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REPORT NO. 208-MGA-2000-03

SAFETY COMPLIANCE SLED TESTING FOR FMVSS 208  
OCCUPANT CRASH PROTECTION

Nissan North America Inc.  
2000 Nissan Maxima 4 Door  
NHTSA NO. CY5204

MGA RESEARCH CORPORATION  
5000 WARREN ROAD  
BURLINGTON, WI 53105



Test Date: March 2, 2000

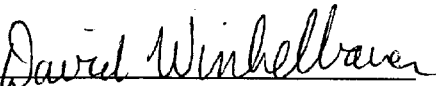
Report Date: March 14, 2000

FINAL REPORT

Prepared For:  
U.S. DEPARTMENT OF TRANSPORTATION  
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION  
SAFETY ASSURANCE  
OFFICE OF VEHICLE SAFETY COMPLIANCE  
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16. Abstract  A compliance test (sled test) was conducted on the subject 2000 Nissan Maxima 4 Door in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP208S-01 for the determination of FMVSS 208 compliance. Test failures identified were as follows:  NONE			
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### Purpose

This FMVSS 208 compliance sled test is part of the Federal Motor Vehicle Safety Standard (FMVSS) 208 compliance test program conducted for the National Highway Traffic Safety Administration (NHTSA) by MGA Research Corporation (MGA) under Contract No. DTNH22-98-D-11055. The purpose of this test was to determine if the subject vehicle, a 2000 Nissan Maxima 4 Door, NHTSA No. CY5204, meets the performance requirements of FMVSS 208, "Occupant Crash Protection," in the impact simulation sled test mode.

## Test Procedure

This test was conducted in accordance with NHTSA's Office of Vehicle Safety Compliance (OVSC) Laboratory Test Procedure No. TP-208S-01 dated January 15, 1998. Data was obtained relative to FMVSS 208, "Occupant Crash Protection," performance.

The test vehicle was instrumented with four (4) accelerometers to measure longitudinal axis accelerations.

The test vehicle contained two (2) Part 572 E 50th percentile adult male anthropomorphic test devices (dummies). The dummies were positioned in the front outboard seating positions according to the dummy placement procedures specified in Appendix B of the Laboratory Test Procedure. The dummies were not restrained by seat belts.

Both dummies were instrumented with head and chest accelerometers to measure longitudinal, lateral, and vertical accelerations; chest deflection potentiometers; left and right femur load cells to measure axial forces; and upper neck load cells to measure longitudinal, lateral, and vertical forces and moments.

The thirty-six (36) data channels were digitally sampled at 10,000 samples per second and processed per Sections 11.7 through 11.9 of the Laboratory Test Procedure.

The crash event was recorded by six (6) high-speed motion picture cameras. The pre-test and post-test conditions were recorded by one (1) real-time motion picture camera.

### Test Results Summary

This FMVSS 208 compliance sled test was conducted at MGA Research Corporation on March 2, 2000.

The test vehicle, a 2000 Nissan Maxima 4 Door, NHTSA No. CY5204, appeared to comply with the performance requirements of FMVSS 208 in the impact simulation sled test mode as measured by Hybrid III 50th percentile male dummies.

	FMVSS 208 Max. Allowable Injury Assessment Values	Driver (Serial #401)	Passenger (Serial #403)
HIC	1000	183	257
Chest g	60 g	40.3 g	52.1 g
Chest displacement	3 inches	1.6 in.	0.3 in.
Left Femur	2250 lb	1237 lb	970 lb
Right Femur	2250 lb	1388 lb	1150 lb
Neck Extension	57 Nm	31.0 Nm	19.2 Nm
Neck Flexion	190 Nm	24.8 Nm	92.2 Nm
Neck Tension	3300 N	1253 N	554 N
Neck Compression	4000 N	2095 N	1516 N
Neck Shear	3100 N	755 N	2089 N

The vehicle also appears to meet the other FMVSS 208 requirements for which it was tested. These results are shown in the data sheets that are included in this report.

The test vehicle was equipped with air bags at the driver and passenger seating positions. The dummies were not restrained by seat belts. The sled carriage was accelerated to 16.9 g with an integrated velocity change of 29.1 mph. After filtering the acceleration signal to Channel Class 60, the airbag system was triggered 19.4 milliseconds after 0.5 g acceleration.

INCLUDE DISCUSSION OF LOST CHANNELS OR OTHER TEST ISSUES.

None noted

Sled Test Summary

Vehicle NHTSA No.: CY5204 Test Mode: FMVSS 208 SLED TEST

Vehicle Yr/Make/Model/Body Style: 2000/Nissan/Maxima/4 Door

Test Date: March 2, 2000 Time: 11:15 a.m. Temp: 71°F

Vehicle Test Weight: 3458 lbs.

**DUMMY INFO.**

	<b>DRIVER</b>	<b>PASSENGER</b>
Dummy Type	<u>Part 572E</u>	<u>Part 572E</u>
Serial Number	<u>401</u>	<u>403</u>
Restraint System	<u>frontal airbag</u>	<u>frontal airbag</u>
No. Data Channels	<u>15</u>	<u>15</u>

Number of Cameras: 1 Real Time  
6 High Speed

Door Opening Data: yes Left Front  
yes Right Front

**FRONT SEAT(S) DATA**

	<b>DRIVER</b>	<b>PASSENGER</b>
Seat Track Failure -	<u>0</u> inches shift;	<u>0</u> inches shift
Seat Back Failure -	<u>none</u>	<u>none</u>

**VISIBLE DUMMY  
CONTACT POINTS:**

	<b>DRIVER</b>	<b>PASSENGER</b>
Head	<u>airbag/windshield/ headrest</u>	<u>airbag/headrest</u>
Chest	<u>airbag</u>	<u>airbag</u>
Left Knee	<u>knee bolster/instrument panel</u>	<u>glove box/dash</u>
Right Knee	<u>knee bolster/steering column</u>	<u>glove box/dash</u>

General Test And Vehicle Parameter DataVehicle Yr/Make/Model/Body Style: 2000/Nissan/Maxima/4 DoorVehicle NHTSA No.: CY5204 VIN: JN1CA31D2YT724959 Color: White

## Engine Data:

No. Cylinders: 6; CID:     ; Liters: 3.0; CCs:     Placement: Longitudinal/Inline:     ; Transverse/Lateral: X

## Transmission Data:

Speeds: 5; Manual: X; Automatic:     ; Overdrive:     

## Final Drive:

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

## Major Options:

A/C: X; Pwr. Strg.: X; Pwr. Brakes: X; Pwr. Windows: XPwr. Dr. Locks: X; Other: cruise control, rear defogger, tachometerDate Received: December 9, 1999; Odometer Reading: 32 milesSelling Dealer: Wilde Nissan  
1903 E. Moreland Blvd.  
Waukesha, WI 53186

REMARKS: None

General Test And Vehicle Parameter Data (Cont.)

## DATA FROM VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured By: Nissan North America Inc.Date of Manufacture: 8/99; VIN: JN1CA31D2YT724959GVWR: 4333 lbs; GAWR Front: 2365 lbs.GAWR Rear: 1988 lbs.

## DATA FROM TIRE PLACARD:

Tire Pressure with Maximum Capacity Vehicle Load:

FRONT: 29 psi REAR: 29 psiRecommended Tire Size: P205/65R15

Recommended Cold Tire Pressure:

FRONT: 29 psi REAR: 29 psiSize of Tires on Test Vehicle: P205/65R15Type of Spare Tire: T125/70D16; Space Saver: X; Standard:     

## Vehicle Capacity Data:

Type of Front Seats: X Bucket;      Bench;      Split BenchNumber of Occupants: 2 Front; 3 Rear;      3rd Seat; 5 TOTAL

REMARKS: None

VEHICLE CAPACITY WEIGHT (VCW) = 882 lbs.No. Of Occupants x 150 lbs = 750 lbs.Rated Cargo/Luggage Weight (RCWL) = 132 lbs. (Difference)

General Test And Vehicle Parameter Data (Cont.)

WEIGHT OF TEST VEHICLE AS RECEIVED AT LABORATORY: (with maximum fluids)

Right Front =	<u>997</u> lbs.	Right Rear =	<u>590</u> lbs.
Left Front =	<u>961</u> lbs.	Left Rear =	<u>639</u> lbs.
TOTAL FRONT =	<u>1958</u> lbs.	TOTAL REAR =	<u>1229</u> lbs.
% Total Weight =	<u>61.4</u> %	% Total Weight =	<u>38.6</u> %

TOTAL DELIVERED WEIGHT = 3187 lbs.

WEIGHT OF FULLY LOADED TEST VEHICLE WITH TWO DUMMIES AND 132 POUNDS OF CARGO WEIGHT:

Right Front =	<u>1076</u> lbs.	Right Rear =	<u>747</u> lbs.
Left Front =	<u>1048</u> lbs.	Left Rear =	<u>792</u> lbs.
TOTAL FRONT =	<u>2124</u> lbs.	TOTAL REAR =	<u>1539</u> lbs.
% Total Weight =	<u>58.0</u> %	% Total Weight =	<u>42.0</u> %

TOTAL WEIGHT = 3663 lbs.

TEST VEHICLE ATTITUDE: (all measurements in degrees)

AS DELIVERED DOOR SILL ANGLE:	<u>0.2° nose down</u>
AS TESTED DOOR SILL ANGLE:	<u>0.2° nose down</u>
FULLY LOADED DOOR SILL ANGLE:	<u>0.1° nose up</u>

FUEL SYSTEM DATA:

Fuel System Capacity From Owner's Manual = 18.5 gallons  
 Usable Capacity Figure Furnished by COTR = 18.5 gallons

REMARKS: None

Post-Impact Data

Test number:	HT00030201
NHTSA number:	CY5204
Test date:	March 2, 2000
Test time:	11:15 am
Test type:	FMVSS 208 Compliance Sled Test
Impact angle:	0°
Ambient Temperature at Impact Area:	71°F
Temperature in Occupant Compartment:	71°F
Impact Velocity:	
Integrated velocity from the integration of the entire sled acceleration:	29.1 mph
Specified integrated velocity range:	28 to 30 mph
Sled Carriage Acceleration:	
Acceleration:	16.9 g
Specified Acceleration Range:	16.0 - 18.2 g
Sled Carriage Acceleration Duration:	
Time from T-0 (-0.5 g) to 0.0 g:	124.1 msec
Specified Acceleration Duration:	120.0 to 130.0 msec

The sled acceleration corridor was achieved.

### Seat and Steering Column Positioning Data

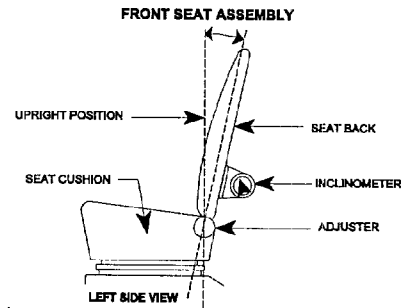
Vehicle Yr/Make/Model/Body Style: 2000/Nissan/Maxima/4 Door

Vehicle NHTSA No.: CY5204 Test Date: March 2, 2000

#### NOMINAL DESIGN RIDING POSITION:

Driver Seat: Seat Back Angle = 21°

Passenger Seat: Seat Back Angle = 21°



#### SEAT FORE AND AFT POSITIONS:

Driver Seat: The seat track had a total position movement of 21 notches and was positioned 10 notches rearward from the foremost position with the forward most locking position as zero.

Passenger Seat: The seat track had a total position movement of 21 notches and was positioned 10 notches rearward from the foremost position with the forward most locking position as zero.

#### STEERING COLUMN ADJUSTMENTS:

The steering column was placed in the mid position of travel (approx. 23°).

Dummy Positioning Measurement Table

Vehicle Year/Make/Model/Body Style: 2000/Nissan/Maxima/4 Door

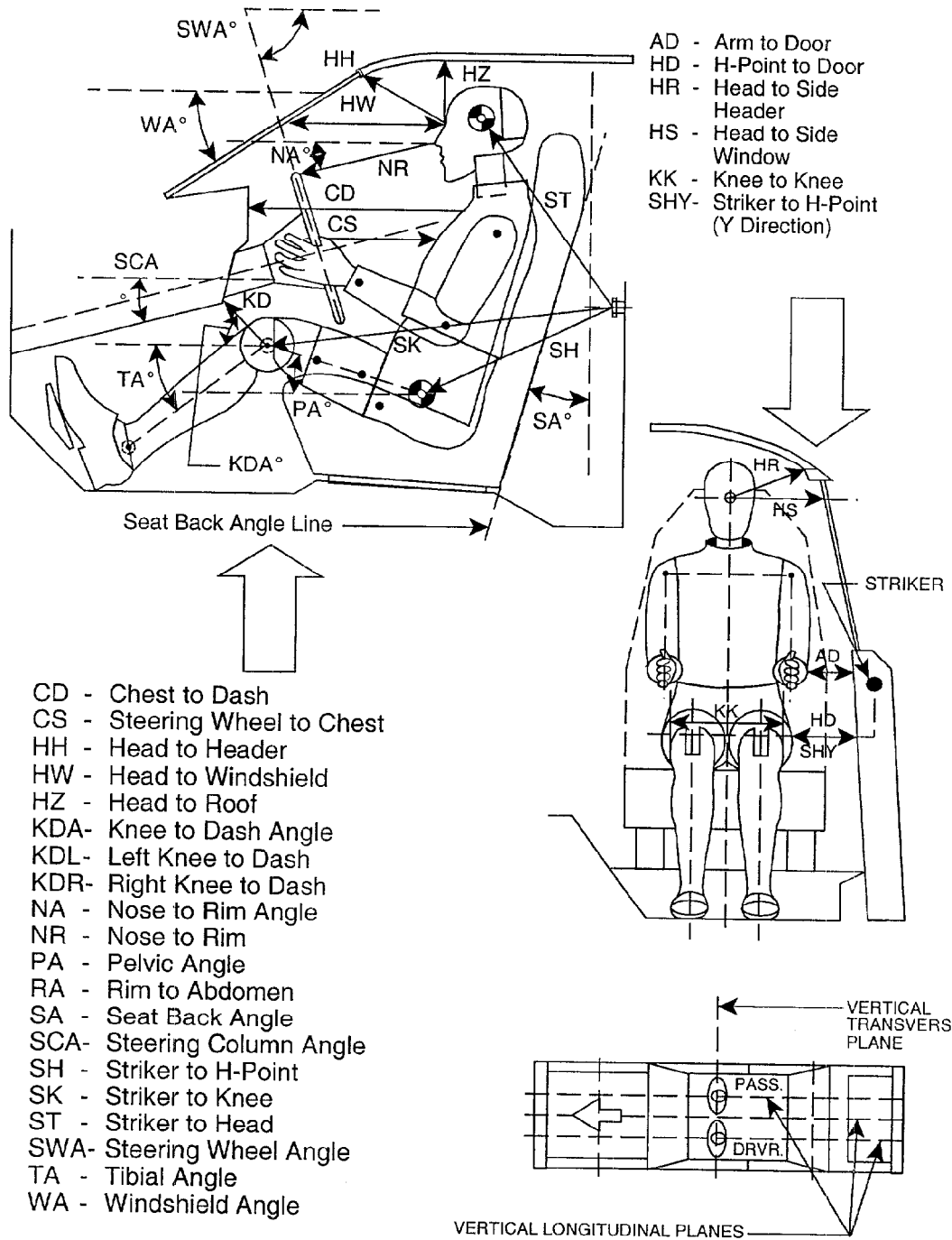
Vehicle NHTSA No.: CY5204      Test Date: March 2, 2000

	DRIVER (Serial #401)	PASSENGER (Serial #403)
WA°	27.9°	
SWA°	23.9°	N/A
SCA°	24.3°	N/A
SA°*	11.4°	11.6°
HZ	174	173
HH	278	274
HW	495	513
HR	253	261
NR	386 Angle (NA°) 15.1°	N/A
CD	540	564
CS	315	N/A
RA	184	N/A
KDL	181 Angle (KDA°) 19.3°	173
KDR	189	169 Angle (KDA°) 24.7°
PA°	24.1°	24.6°
TA°	39.2°	41.9°
KK	316	310
ST	535 Angle 13.5°	537 Angle 9.8°
SK	604 Angle 94.2°	607 Angle 91.8°
SH	238 Angle 123.0°	248 Angle 120.3°
SHY	272	257
HS	382	302
HD	149	137
AD	112	117

\* - measured at headrest post

Dummy Positioning Measurement Locations

**DUMMY MEASUREMENT FOR FRONT SEAT PASSENGERS**



### Description of Dummy Measurements

When a level is to be used, it is to ensure that the line containing the two points described is either parallel or perpendicular to the ground. If a measurement to be made is less than 10 inches ignore the directions to use a level and approximate a level measurement. Also, when a measurement is to be taken to or from the center of a bolt on the dummy, take the measurement from the center of the bolt hole if the bolt is recessed.

**The following measurements are to be made within a vertical longitudinal plane.**

- \*     HH     Head to Header, taken from the point where the dummy's nose meets his forehead (between his eyes) to the furthest point forward on the header.
- \*     HW     Head to Windshield, taken from the point where the dummy's nose meets his forehead (between his eyes) to a point on the windshield. Use a level.
- HZ     Head to Roof, taken from the point where the dummy's nose meets his forehead (between his eyes) to the point on the roof directly above it. Use a level.
- \*     CS     Steering Wheel to Chest, taken from the center of the steering wheel hub to the dummy's chest. Use a level.
- \*     CD     Chest to Dash, place a tape measure on the tip of the dummy's chin and rotate five inches of it downward toward the dummy to the point of contact on the transverse center of the dummy's chest. Then measure from this point to the closest point on the dashboard either between the upper part of the steering wheel between the hub and the rim, or measure to the dashboard placing the tape measure above the rim, whichever is a shorter measurement. See photograph.
- RA     Steering Wheel Rim to Abdomen, taken from the bottommost point of the steering wheel rim horizontally rearward to the dummy. Use a level.
- NR     Nose to Rim, taken from the tip of the dummy's nose to the closest point on the top of the steering wheel rim. Also indicate the angle this line makes with respect to the horizontal (NA).
- \*<sup>1</sup>    KDL, KDR   Left and Right Knees to Dashboard, taken from the center of the knee pivot bolt's outer surface to the closest point forward acquired by swinging the tape measure in continually larger arcs until it contacts the dashboard. Also reference the angle of this measurement with respect to the horizontal for the outboard knee (KDA). See photograph.

\* Measurement used in Data Tape Reference Guide

<sup>1</sup> Only outboard measurement is referenced in Data Tape Reference Guide

Description of Dummy Measurements (Cont.)

SH, SK, ST Striker to Hip, Knee, and Head, these measurements are to be taken in the X-Z plane measured from the forward most center point on the striker to the center of the H-point, outer knee bolt, and head target. When taking this measurement a firm device that can be rigidly connected to the striker should be used. Use a level. The angles of these measurements with respect to the horizontal should also be recorded. The measurement in the Y (transverse) direction from the striker to the H-point should also be taken (SHY). See photograph.

**The following measurements are to be made within a vertical transverse plane.**

- |      |   |
|------|---|
| HS   | Head to Side Window, taken from the point where the dummy's nose meets his forehead (between his eyes) to the outside of the side window. In order to make this measurement, roll the window down to the exact height which allows a level measurement. Use a level. See photograph.  |
| * AD | Arm to Door, taken from the outer surface of the elbow pivot bolt on a Hybrid II dummy to the first point it hits on the door. In the case of a Hybrid III dummy, measure from the bolt on the outer biceps. When a SID is used make the measurement from the center of the bottom of the arm segment where it meets the dummy's torso. |
| * HD | H-point to Door, taken from the H-point on the dummy to the closest point on the door. Use a level.   |
| * HR | Head to Side Header, measure the shortest distance from the point where the dummy's nose meets his forehead (between his eyes) to the side edge of the header just above the window frame, directly adjacent to the dummy.  |
| SHY  | Striker to H-point, taken from a rod rigidly connected to the forward most center point on the striker to the H-point. Use a level. See photograph.   |
| KK   | Knee to Knee, for Hybrid II dummies measure the distance between knee pivot bolt head outer surfaces. For Hybrid III dummies measure the distance between the outboard knee clevis flange surfaces. (This measurement may not be exactly transverse)  |

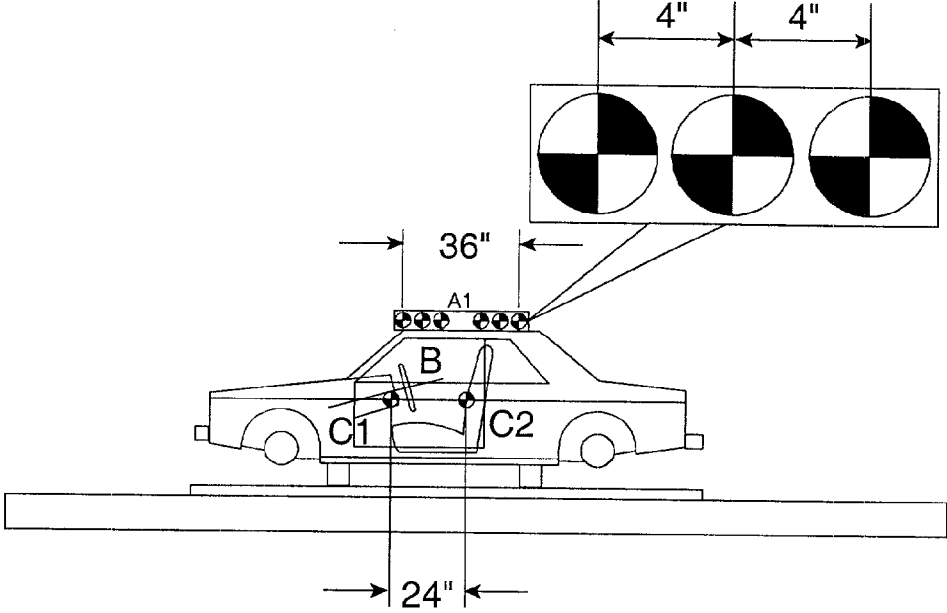
\* Measurement used in Data Tape Reference Guide

Description of Dummy Measurements (Cont.)**Angles**

SA	Seat Back Angle, find this angle using the instructions provided by the manufacturer. If the manufacturer doesn't provide clear instructions contact the COTR.
PA	Pelvic or Femur Angle, taken by inserting the pelvic angle gauge into the H-point gauging hole on the SID or the Hybrid III dummies and taking this angle with respect to the horizontal. Measure the angle of the line connecting the H-point hole and the outer knee pivot bolt hole on a Hybrid II dummy with respect to the horizontal, to find the femur angle.
SWA	Steering Wheel Angle, find this by placing a straight edge against the steering wheel rim along the longitudinal plane. Then measure the acute angle of the straight edge with respect to the horizontal.
SCA	Steering Column Angle, measured with respect to the horizontal by placing an inclinometer on the center of the underside of the steering column.
NA	Measure the angle made when taking the measurement NR with respect to the horizontal.
KDA	Knee to Dash Angle, the angle that the measurement KD is taken at with respect to the horizontal. Only get this angle for the outboard knee. See photograph.
WA	Windshield Angle, place an inclinometer along the transverse center of the windshield exterior (measurement is made with respect to horizontal).
TA	Tibial Angle, use a straight edge to connect the dummy's knee and ankle bolts. Then place an inclinometer on the straight edge and measure the angle with respect to the horizontal.

Vehicle Targeting Measurements

REFERENCE PHOTO TARGETS

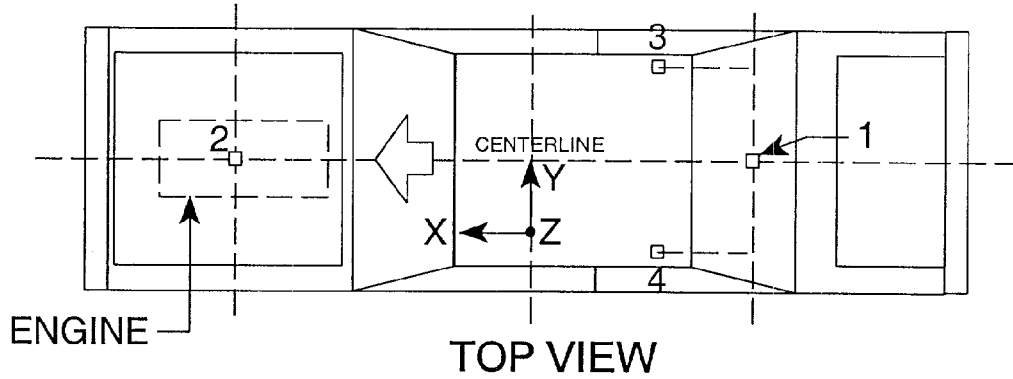


LEFT SIDE VIEW

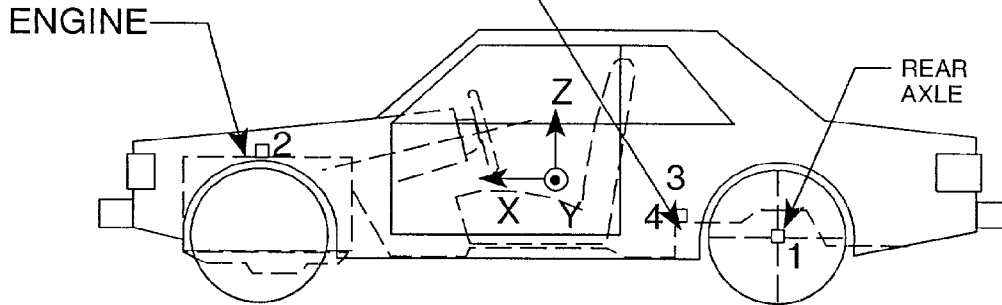
Vehicle Accelerometer Placement and Data Summary

Vehicle Year/Make/Model/Body Style: 2000/Nissan/Maxima/4 Door

Vehicle NHTSA No.: CY5204 Test Date: March 2, 2000



REAR SEAT CUSHION  
ASSY. FRONT ATTACHMENT  
BRACKET SUPPORT



LEFT SIDE VIEW

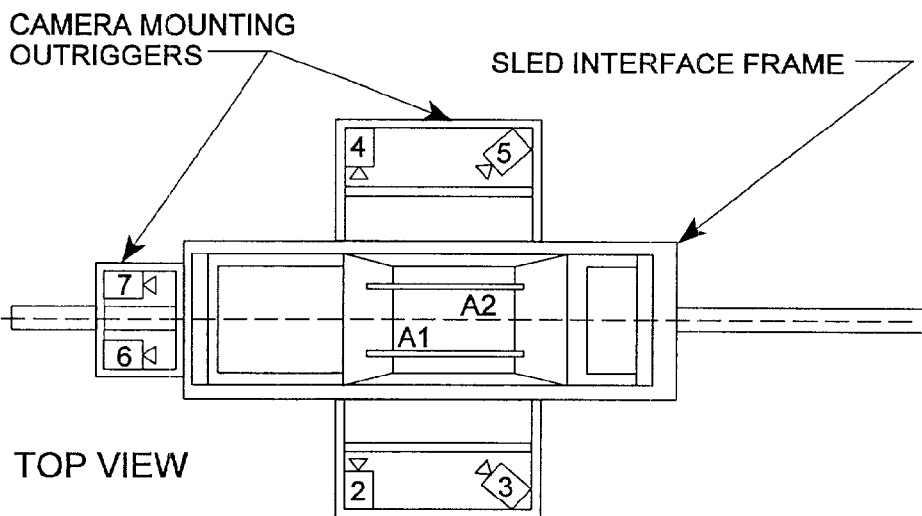
Vehicle Accelerometer Location Measurements and Data Summary

Vehicle Year/Make/Model/Body Style: 2000/Nissan/Maxima/4 Door

Vehicle NHTSA No.: CY5204 Test Date: March 2, 2000

No.	Location	X (in)	Y (in)	Positive Direction		Negative Direction	
				Value	Time (msec)	Value	Time (msec)
	Sled Primary Longitudinal	67.0	0	16.9 g	54	-0.9 g	127
	Sled Redundant Longitudinal	114.0	0	16.9 g	54	-0.9 g	127
	Sled Velocity Measured Integrated	67.0	0	29.1 mph	124	--	--
1	Rear Axle Longitudinal	44.1	0	18.4 g	54	-2.6 g	146
2	Top Engine Longitudinal	159.0	0	21.1 g	43	-2.5 g	129
3	Right Rear Seat Member Longitudinal	70.5	27.4	16.7 g	53	-1.4 g	151
4	Left Rear Seat Member Longitudinal	70.5	27.4	17.3 g	69	-1.2 g	149

Camera Positions

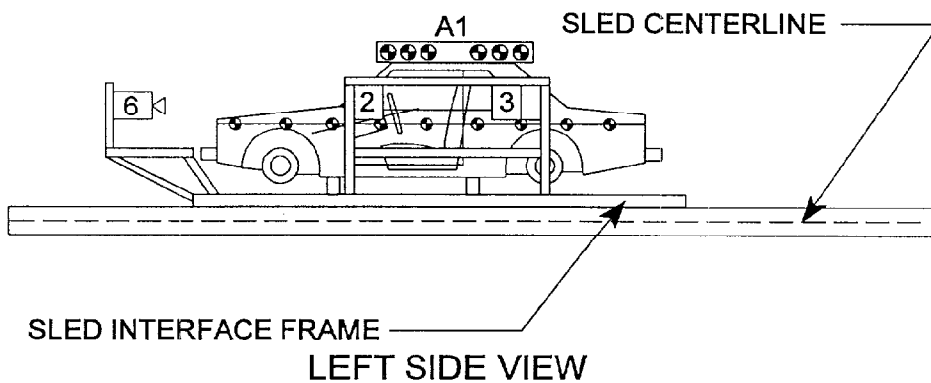


CAMERA FRAME RATES:

#1 = 24 fps

All Others = 1,000 fps

 REAL TIME CAMERA



Camera Location Measurements

Camera No.	VIEW	Camera Positions (inches)*			Angle (deg)	Film Plane To Head Target	Lens (mm)	Speed (fps)
		X	Y	Z				
1	Real-Time (Pre and Post)						10	24
2**	Onboard Driver	76.6	86.0	41.7	90	1720	13	
3	Onboard Driver Angle	147.8	91.3	53.1			13	922
4	Onboard Passenger	73.0	86.4	42.1	90	1710	13	1005
5	Onboard Passenger Angle	147.0	89.4	53.1			13	909
6	Onboard Windshield Driver	22.0	13.2	46.7			13	976
7	Onboard Windshield Passenger	22.0	13.2	46.7			13	952

Reference\* X = Front of sled carriage  
 Y = Center of sled carriage  
 Z = Top of sled carriage

\*\* Camera did not run

Occupant Injury Data

Vehicle Year/Make/Model/Body Style: 2000/Nissan/Maxima/4 Door

Vehicle NHTSA No.: CY5204      Test Date: March 2, 2000

MAXIMUM ACCELERATION VALUES: (g's)	DRIVER DUMMY #401	PASSENGER DUMMY #403
Head Channel X	-50.2	-68.5
Head Channel Y	29.7	-19.3
Head Channel Z	-20.7	29.9
HEAD RESULTANT	58.2	75.8
Chest Channel X	-40.5	-50.6
Chest Channel Y	5.1	5.1
Chest Channel Z	12.7	26.5
CHEST RESULTANT	42.4	53.4

HEAD INJURY CRITERIA (HIC) VALUES:

HIC	183	257
$t_1 =$ (msec)	91.0	77.3
$t_2 =$ (msec)	120.3	112.8

[The maximum time interval from  $t_1$  to  $t_2$  is 36 milliseconds.]

CHEST INJURY CRITERIA (CLIP) VALUES: (g's)

CLIP	40.3	52.1
$t_1 =$ (msec)	93.6	99.3
$t_2 =$ (msec)	96.7	102.4
CHEST DEFLECTION (in)	1.6	0.3

Occupant Injury Data (Cont.)

MAX. COMPRESSIVE FEMUR FORCES:	DRIVER DUMMY #401	PASSENGER DUMMY #403
Left Side (lbs)	1237	970
Right Side (lbs)	1388	1150

## NECK INJURY CRITERIA:

Peak Flexion Bending Moment about the Occipital Condyle (N-m)	24.8	92.2
Peak Extension Bending Moment about the Occipital Condyle (N-m)	31.0	19.2
Peak Axial Tension (N)	1253	554
Peak Axial Compression (N)	2095	1516
Peak Fore Shear (N)	755	2089
Peak Aft Shear (N)	100	146

Seat Belt Warning System Data

Vehicle Year/Make/Model/Body Style: 2000/Nissan/Maxima/4 Door

NHTSA No.: CY5204 ; Technician: Chad Gadberry ;

Date: January 26, 2000

Complete the following to determine which seat belt warning system option (S7.3(a)(1) or S7.3(a)(2)) is used. (Manufacturers may use either option.)

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

A.1 S7.3(a)(1)

Time duration of audible warning signal = 6 seconds  
(4 to 8 seconds)

Time duration of reminder light operation = >60 seconds  
(no less than 60 seconds)

A.2 S7.3(a)(2)

Time duration of audible warning signal =      seconds  
(4 to 8 seconds)(see 49 USCS @ 30124)

Time duration of reminder light operation =      seconds  
(4 to 8 seconds)

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

B.1 S7.3(a)(1)

Time duration of audible warning signal = 0 seconds  
(audible warning not required)

Time duration of reminder light operation = 6 seconds  
(reminder light not required)

B.2 S7.3(a)(2)

Time duration of audible warning signal =      seconds  
(audible warning not required)

Time duration of reminder light operation =      seconds  
(4 to 8 seconds)

C. Note wording of visual warning:

Fasten seat belt	_____
Fasten Belt	_____
Symbol 101	_____ X _____

Readiness IndicatorVehicle Year/Make/Model/Body Style: 2000/Nissan/Maxima/4 DoorNHTSA No.: CY5204 ; Technician: Chad Gadberry ;Date: January 26, 2000

An occupant restraint system that deploys in the event of a crash shall have a monitoring system with a readiness indicator. A totally mechanical system is exempt from this requirement. (11/8/94 legal interpretation)

1. Is the system totally mechanical?      ( )Yes      (X)No  
(If YES this Data Sheet is complete.)
2. Describe the location of the readiness indicator: top center of instrument cluster  
\_\_\_\_\_
3. Is the readiness indicator clearly visible to the driver?  
(X)Yes-Pass      ( )No-FAIL
4. Is a list of the elements in the occupant restraint system, being monitored by the readiness indicator, provided?  
(X)Yes-Pass      ( )No-FAIL

Air Bag Labels DataVehicle Year/Make/Model/Body Style: 2000/Nissan/Maxima/4 DoorNHTSA No.: CY5204 ; Technician: Chad Gadberry ; Date: January 26, 2000

1. Air bag maintenance label and owner's manual instructions (S4.5.1(a)):
  - 1.1. Does the manufacturer recommend periodic maintenance or replacement of the airbag? (X)Yes, go to 1.2 ( ) No, go to 2
  - 1.2. Does the vehicle have a maintenance or replacement label? (X)Yes-Pass ( ) **No-FAIL**
  - 1.3. Does the label contain one of the following? (X)Yes-Pass ( ) **No-FAIL**  
 ( ) Schedule on label specifies month and year (Date: \_\_\_\_\_)  
 ( ) Schedule on label specifies vehicle mileage (Mileage: \_\_\_\_\_)  
 (X) Schedule on label specifies interval measured from date on certification label (Date: 10 years)
  - 1.4. Is the label permanently affixed within the passenger compartment? (X)Yes-Pass ( ) **No-FAIL**
  - 1.5. Is the label lettered in English? (X)Yes-Pass ( ) **No-FAIL**
  - 1.6. Is the label in block capitals and numerals? (X)Yes-Pass ( ) **No-FAIL**
  - 1.7. Are the letters and numerals at least 3/32 inches high? (X)Yes-Pass ( ) **No-FAIL**
  - 1.8. Does the owner's manual set forth the recommended schedule for maintenance or replacement? (X)Yes-Pass ( ) **No-FAIL**
2. Does the owner's manual (S4.5.1(f)):
  - 2.1. Include a description of the vehicle's airbag system in an easily understandable format? (X)Yes-Pass ( ) **No-FAIL**
  - 2.2. Include a statement that the vehicle is equipped with an airbag and a lap/shoulder belt at the front outboard seating positions? (X)Yes-Pass ( ) **No-FAIL**

Air Bag Labels Data (Cont.)

- 2.3 Include a statement that the air bag is a supplemental restraint at the front outboard seating positions?  
(X)Yes-Pass ( ) No-FAIL
- 2.4 Emphasize that all occupants, including the driver, should always wear their seat belts whether or not an airbag is also provided at their seating positions to minimize the risk of severe injury or death in the event of a crash?  
(X)Yes-Pass ( ) No-FAIL
- 2.5 Provide any necessary precautions regarding the proper positioning of occupants, including children, at seating positions equipped with air bags to insure maximum safety protection for those occupants?  
(X)Yes-Pass ( ) No-FAIL
- 2.6 Explain that no objects should be placed over or near the air bag on the steering wheel or on the instrument panel, because any such objects could cause harm if the vehicle is in a crash severe enough to cause the air bag to inflate?  
(X)Yes-Pass ( ) No-FAIL
3. Does the vehicle:
- 3.1. Provide an automatic means to ensure that the airbag does not deploy when a child seat or child with a total mass of 30 kg or less is present on the front outboard passenger?  
( )Yes (X) No
- 3.2. Incorporate sensors, other than or in addition to weight sensors, which automatically prevent the passenger air bag from deploying in situations in which it might have an adverse effect on infants in rear-facing child seats, and unbelted or improperly belted children?  
( )Yes (X) No
- 3.3. Have a passenger air bag designed to deploy in a manner that does not create a risk of serious injury to infants in rear-facing child seats, and unbelted or improperly belted children?  
( )Yes (X) No

If yes to 3.1, or 3.2, or 3.3, the vehicle is not required to have a sunvisor warning label (S4.5.1(6)), an airbag alert label (S4.5.1(c)) or a label on the dash (S4.5.2(e)) and this check sheet is complete (S4.5.1). If no to 3.1, 3.2, and 3.3, go to 4.

## 4. Sun Visor Warning Label

- 4.1. Is the label permanently affixed (may be permanent marking or molding) to either side of the sunvisor at each front outboard seating position with an airbag?  
(S4.5.1(b)(2))
- |                  |             |                         |
|------------------|-------------|-------------------------|
| Driver Side -    | (X)Yes-Pass | ( ) No-FAIL             |
| Passenger Side - | ( ) N/A     | (X)Yes-Pass ( ) No-FAIL |

Air Bag Labels Data (Cont.)

- 4.2. Does the label conform in content (vehicles without back seats may omit the statement: "The back seat is the safest place for children.") (S4.5.1(b)(2)(v)) to either label shown on the next page as appropriate at each front outboard seating position with an air bag? (S4.5.1(b)(2))

- 4.2.1 **Dual air bags:**       Not Applicable  
    Driver Side -       Yes                               **No-FAIL**  
    Passenger Side -       Yes                               **No-FAIL**

- 4.2.2 **Vehicle with driver air bag ONLY - either 4.2.2.1 or 4.2.2.2 is applicable, not both.** (S4.5.1(b)(2)(iv))

- 4.2.2.1      Does the label conform in content to either label shown on the following page as appropriate?  
     Not Applicable  
    Driver Side -       Yes-Pass                               **No-FAIL**

- 4.2.2.2      Does the label conform in content to the first label shown on the following page where the label can be modified to omit the pictogram and the message text may read:

DEATH or SERIOUS INJURY can occur.

- Sit as far back as possible from the air bag.
- ALWAYS use SEAT BELTS and CHILD RESTRAINTS
- The BACK SEAT is the SAFEST place for children.

- Not Applicable  
    Driver Side -       Yes-Pass                               **No-FAIL**

Air Bag Labels Data (Cont.)

**SUN VISOR LABEL VISIBLE WHEN VISOR IS IN DOWN POSITION**

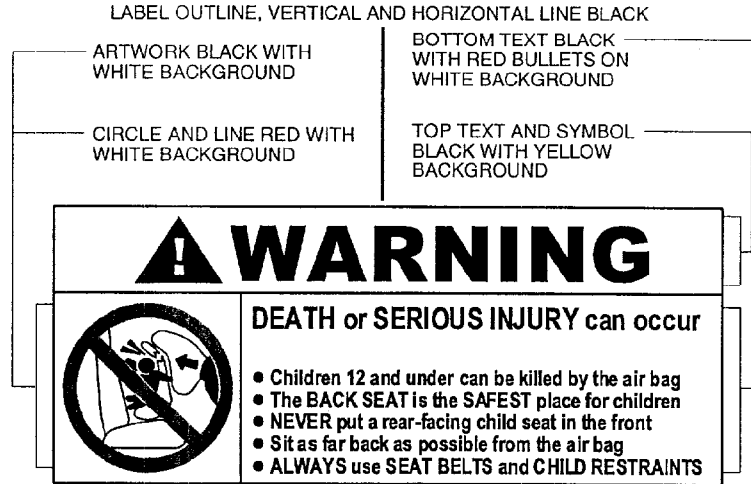


Figure 6a (S4.5.1(b)(2))

**SUN VISOR LABEL VISIBLE WHEN VISOR IS IN DOWN POSITION**

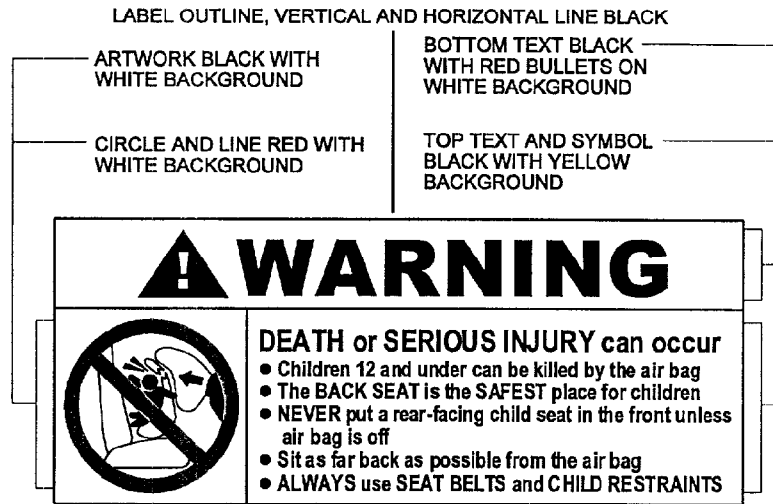


Figure 6b (S4.5.1(b)(2))

- 4.3 Is the label heading area yellow with the word “warning” and the alert symbol in black? (S4.5.1(b)(2)(i))
- |                  |                |              |
|------------------|----------------|--------------|
| Driver Side -    | (X) Yes-Pass   | ( ) No-FAIL  |
| Passenger Side - | ( ) No air bag | (X) Yes-Pass |
|                  |                | ( ) No-FAIL  |
- 4.4 Is the message white with black text? (S4.5.1(b)(2)(ii))
- |                  |                |              |
|------------------|----------------|--------------|
| Driver Side -    | (X) Yes-Pass   | ( ) No-FAIL  |
| Passenger Side - | ( ) No air bag | (X) Yes-Pass |
|                  |                | ( ) No-FAIL  |

Air Bag Labels Data (Cont.)

- 4.5 Is the message area at least 30 cm<sup>2</sup>? (S4.5.1(b)(2)(iii))  
Actual message area: 70 cm<sup>2</sup>
- |                                 |             |             |
|---------------------------------|-------------|-------------|
| Driver Side -                   | (X)Yes-Pass | ( ) No-FAIL |
| Passenger Side - ( ) No air bag | (X)Yes-Pass | ( ) No-FAIL |
- 4.6 Is the pictogram black with a red circle and slash on a white background?  
(S4.5.1(b)(2)(iii) & (S4.5.1(b)(2)(iv)))  
For vehicles with driver side air bag ONLY ( ) Not Applicable
- |                                 |             |             |
|---------------------------------|-------------|-------------|
| Driver Side -                   | (X)Yes-Pass | ( ) No-FAIL |
| Passenger Side - ( ) No air bag | (X)Yes-Pass | ( ) No-FAIL |
- 4.7 Is the pictogram at least 30 mm in diameter? (S4.5.1(b)(2)(iii))  
Actual diameter: 30 mm  
For vehicles with driver side air bag ONLY ( ) Not Applicable
- |                                 |             |             |
|---------------------------------|-------------|-------------|
| Driver Side -                   | (X)Yes-Pass | ( ) No-FAIL |
| Passenger Side - ( ) No air bag | (X)Yes-Pass | ( ) No-FAIL |
- 4.8 Is the same side of the sun visor to which the sun visor label is affixed free of other information with the exception of an air bag maintenance label?  
(S4.5.1(b)(3))
- |                                 |             |             |
|---------------------------------|-------------|-------------|
| Driver Side -                   | (X)Yes-Pass | ( ) No-FAIL |
| Passenger Side - ( ) No air bag | (X)Yes-Pass | ( ) No-FAIL |
- 4.9 Is the sun visor free of other information about air bags or the need to wear seat belts with the exception of the air bag alert label or the utility vehicle label?  
(S4.5.1(b)(3))
- |                                 |             |             |
|---------------------------------|-------------|-------------|
| Driver Side -                   | (X)Yes-Pass | ( ) No-FAIL |
| Passenger Side - ( ) No air bag | (X)Yes-Pass | ( ) No-FAIL |
5. Air Bag Alert Label
- 5.1 Is the Sun Visor Warning Label visible when the sunvisor is in the stowed position?
- |                  |                 |        |        |
|------------------|-----------------|--------|--------|
| Driver Side -    | ( )Yes, go to 6 | (X) No |        |
| Passenger Side - | ( )No air bag   | ( )Yes | (X) No |
- 5.2 Does the label conform in content to the label shown below? (S4.5.1(c)(2))
- |                                |             |             |
|--------------------------------|-------------|-------------|
| Driver Side -                  | (X)Yes-Pass | ( ) No-FAIL |
| Passenger Side - ( )No air bag | (X)Yes-Pass | ( ) No-FAIL |
- 5.3 Is the message area black with yellow text? (S4.5.1(c)(2)(i))
- |                                |             |             |
|--------------------------------|-------------|-------------|
| Driver Side -                  | (X)Yes-Pass | ( ) No-FAIL |
| Passenger Side - ( )No air bag | (X)Yes-Pass | ( ) No-FAIL |

Air Bag Labels Data (Cont.)

- 5.4 Is the message area at least 20 cm<sup>2</sup>? (S4.5.1(c)(2)(i))  
 Actual message area: 21 cm<sup>2</sup>  
 Driver Side - (X)Yes-Pass ( ) No-FAIL  
 Passenger Side - ( )No air bag (X)Yes-Pass ( ) No-FAIL
- 5.5 Is the pictogram black with a red circle and slash on a white background?  
 (S4.5.1(c)(2)(ii))  
 For vehicles with driver side air bag ONLY ( ) Not Applicable  
 (X)Yes-Pass ( ) No-FAIL
- 5.6 Is the pictogram at least 20 mm in diameter? (S4.5.1(c)(2)(ii))  
 Actual diameter 25 mm  
 For vehicles with driver side air bag ONLY ( ) Not Applicable  
 (X)Yes-Pass ( ) No-FAIL

**SUN VISOR LABEL VISIBLE WHEN VISOR IS IN UP POSITION**

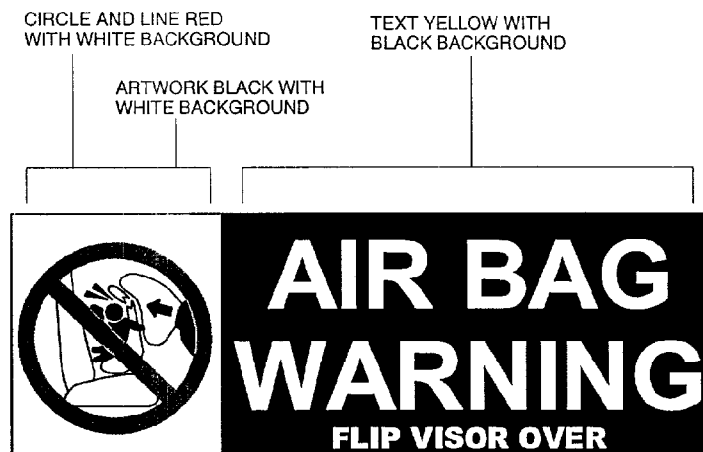


Figure 6c (S4.5.1(c)(2))

6. Label On the Dash
- 6.1 Does the vehicle have a passenger side air bag?  
 (X)Yes ( ) No, check sheet is complete.
- 6.2 Does the vehicle have a label on the dash or steering wheel hub? (S4.5.1(e))  
 (X)Yes-Pass ( ) No-FAIL
- 6.3 Does the label conform in content (vehicles without back seats may omit the statement: "The back seat is the safest place for children 12 and under." (S4.5.1(e)(iii)) to the label shown below. (S4.5.1(e))  
 (X)Yes-Pass ( ) No-FAIL

Air Bag Labels Data (Cont.)

- 6.4 Is the heading area yellow with the word “warning” and the alert symbol in black?  
(S4.5.1(e)(i)) (X)Yes-Pass ( ) No-FAIL
- 6.5 Is the message white with black text? (S4.5.1(e)(ii))  
(X)Yes-Pass ( ) No-FAIL
- 6.6 Is the message area at least 30 cm<sup>2</sup>? (S4.5.1(e)(ii))  
Actual message area: 36 cm<sup>2</sup> (X)Yes-Pass ( )No-FAIL

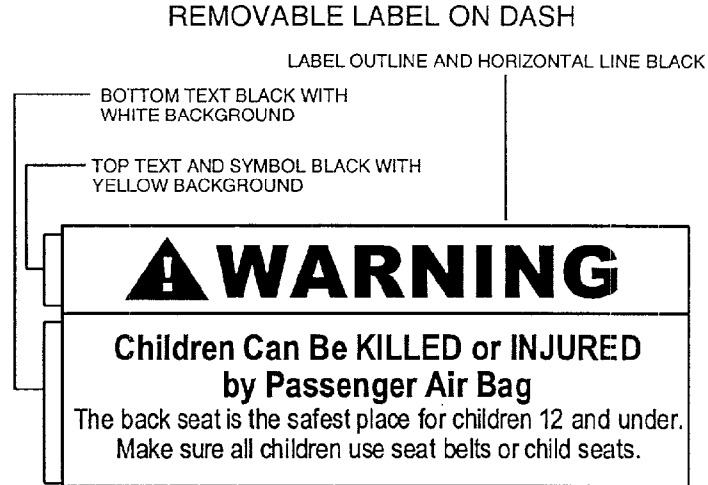


Figure 7 (S4.5.1(e))

Rear Outboard Seating Position Seat Belt DataVehicle Year/Make/Model/Body Style: 2000/Nissan/Maxima/4 DoorNHTSA No.: CY5204; Technician: Chad Gadberry; Date: January 26, 2000

Do all rear outboard seating positions have type 2 seat belts?

 Yes No

If NO, describe the seat belt installed, the seat location, and any other information about the seat that would explain why a type 2 belt was not installed.

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Lap Belt Lockability DataVehicle Year/Make/Model/Body Style: 2000/Nissan/Maxima/4 DoorNHTSA No.: CY5204; Technician: Chad Gadberry; Date: January 26, 2000

Passenger cars, trucks, buses, and multipurpose passenger vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Complete one of these forms for **each** designated seating position with forward-facing seats, other than the driver's seat, or seats that can be adjusted to forward-facing **and** that has seat belt retractors that are not automatic locking retractors. (S7.1.1.5(c))

Designated Seating Position (DSP): Right front

1. Record the seating position. Fully rearward  
(S7.1.1.5(c)(1))  
(Any position is acceptable.)
2. Buckle the seat belt. (S7.1.1.5(c)(1))
3. Complete any procedures recommended in the vehicle owner's manual to activate any locking feature. (S7.1.1.5(c)(1))
4. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5(a))  

(X)Yes-Pass      ( ) No-FAIL
5. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT require inverting, twisting or deforming of the belt webbing. (S7.1.1.5(a))  

(X)Yes-Pass      ( ) No-FAIL
6. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?      (X)Yes, go to 6.1      ( ) No, go to 7.
  - 6.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))  

(X)Yes-Pass      ( ) No-FAIL
7. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

Lap Belt Lockability Data (Cont.)

8. Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))
9. Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2))
10. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

Measured distance between A and B is 68 inches.

11. Readjust the belt system so that the webbing between points A and B is at any length that is 5 inches or more shorter than the maximum length of the webbing. (S7.1.1.5(c)(3))
12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

The measured force application angle = 10 (spec. 5-15 degrees)

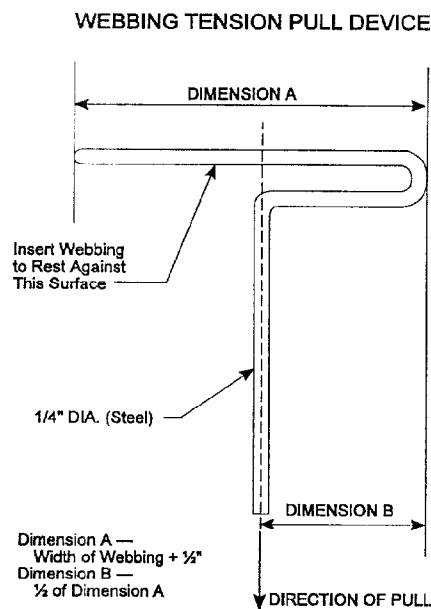


Figure 5 (S7.1.1.5(c)(4))

Lap Belt Lockability Data (Cont.)

13. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

Measured distance between A and B is 26.5 inches.

14. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate: 10 lb/sec (Spec. 10 to 50 lb/sec)

Measure distance between points A and B 27 inches (S7.1.1.5(c)(6))

15. Subtract the measurement in 13 from the measurement in 14. Is the difference 2 inches or less? (S7.1.1.5(c)(7))

14-13 = 0.5 inches (X) Yes-Pass      ( ) No-FAIL

16. Subtract the measurement in 14 from the measurement in 10. Is the difference 3 inches or more?

10-14 = 41 inches (X) Yes-Pass      ( ) No-FAIL

REMARKS: None

Lap Belt Lockability Data

Vehicle Year/Make/Model/Body Style: 2000/Nissan/Maxima/4 Door

NHTSA No.: CY5204; Technician: Chad Gadberry; Date: January 26, 2000

Passenger cars, trucks, buses, and multipurpose passenger vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Complete one of these forms for **each** designated seating position with forward-facing seats, other than the driver's seat, or seats that can be adjusted to forward-facing **and** that has seat belt retractors that are not automatic locking retractors. (S7.1.1.5(c))

Designated Seating Position (DSP): Left rear

- 1. Record the seating position. Non-adjustable  
(S7.1.1.5(c)(1))  
(Any position is acceptable.)
- 2. Buckle the seat belt. (S7.1.1.5(c)(1))
- 3. Complete any procedures recommended in the vehicle owner's manual to activate any locking feature. (S7.1.1.5(c)(1))
- 4. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5(a))  

(X)Yes-Pass      ( ) No-FAIL
- 5. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT require inverting, twisting or deforming of the belt webbing. (S7.1.1.5(a))  

(X)Yes-Pass      ( ) No-FAIL
- 6. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?  

(X)Yes, go to 6.1      ( ) No, go to 7.
- 6.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))  

(X)Yes-Pass      ( ) No-FAIL
- 7. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

Lap Belt Lockability Data (Cont.)

8. Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))
9. Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2))
10. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

Measured distance between A and B is 61 inches.

11. Readjust the belt system so that the webbing between points A and B is at any length that is 5 inches or more shorter than the maximum length of the webbing. (S7.1.1.5(c)(3))
12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

The measured force application angle = 10 (spec. 5-15 degrees)

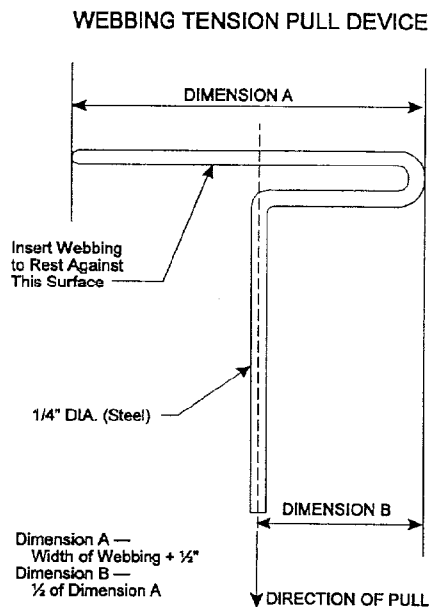


Figure 5 (S7.1.1.5(c)(4))

Lap Belt Lockability Data (Cont.)

13. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

Measured distance between A and B is 17 inches.

14. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate: 10 lb/sec (Spec. 10 to 50 lb/sec)

Measure distance between points A and B 17 inches (S7.1.1.5(c)(6))

15. Subtract the measurement in 13 from the measurement in 14. Is the difference 2 inches or less? (S7.1.1.5(c)(7))

14-13 = 0 inches

(X)Yes-Pass

( ) No-FAIL

16. Subtract the measurement in 14 from the measurement in 10. Is the difference 3 inches or more?

10-14 = 44 inches

(X)Yes-Pass

( ) No-FAIL

REMARKS: None

Lap Belt Lockability DataVehicle Year/Make/Model/Body Style: 2000/Nissan/Maxima/4 DoorNHTSA No.: CY5204 ; Technician: Chad Gadberry ; Date: January 26, 2000

Passenger cars, trucks, buses, and multipurpose passenger vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Complete one of these forms for **each** designated seating position with forward-facing seats, other than the driver's seat, or seats that can be adjusted to forward-facing **and** that has seat belt retractors that are not automatic locking retractors. (S7.1.1.5(c))

Designated Seating Position (DSP): Center rear

1. Record the seating position. Non-adjustable  
(S7.1.1.5(c)(1))  
(Any position is acceptable.)
2. Buckle the seat belt. (S7.1.1.5(c)(1))
3. Complete any procedures recommended in the vehicle owner's manual to activate any locking feature. (S7.1.1.5(c)(1))
4. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5(a))  

(X)Yes-Pass      ( ) No-FAIL
5. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT require inverting, twisting or deforming of the belt webbing. (S7.1.1.5(a))  

(X)Yes-Pass      ( ) No-FAIL
6. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?  

(X)Yes, go to 6.1      ( ) No, go to 7.
- 6.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))  

(X)Yes-Pass      ( ) No-FAIL
7. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

Lap Belt Lockability Data (Cont.)

8. Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))
9. Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2))
10. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

Measured distance between A and B is 68 inches.

11. Readjust the belt system so that the webbing between points A and B is at any length that is 5 inches or more shorter than the maximum length of the webbing. (S7.1.1.5(c)(3))
12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

The measured force application angle = 10 (spec. 5-15 degrees)

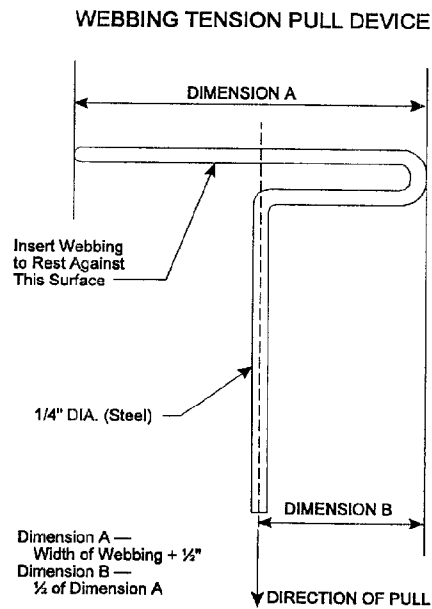


Figure 5 (S7.1.1.5(c)(4))

Lap Belt Lockability Data (Cont.)

13. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

Measured distance between A and B is 10.5 inches.

14. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate: 10 lb/sec (Spec. 10 to 50 lb/sec)

Measure distance between points A and B 11.5 inches (S7.1.1.5(c)(6))

15. Subtract the measurement in 13 from the measurement in 14. Is the difference 2 inches or less? (S7.1.1.5(c)(7))

14-13 = 1 inches

(X)Yes-Pass

( ) No-FAIL

16. Subtract the measurement in 14 from the measurement in 10. Is the difference 3 inches or more?

10-14 = 55.5 inches

(X)Yes-Pass

( ) No-FAIL

REMARKS: None

Lap Belt Lockability DataVehicle Year/Make/Model/Body Style: 2000/Nissan/Maxima/4 DoorNHTSA No.: CY5204 ; Technician: Chad Gadberry ; Date: January 26, 2000

Passenger cars, trucks, buses, and multipurpose passenger vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Complete one of these forms for **each** designated seating position with forward-facing seats, other than the driver's seat, or seats that can be adjusted to forward-facing **and** that has seat belt retractors that are not automatic locking retractors. (S7.1.1.5(c))

Designated Seating Position (DSP): Right rear

1. Record the seating position. Non-adjustable  
(S7.1.1.5(c)(1))  
(Any position is acceptable.)
2. Buckle the seat belt. (S7.1.1.5(c)(1))
3. Complete any procedures recommended in the vehicle owner's manual to activate any locking feature. (S7.1.1.5(c)(1))
4. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5(a))  

(X)Yes-Pass      ( ) No-FAIL
5. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does NOT require inverting, twisting or deforming of the belt webbing. (S7.1.1.5(a))  

(X)Yes-Pass      ( ) No-FAIL
6. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?      (X)Yes, go to 6.1      ( ) No, go to 7.
  - 6.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))  

(X)Yes-Pass      ( ) No-FAIL
7. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

Lap Belt Lockability Data (Cont.)

8. Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))
9. Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2))
10. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

Measured distance between A and B is 61 inches.

11. Readjust the belt system so that the webbing between points A and B is at any length that is 5 inches or more shorter than the maximum length of the webbing. (S7.1.1.5(c)(3))
12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

The measured force application angle = 10 (spec. 5-15 degrees)

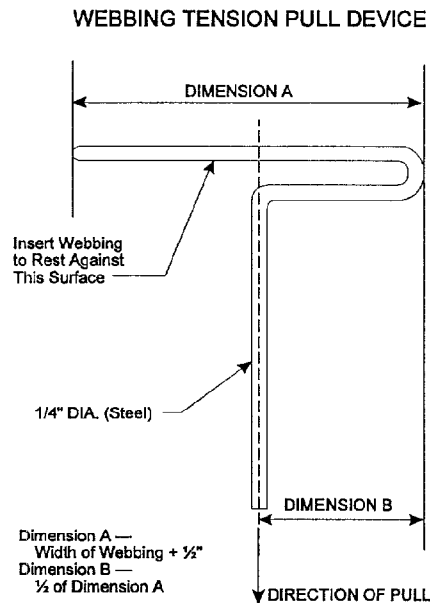


Figure 5 (S7.1.1.5(c)(4))

Lap Belt Lockability Data (Cont.)

13. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

Measured distance between A and B is 17 inches.

14. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate: 10 lb/sec (Spec. 10 to 50 lb/sec)

Measure distance between points A and B 17 inches (S7.1.1.5(c)(6))

15. Subtract the measurement in 13 from the measurement in 14. Is the difference 2 inches or less? (S7.1.1.5(c)(7))

14-13 = 0 inches

Yes-Pass

No-FAIL

16. Subtract the measurement in 14 from the measurement in 10. Is the difference 3 inches or more?

10-14 = 44 inches

Yes-Pass

No-FAIL

REMARKS: None

Seat Belt Comfort and Convenience Data

**1. BELT CONTACT FORCE (S7.4.3)**

Test Vehicle NHTSA No.: CY5204

Vehicle Model Year/Make/Model/Body Style: 2000/Nissan/Maxima/4 Door

Designated Seating Position Tested: Left rear

Date of Comfort/Convenience Check: January 26, 2000

Technician Performing Check: Chad Gadberry

GVWR: 4333 lb

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

- 1.1 Does the vehicle incorporate a webbing tension-relieving device?  
 Yes - go to latchplate access  
 No - continue with this check sheet
- 1.2 Adjustable seats are in adjustment position midway between the forward most and rearmost positions. If an adjustment position does not exist midway between the forward most and rearmost positions, the next closest adjustment position to the rear of the midpoint is used. (S8.1.2)  
 Check  
 N/A
- 1.3 If separately adjustable in a vertical direction, the seats are at the lowest position.  
 Check  
 N/A
- 1.4 Place adjustable seat backs in the manufacturer's nominal design riding position in the manner specified by the manufacturer.  
 Check  
 N/A
- 1.5 Place any adjustable anchorages at the manufacturer's nominal design position for a 50th percentile adult male (50M) occupant. This information will be furnished by the COTR.  
 Check  
 N/A
- 1.6 Place each adjustable head restraint in its highest adjustment position.  
 Check  
 N/A

Seat Belt Comfort and Convenience Data (Cont.)

- 1.7 Adjustable lumbar supports are positioned so that the lumbar support is in its lowest adjustment position. (S8.1.3)  
 Check  
 N/A
- 1.8 Position the test dummies according to dummy position placement instructions in Appendix B.  
 Check
- 1.9 Fasten the seat belt latch. Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point, pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Measure the contact force exerted by the belt webbing on the dummy's chest. Contact the COTR if the contact force exceeds 0.7 pounds.  
Contact Force 0.5 lb.  0.0 to 0.7 pounds - Pass  
 greater than 0.7 pounds - FAIL\*

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

Seat Belt Comfort and Convenience Data

1. **BELT CONTACT FORCE (S7.4.3)**

Test Vehicle NHTSA No.: CY5204

Vehicle Model Year/Make/Model/Body Style: 2000/Nissan/Maxima/4 Door

Designated Seating Position Tested: Center rear

Date of Comfort/Convenience Check: January 26, 2000

Technician Performing Check: Chad Gadberry

GVWR: 4333 lb

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

- 1.1 Does the vehicle incorporate a webbing tension-relieving device?  
 Yes - go to latchplate access  
 No - continue with this check sheet
- 1.2 Adjustable seats are in adjustment position midway between the forward most and rearmost positions. If an adjustment position does not exist midway between the forward most and rearmost positions, the next closest adjustment position to the rear of the midpoint is used. (S8.1.2)  
 Check  
 N/A
- 1.3 If separately adjustable in a vertical direction, the seats are at the lowest position.  
 Check  
 N/A
- 1.4 Place adjustable seat backs in the manufacturer's nominal design riding position in the manner specified by the manufacturer.  
 Check  
 N/A
- 1.5 Place any adjustable anchorages at the manufacturer's nominal design position for a 50th percentile adult male (50M) occupant. This information will be furnished by the COTR.  
 Check  
 N/A
- 1.6 Place each adjustable head restraint in its highest adjustment position.  
 Check  
 N/A

Seat Belt Comfort and Convenience Data (Cont.)

- 1.7 Adjustable lumbar supports are positioned so that the lumbar support is in its lowest adjustment position. (S8.1.3)  
 Check  
 N/A
- 1.8 Position the test dummies according to dummy position placement instructions in Appendix B.  
 Check
- 1.9 Fasten the seat belt latch. Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point, pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Measure the contact force exerted by the belt webbing on the dummy's chest. Contact the COTR if the contact force exceeds 0.7 pounds.  
Contact Force 0.4 lb.  0.0 to 0.7 pounds - Pass  
 greater than 0.7 pounds - FAIL\*

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

Seat Belt Comfort and Convenience Data

1. **BELT CONTACT FORCE (S7.4.3)**

Test Vehicle NHTSA No.: CY5204

Vehicle Model Year/Make/Model/Body Style: 2000/Nissan/Maxima/4 Door

Designated Seating Position Tested: Right rear

Date of Comfort/Convenience Check: January 26, 2000

Technician Performing Check: Chad Gadberry

GVWR: 4333 lb

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

- 1.1 Does the vehicle incorporate a webbing tension-relieving device?  
 Yes - go to latchplate access  
 No - continue with this check sheet
- 1.2 Adjustable seats are in adjustment position midway between the forward most and rearmost positions. If an adjustment position does not exist midway between the forward most and rearmost positions, the next closest adjustment position to the rear of the midpoint is used. (S8.1.2)  
 Check  
 N/A
- 1.3 If separately adjustable in a vertical direction, the seats are at the lowest position.  
 Check  
 N/A
- 1.4 Place adjustable seat backs in the manufacturer's nominal design riding position in the manner specified by the manufacturer.  
 Check  
 N/A
- 1.5 Place any adjustable anchorages at the manufacturer's nominal design position for a 50th percentile adult male (50M) occupant. This information will be furnished by the COTR.  
 Check  
 N/A
- 1.6 Place each adjustable head restraint in its highest adjustment position.  
 Check  
 N/A

Seat Belt Comfort and Convenience Data (Cont.)

- 1.7 Adjustable lumbar supports are positioned so that the lumbar support is in its lowest adjustment position. (S8.1.3)  
 Check  
 N/A
- 1.8 Position the test dummies according to dummy position placement instructions in Appendix B.  
 Check
- 1.9 Fasten the seat belt latch. Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point, pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Measure the contact force exerted by the belt webbing on the dummy's chest. Contact the COTR if the contact force exceeds 0.7 pounds.  
Contact Force 0.5 lb.  0.0 to 0.7 pounds - Pass  
 greater than 0.7 pounds - FAIL\*

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

Seat Belt Comfort and Convenience Data (Cont.)

2. **LATCHPLATE ACCESS (S7.4.4)**

Test Vehicle NHTSA No.: CY5204

Vehicle Model Year/Make/Model/Body Style: 2000/Nissan/Maxima/4 Door

Designated Seating Position Tested: **Not applicable - passenger car**

Date of Comfort/Convenience Check: \_\_\_\_\_

Technician Performing Check: \_\_\_\_\_

GVWR: \_\_\_\_\_

Test all front outboard seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

- 2.1 Position the seat in its forward most adjustment position.  
( ) Check
- 2.2 Position the test dummy using the procedures in Appendix B. (Some modifications to the positioning procedure may need to be made because the seat is in its forward most position.)  
( ) Check
- 2.3 Position the adjustable seat belt anchorage in the manufacturer's nominal design position for a 50th percentile adult male occupant.  
( ) Check
- 2.4 Attach the inboard and outboard reach string following the instructions on Figure 1C.  
( ) Check
- 2.5 Place the latch plate in the stowed position.  
( ) Check
- 2.6 Extend each line backward and outboard to generate arcs of the reach envelop of the test dummy's arms. Is the latch plate within the reach envelope?  
( ) Yes-Pass ( ) **No-FAIL**
- 2.7 Using the clearance test block, specified in Figure 2C, is there sufficient clearance between the vehicle seat and the side of vehicle interior to allow the test block to move unhindered to the latch plate or buckle?  
( ) Yes-Pass ( ) **No-FAIL**

Seat Belt Comfort and Convenience Data (Cont.)

3. **RETRACTION (S7.4.5)**

Test Vehicle NHTSA No.: CY5204

Vehicle Model Year/Make/Model/Body Style: 2000/Nissan/Maxima/4 Door

Designated Seating Position Tested: **Not applicable - passenger car**

Date of Comfort/Convenience Check: \_\_\_\_\_

Technician Performing Check: \_\_\_\_\_

GVWR: \_\_\_\_\_

Test all front outboard seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

- 3.1 Is the vehicle a passenger car or walk-in van-type vehicle?  
       ( ) Yes       If yes, go to seat belt guides and hardware.  
       ( ) No
- 3.2 Adjustable seats are in the adjustment position midway between the forward most and rearmost positions. If an adjustment position does not exist midway between the forward most and rearmost positions, the next closest adjustment position to the rear of the midpoint is used. (S8.1.2)  
       ( ) Check
- 3.3 If separately adjustable in a vertical direction, the seats are at the lowest position.  
       ( ) Check
- 3.4 Place adjustable seat backs in the manufacturer's nominal design riding position in the manner specified by the manufacturer.  
       ( ) Check
- 3.5 Place any adjustable anchorages at the manufacturer's nominal design position for a 50th percentile adult male (50M) occupant. This information will be furnished by the COTR.  
       ( ) Check
- 3.6 Place each adjustable head restraint in its highest adjustment position.  
       ( ) Check
- 3.7 Adjustable lumbar supports are positioned so that the lumbar support is in its lowest adjustment position (S8.1.3)  
       ( ) Check

Seat Belt Comfort and Convenience Data (Cont.)

- 3.8 Use anthropomorphic test dummies whose arms have been removed and position the dummies in the front outboard designated seating positions according to instructions in Appendix B.  
( ) Check
- 3.9 Restrain the dummies using the belt systems for the position being tested.  
( ) Check
- 3.10 Stow outboard armrests which are capable of being stowed.  
( ) Check
- 3.11 Check the statement that applies to this test vehicle:
- (A) The torso and lap belt webbing of the seat belt system automatically retracts to a stowed position when the adjacent vehicle door is in an open position and the seat belt latch plate is released.  
( ) Pass
- (B) The torso and lap belt webbing of the seat belt system automatically retracts when the seat belt latch plate is released.  
( ) Pass
- (C) Neither A or B apply.  
( ) **FAIL**
- 3.12 With the webbing and hardware in the stowed position are the webbing and hardware prevented from being pinched when the door is closed?  
( ) Yes - Pass  
( ) **No - FAIL**
- 3.13 If this test vehicle has an open body (without doors) and has a seat belt system with a tension-relieving device, does the belt system fully retract when the tension-relieving device is deactivated?  
( ) N/A  
( ) Yes - Pass  
( ) **No - FAIL**

Seat Belt Comfort and Convenience Data (Cont.)

4. **SEAT BELT GUIDES AND HARDWARE (S7.4.6)**

Test Vehicle NHTSA No.: CY5204

Vehicle Model Year/Make/Model/Body Style: 2000/Nissan/Maxima/4 Door

Designated Seating Position Tested: Left rear

Date of Comfort/Convenience Check: January 26, 2000

Technician Performing Check: Chad Gadberry

GVWR: 4333 lb

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

The requirements for accessibility **DO NOT APPLY** to:

- A. Seats whose seat cushions are movable so that the seat back serves a function other than seating (S7.4.6.1(b))
- B. Seats which are removable.
- C. Seats which are movable so that the space formerly occupied by the seat can be used for a secondary function.

If the seats in this vehicle are different than the criteria above determine the following:

- 4.1 Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back?
  - Yes - Go to 4.2.
  - No - this form is complete
- 4.2 Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)?
  - Yes - Pass
  - No - **FAIL**
- 4.3 Are the remaining two seat belt parts accessible under normal conditions?
  - Yes - Pass
  - No - **FAIL**

Seat Belt Comfort and Convenience Data (Cont.)

- 4.4 The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the following events occur in order:
- (A) The belt is completely retracted or, if the belt is nonretractable, the belt is unlatched.  Check
  - (B) The seat is moved to any position to which it is designed to be adjusted.  Check
  - (C) The seat back, if foldable, is folded forward as far as possible and then moved backward into position.  Check
- Yes - Pass  
 No - **FAIL**
- 4.5 Is the inboard receptacle end of the seat belt assembly, installed in the outboard designated seating position, accessible with the center arm rest in any position to which it can be adjusted (without moving the armrest)?
- Yes - Pass  
 No - **FAIL**

Seat Belt Comfort and Convenience Data (Cont.)

4. **SEAT BELT GUIDES AND HARDWARE (S7.4.6)**

Test Vehicle NHTSA No.: CY5204

Vehicle Model Year/Make/Model/Body Style: 2000/Nissan/Maxima/4 Door

Designated Seating Position Tested: Center rear

Date of Comfort/Convenience Check: January 26, 2000

Technician Performing Check: Chad Gadberry

GVWR: 4333 lb

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

The requirements for accessibility **DO NOT APPLY** to:

- A. Seats whose seat cushions are movable so that the seat back serves a function other than seating (S7.4.6.1(b))
- B. Seats which are removable.
- C. Seats which are movable so that the space formerly occupied by the seat can be used for a secondary function.

If the seats in this vehicle are different than the criteria above determine the following:

- 4.1 Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back?
  - (X) Yes - Go to 4.2.
  - ( ) No - this form is complete
- 4.2 Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)?
  - (X) Yes - Pass
  - ( ) No - FAIL
- 4.3 Are the remaining two seat belt parts accessible under normal conditions?
  - (X) Yes - Pass
  - ( ) No - FAIL

Seat Belt Comfort and Convenience Data (Cont.)

- 4.4 The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the following events occur in order:
- (A) The belt is completely retracted or, if the belt is nonretractable, the belt is unlatched.  Check
  - (B) The seat is moved to any position to which it is designed to be adjusted.  Check
  - (C) The seat back, if foldable, is folded forward as far as possible and then moved backward into position.  Check
- Yes - Pass  
 No - FAIL
- 4.5 Is the inboard receptacle end of the seat belt assembly, installed in the outboard designated seating position, accessible with the center arm rest in any position to which it can be adjusted (without moving the armrest)?
- Yes - Pass  
 No - FAIL

Seat Belt Comfort and Convenience Data (Cont.)

4. **SEAT BELT GUIDES AND HARDWARE (S7.4.6)**

Test Vehicle NHTSA No.: CY5204

Vehicle Model Year/Make/Model/Body Style: 2000/Nissan/Maxima/4 Door

Designated Seating Position Tested: Right rear

Date of Comfort/Convenience Check: January 26, 2000

Technician Performing Check: Chad Gadberry

GVWR: 4333 lb

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

The requirements for accessibility **DO NOT APPLY** to:

- A. Seats whose seat cushions are movable so that the seat back serves a function other than seating (S7.4.6.1(b))
- B. Seats which are removable.
- C. Seats which are movable so that the space formerly occupied by the seat can be used for a secondary function.

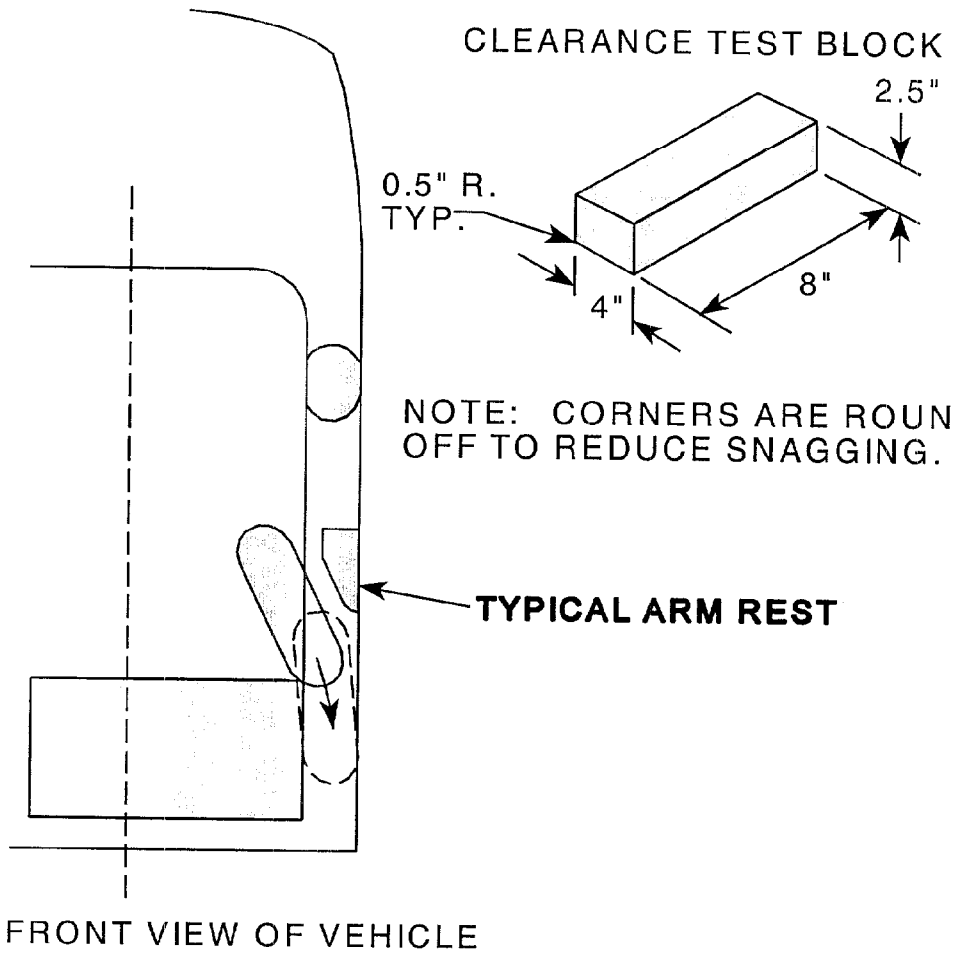
If the seats in this vehicle are different than the criteria above determine the following:

- 4.1 Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back?
  - (X) Yes - Go to 4.2.
  - ( ) No - this form is complete
- 4.2 Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)?
  - (X) Yes - Pass
  - ( ) No - FAIL
- 4.3 Are the remaining two seat belt parts accessible under normal conditions?
  - (X) Yes - Pass
  - ( ) No - FAIL

Seat Belt Comfort and Convenience Data (Cont.)

- 4.4 The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the following events occur in order:
- (A) The belt is completely retracted or, if the belt is nonretractable, the belt is unlatched.  Check
  - (B) The seat is moved to any position to which it is designed to be adjusted.  Check
  - (C) The seat back, if foldable, is folded forward as far as possible and then moved backward into position.  Check
- Yes - Pass  
 No - FAIL
- 4.5 Is the inboard receptacle end of the seat belt assembly, installed in the outboard designated seating position, accessible with the center arm rest in any position to which it can be adjusted (without moving the armrest)?
- Yes - Pass  
 No - FAIL

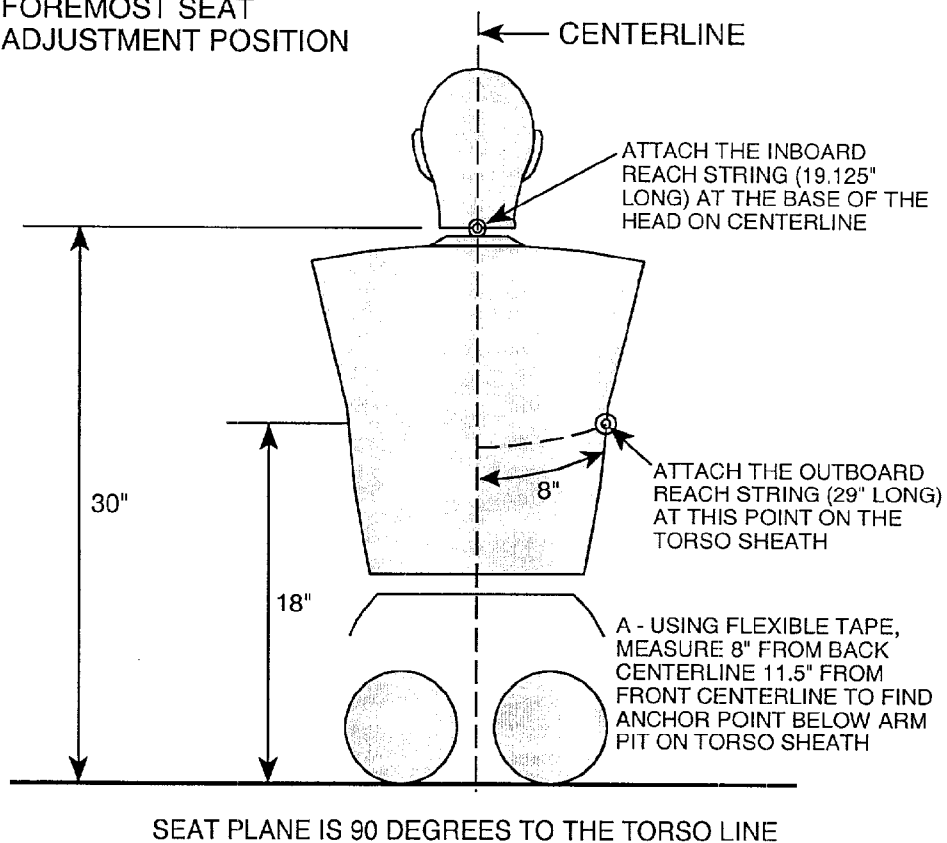
# USE OF CLEARANCE TEST BLOCK TO DETERMINE HAND/ARM ACCESS



**LOCATION OF ANCHORING POINTS FOR  
LATCHPLATE REACH LIMITING CHAINS OR STRINGS  
TO TEST FOR LATCHPLATE ACCESSIBILITY**

**PART 572E DUMMY**

50TH PERCENTILE  
DUMMY SEATED IN  
FOREMOST SEAT  
ADJUSTMENT POSITION



**REAR VIEW**

APPENDIX A  
PHOTOGRAPHS

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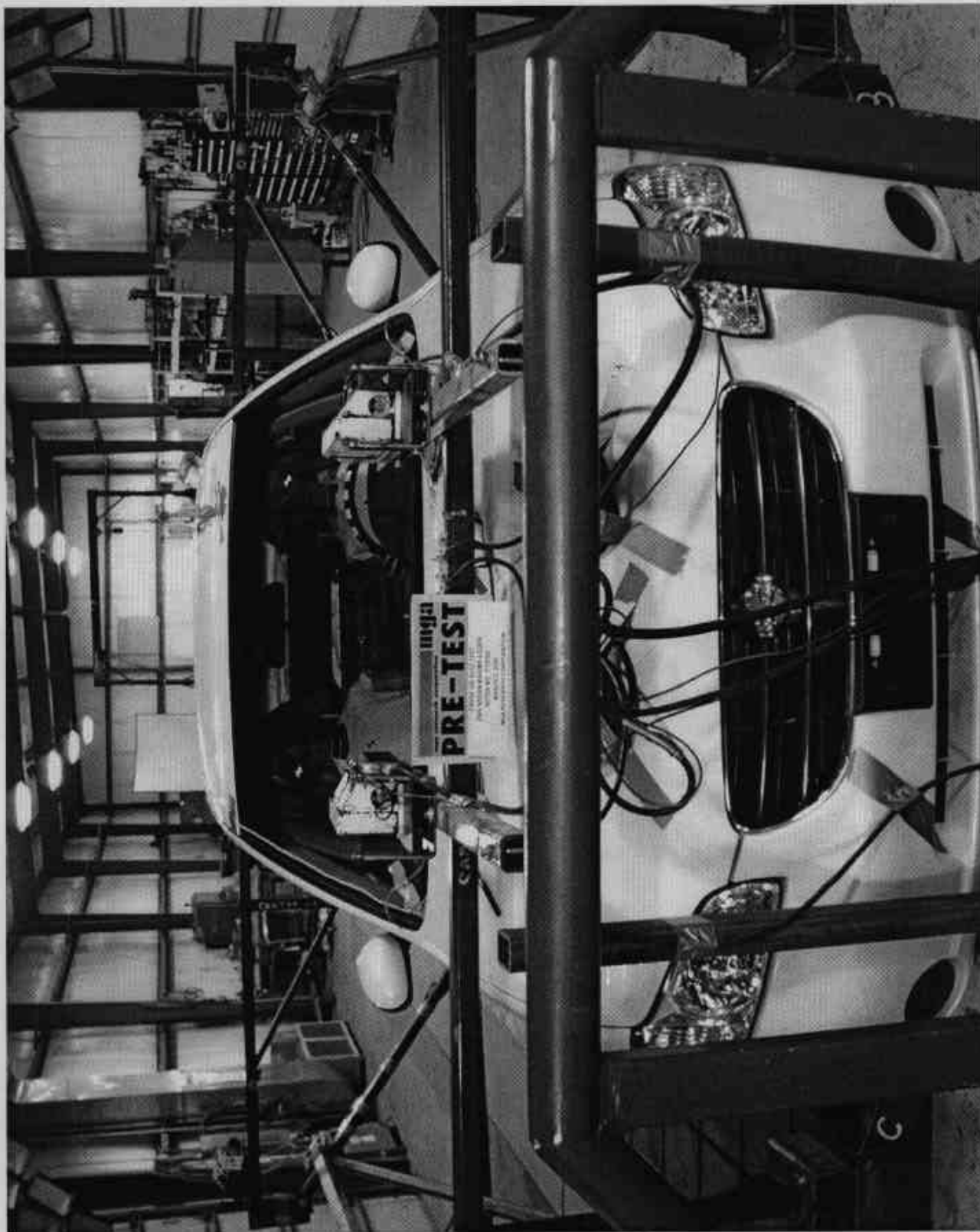


Photo No. A-1 - Pre-Test Frontal View

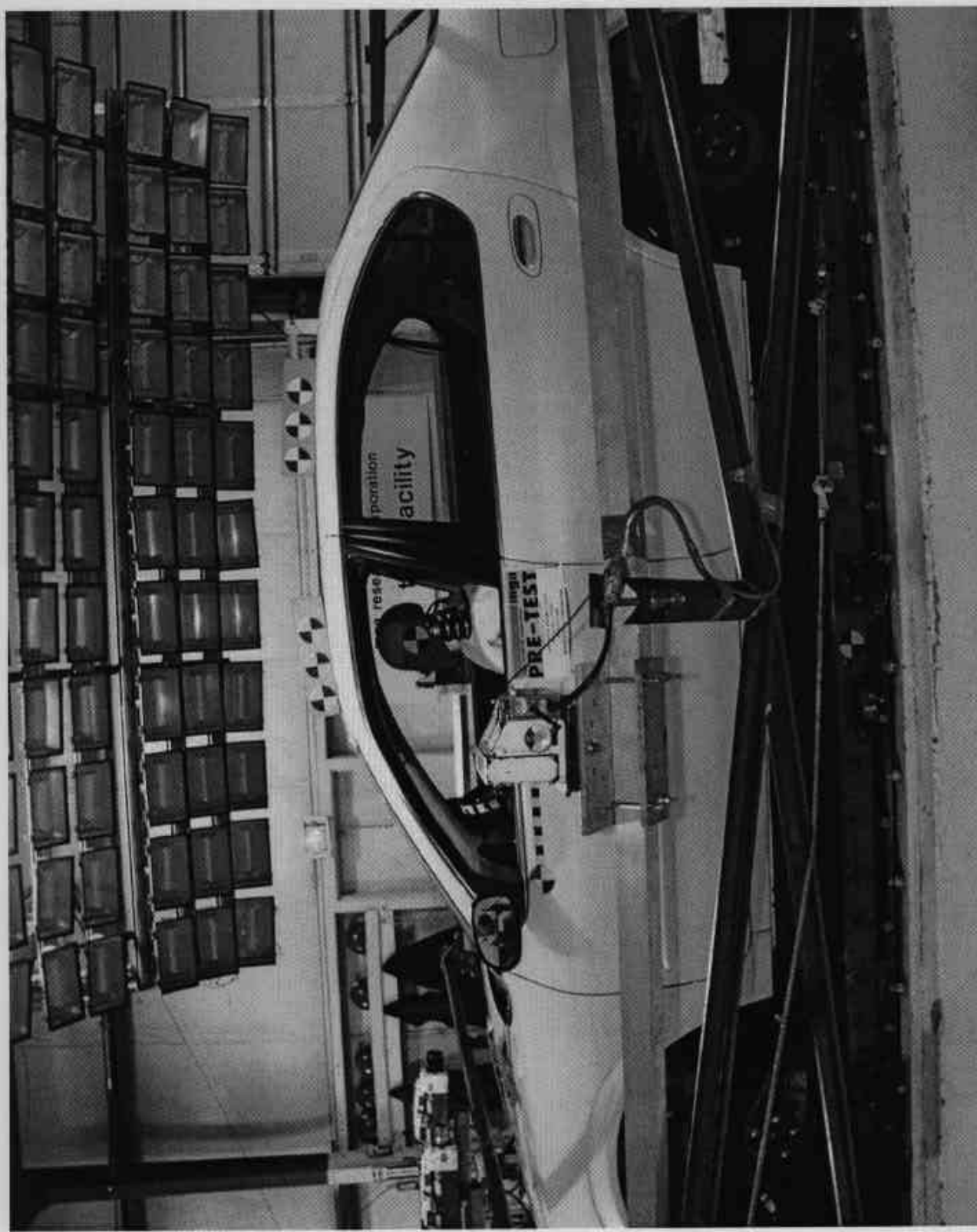


Photo No. A-2 - Pre-Test Left Side View

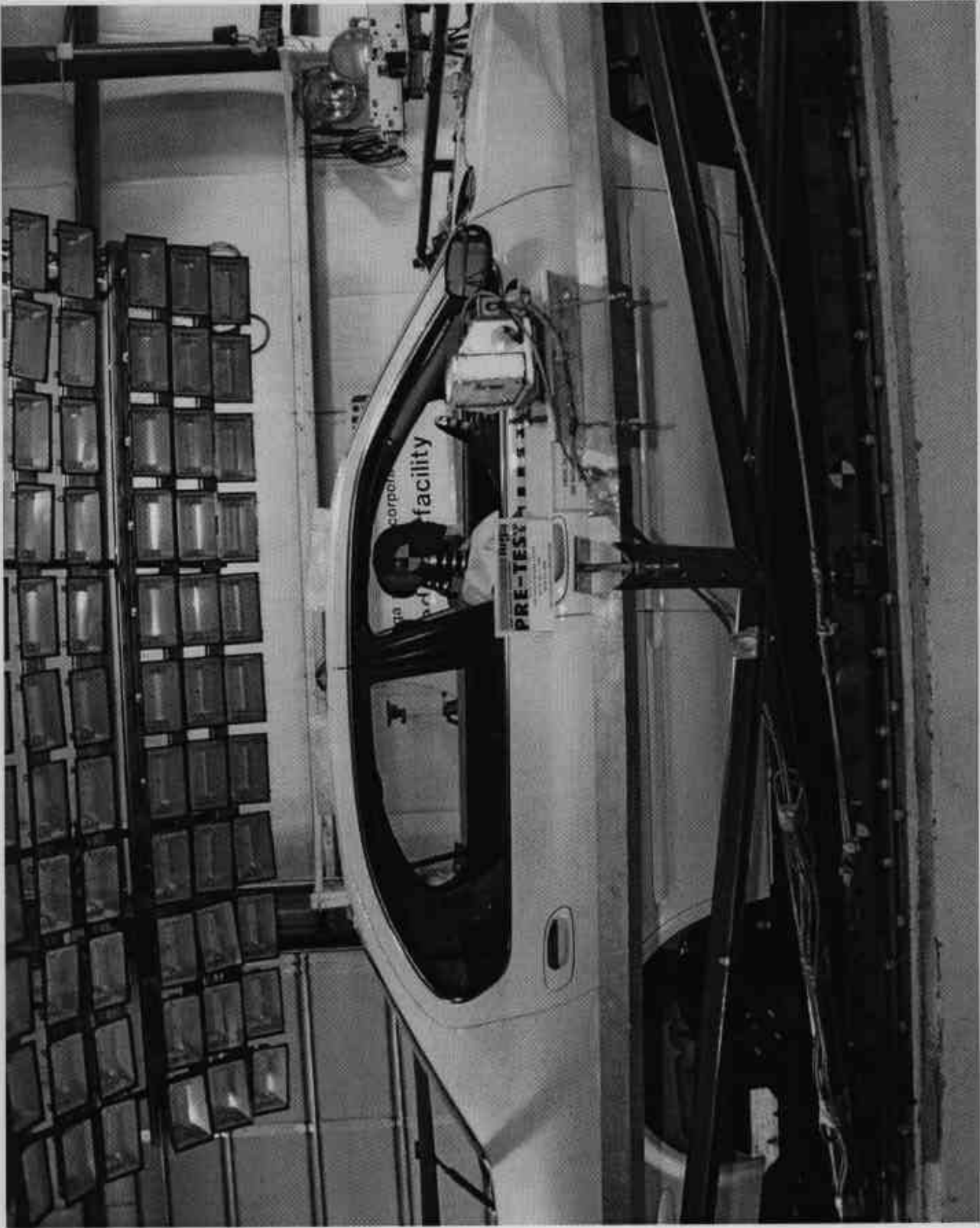


Photo No. A-3 -- Pre-Test Right Side View

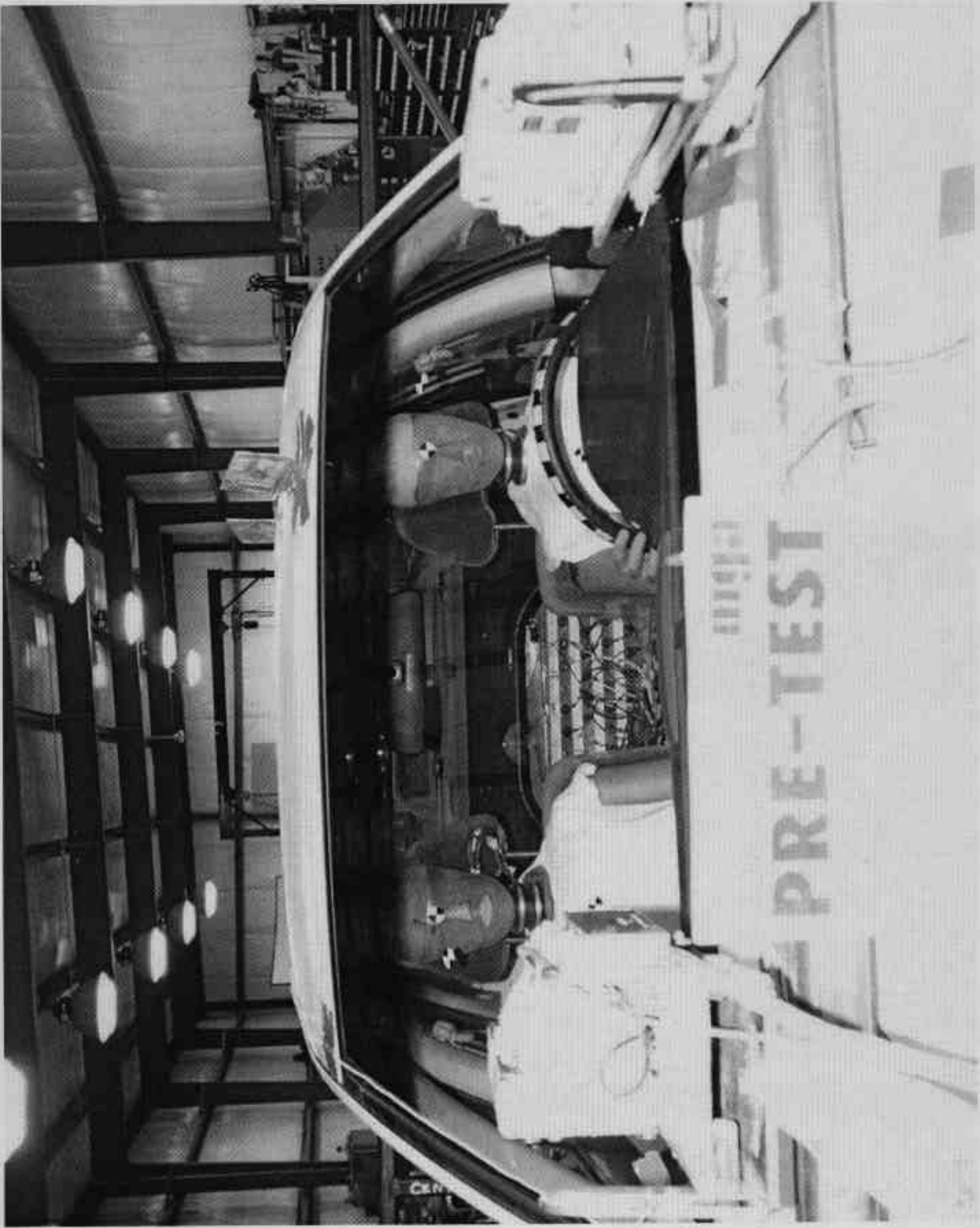


Photo No. A-4 - Pre-Test Windshield View



Photo No. A-5 -- Post-Test Windshield View



Photo No. A-6 — Pre-Test Driver Dummy Position View (Door Open)



Photo No. A-7 – Post-Test Driver Dummy Position View (Door Open)

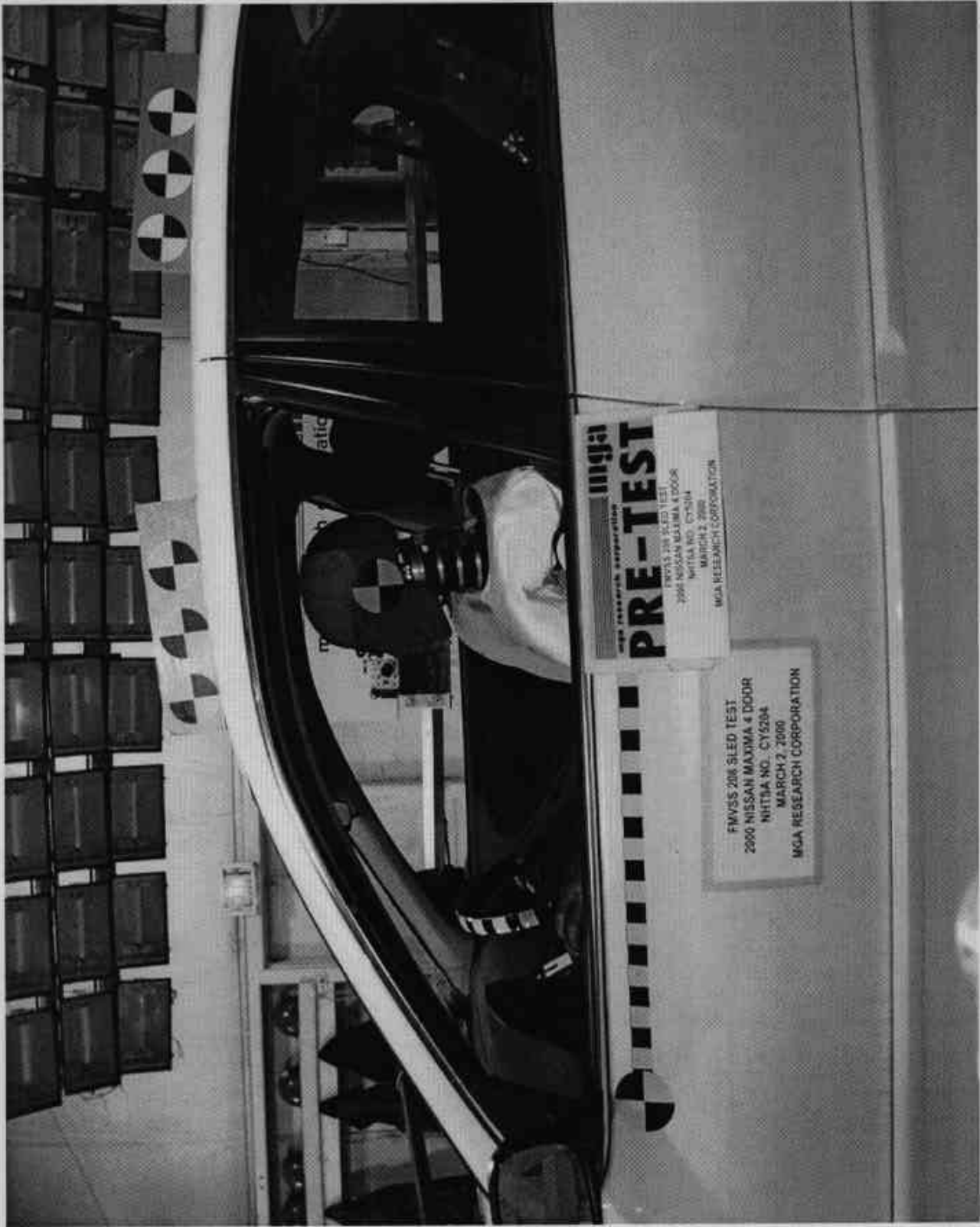


Photo No. A-8 – Pre-Test Driver Dummy Position View

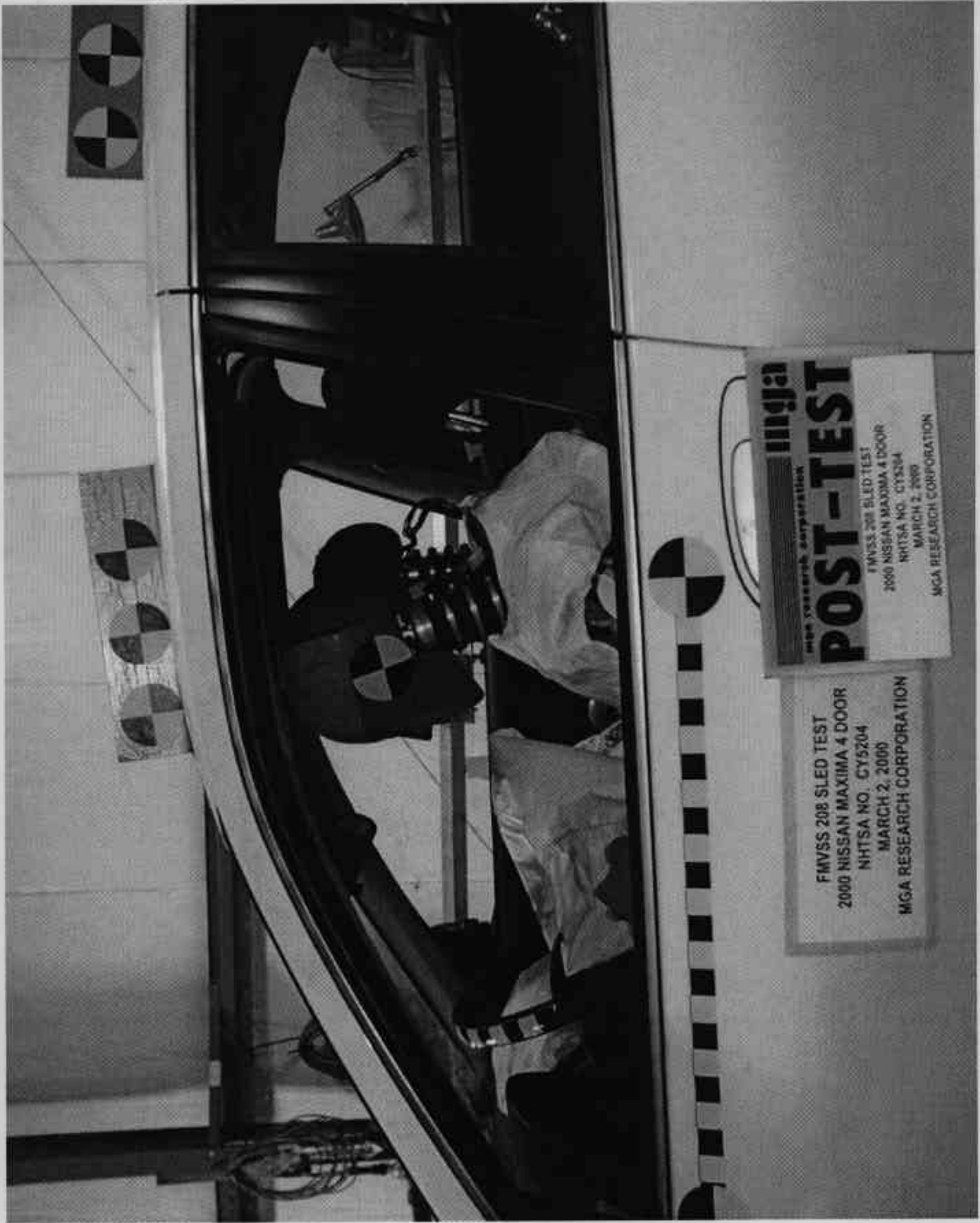


Photo No. A-9 – Post-Test Driver Dummy Position View



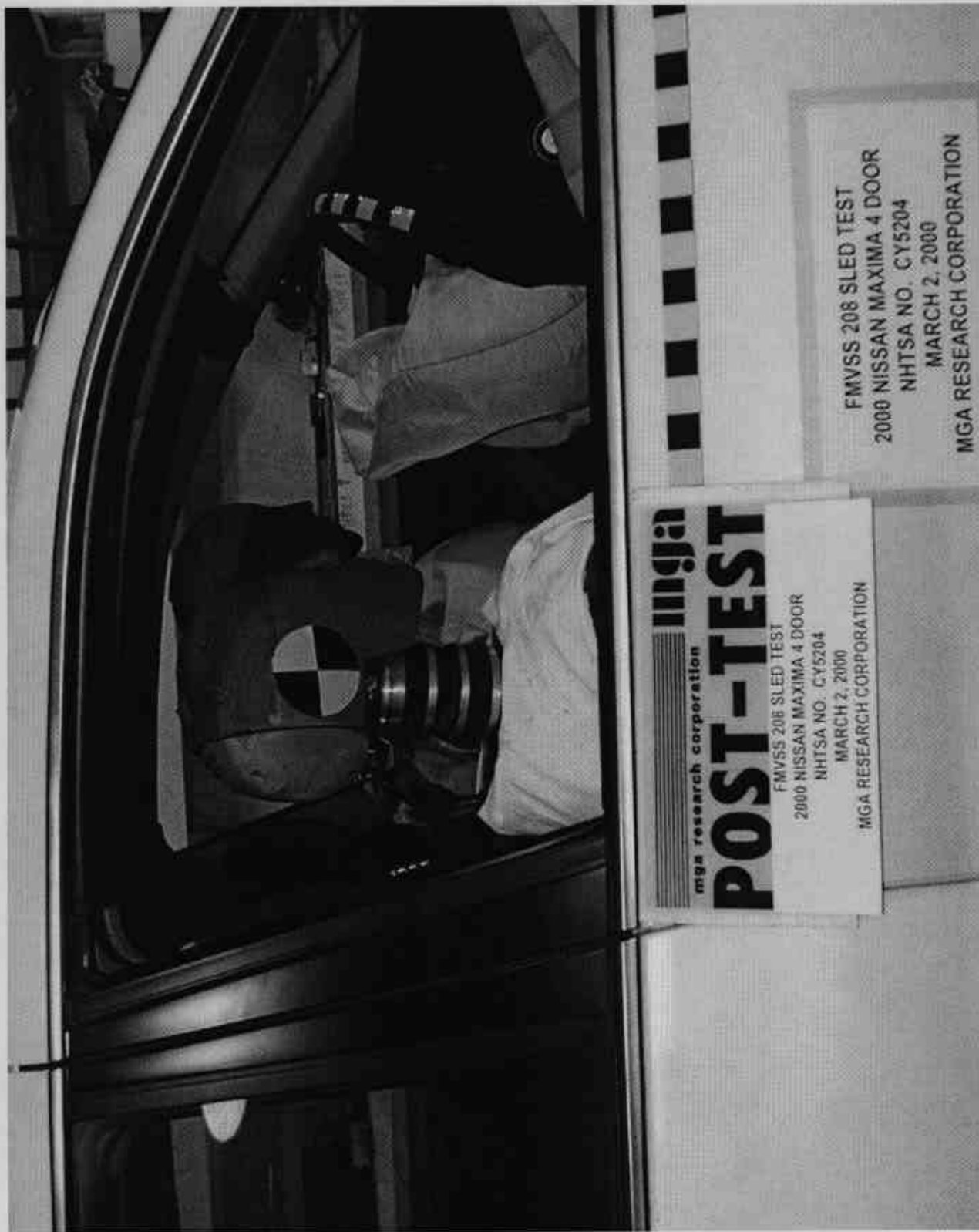
Photo No. A-10 — Pre-Test Passenger Dummy Position View (Door Open)



Photo No. A-11 – Post-Test Passenger Dummy Position View (Door Open)



Photo No. A-12 – Pre-Test Passenger Dummy Position View



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**POST-TEST**  
FMVSS 208 SLED TEST  
2000 NISSAN MAXIMA 4 DOOR  
NHTSA NO. CY5204  
MARCH 2, 2000  
MGA RESEARCH CORPORATION

FMVSS 208 SLED TEST  
2000 NISSAN MAXIMA 4 DOOR  
NHTSA NO. CY5204  
MARCH 2, 2000  
MGA RESEARCH CORPORATION

Photo No. A-13 – Post-Test Passenger Dummy Position View



Photo No. A-14 - Post-Test Driver Airbag View



Photo No. A-15 – Post-Test Driver Head Contact View (headrest)



Photo No. A-16 - Post-Test Driver Head Contact View (windshield)



Photo No. A-17 - Post-Test Passenger Dummy Airbag View



Photo No. A-18 – Post-Test Passenger Dummy Head Contact View (headrest)

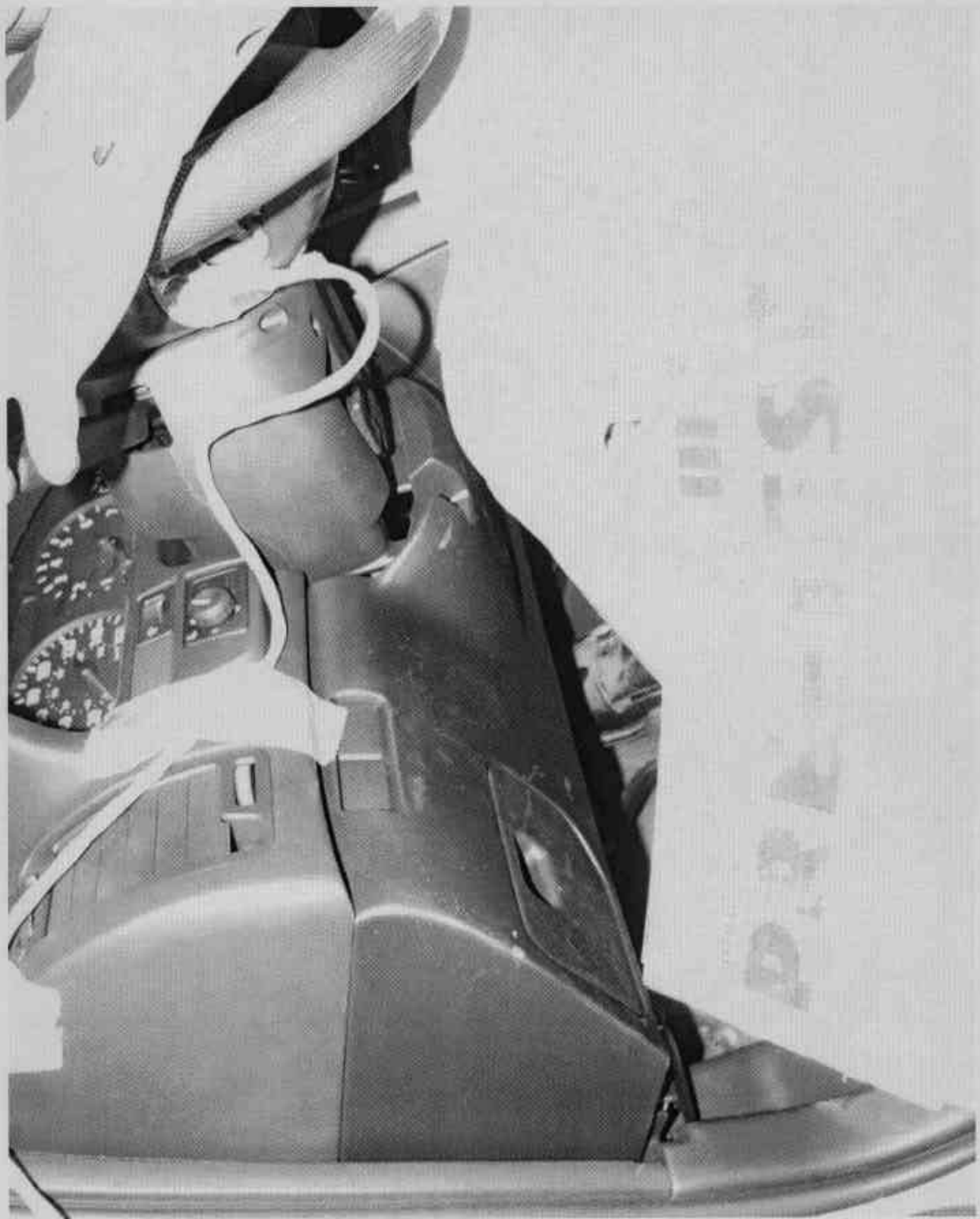


Photo No. A-19 - Pre-Test Driver Knee Bolster View



**POST-TEST**

mga research corporation

FMVSS 208 SLED TEST  
2000 NISSAN MAXIMA 4 DOOR  
NHTSA NO. CY5204

MARCH 2, 2000  
MGA RESEARCH CORPORATION

Photo No. A-20 - Post-Test Driver Knee Bolster View

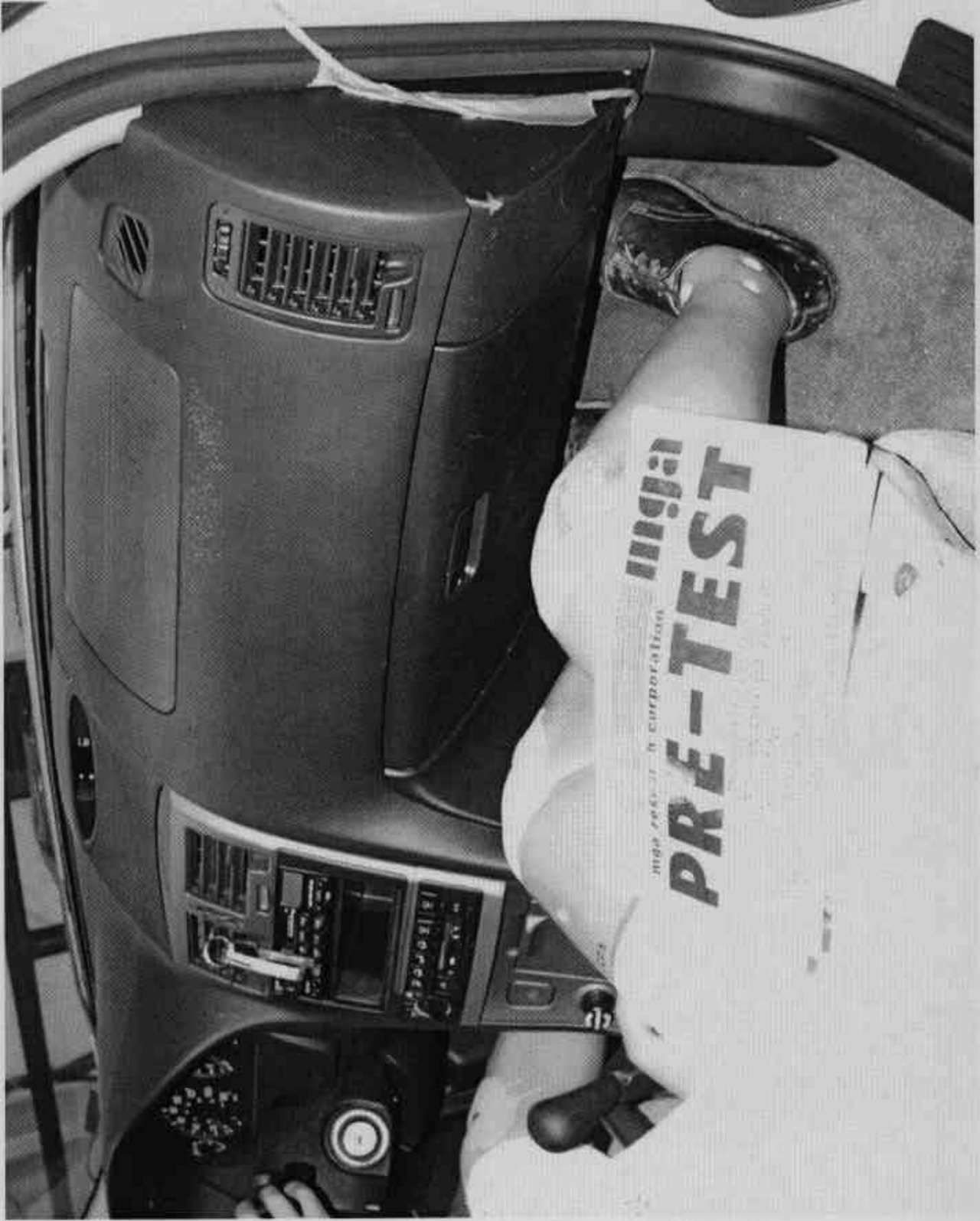


Photo No. A-21 - Pre-Test Passenger Knee Bolster View

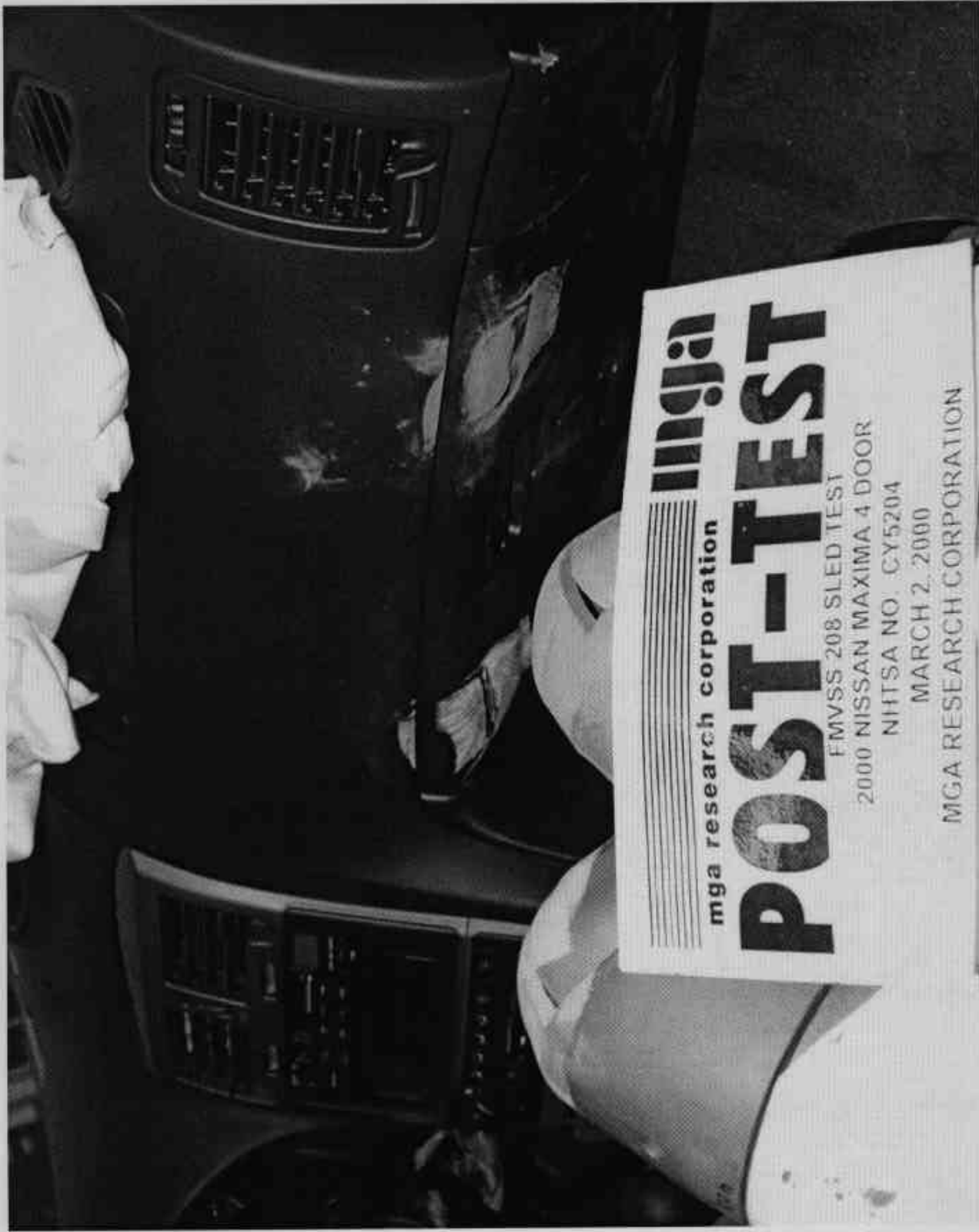


Photo No. A-22 - Post-Test Passenger Knee Bolster View

MFD.BY NISSAN MOTOR CO.,LTD

DATE

08/99

GVWR/PNBV

4333 LBS.

GAWR/PNBE FR.

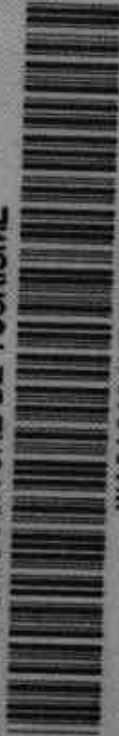
2365 LBS.

RR. 1988 LBS.

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

JN1CA31D2YT724959

PASSENGER CAR/VOITURE DE TOURISME



JN1CA31D2YT724959

Photo No. A-23 - Vehicle Certification Label

VEHICLE CAPACITY WEIGHT POIDS UTILE DU VEHICULE		SEATING CAPACITY NOMBRE DE PLACES		FRONT AVANT		REAR ARRIERE		TOTAL TOTAL		SPARE TIRE ROUE DE SECOURS		psi (kPa)			
4000		4		2		3		5		T125/70D16		60 (420)			
RECOMMENDED COLD TIRE INFLATION PRESSURE PRESSION DE GONFLEGE RECOMMANDEE DES PNEUS FROIDS.															
TIRE SIZE DIMENSIONS				FRONT psi AVANT (kPa)				REAR psi ARRIERE (kPa)							
P205/65R15 87H				29 (200)				29 (200)							
DO NOT USE IN EXCESS OF 50 MPH 80km/h SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION. UTILISATION A UNE VITESSE MAX 50MPH 80km/h POUR LES DETAILS SE REFERER AU MANUEL DU CONDUCTEUR.															
5 B															

Photo No. A-24 – FMVSS 110 Label

APPENDIX B  
DATA PLOTS

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TEST: FMVSS 208 SLED (H00053)

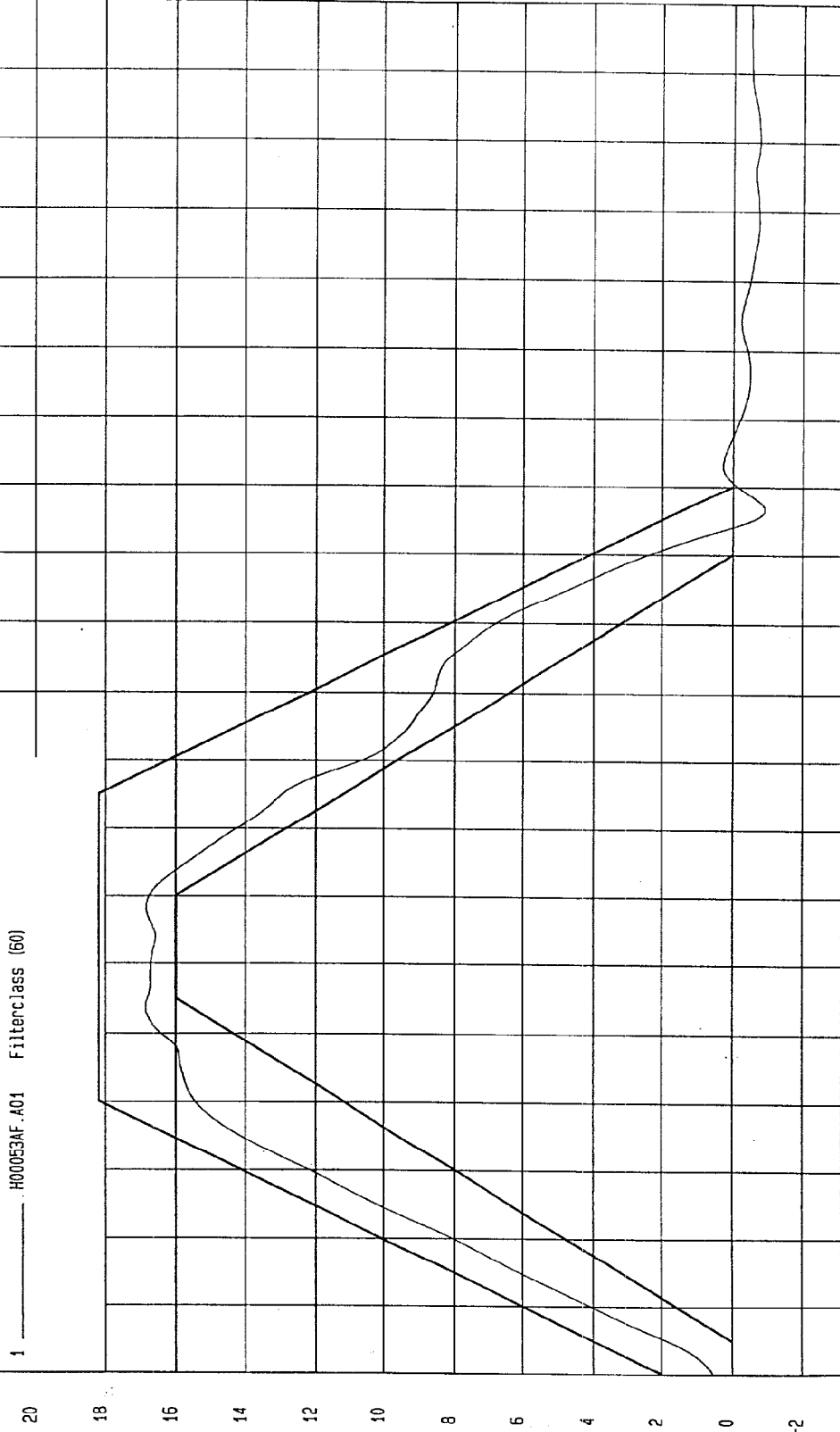
TEST DATE: 03-02-2000

COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -.91 G at 126.6 msec

Maximum = 16.85 G at 53.8 msec

### SLED ACCELERATION



TIME (SECONDS)

MGA Research  
03-02-2000 11:10

TEST: FMVSS 208 SLED (H00053)

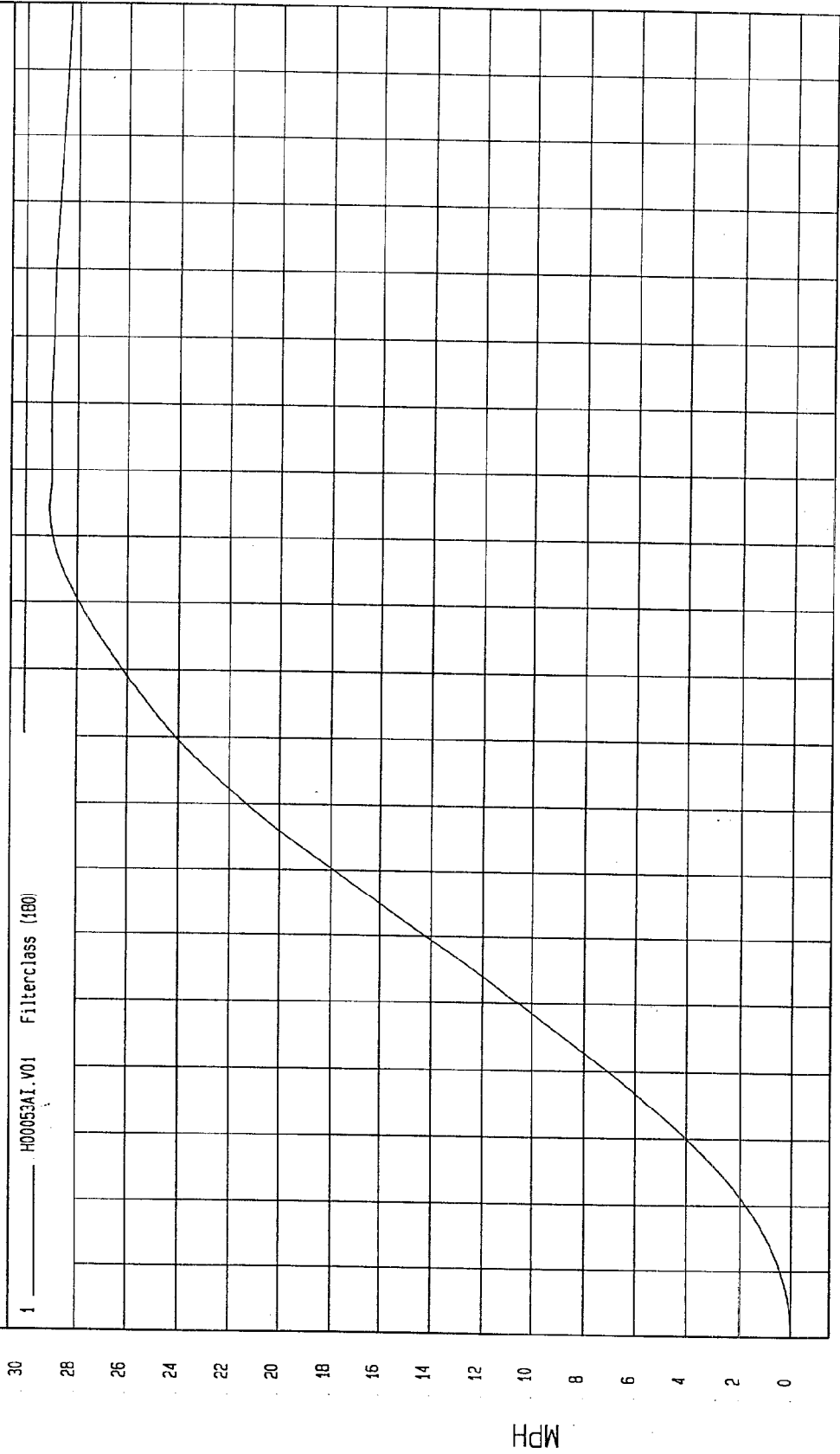
TEST DATE: 03-02-2000

COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = 0 MPH at 0 msec

Maximum = 29.08 MPH at 124 msec

SLED X VELOCITY



MPH

TEST DATE: 03-02-2000

TEST: FMVSS 208 SLED (H00053)

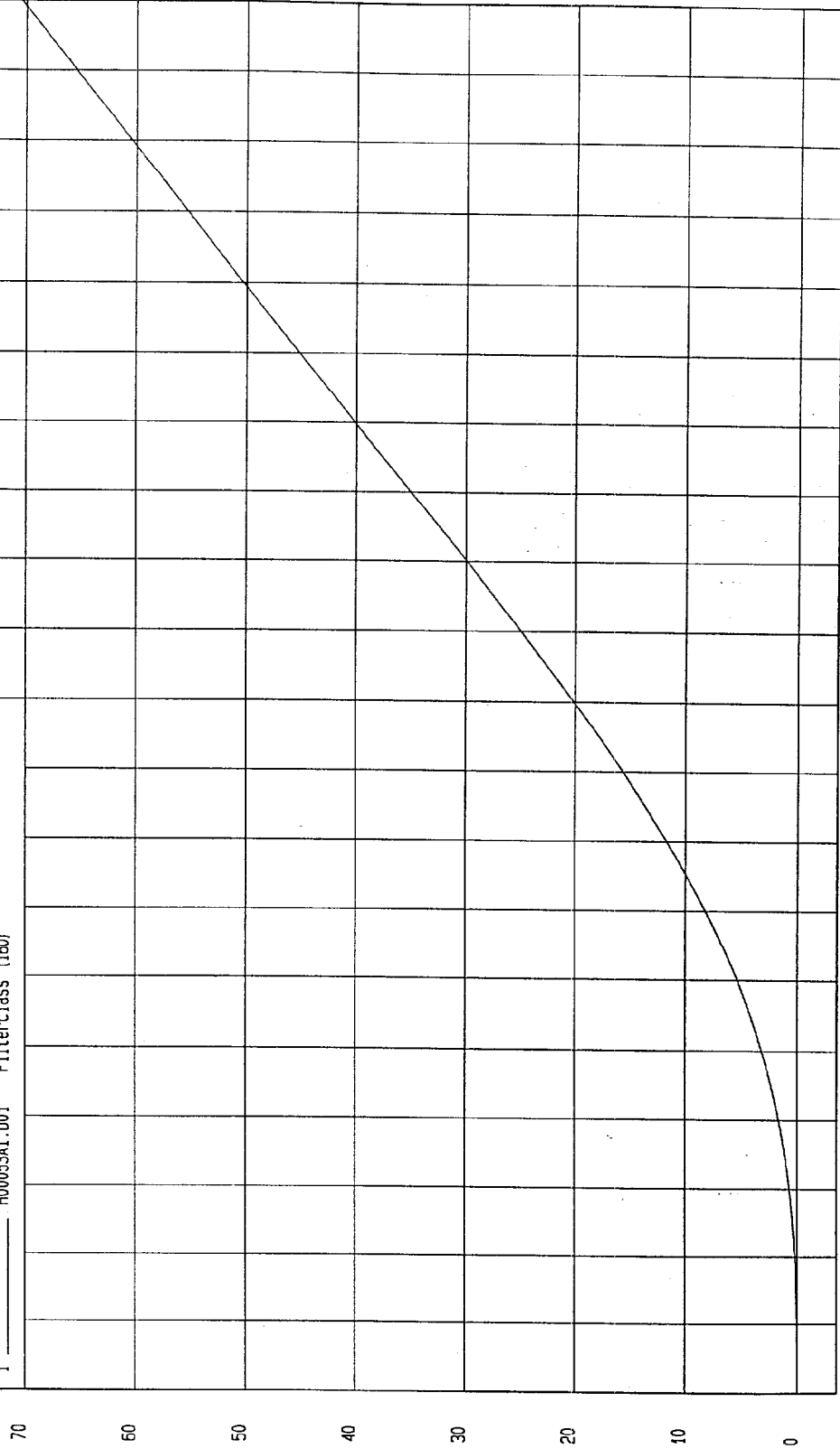
COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = 0 IN at 0 msec

Maximum = 70.37 IN at 200 msec

SLED X DISPLACEMENT

1 H00053A1.001 Filterclass (100)



TEST DATE: 03-02-2000

TEST: FMVSS 208 SLED (H00053)

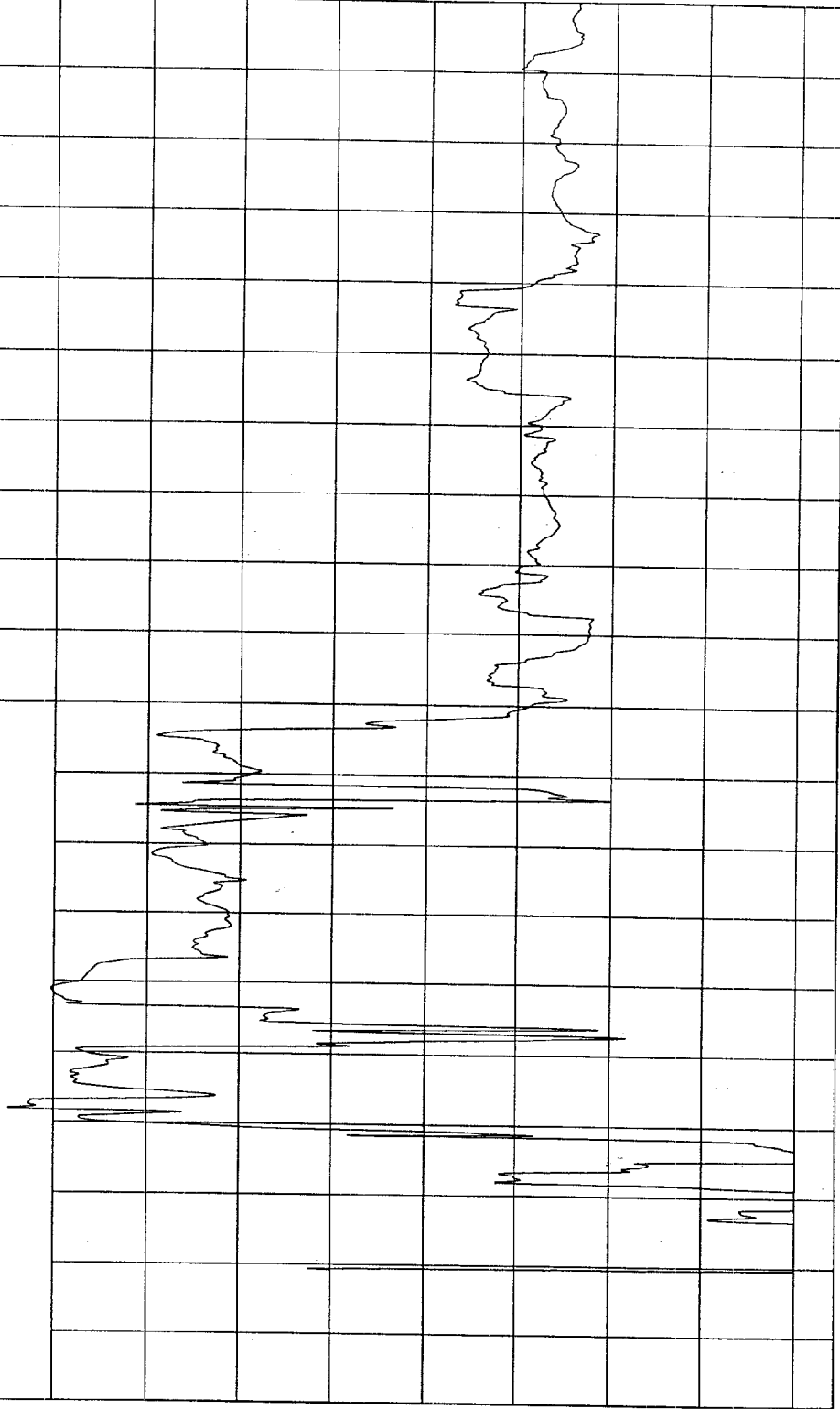
COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Maximum = 3.5 VOLTS at 42 msec

Minimum = -5 VOLTS at 20 msec

AIRBAG TIMING

1 H000530T.047 Filterclass (1000)



TIME (SECONDS)

0  
.01  
.02  
.03  
.04  
.05  
.06  
.07  
.08  
.09  
.1  
.11  
.12  
.13  
.14  
.15  
.16  
.17  
.18  
.19

TEST: FMVSS 208 SLED (H00053) TEST DATE: 03-02-2000

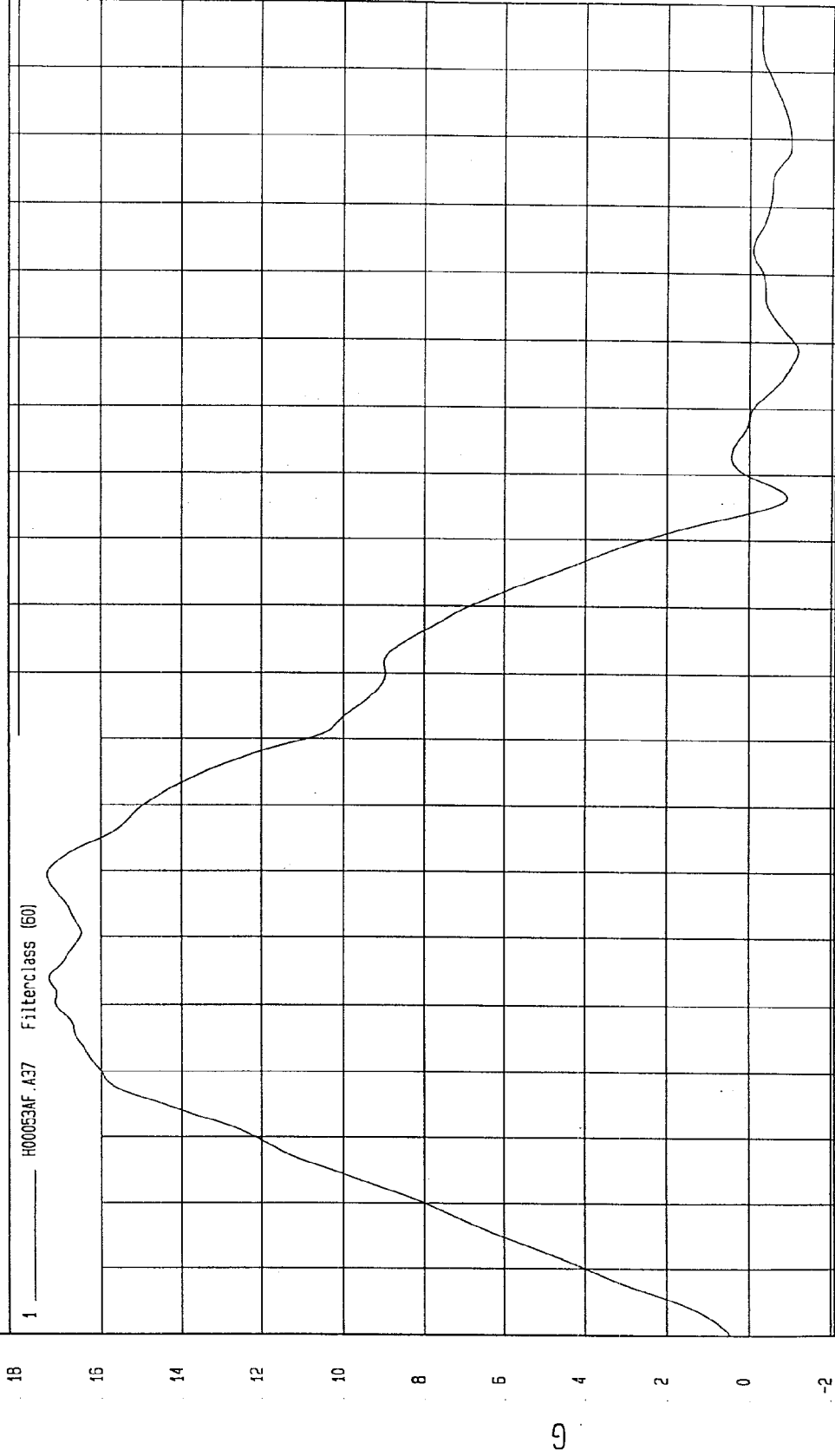
COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -1.17 G at 149 msec

Maximum = 17.32 G at 69 msec

LEFT REAR SEAT CROSSMEMBER X ACCELERATION

1 ——— H00053NF.A37 Filterclass (60)



MGA Research  
03-02-2000 11.10

TIME (SECONDS)

G

TEST DATE: 03-02-2000

TEST: FMVSS 208 SLED (H00053)

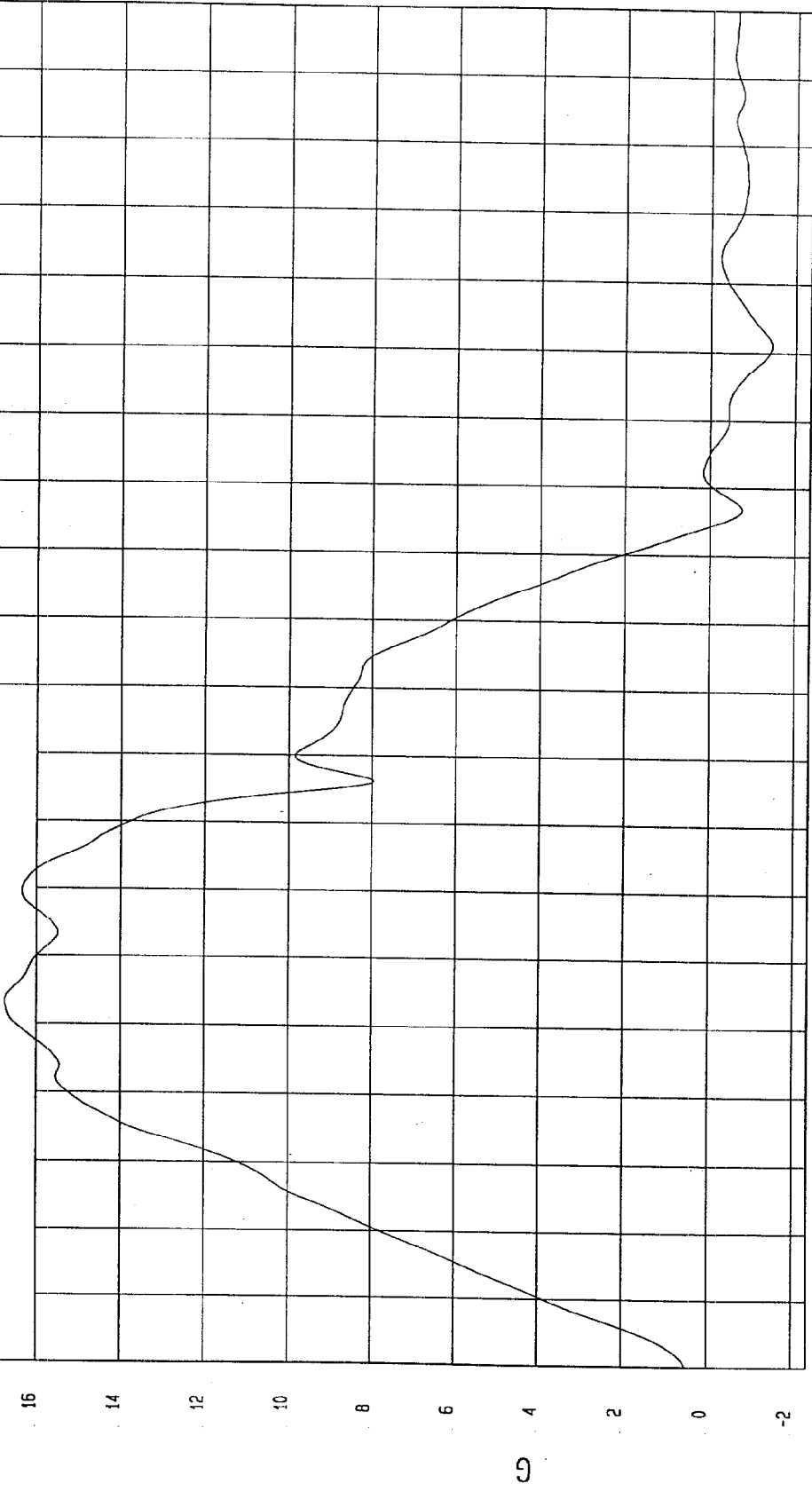
COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -1.44 G at 151 msec

Maximum = 16.74 G at 53 msec

RIGHT REAR SEAT CROSSMEMBER X ACCELERATION

1 ——— H00053AF.A41 FilterClass (60)



TEST: FMVSS 208 SLED (H00053) TEST DATE: 03-02-2000

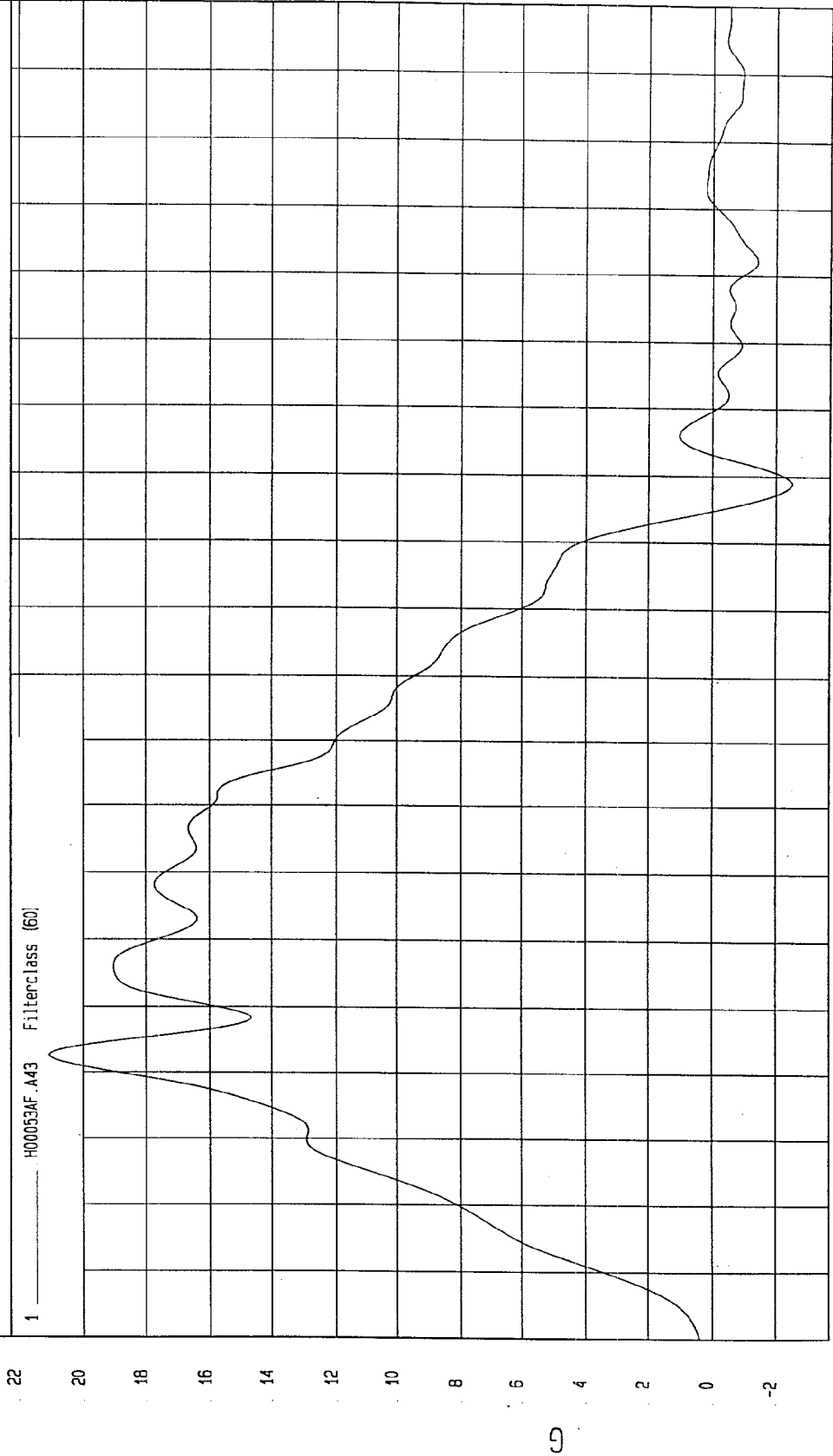
COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -2.51 G at 129 msec

Maximum = 21.08 G at 43 msec

TOP OF ENGINE X ACCELERATION

1 H00053AF.A43 Filterclass (60)



TEST: FMVSS 208 SLED (H00053)

TEST DATE: 03-02-2000

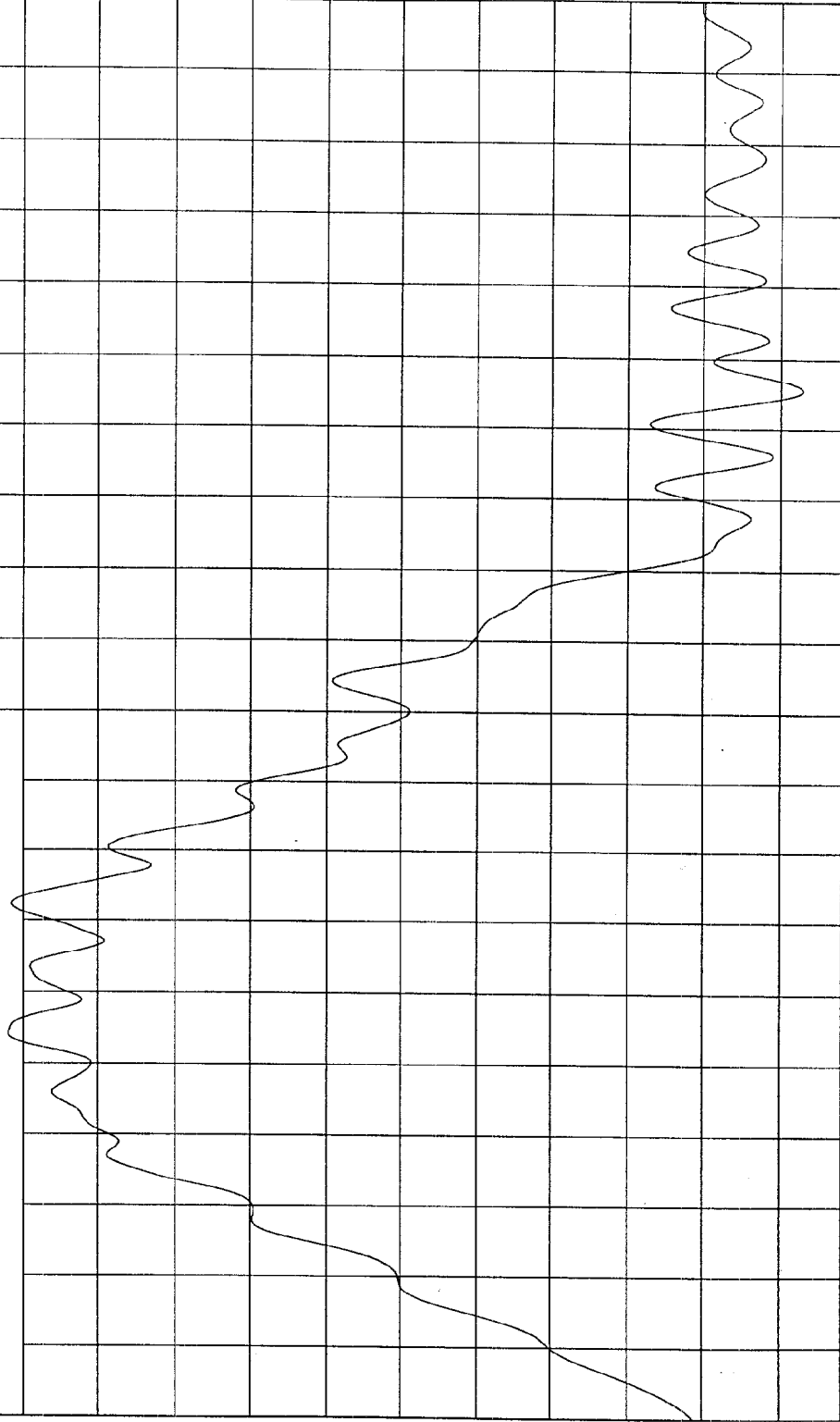
COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -2.6 G at 146 msec

Maximum = 18.39 G at 54 msec

REAR AXLE X ACCELERATION

1 — H00053AF.A44 Filterclass (60)



TEST DATE: 03-02-2000

TEST: FMVSS 208 SLED (H00053)

COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -50.19 G at 110 msec

Maximum = 1.83 G at 173 msec

DRIVER HEAD X ACCELERATION

1 H00053AT.A03 Filterclass (1000)



TEST DATE: 03-02-2000

TEST: FMVSS 208 SLED (H00053)

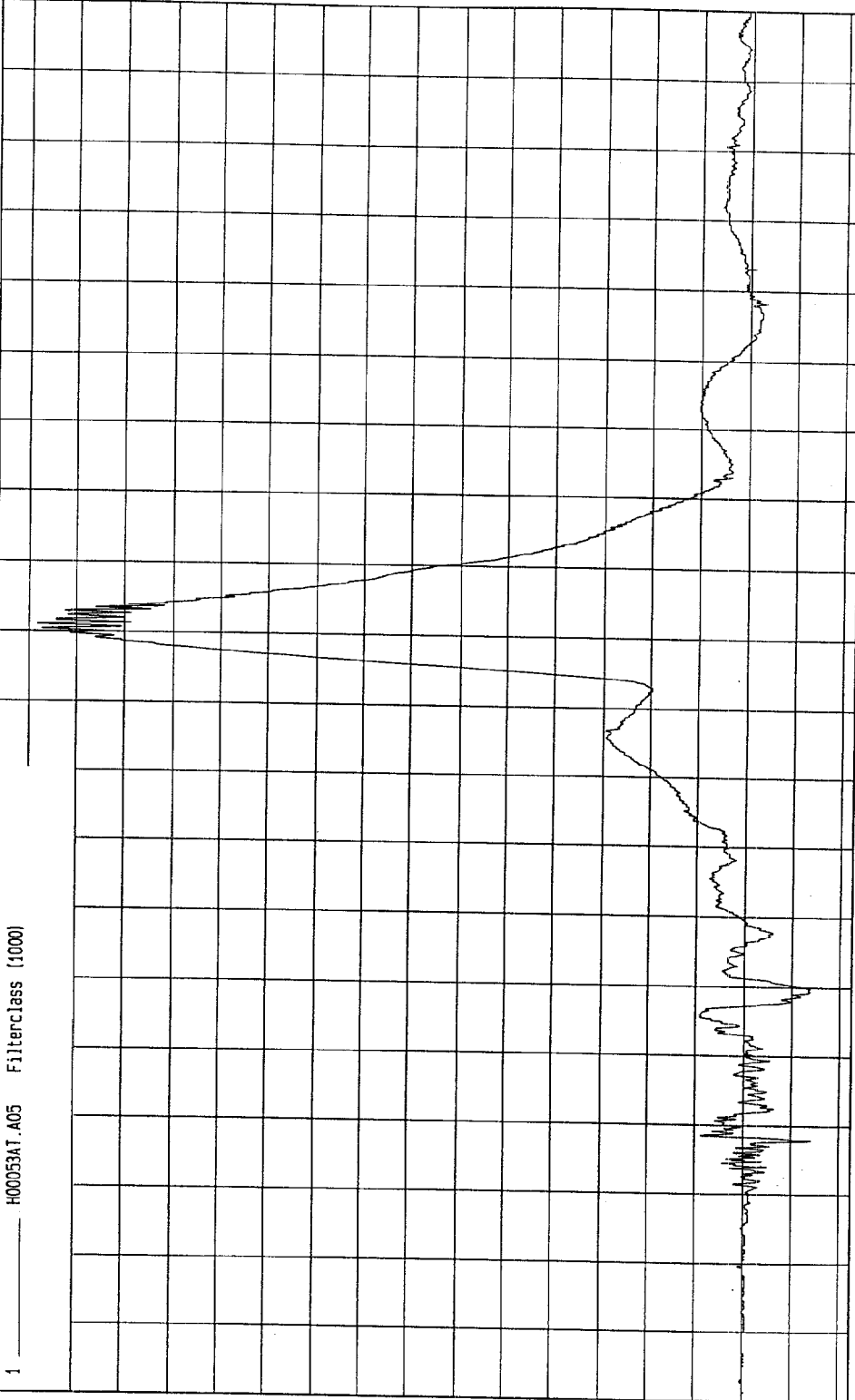
COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -2.85 G at 38 msec

Maximum = 29.67 G at 111 msec

DRIVER HEAD Y ACCELERATION

1 H00053AT.A05 Filterclass (1000)



MCA Research  
03-02-2000 11:08

TIME (SECONDS)

G

TEST: FMVSS 208 SLED (H00053)

TEST DATE: 03-02-2000

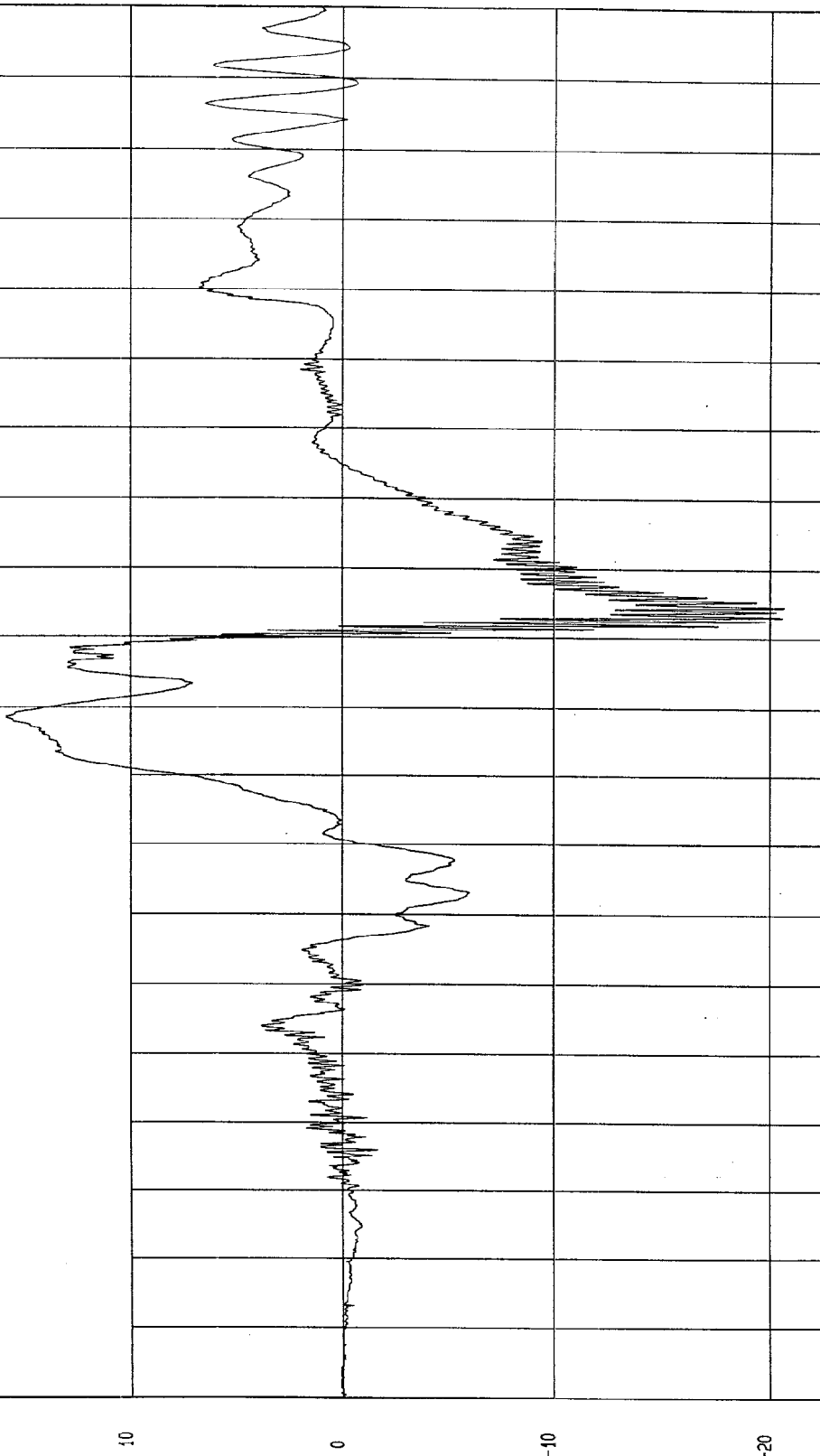
COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -20.65 G at 115 msec

Maximum = 15.84 G at 98 msec

DRIVER HEAD Z ACCELERATION

1 ——— H00053AT.A06 Filterclass (1000)



TIME (SECONDS)

MGA Research  
03-02-2000 11.06

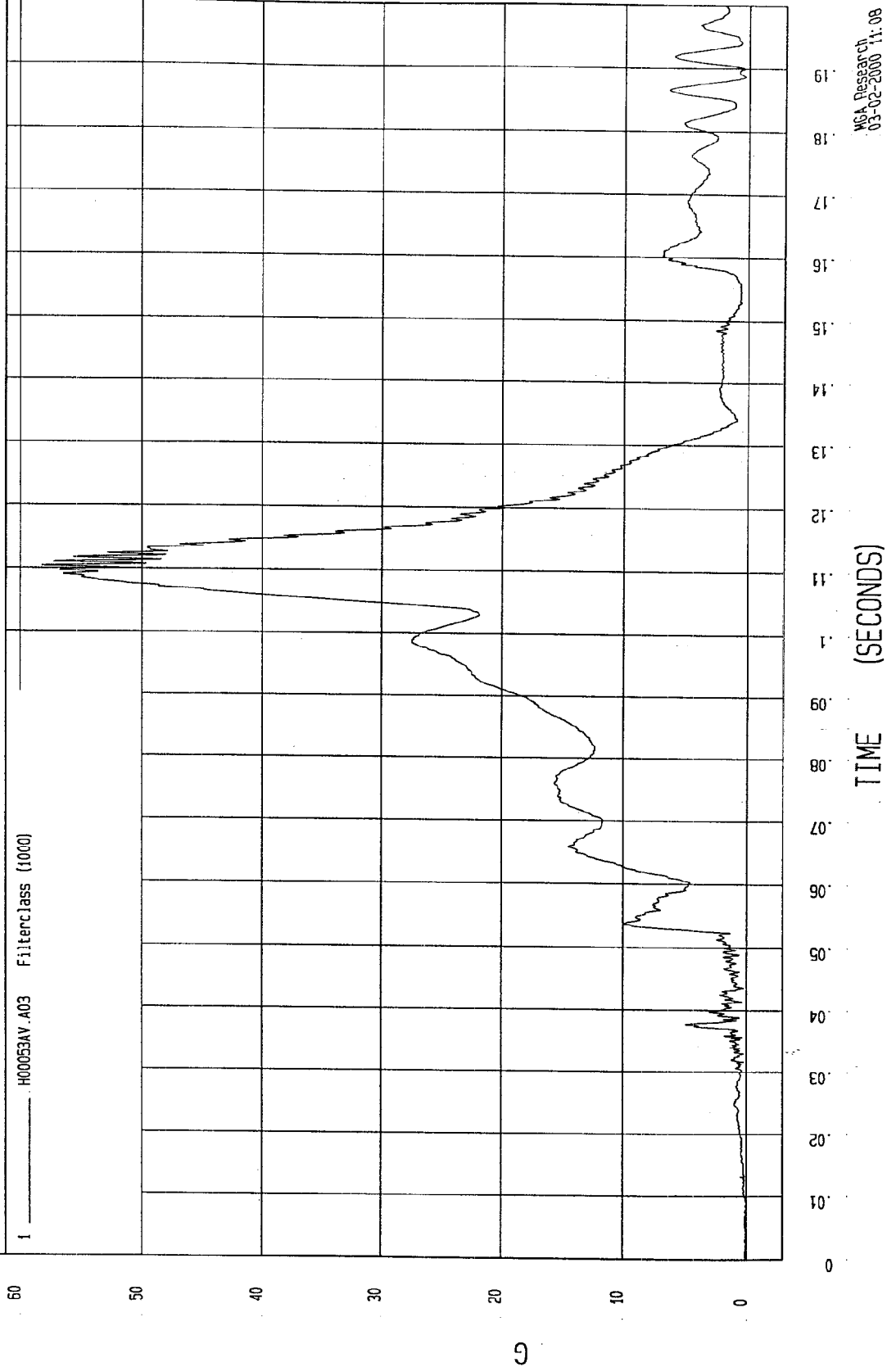
TEST: FMVSS 208 SLED (H00053) TEST DATE: 03-02-2000

COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

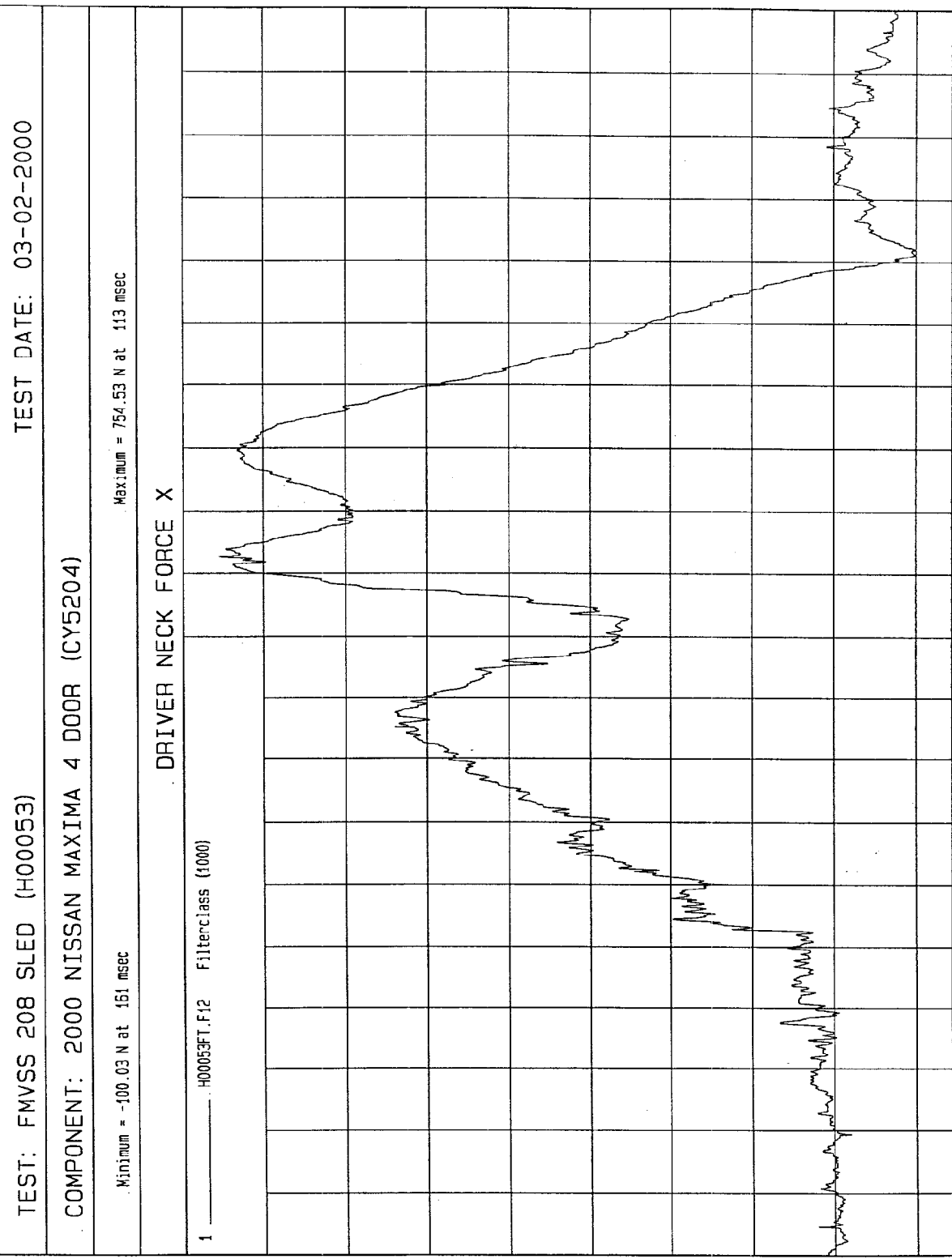
Minimum = 2.88E-02 G at 2 msec Maximum = 58.24 G at 110 msec

DRIVER HEAD RESULTANT ACCELERATION

1 H00053AV.A03 Filterclass (1000)



MGA Research  
03-02-2000 11:08



MGA Research  
03-02-2000 11:09

TIME (SECONDS)

N

TEST DATE: 03-02-2000

TEST: FMVSS 208 SLED (H00053)

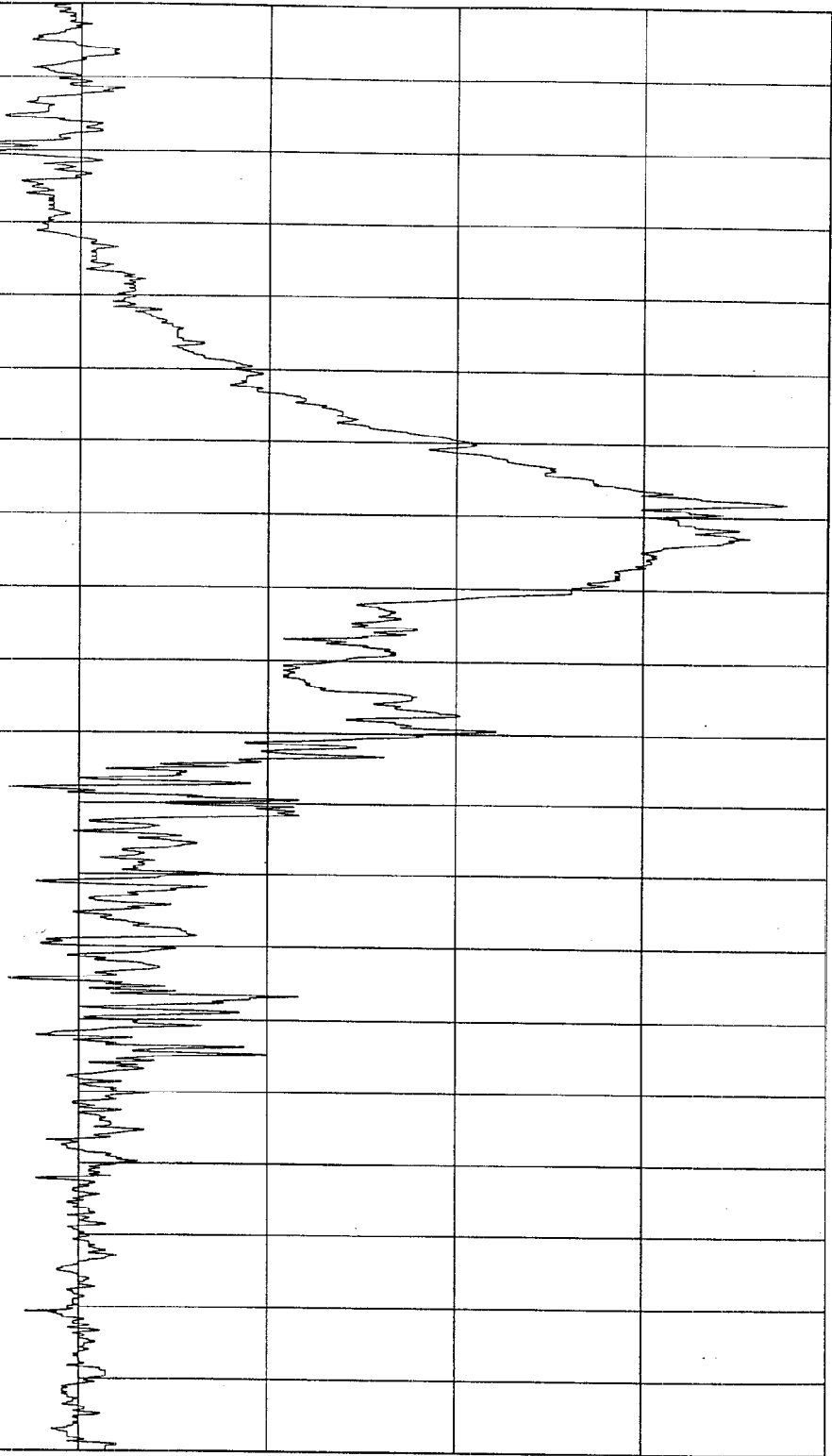
COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Maximum = 54.29 N at 180 msec

Minimum = -375.47 N at 132 msec

DRIVER NECK FORCE Y

1 H00053FT.F13 Filterclass (1000)



TIME (SECONDS)

MGA Research  
03-02-2000 11:09

N

TEST DATE: 03-02-2000

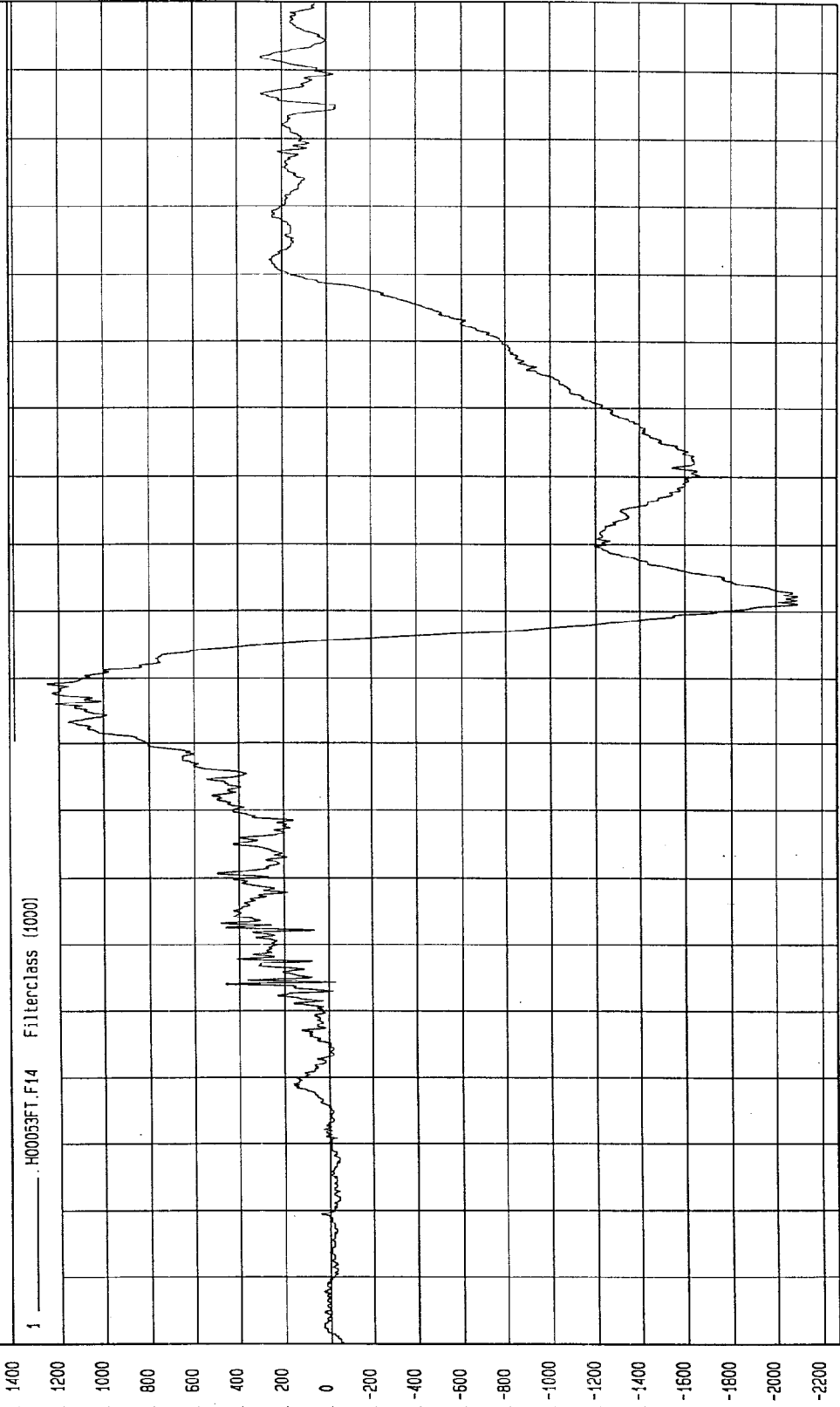
TEST: FMVSS 208 SLED (H00053)

COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Maximum = 1252.76 N at 99 msec

Minimum = -2095.46 N at 111 msec

DRIVER NECK FORCE Z



NSA Research  
03-02-2000 11.09

TIME (SECONDS)

N

TEST DATE: 03-02-2000

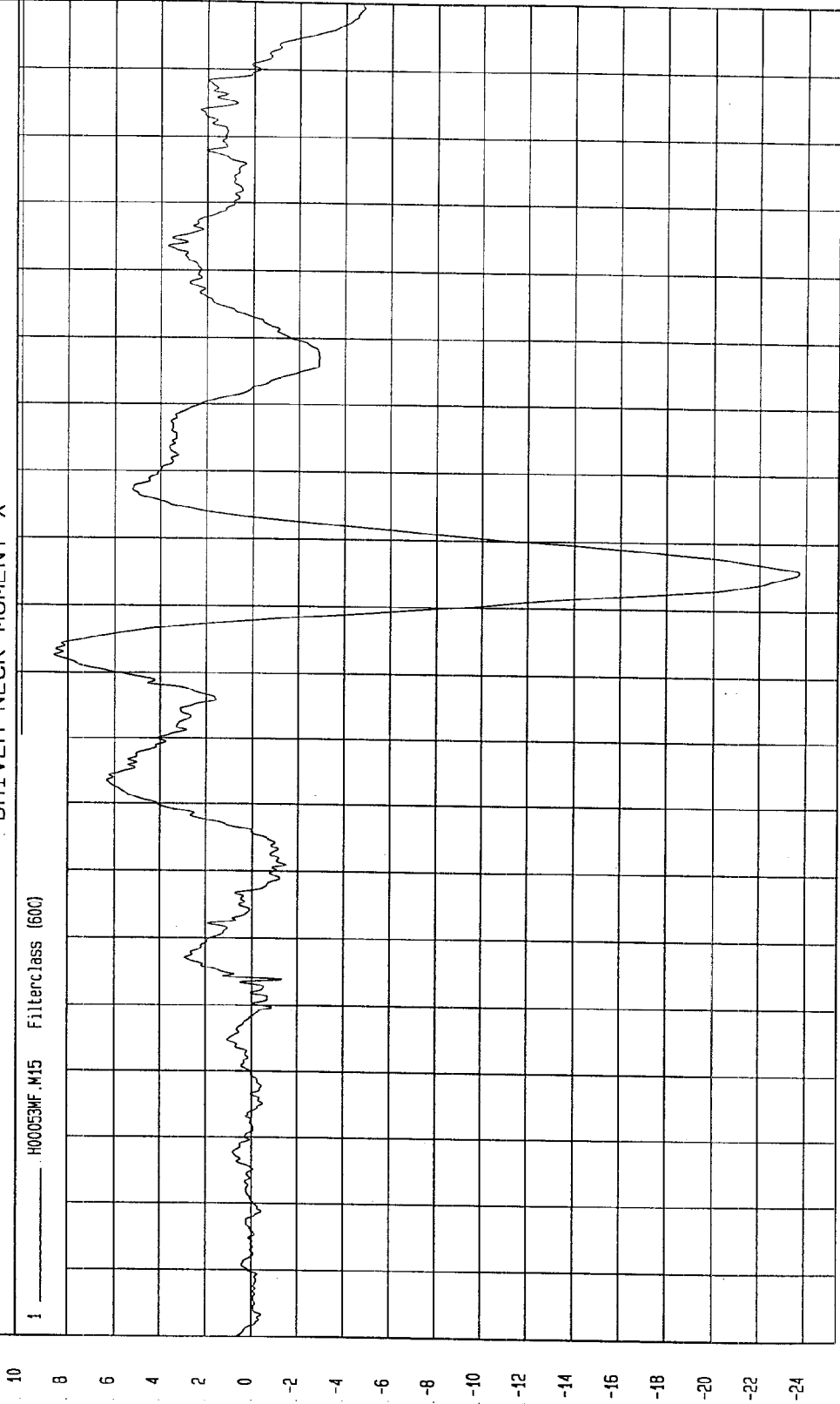
TEST: FMVSS 208 SLED (H00053)

COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -23.74 Nm at 116 msec

Maximum = 8.59 Nm at 103 msec

DRIVER NECK MOMENT X



MGA Research  
03-02-2000 11:09

TIME (SECONDS)

Nm

TEST: FMVSS 208 SLED (H00053)

TEST DATE: 03-02-2000

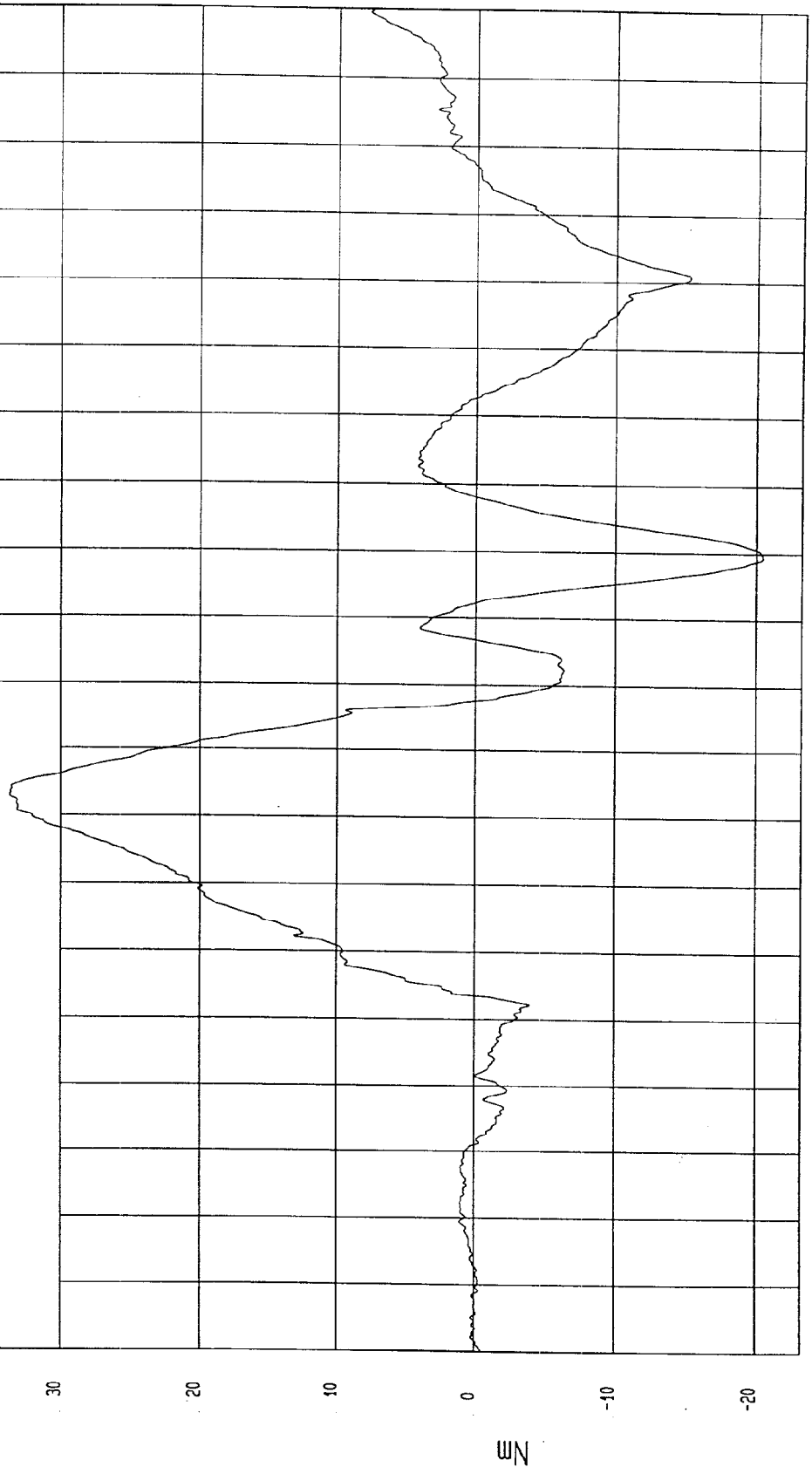
COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -20.42 Nm at 119 msec

Maximum = 33.59 Nm at 83 msec

DRIVER NECK MOMENT Y

1 H00053MF.M16 Filterclass (600)



MGA Research  
03-02-2000 11:09

TEST: FMVSS 208 SLED (H00053) TEST DATE: 03-02-2000

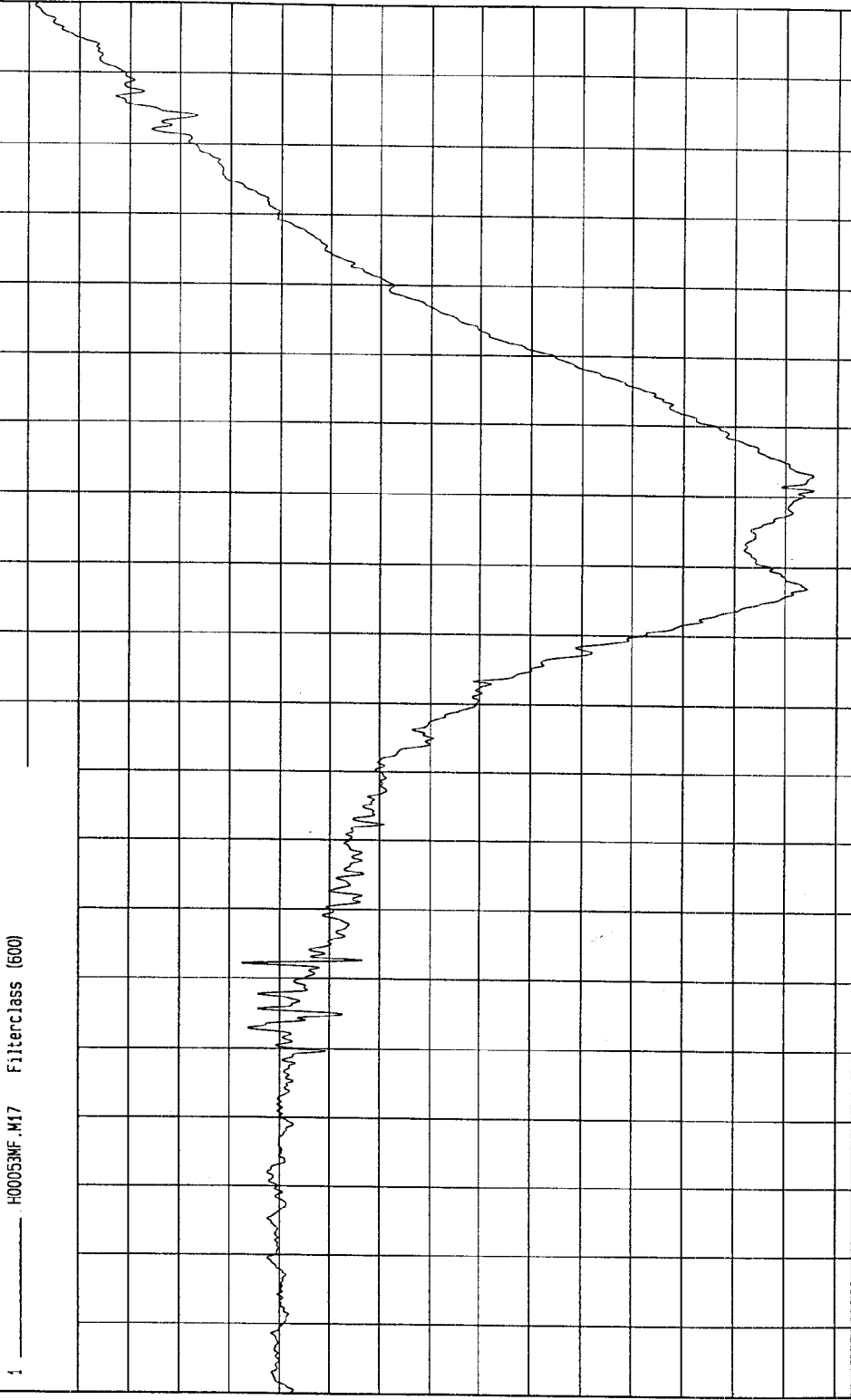
COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -21.1 Nm at 131 msec

Maximum = 9.76 Nm at 200 msec

DRIVER NECK MOMENT Z

1 H00053MF.M17 Filterclass (500)

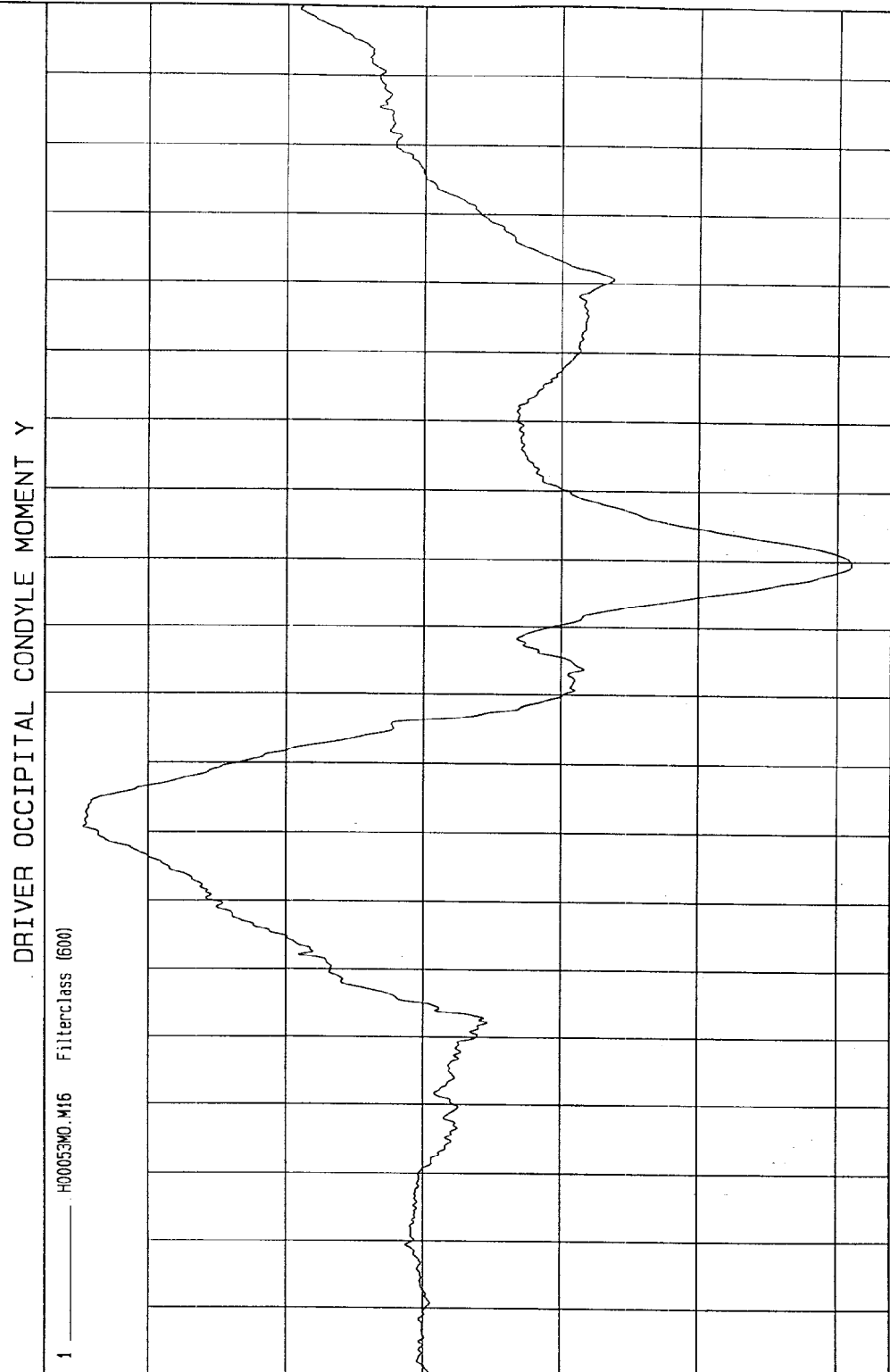


MCA Research  
03-02-2000 11:09

TIME (SECONDS)

Nm

TEST: FMVSS 208 SLED (H00053) TEST DATE: 03-02-2000  
COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)  
Minimum = -31 Nm at 120 msec Maximum = 24.77 Nm at 81 msec



NSA Research  
03-02-2000 11.13

TIME (SECONDS)

Nm

TEST: FMVSS 208 SLED (H00053)

TEST DATE: 03-02-2000

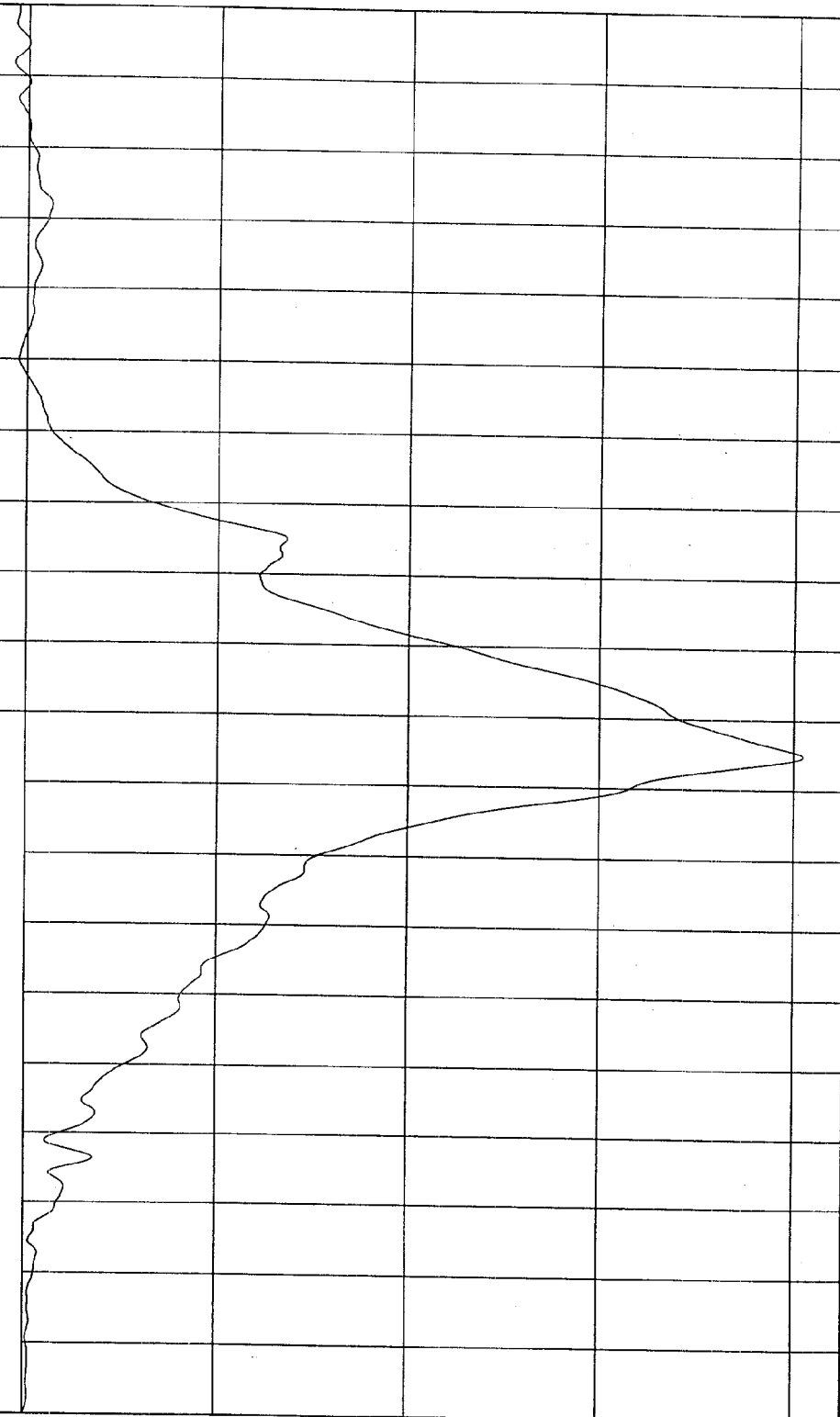
COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -40.47 G at 95 msec

Maximum = .71 G at 192 msec

DRIVER CHEST X ACCELERATION

1 H00053AF.A21 Filterclass (180)



TIME (SECONDS)

NCA Research  
03-02-2000 11:09

TEST DATE: 03-02-2000

TEST: FMVSS 208 SLED (H00053)

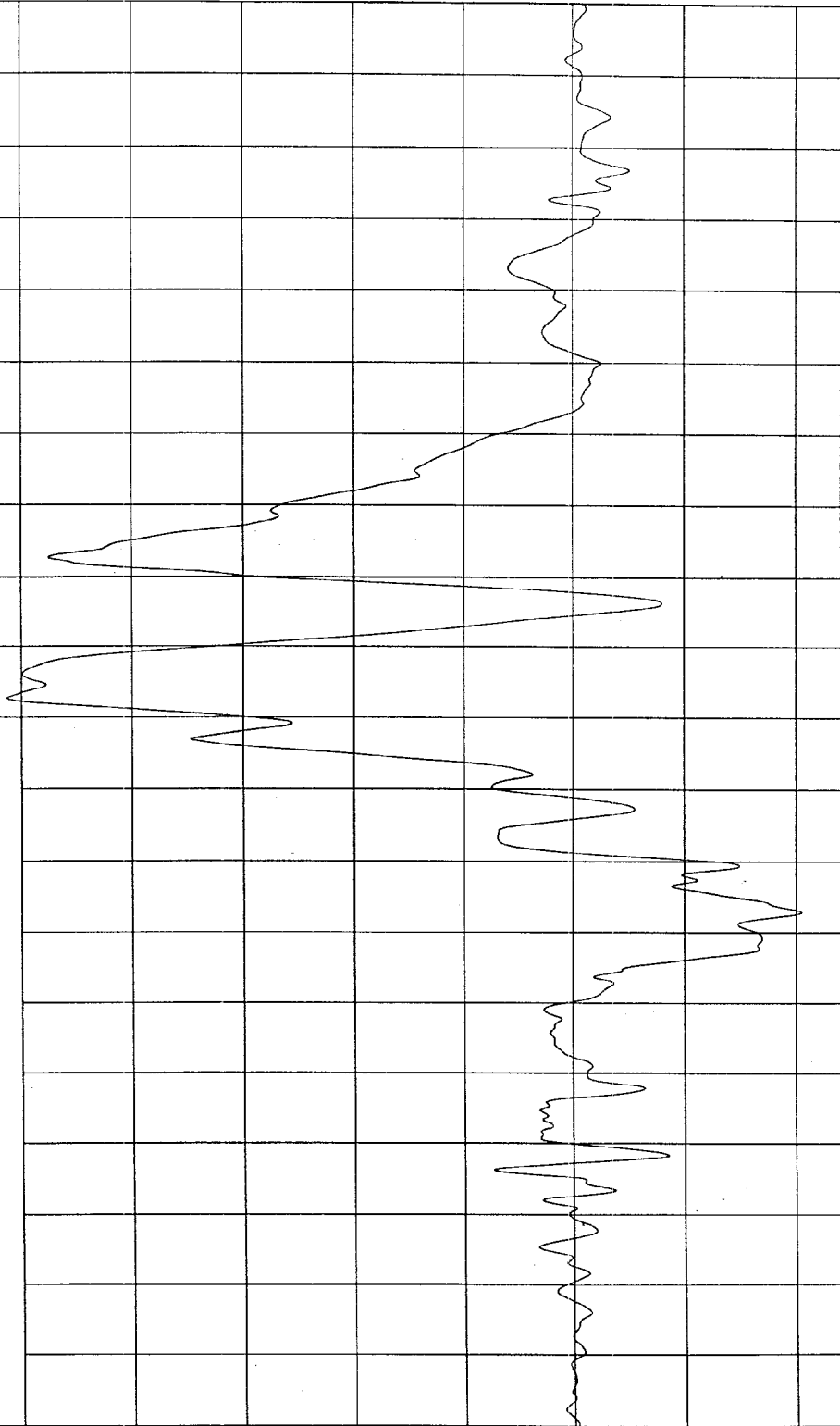
COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -2.05 G at 73 msec

Maximum = 5.12 G at 103 msec

DRIVER CHEST Y ACCELERATION

1 H00053AF.A22 FilterClass (180)



TIME (SECONDS)

TEST: FMVSS 208 SLED (H00053) TEST DATE: 03-02-2000

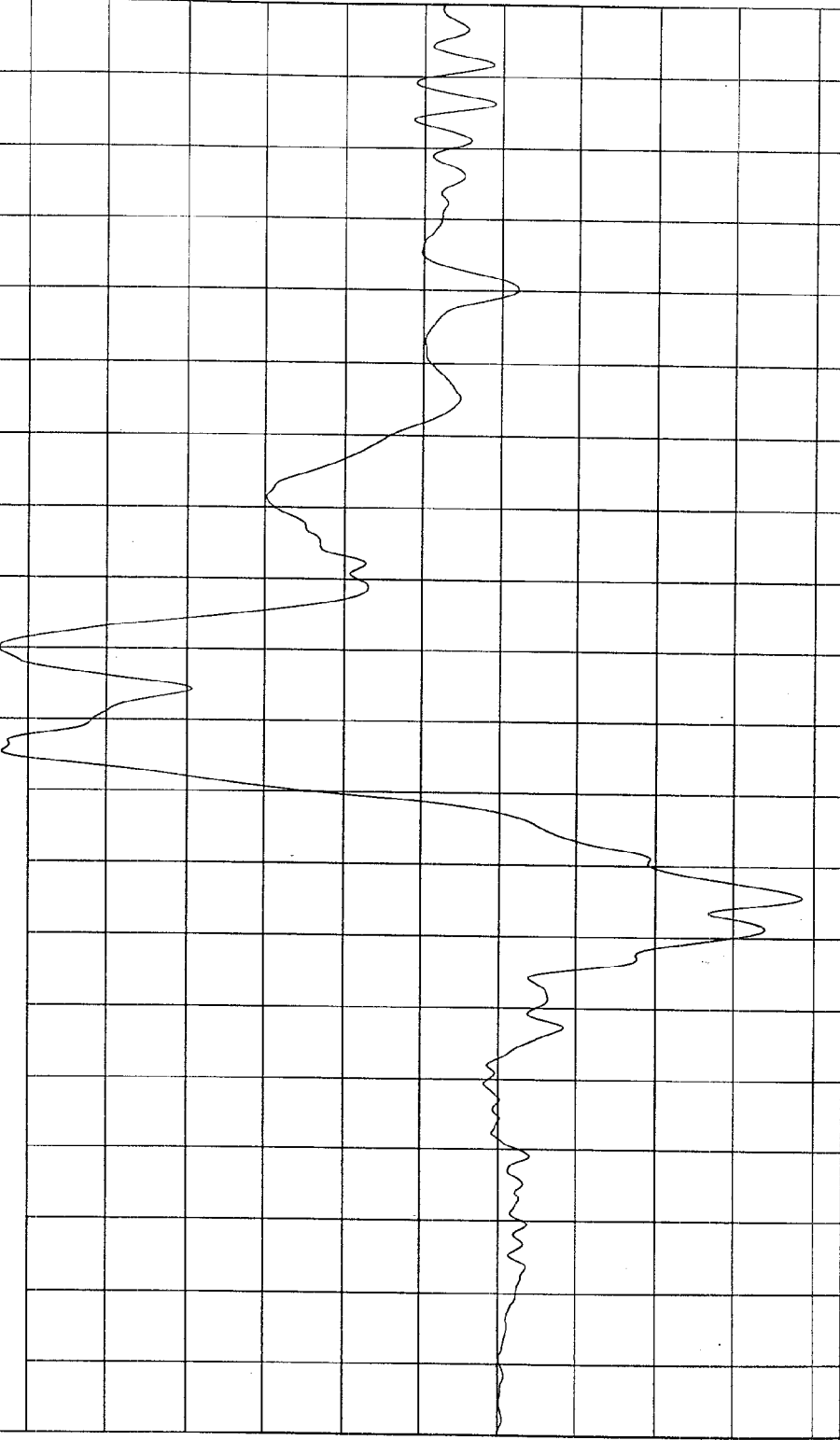
COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -7.69 G at 76 msec

Maximum = 12.71 G at 110 msec

DRIVER CHEST Z ACCELERATION

1 H00053NF.A23 Filterclass (180)



MSA Research  
03-02-2000 11:09

TIME (SECONDS)

G

TEST DATE: 03-02-2000

TEST: FMVSS 208 SLED (H00053)

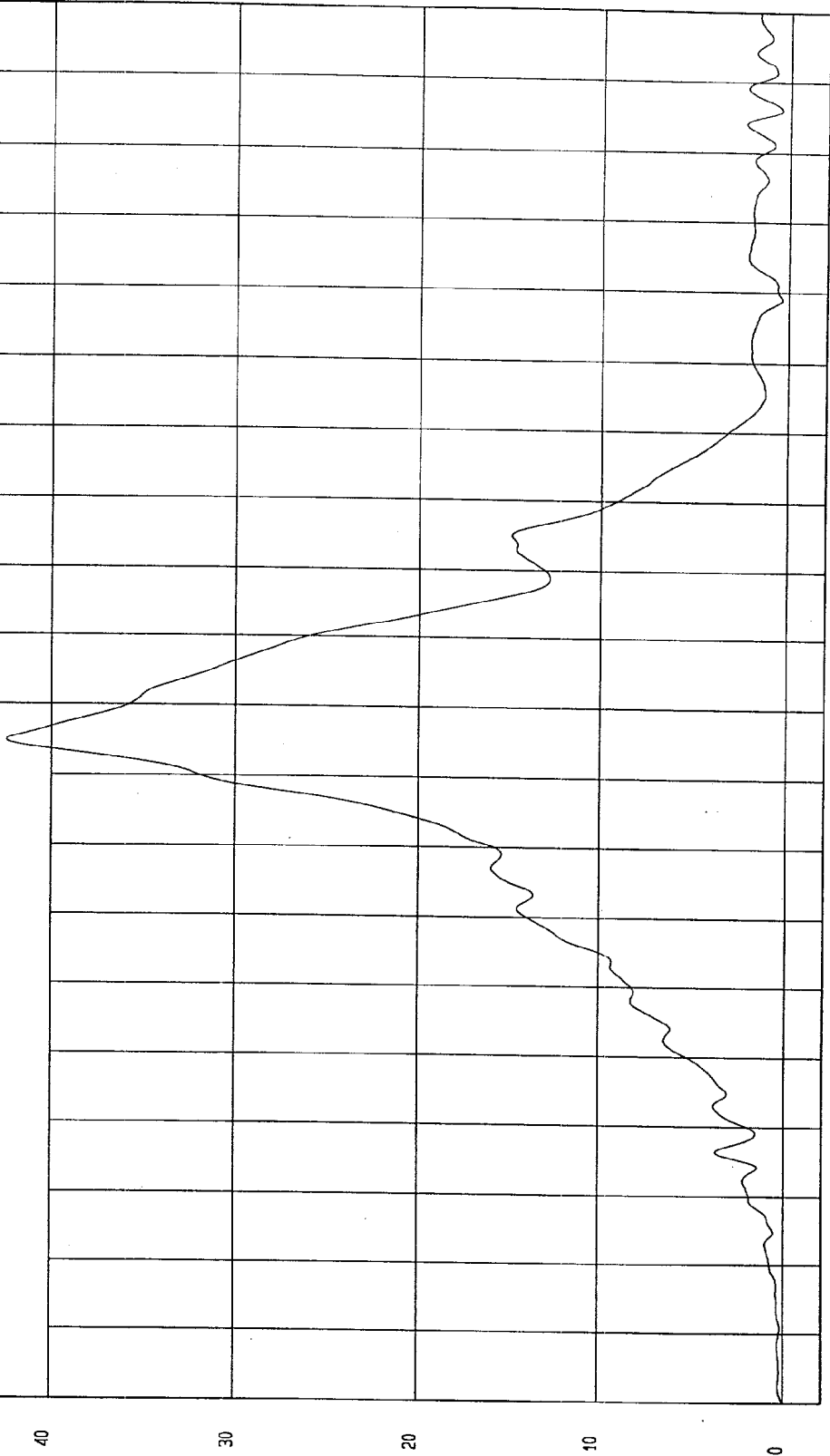
COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = 4.27E-02 G at 0 msec

Maximum = 42.37 G at 95 msec

DRIVER CHEST RESULTANT ACCELERATION

1 H00053AV.A21 Filterclass (180)



MGA Research  
03-02-2000 11:09

TIME (SECONDS)

G

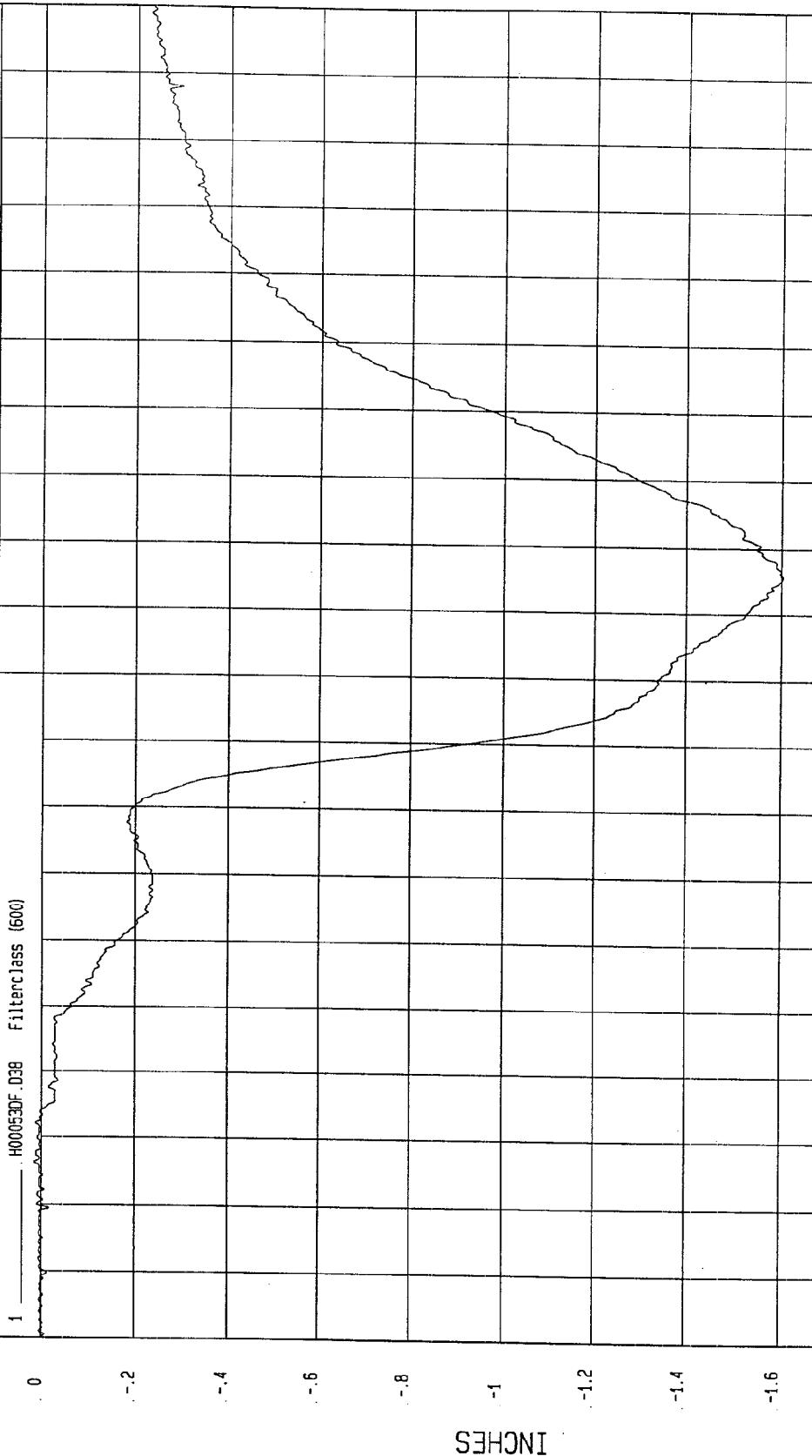
TEST: FMVSS 208 SLED (H00053) TEST DATE: 03-02-2000

COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -1.6 INCHES at 116 msec

Maximum = 1.54E-02 INCHES at 26 msec

DRIVER CHEST COMPRESSION



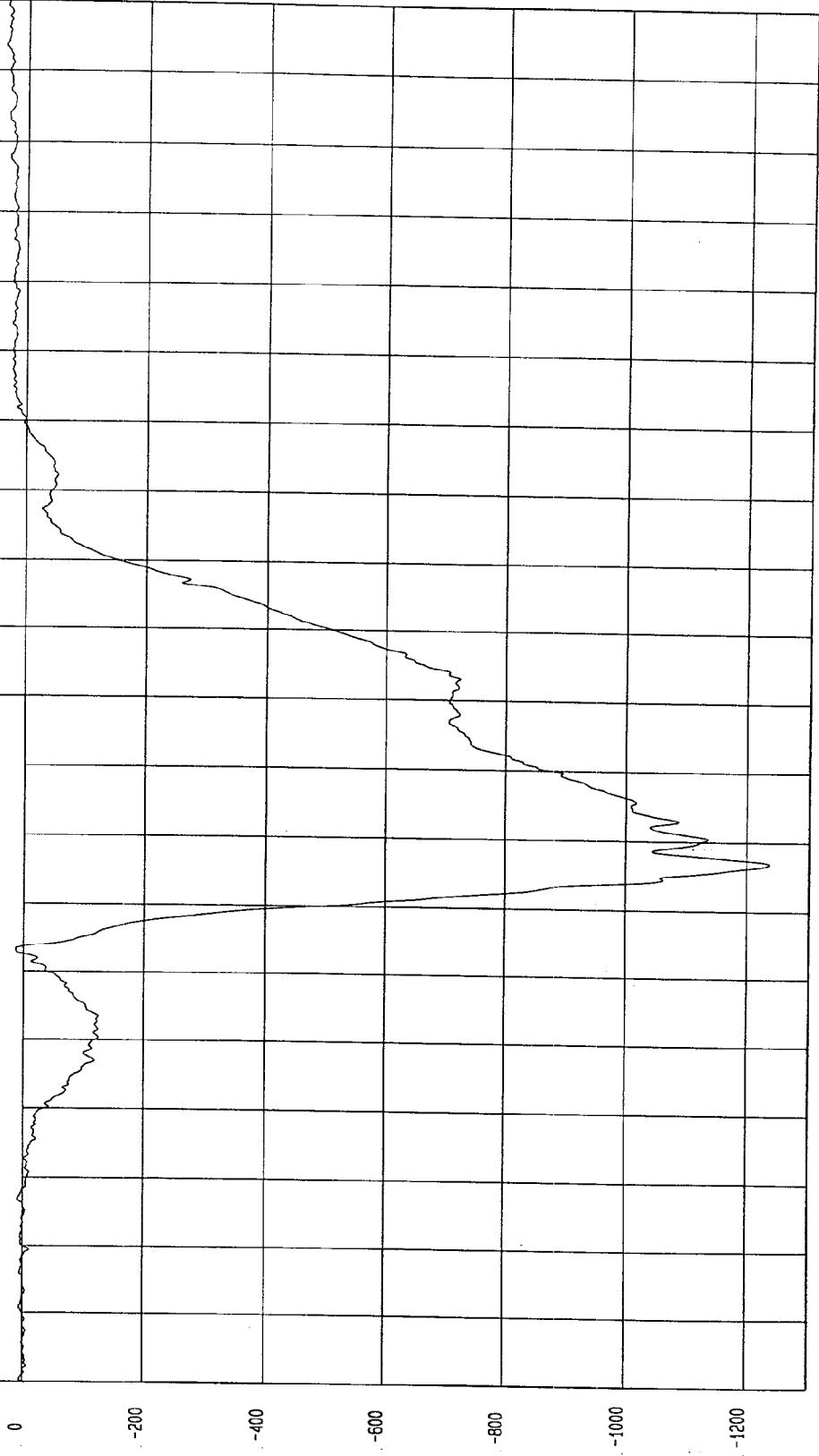
TEST: FMVSS 208 SLED (H00053) TEST DATE: 03-02-2000

COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -1236.72 LB at 77 msec Maximum = 36.36 LB at 194 msec

DRIVER LEFT FEMUR FORCE

1 .H00053FF.F08 Filterclass (600)



TEST DATE: 03-02-2000

TEST: FMVSS 208 SLED (H00053)

COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -1387.77 LB at 76 msec

Maximum = 52.89 LB at 142 msec

DRIVER RIGHT FEMUR FORCE

1 H00053FF.F09 Filterclass (600)



MGA Research  
03-03-2000 15.19

TIME (SECONDS)

LB

TEST: FMVSS 208 SLED (H00053) TEST DATE: 03-02-2000

COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -58.48 G at 96 msec

Maximum = 4.11 G at 138 msec

PASSENGER HEAD X ACCELERATION

1 H00053AT.A24 Filterclass (1000)



MCA Research  
03-02-2000 11:08

TIME (SECONDS)

G

TEST: FMVSS 208 SLED (H00053)

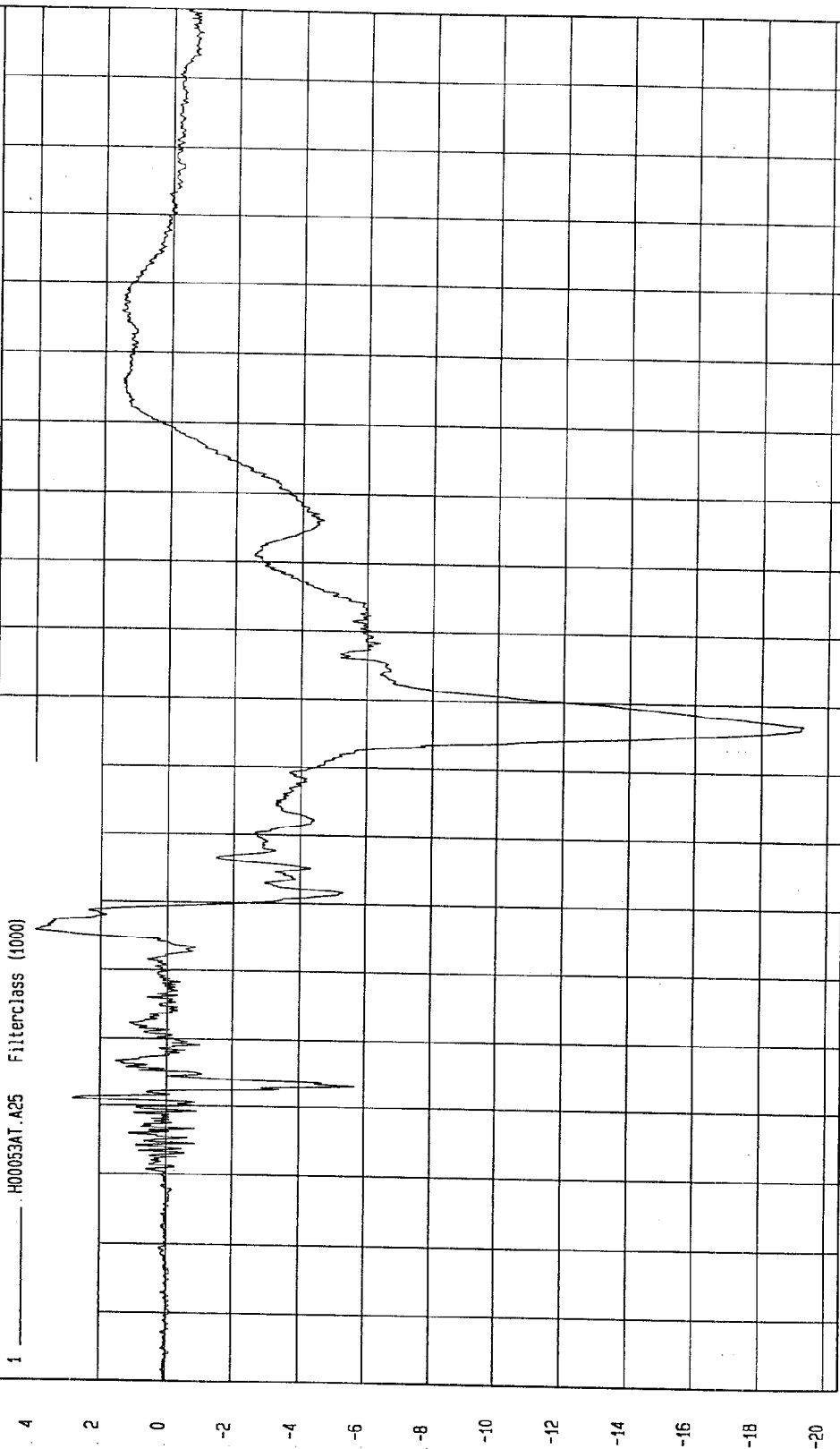
TEST DATE: 03-02-2000

COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -19.26 G at 97 msec

Maximum = 3.99 G at 66 msec

### PASSENGER HEAD Y ACCELERATION



MGA Research  
03-02-2000 11.09

TIME (SECONDS)

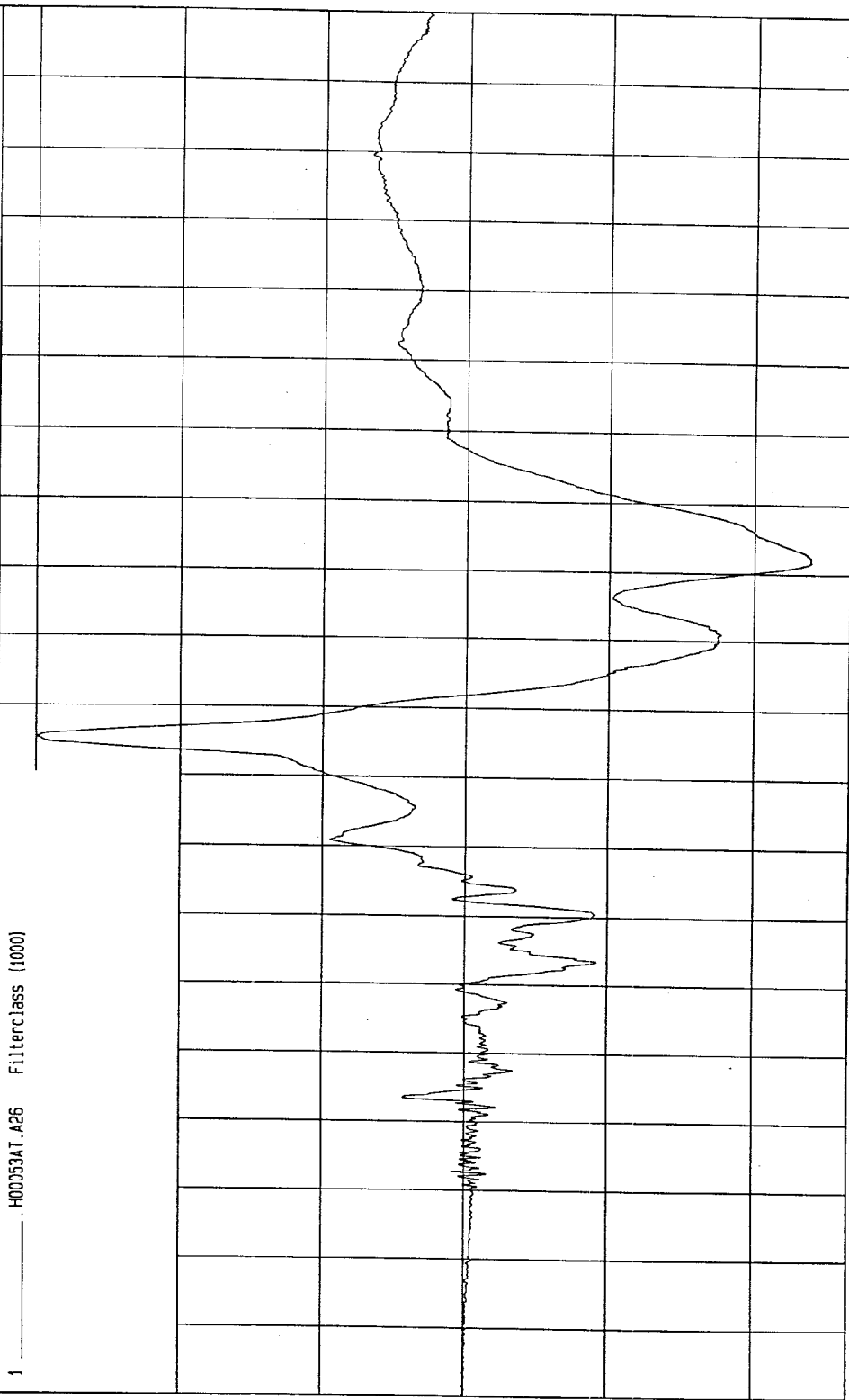
TEST: FMVSS 208 SLED (H00053) TEST DATE: 03-02-2000

COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -23.95 G at 122 msec Maximum = 29.88 G at 95 msec

PASSENGER HEAD Z ACCELERATION

1 H00053AT.A26 Filterclass (1000)



MCA Research  
03-02-2000 11:09

TIME (SECONDS)

G

TEST DATE: 03-02-2000

TEST: FMVSS 208 SLED (H00053)

COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = .04 G at 4 msec

Maximum = 75.81 G at 96 msec

PASSENGER HEAD RESULTANT ACCELERATION

1 ——— H00053AV.A24 FilterClass (1000)



TIME (SECONDS)

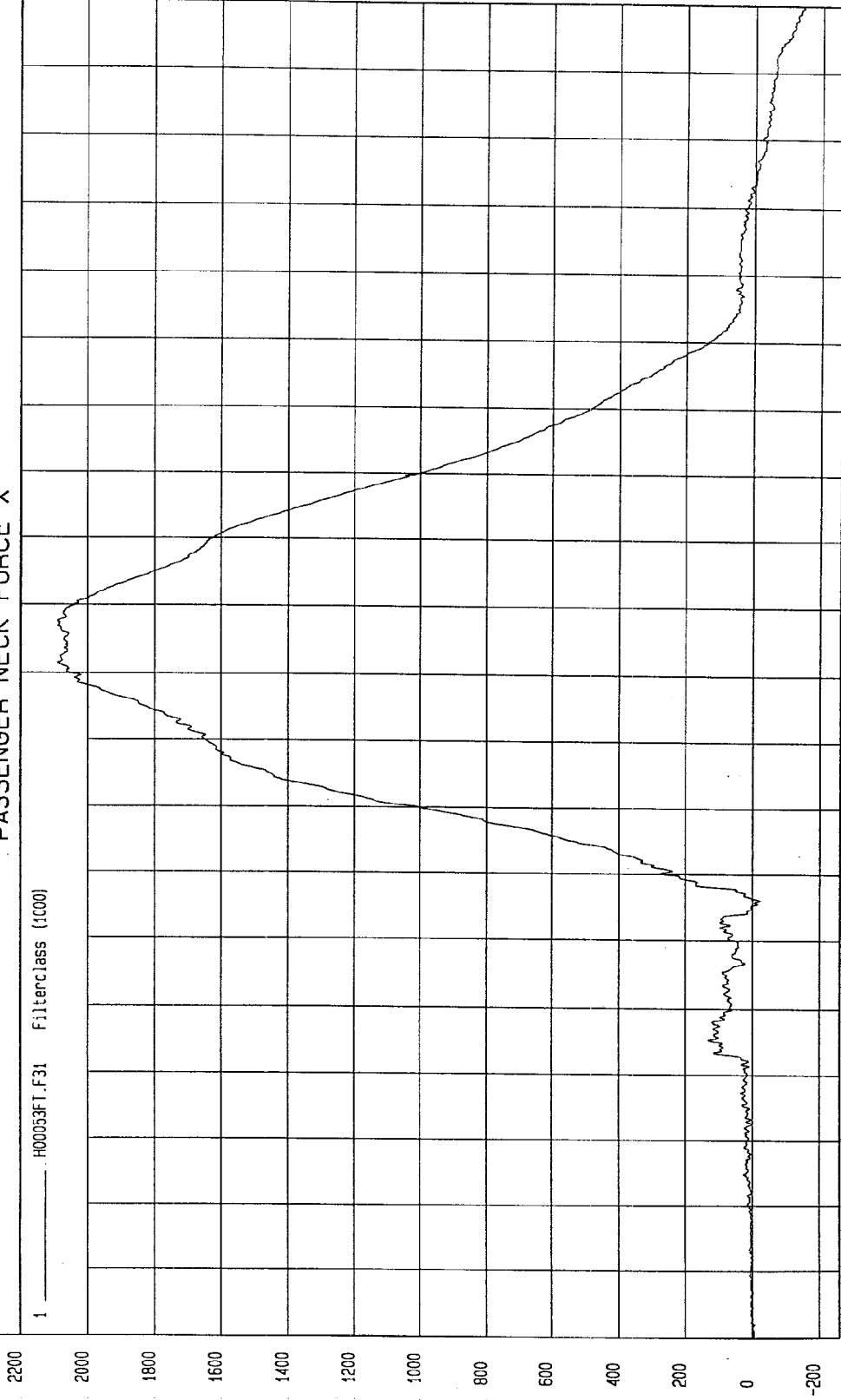
TEST: FMVSS 208 SLED (H00053) TEST DATE: 03-02-2000

COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -146.11 N at 200 msec

Maximum = 2089.25 N at 101 msec

PASSENGER NECK FORCE X



MGA Research  
03-02-2000 11:09

TIME (SECONDS)

N

TEST: FMVSS 208 SLED (H00053)

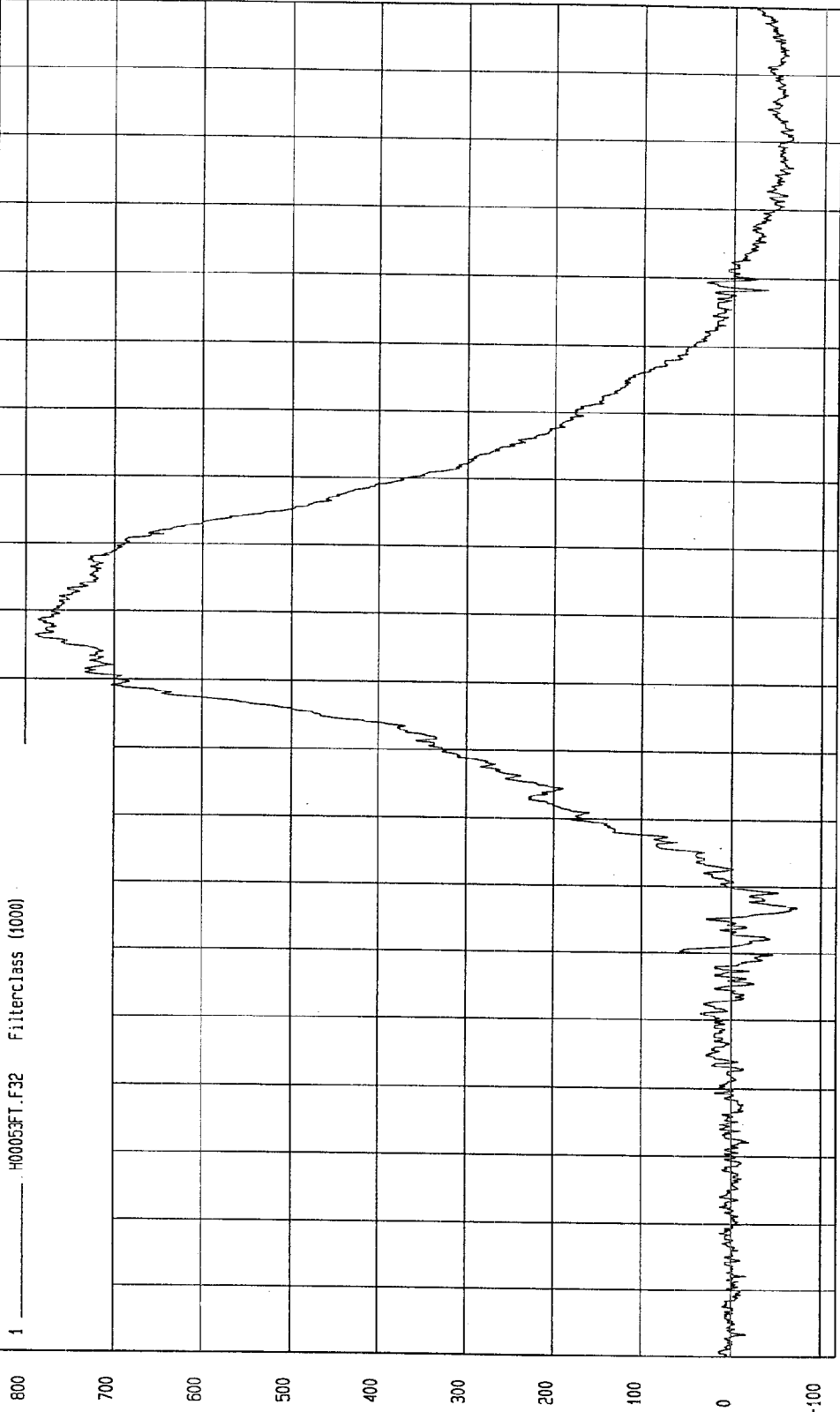
TEST DATE: 03-02-2000

COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -73.08 N at 67 msec

Maximum = 788.64 N at 106 msec

PASSENGER NECK FORCE Y



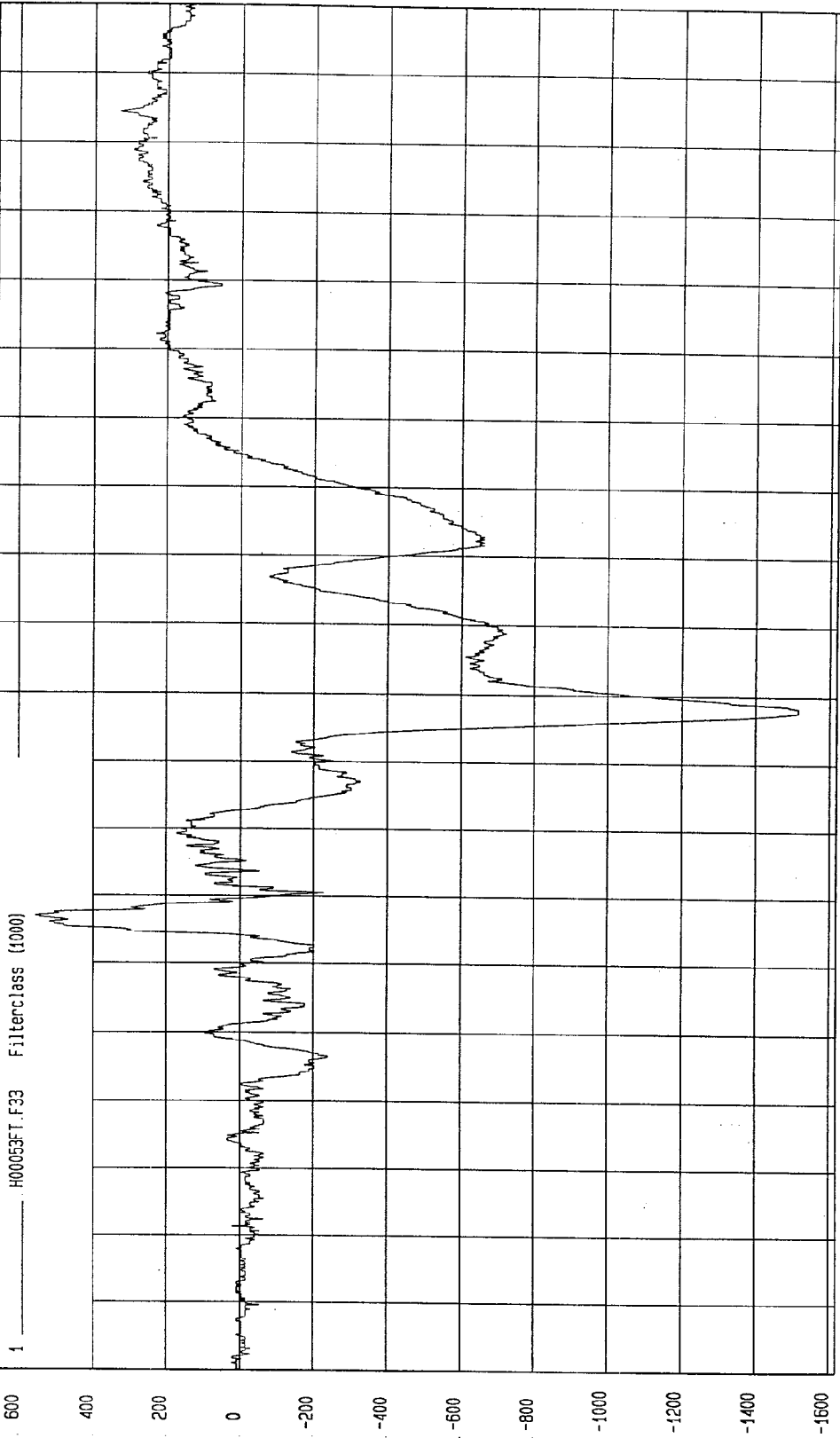
TEST: FMVSS 208 SLED (H00053) TEST DATE: 03-02-2000

COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -1515.5 N at 98 msec

Maximum = 554.39 N at 67 msec

PASSENGER NECK FORCE Z



MCA Research  
03-02-2000 11.09

TIME (SECONDS)

N

TEST DATE: 03-02-2000

TEST: FMVSS 208 SLED (H00053)

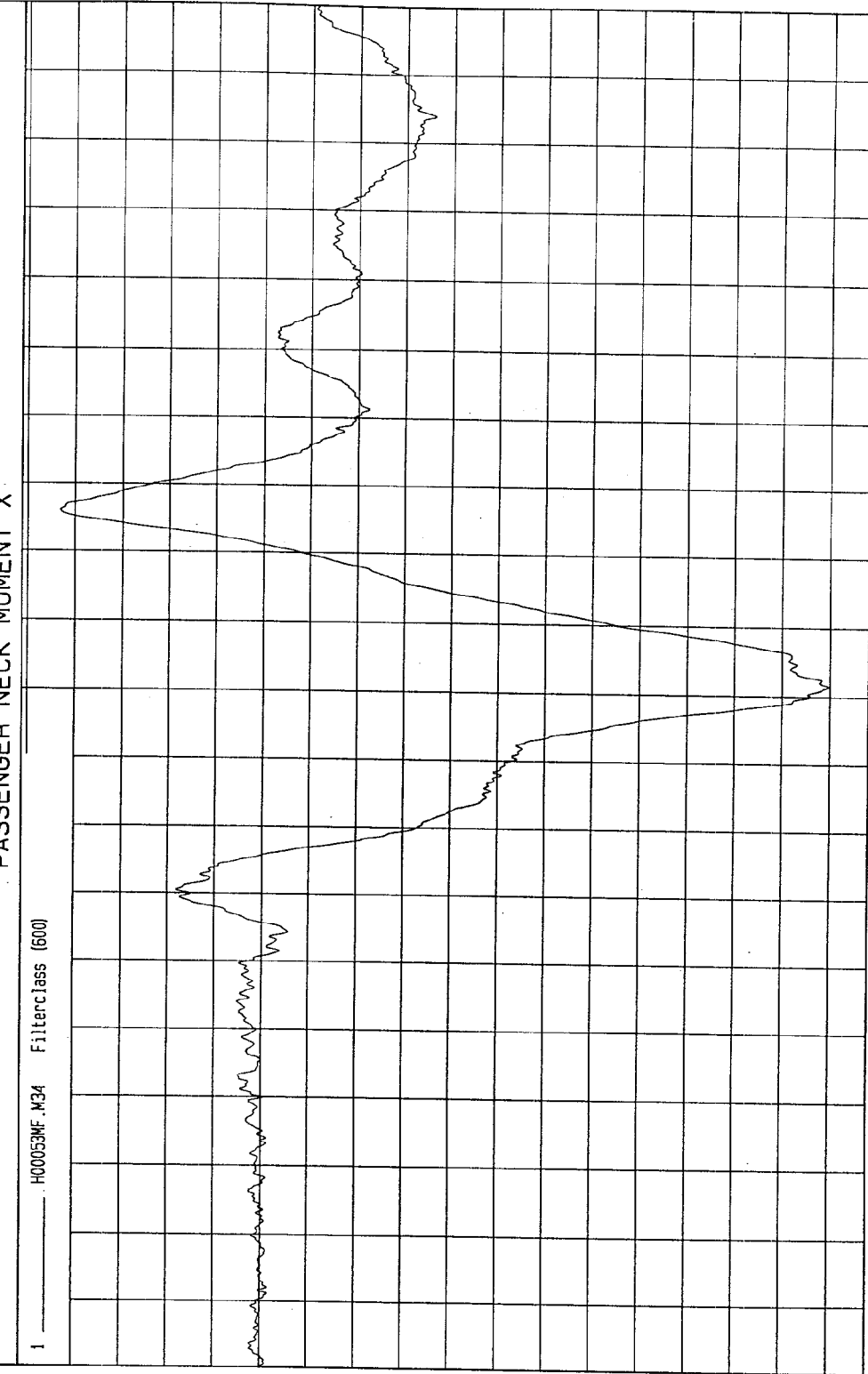
COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -23.95 Nm at 102 msec

Maximum = 8.6 Nm at 126 msec

PASSENGER NECK MOMENT X

1 H00053MF.M34 Filterclass (600)



TIME (SECONDS)

MGA Research  
03-02-2000 11:09

Nm

TEST DATE: 03-02-2000

TEST: FMVSS 208 SLED (H00053)

COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Maximum = 123.69 Nm at 100 msec

Minimum = -18.38 Nm at 155 msec

PASSENGER NECK MOMENT Y

1 ——— H00053MF.M35 Filterclass (600)



MGA Research  
03-02-2000 11:09

TIME (SECONDS)

Nm

TEST DATE: 03-02-2000

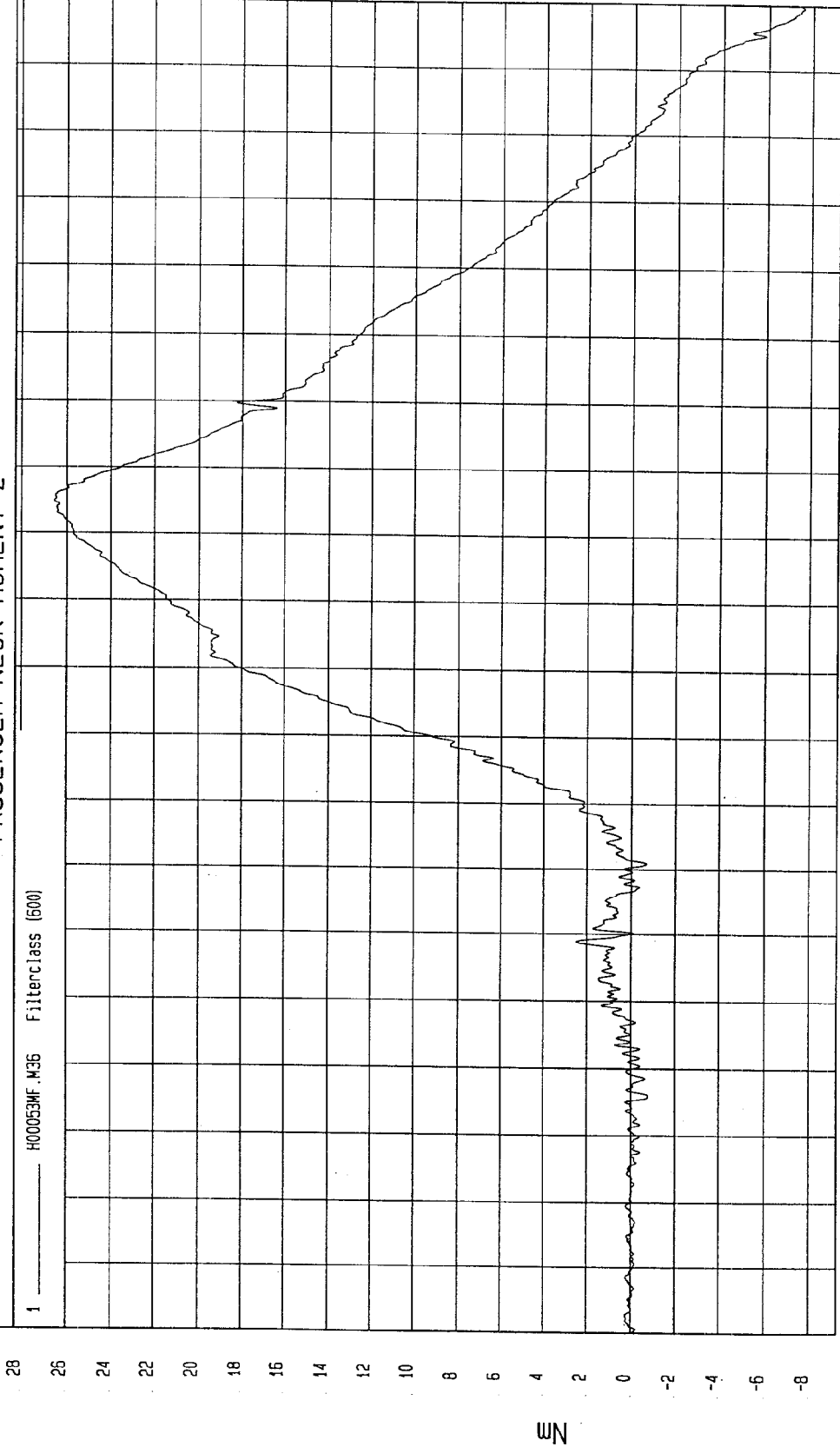
TEST: FMVSS 208 SLED (H00053)

COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -7.59 Nm at 200 msec

Maximum = 26.56 Nm at 125 msec

PASSENGER NECK MOMENT Z

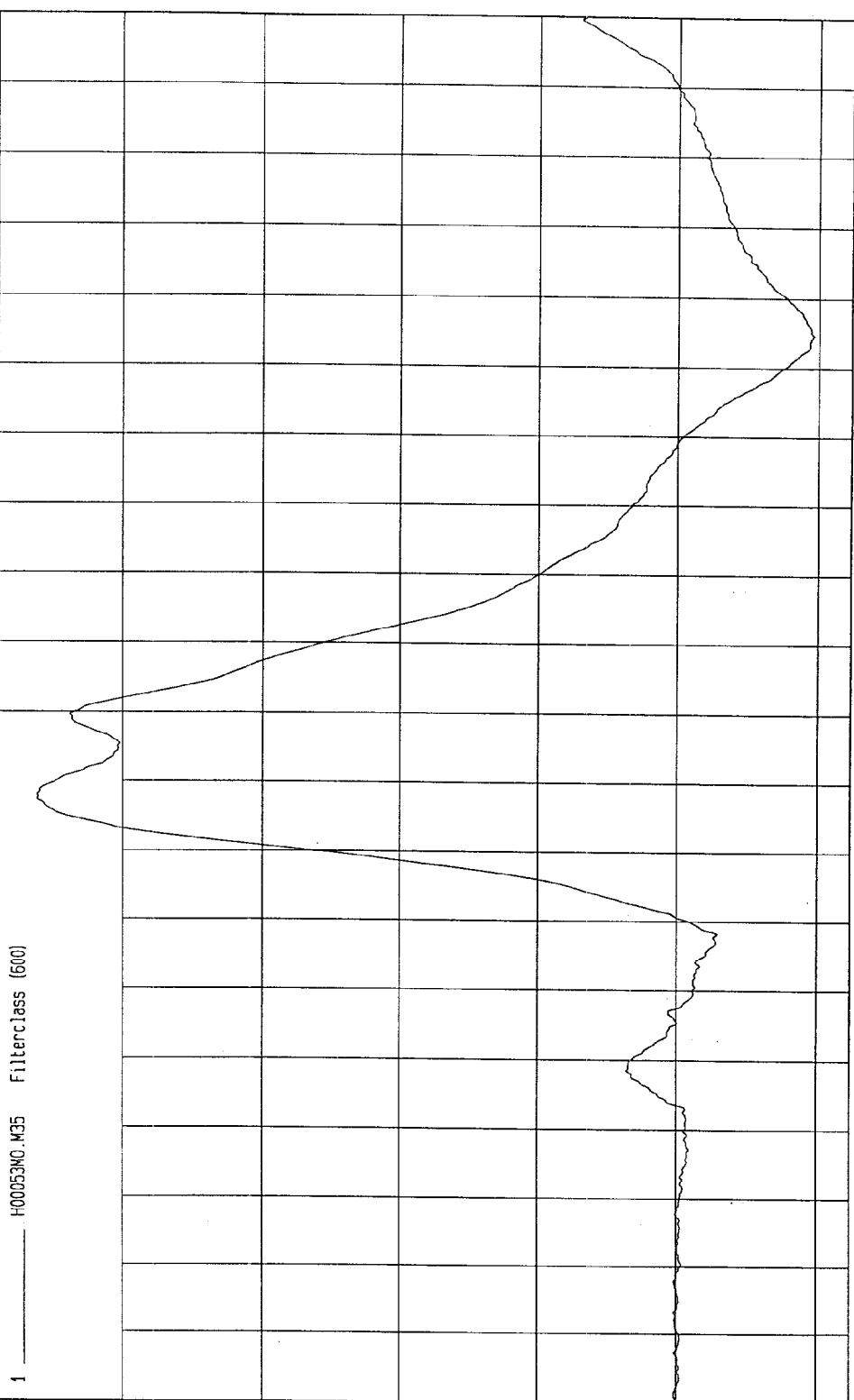


1 H00053MF.M36 Filterclass (500)

Nm

TEST: FMVSS 208 SLED (H00053) TEST DATE: 03-02-2000  
COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)  
Minimum = -19.24 Nm at 155 msec  
Maximum = 92.22 Nm at 87 msec

PASSENGER OCCIPITAL CONDYLE MOMENT Y



TEST: FMVSS 208 SLED (H00053) TEST DATE: 03-02-2000

COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -50.55 G at 102 msec Maximum = 2.24 G at 199 msec

PASSENGER CHEST X ACCELERATION

1 H00053AF.A27 FilterClass (180)



MCA Research  
03-02-2000 11:09

TEST: FMVSS 208 SLED (H00053)

TEST DATE: 03-02-2000

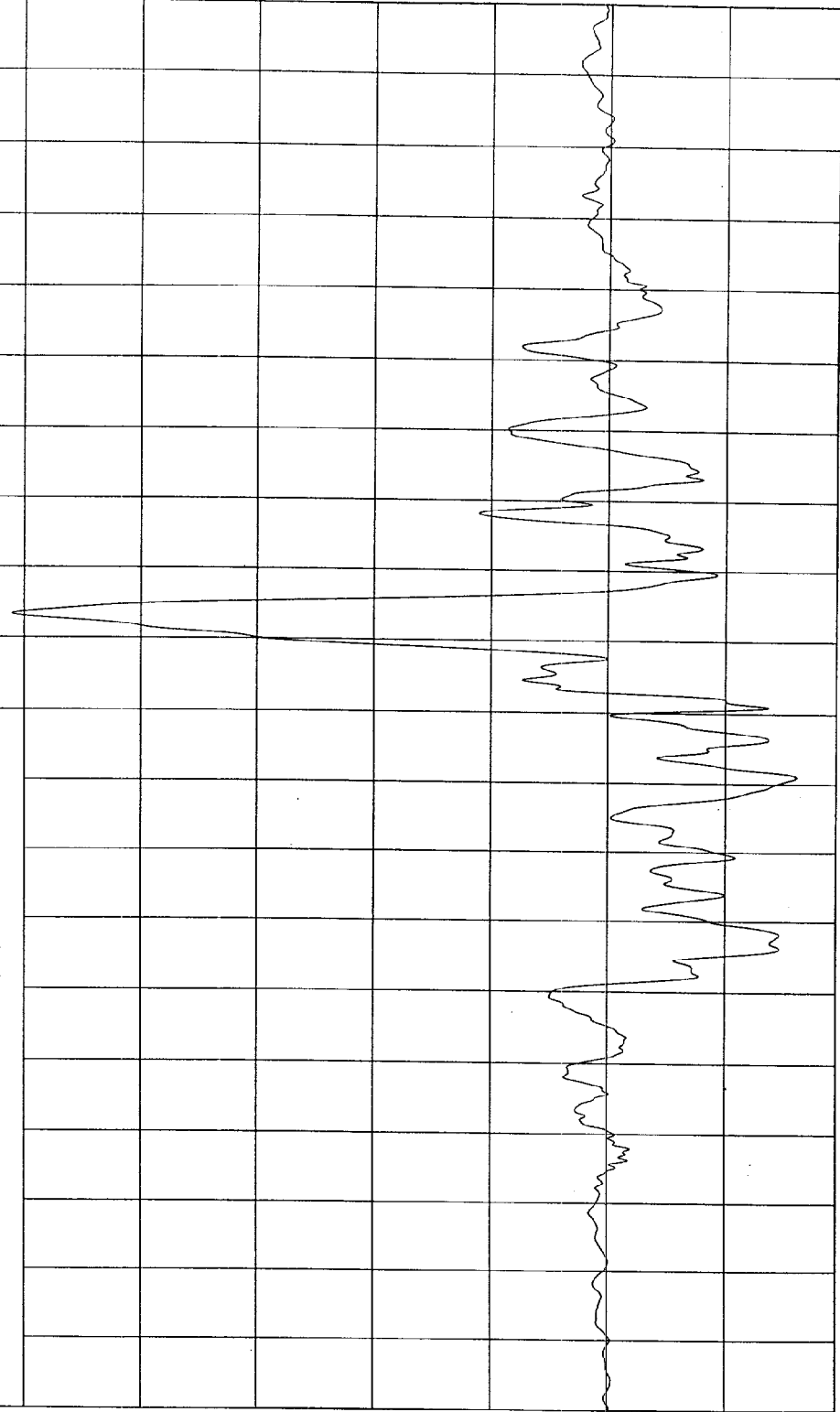
COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -1.61 G at 91 msec

Maximum = 5.11 G at 114 msec

PASSENGER CHEST Y ACCELERATION

1 H00053AF.A28 Filterclass (180)



0 0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.1 0.11 0.12 0.13 0.14 0.15 0.16 0.17 0.18 0.19

TIME (SECONDS)

MGA Research  
03-02-2000 11:09

TEST DATE: 03-02-2000

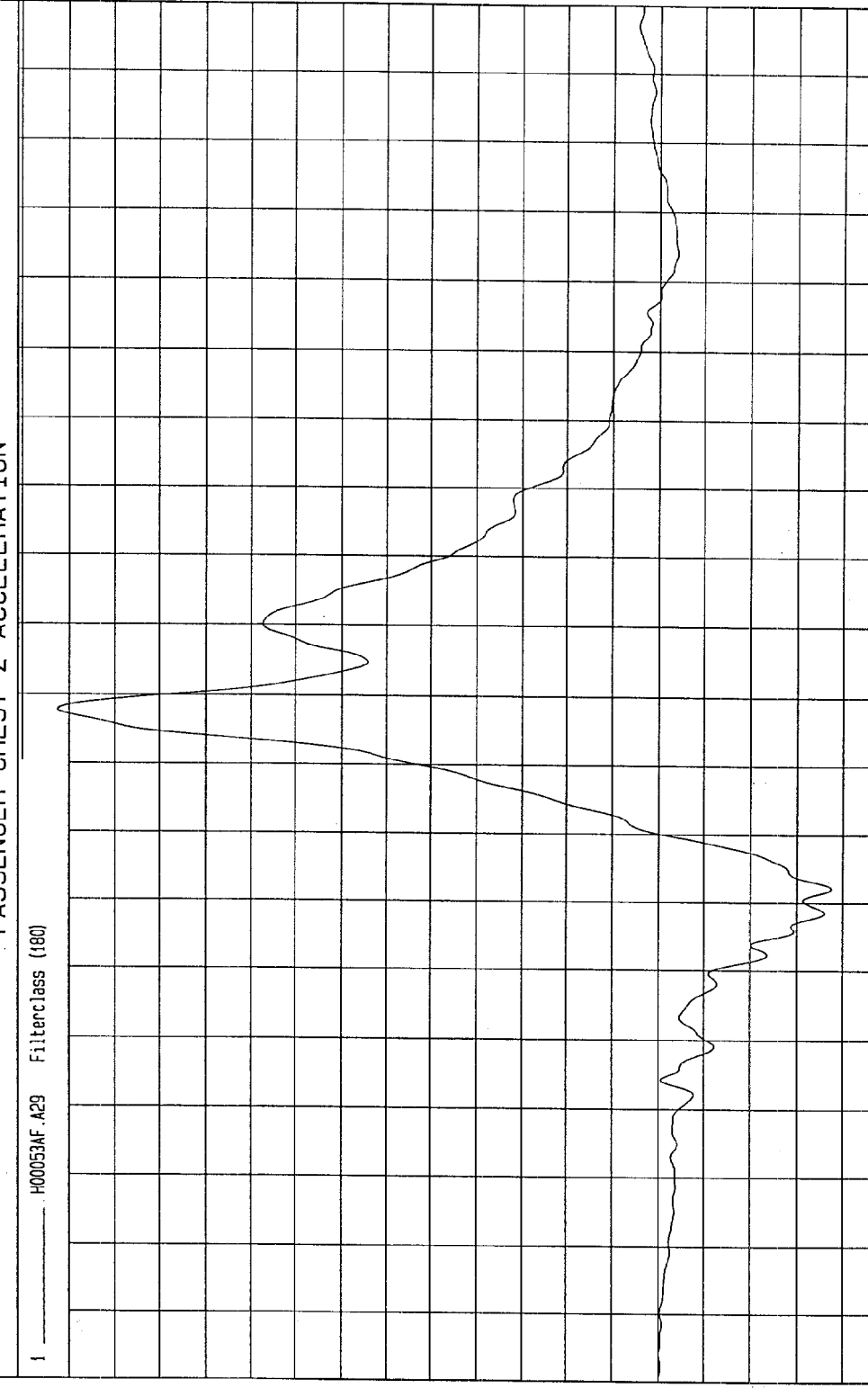
TEST: FMVSS 208 SLED (H00053)

COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -7.5 G at 72 msec

Maximum = 26.5 G at 98 msec

PASSENGER CHEST Z ACCELERATION



MCA Research  
03-02-2000 11:09

TIME (SECONDS)

G

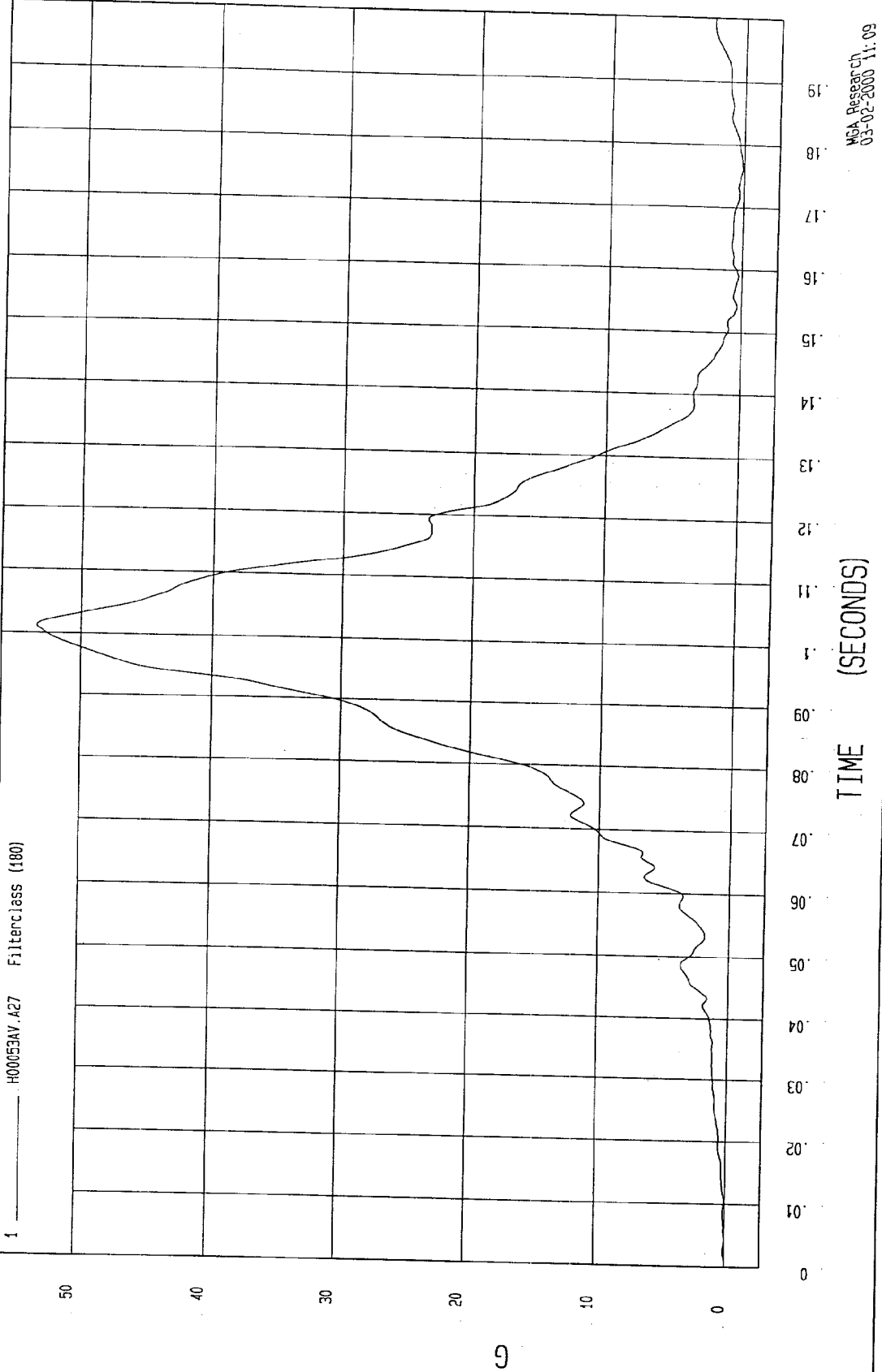
TEST: FMVSS 208 SLED (H00053) TEST DATE: 03-02-2000

COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = 2.19E-02 G at 0 msec Maximum = 53.4 G at 101 msec

PASSENGER CHEST RESULTANT ACCELERATION

1 H00053AV.A27 Filterclass (180)



TEST: FMVSS 208 SLED (H00053)

TEST DATE: 03-02-2000

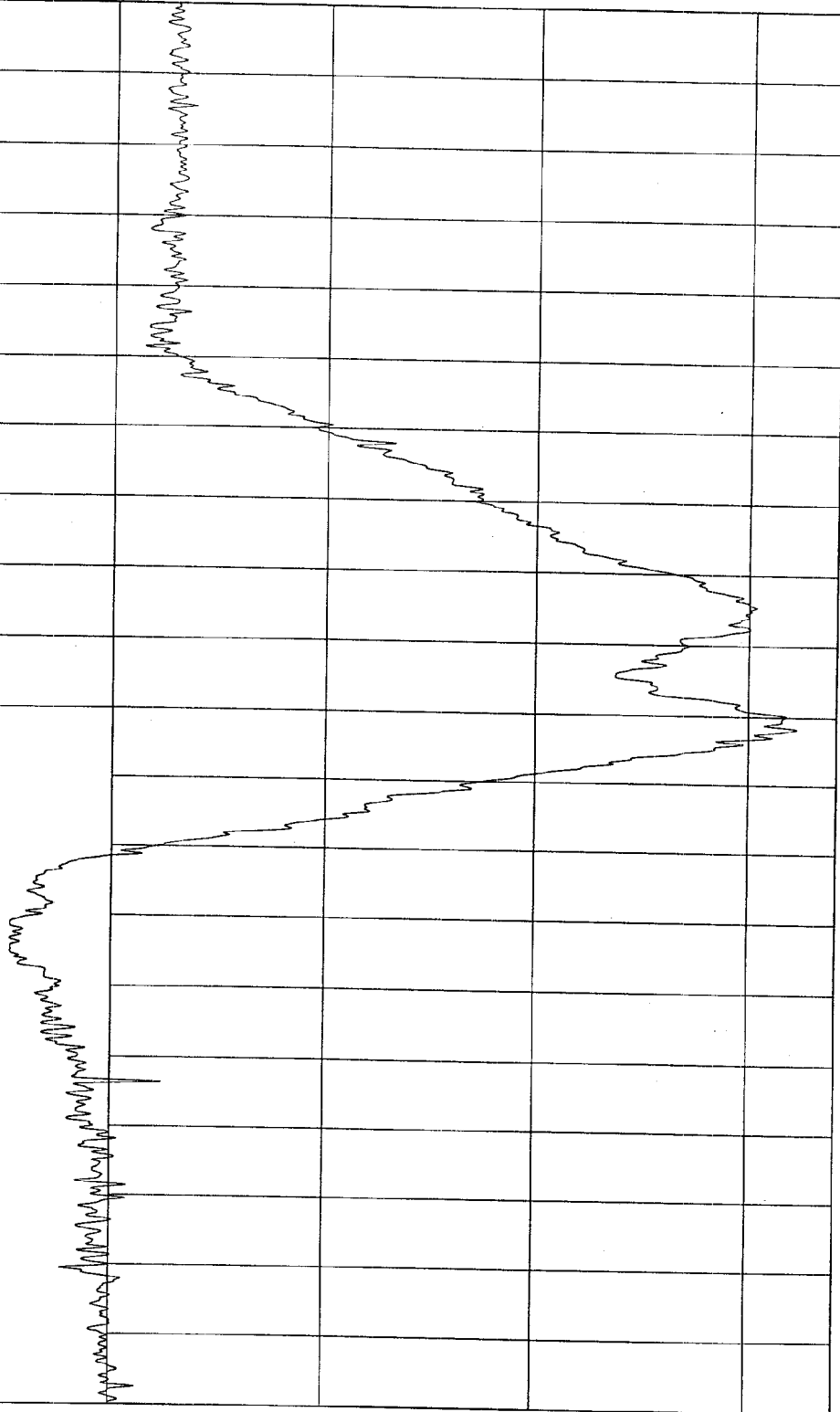
COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -.32 INCHES at 96 msec

Maximum = 4.81E-02 INCHES at 67 msec

PASSENGER CHEST COMPRESSION

1 \_\_\_\_\_ H00053DF.D39 Filterclass (600)



MGA Research  
03-02-2000 11:09

TIME SECONDS

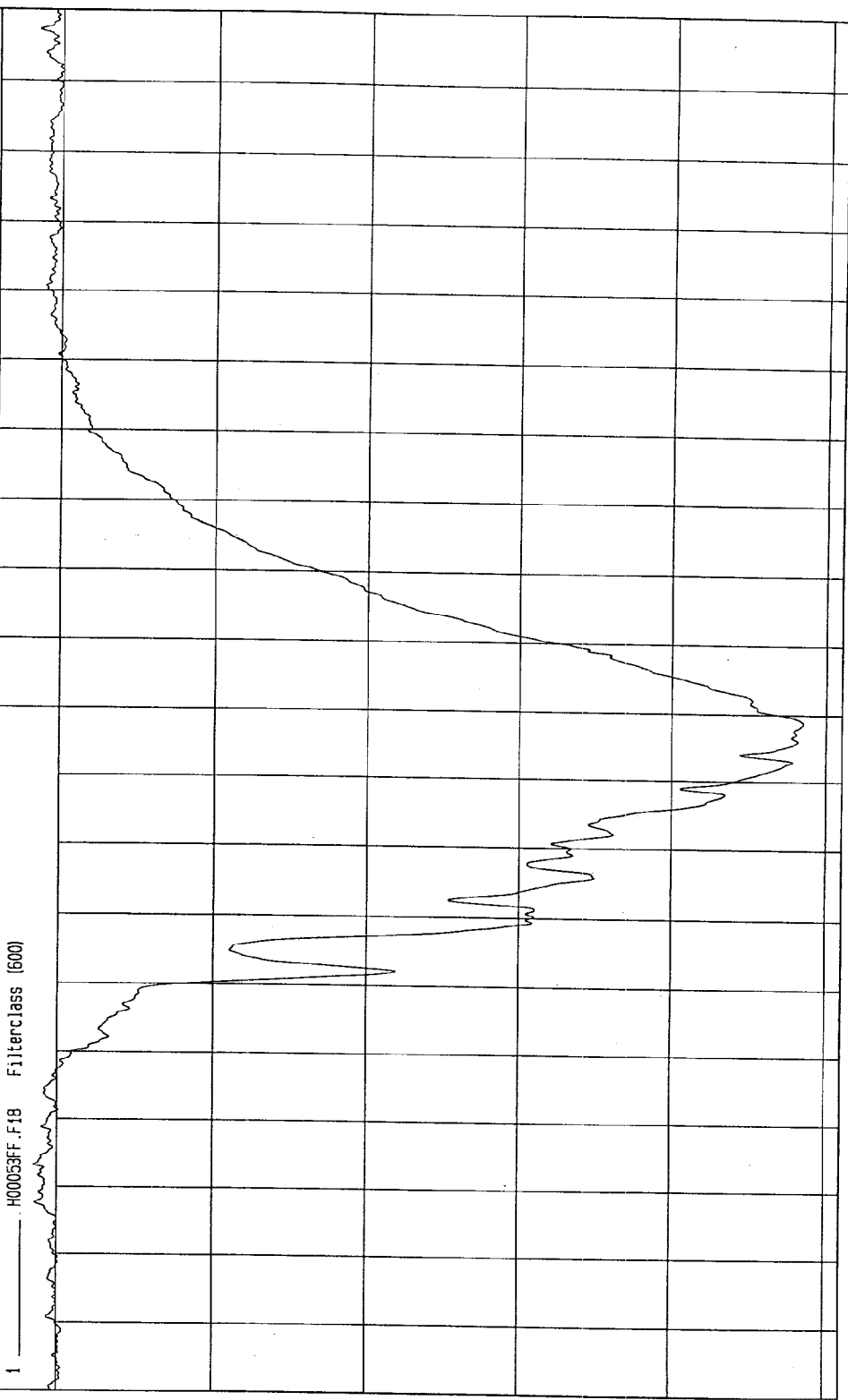
INCHES

TEST: FMVSS 208 SLED (H00053) TEST DATE: 03-02-2000

COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -970.29 LB at 99 msec

PASSENGER LEFT FEMUR FORCE



MCA Research  
03-02-2000 15:19

TIME (SECONDS)

LB

TEST DATE: 03-02-2000

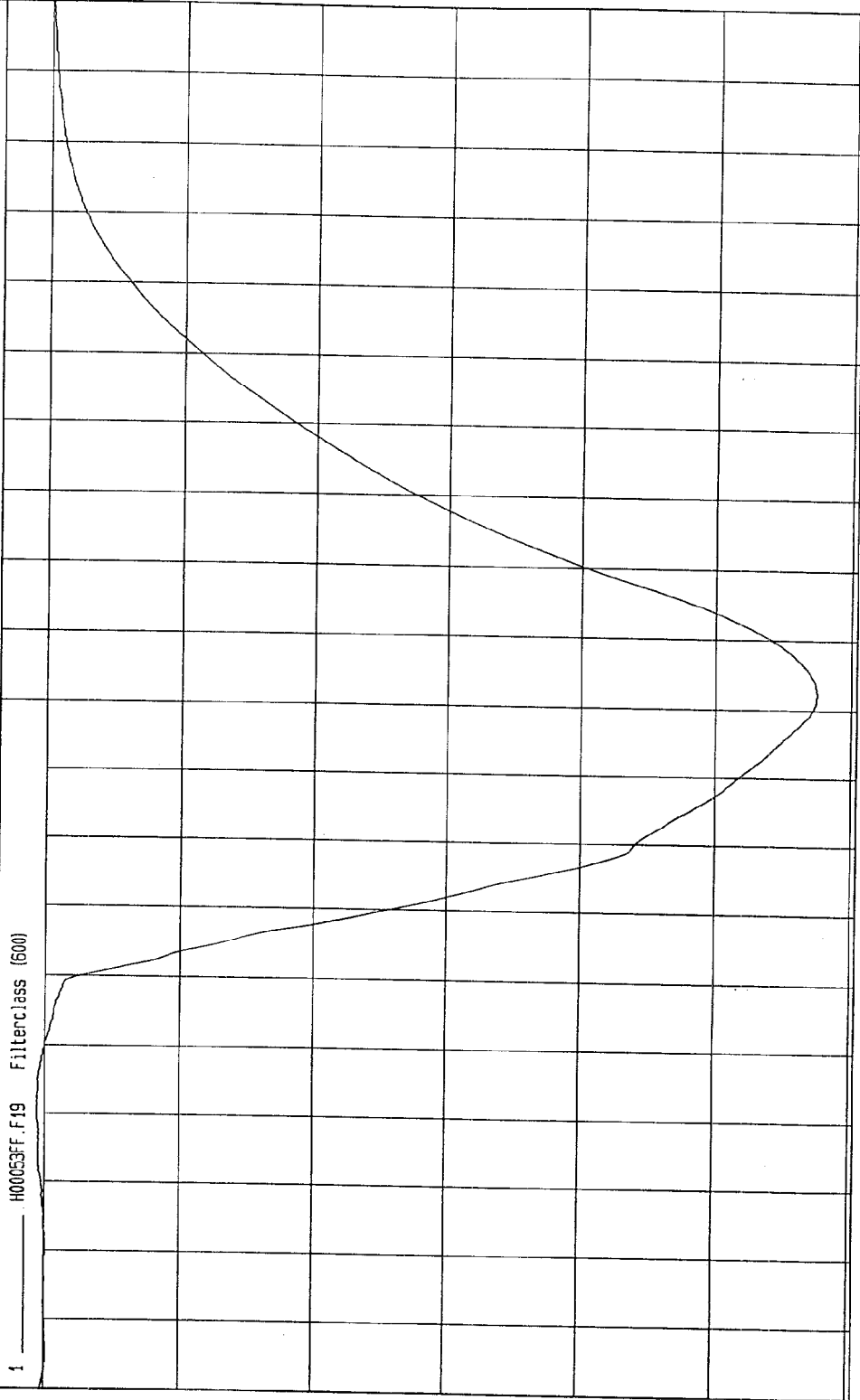
TEST: FMVSS 208 SLED (H00053)

COMPONENT: 2000 NISSAN MAXIMA 4 DOOR (CY5204)

Minimum = -1149.75 LB at 102 msec

Maximum = 10.79 LB at 39 msec

PASSENGER RIGHT FEMUR FORCE



MCA Research  
03-03-2000 15:19

TIME (SECONDS)

LB

APPENDIX C  
MANUFACTURER'S VEHICLE INFORMATION

**2000 MY Nissan Maxima  
FMVSS 208 Information Request**

1.

Q: Please inform OVSC if the air bag restraint system is certified to meet the requirements of S4.1.5.1(a) or S13.

If the air bags were installed to meet the requirements of S4.1.5.1(A)(1) please provide a copy of the certification test reports for the frontal/angular barrier impact test of the automatic restraint system with manual safety belts unfastened and fastened.

If the air bags were installed to meet the requirements of S13 please provide a copy of the certification test reports for the frontal/angular barrier impact test of the automatic restraint system with the manual safety belts fastened and the certification test reports for the sled test using only the automatic restraint system.

A:

00MY Maxima is certified to meet the requirement of S13, sled test.

See Information 1 - Attachment I

2.

Q: If this is a new design vehicle/model, describe any features that might affect performance with respect to children and out of position occupants

If this is not a new design vehicle/model provide that following: (1) state when the air bag was depowered, (2) describe the difference between the MY2000 air bag system and the MY 1999 air bag system, (3) explain what other restraint changes have been made, and (4) explain what other vehicle changes have been made that might have affected FMVSS 208 performance. Explain which changes might affect performance with respect to children and out of position occupants.

A: 00MY Maxima is a new design vehicle/model.

00MY Maxima has no feature that might affect performance with respect to children and out of position occupants.

3.

Q: State if these vehicles have crash event recorders. If yes, explain any procedures needed for the sled or barrier crash event to be recorded. In addition, explain how to retrieve that crash event data from the recorder.

A: 00MY Maxima does not have crash event recorders.

4. If the vehicle was certified with unrestrained dummies to meet the requirements of S13, describe how to disconnect the air bags from the vehicle sensors and connect them to the

triggering mechanism used in the sled test. Describe the method used in certification to determine when to trigger the air bag and the system used to trigger the air bag.

For more advance air bag systems, explain how the triggering of the air bag system in the sled test is different form the triggering of the air bag in a crash. For example, if a multistage inflator is used, explain whether the stages are fired simultaneously in the sled test but fired in a staggered sequence in a similar crash situation.

A: See Information 1 – Attachment 2

5.

Q: State for any safety belt system in this vehicle whether or not it is equipped with a tension-relieving device. Provide a copy of the information furnished in accordance with S7.4.2 if the tension-relieving device is used.

A: Tension-relieving device is not used.

6. FMVSS No. 208, S8.1.5 allows the manufacturer the option of having movable vehicle windows and vents placed in the closed position. State whether the vehicle's movable window and vents were opened or closed or the certification tests.

A: The movable windows and vents were opened for the certification tests.

7

Q: Submit dummy placement measurements, including diagrams or photographs which show exactly where measurements were taken. Enclosed is a diagram of some of OVSC's dummy measurements. Where possible, use the dimension shown in the diagram to provide the individual dummy placement measurements.

State whether the vehicle has a footrest for the driver.

A: See Information 2

00MY Maxima has a foot rest for the driver.

8.

Q: Provide the seat positioning, steering column positioning, and fuel tank data on the enclosed form. If more than one front seating, steering column or fuel tank configuration are available on this vehicle, provide separate information for each. In addition, provide the seating reference point for each seat for the lockable seat belt requirement in S7.1.1.5.

A: See information 2 – Attachment 1

9.

Q: If the vehicle is equipped with adjustable seat belt anchorages, provide the

manufacturer's nominal design position for a 50<sup>th</sup> percentile adult male occupant.

A: See Information 1 – Attachment 3

10.

Q: For barrier tests provide the speed impact, vehicle test weight, and resulting injury criteria (i.e., HIC, chest acceleration, chest compression, and femur loads) recorded for all certification tests conducted to meet the requirements of S4.1.5.1 (a)(1). For sled tests, provide the resulting injury criteria (i.e., HIC, chest acceleration, chest compression, femur loads, and neck moments and forces) recorded for all certification test conducted to meet the requirements of S13.

A: 00MY Maxima is certified to meet the requirement of S13, sled test.  
See Information 1 – Attachment 1

11.

Q: When vehicle components must be removed to obtain the proper test weight for the barrier test, what components do you recommend for removal and in what priority order do you recommend removal?

A: 00MY Maxima is certified to meet the requirement of S13, sled test.

12.

Q: If the vehicle used a pressure vessel to inflate the air bag, provide a copy of the test reports of engineering analysis to demonstrate that it meets all the requirements of S9.1.

A: 00MY Maxima does not use a pressure vessel to inflate the air bag.

13.

Q: If the vehicle uses an explosive device to inflate the air bag, provide a copy of the test report or engineering analysis to demonstrate that it meets all the requirements of S9.2.

A: See Information 1 – Attachment 4

14.

Q: Explain any leakage that have occurred from the onboard vapor recovery system pressure relief valve during any frontal impact development or certification testing performed by or for Nissan North America, Inc. If any leakage occurred, include the amount. Describe that method used to collect fluid from the onboard vapor recovery system pressure relief valve for the period from impact until motion of the vehicle has ceased.

A: No leakage has occurred during and after frontal impact certification testing.

## Method of Disconnecting Air Bags for Sled Test

**CAUTION:**

- Before disconnecting driver and passenger air bags, turn the ignition switch off, disconnect both battery cables and wait for at least 10 minutes.
- Always work from the side of the air bag module.

**Driver Air Bag**

- 1) Remove lower lid from underneath the steering wheel (6 o'clock position) and disconnect air bag module connector.  
Note: The female connector is shunted when the connector is disconnected.
- 2) Cut the male connector (vehicle harness) wire harness with enough lead to solder the trigger mechanism harness.
- 3) Solder the triggering mechanism wire harness to the male connector wire harness.
- 4) Cover the solder joint with electrical heat shrink tubing.
- 5) Connect the air bag module wire harness as the last step prior to running the sled test.

**Passenger Air Bag**

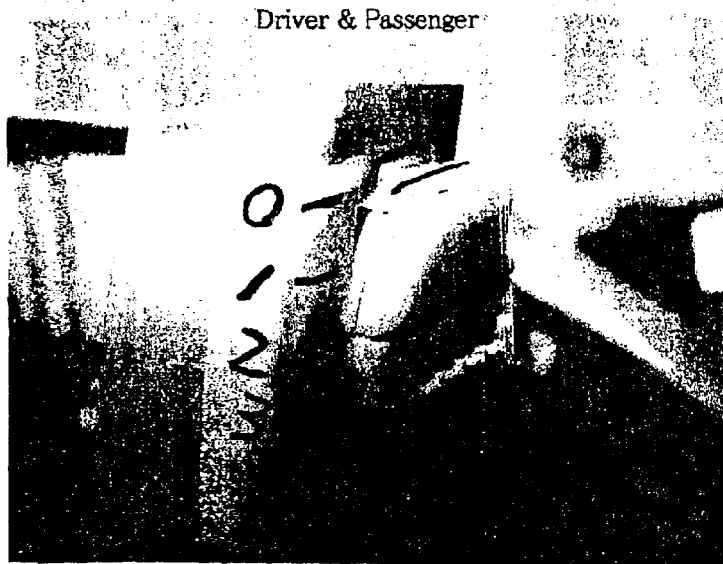
- 1) Remove lid from inside the glove box and disconnect the air bag module connector.  
Note: The female connector is shunted when the connector is disconnected.
- 2) Remove the glove box.
- 2) Cut the male connector (vehicle harness) wire harness with enough lead to solder the trigger mechanism harness.
- 3) Solder the triggering mechanism wire harness to the male connector wire harness.
- 4) Cover the solder joint with electrical heat shrink tubing.
- 5) Connect the air bag module wire harness, **DO NOT** connect the triggering mechanism wire harness to the trigger mechanism.
- 6) Route the air bag module and triggering mechanism wire harness away from any sharp edges and re-install the glove box.
- 7) Connect the triggering mechanism wire harness to the triggering mechanism as the last step prior to running the sled test.

2000 NISSAN MAXIMA 4DOOR SEDAN

ADJUSTABLE SHOULDER BELT ANCHORAGE POSITIONING

DATA FOR 2000 NISSAN MAXIMA 4DOOR SEDAN

1. Locate the lock release button on the B-pillar panel.
2. Actuate the release mechanism by depressing the button and position the adjuster to it's highest position.



AUT12206.JPG

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## Information 2

NISSAN MOTOR COMPANY,LTD.

2000 Model Year  
Nissan Maxima  
Tables, Attachments,  
Appendices & Annexes

\*TABLE#1 Summary of Test Results of FMVSS No.208 Compliance Test

\*TABLE#2 Copy of FMVSS No.204 Certification Test Report

### ATTACHMENTS

Attachment #1: Adjustable Front Seat Back Angle, Seat Slide Positioning, Adjustable Upper Anchorage Positioning, Tilt Steering Column Positioning & Fuel Tank Data (Form #1)

\*Attachment #2: Steering Column Drawing & Energy Management System

Attachment #3: Front Seat Back Positioning Procedure Photographs

\*Attachment #4: Certification Letter for Conformance to FMVSS No.208.S9.2

### APPENDICES

Appendix A : Dimensions & Photographs for Seat Back Angle & Seat Slide Positioning

Appendix B : Dimensions & Photographs for Tilt Steering Column Positioning

Appendix C : Dimensions & Photographs for Dummy Positioning

### ANNEXES

\*Annex #1: Acceleration vs. Time Plots for Driver ATD

\*Annex #2: Acceleration vs. Time Plots for Passenger ATD

\*Not included in this submission. To be submitted as supplemental information.

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Information 2--  
Attachment 1  
Page 1 of 3DATA SHEET  
TEST VEHICLE INFORMATIONVehicle Model Year & Make: 2000MY NISSANVehicle Model & Body Style: MAXIMA 4DOOR SEDAN

## 1. NOMINAL DESIGN RIDING POSITION

For adjustable driver and passenger seat backs.

Please describe how to position the inclinometer to measure the seat back angle.

Include description of the location of the adjustment latch detent if applicable. Indicate, if applicable, how the detents are numbered (Is the first detent "0" of "1"?)

Seat back angle for driver's seat = 21° degrees

Measurement Instructions:

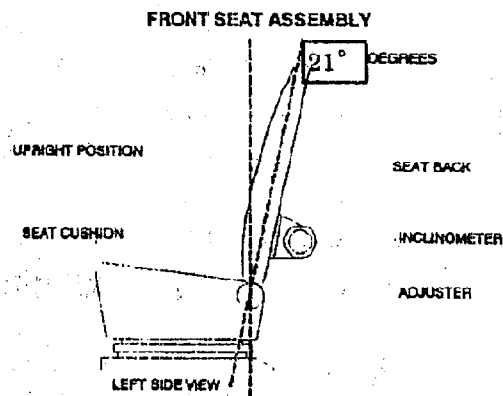
- 1) Pull the folded seat back until the lock position is attained.
- 2) Release the lock by actuating the reclining lever and pushing the seat back to the 6th rearward notch.

Seat back angle for front pass seat = 21° degrees

Measurement Instructions:

Same as driver's seat data.Seat back angle for rear occupant seat = 25° degrees

Measurement Instructions:

The rear seat is fixed.

## 2. SEAT FORE &amp; AFT POSITIONS

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

Positioning of the driver's seat:

1) Actuate seat track slide mechanism by lifting the lock lever and push the seat to its forwardmost position on the track.

2) With the initial position designated as "0", adjust the seat to the 10th detent to attain the proper position.

Positioning of the front passenger's seat (if applicable):

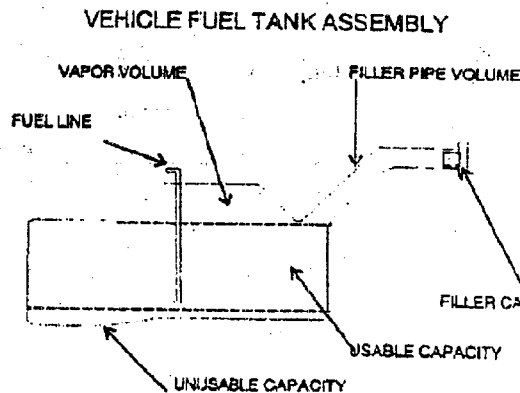
Same as driver's seat data.

Positioning of the rear passenger's seat (left/right)(If applicable):

The rear passenger's seat is fixed.

3. FUEL TANK CAPACITY DATA

- 3.1 A. "Usable Capacity" of standard equipment fuel tank = 18.5 gallons.
- B. "Usable Capacity" of optional equipment fuel tank = N.A. gallons.
- C. "Usable Capacity" of vehicle(s) used for certification testing to requirements of FMVSS 301 = 18.5 gallons.



3.2 Amount of Stoddard solvent added to vehicle(s) used for certification test(s) = 17.39 gallons

3.3 Is vehicle equipped with electric fuel pump? Yes- X ; No-       

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

- 1) for 1 second after the ignition is switched to "on".
- 2) while the engine is running.
- 3) for 1 second after the engine stops.

**CONFIDENTIAL**Information 2--  
Attachment 1  
Page 3 of 3

## 4. STEERING COLUMN ADJUSTMENTS

Steering wheel and column adjustments are made so that the steering wheel hub is at the geometric center of the locus it describes when it is moved through its full range of driving positions.

If the tested vehicle has any of these adjustments, does your company use any specific procedures to determine the geometric center.

Operational Instructions:

a=23° degrees

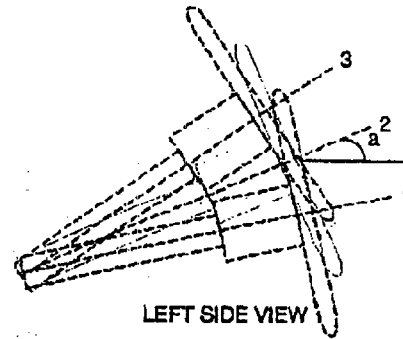
1) Set the inclinometer on the steering column cover

2) Measure the column angle using the inclinometer with the steering column at the highest and lowest elevation and record the resultant angles.

3) Adjust the steering column to the mid position.

REMARKS:

STEERING COLUMN ASSEMBLY



LEFT SIDE VIEW

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2000 NISSAN MAXIMA 4DOOR SEDAN

Information 2--  
Attachment 3

Attachment 3

ADJUSTABLE FRONT SEAT BACK ANGLE

(USE INCLINOMETER)

DATA FOR 2000 NISSAN MAXIMA 4DOOR SEDAN



AUT12203.JPG

After adjusting the back according to Attachment 1, Seat back angle is 10° when measured at the position shown in the photograph.

APPENDIX A

DIMENSIONS FOR SEAT BACK ANGLE AND SEAT SLIDE SETTING  
VEHICLE MODEL YEAR: 2000 VEHICLE MAKE: NISSAN  
VEHICLE MODEL & BODY STYLE: MAXIMA 4DOOR SEDAN

Reset is required when each dimension you measured has more than 0.6 in. difference from the dimension below.  
( Refer to Figs. 1-4 and photographs )

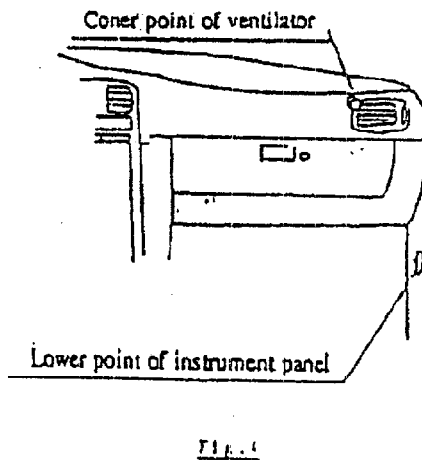
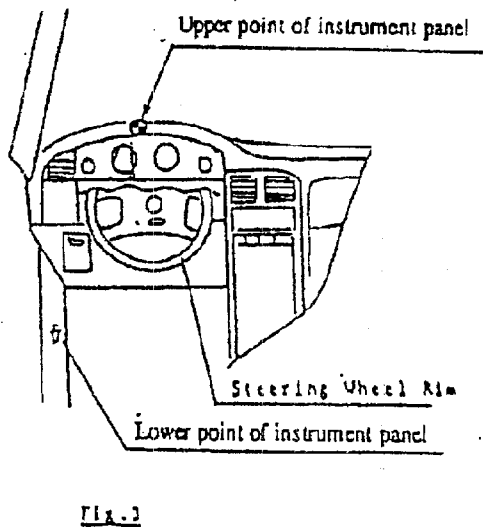
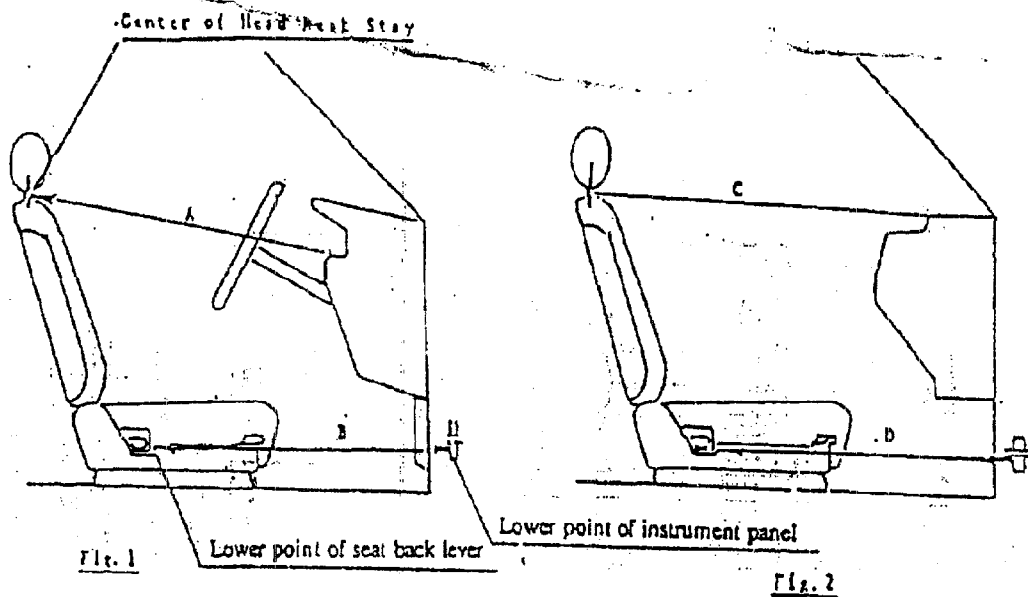
	Measurements Points	Photographs	Dimensions	
Driver Side	Center of headrest stay- Upper point of instrument Panel	1 to 3	38.07in	Seat back setting data
	Corner of seat cover- Check link pin	4 to 6	31.57in	Seat slide setting data
Passenger Side	Center of headrest stay- Upper point of instrument Panel	7 to 9	38.90in	Seat back setting data
	Corner of seat cover- Check link pin	10 to 12	31.89in	Seat slide setting data

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2000 NISSAN MAXIMA 4DOOR SEDAN

Information 2--  
Appendix A

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2000 NISSAN MAXIMA

APPENDIX B

DIMENSIONS FOR TILT STEERING COLUMN POSITIONING  
 VEHICLE MODEL YEAR: 2000 VEHICLE MAKE: NISSAN  
 VEHICLE MODEL & BODY STYLE: MAXIMA 4DOOR SEDAN

Reset is required when each dimension you measured has more than 0.6 in. difference from the dimension below.  
 ( Refer to Figs. 1 -2 and photographs .)

	Measurements Points	Photographs	Dimensions
Driver side	A Center of steering horn pad - Edge of header rail	1,2,3	17.3in
	B Lower point of steeringwheel rim - Edge of header rail	4,5	23.7in

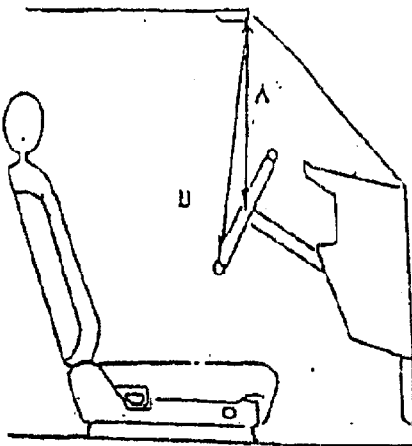
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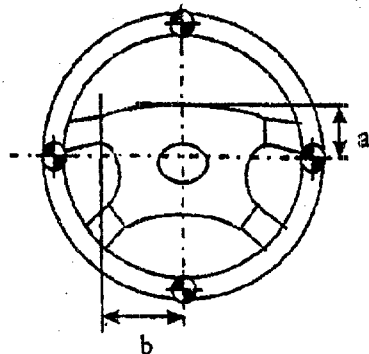
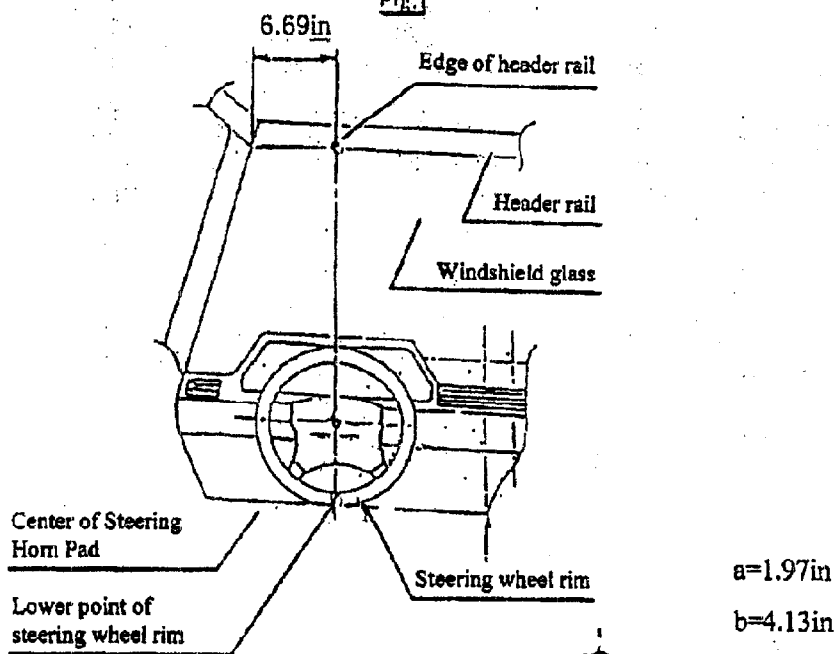
Information 2..  
APPENDIX B

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2000 NISSAN MAXIMA



**Fig. 1**



**Center of Steering Horn Pad**

2000 NISSAN MAXIMA

Information 2--  
Appendix C  
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## Appendix C

DIMENSION FOR DUMMY SETTING(Refer to Figs.1-2 and photographs)

VEHICLE MODEL YEAR : 2000 VEHICLE MAKE : NISSAN  
VEHICLE MODEL & BODY STYLE : MAXIMA 4DOOR SEDAN

Reset is required when each dimension you measured has more than 1 in. difference from the dimension bellow.

	Driver side		Passenger side	
	Photo No.	Dimensions	Photo No.	Dimensions
WA				
SWA	1	23deg		
SCA				
SA	2	10deg	3	11deg
HZ				
HH	4,8,10	11.3in	5,9,11	11.7in
HW	6,8,10	23.3in	7,9,11	23.3in
HR	12,14	7.6in	13,15	7.7in
NR	10,16,17	15.6in		
CD	18,20,24	21.1in	19,21,25	24.8in
CS	22,23,24	11.5in		
RA				
KDL	26,28,32	5.7in	30,33	5.9in
KDR	27,29	5.7in	31,33	5.9in
PA				
TA				
KK	34	10.8in	31	7.5in
ST				
SK				
SH				
SHY				
HS*1	35,37	10.2in	36,38	9.9in
HD*1	39,41	11.7in	40,42	11.8in
AD	43,45	6.7in	44,46	6.5in
HC*3	47,49	32.4in	48,50	32.3in

\*1;HS—Head target to corner point of adjustable shoulder belt anchorage.

\*2;HD—Navel to door , Center line of dummy (Navel) - Upper point of arm rest.

\*3;HC—Center of angle gage hole - Check link pin of front door.

2000 NISSAN MAXIMA

Information 2--  
 Appendix C  
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**DUMMY MEASUREMENTS FOR FRONT SEAT PASSENGERS**

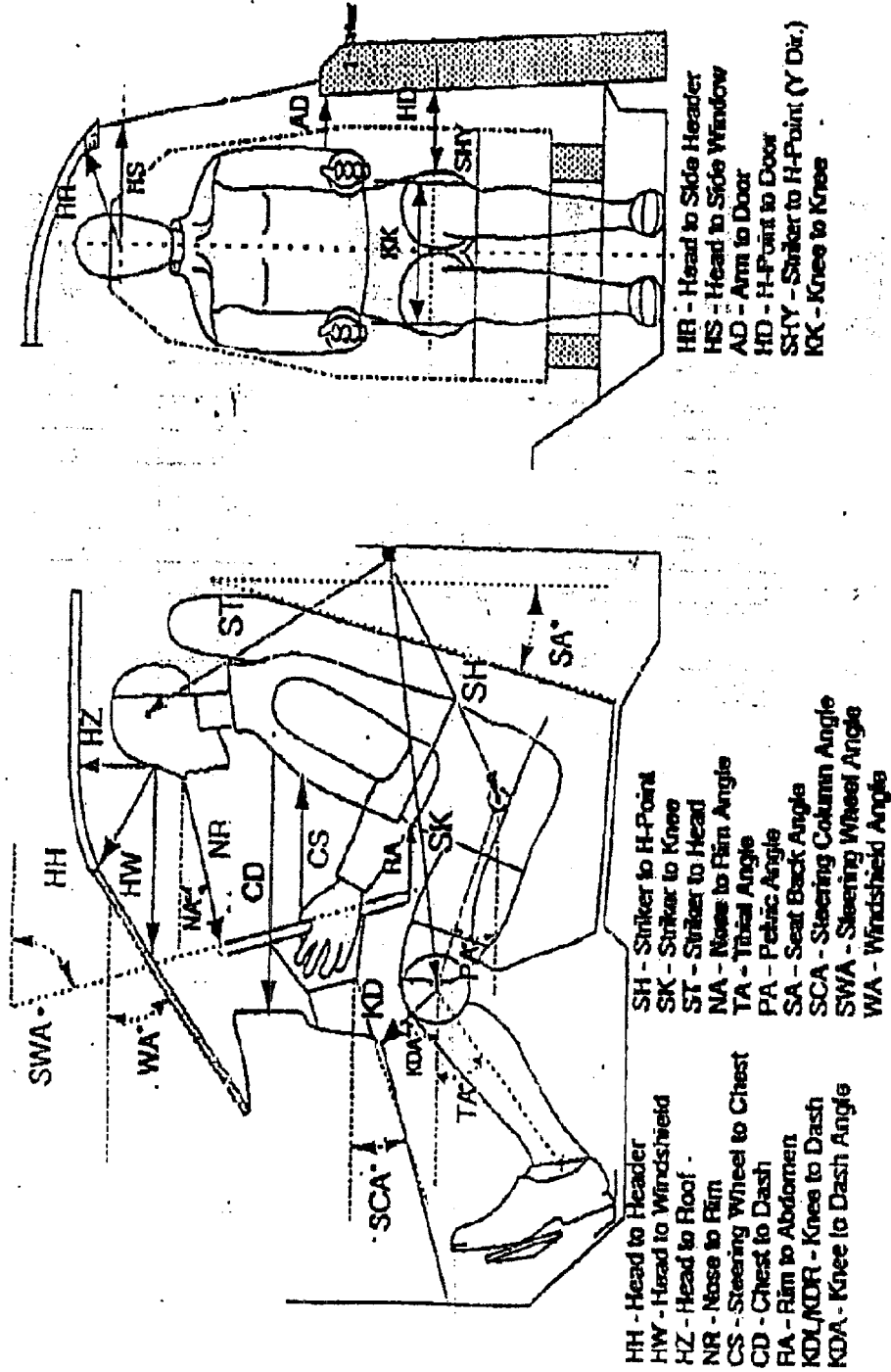


Fig. 2

Fig. 1