

V2275

REPORT NUMBER: 301-CAL-95-11

**SAFETY COMPLIANCE TESTING FOR FMVSS 301
FUEL SYSTEM INTEGRITY**

**DIAMOND-STAR MOTORS CORP.
1995 EAGLE TALON
2-DOOR COUPE**

NHTSA NUMBER: CS0305

CALSPAN TEST NUMBER: 8247-11

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May 2, 1995

FINAL REPORT

PREPARED FOR:

**U. S. Department of Transportation
National Highway Traffic Safety Administration
ENFORCEMENT
Office of Vehicle Safety Compliance
400 Seventh Street, S. W.
Room No. 6115 (NEF-30)
Washington, DC 20590**

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Section 1

PURPOSE OF COMPLIANCE TEST

This 30 mph rear moving barrier impact test is part of the Federal Motor Vehicle Safety Standard (FMVSS) 301 Compliance Test Program conducted for the National Highway Traffic Safety Administration (NHTSA) by Calspan Advanced Technology Center under Contract No. DTNH22-94-C-01136. The purpose of this test was to determine if the subject vehicle, a 1995 Eagle Talon 2-Door Coupe, meets the performance requirements of FMVSS No. 301, "Fuel System Integrity." This compliance test was conducted using the requirements found in the OVSC Laboratory Test Procedure No. TP-301-01, dated March 28, 1994.

Section 2

COMPLIANCE TEST RESULTS SUMMARY

A 3482 pound 1995 Eagle Talon 2-Door Coupe was impacted from the rear by a 3959 pound moving barrier at a velocity of 29.7 mph. The test was performed by the Calspan Corporation Advanced Technology Center on May 2, 1995.

One instrumented Part 572 E and one non-instrumented Part 572 B, 50th percentile male Anthropomorphic Test Device (ATD) were placed in the driver and right front passenger seating positions respectively. Additional ballast (20 pounds) was secured in the vehicle rear seat area.

Average longitudinal crush was 8.9 inches. Pre- and post-test photographs of the vehicle can be found in appendix A.

The gallon fuel tank was filled to 92.5 percent capacity with orange Stoddard fluid prior to the impact. After the impact, there was no fluid leakage for the first 30 minutes nor during any phase of the rollover test. The vehicle appeared to comply with all the requirements of FMVSS No. 301 "Fuel System Integrity." Section 3 presents the results of these tests.

The crash event was recorded by one real-time and eight high-speed cameras. Camera locations and other pertinent camera information are found on pages 3-9 and 3-10 of this report.

Table 1

CRASH TEST SUMMARY

Vehicle NHTSA No.: CS0305 Test Mode: 30 mph Rear Barrier
 Test Date: May 2, 1995 Time: 11:40 Temperature : 61 °F
 Vehicle Make/Model/Body Style: 1995 Eagle Talon 2-Door Coupe
 Vehicle Test Weight: 3482 lbs Impact Velocity: 29.7 mph
 Static Crush: Left Side = 7.8 inches
 Right Side = 9.0 inches
 Centerline = 9.9 inches
 Average Crush: 8.9 inches

TYPE OF FRONT OCCUPANT RESTRAINT SYSTEM INSTALLED IN TEST VEHICLE:

Driver's DSP: Airbag, 3-point belt system
 Right Passenger's DSP: Airbag, 3-point belt system

VISIBLE DUMMY CONTACT POINTS:

Driver: Back of head with headrest.

Passenger: Back of head with headrest.

DOOR OPENING DATA:

Closed / Inoperable - Left Front

Closed / Operable - Right Front

Stoddard Solvent Spillage from Vehicle's Fuel System: None

Remarks: Seatbacks moved to full rear position during the impact. Passenger seatback frame bent at a location midway up its inboard side. Recline mechanisms remained operable. Rear window shattered and lower left corner of the windshield cracked during the impact.

Table 2

GENERAL TEST AND VEHICLE PARAMETER DATATEST VEHICLE INFORMATION:

Year/Make/Model/Body Style: 1995 Eagle Talon 2-Door Coupe

NHTSA No.: CS0305 ; VIN: 4E3AK54F2SE023918 ; Color: Green

Engine Data: 4 cylinders; - CID; 2.0 Liters; - cc

Placement: - Longitudinal or In-Line; X Transverse or Lateral

Transmission Data: 4 speeds; - Manual; X Automatic; X Overdrive

Final Drive: - Rear Wheel Drive; X Front Wheel Drive; - Four Wheel Drive

Major Options: X A/C; X Pwr.Strg.; X Pwr. Brakes
X Pwr. Windows; X Pwr. Door Locks; X Tilt Wheel

Date Received: 10-27-94 ; Odometer Reading 000243 miles

Selling Dealer: Meyer-Barnard Jeep-Eagle

& Address: POB 1088 Route 16 North, Olean, NY 14760

DATA FROM TIRE VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured by: Diamond-Star Motors Corp.

Date of Manufacture: 06/94

GVWR: 3858 lbs.; GAWR: 2260 lbs. FRONT; 1709 lbs. REAR

DATA FROM TIRE PLACARD:

Location of Placard on Vehicle: B-Pillar

Tire Pressure with Maximum Capacity Vehicle Load: 32 psi FRONT 32 psi REAR

Recommended Tire Size: P205/55R16

* Recommended Cold Tire Pressure: 32 psi FRONT; 32 psi REAR

Size of Tires on Test Vehicle: P205/55R16 89V

Type of Spare Tire: T125/70D15

Vehicle Capacity Data:

Type of Front Seats:	<u>-</u>	Bench;	<u>X</u>	Bucket;	<u>-</u>	Split Bench
Number of Occupants:	<u>2</u>	Front;	<u>2</u>	Rear;	<u>4</u>	Total
Vehicle Capacity Weight (VCW)	=	<u>662</u>	lbs.			
No. of Occupants x 150 lbs.	=	<u>600</u>	lbs.			
Rated Cargo/Luggage Weight (RCLW)	=	<u>62</u>				

*Tire pressure used for test

Table 2

GENERAL TEST AND VEHICLE PARAMETER DATA (cont.)WEIGHT OF TEST VEHICLE AS RECEIVED FROM DEALER (with maximum fluids)= UDW:

Right Front	=	961	lbs.	Right Rear	=	582	lbs.
Left Front	=	954	lbs.	Left Rear	=	594	lbs.
TOTAL FRONT	=	1,915	lbs.	TOTAL REAR	=	1,176	lbs.
TOTAL DELIVERED WEIGHT	=	3,091	lbs.				
% of Total Front of Vehicle Weight	=	62		% of Total Rear Weight	=	38	%

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Delivered Weight	=	3,091	lbs.
Rated Cargo/Luggage Weight (RCLW)	=	62	lbs.
Weight of 2 p.572 Dummies, 167 & 164 lbs	=	331	lbs.
TARGET TEST WEIGHT	=	3,484	lbs.

WEIGHT OF TEST VEHICLE WITH TWO DUMMIES AND 60 POUNDS OF CARGO WEIGHT:

Right Front	=	1083	lbs.	Right Rear	=	636	lbs.
Left Front	=	1137	lbs.	Left Rear	=	626	lbs.
TOTAL FRONT	=	2,220	lbs.	TOTAL REAR	=	1,262	lbs.
TOTAL TEST WEIGHT	=	3,482	lbs.				
% of Total Front Weight	=	64	%	% of Total Rear Weight	=	36	%

* Weight of Ballast Secured in Vehicle Rear Seat Area = 20 lbs.

Type of Ballast: Lead shot

Method of Securing Ballast: Rear seat belt anchorages

Vehicle Components Removed for Weight Reduction: None

VEHICLE ATTITUDE (all dimension in inches):

AS DELIVERED:	RF	27.8	LF	27.7	RR	28.4	LR	27.8
AS TESTED:	RF	26.7	LF	26.4	RR	27.9	LR	27.3

Vehicle's Wheel Base: 99.1 in.

Location of Vehicle's C.G.: 35.9 inches rearward of front wheel center.

FUEL SYSTEM DATA:

Fuel System Capacity From Owner's Manual	=	16.0	gallons
Usable Capacity Figure Furnished by COTR	=	16.9	gallons
Test Volume Range (91 to 94% of Usable Capacity)	=	15.4 to 15.9	gallons
ACTUAL TEST VOLUME	=	15.6	gallons (with entire fuel system filled)

* Ballast weight includes the RCLW, the weight of drained vehicle fluids and the weight of any removed vehicle components less the weight of onboard instrumentation, cameras, and hardware.

Table 2

GENERAL TEST AND VEHICLE PARAMETER DATA (cont.)FUEL SYSTEM DATA (continued):

Test Fluid Type:	Stoddard solution
Test Fluid Specific Gravity:	0.764
Test Fluid Kinematic Viscosity:	0.96 centistokes
Test Fluid Color:	Orange ("red" is preferred)
Type of Vehicle Fuel Pump:	Electric
Electric Fuel Pump Operation with Ignition Switch ON and Engine OFF - Fuel pump operated.	
Details of Fuel System:	Fuel filler is located on the right side of the vehicle aft of the rear axle. Fuel lines are located on the left side of the vehicle underbody.

Table 3

POST IMPACT DATA

TYPE OF TEST:

Type of Test: Rear Barrier Impact Angle: 0°
 Test Date: May 2, 1995 Time: 11:40 Temperature: 61 °F
 Vehicle NHTSA No.: CS0305
 Required Impact Velocity Range: 28.9 to 29.9 mph

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

Trap No. 1 = 29.7 mph; Trap No. 2 = 29.7 mph
 Average Impact Speed = 29.7 mph

VEHICLE STATIC CRUSH: (For frontal and rear impacts only.)

Vehicle Length:

Pre-Test	Right =	<u>170.0</u>	; C/L =	<u>173.3</u>	; Left =	<u>170.3</u>
Post-Test	Right =	<u>161.0</u>	; C/L =	<u>163.4</u>	; Left =	<u>162.5</u>
Crush	Right =	<u>9.0</u>	; C/L =	<u>9.9</u>	; Left =	<u>7.8</u>
AVERAGE	=	<u>8.9</u>	inches			

Section 3

COMPLIANCE TEST DATA

Figure 1

PART 572 DUMMY IN-VEHICLE POSITION
(FOR REAR IMPACTS ONLY)

DUMMY MEASUREMENT FOR FRONT SEAT PASSENGERS

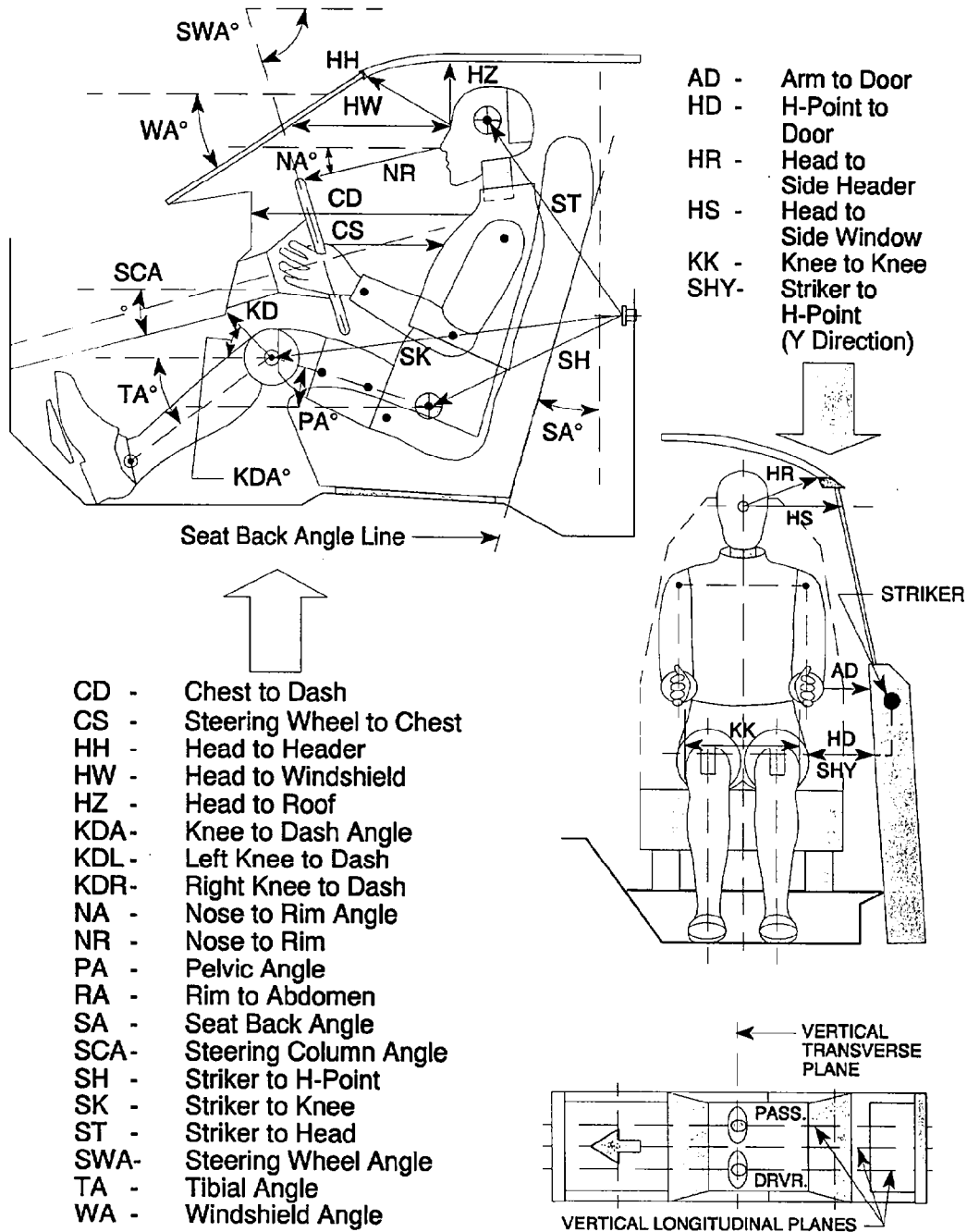


Table 4

FRONT SEAT OCCUPANT MEASUREMENTS
(FOR REAR IMPACT ONLY)

	DRIVER (Serial #)
WA°	25 deg.
SWA°	69 deg.
SCA°	21 deg.
SA°	27 deg.
HZ	6.7
HH	14.3
HW	24.4
HR	7.8
NR	13.8 Angle -9 deg.
CD	21.4
CS	11.3
RA	8.2
KDL	6.4 Angle (KDA) 30 deg.
KDR	5.9
PA°	23 deg.
TA°	-29 deg.
KK	11.0
ST	19.8 Angle 55 deg.
SK	31.5 Angle -7 deg.
SH	17.8 Angle -32 deg.
SHY	9.2
HS	11.6
HD	6.6
AD	5.1

Table 5
FUEL SYSTEM INTEGRITY POST IMPACT TEST DATA

FMVSS NO. 301

TEST VEHICLE NHTSA NO.: CS0305 TEST DATE: May 2, 1995

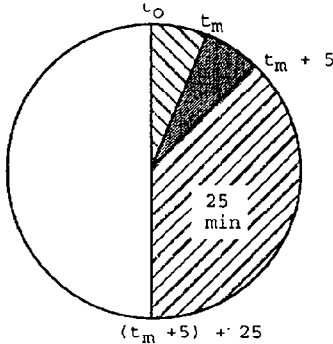
Vehicle Mfr./Make/Model: 1995 Eagle Talon 2-Door Coupe

Test vehicle fuel tank filled to 91% to 94% of manufacturer's "usable" capacity and with electric fuel pump operating (if it will operate without engine operation). Part 572 test dummies located at each front designated seating position.

TEST VEHICLE IMPACT TYPE:

- Frontal (30 mph)
- Oblique (30 mph) with - ° barrier face first
contacting -
(driver/passenger) side
- X Rear Moving Barrier (30 mph)
- Lateral Moving Barrier (20 mph)

FUEL SPILLAGE MEASUREMENT:



1. From impact until vehicle motion ceases
2. For five minute period after vehicle motion ceases
3. For next 25 minutes

ACTUAL	MAX ALLOWED
0	1 oz.
0	5 oz.
0	1 oz./1 min.

SOLVENT SPILLAGE DETAILS:

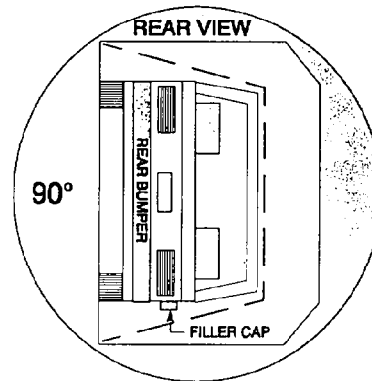
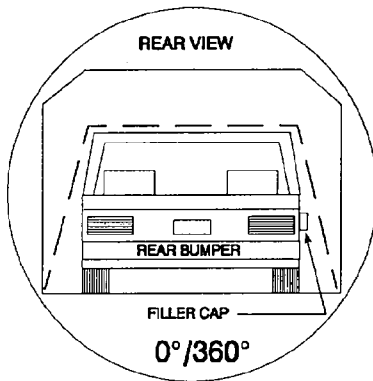
None

Table 6

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET

TEST PHASE :
0-90 Deg.

Vehicle NHTSA ID No. :
CS0305



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time (Spec. Range = 1 to 3 minutes)	1	minutes	57	seconds
FMVSS 301 Position Hold Time +	5	minutes	00	seconds
TOTAL	6	minutes	57	seconds
Next whole minute interval	7	minutes		

II. FMVSS 301 REQUIREMENTS:

(1) Time Period

First 5 minutes FROM onset of rotation	6th min.	7th min.	8th min. if reqd.
--	----------	----------	----------------------

(2) Maximum Allowable Solvent Spillage

5 ounces	1 ounce	1 ounce	1 ounce
----------	---------	---------	---------

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

0	0	0	N/A
---	---	---	-----

Note: Record spillage for whole minute intervals only as determined above.

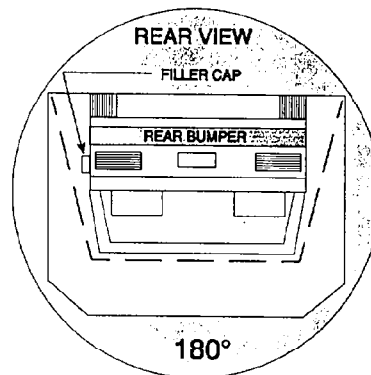
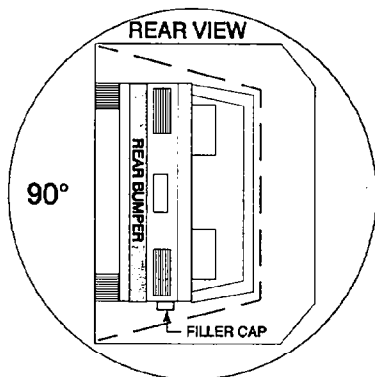
IV. SOLVENT SPILLAGE LOCATION(S):

None

Table 6
FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (cont.)

TEST PHASE :
90-180 Deg.

Vehicle NHTSA ID No. :
CS0305



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time (Spec. Range = 1 to 3 minutes)	2	minutes	01	seconds
FMVSS 301 Position Hold Time +	5	minutes	00	seconds
	7	minutes	01	seconds
Next whole minute interval	8	minutes		
TOTAL				

II. FMVSS 301 REQUIREMENTS:

(1) Time Period

First 5 minutes FROM onset of rotation	6th min.	7th min.	8th min. if reqd.
--	----------	----------	----------------------

(2) Maximum Allowable Solvent Spillage

5 ounces	1 ounce	1 ounce	1 ounce
----------	---------	---------	---------

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

0	0	0	0
---	---	---	---

Note: Record spillage for whole minute intervals only as determined above.

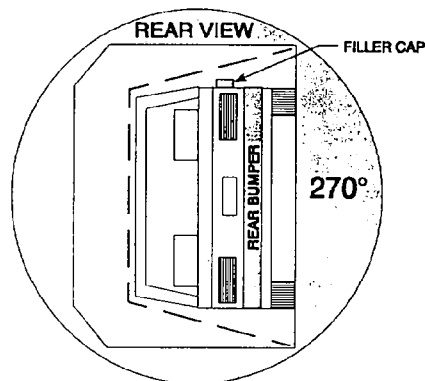
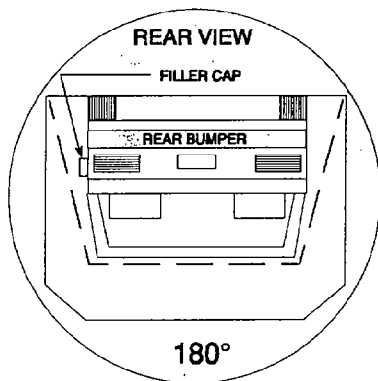
IV. SOLVENT SPILLAGE LOCATION(S):

None

Table 6
FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (cont.)

TEST PHASE :
180-270 Deg.

Vehicle NHTSA ID No. :
CS0305



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time (Spec. Range = 1 to 3 minutes)	1	minutes	58	seconds
FMVSS 301 Position Hold Time +	5	minutes	00	seconds
TOTAL	6	minutes	58	seconds
Next whole minute interval	7	minutes		

II. FMVSS 301 REQUIREMENTS:

(1) Time Period

First 5 minutes FROM onset of rotation	6th min.	7th min.	8th min. if reqd.
--	----------	----------	----------------------

(2) Maximum Allowable Solvent Spillage

5 ounces	1 ounce	1 ounce	1 ounce
----------	---------	---------	---------

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

0	0	0	N/A
---	---	---	-----

Note: Record spillage for whole minute intervals only as determined above.

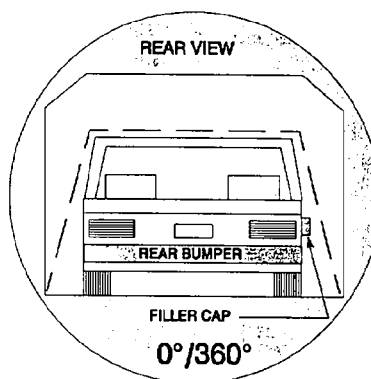
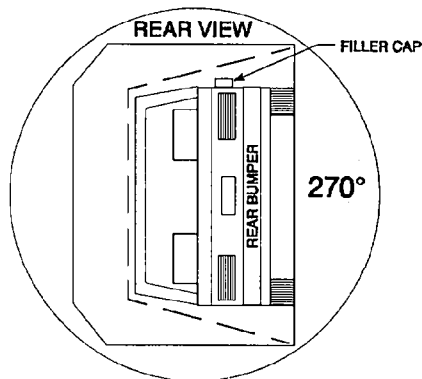
IV. SOLVENT SPILLAGE LOCATION(S):

None

Table 6
FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (cont.)

TEST PHASE :
270-360 Deg.

Vehicle NHTSA ID No. :
CS0305



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time (Spec. Range = 1 to 3 minutes)	2	minutes	02	seconds
FMVSS 301 Position Hold Time +	5	minutes	00	seconds
TOTAL	7	minutes	02	seconds
Next whole minute interval	8	minutes		

II. FMVSS 301 REQUIREMENTS:

(1) Time Period

First 5 minutes FROM onset of rotation	6th min.	7th min.	8th min. if reqd.
--	----------	----------	----------------------

(2) Maximum Allowable Solvent Spillage

5 ounces	1 ounce	1 ounce	1 ounce
----------	---------	---------	---------

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

0	0	0	0
---	---	---	---

Note: Record spillage for whole minute intervals only as determined above.

IV. SOLVENT SPILLAGE LOCATION(S):

None

Figure 2

CAMERA POSITIONS FOR REAR IMPACTS

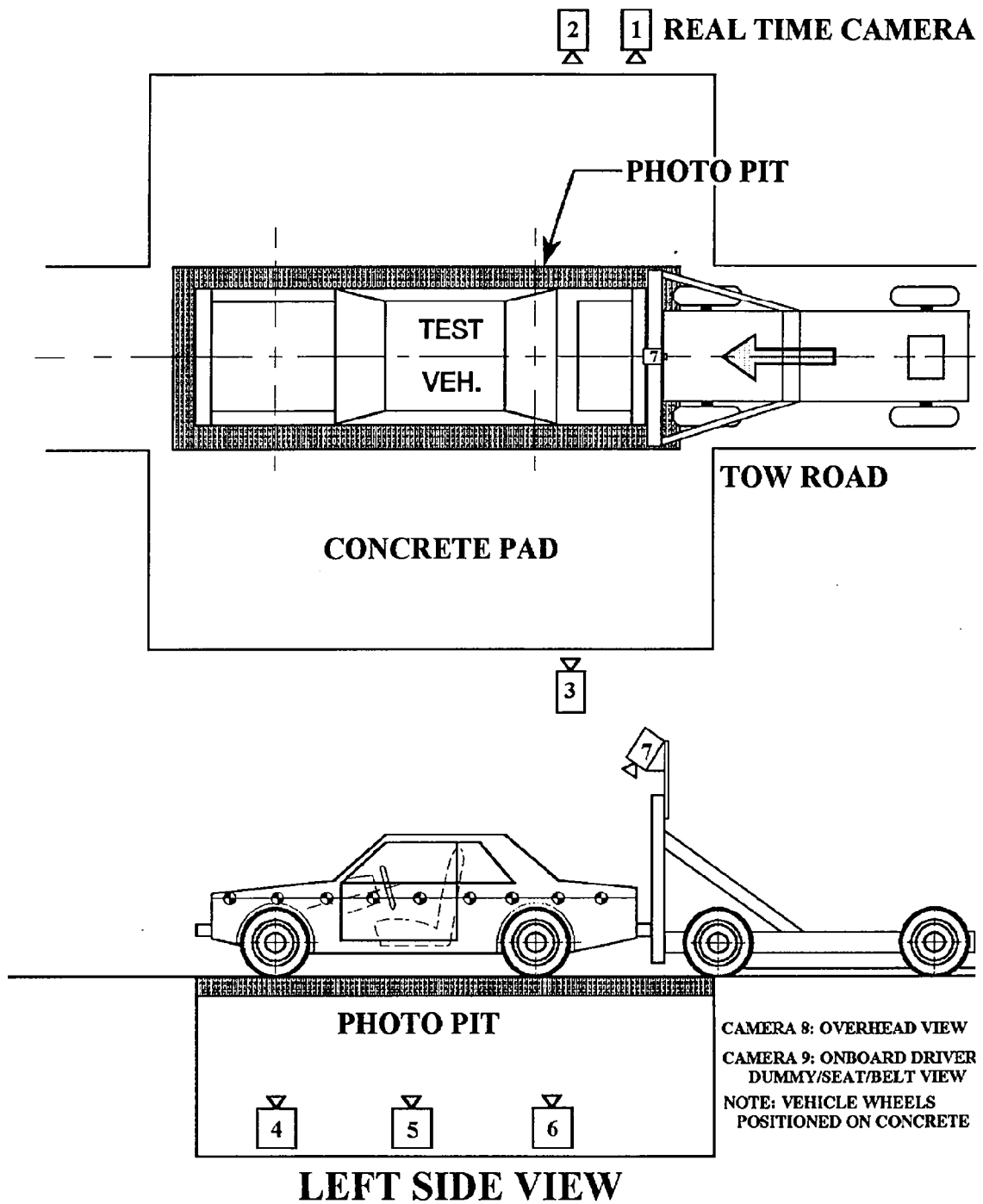


Table 7

HIGH-SPEED CAMERA LOCATIONSNHTSA No. : CS0305 Vehicle : 1995 Eagle Talon 2-Door Coupe

CAMERA NO.	VIEW	CAMERA POSITIONS (inches)*			ANGLE** (degrees)	LENS (mm)	SPEED (fps)
		X	Y	Z			
1	Real-Time Camera	-	-	-	-	-	24
2	Right Side View	-312	0	43	-1	13	805
3	Left Side View	410	68	44	-1	25	835
4	Vehicle Front Underbody View	0	-139	-77	90	13	750
5	Vehicle Mid-Section Underbody View	0	-89	-77	90	13	660
6	Vehicle Rear Underbody View	0	-35	-77	90	13	780
7	Moving Barrier View	0	0	99	-105	13	680
8	Overhead Overall View	-20	0	386	-90	13	850
9	Onboard Driver Dummy/Seat/Belt View	-	-	-	-	8	650

* X = film plant to monorail centerline (+ to left of of rail)

Y = film plane to impact location (+ ahead of impact location)

Z = film plane to ground (+ above ground)

** = referenced to horizontal plane

Appendix A
PHOTOGRAPHS

LIST OF PHOTOGRAPHS

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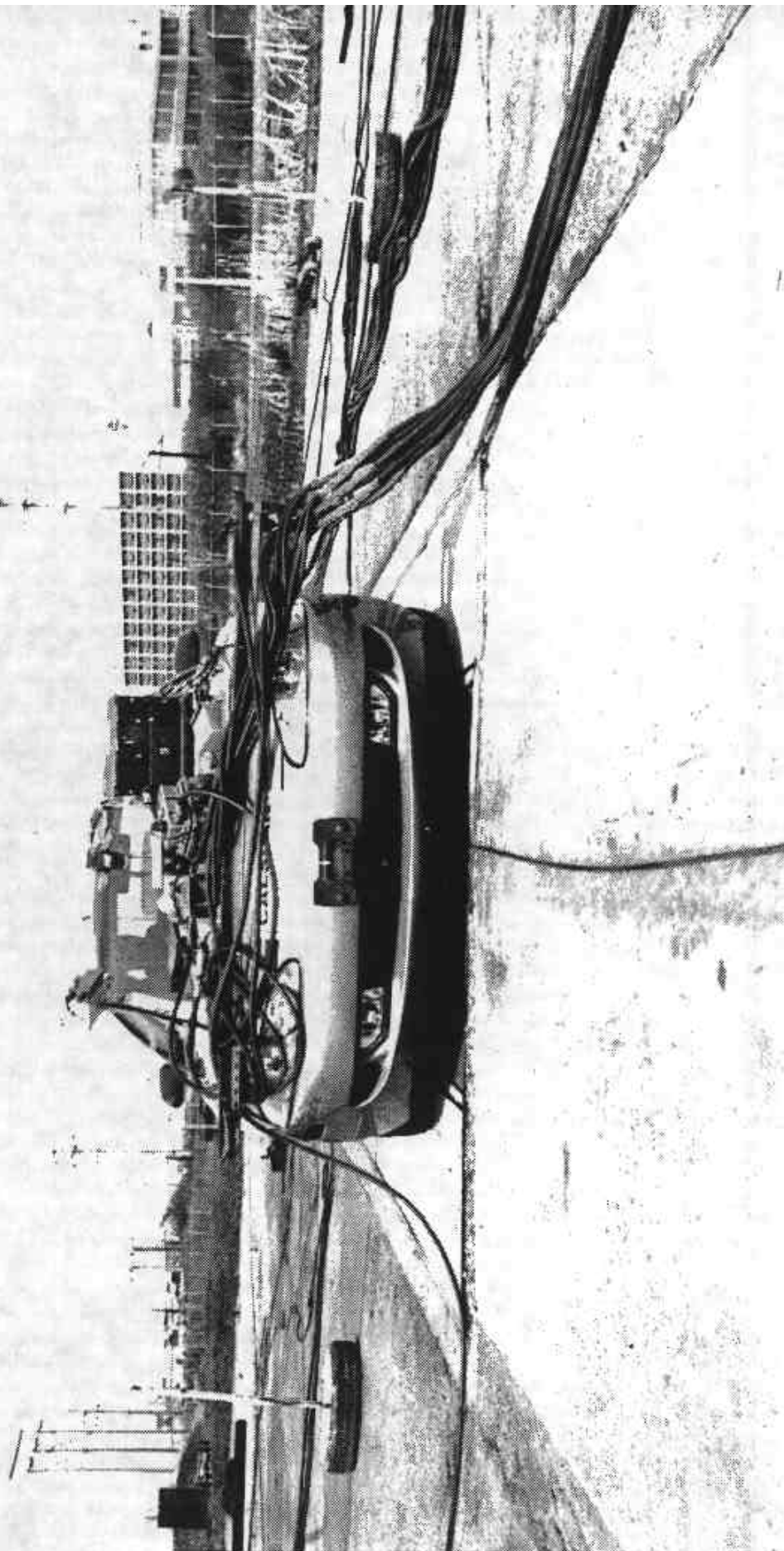
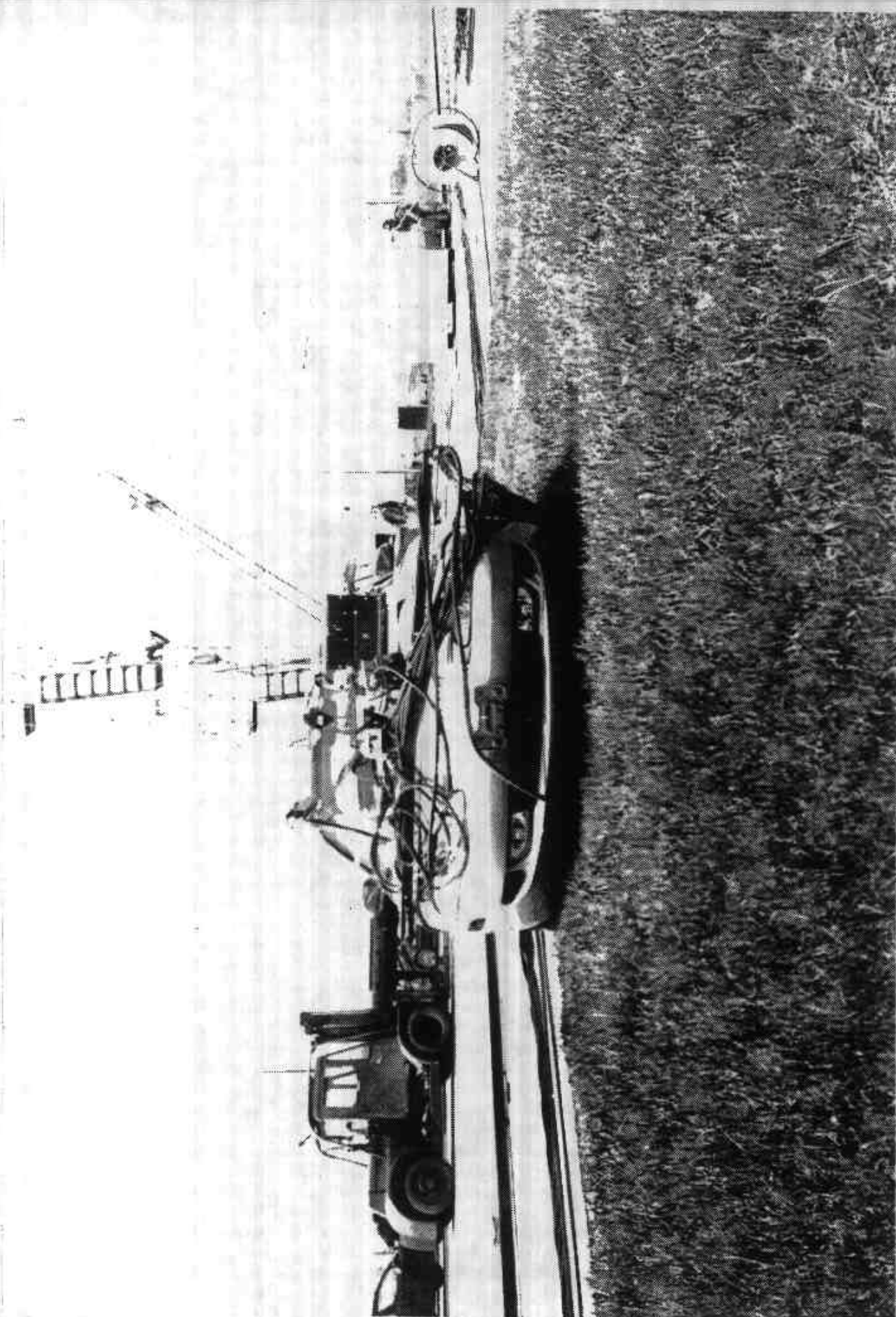


Figure A-1 PRE-TEST FRONT VIEW



A-4

8247-11

Figure A-2 POST-TEST FRONT VIEW

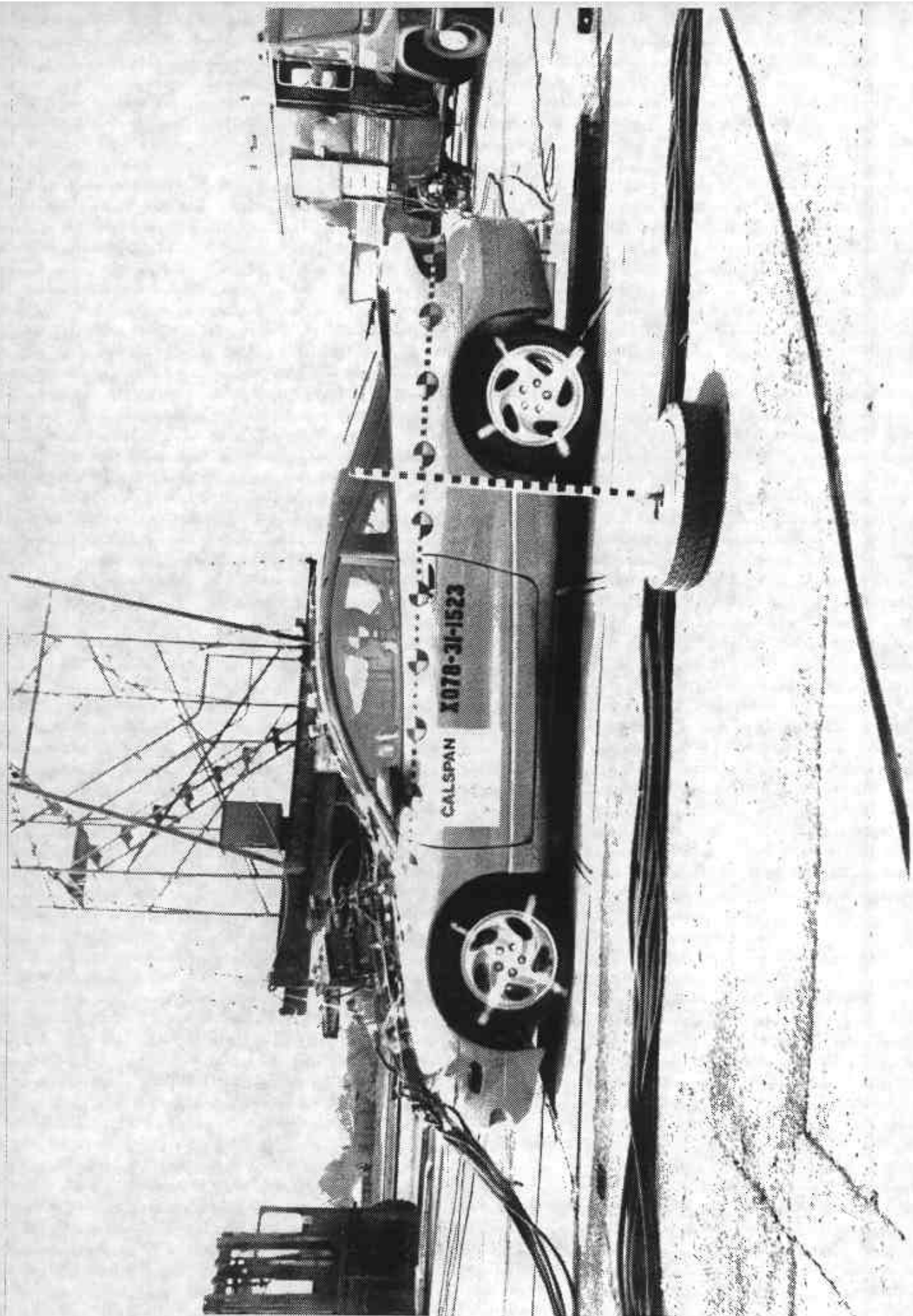


Figure A-3 PRE-TEST LEFT SIDE VIEW



Figure A-4 POST-TEST LEFT SIDE VIEW

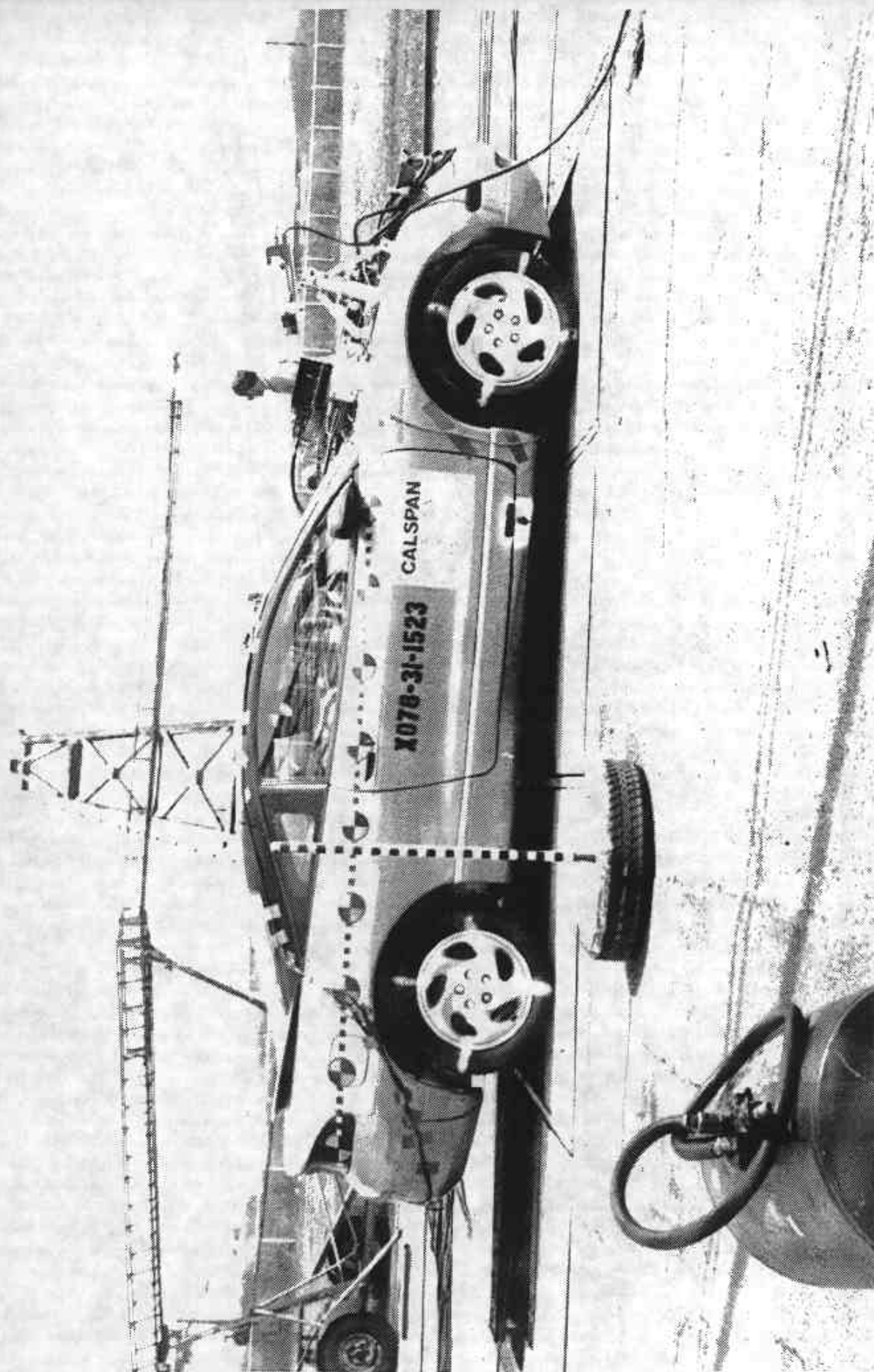


Figure A-5 PRE-TEST RIGHT SIDE VIEW



Figure A-6 POST-TEST RIGHT SIDE VIEW

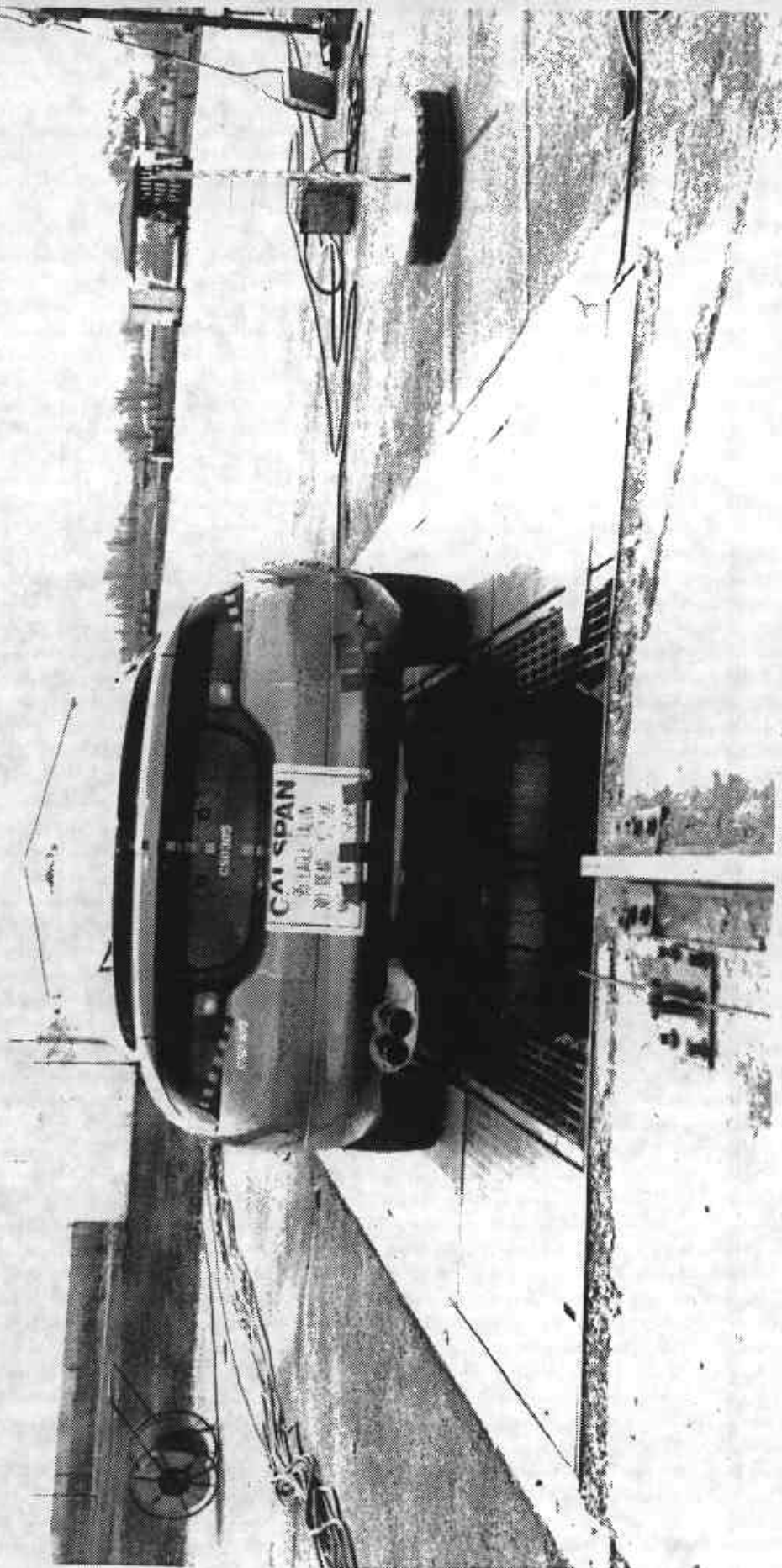


Figure A-7 PRE-TEST REAR VIEW

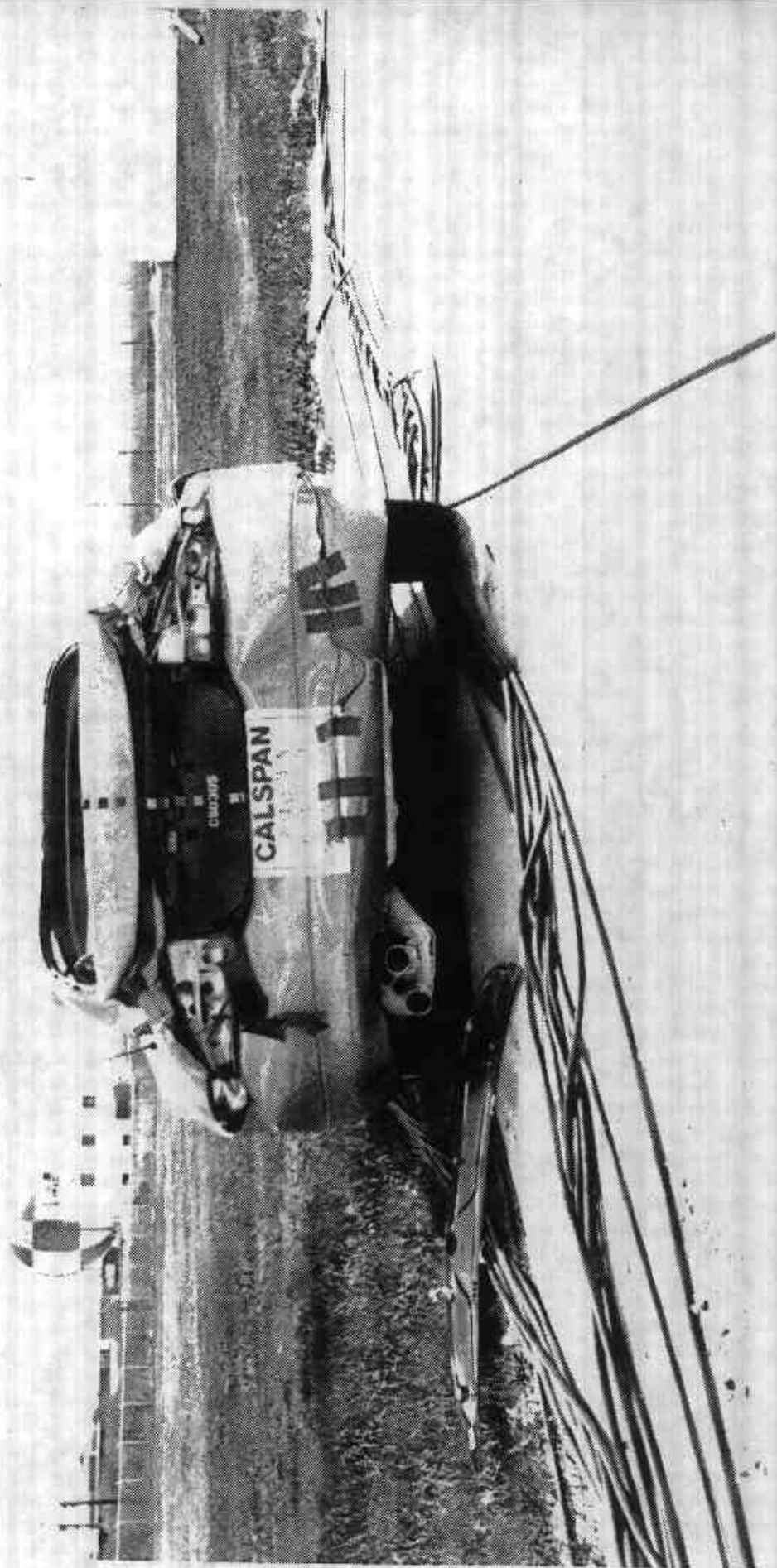


Figure A-8 POST-TEST REAR VIEW

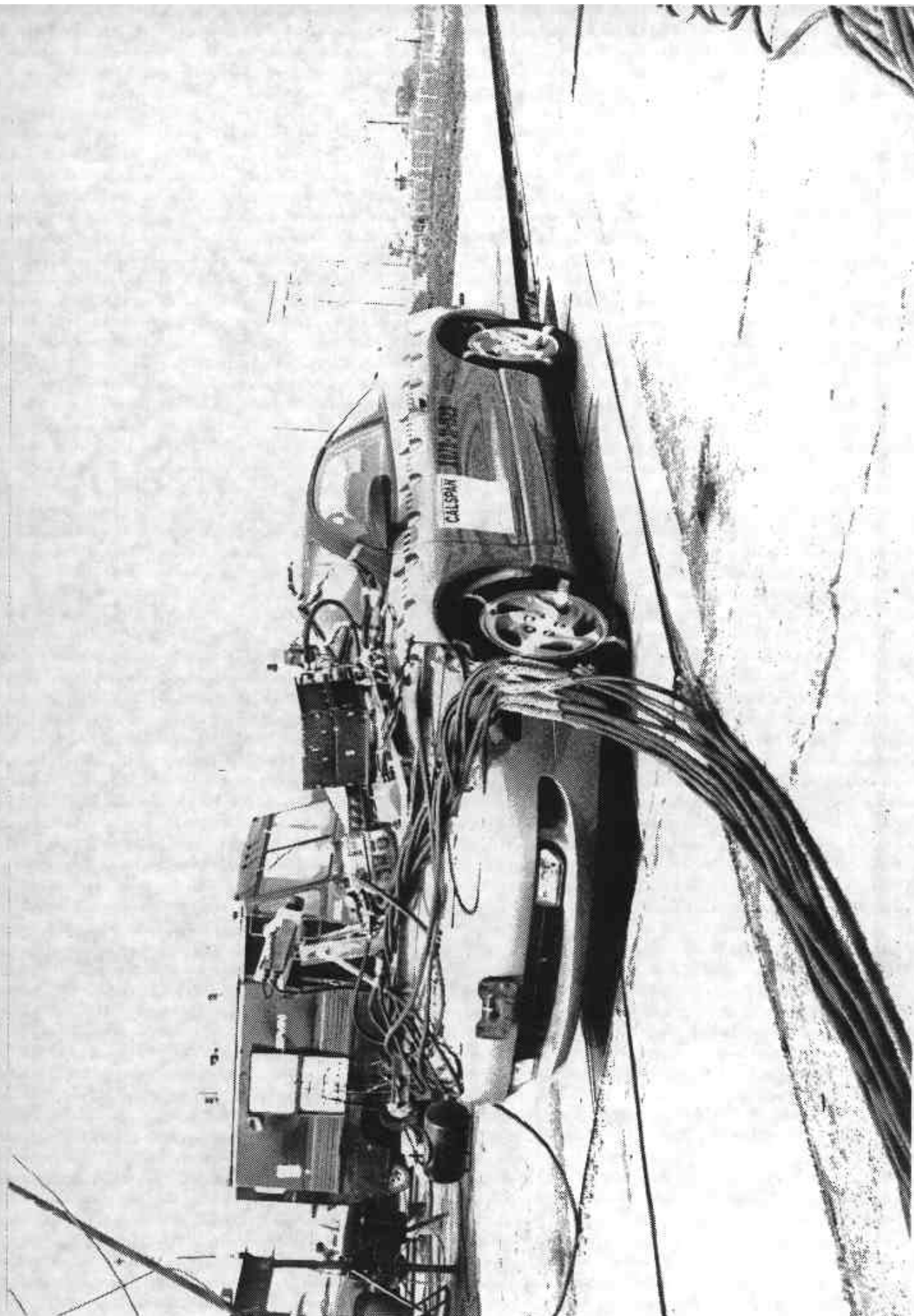


Figure A-9 PRE-TEST LEFT FRONT THREE-QUARTER VIEW

A-11

8247-11



Figure A-10 POST-TEST LEFT FRONT THREE-QUARTER VIEW



Figure A-11 PRE-TEST RIGHT REAR THREE-QUARTER VIEW

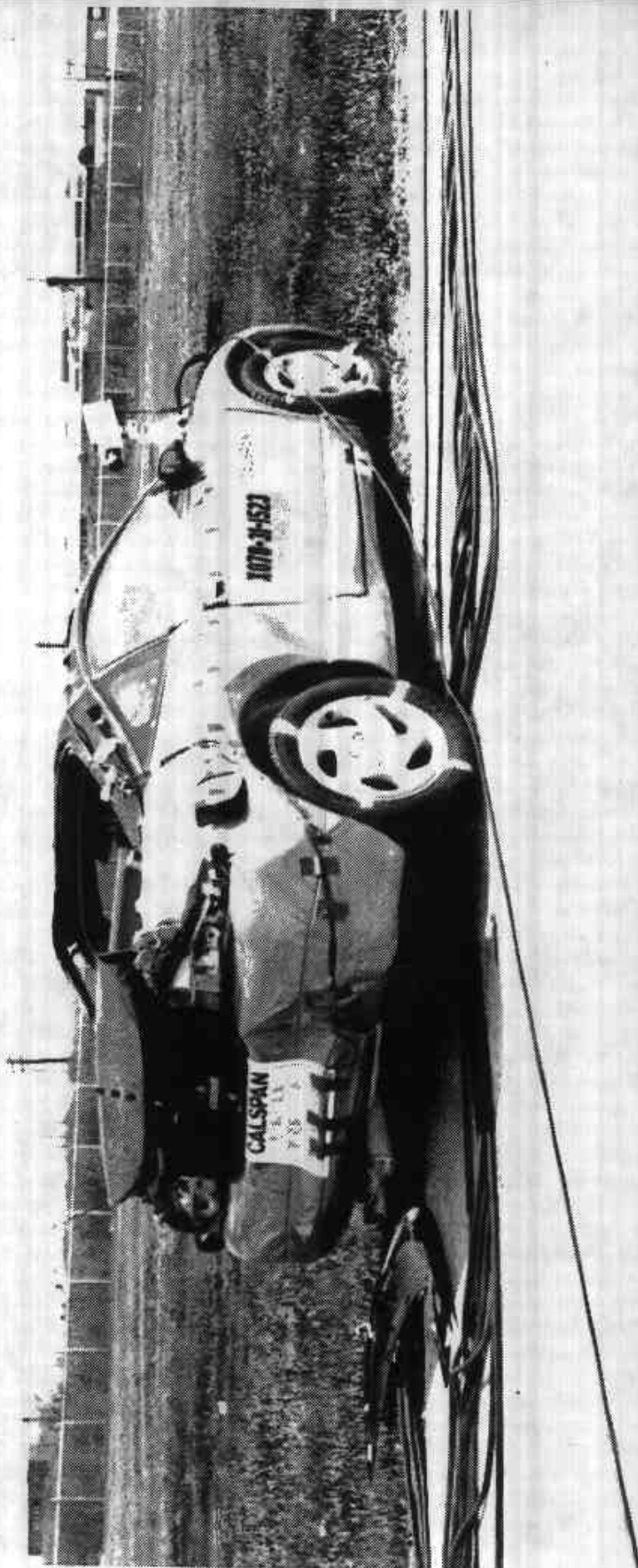


Figure A-12 POST-TEST RIGHT REAR THREE-QUARTER VIEW



Figure A-13 PRE-TEST FRONT UNDERBODY VIEW

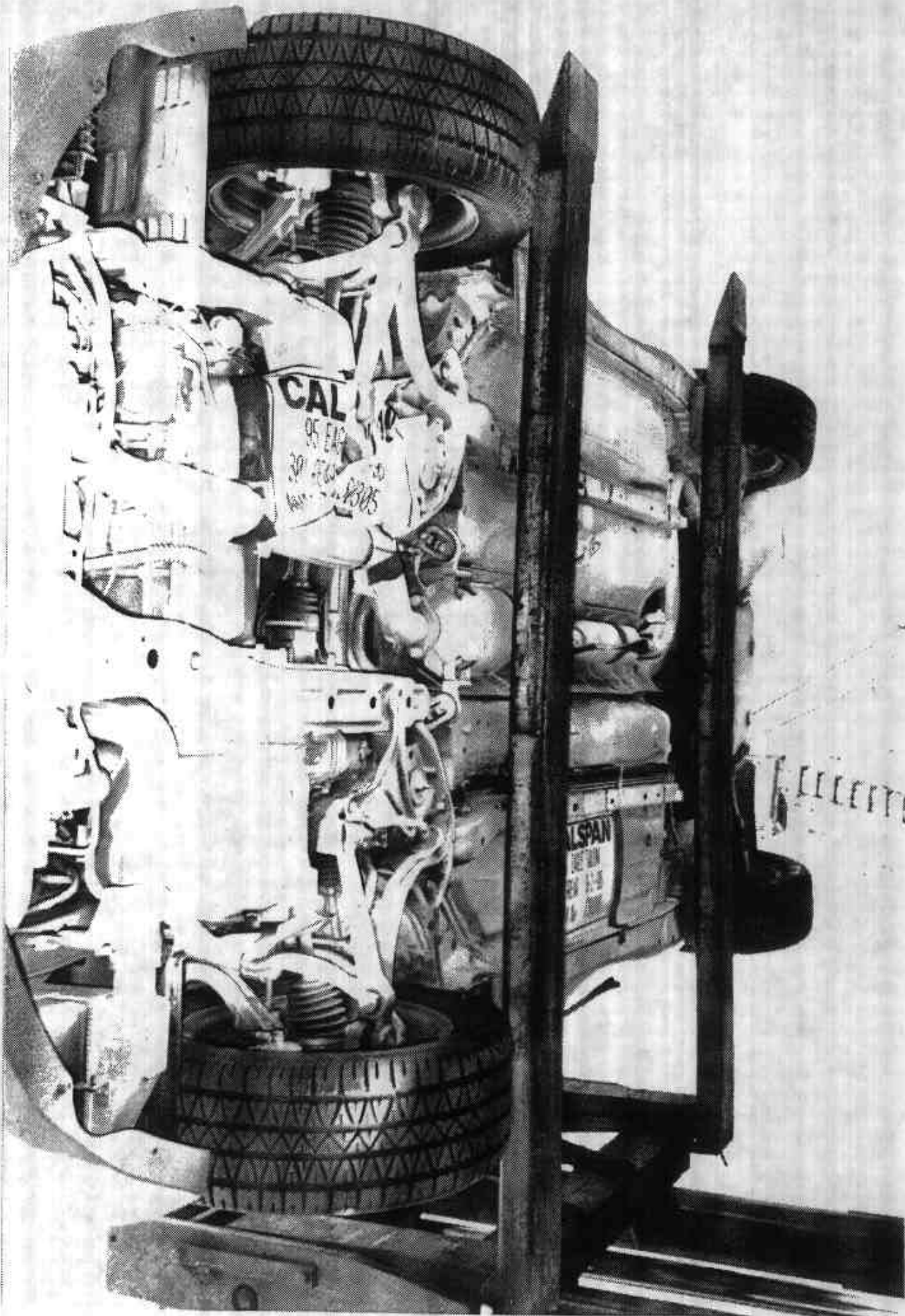


Figure A-14 POST-TEST FRONT UNDERBODY VIEW

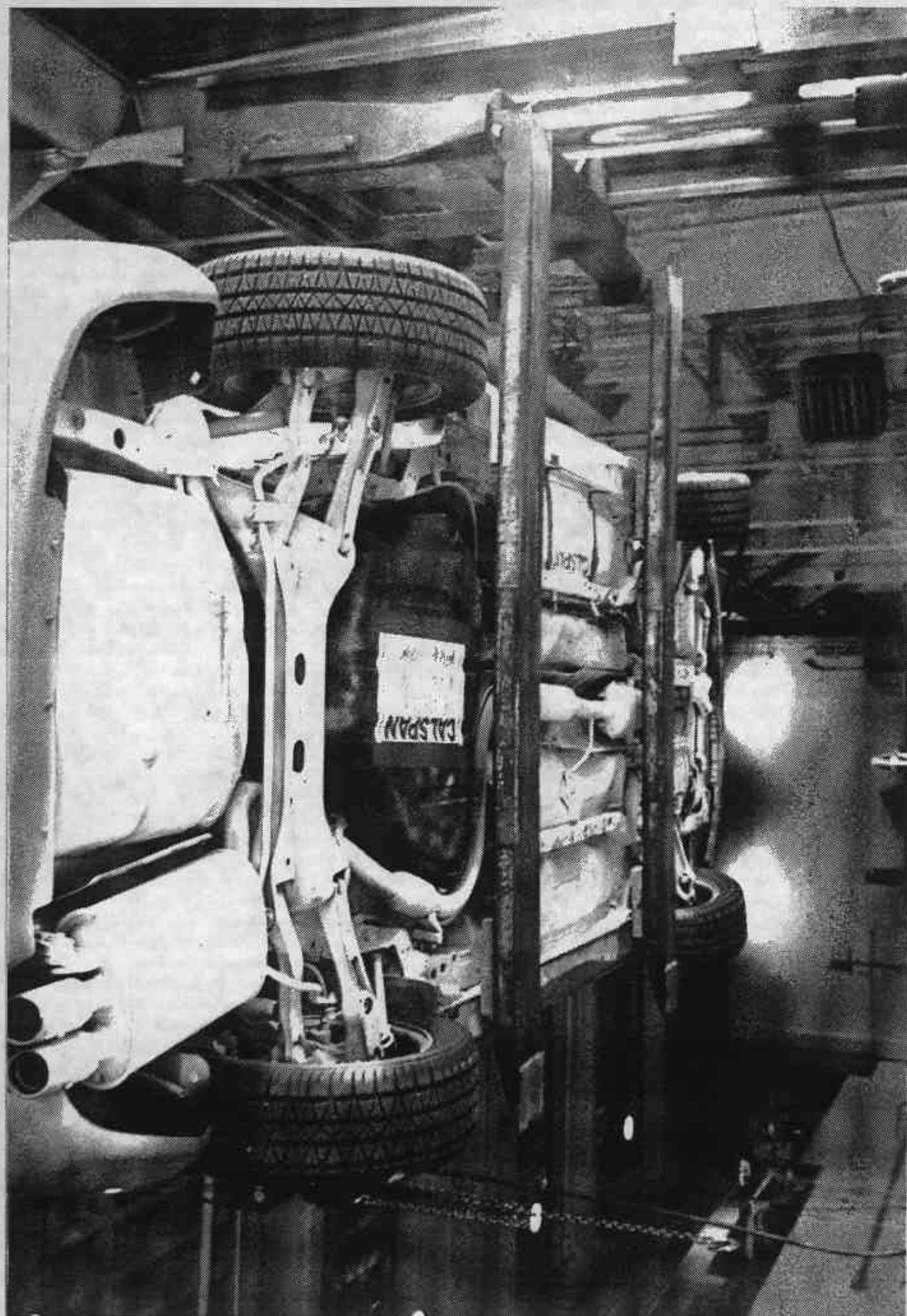
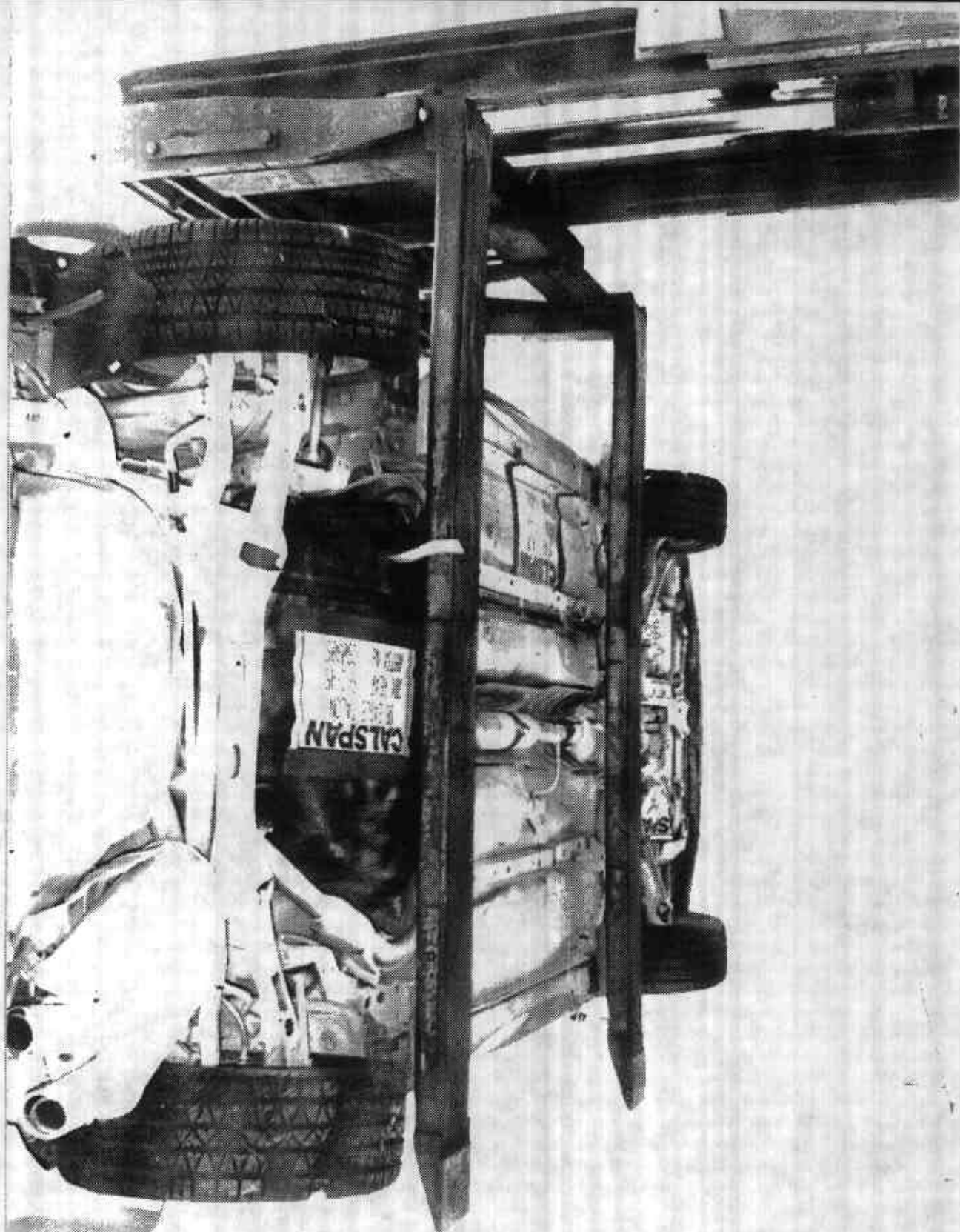


Figure A-15 PRE-TEST REAR UNDERBODY VIEW

Figure A-16 POST-TEST REAR UNDERBODY VIEW



MADE IN U.S.A. DATE JUN. 1994
MANUFACTURED BY DIAMOND-STAR MOTORS CORP.
GVWR 3850 LBS GAWR 2200 LBS GAWR 1700 LBS
1750 KG FR. 1025 KG RR. 775 KG

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

4 E 3 A K 5 4 F 2 S E 0 2 3 9 1 B



MDH 061020

VEHICLE TYPE: PASSENGER CAR NUB00232

Figure A-17 CERTIFICATION PLACARD

TIRE INFLATION PRESSURE (COLD)		
STANDARD INFLATION PRESSURE FOR ALL LOAD		
1ST SEAT	2	PASS.
2ND SEAT	2	PASS.
TOTAL	4	PASS.
LUGGAGE	28kg	(62 LBS)
TOTAL WEIGHT	300kg	(661 LBS)
TIRE SIZE	P205/55R16 89V	
FRONT	REAR	
220kPa (32psi)	200kPa (29psi)	
TIRE SIZE	T125/70D15	
TEMPORARY USE ONLY	420kPa (60psi)	
PART NO. MR102376		

Figure A-18 TIRE PLACARD

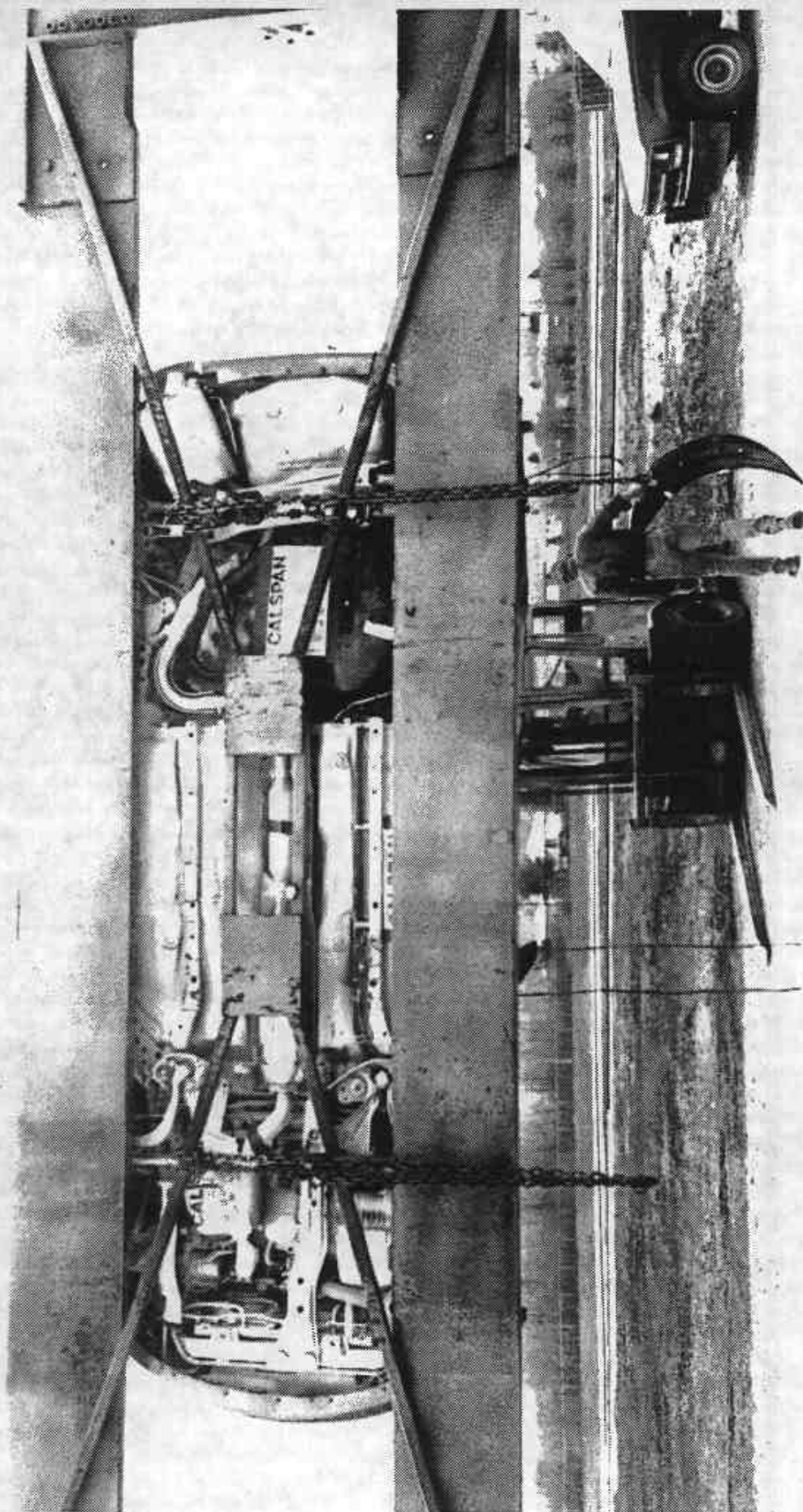


Figure A-19 ROLLOVER 90°



Figure A-20 ROLLOVER 180°



Figure A-21 ROLLOVER 270°



Figure A-22 ROLLOVER 360°

Appendix B

VEHICLE AND DUMMY RESPONSE DATA

(REAR IMPACT ONLY)

FACILITY: Track TEST DATE: 02 May 1995
 RUN #: 1523 TEST TIME: 10:22:34
 SERIES #: 1 BOARD: a

TITLE: 301 Rear 30 MPH-1995 Eagle Talon

CHANNEL NUMBER	DESCRIPTION	ENGR UNIT	MAXIMUM		MINIMUM		FILTER CLASS
			AMP	msec	AMP	msec	
1	Pos. 1 Head X	Gs	31.3	123.8	-4.3	273.8	1000.0
2	Pos. 1 Head Y	Gs	3.0	77.3	-9.8	130.3	1000.0
3	Pos. 1 Head Z	Gs	28.9	111.7	-.6	290.9	1000.0
4	Pos. 1 Chest Disp.	Ins	.1	153.5	.0	125.6	180.0
5	Pos. 1 Chest X	Gs	19.2	69.7	-3.2	119.9	180.0
6	Pos. 1 Chest Y	Gs	3.6	49.7	-2.9	101.9	180.0
7	Pos. 1 Chest Z	Gs	9.1	56.2	-3.0	107.4	180.0
8	Pos. 1 Lap Belt	lbs	223.4	141.0	-9.7	279.4	60.0
9	Pos. 1 Pelvic X	Gs	28.1	64.2	-8.0	139.1	1000.0
10	Pos. 1 Pelvic Y	Gs	5.7	48.2	-2.7	73.6	1000.0
11	Pos. 1 Pelvic Z	Gs	10.2	56.4	-3.6	104.9	1000.0
12	Left Rear Crossmember X	Gs	39.9	13.4	-12.8	23.0	60.0
13	Pos. 1 Upper Neck Fx	lbs	67.5	121.6	-38.7	359.9	1000.0
14	Pos. 1 Upper Neck Fy	lbs	25.1	78.6	-45.1	131.5	1000.0
15	Pos. 1 Upper Neck Fz	lbs	367.3	111.6	-8.6	285.5	1000.0
16	Right Rear Crossmember X	Gs	33.5	14.4	-3.2	25.0	60.0
17	Pos. 1 Head Resultant	Gs	41.8	111.5	.0	6.4	1000.0
18	Pos. 1 Chest Resultant	Gs	20.5	69.7	.0	-50.9	180.0
19	Pos. 1 Pelvic Resultant	Gs	29.7	61.4	.0	5.9	1000.0
20	Pos. 1 Neck Force Res.	lbs	367.5	111.6	1.2	3.1	1000.0

36 ms Fixed Duration HIC SUMMARY: Pos. 1 Head Resultant

hic: 166.59
 t1 = 98.040 msec
 t2 = 134.040 msec
 Average G's Over Hic Duration = 29.25

CLIP SUMMARY: Pos. 1 Chest Resultant

Peak Resultant (3 ms CLIPPED DURATION) = 19.445 G's
 Tstart = 68.0400 ms
 Tend = 71.1600 ms
 CSI = 56.820

FACILITY: Track TEST DATE: 02 May 1995
RUN #: 1523 TEST TIME: 10:22:34
SERIES #: 1 BOARD: b

TITLE: 301 Rear 30 MPH-1995 Eagle Talon

CHANNEL NUMBER	DESCRIPTION	ENGR UNIT	MAXIMUM		MINIMUM		FILTER CLASS
			AMP	msec	AMP	msec	
1	Pos. 1 Upper Neck Mx	ft-lbs	5.6	86.4	-4.4	118.2	600.0
2	Pos. 1 Upper Neck My	ft-lbs	12.2	258.4	-23.9	142.8	600.0
3	Pos. 1 Upper Neck Mz	ft-lbs	3.8	48.8	-9.7	132.7	600.0
4	Upper Seatback X	Gs	32.6	33.7	-26.3	48.7	60.0
5	Lower Seatback X	Gs	30.5	15.8	-17.3	24.8	60.0
6	Pos. 1 Belt Spoolout	Ins	.0	-52.4	-4.7	58.9	60.0
17	Pos. 1 Neck Moment Res.	ft-lbs	25.4	142.8	.0	-8.2	600.0

TEST NO. CS0305

VEHICLE

SAE FILTER CHANNEL CLASS

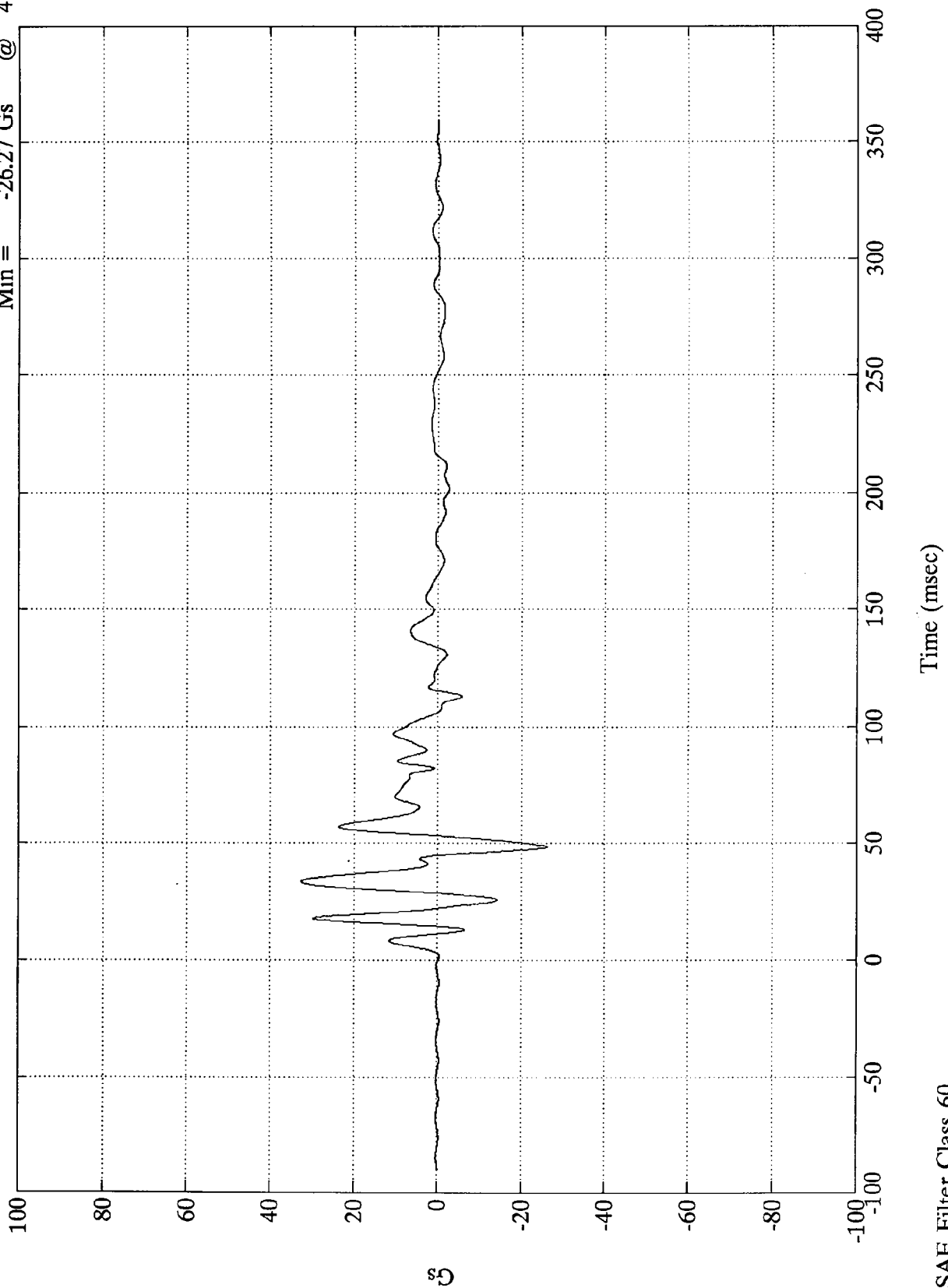
60

Note: Angular seatback position is measured in degrees of rotation from the initial (design) position.

301 Rear 30 MPH-1995 Eagle Talon

Upper Seatback X

Max = 32.60 Gs @ 33.72 msec
Min = -26.27 Gs @ 48.72 msec

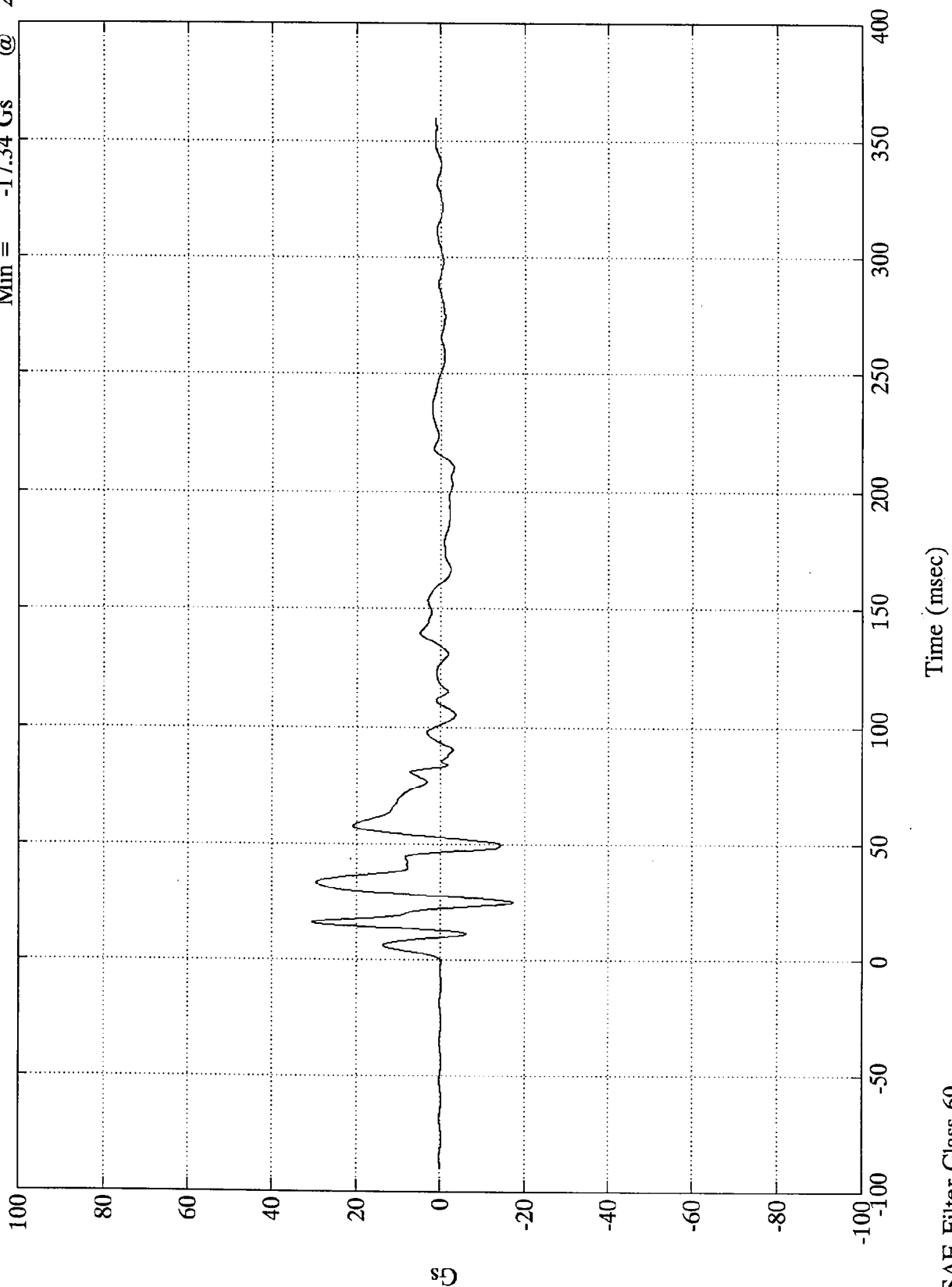


SAE Filter Class 60

301 Rear 30 MPH-1995 Eagle Talon

Max = 30.52 Gs @ 15.83 msec
Min = -17.34 Gs @ 24.83 msec

Lower Seatback X



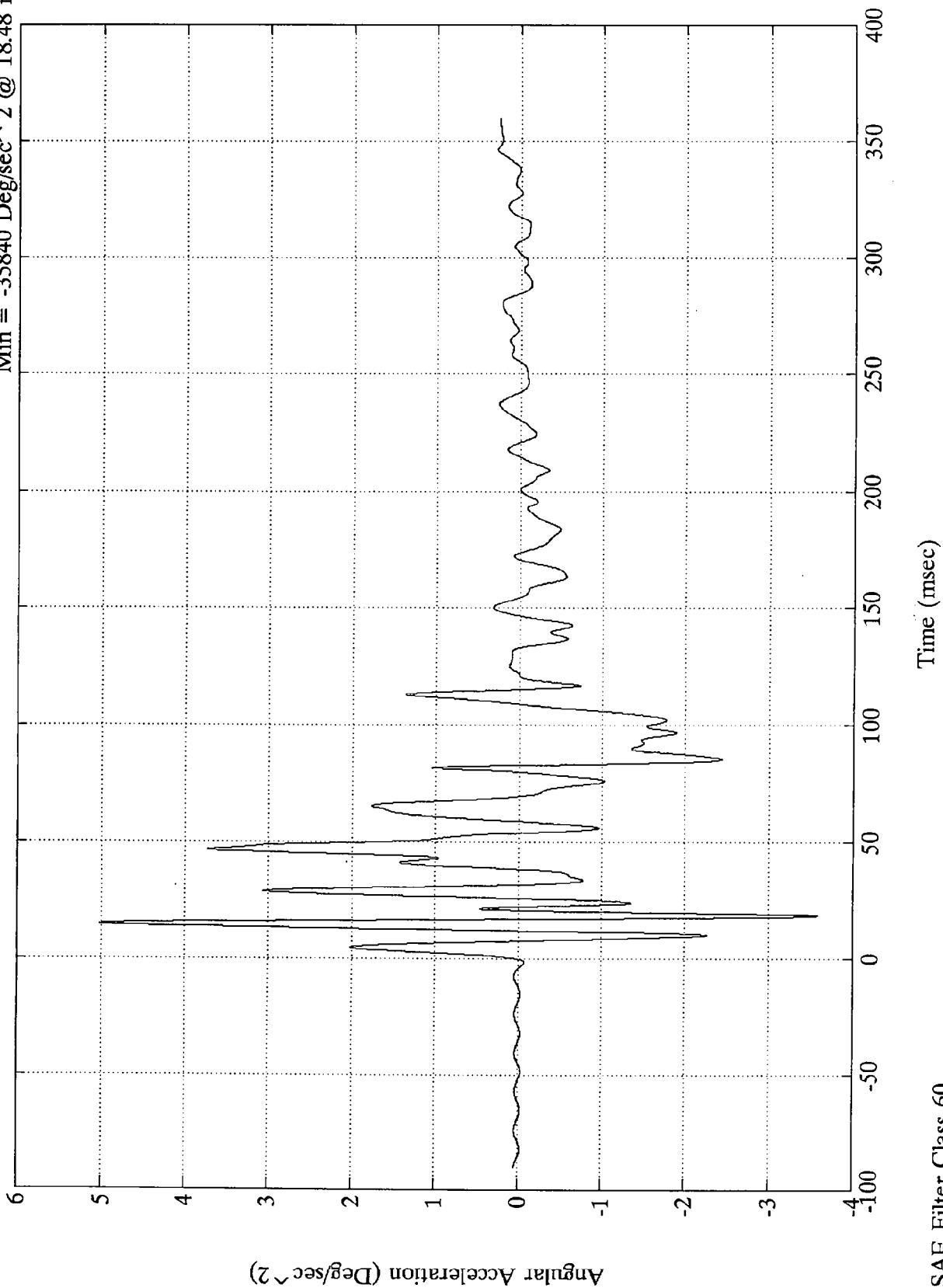
SAE Filter Class 60

301 Rear 30 MPH-1995 Eagle Talon

$\times 10^4$

Seatback Angular Acceleration

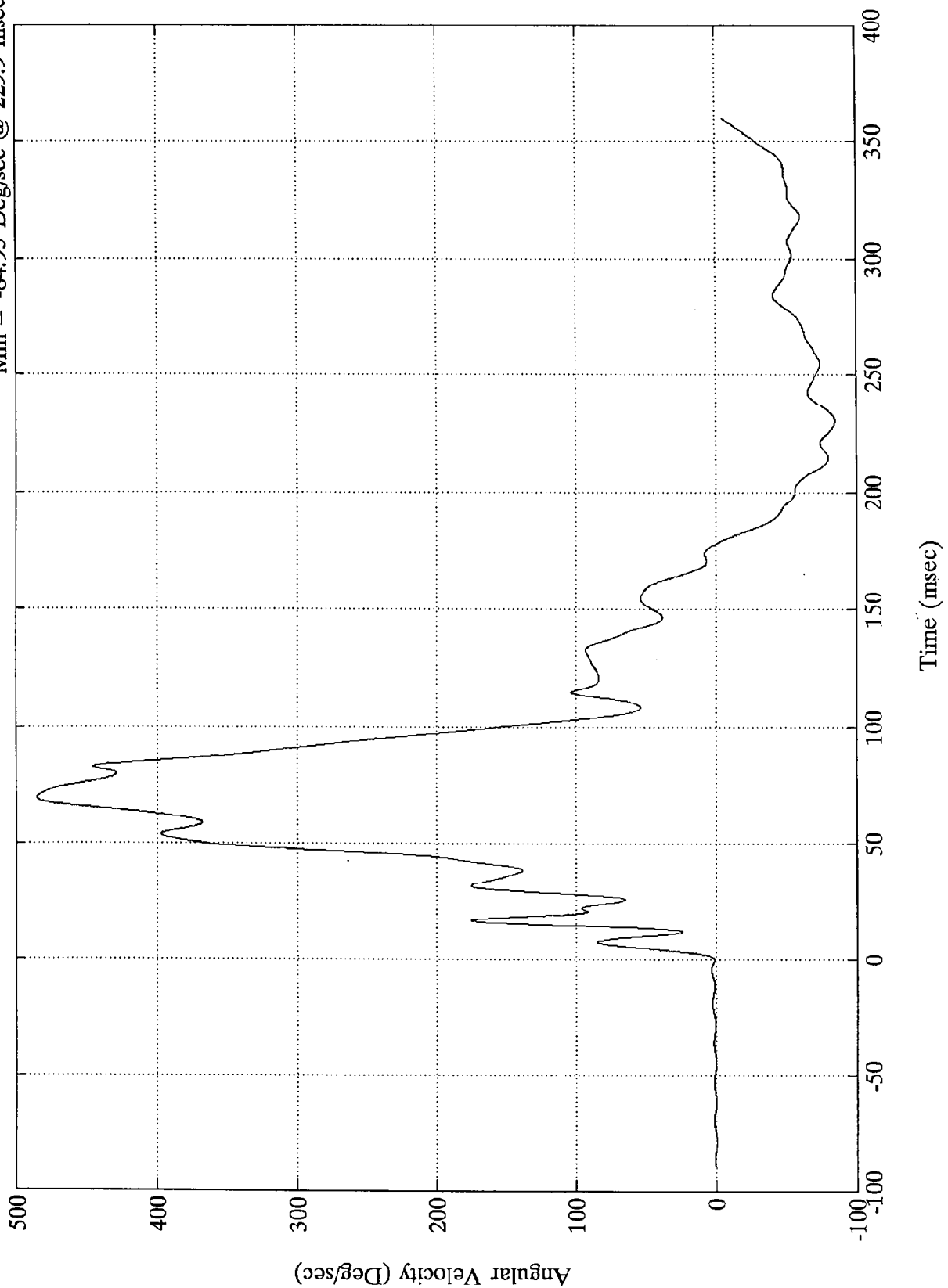
Max = 50150 Deg/sec² @ 14.64 msec
Min = -35840 Deg/sec² @ 18.48 msec



301 Rear 30 MPH-1995 Eagle Talon

Max = 485.4 Deg/sec @ 69.36 msec
Min = -84.95 Deg/sec @ 229.9 msec

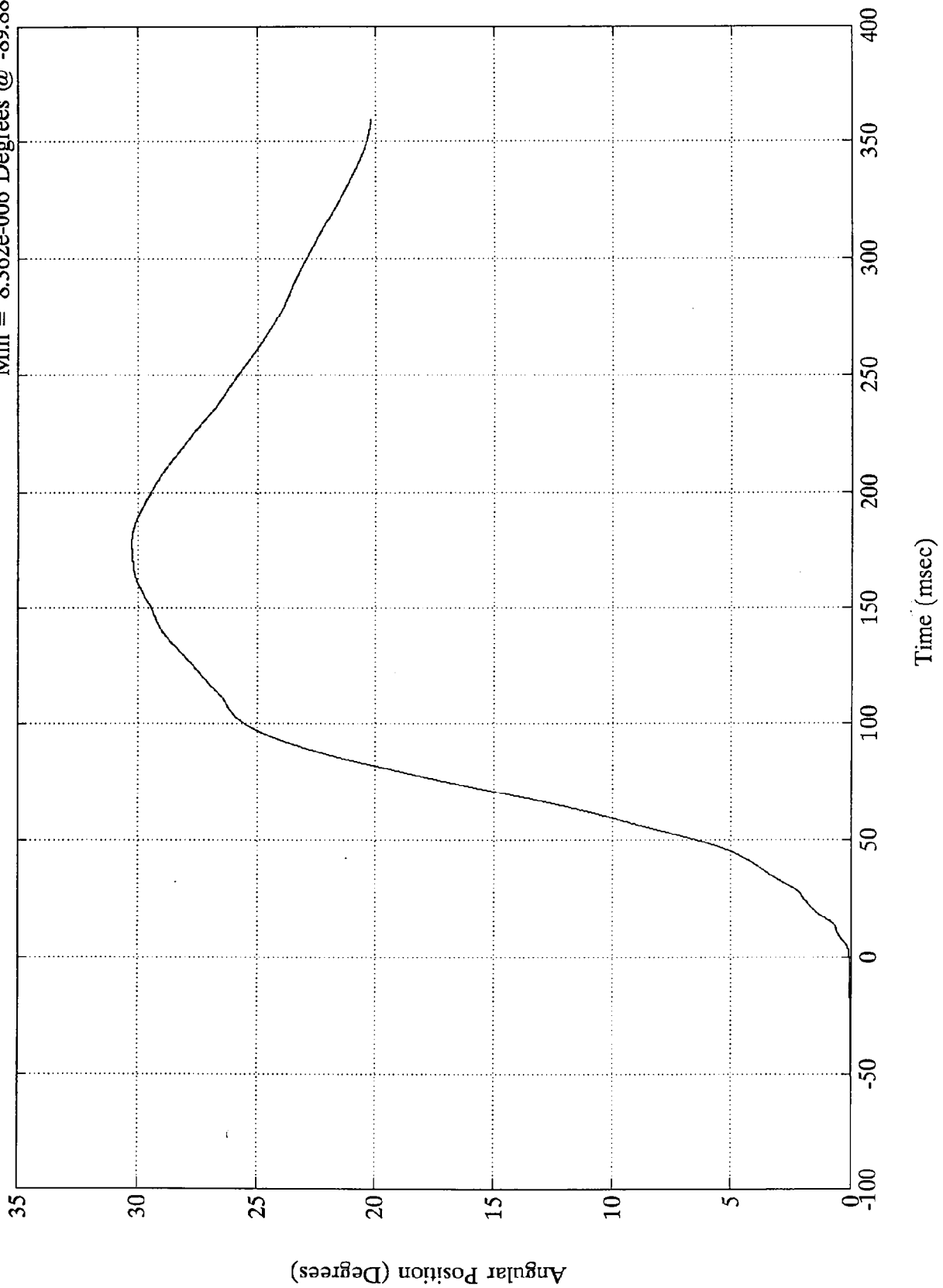
Seatback Angular Velocity



301 Rear 30 MPH-1995 Eagle Talon

Seatback Angular Position

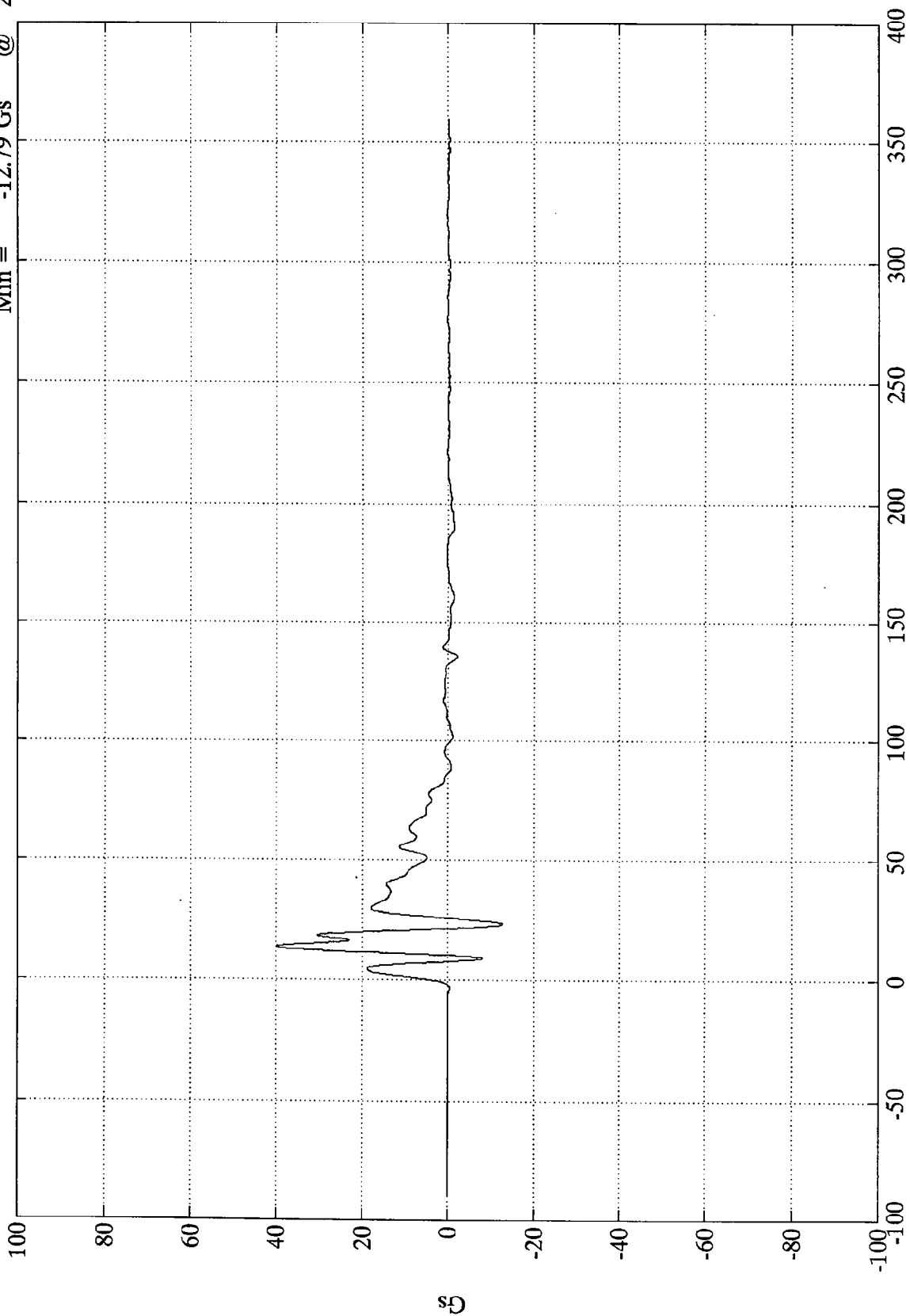
Max = 30.26 Degrees @ 177.8 msec
Min = 8.362e-006 Degrees @ -89.88 msec



301 Rear 30 MPH-1995 Eagle Talon

Max = 39.92 Gs @ 13.43 msec
Min = -12.79 Gs @ 23.04 msec

Left Rear Crossmember X



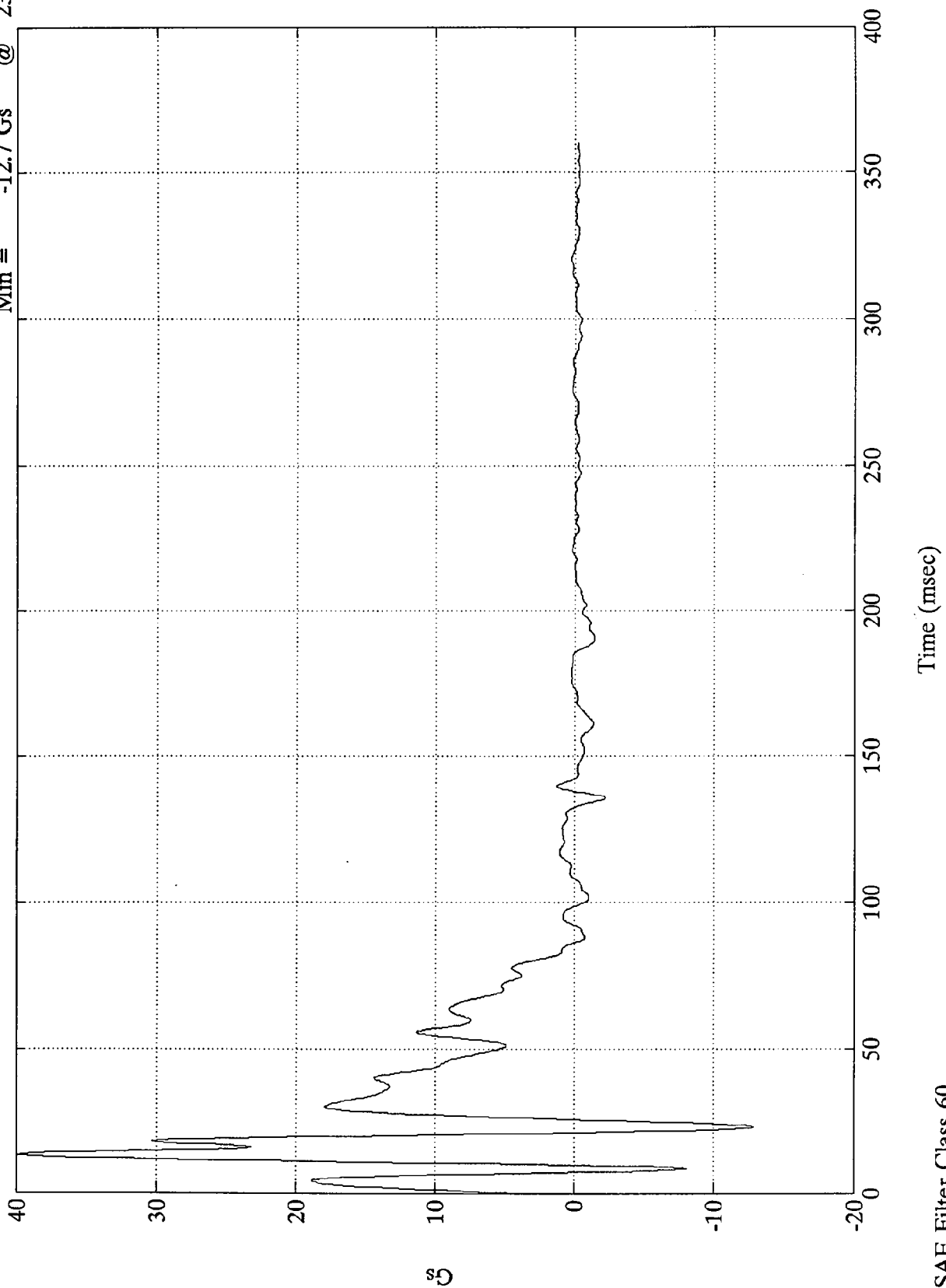
Time (msec)

SAE Filter Class 60

301 Rear 30 MPH-1995 Eagle Talon

Left Rear Crossmember X

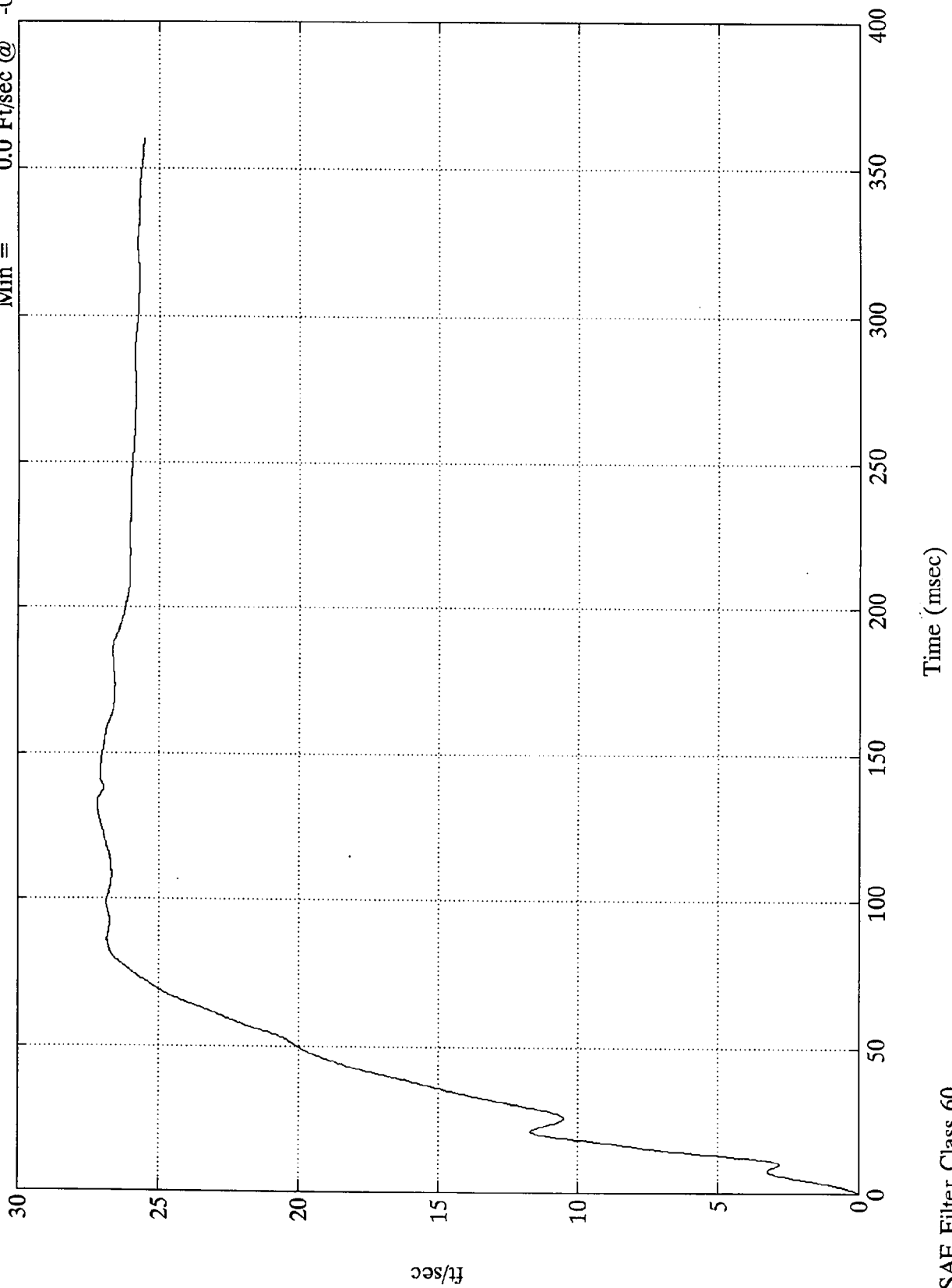
Max = 39.9 Gs @ 13.43 msec
Min = -12.7 Gs @ 23.04 msec



301 Rear 30 MPH-1995 Eagle Talon

1st Integral Left Rear Crossmember X

Max = 27.1 Ft/sec @ 132.48 msec
Min = 0.0 Ft/sec @ -0.00 msec

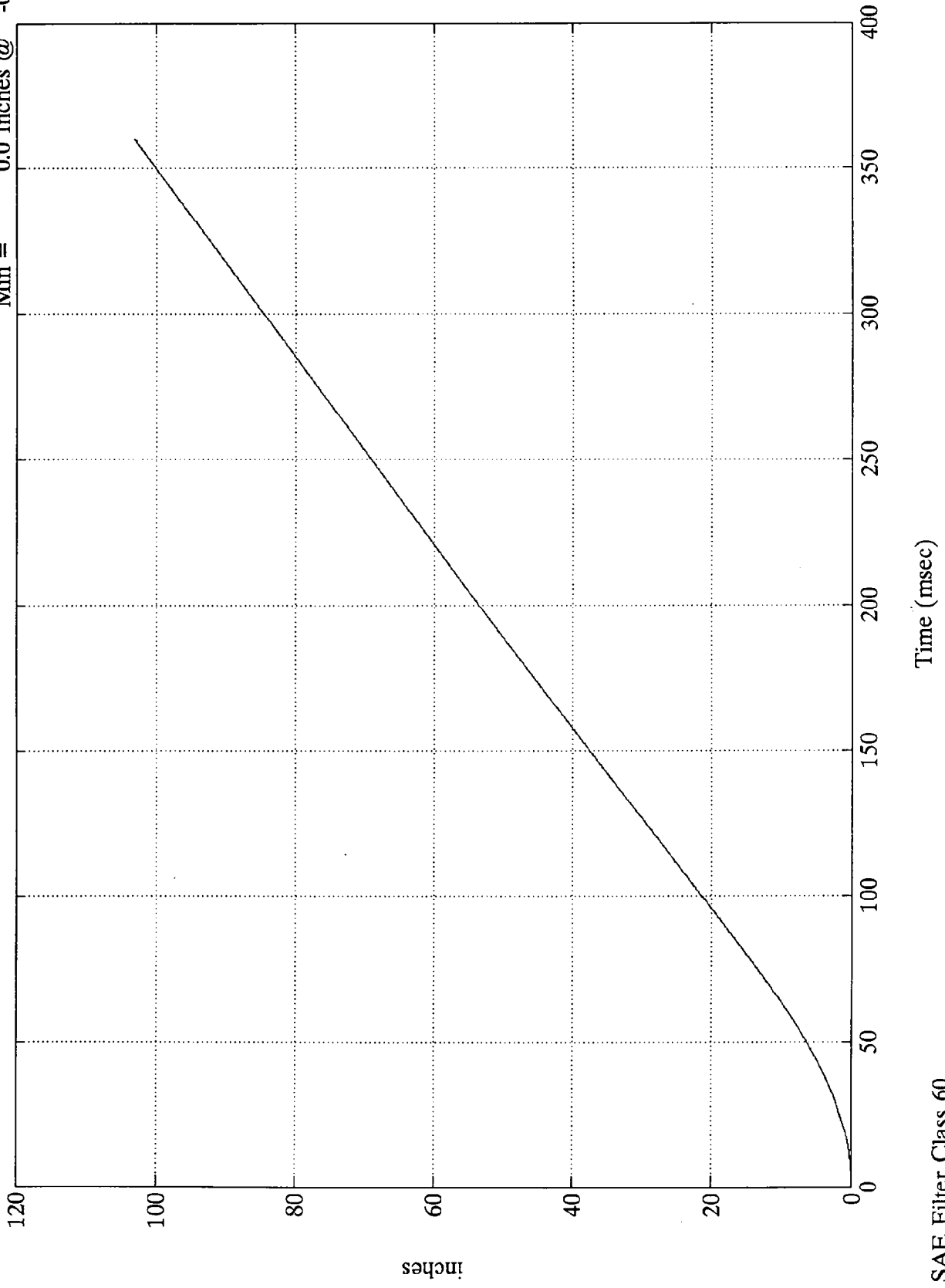


SAE Filter Class 60

301 Rear 30 MPH-1995 Eagle Talon

2nd Integral Left Rear Crossmember X

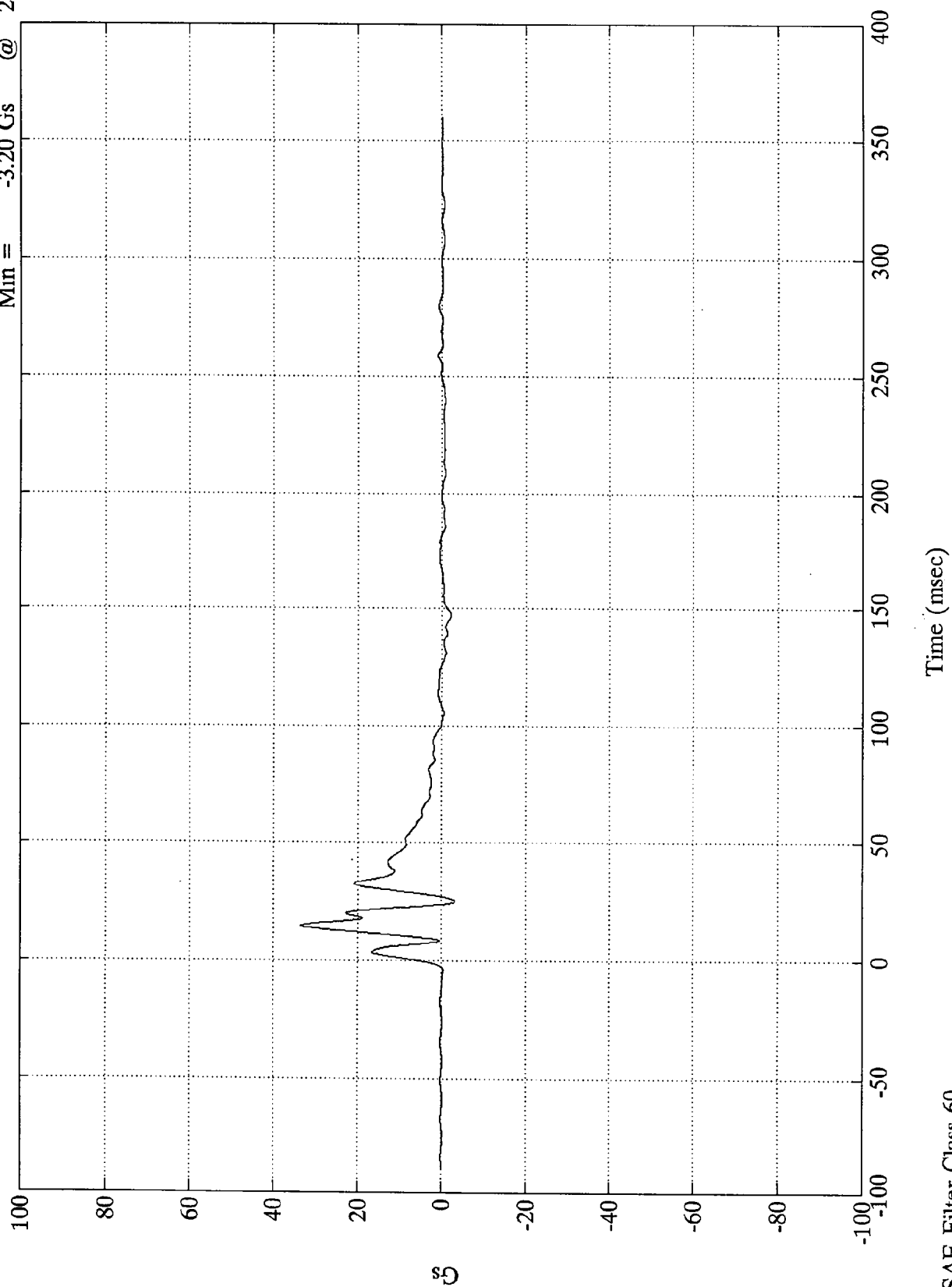
Max = 103.1 Inches @ 359.88 msec
Min = 0.0 Inches @ -0.00 msec



301 Rear 30 MPH-1995 Eagle Talon

Right Rear Crossmember X

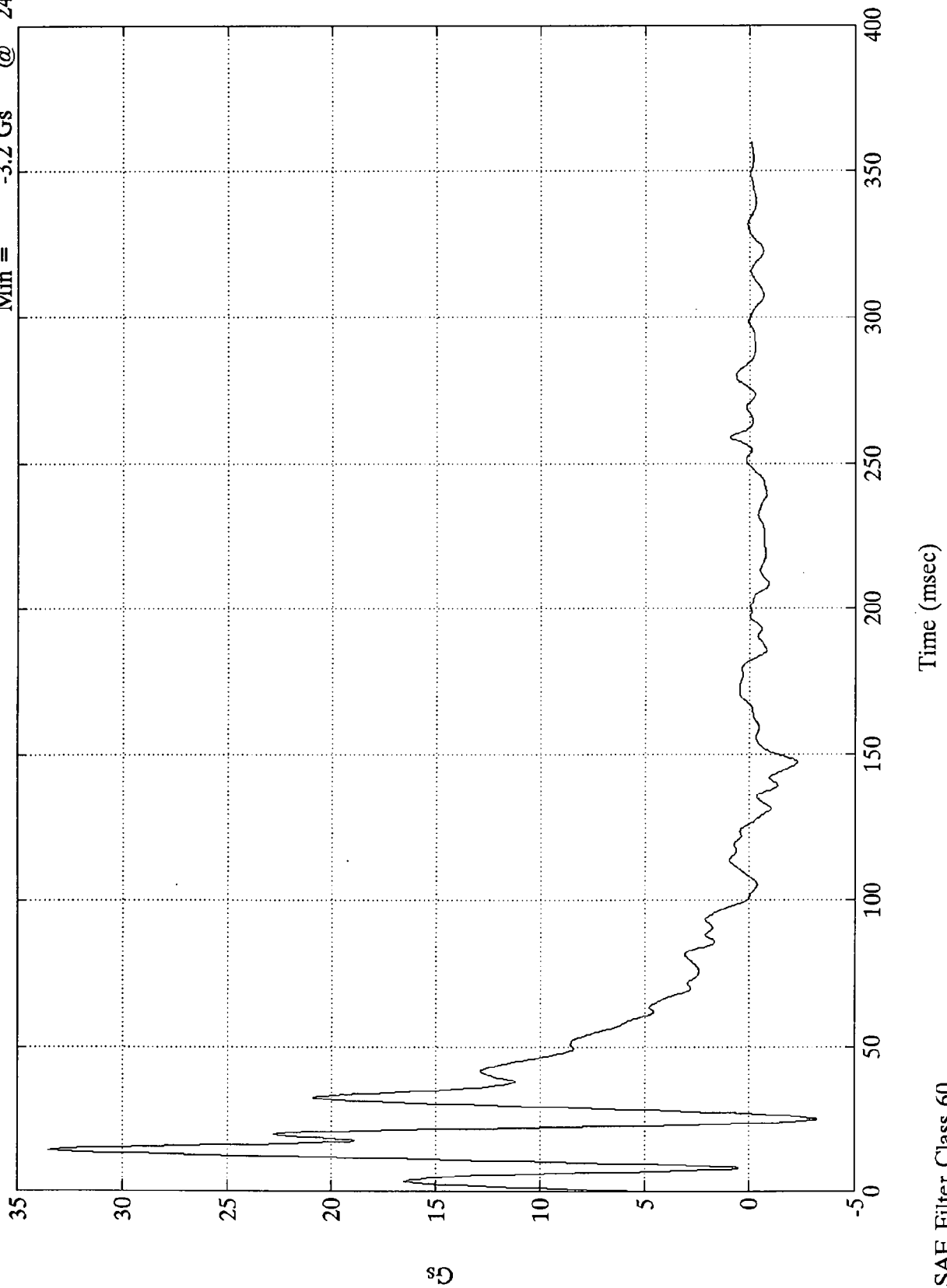
Max = 33.51 Gs @ 14.39 msec
Min = -3.20 Gs @ 24.96 msec



301 Rear 30 MPH-1995 Eagle Talon

Right Rear Crossmember X

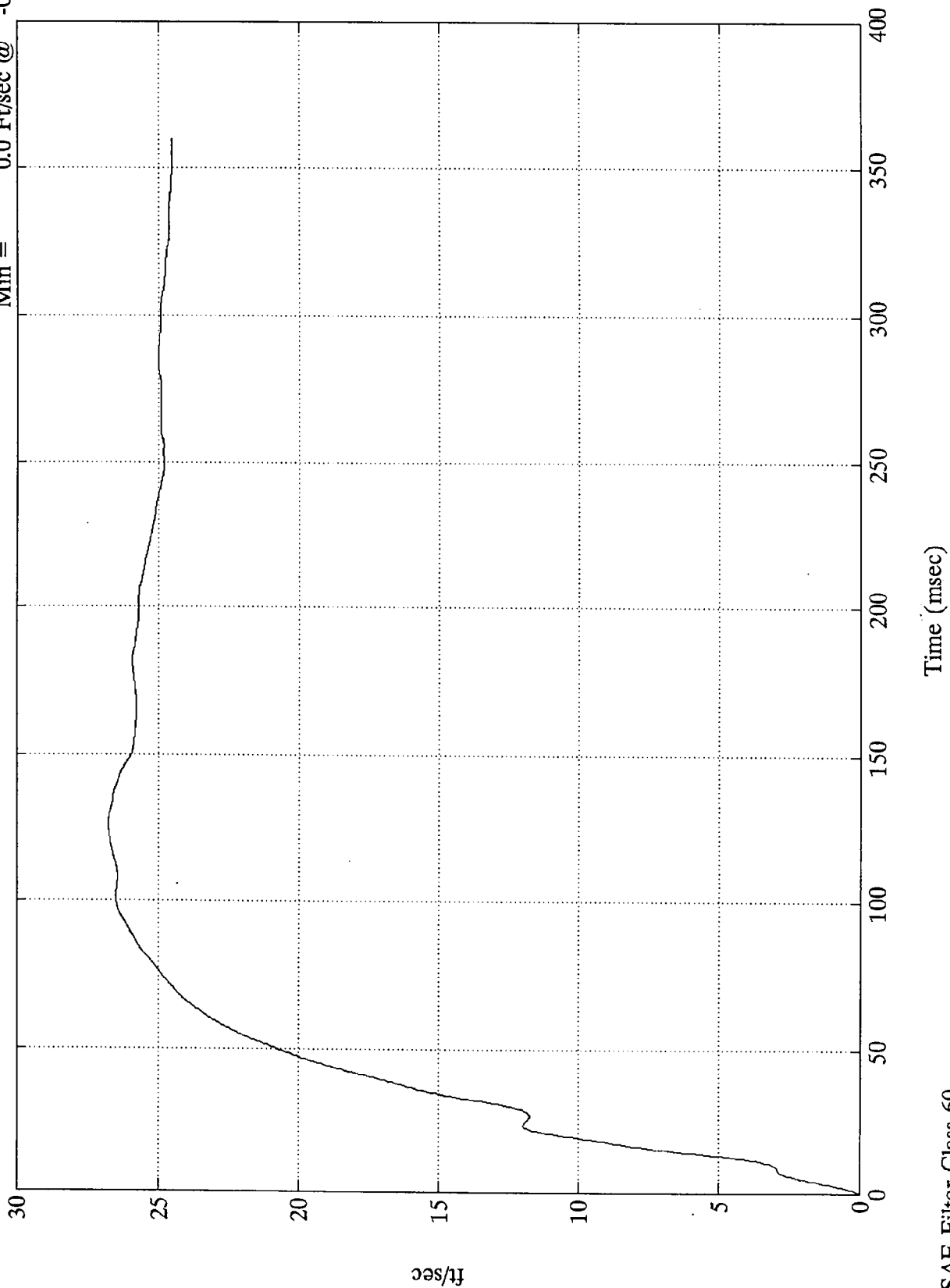
Max = 33.5 Gs @ 14.39 msec
Min = -3.2 Gs @ 24.96 msec



301 Rear 30 MPH-1995 Eagle Talon

1st Integral Right Rear Crossmember X

Max = 26.7 Ft/sec @ 126.24 msec
Min = 0.0 Ft/sec @ -0.00 msec

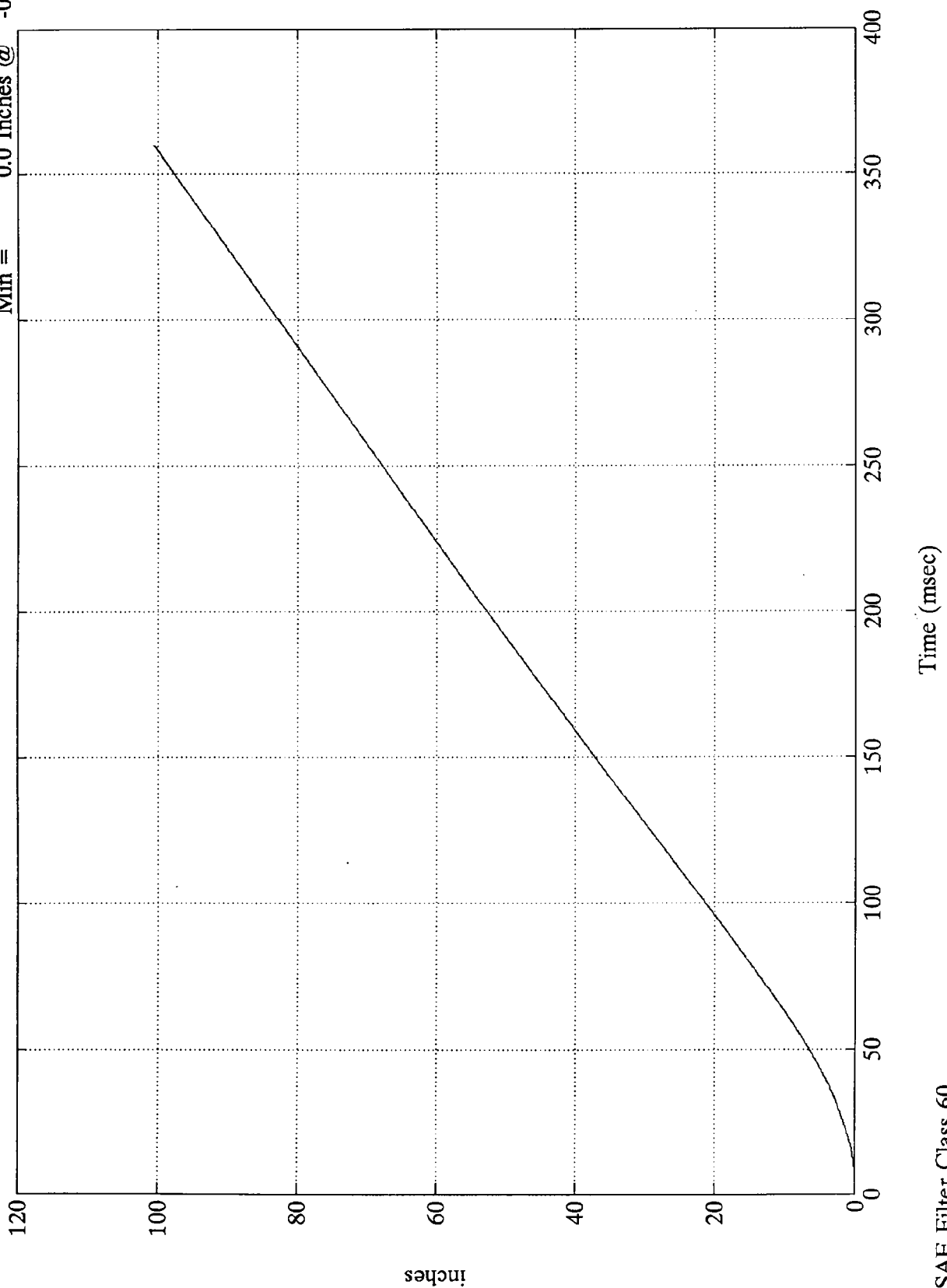


SAE Filter Class 60

301 Rear 30 MPH-1995 Eagle Talon

2nd Integral Right Rear Crossmember X

Max = 100.5 Inches @ 359.88 msec
Min = 0.0 Inches @ -0.00 msec



SAE Filter Class 60

TEST NO. CS0305

DRIVER DUMMY (Pos. 1)

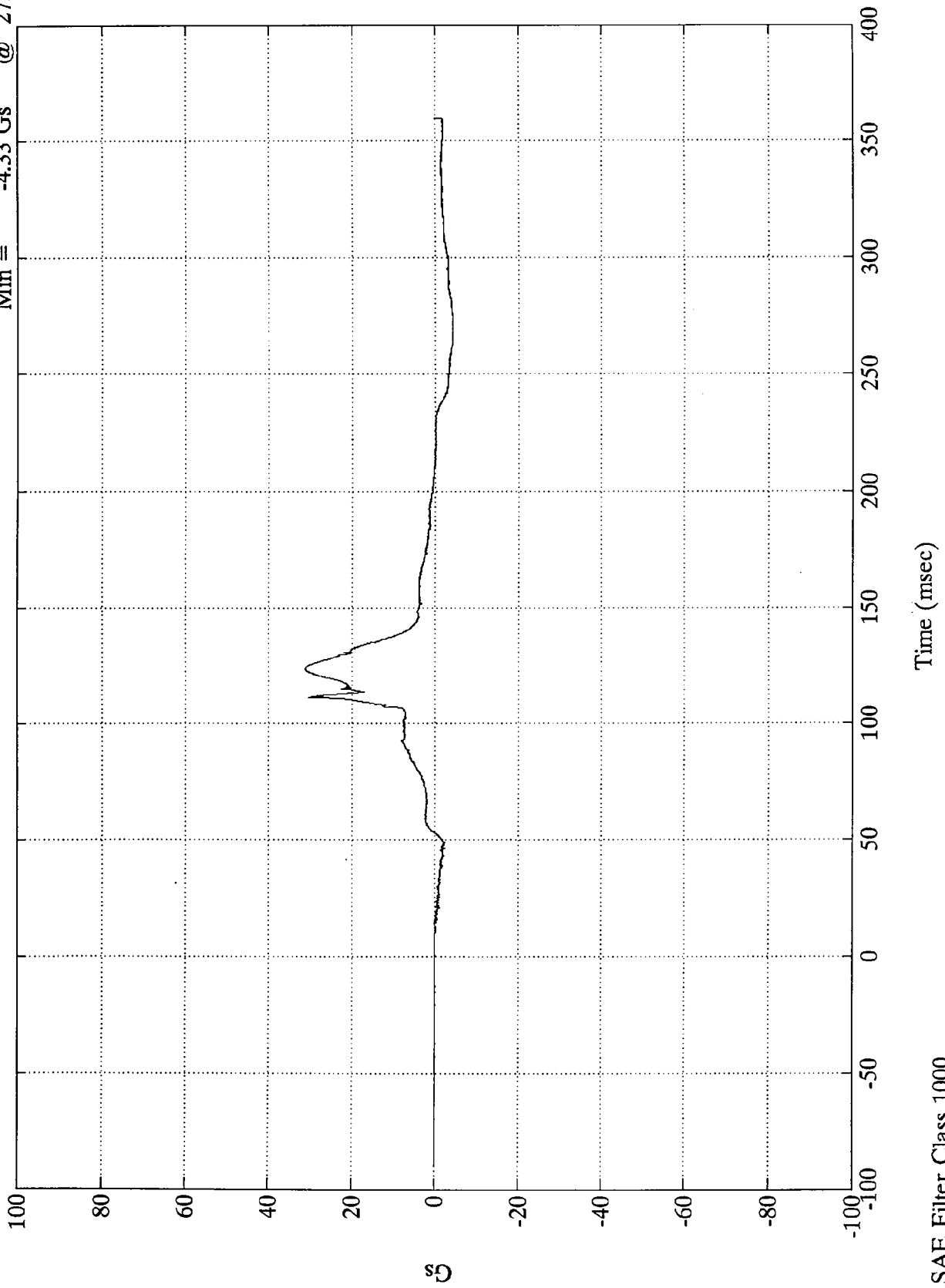
SAE FILTER CHANNEL CLASS

Head Accelerations	1000
Chest Accelerations	180
Pelvic Accelerations	1000
Upper Neck Forces	1000
Upper Neck Moments	600
Belt Forces	60
Belt Spoolout	60

301 Rear 30 MPH-1995 Eagle Talon

Pos. 1 Head X

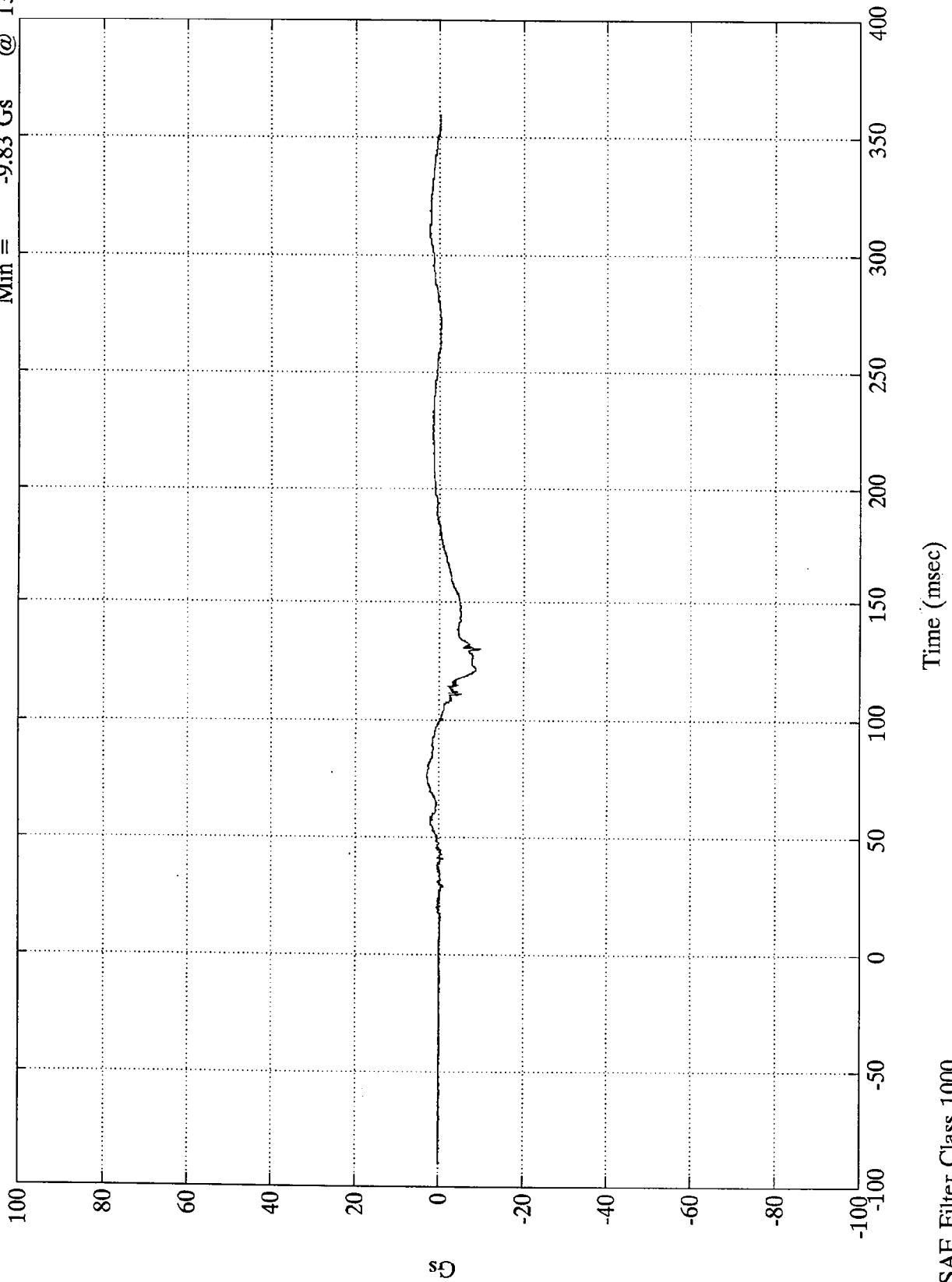
Max = 31.30 Gs @ 123.84 msec
Min = -4.33 Gs @ 273.83 msec



301 Rear 30 MPH-1995 Eagle Talon

Max = 2.97 Gs @ 77.27 msec
Min = -9.83 Gs @ 130.31 msec

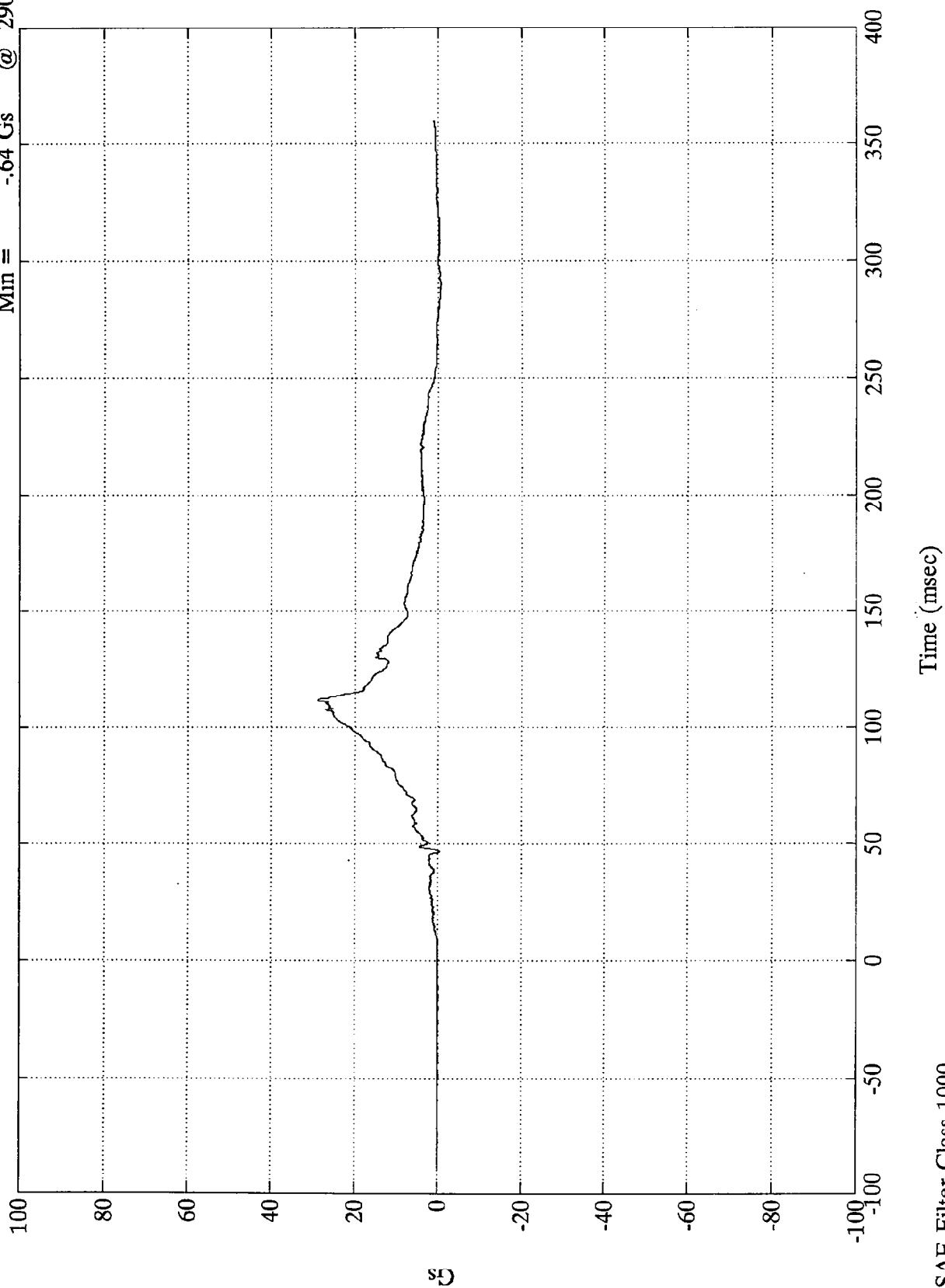
Pos. 1 Head Y



301 Rear 30 MPH-1995 Eagle Talon

Pos. 1 Head Z

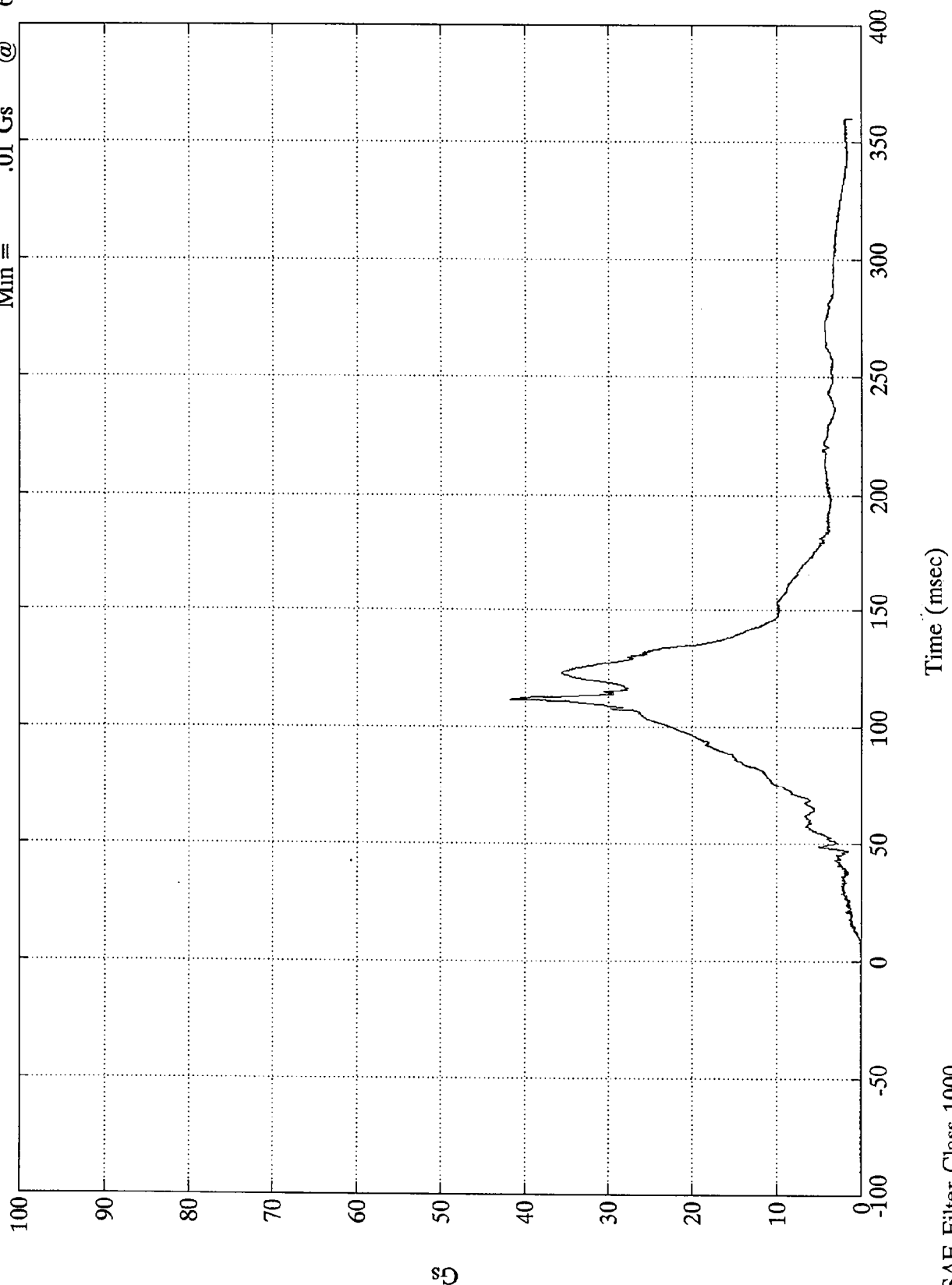
Max = 28.92 Gs @ 111.72 msec
Min = -64 Gs @ 290.88 msec



301 Rear 30 MPH-1995 Eagle Talon

Pos. 1 Head Resultant

Max = 41.78 Gs @ 111.48 msec
Min = .01 Gs @ 6.35 msec



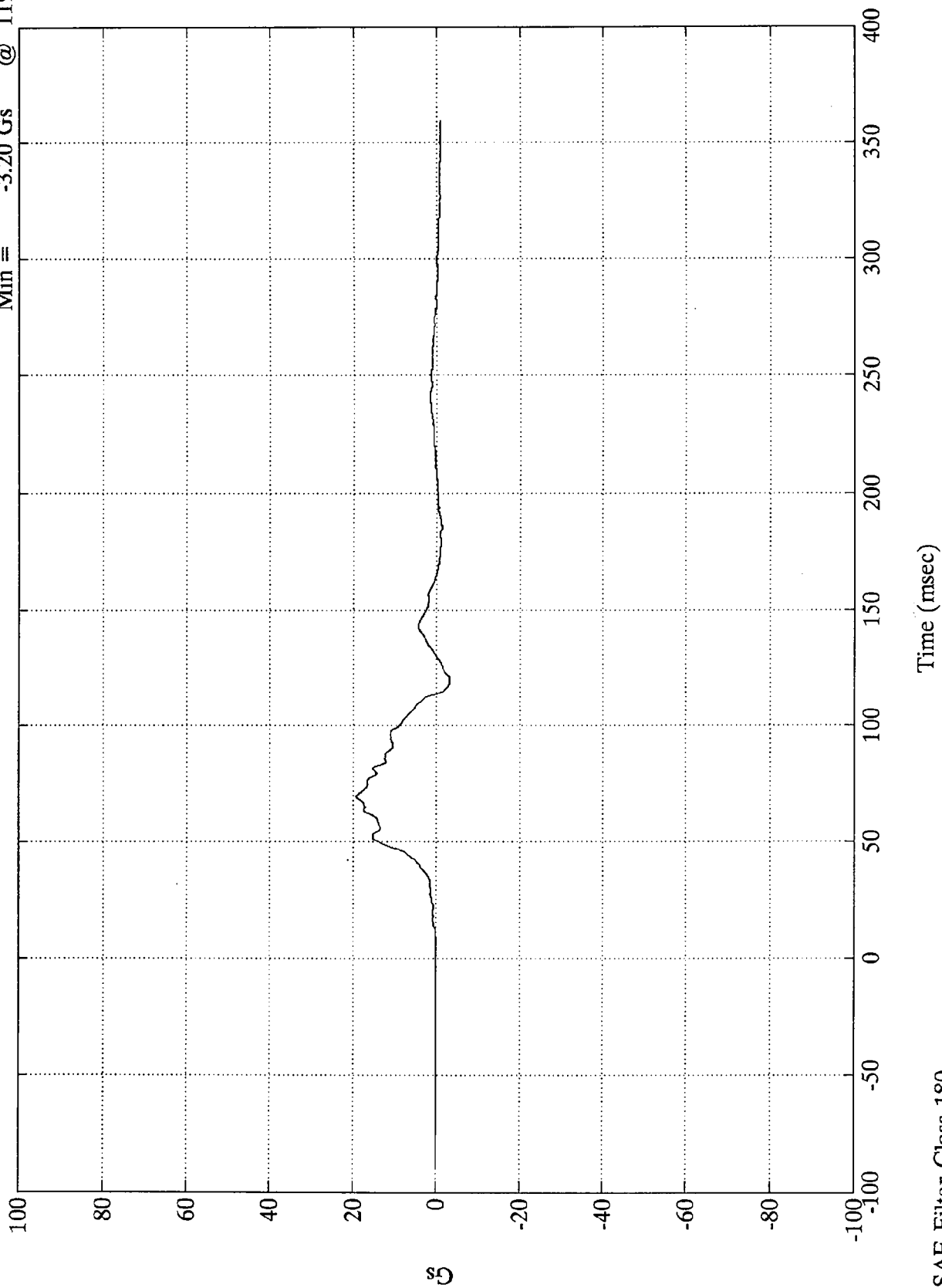
SAE Filter Class 1000

50

301 Rear 30 MPH-1995 Eagle Talon

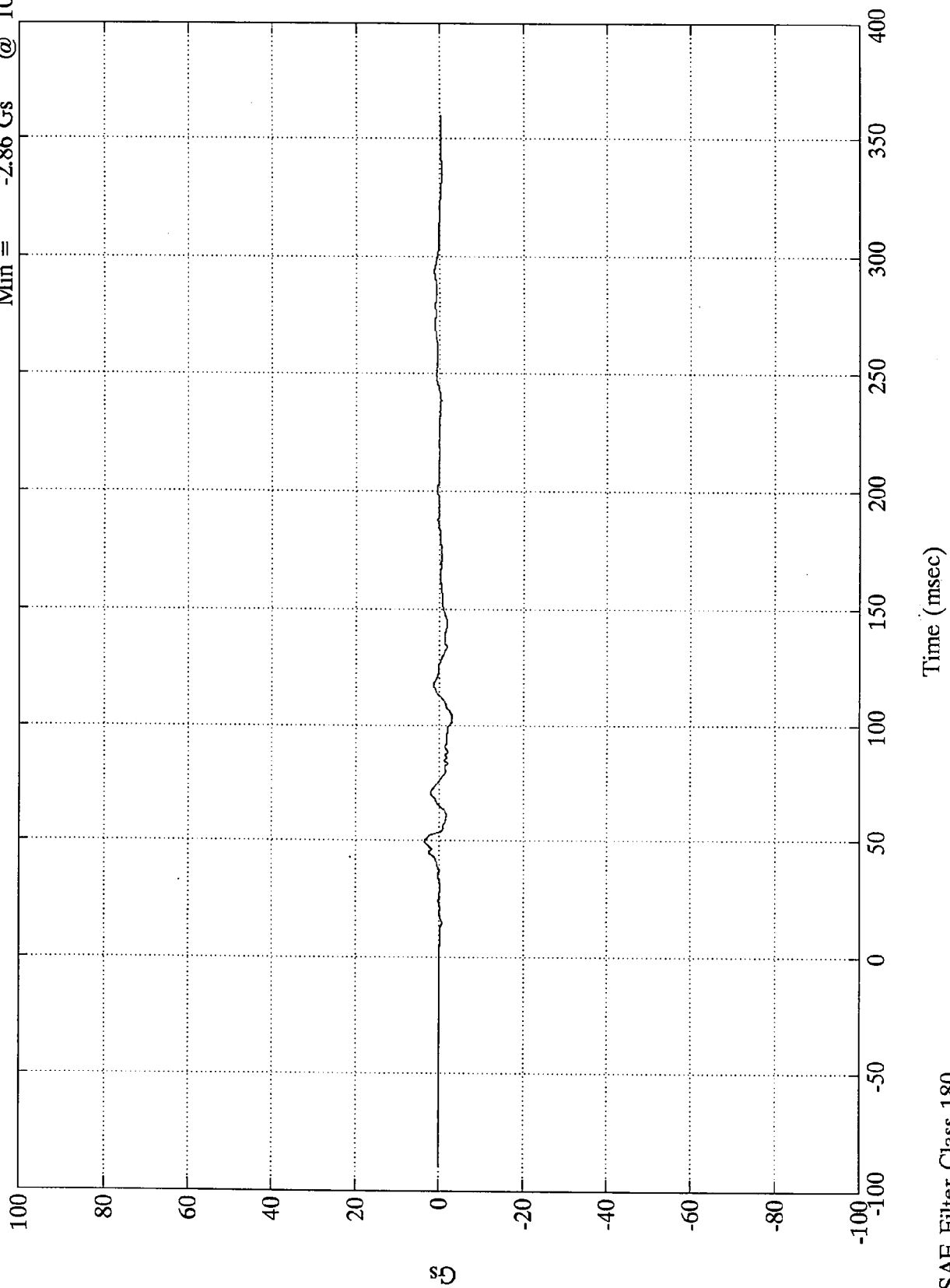
Pos. 1 Chest X

Max = 19.24 Gs @ 69.72 msec
Min = -3.20 Gs @ 119.88 msec



301 Rear 30 MPH-1995 Eagle Talon

Pos. 1 Chest Y
Max = 3.56 Gs @ 49.68 msec
Min = -2.86 Gs @ 101.87 msec

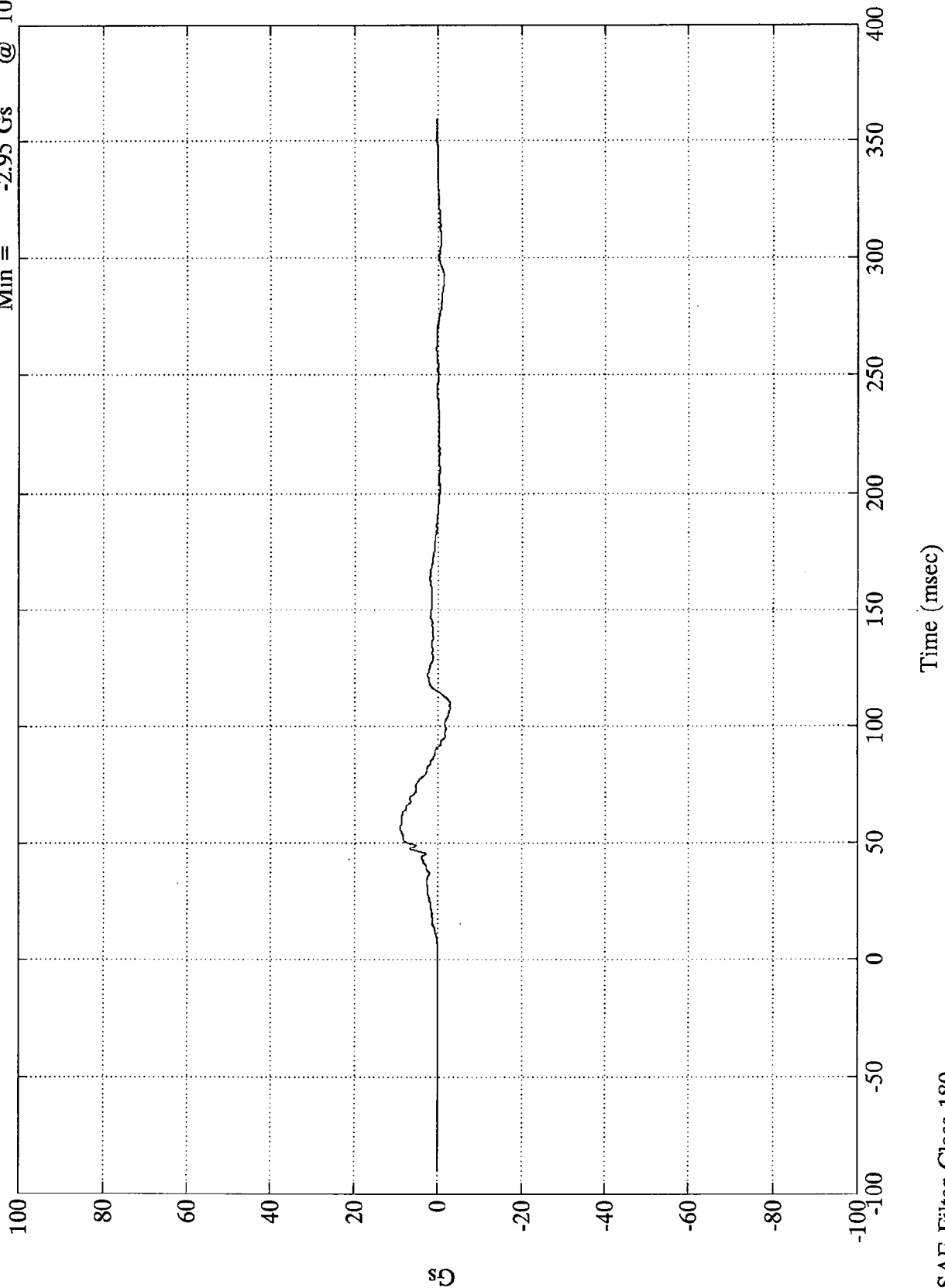


SAE Filter Class 180

301 Rear 30 MPH-1995 Eagle Talon

Pos. 1 Chest Z

Max = 9.07 Gs @ 56.15 msec
Min = -2.95 Gs @ 107.40 msec

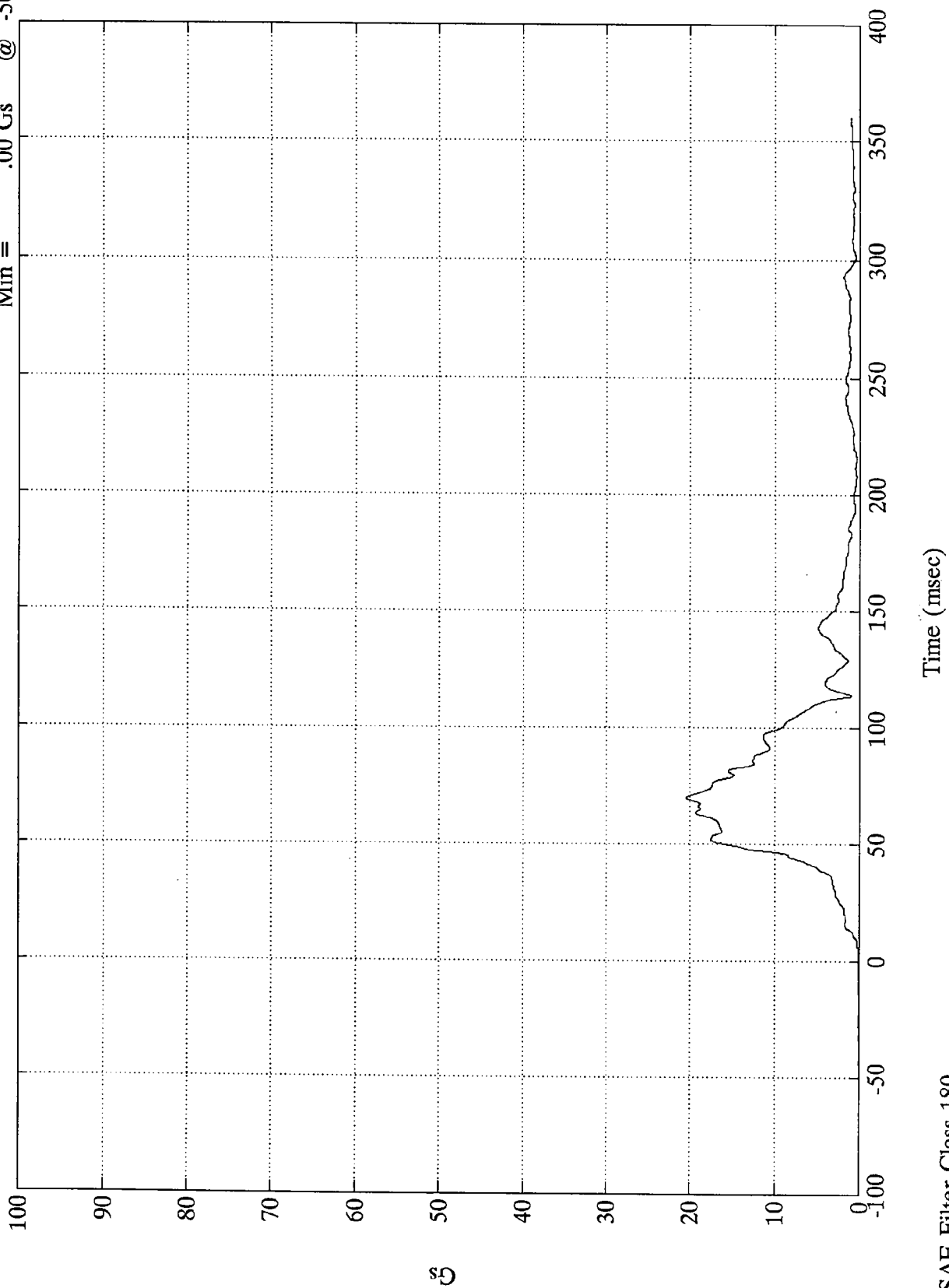


SAE Filter Class 180

301 Rear 30 MPH-1995 Eagle Talon

Max = 20.50 Gs @ 69.72 msec
Min = .00 Gs @ -50.88 msec

Pos. 1 Chest Resultant

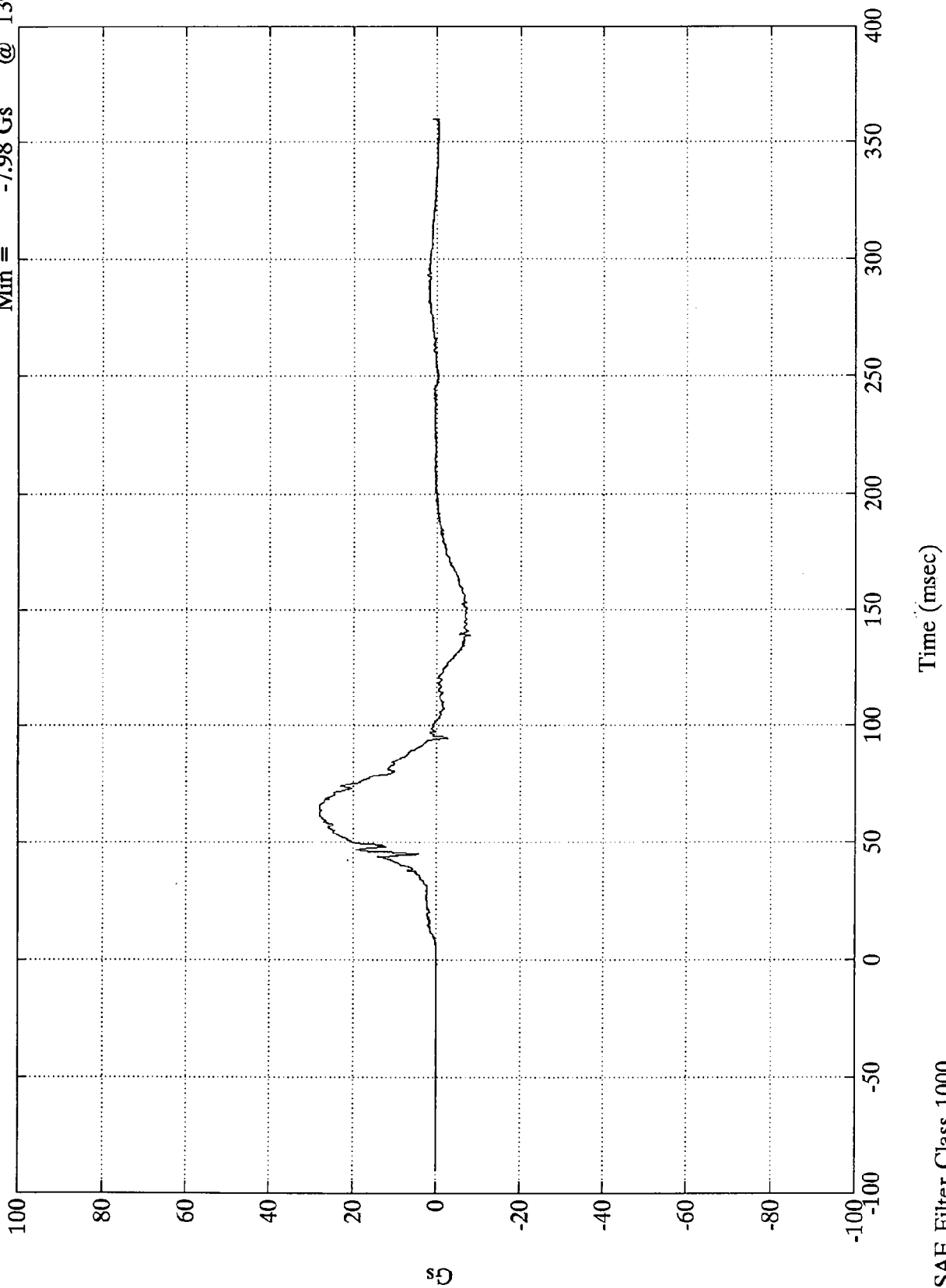


SAE Filter Class 180

301 Rear 30 MPH-1995 Eagle Talon

Pos. 1 Pelvic X

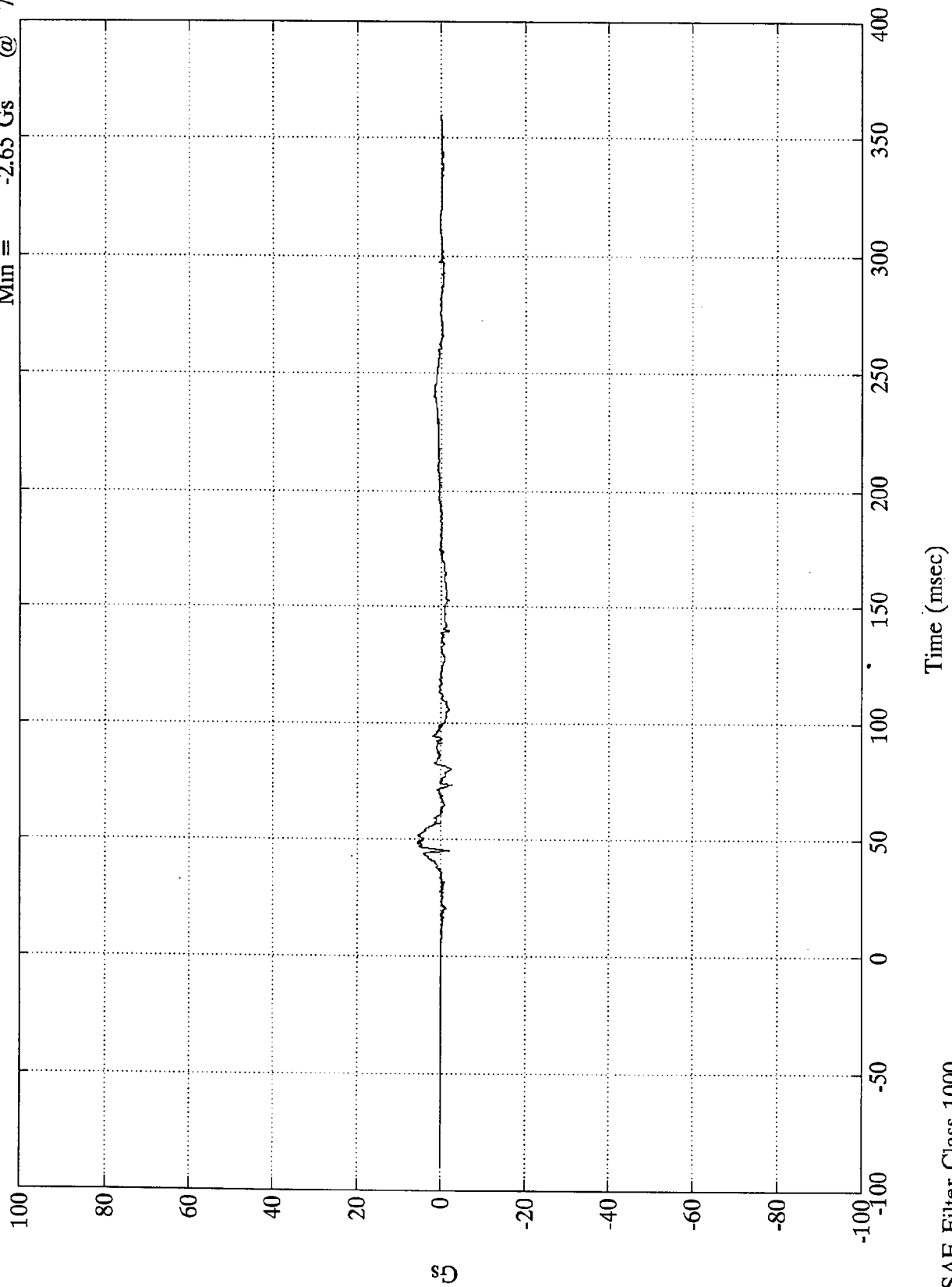
Max = 28.07 Gs @ 64.19 msec
Min = -7.98 Gs @ 139.08 msec



SAE Filter Class 1000

301 Rear 30 MPH-1995 Eagle Talon

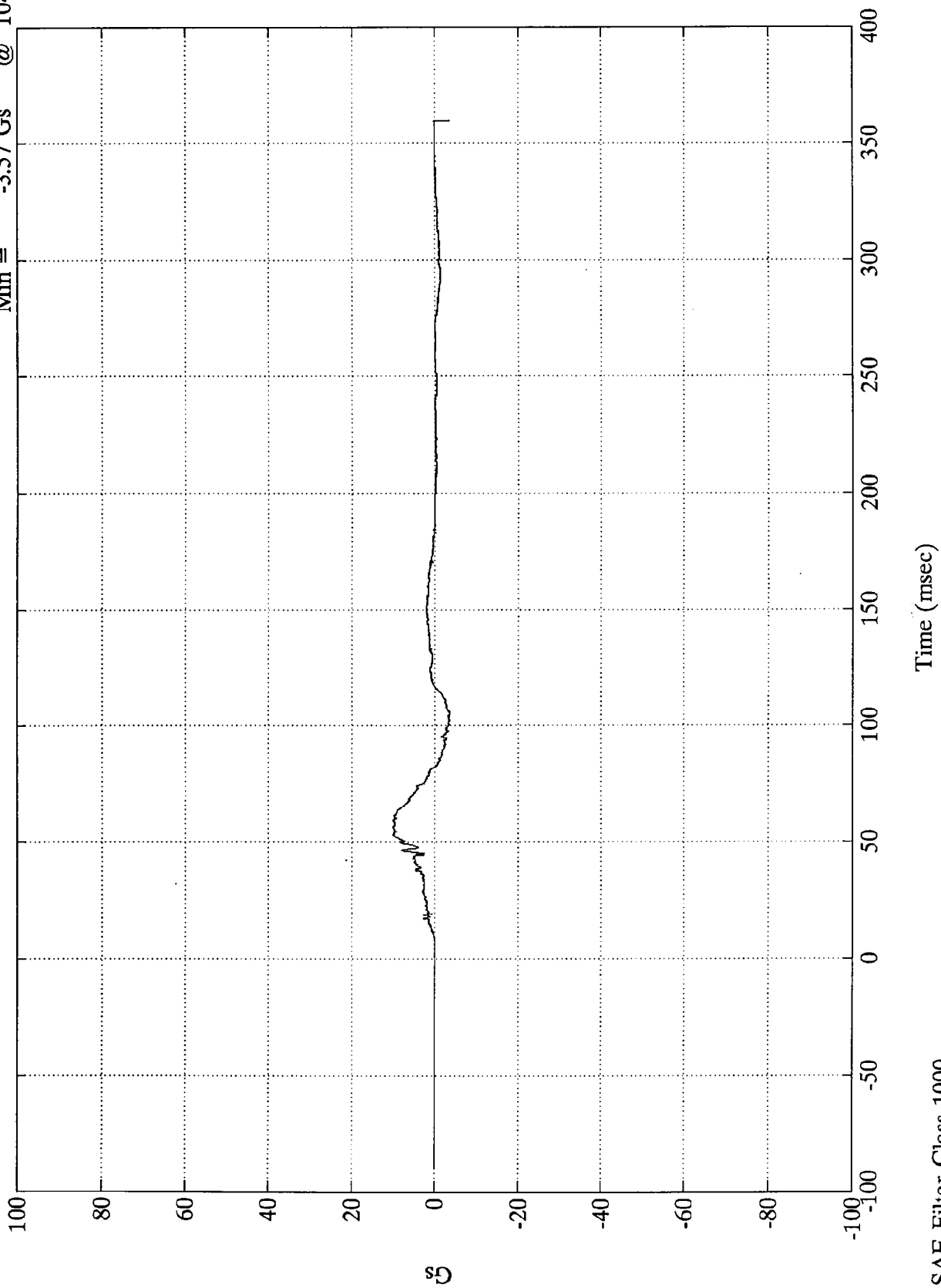
Pos. 1 Pelvic Y
Max = 5.68 Gs @ 48.23 msec
Min = -2.65 Gs @ 73.55 msec



301 Rear 30 MPH-1995 Eagle Talon

Pos. 1 Pelvic Z

Max = 10.16 Gs @ 56.40 msec
Min = -3.57 Gs @ 104.88 msec

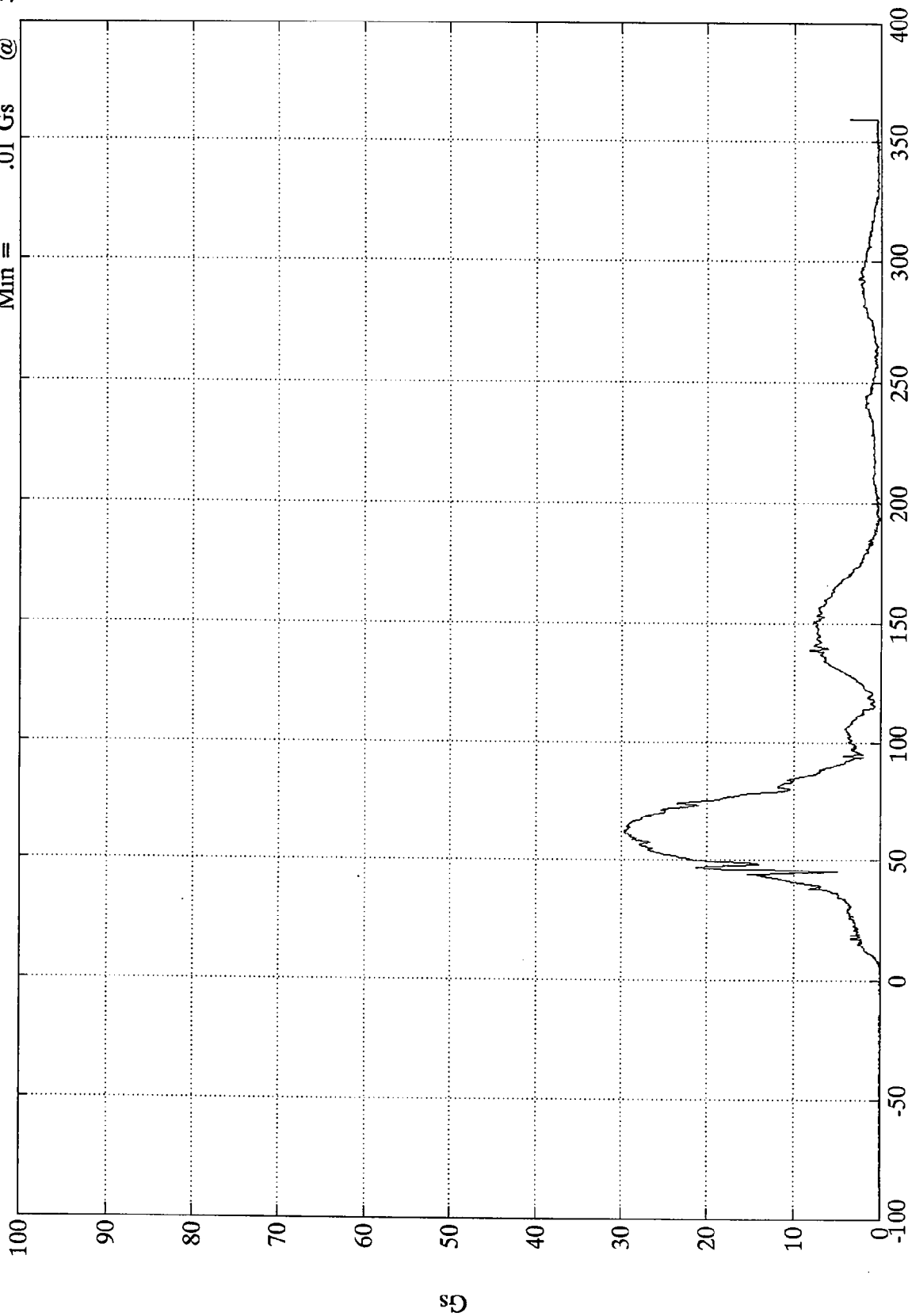


SAE Filter Class 1000

301 Rear 30 MPH-1995 Eagle Talon

Pos. 1 Pelvic Resultant

Max = 29.67 Gs @ 61.44 msec
Min = .01 Gs @ 5.87 msec



Time (msec)

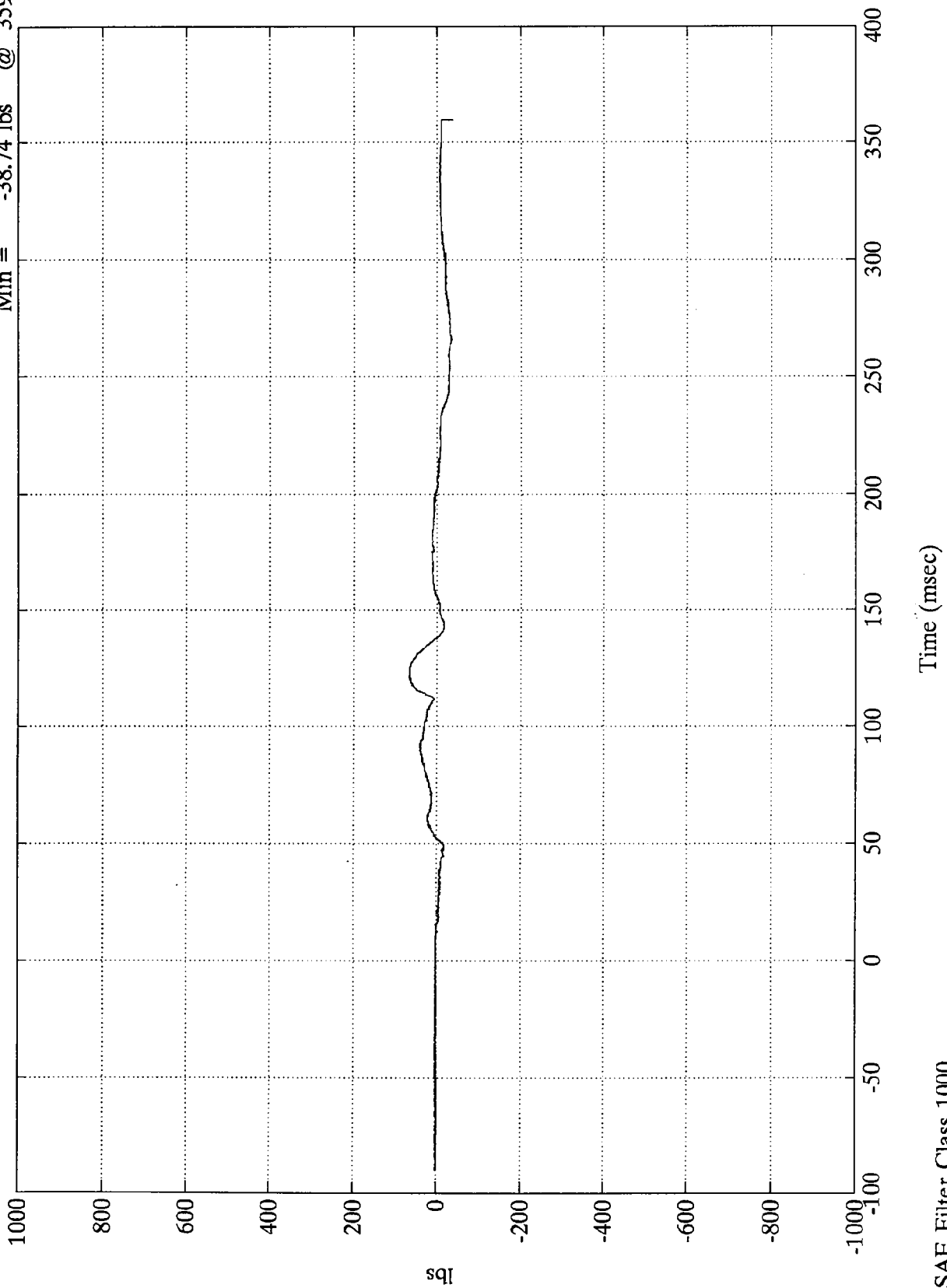
SAE Filter Class 1000

Gs

301 Rear 30 MPH-1995 Eagle Talon

Pos. 1 Upper Neck Fx

Max = 67.52 lbs @ 121.55 msec
Min = -38.74 lbs @ 359.88 msec

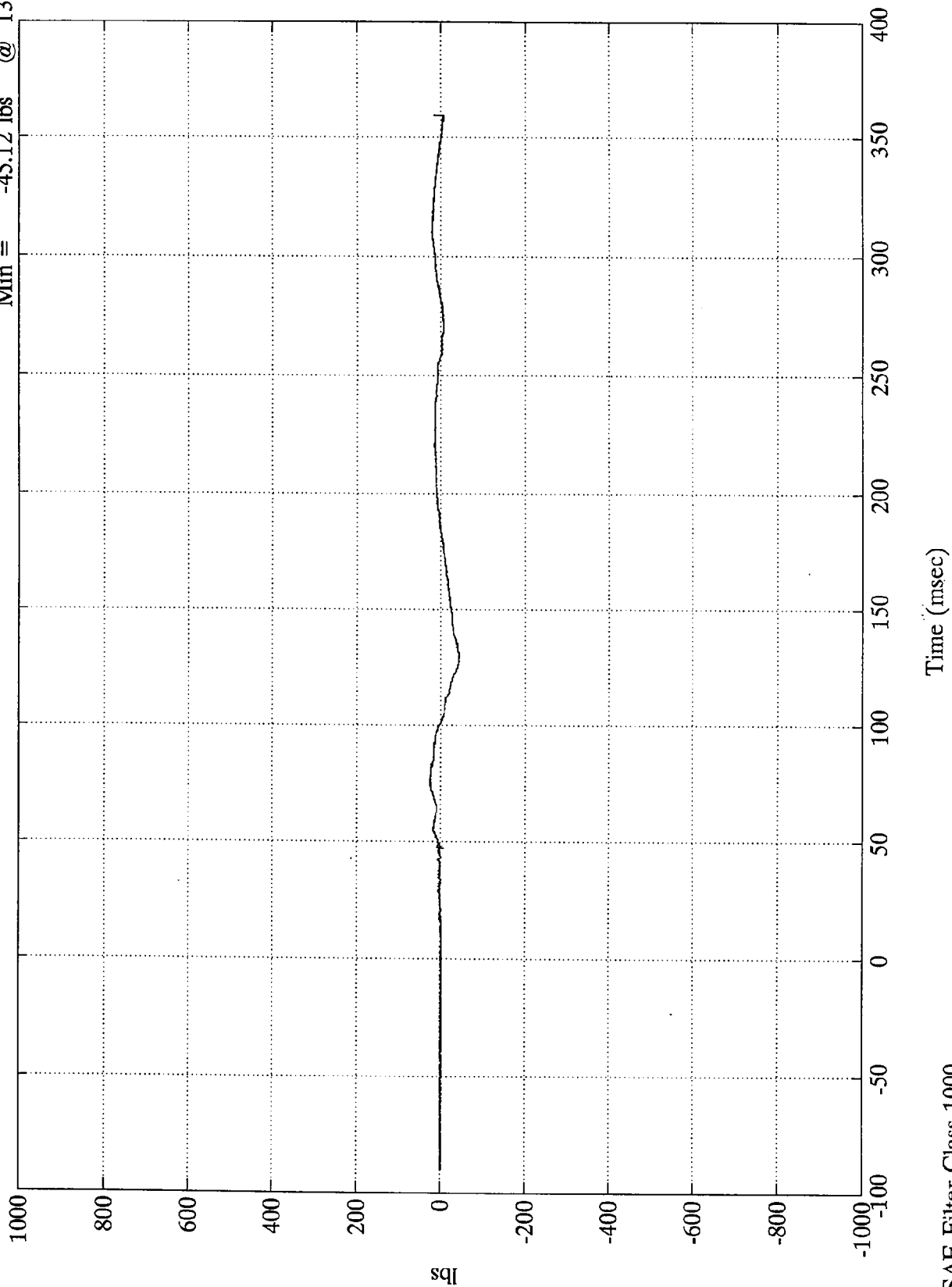


SAE Filter Class 1000

301 Rear 30 MPH-1995 Eagle Talon

Pos. 1 Upper Neck Fy

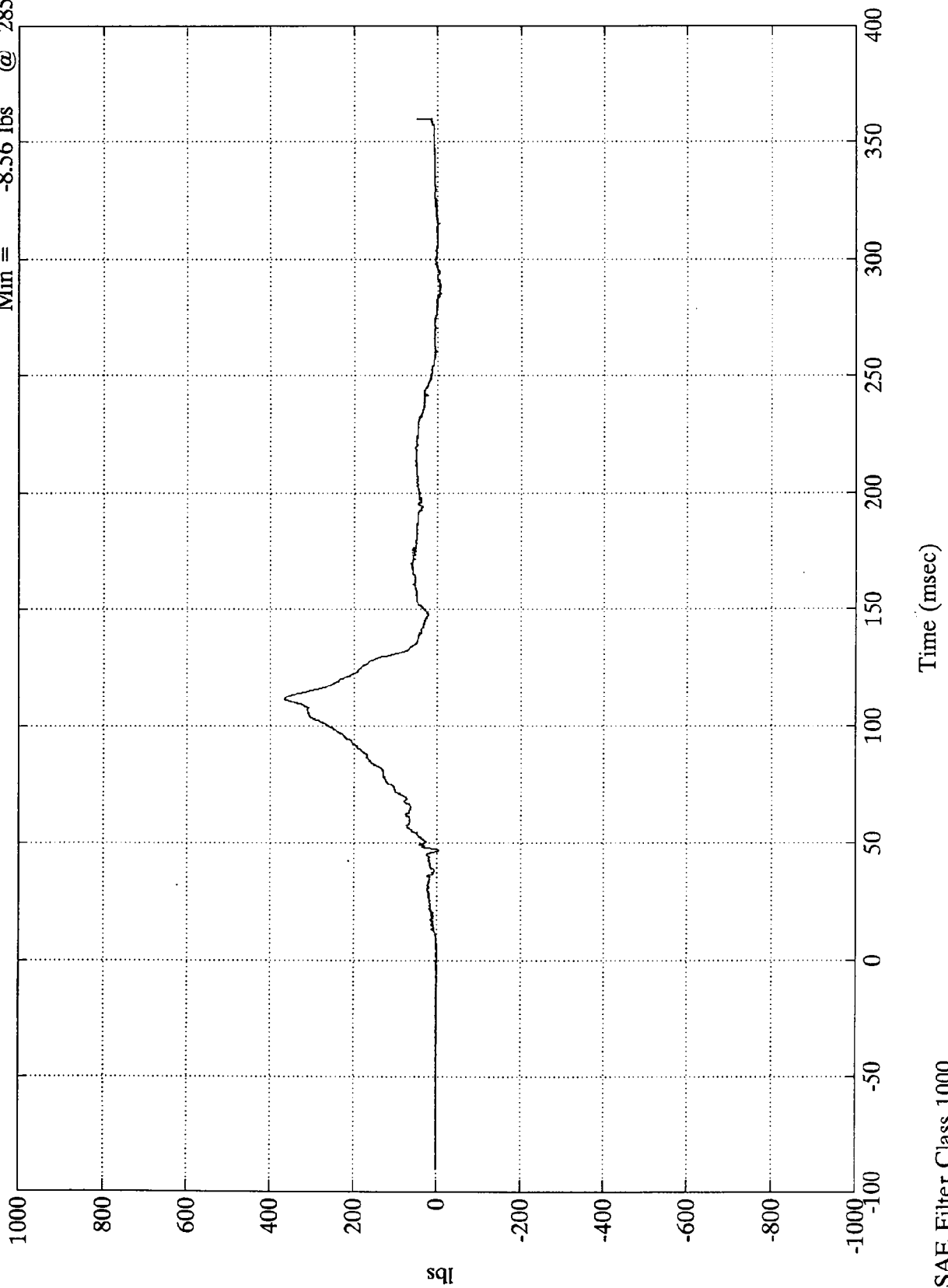
Max = 25.09 lbs @ 78.60 msec
Min = -45.12 lbs @ 131.52 msec



301 Rear 30 MPH-1995 Eagle Talon

Pos. 1 Upper Neck Fz

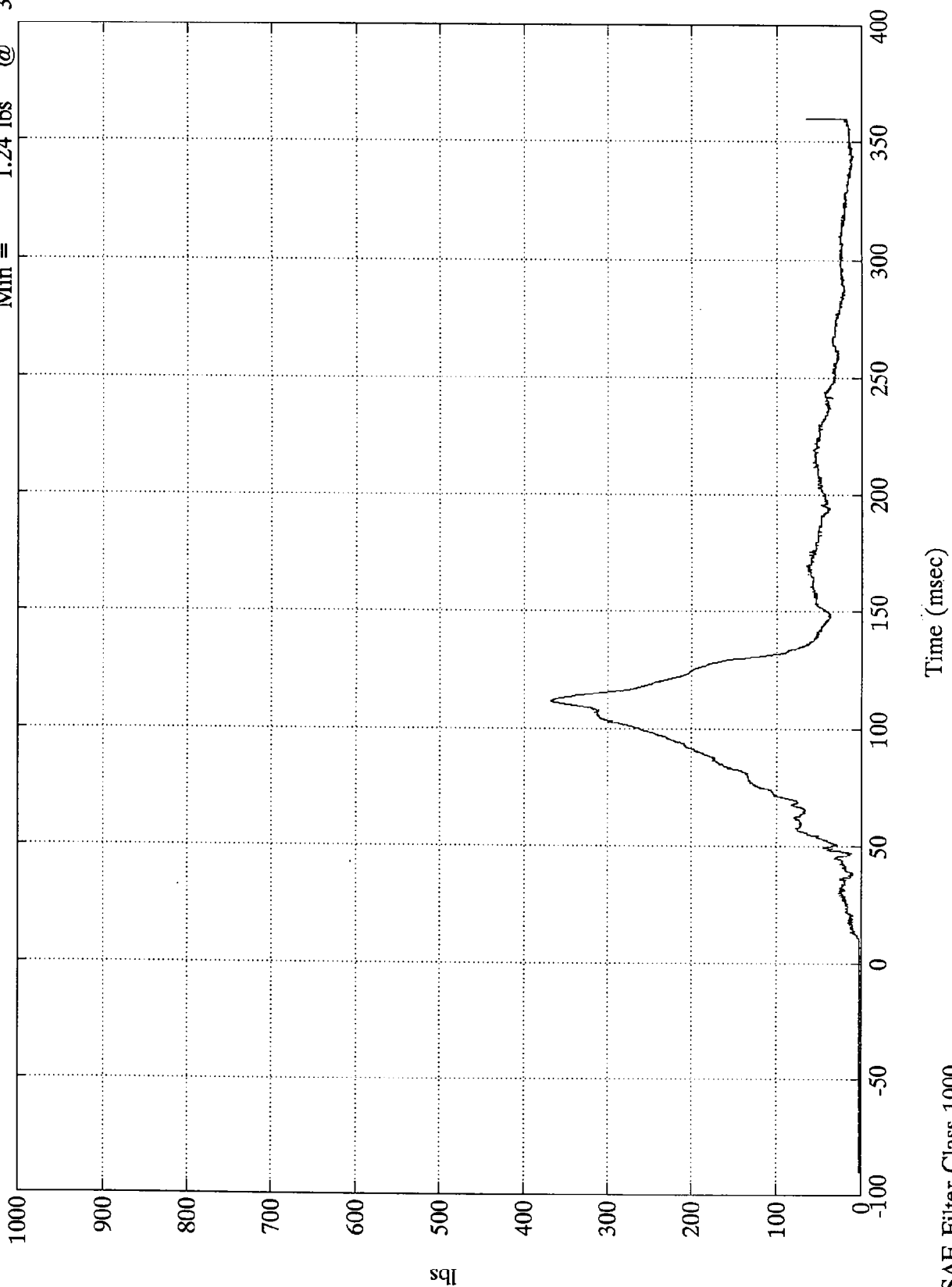
Max = 367.26 lbs @ 111.60 msec
Min = -8.56 lbs @ 285.48 msec



301 Rear 30 MPH-1995 Eagle Talon

Pos. 1 Neck Force Res.

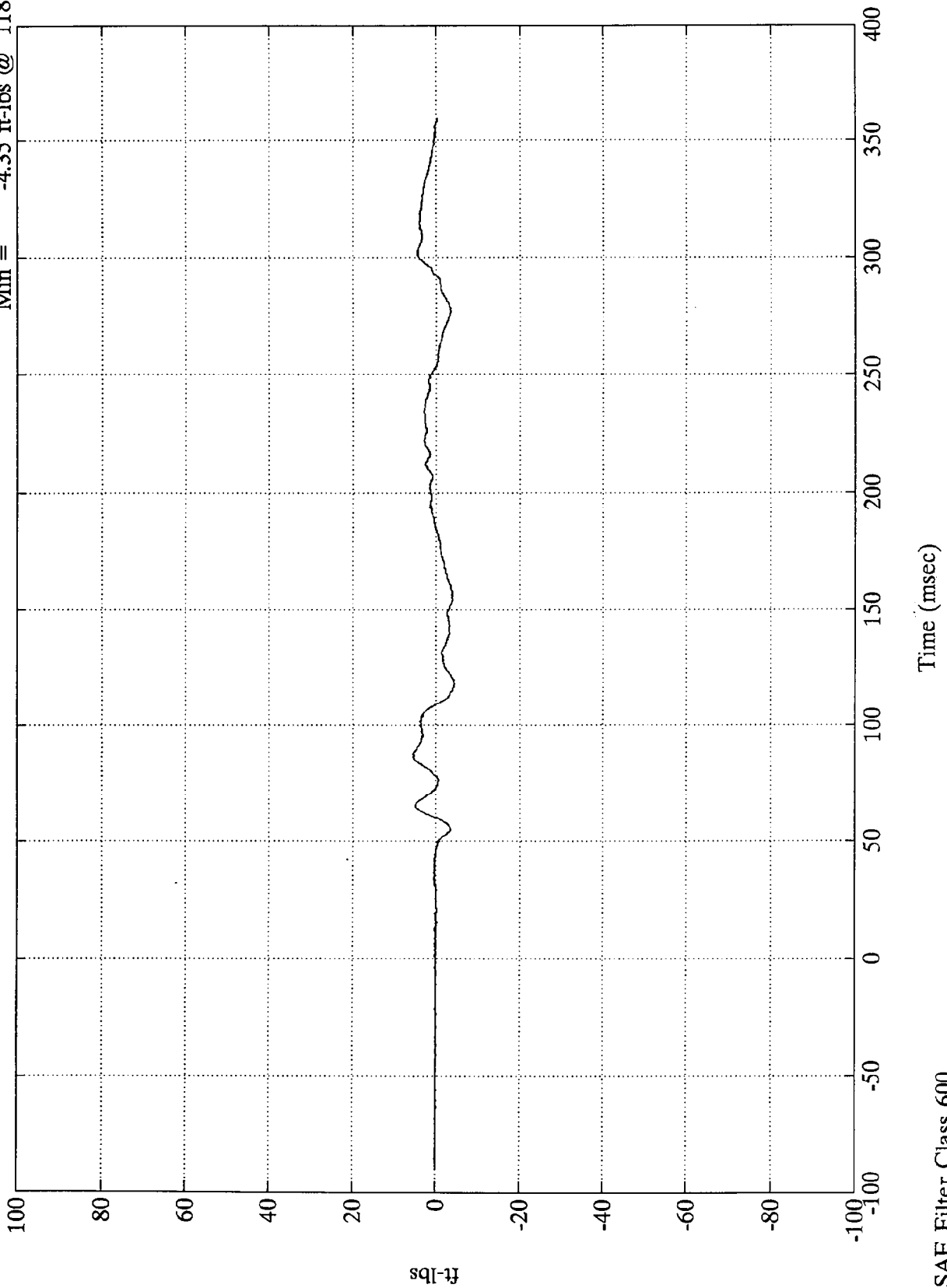
Max = 367.48 lbs @ 111.60 msec
Min = 1.24 lbs @ 3.11 msec



301 Rear 30 MPH-1995 Eagle Talon

Pos. 1 Upper Neck Mx

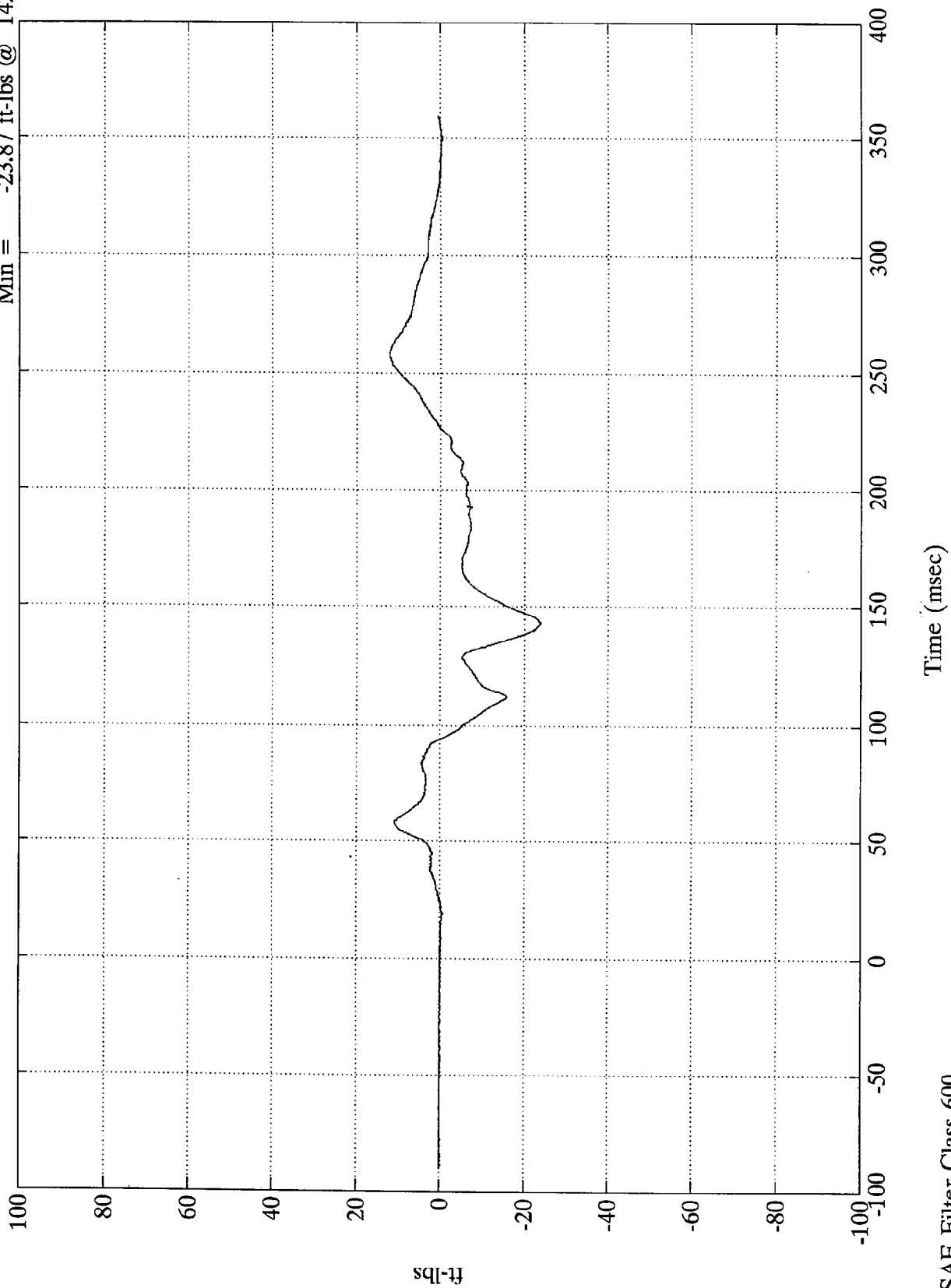
Max = 5.62 ft-lbs @ 86.40 msec
Min = -4.35 ft-lbs @ 118.20 msec



301 Rear 30 MPH-1995 Eagle Talon

Pos. 1 Upper Neck My

Max = 12.21 ft-lbs @ 258.35 msec
Min = -23.87 ft-lbs @ 142.80 msec

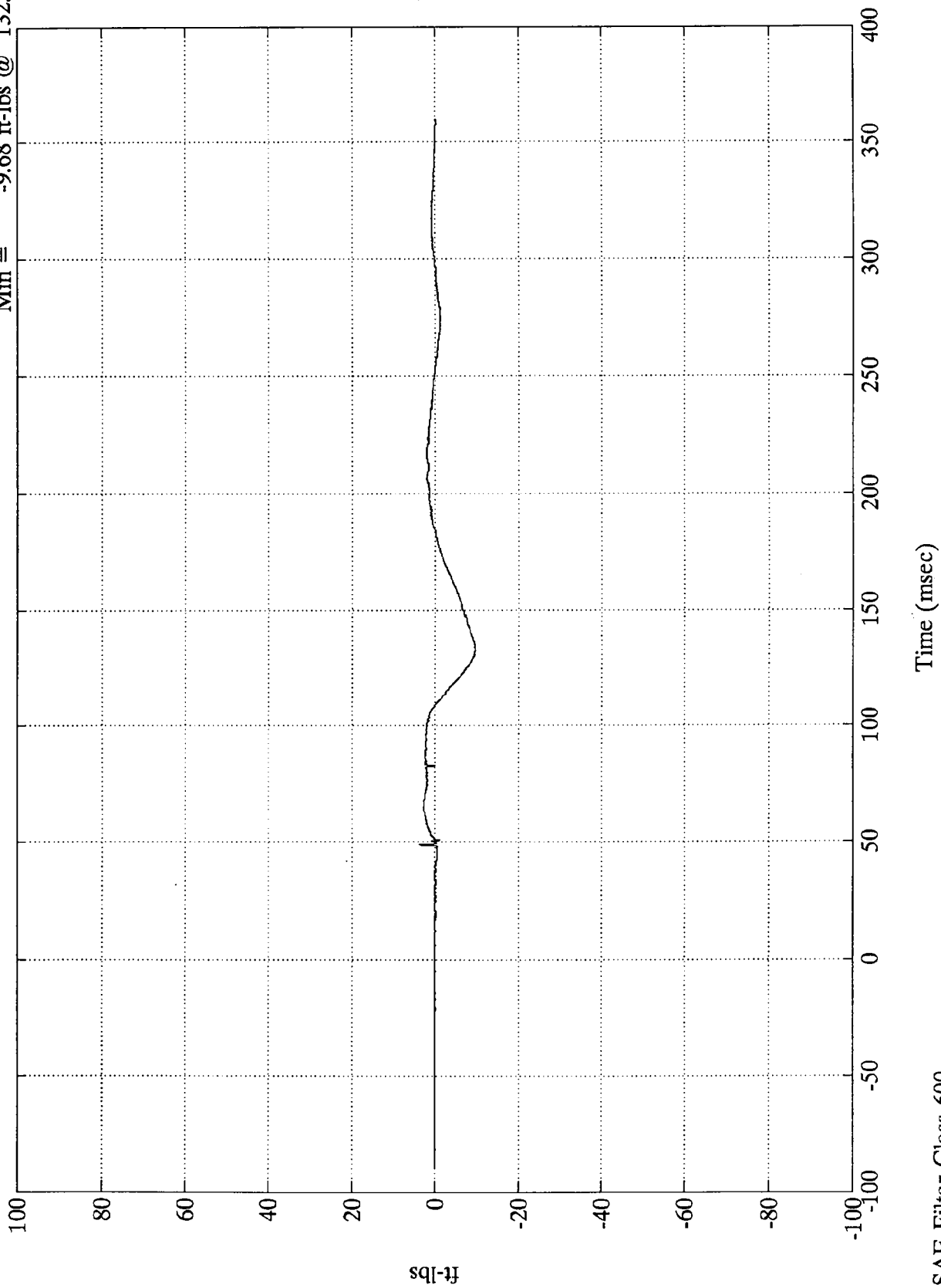


SAE Filter Class 600

301 Rear 30 MPH-1995 Eagle Talon

Pos. 1 Upper Neck Mz

Max = 3.84 ft-lbs @ 48.84 msec
Min = -9.68 ft-lbs @ 132.72 msec

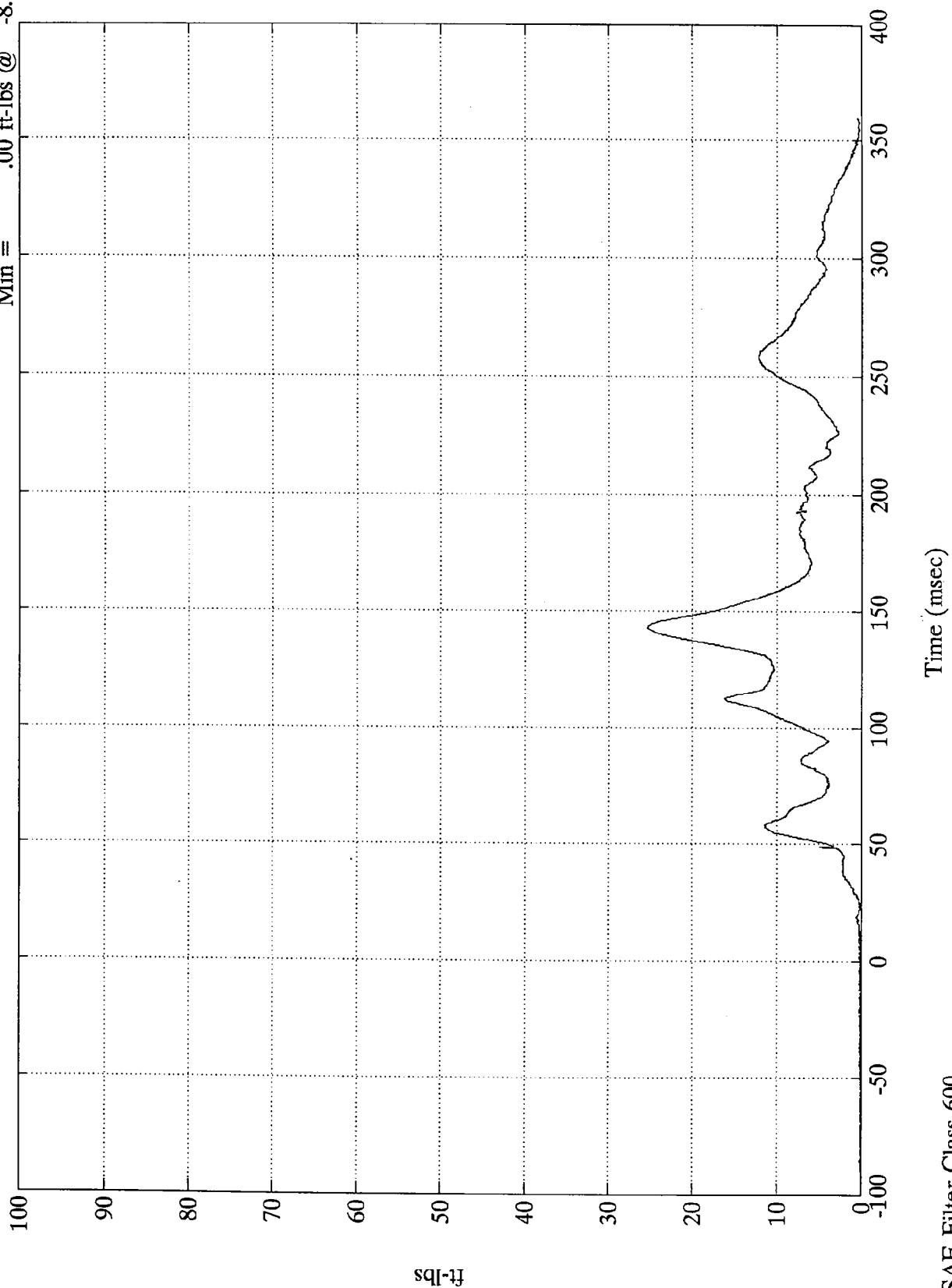


SAE Filter Class 600

301 Rear 30 MPH-1995 Eagle Talon

Pos. 1 Neck Moment Res.

Max = 25.40 ft-lbs @ 142.80 msec
Min = .00 ft-lbs @ -8.16 msec

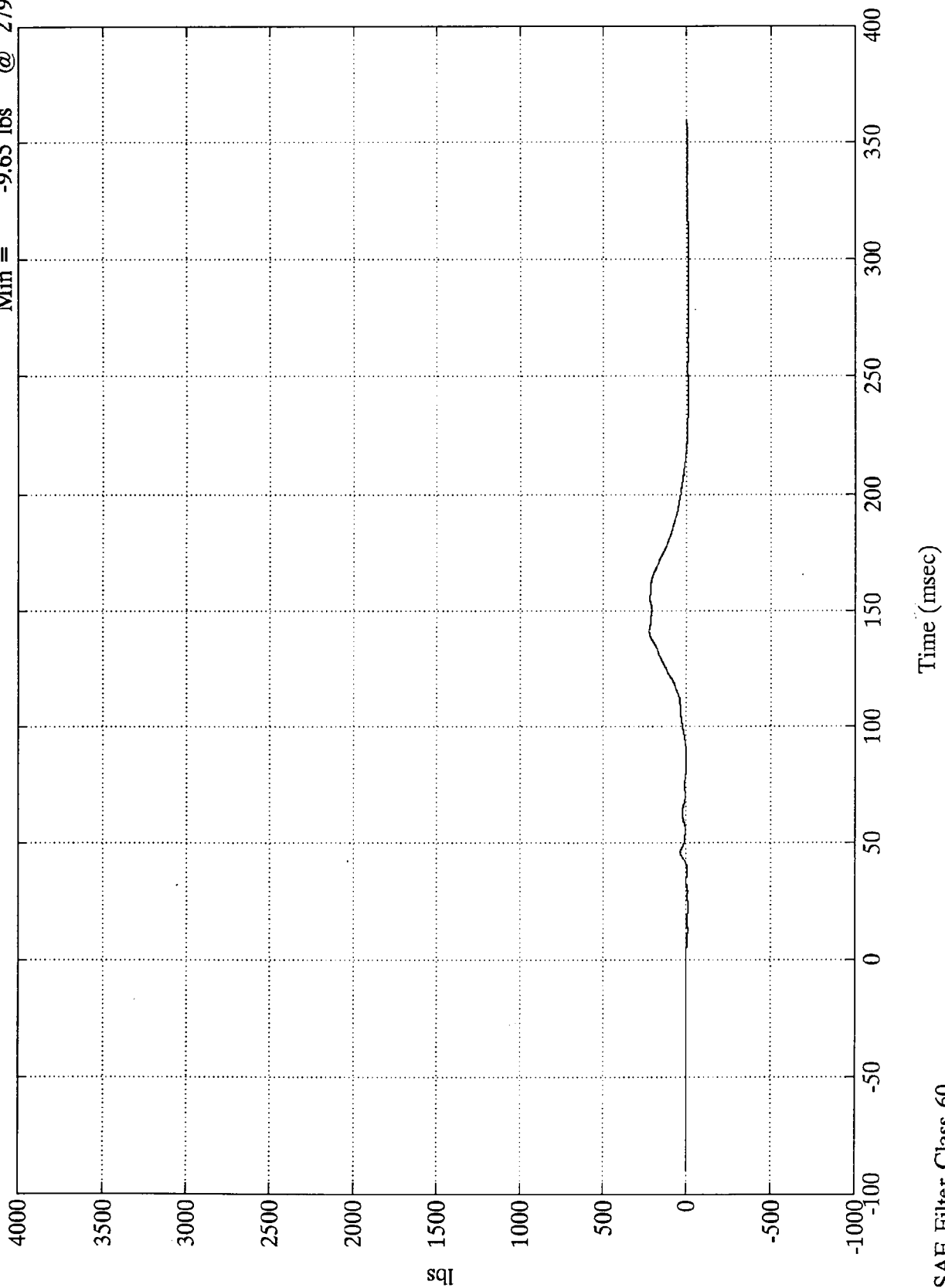


SAE Filter Class 600

301 Rear 30 MPH-1995 Eagle Talon

Pos. 1 Lap Belt

Max = 223.38 lbs @ 141.00 msec
Min = -9.65 lbs @ 279.35 msec

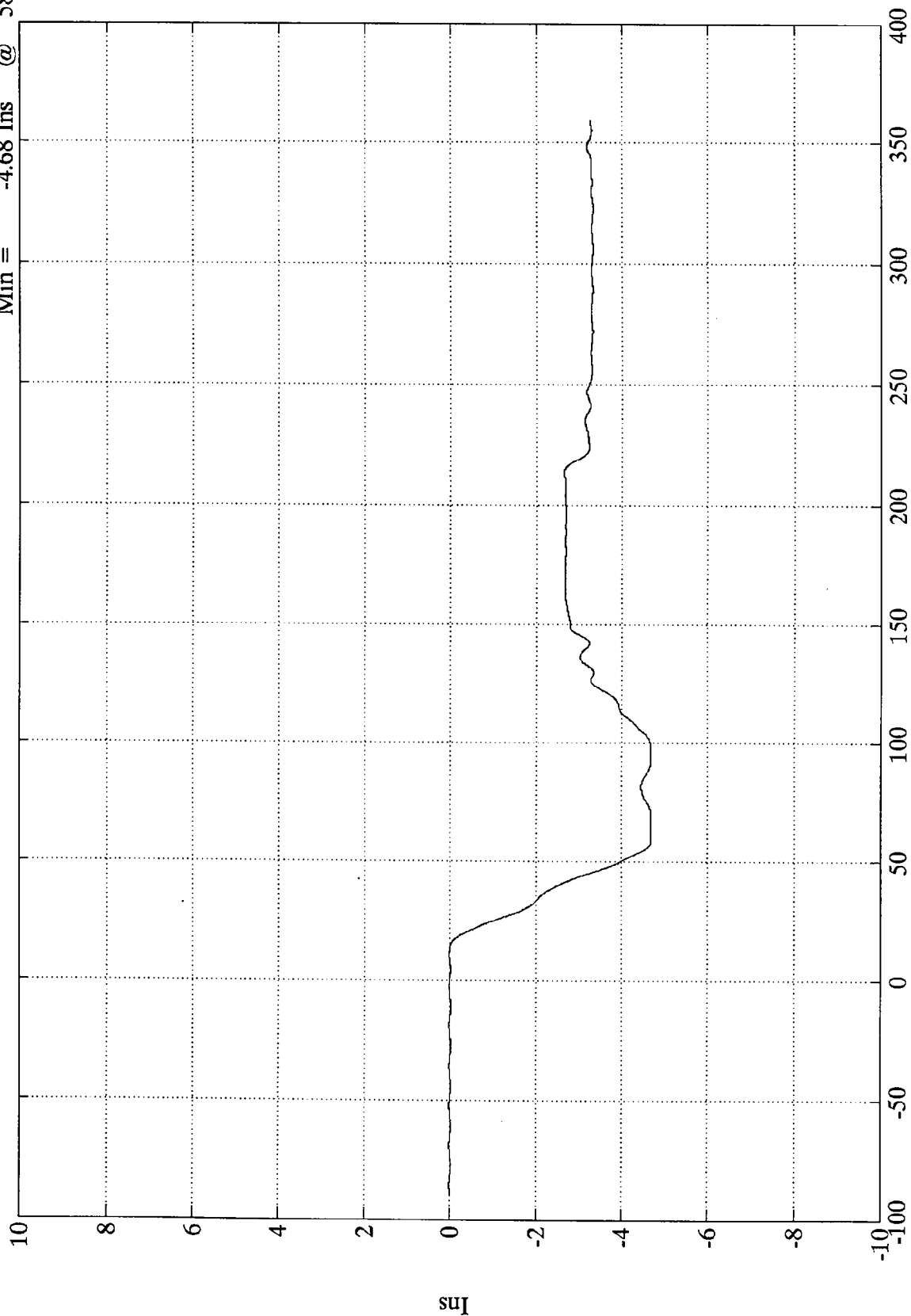


SAE Filter Class 60

301 Rear 30 MPH-1995 Eagle Talon

Pos. 1 Belt Spoolout

Max = .01 Ins @ -52.44 msec
Min = -4.68 Ins @ 58.91 msec



Time (msec)

SAE Filter Class 60