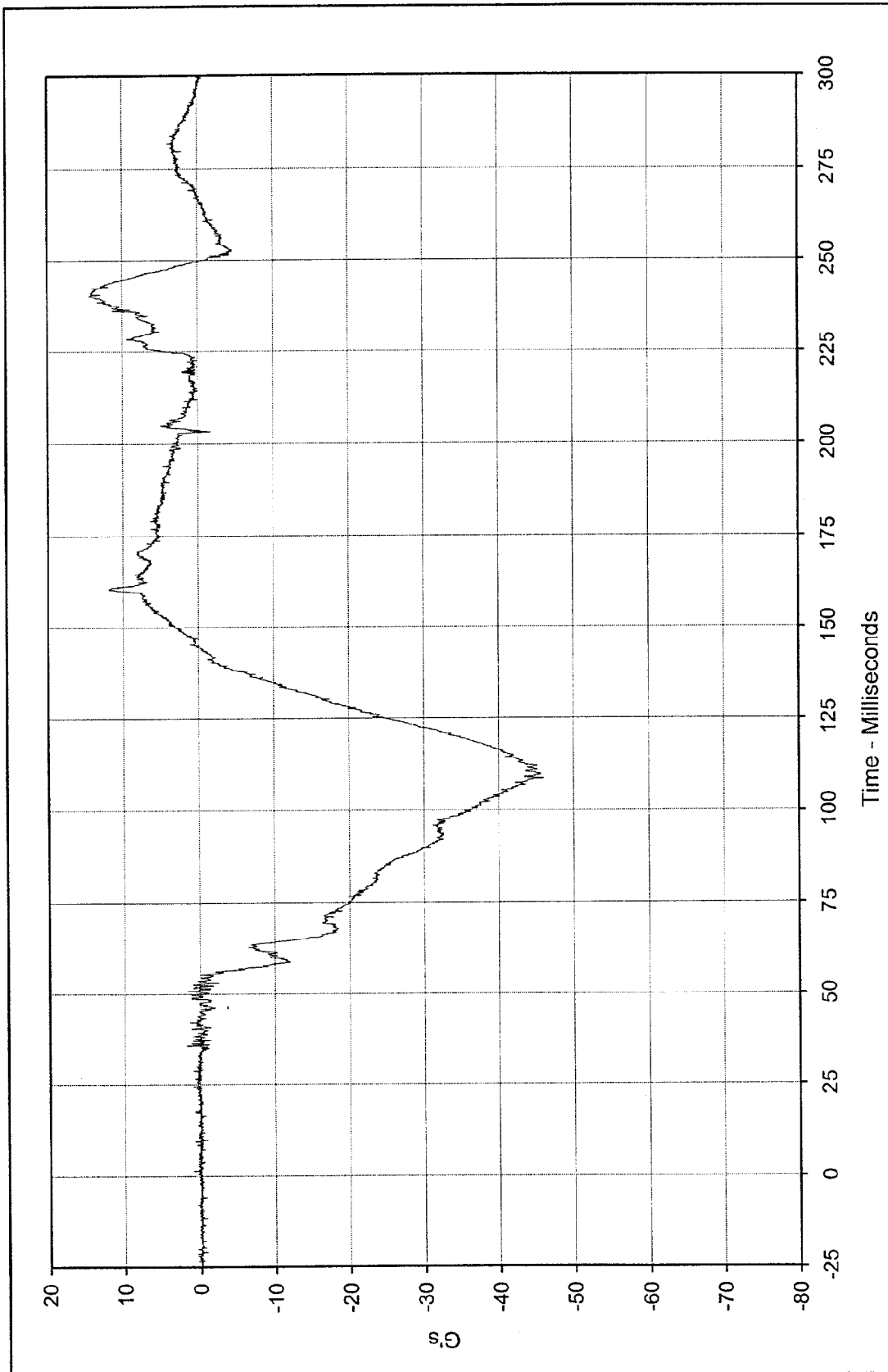
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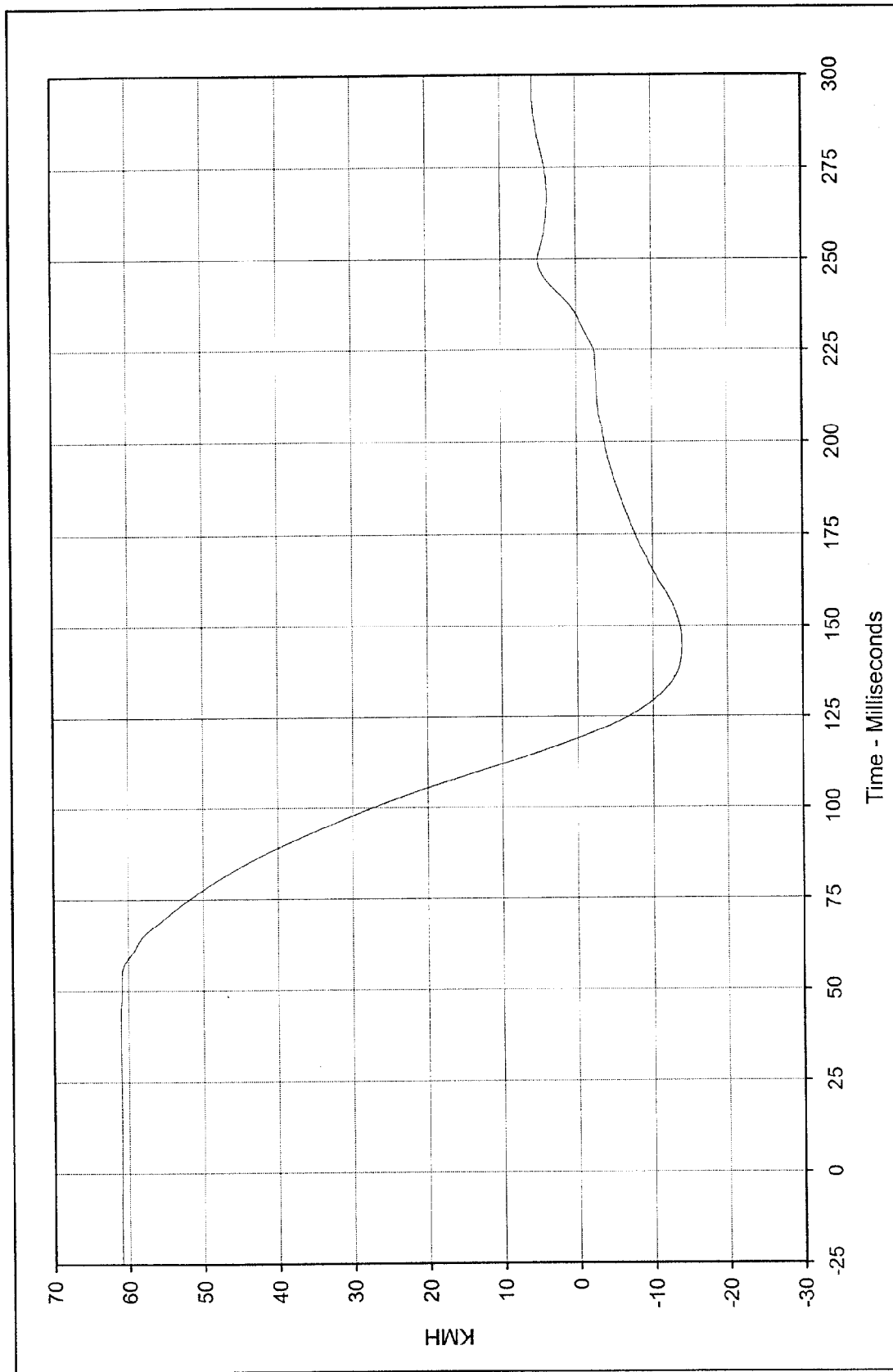
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Curve Description: Driver Head Primary X
 Testing Program: 1997 NCAP 40% Offset Impact
 Test Vehicle: 1996 Ford Taurus 4 Door Sedan

Maximum Value: 14.4 at 240.2 Milliseconds
 Minimum Value: -46.0 at 108.4 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-001

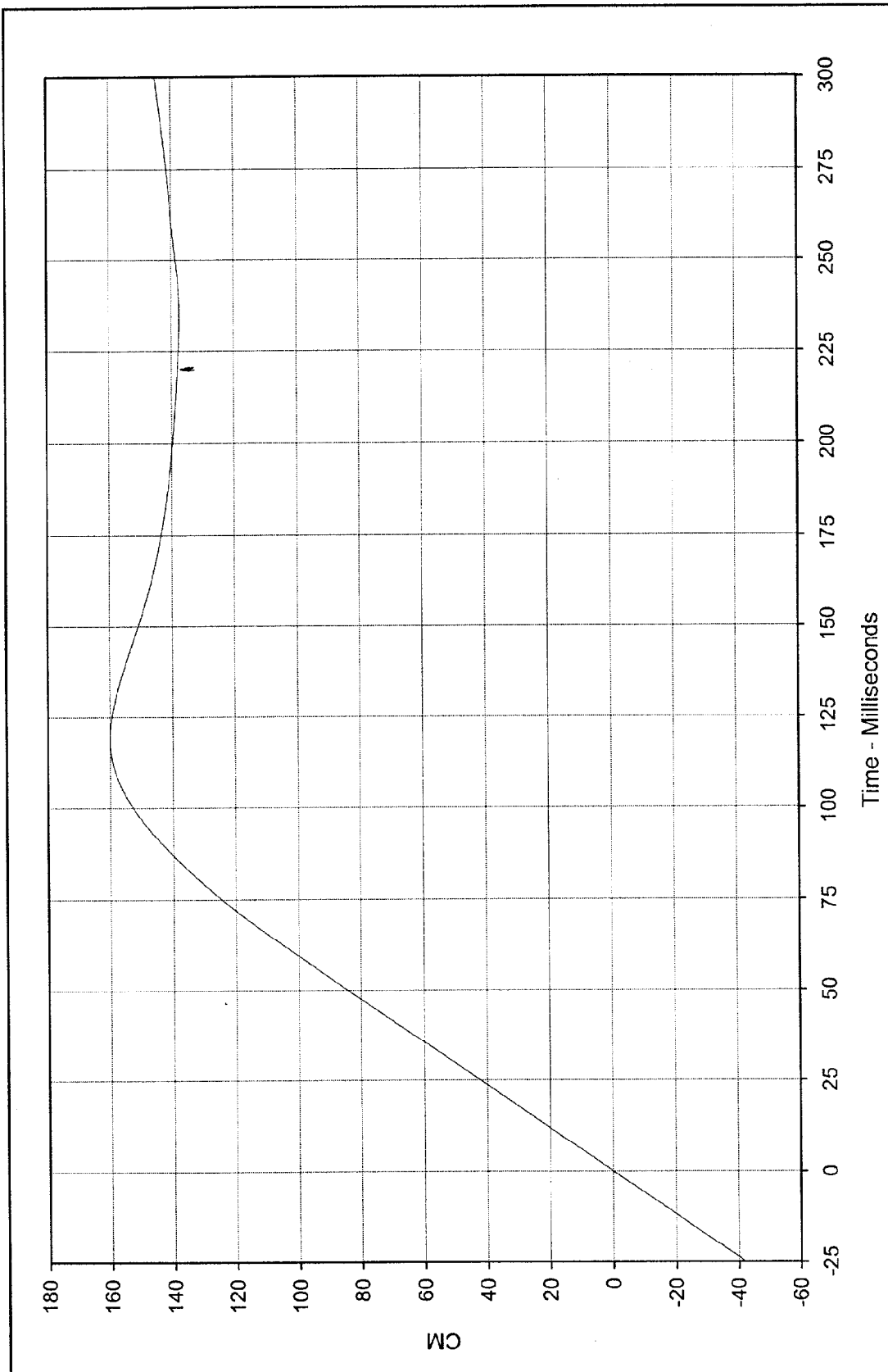




Curve Description: Driver Head Primary X Velocity Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 61.0 at 33.3 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -13.9 at 144.3 Milliseconds

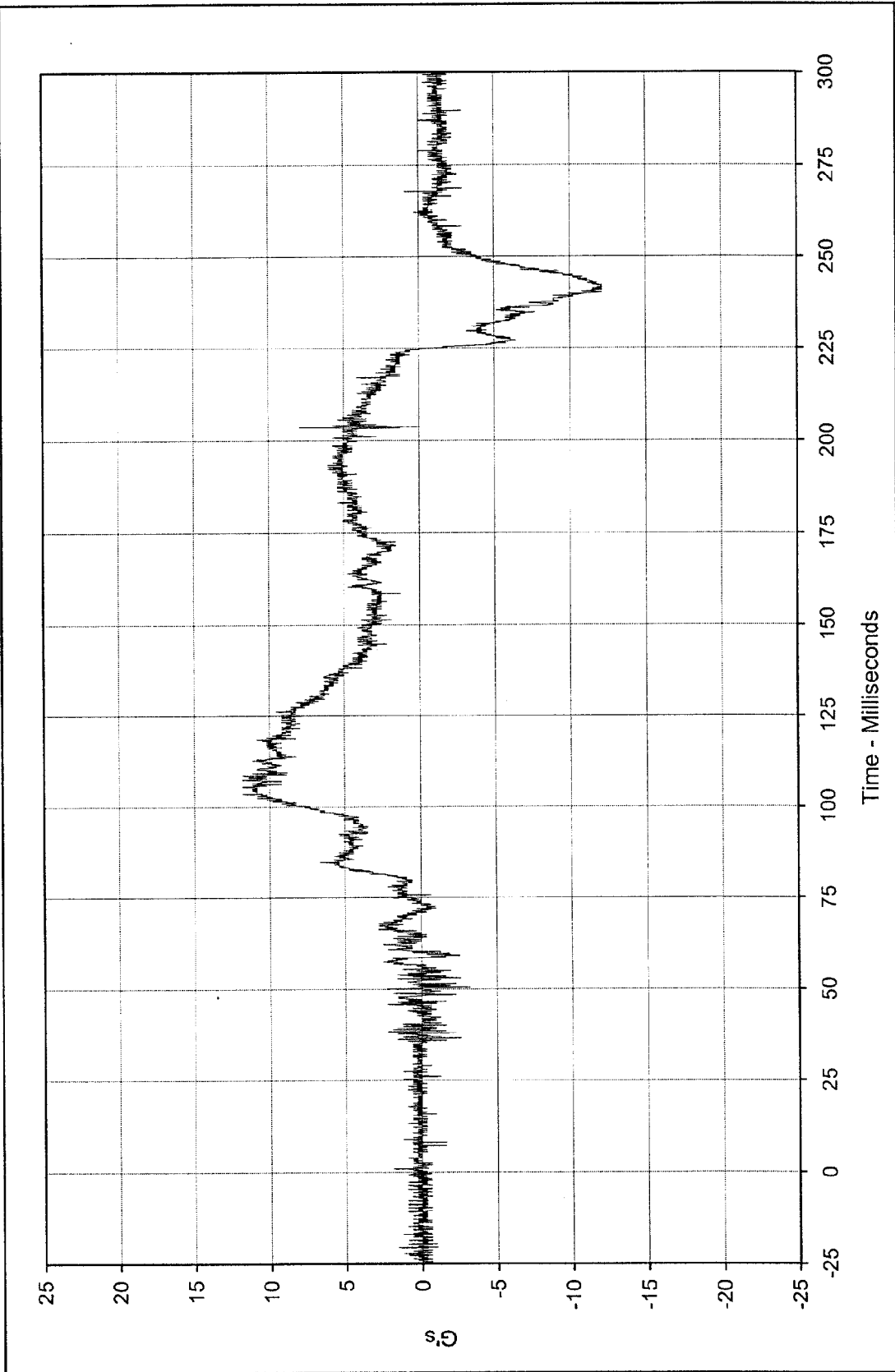


SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN1-001



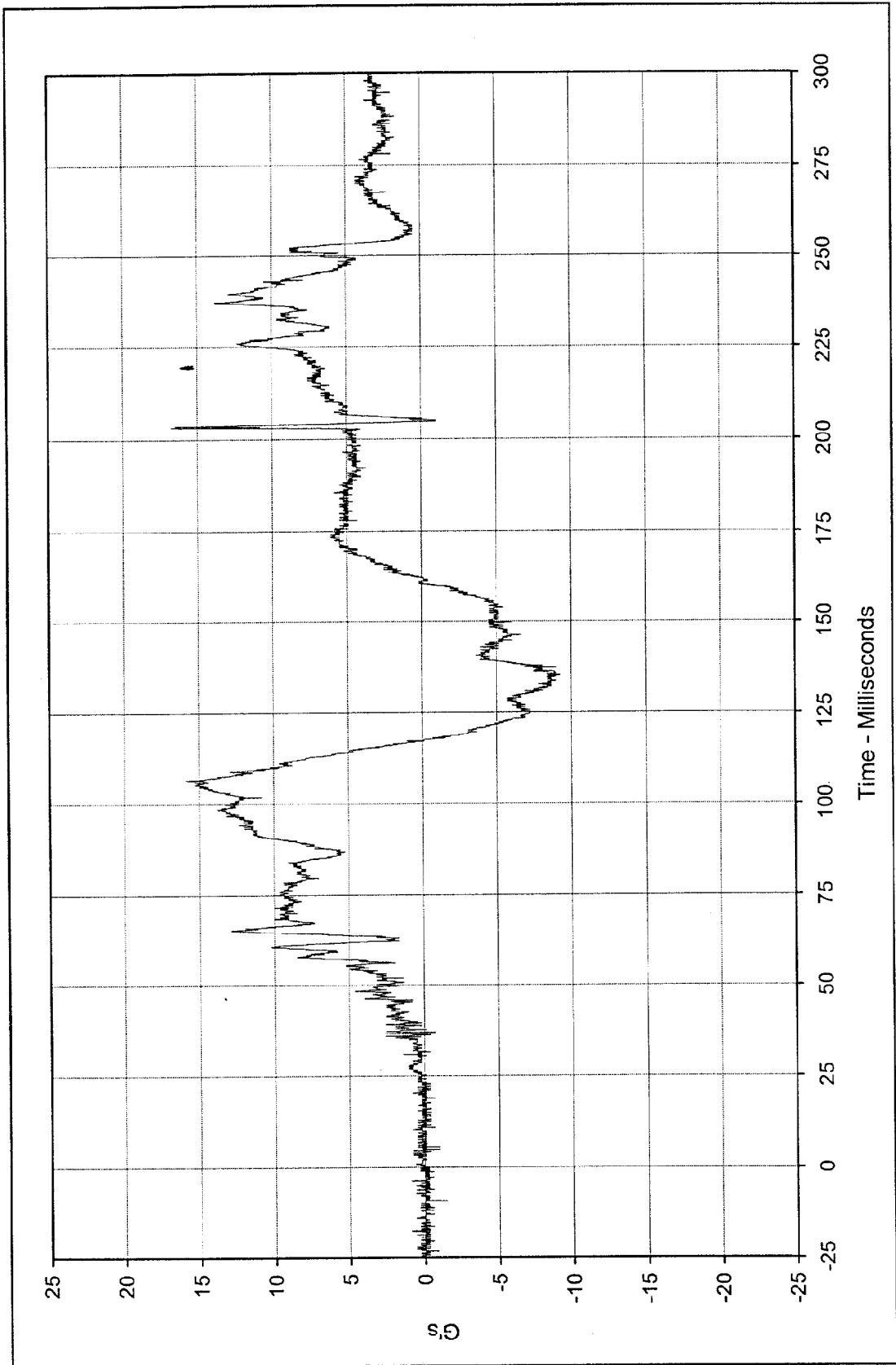
Curve Description: Driver Head Primary X Displ. Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 160.0 at 118.9 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.0 at 0.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN2-001





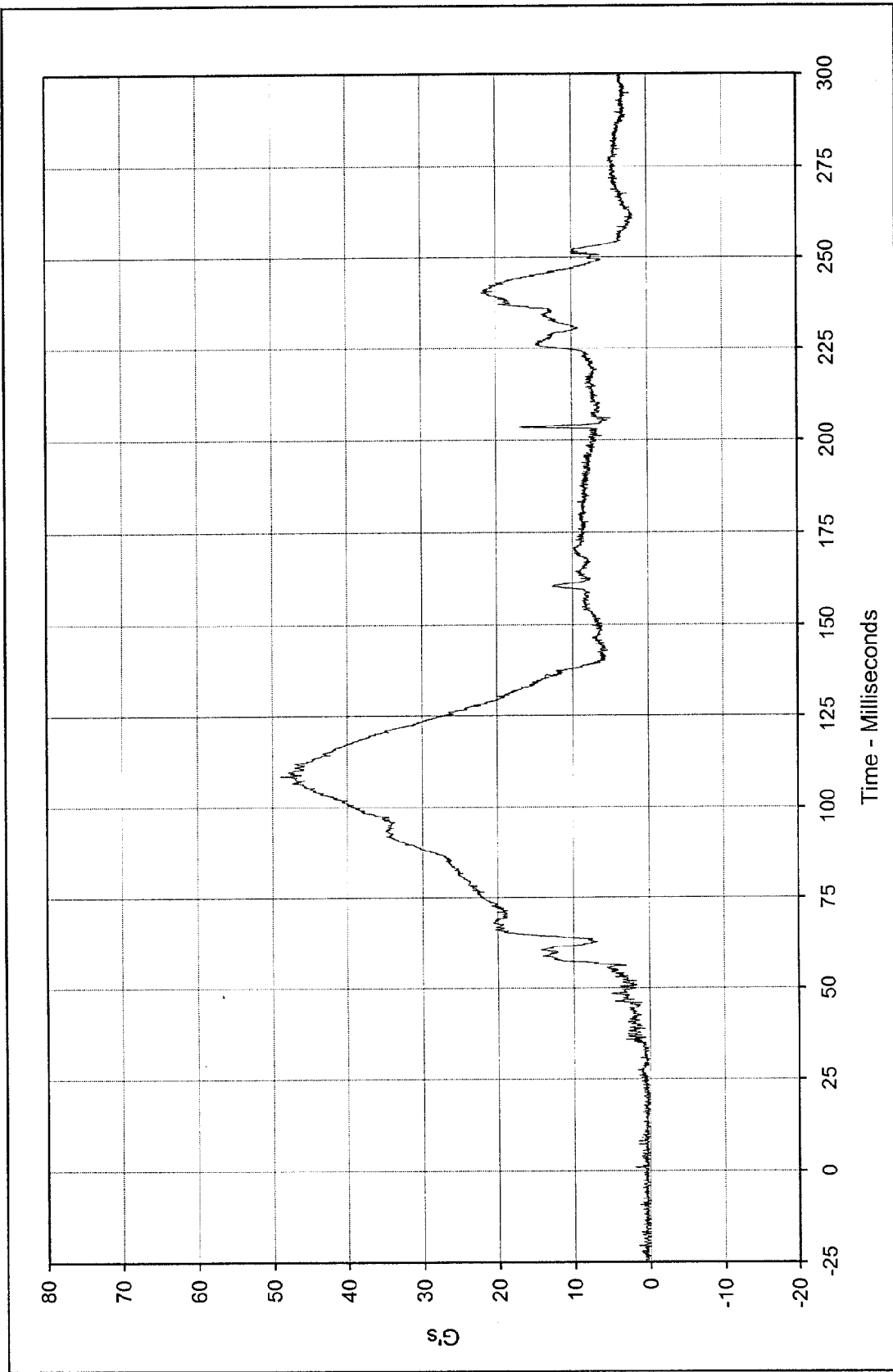
Curve Description: Driver Head Primary Y Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 11.8 at 103.4 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -12.1 at 240.2 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-002





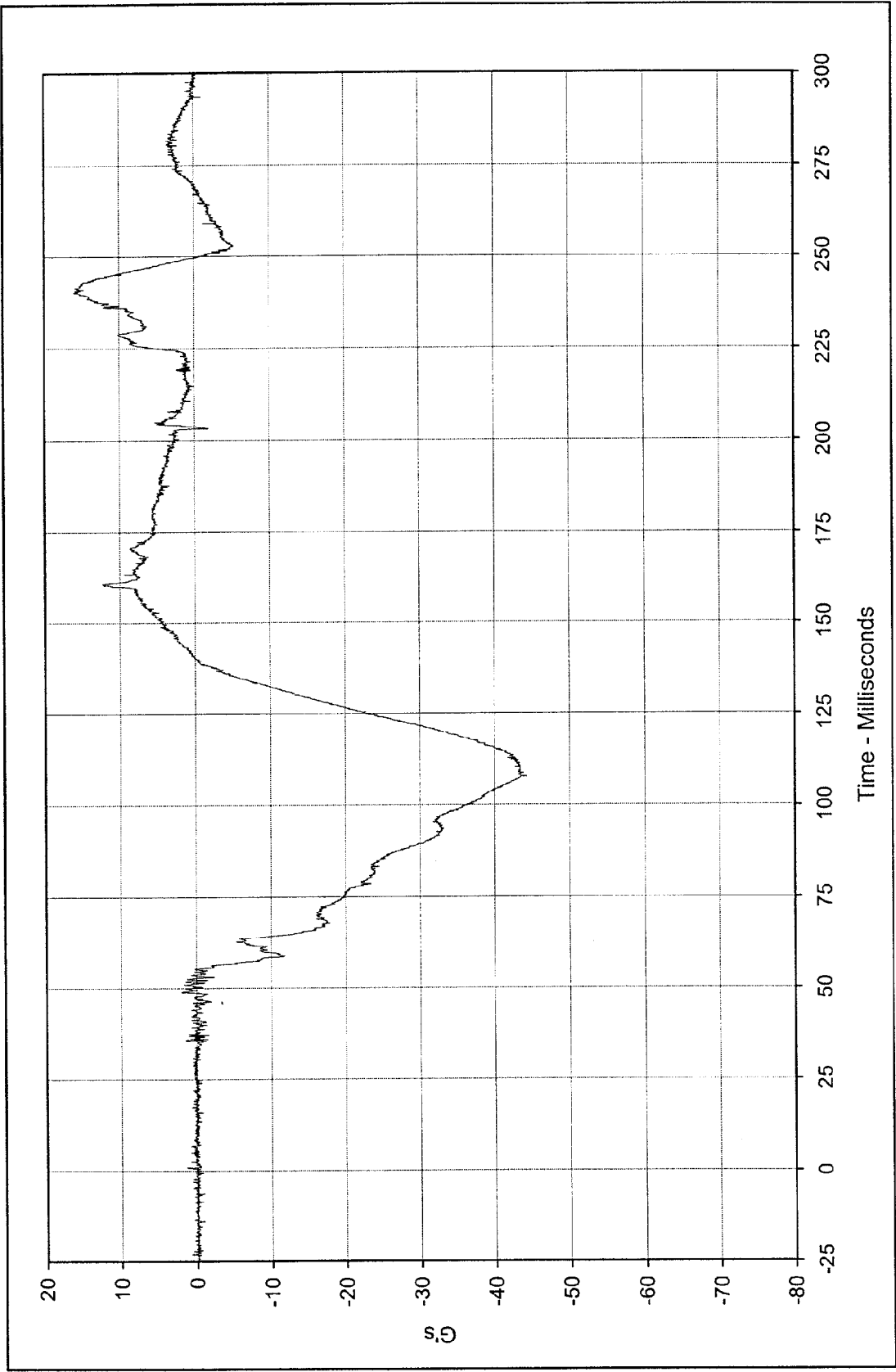
Curve Description: Driver Head Primary Z Testing Program: 1997 NCAP 40% Offset Impact
Maximum Value: 16.7 at 203.3 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
Minimum Value: -9.3 at 135.2 Milliseconds
SAE Filter Class: 1000
Date of Test: 7/17/97
Curve Number: FIL-003





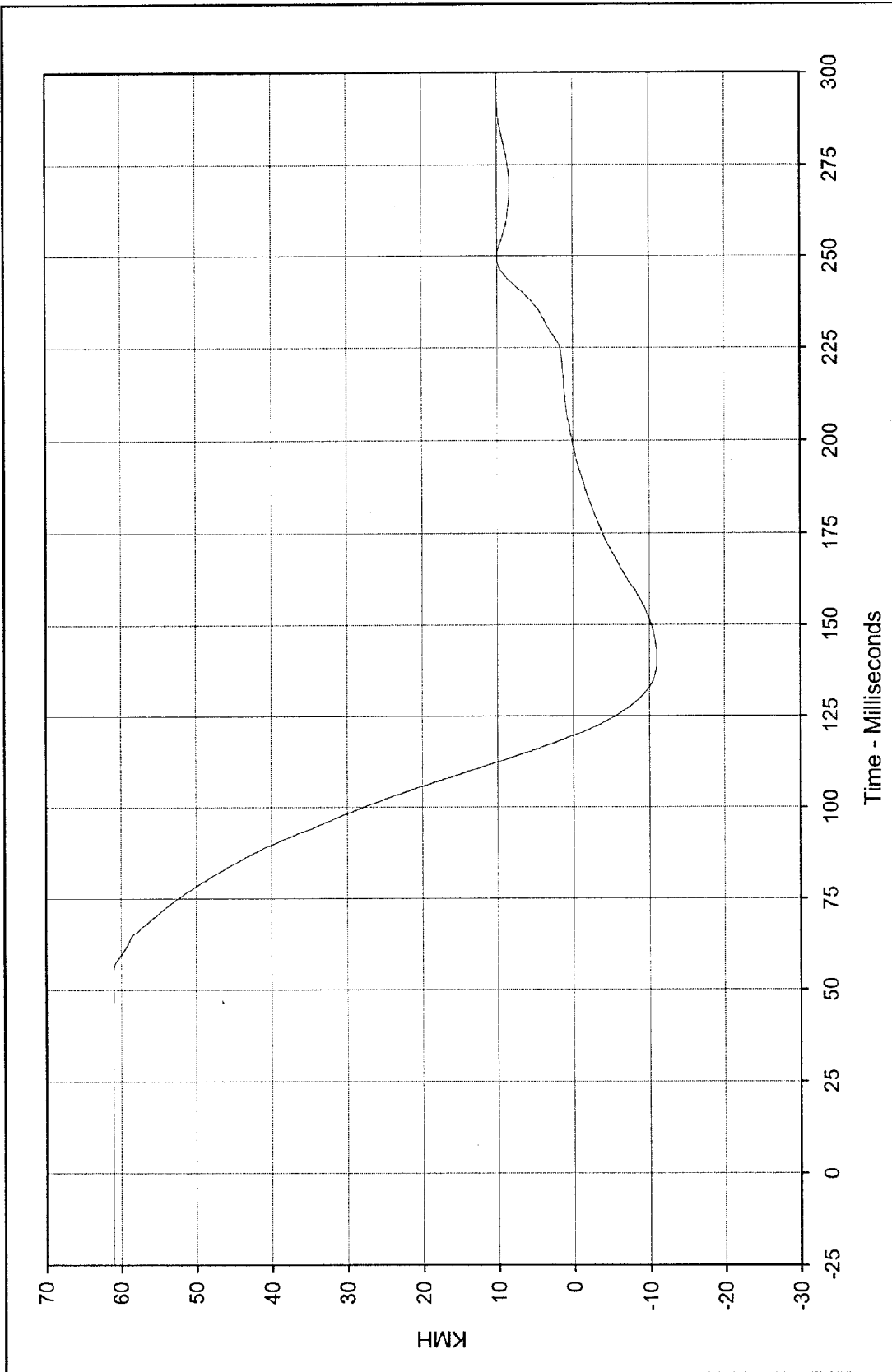
Curve Description: Driver Head Resultant Primary Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 48.9 at 108.4 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.1 at 3.0 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: RES-001





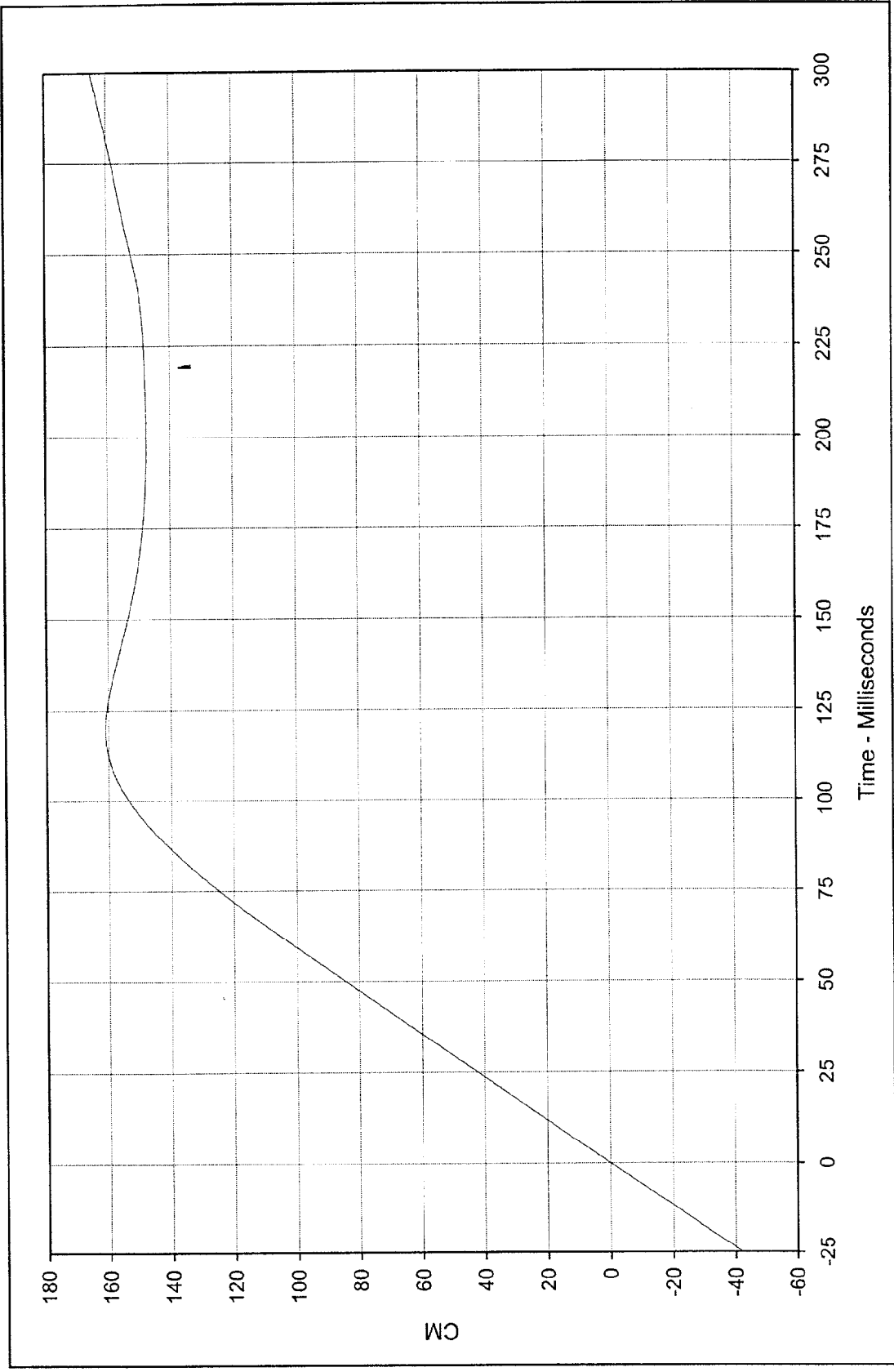
Curve Description: Driver Head Redundant X Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 16.0 at 240.2 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -44.2 at 107.7 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-004





Curve Description: Driver Head Redundant X Velocity Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 61.0 at 33.1 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -11.0 at 140.2 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN1-004

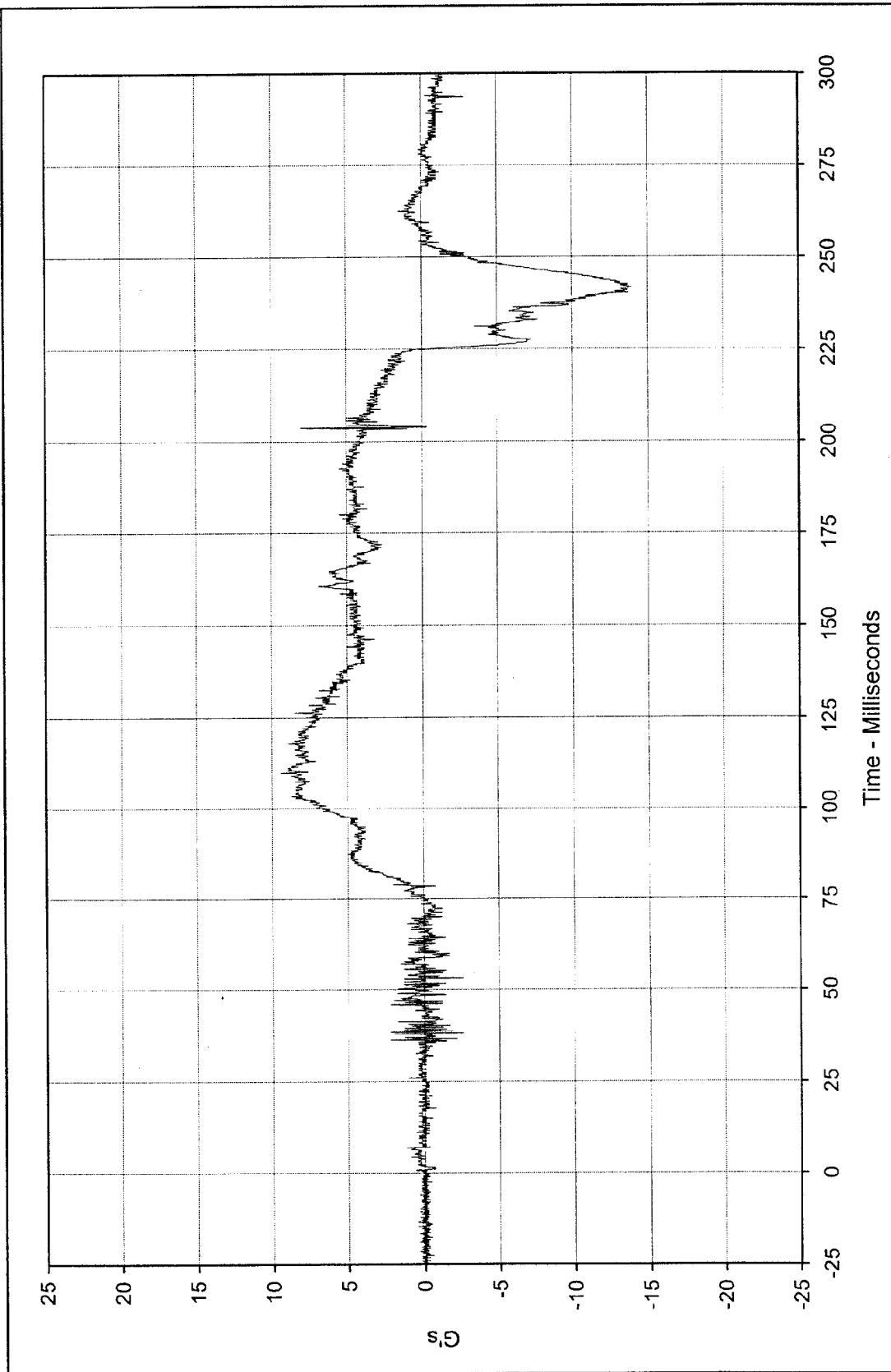




Curve Description: Driver Head Redundant X Displ. Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 165.0 at 299.9 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.0 at 0.0 Milliseconds



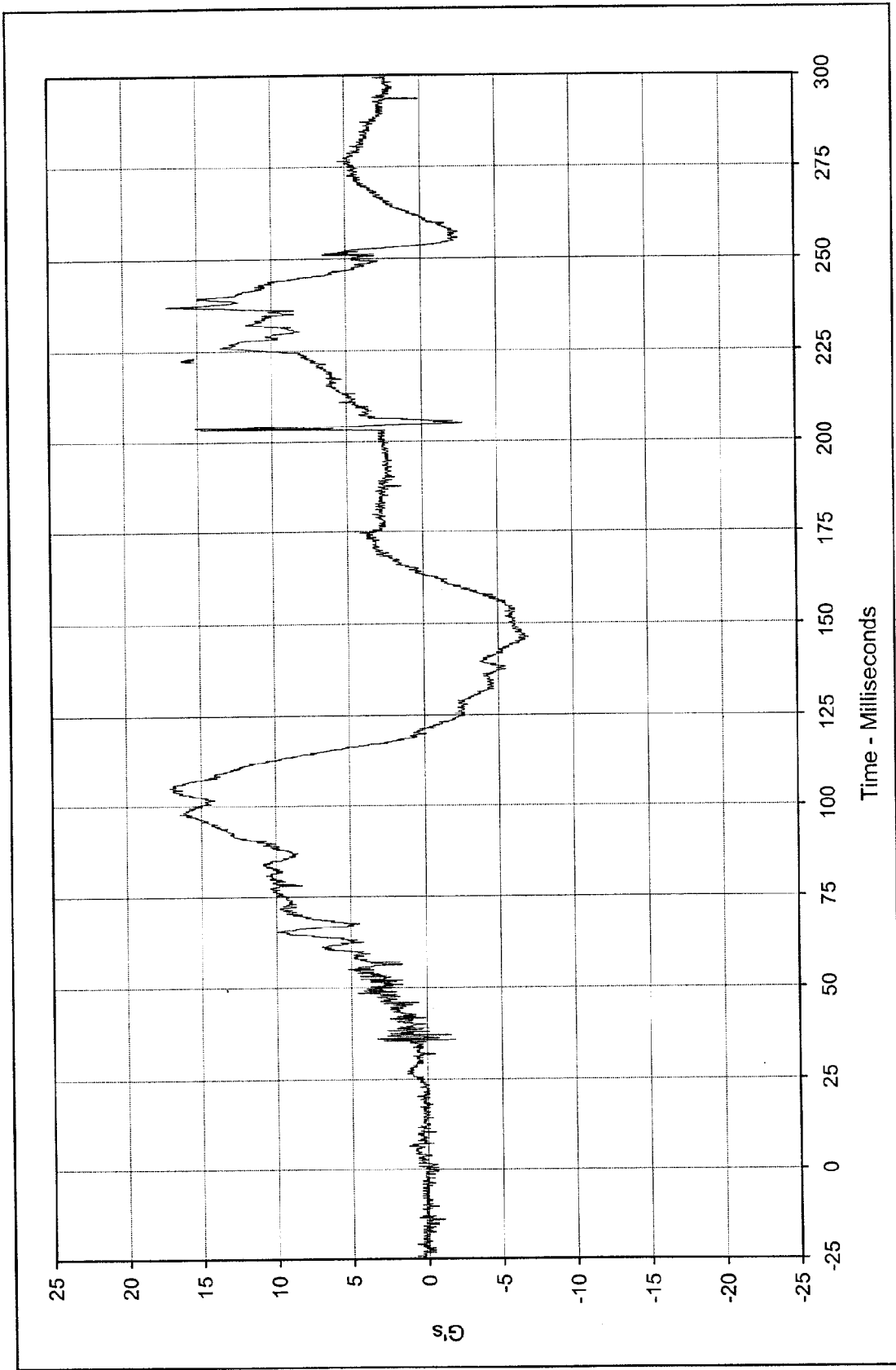
SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN2-004



Curve Description: Driver Head Redundant Y Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 9.4 at 109.8 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -13.9 at 241.7 Milliseconds



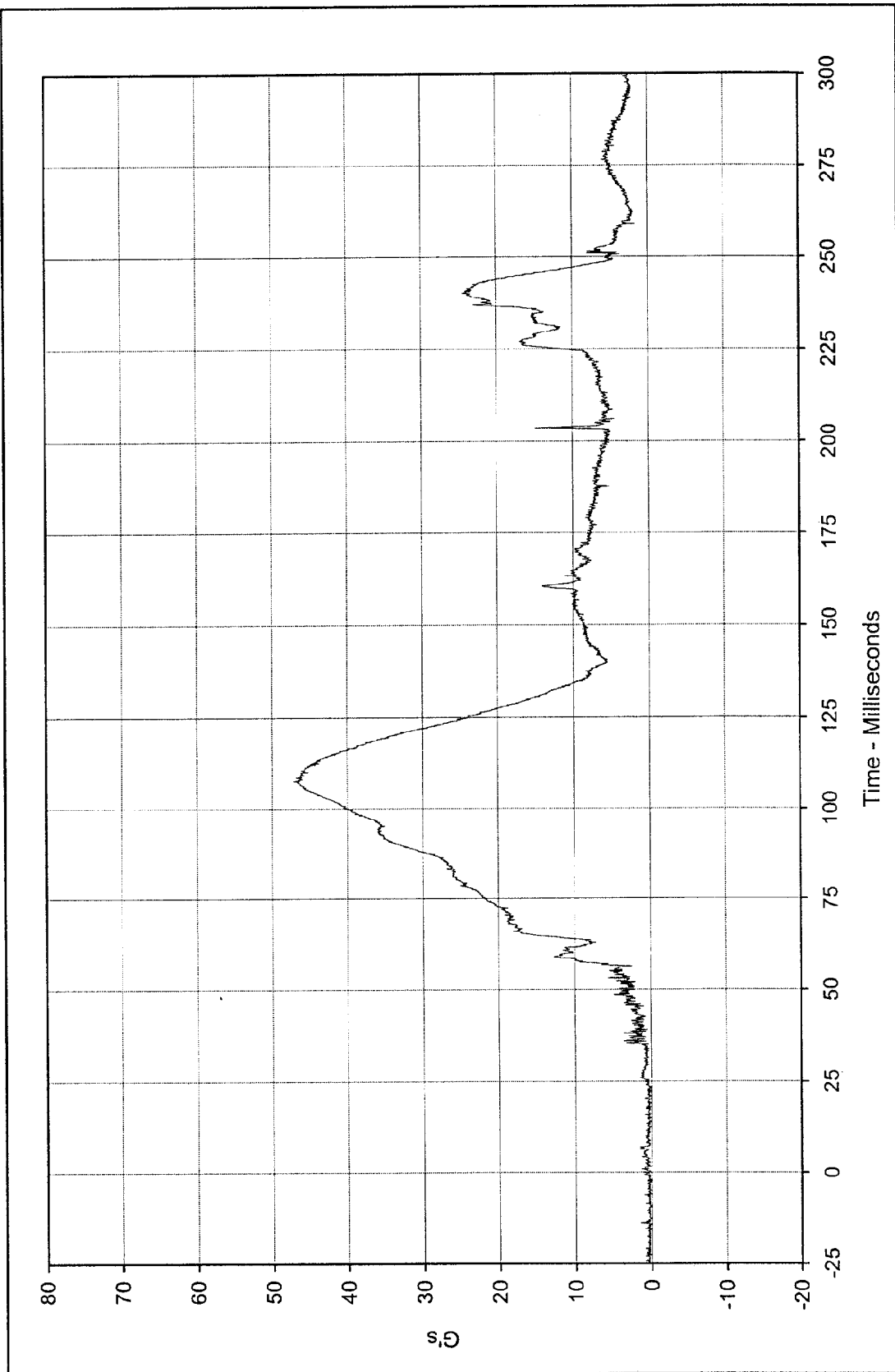
SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-005



Curve Description: Driver Head Redundant Z Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 17.1 at 105.1 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -7.0 at 146.0 Milliseconds

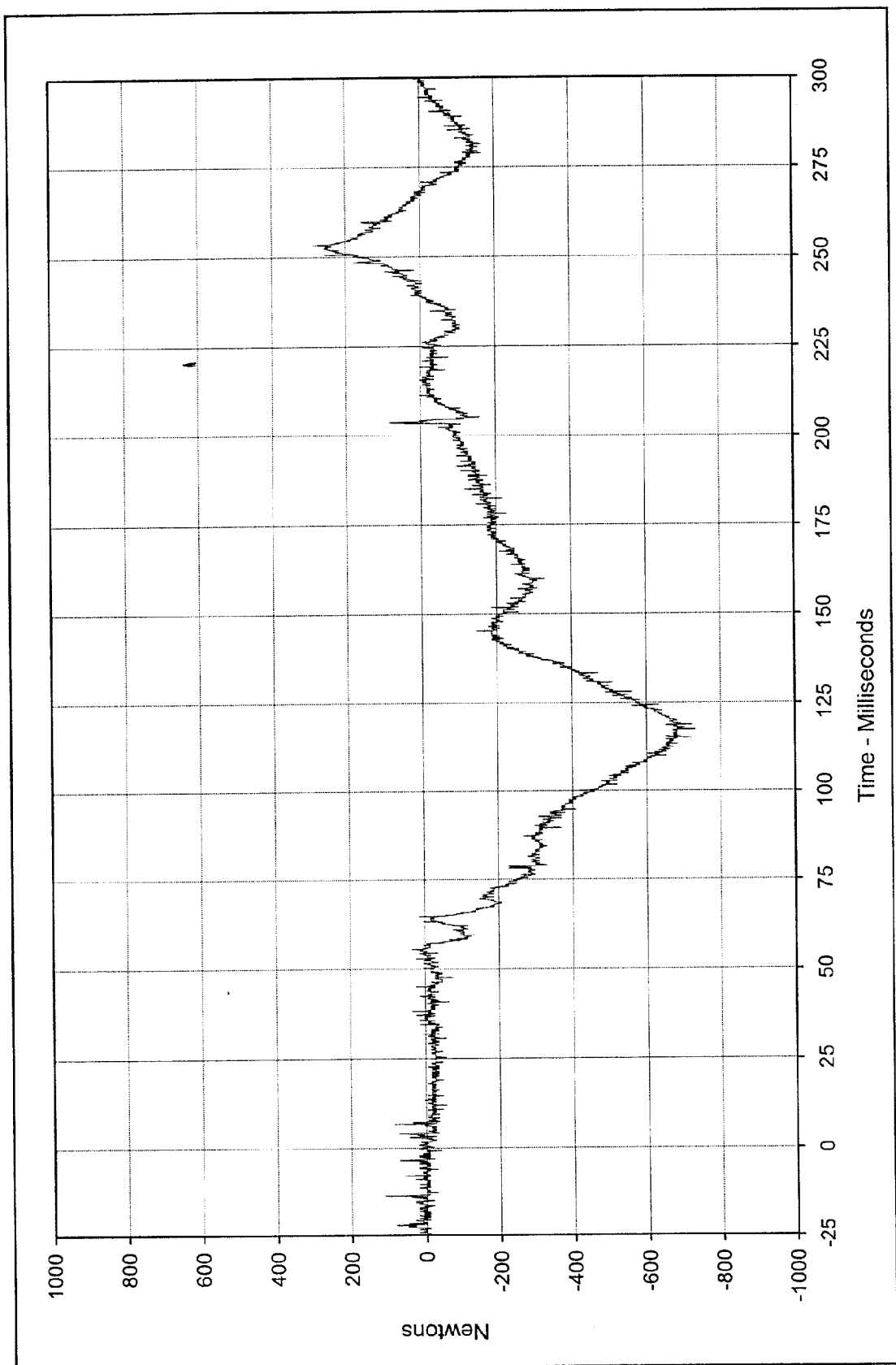
SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-006





Curve Description:	Driver Head Resultant Redundant	Testing Program	1997 NCAP 40% Offset Impact
Maximum Value:	47.2 at 107.7 Milliseconds	Test Vehicle:	1996 Ford Taurus 4 Door Sedan
Minimum Value:	0.1 at 12.6 Milliseconds		
SAE Filter Class:	1000		
Date of Test:	7/17/97		
Curve Number:	RES-004		

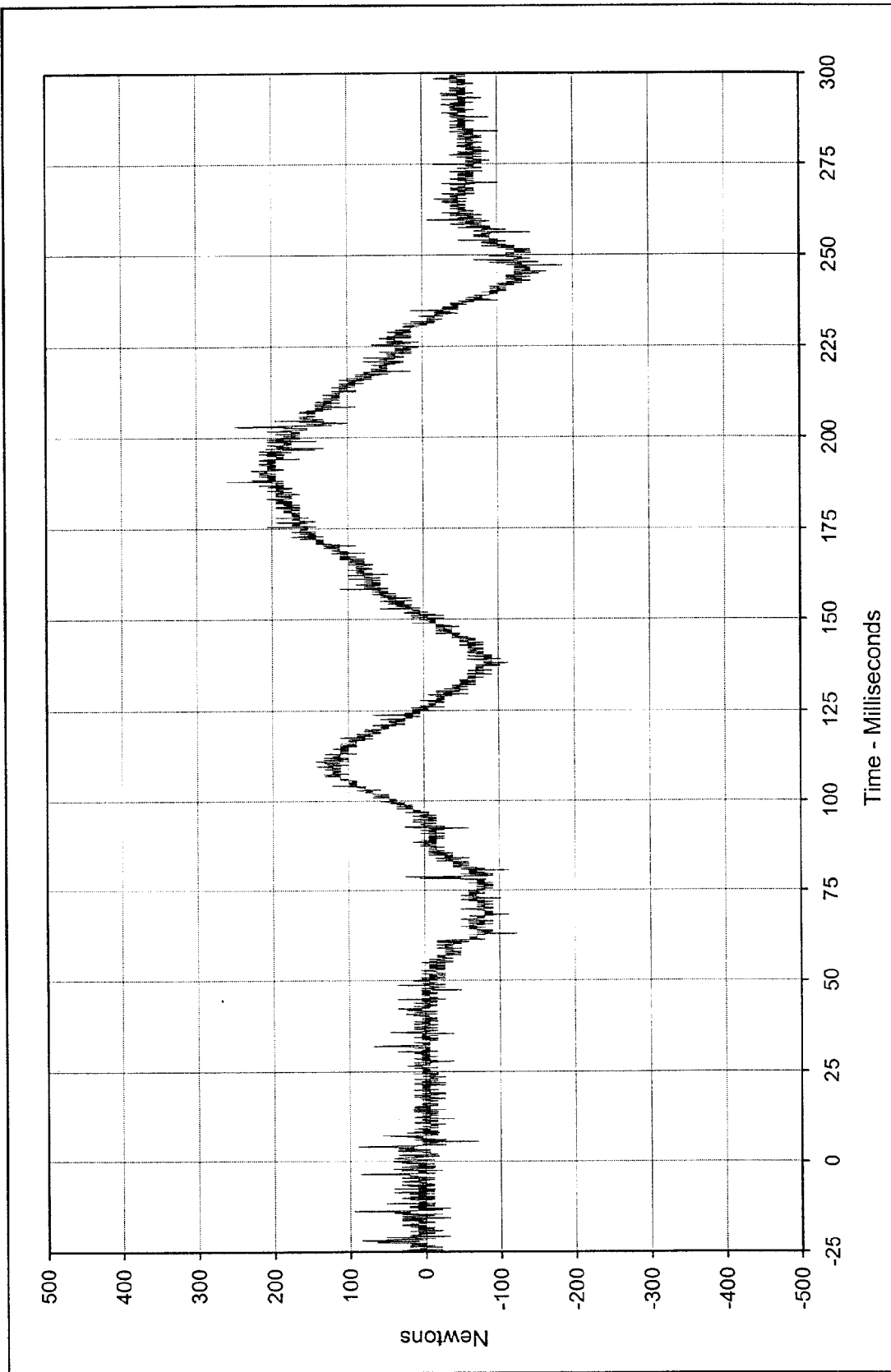




Curve Description: Driver Neck Force X Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 287.3 at 253.3 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -732.1 at 117.6 Milliseconds



SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-007



Curve Description: Driver Neck Force Y Testing Program: 1997 NCAP 40% Offset Impact

Maximum Value: 258.9 at 187.9 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan

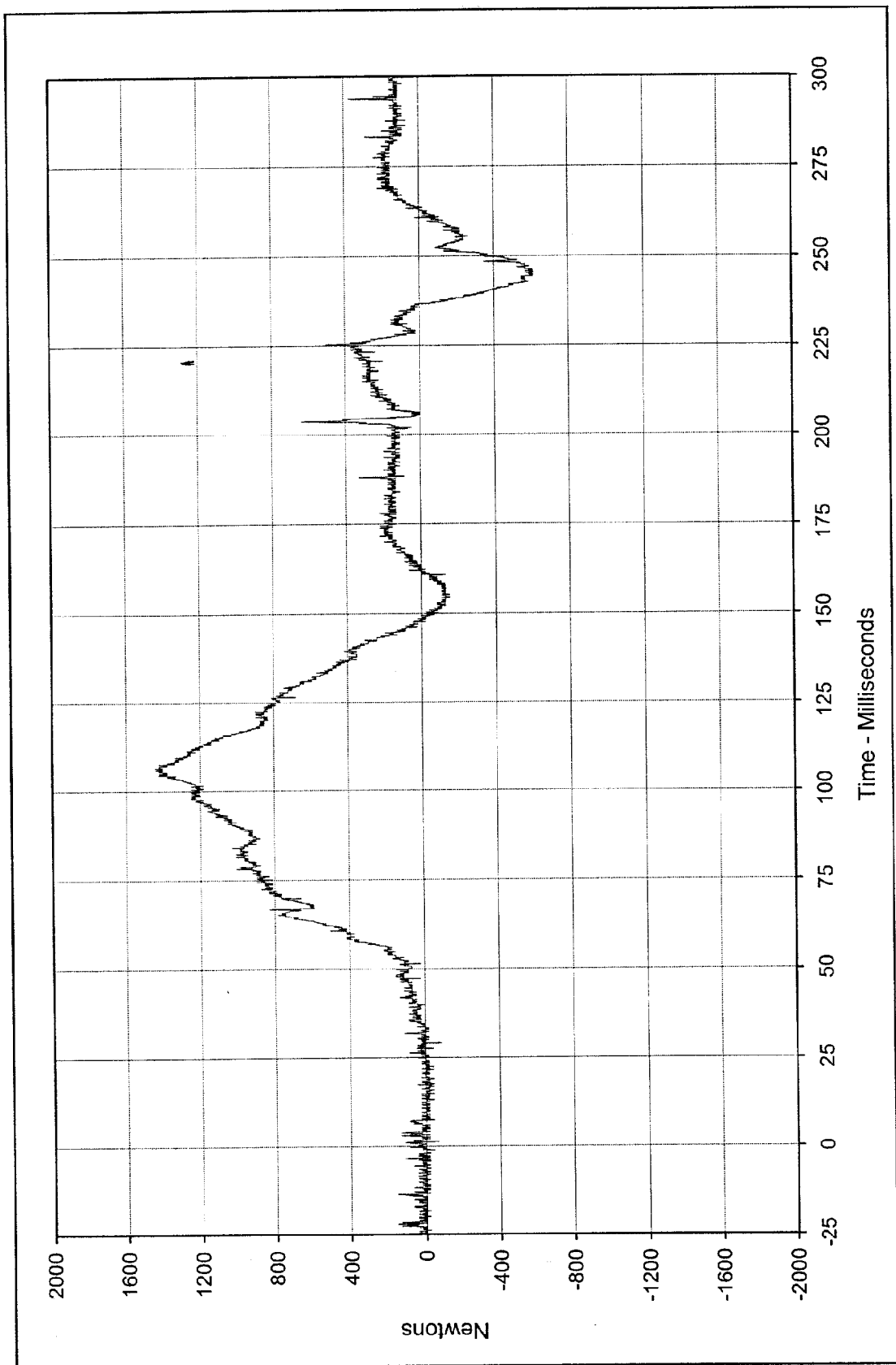
Minimum Value: -186.1 at 247.2 Milliseconds

SAE Filter Class: 1000

Date of Test: 7/17/97

Curve Number: FIL-008

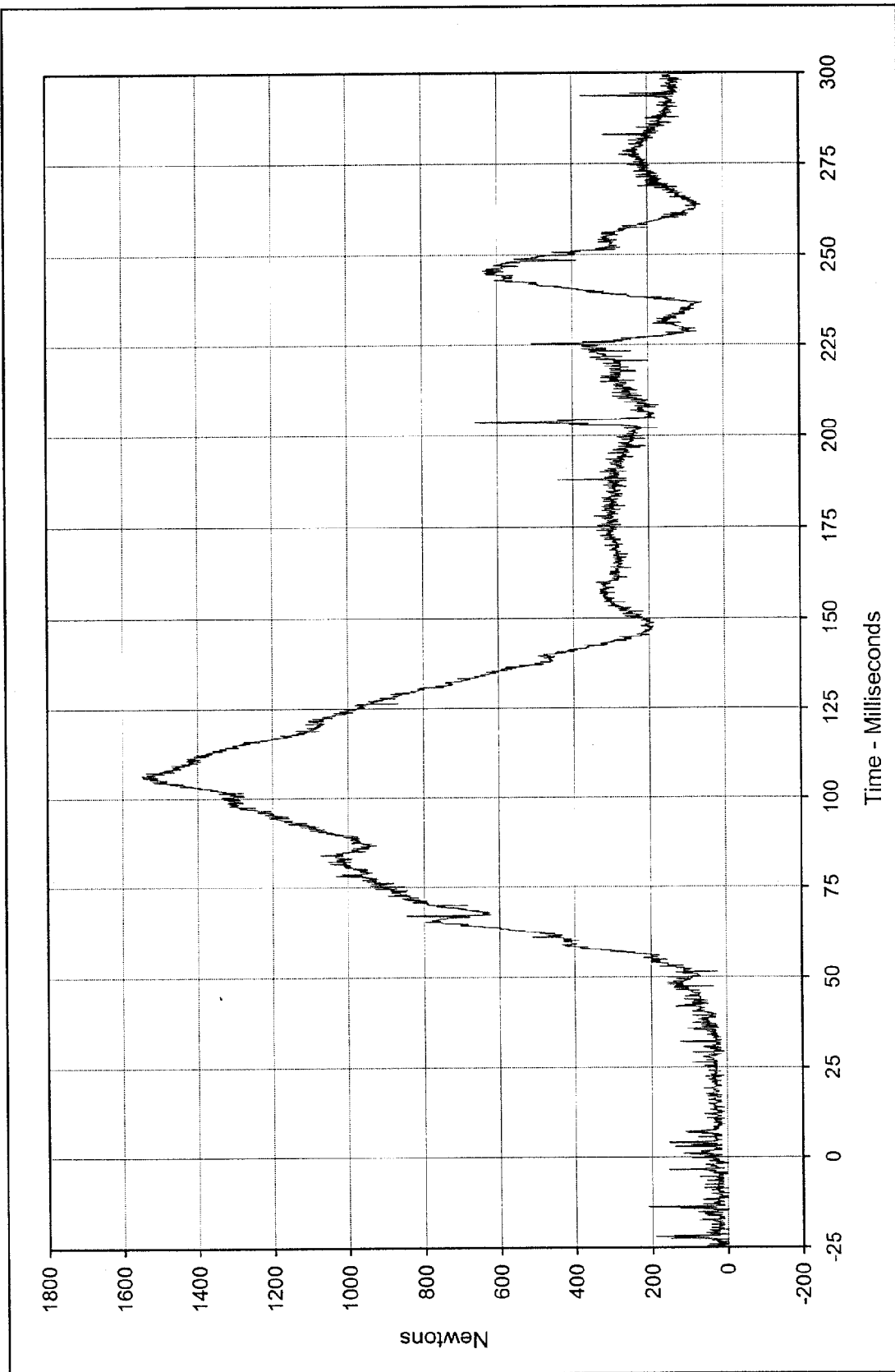




Curve Description: Driver Neck Force Z Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 1445.2 at 105.9 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -611.4 at 244.5 Milliseconds



SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-009



Curve Description: Driver Neck Force Resultant Testing Program: 1997 NCAP 40% Offset Impact

Maximum Value: 1550.4 at 106.4 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan

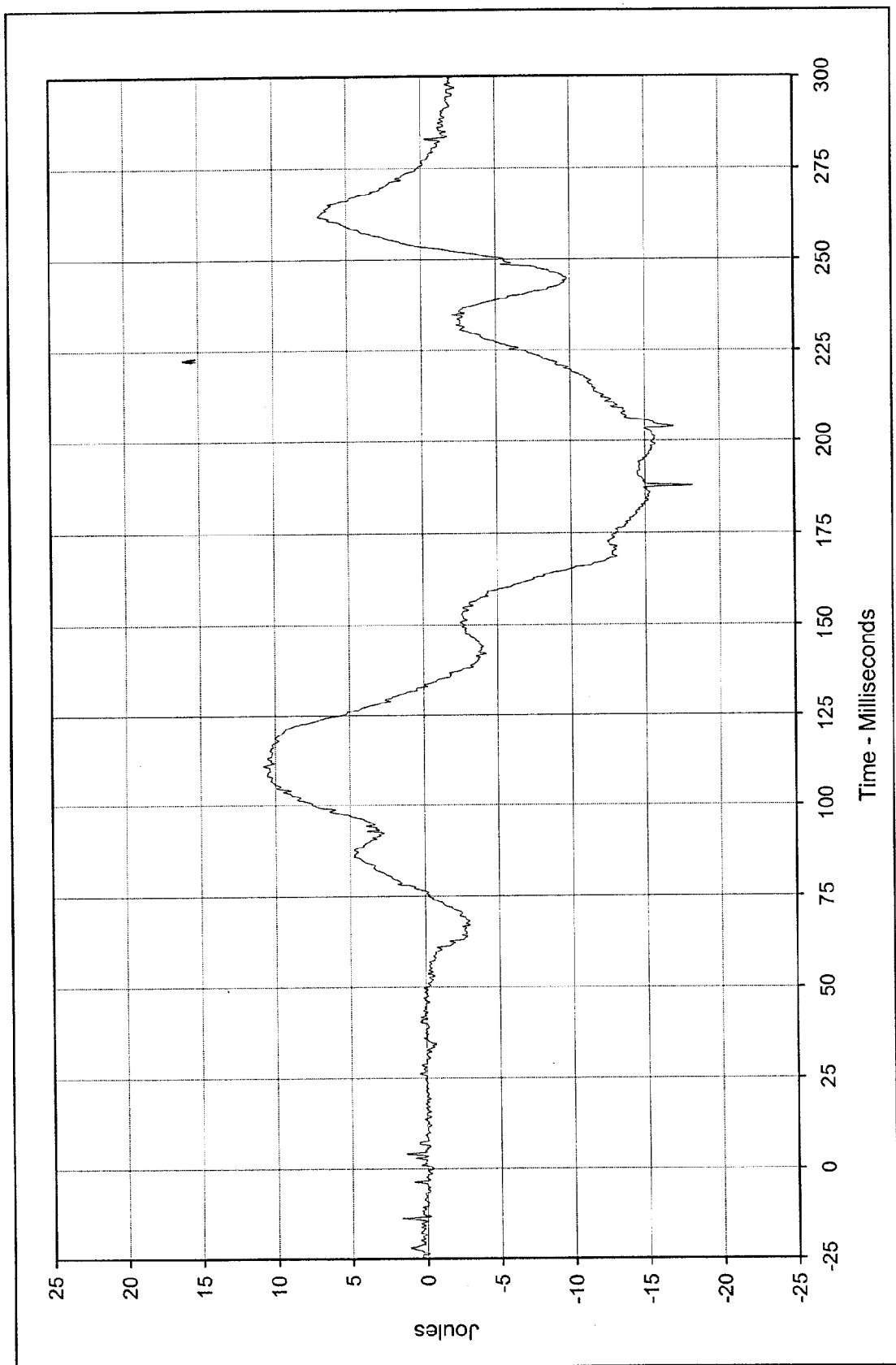
Minimum Value: 7.2 at 9.3 Milliseconds

SAE Filter Class: 1000

Date of Test: 7/17/97

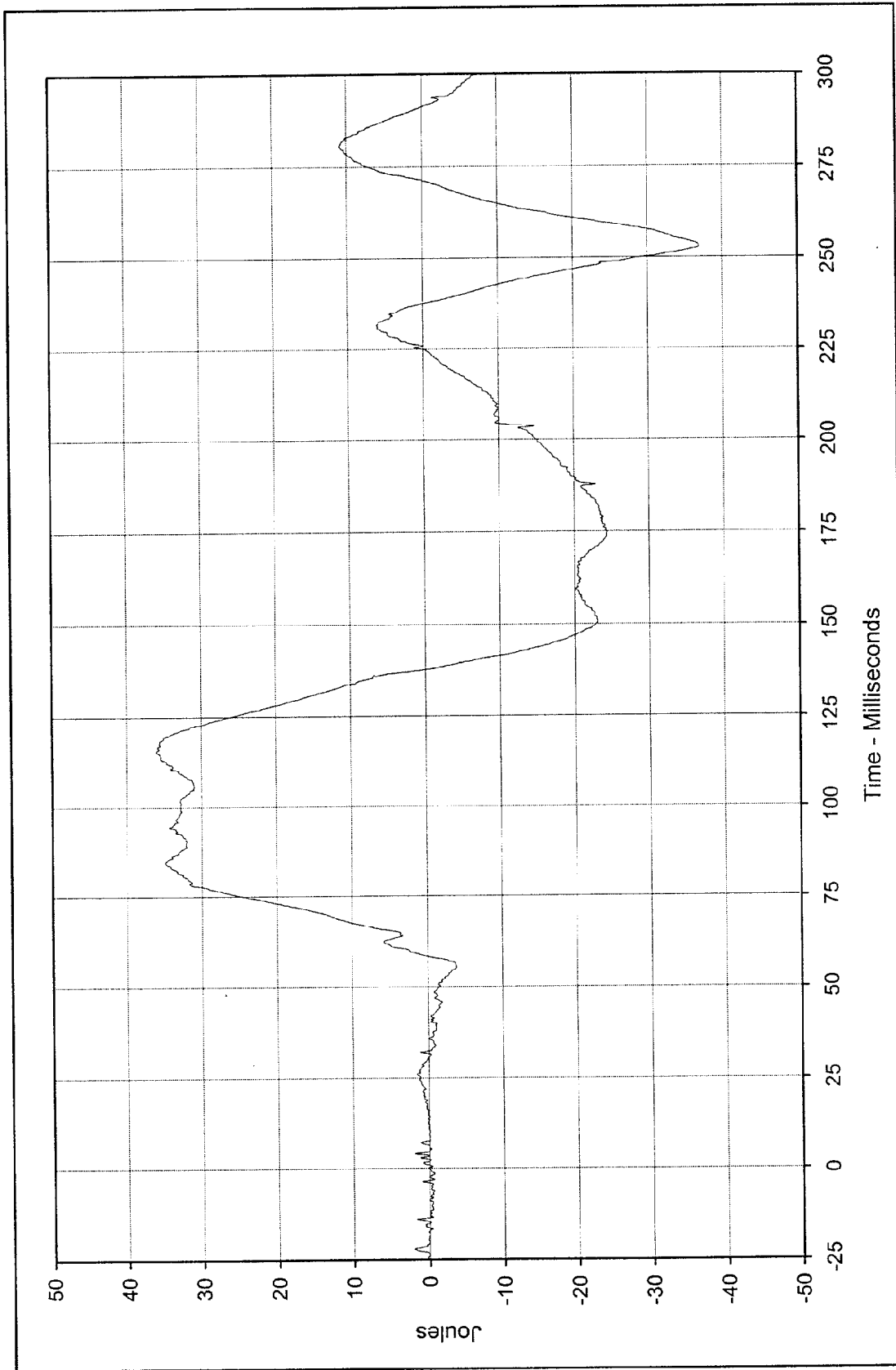
Curve Number: RES-007





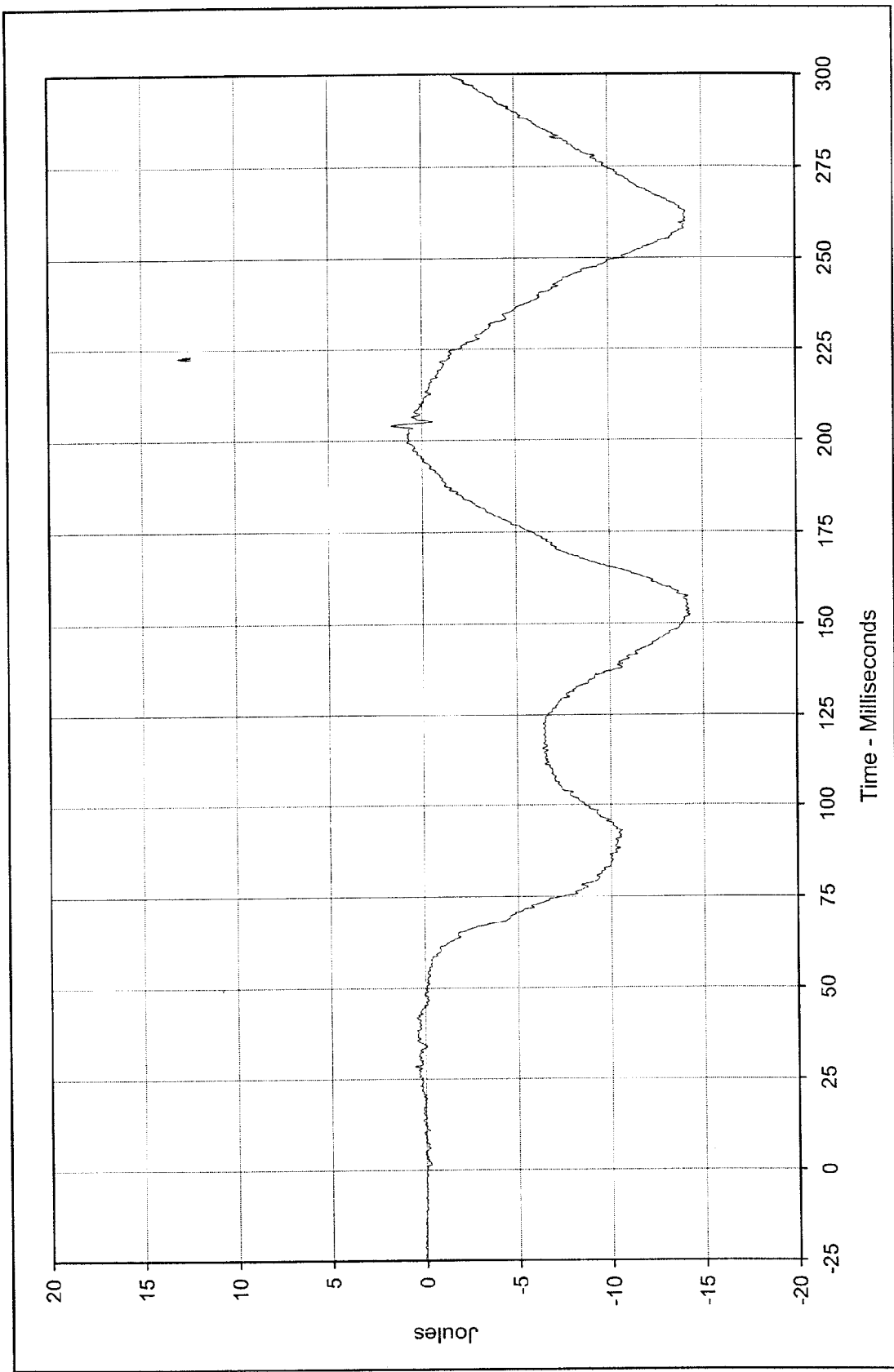
Curve Description: Driver Neck Moment X Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 10.8 at 110.8 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -18.2 at 187.9 Milliseconds
 SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-010





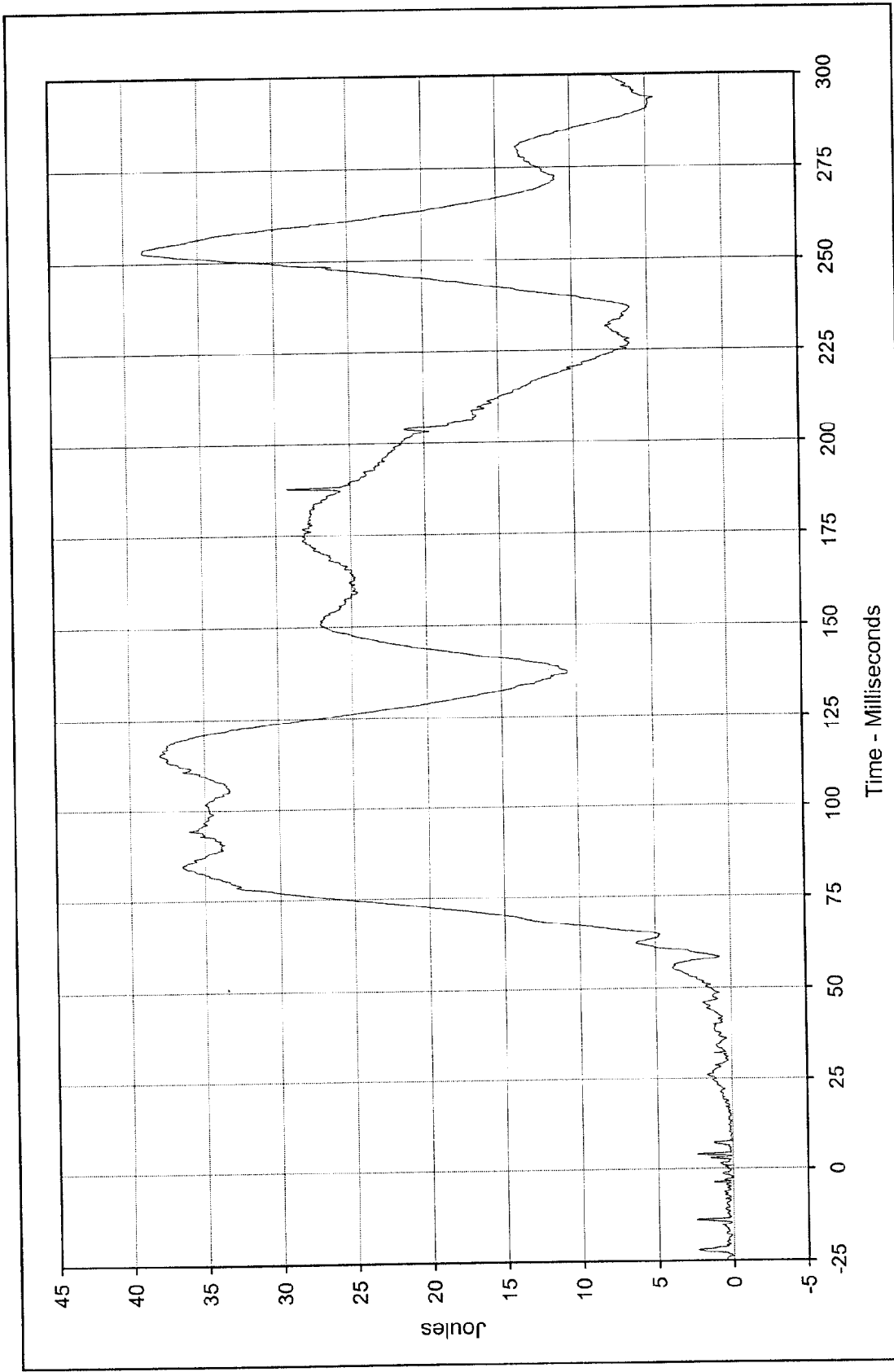
Curve Description: Driver Neck Moment Y Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 36.0 at 115.3 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -36.9 at 252.9 Milliseconds
 SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-011





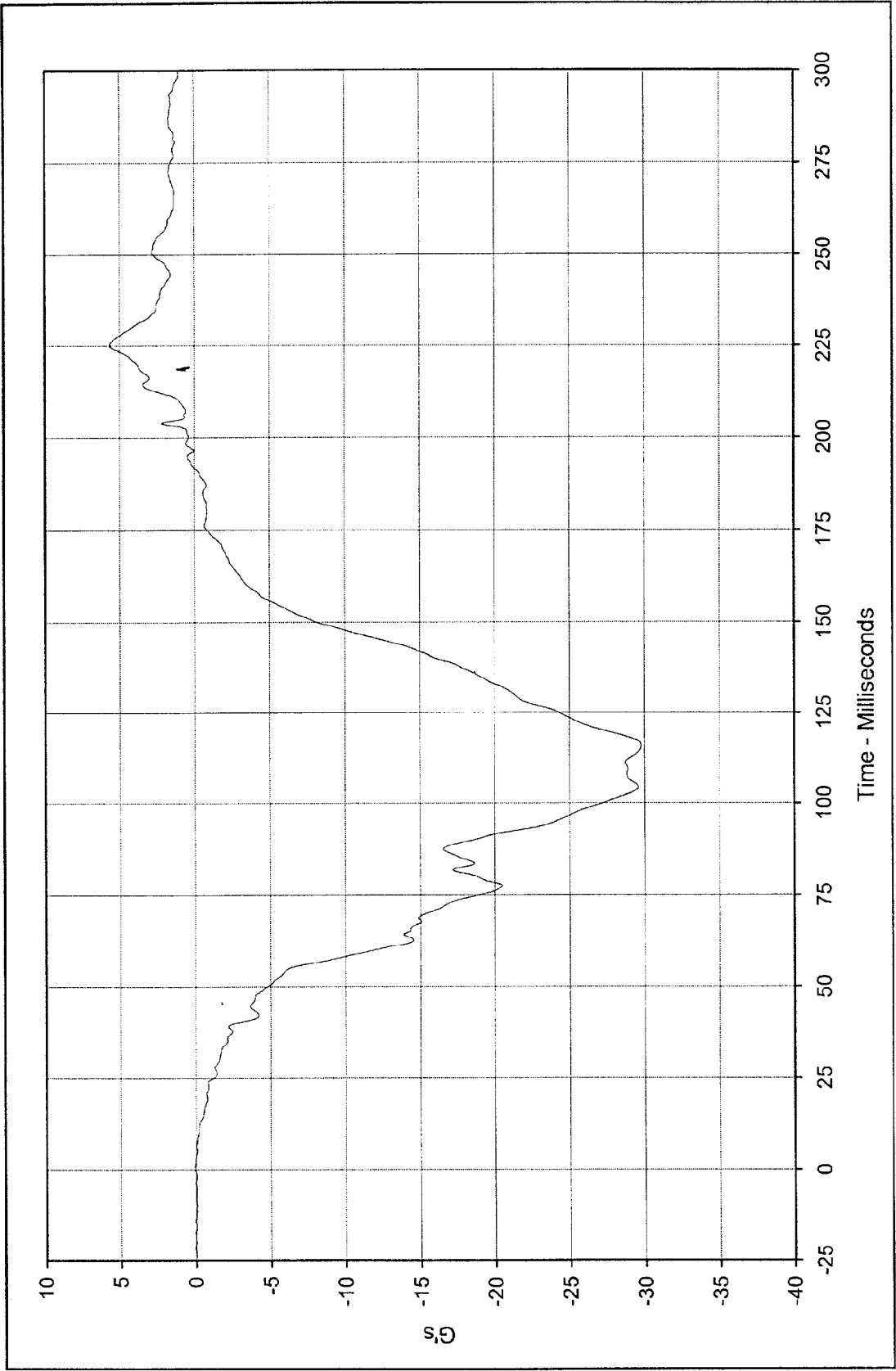
Curve Description: Driver Neck Moment Z Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 1.6 at 204.2 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -14.3 at 152.3 Milliseconds
 SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-012





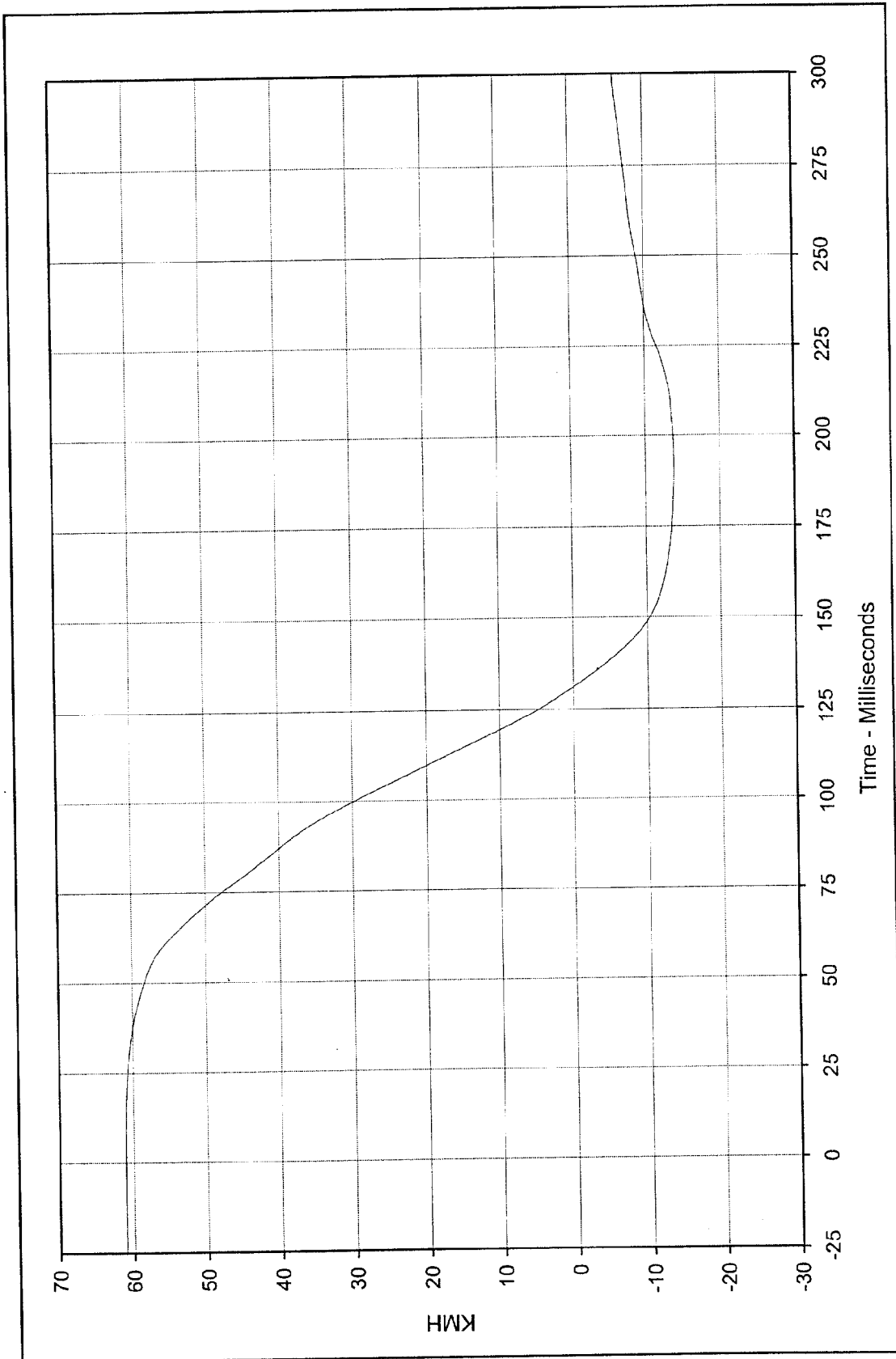
Curve Description: Driver Neck Moment Resultant Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 38.8 at 252.9 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.0 at 7.5 Milliseconds
 SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: RFS-010





Curve Description: Driver Chest Primary X Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 5.6 at 225.1 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -29.8 at 115.7 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: FIL-013

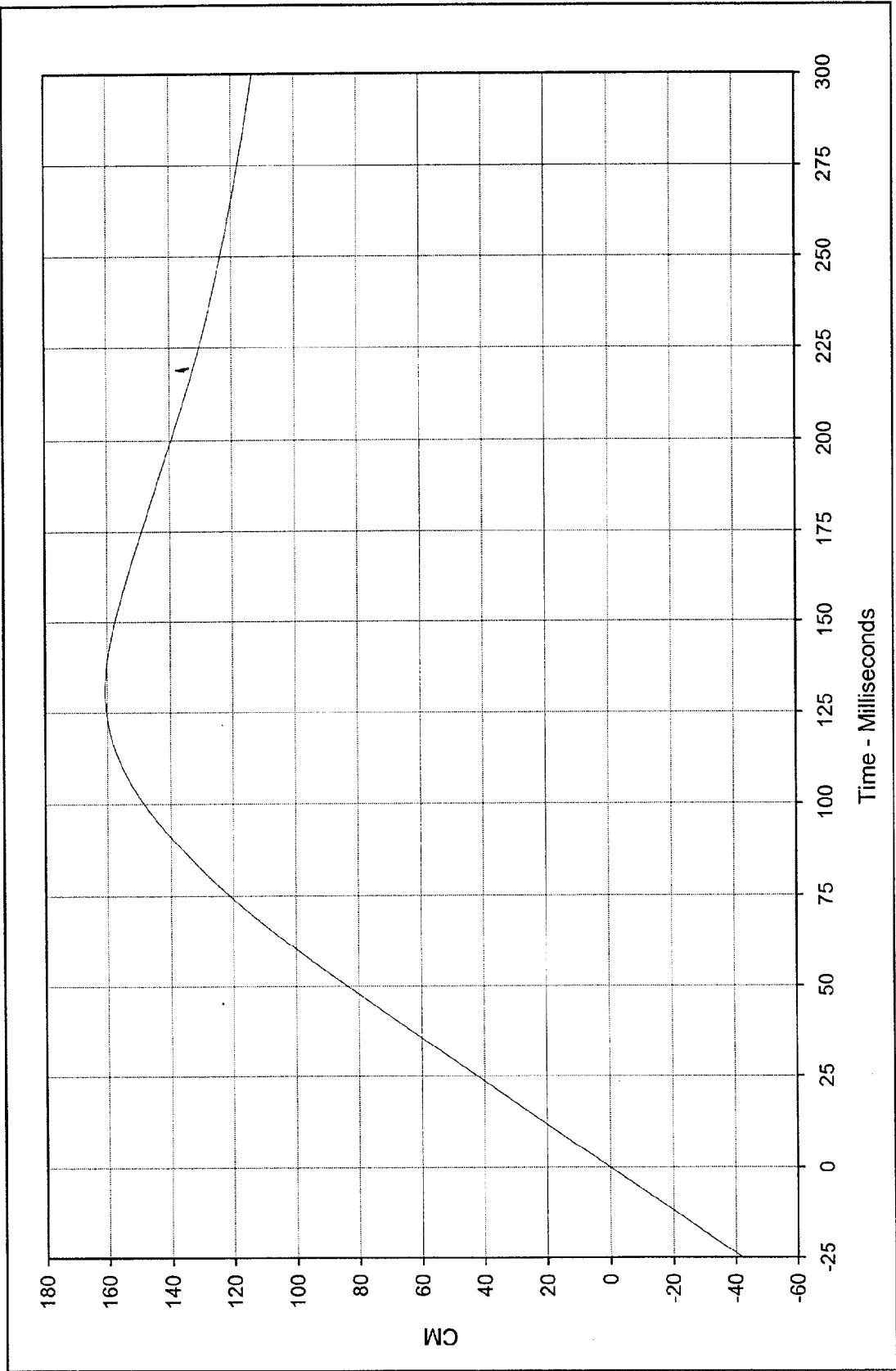




Curve Description: Driver Chest Primary X Velocity Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 61.1 at 3.5 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -13.8 at 191.7 Milliseconds

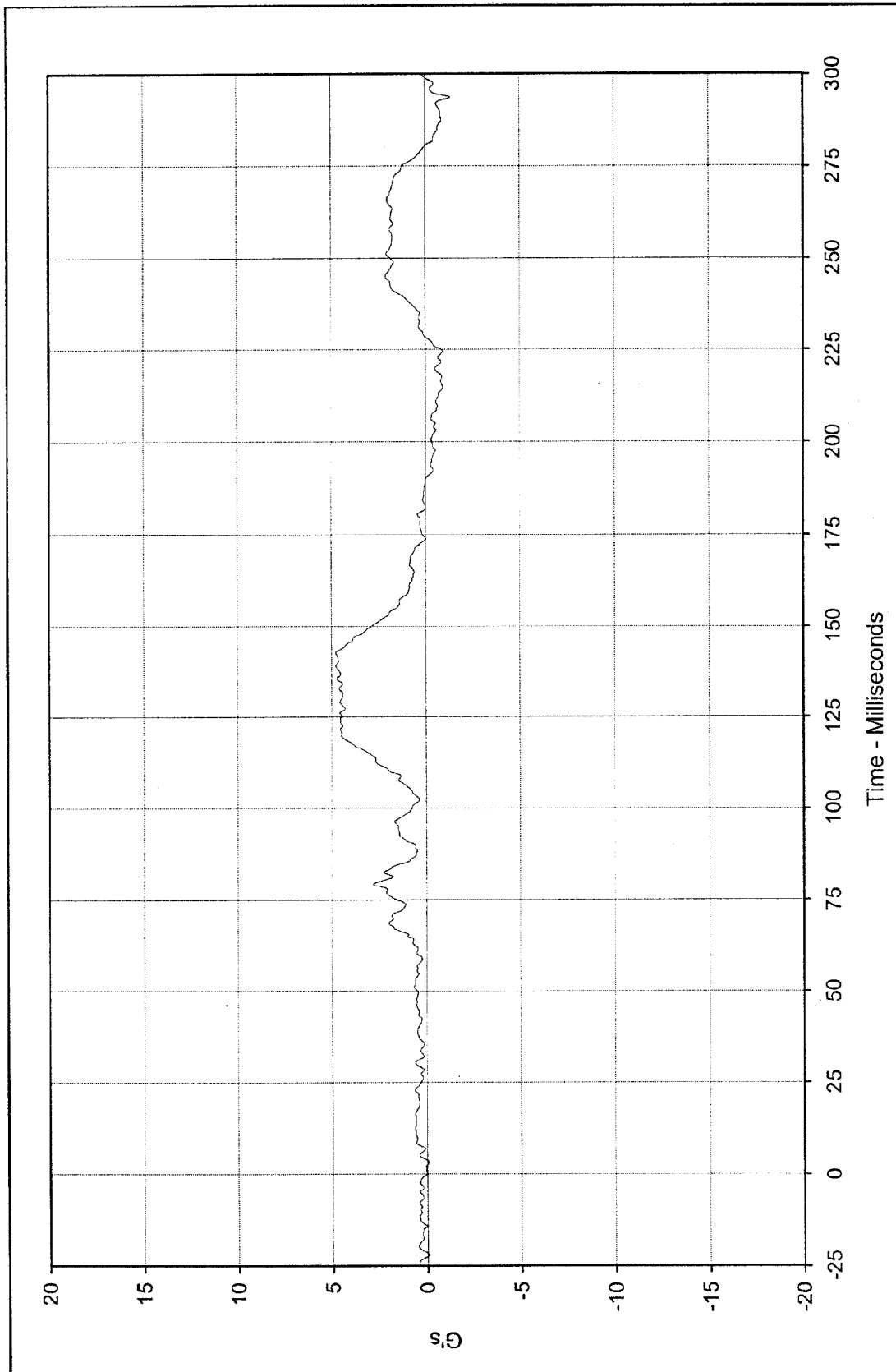


SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN1-013



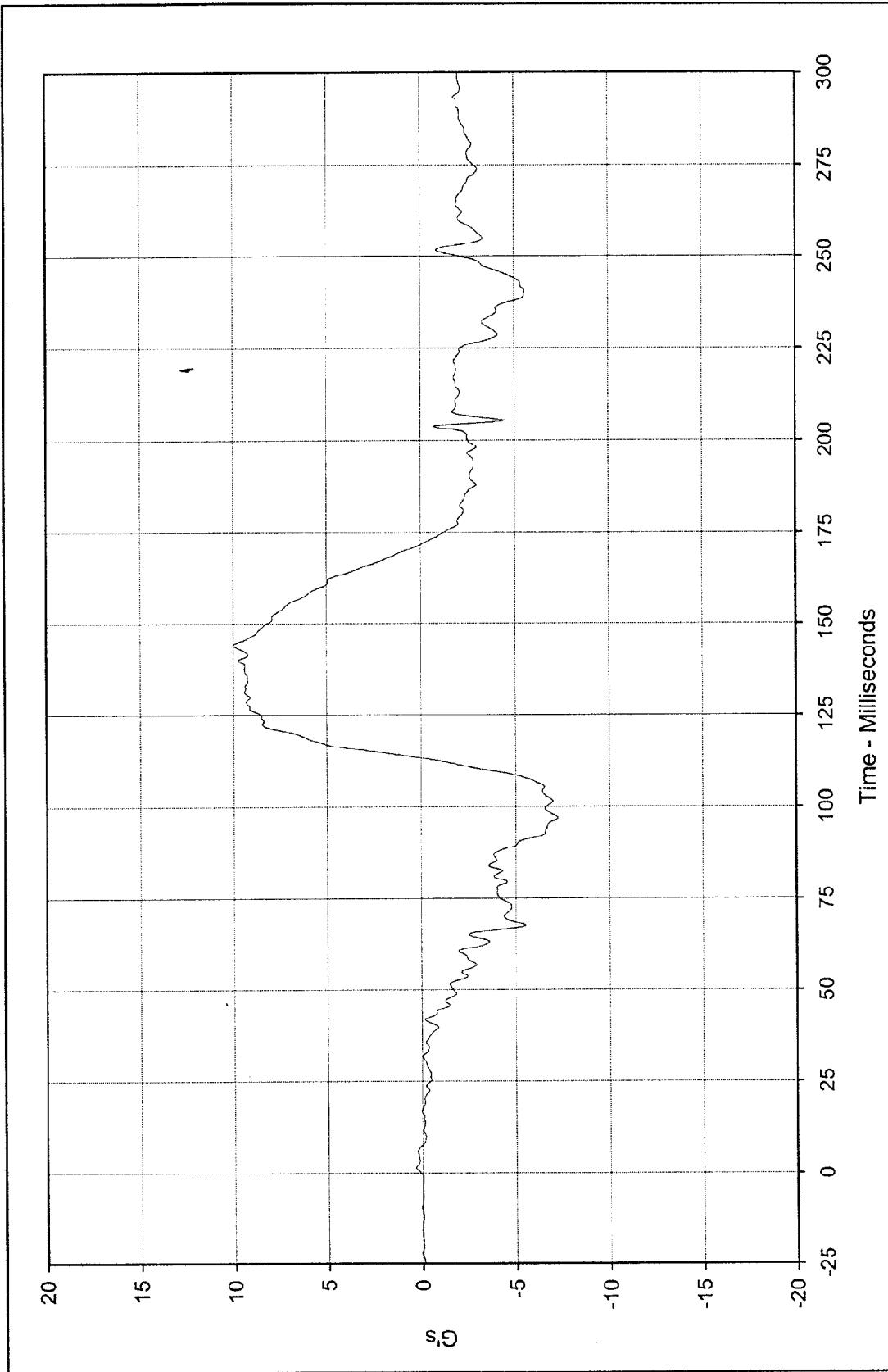
Curve Description: Driver Chest Primary X Displ. Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 160.6 at 131.0 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.1 at 0.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN2-013





Curve Description: Driver Chest Primary Y Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 4.8 at 139.0 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -1.3 at 293.7 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: FIL-014

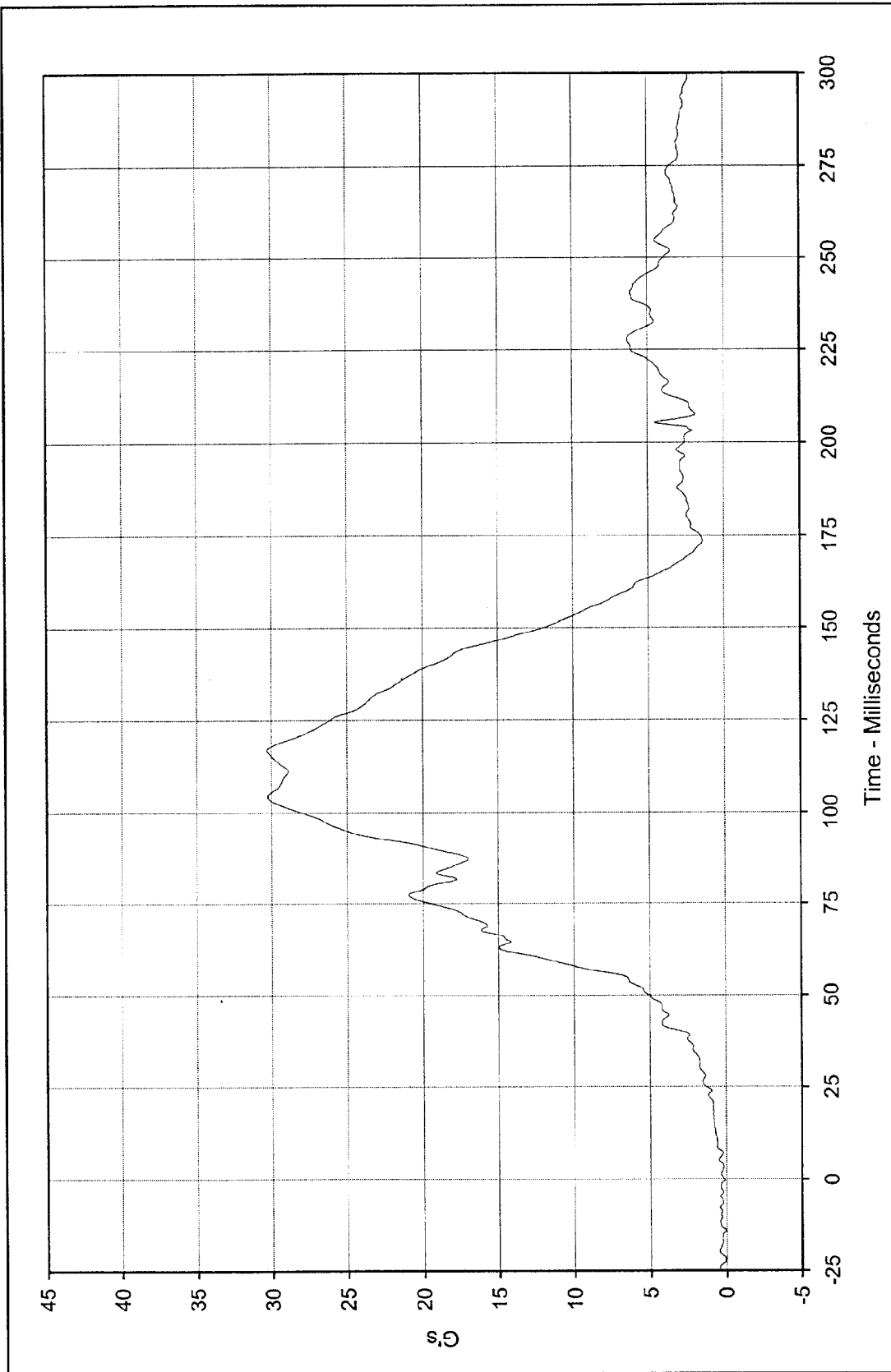




Curve Description: Driver Chest Primary Z Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 10.0 at 144.0 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -7.3 at 96.9 Milliseconds

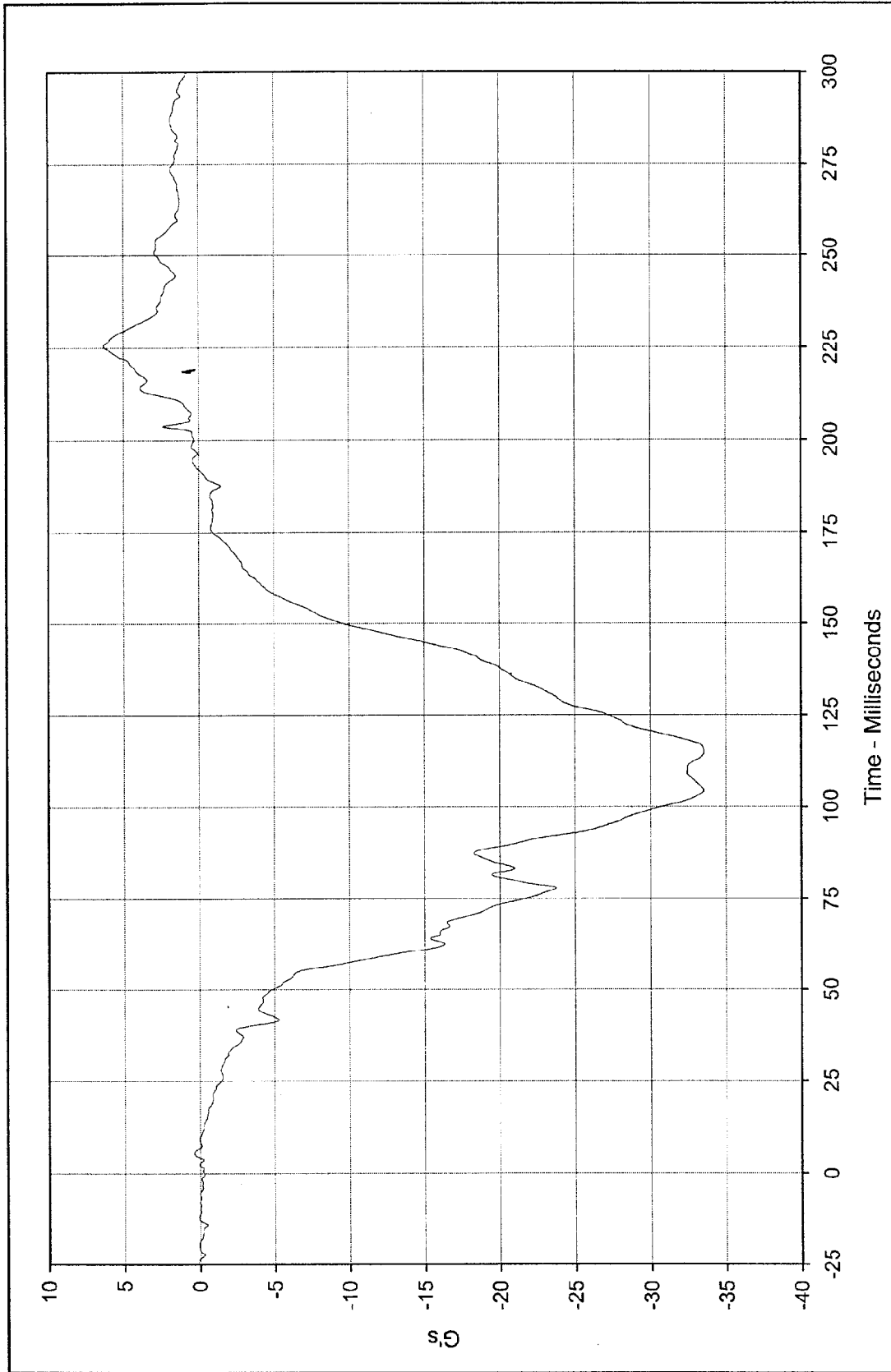


SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: FIL-015



Curve Description: Driver Chest Resultant Primary Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 30.3 at 116.7 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.1 at 0.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: RES-013





Curve Description: Driver Chest Redundant X Testing Program: 1997 NCAP 40% Offset Impact

Maximum Value: 6.3 at 225.6 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan

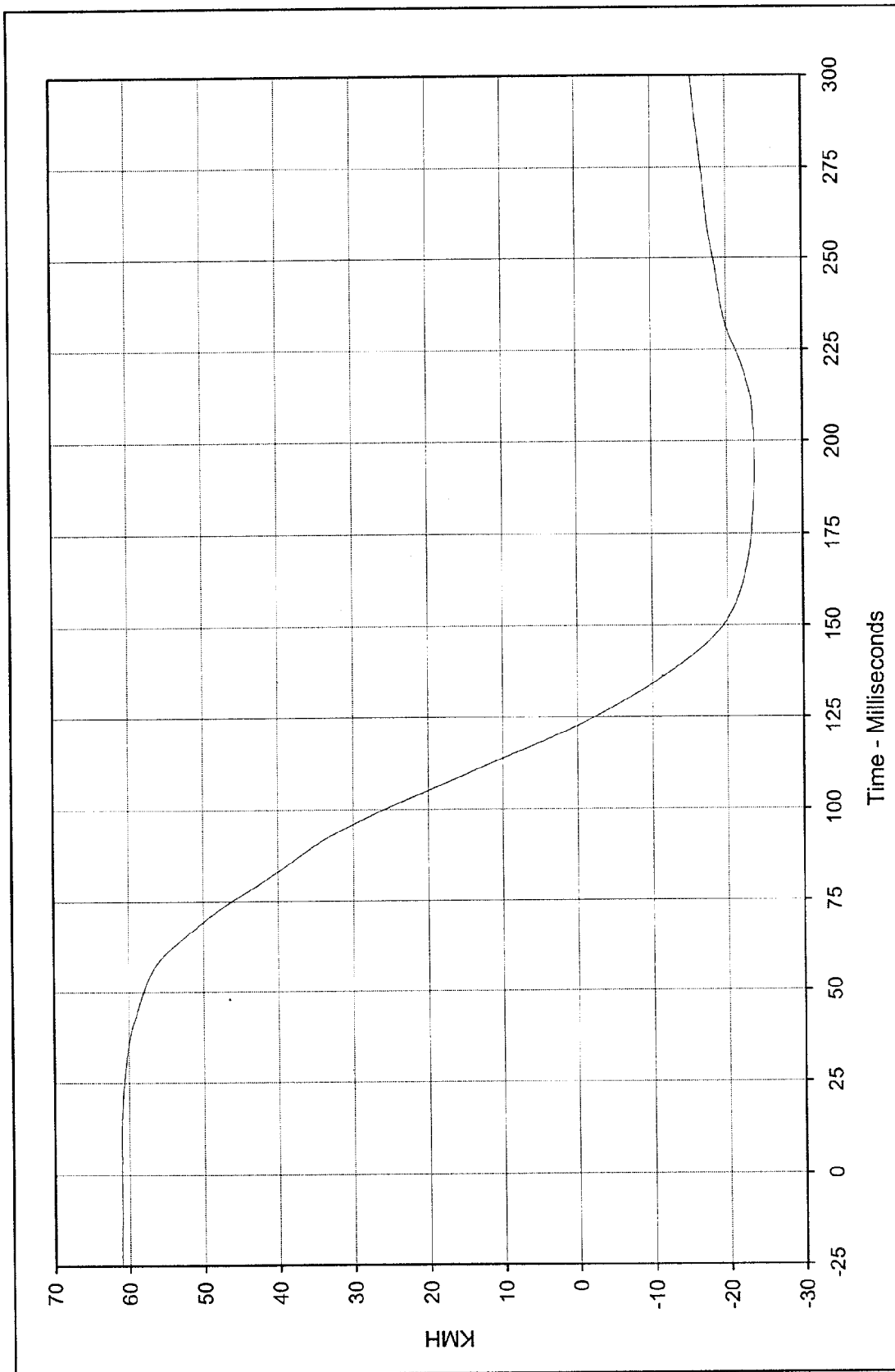
Minimum Value: -33.6 at 114.9 Milliseconds

SAE Filter Class: 180

Date of Test: 7/17/97

Curve Number: FIL-016

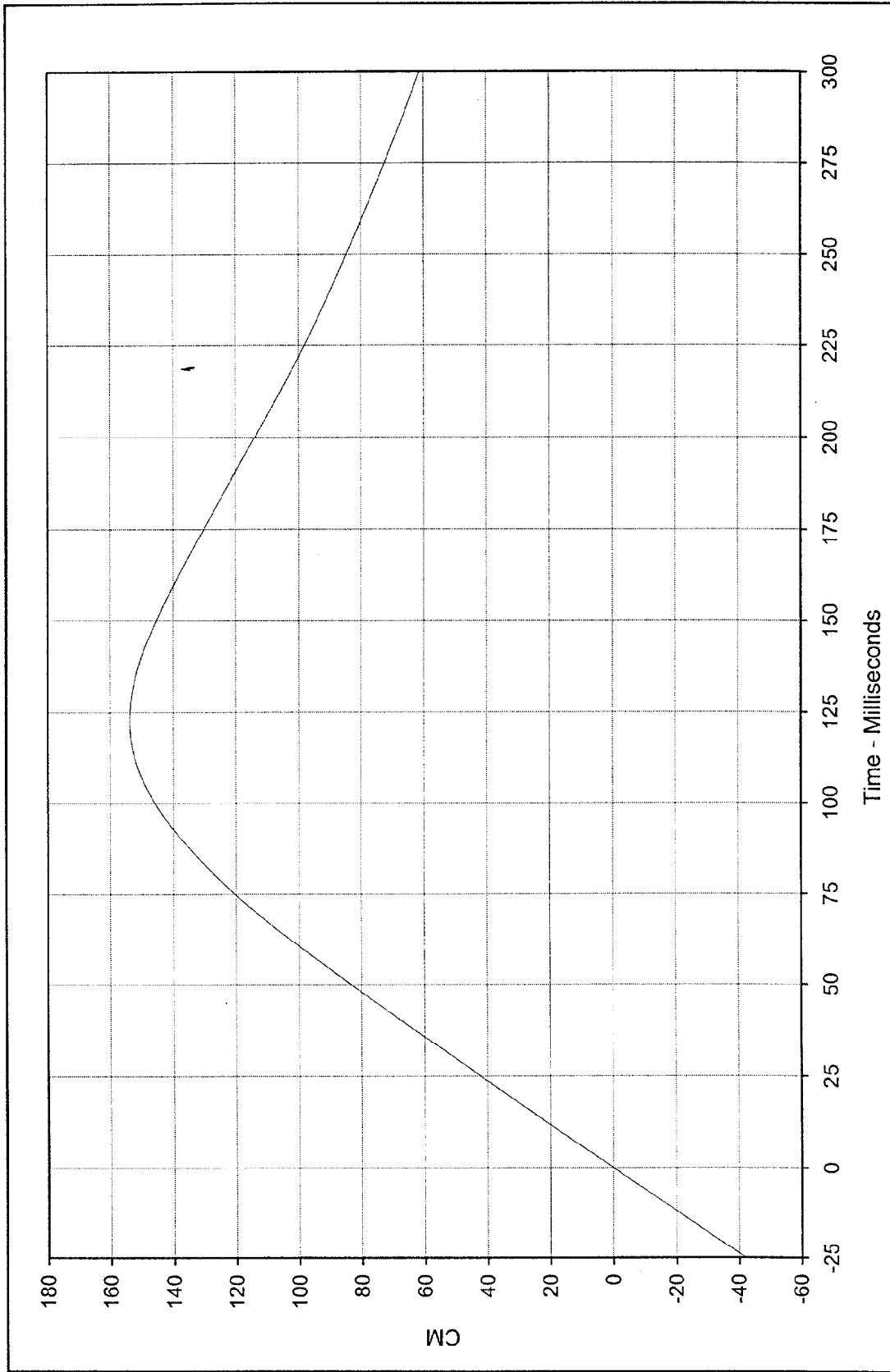




Curve Description: Driver Chest Redundant X Velocity Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 61.0 at 7.1 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -23.7 at 180.0 Milliseconds



SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN1-016



Curve Description: Driver Chest Redundant X Displ. Testing Program 1997 NCAP 40% Offset Impact

Maximum Value: 153.8 at 122.6 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan

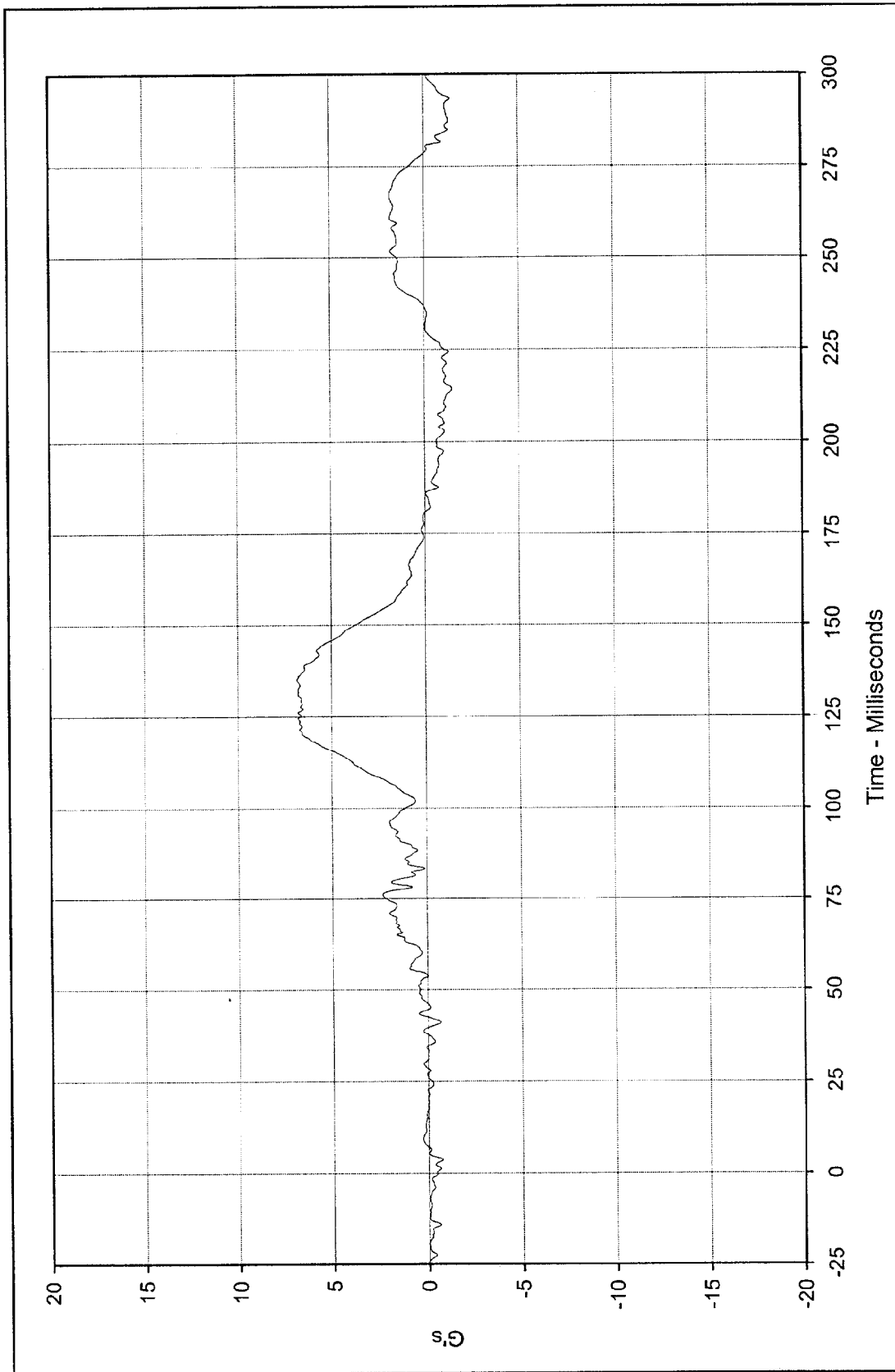
Minimum Value: 0.0 at 0.0 Milliseconds

SAE Filter Class: 180

Date of Test: 7/17/97

Curve Number: IN2-016

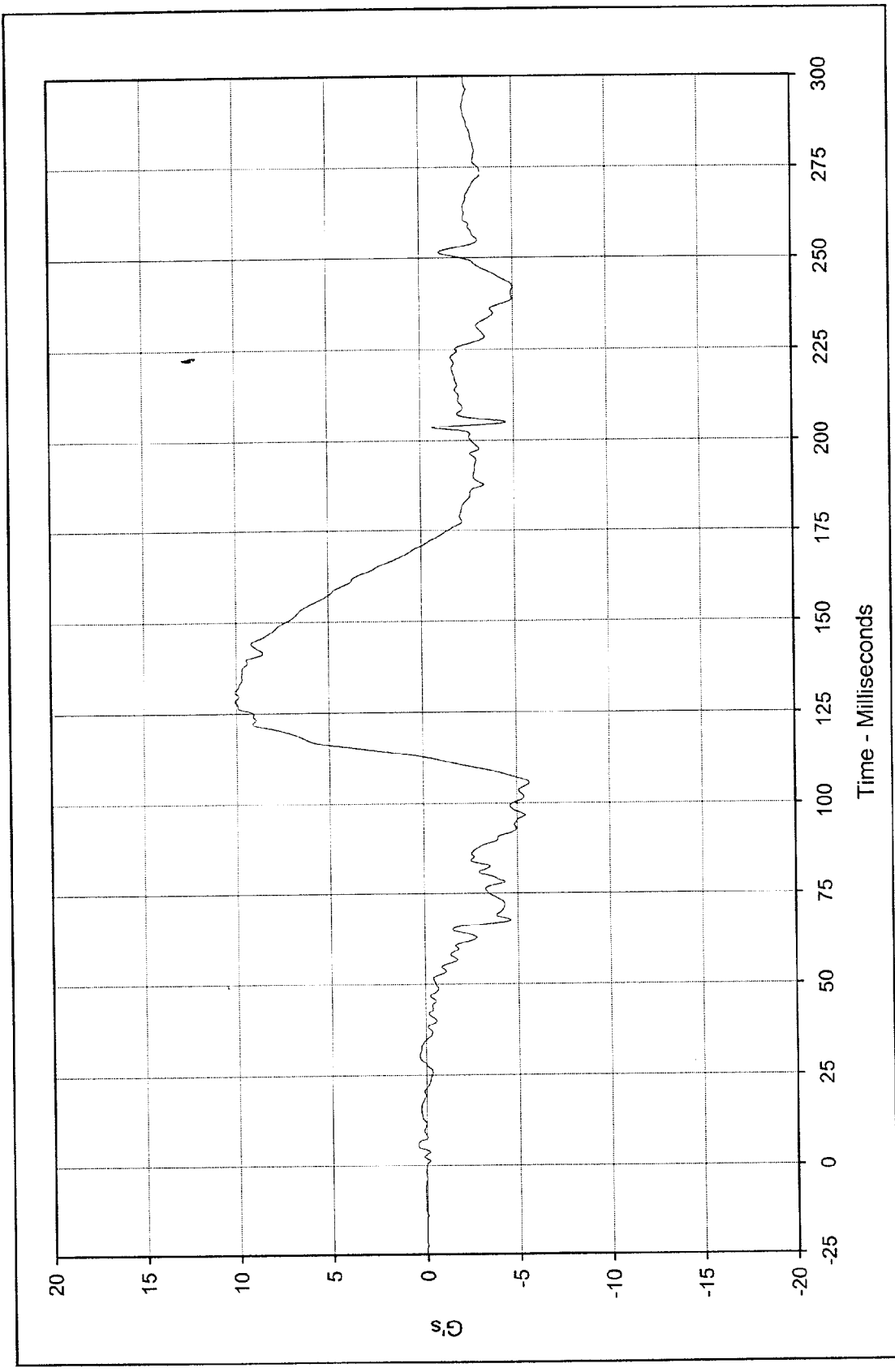




Curve Description: Driver Chest Redundant Y Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 6.9 at 135.0 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -1.5 at 214.5 Milliseconds



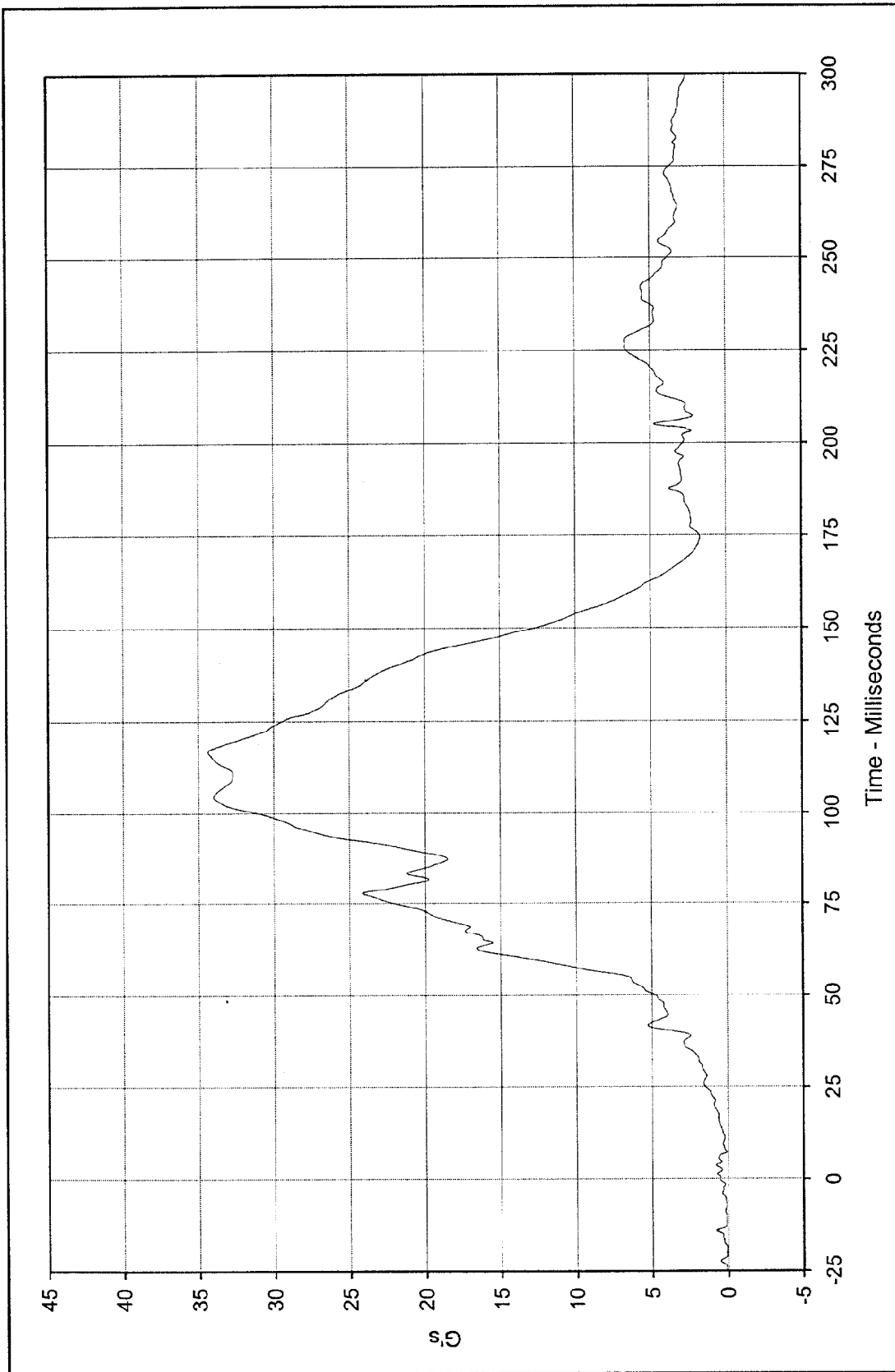
SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: FIL-017



Curve Description: Driver Chest Redundant Z Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 10.1 at 130.9 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -5.7 at 105.6 Milliseconds

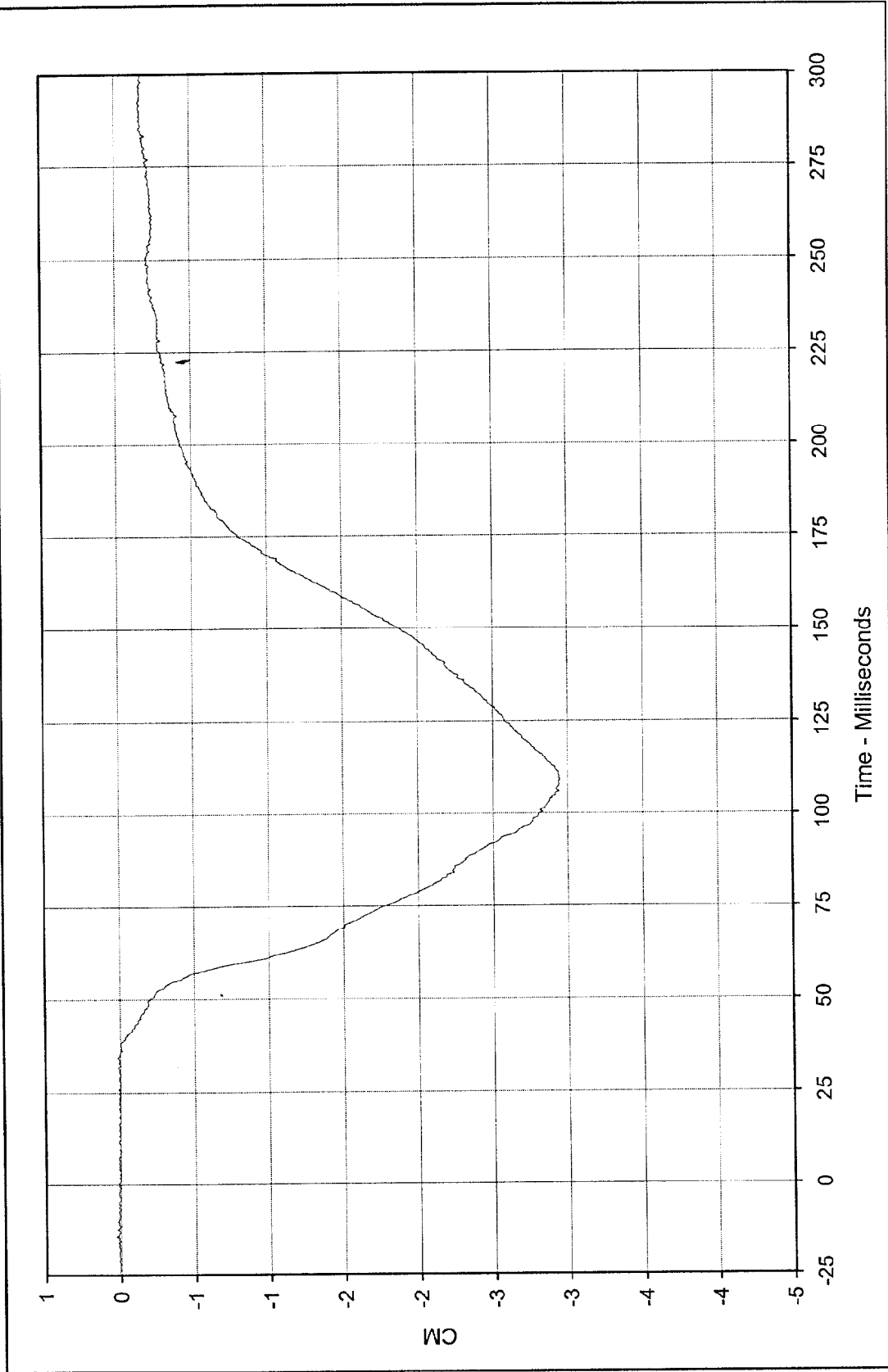


SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: FIL-018



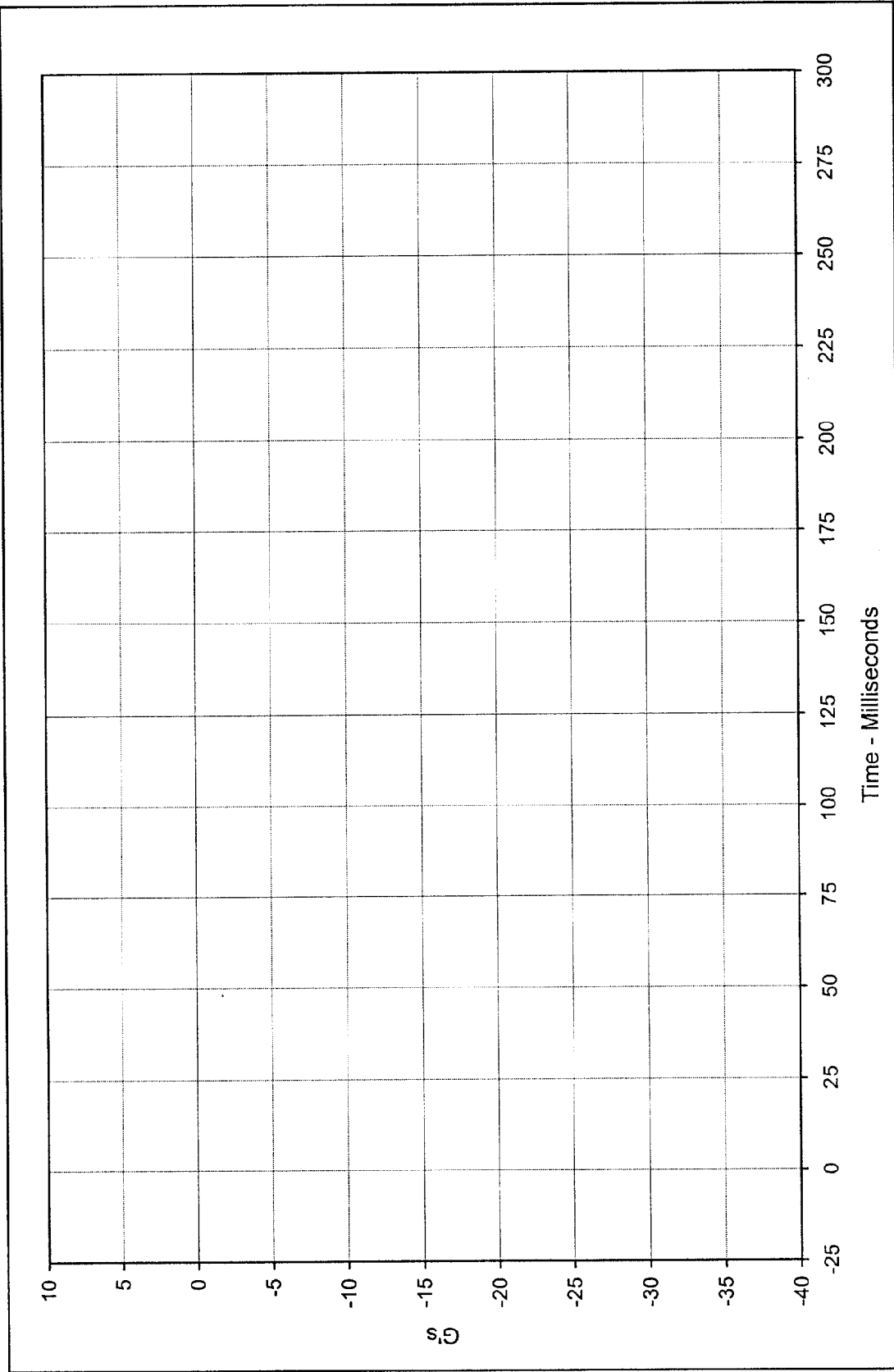
Curve Description: Driver Chest Resultant Redundant Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 34.4 at 116.6 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.1 at 7.2 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: RES-016





Curve Description: Driver Chest Displacement X Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 0.02 at 0.2 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -2.95 at 109.2 Milliseconds
 SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-019



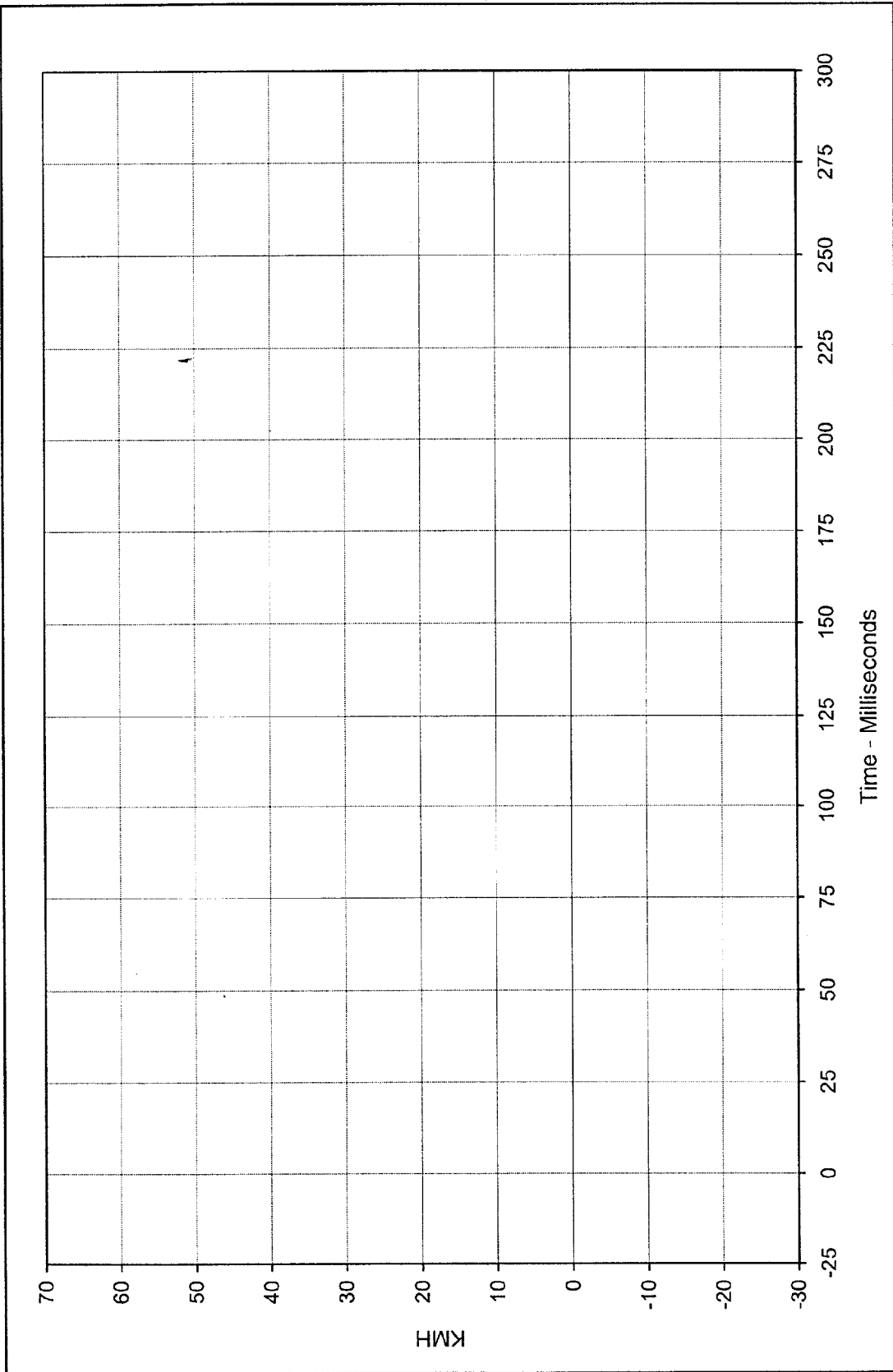


Curve Description: Driver Pelvis X * 1997 NCAP 40% Offset Impact
 Maximum Value: 0.0 at 0.0 Milliseconds 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.0 at 0.0 Milliseconds



SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-020

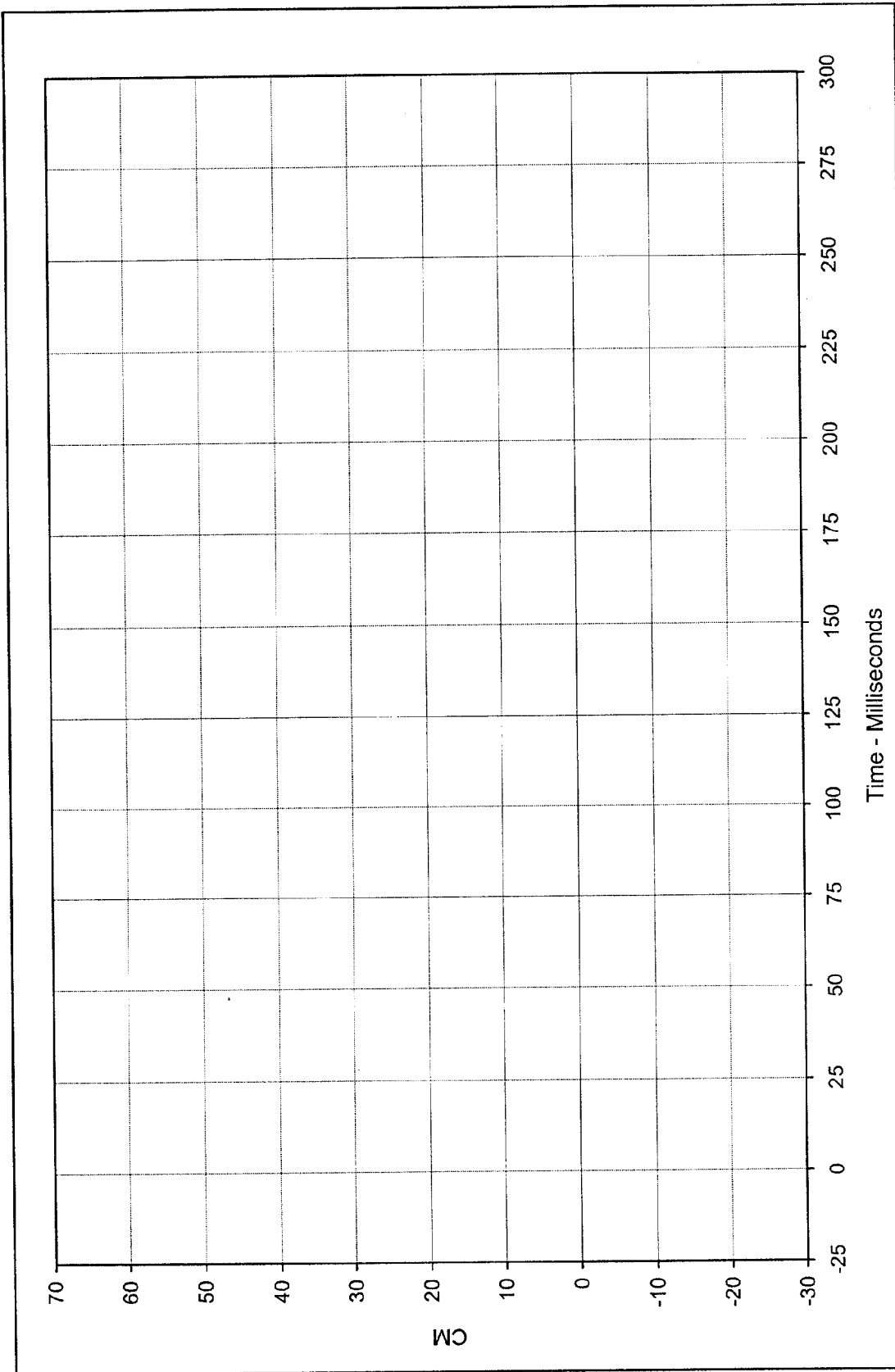
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Curve Description: Driver Pelvis X Velocity * Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 0.0 at 0.0 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.0 at 0.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN1-020



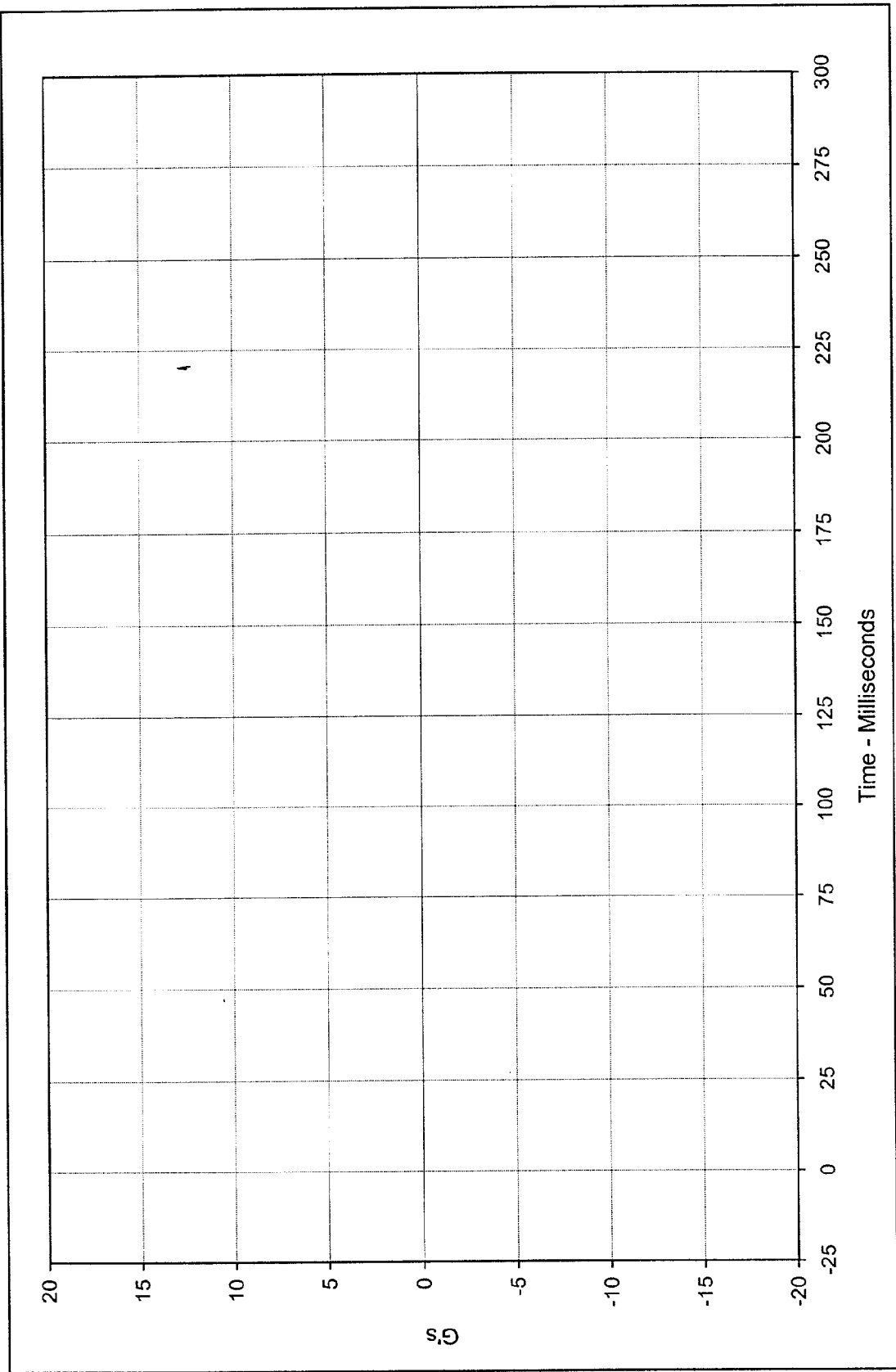
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Curve Description: Driver Pelvis X Displ. * 1997 NCAP 40% Offset Impact
 Maximum Value: 0.0 at 0.0 Milliseconds 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.0 at 0.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN2-020



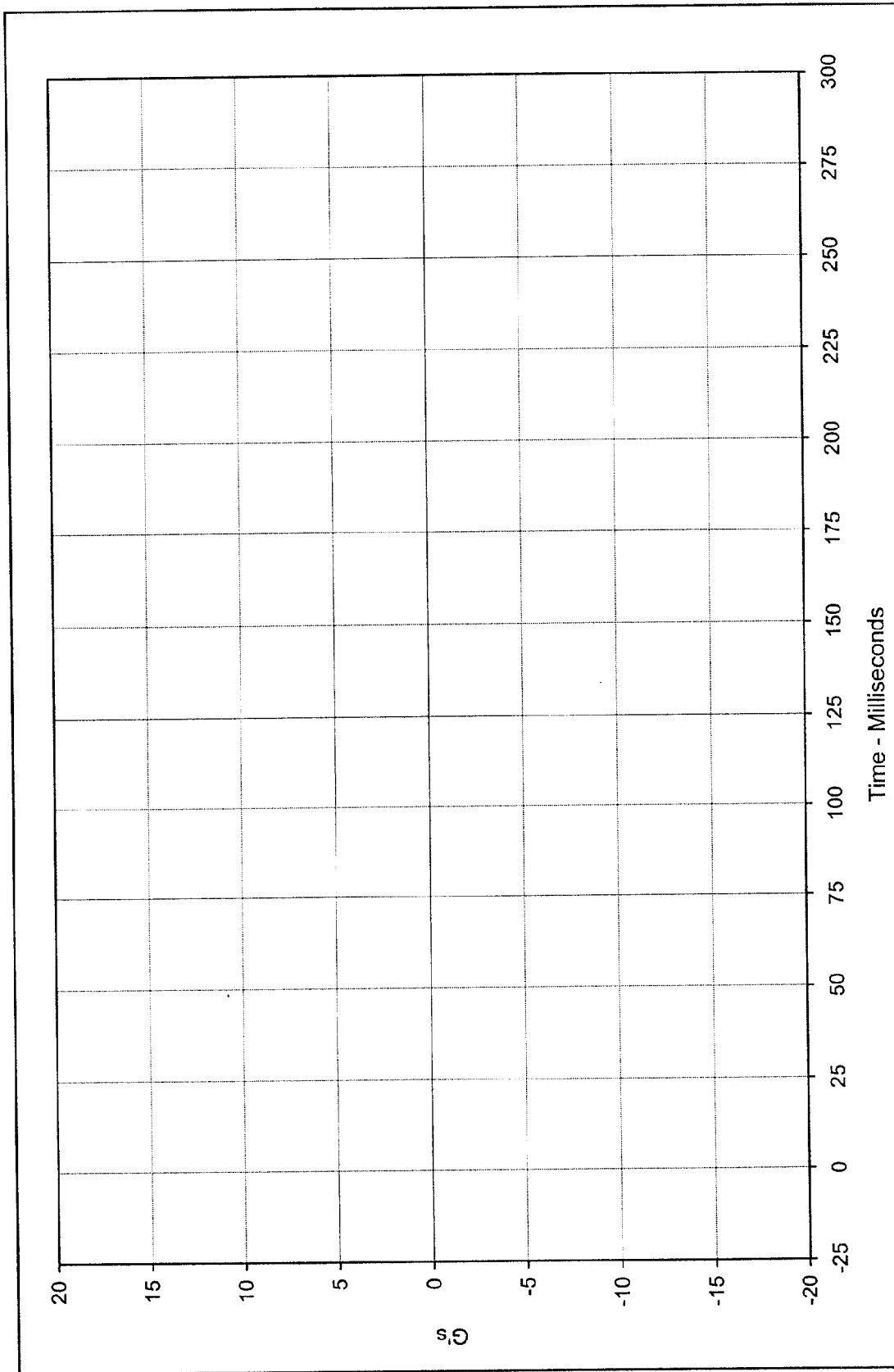
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Curve Description: Driver Pelvis Y * Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 0.0 at 0.0 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.0 at 0.0 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-021



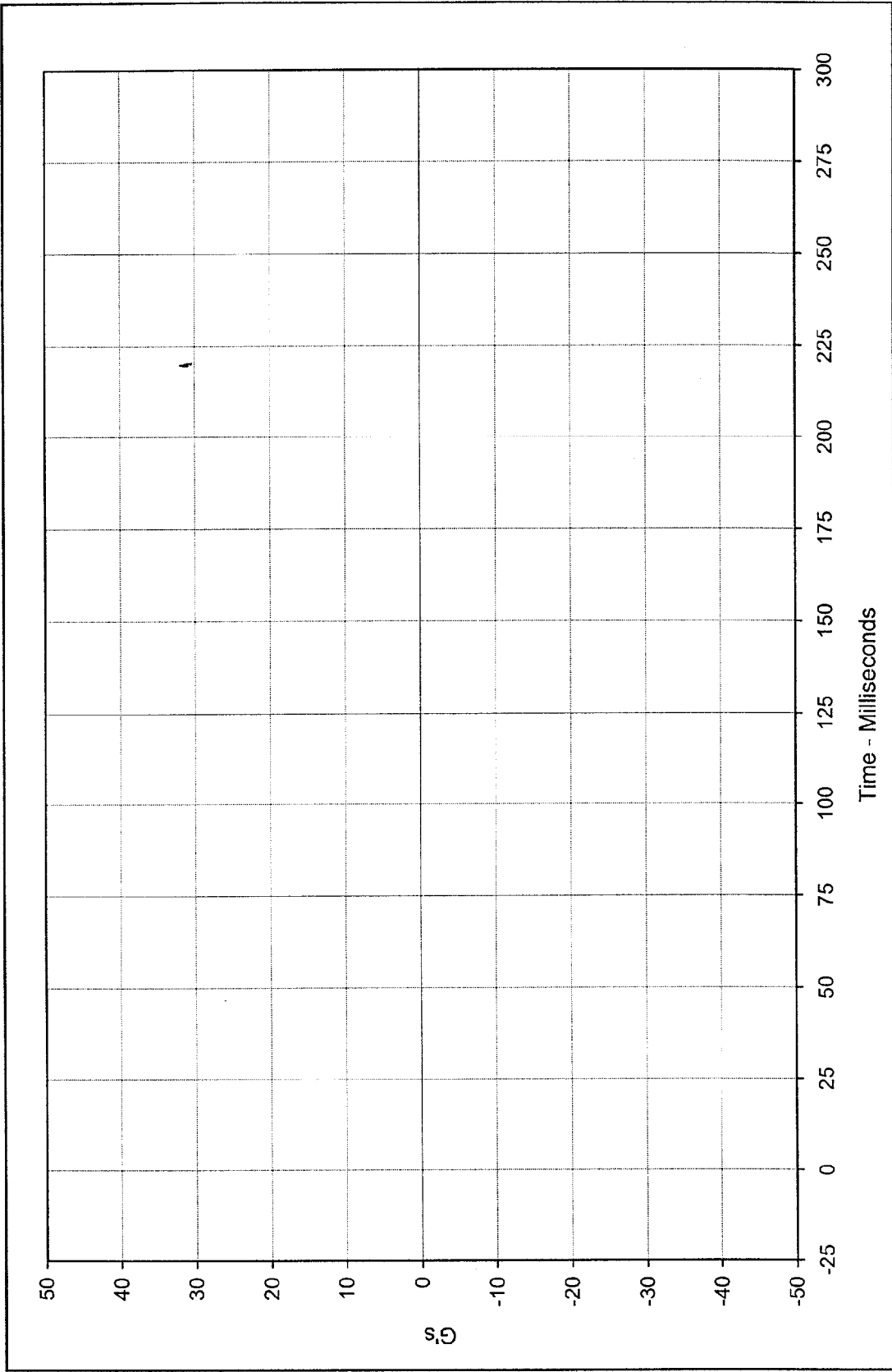
* Channel Failed, No Data



Curve Description: Driver Pelvis Z * 1997 NCAP 40% Offset Impact
 Maximum Value: 0.0 at 0.0 Milliseconds 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.0 at 0.0 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-022



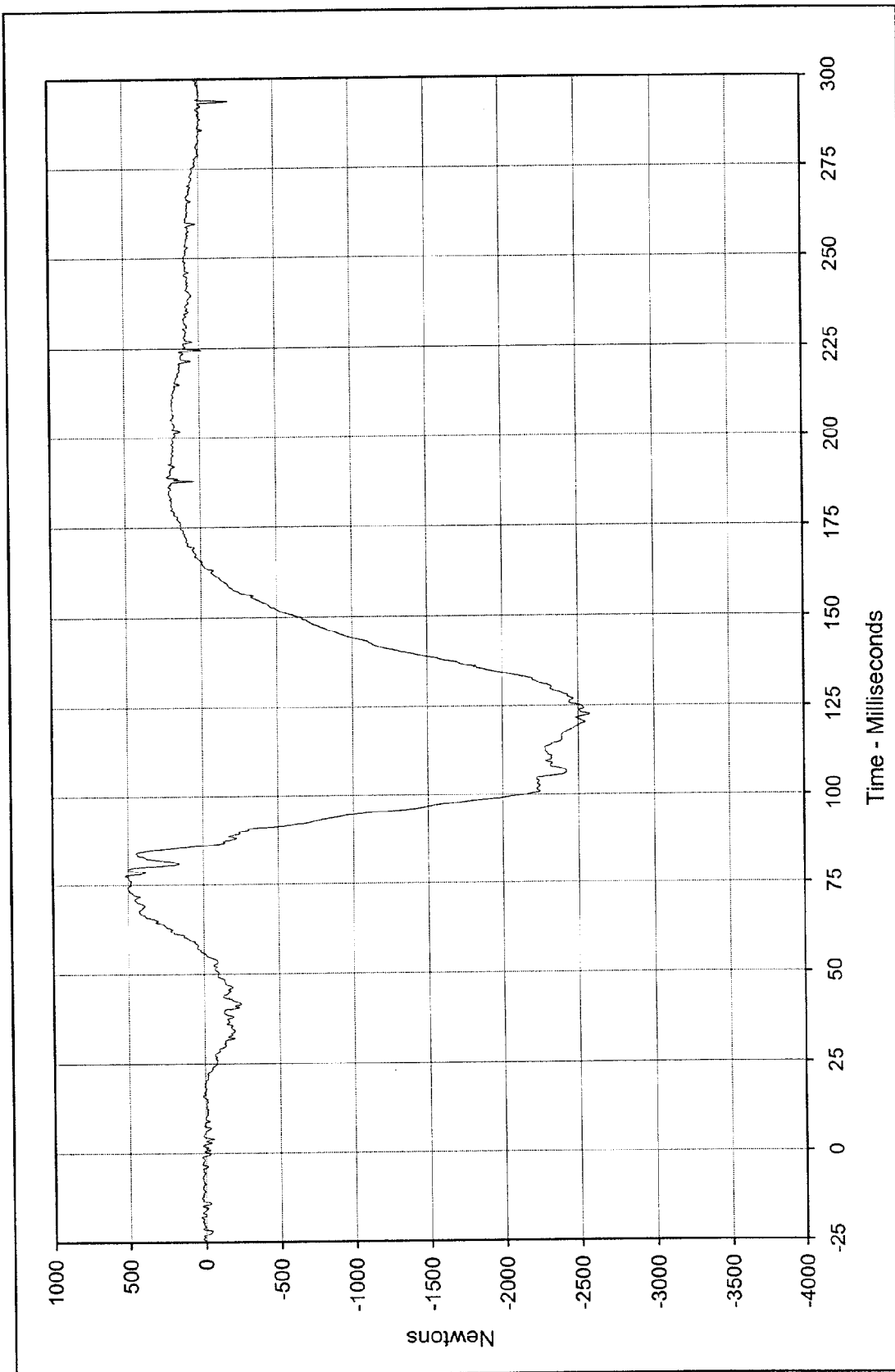
* Channel Failed, No Data



Curve Description: Driver Pelvis Resultant * Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 0.0 at 0.0 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.0 at 0.0 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: RES-020



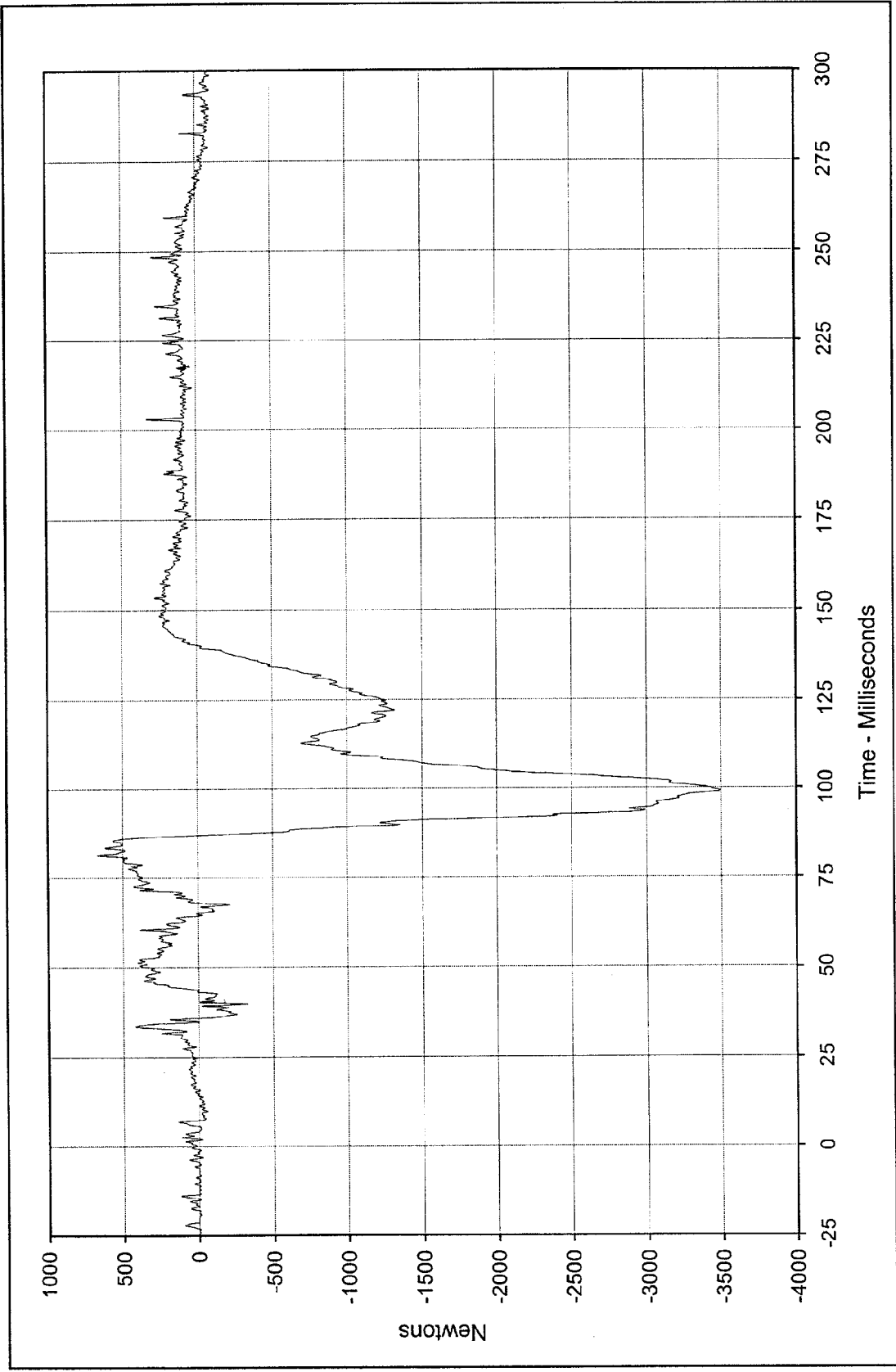
*Channel Failed, No Data



Curve Description: Driver Left Femur Force Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 519.0 at 77.5 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -2577.6 at 122.6 Milliseconds



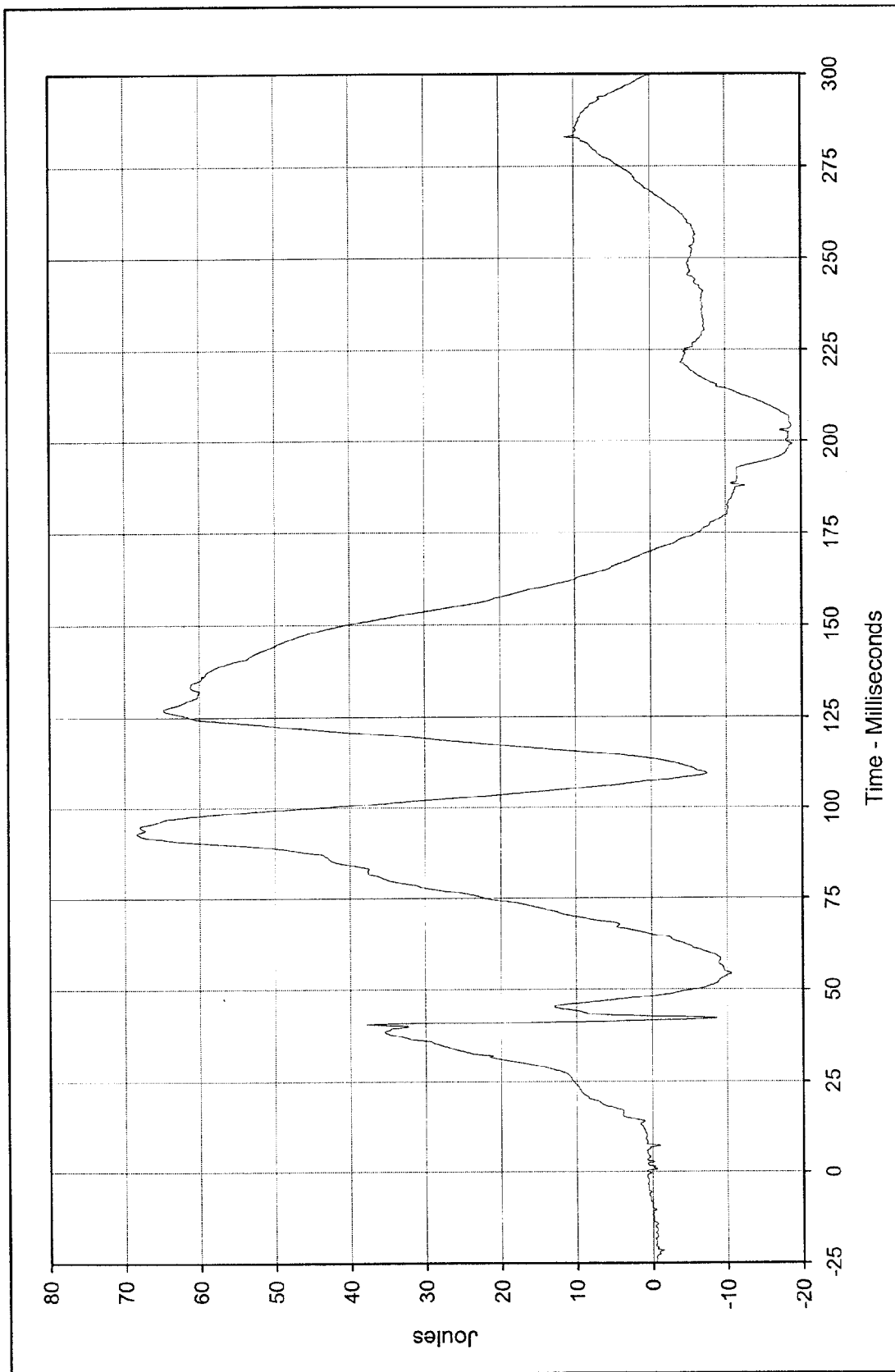
SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-023



Testing Program: 1997 NCAP 40% Offset Impact
 Test Vehicle: 1996 Ford Taurus 4 Door Sedan

Curve Description: Driver Right Femur Force
 Maximum Value: 664.7 at 81.4 Milliseconds
 Minimum Value: -3493.8 at 99.2 Milliseconds
 SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-024

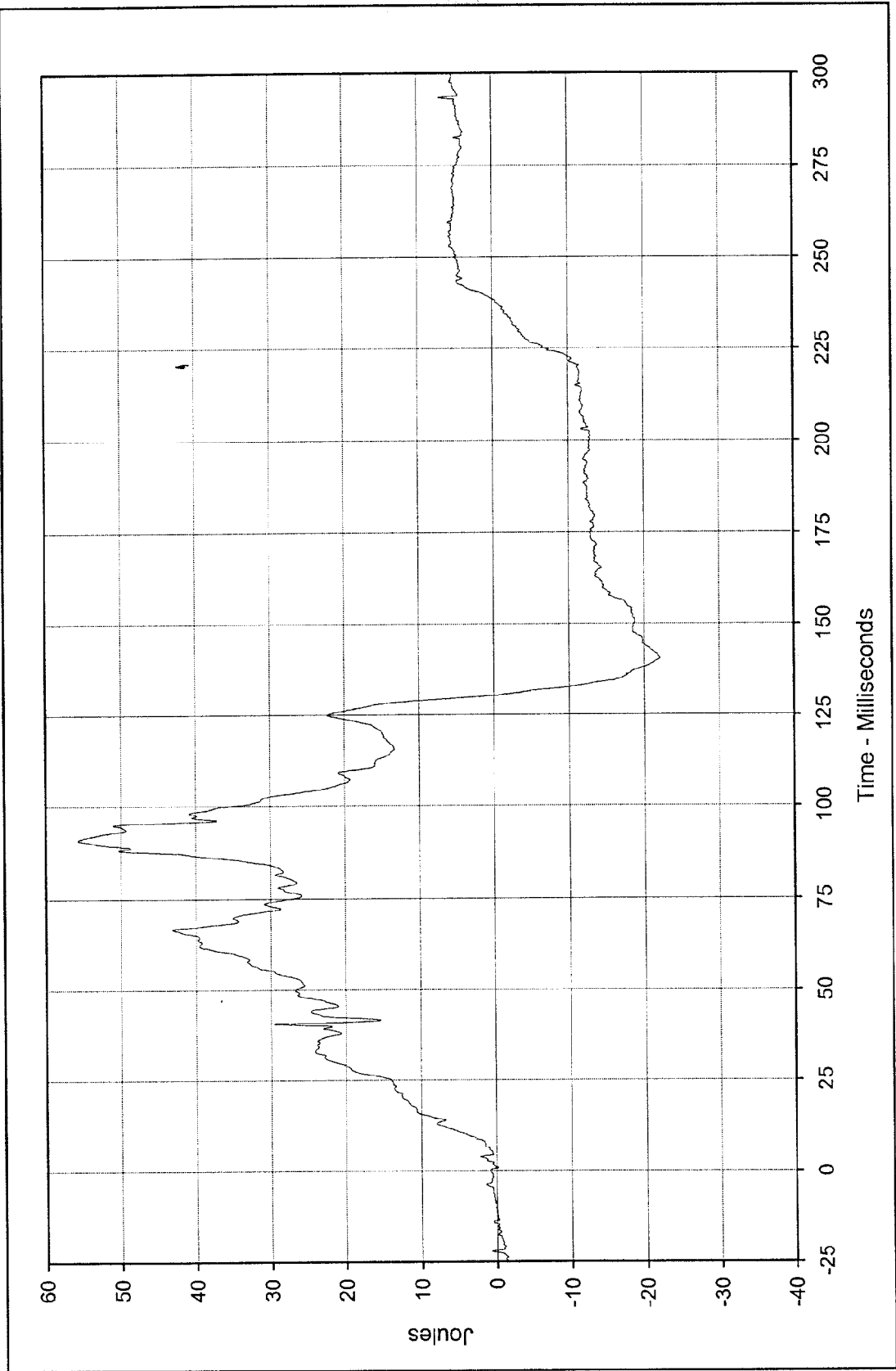




Curve Description: Driver Left Upper Tibia Moment X Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 68.4 at 92.8 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -18.9 at 199.1 Milliseconds



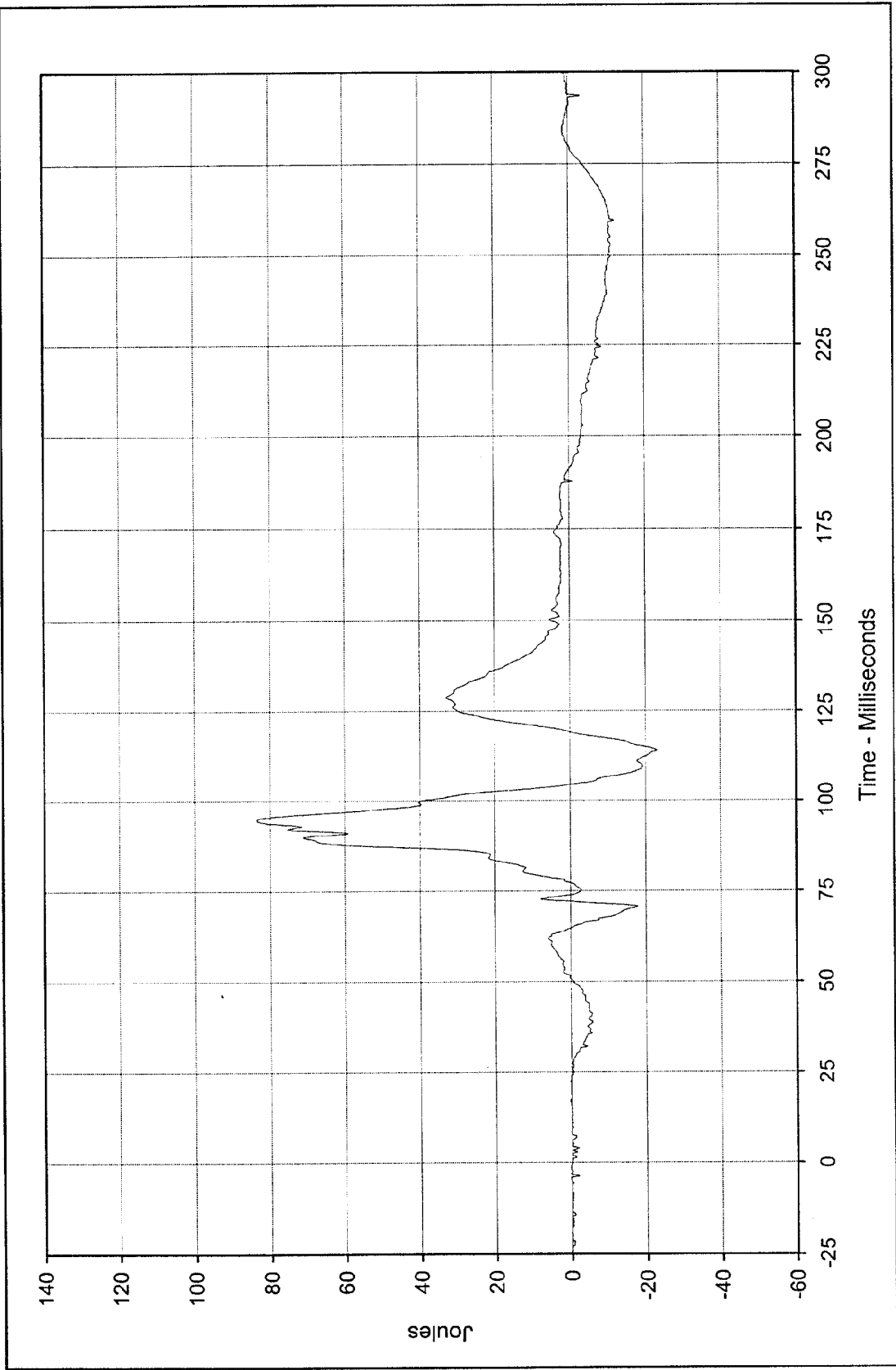
SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-025



Curve Description: Driver Left Upper Tibia Moment Y Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 55.7 at 90.8 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -22.1 at 140.5 Milliseconds

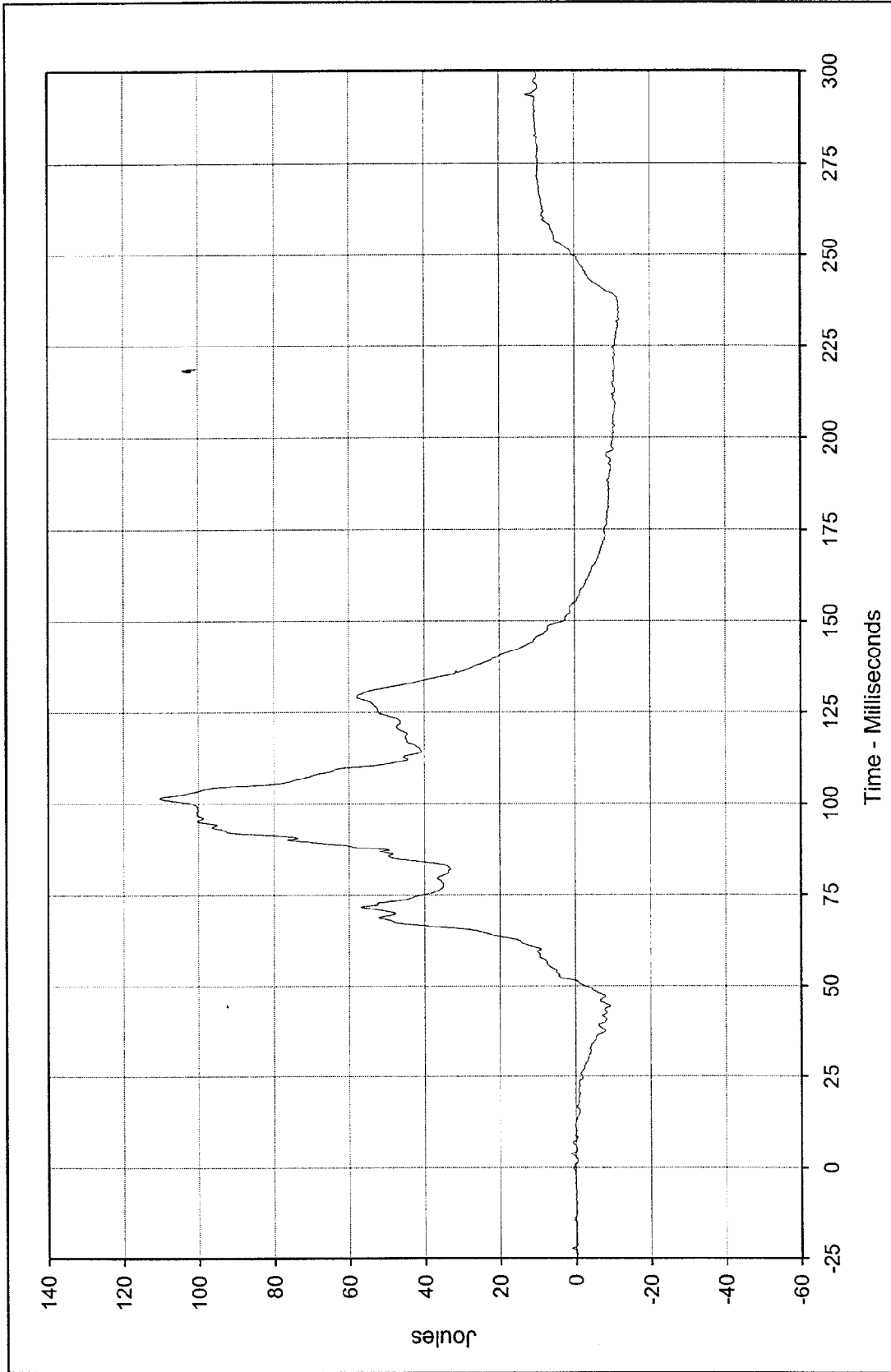


SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-026



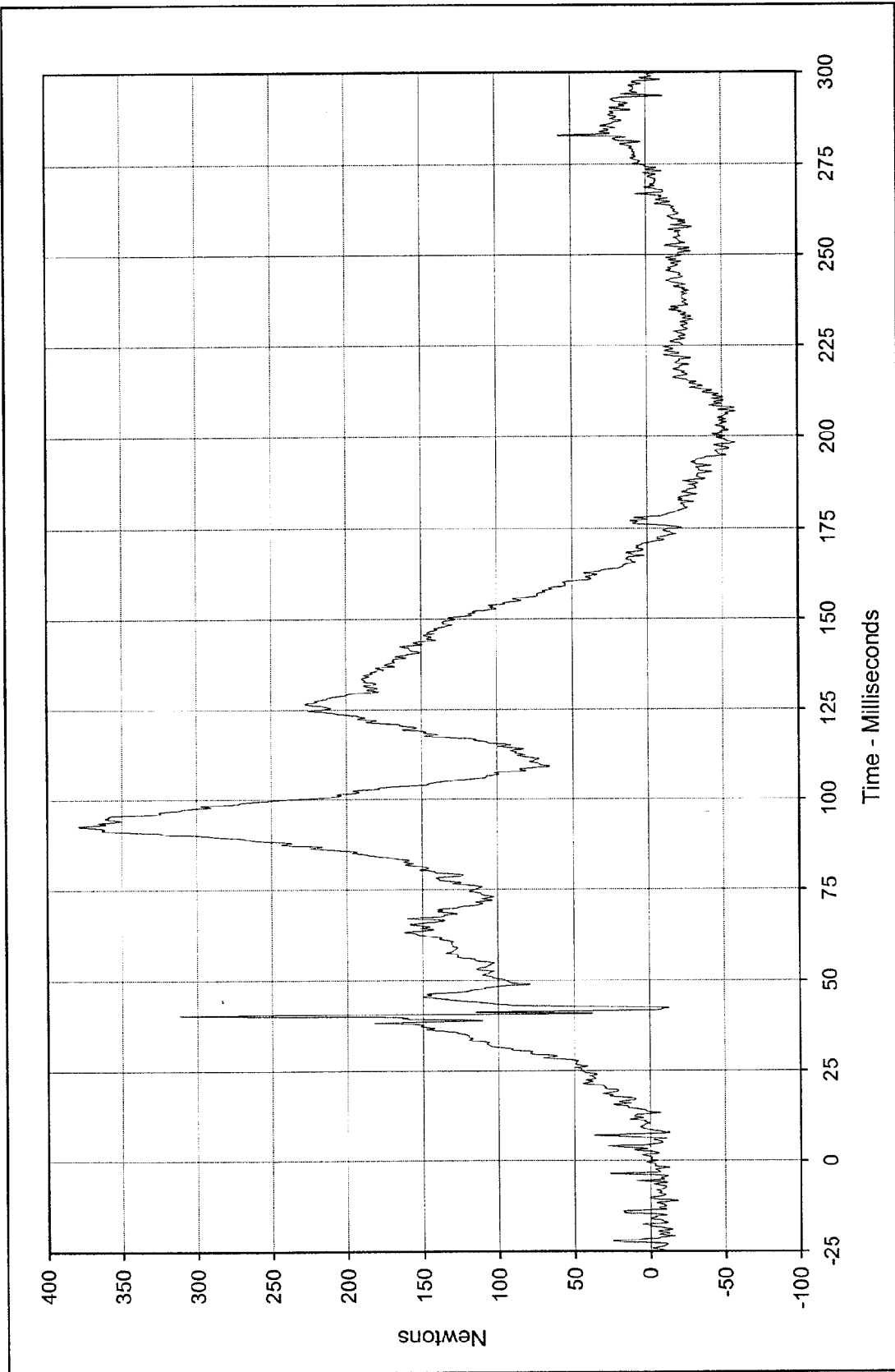
Curve Description: Driver Right Upper Tibia Moment X Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 83.7 at 94.8 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -23.1 at 113.8 Milliseconds
 SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-027





Curve Description: Driver Right Upper Tibia Moment Y Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 110.4 at 101.6 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -11.8 at 232.3 Milliseconds
 SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-028





Curve Description: Driver Left Lower Tibia Force Y Testing Program 1997 NCAP 40% Offset Impact

Maximum Value: 378.9 at 92.8 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan

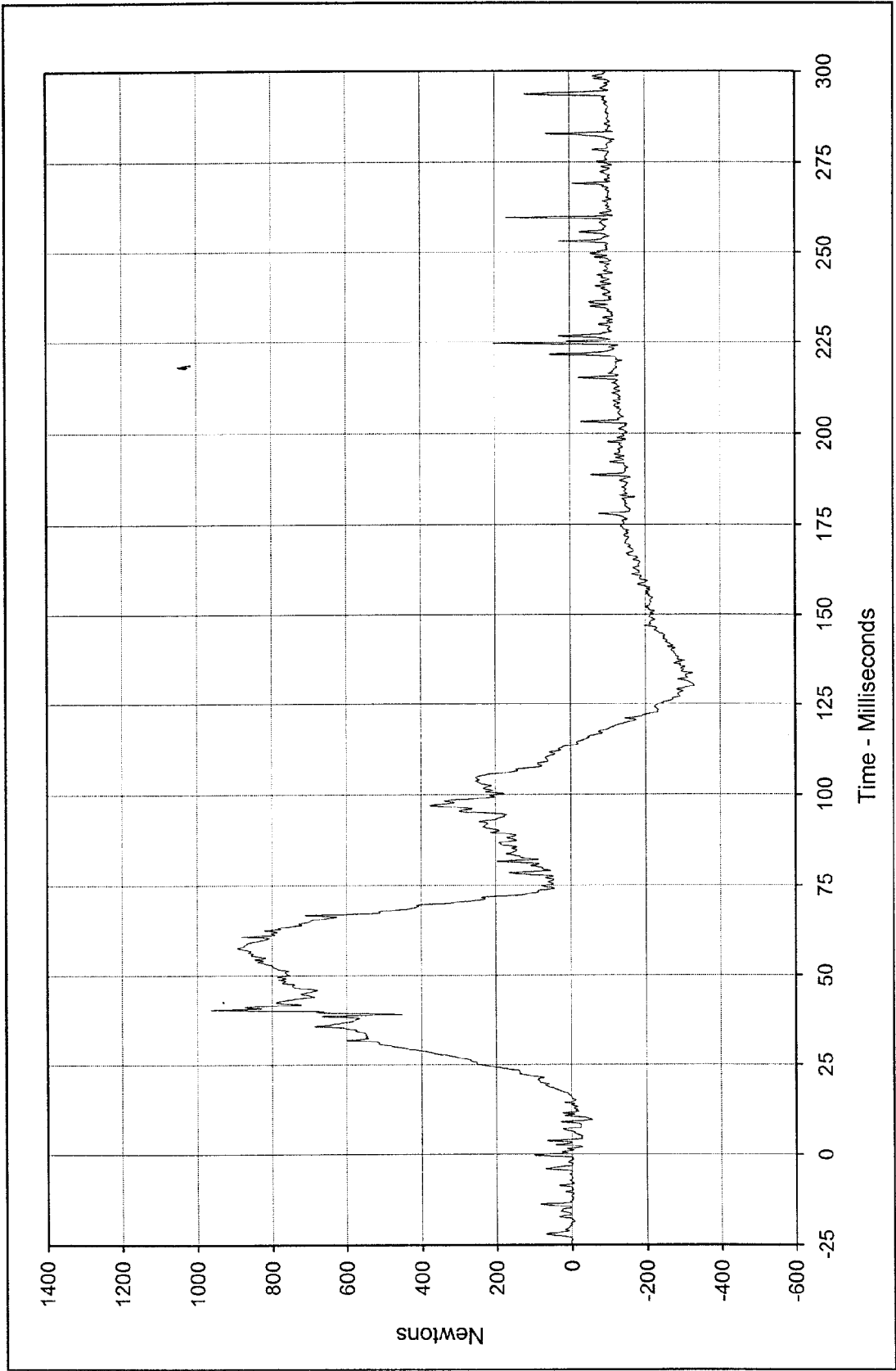
Minimum Value: -59.0 at 207.0 Milliseconds

SAE Filter Class: 600

Date of Test: 7/17/97

Curve Number: FIL-029

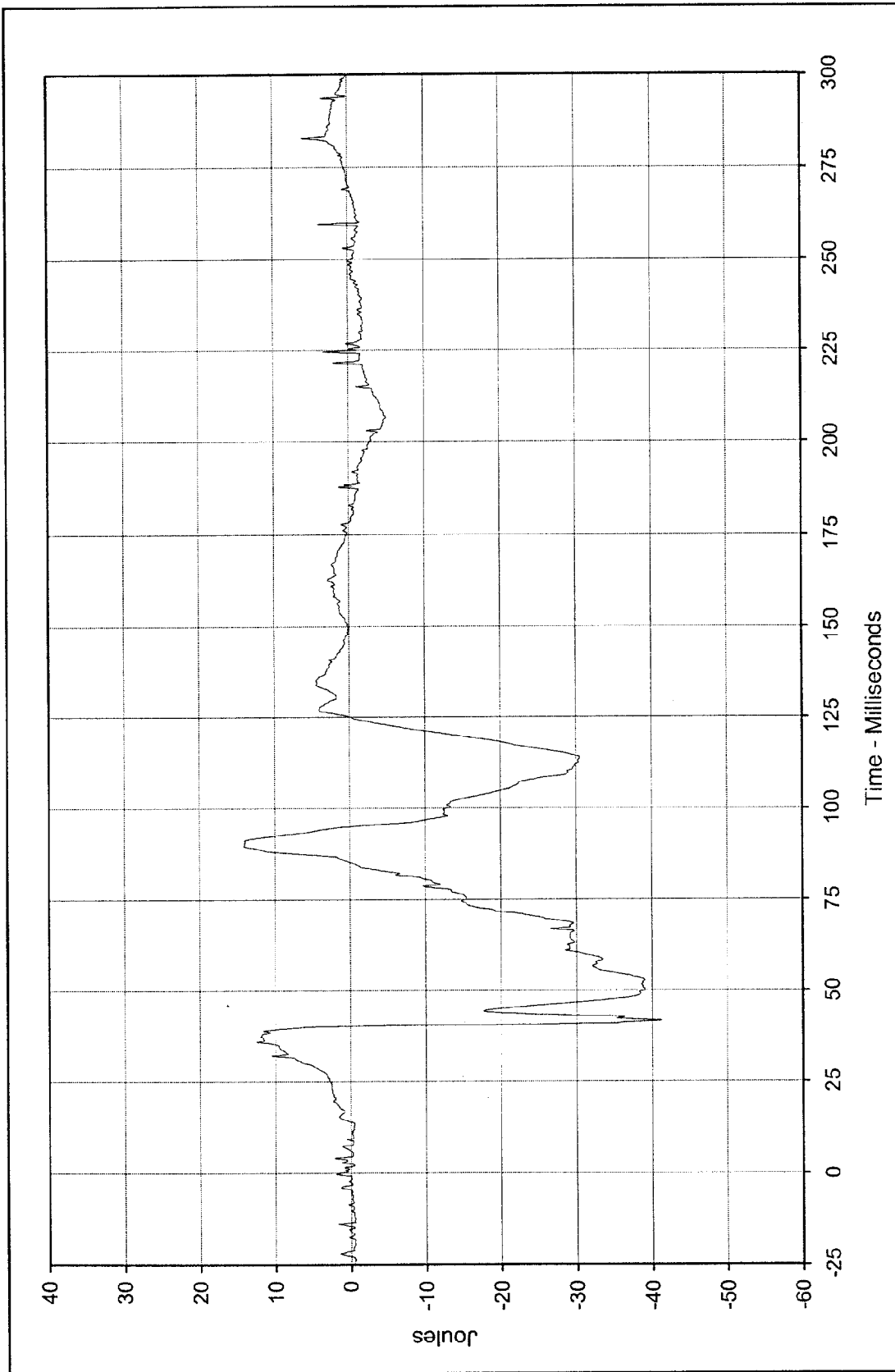




Curve Description: Driver Left Lower Tibia Force Z Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 962.0 at 40.5 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -330.6 at 130.1 Milliseconds

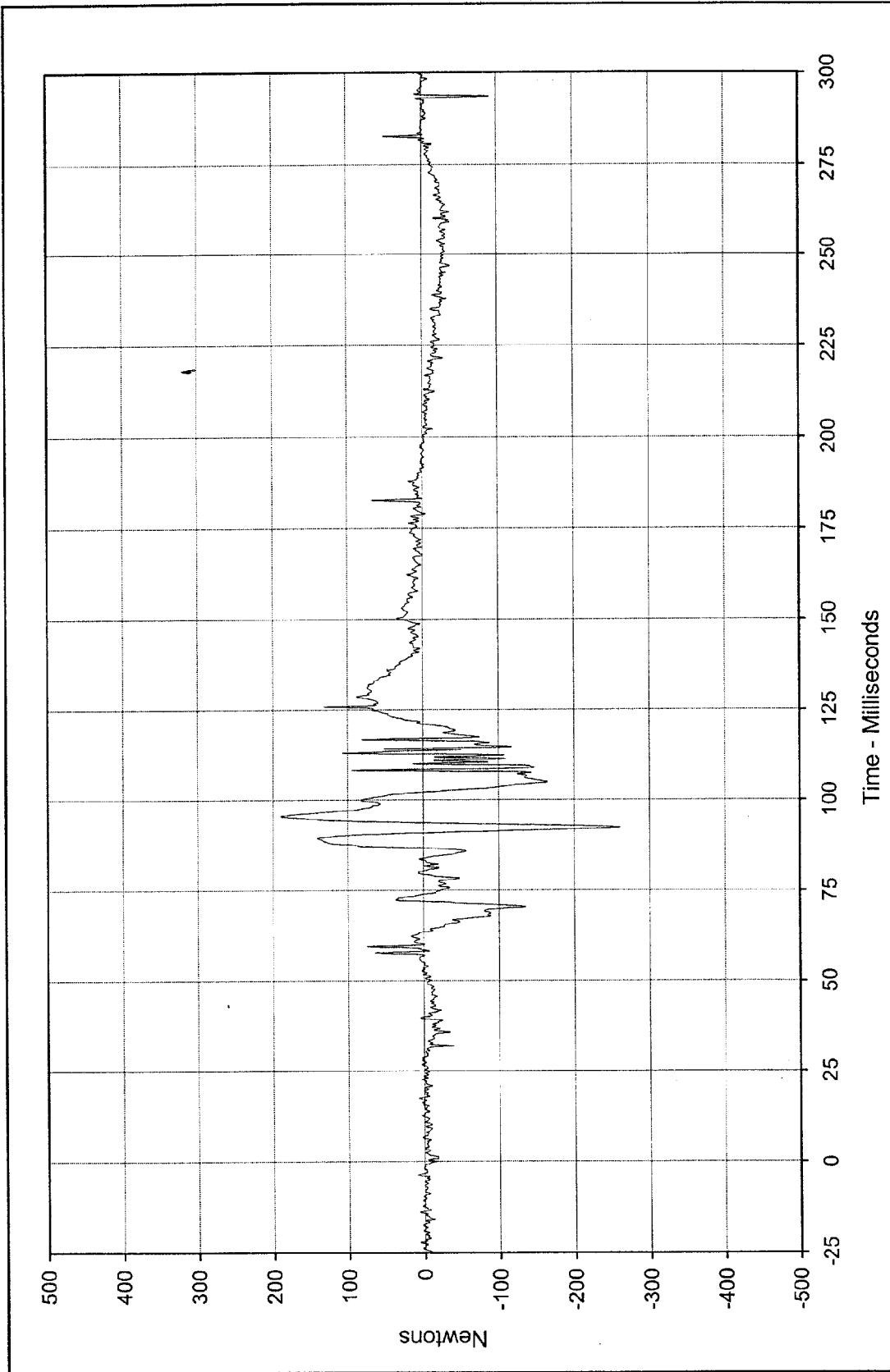


SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-030



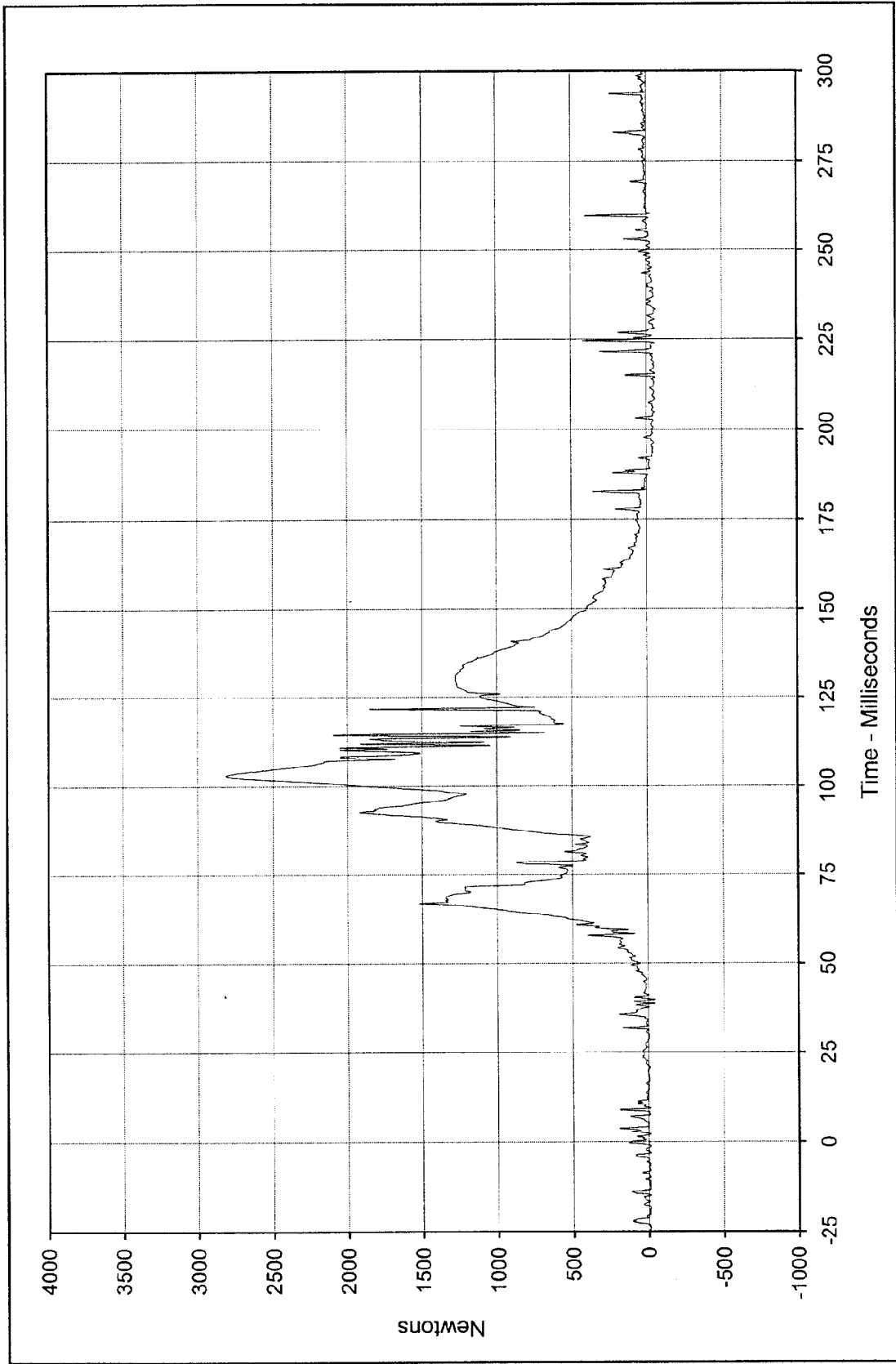
Curve Description: Driver Left Lower Tibia Moment X Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 14.1 at 89.7 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -41.2 at 41.8 Milliseconds
 SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-031





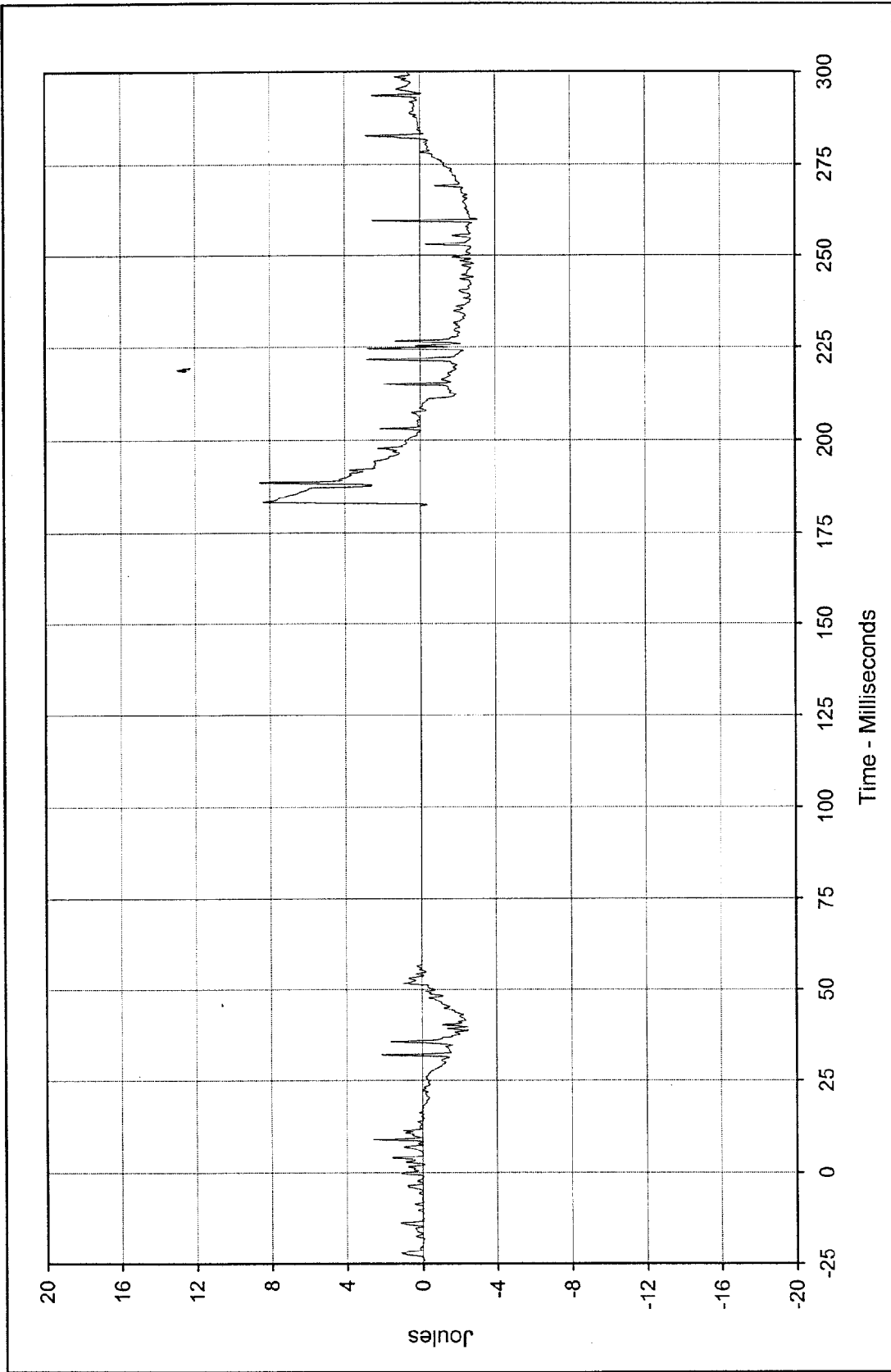
Curve Description: Driver Right Lower Tibia Force Y Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 189.7 at 95.5 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -260.4 at 92.4 Milliseconds
 SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-032





Curve Description: Driver Right Lower Tibia Force Z Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 2810.9 at 103.0 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -65.7 at 233.5 Milliseconds
 SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-033

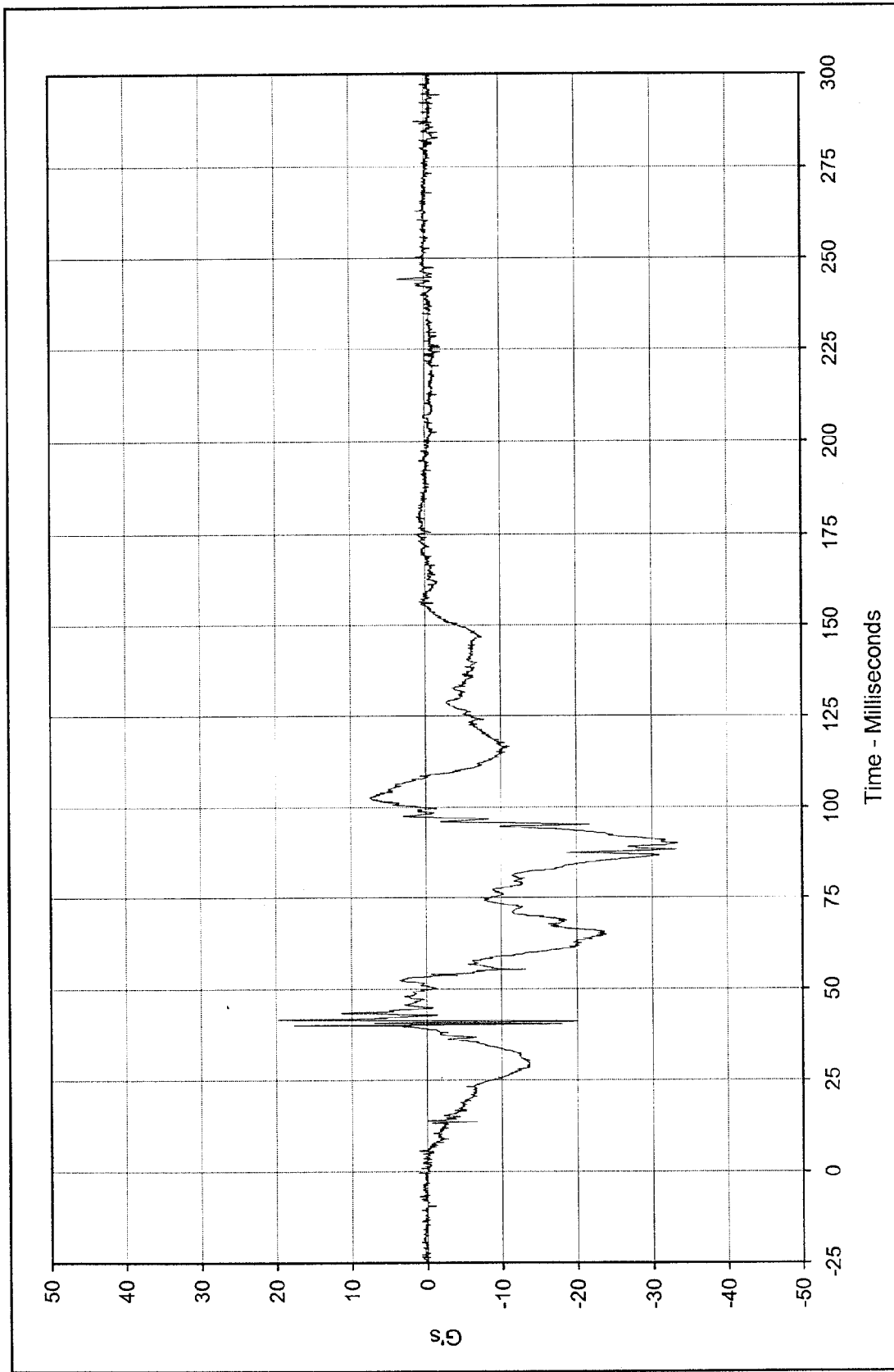




Curve Description: Driver Right Lower Tibia Moment X * Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 8.6 at 188.5 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -3.1 at 260.2 Milliseconds
 SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-034



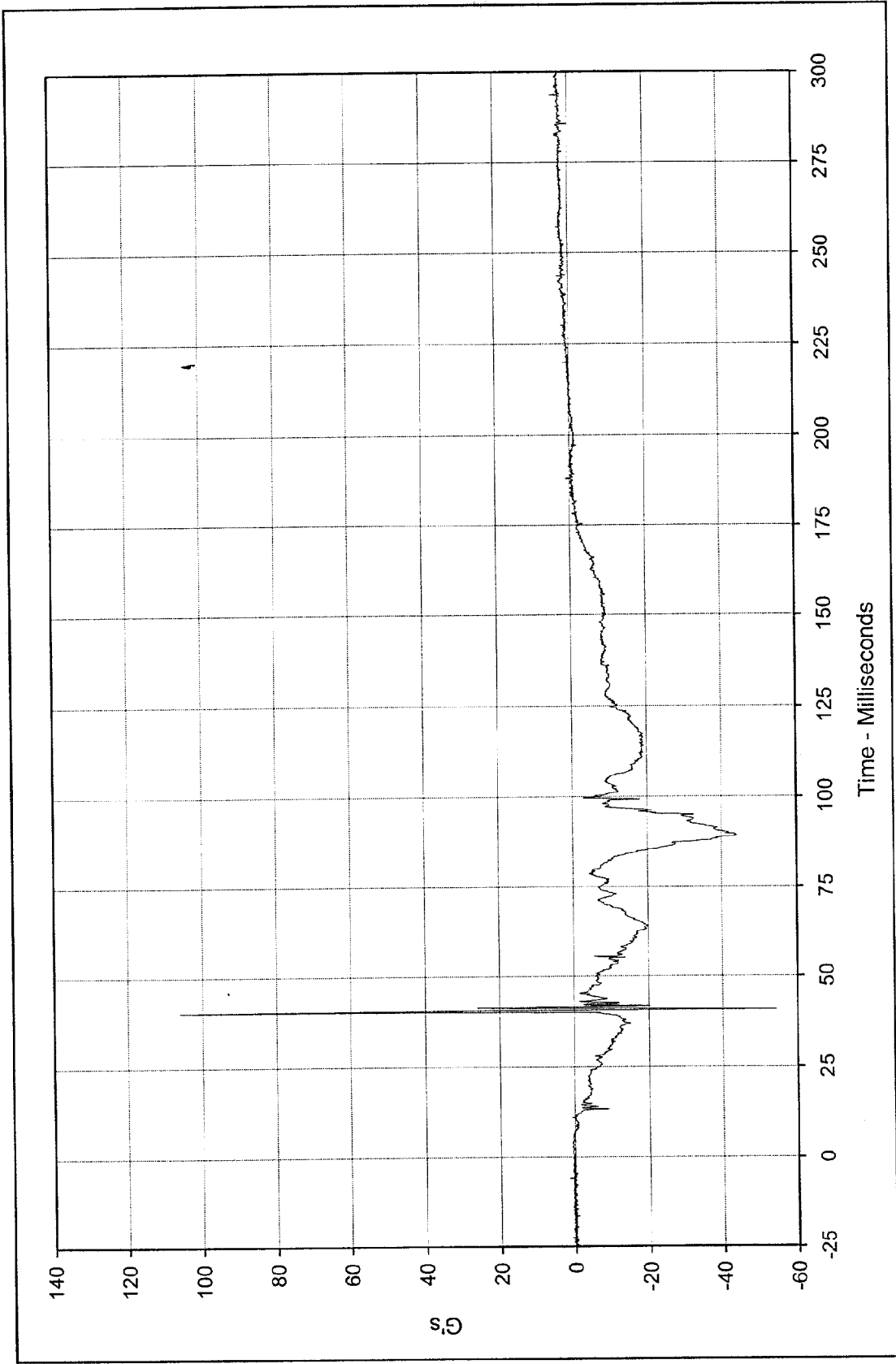
*Channel Failed, 58 to 181 Msec



Curve Description: Driver Left Foot Aft X Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 19.8 at 41.7 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -33.4 at 89.9 Milliseconds



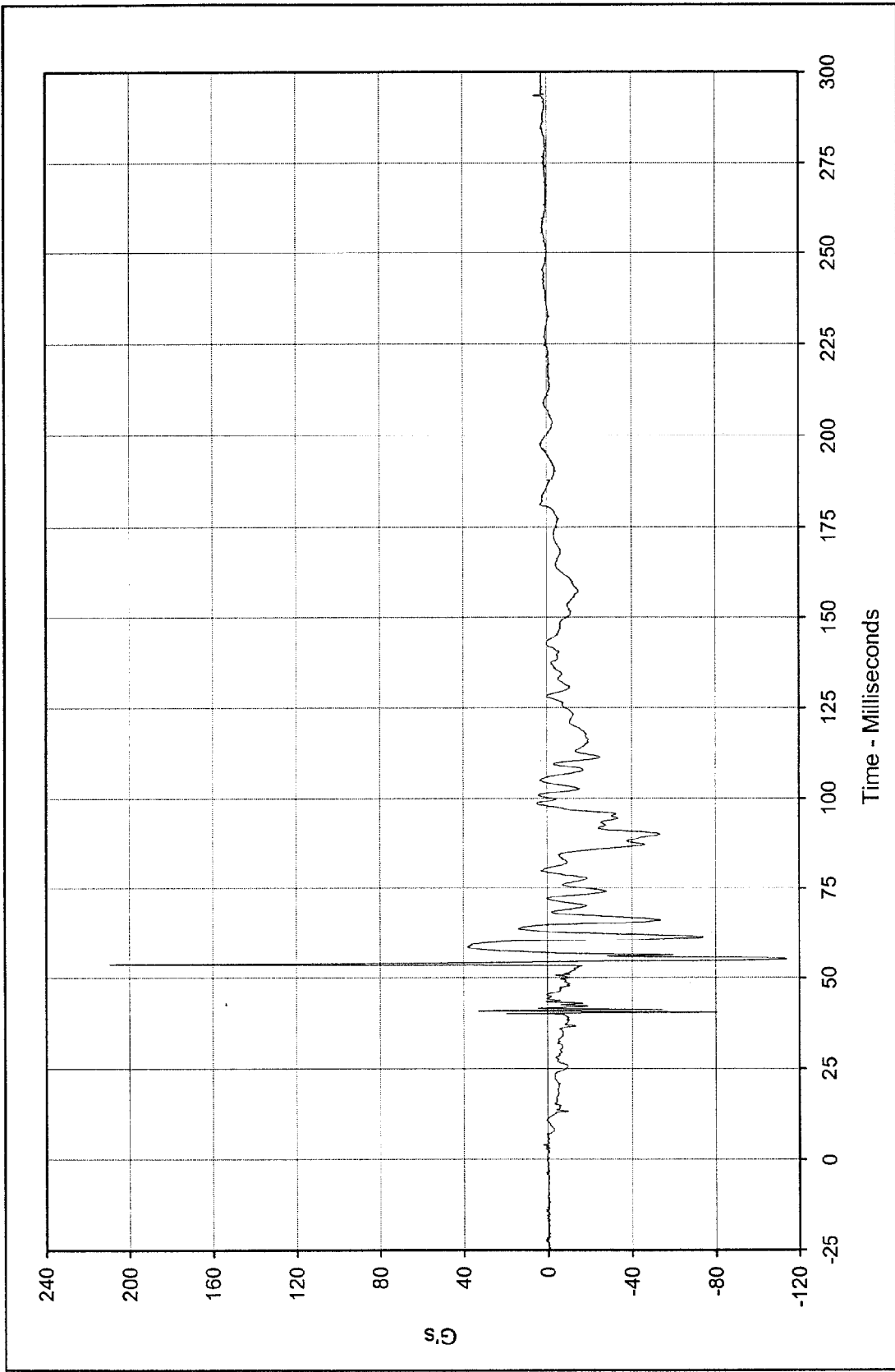
SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-035



Curve Description: Driver Left Foot/Aft Z Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 105.9 at 40.4 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -53.8 at 40.8 Milliseconds

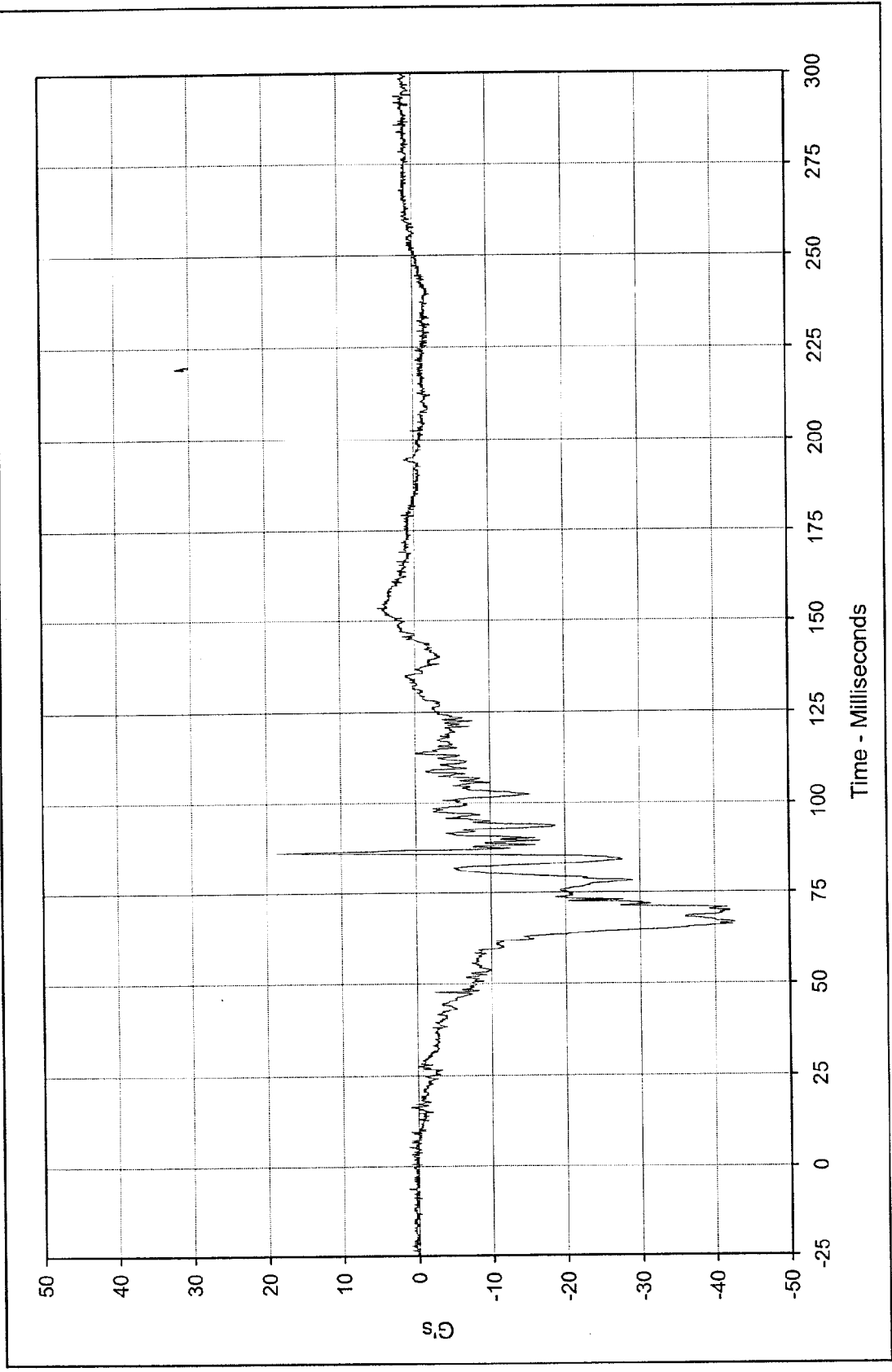


SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-036



Curve Description: Driver Left Foot Fore Z Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 208.8 at 53.8 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -114.0 at 55.1 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-037





Curve Description: Driver Right Foot Aft X Testing Program 1997 NCAP 40% Offset Impact

Maximum Value: 18.7 at 86.1 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan

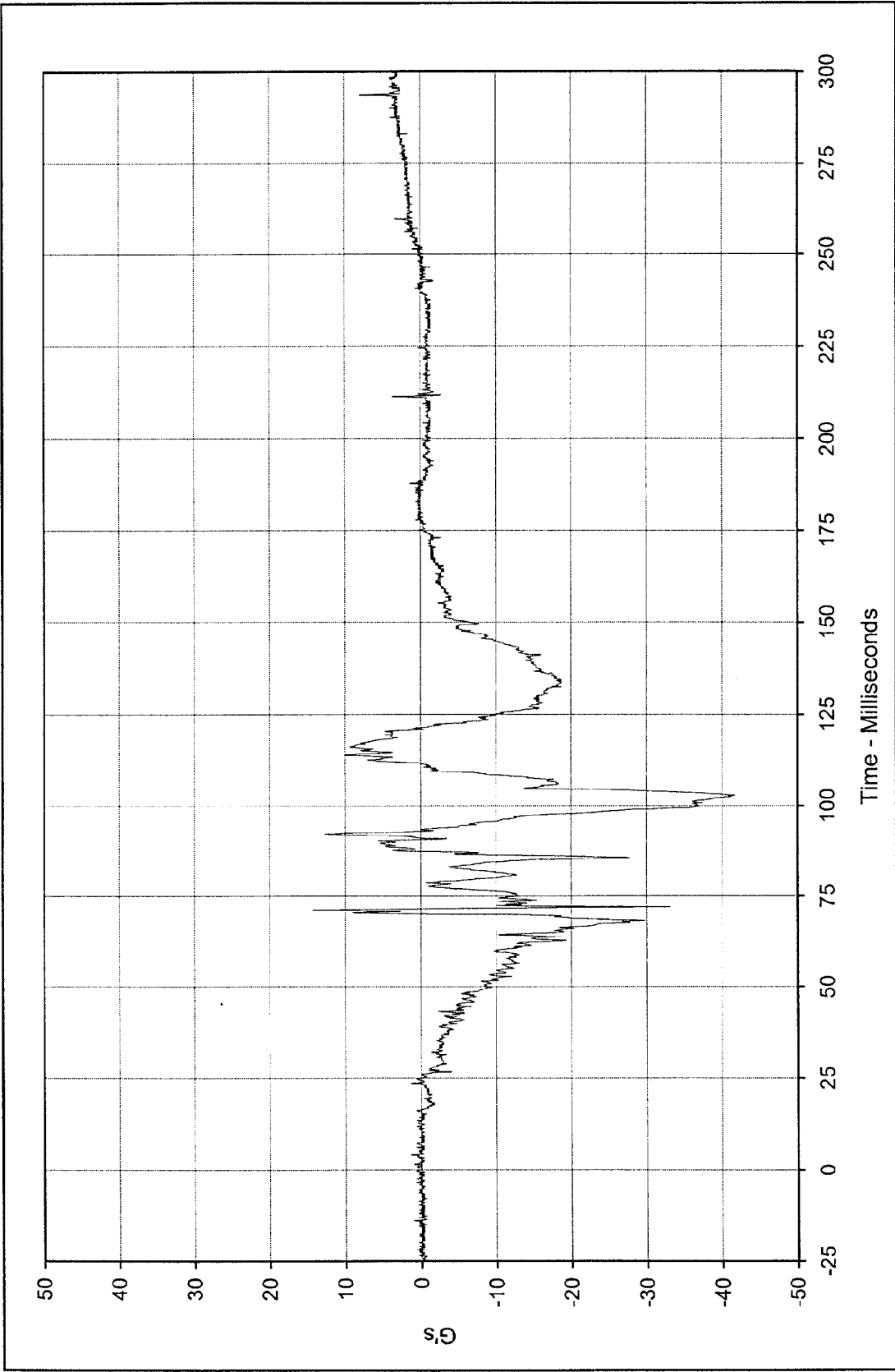
Minimum Value: -42.7 at 66.8 Milliseconds

SAE Filter Class: 1000

Date of Test: 7/17/97

Curve Number: FIL-038





Curve Description: Driver Right Foot Aft Z Testing Program 1997 NCAP 40% Offset Impact

Maximum Value: 14.4 at 71.2 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan

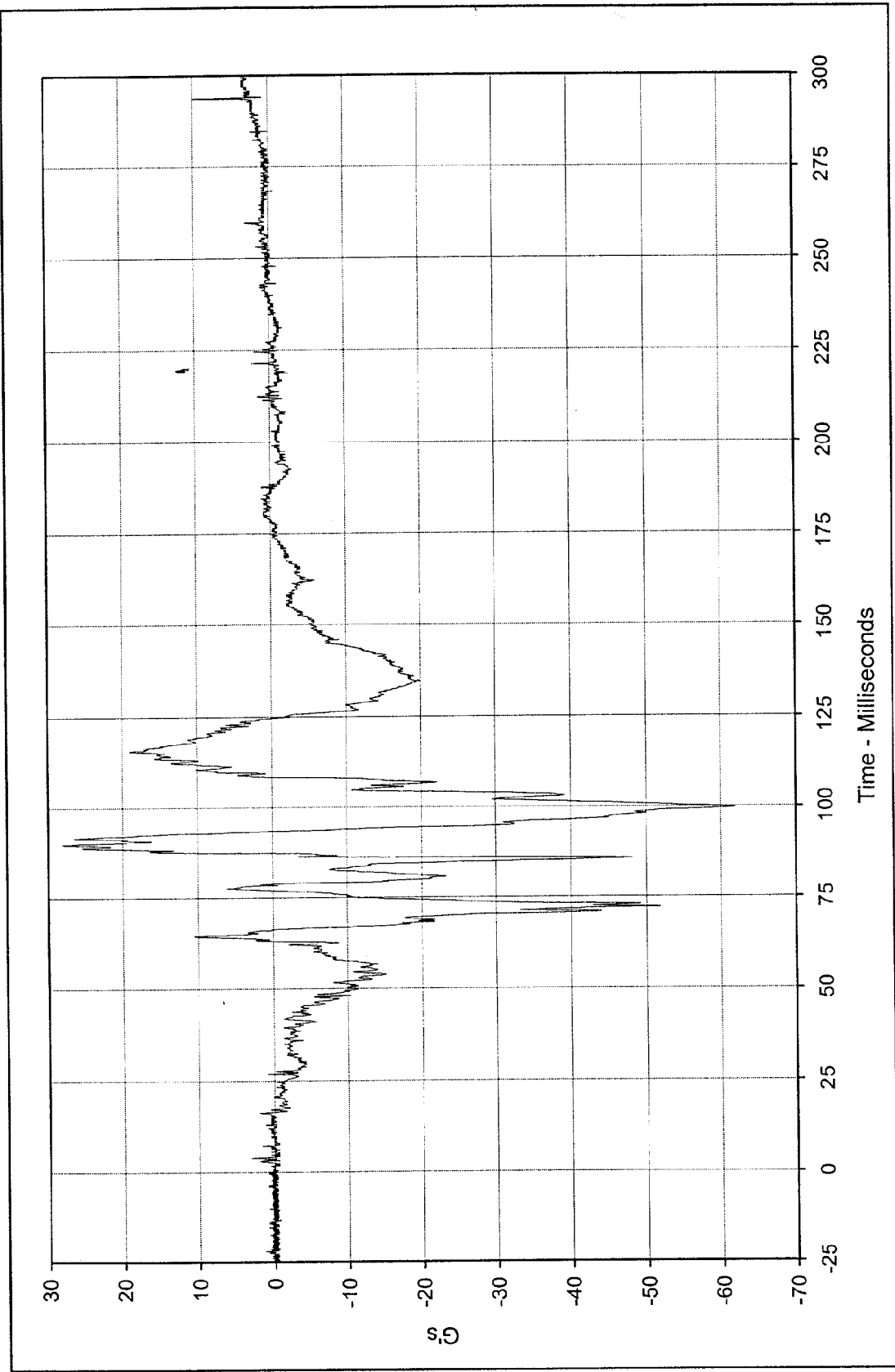
Minimum Value: -41.7 at 102.8 Milliseconds

SAE Filter Class: 1000

Date of Test: 7/17/97

Curve Number: FIL-39

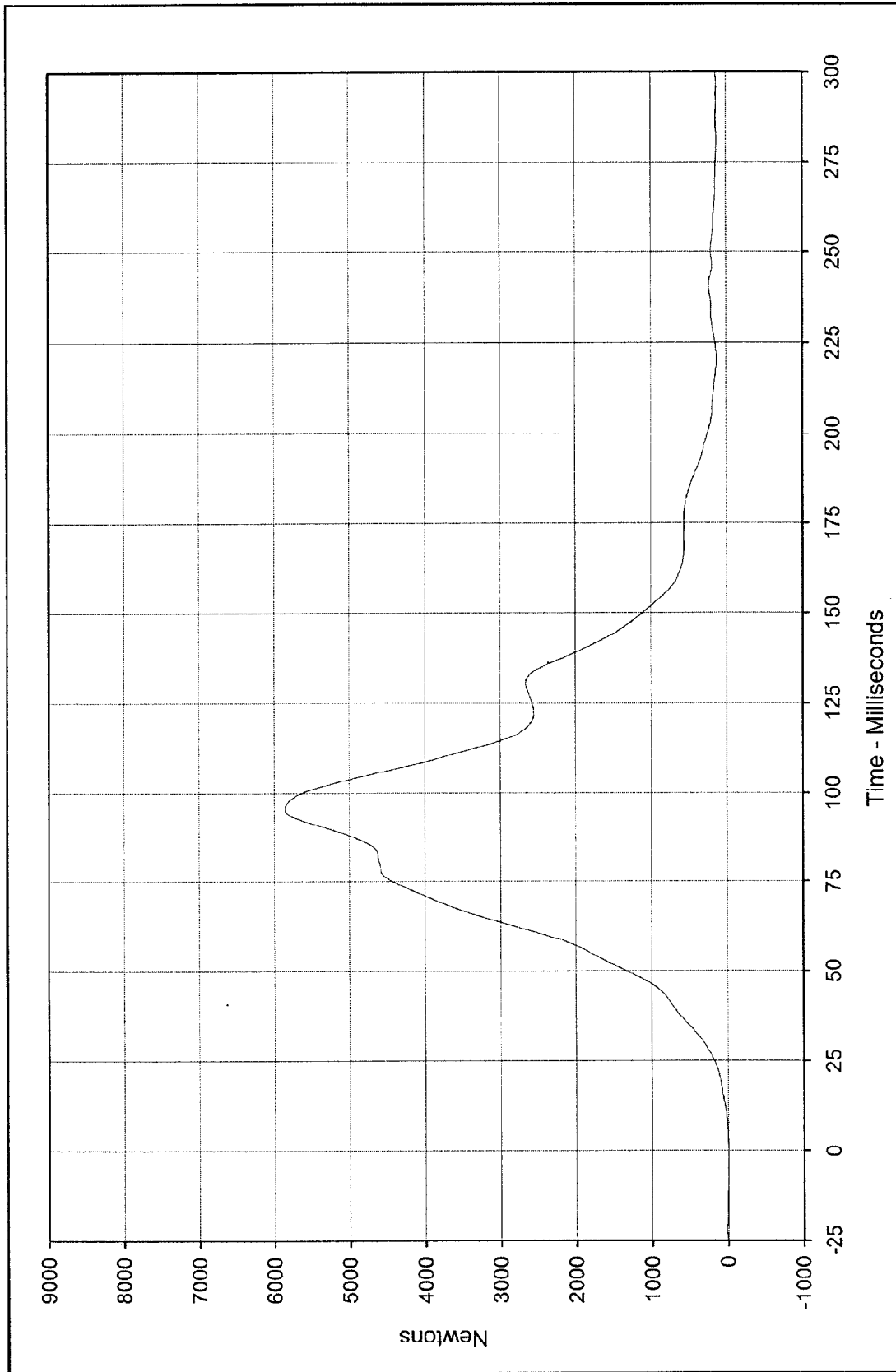




Curve Description: Driver Right Foot Fore Z Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 28.0 at 89.7 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -61.8 at 99.7 Milliseconds

SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-040

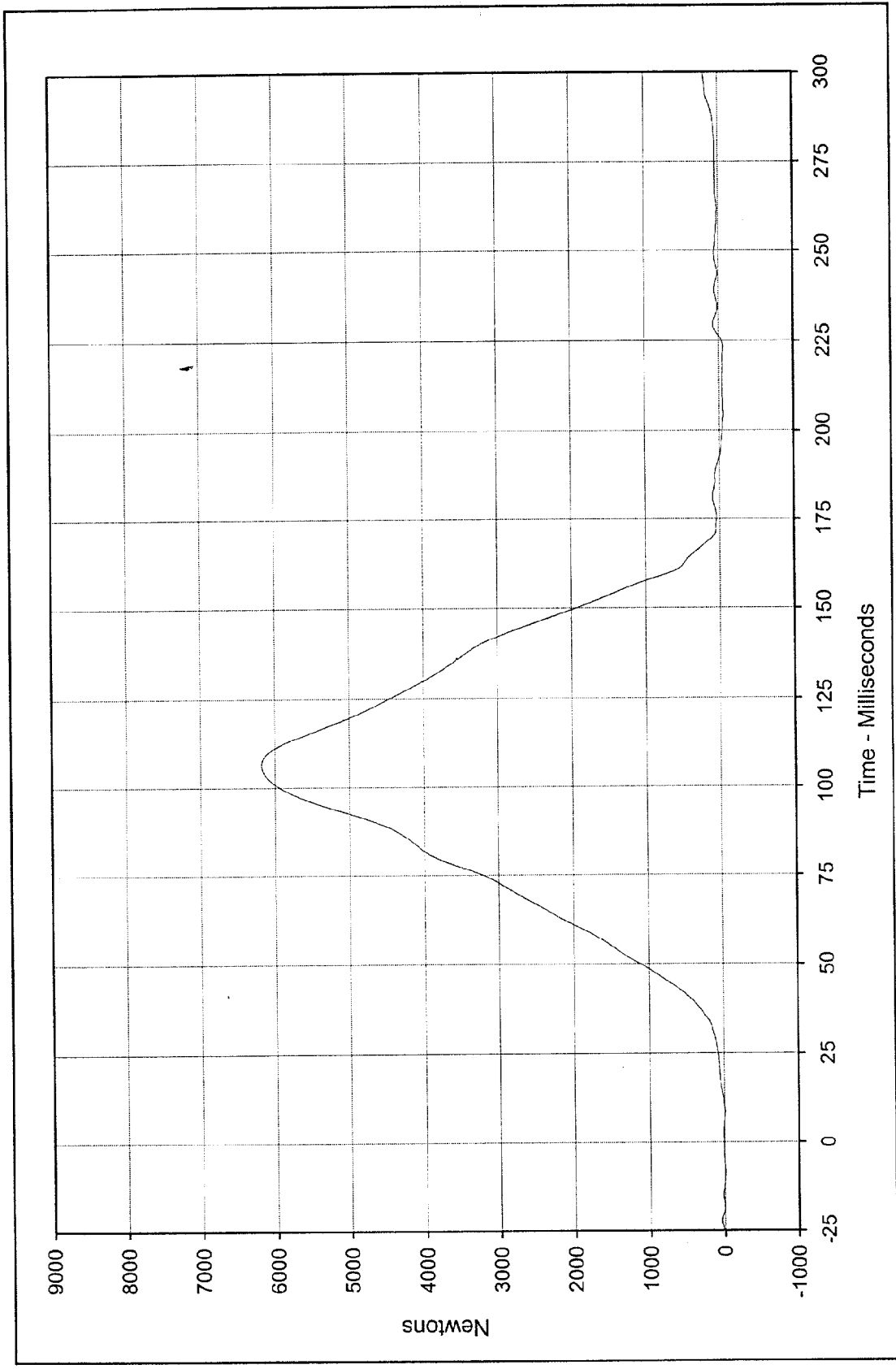




A.

Curve Description:	Driver Lap Belt Force	Testing Program	1997 NCAP 40% Offset Impact
Maximum Value:	5856.4 at 95.6 Milliseconds	Test Vehicle:	1996 Ford Taurus 4 Door Sedan
Minimum Value:	-7.5 at 0.0 Milliseconds		
SAE Filter Class:	60		
Date of Test:	7/17/97		
Curve Number:	FIL-041		

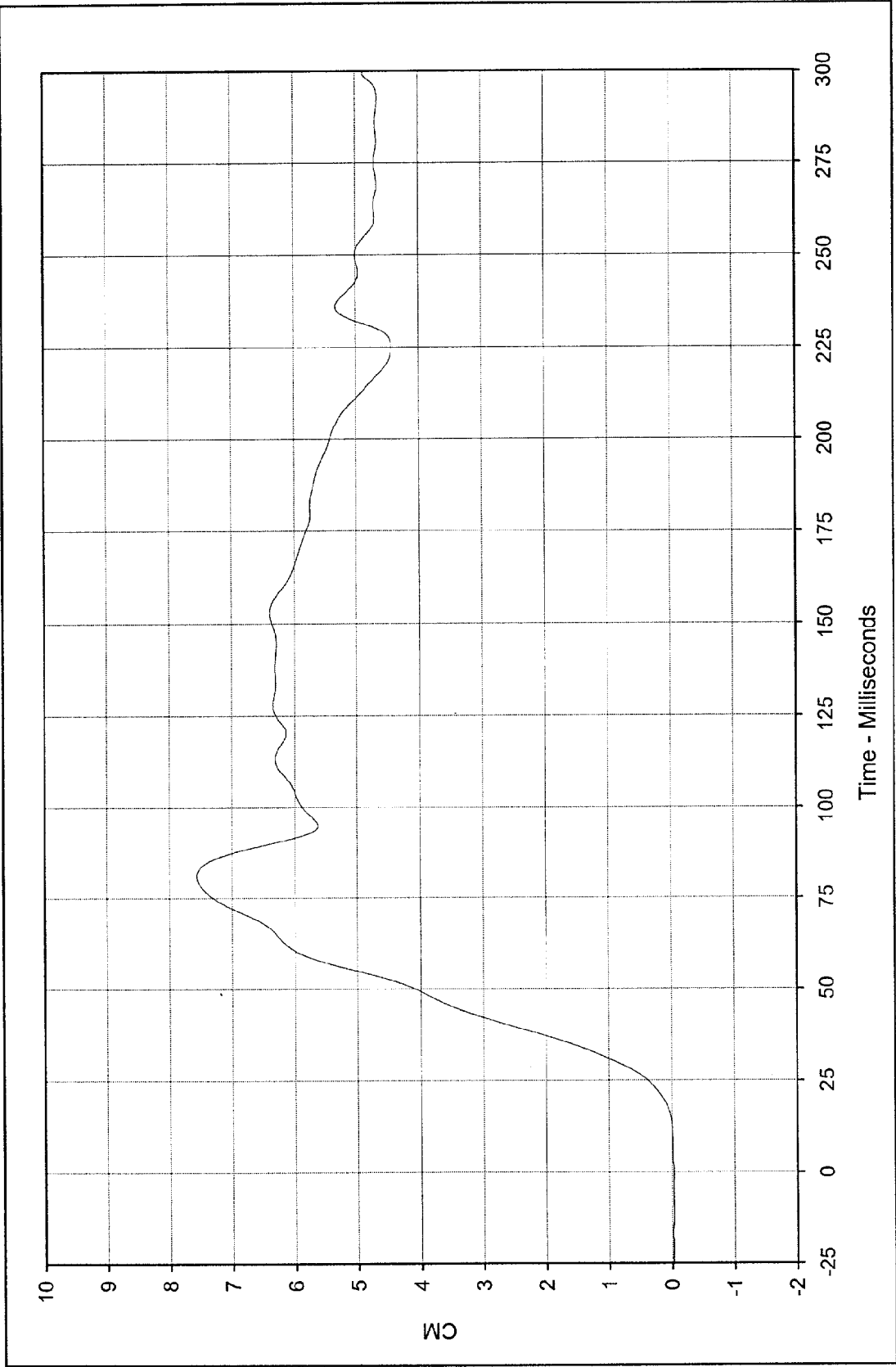




Curve Description: Driver Shoulder Belt Force Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 6180.8 at 106.6 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -59.4 at 204.4 Milliseconds

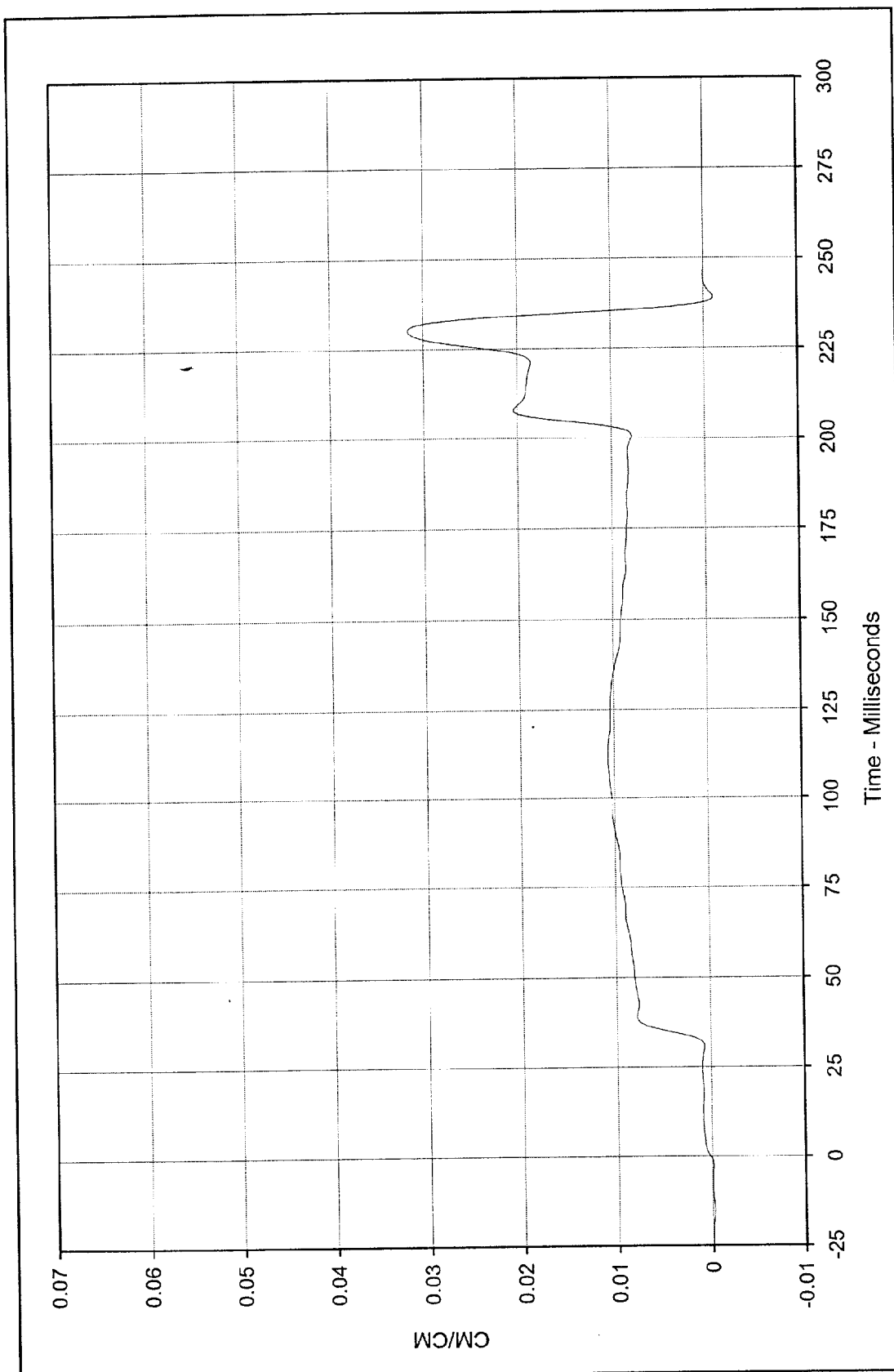
SAE Filter Class: 60
 Date of Test: 7/17/97
 Curve Number: FIL-042





Curve Description: Driver Shoulder Belt Pullout Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 7.56 at 81.1 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -0.03 at 0.2 Milliseconds
 SAE Filter Class: 60
 Date of Test: 7/17/97
 Curve Number: FIL-043

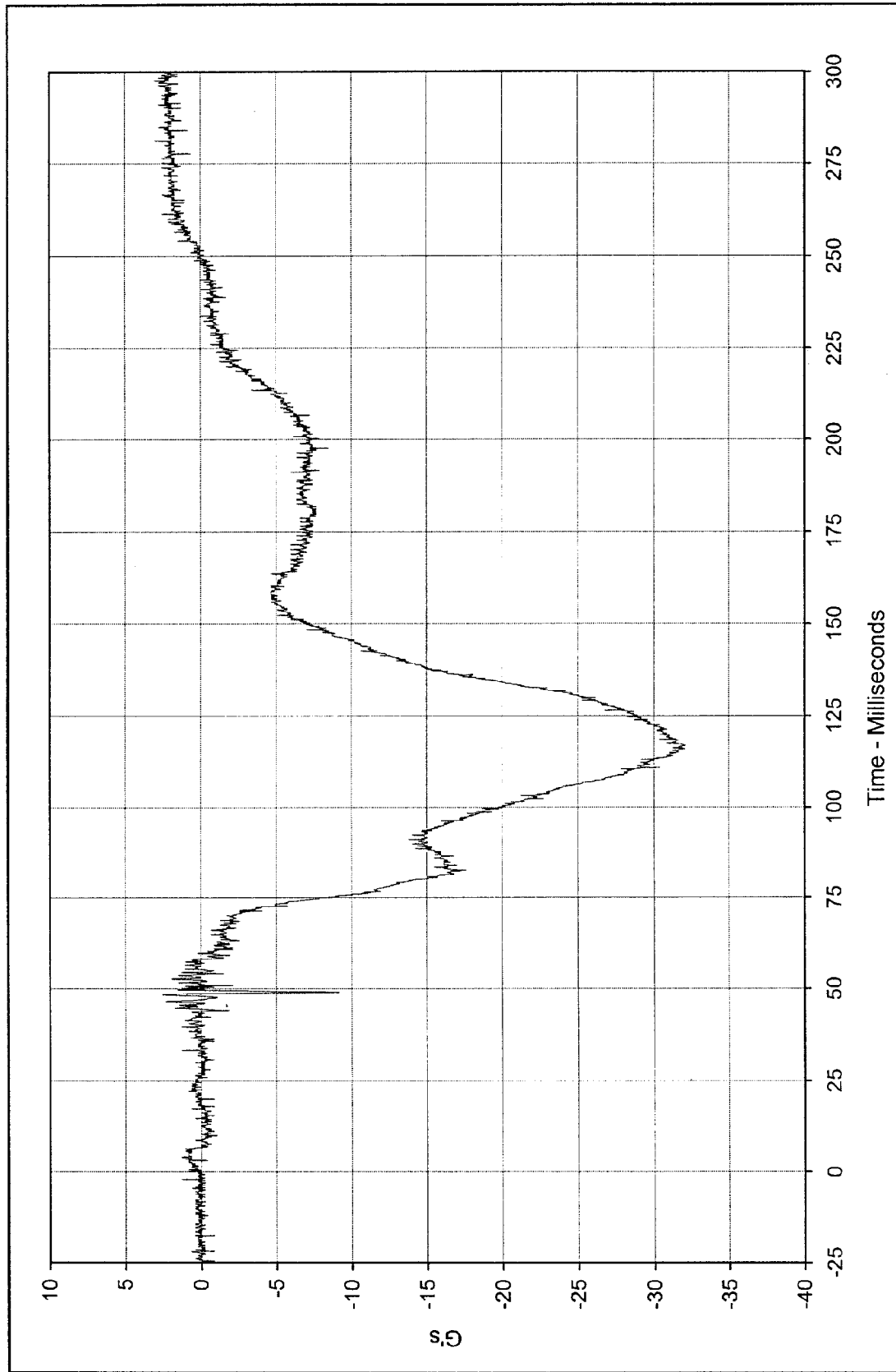




Testing Program: 1997 NCAP 40% Offset Impact
 Test Vehicle: 1996 Ford Taurus 4 Door Sedan

Curve Description: Driver Shoulder Belt Elongation
 Maximum Value: 0.032 at 230.4 Milliseconds
 Minimum Value: -0.001 at 239.3 Milliseconds
 SAE Filter Class: 60
 Date of Test: 7/17/97
 Curve Number: FIL-044

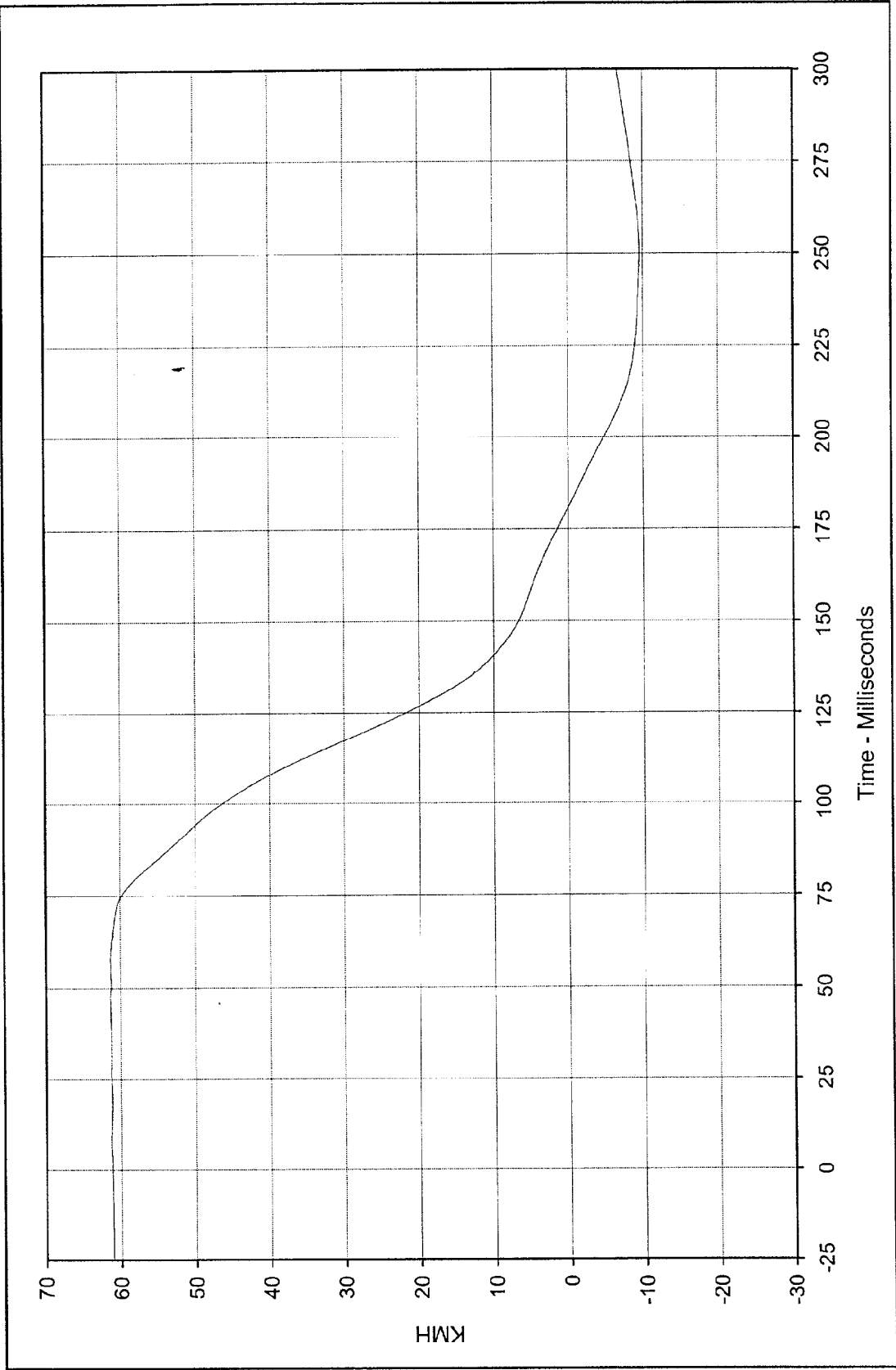




Curve Description: Passenger Head Primary X Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 3.0 at 281.2 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -32.1 at 115.8 Milliseconds



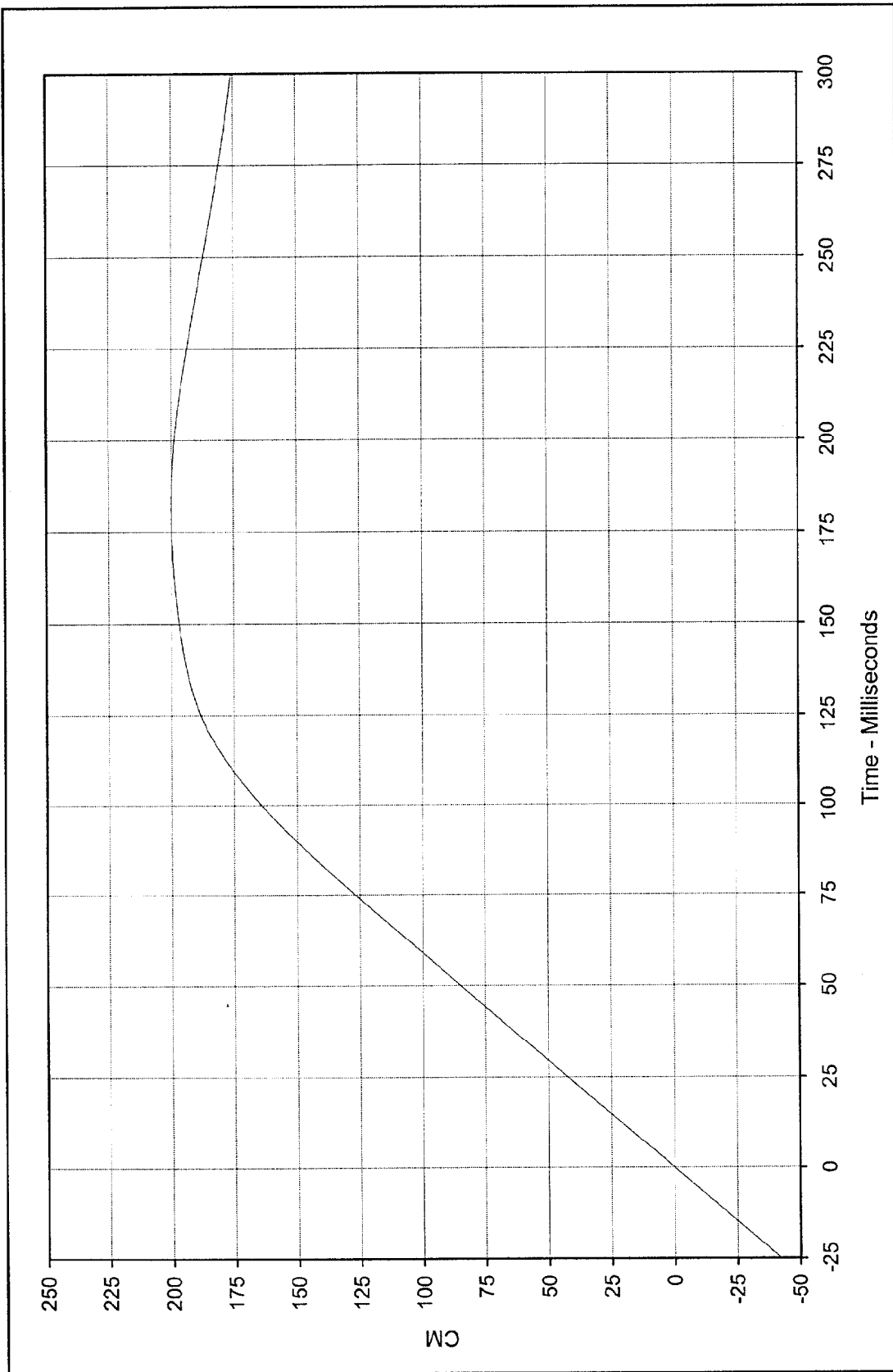
SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-045



Curve Description: Passenger Head Primary X Velocity
 Maximum Value: 61.4 at 47.6 Milliseconds
 Minimum Value: -9.6 at 249.7 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN1-045

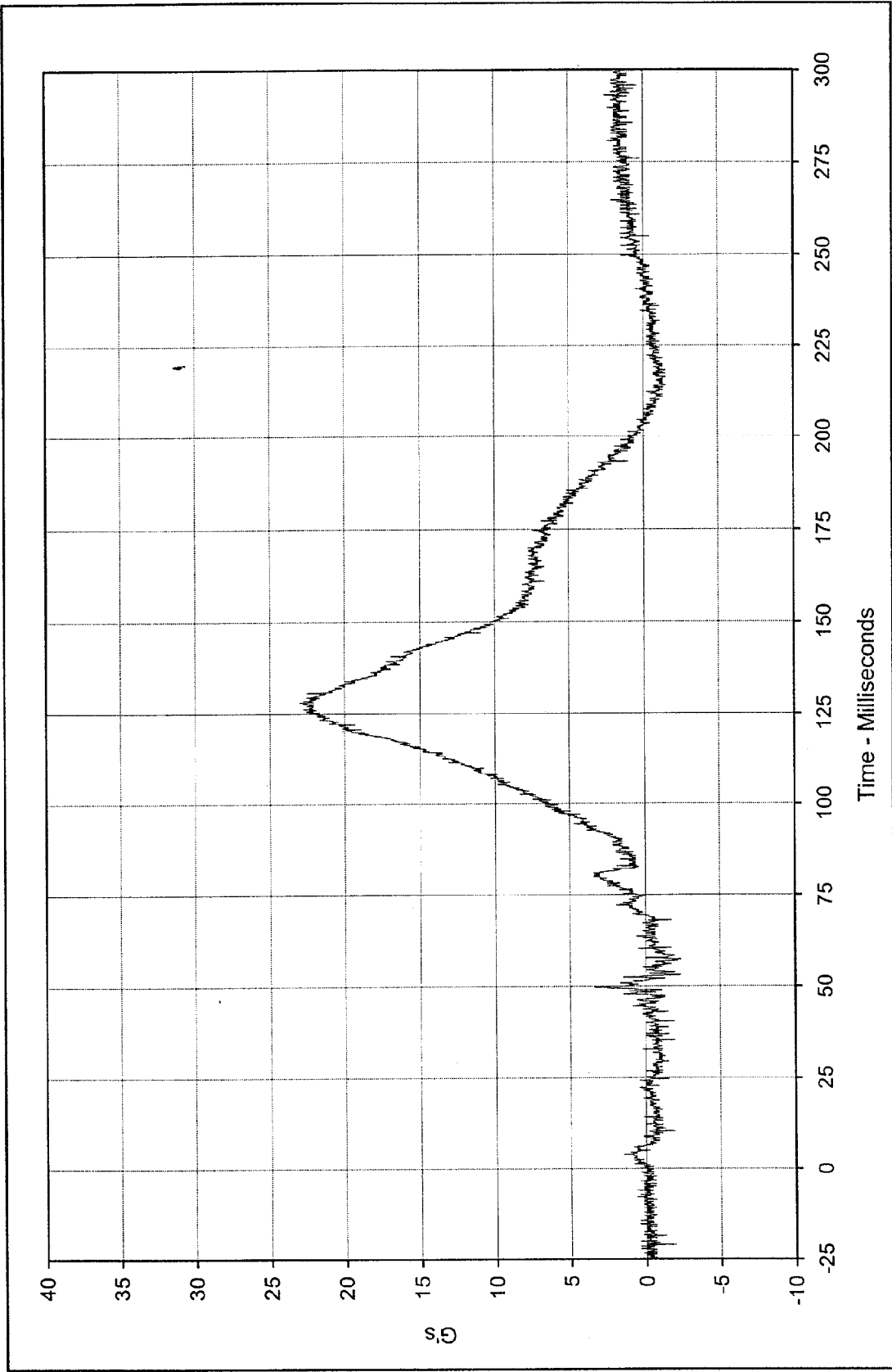
Testing Program: 1997 NCAP 40% Offset Impact
 Test Vehicle: 1996 Ford Taurus 4 Door Sedan





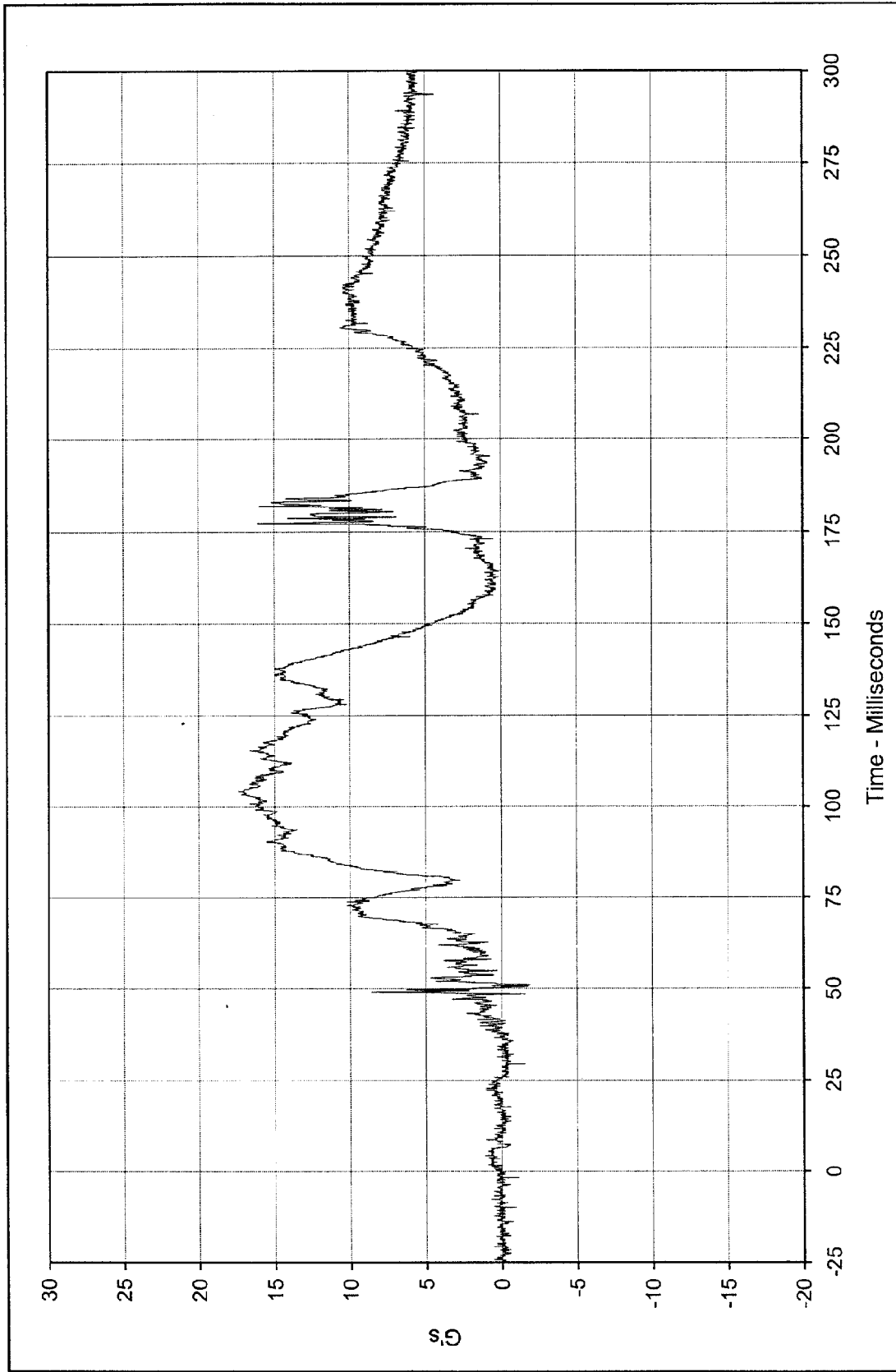
Curve Description: Passenger Head Primary X Displ. Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 200.0 at 180.7 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.1 at 0.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN2-045





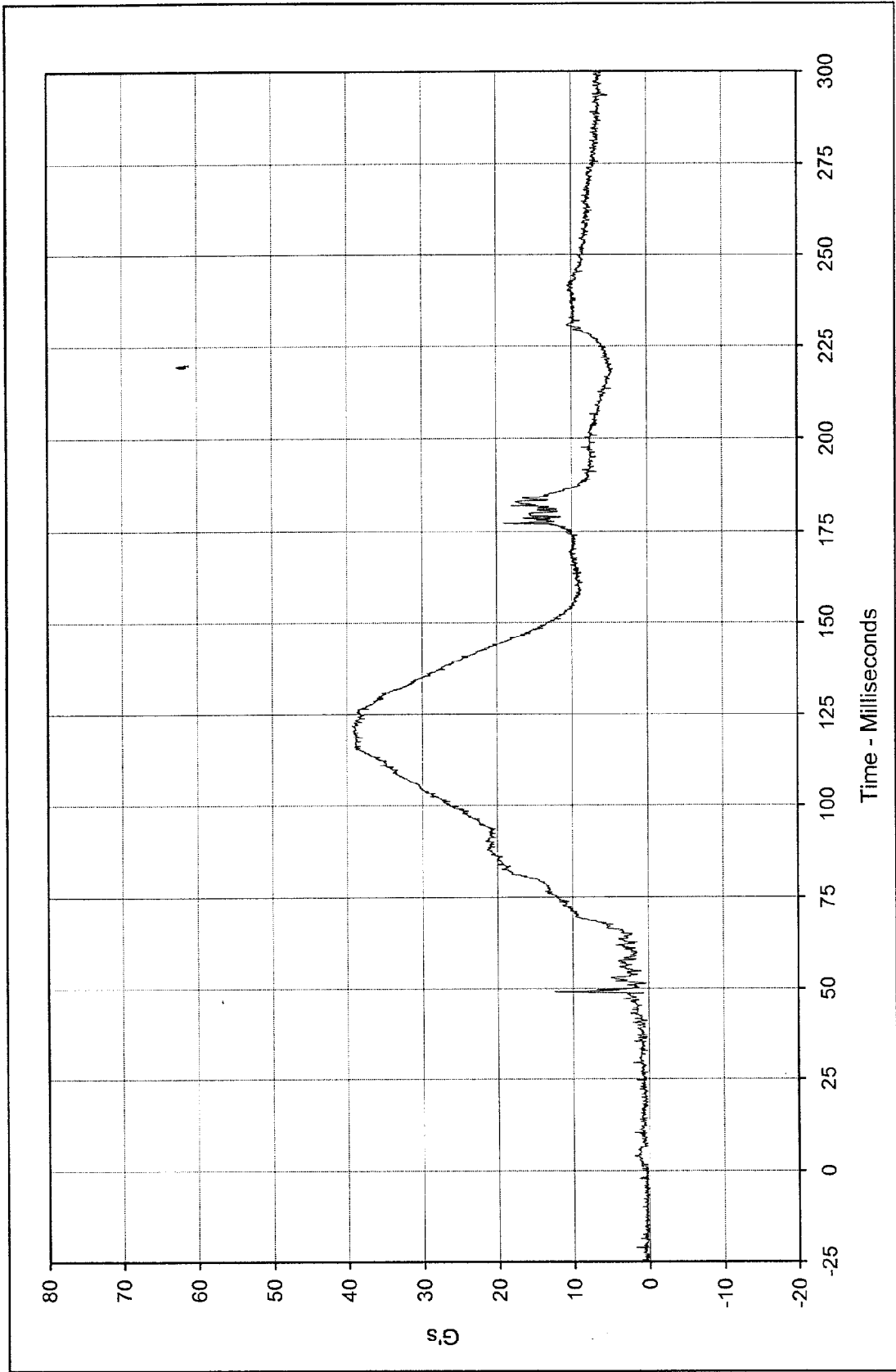
Curve Description: Passenger Head Primary Y Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 23.0 at 128.1 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -2.4 at 53.1 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-046





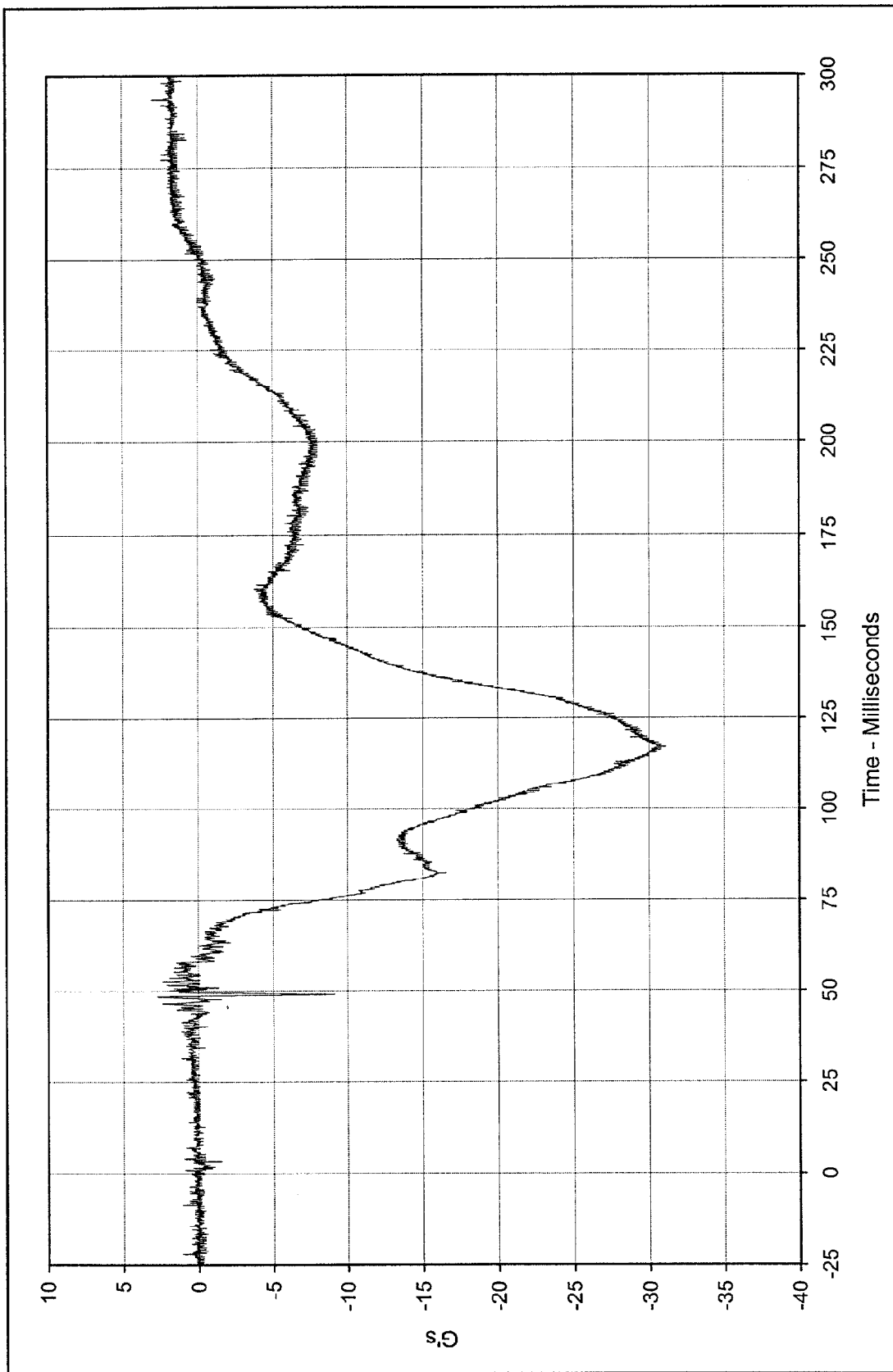
Curve Description: Passenger Head Primary Z Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 17.4 at 104.3 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -1.9 at 51.0 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-047





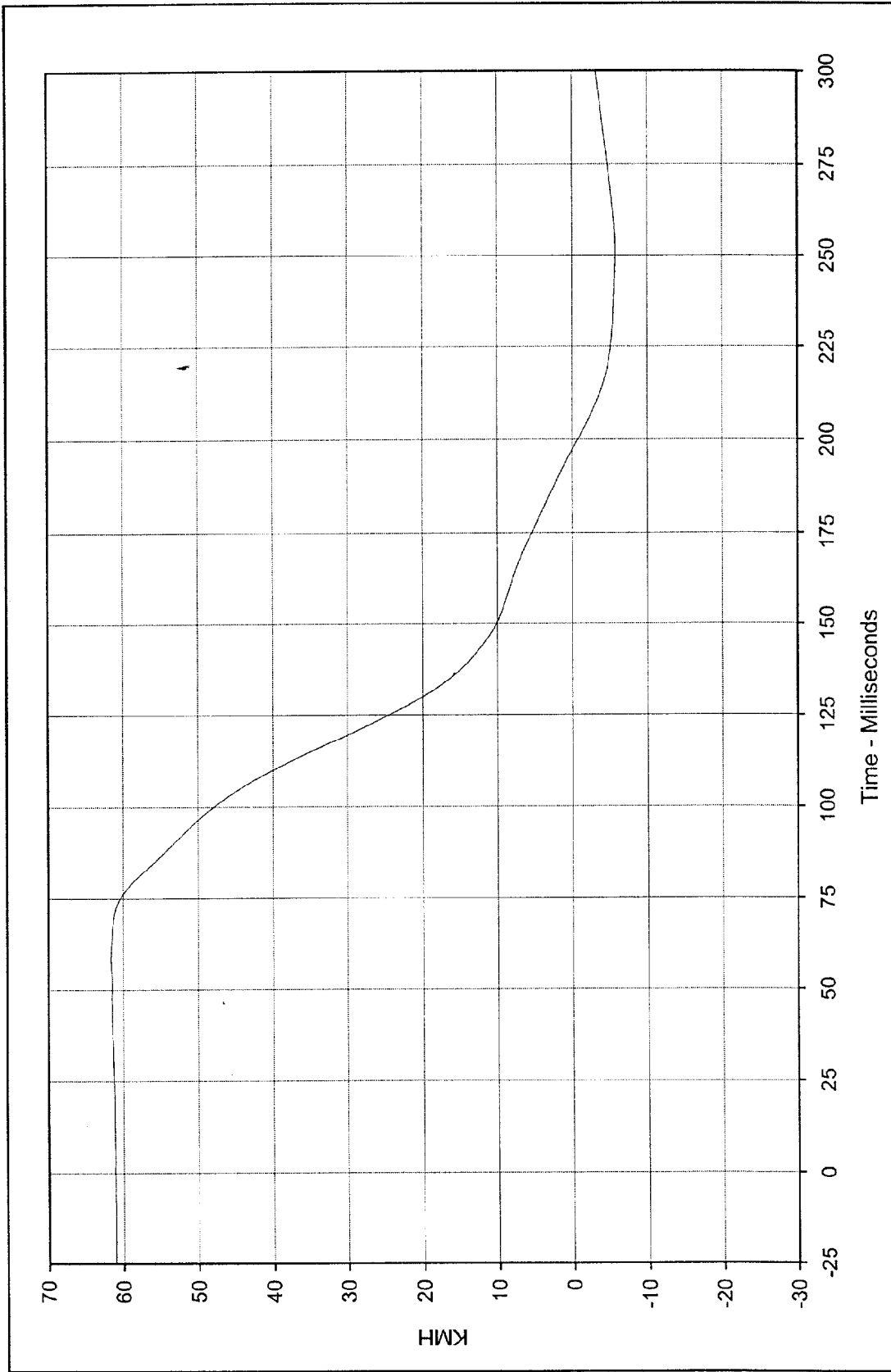
Curve Description: Passenger Head Resultant Primary Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 39.4 at 121.8 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.2 at 6.6 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: RES-045





Curve Description: Passenger Head Redundant X Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 3.1 at 293.7 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -31.1 at 116.8 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-048





Curve Description: Passenger Head Redundant X Velocity

Maximum Value: 61.6 at 58.3 Milliseconds

Minimum Value: -5.7 at 251.1 Milliseconds

SAE Filter Class: 180

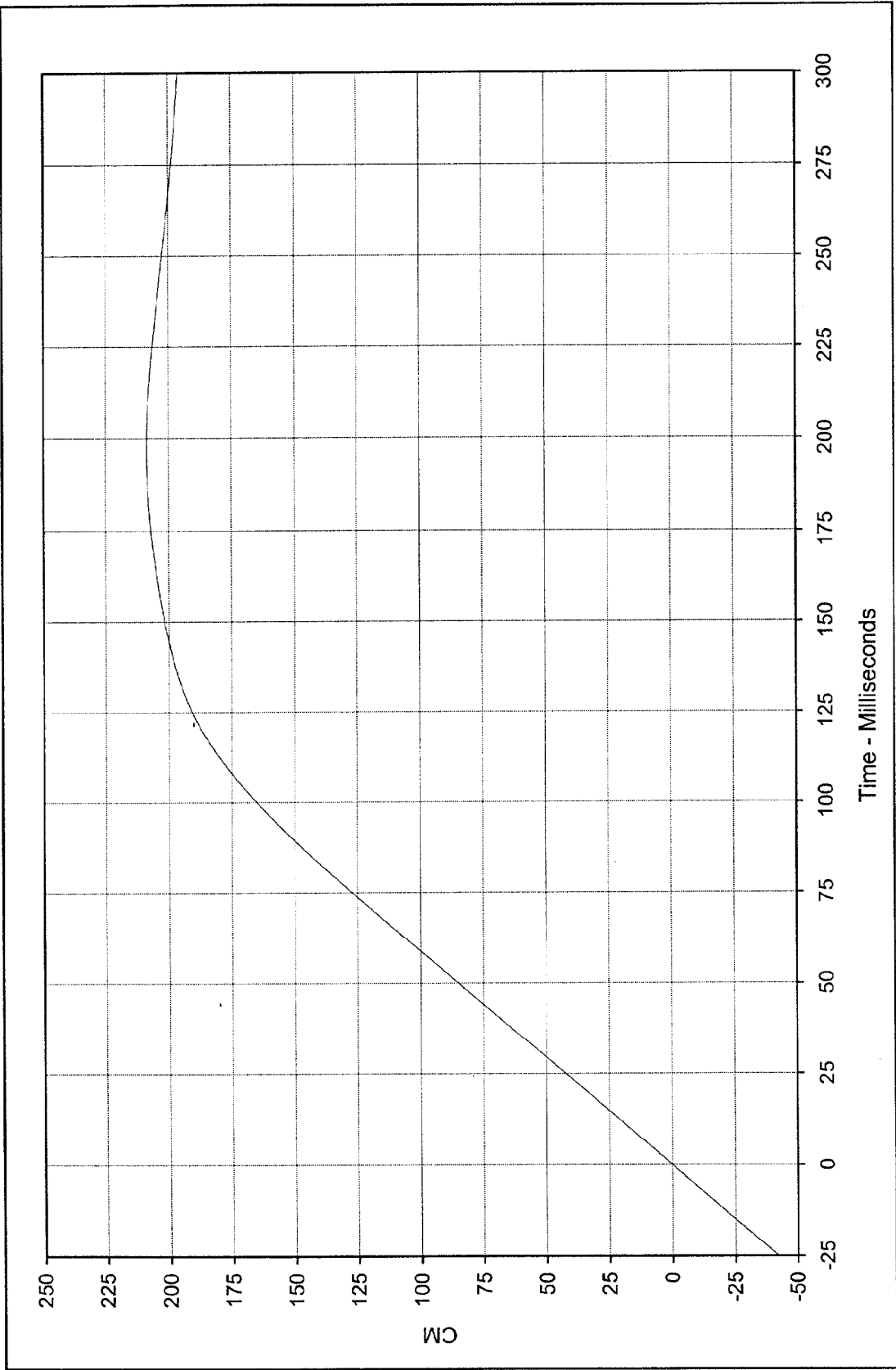
Date of Test: 7/17/97

Curve Number: IN1-048

Testing Program: 1997 NCAP 40% Offset Impact

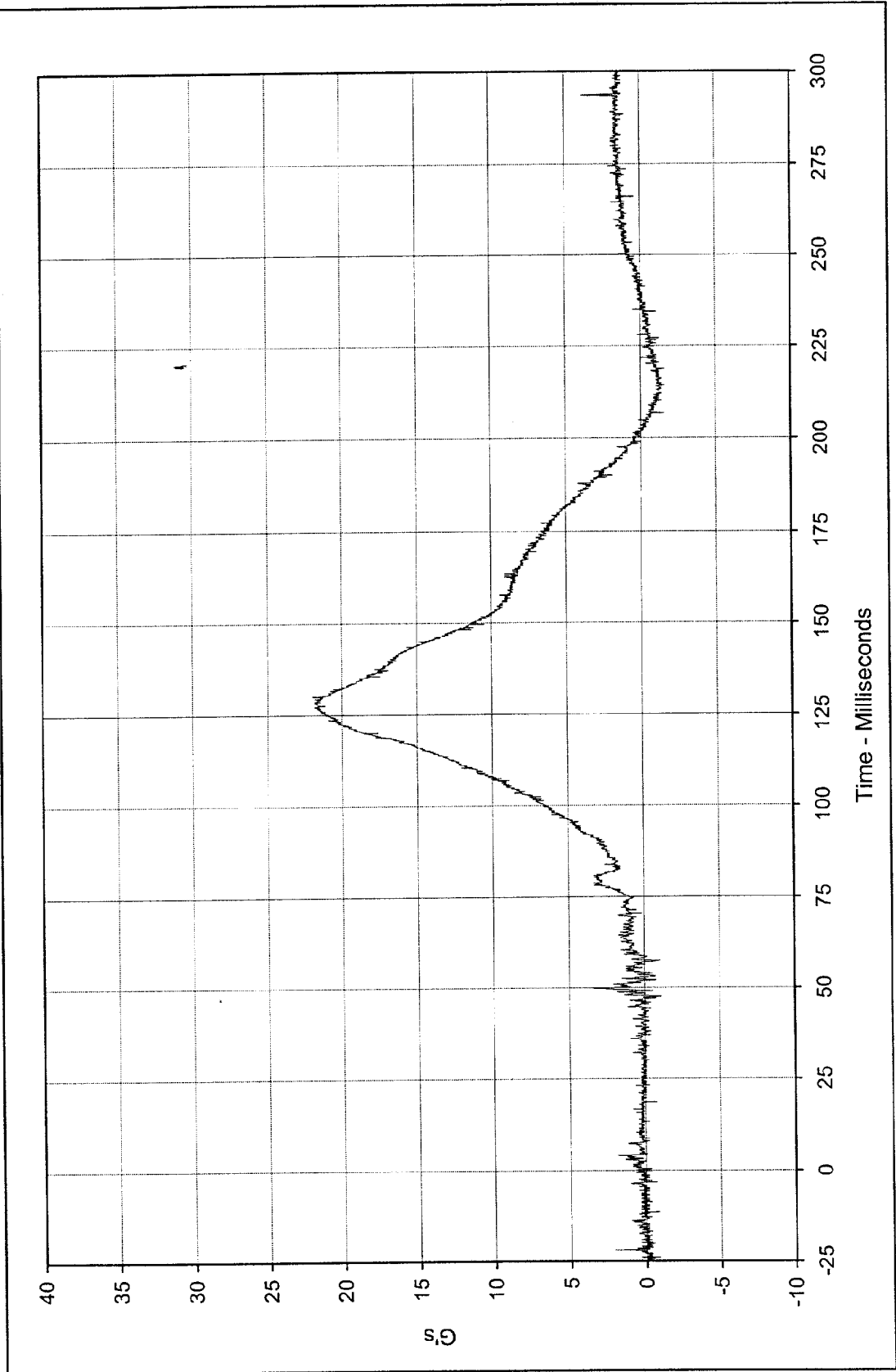
Test Vehicle: 1996 Ford Taurus 4 Door Sedan





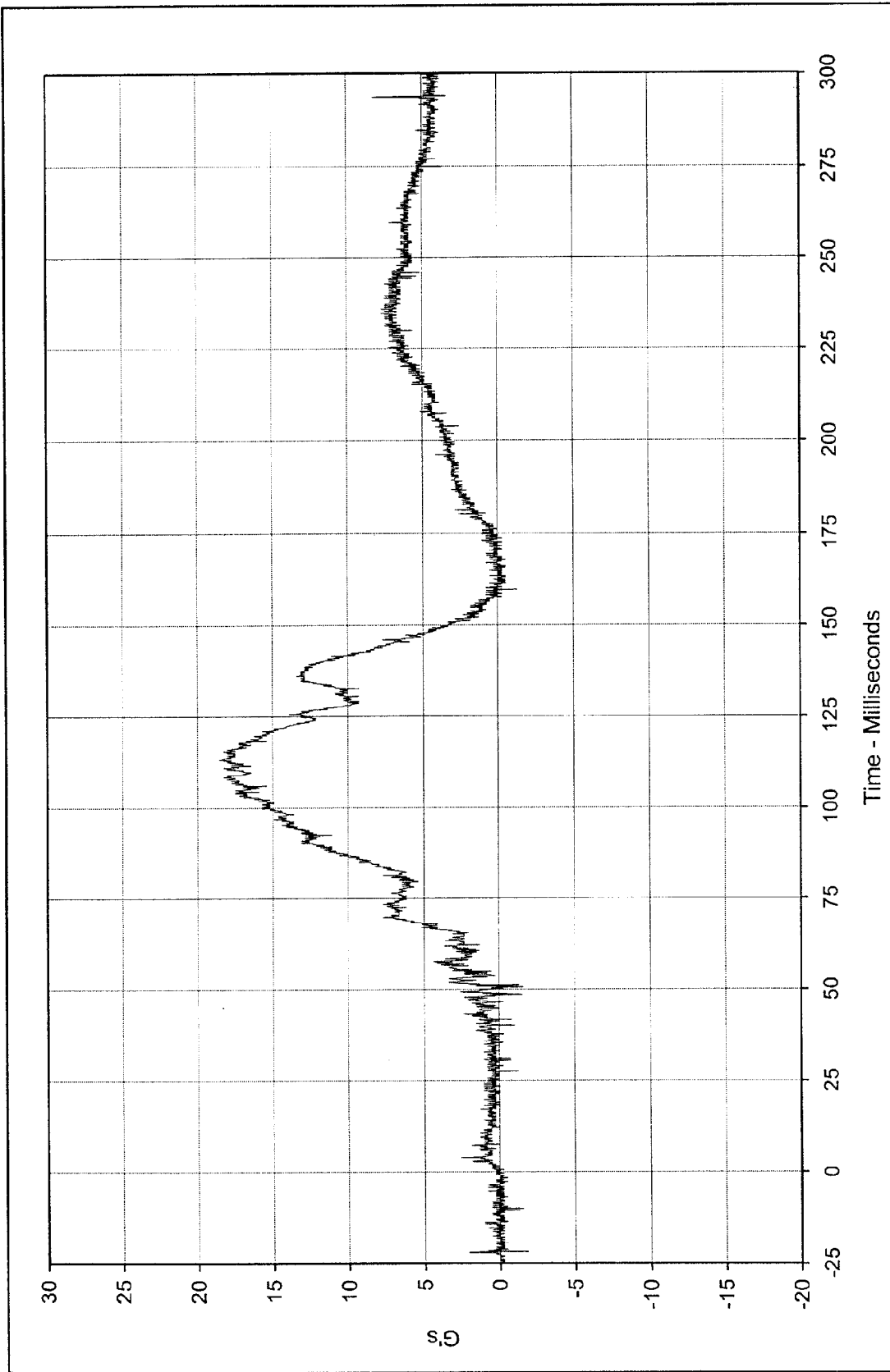
Curve Description: Passenger Head Redundant X Displ. Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 208.8 at 197.2 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.1 at 0.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN2-048





Curve Description: Passenger Head Redundant Y Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 22.0 at 130.0 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -1.6 at 206.9 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-049

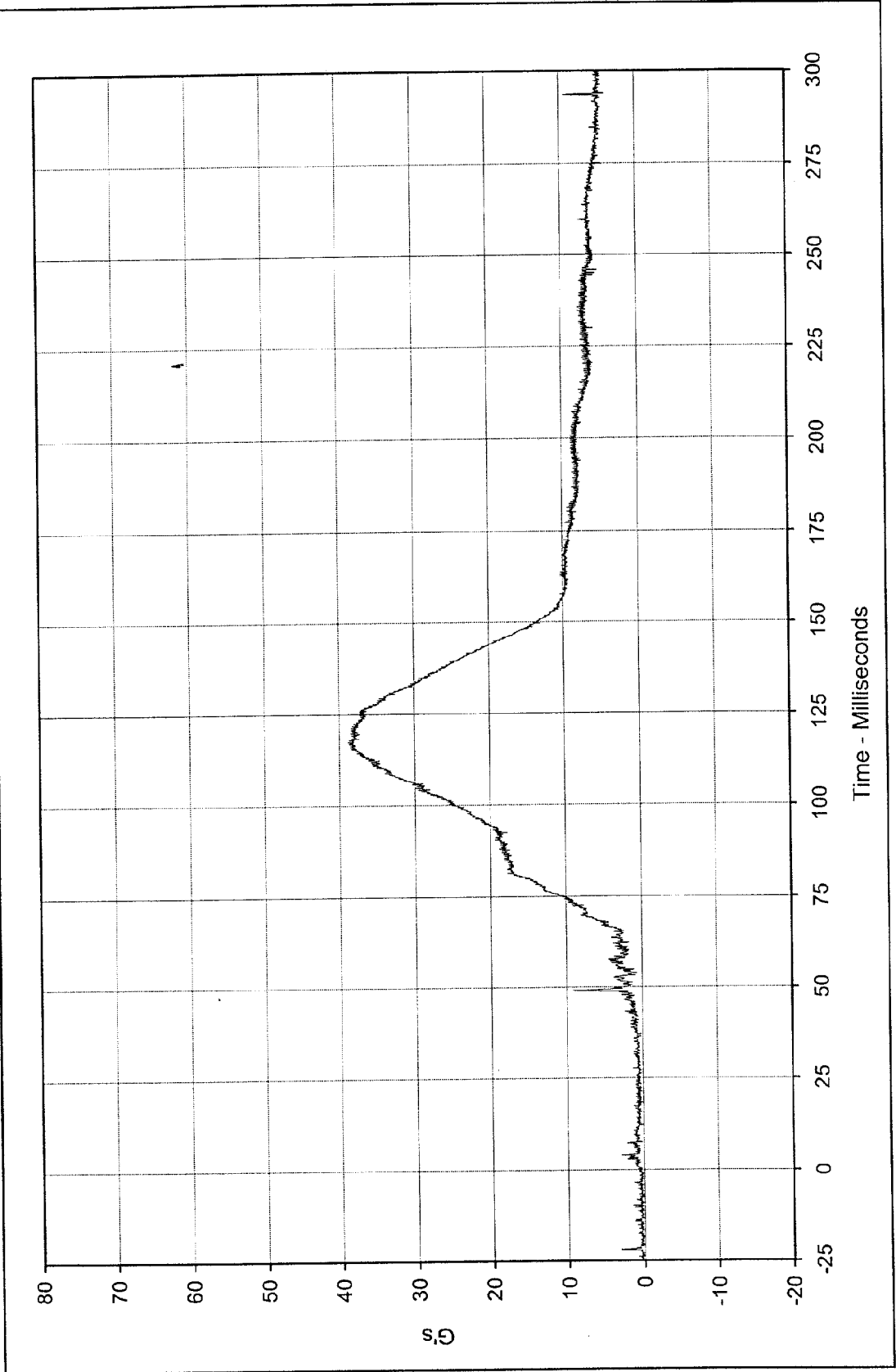




Curve Description: Passenger Head Redundant Z Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 18.5 at 113.1 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -1.5 at 48.6 Milliseconds



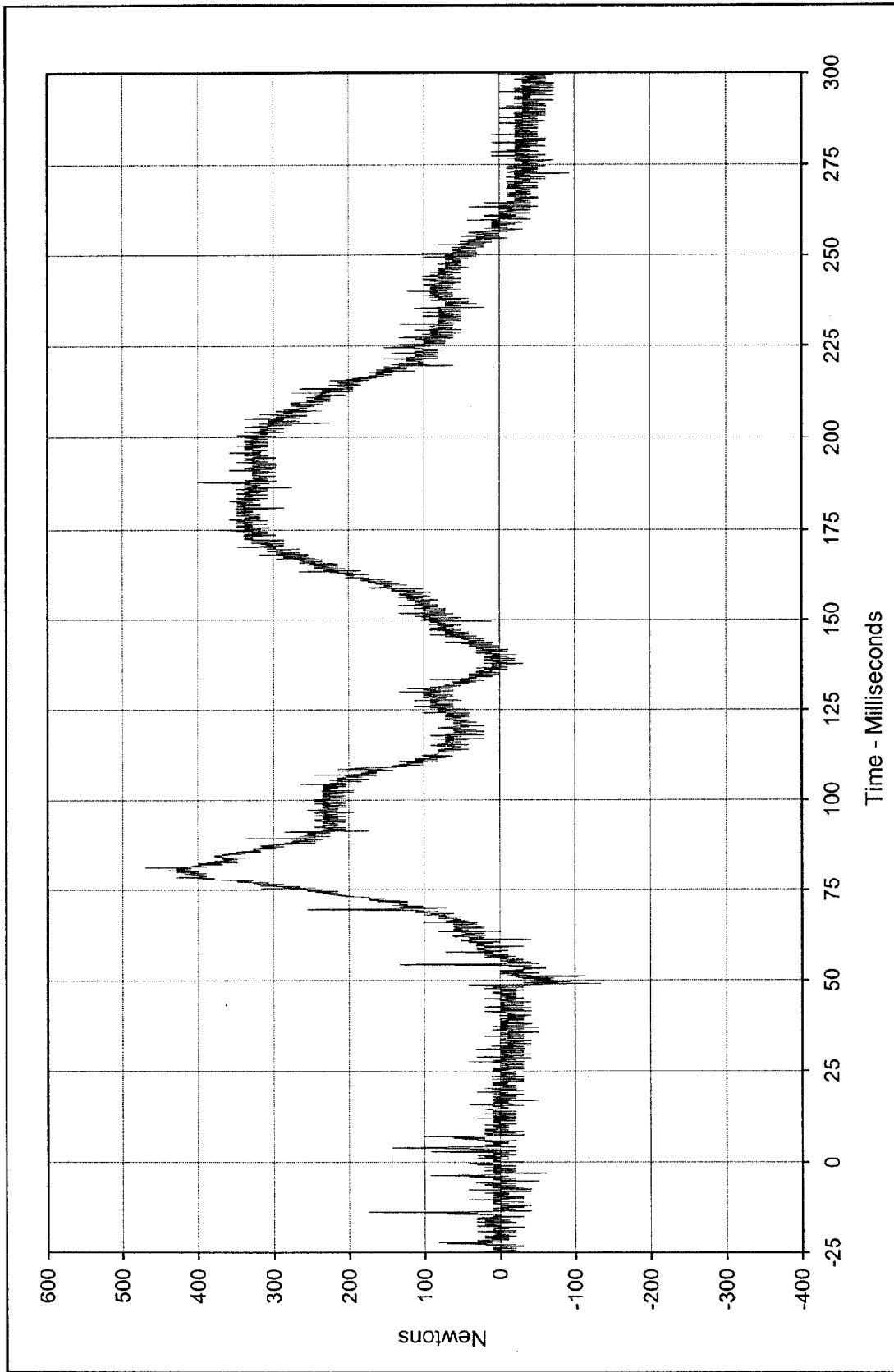
SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-050



Curve Description: Passenger Head Resultant Redundant Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 38.8 at 117.3 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.1 at 12.4 Milliseconds

SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: RES-048





Curve Description: Passenger Neck Force X Testing Program: 1997 NCAP 40% Offset Impact

Maximum Value: 470.1 at 81.3 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan

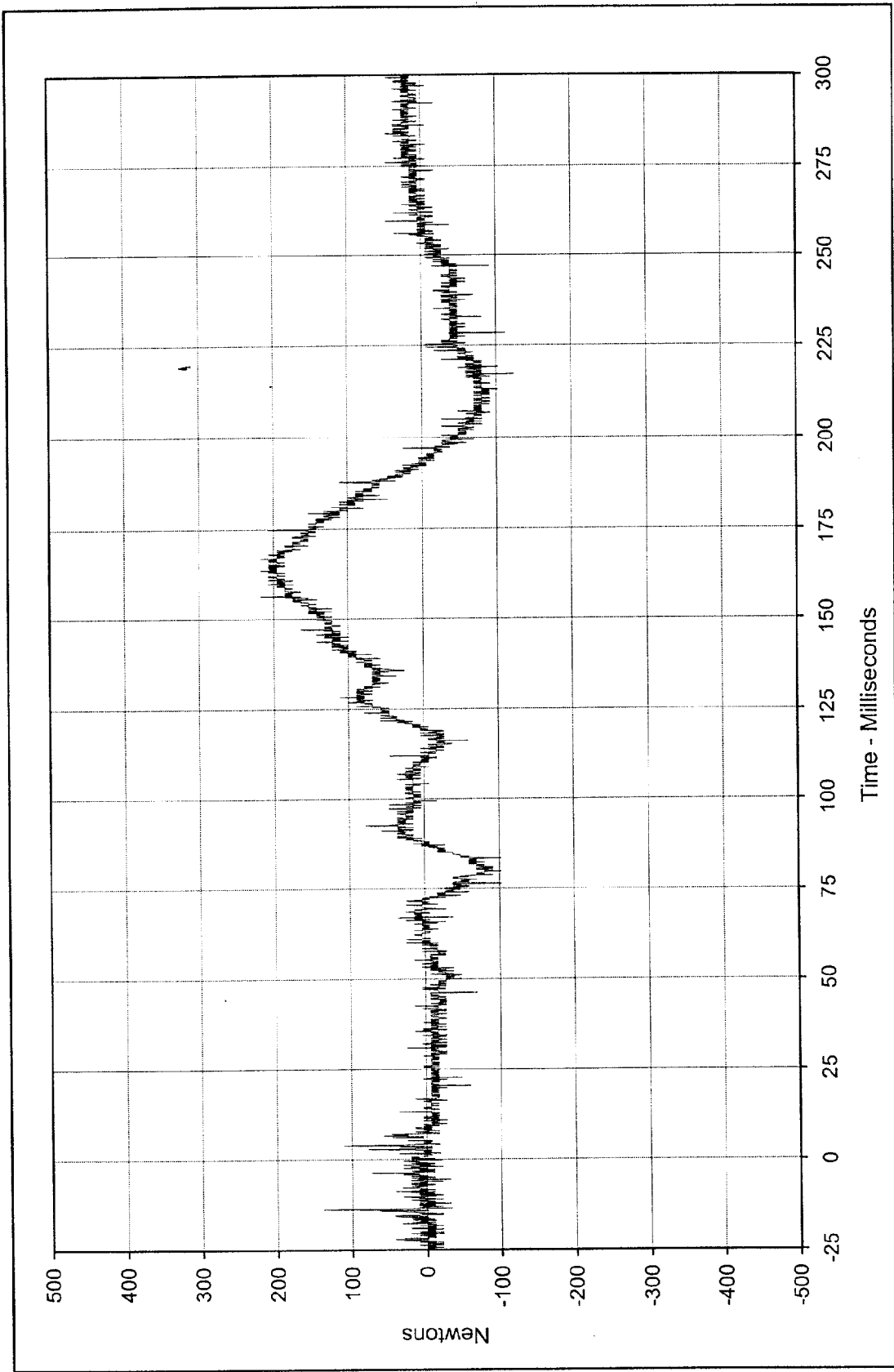
Minimum Value: -133.0 at 49.1 Milliseconds

SAE Filter Class: 1000

Date of Test: 7/17/97

Curve Number: FIL-051

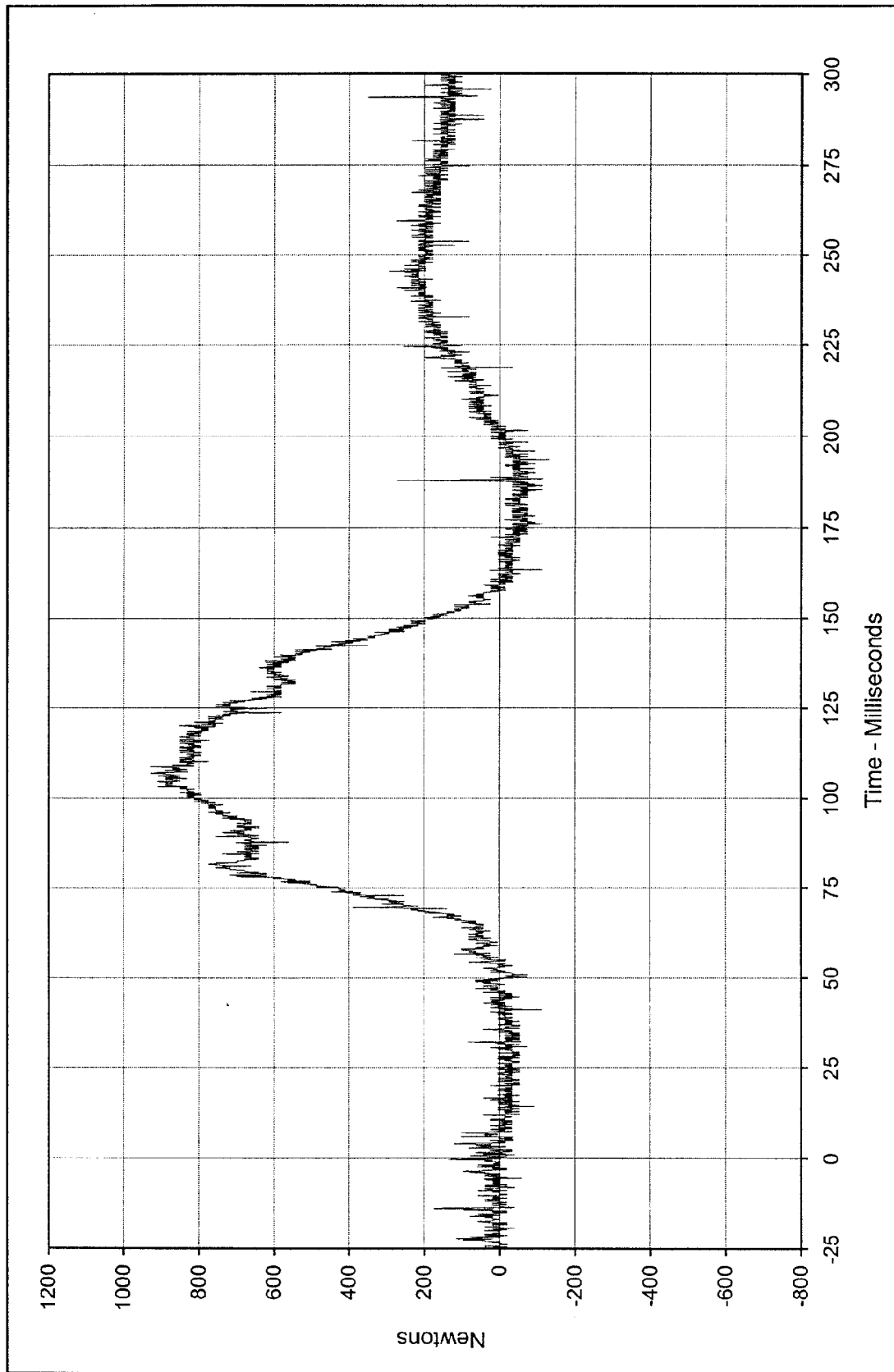




Curve Description: Passenger Neck Force Y Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 216.9 at 156.2 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -122.9 at 217.2 Milliseconds

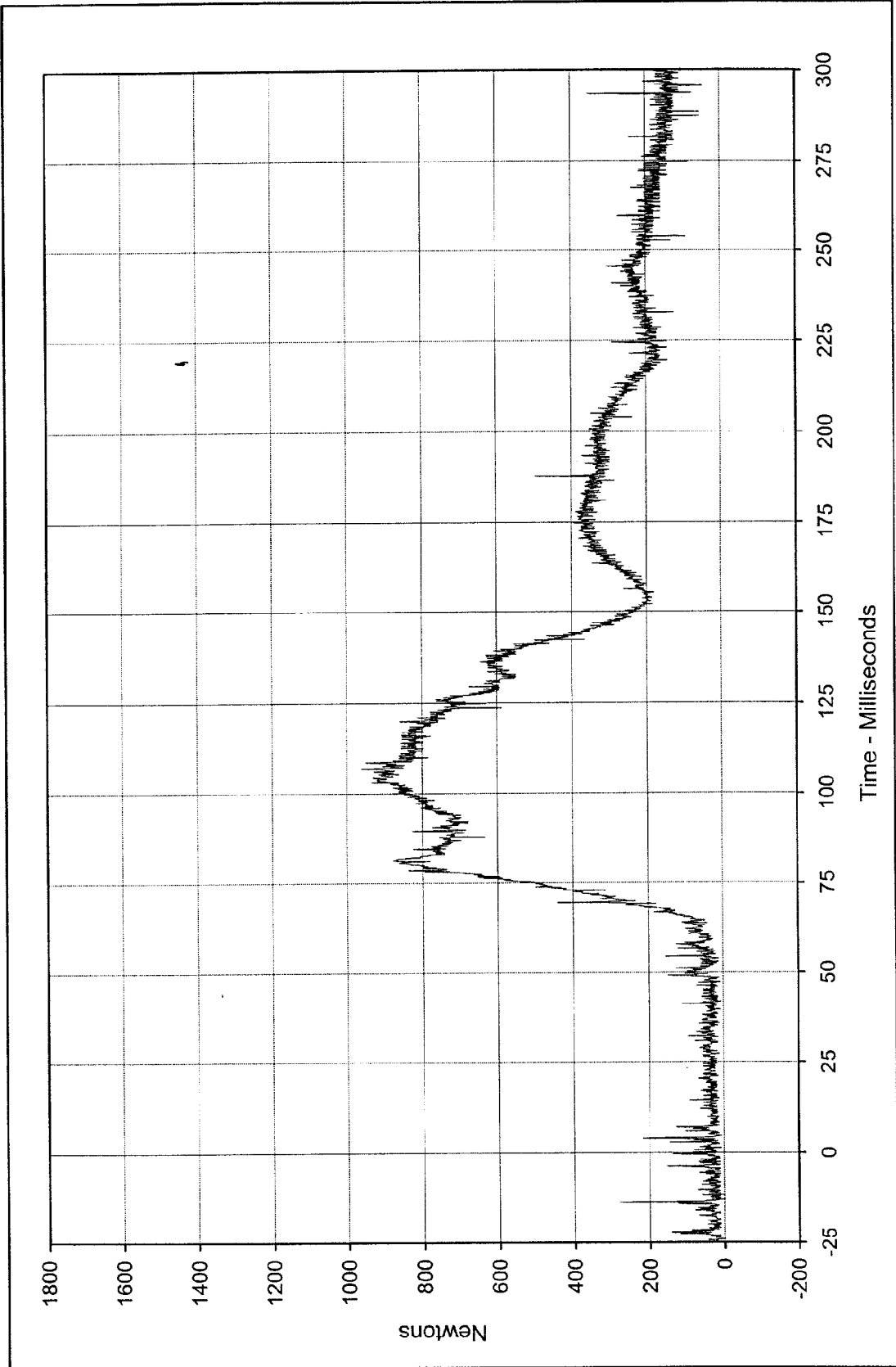


SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-052



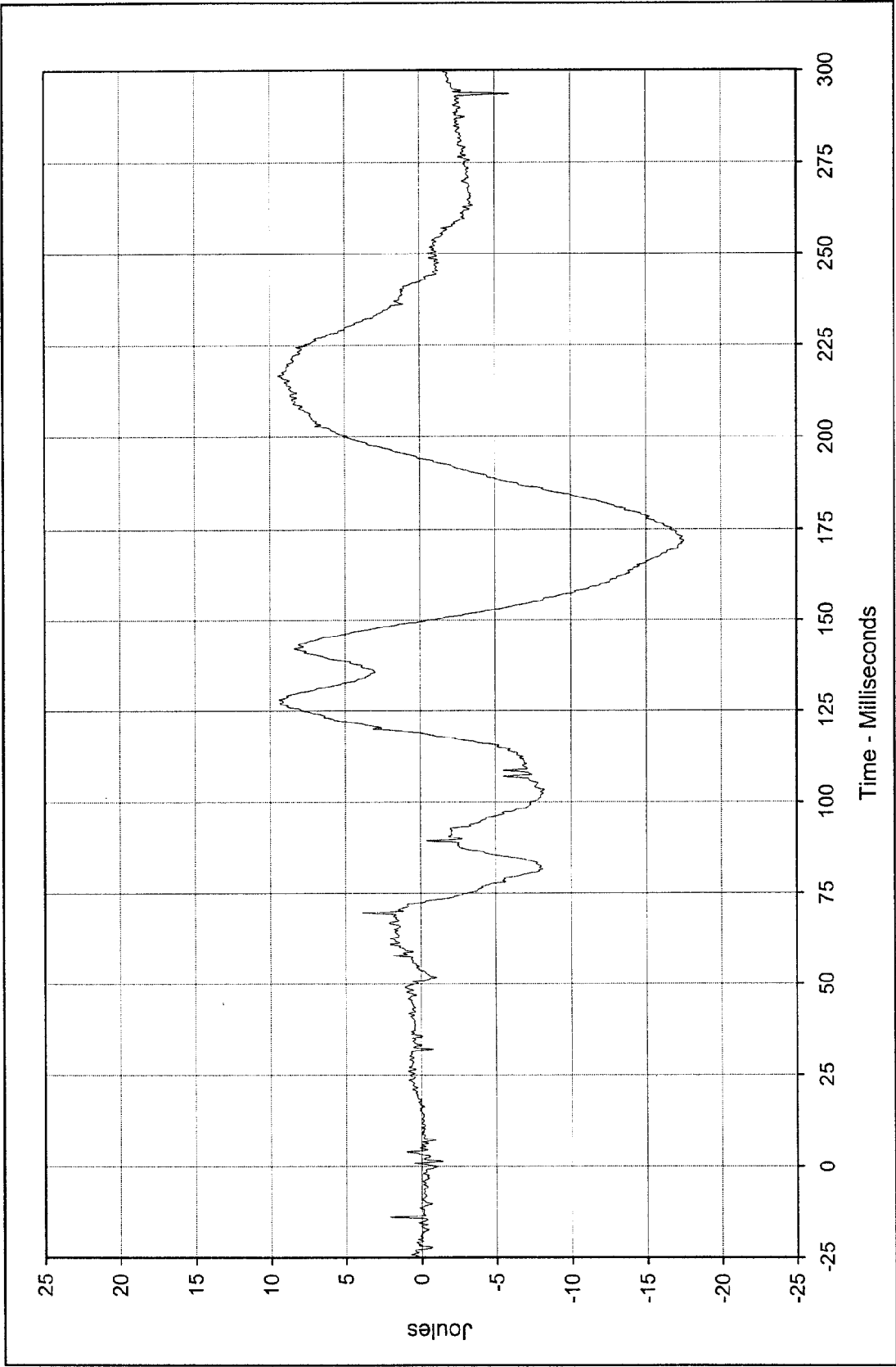
Curve Description: Passenger Neck Force Z Testing Program: 1997 NCAP 40% Offset Impact
Maximum Value: 928.8 at 106.8 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
Minimum Value: -130.3 at 193.4 Milliseconds
SAE Filter Class: 1000
Date of Test: 7/17/97
Curve Number: FIL-053





Curve Description: Passenger Neck Force Resultant Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 961.3 at 106.9 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 6.4 at 4.6 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: RES-051





Curve Description: Passenger Neck Moment X Testing Program: 1997 NCAP 40% Offset Impact

Maximum Value: 9.5 at 216.7 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan

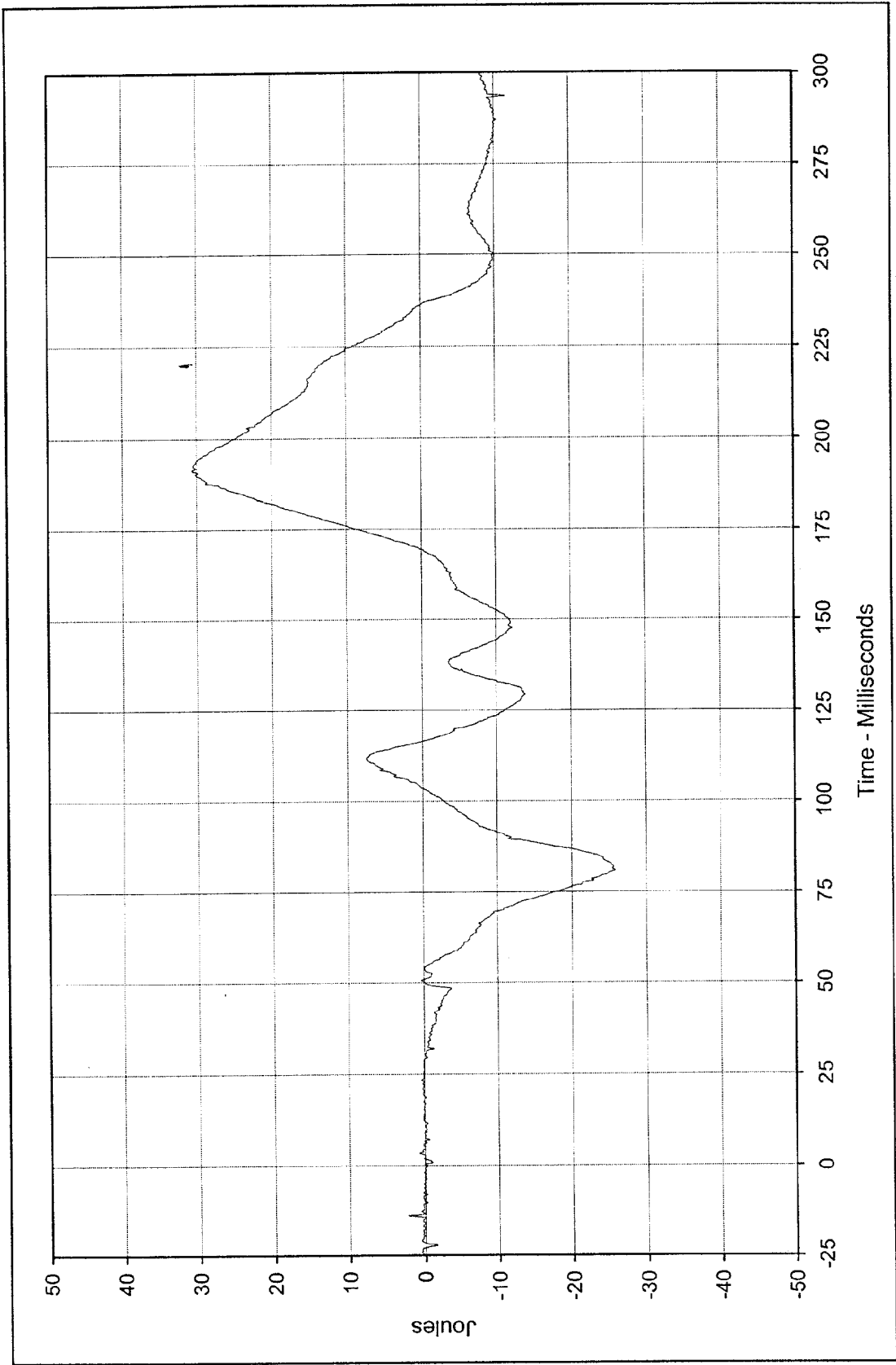
Minimum Value: -17.5 at 171.5 Milliseconds

SAE Filter Class: 600

Date of Test: 7/17/97

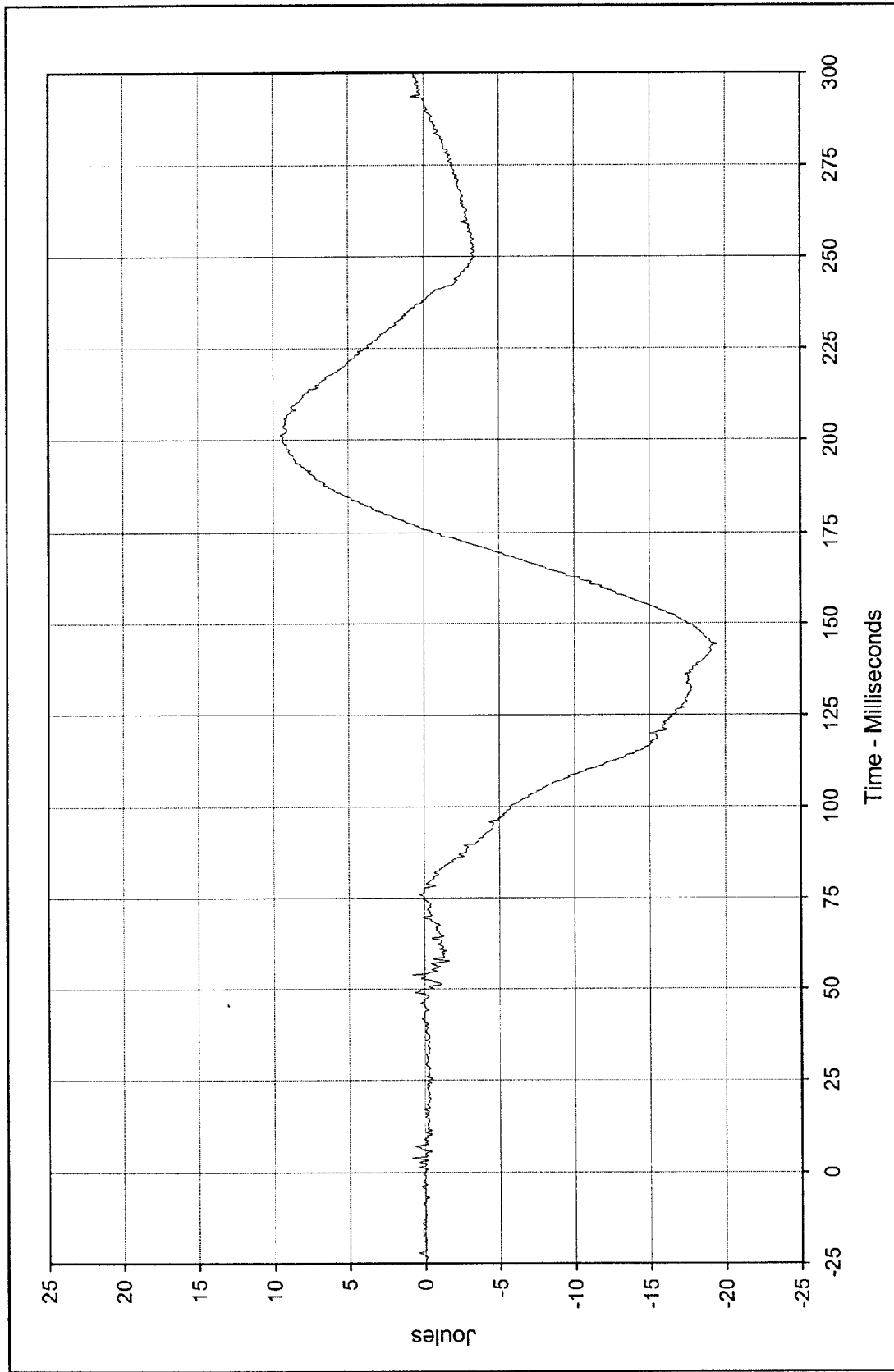
Curve Number: FIL-054





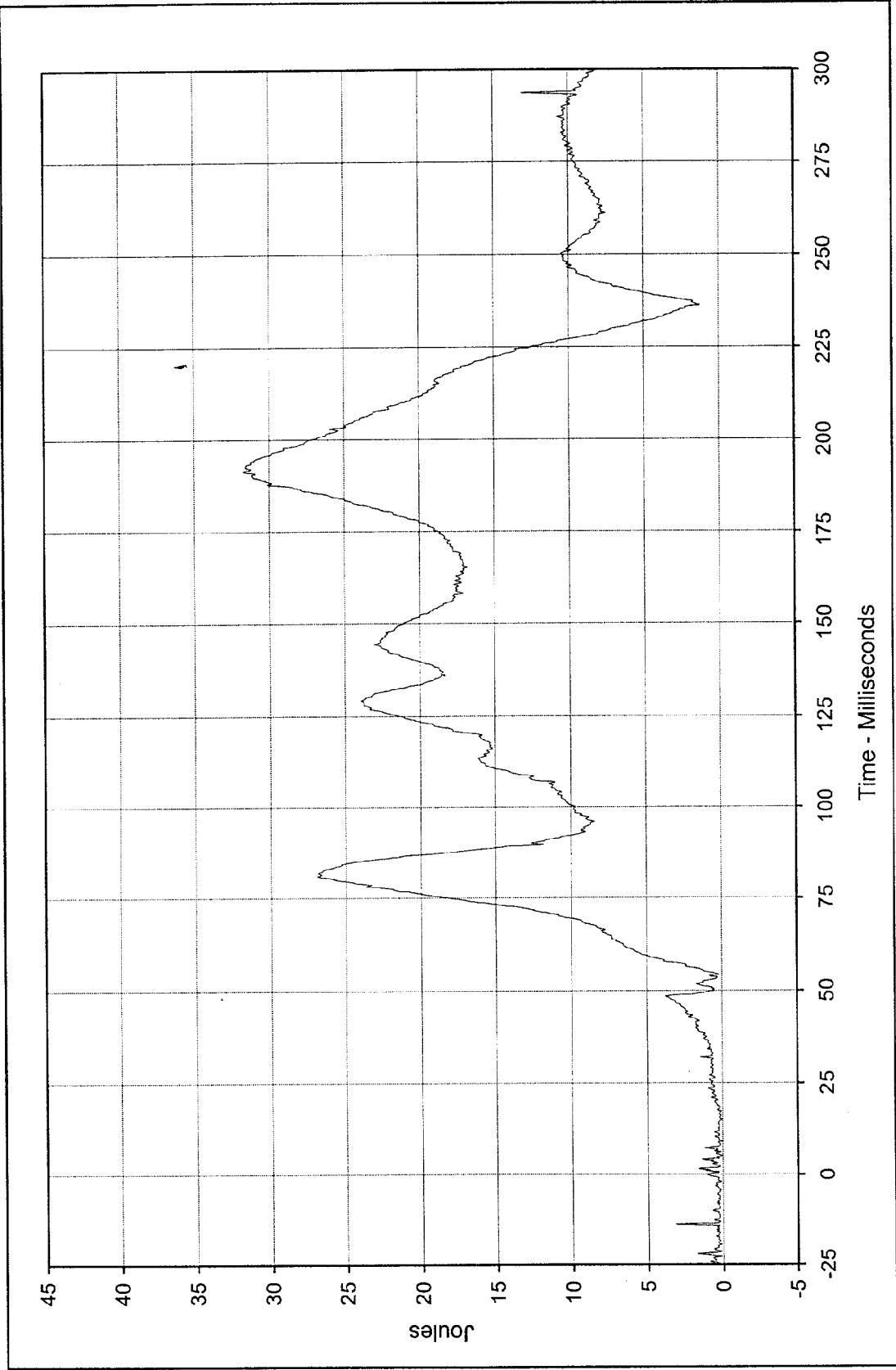
Curve Description: Passenger Neck Moment Y Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 30.7 at 191.4 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -25.8 at 80.8 Milliseconds
 SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-055





Curve Description: Passenger Neck Moment Z Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 9.5 at 201.6 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -19.4 at 144.2 Milliseconds
 SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-056

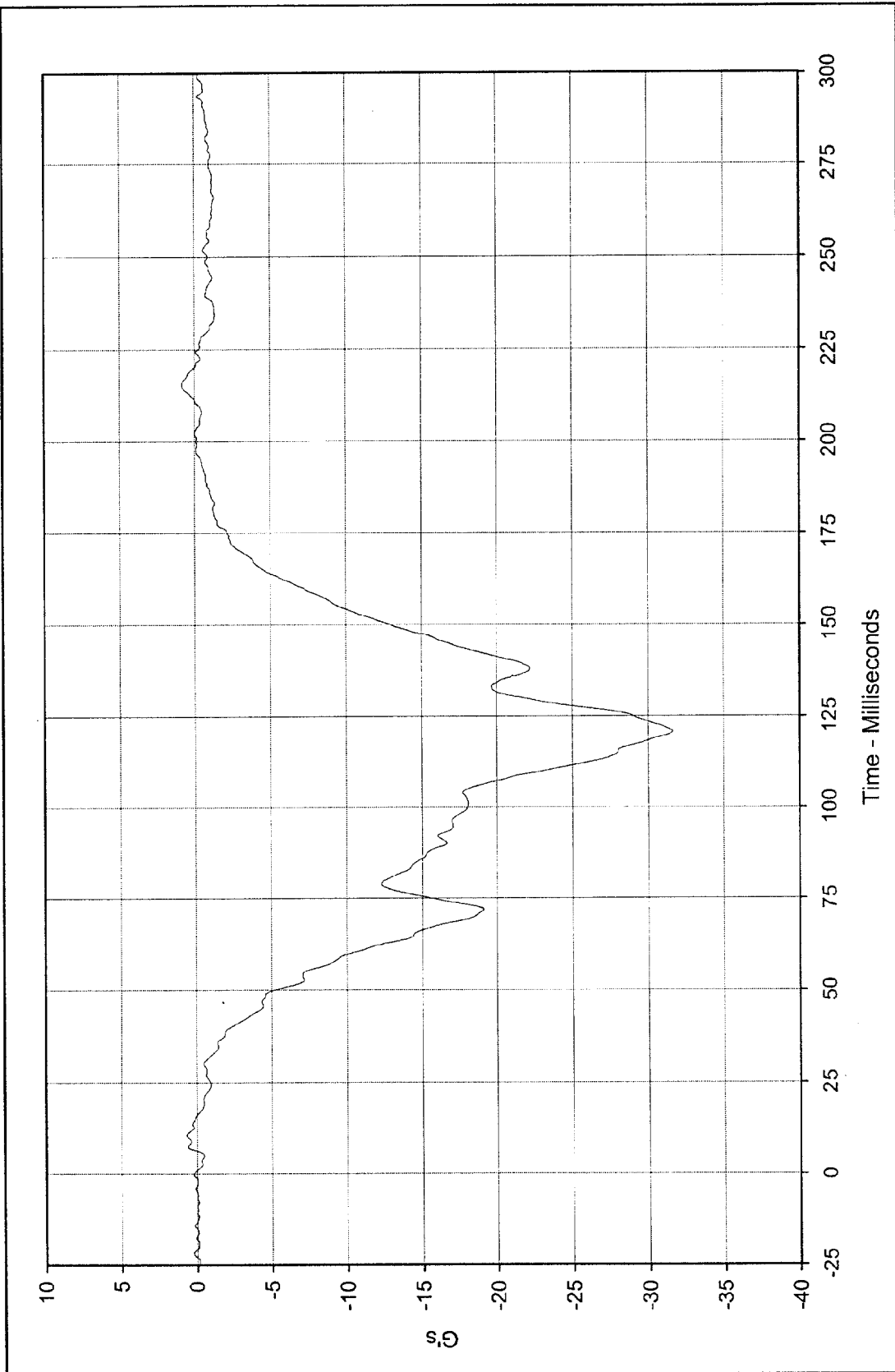




Curve Description: Passenger Neck Moment Resultant
 Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 31.7 at 191.4 Milliseconds
 Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.1 at 9.1 Milliseconds

SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: RES-054

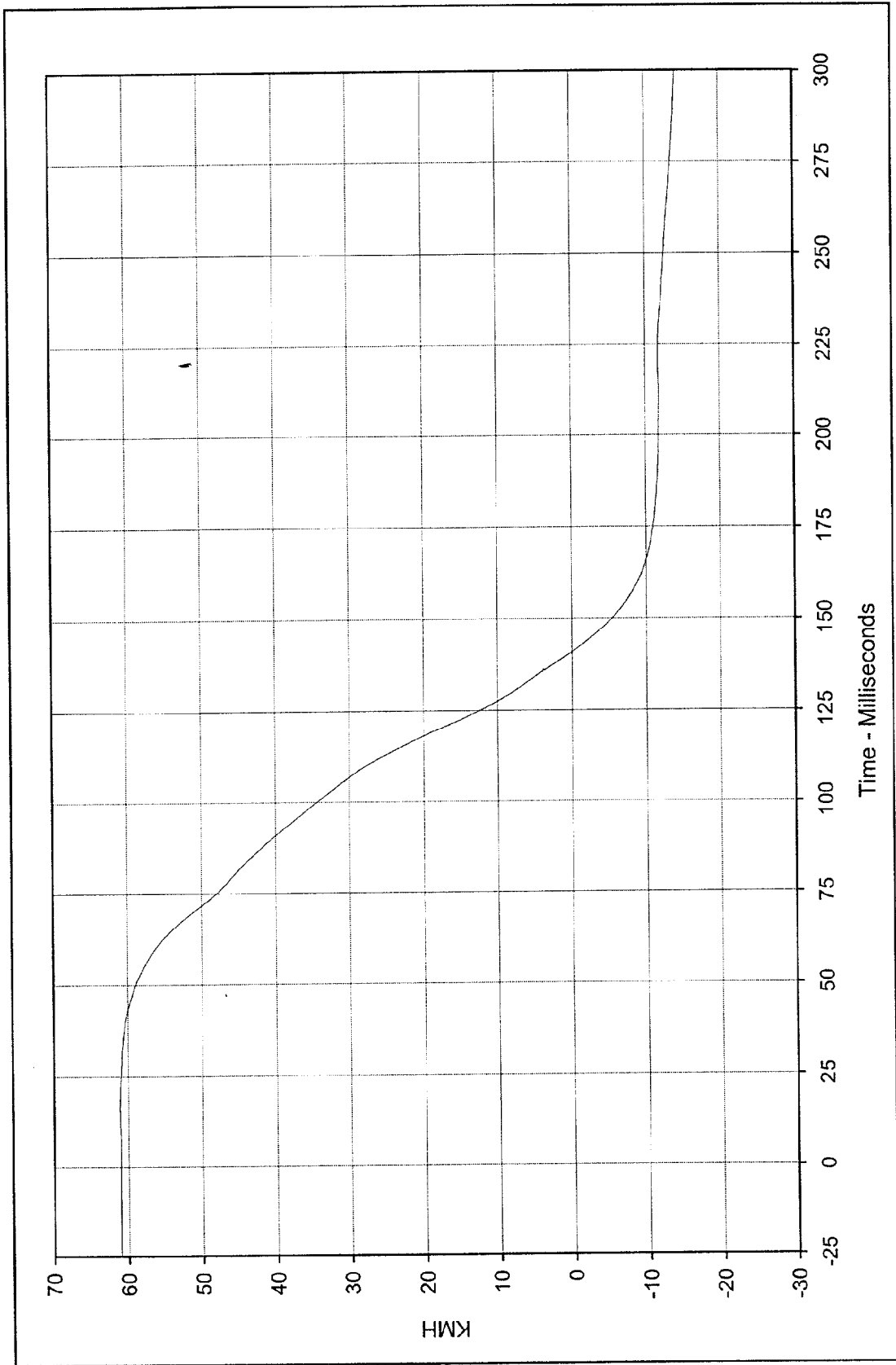




A.

Curve Description:	Passenger Chest Primary X	Testing Program	1997 NCAP 40% Offset Impact
Maximum Value:	0.9 at 215.7 Milliseconds	Test Vehicle:	1996 Ford Taurus 4 Door Sedan
Minimum Value:	-31.6 at 120.8 Milliseconds		
SAE Filter Class:	180		
Date of Test:	7/17/97		
Curve Number:	FIL-057		

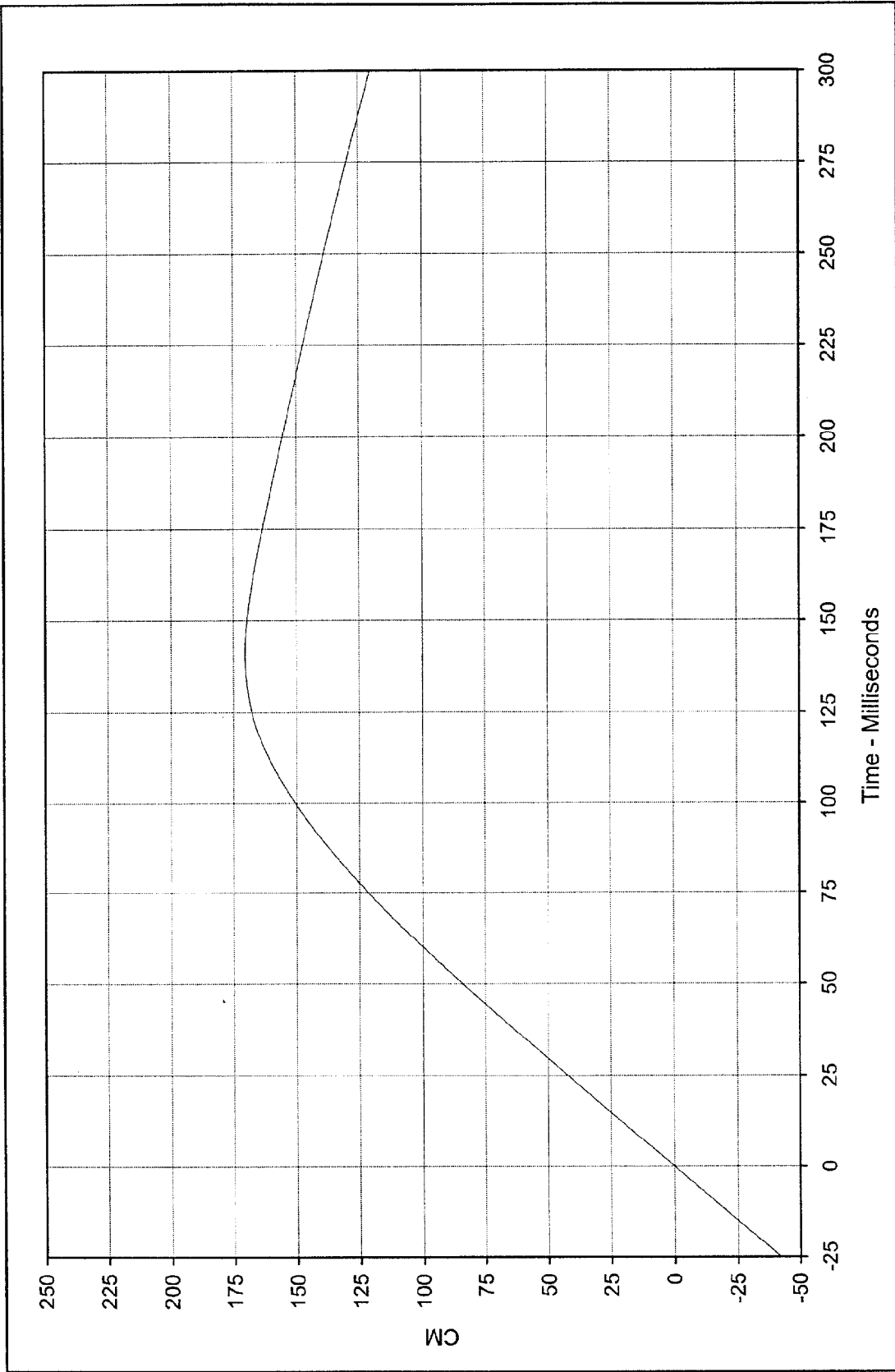




Curve Description: Passenger Chest Primary X Velocity
 Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 61.1 at 16.2 Milliseconds
 Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -14.1 at 299.9 Milliseconds

SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN1-057





Curve Description: Passenger Chest Primary X Displ. Testing Program: 1997 NCAP 40% Offset Impact

Maximum Value: 170.3 at 140.8 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan

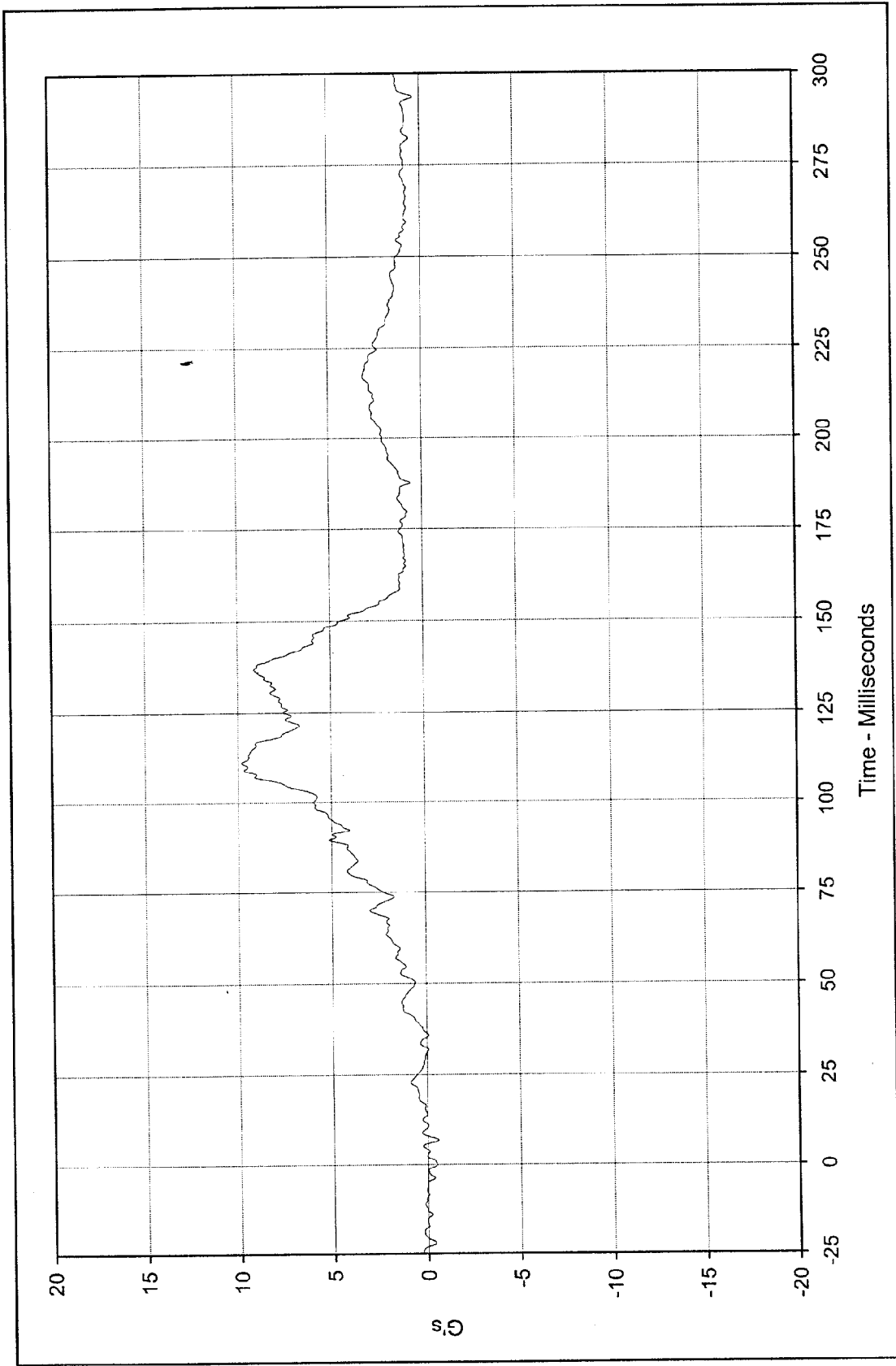
Minimum Value: 0.0 at 0.0 Milliseconds

SAE Filter Class: 180

Date of Test: 7/17/97

Curve Number: IN2-057

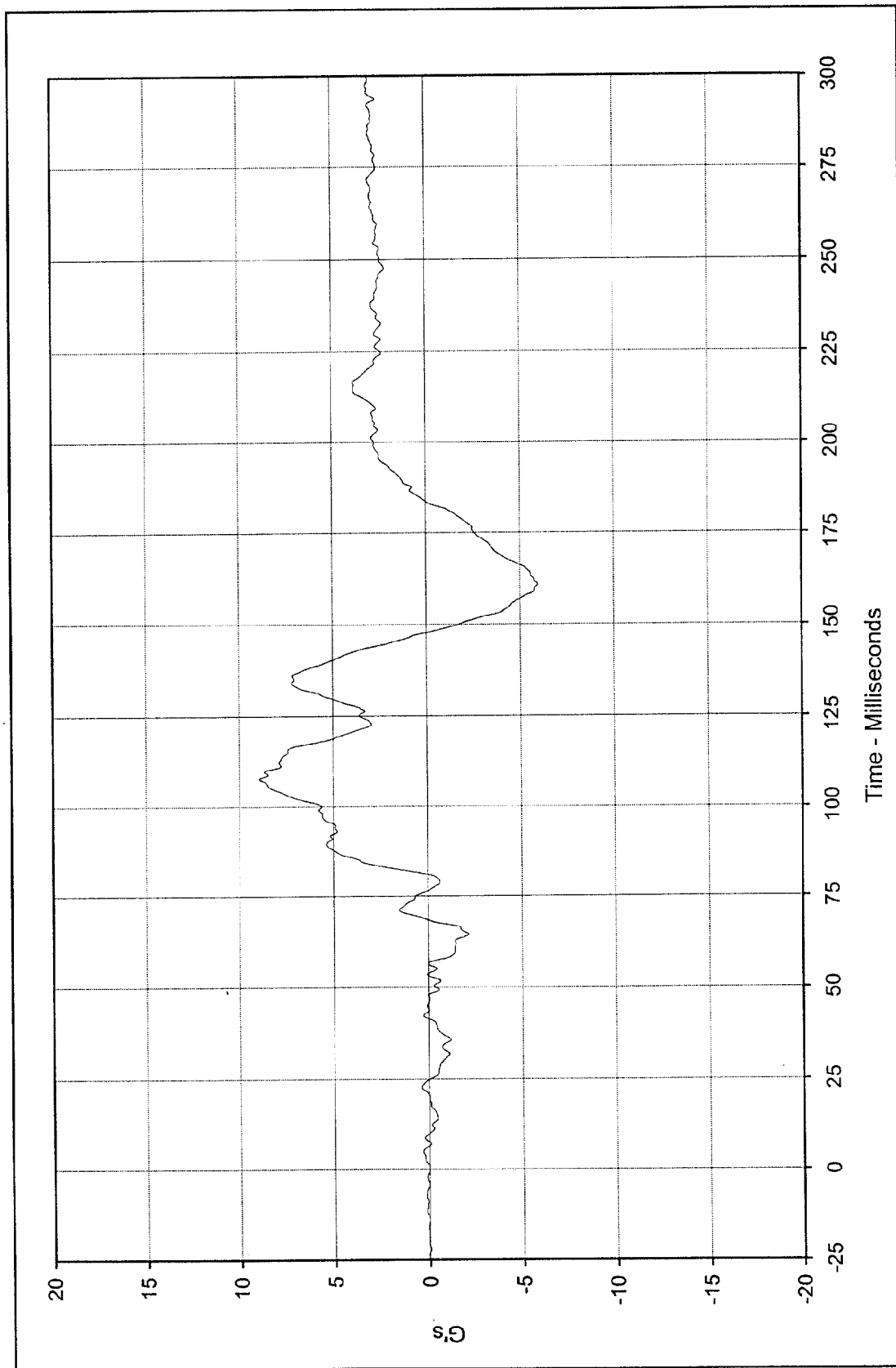




Curve Description: Passenger ChestPrimary Y
 Maximum Value: 9.8 at 111.0 Milliseconds
 Minimum Value: -0.6 at 6.8 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: FIL-058

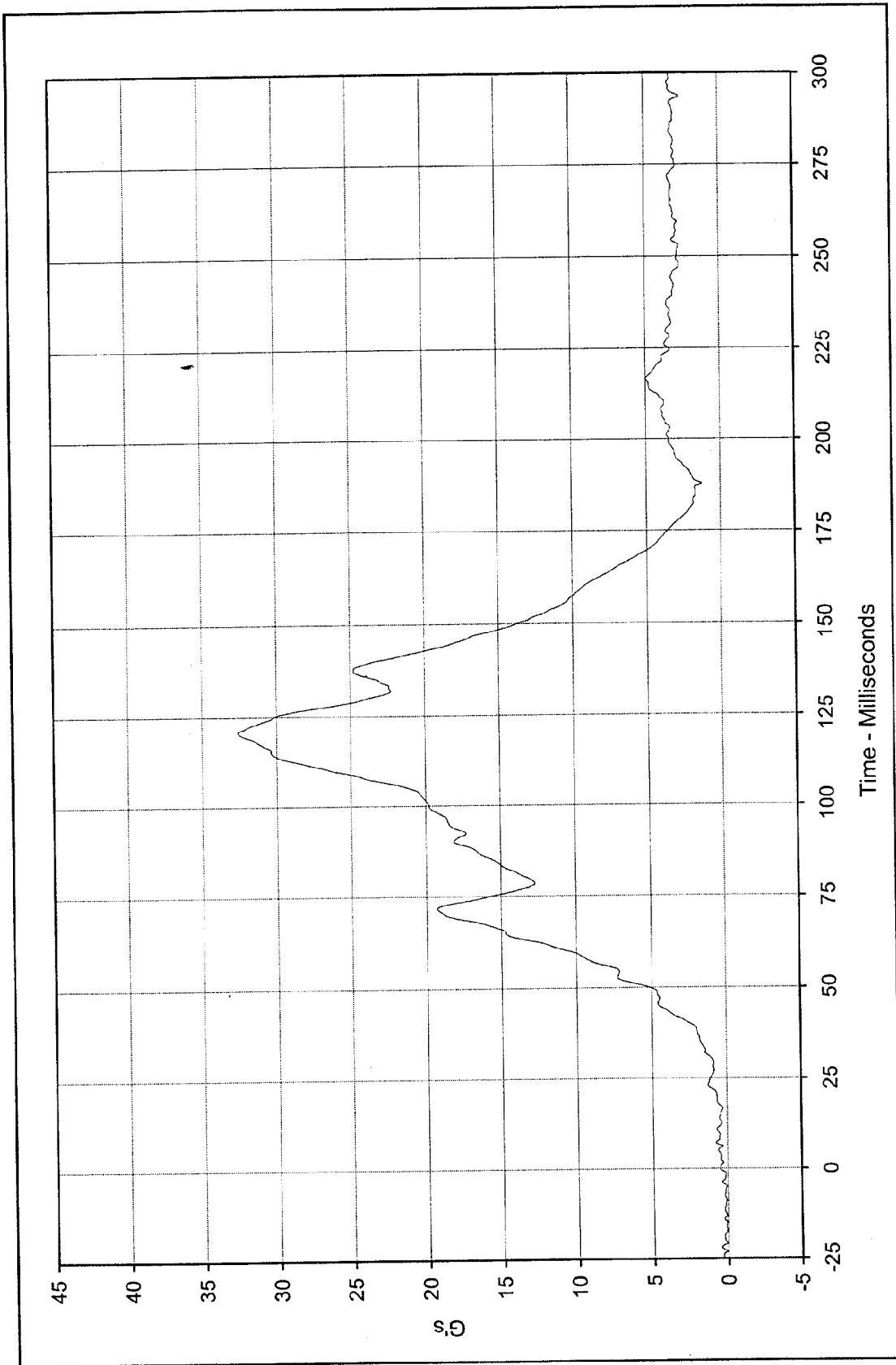
Testing Program: 1997 NCAP 40% Offset Impact
 Test Vehicle: 1996 Ford Taurus 4 Door Sedan





Curve Description: Passenger Chest Primary Z Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 9.0 at 107.6 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -5.9 at 160.8 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: FIL-059

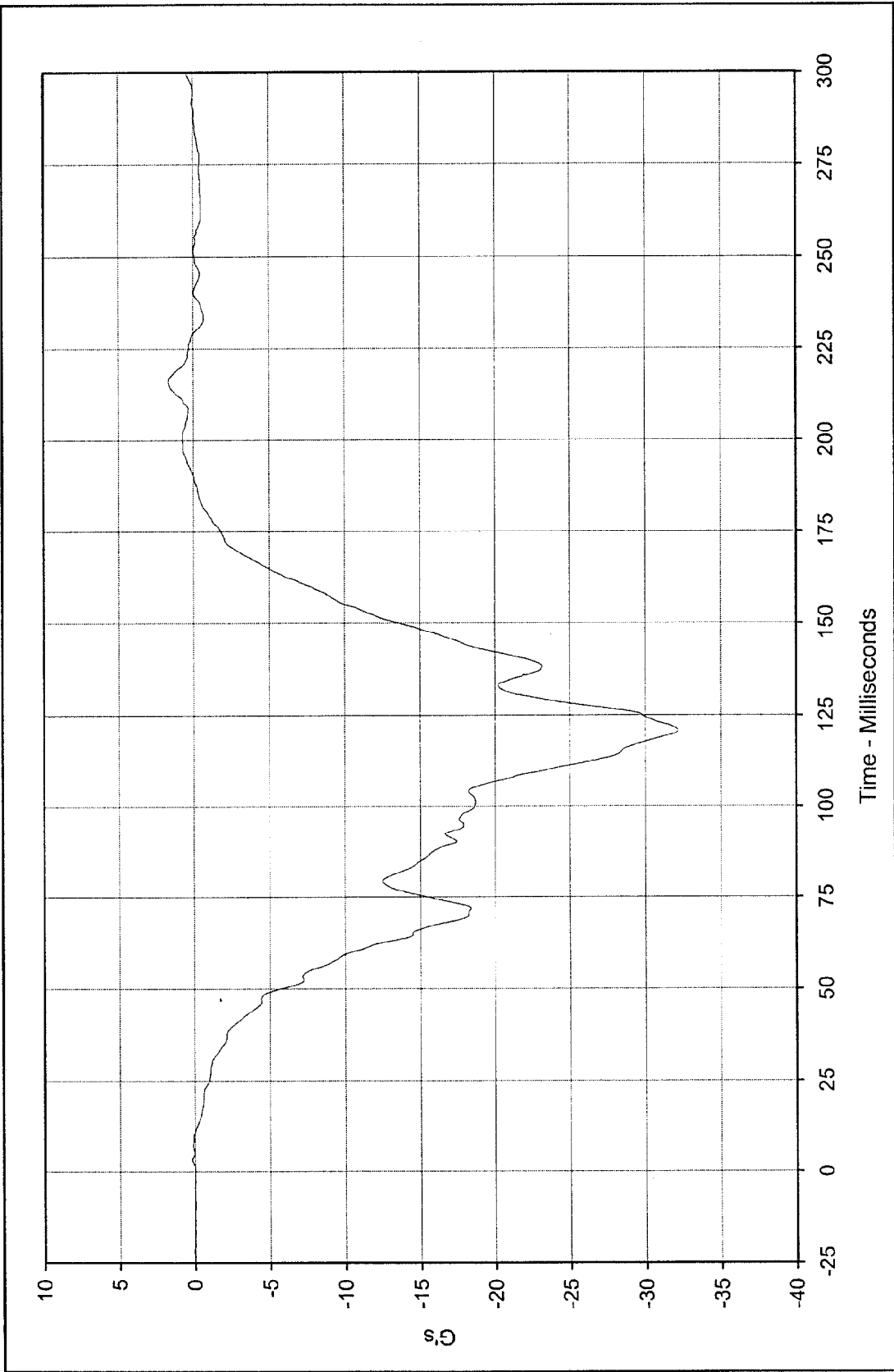




Curve Description: Passenger Chest Resultant Primary
 Maximum Value: 32.6 at 120.7 Milliseconds
 Minimum Value: 0.3 at 6.1 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: RES-057

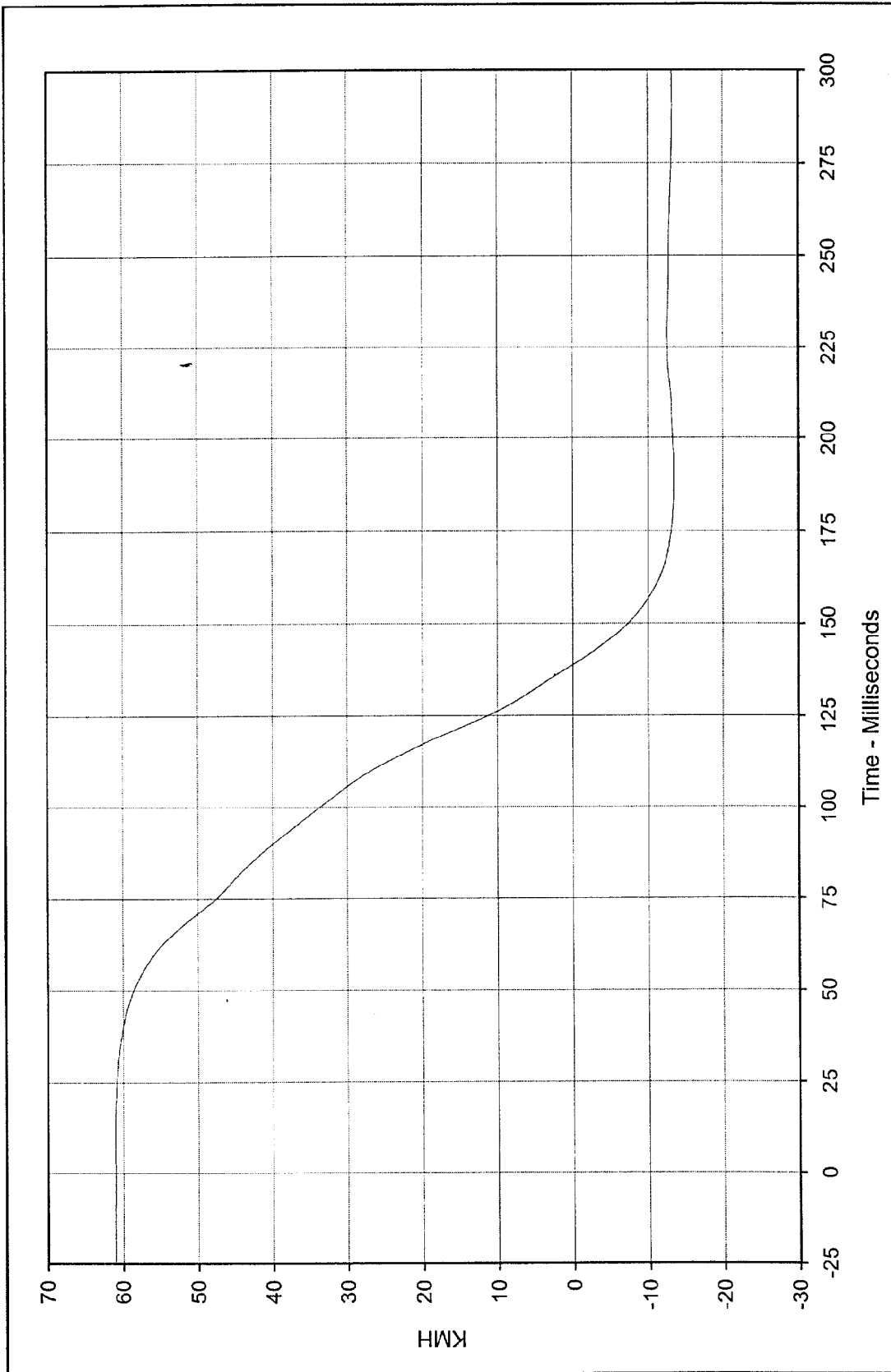
Testing Program: 1997 NCAP 40% Offset Impact
 Test Vehicle: 1996 Ford Taurus 4 Door Sedan





Curve Description: Passenger Chest Redundant X Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 1.7 at 216.1 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -32.2 at 120.9 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: FIL-060





Curve Description: Passenger Chest Redundant X Velocity Testing Program: 1997 NCAP 40% Offset Impact

Maximum Value: 61.1 at 10.9 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan

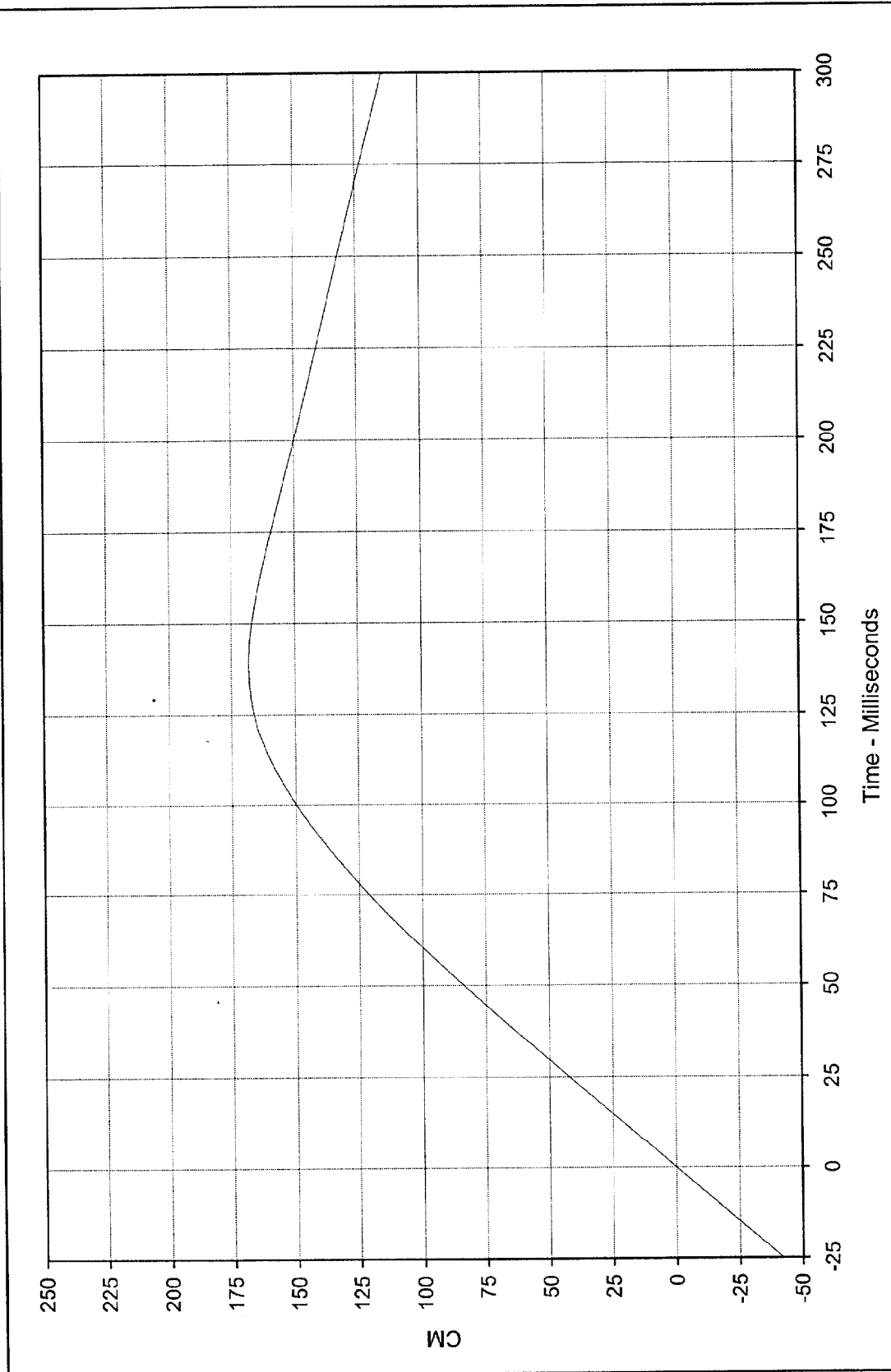
Minimum Value: -13.4 at 190.5 Milliseconds

SAE Filter Class: 180

Date of Test: 7/17/97

Curve Number: IN1-060

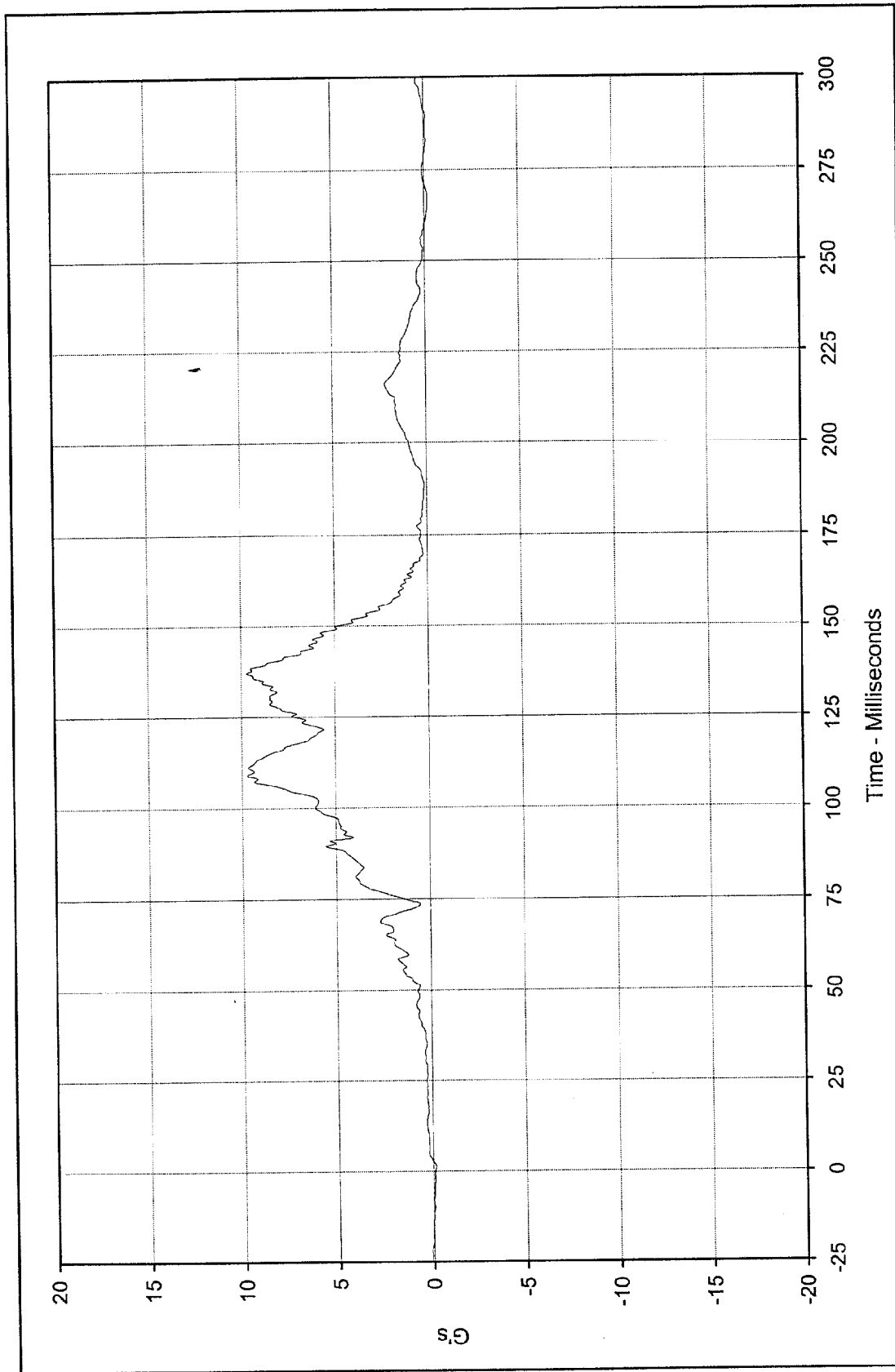




Curve Description: Passenger Chest Redundant X Displ. Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 168.2 at 138.7 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.0 at 0.0 Milliseconds

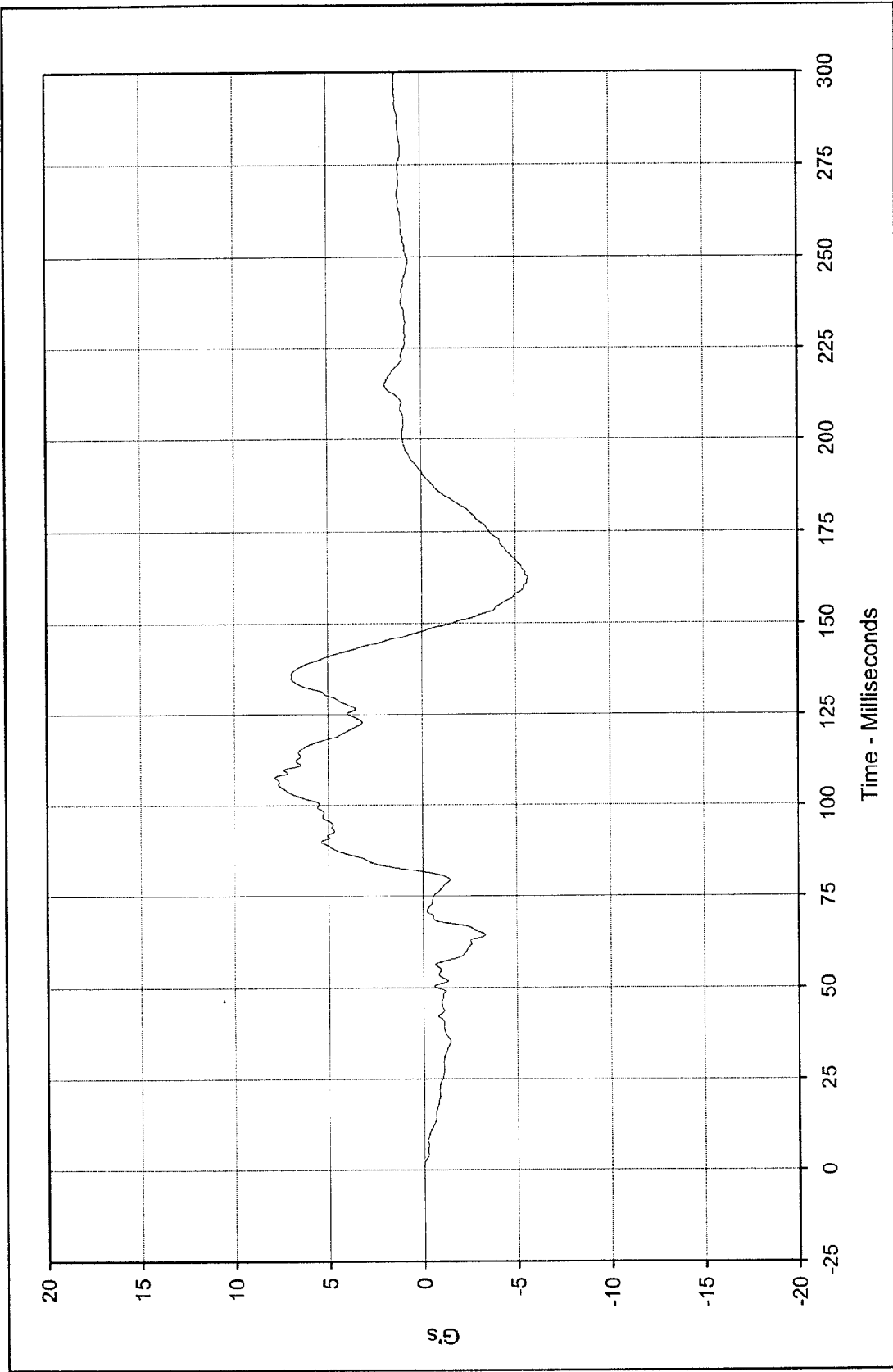


SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN2-060



Curve Description: Passenger Chest Redundant Y Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 9.8 at 109.0 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -0.2 at 267.6 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: FIL-061

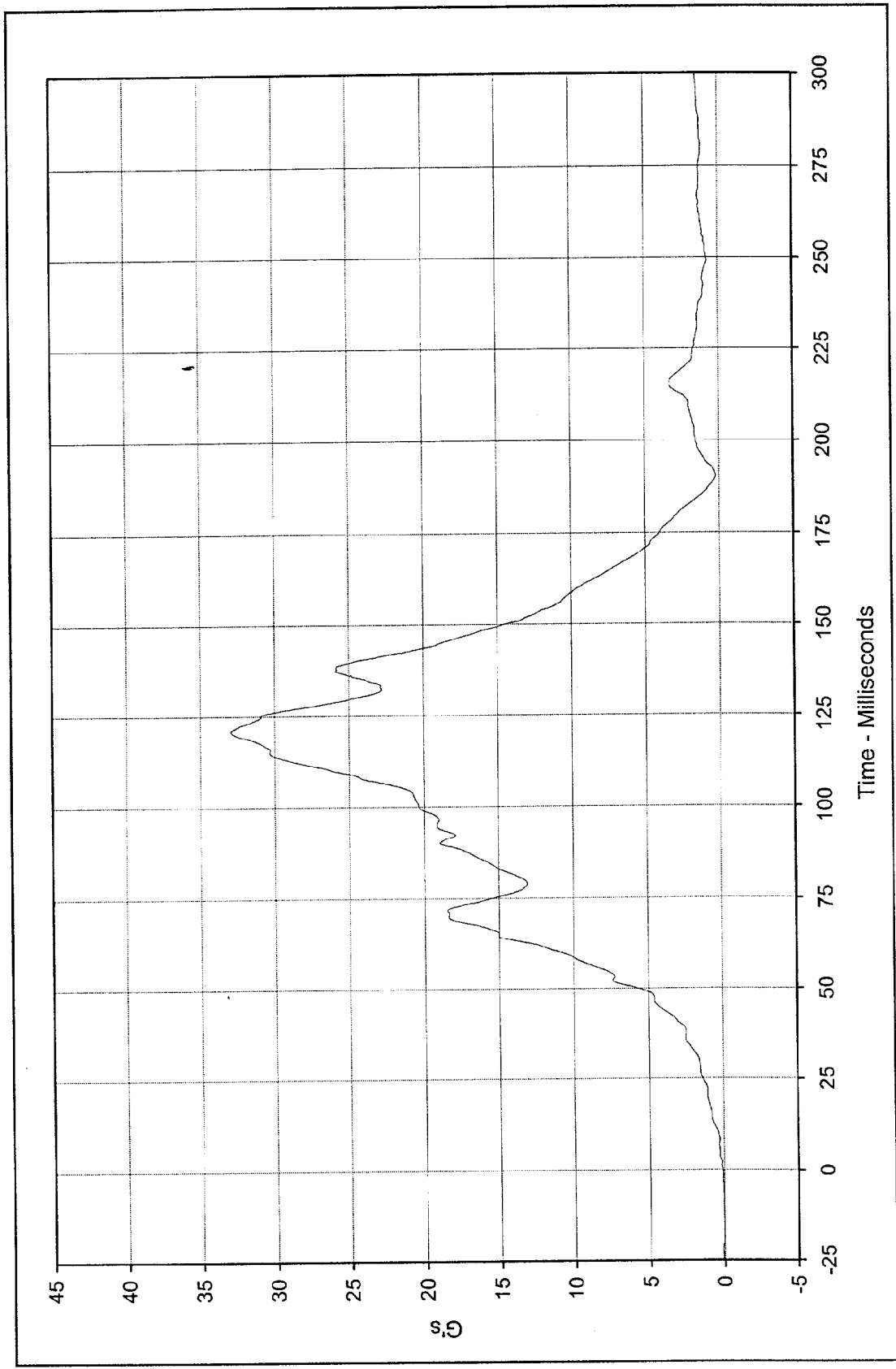




Curve Description: Passenger Chest Redundant Z Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 7.9 at 107.5 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -5.7 at 162.4 Milliseconds

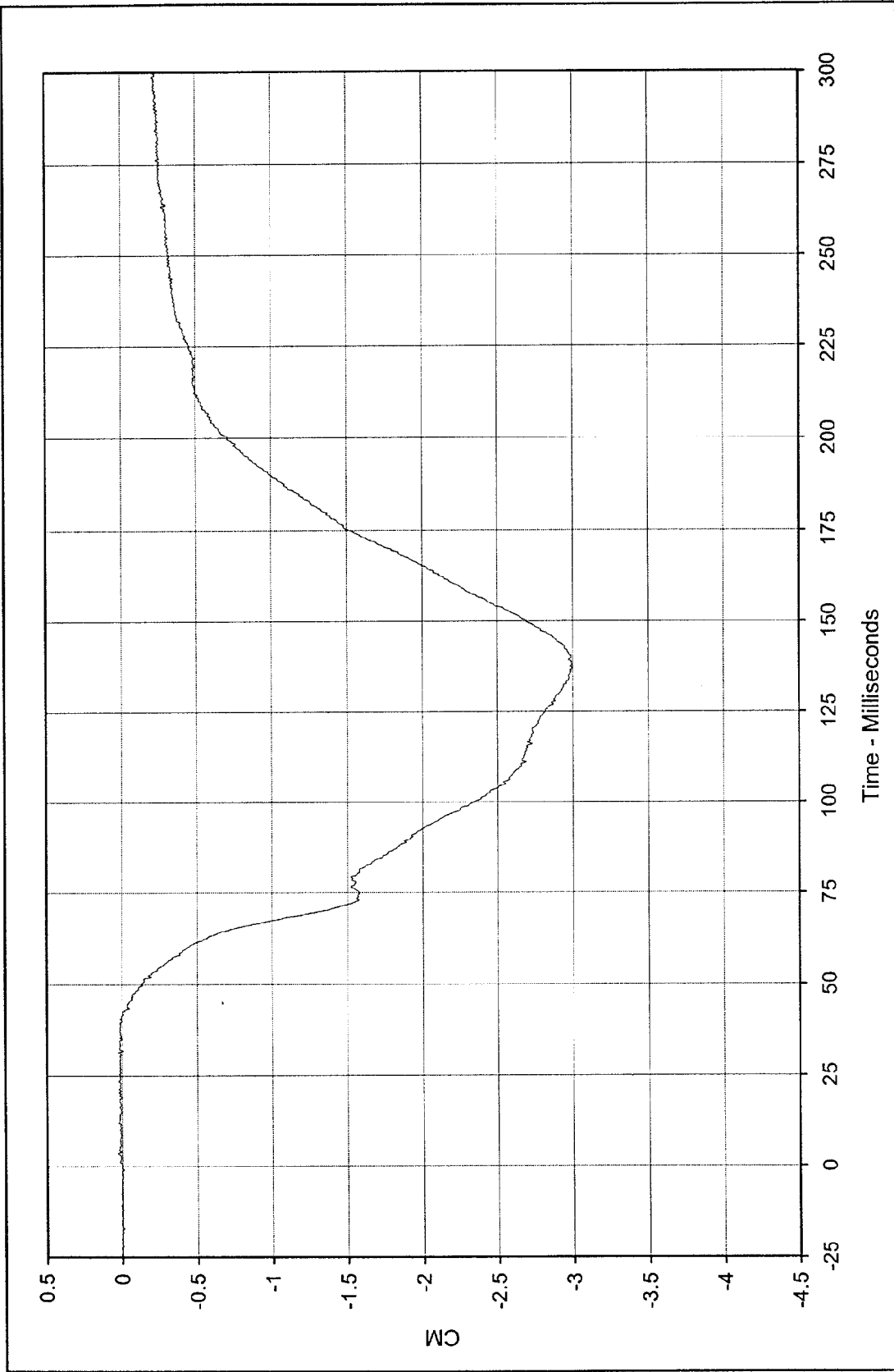


SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: FIL-062



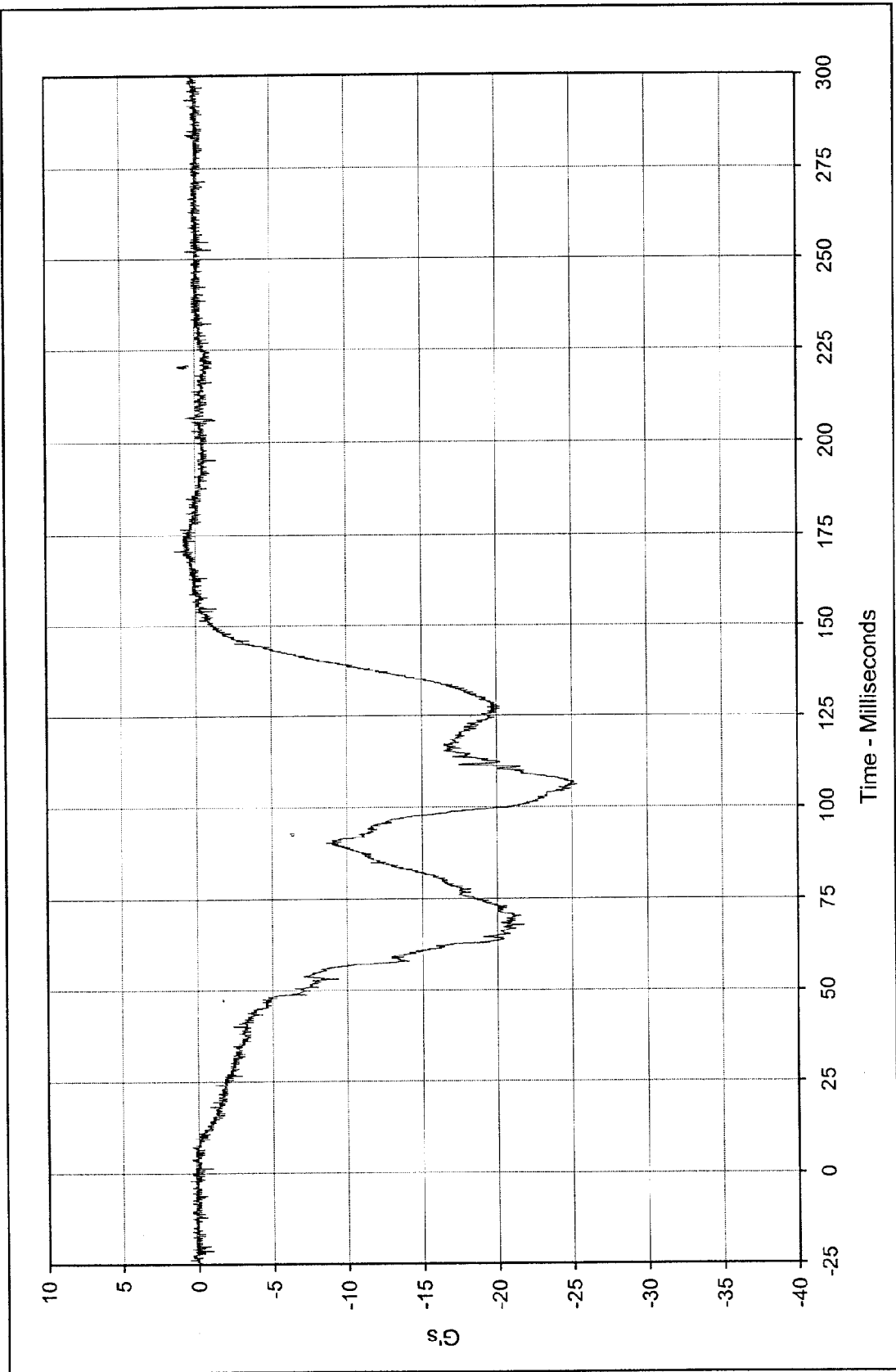
Curve Description: Passenger Chest Resultant Redundant Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 32.9 at 120.8 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.1 at 0.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: RES-060





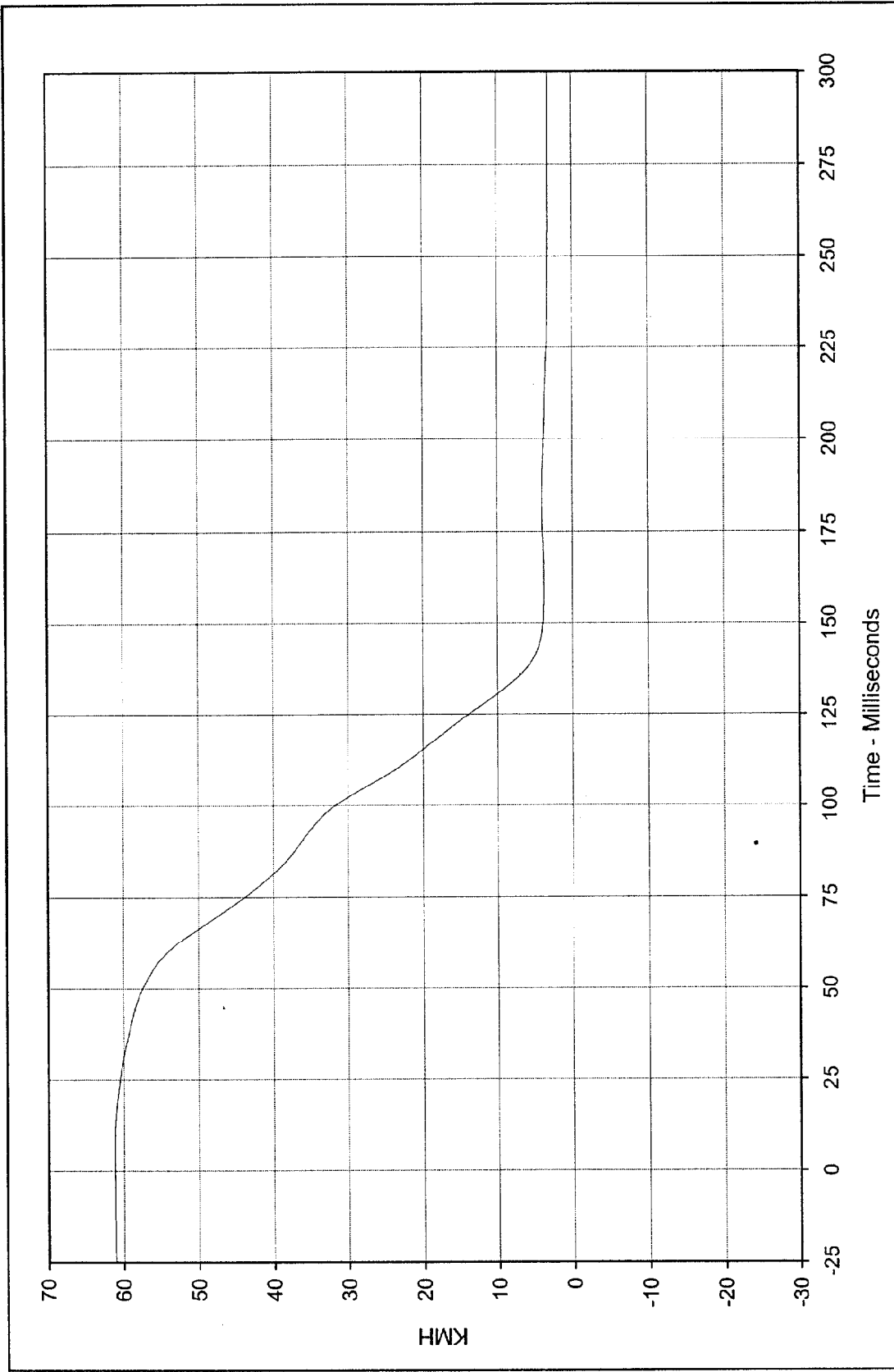
Curve Description:	Passenger Chest Displacement X	Testing Program	1997 NCAP 40% Offset Impact
Maximum Value:	0.03 at 3.5 Milliseconds	Test Vehicle:	1996 Ford Taurus 4 Door Sedan
Minimum Value:	-3.00 at 136.9 Milliseconds		
SAE Filter Class:	600		
Date of Test:	7/17/97		
Curve Number:	FIL-063		





Curve Description: Passenger Pelvis X Testing Program: 1997 NCAP 40% Offset Impact
Maximum Value: 1.4 at 170.5 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
Minimum Value: -25.3 at 105.9 Milliseconds
SAE Filter Class: 1000
Date of Test: 7/17/97
Curve Number: FIL-064

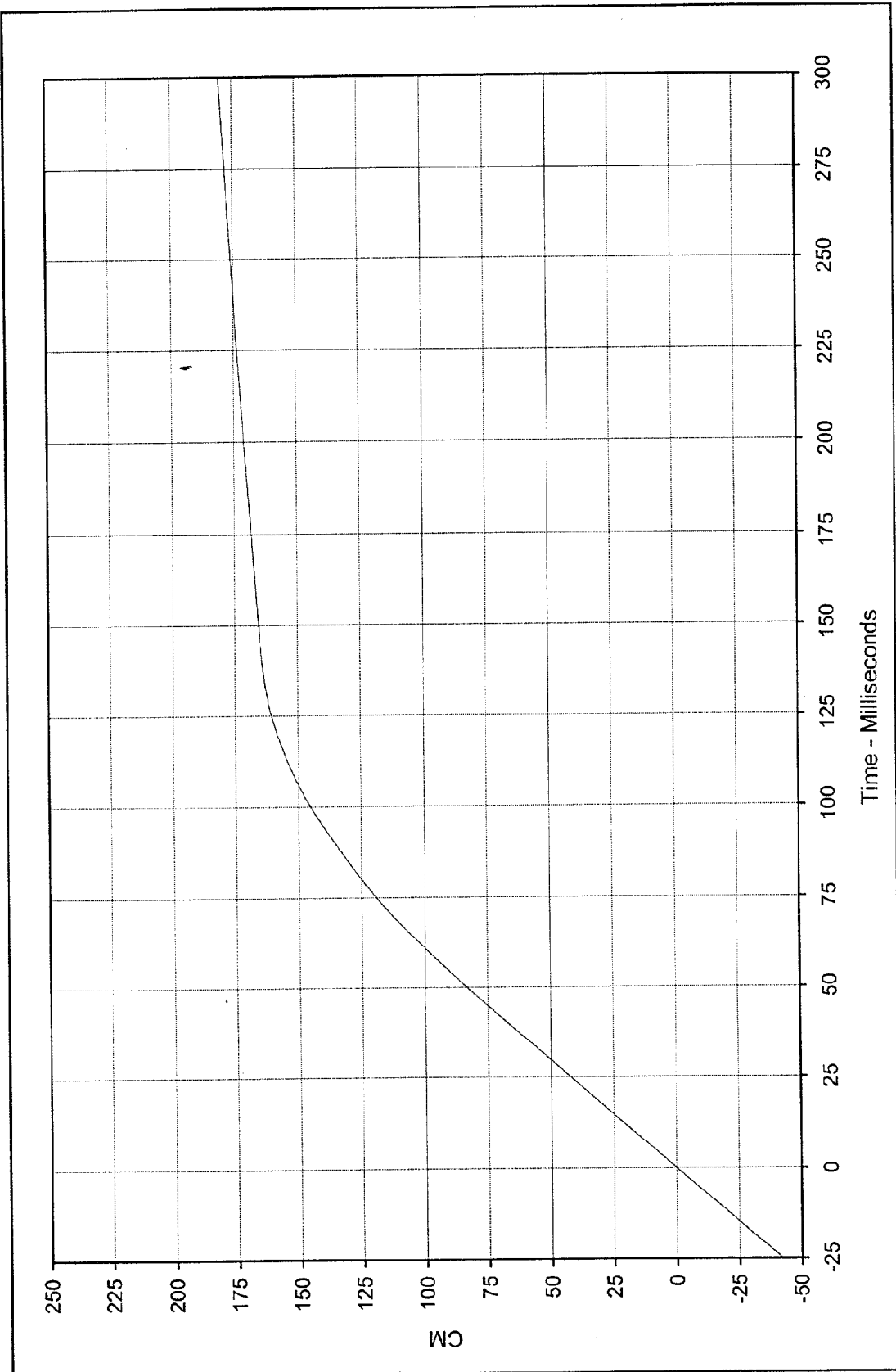




Curve Description: Passenger Pelvis X Velocity Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 61.1 at 7.6 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 3.2 at 293.0 Milliseconds

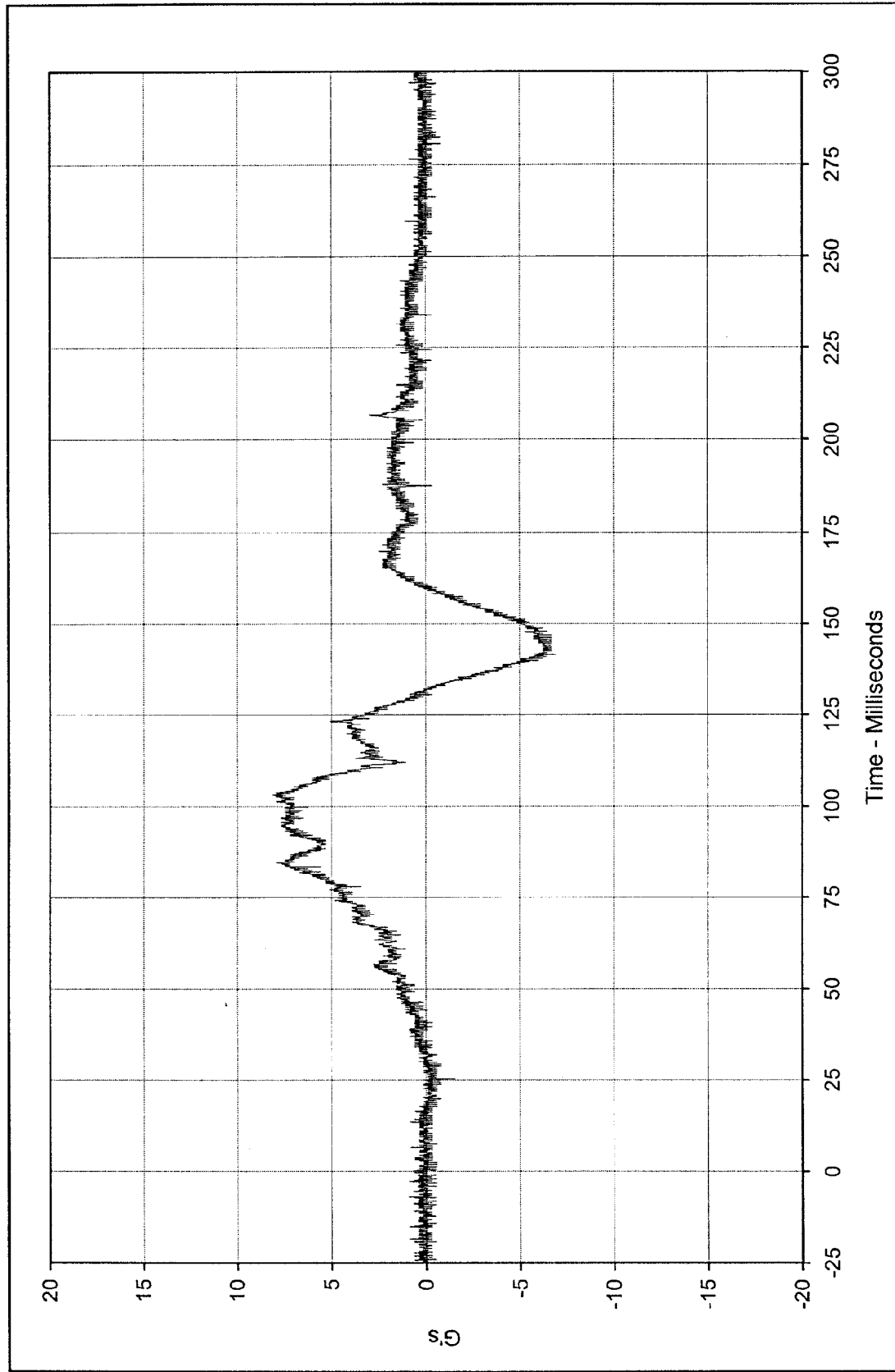


SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN1-064



Curve Description: Passenger Pelvis X Displ. Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 180.3 at 299.9 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.1 at 0.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN2-064





Curve Description: Passenger Pelvis Y Testing Program: 1997 NCAP 40% Offset Impact

Maximum Value: 8.2 at 103.0 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan

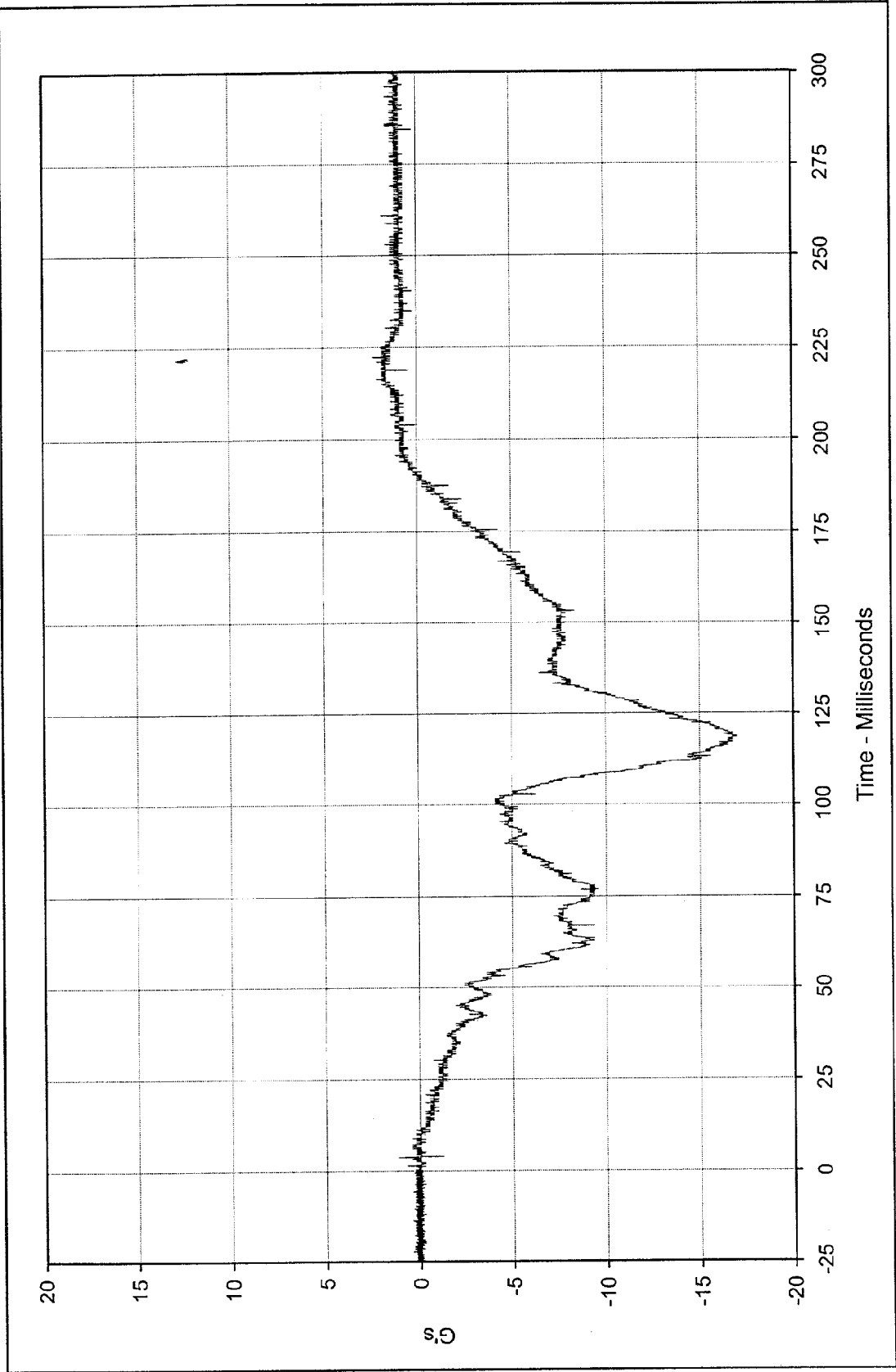
Minimum Value: -6.9 at 141.4 Milliseconds

SAE Filter Class: 1000

Date of Test: 7/17/97

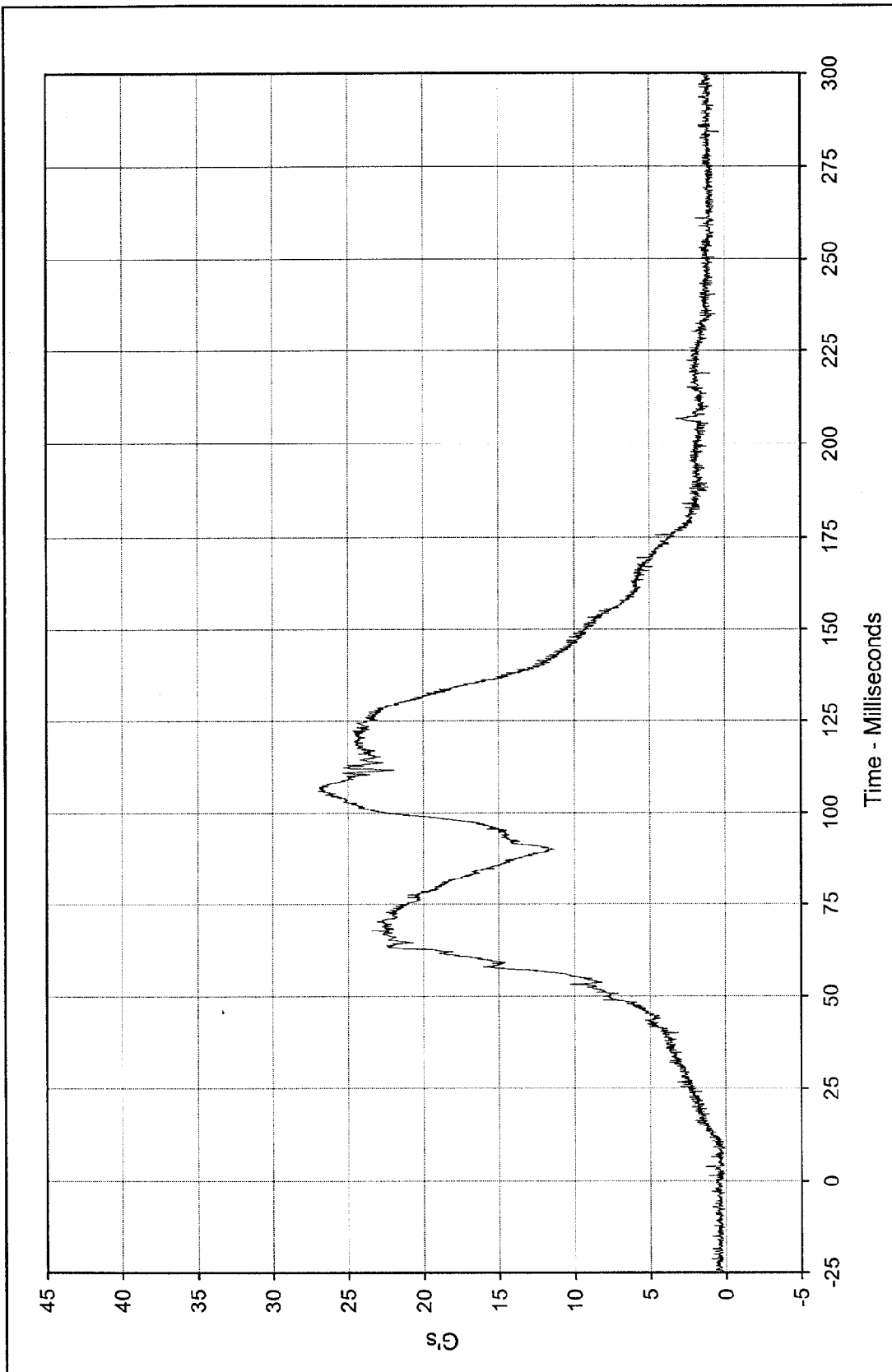
Curve Number: FIL-065





Curve Description: Passenger Pelvis Z Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 2.3 at 222.3 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -17.0 at 118.2 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-066





Curve Description: Passenger Pelvis Resultant Testing Program: 1997 NCAP 40% Offset Impact

Maximum Value: 27.0 at 105.9 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan

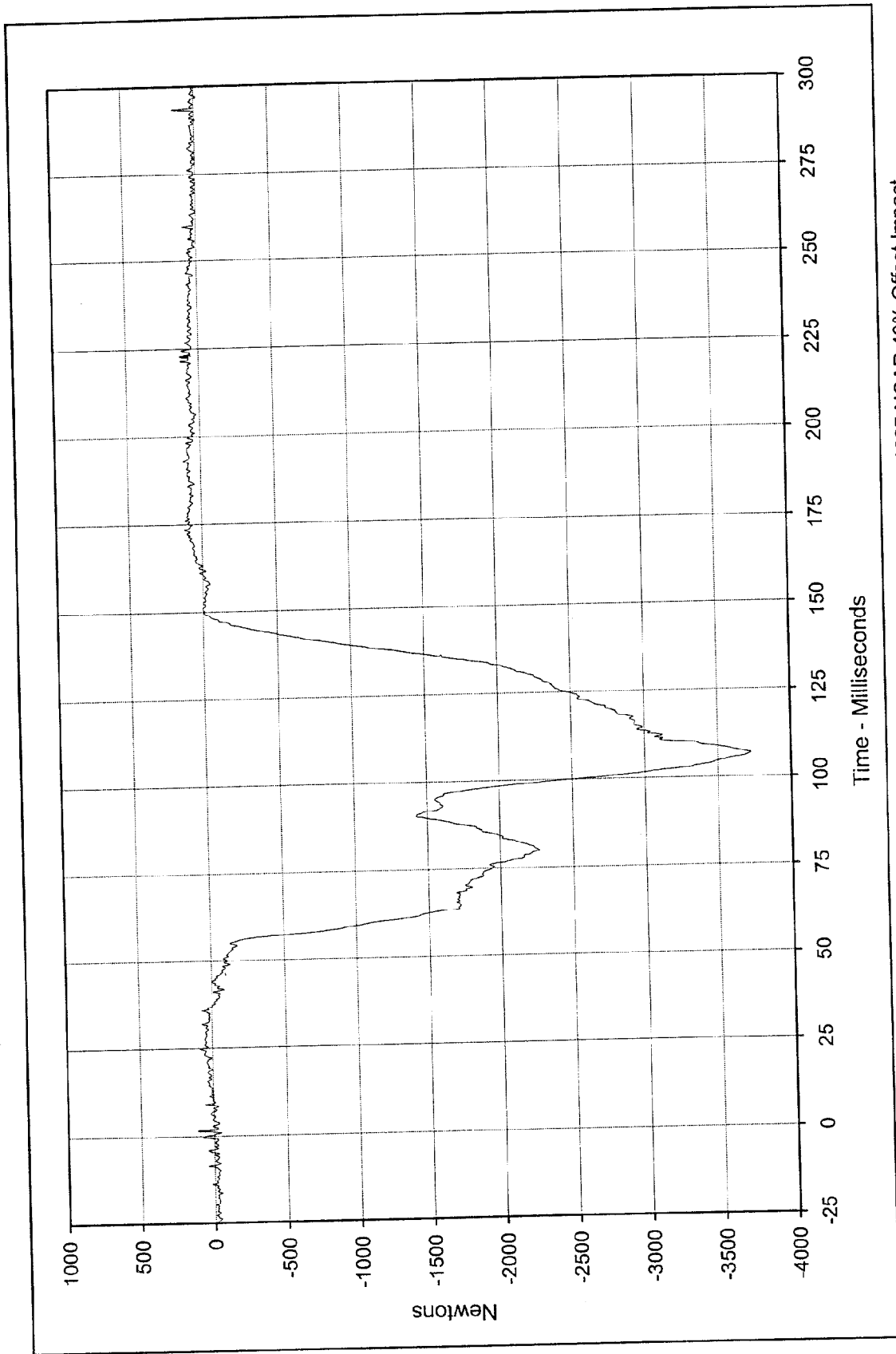
Minimum Value: 0.1 at 2.1 Milliseconds

SAE Filter Class: 1000

Date of Test: 7/17/97

Curve Number: RES-064

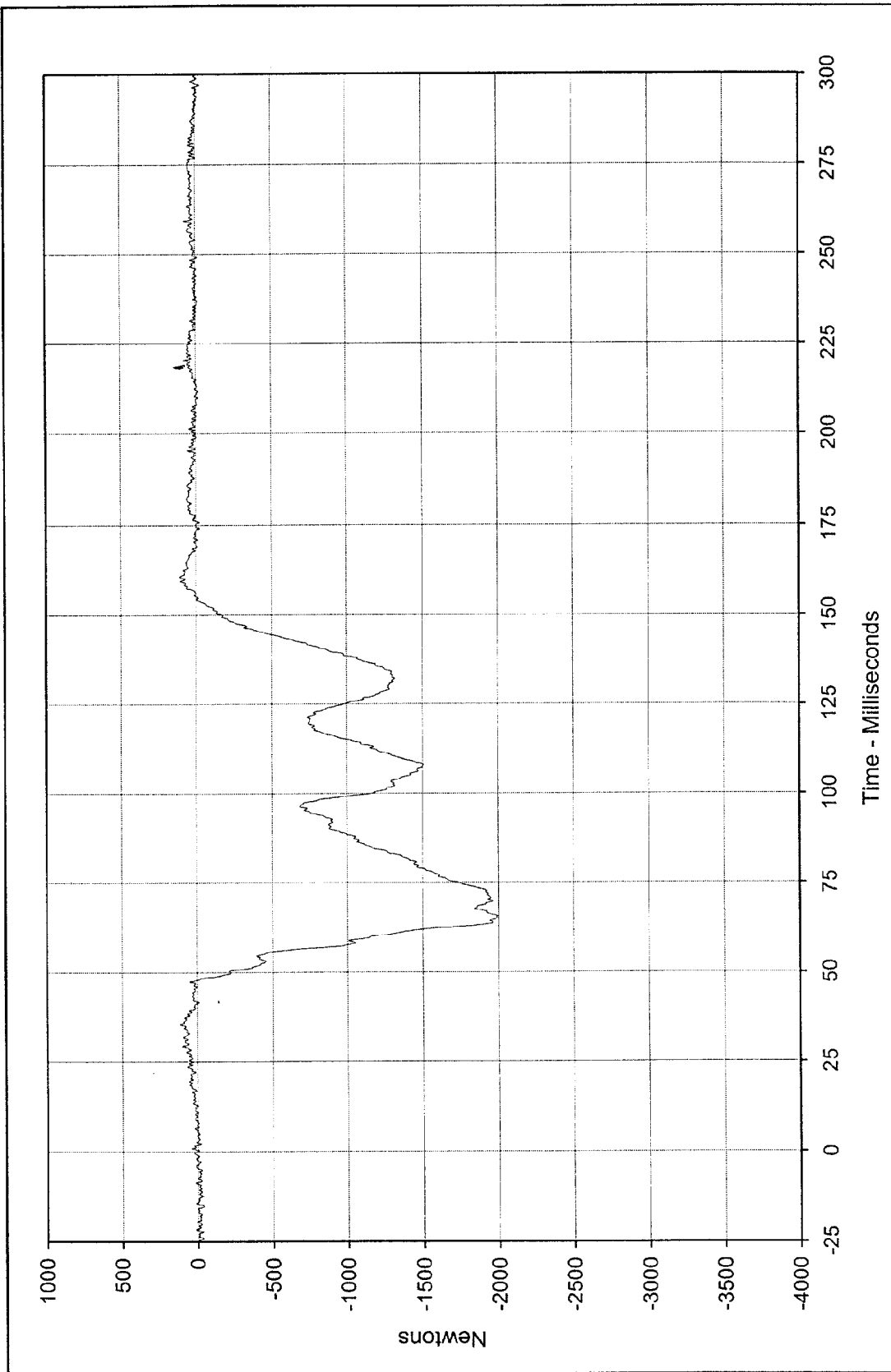




Testing Program: 1997 NCAP 40% Offset Impact
 Test Vehicle: 1996 Ford Taurus 4 Door Sedan



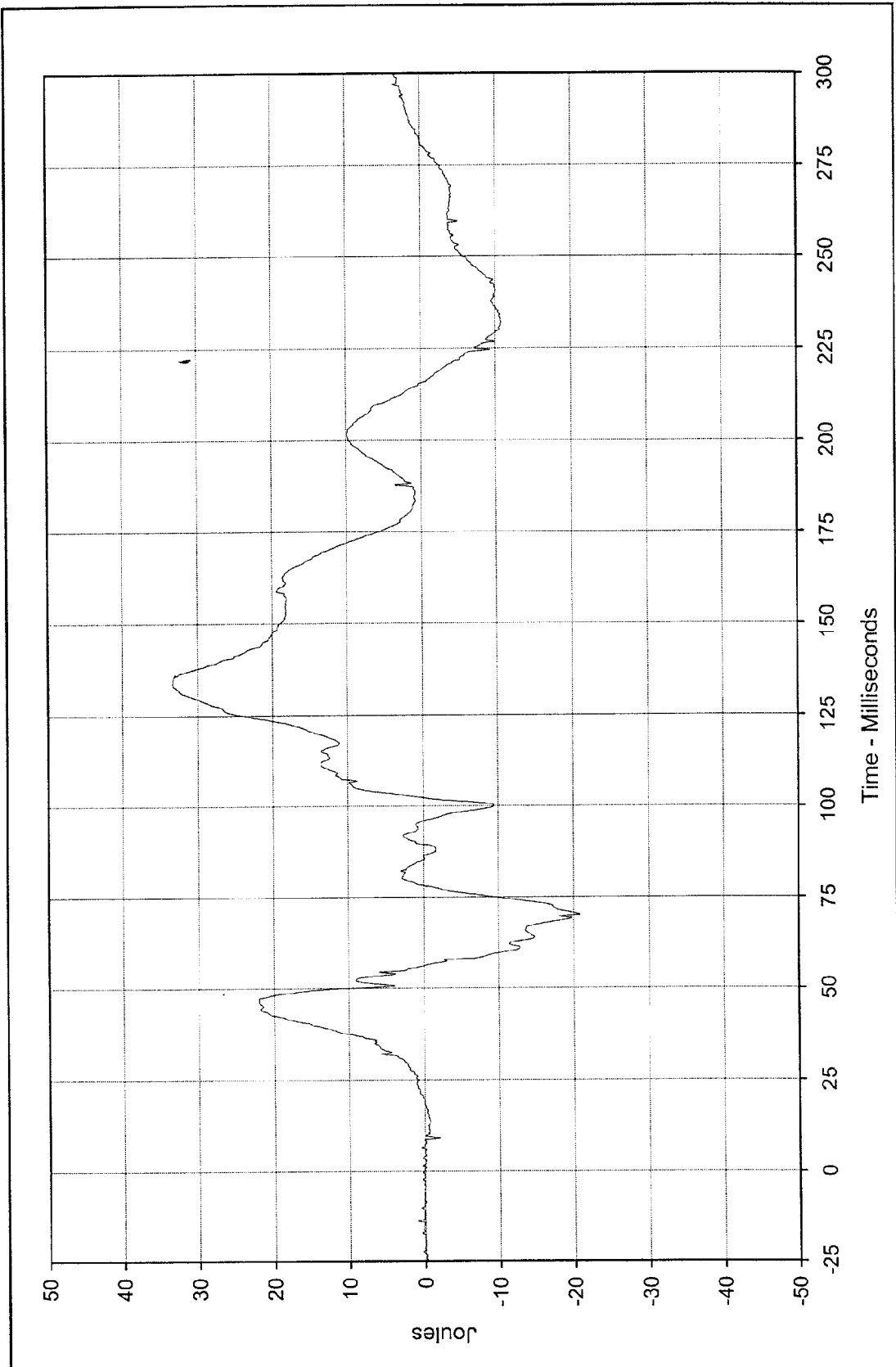
Curve Description: Passenger Left Femur Force
 Maximum Value: 149.1 at 293.7 Milliseconds
 Minimum Value: -3728.1 at 106.8 Milliseconds
 SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-067



Curve Description: Passenger Right Femur Force Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 115.7 at 35.5 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -1993.9 at 65.8 Milliseconds

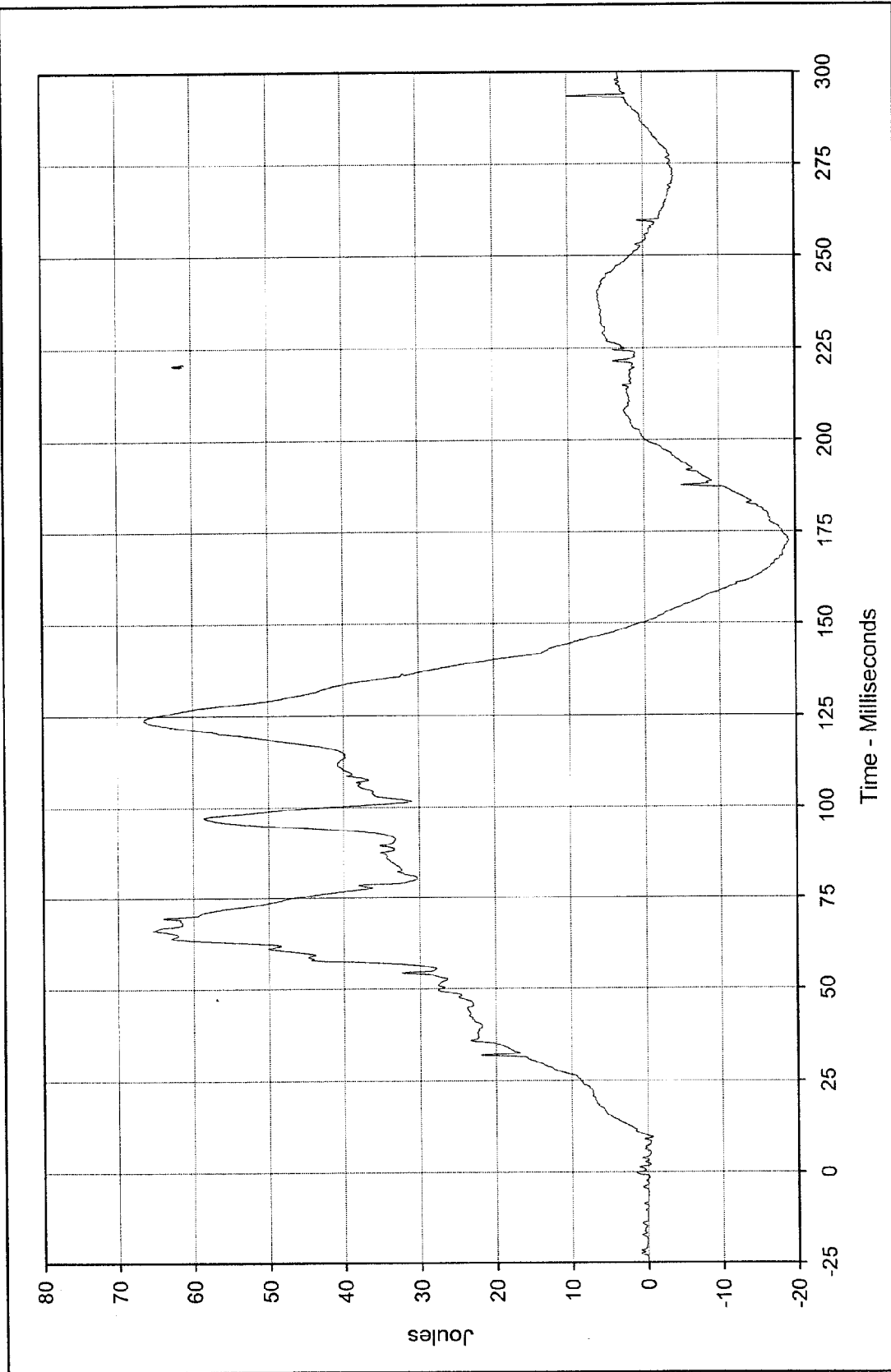


SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-068



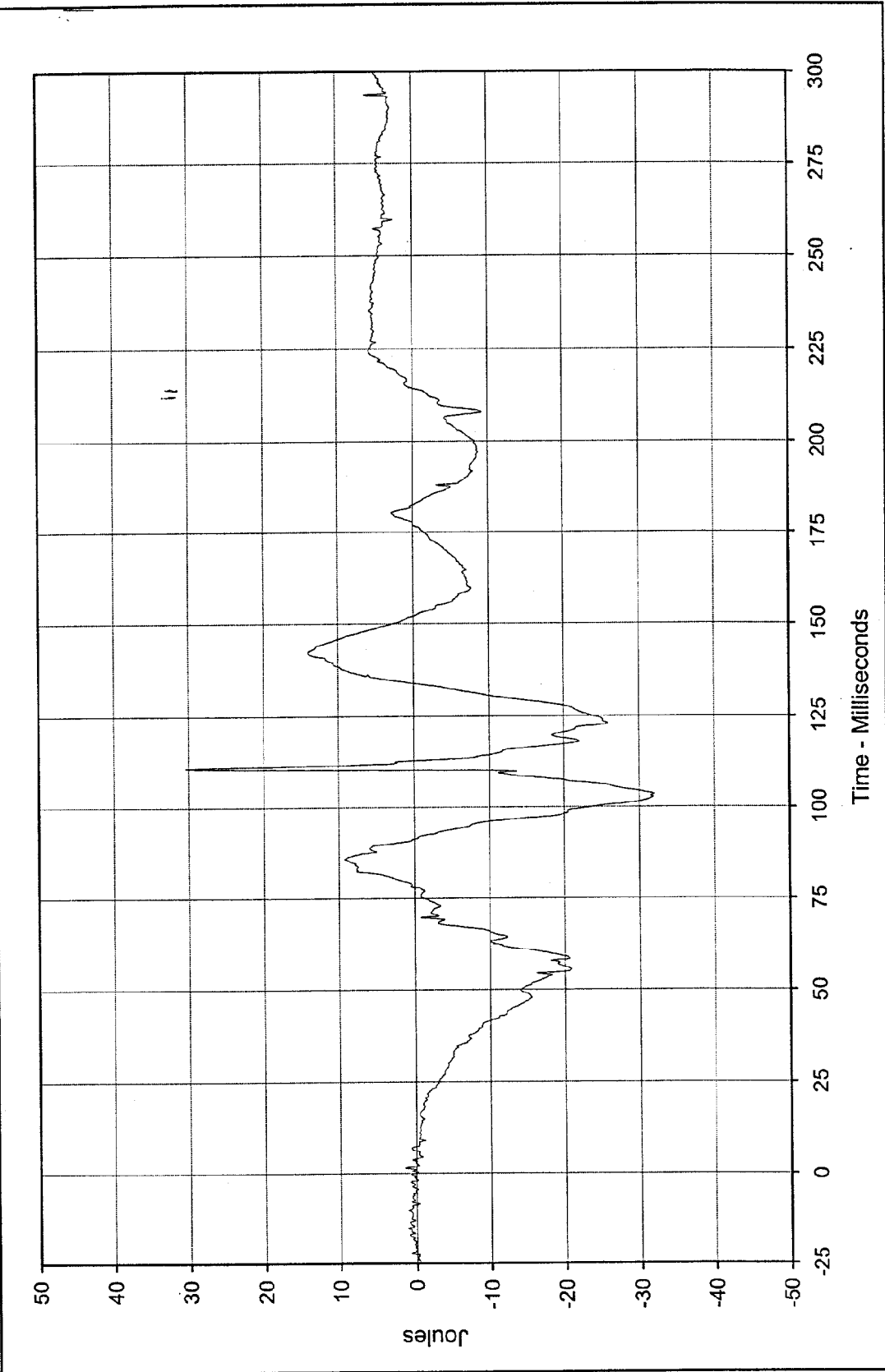
Curve Description: Passenger Left Upper Tibia Moment X Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 33.4 at 134.4 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -20.8 at 70.2 Milliseconds
 SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-069





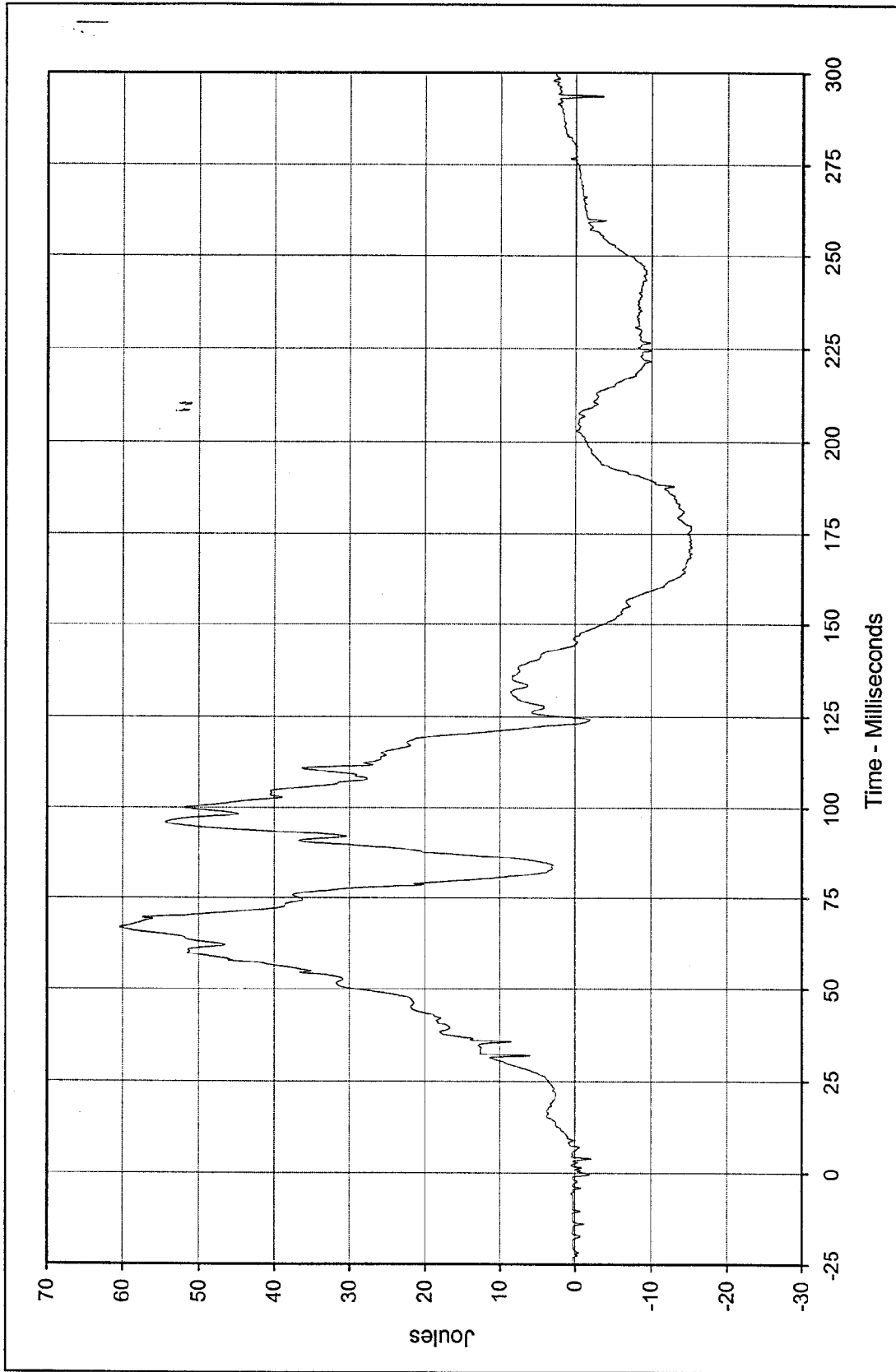
Curve Description: Passenger Left Upper Tibia Moment Y Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 66.5 at 124.0 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -19.2 at 172.4 Milliseconds
 SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-070





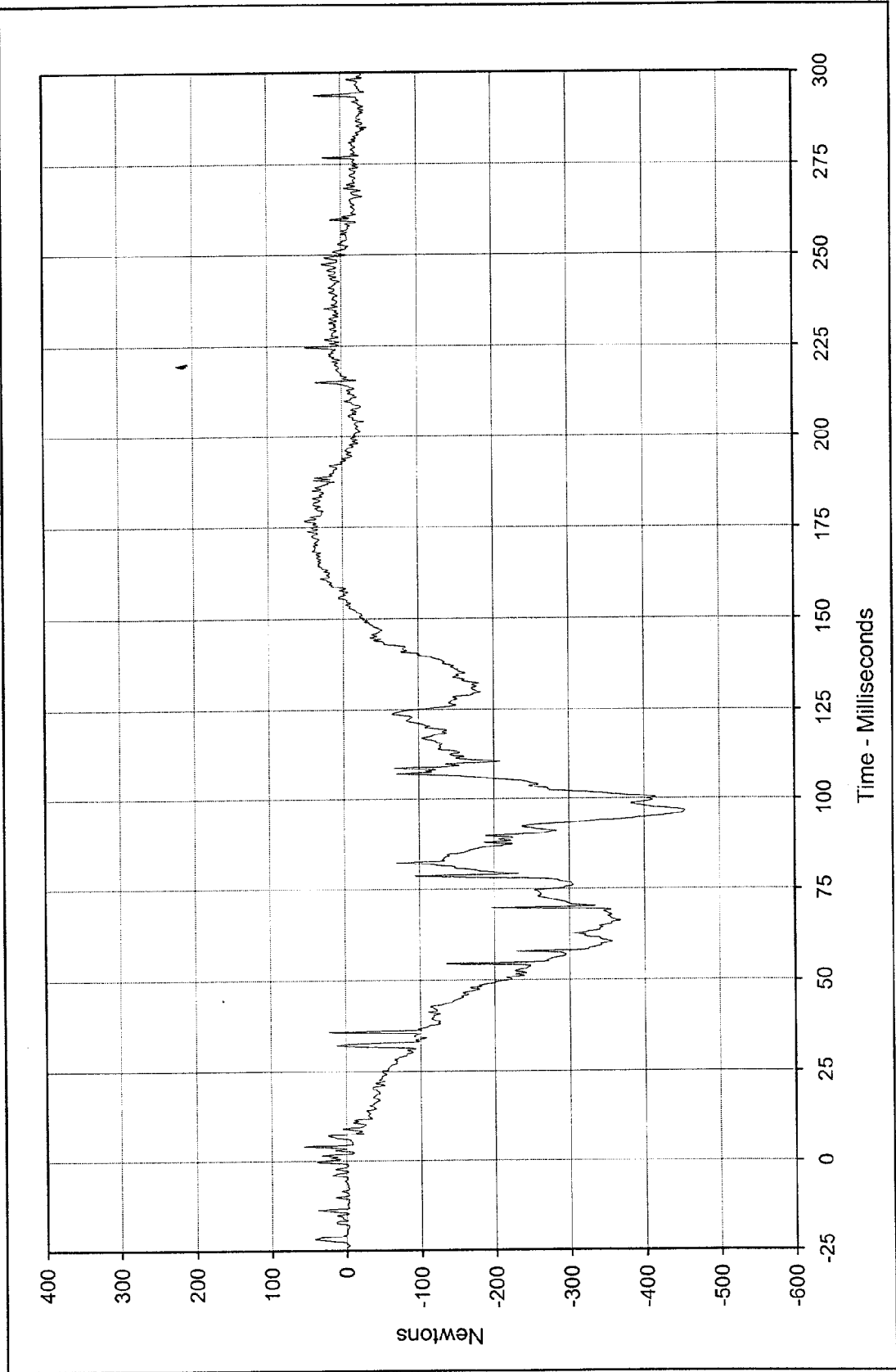
Curve Description: Passenger Right Upper Tibia Moment X Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 30.5 at 110.7 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -31.9 at 103.4 Milliseconds
 SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-071





Curve Description: Passenger Right Upper Tibia Moment Y Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 60.4 at 66.9 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -15.3 at 171.3 Milliseconds
 SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-072

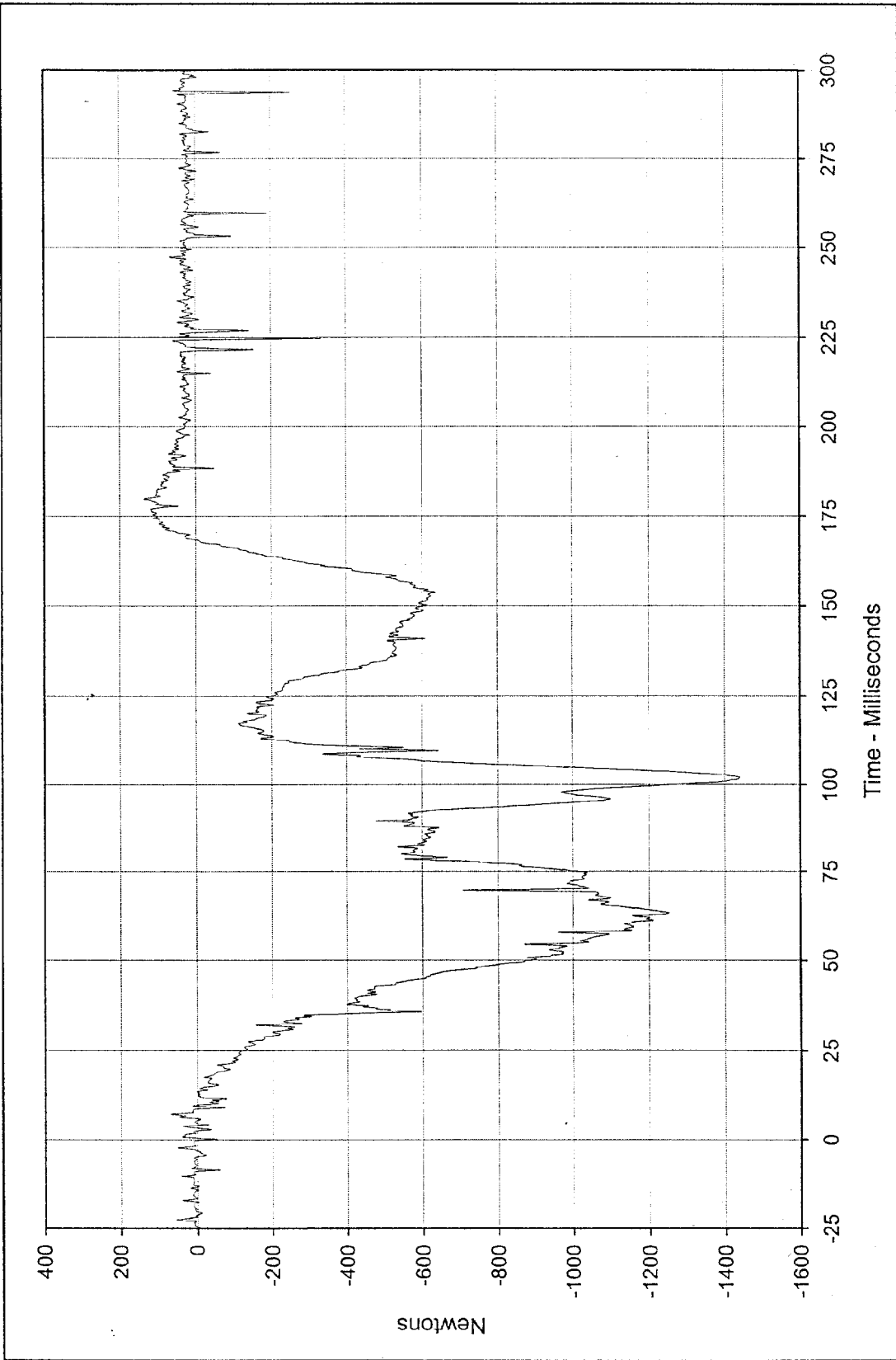




Curve Description: Passenger Left Lower Tibia Force Y
 Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 56.3 at 4.0 Milliseconds
 Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -453.9 at 96.6 Milliseconds

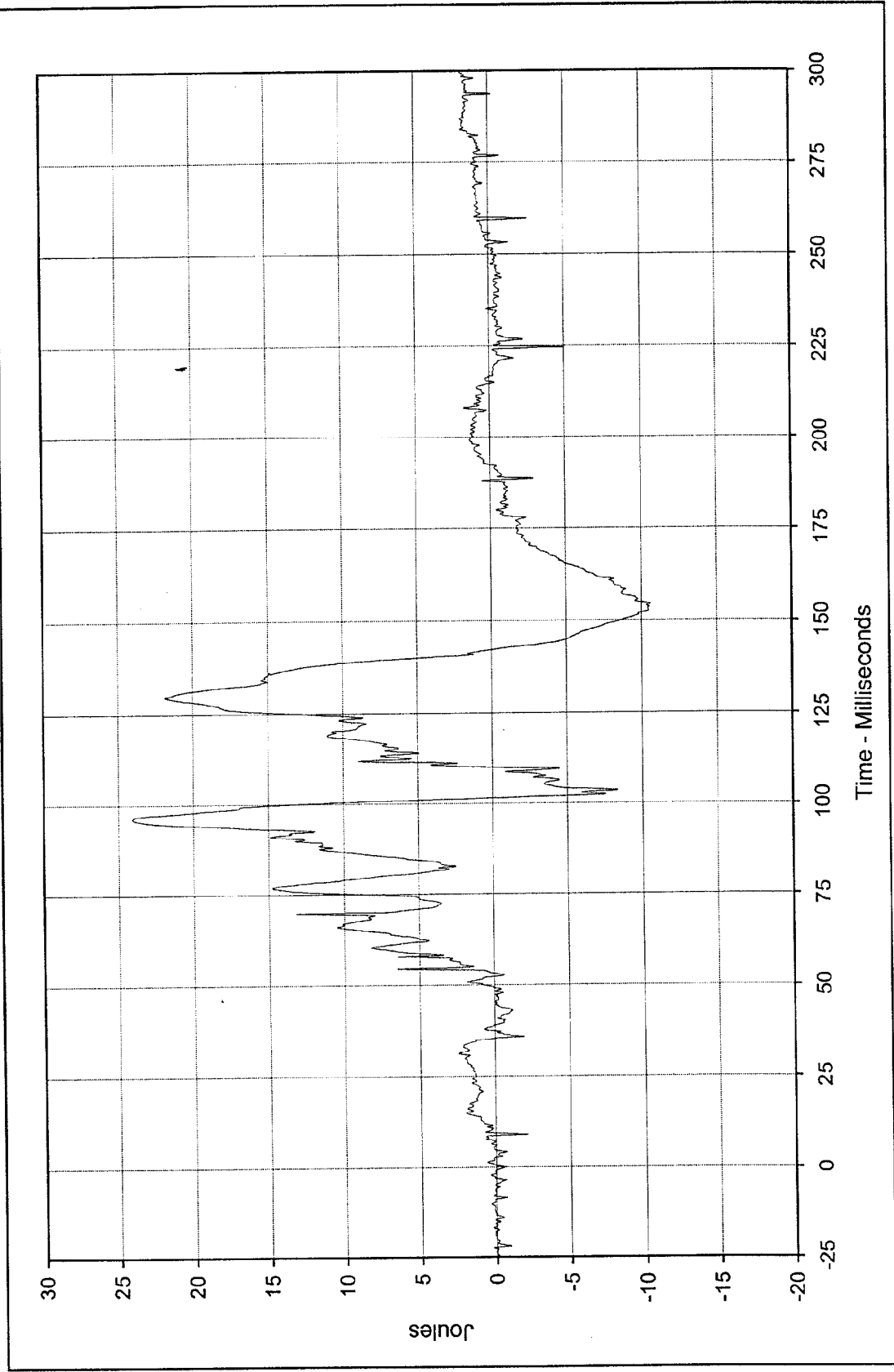


SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-073



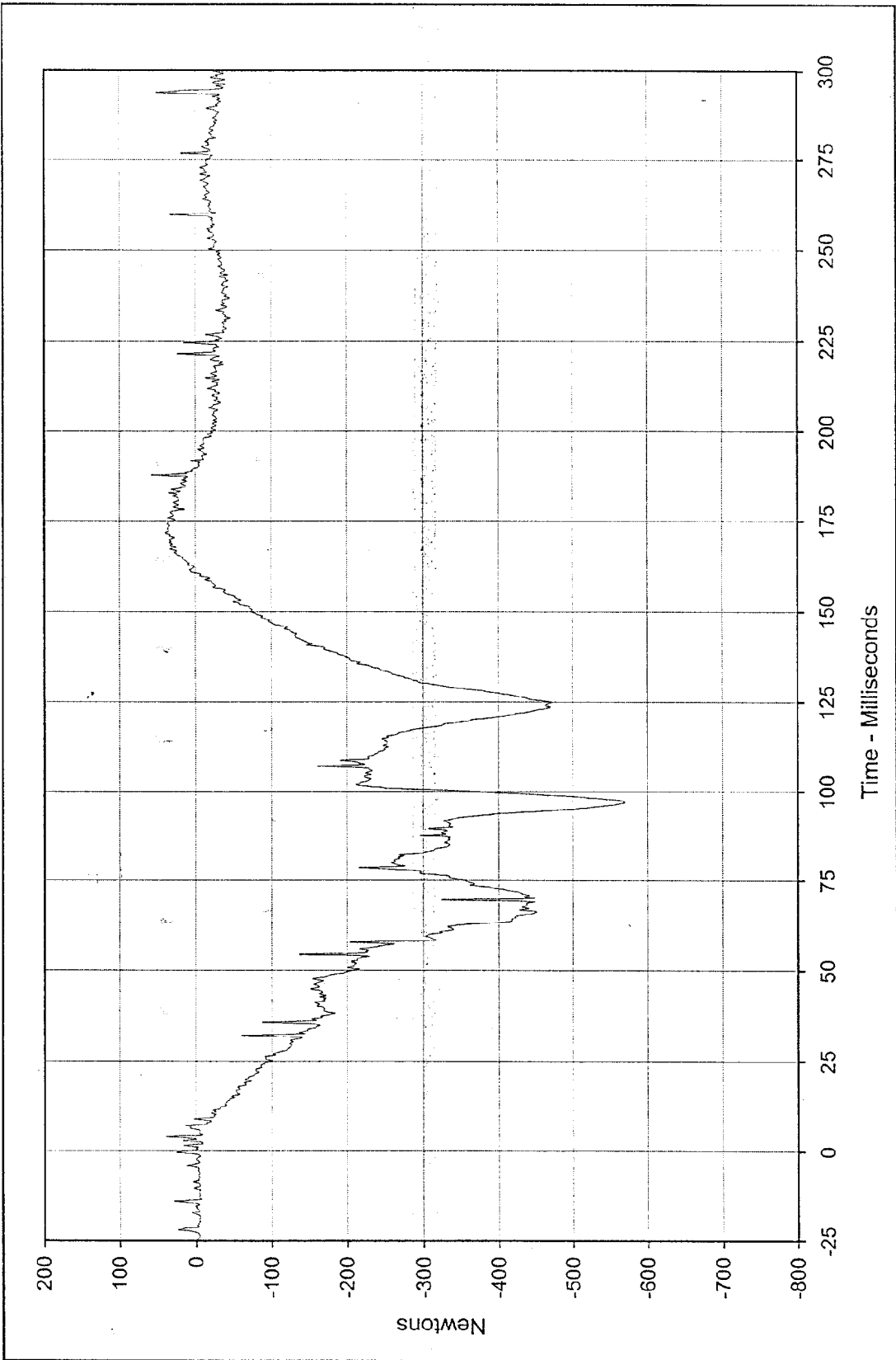
Curve Description: Passenger Left Lower Tibia force Z Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 135.9 at 179.9 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -1440.5 at 102.0 Milliseconds
 SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-074





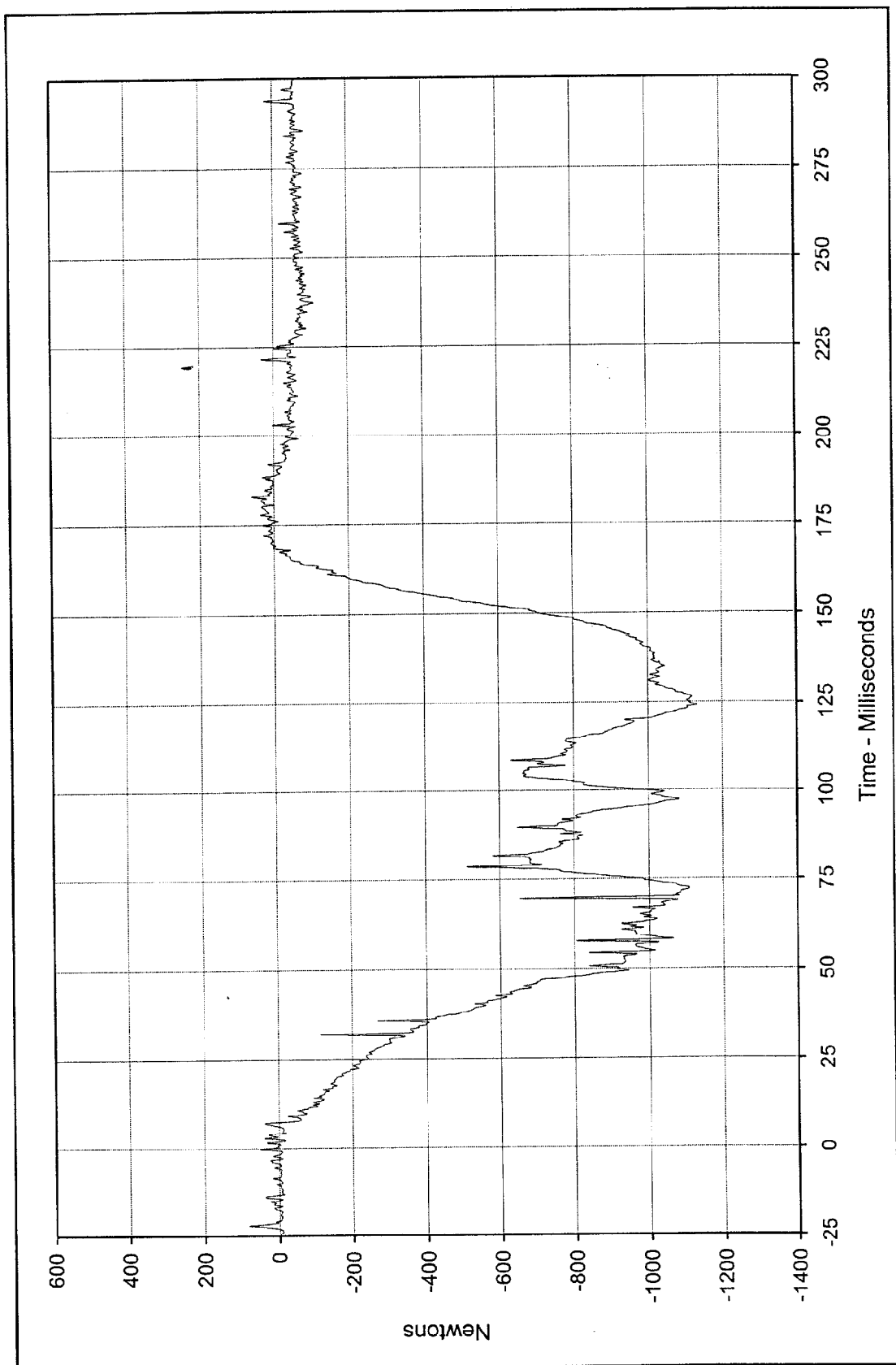
Curve Description: Passenger Left Lower Tibia Moment X Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 24.1 at 96.0 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -10.6 at 154.4 Milliseconds
 SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-075





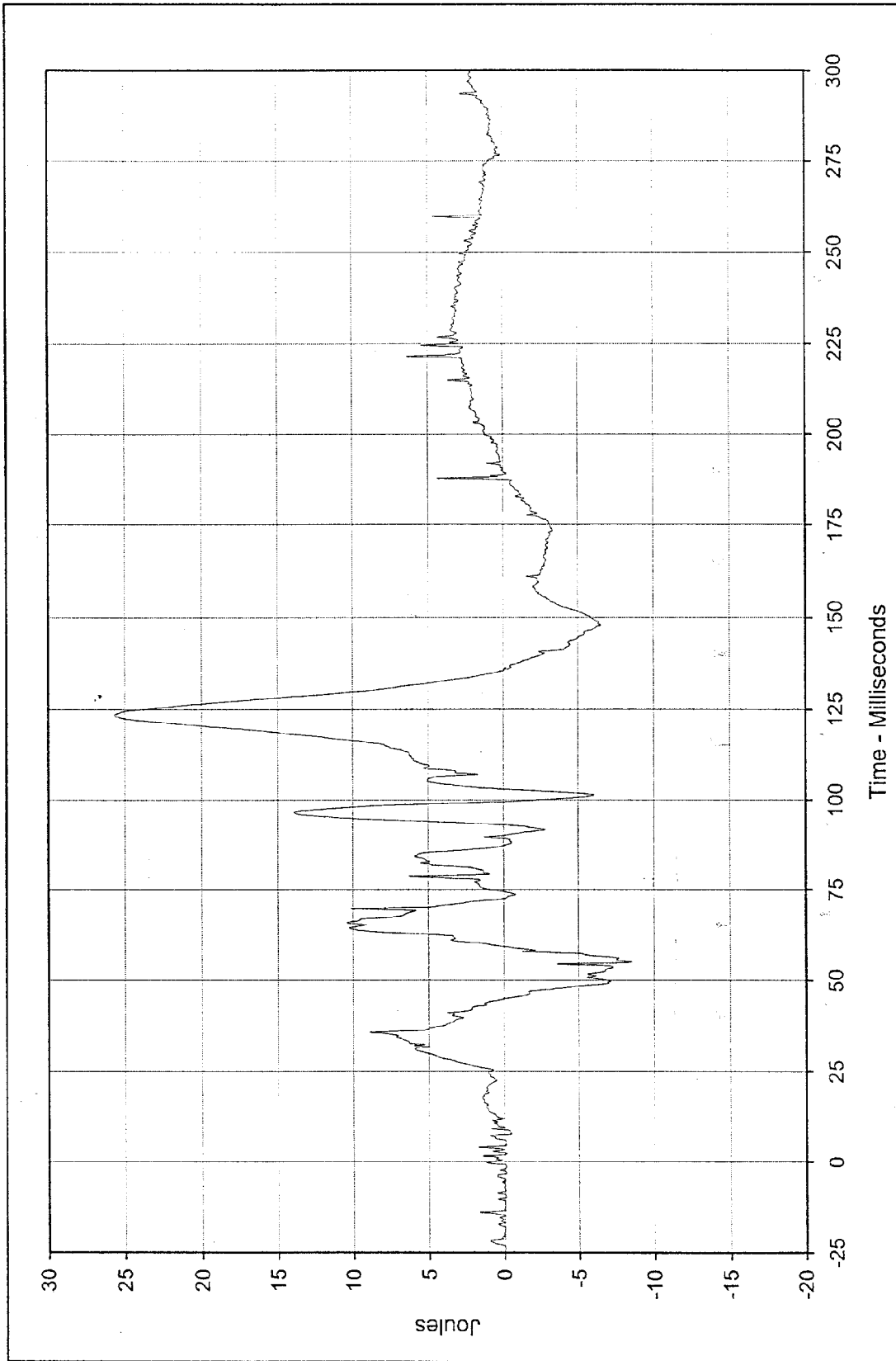
Curve Description: Passenger Right Lower Tibia Force Y Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 57.5 at 187.9 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -570.1 at 97.0 Milliseconds
 SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-076





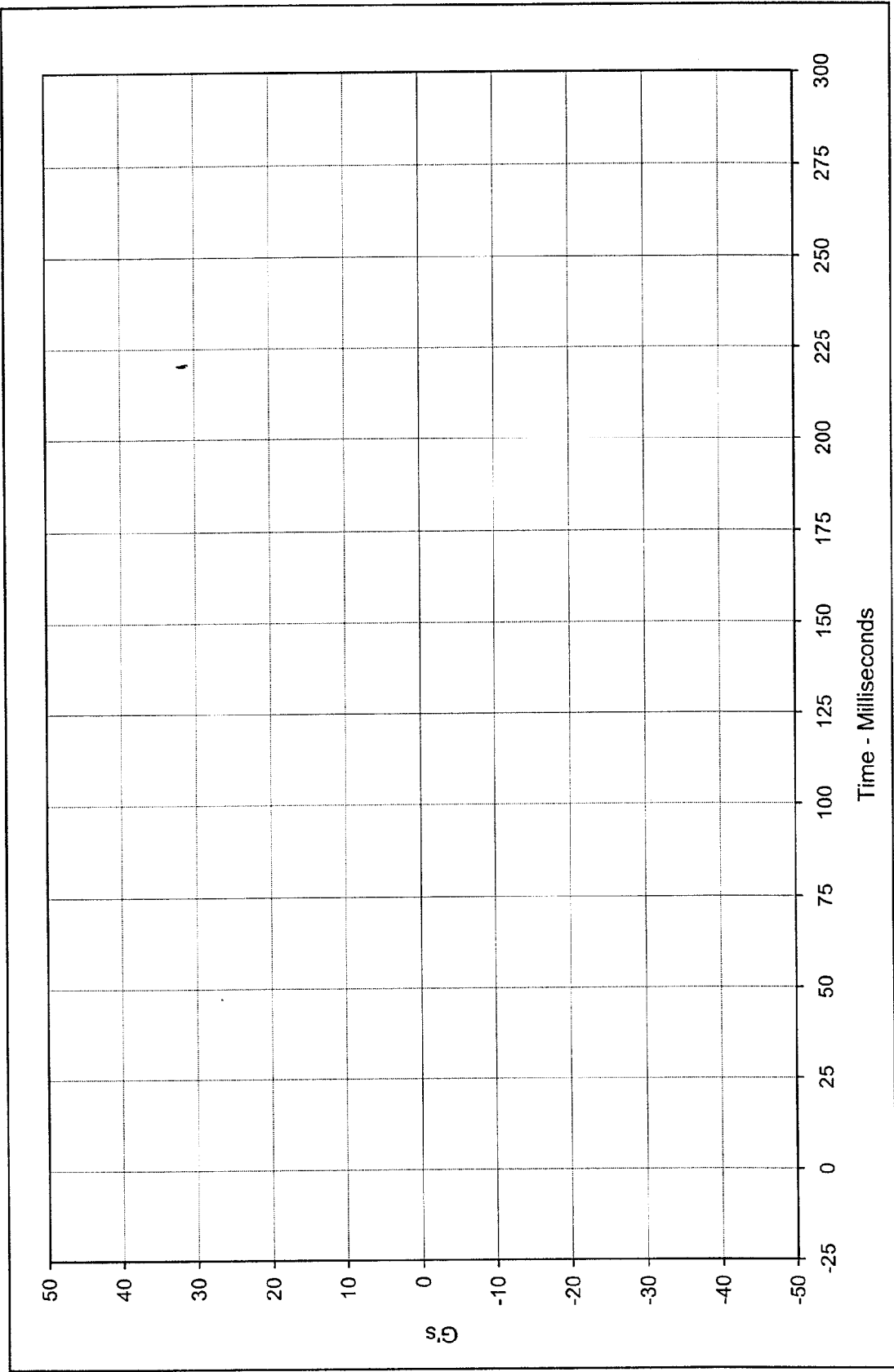
Curve Description: Passenger Right Lower Tibia Force Z Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 60.9 at 182.9 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -1132.3 at 124.1 Milliseconds
 SAE Filter Class: 600
 Date of Test: 7/17/97
 Curve Number: FIL-077





Curve Description:	Passenger Right lower Tibia Moment X	Testing Program	1997 NCAP 40% Offset Impact
Maximum Value:	25.6 at 123.5 Milliseconds	Test Vehicle:	1996 Ford Taurus 4 Door Sedan
Minimum Value:	-8.5 at 54.9 Milliseconds		
SAE Filter Class:	600		
Date of Test:	7/17/97		
Curve Number:	FIL-078		

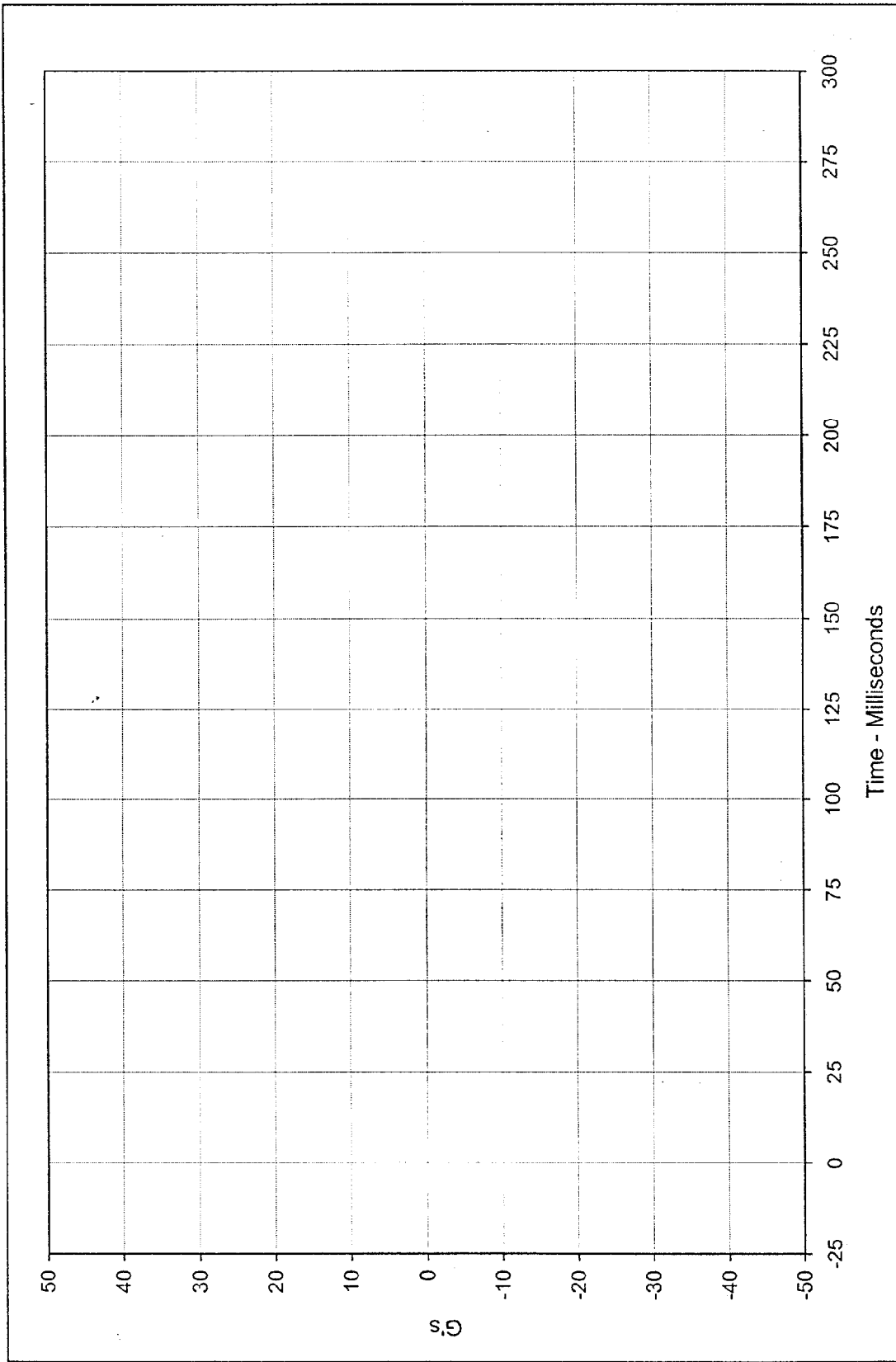




Curve Description: Passenger Left Foot Aft X * Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 0.0 at 0.0 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.0 at 0.0 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-079



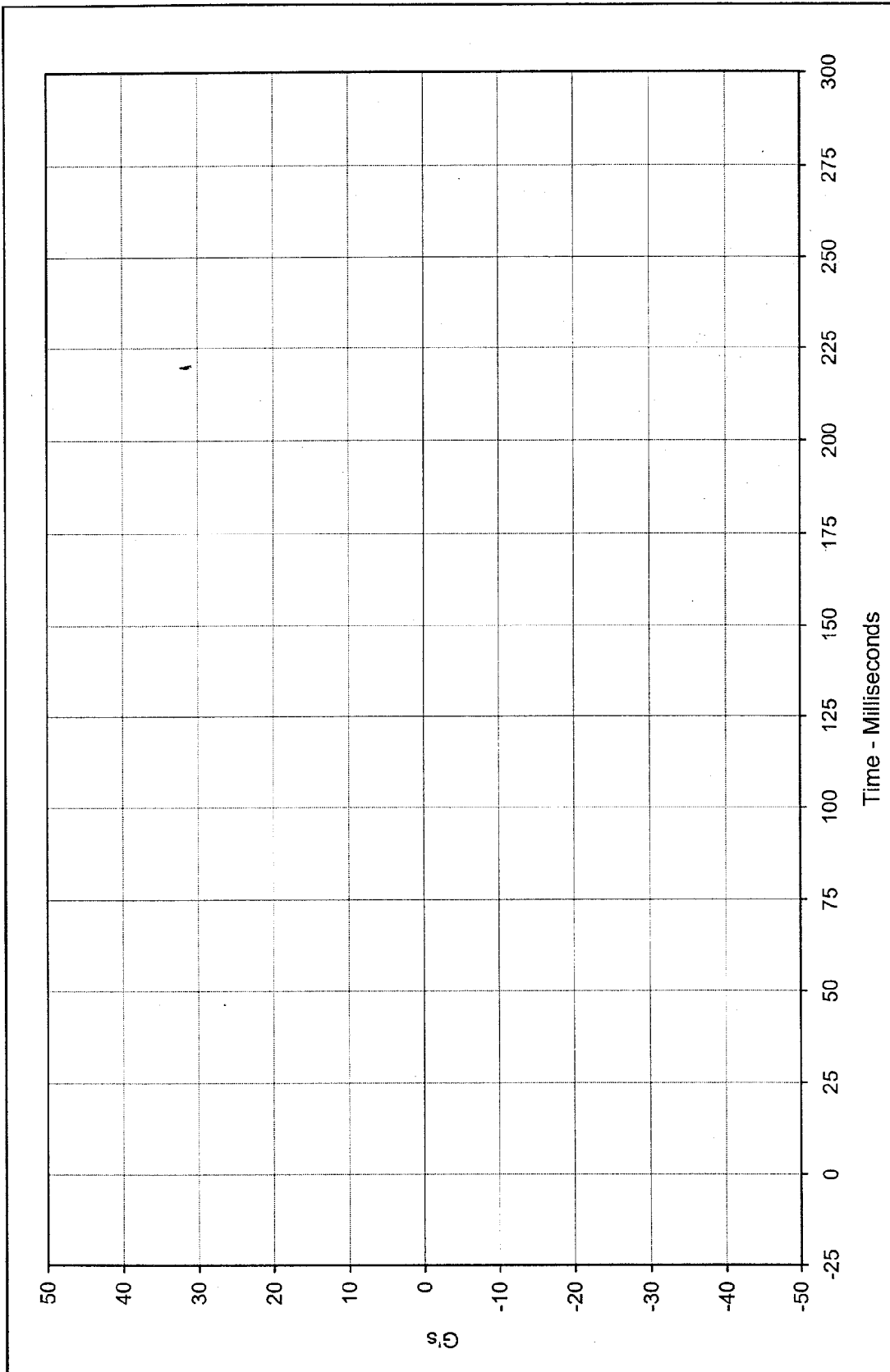
*Channel Failed, No Data



Curve Description: Passenger Left Foot Aft Z * Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 0.0 at 0.0 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.0 at 0.0 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-080



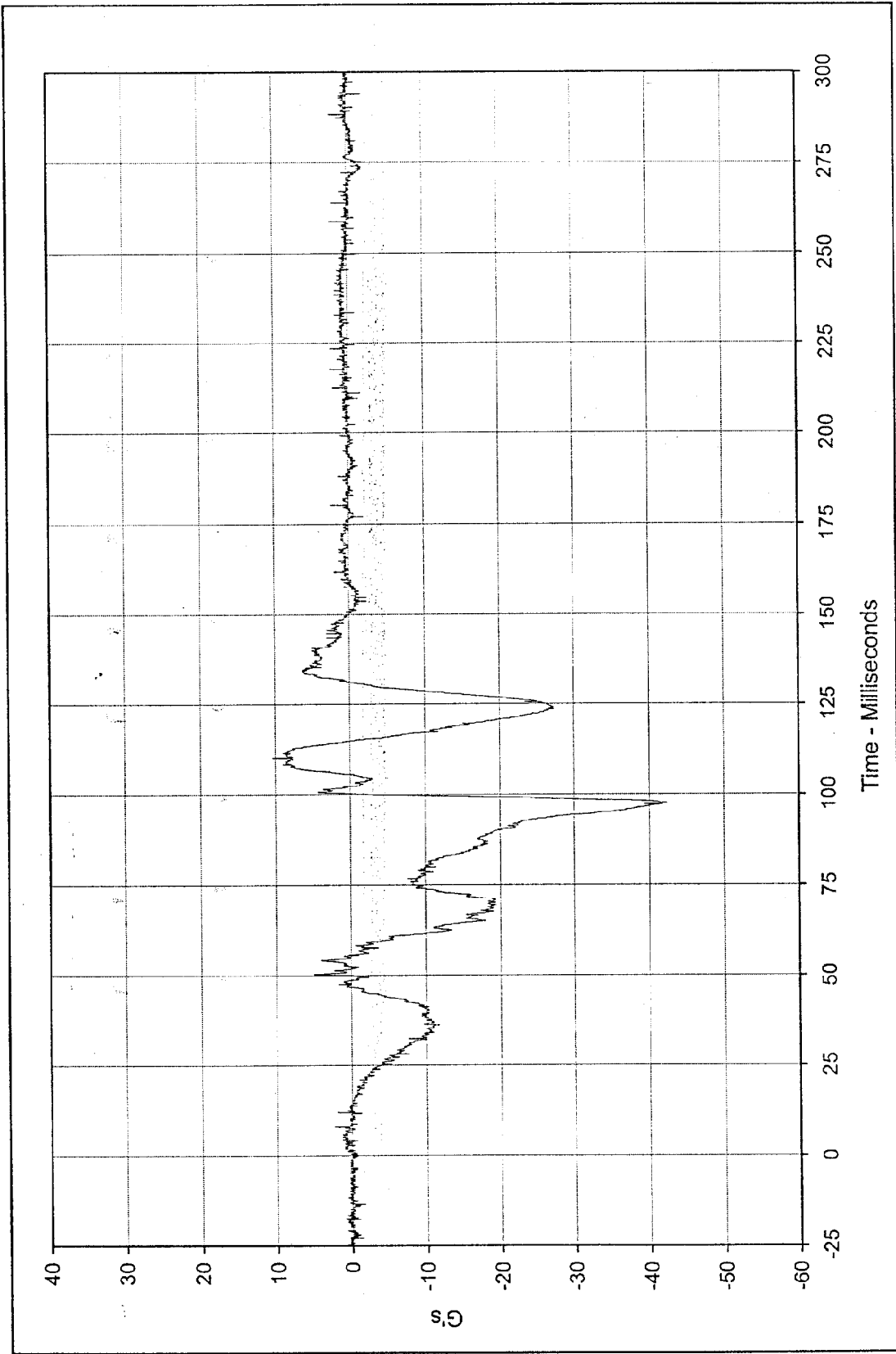
*Channel Failed, No Data



Curve Description: Passenger Left Foot Fore Z * Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 0.0 at 0.0 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.0 at 0.0 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-081

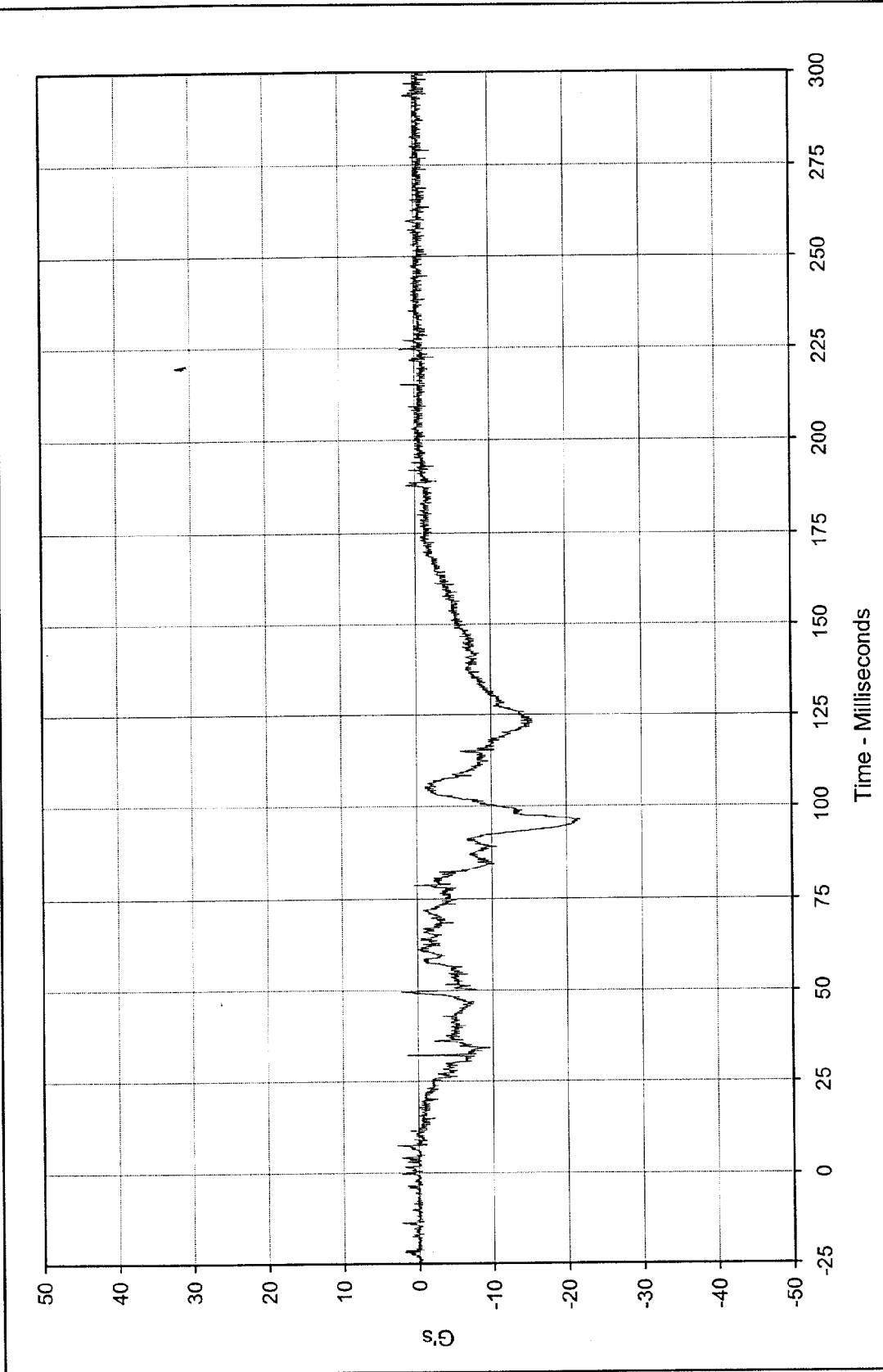


*Channel Failed, No Data



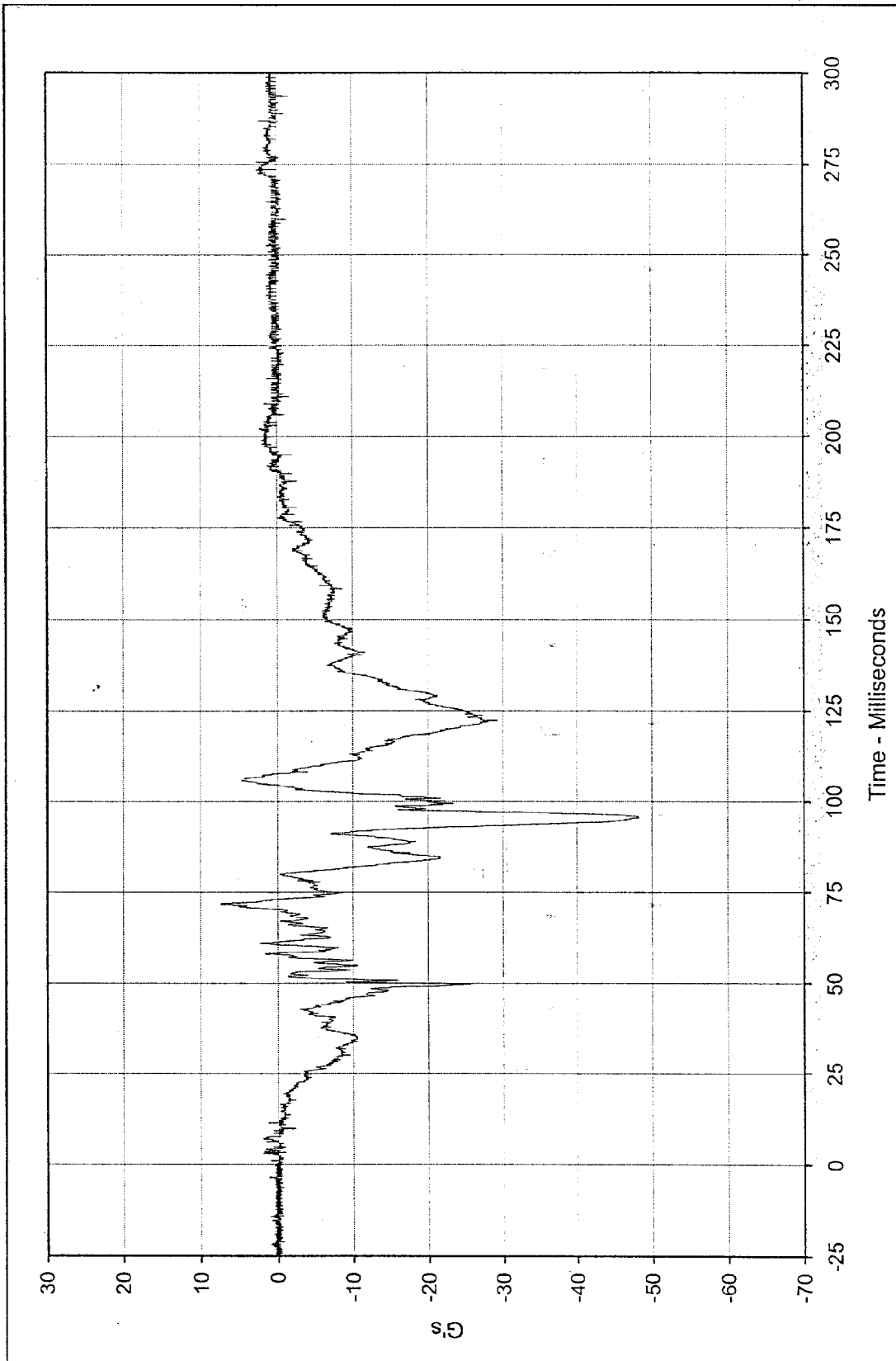
Curve Description: Passenger Right Foot Aft X Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 10.3 at 110.2 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -42.3 at 97.4 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-082





Curve Description: Passenger Right Foot Aft Z Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 2.8 at 7.4 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -21.8 at 96.3 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-083

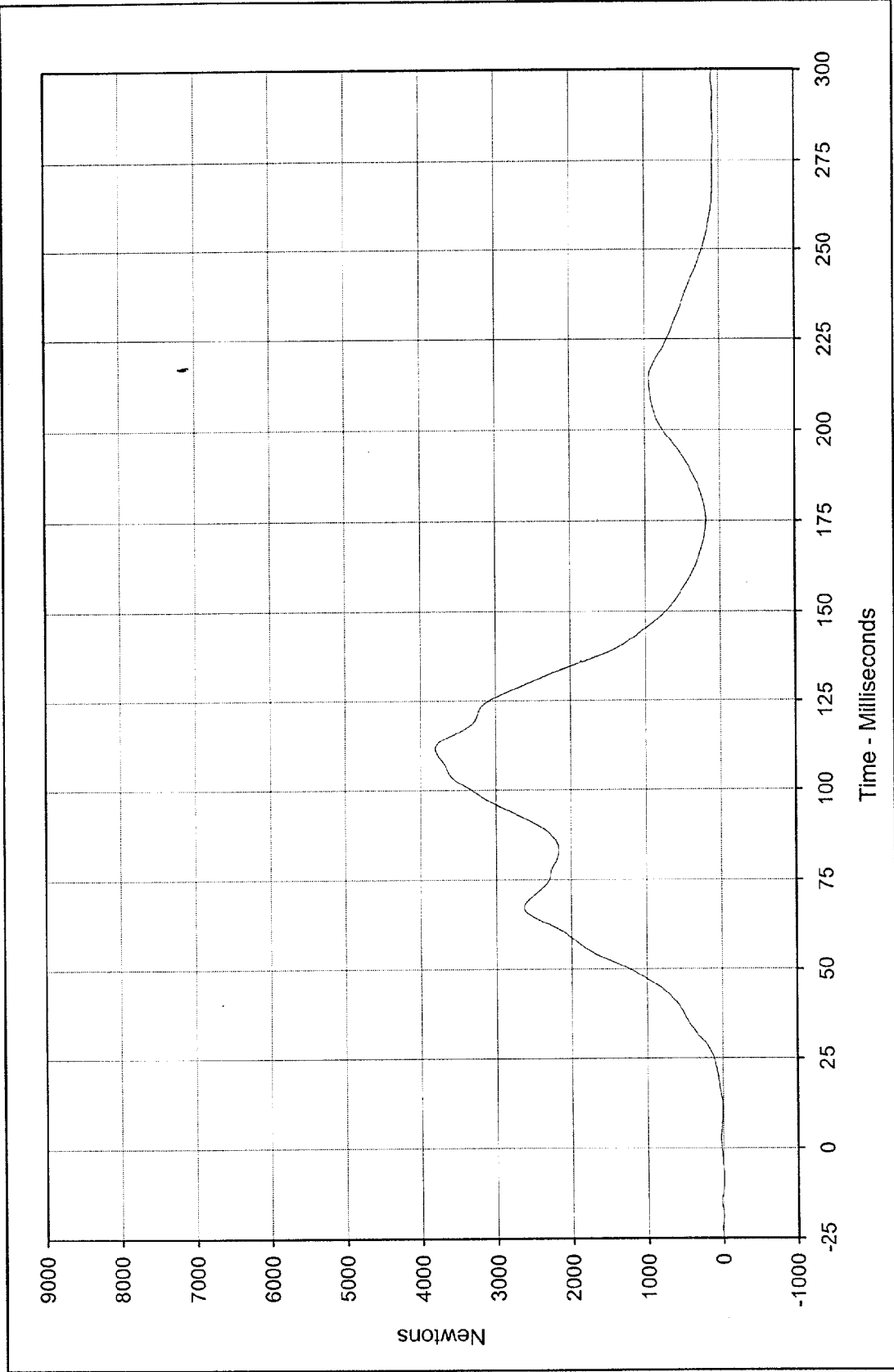




Curve Description: Passenger Right Foot Fore Z Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 7.4 at 71.7 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -48.2 at 95.4 Milliseconds

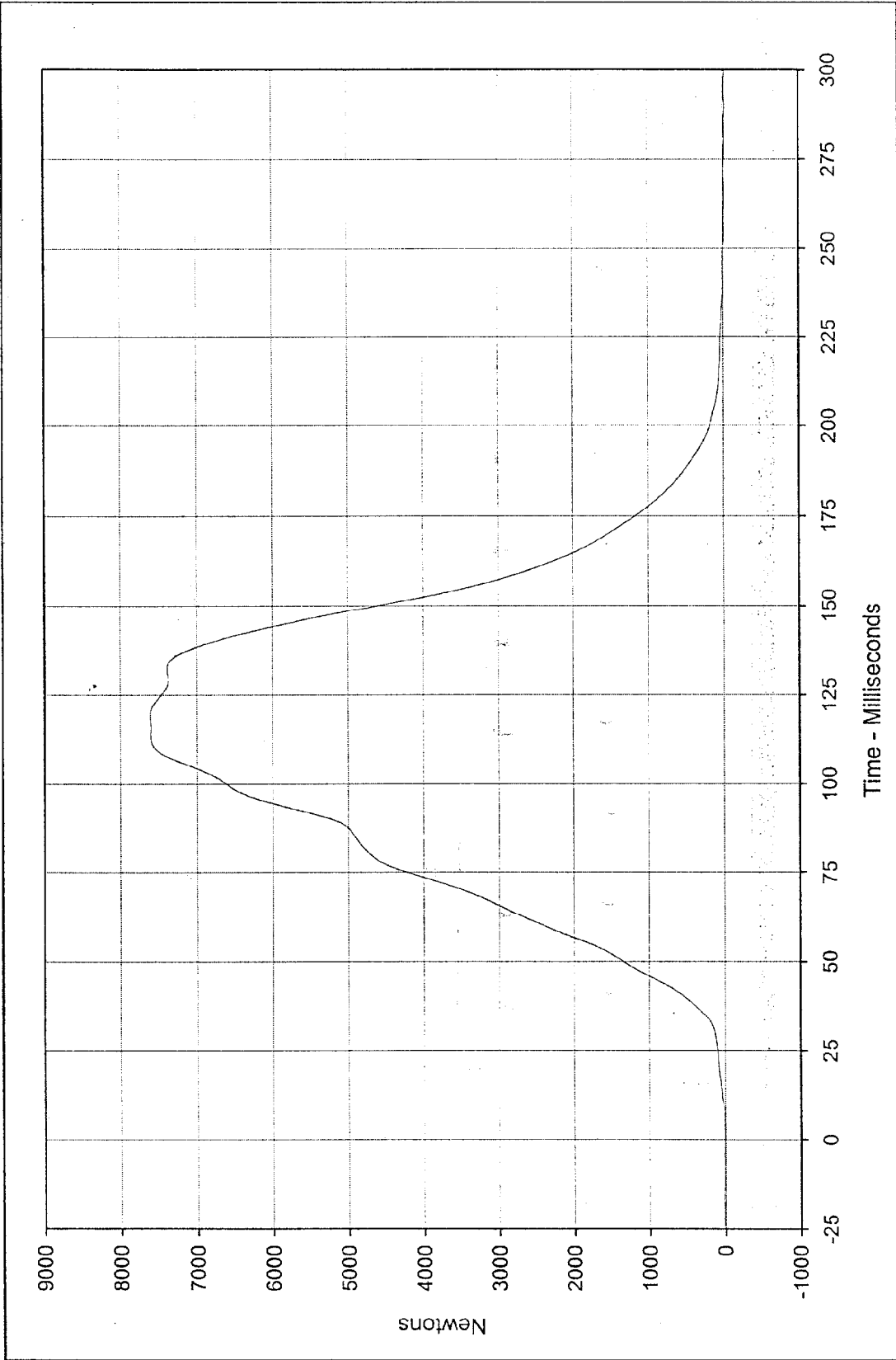


SAE Filter Class: 1000
 Date of Test: 7/17/97
 Curve Number: FIL-084



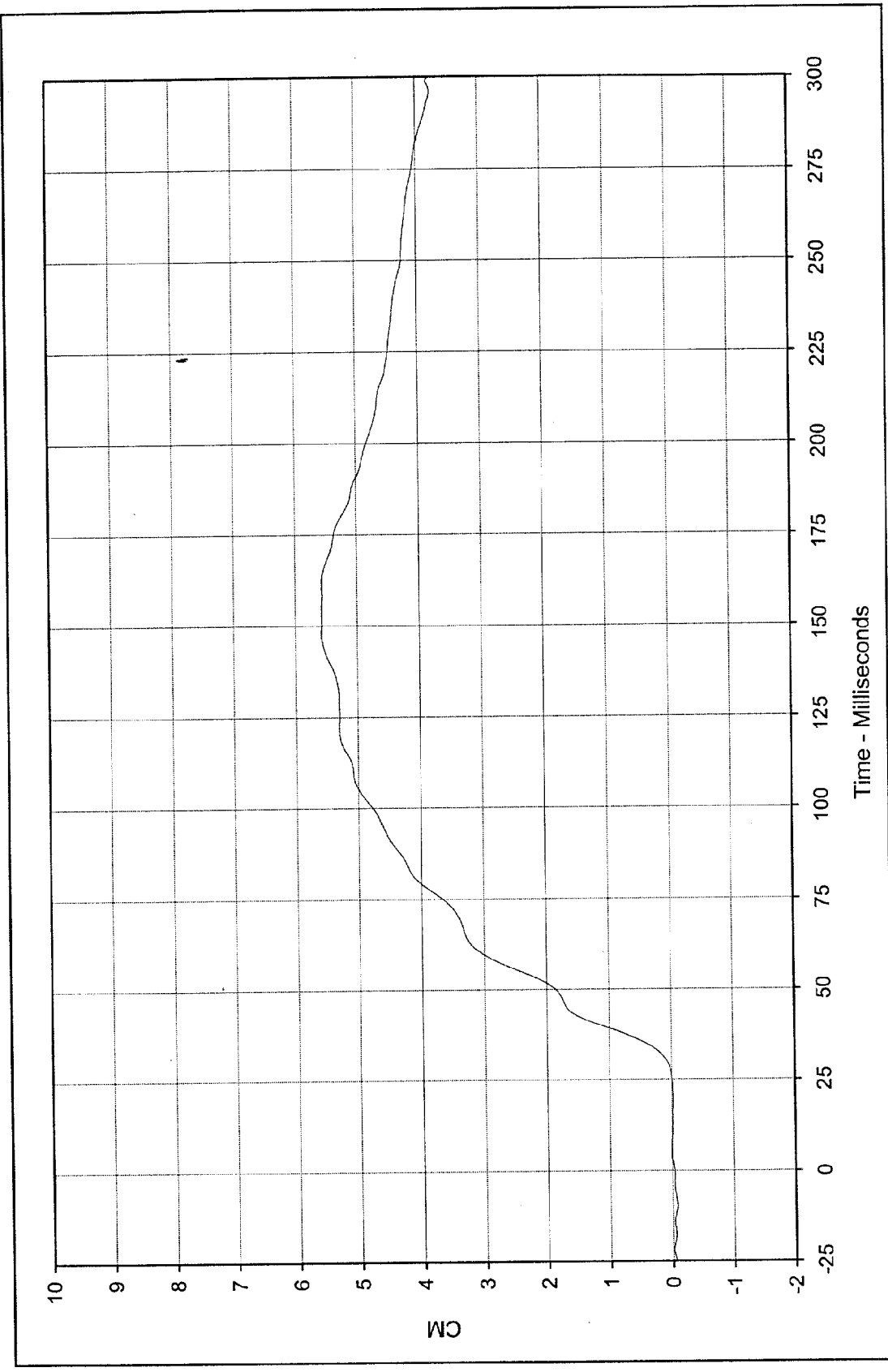
Curve Description: Passenger Lap Belt Force Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 3804.4 at 111.6 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 6.4 at 9.7 Milliseconds
 SAE Filter Class: 60
 Date of Test: 7/17/97
 Curve Number: FIL-085





Curve Description:	Passenger Shoulder Belt Force	Testing Program	1997 NCAP 40% Offset Impact
Maximum Value:	7608.0 at 119.2 Milliseconds	Test Vehicle:	1996 Ford Taurus 4 Door Sedan
Minimum Value:	-19.8 at 289.7 Milliseconds		
SAE Filter Class:	60		
Date of Test:	7/17/97		
Curve Number:	FIL-086		

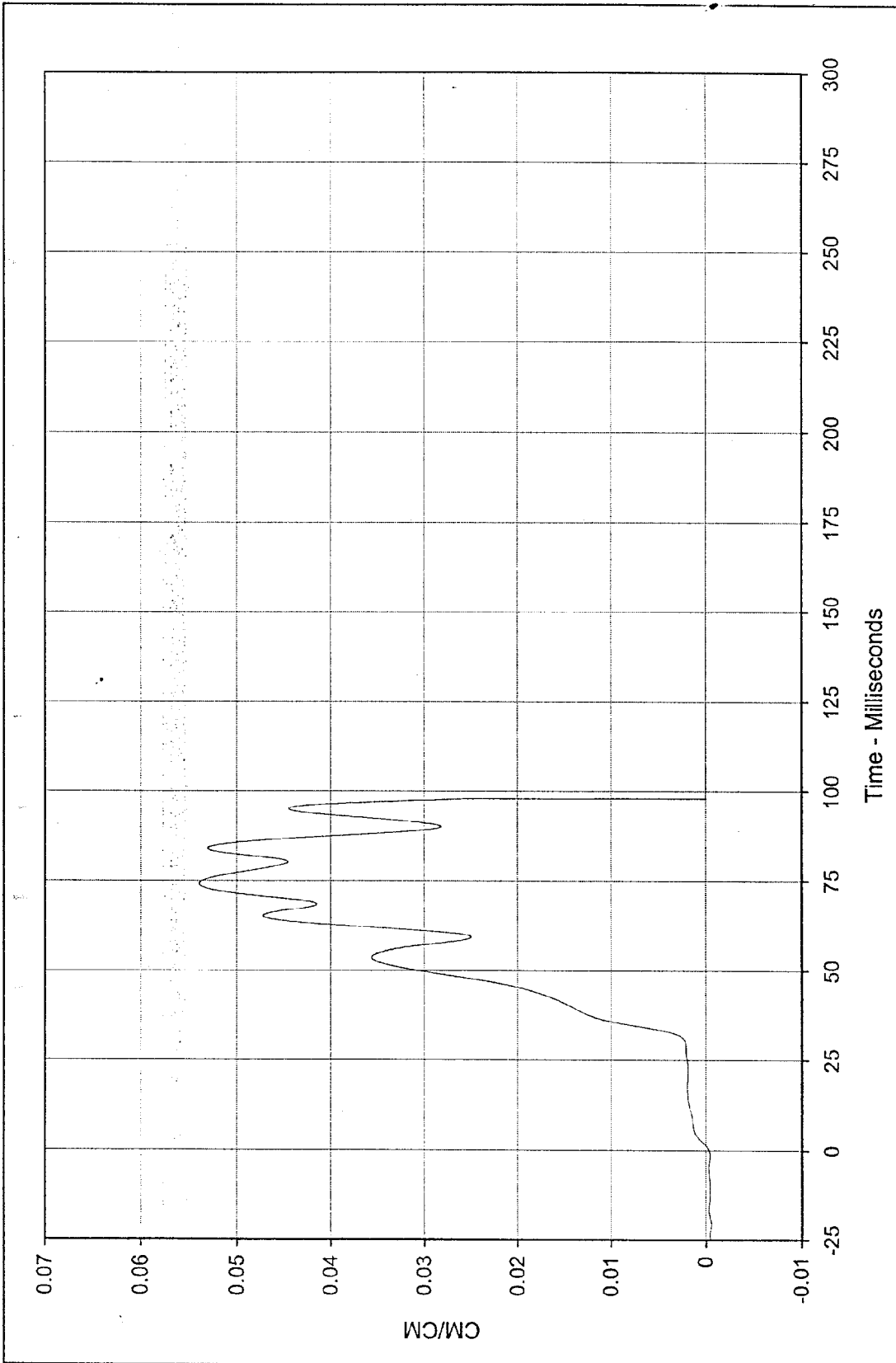




Curve Description: Passenger Shoulder Belt Pullout Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 5.58 at 147.4 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -0.03 at 0.0 Milliseconds



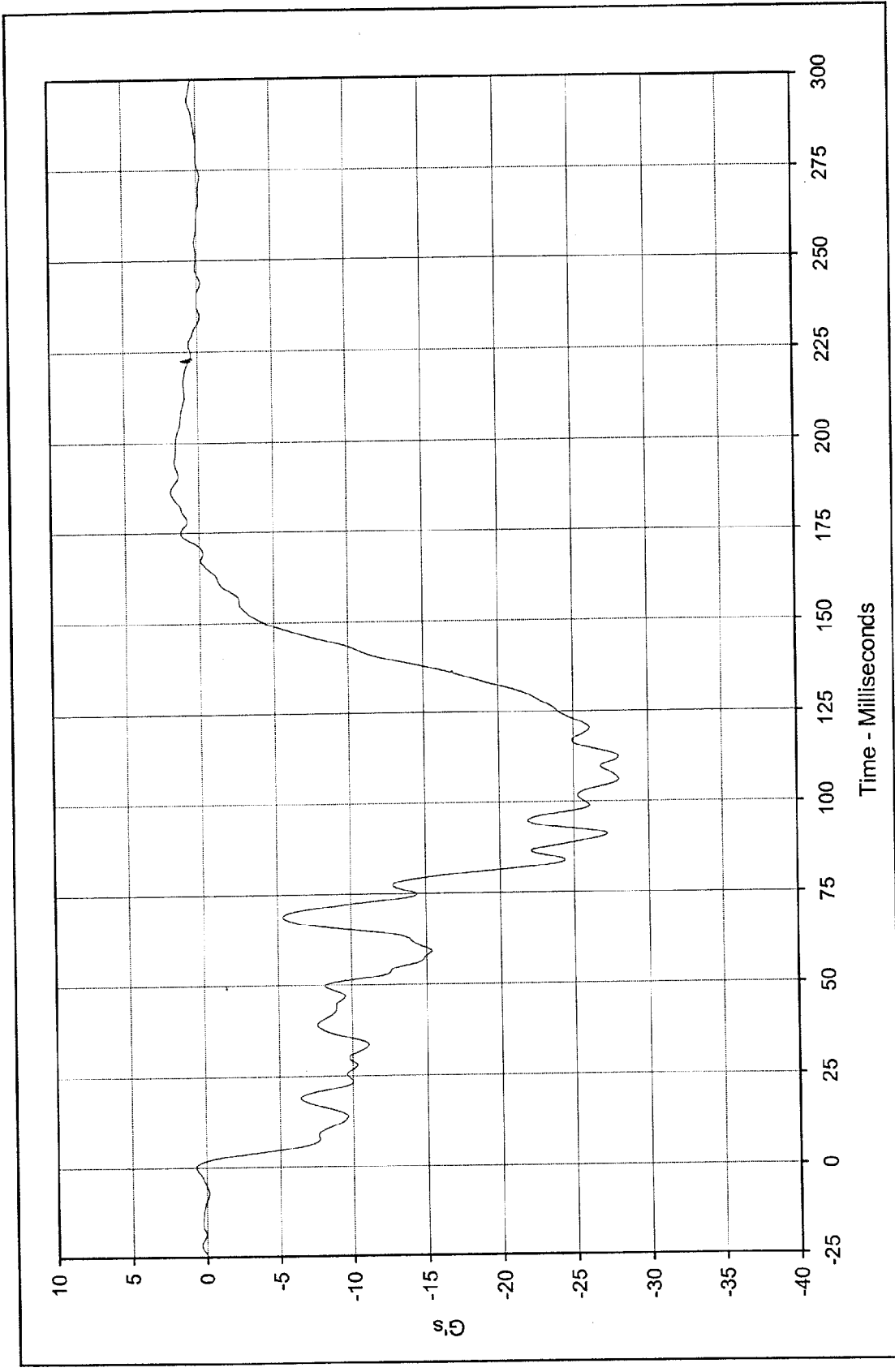
SAE Filter Class: 60
 Date of Test: 7/17/97
 Curve Number: FIL-087



Curve Description: Passenger Shoulder Belt Elongation * Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 0.054 at 74.2 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.000 at 0.0 Milliseconds
 SAE Filter Class: 60
 Date of Test: 7/17/97
 Curve Number: FIL-088

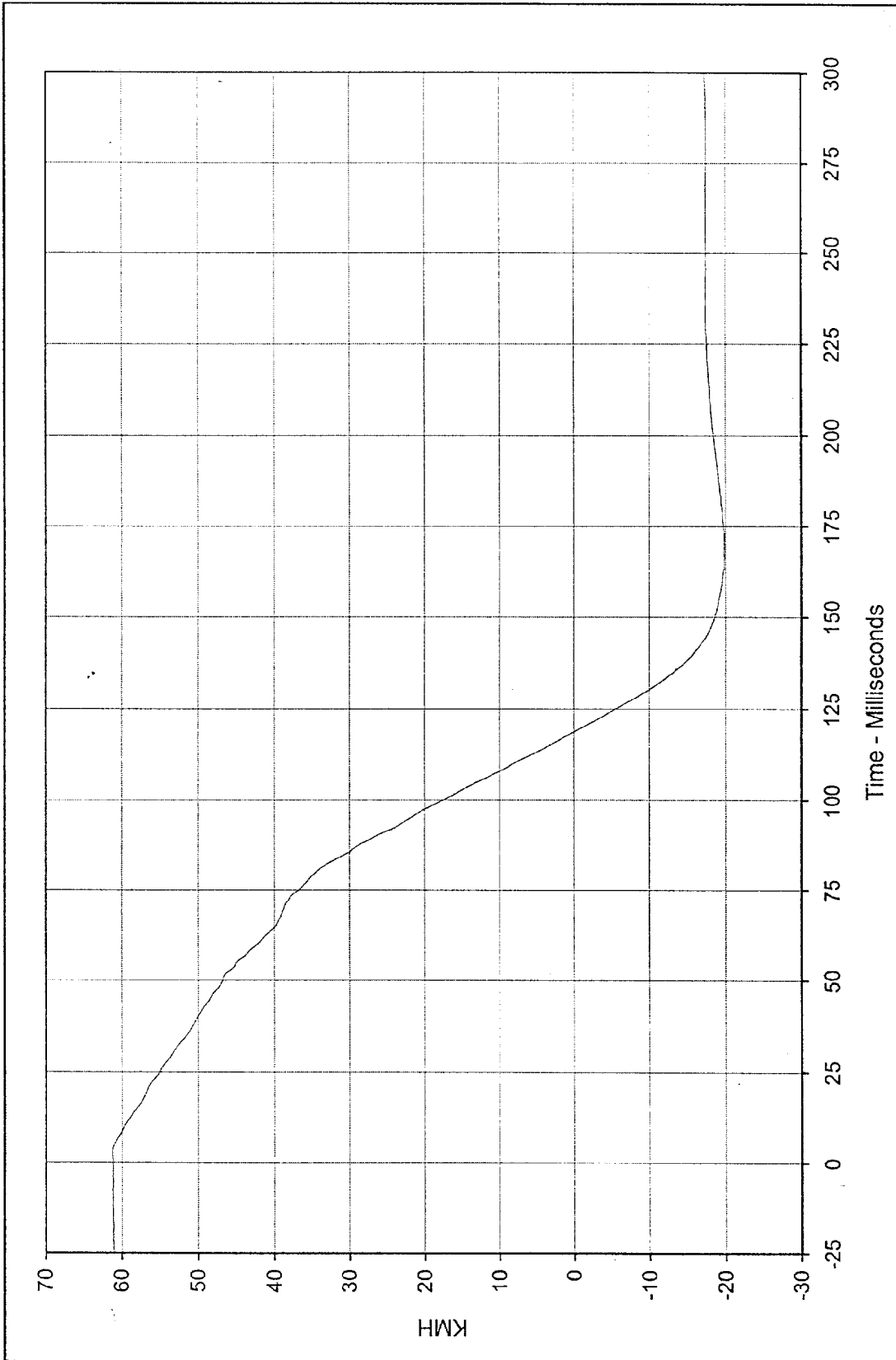


* Channel Failed at 98.0 Msec



Curve Description: Vehicle Left Rear Sill X Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 1.9 at 186.6 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -28.0 at 106.0 Milliseconds
 SAE Filter Class: 60
 Date of Test: 7/17/97
 Curve Number: FIL-089

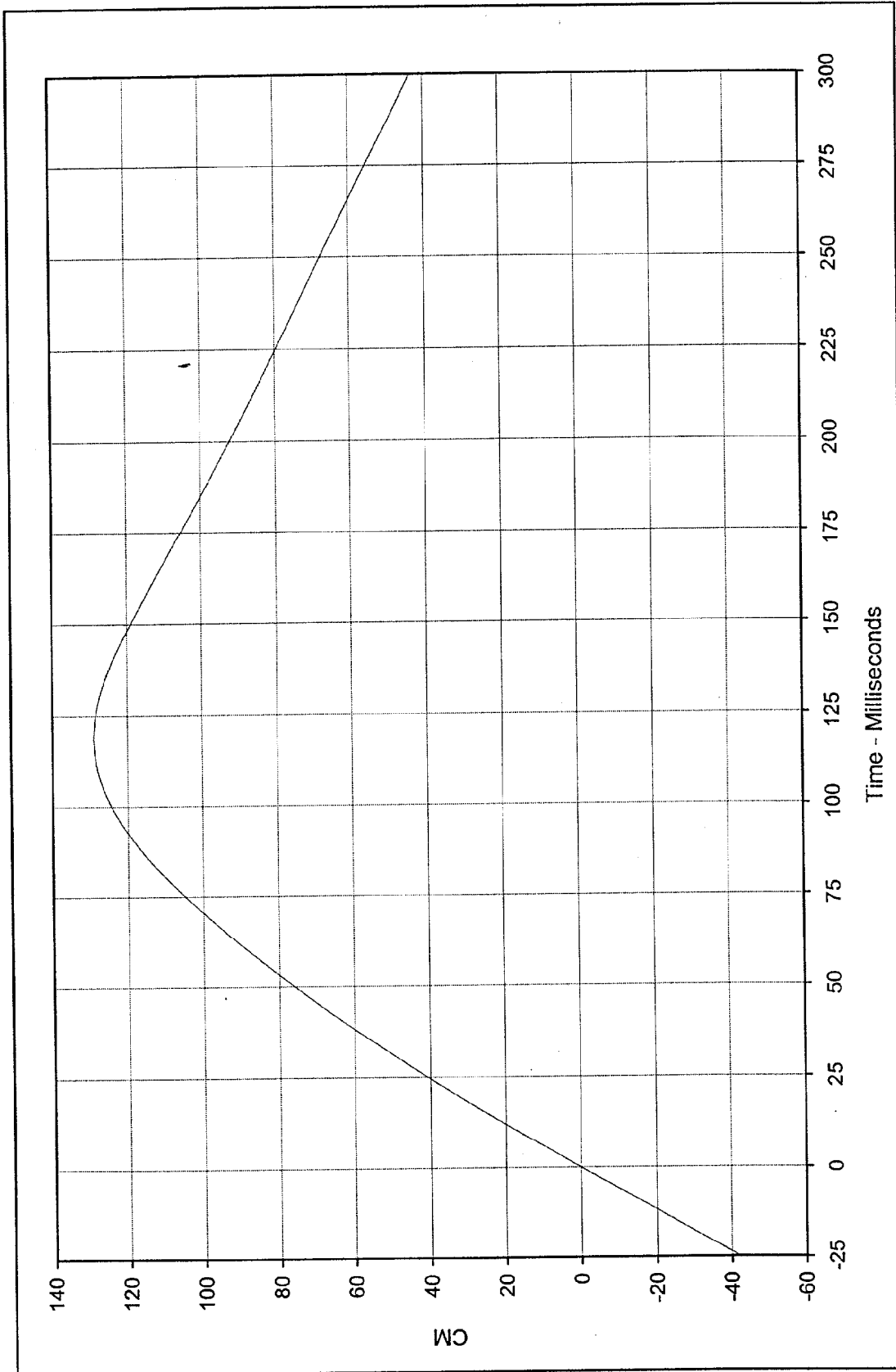




Curve Description: Vehicle Left Rear Sill X Velocity Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 61.2 at 3.1 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -19.8 at 172.3 Milliseconds



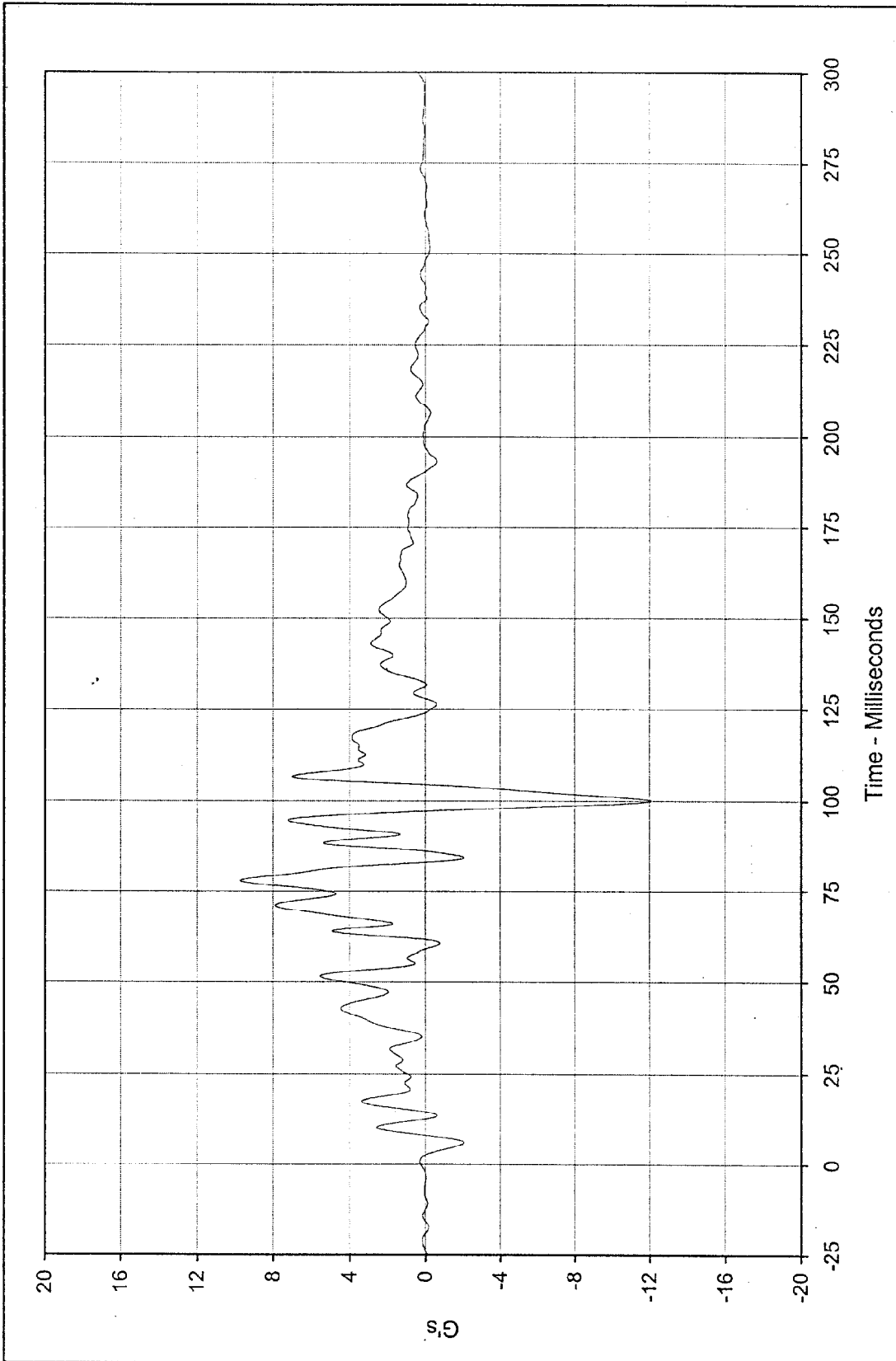
SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN1-089



Curve Description: Vehicle Left Rear Sill X Displ.
 Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 128.9 at 118.9 Milliseconds
 Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.1 at 0.0 Milliseconds

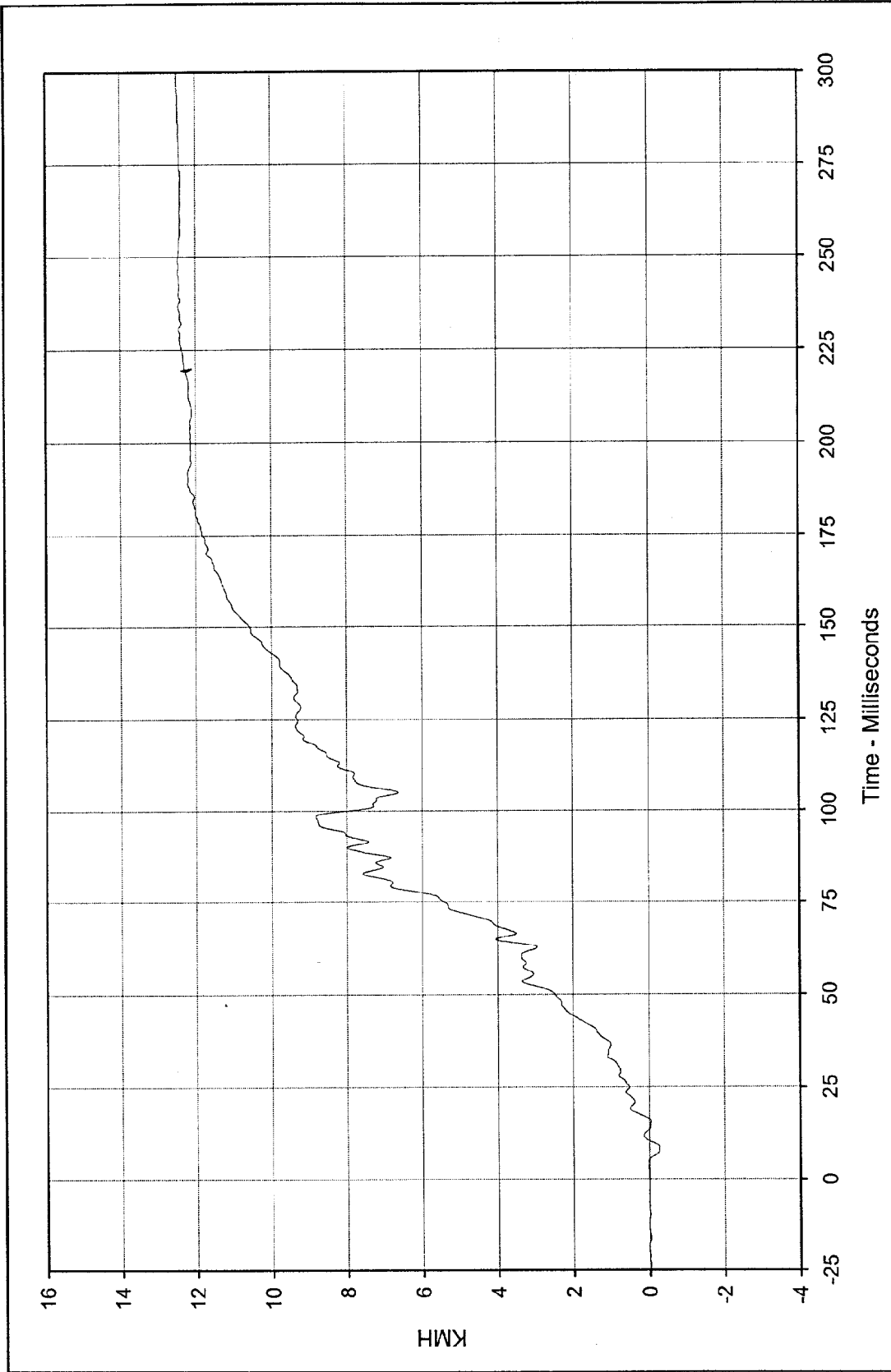


SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN2-089



Curve Description: Vehicle Left Rear Sill Y Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 9.8 at 77.9 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -12.1 at 100.1 Milliseconds
 SAE Filter Class: 60
 Date of Test: 7/17/97
 Curve Number: FIL-090

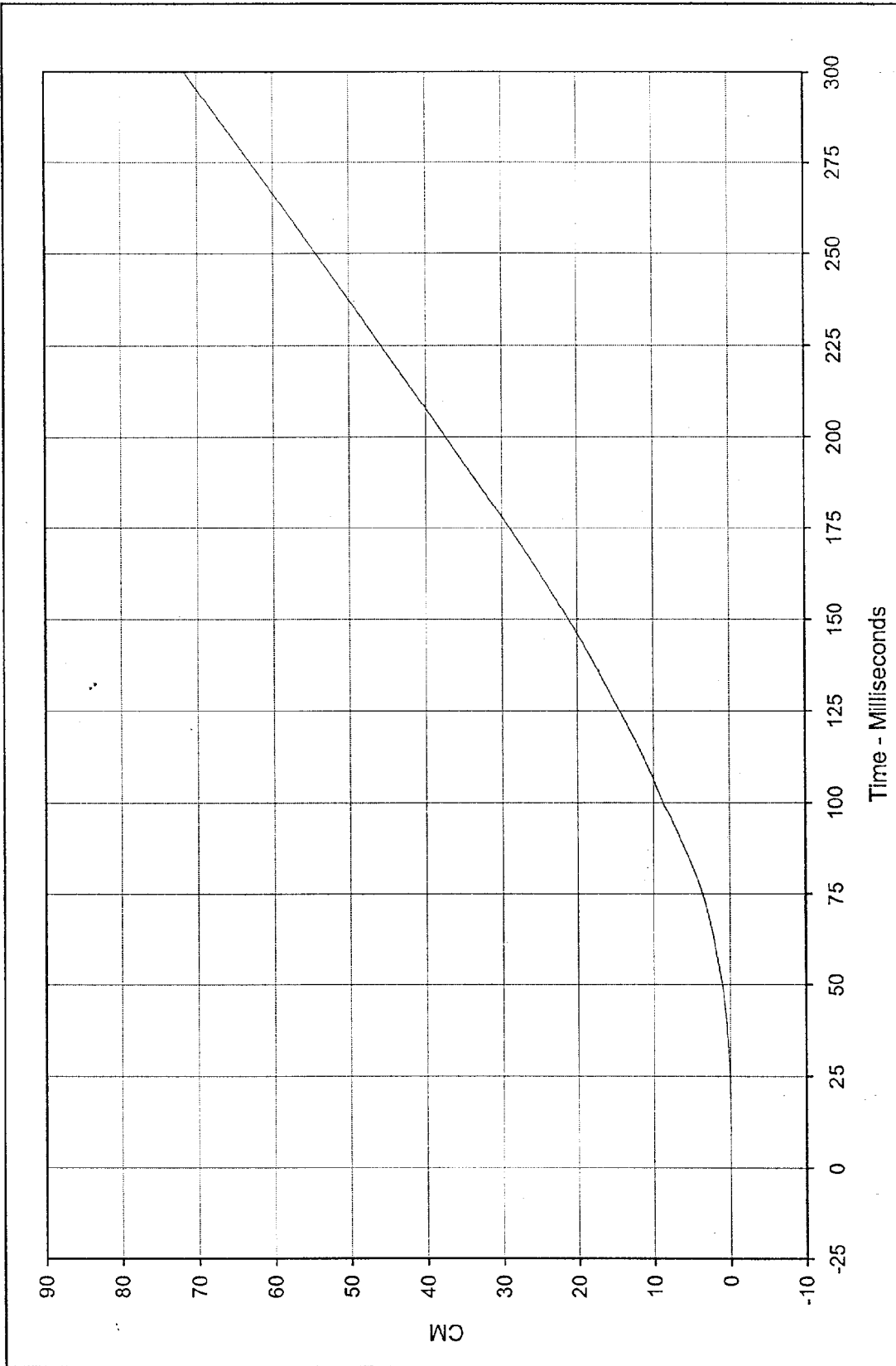




Curve Description: Vehicle Left Rear Sill Y Velocity Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 12.5 at 299.9 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -0.3 at 8.7 Milliseconds

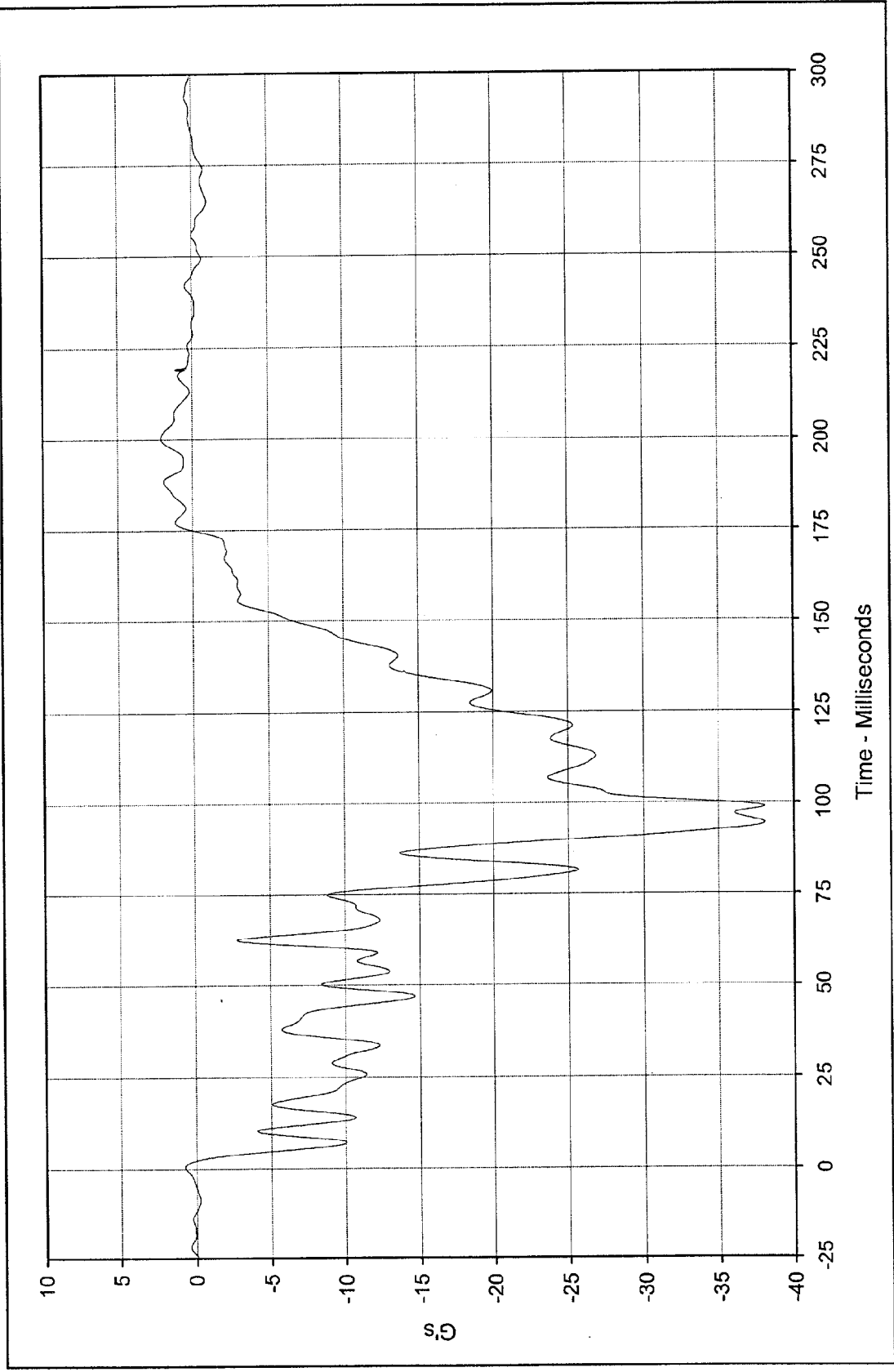


SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN1-090



Curve Description: Vehicle Left Rear Sill Y Displ. Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 71.6 at 299.9 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.0 at 10.4 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN2-090

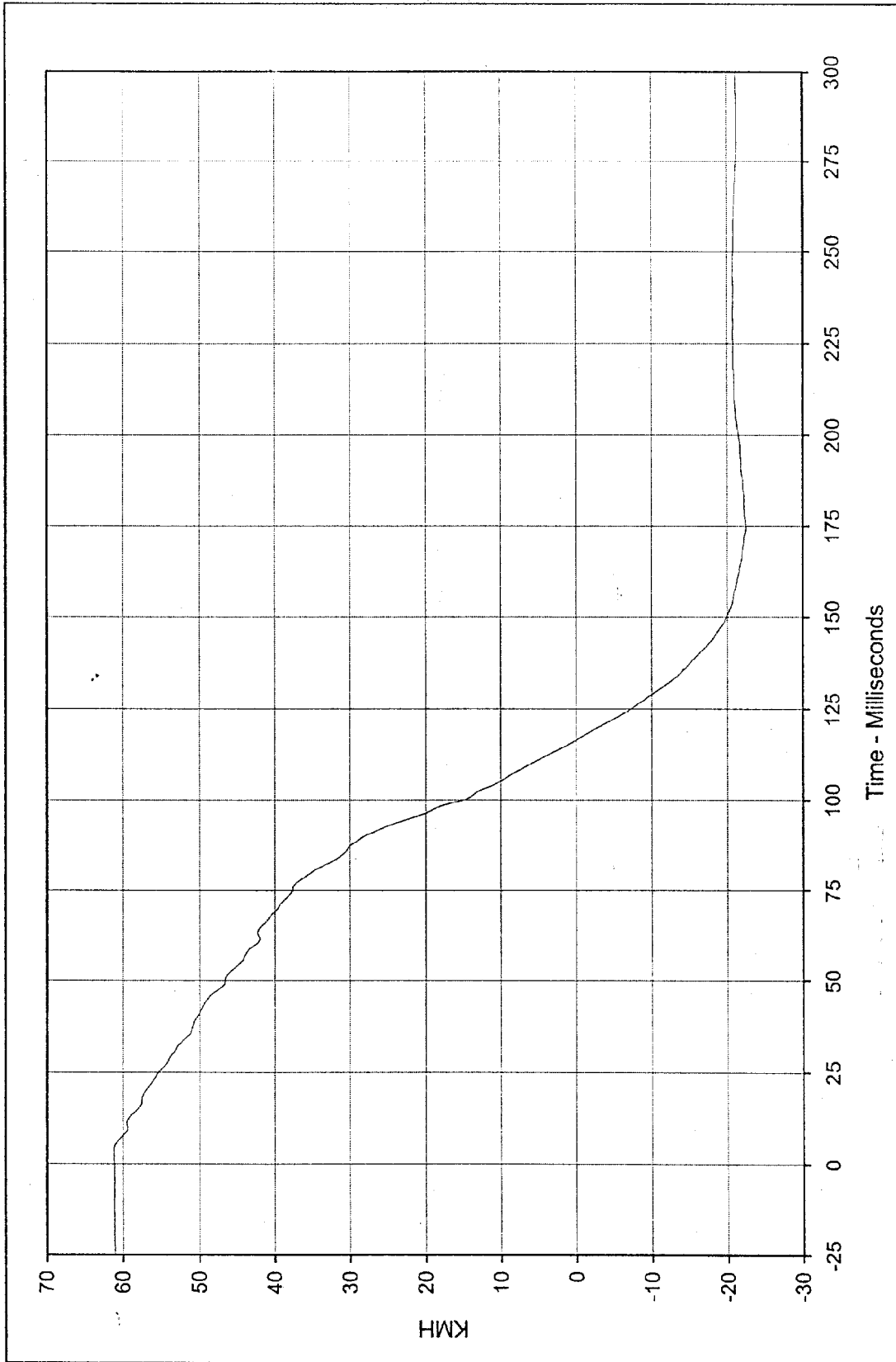




Curve Description: Vehicle Center Console Rear X Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 2.1 at 200.5 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -38.1 at 94.4 Milliseconds

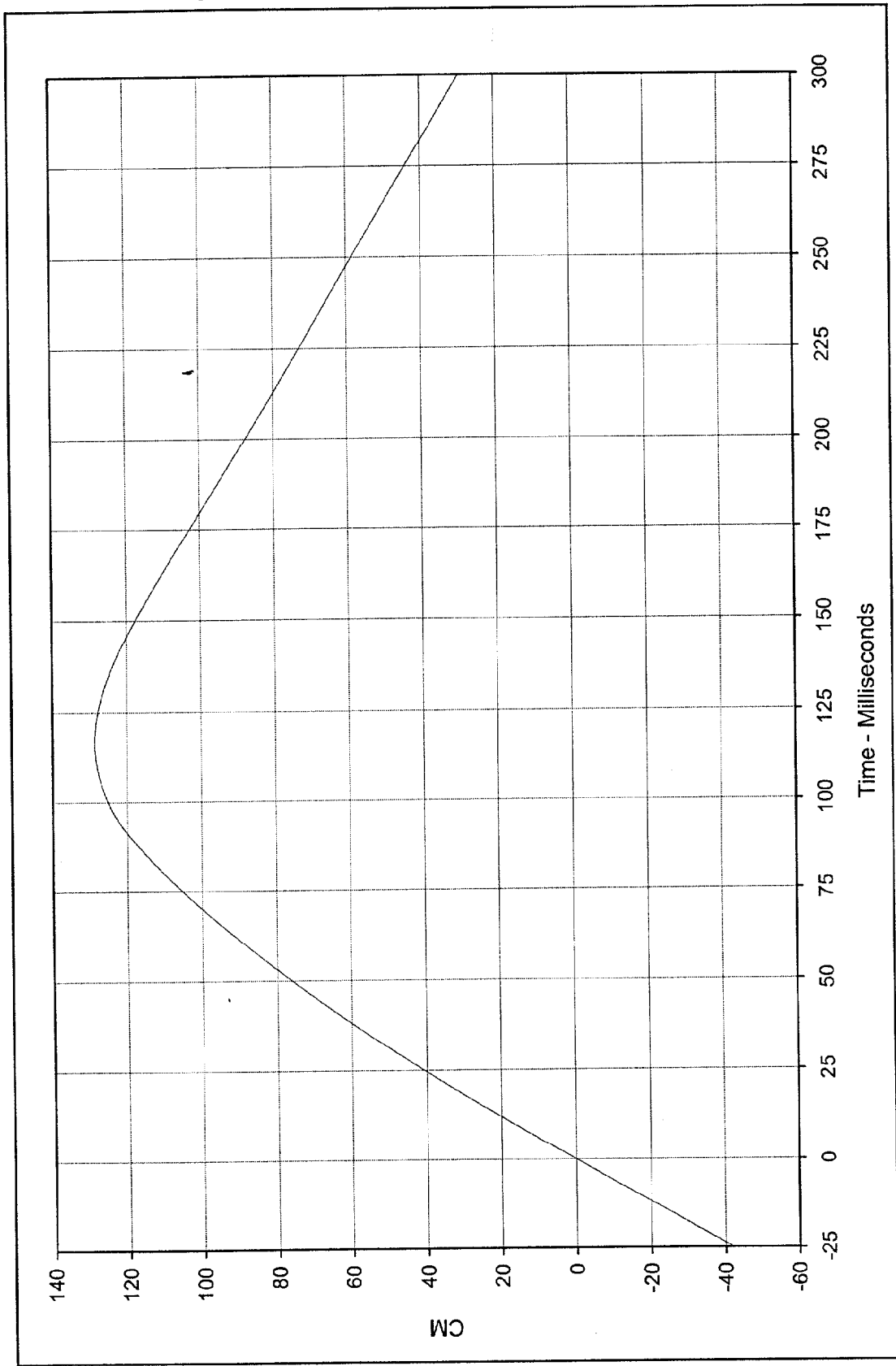
SAE Filter Class: 60
 Date of Test: 7/17/97
 Curve Number: FIL-091





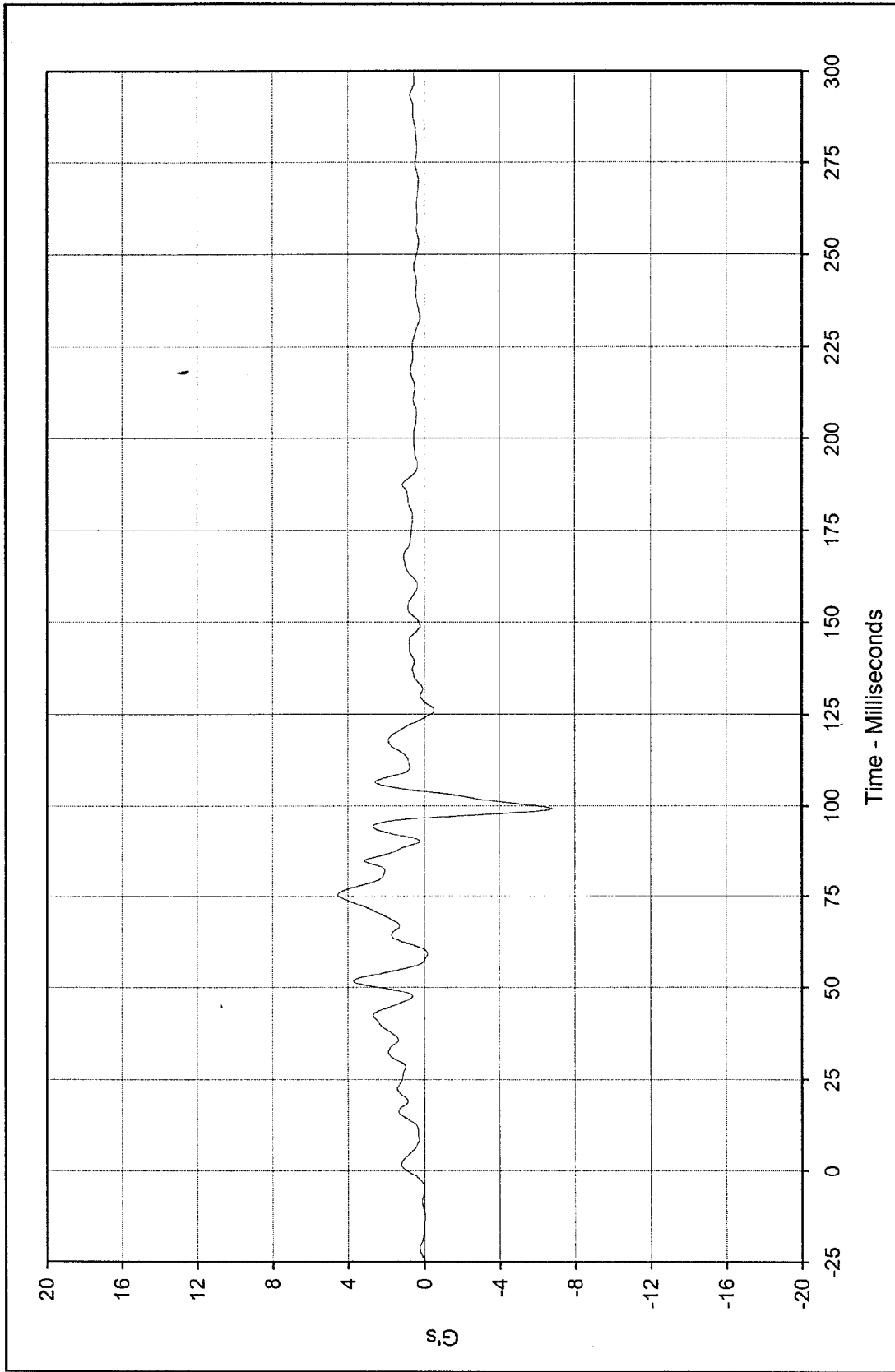
Curve Description: Vehicle Center Rear Console: X Velocity	Testing Program	1997 NCAP 40% Offset Impact
Maximum Value: 61.2 at 3.9 Milliseconds	Test Vehicle:	1996 Ford Taurus 4 Door Sedan
Minimum Value: -22.5 at 174.7 Milliseconds		
SAE Filter Class: 180		
Date of Test: 7/17/97		
Curve Number: IN1-091		





Curve Description: Vehicle Center Rear Console X Displ. Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 128.5 at 116.5 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.1 at 0.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN2-091

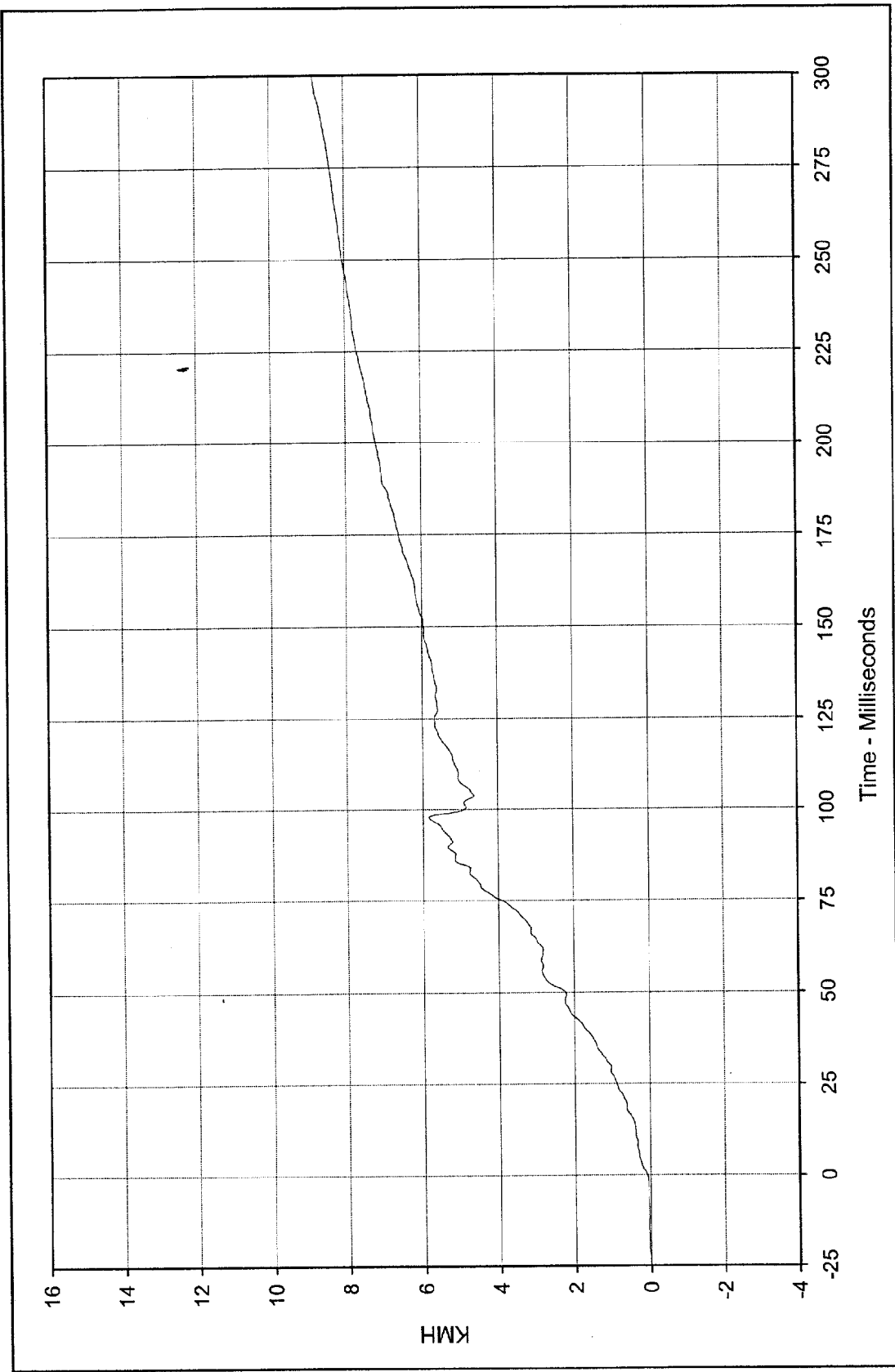




Curve Description: Vehicle Center Console Rear Y Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 4.6 at 75.3 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -6.8 at 99.2 Milliseconds

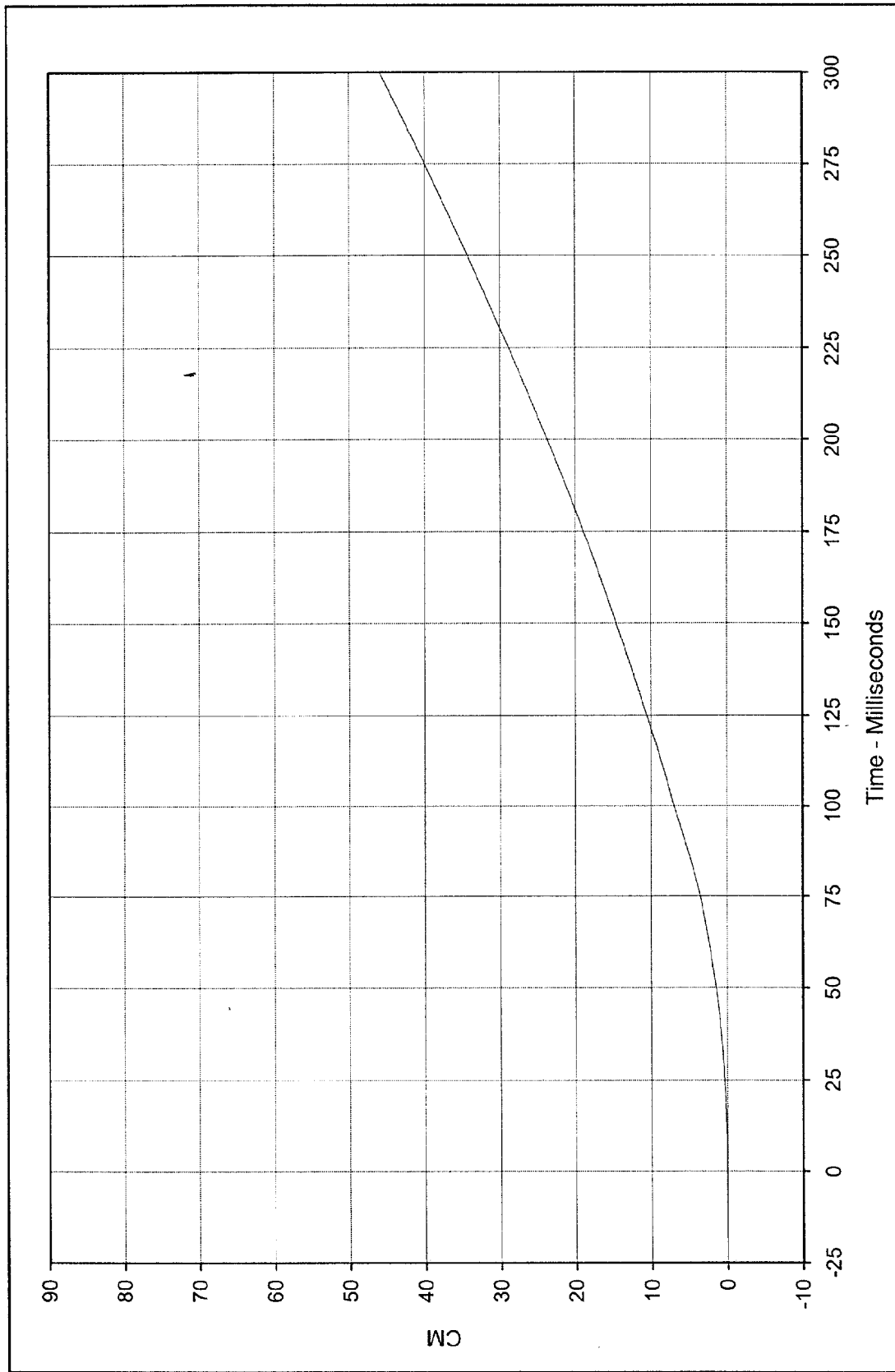


SAE Filter Class: 60
 Date of Test: 7/17/97
 Curve Number: FIL-092



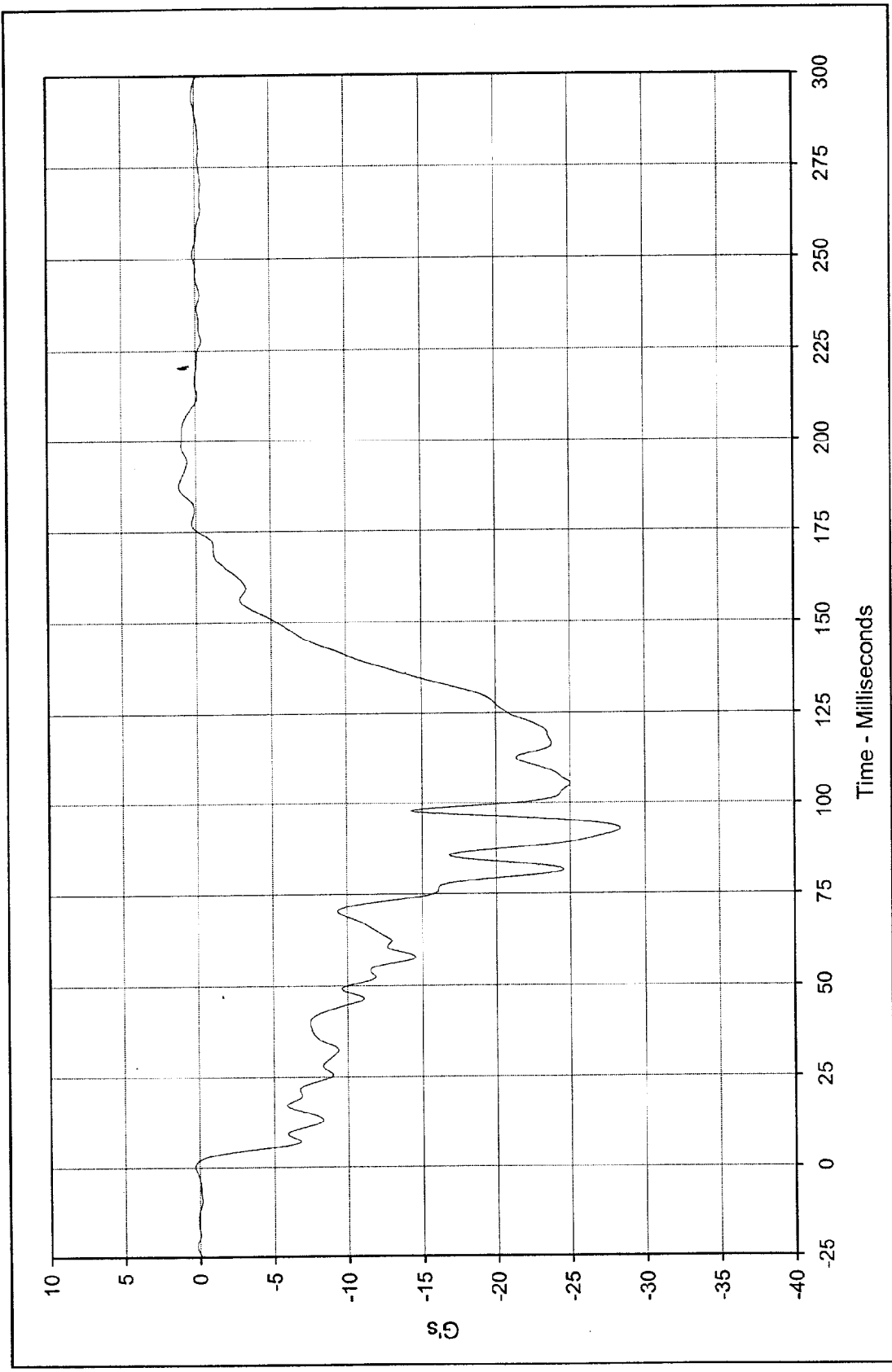
Curve Description: Vehicle Center Rear Console Y Velocity Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 8.8 at 299.9 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.1 at 0.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN1-092





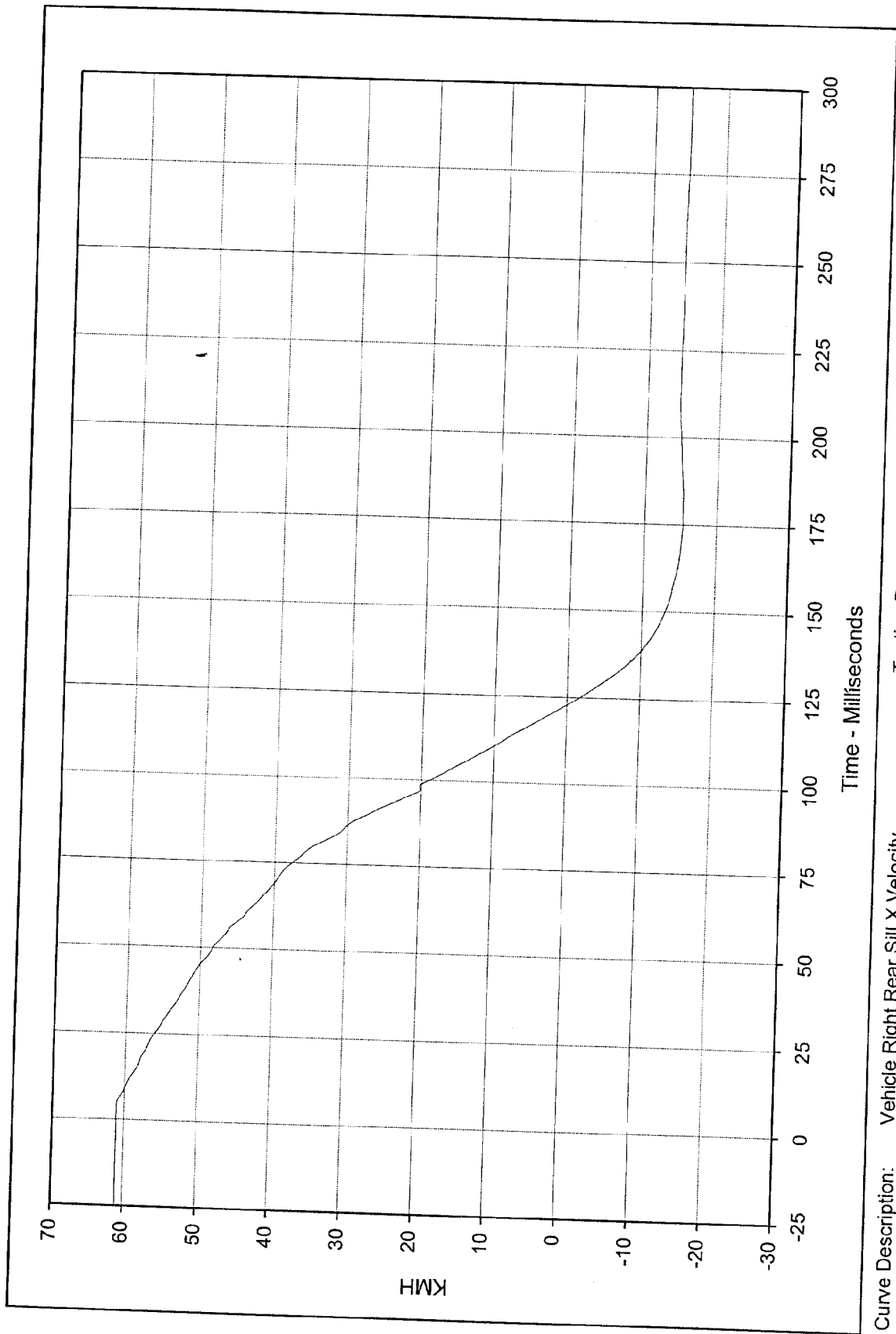
Curve Description: Vehicle Center Rear Console Y Displ. Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 45.9 at 299.9 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.0 at 0.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN2-092





Curve Description: Vehicle Right Rear Sill X Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 1.1 at 187.5 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -28.3 at 92.7 Milliseconds
 SAE Filter Class: 60
 Date of Test: 7/17/97
 Curve Number: FIL-093

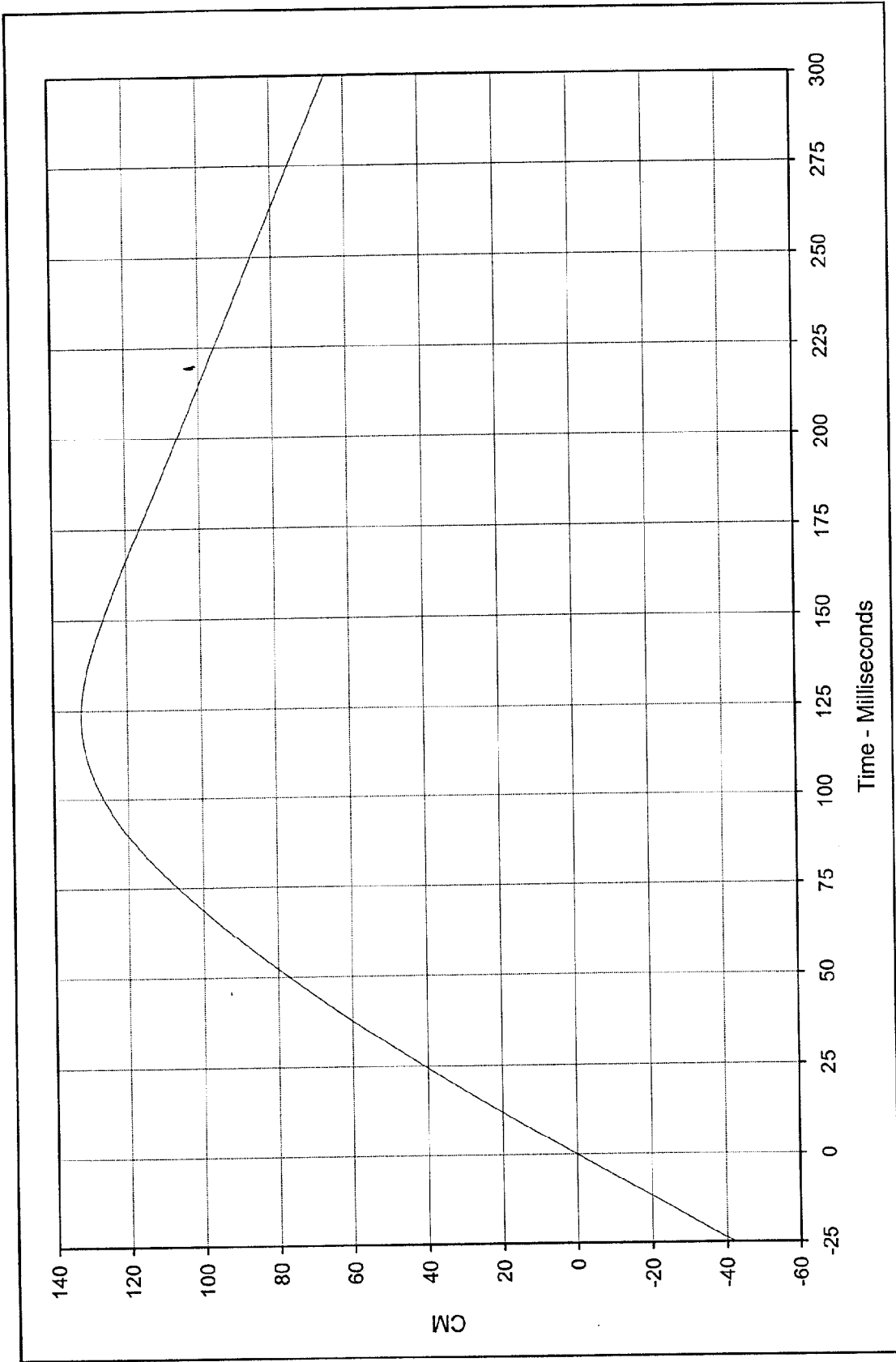




Curve Description: Vehicle Right Rear Sill X Velocity
 Maximum Value: 61.1 at 4.2 Milliseconds
 Minimum Value: -15.3 at 174.9 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN1-093

Testing Program: 1997 NCAP 40% Offset Impact
 Test Vehicle: 1996 Ford Taurus 4 Door Sedan

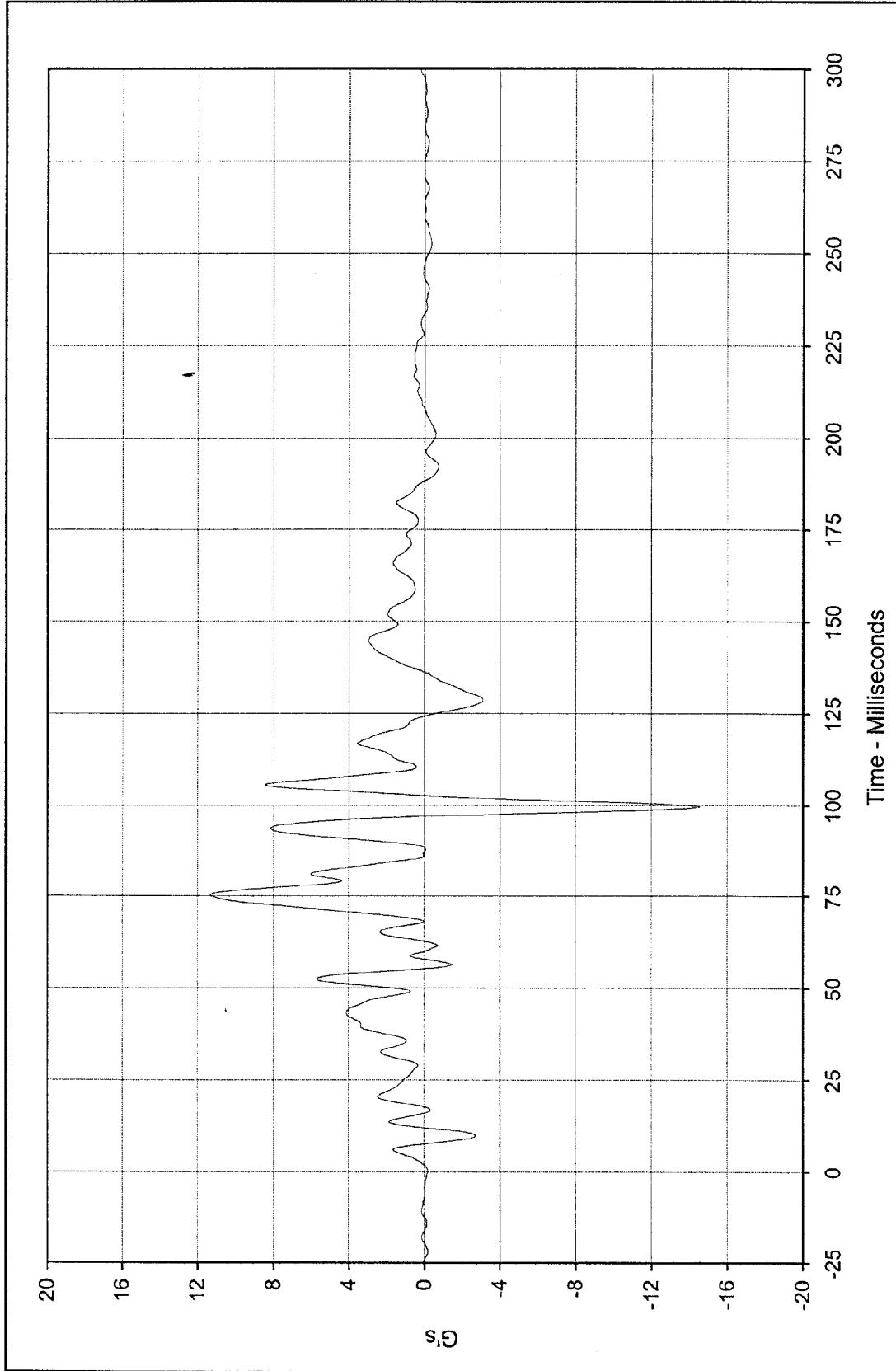




Curve Description: Vehicle Right Rear Sill X Displ. Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 132.4 at 122.7 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.0 at 0.0 Milliseconds

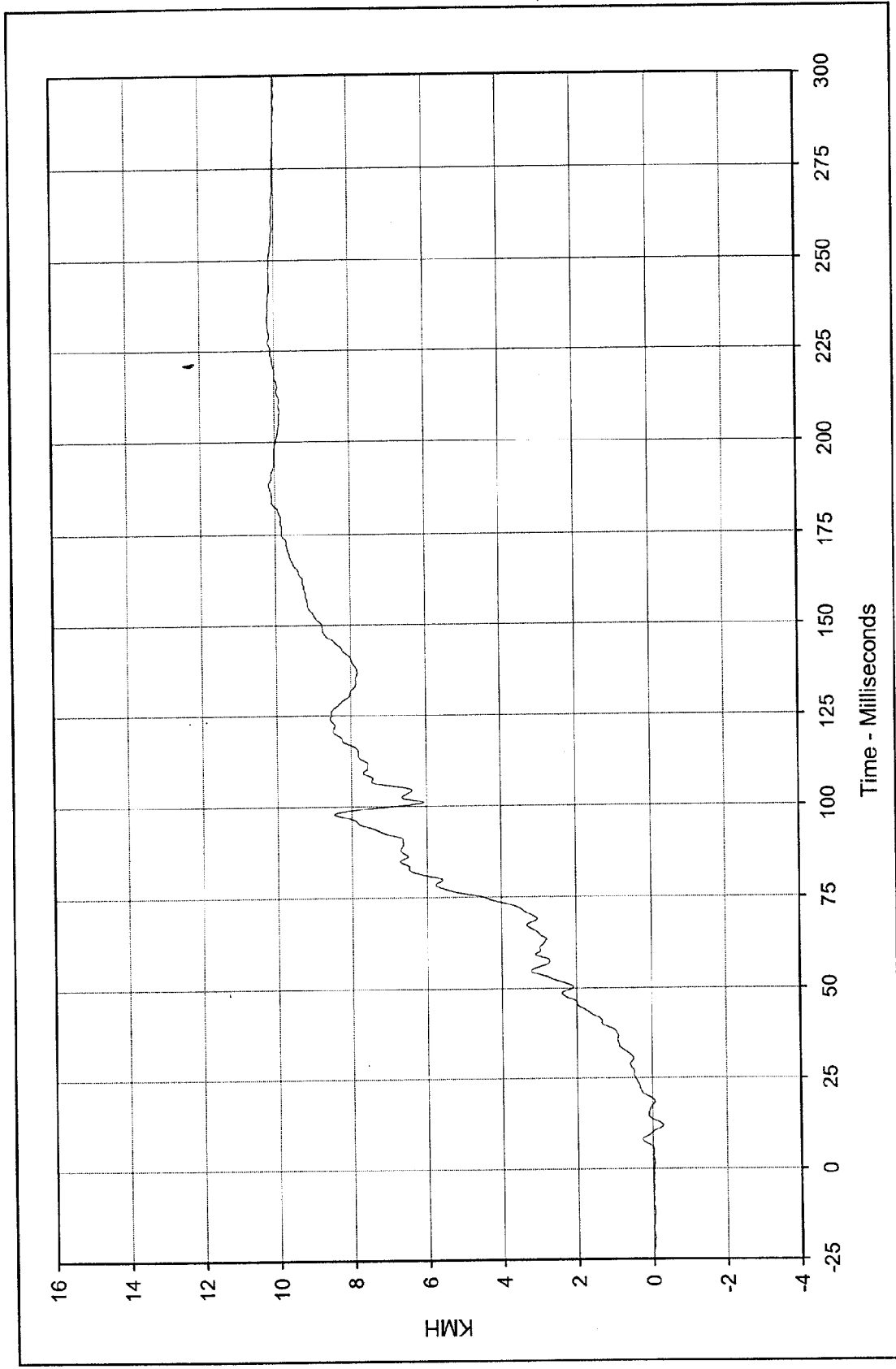


SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN2-093



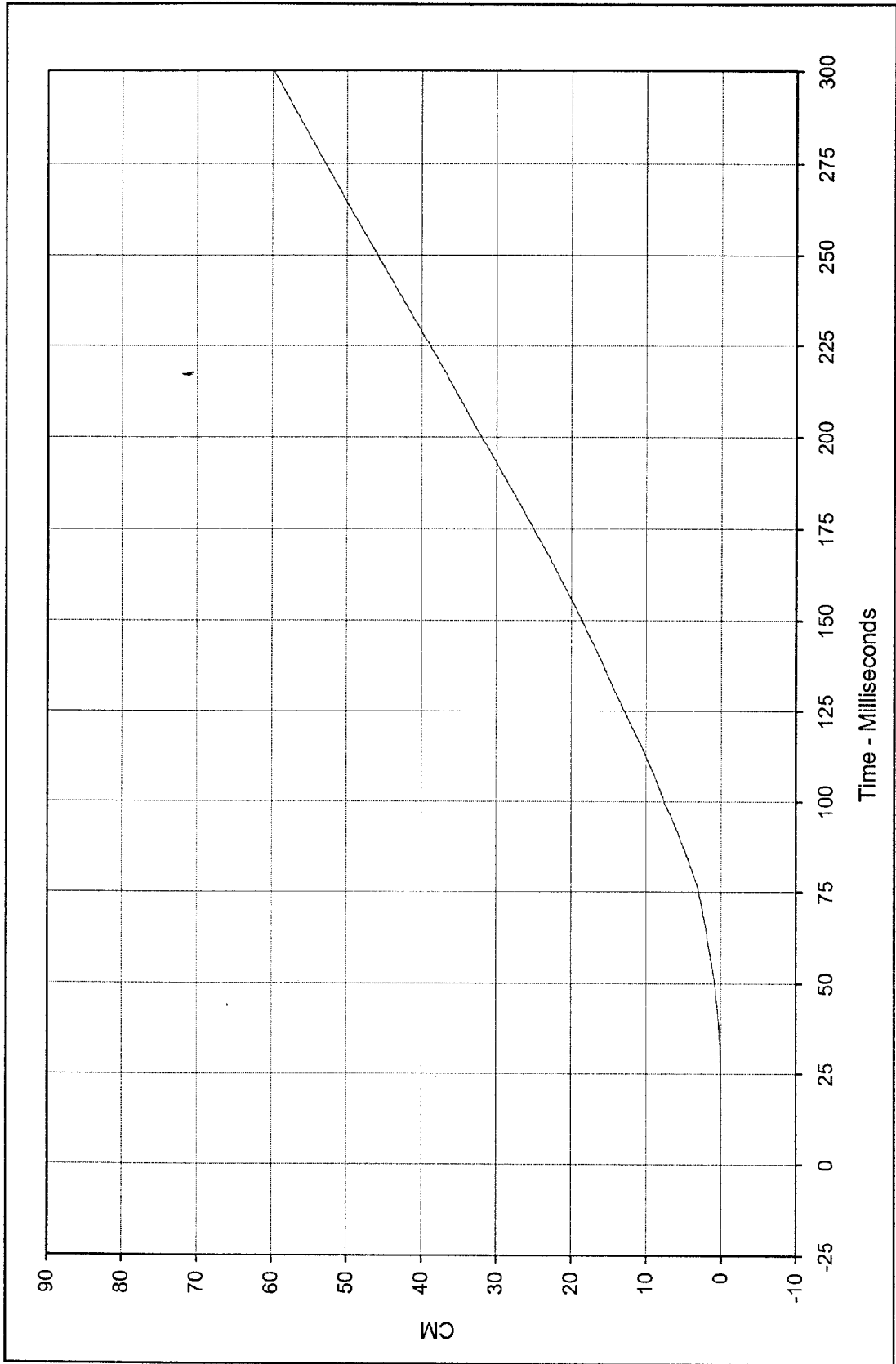
Curve Description: Vehicle Right Rear Sill Y Testing Program: 1997 NCAP 40% Offset Impact
Maximum Value: 11.3 at 75.3 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
Minimum Value: -14.6 at 99.6 Milliseconds
SAE Filter Class: 60
Date of Test: 7/17/97
Curve Number: FIL-094





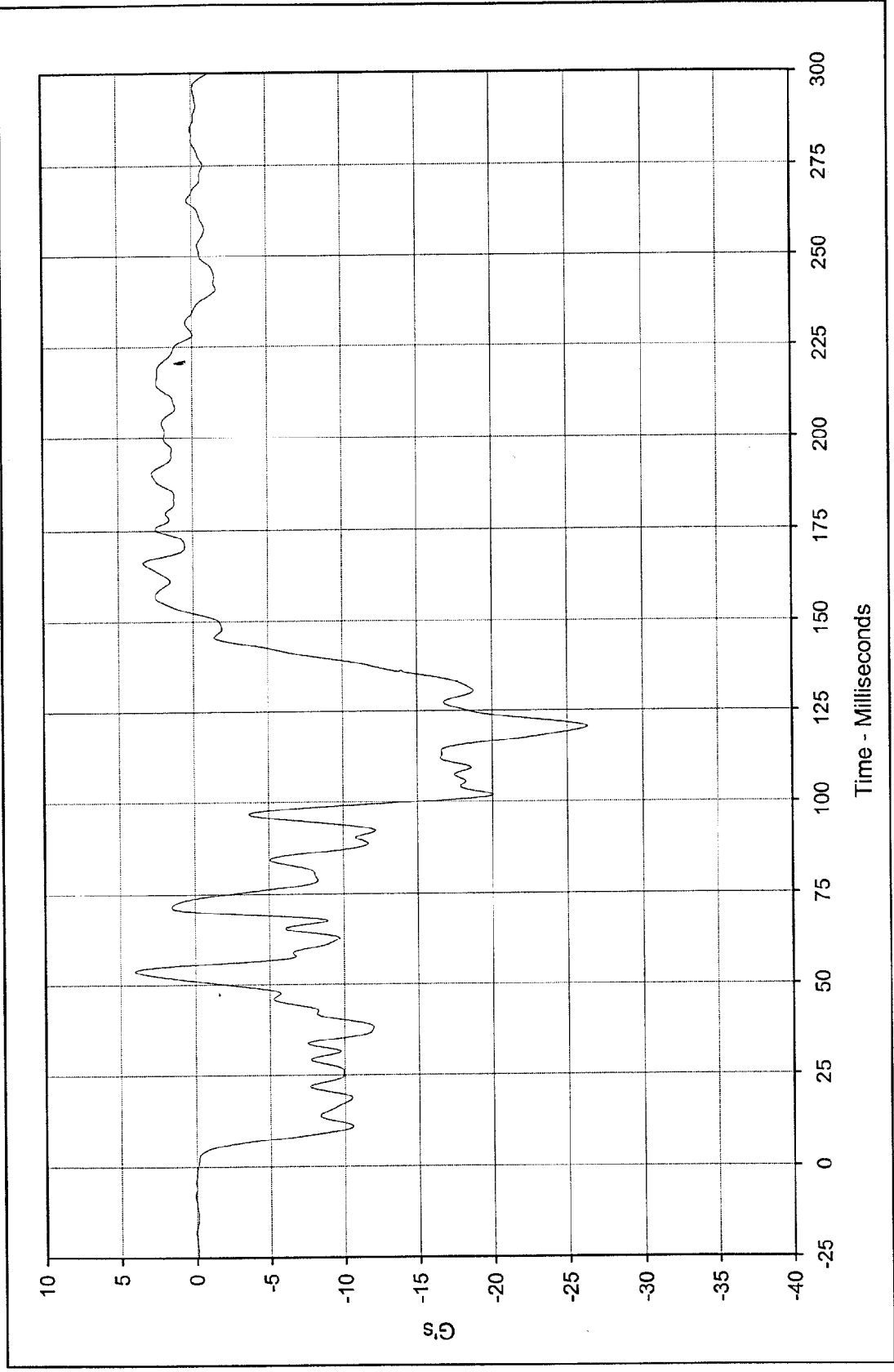
Curve Description: Vehicle Right Rear Sill Y Velocity Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 10.2 at 233.9 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -0.3 at 12.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN1-094





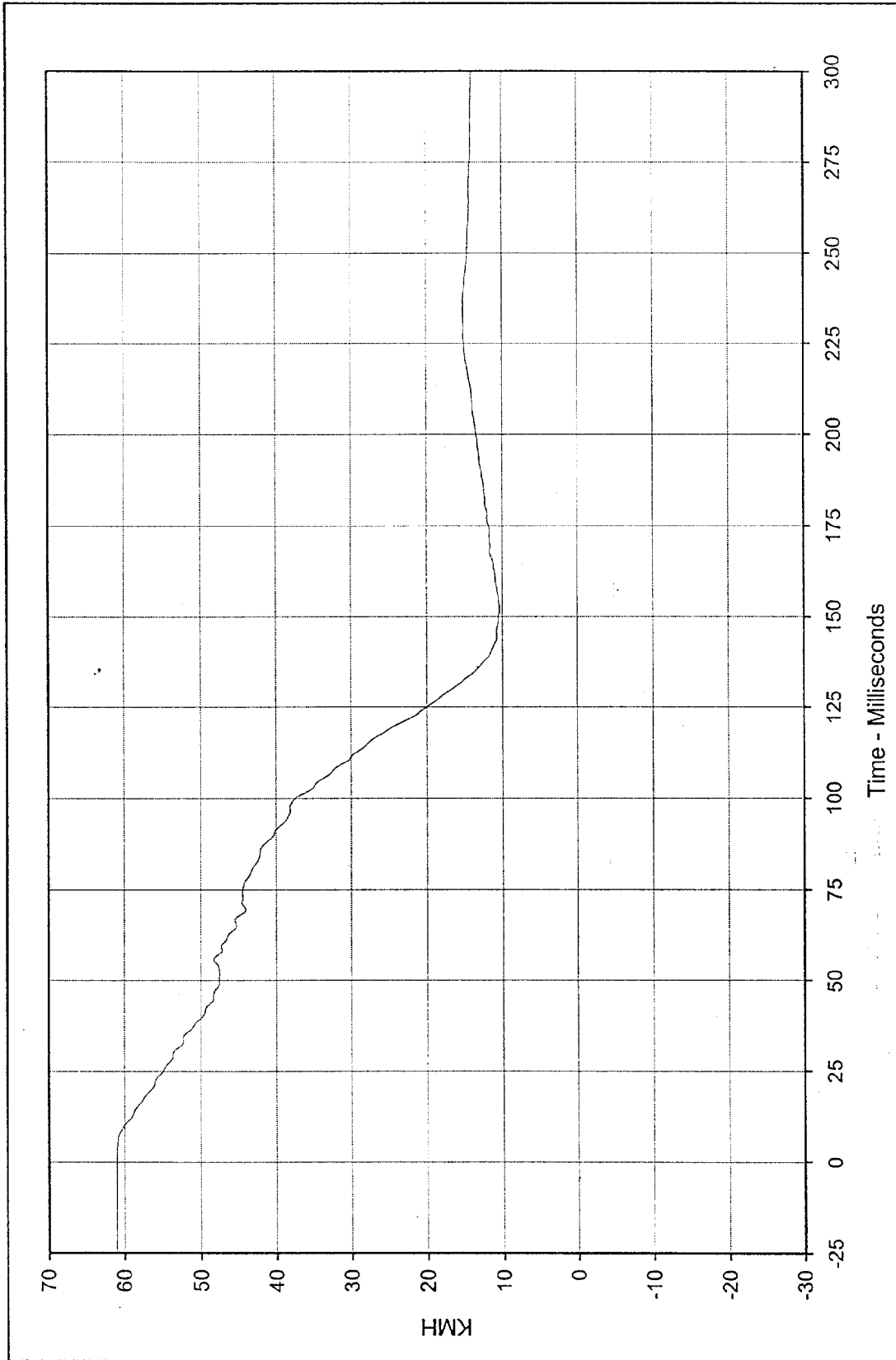
Curve Description: Vehicle Right Rear Sill Y Displ. Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 59.8 at 299.9 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.0 at 5.8 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN2-094





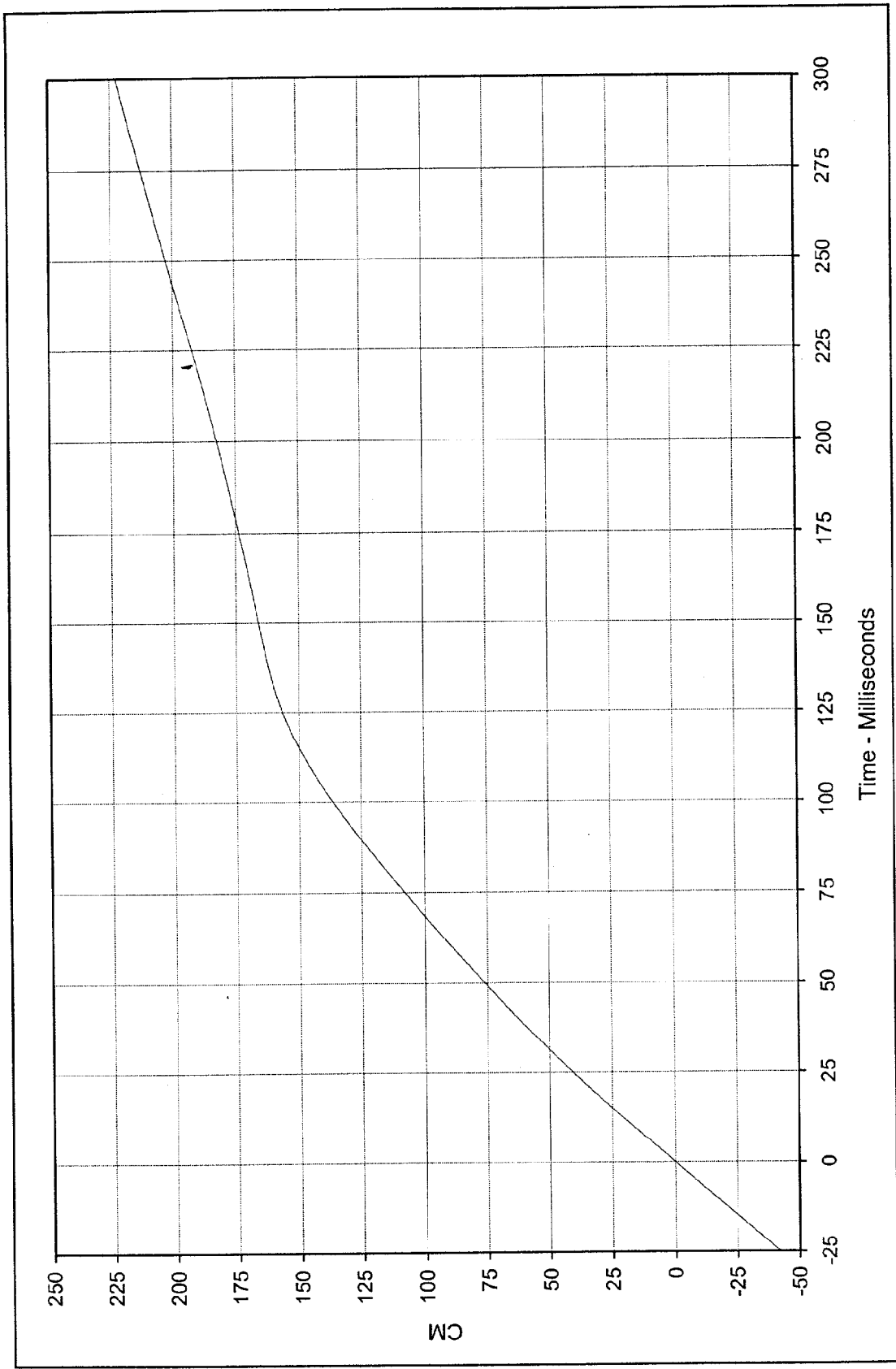
Curve Description: Vehicle Center Rear Trunk X Testing Program 1997 NCAP 40% Offset Impact
 Maximum Value: 4.0 at 53.8 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: -26.3 at 120.6 Milliseconds
 SAE Filter Class: 60
 Date of Test: 7/17/97
 Curve Number: FIL-095





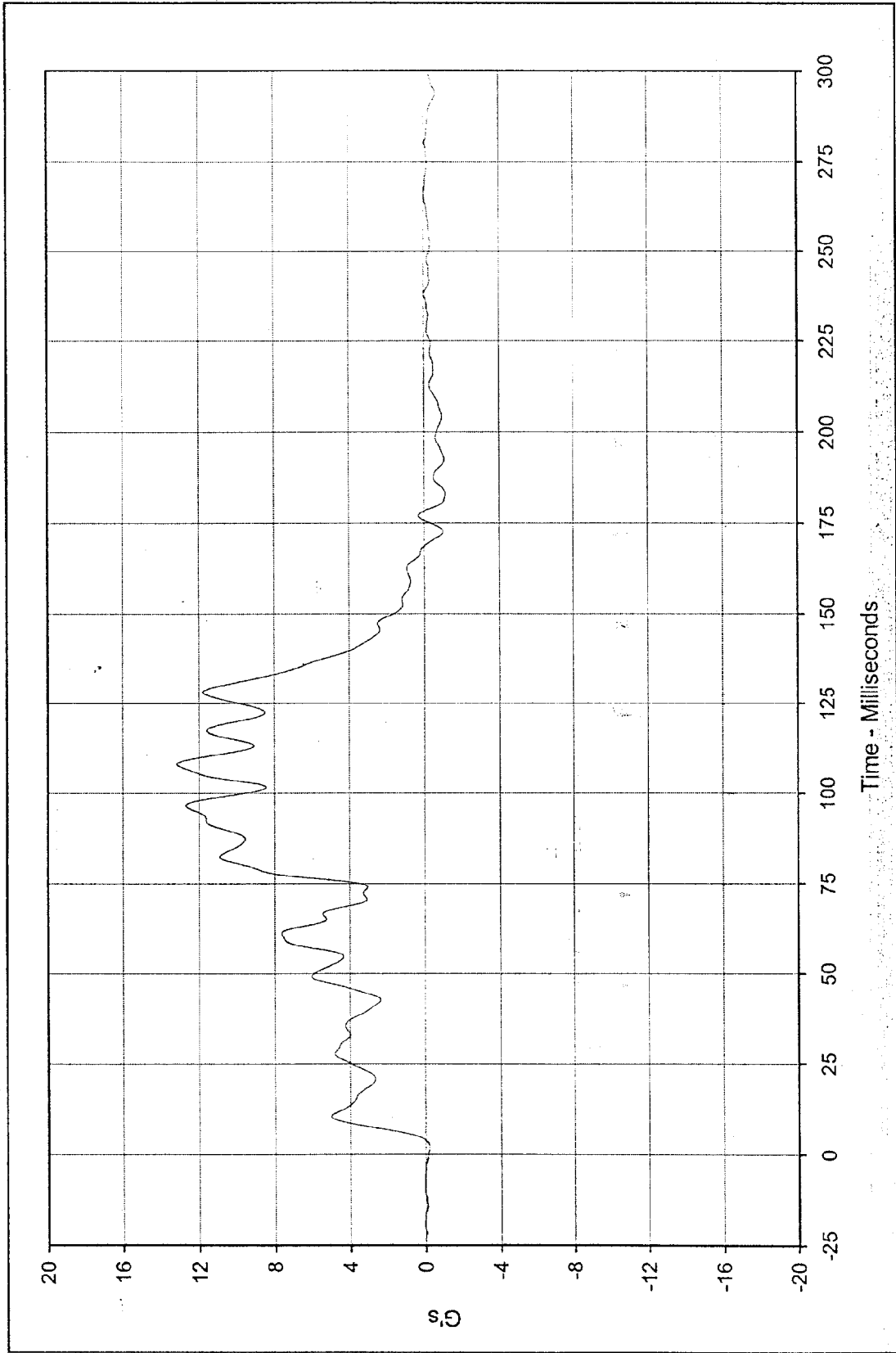
Curve Description: Vehicle Center Rear Trunk X Velocity Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 61.0 at 0.0 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 10.4 at 152.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN1-095





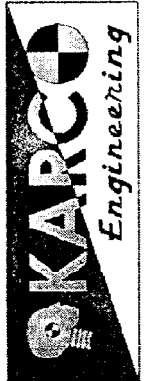
Curve Description: Vehicle Center Rear Trunk X Displ. Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 222.5 at 299.9 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.0 at 0.0 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN2-095

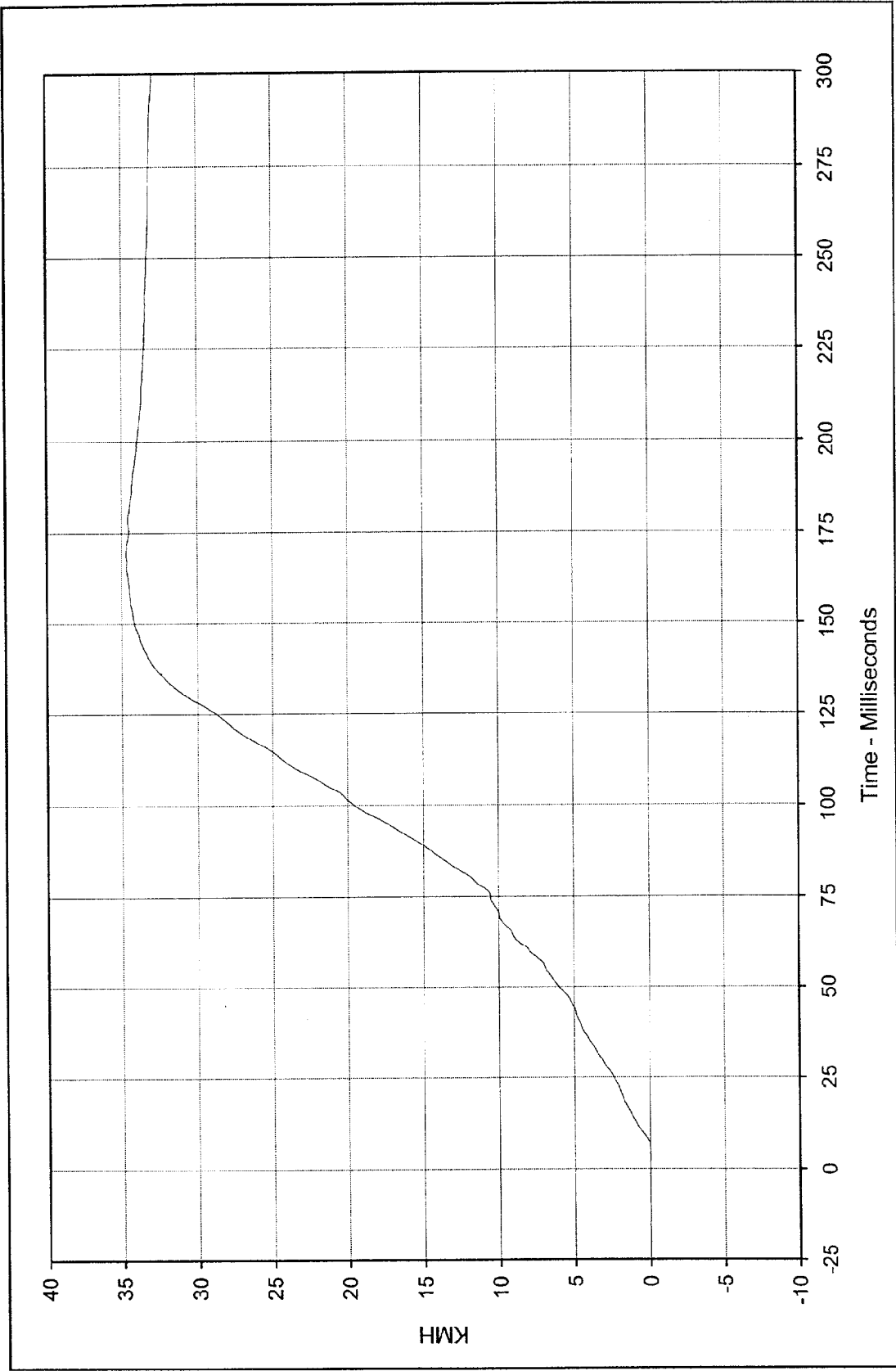




Time - Milliseconds

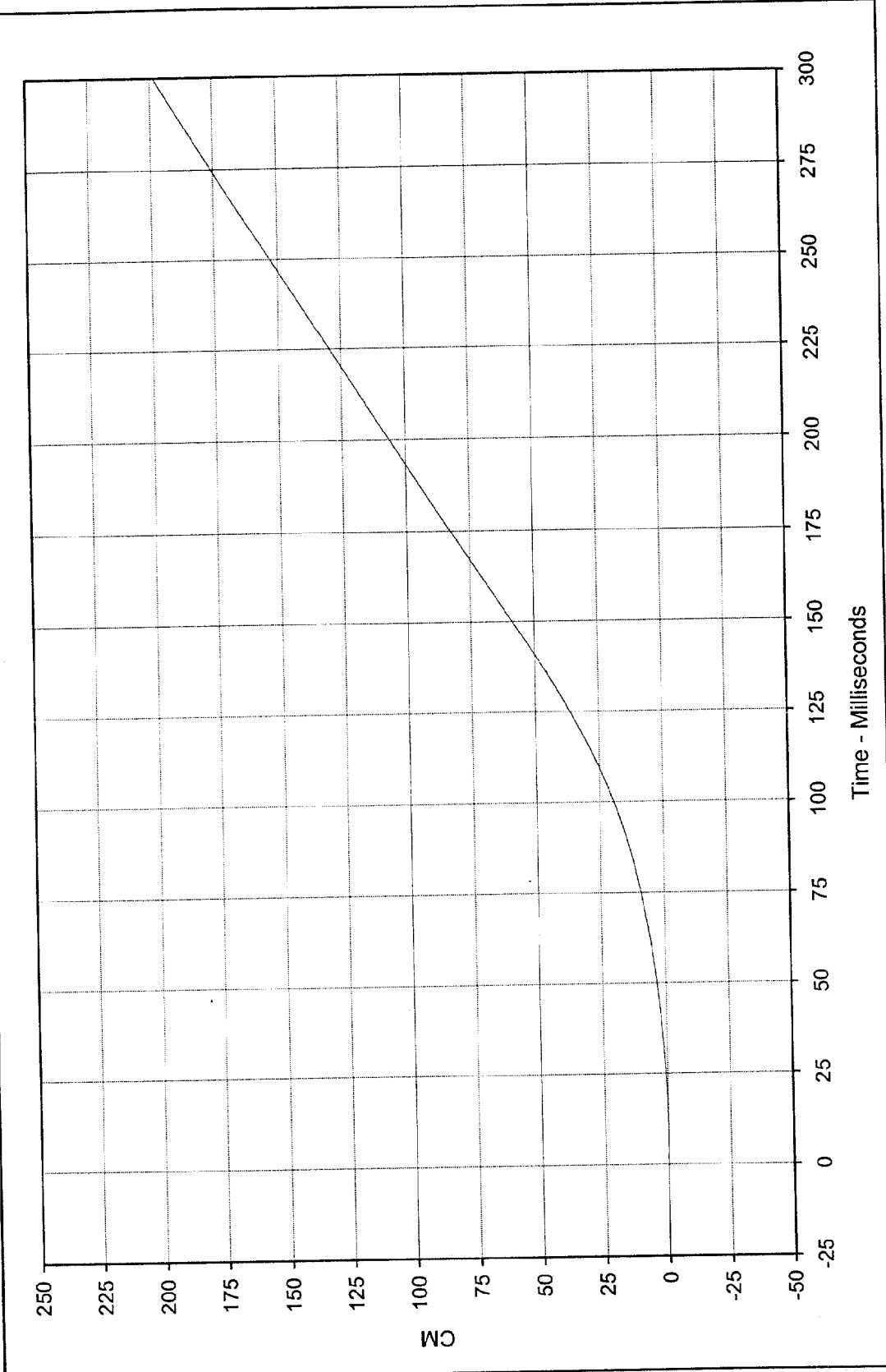
Curve Description:	Vehicle Center Rear Trunk Y	Testing Program	1997 NCAP 40% Offset Impact
Maximum Value:	13.2 at 108.2 Milliseconds	Test Vehicle:	1996 Ford Taurus 4 Door Sedan
Minimum Value:	-1.1 at 183.1 Milliseconds		
SAE Filter Class:	60		
Date of Test:	7/17/97		
Curve Number:	FIL-096		





Curve Description: Vehicle Center Rear Trunk Y Velocity Testing Program: 1997 NCAP 40% Offset Impact
 Maximum Value: 34.7 at 168.9 Milliseconds Test Vehicle: 1996 Ford Taurus 4 Door Sedan
 Minimum Value: 0.0 at 3.1 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN1-096





Testing Program 1997 NCAP 40% Offset Impact
 Test Vehicle: 1996 Ford Taurus 4 Door Sedan

Curve Description: Vehicle Center Rear Trunk Y Displ.
 Maximum Value: 198.6 at 299.9 Milliseconds
 Minimum Value: 0.0 at 6.3 Milliseconds
 SAE Filter Class: 180
 Date of Test: 7/17/97
 Curve Number: IN2-096



APPENDIX C
DEFORMABLE BARRIER DATA

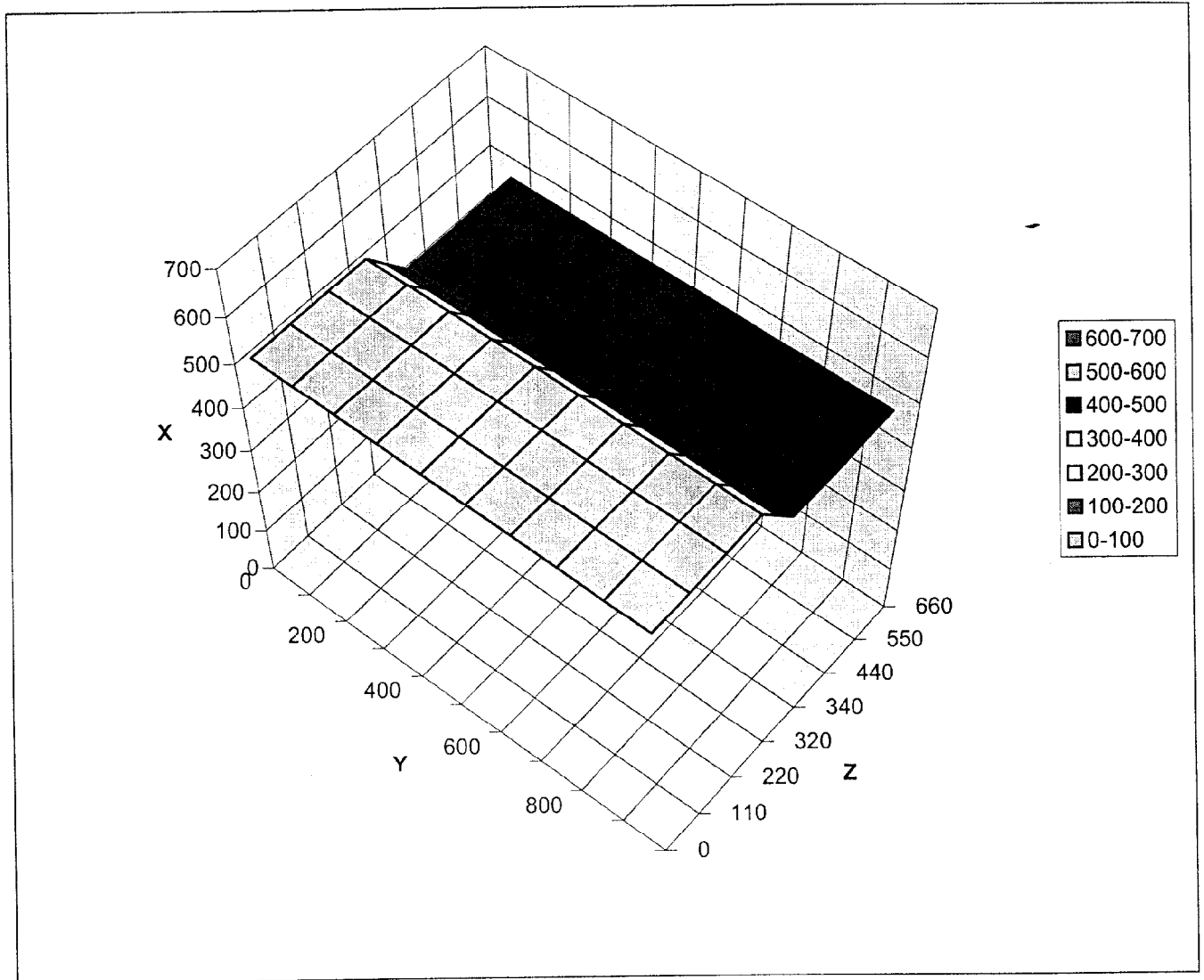
DEFORMABLE BARRIER MEASUREMENTS - PRETEST

VEHICLE YR/MAKE/MODEL/BODY: 1996 FORD TAURUS 4 DOOR SEDAN

NHTSA No.: MT0210

TEST PROGRAM: 1997 NCAP 40% OFFSET IMPACT (MALE)

TEST DATE: 7/17/97



All Measurements are in Millimeters

	Z Axis	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10
Y Axis	0	0	100	200	300	400	500	600	700	800	900
Level 1	660	454	454	454	454	454	454	454	454	454	454
Level 2	550	454	454	454	454	454	454	454	454	454	454
Level 3	440	454	454	454	454	454	454	454	454	454	454
Level 4	340	454	454	454	454	454	454	454	454	454	454
Level 5	320	544	544	544	544	544	544	544	544	544	544
Level 6	220	544	544	544	544	544	544	544	544	544	544
Level 7	110	544	544	544	544	544	544	544	544	544	544
Level 8	0	544	544	544	544	544	544	544	544	544	544

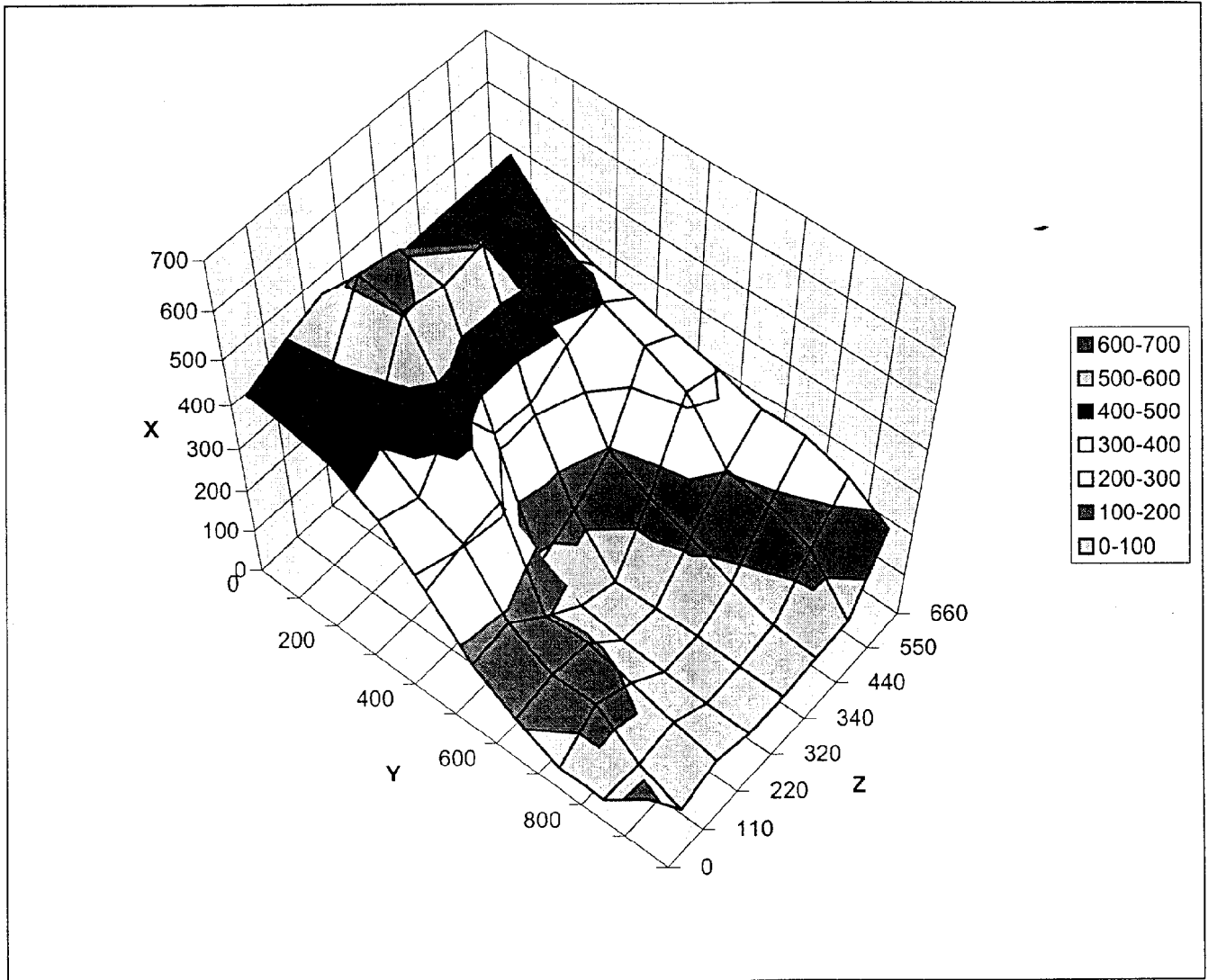
DEFORMABLE BARRIER MEASUREMENTS - POSTTEST

VEHICLE YR/MAKE/MODEL/BODY: 1996 FORD TAURUS 4 DOOR SEDAN

NHTSA No.: MT0210

TEST PROGRAM: 1997 NCAP 40% OFFSET IMPACT (MALE)

TEST DATE: 7/17/97



All Measurements are in Millimeters

	Z Axis	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10
Y Axis	0	0	100	200	300	400	500	600	700	800	900
Level 1	660	481	391	356	341	317	297	268	267	238	180
Level 2	550	478	477	444	401	365	323	204	183	143	32
Level 3	440	476	489	442	377	196	149	117	74	37	27
Level 4	340	472	482	602	321	130	19	24	25	21	19
Level 5	320	472	603	587	328	81	47	30	24	19	17
Level 6	220	523	621	605	452	317	110	117	92	68	44
Level 7	110	494	472	411	343	303	184	129	134	53	12
Level 8	0	456	444	425	371	278	172	111	60	60	150

8

APPENDIX D

INSTRUMENTATION DATA CHANNEL ASSIGNMENTS

APPENDIX D

INSTRUMENTATION DATA CHANNEL ASSIGNMENTS

**40 % Offset Test With Hybrid III Male 50th Percentile ATD
Instrumentation Data Channel Assignments
Driver A.T.D Serial Number 34**

Test Date: 7/17/97

Vehicle: 1997 Ford Taurus GL 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	HEAD, REDUNDANT	X	GPAC032	Accel., 1/2 bridge	Endevco	7264-2000	G
5	HEAD, REDUNDANT	Y	GPAC021	Accel., 1/2 bridge	Endevco	7264-2000	G
6	HEAD, REDUNDANT	Z	GPAC026	Accel., 1/2 bridge	Endevco	7264-2000	G
7	NECK FORCE	X	GPUN01FX	Load cell, six axis neck	R. A. Denton	1716A	N
8	NECK FORCE	Y	GPUN01FY	Load cell, six axis neck	R. A. Denton	1716A	N
9	NECK FORCE	Z	GPUN01FZ	Load cell, six axis neck	R. A. Denton	1716A	N
10	NECK MOMENT	X	GPUN01MX	Load cell, six axis neck	R. A. Denton	1716A	N
11	NECK MOMENT	Y	GPUN01MY	Load cell, six axis neck	R. A. Denton	1716A	N
12	NECK MOMENT	Z	GPUN01MZ	Load cell, six axis neck	R. A. Denton	1716A	N
13	CHEST , PRIMARY	X	GPAC005	Accel., 1/2 bridge	Endevco	7264-2000	G
14	CHEST , PRIMARY	Y	GPAC011	Accel., 1/2 bridge	Endevco	7264-2000	G
15	CHEST , PRIMARY	Z	GPAC010	Accel., 1/2 bridge	Endevco	7264-2000	G
16	CHEST , REDUNDANT	X	GPAC034	Accel., 1/2 bridge	Endevco	7264-2000	G
17	CHEST , REDUNDANT	Y	GPAC023	Accel., 1/2 bridge	Endevco	7264-2000	G
18	CHEST , REDUNDANT	Z	GPAC020	Accel., 1/2 bridge	Endevco	7264-2000	G
19	CHEST DISPLACEMENT	X	GPRP001	Potentiometer, Rotary	Servo	14CBI	CM
20	PELVIS, PRIMARY	X	GPAC025	Accel., 1/2 bridge	Endevco	7264-2000	G
21	PELVIS, PRIMARY	Y	GPAC022	Accel., 1/2 bridge	Endevco	7264-2000	G
22	PELVIS, PRIMARY	Z	GPAC019	Accel., 1/2 bridge	Endevco	7264-2000	G
23	LEFT FEMUR FORCE	Z	KEFF001	Load cell, Femur	R.A. Denton	2121	N
24	RIGHT FEMUR FORCE	Z	GPLC001	Load cell, Femur	G.S.E.	2430	N

**40 % Offset Test With Hybrid III Male 50th Percentile ATD
Instrumentation Data Channel Assignments
Driver A.T.D Serial Number 34**

Test Date: 7/17/97

Vehicle: 1997 Ford Taurus GL 4 Door Sedan

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
25	UP. TIBIA LEFT MOM.	X	GPUT01MX	2 ch., Upper tibia gage	R. A. Denton	1583	J
26	UP. TIBIA LEFT MOM.	Y	GPUT01MY	2 ch., Upper tibia gage	R. A. Denton	1583	J
27	UP. TIBIA RIGHT MOM.	X	GPUT02MX	2 ch., Upper tibia gage	R. A. Denton	1583	J
28	UP. TIBIA RIGHT MOM.	Y	GPUT02MY	2 ch., Upper tibia gage	R. A. Denton	1583	J
29	LWR. TIBIA LEFT FORCE	Y	GPLT01FY	3 ch., lower tibia gage	R. A. Denton	1584	N
30	LWR. TIBIA LEFT FORCE	Z	GPLT01FZ	3 ch., lower tibia gage	R. A. Denton	1584	N
31	LWR. TIBIA LEFT MOM.	X	GPLT01MX	3 ch., lower tibia gage	R. A. Denton	1584	J
32	LWR. TIBIA RIGHT FORCE	Y	GPLT02FY	3 ch., lower tibia gage	R. A. Denton	1584	N
33	LWR. TIBIA RIGHT FORCE	Z	GPLT02FZ	3 ch., lower tibia gage	R. A. Denton	1584	N
34	LWR. TIBIA RIGHT MOM.	X	GPLT02MX	3 ch., lower tibia gage	R. A. Denton	1584	J
35	FOOT LEFT	X	KEIC002X	Accel., Foot Triax	I.C. Sensor	3031-500	G
36	FOOT LEFT	Y	KEIC002Y	Accel., Foot Triax	I.C. Sensor	3031-500	G
37	FOOT LEFT	Z	KEIC002Z	Accel., Foot Triax	I.C. Sensor	3031-500	G
38	FOOT RIGHT	X	KEIC001X	Accel., Foot Triax	I.C. Sensor	3031-500	G
39	FOOT RIGHT	Y	KEIC001Y	Accel., Foot Triax	I.C. Sensor	3031-500	G
40	FOOT RIGHT	Z	KEIC001Z	Accel., Foot Triax	I.C. Sensor	3031-500	G
41	LAP BELT FORCE	X	KELC001	Load cell, Seat belt	Lebow	3371	N
42	SHOULDER BELT FORCE	X	KELC002	Load cell, Seat belt	Lebow	3371	N
43	SHOULDER BELT SPOOL	X	KEPP001	Pullout pot	Celesco	PTX101-0030	CM
44	SHOULDER BELT ELONG.	X	KEEP001	Linear pot., belt stretch	E.T.I.	LCP8-10 10K	CM/CM

40 % Offset Test With Hybrid III Male 50th Percentile ATD

Instrumentation Data Channel Assignments

Passenger A.T.D Serial Number 35

Test Date: 7/17/97

Vehicle: 1997 Ford Taurus GL 4 Door Sedan

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
45	HEAD, PRIMARY	X	KEAC039	Accel., 1/2 bridge	Endevco	7264-2000	G
46	HEAD, PRIMARY	Y	KEAC038	Accel., 1/2 bridge	Endevco	7264-2000	G
47	HEAD, PRIMARY	Z	KEAC027	Accel., 1/2 bridge	Endevco	7264-2000	G
48	HEAD, REDUNDANT	X	KEAC031	Accel., 1/2 bridge	Endevco	7264-2000	G
49	HEAD, REDUNDANT	Y	KEAC032	Accel., 1/2 bridge	Endevco	7264-2000	G
50	HEAD, REDUNDANT	Z	KEAC026	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
55	NECK MOMENT	Y	GPUN02MY	Load cell, six axis neck	R. A. Denton	1716A	N
56	NECK MOMENT	Z	GPUN02MZ	Load cell, six axis neck	R. A. Denton	1716A	N
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

40 % Offset Test With Hybrid III Male 50th Percentile ATD

Instrumentation Data Channel Assignments

Passenger A.T.D Serial Number 35

Test Date: 7/17/97

Vehicle: 1997 Ford Taurus GL 4 Door Sedan

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
69	UP. TIBIA LEFT MOM.	X	GPU03MX	2 ch., Upper tibia gage	R. A. Denton	1583	J
70	UP. TIBIA LEFT MOM.	Y	GPU03MY	2 ch., Upper tibia gage	R. A. Denton	1583	J
71	UP. TIBIA RIGHT MOM.	X	GPU04MX	2 ch., Upper tibia gage	R. A. Denton	1583	J
72	UP. TIBIA RIGHT MOM.	Y	GPU04MY	2 ch., Upper tibia gage	R. A. Denton	1583	J
73	LWR. TIBIA LEFT FORCE	Y	GPLT03FY	3 ch., lower tibia gage	R. A. Denton	1584	N
74	LWR. TIBIA LEFT FORCE	Z	GPLT03FZ	3 ch., lower tibia gage	R. A. Denton	1584	N
75	LWR. TIBIA LEFT MOM.	X	GPLT03MX	3 ch., lower tibia gage	R. A. Denton	1584	J
76	LWR. TIBIA RIGHT FORCE	Y	GPLT04FY	3 ch., lower tibia gage	R. A. Denton	1584	N
77	LWR. TIBIA RIGHT FORCE	Z	GPLT04FZ	3 ch., lower tibia gage	R. A. Denton	1584	N
78	LWR. TIBIA RIGHT MOM.	X	GPLT04MX	3 ch., lower tibia gage	R. A. Denton	1584	J
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	Cefesco	PTX101-0030	CM
88	SHOULDER BELT ELONG.	X	KEEP001	Linear pot., belt stretch	E.T.I.	LCP8-10 10K	CM

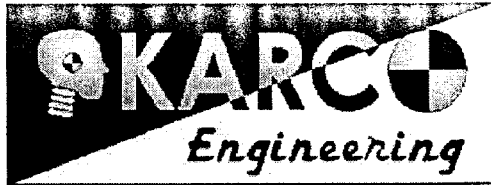
**40 % Offset Test With Hybrid III Male 50th Percentile ATD
Instrumentation Data Channel Assignments
Vehicle Accelerometers**

Test Date: 7/17/97

Vehicle: 1997 Ford Taurus GL 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

50TH Percentile Male

Left Knee Impact Test

ATD Serial No.: 34

Part Serial No.: N/A

Test I.D.: MK008

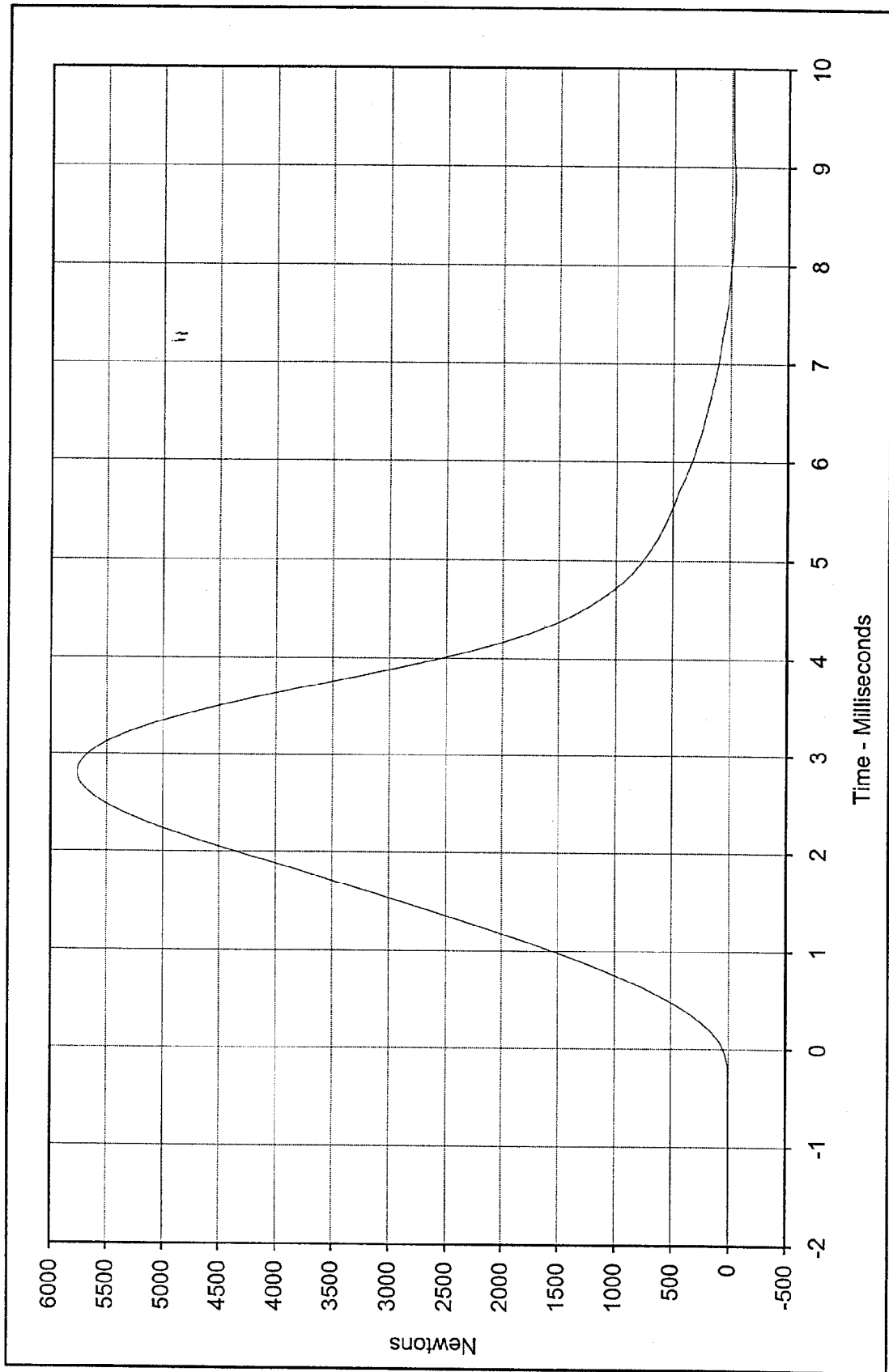
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.5	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	2.073 to 2.134	2.106	Pass
Peak Probe Force	Newtons	4715 to 5782	5761.1	Pass
Overall Test Results				Pass

N 2 O P
Laboratory Technician

J W Richardson
Approved By

July 8, 1997
Test Date

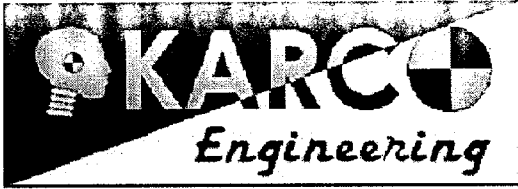
7/8/97
Date



Curve Description: Hybrid III Left Knee Impact Test
 Maximum Value: 5761.1 at 2.8 Milliseconds
 Minimum Value: -4.2 at 8.0 Milliseconds
 SAE Filter Class: 600
 Date of Test: 7/8/97
 ATD Serial No.: 34

Testing Program: Hybrid III Left Knee Impact Test
 Test Information: Part S/N: N/A Test I.D.: MK008





Hybrid III Calibration Data Sheet

50TH Percentile Male

Right Knee Impact Test

ATD Serial No.: 34

Part Serial No.: N/A

Test I.D.: MK006

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.5	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	2.073 to 2.134	2.103	Pass
Peak Probe Force	Newtons	4715 to 5782	5229.9	Pass
Overall Test Results				Pass

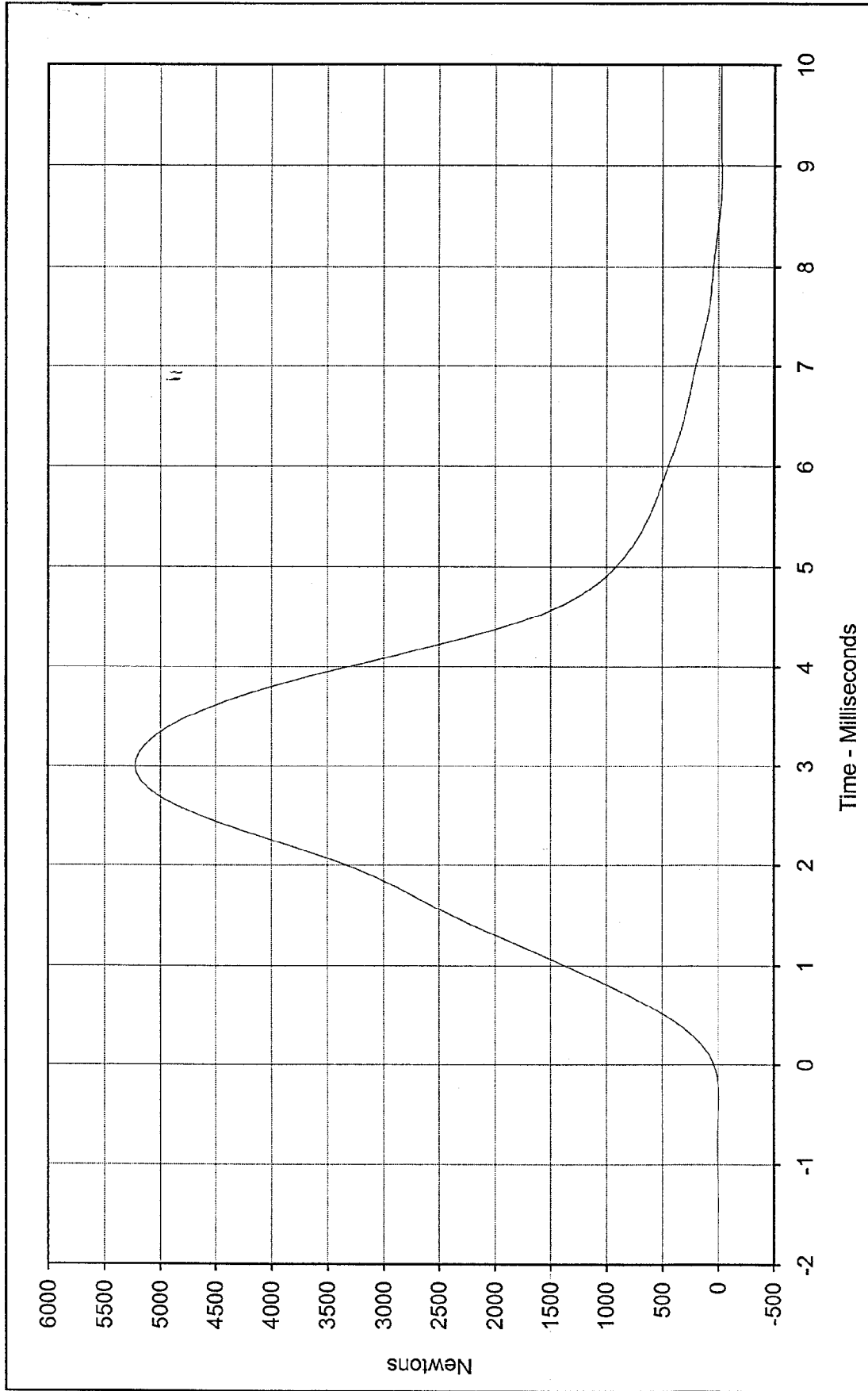
Laboratory Technician

Approved By

July 8, 1997

Test Date

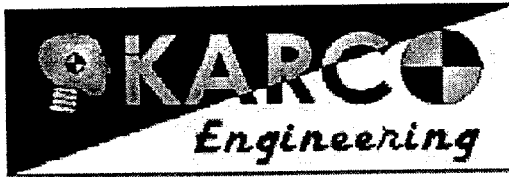
Date



Curve Description: Hybrid III Right Knee Impact Test
 Maximum Value: 5229.9 at 3.0 Milliseconds
 Minimum Value: -4.9 at -0.3 Milliseconds



SAE Filter Class: 600
 Date of Test: 7/8/96
 ATD Serial No.: 34



Hybrid III Calibration Data Sheet

50TH Percentile Male

Head Drop Calibration

ATD Serial No.: 034

Part Serial No.: N/A

Test I.D.: MH001

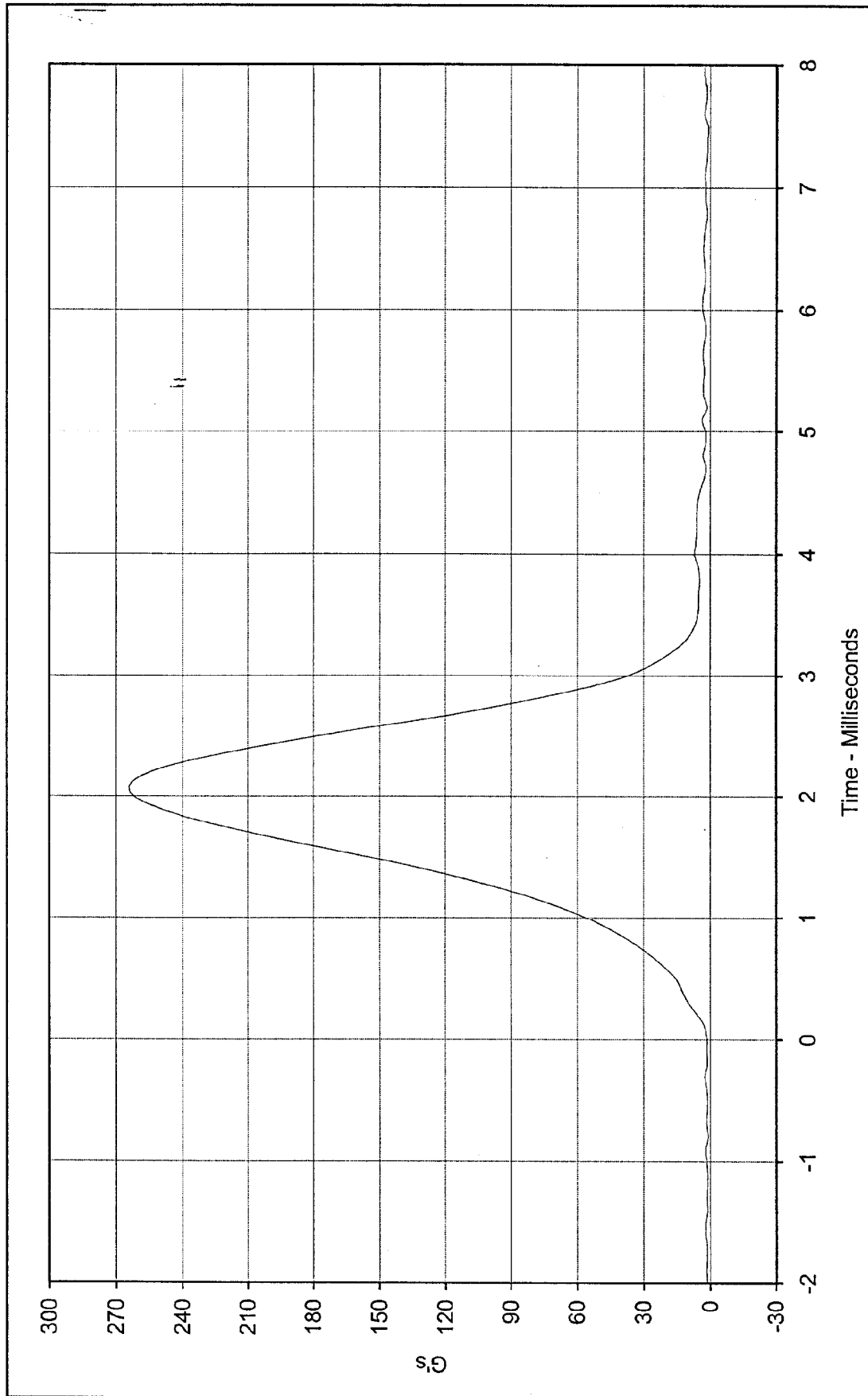
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	20.6	Pass
Laboratory Relative Humidity	%	10 to 70	35	Pass
Peak Resultant Acceleration	G's	225.0 to 275.0	263.6	Pass
Peak Lateral Acceleration	G's	≤15.0	4.0	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Overall Test Results				Pass

N Z Orlop
Laboratory Technician

July 7, 1997
Test Date

J. A. Kulandran
Approved By

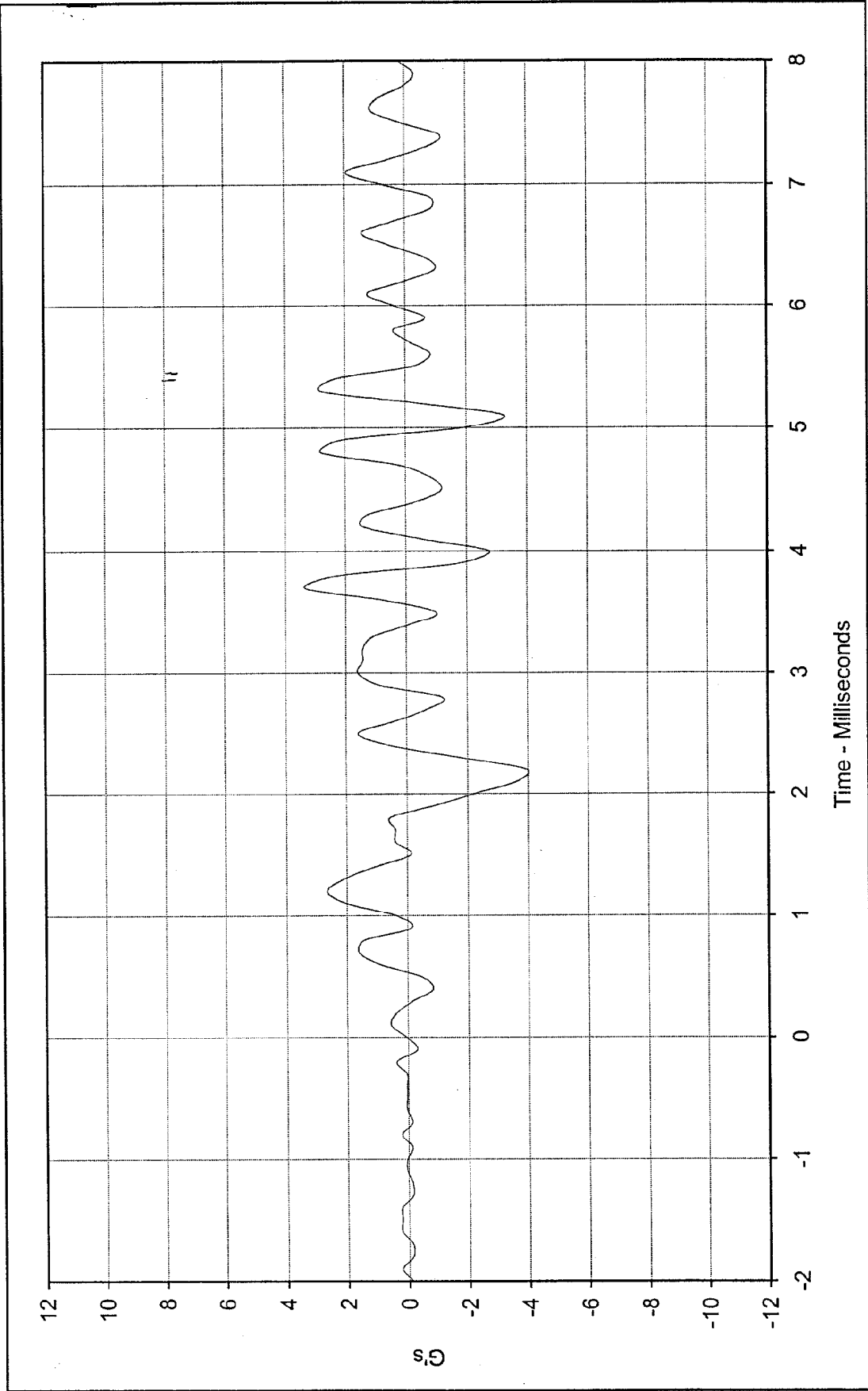
7/7/97
Date



Curve Description: Head Resultant Acceleration
 Maximum Value: 263.6 at 2.1 Milliseconds
 Minimum Value: 0.9 at 7.5 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 7/7/97
 ATD Serial No.: 034

Testing Program: Hybrid III Head Drop Calibration (Male)
 Test Information: S/N of Part: N/A Test I.D.: MH001





Curve Description: Head Acceleration Y Axis Testing Program: Hybrid III Head Drop Calibration (Male)
 Maximum Value: 3.3 at 3.7 Milliseconds Test Information: S/N of Part: N/A Test I.D.: MH001
 Minimum Value: -4.0 at 2.2 Milliseconds

SAE Filter Class: 1000
 Date of Test: 7/7/97
 ATD Serial No.: 034





Hybrid III Calibration Data Sheet

50TH Percentile Male

Thorax Impact Test

ATD Serial No.: 34

Part Serial No.: N/A

Test I.D.: CH343

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
Probe Velocity	m/s	6.58 to 6.82	6.65	Pass
Peak Probe Force	Newtons	5159 to 5893	5778	Pass
Peak Sternum Displacement	CM	6.35 to 7.26	6.5	Pass
Internal Hysteresis	%	69 to 85	70.1	Pass
Overall Test Results				Pass

Laboratory Technician

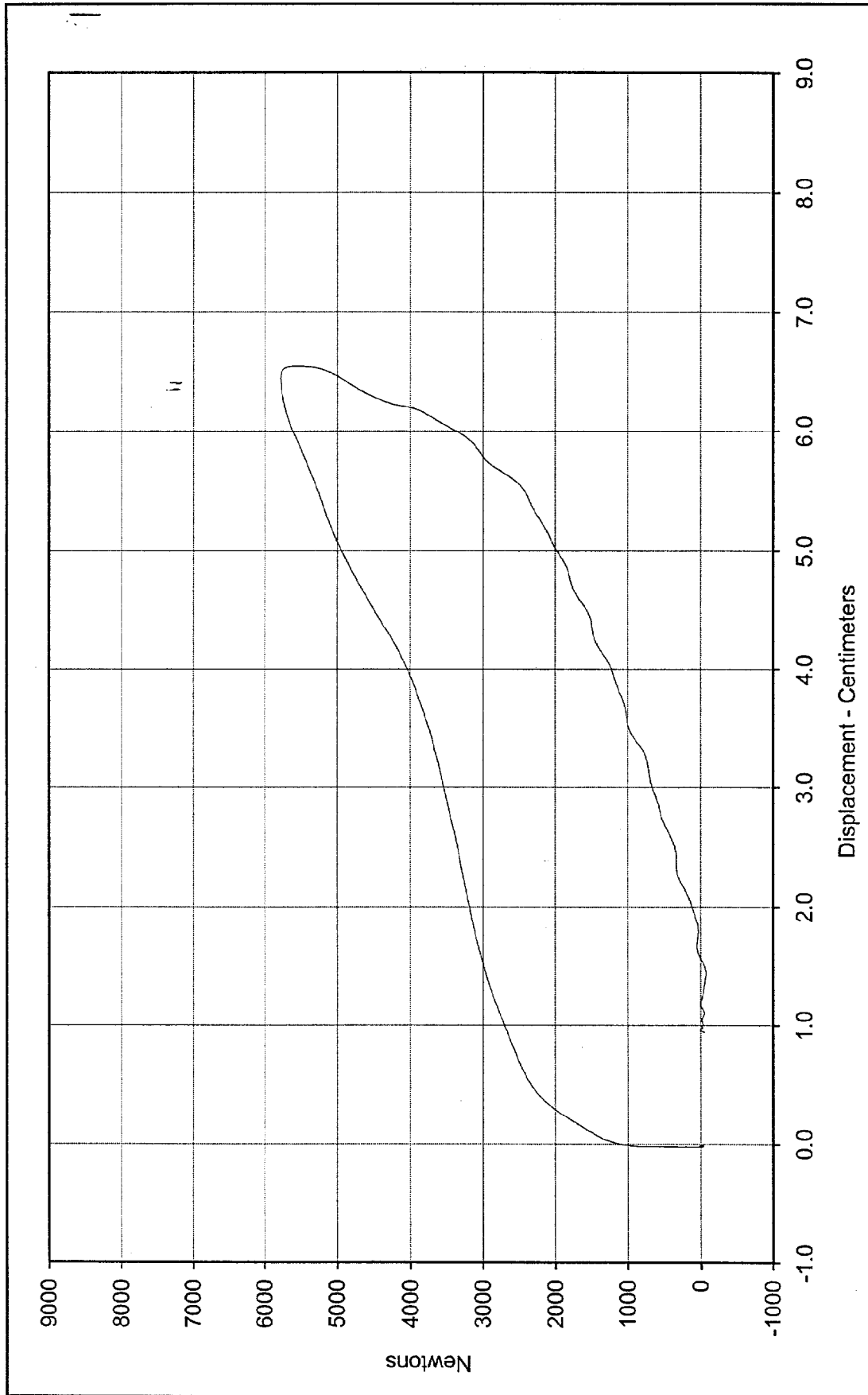
July 6, 1997

Test Date

Approved By

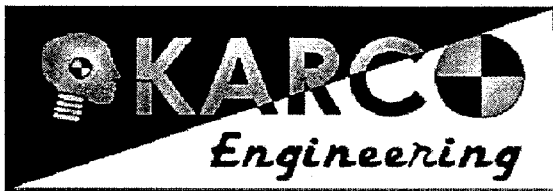
7/6/97

Date



Curve Description: Probe Force vs. Chest Displacement Testing Program: Hybrid III Thorax Impact Test
 Probe Force: 5778.0 Newtons Test Information: S/N of Part: N/A Test I.D.: CH343
 Chest Displ.: 6.54 Centimeters
 SAE Filter Class: 180
 Date of Test: 7/6/97
 ATD Serial No.: 34





Hybrid III Calibration Data Sheet

50TH Percentile Male

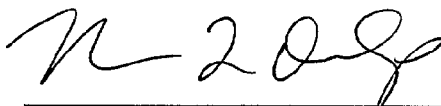
Neck Flexion Test

ATD Serial No.: 34

Part Serial No.: N/A

Test I.D.: MNF07

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	6.94	Pass	
Pendulum Deceleration	10 Msec.	m/s	22.5 to 27.5	23.3	Pass
	20 Msec.	m/s	17.6 to 22.6	18.9	Pass
	30 Msec.	m/s	12.5 to 18.5	16.2	Pass
Peak Pendulum Decel. after 30 Msec.	G's	≤ 29.0	16.2	Pass	
Deceleration Decay, Time to Cross 5 G's	Msec.	34.0 to 42.0	34.4	Pass	
Maximum "D" Plane Rotation	Maximum	Degrees	64.0 to 78.0	71.6	Pass
	Time	Msec.	57.0 to 64.0	58.9	Pass
"D" Plane Rotation Decay, Time To Zero Crossing	Msec.	113.0 to 128.0	118.5	Pass	
Moment About Occipital Condyle	Maximum	N • m	84.1 to 108.5	98.7	Pass
	Time	Msec.	47.0 to 58.0	52.9	Pass
Positive Moment Decay, Time To Zero Crossing	Msec.	97.0 to 107.0	107.0	Pass	
Overall Test Results				Pass	



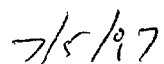
 Laboratory Technician

July 5, 1997

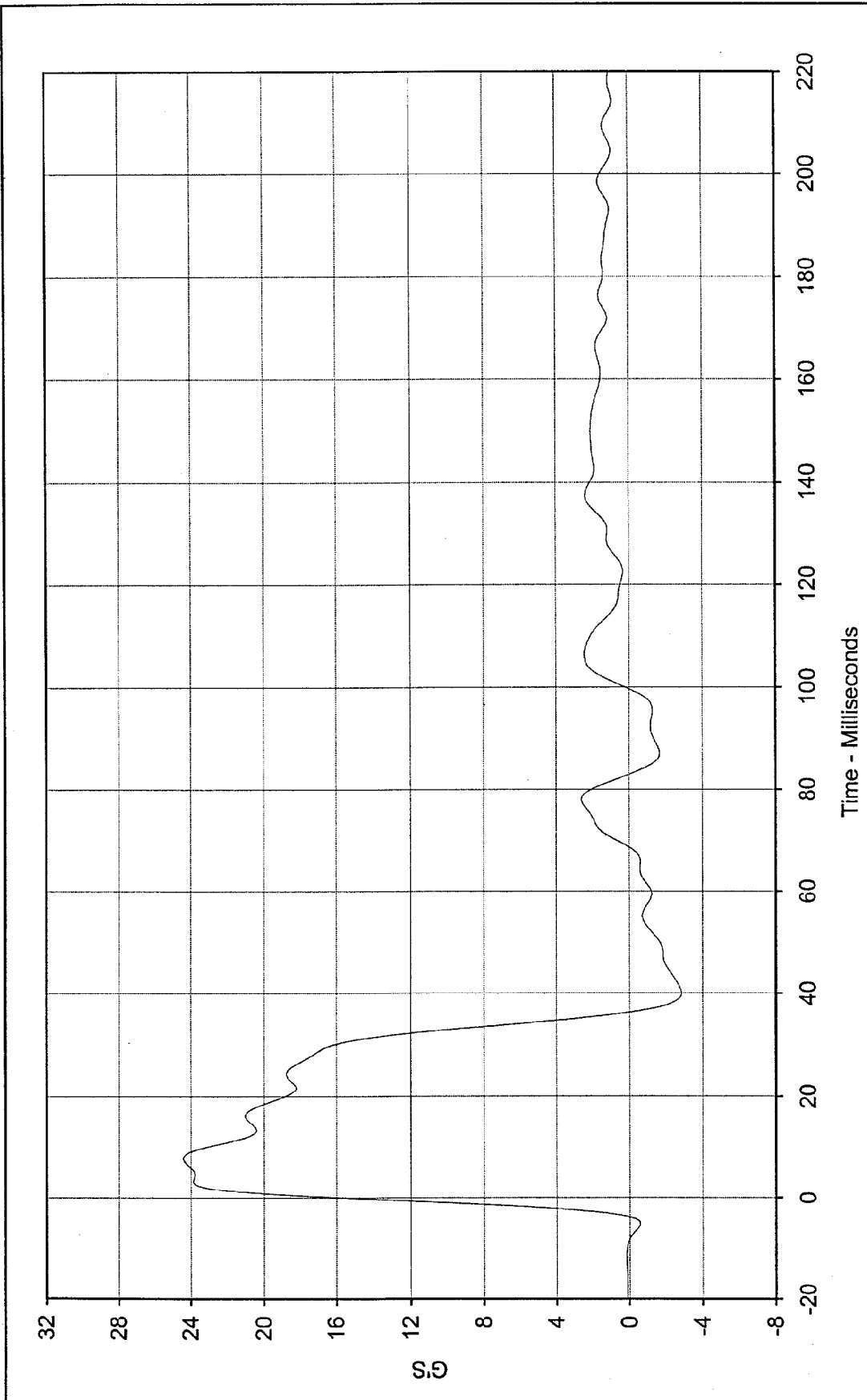
 Test Date



 Approved By



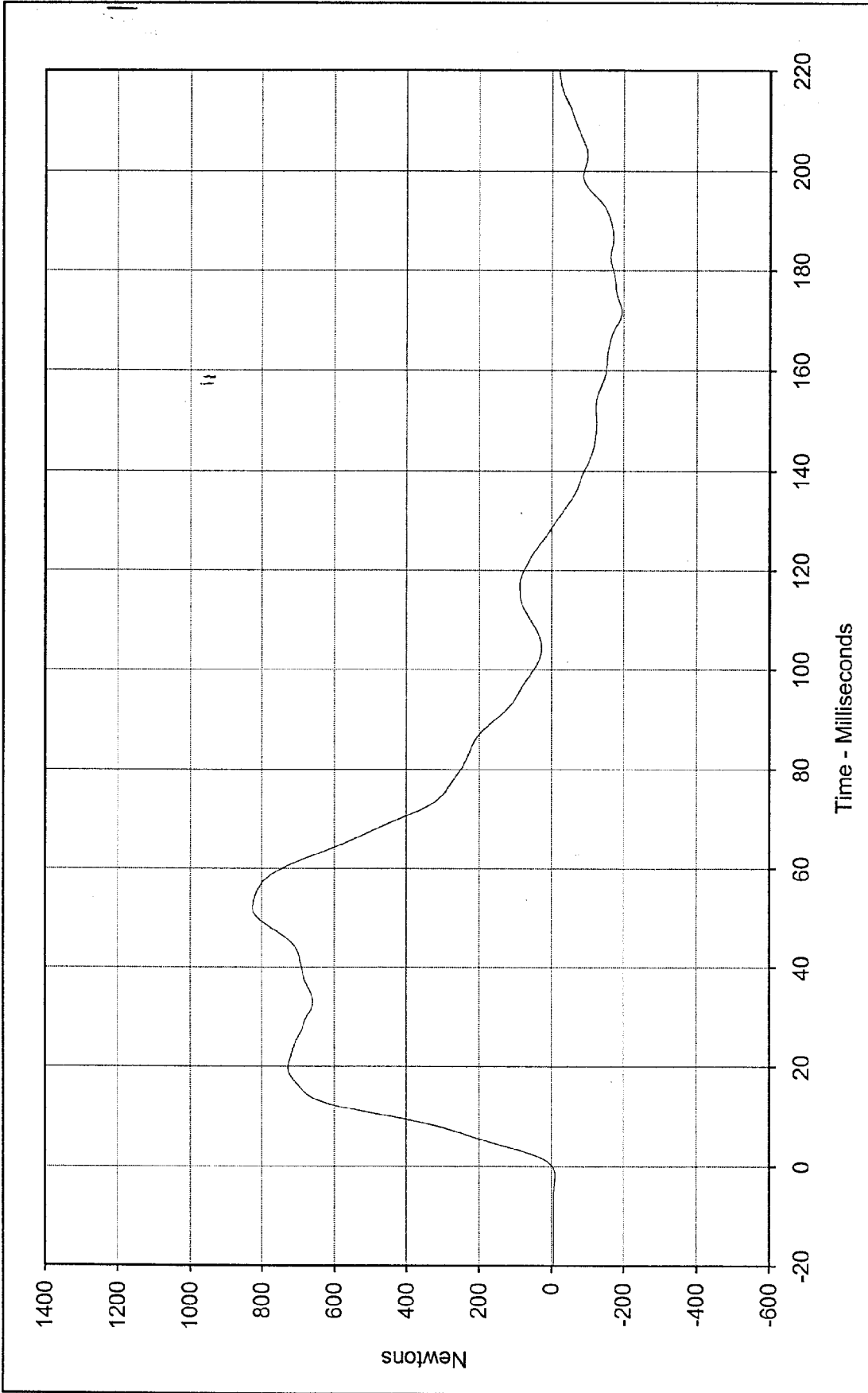
 Date



Curve Description: Pendulum Deceleration
 Maximum Value: 24.4 at 7.9 Milliseconds
 Minimum Value: -2.8 at 40.0 Milliseconds
 SAE Filter Class: 60
 Date of Test: 7/5/97
 ATD Serial No.: 34

Testing Program: Hybrid III Neck Flexion Test (Male)
 Test Information: S/N of Part: N/A Test I.D.: MNF07

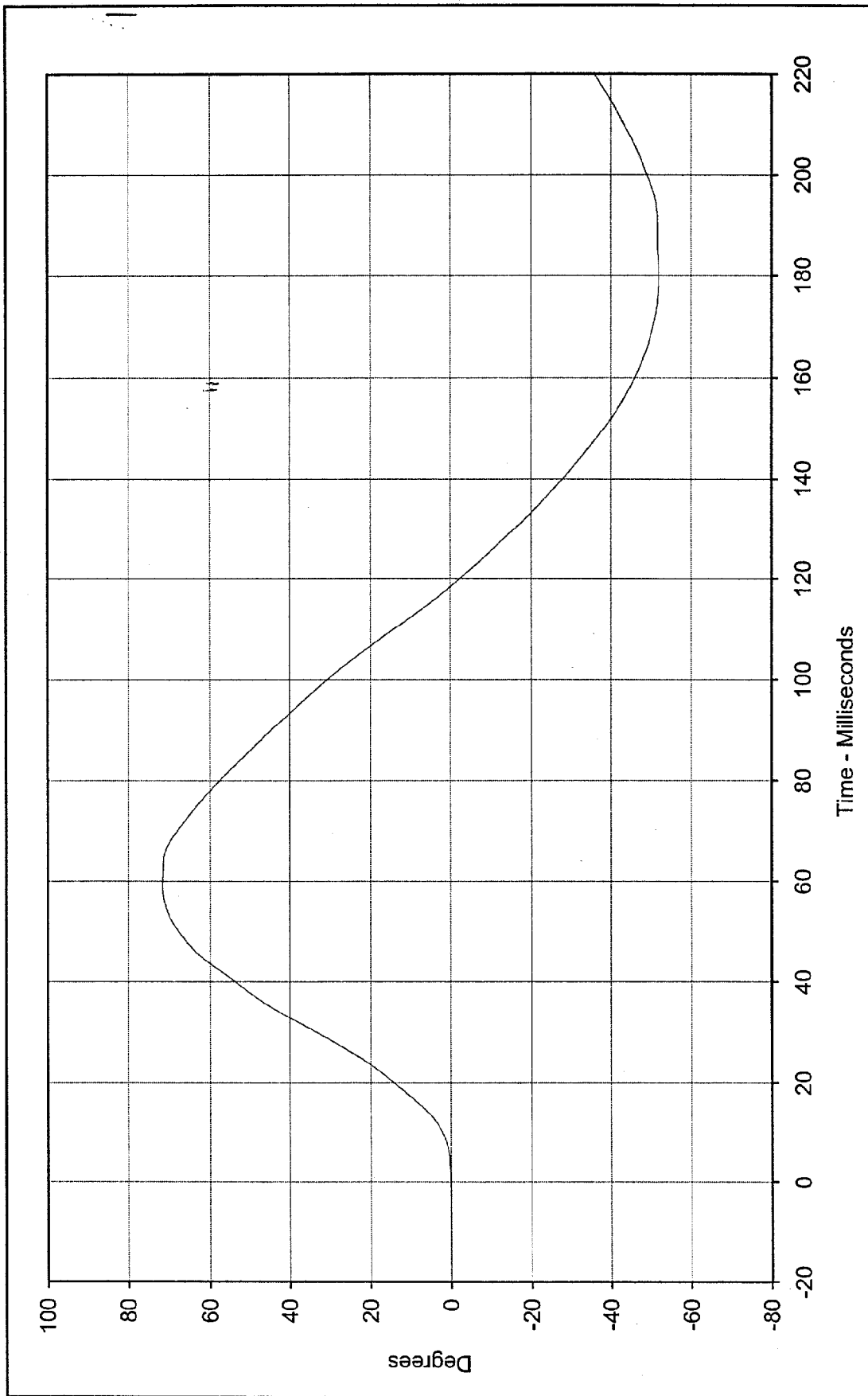




Testing Program: Hybrid III Neck Flexion Test (Male)
 Test Information: S/N of Part: N/A Test I.D.: MNF07

Curve Description: Neck Force X
 Maximum Value: 825.2 at 52.0 Milliseconds
 Minimum Value: -193.5 at 171.7 Milliseconds
 SAE Filter Class: 60
 Date of Test: 7/5/97
 ATD Serial No.: 34

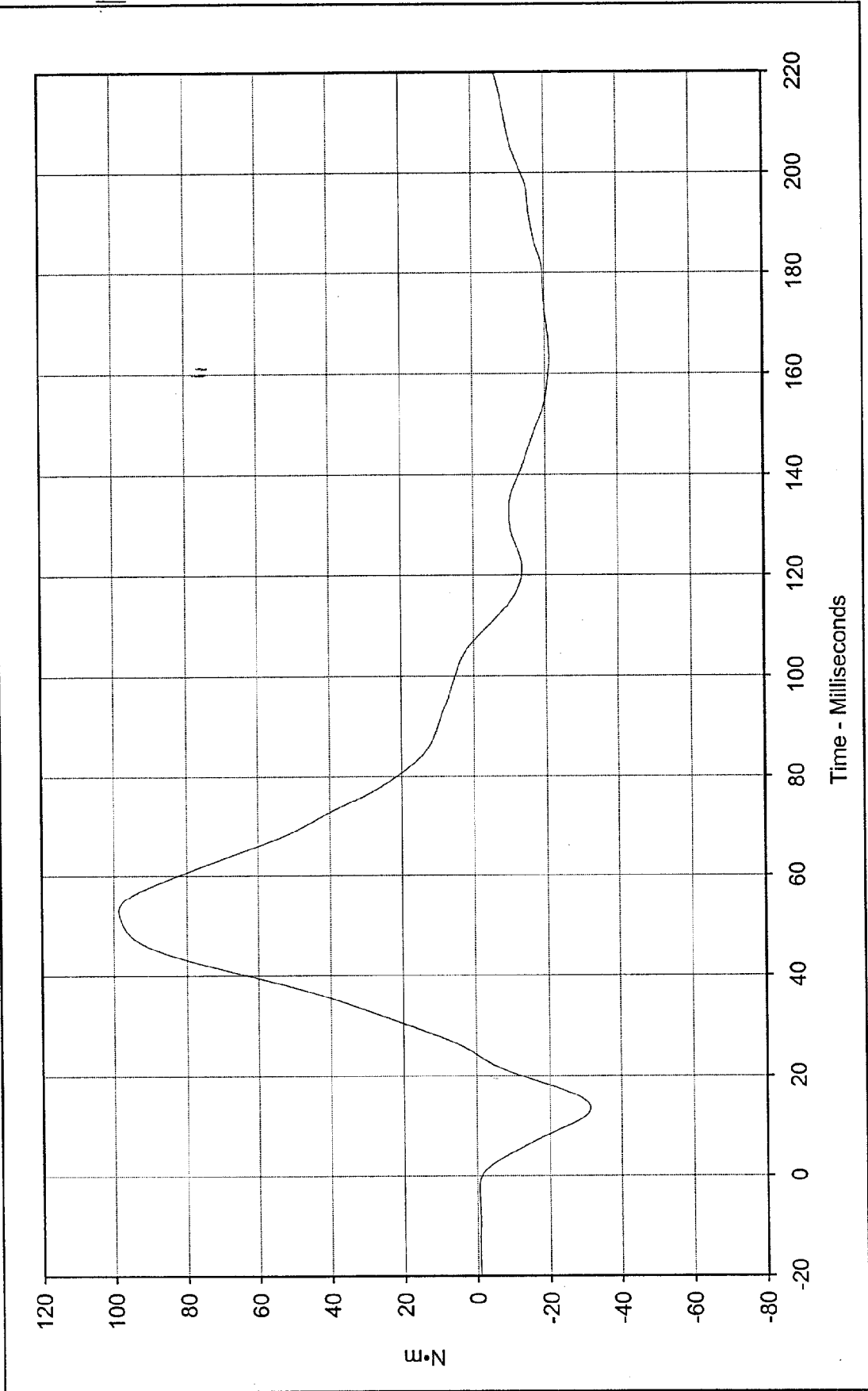




Testing Program: Hybrid III Neck Flexion Test (Male)
 Test Information: S/N of Part: N/A Test I.D.: MNF07

Curve Description: "D" Plane Rotation
 Maximum Value: 71.6 at 58.9 Milliseconds
 Minimum Value: -51.9 at 180.5 Milliseconds
 SAE Filter Class: 60
 Date of Test: 7/5/97
 ATD Serial No.: 34

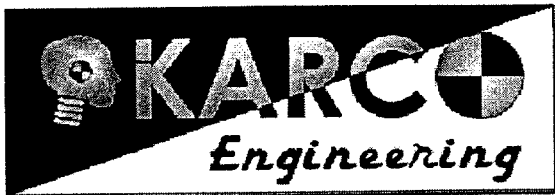




Testing Program: Hybrid III Neck Flexion Test (Male)
 Test Information: S/N of Part: N/A Test I.D.: MNF07

Curve Description: Moment About Occipital Condyles
 Maximum Value: 98.7 at 52.9 Milliseconds
 Minimum Value: -31.3 at 13.4 Milliseconds
 SAE Filter Class: 60
 Date of Test: 7/5/97
 ATD Serial No.: 34





Hybrid III Calibration Data Sheet

50TH Percentile Male

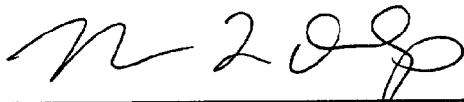
Neck Extension Test

ATD Serial No.: 34

Part Serial No.: N/A

Test I.D.: MNE05

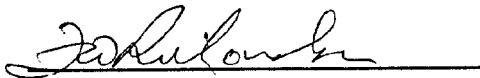
Tested Parameter	Units	Specification	Result	Pass/Fail	
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass	
Laboratory Relative Humidity	%	10 to 70	36	Pass	
Pendulum Velocity	m/s	5.95 to 6.19	6.04	Pass	
Pendulum Deceleration	10 Msec.	m/s	17.2 to 21.2	17.5	Pass
	20 Msec.	m/s	14.0 to 19.0	16.1	Pass
	30 Msec.	m/s	11.0 to 16.0	13.8	Pass
Peak Pendulum Decel. after 30 Msec.	G's	≤ 22.0	13.8	Pass	
Deceleration Decay, Time to Cross 5 G's	Msec.	38.0 to 46.0	42.3	Pass	
Maximum "D" Plane Rotation	Maximum	Degrees	81.0 to 106.0	97.4	Pass
	Time	Msec.	72.0 to 82.0	77.1	Pass
"D" Plane Rotation Decay, Time To Zero Crossing	Msec.	147.0 to 174.0	157.6	Pass	
Moment About Occipital Condyle	Maximum	N • m	-52.9 to -79.9	-79.6	Pass
	Time	Msec.	65.0 to 79.0	70.4	Pass
Negative Moment Decay, Time To Zero Crossing	Msec.	120.0 to 148.0	144.2	Pass	
Overall Test Results				Pass	



Laboratory Technician

July 5, 1997

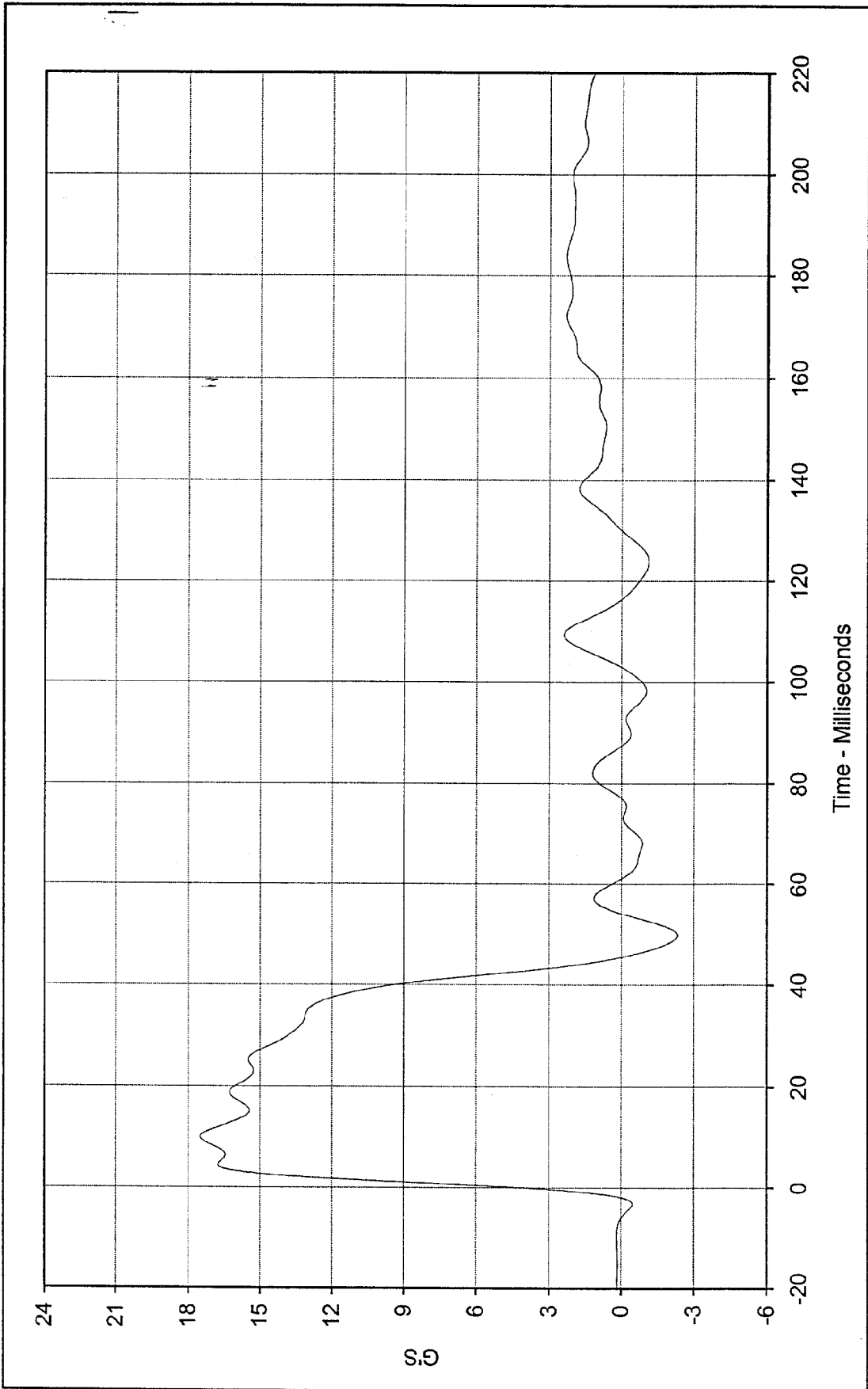
Test Date



Approved By



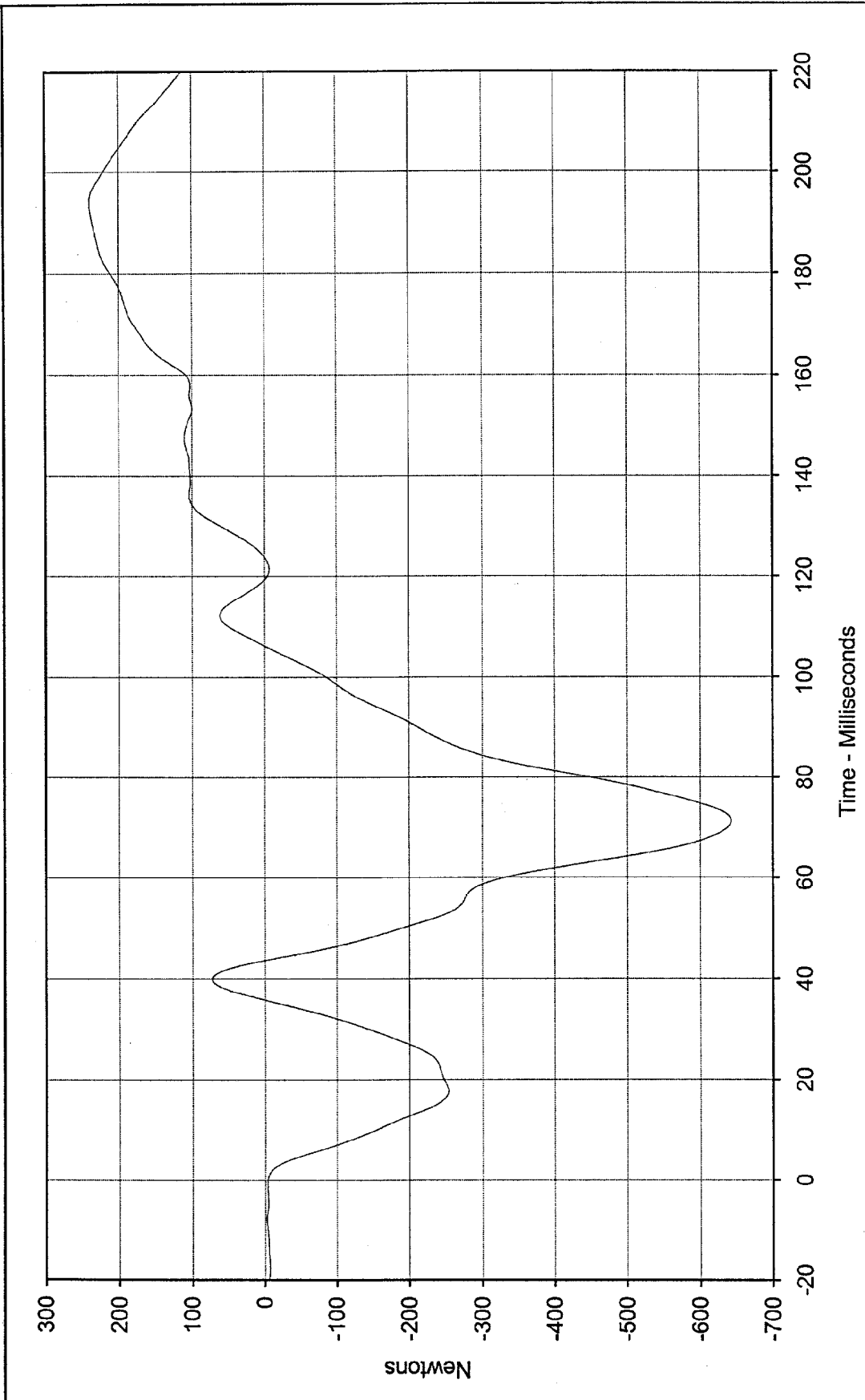
Date



Curve Description: Pendulum Deceleration
 Maximum Value: 17.5 at 9.9 Milliseconds
 Minimum Value: -2.3 at 49.7 Milliseconds
 SAE Filter Class: 60
 Date of Test: 7/5/97
 ATD Serial No.: 34

Testing Program: Hybrid III Neck Extension Test (Male)
 Test Information: S/N of Part: N/A Test I.D.: MNE05

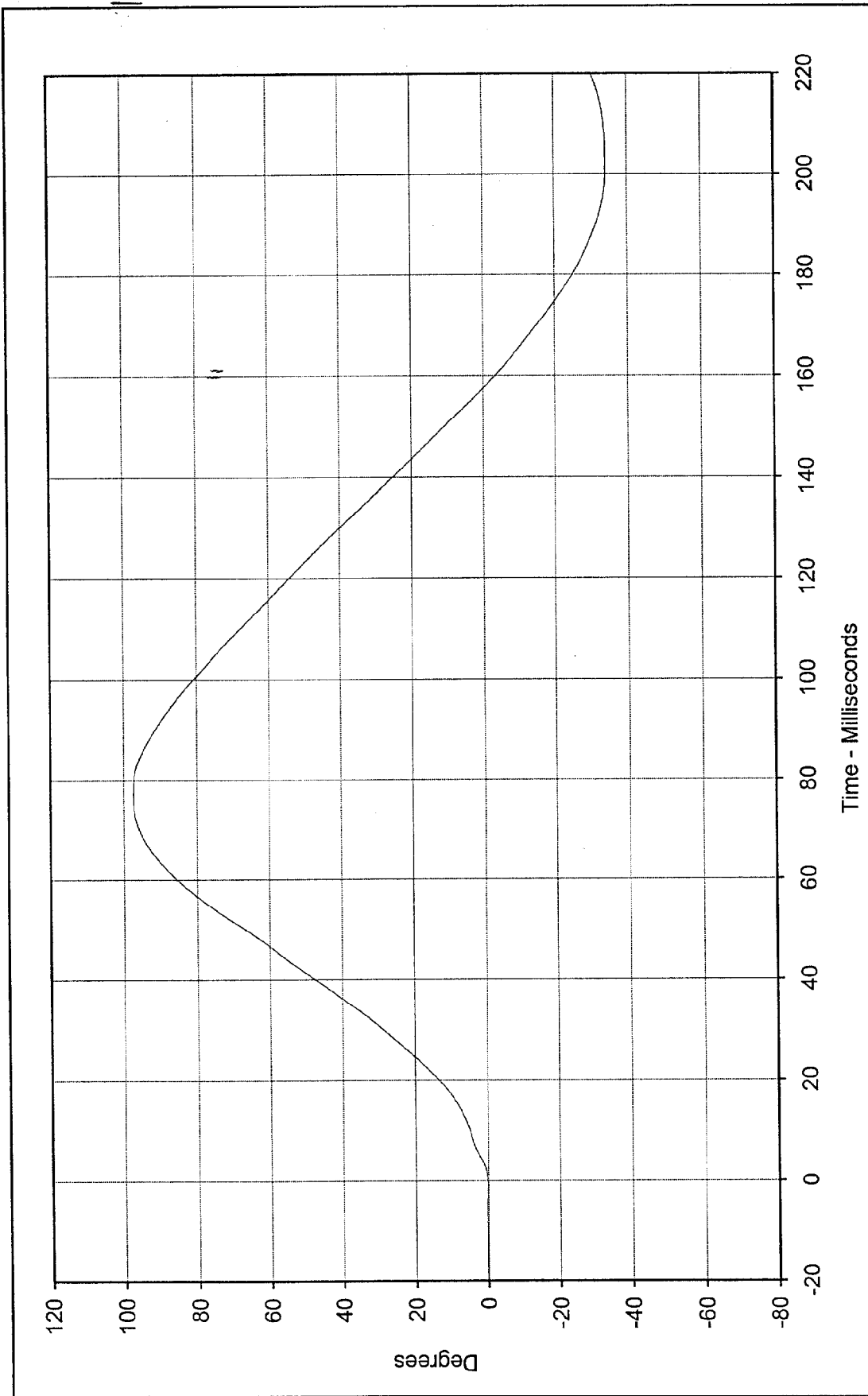




Testing Program: Hybrid III Neck Extension Test (Male)
 Test Information: S/N of Part: N/A Test I.D.: MNE05

Curve Description: Neck Force X
 Maximum Value: 239.1 at 194.1 Milliseconds
 Minimum Value: -642.7 at 71.3 Milliseconds
 SAE Filter Class: 60
 Date of Test: 7/5/97
 ATD Serial No.: 34

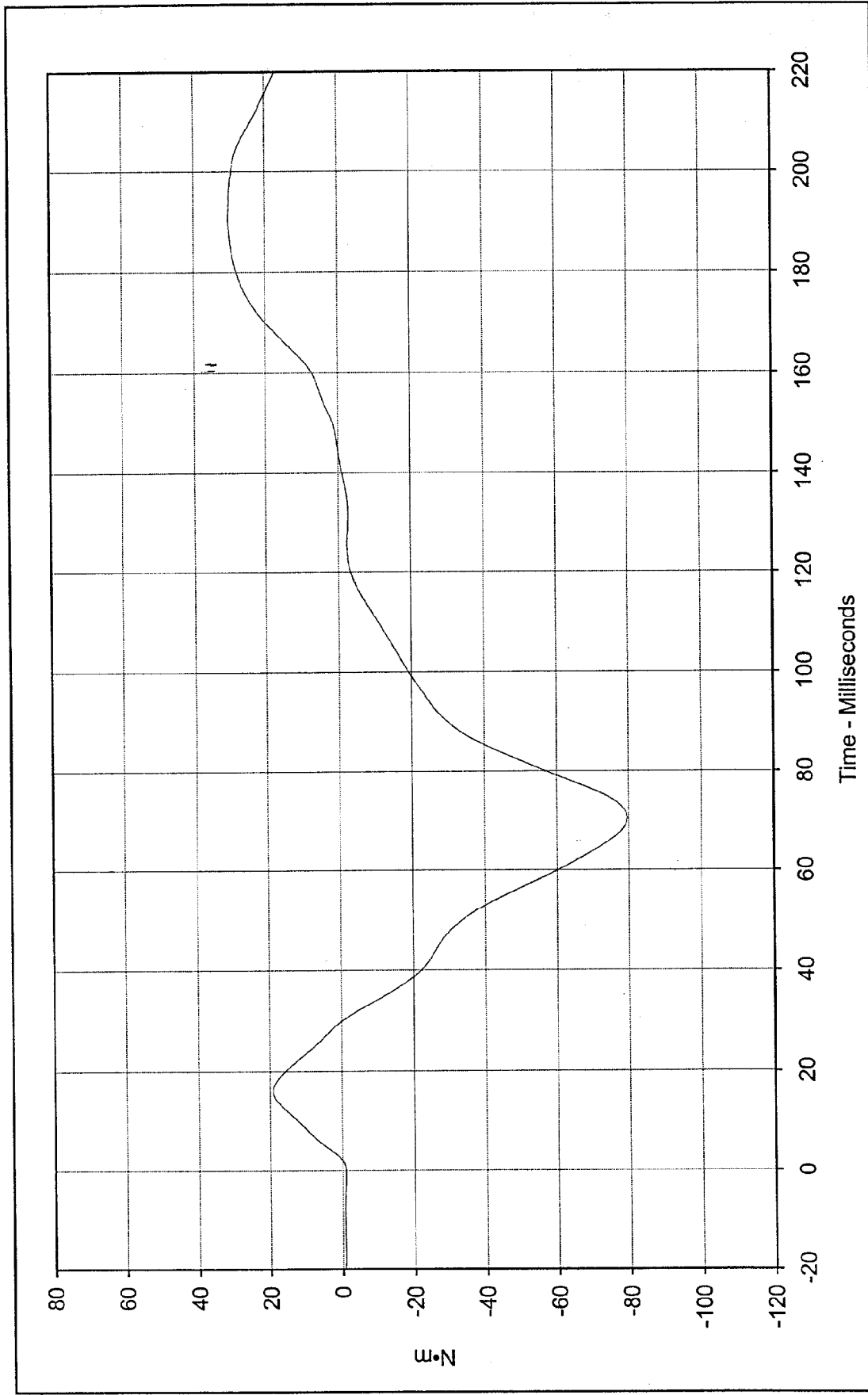




Testing Program: Hybrid III Neck Extension Test (Male)
 Test Information: S/N of Part: N/A Test I.D.: MNE05

Curve Description: "D" Plane Rotation
 Maximum Value: 97.4 at 77.1 Milliseconds
 Minimum Value: -34.1 at 202.6 Milliseconds
 SAE Filter Class: 60
 Date of Test: 7/5/97
 ATD Serial No.: 34

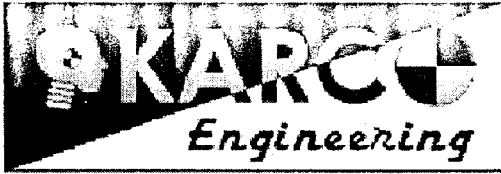




Curve Description: Moment About Occipital Condyles
 Testing Program: Hybrid III Neck Extension Test (Male)
 Maximum Value: 30.2 at 190.8 Milliseconds
 Test Information: S/N of Part: N/A Test I.D.: MNE05
 Minimum Value: -79.6 at 70.4 Milliseconds



SAE Filter Class: 60
 Date of Test: 7/5/97
 ATD Serial No.: 34



Hybrid III Calibration Data Sheet

50TH Percentile Male


External Measurements

ATD Serial No.: 034

Part Serial No.: N/A

Test I.D.: N/A

External Measurement Data				
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory temperature	°C	20.4 to 22.1	20.9	Pass
Laboratory relative humidity	%	10 to 70	43	Pass
A - Total sitting height	mm	878.8 to 889.0	886.3	Pass
B - Shoulder pivot height	mm	505.5 to 520.7	508.5	Pass
C - "H" point height	mm	83.8 to 88.9	85.3	Pass
D - "H" point from seat back	mm	134.6 to 139.7	138.6	Pass
E - Shoulder pivot from back	mm	83.8 to 94.0	85.7	Pass
F - Thigh clearance	mm	139.7 to 154.9	145.8	Pass
G - Elbow back to wrist pivot	mm	289.6 to 304.8	290.9	Pass
H - Skull cap to back line	mm	40.6 to 45.7	45.0	Pass
I - Shoulder to elbow length	mm	330.2 to 345.4	340.1	Pass
J - Elbow rest height	mm	190.5 to 210.8	207.0	Pass
K - Buttock to knee length	mm	579.1 to 604.5	585.0	Pass
L - Popliteal length	mm	429.3 to 454.7	437.0	Pass
M - Knee pivot height	mm	485.1 to 500.4	491.0	Pass
N - Buttock popliteal length	mm	452.1 to 477.5	455.0	Pass
O - Chest depth	mm	213.4 to 228.6	216.4	Pass
P - Foot length	mm	251.5 to 266.7	255.0	Pass
V - Shoulder breadth	mm	421.6 to 436.9	425.0	Pass
W - Foot breadth	mm	91.4 to 106.7	96.0	Pass
Y - Chest circumference	mm	970.3 to 1000.8	998.0	Pass
Z - Waist circumference	mm	835.7 to 866.1	855.0	Pass
AA - Location for chest circumference	mm	429.3 to 434.3	432.0	Pass
BB - Location for waist circumference	mm	226.1 to 231.1	229.0	Pass
Overall Test Results				Pass


 Laboratory Technician

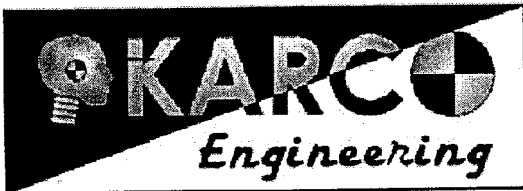
July 9, 1997

Test Date


 Approved By



Date



Hybrid III Calibration Data Sheet

50TH Percentile Male

Left Knee Impact Test

ATD Serial No.: 35

Part Serial No.: N/A

Test I.D.: MK003

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.5	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	2.073 to 2.134	2.110	Pass
Peak Probe Force	Newtons	4715 to 5782	5519.7	Pass
Overall Test Results				Pass

M 2 Qyp

Laboratory Technician

JW Rubens

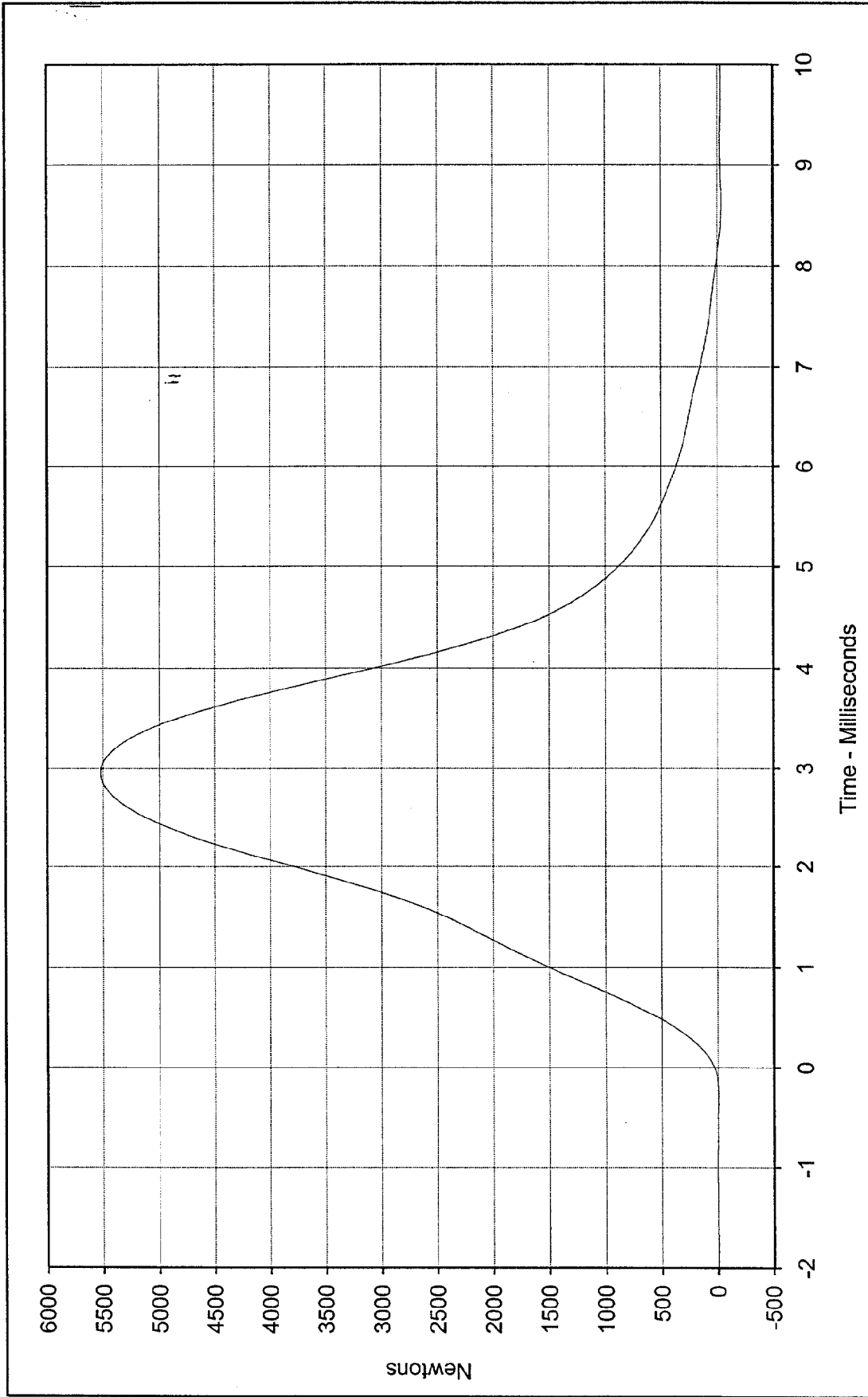
Approved By

July 8, 1997

Test Date

7/8/97

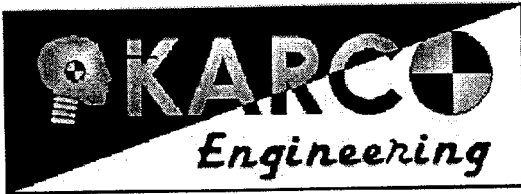
Date



Curve Description: Hybrid III Left Knee Impact Test
 Testing Program: Part S/N: N/A Test I.D.: MK003

Probe Force
 Maximum Value: 5519.7 at 3.0 Milliseconds
 Minimum Value: -4.5 at -0.3 Milliseconds
 SAE Filter Class: 600
 Date of Test: 7/8/97
 ATD Serial No.: 35





Hybrid III Calibration Data Sheet

50TH Percentile Male

Right Knee Impact Test

ATD Serial No.: 35

Part Serial No.: N/A

Test I.D.: MK001

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.5	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	2.073 to 2.134	2.129	Pass
Peak Probe Force _z	Newtons	4715 to 5782	5726.1	Pass
Overall Test Results				Pass

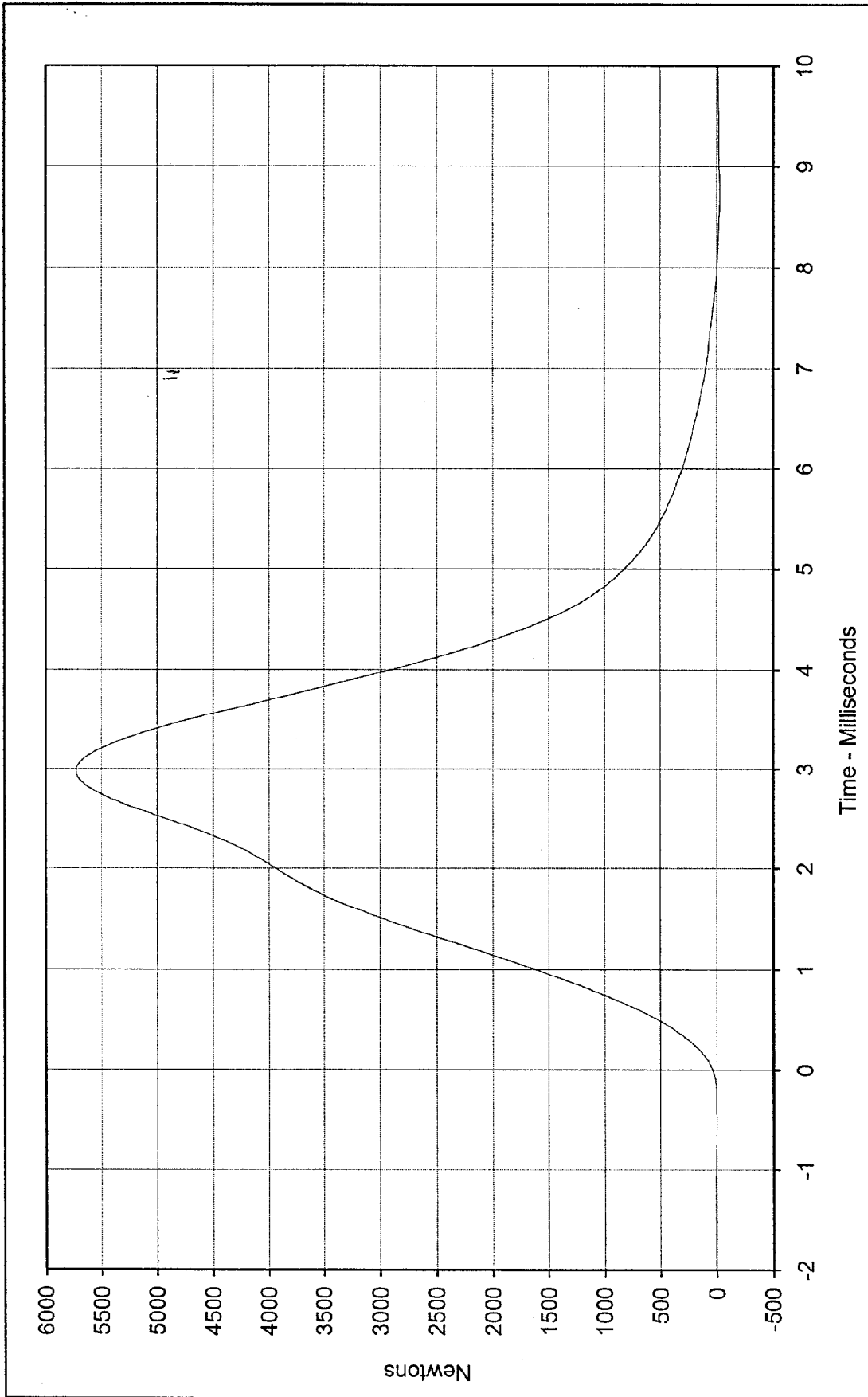
Laboratory Technician

Approved By

July 8, 1997

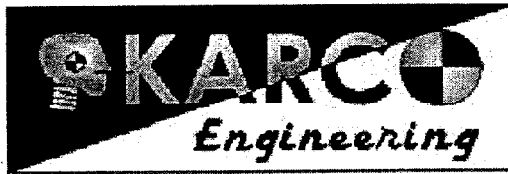
Test Date

Date



Curve Description: Hybrid III Right Knee Impact Test
 Maximum Value: 5726.1 at 3.0 Milliseconds
 Minimum Value: -4.6 at 8.0 Milliseconds
 SAE Filter Class: 600
 Date of Test: 7/8/97
 ATD Serial No.: 35





Hybrid III Calibration Data Sheet

50TH Percentile Male

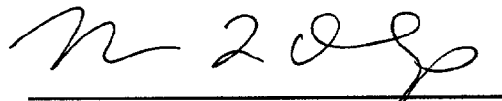
Head Drop Calibration

ATD Serial No.: 035

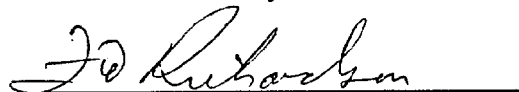
Part Serial No.: N/A

Test I.D.: MH002

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	20.6	Pass
Laboratory Relative Humidity	%	10 to 70	35	Pass
Peak Resultant Acceleration	G's	225.0 to 275.0	263.4	Pass
Peak Lateral Acceleration	G's	≤15.0	8.2	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Overall Test Results				Pass



Laboratory Technician



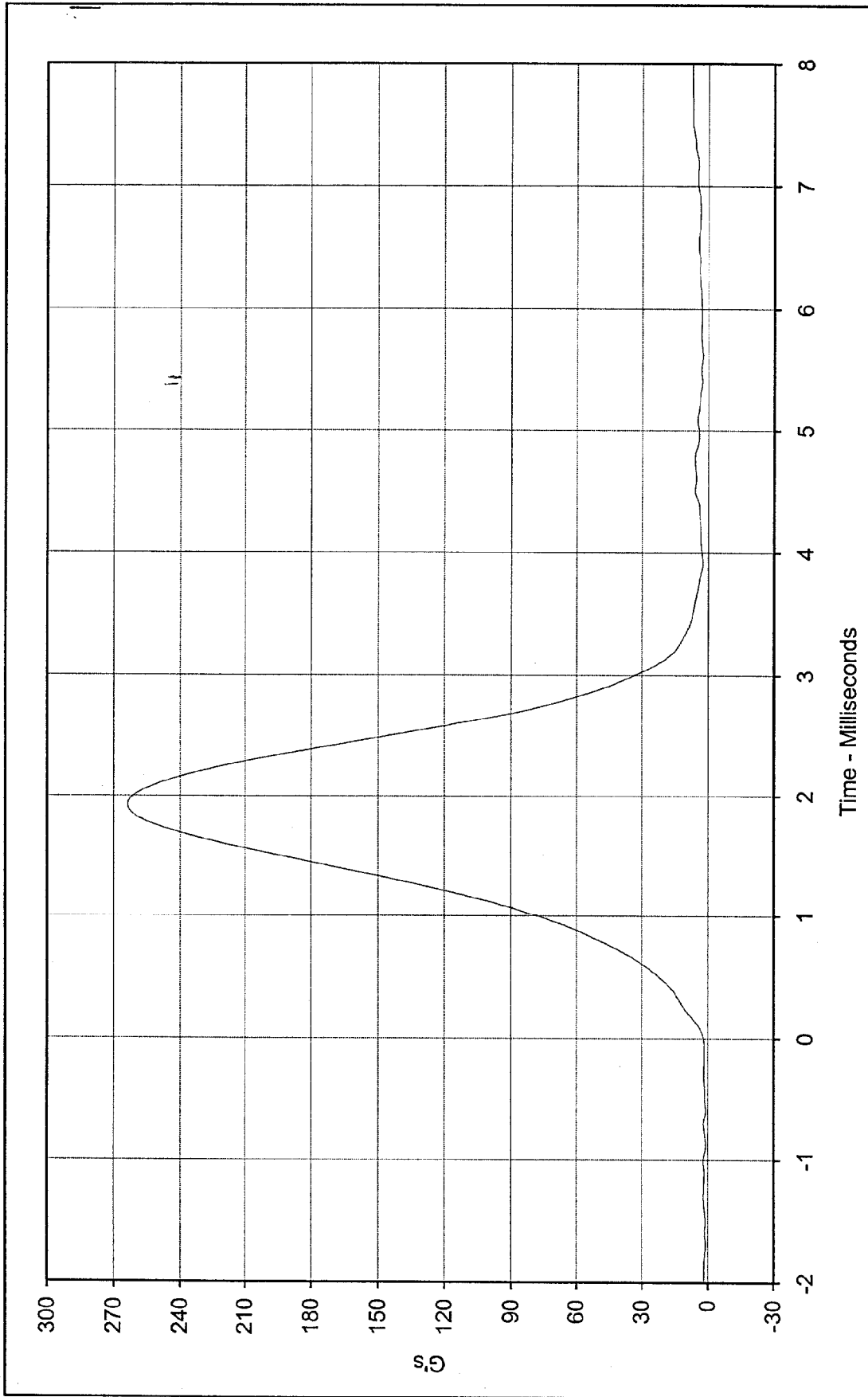
Approved By

July 7, 1997

Test Date

7/7/97

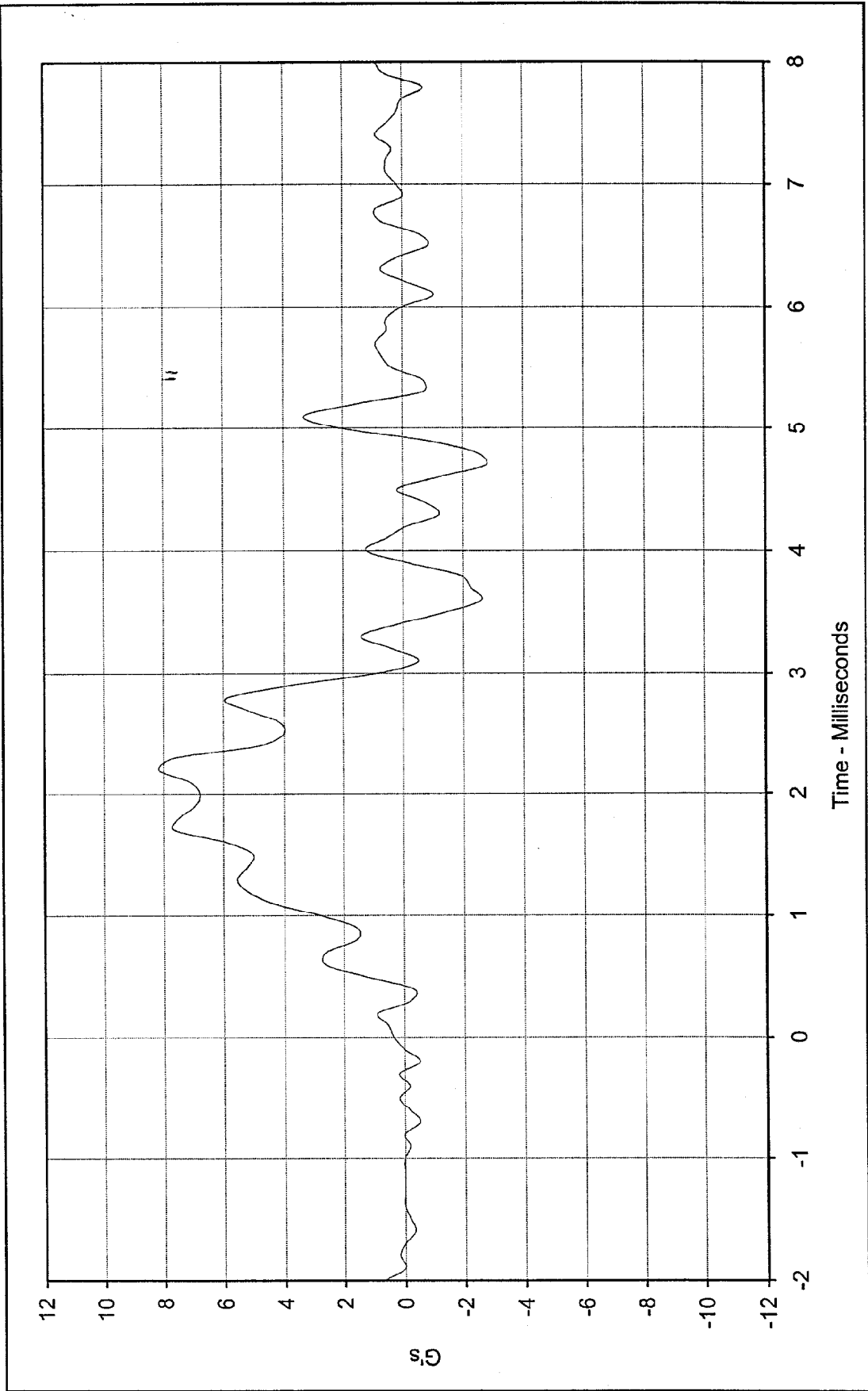
Date



Curve Description: Head Resultant Acceleration
 Maximum Value: 263.4 at 1.9 Milliseconds
 Minimum Value: 0.8 at -0.6 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 7/7/97
 ATD Serial No.: 035

Testing Program: Hybrid III Head Drop Calibration (Male)
 Test Information: S/N of Part: N/A Test I.D.: MH002





Testing Program: Hybrid III Head Drop Calibration (Male)
 Test Information: S/N of Part: N/A Test I.D.: MH002

Curve Description: Head Acceleration Y Axis
 Maximum Value: 8.2 at 2.2 Milliseconds
 Minimum Value: -2.8 at 4.7 Milliseconds
 SAE Filter Class: 1000
 Date of Test: 7/7/97
 ATD Serial No.: 035





Hybrid III Calibration Data Sheet

50TH Percentile Male

Thorax Impact Test

ATD Serial No.: 35

Part Serial No.: N/A

Test I.D.: CH351

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
Probe Velocity	m/s	6.58 to 6.82	6.65	Pass
Peak Probe Force	Newtons	5159 to 5893	5854	Pass
Peak Sternum Displacement	CM	6.35 to 7.26	6.4	Pass
Internal Hysteresis	%	69 to 85	76.4	Pass
Overall Test Results				Pass



Laboratory Technician



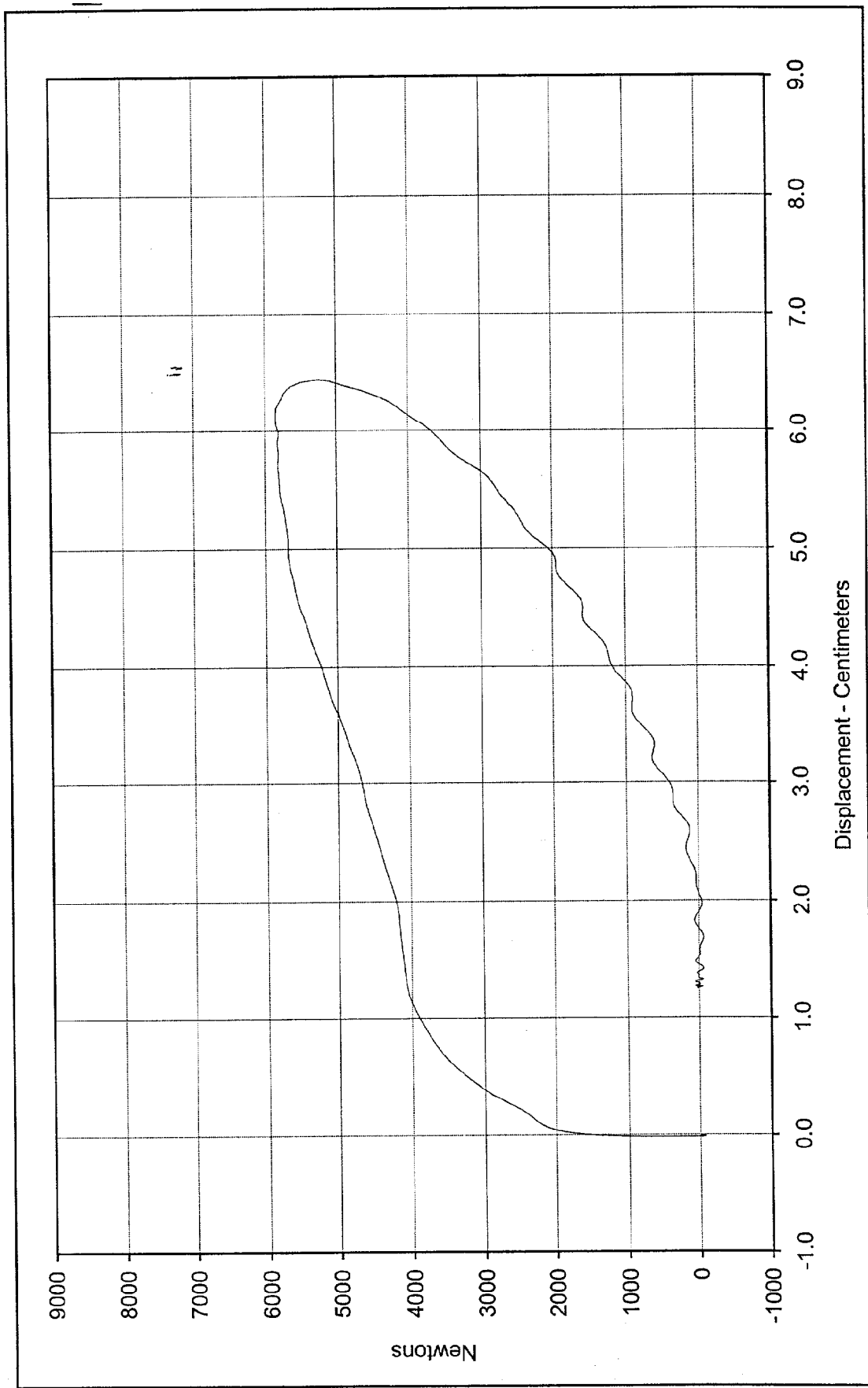
Approved By

July 6, 1997

Test Date

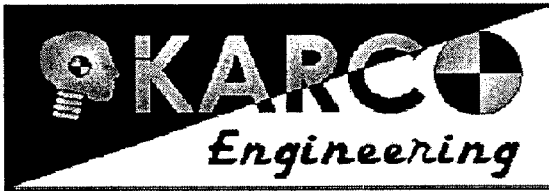
7/6/97

Date



Curve Description: Probe Force vs. Chest Displacement Testing Program: Hybrid III Thorax Impact Test
 Probe Force: 5853.8 Newtons Test Information: S/N of Part: N/A Test I.D.: CH351
 Chest Displ.: 6.44 Centimeters
 SAE Filter Class: 180
 Date of Test: 7/6/97
 ATD Serial No.: 35





Hybrid III Calibration Data Sheet

50TH Percentile Male

Neck Flexion Test

ATD Serial No.: 35

Part Serial No.: N/A

Test I.D.: MNF02

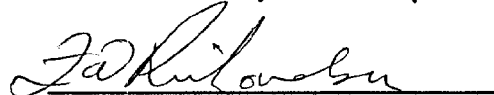
Tested Parameter	Units	Specification	Result	Pass/Fail	
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass	
Laboratory Relative Humidity	%	10 to 70	36	Pass	
Pendulum Velocity	m/s	6.89 to 7.13	7.11	Pass	
Pendulum Deceleration	10 Msec.	m/s	22.5 to 27.5	24.8	Pass
	20 Msec.	m/s	17.6 to 22.6	21.4	Pass
	30 Msec.	m/s	12.5 to 18.5	18.2	Pass
Peak Pendulum Decel. after 30 Msec.	G's	≤ 29.0	18.2	Pass	
Deceleration Decay, Time to Cross 5 G's	Msec.	34.0 to 42.0	35.0	Pass	
Maximum "D" Plane Rotation	Maximum	Degrees	64.0 to 78.0	75.5	Pass
	Time	Msec.	57.0 to 64.0	60.2	Pass
"D" Plane Rotation Decay, Time To Zero Crossing	Msec.	113.0 to 128.0	115.3	Pass	
Moment About Occipital Condyle	Maximum	N • m	84.1 to 108.5	99.9	Pass
	Time	Msec.	47.0 to 58.0	52.6	Pass
Positive Moment Decay, Time To Zero Crossing	Msec.	97.0 to 107.0	105.3	Pass	
Overall Test Results				Pass	



Laboratory Technician

July 5, 1997

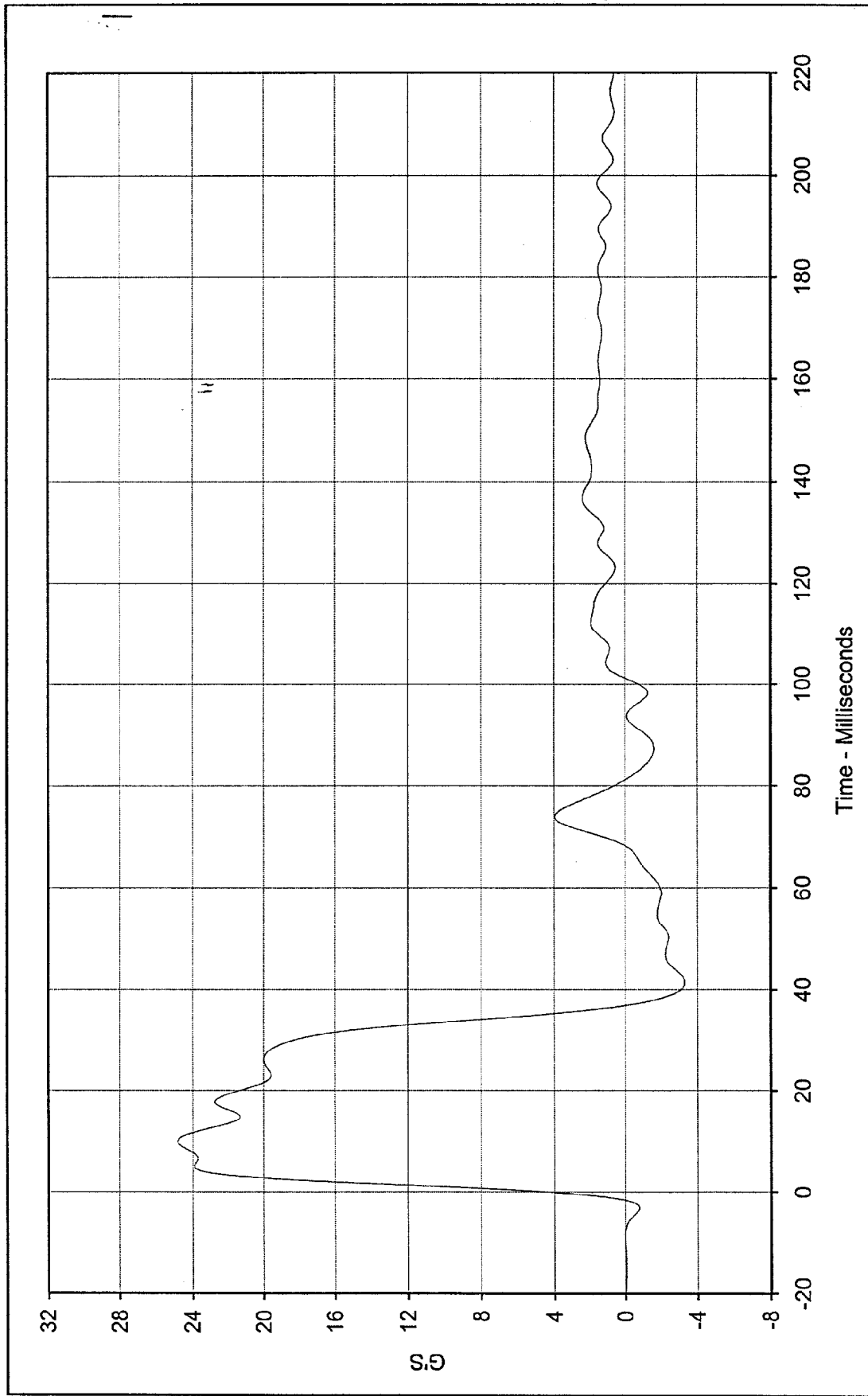
Test Date



Approved By

7/5/97

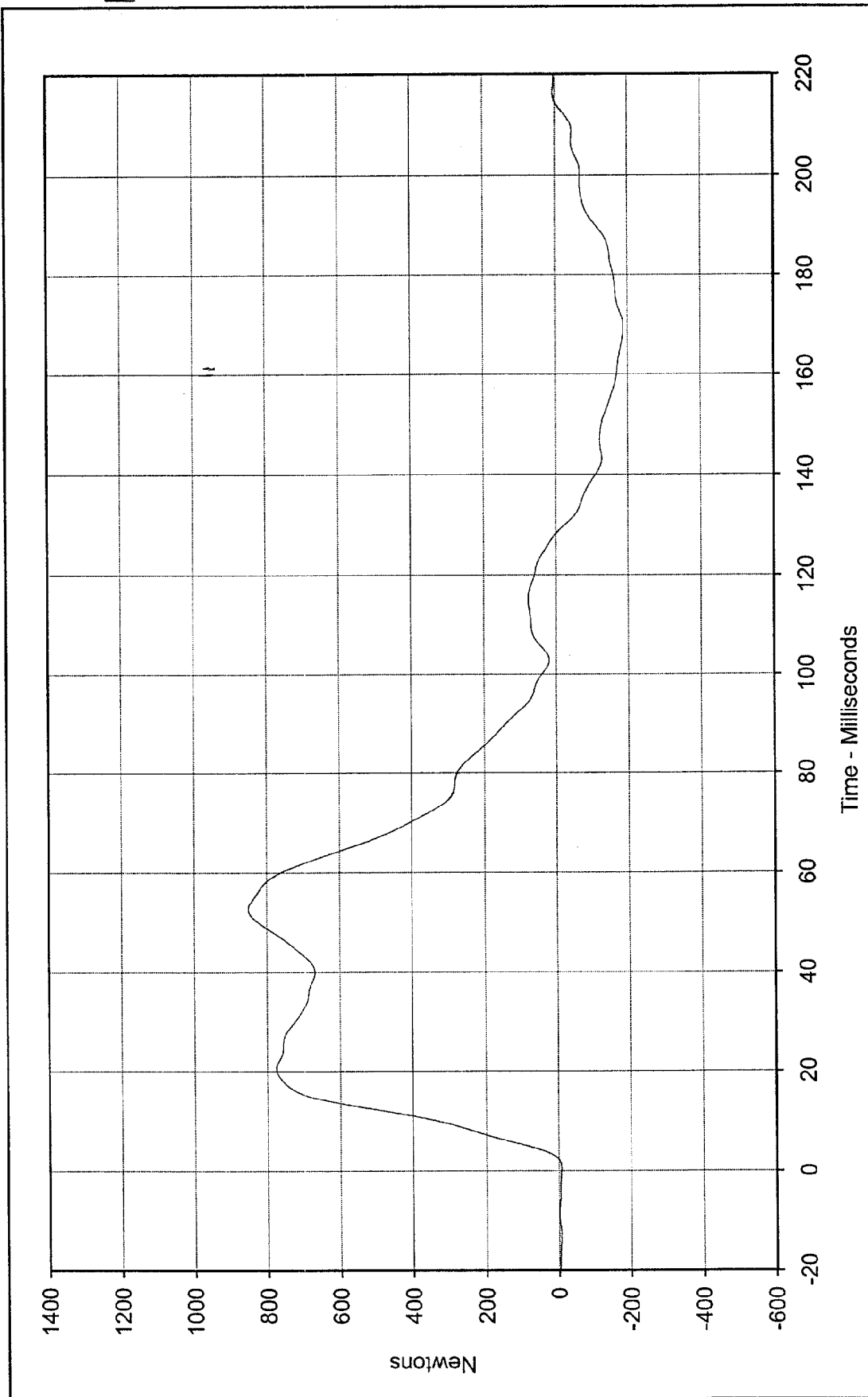
Date



Curve Description: Pendulum Deceleration Testing Program: Hybrid III Neck Flexion Test (Male)
 Maximum Value: 24.8 at 9.9 Milliseconds Test Information: S/N of Part: N/A Test I.D.: MNF02
 Minimum Value: -3.3 at 41.4 Milliseconds



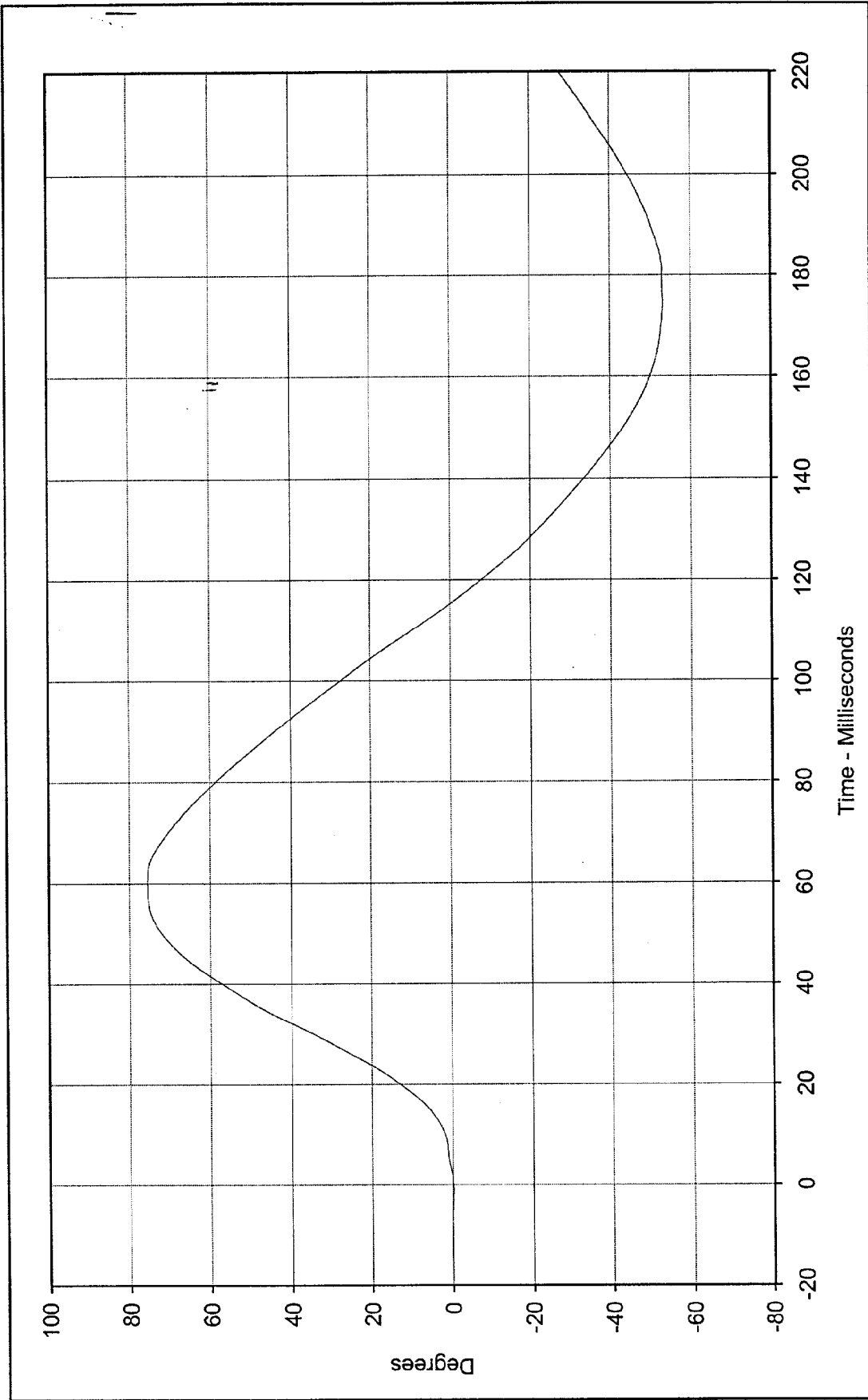
SAE Filter Class: 60
 Date of Test: 7/5/97
 ATD Serial No.: 35



Testing Program: Hybrid III Neck Flexion Test (Male)
 Test Information: S/N of Part: N/A Test I.D.: MNF02

Curve Description: Neck Force X
 Maximum Value: 849.9 at 52.6 Milliseconds
 Minimum Value: -187.9 at 169.8 Milliseconds
 SAE Filter Class: 60
 Date of Test: 7/5/97
 ATD Serial No.: 35

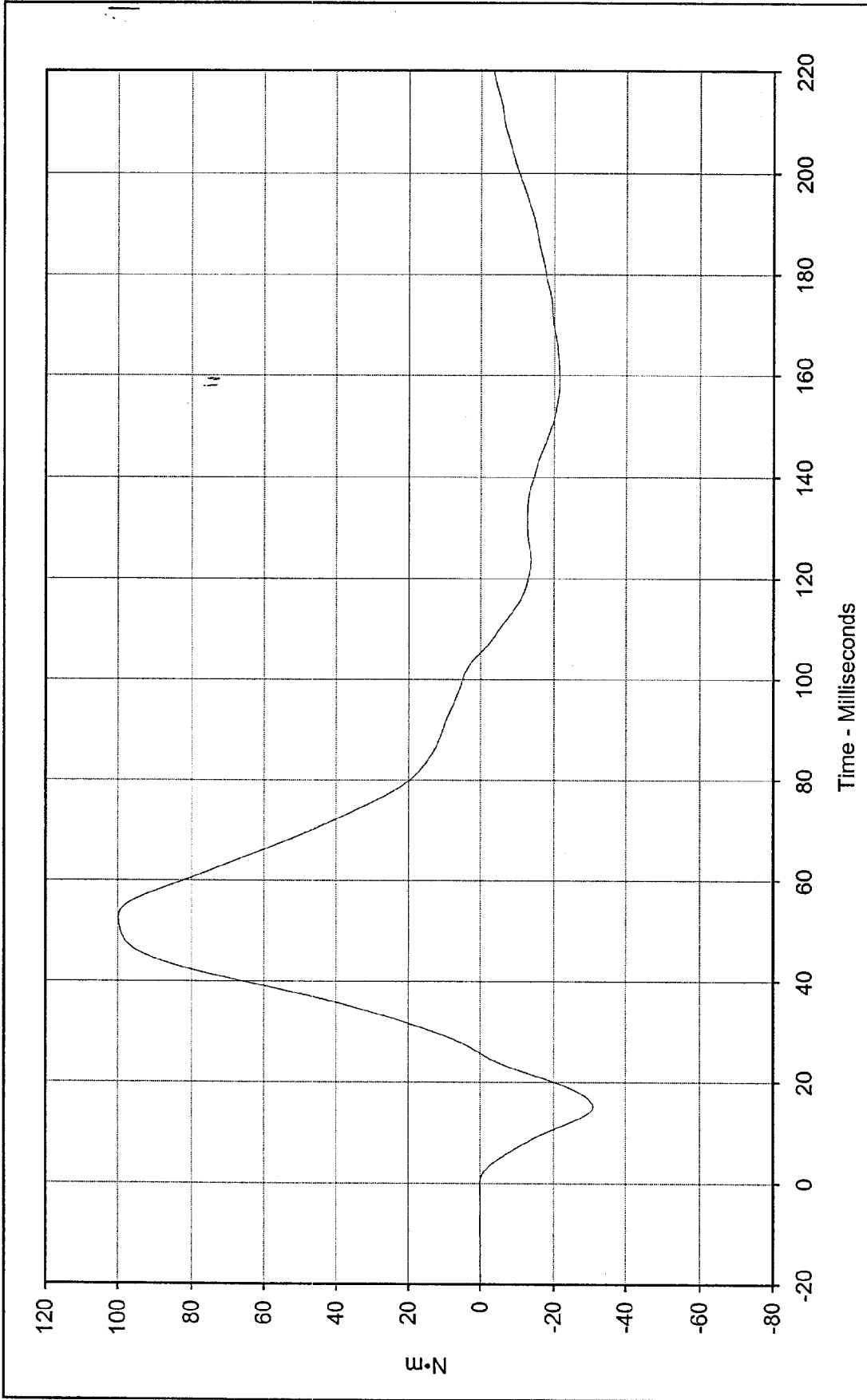




Testing Program: Hybrid III Neck Flexion Test (Male)
 Test Information: S/N of Part: N/A Test I.D.: MNF02

Curve Description: "D" Plane Rotation
 Maximum Value: 75.5 at 60.2 Milliseconds
 Minimum Value: -53.0 at 174.4 Milliseconds
 SAE Filter Class: 60
 Date of Test: 7/5/97
 ATD Serial No.: 35





Curve Description: Moment About Occipital Condyles Testing Program: Hybrid III Neck Flexion Test (Male)

Maximum Value: 99.9 at 52.6 Milliseconds Test Information: S/N of Part: N/A Test I.D.: MNF02

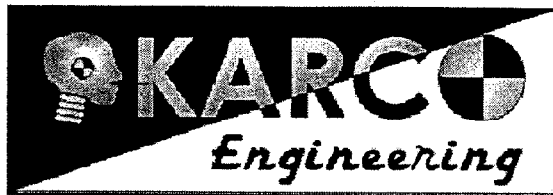
Minimum Value: -30.9 at 15.2 Milliseconds

SAE Filter Class: 60

Date of Test: 7/5/97

ATD Serial No.: 35





Hybrid III Calibration Data Sheet

50TH Percentile Male

Neck Extension Test

ATD Serial No.: 35

Part Serial No.: N/A

Test I.D.: MNE07

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	5.95 to 6.19	6.03	Pass	
Pendulum Deceleration	10 Msec.	m/s	17.2 to 21.2	17.6	Pass
	20 Msec.	m/s	14.0 to 19.0	15.5	Pass
	30 Msec.	m/s	11.0 to 16.0	14.5	Pass
Peak Pendulum Decel. after 30 Msec.	G's	≤ 22.0	14.5	Pass	
Deceleration Decay, Time to Cross 5 G's	Msec.	38.0 to 46.0	41.4	Pass	
Maximum "D" Plane Rotation	Maximum	Degrees	81.0 to 106.0	96.2	Pass
	Time	Msec.	72.0 to 82.0	77.1	Pass
"D" Plane Rotation Decay, Time To Zero Crossing	Msec.	147.0 to 174.0	156.3	Pass	
Moment About Occipital Condyle	Maximum	N • m	-52.9 to- 79.9	-78.1	Pass
	Time	Msec.	65.0 to 79.0	70.4	Pass
Negative Moment Decay, Time To Zero Crossing	Msec.	120.0 to 148.0	139.0	Pass	
Overall Test Results				Pass	

N 208p

Laboratory Technician

J. H. L.

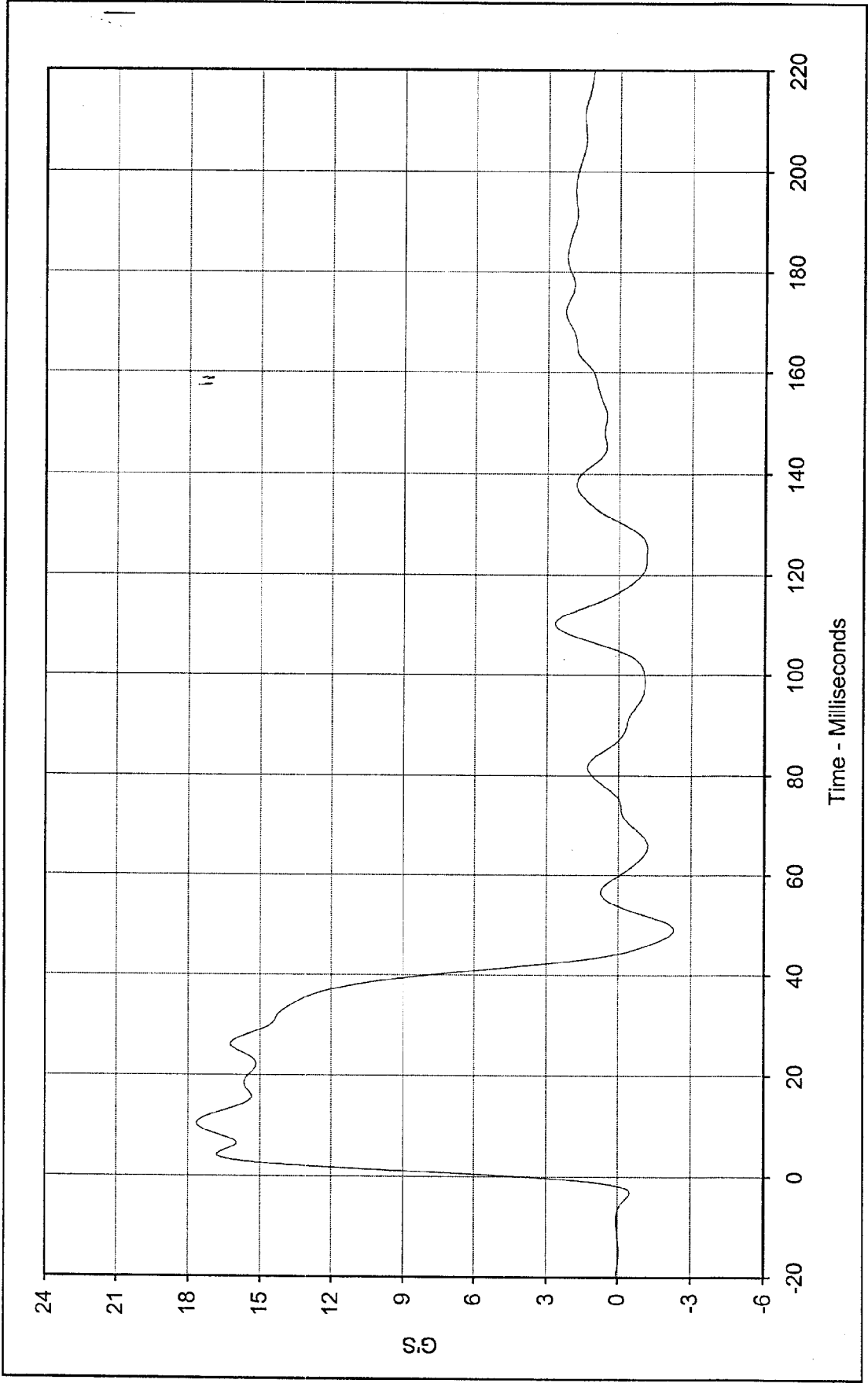
Approved By

July 5, 1997

Test Date

7/5/97

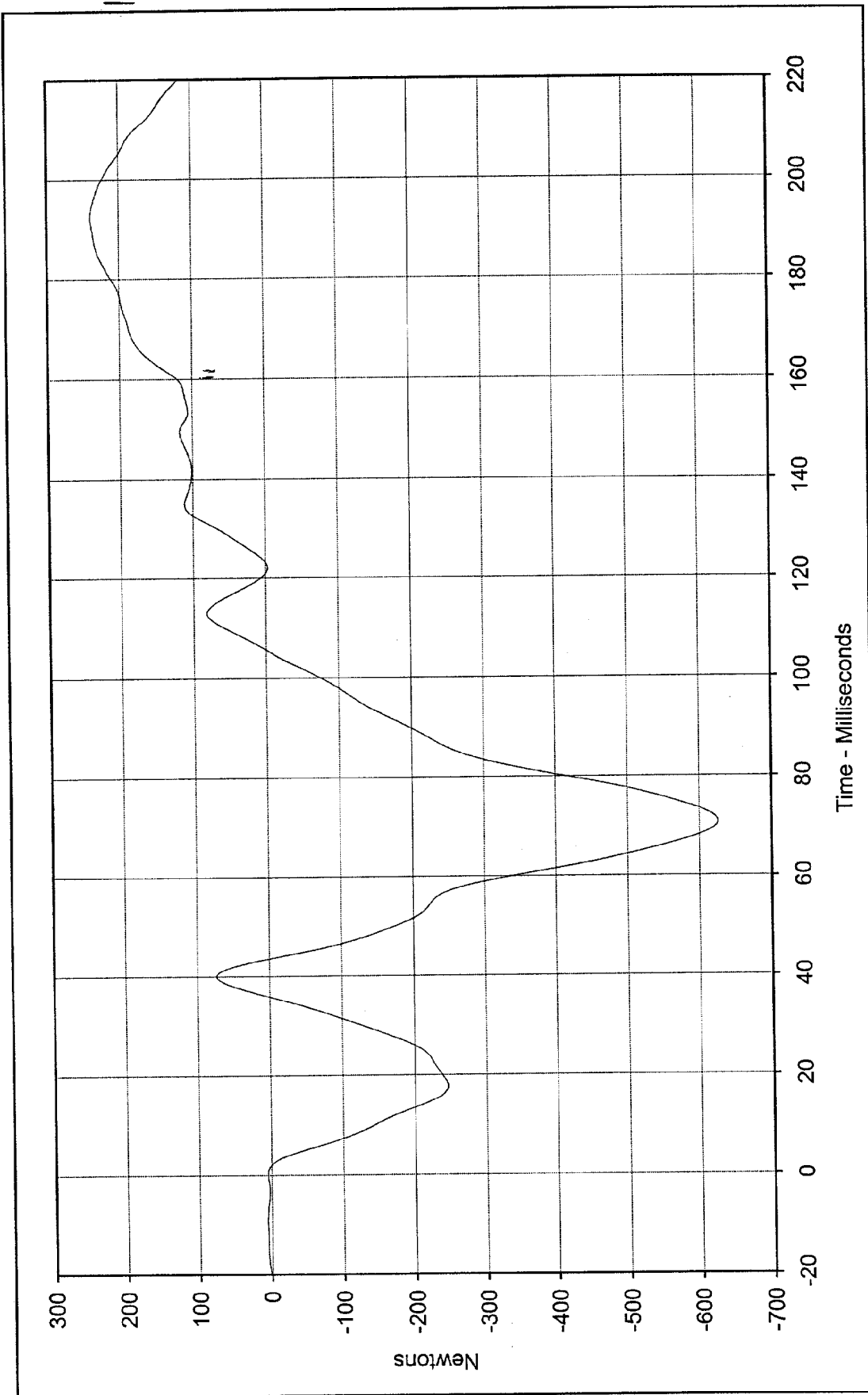
Date



Curve Description: Pendulum Deceleration
 Maximum Value: 17.6 at 10.4 Milliseconds
 Minimum Value: -2.3 at 49.0 Milliseconds
 SAE Filter Class: 60
 Date of Test: 7/5/97
 ATD Serial No.: 35

Testing Program: Hybrid III Neck Extension Test (Male)
 Test Information: S/N of Part: N/A Test I.D.: MNE07

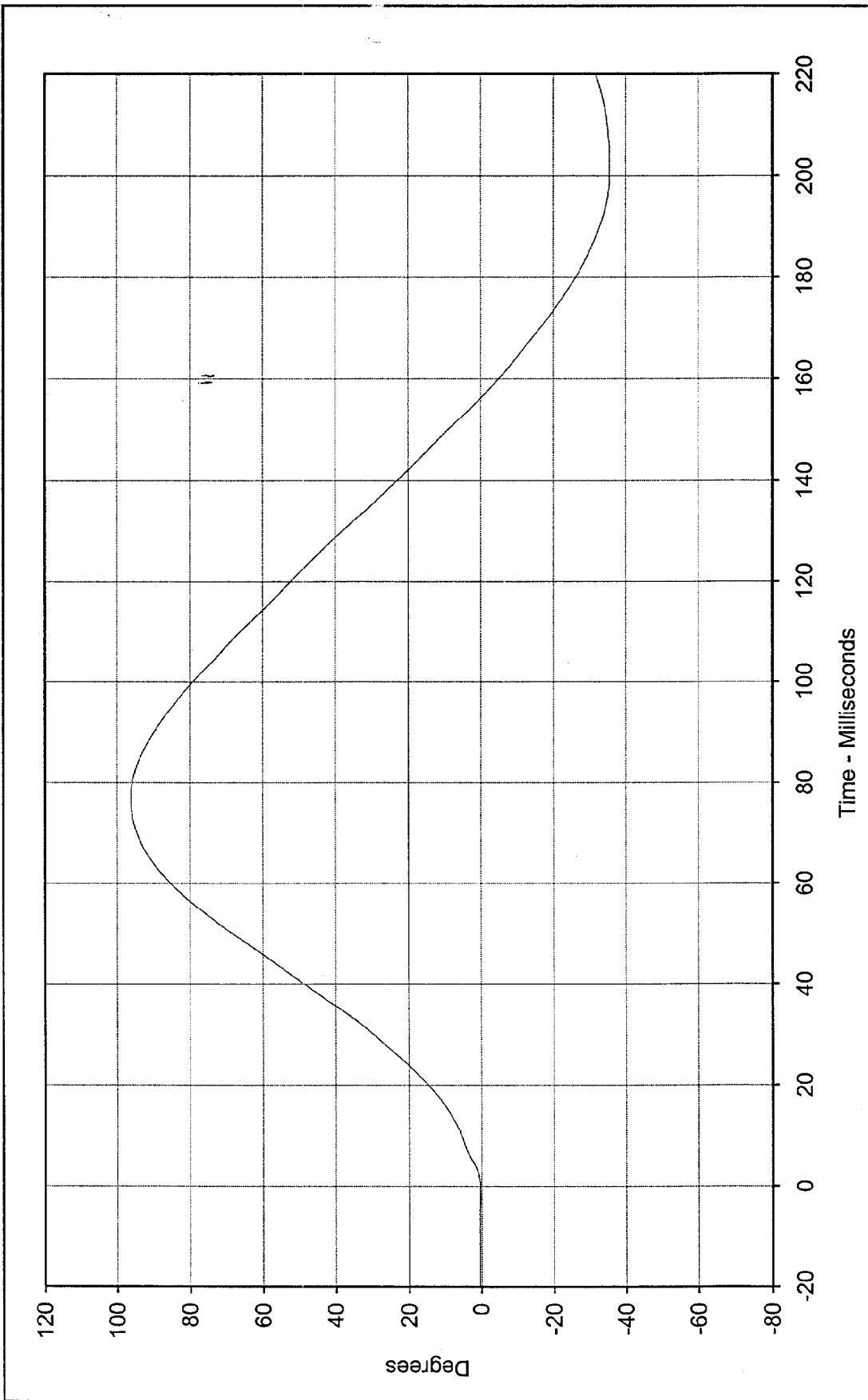




Testing Program: Hybrid III Neck Extension Test (Male)
 Test Information: S/N of Part: N/A Test I.D.: MNE07

Curve Description: Neck Force X
 Maximum Value: 239.5 at 192.2 Milliseconds
 Minimum Value: -626.7 at 70.7 Milliseconds
 SAE Filter Class: 60
 Date of Test: 7/5/97
 ATD Serial No.: 35

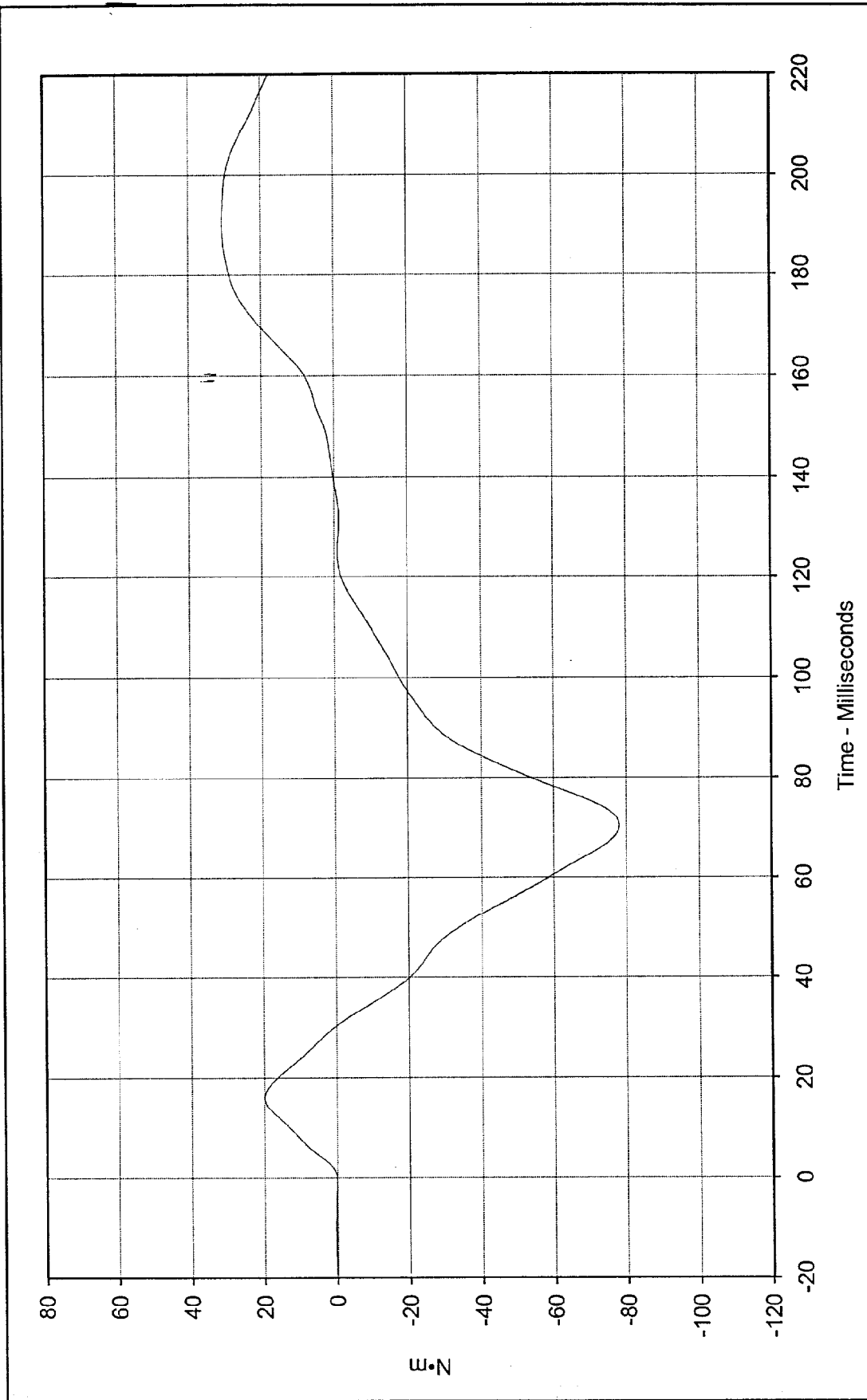




Testing Program: Hybrid III Neck Extension Test (Male)
 Test Information: S/N of Part: N/A Test I.D.: MNE07

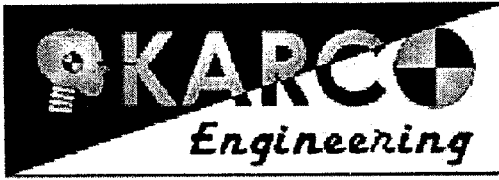
Curve Description: "D" Plane Rotation
 Maximum Value: 96.2 at 77.1 Milliseconds
 Minimum Value: -35.5 at 200.9 Milliseconds
 SAE Filter Class: 60
 Date of Test: 7/5/97
 ATD Serial No.: 35





Curve Description: Moment About Occipital Condyles Testing Program: Hybrid III Neck Extension Test (Male)
 Maximum Value: 30.6 at 190.7 Milliseconds Test Information: S/N of Part: N/A Test I.D.: MNE07
 Minimum Value: -78.1 at 70.4 Milliseconds
 SAE Filter Class: 60
 Date of Test: 7/5/97
 ATD Serial No.: 35





Hybrid III Calibration Data Sheet

50TH Percentile Male

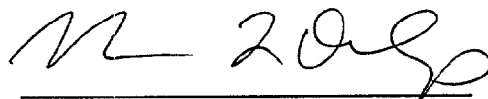
External Measurements

ATD Serial No.: 035

Part Serial No.: N/A

Test I.D.: N/A

External Measurement Data				
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory temperature	°C	20.4 to 22.1	20.9	Pass
Laboratory relative humidity	%	10 to 70	43	Pass
A - Total sitting height	mm	878.8 to 889.0	888.0	Pass
B - Shoulder pivot height	mm	505.5 to 520.7	510.7	Pass
C - "H" point height	mm	83.8 to 88.9	83.9	Pass
D - "H" point from seat back	mm	134.6 to 139.7	137.5	Pass
E - Shoulder pivot from back	mm	83.8 to 94.0	87.2	Pass
F - Thigh clearance	mm	139.7 to 154.9	147.0	Pass
G - Elbow back to wrist pivot	mm	289.6 to 304.8	290.9	Pass
H - Skull cap to back line	mm	40.6 to 45.7	46.0	Pass
I - Shoulder to elbow length	mm	330.2 to 345.4	341.0	Pass
J - Elbow rest height	mm	190.5 to 210.8	209.0	Pass
K - Buttock to knee length	mm	579.1 to 604.5	590.6	Pass
L - Popliteal length	mm	429.3 to 454.7	444.0	Pass
M - Knee pivot height	mm	485.1 to 500.4	495.7	Pass
N - Buttock popliteal length	mm	452.1 to 477.5	467.0	Pass
O - Chest depth	mm	213.4 to 228.6	215.0	Pass
P - Foot length	mm	251.5 to 266.7	259.7	Pass
V - Shoulder breadth	mm	421.6 to 436.9	427.0	Pass
W - Foot breadth	mm	91.4 to 106.7	99.0	Pass
Y - Chest circumference	mm	970.3 to 1000.8	1000.0	Pass
Z - Waist circumference	mm	835.7 to 866.1	861.0	Pass
AA - Location for chest circumference	mm	429.3 to 434.3	433.2	Pass
BB - Location for waist circumference	mm	226.1 to 231.1	229.0	Pass
Overall Test Results				Pass



 Laboratory Technician

July 9, 1997

Test Date

Approved By

Date

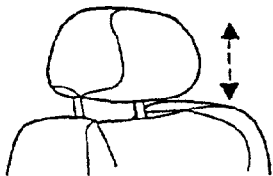
APPENDIX F
VEHICLE OWNER'S MANUAL
OCCUPANT RESTRAINT INSTRUCTIONS

Seating and safety restraints

SEATING

Head restraints

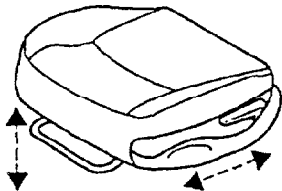
The head restraints can be moved up and down.



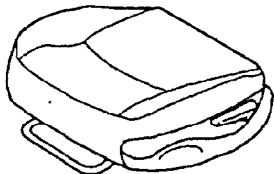
Front seats

Adjusting the manual seats

Lift bar to move seat forward or backward.



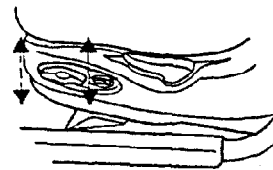
Pull lever up to adjust seatback.



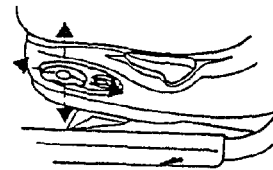
Seating and safety restraints

Adjusting the power seats (if equipped)

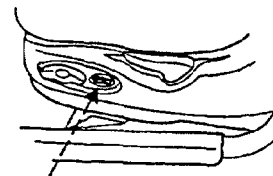
Press to move front or rear of seat up and down.



Press in the direction to raise or lower the seat, or to move the seat forward or backward.



Push to increase or decrease lumbar support.



Pull lever up to adjust seatback.

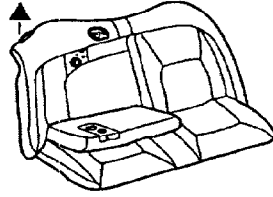


Seating and safety restraints

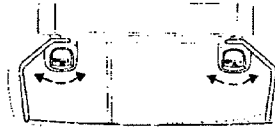
2nd seat/Split-folding rear seat

One or both rear seatbacks can be folded down to provide additional cargo space.

To lower the seatback(s) from inside the vehicle, lift seatback release handle, pull tab, then fold seatback down.



In the sedan, the seatbacks can also be folded down from inside the trunk. Move the release lever on the back of the rear seatback to the OPEN position and fold the seatback down.



When raising the seatback(s), make sure you hear the seat latch into place.

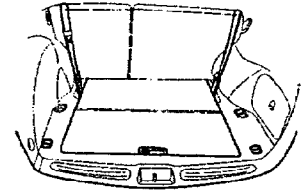
3rd seat (wagon only)

The third seat faces the rear of the vehicle. For height and weight limits, see the label on the seat cushion. When the seat is down, the back of your wagon has a flat surface for carrying cargo.

To open up the seat:

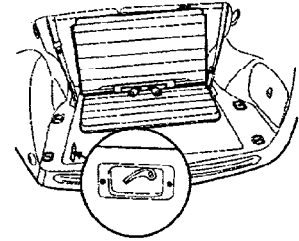
Seating and safety restraints

1. Unlock the floor panel with the key, then use the handle to fold the floor panel toward the front of the car.



2. Remove the cargo cover. The cargo cover must be removed or the seatback will not latch in the upright position.

3. Lift the remote latch release on the left side of the compartment and fold the remaining floor panel until it latches. Make sure the seatback is locked in the upright position.



To close the seat, make sure the safety belts are in their correct notches, then lift the remote latch release and push the seat down until it latches. Pull up on the handle and push the floor panel into place.

To close the seat, make sure the safety belts are in their correct notches, lift the remote latch release and push the seat down until it latches. Pull up on the handle and push the floor panel into place.

Seating and safety restraints

SAFETY RESTRAINTS

Safety restraints precautions

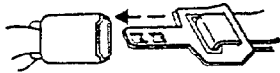
Always drive and ride with your seatback upright and the lap belt snug and low across the hips.

To prevent the risk of injury, make sure children sit where they can be properly restrained.

It is extremely dangerous to ride in a cargo area inside or outside of a vehicle. In a collision, people riding in these areas are more likely to be seriously injured or killed. Do not allow people to ride in any area of your vehicle that is not equipped with seats and safety belts. Be sure everyone in your vehicle is in a seat and using a safety belt properly.

Combination lap and shoulder belts

1. To fasten, insert the tongue into the slot in the buckle.



2. To unfasten, push the red release button and remove the tongue from the buckle.



The outboard safety restraints in the vehicle are combination lap and shoulder belts. The front and rear seat passenger outboard safety belts have two types of locking modes described below:

Seating and safety restraints

To test the vehicle sensitive (emergency) locking mode, pull the shoulder belt quickly to lock.



The vehicle sensitive mode is the normal retractor mode, adjusting shoulder belt tightness in response to vehicle movement. For example, if the driver brakes suddenly or turns a corner sharply or the vehicle receives an impact of 8 km/h (5 mph) or more, the combination safety belts would lock to help reduce forward movement of the driver and passengers.

Automatic locking mode

In this mode, the shoulder belt is locked in a certain position by the occupant and **does not** adjust tightness during vehicle movement.

The automatic locking mode is not available on the driver belt.

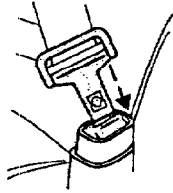
When to use the automatic locking mode

- When a tight lap/shoulder fit is desired.
- **Any time** a child safety seat is installed in the vehicle. Refer to *Children and infant or Child safety seats* later in this chapter.

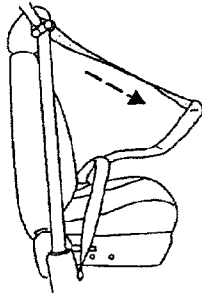
Seating and safety restraints

How to use the automatic locking mode

- Buckle the combination lap and shoulder belt.



- Grasp the shoulder portion and pull downward until the entire belt is extracted.



- Allow the belt to retract. As the belt retracts, you will hear a clicking sound. This indicates the safety belt is now in the automatic locking mode.

How to cancel the automatic locking mode

Disconnect the combination lap/shoulder belt and allow it to retract completely to cancel the automatic locking mode and activate the vehicle sensitive (emergency) locking mode.

Safety belts for front outboard passenger and rear outboard seating positions (except wagon rear-facing position)

Your vehicle is equipped with a dual locking mode retractor on the **shoulder** belt portion of the combination lap/shoulder safety belt at these positions.

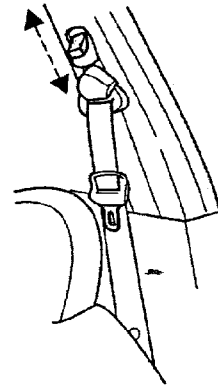
Seating and safety restraints

Front safety belt height adjustment

Your vehicle has safety belt height adjustments for the driver and front passenger. Adjust the height of the shoulder belt so the belt rests across the middle of your shoulder.

To lower the shoulder belt height, push the button and slide the height control down.

To raise the height of the shoulder belt, slide the height adjuster up. Pull down on the height adjustment assembly to make sure it is locked in place.

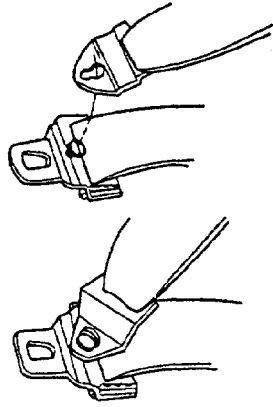


Center rear lap belt (sedan)

The safety belt in the center rear seating position has a detachable shoulder belt.

Seating and safety restraints

To attach the shoulder belt to the lap belt, pull the shoulder belt out from the retractor in the seatback and insert into the lap belt connecting pin into the wide end of the key slot on the shoulder belt. Pull the connecting pin into the narrow end of the key slot until you hear a snap and feel it latch. Make sure the shoulder belt is securely fastened to the lap belt by pulling up on the shoulder belt.



Lap belts

The lap belts in the center front seating position (if equipped) and center rear seating position (wagon) do not adjust automatically. You must adjust them to fit snugly and low as possible around your hips. Do not wear the lap belt around your waist.

Make sure you insert the tongue into the correct buckle. If you need to lengthen the belt, turn the tongue at a right angle to the belt and pull across your lap until it reaches the buckle. If you need to tighten the belt, pull the loose end of the belt through the tongue until it is snugly across the hips. Shorten and fasten the belt when not in use.

Safety belts for rear-facing occupants (wagon only)



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Seating and safety restraints


Your vehicle is equipped with safety belts containing an adjust tongue at the rear-facing seating positions.

When the adjust tongue of the lap/shoulder combination seat belt is latched into the buckle, the tongue will allow the lap portion to become shorter, but locks the webbing in place to restrict it from becoming longer.

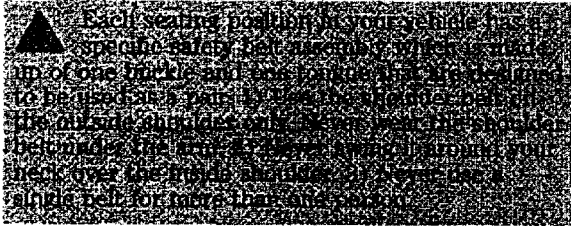
Before you reach and latch a combination lap and shoulder belt having an adjust tongue into the buckle, you may have to lengthen the lap belt portion of it. To lengthen the lap belt, pull some webbing out of the shoulder belt retractor. While holding the webbing below the tongue, grasp the tongue so that it is parallel to the webbing and slide the tongue upward, provide enough length so that the tongue can reach the buckle.

To fasten the belt, pull the combination lap and shoulder belt from the retractor so that the shoulder belt portion of the safety belt crosses your shoulder and chest. Be sure the belt is not twisted. If the belt is twisted, remove the twist. Insert the tongue into the proper buckle for your seating position until you hear a snap and feel it latch. Make sure the tongue is securely fastened to the buckle by pulling on the tongue.

 The lap belts should fit snugly and as low as possible around the hips, not around the waist.

 Front and rear seat occupants, including pregnant women, should wear safety belts for optimum protection in an accident.

Seating and safety restraints



Due to folding rear seats, sometimes the buckles and tongues toward the center of the vehicle may be hidden by the rear edge of the seat cushion. Pull them out so they will be accessible.

While you are fastened in the seat belt, the shoulder belt adjusts to your movement. However, if you brake hard, turn hard or your vehicle receives an impact of 8 km/h (5 mph) or more, the safety belt will become locked and help reduce your forward movement.

To unfasten the belt, push the red release button on the end of the buckle. This allows the tongue to unlatch from the buckle. While the belt retracts, guide the tongue to its original position to prevent it from striking you or the vehicle.

Safety belt extension assembly

If the safety belt assembly is too short, even when fully extended, eight inches can be added to the safety belt assembly by adding a safety belt extension assembly (part number 611C22). Safety belt extension assemblies can be obtained from your dealer at no cost. This assembly is not for use in the wagon's rear-facing seat.

Use only extensions manufactured by the same supplier as the safety belt. Manufacturer identification is located at the end of the webbing on the label. Also, use the safety belt extension only if the safety belt is too short for you when fully

Seating and safety restraints

extended. Do not extensions to change the fit of the shoulder belt across the torso.

Safety belt warning light and indicator chime

The seat belt warning light illuminates in the instrument cluster and a chime sounds to remind the occupants to fasten their safety belts.

Conditions of operation

If...	Then...
The driver's safety belt is not buckled before the ignition key is turned ON...	The safety belt indicator illuminates for one to two minutes and the warning chime sounds for four to eight seconds.
The driver's side safety belt is buckled while the indicator light is illuminated and the warning chime is sounding...	The safety belt indicator light and warning chime turn off.
The driver's safety belt is buckled before the ignition key is turned to ON...	The safety belt warning light and indicator chime remain off.

Safety belt maintenance

Check the safety belt systems periodically to make sure they work properly and are not damaged. Check the safety belts to make sure there are no nicks, wears or cuts. All safety belt assemblies, including retractors, buckles, front seat belt buckle assemblies (slide bar) (if equipped), shoulder belt height adjusters (if equipped), child safety seat tether bracket assemblies (if equipped), and attaching hardware, should be inspected after a collision. Ford recommends that all safety belt assemblies used in vehicles involved in a collision be

Seating and safety restraints

replaced. However, if the collision was minor and a qualified technician finds that the belts do not show damage and continue to operate properly, they do not need to be replaced. Safety belt assemblies not in use during a collision should also be inspected and replaced if either damage or improper operation is noted.

Refer to *Cleaning and maintaining the safety belts* in the *Maintenance and Care* section.

IMPORTANT SUPPLEMENTAL RESTRAINT SYSTEM (SRS) PRECAUTIONS

The supplemental restraint system is designed to:

- work with the safety belt to protect the driver and right front passenger
- reduce certain upper body injuries



Failure to follow these instructions will affect the performance of the safety belts and increase the risk of personal injury.

The supplemental air bags are not designed to protect occupants in the front center seating position.

Do not place objects or mount equipment on or near the air bag cover on the steering wheel or in front seat areas that may come in contact with a deploying air bag. Failure to follow this instruction may increase the risk of personal injury in the event of a collision.

Seating and safety restraints

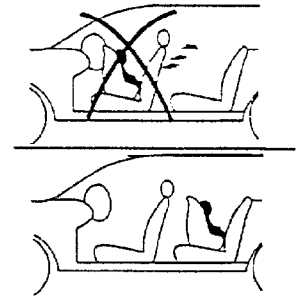
Do not attempt to service, repair, or modify the Air Bag Supplemental Restraint System or its fuses. See your Ford or Lincoln Mercury dealer.

CHILDREN AND AIR BAGS

For additional important safety information, read all information on safety restraints in this guide.

Children should always wear their safety belts. Failure to follow these instructions may increase the risk of injury in a collision.

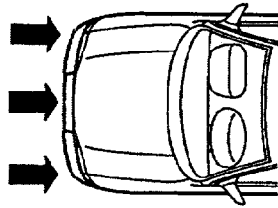
Infant child seats or infant carriers should never be placed in the front seats.



Seating and safety restraints

HOW DOES THE AIR BAG SUPPLEMENTAL RESTRAINT SYSTEM WORK?

The SRS is designed to activate when the vehicle sustains sufficient longitudinal deceleration, similar to hitting a fixed barrier head on at 12-24 km/h (8-14 mph).



The fact that the air bags did not inflate in a collision does not mean that something is wrong with the system. Rather, it means the forces were not of the type sufficient to cause activation.

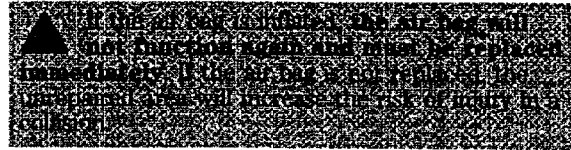
The air bags inflate and deflate rapidly upon activation.



After air bag deployment, it is normal to notice a smoke-like, powdery residue or smell the burnt propellant. This may consist of cornstarch, talcum powder (to lubricate the bag) or sodium compounds (e.g., baking soda) that result from the combustion process that inflates the air bag. Small amounts of sodium hydroxide may be present which may irritate the skin and eyes, but none of the residue is toxic.



Seating and safety restraints



The SRS consists of:


- driver and passenger air bag modules (which include the inflators and air bags),
- one or more impact and safing sensors,
- a readiness light and tone
- and the electrical wiring which connects the components.

The diagnostic module monitors its own internal circuits and the supplemental air bag electrical system readiness (including the impact sensors), the system wiring, the air bag system readiness light, the air bag back up power and the air bag ignitors.

DETERMINING IF THE SYSTEM IS OPERATIONAL

The SRS uses a readiness light in the instrument cluster or a tone to indicate the condition of the system. Refer to the *Air bag* readiness section in the *Instrumentation* chapter. Routine maintenance of the air bag is not required.

A difficulty with the system is indicated by one or more of the following:

- The readiness light will either flash or stay lit. 
- The readiness light will not illuminate immediately after ignition is turned on.
- A group of five beeps will be heard. The tone pattern will repeat periodically until the problem and light are repaired.