V24150

REPORT NUMBER: 208-CAL-96-07
212-CAL-96-07
301-CAL-96-07

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

Ford Motor Company
1996 Ford Taurus GL
4 -door sedan

NHTSA NUMBER: CT0206

CALSPAN TEST NUMBER: 8353-5

May 31, 1996

CALSPAN SRL CORPORATION
P.O. BOX 400
BUFFALO, NEW YORK 14225

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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15. Supplementary Notes

16. Abstract

A 30 mph vehicle safety compliance test was conducted on a 1996 Ford Taurus GL 4 -door sedan.

This test was performed at the Calspan SRL Corporation in Buffalo, New York on May 31, 1996.

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 29.1 mph. The ambient temperature at the impact face was 70 °F.

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

Type of Restraint System: The test vehicle was equipped with a driver Air Bag and a passenger Air Bag restraint system. The manual seat belts were not used for this test.

17. Key Words	18. Distribution Statement
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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 SRL Corporation under Contract No. DTNH22-93-D-11089. The purpose of this test was to determine if the subject vehicle, a 1996 Ford Taurus GL 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-208-09, dated March 15, 1993.

Section 2

SUMMARY OF TEST NUMBER CT0206

A frontal barrier was impacted by a 1996 Ford Taurus GL 4 -door sedan at a velocity of 29.1 mph. The test was performed at the Calspan SRL Corporation on May 31, 1996. 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.

One Part 572E, 50th percentile male anthropomorphic test device (ATD), was placed in the driver seating position and one Part 572B 50th percentile male ATD was placed in the right-front passenger seating position according to dummy placement instructions specified in the OVSC Laboratory Test Procedure.

The driver ATD was instrumented with head and chest three axis (x, y, and z) accelerometers, chest displacement potentiometers, left/right femur load cells and lower leg instrumentation. The passenger ATD was instrumented with head and chest three axis (x, y, and z) accelerometers, and left/right femur load cells. These ATDs had been certified prior to the test.

The 35 channels of data were recorded on a P.C. based data acquisition system. Appendix B contains the vehicle and dummy response data traces. The instrument panel X accelerometer contains questionable data after 65 msec.

The driver's HIC was 491.19. The maximum chest deceleration over 3 milliseconds was 50.393 g's with 1.3 inches of deflection. The maximum force on the driver's left femur was 1088.5 pounds and 1086.3 pounds on the right femur.

The right front passenger's HIC was 167.00. The maximum chest deceleration over 3 milliseconds was 45.578 g's. Loads of 1669.2 and 1617.1 pounds were recorded on the left and right femurs respectively.

Table 1

CRASH TEST SUMMARY

Vehicle NHTSA No. : CT0206 Test Mode : 30 mph Frontal Barrier

Test Date : May 31, 1996 Time: 11:00 Temperature : 70 °F

Vehicle Make/Model/Body Style : 1996 Ford Taurus GL 4 -door sedan

Vehicle Test Weight : 3857 lbs

Vehicle/Barrier Impact Angle : 0 °

Impact Velocity : 29.1 mph

Maximum Static Crush : 16.2 inches

Vehicle Rebound : 18.8 inches

DUMMIES:	DRIVER	PASSENGER
Type :	Part 572E	Part 572B
Restraint System :	Air Bag	Air Bag

Number of Data Channels : 35

Number of Cameras : 1 Real Time

14 High Speed

DOOR OPENING DATA : closed/operable - Left Front

closed/operable - Right Front

Front Seat(s) Data :	DRIVER	PASSENGER
Seat Track Failure :	0.0	0.0
	Inches of shift	
Seat Back Failure :	none	none

VISIBLE DUMMY CONTACT POINTS :	DRIVER	PASSENGER
Head :	Face with air bag	Face with air bag, top of head with sunvisor.
Abdomen :	air bag	air bag
Chest	air bag	air bag
Knees	lower dash	glove box door

Table 2

GENERAL TEST AND VEHICLE PARAMETER DATA

TEST VEHICLE INFORMATION :

Year/Make/Model/Body Style : 1996 Ford Taurus GL 4 -door sedan

NHTSA No. : CT0206 ; VIN: 1FALP52U5TG144375 ; Color : Silver

Engine Data: 6 cylinders; - CID; 3.0 Liters; - cc

Placement : - Longitudinal or In-Line; X Transverse of 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 : 3/7/96 ; Odometer Reading 91 miles

Selling Dealer : Delacy Ford

& Address: 3061 Transit Rd., Elma

DATA FROM TIRE VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured by : Ford Motor Company

Date of Manufacture 10/95

GVWR : 4687 lbs.; GAWR: 2647 lbs. FRONT; 2065 lbs. REAR

DATA FROM TIRE PLACARD:

Tire Pressure with Maximum Capacity Vehicle Load : 33 psi FRONT

33 psi REAR

Recommended Tire Size : P205/65R15

* Recommended Cold Tire Pressure : 33 psi FRONT; 33 psi REAR

Size of Tires on Test Vehicle: P205/65R15 ; Manufacturer: GENERAL

Vehicle Capacity Data :

Type of Front Seats: - Bench; - Bucket; X Split Bench

Number of Occupants: 3 Front; 3 Rear; 6 Total

Vehicle Capacity Weight (VCW) = 1100 lbs.

No. of Occupants x 150 lbs. = 900 lbs.

Rated Cargo/Luggage Weight (RCLW) = 200 lbs.

*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	= 1084 lbs.		Right Rear	= 596	lbs.
Left Front	= 1057 lbs.		Left Rear	= 603	lbs.
TOTAL FRONT	= 2,141 lbs.		TOTAL REAR	= 1,199	lbs.

TOTAL DELIVERED WEIGHT = 3,340.0 lbs.

% of Total Front of Vehicle Weight = 64.1 % of Total Rear Weight = 35.9 %

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT :

Total Delivered Weight	= 3,340	lbs.
Rated Cargo/Luggage Weight (RCLW)	= 200	lbs.
Part 572E and B Dummies @ 167 AND 164	= 331	lbs.
TARGET TEST WEIGHT	= 3,871	lbs.

WEIGHT OF TEST VEHICLE WITH TWO DUMMIES AND 186 POUNDS OF CARGO WEIGHT:

Right Front	= 1141 lbs.		Right Rear	= 780	lbs.
Left Front	= 1131 lbs.		Left Rear	= 805	lbs.
TOTAL FRONT	= 2,272 lbs.		TOTAL REAR	= 1,585	lbs.

TOTAL TEST WEIGHT = 3,857.0 lbs.

% of Total Front Weight = 58.9 % % of Total Rear Weight = 41.1 %

Weight of Ballast Secured in Vehicle Trunk Area = 85 lbs.

Vehicle Components Removed for Weight Reduction: none

VEHICLE ATTITUDE (all dimension in inches) :

AS DELIVERED :	RF	28.3	LF	28.5	RR	27.3	LR 27.4
FULLY LOADED :	RF	28.0	LF	28.3	RR	25.6	LR 25.8
AS TESTED :	RF	28.0	LF	28.3	RR	25.6	LR 25.8

Vehicle's Wheel Base : 108.4 in.

Location of Vehicle's C.G. : 44.5 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 DATA

TYPE OF TEST:

Type of Test : Frontal Barrier Impact Angle : 0°

Test Date : May 31, 1996 Time: 11:00 Temperature: 70 °F

Vehicle NHTSA No. : CT0206

Required Impact Velocity Range : 28.9 to 29.9 mph

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

Trap No. 1 = 29.1 mph; Trap No. 2 = 29.1 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 =	193.5	; C/L =	197.1	; Left =	194.1
Post-Test	Right =	179.7	; C/L =	180.9	; Left =	180.5
Crush	Right =	13.8	; C/L =	16.2	; Left =	13.6

AVERAGE = 14.5 inches

VEHICLE REBOUND: (From rigid barrier only.)

Distance from front of test vehicle to impact point :

Right = 19.8 ; C/L = 18.6 ; Left = 18.0

AVERAGE = 18.8 inches

DOOR OPENING :	Left	Right
Front	closed/operable	closed/operable
Rear	closed/operable	closed/operable
SEAT MOVEMENT :	**Seat Back Failure**	**Seat Shift**
Front	none	0.0
Rear	n/a	n/a

Table 3

POST IMPACT (cont.)

GLAZING DAMAGE :

Windshield cracked throughout.

OTHER NOTABLE IMPACT FEATURES :

Steering column stroked.

Section 3

OCCUPANT AND VEHICLE DATA

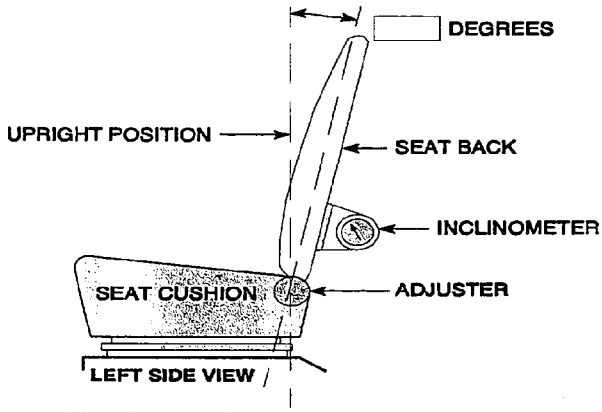
Figure 1

TEST VEHICLE INFORMATION

VEHICLE IDENTIFICATION:

Model Year : 1996 Vehicle Model: Ford Taurus GL 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.



FRONT SEAT ASSEMBLY

Seat back angle for driver's seat : 26.5 degrees

Measurement instructions : Measure seat back frame 13" up from pivot point.

Angle should be 26.5 degrees +/- 2 degrees with dummy installed.

Seat back angle for passenger's seat : 26.5 degrees

Measurement instructions : Measure seat back frame 13" up from pivot point.

Angle should be 26.5 degrees +/- 2 degrees with dummy installed.

2. Seat Fore and Aft Positioning

Positioning of the driver's seat : Seat set in mid-position, 7th detent of 13 total detent positions.

Positioning of the passenger's seat (if applicable) : Seat set in mid-position, 7th detent of 13 total detent positions.

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 - gallons

4. Steering Column Position :

Column located in center detent position.

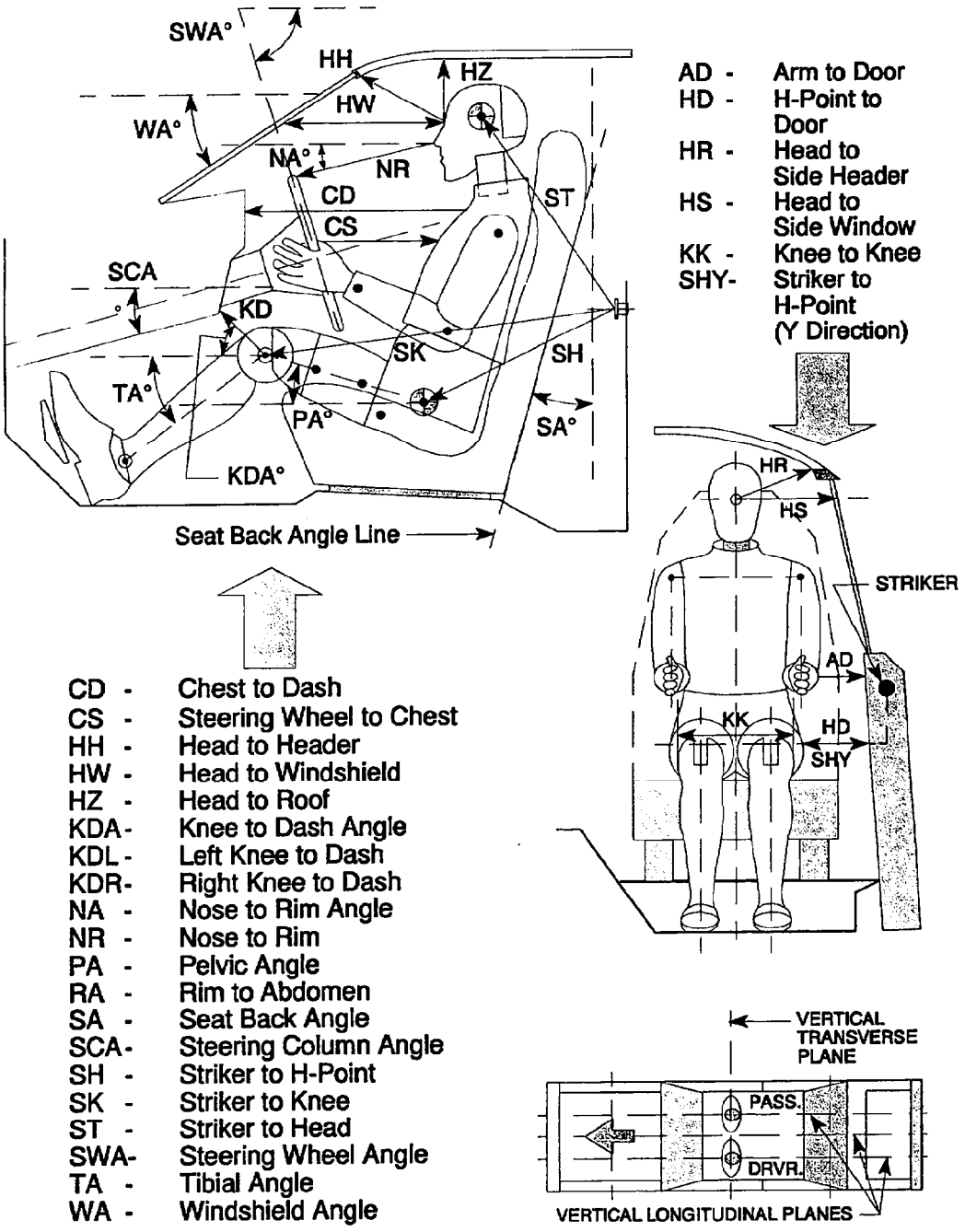
5. Other:

None

Figure 2

PART 572 DUMMY IN-VEHICLE POSITION

DUMMY MEASUREMENT FOR FRONT SEAT PASSENGERS



CD - Chest to Dash
CS - Steering Wheel to Chest
HH - Head to Header
HW - Head to Windshield
HZ - Head to Roof
KDA - Knee to Dash Angle
KDL - Left Knee to Dash
KDR - Right Knee to Dash
NA - Nose to Rim Angle
NR - Nose to Rim
PA - Pelvic Angle
RA - Rim to Abdomen
SA - Seat Back Angle
SCA - Steering Column Angle
SH - Striker to H-Point
SK - Striker to Knee
ST - Striker to Head
SWA - Steering Wheel Angle
TA - Tibial Angle
WA - Windshield Angle

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Table 4

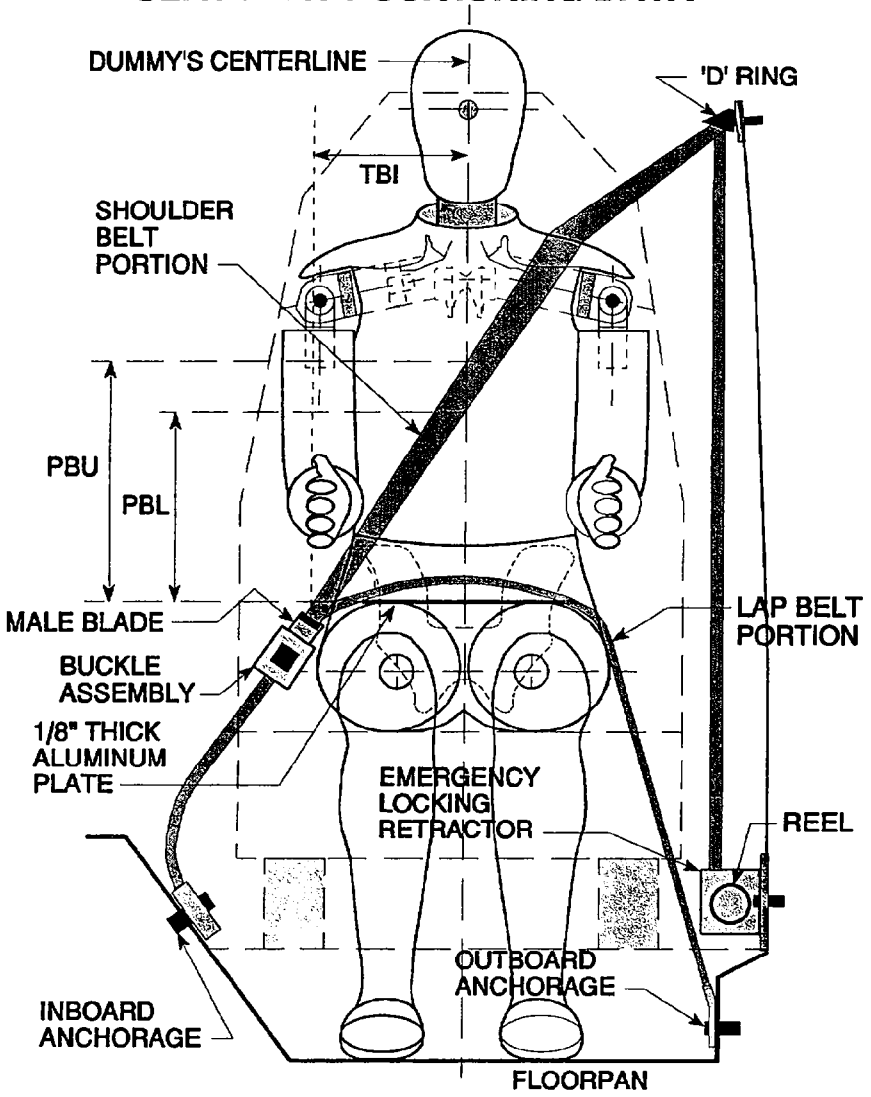
FRONT SEAT OCCUPANT MEASUREMENTS

(All dimensions excluding angles are in inches).

	DRIVER (Serial #342)			PASSENGER (Serial #1020)		
WA°	26 deg.			-		
SWA°	67 deg.			-		
SCA°	23 deg.			-		
SA°	26 deg.			26 deg.		
HZ	6.2			4.3		
HH	12.2			11.8		
HW	24.2			20.6		
HR	8.4			8.0		
NR	15.8	Angle	7 deg.	-		
CD	21.3			19.6		
CS	12.3			-		
RA	7.0			-		
KDL/KDA	5.1	Angle	35 deg.	7.0		
KDR/KDA	3.9			7.2	Angle	38 deg.
PA°	25 deg.			Torso angle - 23 deg.		
TA°	47 deg.			46 deg.		
KK	12.2			12.0		
ST	21.3	Angle	10 deg.	22.5	Angle	8 deg.
SK	23.7	Angle	93 deg.	23.4	Angle	103 deg.
SH	9.8	Angle	125 deg.	8.7	Angle	130 deg.
SHY	9.5			10.0		
HS	11.9			10.5		
HD	6.0			5.3		
AD	4.3			4.8		

Figure 3

SEAT BELT POSITIONING DATA



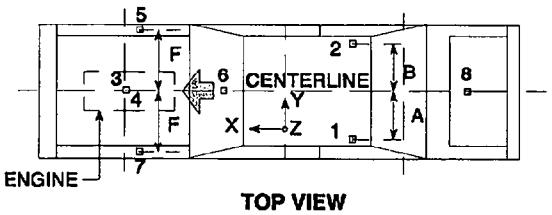
FRONT VIEW OF DUMMY

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

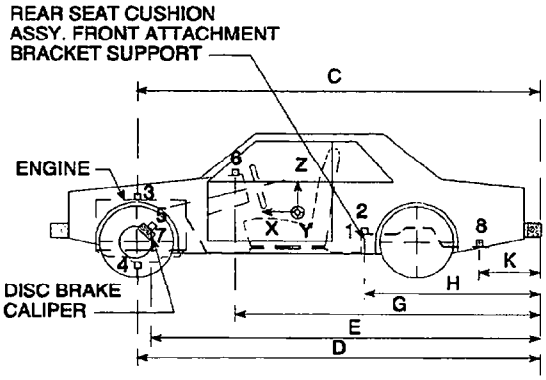
* Vehicle equipped with air bag, manual seat belt not used for this position.

Figure 4

VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY



TOP VIEW



LEFT SIDE VIEW

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	Instrument Panel	X		
7	Left Disc Brake Caliper	X		
8	Trunk Z			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

DIMENSION	LENGTH (Inches)	
	PRE-TEST VALUES	POST-TEST VALUES
A Left Rear Seat Crossmember Y	22.5	22.5
B Right Rear Seat Crossmember Y	22.5	22.5
C Top of Engine X	160.1	154.9
D Bottom of Engine X	151.3	146.7
E Disc Brake Calipers X	156.3	left = 153.9; right = 154.4
F Disc Brake Calipers Y	23.3	23.3
G Instrument Panel X	122.8	122.7
H Rear Seat Crossmembers X	79.5	79.5
K Trunk X	16.2	16.2

LOCATION NUMBER	DESCRIPTION	MAXIMUM VALUE			
		Pos.	msec.	Neg.	msec.
1	Rear Seat X-Member @ Left Side	3	120	-25	39
2	Rear Seat X-Member @ Right Side	2	124	-26	37
3	Top of Engine Block	22	61	-77	30
4	Bottom of Engine	10	54	-70	40
5	Disc Brake Caliper @ Right Side	11	56	-63	37
6	Instrument Panel	43	39	-80	55
7	Disc Brake Caliper @ Left Side	6	147	-58	36
8	Trunk	21	86	-25	105

Figure 5

CAMERA POSITIONS FOR FRONTAL IMPACTS

NOTE: Camera Information shown on Table 6.

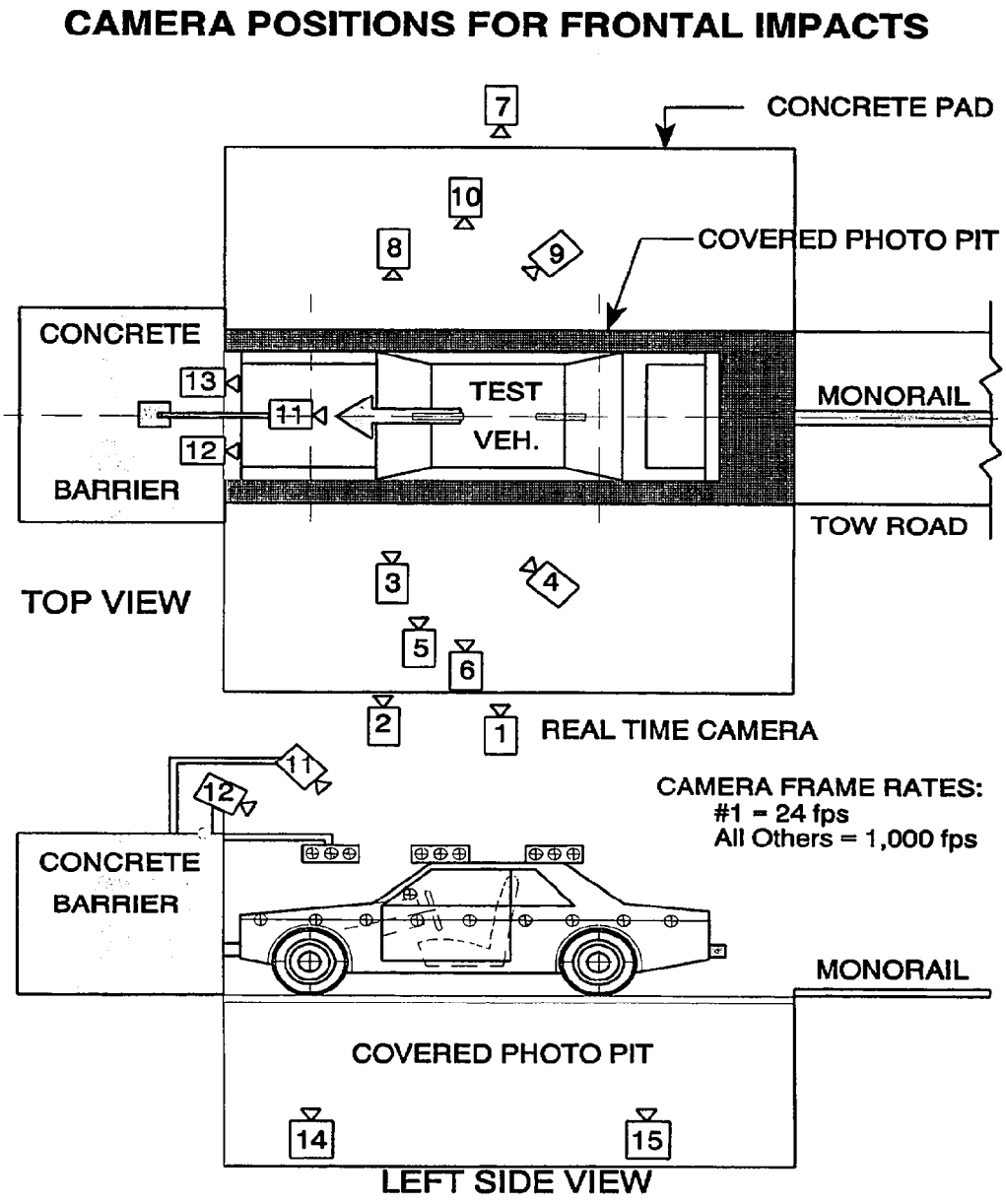


Table 6

HIGH-SPEED CAMERA LOCATIONS

Test No. CT0206 Vehicle: 1996 Ford Taurus GL 4 -door sedan

Camera No.	VIEW	CAMERA POSITIONS (In.)* X	Y	Z	ANGLE** (deg)	FILM PLANE TO HEAD TARGET (In.)	LENS (mm)	SPEED (fps)
1	Real-Time Camera	-	-	-	-	-	-	24
2	Overall Left Side	264	66	45	-4	246.3	13	1005
3	Left Side View	380	44	46	-4	362.3	28	925
4	Driver and Interior View	227	119	75	-10	-	25	955
5	Steering Column (Bottom)	311	82	46	-4	293.3	25	980
6	Steering Column (Top)	311	82	70	-9	293.3	25	1025
7	Overall Right Side	240	88	47	-4	222.3	13	1145
8	Right Side View	322	67	50	-4	304.3	25	900
9	Passenger and Interior View	185	133	73	-8	-	25	1050
10	Right Passenger View	316	77	56	-4	298.3	35	1115
11	Windshield View	0	0	127	-28	-	13	1005
12	Driver Front View	23	17	76	-44	-	8	1005
13	Passenger Front View	23	17	76	-44	-	8	1000
14	Pit View of Engine	0	25	-98	90	-	13	995
15	Pit View of Fuel Tank	0	100	-98	90	-	13	885

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

Figure 6

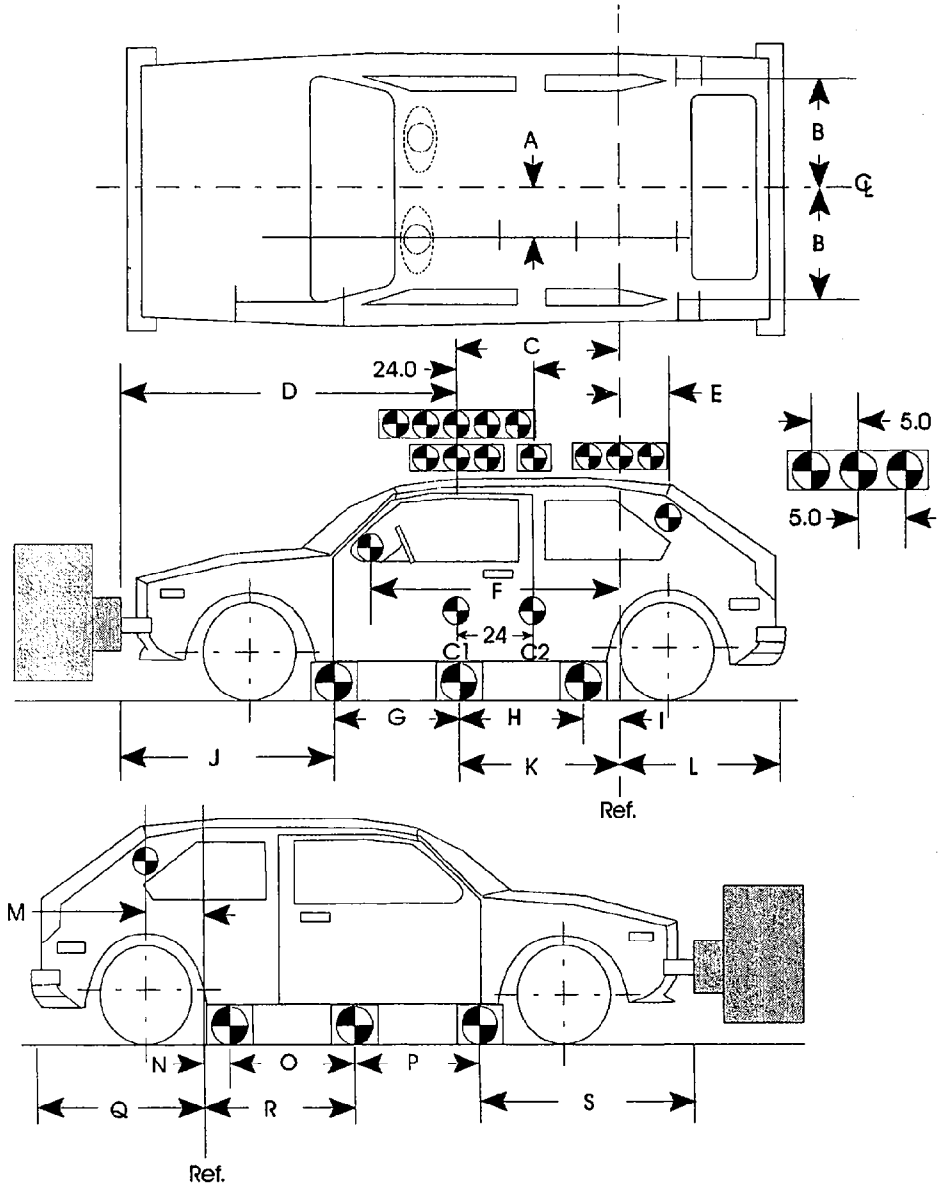
VEHICLE TARGET LOCATIONS
(All dimensions in inches)

Key (Inches)

A =	14.7
B =	25.0

C =	35.8
D =	101.1
E =	12.9
F =	64.8
G =	35.9
H =	35.9
I =	4.9
J =	59.3
K =	40.8
L =	61.1

M =	12.8
N =	5.1
O =	35.9
P =	36.1
Q =	60.9
R =	41.0
S =	59.1



Note: Targets on front fender are 12.0 inches apart. Targets rearward of front fender are 24.0 inches apart.

Figure 7

TEST VEHICLE MEASUREMENTS

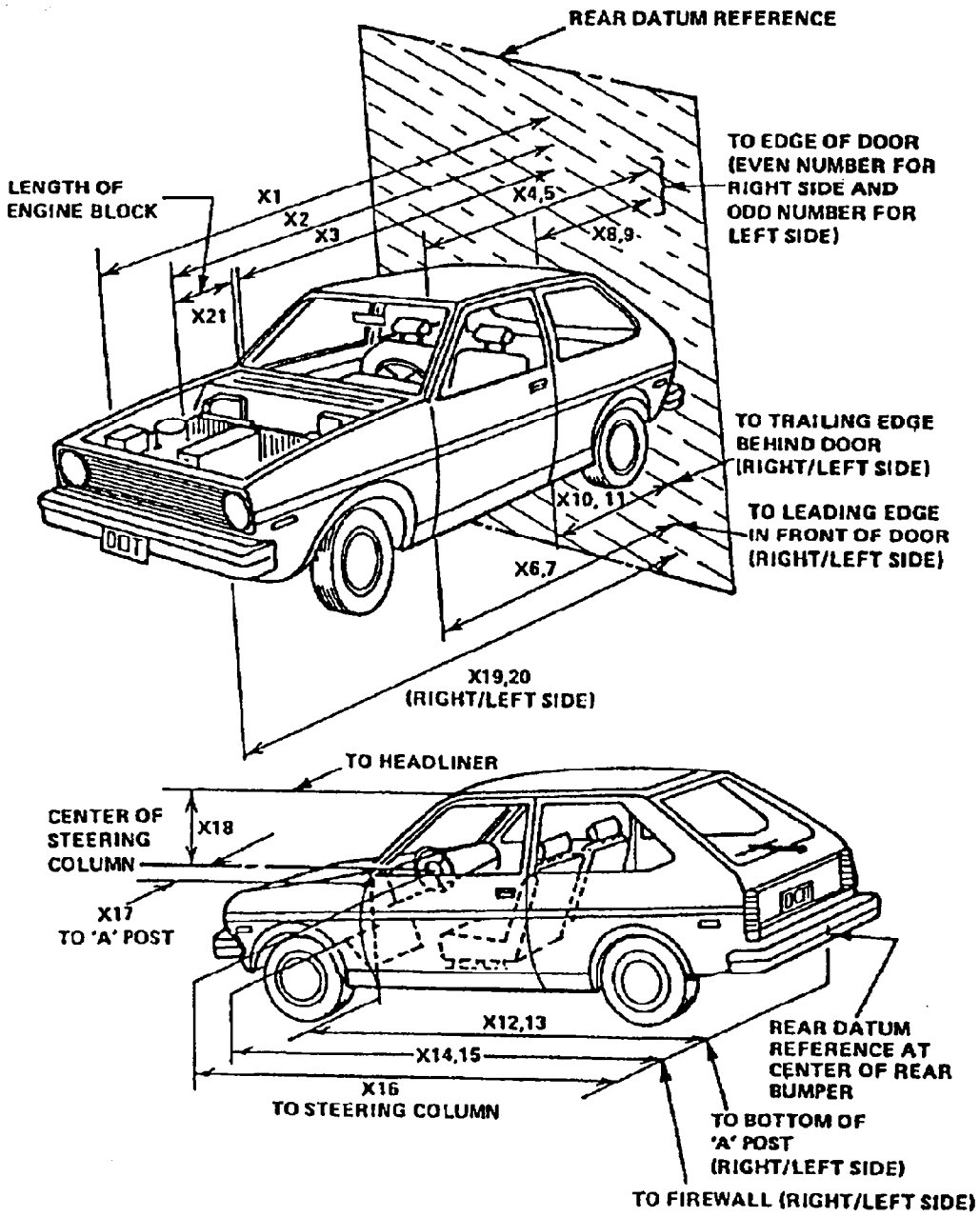


Table 7

VEHICLE MEASUREMENTS

		All Dimensions in inches		
No.		Pre-Test	Post-Test	Differences
X1	Total Length of Vehicle at Centerline	197.1	180.9	16.2
X2	Rear Surface of Vehicle to Front of Engine	165.5	160.0	5.5
X3	Rear Surface of Vehicle to Firewall	152.6	151.9	0.7
X4	Rear Surface of Vehicle to Upper Leading Edge of Right Door	137.8	137.3	0.5
X5	Rear Surface of Vehicle to Upper Leading Edge of Left Door	138.2	137.3	0.9
X6	Rear Surface of Vehicle to Lower Leading Edge of Right Door	134.3	133.6	0.7
X7	Rear Surface of Vehicle to Lower Leading Edge of Left Door	134.4	133.4	1.0
X8	Rear Surface of Vehicle to Upper Trailing Edge of Right Door	94.5	94.1	0.4
X9	Rear Surface of Vehicle to Upper Trailing Edge of Left Door	94.8	93.9	0.9
X10	Rear Surface of Vehicle to Lower Trailing Edge of Right Door	91.9	91.4	0.5
X11	Rear Surface of Vehicle to Lower Trailing Edge of Left Door	92.4	91.4	1.0
X12	Rear Surface of Vehicle to Bottom of "A" Post of Right Side	131.1	130.4	0.7
X13	Rear Surface of Vehicle to Bottom of "A" Post of Left Side	131.5	130.6	0.9
X14	Rear Surface of Vehicle to Firewall, Right Side	151.0	148.7	2.3
X15	Rear Surface of Vehicle to Firewall, Left Side	151.0	149.5	1.5
X16	Rear Surface of Vehicle to Steering Column	117.5	120.0	-2.5
X17	Center of Steering Column to "A" Post	17.5	15.5	2.0
X18	Center of Steering Column to Headliner	16.5	16.8	-0.3
X19	Rear Surface of Vehicle to Right Side of Front Bumper	193.5	179.7	13.8
X20	Rear Surface of Vehicle to Left Side of Front Bumper	194.1	180.5	13.6
X21	Length of Engine Block	18.0	18.0	0.0

Section 4

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

- "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

Table 8

DUMMY INJURY CRITERIA VALUES

NHTSA No. : CT0206 Vehicle : 1996 Ford Taurus GL 4 -door sedan

	MAXIMUM ACCELERATION (g's)								
	HEAD				CHEST				
	X	Y	Z	R	X	Y	Z	R*	Displacement
Dummy (1)	59.0	8.6	-18.9	59.9	-49.7	-5.5	11.9	50.393	1.3
Dummy (2)	-54.0	9.7	39.9	67.1	-44.5	4.9	18.5	45.578	n/a

	MAXIMUM FORCE - FEMUR LOAD (lbs.)	
	LEFT FEMUR	RIGHT FEMUR
Dummy (1)	1088.5	1086.3
Dummy (2)	1669.2	1617.1

	HEAD INJURY CRITERIA**			
		36 millisecond Maximum		Avg. Acc (g)
	HIC	t_1 (msec)	t_2 (msec)	t_1 TO t_2
Dummy (1)	491.19	66.120	102.00	45.14
Dummy (2)	167.00	55.680	66.120	48.04

* 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 = 0 sec.
(audible warning should not operate)

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 :

Label located on back of sunvisor.

The label states, "See the owner's manual for further information and explanations." The owner's manual states no regular maintenance is required.

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 on upper 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. :	CT0206
Make/Model :	1996 Ford Taurus GL 4 -door sedan
Date of Comfort/Convenience Check :	May 30, 1996
Technician Performing Check :	DJT
GVWR :	4687 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 - NO X

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.

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 n/a NO n/a

b. The latch plate is released from the buckle. YES n/a NO n/a

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 n/a NO n/a

(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 - NO X

2. Seat are adjusted according to instructions in Appendix B.

YES X NO -

3. The test dummies are positioned according to dummy position placement instructions in Appendix B and Appendix C.

YES X NO -

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 0.4 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 X NO -

2. Attach the inboard and outboard reach string. YES X NO -

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 X NO -

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 X NO -

D5
RETRACTION

1. Seats and seat backs are adjusted according to instructions in Appendix B "General Test Conditions" in TP-208-09, dated March 15, 1993.

   YES X NO -

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 X NO -

3. Outboard armrests which are capable of being stowed on vehicle seats shall be placed in their stowed positions.

   YES n/a NO n/a

4. Check the option which applies to this test vehicle:

   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 X NO -

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 X NO -

   b. The seat is moved to any position to which it is designed to be adjusted.

   YES X NO -

   c. The seat back, if foldable, is folded forward as far as possible and then moved backward into positions.

   YES X NO -

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 X NO -

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 X NO -

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 X NO -

3. That releases at a single point by a push button action.

   YES X NO -

Figure 8

FMVSS NO. 212 - "WINDSHIELD MOUNTING" DATA SHEET

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

The windshield is bonded in place with 0.8 inch rubber trim along the top and sides. The lower portion of the windshield is covered by 0.6 inch rubber trim and a plastic shroud.

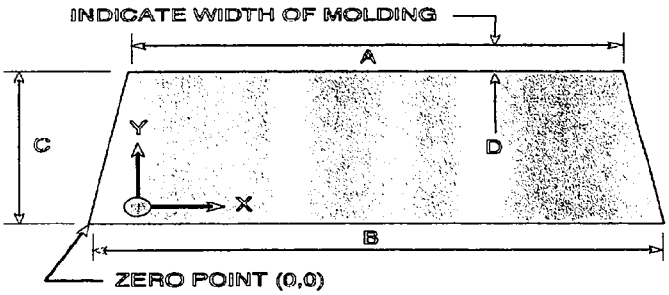
FMVSS 212 REQUIREMENTS :

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		
	PRE - TEST (in.)	POST - TEST (in.)	PERCENT RETENTION
RIGHT SIDE	88.85	88.85	100.0
LEFT SIDE	88.85	88.85	100.0
TOTAL	177.7	177.7	100.0

AREA OF RETENTION FAILURE:



FRONT VIEW OF WINDSHIELD

FAILURE DETAILS : None

Figure 9

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

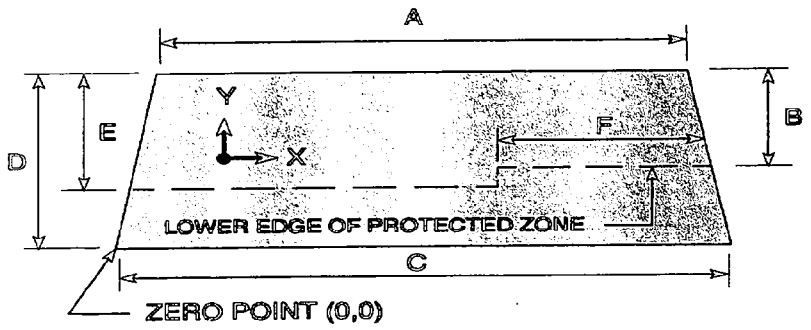
PROTECTED ZONE LOWER EDGE REQUIREMENT :

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 (Inches):

A =	46.5
B =	15.5
C =	65.0
D =	33.1
E =	20.3
F =	34.8



FRONT VIEW OF WINDSHIELD

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

(Show location of penetration on above sketch)

	COORDINATES	
	X	Y
1		
2		
3		
4		

None

Table 13

FUEL SYSTEM INTEGRITY POST IMPACT TEST DATA

FMVSS NO. 301

TEST VEHICLE NHTSA NO. : CT0206 TEST DATE : May 31, 1996

Vehicle Mfgr./Make/Model : 1996 Ford Taurus GL 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 :

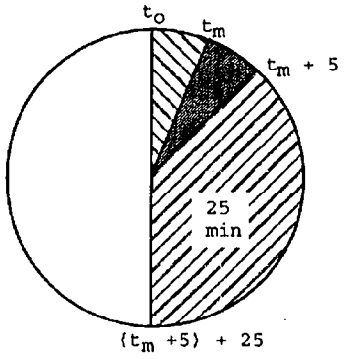
X Frontal (30 mph)

\- Oblique (30 mph) with - °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 :

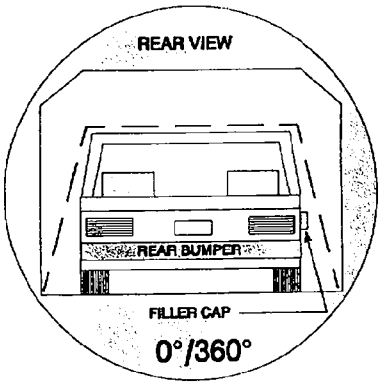
None

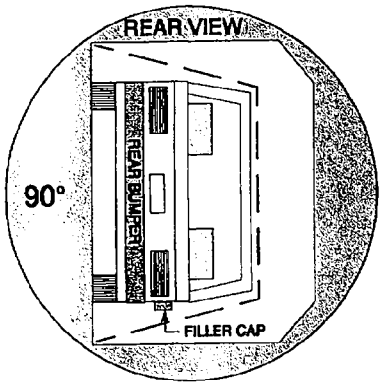
Table 14

FMVSS NO. 301 STATIC ROLLOVER DATA SHEET

TEST PHASE :
0-90 Deg.

Vehicle NHTSA ID No. :
CT0206





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
TOTAL	7	minutes	1	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.

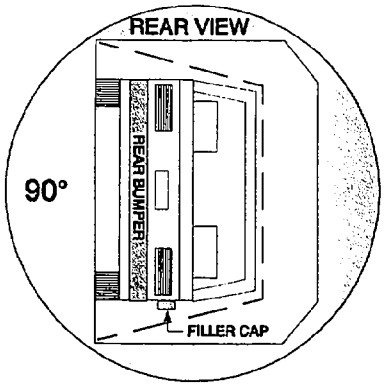
IV. SOLVENT SPILLAGE LOCATION(S) :

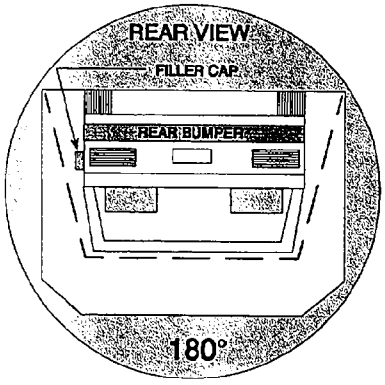
None

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

TEST PHASE :
90-180 Deg.

Vehicle NHTSA ID No. :
CT0206





I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time (Spec. Range = 1 to 3 minutes)		2	minutes	03	seconds
FMVSS 301 Position Hold Time +		5	minutes	00	seconds
	TOTAL	7	minutes	3	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) :

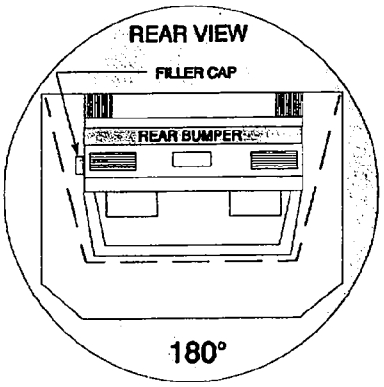
None

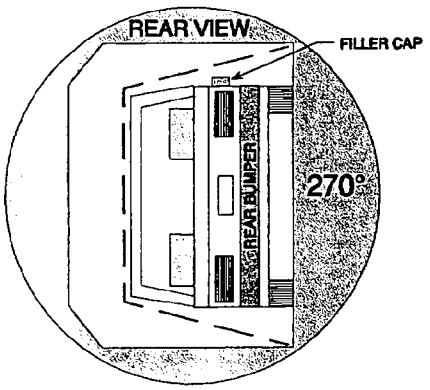
Table 14

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

TEST PHASE :
180-270 Deg.

Vehicle NHTSA ID No. :
CT0206





I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time (Spec. Range = 1 to 3 minutes)		1	minutes	49	seconds
FMVSS 301 Position Hold Time +		5	minutes	00	seconds
	TOTAL	6	minutes	49	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.

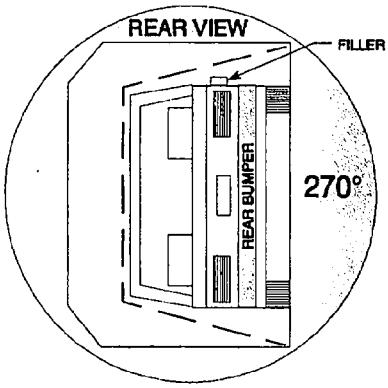
IV. SOLVENT SPILLAGE LOCATION(S) :

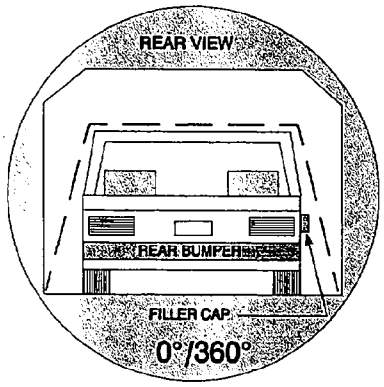
None

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

TEST PHASE :
270-360 Deg.

Vehicle NHTSA ID No. :
CT0206





I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time (Spec. Range = 1 to 3 minutes)		2	minutes	04	seconds
FMVSS 301 Position Hold Time +		5	minutes	00	seconds
	TOTAL	7	minutes	4	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

Table 15

POST TEST AIR BAG DATA

NHTSA No. : CT0206; Test Date: May 31, 1996; Technician: AJK

Vehicle Model Year/Make/Model: 1996 Ford Taurus GL

A. No. of vent holes: 0 -Driver 0 -Passenger

B. Size of vent holes: ($In.^2$) - -Driver - -Passenger

C. Total vent area: ($In.^2$) - -Driver - -Passenger

D. Deflated air bag length and width dimensions or, if round,diameter. (In inches)

Driver: - -Length; - -Width; 24.0 -Diameter

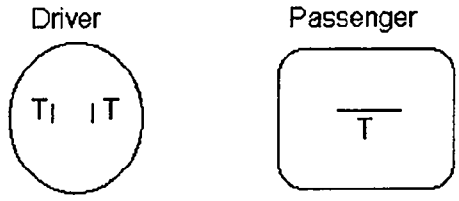
Passenger: 24.5 -Height; 24.5 -Width; 20.5 -Depth

E. Is the air bag tethered?

Driver: X -Yes; - -No; If yes, record length of tether- 2 ea. - 10"

Passenger: X -Yes; - -No; If yes, record length of tether- 1 ea. - 10"

Sketch the air bag showing the location of the vent holes, how the bag is tethered, and where the bag is tethered. Also describe how the tethers are attached to the bag and the steering wheel.
(Note: Not to scale; V_n = Vent hole$_n$, T_n = Tether$_n$).



F. Record part numbers and manufacturer name of the air bag and gas generator.

Driver: Air bag: P116487-03D TAC250J10389

Generator:FCAFX33TASR FDBFX95RBFT

Passenger: Air bag: F6DB54044A74AFZUF4 UPC# FDB952792014

Generator: FCZFX64HDLH

G. Cut out a 6 inch by 6 inch swatch of the bag material and at least one tether from each bag, mark the vehicle's NHTSA number on the swatch, and send these parts to the COTR with the test report.

Table 16

ACCIDENT INVESTIGATION DIVISION DATA

VEHICLE YEAR/MAKE/MODEL/BODY STYLE: 1996 Ford Taurus GL 4 -door sedan

VEHICLE NHTSA NO. : CT0206 VIN NO. : 1FALP52U5TG144375

WHEELBASE: 108.4 in. BUILD DATE: 10/95 TEST DATE: May 31, 1996

VEH SIZE CATEGORY: full TEST WEIGHT: 3857 lbs.

FRONT OVERHANG: 39.6 in. OVERALL WIDTH: - in.

COLLISION DEFORMATION (CDC) CODE: 12FDEW2

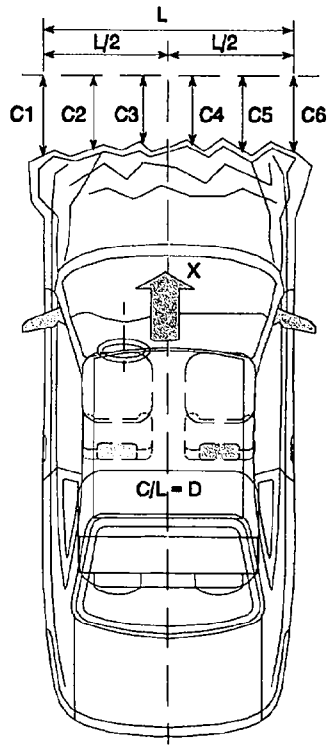
IMPACT MODE: 30 mph zero degree frontal barrier.

CRUSH DEPTH DIMENSIONS: (Inches)

C1 =	12.5	C4 =	15.5
C2 =	14.0	C5 =	14.2
C3 =	15.3	C6 =	14.5

MIDPOINT OF DAMAGE: D=
(Vehicle Longitudinal Centerline) 26.25

LENGTH OF DAMAGE
REGION: L= 52.5



Remarks: None

Table 17
TEST VEHICLE NONCOMPLIANCE NOTICE

NHTSA Contract Lab : Calspan SRL Corporation

Lab Project Manager & Telephone No. : David J. Travale (716) 632 - 7500

Date of Test : May 31, 1996 Vehicle NHTSA No. : CT0206

Vehicle Manufacturer : Ford Motor Company

Model Year : 1996 VIN : 1FALP52U5TG144375

Model : Taurus GL Body Style: 4 -door sedan Build Date : 10/95

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

Impact Velocity : 29.1 mph; Time of Test : 11:00

Type of Automatic Restraint System :

Driver : Air Bag

Passenger : Air Bag

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

Figure A-1 PRE-TEST FRONT VIEW

8353-5

Figure A-2 POST-TEST FRONT VIEW

8353-5

Figure A-3 PRE-TEST LEFT SIDE VIEW

Figure A-4 POST-TEST LEFT SIDE VIEW

8353-5

Figure A-5 PRE-TEST RIGHT SIDE VIEW

8353-5

Figure A-6 POST-TEST RIGHT SIDE VIEW

A-9

8353-5

Figure A-7 PRE-TEST FRONT UNDERBODY VIEW

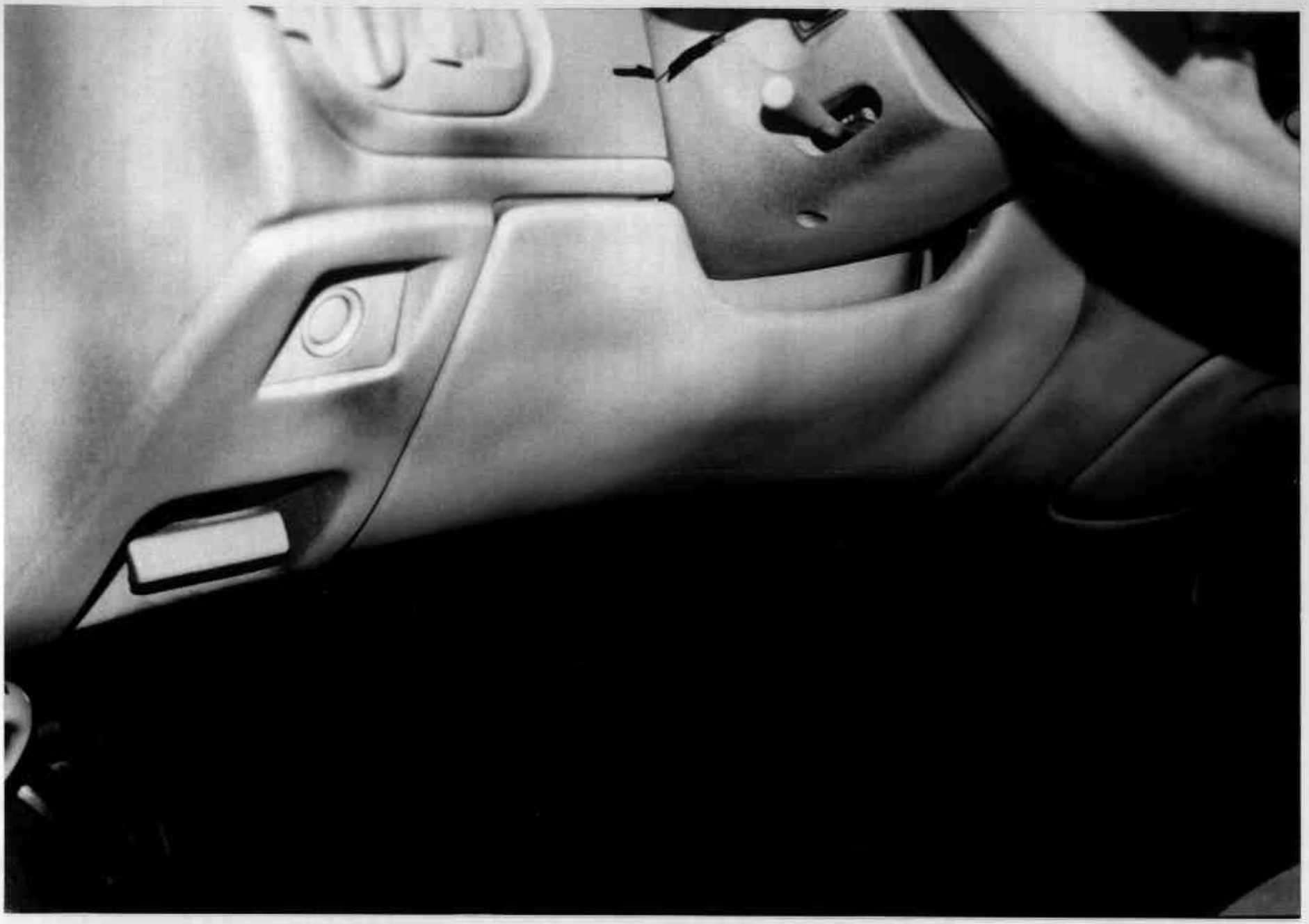
Figure A-8 POST-TEST FRONT UNDERBODY VIEW

Figure A-9 PRE-TEST DRIVER SIDE VIEW

Figure A-10 POST-TEST DRIVER SIDE VIEW

Figure A-11 PRE-TEST PASSENGER SIDE VIEW

Figure A-12 POST-TEST PASSENGER SIDE VIEW



A-15

8353-5

Figure A-13 PRE-TEST DRIVER KNEE BOLSTER

A-16

8353-5

Figure A-14 POST-TEST DRIVER KNEE BOLSTER

A-17

8353-5

Figure A-15 PRE-TEST PASSENGER KNEE BOLSTER

A-18

8353-5

Figure A-16 POST-TEST PASSENGER KNEE BOLSTER

Figure A-17 PRE-TEST UNDERBODY STEERING SHAFT

Figure A-18 POST-TEST UNDERBODY STEERING SHAFT

Figure A-19 PRE-TEST STEERING COLUMN/FIREWALL INSIDE VIEW

Figure A-20 POST-TEST STEERING COLUMN/FIREWALL INSIDE VIEW

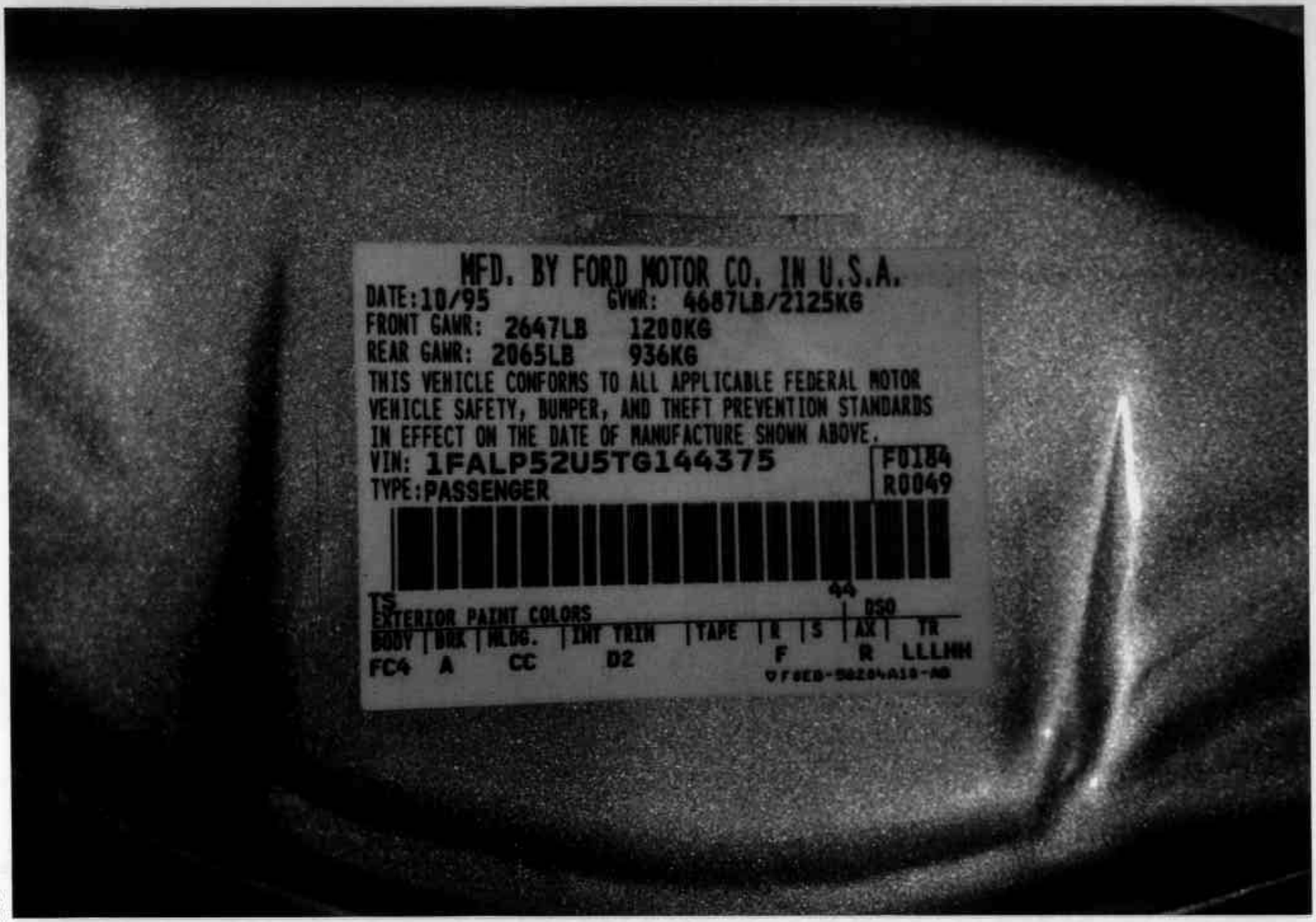


Figure A-21 CERTIFICATION PLACARD

8353-5

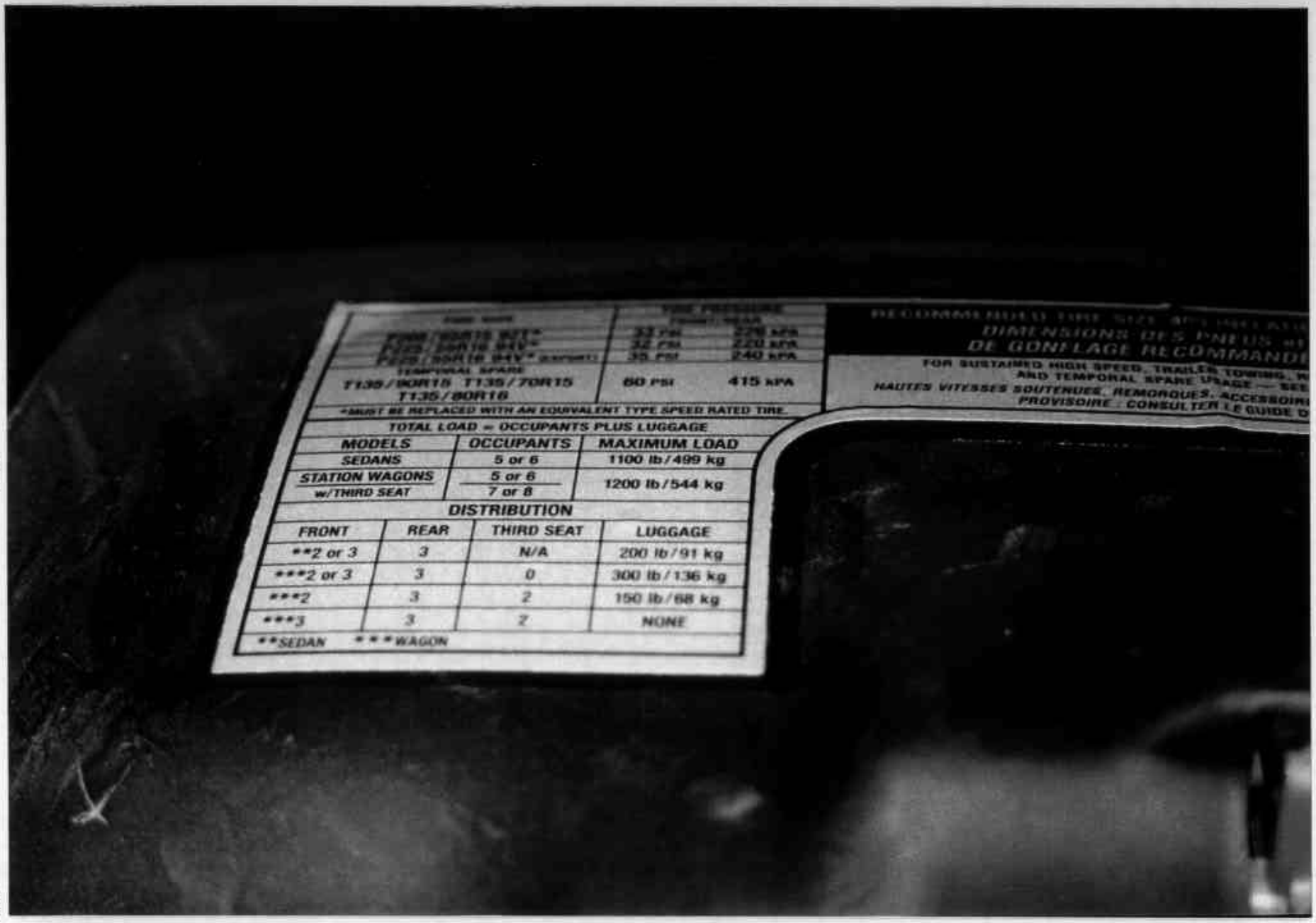


Figure A-22 TIRE PLACARD

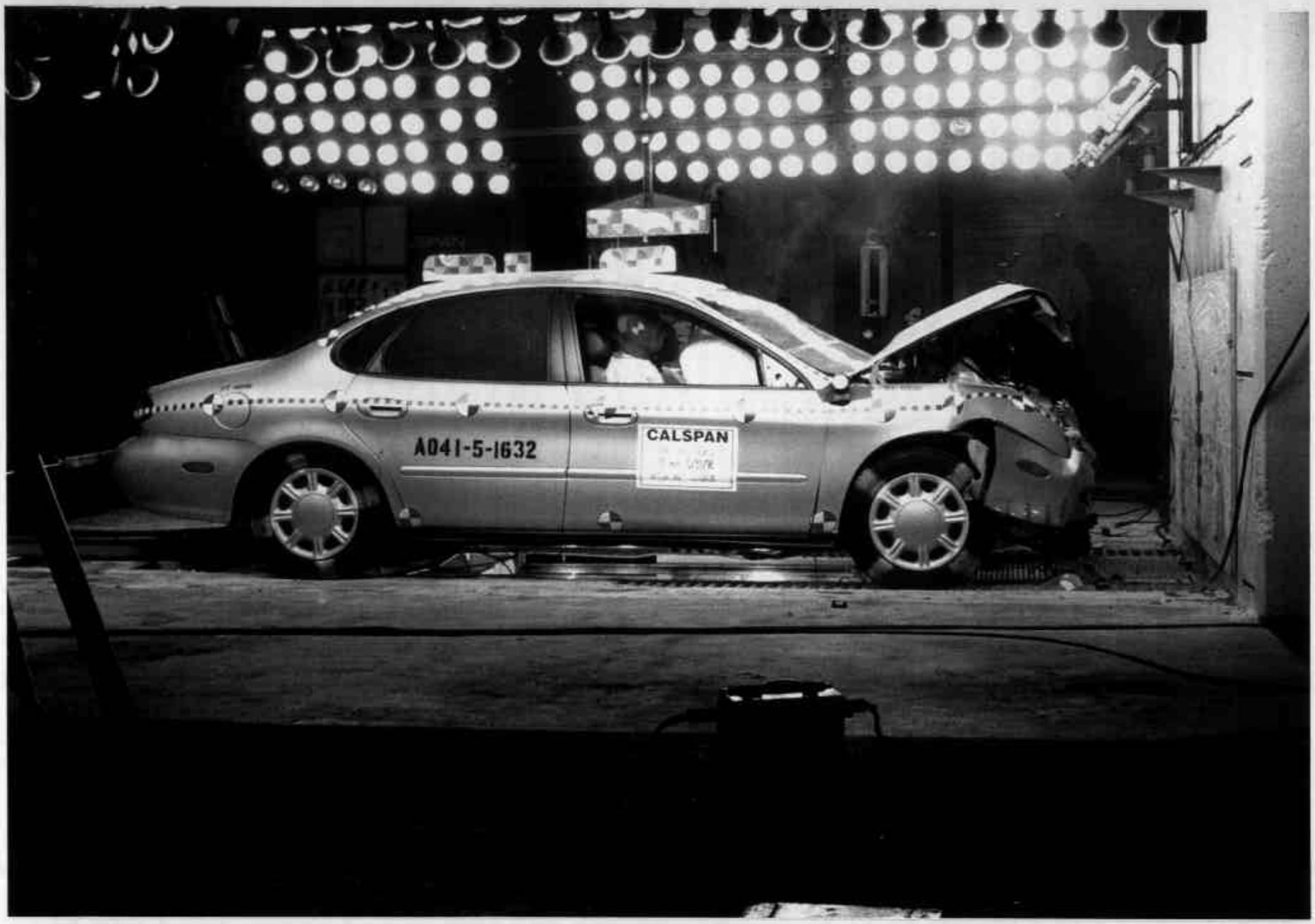


Figure A-23 VEHICLE IMPACT

8353-5

A-26

8353-5

Figure A-24 POST-TEST DRIVER AIRBAG VIEW

A-27

8353-5

Figure A-25 POST-TEST PASSENGER AIRBAG VIEW

Figure A-26 POST-TEST PASSENGER HEAD CONTACT

8353-5

Appendix B

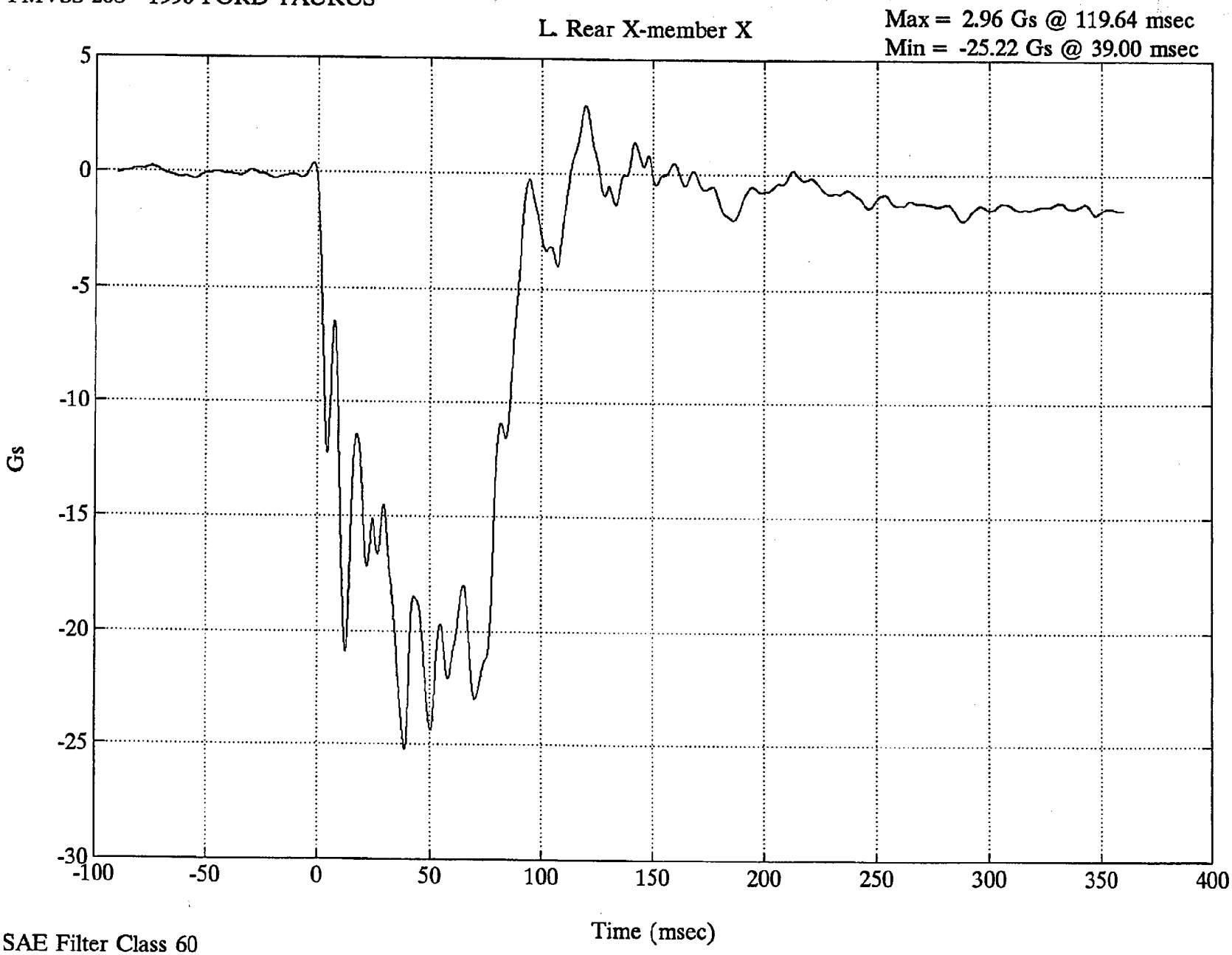
VEHICLE AND DUMMY RESPONSE DATA

NOTE : Data trace scales are automatically scaled at the request of the COTR. Use caution when reviewing data.

TEST NO. CT0206

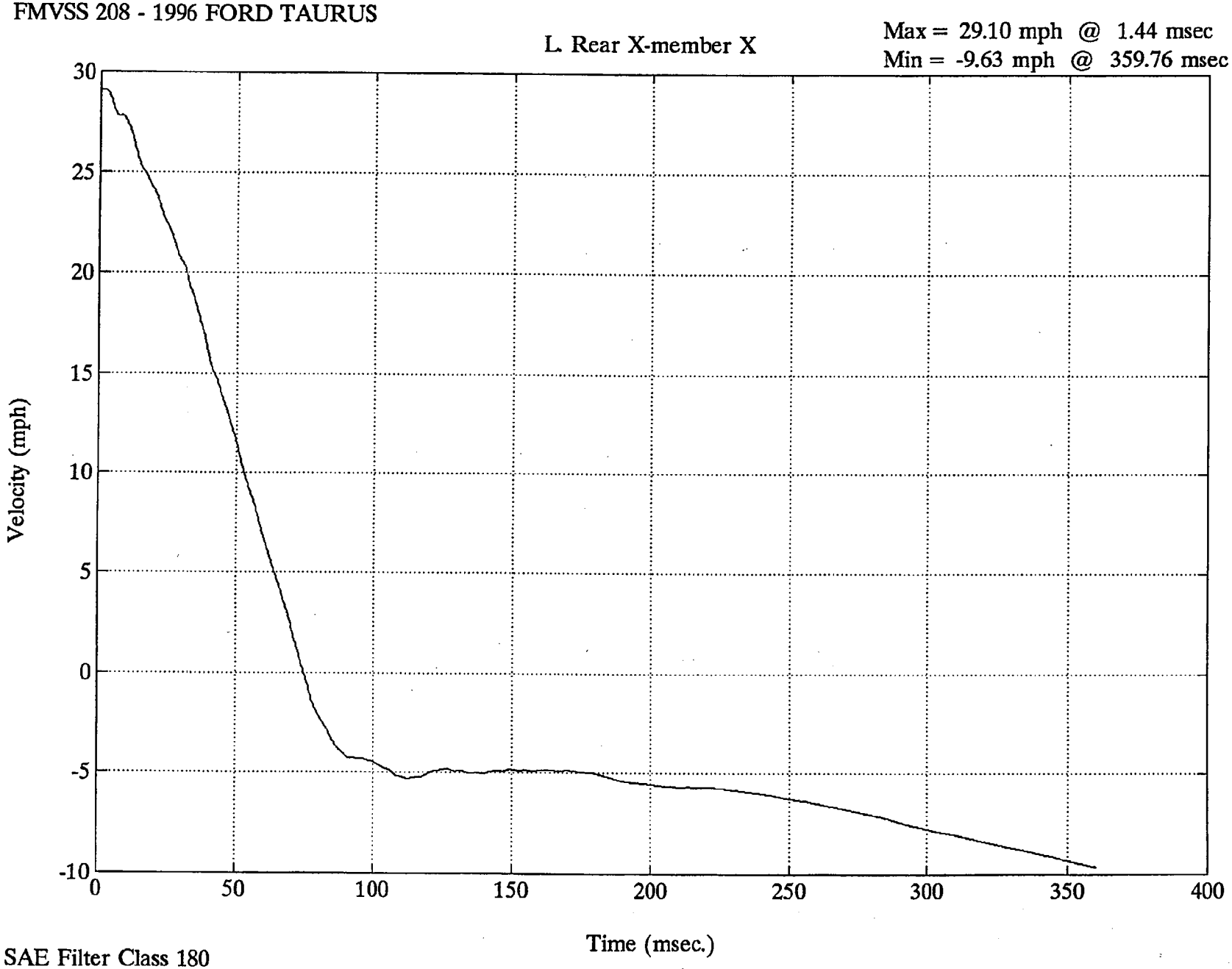
VEHICLE	SAE FILTER CHANNEL CLASS
	60

FMVSS 208 - 1996 FORD TAURUS



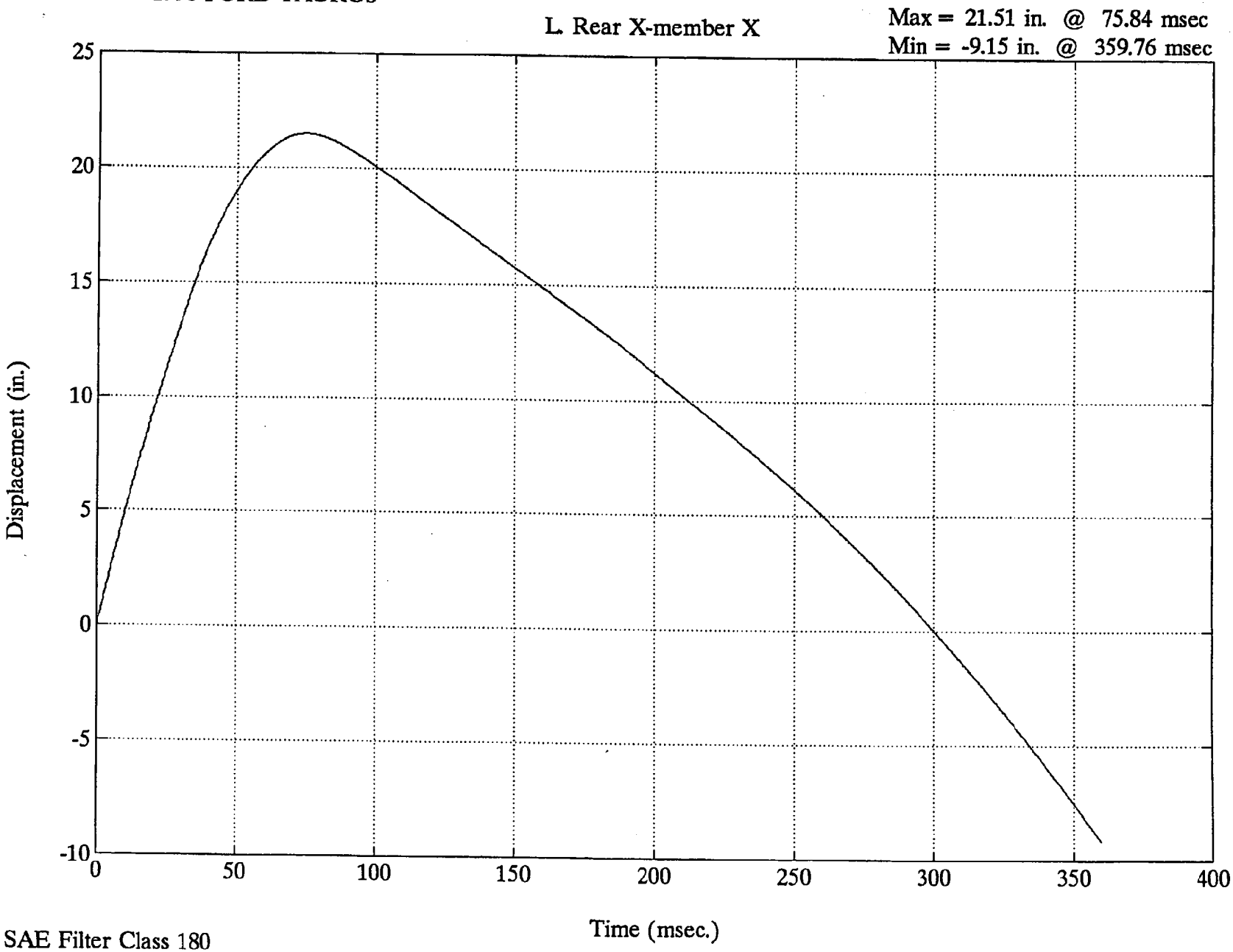
SAE Filter Class 60

FMVSS 208 - 1996 FORD TAURUS



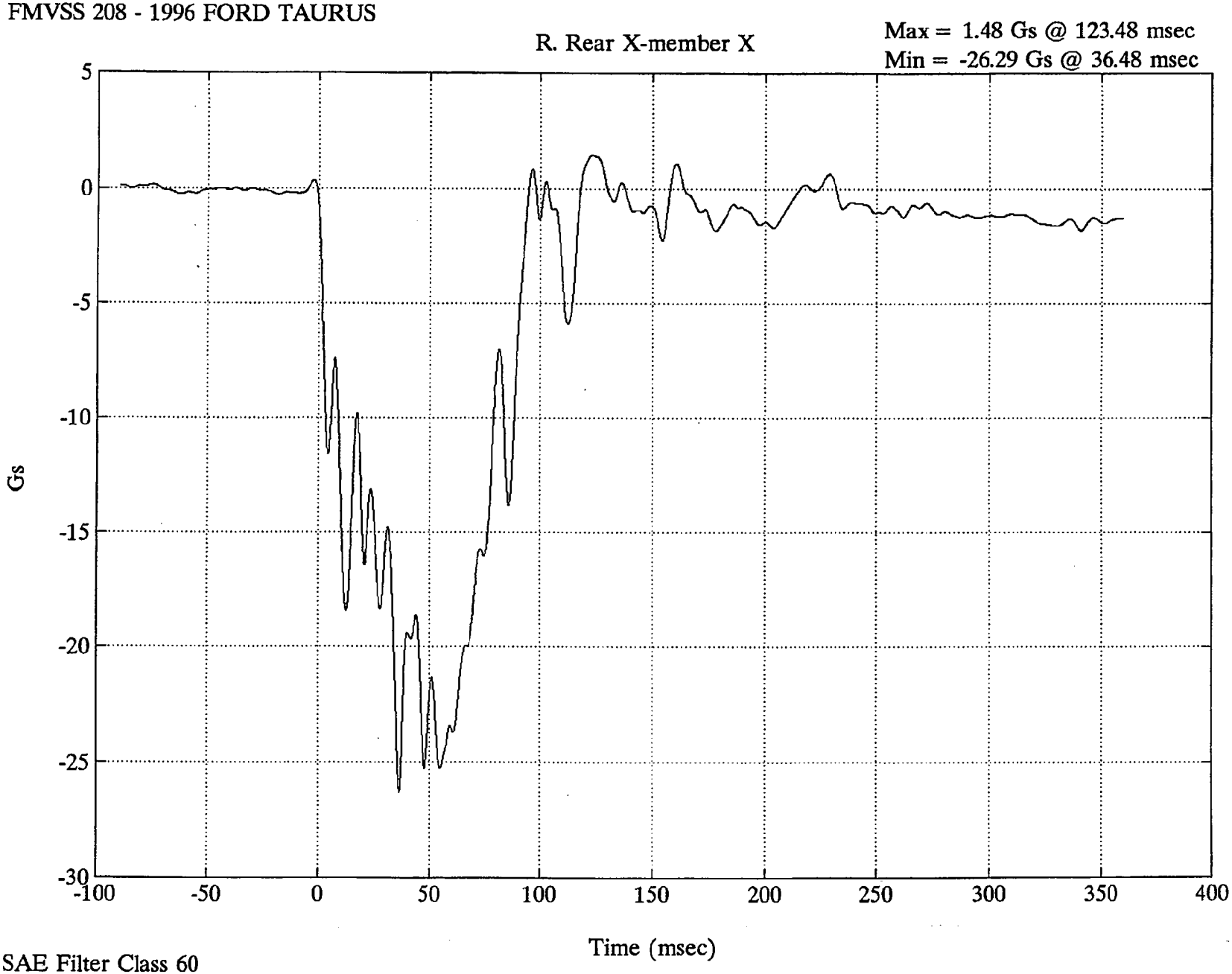
SAE Filter Class 180

FMVSS 208 - 1996 FORD TAURUS



SAE Filter Class 180

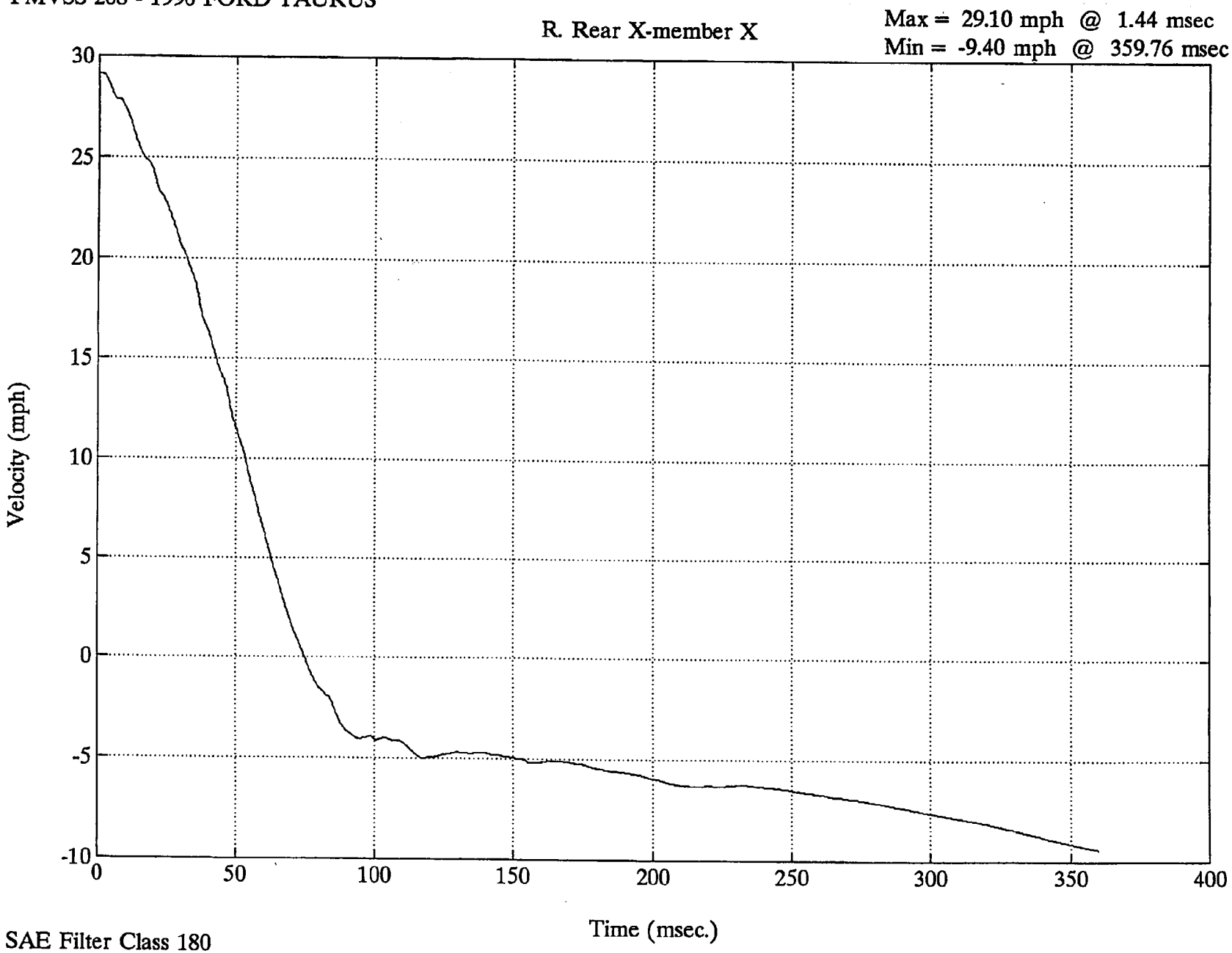
FMVSS 208 - 1996 FORD TAURUS



SAE Filter Class 60

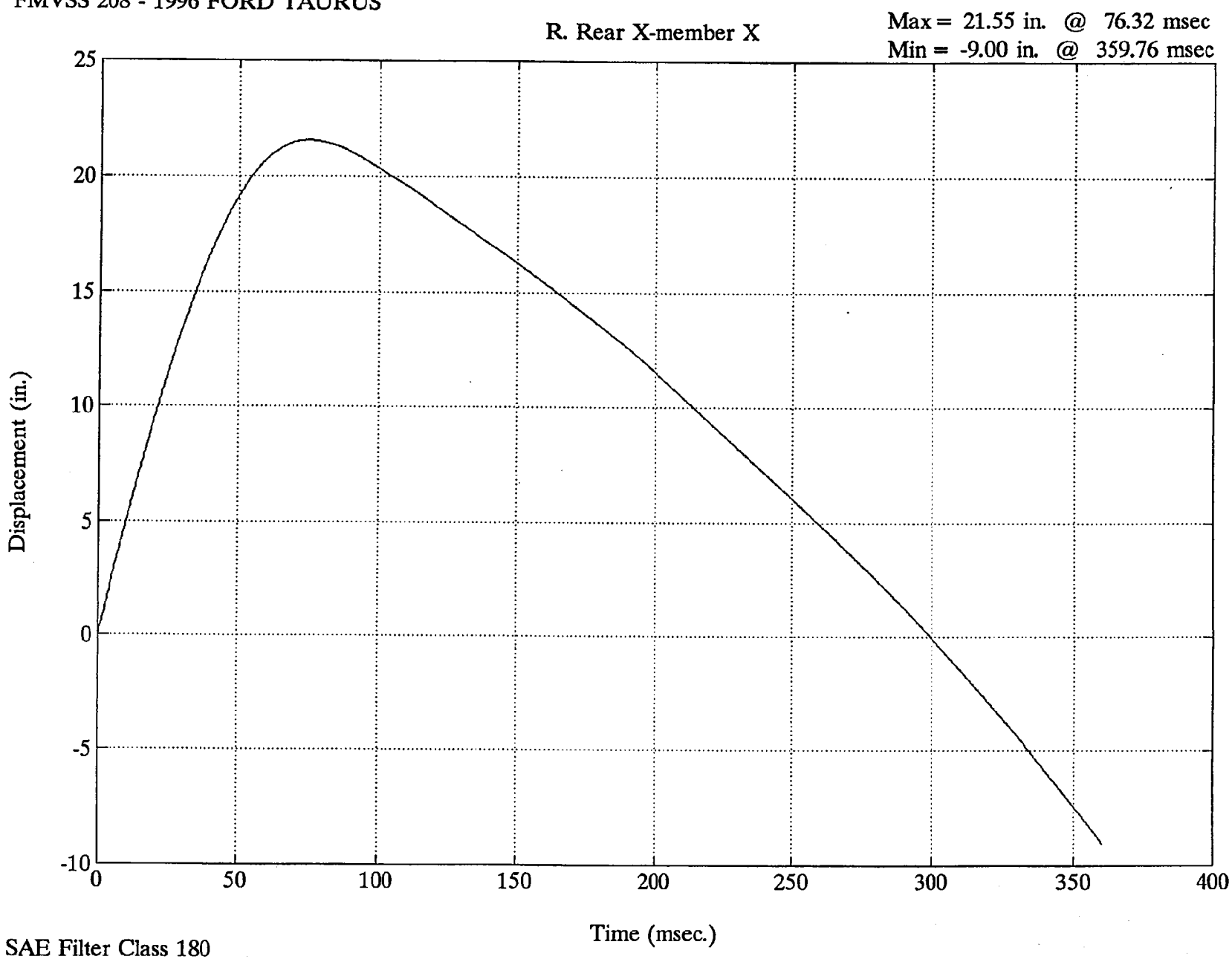
8353-5

FMVSS 208 - 1996 FORD TAURUS



SAE Filter Class 180

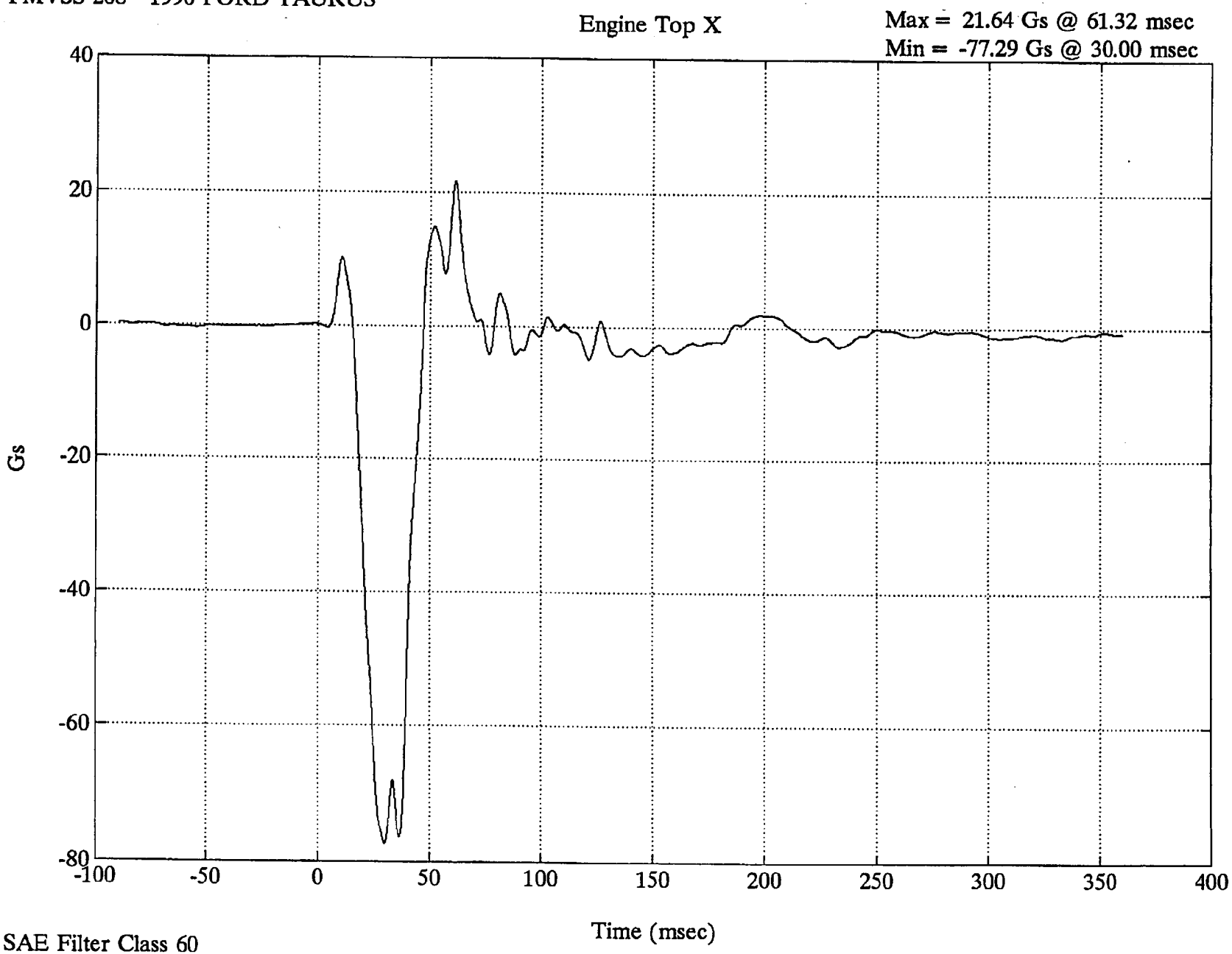
FMVSS 208 - 1996 FORD TAURUS



SAE Filter Class 180

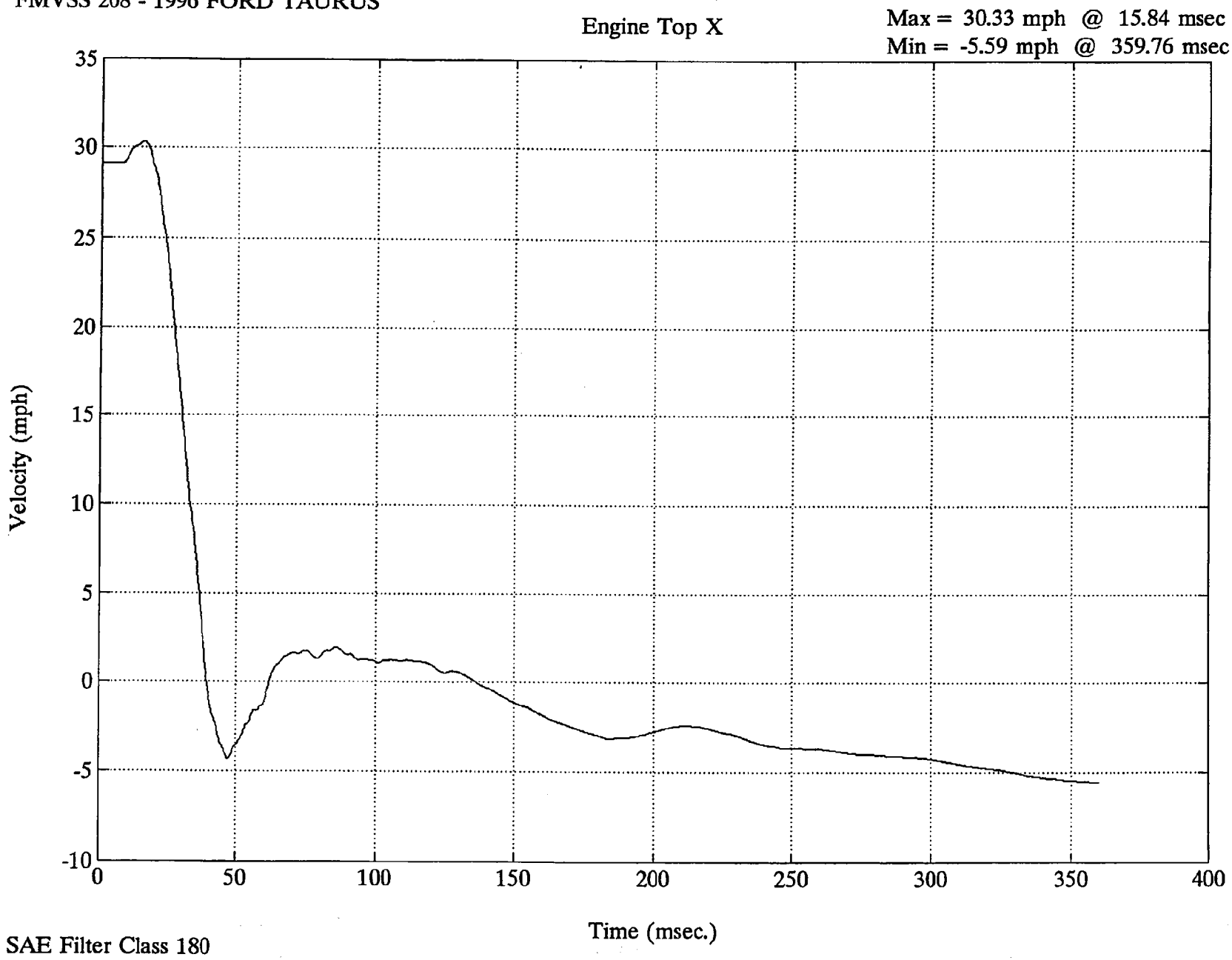
8353-5

FMVSS 208 - 1996 FORD TAURUS



SAE Filter Class 60

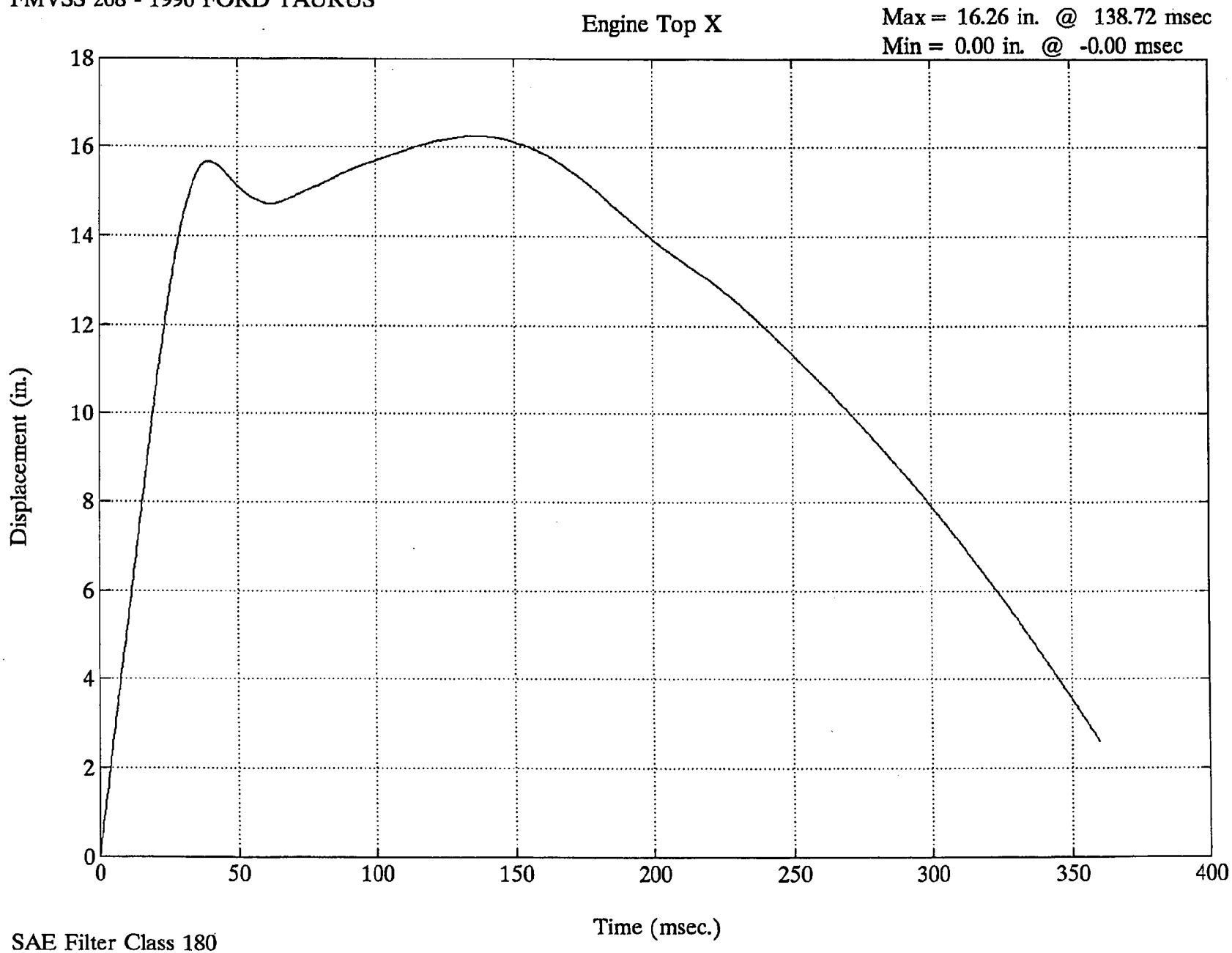
FMVSS 208 - 1996 FORD TAURUS



SAE Filter Class 180

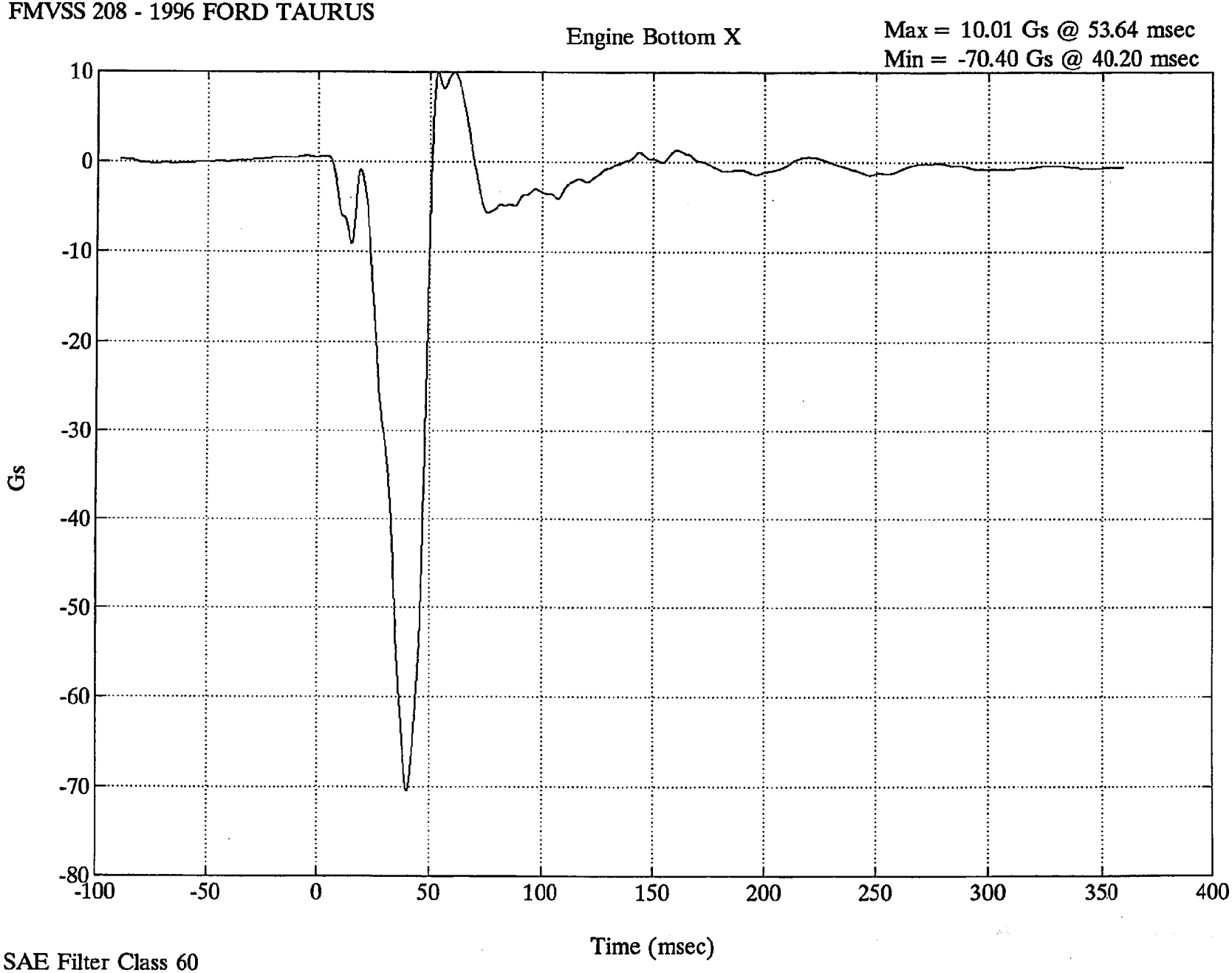
8353-5

FMVSS 208 - 1996 FORD TAURUS



SAE Filter Class 180

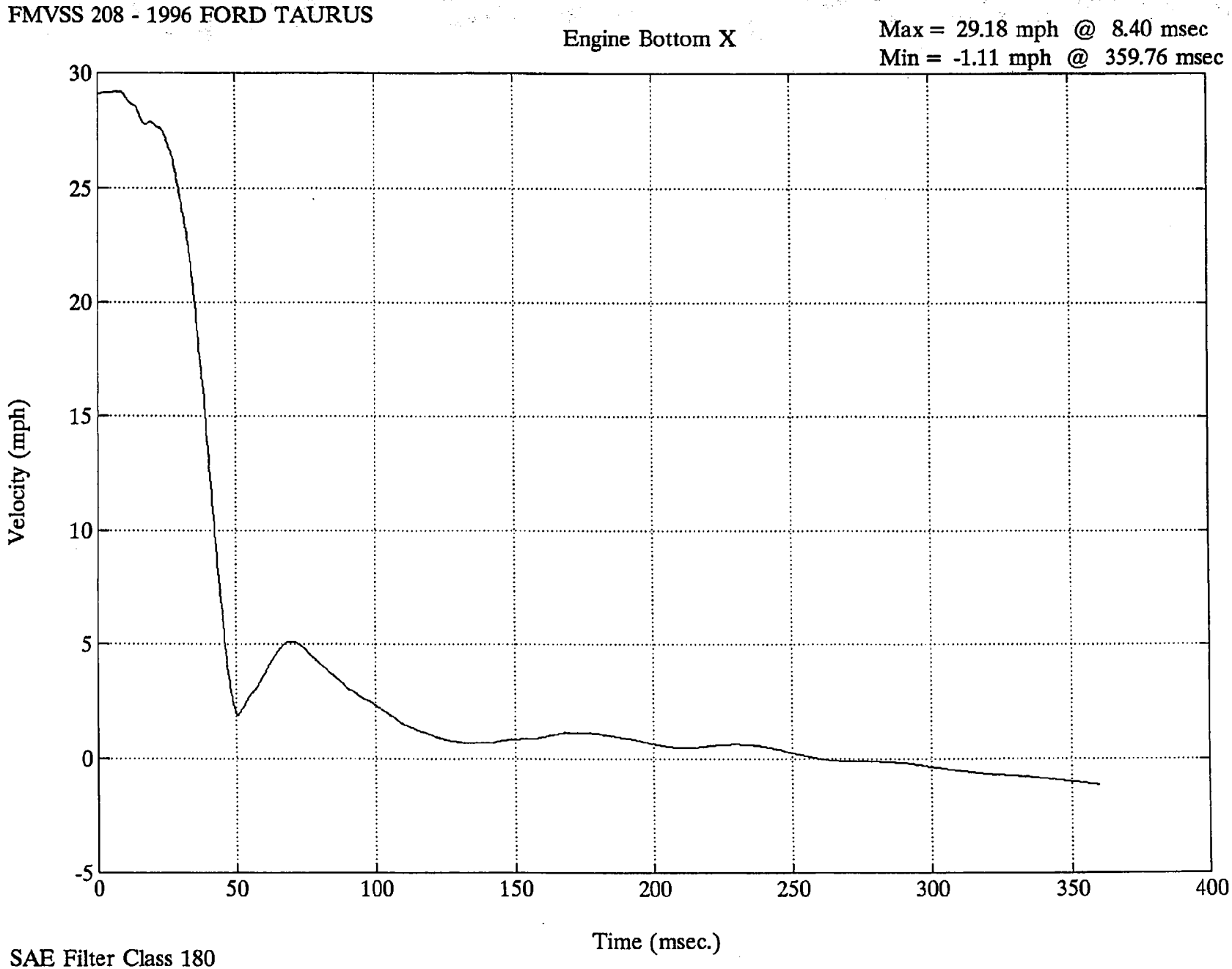
FMVSS 208 - 1996 FORD TAURUS



SAE Filter Class 60

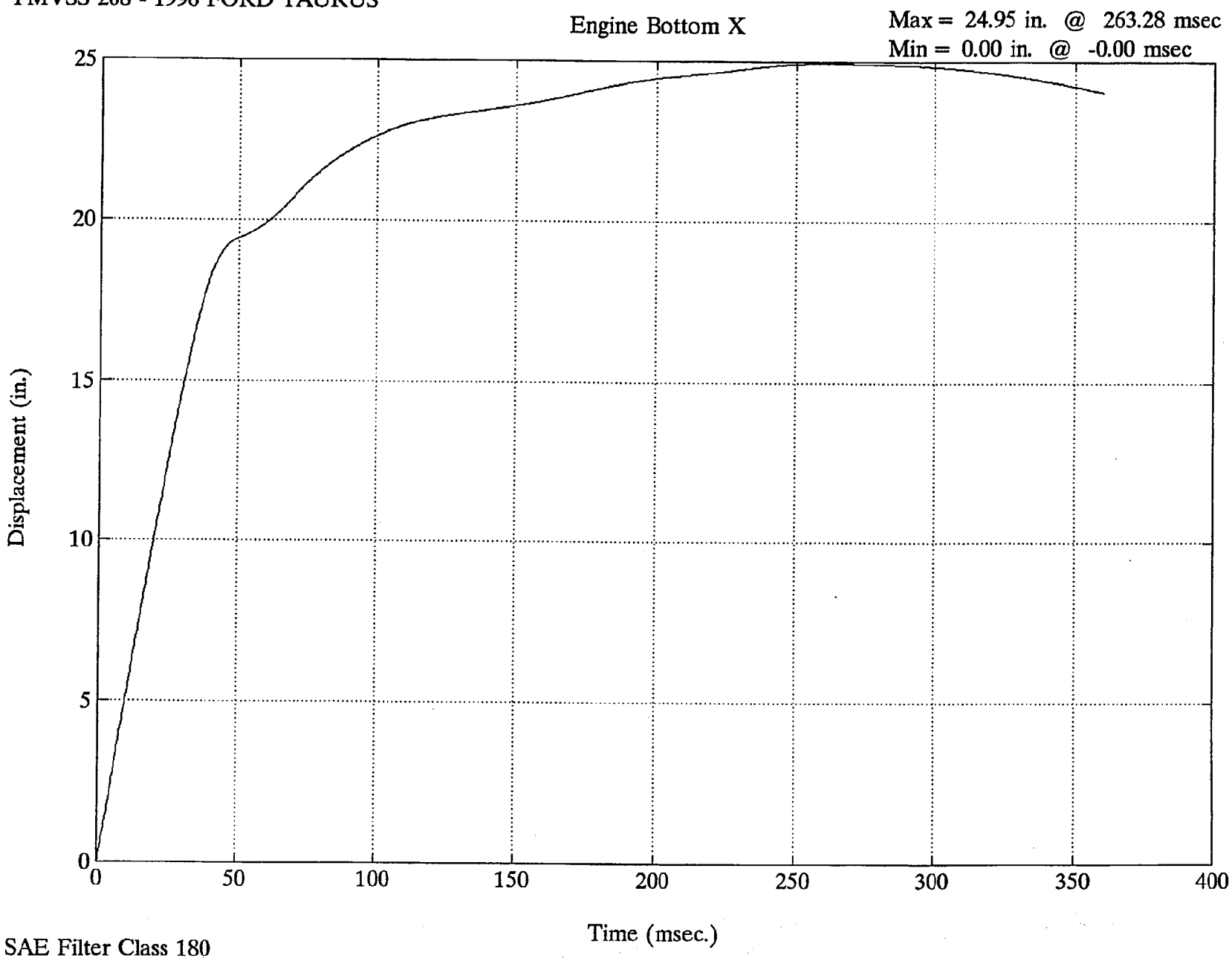
8353-5

FMVSS 208 - 1996 FORD TAURUS



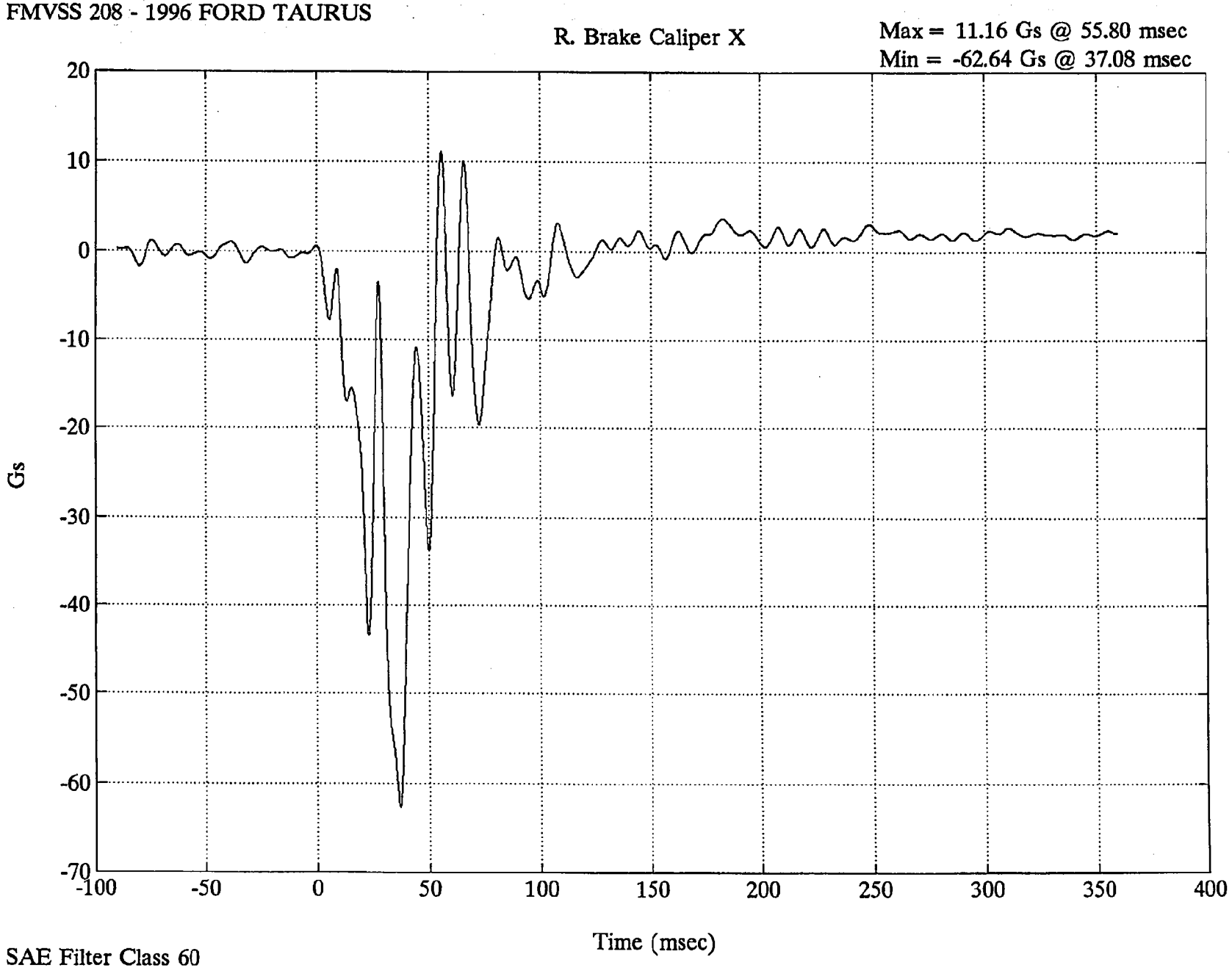
SAE Filter Class 180

FMVSS 208 - 1996 FORD TAURUS



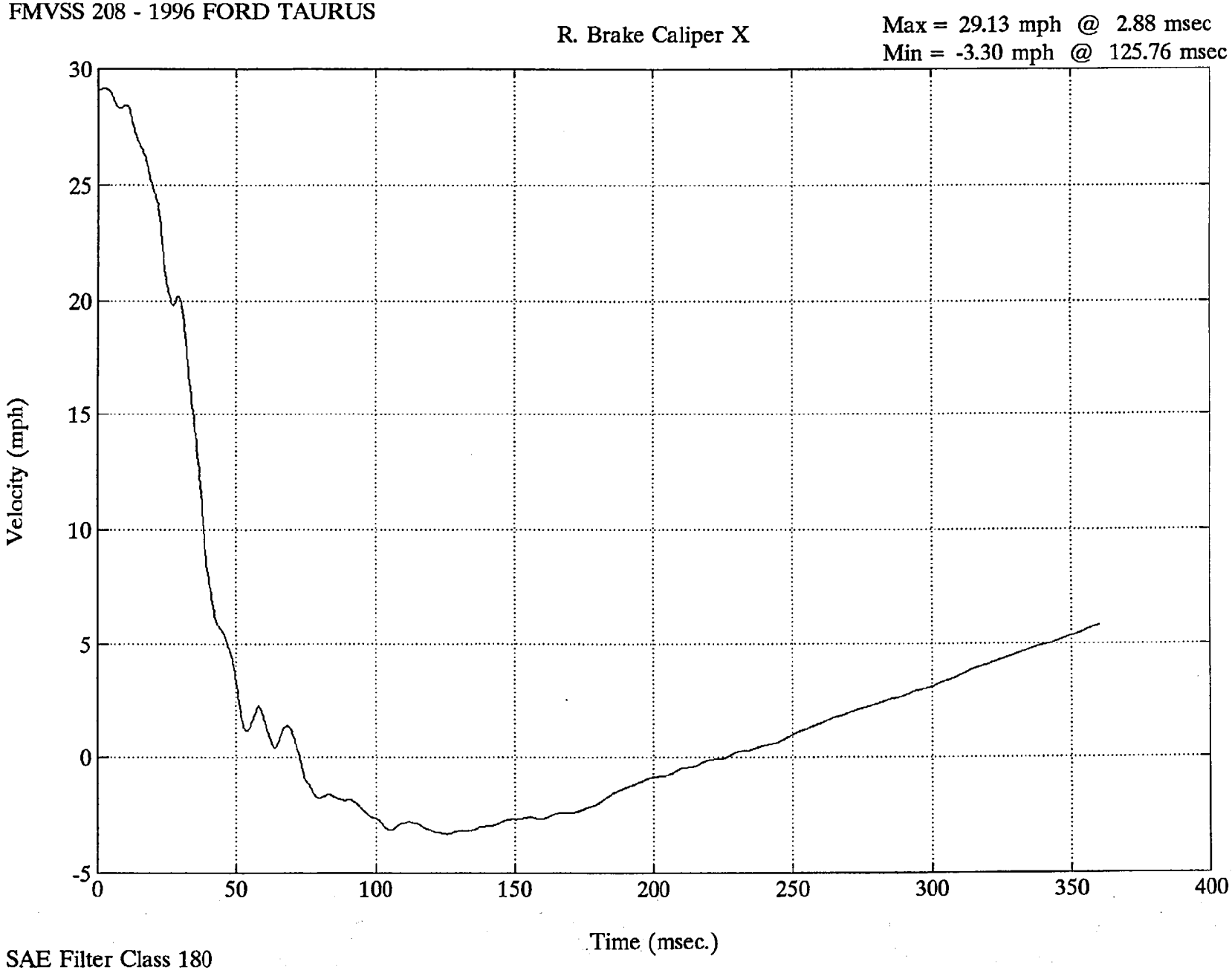
SAE Filter Class 180

FMVSS 208 - 1996 FORD TAURUS



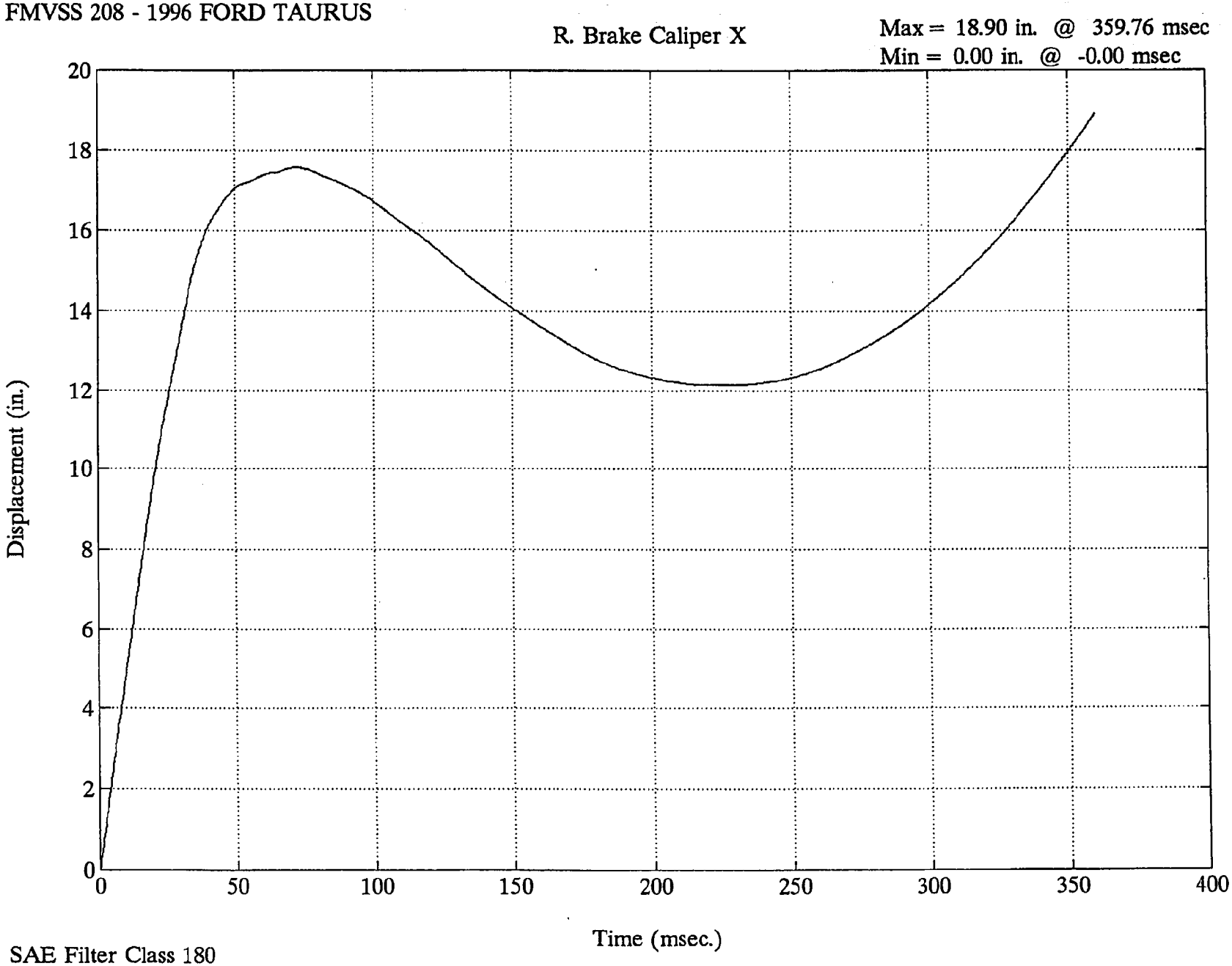
SAE Filter Class 60

FMVSS 208 - 1996 FORD TAURUS



SAE Filter Class 180

FMVSS 208 - 1996 FORD TAURUS

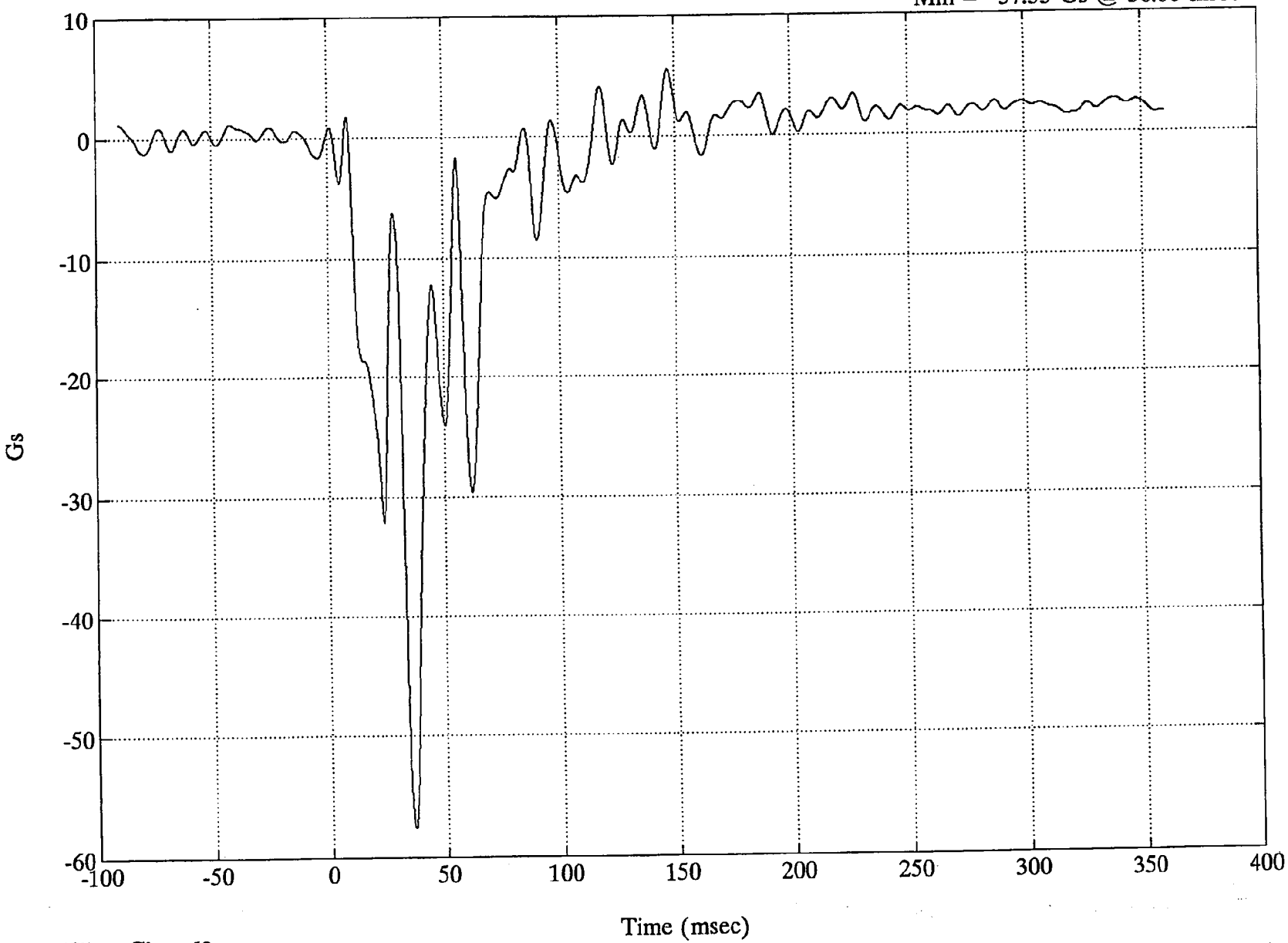


SAE Filter Class 180

FMVSS 208 - 1996 FORD TAURUS

L. Brake Caliper X

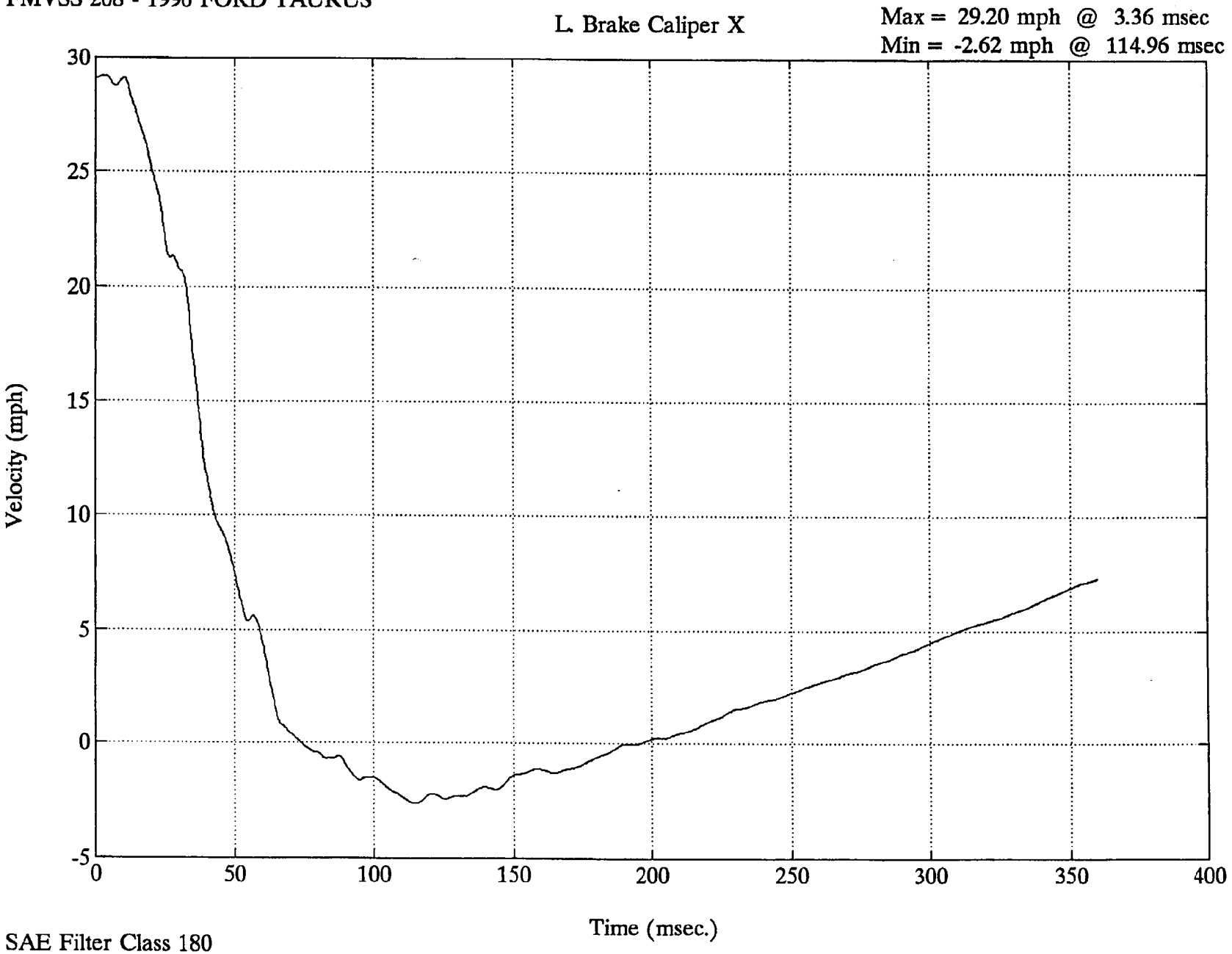
Max = 5.51 Gs @ 147.12 msec
Min = -57.55 Gs @ 36.00 msec



SAE Filter Class 60

8353-5

FMVSS 208 - 1996 FORD TAURUS

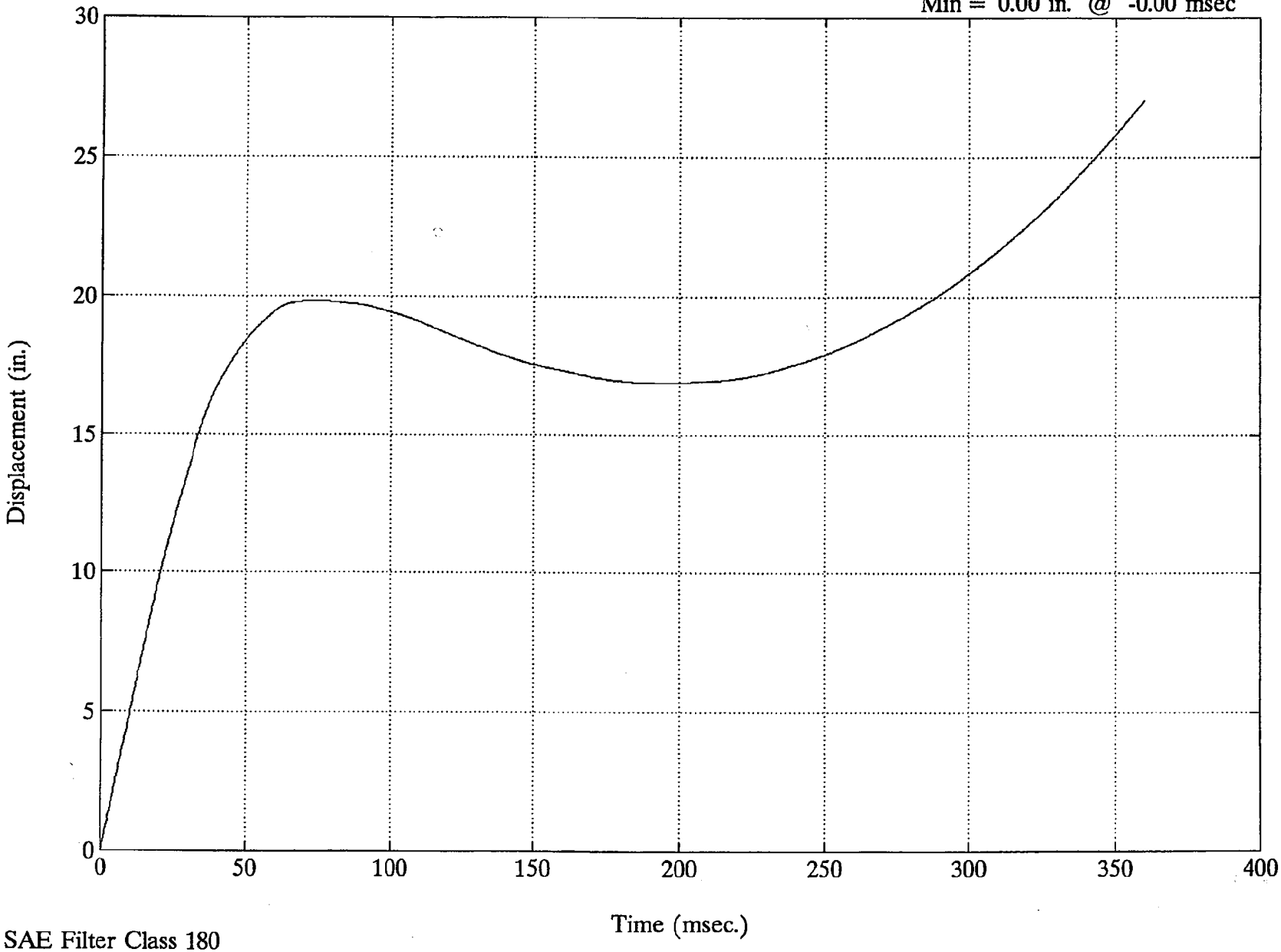


SAE Filter Class 180

FMVSS 208 - 1996 FORD TAURUS

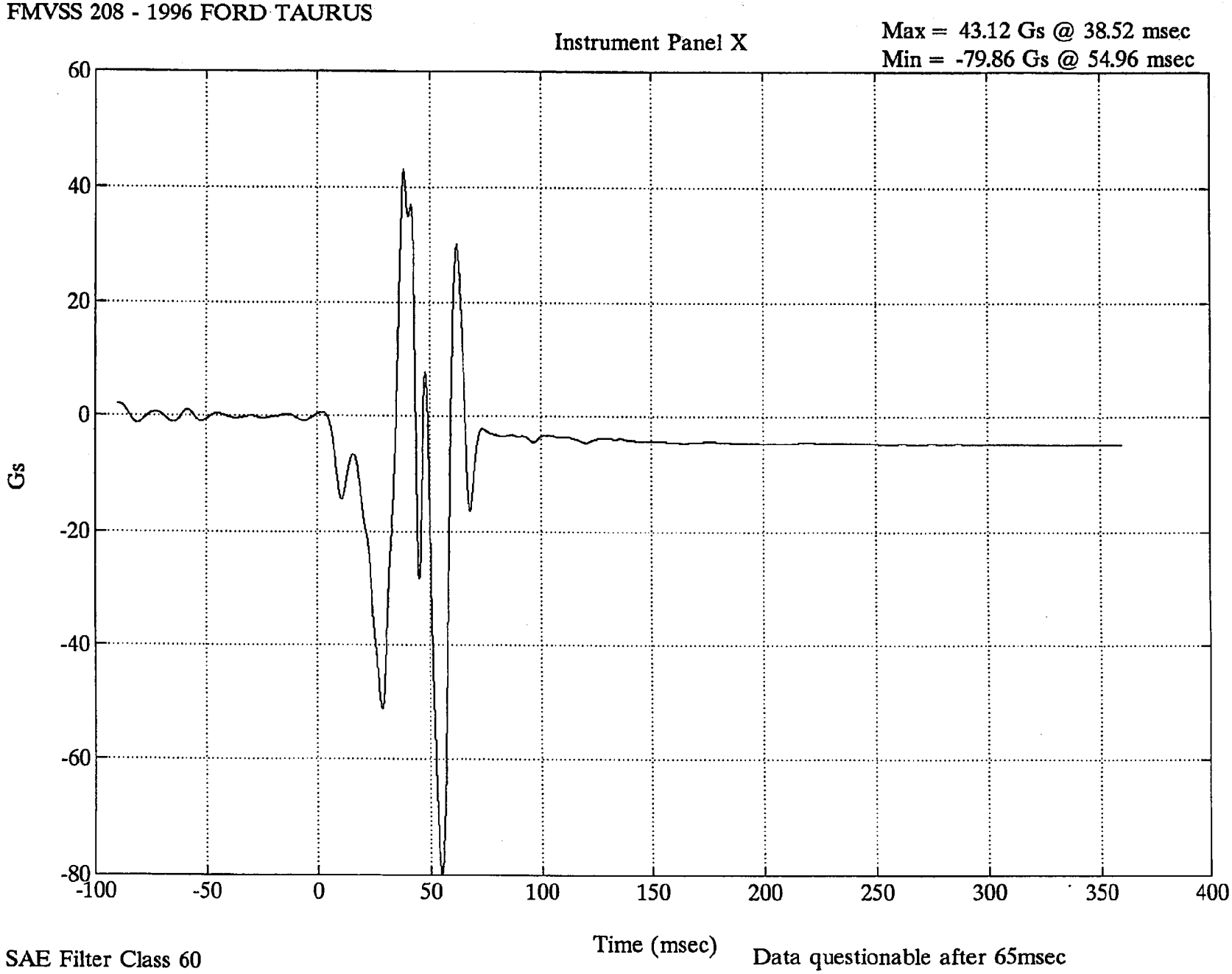
L. Brake Caliper X

Max = 27.06 in. @ 359.76 msec
Min = 0.00 in. @ -0.00 msec



SAE Filter Class 180

FMVSS 208 - 1996 FORD TAURUS

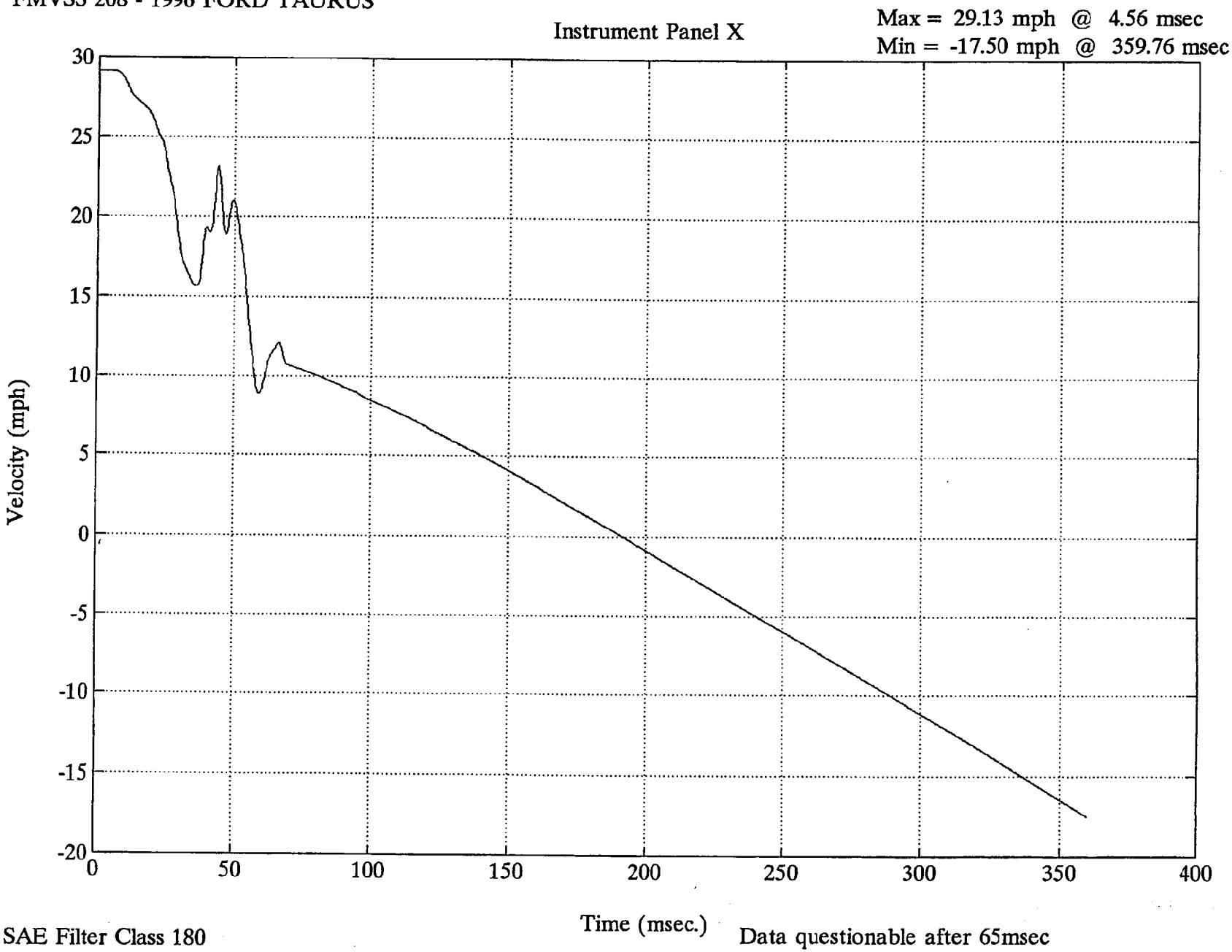


SAE Filter Class 60

Data questionable after 65msec

8353-5

FMVSS 208 - 1996 FORD TAURUS



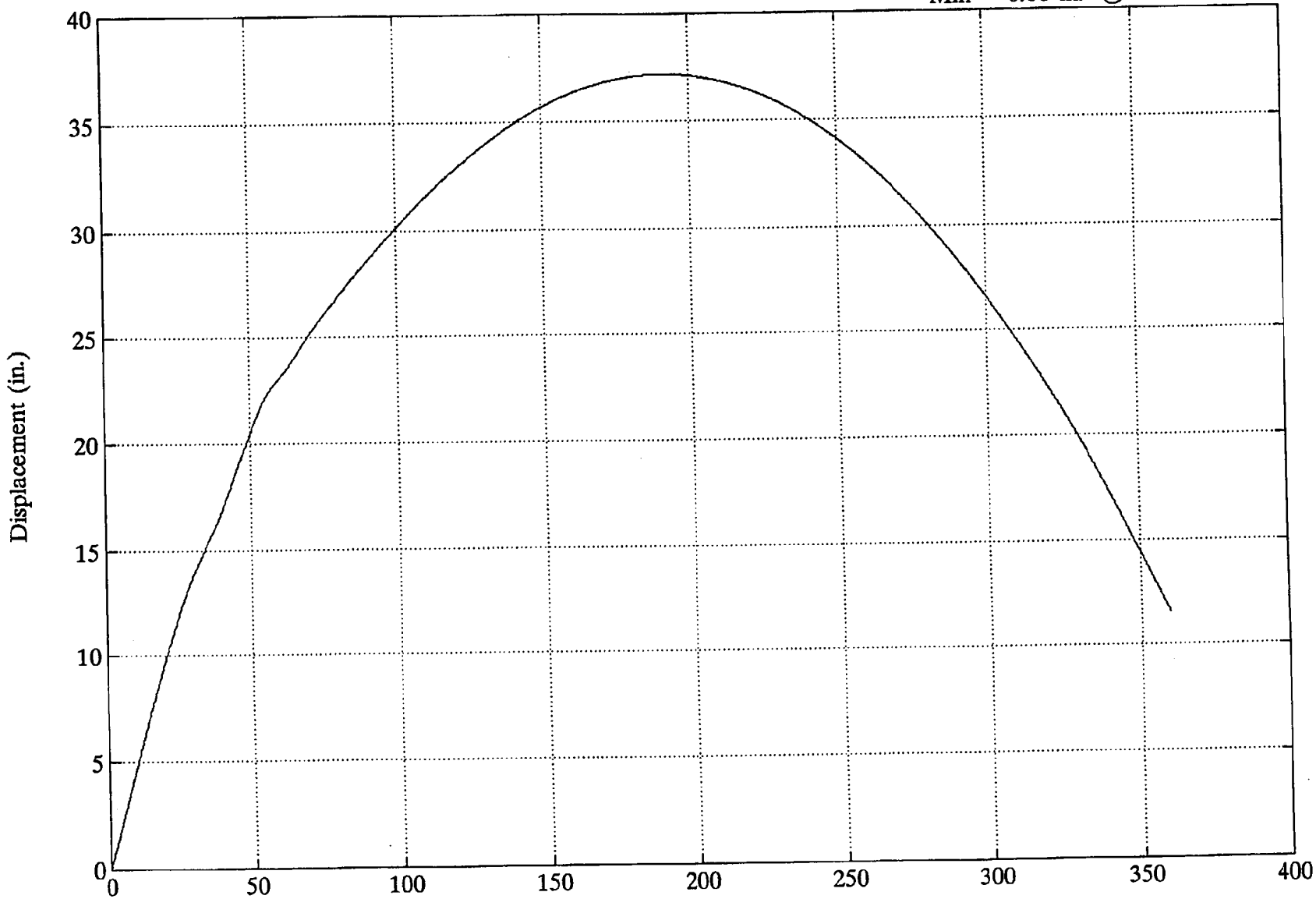
SAE Filter Class 180

Data questionable after 65msec

FMVSS 208 - 1996 FORD TAURUS

Instrument Panel X

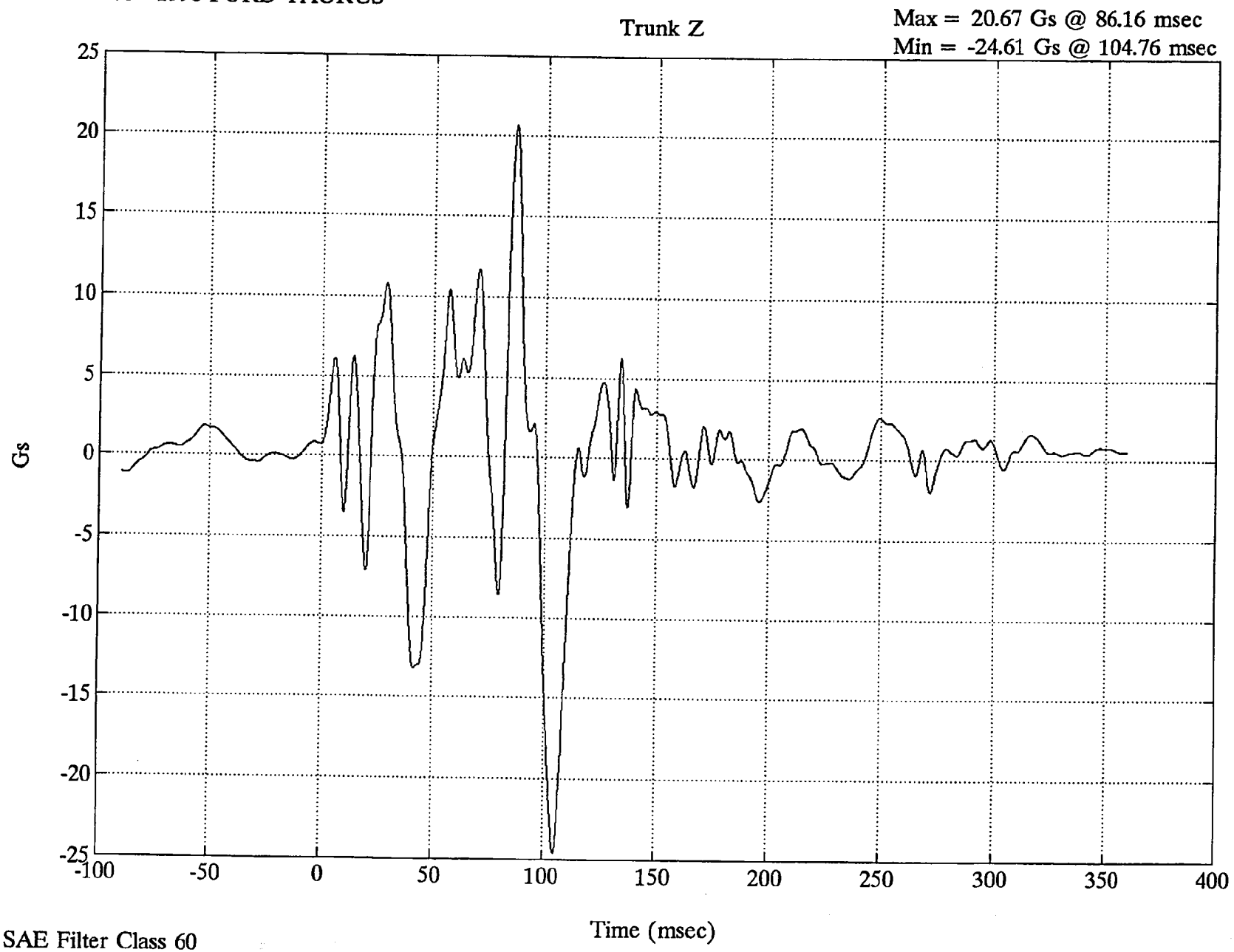
Max = 37.16 in. @ 194.40 msec
Min = 0.00 in. @ -0.00 msec



Data questionable after 65msec

SAE Filter Class 180

FMVSS 208 - 1996 FORD TAURUS



SAE Filter Class 60

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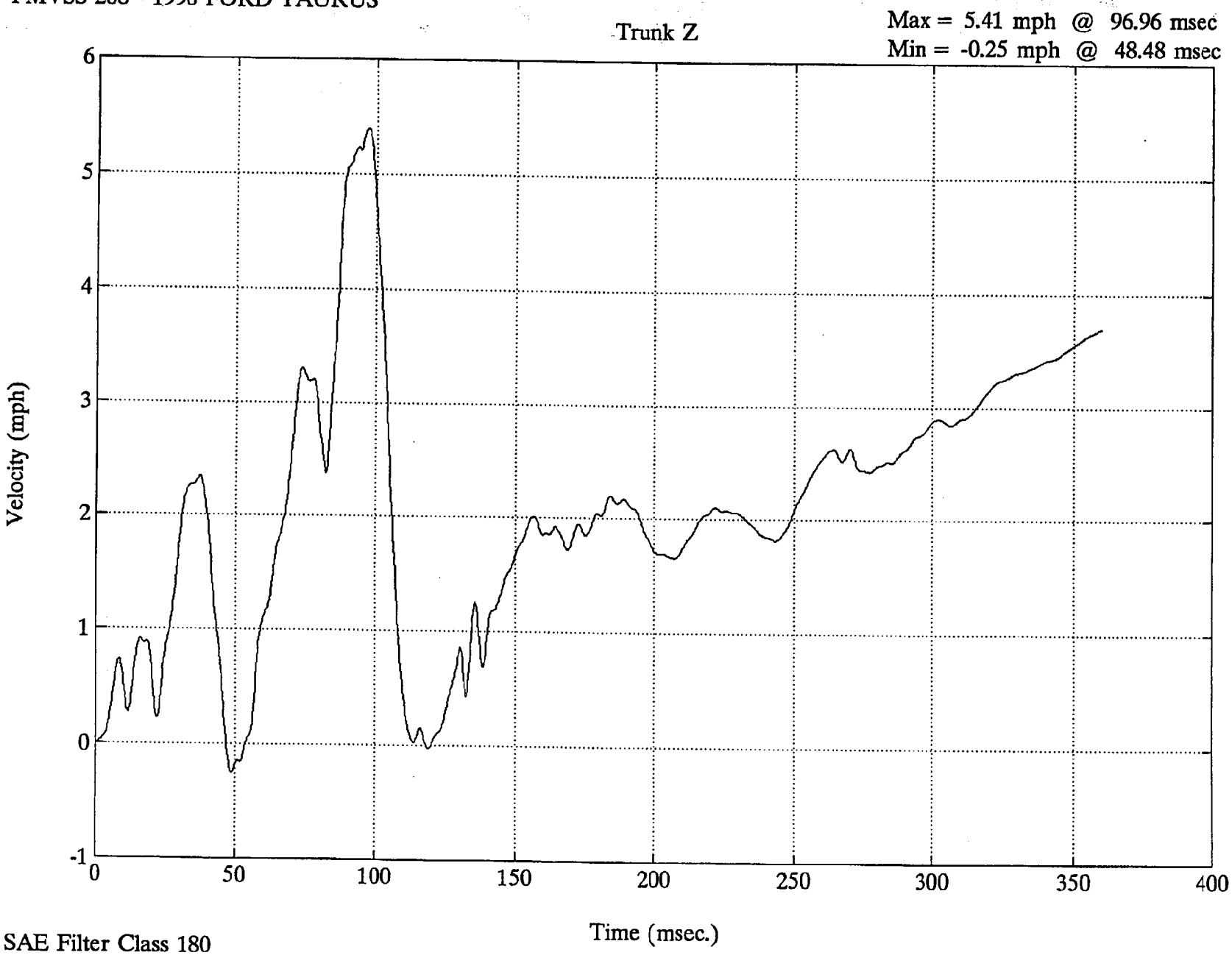

SAE Filter Class 180

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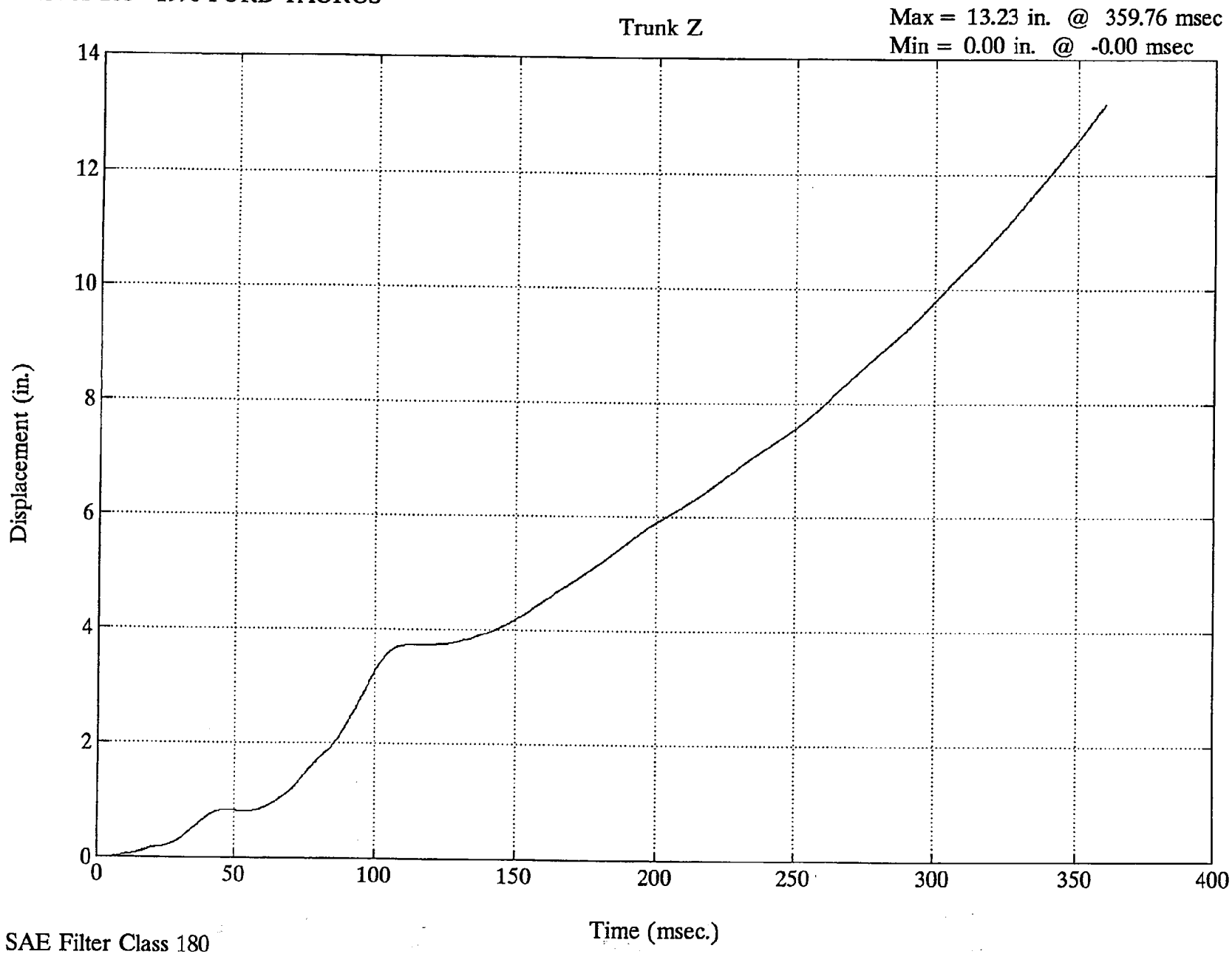


SAE Filter Class 180

TEST NO. CT0206

DUMMY	SAE FILTER CHANNEL CLASS
Head Accelerations	1000
Chest Accelerations	180
Femur Forces	600

FACILITY: track TEST DATE: 31 May 1996
RUN #: 1632 TEST TIME: 09:47:19
SERIES #: 1 BOARD: A

TITLE: 208 Test #8 - 1996 Ford Taurus

CHANNEL NUMBER	DESCRIPTION	ENGR UNIT	MAXIMUM AMP	MAXIMUM msec	MINIMUM AMP	MINIMUM msec	FILTER CLASS
1	Pos. 1 Head X	Gs	10.8	275.9	-59.0	82.3	1000.0
2	Pos. 1 Head Y	Gs	8.6	87.1	-1.9	44.9	1000.0
3	Pos. 1 Head Z	Gs	16.5	75.2	-18.9	100.7	1000.0
4	Pos. 1 Left Femur	lbs	28.1	16.4	-1088.5	49.7	600.0
5	Pos. 1 Chest X	Gs	5.1	235.9	-49.7	76.0	180.0
6	Pos. 1 Chest Y	Gs	3.1	66.1	-5.5	91.8	180.0
7	Pos. 1 Chest Z	Gs	11.9	74.0	-5.4	58.4	180.0
8	Pos. 1 Right Femur	lbs	43.6	199.8	-1086.3	83.5	600.0
9	Pos. 2 Head X	Gs	10.1	359.9	-54.0	58.1	1000.0
10	Pos. 2 Head Y	Gs	9.7	92.0	-8.7	60.1	1000.0
11	Pos. 2 Head Z	Gs	39.9	58.7	-21.8	91.7	1000.0
12	Pos. 2 Left Femur	lbs	292.2	108.1	-1669.2	64.0	600.0
13	Pos. 2 Chest X	Gs	6.2	143.0	-44.5	85.6	180.0
14	Pos. 2 Chest Y	Gs	4.9	124.9	-4.6	91.0	180.0
15	Pos. 2 Chest Z	Gs	18.5	75.4	-6.3	111.4	180.0
16	Pos. 2 Right Femur	lbs	126.2	139.1	-1617.1	74.2	600.0
17	Pos. 1 Head Resultant	Gs	59.9	81.8	.1	-72.8	1000.0
18	Pos. 1 Chest Resultant	Gs	50.7	75.8	.0	-84.0	180.0
19	Pos. 2 Head Resultant	Gs	67.1	58.7	.1	-74.5	1000.0
20	Pos. 2 Chest Resultant	Gs	45.9	82.9	.0	-71.8	180.0

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

hic: 491.19
t1 = 66.120 msec
t2 = 102.000 msec
Average G's Over Hic Duration = 45.14

CLIP SUMMARY: Pos. 1 Chest Resultant

Peak Resultant (3 ms CLIPPED DURATION) = 50.393 G's
Tstart = 75.1200 ms
Tend = 78.2400 ms
CSI = 370.549

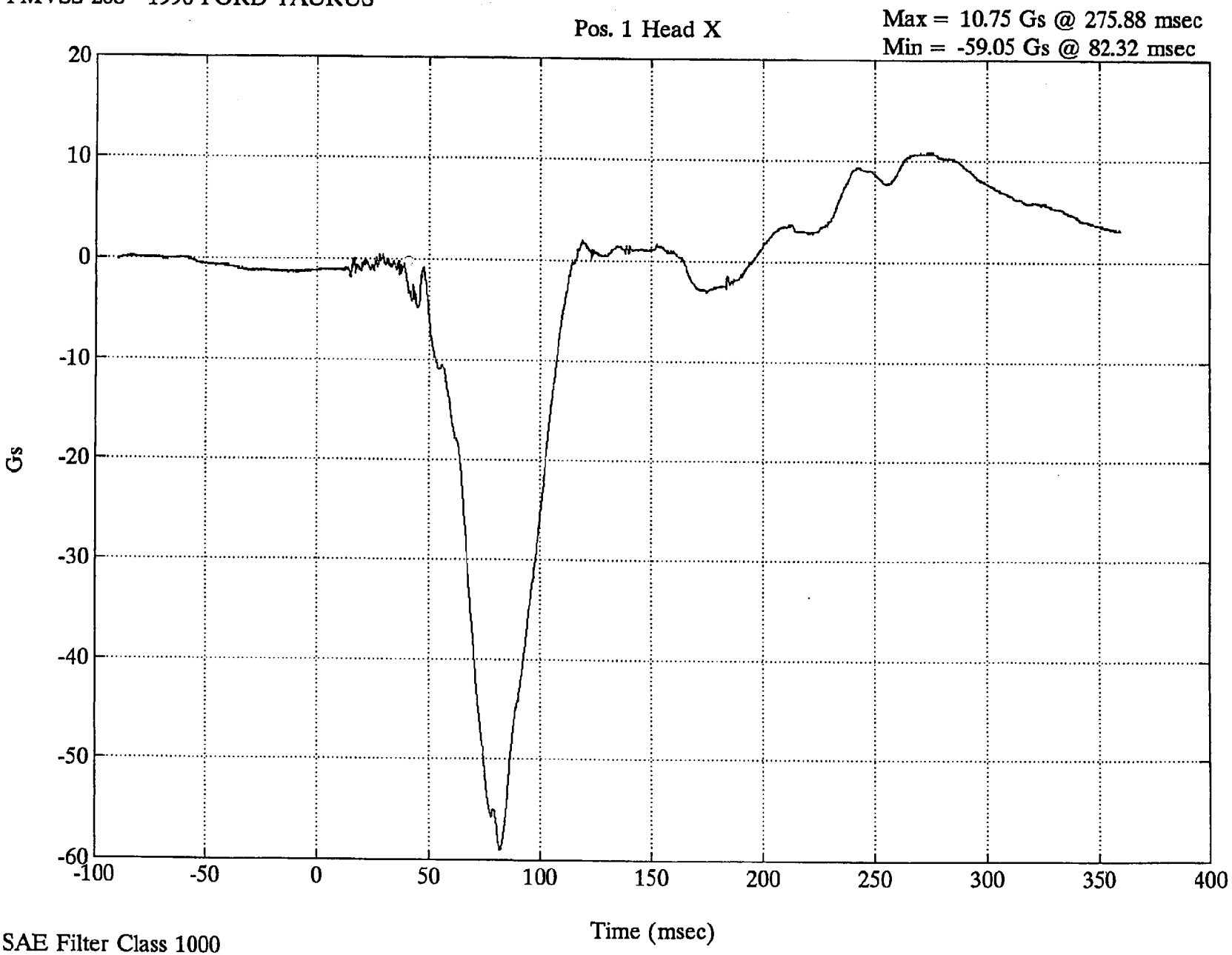
36 ms Fixed Duration HIC SUMMARY: Pos. 2 Head Resultant

hic: 167.00
t1 = 55.680 msec
t2 = 66.120 msec
Average G's Over Hic Duration = 48.04

CLIP SUMMARY: Pos. 2 Chest Resultant

Peak Resultant (3 ms CLIPPED DURATION) = 45.578 G's
Tstart = 79.8000 ms
Tend = 82.8000 ms
CSI = 426.691

FMVSS 208 - 1996 FORD TAURUS



SAE Filter Class 1000

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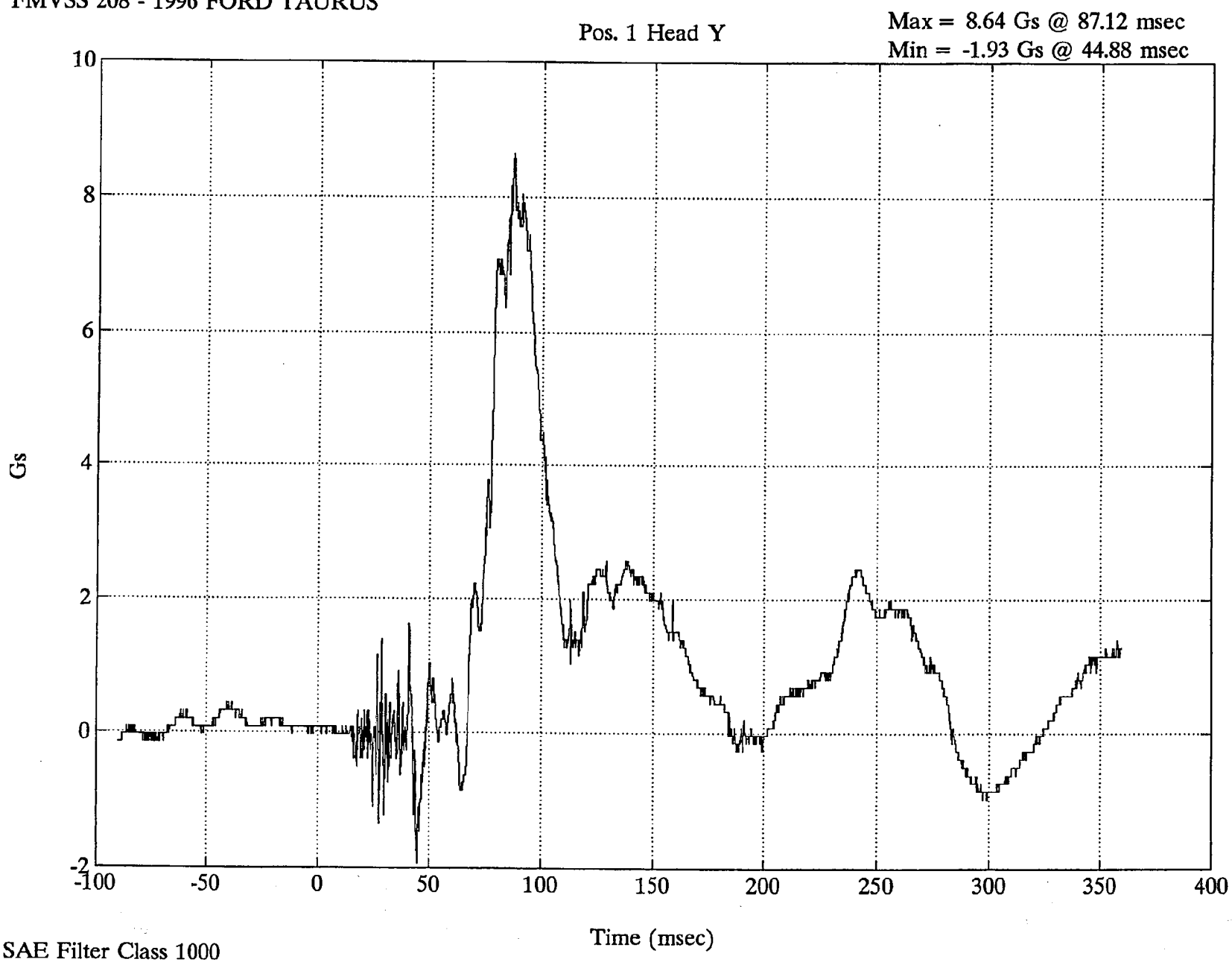
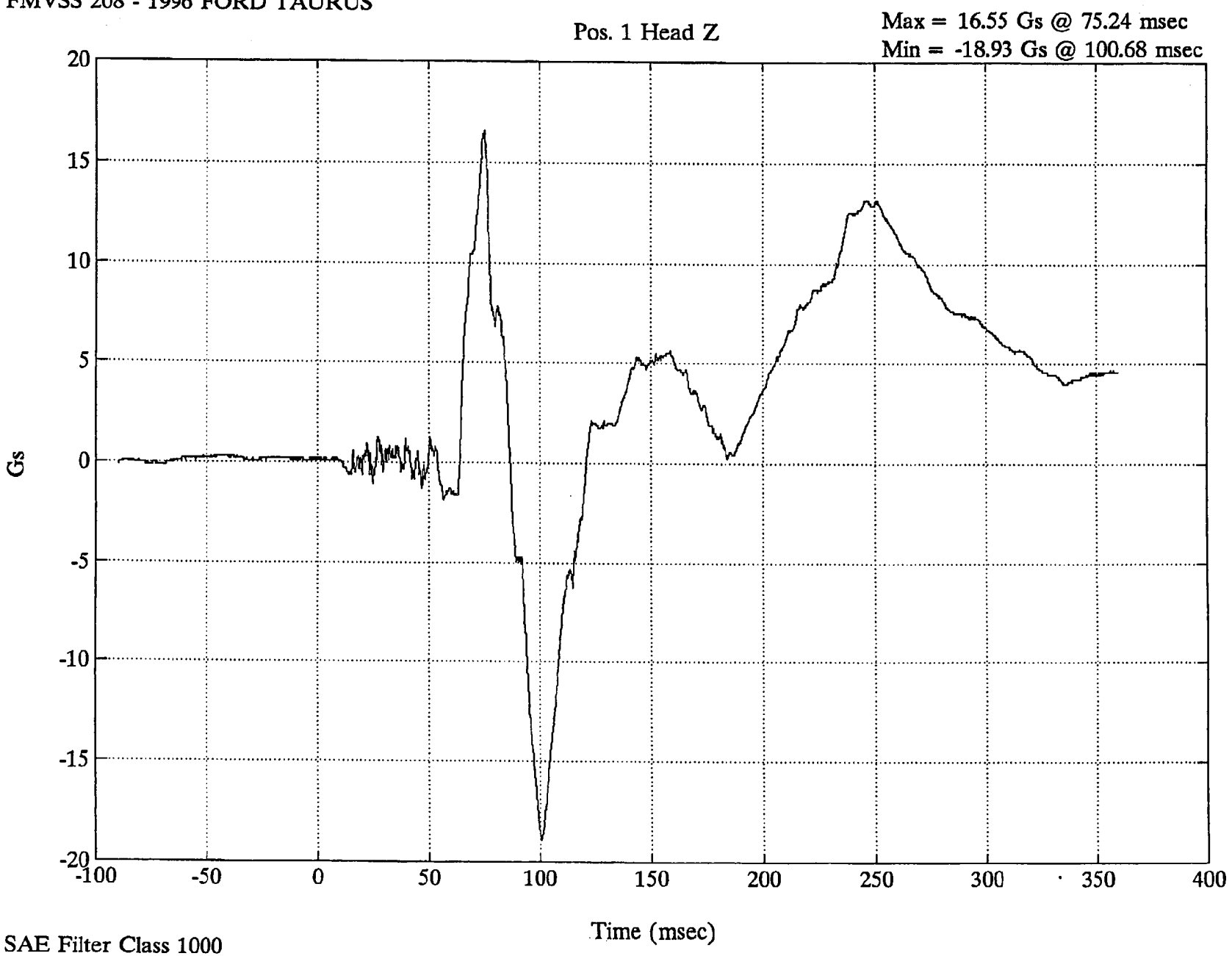
FMVSS 208 - 1996 FORD TAURUS



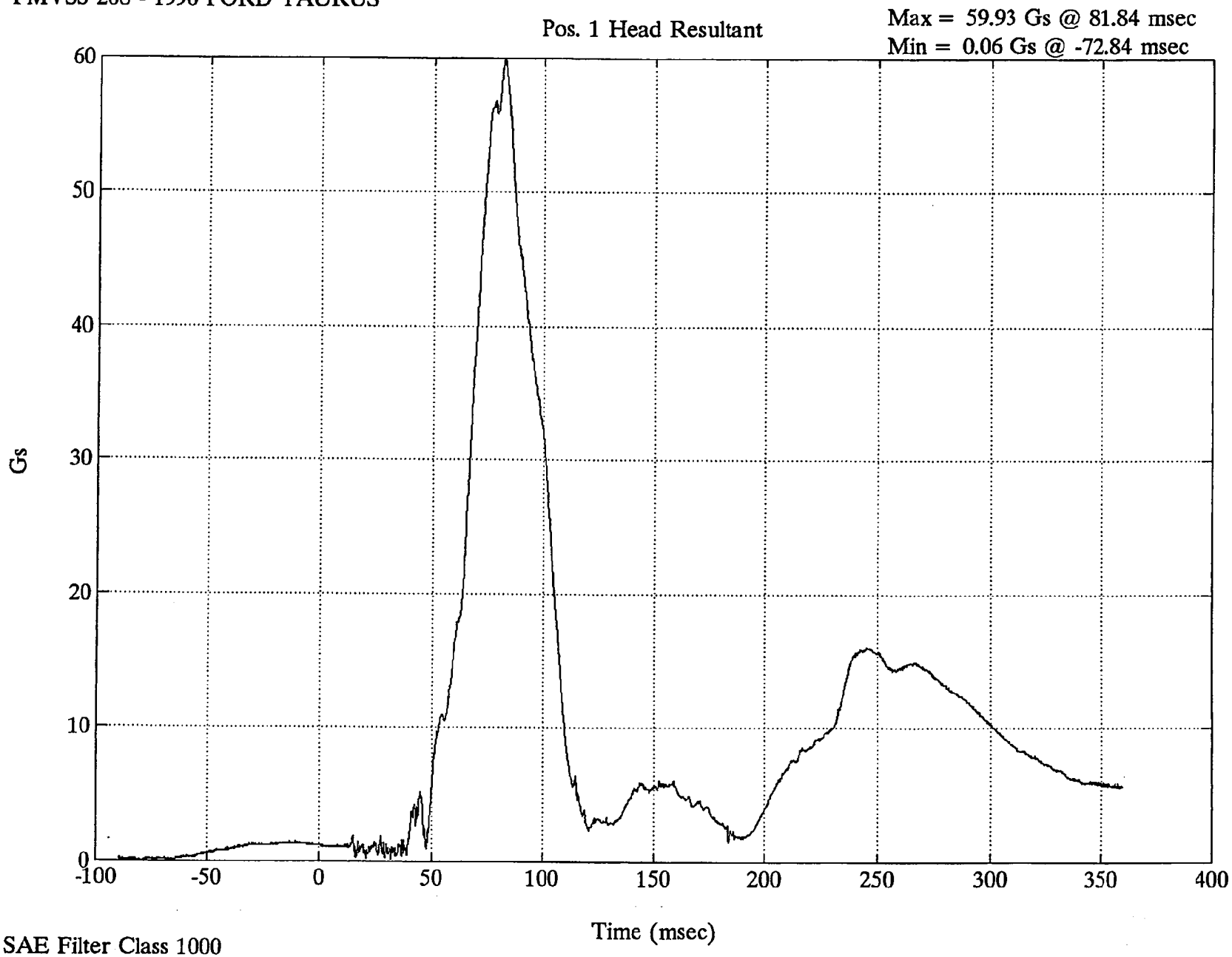
SAE Filter Class 1000

FMVSS 208 - 1996 FORD TAURUS



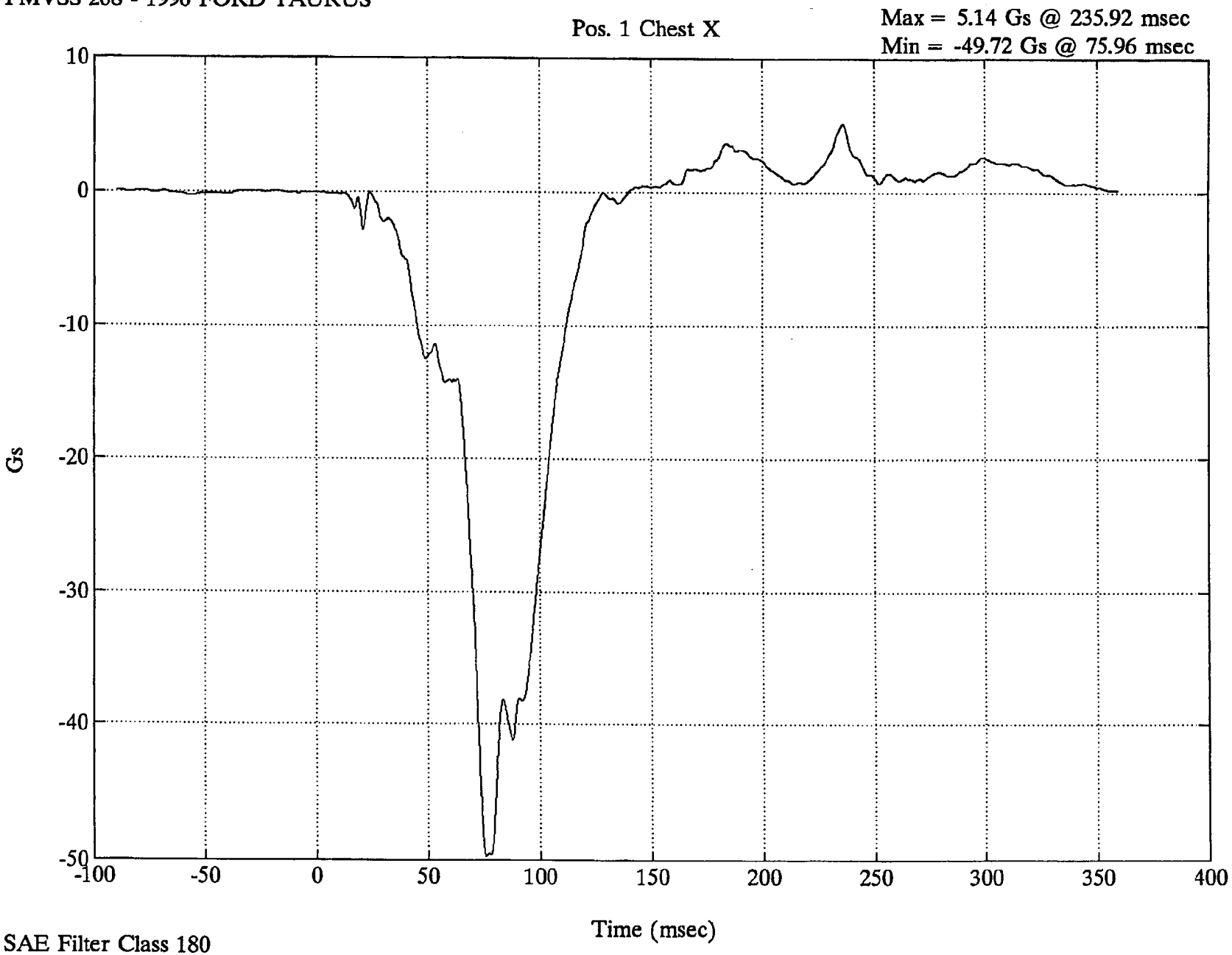
SAE Filter Class 1000

FMVSS 208 - 1996 FORD TAURUS



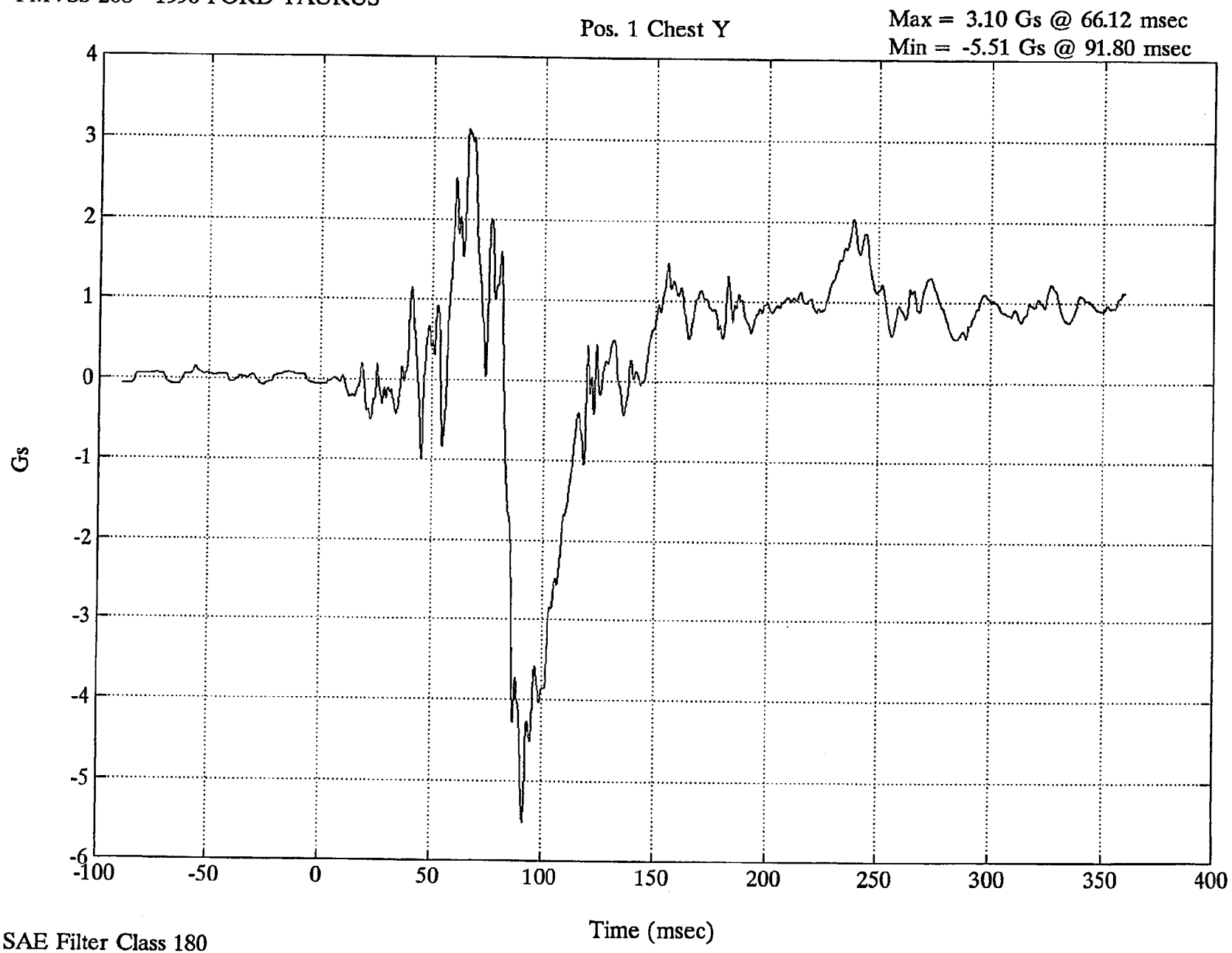
SAE Filter Class 1000

FMVSS 208 - 1996 FORD TAURUS



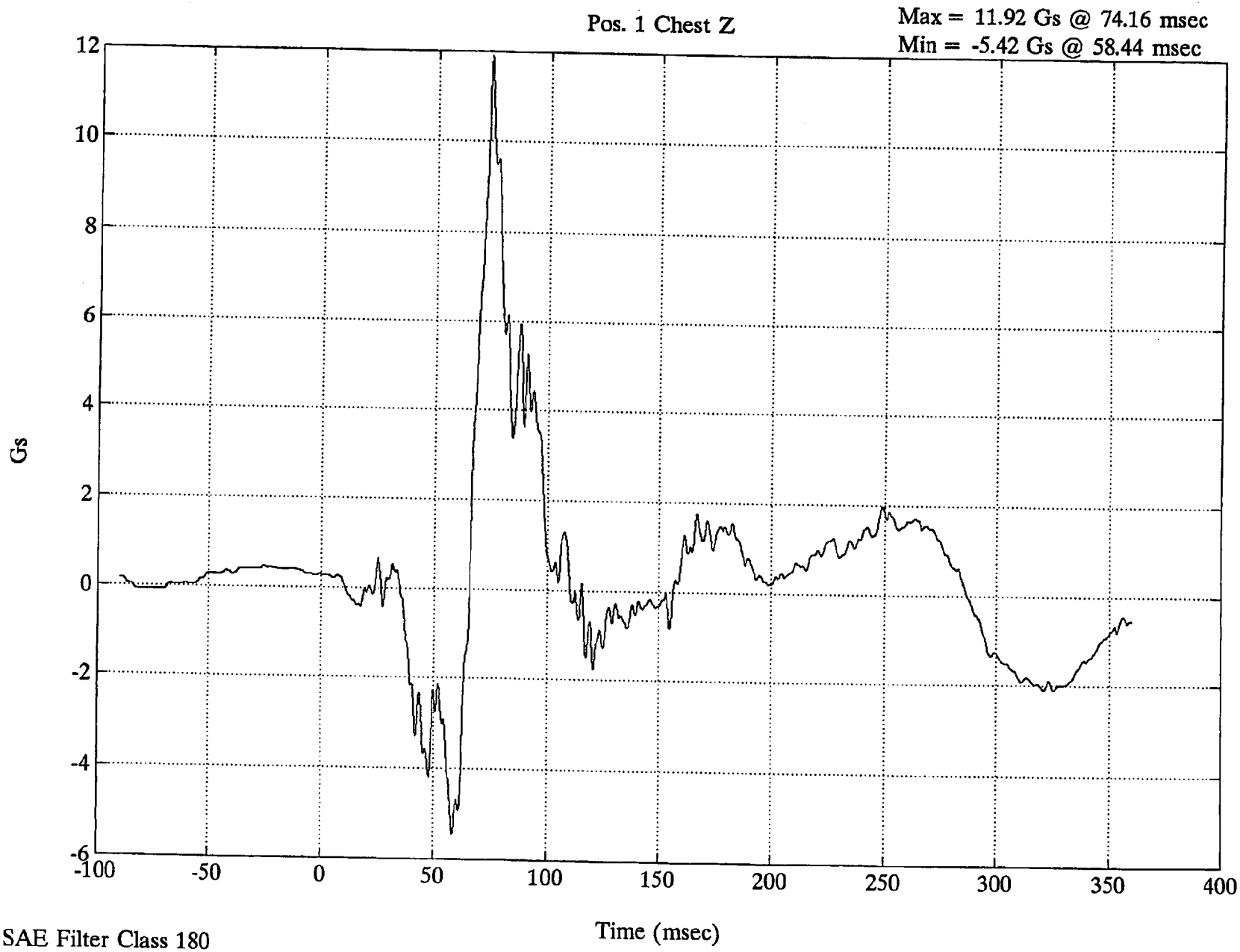
SAE Filter Class 180

FMVSS 208 - 1996 FORD TAURUS



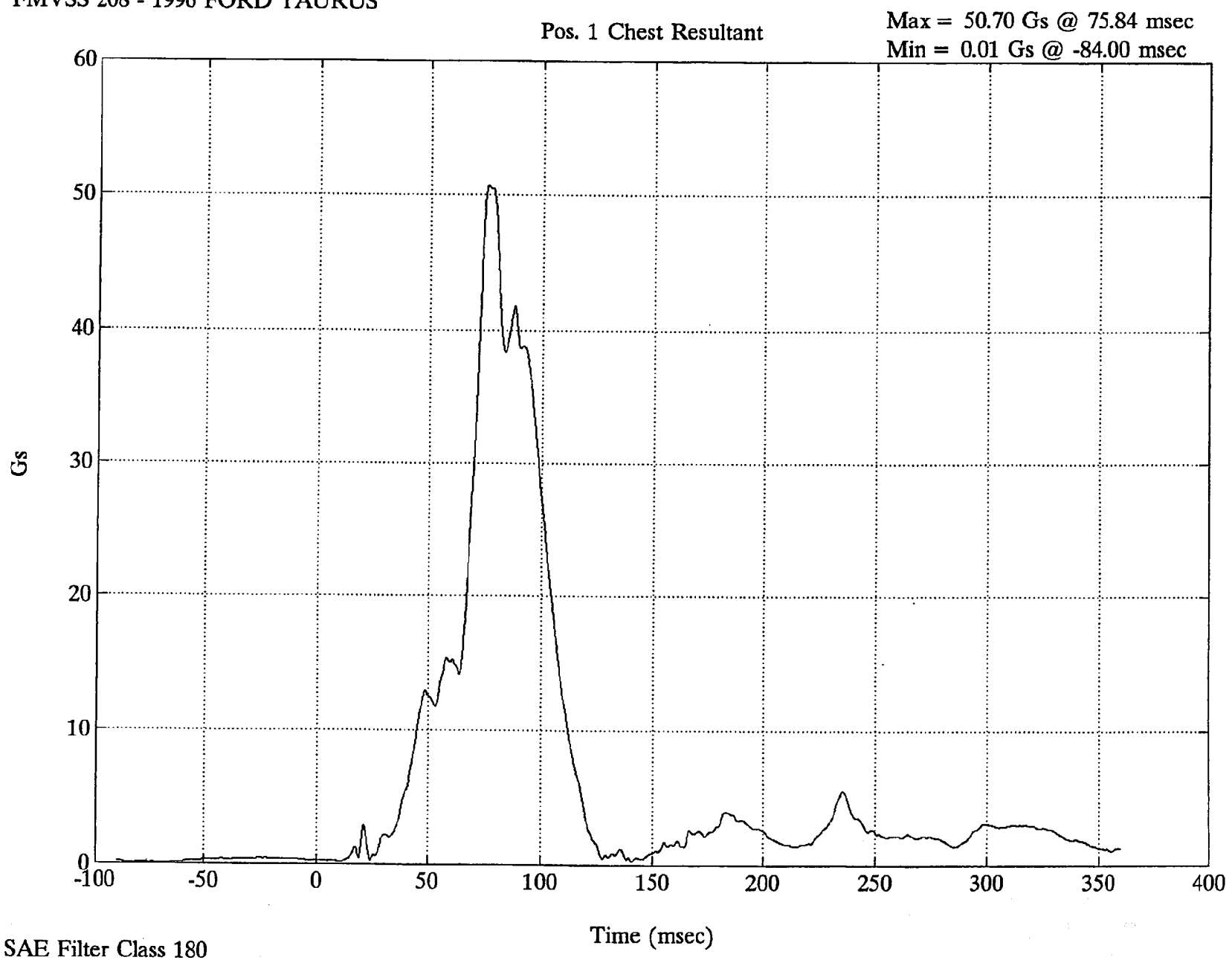
SAE Filter Class 180

FMVSS 208 - 1996 FORD TAURUS



SAE Filter Class 180

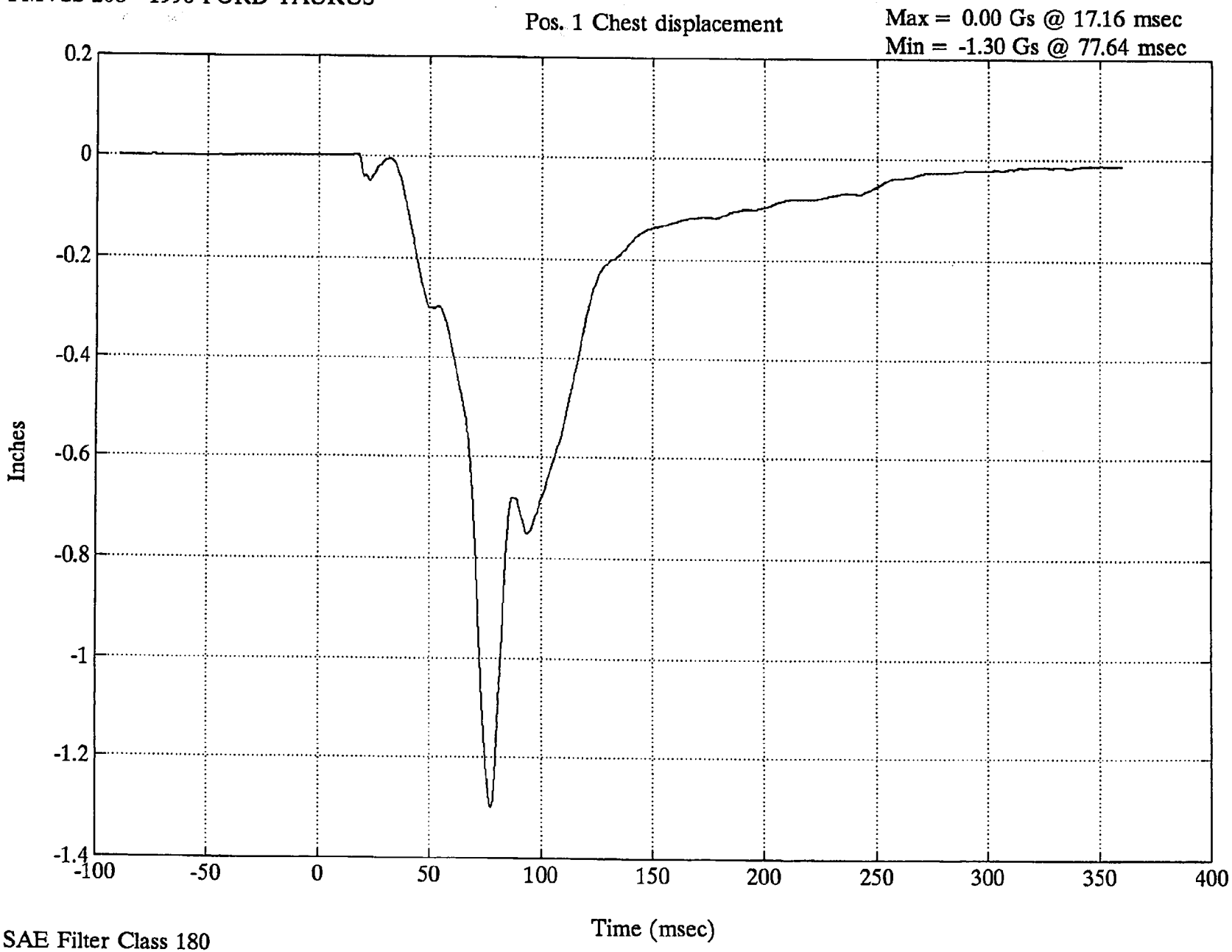
FMVSS 208 - 1996 FORD TAURUS



SAE Filter Class 180

8353-5

FMVSS 208 - 1996 FORD TAURUS



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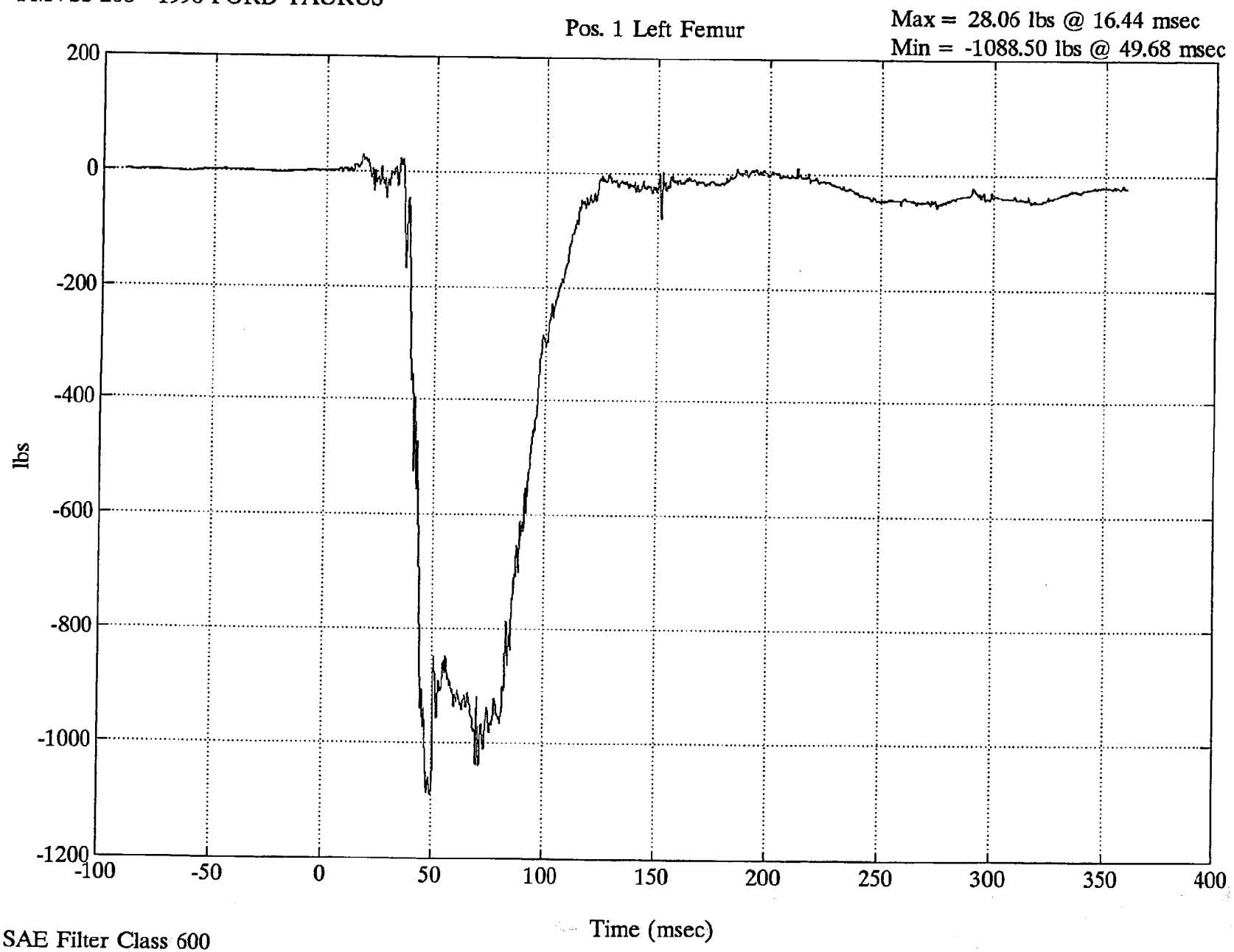
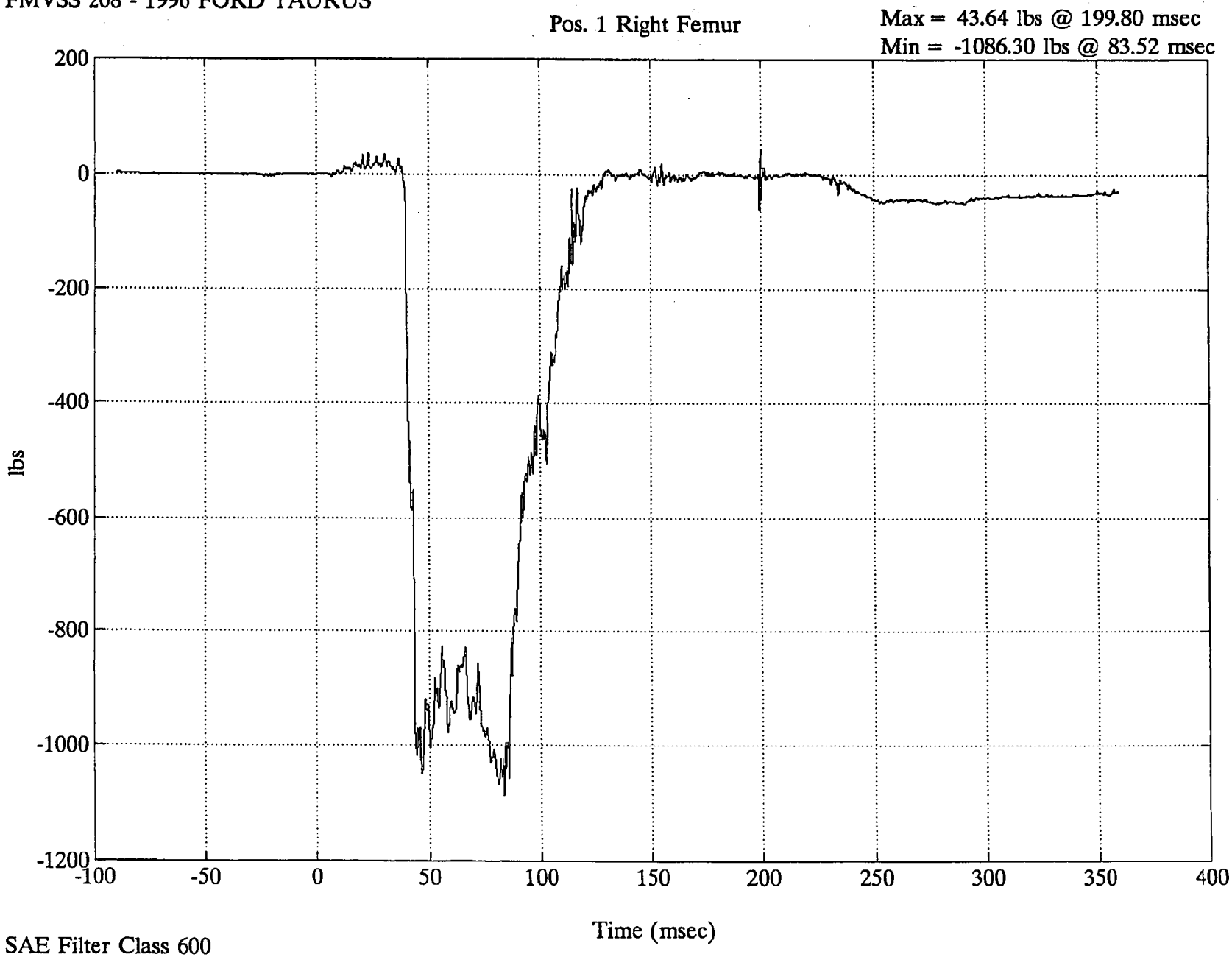


SAE Filter Class 600

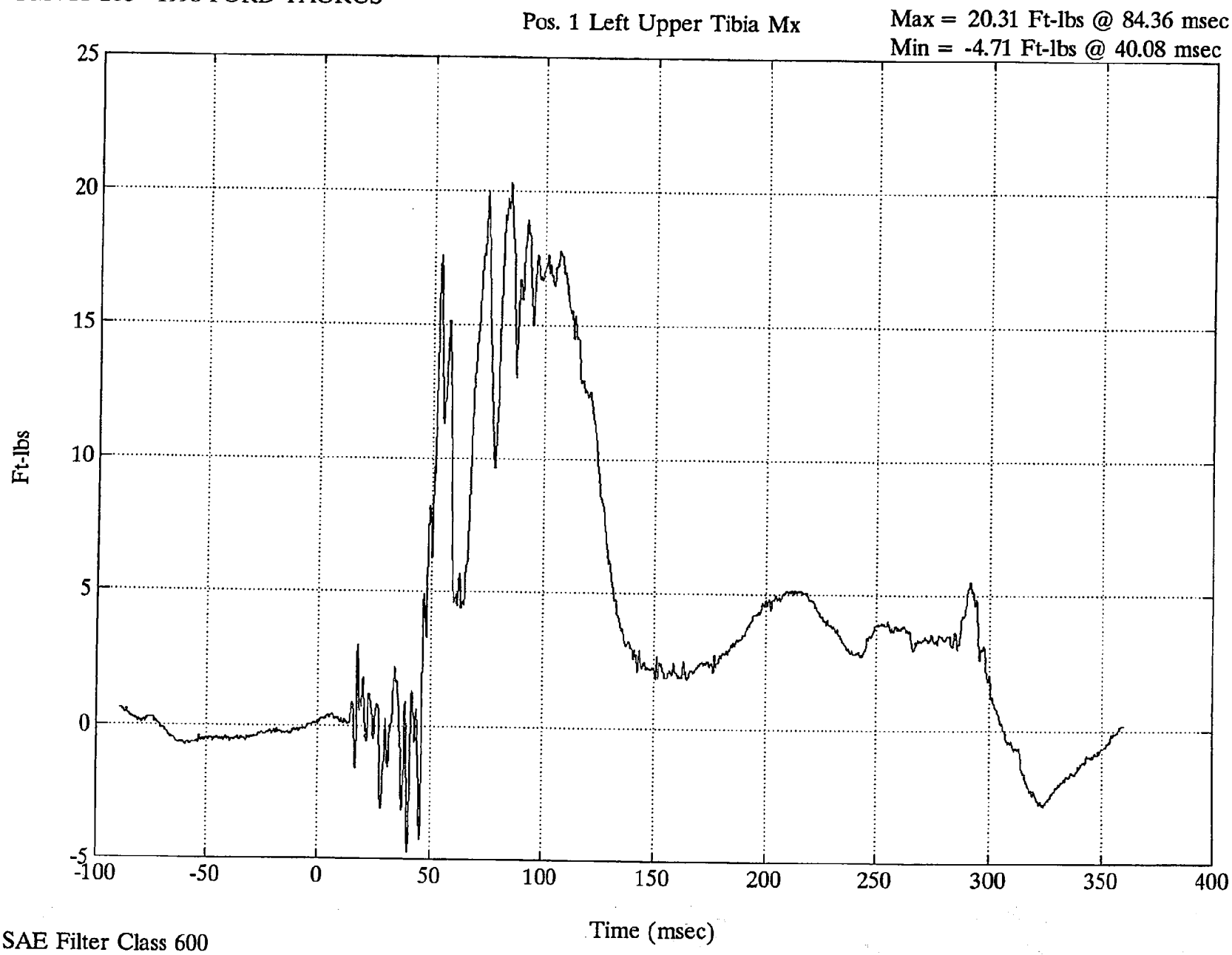
FMVSS 208 - 1996 FORD TAURUS



SAE Filter Class 600

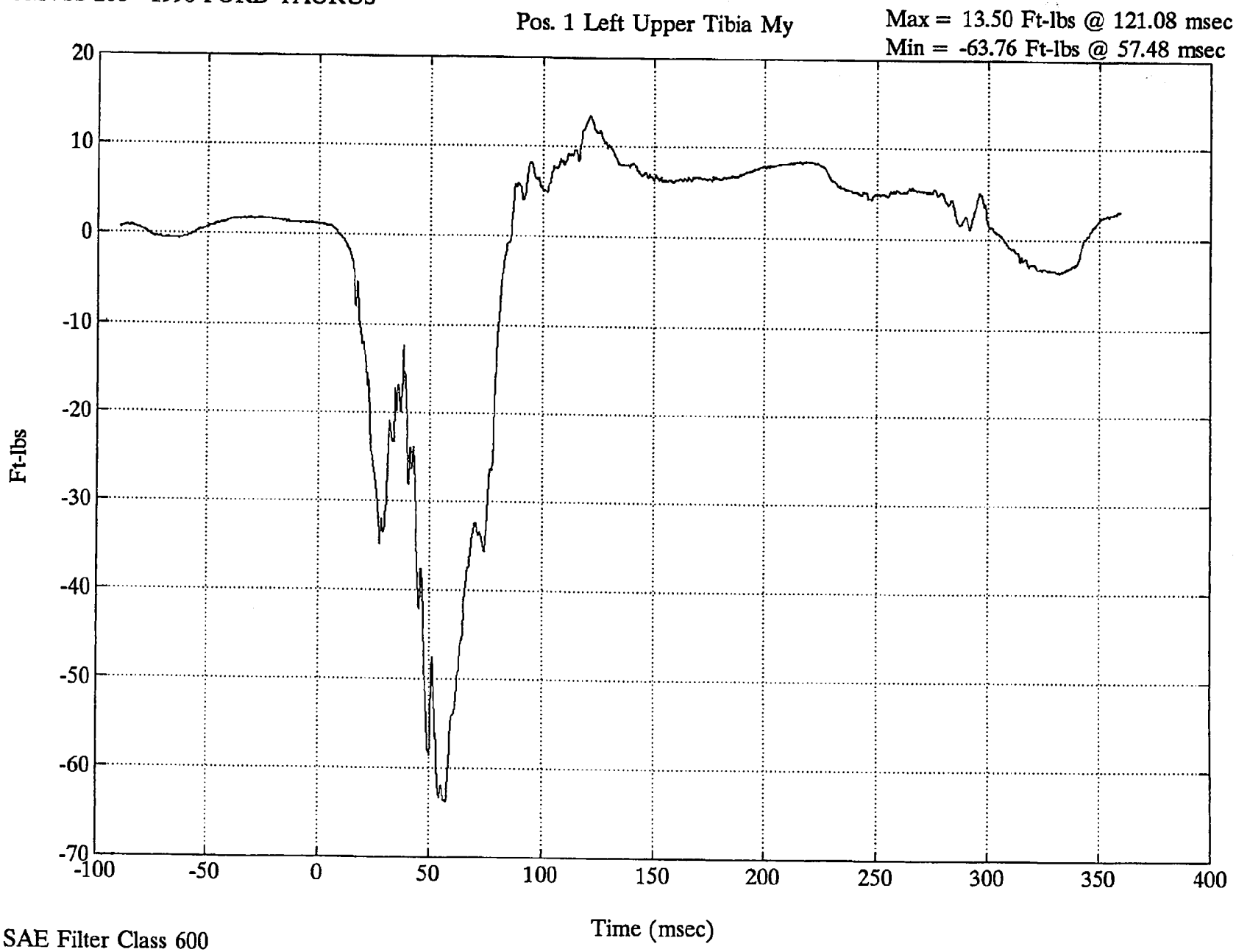
8353-5

FMVSS 208 - 1996 FORD TAURUS



SAE Filter Class 600

FMVSS 208 - 1996 FORD TAURUS



SAE Filter Class 600

8353-5

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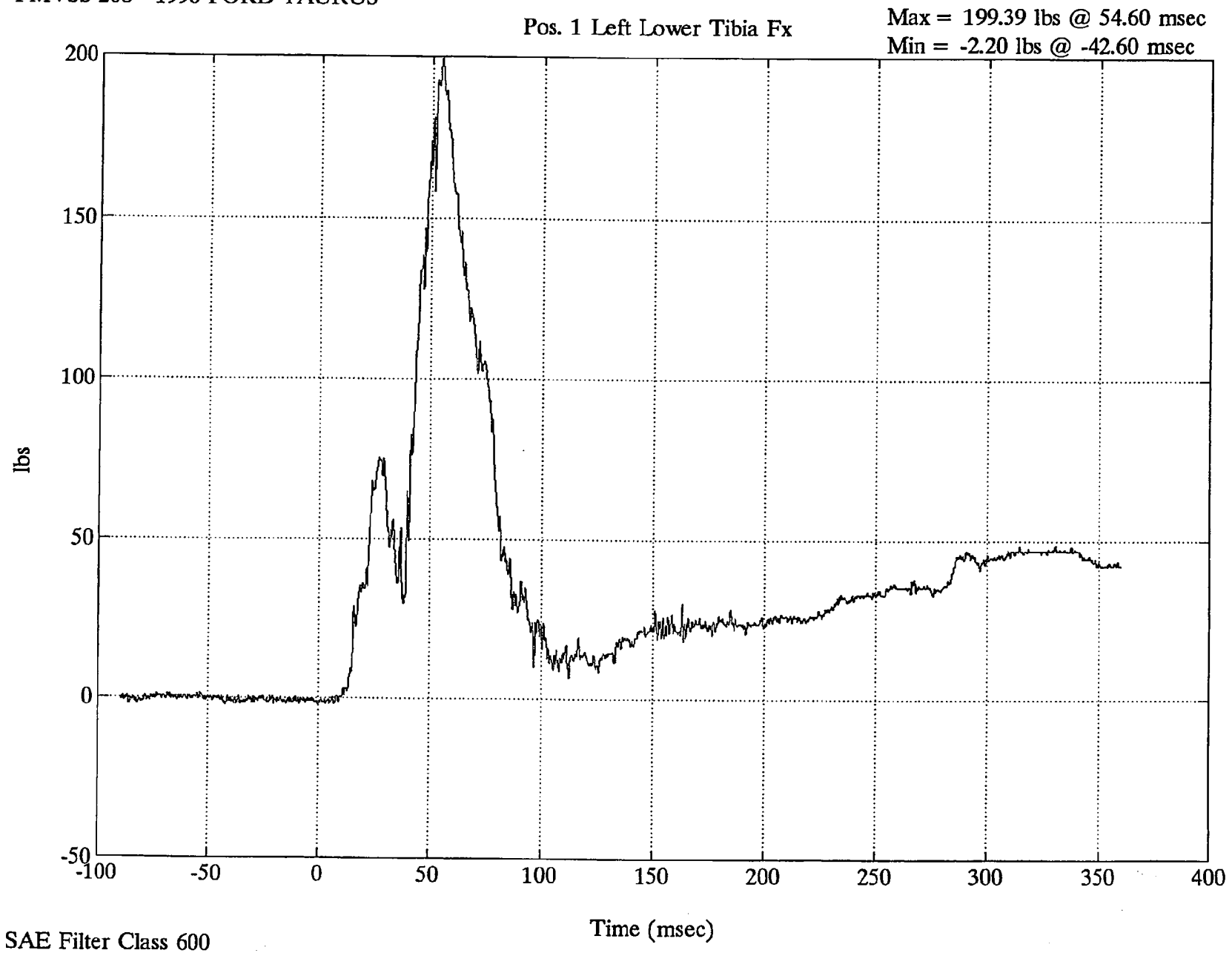

SAE Filter Class 600

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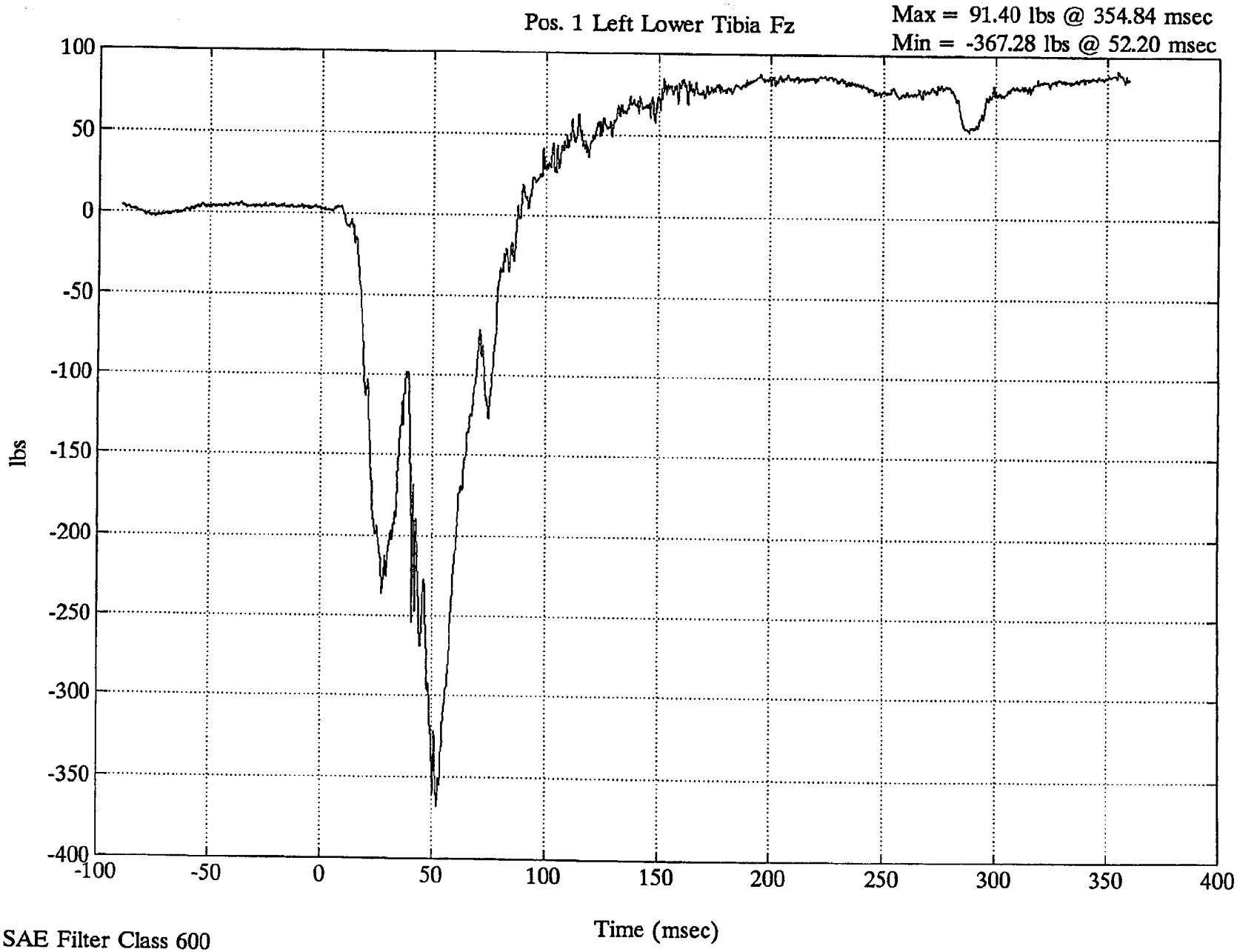
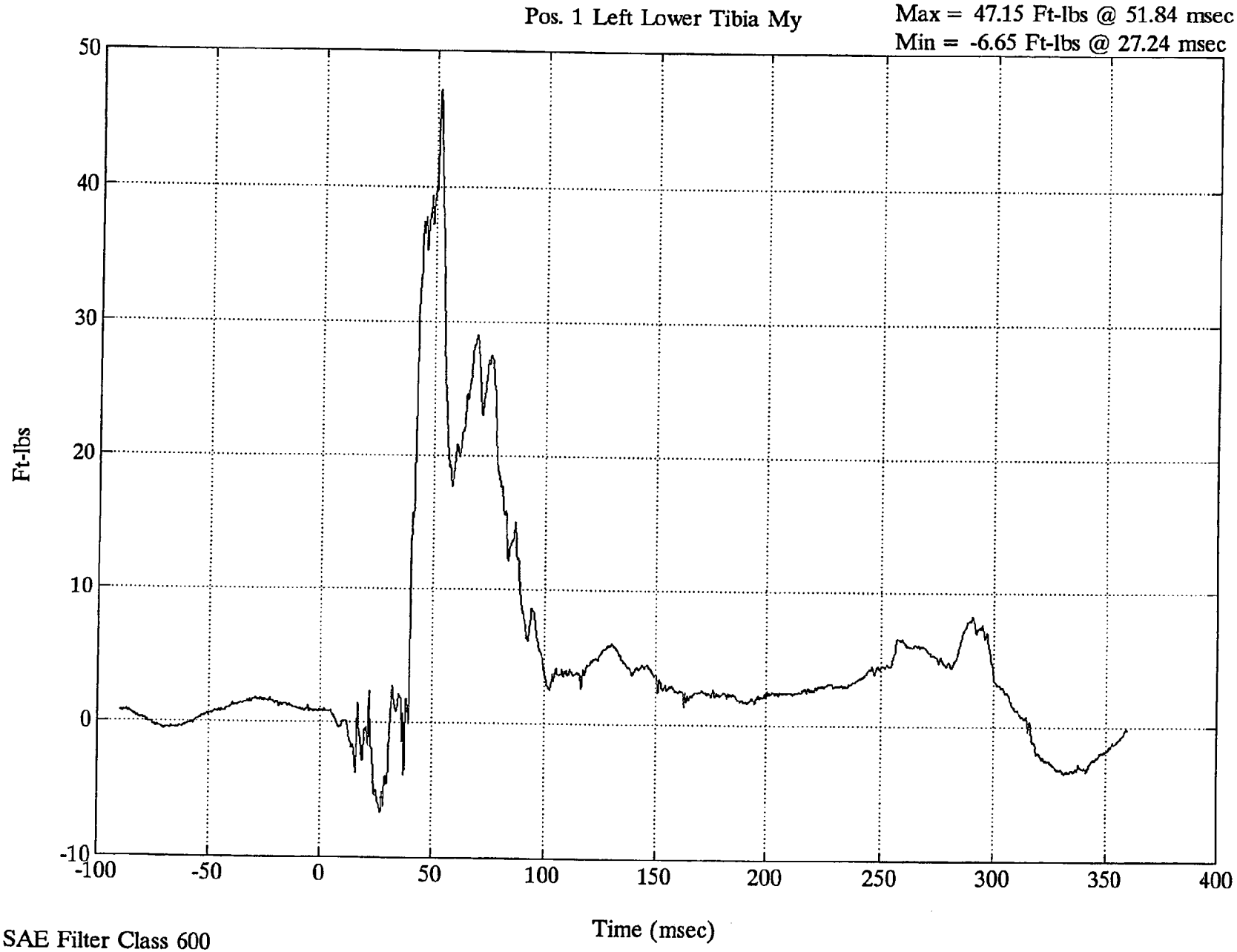


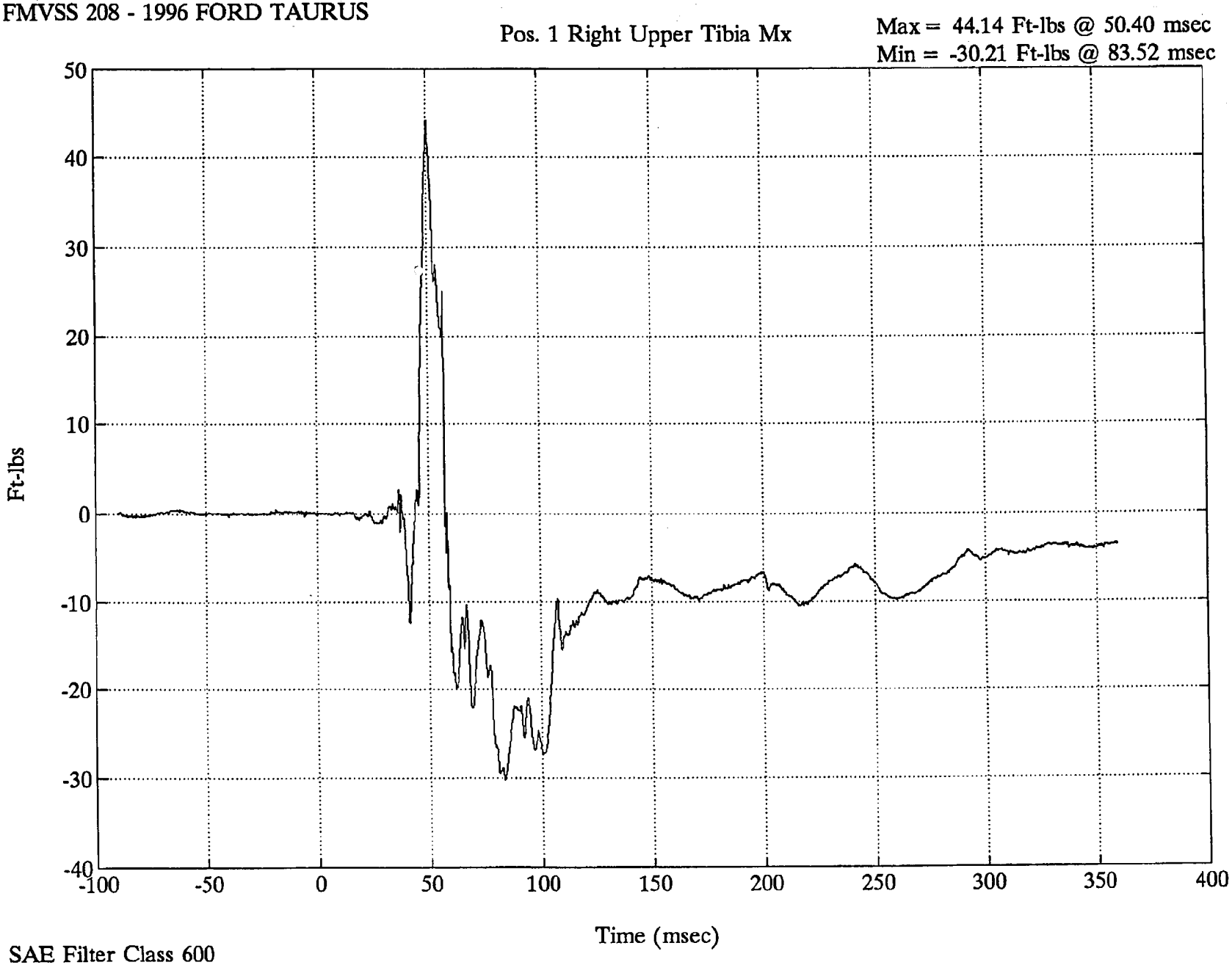
SAE Filter Class 600

FMVSS 208 - 1996 FORD TAURUS



SAE Filter Class 600

FMVSS 208 - 1996 FORD TAURUS



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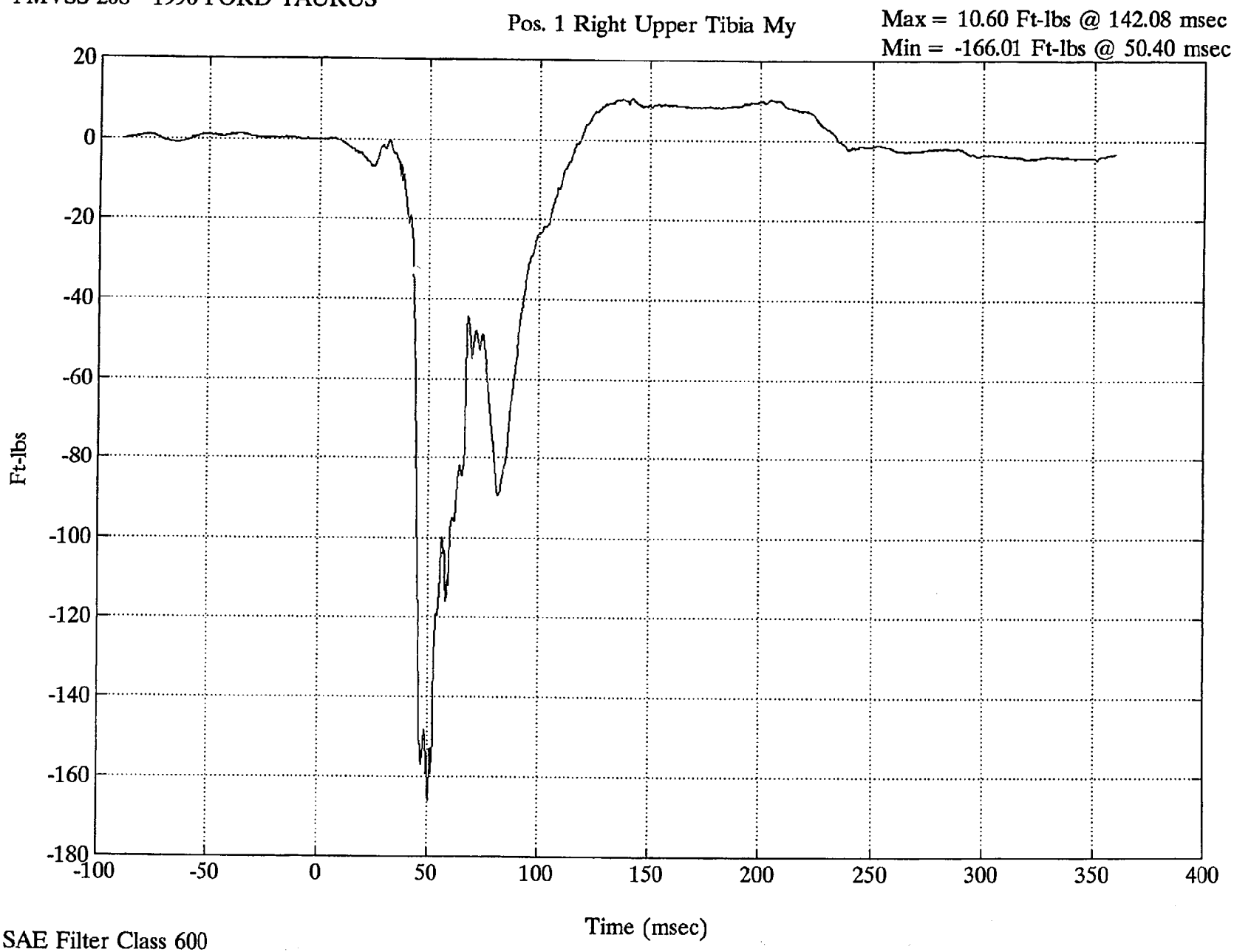

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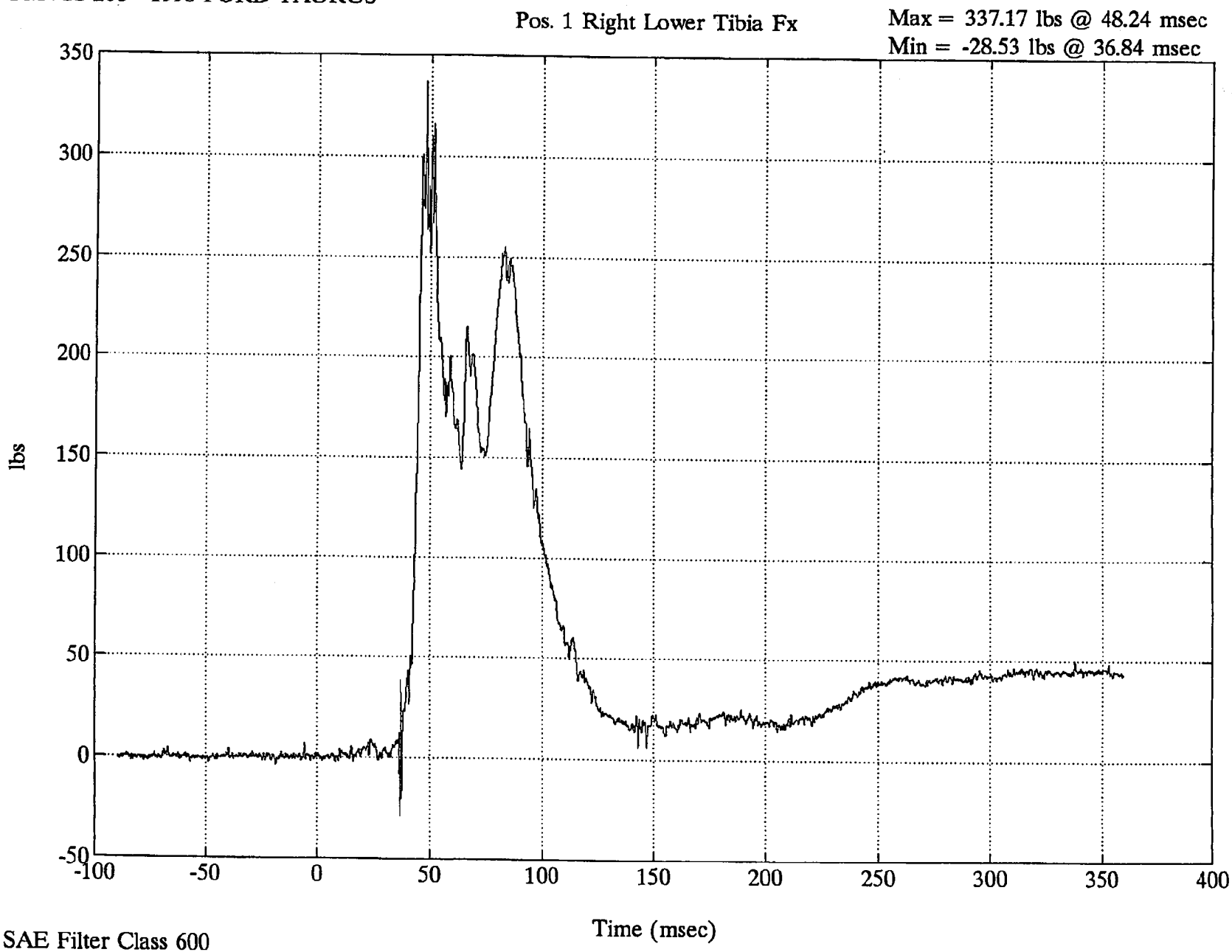

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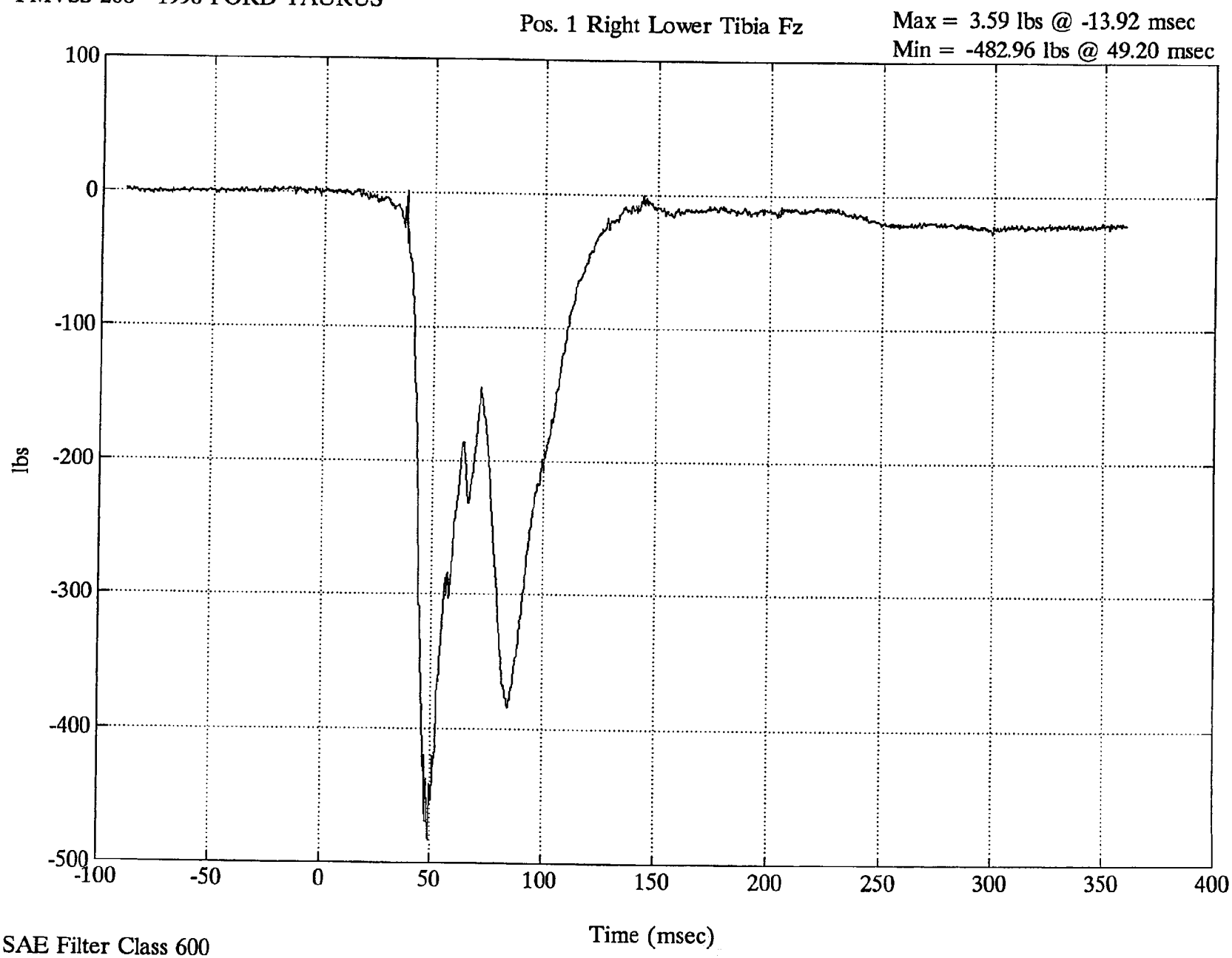

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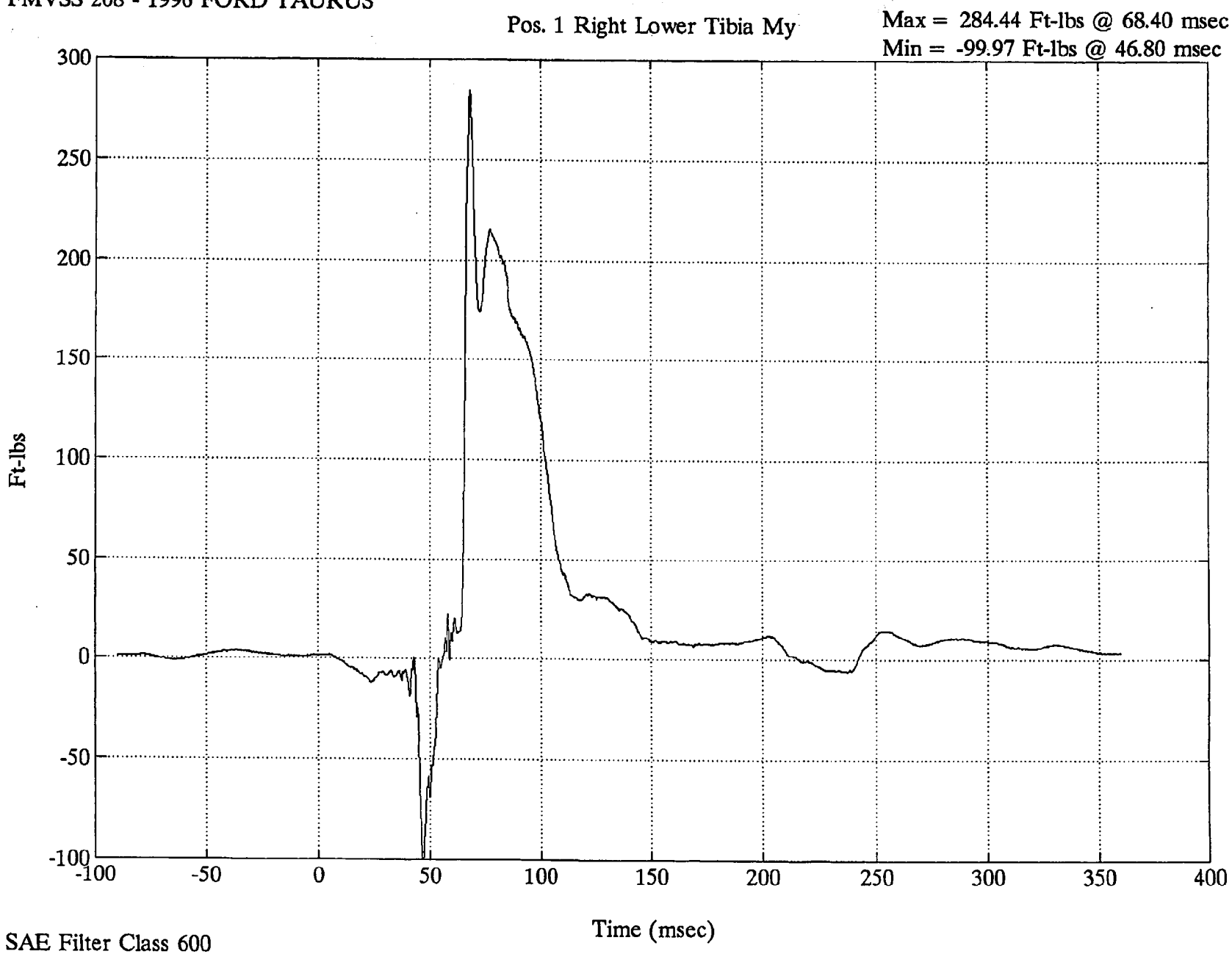

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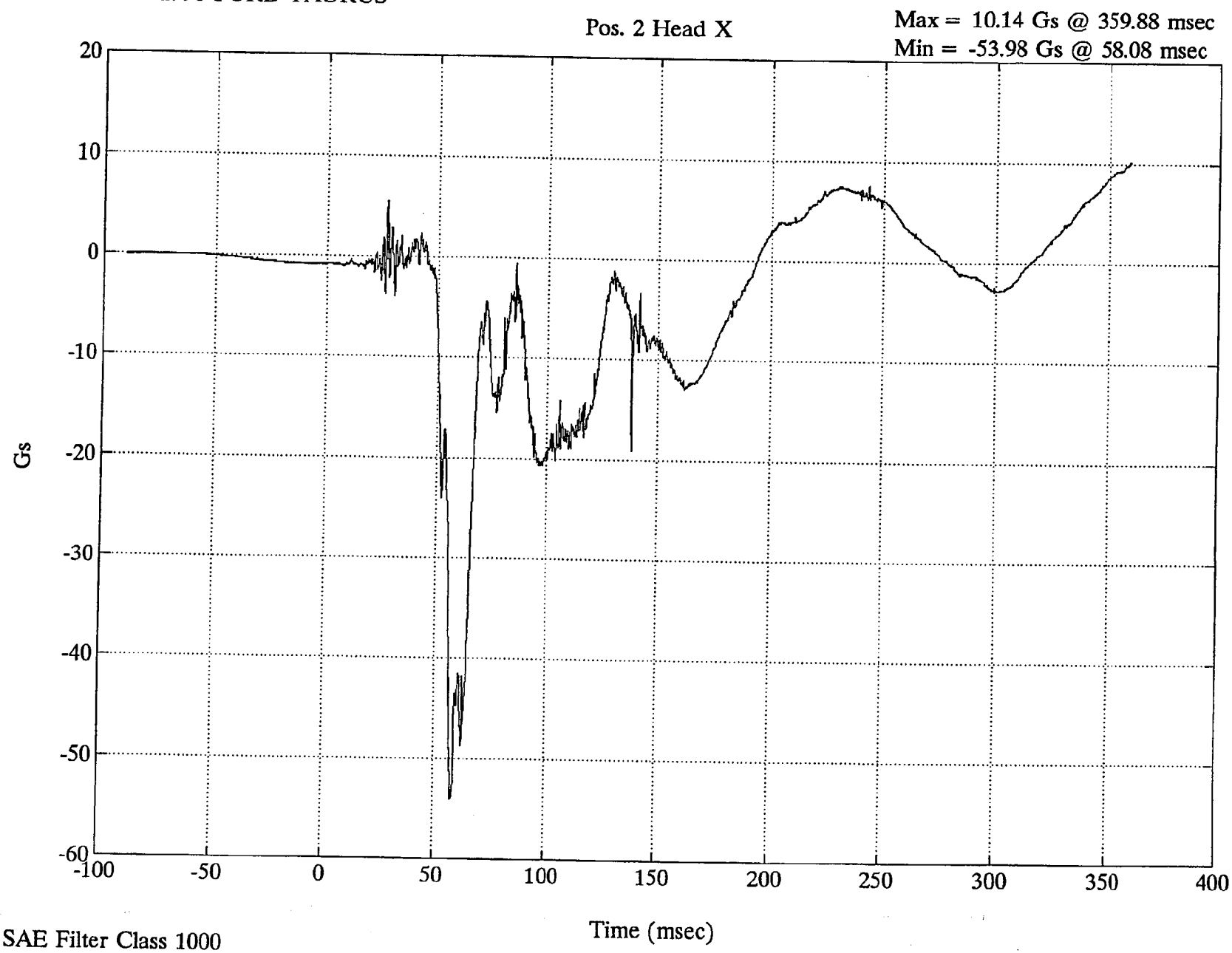

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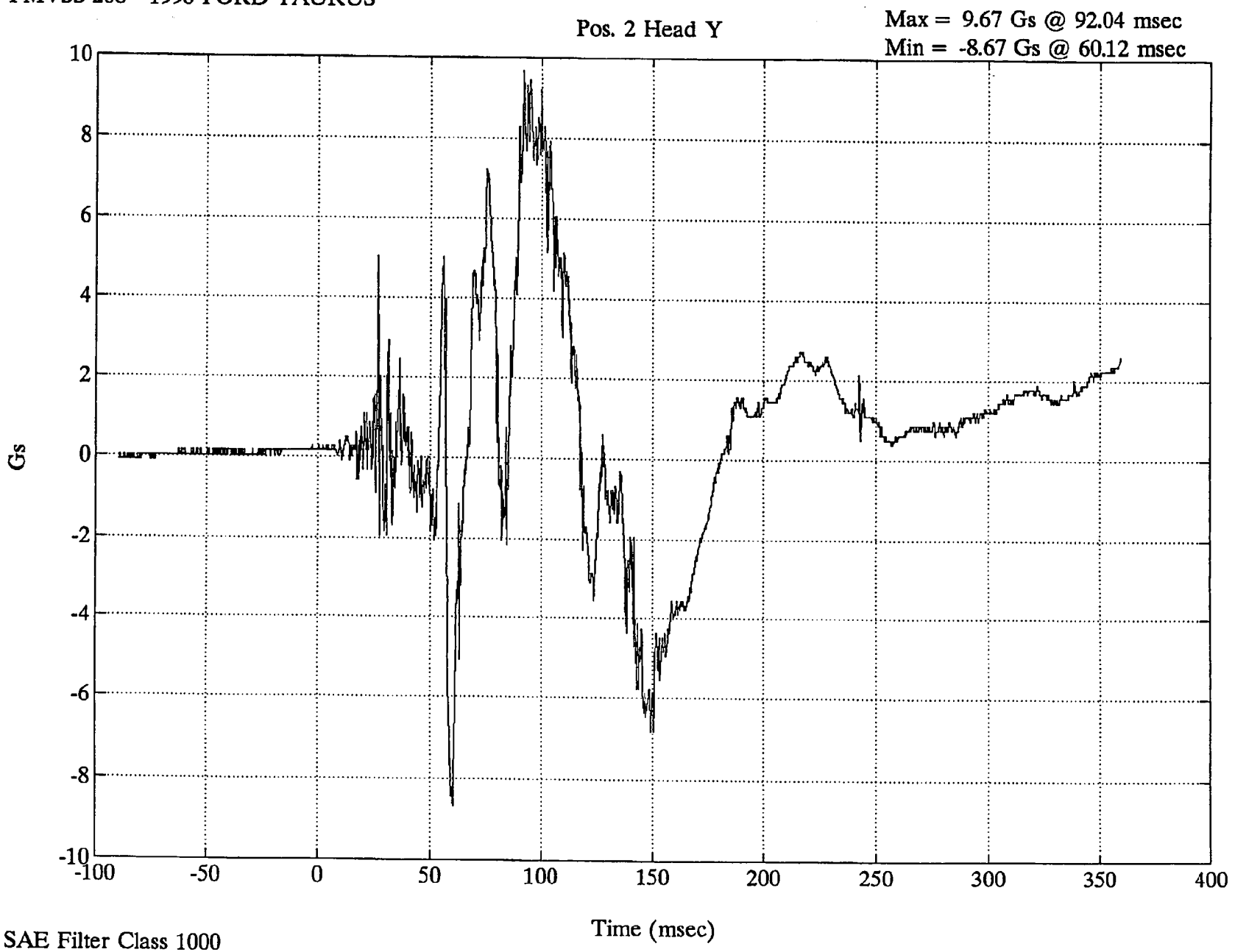

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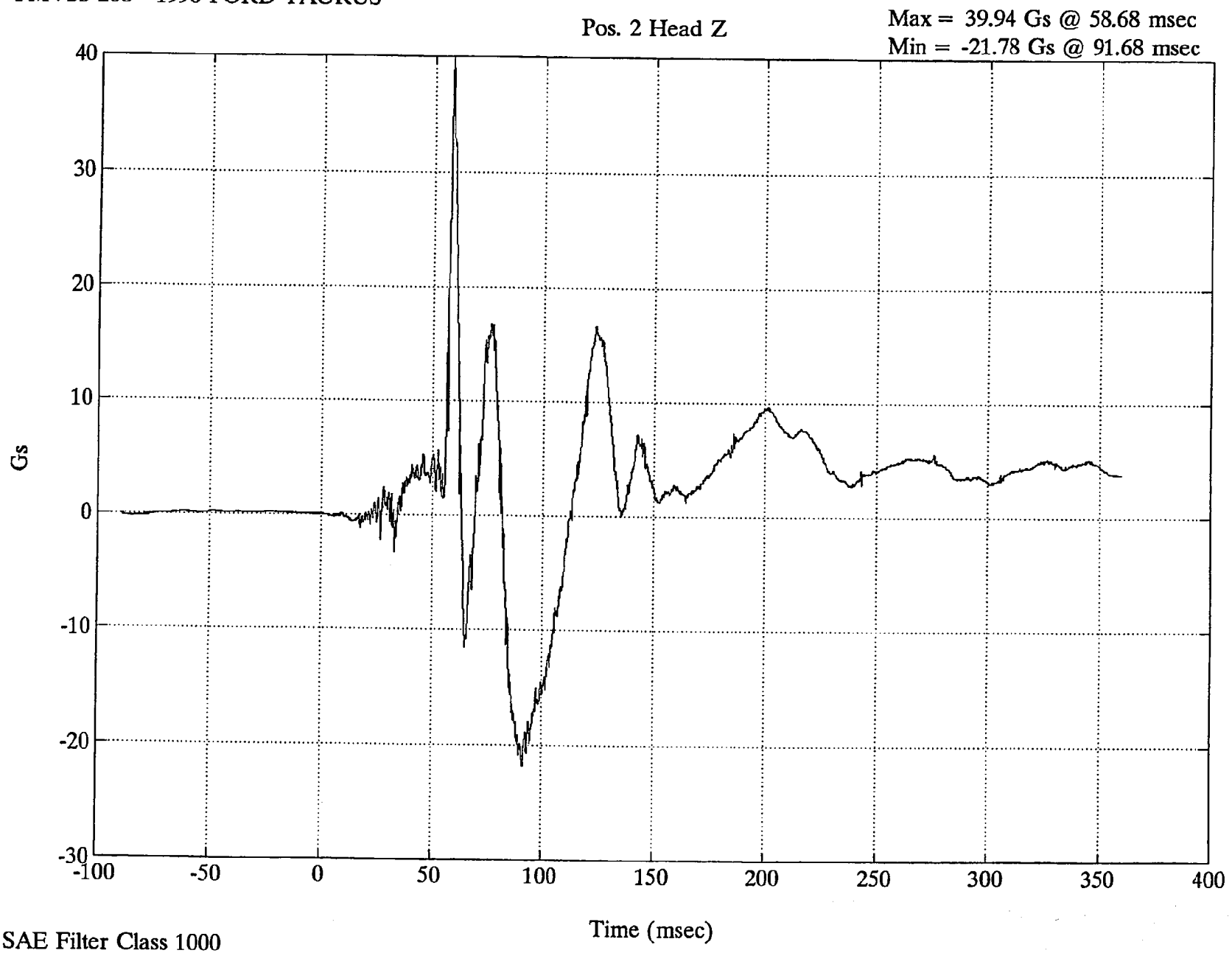

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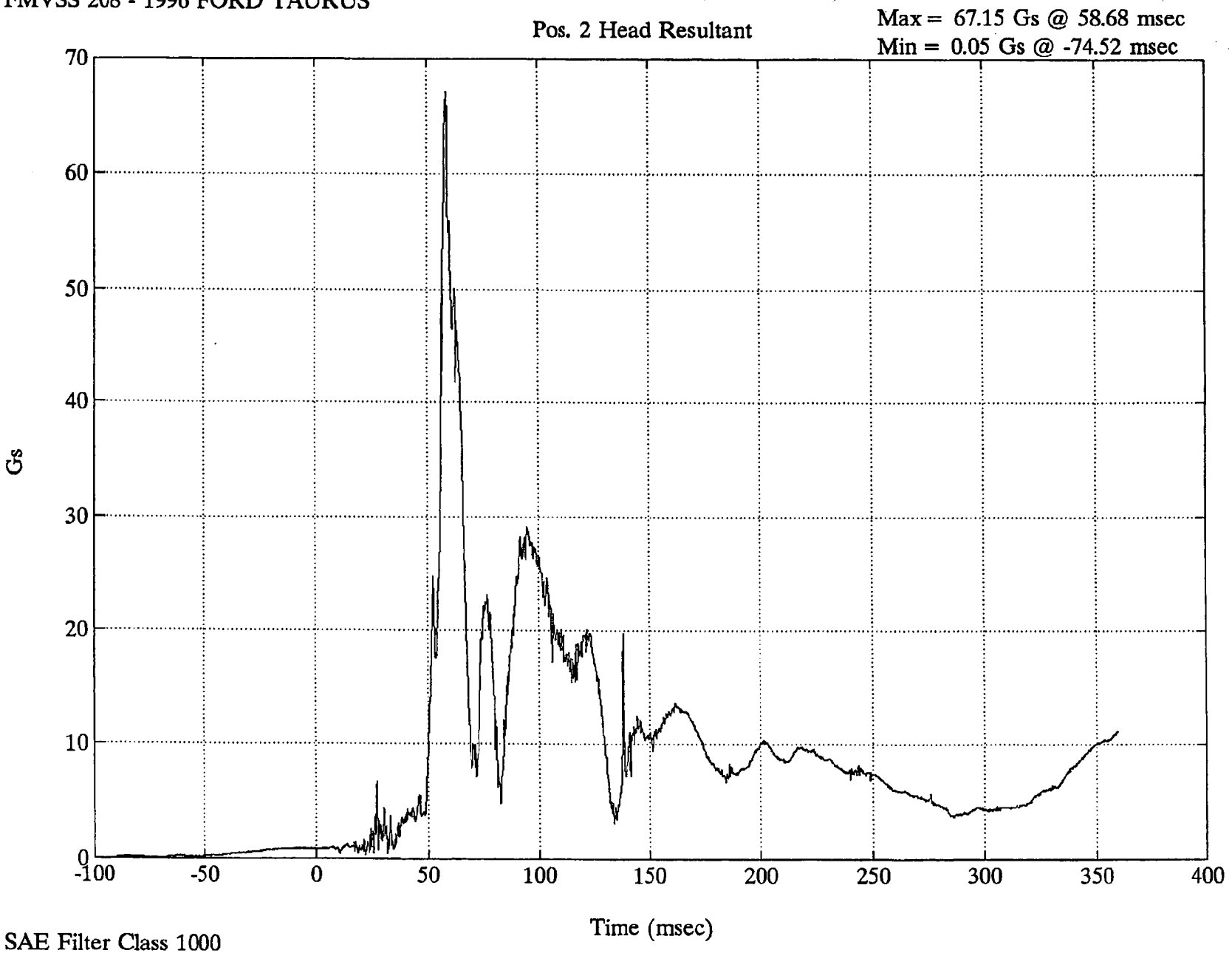

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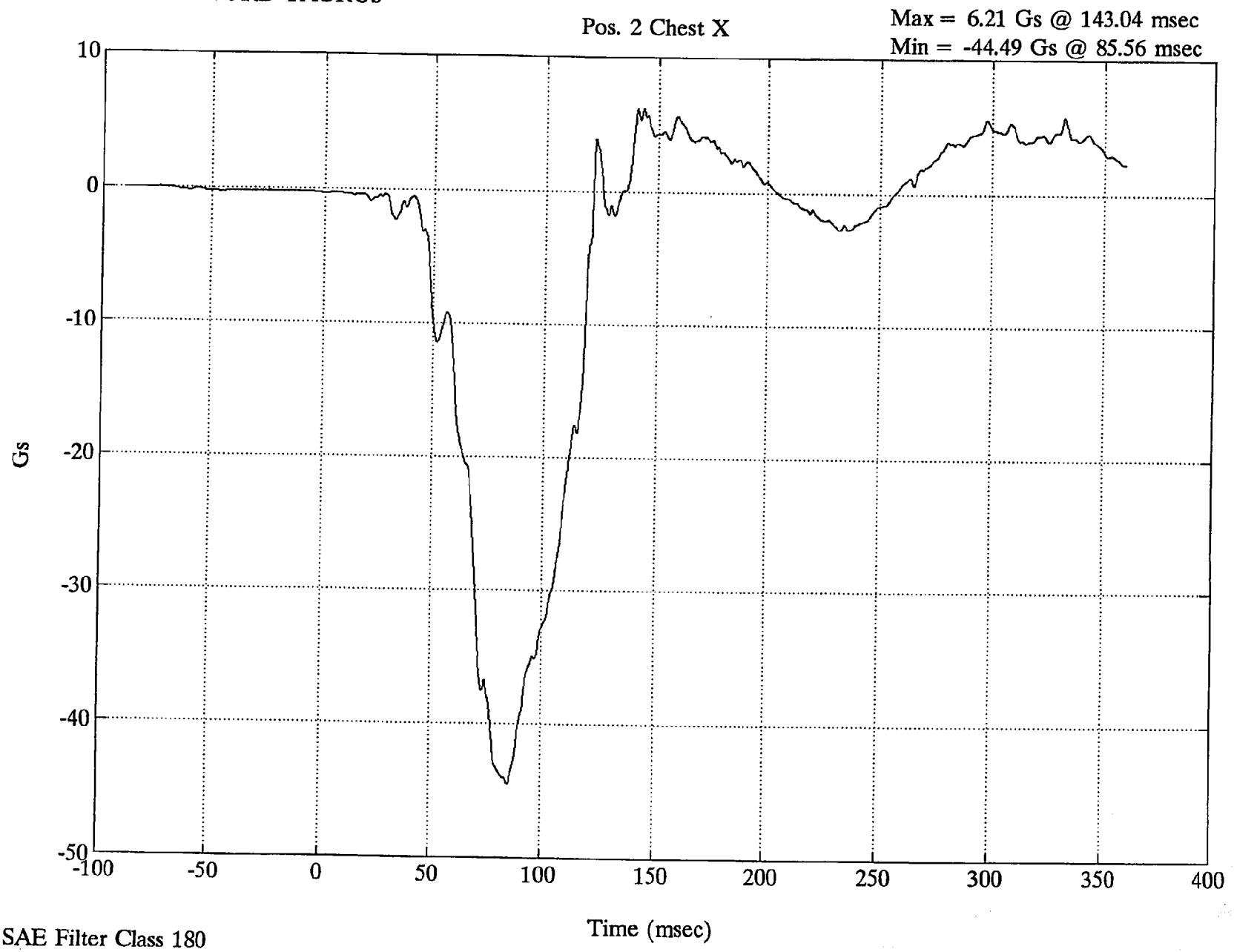

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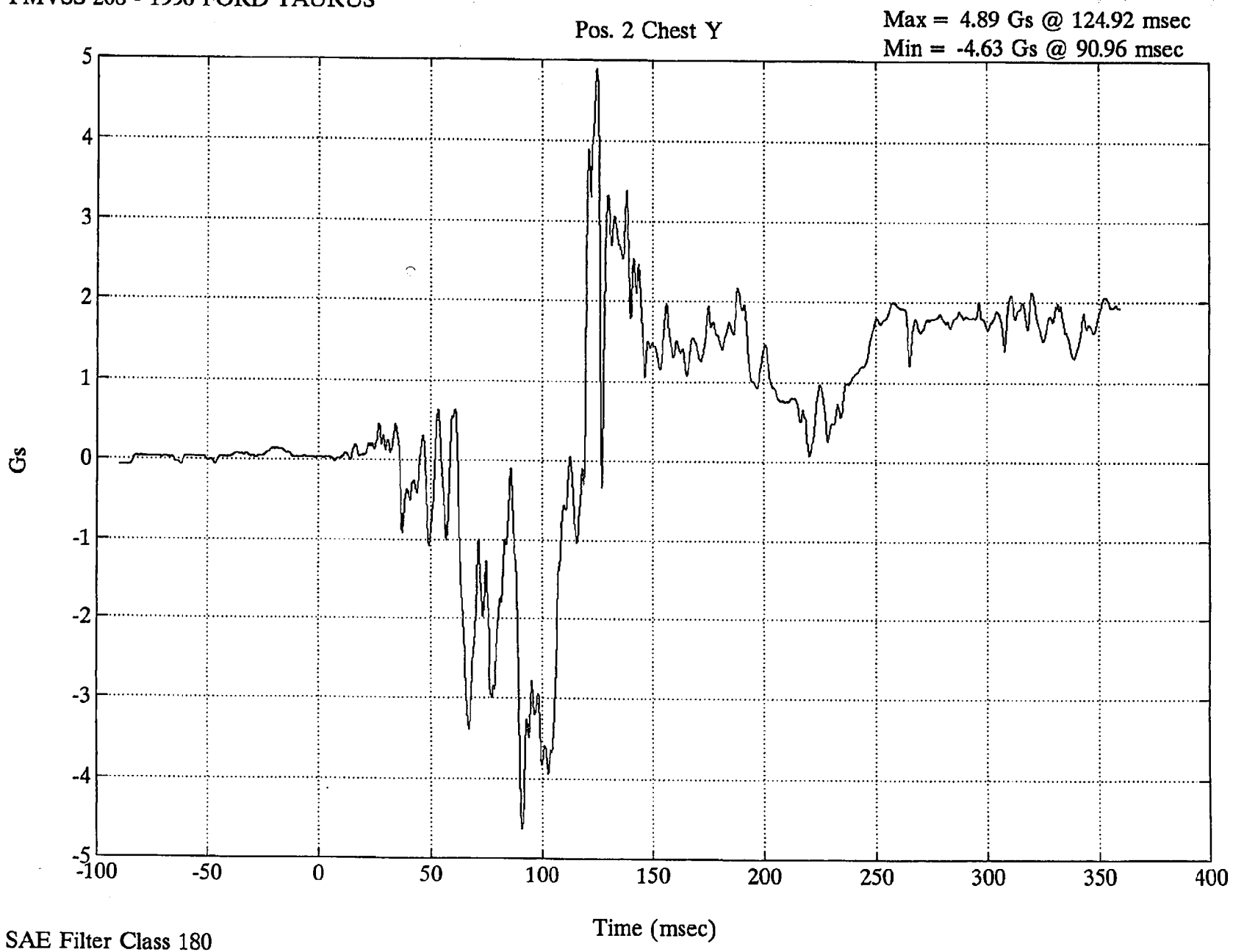

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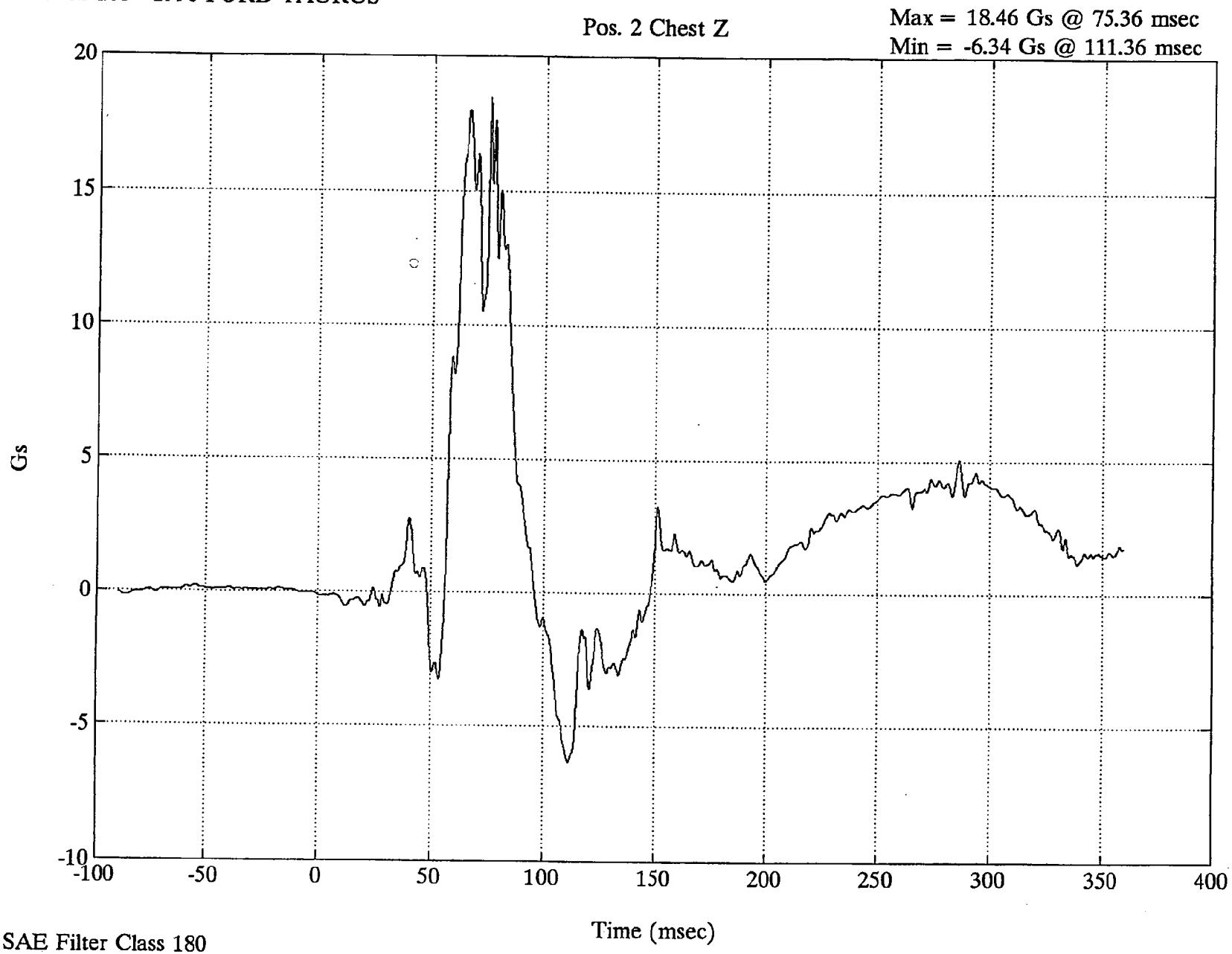

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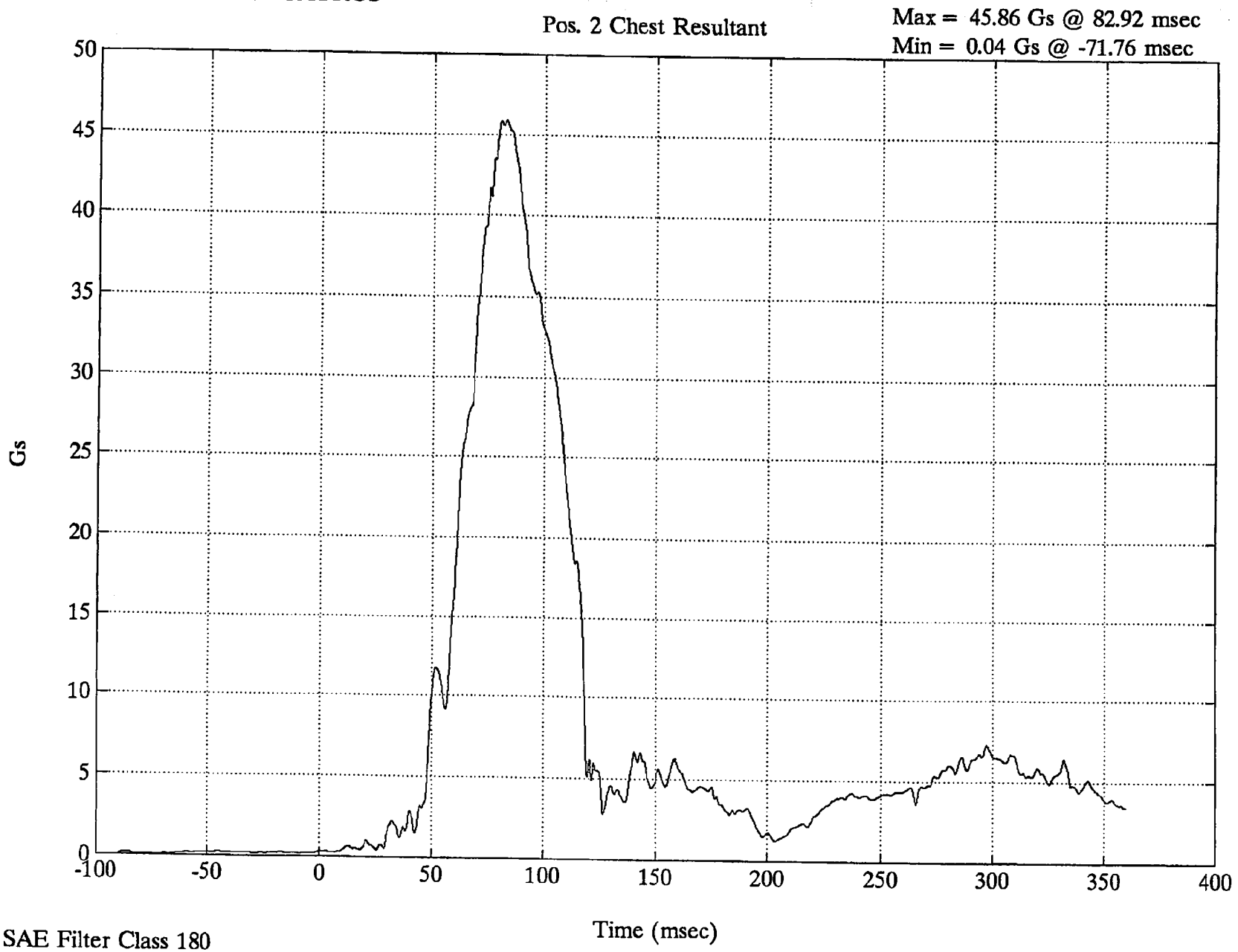

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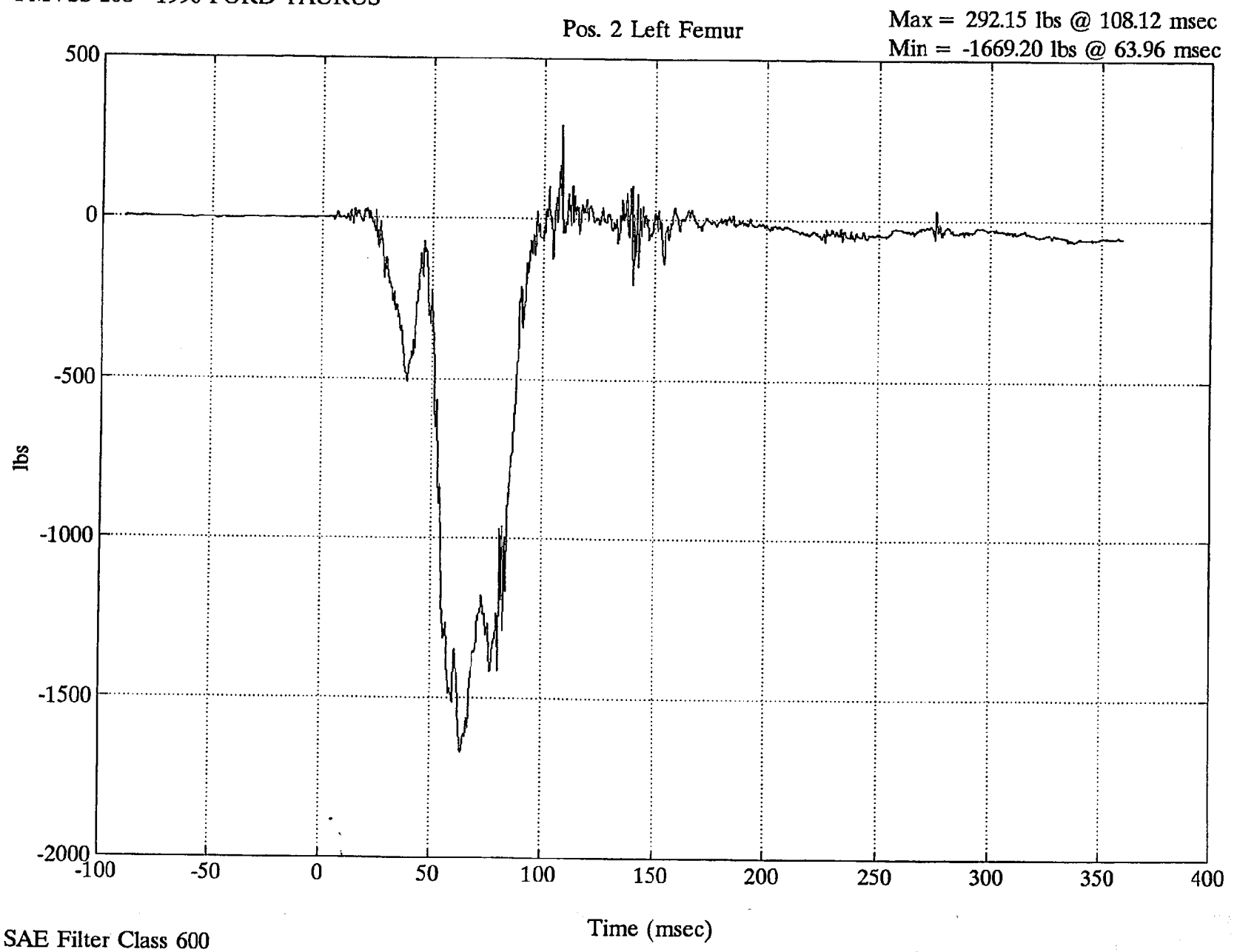

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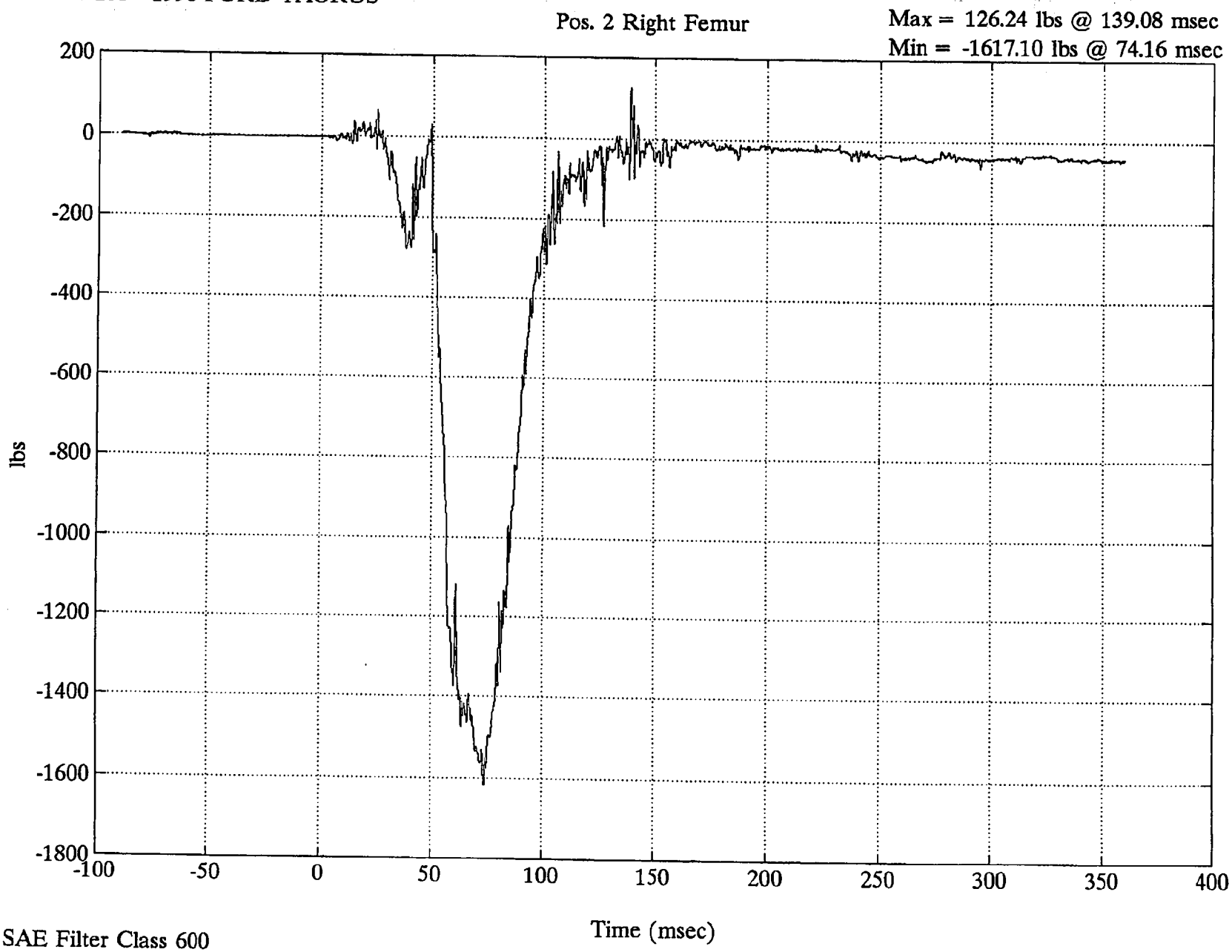

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Appendix C

VEHICLE OWNERS MANUAL OCCUPANT RESTRAINT SYSTEM INSTRUCTIONS

Safety Restraints

Important Safety Belt Information

The use of safety belts helps to restrain you and your passengers in case of a collision. In most states and in Canada the law requires their use.

Safety belts provide best restraint when:

- ❑ the seatback is upright
- ❑ the occupant is sitting upright (not slouched)
- ❑ the lap belt is snug and low on the hips
- ❑ the shoulder belt is snug against the chest
- ❑ the knees are straight forward

To help you remember to fasten your safety belt, a warning light may come on and a chime may sound. See *Safety Belt Warning Light and Chime* in the *Warning Lights and Gauges* chapter.

See the following sections in this chapter for directions on how to properly use these safety belts. Also see *Safety Restraints for Children* in this chapter for special instructions about using safety belts for children.

⚠WARNING

Make sure that you and your passengers, including pregnant women, wear safety belts. Always drive and ride with your seatback upright and the lap belt portion of your safety belt snug and low across the hips. This will reduce the risk of serious injury to the abdomen or neck that could be caused by sliding under the safety belts in a collision. If safety belts are not used properly, the risk of you or your passengers being injured in a collision greatly increases.

⚠WARNING

Never wear the shoulder belt under the arm. Never swing it around the neck over the inside shoulder. Never use a single belt for more than one person or across more than one seating position. Each seating position in your vehicle has a specific safety belt assembly which is made up of one buckle and one tongue that are designed to be used as a pair. Failure to follow these precautions could increase the risk and/or severity of injury in a collision.

⚠WARNING

Never drive or ride with a twisted or jammed safety belt. If you cannot untwist or unjam the safety belt, see the nearest qualified technician immediately.

⚠WARNING

Children should always ride with the seatback in the fully upright position. When the seatback is not fully upright, there is a greater risk that the child will slide under the safety belt and be seriously injured in a collision.

⚠WARNING

Never let a passenger hold a child on his or her lap while the vehicle is moving. The passenger cannot protect the child from injury in a collision.

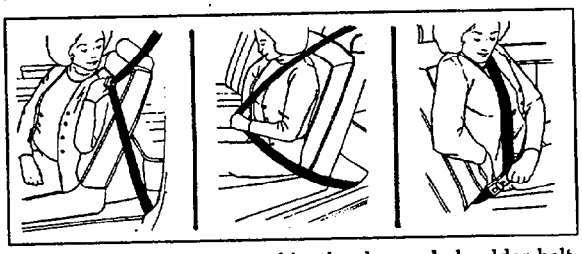
Lock the doors of your vehicle before driving to lessen the risk of the door coming open in a collision.

Combination Lap and Shoulder Belts

While your vehicle is in motion, the combination lap and shoulder belt adjusts to your movement. However, if you brake hard, turn hard, or if your vehicle receives an impact of 5 mph (8 km/h) or more, the lap and shoulder belt locks and helps reduce your forward movement.

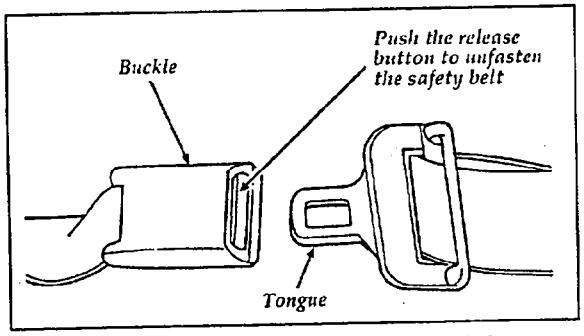
After you get into your vehicle, close the door and lock it. Then adjust the seat to the position that suits you best.

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



Fastening the front seat combination lap and shoulder belt

NOTE: **Be sure to read and understand *Important Safety Belt Information* at the beginning of this chapter.**



Unfastening the combination lap and shoulder belts — front and rear outboard seating positions

While the belt retracts, guide the tongue to its original position to prevent it from striking you or the vehicle.

Safety Belts for Front Outboard Passenger and Rear Outboard Seating Positions (Except Wagon Rear-Facing Seat)

Your vehicle is equipped with a dual locking mode retractor on the **shoulder** belt portion of the combination lap/shoulder safety belt for the front seat outboard passenger and rear outboard passengers.

Dual locking mode retractors operate in two ways:

Vehicle Sensitive (Emergency) Locking Mode

In this operating mode, the shoulder belt retractor will allow the occupant freedom of movement, locking tight only on hard braking, hard cornering or impacts of approximately 5 mph (8 km/h) or more. The retractor can also be made to lock by pulling on the belt.

Automatic locking mode

In this operating mode, the shoulder belt retractor will be automatically locked and will remain locked when the combination lap/shoulder safety belt is buckled, and does not allow the occupant freedom of movement. This mode provides the following:

- ❑ A tight lap/shoulder belt on the occupant.
- ❑ Child safety seat installation.

⚠WARNING
Rear-facing infant seats should never be placed in the front seats.

This mode **must be used** when installing a child safety seat on the front passenger seat and rear outboard seats where dual locking retractors are provided.

To switch the retractor from the emergency locking mode to the automatic locking mode, perform the following steps:

1. Buckle the lap/shoulder combination belt.
2. Grasp the shoulder portion of the belt and pull downward until all of the belt is extracted, and when allowed to retract, a clicking sound will be heard. At this time, the belt retractor is in the automatic locking mode (child restraint mode).
3. A clicking sound will continue to be heard as the belt is allowed to retract. This indicates that the retractor is in the automatic locking mode.

NOTE: **When the combination lap/shoulder belt is unbuckled and allowed to retract completely, the retractor will switch to the vehicle sensitive (emergency) locking mode. See the detailed instructions under *Safety Seats for Children* in this chapter.**

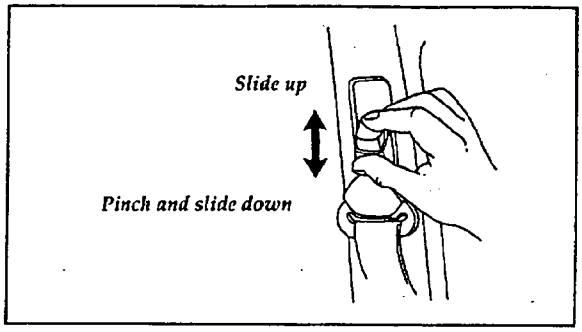
Shoulder Belt Height Adjustment

Driver and right front passenger

You can adjust the shoulder belt height to one of five (5) positions.

To adjust the belt down, pinch the release button. To adjust the belt up, slide the adjuster up. (You do not have to pinch the release button.)

Make sure the adjuster is firmly in one of the five positions. The belt should be adjusted up or down until the belt rests on your shoulder near your neck.



The shoulder belt height adjuster

⚠WARNING

Position the shoulder belt height adjuster so that the belt rests across the middle of your shoulder. Be sure the shoulder belt is properly positioned on your shoulder each time you use the belt. If the shoulder belt is off your shoulder, on your upper arm or neck, there is a greater risk of severe injury in a collision.

Safety Belts for Rear-Facing Occupants (Wagon)

⚠WARNING

If you have a wagon, never use child safety seats in the third seat. Safety seats for children are not intended for use in rear facing seats.

Your vehicle is equipped with safety seat belts containing a cinch tongue at the rear-facing seating positions.

The locking cinch tongue will slide up and down the belt webbing when the belt is in the stowed position or while putting seat belts on. When the locking cinch tongue of the lap/shoulder combination seat belt is latched into the buckle, the cinch tongue will allow the lap portion to become shorter, but locks the webbing in place to restrict it from becoming longer.

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

NOTE: **If you grasp the tongue by the tongue cover to lengthen the belt, the tongue cover will grab the webbing, making it difficult to slide.**

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

⚠WARNING

Make sure that the lap belt is as low around your hips as possible. Do not wear the lap belt around your waist. If you do not use the lap belts properly, the risk of being injured in a collision greatly increases.

⚠WARNING

All front and rear seat outboard occupants (including pregnant women) should wear lap and shoulder belts, for optimum protection in a collision.

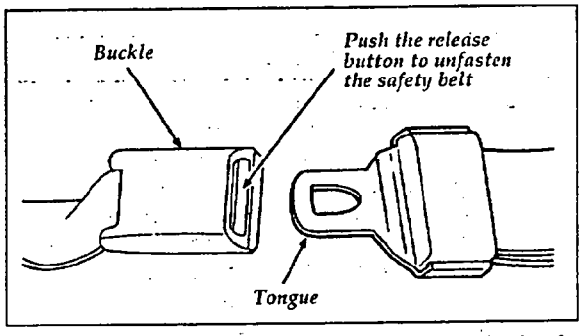
⚠WARNING

Use the shoulder belt on the outside shoulder only. Never wear the shoulder belt under the arm. Never swing it around your neck over the inside shoulder. Never use a single belt for more than one person. Failure to follow these precautions could increase the risk and/or severity of injury in a collision.

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

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

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

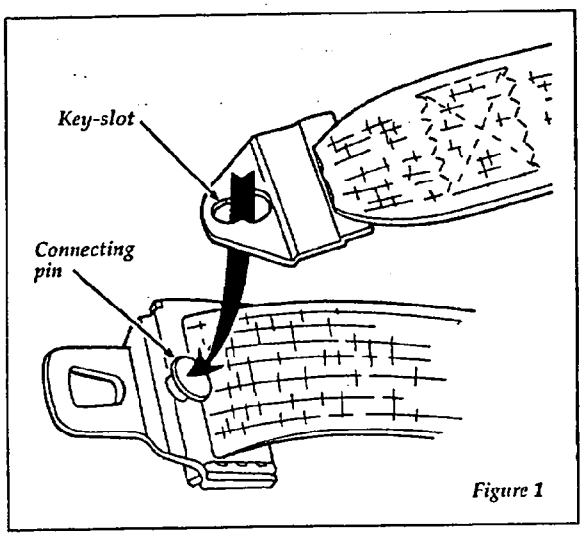


Unfastening the combination lap and shoulder belts for the rear-facing third seat (wagon)

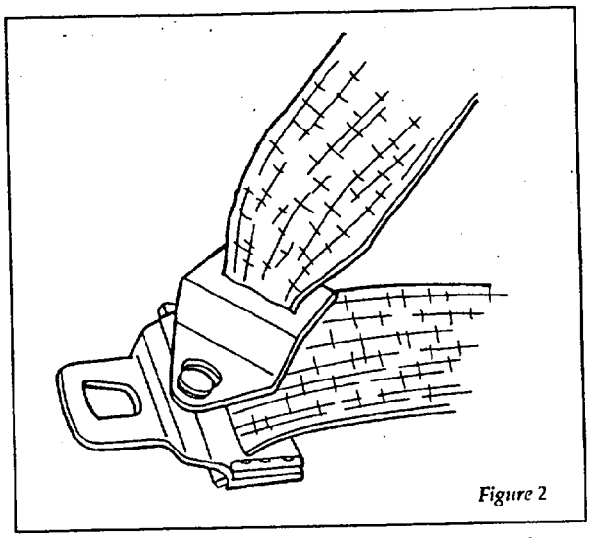
Center Occupant Rear Safety Belt (Sedan)

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

To attach the shoulder belt to the lap belt, pull the shoulder belt out from the retractor in the seatback and insert the lap belt connecting pin into the wide end of the key-slot on the shoulder belt as shown in Figure 1. Pull the connecting pin into the narrow end of the key-slot until you hear a snap and feel it latch. See Figure 2. Make sure the shoulder belt is securely fastened to the lap belt by pulling up on the shoulder belt.



The reverse side of the lap belt and the detachable shoulder belt



The reverse side of the shoulder belt attached to the lap belt

For information about adjusting the belts, see *Lap Belts* in this chapter.

Detach the shoulder belt before folding down the passenger side rear seat. To detach the shoulder belt, slide the connecting pin to the wide end of the key-slot and lift the shoulder belt off the connecting pin. As the shoulder belt retracts, guide the belt so that it does not strike you or the vehicle.

Lap Belts

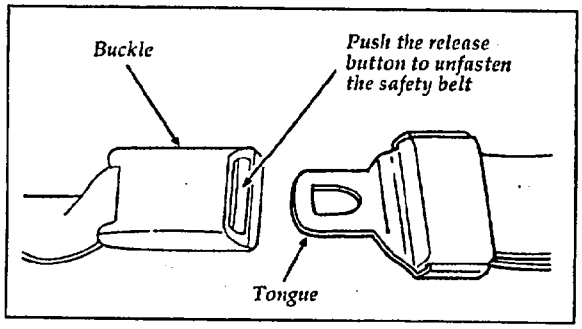
The lap belts in the center front seating position (if equipped) and center rear seat (wagon) do not adjust automatically. You must adjust them to fit snugly and as low as possible around your hips. Do not wear the lap belt around your waist.

The front center seat belt buckle and tongue are stowed in a pocket between the seat cushion and seatback. Remove them from the stowage pocket before fastening.

Pull the belt across your hips and **insert the tongue into the correct buckle** on your seat until you hear a snap and feel it lock. Make sure the buckle is securely fastened.

If you need to lengthen the belt, unfasten it and tip the belt tongue at a right angle to the belt. Pull the belt tongue over your lap until it reaches the buckle.

If you need to shorten the belt, pull on the loose end of the webbing until the belt fits snugly.



Unfastening the lap belts for the center front and center rear seating positions

To unfasten the belt, push the release button on the end of the buckle. This allows the tongue to unlatch from the buckle.

⚠WARNING

Make sure that the lap belt is as low around your hips as possible. Do not wear the lap belt around your waist. If you do not use the lap belts properly, the risk of being injured in a collision greatly increases.

Safety Belt Extension Assembly

For some people, the safety belt may be too short even when it is fully extended. You can add about eight inches (20 cm) to the belt length with a safety belt extension assembly (part number 611C22). Safety belt extensions are available at no cost from your dealer.

This assembly is not for use in the wagon rear-facing seat.

⚠WARNING

The use of the safety belt extension assembly, in the wagon rear-facing seat will affect the performance of the safety belts and increase the risk of personal injury.

⚠WARNING

Use only extensions manufactured by the same supplier as the safety belt. Manufacturer identification is located at the end of the webbing on the label. Also, use the safety belt extension only if the safety belt is too short for you when fully extended. Do not use extension to change the fit of the shoulder belt across the torso. Failure to follow these instructions will affect the performance of the safety belts and increase the risk of personal injury.

Safety Belt Maintenance

Check the safety belt systems periodically to make sure that they work properly and are not damaged.

All safety belt assemblies, including retractors, buckles, front seat belt buckle support assemblies (slide bar) (if equipped), child safety seat tether bracket assemblies (if equipped), and attaching hardware, should be inspected after any collision. Ford recommends that all safety belt assemblies used in vehicles involved in a collision be replaced. However, if the collision was minor and a qualified technician finds that the belts do not show damage and continue to operate properly, they do not need to be replaced. Safety belt assemblies not in use during a collision should also be inspected and replaced if either damage or improper operation is noted.

Cleaning the Safety Belts

Clean the safety belts with any mild soap solution that is recommended for cleaning upholstery or carpets. Do not bleach or dye the belt webbing because this may weaken it.

Air Bag Supplemental Restraint System (SRS)

The driver and right front passenger air bags are Supplemental Restraint Systems (SRS), provided at these seating positions in addition to the lap/shoulder belt, and are designed to supplement the protection provided to properly belted occupants in moderate to severe frontal collisions. The supplemental air bag system does not provide restraint to the lower body.

The Importance of Wearing Safety Belts

⚠WARNING
ALWAYS WEAR YOUR SAFETY BELT!

⚠WARNING
All occupants of the vehicle, including the driver, should always wear their safety belts, whether or not an air bag Supplemental Restraint System is also provided at their seating position. Failure to do so may increase the risk of severe injury or death in the event of a collision.

There are four very important reasons to use safety belts even with an air bag system. Use your safety belts to:

- ❑ help keep you in the proper position (away from the air bag) when it inflates
- ❑ reduce the risk of harm in rollover, side or rear impact collisions, because an air bag is not designed to inflate in such situations
- ❑ reduce the risk of harm in frontal collisions that are not severe enough to activate the supplemental air bag
- ❑ reduce the risk of being thrown from your vehicle

The Importance of Being Properly Seated

In a collision, the air bag must inflate extremely fast to help provide additional protection for you. In order to do this, the air bag must inflate with considerable force. If you are not seated in a normal riding position with your back against the seatback, the air bag may not protect you properly and could possibly hurt you as it inflates.

⚠WARNING
If a passenger is not properly seated and restrained, an inflating air bag could cause serious injury.

⚠WARNING
Rear-facing infant seats should never be placed in the front seat.

In rear-facing infant seats, the infant's head is closer to the air bag. The force of the rapidly inflating air bag could push the top of the

rear-facing seat against the vehicle seatback or center armrests (if so equipped), or center console (if so equipped). REAR-FACING INFANT CARRIERS MUST ALWAYS BE SECURED IN THE REAR SEAT, and other child safety seats and infant seats should be secured in the rear seat whenever possible.

⚠WARNING

Your vehicle is equipped with a right front passenger air bag. Front passengers, especially children and small adults, should never sit on the edge of the seat, stand near the glove compartment of the instrument panel, or lean over with their faces near the glove compartment when the vehicle is moving. All occupants should sit with their backs against the seatback and use the safety belts. Children weighing less than 40 lbs. (18 kg) should use child or infant seats. Forward-facing child seats must have the passenger seat moved as far back from the instrument panel as possible. REAR-FACING INFANT SEATS SHOULD NEVER BE USED IN THE FRONT SEAT, BECAUSE THE FORCE OF THE RAPIDLY INFLATING PASSENGER AIR BAG COULD PUSH THE TOP OF THE REAR-FACING SEAT AGAINST THE VEHICLE SEATBACK, CENTER ARMRESTS OR CONSOLE (IF SO EQUIPPED). REAR-FACING INFANT SEATS MUST ALWAYS BE PLACED IN THE REAR SEAT.

⚠WARNING

Do not place objects or mount equipment on or near the air bag module covers (identified by the letters "SRS") on the steering wheel and instrument panel, or in front seat areas that may come in contact with a deploying air bag, because any such objects could cause harm if the vehicle is in a collision severe enough to cause the air bag to inflate. Failure to follow this instruction may increase the risk of personal injury in the event of a collision.

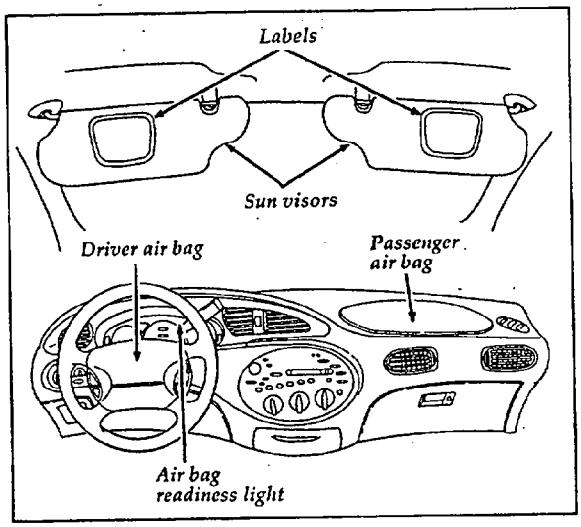
For further information about the proper mounting of equipment in the front seat of this vehicle, please refer to Ford's brochure entitled *Some Important Information About Air Bag Supplemental Restraint System* which can be obtained by calling Helm Inc. at 1-800-782-4356. Ask for brochure FPS-8602.

For additional important safety information on the proper use of seat belts, child seats, and infant seats, please read the other sections of this part of the Owner Guide, especially sections entitled *Safety Belts for Children* and *Safety Seats for Children.*

How the Air Bag Supplemental Restraint System Operates

The Air Bag Supplemental Restraint System consists of the Driver and Passenger air bags, impact sensors, a system diagnostic module, a readiness light and tone, and the electrical wiring which connects the components.

The driver air bag is in the center of the steering wheel. The front passenger seat air bag is located in the center of the instrument panel ledge above the glove compartment. Both air bags are designed to stay out of sight until they are activated.



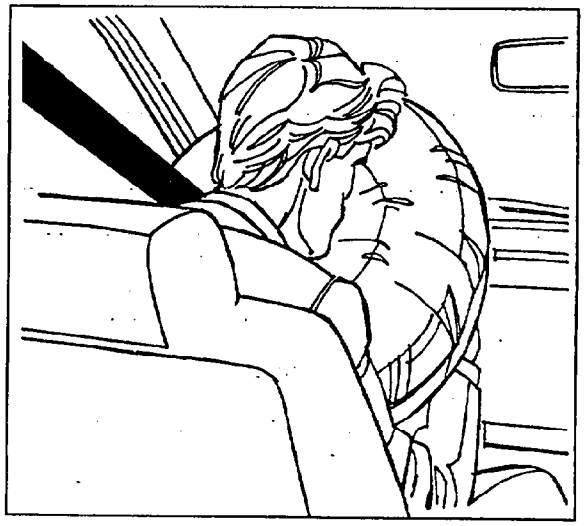
The location of air bags and warning labels

If a collision occurs, the sensors sense the severity of the impact and activate the air bags if necessary. The air bag system is designed to deploy in frontal and front-angled collisions more severe than hitting a parked vehicle (of similar size and weight) head-on at about 28 mph (45 km/h). Because the system senses the crash severity rather than vehicle speed, some frontal collisions at speeds above 28 mph (45 km/h) will not inflate the air bag.

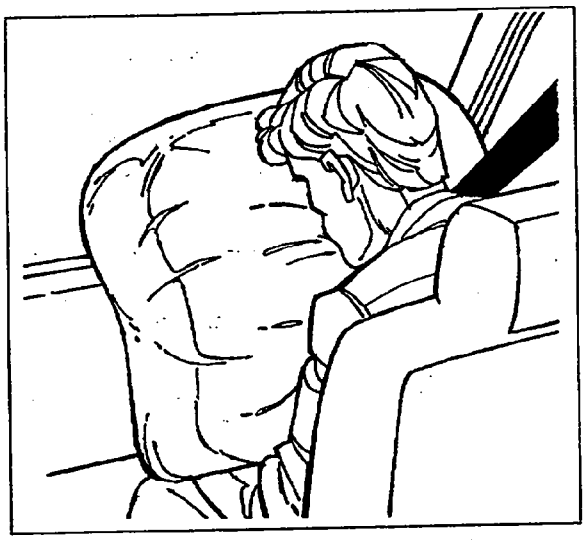
When the sensors activate the system, the air bags inflate rapidly, filling with non-toxic nitrogen gas in a fraction of a second. Immediately after inflation, the air bags deflate by releasing the nitrogen gas through vent holes. The whole process takes place in a matter of seconds.

⚠WARNING

Several air bag system components get hot after inflation. Do not try to touch them after inflation.



Inflated driver-side air bag



Inflated passenger-side air bag

⚠WARNING

The air bag will inflate only once. The system is designed to function on a one-time-only basis. If the air bag is inflated, THE AIR BAG WILL NOT FUNCTION AGAIN AND MUST BE REPLACED IMMEDIATELY. If the air bag is not replaced, the unrepaired area will increase the risk of injury in a collision.

To ensure that the air bag system will operate as intended in a crash, the system is equipped with a diagnostic module. The diagnostic module monitors its own circuits, the air bag electrical system, the air bag readiness light, the air bag power, and the air bag inflators.

The air bag system uses a readiness light on the instrument cluster and a tone to indicate the condition of the system. When you turn the ignition key to the ON position, this light will illuminate for approximately six (6) seconds and then turn off. This indicates that the system is operating normally. NOTE: Maintenance of the air bag system is not required.

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

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

If any of these things happen, have the air bag system serviced at your Ford or Lincoln-Mercury dealer immediately. Unless serviced, the Air Bag Supplemental Restraint System may not function properly in the event of a collision.

⚠WARNING

Do not attempt to service, repair, or modify the Air Bag Supplemental Restraint System; tampering could cause activation of the system and increase the risk of personal injury. DO NOT REPLACE OR OTHERWISE TAMPER WITH THE AIR BAG FUSES. For servicing of the Air Bag Supplemental Restraint System, see your Ford or Lincoln-Mercury dealer.

Disposal of air bags or air bag equipped vehicles

For disposal of air bags or air bag equipped vehicles, see your local Ford or Lincoln-Mercury dealer. Air bags **MUST** be disposed of by qualified personnel.

Safety Restraints for Children

In the U.S. and Canada, you are required by law to use safety restraints for children. If small children ride in your vehicle — this generally includes children who are four years old or younger and who weigh 40 pounds (18 kg) or less — you must put them in safety seats that are made specially for children. Safety belts alone do not provide maximum protection for these children. Check your local and state laws for specific requirements.

⚠WARNING

Never let a passenger hold a child on his or her lap while the vehicle is moving. The passenger cannot protect the child from injury in a collision.

⚠WARNING

Make sure children sit where they can be properly restrained. If they are not restrained, the risk of their being injured in a collision greatly increases.

⚠WARNING

Never let children or adults ride in the cargo area of your vehicle. Make sure that they sit where they can be properly restrained. If they are not restrained, the risk of their being injured in a collision greatly increases.

⚠WARNING

When possible, put children in the rear seat of your vehicle. Accident statistics suggest that children are safer when properly restrained in the rear seating positions than in the front seating positions.

⚠WARNING

When using any infant or child restraint system, it is important that you follow the instructions and warnings provided by the manufacturer concerning its installation and use. Failure to follow each of the restraint manufacturer's instructions could increase the risk or severity of an injury in the event of a collision or sudden stop.

⚠WARNING

Safety belts and seats can become hot in a vehicle that has been closed up in sunny weather; they could burn a small child. Check seat covers and buckles before you place a child anywhere near them.

⚠WARNING

Never leave a child unattended in your vehicle. Always remove the key from the ignition and take it with you.

Safety Seats for Children

Use a safety seat that is recommended for the size and weight of the child. Always follow the safety seat manufacturer's instructions when installing and using the safety seat.

Ford recommends the use of a child safety seat having a top tether strap. Install the child safety seat in a seating position which is capable of providing a tether anchorage. For more information on top tether straps see *Attaching Safety Seats With Tether Straps* in this chapter.

When installing a child safety seat, be sure to use the correct safety belt buckle for that seating position, and make sure the tongue is securely fastened in the buckle.

⚠WARNING

Your vehicle is equipped with a right front passenger air bag. REAR-FACING INFANT SEATS SHOULD NEVER BE USED IN THE FRONT SEAT, BECAUSE THE FORCE OF THE RAPIDLY INFLATING PASSENGER AIR BAG COULD PUSH THE TOP OF THE REAR-FACING SEAT AGAINST THE VEHICLE SEATBACK, OR CENTER CONSOLE (IF SO EQUIPPED), OR CENTER ARMRESTS (IF SO EQUIPPED). ALWAYS PLACE REAR-FACING INFANT SEATS IN THE REAR SEAT. When using forward-facing child seats in the front seat, always move the passenger seat as far back from the instrument panel as possible. Failure to follow these warnings could result in injury to the child.

⚠WARNING

All child restraint systems are designed to be secured in vehicle seats by lap belts or by the lap portion of a lap-shoulder belt. If you do not properly secure the safety seat to the vehicle, the risk is greater that a child, occupying the seat during a collision or sudden stop, will be injured. An unsecured safety seat could also injure other passengers in the vehicle.

⚠WARNING
Carefully follow all of the manufacturer's instructions that come with the safety seat that you put in your vehicle. Make sure that the shoulder belt (if provided at the seating position where the safety seat is being used) does not cross or rest in front of the child's face or neck. If you do not install and use the safety seat properly, the child may be injured in a sudden stop or collision.

⚠WARNING
If you have a wagon, never use child safety seats in the third seat. Safety seats for children are not intended for use in rear facing seats.

⚠WARNING
Always keep the buckle release button pointing upward and away from the child seat, with the tongue between the child seat and the release button as shown in the following illustration. Failure to follow these instructions could result in accidental unbuckling of the safety belt if the child safety seat hits the release button. Release of the safety belt could result in serious injuries.