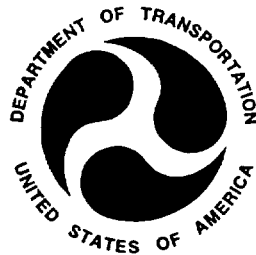


REPORT NO. 208-MGA-2001-007

SAFETY COMPLIANCE SLED TESTING FOR FMVSS 208
OCCUPANT CRASH PROTECTION

DaimlerChrysler Corporation
2001 Dodge Neon 4 Door
NHTSA NO. C10301

MGA RESEARCH CORPORATION
5000 WARREN ROAD
BURLINGTON, WI 53105



Test Date: May 14, 2001

Report Date: May 29, 2001

FINAL REPORT

Prepared For:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
SAFETY ASSURANCE
OFFICE OF VEHICLE SAFETY COMPLIANCE
MAIL CODE. NSA-30
400 SEVENTH STREET, S.W., ROOM 6115
WASHINGTON, D.C. 20590

This publication is distributed by the U.S. Department of Transportation, National Highway Traffic Safety Administration, in the interest of information exchange. The opinions, findings and conclusions expressed in this publication are those of the author(s) and not necessarily those of the Department of Transportation or the National Highway Traffic Safety Administration. The United States Government assumes no liability for its contents or use thereof. If trade or manufacturers' names or products are mentioned, it is only because they are considered essential to the object of the publication and should not be construed as an endorsement. The United States Government does not endorse products or manufacturers.

PREPARED BY: Chad Gadberry
Chad Gadberry, Project Engineer
MGA Research Corporation

DATE: 6/1/01

APPROVED BY: David Winkelbauer
David Winkelbauer, Facility Director
MGA Research Corporation

DATE: 6/1/01

Technicians: Alan Artus
Tammy Brausch
Carl Ford
Ben Marx
Tim Michnay
Doug Miller
Chris Novak
Kurt Range

Secretary: Donna M Janovicz

FINAL REPORT ACCEPTED BY:

Charles R. Lane
Contracting Officer's Technical Representative (COTR)
NHTSA, Office of Vehicle Safety Compliance

9/10/01
Date of Report Acceptance

TECHNICAL REPORT STANDARD TITLE PAGE

1 Report No 208-MGA-2001-007	2 Government Accession No	3 Recipient's Catalog No	
4 Title and Subtitle Final Report for FMVSS 208 Compliance Sled Testing of a 2001 Dodge Neon 4 Door NHTSA No C10301		5 Report Date May 29, 2001	
		6 Performing Organization Code MGA	
7. Author(s) Chad Gadberry, Project Engineer		8 Performing Organization Report No 208-MGA-2001-007	
9. Performing Organization Name and Address MGA Research Corporation 5000 Warren Road Burlington, WI 53105		10 Work Unit No	
		11 Contract or Grant No DTNH22-98-D-11055	
12. Sponsoring Agency Name and Address U.S Department of Transportation National Highway Traffic Safety Administration Office of Vehicle Safety Compliance (Mail Code NSA-30) 400 Seventh St , S W , Room 6115 Washington, D C 20590		13 Type of Report and Period Covered Final Report May 14 - 29, 2001	
		14 Sponsoring Agency Code NSA-30	
15 Supplementary Notes			
16 Abstract A compliance test (sled test) was conducted on the subject 2001 Dodge Neon 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 Lap belt lockability of the right front passenger seating position (S7 1.1 5(c)(7))			
17. Key Words Compliance Testing Safety Engineering FMVSS 208S Sled Test		18 Distribution Statement Copies of this report are available from NHTSA Technical Reference Division, Room 5108, (NAD-40) 400 Seventh Street, S W Washington, D C 20590 Telephone No (202) 366-4946	
19 Security Classif (of this report) Unclassified	20. Security Classif (of this page) Unclassified	21 No of Pages 156	22 Price

TABLE OF CONTENTS

<u>DESCRIPTION</u>	<u>PAGE NO.</u>
Purpose	1
Test Procedure	2
Test Results Summary	3
Sled Test Summary	5
General Test and Vehicle Parameter Data	6
Post Test Data	9
Seat and Steering Column Positioning Data	10
Dummy Positioning Measurement Table	11
Vehicle Targeting Measurements	16
Vehicle Accelerometer Placement and Data Summary	17
Vehicle Accelerometer Location Measurements and Data Summary	18
Camera Positions	19
Camera Location Measurements	20
Occupant Injury Data	21
Seat Belt Warning System Data	23
Readiness Indicator	24
Airbag Labels Data	25
Rear Outboard Seating Position Seat Belt Data	32
Lap Belt Lockability Data	33
Seat Belt Comfort and Convenience Data	45
Appendix A - Photographs	
Appendix B - Data Plots	
Appendix C - Manufacturer Provided Test Information	

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 2001 Dodge Neon 4 Door, NHTSA No. C10301, 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-eight (38) 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 one (1) real-time motion picture camera and 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 May 14, 2001

The test vehicle, a 2001 Dodge Neon 4 Door, NHTSA No. C10301, 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	186	203
Chest g	60 g	32.9 g	46.9 g
Chest displacement	3 in	0.7 in	0.8 in
Left Femur	2250 lb	1433 lb	1093 lb
Right Femur	2250 lb	1110 lb	1305 lb
Neck Extension	57 Nm	11.1 Nm	5.3 Nm
Neck Flexion	190 Nm	63.7 Nm	39.7 Nm
Neck Tension	3300 N	739 N	866 N
Neck Compression	4000 N	890 N	764 N
Neck Shear	3100 N	1251 N	1087 N

The vehicle also appears to meet the other FMVSS 208 requirements for which it was tested, with the exception of the lap belt lockability of the right front passenger seating position. 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 17.5 g with an integrated velocity change of 29.4 mph. After filtering the acceleration signal to Channel Class 60, the airbag system was triggered 20.4 milliseconds after 0.5 g acceleration.

INCLUDE DISCUSSION OF LOST CHANNELS OR OTHER TEST ISSUES

- None noted

Sled Test Summary

Vehicle NHTSA No.: C10301 Test Mode FMVSS 208 SLED TEST

Vehicle Yr/Make/Model/Body Style: 2001/Dodge/Neon/4 Door

Test Date: May 14, 2001

Time 1.15 p.m

Temp: 71°F

Vehicle Test Weight: 3099 lbs

DUMMY INFO.

DRIVER

PASSENGER

Dummy Type

Part 572E

Part 572E

Serial Number

401

403

Restraint System

Frontal airbag

Frontal airbag

No. Data Channels

15

15

Number of Cameras:

1 Real Time

6 High Speed

Door Opening Data:

yes Left Front

yes Right Front

FRONT SEAT(S) DATA

DRIVER

PASSENGER

Seat Track Failure -

0.0 inches shift,

0.0 inches shift

Seat Back Failure -

no

no

VISIBLE DUMMY CONTACT POINTS:

DRIVER

PASSENGER

Head

Airbag/sun visor

Airbag/sun visor

Chest

Airbag

Airbag

Left Knee

Knee bolster

Glove box/airbag

Right Knee

Knee bolster

Glove box/airbag

General Test And Vehicle Parameter DataVehicle Yr/Make/Model/Body Style: 2001/Dodge/Neon/4 DoorVehicle NHTSA No. C10301 VIN: 1B3ES46C71D190982 Color White

Engine Data:

No Cylinders 4; CID:____; Liters: 2.0; CCs:____Placement. Longitudinal/Inline:____; Transverse/Lateral: X

Transmission Data

Speeds: 4; Manual:____; Automatic: X; Overdrive:____

Final Drive:

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

Major Options

A/C ____; Pwr. Strg.: X; Pwr. Brakes: X; Pwr. Windows: ____Pwr. Dr. Locks.:____; Other: Rear defogger, tinted glassDate Received: 1/24/01; Odometer Reading: 65 milesSelling Dealer: Griffin Dodge, N85 W15474 Appleton Avenue, Menomonee Falls, WI 53051

REMARKS: None

General Test And Vehicle Parameter Data (Cont.)

DATA FROM VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured By DaimlerChrysler CorporationDate of Manufacture 1/01, VIN 1B3ES46C71D190982GVWR: 3640 lbs; GAWR Front: 1967 lbsGAWR Rear: 1723 lbs

DATA FROM TIRE PLACARD:

Tire Pressure with Maximum Capacity Vehicle Load:

FRONT: 32 psi REAR: 32 psiRecommended Tire Size: P185/65R14 or P185/60R15

Recommended Cold Tire Pressure:

FRONT: 32 psi REAR: 32 psiSize of Tires on Test Vehicle: P185/65R14Type of Spare Tire: T125/70D14; 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) = 865 lbsNo Of Occupants x 150 lbs = 750 lbsRated Cargo/Luggage Weight (RCWL) = 115 lbs (Difference)

General Test And Vehicle Parameter Data (Cont.)

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

Right Front =	<u>827</u> lbs.	Right Rear =	<u>490</u> lbs
Left Front =	<u>839</u> lbs.	Left Rear =	<u>484</u> lbs
TOTAL FRONT =	<u>1666</u> lbs.	TOTAL REAR =	<u>974</u> lbs.
% Total Weight =	<u>63.1</u> %	% Total Weight =	<u>36.9</u> %
TOTAL DELIVERED WEIGHT = <u>2640</u> lbs.			

WEIGHT OF FULLY LOADED TEST VEHICLE WITH TWO DUMMIES (344 LB) AND 115 POUNDS OF CARGO WEIGHT:

Right Front =	<u>914</u> lbs.	Right Rear =	<u>635</u> lbs.
Left Front =	<u>916</u> lbs	Left Rear =	<u>634</u> lbs.
TOTAL FRONT =	<u>1830</u> lbs.	TOTAL REAR =	<u>1269</u> lbs.
% Total Weight =	<u>59.1</u> %	% Total Weight =	<u>40.9</u> %
TOTAL WEIGHT = <u>3099</u> lbs.			

TEST VEHICLE ATTITUDE: (all measurements in degrees)

AS DELIVERED DOOR SILL ANGLE:	<u>2.4° nose down</u>
AS TESTED DOOR SILL ANGLE:	<u>2.2° nose down</u>
FULLY LOADED DOOR SILL ANGLE:	<u>1.9° nose down</u>

FUEL SYSTEM DATA:

Fuel System Capacity From Owner's Manual = 12.0 gallons
 Usable Capacity Figure Furnished by COTR = 12.0 gallons

REMARKS: None

Post-Impact Data

Test number: HT01051401

NHTSA number C10301

Test date: May 14, 2001

Test time: 1:15 p m.

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: 29.4 mph

Specified integrated velocity range: 28 to 30 mph

Sled Carriage Acceleration:

Acceleration: 17.5 g

Specified Acceleration Range. 16.0 - 18.2 g

Sled Carriage Acceleration Duration:

Time from T-0 (-0.5 g) to 0.0 g: 124.3 msec

Specified Acceleration Duration: 120.0 to 130.0 msec

The sled acceleration corridor was achieved

Seat and Steering Column Positioning Data

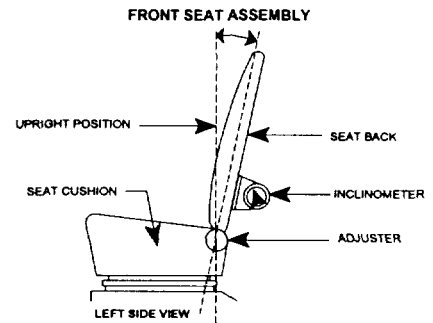
Vehicle Yr/Make/Model/Body Style: 2001/Dodge/Neon/4 Door

Vehicle NHTSA No.: C10301 Test Date: May 14, 2001

NOMINAL DESIGN RIDING POSITION:

Driver Seat: Seat Back Angle = 22.5°

Passenger Seat: Seat Back Angle = 22.5°



SEAT FORE AND AFT POSITIONS:

Driver Seat: The seat track had a total position movement of 23 notches and was positioned 11 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 23 notches and was positioned 11 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 its continuous angular adjustment (22.5°).

Dummy Positioning Measurement Table

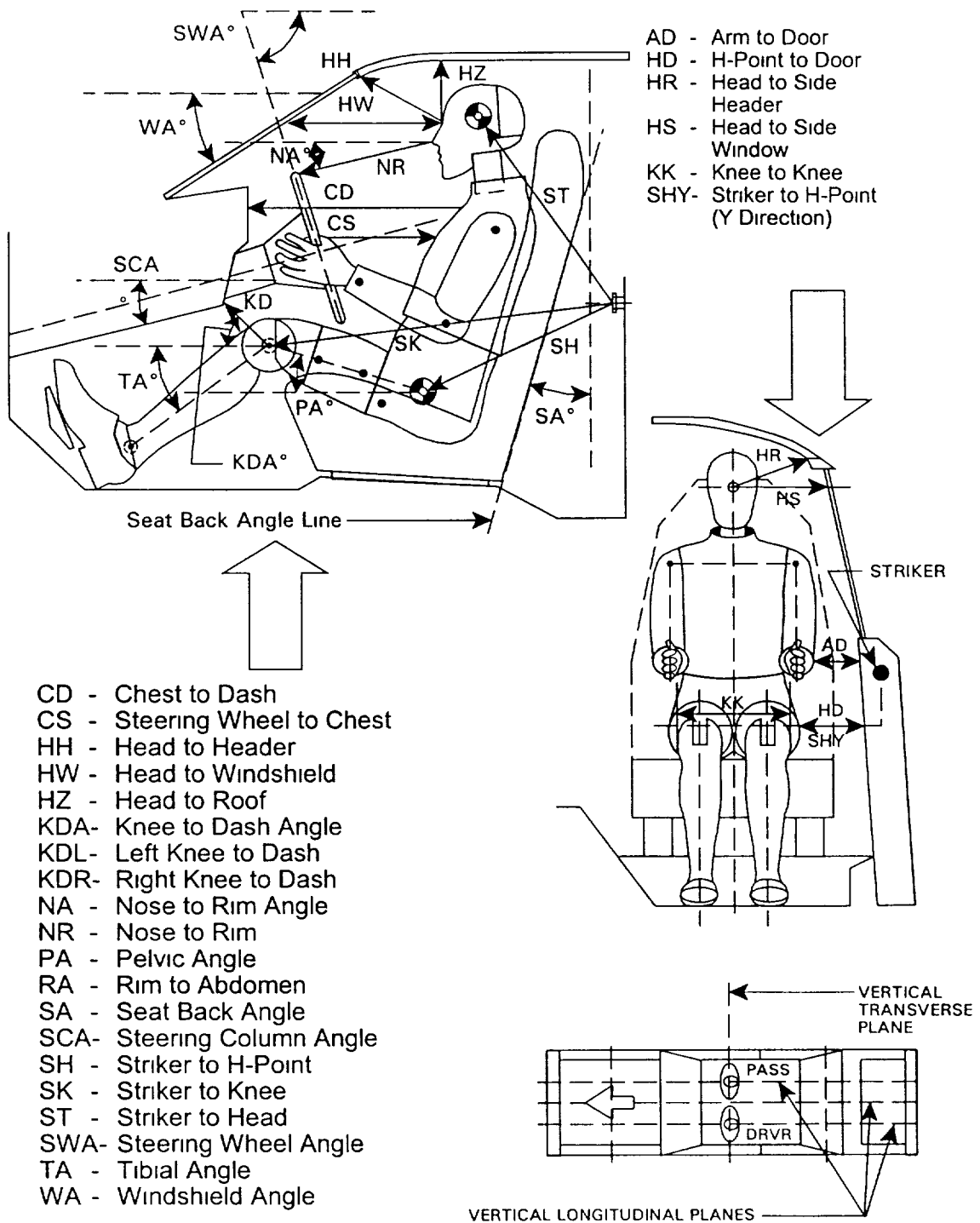
Vehicle Year/Make/Model/Body Style: 2001/Dodge/Neon/4 Door

Vehicle NHTSA No.. C10301 Test Date May 14, 2001

	DRIVER (Serial #401)	PASSENGER (Serial #403)
WA°	24.9°	
SWA°	22.5°	
SCA°	23.5°	
SA°	16.4°	17.2°
HZ	6.8	6.8
HH	14.1	12.7
HW	26.0	24.1
HR	7.5	7.6
NR	16.4 Angle (NA°) 12.0°	
CD	20.9	19.9
CS	13.1	
RA	7.8	
KDL	7.1 Angle (KDA°) 17.9°	6.8
KDR	6.8	6.6 Angle (KDA°) 33.7°
PA°	24.3°	22.7°
TA°	36.9°	43.0°
KK	12.1	9.8
ST	20.0 Angle 4.3°	20.8 Angle 7.3°
SK	21.6 Angle 90.2°	21.3 Angle 90.0°
SH	7.5 Angle 124.5°	7.4 Angle 127.7°
SHY	9.6	9.0
HS	11.6	11.9
HD	5.2	4.9
AD	3.1	4.2

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).
- *¹ 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

¹ 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)

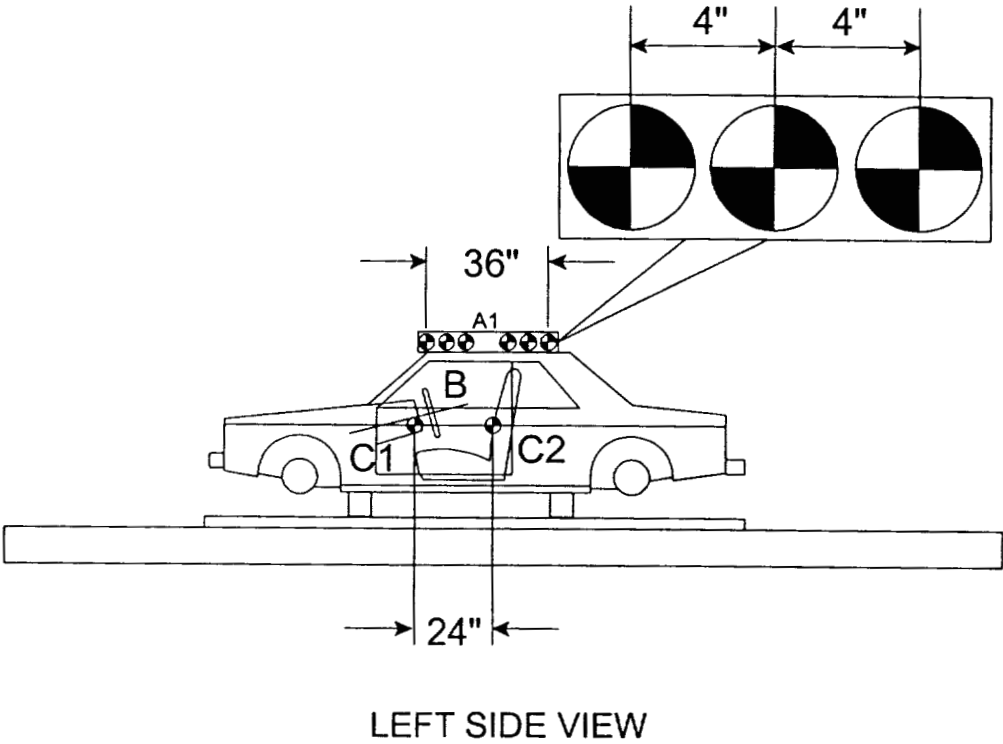
* Measurement used in Data Tape Reference Guide

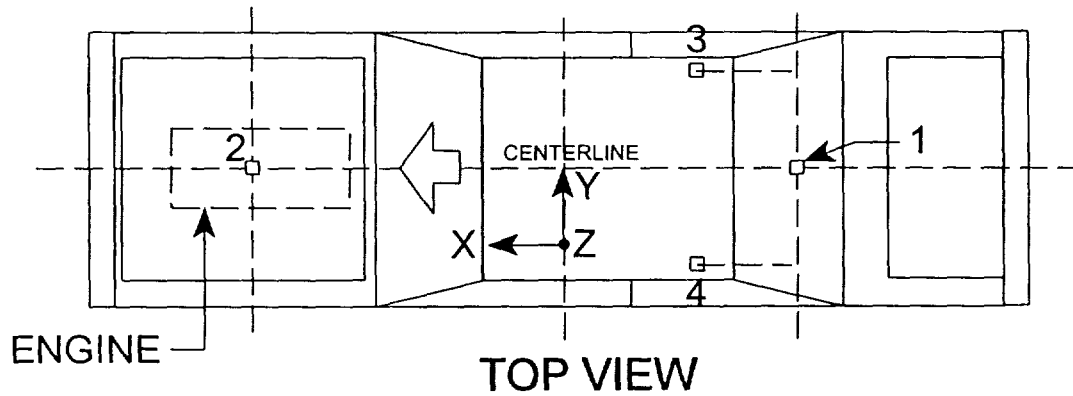
Description of Dummy Measurements (Cont.)**Angles**

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.

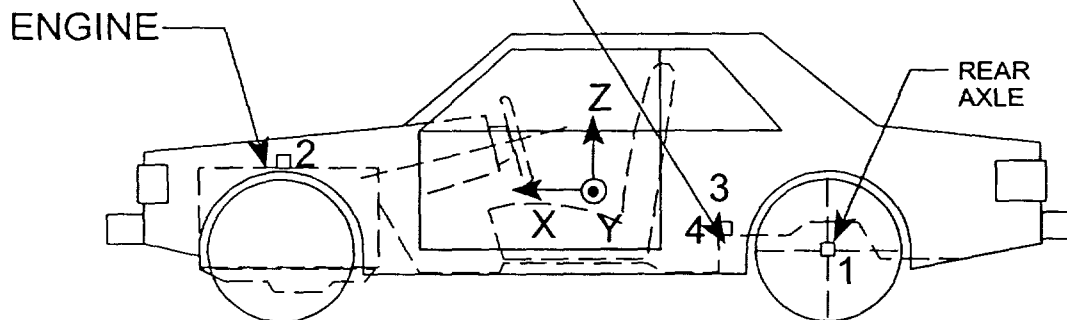
Vehicle Targeting Measurements

REFERENCE PHOTO TARGETS



Vehicle Accelerometer Placement and Data SummaryVehicle Year/Make/Model/Body Style. 2001/Dodge/Neon/4 DoorVehicle NHTSA No.: C10301 Test Date: May 14, 2001

REAR SEAT CUSHION
ASSY. FRONT ATTACHMENT
BRACKET SUPPORT



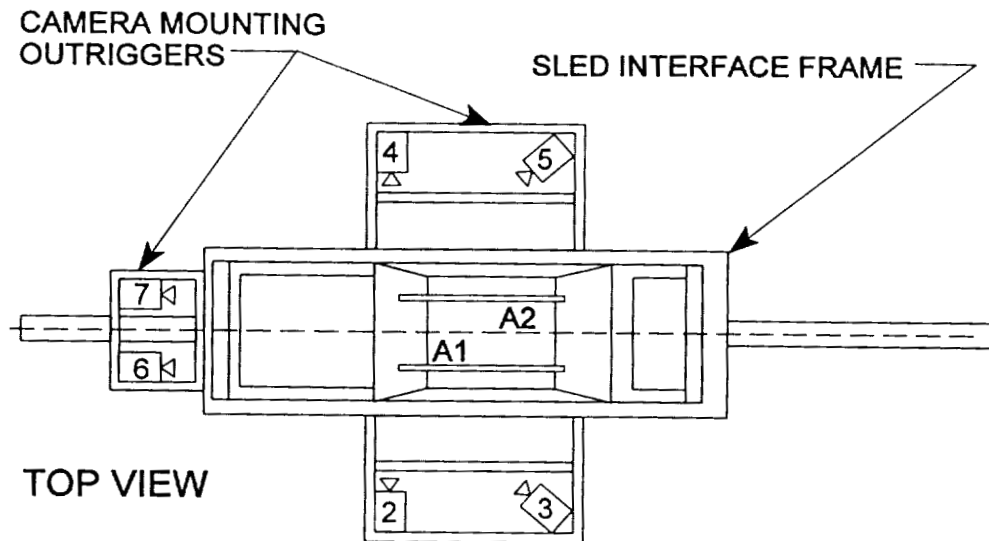
Vehicle Accelerometer Location Measurements and Data Summary

Vehicle Year/Make/Model/Body Style: 2001/Dodge/Neon/4 Door

Vehicle NHTSA No C10301 Test Date: May 14, 2001

No.	Location	X (in)	Y (in)	Positive Direction		Negative Direction	
				Value	Time (msec)	Value	Time (msec)
	Sled Primary Longitudinal	67.0	0	17.5 g	68	-1.2 g	127
	Sled Redundant Longitudinal	67.0	4.0	17.3 g	68	-1.2 g	127
	Sled Velocity Measured Integrated	67.0	0	29.4 mph	124	--	--
1	Rear Axle Longitudinal	32.0	0	19.5 g	39	-1.5 g	129
2	Top Engine Longitudinal	148.0	0	18.0 g	46	-1.1 g	152
3	Right Rear Seat Member Longitudinal	64.0	12.5	20.2 g	48	-1.8 g	130
4	Left Rear Seat Member Longitudinal	64.0	12.5	19.9 g	62	-1.6 g	130

Camera Positions



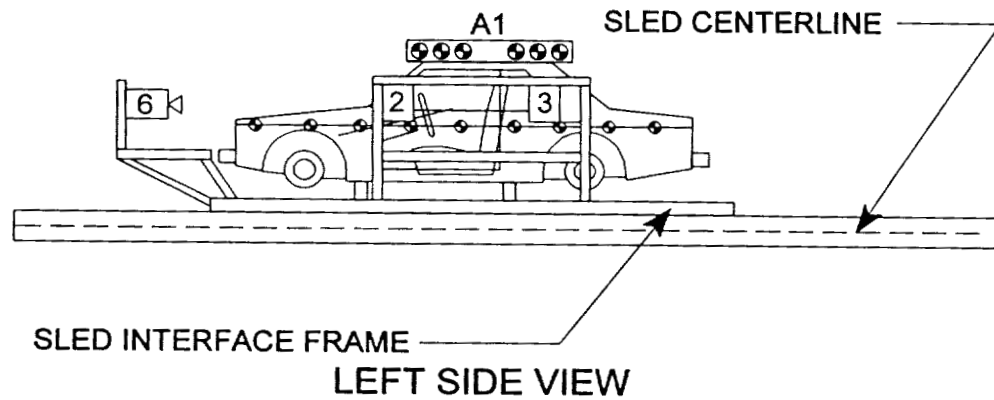
CAMERA FRAME RATES.

#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	70.6	88.6	38.4	90	72.4	13	952
3	Onboard Driver Angle	150.9	91.1	47.8			13	488
4	Onboard Passenger	71.8	89.6	38.5	90	71.1	13	1000
5	Onboard Passenger Angle	146.7	88.5	47.9			13	1005
6	Onboard Windshield Driver	18.3	14.1	42.9			13	1005
7	Onboard Windshield Passenger	18.3	13.9	42.9			13	647

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

Occupant Injury Data

Vehicle Year/Make/Model/Body Style: 2001/Dodge/Neon/4 Door

Vehicle NHTSA No. C10301 Test Date. May 14, 2001

MAXIMUM ACCELERATION VALUES (g's)	DRIVER DUMMY #401	PASSENGER DUMMY #403
Head Channel X	-35.8	-35.6
Head Channel Y	5.4	-5.0
Head Channel Z	20.2	25.2
HEAD RESULTANT	39.6	36.3
Chest Channel X	-31.5	-42.5
Chest Channel Y	3.9	3.4
Chest Channel Z	10.9	24.1
CHEST RESULTANT	33.1	47.5

HEAD INJURY CRITERIA (HIC) VALUES:

HIC	186	203
t_1 = (msec)	83.2	105.3
t_2 = (msec)	119.2	141.3

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

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

CLIP	32.9	46.9
t_1 = (msec)	98.7	104.7
t_2 = (msec)	101.7	107.7
CHEST DEFLECTION (in)	0.7	0.8

Occupant Injury Data (Cont)

MAX COMPRESSIVE FEMUR FORCES	DRIVER DUMMY #401	PASSENGER DUMMY #403
Left Side (lbs)	1433	1093
Right Side (lbs)	1110	1305

NECK INJURY CRITERIA:

Peak Flexion Bending Moment about the Occipital Condyle (N-m)	63.7	39.7
Peak Extension Bending Moment about the Occipital Condyle (N-m)	11.1	5.3
Peak Axial Tension (N)	739	866
Peak Axial Compression (N)	890	764
Peak Fore Shear (N)	1251	1087
Peak Aft Shear (N)	197	217

Seat Belt Warning System Data

Vehicle Year/Make/Model/Body Style 2001/Dodge/Neon/4 Door

NHTSA No C10301 ; Technician: Chad Gadberry, Date: April 4, 2001

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 _____

Vehicle Year/Make/Model/Body Style: 2001/Dodge/Neon/4 Door

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 (☒)No
(If YES this Data Sheet is complete.)
2. Describe the location of the readiness indicator. Left side of instrument panel

3. Is the readiness indicator clearly visible to the driver?
 (☒)Yes-Pass (☐)No-FAIL
4. Is a list of the elements in the occupant restraint system, being monitored by the readiness indicator, provided?
 (☒)Yes-Pass (☐)No-FAIL

Air Bag Labels Data

Vehicle Year/Make/Model/Body Style. 2001/Dodge/Neon/4 Door

NHTSA No. C10301, Technician Chad Gadberry, Date April 4, 2001

- 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? ☐ Yes, go to 1.2 ☒ No, go to 2
 - 1.2. Does the vehicle have a maintenance or replacement label? ☐ Yes-Pass ☐ No-FAIL
 - 1.3. Does the label contain one of the following? ☐ Yes-Pass ☐ No-FAIL
 - ☐ Schedule on label specifies month and year (Date:_____)
 - ☐ Schedule on label specifies vehicle mileage (Mileage:_____)
 - ☐ Schedule on label specifies interval measured from date on certification label (Date:_____)
 - 1.4. Is the label permanently affixed within the passenger compartment? ☐ Yes-Pass ☐ No-FAIL
 - 1.5. Is the label lettered in English? ☐ Yes-Pass ☐ No-FAIL
 - 1.6. Is the label in block capitals and numerals? ☐ Yes-Pass ☐ No-FAIL
 - 1.7. Are the letters and numerals at least 3/32 inches high? ☐ Yes-Pass ☐ No-FAIL
 - 1.8. Does the owner's manual set forth the recommended schedule for maintenance or replacement? ☐ 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? ☒ 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? ☒ 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-Pass ☐ **No-FAIL**
 Passenger Side - ☒ Yes-Pass ☐ **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

LABEL OUTLINE VERTICAL AND HORIZONTAL LINE BLACK

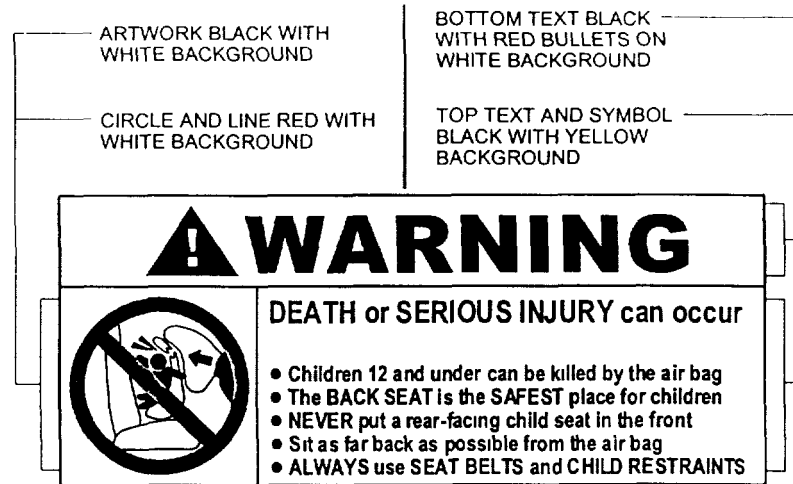


Figure 6a (S4.5.1(b)(2))

SUN VISOR LABEL VISIBLE WHEN VISOR IS IN DOWN POSITION

LABEL OUTLINE, VERTICAL AND HORIZONTAL LINE BLACK

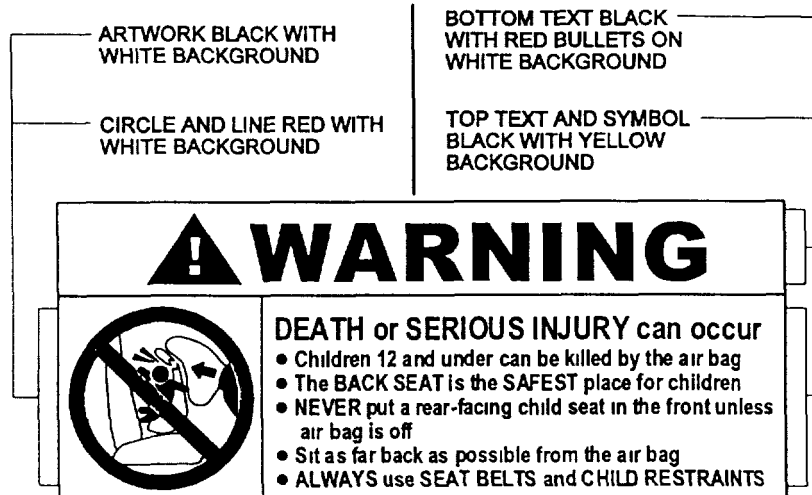


Figure 6b (S4 5 1(b)(2))

- | | | | | |
|-----|---|----------------|-------------|-------------|
| 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.)

- 5 4 Is the message area at least 20 cm²? (S4 5 1(c)(2)(i))
 Actual message area: _____ cm²
 Driver Side - () Yes-Pass () **No-FAIL**
 Passenger Side - () No air bag () 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
 () Yes-Pass () **No-FAIL**
- 5 6 Is the pictogram at least 20 mm in diameter? (S4.5.1(c)(2)(ii))
 Actual diameter _____ mm
 For vehicles with driver side air bag ONLY () Not Applicable
 () 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 cm²? (S4.5.1(e)(ii))
Actual message area: 33.8 cm²
(X)Yes-Pass () **No-FAIL**

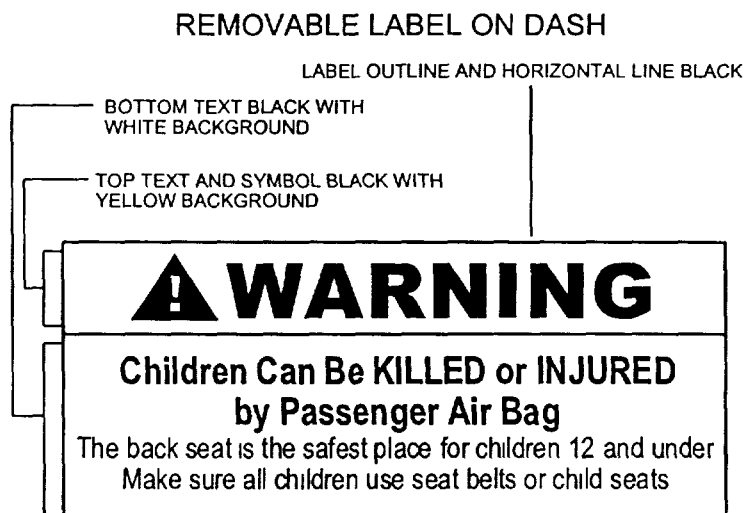


Figure 7 (S4.5.1(e))

Rear Outboard Seating Position Seat Belt DataVehicle Year/Make/Model/Body Style: 2001/Dodge/Neon/4 DoorNHTSA No.: C10301, Technician Chad Gadberry, Date: April 4, 2001

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.

Lap Belt Lockability Data

Vehicle Year/Make/Model/Body Style: 2001/Dodge/Neon/4 Door

NHTSA No C10301 ; Technician: Chad Gadberry ; Date April 4, 2001

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? () Yes, go to 6.1 (X) 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))

() 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 59.8 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)

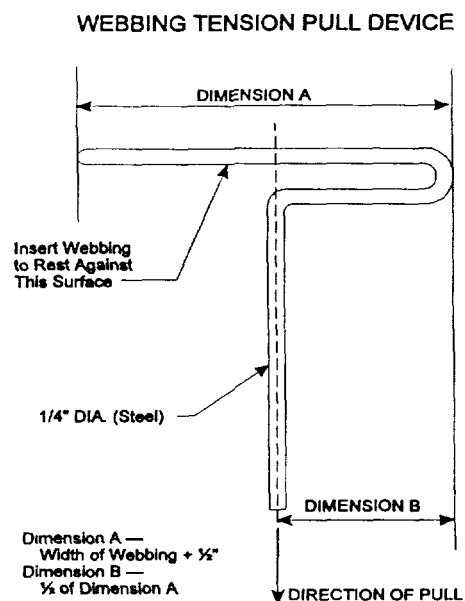


Figure 5 (S7.1.1.5(c)(4))

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 19.3 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 21.8 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 = 2.5 inches

() Yes-Pass

(X) No-FAIL

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

10-14 = 38.0 inches

(X) Yes-Pass

() No-FAIL

REMARKS. None

Lap Belt Lockability Data (Cont.)

Vehicle Year/Make/Model/Body Style 2001/Dodge/Neon/4 Door

NHTSA No C10301, Technician Chad Gadberry; Date: April 4, 2001

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? () Yes, go to 6.1 (X) 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))

() 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 62.0 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)

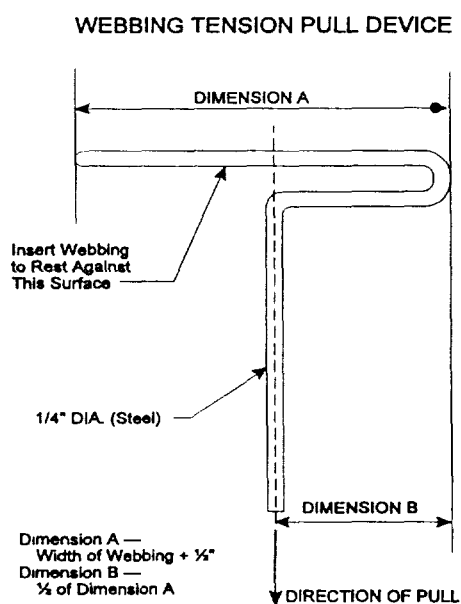


Figure 5 (S7 1 1.5(c)(4))

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 16.5 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 17.8 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 = 1.3 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 = 44.2 inches

(X)Yes-Pass

() No-FAIL

REMARKS None

Lap Belt Lockability Data (Cont.)

Vehicle Year/Make/Model/Body Style: 2001/Dodge/Neon/4 Door

NHTSA No C10301; Technician: Chad Gadberry, Date April 4, 2001

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? () Yes, go to 6.1 (X) 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))

() 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 59.5 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)

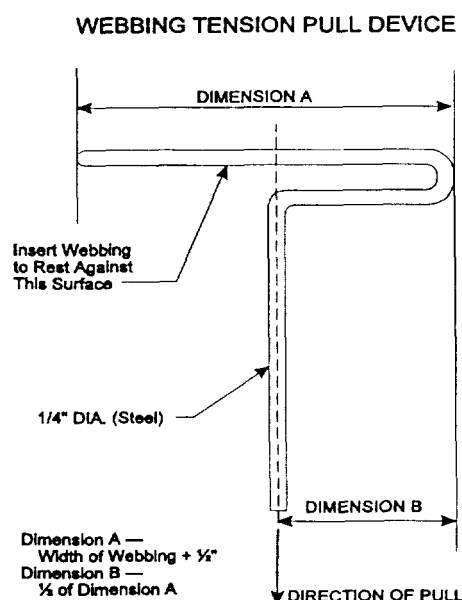


Figure 5 (S7.1.1.5(c)(4))

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 13.0 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 13.4 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 = 0.4 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 = 46.1 inches

(X)Yes-Pass

() No-FAIL

REMARKS: None

Lap Belt Lockability Data (Cont.)

Vehicle Year/Make/Model/Body Style 2001/Dodge/Neon/4 Door

NHTSA No.: C10301 ; Technician: Chad Gadberry ; Date: April 4, 2001

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? () Yes, go to 6.1 (X) 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))

() 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 62.0 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)

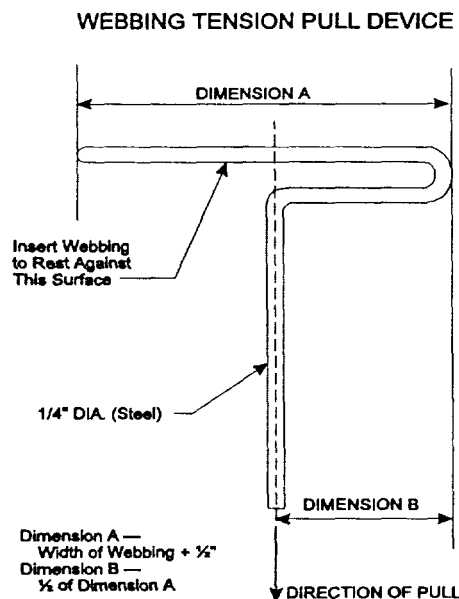


Figure 5 (S7.1.1.5(c)(4))

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 16.5 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 17.8 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 = 1.3 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 = 44.2 inches

(X)Yes-Pass

() No-FAIL

REMARKS: None

Seat Belt Comfort and Convenience Data**1 BELT CONTACT FORCE (S7.4.3)**Test Vehicle NHTSA No.: C10301Vehicle Model Year/Make/Model/Body Style: 2001/Dodge/Neon/4 DoorDesignated Seating Position Tested: Left RearDate of Comfort/Convenience Check: April 4, 2001Technician Performing Check: Chad GadberryGVWR: 3640 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
(X) 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
(X) N/A
- 1.3 If separately adjustable in a vertical direction, the seats are at the lowest position
() Check
(X) N/A
- 1.4 Place adjustable seat backs in the manufacturer's nominal design riding position in the manner specified by the manufacturer.
() Check
(X) 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
(X) N/A
- 1.6 Place each adjustable head restraint in its highest adjustment position
() Check
(X) 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
(X) N/A
- 1.8 Position the test dummies according to dummy position placement instructions in Appendix B.
(X) 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 0.6 lb. (X) 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.)

1. BELT CONTACT FORCE (S7.4.3)

Test Vehicle NHTSA No : C10301

Vehicle Model Year/Make/Model/Body Style 2001/Dodge/Neon/4 Door

Designated Seating Position Tested: Center Rear

Date of Comfort/Convenience Check: April 4, 2001

Technician Performing Check: Chad Gadberry

GVWR: 3640 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
 (X) 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
 (X) N/A
- 1 3 If separately adjustable in a vertical direction, the seats are at the lowest position.
 () Check
 (X) N/A
- 1 4 Place adjustable seat backs in the manufacturer's nominal design riding position in the manner specified by the manufacturer.
 () Check
 (X) 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
 (X) N/A
- 1 6 Place each adjustable head restraint in its highest adjustment position.
 () Check
 (X) 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
(X) N/A
- 1.8 Position the test dummies according to dummy position placement instructions in Appendix B.
(X) 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 0.7 lb. (X) 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.)**1 BELT CONTACT FORCE (S7.4.3)**Test Vehicle NHTSA No : C10301Vehicle Model Year/Make/Model/Body Style. 2001/Dodge/Neon/4 DoorDesignated Seating Position Tested: Right RearDate of Comfort/Convenience Check: April 4, 2001Technician Performing Check: Chad GadberryGVWR: 3640 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
(X) 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
(X) N/A
- 1.3 If separately adjustable in a vertical direction, the seats are at the lowest position.
() Check
(X) N/A
- 1.4 Place adjustable seat backs in the manufacturer's nominal design riding position in the manner specified by the manufacturer.
() Check
(X) 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
(X) N/A
- 1.6 Place each adjustable head restraint in its highest adjustment position
() Check
(X) 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 0.6 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.: C10301

Vehicle Model Year/Make/Model/Body Style: 2001/Dodge/Neon/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 : C10301Vehicle Model Year/Make/Model/Body Style. 2001/Dodge/Neon/4 DoorDesignated 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.: C10301

Vehicle Model Year/Make/Model/Body Style. 2001/Dodge/Neon/4 Door

Designated Seating Position Tested: Left Rear

Date of Comfort/Convenience Check: April 4, 2001

Technician Performing Check: Chad Gadberry

GVWR: 3640 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. (X) Check
 - (B) The seat is moved to any position to which it is designed to be adjusted. (X) Check
 - (C) The seat back, if foldable, is folded forward as far as possible and then moved backward into position. (X) Check
- (X) 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)?
- (X) Yes - Pass
() No - FAIL

Seat Belt Comfort and Convenience Data (Cont.)4. **SEAT BELT GUIDES AND HARDWARE (S7.4.6)**Test Vehicle NHTSA No : C10301Vehicle Model Year/Make/Model/Body Style 2001/Dodge/Neon/4 DoorDesignated Seating Position Tested Center RearDate of Comfort/Convenience Check: April 4, 2001Technician Performing Check: Chad GadberryGVWR: 3640 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. (X) Check
 - (B) The seat is moved to any position to which it is designed to be adjusted. (X) Check
 - (C) The seat back, if foldable, is folded forward as far as possible and then moved backward into position. (X) Check
- (X) 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)?
- (X) Yes - Pass
() No - **FAIL**

Seat Belt Comfort and Convenience Data (Cont.)**4. SEAT BELT GUIDES AND HARDWARE (S7.4.6)**

Test Vehicle NHTSA No : C10301

Vehicle Model Year/Make/Model/Body Style 2001/Dodge/Neon/4 Door

Designated Seating Position Tested: Right Rear

Date of Comfort/Convenience Check. April 4, 2001

Technician Performing Check: Chad Gadberry

GVWR: 3640 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

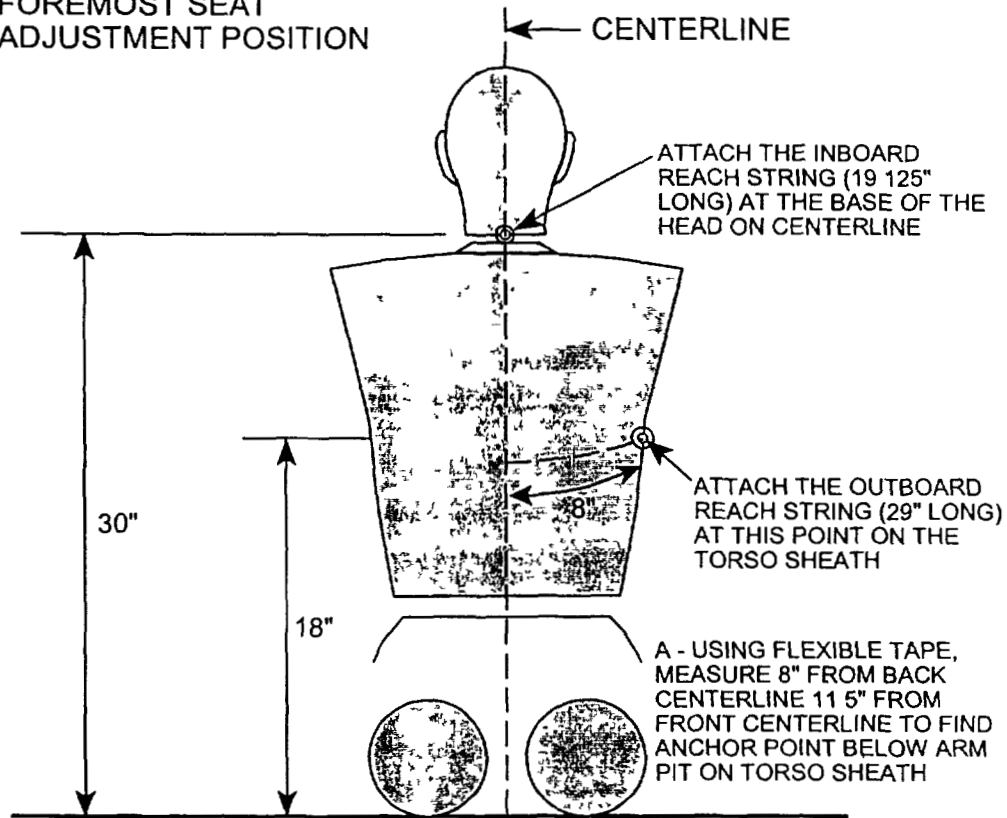
Seat Belt Comfort and Convenience Data (Cont.)

- 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. (X) Check
 - (B) The seat is moved to any position to which it is designed to be adjusted (X) Check
 - (C) The seat back, if foldable, is folded forward as far as possible and then moved backward into position. (X) Check
- (X) 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)?
- (X) Yes - Pass
() No - FAIL

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

PART 572E DUMMY

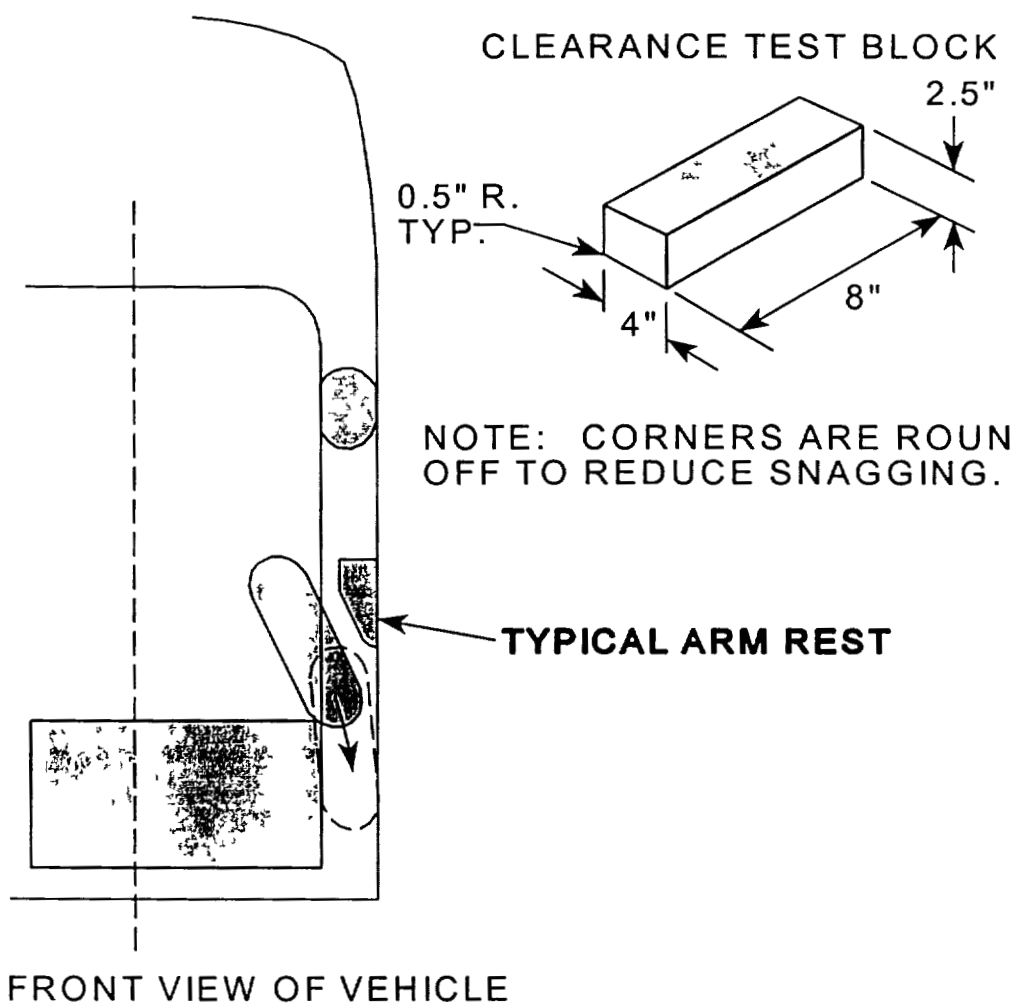
50TH PERCENTILE
DUMMY SEATED IN
FOREMOST SEAT
ADJUSTMENT POSITION



SEAT PLANE IS 90 DEGREES TO THE TORSO LINE

REAR VIEW

USE OF CLEARANCE TEST BLOCK TO DETERMINE HAND/ARM ACCESS



LABORATORY NOTICE OF APPARENT TEST FAILURE TO OVSC

FMVSS NO.: 208 TEST DATE. APRIL 4, 2001

LABORATORY MGA RESEARCH CORPORATION

CONTRACT NO.: DTNH22-98-D-11055 DELV. ORDER NO : 4

LABORATORY PROJECT ENGINEER'S NAME: Chad Gadberry

TEST SPECIMEN DESCRIPTION 2001 Dodge Neon 4 Door

VEHICLE NHTSA NO.. C10301 VIN: 1B3ES46C71D190982

MFR: DaimlerChrysler

APPARENT TEST FAILURE DESCRIPTION Lap Belt Lockability - Right Front
Occupant Location

FMVSS REQUIREMENT, PARAGRAPHS S7.1.1.5(C)(7)

NOTIFICATION TO NHTSA (COTR) Brian Smith

DATE: August 28, 2001 BY: Chad Gadberry

REMARKS:

APPENDIX A
PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

<u>Description</u>	<u>Page No.</u>
Photo No. A-1 - Pre-Test Frontal View	A-1
Photo No. A-2 - Pre-Test Left Side View	A-2
Photo No. A-3 - Pre-Test Right Side View	A-3
Photo No. A-4 - Pre-Test Windshield View	A-4
Photo No. A-5 - Post-Test Windshield View	A-5
Photo No. A-6 - Pre-Test Driver Dummy Position View (Door Open)	A-6
Photo No. A-7 - Post-Test Driver Dummy Position View (Door Open)	A-7
Photo No. A-8 - Pre-Test Driver Dummy Position View	A-8
Photo No. A-9 - Post-Test Driver Dummy Position View	A-9
Photo No. A-10 - Pre-Test Passenger Dummy Position View (Door Open)	A-10
Photo No. A-11 - Post-Test Passenger Dummy Position View (Door Open)	A-11
Photo No. A-12 - Pre-Test Passenger Dummy Position View	A-12
Photo No. A-13 - Post-Test Passenger Dummy Position View	A-13
Photo No. A-14 - Post-Test Driver Airbag View	A-14
Photo No. A-15 - Post-Test Driver Head Contact View (visor)	A-15
Photo No. A-16 - Post-Test Driver Head Contact View (headrest)	A-16
Photo No. A-17 - Post-Test Driver Knee Contact View	A-17
Photo No. A-18 - Post-Test Passenger Dummy Airbag View	A-18
Photo No. A-19 - Post-Test Passenger Dummy Head Contact View (visor)	A-19
Photo No. A-20 - Pre-Test Driver Knee Bolster View	A-20
Photo No. A-21 - Post-Test Driver Knee Bolster View	A-21
Photo No. A-22 - Pre-Test Passenger Knee Bolster View	A-22
Photo No. A-23 - Post-Test Passenger Knee Bolster View	A-23
Photo No. A-24 - Pre-Test Driver Seat Position View	A-24
Photo No. A-25 - Post-Test Driver Seat Position View	A-25
Photo No. A-26 - Pre-Test Passenger Seat Position View	A-26
Photo No. A-27 - Post-Test Passenger Seat Position View	A-27
Photo No. A-28 - Vehicle Certification Label	A-28
Photo No. A-29 - FMVSS 110 Label	A-29

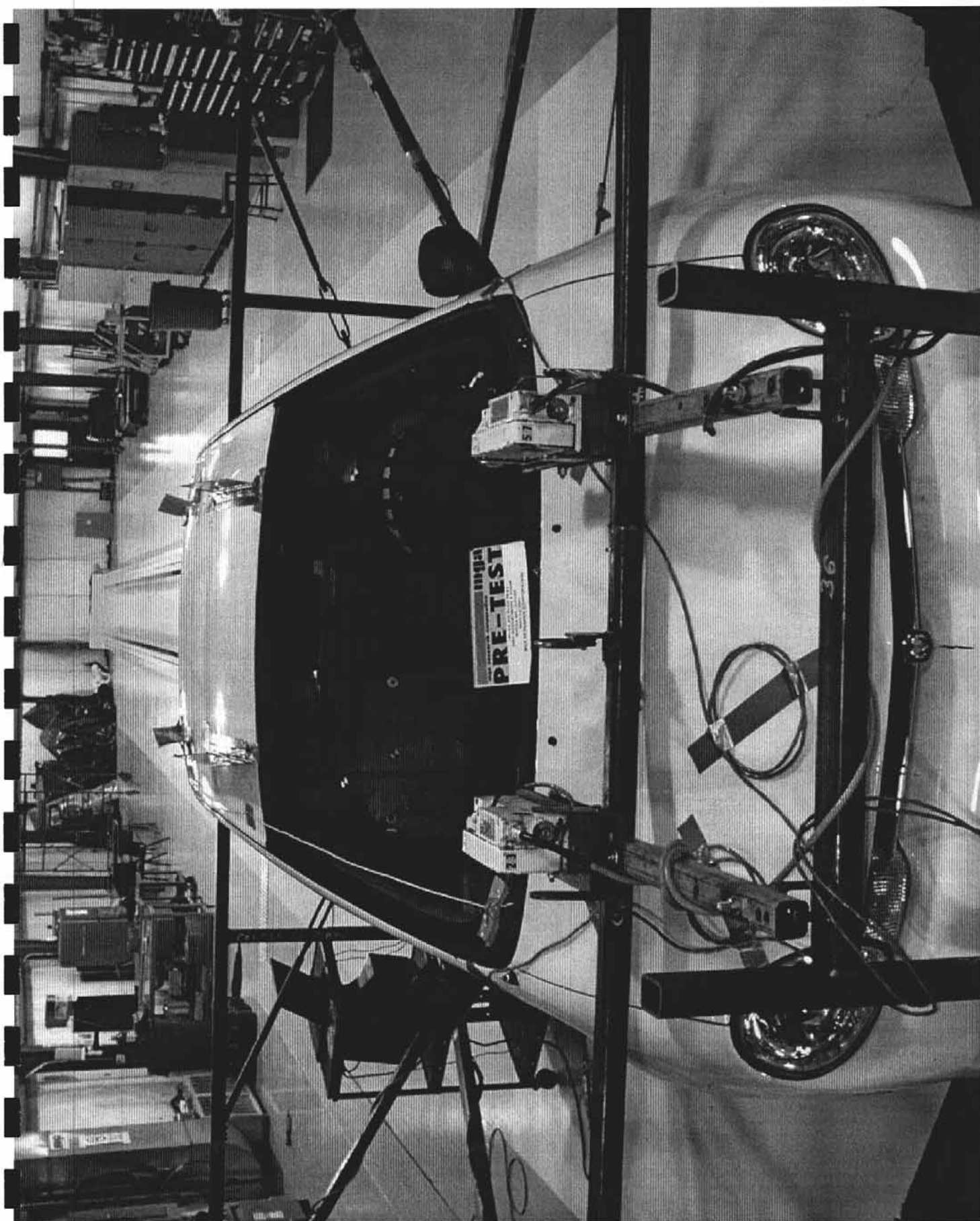


Photo No. A-1 - Pre-Test Frontal View

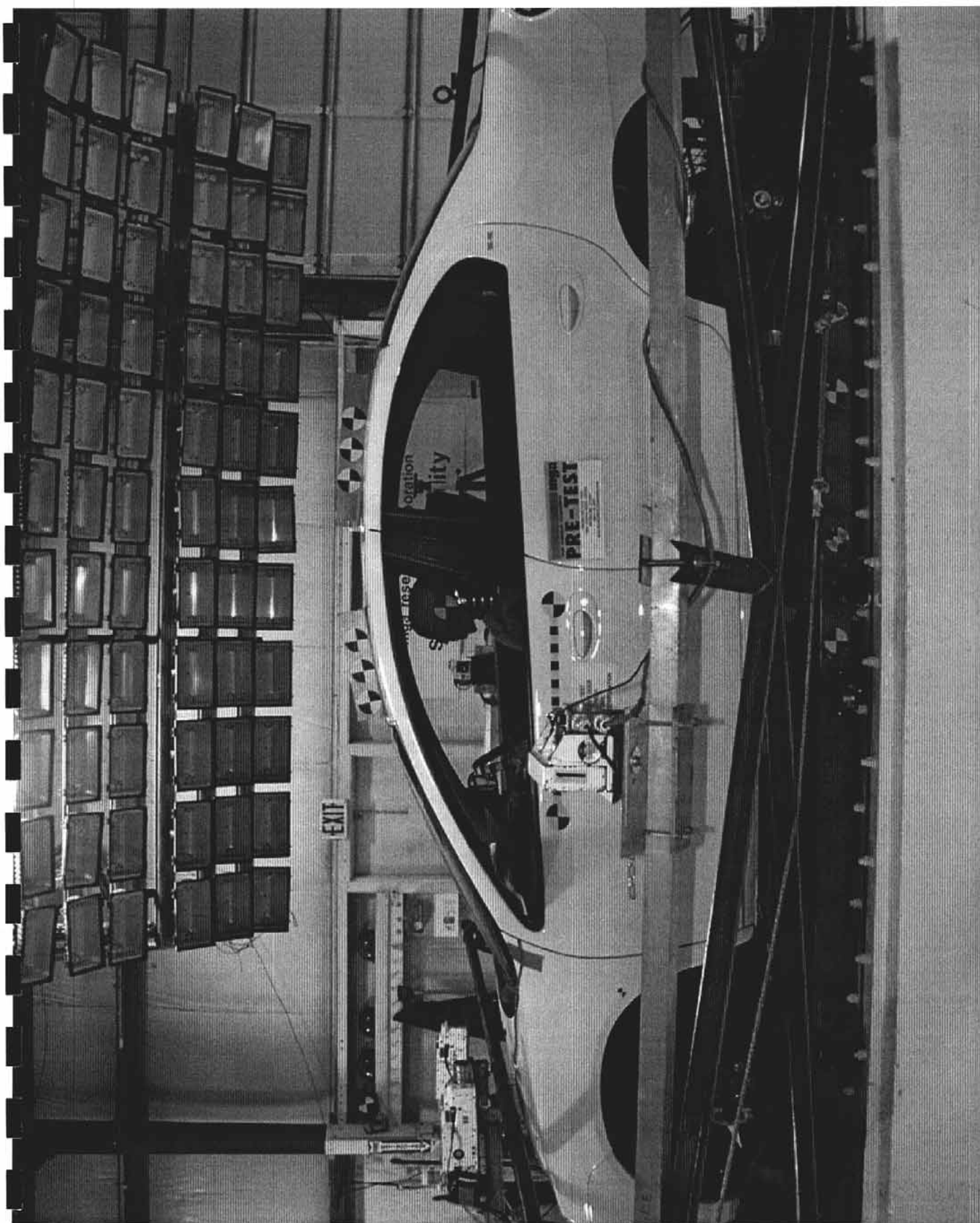


Photo No. A-2 - Pre-Test Left Side View

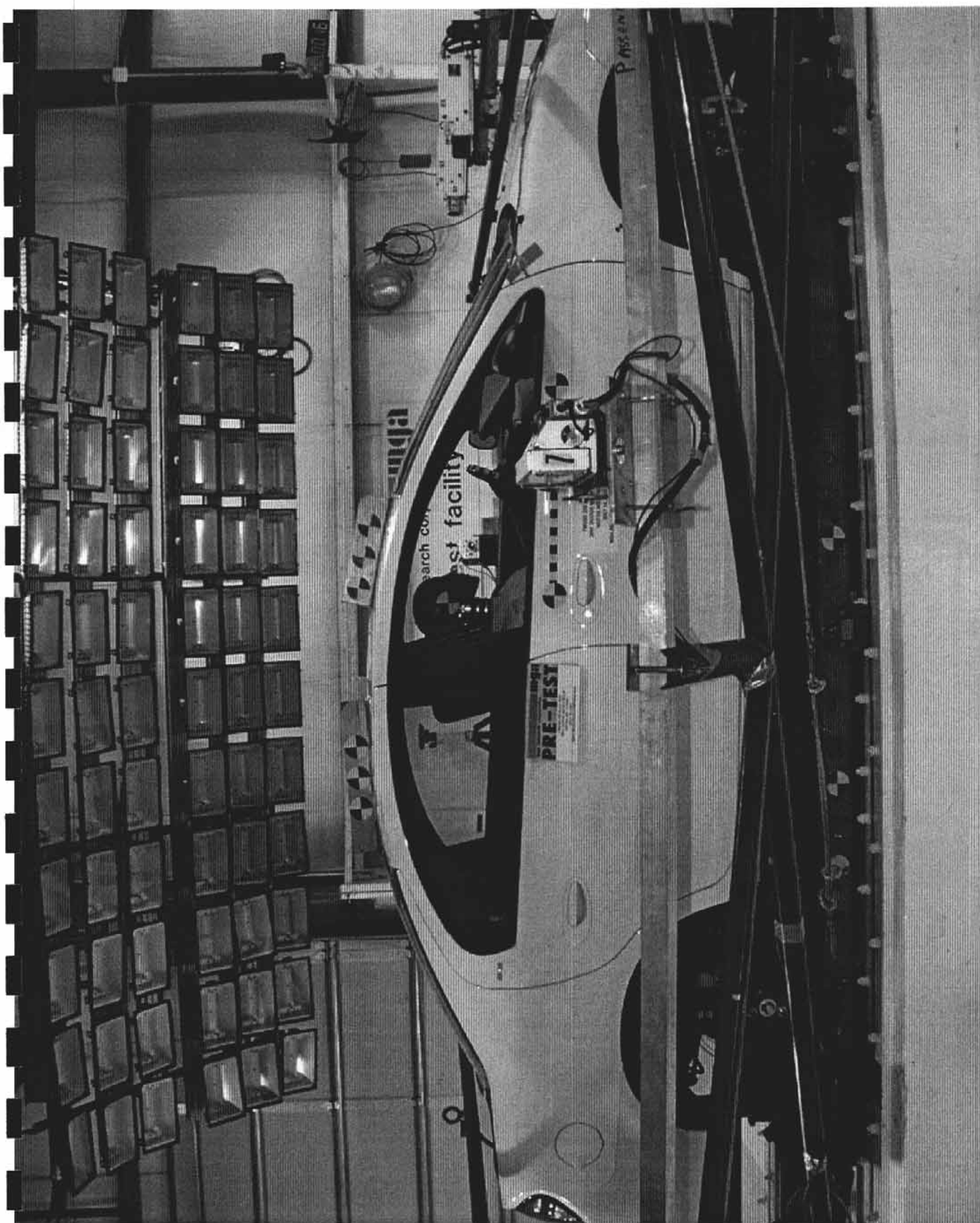


Photo No. A-3 - Pre-Test Right Side View

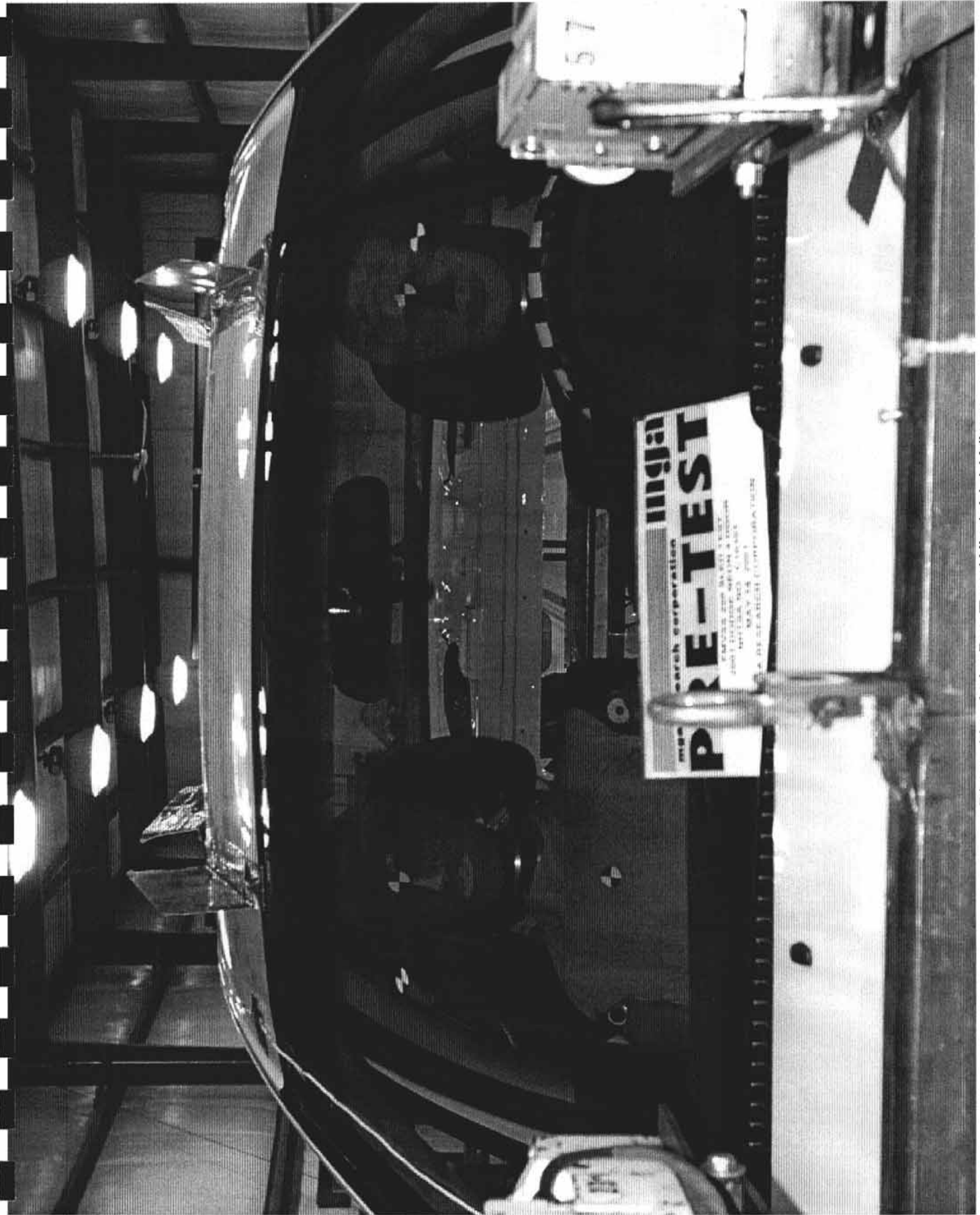


Photo No. A-4 - Pre-Test Windshield View



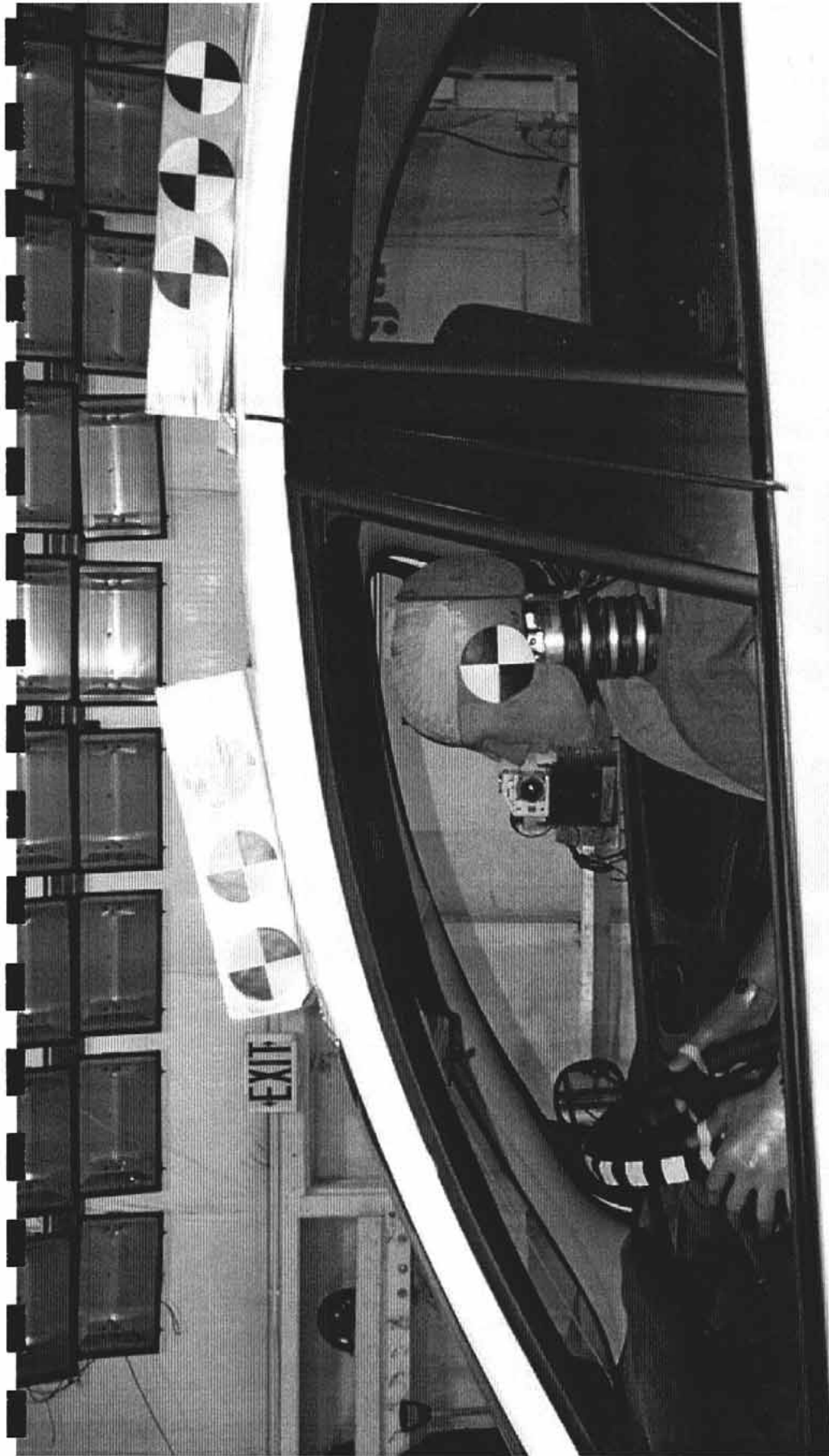
Photo No. A-5 - Post-Test Windshield View



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



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

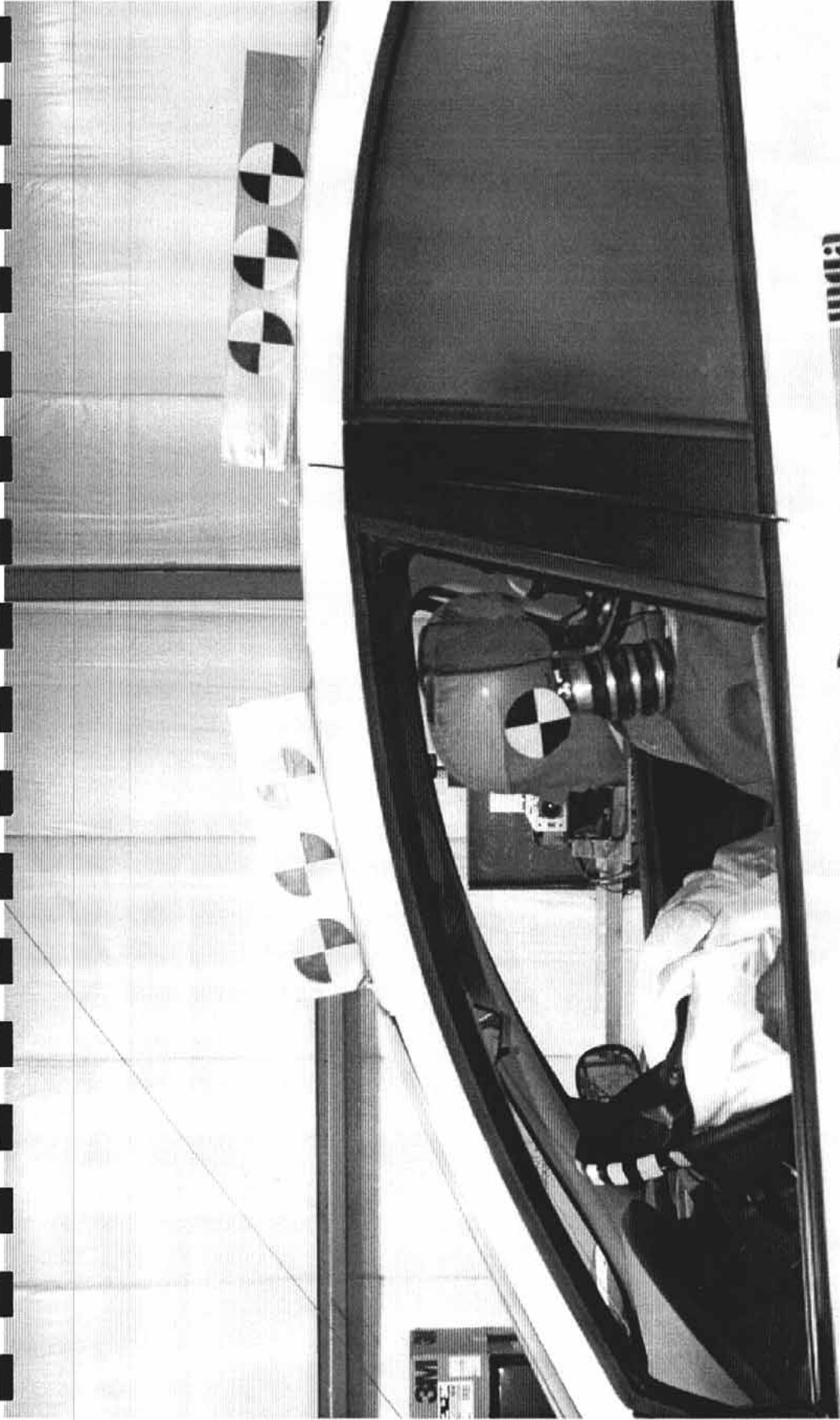


mga
mga research corporation
PRE-TEST

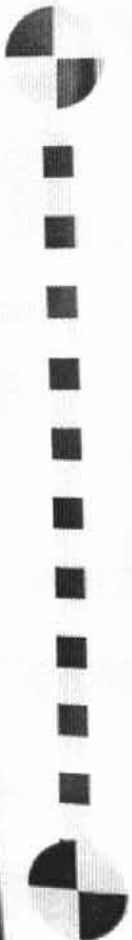
FMVSS 208 SLED TEST
2001 DODGE NEON 4 DOOR
NHTSA NO. C10301
MAY 14, 2001

MGA RESEARCH CORPORATION

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



mga
mga research corporation
POST-TEST



FMVSS 201 SEATED TEST
J001 600GE NEOA 1 DOOR
NETSA NO. 0111P
MAR 14 2001
MGA RESEARCH CORPORATION

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

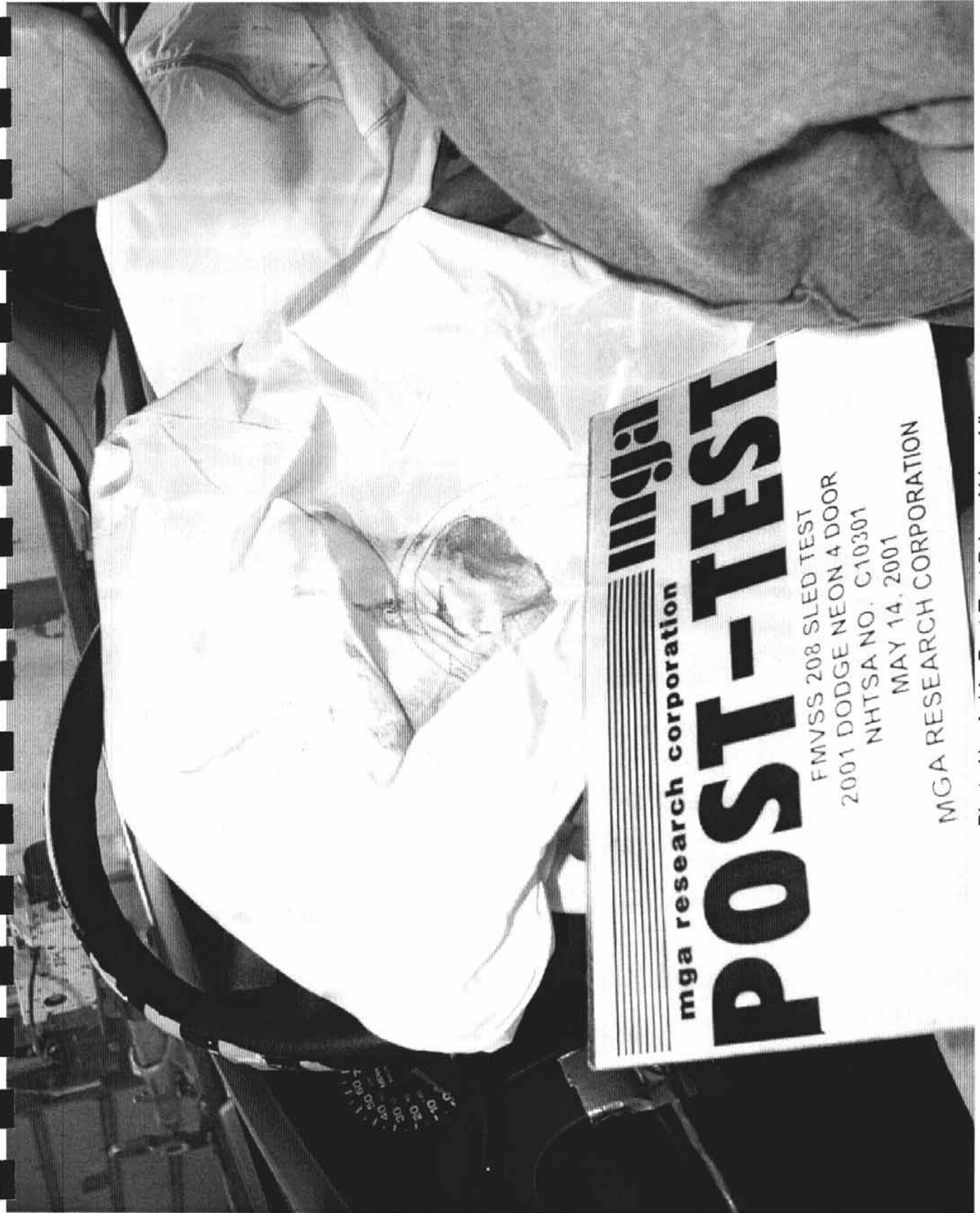


mga
research corporation
POST-TEST

FMVSS 208 SLED TEST
2001 DODGE NEON 4 DOOR
NHTSA NO. C10301
MAY 14, 2001
MGA RESEARCH CORPORATION

FMVSS 208 SLED TEST
2001 DODGE NEON 4 DOOR
NHTSA NO. C10301
MAY 14, 2001
MGA RESEARCH CORPORATION

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



mga

mga research corporation

POST-TEST

FMVSS 208 SLED TEST
2001 DODGE NEON 4 DOOR
NHTSA NO. C10301

MAY 14, 2001
MGA RESEARCH CORPORATION

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

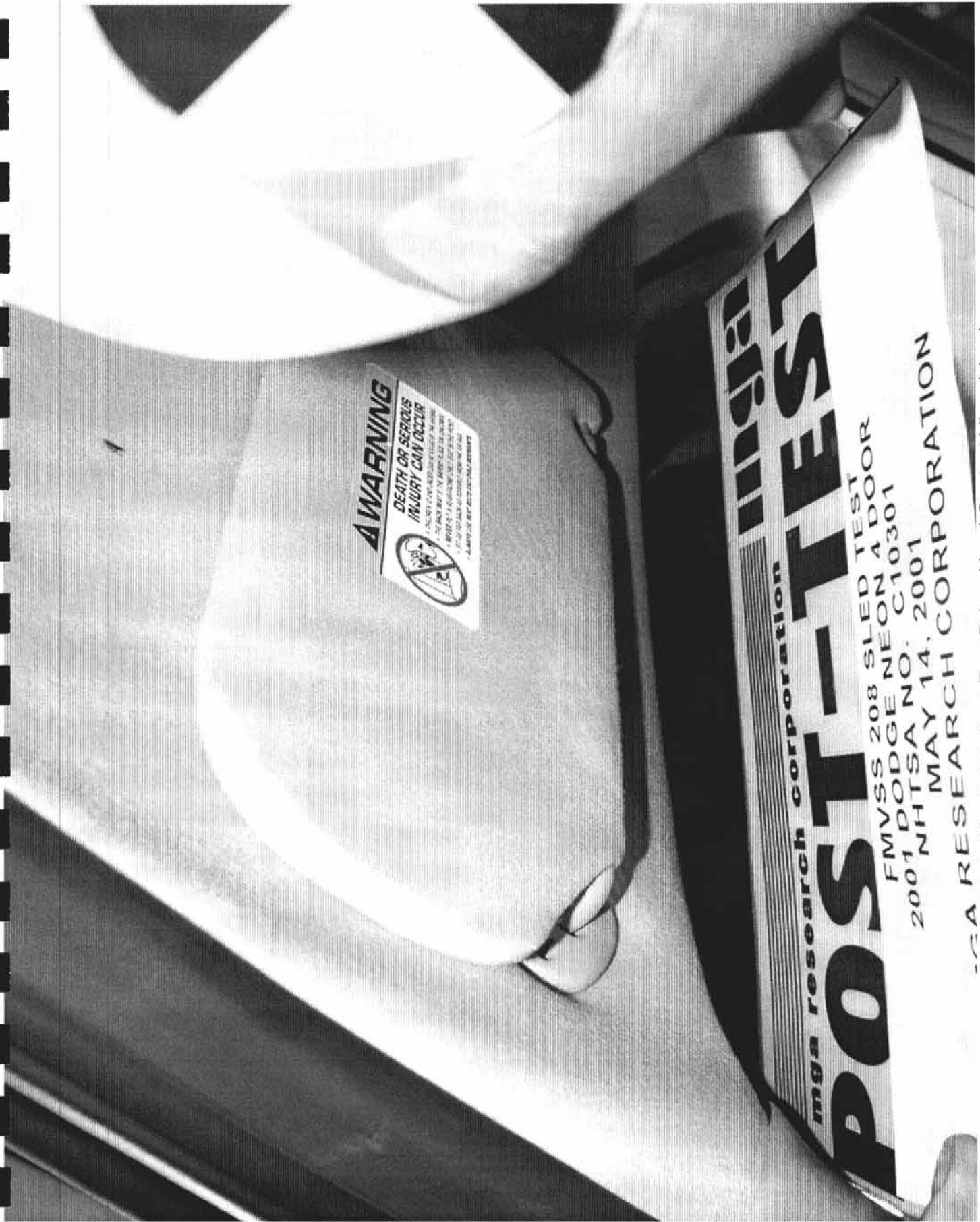


Photo No. A-15 - Post-Test Driver Head Contact View (visor)

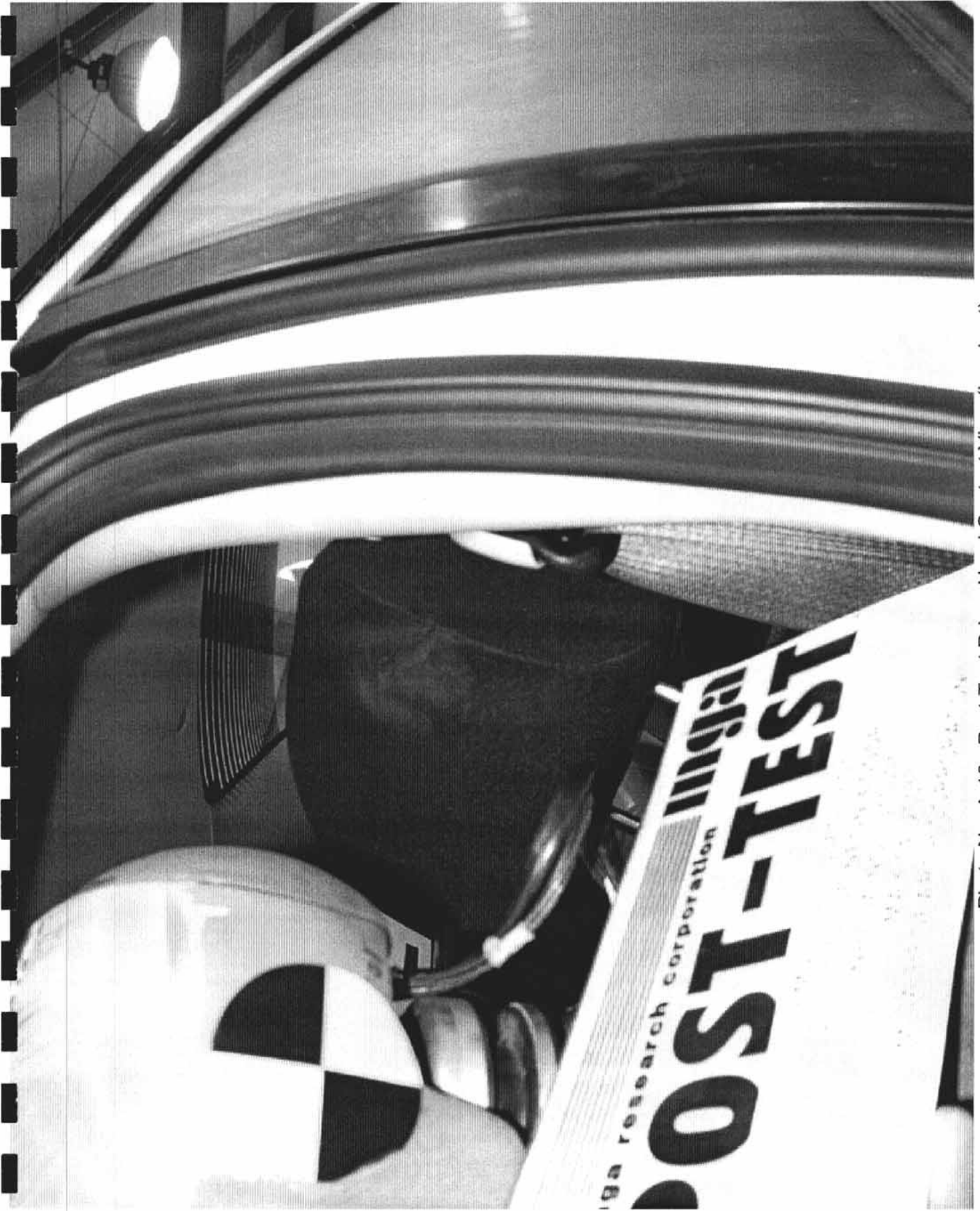


Photo No. A-16 - Post-Test Driver Head Contact View (headrest)



Photo No. A-17 - Post-Test Driver Knee Contact View



Photo No. A-18 - Post-Test Passenger Dummy Airbag View

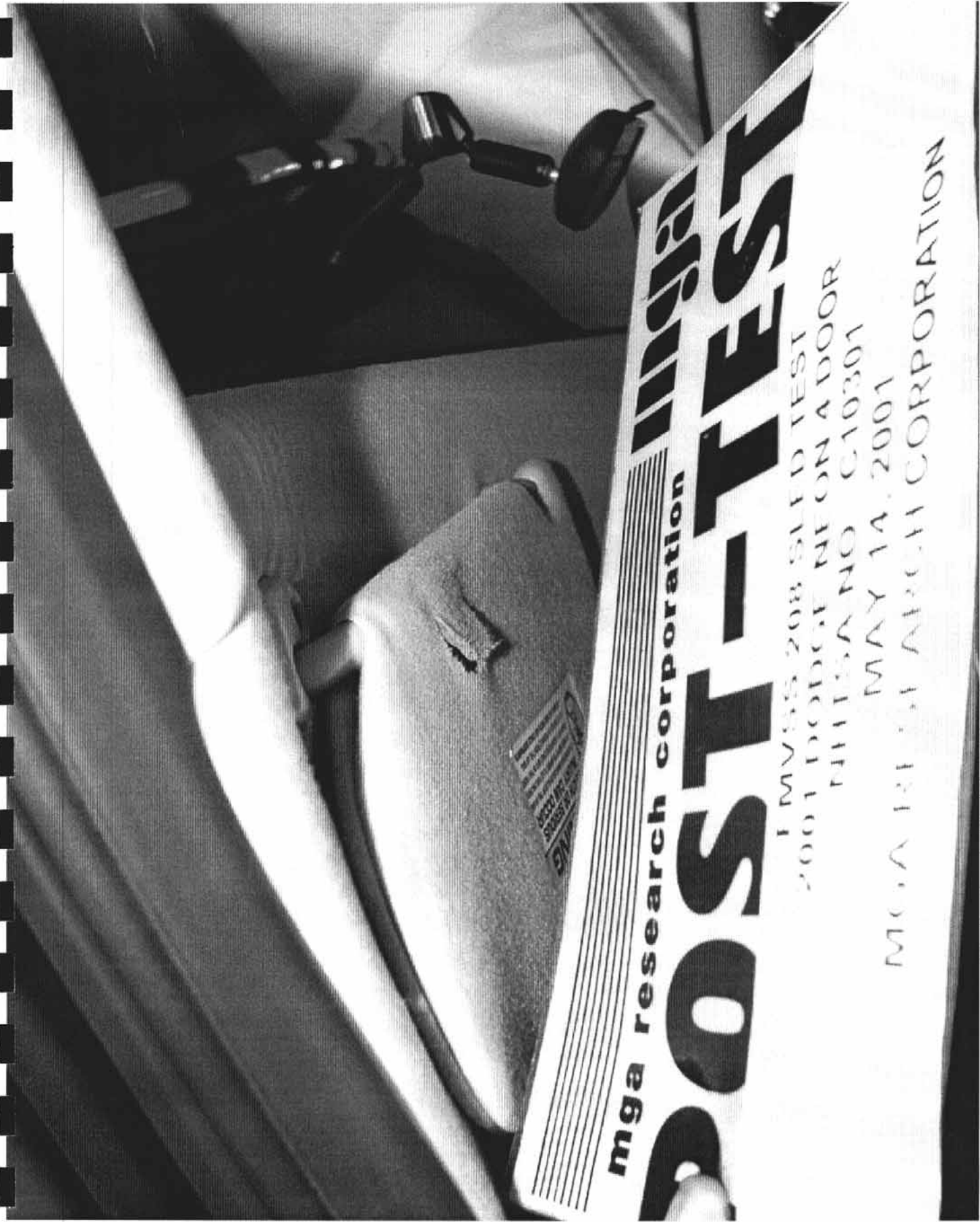


Photo No. A-19 - Post-Test Passenger Dummy Head Contact View (visor)

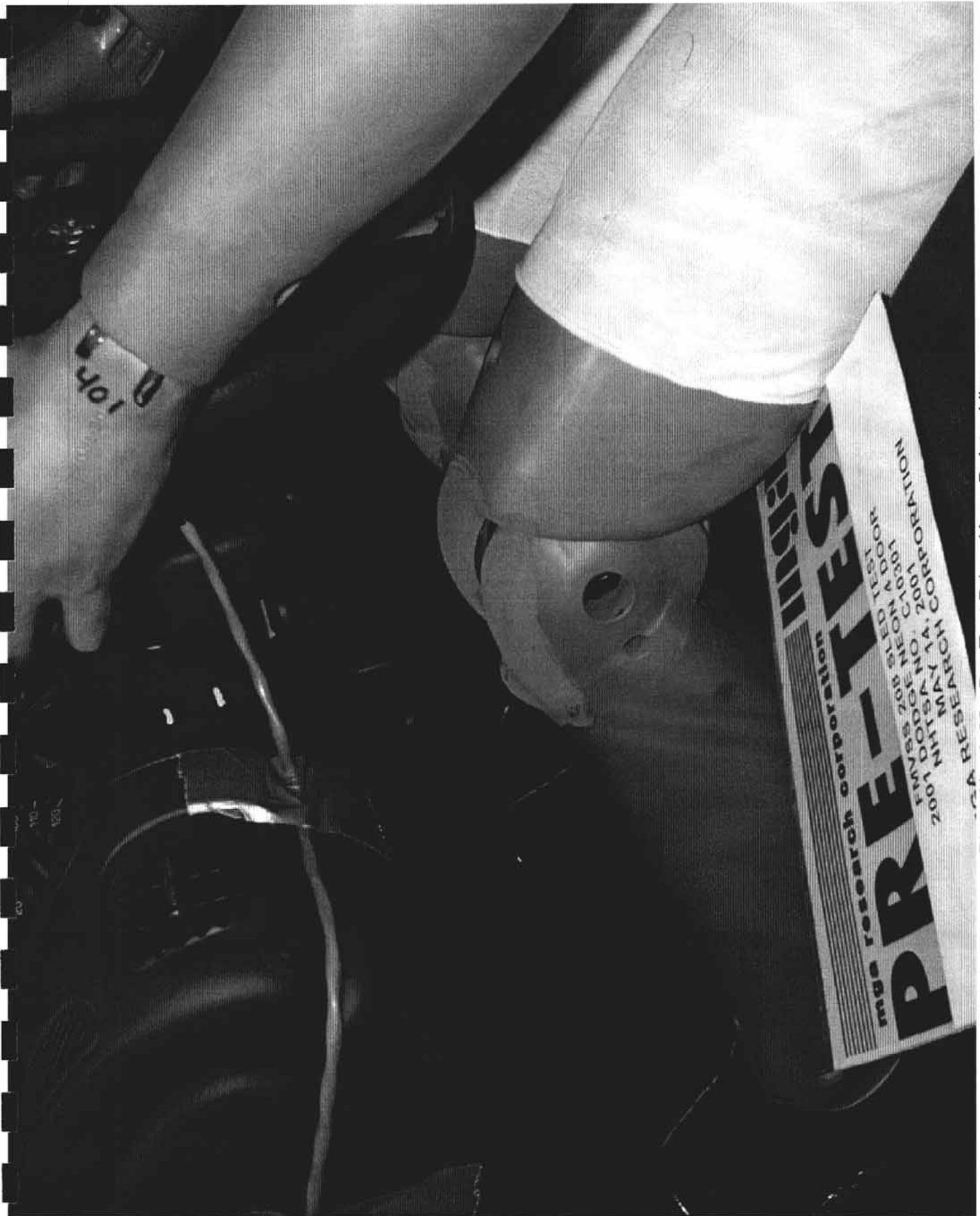


Photo No. A-20 - Pre-Test Driver Knee Bolster View

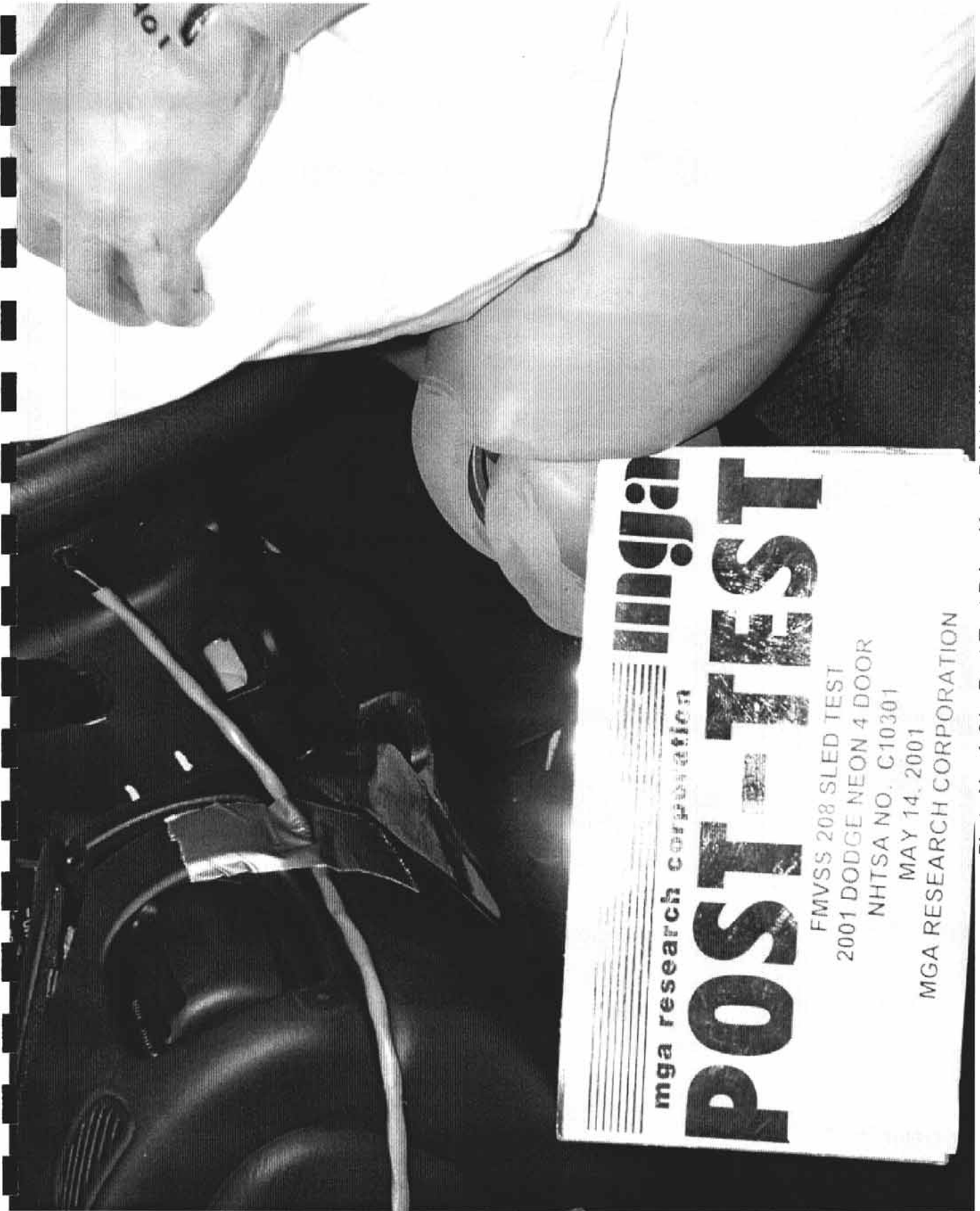


Photo No. A-21 - Post-Test Driver Knee Bolster View



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



Photo No. A-23 - Post-Test Passenger Knee Bolster View

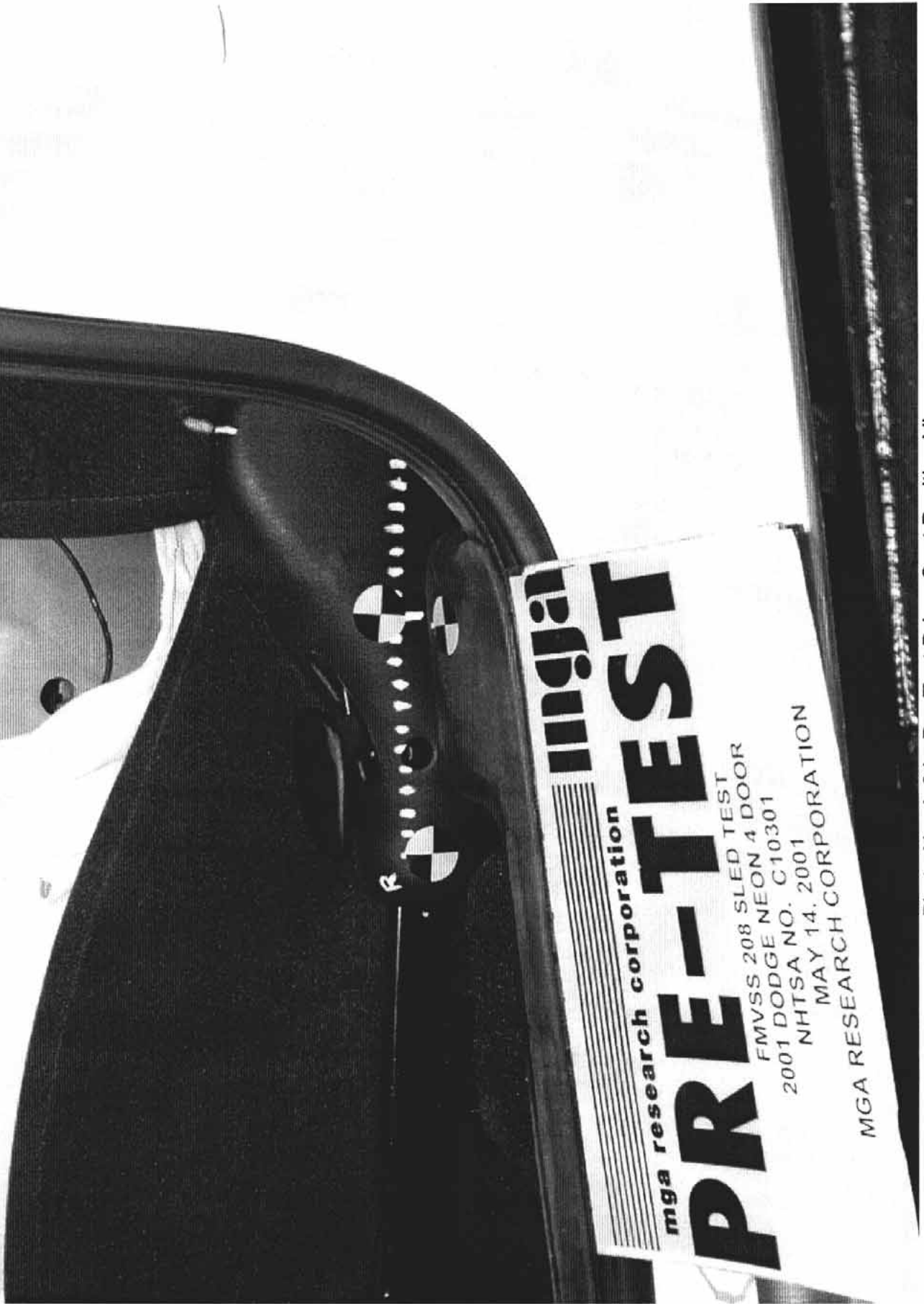


Photo No. A-24 - Pre-Test Driver Seat Position View



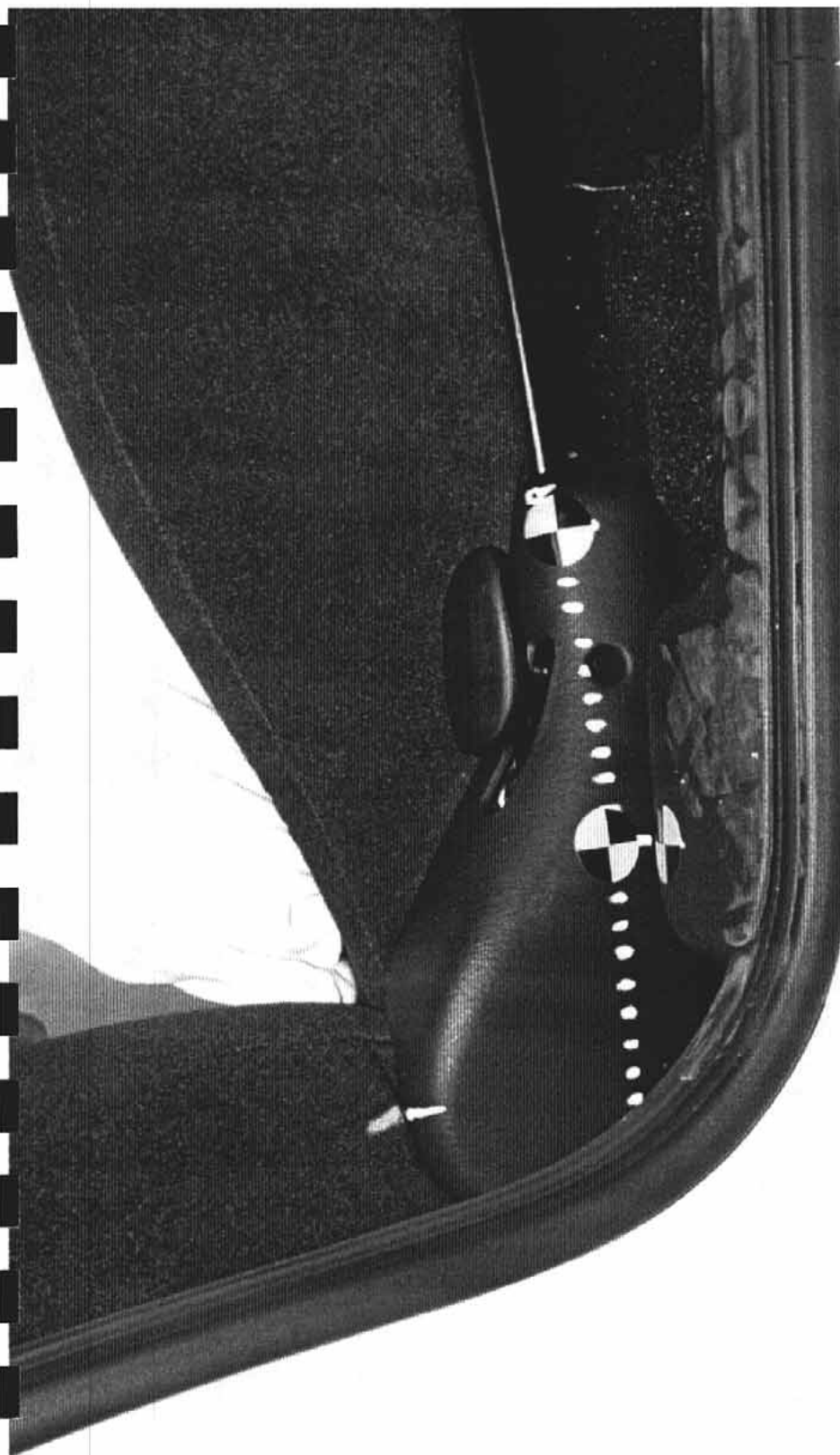
mga research corporation

POST-TEST

FMVSS 208 SLED TEST
2001 DODGE NEON 4 DOOR
NHTSA NO. C10301

MAY 14, 2001
MGA RESEARCH CORPORATION

Photo No. A-25 - Post-Test Driver Seat Position View



mga research corporation

PRE-TEST

FMVSS 208 SLED TEST
2001 DODGE NEON 4 DOOR
NHTSA NO. C10301

MAY 14, 2001
MGA RESEARCH CORPORATION

Photo No. A-26 - Pre-Test Passenger Seat Position View

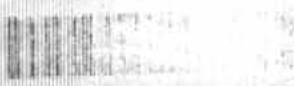


mga
mga research corporation

POST-TEST

FMVSS 208 SLED TEST
2001 DODGE NEON 4 DOOR
NHTSA NO. C10301

MAY 14 2001
MGA RESEARCH CORPORATION



PRINTED IN USA 0855 590AB

SEE OWNERS MANUAL FOR
ADDITIONAL DATA

P185/65R14
STANDARD LOAD

P185/60R15
STANDARD LOAD

RECOMMENDED TIRE SIZES

VEHICLE CAPACITY OR LESS		1st SEAT	2nd SEAT	LUGGAGE	TOTAL	TOTAL WEIGHT	TIRE PRESSURE	COLD
		2 PASS	3 PASS	115 LBS-52 kg	5 PASS	865 LBS-392 kg	32 psi	220 kPa

4658843

THE PASSENGER CAR

WINE COUN

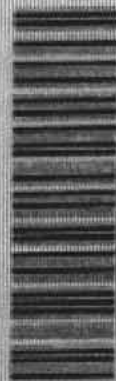


Photo No. A-29 - FMVSS 110 Label

APPENDIX B
DATA PLOTS

TABLE OF DATA PLOTS

<u>Description</u>	<u>Page No</u>
Figure B-1 - Sled X Acceleration vs. Time	B-1
Figure B-2 - Sled X Velocity vs Time	B-2
Figure B-3 - Sled X Displacement vs. Time	B-3
Figure B-4 - 1 Meter Sled Displacement	B-4
Figure B-5 - Airbag Timing vs. Time	B-5
Figure B-6 - Left Rear Seat Crossmember X Acceleration vs. Time	B-6
Figure B-7 - Right Rear Seat Crossmember X Acceleration vs. Time	B-7
Figure B-8 - Top of Engine X Acceleration vs. Time	B-8
Figure B-9 - Rear Axle X Acceleration vs. Time	B-9
Figure B-10 - Driver Head X Acceleration vs. Time	B-10
Figure B-11 - Driver Head Y Acceleration vs Time	B-11
Figure B-12 - Driver Head Z Acceleration vs. Time	B-12
Figure B-13 - Driver Head Resultant Acceleration vs. Time	B-13
Figure B-14 - Driver Neck Force X vs Time	B-14
Figure B-15 - Driver Neck Force Y vs Time	B-15
Figure B-16 - Driver Neck Force Z vs. Time	B-16
Figure B-17 - Driver Neck Moment X vs. Time	B-17
Figure B-18 - Driver Neck Moment Y vs. Time	B-18
Figure B-19 - Driver Neck Moment Z vs. Time	B-19
Figure B-20 - Driver Occipital Condyle Moment Y vs Time	B-20
Figure B-21 - Driver Chest X Acceleration vs Time	B-21
Figure B-22 - Driver Chest Y Acceleration vs. Time	B-22
Figure B-23 - Driver Chest Z Acceleration vs Time	B-23
Figure B-24 - Driver Chest Resultant Acceleration vs Time	B-24
Figure B-25 - Driver Chest Compression vs Time	B-25
Figure B-26 - Driver Left Femur Force vs. Time	B-26
Figure B-27 - Driver Right Femur Force vs Time	B-27
Figure B-28 - Passenger Head X Acceleration vs Time	B-28
Figure B-29 - Passenger Head Y Acceleration vs Time	B-29
Figure B-30 - Passenger Head Z Acceleration vs. Time	B-30

TABLE OF DATA PLOTS (Cont.)

<u>Description</u>	<u>Page No</u>
Figure B-31 - Passenger Head Resultant Acceleration vs Time	B-31
Figure B-32 - Passenger Neck Force X vs Time	B-32
Figure B-33 - Passenger Neck Force Y vs Time	B-33
Figure B-34 - Passenger Neck Force Z vs Time	B-34
Figure B-35 - Passenger Neck Moment X vs. Time	B-35
Figure B-36 - Passenger Neck Moment Y vs. Time	B-36
Figure B-37 - Passenger Neck Moment Z vs. Time	B-37
Figure B-38 - Passenger Occipital Condyle Moment Y vs. Time	B-38
Figure B-39 - Passenger Chest X Acceleration vs Time	B-39
Figure B-40 - Passenger Chest Y Acceleration vs. Time	B-40
Figure B-41 - Passenger Chest Z Acceleration vs. Time	B-41
Figure B-42 - Passenger Chest Resultant Acceleration vs Time	B-42
Figure B-43 - Passenger Chest Compression vs. Time	B-43
Figure B-44 - Passenger Left Femur Force vs. Time	B-44
Figure B-45 - Passenger Right Femur Force vs. Time	B-45

TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

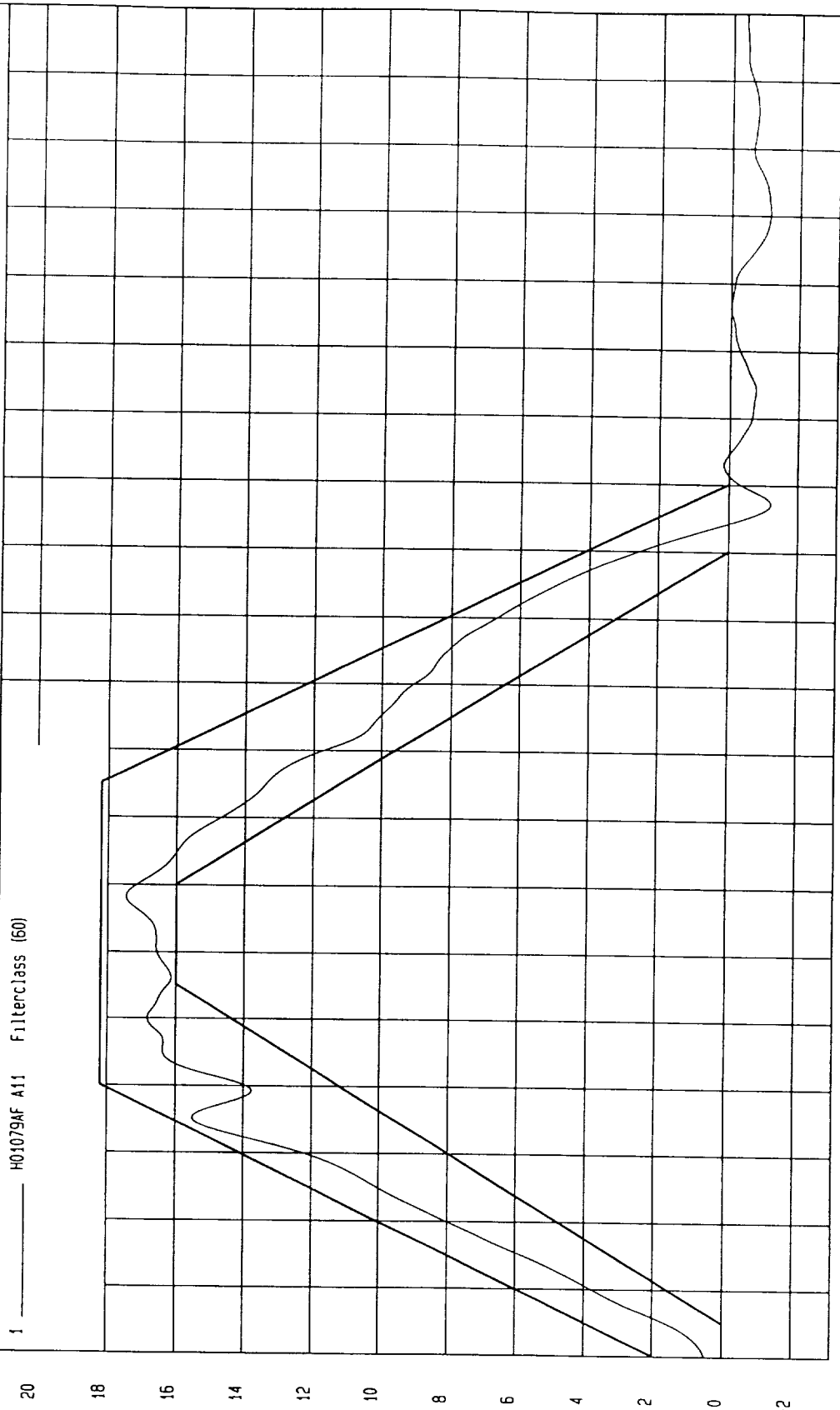
COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum = -1.22 G at 127.2 msec

Maximum = 17.46 G at 68.2 msec

SLED X ACCELERATION

1 ——— H01079AF A11 Filterclass (60)



TIME Seconds

0 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19

MPH

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30

SLED X VELOCITY

1 ——— H01079A1 V11 Filterclass (180)

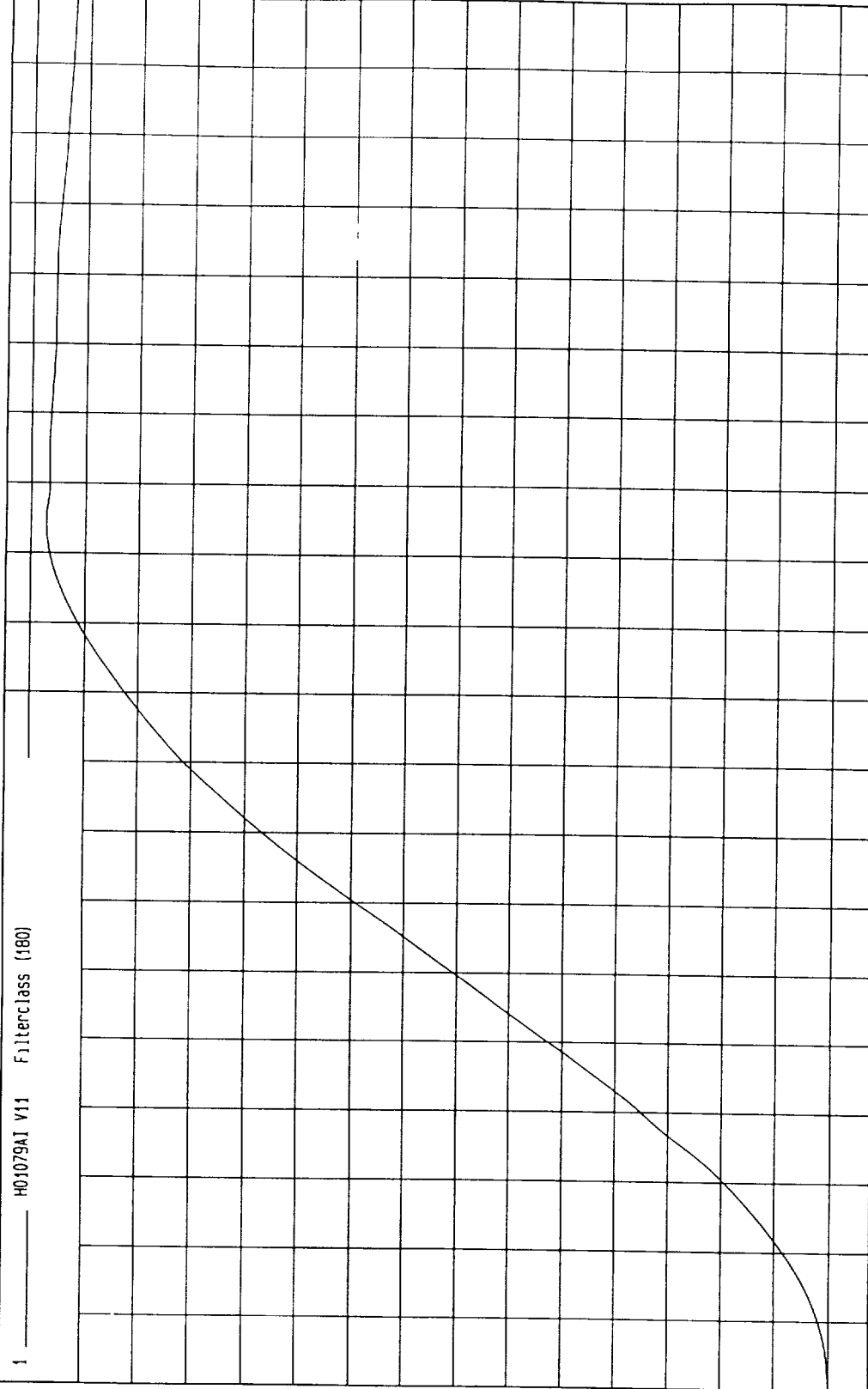
Minimum = 0 MPH at 0 msec

Maximum = 29.44 MPH at 124 msec

TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

COMPONENT 2001 DODGE NEON 4 DOOR (C10301)



TEST FMVSS 208 SLED (H01079)

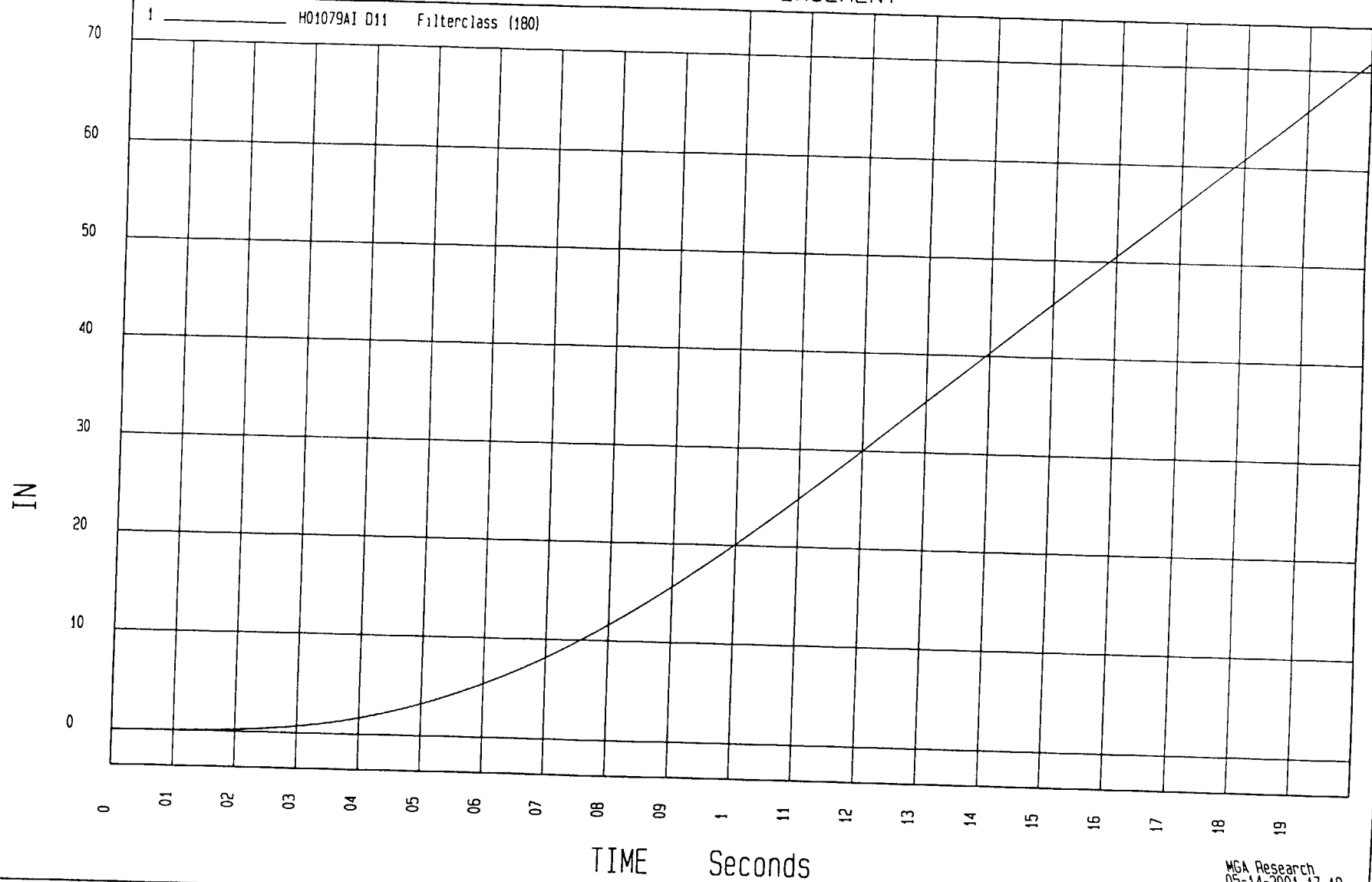
TEST DATE 05-14-2001

COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum = 0 IN at 0 msec

Maximum = 70.84 IN at 200 msec

SLED X DISPLACEMENT



MGA Research
05-14-2001 17 19

TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

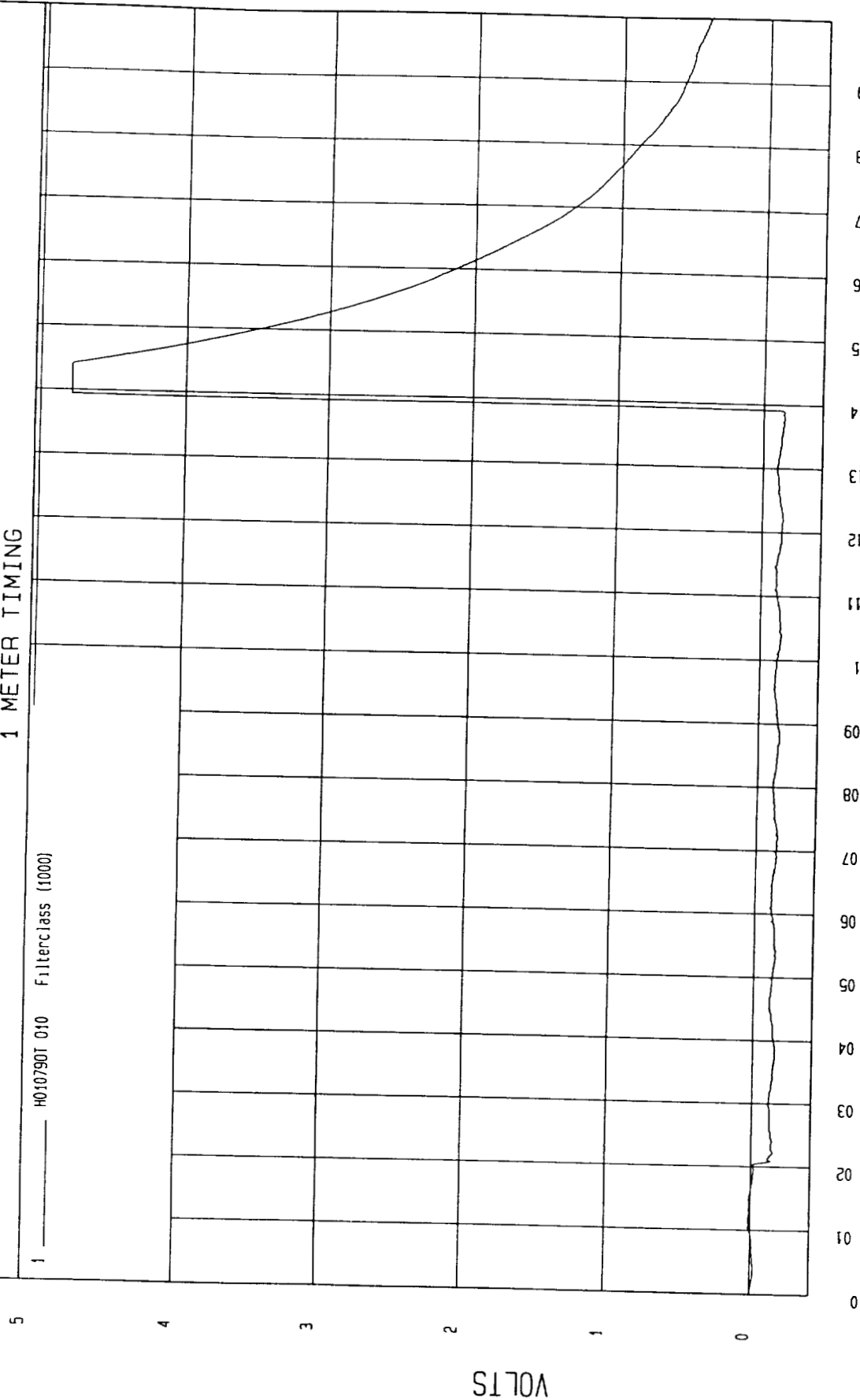
COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum 15 VOLTS at 37 msec

Maximum = 4.79 VOLTS at 139 msec

1 METER TIMING

1 ——— H010790T 010 Filterclass (1000)



TIME (SECONDS)

TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

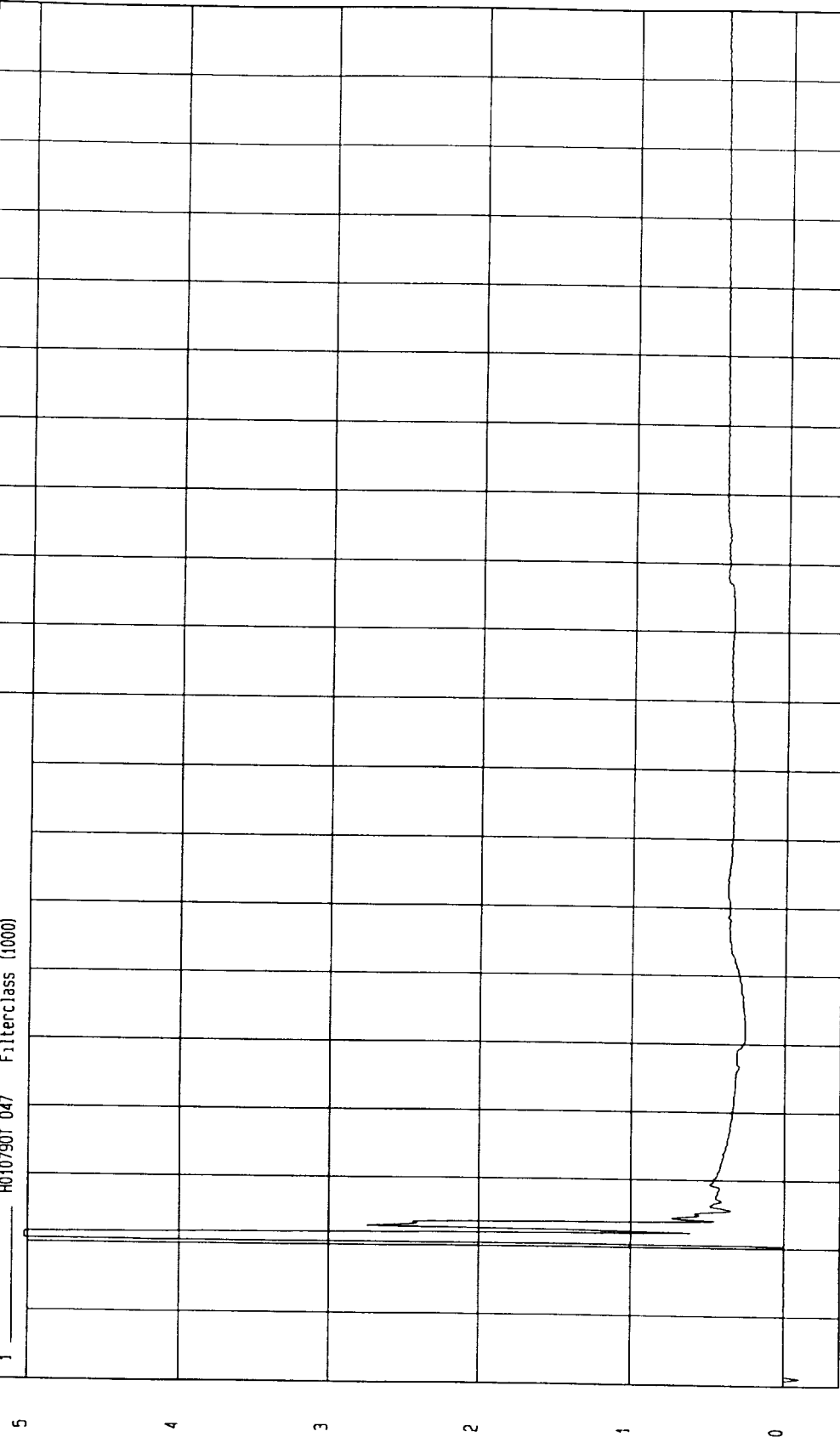
COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum = - 1 at 1 msec

Maximum = 5.02 at 21 msec

AIRBAG TIMING

1 H010790T 047 Filterclass (1000)



TIME (SECONDS)

TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

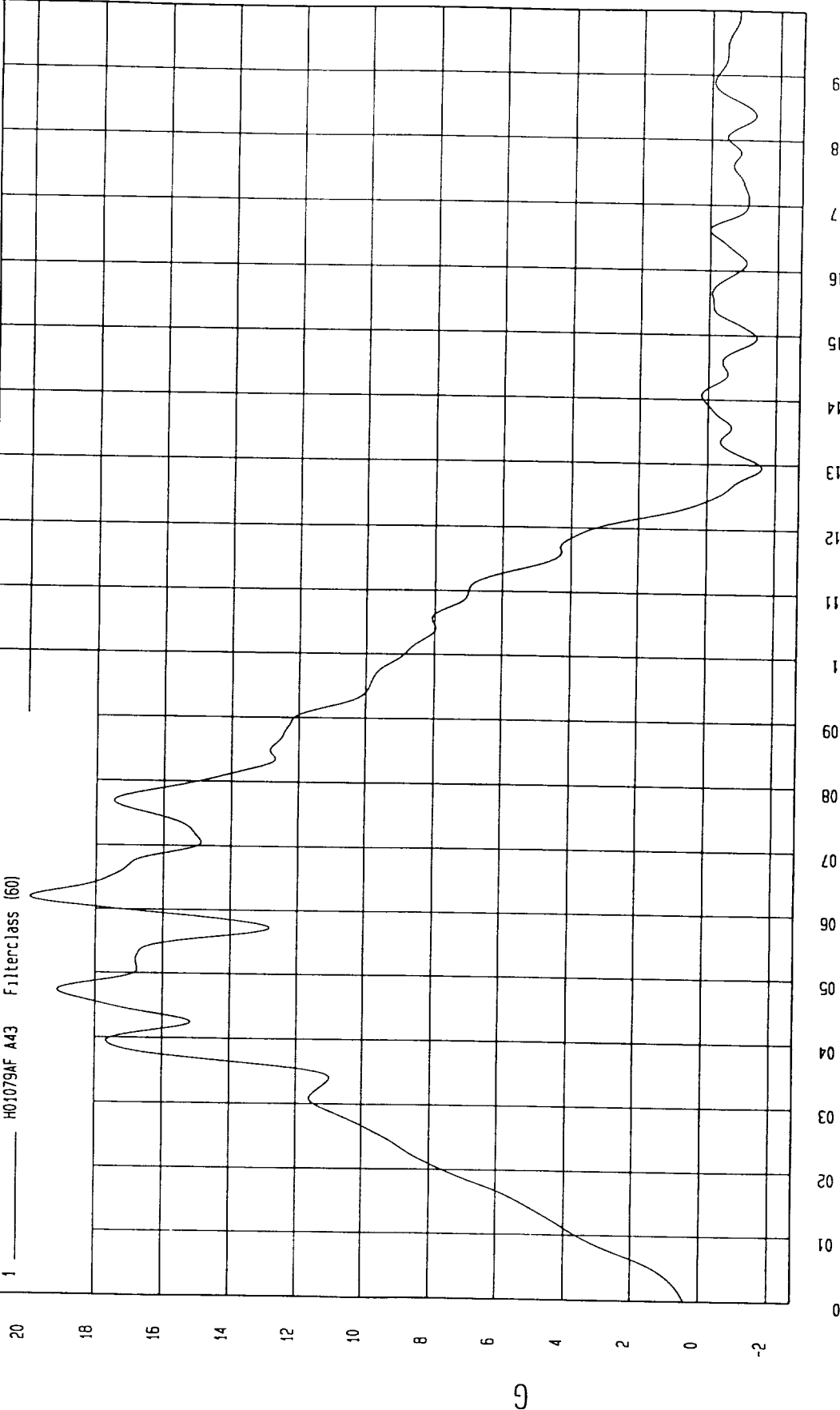
COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum = -1.59 G at 130 msec

Maximum = 19.92 G at 62 msec

LEFT REAR SEAT CROSSMEMBER X ACCELERATION

1 — H01079AF A43 Filterclass (60)



TIME (SECONDS)

MSA Research
05-14-2001 13 31

TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

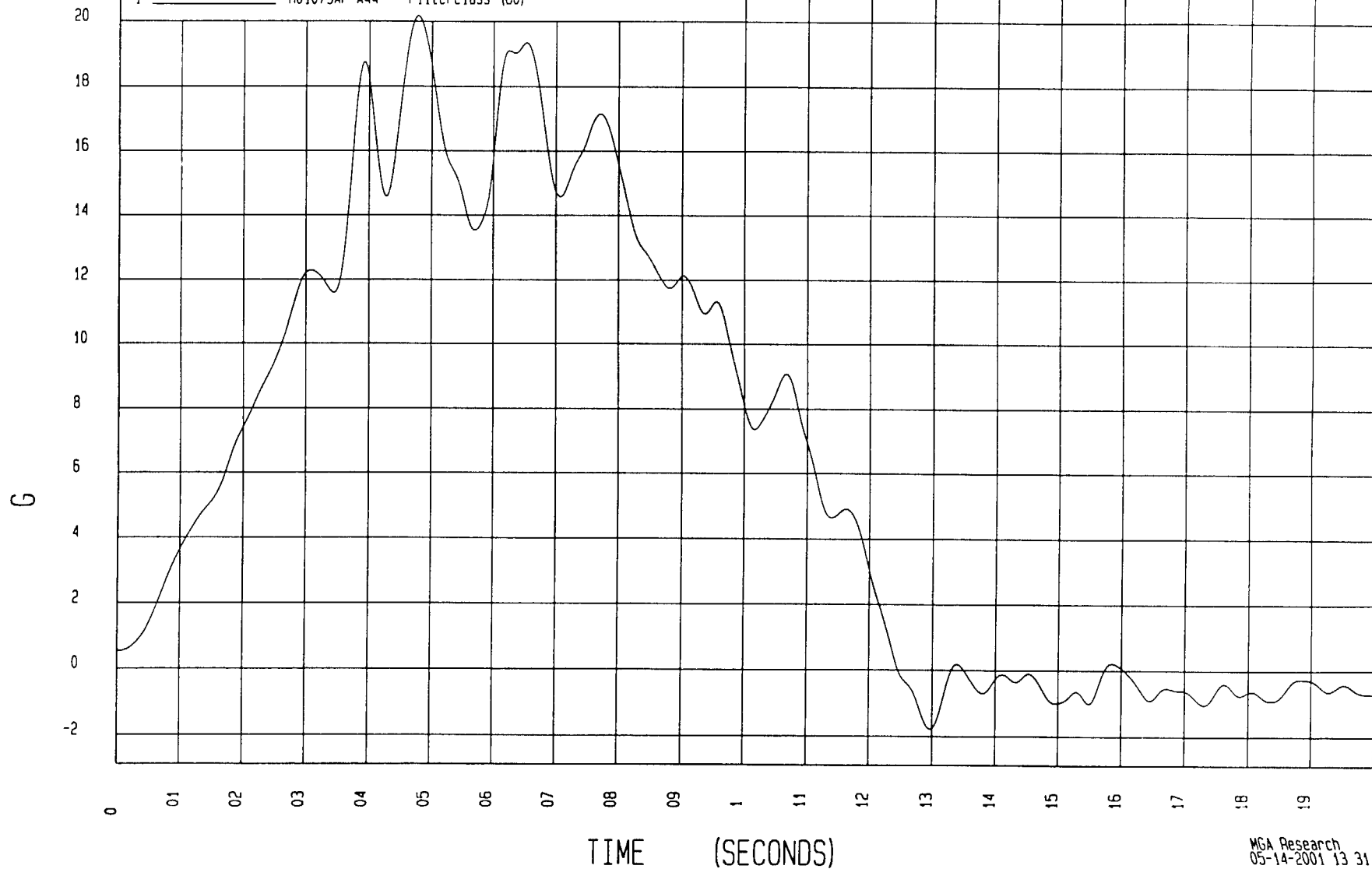
COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum = -1.77 G at 130 msec

Maximum = 20.17 G at 48 msec

RIGHT REAR SEAT CROSSMEMBER X ACCELERATION

1 H01079AF A44 Filterclass (60)



MGA Research
05-14-2001 13 31

TEST FMVSS 208 SLED (H01079)

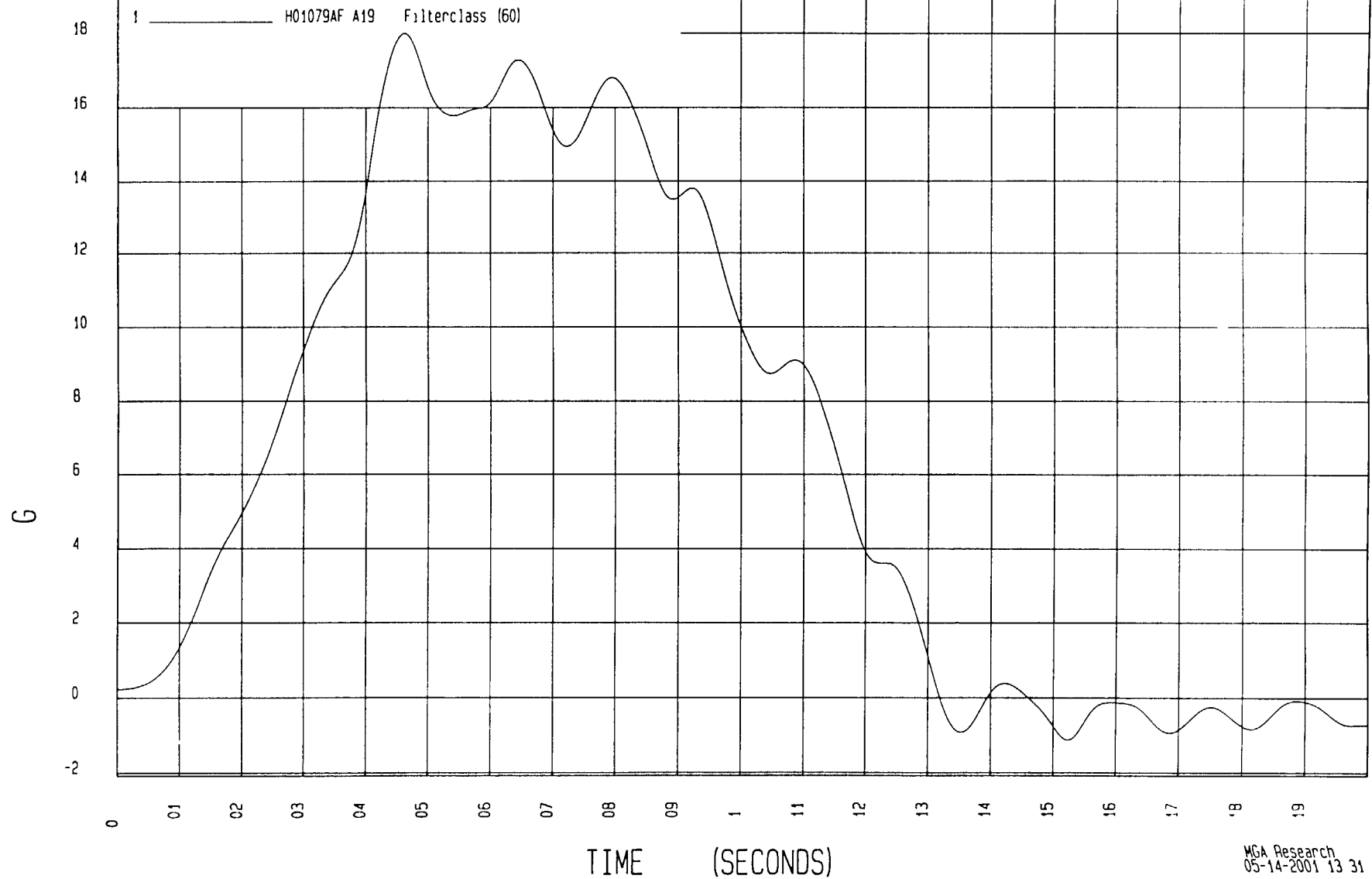
TEST DATE 05-14-2001

COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum = -1.12 G at 152 msec

Maximum = 17.99 G at 46 msec

TOP OF ENGINE X ACCELERATION



TEST FMVSS 208 SLED (H01079)

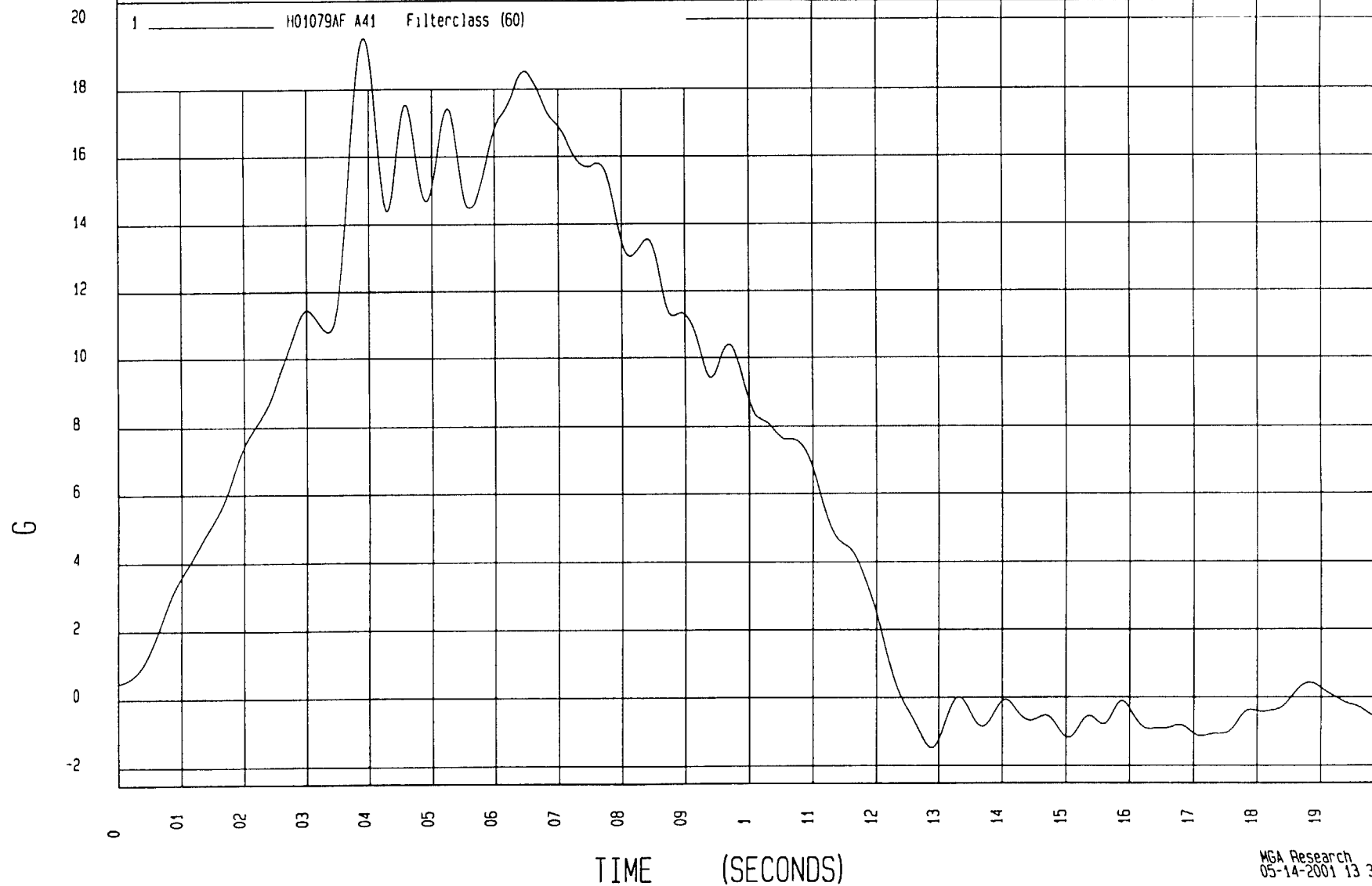
TEST DATE 05-14-2001

COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum = 1.47 G at 129 msec

Maximum = 19.48 G at 39 msec

REAR AXLE X ACCELERATION



TEST FMVSS 208 SLED (H01079) TEST DATE 05-14-2001

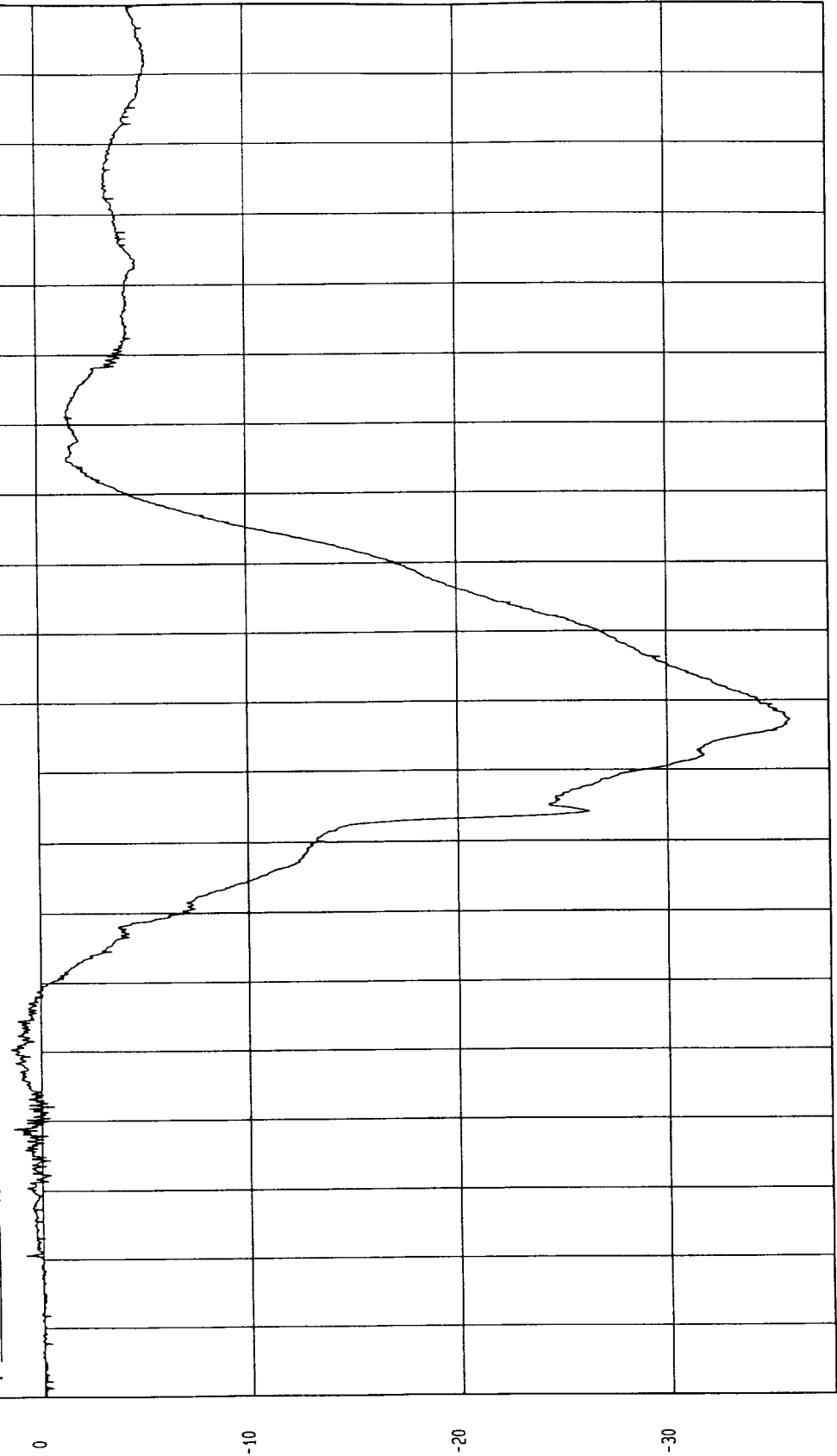
COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum = -35.79 G at 97 msec

Maximum = 1.42 G at 50 msec

DRIVER HEAD X ACCELERATION

1 H01079AT A03 Filterclass (1000)



MCA Research
05-14-2001 13 29

TIME (SECONDS)

TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

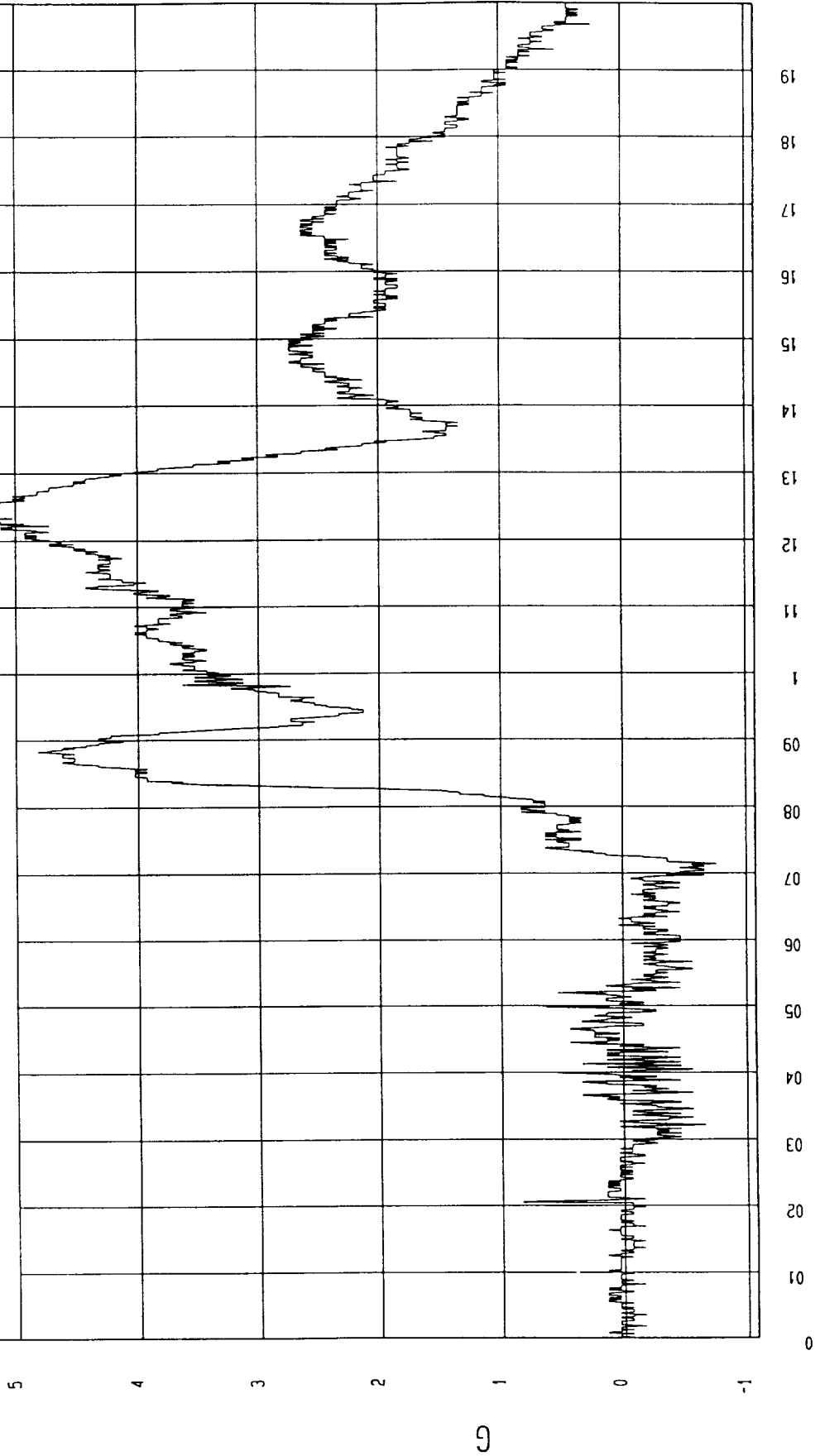
COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum - - 76 G at 71 msec

Maximum = 5.43 G at 124 msec

DRIVER HEAD Y ACCELERATION

1 _____ H01079AT A05 Filterclass (1000)



TEST FMVSS 208 SLED (H01079)

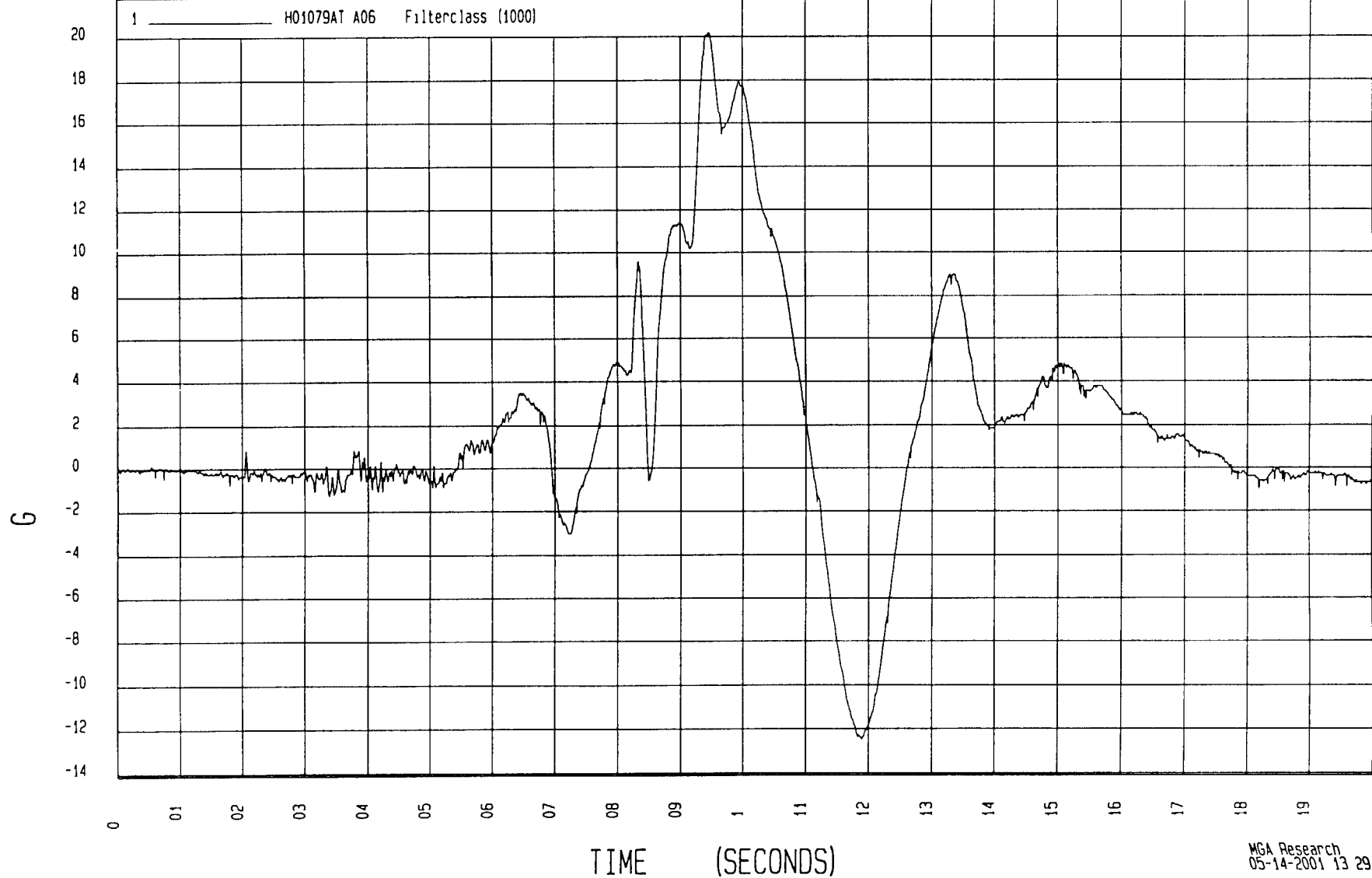
TEST DATE 05-14-2001

COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum = -12.47 G at 119 msec

Maximum = 20.16 G at 94 msec

DRIVER HEAD Z ACCELERATION



TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

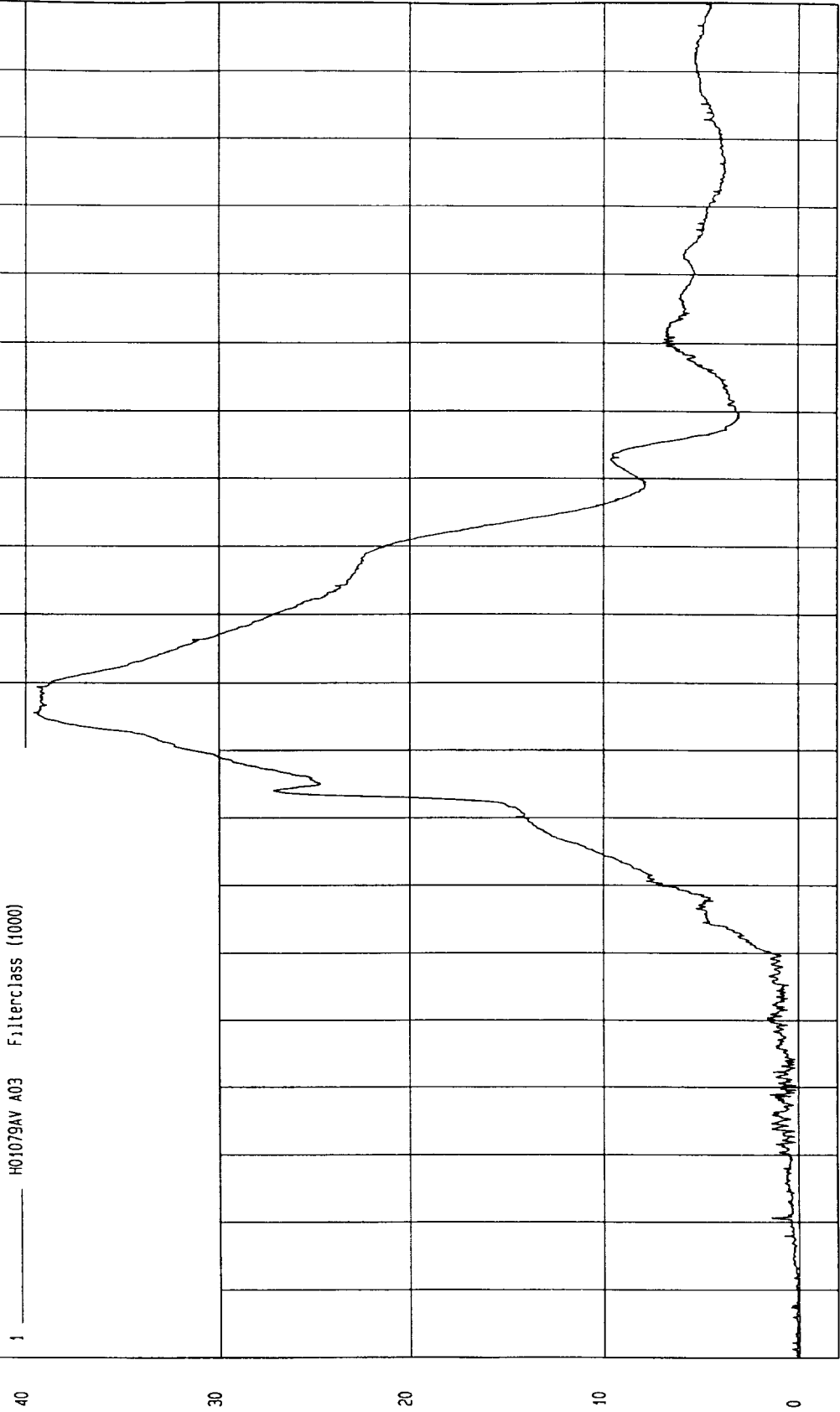
COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum 4 94E 02 G at 1 msec

Maximum - 39 61 G at 96 msec

DRIVER HEAD RESULTANT ACCELERATION

1 H01079AV A03 Filterclass (1000)



TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

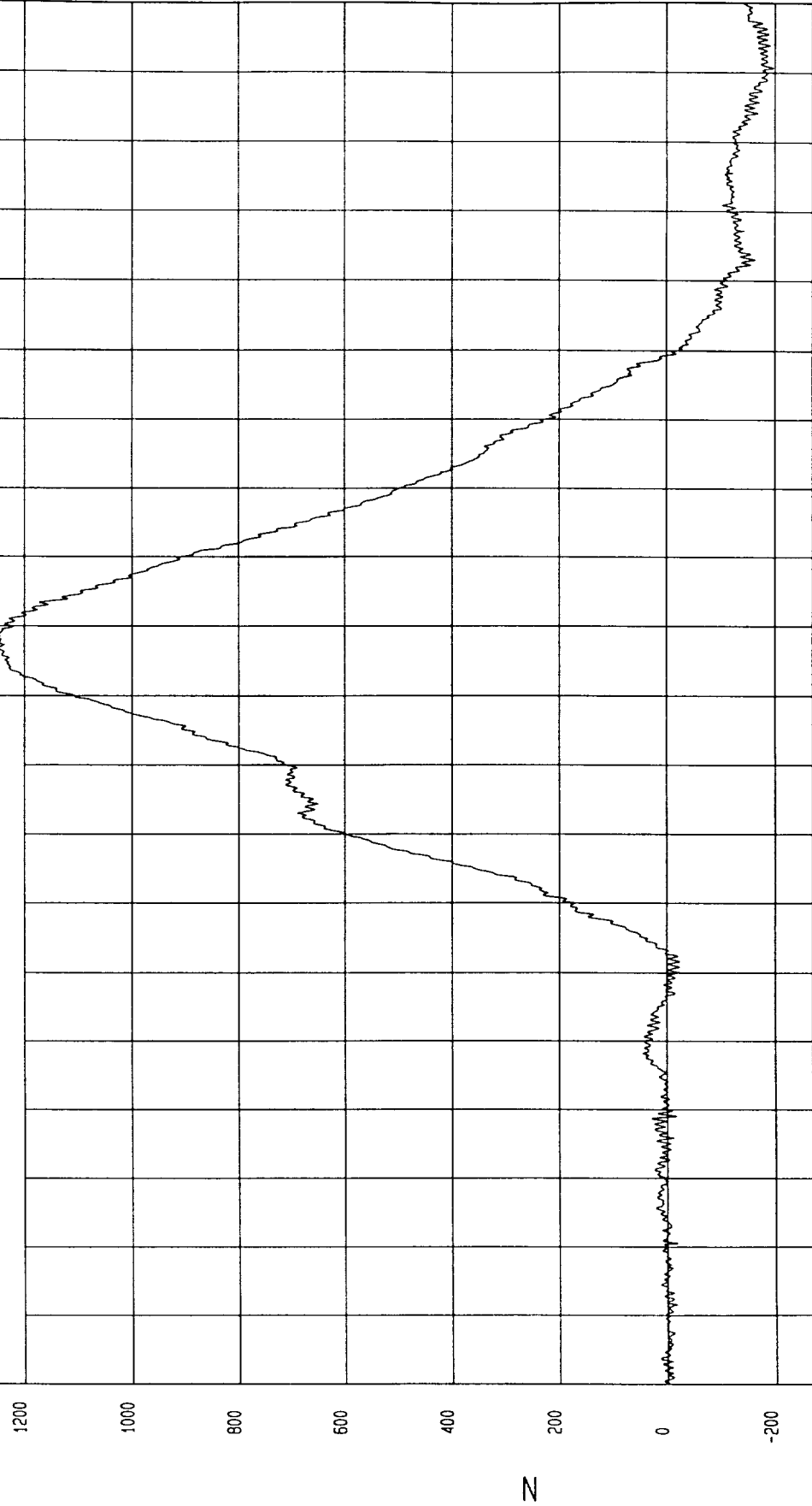
COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum -196 58 N at 191 msec

Maximum 1251 2 N at 107 msec

DRIVER NECK FORCE X

1 H01079T F12 Filterclass (1000)



TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

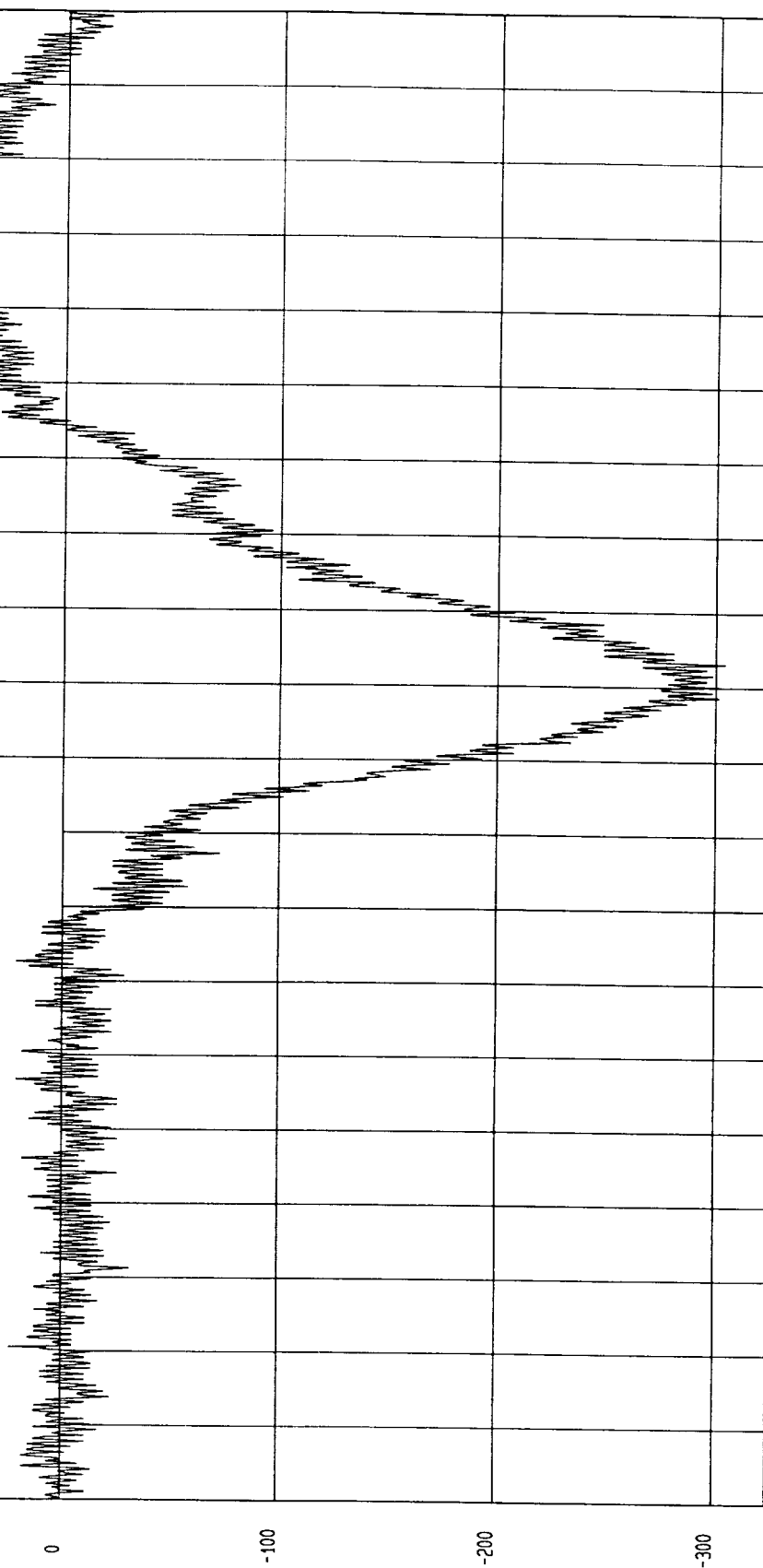
COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum = -304 45 N at 113 msec

Maximum = 79 88 N at 166 msec

DRIVER NECK FORCE Y

1 H01079FT F13 Filterclass (1000)



TIME (SECONDS)

MGA Research
05-14-2001 13 30

TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

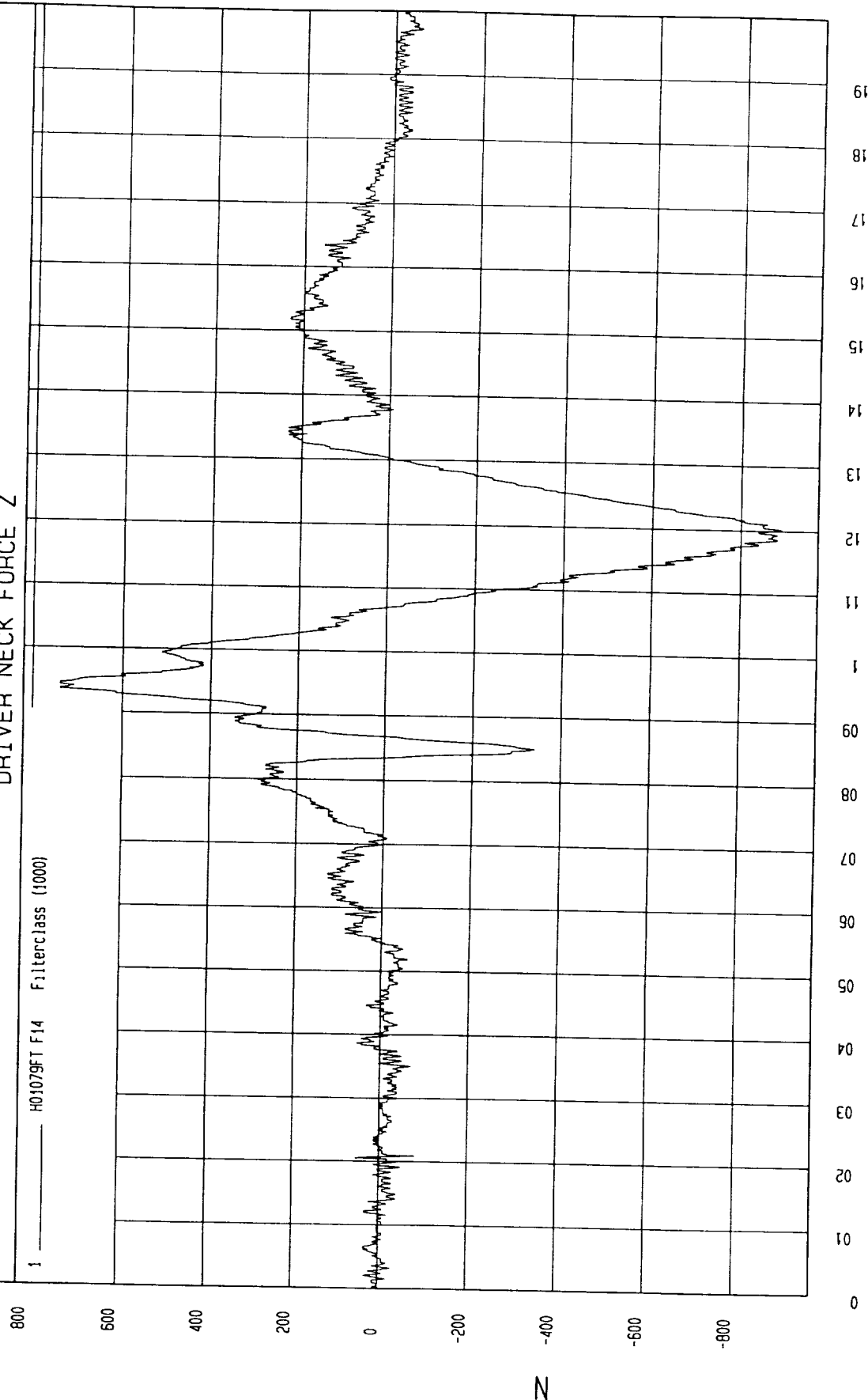
COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum = -890 29 N at 120 msec

Maximum = 738 84 N at 94 msec

DRIVER NECK FORCE Z

1 ——— H01079FT F14 Filterclass (1000)



TIME (SECONDS)

MGA Research
05-14 2001 13 30

TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

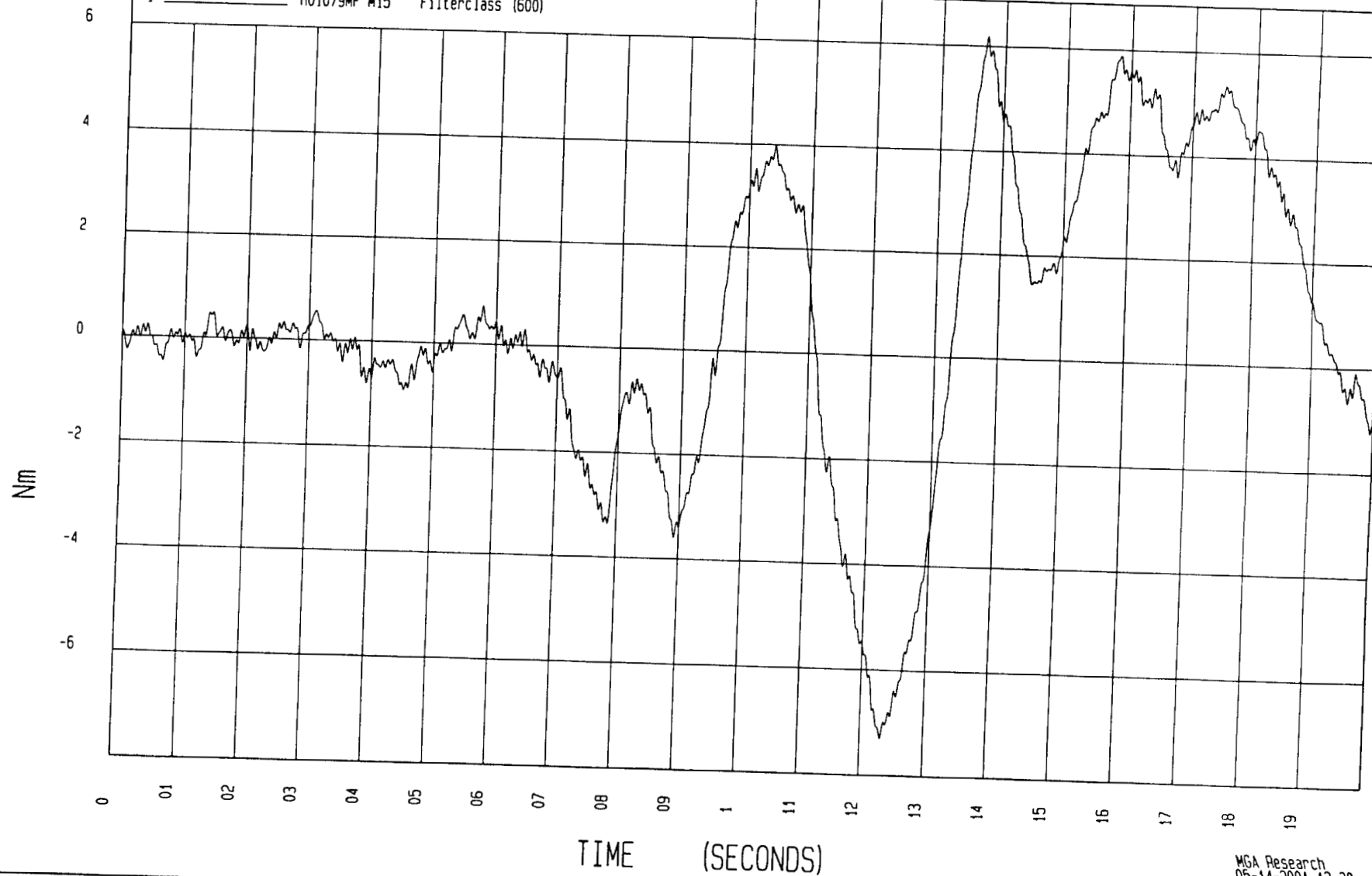
COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum 7.3 Nm at 123 msec

Maximum = 6.19 Nm at 137 msec

DRIVER NECK MOMENT X

1 H01079MF M15 Filterclass (600)

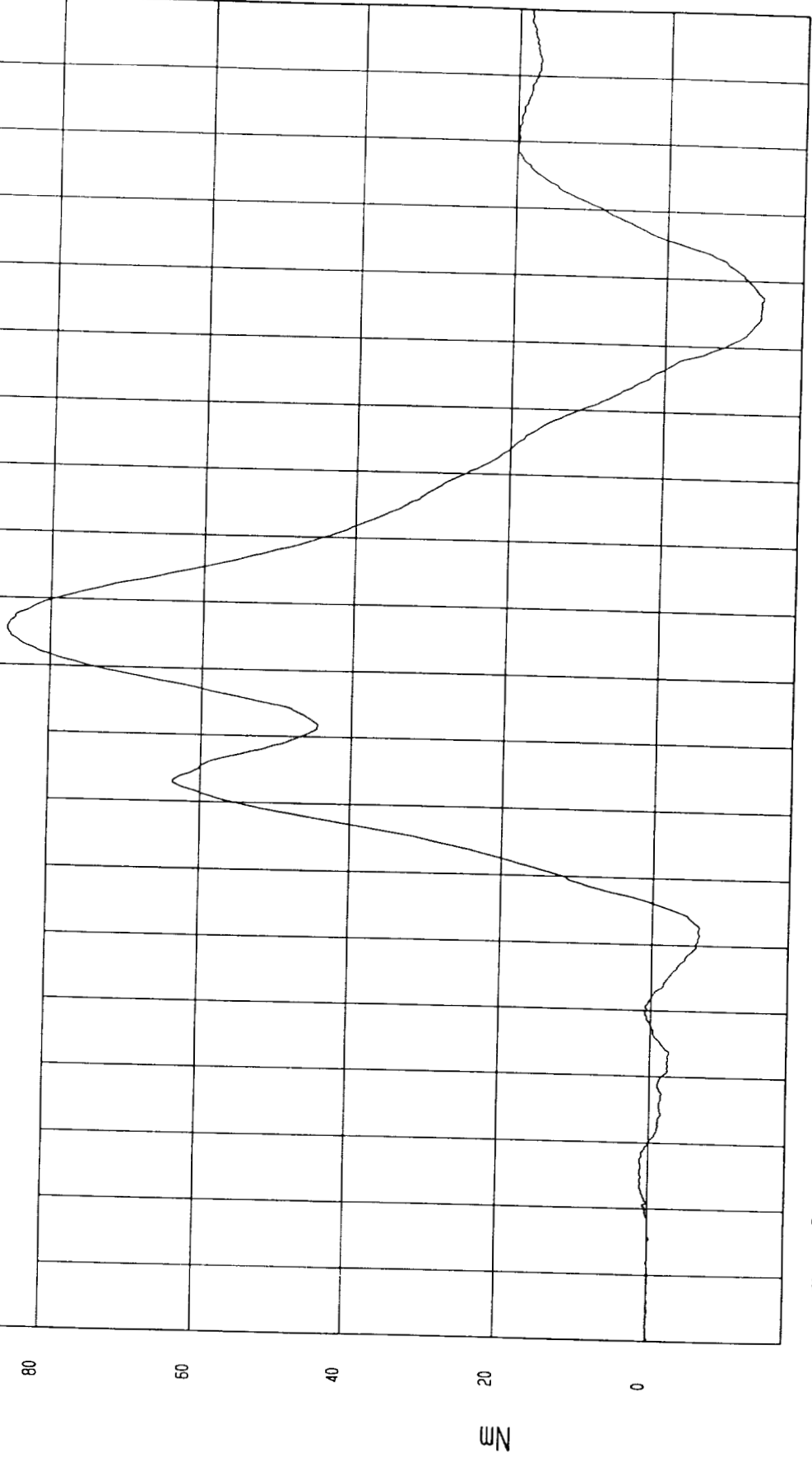


MGA Research
05-14-2001 13:30

MCA Research
05 14 2001 13 30

TIME (SECONDS)

19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0



DRIVER NECK MOMENT Y

1 H01079MF M16 Filterclass (600)

Maximum - 85.57 Nm at 10.6 msec

Minimum - -12.69 Nm at 157 msec

COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

TEST FMVSS 208 SLED (H01079)

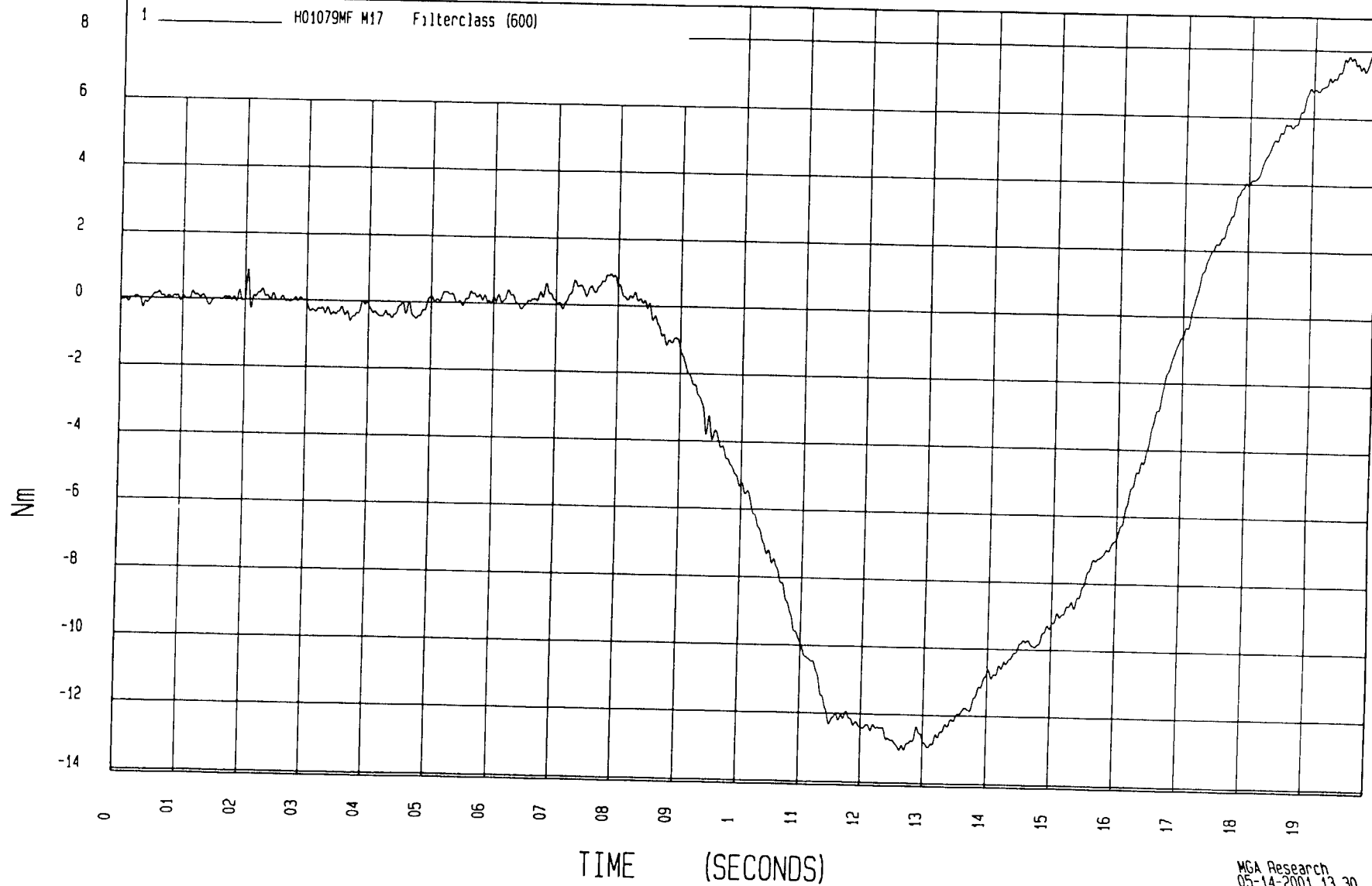
TEST DATE 05-14-2001

COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum = -13.04 Nm at 126 msec

Maximum = 7.9 Nm at 199 msec

DRIVER NECK MOMENT Z



MGA Research
05-14-2001 13 30

TIME (SECONDS)

DRIVER OCCIPITAL CONDYLE MOMENT Y

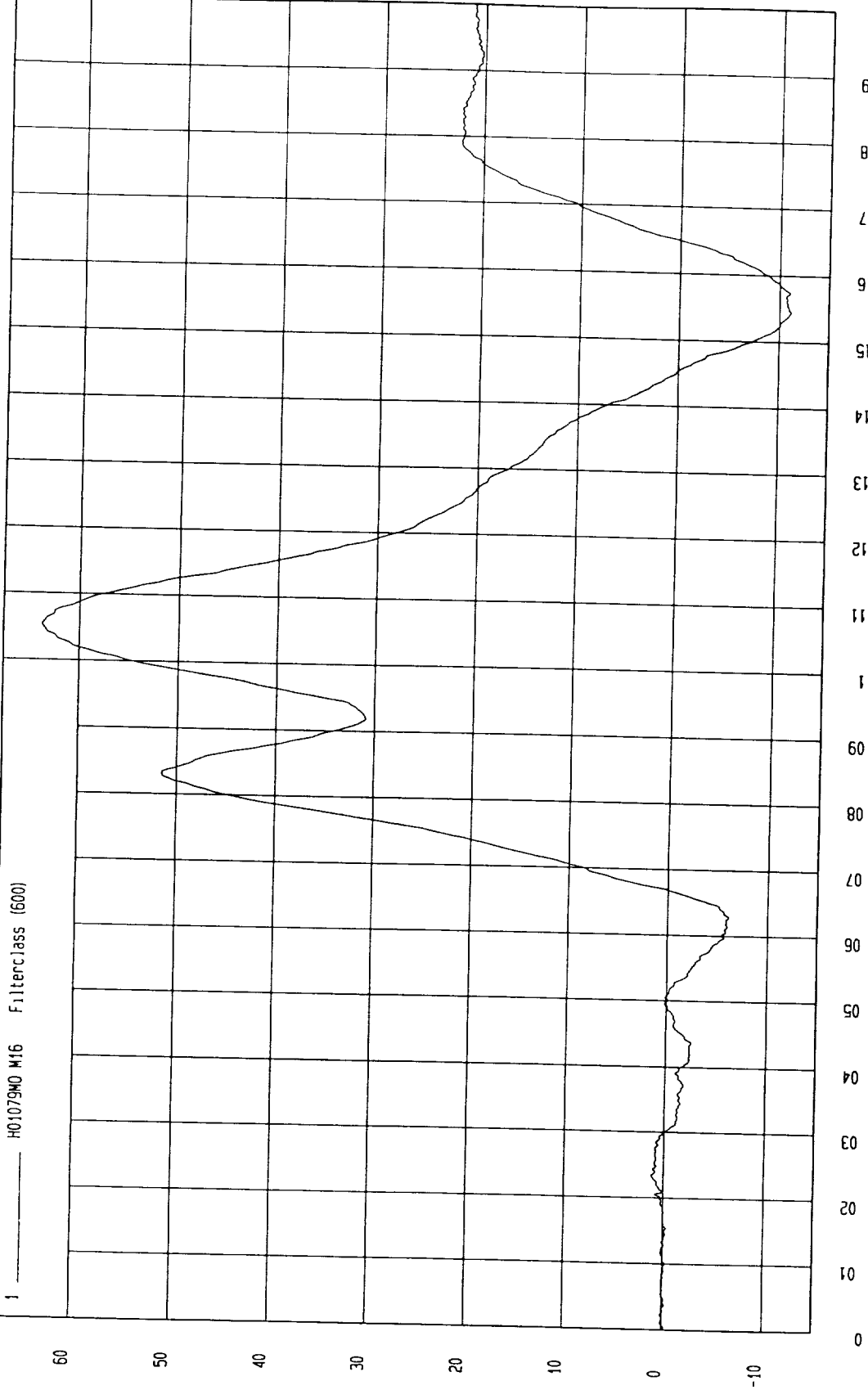
1 H01079M0 M16 Filterclass (600)

Maximum = 63.67 Nm at 105 msec

Minimum = 11.14 Nm at 154 msec

TEST FMVSS 208 SLED (H01079)

COMPONENT 2001 DODGE NEON 4 DOOR (C10301)



TEST FMVSS 208 SLED (H01079)

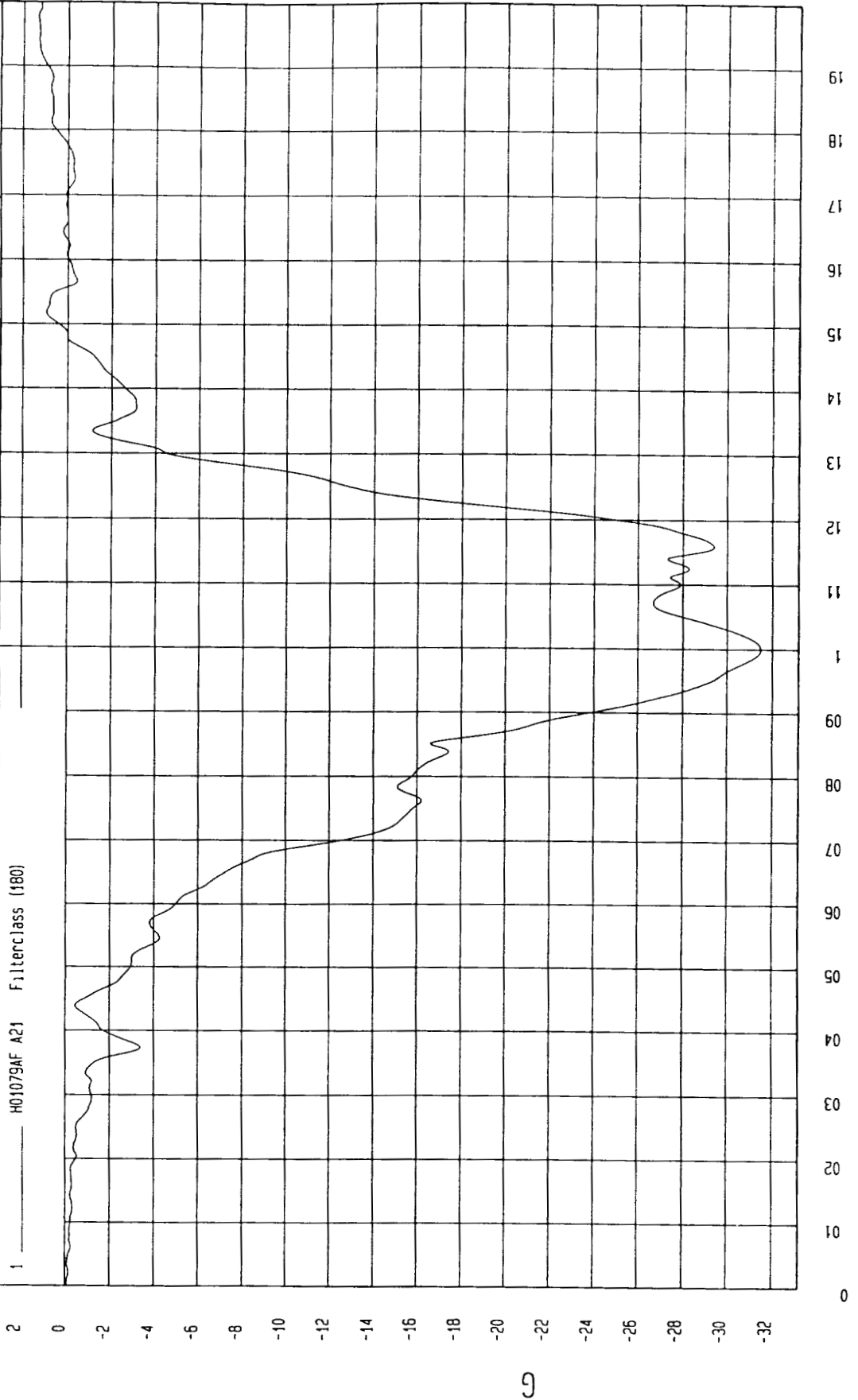
TEST DATE 05-14-2001

COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum -31.49 G at 100 msec

Maximum = 1.35 G at 198 msec

DRIVER CHEST X ACCELERATION



TEST FMVSS 208 SLED (H01079)

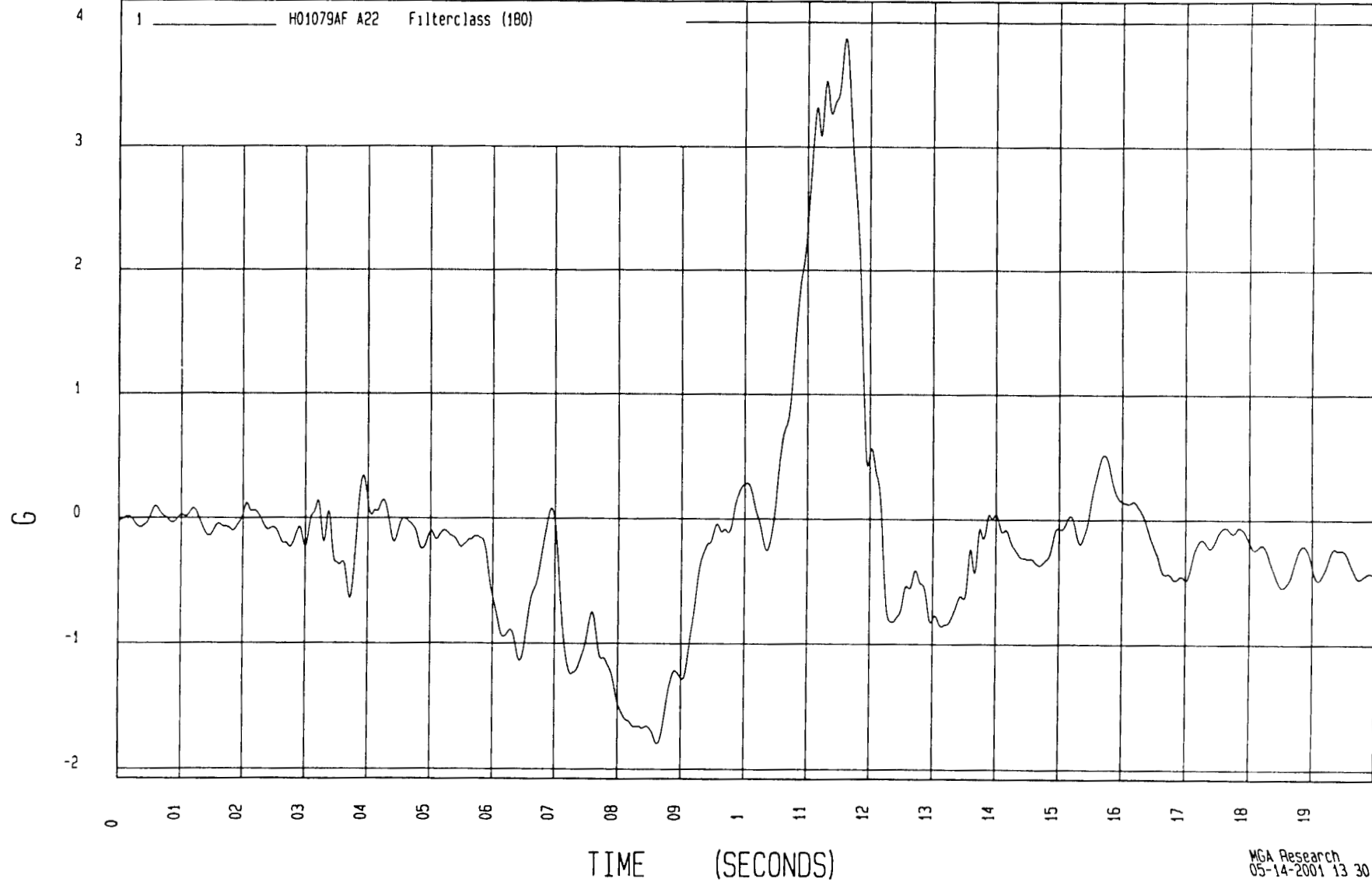
TEST DATE 05-14-2001

COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum = -1.79 G at 86 msec

Maximum = 3.88 G at 116 msec

DRIVER CHEST Y ACCELERATION



MCA Research
05-14-2001 13 30

TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

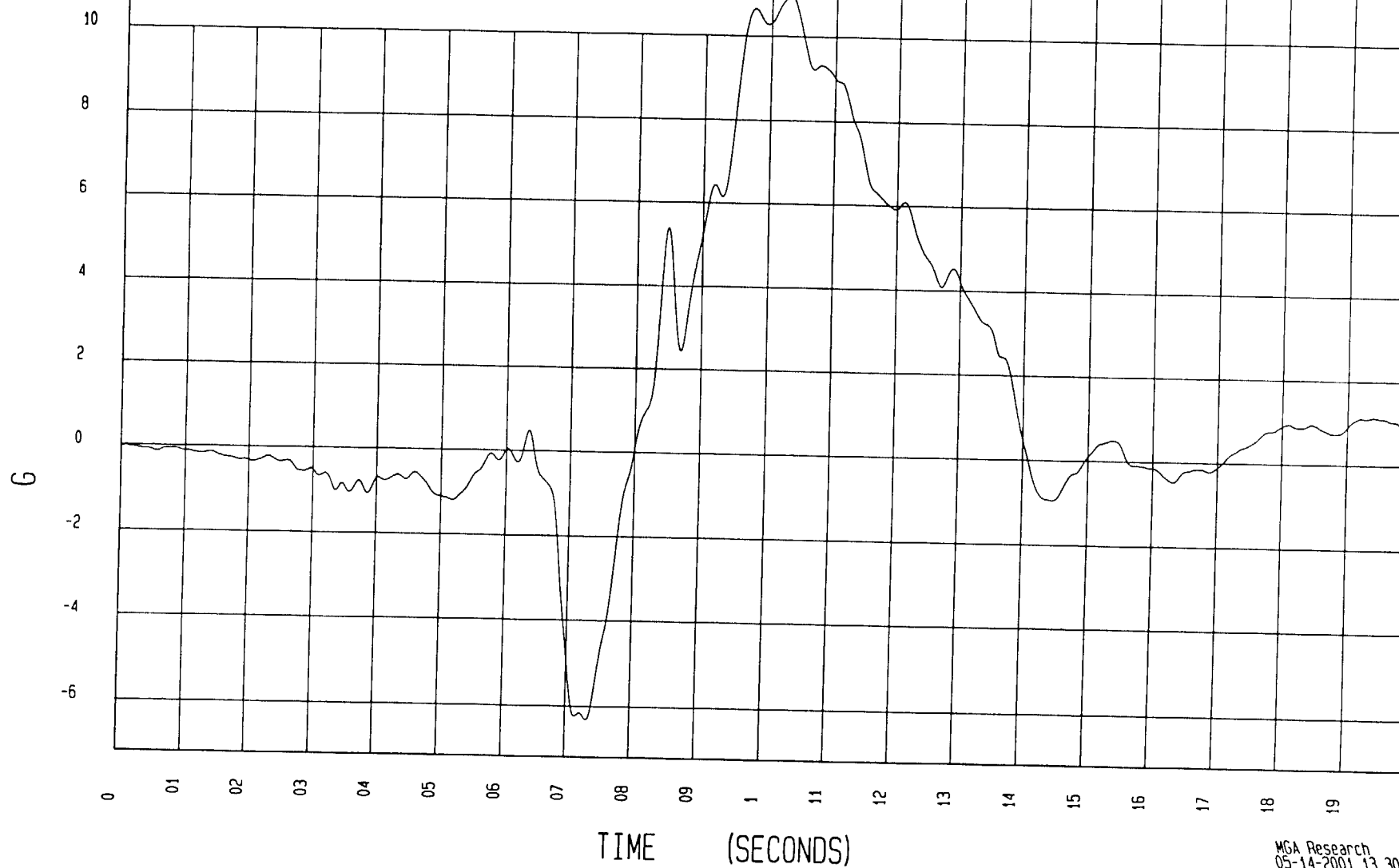
COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum = 6.31 G at 73 msec

Maximum = 10.94 G at 103 msec

DRIVER CHEST Z ACCELERATION

1 H01079AF A23 Filterclass (180)



MGA Research
05-14-2001 13 30

TEST FMVSS 208 SLED (H01079)

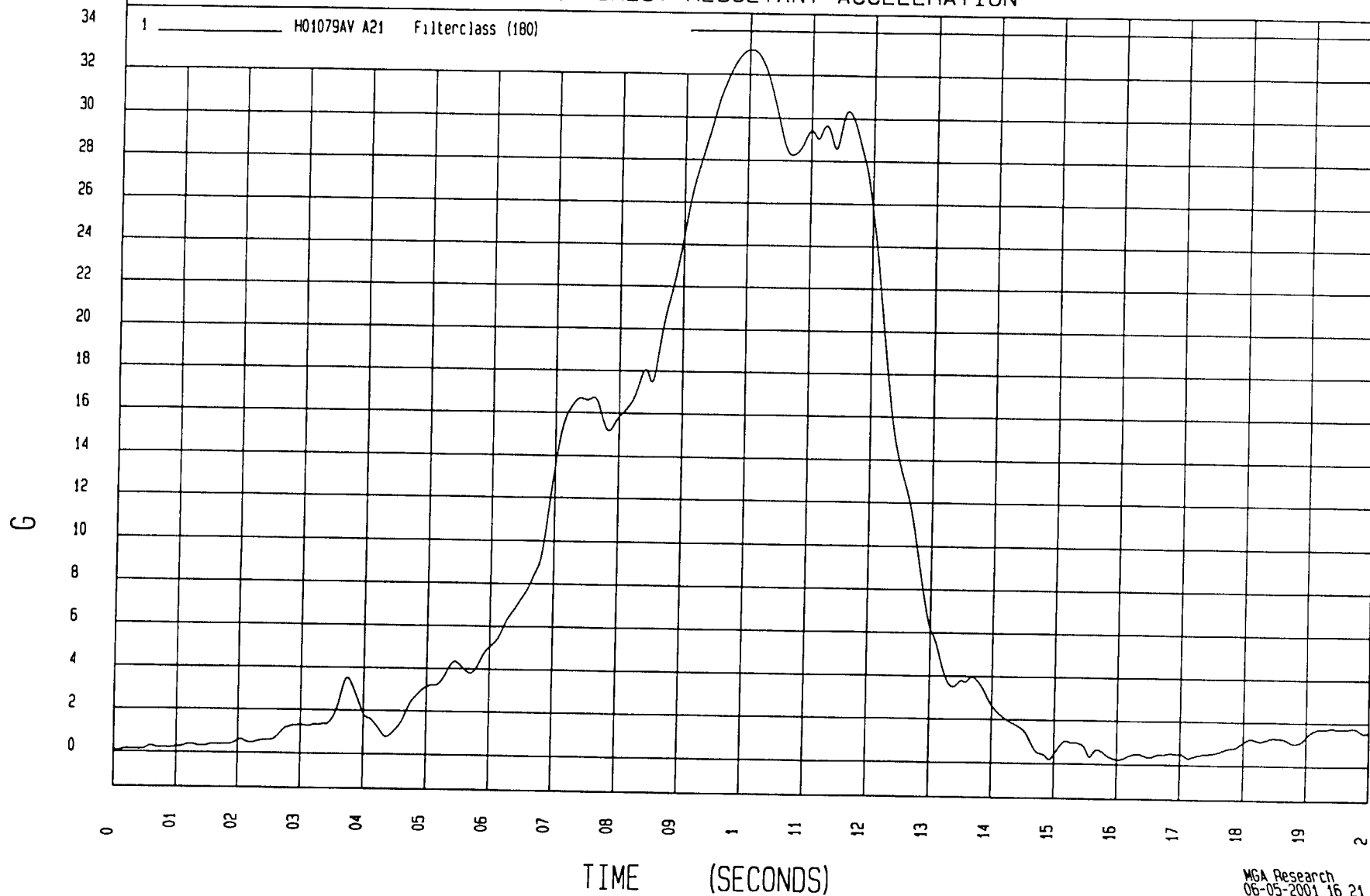
TEST DATE 05-14-2001

COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum = 7.78E-02 G at 1 msec

Maximum = 33.14 G at 100 msec

DRIVER CHEST RESULTANT ACCELERATION



MCA Research
06-05-2001 15:21

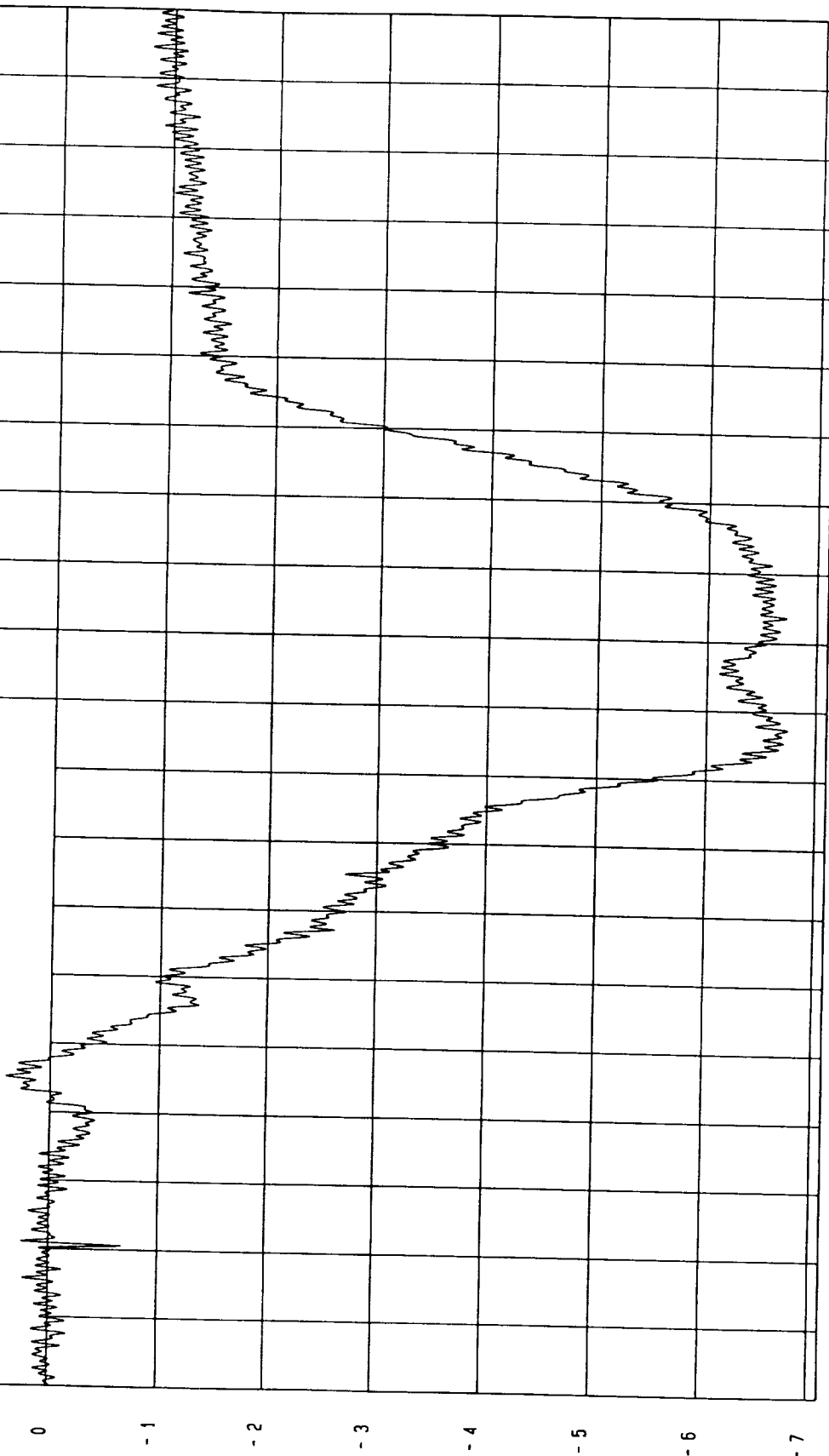
TIME SECONDS

2
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0

INCHES

DRIVER CHEST COMPRESSION

1 ——— H010790F 038 Filterclass (600)



Maximum = 3.99E-02 INCHES at 45 msec

Minimum = -67 INCHES at 97 msec

COMPONENT. 2001 DODGE NEON 4 DOOR (C10301)

TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

MSA Research
05-14-2001 13 30

TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

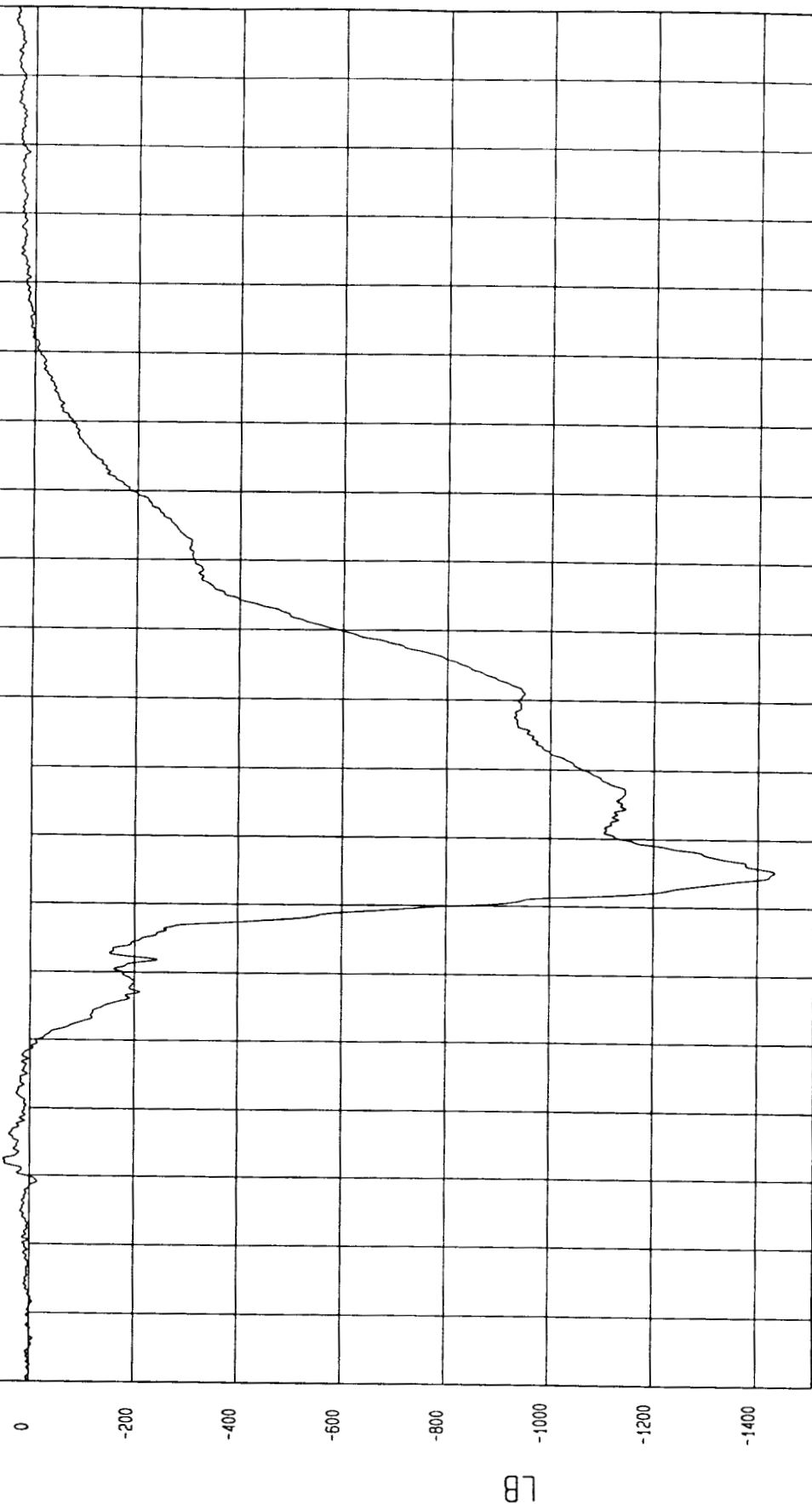
COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum = -1432 85 LB at 75 msec

Maximum = 50 86 LB at 32 msec

DRIVER LEFT FEMUR FORCE

1 — H01079FF F08 Filterclass (600)



TIME (SECONDS)

TEST FMVSS 208 SLED (H01079)

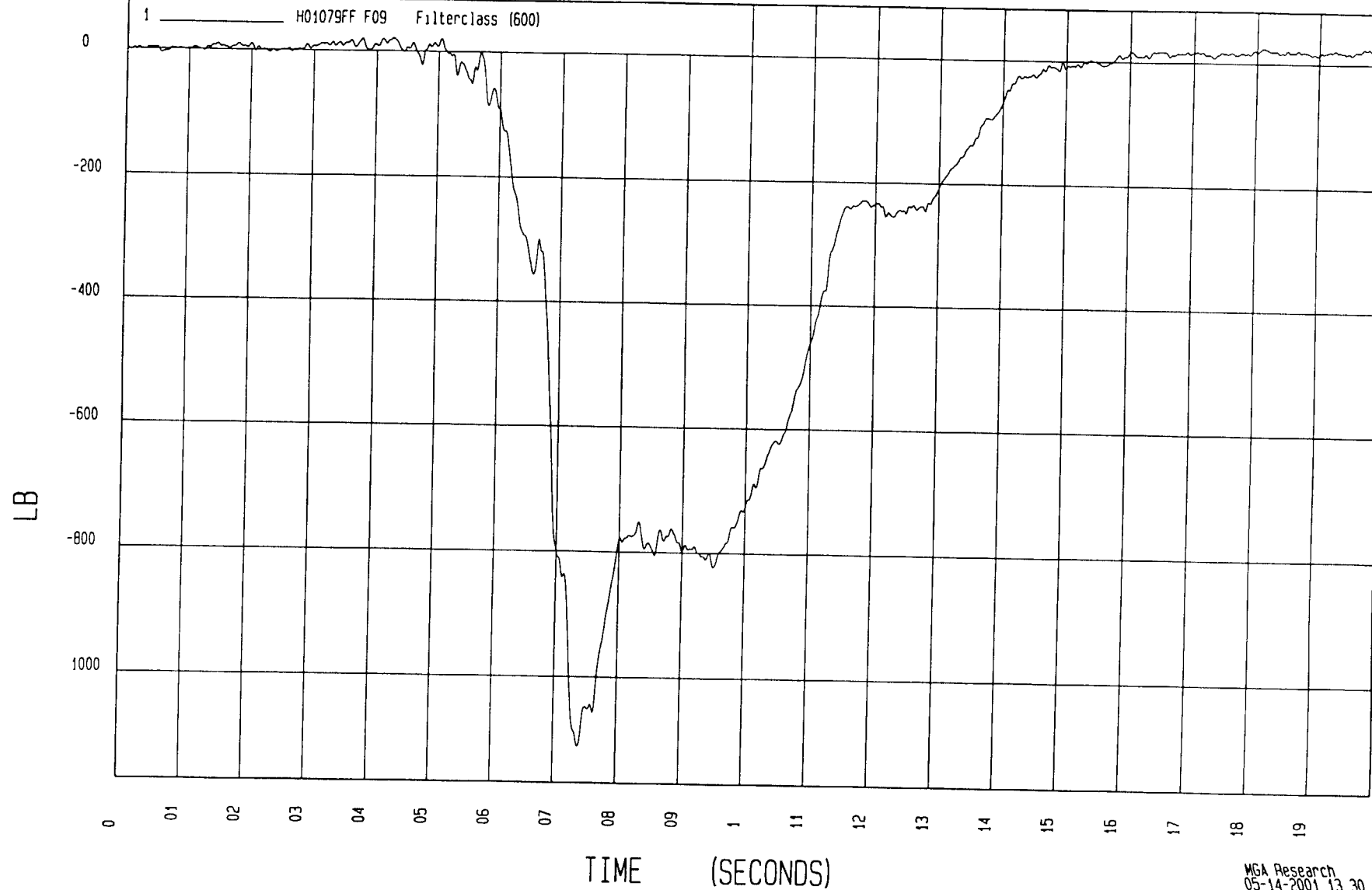
TEST DATE 05-14-2001

COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum = -1110.38 LB at 74 msec

Maximum = 24.88 LB at 181 msec

DRIVER RIGHT FEMUR FORCE



TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

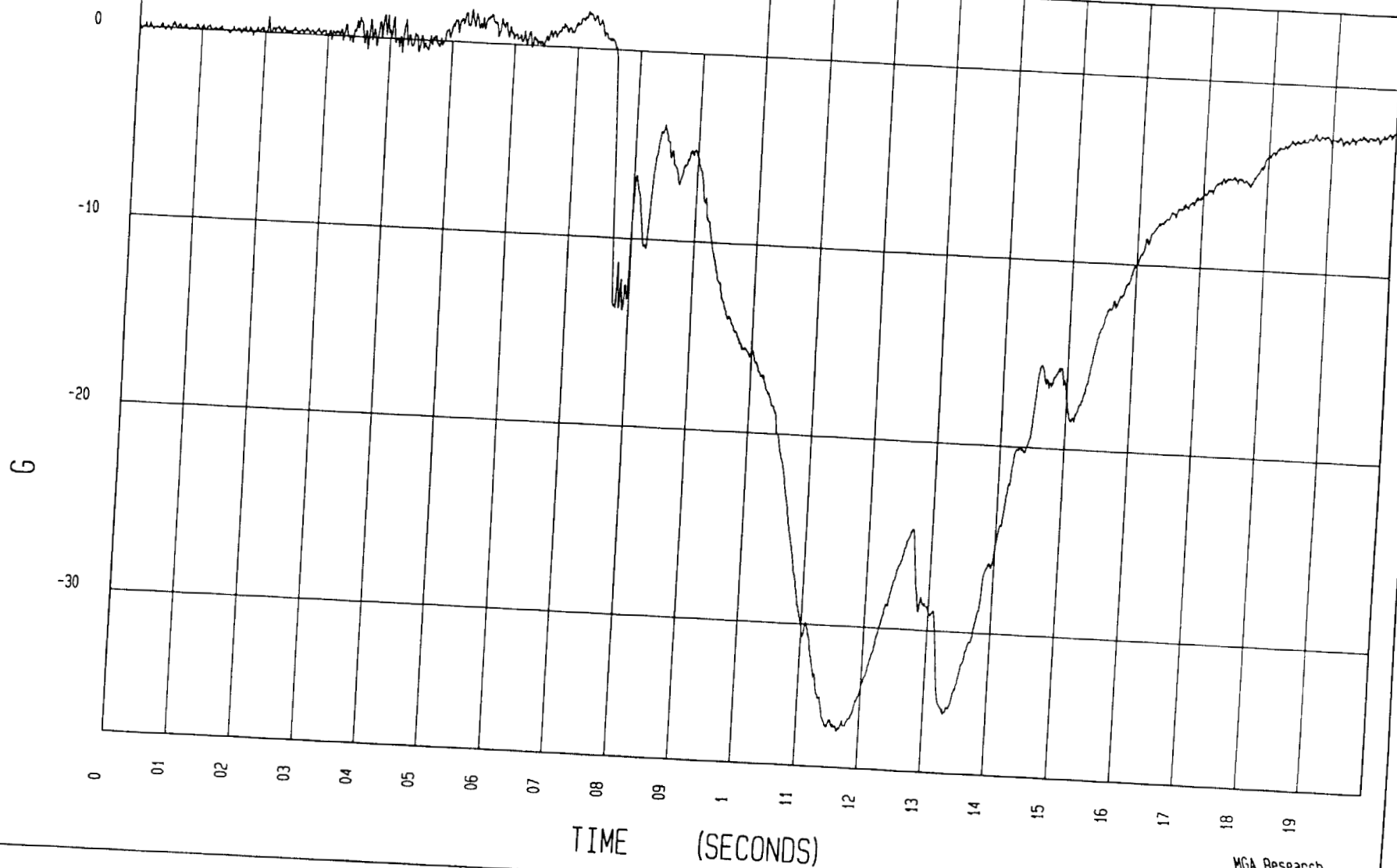
COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum = -35.56 G at 116 msec

Maximum = 1.94 G at 72 msec

PASSENGER HEAD X ACCELERATION

1 H01079AT A24 Filterclass (1000)



MCA Research
05-14-2001 13 29

TEST FMVSS 208 SLED (H01079)

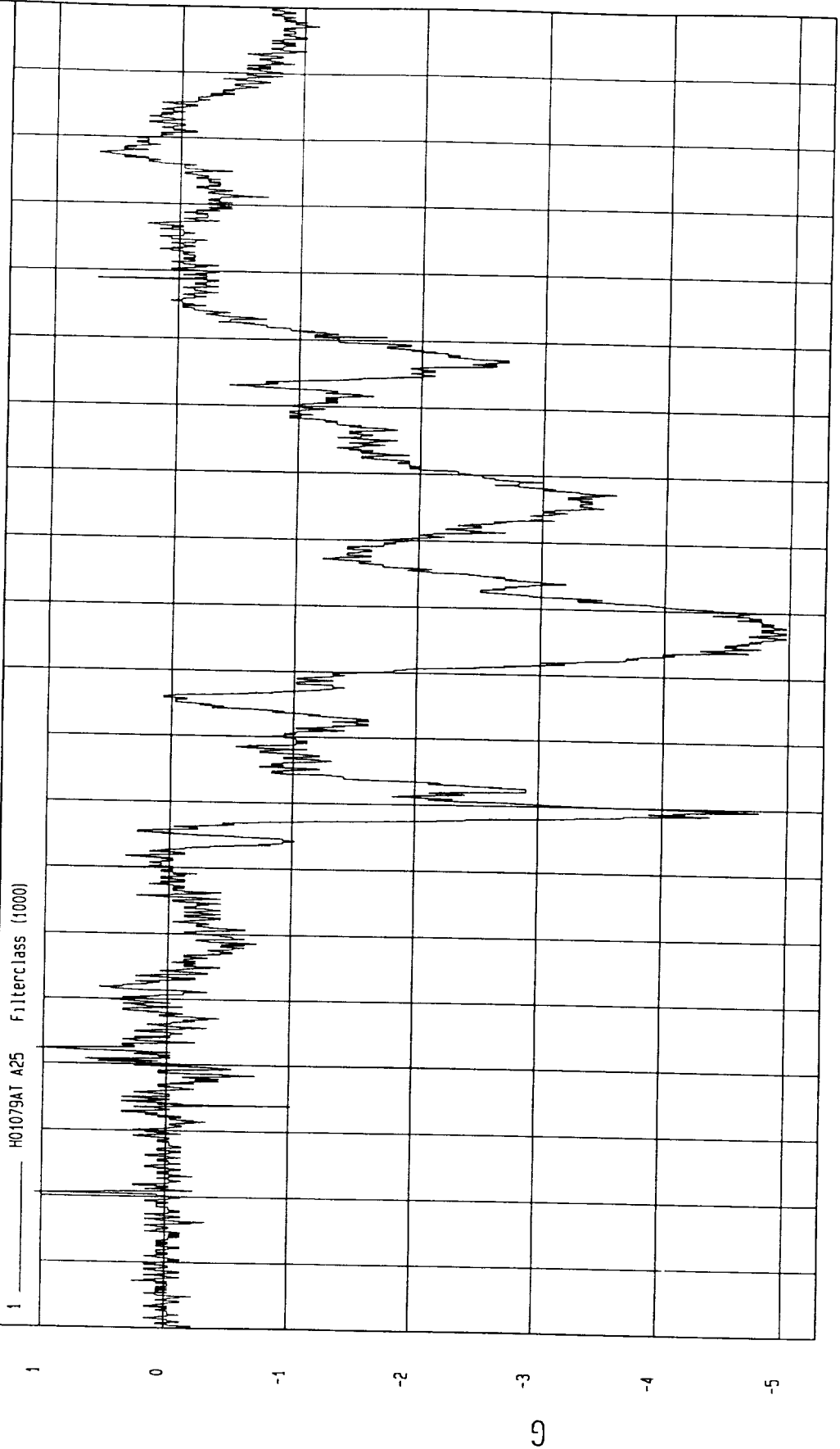
TEST DATE 05-14-2001

COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum = -4.98 G at 106 msec

Maximum = 1.06 G at 20 msec

PASSENGER HEAD Y ACCELERATION



TEST FMVSS 208 SLED (H01079)

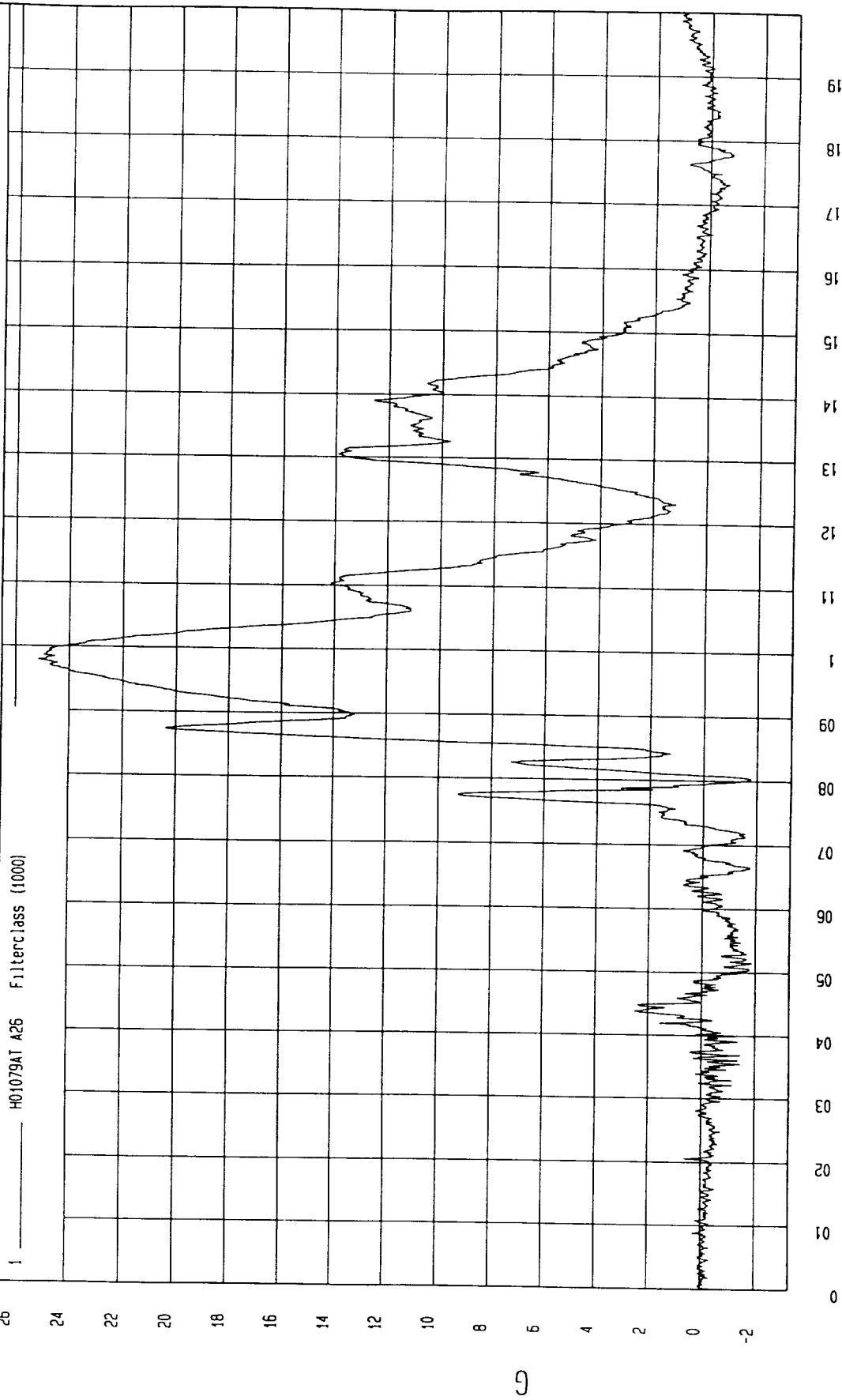
TEST DATE 05-14-2001

COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum = -1.87 G at 52 msec

Maximum = 25.16 G at 98 msec

PASSENGER HEAD Z ACCELERATION

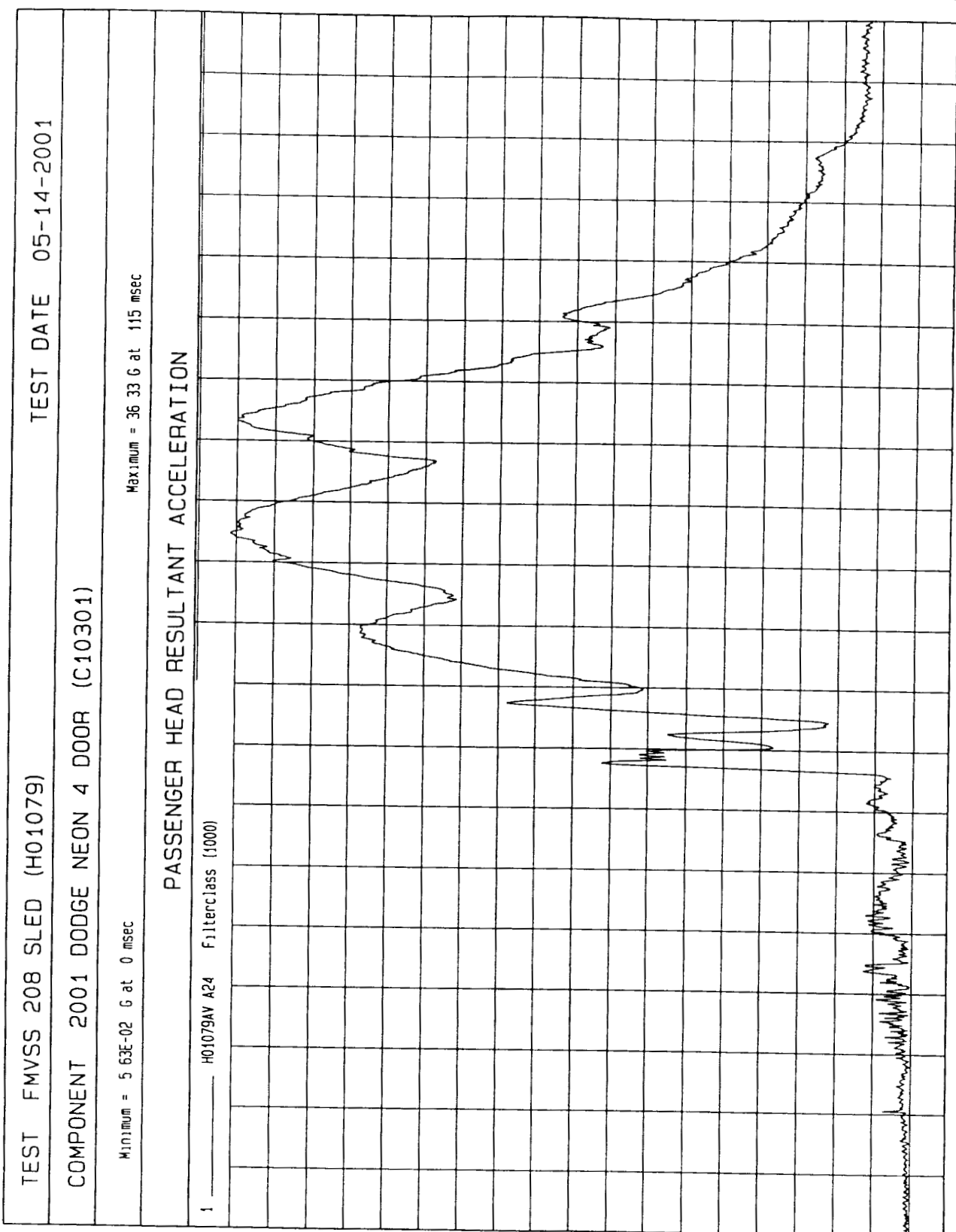


TIME (SECONDS)

WGA Research
05-14-2001 13 29

MCA Research
05-14-2001 13 29

TIME (SECONDS)

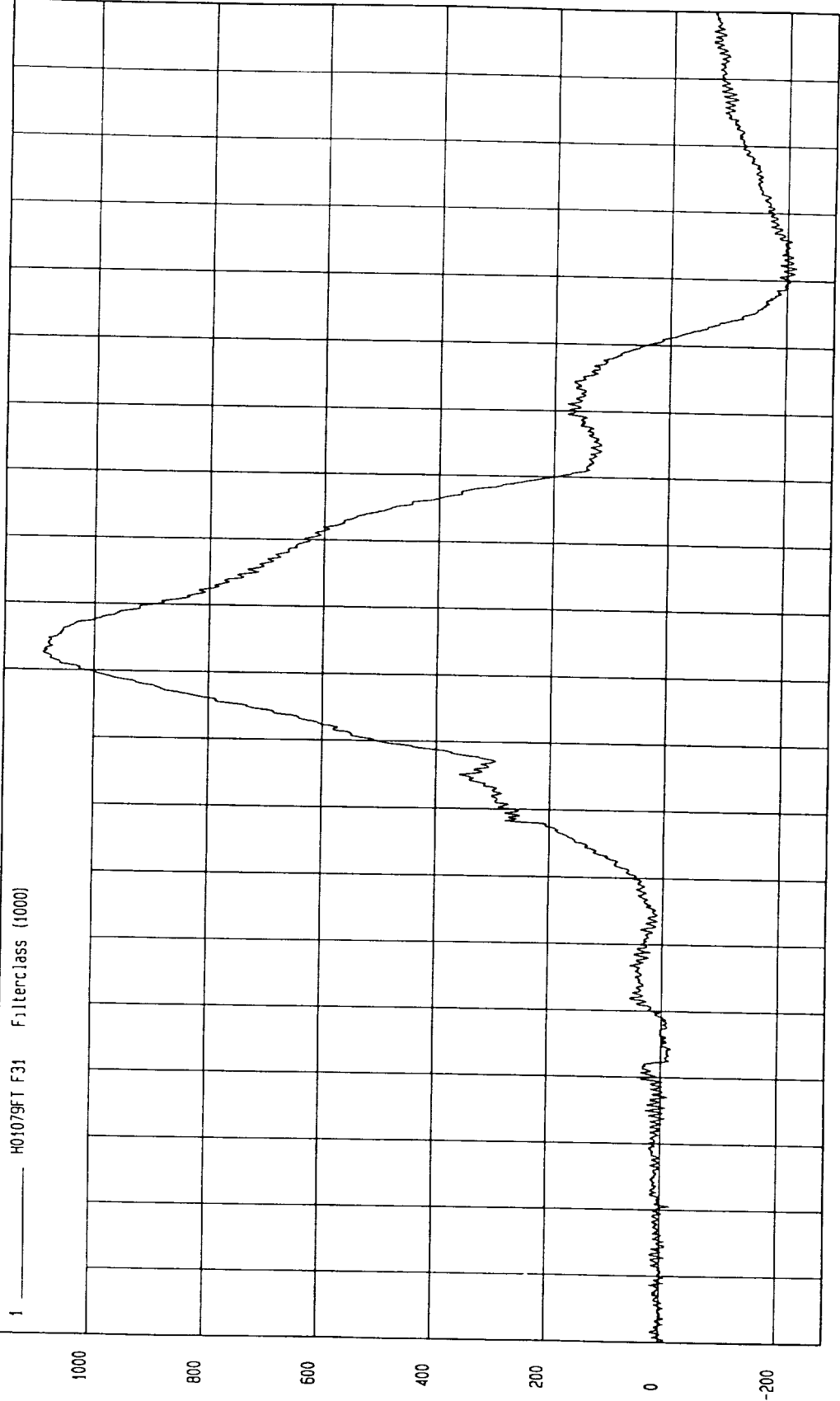


TEST FMVSS 208 SLED (H01079) TEST DATE 05-14-2001

COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

TIME (SECONDS)

19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0



PASSENGER NECK FORCE X

Maximum = 1087 47 N at 103 msec

Minimum = -216 58 N at 162 msec

COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

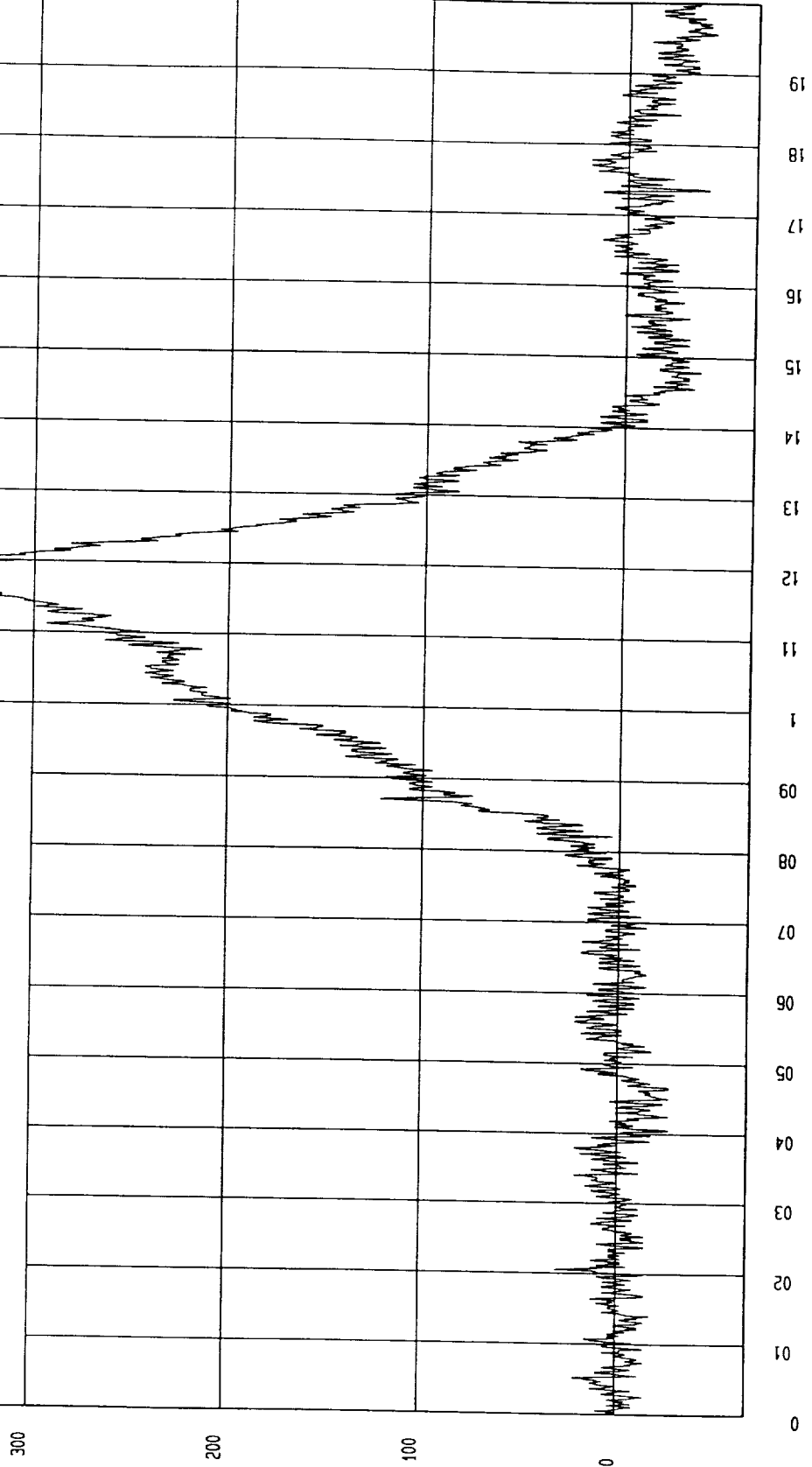
COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum -43 58 N at 196 msec

Maximum = 361 07 N at 117 msec

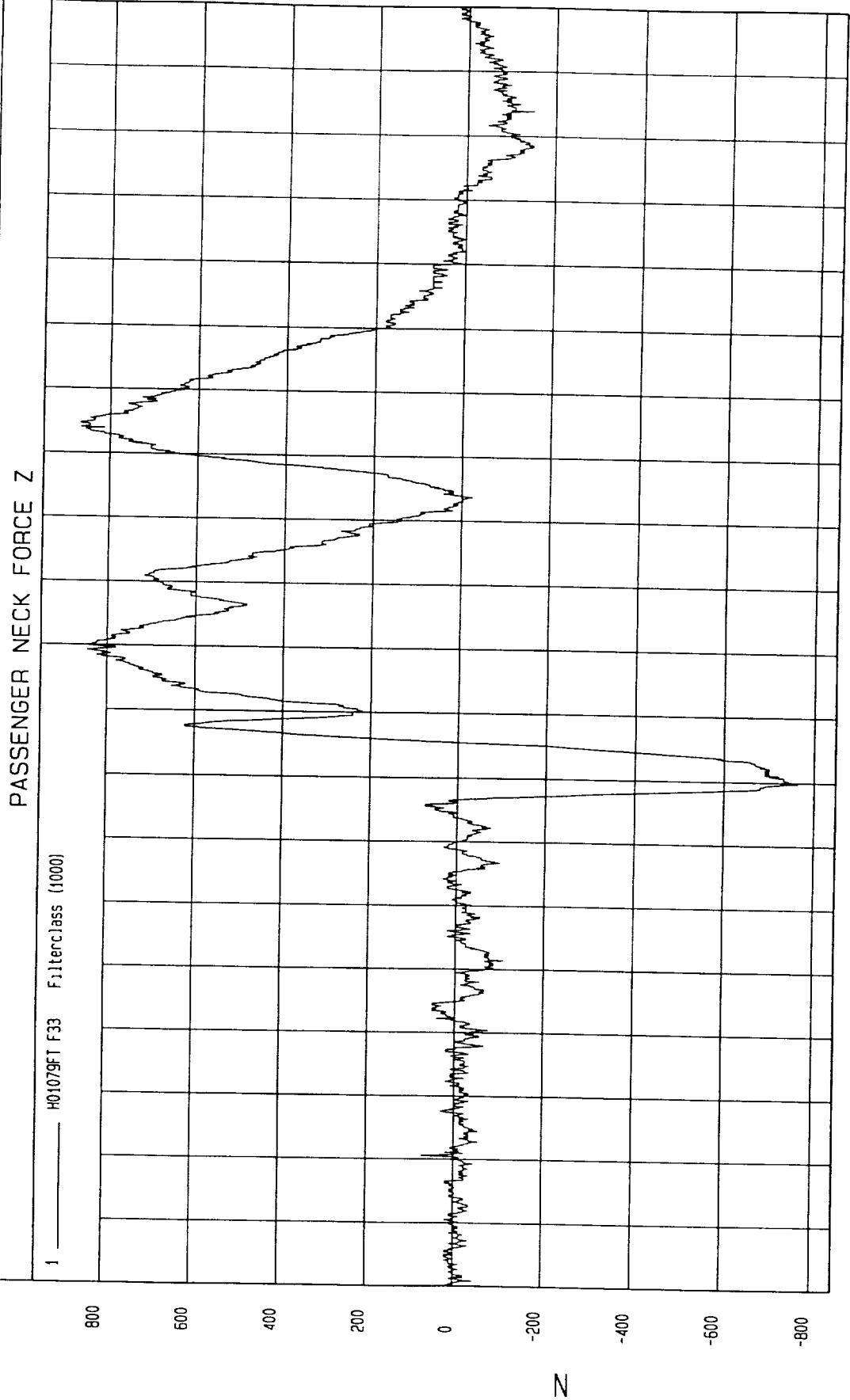
PASSENGER NECK FORCE Y

1 ——— H01079FT F32 Filterclass (1000)



TIME (SECONDS)

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



PASSENGER NECK FORCE Z

Maximum = 865 N at 134 msec

Minimum = -764 N at 80 msec

COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

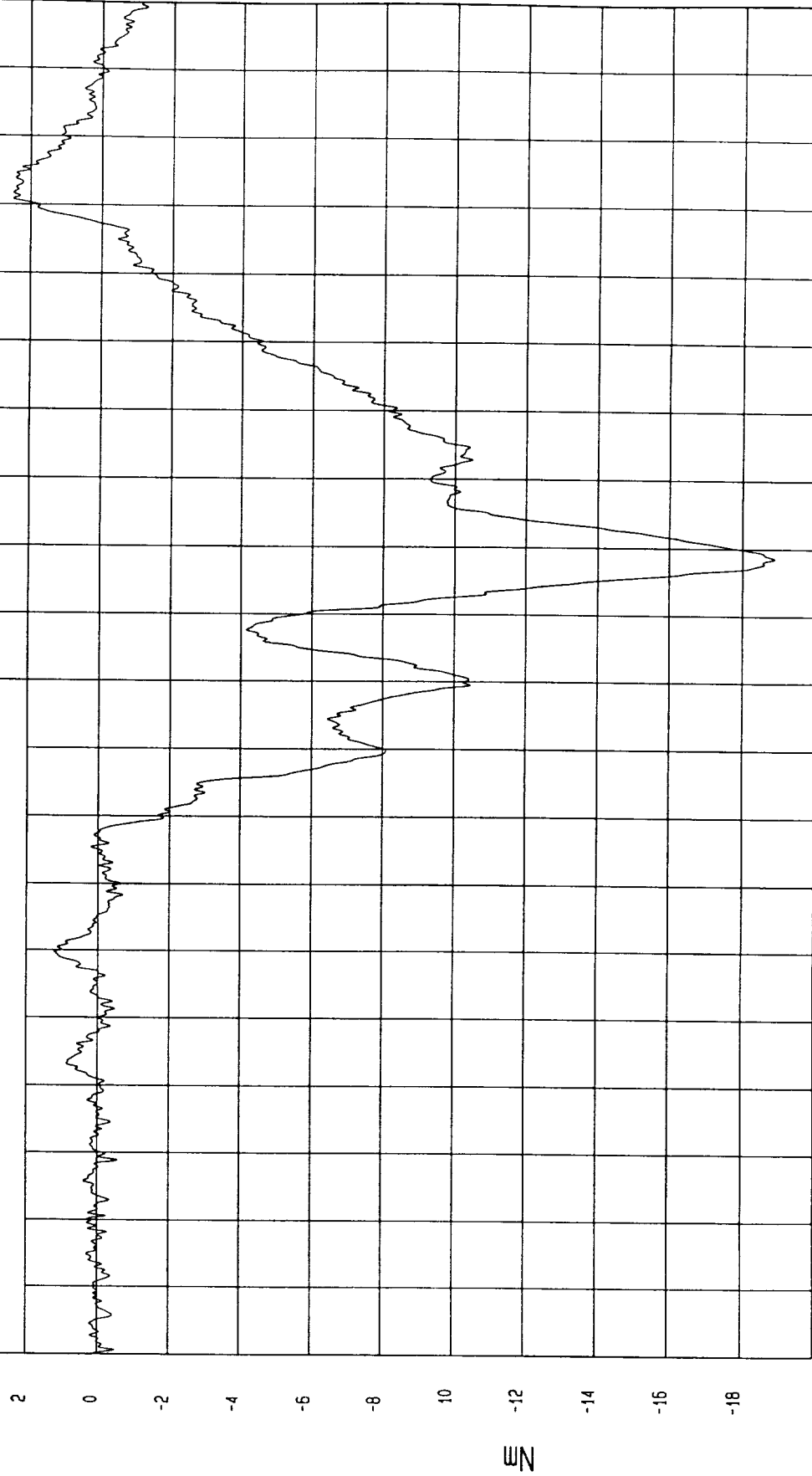
COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum = 18.87 Nm at 118 msec

Maximum = 2.49 Nm at 171 msec

PASSENGER NECK MOMENT X

1 H01079MF M37 Filterclass (600)



TEST FMVSS 208 SLED (H01079)

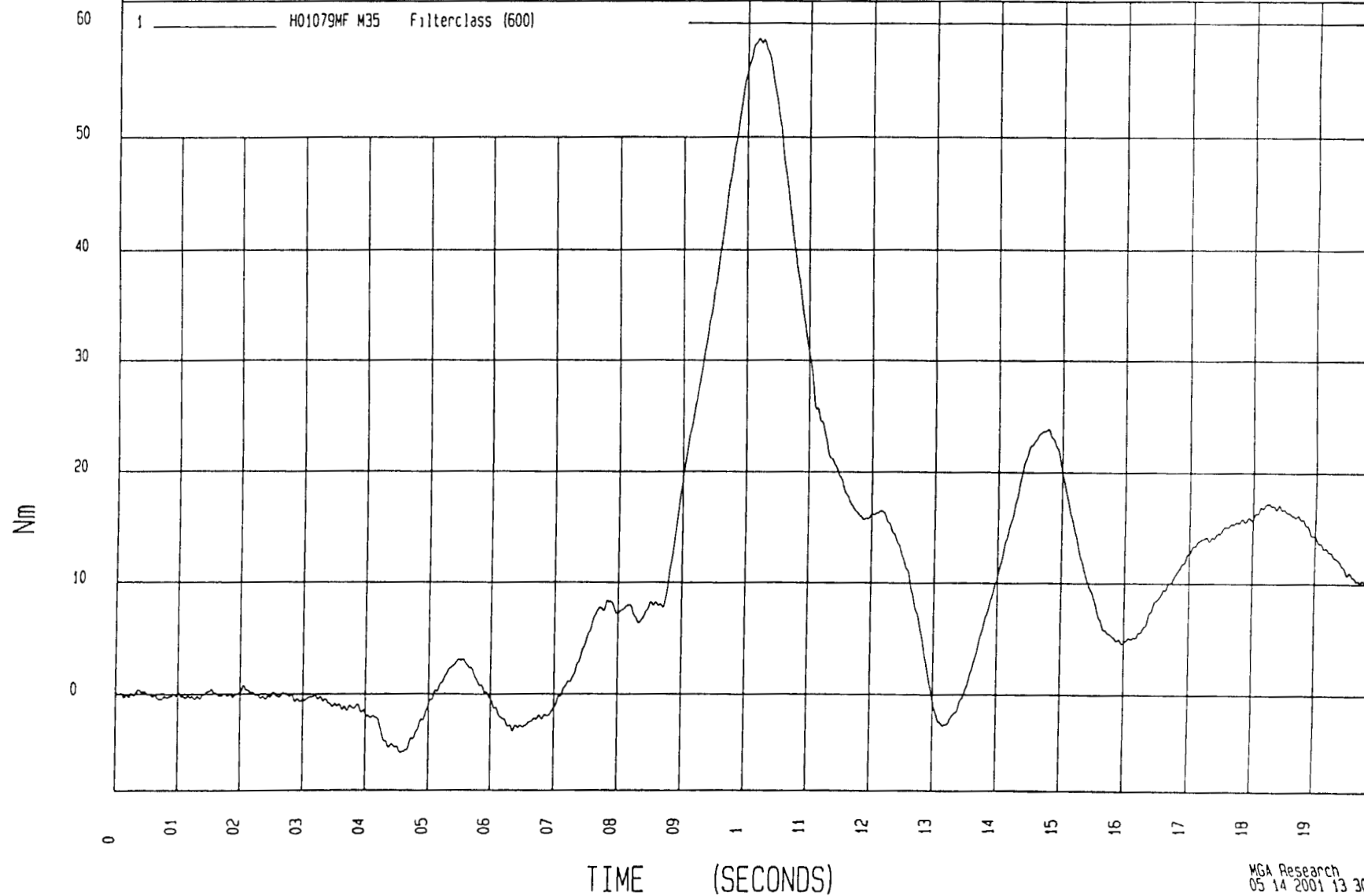
TEST DATE 05-14-2001

COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum 5.13 Nm at 46 msec

Maximum = 58.7 Nm at 102 msec

PASSENGER NECK MOMENT Y



TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

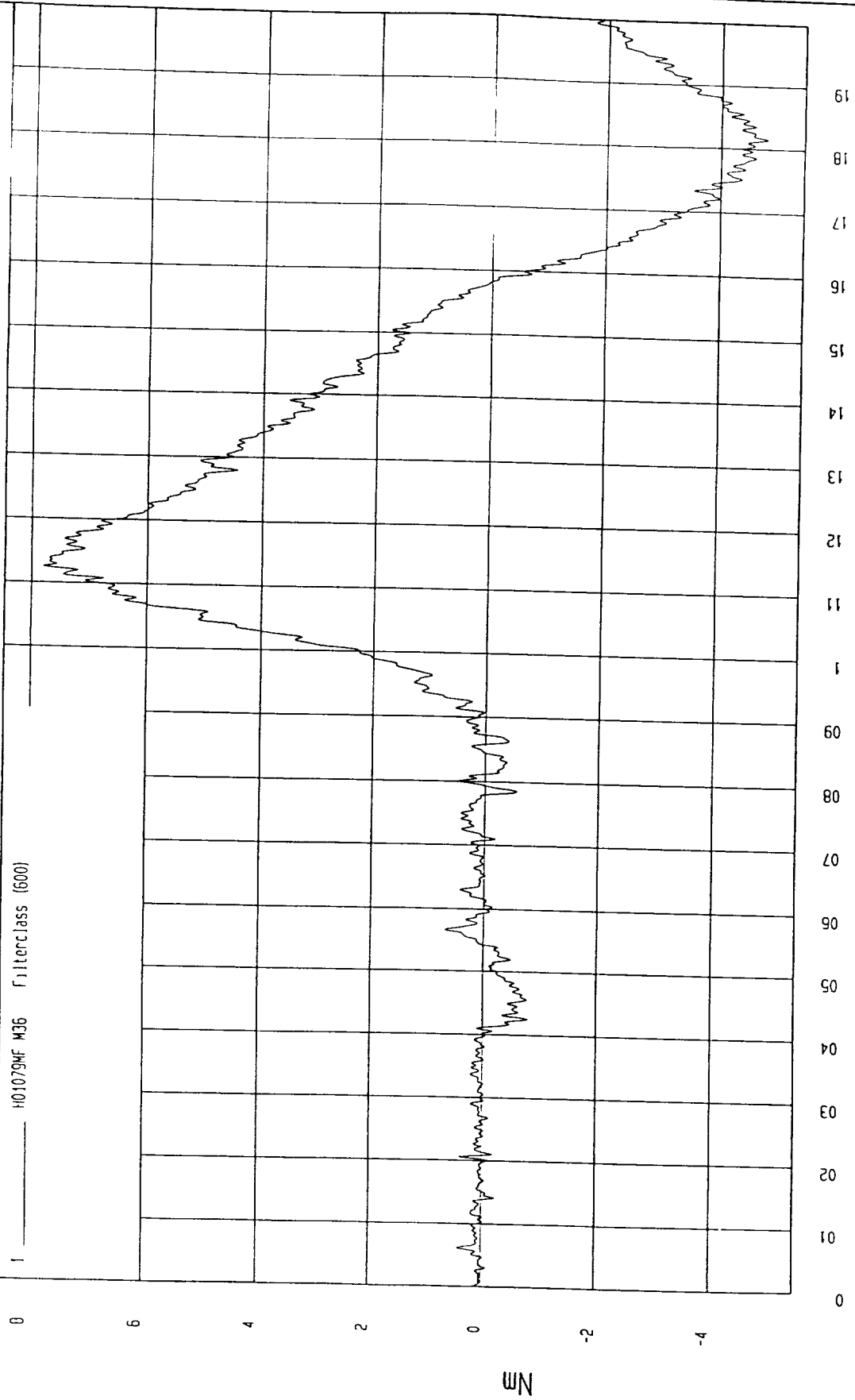
COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum 4.81 Nm at 182 msec

Maximum = 7.8 Nm at 113 msec

PASSENGER NECK MOMENT Z

1 H01079NF M36 Filterclass (600)



TIME (SECONDS)

TIME (SECONDS)

19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0

Nm

40

30

20

10

0

1 H0107940 M35 Filterclass (600)

PASSENGER OCCIPITAL CONDYLE MOMENT Y

Minimum 5.28 Nm at 132 msec

Maximum - 39.65 Nm at 102 msec

TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

TIME (SECONDS)

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

G

0 -10 -20 30 -40

1 ——— H01079AF A27 Filterclass (180)

PASSENGER CHEST X ACCELERATION

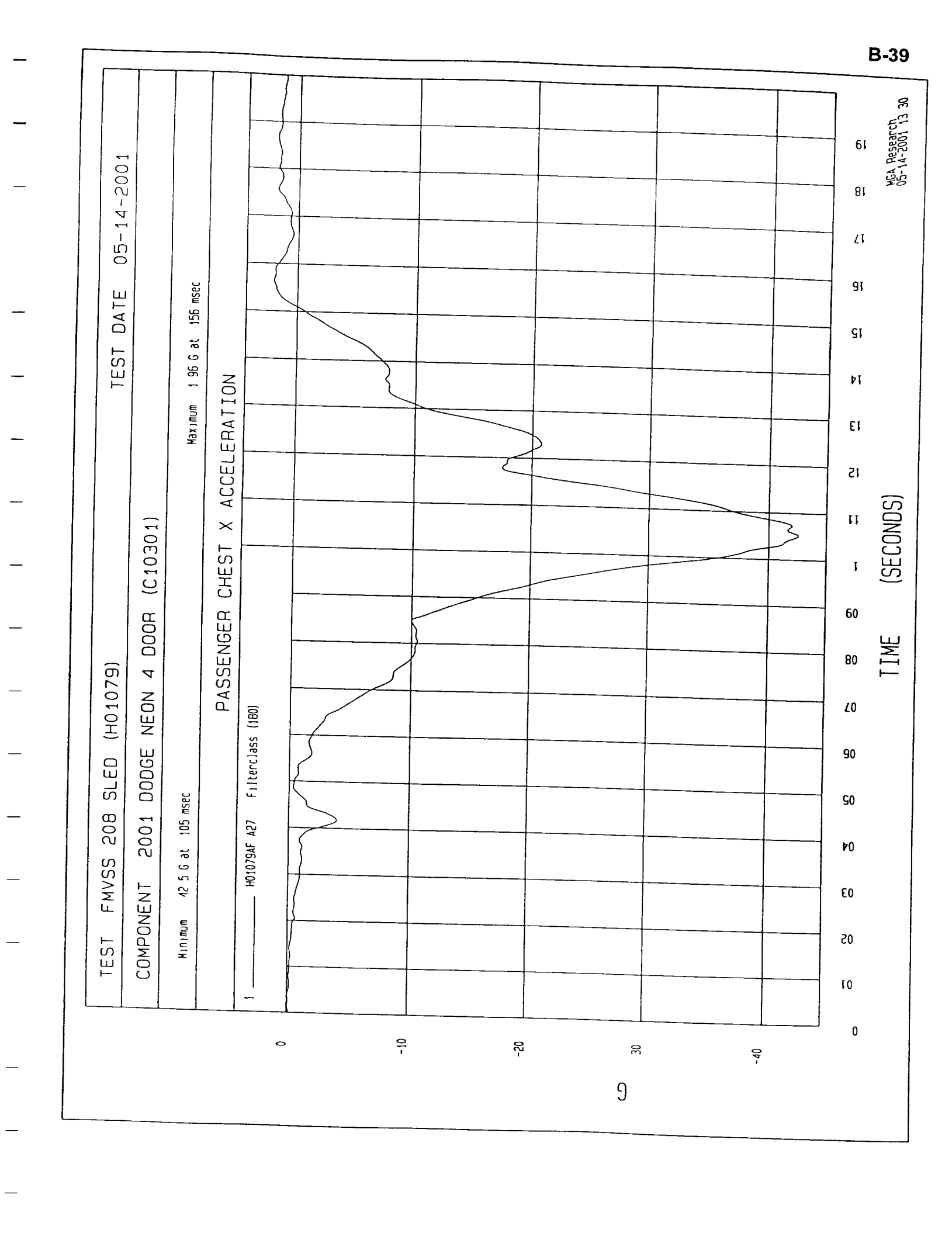
Minimum 42.5 G at 105 msec

Maximum 1.96 G at 156 msec

COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001



TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

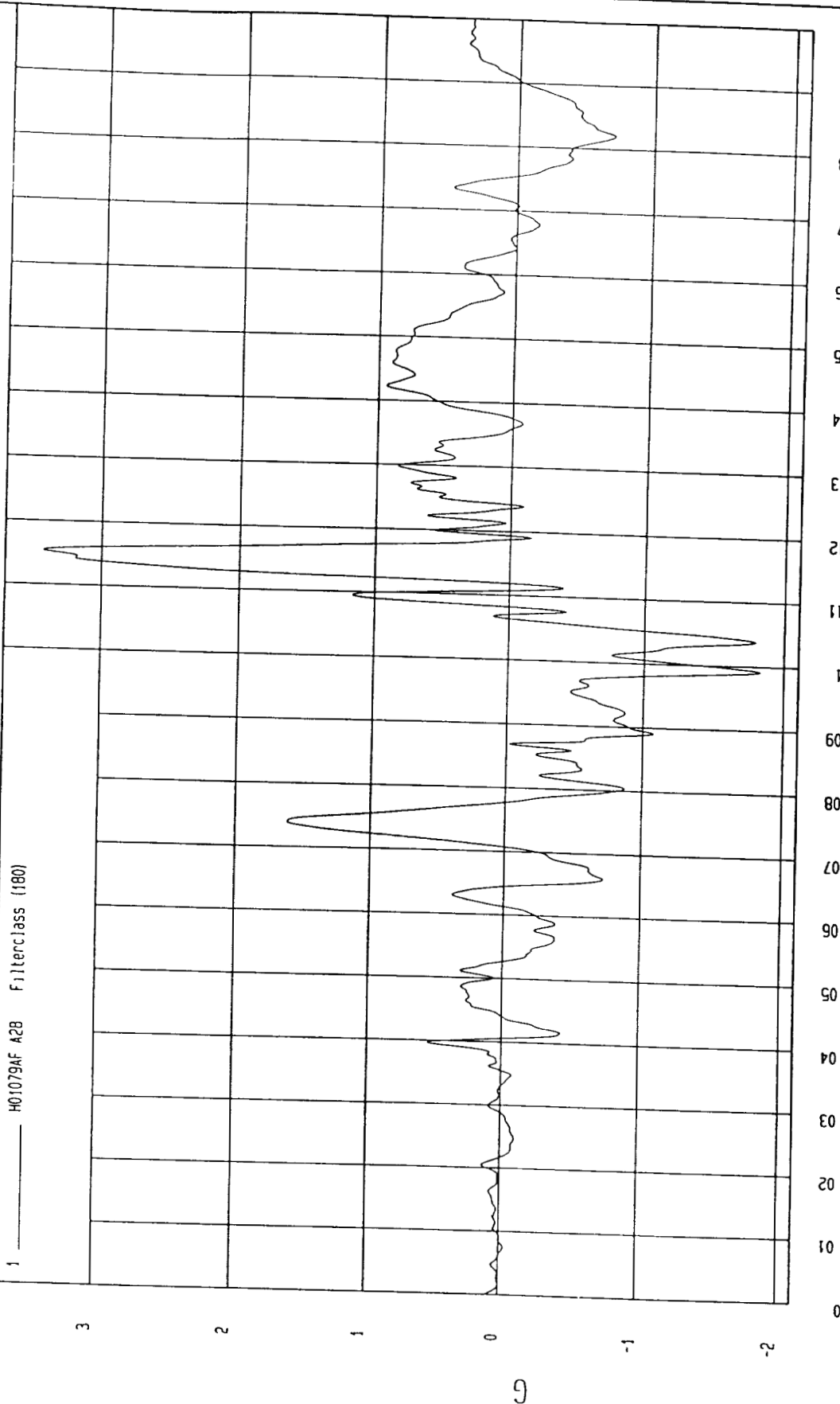
COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum -1.84 G at 99 msec

Maximum = 3.42 G at 115 msec

PASSENGER CHEST Y ACCELERATION

1 H01079AF A28 Filterclass (180)

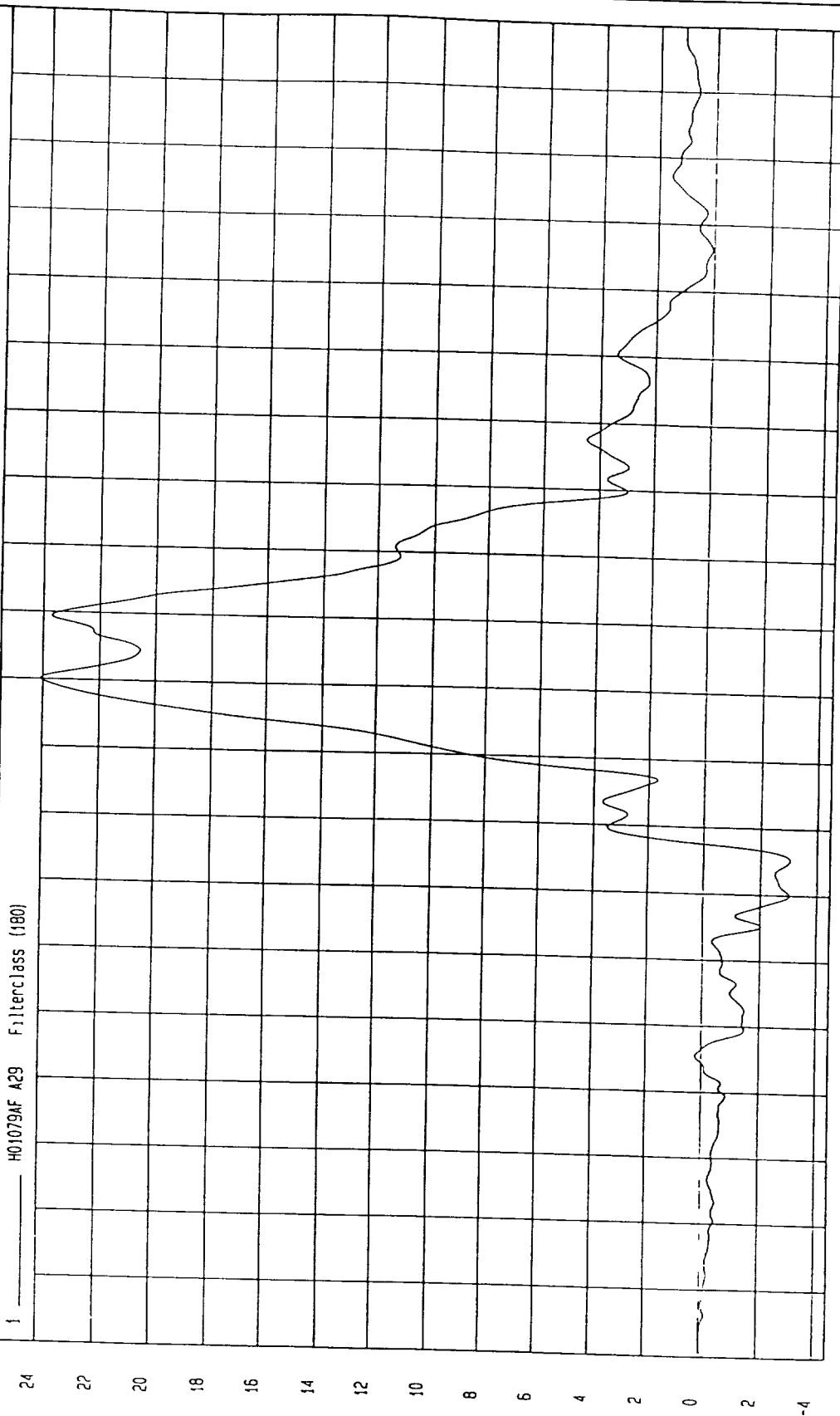


TIME (SECONDS)

TIME (SECONDS)

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

G



PASSENGER CHEST Z ACCELERATION

Maximum = 24.07 G at 100 msec

Minimum = -3.07 G at 75 msec

COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

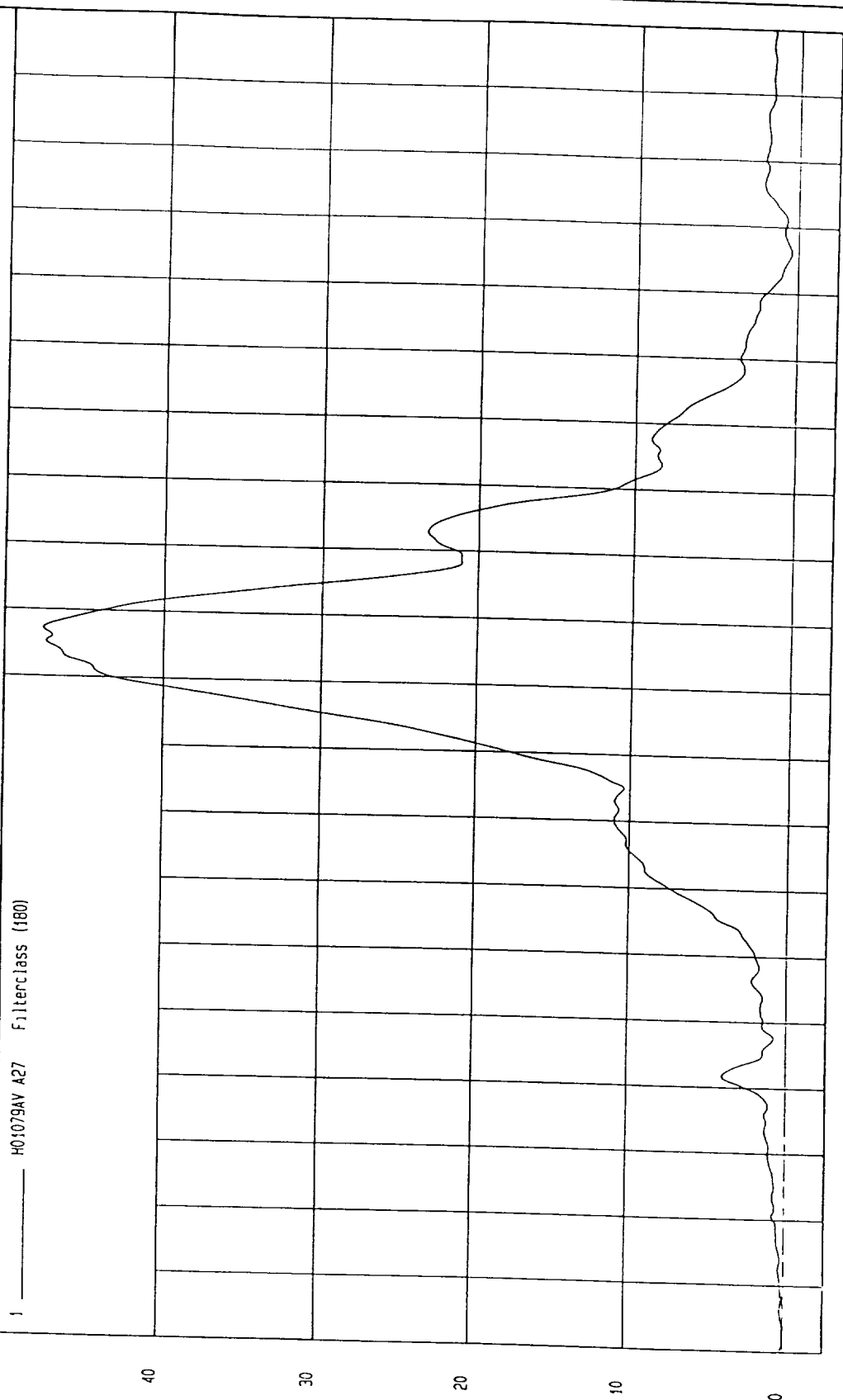
TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

TIME (SECONDS)

19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0

G



1 — H01079AV A27 Filterclass (180)

PASSENGER CHEST RESULTANT ACCELERATION

Maximum = 47.49 G at 107 msec

Minimum = 4.34E 02 G at 4 msec

COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

TEST FMVSS 208 SLED (H01079)

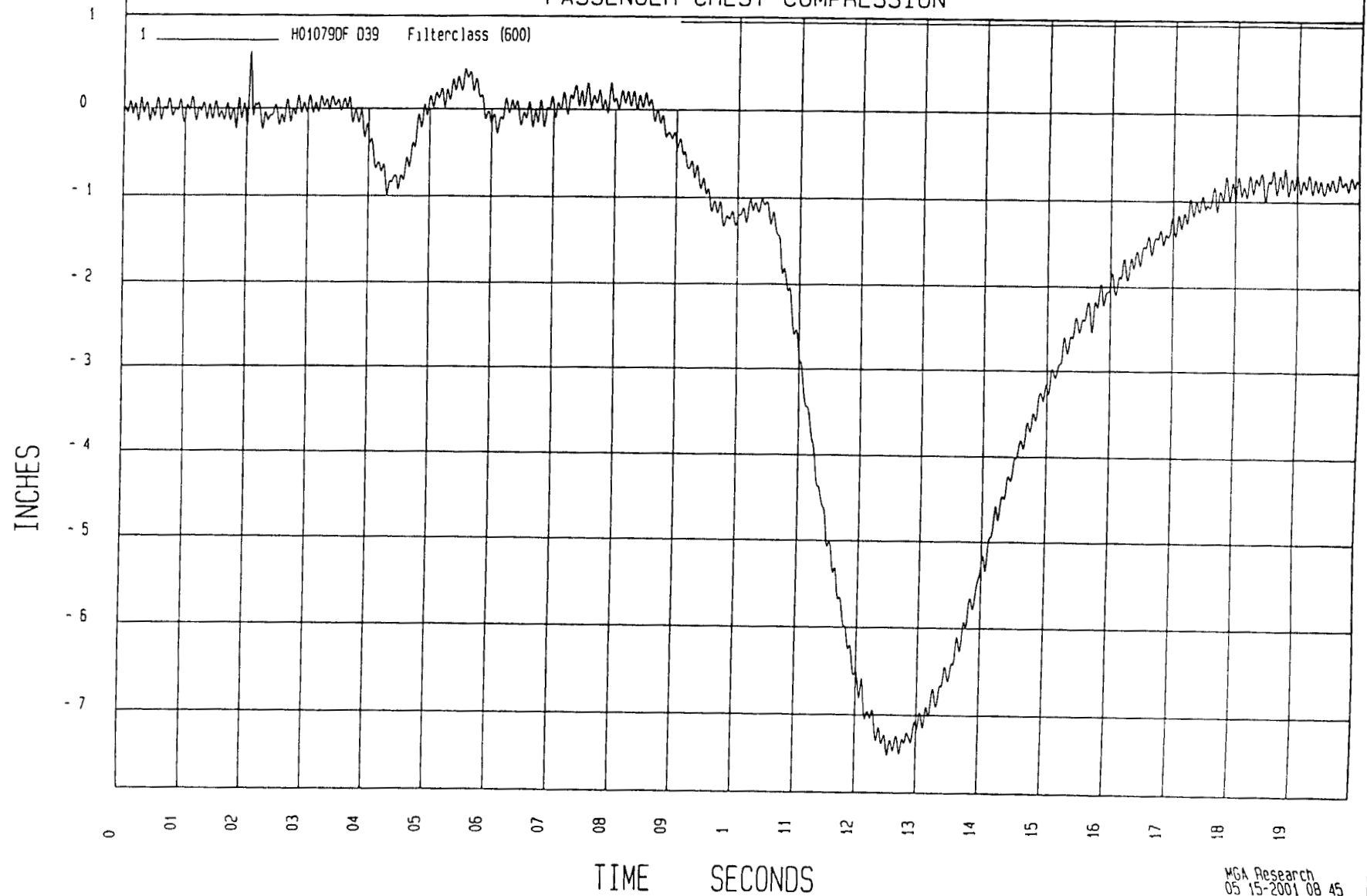
TEST DATE 05-14-2001

COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

Minimum 75 INCHES at 125 msec

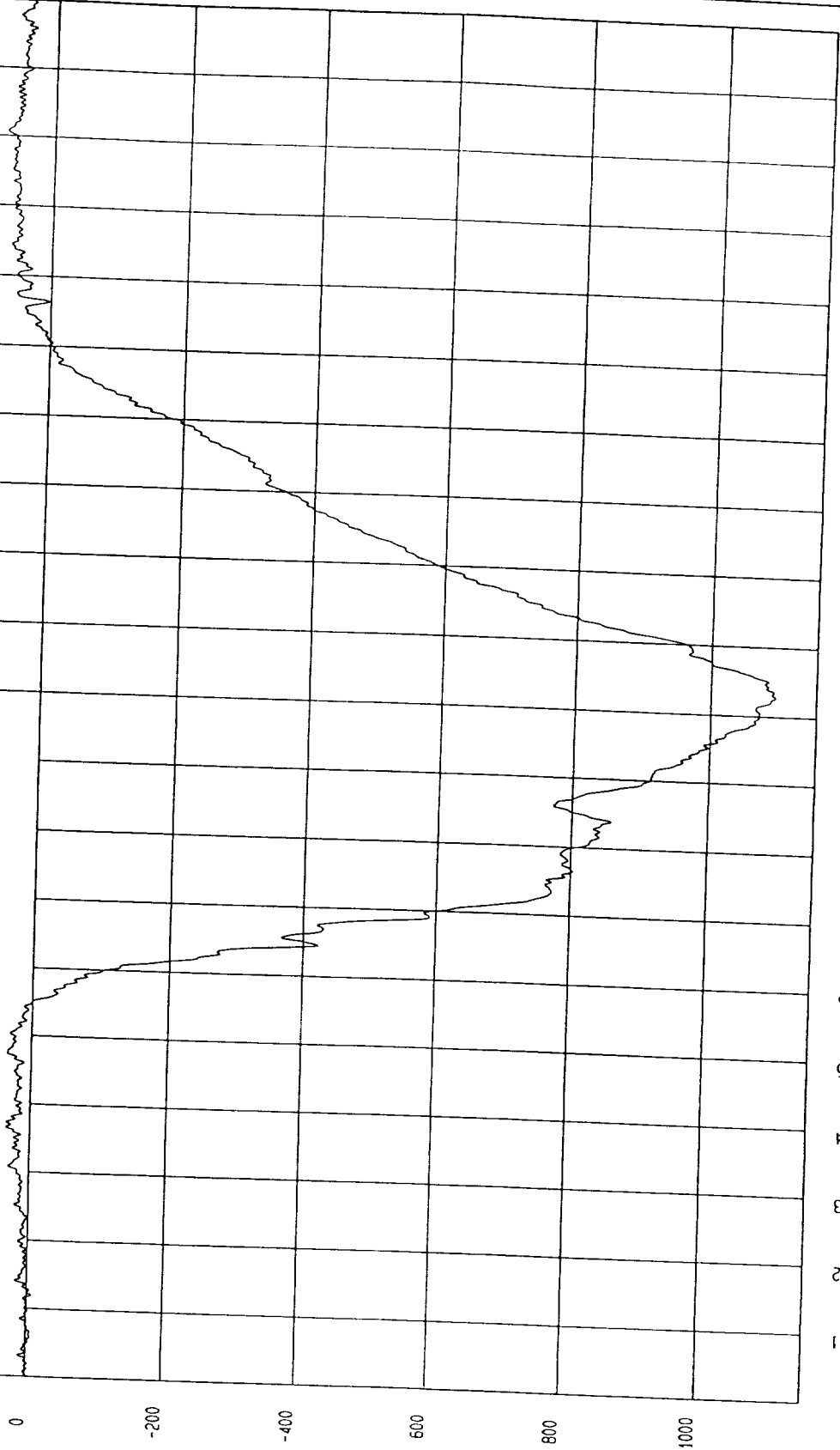
Maximum = 6.46E-02 INCHES at 21 msec

PASSENGER CHEST COMPRESSION



TIME (SECONDS)

19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0



PASSENGER LEFT FEMUR FORCE

1 — H01079FF F1B Filterclass (600)

Maximum 607110 at 103 msec

Minimum 10931110 at 103 msec

COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

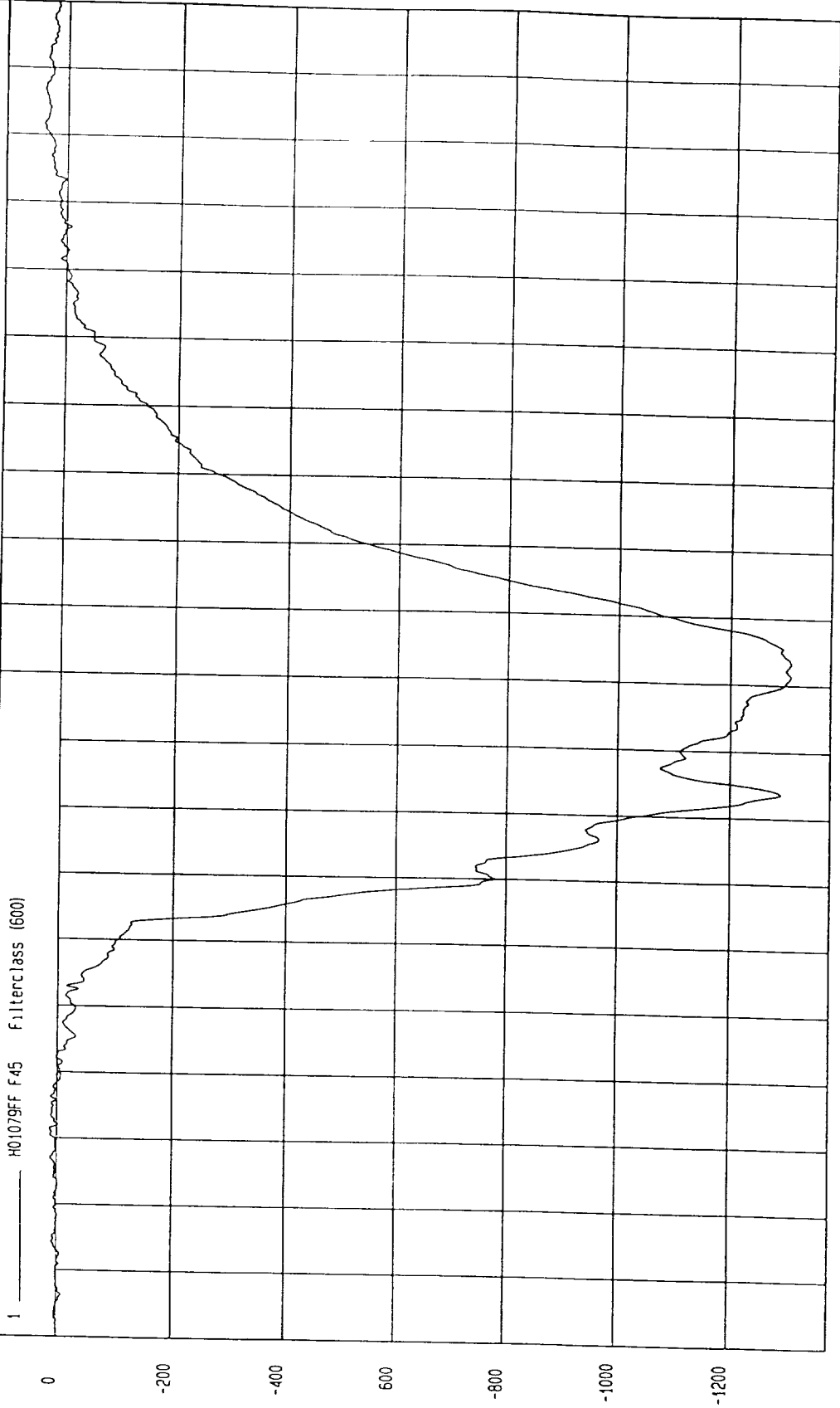
TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

TIME (SECONDS)

19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0

LB



1 H01079FF F45 Filterclass (600)

PASSENGER RIGHT FEMUR FORCE

Maximum - 404 LB at 182 msec

Minimum 1305 47 LB at 103 msec

COMPONENT 2001 DODGE NEON 4 DOOR (C10301)

TEST FMVSS 208 SLED (H01079)

TEST DATE 05-14-2001

DAIMLERCHRYSLER

C-1

December 7, 2000

DaimlerChrysler Corporation

Matthew C Reynolds

Director

Vehicle Compliance & Safety Affairs

Ms Marilynne Jacobs, Director
Office of Vehicle Safety Compliance
National Highway Traffic Administration
U S Department of Transportation
400 Seventh Street, S.W
Washington, D C 20590

Dear Ms Jacobs

Reference NSA-31CCa/OA - 208 - 001018D
FMVSS 208 Occupant Crash Protection (Compliance Test)
2001 Dodge Neon

The following is provided in response to your November 5, 1999 information request.

Q1. Please inform OVSC if the air bag restraint system is certified to meet the requirements of S4.1.5.1(a)(1) 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 tests of the automatic restraint system with the 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 tests of the automatic restraint system with the manual safety belts fastened and the certification test reports for the sled test with only the automatic restraint system.

A1 The 2001 Dodge Neon is certified to meet the requirements of FMVSS 208 S13. The compliance test data was provided in **Attachment 1** for our 2000 response **208991029C December 16, 1999**. The 2001 Dodge R/T, 2.0L HO Engine with a 5 speed manual transaxle was added for the 2001 MY. See **Attachment 1.(CD VC8430, VC8431, VC8461)**

Q2 Provide the following: (1) describe the difference between the MY 2001 air bag system and the MY 2000 air bag system, (2) explain what other restraint changes have been made, (3) explain what other vehicle changes

DaimlerChrysler Corporation
800 Chrysler Drive CIMS 482.00.91
Auburn Hills MI USA 48326 2757
Phone 248 512 4188
Fax 248 576 7371
e mail mcr1@daimlerchrysler.com

Ms Marilynne Jacobs
NSA-31CCa ; 0A-208001018D
December 7, 2000
Page 2 of 4

Q2 Continued

have been made that might have affected FMVSS 208 performance, and (4) describe any features that might affect performance with respect to children and out of position occupants.

A2 The 2001 model year vehicle incorporates no new technology from the 2000 model year. In addition, there have been no changes implemented with the specific intent of affecting performance in a FMVSS 208 crash test or the performance characteristics of the restraint system with regard to children and out of position occupants.

Q3. 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 air bags with dual stage or multistage inflators describe when the stages are triggered and provide data to show that this is similar to what would occur in a crash of similar severity. (see enclosure 1)

A3 Disconnect the battery and wait at least two minutes. Remove the driver air bag module from the steering wheel and unplug the connector; unplug the passenger air bag pigtail from the vehicle body wiring harness underneath the instrument panel. Once the air bags have been disconnected, cut the wires on the body wiring harness. Use the cut wires to construct an overlay harness, which will be used to deploy the air bags during the impact simulator test. Using the overlay harness, the air bags are wired in parallel to a 12 volt power supply controlled by an "air bag timer delay box" which is used to trigger the air bags 18 milliseconds following a 1/2 G carriage acceleration event.

The 2001 Dodge Neon does not have dual stage or multistage inflators.

Q4. 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.

A4 The safety belts are not equipped with tension-relieving devices.

Q5. 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 windows and vents were opened or closed for the certification tests.

A5 All certification tests except for VC08430 and VC08431 were performed with the windows in the fully down position.

Q6. 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

Ms Marilynne Jacobs
NSA-31CCa ; 0A-208001018D
December 7, 2000
Page 3 of 4

Q6. Continued

possible, use each dimension shown in the diagram to provide the individual dummy placement measurements.

State whether the vehicle has a foot rest for the driver.

A6. Dummy placement measurements, where available, are provided in **Attachment 2** A driver foot rest is not provided on the 2000 Dodge Neon.

Q7. Provide the seat positioning, steering column positioning, and fuel tank data on the enclosed form. If more than one front seating configuration, steering column, or fuel tank are available on this vehicle, provide separate information for each.

A7 The requested set up information is provided in **Attachment 3**

Q8. If the vehicle is equipped with adjustable seatbelt anchorages, provide the manufacturer's nominal design position for a 50th percentile adult male occupant.

A8 The ATL has five (5) locking positions Place ATL in the third position from either the top or bottom position

Q9. For barrier tests provide the speed at 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 tests conducted to meet the requirements of S13.

A9 The requested information is in the Compliance Report provided in **Attachment 1**

Q10. 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?

A10 If vehicle components are removed, this is the recommended order 1) Fluids 2) spare tire and jack, 3) rear bumper and fascia, 4) muffler, 5) tail lamps and 6) deck lid

Q11. If the vehicle uses a pressure vessel to inflate the air bag, provide a copy of the test reports or engineering analysis to demonstrate that it meets all the requirements of S9.1.

Ms Marilynne Jacobs
NSA-31CCa ; 0A-208001018D
December 7, 2000
Page 4 of 4

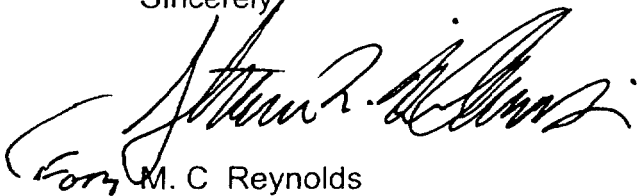
A11 A pressure vessel is used to deploy the passenger air bag See **Attachment 4** for the requested information

Q12. 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.

A12 Explosive devices are used to inflate the air bags See **Attachment 4** for the requested information

If you have any questions regarding the information provided, please contact Mr. Archie J Rock of my staff at (248) 576-7324

Sincerely

A handwritten signature in black ink, appearing to read "M. C. Reynolds", is written over the printed name.

M. C Reynolds

Attachments

FMVSS 208

**2001 DODGE NEON
2.0L HO ENGINE
5-SPEED MANUAL TRANSAXLE**

NSA-31CCa ; OA-208001018D

ATTACHMENT 2

RESPONSE TO QUESTION #6

**DUMMY PLACEMENT
MEASUREMENTS**

2001 PL 41 MVSS 208 Dummy Measurement Summary

Driver Dummy Measurements (In Inches)						
Test Number	Test Mode	NR	NH	CH	KL	KR
VC7228	Frontal	16.7	16.7	11.6	3.8	4.0
VC7229	Frontal	15.9	16.1	11.3	4.0	4.1
VC7236	Left Angle	16.8	16.7	11.6	2.7	2.9
VC7237	Right Angle	16.6	16.6	11.5	3.8	3.9
VC8430	Right Angle	15.4	N/A	12.1	4.1	2.9
VC8431	Left Angle	16.1	N/A	12.1	3.5	3.4
VC8461	Frontal	17.2	17.3	12.0	4.3	4.7
Average		16.4	16.7	11.7	3.7	3.7

NR = Tip of nose to top rear surface of steering wheel rim

NH = Tip of nose to center of steering wheel hub

CH = Chest 9 inches down from chin to center of steering wheel hub

KL = Left knee clearance from surface of knee to surface of bolster

KR = Right knee clearance from surface of knee to surface of bolster

Passenger Dummy Measurements (In Inches)						
Test Number	Test Mode	A	B	C	KL	KR
VC7228	Frontal	23.7	28.1	18.1	2.6	2.5
VC7229	Frontal	23.6	28.0	18.1	4.1	3.0
VC7236	Left Angle	23.8	28.3	17.5	4.3	4.0
VC7237	Right Angle	24.5	28.2	18.4	3.3	3.5
VC8430	Right Angle	24.5	N/A	19.9	2.9	3.2
VC8431	Left Angle	24.2	N/A	20.5	3.5	3.8
VC8461	Frontal	24.6	28.8	18.6	3.8	3.5
Average		24.1	28.3	18.7	3.5	3.4

A = Bridge of nose horizontal to contact with windshield

B = Center of head CG target horizontal to contact with windshield

C = Chest 9 inches down from chin to closest point on instrument panel

KL = Left knee clearance from surface of knee to surface of bolster

KR = Right knee clearance from surface of knee to surface of bolster

FMVSS 208

**2001 DODGE NEON
2.0L HO ENGINE
5-SPEED MANUAL TRANSAXLE**

NSA-31CCa ; OA-208001018D

ATTACHMENT 3

RESPONSE TO QUESTION #7

GENERAL SETUP CONDITIONS

TEST VEHICLE INFORMATION

Vehicle Model Year & Make 2001 Dodge
 Vehicle Model & Body Style Neon 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 A0" of A1"?) Indicate if the seat back angle is measured with the dummy in the seat

Seat back angle for driver's seat = 22.5°

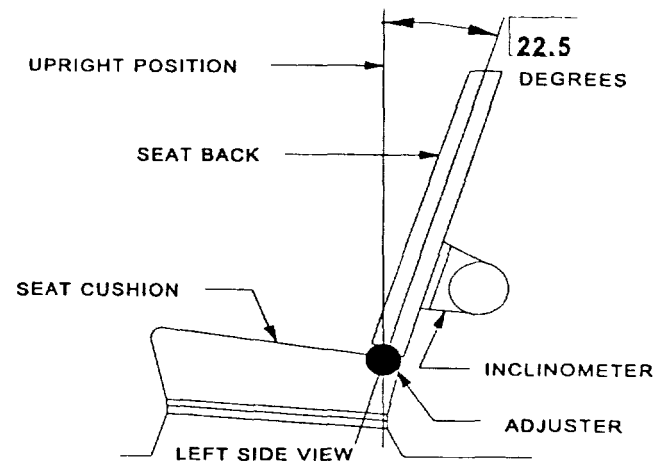
Measurement Instructions ANo dummy in seat ≡
See Attached Page 3 of 3

Seat back angle for front pass seat = 22.5°

Measurement Instructions
Same as drivers

Seat back angle for rear occupants seat = N/A

Measurement Instructions
N/A

**2 SEAT FORE & 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

Each seat track detent moves the seat 10mm Total seat travel 220mm. At the mid-track setting, there will be approximately 25 mm of exposure of the lower track at the rear attachments to the floor crossmember

Positioning of the passenger's seat (if applicable)

Same as driver=s

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

N/A

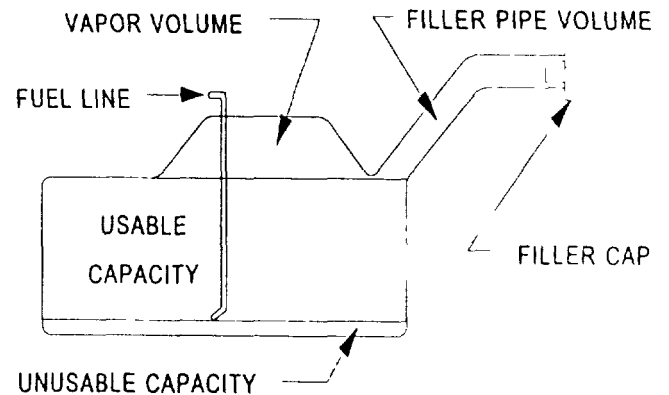
3 FUEL TANK CAPACITY DATA - -

3 1 A "Usable Capacity" of standard equipment fuel tank = 12.5 gallons

B "Usable Capacity" of optional equipment fuel tank = N/A gallons

C AUsable Capacity≡ of vehicle(s) used for certification testing to requirements of FMVSS 301 = 12 0 and 12 4 gallons

Operational Instructions



3 2 Amount of Stoddard solvent added to vehicle(s) used for certification test(s) = 12 0 and 12 4 gallons

VEHICLE FUEL TANK ASSEMBLY

FORM NO. 1 . . . Continued

TEST VEHICLE INFORMATION

- 3.3 Is vehicle equipped with electric fuel pump? ☒ YES ☐ NO
 If YES, does pump normally operate when vehicle's electrical system is activated? ☒ YES ☐ NO

4. ADJUSTABLE UPPER ANCHORAGE POSITION:

1. Push the adjustable turning loop(ATL) all the way up.
2. Pull down on the ATL to engage in the first notch.
3. The position for the 50th percentile SID will be two notches further down.

5. 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

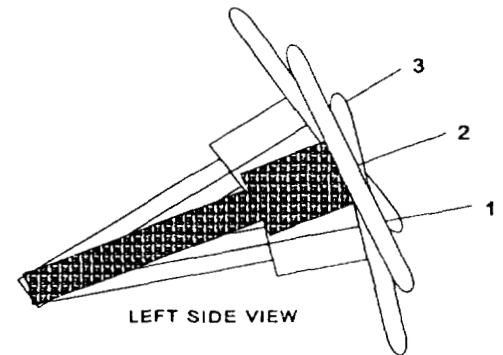
If the tested vehicle has any of these adjustments, does your company use any specific procedures to determine the geometric center

Operational Instructions

1. With the steering column in the full down position, place a digital level across the steering wheel (top to bottom) in the side view and record the angle.

2. With the steering column in the full up position, place a digital level across the steering wheel (top to bottom) in the side view and record the angle.

3 The steering column mid-point location will be at the mid-point of the two angles measured in steps 1 and 2



LEFT SIDE VIEW

STEERING COLUMN ASSEMBLY

2001 Model Year Neon Seat Back Setup Procedure

1. Remove the seatback recliner plastic side shield by removing the two retaining screws
2. Lift the recliner handle and rotate the seatback to the full upright position.
3. Insert a 6mm pin in the gage hole provided at the front of the recliner.
4. Lift the recliner handle and recline the seatback until the sector gear assembly makes contact with the pin; this sets the seat to 18 degrees.
5. Remove the pin and recline the seat an additional **3 notches** (each notch reclines the seatback 1.5 degrees), this sets the seatback to the design angle of 22.5 degrees.
6. Reinstall the seatback recliner plastic side shield

Note: At 4 notches reclined, the hole will be entirely covered by the sector gear assembly