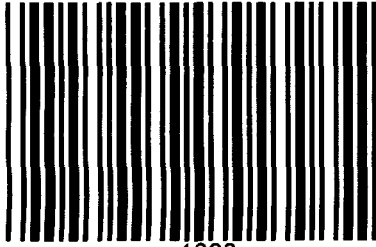


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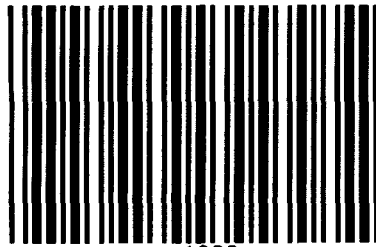
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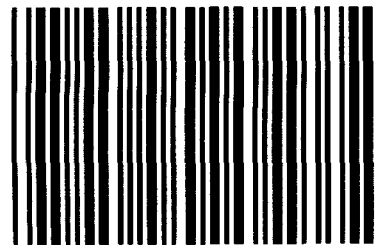
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1st Bar Code = 6.70 cpi, 1.25in high, 2:1 ratio;
x=1, dx=6.5; y=2 dy=1.25
2nd Bar Code =6.70 cpi, 1.25in high, 2:1 ratio;
x=1, dx=6.5; y=5 dy=1.25



1888

1888

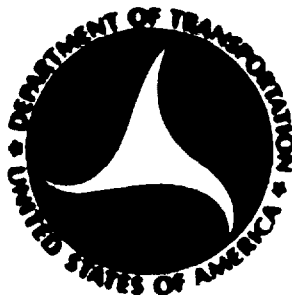


FLSP

NEW CAR ASSESSMENT PROGRAM (NCAP)
FRONTAL BARRIER IMPACT TEST

NISSAN MOTOR CORPORATION
1993 NISSAN SENTRA
4 DOOR SEDAN
NHTSA NO. MP5003

MOBILITY SYSTEMS AND EQUIPMENT COMPANY
9920 LA CIENEGA BOULEVARD SUITE 708
INGLEWOOD, CALIFORNIA 90301



APRIL 2, 1993

FINAL REPORT

Prepared For:

U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
OFFICE OF MARKET INCENTIVES
400 Seventh Street, S.W.
Room No. 5313 (NRM-22)
Washington, DC 20590

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Prepared by: Dr. Anil V. Khadilkar, Program Manager

Mr. Brian O'Keefe, Test Engineer

Mr. Jerry Kratzke, Test Engineer

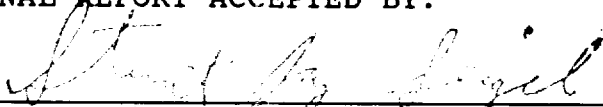
MOBILITY SYSTEMS AND EQUIPMENT COMPANY

Approved by: 

Dr. Anil V. Khadilkar

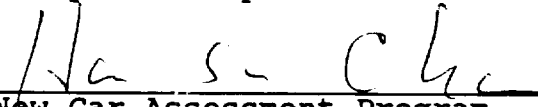
Date: APRIL 2, 1993

FINAL REPORT ACCEPTED BY:


Manager, New Car Assessment Program

JUN 01 1993

Date of Report Acceptance


COTR, New Car Assessment Program

JUN 01 1993

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Technical Report Documentation Page

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15. Supplementary Notes														
16. Abstract A 35 MPH Frontal barrier impact test using a load cell barrier was conducted on a 1993 Nissan Sentra 4 Door Sedan at the Mobility Systems and Equipment Company (MSE) crash test facility in San Bernadino, CA, on March 10, 1992. The impact velocity was 56.28 km/h, and the ambient temperature at the barrier face at the time of impact was 21 degrees C. The vehicle's maximum post-test static crush was 585 mm. The test vehicle satisfied the requirements of FMVSS No.'s 212, 219 and 301-75. Occupant injury response data summary is as follows: <table border="1"> <thead> <tr> <th>Injury Criteria Threshold Value</th> <th>Driver Dummy</th> <th>Passenger Dummy</th> </tr> </thead> <tbody> <tr> <td>Head Injury Criterion HIC = 1000</td> <td>660.0</td> <td>613.2</td> </tr> <tr> <td>Chest Resultant Peak 60 G's (3 msec clip)</td> <td>47.3</td> <td>44.0</td> </tr> <tr> <td>Femur Force Left 10009 N Right</td> <td>7997.3 1352.6</td> <td>3229.1 3851.2</td> </tr> </tbody> </table> Type of occupant restraint system: A 2 point automatic shoulder belt and a 2 point manual lap belt at each front outboard seating position. Also a driver side airbag.			Injury Criteria Threshold Value	Driver Dummy	Passenger Dummy	Head Injury Criterion HIC = 1000	660.0	613.2	Chest Resultant Peak 60 G's (3 msec clip)	47.3	44.0	Femur Force Left 10009 N Right	7997.3 1352.6	3229.1 3851.2
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17. Key Words 35 MPH Frontal Barrier Impact Test New Car Assessment Program (NCAP) 1993 Nissan Sentra 4 Door Sedan		18. Distribution Statement <u>Copies of this report are available from:</u> Technical Reference Division Nat'l Highway Traffic Safety Admin. Room 5108, Nassif Building 400 7th St., S.W., Wash. D.C. 20590												
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SECTION 1

PURPOSE AND TEST PROCEDURE

This 35 mph frontal barrier impact test is a part of the FY'93 Vehicle Barrier Impact and Testing Program sponsored by the National Highway Traffic Safety Administration (NHTSA) under Contract No. DTNH22-90-D-32121. The purpose of this test was to obtain vehicle crashworthiness and occupant restraint system performance data for an impact speed in excess of the current 30 mph (48.27 km/h) FMVSS 208/212/219/301-75 requirements.

This 35 mph (56.32 km/h) frontal barrier impact test was conducted in accordance with the Office of Marketing Incentives (OMI) Laboratory Indicant Test Procedure, dated 01 January 1990.

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SECTION 2

SUMMARY OF FRONTAL BARRIER IMPACT TEST

A load cell barrier was impacted by a 1993 Nissan Sentra 4 Door Sedan, NHTSA No. MP5003, at a velocity of 56.28 km/h. The frontal impact test was conducted by Mobility Systems and Equipment Company (MSE) on 10 March 1993. The general test and vehicle description information are presented in Tables 1 and 2. Pretest and posttest photographs of the test vehicle and dummies are shown in Appendix A.

Two (2) Part 572 50th percentile adult male Anthropomorphic Test Devices (ATD's) were placed in the driver and front outboard passenger designated seating positions (DSP's) according to the NHTSA test requirements.

The ATD's were instrumented with head and chest triaxial accelerometers and right and left femur load cells. In addition, load cells were placed on both lap and shoulder seat belts to measure ATD upper torso and pelvic section belt loading. Displacement transducers were attached to the shoulder belts to measure seat belt elongation and belt spoolout. A summary of ATD data is presented in Table 3. A summary of ATD configuration and performance verification test data is presented in Appendix C.

The frontal impact event was documented by one (1) real time camera and sixteen (16) high-speed cameras. Camera location data and film speeds are presented in Table 7.

Sixty-nine (69) channels of crash parameters were recorded using two (2) FM tape recorders and three (3) data acquisition computers with direct analog to digital acquisition units. Time history plots of all recorded data channels are presented in Appendix B.

2.1 GENERAL COMMENTS

The 1993 Nissan Sentra 4 Door Sedan was equipped with a 1597 cc, 4 cylinder engine and a 3 speed automatic transmission. The test weight of the 1993 Nissan Sentra 4 Door Sedan with two (2) 50th percentile male ATD's, instrumentation and cameras was 1263 kg.

The 1993 Nissan Sentra 4 Door Sedan was involved in a frontal barrier crash at a velocity of 56.28 km/h.

The maximum static crush for the vehicle of 585 mm occurred on the centerline of the bumper. The windshield was cracked, but otherwise the vehicle glazing remained intact. All doors were opened without the aid of tools.

The driver ATD's face hit the airbag. The driver's left and right knees hit the dash panel. The driver ATD had a Head Injury Criteria (HIC) value of 660, the maximum chest acceleration (resultant clipped) was 47 g's and the maximum femur loads were 7997 newtons (left) and 1353 newtons (right).

The passenger ATD's head made no contact with the vehicle. The passenger ATD's right and left knees hit both the glove box door and the dash panel. The passenger ATD had a HIC value of 613, the maximum chest acceleration (resultant clipped) was 44 g's and the maximum femur loads were 3229 newtons (left) and 3851 newtons (right).

Seat belt spoolout could not be measured by high-speed film analysis. The driver belt camera lost it's lens upon impact and the film was not usable. The passenger belt camera did not show the spoolout due to movement of the seat which obstructed the view of the belt. Seat belt spoolout and strain data are presented in Table 6.

The 1993 Nissan Sentra 4 Door Sedan passed the requirements of FMVSS 212, FMVSS 219 and FMVSS 301-75. Data pertaining to these standards are presented in Section 4, in Tables 13, 14 and 15, respectively.

Appendix D contains the manufacturer's occupant restraint system instructions as presented in the owner's manual. Appendix E contains the instrumentation calibration data.

DATA TABLE No. 1
TEST VEHICLE DATA

VEHICLE YEAR/MAKE/MODEL/BODY STYLE: 1993/Nissan/Sentra/4 Door Sedan
VEHICLE NHTSA No.: M P 5 0 0 3 ; VIN: J N 1 E B 3 1 F 8 P U 5 0 2 9 8 9
VEHICLE BODY COLOR: Maroon ; MONTH AND YEAR OF MANUFACTURE: 11/92
ENGINE: 4 Cylinders; 97.39 cu in; 1.6 Liters; 1597 cc
X Gas; Diesel; Turbocharged
PLACEMENT: Longitudinal; X Transverse (Lateral)
TRANSMISSION: 3 Speed; Manual; X Automatic; Overdrive
FINAL DRIVE: X Front Wheel Drive; Rear Wheel Drive; Four Wheel Drive
DATE VEHICLE AVAILABLE FOR 35 MPH CRASH TESTING: 02/05/93
ODOMETER READING: 124 km; OPTIONS: A/C; X P/S; P/Window;
 Tilt Whl.; Cruise Control

DATA RECORD FROM VEHICLE'S TIRE PLACARD:

Tire Pressure (at capacity): 220 kPa Front; 200 kPa Rear
Recommended Tire Size: P175/70R13 82S
Tires on Vehicle: P175/70R13 ; Manufacturer: Michelin
Number of Occupants: 2 Front; 3 Rear; Third Seat; 5 TOTAL
Type of Front Seats: X Bucket; Bench; Split Bench
Type of Front Seat Back: Fixed; X Adj. Lever; Adj. Rotating Knob
Vehicle Maximum Capacity Loading: 355 kg
No. of Occupants x 68 kg: 340 kg
Cargo Capacity (Max - Occupants): 15 kg

TEST VEHICLE DELIVERED WEIGHT WITH MAXIMUM FLUIDS:

Right Front:	<u>332</u> kg	
Left Front:	<u>354</u> kg	Total Front: <u>686</u> kg (62% of Total)
Right Rear:	<u>214</u> kg	
Left Rear:	<u>201</u> kg	Total Rear: <u>415</u> kg (38% of Total)
		<u> </u>
		Total Weight: <u>1101</u> kg

CALCULATION OF TEST VEHICLE TARGET WEIGHT:

Total Test Vehicle Delivered Weight With Maximum Fluids:	<u>1101</u> kg
Maximum Cargo Carrying Capacity of Test Vehicle:	<u>15</u> kg *
Weight of Two Part 572 ATD's (2 * 74.5 kg):	<u>149</u> kg
TEST VEHICLE TARGET WEIGHT:	<u>1265</u> kg

* 136 kg for light trucks and MPV's

DATA TABLE No. 1 (Cont.)
TEST VEHICLE DATA

ACTUAL WEIGHT OF TEST VEHICLE WITH 2 ATD's AND CARGO:

Right Front:	<u>373</u> kg		
Left Front:	<u>398</u> kg	Total Front:	<u>771</u> kg (61% of Total)
Right Rear:	<u>250</u> kg		
Left Rear:	<u>242</u> kg	Total Rear:	<u>492</u> kg (39% of Total)

Total Weight: 1263 kg (includes 0 kg of ballast secured in the cargo / luggage area)

VEHICLE COMPONENTS REMOVED TO MEET TARGET WEIGHT:

- | | |
|----------------------------|-----------------------|
| 1. Jack | 3. Rear seat assembly |
| 2. Both tail lamp housings | 4. Rear bumper |
| 3. Spare tire | 5. Trunk hood |

TEST VEHICLE ATTITUDE:

As Delivered - Right Front:	<u>668</u> mm	Ready for Test - Right Front:	<u>643</u> mm
Left Front:	<u>660</u> mm	Left Front:	<u>630</u> mm
Right Rear:	<u>650</u> mm	Right Rear:	<u>617</u> mm
Left Rear:	<u>635</u> mm	Left Rear:	<u>600</u> mm

TEST VEHICLE DIMENSIONS:

Total Vehicle Length:	Right Side:	<u>4060</u> mm
	Left Side:	<u>4068</u> mm
	Centerline:	<u>4200</u> mm

Wheelbase: 2431 mm

C. G. is 947 mm rearward of front axle centerline.

DATA TABLE No. 2
POST CRASH TEST DATA

DATE OF 35 MPH FRONTAL BARRIER IMPACT RATING TEST: 03/10/93

TIME OF TEST: 1350 Hrs; AMBIENT TEMPERATURE AT BARRIER FACE: 21° C

VEHICLE OCCUPANT COMPARTMENT TEMPERATURE: 21° C (Req. Range 19° C to 26° C)

VEHICLE WINDSHIELD MOLDING TEMPERATURE: 21° C

VEHICLE IMPACT VELOCITY: (Req. Range 55.52 to 57.13 km/h)
 Primary Speed Trap: 56.28 km/h
 Secondary Speed Trap: 56.16 km/h
 Distance from vehicle leading edge to barrier face when:
 Entering Speed Trap: 1524 mm
 Exiting Speed Trap: 305 mm

VEHICLE STATIC CRUSH:	Pretest	Posttest	Static Crush
Right Side (mm)	<u>4060</u>	<u>3500</u>	<u>560</u>
Centerline (mm)	<u>4200</u>	<u>3615</u>	<u>585</u>
Left Side (mm)	<u>4068</u>	<u>3540</u>	<u>528</u>

VEHICLE REBOUND FROM BARRIER: Right Side: 550 mm
 Centerline: 545 mm
 Left Side: 575 mm

ATD CONTACT POINTS:

	Driver ATD (ID# 830)	Pass. ATD (ID# 814)
Head	Airbag	No Contact
Chest	No Contact	No Contact
Abdomen	No Contact	No Contact
Right Knee	Instrument Panel	Glove Box, Instr Panel
Left Knee	Instrument Panel	Glove Box, Instr Panel

VEHICLE DOOR OPENING INFORMATION:

Door	Opened	Jammed
Right Front	Yes	No
Left Front	Yes	No
Right Rear	Yes	No
Left Rear	Yes	No

VEHICLE FRONT SEAT MOVEMENT DURING IMPACT EVENT:

Seat Cushion Shift - Driver = 0 mm Passenger = 0 mm
 Seat Adjustor Failure - Driver: No Passenger: No
 Details of Any Failure: None

OTHER NOTABLE IMPACT EFFECTS: None

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SECTION 3

OCCUPANT AND VEHICLE INFORMATION

I. OMI DATA

- Dummy Injury Criteria Data Summary
- Dummy Positioning Data
- Seat Belt Positioning Data
- Seat Belt Performance Assessment Data
- Camera Locations

II. OVR DATA

- Load Cell Barrier Data
- Vehicle Accelerometer Data

DATA TABLE No. 3
FMVSS No. 208 OCCUPANT CRASH PROTECTION DATA SHEET

VEH. YEAR/MAKE/MODEL/BODY STYLE: 1993/Nissan/Sentra/4 Door Sedan

VEH. NHTSA NO.: MP5003

TEST DATE: 03/10/93

MAXIMUM ACCELERATION VALUES:	DRIVER ATD No. 830	PASSENGER ATD No. 814
Head X	-46.0	30.2
Head Y	9.3	27.3
Head Z	54.2	49.3
HEAD RESULTANT	62.6	59.1
Chest X	-49.8	-45.9
Chest Y	14.7	-33.5
Chest Z	14.0	-17.6
CHEST RESULTANT (3msec clip)	47.3	44.0
TIME INTERVAL (msec)	81.6 to 84.6	72.1 to 75.1

HEAD INJURY CRITERIA (HIC) VALUES:

HIC	660.0	613.2
t_1 (msec)	65.8	75.3
t_2 (msec)	101.8	111.3
Avg. Acceleration t_1 to t_2	50.7	49.2

MAXIMUM FEMUR FORCES:

Left Femur (N)	-7997.3	-3229.1
Right Femur (N)	-1352.6	-3851.2

MAXIMUM SEAT BELT FORCES:

Lap Belt (N)	4418.9	6313.6
Shoulder Belt (N)	7808.3	10748.0

MAXIMUM SEAT BELT WEBBING SPOOLOUT:

Lap/Shoulder Belt Combination	74	114
-------------------------------	----	-----

DATA TABLE No. 4
TEST ATD POSITIONING DATA

PRE - IMPACT DATA:

Make / Model: Nissan Sentra
Body Style: 4 Door Sedan
Model Year: 1993
Color: Maroon
NHTSA No.: MP5003

DATA FROM CERTIFICATION LABEL:

Vehicle Manufacturer: Nissan
Date of Manufacture: 11/92
VIN: JN1EB31F8PU502989
GVWR: 1506
GAWR Front: 871
GAWR Rear: 750

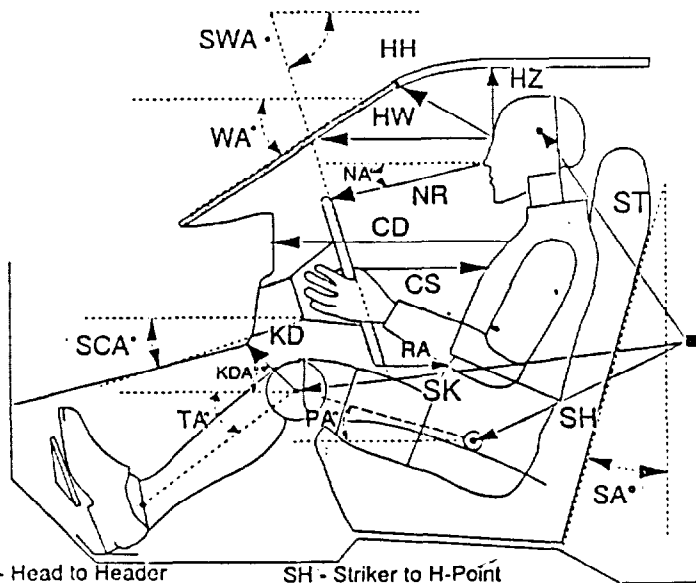
POST IMPACT DATA:

Date of Test: 03/10/93
Time: 1350 Hrs.
Temperature: 21° C
Required Impact Velocity Range: 55.52 to 57.13 km/h
Impact Velocity - Primary: 56.28 km/h
Secondary: 56.16 km/h
Seat Type: Bucket
Adjustor Type: Lever
Bucket Seat Back Type: Adjustable Head Restraint

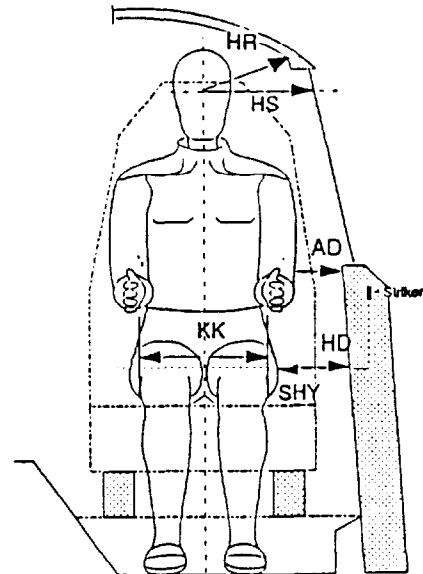
ATD POSITIONING TECHNICIANS: Brian O'Keefe, Levi Navarro

DATA TABLE No. 4 (Cont.)
TEST ATD POSITIONING DATA

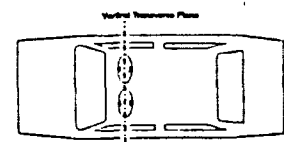
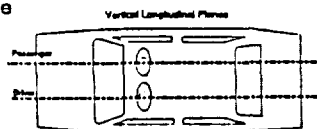
DUMMY MEASUREMENTS FOR FRONT SEAT PASSENGERS



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



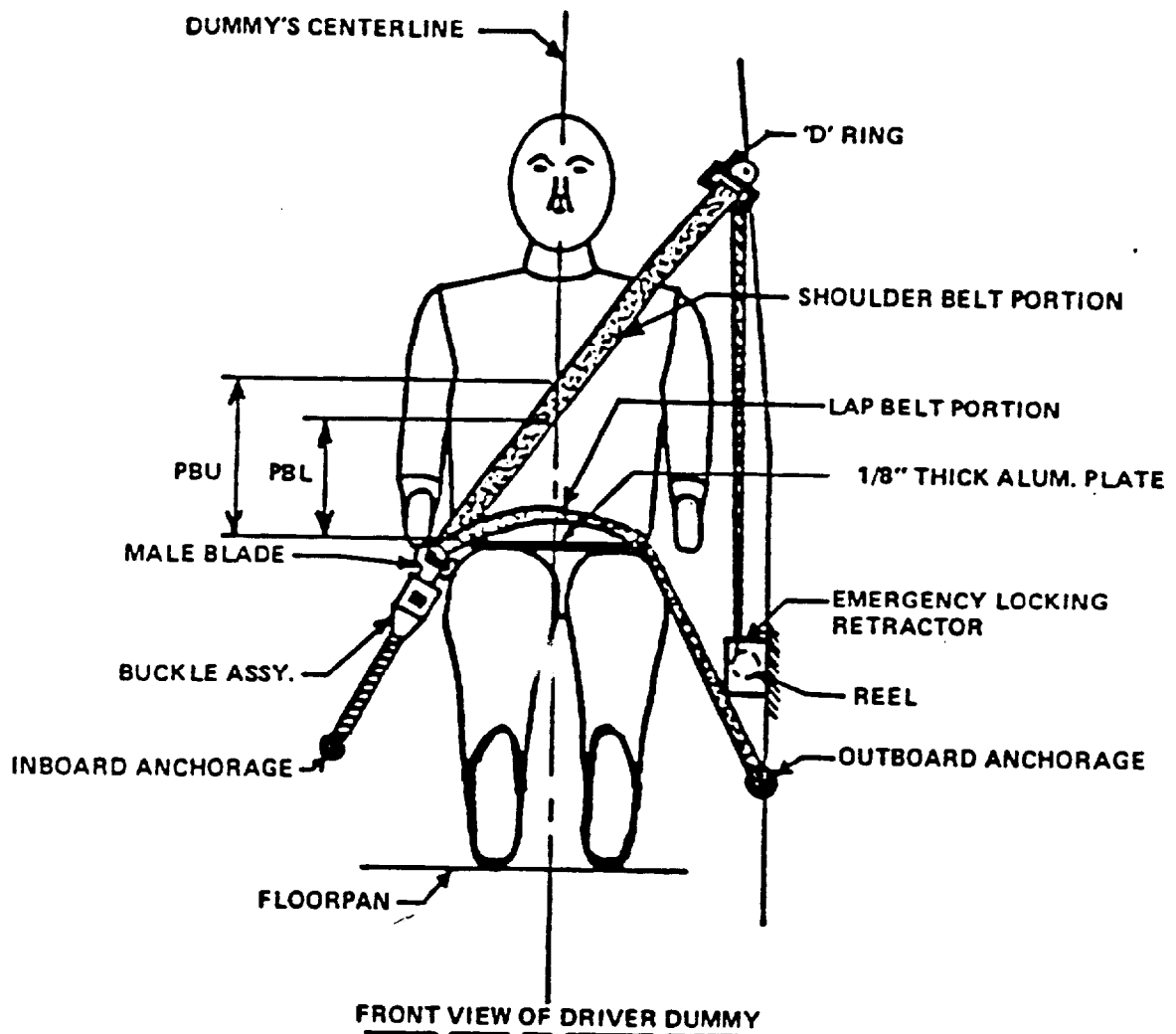
HR - Head to Side Header
HS - Head to Side Window
AD - Arm to Door
HD - H-Point to Door
SHY - Striker to H-Point (Y Dir.)
KK - Knee to Knee



DATA TABLE No. 4 (Cont.)
TEST ATD POSITIONING DATA

Measurement	Driver (Serial No. 830)		Passenger (Serial No. 814)	
	Length (mm)	Angle (Degrees)	Length (mm)	Angle (Degrees)
WA	---	30	---	---
SWA	---	65	---	---
SCA	---	23	---	---
HZ	125	90	135	90
HH	325	---	345	---
HW	480	0	490	0
HR	150	---	155	---
NR	450	-20	---	---
CD	575	---	595	---
CS	360	0	---	---
RA	195	0	---	---
KDL	238	21	230	---
KDR	260	---	240	34
PA	---	16	---	12
TA	---	-36	---	-32
KK	350	---	290	---
ST	510	91	530	93
SK	520	-3	540	-6
SH	190	-45	180	-41
SHY	210	0	215	0
HS	275	0	295	0
HD	120	0	135	0
AD	100	0	30	0

DATA TABLE No. 5
SEAT BELT POSITIONING DATA



Measurement	Driver ATD	Passenger ATD
PBU - Top Surface of alum. plate to belt upper edge (mm)	320	305
PBL - Top Surface of alum. plate to belt lower edge (mm)	235	230
Lap Belt Tension (N)	N/D	N/D
Shoulder Belt Tension (N)	N/D	N/D

DATA TABLE 6
SEAT BELT PERFORMANCE ASSESSMENT TEST DATA

DRIVER SIDE		PASSENGER SIDE	
PRETEST	POSTTEST	PRETEST	POSTTEST
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
920	990	905	990
640	650	660	700
Sh. 280 Lap 80	Sh. 210 Lap 70	Sh. 290 Lap 60	Sh. 205 Lap 20

BELT LENGTH DATA:

Total belt length from retractor reel to bolt hole anchor point for continuous webbing systems (mm) _____

Retractor reel to 'D' ring as measured on Part 572 ATD (mm) _____

Shoulder belt length as measured on Part 572 ATD (mm) _____

Lap belt length as measured on Part 572 ATD (mm) _____

Remainder of belt webbing left on the retractor reel (mm) _____

BELT SPOOL-OFF DATA:

As determined by film analysis (mm) _____

As determined electronically (mm) _____

As determined mechanically (mm) _____

N/D	N/D
74	114
65	120

BELT STRAIN DATA: Measured on the shoulder belt

As determined electronically (%) _____

As determined mechanically (%) _____

3.4	4.7
0.0	0.0

DATA TABLE No. 7
FMVSS No. 208 CAMERA LOCATION DATA

VEH. YEAR/MAKE/MODEL/BODY STYLE: 1993/Nissan/Sentra/4 Door Sedan

VEH. NHTSA NO.: MP5003

TEST DATE: 03/10/93

TIME: 1350 Hrs.

CAMERA NO.	VIEW	CAMERA POS. (mm)			ANGLE (deg)	FILM PLANE TO HEAD TARGET	LENS (mm)	SPEED (fps)
		X	Y	Z				
1	Left Side View	5900	14350	3400	-20	14546	15-70 Zoom	24
2	Right Side View	2550	6080	1050	-5	5645	13	450
3	Left Side View	1055	9290	1570	-7	8955	13	510
4	Overhead	-650	0	5395	-74	5255	13	*** N/D
5	Pit - Engine	570	40	-1620	90	3257	13	460
6	Pit - Fuel Tank	2480	-20	-1950	90	3079	25	460
7	Front - Passenger	-406	406	2438	-41	3051	16	410
8	Front - Driver	-406	-305	2438	-42	3054	16	650
9	Left Side - Driver	2605	2300	1680	-18	1971	16	600
10	Right Side - Pass.	2650	2520	1670	-19	2183	16	540
11	Right Side - A-Post	895	5150	1295	-3	4929	28	560
12	Left Side - A-Post	132	10400	2000	-6	10241	50	* N/D
13	Onboard - Left Side	2875	245	570	-4	779	28	** N/D
14	Onboard - Right Side	2845	-245	570	-4	1003	13	* N/D
15	Left Side - St. Col.	1422	10000	3835	-16	9988	28	610
16	Left Side - St. Col.	1482	10000	3170	-14	9821	28	600
17	Right Side - Pass.	1500	4130	1365	-7	3793	16	*** N/D

REFERENCE: X - Film plane to barrier face

Y - Film plane to monorail centerline

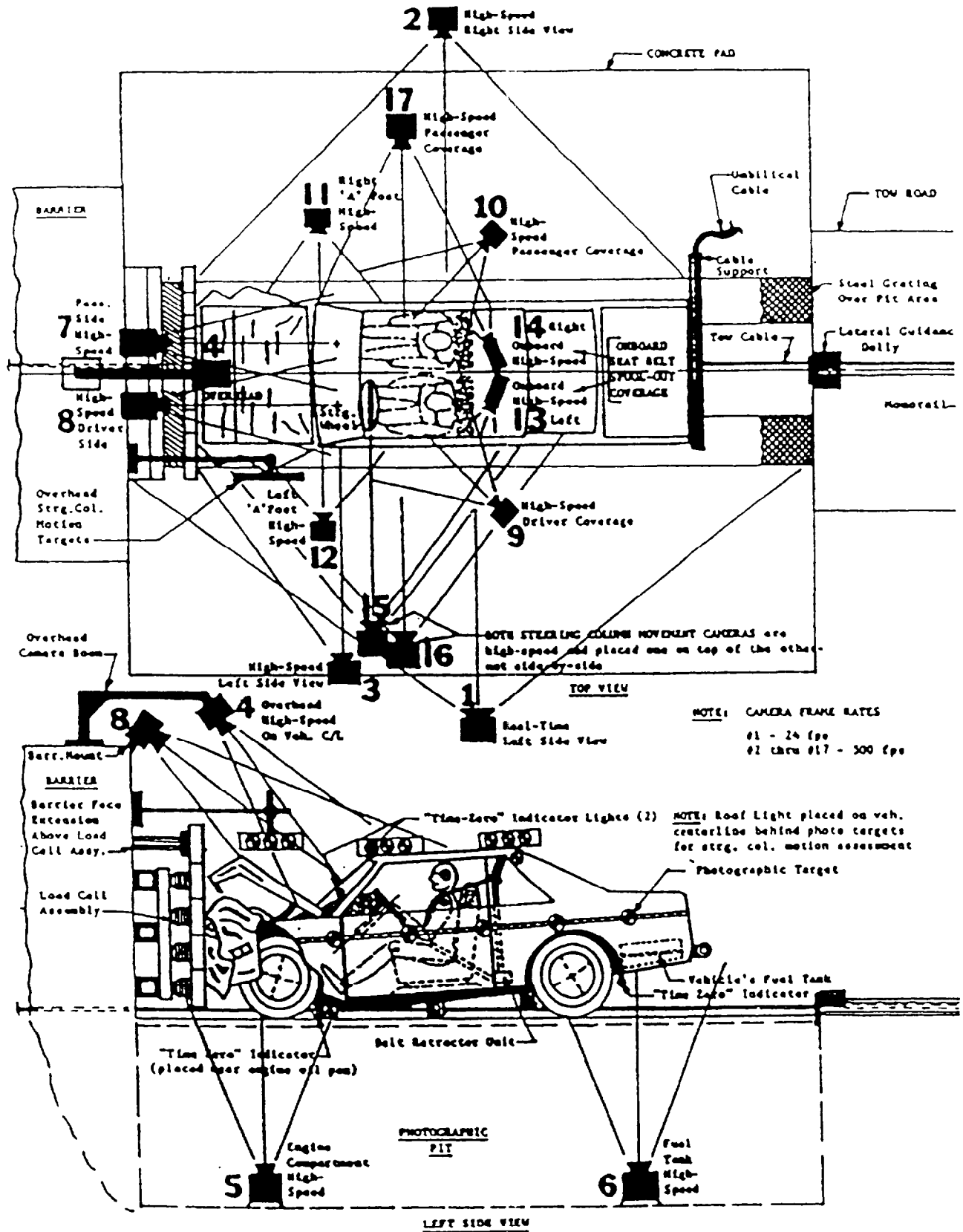
Z - Film plane to ground

NOTES: * Film is good but film speed could not be determined.

** Camera lens disengaged from camera upon impact.

*** Film lost during processing.

CAMERA REQUIREMENTS FOR 35 MPH FRONTAL BARRIER IMPACT ASSESSMENT PROGRAM TEST



DATA TABLE No. 8
VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY

No.	Description	Location			Maximum Value (g's)			
		X	Y	Z	-X	msec	+X	msec
1	Left rear seat cross member	2810	-500	350	39.0	56.3	2.2	148.6
2	Right rear seat cross member	2810	490	350	36.7	54.7	3.1	148.5
3	Top of engine block	680	190	740	162.4	44.4	77.1	56.2
4	Bottom of engine	660	270	170	163.9	48.1	76.2	54.8
5	Right brake caliper	740	680	320	96.0	54.0	26.2	76.2
6	Instrument panel	1580	40	880	77.2	84.5	30.9	46.5
7	Left brake caliper	740	-680	320	110.8	58.9	51.7	75.8
8	Left rear seat cross member Redun.	2810	-500	350	38.9	56.2	2.3	148.4
9	Right rear seat cross member Redun.	2810	490	350	36.7	54.6	3.1	148.5

REFERENCE: X - Front bumper leading edge
Y - Vehicle centerline (Right Pos., Left Neg.)
Z - Ground level

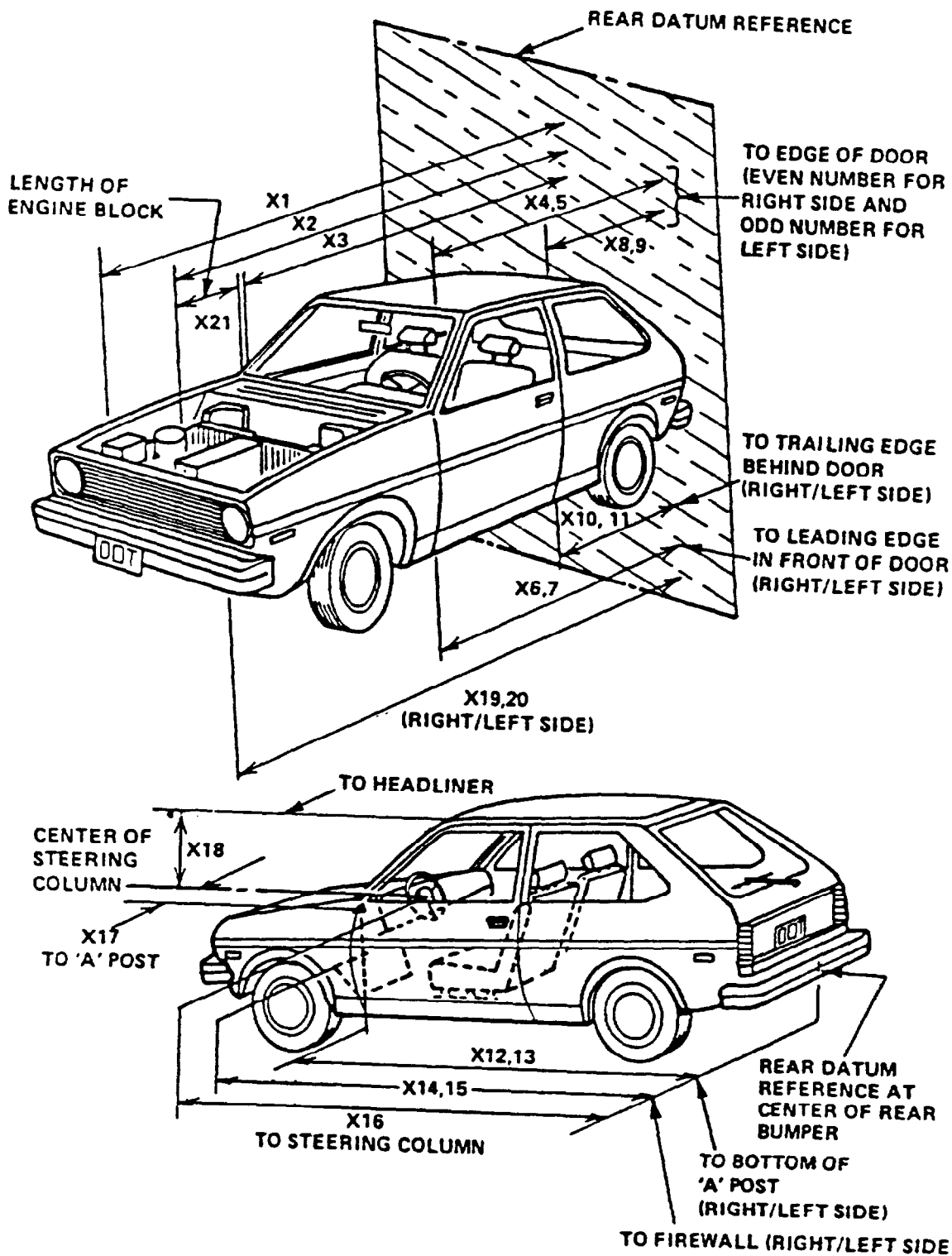
All dimensions in mm

DATA TABLE No. 9
TEST VEHICLE MEASUREMENTS

No.	Measurement Description	Pretest	Posttest	Change
1	Length of test vehicle at centerline	4200	3615	585
2	Rear surface of vehicle to front of engine	3641	3455	186
3	Rear of vehicle to firewall centerline	3185	3095	90
4	Rear to upper leading edge of right door	2803	2790	13
5	Rear to upper leading edge of left door	2823	2798	25
6	Rear to lower leading edge of right door	2815	2810	5
7	Rear to lower leading edge of left door	2828	2810	18
8	Rear to upper trailing edge of right door	1812	1810	2
9	Rear to upper trailing edge of left door	1832	1810	22
10	Rear to lower trailing edge of right door	1817	1815	2
11	Rear to lower trailing edge of left door	1832	1810	22
12	Rear to bottom of right 'A' pillar	2879	2875	4
13	Rear to bottom of left 'A' pillar	2884	2850	34
14	Rear surface to firewall on right side	3138	3110	28
15	Rear surface to firewall on left side	3120	3105	15
16	Rear surface to steering column	2417	2390	27
17	Center of steering column to left 'A' pillar	406	380	26
18	Center of steering column to headlining	445	440	5
19	Rear surface to right side of front bumper	4060	3500	560
20	Rear surface to left side of front bumper	4068	3540	528
21	Length of engine block	508	508	0

All measurements in mm

DATA TABLE No. 9 (Cont.)
TEST VEHICLE MEASUREMENTS



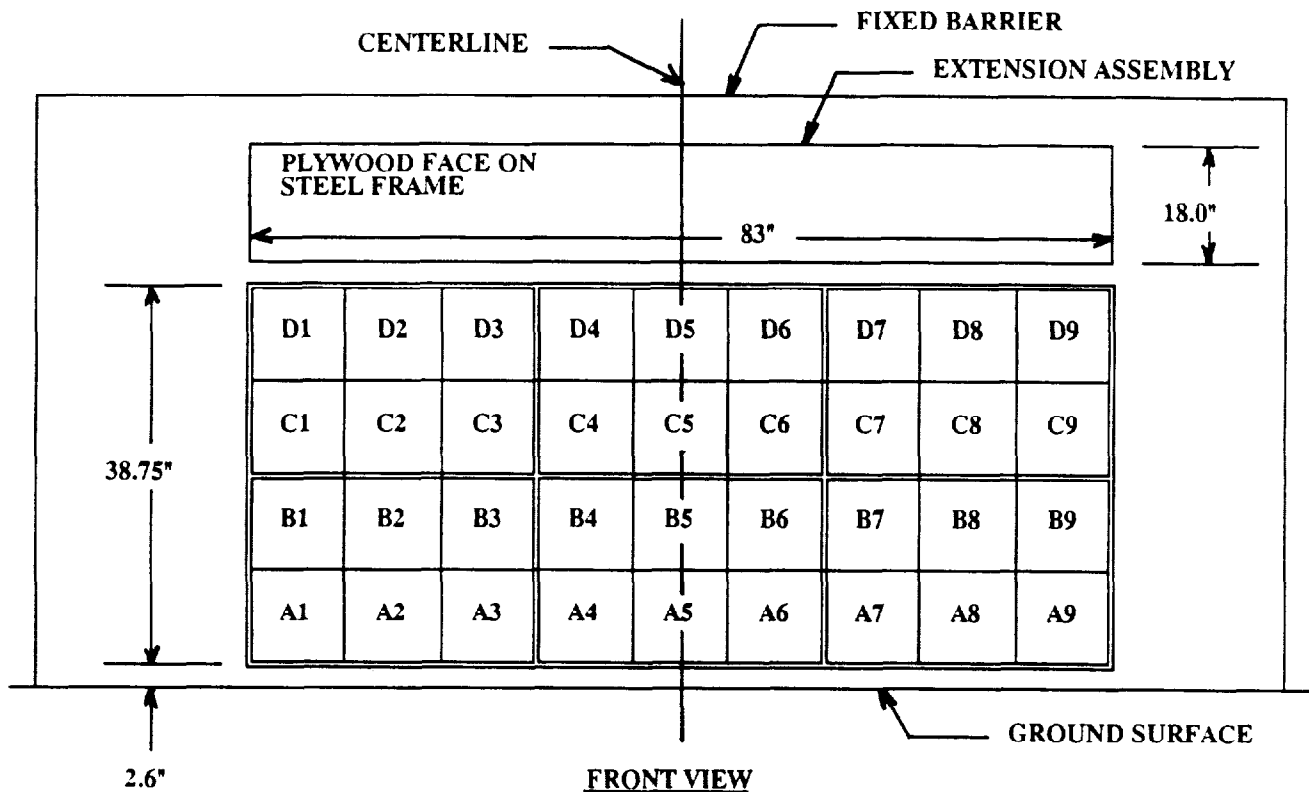
The image contains three technical drawings of a vehicle, likely a fire engine or similar emergency vehicle, for a fire test. The drawings include dimensions in millimeters.

- Top View:** Shows the vehicle from above. Dimensions include a total width of 3118 mm, a wheel track of 711 mm on each side, and a centerline (C/L) indicated by a dashed line.
- Side View:** Shows the vehicle from the side. Dimensions include a total length of 2032 mm, a wheelbase of 1003 mm, a front overhang of 74 mm, a wheel track of 1394 mm, and a wheel offset of 1262 mm. The vehicle is shown with a fire test target (a grid of circles) mounted on the roof. A detail view of the target shows a 102 mm spacing between the circles.
- Front View:** Shows the vehicle from the front. Dimensions include a wheel offset of 163 mm, a wheel track of 1165 mm, a wheelbase of 958 mm, a wheel offset of 795 mm, a wheel track of 795 mm, and a total width of 1282 mm. The vehicle is shown with a fire test target (a grid of circles) mounted on the front. A detail view of the target shows a 102 mm spacing between the circles.

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DATA TABLE No. 11
LOAD CELL LOCATIONS ON FIXED BARRIER

36 Load cells
4 Rows
9 Columns
6 Groupings (6 cells/group)



6 GROUPS OF 6 LOAD CELLS EACH

Group 4 C1 thru D3	Group 5 C4 thru D6	Group 6 C7 thru D9
Group 1 A1 thru B3	Group 2 A4 thru B6	Group 3 A7 thru B9

DATA REQUIREMENTS:

- (1) Data from 36 individual load cells
- (2) Total or sum of 36 individual load cells
- (3) Data from 6 groupings shown above (6 cells/group)
- (4) Total load vs. vehicle dynamic crush

ACCIDENT INVESTIGATION DIVISION DATA FOR 35 MPH FRONTAL BARRIER IMPACT

Vehicle Make/Model/Body Style: Nissan/Sentra/4 Door Sedan

Veh. NHTSA No.: MP5003; VIN: JN1EB31F8PU502989

Model Year: 1993; Build Date: 11/92; Test Date: 03/10/93

Veh. Size Category: N/A; Test Weight: 1263 kg

Veh. Wheelbase: 2430 mm; Front Overhang: 880 mm; Overall Width: 1666 mm

ACCELEROMETER DATA:

Location: Left and right side passenger compartment

Calibration Procedure: 6 months / Drop test

Linearity: Good; Integration Algorithm: NHTSA Standard

Veh. Impact Speed: 56.28 km/h; Time of separation: 85.9 msec

Velocity Change: 66.6 km/h (Left); 65.5 km/h (Right)

Collision Deformation Classification (CDC) Code: F (Frontal)

Crush Depth Dimensions:

C1 = 473 mm

C2 = 524 mm

C3 = 542 mm

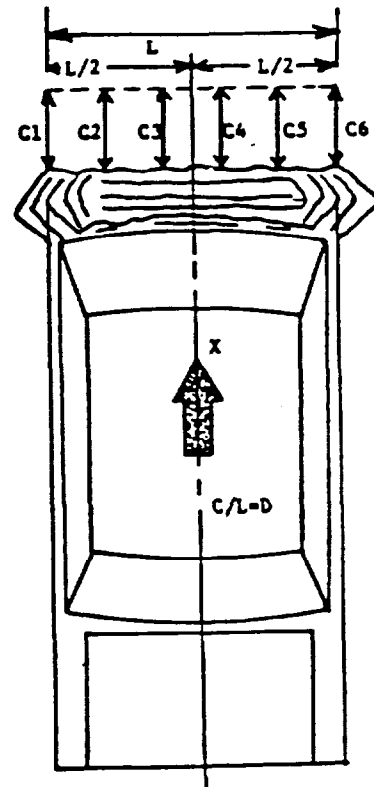
C4 = 551 mm

C5 = 549 mm

C6 = 545 mm

Midpoint of Damage: Vehicle Centerline

Length of Damaged Region: L = 1300 mm



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SECTION 4

SUMMARY OF RESULTS FOR:

FMVSS 212, "Windshield Mounting"
FMVSS 219, "Windshield Zone Intrusion"
FMVSS 301-75, "Fuel System Integrity"

DATA TABLE No. 13
FMVSS No. 212, WINDSHIELD MOUNTING

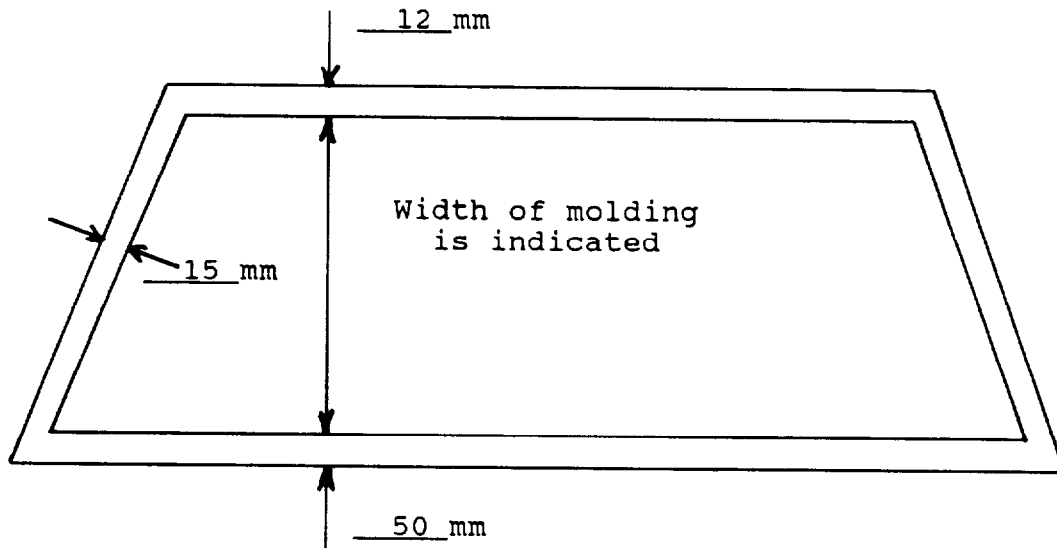
Details of windshield mounting: Glass is secured to the vehicle frame with a rubber type adhesive with rubber molding along the top, plastic molding along the bottom and metallic molding along the sides.

FMVSS 212 Requirements: The post-test periphery retention amount must be at least 75% of the pretest periphery measurement for vehicles not equipped with automatic restraints and 50% for each side of the windshield for vehicles equipped with automatic restraint systems for front occupants.

FMVSS 212 Test Data:

	Windshield Periphery Retention		
	Pretest (mm)	Posttest (mm)	Percent Retention
Right Side	1990	1990	100
Left Side	1990	1990	100
Total	3980	3980	100

AREA OF RETENTION FAILURE:



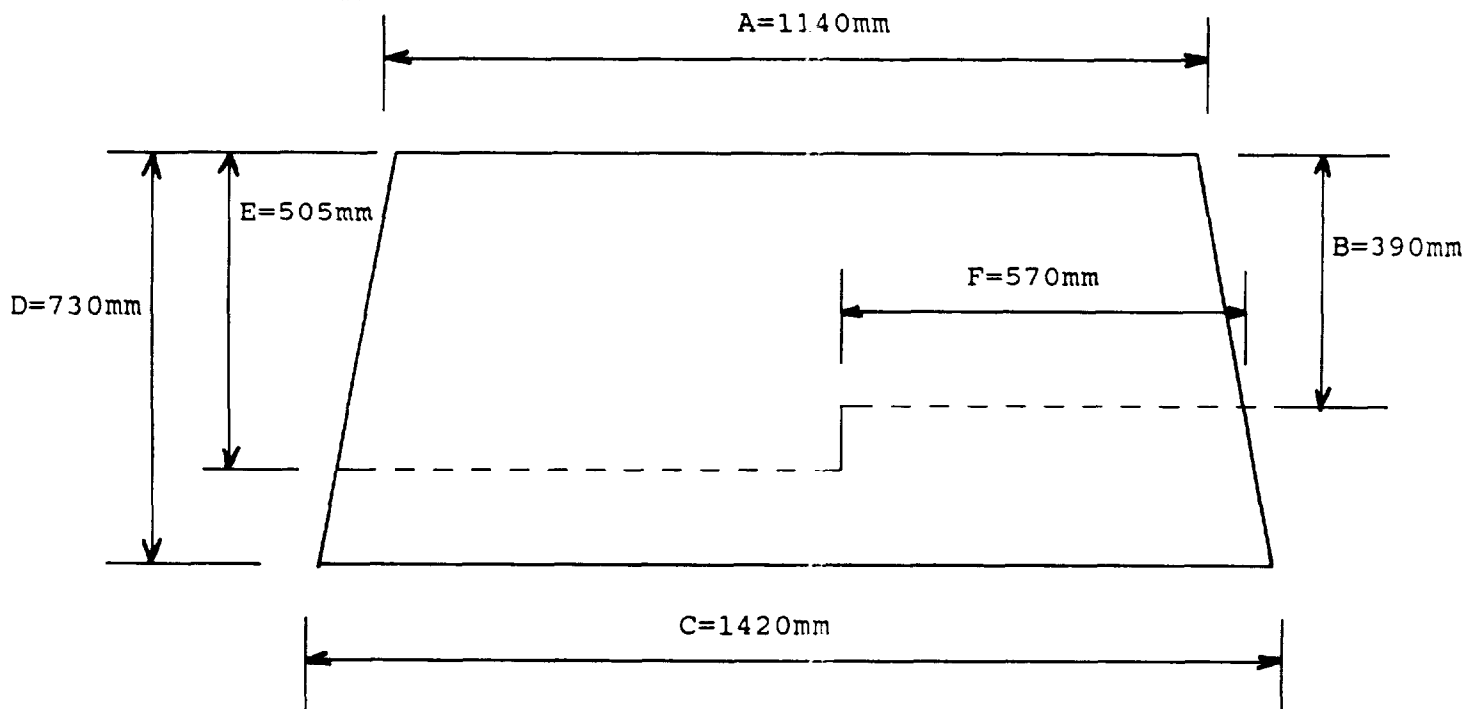
FAILURE DETAILS: None

DATA TABLE No. 14
FMVSS No. 219 WINDSHIELD ZONE INTRUSION

PROTECTED ZONE LOWER EDGE REQUIREMENT

The lower edge of the protected zone is determined by placing a 6.5 inch diameter 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. Draw the locus of points on the inner surface of the windshield contactable 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 inch distant from the locus line. The lower edge of the protected zone is the longitudinal projection onto the outer surface of the windshield of this line.

FMVSS 219 TEST DATA:



DETAILS OF WINDSHIELD GLASS PENETRATION GREATER THAN 1/4": None
(Location shown on above sketch)

Data Table No. 15
FMVSS No. 301-75, Fuel System Integrity

VEH. YEAR/MAKE/MODEL/BODY STYLE: 1993/Nissan/Sentra/4 Door Sedan

VEH. NHTSA NO.: MP5003 TEST DATE: 03/10/93

USABLE CAPACITY OF VEHICLE'S FUEL TANK: 50 Liters (furnished by Mfr.)

TEST REQUIREMENTS:

Vehicle's engine operated to "run dry" condition and a small amount of Stoddard solvent, dyed red, was added to the vehicle's fuel tank. Fuel pump was operated to fill the fuel system ahead of the fuel tank, then added 92% to 94% of the stated usable capacity to the fuel tank.

AMOUNT OF STODDARD SOLVENT ADDED TO THE VEHICLE'S FUEL TANK:

46.3 Liters, which is 92.6% of the stated usable capacity

SOLVENT SPILLAGE MEASUREMENT AFTER 35 MPH FRONTAL BARRIER IMPACT TEST:

	Actual	Max. Allowed
From impact until vehicle motion ceases	<u>0 oz.</u>	1 oz.
For 5 min. period after vehicle motion ceases	<u>0 oz.</u>	5 oz.
For next 25 min. at barrier face	<u>0 oz.</u>	1 oz./min.

SOLVENT SPILLAGE DETAILS: None

STATIC ROLLOVER MACHINE ROTATION TIME INFORMATION: (Spec. range = 1 to 3 min)

Time reqd. for machine to rotate 90°	<u>1</u> minutes, <u>20</u> seconds
FMVSS 301-75 position hold time	<u>5</u> minutes, <u>00</u> seconds
Total	<u>6</u> minutes, <u>20</u> seconds
Next whole minute interval	<u>7</u> minutes

VEHICLE STATIC ROLLOVER DATA:

	1st 5 Min.	6th min.	7th min.	8th min.
Max allowable solvent spillage	5 oz.	1 oz.	1 oz.	1 oz.
0° to 90° (filler cap down)	0 oz.	0 oz.	0 oz.	N/A
90° to 180°	0 oz.	0 oz.	0 oz.	N/A
180° to 270°	0 oz.	0 oz.	0 oz.	N/A
270° to 360°	0 oz.	0 oz.	0 oz.	N/A

SOLVENT SPILLAGE LOCATIONS: None

APPENDIX A
PHOTOGRAPHS

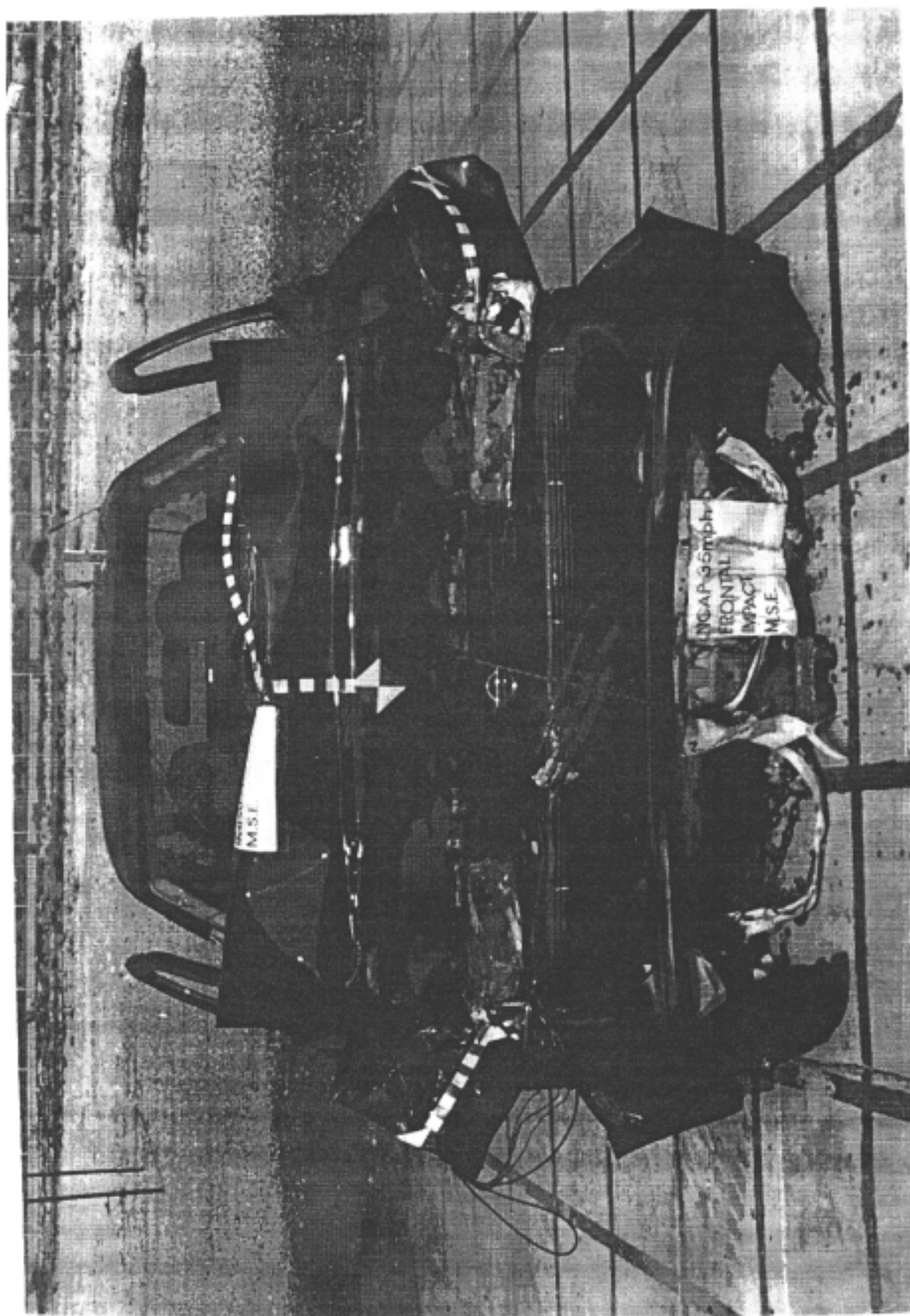
PRETEST FRONT VIEW
POSTTEST FRONT VIEW
PRETEST LEFT SIDE VIEW
POSTTEST LEFT SIDE VIEW
PRETEST RIGHT SIDE VIEW
POSTTEST RIGHT SIDE VIEW
PRETEST RIGHT FRONT 3/4 VIEW
POSTTEST RIGHT FRONT 3/4 VIEW
PRETEST LEFT REAR 3/4 VIEW
POSTTEST LEFT REAR 3/4 VIEW
PRETEST WINDSHIELD VIEW
POSTTEST WINDSHIELD VIEW
PRETEST ENGINE COMPARTMENT VIEW
POSTTEST ENGINE COMPARTMENT VIEW
PRETEST FRONT UNDERBODY VIEW
POSTTEST FRONT UNDERBODY VIEW
PRETEST REAR UNDERBODY VIEW
POSTTEST REAR UNDERBODY VIEW
PRETEST DRIVER DUMMY POSITION VIEW
POSTTEST DRIVER DUMMY POSITION VIEW
PRETEST PASSENGER DUMMY POSITION VIEW
POSTTEST PASSENGER DUMMY POSITION VIEW
PRETEST DRIVER DUMMY & VEHICLE INTERIOR VIEW (Door Open)
POSTTEST DRIVER DUMMY & VEHICLE INTERIOR VIEW (Door Open)
PRETEST PASSENGER DUMMY & VEHICLE INTERIOR VIEW (Door Open)
POSTTEST PASSENGER DUMMY & VEHICLE INTERIOR VIEW (Door Open)
POSTTEST DRIVER DUMMY (ATD) STEERING COLUMN HUB/RIM CONTACT AND
KNEE CONTACT AREA
POSTTEST PASSENGER DUMMY (ATD) KNEE CONTACT AREA



PRETEST FRONT VIEW

A-1

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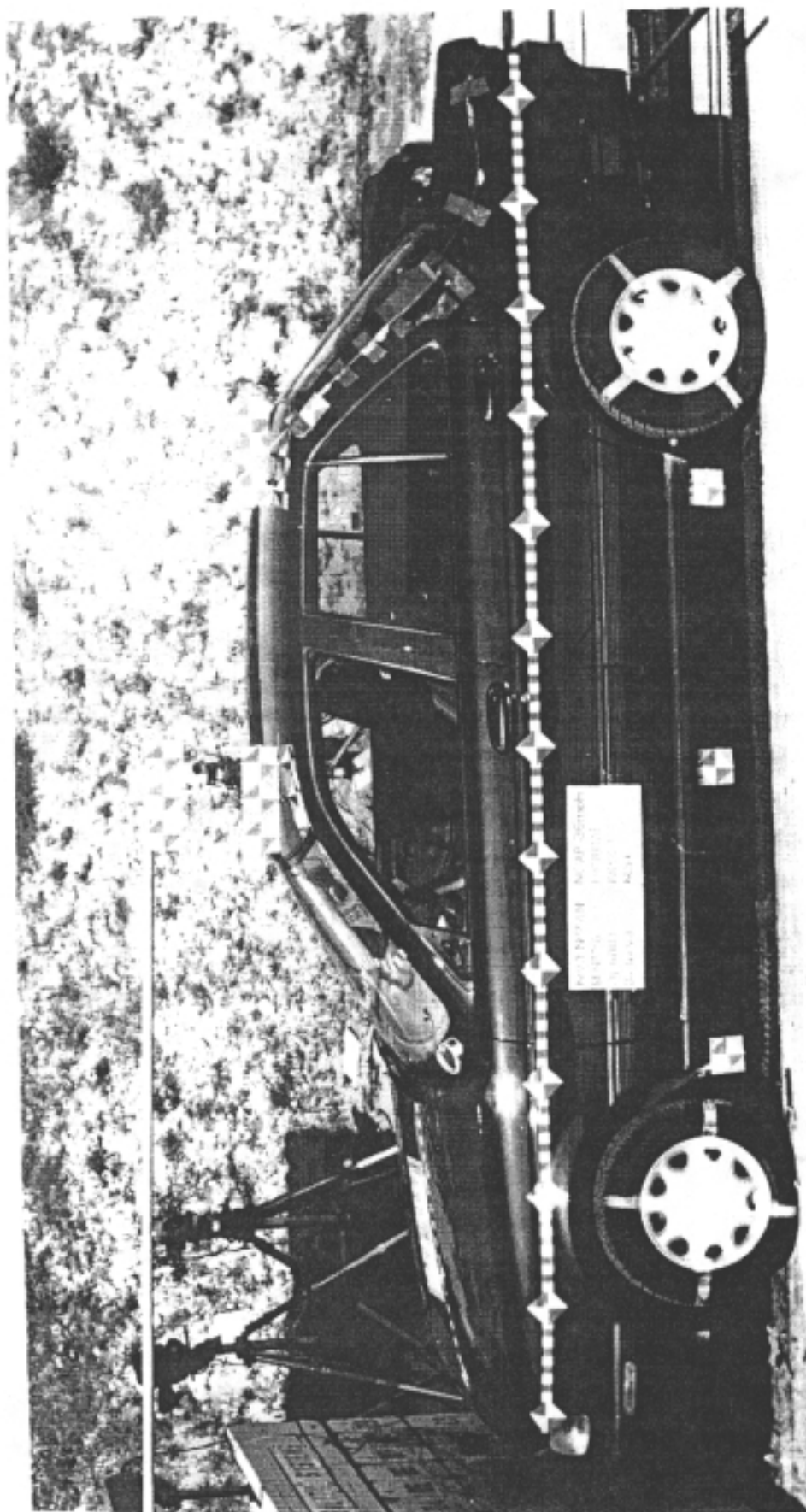


POSTTEST FRONT VIEW

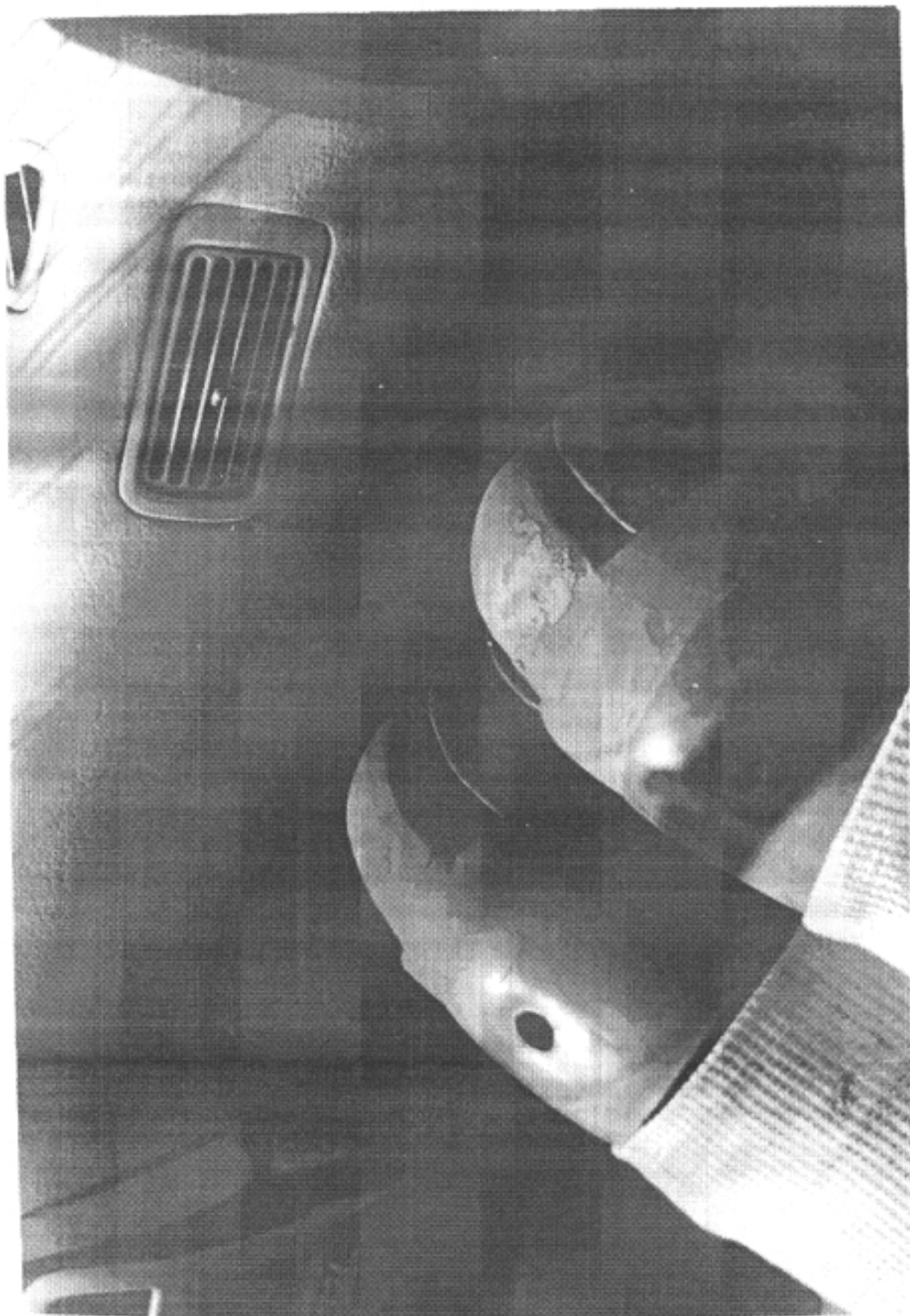
A-2

MSE-93-R92083-NO8

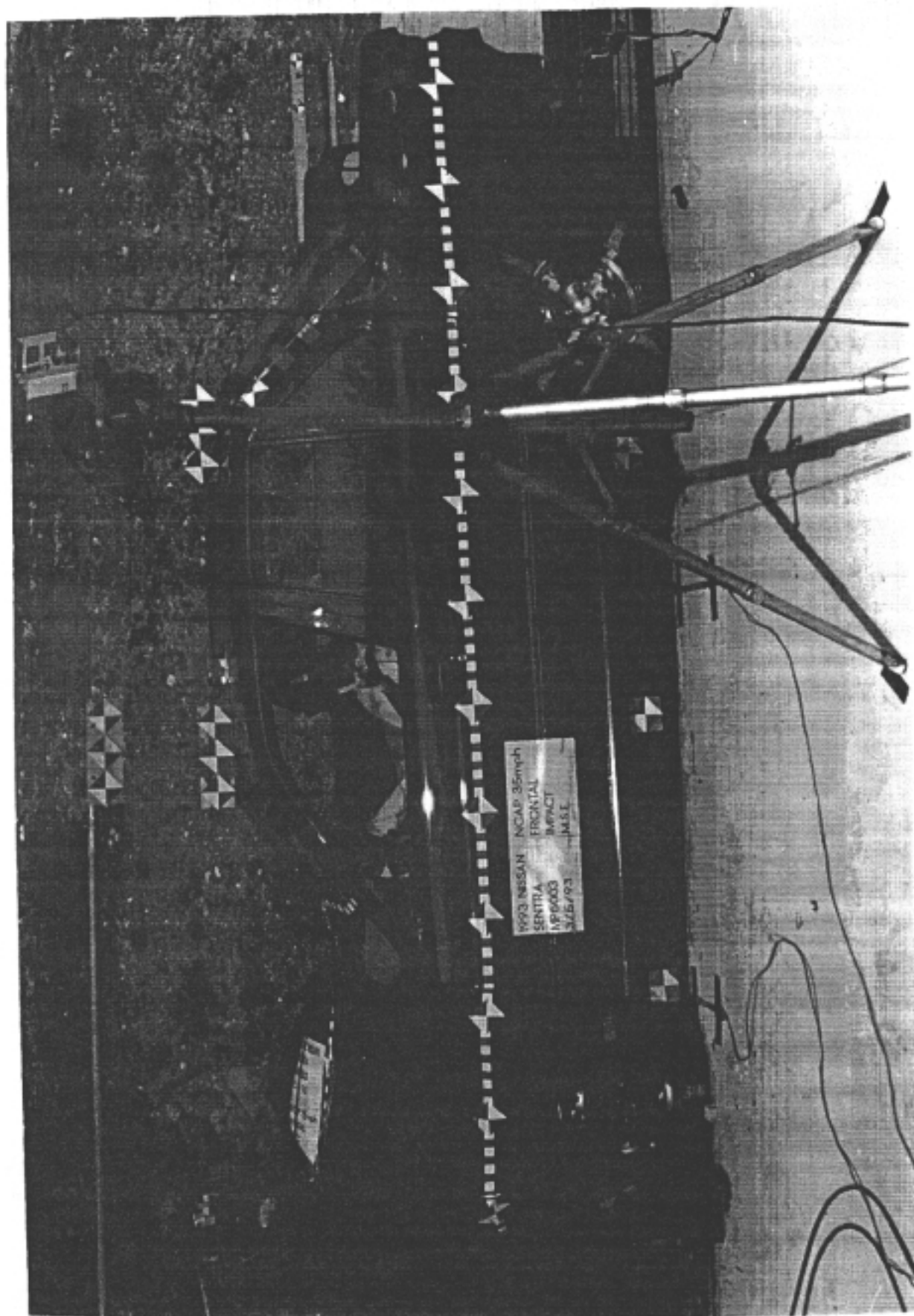
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PRETEST LEFT SIDE VIEW



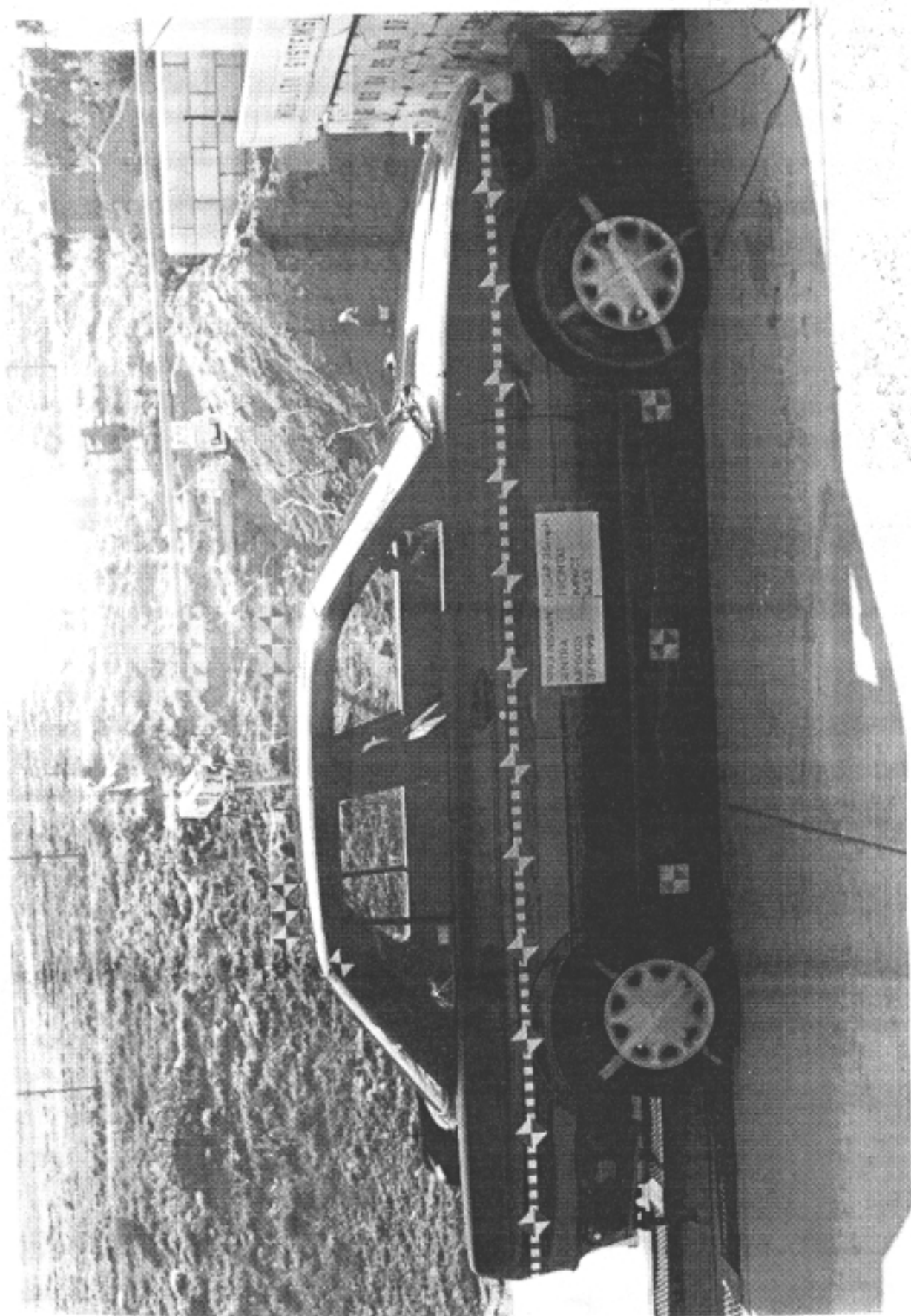
POSTTEST PASSENGER ATD KNEE CONTACT AREA



POSTTEST LEFT SIDE VIEW



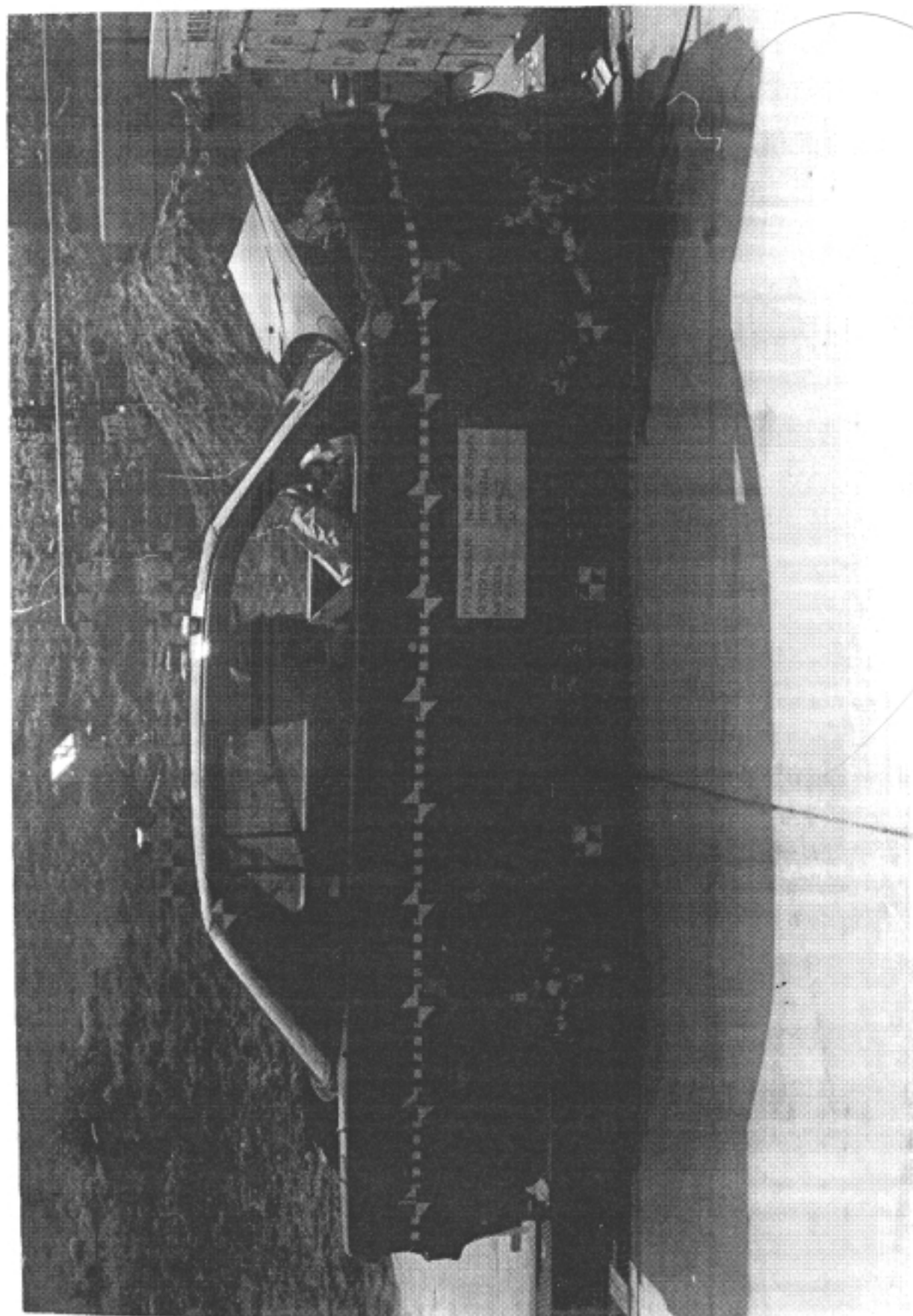
POSTTEST DRIVER ATD HEAD AND KNEE CONTACT AREA



PRETEST RIGHT SIDE VIEW



POSTTEST PASSENGER DUMMY & VEHICLE INTERIOR (Door Open)



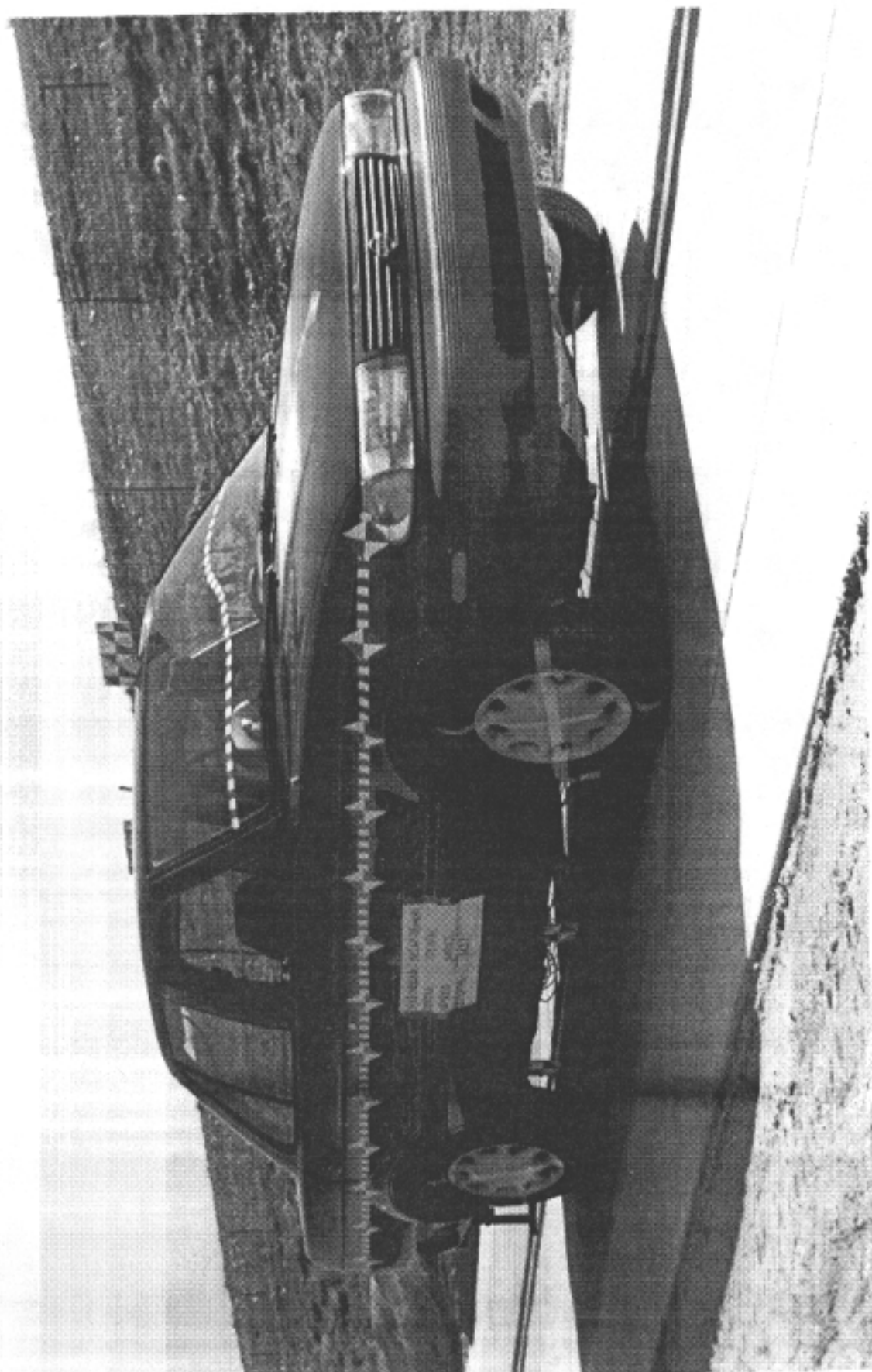
POSTTEST RIGHT SIDE VIEW

A-6

MSE-93-R92083-N08



PRETEST PASSENGER DUMMY & VEHICLE INTERIOR (Door Open)



PRETEST RIGHT FRONT 3/4 VIEW

A-7

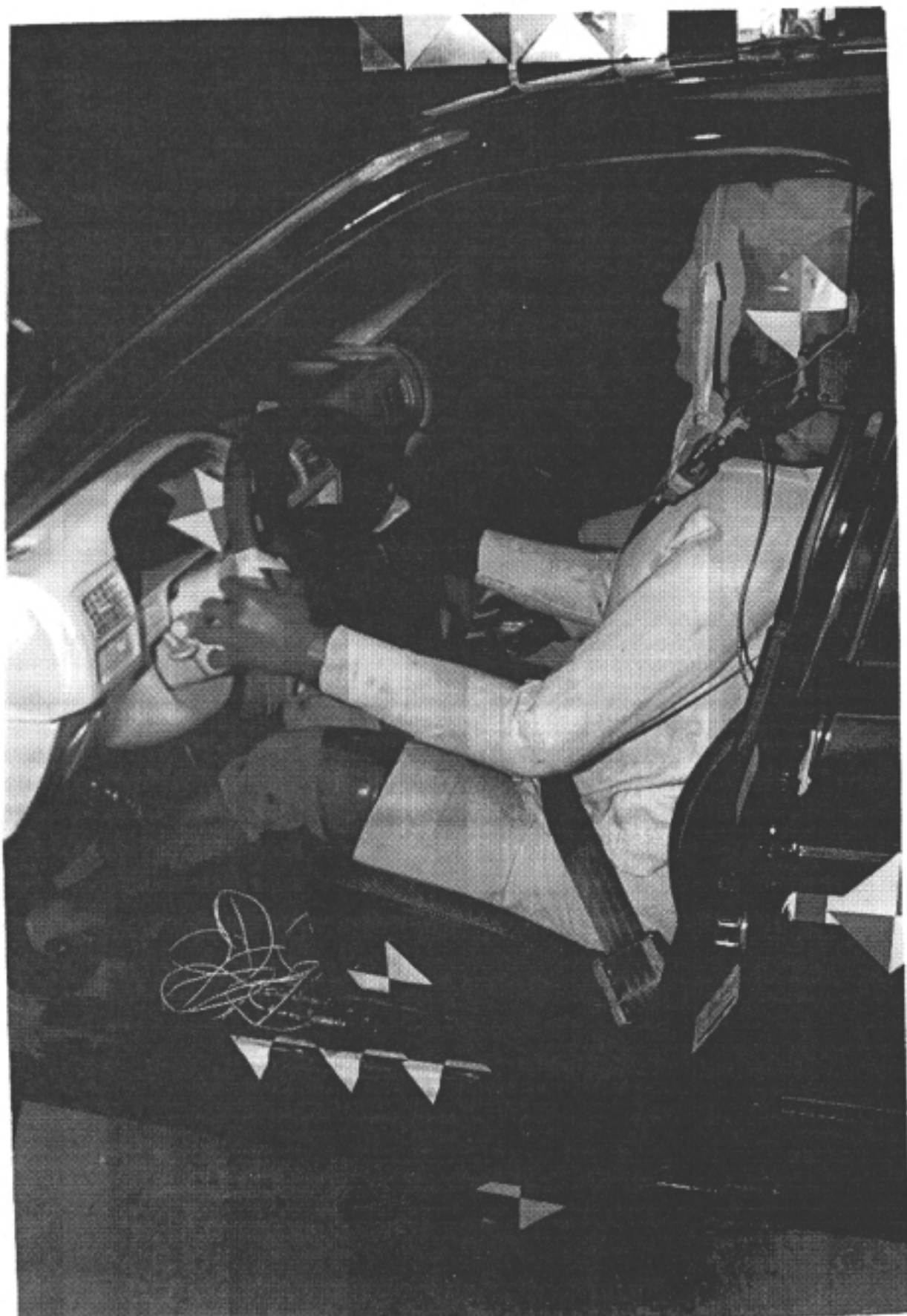
MSE-93-R92083-NO8



POSTTEST DRIVER DUMMY & VEHICLE INTERIOR VIEW (Door Open)



POSTTEST RIGHT FRONT 3/4 VIEW



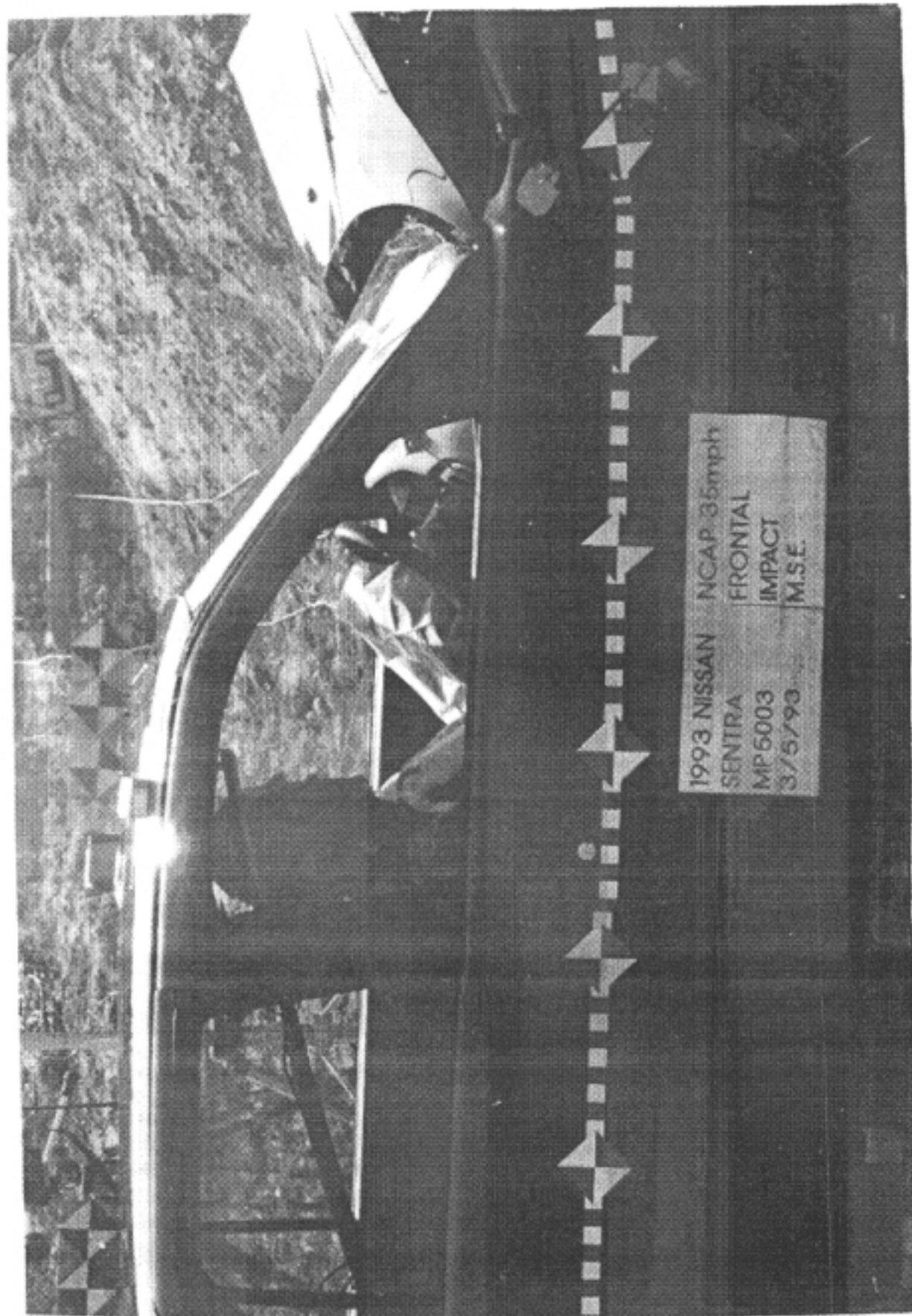
PRETEST DRIVER DUMMY & VEHICLE INTERIOR VIEW (Door Open)



PRETEST LEFT REAR 3/4 VIEW

A-9

MSE-93-R92083-NO8



1993 NISSAN	NCAP 35mph
SENTRA	FRONTAL
MP5003	IMPACT
3/5/93	M.S.E.

POSTTEST PASSENGER DUMMY POSITION VIEW



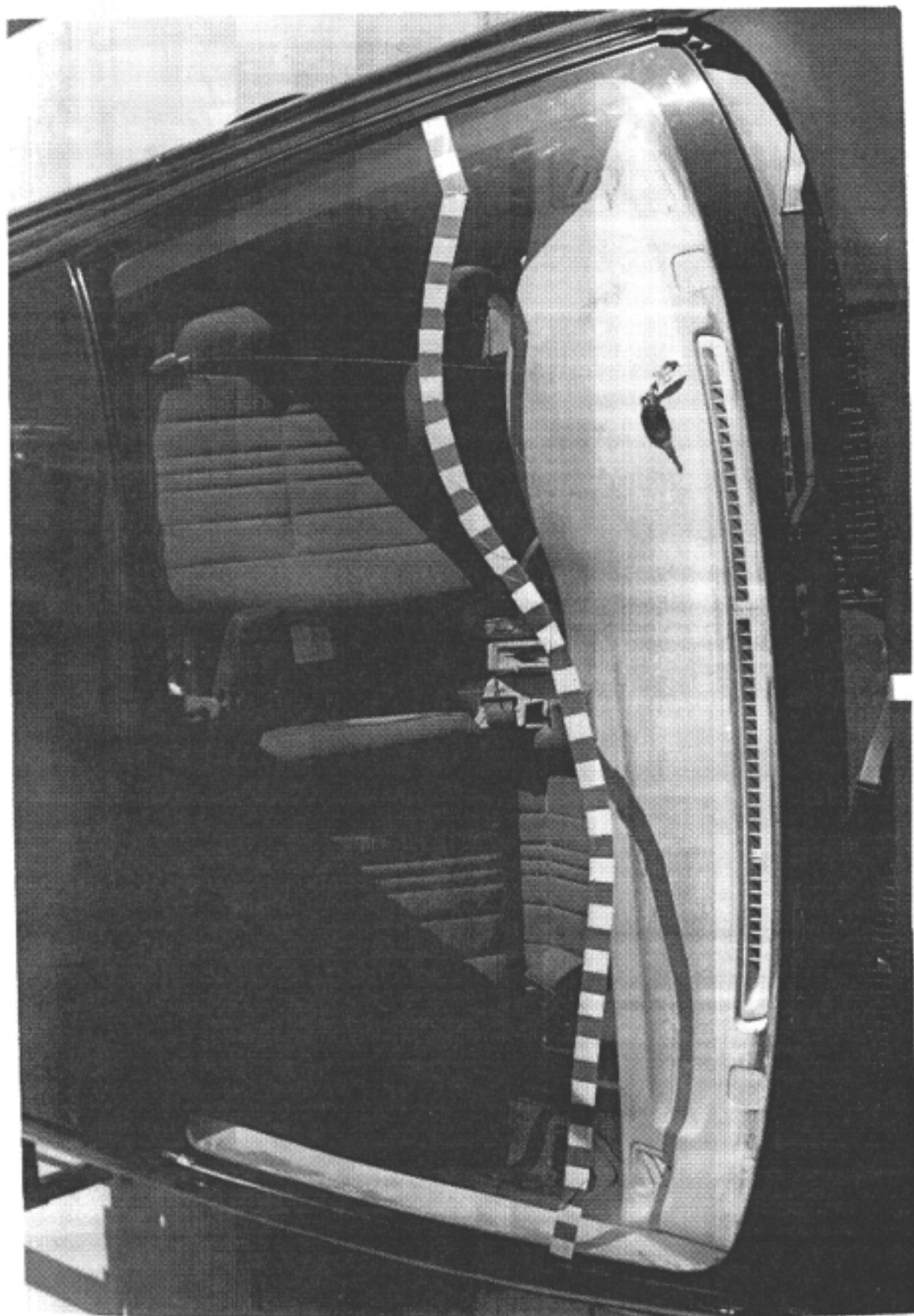
POSTTEST LEFT REAR 3/4 VIEW



PRETEST PASSENGER DUMMY POSITION VIEW

A-21

MSE-93-R92083-NO8



PRETEST WINDSHIELD VIEW

A-11

MSE-93-R92083-NO8



POSTTEST DRIVER DUMMY POSITION VIEW

A-20

MSE-93-R92083-N08



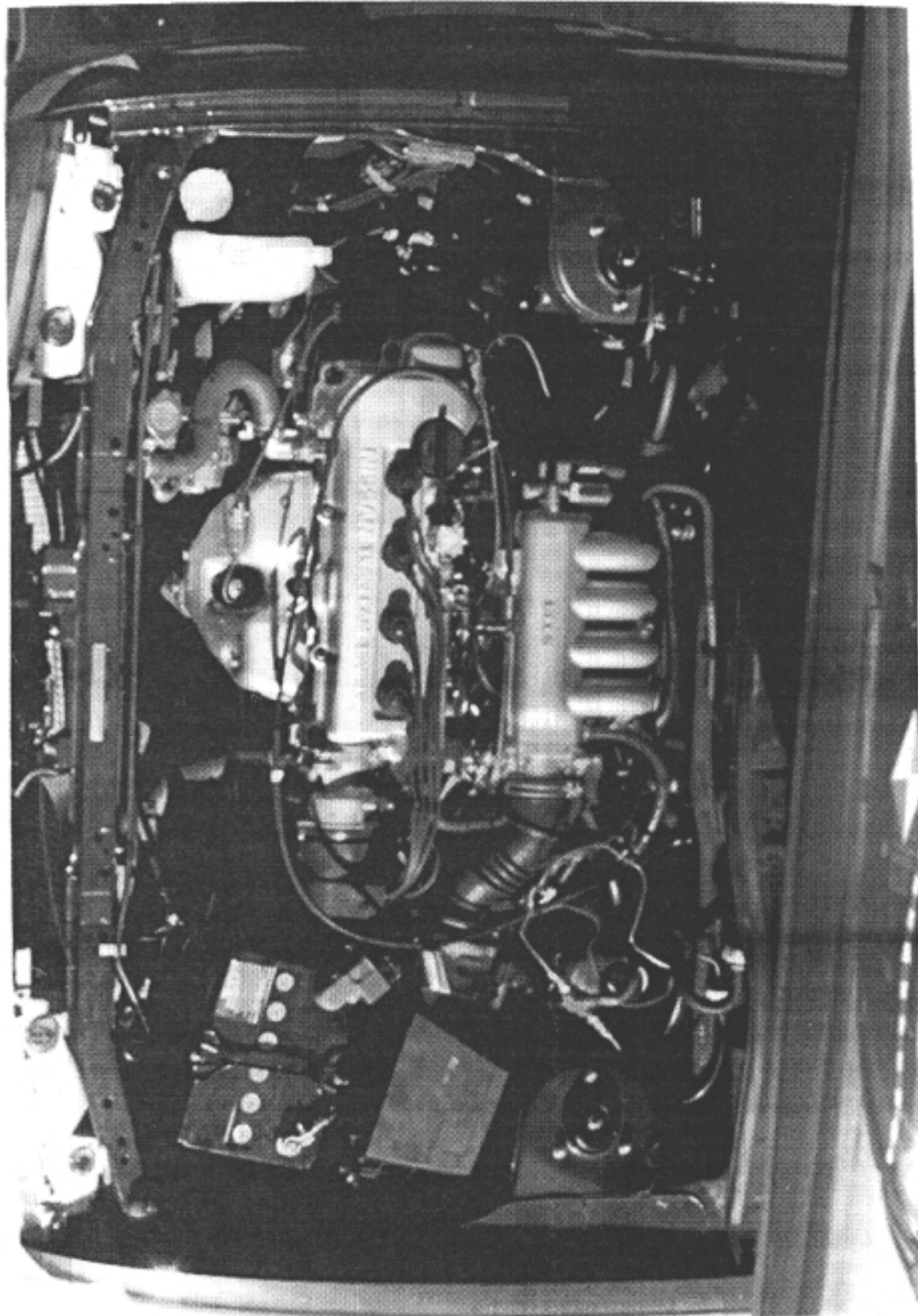
POSTTEST WINDSHIELD VIEW

A-12

MSE-93-R92083-N08



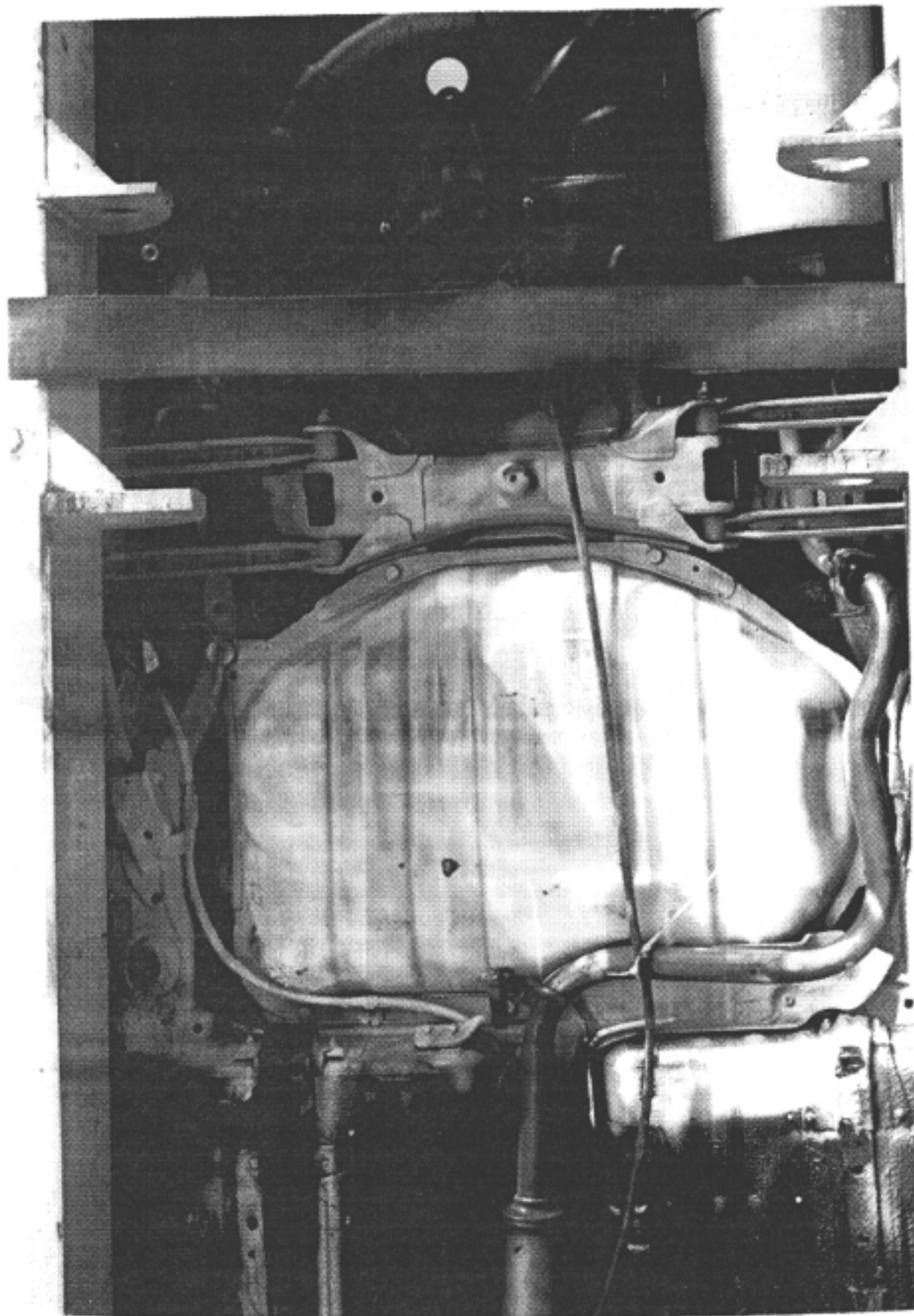
PRETEST DRIVER DUMMY POSITION VIEW



PRETEST ENGINE COMPARTMENT VIEW

A-13

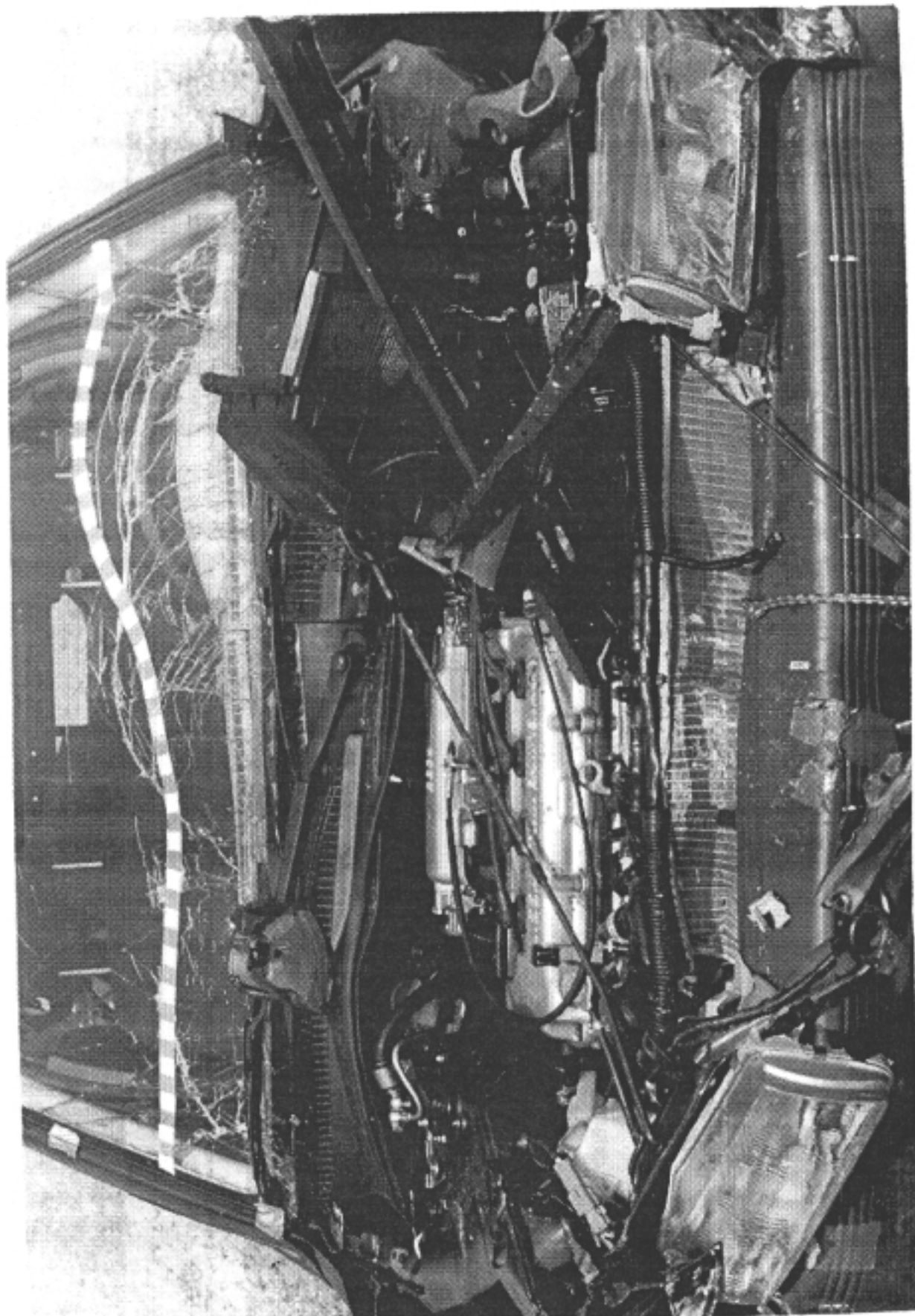
MSE-93-R92083-N08



POSTTEST REAR UNDERBODY VIEW

A-18

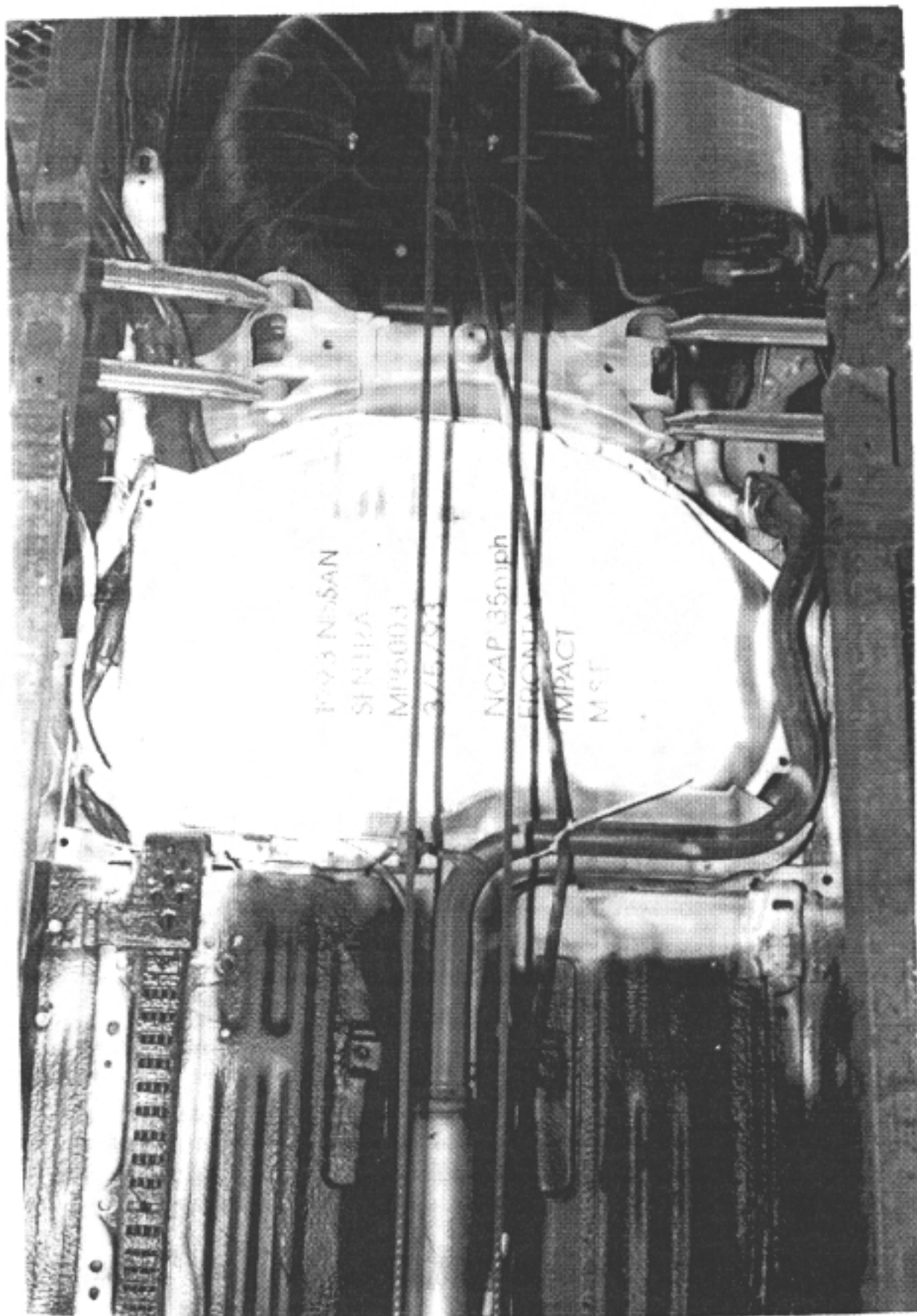
MSE-93-R92083-NO8



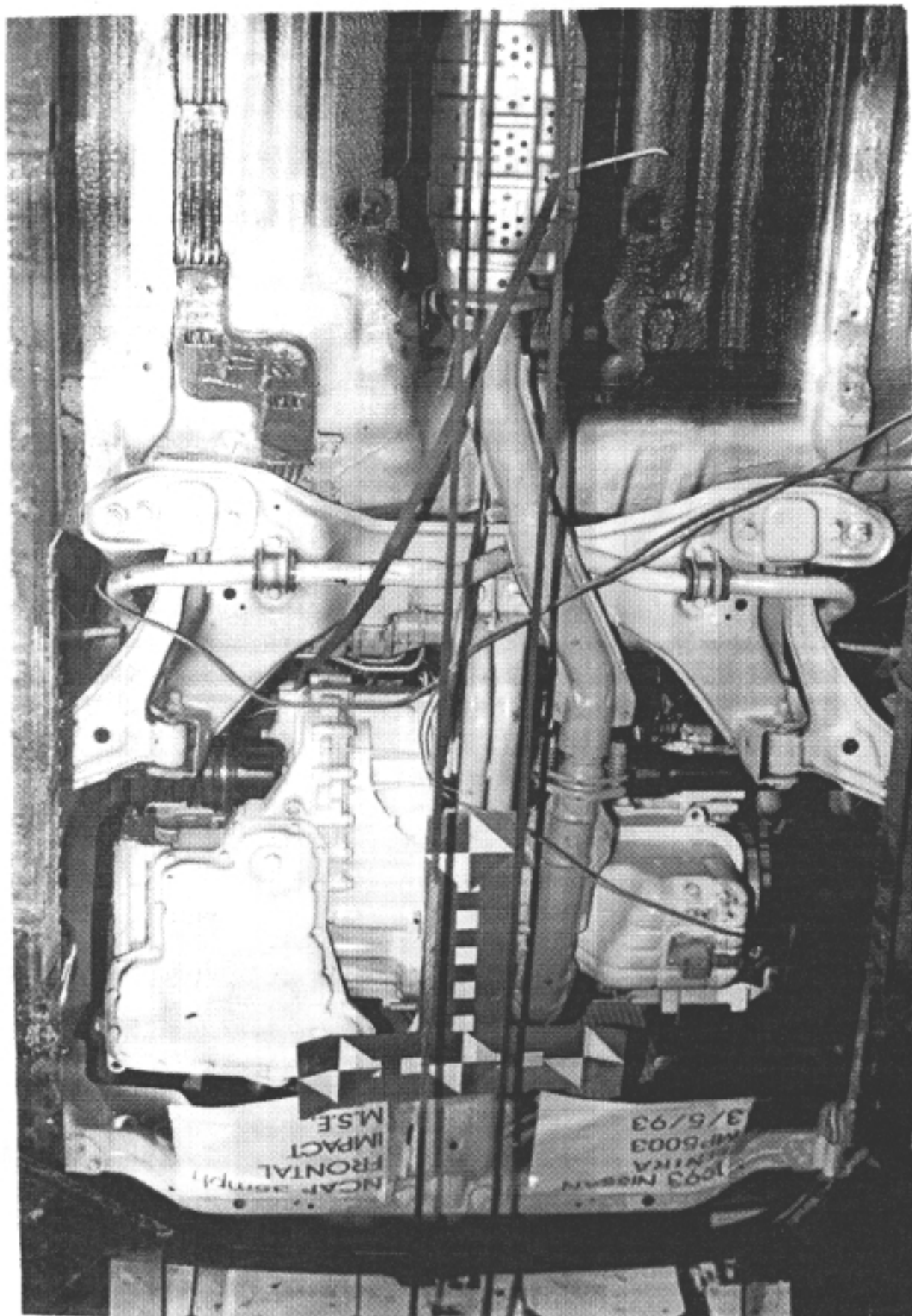
POSTTEST ENGINE COMPARTMENT VIEW

A-14

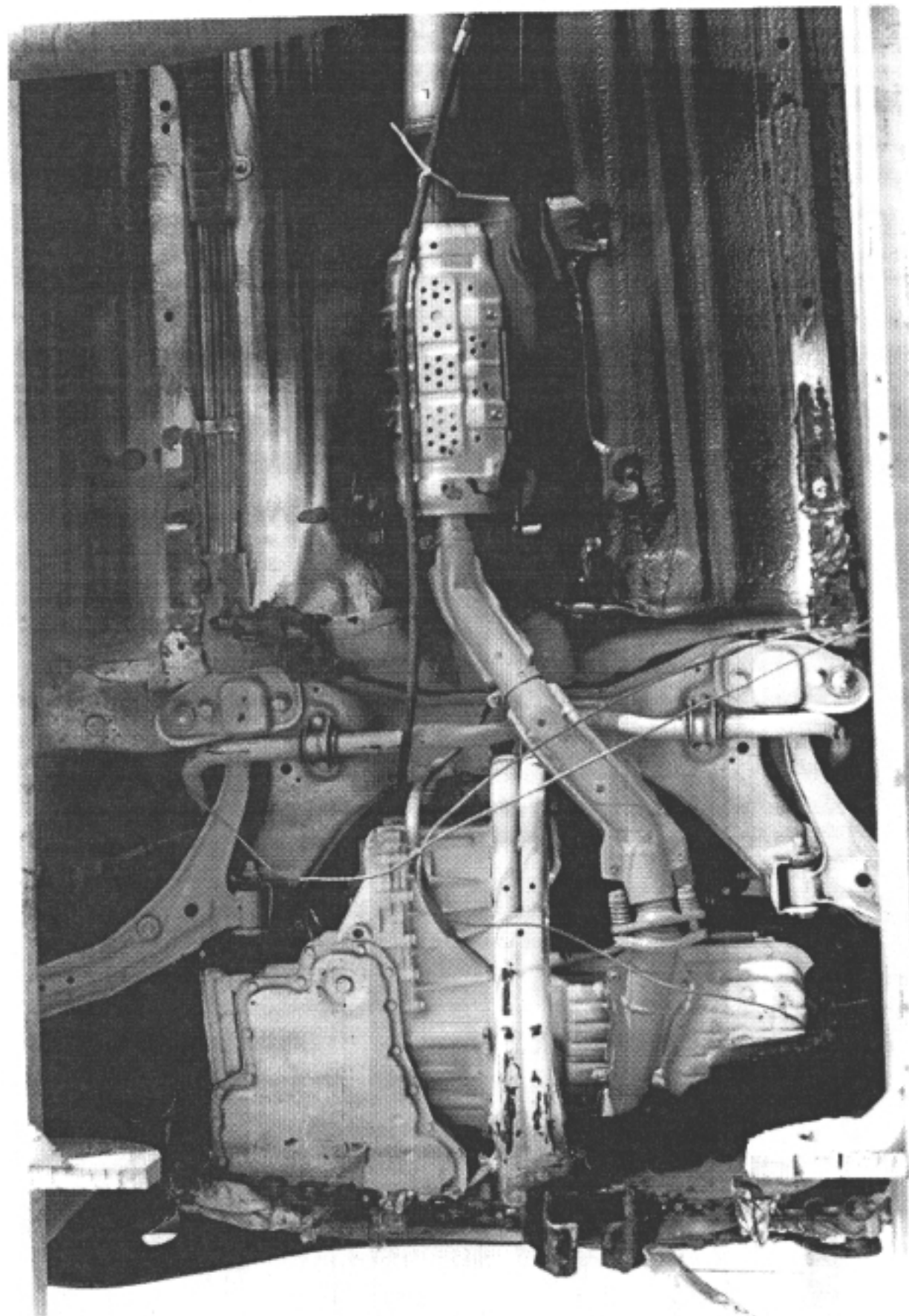
MSE-93-R92083-N08



PRETEST REAR UNDERBODY VIEW



PRETEST FRONT UNDERBODY VIEW



POSTTEST FRONT UNDERBODY VIEW

A-16

MSE-93-R92083-N08

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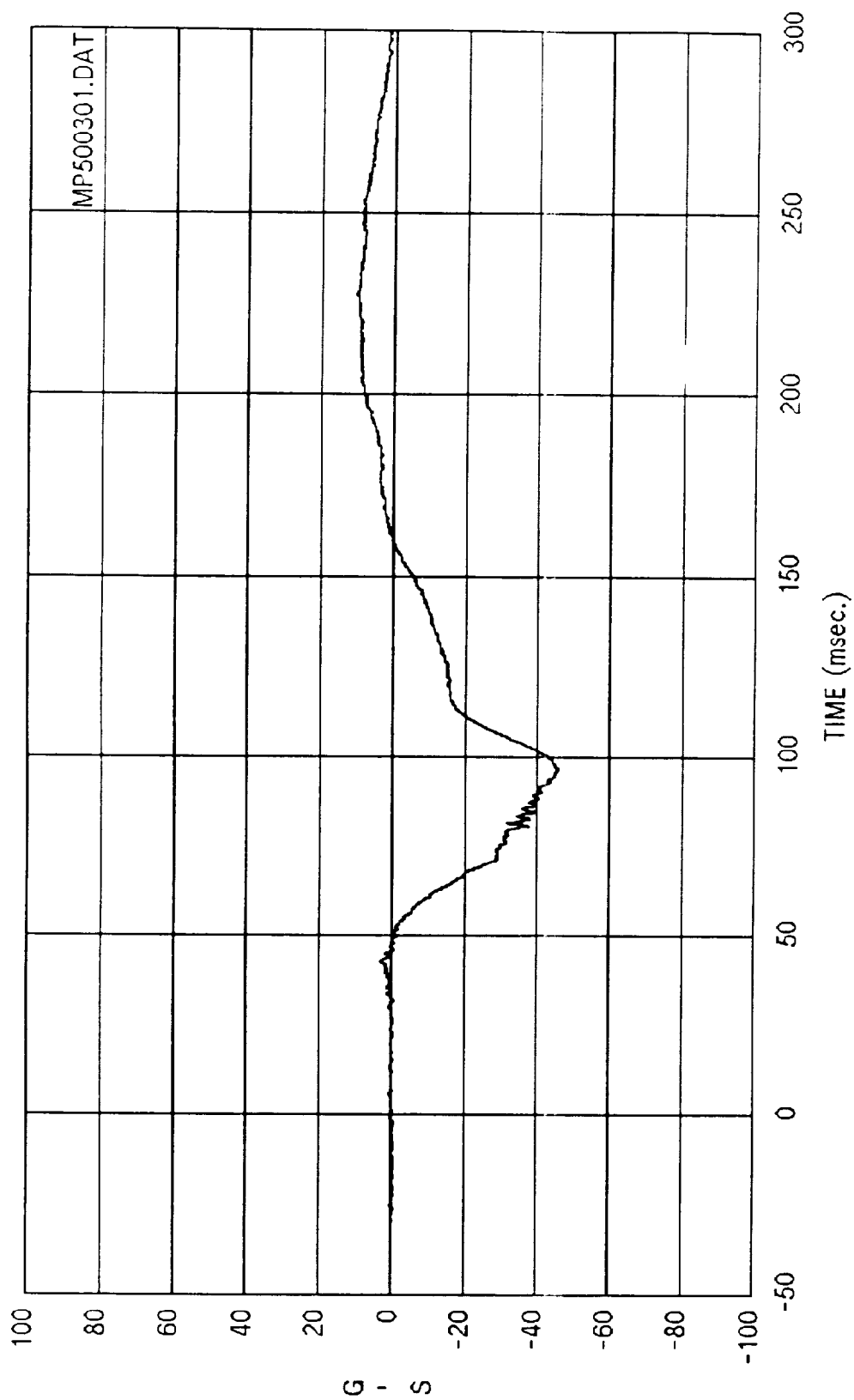
APPENDIX B-1

VEHICLE AND DUMMY (ATD) RESPONSE DATA

DATA FILTERING:

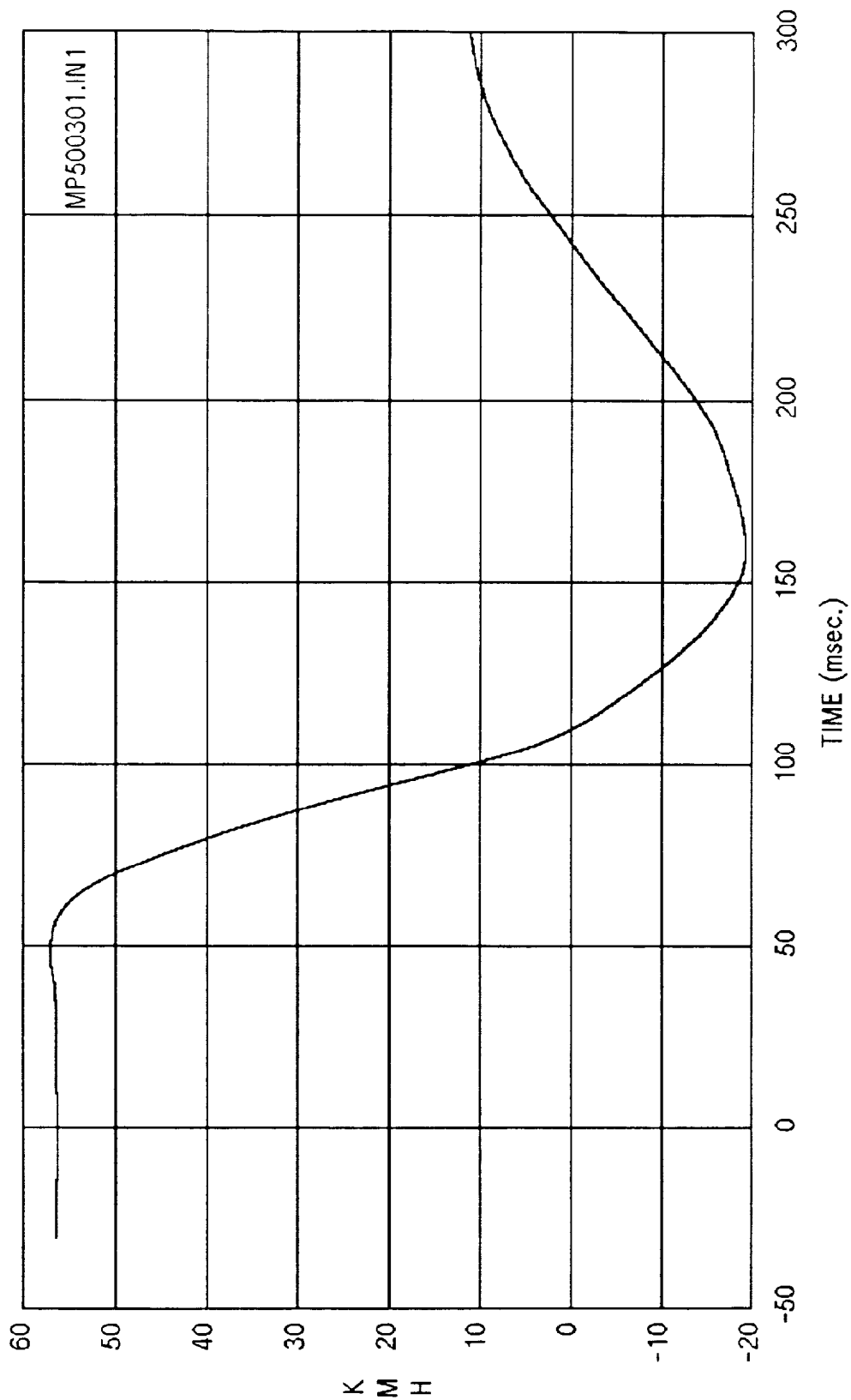
ATD Head Channels	- Class 1000
ATD Chest Channels	- Class 180
ATD Femur Channels	- Class 600
Vehicle Channels	- Class 60

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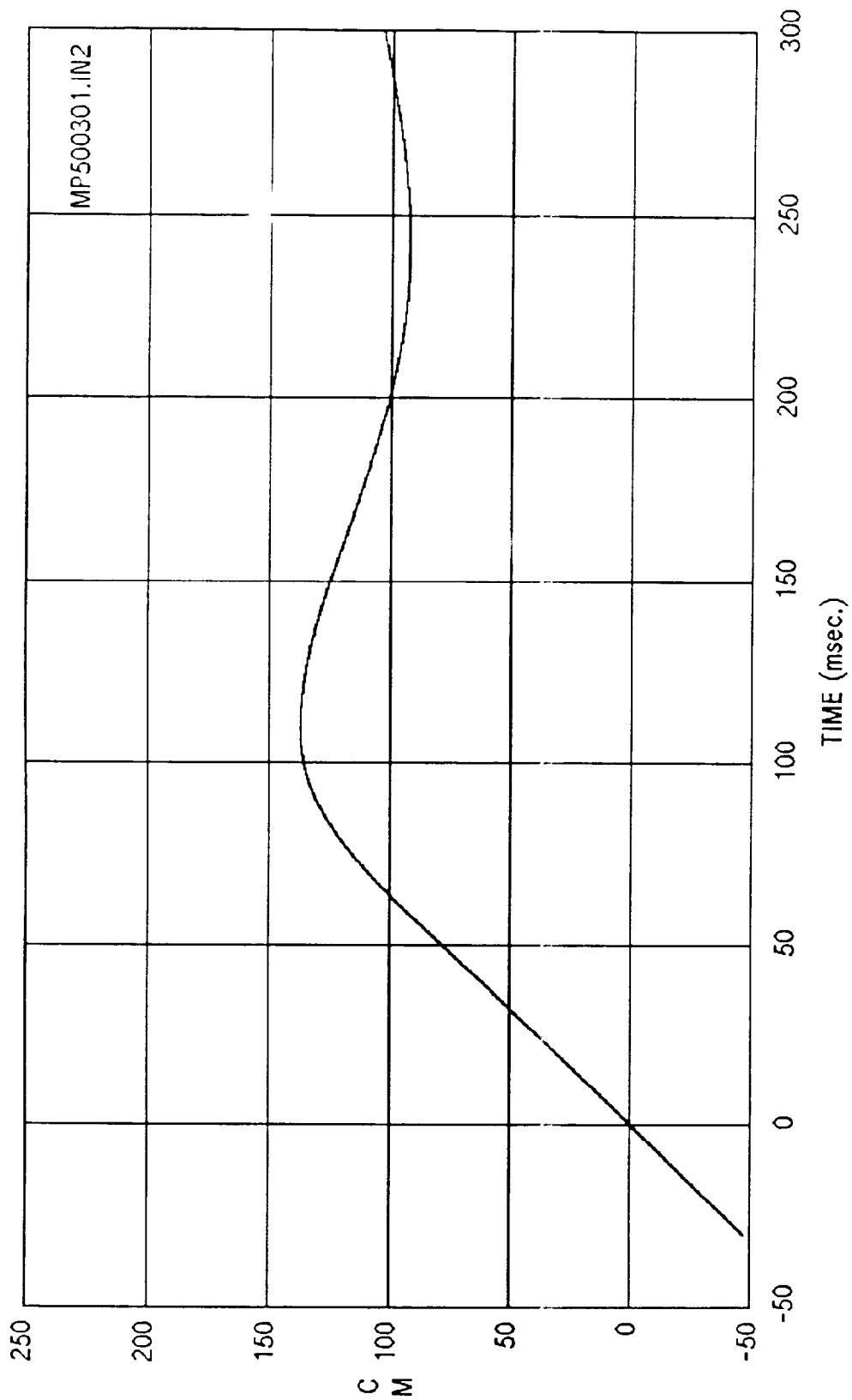
Curve: Driver head acceleration -- X axis Filter: SAE CLASS 1000 Max = 10.450 Min = -46.038

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



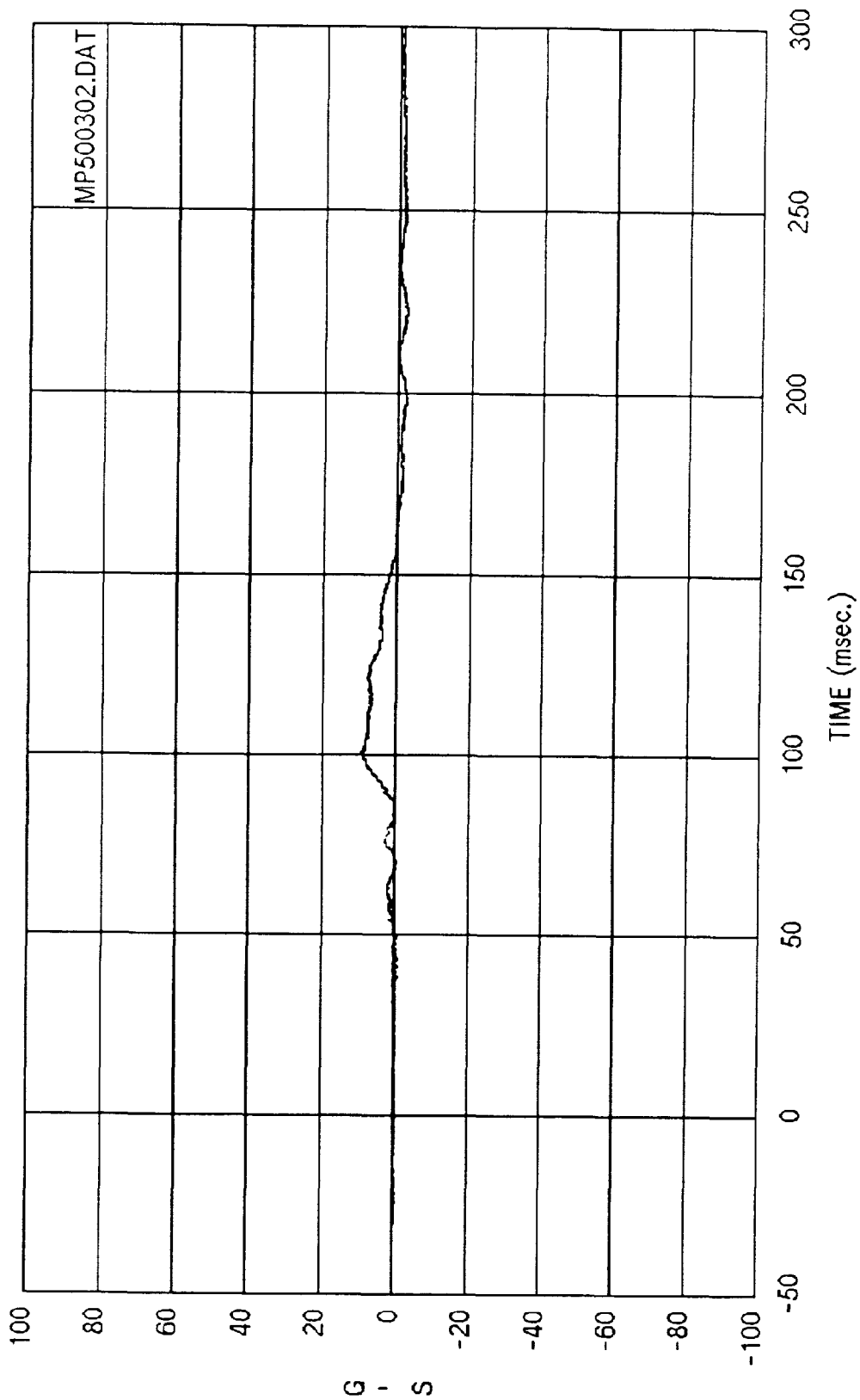
Curve: Driver head delta V -- X axis Filter: SAE CLASS 180 Max = 57.041 Min = -19.213

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



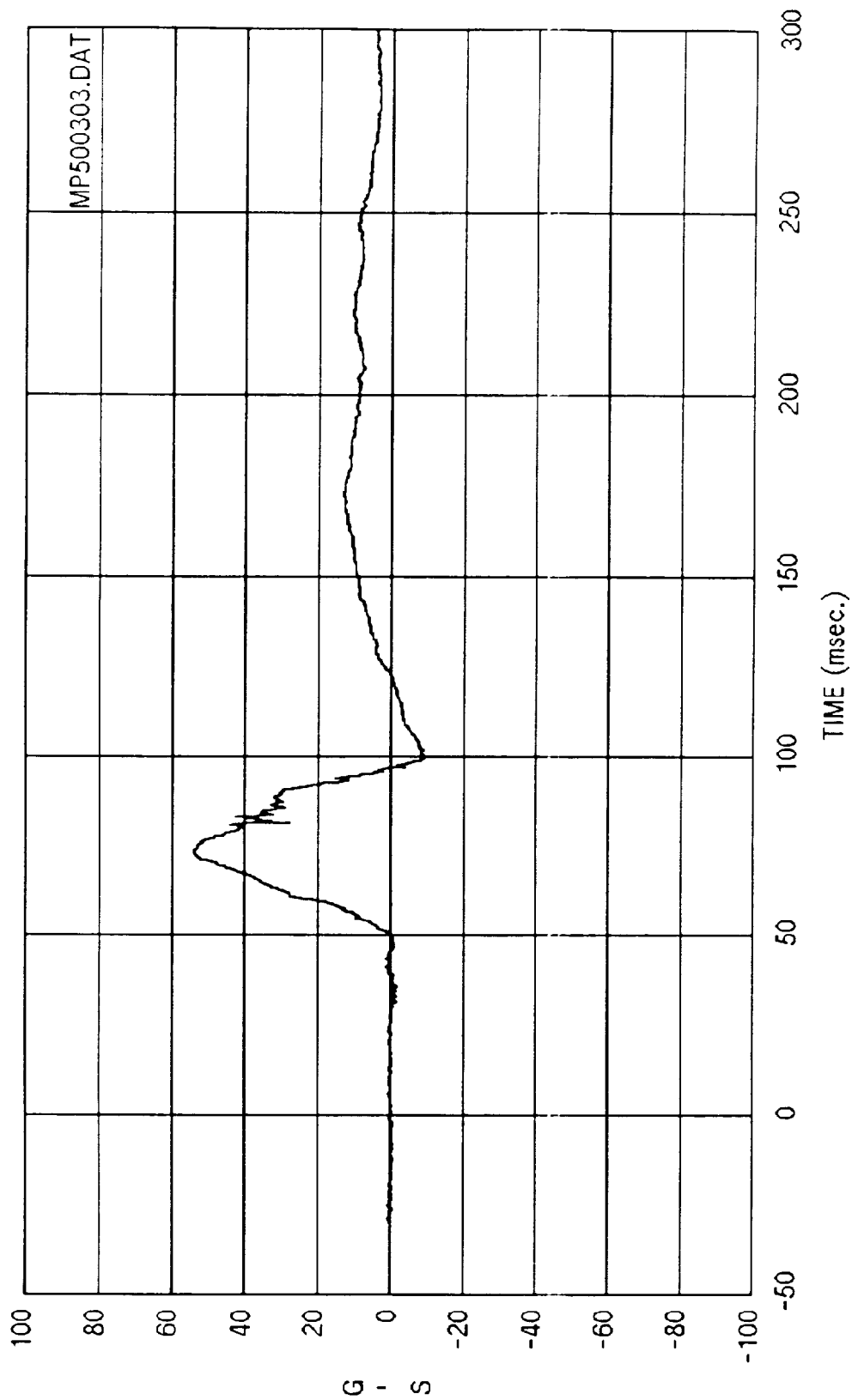
Curve: Driver head displacement -- X axis Filter: SAE CLASS 180 Max = 137.28 Min = 92.732

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



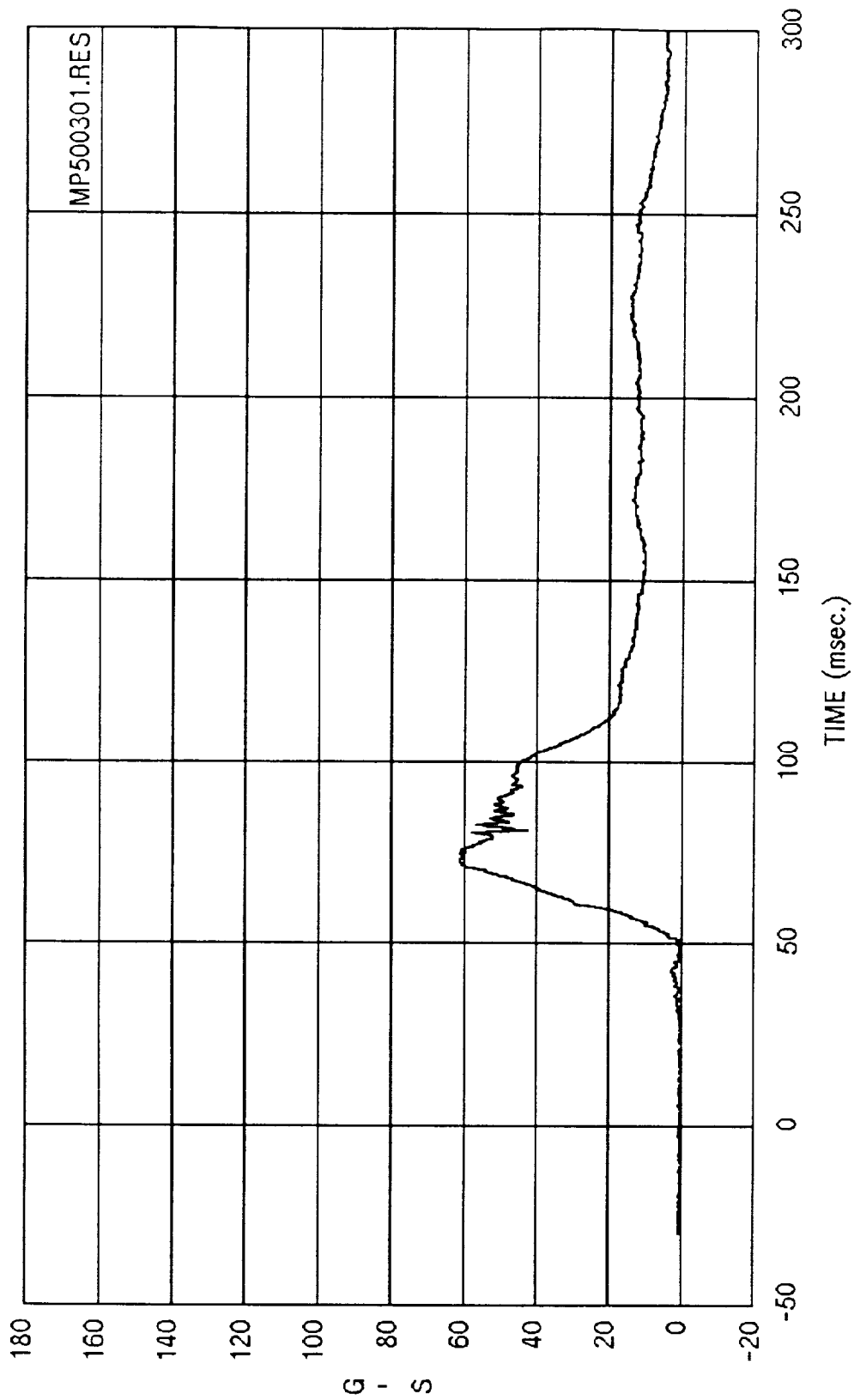
Curve: Driver head acceleration -- Y axis Filter: SAE CLASS 1000 Max = 9.3364 Min = -2.5709

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

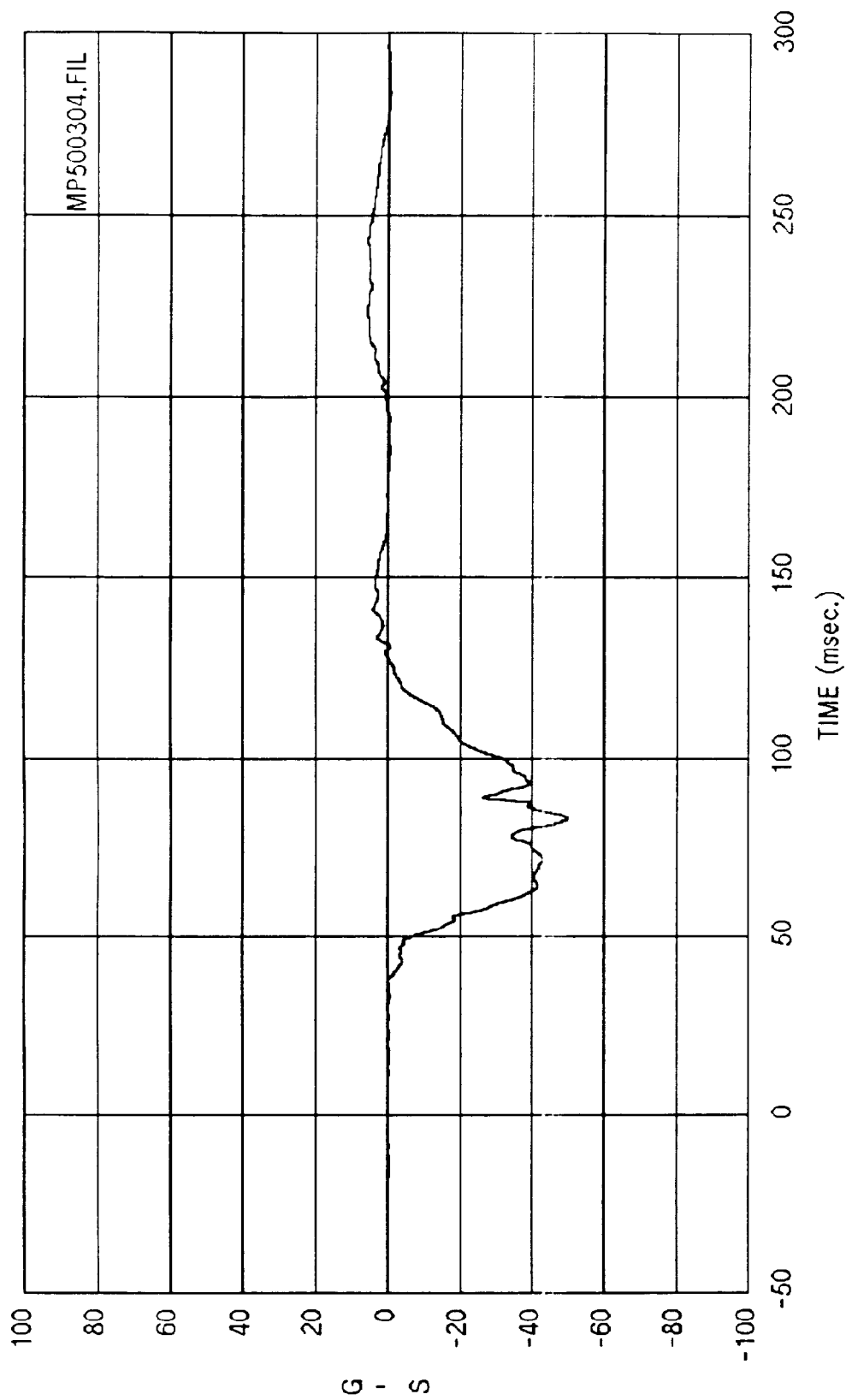


Curve: Driver head acceleration -- Z axis Filter: SAE CLASS 1000 Max = 54.213 Min = -10.786

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

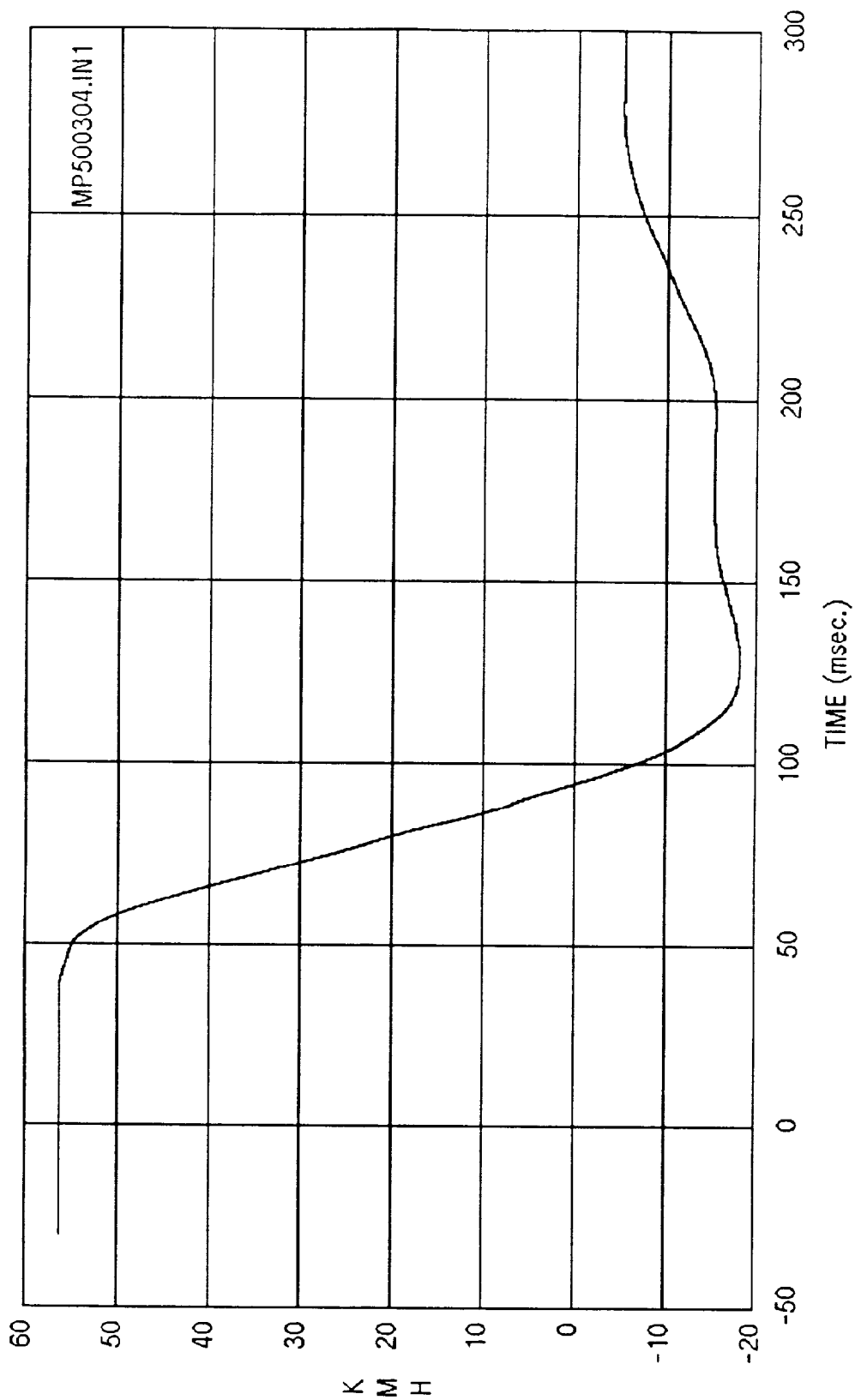


Curve: Driver head acceleration -- Resultant Filter: SAE CLASS 1000 Max = 62.640 Min = .00000
MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



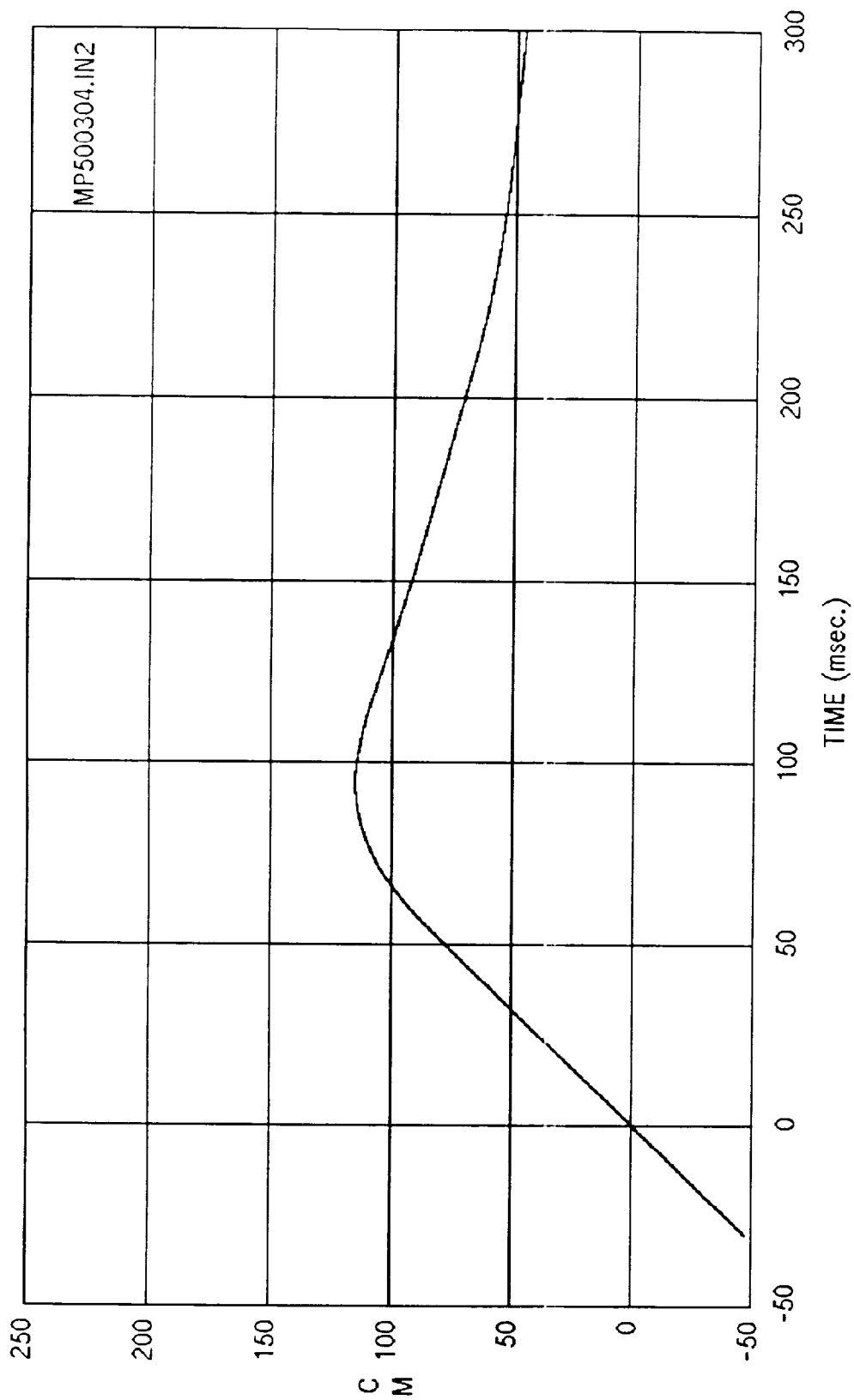
Curve: Driver chest acceleration -- X axis Filter: SAE CLASS 180 Max = 5.9016 Min = -49.772

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



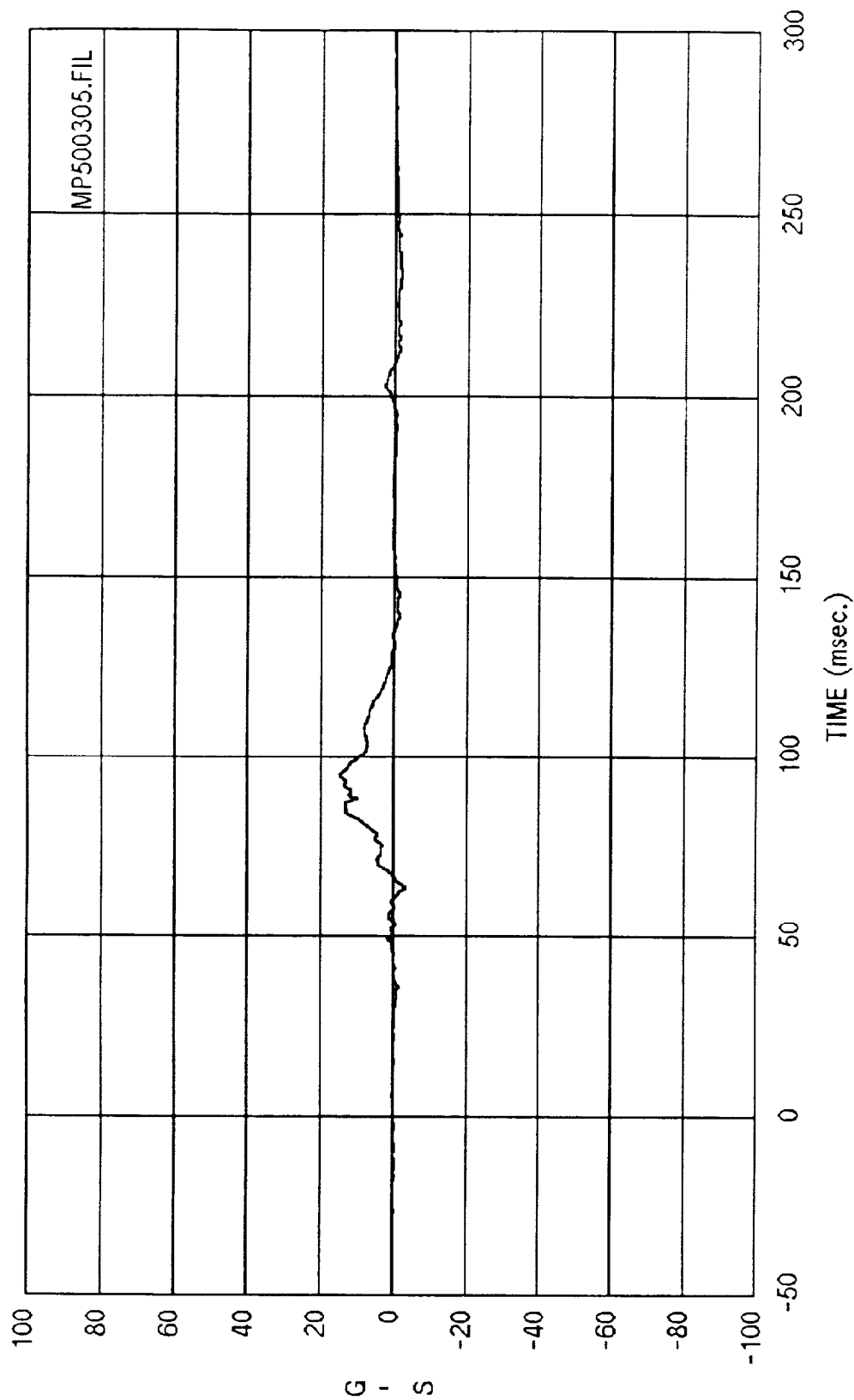
Curve: Driver chest delta V -- X axis Filter: SAE CLASS 180 Max = 56.341 Min = -18.177

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



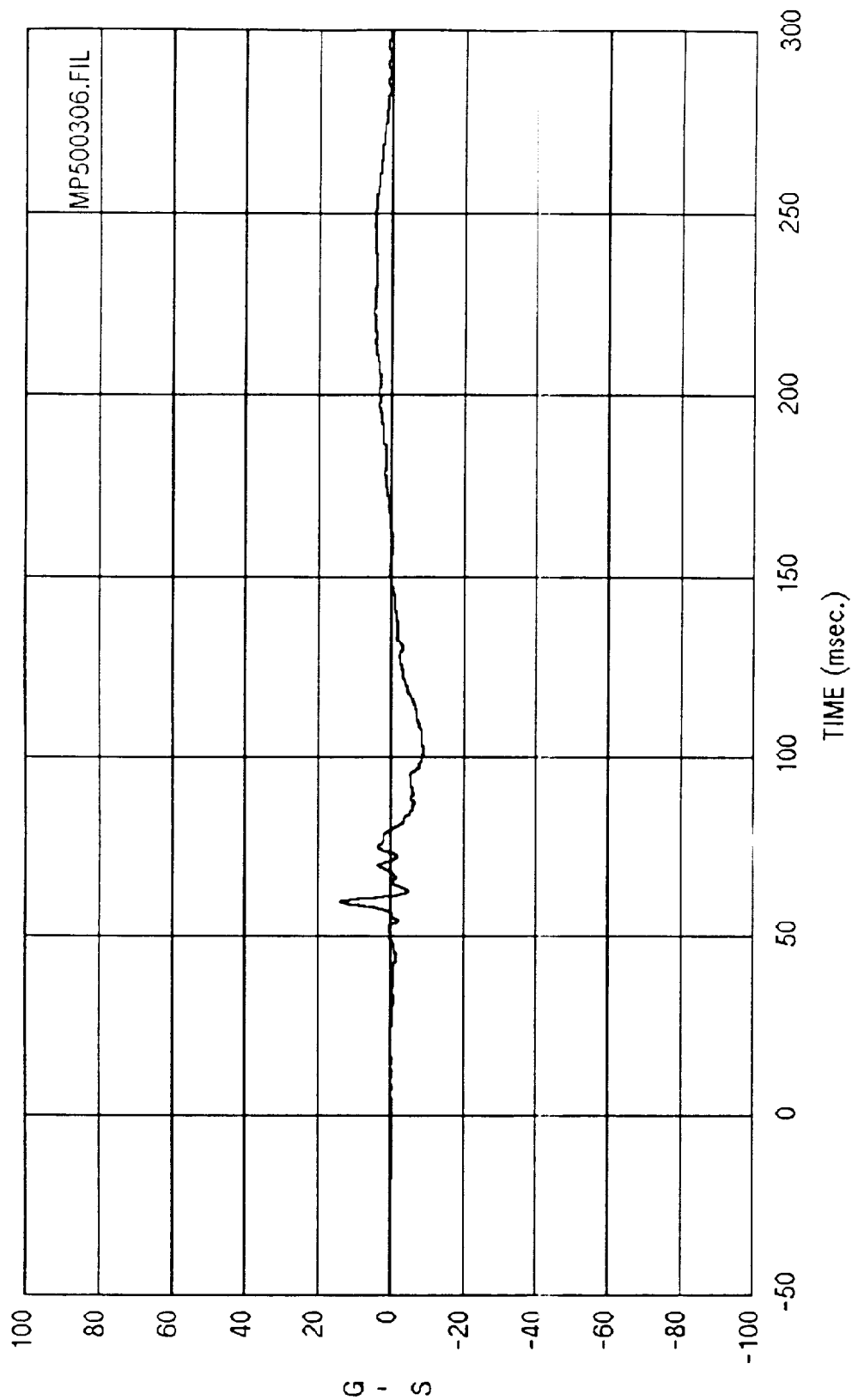
Curve: Driver chest displacement -- X axis Filter: SAE CLASS 180 Max = 115.20 Min = 46.877

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



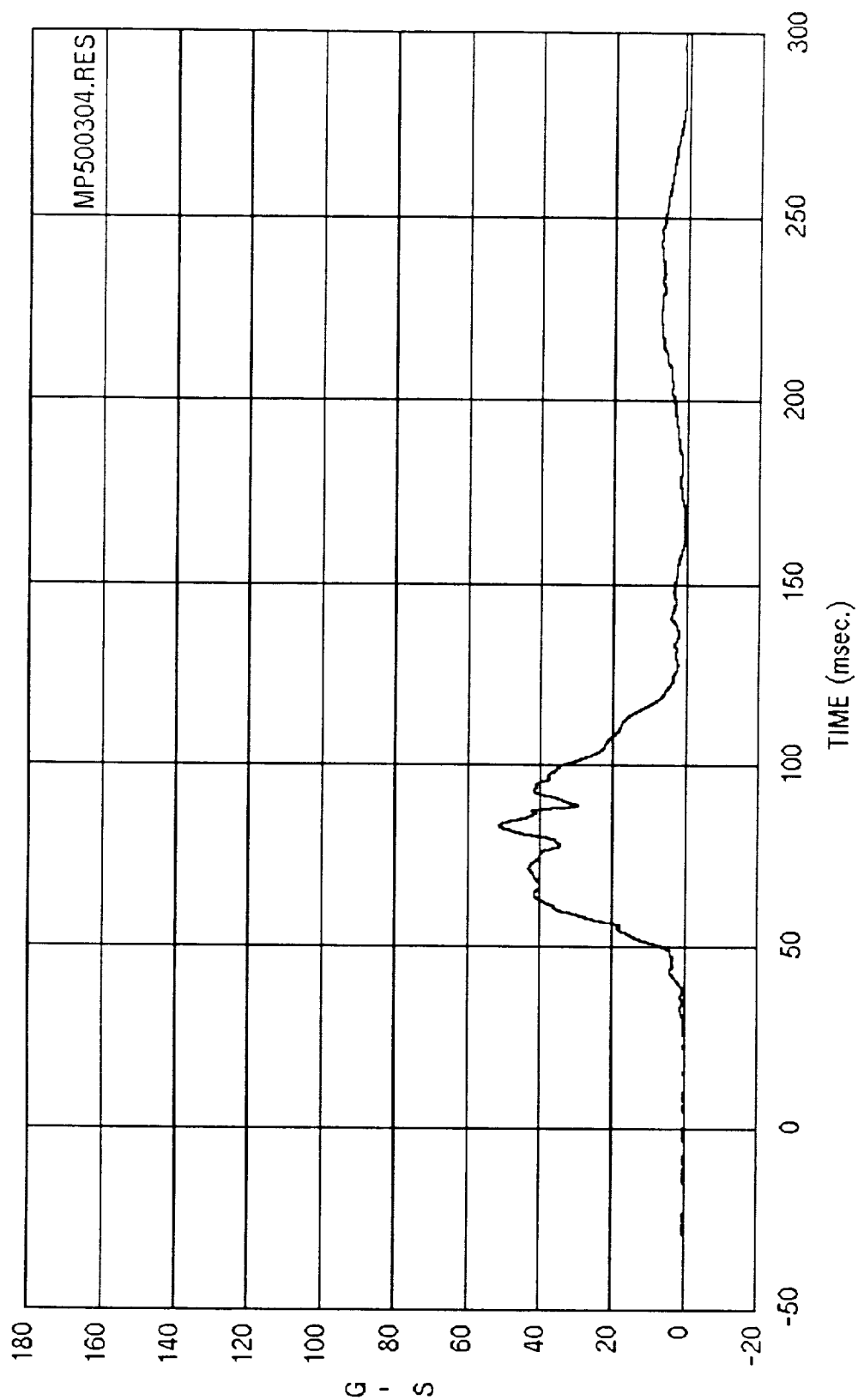
Curve: Driver chest acceleration -- Y axis Filter: SAE CLASS 180 Max = 14.683 Min = -3.1762

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



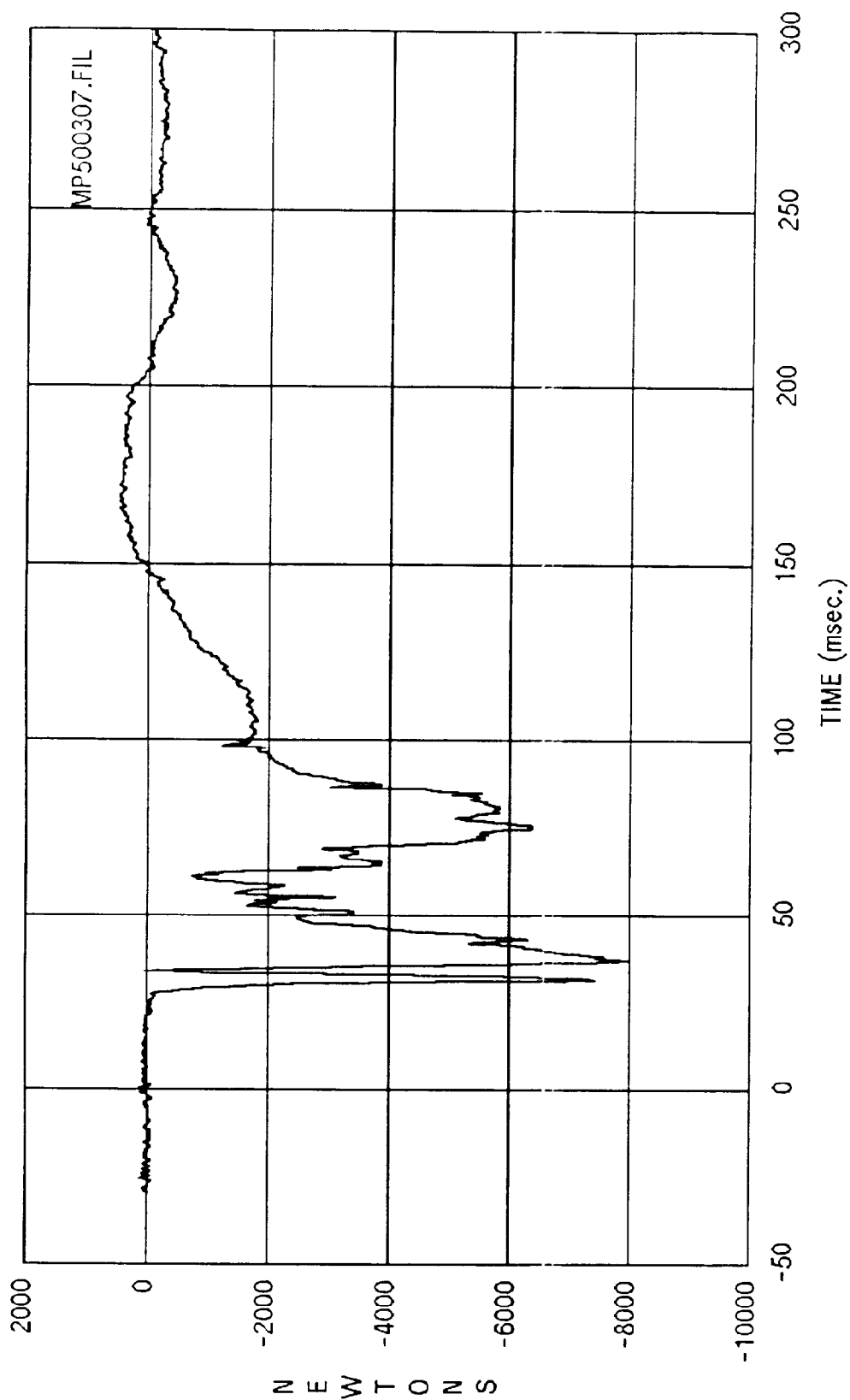
Curve: Driver chest acceleration -- Z axis Filter: SAE CLASS 180 Max = 14.008 Min = -8.8359

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



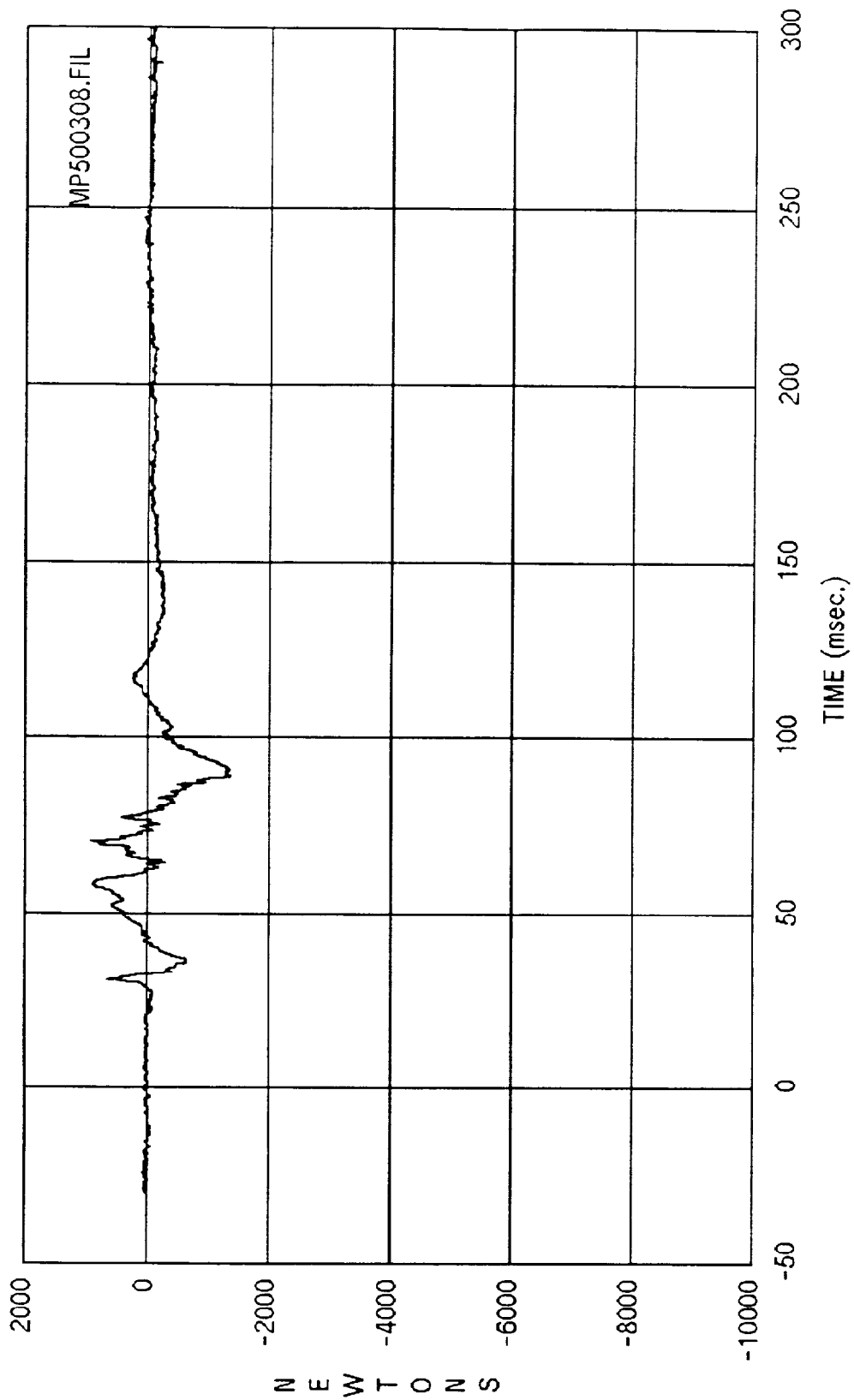
Curve: Driver chest acceleration -- Resultant Filter: SAE CLASS 180 Max = 51.221 Min = .48200E 01

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



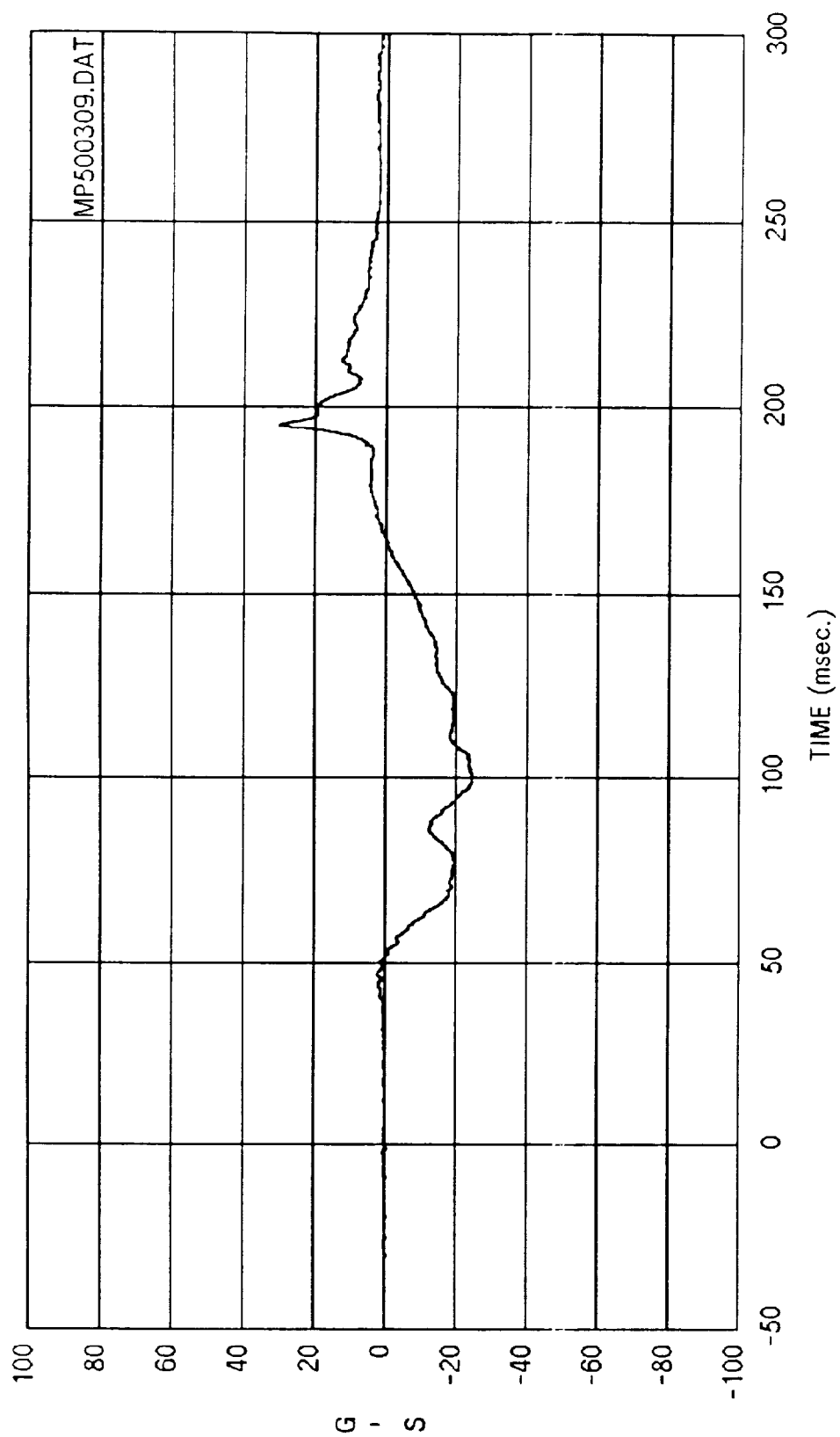
Curve: Driver left femur force Filter: SAE CLASS 600 Max = 476.69 Min = -7997.3

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



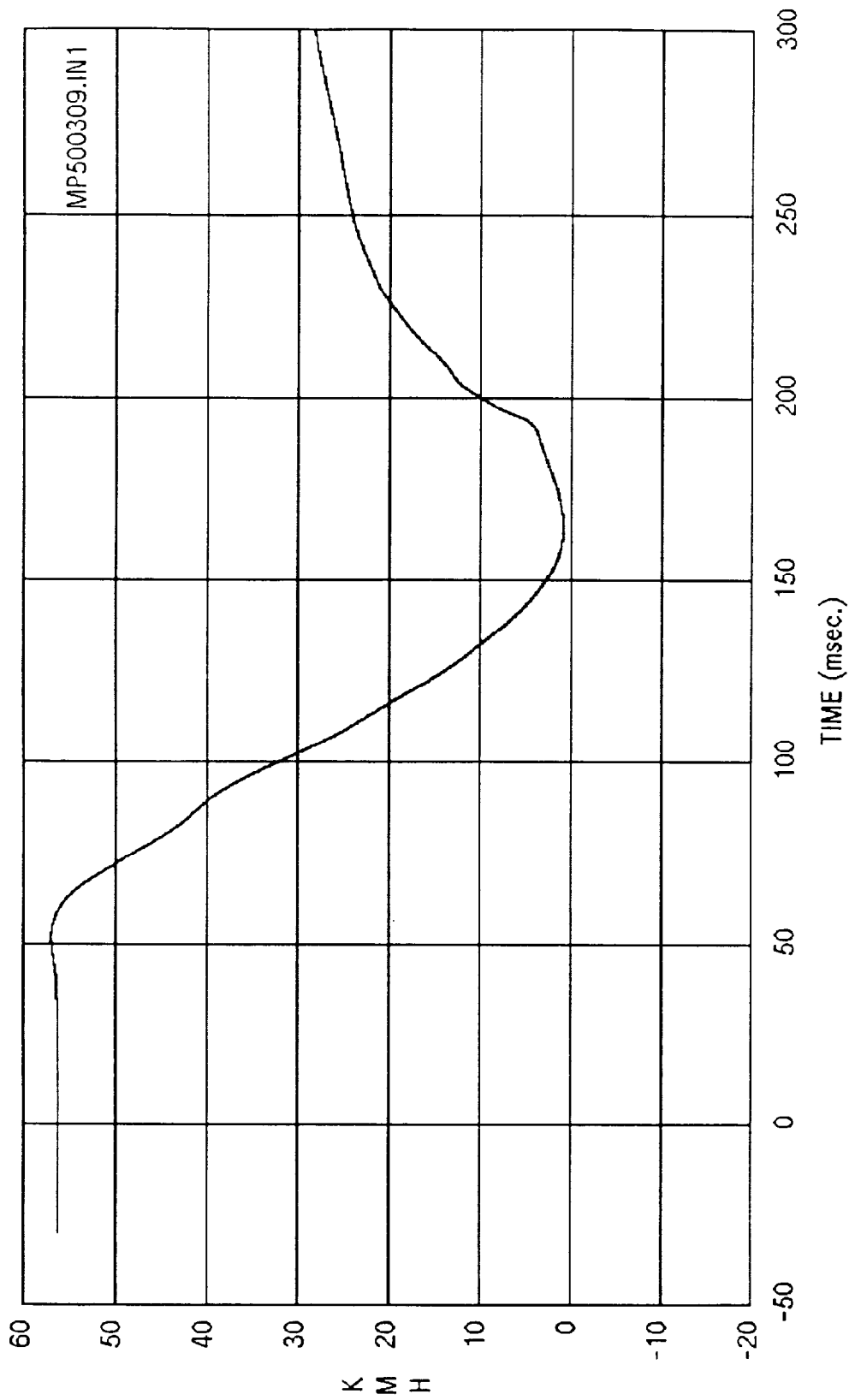
Curve: Driver right femur force Filter: SAE CLASS 600 Max = 929.73 Min = -1352.6

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



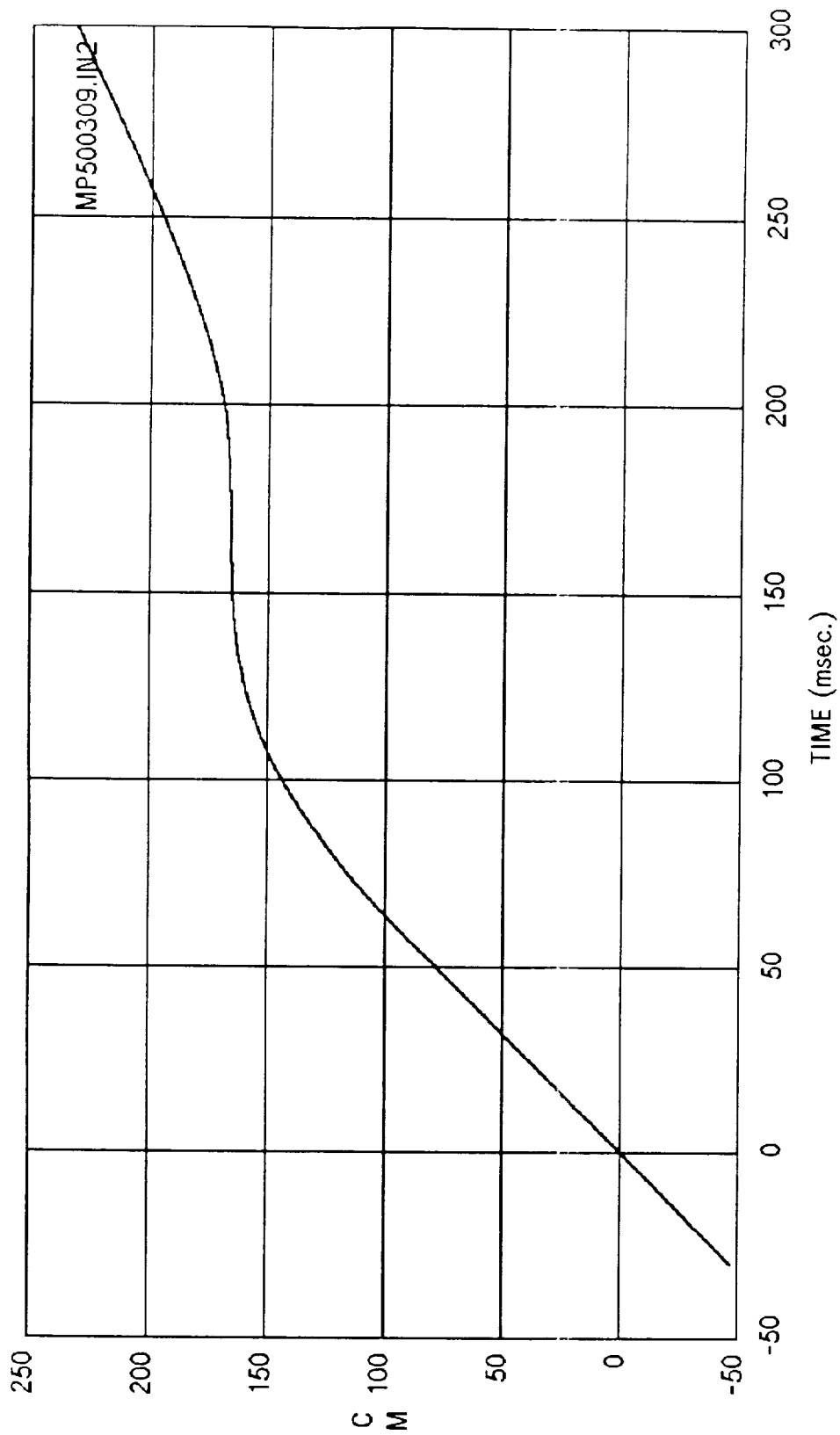
Curve: Passenger head acceleration -- X axis Filter: SAE CLASS 1000 Max = 30.160 Min = -24.901

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



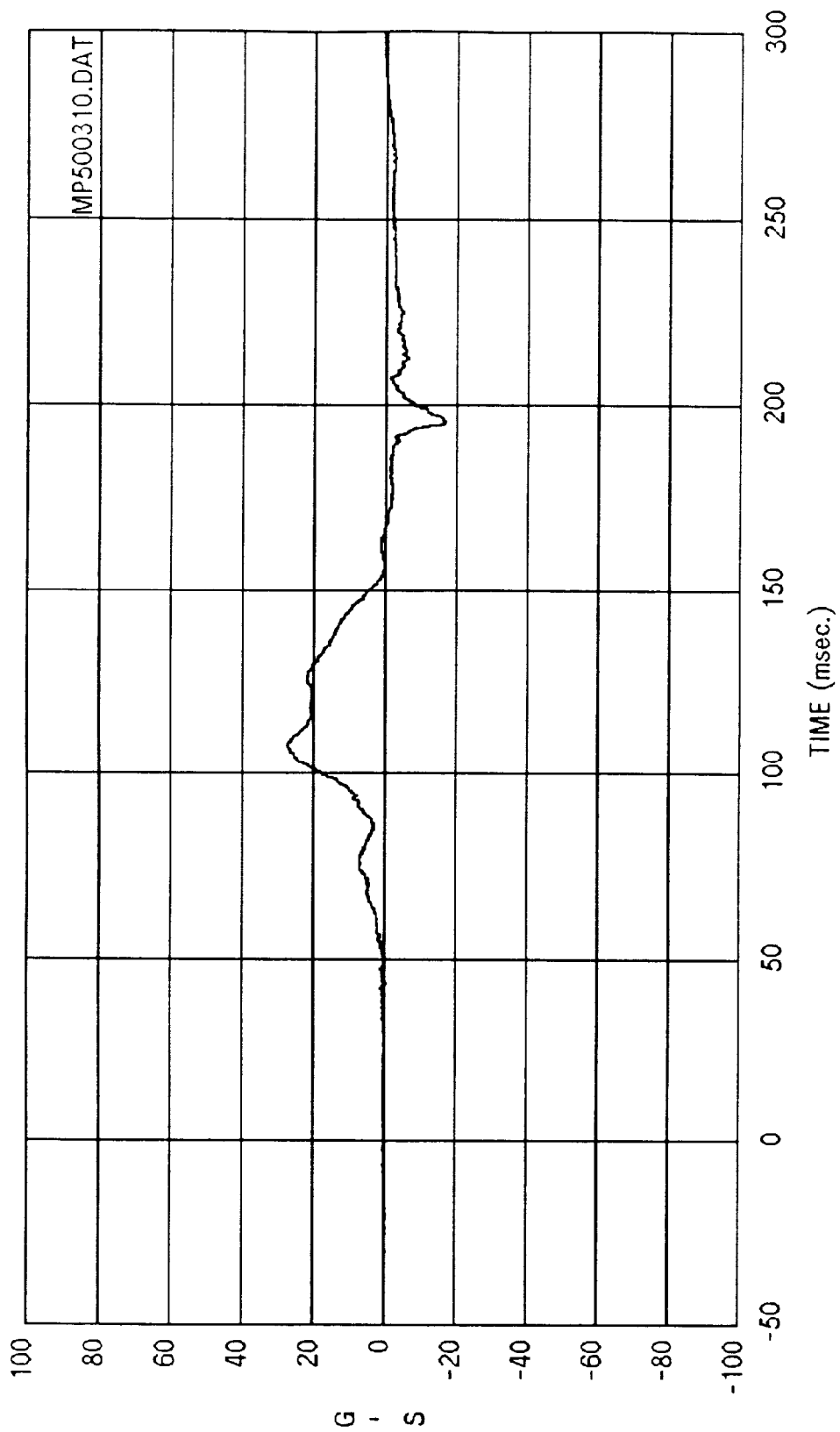
Curve: Passenger head delta V -- X axis Filter: SAE CLASS 180 Max = 56.979 Min = .85505

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



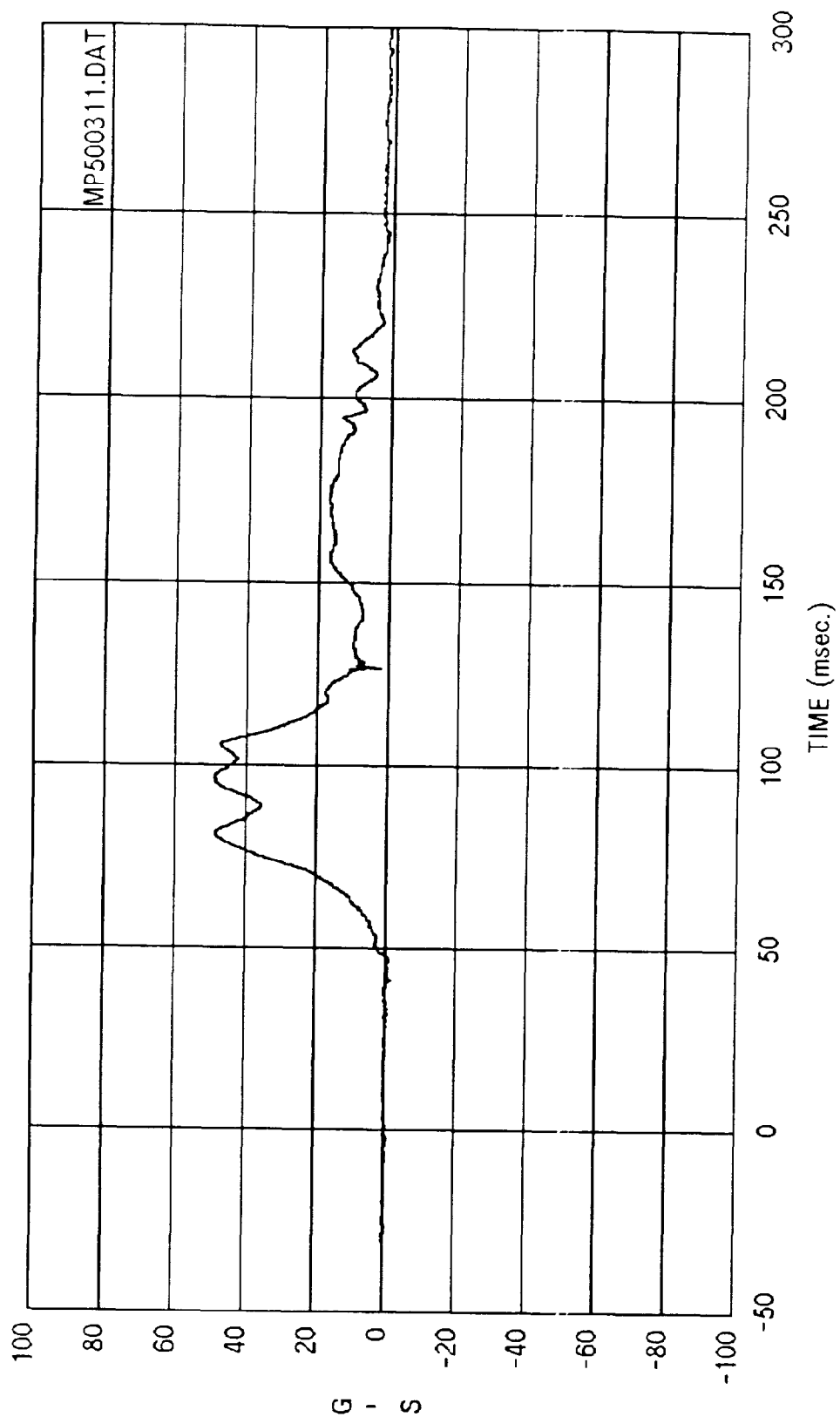
Curve: Passenger head displacement -- X axis Filter: SAE CLASS 180 Max = 231.47 Min = .10000E+11

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



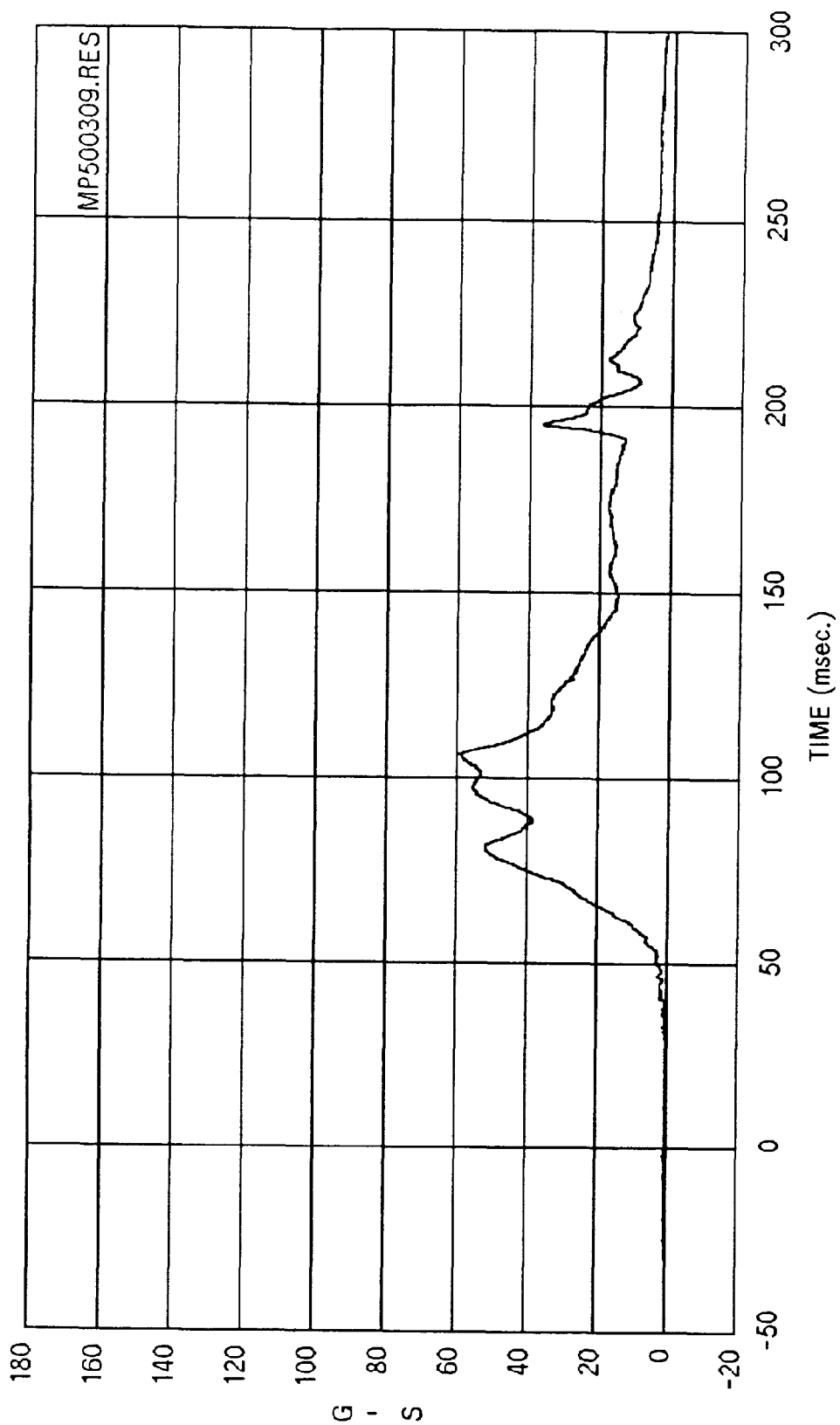
Curve: Passenger head acceleration -- Y axis Filter: SAE CLASS 1000 Max = 27.322 Min = -17.672

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



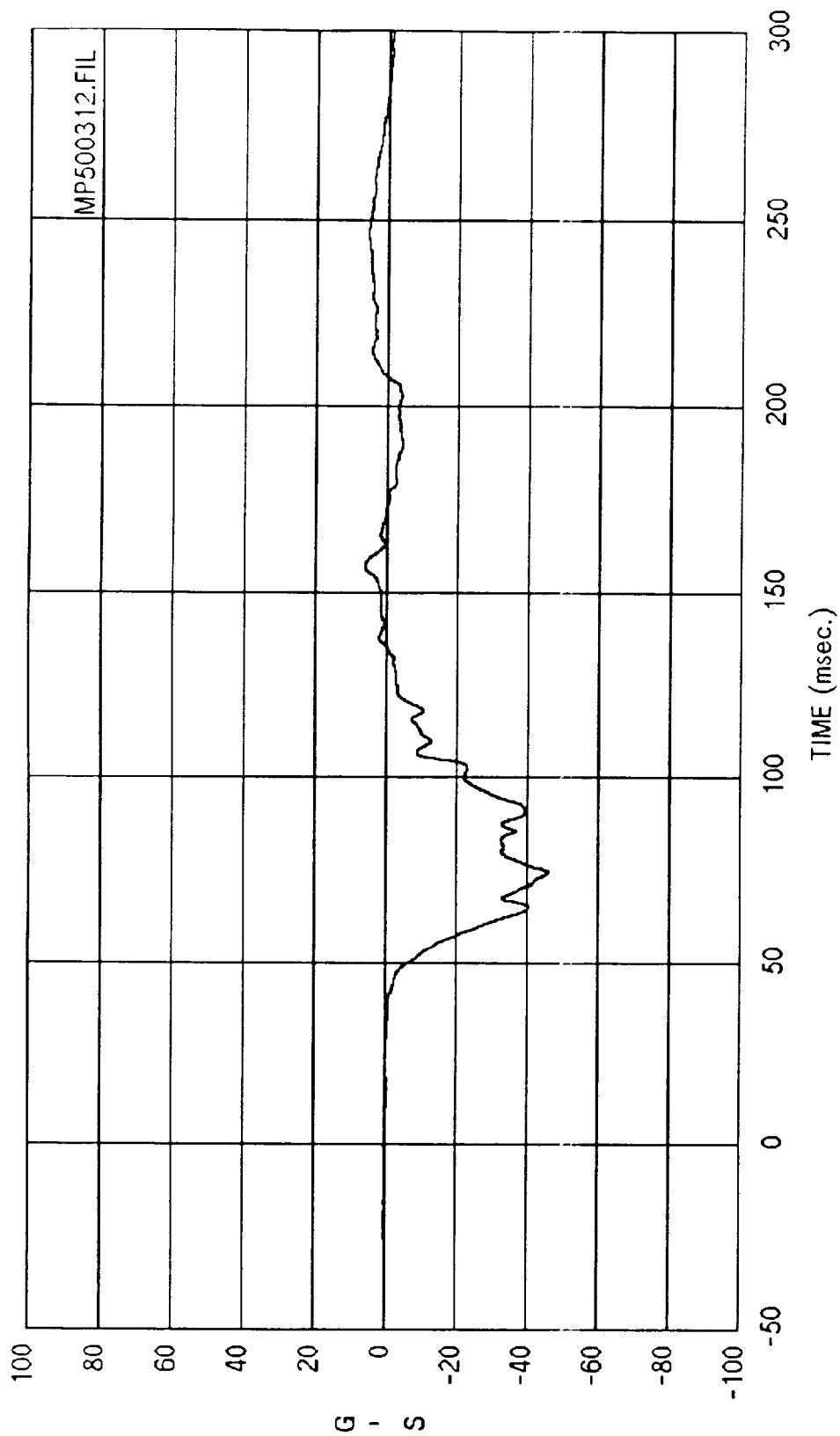
Curve: Passenger head acceleration -- Z axis Filter: SAE CLASS 1000 Max = 49.251 Min = -1.6417

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



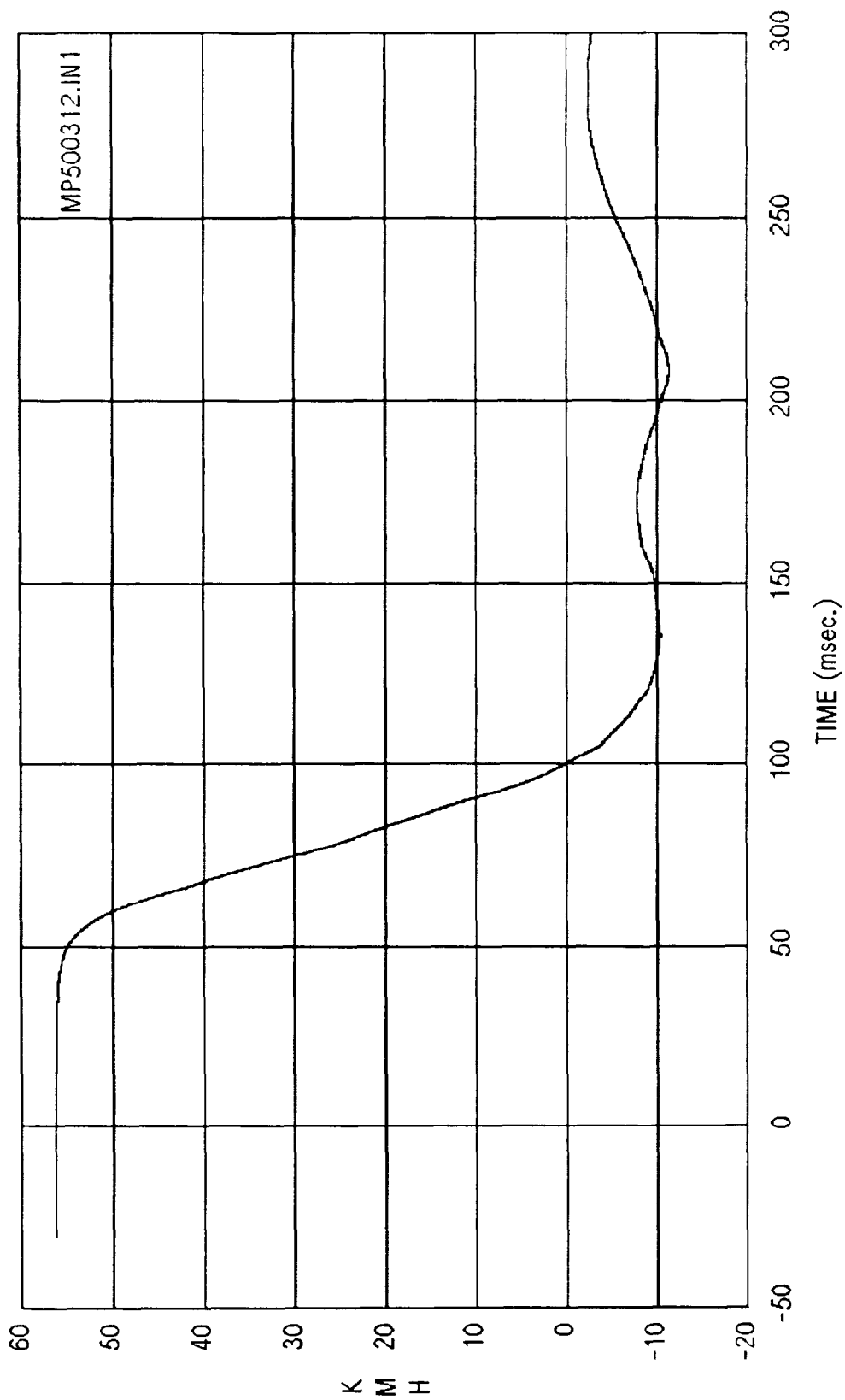
Curve: Passenger head acceleration -- Resultant Filter: SAE CLASS 1000 Max = 59.058 Min = .00000

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



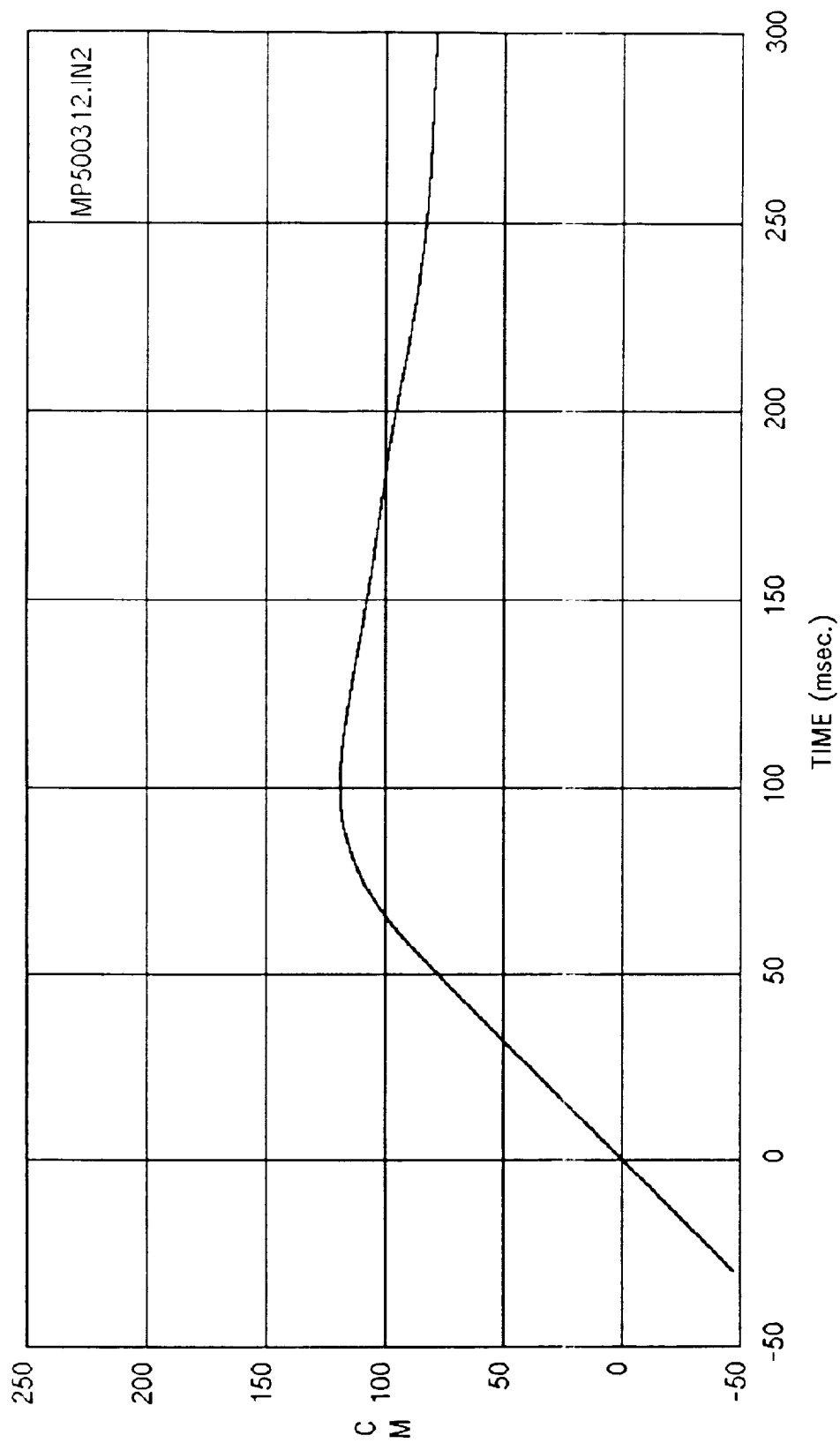
Curve: Passenger chest acceleration -- X axis Filter: SAE CLASS 180 Max = 5.9125 Min = -45.907

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



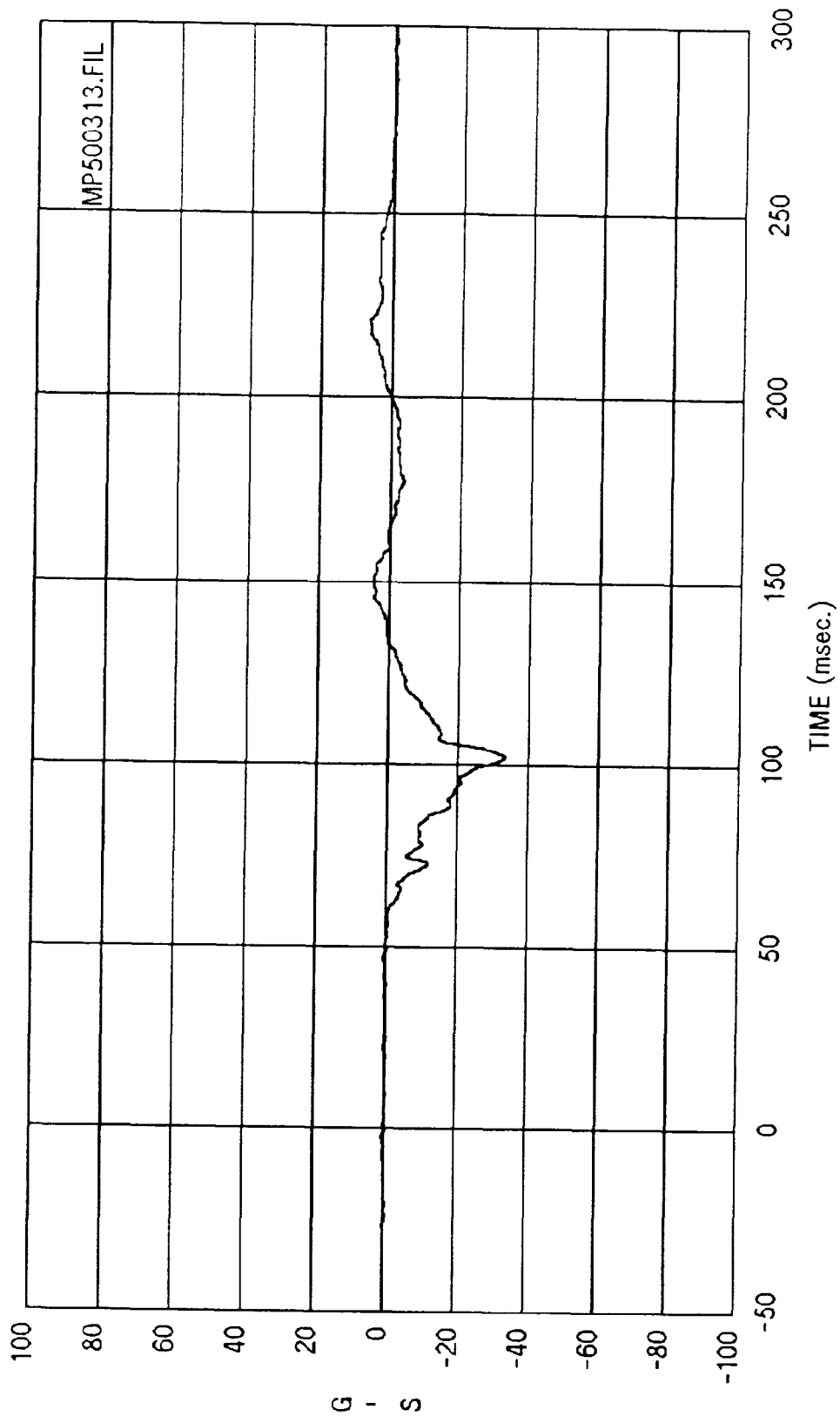
Curve: Passenger chest delta V -- X axis Filter: SAE CLASS 180 Max = 56.303 Min = -11.367

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

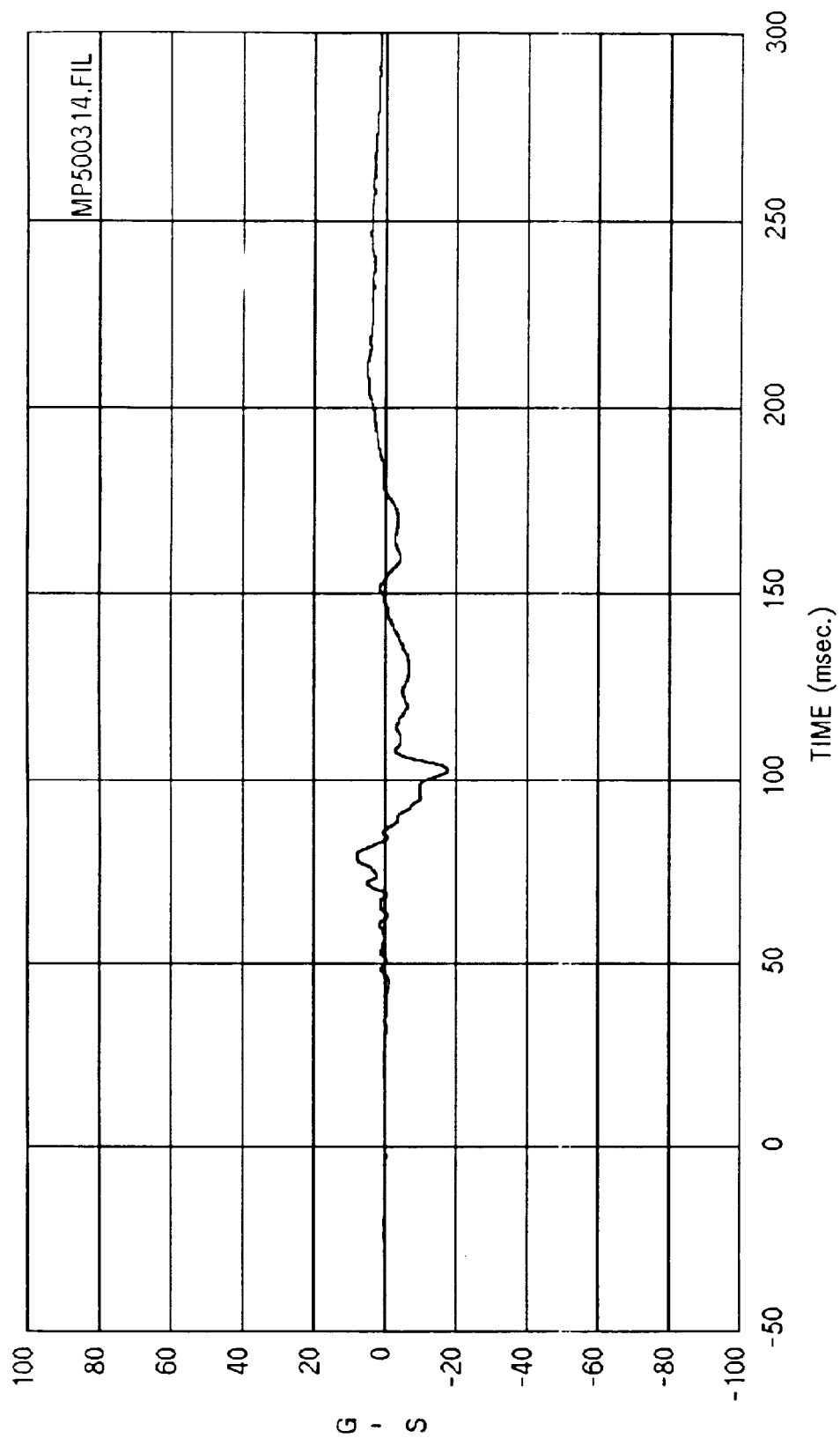


Curve: Passenger chest displacement -- X axis Filter: SAE CLASS 180 Max = 118.94 Min = 78.617

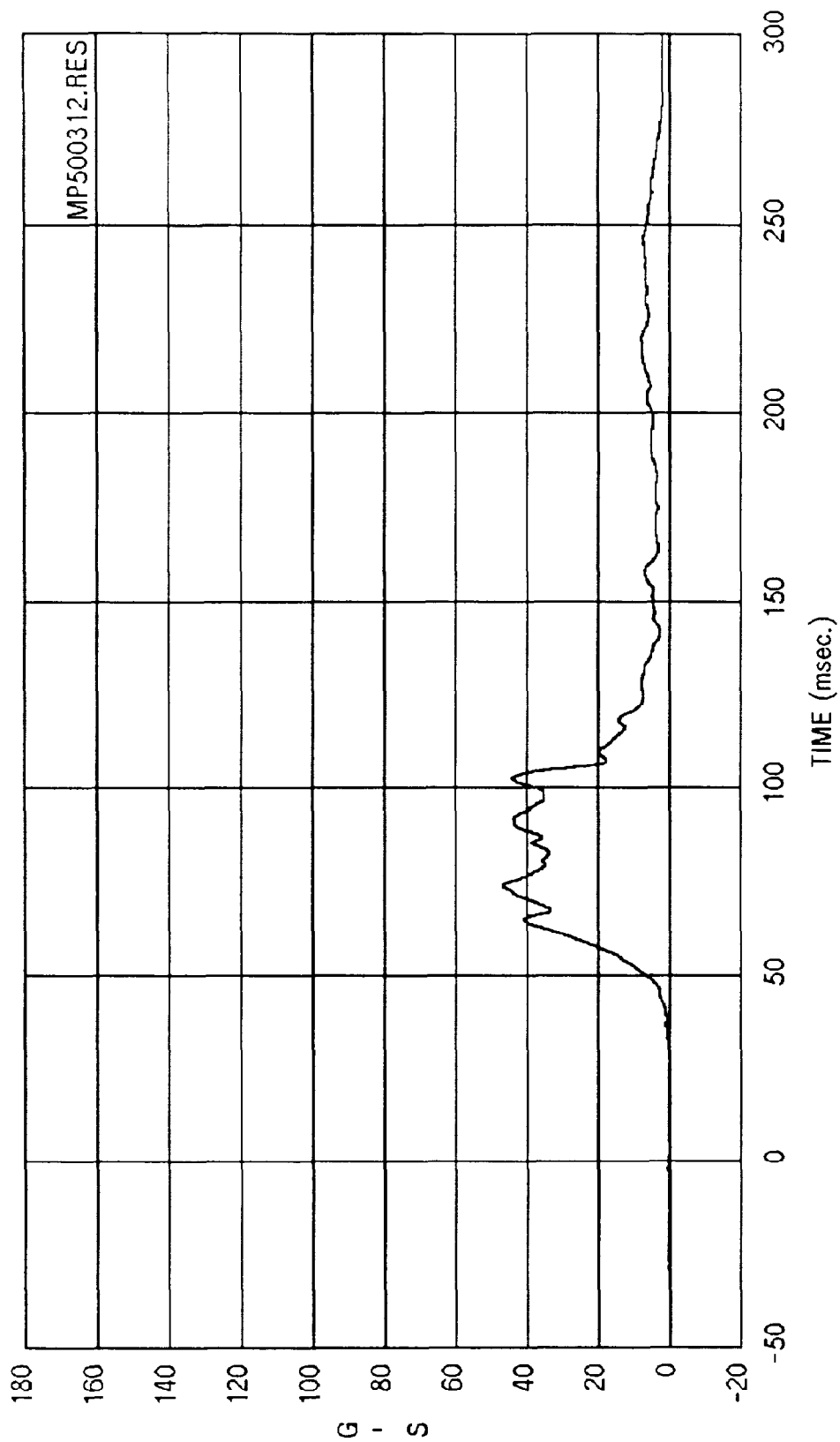
MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



Curve: Passenger chest acceleration -- Y axis Filter: SAE CLASS 180 Max = 6.2237 Min = -33.451
MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

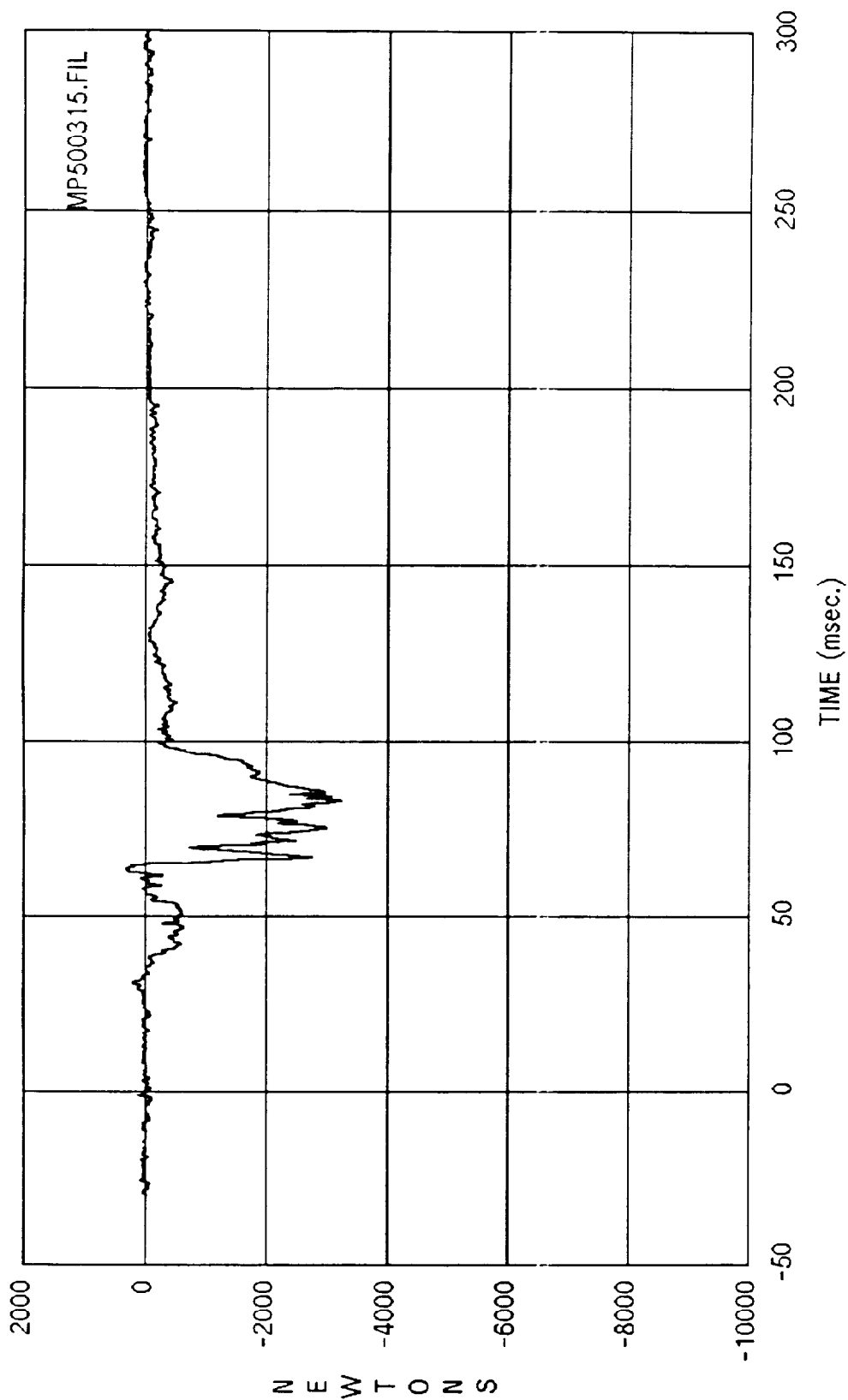


Curve: Passenger chest acceleration -- Z axis Filter: SAE CLASS 180 Max = 7.9389 Min = -17.645
MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



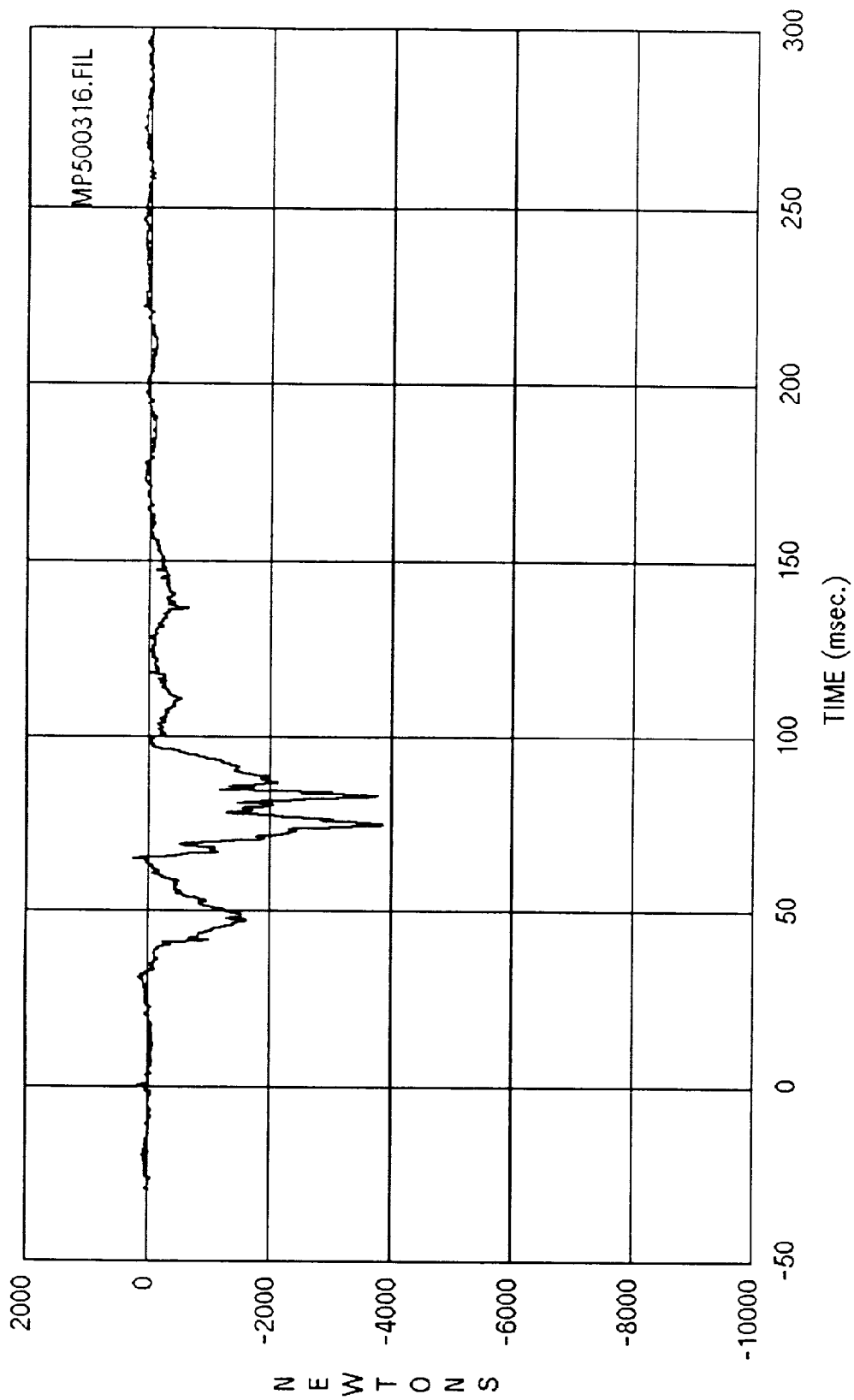
Curve: Passenger chest acceleration -- Resultant Filter: SAE CLASS 180 Max = 46.749 Min = .37599
01

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



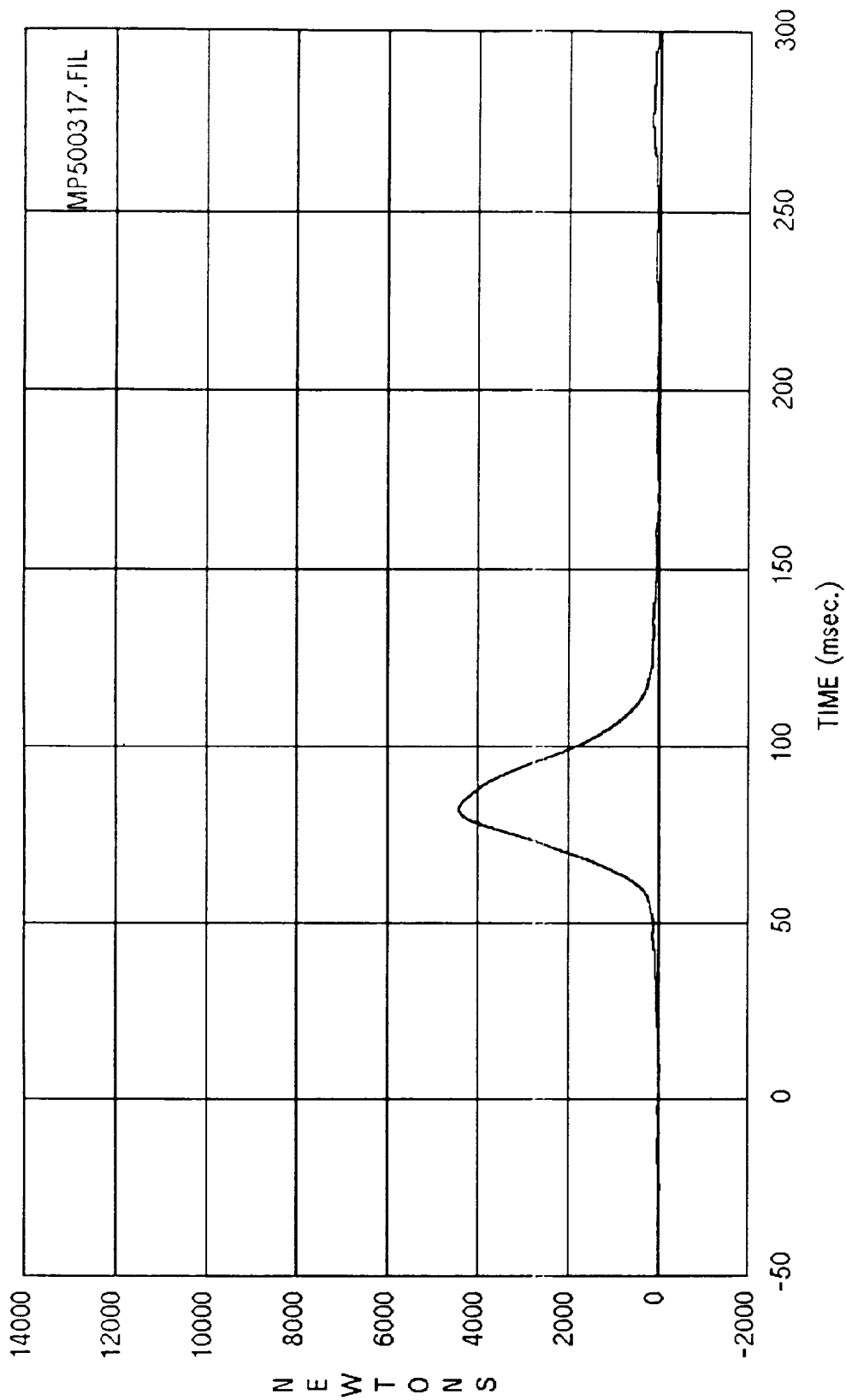
Curve: Passenger left femur force Filter: SAE CLASS 600 Max = 336.43 Min = -3229.1

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



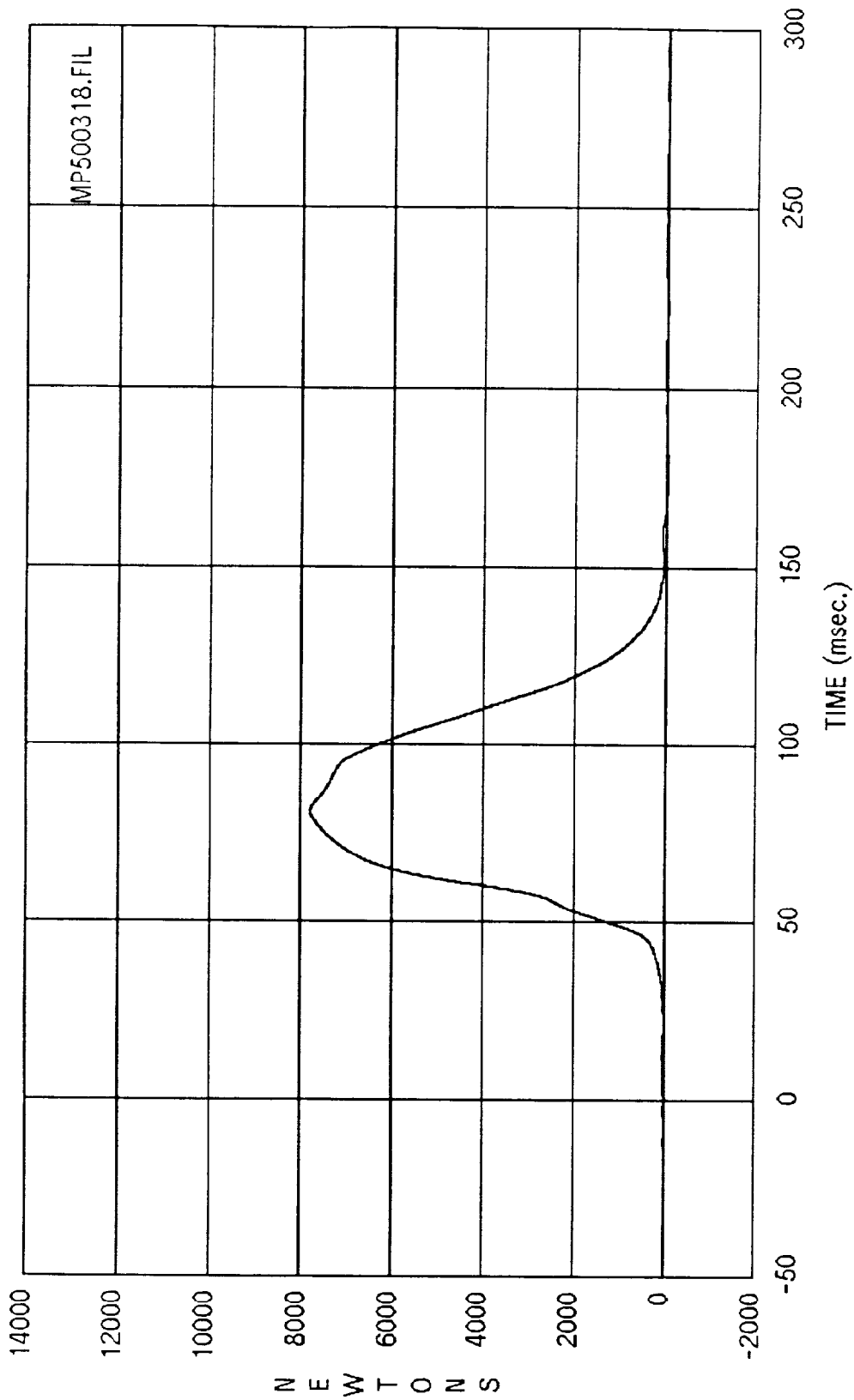
Curve: Passenger right femur force Filter: SAE CLASS 600 Max = 279.24 Min = -3851.2

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



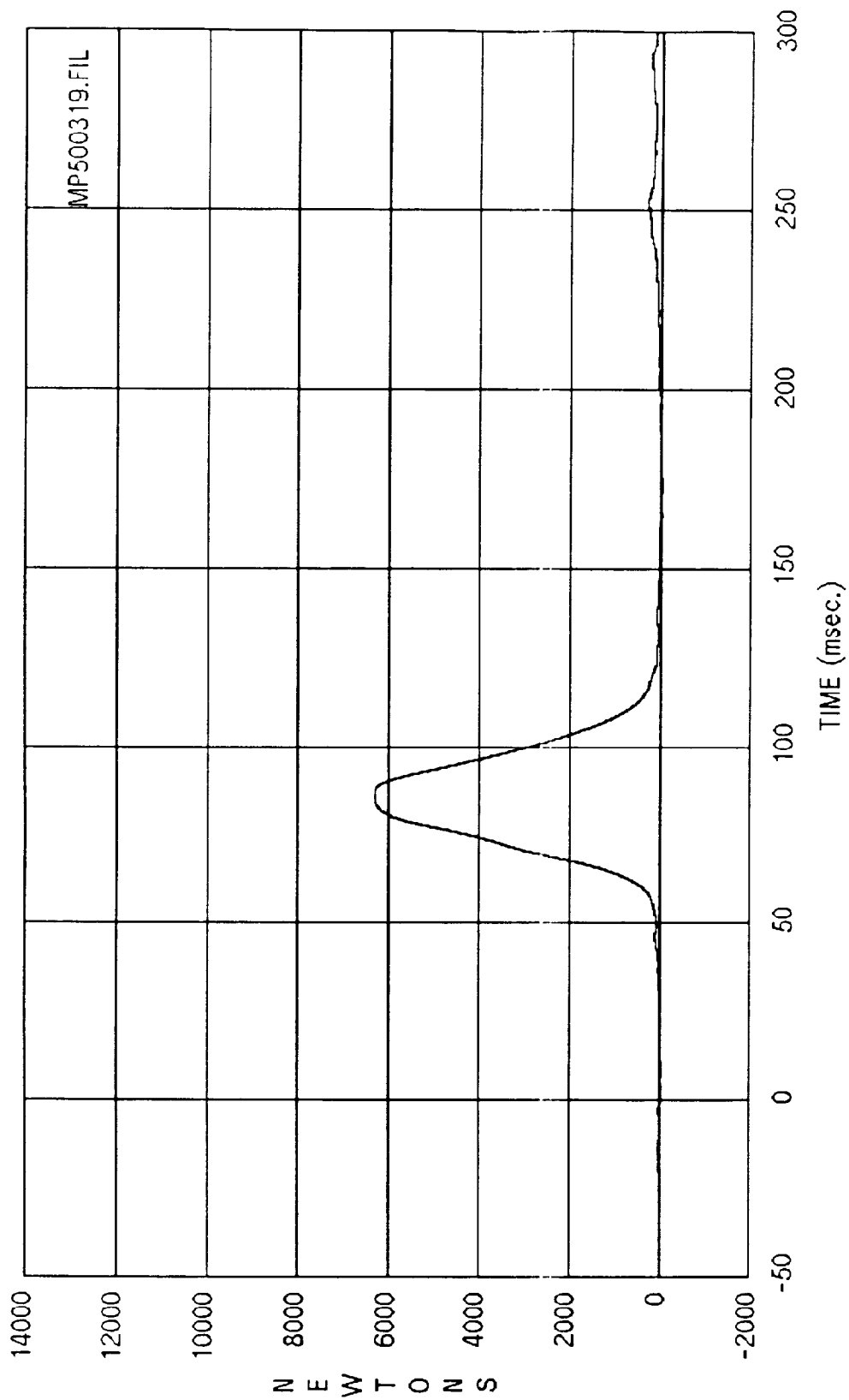
Curve: Driver lap belt load Filter: SAE CLASS 60 Max = 4418.9 Min = -24.963

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

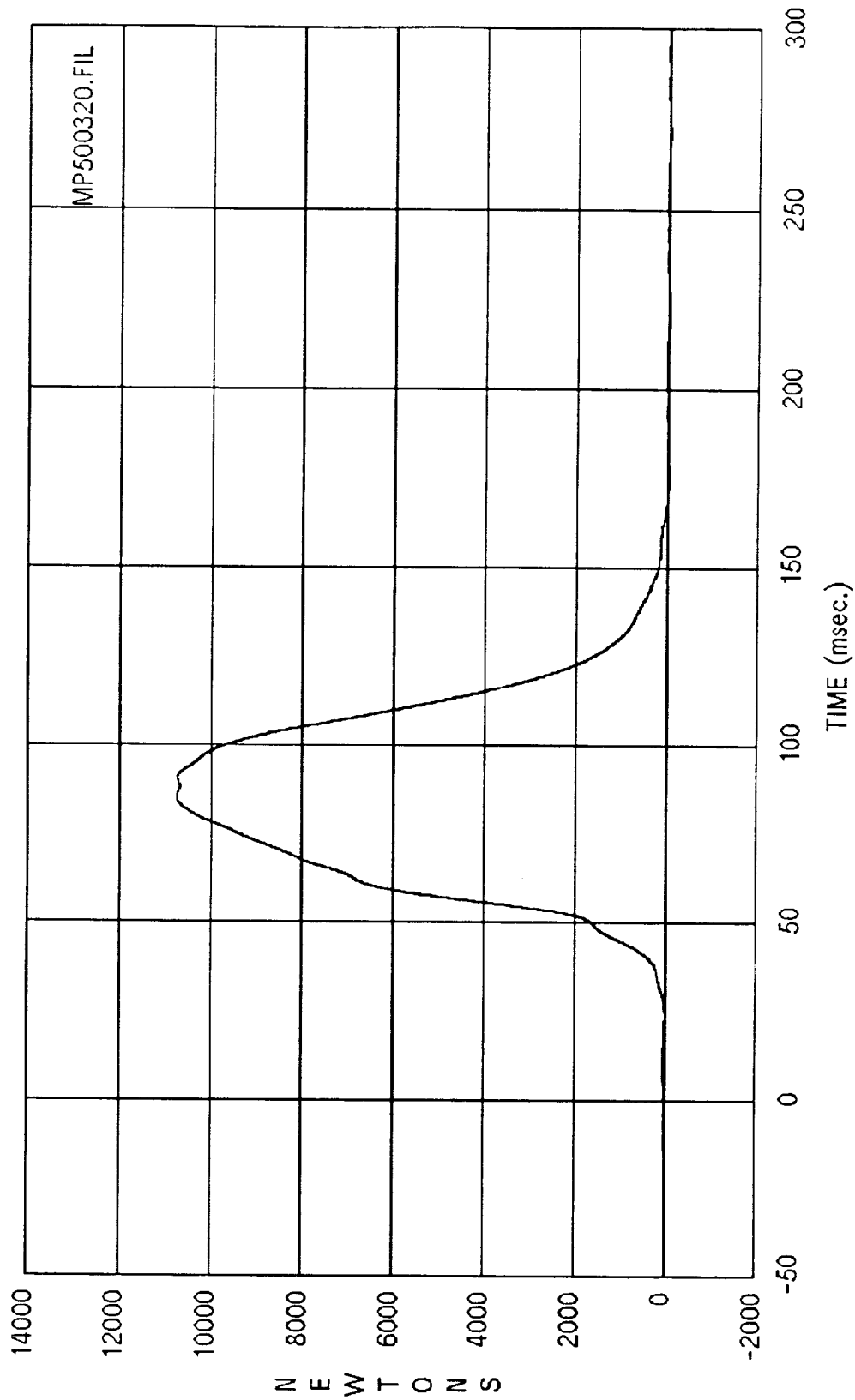


Curve: Driver shoulder belt load Filter: SAE CLASS 60 Max = 7808.3 Min = -39.771

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

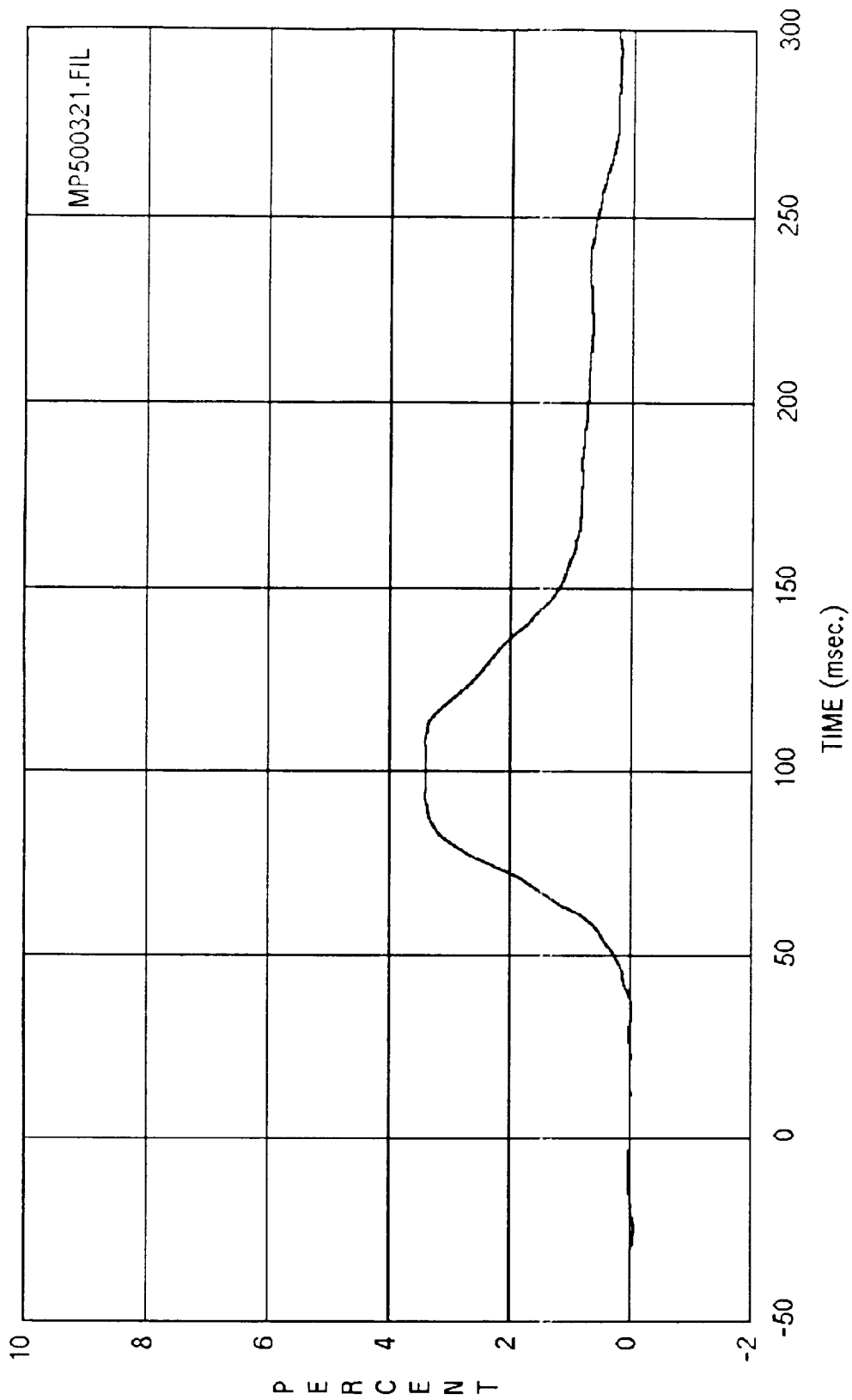


Curve: Passenger lap belt load Filter: SAE CLASS 60 Max = 6313.6 Min = -40.175
MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

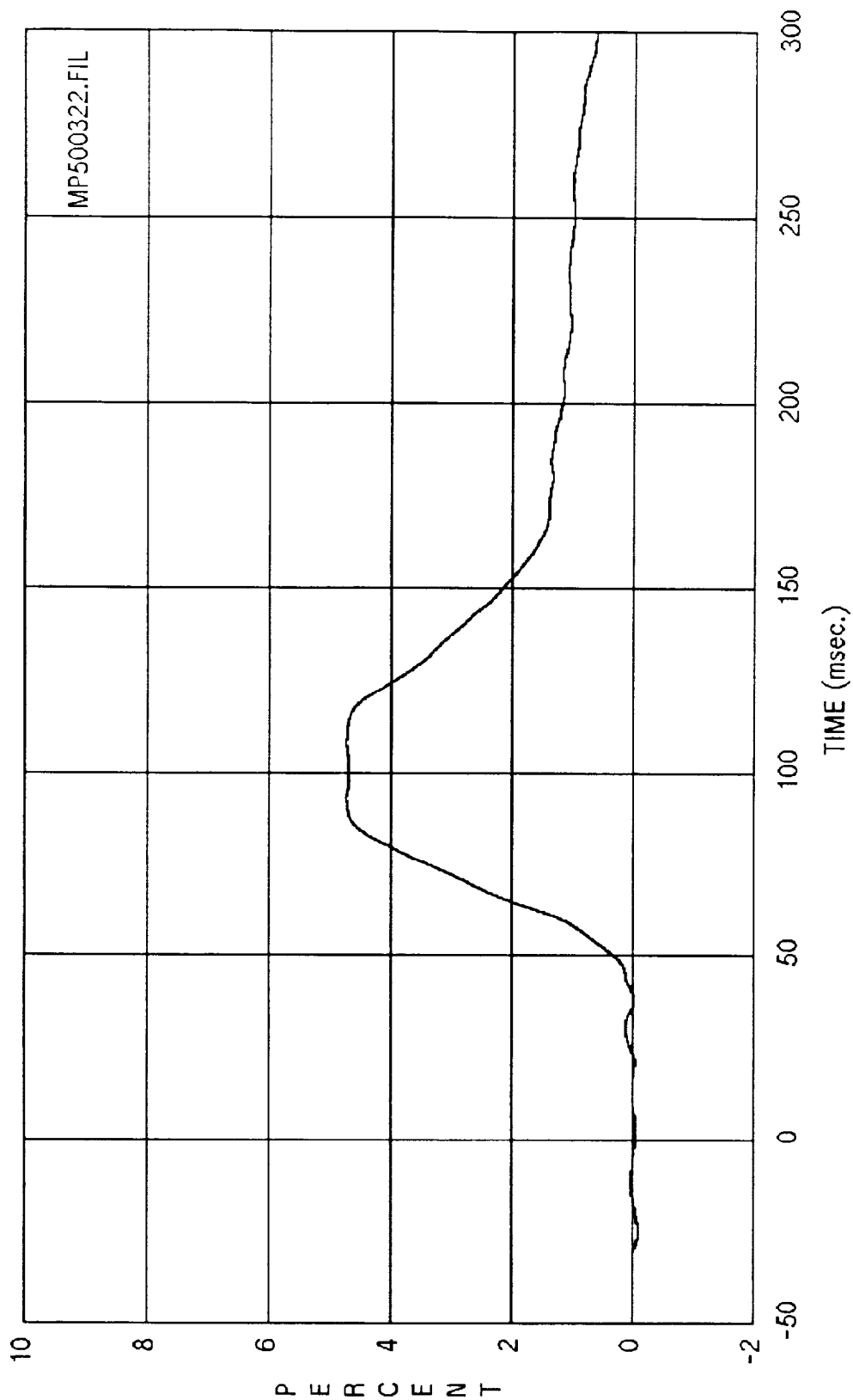


Curve: Passenger shoulder belt load Filter: SAE CLASS 60 Max = 10748. Min = -51.469

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

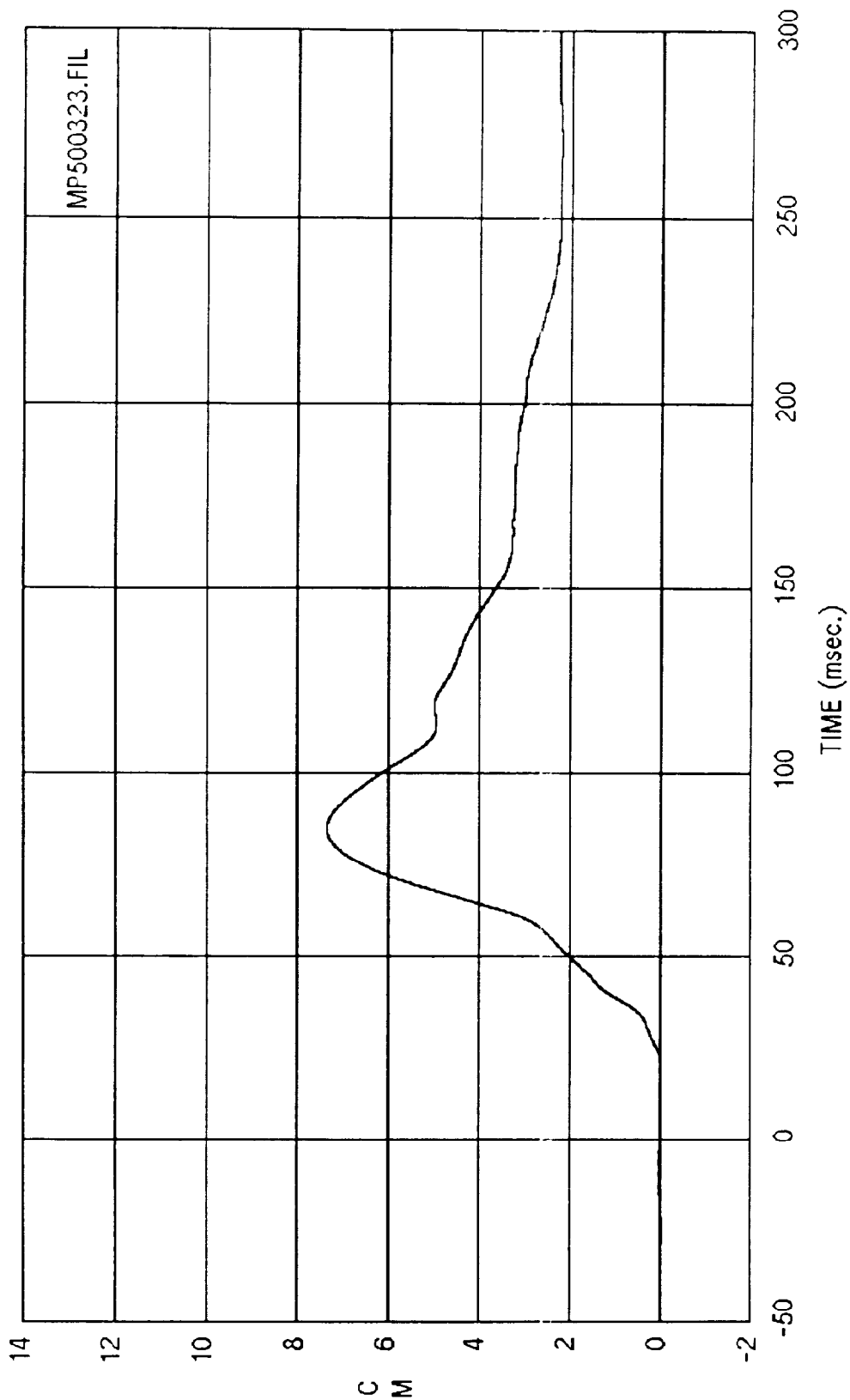


Curve: Driver shoulder belt elongation Filter: SAE CLASS 60 Max = 3.4184 Min = -.14376E-0
MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



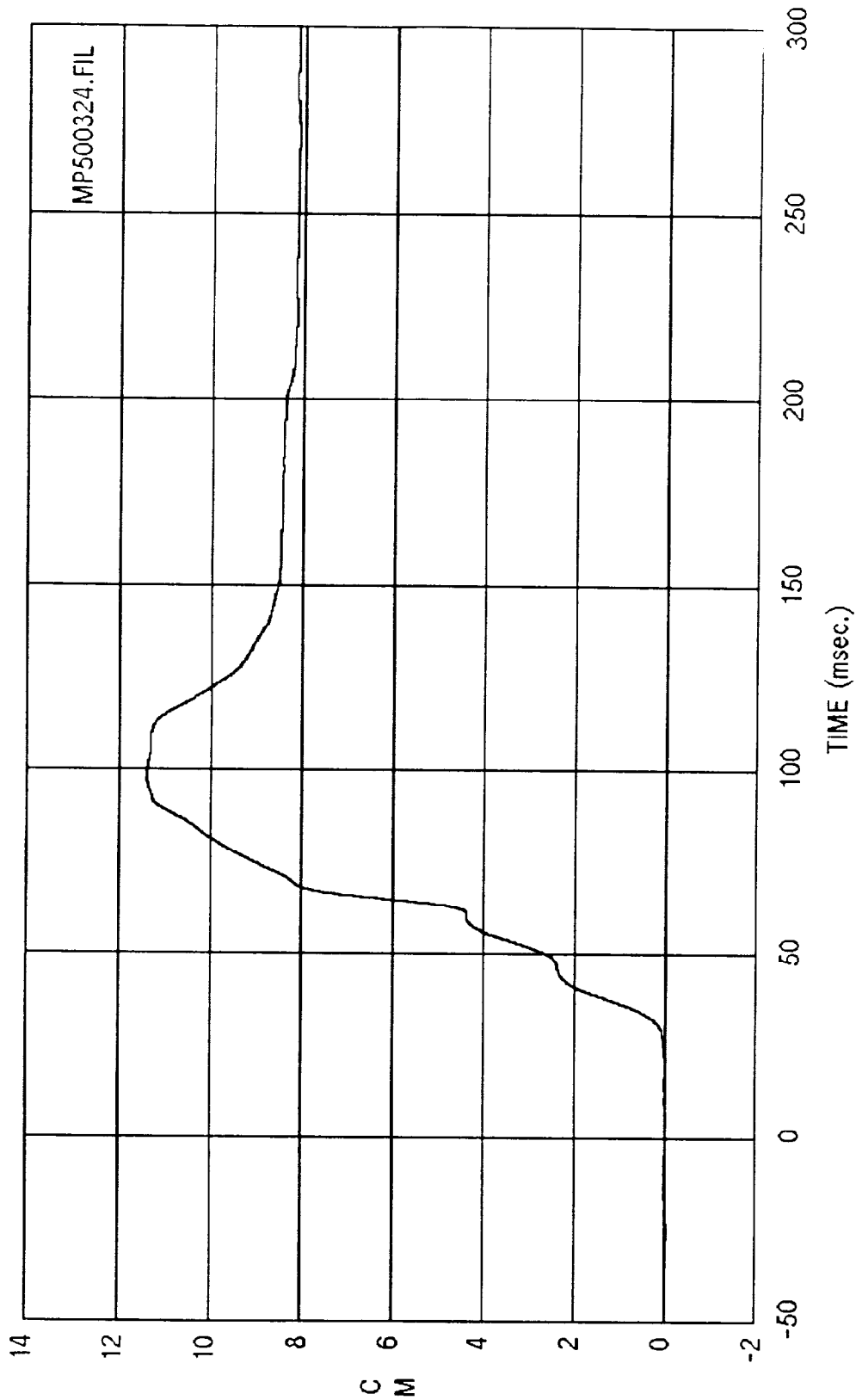
Curve: Passenger shoulder belt elongation Filter: SAE CLASS 60 Max = 4.7418 Min = -.30377E-(

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

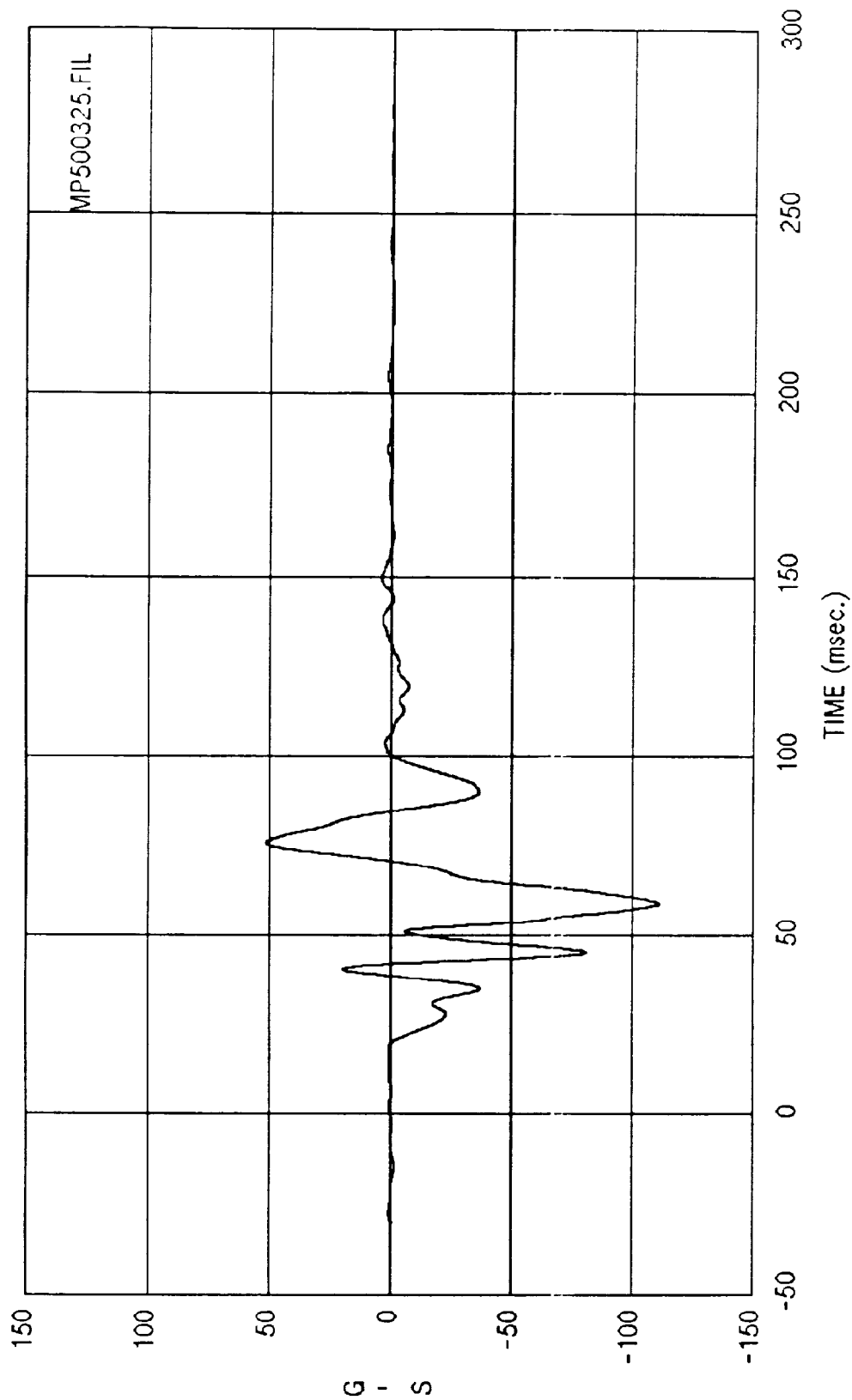


Curve: Driver shoulder belt spoolout Filter: SAE CLASS 60 Max = 7.3692 Min = -.20029E-0

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

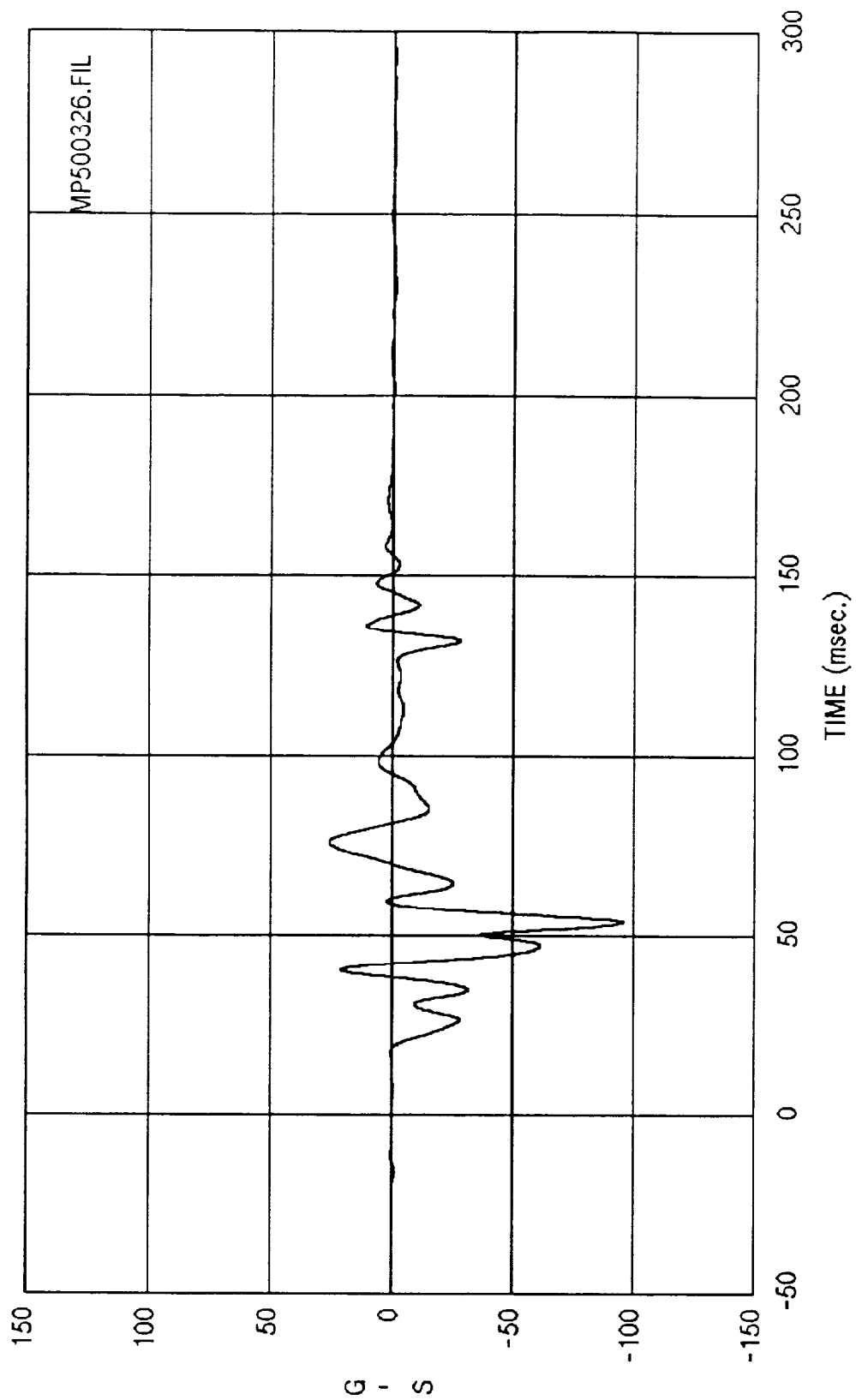


Curve: Passenger shoulder belt spoolout Filter: SAE CLASS 60 Max = 11.403 Min = -.46263E-01
MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

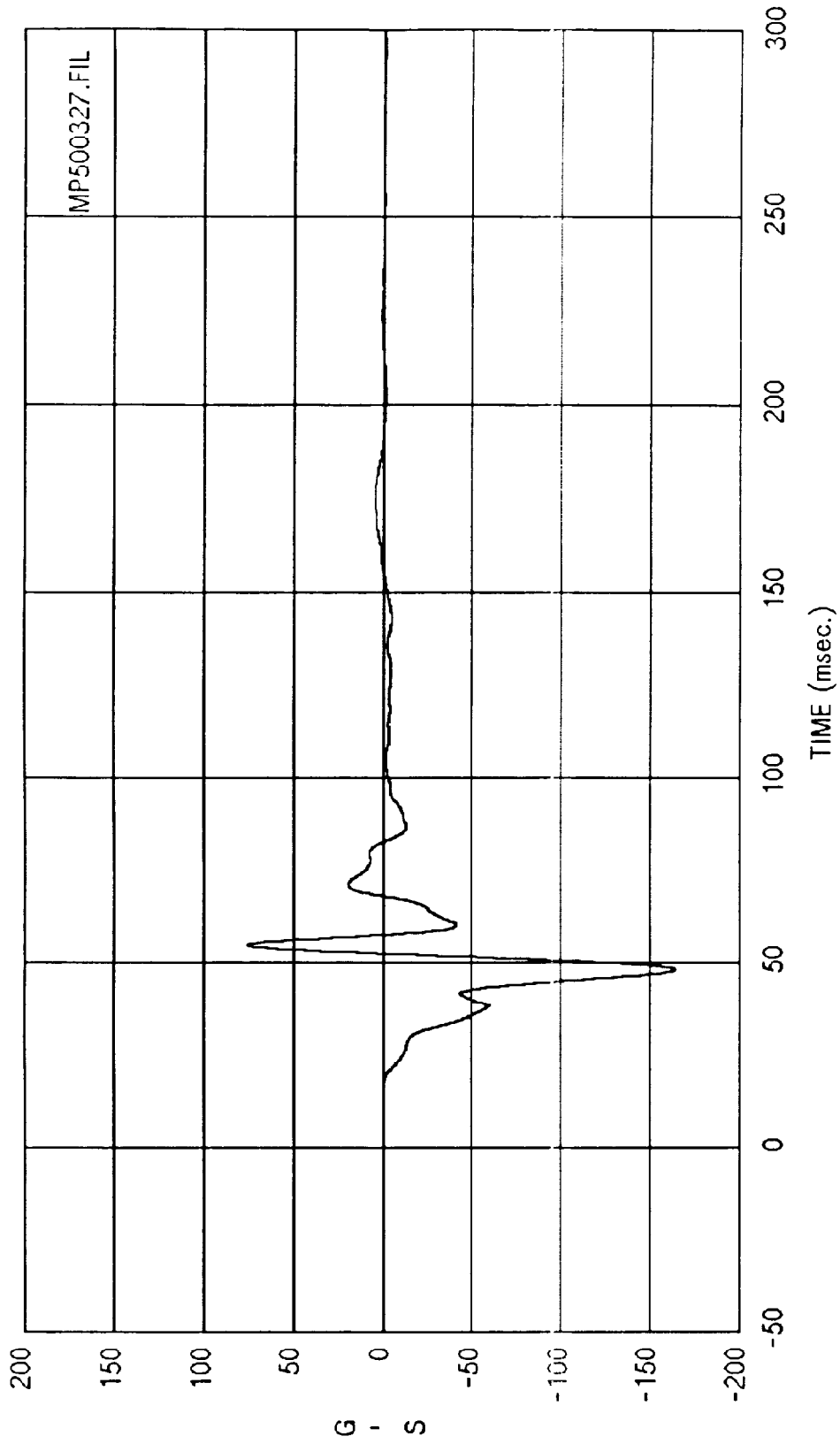


Curve: Left front caliper acceleration -- X axis Filter: SAE CLASS 60 Max = 51.673 Min = -110.78

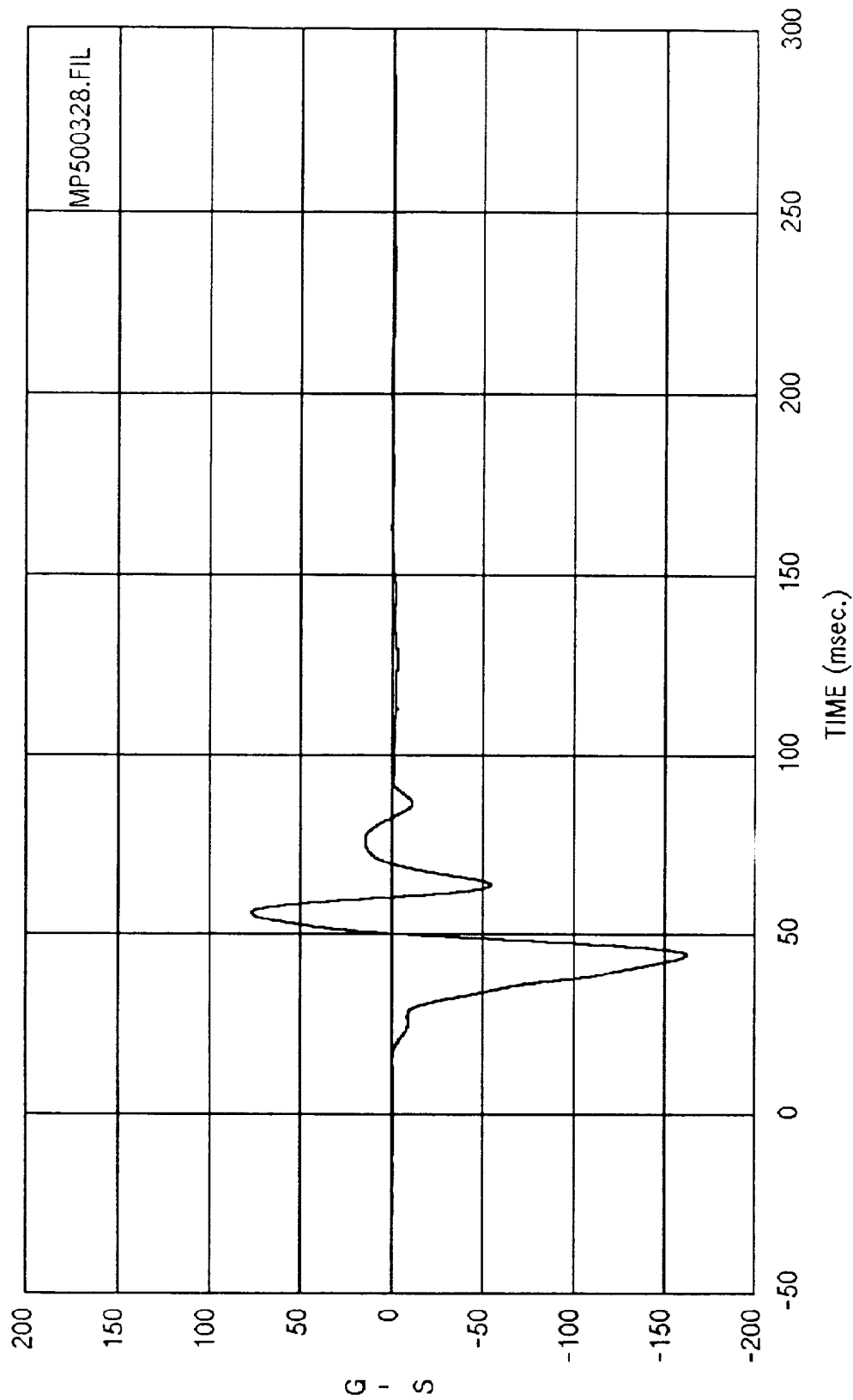
MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



Curve: Right front caliper acceleration -- X axis Filter: SAE CLASS 60 Max = 26.186 Min = -95.994
MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

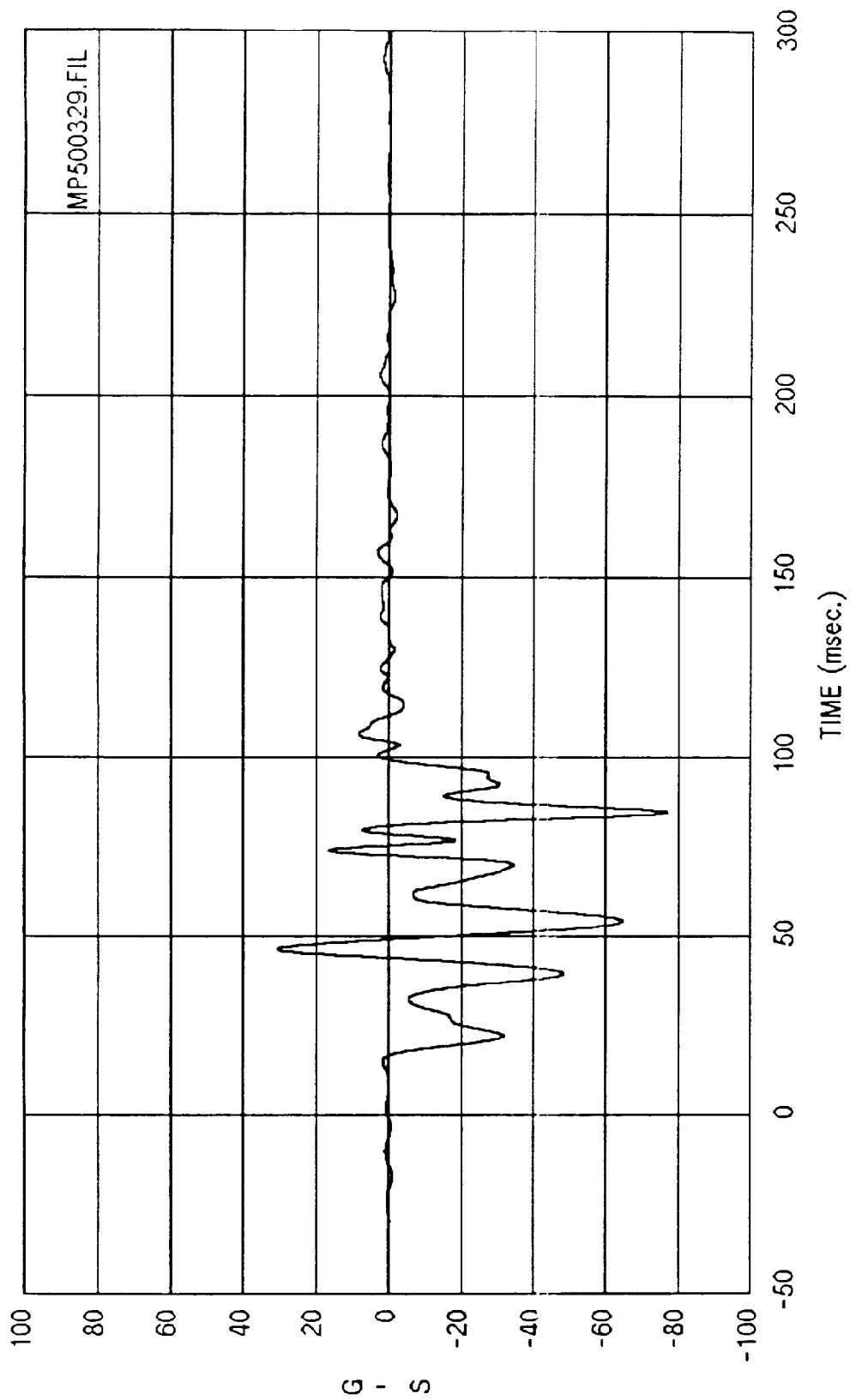


Curve: Engine bottom acceleration -- X axis Filter: SAE CLASS 60 Max = 76.197 Min = -163.91
MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



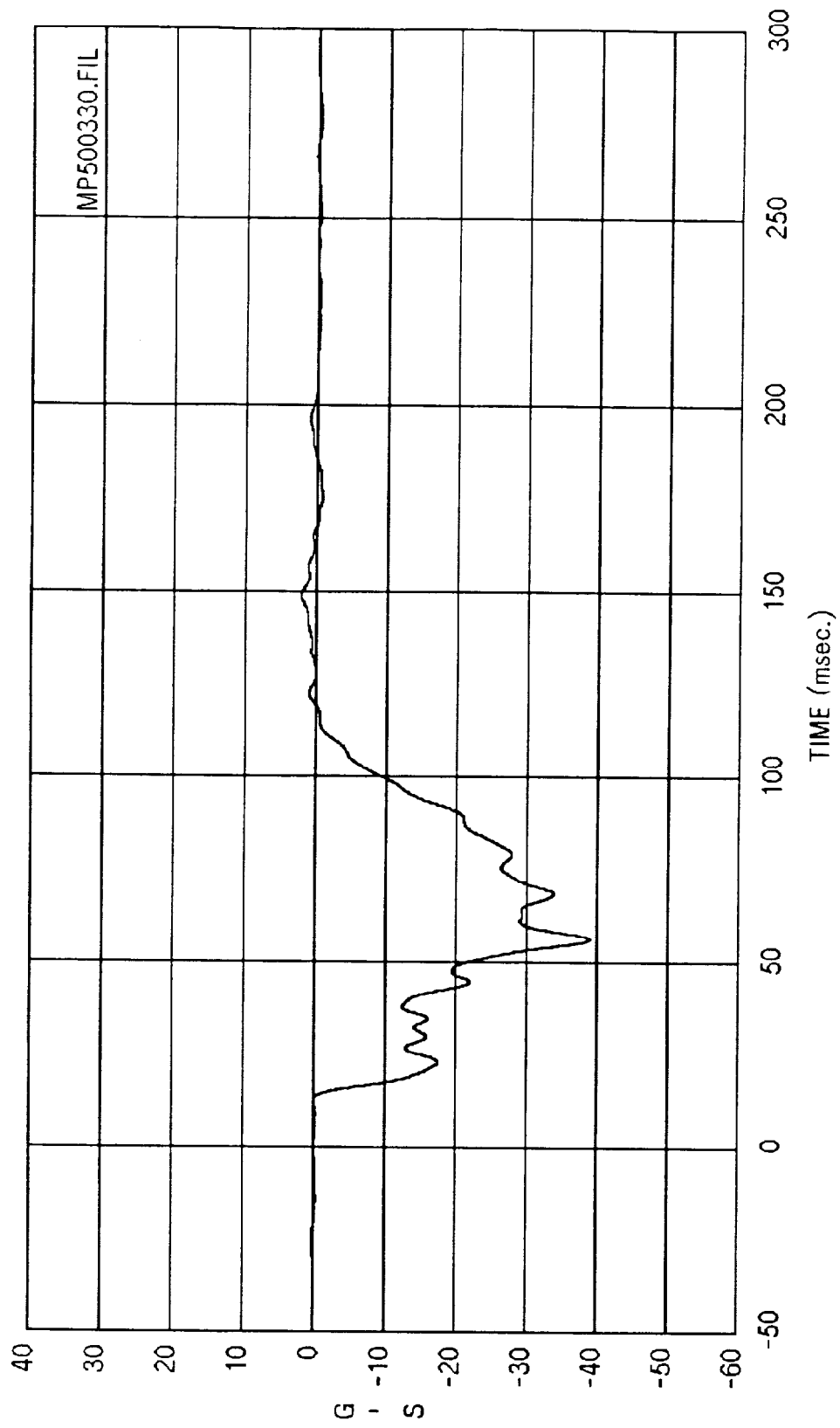
Curve: Engine top acceleration -- X axis Filter: SAE CLASS 60 Max = 77.138 Min = -162.40

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



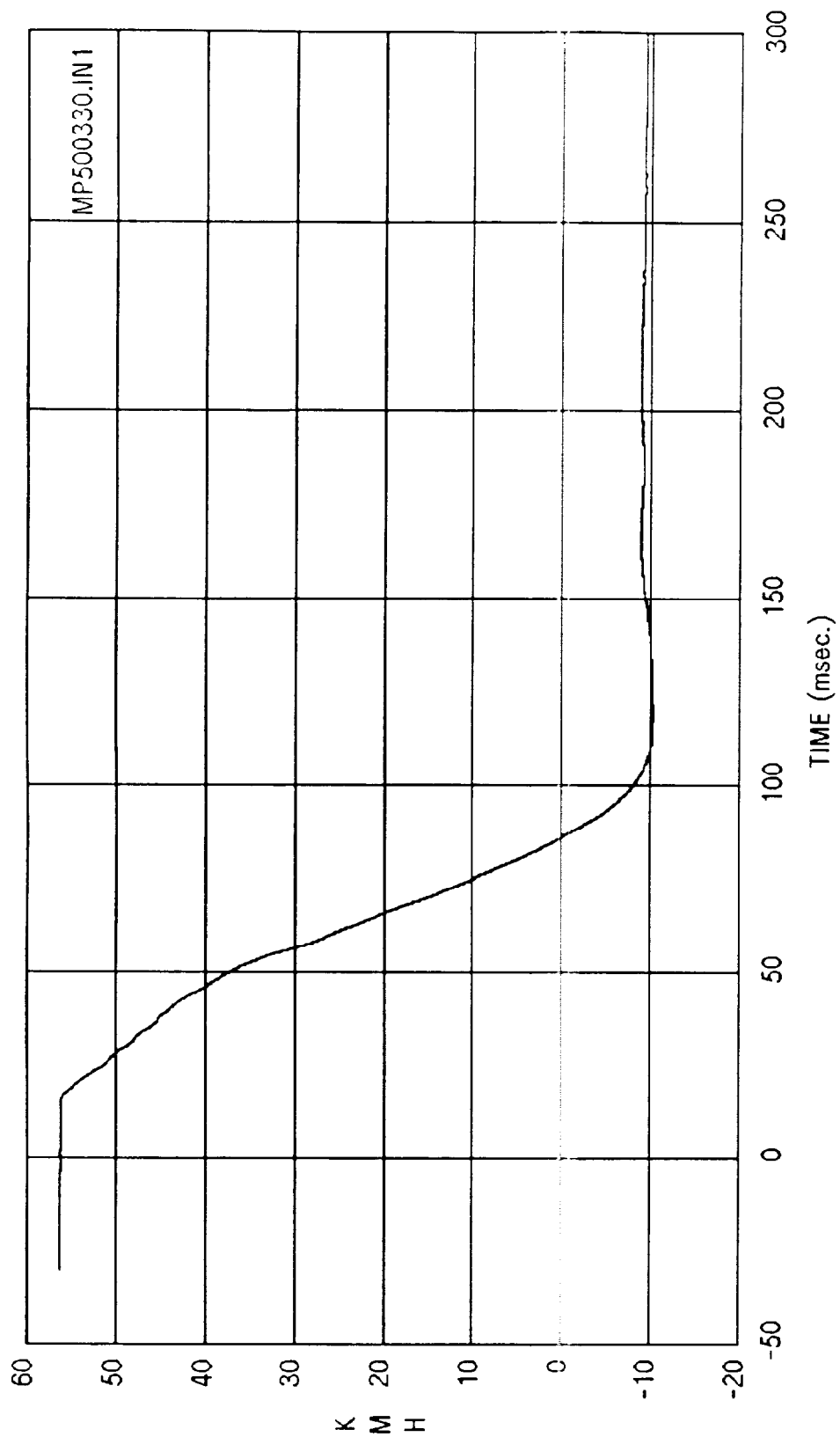
Curve: Dashpanel acceleration -- X axis Filter: SAE CLASS 60 Max = 30.900 Min = -77.172

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



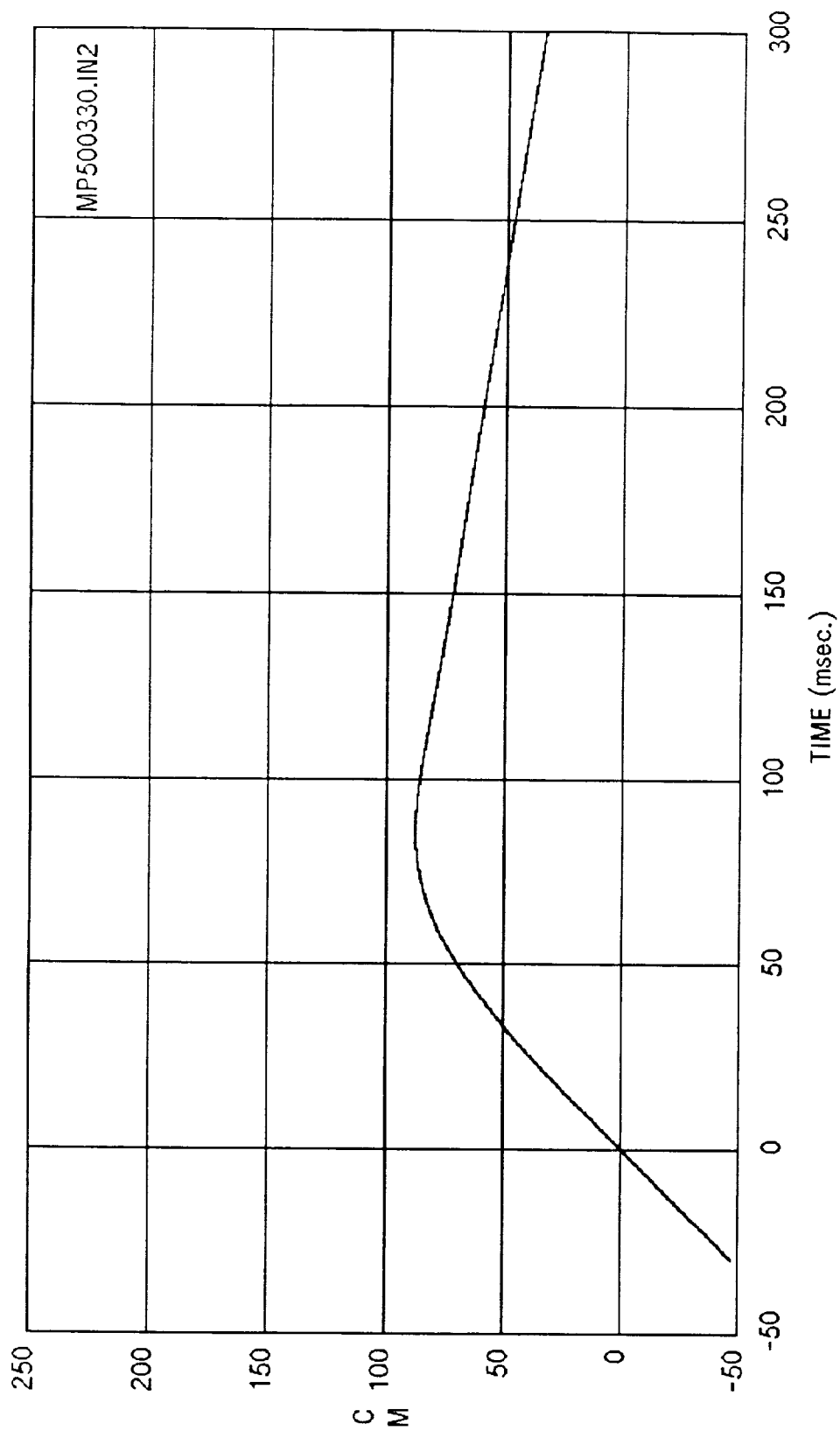
Curve: Left rear cross-member accel. - X axis (primary) Filter: SAE CLASS 60 Max = 2.1878 Min = -39.00

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

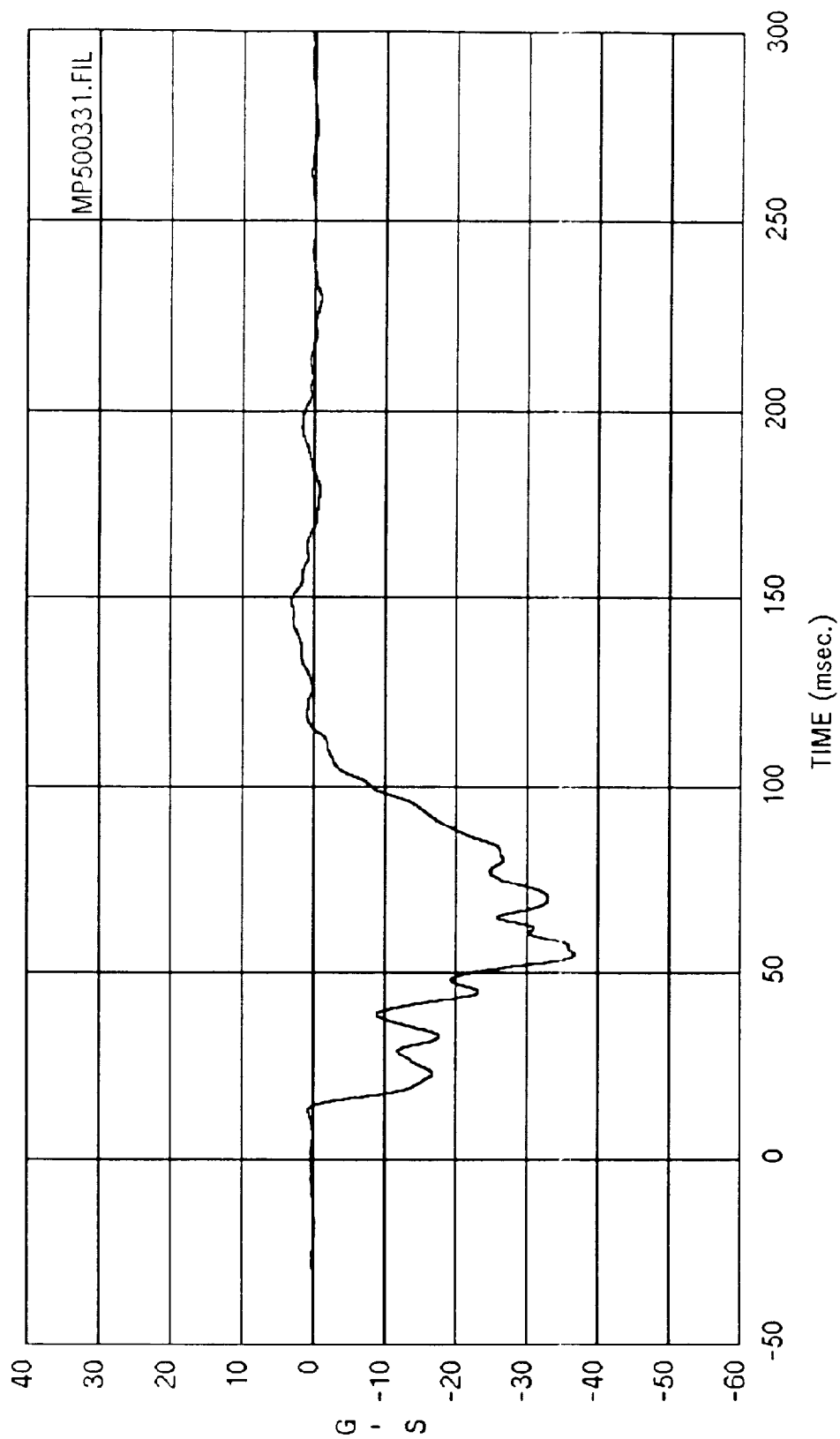


Curve: Left rear cross-member delta V -- X axis (Pri) Filter: SAE CLASS 180 Max = 56.307 Min = -10.27

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

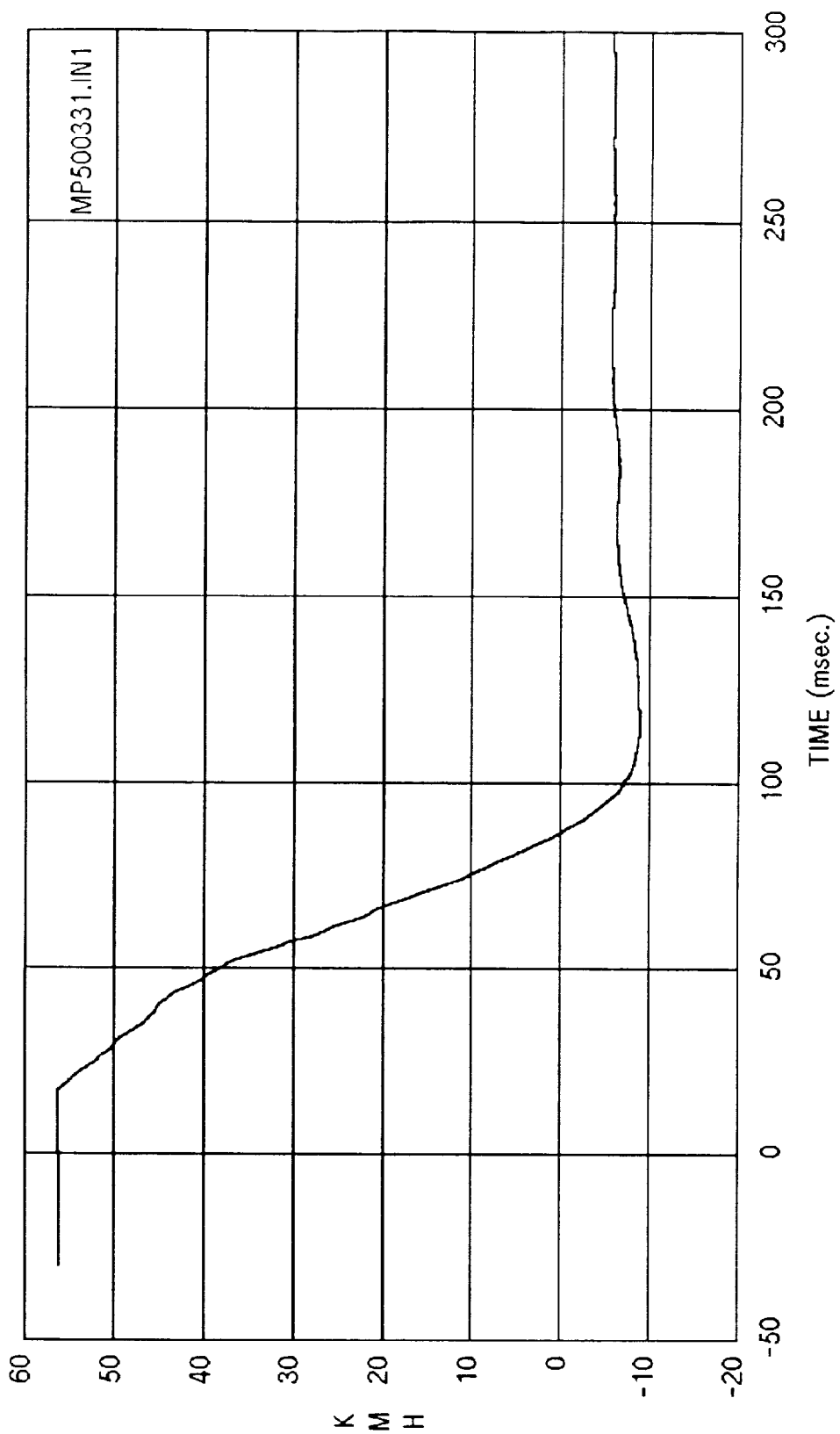


Curve: Left rear cross-member disp. - X axis (primary) Filter: SAE CLASS 180 Max = 87.566 Min = 34.116
MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



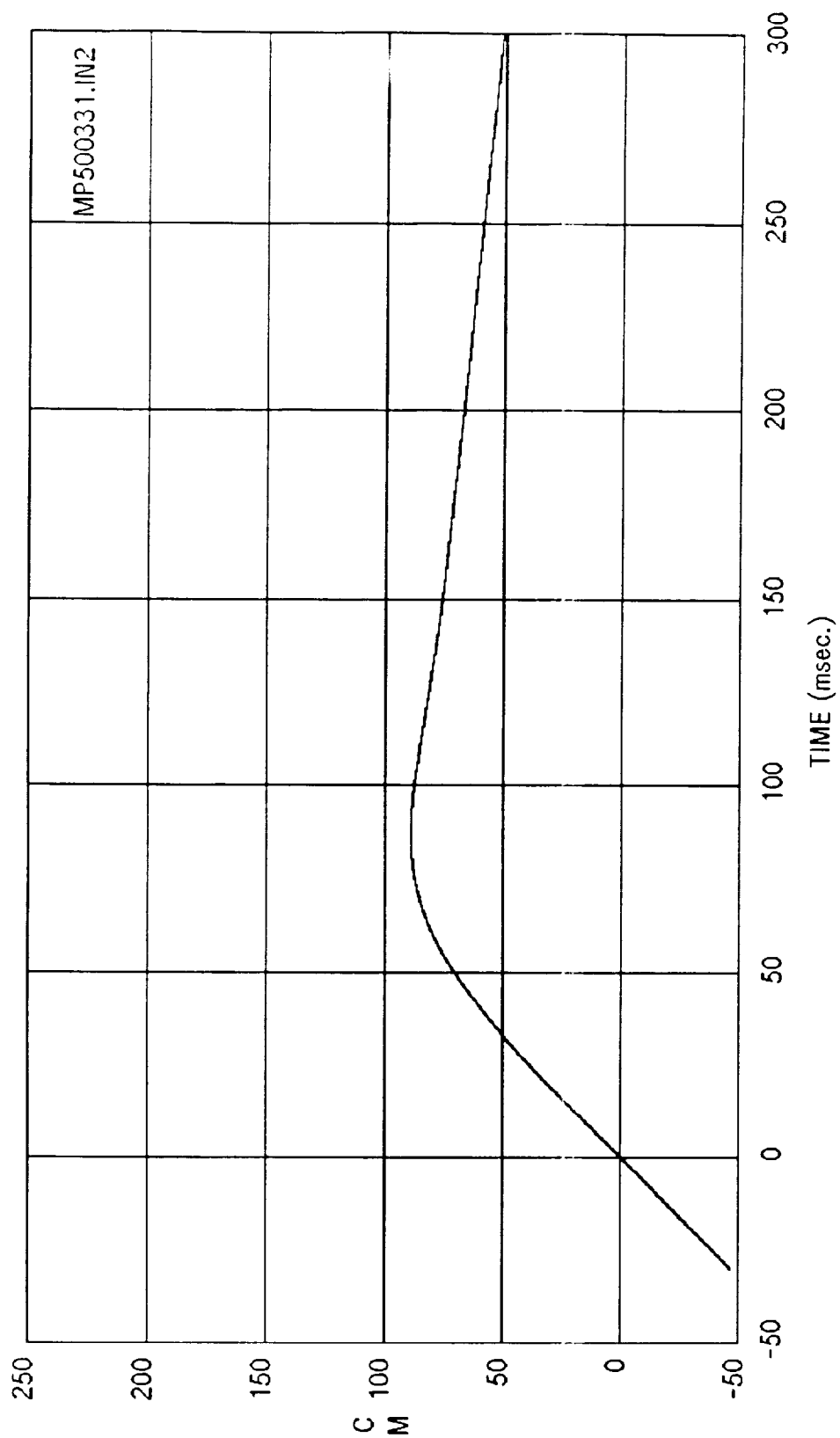
Curve: Right rear cross-member acc. - X axis (primary) Filter: SAE CLASS 60 Max = 3.1003 Min = -36.71

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



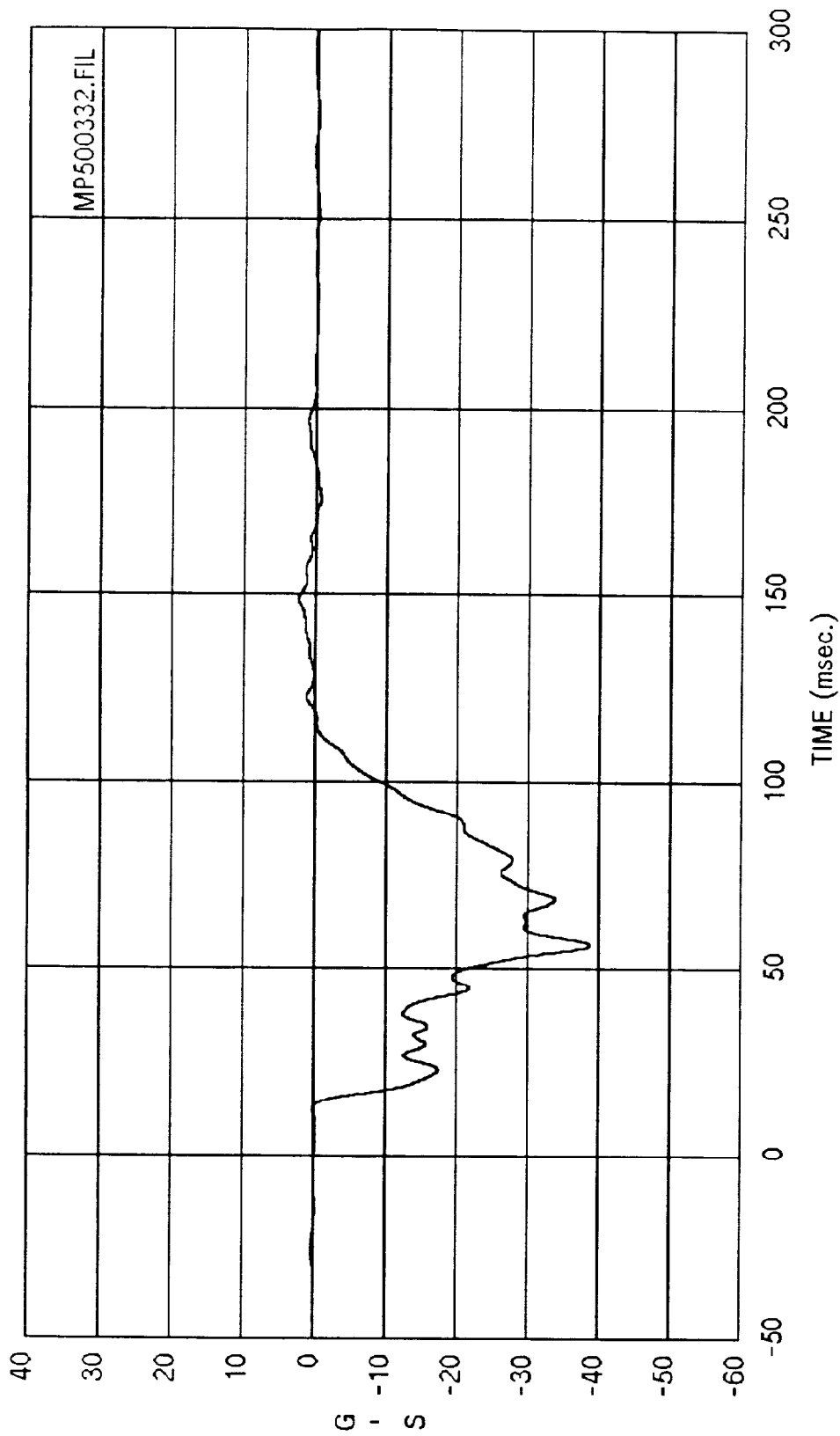
Curve: Right rear cross-member delta V -- X axis(Pri) Filter: SAE CLASS 180 Max = 56.451 Min = -8.954

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



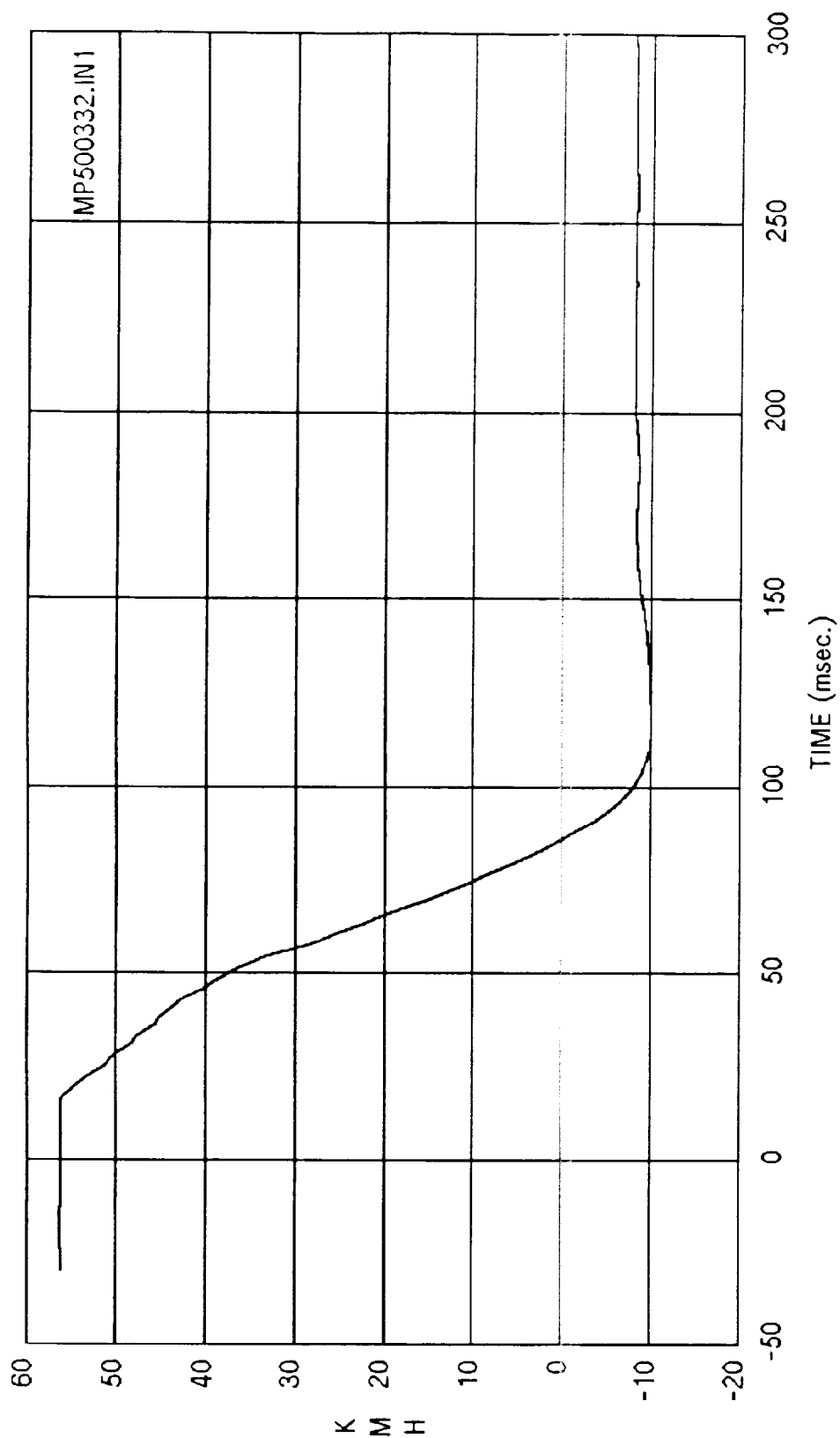
Curve: Right rear cross-member disp. - X axis (primary) Filter: SAE CLASS 180 Max = 88.946 Min = 51.150

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



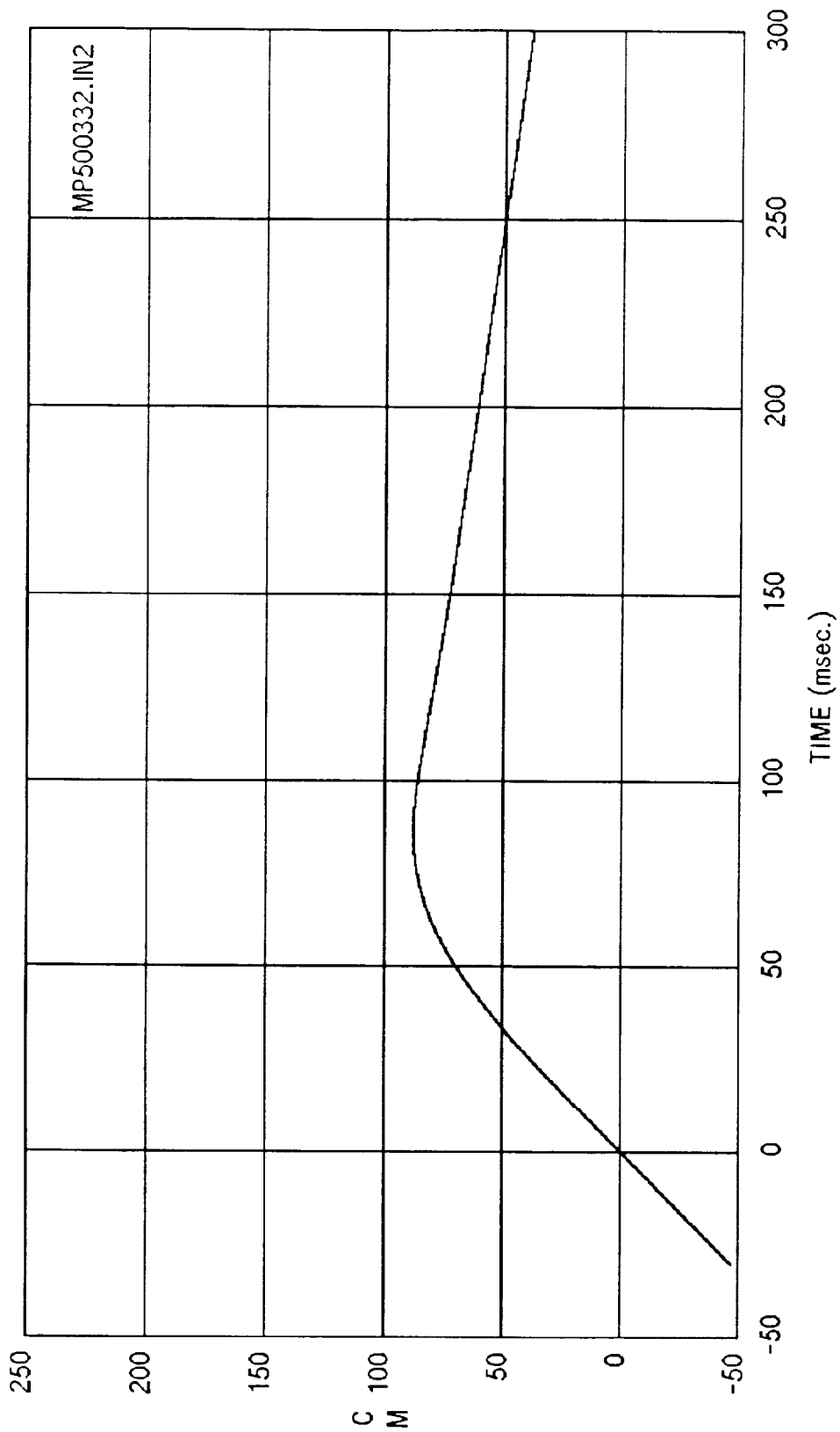
Curve: Left rear cross-member accel. - X axis(secondary) Filter: SAE CLASS 60 Max = 2.3133 Min = -38.9

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



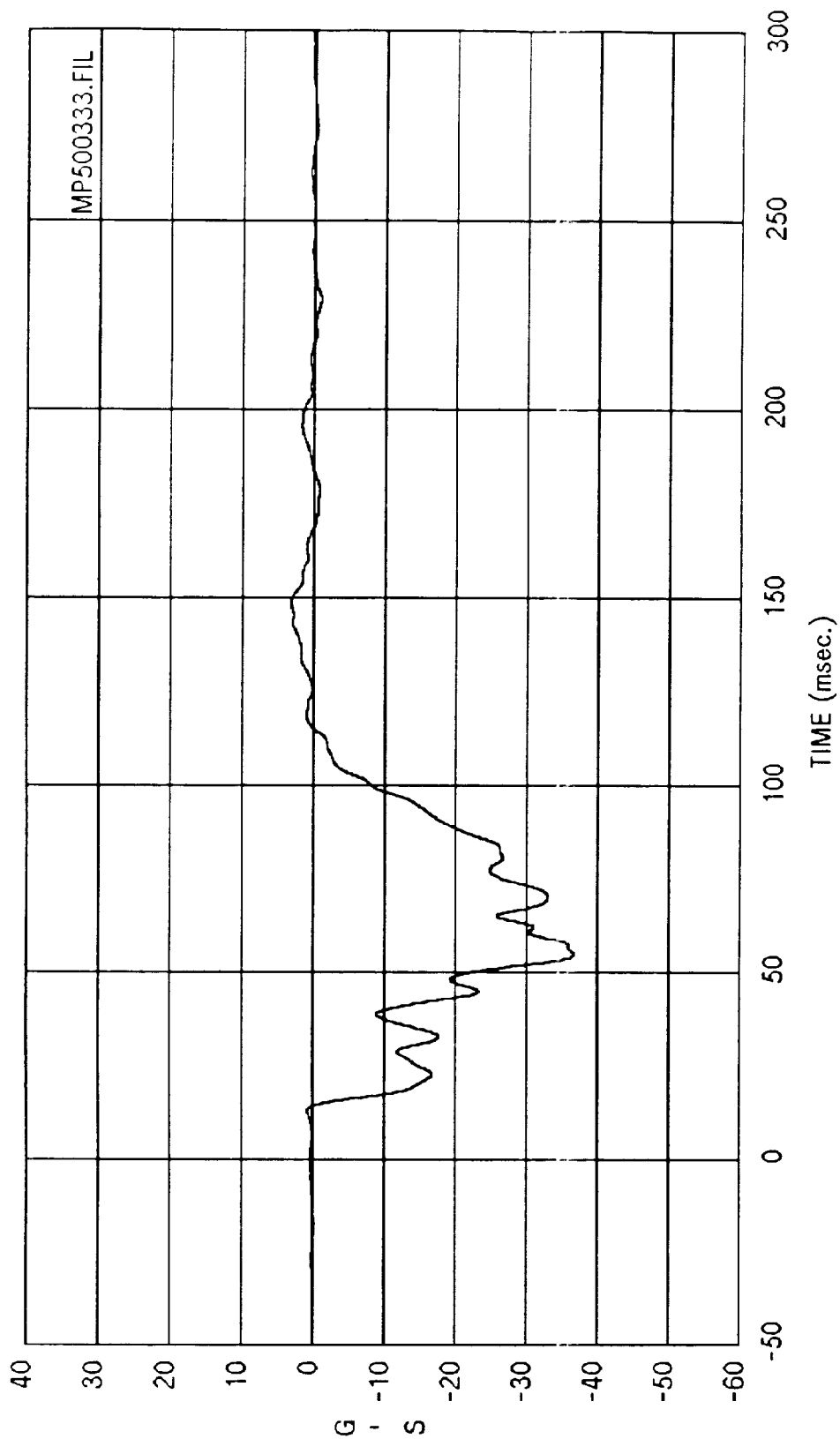
Curve: Left rear cross-member delta V -- X axis (Sec) Filter: SAE CLASS 180 Max = 56.301 Min = -10.0

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



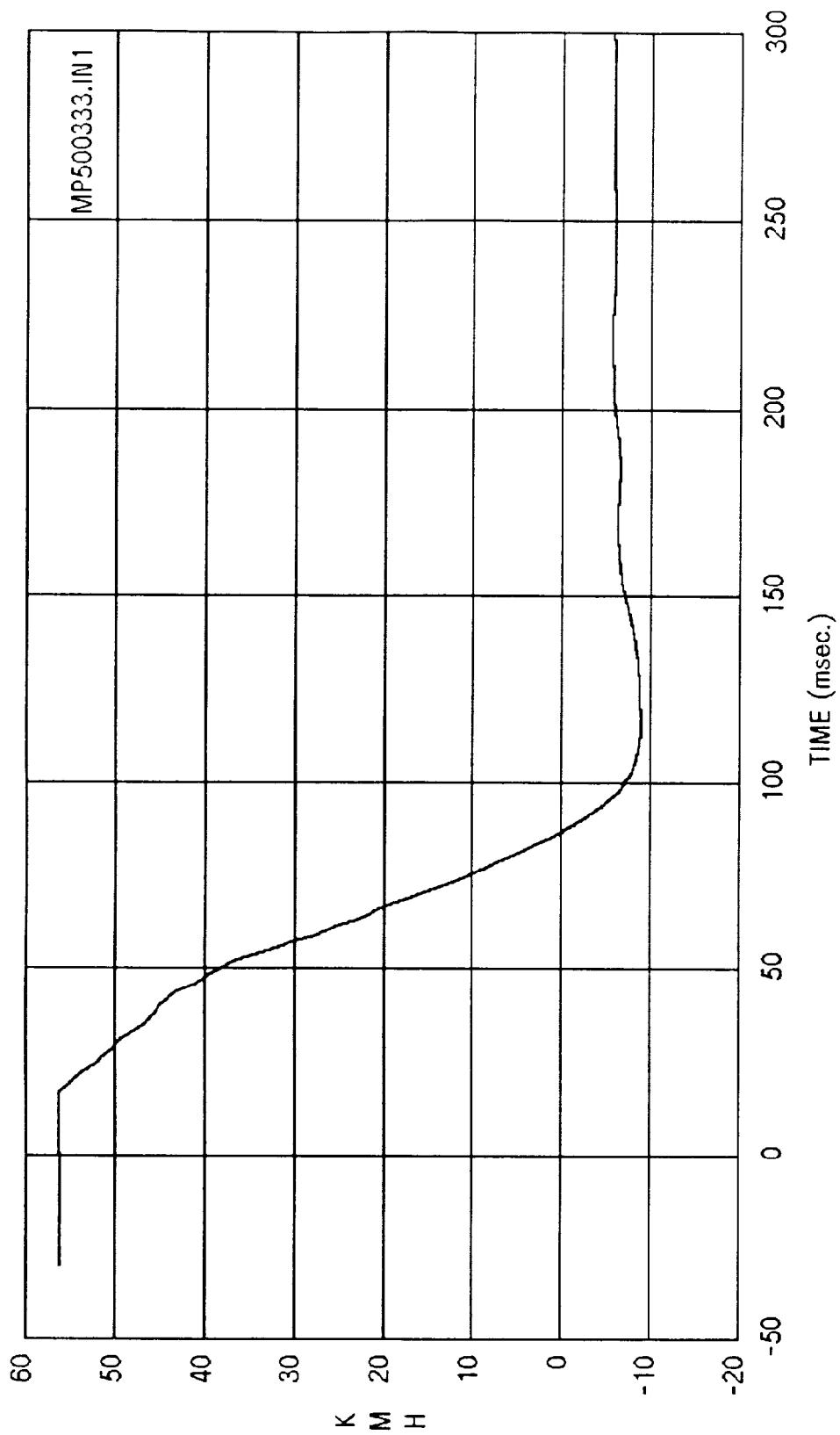
Curve: Left rear cross-member disp. - X axis(secondary) Filter: SAE CLASS 180 Max = 87.715 Min = 38.4;

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



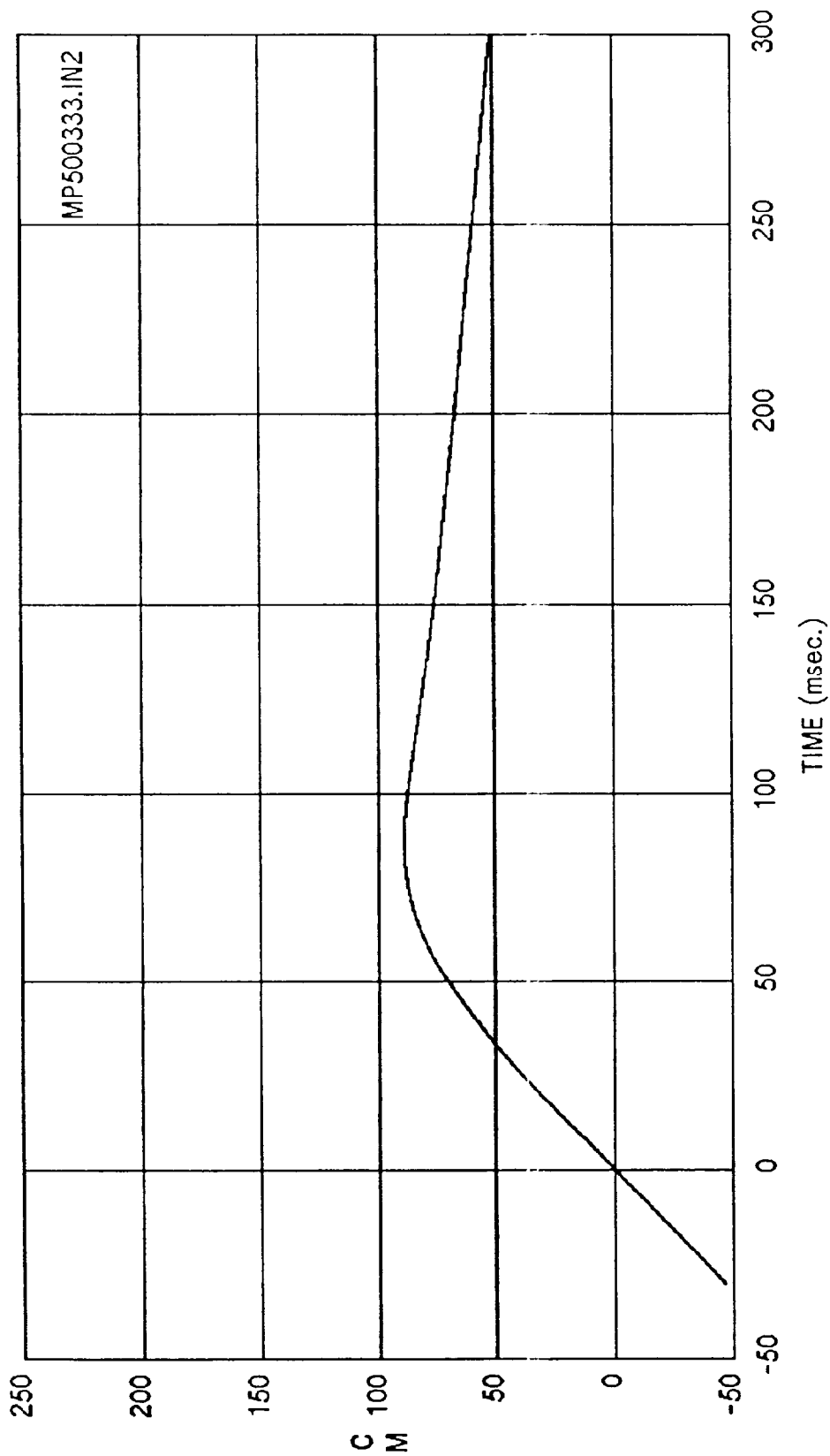
Curve: Right rear cross-member acc. - X axis (secondary) Filter: SAE CLASS 60 Max = 3.1081 Min = -36.7

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



Curve: Right rear cross-member delta V -- X axis(Sec) Filter: SAE CLASS 180 Max = 56.449 Min = -8.96

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



Curve: Right rear cross-member disp. - X axis(secondary) Filter: SAE CLASS 180 Max = 88.932 Min = 51.0

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

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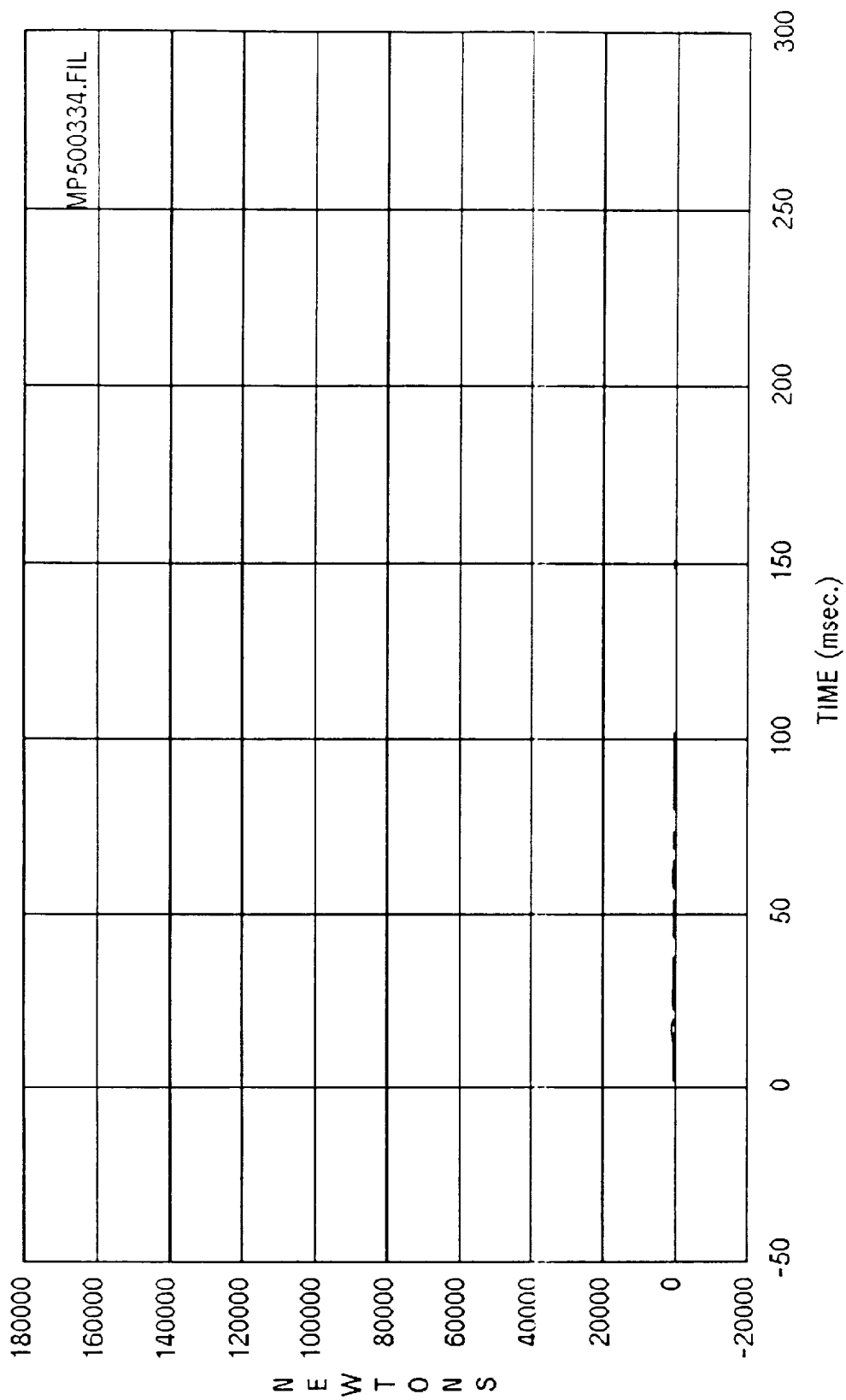
APPENDIX B-2

LOAD CELL BARRIER DATA

DATA FILTERING:

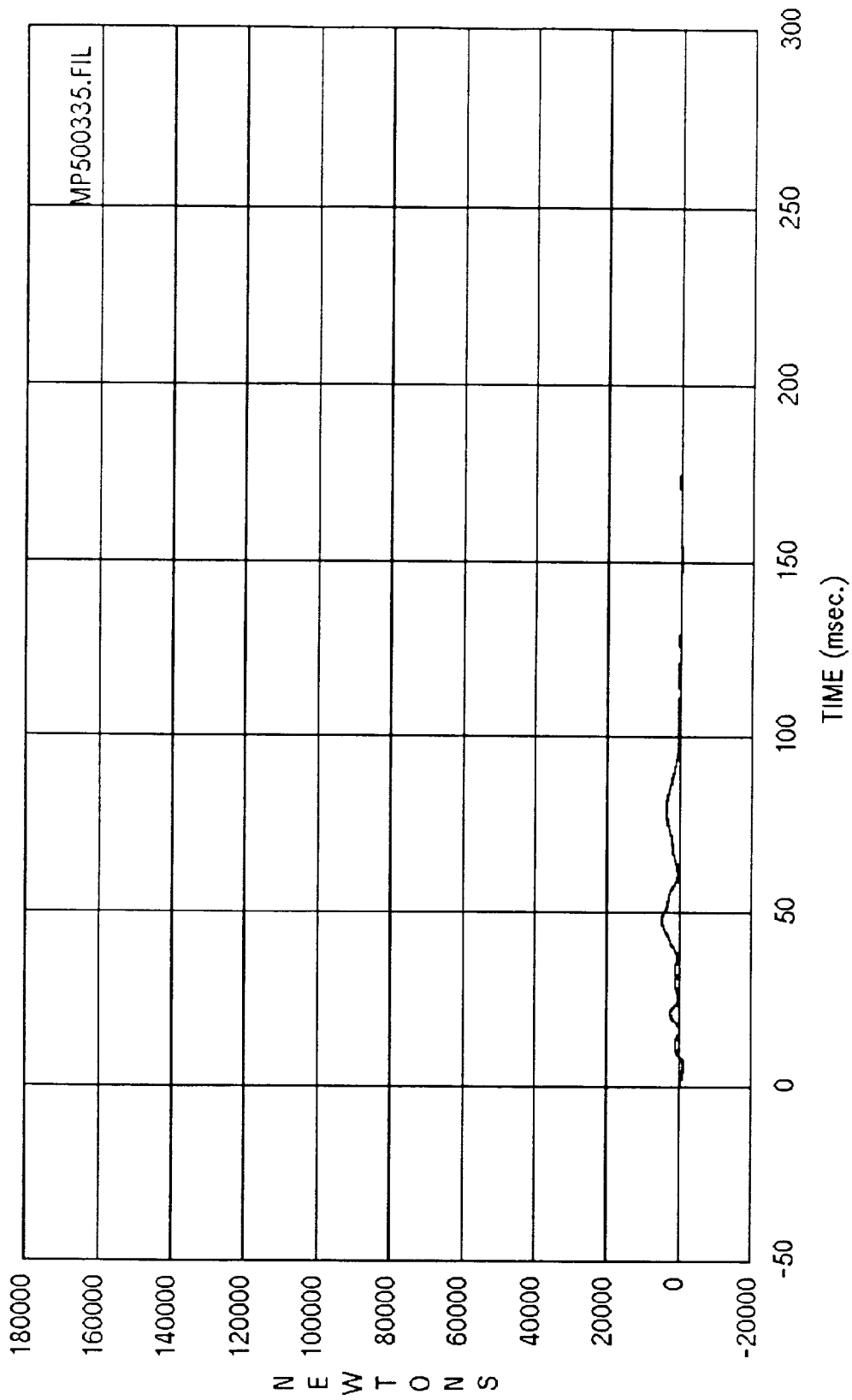
Load Cell Barrier Channels - Class 60

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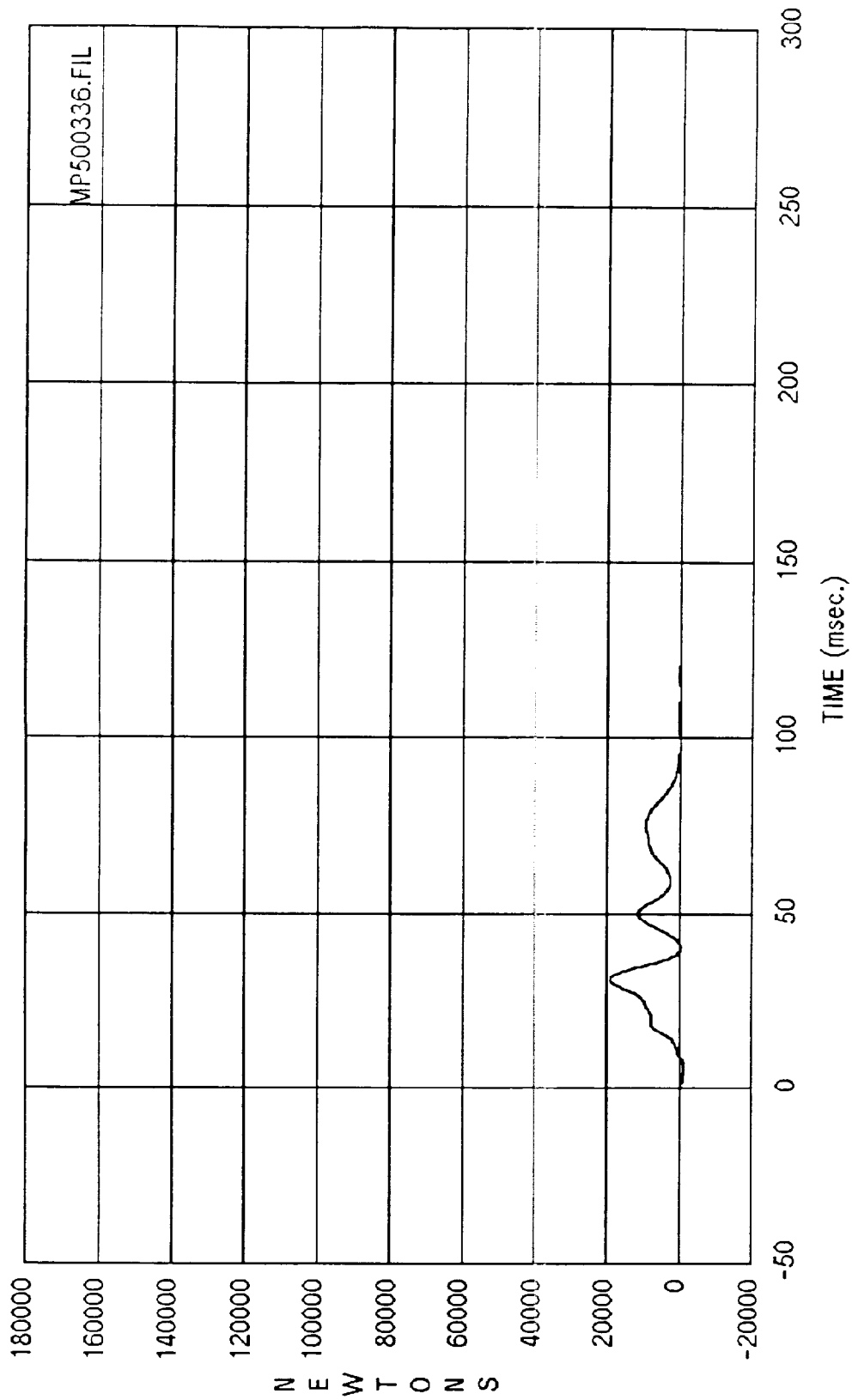
Curve: Force on barrier location A1 Filter: SAE CLASS 60 Max = 1085.7 Min = -102.19

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



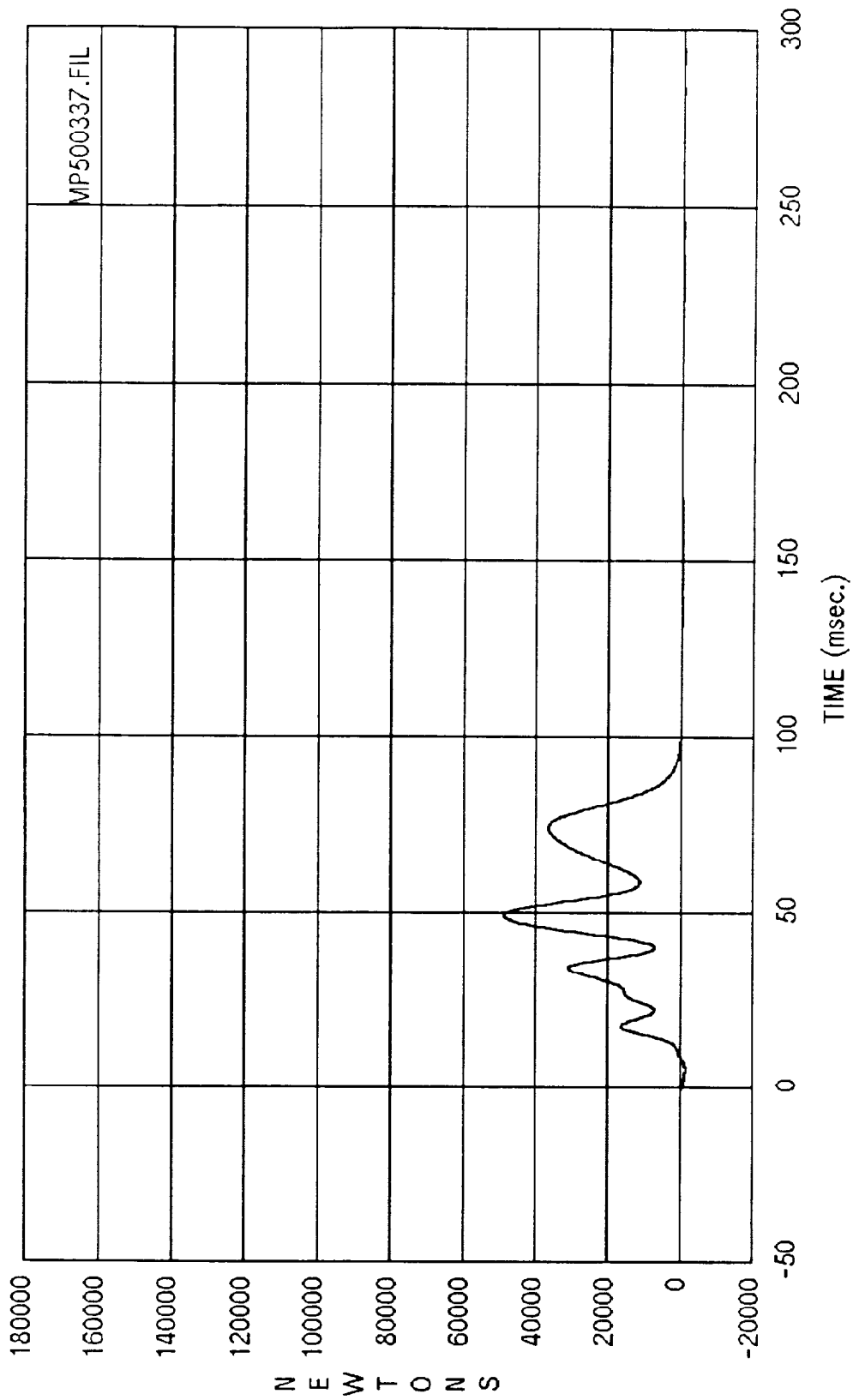
Curve: Force on barrier location A2 Filter: SAE CLASS 60 Max = 5000.6 Min = -1187.1

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



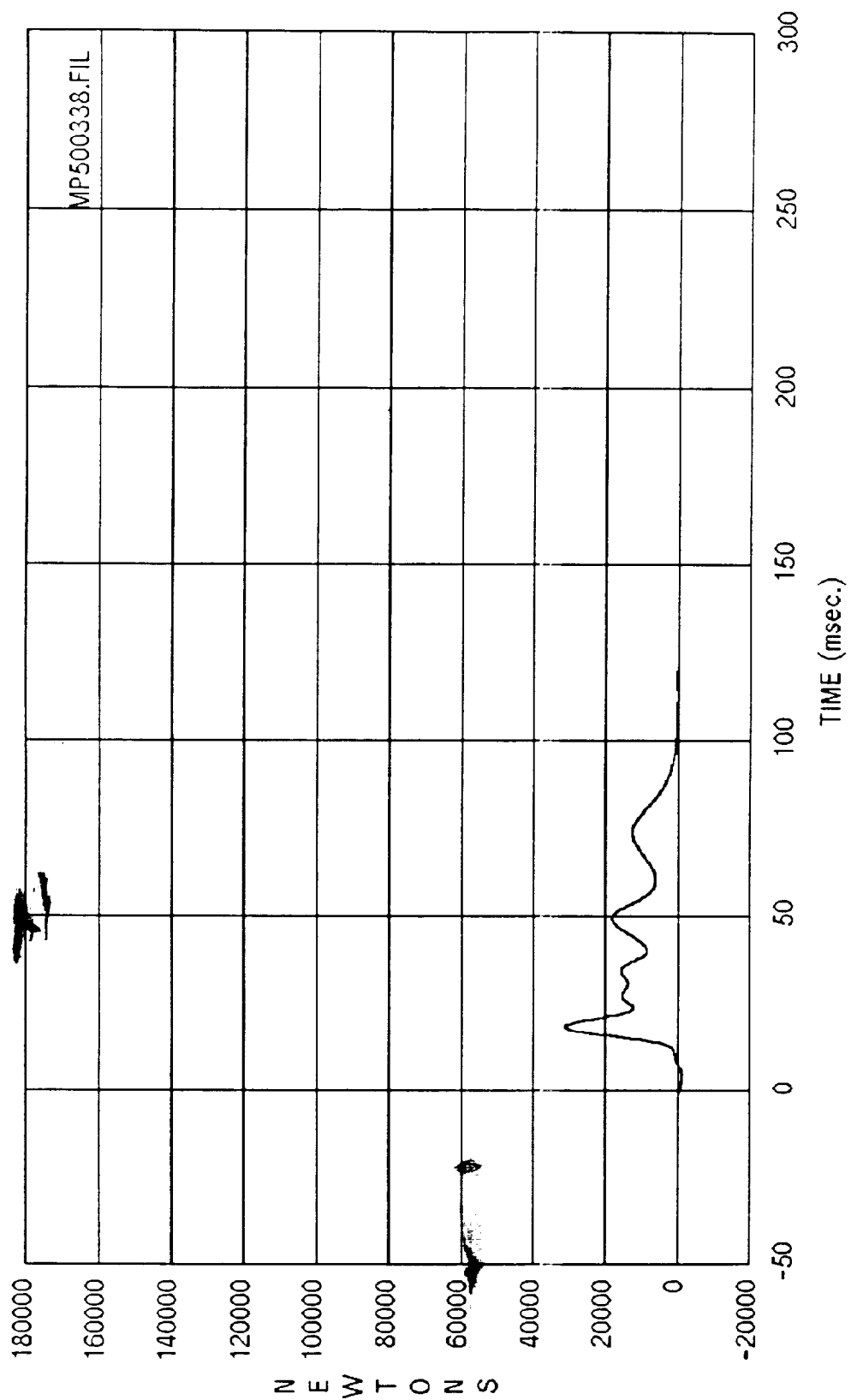
Curve: Force on barrier location A3 Filter: SAE CLASS 60 Max = 19242. Min = -1183.5

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



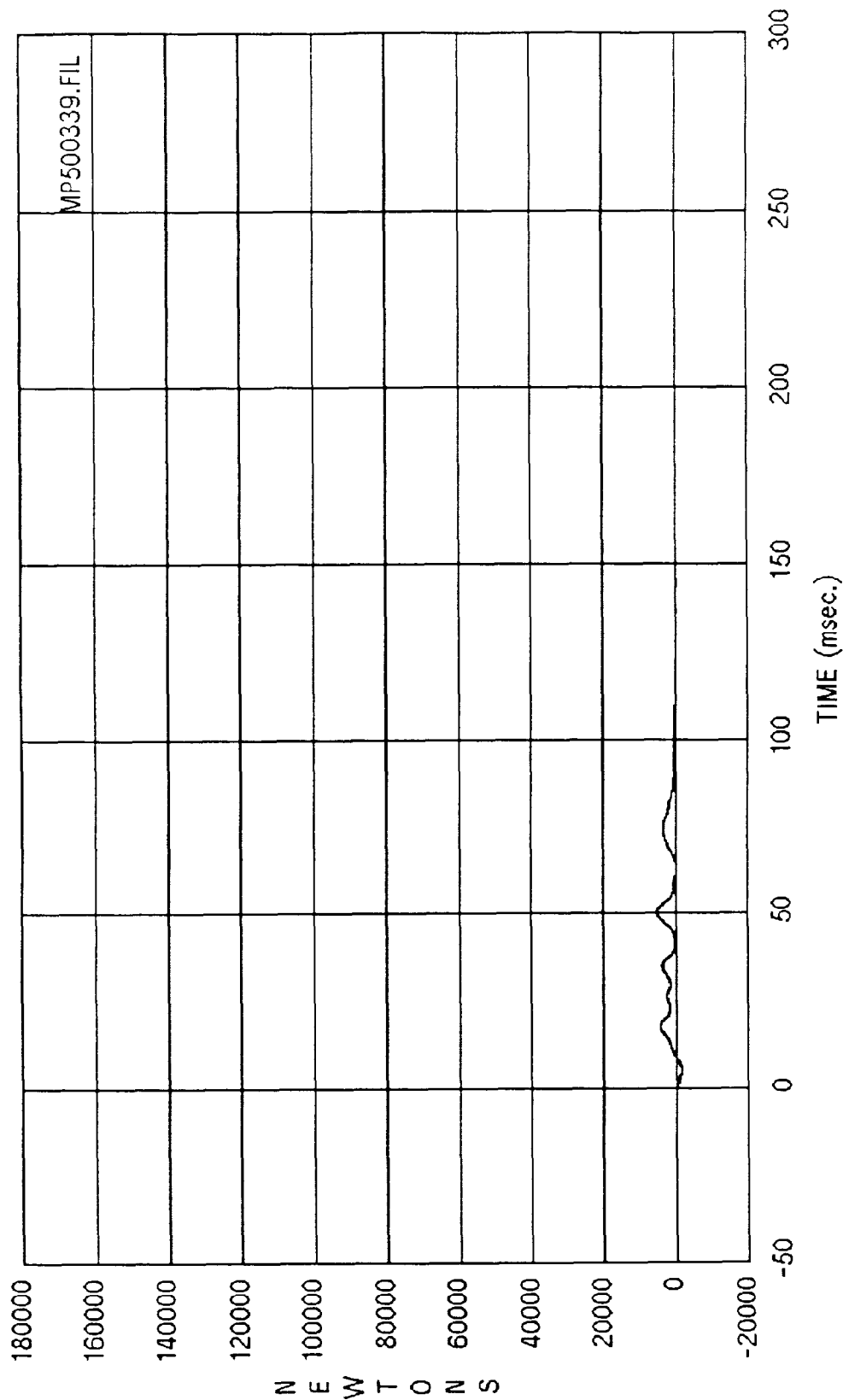
Curve: Force on barrier location A4 Filter: SAE CLASS 60 Max = 48992. Min = -1335.4

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



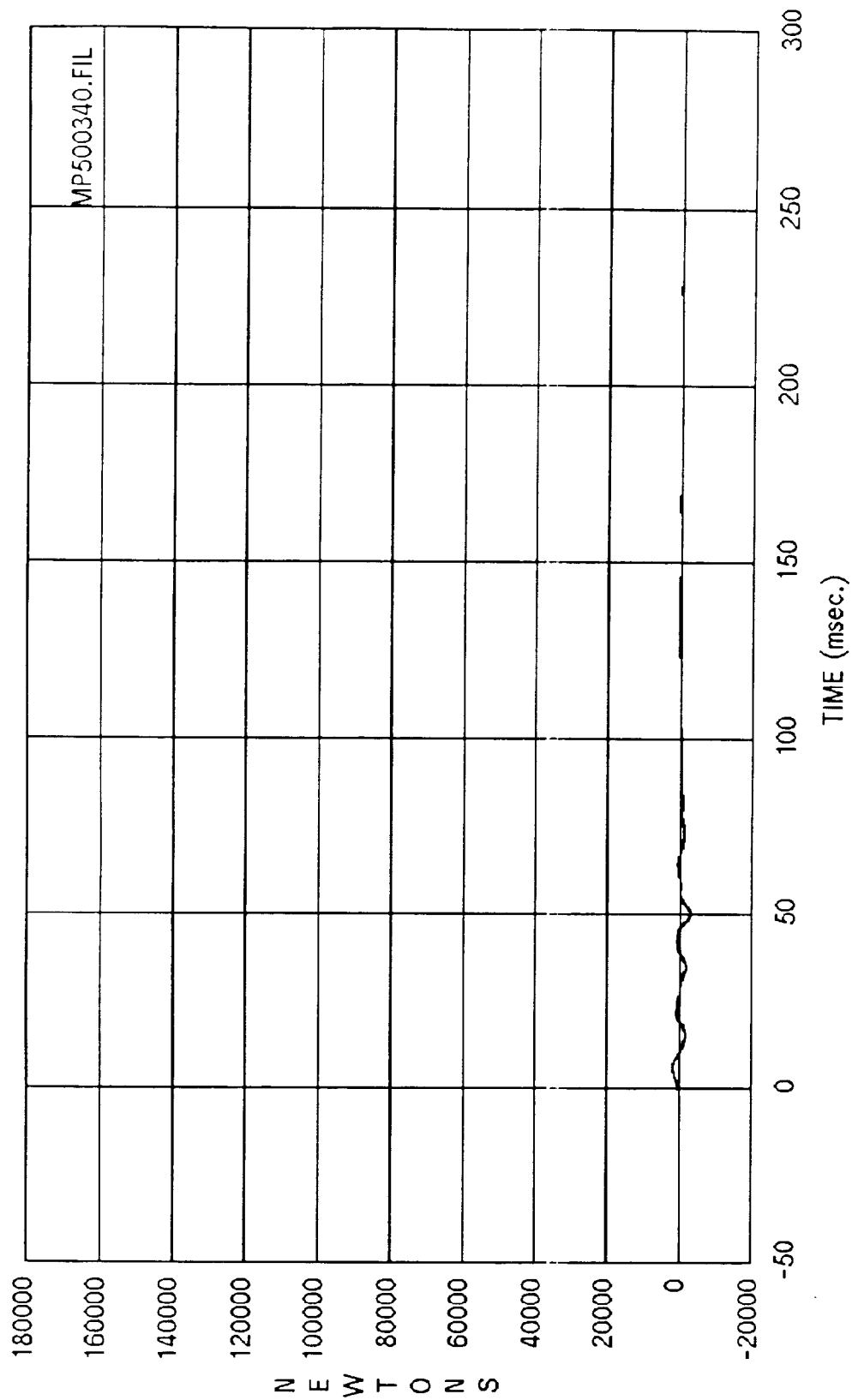
Curve: Force on barrier location A5 Filter: SAE CLASS 60 Max = 31529. Min = -1175.5

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



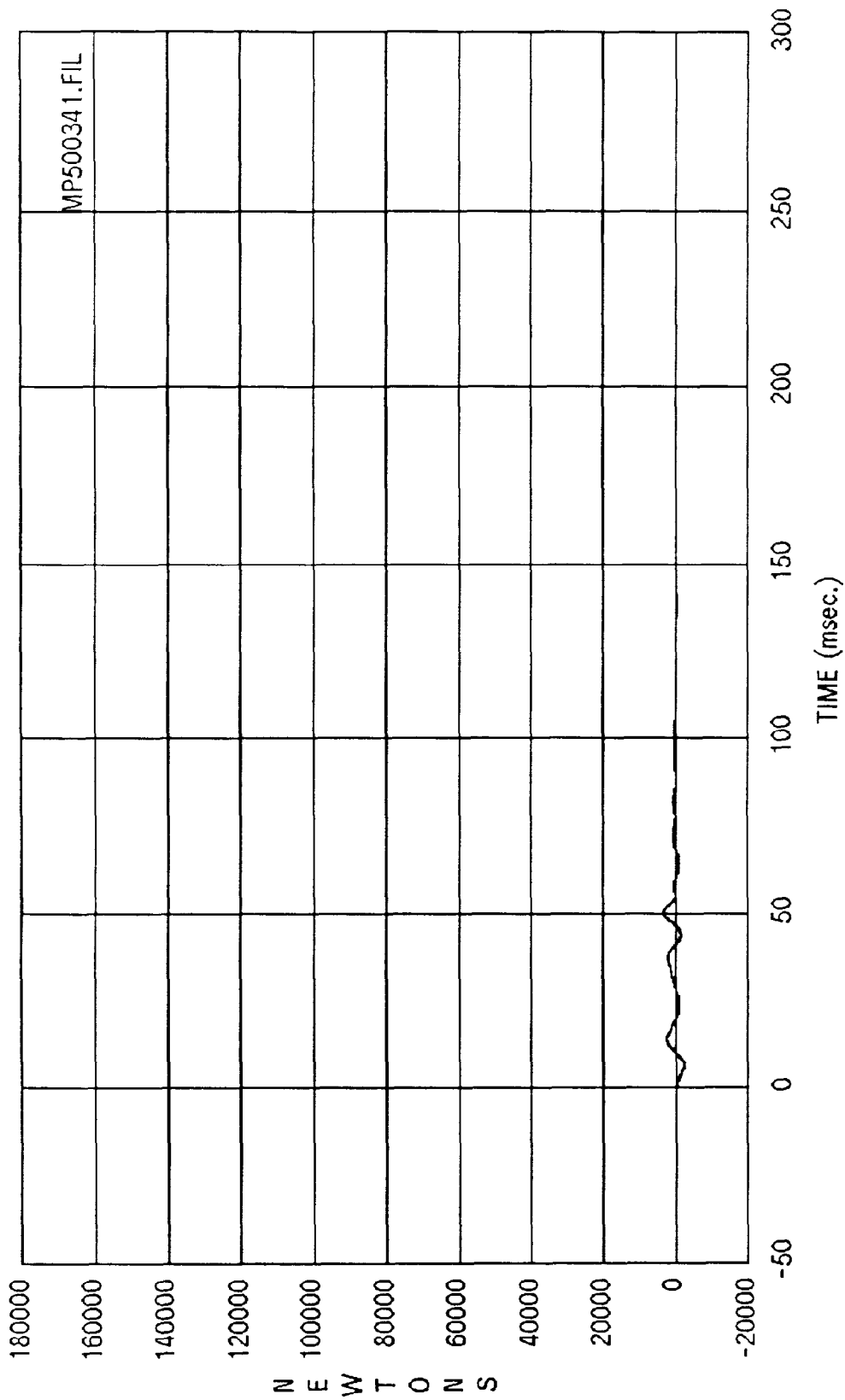
Curve: Force on barrier location A6 Filter: SAE CLASS 60 Max = 5454.8 Min = -1446.8

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

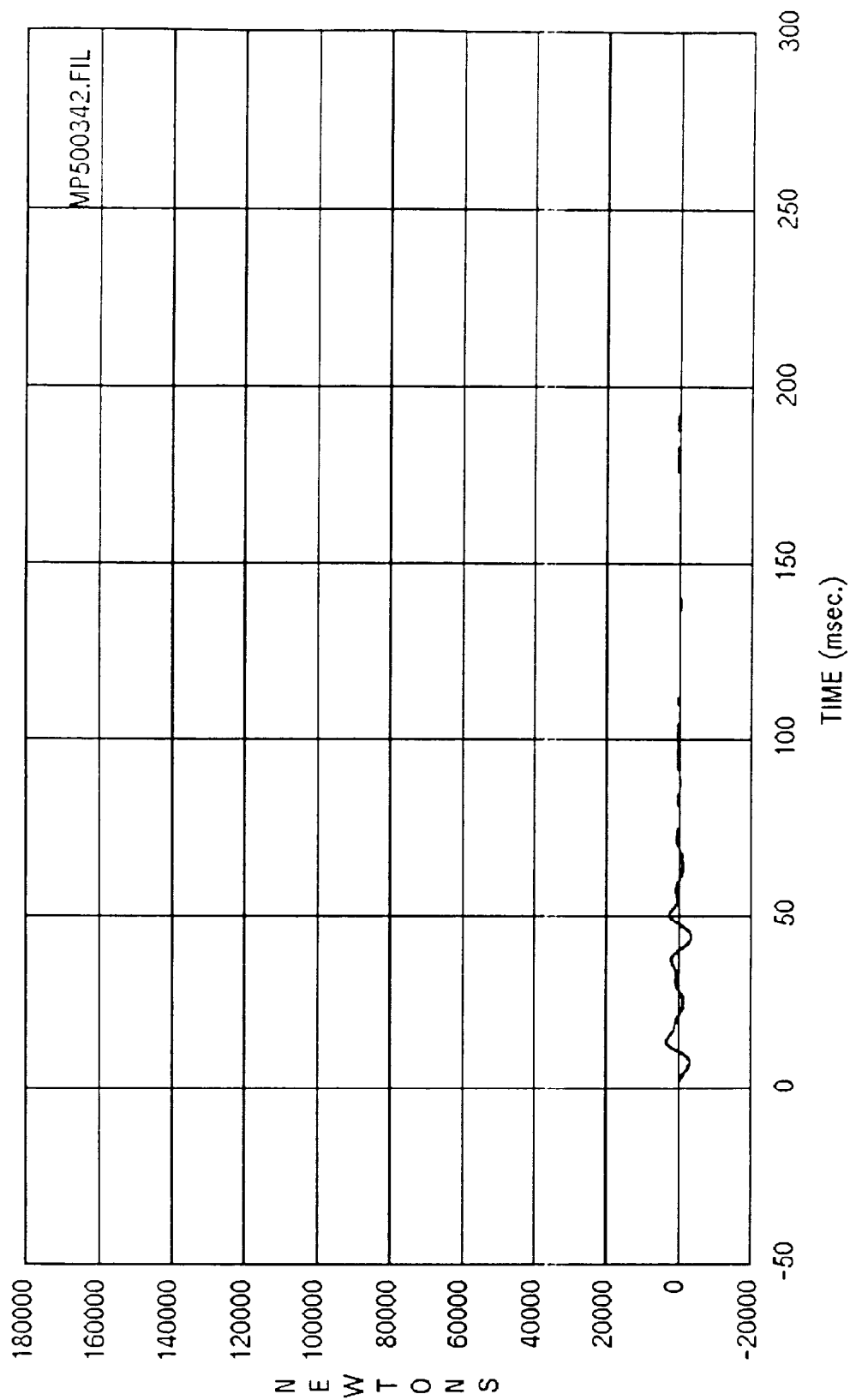


Curve: Force on barrier location A7 Filter: SAE CLASS 60 Max = 1940.1 Min = -2880.7

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

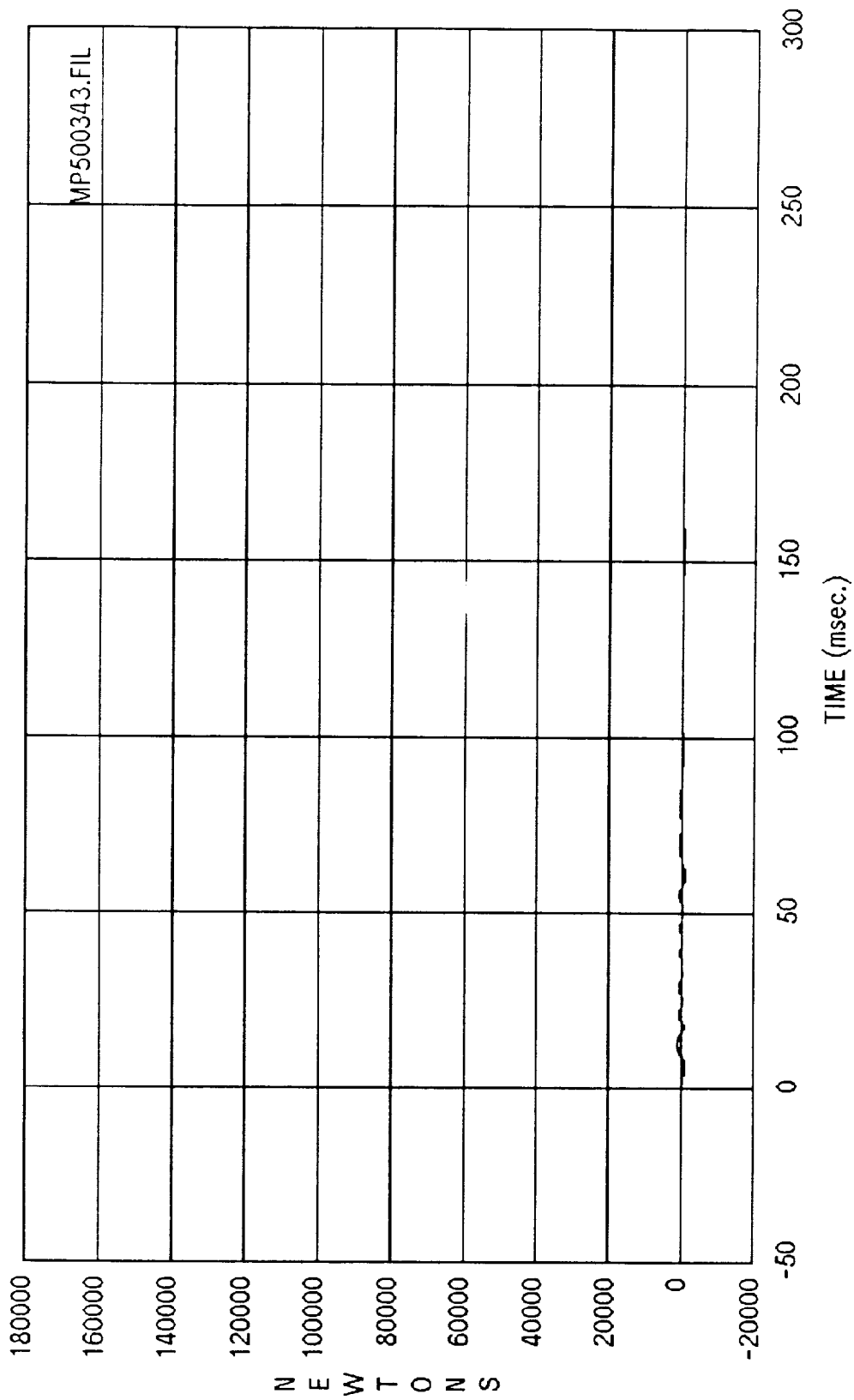


Curve: Force on barrier location A8 Filter: SAE CLASS 60 Max = 3480.7 Min = -2245.7
MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



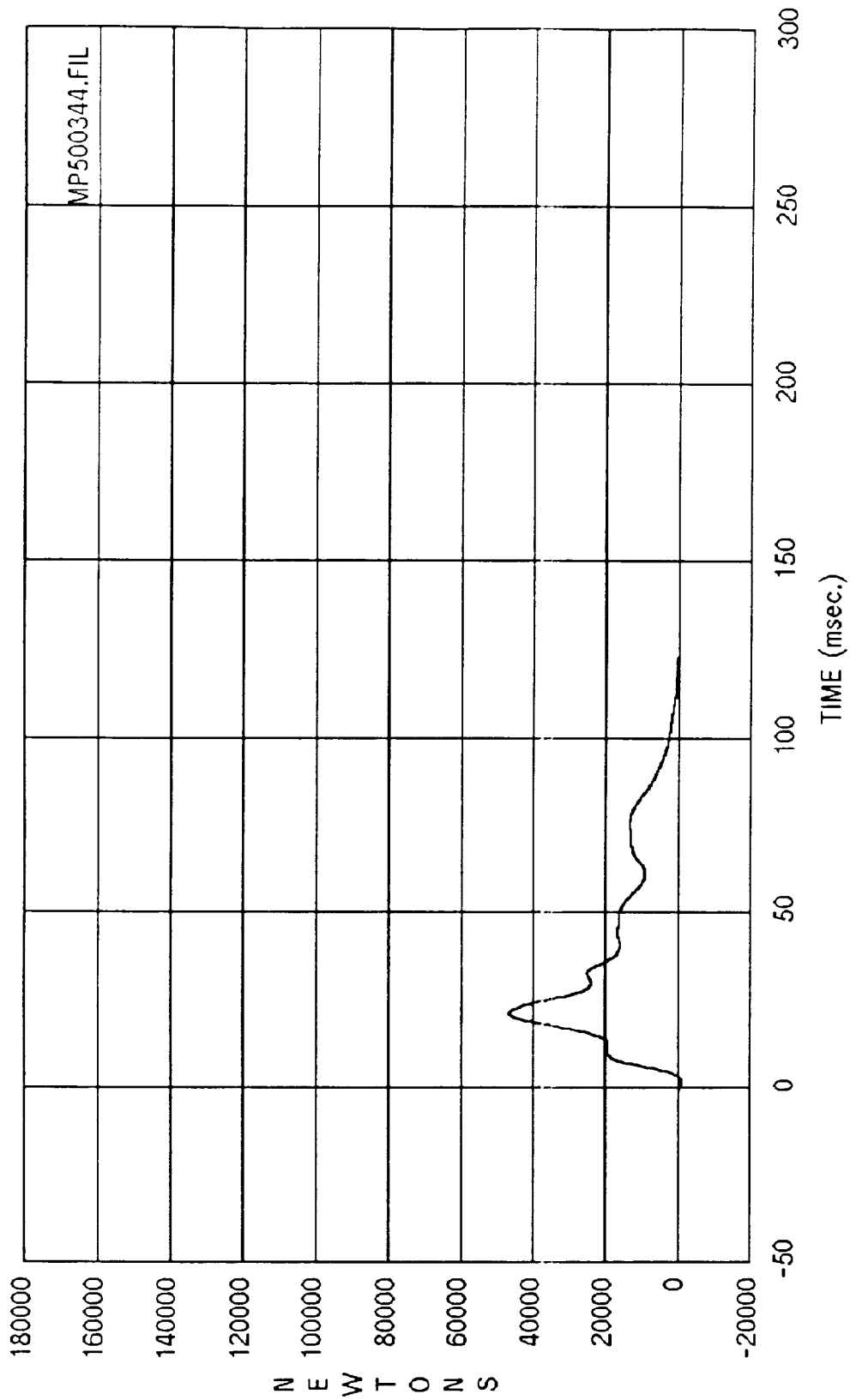
Curve: Force on barrier location A9 Filter: SAE CLASS 60 Max = 3393.3 Min = -3305.7

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



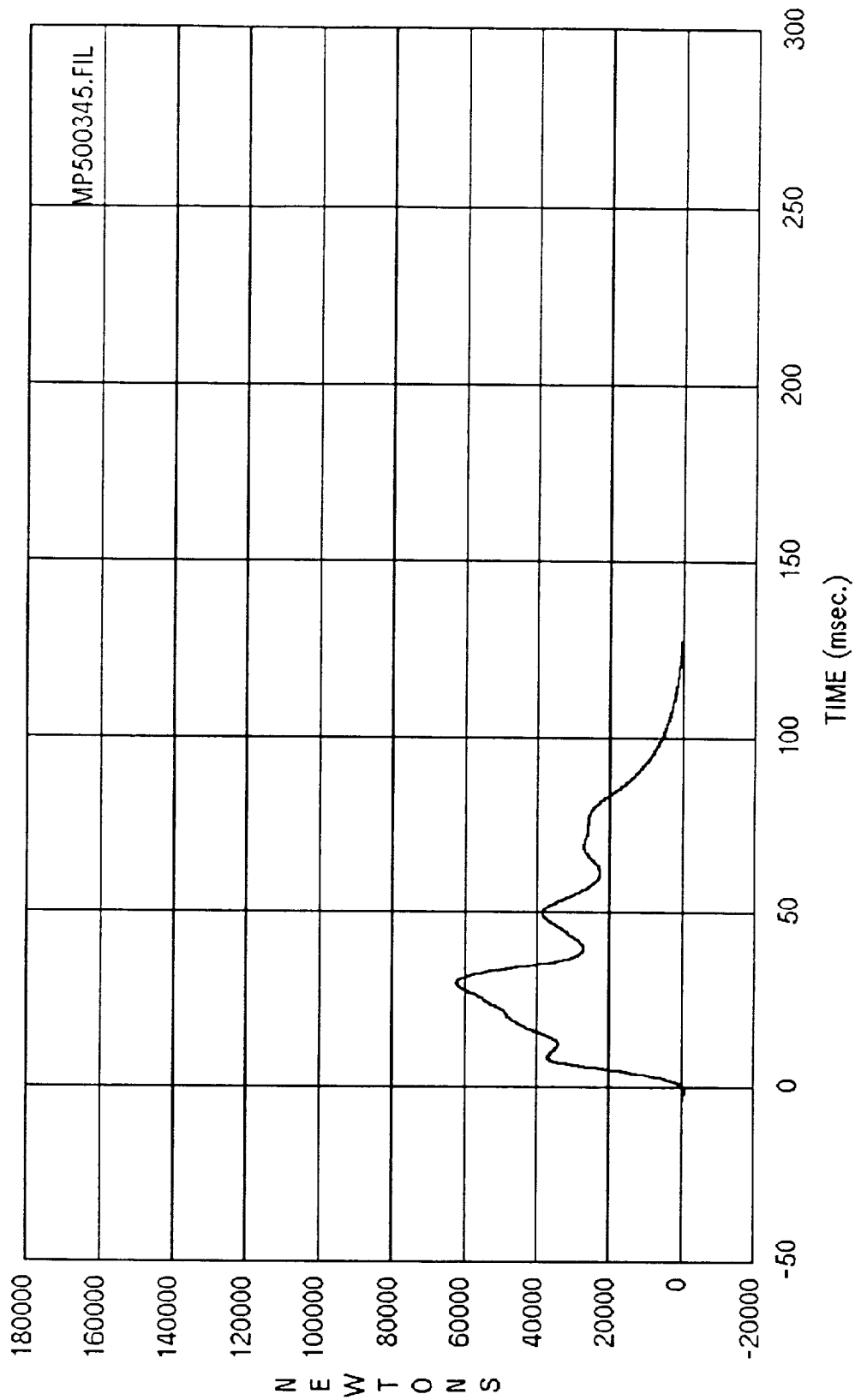
Curve: Force on barrier location B1 Filter: SAE CLASS 60 Max = 1051.7 Min = -847.40

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

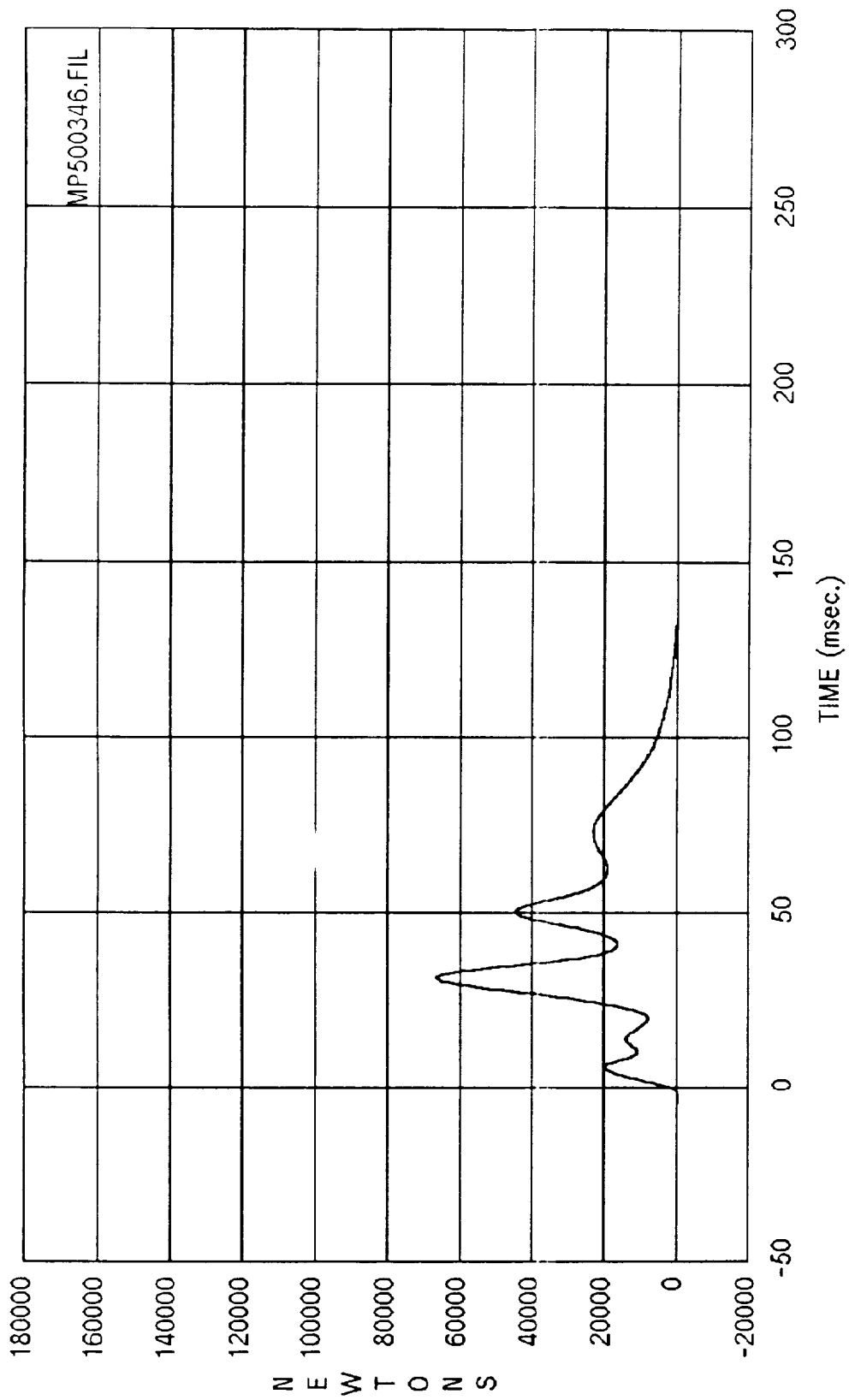


Curve: Force on barrier location B2 Filter: SAE CLASS 60 Max = 46855. Min = -839.20

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

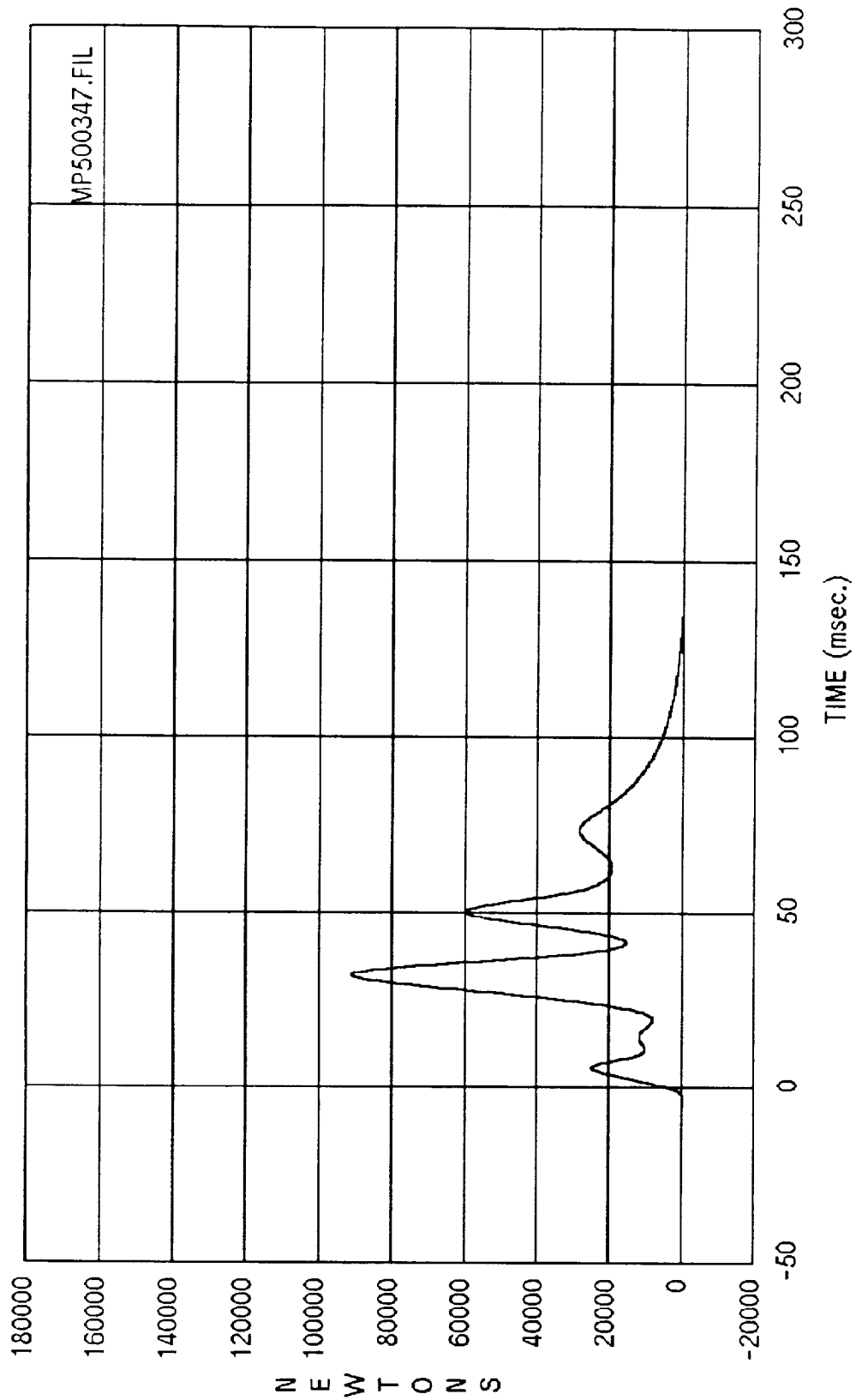


Curve: Force on barrier location B3 Filter: SAE CLASS 60 Max = 62442. Min = -126.67
MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



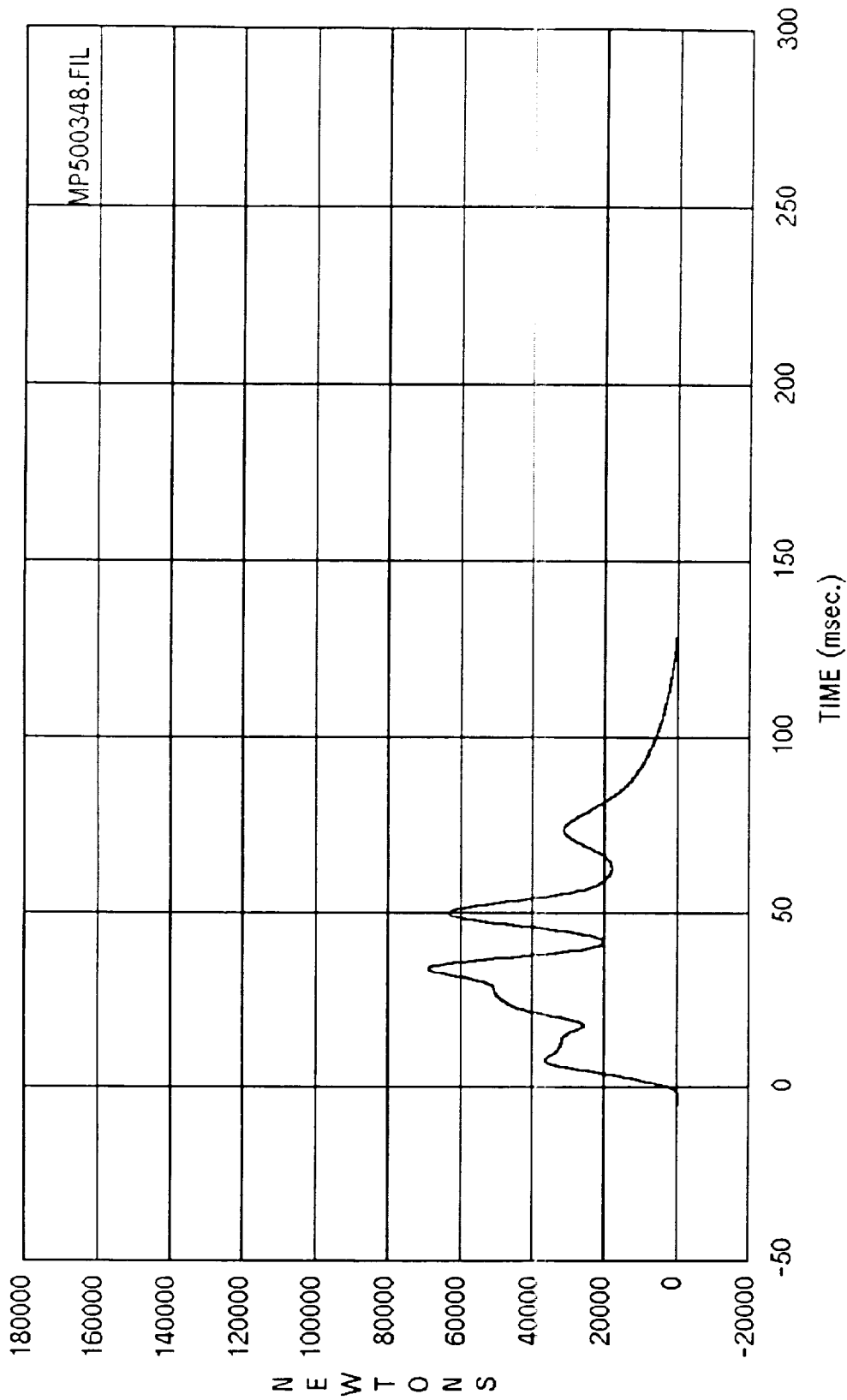
Curve: Force on barrier location B4 Filter: SAE CLASS 60 Max = 66614. Min = -101.94

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



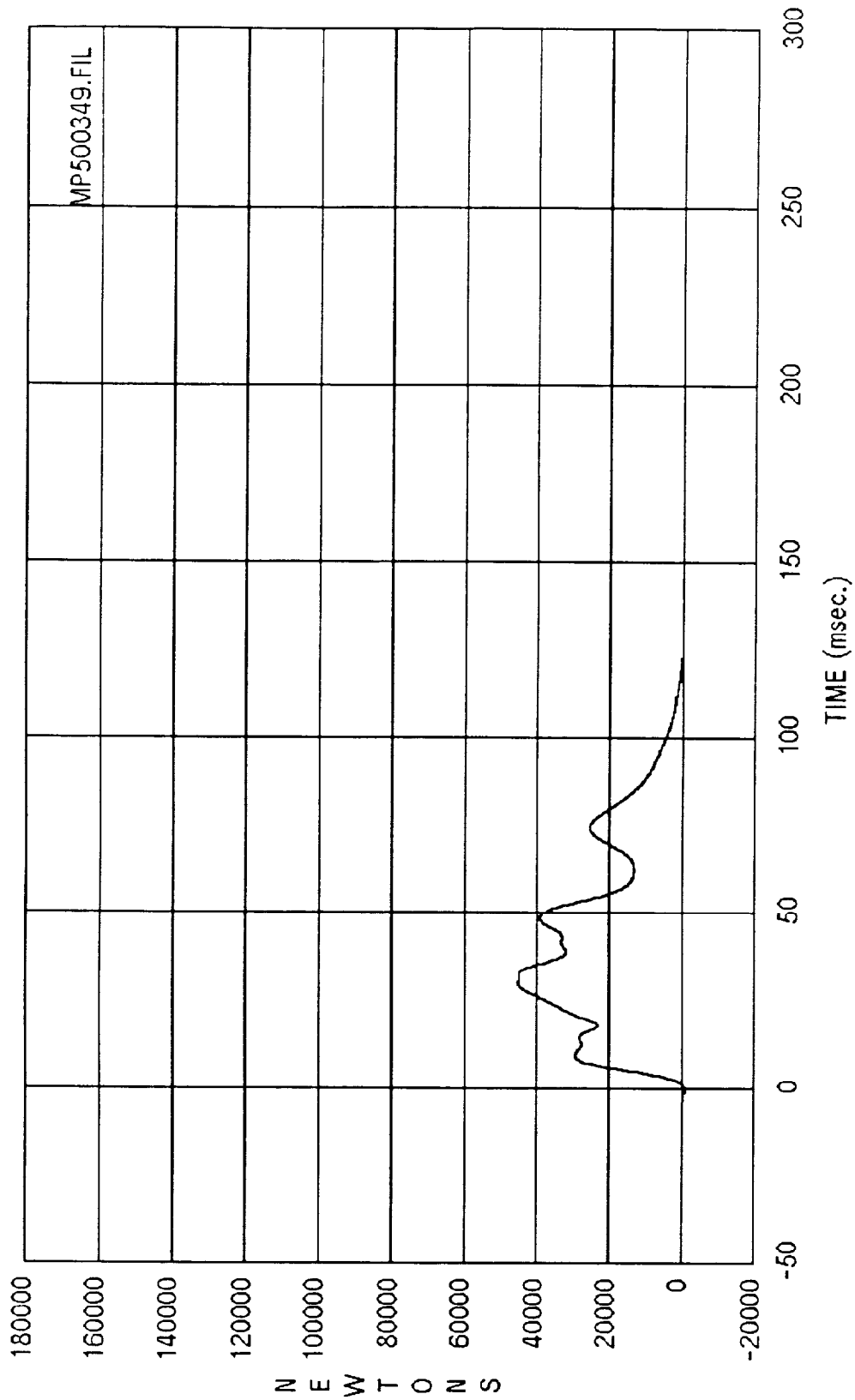
Curve: Force on barrier location B5 Filter: SAE CLASS 60 Max = 91350. Min = -46.903

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



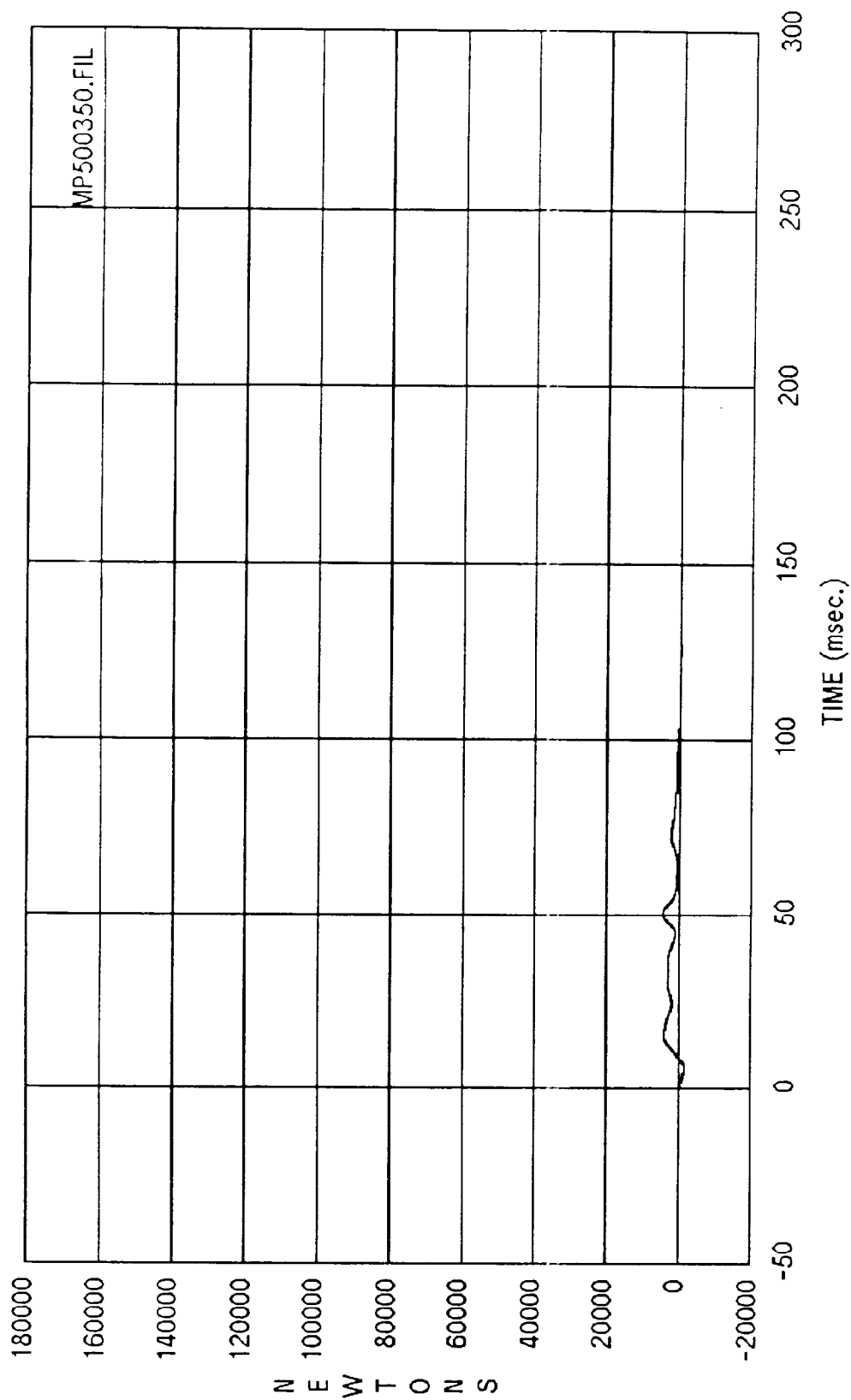
Curve: Force on barrier location B6 Filter: SAE CLASS 60 Max = 69031. Min = -151.88

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



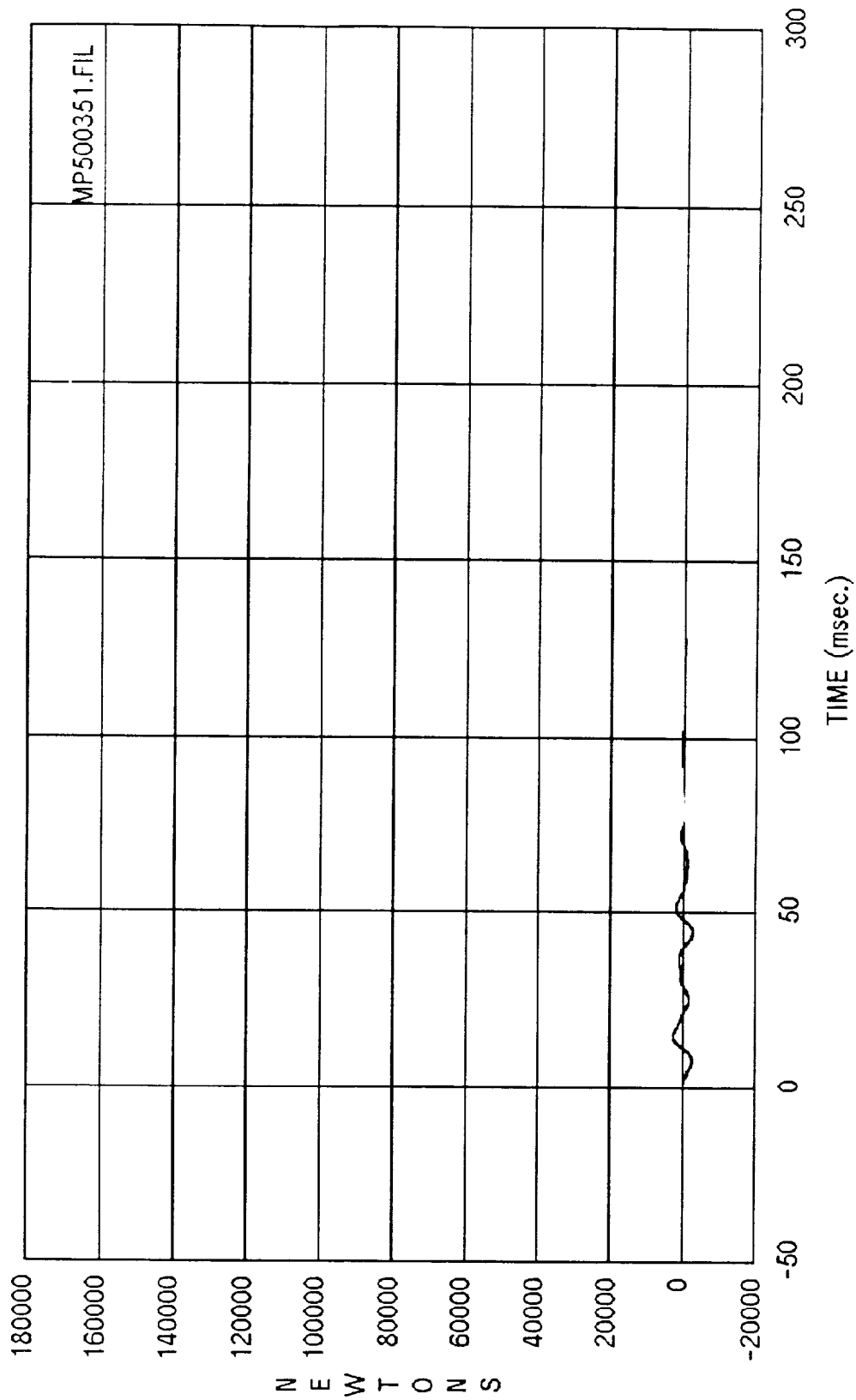
Curve: Force on barrier location B7 Filter: SAE CLASS 60 Max = 45189. Min = -155.82

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



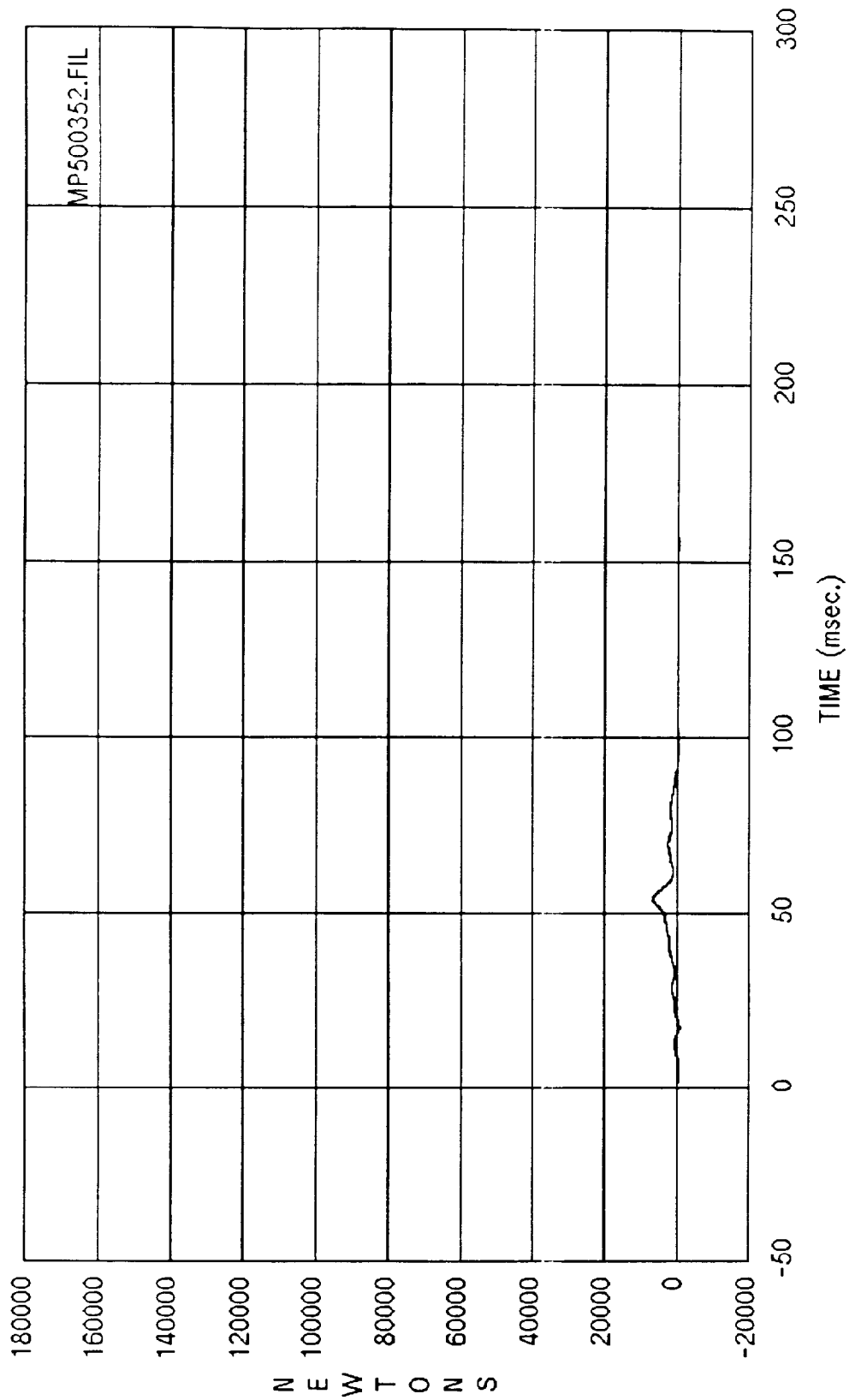
Curve: Force on barrier location B8 Filter: SAE CLASS 60 Max = 4636.5 Min = -1600.6

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



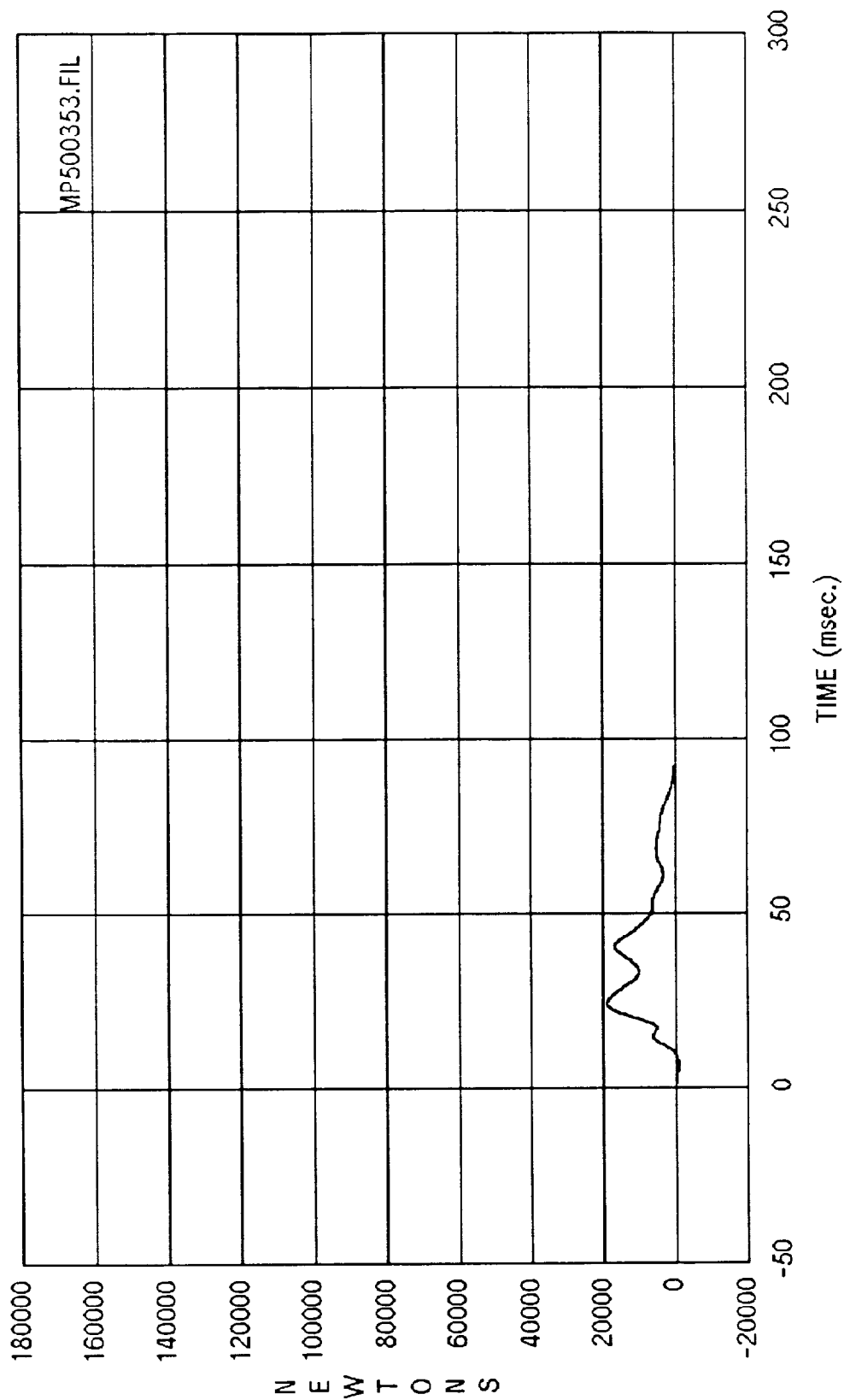
Curve: Force on barrier location B9 Filter: SAE CLASS 60 Max = 2723.8 Min = -2667.3

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



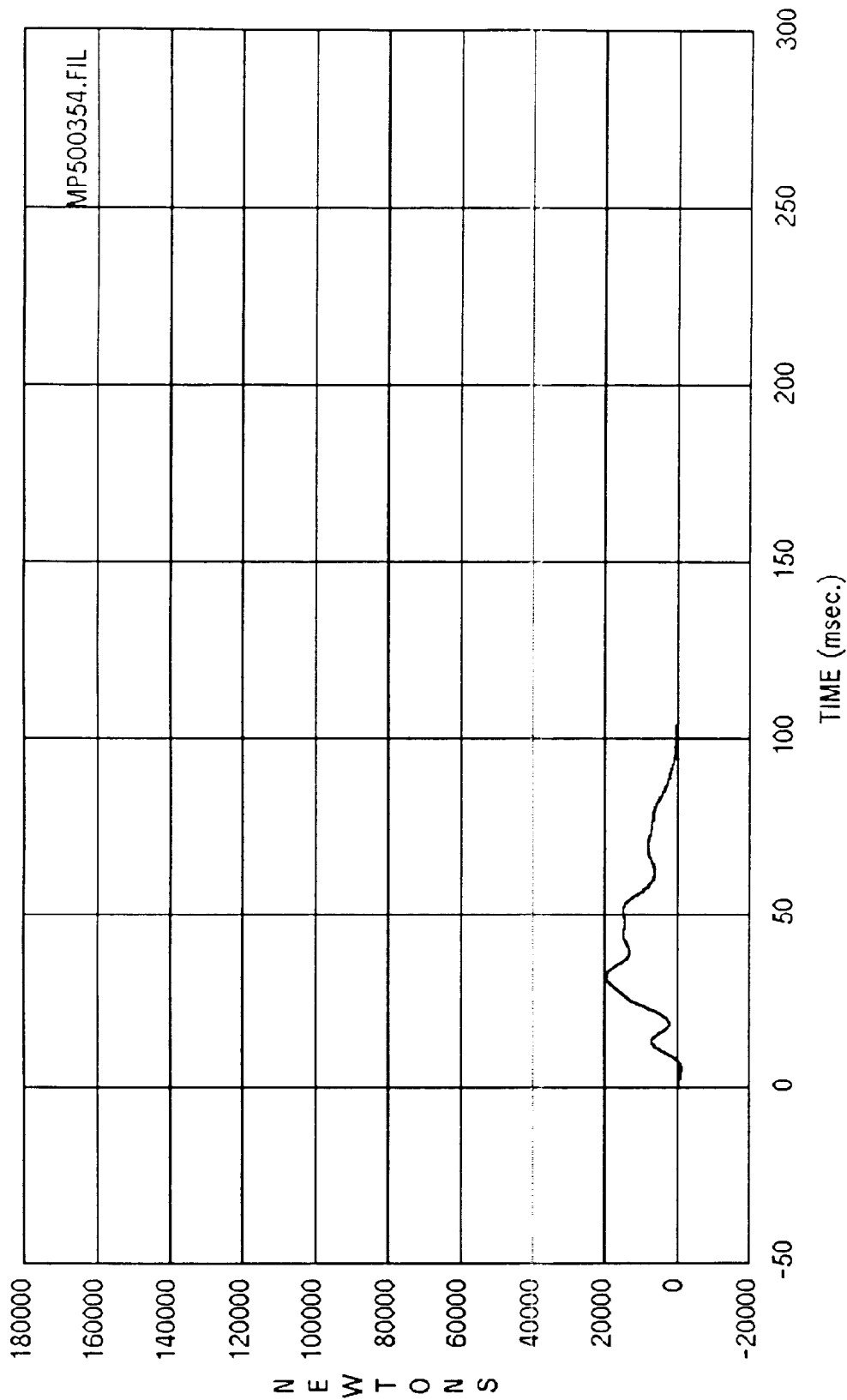
Curve: Force on barrier location C1 Filter: SAE CLASS 60 Max = 6698.2 Min = -537.75

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



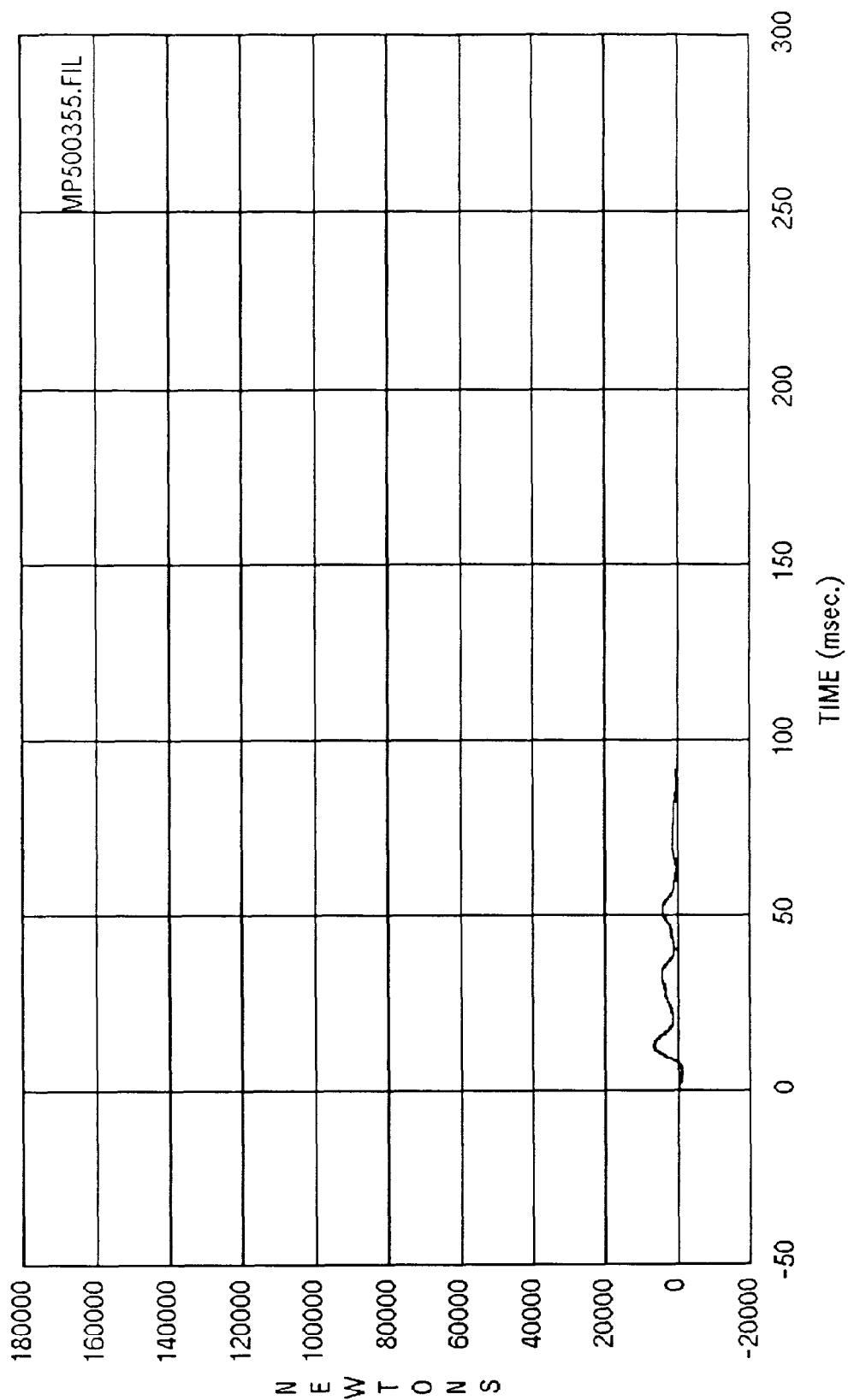
Curve: Force on barrier location C2 Filter: SAE CLASS 60 Max = 19103. Min = -711.39

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



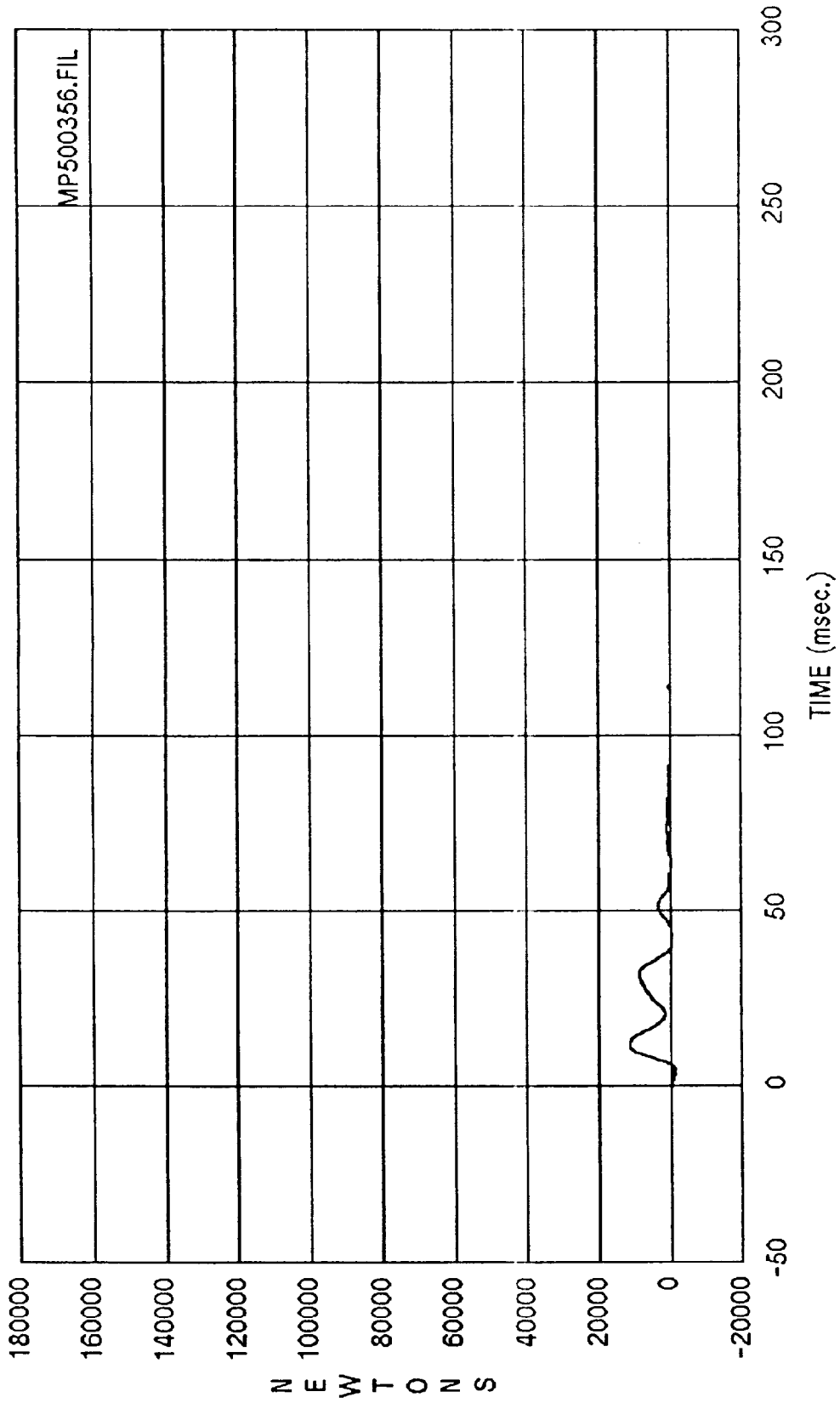
Curve: Force on barrier location C3 Filter: SAE CLASS 60 Max = 19673. Min = -956.38

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



Curve: Force on barrier location C4 Filter: SAE CLASS 60 Max = 6640.0 Min = -1059.4

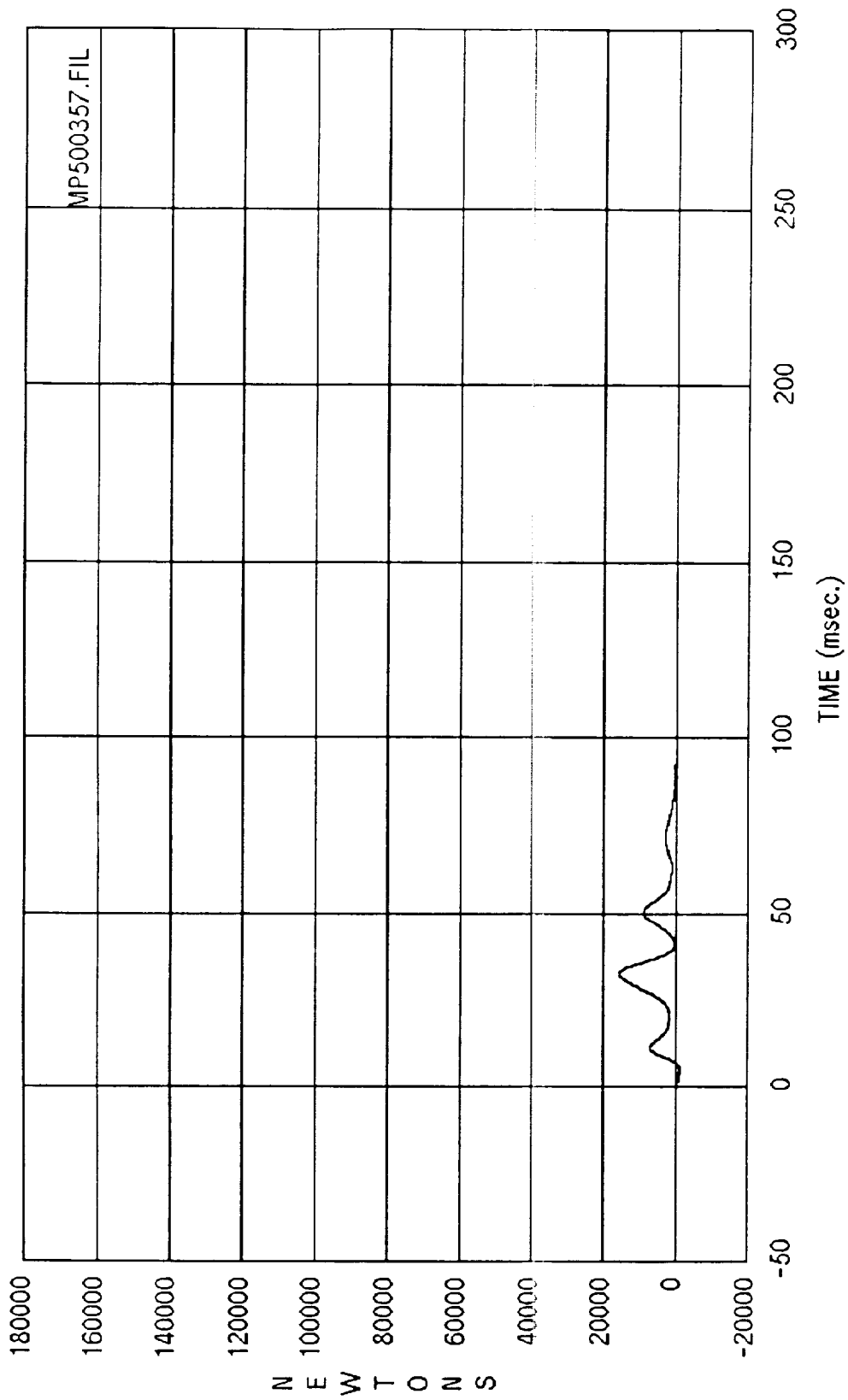
MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



Curve: Force on barrier location C5 Filter: SAE CLASS 60 Max = 11816. Min = -1047.4

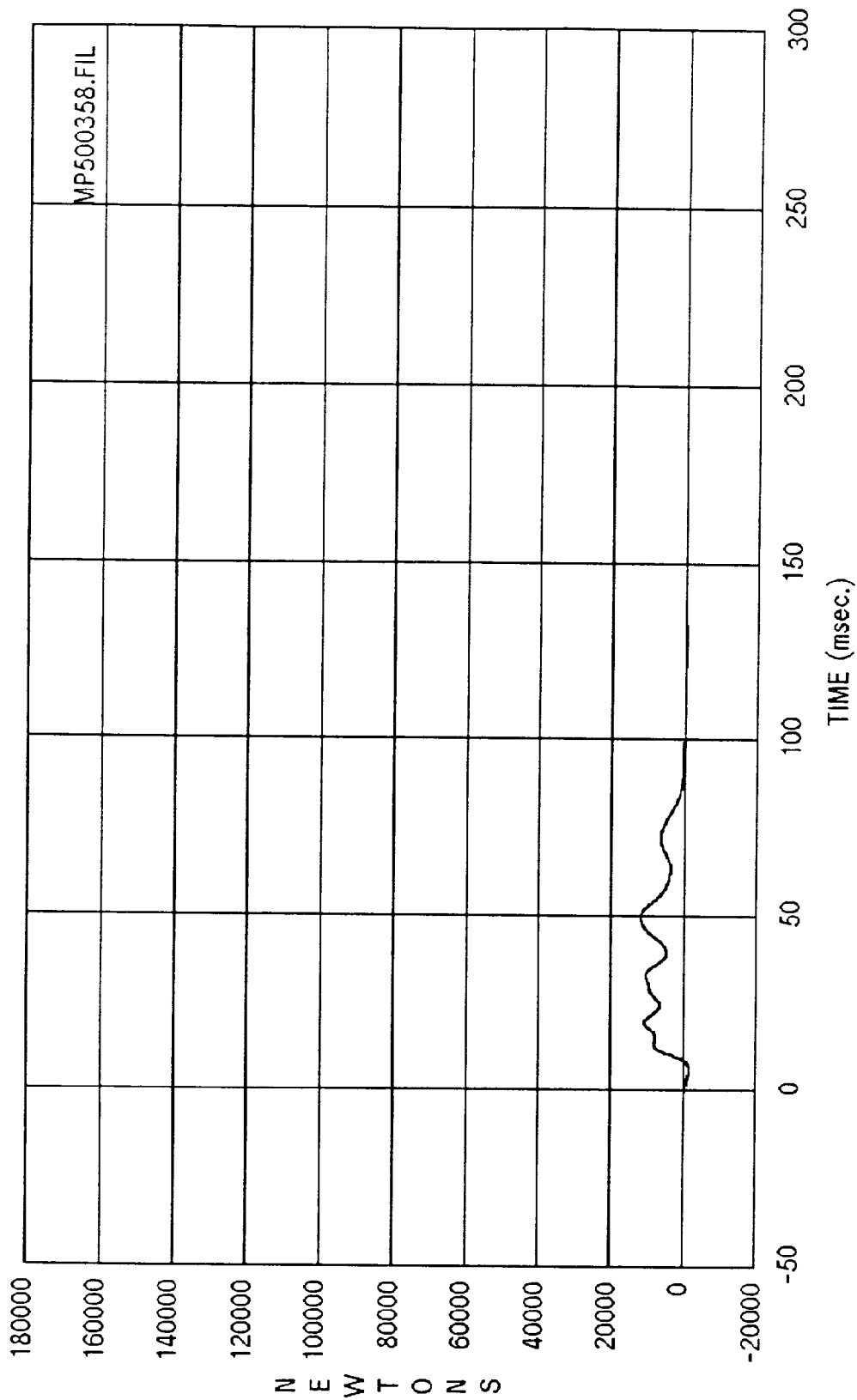
MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

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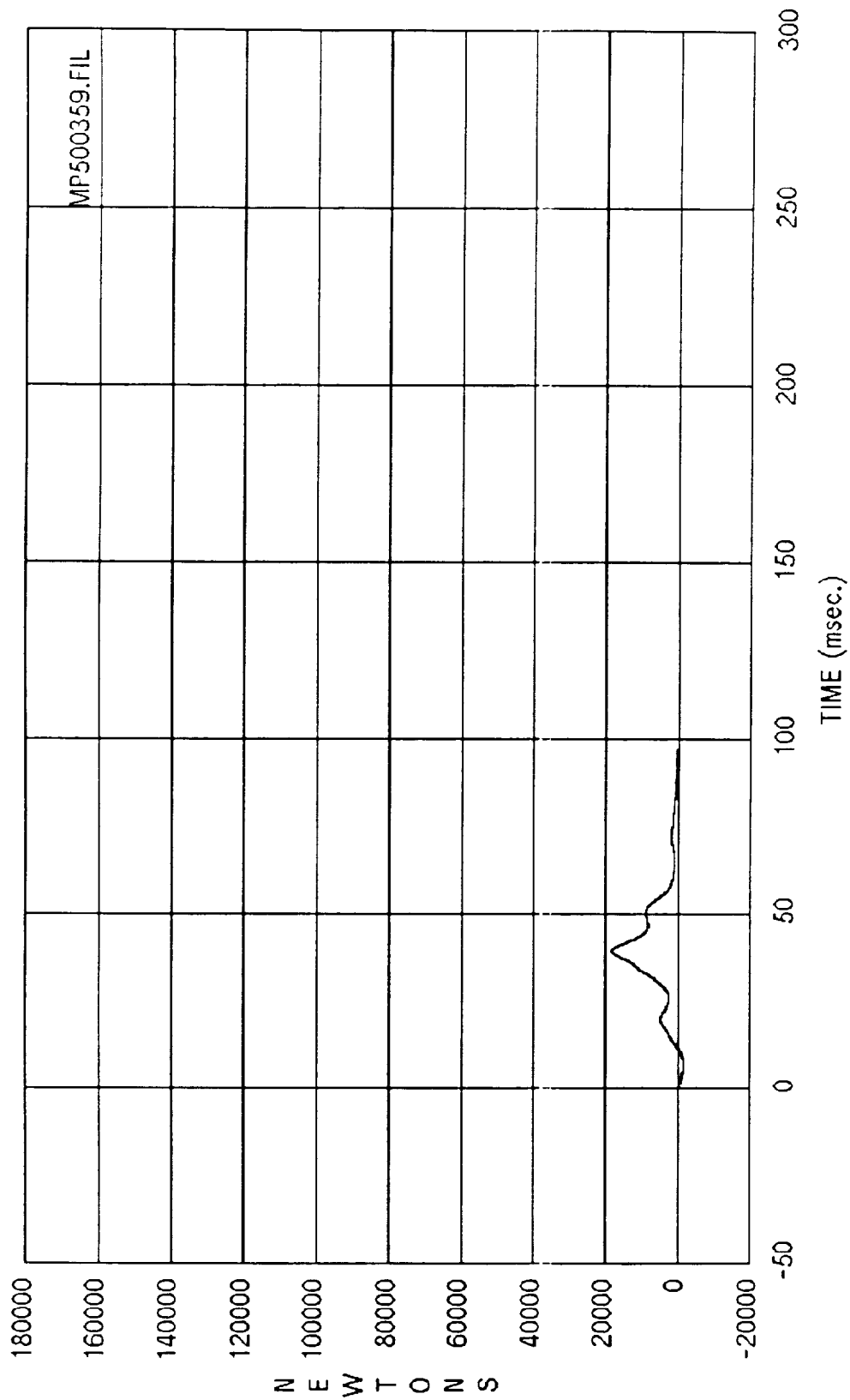
Curve: Force on barrier location C6 Filter: SAE CLASS 60 Max = 15823. Min = -1074.6

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



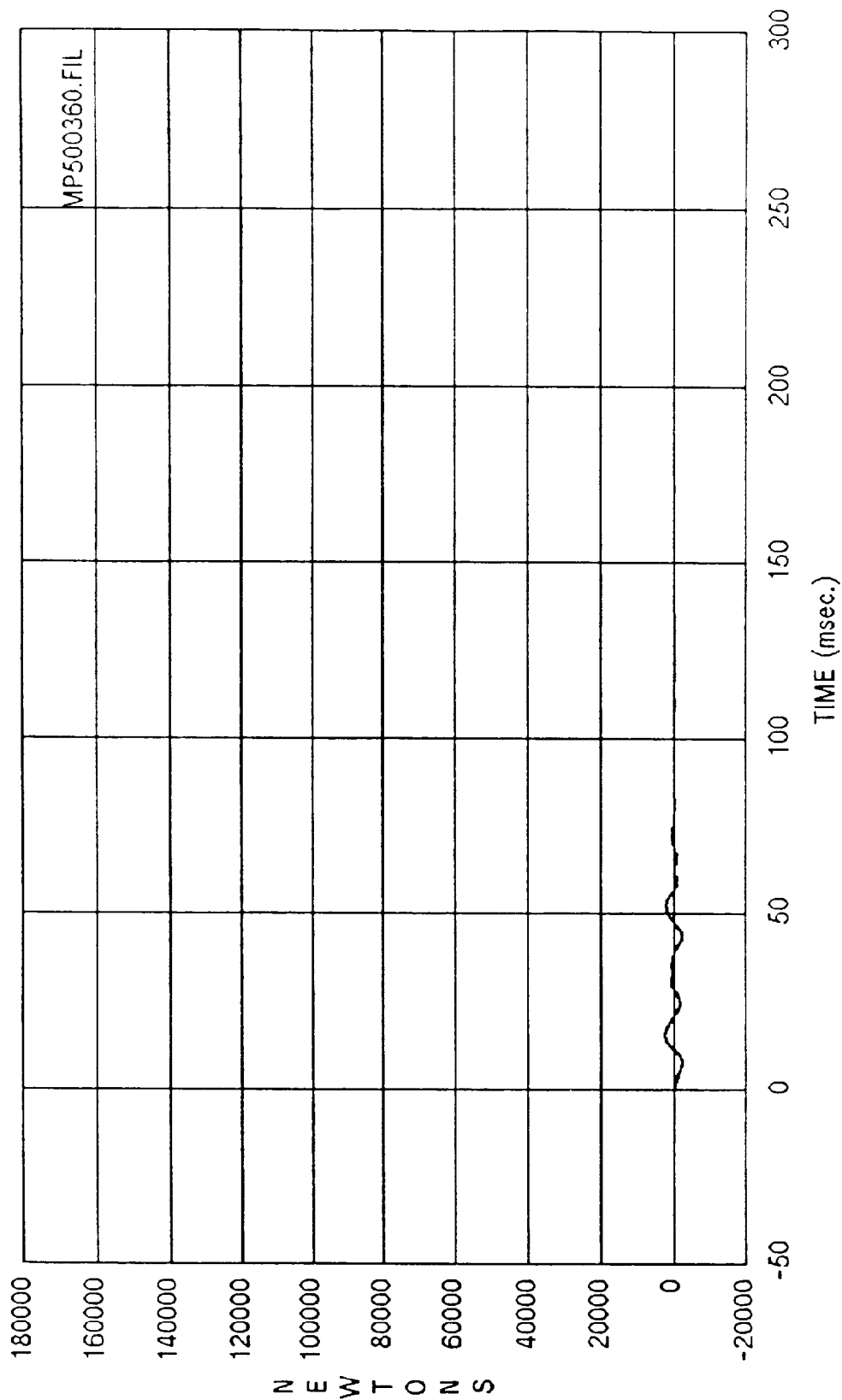
Curve: Force on barrier location C7 Filter: SAE CLASS 60 Max = 11932. Min = -1568.2

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



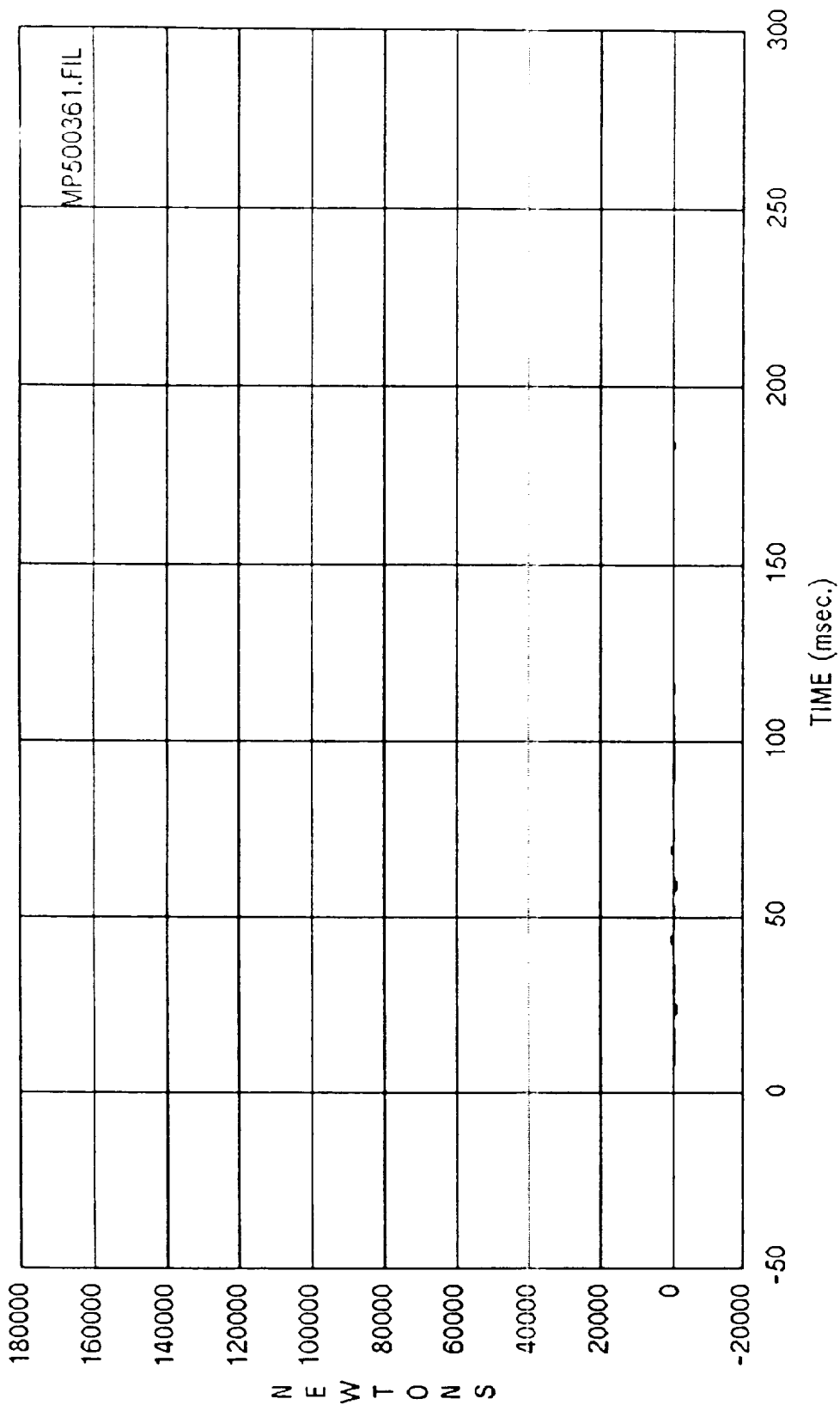
Curve: Force on barrier location C8 Filter: SAE CLASS 60 Max = 18334. Min = -1656.0

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



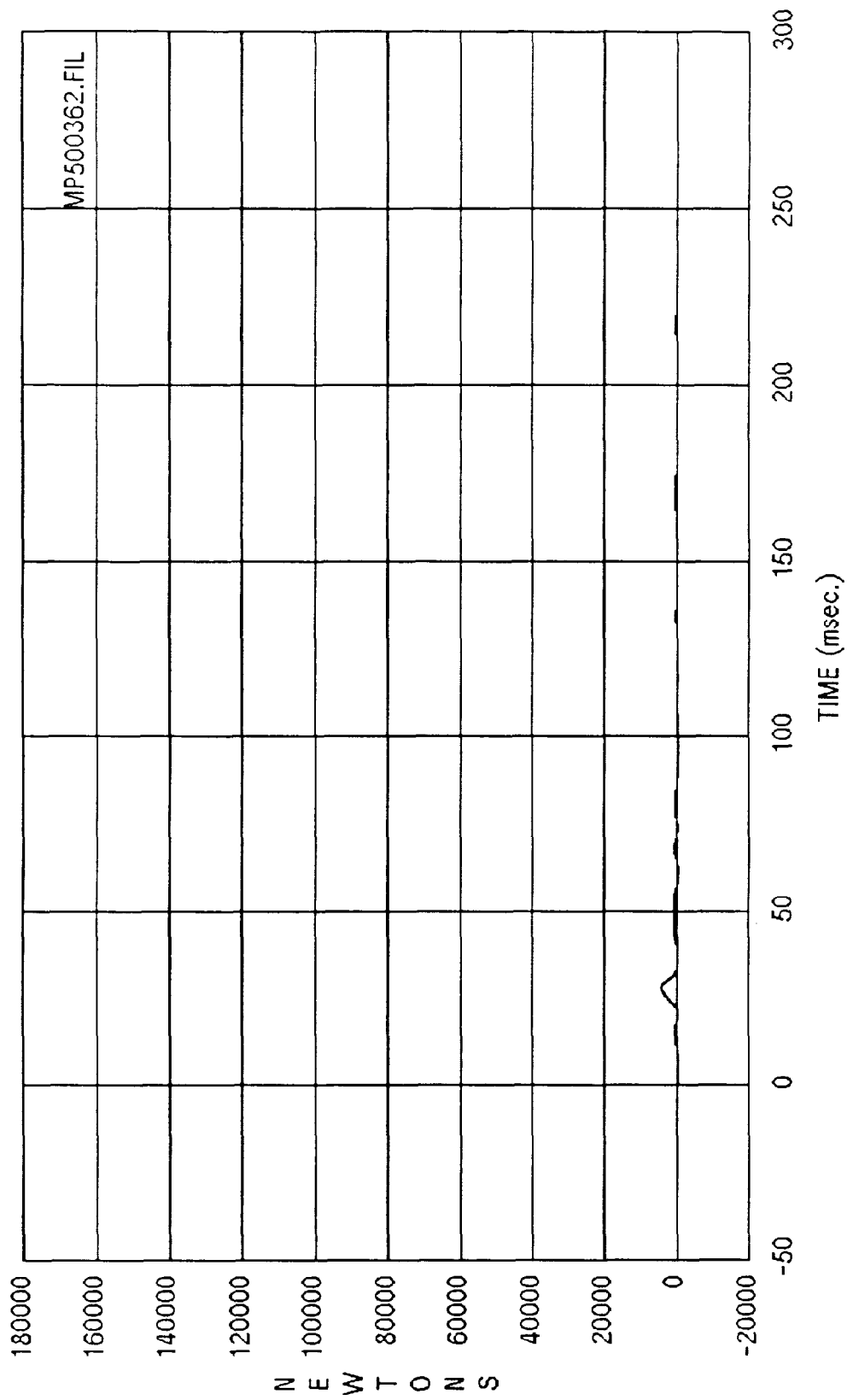
Curve: Force on barrier location C9 Filter: SAE CLASS 60 Max = 2492.8 Min = -2241.4

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

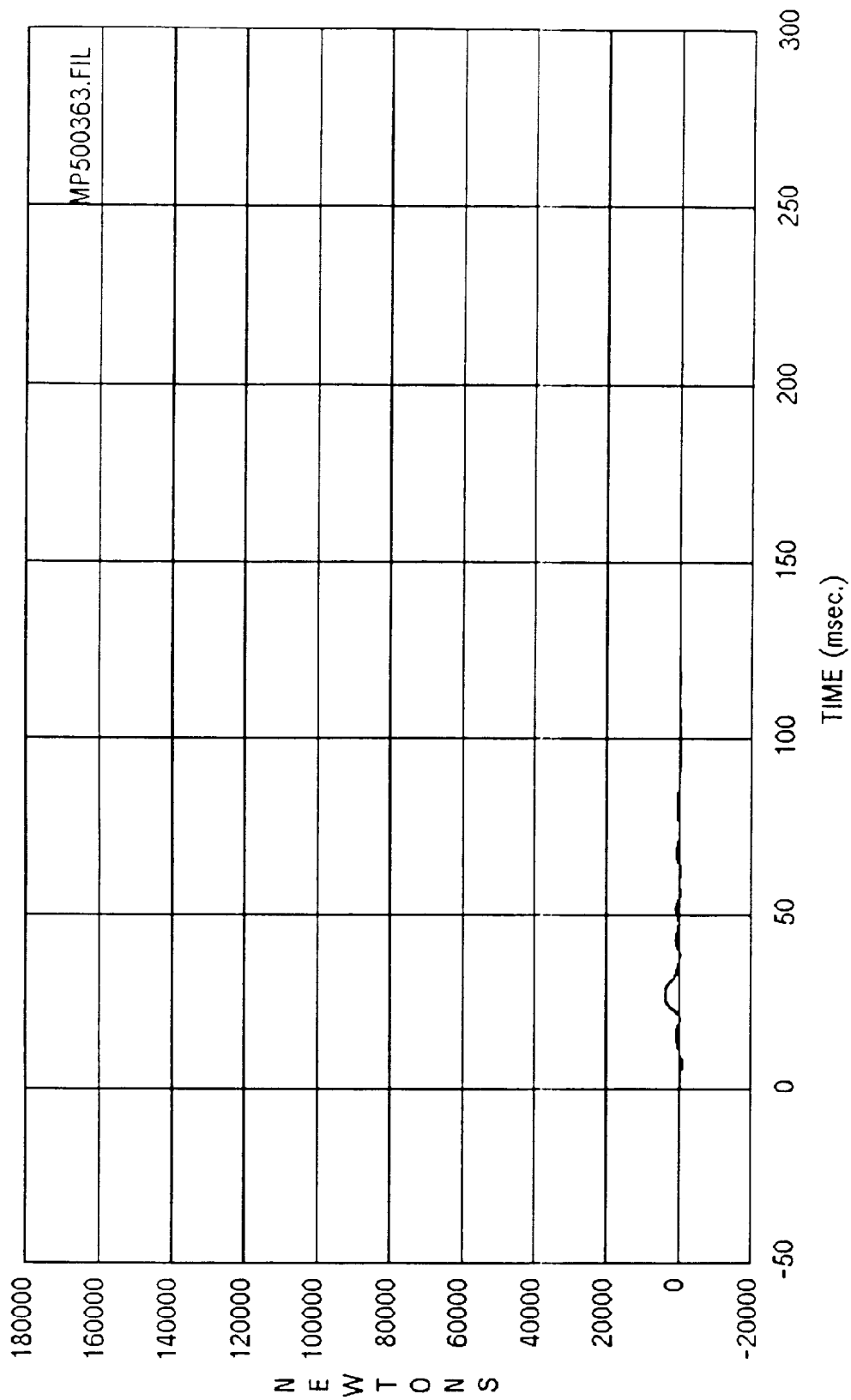


Curve: Force on barrier location D1 Filter: SAE CLASS 60 Max = 264.41 Min = -768.60

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

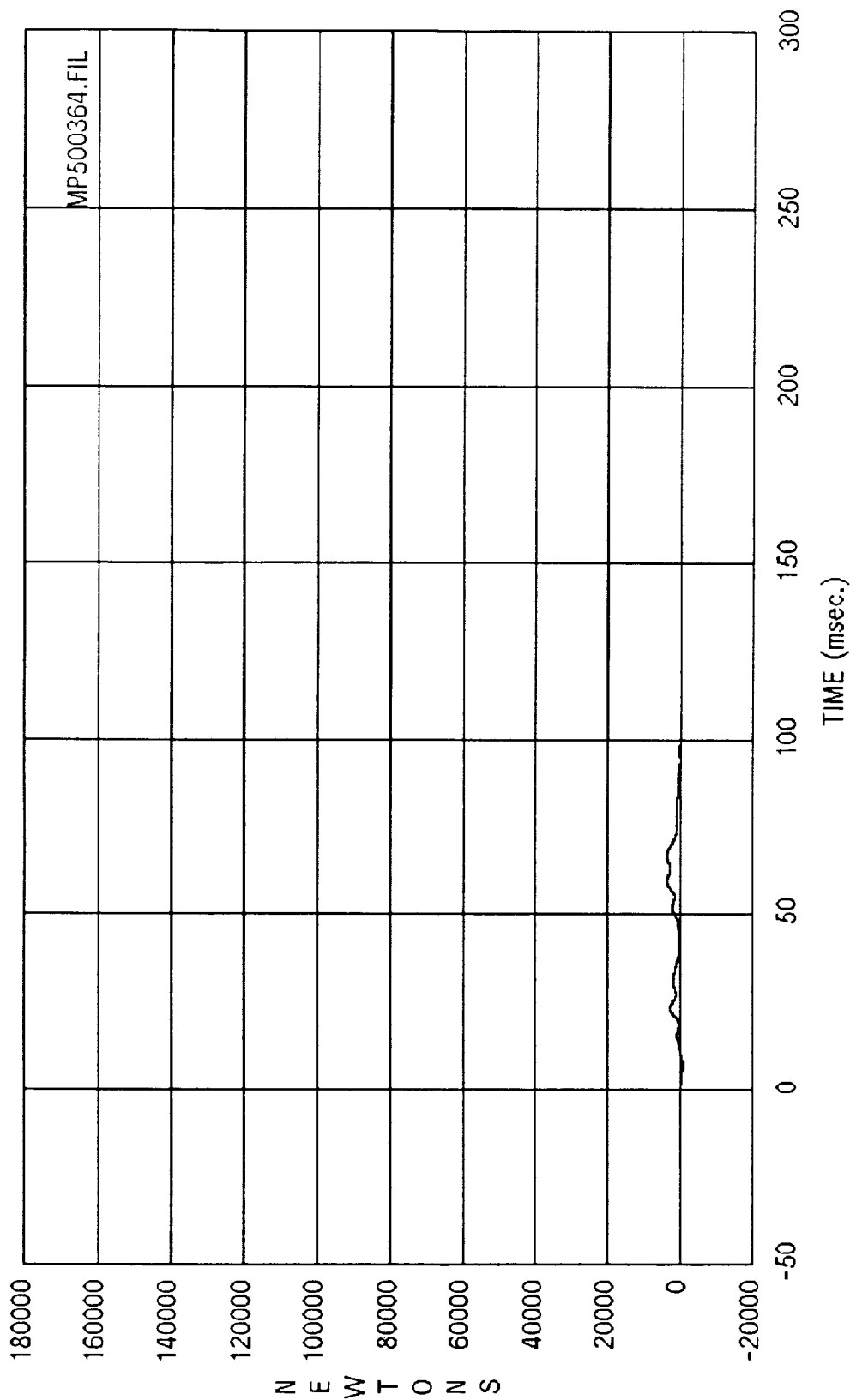


Curve: Force on barrier location D2 Filter: SAE CLASS 60 Max = 4353.7 Min = -495.68
MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



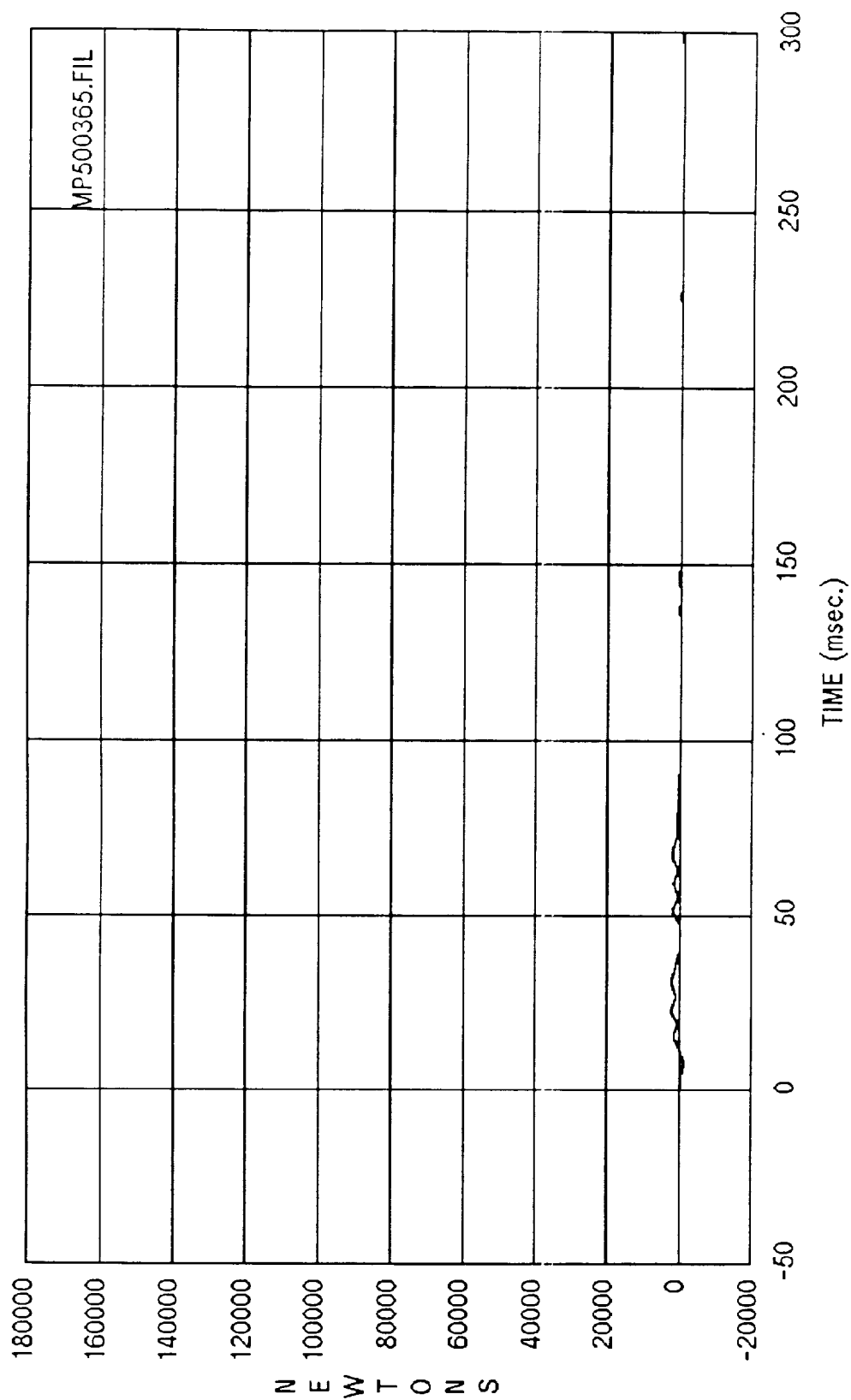
Curve: Force on barrier location D3 Filter: SAE CLASS 60 Max = 3816.3 Min = -676.24

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



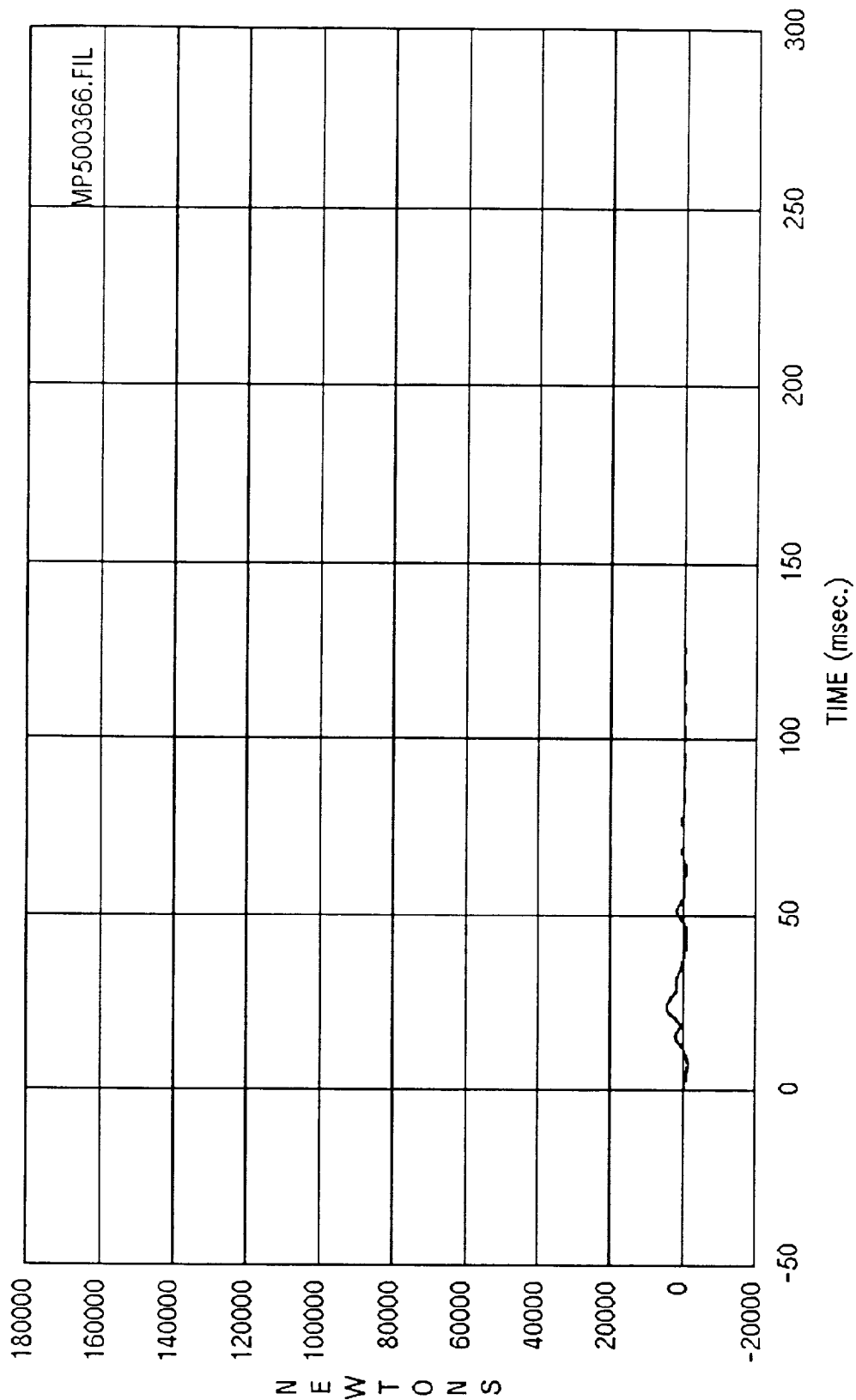
Curve: Force on barrier location D4 Filter: SAE CLASS 60 Max = 3821.8 Min = -717.06

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



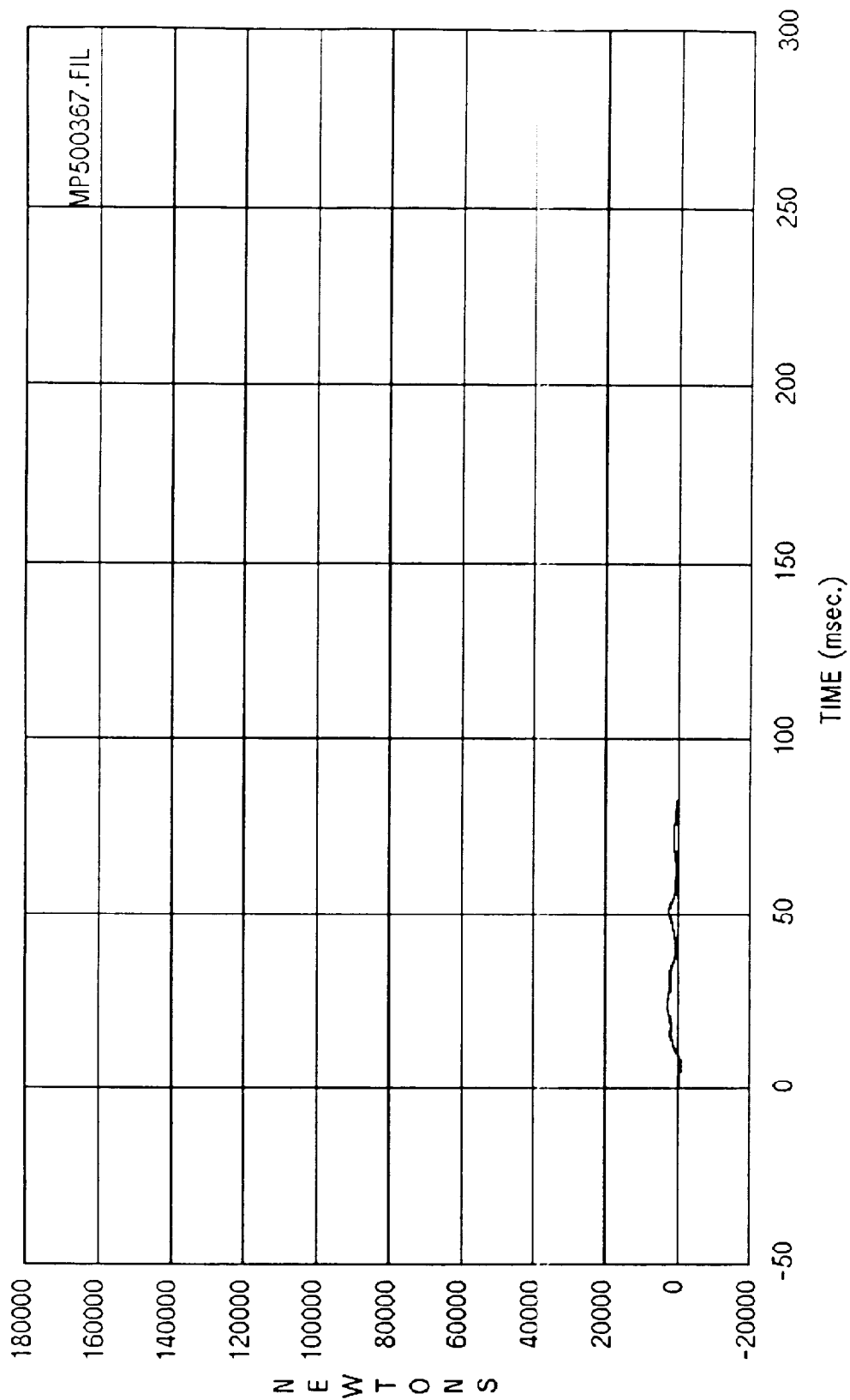
Curve: Force on barrier location D5 Filter: SAE CLASS 60 Max = 2260.6 Min = -990.74

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

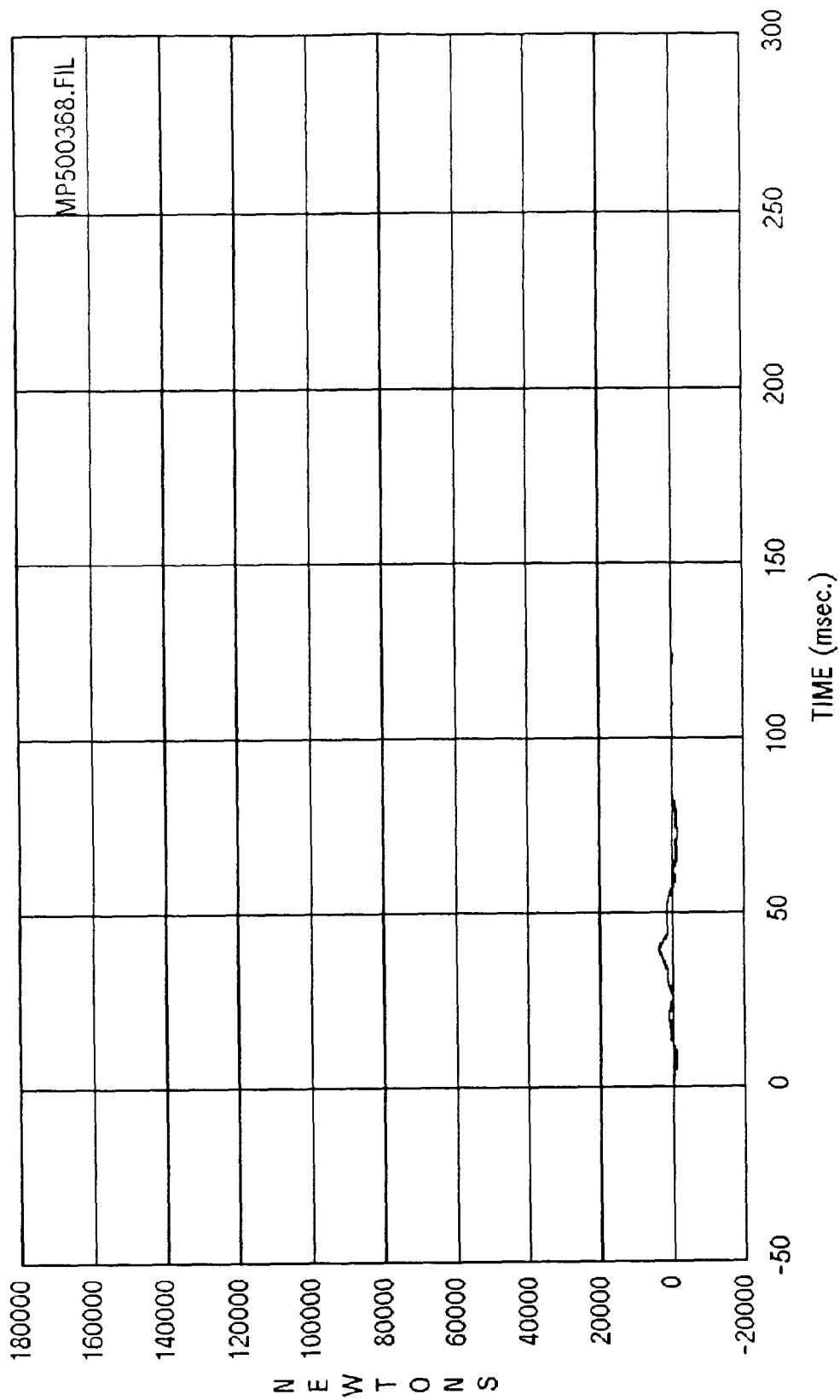


Curve: Force on barrier location D6 Filter: SAE CLASS 60 Max = 4561.0 Min = -1306.8

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

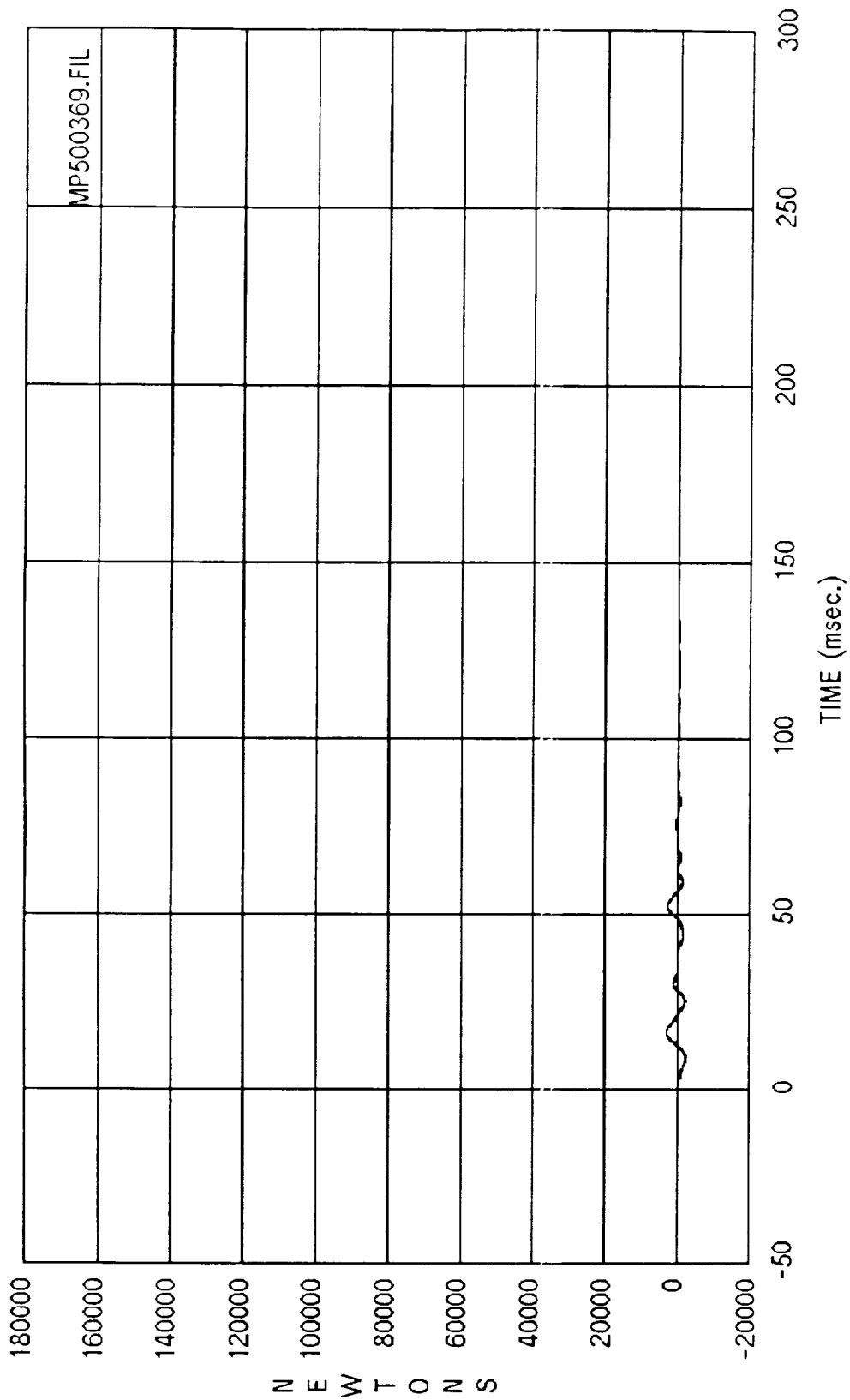


Curve: Force on barrier location D7 Filter: SAE CLASS 60 Max = 2901.9 Min = -705.55
MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

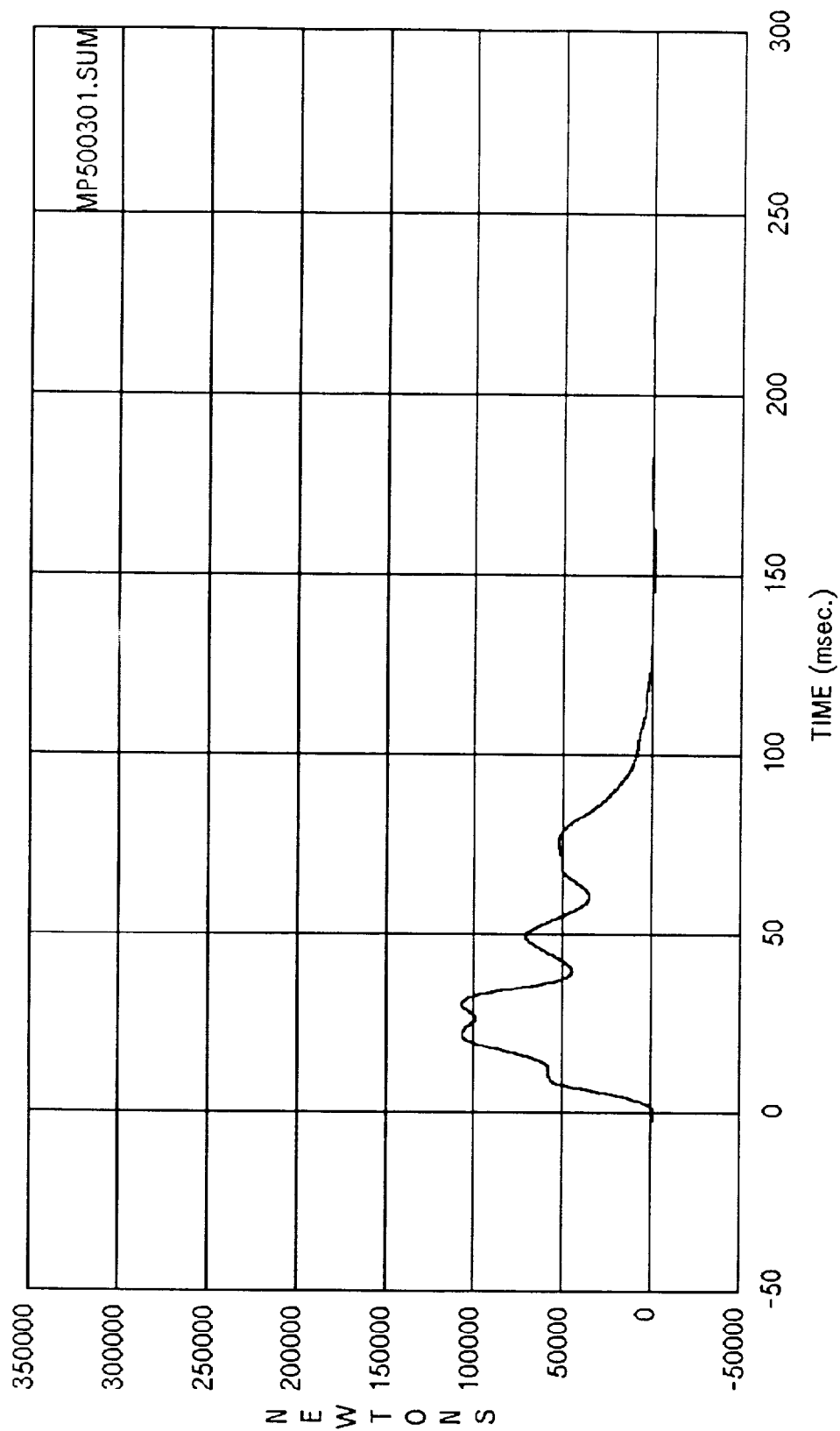


Curve: Force on barrier location D8 Filter: SAE CLASS 60 Max = 3701.5 Min = -1338.9

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

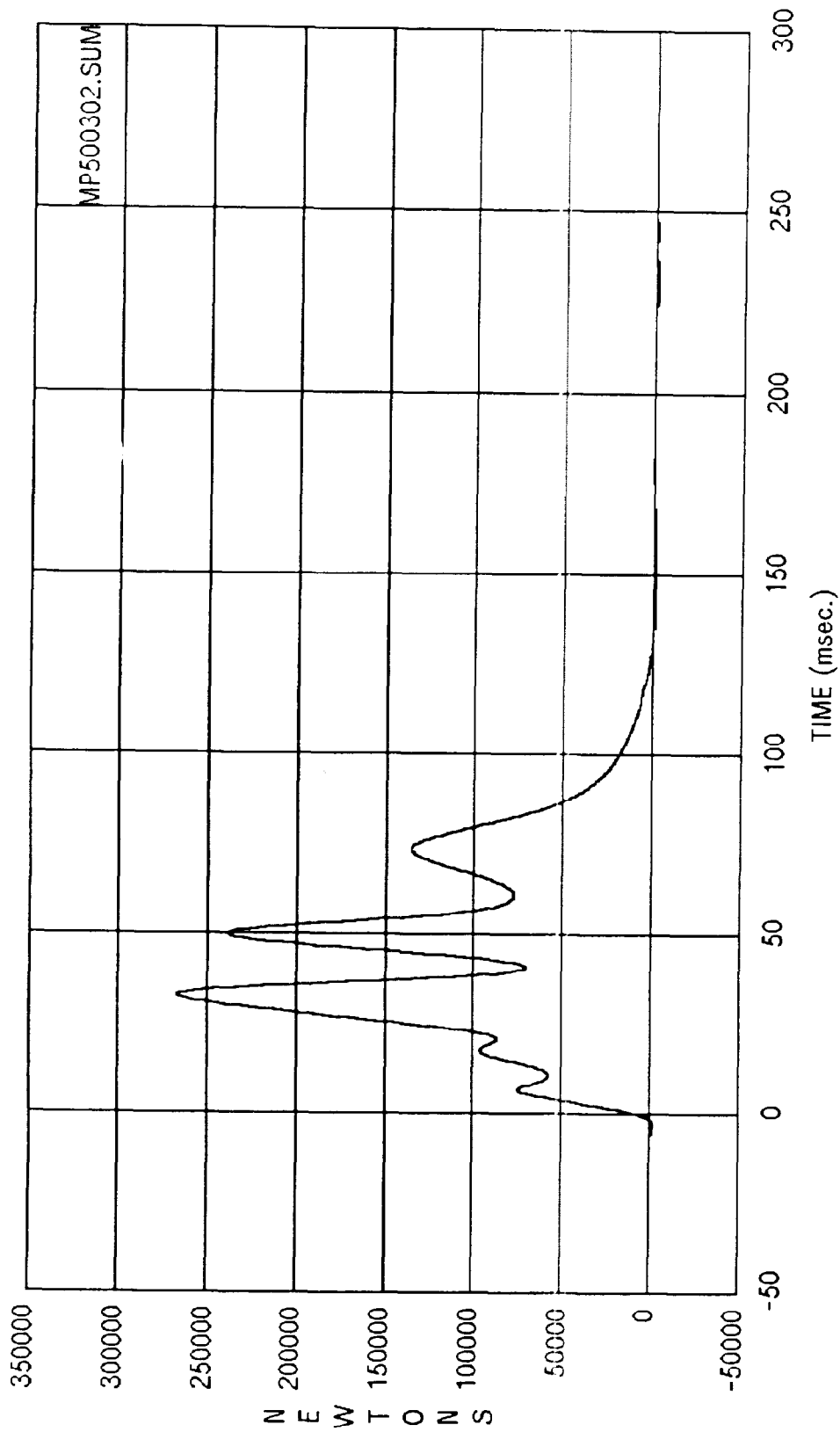


Curve: Force on barrier location D9 Filter: SAE CLASS 60 Max = 3150.4 Min = -2226.8
MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



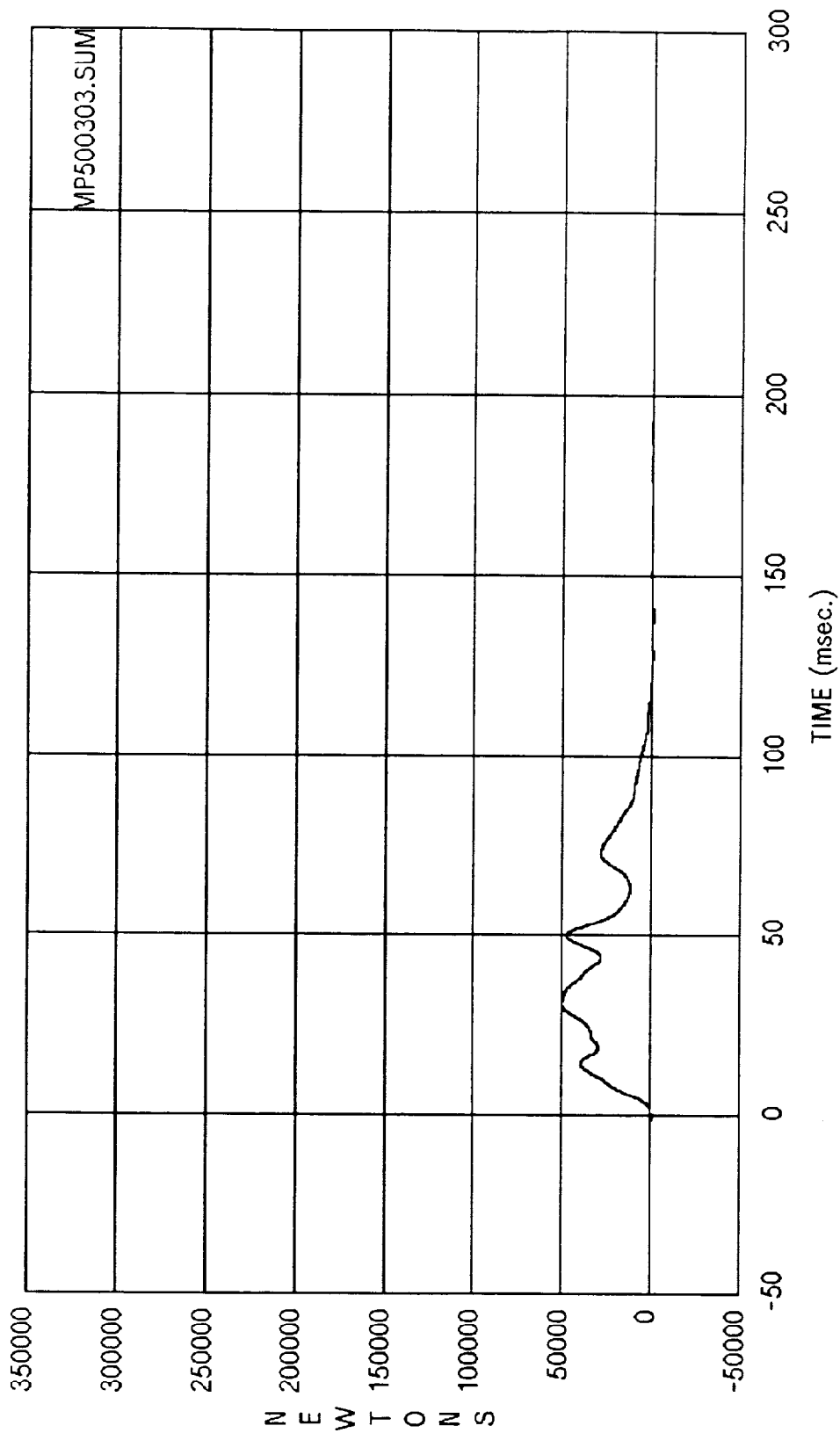
Curve: Barrier sum force A1,A2,A3,B1,B2,B3 -- Group 1 Filter: SAE CLASS 60 Max = .10735E+06 Min = 634.75

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



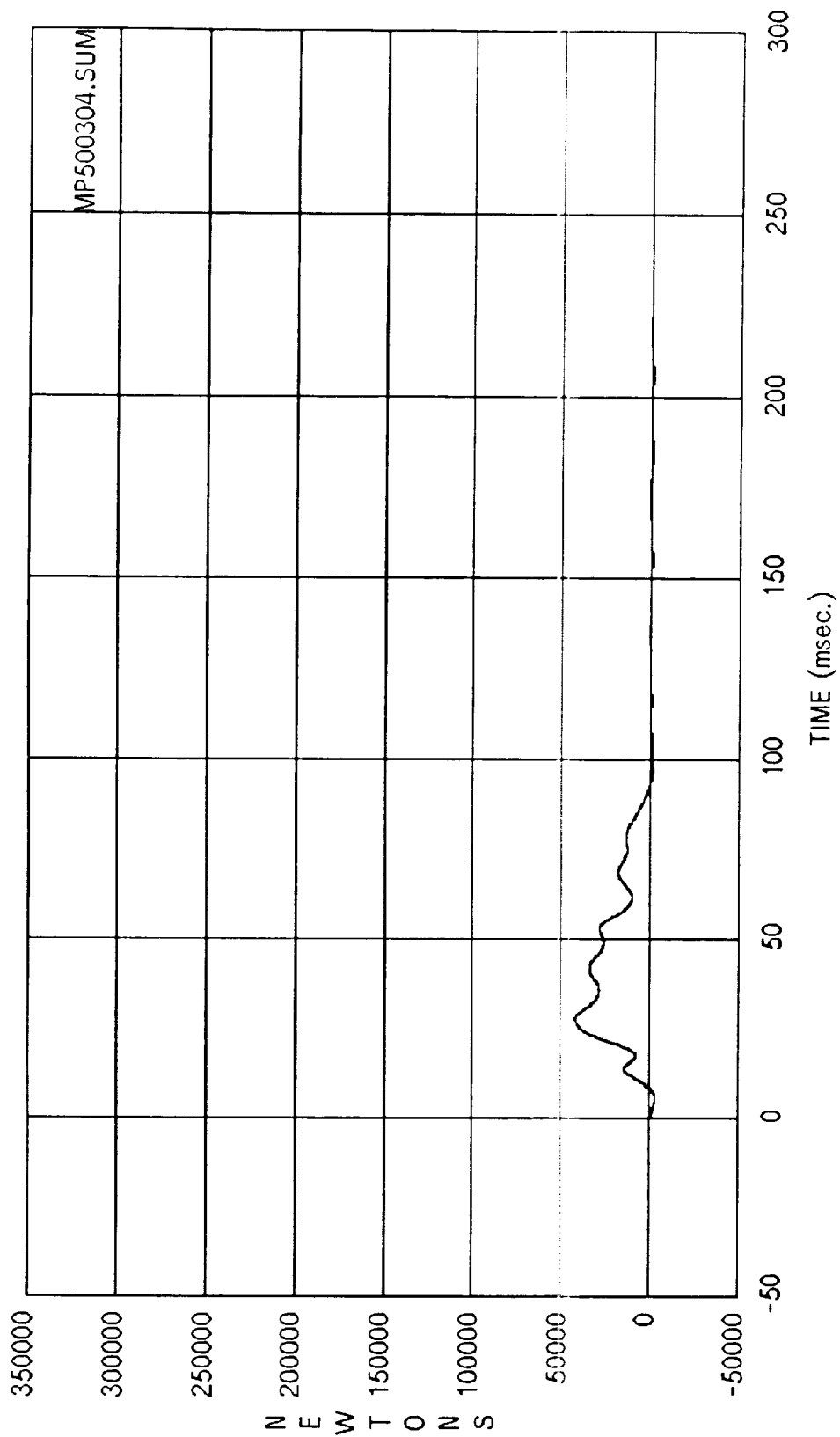
Curve: Barrier sum force A4,A5,A6,B4,B5,B6 -- Group 2 Filter: SAE CLASS 60 Max = .26744E+06 Min = 789.55

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



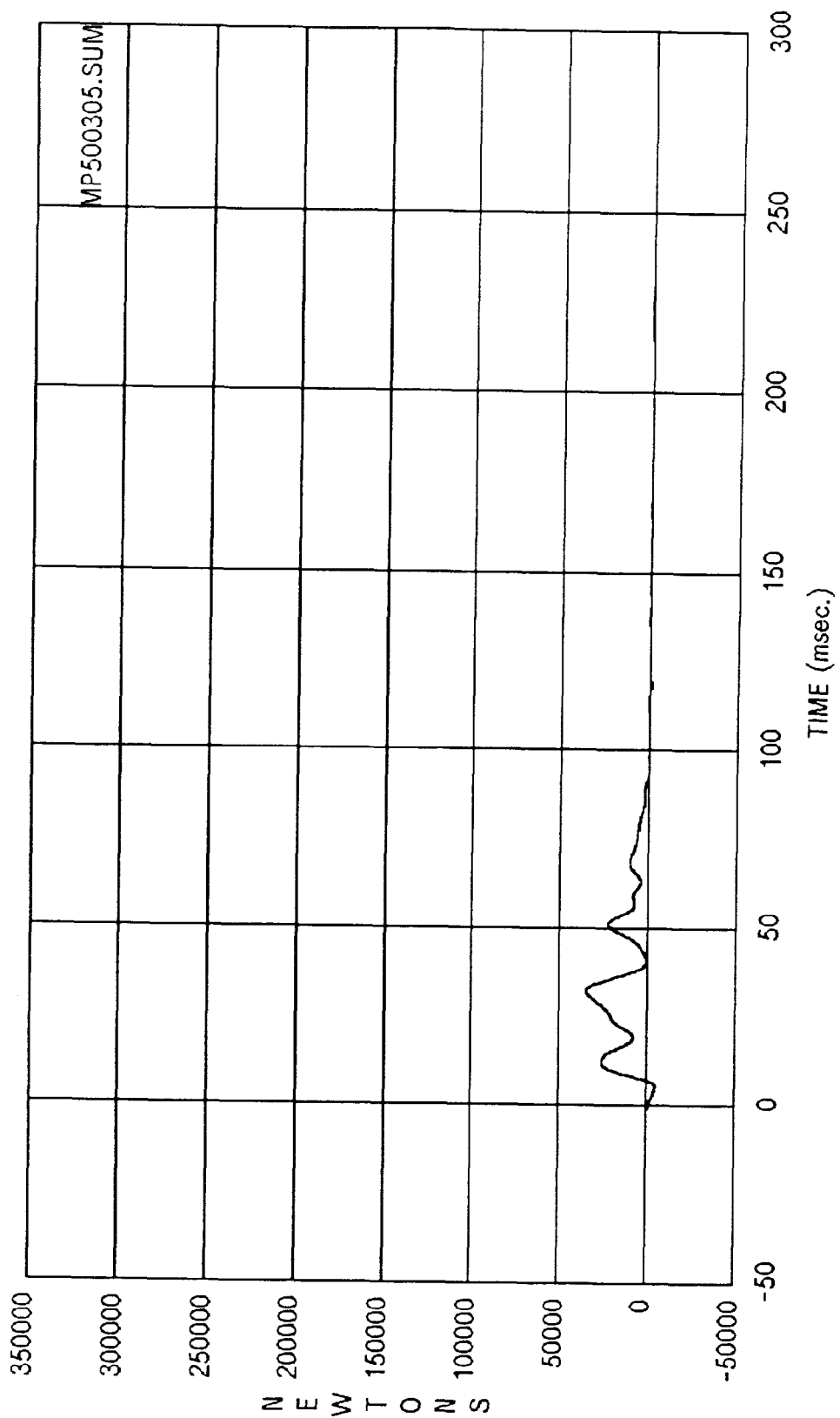
Curve: Barrier sum force A7,A8,A9,B7,B8,B9 -- Group 3 Filter: SAE CLASS 60 Max = 50016. Min = -38

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



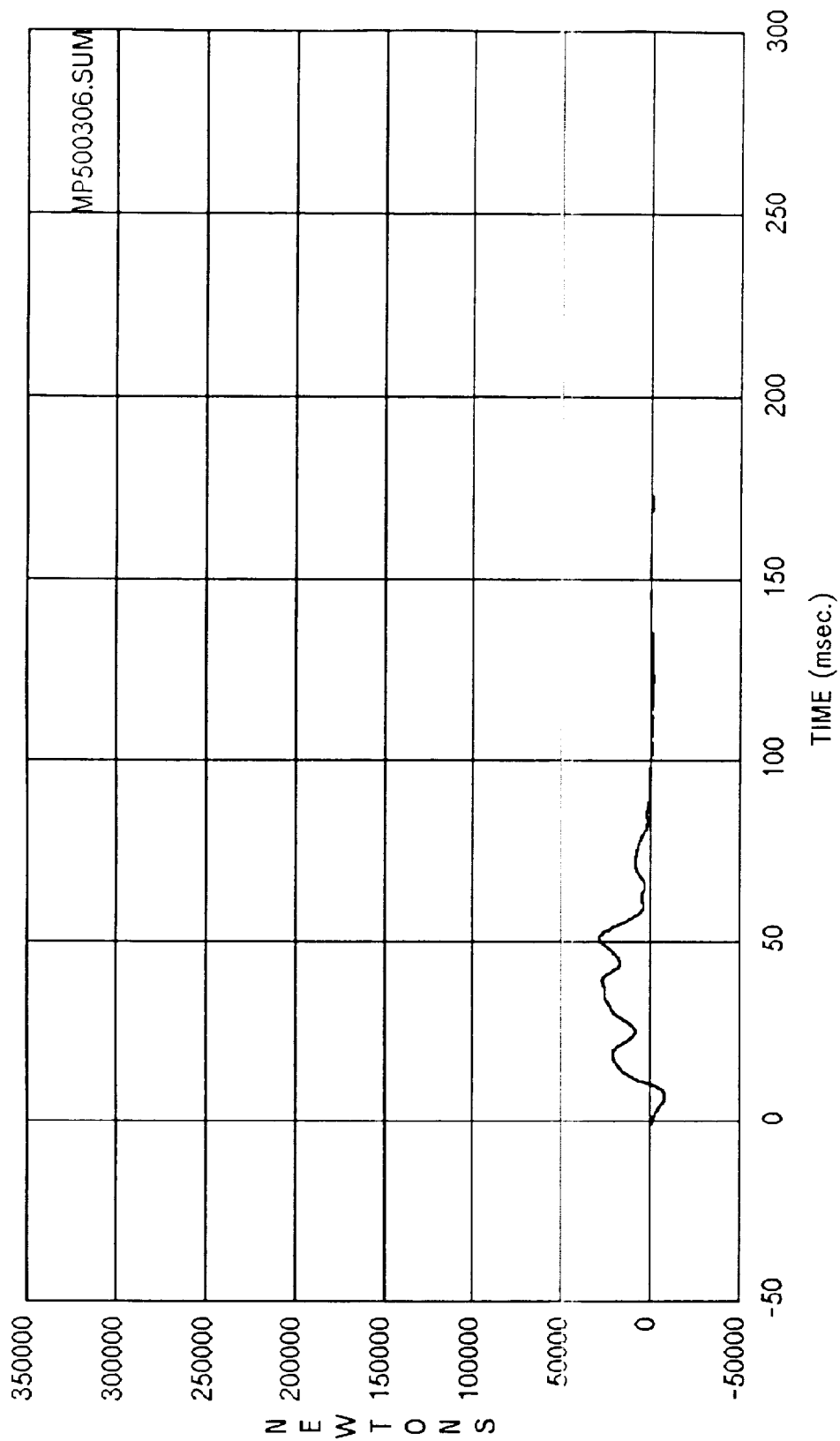
Curve: Barrier sum force C1,C2,C3,D1,D2,D3 -- Group 4 Filter: SAE CLASS 60 Max = 42163. Min = -30

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



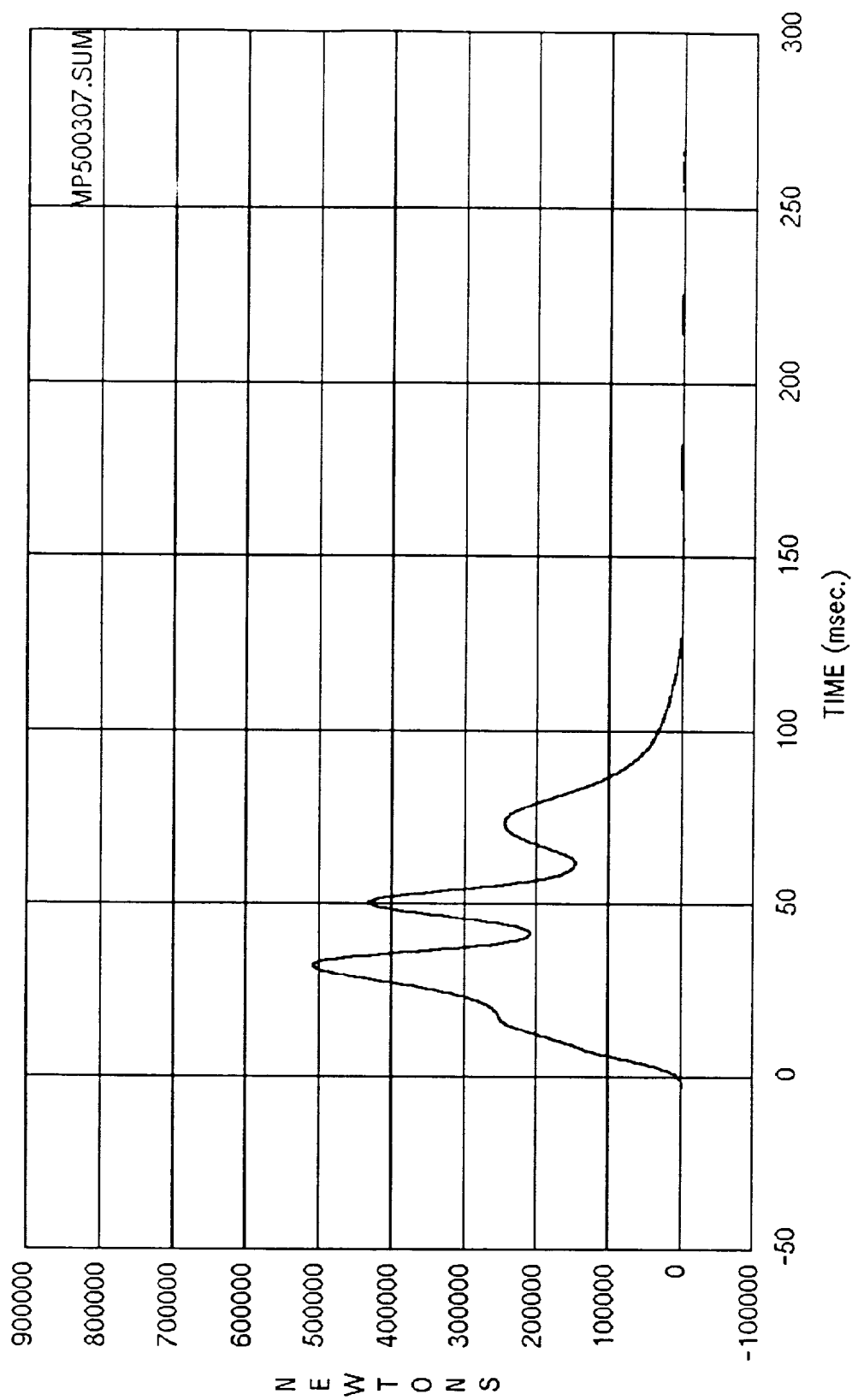
Curve: Barrier sum force C4,C5,C6,D4,D5,D6 -- Group 5 Filter: SAE CLASS 60 Max = 35107. Min = -47

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



Curve: Barrier sum force C7,C8,C9,D7,D8,D9 -- Group 6 Filter: SAE CLASS 60 Max = 29012. Min = -81

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra



Curve: Barrier sum force -- Total Filter: SAE CLASS 60 Max = .50992E+06 Min = -812.3

MSE Date: 03/10/93 Program: 1993 NCAP, test number 8 Vehicle: 1993 Nissan Sentra

APPENDIX C

PART 572 DUMMY CONFIGURATION AND
PERFORMANCE VERIFICATION TESTS

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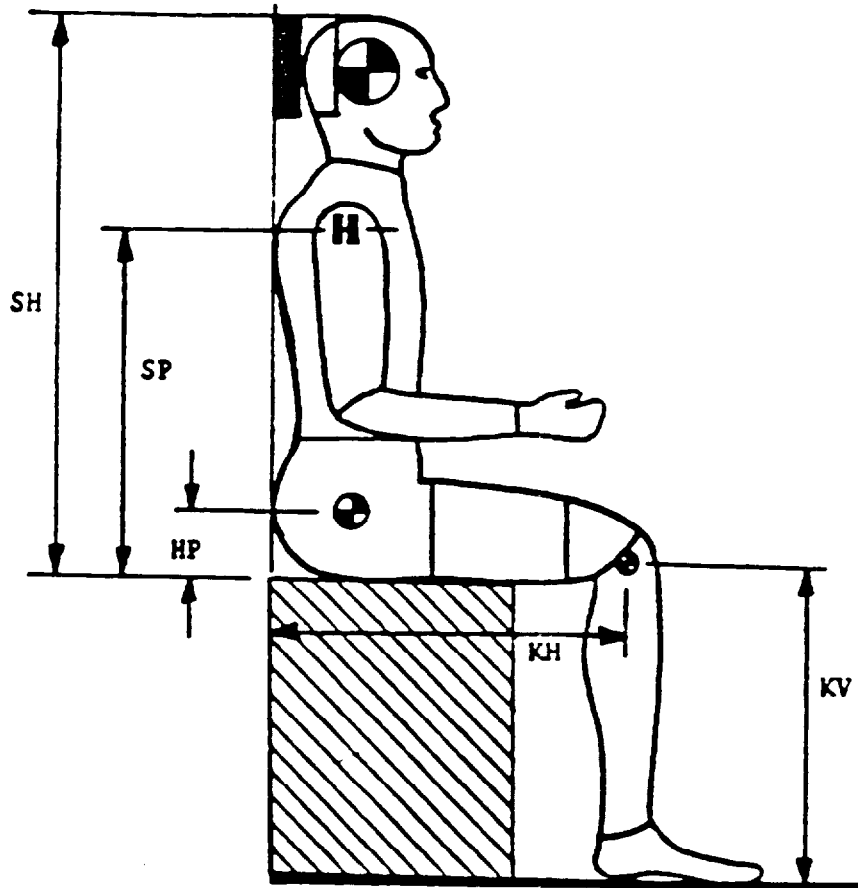
PART 572 ATD CONFIGURATION AND PERFORMANCE VERIFICATION DATA

NHTSA ATD I.D. NUMBER: 830

LAB TECHNICIAN: P. Puzzuto/L. Rawlings

CALIBRATION SEQUENCE: 03

CALIBRATION DATE: 02/12/93 to 02/22/93



I. CONFIGURATION VERIFICATION DATA, PRETEST

TESTED PARAMETER	UNITS	SPECIFICATION	TEST RESULTS
SH - Seated height	mm	904 - 909	905
SP - Shoulder pivot height	mm	554 - 569	557
HP - Hip pivot height	mm	99 reference	99
KH - Knee pivot from back	mm	511 - 526	520
KV - Knee pivot from floor	mm	490 - 505	503
SW - Shoulder width	mm	452 - 467	460
HW - Hip width	mm	356 - 391	382

PART 572 ATD CONFIGURATION AND PERFORMANCE VERIFICATION DATA (Cont.)

NHTSA ATD I.D. NUMBER: 830

LAB TECHNICIAN: P. PUZZUTO/L. RAWLINGS

CALIBRATION SEQUENCE: 03

CALIBRATION DATE: 02/12/93 to 02/22/93

II. PERFORMANCE VERIFICATION DATA, PRETEST			
TESTED PARAMETER	UNITS	SPECIFICATION	TEST RESULTS
Temperature in laboratory	Deg C	18.9 - 25.6	22.4
Humidity in laboratory	%	10 - 70	54
HEAD DROP TEST			
Peak resultant acceleration	G's	210 - 260	247.7
Peak lateral acceleration	G's	less than 10	3.8
Time above 100 G's	msec	0.9 to 1.5	1.2
ABDOMINAL COMPRESSION TEST			
Force at 12mm displacement	kg	10.5 - 16.4	13.2
Force at 19mm displacement	kg	16.4 - 22.7	19.5
Force at 25mm displacement	kg	22.7 - 28.6	27.1
Force at 33mm displacement	kg	33.2 - 40.0	38.9
CHEST IMPACT TEST, HIGH ENERGY			
Probe speed	mps	6.64 - 6.77	6.69
Peak deflection	mm	43.2 maximum	42.7
Peak resistive force	kg	1023 maximum	981
Internal hysteresis	%	50 - 70	51
CHEST IMPACT TEST, LOW ENERGY			
Probe speed	mps	4.22 - 4.31	4.25
Peak deflection	mm	27.9 maximum	27.0
Peak resistive force	kg	659 maximum	600
Internal hysteresis	%	50 - 70	59

PART 572 ATD CONFIGURATION AND PERFORMANCE VERIFICATION DATA (CONT.)

NHTSA ATD I.D. NUMBER: 830

LAB TECHNICIAN: P. Puzzuto/L. Rawlings

CALIBRATION SEQUENCE: 03

CALIBRATION DATE: 02/12/93 to 02/22/93

II. PERFORMANCE VERIFICATION DATA, PRETEST

II. PERFORMANCE VERIFICATION DATA, PRETEST				
TESTED PARAMETER		UNITS	SPECIFICATION	TEST RESULTS
NECK BEND TEST				
Pendulum speed	mps	6.55 - 7.77	6.67	
Pendulum avg. decel. (T ₁ -T ₂)	G's	20 - 24	22.3	
Pendulum decel. (T ₂ -T ₁)	msec	less than 3	2.1	
Pendulum decel. (T ₃ -T ₂)	msec	25 - 30	28.0	
Pendulum decel. (T ₄ -T ₃)	msec	less than 10	4.4	
Resultant head acceleration	G's	less than 26	25.3	
Maximum head rotation	deg.	63 - 73	64.1	
CHORDAL DISPLACEMENT / HEAD ROTATION ANGLE				
0 deg.	Time	msec	-2.0 - 2.0	0.0
	Displ.	mm	-13 - 13	0
30 deg.	Time	msec	25.6 - 34.4	29.5
	Displ.	mm	53 - 79	59
60 deg.	Time	msec	40.3 - 51.7	46.2
	Displ.	mm	109 - 135	113
Maximum	Time	msec	53.2 - 66.8	60.0
	Displ.	mm	127 - 152	130
60 deg.	Time	msec	67.0 - 83.0	67.8
	Displ.	mm	109 - 135	115
30 deg.	Time	msec	85.4 - 104.6	90.0
	Displ.	mm	53 - 79	55
0 deg.	Time	msec	101.0 - 123.0	102.1
	Displ.	mm	-13 - 13	4

PART 572 ATD CONFIGURATION AND PERFORMANCE VERIFICATION DATA (CONT.)

NHTSA ATD I.D. NUMBER: 830

LAB TECHNICIAN: P. Puzzuto/L. Rawlings

CALIBRATION SEQUENCE: 03

CALIBRATION DATE: 02/12/93 to 02/22/93

II. PERFORMANCE VERIFICATION DATA, PRETEST			
TESTED PARAMETER	UNITS	SPECIFICATION	TEST RESULTS
KNEE IMPACT TEST, LEFT			
Probe speed	mps	2.06 to 2.15	2.09
Maximum force	kg	841 to 1136	1077
Time above 455 kg	msec	1.7 minimum	1.7
KNEE IMPACT TEST, RIGHT			
Probe speed	mps	2.06 to 2.15	2.10
Maximum force	kg	841 to 1136	1043
Time above 455 kg	msec	1.7 minimum	1.7
LUMBAR FLEXION TEST			
Force at 20 degrees	kg	10.0 to 15.5	14.1
Force at 30 degrees	kg	15.5 to 20.9	18.2
Force at 40 degrees	kg	20.9 to 26.4	25.9
Lumbar return angle	deg	12 maximum	10

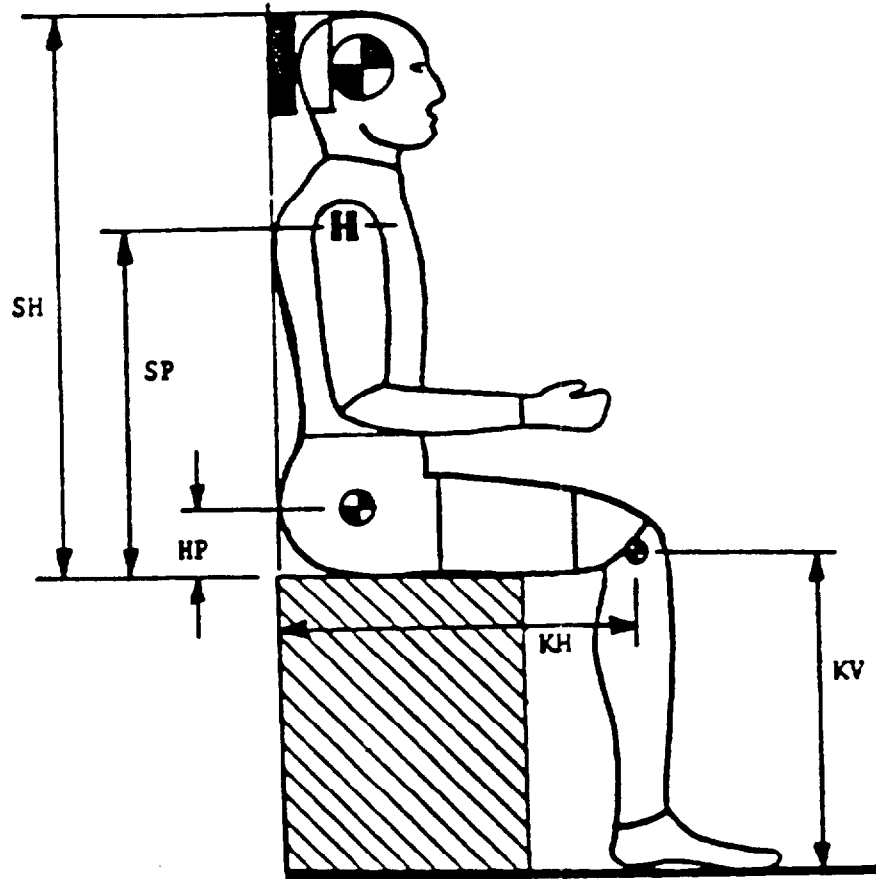
PART 572 ATD CONFIGURATION AND PERFORMANCE VERIFICATION DATA

NHTSA ATD I.D. NUMBER: 814

LAB TECHNICIAN: P. Puzzuto/L. Rawlings

CALIBRATION SEQUENCE: 04

CALIBRATION DATE: 02/12/93 to 02/22/93



I. CONFIGURATION VERIFICATION DATA, PRETEST

TESTED PARAMETER	UNITS	SPECIFICATION	TEST RESULTS
SH - Seated height	mm	904 - 909	908
SP - Shoulder pivot height	mm	554 - 569	567
HP - Hip pivot height	mm	99 reference	99
KH - Knee pivot from back	mm	511 - 526	520
KV - Knee pivot from floor	mm	490 - 505	500
SW - Shoulder width	mm	452 - 467	461
HW - Hip width	mm	356 - 391	370

PART 572 ATD CONFIGURATION AND PERFORMANCE VERIFICATION DATA (Cont.)

NHTSA ATD I.D. NUMBER: 814

LAB TECHNICIAN: P. PUZZUTO/L. RAWLINGS

CALIBRATION SEQUENCE: 04

CALIBRATION DATE: 02/12/93 to 02/22/93

II. PERFORMANCE VERIFICATION DATA, PRETEST			
TESTED PARAMETER	UNITS	SPECIFICATION	TEST RESULTS
Temperature in laboratory	Deg C	18.9 - 25.6	22.4
Humidity in laboratory	%	10 - 70	54
HEAD DROP TEST			
Peak resultant acceleration	G's	210 - 260	230.8
Peak lateral acceleration	G's	less than 10	5.1
Time above 100 G's	msec	0.9 to 1.5	1.2
ABDOMINAL COMPRESSION TEST			
Force at 12mm displacement	kg	10.5 - 16.4	15.8
Force at 19mm displacement	kg	16.4 - 22.7	21.6
Force at 25mm displacement	kg	22.7 - 28.6	28.0
Force at 33mm displacement	kg	33.2 - 40.0	37.8
CHEST IMPACT TEST, HIGH ENERGY			
Probe speed	mps	6.64 - 6.77	6.68
Peak deflection	mm	43.2 maximum	41.1
Peak resistive force	kg	1023 maximum	966
Internal hysteresis	%	50 - 70	56
CHEST IMPACT TEST, LOW ENERGY			
Probe speed	mps	4.22 - 4.31	4.26
Peak deflection	mm	27.9 maximum	26.3
Peak resistive force	kg	659 maximum	621
Internal hysteresis	%	50 - 70	63

PART 572 ATD CONFIGURATION AND PERFORMANCE VERIFICATION DATA (CONT.)

NHTSA ATD I.D. NUMBER: 814

LAB TECHNICIAN: P. Puzzuto/L. Rawlings

CALIBRATION SEQUENCE: 04

CALIBRATION DATE: 02/12/93 to 02/22/93

II. PERFORMANCE VERIFICATION DATA, PRETEST				
TESTED PARAMETER		UNITS	SPECIFICATION	TEST RESULTS
NECK BEND TEST				
Pendulum speed		mps	6.55 - 7.77	6.70
Pendulum avg. decel. ($T_1 - T_2$)		G's	20 - 24	22.6
Pendulum decel. ($T_2 - T_1$)		msec	less than 3	1.9
Pendulum decel. ($T_3 - T_2$)		msec	25 - 30	28.0
Pendulum decel. ($T_4 - T_3$)		msec	less than 10	6.0
Resultant head acceleration		G's	less than 26	24.5
Maximum head rotation		deg.	63 - 73	66.1
CHORDAL DISPLACEMENT / HEAD ROTATION ANGLE				
0 deg.	Time	msec	-2.0 - 2.0	0.0
	Displ.	mm	-13 - 13	0
30 deg.	Time	msec	25.6 - 34.4	29.7
	Displ.	mm	53 - 79	64
60 deg.	Time	msec	40.3 - 51.7	45.7
	Displ.	mm	109 - 135	118
Maximum	Time	msec	53.2 - 66.8	59.1
	Displ.	mm	127 - 152	133
60 deg.	Time	msec	67.0 - 83.0	73.7
	Displ.	mm	109 - 135	112
30 deg.	Time	msec	85.4 - 104.6	91.5
	Displ.	mm	53 - 79	59
0 deg.	Time	msec	101.0 - 123.0	101.9
	Displ.	mm	-13 - 13	1

PART 572 ATD CONFIGURATION AND PERFORMANCE VERIFICATION DATA (CONT.)

NHTSA ATD I.D. NUMBER: 814

LAB TECHNICIAN: P. Puzzuto/L. Rawlings

CALIBRATION SEQUENCE: 04

CALIBRATION DATE: 02/12/93 to 02/22/93

II. PERFORMANCE VERIFICATION DATA, PRETEST			
TESTED PARAMETER	UNITS	SPECIFICATION	TEST RESULTS
KNEE IMPACT TEST, LEFT			
Probe speed	mps	2.06 to 2.15	2.09
Maximum force	kg	841 to 1136	1018
Time above 455 kg	msec	1.7 minimum	1.8
KNEE IMPACT TEST, RIGHT			
Probe speed	mps	2.06 to 2.15	2.10
Maximum force	kg	841 to 1136	977
Time above 455 kg	msec	1.7 minimum	1.8
LUMBAR FLEXION TEST			
Force at 20 degrees	kg	10.0 to 15.5	13.2
Force at 30 degrees	kg	15.5 to 20.9	18.9
Force at 40 degrees	kg	20.9 to 26.4	24.0
Lumbar return angle	deg	12 maximum	11

APPENDIX D

VEHICLE OWNER'S MANUAL OCCUPANT RESTRAINT SYSTEM INSTRUCTIONS

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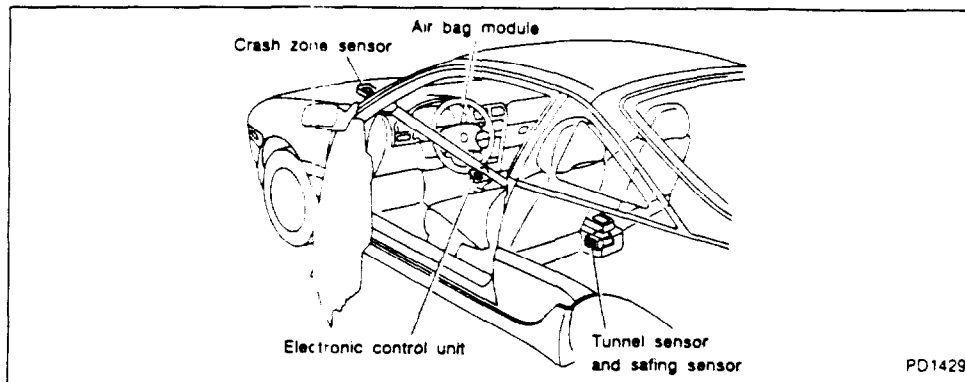
SUPPLEMENTAL RESTRAINT SYSTEM (AIR BAG SYSTEM)

The information written in this Supplemental Restraint System section contains important points concerning the air bag system. The Supplemental Restraint System Air Bag helps reduce impact force to the driver in certain frontal collision. The air bag is designed to **supplement** the accident protection provided by the driver's seat belt and is **not a substitute** for the three-point seat belt system. The seat belt should be correctly worn and the driver seated a suitable distance from the steering wheel.

The air bag will operate only when the ignition switch is in the "ON" or "START" position.

WARNING:

The seat belts are designed to help reduce the risk or severity of injury in various kinds of accidents and should be worn by all occupants of the vehicle. The seat belt must be worn, as the air bag only assists in reducing the impact force in a frontal collision. (See "Seat belts".)



Air bag system

The air bag is located in the center of the steering wheel and will deploy in a moderate to severe frontal collision. The air bag will not usually deploy in the event of a side impact, rear impact or a roll-over accident. There are no air bags for the passenger seat. When the air bag system receives a signal from the crash zone sensors, a fairly loud deploying noise will be heard, followed by release of smoke. This smoke is not injurious and does not indicate a fire. The air bag, along with the use of a seat

belt, helps to cushion the impact force on the driver's face and chest. The seat belt should be correctly worn and the driver seated a suitable distance from the steering wheel. Since the air bag deploys quickly in order to protect the driver, the force of the air bag deploying can increase the risk of injury if the driver is too close to or is against the steering wheel during deployment. The air bag will deflate quickly after the collision is over.

The air bag will operate only when the ignition switch is in the "ON" or "START" position.

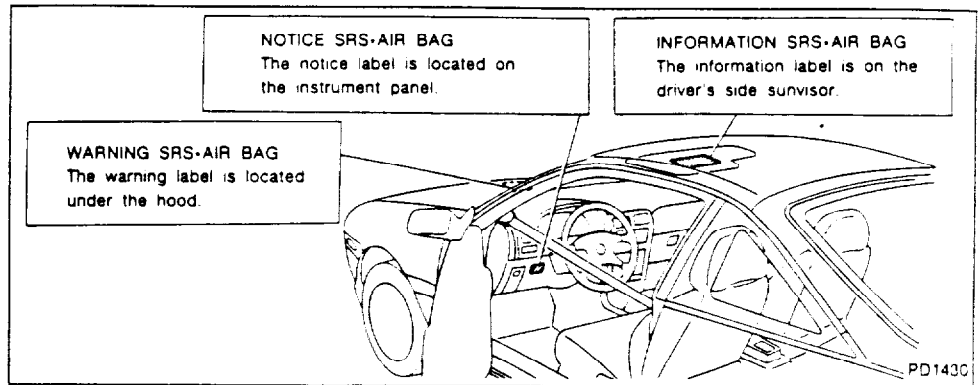
INFORMATION AND WARNING LABELS

WARNING:

Right after inflation, several air bag system components will be hot. Do not touch them, you may severely burn yourself.

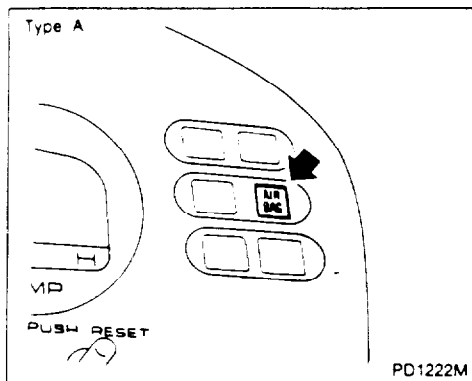
WARNING:

No unauthorized changes are to be made to any components or wiring of the air bag system. This is to prevent accidental deployment of the air bag or damage to the air bag operation. Tampering with the air bag system may result in serious personal injury. This includes changes to or replacement of the steering wheel, placing material over the steering wheel pad or, installing additional trim material around the air bag system. Objects attached to the steering wheel pad may become dangerous projectiles and cause injury if the air bag deploys. Work around and on the air bag system should be done by an authorized NISSAN dealer. Installation of electrical equipment should also be done by an authorized NISSAN dealer. The yellow SRS wiring must not be disconnected. Unauthorized electrical test equipment and probing devices must not be used on the air bag system.



Information and warning labels about the air bag system are placed in the vehicle.

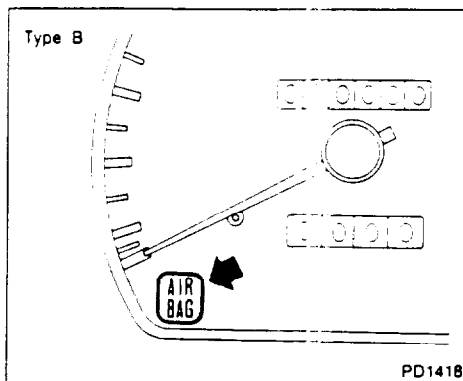
AIR BAG WARNING LIGHT



The air bag light, displaying "AIR BAG" in the instrument panel, monitors the circuits of the air bag. The circuits monitored by the air bag light are the crash zone sensor, tunnel sensor, safing sensor and all related wiring.

When the ignition key is in the "ON" or "START" position, the air bag light will illuminate for about 7 seconds and then turn off. This means the system is operational.

If any of the following conditions occur, the air bag needs servicing and must be taken to your nearest authorized NISSAN dealer.



1. The air bag light does not come on for 7 seconds and then go off as described above.

2. The air bag light flashes intermittently or remains on.

3. The air bag light does not come on at all.

Under these conditions, the Supplemental Restraint System "Air Bag" will not operate properly. It must be checked and repaired.

Repair and replacement procedure

The air bag system is designed to inflate on a one-time-only basis. As a reminder un-

less it is damaged, the air bag light will remain illuminated after deployment has occurred. Repair and replacement of the air bag system must be done only by an authorized NISSAN dealer. To ensure long-term functioning, the system must be inspected 10 years after the date of manufacture as noted on the certification label located on the driver side center pillar.

When maintenance work is required on the vehicle, the air bag system and related parts should be pointed out to the person conducting the maintenance. The ignition key must always be in the "LOCK" position when working under the hood or inside the vehicle.

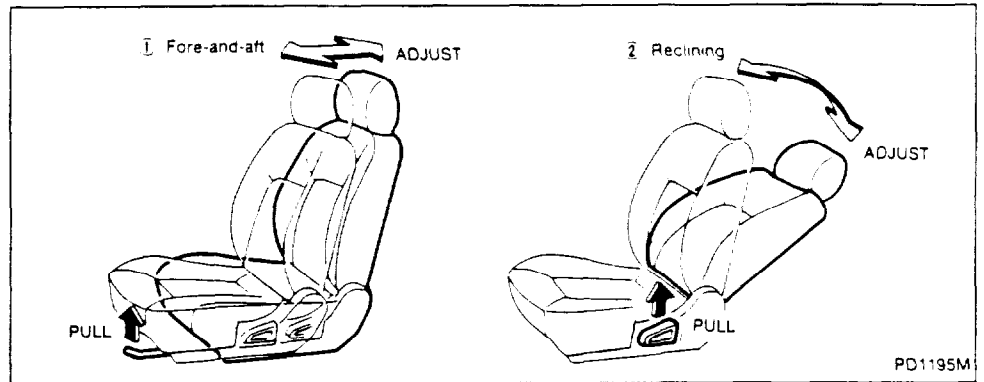
WARNING:

- Once the air bag is deployed, the air bag module will not function again and must be replaced. The air bag module cannot be repaired.
- The air bag system must be serviced by an authorized NISSAN dealer if there is any damage made to the front end portion of the vehicle or if the air bag has deployed.
- When selling your vehicle, we request

SEATS

that you inform the buyer about the air bag system and guide the buyer to the appropriate sections in this Owner's Manual.

- If you need to dispose of the air bag or scrap the vehicle, contact an authorized NISSAN dealer. Correct air bag disposal procedures are set forth in the appropriate NISSAN Service Manual. Incorrect disposal procedures could cause personal injury.



SEAT ADJUSTMENT

WARNING:

- Do not adjust the driver's seat while driving. The seat may move suddenly and could cause loss of control of the vehicle.
- After adjustment, gently rock in the seat to make sure it is securely locked.

① Fore-and-aft

Pull the lever up while you slide the seat forward or backward to the desired position.

tion. Release the lever to lock the seat in position.

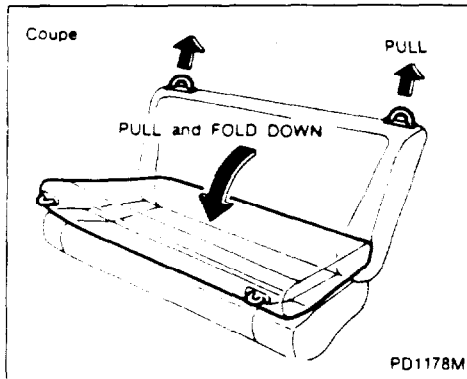
2-point automatic seat belt equipped models (4-door Sedan for U.S.A.)

If the fore-and-aft adjustment is unlocked, the seat belt warning light will come on for 5 seconds. Make sure that the seat is locked securely.

WARNING:

If the seat belt warning light glows continuously while the ignition is turned "ON" with both doors closed and all seat belts

SEAT BELTS



Rear seat (Coupe model)

Pull the knob and pull the seat back forward to fold it down.

Never allow anyone to ride in the luggage area or on the rear seat in the fold-down position. Use of these areas by passengers without proper restraint can be extremely hazardous in case of accidents, or during sudden stops.

PRECAUTIONS ON SEAT BELT USAGE

Your chances of being injured in an accident and/or the severity of injury may be greatly reduced if you are wearing your seat belt and it is properly adjusted. NISSAN strongly encourages you and all of your passengers to buckle up every time you drive.

Some states, provinces or territories require that seat belts be worn at all times when a vehicle is being driven.

WARNING:

- The belt should be adjusted to a snug fit. Slack in the lap-shoulder belt will reduce the effectiveness of the entire restraint system.
- Never wear the belt inside out or twisted.
- Do not allow more than one person to use the same belt.
- All seat belt assemblies including retractors and attaching hardware should be inspected after any collision at your NISSAN dealer. NISSAN recommends that all seat belt assemblies in use during a collision be replaced unless the collision

was minor and the belts show no damage and continue to operate properly. Seat belt assemblies not in use during a collision should also be inspected and replaced if either damage or improper operation is noted.

Be sure to observe the following cautions when using seat belts. Failure to do so could increase the chance and/or severity of injury in an accident.

- Always pass the shoulder belt over your shoulder and across your chest. Never run the belt under your arm. Serious injury can occur if seat belt is not worn properly.
- Position the lap belt as low as possible **AROUND THE HIPS, NOT THE WAIST.**

Infant or small child

Nissan recommends that infants or small children be seated in a child restraint system. You should choose a child restraint system which fits your vehicle and always follow the manufacturer's instructions for installation and use.

Children

Children who are too large for child re-

straint systems should be seated and restrained by the seat belts which are provided.

NISSAN recommends that children sit in the rear seat if available. According to accident statistics, children are safer when properly restrained in the rear seat than in the front seat.

If the child's seating position has a shoulder belt that fits close to the face or neck, the use of a booster seat (commercially available) may help overcome this. The booster seat should raise the child so that the shoulder belt is centered across the top, middle portion of the shoulder and the lap belt is low on the hips. The booster seat should fit the vehicle seat and have a label certifying that it complies with Federal Motor Vehicle Safety Standards or Canadian Motor Vehicle Safety Standards. Once the child has grown enough so the shoulder belt is not longer on or near the face and neck, use the shoulder belt without the booster seat.

Never let a child stand or kneel on any seat and do not allow a child in the cargo areas while the vehicle is moving.

Pregnant women

Nissan recommends that pregnant women use seat belts. Contact your doctor for specific recommendations. The lap belt should be worn snug and positioned as low as possible around the hips, not the waist.

Injured persons

Nissan recommends that injured persons use seat belts, depending on the injury. Check with your doctor for specific recommendations.

2-POINT AUTOMATIC SEAT BELT SYSTEM (4-door sedan for U.S.A.)

The Automatic Seat Belt system consists of an automatic shoulder belt and a manual lap belt for the driver and front passenger seat positions. The shoulder belts automatically adjust to the body and seating positions when the door is closed and the ignition key is turned "ON".

WARNING:

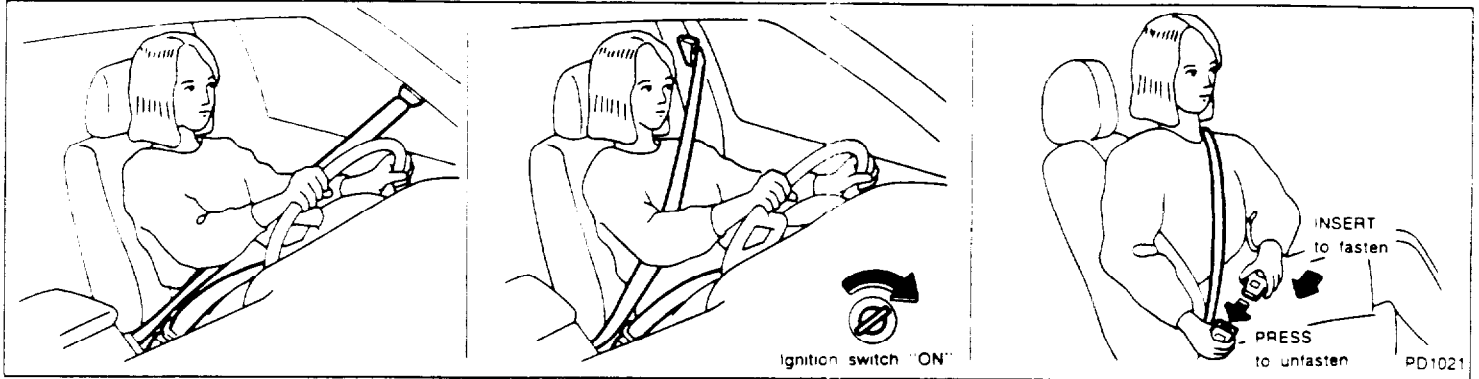
- For most effective protection, always fasten the manual lap belt in addition to the automatic shoulder belt.
- To properly operate the automatic seat

belt system, the shoulder belt tongue should always remain inserted in the shoulder belt buckle, located in the rail of the door opening.

NISSAN recommends that children be seated in the rear seats. See Precautions on Seat Belt Usage earlier in this Section.

System malfunction

If, while the ignition switch is turned "ON" with either front door open, the seat belt warning light flickers and the chime sounds faster than usual for about 6 seconds, it may indicate a malfunction in the system. Have the system checked by your NISSAN dealer.



Fastening the belts

1. Open the door and make sure that the shoulder buckle is in the forward position. Then get into the vehicle and close the door.

If the ignition switch is in the "ON" position, the shoulder buckle will move to the rear position when closing the door.

2. Adjust the seat.

WARNING:

The seatback should not be reclined any more than needed for comfort. Seat belts

are most effective when the passenger sits well back and straight up in the seat. If the seat is reclined, the risk of sliding under the lap belt and being injured is increased.

3. Turn the ignition switch ON. The shoulder buckle will move to the rear position and will fit across your chest. Pull the shoulder belt toward the retractor to take up extra slack.

- Do not touch the door guide rail while the shoulder buckle is moving.
- Do not wear the shoulder belt across the neck or under your outer arm. The

shoulder belt should be positioned midway over the shoulder for the most effective protection.

4. Slowly pull the lap belt out of the retractor and insert the tongue into the lap buckle until it snaps. Position the lap belt **low on the hips** and pull the belt toward the retractor to take up extra slack.

- Do not wear the lap belt across the shoulder belt.
- The retractors are designed to lock during a sudden stop or on impact. A slow pulling motion will permit the belt to

move, and allow you some freedom of movement in the seat.

Unfastening the belts

1. To unfasten the lap belt, press the button on the lap buckle. The seat belt will automatically retract.
 2. Open the door. The shoulder belt buckle will move to the forward position and the shoulder belt will move away from your chest.
- Do not touch the door guide rail while the shoulder buckle is moving.
 - Do not unfasten the shoulder belt tongue from the buckle except in emergency. See "Operation in emergency" later in this Section.

How the automatic shoulder belt works

While the ignition switch is on:

The shoulder buckle will move to the forward position when the door is opened, and it will move to the rear position when the door is closed.

While the ignition switch is off:

The shoulder buckle will remain or move to the front position when the door is opened, and it will remain in the front position when the door is closed until the ignition switch is turned "ON".

If the shoulder buckle operates abnormally, have the system checked by your NISSAN dealer.

Seat belt warning light "  " and warning chime

When the ignition switch is turned on with the door open (the shoulder buckle is at the front position):

The chime will sound for about 6 seconds, and the warning light will flicker continuously. The warning light will go off when the door is closed and the shoulder buckle reaches the rear position.

When the ignition switch is turned on with the door closed:

The chime will sound and the warning light will flicker until the shoulder buckle reaches the rear position. The warning light will come on for several seconds after the shoulder buckle reaches the rear position.

If the shoulder belt tongue is disconnected from the buckle:

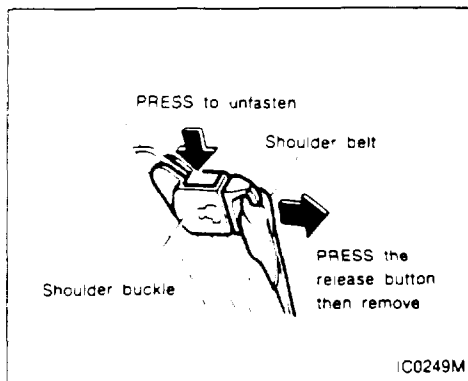
When the ignition switch is turned on and the shoulder buckle reaches the rear position, the warning light will come on for about 100 seconds and the chime will sound for about 6 seconds until the shoulder belt is connected to the shoulder buckle. Insert the shoulder belt tongue into the shoulder buckle before driving.

If the driver side lap belt is not fastened:

When the ignition switch is turned ON and the shoulder buckle reaches the rear position, the warning light will come on for about 6 seconds and the chime will sound for about 6 seconds until the lap belt is fastened. Fasten the lap belt before driving.

WARNING:

If the seat belt warning light glows continuously while the ignition is turned "ON" with both doors closed and all seat belts fastened, it may indicate a malfunction in the system. Have the system check by your NISSAN dealer.

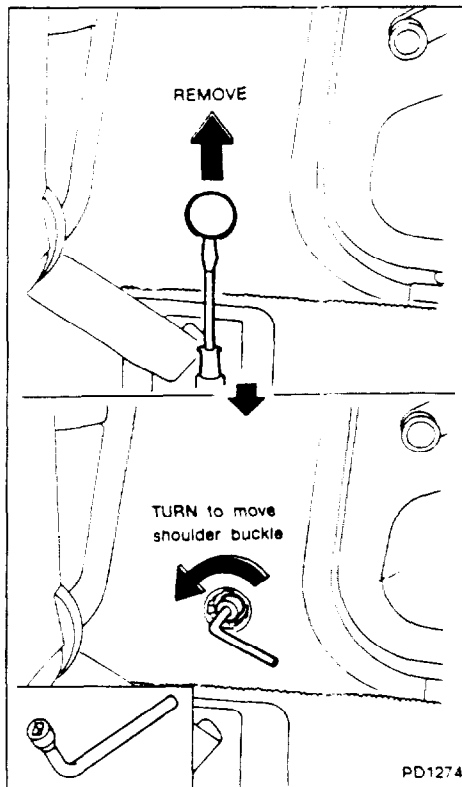


Operation in an accident

Emergency release

If you need to release the shoulder belt from the shoulder belt buckle in an emergency, press the buckle marked with "PRESS EMERGENCY". Use this feature only when the shoulder belt keeps you from leaving the vehicle in an accident.

For normal use, the shoulder belt should always be connected to the buckle.



If either shoulder belt buckle does not operate

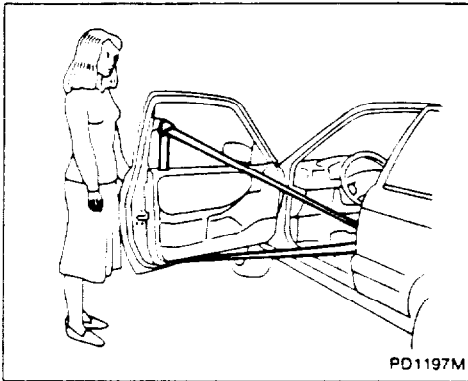
1. Slide the seat forward as far as possible.
2. Remove the blind cap in the lower portion of the center pillar with the screwdriver. The shaft end of the motor will be visible.
3. Using the wrench supplied in the tool bag, turn the shaft of the motor counter-clockwise to move the shoulder buckle to the rear position.

Have the automatic seat belt system checked and repaired by your NISSAN dealer.

Checking seat belt retractor operation (Automatic seat belt)

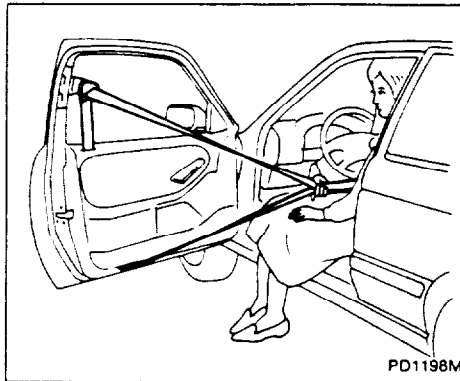
Your seat belt retractors are designed to lock belt movement **only** when the vehicle slows down rapidly. Pulling on the belt will not cause the retractor to lock, no matter how fast you pull.

If you wish to have the locking operation of your seat belts checked for you, or if you have any question about belt operation, see your NISSAN dealer.

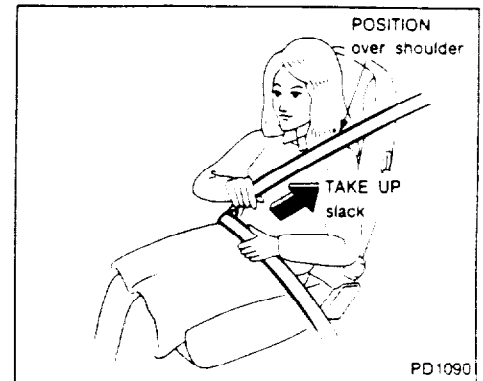


3-POINT AUTOMATIC SEAT BELT SYSTEM (2-door sedan for U.S.A.)

A 3-point Automatic Seat Belt system is provided for the driver and front passenger seat positions. When the door is opened, the automatic seat belt is designed to let you enter and exit without releasing the belt from the buckle. When the door is fully closed, the automatic seat belt will adjust to the body and seating positions.

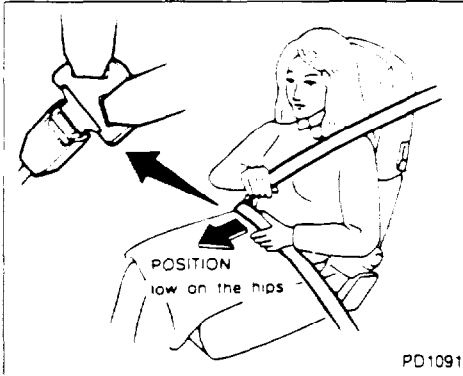


- In order for the automatic seat belt system to operate properly, the belt tongue should always remain inserted in the buckle.
- Do not allow more than one person to use the same seat belt.
- If available, NISSAN recommends that children be seated in the rear seats. See "Precautions on Seat Belt Usage" earlier in this section.



Fastening the belts

1. Open the door. The lap and shoulder belts will move out of the way. Get into the seat and close the door. Make sure the door is fully closed.
2. Adjust the seat.
The seatback should not be reclined any more than needed for comfort. Seat belts are most effective when the passenger sits well back and straight up in the seat.
3. Be sure the belt is positioned properly as shown in the illustration above.



- The lap portion of the automatic seat belt should be positioned **LOW ON THE HIPS**, free of twists and slack. This reduces the risk of sliding under the lap belt during a collision. Reposition the belt if necessary.
- The shoulder portion of the automatic belt is designed to position itself to lie flat and be centered across the top, middle portion of the shoulder. The shoulder belt should be routed across the chest and over the top of the shoulder, free of twists and slack, for maximum comfort and protection. **DO NOT**

wear the shoulder belt across the neck or under the arm. Movement of the occupant will normally position the shoulder belt correctly if articles of clothing or other factors prevent correct belt positioning. Reposition the belt if necessary.

- The retractors are designed to lock during a sudden stop or on impact. A normal pulling motion will permit the belt to move, and allow you freedom of movement in the seat.

Unfastening the belts

1. Stop the vehicle.
 2. When opening the door the seat belt warning light will come on. The automatic seat belts will move away from you so you can get out of the vehicle.
- If the automatic seat belt prevents the door from opening, the door may have been opened too quickly. When this occurs, close the door and open it slowly. If the door is prevented repeatedly from opening, the seat belt retractor is not working correctly. The 3-point automatic seat belt system must be immediately checked by your NISSAN dealer.

- Do not unfasten the seat belt tongue from the buckle except in an emergency. See "Operation in an Accident" later in this section.

Seat belt warning light "⚠" and warning chime

The seat belt warning light "⚠" and warning chime remind you to wear the seat belt, and they warn that there may be a malfunction in the 3-point automatic seat belt system.

The door warning light will also flash continuously.

- If the seat belt warning light flashes or glows continuously with the ignition switch turned "ON", the door fully closed and all seat belts fastened, this may indicate a malfunction in the seat belt system. When the ignition switch is turned "ON", the warning light will flicker for about 6 seconds to remind you to wear the seat belt.

When the automatic seat belt tongue is disconnected from the buckle and the ignition switch is turned "ON", the seat belt warning light will come on for about 100

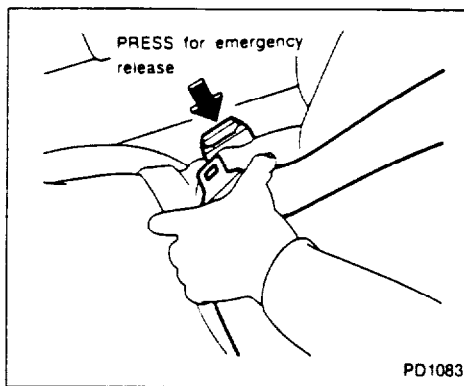
seconds. The seat belt warning chime will also sound for about 6 seconds.

WARNING:

There may be a malfunction in the 3-point automatic seat belt system if any of the following conditions occur with the ignition switch turned "ON":

- The seat belt warning light does not operate as described above.
- The seat belt warning light does not come on.
- The seat belt warning light flashes continuously for over 100 seconds.
- The seat belt warning light glows continuously.

If any of the above conditions occurs, the seat belt system should be immediately checked by a NISSAN dealer to avoid risk of injury.



Operation in an accident

Emergency release

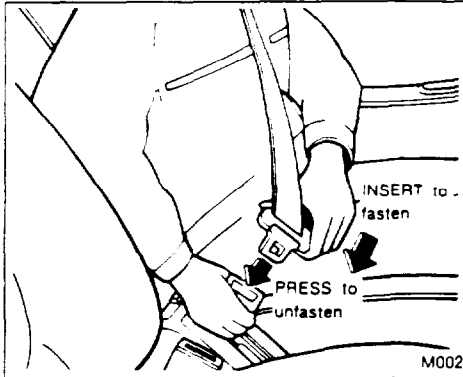
The 3-point automatic seat belt system is designed so that the driver and passenger can use the seat belt without releasing the belt from the buckle. The belt attached to the buckle will swing out of your way when the door is opened, allowing entry and exit.

For normal use, the automatic seat belt should always be connected to the buckle.

If you need to release the automatic seat belt from the buckle in an emergency, press the buckle marked "PRESS EMERGENCY".

Use this feature only when the seat belt keeps you from leaving the vehicle in an accident.

The emergency release can also be used when a child restraint is placed in the passenger seat. See "Child Restraint Systems" later in this section.



3-POINT TYPE WITH RETRACTOR

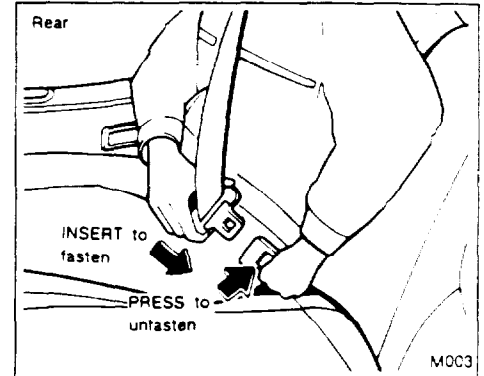
Every person who drives or rides in this vehicle should wear a seat belt at all times.

Fastening the belts

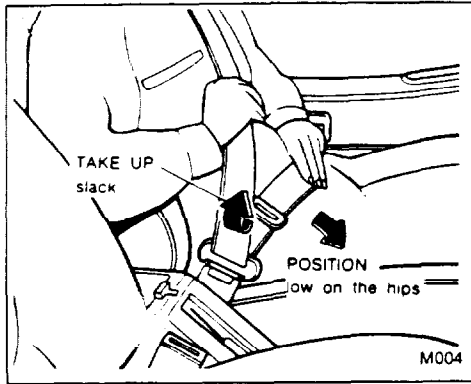
1. Adjust the seat.

The seatback should not be reclined any more than needed for comfort. Seat belts are most effective when the passenger sits well back and straight up in the seat. If the seat is reclined, the risk of sliding under the lap belt and being injured is increased.

2. Slowly pull the seat belt out of the retractor and insert the tongue into the buckle until it snaps.



The retractor is designed to lock during a sudden stop or on impact. A slow pulling motion will permit the belt to move, and allow you some freedom of movement in the seat.



3. Position the lap belt portion **low on the hips** as shown.
4. Pull the shoulder belt portion toward the retractor to take up extra slack.

Unfastening the belts

To unfasten the belt, press the button on the buckle. The seat belt will automatically retract.

Checking seat belt operation (3-point type with retractor)

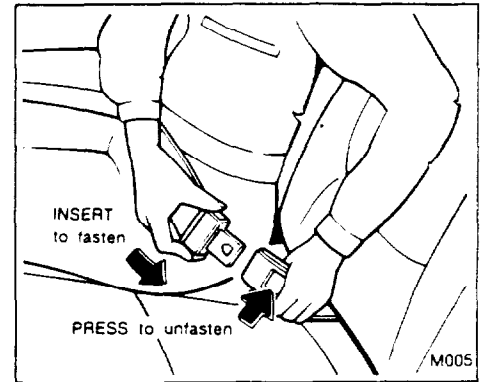
Your seat belt retractors are designed to lock belt movement by two separate methods:

- 1) When the belt is pulled quickly from the retractor.
- 2) When the vehicle slows down rapidly.

To increase your confidence in the belts, check the operation as follows:

- Grasp the shoulder belt and pull quickly forward. The retractor should lock and restrict further belt movement.

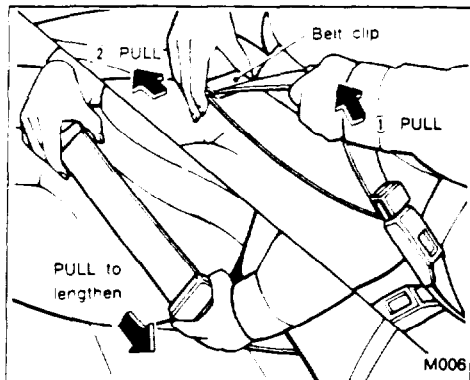
If the retractor does not lock during this check or if you have any question about belt operation, see your NISSAN dealer.



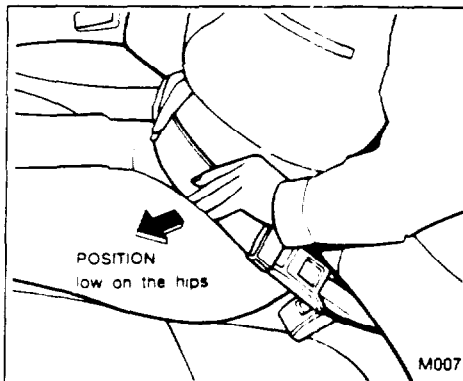
2-POINT TYPE WITHOUT RETRAC-TOR

Fastening the belts

1. Insert the tongue into the buckle until it snaps.



2. To lengthen, hold the tongue at a right angle to the belt and pull on the belt. To shorten, pull the free end of the belt away from the tongue, then pull the belt clip to take up the slack.

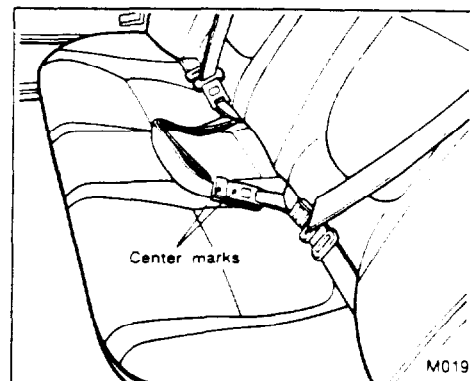


3. Position the lap belt **low on the hips** as illustrated.

Unfastening the belts

To unfasten the belt, press the button on the buckle.

Fasten the seat belts when not in use to prevent them from being caught in the door.



Selecting correct set of belts

The center seat belt buckle and tongue are identified by the "CENTER" label. The center seat belt tongue can be fastened **only** into the center seat belt buckle.

SEAT BELT EXTENDERS (Except for the Automatic seat belt)

If, because of body size or driving position, it is not possible to properly fit the lap-shoulder belt and fasten it, an extender is available which is compatible with the installed seat belts. The extender adds ap-

proximately 8 inches (200 mm) of length and may be used for either the driver or front passenger seating position. See your NISSAN dealer for assistance if the extender is required.

WARNING:

- Only NISSAN belt extenders, made by the same company which made the original equipment belts, should be used with NISSAN belts.
- Persons who can use the standard seat belt should not use an extender. Such unnecessary use could result in serious personal injury in the event of an accident.

SEAT BELT MAINTENANCE

- To clean the belt webbings, apply a mild soap solution or any solution recommended for cleaning upholstery or carpets. Then brush it, wipe with a cloth and allow it to dry in the shade. Do not allow the belts to retract until they are completely dry.
- Periodically check to see that the belt and the metal components such as buckles, tongues, retractors, flexible wires

and anchors work properly. If loose parts, deterioration, cuts or other damage on the webbing is found, the entire belt assembly should be replaced.

CHILD RESTRAINT SYSTEMS FOR INFANTS AND SMALL CHILDREN

Infants and small children should always be placed in an infant or child restraint system while riding in the vehicle.

WARNING:

Children and infants should never be carried on your lap. It is not possible for even the strongest adult to resist the forces of an accident. The child could be crushed between the adult and parts of the vehicle. Also, do not put the same seat belt around both your child and yourself.

In general, child restraint systems are designed to be installed with a lap belt or the lap portion of a three-point type seat belt. A child restraint system should never be installed with an automatic belt (also known as a "passive" belt), since such a belt will not properly secure the child seat.

For automatic seat belt system, a specially designed supplementary genuine NISSAN child restraint buckle is required to prop-

erly secure the child seat. Refer to page 2-33.

According to traffic accident statistics, the rear seat is safer than the front seat for installation of a child restraint.

Nissan recommends that the child restraint system be installed in the rear seat, unless the child is an infant and you are the only adult in the car. According to accident statistics, children are safer when properly restrained in the rear seat than in the front seat. An improperly installed child restraint could lead to serious injury in an accident.

Child restraint systems specially designed for infants and small children are offered by several manufacturers. Some systems may be used for both infants and small children. When selecting any child restraint system, keep the following points in mind:

- 1) Choose only a system with a label certifying that it complies with Federal Motor Vehicle Safety Standard 213 or Canadian Motor Vehicle Safety Standard 213.
- 2) Place your child in the child restraint and check the various adjustments to be sure the child restraint is compatible with your child. Always follow all recom-

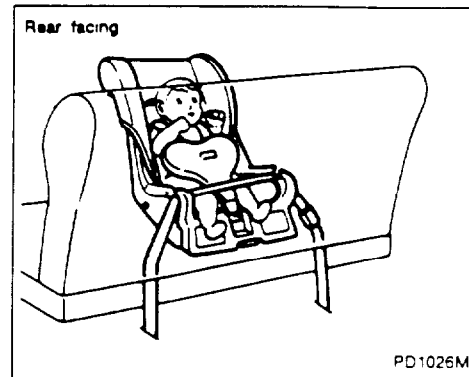
mended procedures.

- 3) Check the child restraint in your vehicle to be sure it is compatible with the vehicle's seat belt system.

WARNING:

- Follow all of the child restraint manufacturer's instructions for installation and use. When purchasing a child restraint, be sure to select one which will fit your child and vehicle as it may not be possible to properly install some types of child restraints in your vehicle. Improper use of a child restraint system can result in increased injuries for both the infant or child and other occupants in the vehicle.
- When your child restraint system is not in use, store it in the trunk or keep it secured with a seat belt to prevent it from being thrown forward in case of a sudden stop or accident.
- Remember that a child restraint left in a closed vehicle can become very hot. Check the seating surface and buckles before placing your child in the child restraint.

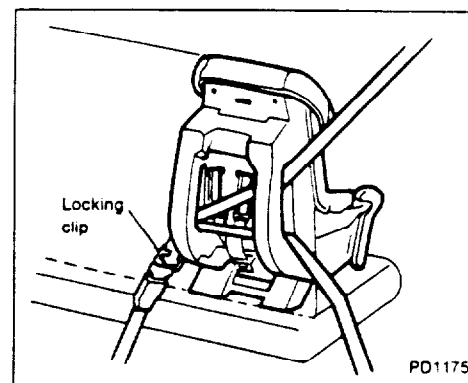
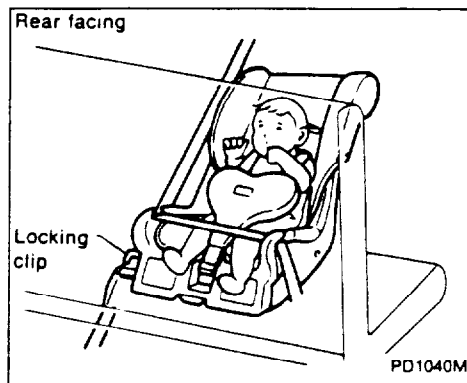
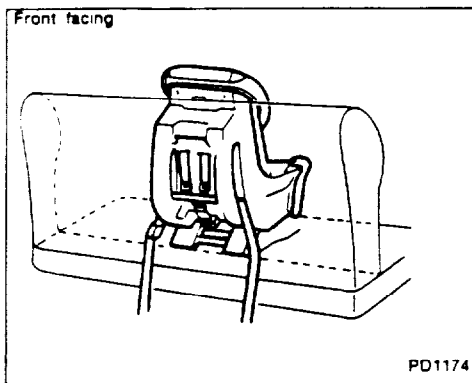
- All U.S. states and some provinces or territories require that infants and small children be restrained in approved child restraint systems at all times while the vehicle is being operated.



Installation on rear seat
(Coupe models)

Center lap belt

Secure the child restraint with the lap belt as illustrated. Remove all slack in the lap belt for a very tight fit by pulling forcefully on the lap belt adjustment.

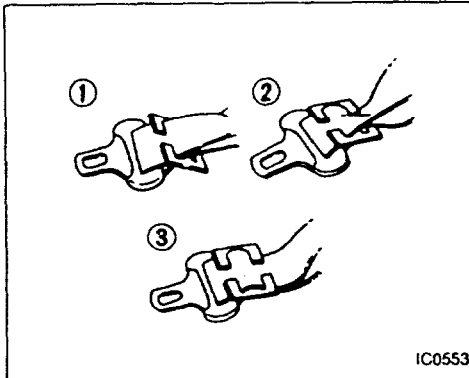


Outboard shoulder/lap belt

Before using the locking clip, read the instructions attached to the clip.

Secure the child restraint with the lap belt as illustrated. To prevent slack in the lap belt, it will be necessary to secure the lap/shoulder belt in place with a locking clip.

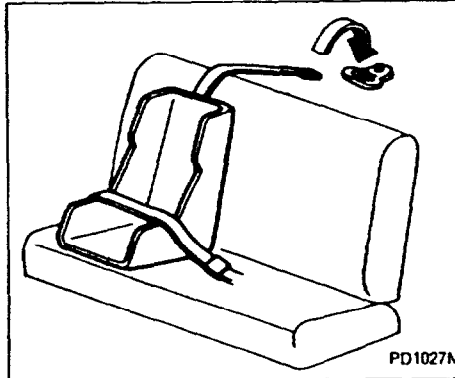
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Use a NISSAN genuine locking clip (part number H8010-89970, available from your NISSAN dealer), or one which is equivalent in dimensions and strength.

When your child restraint system is not in use, keep the locking clip in the glove box to prevent it from being lost.



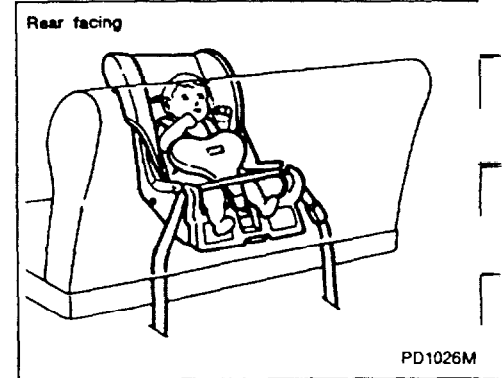
PD1027M

If your child restraint has a top strap, install the anchor bracket to the provided anchor point. Secure the child restraint with the outboard lap belt and latch the top strap hook onto the anchor bracket. To install the anchor bracket, a metric bolt of the dimensions listed below must be used.

Bolt diameter: 8.0 mm

Bolt length: more than 1.18 in (30 mm)

Thread pitch: 1.25 mm

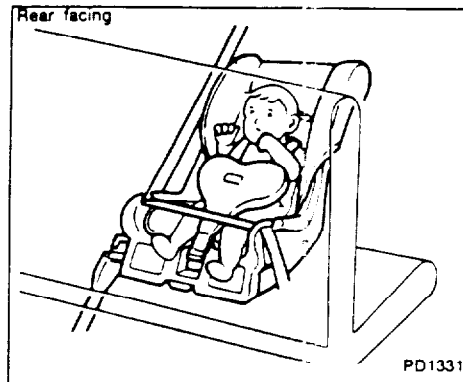
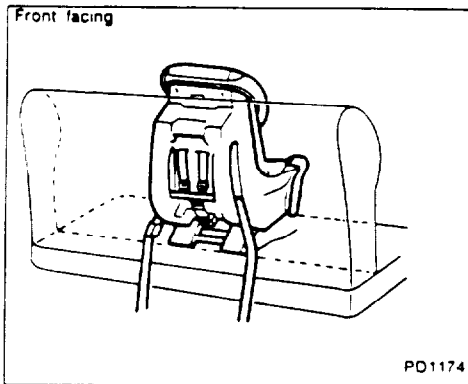


PD1026M

Installation on rear seat (Sedan models)

Center lap belt

Secure the child restraint with the lap belt as illustrated. Remove all slack in the lap belt for a very tight fit by pulling forcefully on the lap belt adjustment.



Installation on rear outboard seating positions

WARNING:

- The 3-point belt on your vehicle is equipped with a locking mode retractor which must be used when installing a child restraint or an infant carrier.
- Failure to do so will result in the child restraint not being properly secured. The seat could tip over or otherwise be unsecured and cause injury to the child in a sudden stop or collision.

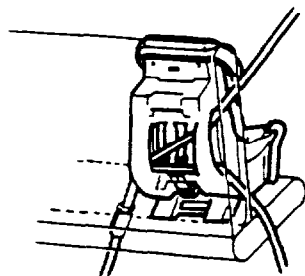
If you choose to install a child restraint or infant carrier follow these steps:

1. Position the child restraint or infant carrier on a rear outboard seat. It can be placed in a forward facing or rear facing direction, depending on the size of the child and the restraint manufacturer's instructions.
2. Follow the child restraint or infant carrier manufacturer's instructions. Route the lap belt through the child restraint or infant carrier and insert the belt tongue into the buckle until you hear and feel the latch engage.

Be sure to follow the child restraint manufacturer's instructions for belt routing.

3. Pull upward on the lap belt until all of the belt is fully extended and a click is heard. At this time, the lap belt retractor is in the automatic locking mode (child restraint mode). (It will revert back to "emergency locking" when the belt is fully retracted.)
4. Allow the belt to retract. A clicking sound will be heard as the belt retracts. This indicates that the retractor is in the automatic locking mode. Pull down on the belt to remove any slack in the belt.

Front facing

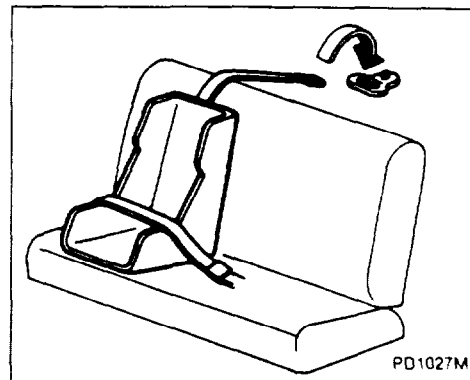


PD1332

cured prior to each use. If the lap belt is not locked, repeat steps 3 through 6.

After the child restraint is removed and the seat belt is allowed to wind back into the retractor, the automatic locking mode (child restraint mode) is canceled; the emergency locking retractor may be used as normal and will only lock during a sudden stop or impact.

5. Before placing the child in the child restraint or infant carrier, use force to tilt the child restraint from side to side, and tug it forward to make sure that it is securely held in place.
6. Check that the retractor is in the automatic locking mode by trying to pull more belt out of the retractor. If you cannot pull any more belt webbing out of the retractor, the belt is in the automatic locking mode.
7. Check to make sure that the child restraint or infant carrier is properly se-



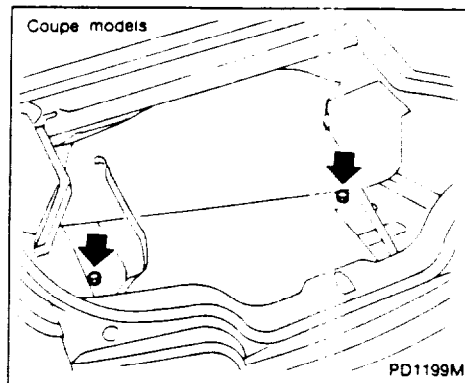
PD1027M

If your child restraint has a top strap, install the anchor bracket to the provided anchor point. Secure the child restraint with the outboard lap belt and latch the top strap hook onto the anchor bracket. To install the anchor bracket, a metric bolt of the dimensions listed below must be used.

Bolt diameter: 8.0 mm

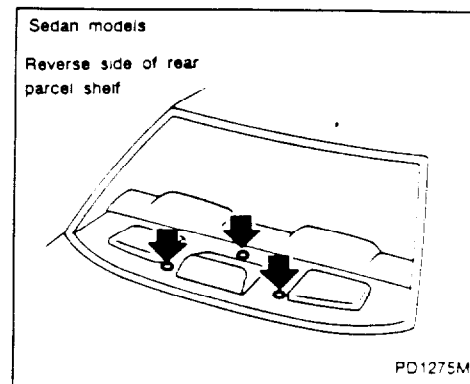
Bolt length: more than 1.18 in (30 mm)

Thread pitch: 1.25 mm



Anchor point location

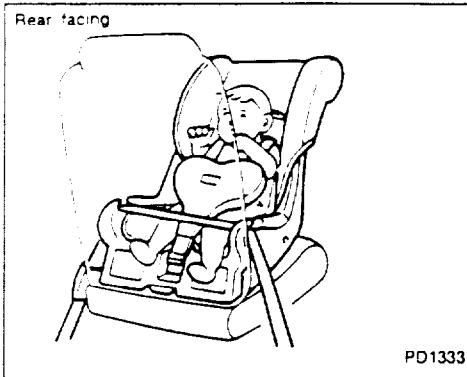
Anchor points are located under the clips on the rear parcel shelf finisher.



Anchor point location

Anchor points are located under the carpet of the rear luggage area floor.

Child restraint anchor points are designed to withstand only those loads imposed by correctly fitted child restraints. Under no circumstances are they to be used for adult seat belts or harnesses.



Installation on front passenger seat
(For U.S.A.- Automatic seat belt)

Never install the child restraint with the automatic shoulder belt. It is not suitable to secure the child restraint.

A child restraint with a top strap should not be used in the front passenger seat.

WARNING:

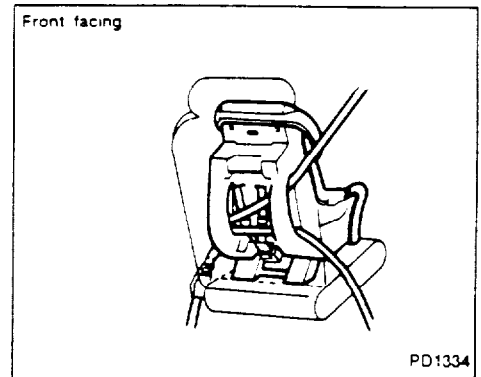
- The front seat passenger lap belt in your vehicle is equipped with a locking mode retractor which must be used when in-

stalling a child restraint or an infant carrier.

- Failure to use the retractor's locking mode will result in the child restraint not being properly secured. The seat could tip over or otherwise be unsecured and cause injury to the child in a sudden stop or collision.
- Make sure the front motorized shoulder belt is disconnected so it does not cross or rest in front of the child's face or neck. Always reattach it when the child restraint is removed from the seat.

If you choose to install a child restraint or infant carrier follow these steps:

1. Position the child restraint or infant carrier on the front passenger seat. It can be placed in a forward facing or rear facing direction, depending on the size of the child and the restraint manufacturer's instructions.
2. Follow the child restraint or infant carrier manufacturer's instructions. Route the lap belt through the child restraint or infant carrier and insert the belt tongue into the buckle until you hear and feel the latch engage.

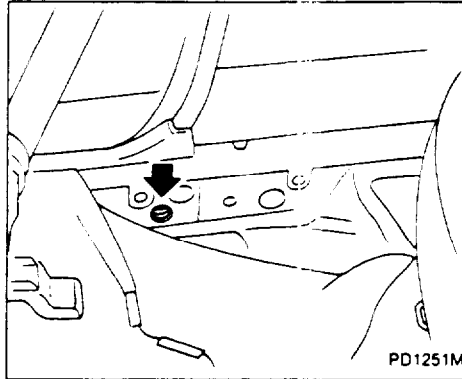


Be sure to follow the child restraint manufacturer's instructions for belt routing.

3. Pull upward on the lap belt until all of the belt is fully extended and a click is heard. At this time, the lap belt retractor is in the automatic locking mode (child restraint mode). (It will revert back to "emergency locking" when the belt is fully retracted.)
4. Allow the belt to retract. A clicking sound will be heard as the belt retracts. This indicates that the retractor is in the automatic locking mode. Pull down on the belt to remove any slack in the belt.

5. Before placing the child in the child restraint or infant carrier, use force to tilt the child restraint from side to side, and tug it forward to make sure that it is securely held in place.
6. Check that the retractor is in the automatic locking mode by trying to pull more belt out of the retractor. If you cannot pull any more belt webbing out of the retractor, the belt is in the automatic locking mode.
7. Check to make sure that the child restraint or infant carrier is properly secured prior to each use. If the lap belt is not locked, repeat steps 3 through 6.

After the child restraint is removed and the seat belt is allowed to wind back into the retractor, the automatic locking mode (child restraint mode) is canceled; the emergency locking retractor may be used as normal and will only lock during a sudden stop or impact.

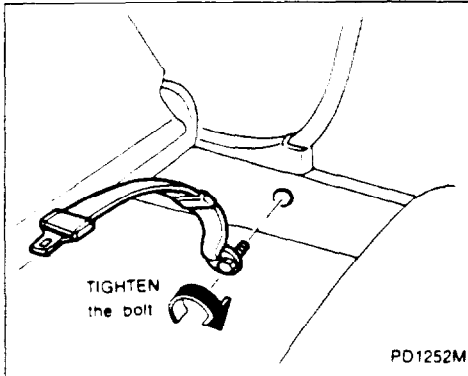


Installation of lap belt assembly (2-door sedan)

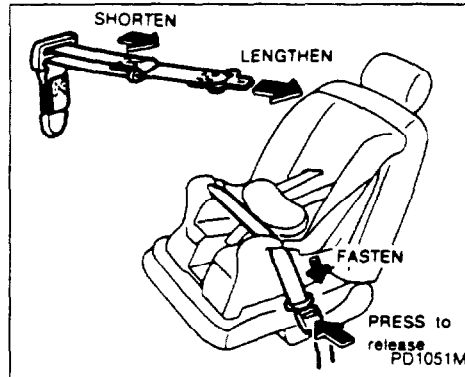
The anchor point to install the genuine lap belt assembly is located on the center pillar beside the front passenger seat.

1. Slide the seat to its frontmost position.
2. Pull out the carpet as shown.
3. Using a knife, open a 1 inch diameter hole in the carpet at the position of the nut for the anchor bolt.

4. Put back the carpet, and install the lap belt assembly on the body using the anchor bolt.



**Anchor bolt tightening torque:
32 to 41 ft-lb (43 to 55 N·m)**



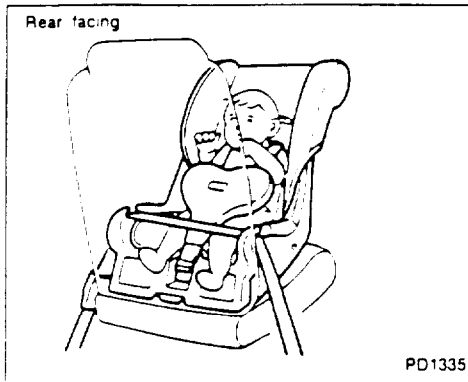
Installation of child restraint

1. Slide the seat to its rearmost position.
2. Adjust the genuine lap belt as short as possible to fit the child restraint, as shown, and secure the child restraint.
3. Slide the seat forward so that the genuine lap belt may fully tighten the child restraint.

Never install the child restraint with an automatic shoulder belt or a lap belt with a retractor because they are not suitable to secure the child restraint.

Do not use this genuine lap belt for adults.

When the genuine lap belt is not in use, fold it neatly, and pay attention so as not to allow it to be caught in the door, or become stained.



— Installation on front passenger seat (Sedan models for Canada — 3-point type with retractor)

— A child restraint with a top strap should not be used in the front passenger seat.

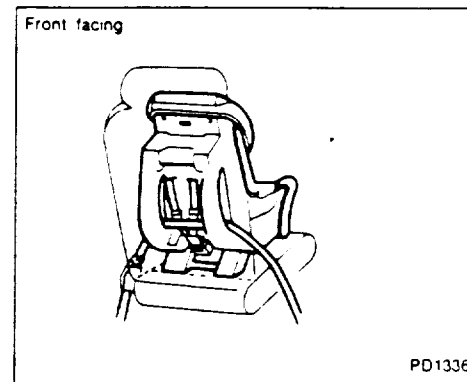
WARNING:

- The 3-point belt in your vehicle is equipped with a locking mode retractor which must be used when installing a child restraint or an infant carrier.
- Failure to use the retractor's locking mode will result in the child restraint not

being properly secured. The seat could tip over or otherwise be unsecured and cause injury to the child in a sudden stop or collision.

If you choose to install a child restraint or infant carrier follow these steps:

1. Position the child restraint or infant carrier on the front passenger seat. It can be placed in a forward facing or rear facing direction, depending on the size of the child and the restraint manufacturer's instructions.
2. Follow the child restraint or infant carrier manufacturer's instructions. Route the lap belt through the child restraint or infant carrier and insert the belt tongue into the buckle until you hear and feel the latch engage.

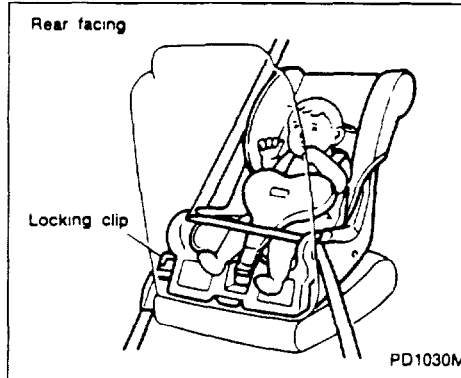


Be sure to follow the child restraint manufacturer's instructions for belt routing.

3. Pull upward on the lap belt until all of the belt is fully extended and a click is heard. At this time, the lap belt retractor is in the automatic locking mode (child restraint mode). (It will revert back to "emergency locking" when the belt is fully retracted.)
4. Allow the belt to retract. A clicking sound will be heard as the belt retracts. This indicates that the retractor is in the automatic locking mode. Pull down on the belt to remove any slack in the belt.

5. Before placing the child in the child restraint carrier, use force to tilt the child restraint from side to side, and tug it forward to make sure that it is securely held in place.
6. Check that the retractor is in the automatic locking mode by trying to pull more belt out of the retractor. If you cannot pull any more belt webbing out of the retractor, the belt is in the automatic locking mode.
7. Check to make sure that the child restraint or infant carrier is properly secured prior to each use. If the lap belt is not locked, repeat steps 3 through 6.

After the child restraint is removed and the seat belt is allowed to wind back into the retractor, the automatic locking mode (child restraint mode) is canceled; the emergency locking retractor may be used as normal and will only lock during a sudden stop or impact.



Installation on front passenger seat (Coupe models - 3-point type with retractor)

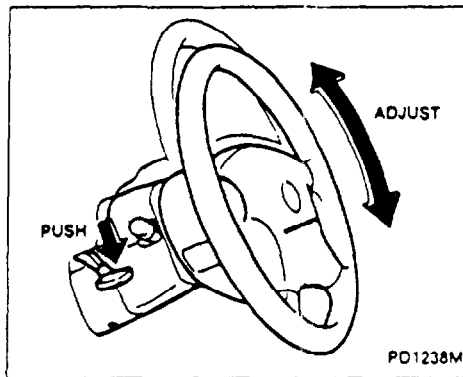
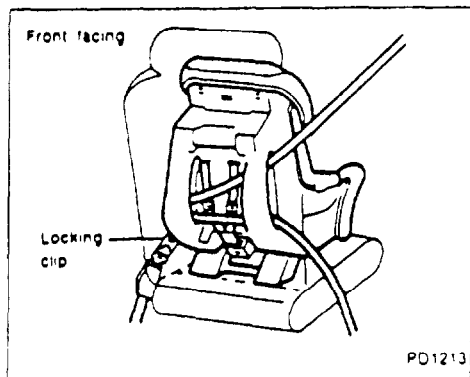
Before using the locking clip, read the instructions attached to the clip.

Slide the seat to its rearmost position.

Secure the child restraint with the lap belt as illustrated. To prevent slack in the lap belt, it will be necessary to secure the lap/shoulder belt in place with a locking clip.

Slide the seat forward so that the seat belt fully tightens the child restraint.

TILTING STEERING WHEEL

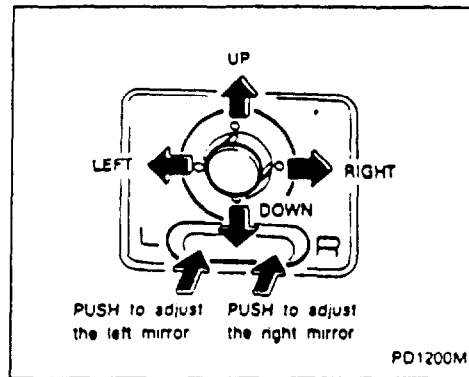


Pull the lock lever down and adjust the steering wheel up or down to the desired position. Push the lock lever up firmly to lock the steering wheel in place.

WARNING:

Do not adjust the steering wheel while driving.

OUTSIDE MIRROR CONTROL



Electric control type

The outside mirror will operate only when the ignition switch is in the "ACC" or "ON" position.

Push the right or left end of the switch to select the right or left side mirror, then adjust using the control lever.

Objects viewed in the outside mirror on the passenger side are closer than they appear.

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APPENDIX E
INSTRUMENTATION AND CALIBRATION DATA

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General Test Information

VERSNO: V2 TGID: 1
TITLE: 1993 56.35 KM/H NCAP FRONTAL BARRIER IMPACT
TSTOBJ: ACQUIRE NCAP DATA USING TWO INSTR. DUMMIES AND LOAD CELL BARRIER
TSTDAT: 10/MAR/93 TSTPRF: MSE CONNO: DTNH22-90-D-32121
TSTREF: MP5003 TSTTYP: NCA TSTCFN: VTB
TKSURF: CON TKCOND: DRY TEMP: 18 RECTYP: FMT
LINK: UMB CLSSPD: 56.3 IMPANG: 0 OFFSET: 0.0
IMPPNT: 9999.9 MEASUR: MET TOTCRV: 69
TSTCOM: NO COMMENTS

Vehicle Information

VGID: 2 VEHNO: 1 MAKE: 64 MODEL: 02 YEAR: 93 BODY: 4S
 VIN: JN1EB31F8PU502989 ENGINE: 4CTF ENGDSP: 1.6 LITERS TRANSM: AF
 VEHTWT: 1263 WHLBAS: 243.0 VEHLLEN: 420.0 VEHWID: 142.2
 VEHCG: 94.7 STRSEP: UN COLMEC: BWU MODIND: P
 MODDSC: UNMODIFIED

BX

1: 420.0
 2: 364.1
 3: 318.5
 4: 280.3
 5: 282.3
 6: 281.5
 7: 282.8
 8: 181.2
 9: 183.2
 10: 181.7
 11: 183.2
 12: 287.9
 13: 288.4
 14: 313.8
 15: 312.0
 16: 241.7
 17: 40.6
 18: 44.5
 19: 406.0
 20: 406.8
 21: 50.8

VEHSPD: 56.3 CRBANG: 0 PDOF: 0 BMPENG: NA

SILENG: NA APLENG: NA

DPD

1: 47.3
 2: 52.4
 3: 54.2
 4: 55.1
 5: 54.9
 6: 54.4

VDI: 12FCAW9 LENCNT: 130.0 DAMDST: 0.0 CRHDST: 55.1

AX

1: 361.5
 2: 345.5
 3: 309.5
 4: 279.0
 5: 279.8
 6: 281.0
 7: 281.0
 8: 181.0
 9: 181.0
 10: 181.5
 11: 181.0
 12: 287.5
 13: 285.0
 14: 311.0
 15: 310.5
 16: 239.0
 17: 38.0
 18: 44.0
 19: 350.0
 20: 354.0
 21: 50.8

CARANG: 999 VEHOR: 999

VEHCOM: NO COMMENTS

Barrier Information

Barrier ID: 3

BARRIG: R

BARSHP: LCB

BARANG: 0

BARDIA: 999.9

BARCOM: BARRIER INSRAT FIELDS ARE IN KILONEWTONS

Occupant Information

Occupant Group ID: 4 VEHNO: 1
OCCLOC: 01 OCCTYP: P5 OCCAGE: 99 OCCSEX: M OCCHT: 999 OCCWT: 999
MTHCAL: P5 DUMSIZ: 50
DUMMAN: MFG: HUMANOID SYSTEMS, S/N: 830
DUMMOD: UNMODIFIED
DUMDSC: NO COMMENT
HH: 32.5 HW: 48.0 HR: 15.0 HS: 27.5 CD: 57.5 CS: 36.0 AD: 10.0 HD: 12.0
KD: 23.8 HB:999.9 NB:999.9 CB:999.9 KB:999.9
RESTR1: PS2 RESTR2: ABG
REXTXT: NO COMMENTS
SEPOSN: CN AIRDEP: DP
CNTRH1: OT CNTRH2: NO CNTRC1: NO CNTRC2: NO CNTRL1: DP CNTRL2: DP
HIC: 660. T1: 65.800 T2: 101.800
CLIP3M: 47.3 LFEM: 7997 RFEM: 1352 CSI: 484. LBELT: 4419 SBELT: 7808
OCCCOM: CNTRH1: AIRBAG, RESTR3: AIRBAG

Occupant Information

Occupant Group ID: 4 VEHNO: 1
OCCLOC: 02 OCCTYP: P5 OCCAGE: 99 OCCSEX: M OCCHT: 999 OCCWT: 999
MTHCAL: P5 DUMSIZ: 50
DUMMAN: MFG: HUMANOID SYSTEMS, S/N: 814
DUMMOD: UNMODIFIED
DUMDSC: NO COMMENT
HH: 34.5 HW: 49.0 HR: 15.5 HS: 29.5 CD: 59.5 CS:999.9 AD: 3.0 HD: 13.5
KD: 23.0 HB:999.9 NB:999.9 CB:999.9 KB:999.9
RESTR1: PS2 RESTR2: LAP
RESTXT: NO COMMENTS
SEPOSN: CN AIRDEP: NA
CNTRH1: NO CNTRH2: NO CNTRC1: NO CNTRC2: NO CNTRL1: DP CNTRL2: NO
HIC: 613. T1: 75.300 T2: 111.300
CLIP3M: 44.0 LFEM: 3229 RFEM: 3851 CSI: 462. LBELT: 6313 SBELT: 10748
OCCCOM: NO COMMENT

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 001	
SENTYP: AC	SENLOC: 01	SENATT: HDCG	
AXIS: XL	UNITS: G'S	PREFIL: 1650	
INSMAN: MFG: ENDEVCO,	MODEL: 7264-200,	S/N: BJ61H	
CALDAT: 02/OCT/92	INSRAT: 200	CHLMAX: 23	INIVEL: 56.3
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 002	
SENTYP: AC	SENLOC: 01	SENATT: HDCG	
AXIS: YL	UNITS: G'S	PREFIL: 1650	
INSMAN: MFG: ENDEVCO,	MODEL: 7264-200,	S/N: BG95H	
CALDAT: 02/OCT/92	INSRAT: 200	CHLMAX: 4	INIVEL: 0.0
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 003	
SENTYP: AC	SENLOC: 01	SENATT: HDCG	
AXIS: ZL	UNITS: G'S	PREFIL: 1650	
INSMAN: MFG: ENDEVCO,	MODEL: 7264-200,	S/N: BJ54H	
CALDAT: 02/OCT/92	INSRAT: 200	CHLMAX: 27	INIVEL: 0.0
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 004	
SENTYP: AC	SENLOC: 01	SENATT: CHST	
AXIS: XL	UNITS: G'S	PREFIL: 1650	
INSMAN: MFG: ENDEVCO,	MODEL: 7264-200,	S/N:	
CALDAT: 02/OCT/92	INSRAT: 200	CHLMAX: 32	INIVEL: 56.3
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 005	
SENTYP: AC	SENLOC: 01	SENATT: CHST	
AXIS: YL	UNITS: G'S	PREFIL: 1650	
INSMAN: MFG: ENDEVCO,	MODEL: 7264-200,	S/N: BG78H	
CALDAT: 02/OCT/92	INSRAT: 200	CHLMAX: 18	INIVEL: 0.0
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5 VEHNO: 1 CURNO: 006
SENTYP: AC SENLOC: 01 SENATT: CHST
AXIS: ZL UNITS: G'S PREFIL: 1650
INSMAN: MFG: ENDEVCO, MODEL: 7264-200, S/N AR39
CALDAT: 02/OCT/92 INSRAT: 200 CHLMAX: 10 INIVEL: 0.0
NFP: -300 NLP: 2999 DELT: 100 DASTAT: AM
INSCOM: NO COMMENT

Instrumentation Information

Inst. Group ID: 5 VEHNO: 1 CURNO: 007
SENTYP: LC SENLOC: 01 SENATT: FMRL
AXIS: XL UNITS: NWT PREFIL: 1650
INSMAN: MFG: GSE INC. MODEL: 2430, S/N 634
CALDAT: 09/OCT/92 INSRAT: 13350 CHLMAX: 60 INIVEL: 0.0
NFP: -300 NLP: 2999 DELT: 100 DASTAT: AM
INSCOM: NO COMMENT

Instrumentation Information

Inst. Group ID: 5 VEHNO: 1 CURNO: 008
SENTYP: LC SENLOC: 01 SENATT: FMRR
AXIS: XL UNITS: NWT PREFIL: 1650
INSMAN: MFG: GSE INC, MODEL: 2430, S/N: 744
CALDAT: 09/OCT/92 INSRAT: 13350 CHLMAX: 10 INIVEL: 0.0
NFP: -300 NLP: 2999 DELT: 100 DASTAT: AM
INSCOM: NO COMMENT

Instrumentation Information

Inst. Group ID: 5 VEHNO: 1 CURNO: 009
SENTYP: AC SENLOC: 02 SENATT: HDCG
AXIS: XL UNITS: G'S PREFIL: 1650
INSMAN: MFG: ENDEVCO, MODEL: 7264-200, S/N: BF83H
CALDAT: 02/OCT/92 INSRAT: 200 CHLMAX: 15 INIVEL: 56.3
NFP: -300 NLP: 2999 DELT: 100 DASTAT: AM
INSCOM: NO COMMENT

Instrumentation Information

Inst. Group ID: 5 VEHNO: 1 CURNO: 010
SENTYP: AC SENLOC: 02 SENATT: HDCG
AXIS: YL UNITS: G'S PREFIL: 1650
INSMAN: MFG: ENDEVCO, MODEL: 7264-200, S/N: BJ15H
CALDAT: 02/OCT/92 INSRAT: 200 CHLMAX: 14 INIVEL: 0.0
NFP: -300 NLP: 2999 DELT: 100 DASTAT: AM
INSCOM: NO COMMENT

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 011	
SENTYP: AC	SENLOC: 02	SENATT: HDCG	
AXIS: ZL	UNITS: G'S	PREFIL: 1650	
INSMAN: MFG: ENDEVCO,	MODEL: 7264-200,	S/N: BG29H	
CALDAT: 02/OCT/92	INSRAT: 200	CHLMAX: 25	INIVEL: 0.0
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 012	
SENTYP: AC	SENLOC: 02	SENATT: CHST	
AXIS: XL	UNITS: G'S	PREFIL: 1650	
INSMAN: MFG: ENDEVCO,	MODEL: 7264-200,	S/N: BI14H	
CALDAT: 02/OCT/92	INSRAT: 200	CHLMAX: 24	INIVEL: 56.3
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 013	
SENTYP: AC	SENLOC: 02	SENATT: CHST	
AXIS: YL	UNITS: G'S	PREFIL: 1650	
INSMAN: MFG: ENDEVCO,	MODEL: 7264-200,	S/N: BI19H	
CALDAT: 02/OCT/92	INSRAT: 200	CHLMAX: 18	INIVEL: 0.0
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 014	
SENTYP: AC	SENLOC: 02	SENATT: CHST	
AXIS: ZL	UNITS: G'S	PREFIL: 1650	
INSMAN: MFG: ENDEVCO,	MODEL: 7264-200,	S/N: BI92H	
CALDAT: 02/OCT/92	INSRAT: 200	CHLMAX: 9	INIVEL: 0.0
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 015	
SENTYP: LC	SENLOC: 02	SENATT: FMRL	
AXIS: XL	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: GSE INC,	MODEL: 2430,	S/N: 735	
CALDAT: 09/OCT/92	INSRAT: 13350	CHLMAX: 25	INIVEL: 0.0
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 016	
SENTYP: LC	SENLOC: 02	SENATT: FMRR	
AXIS: XL	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: GSE INC,	MODEL: 2430, S/N: 710		
CALDAT: 09/OCT/92	INSRAT: 13350	CHLMAX: 29	INIVEL: 0.0
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 017	
SENTYP: LC	SENLOC: 01	SENATT: LPBO	
AXIS: OT	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: LEBOW,	MODEL: 3371, S/N: 333		
CALDAT: 13/OCT/92	INSRAT: 15575	CHLMAX: 29	INIVEL: 0.0
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 018	
SENTYP: LC	SENLOC: 01	SENATT: SHBT	
AXIS: OT	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: LEBOW,	MODEL: 3371, S/N: 327		
CALDAT: 13/OCT/92	INSRAT: 15575	CHLMAX: 51	INIVEL: 0.0
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 019	
SENTYP: LC	SENLOC: 02	SENATT: LPBO	
AXIS: OT	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: LEBOW,	MODEL: 3371, S/N: 330		
CALDAT: 13/OCT/92	INSRAT: 15575	CHLMAX: 42	INIVEL: 0.0
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 020	
SENTYP: LC	SENLOC: 02	SENATT: SHBT	
AXIS: OT	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: LEBOW,	MODEL: 3371, S/N: 308		
CALDAT: 13/OCT/92	INSRAT: 15575	CHLMAX: 70	INIVEL: 0.0
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 021	
SENTYP: DS	SENLOC: 01	SENATT: SHBT	
AXIS: OT	UNITS: OTH	PREFIL: 1650	
INSMAN: MFG: ETI,	MODEL: LCP12A-12,	S/N: 1	
CALDAT: 10/NOV/92	INSRAT: 50	CHLMAX: 7	INIVEL: 0.0
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 022	
SENTYP: DS	SENLOC: 02	SENATT: SHBT	
AXIS: OT	UNITS: OTH	PREFIL: 1650	
INSMAN: MFG: ETI,	MODEL: LCP12A-12,	S/N: 2	
CALDAT: 10/NOV/92	INSRAT: 50	CHLMAX: 10	INIVEL: 0.0
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 023	
SENTYP: DS	SENLOC: 01	SENATT: SHBE	
AXIS: OT	UNITS: CMS	PREFIL: 1650	
INSMAN: MFG: CELESCO,	MODEL: 20 IN.,	S/N: NA	
CALDAT: 10/NOV/92	INSRAT: 51	CHLMAX: 15	INIVEL: 0.0
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 024	
SENTYP: DS	SENLOC: 02	SENATT: SHBE	
AXIS: OT	UNITS: CMS	PREFIL: 1650	
INSMAN: MFG: MSE,	MODEL: 24 IN. LIN.,	S/N: 112	
CALDAT: 10/NOV/92	INSRAT: 61	CHLMAX: 19	INIVEL: 0.0
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 025	
SENTYP: AC	SENLOC: NA	SENATT: SULF	
AXIS: XG	UNITS: G'S	PREFIL: 1650	
INSMAN: MFG: I.C. SENSOR,	MODEL: 3031-200,	S/N: 27-200	
CALDAT: 09/OCT/92	INSRAT: 200	CHLMAX: 158	INIVEL: 56.3
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 026	
SENTYP: AC	SENLOC: NA	SENATT: SURF	
AXIS: XG	UNITS: G'S	PREFIL: 1650	
INSMAN: MFG: I.C. SENSOR, MODEL: 3031-200, S/N: 31-200			
CALDAT: 09/OCT/92	INSRAT: 200	CHLMAX: 156	INIVEL: 56.3
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 027	
SENTYP: AC	SENLOC: NA	SENATT: ENGN	
AXIS: XG	UNITS: G'S	PREFIL: 1650	
INSMAN: MFG: I.C. SENSOR, MODEL: 3031-200, S/N: 32-200			
CALDAT: 09/OCT/92	INSRAT: 200	CHLMAX: 132	INIVEL: 56.3
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 028	
SENTYP: AC	SENLOC: NA	SENATT: ENGN	
AXIS: XG	UNITS: G'S	PREFIL: 1650	
INSMAN: MFG: I.C. SENSOR, MODEL: 3031-200, S/N: 21-200			
CALDAT: 09/OCT/92	INSRAT: 200	CHLMAX: 139	INIVEL: 56.3
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 029	
SENTYP: AC	SENLOC: NA	SENATT: DPLC	
AXIS: XG	UNITS: G'S	PREFIL: 1650	
INSMAN: MFG: I.C. SENSOR, MODEL: 3031-200, S/N: 28-200			
CALDAT: 09/OCT/92	INSRAT: 200	CHLMAX: 91	INIVEL: 56.3
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 030	
SENTYP: AC	SENLOC: NA	SENATT: FLLR	
AXIS: XG	UNITS: G'S	PREFIL: 1650	
INSMAN: MFG: I.C. SENSOR, MODEL: 3031-200, S/N: 23-200			
CALDAT: 09/OCT/92	INSRAT: 200	CHLMAX: 30	INIVEL: 56.3
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 031	
SENTYP: AC	SENLOC: NA	SENATT: FLRR	
AXIS: XG	UNITS: G'S	PREFIL: 1650	
INSMAN: MFG: I.C. SENSOR, MODEL: 3031-200, S/N: 30-200			
CALDAT: 09/OCT/92	INSRAT: 200	CHLMAX: 30	INIVEL: 56.3
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 032	
SENTYP: AC	SENLOC: NA	SENATT: OTHR	
AXIS: XG	UNITS: G'S	PREFIL: 1650	
INSMAN: MFG: I.C. SENSOR, MODEL: 3031-200, S/N: 26-200			
CALDAT: 09/OCT/92	INSRAT: 200	CHLMAX: 31	INIVEL: 56.3
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 1	CURNO: 033	
SENTYP: AC	SENLOC: NA	SENATT: TRFC	
AXIS: XG	UNITS: G'S	PREFIL: 1650	
INSMAN: MFG: I.C. SENSOR, MODEL: 3031-200, S/N: 34-200			
CALDAT: 09/OCT/92	INSRAT: 200	CHLMAX: 29	INIVEL: 56.3
NFP: -300	NLP: 2999	DELT: 100	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 034	
SENTYP: LC	SENLOC: NA	SENATT: LCA1	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS, S/N: 19349			
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 2	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 035	
SENTYP: LC	SENLOC: NA	SENATT: LCA2	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS, S/N: 19324			
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 3	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 036	
SENTYP: LC	SENLOC: NA	SENATT: LCA3	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19283		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 10	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 037	
SENTYP: LC	SENLOC: NA	SENATT: LCA3	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19263		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 22	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 038	
SENTYP: LC	SENLOC: NA	SENATT: LCA5	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19265		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 16	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 039	
SENTYP: LC	SENLOC: NA	SENATT: LCA6	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19266		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 4	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 040	
SENTYP: LC	SENLOC: NA	SENATT: LCA7	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19317		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 7	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 041	
SENTYP: LC	SENLOC: NA	SENATT: LCA8	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19270		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 3	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 042	
SENTYP: LC	SENLOC: NA	SENATT: LCA9	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19428		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 3	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 043	
SENTYP: LC	SENLOC: NA	SENATT: LCB1	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19273		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 3	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 044	
SENTYP: LC	SENLOC: NA	SENATT: LCB1	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19276		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 23	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 045	
SENTYP: LC	SENLOC: NA	SENATT: LCB3	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19258		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 29	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 046	
SENTYP: LC	SENLOC: NA	SENATT: LCB4	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19278		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 31	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 047	
SENTYP: LC	SENLOC: NA	SENATT: LCB5	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19279		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 44	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 048	
SENTYP: LC	SENLOC: NA	SENATT: LCB6	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19282		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 35	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 049	
SENTYP: LC	SENLOC: NA	SENATT: LCB7	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19262		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 22	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 050	
SENTYP: LC	SENLOC: NA	SENATT: LCB8	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19285		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 3	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 051	
SENTYP: LC	SENLOC: NA	SENATT: LCB9	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19286		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 2	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 052	
SENTYP: LC	SENLOC: NA	SENATT: LCC1	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19287		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 4	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 053	
SENTYP: LC	SENLOC: NA	SENATT: LCC2	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19288		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 10	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 054	
SENTYP: LC	SENLOC: NA	SENATT: LCC3	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19289		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 10	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 055	
SENTYP: LC	SENLOC: NA	SENATT: LCC4	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19291		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 7	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 056	
SENTYP: LC	SENLOC: NA	SENATT: LCC5	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19324		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 11	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 057	
SENTYP: LC	SENLOC: NA	SENATT: LCC6	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19313		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 8	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 058	
SENTYP: LC	SENLOC: NA	SENATT: LCC7	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19314		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 6	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 059	
SENTYP: LC	SENLOC: NA	SENATT: LCC8	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19315		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 10	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 060	
SENTYP: LC	SENLOC: NA	SENATT: LCC9	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19316		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 2	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 061	
SENTYP: LC	SENLOC: NA	SENATT: LCD1	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19317		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 1	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 062	
SENTYP: LC	SENLOC: NA	SENATT: LCD2	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19318		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 4	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 063	
SENTYP: LC	SENLOC: NA	SENATT: LCD3	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19322		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 4	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 064	
SENTYP: LC	SENLOC: NA	SENATT: LCD4	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19323		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 3	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 065	
SENTYP: LC	SENLOC: NA	SENATT: LCD5	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19260		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 2	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 066	
SENTYP: LC	SENLOC: NA	SENATT: LCD6	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19325		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 4	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 067	
SENTYP: LC	SENLOC: NA	SENATT: LCD7	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19332		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 2	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 068	
SENTYP: LC	SENLOC: NA	SENATT: LCD8	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19333		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 2	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

Instrumentation Information

Inst. Group ID: 5	VEHNO: 0	CURNO: 069	
SENTYP: LC	SENLOC: NA	SENATT: LCD9	
AXIS: XG	UNITS: NWT	PREFIL: 1650	
INSMAN: MFG: INTERFACE, MODEL: 1220-FS,	S/N: 19338		
CALDAT: 14/MAY/85	INSRAT: 222	CHLMAX: 2	INIVEL: 0.0
NFP: -250	NLP: 2499	DELT: 120	DASTAT: AM
INSCOM: NO COMMENT			

CALIBRATION DATA FOR INSTRUMENTATION USED IN ATD CALIBRATION

DUMMY INSTRUMENTS	MANUFACTURER	MODEL	SERIAL No.	CAL DATE	DUE DATE
CHEST DEFLECTION POT	BECKMAN	5311	N/A	EACH USE	EACH USE
CHEST IMPACTOR ACCELEROMETER	ENTRAN	EGV-1	14N3N-V13-1	09/14/92	03/14/93
NECK PENDULUM ACCELEROMETER	ENTRAN	EGV-1	14N3N-V13-1	09/14/92	03/14/93
NECK ROTATION NO. 2	BECKMAN	5311	N/A	EACH USE	EACH USE
NECK ROTATION NO. 1	BECKMAN	5311	N/A	EACH USE	EACH USE
NECK EXTENSION POT	BOURNS	80294-20518- 1840202	1684-067	EACH USE	EACH USE
ABDOMINAL COMPRESSION LOAD	LEBOW/EATON	3167	1573	09/14/92	03/14/93
LUMBAR FLEXION LOAD	LEBOW/EATON	3167	1573	09/14/92	03/14/93
LUMBAR ROTATION	BOURNS	3590S-2-102	N/A	EACH USE	EACH USE
ABDOMINAL DISPLACEMENT	CELESCO	PT-101-15B	0786551	EACH USE	EACH USE
TIMER	MSE	MSE TIM	1	02/11/93	08/11/93
TIME TRAP	MSE	1 in.	1	02/11/93	08/11/93