

REPORT NUMBER: 208-CAL-94-3
212-CAL-94-3
301-CAL-94-3

**VEHICLE SAFETY COMPLIANCE TESTING FOR OCCUPANT CRASH PROTECTION
WINDSHIELD MOUNTING, WINDSHIELD ZONE INTRUSION (PARTIAL)
AND FUEL SYSTEM INTEGRITY**

**CHRYSLER CORPORATION
1994 DODGE SPIRIT
4 -DOOR SEDAN**

NHTSA NUMBER: CR0301

CALSPAN TEST NUMBER: 8145-3

NOVEMBER 9, 1993

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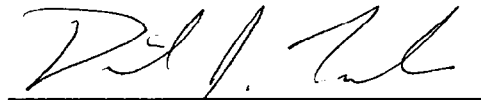
FINAL REPORT

PREPARED FOR:
U. S. Department of Transportation
National Highway Traffic Safety Administration
ENFORCEMENT
Office of Vehicle Safety Compliance
400 Seventh Street, S. W.
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Washington, DC 20590

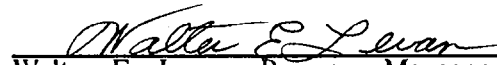
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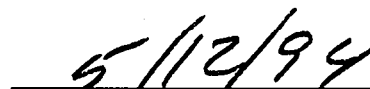

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Contracting Office's Technical Representative
(COTR), NHTSA, Office of Vehicle Safety Compliance


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15. Supplementary Notes			
16. Abstract A 30 mph vehicle safety compliance test was conducted on a 1994 Dodge Spirit 4-Door Sedan. This test was performed at the Calspan Advanced Technology Center in Buffalo, New York on November 9, 1993. The purpose of this test was to determine compliance with the performance requirements of the following Federal Motor Vehicle Safety Standards: 1. FMVSS No. 208, "Occupant Crash Protection" 2. FMVSS No. 212, "Windshield Mounting" 3. FMVSS No. 219 (partial), "Windshield Zone Intrusion" 4. FMVSS No. 301, "Fuel System Integrity" The test mode was perpendicular (0°) and the impact velocity was 29.3 mph. The ambient temperature at the impact face was 71 °F. The subject test vehicle appears to comply with the requirements of FMVSS Nos. 208, 212, 219 (partial) and 301. <u>Type of Restraint System:</u> The test vehicle was equipped with a driver side air bag and a passenger side automatic torso belt. The manual seat belt restraints were not used for this test.			
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Section 1

PURPOSE AND TEST PROCEDURE

This 30 mph frontal barrier impact test is part of the Federal Motor Vehicle Safety Standard (FMVSS) 208, 212, 219 (partial) and 301 compliance test program conducted for the National Highway Traffic Safety Administration (NHTSA) by Calspan Advanced Technology Center under Contract No. DTNH22-90-D-02121. The purpose of this test was to determine if the subject vehicle, a 1994 Dodge Spirit 4-Door Sedan, meets the performance requirements of FMVSS 208, "Occupant Crash Protection"; FMVSS No. 212, "Windshield Mounting"; FMVSS No. 219 (partial), "Windshield Zone Intrusion"; and FMVSS No. 301, "Fuel System Integrity". This compliance test was conducted using the requirements found in the OVSC Laboratory Test Procedure No. TP-208-08, dated September 8, 1989.

Section 2

SUMMARY OF TEST NUMBER CR0301

A frontal barrier was impacted by a 1994 Dodge Spirit 4-Door Sedan at a velocity of 29.3 mph. The test was performed at the Calspan Corporation Advanced Technology Center on November 9, 1993. Pre- and Post-test photographs of the vehicle and dummies can be found in Appendix A.

The frontal barrier impact event was documented by one real-time camera and 14 high-speed cameras. Camera locations and other pertinent camera information can be found in this report.

Two Part 572E, 50th percentile male anthropomorphic test devices (ATDs), were placed in the driver and right-front passenger seating positions according to dummy placement instructions specified in the OVSC Laboratory Test Procedure. Both ATDs were fully instrumented with head and chest accelerometers (x,y,and z), chest displacement potentiometers and left/right femur load cells. These ATDs had been certified prior to the test.

The 25 channels of data were recorded on a P.C. based data acquisition system. Appendix B contains the vehicle and dummy response data traces.

The driver's HIC was 420. The maximum chest deceleration over 3 milliseconds was 47.7 g's with 1.4 inches of deflection. The maximum force on the driver's left femur was -1063.9 pounds and -1488.8 pounds on the right femur.

The right front passenger's HIC was 490. The maximum chest deceleration over 3 milliseconds was 43.8 g's with 2.6 inches of deflection. Loads of -1638.5 and -1609.8 pounds were recorded on the left and right femurs respectively.

Table 1

CRASH TEST SUMMARY

Vehicle NHTSA No. :	<u>CR0301</u>	Test Mode :	<u>30 mph Frontal Barrier</u>
Test Date :	<u>November 9, 1993</u>	Time:	<u>11:20</u> Temperature : <u>71</u> °F
Vehicle Make/Model/Body Style : <u>1994 Dodge Spirit 4-Door Sedan</u>			
Vehicle Test Weight :	<u>3335</u>	lbs	
Vehicle/Barrier Impact Angle :	<u>0</u>	°	
Impact Velocity :	<u>29.3</u>	mph	
Maximum Static Crush :	<u>20.8</u>	inches	
Vehicle Rebound :	<u>10.2</u>	inches	
<u>DUMMIES:</u>	<u>DRIVER</u>	<u>PASSENGER</u>	
Type :	<u>Part 572E</u>	<u>Part 572E</u>	
Restraint System :	<u>Airbag</u>	<u>Automatic Torso Belt</u>	
Number of Data Channels :	<u>25</u>		
Number of Cameras :	<u>1</u>	Real Time	
	<u>14</u>	High Speed	
<u>DOOR OPENING DATA :</u>	<u>Closed/Operable</u>	- Left Front	
	<u>Closed/Operable</u>	- Right Front	
Front Seat(s) Data :	<u>DRIVER</u>	<u>PASSENGER</u>	
Seat Track Failure :	<u>None</u>	<u>None</u>	
		Inches ofshift	
Seat Back Failure :	<u>None</u>	<u>None</u>	
<u>VISIBLE DUMMY CONTACT POINTS :</u>	<u>DRIVER</u>	<u>PASSENGER</u>	
Head :	<u>Face w/ airbag, Rear of head w/ head rest</u>	<u>Chin w/ chest, Rear of head w/ head rest</u>	
Abdomen :	<u>Airbag</u>	<u>No Contact</u>	
Chest	<u>Airbag</u>	<u>No Contact</u>	
Knees	<u>Lower dash panel</u>	<u>Glove box door</u>	

Table 2

GENERAL TEST AND VEHICLE PARAMETER DATATEST VEHICLE INFORMATION :

Year/Make/model/Body Style : 1994 Dodge Spirit 4-Door Sedan

NHTSA No. : CR0301 ; VIN: 1B3AA46KXRF117551 ; Color : Wildberry

Engine Data: 4 cylinders; - CID; 2.5 Liters; - cc

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

Transmission Data : 3 speeds; - Manual; X Automatic; - Overdrive

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

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

Date Received : 9/14/93 ; Odometer Reading 8.0 miles

Selling Dealer : Transitown Dodge

& Address: 7408 Transit Rd. Williamsville, N.Y. 14221

DATA FROM TIRE VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured by : Chrysler Corporation

Date of Manufacture August 1993

GVWR : 3999 lbs.; GAWR: 2206 lbs. FRONT; 1843 lbs. REAR

DATA FROM TIRE PLACARD:

Tire Pressure with Maximum Capacity Vehicle Load : 35 psi FRONT
35 psi REAR

Recommended Tire Size : P185/70R14

* Recommended Cold Tire Pressure : 35 psi FRONT; 35 psi REAR

Size of Tires on Test Vehicle: P185/70R14 ; Manufacturer: GOOD YEAR

Vehicle Capacity Data :

Type of Front Seats:	<u>-</u> Bench;	<u>-</u> Bucket;	<u>X</u> Split Bench
Number of Occupants:	<u>3</u> Front;	<u>3</u> Rear;	<u>6</u> Total
Vehicle Capacity Weight (VCW)	=	<u>1015</u>	lbs.
No. of Occupants x 150 lbs.	=	<u>900</u>	lbs.
Rated Cargo/Luggage Weight (RCLW)	=	<u>115</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	=	880	lbs.	Right Rear	=	560	lbs.
Left Front	=	960	lbs.	Left Rear	=	500	lbs.
TOTAL FRONT	=	1,840	lbs.	TOTAL REAR	=	1,060	lbs.
TOTAL DELIVERED WEIGHT =				2,900.0 lbs.			

% of Total Front of Vehicle Weight = 63.5 % of Total Rear Weight = 36.6 %

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT :

Total Delivered Weight	=	2,900	lbs.
Rated Cargo/Luggage Weight (RCLW)	=	115	lbs.
Weight of 2 p.572 Dummies @ 167 each	=	334	lbs.
TARGET TEST WEIGHT	=	3,349	lbs.

WEIGHT OF TEST VEHICLE WITH TWO DUMMIES AND 101 POUNDS OF CARGO WEIGHT:

Right Front	=	950	lbs.	Right Rear	=	700	lbs.
Left Front	=	1010	lbs.	Left Rear	=	675	lbs.
TOTAL FRONT	=	1,960	lbs.	TOTAL REAR	=	1,375	lbs.
TOTAL TEST WEIGHT =				3,335 lbs.			

% of Total Front Weight = 58.8 % % of Total Rear Weight = 41.2 %

Weight of Ballast Secured in Vehicle Trunk Area = 25 lbs.

Vehicle Components Removed for Weight Reduction: None

VEHICLE ATTITUDE (all dimension in inches) :

AS DELIVERED :	RF	<u>27.7</u>	LF	<u>27.5</u>	RR	<u>28.1</u>	LR	<u>27.7</u>
FULLY LOADED :	RF	<u>26.3</u>	LF	<u>26.3</u>	RR	<u>24.5</u>	LR	<u>24.4</u>
AS TESTED :	RF	<u>27.4</u>	LF	<u>27.3</u>	RR	<u>26.9</u>	LR	<u>26.7</u>
Vehicle's Wheel Base : <u>103.8</u> in.								

Location of Vehicle's C.G. : 42.8 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	=	16.0	gallons
Test Volume Range (92 to 94% of Usable Capacity)	=	14.7	to 15.0 gallons
ACTUAL TEST VOLUME=		14.8	gallons (with entire fuel system filled)

Table 3

POST IMPACT DATATYPE OF TEST:

Type of Test : Frontal Barrier Impact Angle : 0°
 Test Date : November 9, 1993 Time: 11:20 Temperature: 71 °F
 Vehicle NHTSA No. : CR0301
 Required Impact Velocity Range : 28.9 to 29.9 mph

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

Trap No. 1 = 29.3 mph; Trap No. 2 = 29.3 mph
 Distance from vehicle to barrier : (1) entering trap = 52 inches
 (2) exiting trap = 12 inches

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

Vehicle Length:

Pre-Test Right = 178.7 ; C/L = 182.8 ; Left = 177.7
 Post-Test Right = 163.2 ; C/L = 162.0 ; Left = 162.1
 Crush Right = 15.5 ; C/L = 20.8 ; Left = 15.6
 AVERAGE = 17.3 inches

VEHICLE REBOUND: (From rigid barrier only.)

Distance from front of test vehicle to impact point :

Right = 10.0 ; C/L = 10.0 ; Left = 10.5
 AVERAGE = 10.2 inches

DOOR OPENING :

	Left	Right
Front	<u>Closed</u>	<u>Closed</u>
Rear	<u>Closed/operable</u>	<u>Closed/operable</u>

SEAT MOVEMENT :

	Seat Back Failure	Seat Shift
Front	<u>None</u>	<u>None</u>
Rear	<u>None</u>	<u>None</u>

Table 3

POST IMPACT (cont.)

GLAZING DAMAGE :

Windshield cracked near "A" pillars on both sides of vehicle.

OTHER NOTABLE IMPACT FEATURES :

Steering column stroked.

Section 3

OCCUPANT AND VEHICLE DATA



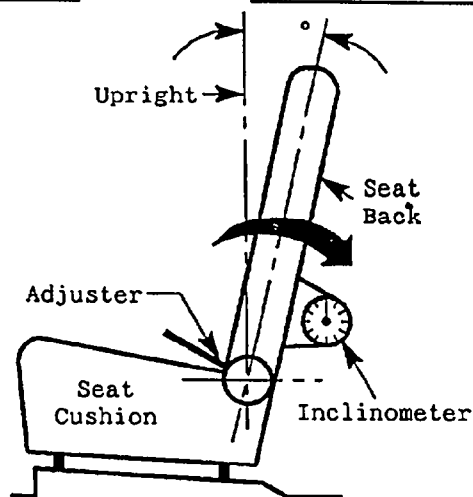
Figure 1

TEST VEHICLE INFORMATION

VEHICLE IDENTIFICATION:

Model Year : 1994 Vehicle Model: Dodge Spirit Body Style : 4-Door Sedan

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.



Seat back angle for driver's seat : -

Measurement instructions : Side shield was removed to expose lower arm of recliner mechanism.

Seat back positioned to align rear edge of recliner gear with rear most notch(3rd) on recliner arm.

Seat back angle for passenger's seat : -

Measurement instructions : Same as driver.

2. Seat Fore and Aft Positioning

Positioning of the driver's seat : Seat positioned at mid-point (sixth detent) from rear most (position #1). There are 11 dentents total.

Positioning of the passenger's seat (if applicable) : Same as driver.

3. Fuel Tank Capacity Data

A. "Usable Capacity" of the standard equipment fuel tank is 16.0 gallons

B. "Usable Capacity" of the optional equipment fuel tank is N/A gallons

4. Steering Column Position :

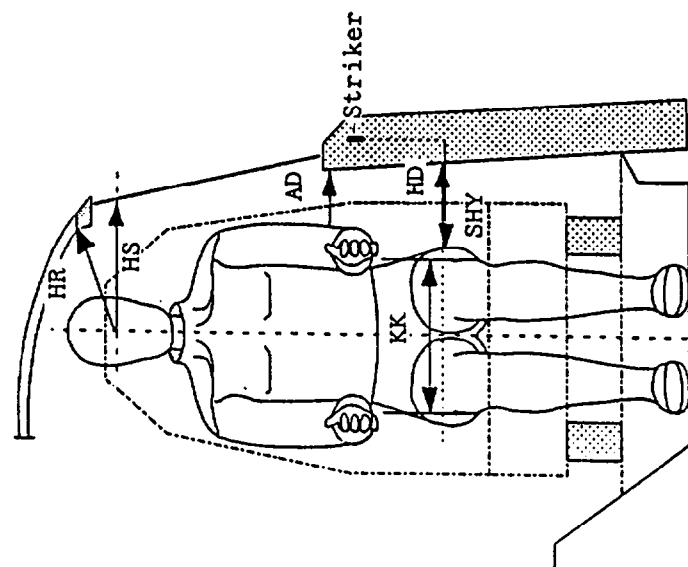
Steering column set at mid-position; second locking position from full down.

5. Other:

None

Figure 2

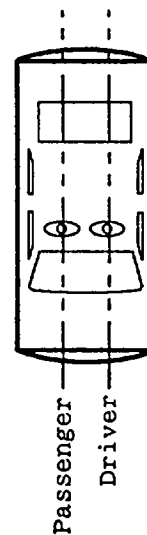
PART 572 DUMMY IN-VEHICLE POSITION



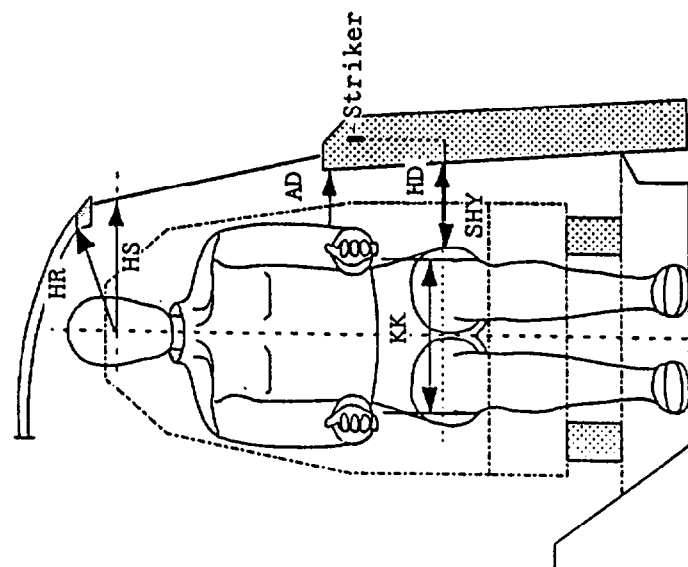
HH - Head to Head
 HW - Head to Windshield
 HZ - Head to Roof
 NR - Nose to Rim
 CS - Steering Wheel to Chest
 CD - Chest to Dash
 RA - Rime to Abdomen
 KDL/KDR - Knee to Dash
 KDA - Knee to Dash Angle
 SH - Striker to H-Point

SK - Striker to Knee
 ST - Striker to Head
 NA - Nose to Rim Angle
 TA - Tibial Angle
 PA - Pelvic Angle
 SA - Seat Back Angle
 SCA - Steering Column Angle
 SWA - Steering Wheel Angle
 WA - Windshield Angle

Vertical Longitudinal Planes



Passenger
 Driver



HR - Head to Side Header
 HS - Head to Side Window
 AD - Arm to Door
 HD - H-Point to Door
 SHY - Striker to H-Point (Y Dir.)
 KK - Knee to Knee

Vertical Transverse Plane

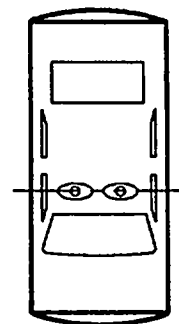


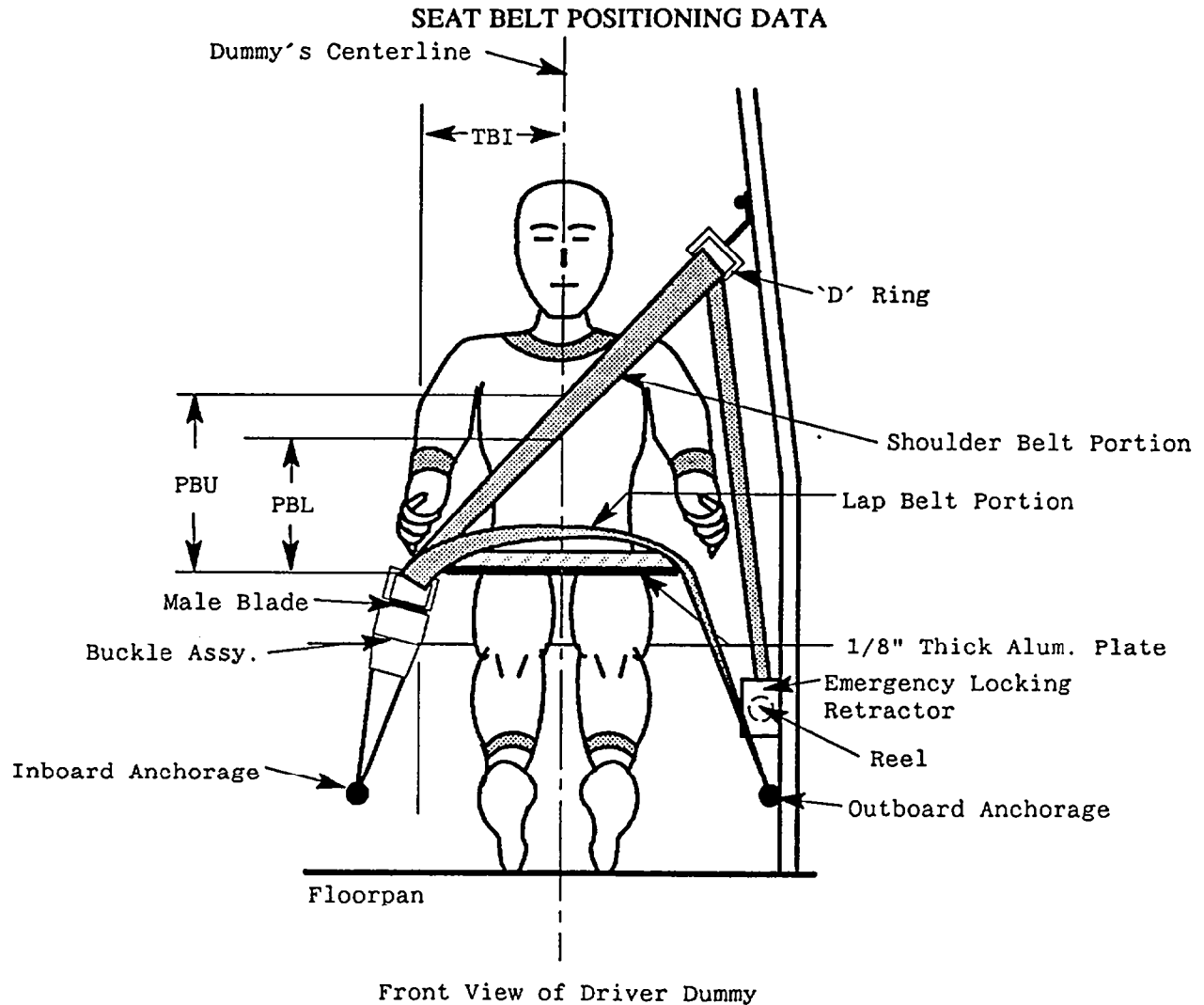
Table 4

FRONT SEAT OCCUPANT MEASUREMENTS

	DRIVER (Serial #290)	PASSENGER (Serial #313)
WA°	32 deg.	-
SWA°	66 deg.	-
SCA°	24 deg.	-
SA°	See note below	See note below
HZ	6.8	6.9
HH	13.5	13.0
HW	20.5	20.2
HR	8.0	7.3
NR	14.4 Angle 16 deg.	-
CD	19.4	21.3
CS	9.3	-
RA	5.9	-
KDL	7.2 Angle (KDA) 28 deg.	6.7
KDR	7.6	7.2 Angle (KDA) 31 deg.
PA°	21 deg.	24 deg.
TA°	38 deg.	38 deg.
KK	13.1	12.0
ST	19.4 Angle 9 deg.	19.7 Angle 11 deg.
SK	23.4 Angle 99 deg.	23.7 Angle 99 deg.
SH	10.3 Angle 135 deg.	9.5 Angle 136 deg.
SHY	9.8	9.6
HS	12.4	12.0
HD	6.4	6.3
AD	4.3	4.3

NOTE: Seat back angle set according to manufacturer's specifications.

Figure 3

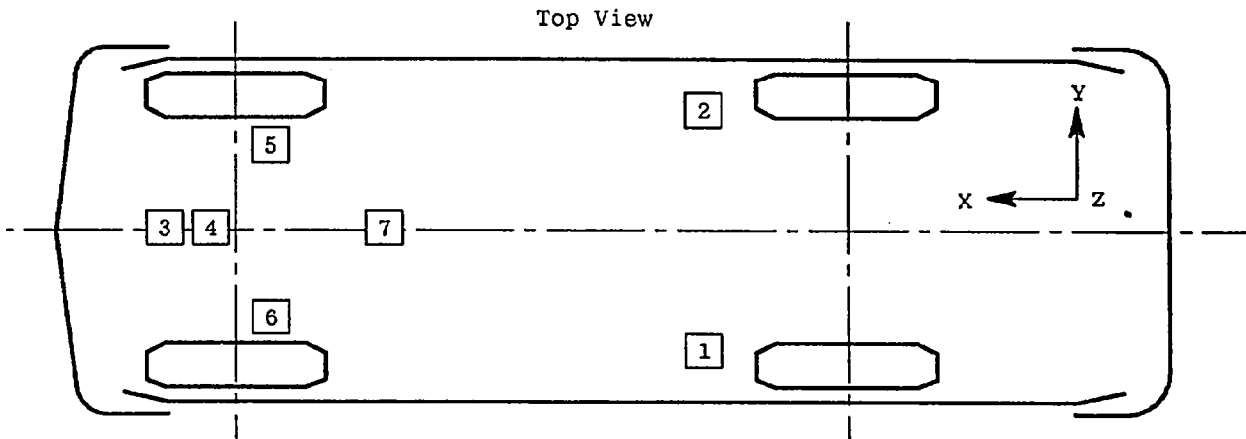


	DRIVER DUMMY (inches)	PASSENGER DUMMY (inches)
<u>PBU</u> -- Top surface of alum. plate to upper edge	*	12.8
<u>PBL</u> -- Top surface of alum. plate to belt lower edge	*	10.0
<u>TBI</u> -- Distance from torso centerline to buckle	*	**

* - Driver air bag, belt not used for this test.

** - Automatic shoulder belt, lap belt not used for this test.

Figure 4
VEHICLE ACCELEROMETER LOCATIONS



ACCELEROMETER NUMBER*	ACCELEROMETER LOCATION	DIRECTION		
		X	Y	Z
1	Left Rear Seat Crossmember	X		
2	Right Rear Seat Crossmember	X		
3	Top of Engine	X		
4	Bottom of Engine	X		
5	Right Disc Brake Caliper	X		
6	Left Disc Brake Caliper	X		
7	Instrument Panel	X		

*The accelerometer pack number can be correlated with the vehicle response data traces found in Appendix B.

Table 5

VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

NO.	LOCATION		X*	Y*	Z*	POSITIVE DIRECTION**		NEGATIVE DIRECTION**	
						MAX (g)	TIME (msec)	MAX (g)	TIME (msec)
1	REAR SEAT X-MEMBER AT LEFT SIDE LONGITUDINAL ACCELERATION	PRE:	65.8	21.6	13.9				
		POST:	65.8	21.6	15.8				
						3.6	164.8	-36.1	61.6
2	REAR SEAT X-MEMBER AT RIGHT SIDE LONGITUDINAL ACCELERATION	PRE:	65.8	-21.6	14.0				
		POST:	65.8	-21.6	15.1				
						1.6	168.5	-41.5	63.4
3	TOP OF ENGINE BLOCK LONGITUDINAL ACCELERATION	PRE:	149.5	-9.7	32.2				
		POST:	141.4	-9.6	32.4				
						26.6	49.0	-69.7	39.7
4	BOTTOM OF ENGINE LONGITUDINAL ACCELERATION	PRE:	148.4	-2.3	7.5				
		POST:	136.6	-2.3	8.2				
						cable	cut	cable	cut
5	BRAKE CALIPER AT RIGHT SIDE LONGITUDINAL ACCELERATION	PRE:	142.6	-26.5	15.3				
		POST:	140.2	-25.8	16.2				
						34.5	74.3	-90.4	51.8
6	BRAKE CALIPER AT LEFT SIDE LONGITUDINAL ACCELERATION	PRE:	142.4	26.5	15.3				
		POST:	139.7	25.8	15.9				
						56.7	70.1	-95.5	49.7
7	DASH PANEL LONGITUDINAL ACCELERATION	PRE:	115.0	-2.7	30.1				
		POST:	116.3	-2.7	29.9				
						27.9	84.6	-67.7	53.3

*X + Forward from rear bumper
Y + Left from vehicle centerline
Z + Up from ground

**
LONGITUDINAL:
LATERAL:
VERTICAL:

POSITIVE
FORWARD
LEFTWARD
UPWARD

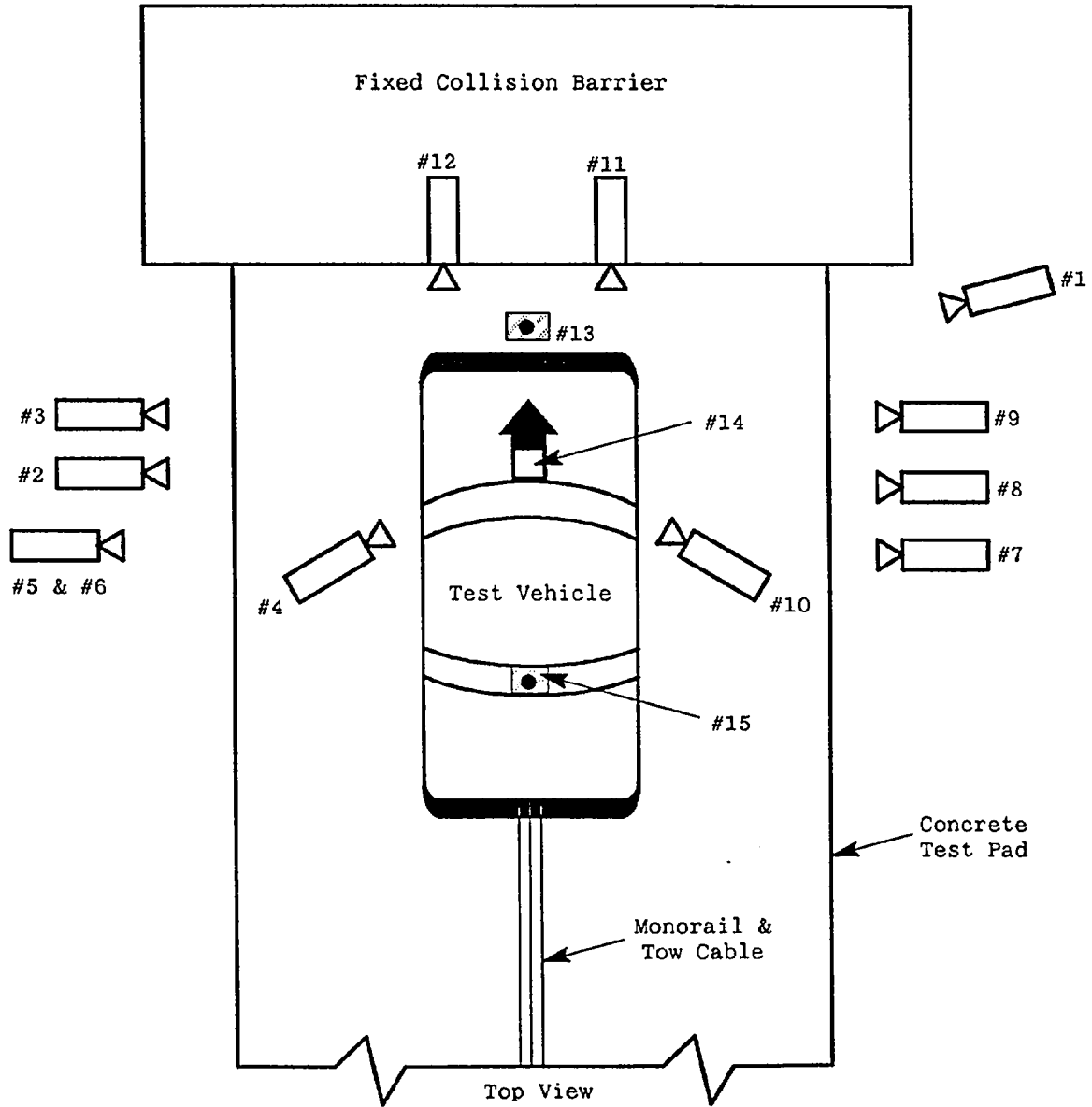
NEGATIVE
REARWARD
RIGHTWARD
DOWNWARD

DISTANCE MEASUREMENTS IN INCHES

Figure 5

CAMERA POSITIONS FOR FRONTAL IMPACTS

NOTE: Camera Information shown on Table 5.



VEHICLE TARGET LOCATIONS

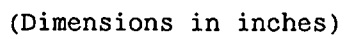


Table 6

HIGH-SPEED CAMERA LOCATIONS

Test No.	8145-3	Vehicle:	1994 Dodge Spirit 4 -Door Sedan				
Camera No.	VIEW	CAMERA POSITION (In.)*		ANGLE** (deg)	FILM PLANE TO HEAD TARGET	LENS (mm)	SPEED (fps)
1	Real-Time Camera	-	-	-	-	-	24
2	Overall Left Side	241	70	-2	225.3	13	1020
3	Left Side View	308	50	-3	292.3	25	1020
4	Driver and Interior View	115	103	-19	-	13	1050
5	Steering Column (Bottom)	281	82	-4	265.3	25	1000
6	Steering Column (Top)	281	82	-10	265.3	25	1020
7	Overall Right Side	256	84	-2	240.3	13	960
8	Right Side View	296	59	-2	280.3	25	840
9	Right Passenger View	293	75	-3	277.3	35	1015
10	Passenger and Interior View	113	100	-22	-	13	860
11	Passenger Front View	22	19	-37	-	13	1020
12	Driver Front View	22	19	36	-	13	1013
13	Windshield View	0	0	59	-	13	1100
14	Pit View of Engine	0	30	90	-	13	710
15	Pit View of Fuel Tank	0	96	90	-	13	745

*X = film plane to monorail centerline
 Y = film plane to impact location
 Z = film plane to ground
 ** = referenced to horizontal plane

Figure 7

TEST VEHICLE MEASUREMENTS

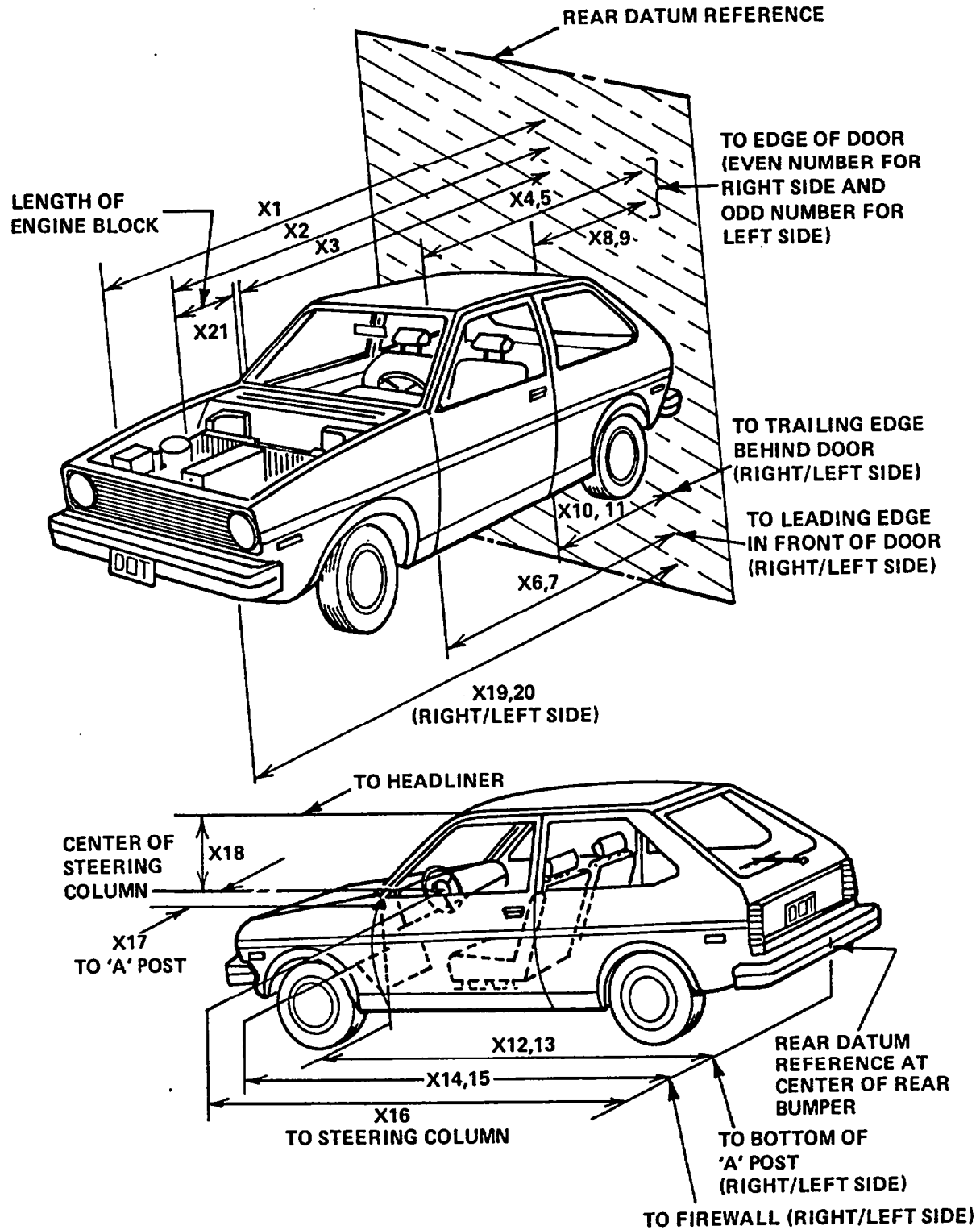


Table 7

VEHICLE MEASUREMENTS

No.		All Dimensions in inches		
		Pre-Test	Post-Test	Differences
X1	Total Length of Vehicle at Centerline	182.8	162.0	20.8
X2	Rear Surface of Vehicle to Front of Engine	157.2	148.6	8.6
X3	Rear Surface of Vehicle to Firewall	136.7	134.2	2.5
X4	Rear Surface of Vehicle to Upper Leading Edge of Right Door	124.6	125.1	-0.5
X5	Rear Surface of Vehicle to Upper Leading Edge of Left Door	124.2	124.5	-0.3
X6	Rear Surface of Vehicle to Lower Leading Edge of Right Door	123.8	123.8	0.0
X7	Rear Surface of Vehicle to Lower Leading Edge of Left Door	123.5	123.4	0.1
X8	Rear Surface of Vehicle to Upper Trailing Edge of Right Door	85.3	85.2	0.1
X9	Rear Surface of Vehicle to Upper Trailing Edge of Left Door	85.1	85.5	-0.4
X10	Rear Surface of Vehicle to Lower Trailing Edge of Right Door	85.5	85.4	0.1
X11	Rear Surface of Vehicle to Lower Trailing Edge of Left Door	85.3	85.7	-0.4
X12	Rear Surface of Vehicle to Bottom of "A" Post of Right Side	124.2	124.4	-0.2
X13	Rear Surface of Vehicle to Bottom of "A" Post of Left Side	124.5	124.7	-0.2
X14	Rear Surface of Vehicle to Firewall, Right Side	137.2	134.5	2.7
X15	Rear Surface of Vehicle to Firewall, Left Side	136.8	135.7	1.1
X16	Rear Surface of Vehicle to Steering Column	105.3	107.9	-2.6
X17	Center of Steering Column to "A" Post	15.5	16.0	-0.5
X18	Center of Steering Column to Headliner	17.5	15.8	1.7
X19	Rear Surface of Vehicle to Right Side of Front Bumper	178.7	163.2	15.5
X20	Rear Surface of Vehicle to Left Side of Front Bumper	177.7	162.1	15.6
X21	Length of Engine Block	19.0	19.0	0.0

Section 4

SUMMARY OF RESULTS OF FMVSS NOS. 208, 212, 219 AND 301-75

- "Occupant Crash Protection," FMVSS No. 208 Data
- "Windshield Mounting," FMVSS No. 212 Data
- "Windshield Zone Intrusion," FMVSS No. 219 (Partial) Data
- "Fuel System Integrity," FMVSS No. 301-75

Table 8

DUMMY INJURY CRITERIA VALUESNHTSA No. : CR0301 Vehicle : 1994 Dodge Spirit 4-Door Sedan

	MAXIMUM ACCELERATION (g's)								
	HEAD				CHEST				
	X	Y	Z	R	X	Y	Z	R*	Displacement
Dummy (1)	-60.2	-12.0	11.2	61.2	-52.3	-6.7	6.4	47.7	-1.4
Dummy (2)	-36.6	5.0	49.6	55.9	-48.3	13.7	-10.8	43.8	-2.6

	MAXIMUM FORCE - FEMUR LOAD (lbs.)	
	LEFT FEMUR	RIGHT FEMUR
Dummy (1)	-1063.9	-1488.8
Dummy (2)	-1638.5	-1609.8

	HEAD INJURY CRITERIA **			
	HIC	36 millisecond Maximum		Avg. Acc (g)
		t ₁ (msec)	t ₂ (msec)	t ₁ TO t ₂
Dummy (1)	419.51	62.280	89.160	47.57
Dummy (2)	489.72	70.920	106.800	45.09

* Defined as exceeding 0.003 sec. duration

**As defined in FMVSS No. 208

Table 9

FMVSS NO. 208 - SEAT BELT WARNING SYSTEM CHECK

With occupant in driver's position, the lap belt in stowed position, and ignition switch placed in "Start/On" position:

Log time duration of audible warning signal = 6 sec.

Log time duration of reminder light operation = continuous sec.

With occupant in driver's position, lap belt in use, and the ignition switch placed in "Start/On" position :

Log time duration of audible warning signal
(audible warning should not operate) = 0 sec.

Log time duration of reminder light operation = 6 sec.

Note wording of visual warning :

Fasten Seat Belt -

Fasten Belt -

Symbol 101 X

Table 10

FMVSS NO. 208 - LABELING AND DRIVER'S MANUAL INFORMATION

Locate label which describes manufacturers maintenance or replacement schedule for crash-deployed occupant protection system.

Describe location : Maintenance schedule located located in glove compartment. The schedule states that, "the airbag system is designed to be maintenance free." However, if the airbag light does not come on momentarily at start-up, or flashes while driving, the system needs to be serviced.

Were appropriate instructions concerning maintenance and/or replacement of this system provided ?

YES X NO -

Was a description of the functional operation of the system provided ?

YES X NO -

Is there a reference to the instructions and description of the system on the label ?

YES X NO -

Was an owner's manual provided ?

YES X NO -

Did the owner's manual contain appropriate information concerning maintenance and/or replacement and a description of the functional operation of the system ?

YES X NO -

Table 11

FMVSS NO. 208 - READINESS INDICATOR

An occupant restraint system that deploys in the event of a crash shall have a monitoring system with a readiness indicator. A totally mechanical system is exempt from this requirement.

Is the system totally mechanical ? YES - NO X

Describe the location of the readiness indicator :

Readiness indicator located at top right of instrument cluster.

Is the readiness indicator clearly visible to the driver ? YES X NO -

Is a list of the elements in the occupant restraint system, being monitored by the readiness indicator, provided ?

YES X NO -

Table 12

FMVSS NO. 208 - COMFORT AND CONVENIENCE TEST SUMMARY

Test Vehicle NHTSA No. :	CR0301
Make/Model :	1994 Dodge Spirit 4 -Door Sedan
Date of Comfort/Convenience Check :	November 8, 1993
Technician Performing Check :	D. J. T.
GVWR :	3999 lbs.

Seat belt comfort and convenience requirements cover vehicles manufactured on or after September 1, 1986, which have a gross vehicle weight rating of 10,000 pounds or less. Exemptions to this rule are belts installed in a walk-in, van-type vehicle and manual Type 2 belt systems installed in the front outboard seating positions of passenger automobiles. On or after September 1, 1989, the exemption of the type 2 manual seat belts installed in the front outboard seating positions of passenger automobiles will change depending on the states' enactment of mandatory usage laws.

Was vehicle built after or on September 1, 1986, and is it equipped with :

1. Automatic seat belts YES X ** NO -

If yes, go to requirements D1, D2, and D3

2. Manual seat belts* YES X NO -

a. The seat belts, other than Type 2 lap/shoulder belts, are located in the front outboard seating positions of a passenger automobile.

YES - NO X

(Go to requirements D3, D4, D5, and D6)

b. The seat belt system is Type 2 lap/shoulder belt in the front outboard seating positions or the seat belts are located in a walk-in van.

STOP

* If the seat belts are voluntarily installed by the manufacturer they do not have to comply.

** Right front passenger seating position only.

Table 12 (cont.)

D1
CONVENIENCE HOOKS

A convenience hook or other device is provided to stow seat belt webbing to facilitate entering or exiting the vehicle.

YES - NO X

Check the option which applies to this test vehicle:

1. A convenience hook or other device automatically releases the webbing when the automatic belt system is operational and remains in the released mode as long as the vehicle's ignition switch is moved to the "on" or "start" position and the vehicle's drivetrain is engaged.

YES N/A NO N/A

2. A convenience hook or other device automatically releases the webbing when the automatic belt system is operational and remains in the released mode as long as the vehicle's ignition switch is moved to the "on" or "start" position and the vehicle's parking brake is in the released mode (non-engaged)

YES N/A NO N/A

D2
WEBBING TENSION - RELIEVING DEVICE

The seat belt assembly installed in the outboard designated seating position has either manual or automatic tension relieving devices permitting the introduction of slack in the webbing of the shoulder belt ("comfort clips" or "window shade" devices).

YES - NO X

Check the owner's manual and determine the maximum amount of slack recommended by the manufacturer in inches. The recommended slack is n/a inches. Introduce this slack into the shoulder belt before testing the vehicle to comply with the requirements of FMVSS 208 S5.1. A warning is included in the owner's manual that introducing slack beyond the amount specified can significantly reduce the effectiveness of the shoulder belt.

YES N/A NO N/A

(If NO, provide explanation.)

Check the option which applies to this test vehicle:

1. This vehicle is equipped with automatic seat belts and the tension relieving device is cancelled each time the adjacent door is opened.

YES N/A NO N/A

(If NO, provide explanation.)

Table 12 (cont.)

2. This vehicle is equipped with manual belts, required to meet FMVSS 208 S4.6, and the tension relieving device is cancelled each time one of the following options occurs:
- | | | | | |
|---|-----|------------|----|------------|
| a. The adjacent door is opened. | YES | <u>N/A</u> | NO | <u>N/A</u> |
| b. The latch plate is released from the buckle. | YES | <u>N/A</u> | NO | <u>N/A</u> |
3. This is an open-body vehicle, without doors. Does the manual mean to cancel any shoulder belt slack introduced by a tension relieving device to operate properly ?
- | | | | | |
|--|-----|------------|----|------------|
| | YES | <u>N/A</u> | NO | <u>N/A</u> |
|--|-----|------------|----|------------|

(If NO, provide explanation.)

D3
BELT CONTACT FORCE

1. Do not measure the belt contact force if the manual or automatic seat belt assemblies in this vehicle incorporate a webbing tension relieving device. Does the vehicle incorporate a tension relieving device ?
- | | | | | |
|--|-----|----------|----|----------|
| | YES | <u>-</u> | NO | <u>X</u> |
|--|-----|----------|----|----------|
2. Seat are adjusted according to instructions in Appendix B.
- | | | | | |
|--|-----|----------|----|----------|
| | YES | <u>X</u> | NO | <u>-</u> |
|--|-----|----------|----|----------|
3. The test dummies are positioned according to dummy position placement instructions in Appendix B and Appendix C.
- | | | | | |
|--|-----|----------|----|----------|
| | YES | <u>X</u> | NO | <u>-</u> |
|--|-----|----------|----|----------|
4. Close the vehicle's adjacent door, pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest, then fasten the latch. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point, pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. Measure the contact force exerted by the belt webbing on the dummy's chest. The contact force is 0.3 pounds. Contact the COTR if the contact force exceeds 0.7 pounds.

Table 12 (cont.)

D4
LATCHPLATE ACCESSIBILITY

- | | | | | | |
|----|--|-----|--------------|----|--------------|
| 1. | Position the test dummy in the driver's seat or passenger's seat in its forward most adjustment position. | YES | <u> X </u> | NO | <u> - </u> |
| 2. | Attach the inboard and outboard reach string. | YES | <u> X </u> | NO | <u> - </u> |
| 3. | Extend each line backward and outboard to generate arcs of the reach envelope of the test dummy's arms. With the latchplate in the normal stowed position, check to assure that the latchplates are within the reach envelope. | YES | <u> X </u> | NO | <u> - </u> |
| 4. | Using the clearance test block, determine if there is sufficient clearance between the vehicle seat and the side of vehicle interior to allow the test block to move unhindered to the latchplate or buckle. | YES | <u> X </u> | NO | <u> - </u> |

D5
RETRACTION

- | | | | | | |
|----|--|-----|--------------|----|--------------|
| 1. | Seats and seat backs are adjusted according to instructions in Appendix B "General Test Conditions" in TP-208-8. | YES | <u> X </u> | NO | <u> - </u> |
| 2. | Use anthropomorphic test dummies whose arms have been removed and position the dummies in the front outboard designated seating positions according to instructions in Appendix B and restrain the dummies, using the belt systems for the positions being tested. | YES | <u> X </u> | NO | <u> - </u> |
| 3. | Outboard armrests which are capable of being stowed on vehicle seats shall be placed in their stowed positions. | YES | <u> X </u> | NO | <u> - </u> |
| 4. | Check the option which applies to this test vehicle: | YES | <u> X </u> | NO | <u> - </u> |
| | a. The torso and lap belt webbing of the seat belt system automatically retract to a stowed position when the adjacent vehicle door is in an open position and the seat belt latch plate is released. | YES | <u> X </u> | NO | <u> - </u> |

Table 12 (cont.)

- b. The torso and lap belt webbing of the seat belt system automatically retract when the seat belt latchplate is released.
- YES X NO -
5. With the webbing and hardware in the stowed position, close the door to assure that the webbing and hardware are prevented from being pinched.
- YES X NO -
6. If this test vehicle has an open body (without doors) and has a belt system with a tension-relieving device, check to assure that the belt system fully retracts when the tension-relief device is manually deactivated.
- YES N/A NO N/A

D6
ACCESSIBILITY

The requirements for accessibility do not apply to:

1. Seats whose seat cushions are removable so that the seat back serves a function other than seating;
2. Seats which are removable;
3. Seats which are movable so that the space formerly occupied by the seat can be used for a secondary function.

If the seats in this vehicle are different than the criteria above, then determine if:

1. Each manual seat belt assembly whose webbing is designed to pass through the seat cushion or between the seat cushion and seat back has one of the following three parts (the seat belt latchplate, the buckle, or the seat belt webbing) on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant).

YES X NO -

2. The remaining two seat belt parts are accessible under normal conditions.

YES X NO -

Table 12 (cont.)

3.	The buckle and latchplate pass through the guides or conduits provided and do not fall behind the seat when the following events occur in order:				
		a.	The belt is completely retracted or, if the belt is non-retractable, the belt is unattached.	YES	<u> X </u>
				NO	<u> - </u>
		b.	The seat is moved to any position to which it is designed to be adjusted.	YES	<u> X </u>
				NO	<u> - </u>
		c.	The seat back, if foldable, is folded forward as far as possible and then moved backward into positions.	YES	<u> X </u>
				NO	<u> - </u>
4.	Is the inboard receptacle end of the seat belt assembly which is installed in the outboard designated seating position accessible with the center arm rest in any position to which it can be adjusted without moving the armrest?			YES	<u> X </u>
				NO	<u> - </u>

D7
LATCH MECHANISM

A seat belt assembly installed in a passenger car, except an automatic belt assembly, shall have a latch mechanism:

1.	Whose components are accessible to a seated occupant in both the stowed and operational positions.	YES	<u> X </u>	NO	<u> - </u>
2.	That releases both the upper torso restraint and the lap belt simultaneously, if the assembly has a lap belt and an upper torso restraint that require unlatching for release of the occupant.	YES	<u> X </u>	NO	<u> - </u>
3.	That releases at a single point by a push button action.	YES	<u> X </u>	NO	<u> - </u>

Figure 8

FMVSS NO. 212 - "WINDSHIELD MOUNTING" DATA SHEET

DETAILS OF WINDSHIELD MOUNTING SUCH AS RETENTION METHOD, TRIM TYPE, ETC. :

Windshield is bonded in place with 0.7 inch rubber trim along the top, and 1.3 inch rubber trim along the sides. The lower portion of the windshield is covered by a plastic shroud.

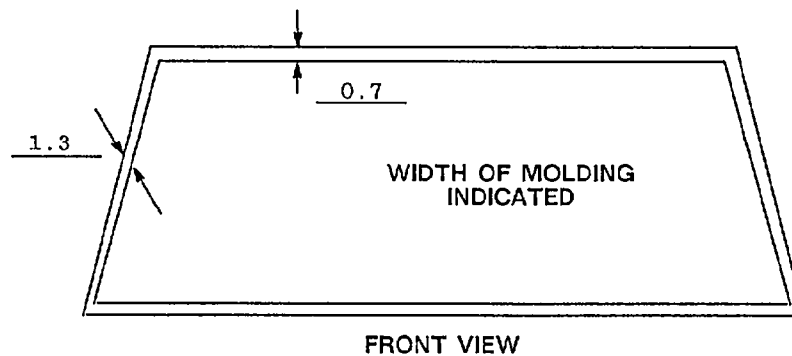
FMVSS 212 REQUIREMENTS :

The Post - Test periphery retention amount must be at least 75% of the Pre - Test periphery measurement for vehicle NOT equipped with automatic restraints, and 50% for each side of windshield for vehicles equipped with automatic restraint systems for front occupants.

FMVSS 212 TEST DATA :

	WINDSHIELD PERIPHERY		PERCENT RETENTION
	PRE - TEST (in.)	POST - TEST (in.)	
RIGHT SIDE	81.2	81.2	100.0
LEFT SIDE	81.2	81.2	100.0
TOTAL	162	162	100.0

AREA OF RETENTION FAILURE:



FAILURE DETAILS :

None

Figure 9

FMVSS NO. 219 (PARTIAL) - "WINDSHIELD ZONE INTRUSION" DATA SHEET

PROTECTED ZONE LOWER EDGE REQUIREMENT :

The lower edge of the protected zone is determined by placing a 6.5" dia. rigid sphere weighing 15 pounds in a position such that it simultaneously contacts the inner surface of the windshield and the top surface of the instrument panel including padding. The locus of points is drawn on the inner surface of the windshield contacted by the sphere across the width of the instrument panel. From the outermost contactable points, extend the locus line horizontally to the edges of the windshield, and then draw a line on the inner surface of the windshield below and 1/2" distant from the locus line. The LOWER EDGE OF THE PROTECTED ZONE is the longitudinal projection of this line onto the outer surface of the windshield

FMVSS 219 TEST DATA : (Dimensions in inches.)

KEY

A= 46.0

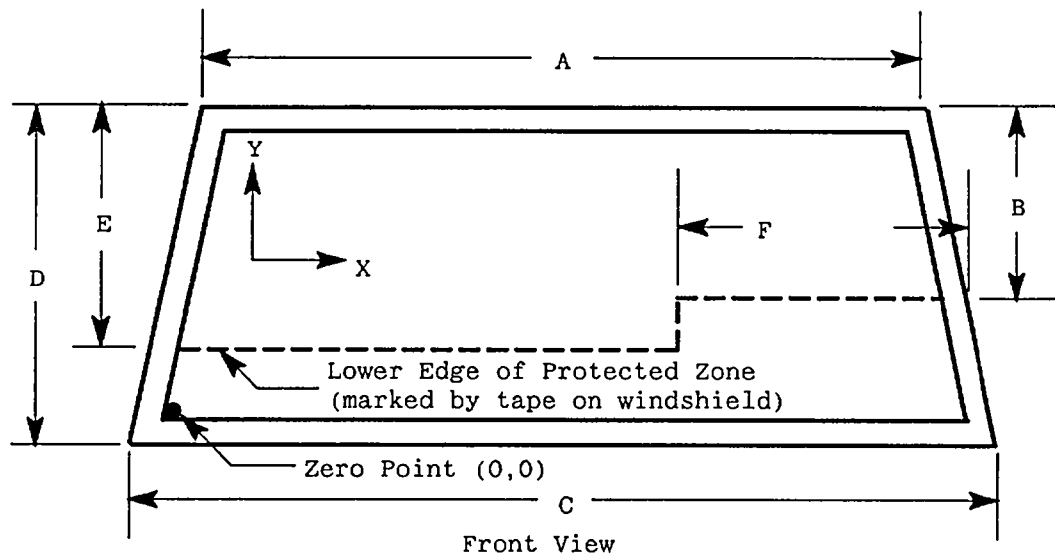
B= 13.9

C= 57.8

D= 29.3

E= 19.8

F= 34.1



DETAILS OF WINDSHIELD GLASS PENETRATION GREATER THAN 1/4" :

(Show location of penetration on above sketch)

None

COORDINATES		
	X	Y
1		
2		
3		
4		

Table 13

FUEL SYSTEM INTEGRITY POST IMPACT TEST DATA

FMVSS NO. 301

TEST VEHICLE NHTSA NO. : CR0301 TEST DATE : November 9, 1993Vehicle Mfr./Make/Model : 1994 Dodge Spirit 4 -Door Sedan

Test vehicle fuel tank filled to 92% 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 : X Frontal (30 mph)
- Oblique (30 mph) with 0 ° barrier face first
 contacting _____
 (driver/passenger) side
- Rear Moving Barrier (30 mph)
- Lateral Moving Barrier (20 mph)

FUEL SPILLAGE MEASUREMENT:

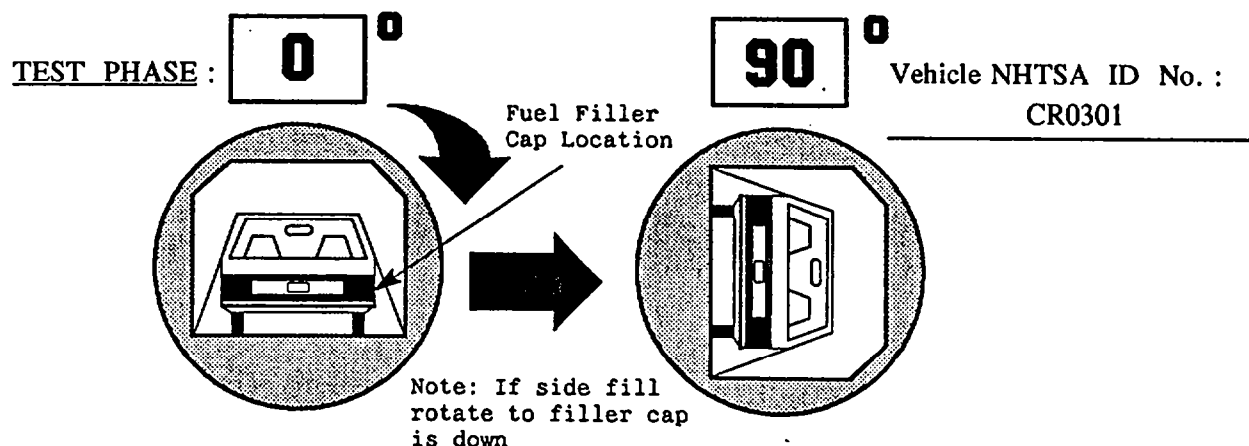
1. From impact until vehicle motion ceases
2. For five minute period after vehicle motion ceases
3. For next 25 minutes

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

SOLVENT SPILLAGE DETAILS :

None

Table 14

FMVSS NO. 301 STATIC ROLLOVER DATA SHEETI. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time (Spec. Range = 1 to 3 minutes)	<u>2</u>	minutes	<u>07</u>	seconds
FMVSS 301 Position Hold Time +	<u>5</u>	minutes	<u>00</u>	seconds
TOTAL	<u>7</u>	minutes	<u>07</u>	seconds
Next whole minute interval	<u>8</u>	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 :

<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
----------	----------	----------	----------

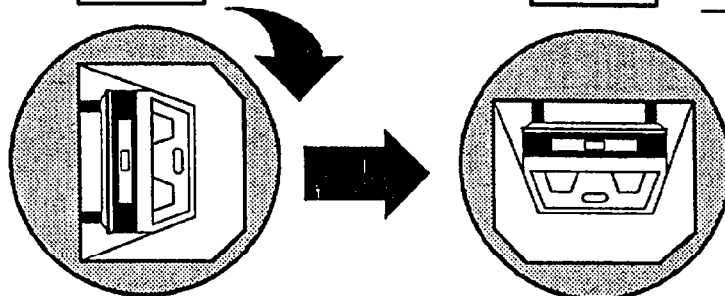
Note: Record spillage for whole minute intervals only as determined above.

IV. SOLVENT SPILLAGE LOCATION(S) :

None

Table 14
FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (cont.)

TEST PHASE : **90°** **180°** Vehicle NHTSA ID No. :
CR0301



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

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

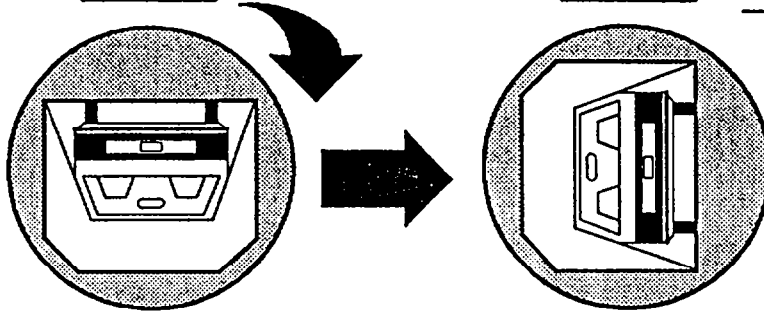
Note: Record spillage for whole minute intervals only as determined above.

IV. SOLVENT SPILLAGE LOCATION(S) :

None

Table 14
FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (cont.)

TEST PHASE : **180°** **270°** Vehicle NHTSA ID No. :
CR0301



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time (Spec. Range = 1 to 3 minutes)	1	minutes	51	seconds
FMVSS 301 Position Hold Time +	5	minutes	00	seconds
TOTAL	6	minutes	51	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	0
---	---	---	---

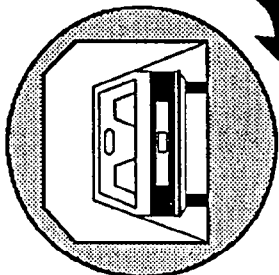
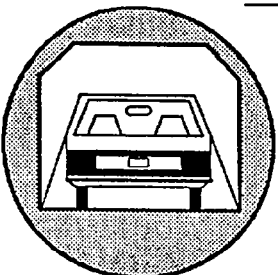
Note: Record spillage for whole minute intervals only as determined above.

IV. SOLVENT SPILLAGE LOCATION(S) :

None

Table 14
FMVSS NO. 301 STATIC ROLLOVER DATA SHEET (cont.)

TEST PHASE : **270**⁰ **360**⁰ Vehicle NHTSA ID No. :
CR0301

I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time (Spec. Range = 1 to 3 minutes)	1	minutes	52	seconds
FMVSS 301 Position Hold Time +	5	minutes	00	seconds
TOTAL	6	minutes	52	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	0
---	---	---	---

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

IV. SOLVENT SPILLAGE LOCATION(S) :

None

Table 15
TEST VEHICLE NONCOMPLIANCE NOTICE

NHTSA Contract Lab : Calspan Advanced Technology Center

Lab Project Manager & Telephone No. : Walter E. Levan (716) 632 - 7500

Date of Test : November 9, 1993 Vehicle NHTSA No. : CR0301

Vehicle Manufacturer : Chrysler Corporation

Model Year : 1994 VIN : 1B3AA46KXRF117551

Model : Dodge Spirit Body Style: 4-Door Sedan Build Date : August 1993

Dummy Stabilized Temperature at Time of Test : 70 °F (Spec. = 69 - 72 °F)

Impact Velocity : 29.3 mph; Time of Test : 11:20

Type of Automatic Restraint System :

Driver : Airbag

Passenger : Right front passenger automatic shoulder belt.

Failure Details :

The vehicle, as tested, appears to comply with the requirements of FMVSS Nos. 208, 212, 219 (partial), and 301.

Appendix A
PHOTOGRAPHS

LIST OF PHOTOGRAPHS

<u>Figure</u>	<u>Photograph Title</u>	<u>Page No.</u>
A-1	PRE-TEST FRONT VIEW	A-3
A-2	POST- TEST FRONT VIEW	A-4
A-3	PRE-TEST LEFT SIDE VIEW	A-5
A-4	POST -TEST LEFT SIDE VIEW	A-6
A-5	PRE-TEST RIGHT SIDE VIEW	A-7
A-6	POST -TEST RIGHT SIDE VIEW	A-8
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A-8	POST- TEST RIGHT FRONT THREE-QUARTER VIEW	A-10
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A-20	PRE-TEST FRONT SIDE UNDERBODY VIEW	A-22
A-21	POST- TEST FRONT SIDE UNDERBODY VIEW	A-23
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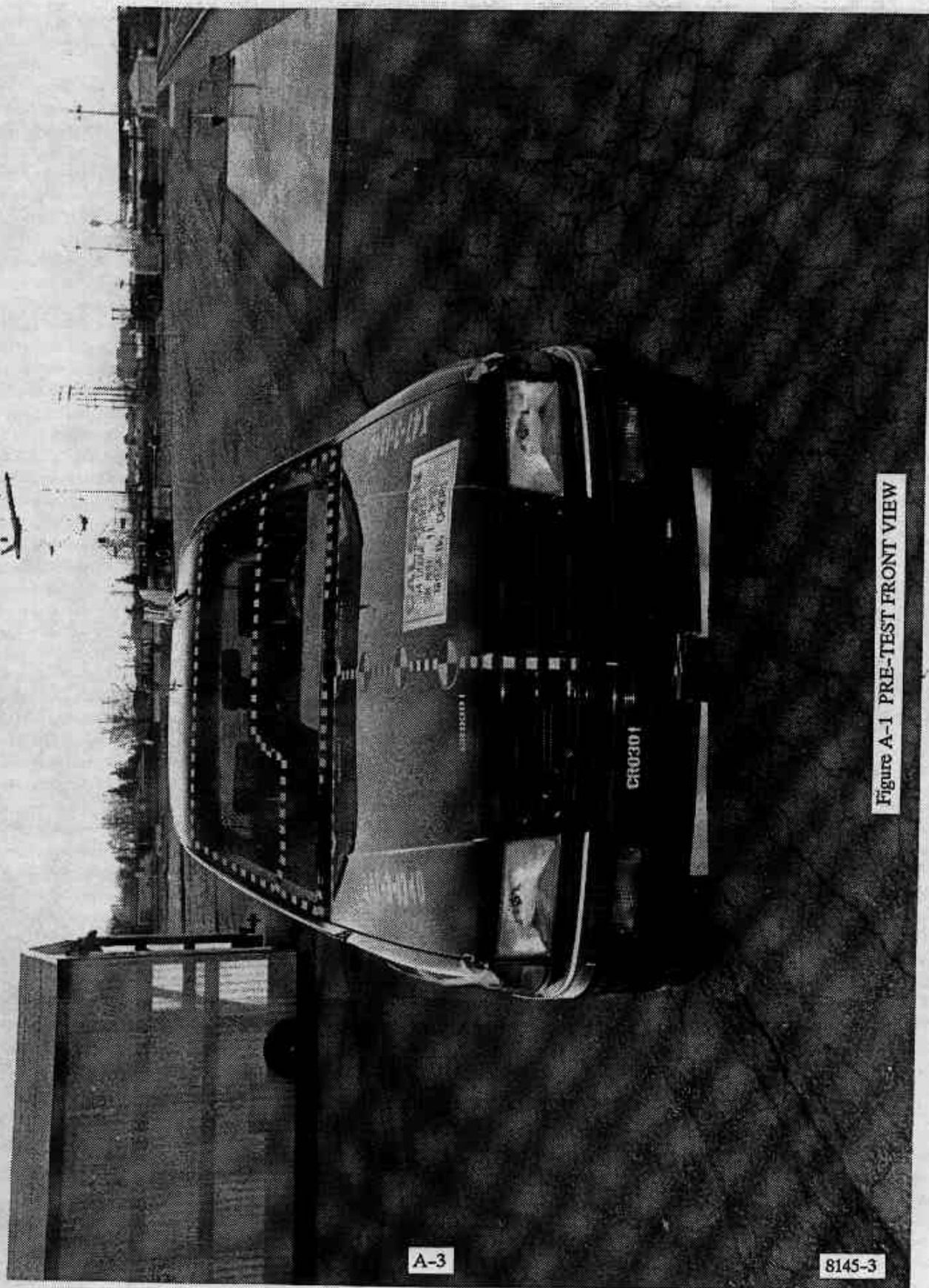


Figure A-1 PRE-TEST FRONT VIEW

A-3

8145-3



Figure A-2 POST-TEST FRONT VIEW

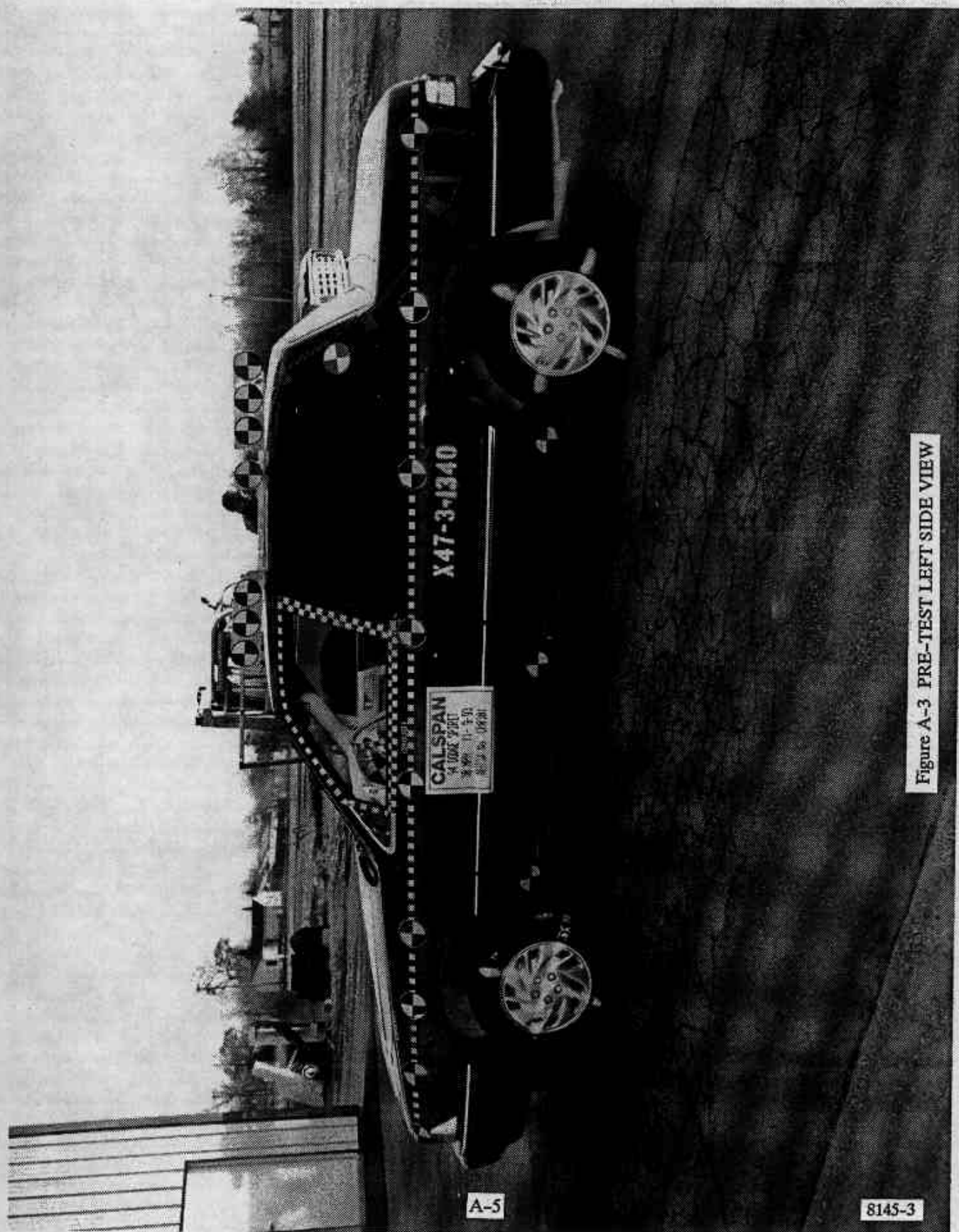


Figure A-3 PRE-TEST LEFT SIDE VIEW

A-5

8145-3

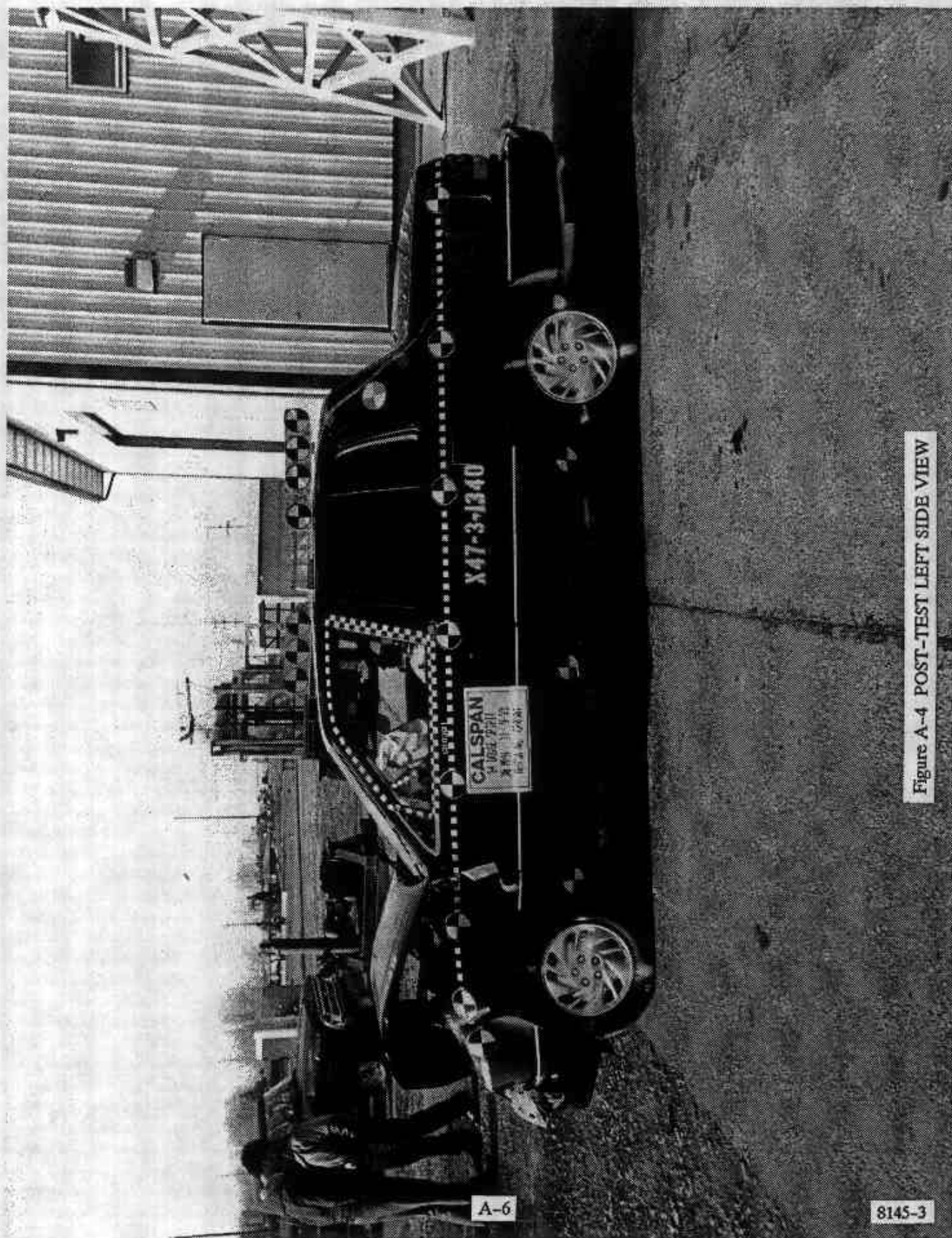


Figure A-4 POST-TEST LEFT SIDE VIEW

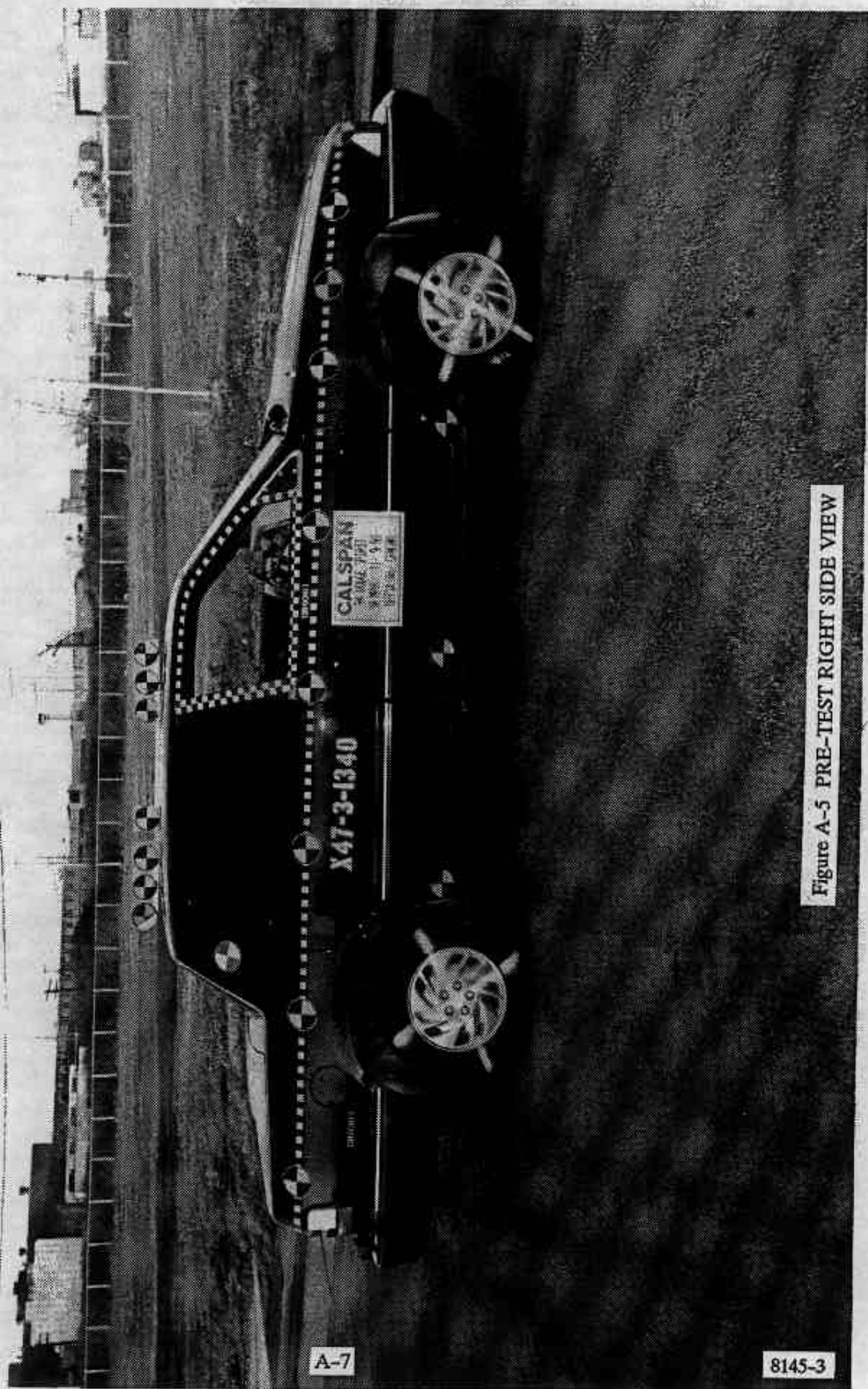


Figure A-5 PRE-TEST RIGHT SIDE VIEW



Figure A-6 POST-TEST RIGHT SIDE VIEW

8145-3

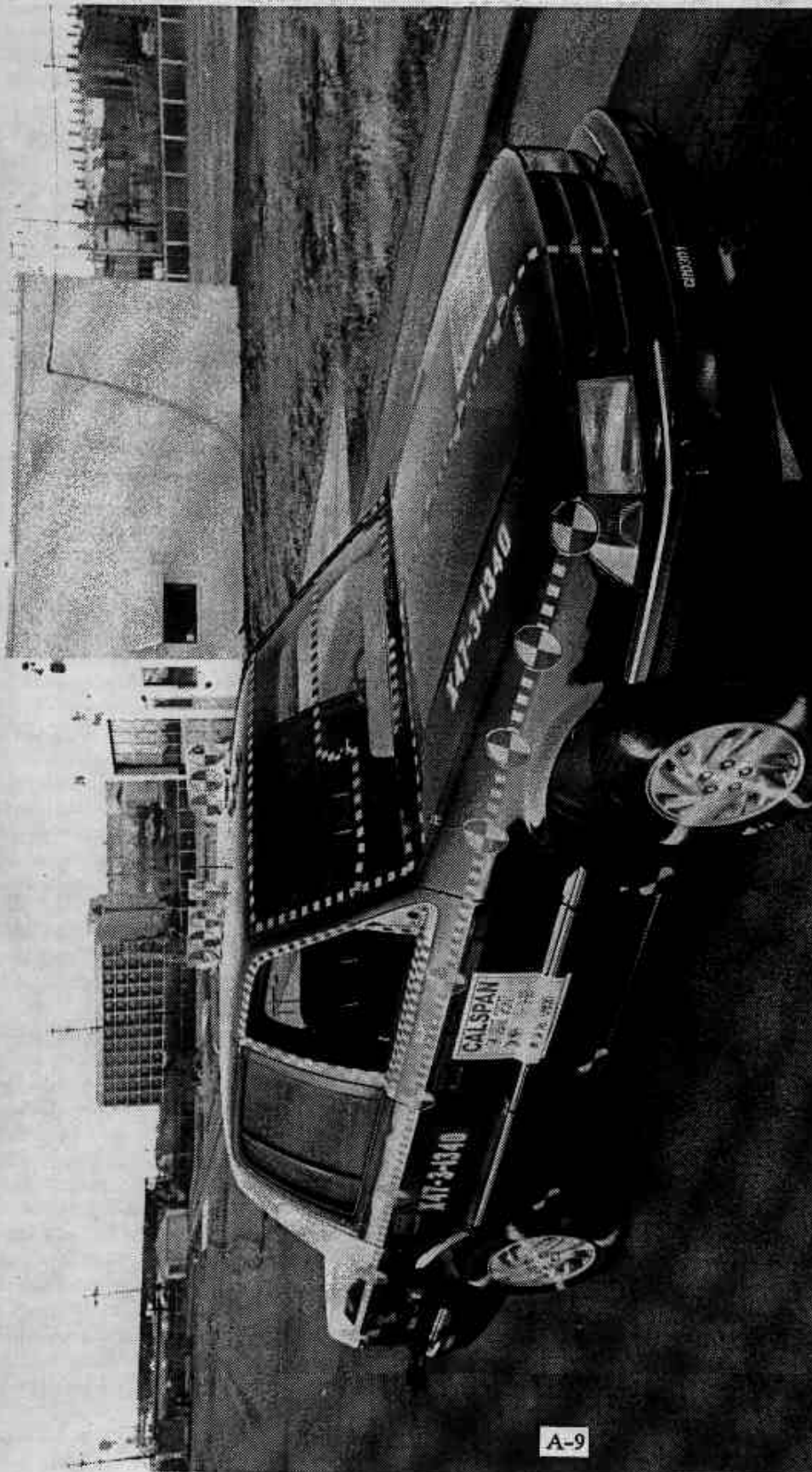


Figure A-7 PRE-TEST RIGHT FRONT THREE-QUARTER VIEW

A-9

8145-3

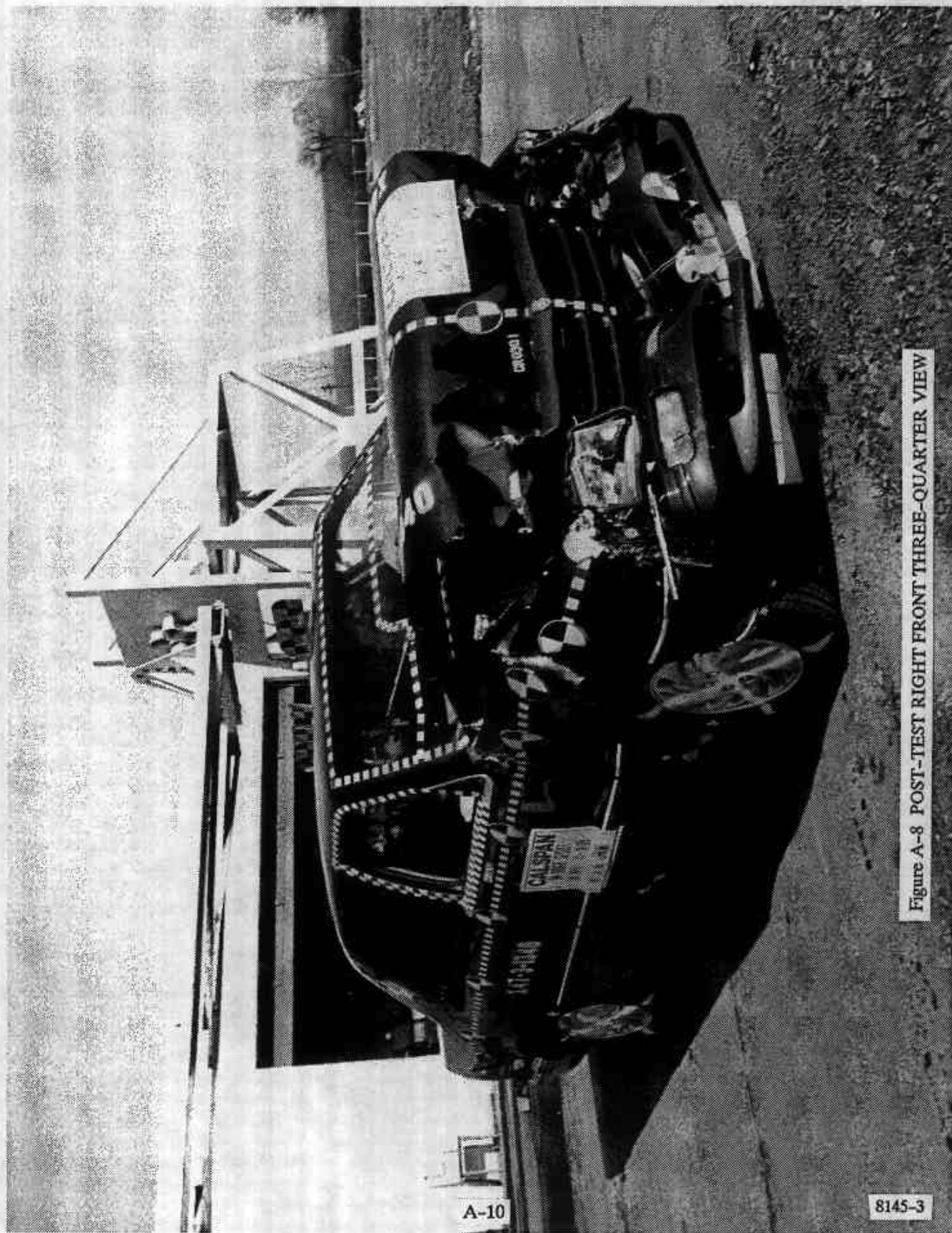


Figure A-8 POST-TEST RIGHT FRONT THREE-QUARTER VIEW

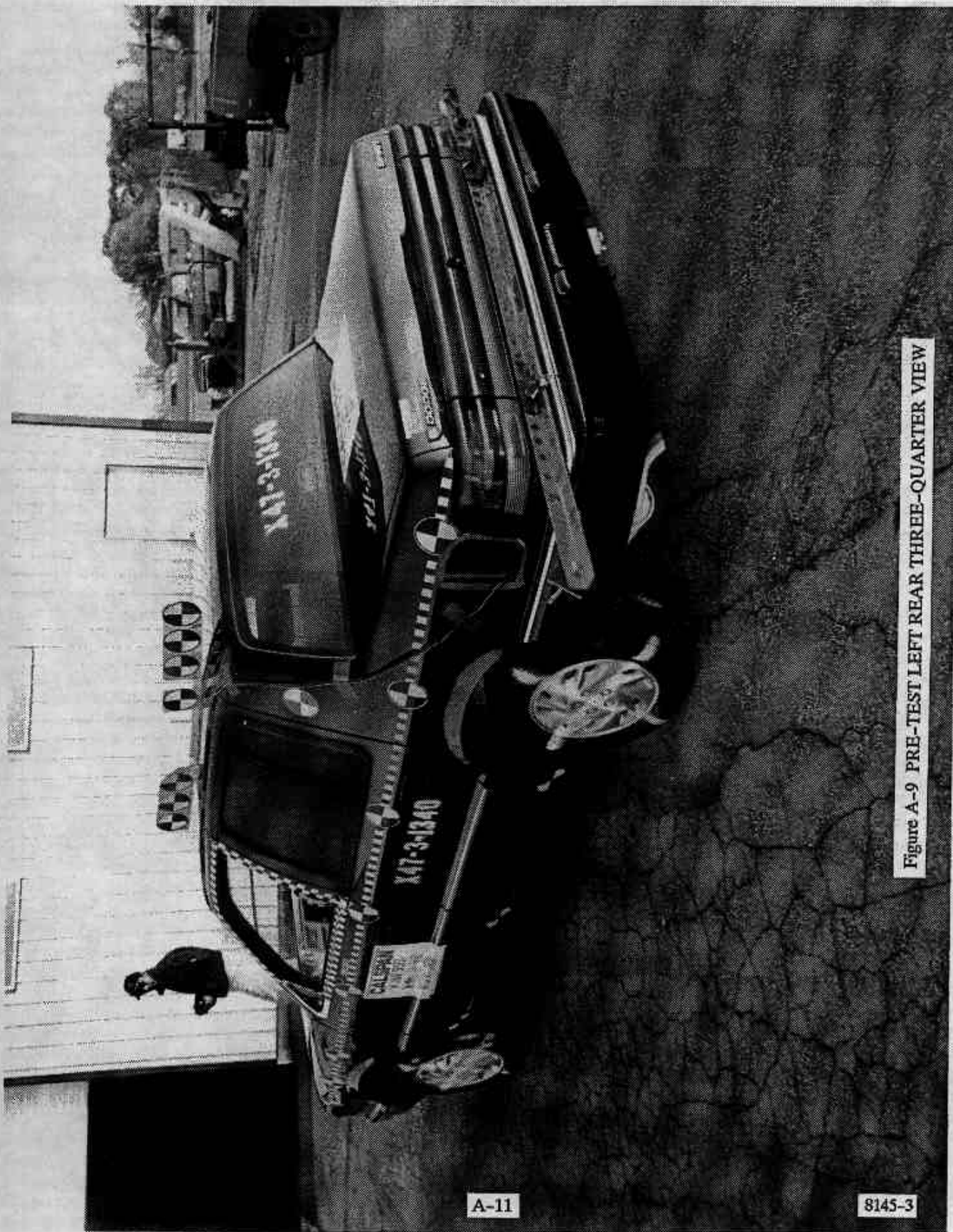


Figure A-9 PRE-TEST LEFT REAR THREE-QUARTER VIEW

A-11

8145-3

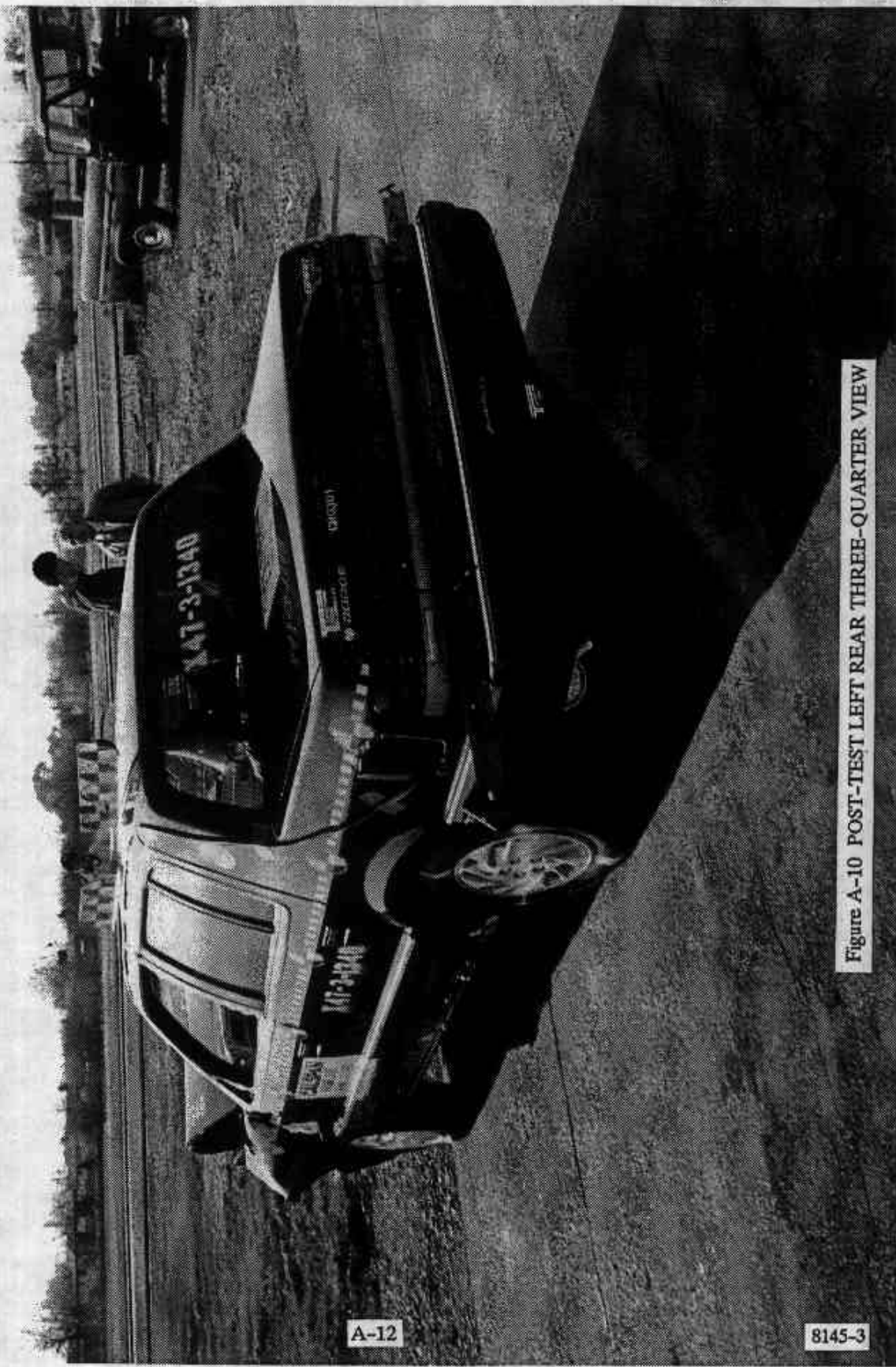


Figure A-10 POST-TEST LEFT REAR THREE-QUARTER VIEW

A-12

8145-3

Figure A-11 POST-TEST TOP VIEW (Not Available)

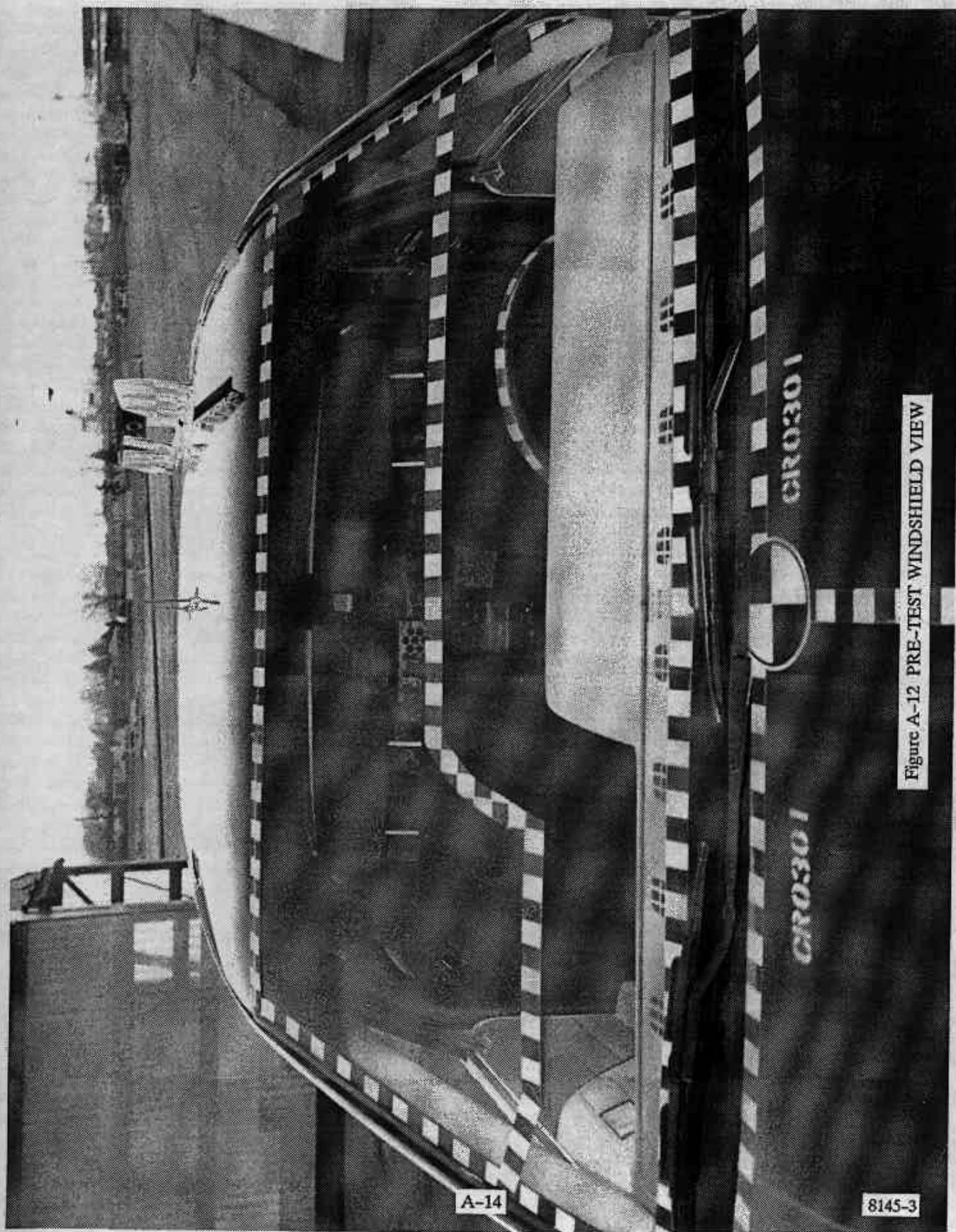


Figure A-12 PRE-TEST WINDSHIELD VIEW

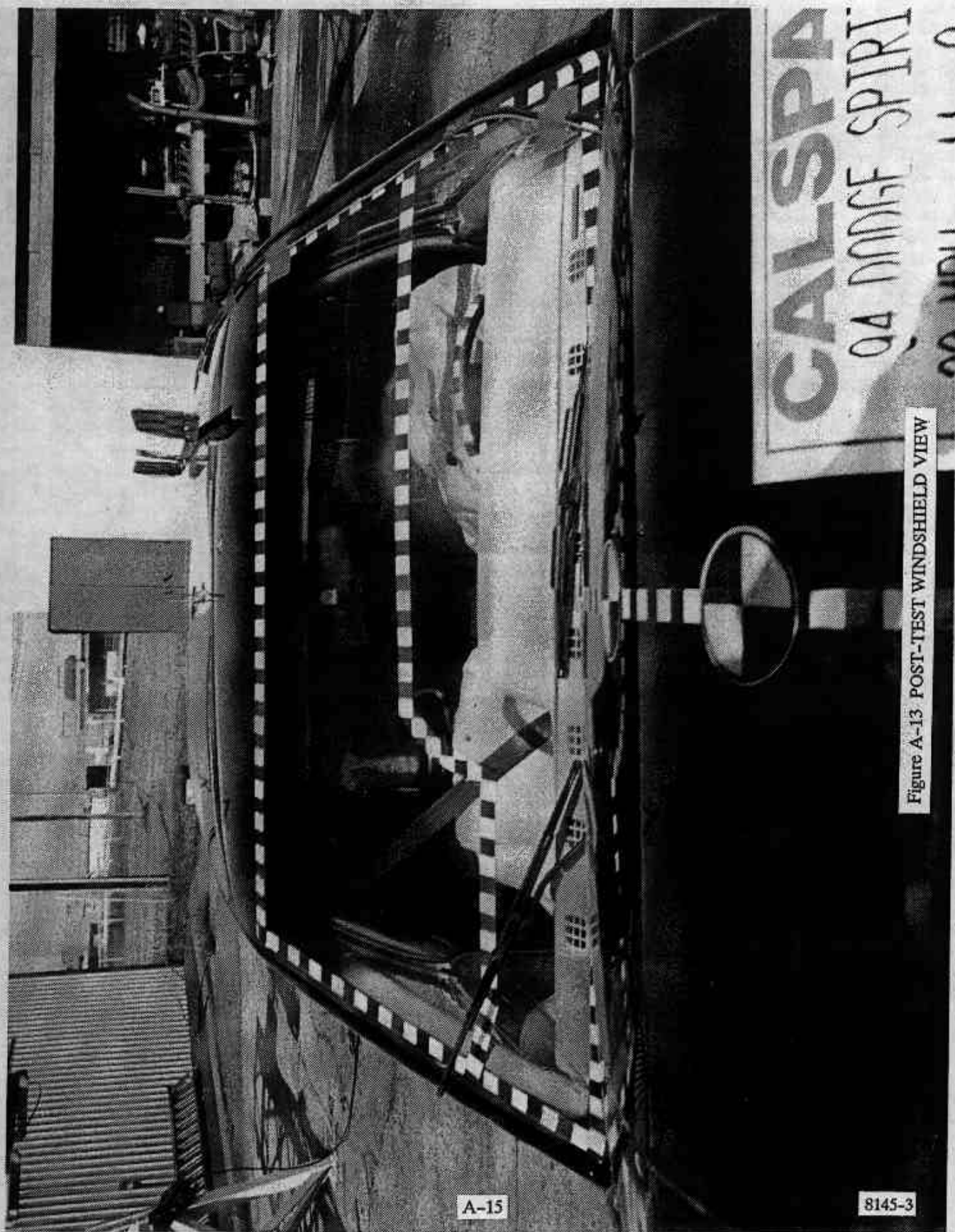


Figure A-13. POST-TEST WINDSHIELD VIEW

A-15

8145-3

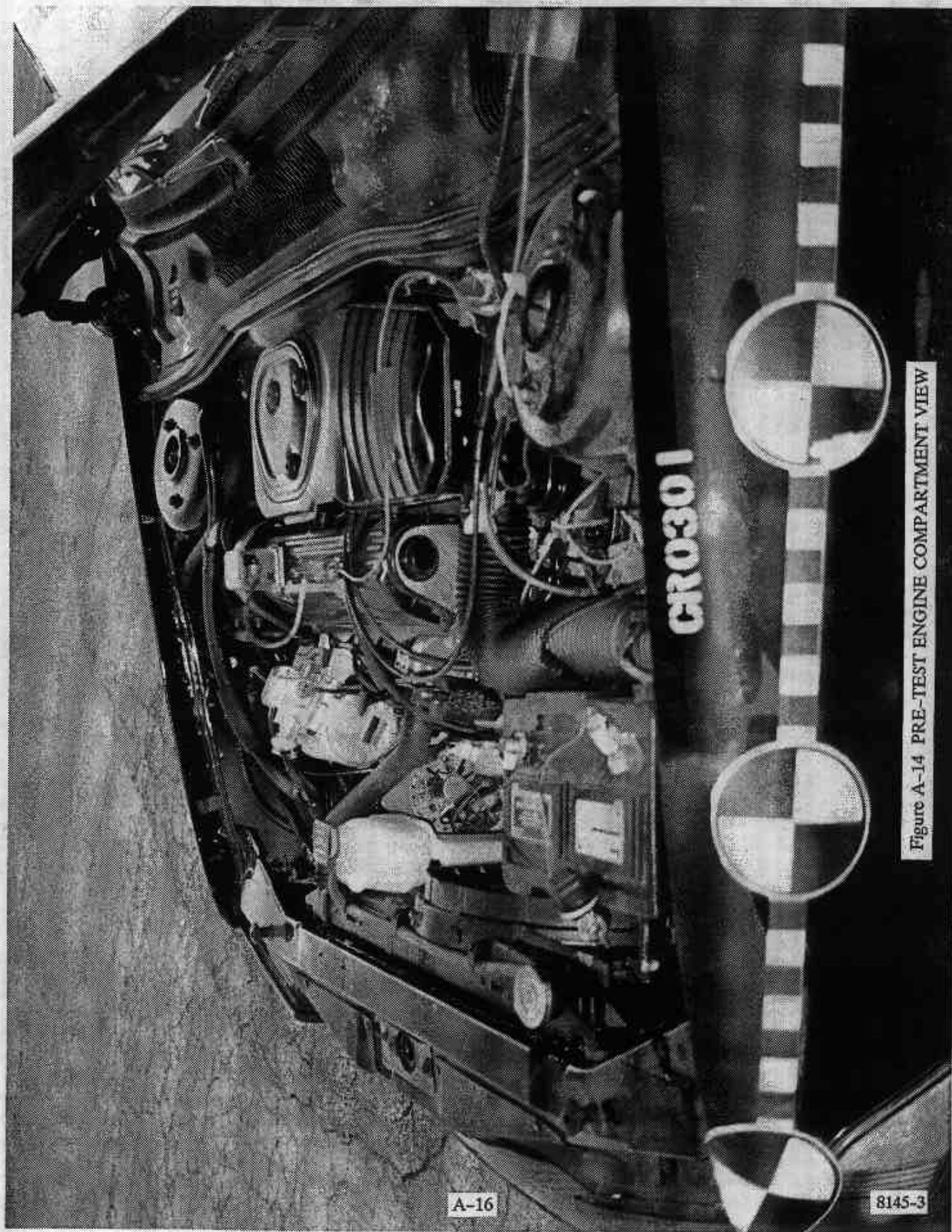


Figure A-14 PRE-TEST ENGINE COMPARTMENT VIEW

A-16

8145-3

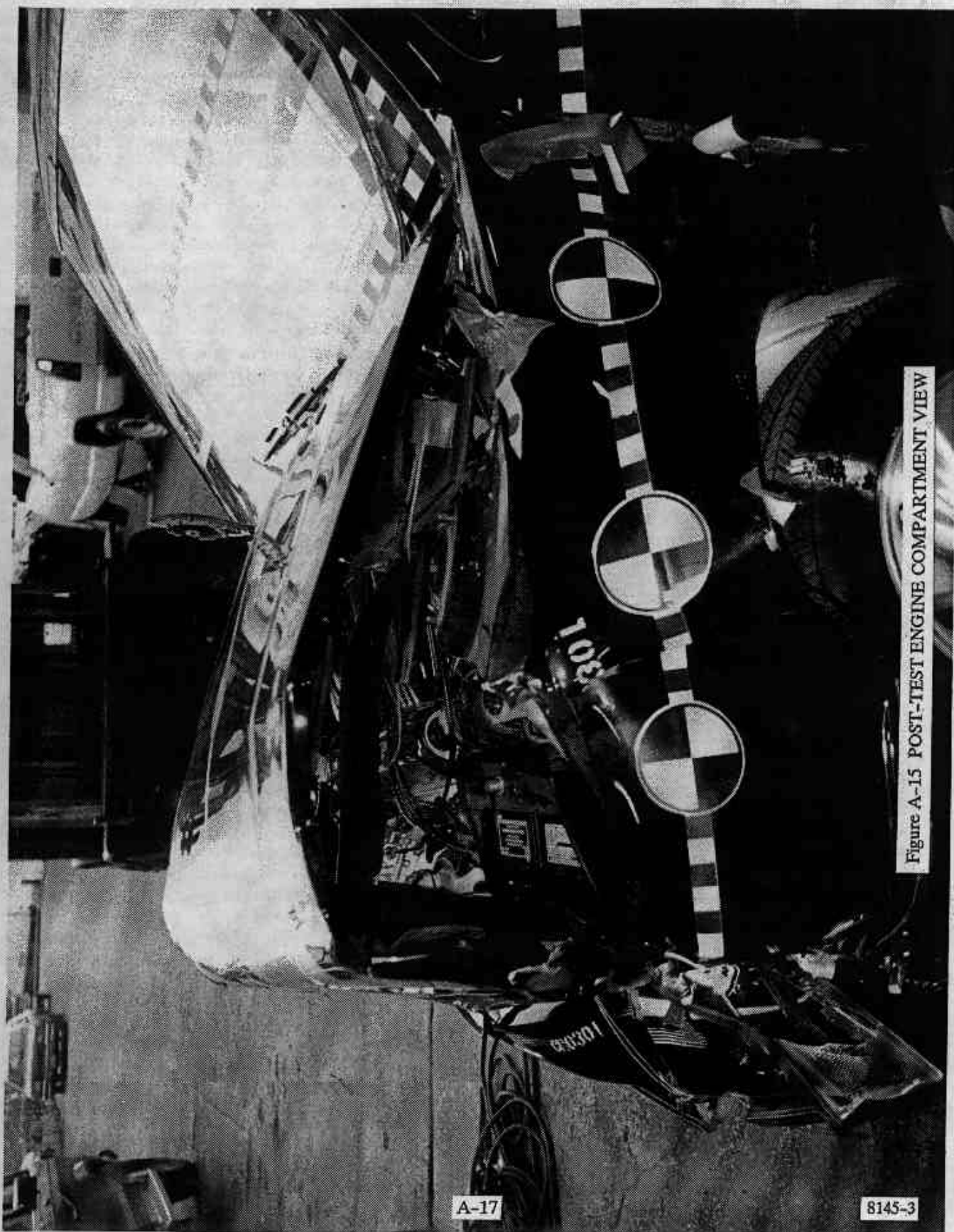


Figure A-15 POST-TEST ENGINE COMPARTMENT VIEW

A-17

8145-3

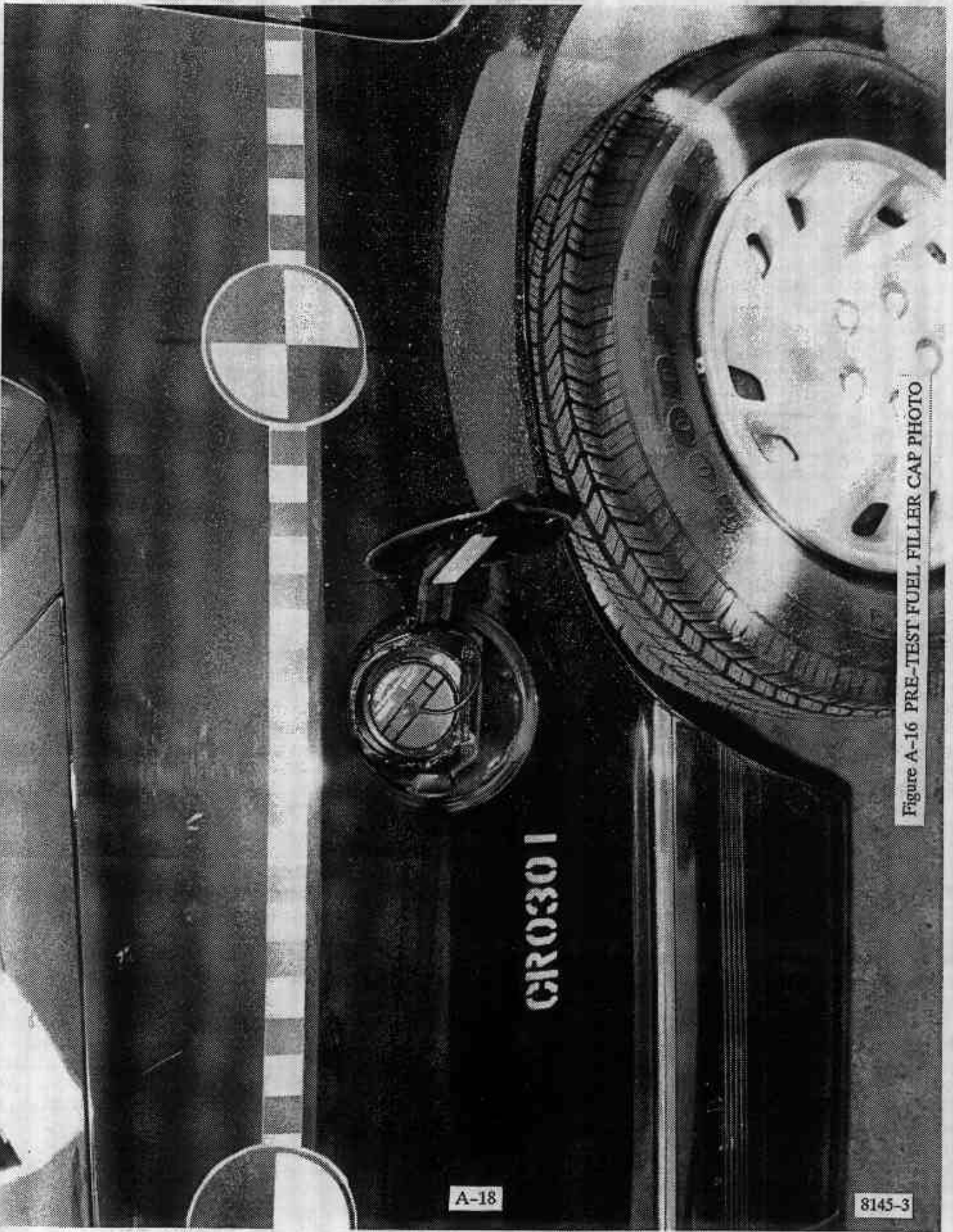


Figure A-16 PRE-TEST FUEL FILLER CAP PHOTO

A-18

8145-3

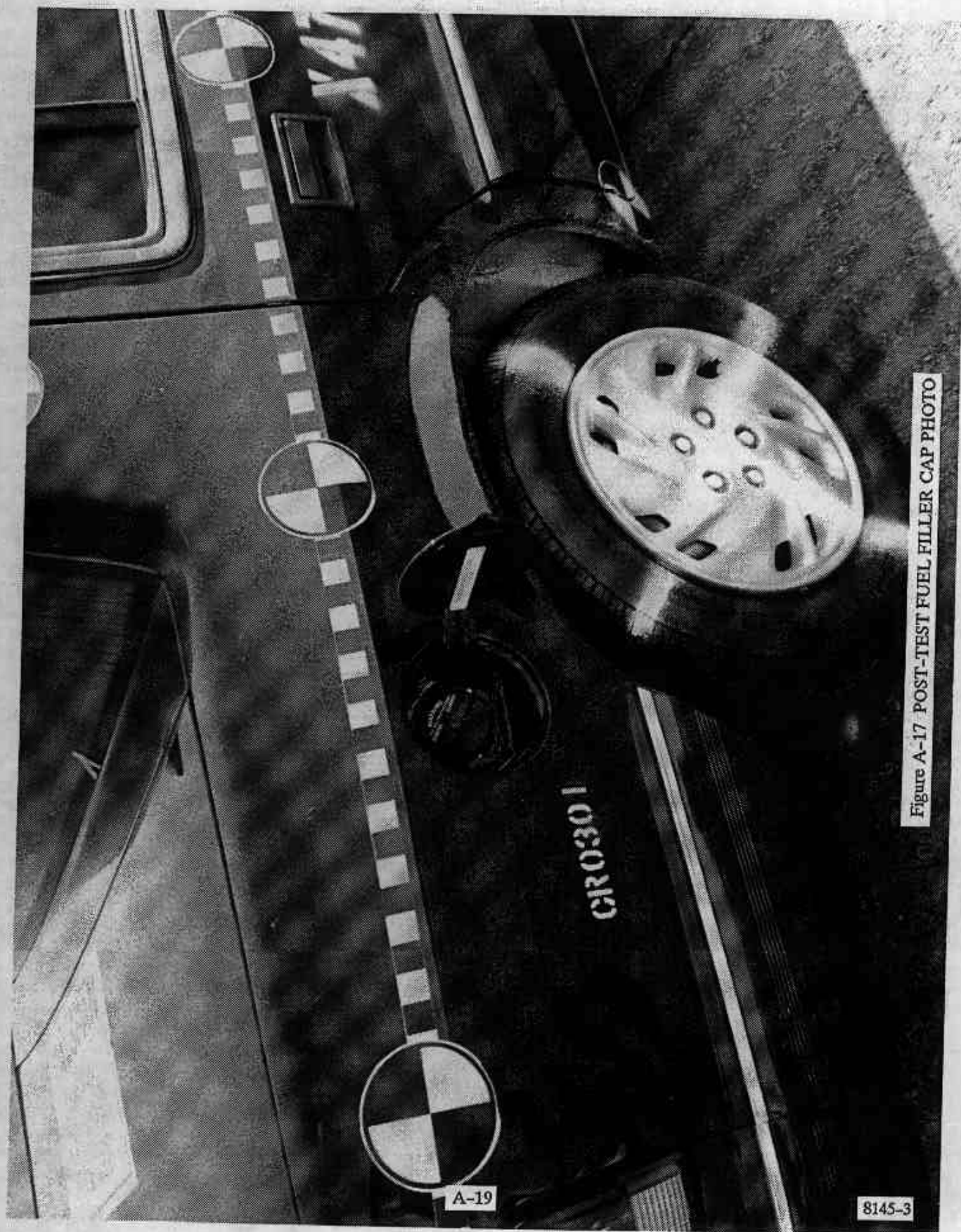


Figure A-17 POST-TEST FUEL FILLER CAP PHOTO

A-19

8145-3

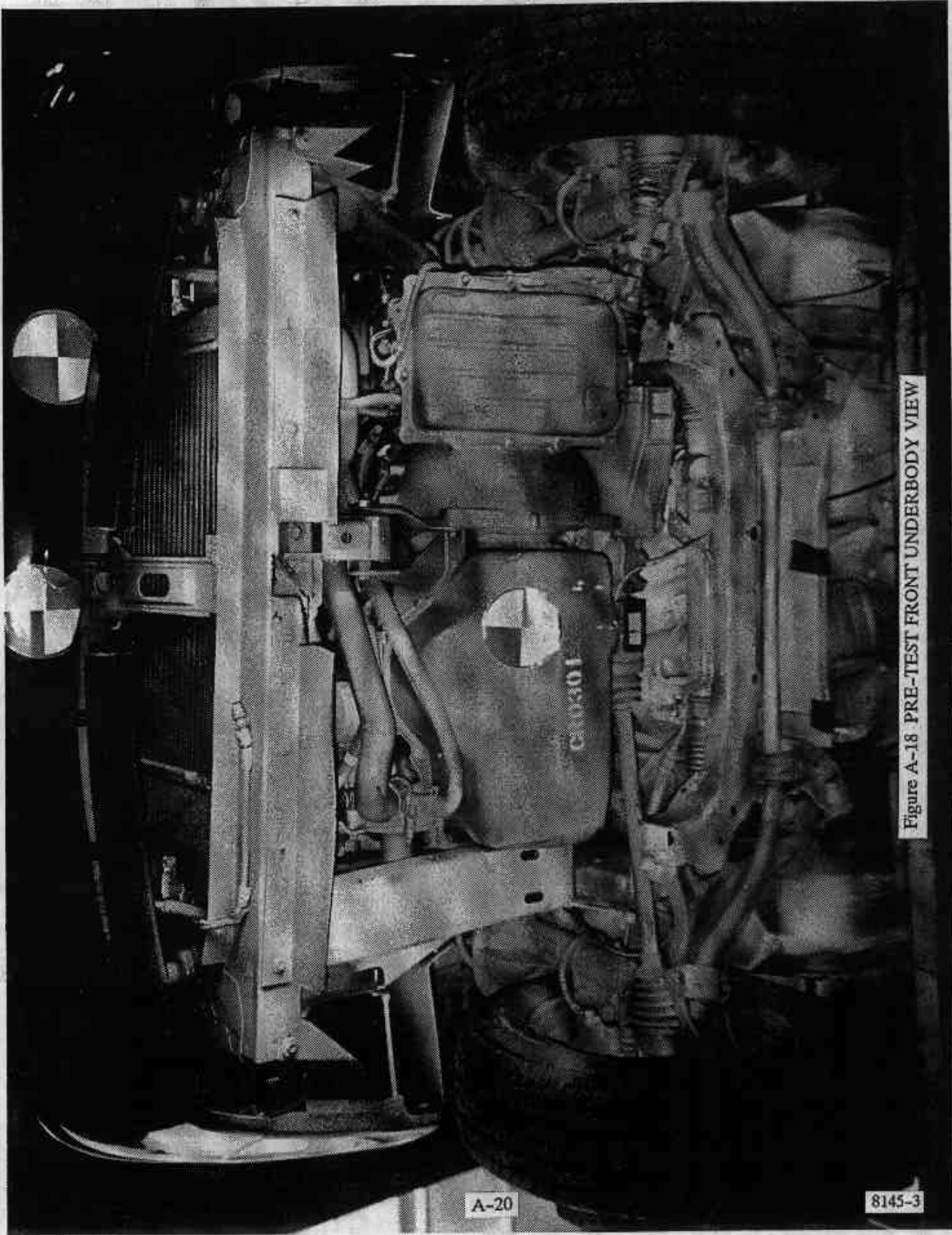


Figure A-18 PRE-TEST FRONT UNDERBODY VIEW

A-20

8145-3

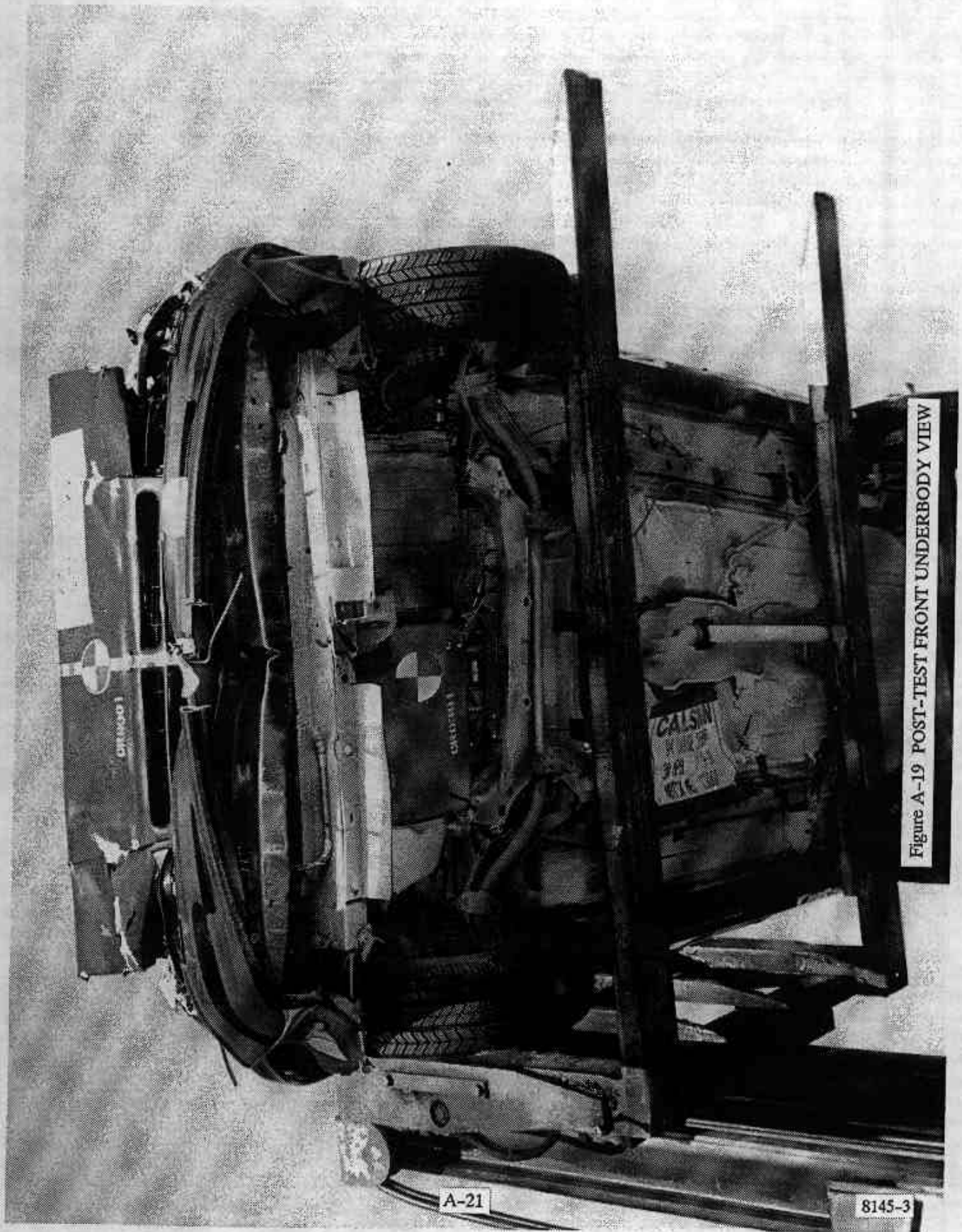


Figure A-19 POST-TEST FRONT UNDERBODY VIEW

A-21

8145-3

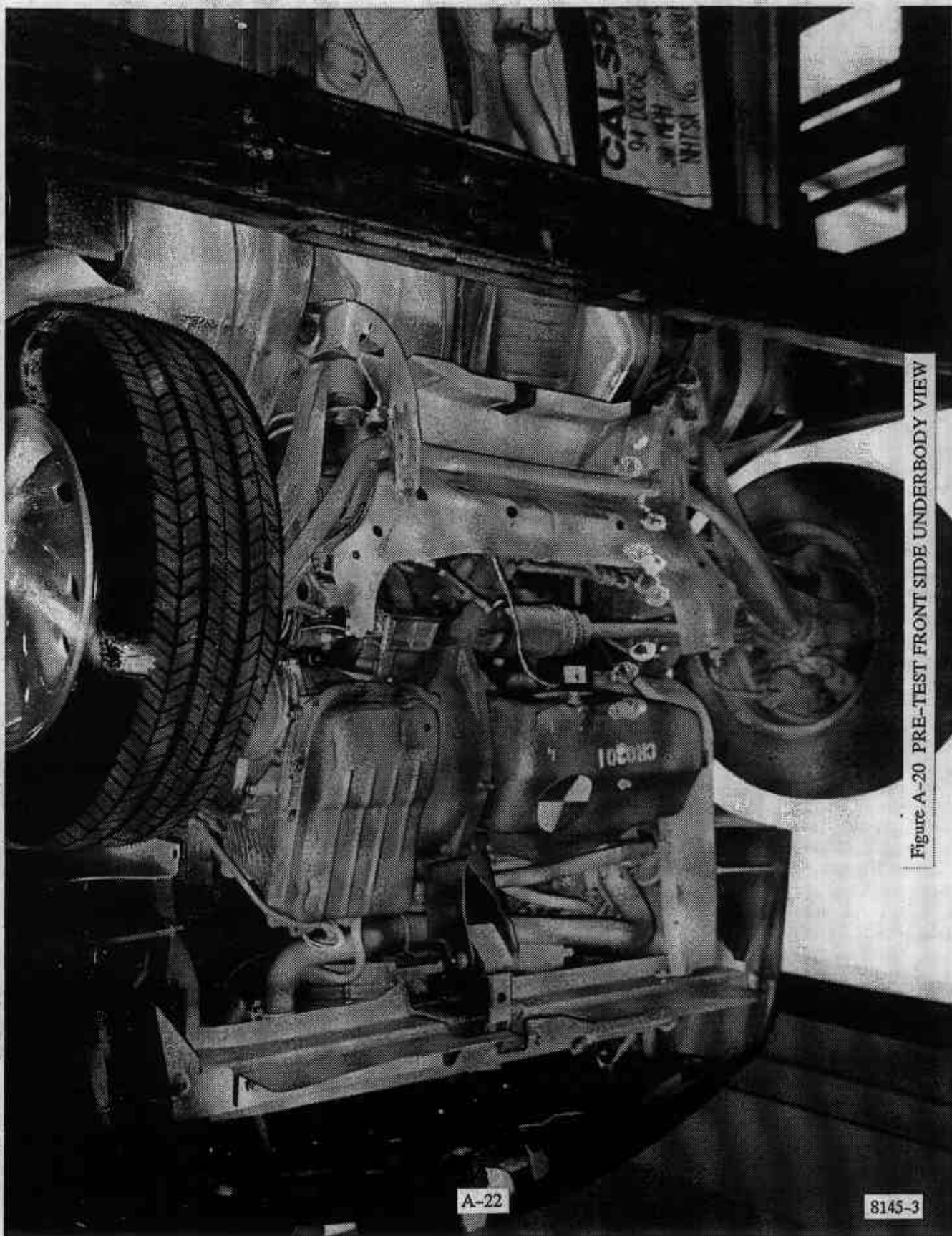


Figure A-20 PRE-TEST FRONT SIDE UNDERBODY VIEW

A-22

8145-3



Figure A-21 POST-TEST FRONT SIDE UNDERBODY VIEW

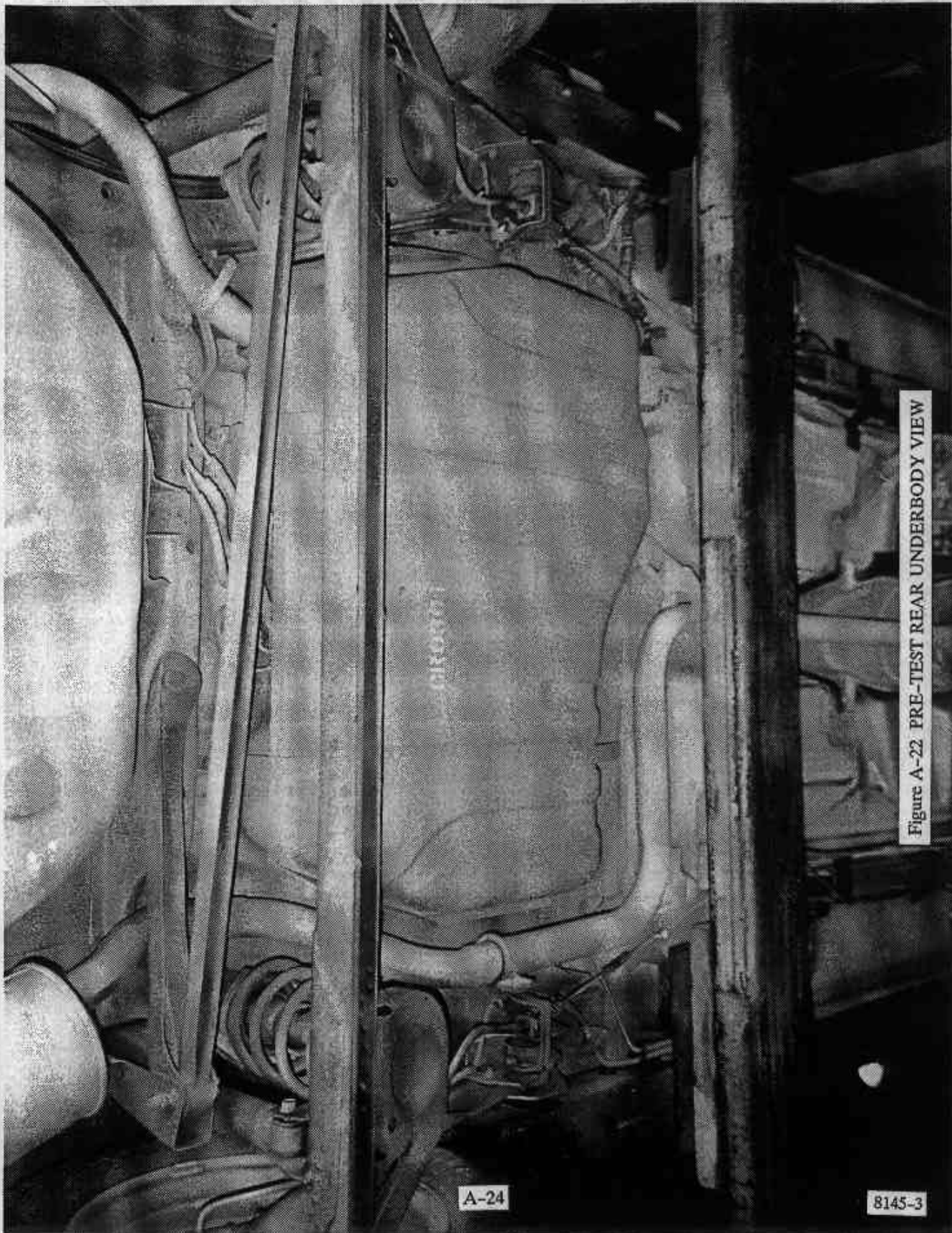


Figure A-22 PRE-TEST REAR UNDERBODY VIEW

A-24

8145-3

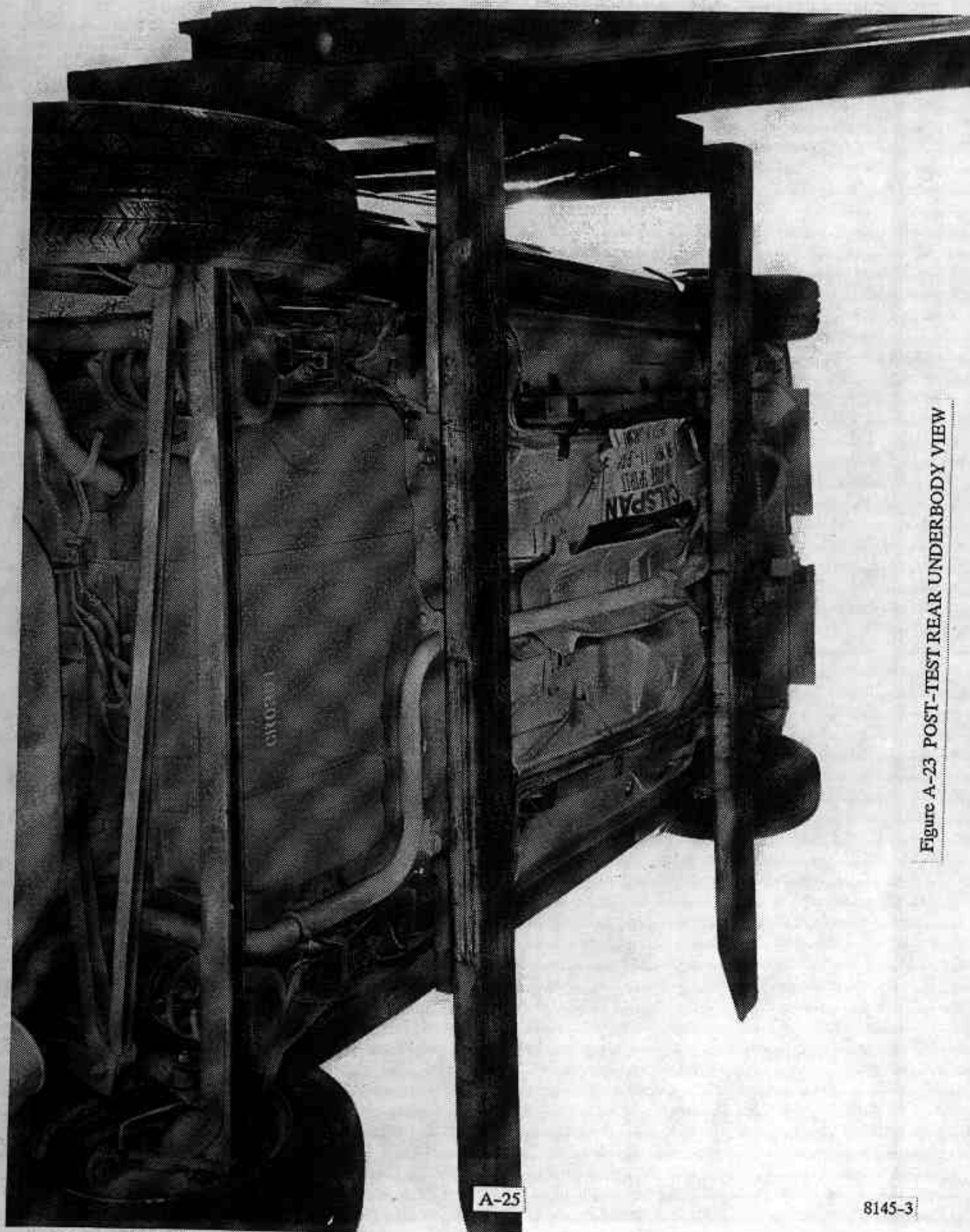


Figure A-23 POST-TEST REAR UNDERBODY VIEW

8145-3

MADE BY CHRYSLER CORPORATION

DATE OF MFR: 8-93

GROSS WEIGHT
1814 KG

GROSS WEIGHT
FRONT 1001 KG

GROSS WEIGHT
REAR 896 KG

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

VIN: 1B3AA46K9RF117551

TYPE: PASSENGER CAR



MDH: 081422 614

VEHICLE MADE IN U.S.A.

4648100

Figure A-24 CERTIFICATION LABEL

	REDUCED LOADING (IMPROVED RIDE)		VEHICLE CAPACITY OR LESS	
	1ST SEAT	2 PASS.	2 PASS.	3 PASS.
2ND SEAT			2 PASS. <td>3 PASS.</td>	3 PASS.
LOADAGE		0		115 LB-52 kg
TOTAL		4 PASS.		5 PASS.
TOTAL WEIGHT		600 LB 272 kg		1015 LB 460 kg
TIRE PRESSURE COLD	32 psi	35 psi		
	220 kPa	240 kPa		
	FRONT & REAR	FRONT & REAR		
* REDUCE VEHICLE CAPACITY TO 2 PASSENGERS IN 1ST SEAT (865 LBS-392 kg-5 PASS. TOTAL) WHEN EQUIPPED WITH BUCKET SEATS WITHOUT CENTER SEAT				
MINIMUM TIRE SIZE P185/70R14 STANDARD LOAD				
SEE OWNERS MANUAL FOR OPTIONAL TIRES, HIGH SPEED OPERATION & ADDITIONAL DATA				
PRINTED IN USA				4284 946

Figure A-25 TIRE PLACARD



Figure A-26 PRE-TEST DRIVER DUMMY POSITION VIEW

A-28

8145-3



Figure A-27 POST-TEST DRIVER DUMMY POSITION VIEW

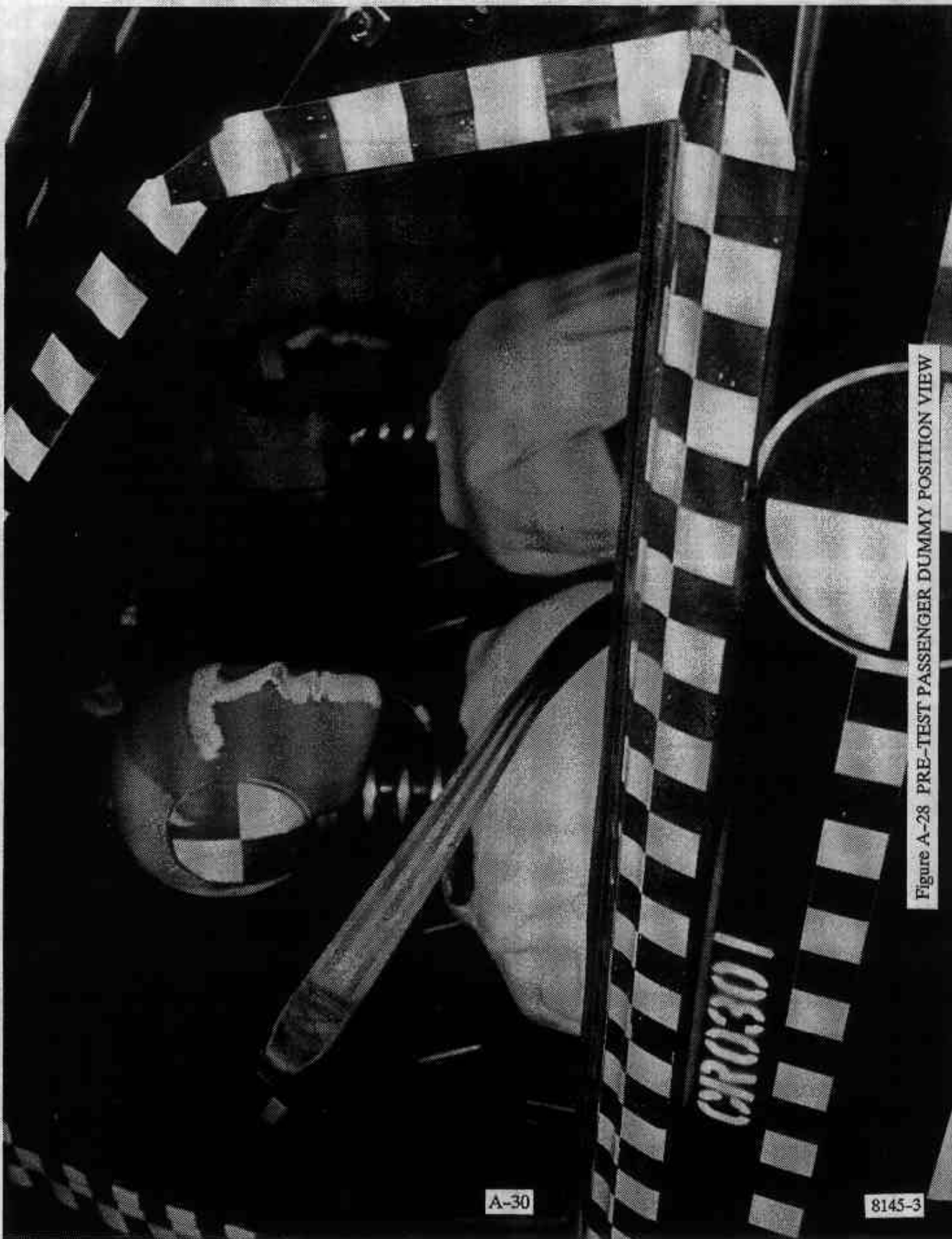


Figure A-28 PRE-TEST PASSENGER DUMMY POSITION VIEW

A-30

8145-3



Figure A-29 POST-TEST PASSENGER DUMMY POSITION VIEW

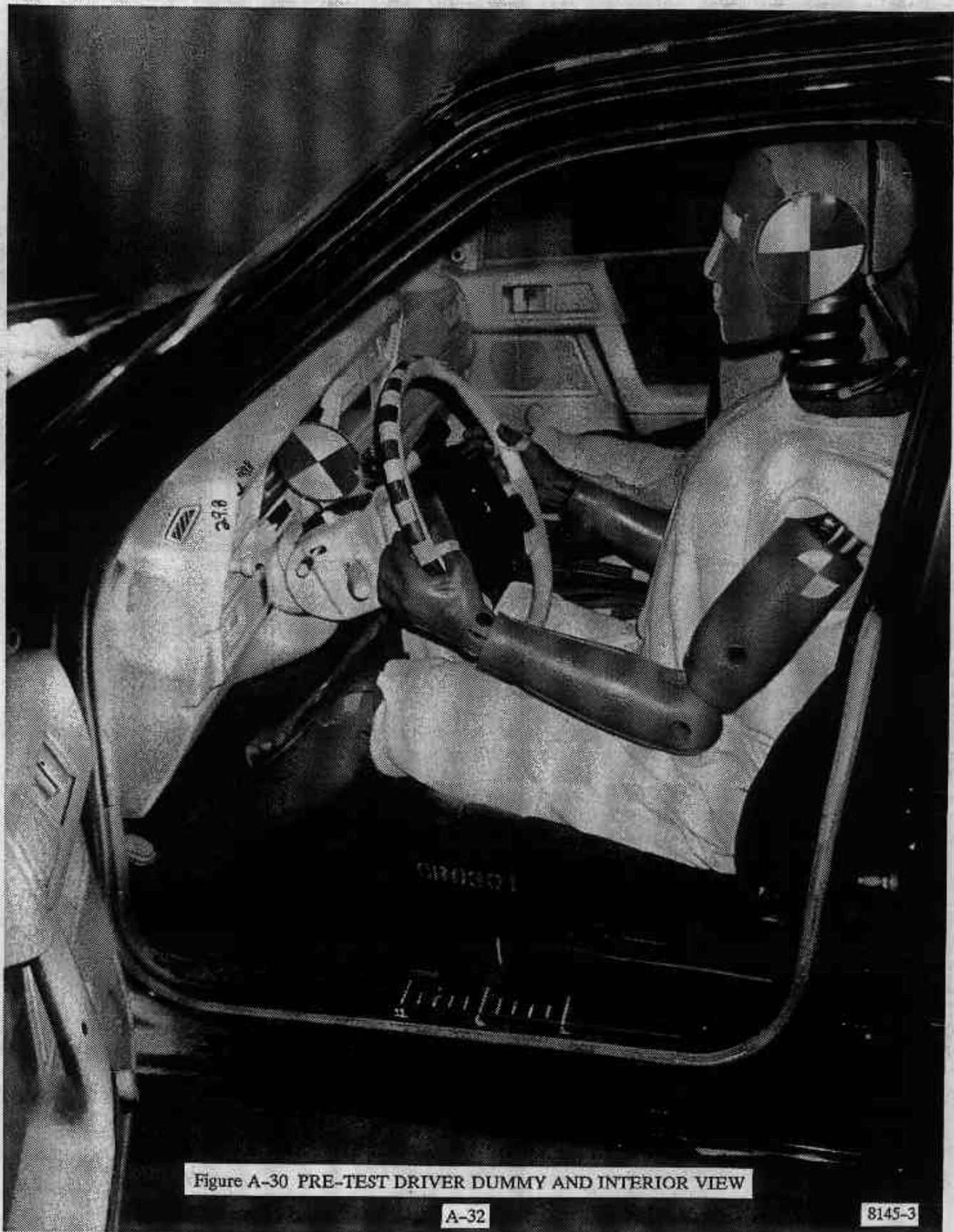


Figure A-30 PRE-TEST DRIVER DUMMY AND INTERIOR VIEW

A-32

8145-3



Figure A-31 POST-TEST DRIVER DUMMY AND INTERIOR VIEW

A-33

8145-3



Figure A-32 PRE-TEST PASSENGER DUMMY AND INTERIOR VIEW

A-34

8145-3

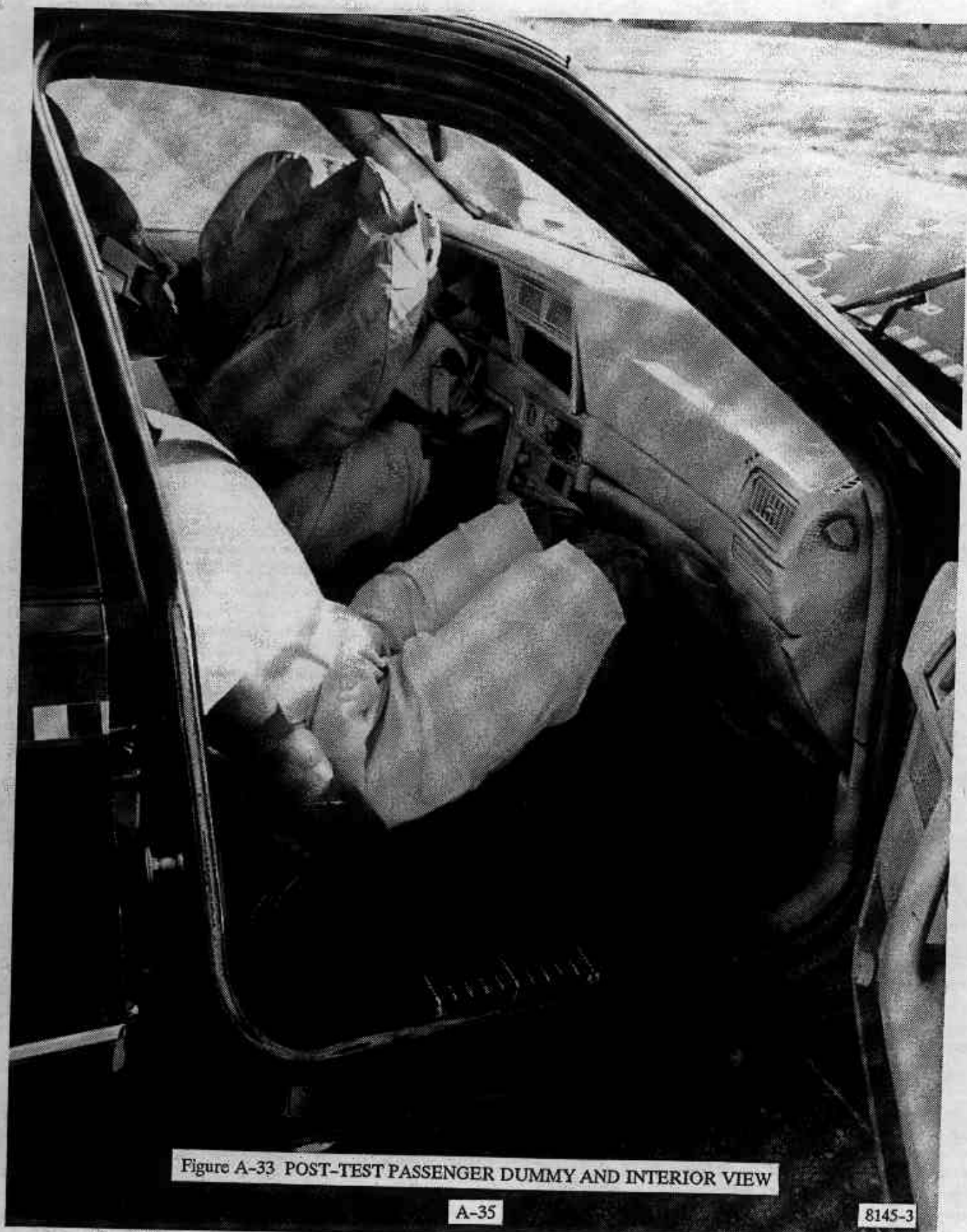


Figure A-33 POST-TEST PASSENGER DUMMY AND INTERIOR VIEW

A-35

8145-3

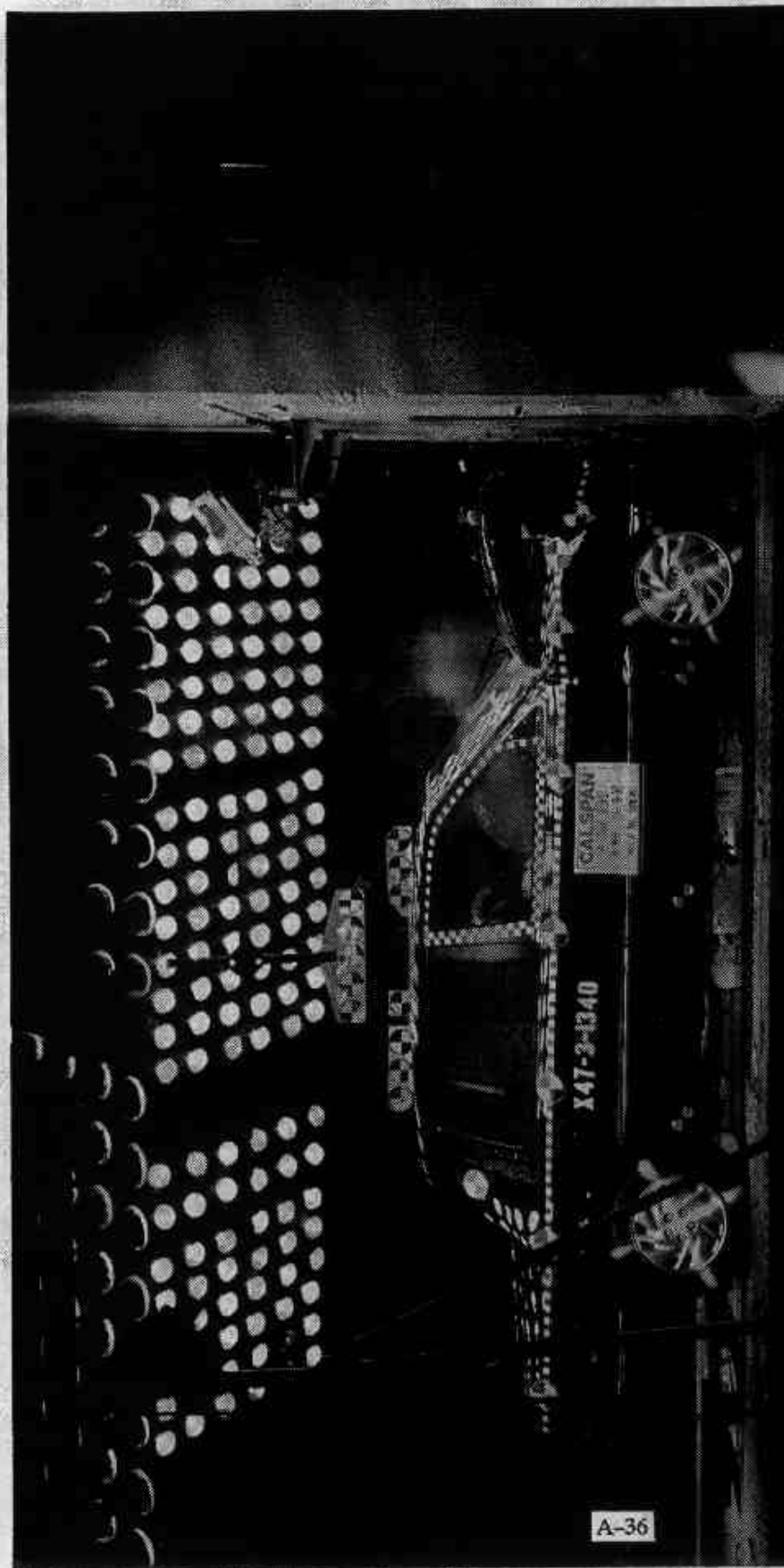


Figure A-34 VEHICLE IMPACT

A-36

8145-3



Figure A-35 POST-TEST DRIVER AIRBAG VIEW

A-37

8145-3

Appendix B

VEHICLE AND DUMMY RESPONSE DATA

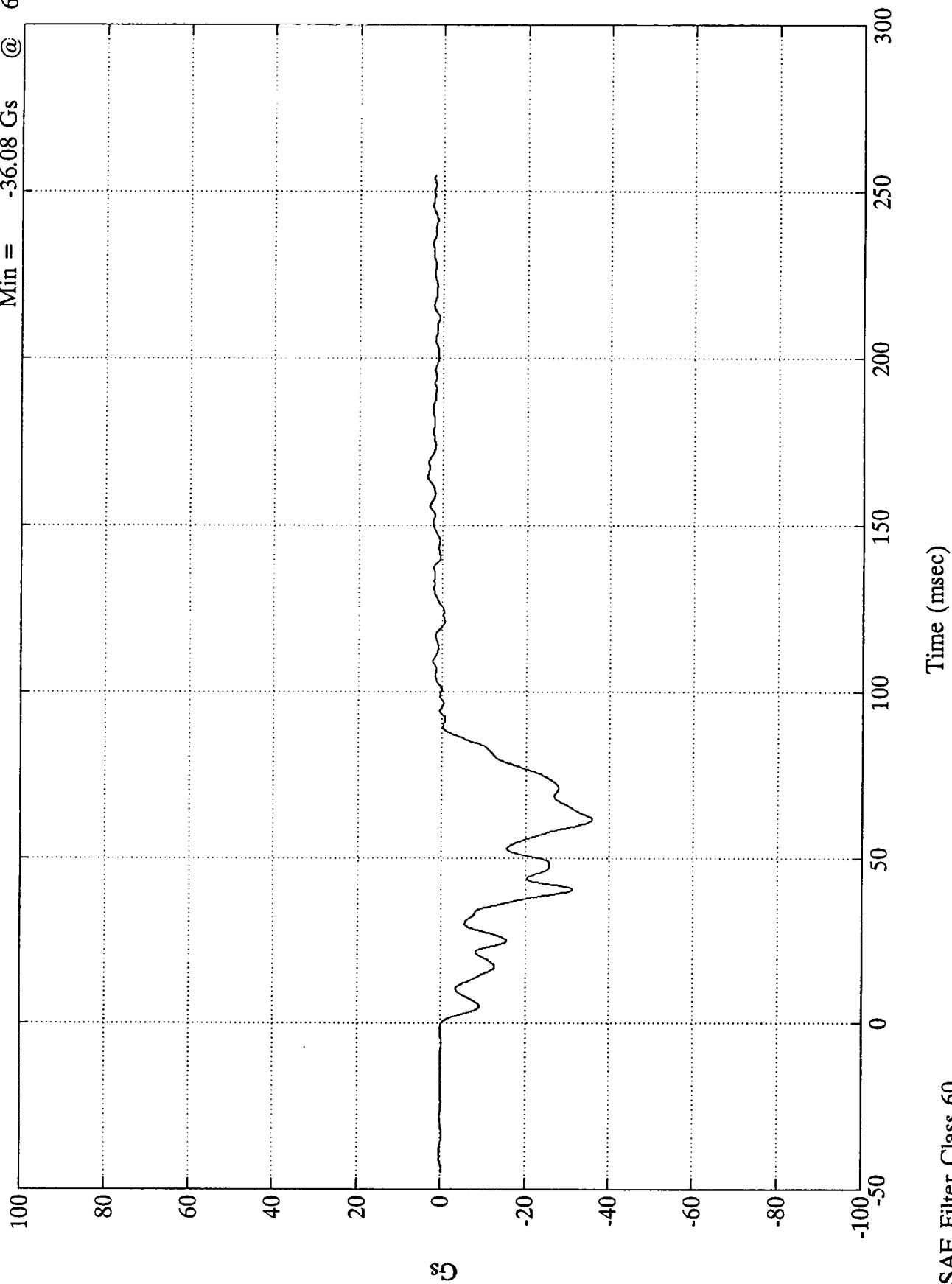
TEST NO. CR0301

VEHICLE

SAE FILTER CHANNEL CLASS

60

L. Rear X-member X (#1)
 Max = 3.58 Gs @ 164.76 msec
 Min = -36.08 Gs @ 61.56 msec

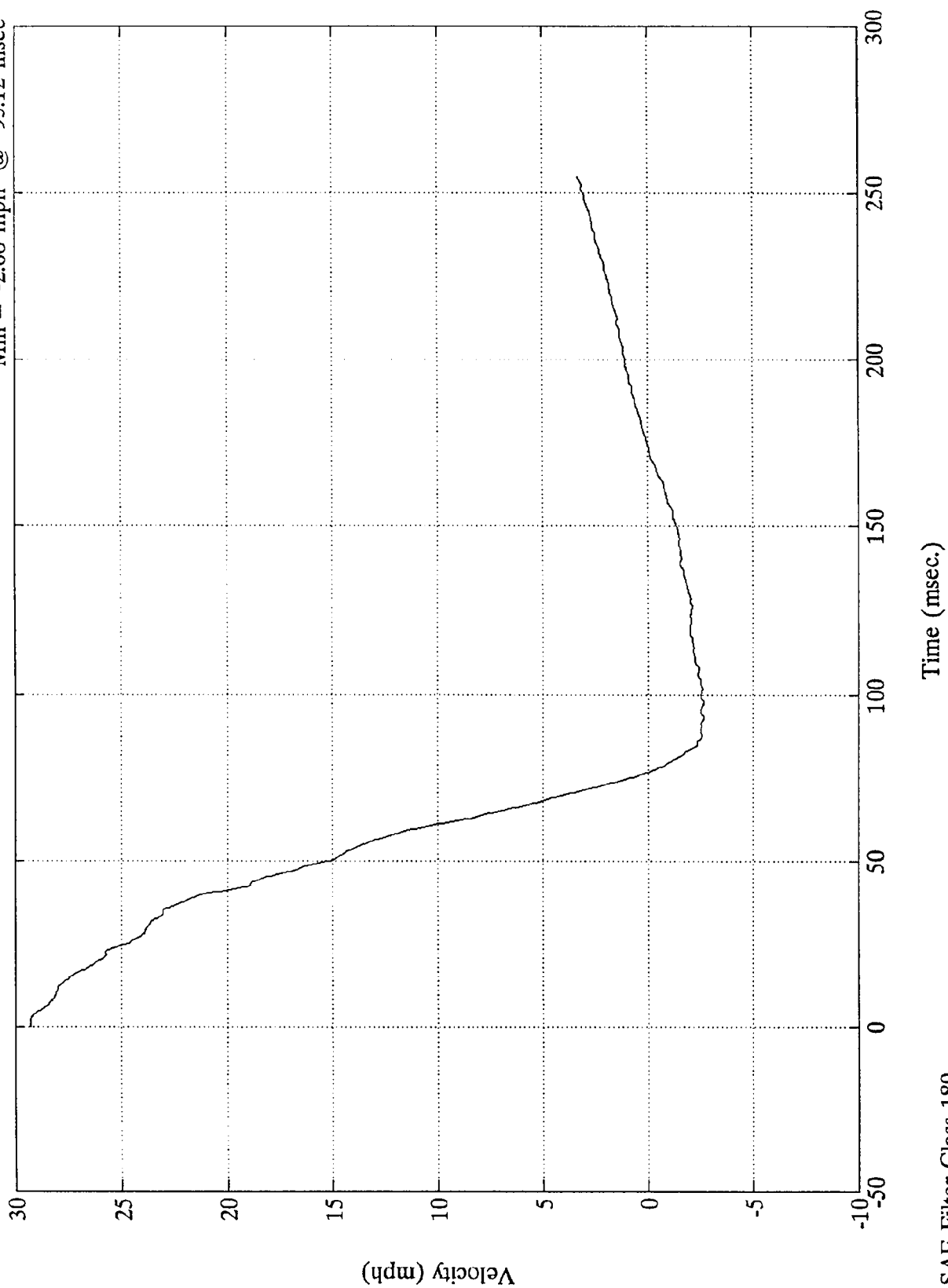


SAE Filter Class 60

NHTSA 208 TEST #3 - 1994 Dodge Spirit

Max = 29.30 mph @ 0.72 msec
Min = -2.68 mph @ 93.12 msec

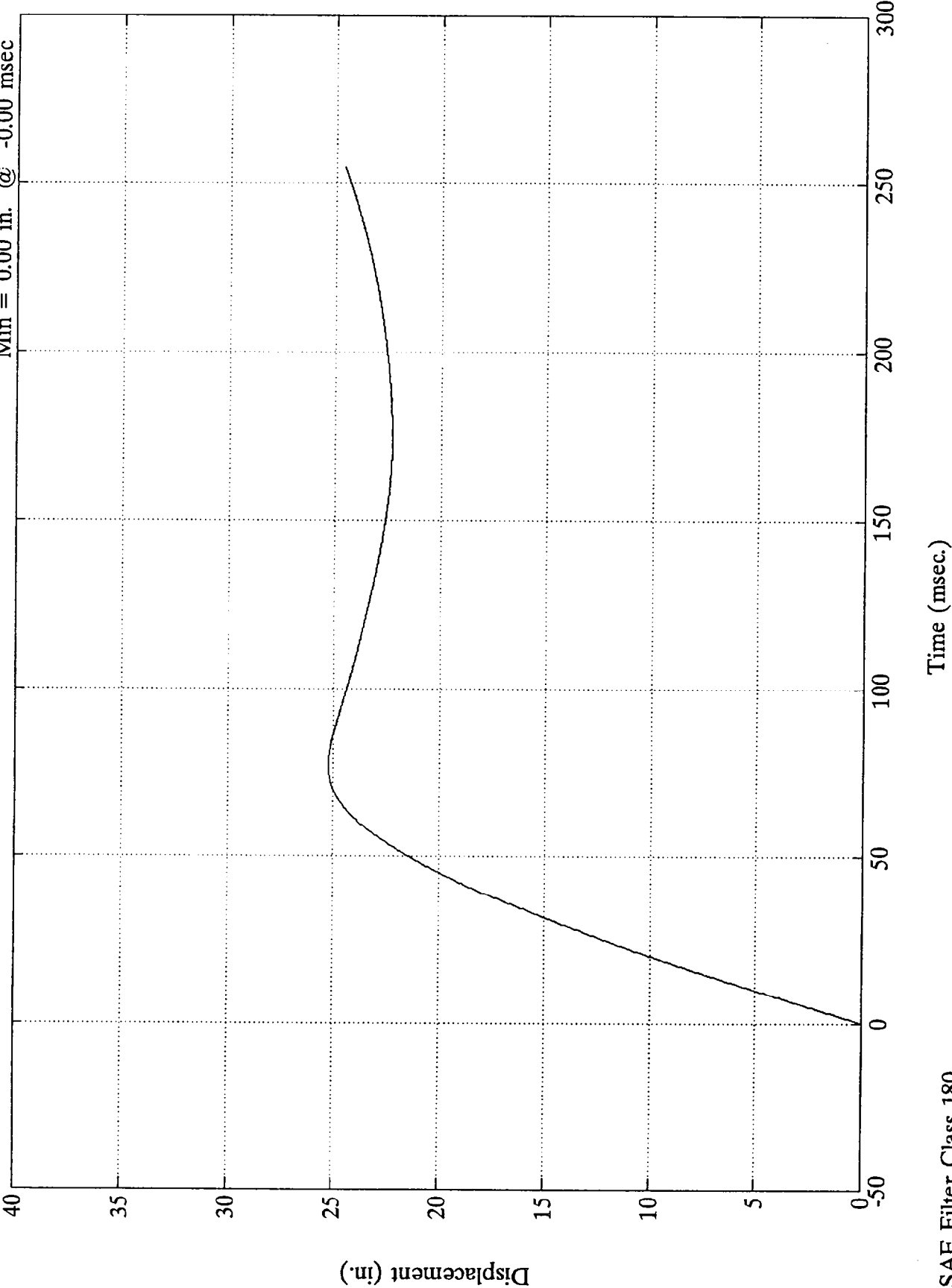
L. Rear X-member X (#1)



SAE Filter Class 180

L. Rear X-member X (#1)

Max = 25.25 in. @ 78.00 msec
Min = 0.00 in. @ -0.00 msec

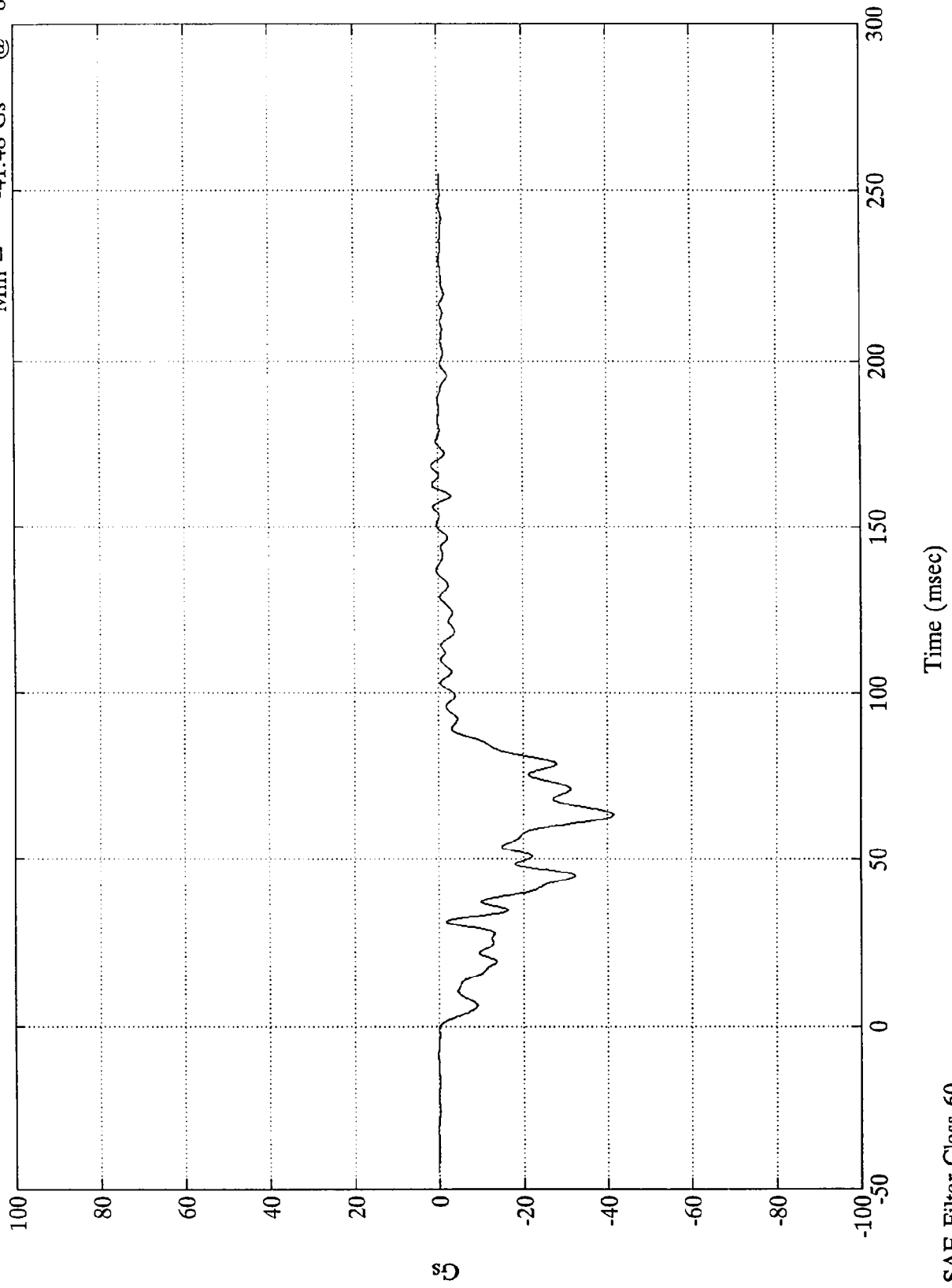


SAE Filter Class 180

NHTSA 208 TEST #3 - 1994 Dodge Spirit

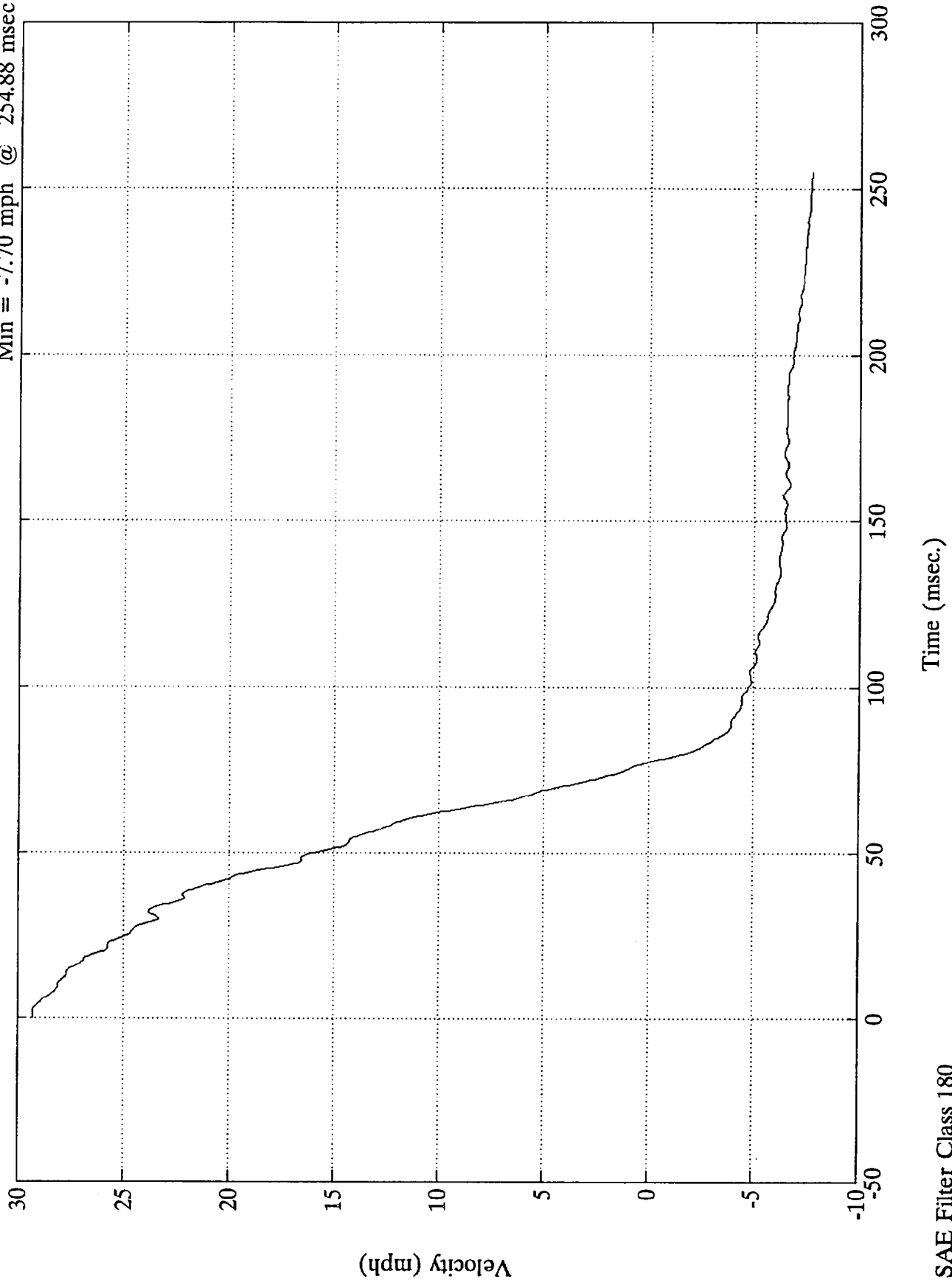
R. Rear X-member X (#2)

Max = 1.60 Gs @ 168.48 msec
 Min = -41.48 Gs @ 63.35 msec



SAE Filter Class 60

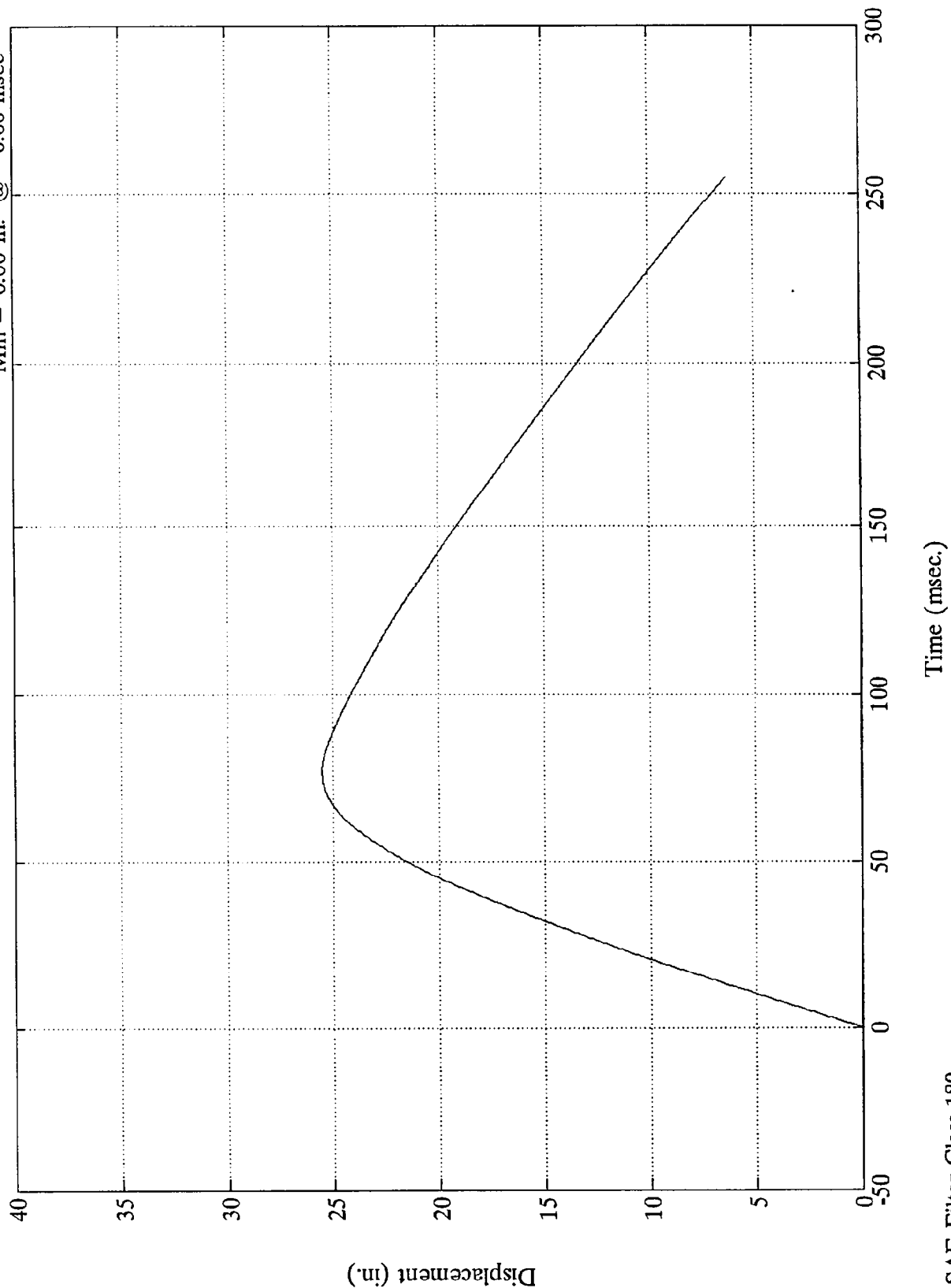
R. Rear X-member X (#2)
Max = 29.30 mph @ 1.92 msec
Min = -7.70 mph @ 254.88 msec



NHTSA 208 TEST #3 - 1994 Dodge Spirit

R. Rear X-member X (#2)

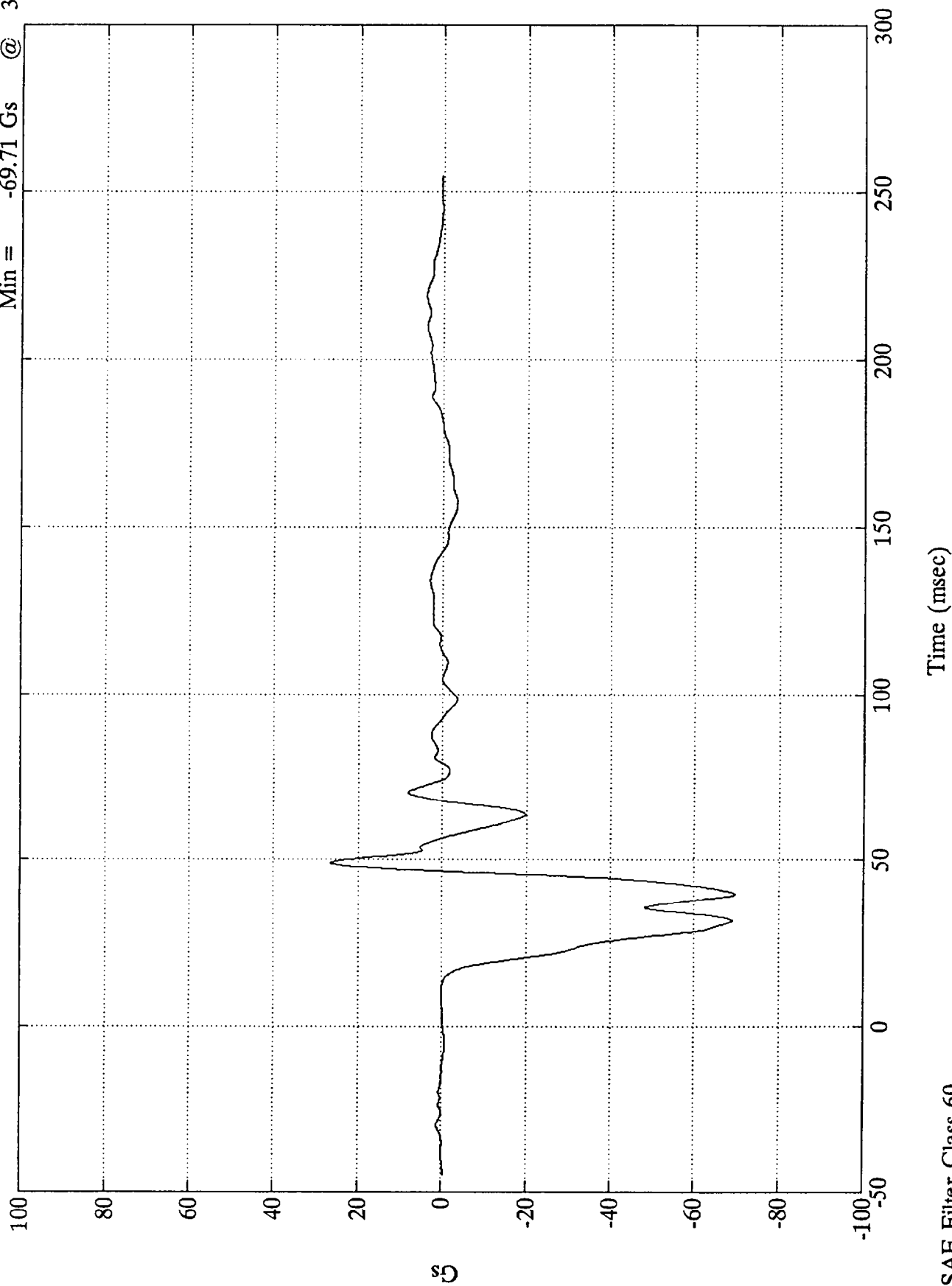
Max = 25.54 in. @ 78.72 msec
Min = 0.00 in. @ -0.00 msec



SAE Filter Class 180

Engine Top X (#3)

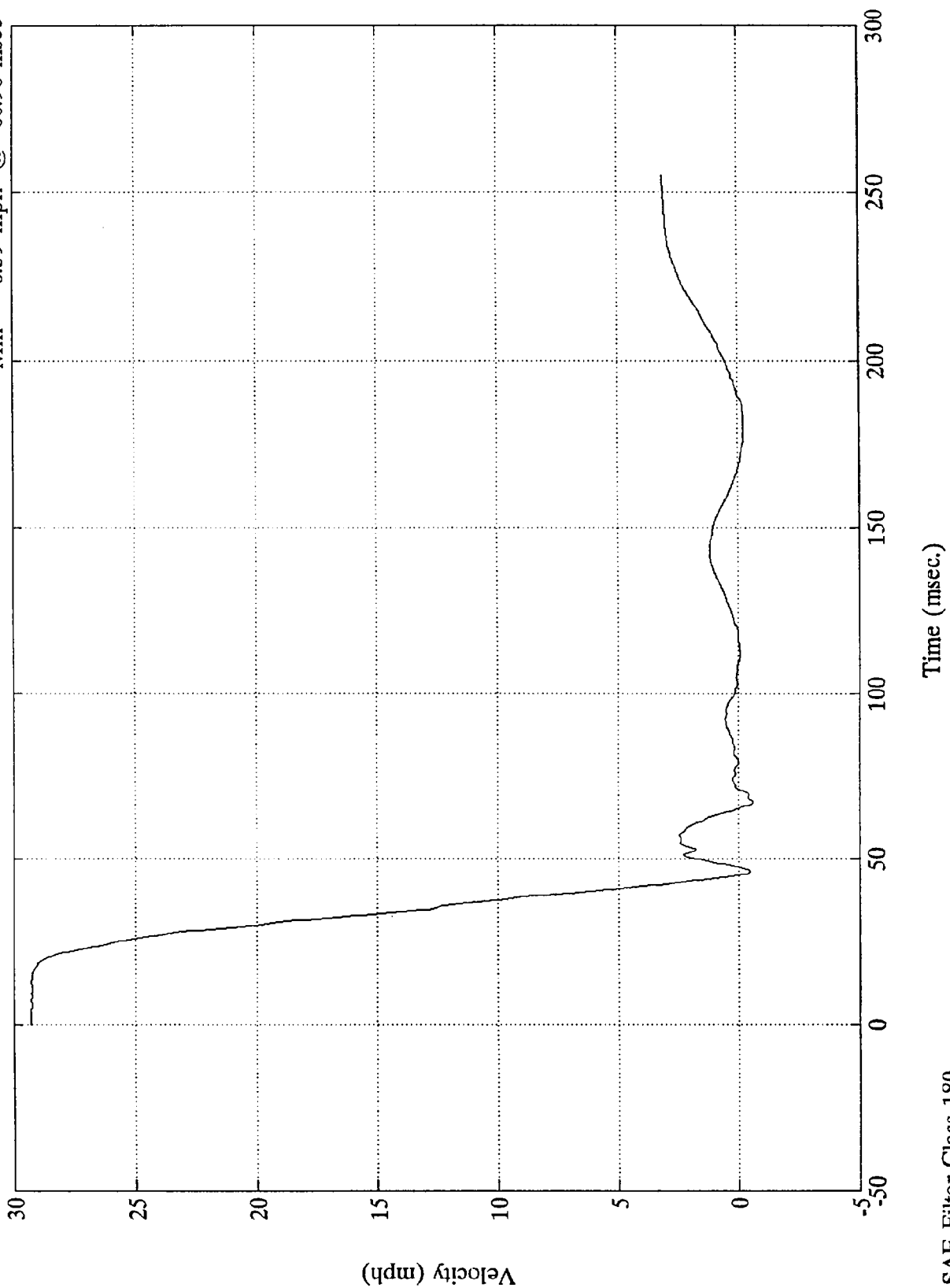
Max = 26.59 Gs @ 48.95 msec
 Min = -69.71 Gs @ 39.71 msec



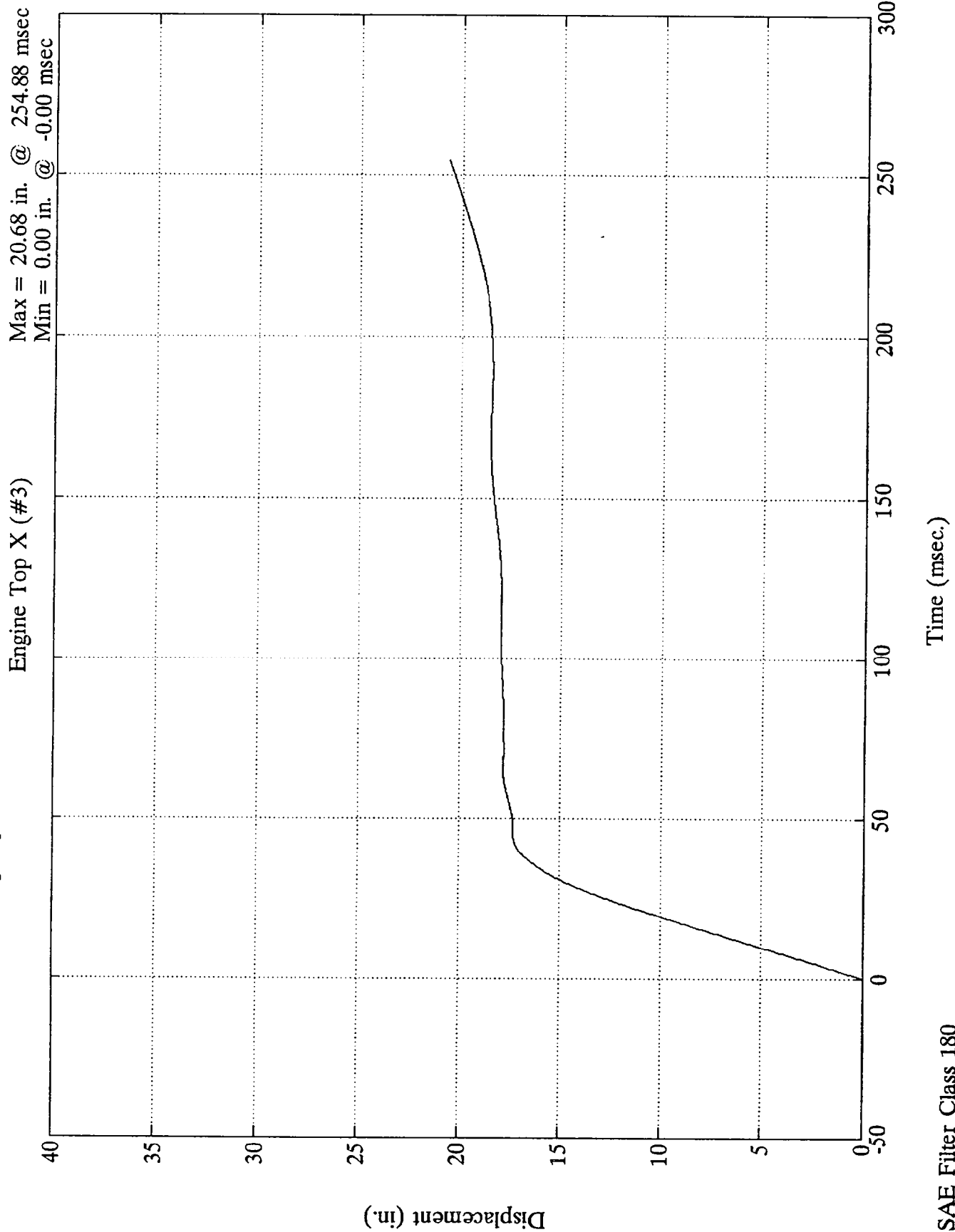
SAE Filter Class 60

NHTSA 208 TEST #3 - 1994 Dodge Spirit

Engine Top X (#3)
Max = 29.30 mph @ 1.68 msec
Min = -0.59 mph @ 66.96 msec



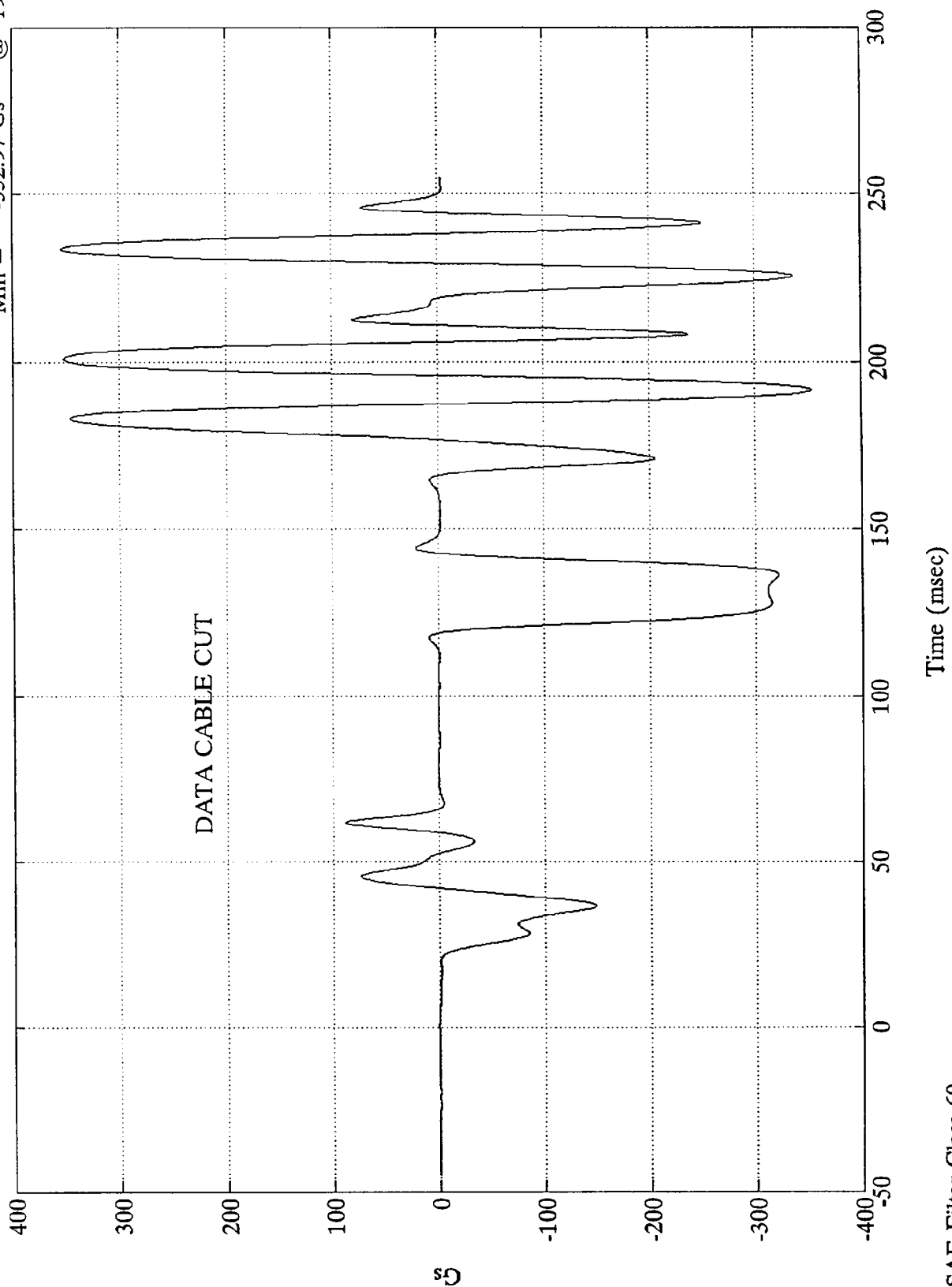
SAE Filter Class 180



NHTSA 208 TEST #3 - 1994 Dodge Spirit

Engine Bottom X (#4)

Max = 354.17 Gs @ 233.52 msec
Min = -352.97 Gs @ 191.88 msec



SAE Filter Class 60

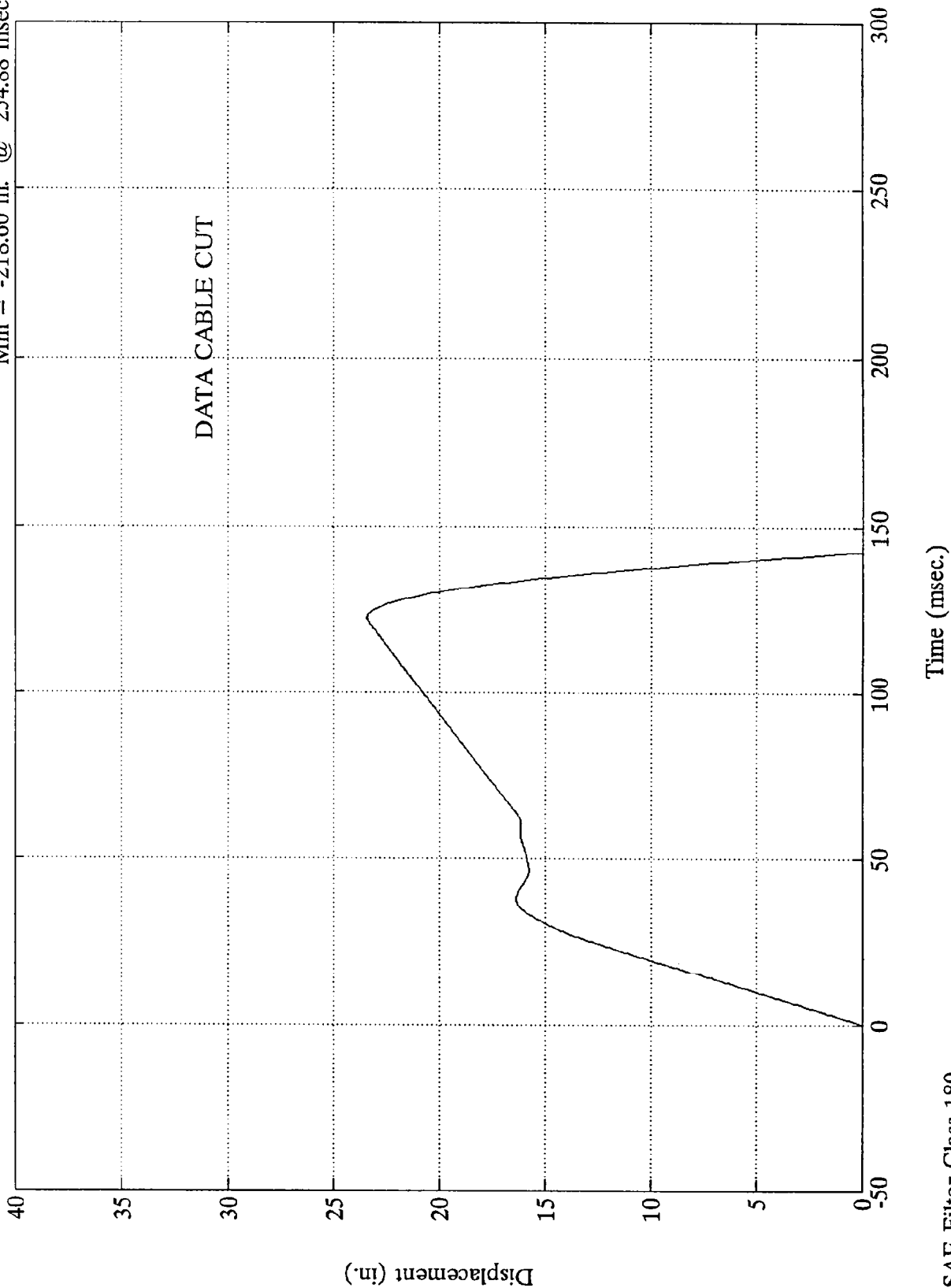
Engine Bottom X (#4) Max = 29.38 mph @ 6.00 msec
Min = -144.20 mph @ 178.08 msec



NHTSA 208 TEST #3 - 1994 Dodge Spirit

Engine Bottom X (#4)

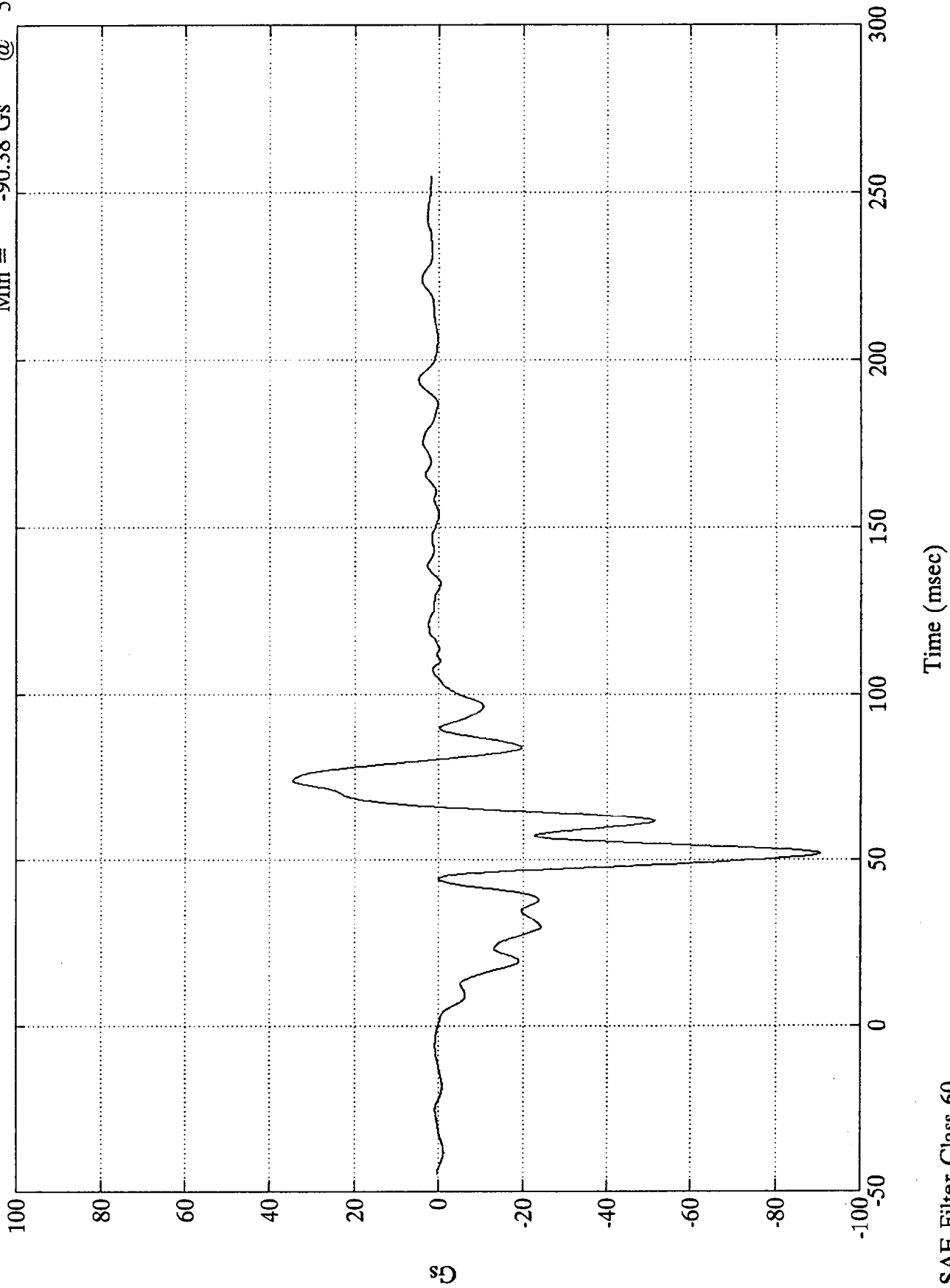
Max = 23.44 in. @ 122.64 msec
Min = -218.60 in. @ 254.88 msec



SAE Filter Class 180

R. Brake Caliper X (#5)

Max = 34.50 Gs @ 74.27 msec
Min = -90.38 Gs @ 51.84 msec

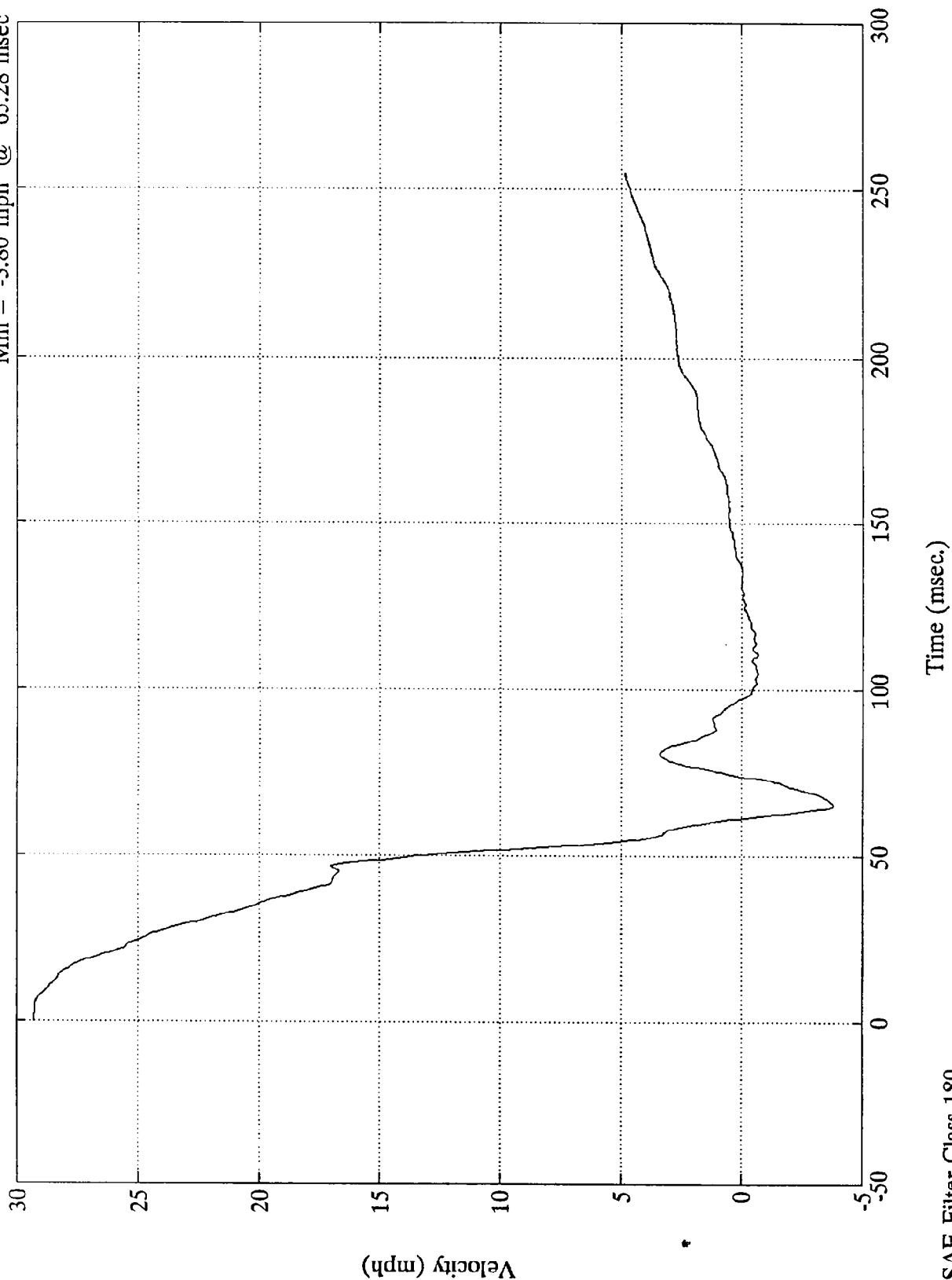


SAE Filter Class 60

NHTSA 208 TEST #3 - 1994 Dodge Spirit

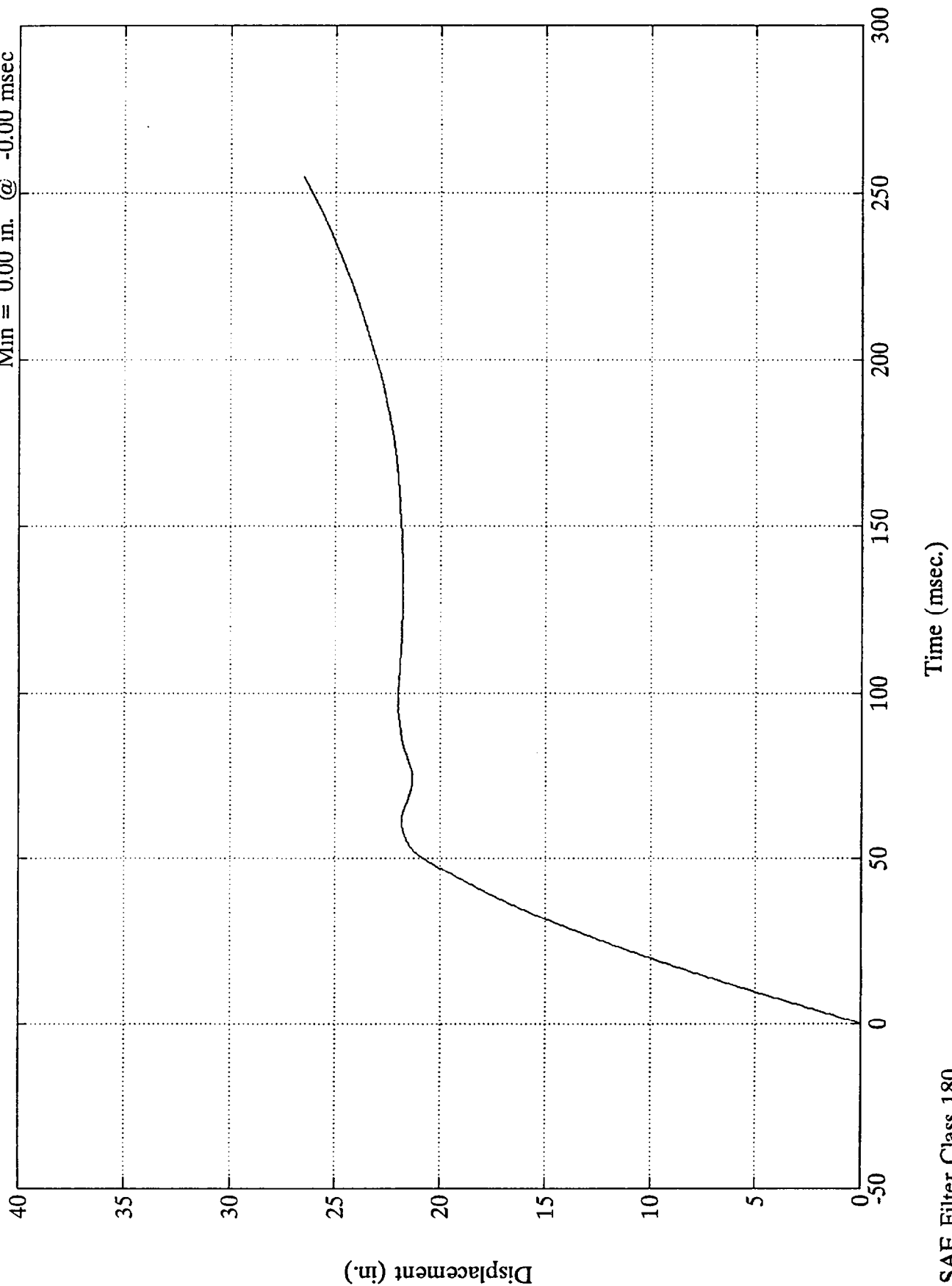
R. Brake Caliper X (#5)

Max = 29.30 mph @ 1.20 msec
Min = -3.80 mph @ 65.28 msec



SAE Filter Class 180

R. Brake Caliper X (#5)
Max = 26.53 in. @ 254.88 msec
Min = 0.00 in. @ -0.00 msec

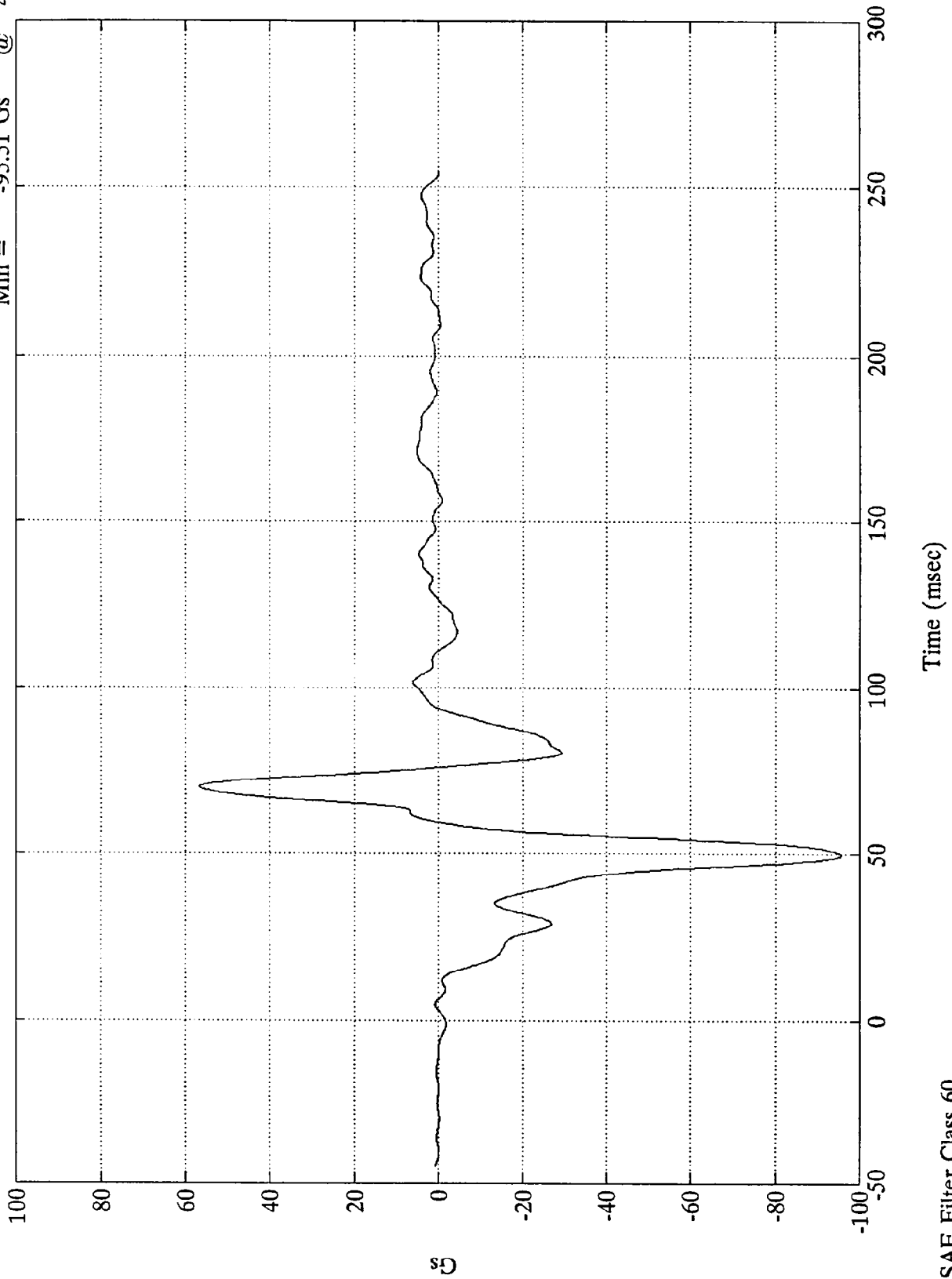


SAE Filter Class 180

NHTSA 208 TEST #3 - 1994 Dodge Spirit

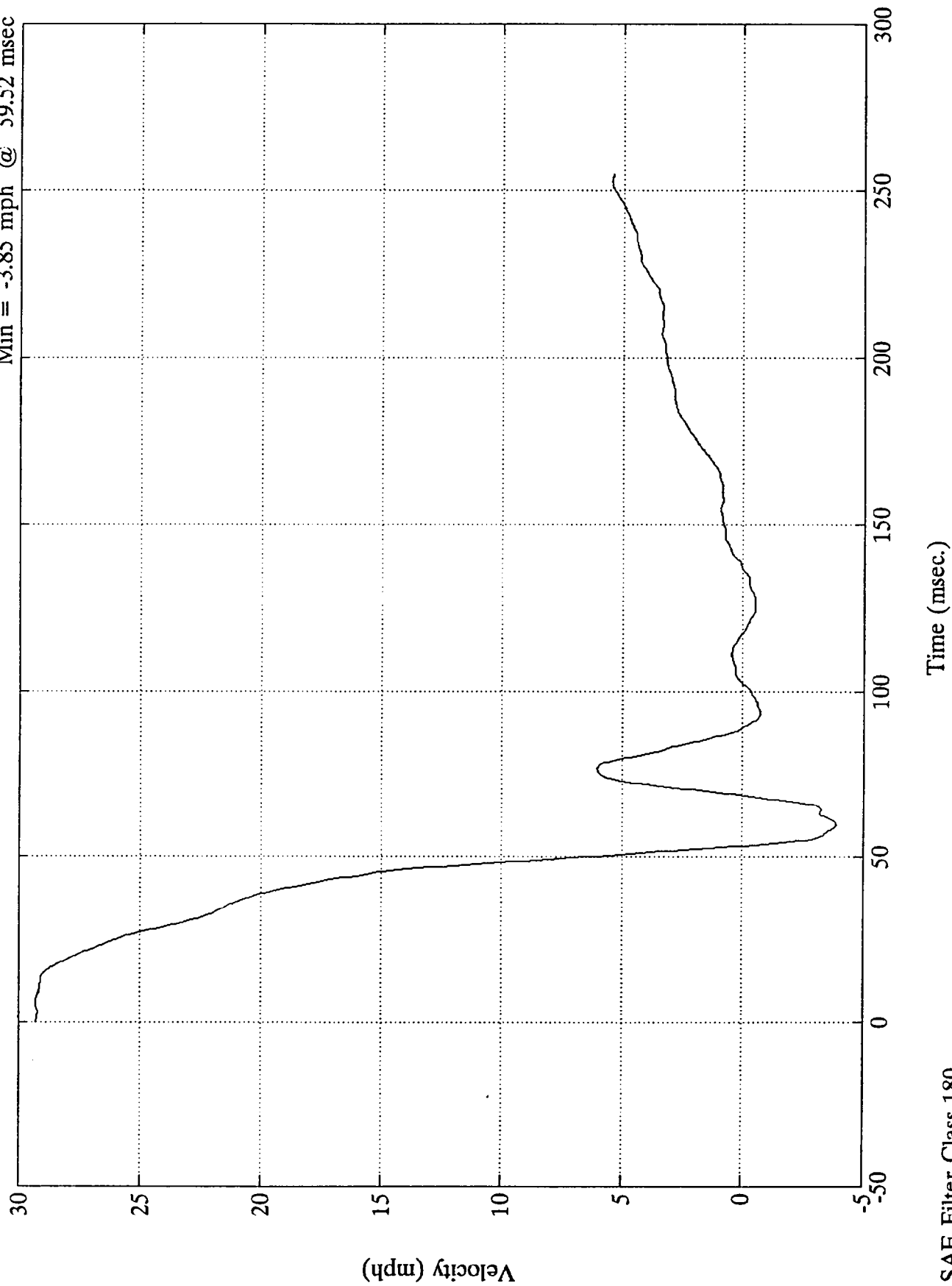
L. Brake Caliper X (#6)

Max = 56.68 Gs @ 70.08 msec
Min = -95.51 Gs @ 49.68 msec



SAE Filter Class 60

L. Brake Caliper X (#6)
Max = 29.32 mph @ 6.72 msec
Min = -3.85 mph @ 59.52 msec

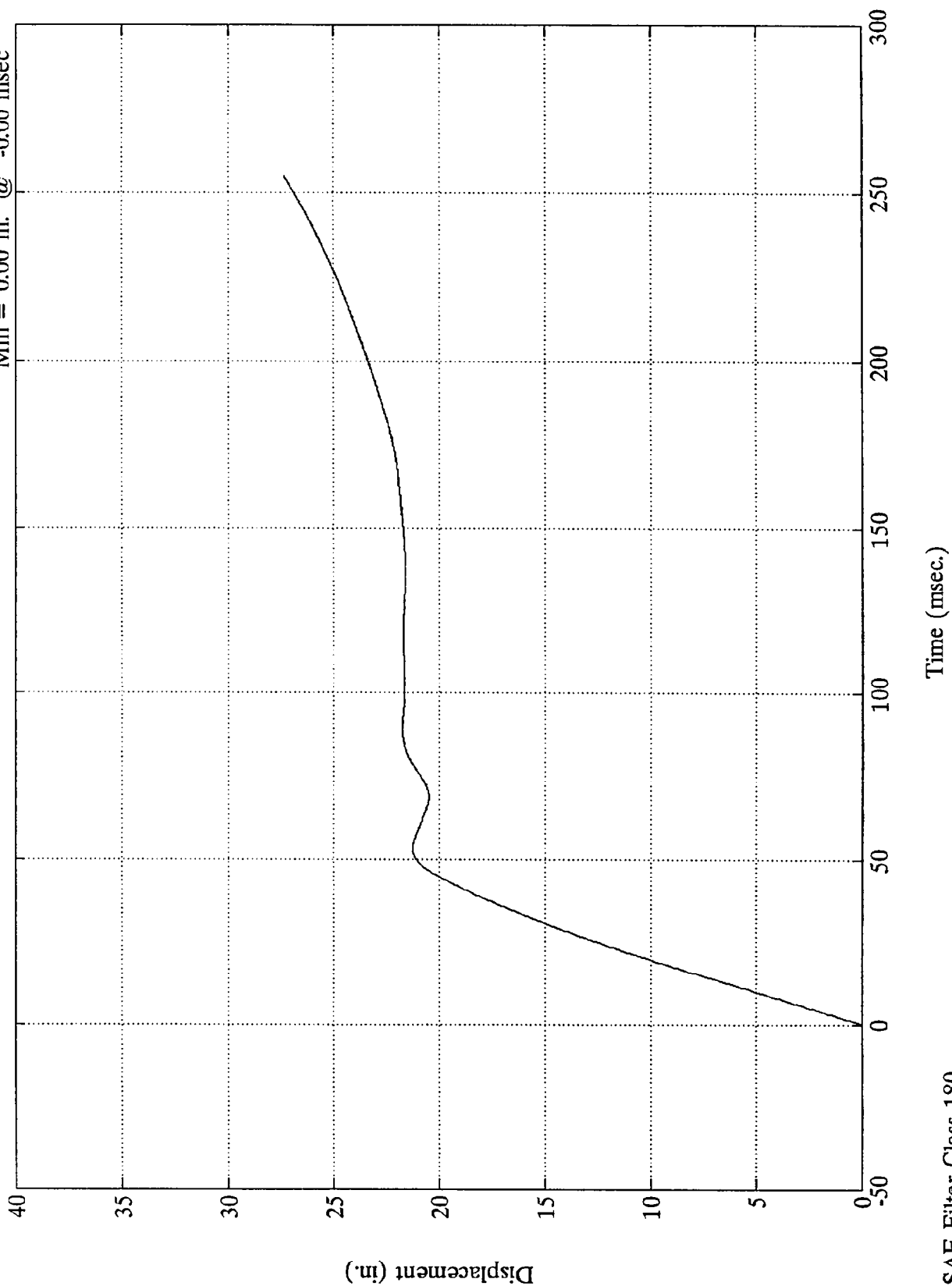


SAE Filter Class 180

NHTSA 208 TEST #3 - 1994 Dodge Spirit

L. Brake Caliper X (#6)

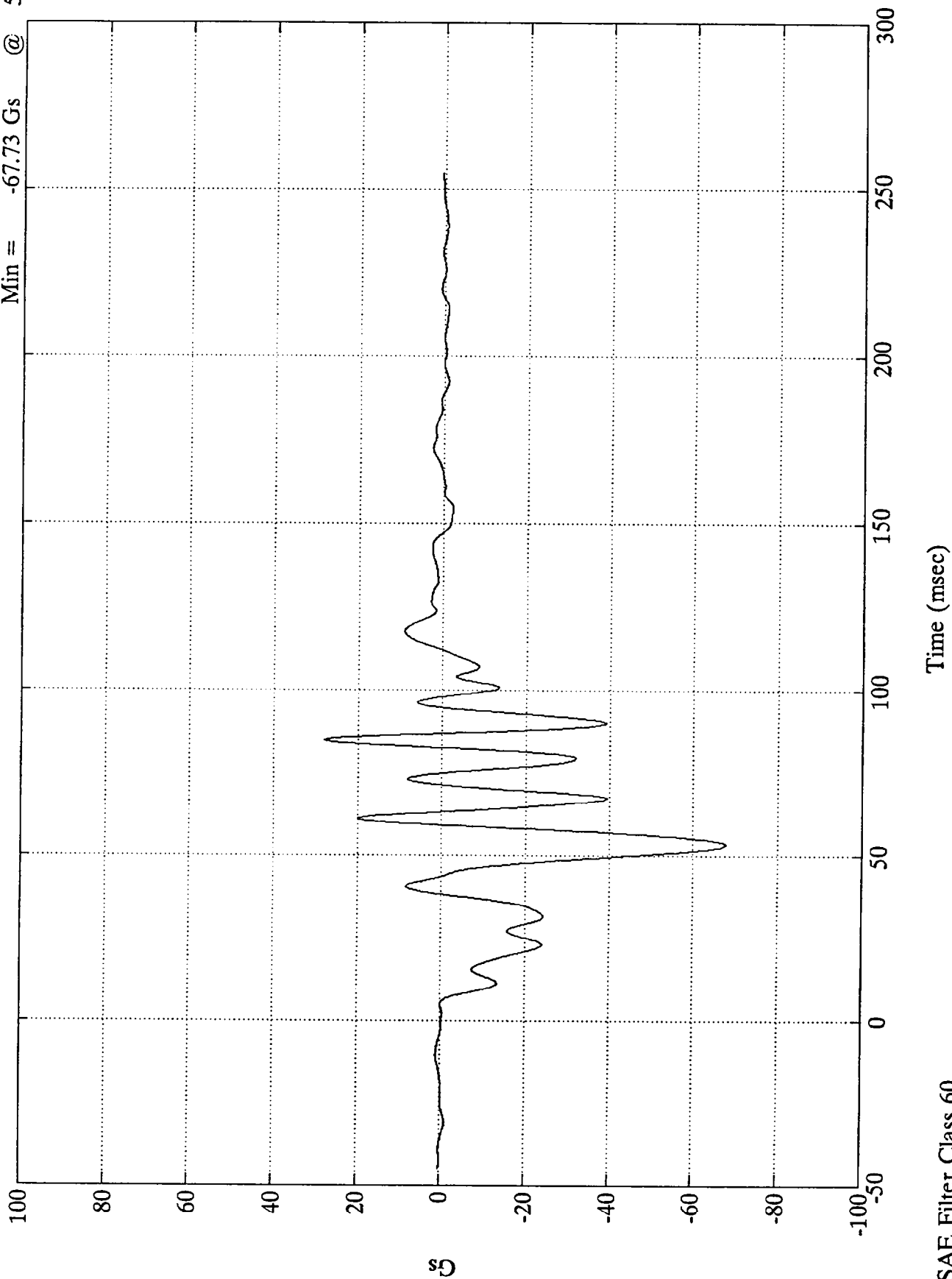
Max = 27.36 in. @ 254.88 msec
Min = 0.00 in. @ -0.00 msec



SAE Filter Class 180

Instrument Panel X (#7)

Max = 27.92 Gs @ 84.59 msec
 Min = -67.73 Gs @ 53.27 msec

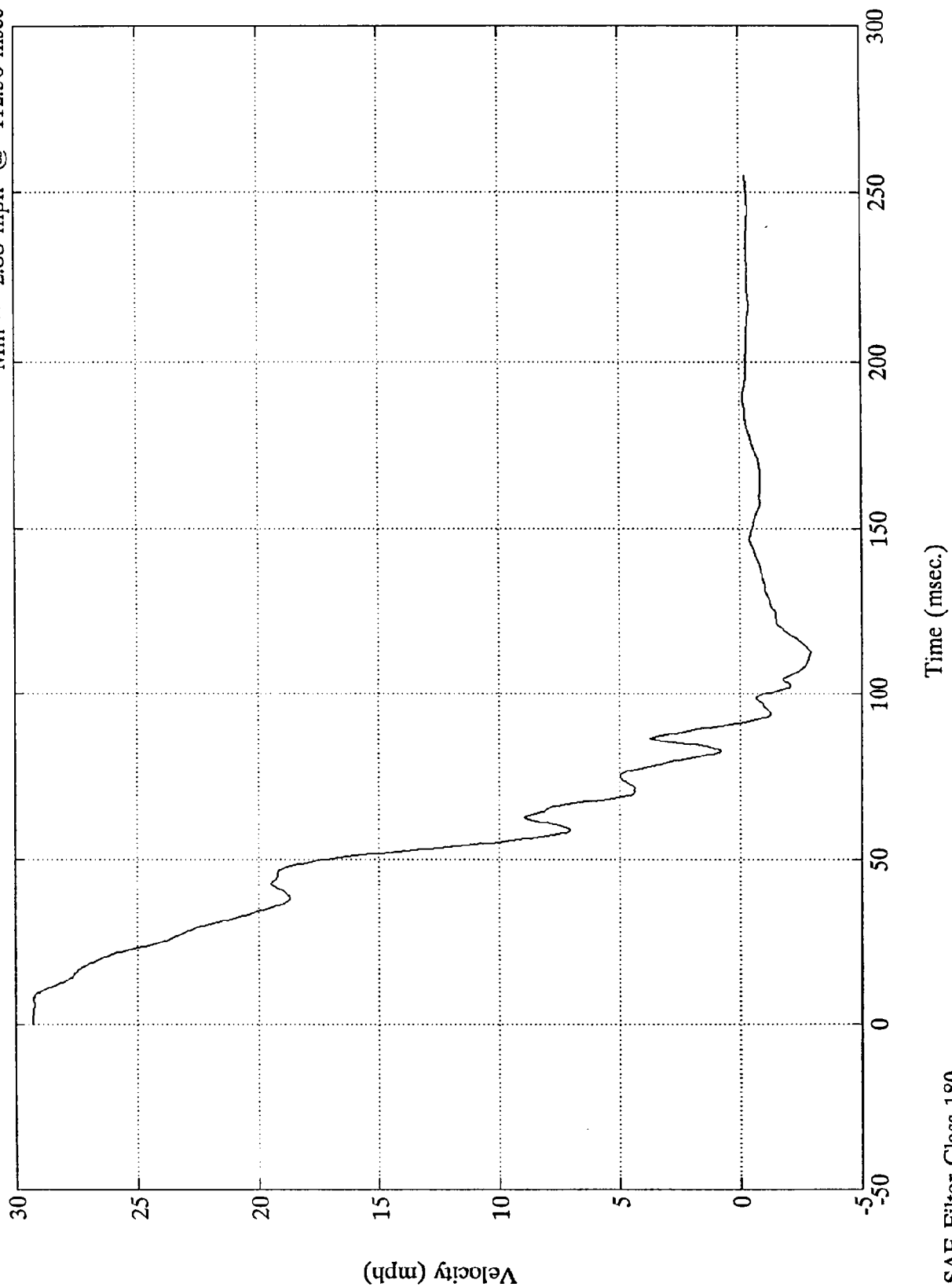


SAE Filter Class 60

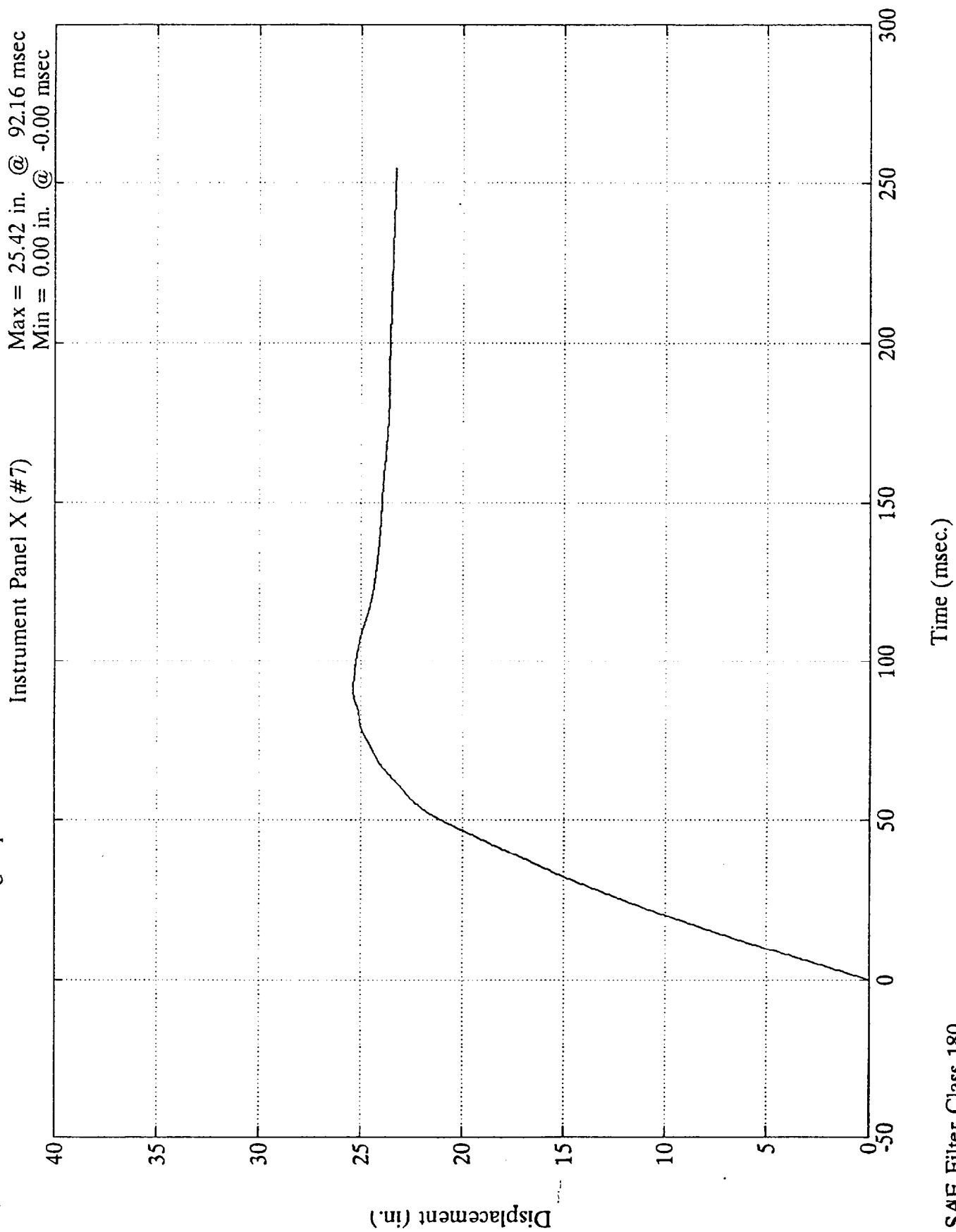
NHTSA 208 TEST #3 - 1994 Dodge Spirit

Instrument Panel X (#7)

Max = 29.30 mph @ 1.20 msec
Min = -2.88 mph @ 112.56 msec



SAE Filter Class 180



TEST NO. CR0301

DUMMY	SAE FILTER CHANNEL CLASS
Head Accelerations	1000
Chest Accelerations	100
Femur Forces	600

FACILITY: TRACK TEST DATE: 09 Nov 1993
 RUN #: 1340 TEST TIME: 12:01:54
 SERIES #: 1 BOARD: a

TITLE: NHTSA 208 TEST #3 - 1994 Dodge Spirit

CHANNEL NUMBER	DESCRIPTION	ENGR UNIT	MAXIMUM		MINIMUM		FILTER
			AMP	msec	AMP	msec	CLASS
1	Pos. 1 Head X	Gs	16.9	170.5	-60.2	75.2	1000.0
2	Pos. 1 Head Y	Gs	6.8	169.2	-12.0	73.2	1000.0
3	Pos. 1 Head Z	Gs	11.2	166.7	-8.0	106.7	1000.0
4	Pos. 1 Left Femur	lbs	30.5	20.2	-1063.9	55.6	600.0
5	Pos. 1 Chest X	Gs	11.7	183.5	-52.3	89.3	180.0
6	Pos. 1 Chest Y	Gs	3.9	117.2	-6.7	88.0	180.0
7	Pos. 1 Chest Z	Gs	6.4	179.4	-6.4	65.0	180.0
8	Pos. 1 Right Femur	lbs	23.2	22.2	-1488.8	64.3	600.0
9	Pos. 2 Head X	Gs	21.7	223.0	-36.6	104.5	1000.0
10	Pos. 2 Head Y	Gs	5.0	242.3	-2.1	98.4	1000.0
11	Pos. 2 Head Z	Gs	49.6	80.5	-1.6	14.3	1000.0
12	Pos. 2 Left Femur	lbs	47.1	52.7	-1638.5	64.4	600.0
13	Pos. 2 Chest X	Gs	7.8	254.2	-48.3	80.0	180.0
14	Pos. 2 Chest Y	Gs	13.7	98.2	-12.8	94.2	180.0
15	Pos. 2 Chest Z	Gs	9.1	87.0	-10.8	97.1	180.0
16	Pos. 2 Right Femur	lbs	36.3	53.0	-1609.8	78.1	600.0
17	Pos. 1 Head Resultant	Gs	61.2	75.2	.2	-21.4	1000.0
18	Pos. 1 Chest Resultant	Gs	52.8	89.3	.0	11.0	180.0
19	Pos. 2 Head Resultant	Gs	55.9	85.7	.0	1.6	1000.0
20	Pos. 2 Chest Resultant	Gs	49.5	80.0	.0	-42.0	180.0

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

hic: 419.51
 t1 = 62.280 msec
 t2 = 89.160 msec
 Average G's Over Hic Duration = 47.57

CLIP SUMMARY: Pos. 1 Chest Resultant

Peak Resultant (3 ms CLIPPED DURATION) = 47.661 G's
 Tstart = 87.8400 ms
 Tend = 90.9600 ms
 CSI = 351.517

36 ms Fixed Duration HIC SUMMARY: Pos. 2 Head Resultant

hic: 489.72
 t1 = 70.920 msec
 t2 = 106.800 msec
 Average G's Over Hic Duration = 45.09

CLIP SUMMARY: Pos. 2 Chest Resultant

Peak Resultant (3 ms CLIPPED DURATION) = 43.766 G's
 Tstart = 74.0400 ms
 Tend = 77.0400 ms
 CSI = 356.193

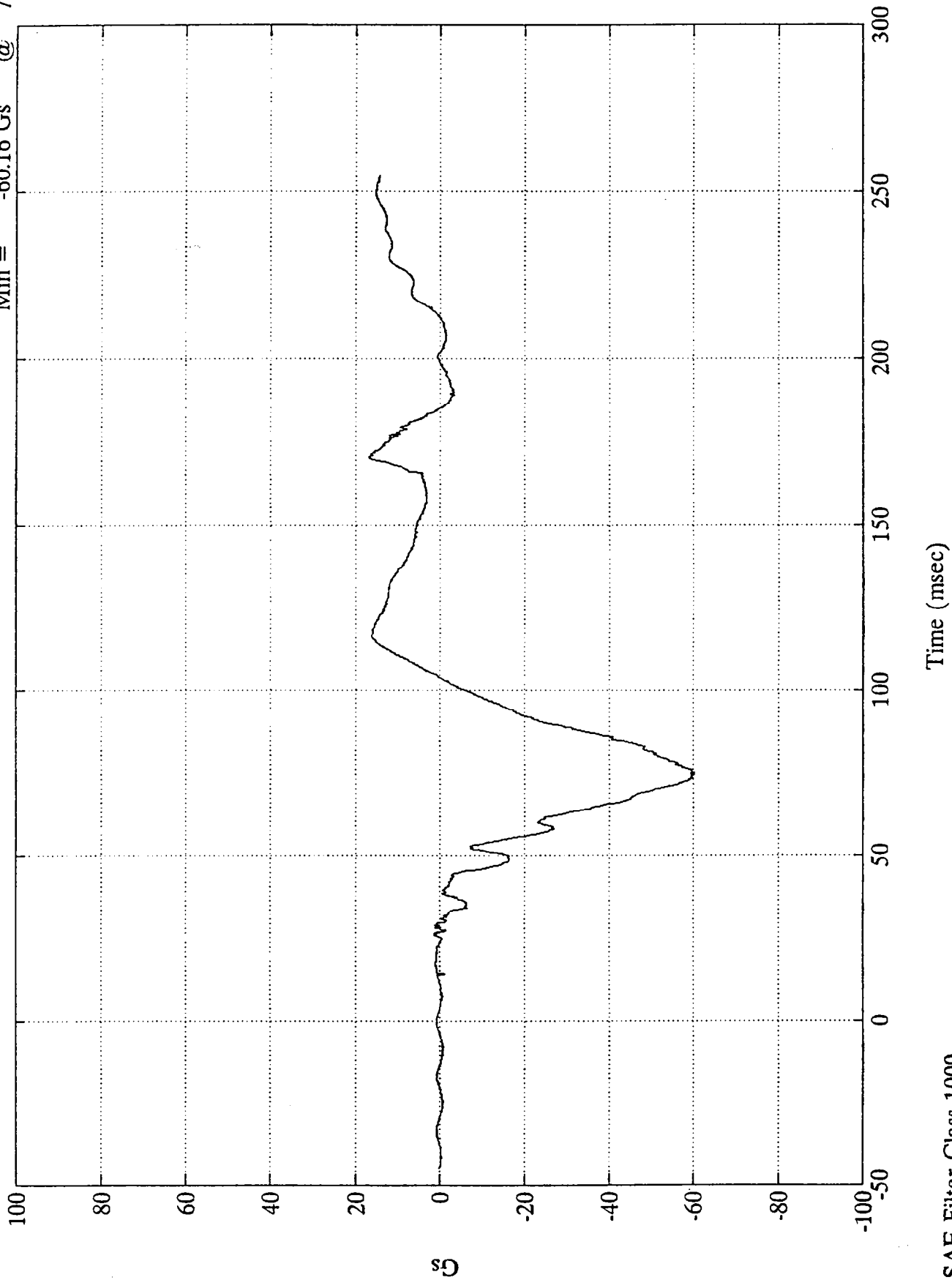
FACILITY: TRACK
RUN #: 1340
SERIES #: 1

TEST DATE: 09 Nov 1993
TEST TIME: 12:01:54
BOARD: b

TITLE: NHTSA 208 TEST #3 - 1994 Dodge Spirit

CHANNEL NUMBER	DESCRIPTION	ENGR UNIT	MAXIMUM		MINIMUM		FILTER CLASS
			AMP	msec	AMP	msec	
1	L. Rear X-member X (#1)	Gs	3.6	164.8	-36.1	61.6	60.0
2	R. Rear X-member X (#2)	Gs	1.6	168.5	-41.5	63.4	60.0
3	Engine Top X (#3)	Gs	26.6	49.0	-69.7	39.7	60.0
4	Engine Bottom X (#4)	Gs	354.2	233.5	-353.0	191.9	60.0
5	R. Brake Caliper X (#5)	Gs	34.5	74.3	-90.4	51.8	60.0
6	L. Brake Caliper X (#6)	Gs	56.7	70.1	-95.5	49.7	60.0
7	Instrument Panel X (#7)	Gs	27.9	84.6	-67.7	53.3	60.0
8	Pos. 1 Chest Displacement	ins	.0	26.2	-1.4	77.9	60.0
9	Pos. 2 Chest Displacement	ins	.0	37.0	-2.6	95.9	60.0

Pos. 1 Head X
Max = 16.90 Gs @ 170.52 msec
Min = -60.16 Gs @ 75.23 msec

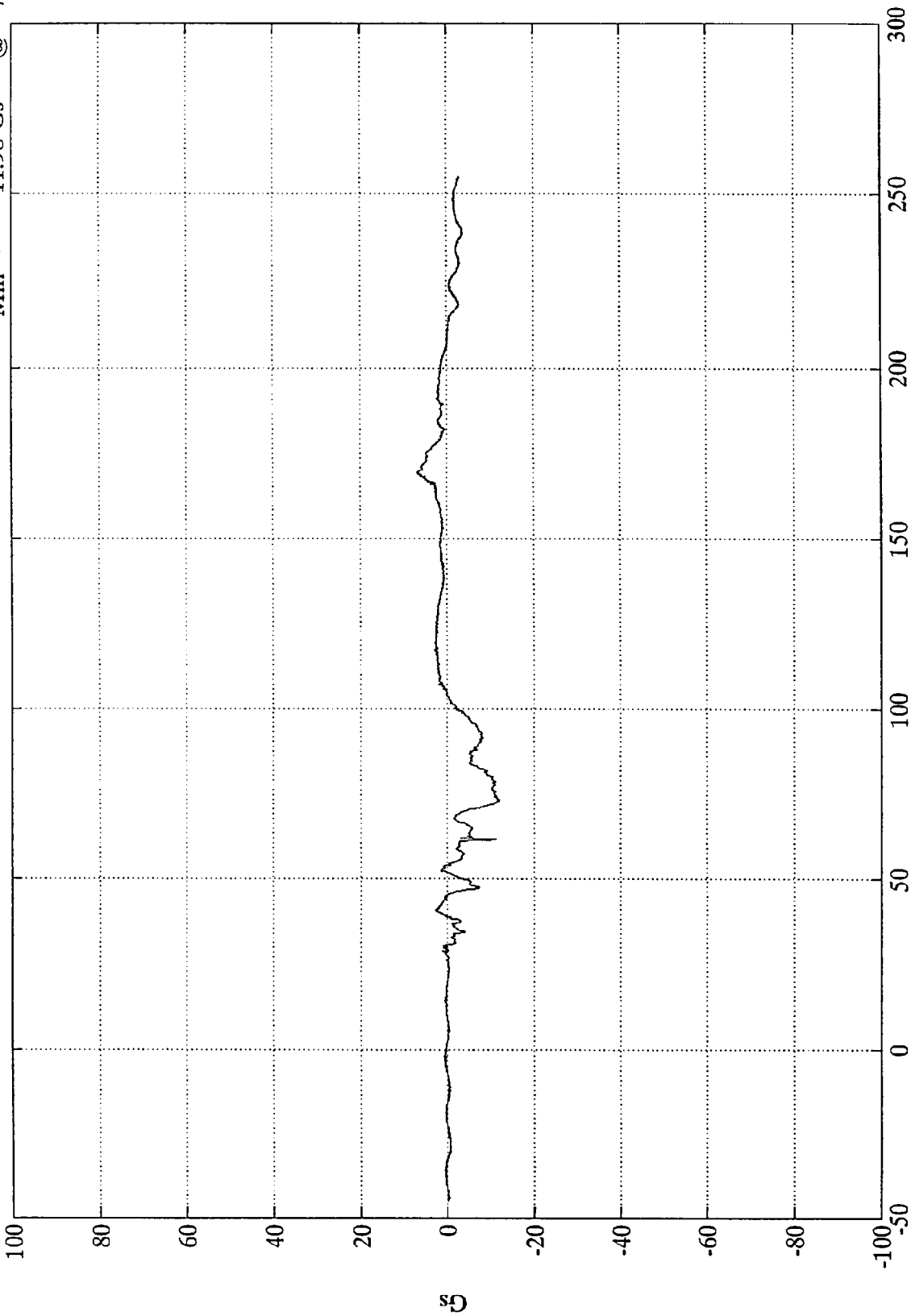


SAE Filter Class 1000

NHTSA 208 TEST #3 - 1994 Dodge Spirit

Max = 6.83 Gs @ 169.19 msec
 Min = -11.98 Gs @ 73.20 msec

Pos. 1 Head Y

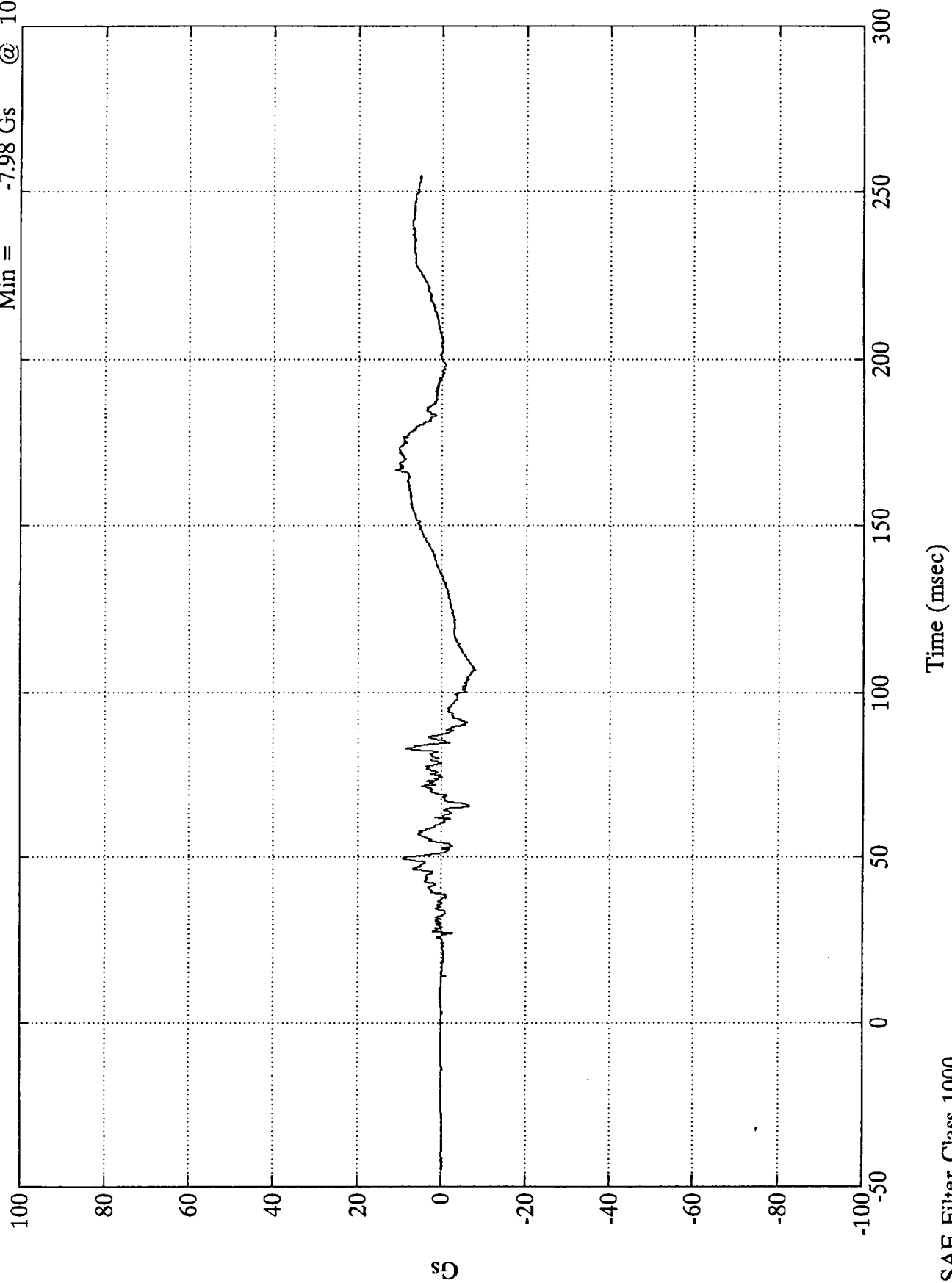


Time (msec)

SAE Filter Class 1000

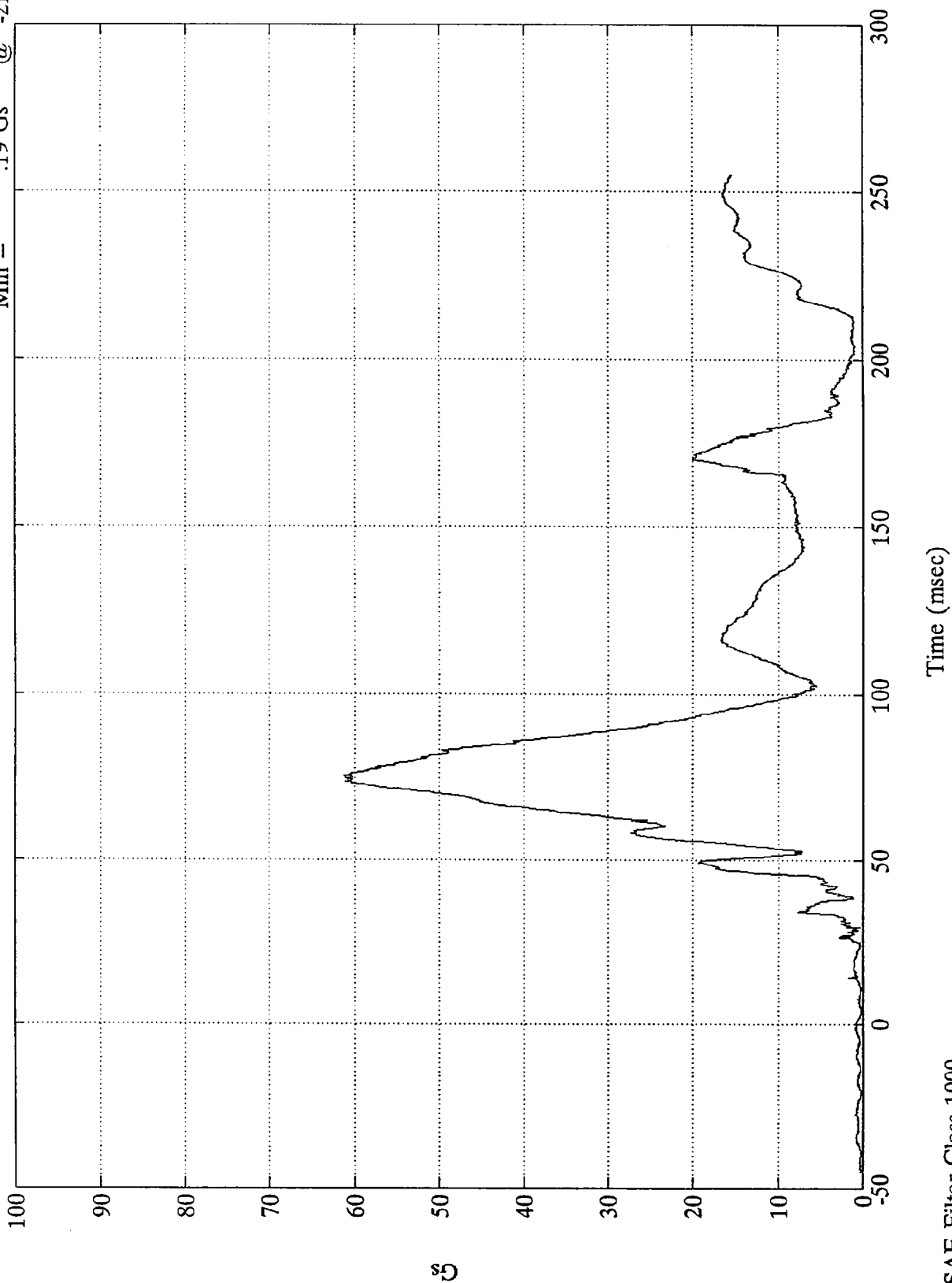
Max = 11.20 Gs @ 166.68 msec
 Min = -7.98 Gs @ 106.68 msec

Pos. 1 Head Z



NHTSA 208 TEST #3 - 1994 Dodge Spirit

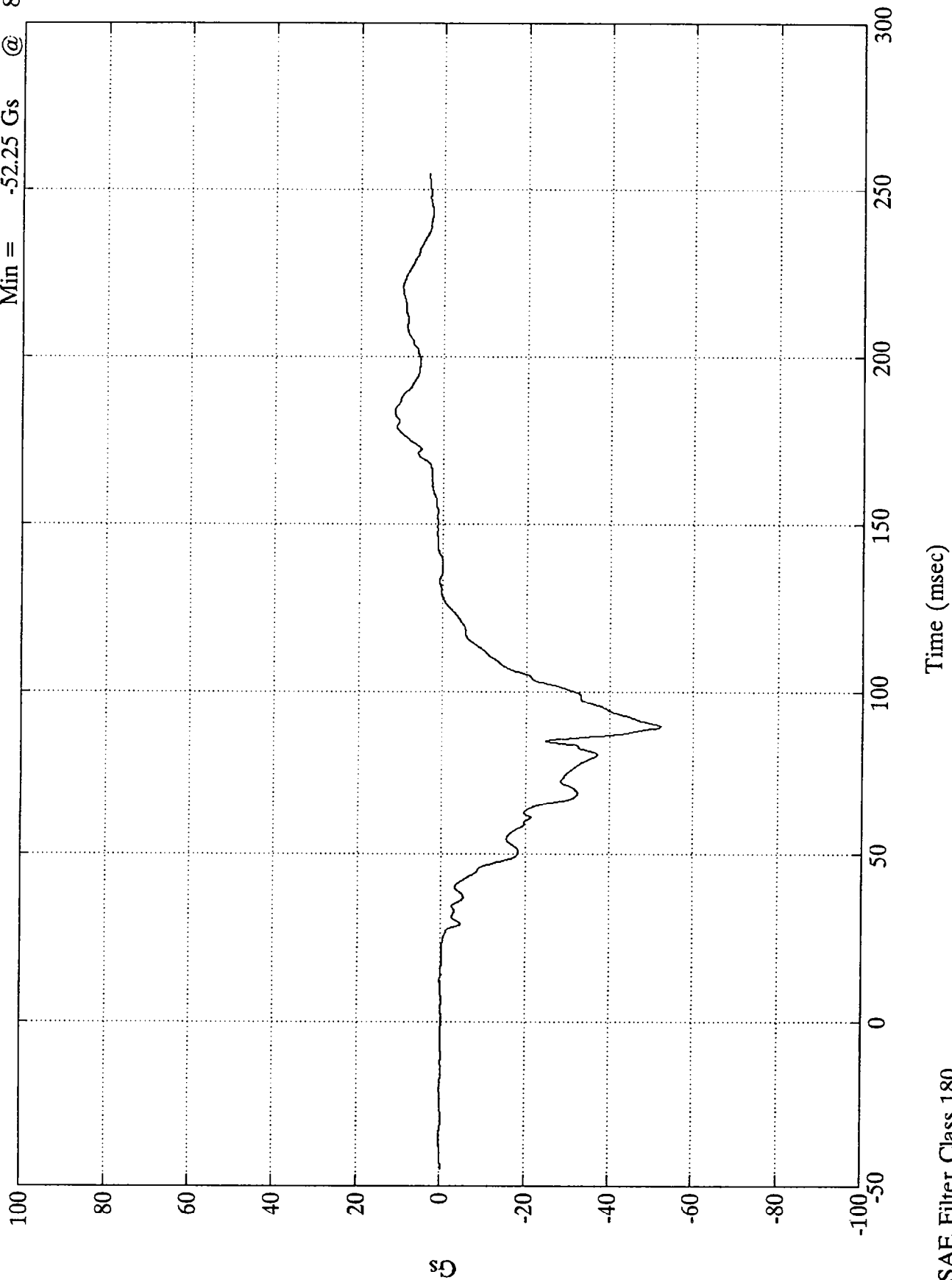
Pos. 1 Head Resultant
 Max = 61.17 Gs @ 75.23 msec
 Min = .19 Gs @ -21.36 msec



SAE Filter Class 1000

Max = 11.68 Gs @ 183.48 msec
Min = -52.25 Gs @ 89.27 msec

Pos. 1 Chest X

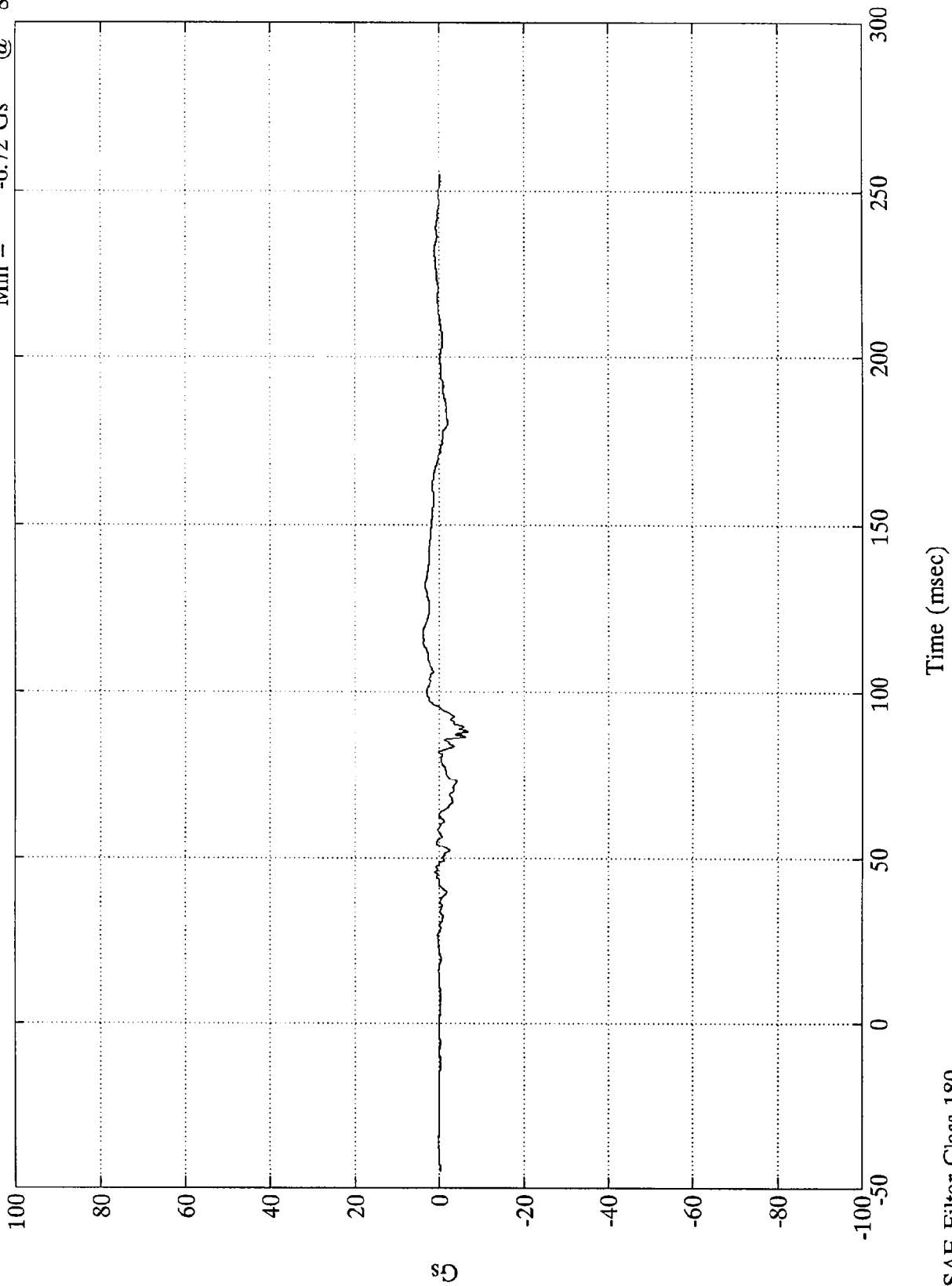


SAE Filter Class 180

NHTSA 208 TEST #3 - 1994 Dodge Spirit

Max = 3.94 Gs @ 117.24 msec
Min = -6.72 Gs @ 87.96 msec

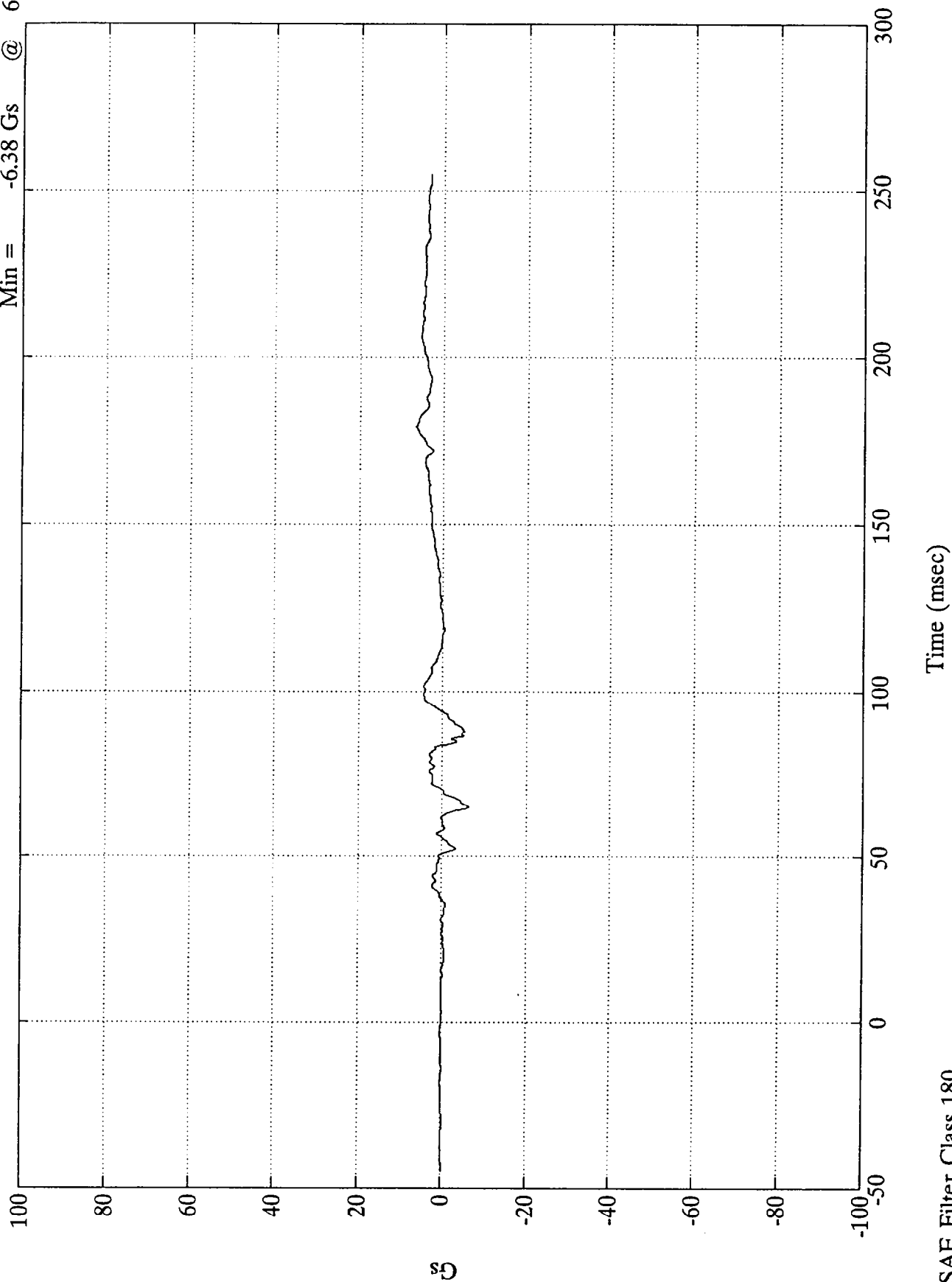
Pos. 1 Chest Y



SAE Filter Class 180

Max = 6.44 Gs @ 179.40 msec
Min = -6.38 Gs @ 65.04 msec

Pos. 1 Chest Z

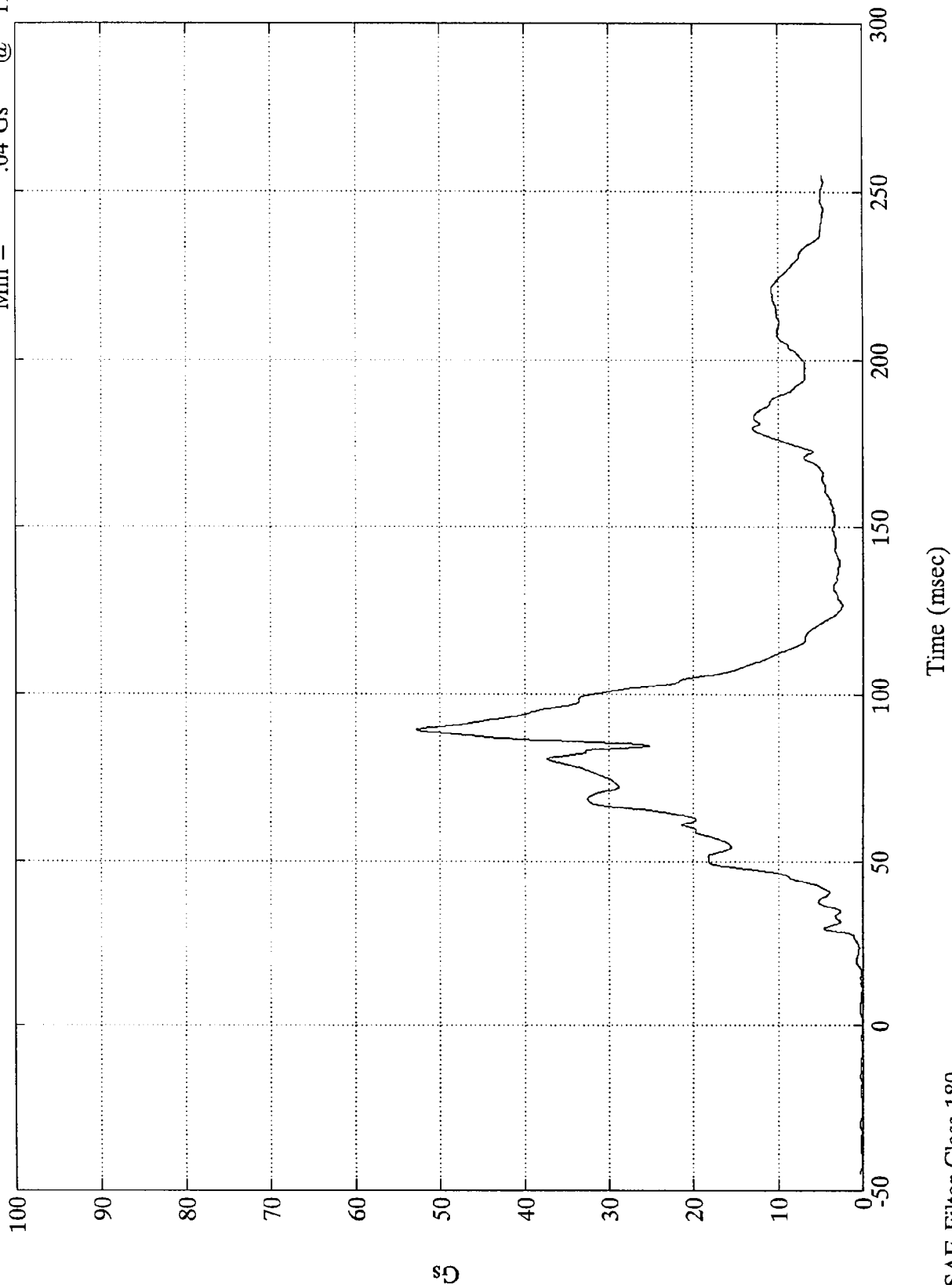


SAE Filter Class 180

NHTSA 208 TEST #3 - 1994 Dodge Spirit

Max = 52.76 Gs @ 89.27 msec
 Min = .04 Gs @ 11.03 msec

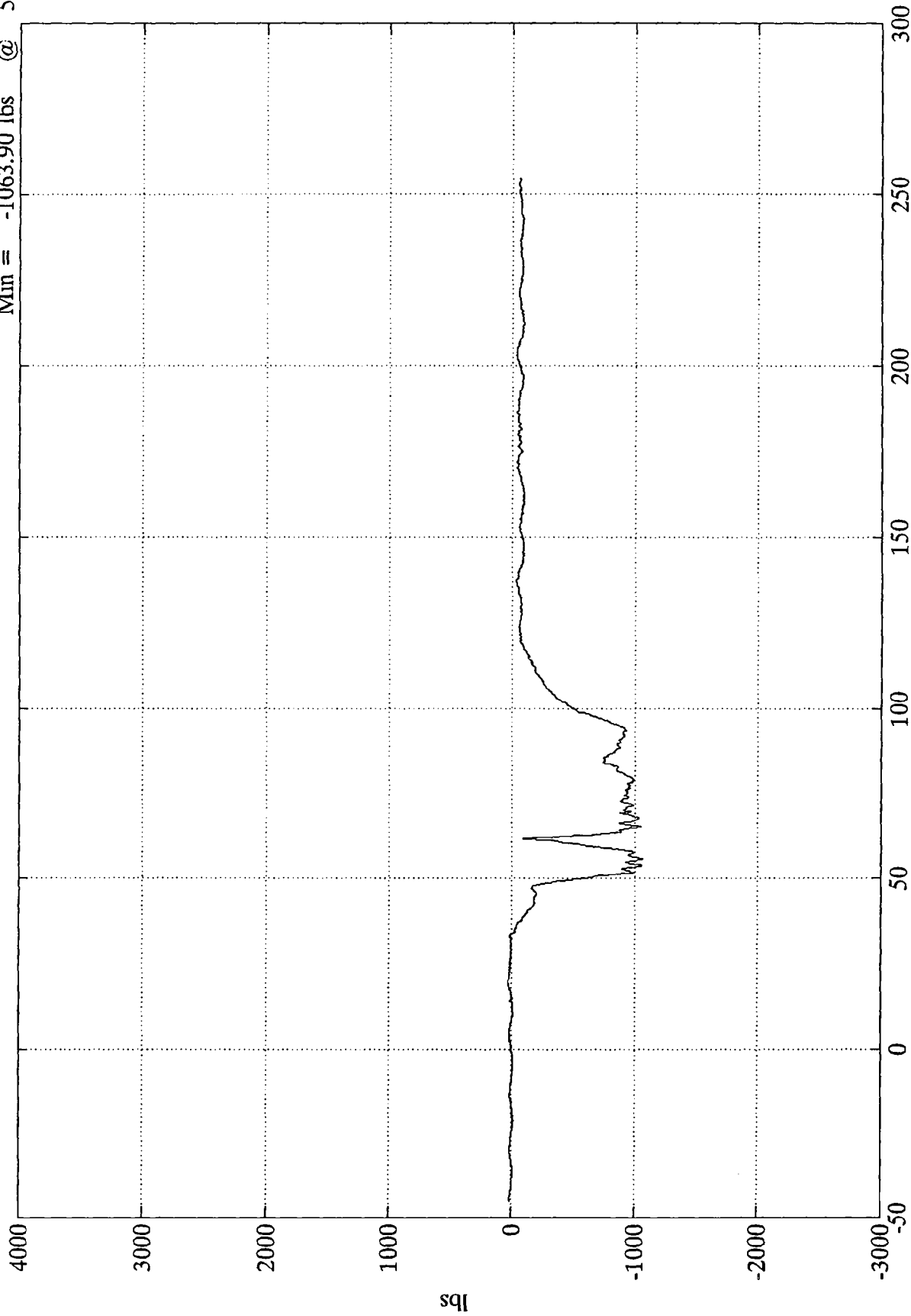
Pos. 1 Chest Resultant



SAE Filter Class 180

Max = 30.46 lbs @ 20.15 msec
 Min = -1063.90 lbs @ 55.56 msec

Pos. 1 Left Femur



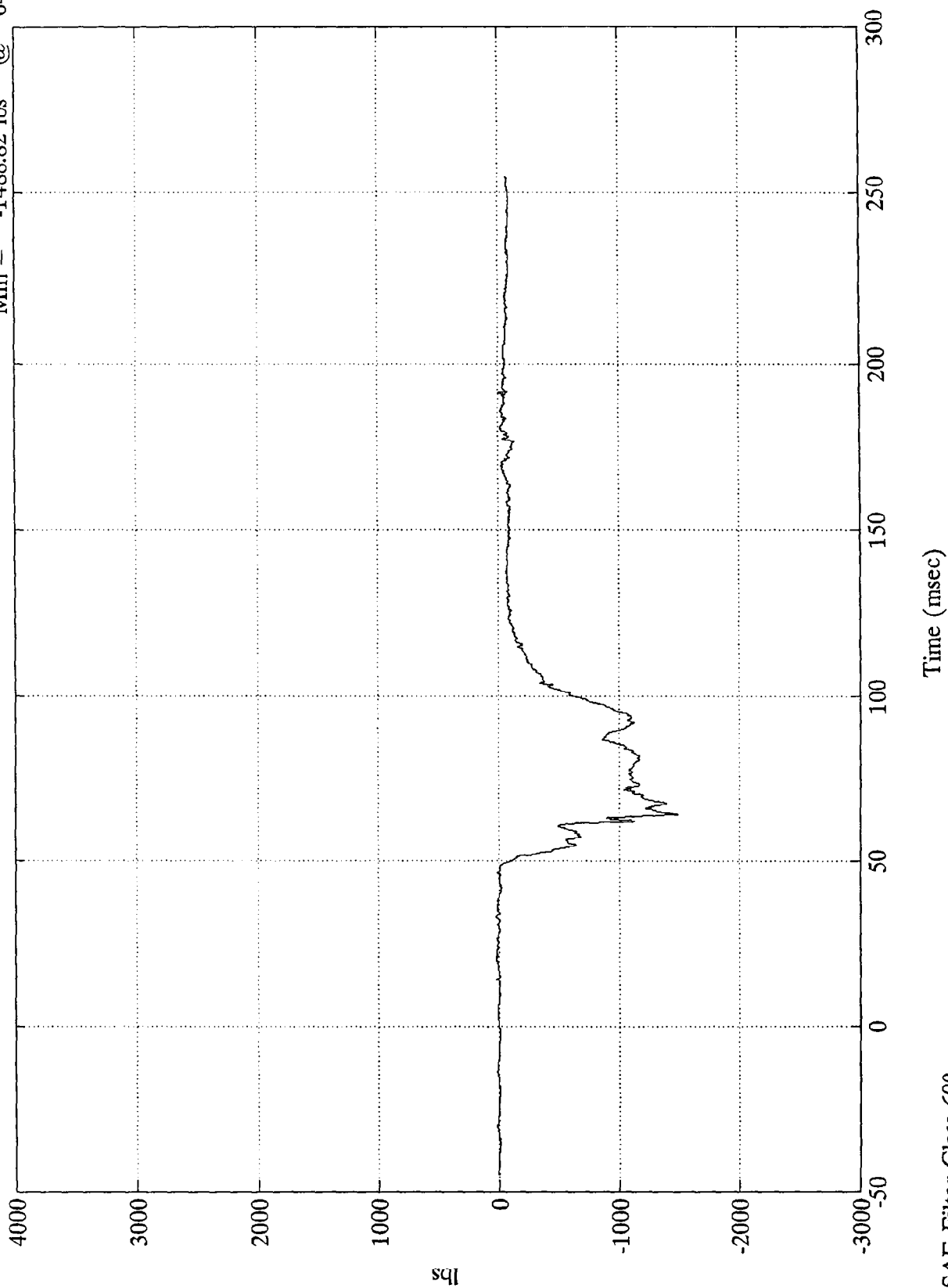
Time (msec)

SAE Filter Class 600

NHTSA 208 TEST #3 - 1994 Dodge Spirit

Max = 23.19 lbs @ 22.19 msec
Min = -1488.82 lbs @ 64.31 msec

Pos. 1 Right Femur



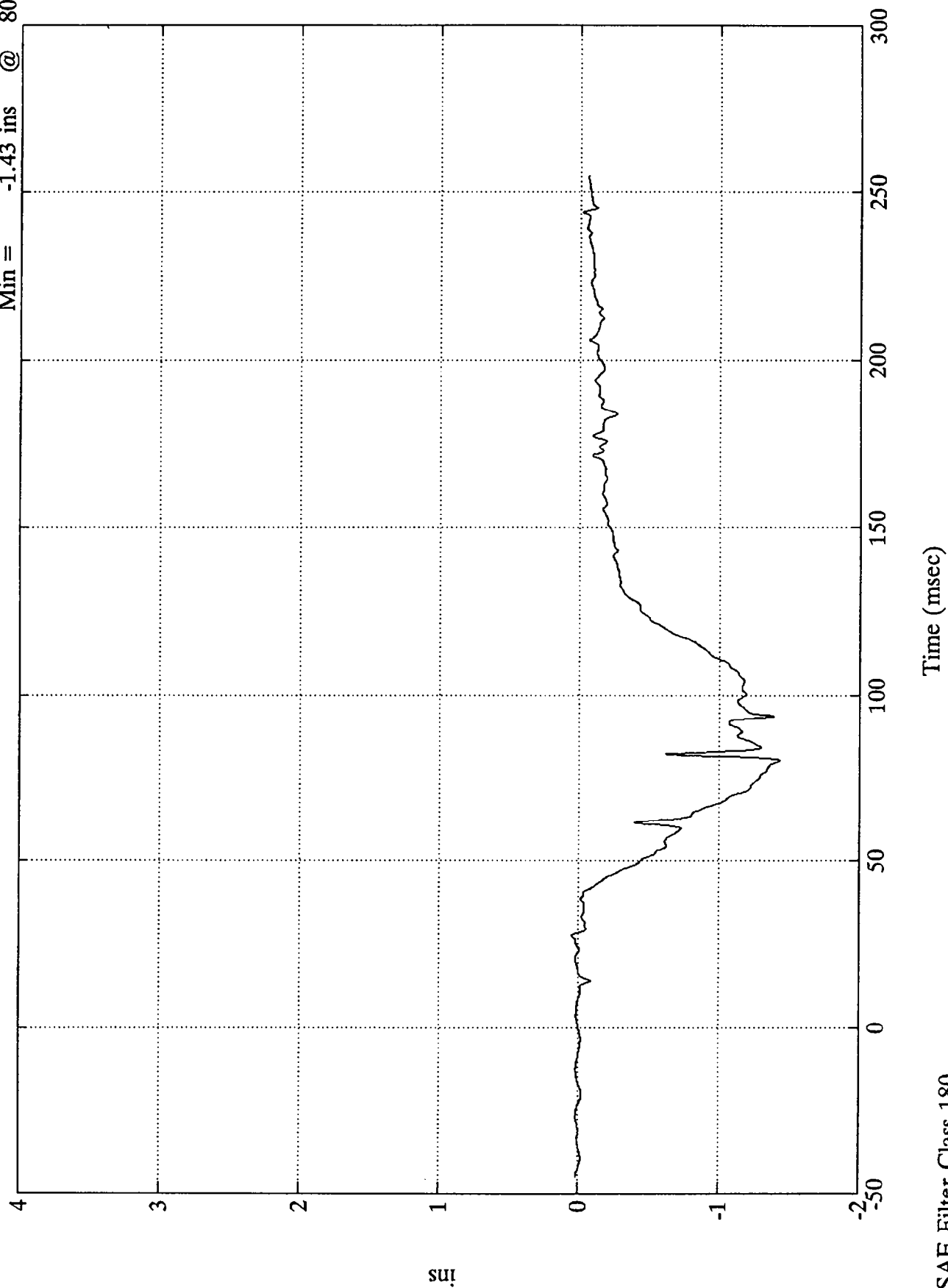
SAE Filter Class 600

Pos. 1 Chest Displacement

Max =
Min =

.05 ins
-1.43 ins

@ 27.48 msec
@ 80.27 msec

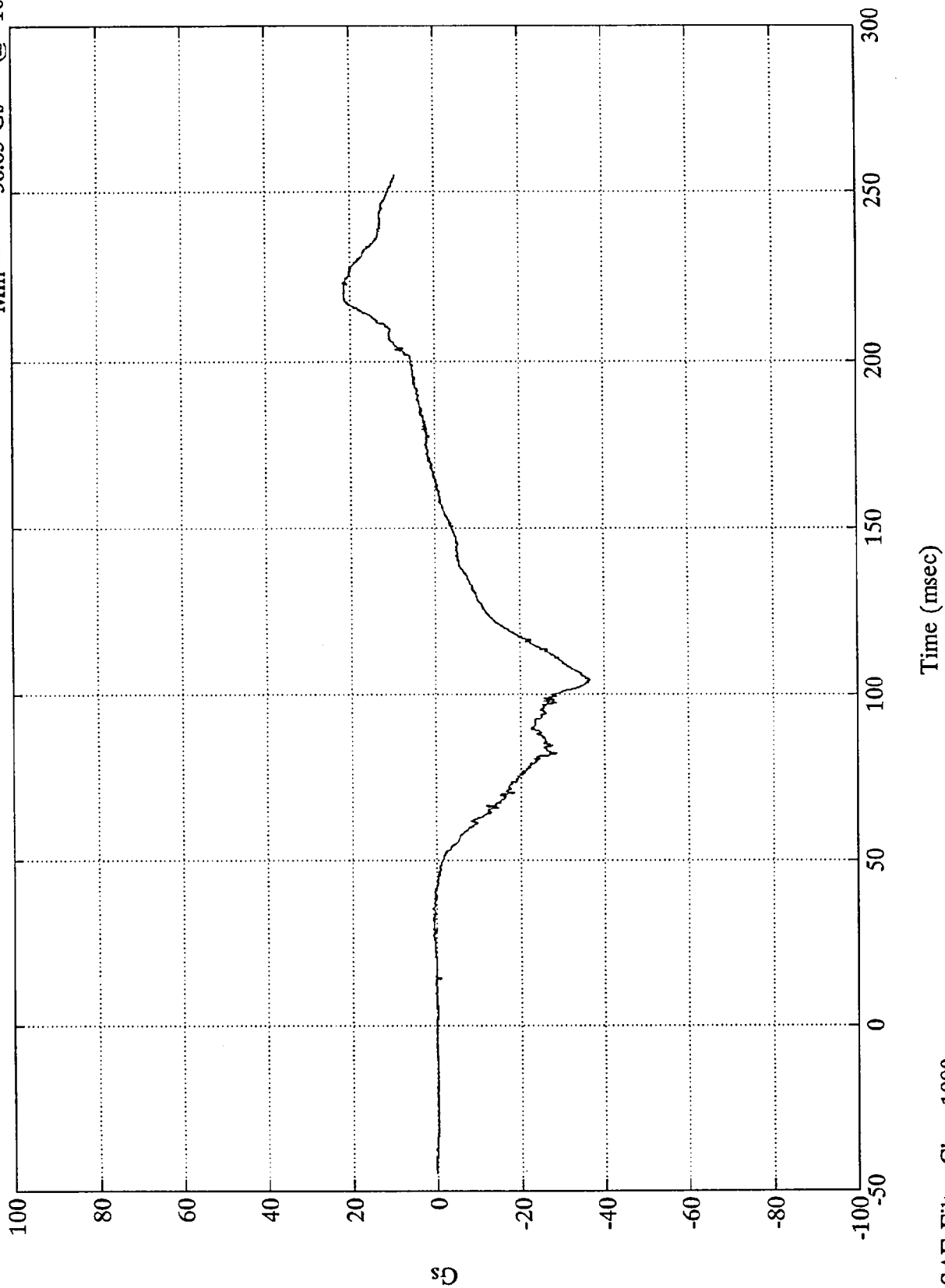


SAE Filter Class 180

NHTSA 208 TEST #3 - 1994 Dodge Spirit

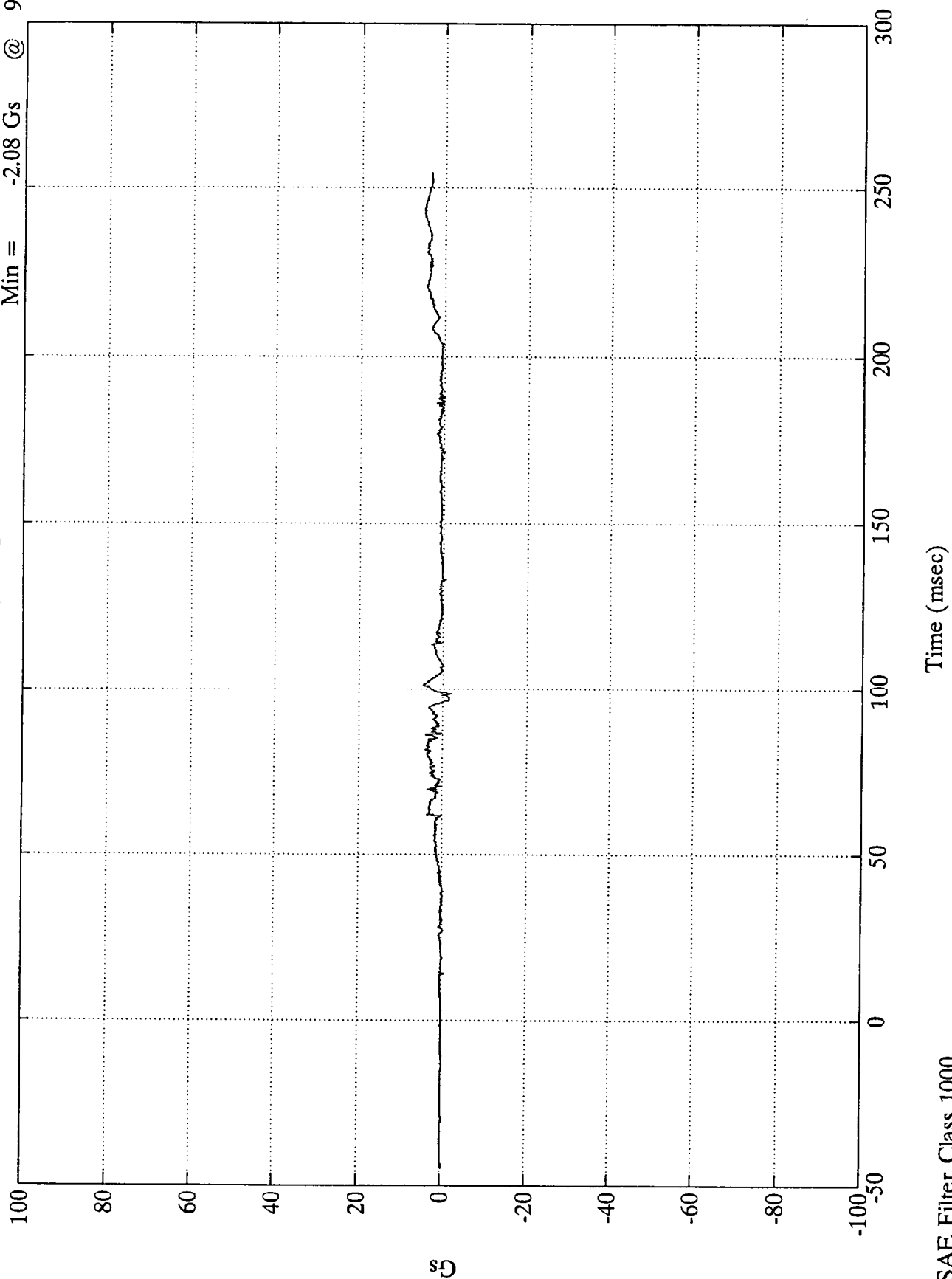
Pos. 2 Head X

Max = 21.69 Gs @ 222.96 msec
Min = -36.65 Gs @ 104.52 msec



SAE Filter Class 1000

Pos. 2 Head Y
 Max = 4.97 Gs @ 242.27 msec
 Min = -2.08 Gs @ 98.40 msec

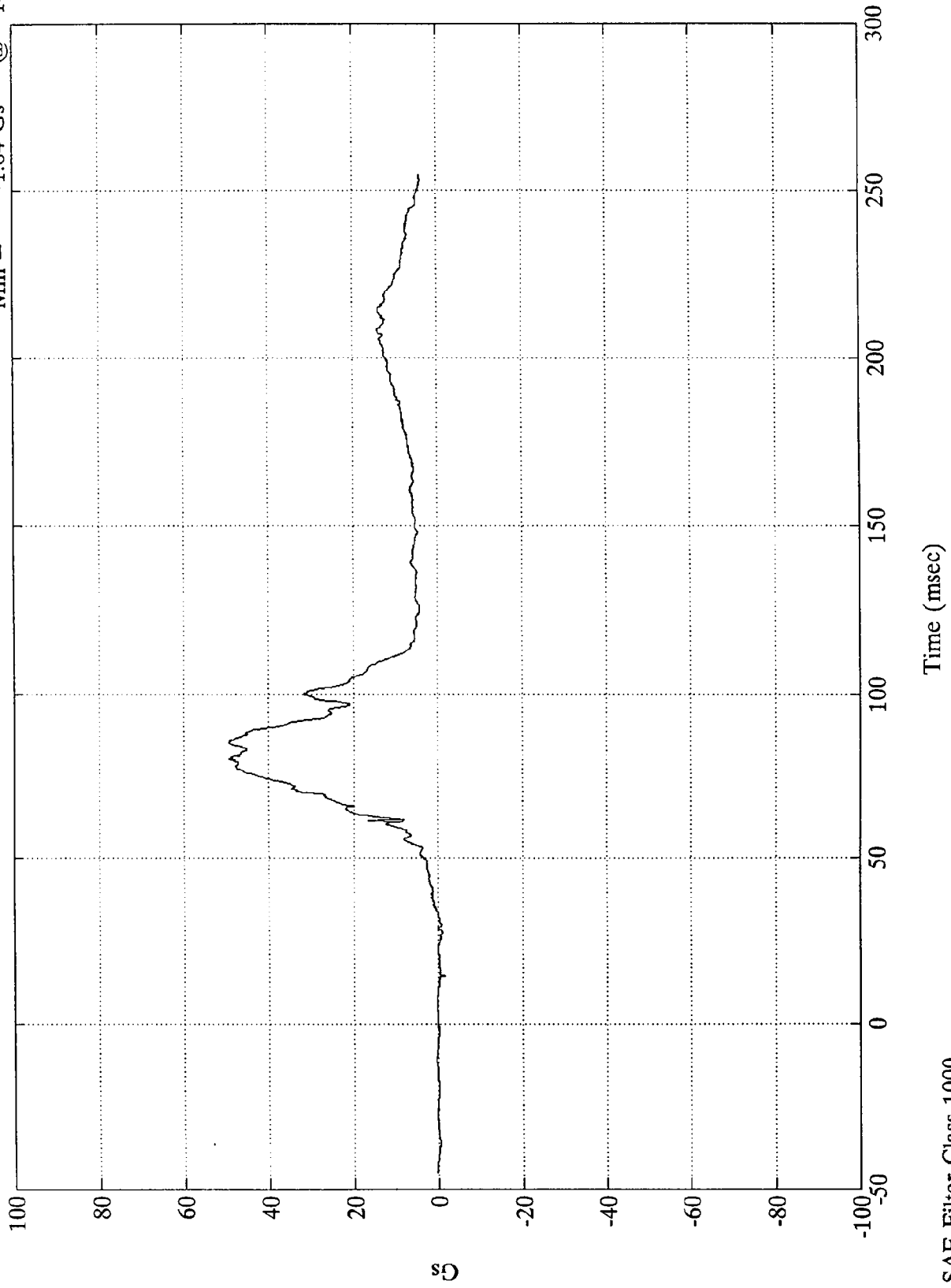


SAE Filter Class 1000

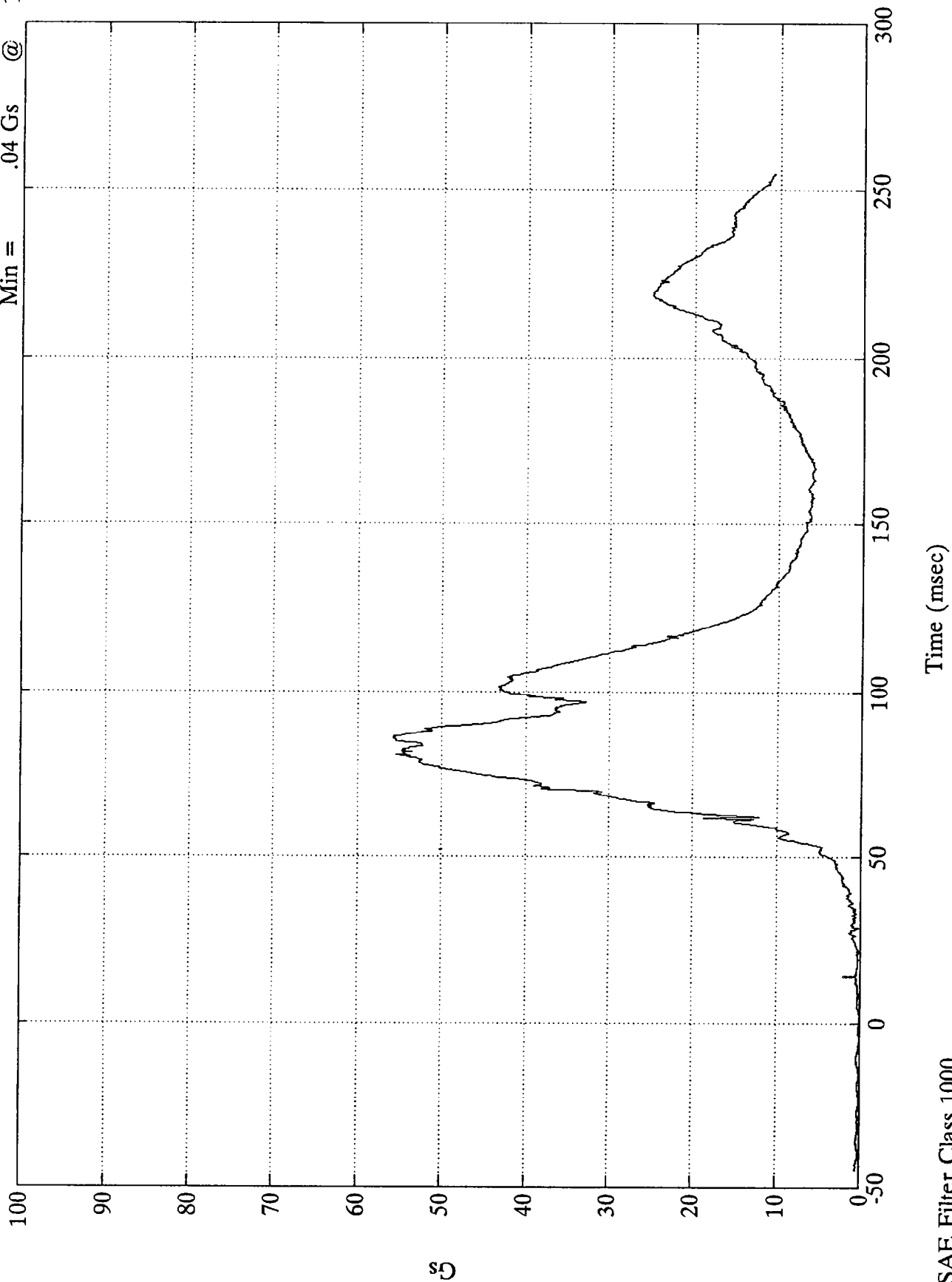
NHTSA 208 TEST #3 - 1994 Dodge Spirit

Max = 49.57 Gs @ 80.52 msec
Min = -1.64 Gs @ 14.27 msec

Pos. 2 Head Z



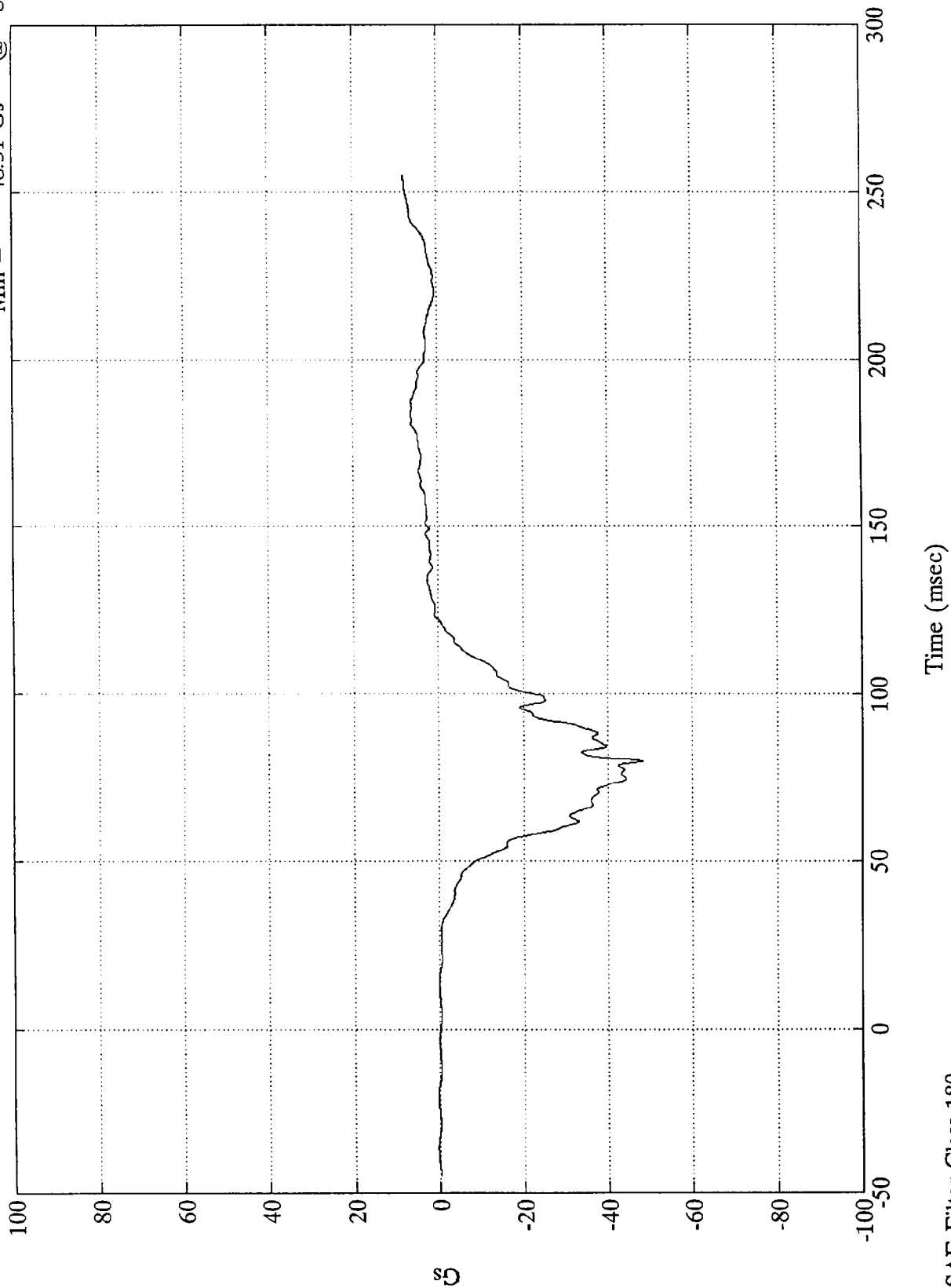
Pos. 2 Head Resultant
 Max = 55.89 Gs @ 85.68 msec
 Min = .04 Gs @ 1.55 msec



NHTSA 208 TEST #3 - 1994 Dodge Spirit

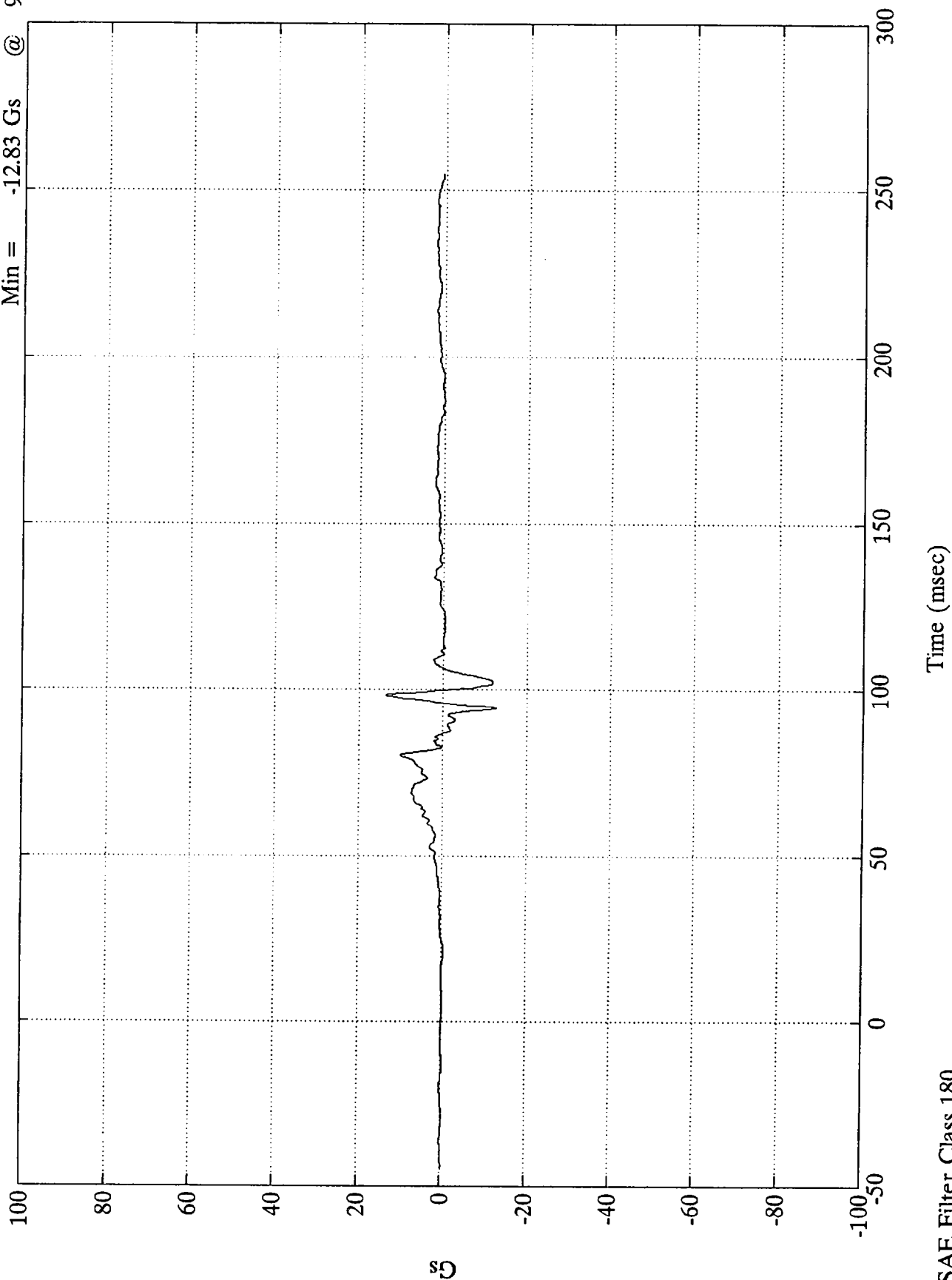
Max = 7.80 Gs @ 254.16 msec
Min = -48.31 Gs @ 80.04 msec

Pos. 2 Chest X



Max = 13.73 Gs @ 98.15 msec
Min = -12.83 Gs @ 94.19 msec

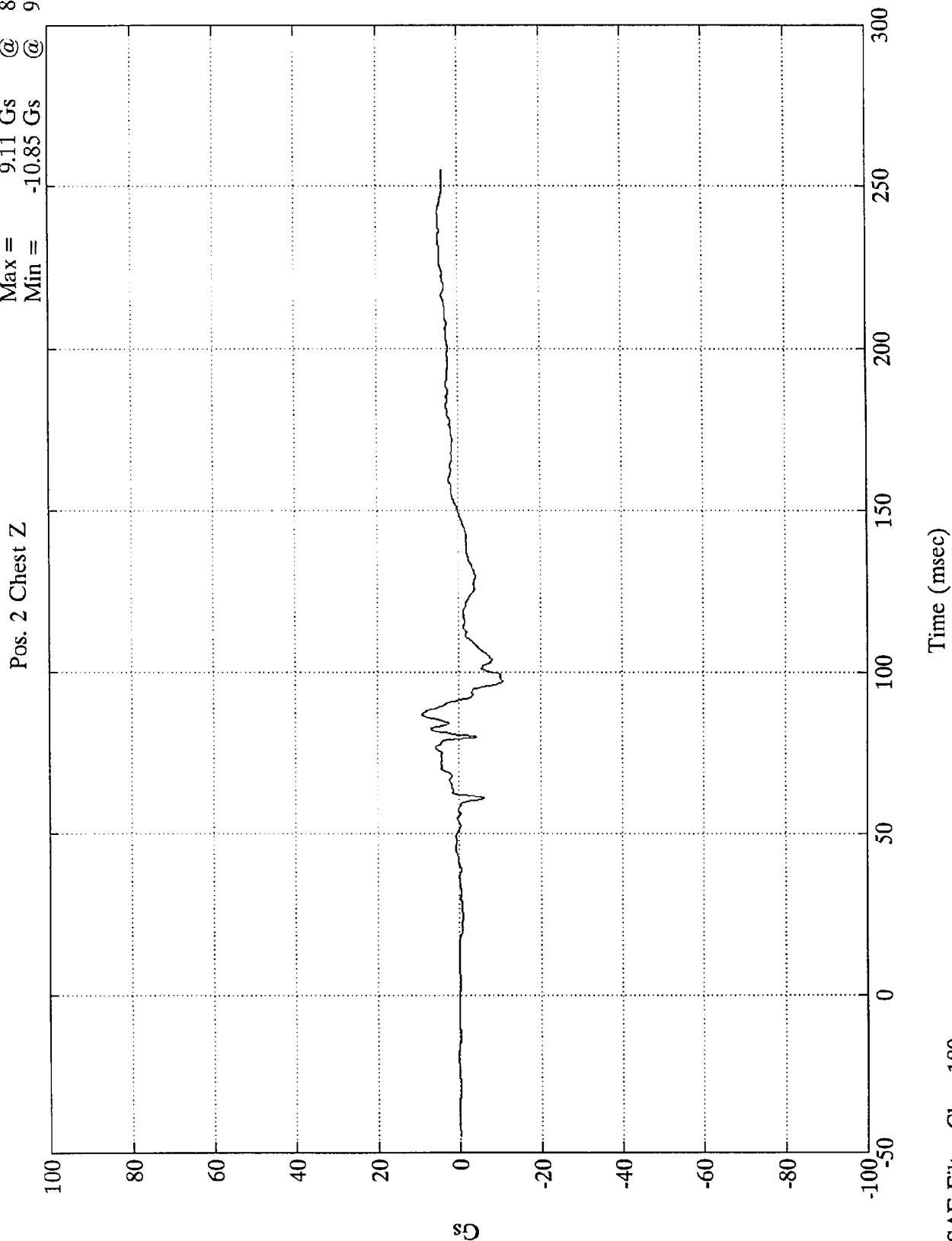
Pos. 2 Chest Y



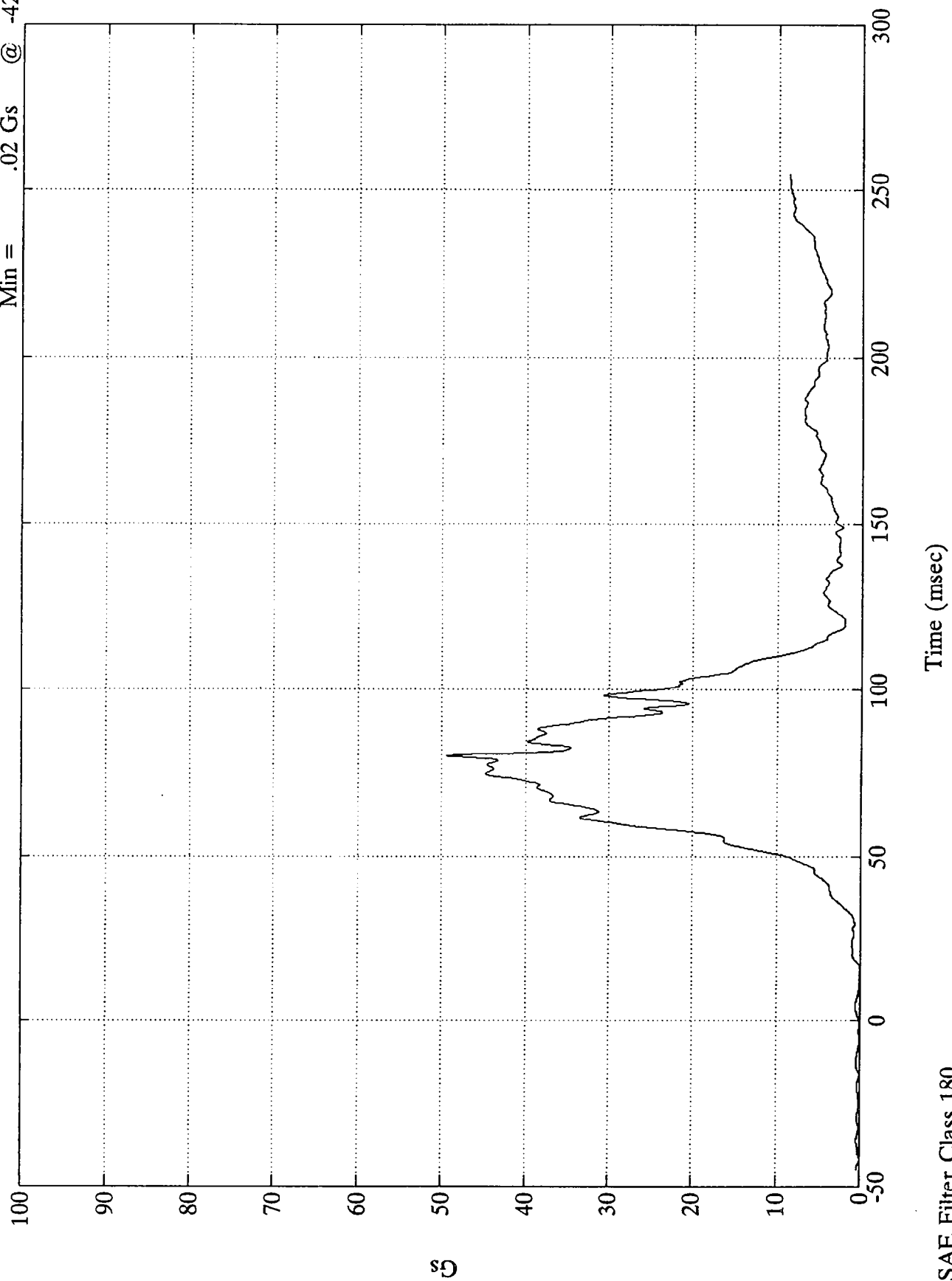
SAE Filter Class 180

NHTSA 208 TEST #3 - 1994 Dodge Spirit

Max = 9.11 Gs @ 87.00 msec
Min = -10.85 Gs @ 97.08 msec



Pos. 2 Chest Resultant
Max = 49.46 Gs @ 80.04 msec
Min = .02 Gs @ -42.00 msec

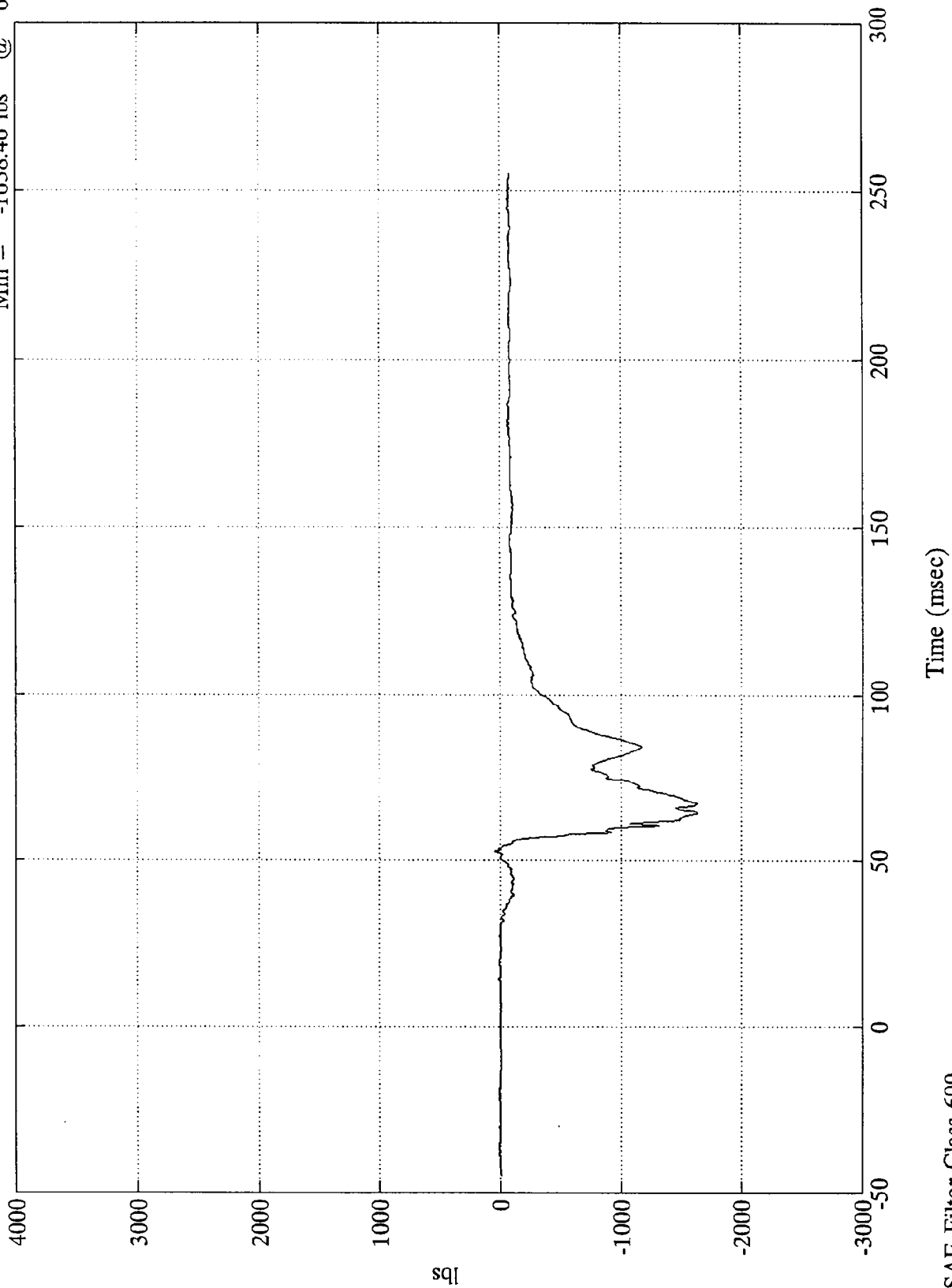


SAE Filter Class 180

NHTSA 208 TEST #3 - 1994 Dodge Spirit

Max = 47.12 lbs @ 52.68 msec
Min = -1638.46 lbs @ 64.44 msec

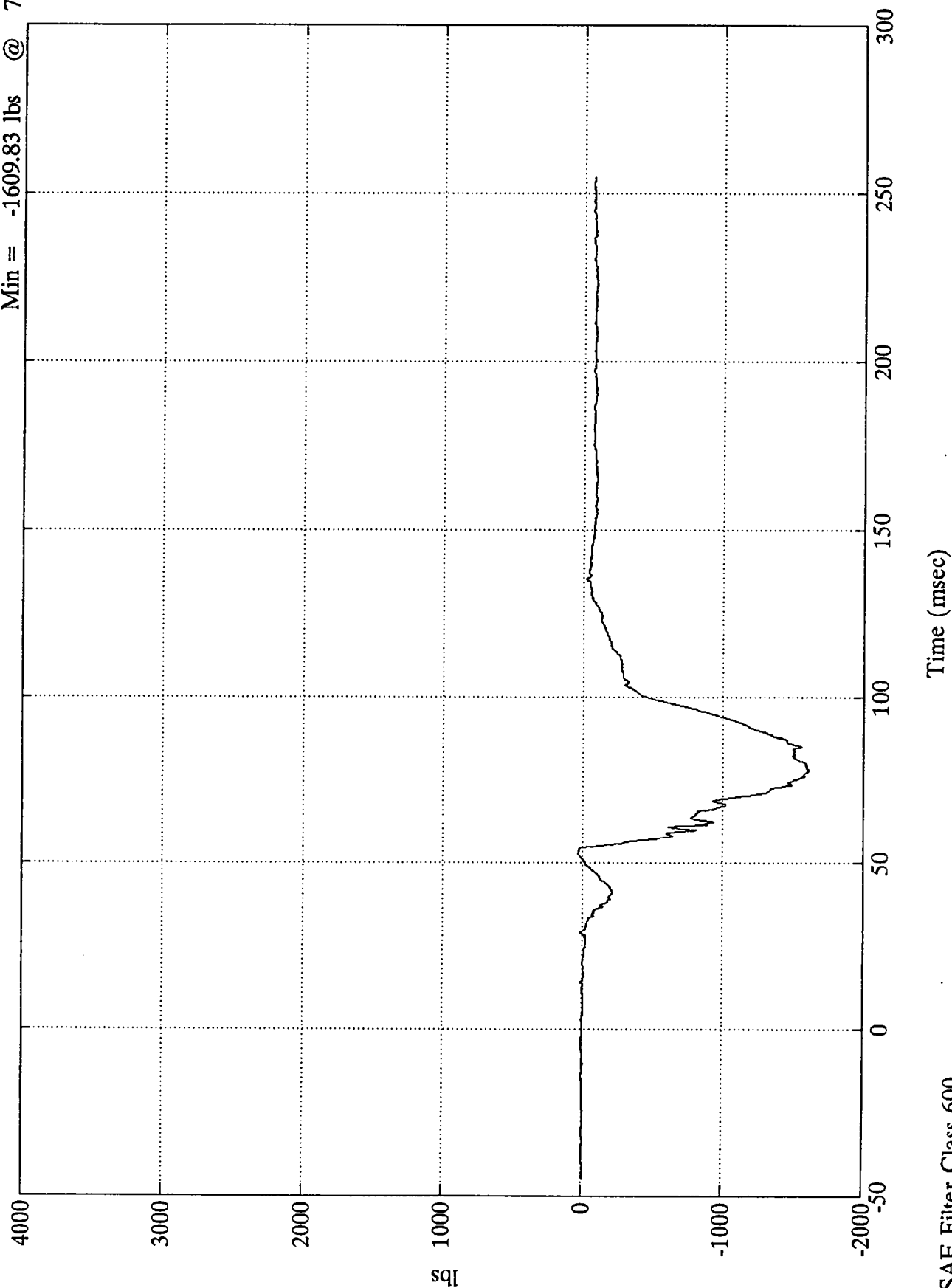
Pos. 2 Left Femur



SAE Filter Class 600

Pos. 2 Right Femur

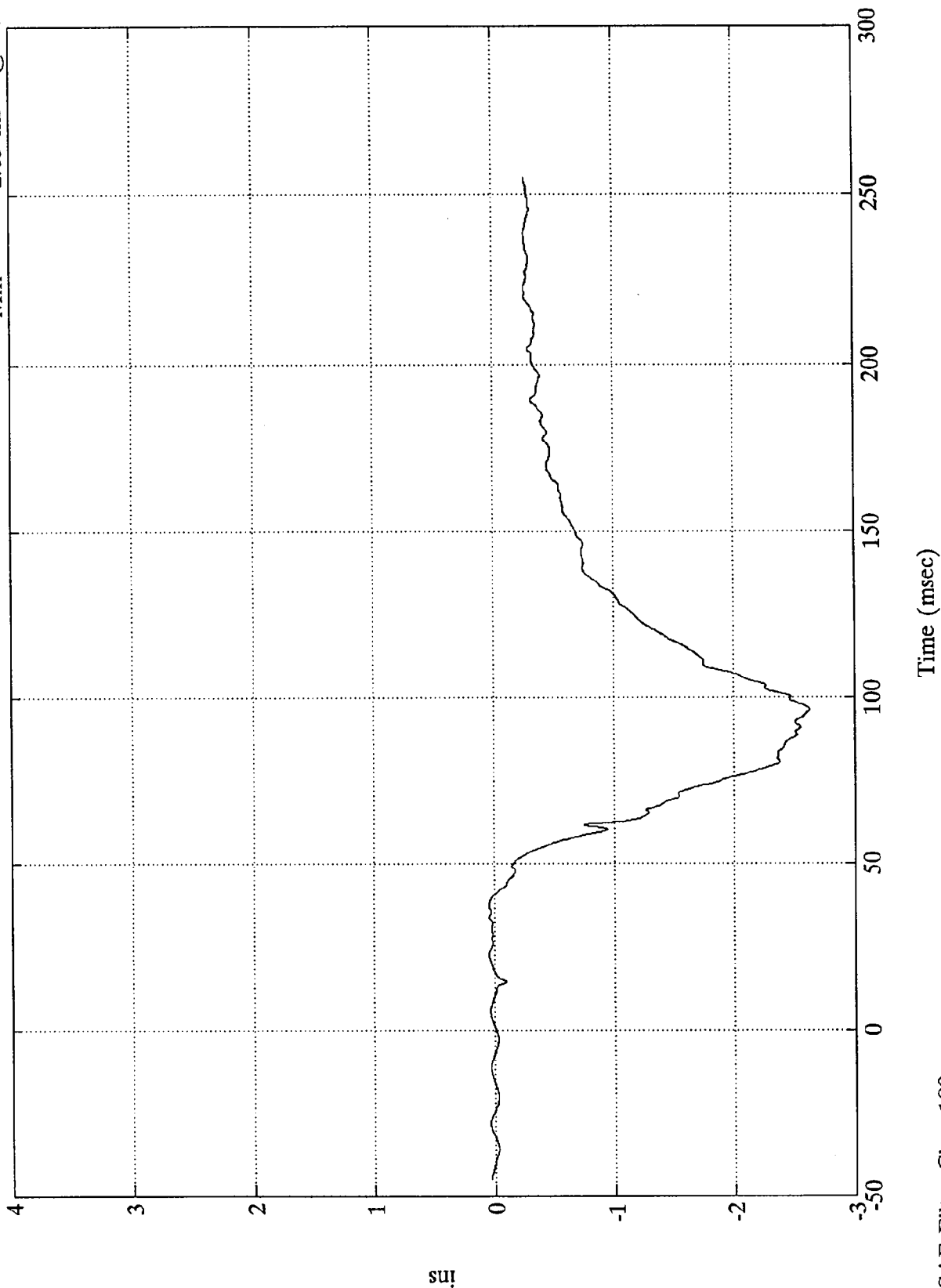
Max = 36.26 lbs @ 53.04 msec
Min = -1609.83 lbs @ 78.12 msec



SAE Filter Class 600

NHTSA 208 TEST #3 - 1994 Dodge Spirit

Pos. 2 Chest Displacement Max = .05 ins @ 22.31 msec
 Min = -2.63 ins @ 96.23 msec



SAE Filter Class 180

Appendix C

VEHICLE OWNERS MANUAL OCCUPANT RESTRAINT SYSTEM INSTRUCTIONS

BEFORE DRIVING YOUR VEHICLE

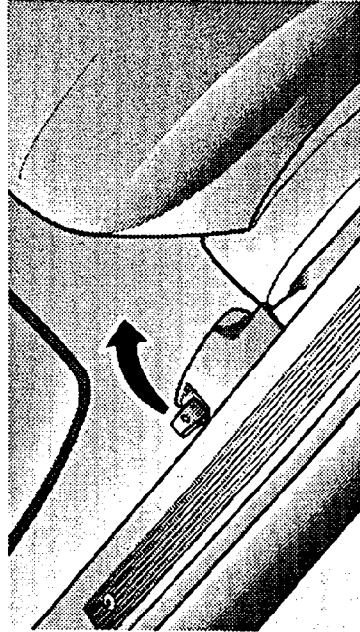
NOTE: On vehicles with power door locks, the doors cannot be locked by pressing the power door lock switch if the key is in the ignition and the driver's door is open.

POWER WINDOWS (if so equipped)

Window controls on the armrest give the driver control of all door windows. There is an individual window control on each door. A window LOCK switch allows the driver to lock all windows when small children are passengers in the vehicle.

TRUNK LID REMOTE RELEASE (if so equipped)

The trunk lid lock is operated from outside the vehicle with the master key. From inside the vehicle the trunk can be released by lifting the remote cable release lever. The lever is located just outboard of the driver's seat riser, adjacent to the sill trim.



As a security measure, a remote release override lever is built into the trunk latching mechanism. Move the lever inward before closing the trunk, and the remote release will not function.

OCCUPANT RESTRAINTS

One of the most important safety features in your vehicle is the restraint system. This system includes the front and rear seat belts and the driver's side airbag.

Your seat belts can hold infant and child restraint systems if you will be carrying children too small for adult-size belts.

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

The right front passenger seat of your vehicle is equipped with either a Unibelt or the Automatic Belt System. Use the instructions for the system installed in your vehicle.

WARNING!

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

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

Research has shown that seat belts save lives. And they can reduce the seriousness of injuries in a collision. Some of the worst injuries happen when people are thrown from the vehicle. Seat belts provide protection from that, and they reduce the risk of injury caused by striking the inside of the vehicle. **Everyone** in a motor vehicle needs to be buckled up **all the time**.

BEFORE DRIVING YOUR VEHICLE

UNIBELTS (if so equipped)

The seats next to the front and rear doors of your vehicle have UNIBELTS.

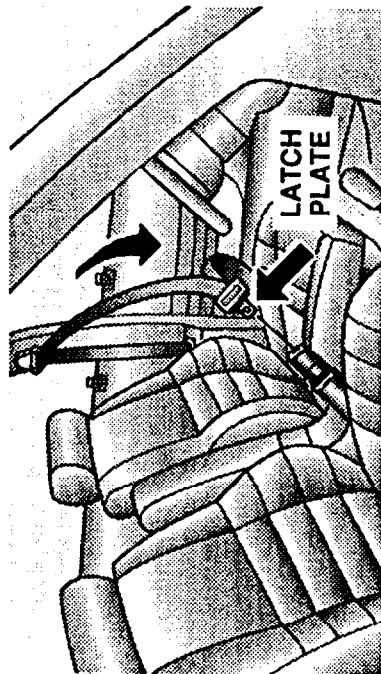
A unibelt is a combined lap/shoulder belt system. The webbing retractor will lock only during very sudden stops or impacts. This feature allows the shoulder part of the belt to move freely with you under normal conditions. But in a collision, the belt will lock and reduce the risk of your striking the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

WARNING!

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

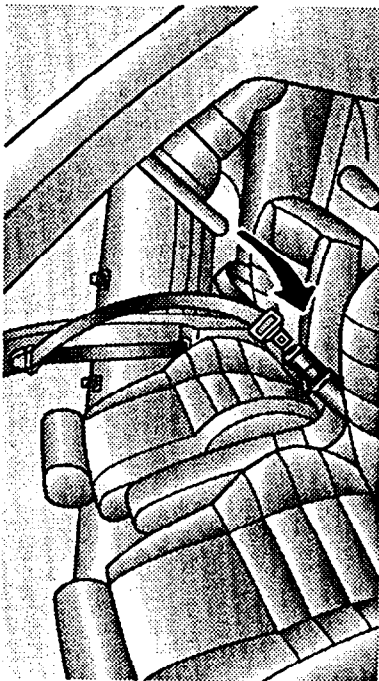
UNIBELT OPERATING INSTRUCTIONS

1. Enter the vehicle and close the door. Sit back and



adjust the seat.

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



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

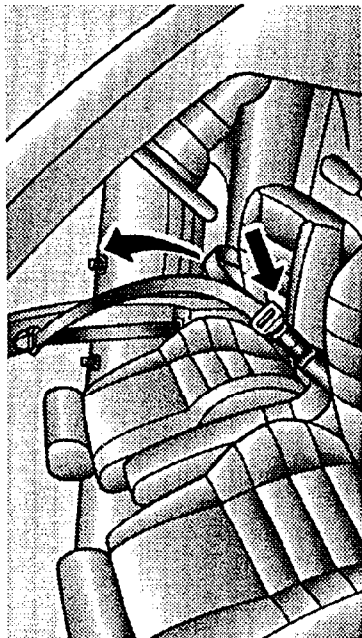
BEFORE DRIVING YOUR VEHICLE

WARNING!

A belt that is buckled into the wrong buckle will not protect you properly. The lap portion could ride too high on your body, possibly causing internal injuries. Always buckle your belt into the buckle nearest you.

A belt that is too loose will not protect you as well. In a sudden stop you could move too far forward, increasing the possibility of injury. Wear your seat belt snugly.

A belt that is worn under your arm is very dangerous. Your body could fall into the inside surfaces of the vehicle in a collision, increasing head and neck injury. And a belt worn under the arm can cause internal injuries. Ribs aren't as strong as shoulder bones. Wear the belt over your shoulder so that your strongest bones will take the force in a collision.



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

WARNING!

A lap belt worn too high can increase the risk of internal injury in a collision. The belt forces won't be at the strong hip and pelvic bones, but across your abdomen. Always wear the lap belt as low as possible and keep it snug.

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

WARNING!

A twisted belt can't do its job as well. In a collision it could even cut into you. Be sure that the belt is straight. If you can't straighten a belt in your vehicle, or if a belt is not working properly, take it to your dealer and have it fixed.

If your driver's seat belt is not working properly, you could be seriously injured in a collision because your seat belt is not there to restrain you. Don't drive your vehicle until after your seat belt has been repaired. Have your vehicle towed to a dealer for repair.

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

BEFORE DRIVING YOUR VEHICLE

AUTOMATIC BELT SYSTEM (if so equipped)

An automatic shoulder belt is installed for the right front seat passenger. The automatic belt moves out of the way when the door is opened and eliminates the need to buckle and unbuckle the shoulder belt. An emergency release is located at the upper end, should the need arise to manually release the shoulder belt.

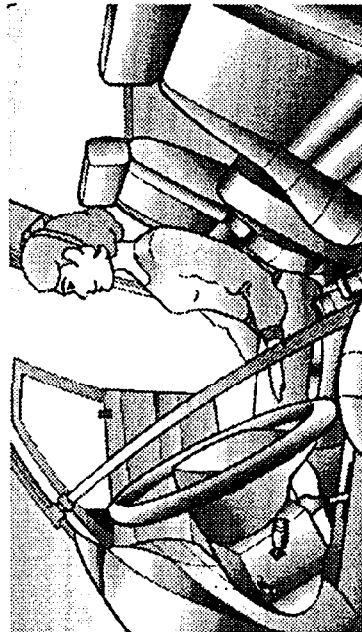
A manual lap belt is also provided at this seating position. The lap belt must be worn in addition to the automatic shoulder belt in order to obtain the maximum amount of protection afforded by seat belts. The lap belt is equipped with an automatic locking retractor which will lock if the webbing is pulled or jerked after it is first withdrawn from the retractor. Withdraw the belt from the retractor in a continuous motion until the belt is extended as far as possible.

The automatic shoulder belt has an inertia sensitive webbing retractor which is designed to lock during very sudden stops or impacts. This feature allows the belt to move freely with the wearer under normal conditions, and locks the retractor only when the whole vehicle is tipped or jolted.

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AUTOMATIC BELT OPERATING INSTRUCTIONS

The outboard end of the shoulder belt is attached to a carrier which travels in a track extending from the windshield pillar, across the top of the door opening, and part way down the lock pillar. When the door is first opened, the carrier is at the windshield pillar or moves immediately to that position.





1. Enter the vehicle, sit back and erect in the seat and close the door. When the ignition is turned ON, a motor moves the carrier to the lock pillar and positions the shoulder belt against your body.



2. Adjust the shoulder belt, if necessary so that it is positioned properly and comfortably across your chest and shoulder, as shown in the illustration. If the belt is too loose, pull it towards the console (or center retractor) and the retractor will take up the slack.

The shoulder belt will allow unrestricted movement of the upper body under normal conditions. The retractor will lock in the event of a collision.

BEFORE DRIVING YOUR VEHICLE



3. Grasp the latch plate of the lap belt and pull the belt toward the buckle. Insert the latch plate into the buckle until a "click" is heard. Snug the belt against your hips and assure that it is not twisted. If the belt is too loose, pull it toward the door and the retractor will take up the excess webbing.

4. To release the lap belt, press the red button marked "press" on the buckle. The belt will automatically retract to its stowed position.

5. When the door is opened, the upper end of the shoulder belt will return to the windshield pillar to permit easy exit.

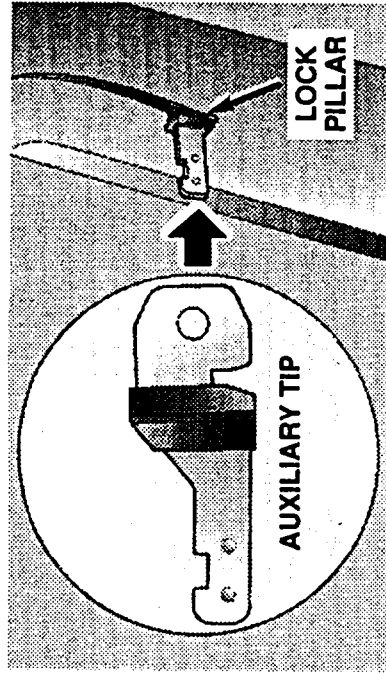
WARNING!

The lap belt must be used in addition to the shoulder belt to provide full restraint. Both belts must be worn properly for maximum effectiveness. The shoulder belt must be positioned midway on the shoulder and should not touch or cross the neck. The lap belt should be positioned across the hips, not the stomach.

Failure to follow these instructions could increase the chance of severe or fatal injury in the event of a collision.

Automatic Belt General Information

- If the door is opened and the vehicle is moving more than 3 mph, the carrier holding the upper end of the shoulder belt will remain at the lock pillar.
- If anything blocks movement of the carrier in either direction, it will stop at the obstruction. If the obstruction is removed promptly, the carrier will continue its motion. If not, the carrier will stay at the position where it stopped. Cycling the ignition switch ON-OFF-ON or OFF-ON-OFF, depending on its initial position, will then cause the carrier to resume its motion to the correct position.
- If the shoulder belt emergency release buckle is disconnected and the belt is retracted, the carrier will move to the lock pillar and stay there.

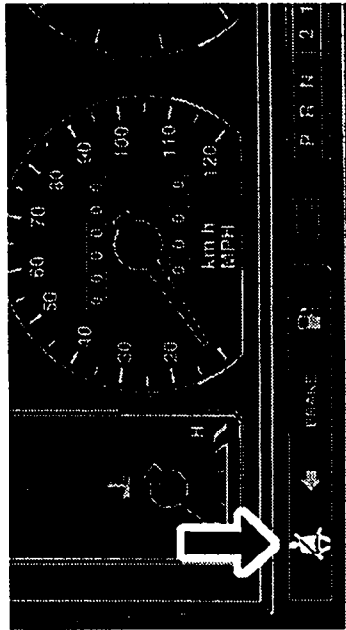


- If the carrier holding the upper end of the shoulder belt stops at any position other than the lock pillar, and will not move when the ignition switch is cycled, the shoulder belt can still be used. Place the Auxiliary Tip Insert, provided in glove compartment, into the track end position as shown. Press the red button on the buckle to release the belt from the carrier and connect the buckle to the Auxiliary Tip. Have the system serviced by an authorized dealer.

BEFORE DRIVING YOUR VEHICLE

SEAT BELT WARNING LIGHT

The seat belt warning symbol will remain lighted if the carrier does not lock in place in the door lock pillar. If this occurs, have the system serviced by an authorized dealer.



FRONT CENTER AND REAR CENTER LAP BELTS

(if so equipped)

Center seating positions have a lap belt only. To fasten a lap belt, slip the latch plate into the buckle.

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

WARNING!

A lap belt worn too loose or too high is dangerous.

A belt worn too loose can allow you to slip down and under the belt in a collision.

A belt that is too high will apply crash forces to the abdomen, not to the stronger hip bones.

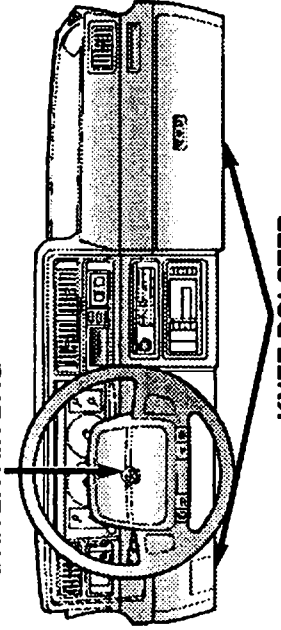
In either case, the risk of internal injuries is greater. Wear the lap belt low and snug.

certifying that it meets applicable Motor Vehicle Safety Standards. Make sure that it is satisfactory for use in this vehicle.

DRIVER SUPPLEMENTAL RESTRAINT SYSTEM - AIRBAG

This vehicle has an airbag for the driver as a supplement to the seat belt restraint system. The airbag is mounted in the steering wheel. Its job is to inflate in higher speed frontal impacts. It works with the instrument panel knee bolster and the seat belt to provide improved protection for the driver.

DRIVER AIR BAG

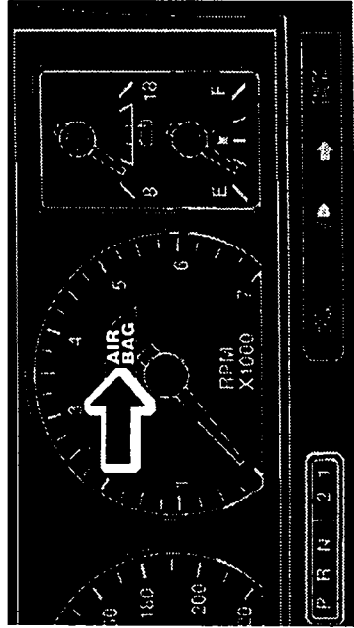


The seat belt is designed to protect you in many types of collisions. The airbag deploys only in frontal collisions. And it will not deploy in collisions at slow speed. But even in collisions where the airbag does work, you need the seat belt to keep you in the right position for the airbag to protect you properly.

BEFORE DRIVING YOUR VEHICLE

WARNING!

- Being too close to the steering wheel or instrument panel during airbag deployment could cause serious injury. Airbags need room to inflate. Sit back, comfortably extending your arms to reach the steering wheel or instrument panel.
- Relying on the airbag alone could lead to more severe injuries in a collision. The airbag works with your seat belt to restrain you properly. In some collisions the airbag won't deploy at all. Wear your seat belt even though you have an airbag.
- Ignoring the AIRBAG light in your instrument panel could mean you won't have the airbag to protect you in a collision. If the light does not come on, stays on after you start the vehicle, or if it comes on as you drive, have the airbag system checked right away.



The airbag system consists of the following:

- Crash Sensors
- Diagnostic Unit
- AIRBAG Readiness Light
- Airbag/inflator Unit
- Unique Steering Wheel and Column
- Interconnecting Wiring

- **Knee Impact Bolster**

How The Airbag System Works

- **Crash Sensors** in the front of the vehicle and in the occupant compartment determine if a frontal impact is severe enough to require the airbag. The sensors will not detect side, rollover, or rear impacts. Switches in the sensors are connected to the diagnostic unit and to the airbag/inflator unit.
- **The Diagnostic Unit** monitors the readiness of the electronic parts of the system whenever the ignition switch is in the START or RUN positions. These include all of the items listed above except the knee bolster and the steering wheel and column. The diagnostic unit also turns on the AIRBAG light in the instrument panel for 6 to 8 seconds when the ignition is first turned on, then turns the light off. If it detects a malfunction in any part of the system, it turns on the light either momentarily or continuously.
- **The Airbag/Inflator Unit** is in the center of the steering wheel. When the crash sensors detect an

impact requiring the airbag, they signal the inflator unit. A large quantity of non-toxic nitrogen gas is generated to inflate the airbag. The steering wheel hub trim cover separates and folds out of the way as the bag inflates to its full size. The bag fully inflates in about 50 milliseconds. This is about half of the time it takes to blink your eye. It then quickly deflates by venting the nitrogen gas through holes in the airbag toward the instrument panel. In this way the bag does not interfere with your control of the vehicle.

If A Deployment Occurs

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

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

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

BEFORE DRIVING YOUR VEHICLE

- The nylon airbag material may sometimes cause abrasions and/or skin reddening to the driver as the airbag deploys and unfolds itself from the steering wheel. The abrasions are similar to friction rope burns or those you might get sliding along a carpet or gymnasium floor. They are not caused by contact with chemicals. They are not permanent and normally heal quickly. However, if you haven't healed significantly within a few days, or if you have any blistering, see your doctor immediately.
- Your vehicle may be safely driveable after the airbag deploys. If so, you can tuck the deployed airbag inside the opening in the steering wheel hub trim cover to make driving somewhat easier.

- As the airbag deflates you may see some smoke-like particles. The particles are a normal by-product of the process that generates the non-toxic nitrogen gas used for airbag inflation. These airborne particles may irritate the skin, eyes, nose, or throat. If you have skin or eye irritation, rinse the area with cool water. For nose or throat irritation, move to fresh air. If the irritation continues, see your doctor.

If these particles settle on your clothing, follow the garment manufacturers instructions for cleaning.

MAINTAINING YOUR AIRBAG SYSTEM

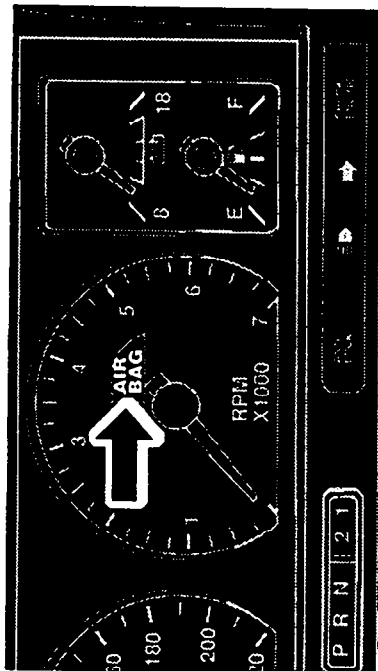
WARNING!

- Modifications to any part of the airbag system could cause it to fail when you need it. You could be injured because the airbag is not there to protect you. Do not modify the components or wiring, including adding any kind of badges or stickers to the steering wheel hub trim cover. Do not modify the front bumper or vehicle body structure.
- You need proper knee impact protection in a collision. Make sure the fuse access panel, in the lower portion of the knee impact bolster, is in place before driving the vehicle. Do not mount or locate any aftermarket equipment on or behind the knee impact bolster.
- You can be injured if you are too close to the steering wheel hub and the airbag inflates. It is dangerous to try to repair any part of the airbag system yourself. Don't try to repair the airbag system. Be sure to tell anyone who works on your vehicle that it has an airbag.

BEFORE DRIVING YOUR VEHICLE

You will want to have the airbag ready to inflate for your protection in an impact. So if any of the following occurs, have an authorized dealer service the system promptly.

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



- The light remains on or flickers after the 6 to 8 second interval.

BEFORE DRIVING YOUR VEHICLE

- The light flickers or comes on and remains on while driving.

WARNING!

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

Transporting Pets

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

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

SEATS

WARNING!

Adjusting a seat while the vehicle is moving is dangerous. The sudden movement of the seat could cause you to lose control. The seat belt might not be properly adjusted and you could be injured. Adjust the seat only while the vehicle is parked.

Manual Seat Adjustment

The adjusting lever is at the front of the seat, near the floor. Pull the lever up and move the seat to the desired position.

Using body pressure, move forward and rearward on the seat to be sure the seat adjusters have latched.

Power Seat (if so equipped)

The power seat adjuster, provides six-way adjustment of the driver's seat.