

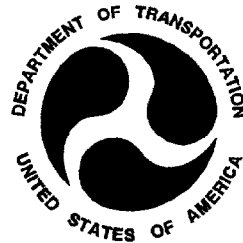
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REPORT NO. 208-MGA-98-011

SAFETY COMPLIANCE TESTING FOR FMVSS 208
OCCUPANT CRASH PROTECTION
(SLED TEST)

Chrysler Corporation
1998 Dodge Neon 4 Door
NHTSA NO. CW0305

MGA RESEARCH CORPORATION
5000 WARREN ROAD
BURLINGTON, WI 53105



Test Date: May 21, 1998

Report Date: June 4, 1998

Final Report

Prepared For:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
SAFETY ASSURANCE
OFFICE OF VEHICLE SAFETY COMPLIANCE
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APPROVED BY: David Winkelbauer DATE: 7/27/98
David Winkelbauer, Project Engineer
MGA Research Corporation

FINAL REPORT ACCEPTED BY:

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

8/24/98
Date of Report Acceptance

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SECTION 1
PURPOSE AND TEST PROCEDURE

PURPOSE

This 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. DTNH22-93-D-21089. The purpose of this test was to determine whether the subject vehicle, a 1998 Dodge Neon 4 Door, NHTSA No. CW0305, meets the performance requirements of FMVSS 208, "Occupant Crash Protection". The compliance test was conducted using the requirements found in the OVSC Laboratory Test Procedure No. TP-208S-00 dated June 17, 1997.

TEST PROCEDURE

This test was conducted in accordance with NHTSA's Office of Vehicle Safety Compliance (OVSC) Laboratory Test Procedure No. TP-208S-00 dated June 17, 1997. Data was obtained relative to FMVSS 208, "Occupant Crash Protection".

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 (ATDs). 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.

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

The thirty-seven (37) data channels were multiplexed and recorded on five IBM PC compatible computers with Metrabyte DAS-16F A/D converter boards. The data was digitally sampled at 10,000 samples per second and processed per Section 11.7 through 11.9 of the Laboratory Test Procedure.

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

The vehicle and occupant data are summarized in Section 2. The FMVSS 208 data is presented in Section 3. The vehicle, occupant, and camera measurements are presented in Section 4. Appendix A contains the still photographic prints. Appendix B contains the dummy and vehicle data plots. Appendix C contains the manufacturer's vehicle information.

SECTION 2
COMPLIANCE DATA SUMMARY

TEST RESULTS SUMMARY

This sled test was conducted at MGA Research Corporation on May 21, 1998.

The test vehicle, a 1998 Dodge Neon 4 Door, NHTSA No. CW0305, appeared to comply with the performance requirements of FMVSS 208. The Head Injury Criteria (HIC) calculations were less than 1000, the chest resultant accelerations did not exceed 60 g's. The compressive forces transmitted through the upper legs did not exceed 2,250 pounds as measured by Part 572 E dummies seated in the front outboard designated seating positions. For each Part 572 E dummy, the chest deflection did not exceed 3.0 inches. For each Part 572E dummy, the maximum peak flexion bending moment about the occipital condyle did not exceed 190 N-m. The maximum peak extension bending moment did not exceed 57 N-m. The maximum peak axial tension did not exceed 3300 N. The maximum peak axial compression did not exceed 4000 N. The maximum peak fore and aft shear did not exceed 3100 N. The vehicle's restraint system met the applicable comfort and convenience requirements.

The test vehicle was equipped with an airbag and a Type 2 seat belt in the front outboard designated seating positions. Both dummies were restrained only by the airbag during the test.

The driver's HIC was 142. The maximum peak flexion bending moment about the occipital condyle was 58.1 N-m, the maximum peak extension bending moment was 7.1 N-m, the maximum peak axial tension was 767.1 N, the maximum peak axial compression was 200.6 N, the maximum peak fore/aft shear was 961.0 N. The driver's chest maximum resultant acceleration with three (3) milliseconds minimum duration was 33 g's. The driver's chest maximum deflection was 0.7 inches. The driver's left and right femur maximum compressive forces were 1118 pounds and 1298 pounds, respectively.

The right front passenger's HIC was 160. The maximum peak flexion bending moment about the occipital condyle was 34.6 N-m, the maximum peak extension bending moment was 51.3 N-m, the maximum peak axial tension was 1189.6 N, the maximum peak axial compression was 119.4 N, the maximum peak fore/aft shear was 689.6 N. The right front passenger's chest

maximum resultant acceleration with three (3) milliseconds minimum duration was 33 g's. No valid data was collected for the right front passenger's chest maximum deflection. The right front passenger's left and right femur maximum compressive forces were 1021 pounds and 1196 pounds, respectively.

TEST NOTES

TABLE 1 SLED TEST SUMMARY

Vehicle Yr/Make/Model/Body Style: 1998/Dodge/Neon/4 Door

Vehicle NHTSA No.: CW0305 Test Type: Sled Test

Test Date: May 21, 1998 Time: 1:33 p.m. Temp: 71°F

Vehicle Test Weight: 2979 lbs.

Sled Velocity Change: 28.7 mph

Airbag Fire Time: 18 msec

Dummies:	Driver	Passenger
Dummy Type	<u>Part 572E</u>	<u>Part 572E</u>
Serial Number	<u>403</u>	<u>401</u>
Restraint System	<u>Airbag</u>	<u>Airbag</u>
No. of Data Channels	<u>15</u>	<u>15</u>

Number of Cameras: 1 Real Time

6 High Speed

Door Opening Data:	Left Front:	<u>Opened</u>	Left Rear:	<u>Opened</u>
	Right Front:	<u>Opened</u>	Right Rear:	<u>Opened</u>

Front Seat(s) Data:	Driver	Passenger
Seat Track Failure	<u>0 in.</u>	<u>0 in.</u>
Seat Back Failure	<u>None</u>	<u>None</u>

Visible Dummy Contact Points:	Driver	Passenger
Head	<u>Airbag, headrest</u>	<u>Airbag</u>
Chest	<u>Airbag</u>	<u>Airbag</u>
Left Knee	<u>Instrument panel</u>	<u>Instrument panel</u>
Right Knee	<u>Instrument panel</u>	<u>Instrument panel</u>

TABLE 2 GENERAL TEST AND VEHICLE PARAMETER DATA

Vehicle Yr/Make/Model/Body Style: 1998/Dodge/Neon/4 Door

NHTSA No: CW0305 VIN: 1B3ES47C3WD609738 Body Color: Red

Engine: 4 Cylinders; C.I.D.; 2.0 liters; CC

X Gas; Diesel; Turbocharged

 Longitudinal; X Transverse

Transmission: 3 Speed; Manual; X Automatic; Overdrive

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

Major Option: A/C; X P/S; X P/B; P/wdo; P/door locks;

 P/seats; Tilt Wheel; Anti-skid Brakes; Cruise Control

Date Received: 3/02/98; Odometer Reading: 41 miles

Dealer's Name/Address: Belle Dodge
6940 Washington Avenue
Racine, WI 53406

DATA FROM VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured By: Chrysler Corporation

Date of Manufacture: 12/97; VIN: 1B3ES47C3WD609738

GVWR: 3459 lbs; GAWR Front: 1899 lbs. GAWR Rear: 1610 lbs.

DATA FROM TIRE PLACARD:

Tire Pressure with maximum capacity vehicle load: Front 32 psi Rear 32 psi

Recommended Tire Size: P185/65R14

Recommended Cold Tire Pressure: Front 32 psi; Rear 32 psi

Tires on Vehicle: P185/65R14; Manufacturer: Goodyear

Type of Spare Tire: Spacesaver

Number of Occupants: 2 Front; 3 Rear; 3rd Seat; 5 TOTAL

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

Type of Front Seat Back: Fixed; X Adj. With; X Lever; Rot. Knob Power

TABLE 2 GENERAL TEST AND VEHICLE PARAMETER DATA (Cont.)

VEHICLE CAPACITY WEIGHT (VCW) = 865 lbs.
No. Of Occupants x 150 lbs = 750 lbs.
Rated Cargo/Luggage Weight (RCWL) = 115 lbs.

WEIGHT OF TEST VEHICLE AS RECEIVED FROM DEALER

(WITH MAXIMUM FLUIDS) = UDW:

Right Front = 774 lbs Right Rear = 461 lbs
Left Front = 829 lbs Left Rear = 451 lbs
TOTAL FRONT WEIGHT = 1603 lbs (64 % of Total Vehicle Weight)
TOTAL REAR WEIGHT = 912 lbs (36 % of Total Vehicle Weight)
TOTAL UNLOADED DELIVERED WEIGHT (UDW) = 2515 lbs

WEIGHT OF TEST VEHICLE WITH REQUIRED DUMMIES AND CARGO WEIGHT:

Right Front = 858 lbs Right Rear = 607 lbs
Left Front = 916 lbs Left Rear = 598 lbs
TOTAL FRONT WEIGHT = 1774 lbs (60 % of Total Vehicle Weight)
TOTAL REAR WEIGHT = 1205 lbs (40 % of Total Vehicle Weight)
TOTAL TEST WEIGHT = 2979 lbs

VEHICLE ATTITUDE:

Delivered Door Sill Angle: 1.0°
Fully Loaded Door Sill Angle: -0.4°
Test Door Sill Angle: 0.1°
Wheel Base: 104 in

Fuel System Capacity From Owner's Manual = 12.5 gallons
Usable Capacity Figure Furnished by COTR = 12.5 gallons

TABLE 3 VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY

Vehicle Year/Make/Model/Body Style: 1998/Dodge/Neon/4 Door

Vehicle NHTSA No.: CW0305; Test Date: May 21, 1998

ACCELEROMETER LOCATION (inches)				
	Description	X	Y	Z
1	Engine	23.1	0	44.4
2	Left B-Post	90.6	26.0	13.0
3	Right B-Post	89.8	26.0	13.0
4	Rear Axle	133.9	0	7.9

Reference: X = Front of Sled Carriage
Y = Centerline of Sled Carriage
Z = Top of Sled Carriage

ACCELEROMETER DATA SUMMARY					
No.	DESCRIPTION	MAXIMUM (g's)	TIME (msec)	MINIMUM (g's)	TIME (msec)
1	Engine	2.0	145	-19.6	50
2	Left B-Post	1.3	125	-17.3	61
3	Right B-Post	1.4	125	-17.4	46
4	Rear Axle	1.4	125	-20.0	63

TABLE 4 REPORT OF VEHICLE CONDITION AT THE COMPLETION OF TESTING

Contract Number: DTNH22-93-D-21089

From: MGA Research Corporation
5000 Warren Road
Burlington, WI 53105

To: Mr. Charles Case, COTR
Office of Vehicle Safety Compliance

The following vehicle has been subjected to testing for FMVSS 208. The vehicle was inspected upon arrival at the laboratory for the test and found to contain all of the equipment listed below. The vehicle was again inspected after the above test had been conducted, and all changes were noted below. The final condition of the vehicle was also noted in detail.

Vehicle Year/Make/Model/Body Style: 1998/Dodge/Neon/4 Door

Vehicle NHTSA No.: CW0305 Body Color: Red

VIN: 1B3ES47C3WD609738 Cost: \$12,765

Odometer: Arrival Date: March 2, 1998 Reading: 41 miles

Completion Date: May 21, 1998 Reading: 43 miles

Engine: 4 Cylinders; 2.0 Liters; Gas; Diesel

Transmission: 3 Speed; Manual; X Automatic

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

Tire Size: P185/65R14; Manufacturer: Goodyear

Air Conditioner	<u>No</u>	Console	<u>Yes</u>	Brakes	<u>Power</u>
Tinted Glass	<u>No</u>	Tachometer	<u>No</u>	Front	<u>Disc</u>
Power Steering	<u>Yes</u>	Cruise Control	<u>No</u>	Rear	<u>Drum</u>
Power Windows	<u>No</u>	Rear Window Def.	<u>Yes</u>	Front Seats	<u>Bucket</u>
Power Door Locks	<u>No</u>	Sun/Moon Roof	<u>No</u>	Seat Type	
Radio	<u>Yes</u>	T-Top	<u>No</u>	Front	<u>Adjustable</u>
Clock	<u>No</u>	Tilt Steering Wheel	<u>No</u>	Rear	<u>Non-Adjustable</u>
Roof Rack	<u>No</u>	Other Options:	<u> </u>	No. of Seats	<u>5</u>

Equipment that is no longer on the vehicle as noted above: rear seats, all cargo area trim, rear speakers, rear deck lid, exhaust system, gas tank, radiator, spare tire, and jack.

Explanation:

Items removed to allow installation of data acquisition system and vehicle mounting structure.

Vehicle Condition:

The vehicle was subjected to a sled test. The engine and suspension has been fixed and have numerous beams and brackets welded to them. A steel framework is attached to the vehicle. Various interior and exterior portions of the vehicle have been painted and have had holes drilled to facilitate attachment of instrumentation. Various body parts have been removed. THE VEHICLE IS FOR SALVAGE ONLY AND IS NOT TO BE REPAIRED FOR HIGHWAY USE.

SECTION 3
SUMMARY OF RESULTS FOR FMVSS 208

TABLE 5 FMVSS 208 OCCUPANT INJURY CRITERIA

Veh. Yr./Make/Model/Body Style: 1998/Dodge/Neon/4 Door

Veh. NHTSA No.: CW0305 Test Date: May 21, 1998

MAXIMUM ACCELERATION VALUES: (g's)	DRIVER DUMMY #403	PASSENGER DUMMY #401
Head Channel X	-31.4	-50.3
Head Channel Y	5.2	-23.9
Head Channel Z	11.5	23.8
HEAD RESULTANT	33.6	55.8
Chest Channel X	-32.6	-30.4
Chest Channel Y	2.6	-2.3
Chest Channel Z	8.1	16.7
CHEST RESULTANT	33.5	34.0

HEAD INJURY CRITERIA (HIC) VALUES:

HIC	142	160
t_1 = (msec)	77.7	143.1
t_2 = (msec)	113.7	157.0

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

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

CLIP	33	33
t^1 = (msec)	92.0	94.1
t^2 = (msec)	95.1	97.2
CHEST DEFLECTION (in)	0.7	*

* No valid data collected

TABLE 5 FMVSS 208 OCCUPANT INJURY CRITERIA (Cont.)

Veh. Yr./Make/Model/Body Style: 1998/Dodge/Neon/4 Door

Veh. NHTSA No.: CW0305 Test Date: May 21, 1998

MAX. COMPRESSIVE FEMUR FORCES:	DRIVER DUMMY #403	PASSENGER DUMMY #401
Left Side (lbs)	1118	1021
Right Side (lbs)	1298	1196

NECK FORCES:

Neck Force X (N)	961.0	-689.6
Neck Force Y (N)	-1468.7	164.2
Neck Force Z (N)	767.1	1189.6

NECK MOMENTS:

Neck Moment X (N-m)	-10.0	7.7
Neck Moment Y (N-m)	70.8	-62.8
Neck Moment Z (N-m)	-12.9	15.8

TABLE 5 FMVSS 208 OCCUPANT INJURY CRITERIA (Cont.)

NECK INJURY CRITERIA:	DRIVER DUMMY #403	PASSENGER DUMMY #401
Peak Flexion Bending Moment about the Occipital Condyle (N-m)	58.1	34.6
Peak Extension Bending Moment about the Occipital Condyle (N-m)	7.1	51.3
Peak Axial Tension (N)	767.1	1189.6
Peak Axial Compression (N)	200.6	119.4
Peak Fore Shear (N)	961.0	684.1
Peak Aft Shear (N)	230.6	689.6

TABLE 6 DUMMY KINEMATIC SUMMARY

DRIVER DUMMY

Upon impact, the driver dummy translated forward on the seat impacting both knees into the instrument panel. The dummy's head impacted the airbag with the dummy's head rotating rearward. The driver dummy was restrained by the airbag. The dummy rebounded rearward into the seat back with the dummy's head contacting the head restraint. The driver dummy came to rest in the seat.

RIGHT FRONT PASSENGER DUMMY

Upon impact, the right front passenger dummy translated forward on the seat impacting both knees into the dashboard. The dummy's head impacted the airbag with the dummy's head rotating rearward. The right front passenger dummy was restrained by the airbag. The right front passenger dummy came to rest in the seat.

TABLE 7 FMVSS 208 SEAT BELT COMFORT AND CONVENIENCE TEST SUMMARY

BELT CONTACT FORCE (S7.4.3)

Vehicle Year/Make/Model/Body Style: 1998/Dodge/Neon/4 Door

NHTSA No.: CW0305 ; Technician: David Winkelbauer Date: May 13, 1998

Designated Seating Position Tested: Left Rear Outboard

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 checksheet
- 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

TABLE 7 FMVSS 208 SEAT BELT COMFORT AND CONVENIENCE TEST SUMMARY

- 1.6 Place each adjustable head restraint in its highest adjustment position.
() Check
(X) N/A
- 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 0.5 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.

BELT CONTACT FORCE (S7.4.3)

Designated Seating Position Tested: Right Rear Outboard

- 1.1 Does the vehicle incorporate a webbing tension-relieving device?
() Yes - go to latchplate access
(X) No - continue with this checksheet
- 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

TABLE 7 FMVSS 208 SEAT BELT COMFORT AND CONVENIENCE TEST SUMMARY

- 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
- 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 0.5 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.

TABLE 7 FMVSS 208 SEAT BELT COMFORT AND CONVENIENCE TEST SUMMARY

LATCHPLATE ACCESS (S7.4.4)

Vehicle Year/Make/Model/Body Style: 1998/Dodge/Neon/4 Door

NHTSA No.: CW0305; Technician: David Winkelbauer Date: May 13, 1998

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.

(X) Not Applicable

This vehicle is a passenger car which is not applicable to this requirement.

TABLE 7 FMVSS 208 SEAT BELT COMFORT AND CONVENIENCE TEST SUMMARY

RETRACTION (S7.4.5):

Vehicle Year/Make/Model/Body Style: 1998/Dodge/Neon/4 Door

NHTSA No.: CW0305 ; Technician: David Winkelbauer Date: May 13, 1998

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.

(X) Not Applicable

This vehicle is a passenger car which is not applicable to this requirement.

TABLE 7 FMVSS 208 SEAT BELT COMFORT AND CONVENIENCE TEST SUMMARY

SEAT BELT GUIDES AND HARDWARE (S7.4.6)

Vehicle Year/Make/Model/Body Style: 1998/Dodge/Neon/4 Door

NHTSA No.: CW0305 ; Technician: David Winkelbauer

Date: May 13, 1998

Designated Seating Position Tested: Left Rear Outboard

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**

TABLE 7 FMVSS 208 SEAT BELT COMFORT AND CONVENIENCE TEST SUMMARY

- 4.3 Are the remaining two seat belt parts accessible under normal conditions?
(X) Yes - Pass
() No - **FAIL**
- 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**

Designated Seating Position Tested: Center Rear

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.

TABLE 7 FMVSS 208 SEAT BELT COMFORT AND CONVENIENCE TEST SUMMARY

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**

- 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**

TABLE 7 FMVSS 208 SEAT BELT COMFORT AND CONVENIENCE TEST SUMMARY

Designated Seating Position Tested: Right Rear Outboard

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**

- 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

TABLE 7 FMVSS 208 SEAT BELT COMFORT AND CONVENIENCE TEST SUMMARY

(C) The seat back, if foldable, is folded forward as far as possible and then moved backward into position.

☒ Check

☒ Yes - Pass

☐ No - **FAIL**

4.5 Is the inboard receptacle end of the seat belt assembly, installed in the outboard designated seating position, accessible with the center arm rest in any position to which it can be adjusted (without moving the armrest)?

☒ Yes - Pass

☐ No - **FAIL**

TABLE 8 FMVSS 208 SEAT BELT WARNING SYSTEM CHECK

Vehicle Year/Make/Model/Body Style: 1998/Dodge/Neon/4 Door

NHTSA No.: CW0305 ; Technician: David Winkelbauer ;

Date: May 13, 1998

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 = ____ seconds
(4 to 8 seconds)

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

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

Time duration of audible warning signal = 6 seconds
(4 to 8 seconds)(see 49 USCS @ 30124)

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

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

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

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

Time duration of reminder light operation = 6 seconds
(4 to 8 seconds)

C. Note wording of visual warning: () Fasten seat belt () Fasten Belt
(X) Symbol 101

TABLE 9 FMVSS 208 READINESS INDICATOR (S4.5.2)

Vehicle Year/Make/Model/Body Style: 1998/Dodge/Neon/4 Door

NHTSA No.: CW0305 ; Technician: David Winkelbauer ;

Date: May 13, 1998

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

(11/8/94 legal interpretation)

1. Is the system totally mechanical? ()Yes (X)No

(If YES this Data Sheet is complete.)

2. Describe the location of the readiness indicator: On the instrument cluster

3. Is the readiness indicator clearly visible to the driver?

(X)Yes-Pass ()No-FAIL

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

(X)Yes-Pass ()No-FAIL

TABLE 10 FMVSS 208 REAR OUTBOARD SEATING POSITION SEAT BELTS

Vehicle Year/Make/Model/Body Style: 1998/Dodge/Neon/4 Door

NHTSA No.: CW0305; Technician: David Winkelbauer; Date: May 13, 1998

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

(X)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.

TABLE 11 LAP BELT LOCKABILITY

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))

Vehicle Year/Make/Model/Body Style: 1998/Dodge/Neon/4 Door

NHTSA No.: CW0305 ; Technician: Al Chalmers ; Date: May 13, 1998

Designated Seating Position Tested: Right Front Outboard

1. Record the seating position. Mid Position
(Any position is acceptable.)
2. Buckle the seat belt.
3. Complete any procedures recommended in the vehicle owner's manual to activate any locking feature.
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.
(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.
(X)Yes-Pass () No-FAIL
6. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?
(X)Yes, go to 6.1 () No, go to 7.
 - 6.1 If yes, 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.
(X)Yes-Pass () No-FAIL
7. Locate a reference point A on the seat belt buckle.

TABLE 11 LAP BELT LOCKABILITY (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.
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.
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.
Measured distance between A and B is 55 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.
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.
The measured force application angle = 10 degrees.

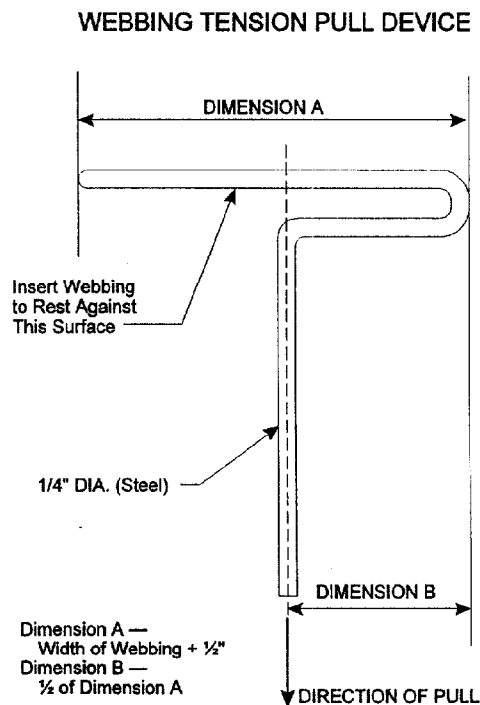


TABLE 11 LAP BELT LOCKABILITY (Cont.)

13. The length between points A and B along the longitudinal centerline of the webbing while the preload is being applied.
Measured distance between A and B is 48 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.
Record onset rate: 15 lb/sec.
Record the distance between points A and B: 48.5 inches
15. Subtract the measurement in 14 from the measurement in 13. Is the difference 2 inches or less? 14-13 = 0.5 inches (X)Yes-Pass () No-FAIL
16. Subtract the measurement in 10 from the measurement in 14. Is the difference 3 inches or more? 10-14 = 6.5 inches (X)Yes-Pass () No-FAIL

TABLE 11 LAP BELT LOCKABILITY (Cont.)

Vehicle Year/Make/Model/Body Style: 1998/Dodge/Neon/4 Door

NHTSA No.: CW0305; Technician: Al Chalmers; Date: May 13, 1998

Designated Seating Position Tested: Left Rear Outboard

1. Record the seating position. Non-Adjustable
(Any position is acceptable.)
2. Buckle the seat belt.
3. Complete any procedures recommended in the vehicle owner's manual to activate any locking feature.
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.
(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.
(X) Yes-Pass () No-FAIL
6. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?
(X) Yes, go to 6.1 () No, go to 7.
 - 6.1 If yes, 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.
(X) Yes-Pass () No-FAIL
7. Locate a reference point A on the seat belt buckle.

TABLE 11 LAP BELT LOCKABILITY (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.
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.
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.
Measured distance between A and B is 45 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.
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.
The measured force application angle = 12 degrees.

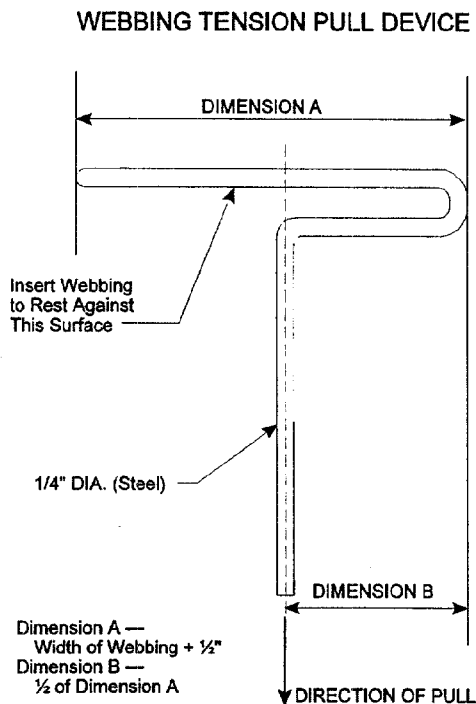


TABLE 11 LAP BELT LOCKABILITY (Cont.)

13. The length between points A and B along the longitudinal centerline of the webbing while the preload is being applied.
Measured distance between A and B is 38 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.
Record onset rate: lb/sec.
Record the distance between points A and B: 38.6 inches
15. Subtract the measurement in 14 from the measurement in 13. Is the difference 2 inches or less? 14-13 = 0.6 inches (X)Yes-Pass () No-FAIL
16. Subtract the measurement in 10 from the measurement in 14. Is the difference 3 inches or more? 10-14 = 6.4 inches (X)Yes-Pass () No-FAIL

TABLE 11 LAP BELT LOCKABILITY (Cont.)

Vehicle Year/Make/Model/Body Style: 1998/Dodge/Neon/4 Door

NHTSA No.: CW0305; Technician: Al Chalmers; Date: May 13, 1998

Designated Seating Position Tested: Center Rear

1. Record the seating position. Non-Adjustable
(Any position is acceptable.)
2. Buckle the seat belt.
3. Complete any procedures recommended in the vehicle owner's manual to activate any locking feature.
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.
(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.
(X) Yes-Pass () No-FAIL
6. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?
(X) Yes, go to 6.1 () No, go to 7.
 - 6.1 If yes, 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.
(X) Yes-Pass () No-FAIL
7. Locate a reference point A on the seat belt buckle.

TABLE 11 LAP BELT LOCKABILITY (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.
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.
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.
Measured distance between A and B is 33.8 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.
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.
The measured force application angle = 10 degrees.

WEBBING TENSION PULL DEVICE

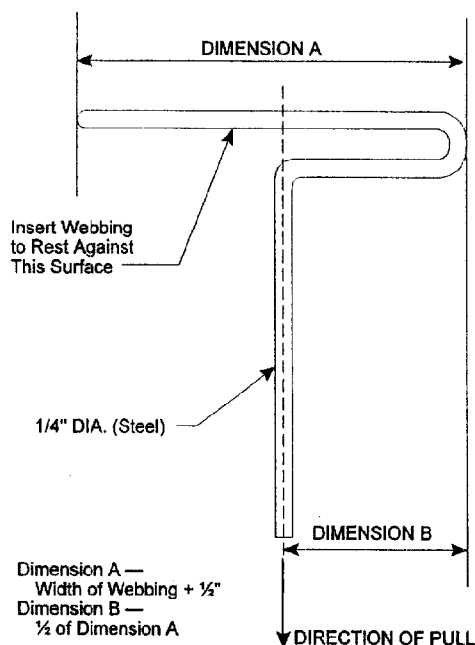


TABLE 11 LAP BELT LOCKABILITY (Cont.)

13. The length between points A and B along the longitudinal centerline of the webbing while the preload is being applied.
Measured distance between A and B is 26 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.
Record onset rate: 20 lb/sec.
Record the distance between points A and B: 26.5 inches
15. Subtract the measurement in 14 from the measurement in 13. Is the difference 2 inches or less? 14-13 = 0.5 inches (X)Yes-Pass () No-FAIL
16. Subtract the measurement in 10 from the measurement in 14. Is the difference 3 inches or more? 10-14 = 7.3 inches (X)Yes-Pass () No-FAIL

TABLE 11 LAP BELT LOCKABILITY (Cont.)

Vehicle Year/Make/Model/Body Style: 1998/Dodge/Neon/4 Door

NHTSA No.: CW0305 ; Technician: Al Chalmers ; Date: May 13, 1998

Designated Seating Position Tested: Right Rear Outboard

1. Record the seating position. Non-adjustable
(Any position is acceptable.)
2. Buckle the seat belt.
3. Complete any procedures recommended in the vehicle owner's manual to activate any locking feature.
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.
(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.
(X) Yes-Pass () No-FAIL
6. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?
(X) Yes, go to 6.1 () No, go to 7.
 - 6.1 If yes, 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.
(X) Yes-Pass () No-FAIL
7. Locate a reference point A on the seat belt buckle.

TABLE 11 LAP BELT LOCKABILITY (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.
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.
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.
Measured distance between A and B is 45.5 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.
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.
The measured force application angle = 14 degrees.

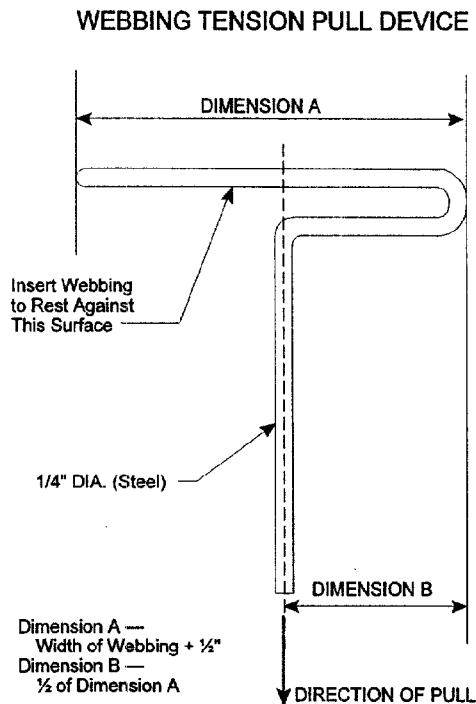


TABLE 11 LAP BELT LOCKABILITY (Cont.)

13. The length between points A and B along the longitudinal centerline of the webbing while the preload is being applied.
Measured distance between A and B is 37.5 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.
Record onset rate: 18 lb/sec.
Record the distance between points A and B: 38.3 inches
15. Subtract the measurement in 14 from the measurement in 13. Is the difference 2 inches or less? 14-13 = 0.8 inches (X) Yes-Pass () No-FAIL
16. Subtract the measurement in 10 from the measurement in 14. Is the difference 3 inches or more? 10-14 = 7.2 inches (X) Yes-Pass () No-FAIL

TABLE 12 AIR BAG LABELS

Vehicle Year/Make/Model/Body Style: 1998/Dodge/Neon/4 Door

NHTSA No.: CW0305 ; Technician: Al Chalmers ; Date: May 13, 1998

1. Air bag maintenance label and owner's manual instructions:
 - 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
☐ Schedule on label specifies vehicle mileage
☐ Schedule on label specifies interval measured from date on certification label
 - 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:
 - 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

TABLE 12 AIR BAG LABELS (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 is 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

TABLE 12 AIR BAG LABELS (Cont.)

If yes to 3.1, or 3.2, or 3.3, the vehicle is not required to have a sunvisor warning label, an airbag alert label or a label on the dash and this check sheet is complete. 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?

Driver Side - ☒ Yes-Pass ☐ No-FAIL

Passenger Side - ☒ Yes-Pass ☐ No-FAIL

- 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.") to either label shown on the next page as appropriate at each front outboard seating position with an air bag?

- 4.2.1 **Dual air bags:** ☐ Not Applicable

Driver Side - ☒ Yes ☐ No-FAIL

Passenger Side - ☒ Yes ☐ No-FAIL

- 4.2.2 **Vehicle with driver air bag ONLY - either 4.2.2.1 or 4.2.2.2 is applicable, not both.**

- 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:

TABLE 12 AIR BAG LABELS (Cont.)

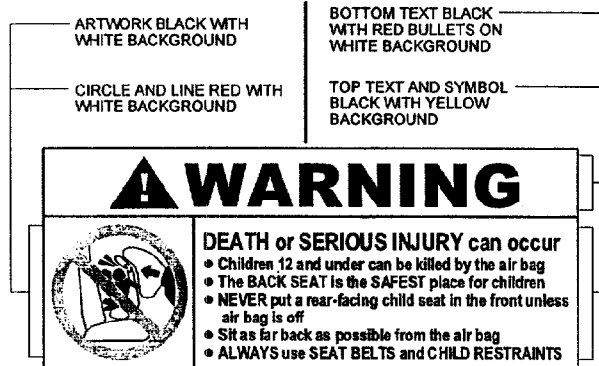
DEATH or SERIOUS INJURY can occur.

- 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.

(X) Not Applicable

Driver Side - () Yes-Pass () No-FAIL

SUN VISOR LABEL VISIBLE WHEN VISOR IS IN DOWN POSITION
LABEL OUTLINE, VERTICAL AND HORIZONTAL LINE BLACK



SUN VISOR LABEL VISIBLE WHEN VISOR IS IN DOWN POSITION
LABEL OUTLINE, VERTICAL AND HORIZONTAL LINE BLACK

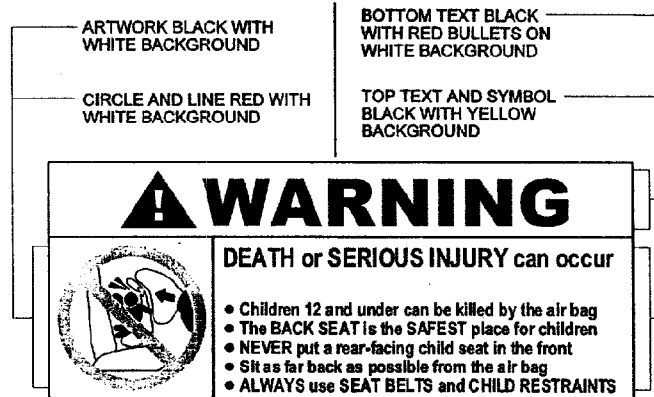


TABLE 12 AIR BAG LABELS (Cont.)

- 4.3 Is the label heading area yellow with the word "warning" and the alert symbol in black?
Driver Side - (X)Yes-Pass () **No-FAIL**
Passenger Side - (X)Yes-Pass () **No-FAIL**
- 4.4 Is the message white with black text?
Driver Side - (X)Yes-Pass () **No-FAIL**
Passenger Side - (X)Yes-Pass () **No-FAIL**
- 4.5 Is the message area at least 30 cm²? Actual message area: 32 cm²
Driver Side - (X)Yes-Pass () **No-FAIL**
Passenger Side - (X)Yes-Pass () **No-FAIL**
- 4.6 Is the pictogram black with a red circle and slash on a white background?
For vehicles with driver side air bag ONLY () Not Applicable
Driver Side - (X)Yes-Pass () **No-FAIL**
Passenger Side - (X)Yes-Pass () **No-FAIL**
- 4.7 Is the pictogram at least 30 mm in diameter? Actual diameter: 30 mm
For vehicles with driver side air bag ONLY () Not Applicable
Driver Side - (X)Yes-Pass () **No-FAIL**
Passenger Side - (X)Yes-Pass () **No-FAIL**
- 4.8 Is the same side of the sun visor to which the sun visor label is affixed free of other information with the exception of an air bag maintenance label?
Driver Side - (X)Yes-Pass () **No-FAIL**
Passenger Side - (X)Yes-Pass () **No-FAIL**
- 4.9 Is the sun visor free of other information about air bags or the need to wear seat belts with the exception of the air bag alert label or the utility vehicle label?
Driver Side - (X)Yes-Pass () **No-FAIL**
Passenger Side - (X)Yes-Pass () **No-FAIL**

TABLE 12 AIR BAG LABELS (Cont.)

5. Air Bag Alert Label

5.1 Is the Sun Visor Warning Label visible when the sunvisor is in the stowed position?

Driver Side - ☒ Yes, go to 6 ☐ No

Passenger Side - ☐ No air bag ☐ Yes ☐ No

5.2 Does the label conform in content to the label shown below?

Driver Side - ☐ Yes ☐ No-FAIL

Passenger Side - ☐ No air bag ☐ Yes-Pass ☐ No-FAIL

5.3 Is the message area black with yellow text?

Driver Side - ☐ Yes-Pass ☐ No-FAIL

Passenger Side - ☐ No air bag ☐ Yes-Pass ☐ No-FAIL

5.4 Is the message area at least 20 cm²? 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?

For vehicles with driver side air bag ONLY ☐ Not Applicable

☐ Yes-Pass ☐ No-FAIL

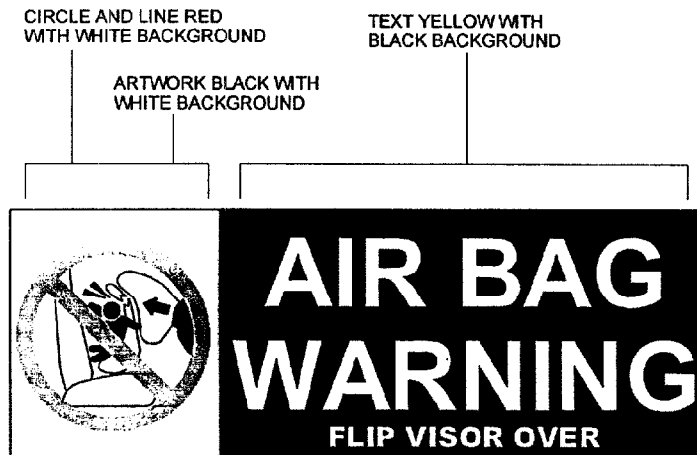
TABLE 12 AIR BAG LABELS (Cont.)

5.6 Is the pictogram at least 20 mm in diameter? 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



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?

(X) Yes-Pass () **No-FAIL**

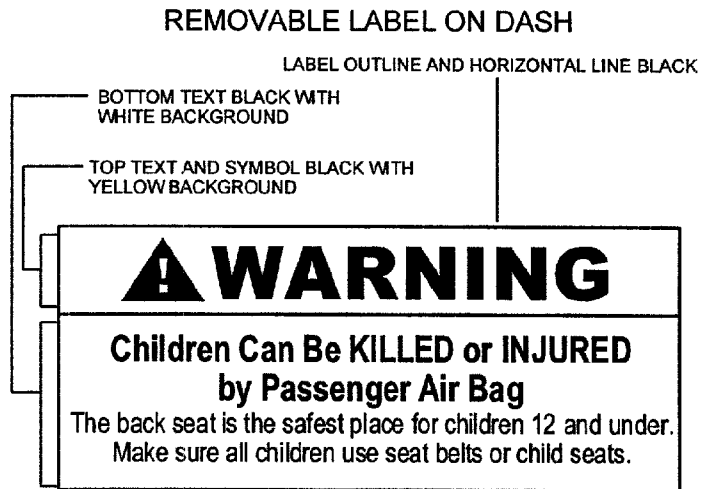
6.3 Does the label conform in content (vehicles without back seats may omit the statement: "The back seat is the safest place for children 12 and under." to the label shown below. (X) Yes-Pass () **No-FAIL**

6.4 Is the heading area yellow with the word "warning" and the alert symbol in black?

(X) Yes-Pass () **No-FAIL**

TABLE 12 AIR BAG LABELS (Cont.)

- 6.5 Is the message white with black text? (X)Yes-Pass () No-FAIL
- 6.6 Is the message area at least 30 cm²? Actual message area: 38 cm²
() Yes-Pass () No-FAIL



SECTION 4
OCCUPANT, VEHICLE, AND CAMERA INFORMATION

TABLE 13 SEAT AND STEERING COLUMN POSITIONING DATA

Vehicle Year/Make/Model/Body Style: 1998/Dodge/Neon/4 Door

Vehicle NHTSA No.: CW0305 Test Date: May 21, 1998

NOMINAL DESIGN RIDING POSITION:

Driver Seat: Seat Back Angle* = 12.2°

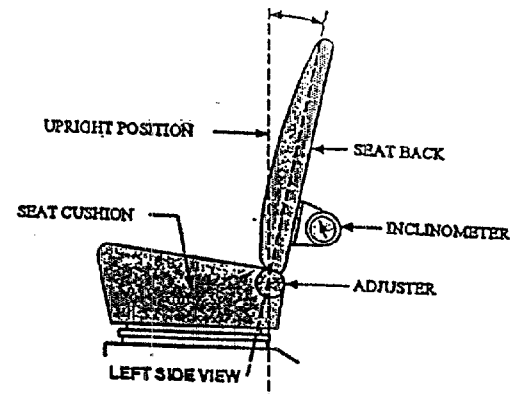
Passenger Seat: Seat Back Angle* = 11.6°

* measured on headrest support

SEAT FORE AND AFT POSITIONS:

Driver Seat: The seat track had a total position movement of 23 notches and was positioned 12 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 12 notches rearward from the foremost position with the forward most locking position as zero.



STEERING COLUMN ADJUSTMENTS:

The steering column was not adjustable.

FIGURE 1 DUMMY MEASUREMENT LOCATIONS FOR FRONT SEAT OCCUPANTS

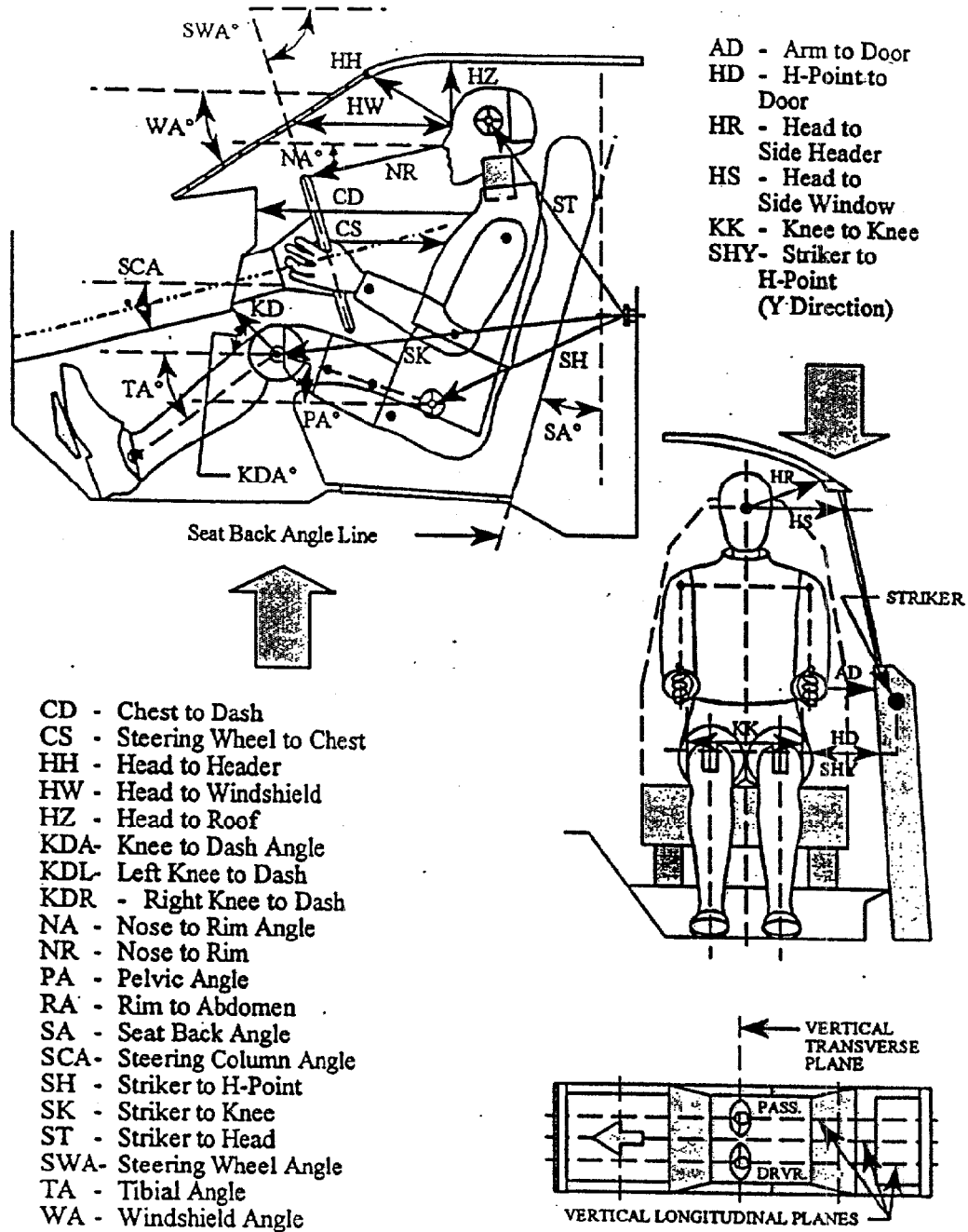


TABLE 14 DUMMY MEASUREMENT DATA FOR FRONT SEAT OCCUPANTS

Vehicle Year/Make/Model/Body Style: 1998/Dodge/Neon/4 Door

Vehicle NHTSA No.: CW0305 Test Date: May 21, 1998

	DRIVER (Serial #403)	PASSENGER (Serial #401)
WA°	26.2°	
SWA°	68.2°	N/A
SCA°	22.7°	N/A
SA°*	12.2°	11.6°
HZ	7.2	7.1
HH	12.8	13.3
HW	23.4	21.8
HR	8.5	8.8
NR	14.4 Angle (NA) 114.9°	N/A
CD	20.7	18.2
CS	11.5	N/A
RA	6.4	N/A
KDL	5.4 Angle (KDA) 34.1°	5.2
KDR	5.2	5.5 Angle (KDA) 34.2°
PA°	24.2°	23.5°
TA°	41.1	37.8
KK	11.5	10.2
ST	21.7 Angle 9.5°	21.8 Angle 13.6°
SK	22.8 Angle 89.4°	23.6 Angle 90.8°
SH	9.0 Angle 119.3°	9.2 Angle 120.1°
SHY	9.8	9.5
HS	11.3	11.0
HD	5.0	4.6
AD	3.4	3.5

* measured on headrest support

FIGURE 2 VEHICLE TARGET LOCATIONS

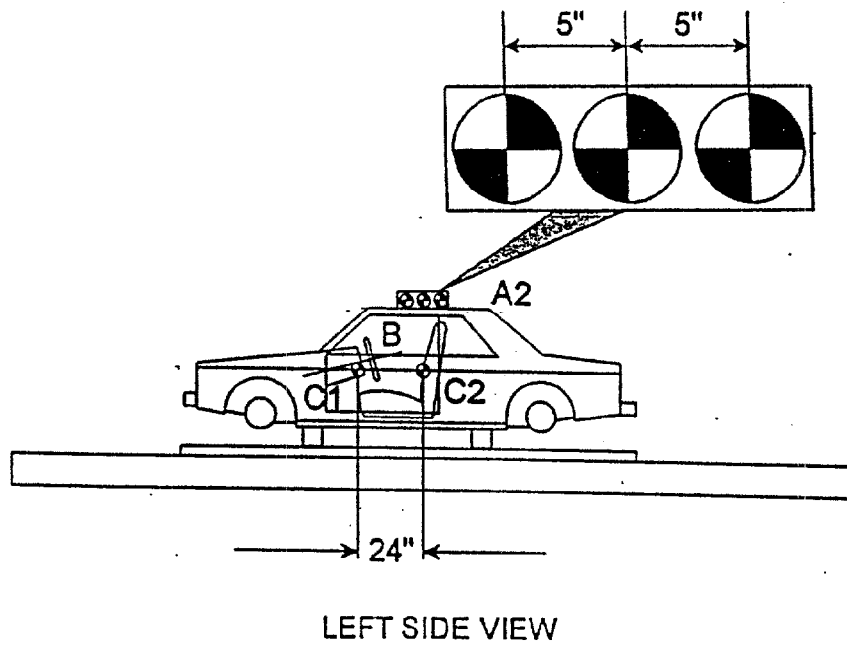
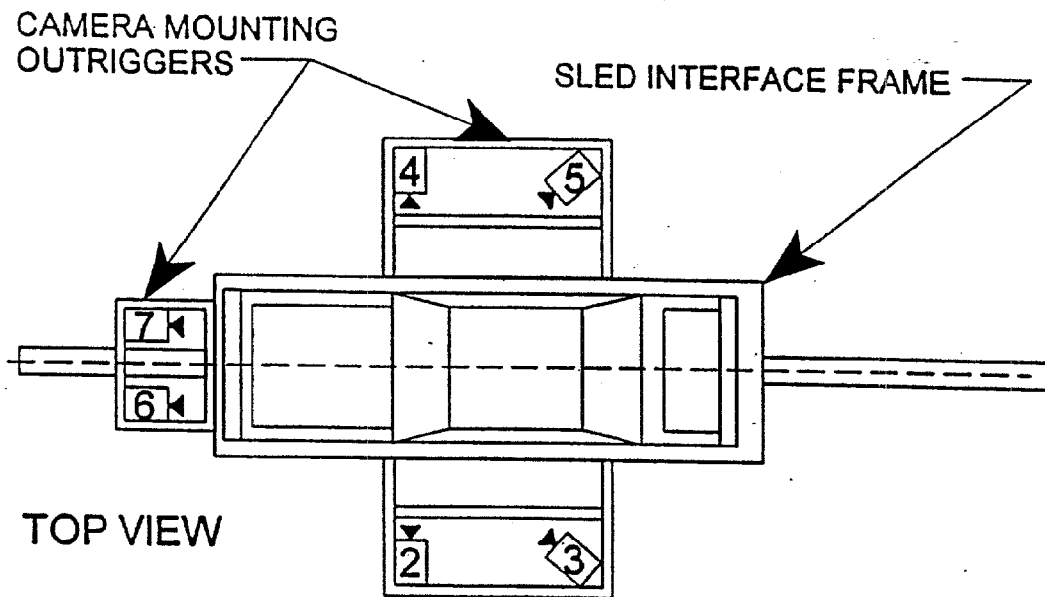


FIGURE 3 CAMERA POSITIONS



CAMERA FRAME RATES:

#1 = 24 fps

All Others = 1,000 fps

1 REAL TIME CAMERA

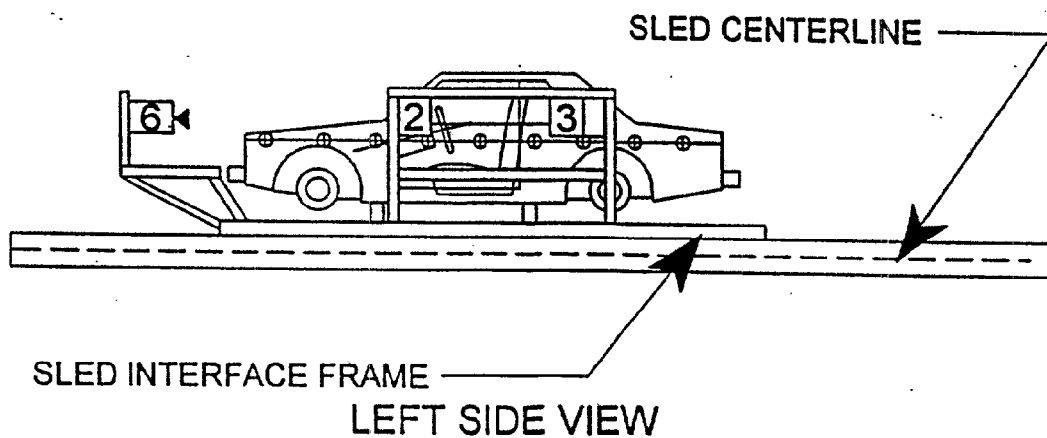


TABLE 15 CAMERA LOCATIONS

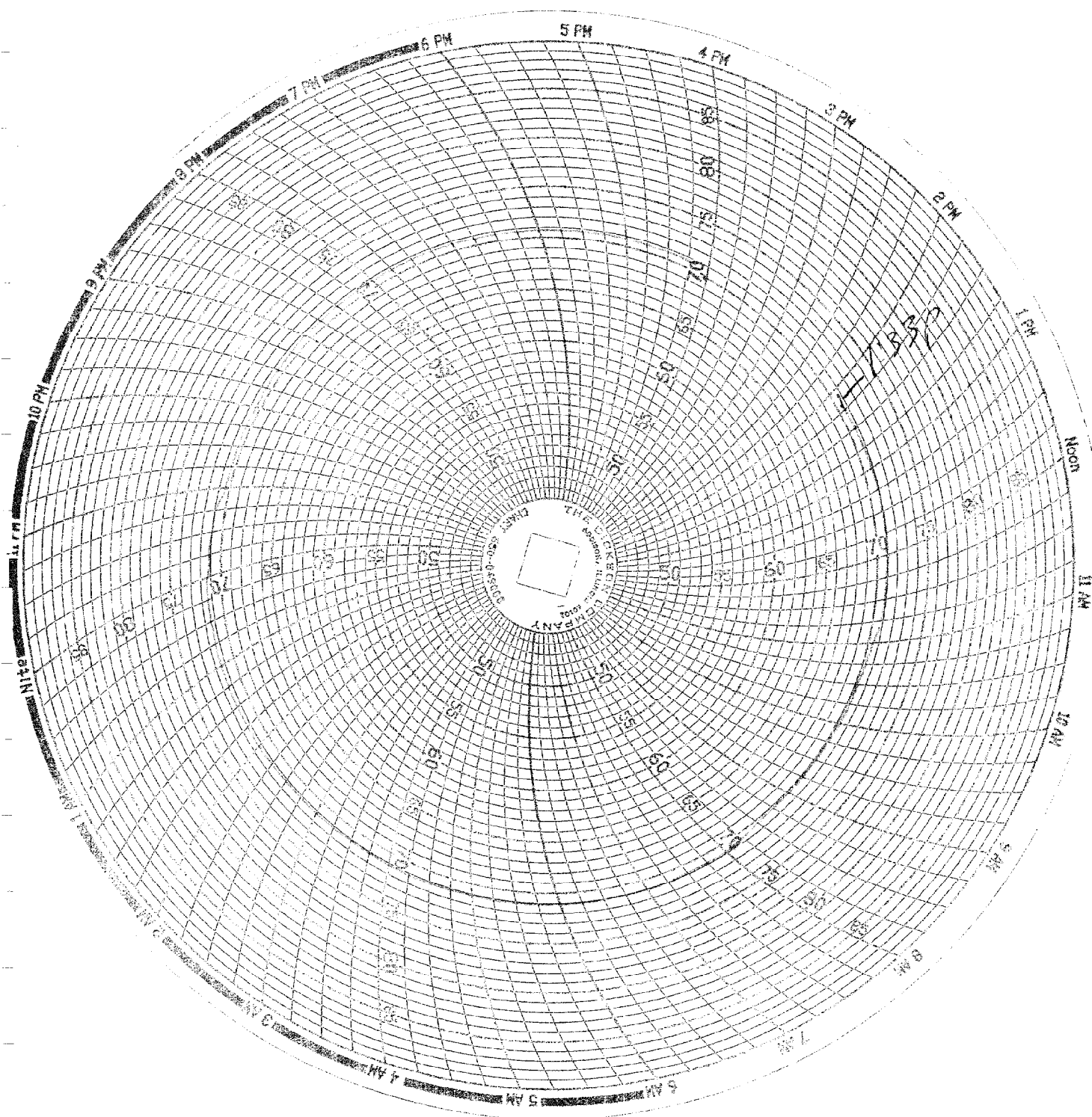
Veh. Year/Make/Model/Body Style: 1998/Dodge/Neon/4 Door

Vehicle NHTSA No.: CW0305 ; Test Date: May 21, 1998

	VIEW	CAMERA POSITIONS (inches)*			ANGLE (deg)	LENS (mm)	SPEED (fps)
		X	Y	Z			
1	Real-Time (Pre and Post)					10	24
2	Onboard Driver	73.0	91.3	37.0	90	13	1020
3	Onboard Driver Angle	146.9	90.2	46.9		13	1020
4	Onboard Passenger	68.8	92.9	38.6	90	13	1020
5	Onboard Passenger Angle	147.8	89.8	46.9		13	1031
6	Onboard Windshield Driver	22.4	14.2	41.7		13	1020
7	Onboard Windshield Passenger	20.7	14.6	42.3		13	1010

- * +X = Rearward of the front of the sled carriage
 +Y = Right of the sled carriage longitudinal centerline
 +Z = Above the top of the sled carriage

FIGURE 4 AIR PROBE TEMPERATURE



APPENDIX A
PHOTOGRAPHS

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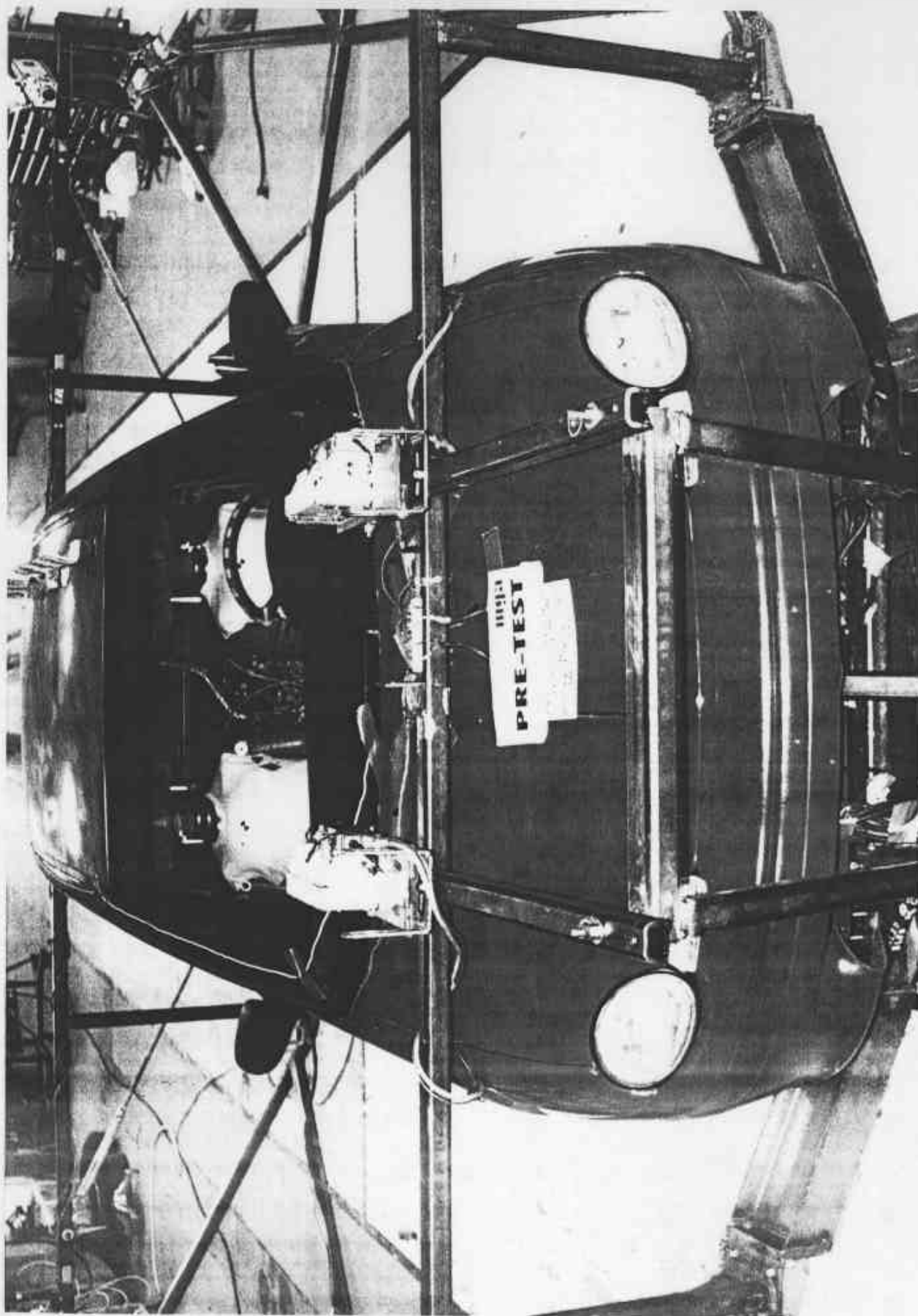


Photo No. A-1 - Pre-Test Front View

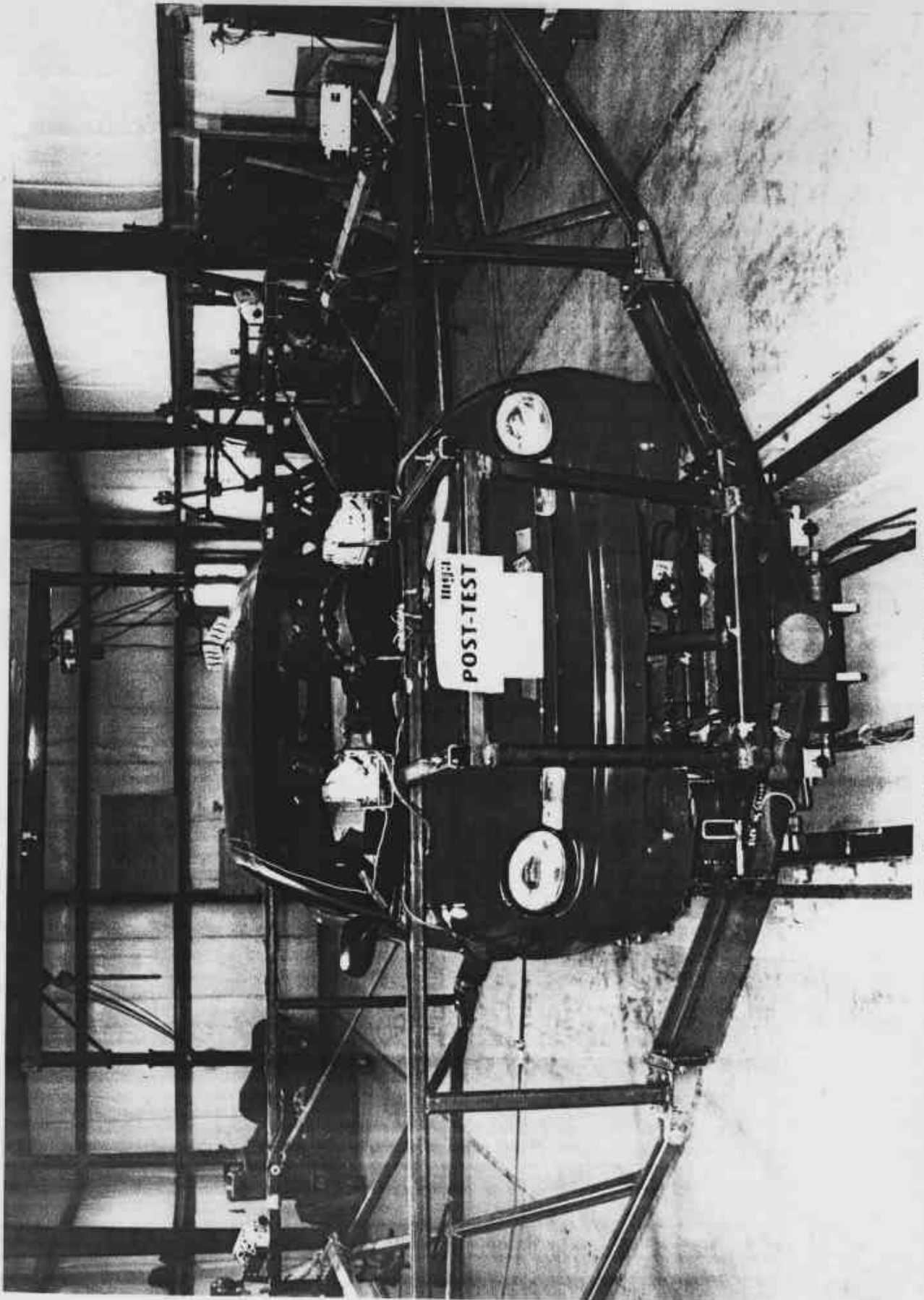


Photo No. A-2 - Post-Test Front View

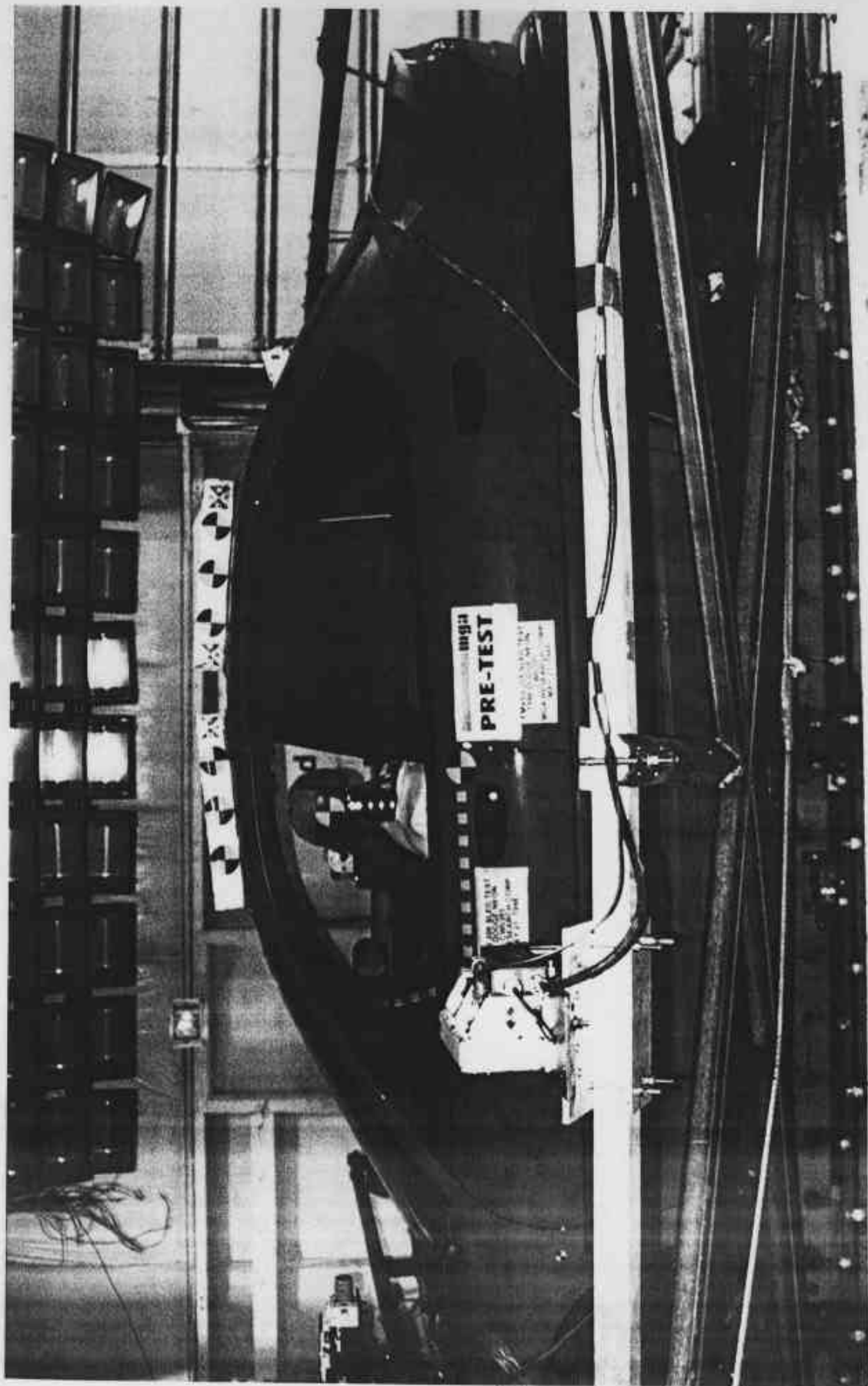


Photo No. A-3 - Pre-Test Left Side View

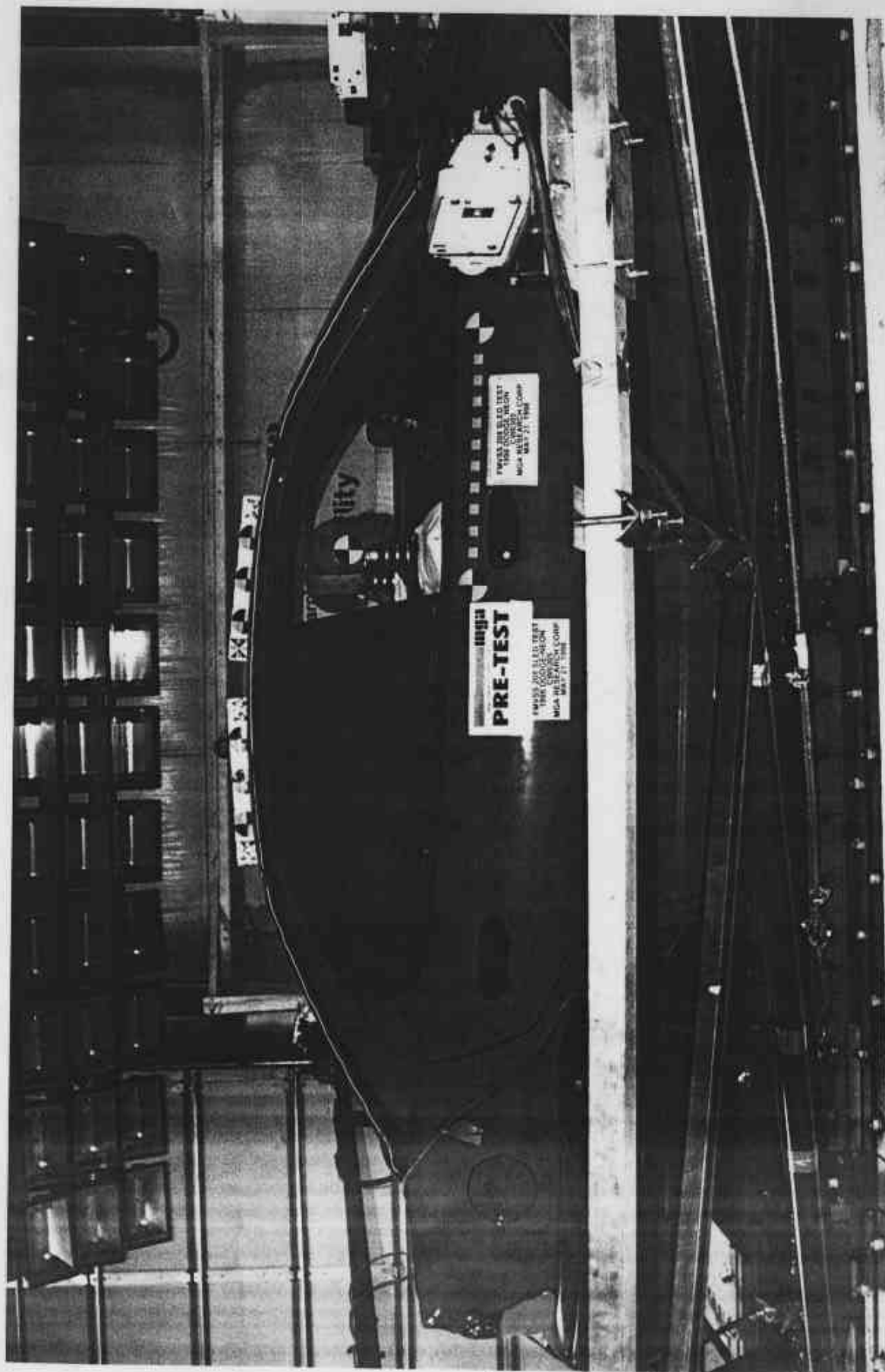
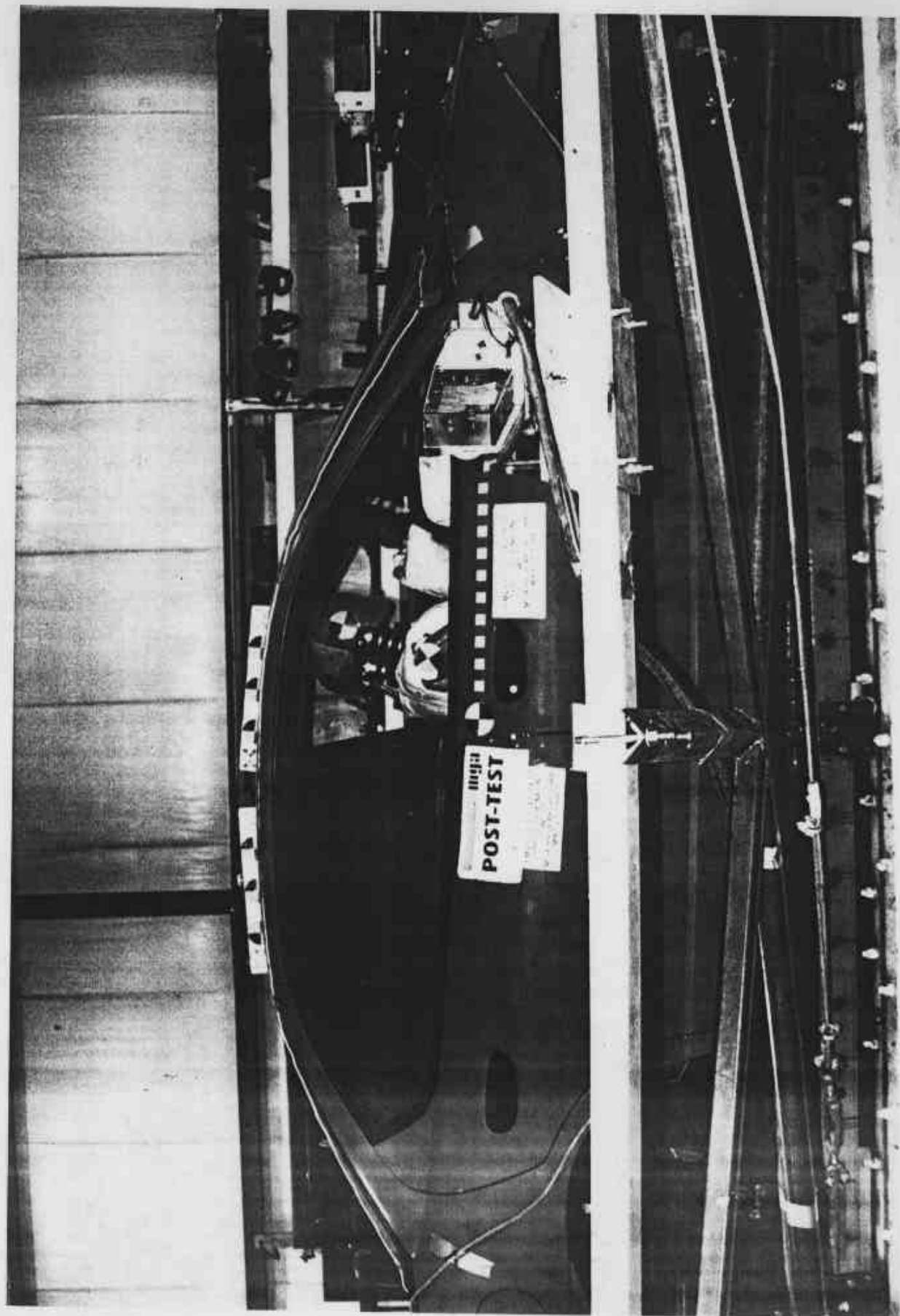


Photo No. A-5 - Pre-Test Right Side View



A-6

Photo No. A-6 - Post-Test Right Side View

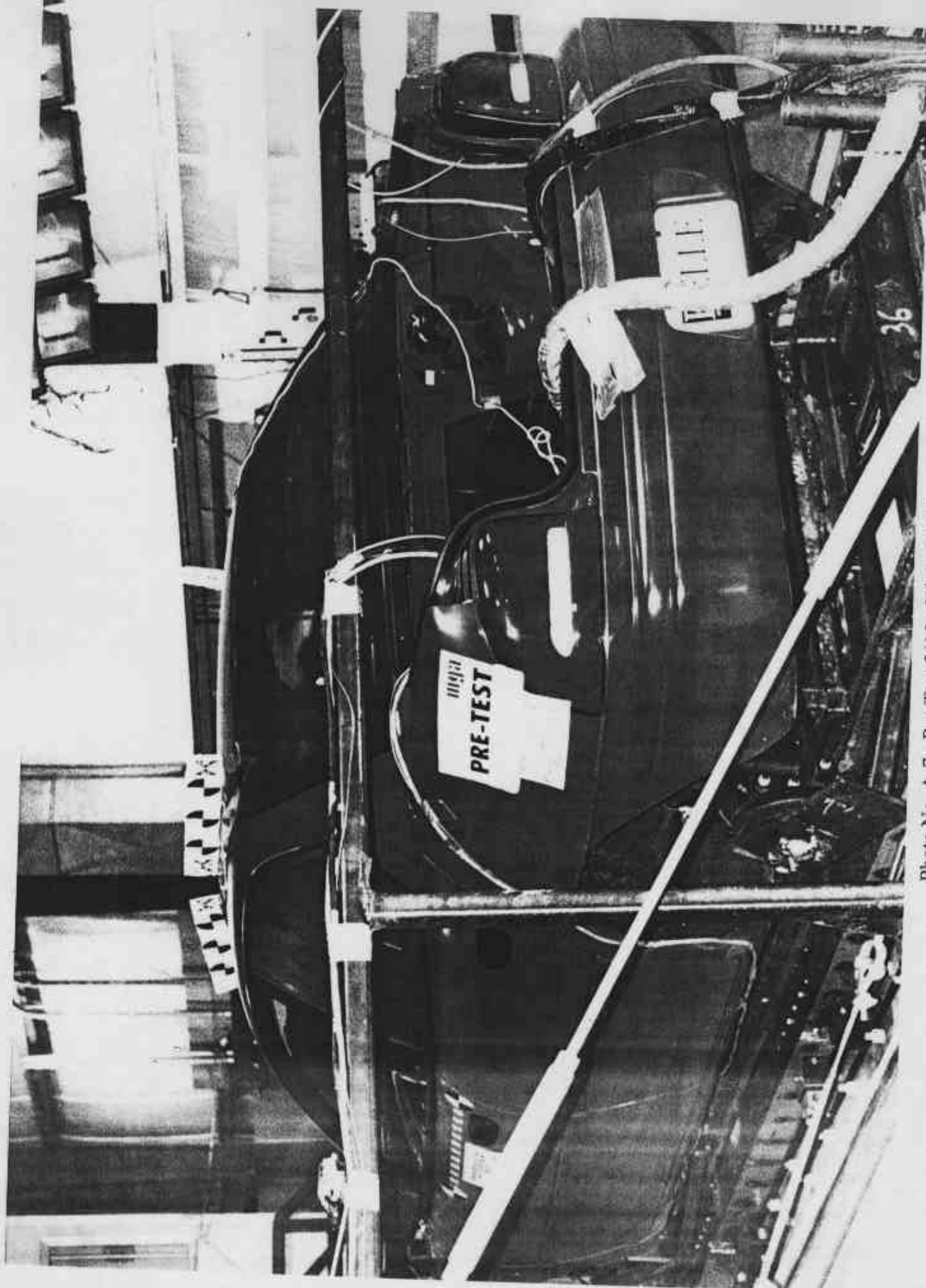


Photo No. A-7 - Pre-Test 3/4 Left Rear View

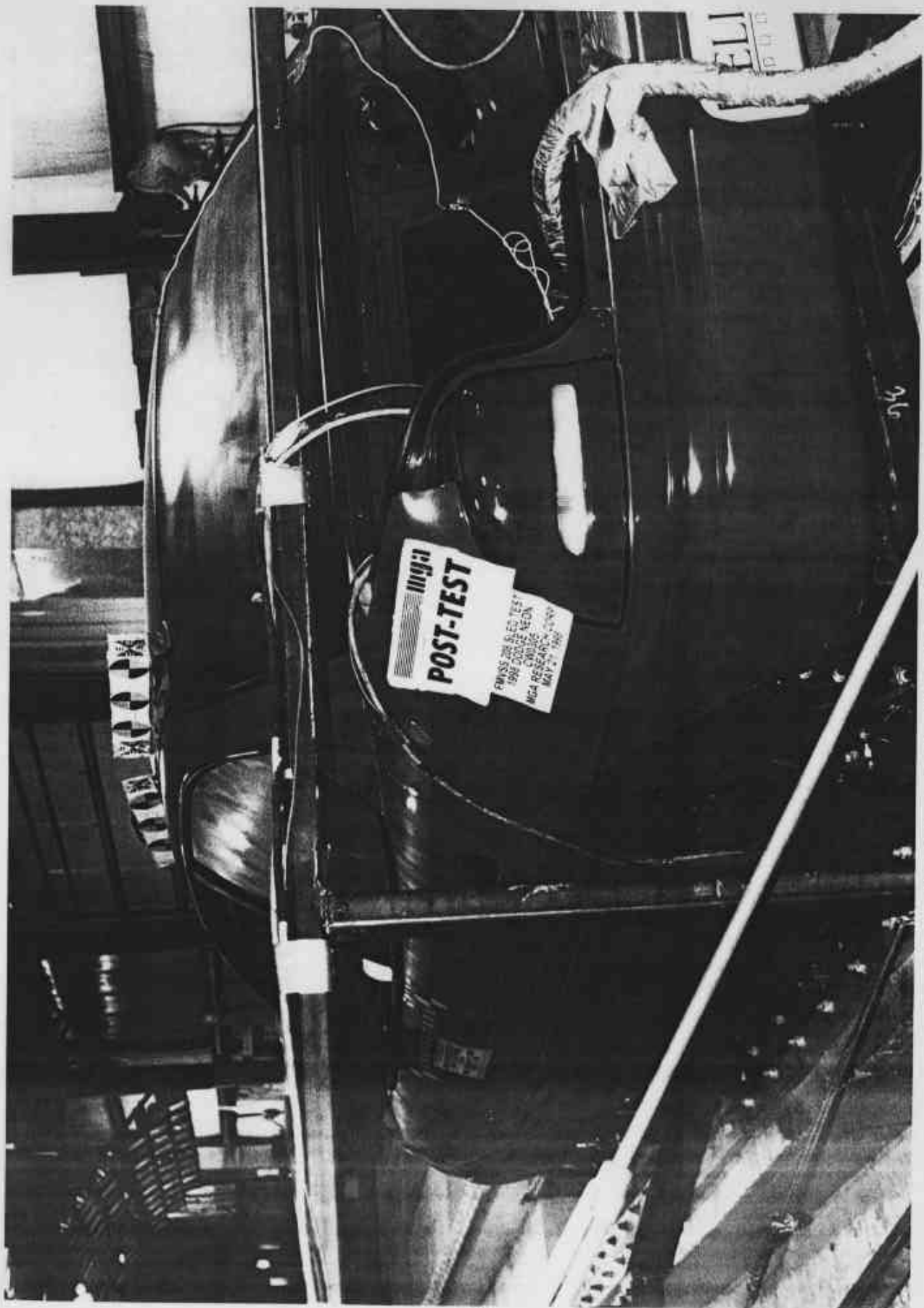


Photo No. A-8 - Post-Test 3/4 Left Rear View

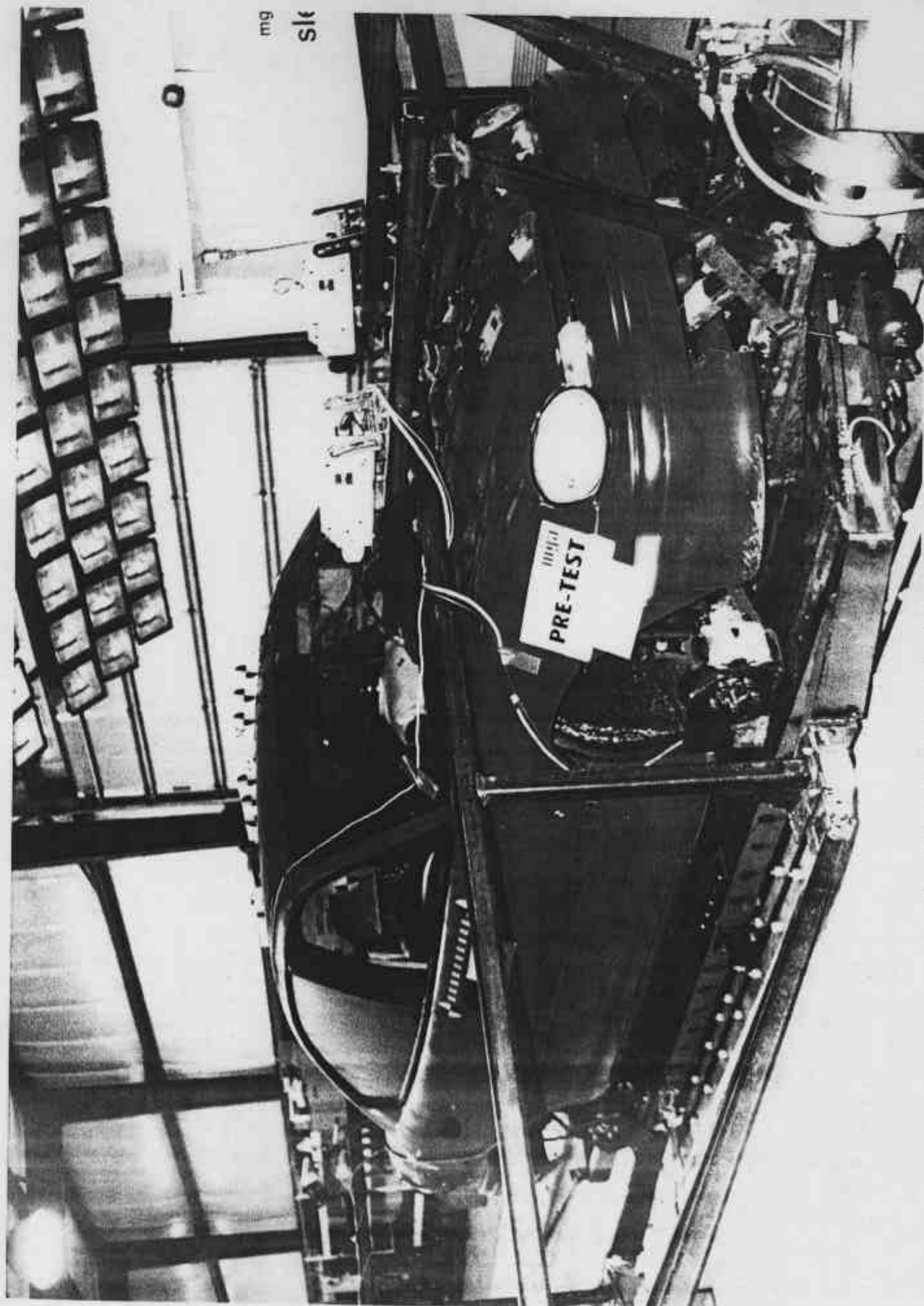


Photo No. A-9 - Pre-Test 3/4 Right Front View

A-9

mg
sk

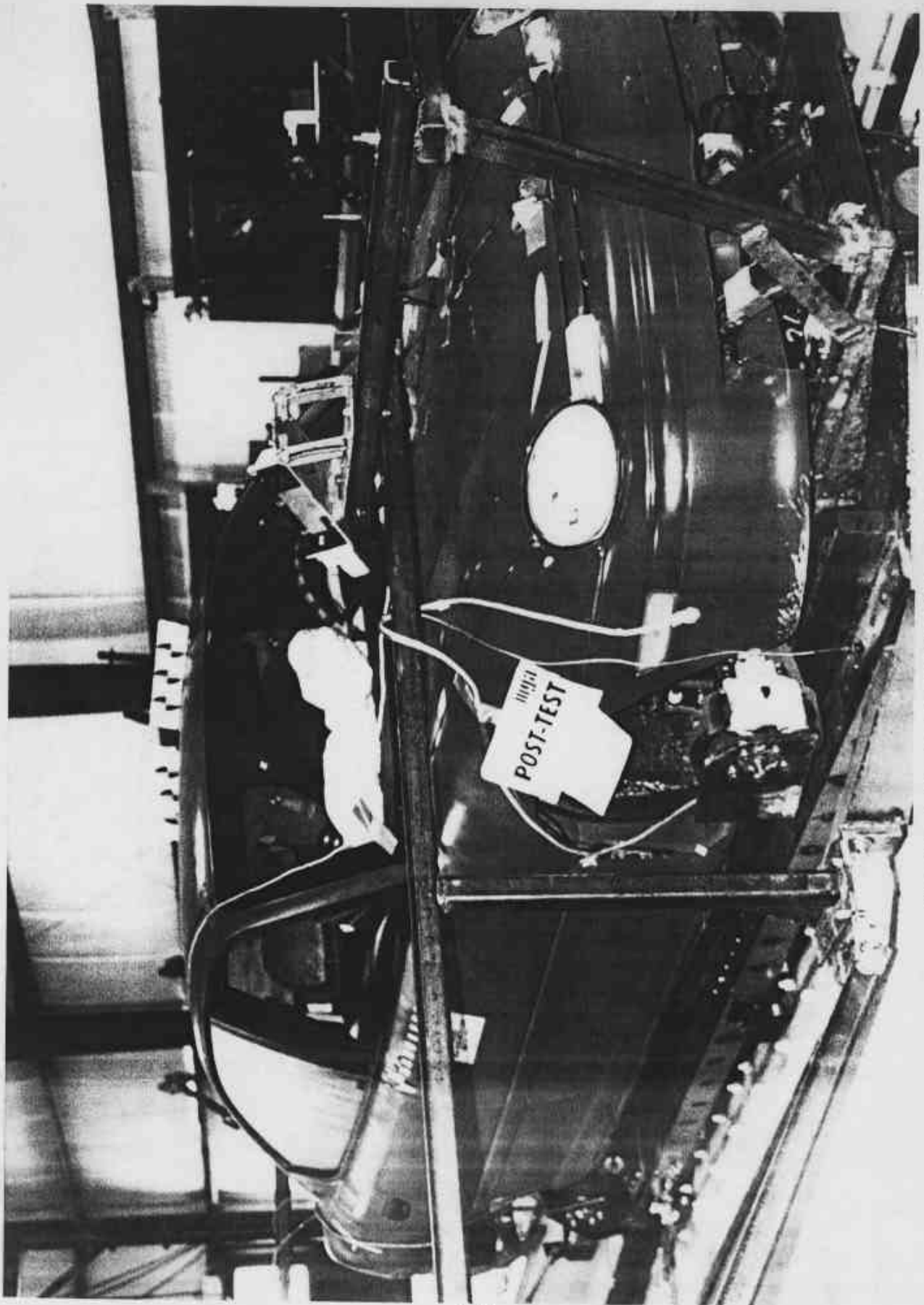


Photo No. A-10 - Post-Test 3/4 Right Front View

A-10

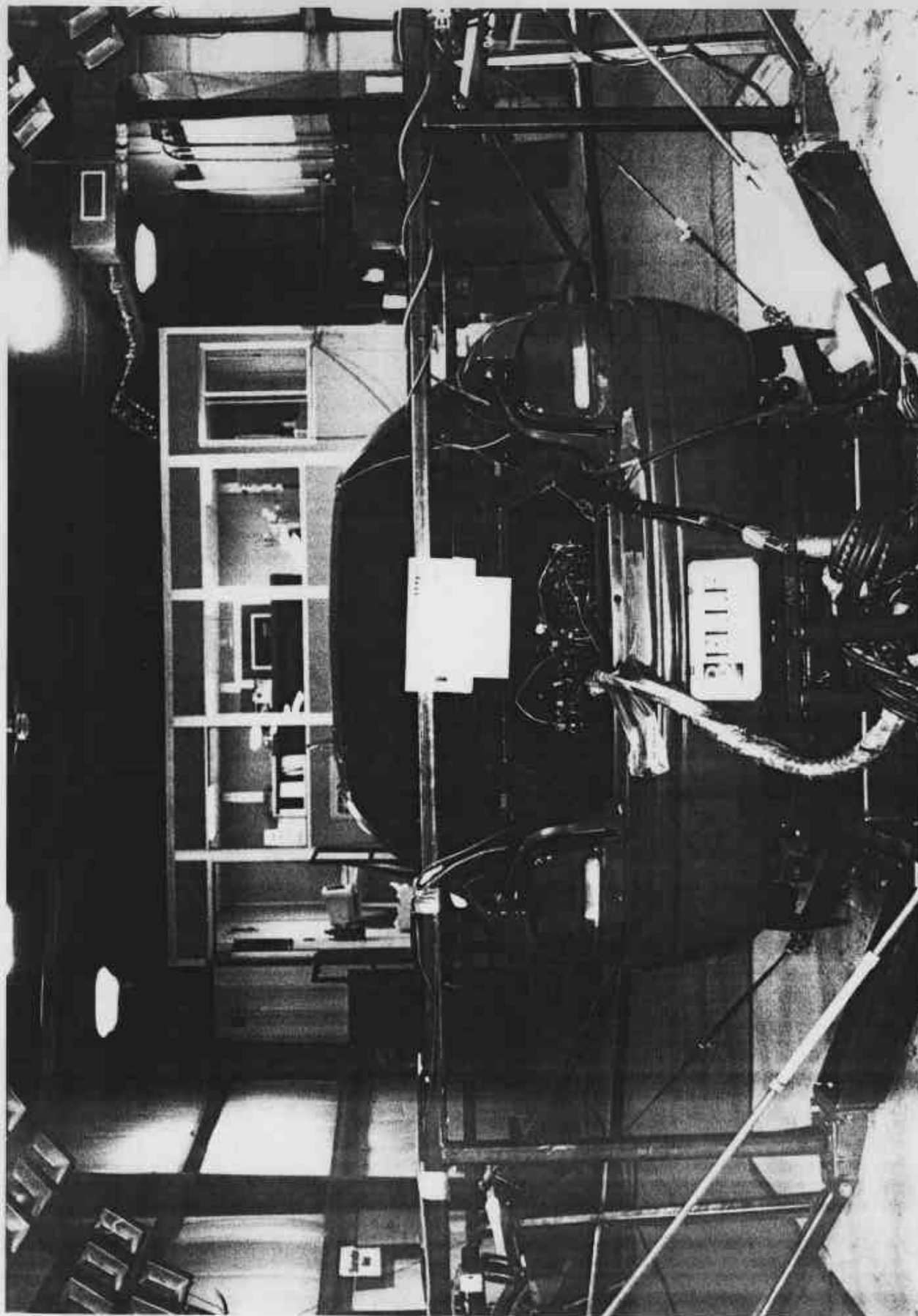


Photo No. A-11 - Pre-Test Rear View

A-11

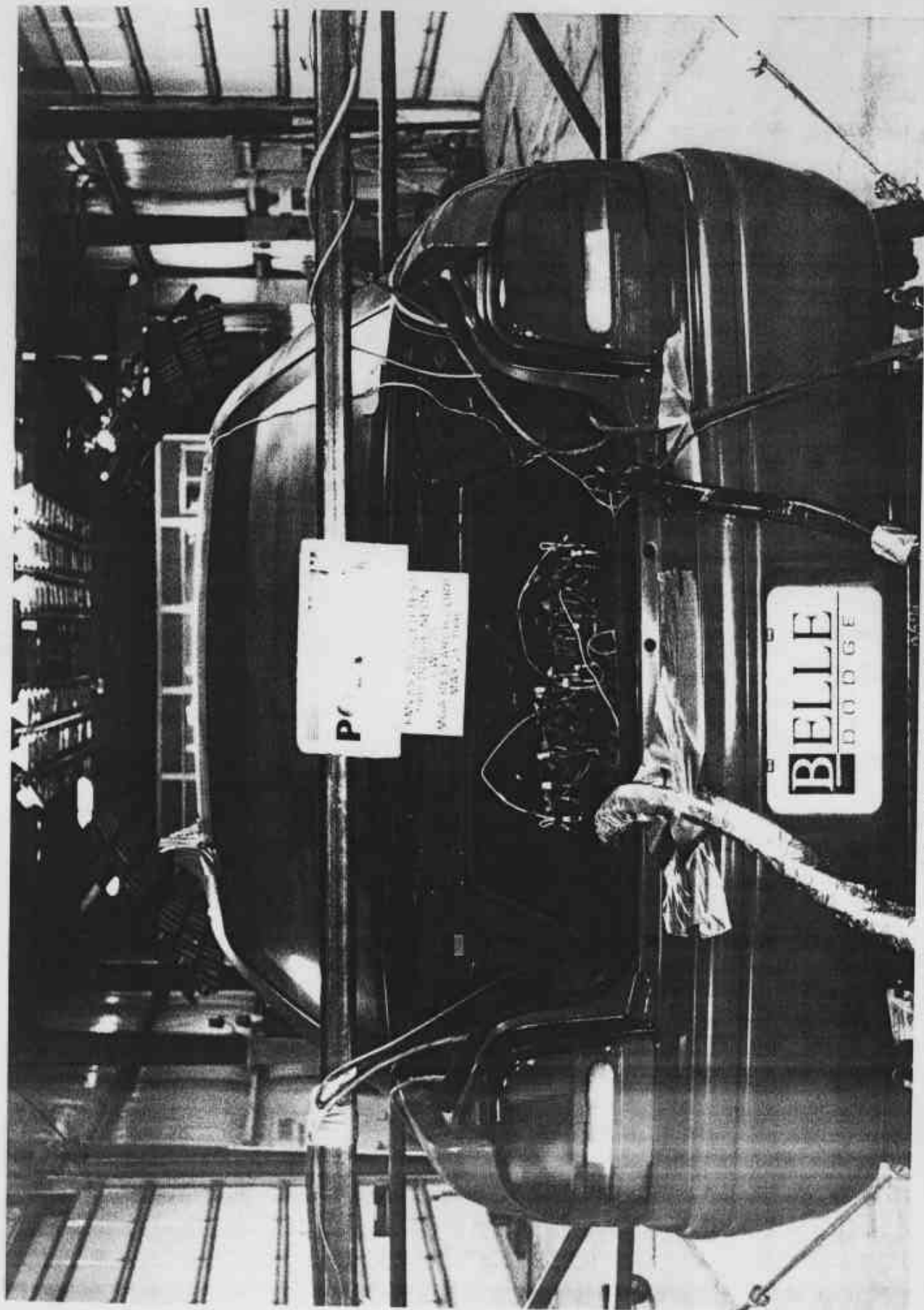


Photo No. A-12 - Post-Test Rear View

A-12

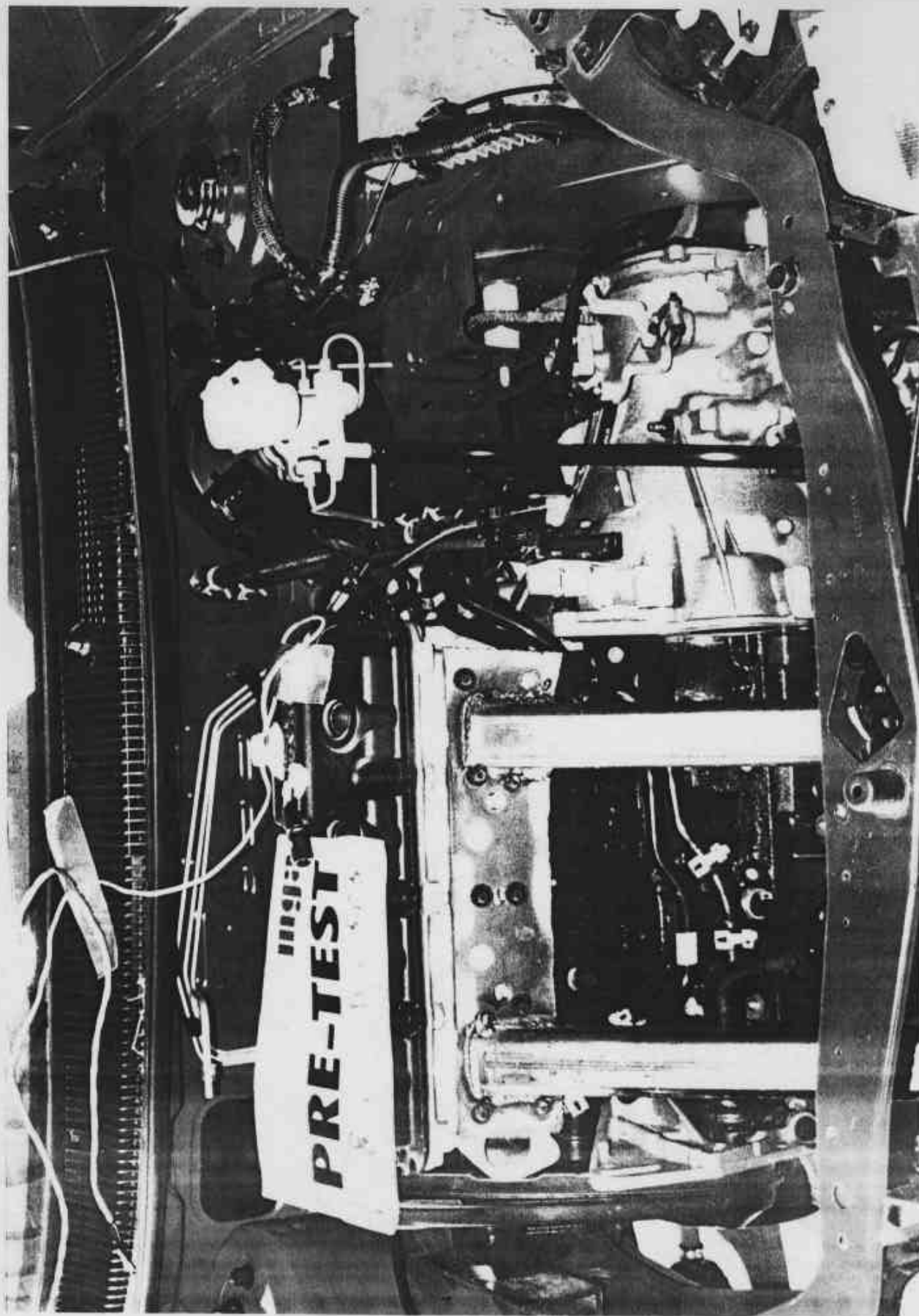
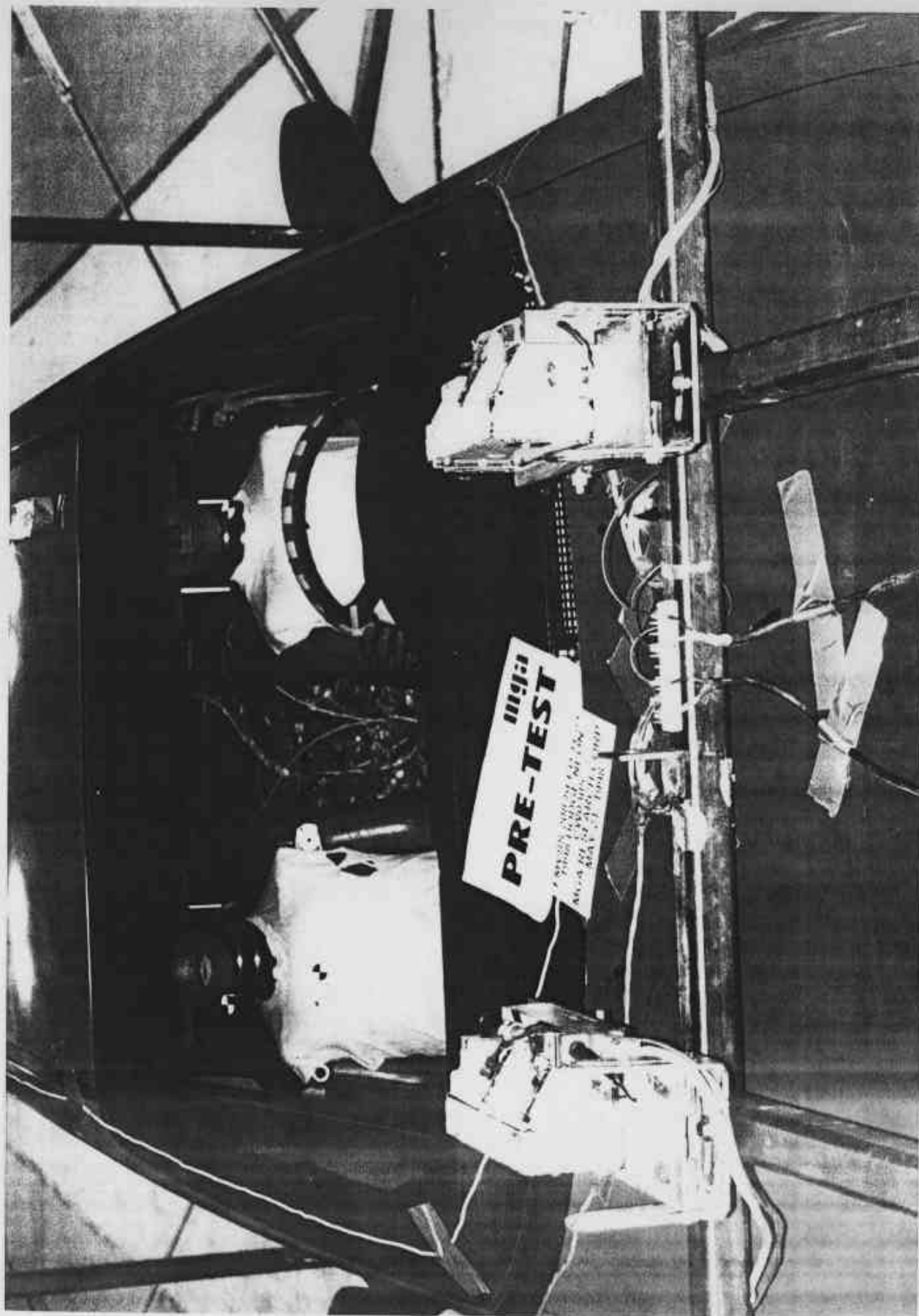


Photo No. A-13 - Pre-Test Engine Compartment View



A-14

Photo No. A-14 - Pre-Test Windshield View

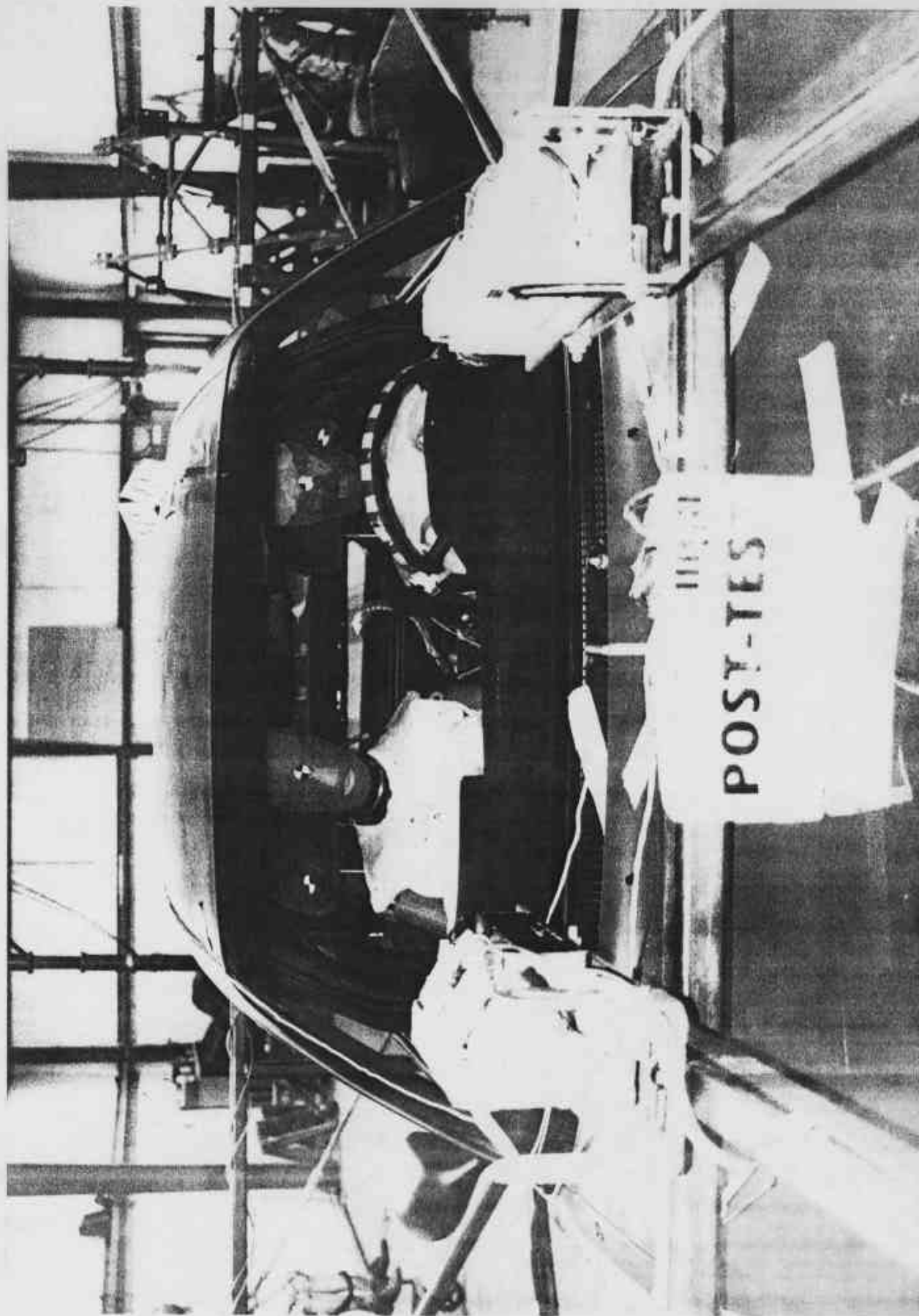


Photo No. A-15 - Post-Test Windshield View

A-15



Photo No. A-16 - Pre-Test Driver Dummy Position View

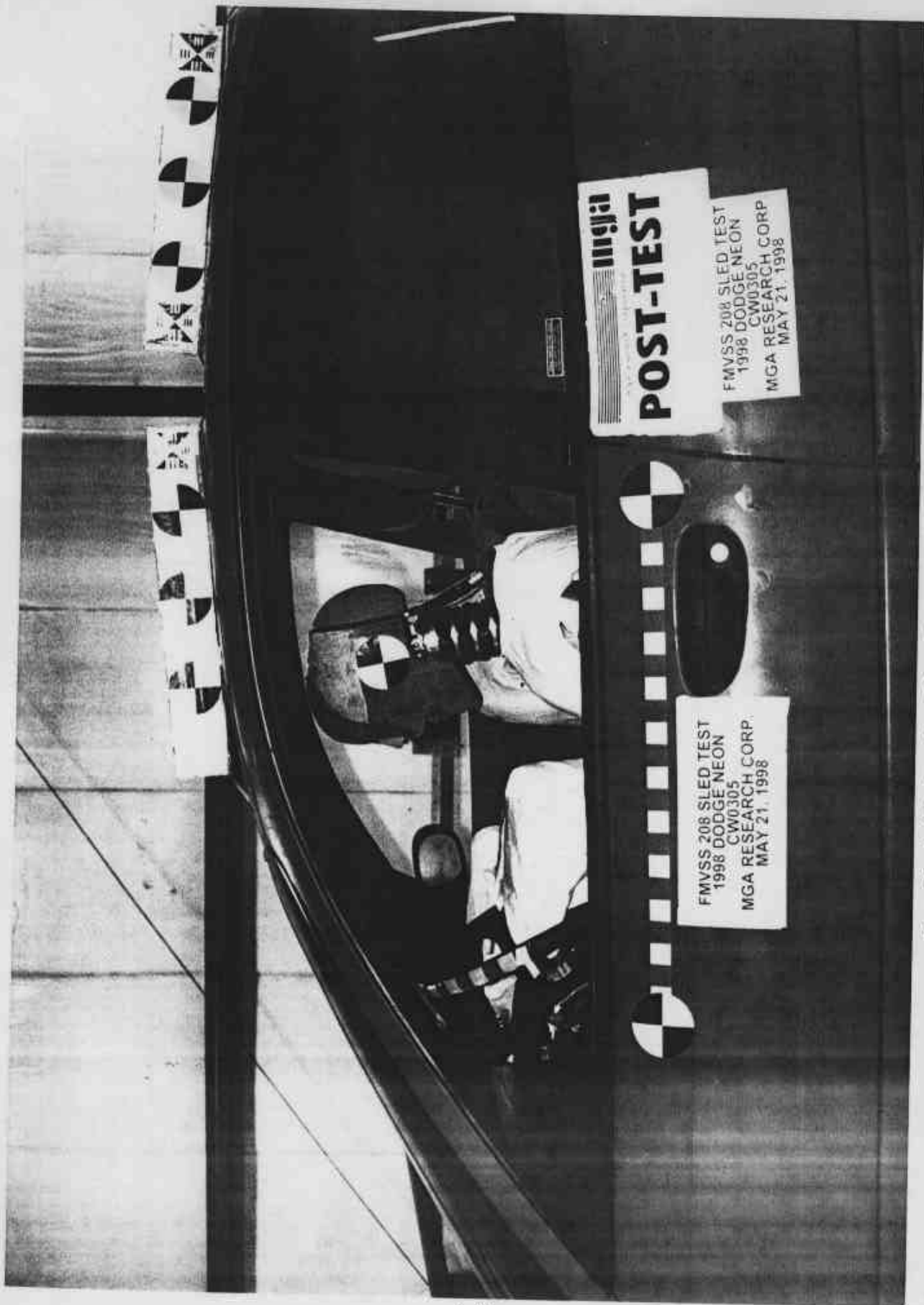


Photo No. A-17 - Post-Test Driver Dummy Position View



Photo No. A-18 - Pre-Test Driver Dummy Position View (Door Open)



Photo No. A-19 - Post-Test Driver Dummy Position View (Door Open)

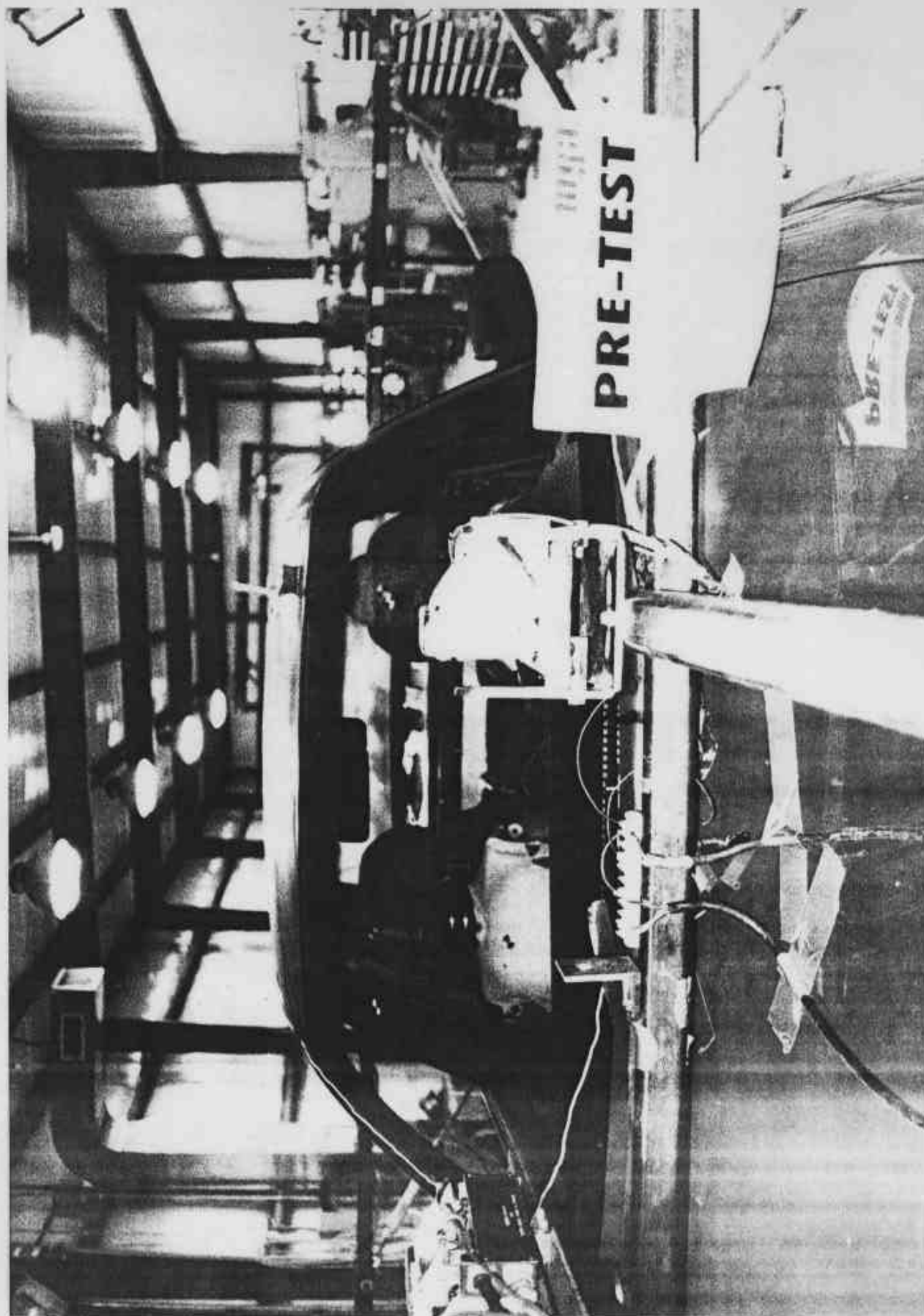


Photo No. A-20 - Pre-Test Driver Windshield View

A-20

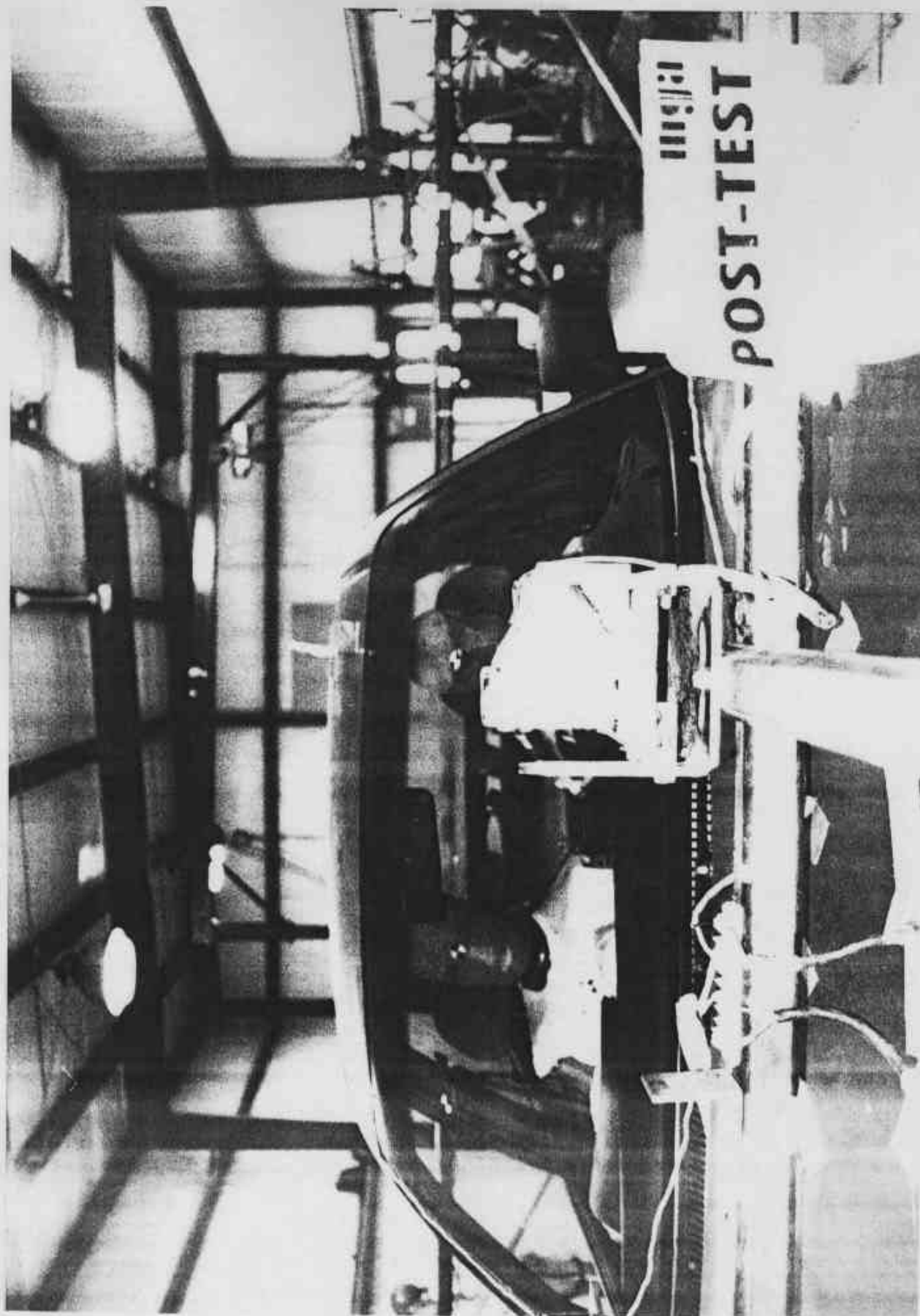


Photo No. A-21 - Post-Test Driver Windshield View

A-21



Photo No. A-22 - Pre-Test Driver Seat Position View



A-23

Photo No. A-23 - Post-Test Driver Seat Position View



Photo No. A-24 - Pre-Test Driver Knee Bolster View



Photo No. A-25 - Post-Test Driver Knee Bolster View



Photo No. A-26 - Post-Test Driver Airbag View



Photo No. A-27 - Pre-Test Passenger Dummy Position View



Photo No. A-28 - Post-Test Passenger Dummy Position View



Photo No. A-29 - Pre-Test Passenger Dummy Position View (Door Open)



Photo No. A-30 - Post-Test Passenger Dummy Position View (Door Open)



Photo No. A-31 - Pre-Test Passenger Windshield View

A-31

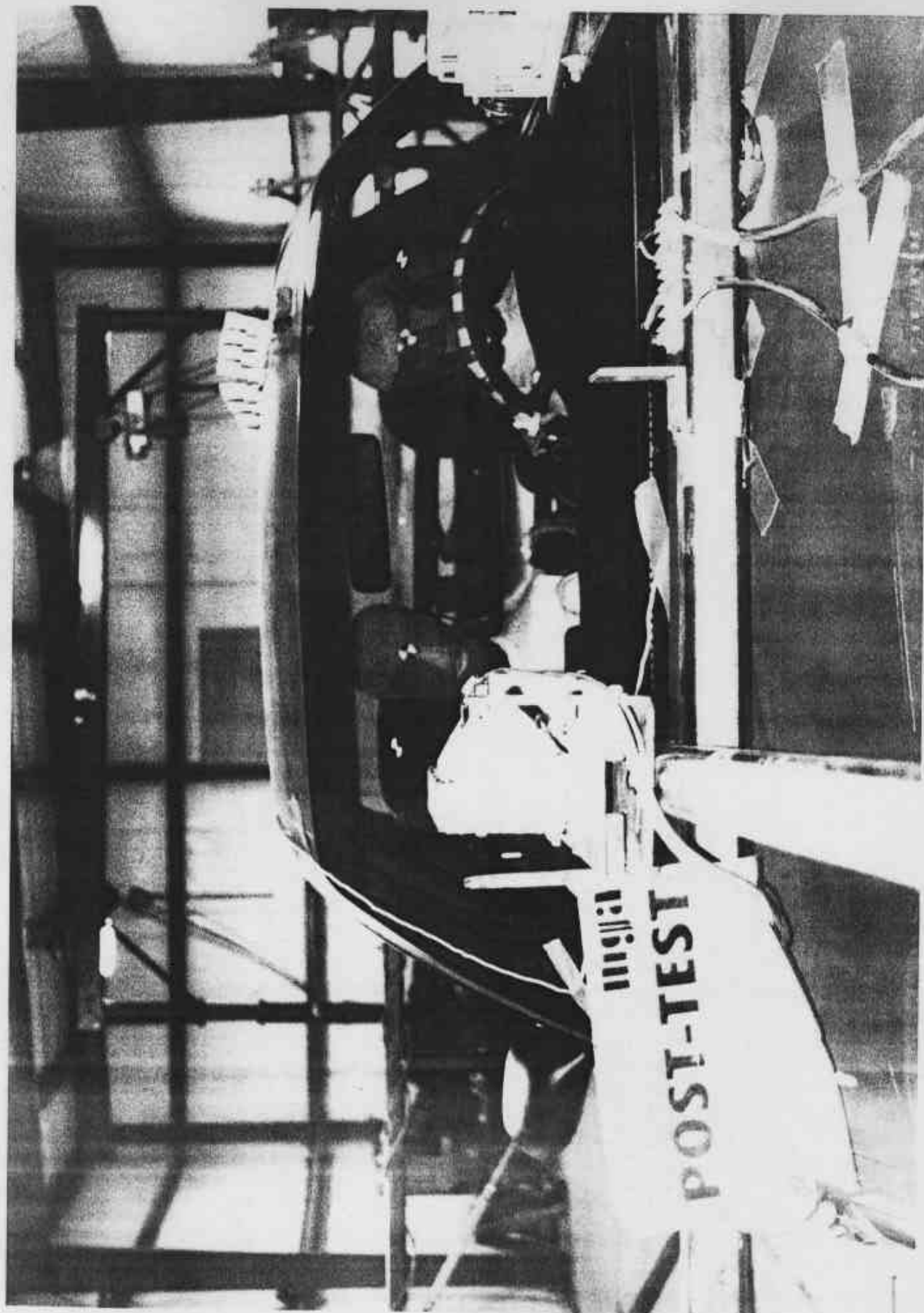
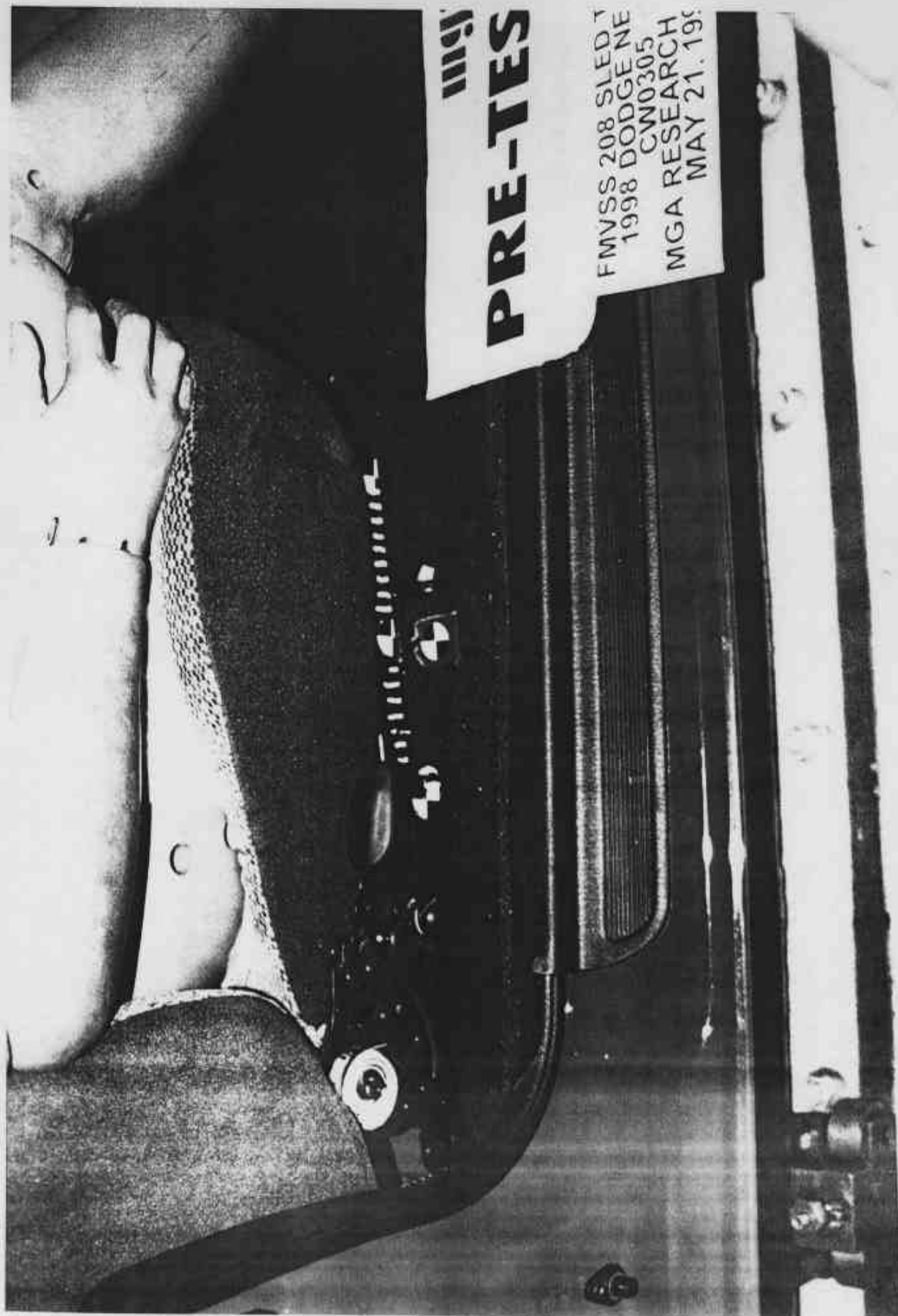


Photo No. A-32 - Post-Test Passenger Windshield View



A-33

Photo No. A-33 - Pre-Test Passenger Dummy Seat Position View



Photo No. A-34 - Post-Test Passenger Dummy Seat Position View



Photo No. A-35 - Pre-Test Passenger Dummy Knee Bolster View



Photo No. A-36 - Post-Test Passenger Dummy Knee Bolster View



Photo No. A-37 - Post-Test Passenger Dummy Airbag View

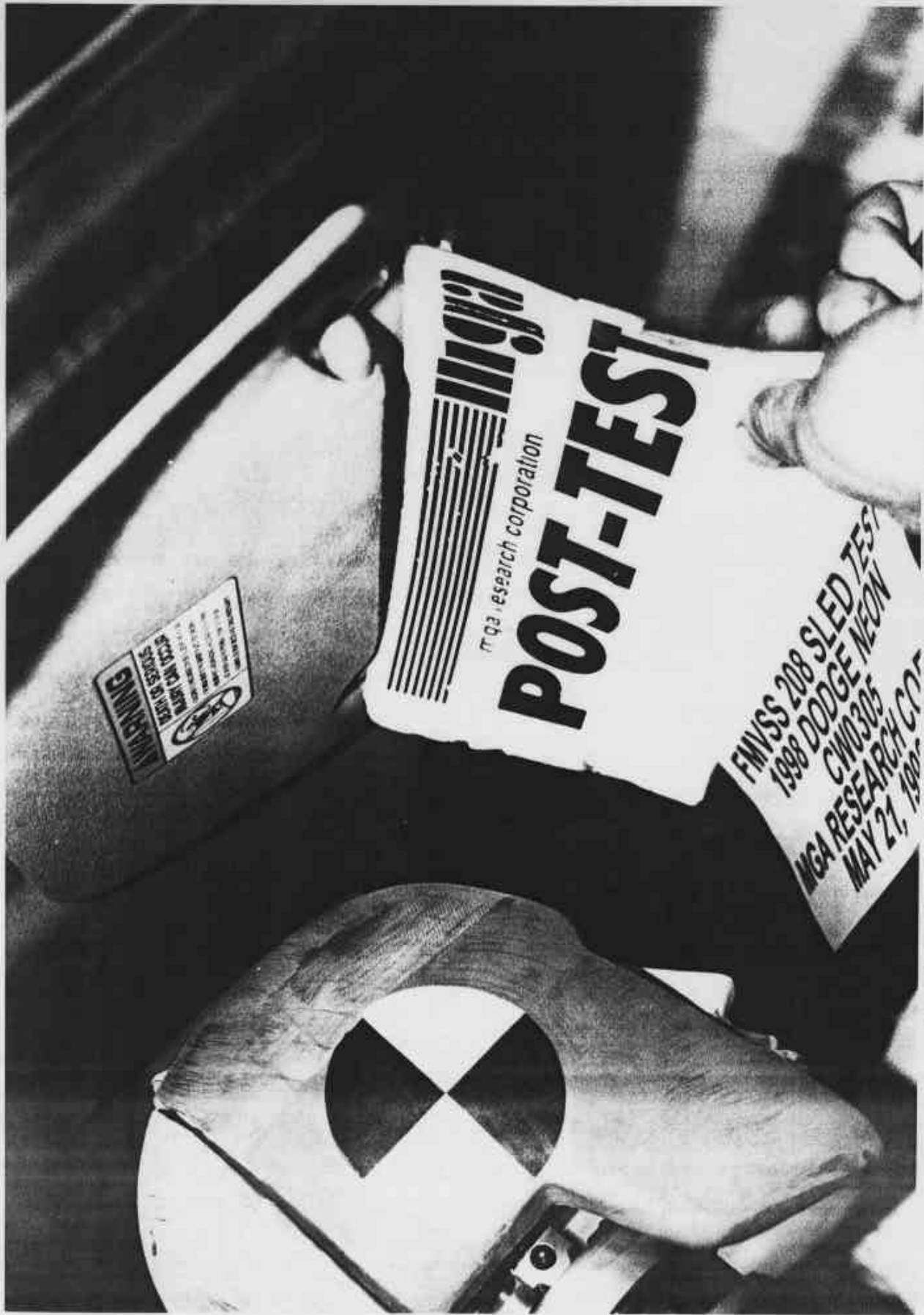


Photo No. A-38 - Post-Test Passenger Dummy Head Contact View (visor)

MADE BY CHRYSLER CORPORATION

GWR: 1569 KG

GWR: 8862 KG

83459 LB

FRONT: 1889 LB

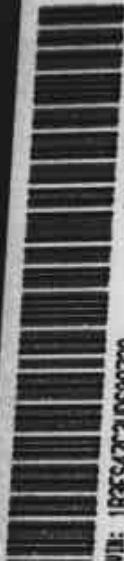
REAR: 1610 LB

DATE OF MFR: 12-97

GWR: 8731 KG

REAR: 1610 LB

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



VIN: 1B3CS47C3AD689738

DOB: 121614 88544

VEHICLE MADE IN U.S.A.

TYPE: PASSENGER CAR

TRIM: VTAZ

46548843

Photo No. A-39 - Vehicle Certification Label

		VEHICLE CAPACITY OR LESS	
1st SEAT	2 PASS		
2nd SEAT	3 PASS		
LUGGAGE	115 LBS-52 kg		
TOTAL	5 PASS		
TOTAL WEIGHT	865 LBS-392 kg		
TIRE PRESSURE COLD	32 PSI 220 kPa		
RECOMMENDED TIRE SIZES			
P175/70R14			
STANDARD LOAD			
P185/65R14			
STANDARD LOAD			
SEE OWNERS MANUAL FOR ADDITIONAL DATA			
PRINTED IN USA 4473 985			

Photo No. A-40 - Tire Placard

APPENDIX B

DATA PLOTS

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Figure B-10 - Driver Neck Moment Z vs. Time	B-10
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TEST DATE: 05-21-1998

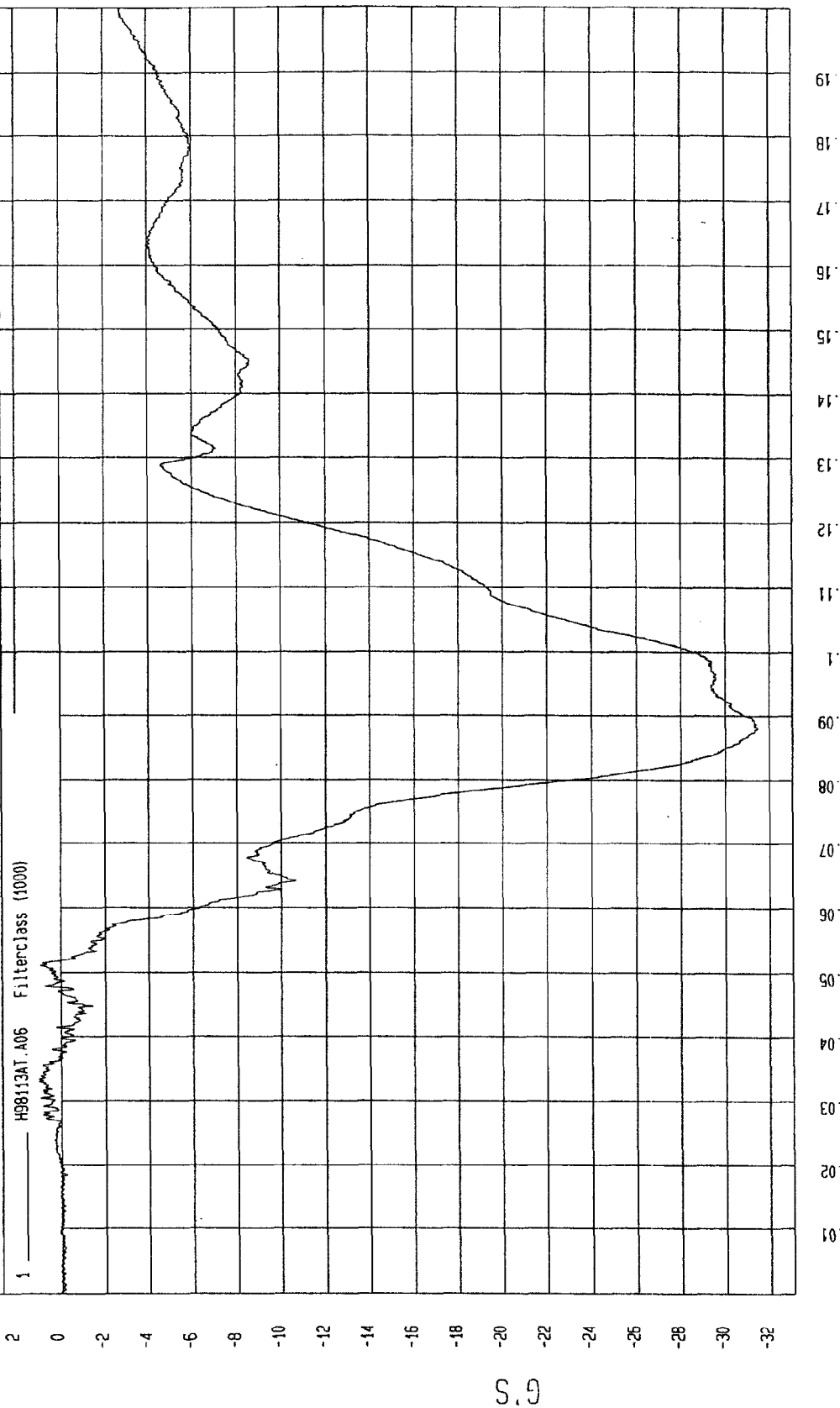
TEST: FMVSS 208 SLED TEST

COMPONENT: 1998 DODGE NEON (CW0305)

YMIN=-31.42037 G'S at 87. msec

YMAX= 1.001098 G'S at 33 msec

DRIVER HEAD X ACCELERATION



MGA Research
05-13-1998 13:51

TIME (SECONDS)

TEST: FMVSS 208 SLED TEST

TEST DATE: 05-21-1998

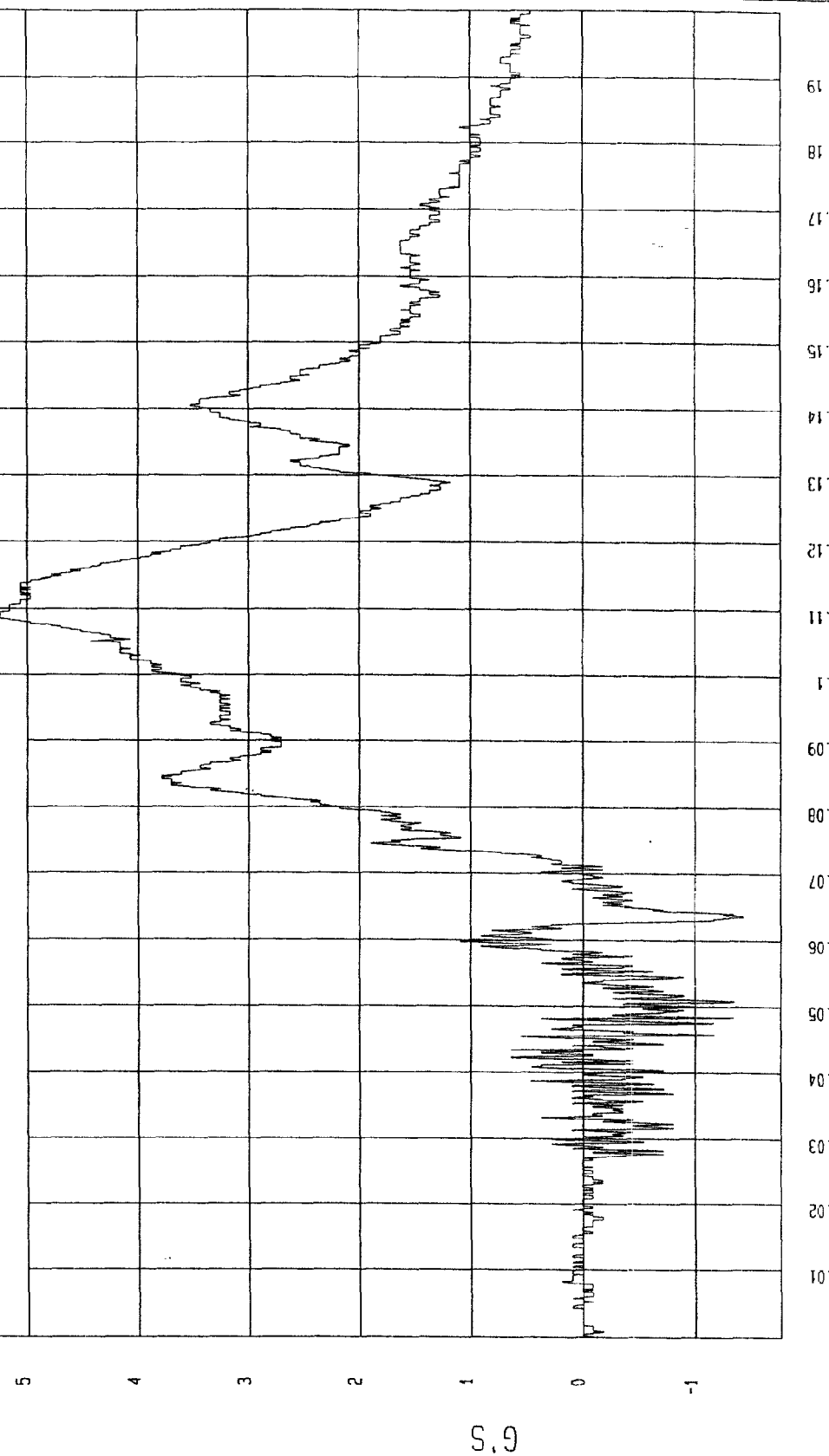
COMPONENT: 1998 DODGE NEON (CW0305)

YMIN=-1.439088 G'S at 63. msec

YMAX= 5.242 G'S at 108 msec

DRIVER HEAD Y ACCELERATION

1 ——— H98113AT.A08 Filterclass (1000)



NSA Research
05-13-1998 13:52

TEST: FMVSS 208 SLED TEST

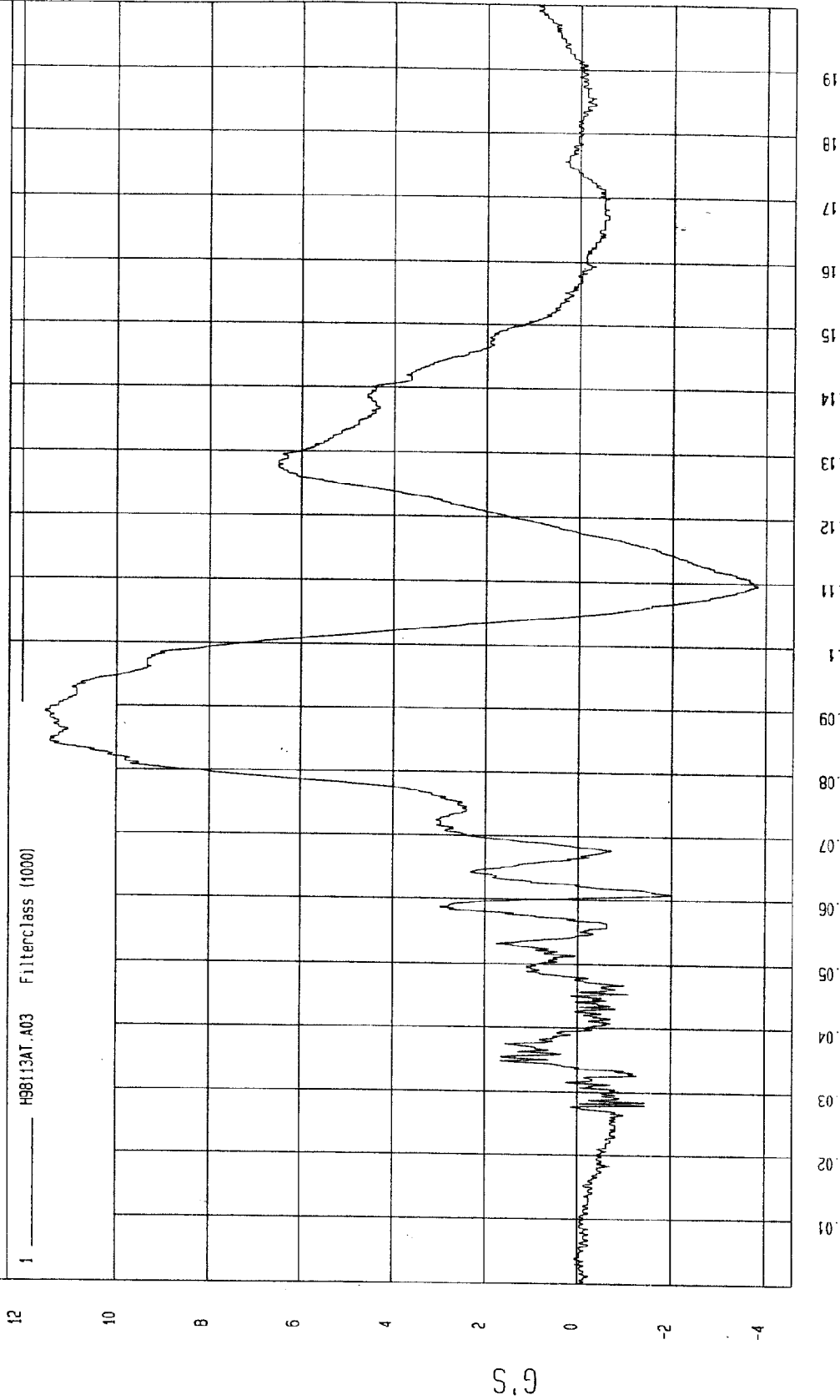
TEST DATE: 05-21-1998

COMPONENT: 1998 DODGE NEON (CW0305)

YMIN=-3.829192 G'S at 109 msec

YMAX= 11.50851 G'S at 89 msec

DRIVER HEAD Z ACCELERATION



WCA Research
05-13-1998 13:52

TEST: FMVSS 208 SLED TEST

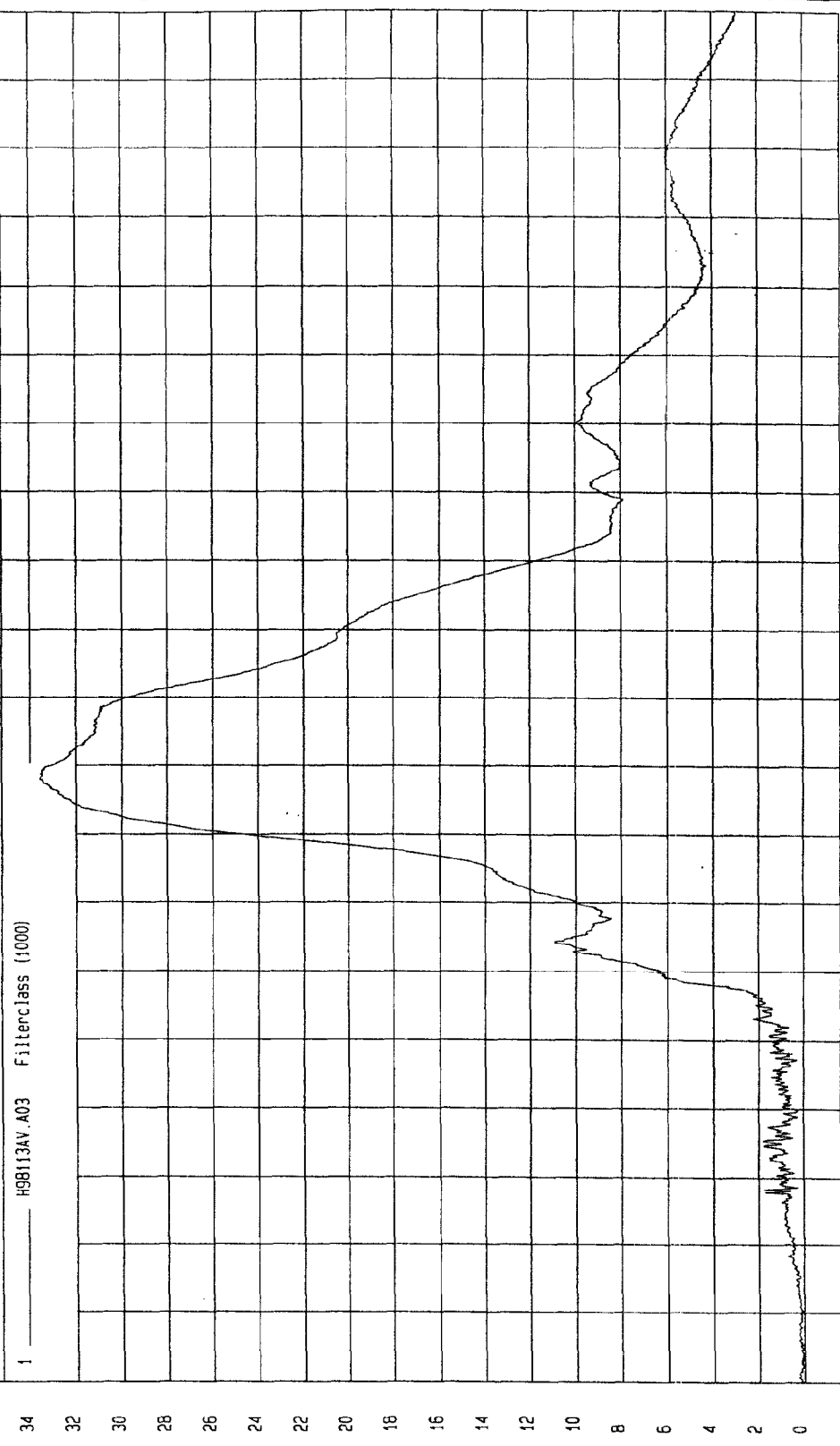
TEST DATE: 05-21-1998

COMPONENT: 1998 DODGE NEON (CW0305)

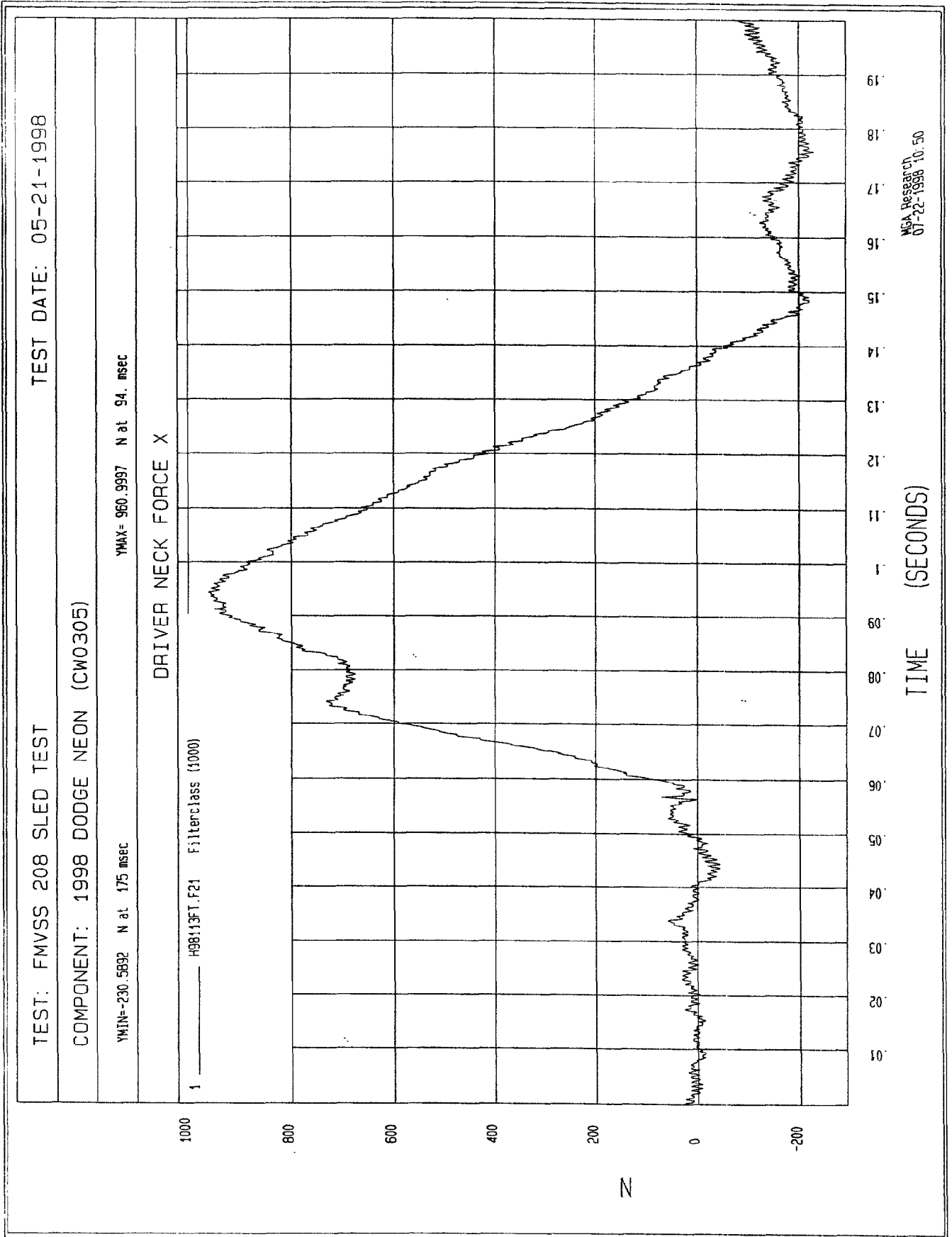
YMIN= 5.21966E-02 G'S at 3.3 msec YMAX= 33.95438 G'S at 88 msec

DRIVER HEAD RESULTANT ACCELERATION

1 H981134V.A03 Filterclass (1000)



MCA Research
05-13-1998 13:53



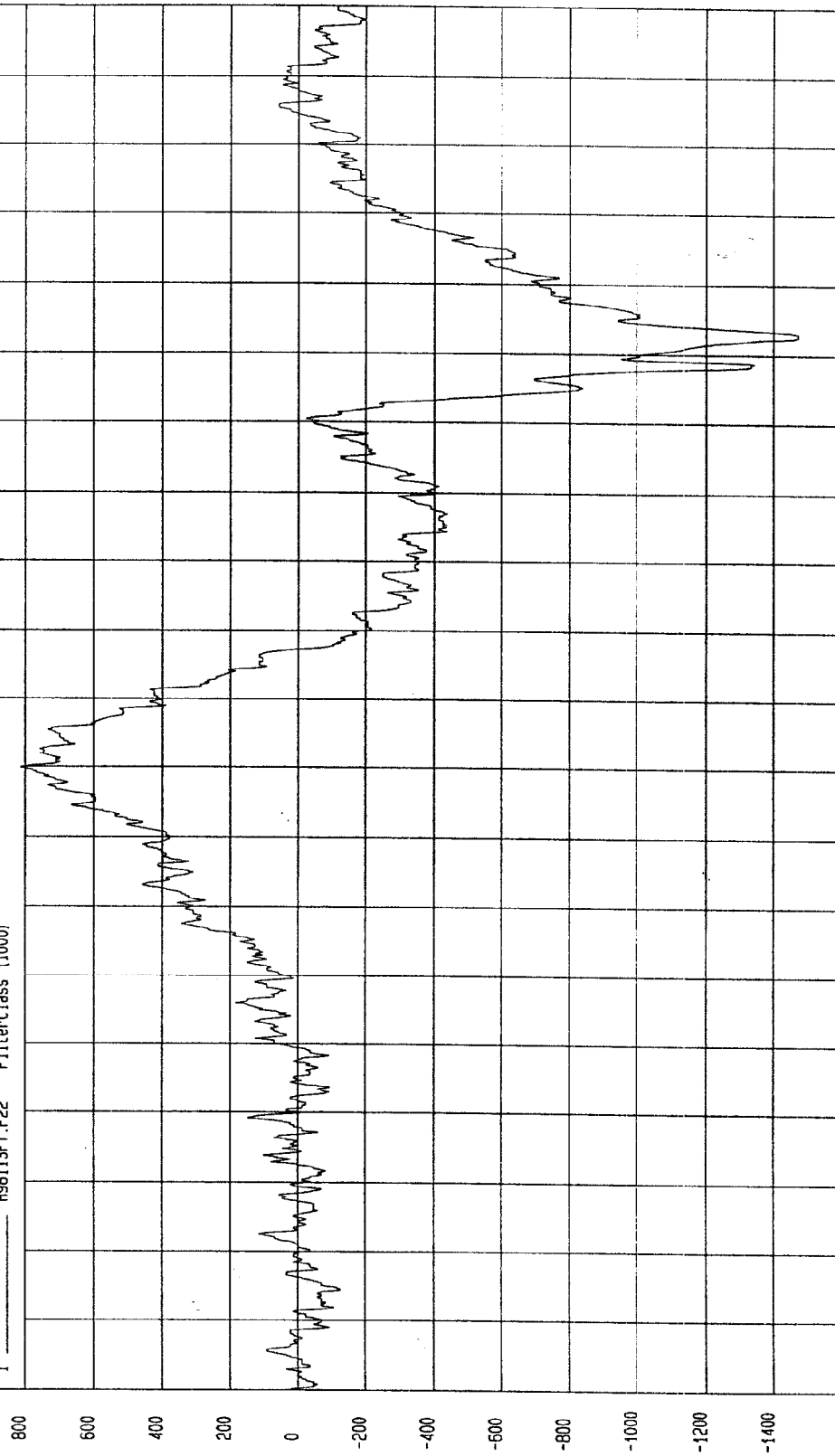
TEST: FMVSS 208 SLED TEST TEST DATE: 05-21-1998

COMPONENT: 1998 DODGE NEON (CW0305)

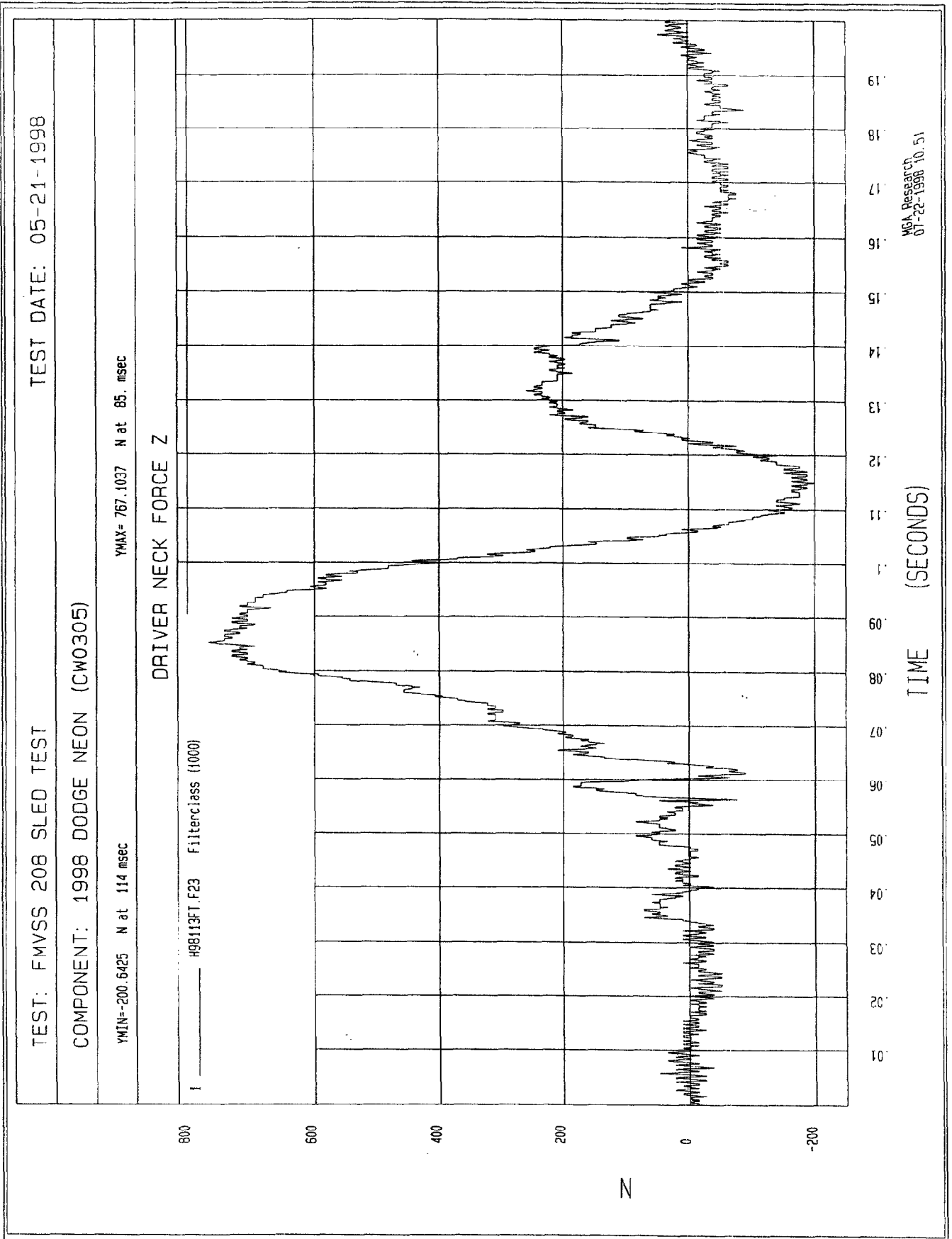
YMIN=-1468.706 N at 152 msec YMAX= 814.1327 N at 89. msec

DRIVER NECK FORCE Y

1 H98113FT.F22 Filterclass (1000)



NSA Research
07-22-1998 10:51



TEST: FMVSS 208 SLED TEST

TEST DATE: 05-21-1998

COMPONENT: 1998 DODGE NEON (CW0305)

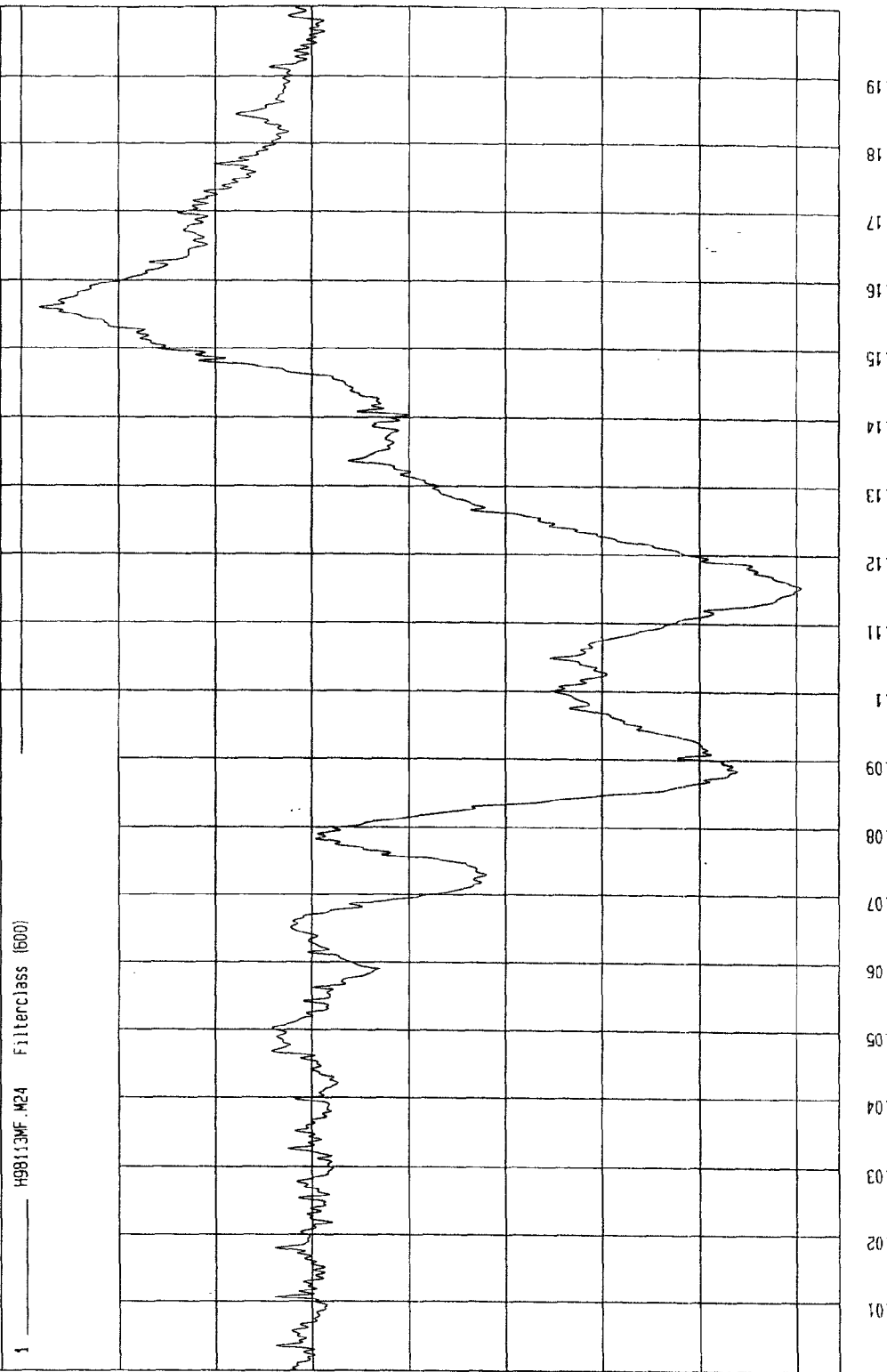
YMIN=-10.09943 NM at 115 msec

YMAX= 5.635928 NM at 156 msec

DRIVER NECK MOMENT X

1 H98113MF.M24 Filterclass (600)

6
4
2
0
-2
-4
-6
-8
-10



MGA Research
05-13-1998 13.54

TIME (SECONDS)

TEST DATE: 05-21-1998

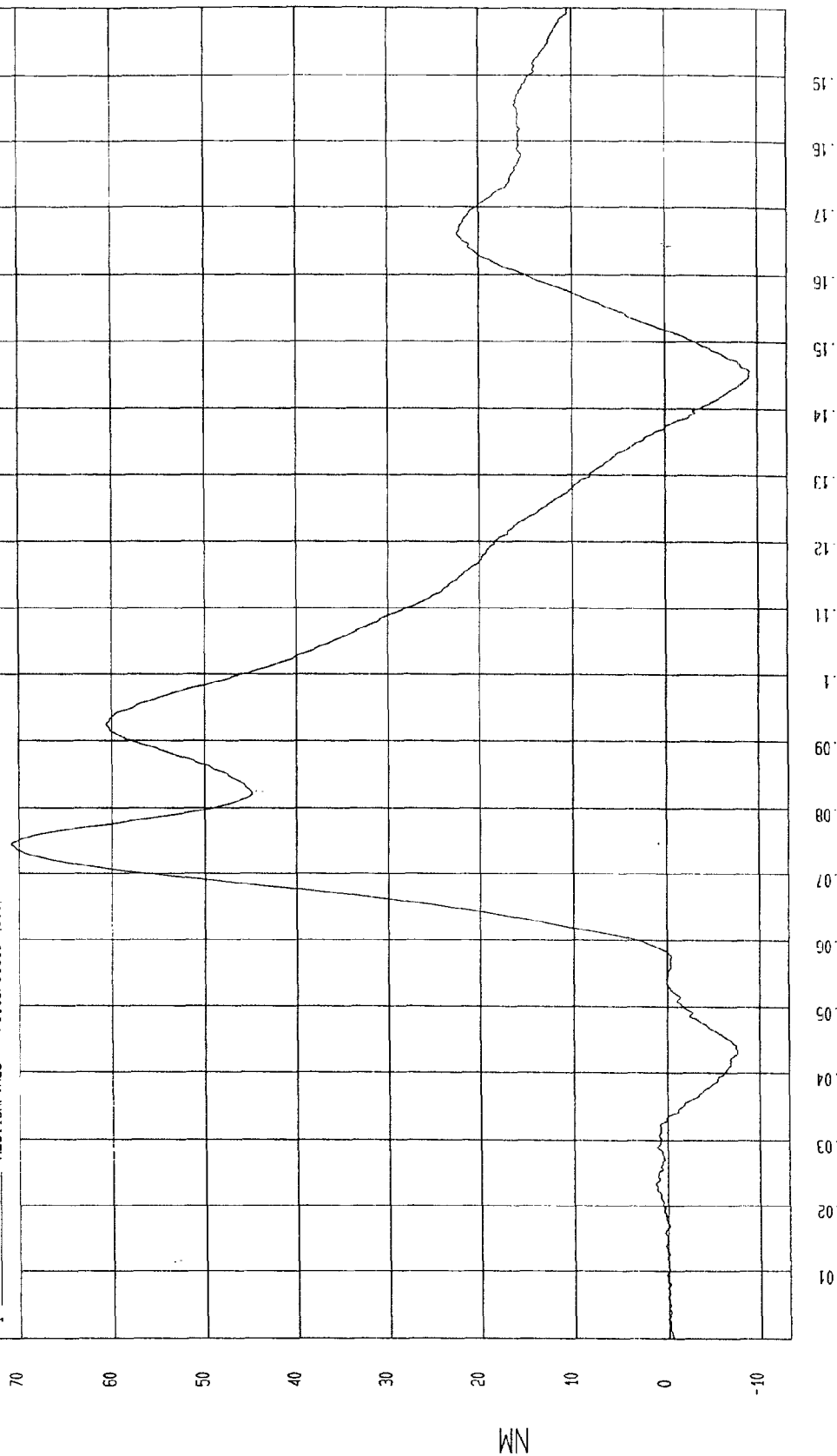
TEST: FMVSS 208 SLED TEST

COMPONENT: 1998 DODGE NEON (CW0305)

YMIN=-9.13548 NM at 145 msec YMAX= 70.77821 NM at 74. msec

DRIVER NECK MOMENT Y

1 H98113MF.M25 FilterClass (600)



MCA Research
05-13-1998 13:55

TEST: FMVSS 208 SLED TEST

TEST DATE: 05-21-1998

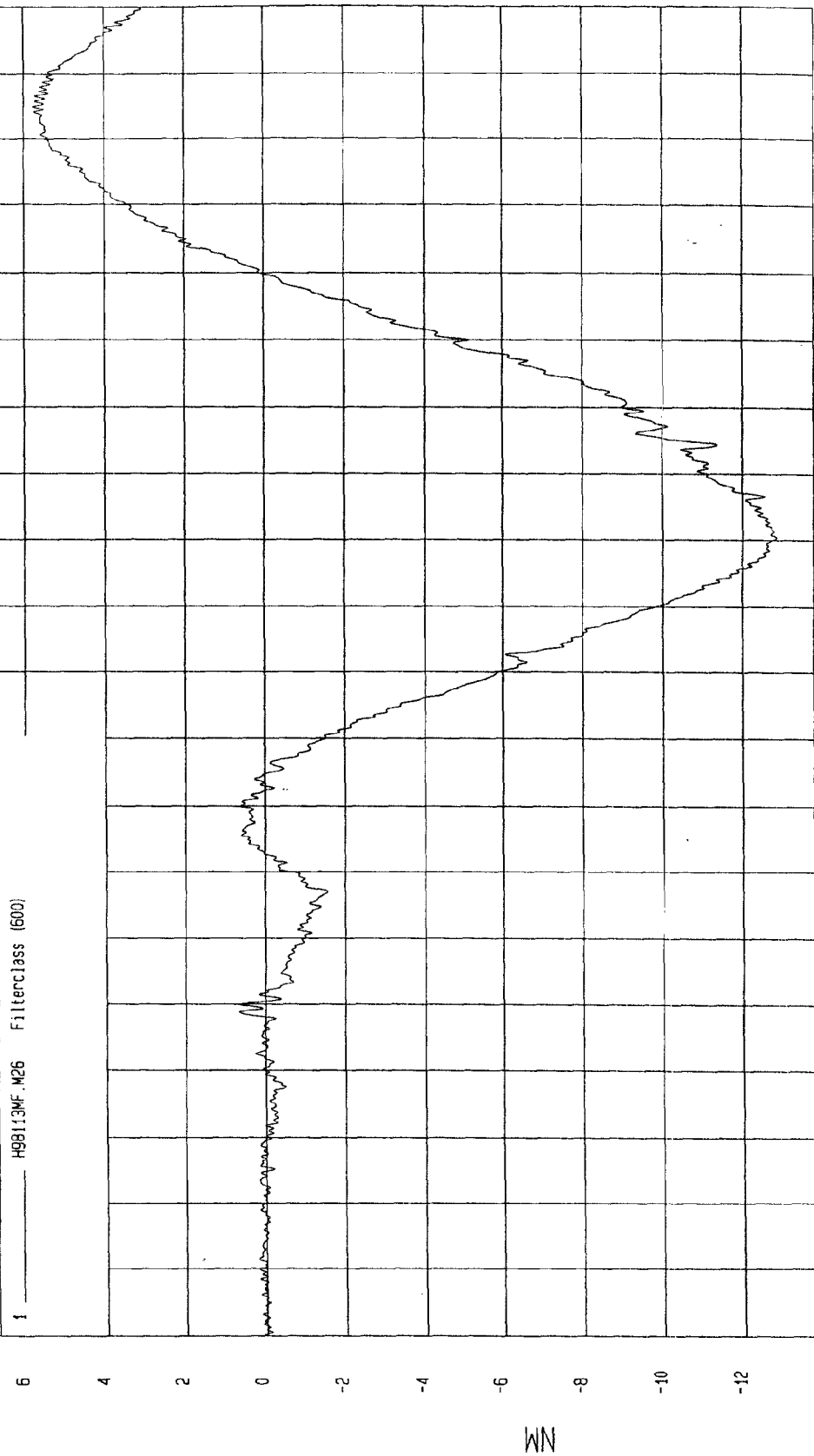
COMPONENT: 1998 DODGE NEON (CW0305)

YMIN=-12.872 NM at 120 msec

YMAX= 5.7703 NM at 184 msec

DRIVER NECK MOMENT Z

1 H98113MF.M26 FilterClass (600)



MCA Research
05-13-1998 13.55

TIME (SECONDS)

TEST DATE: 05-21-1998

TEST: FMVSS 208 SLED TEST

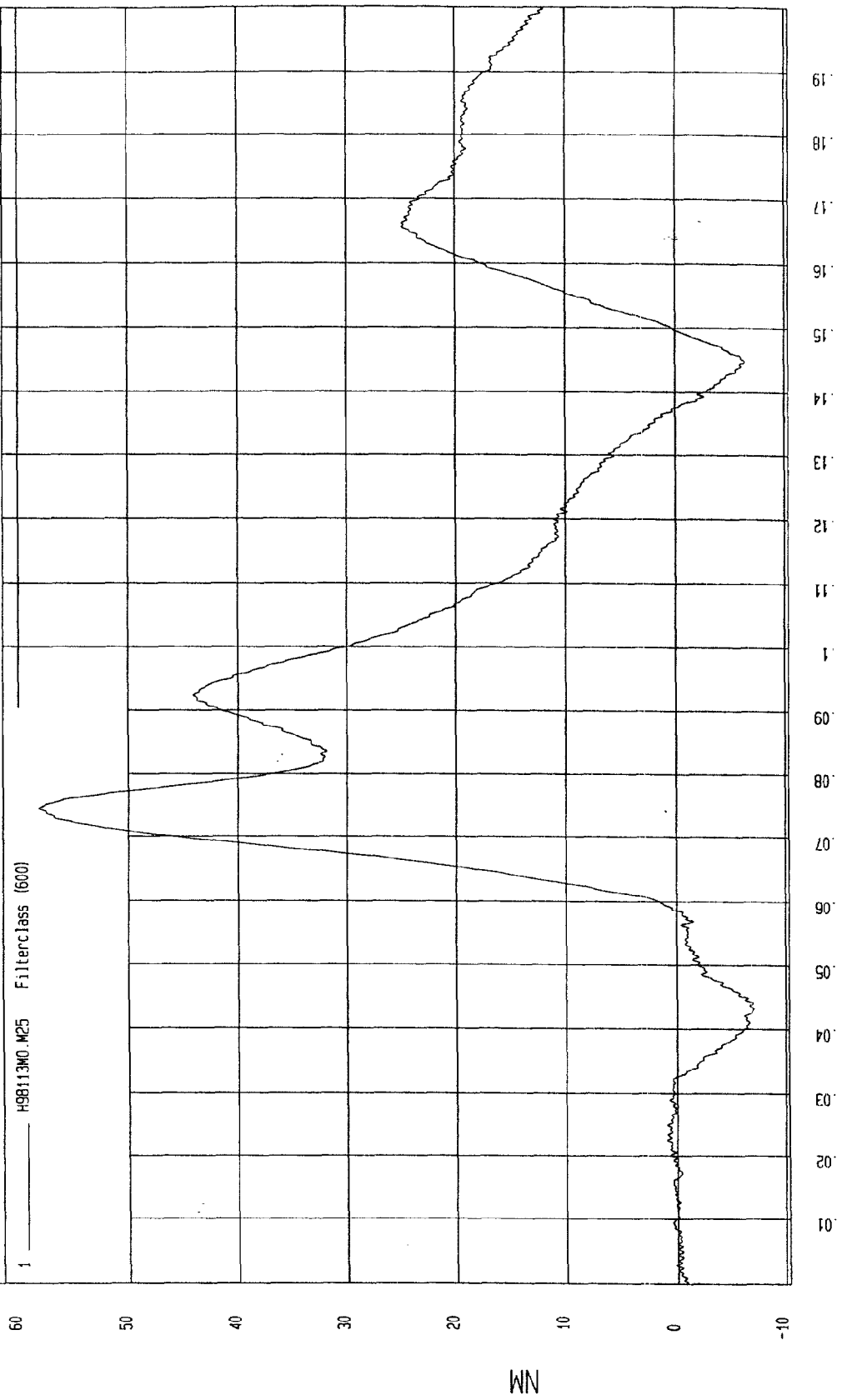
COMPONENT: 1998 DODGE NEON (CW0305)

YMIN=-7.075612 NM at 43. msec

YMAX= 58.12686 NM at 74. msec

DRIVER OCCIPITAL CONDYLE MOMENT Y

1 H98113M0.M25 Filterclass (600)



MCA Research
05-13-1998 14: 10

TIME (SECONDS)

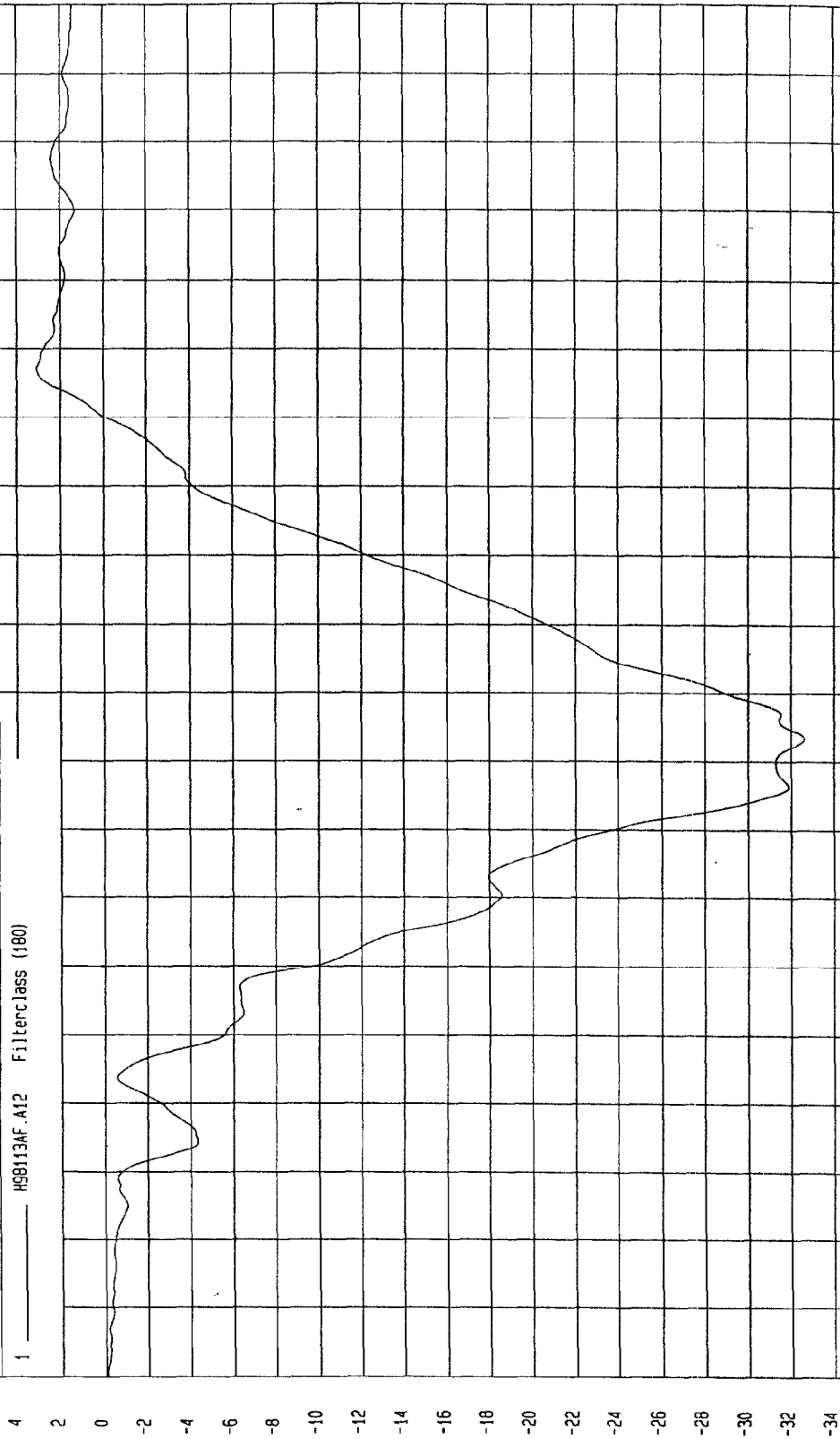
TEST: FMVSS 208 SLED TEST TEST DATE: 05-21-1998

COMPONENT: 1998 DODGE NEON (CW0305)

YMIN=-32.61942 G'S at 93. msec YMAX= 3.084187 G'S at 147 msec

DRIVER CHEST X ACCELERATION

1 H98113AF.A12 Filterclass (180)



TIME (SECONDS)

MCA Research
05-13-1998 13:55

TEST DATE: 05-21-1998

TEST: FMVSS 208 SLED TEST

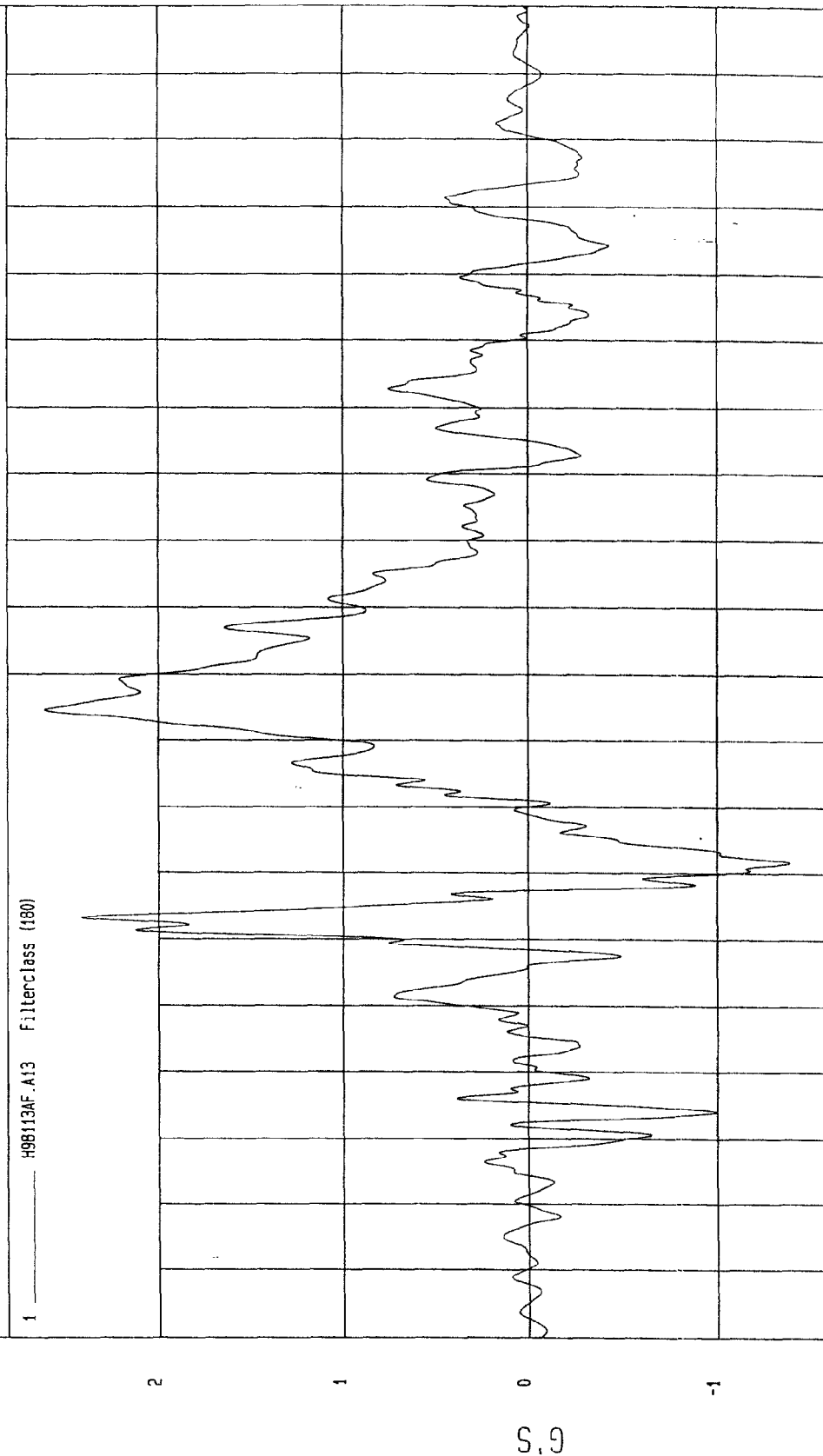
COMPONENT: 1998 DODGE NEON (CW0305)

YMIN=-1.396454 G'S at 71. msec

YMAX= 2.603326 G'S at 94. msec

DRIVER CHEST Y ACCELERATION

1 H98113AF.A13 Filterclass (180)



MCA Research
05-13-1998 13:56

TEST DATE: 05-21-1998

TEST: FMVSS 208 SLED TEST

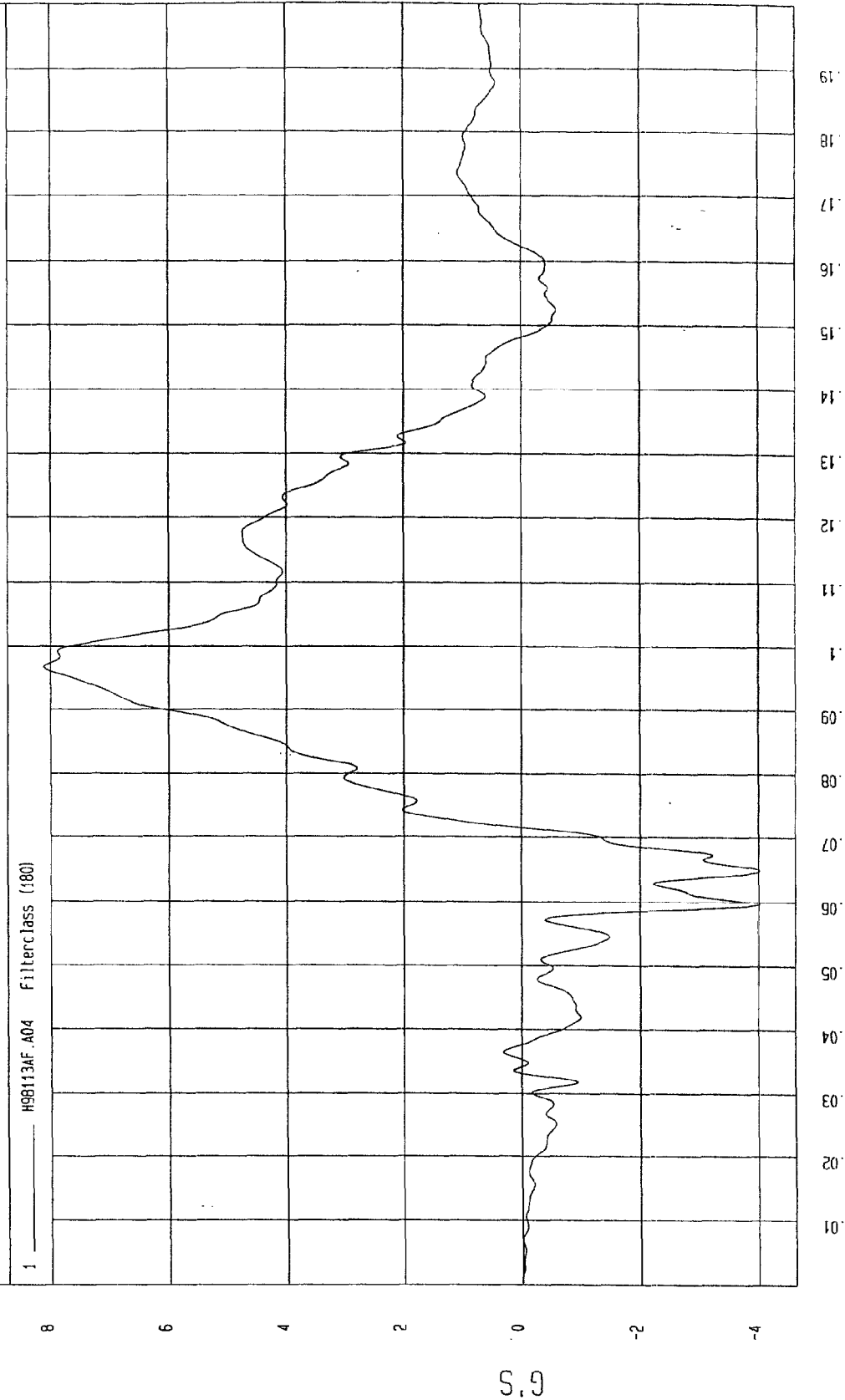
COMPONENT: 1998 DODGE NEON (CW0305)

YMIN=-4.035205 G'S at 64. msec

YMAX= 8.104859 G'S at 96. msec

DRIVER CHEST Z ACCELERATION

1 H98113AF.A04 Filterclass (180)



MCA Research
05-13-1998 13:56

TEST DATE: 05-21-1998

TEST: FMVSS 208 SLED TEST

COMPONENT: 1998 DODGE NEON (CW0305)

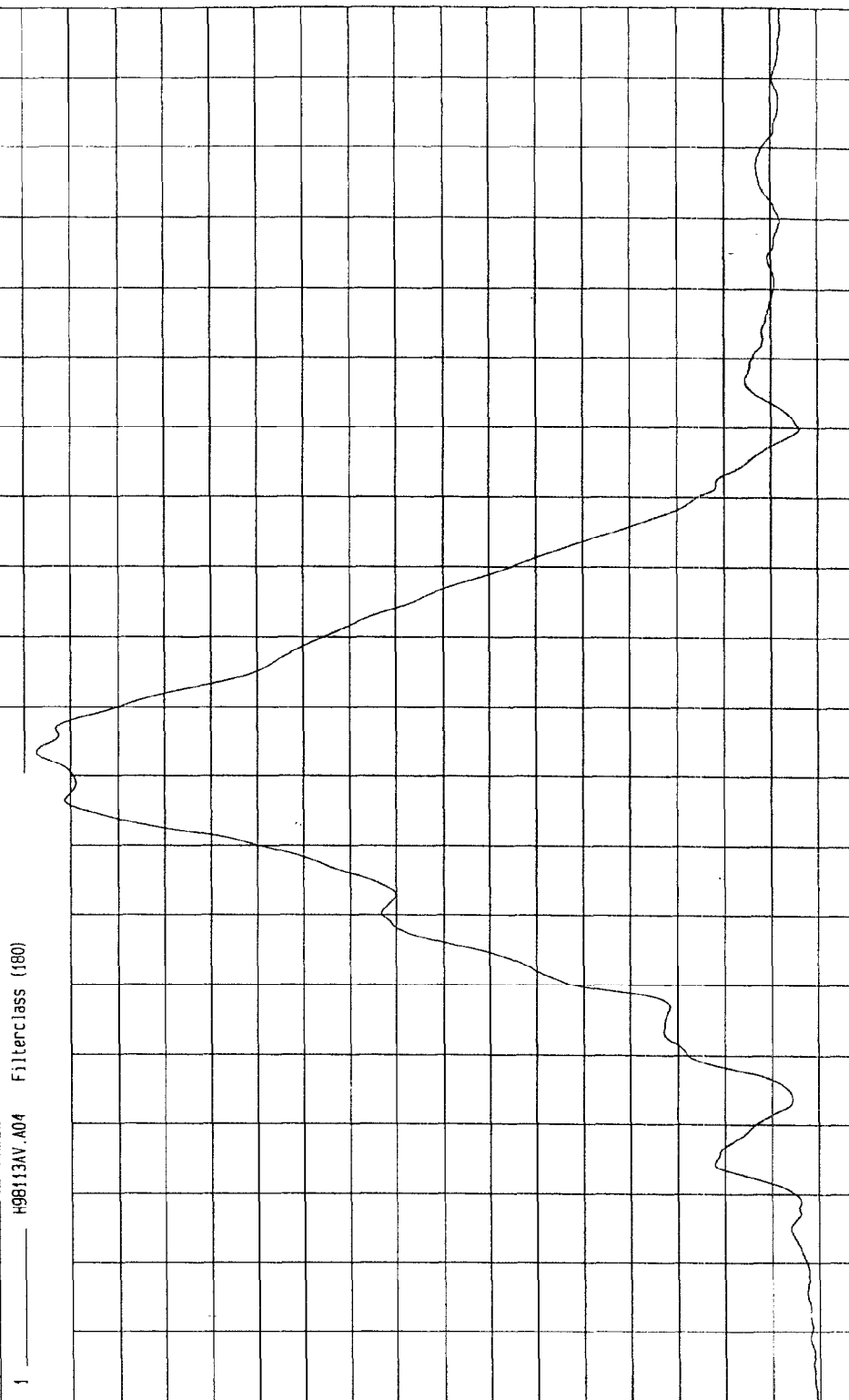
YMAX= 33.47506 G'S at 93. msec

YMIN= .1002031 G'S at 9.9 msec

DRIVER CHEST RESULTANT ACCELERATION

1 H98113AV.A04 Filterclass (180)

G.S



TIME (SECONDS)

MSA Research
05-13-1998 13:57

TEST: FMVSS 208 SLED TEST

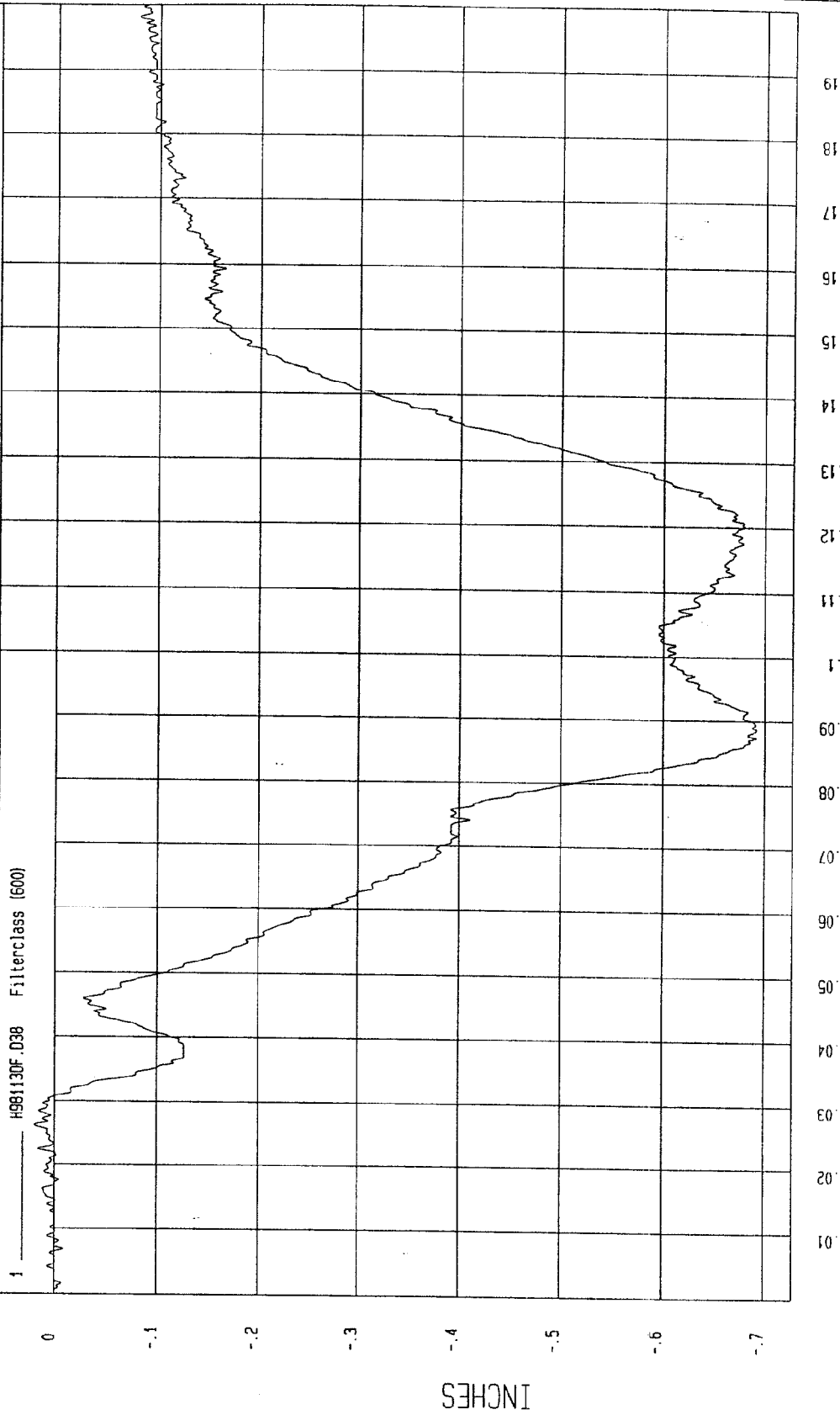
TEST DATE: 05-21-1998

COMPONENT: 1998 DODGE NEON (CW0305)

YMIN=-.6920906 INCHES at 88. msec

YMAX= 2.041064E-02 INCHES at 26. msec

DRIVER CHEST COMPRESSION



MGA Research
05-13-1998 14.14

TEST: FMVSS 208 SLED TEST

TEST DATE: 05-21-1998

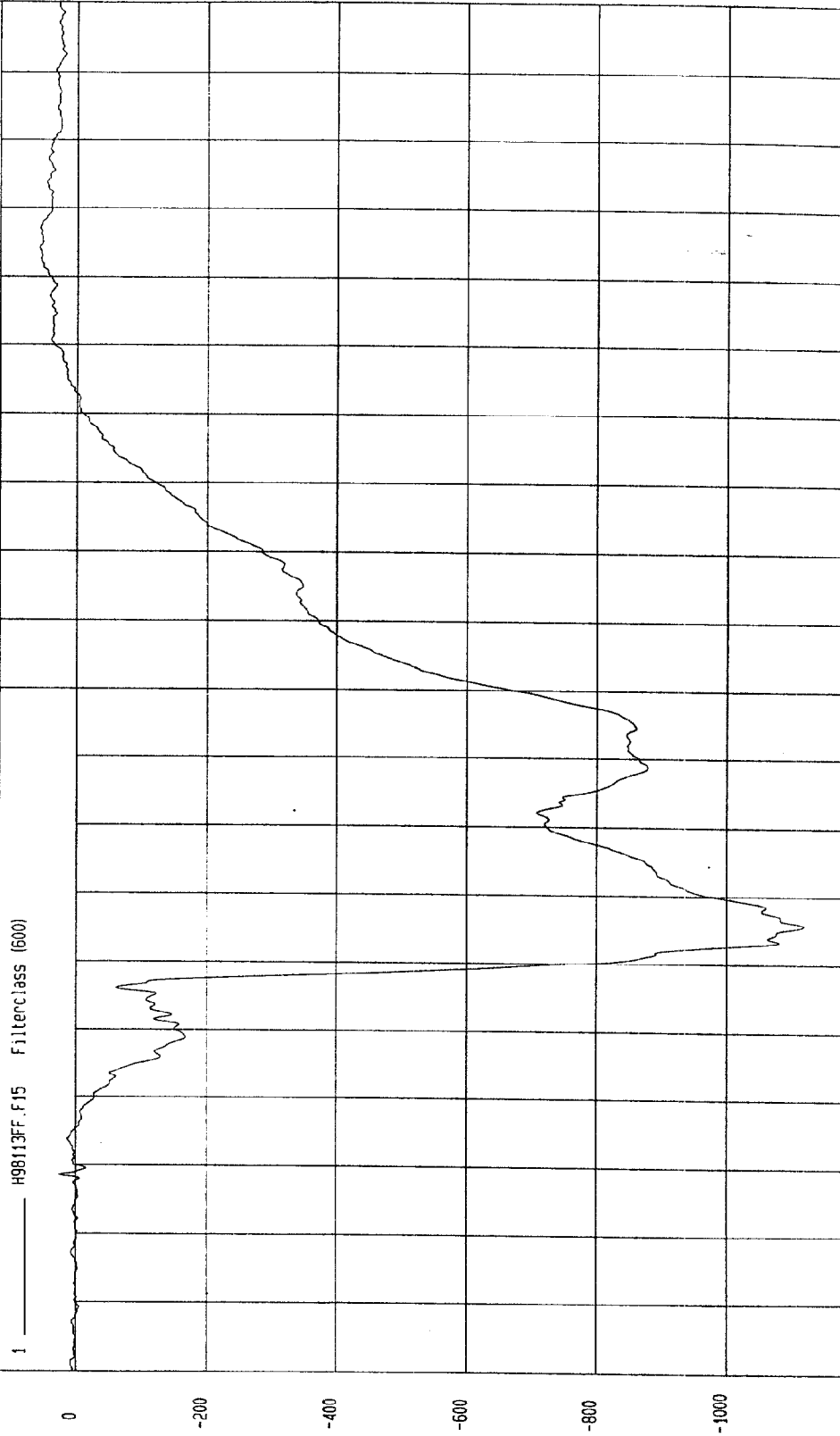
COMPONENT: 1998 DODGE NEON (CW0305)

YMIN=-1118.482 LBS at 65. msec

YMAX= 56.98095 LBS at 164 msec

DRIVER LEFT FEMUR FORCE

1 ——— H98113FF.F15 Filterclass (600)



NSA Research
05-13-1998 13:57

TIME (SECONDS)

TEST: FMVSS 208 SLED TEST TEST DATE: 05-21-1998

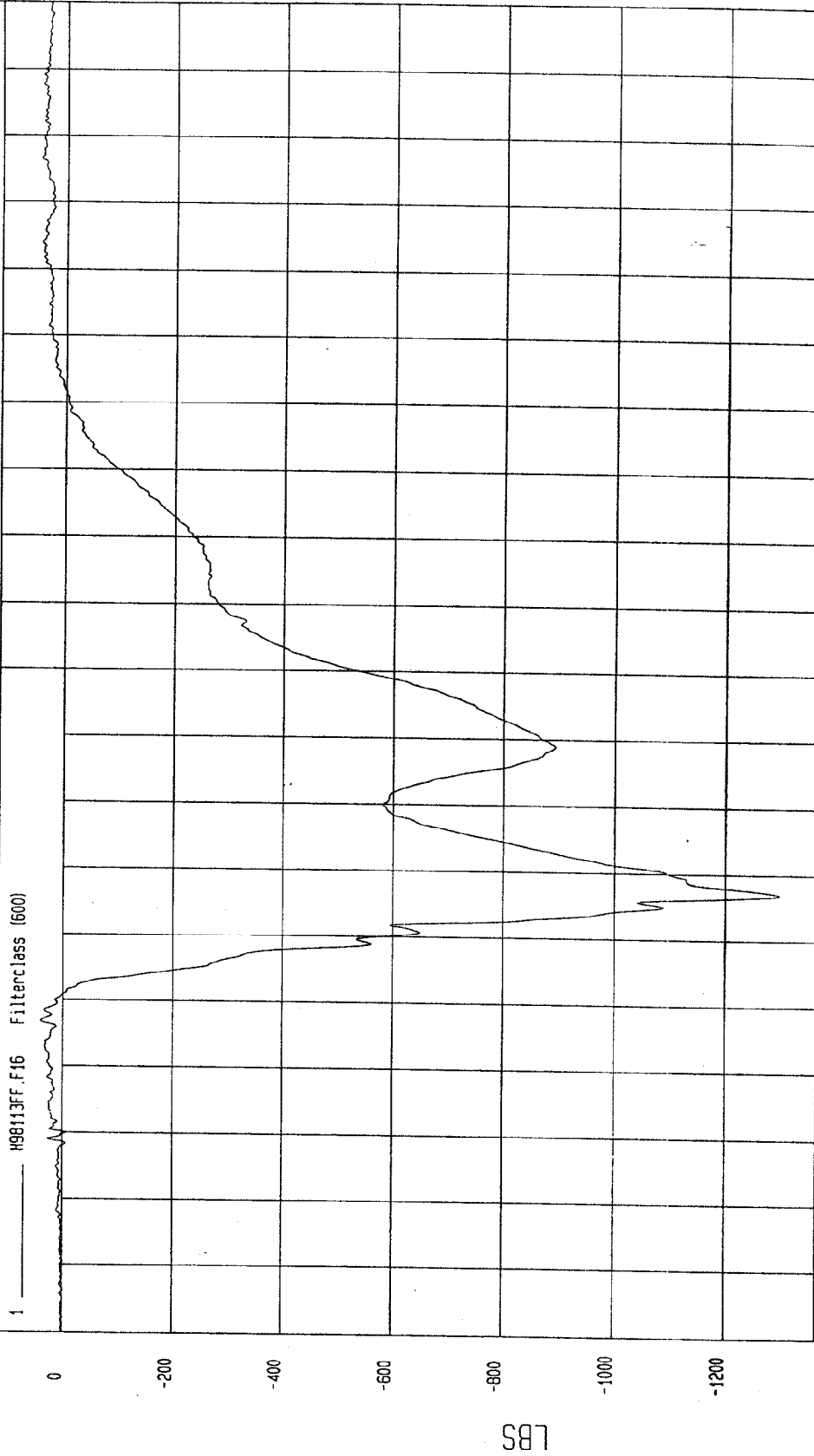
COMPONENT: 1998 DODGE NEON (CW0305)

YMIN=-1297.898 LBS at 67 msec

YMAX= 45.70071 LBS at 176 msec

DRIVER RIGHT FEMUR FORCE

1 — H9813FF.F16 Filterclass (600)



MGA Research
05-13-1998 13:58

TIME (SECONDS)

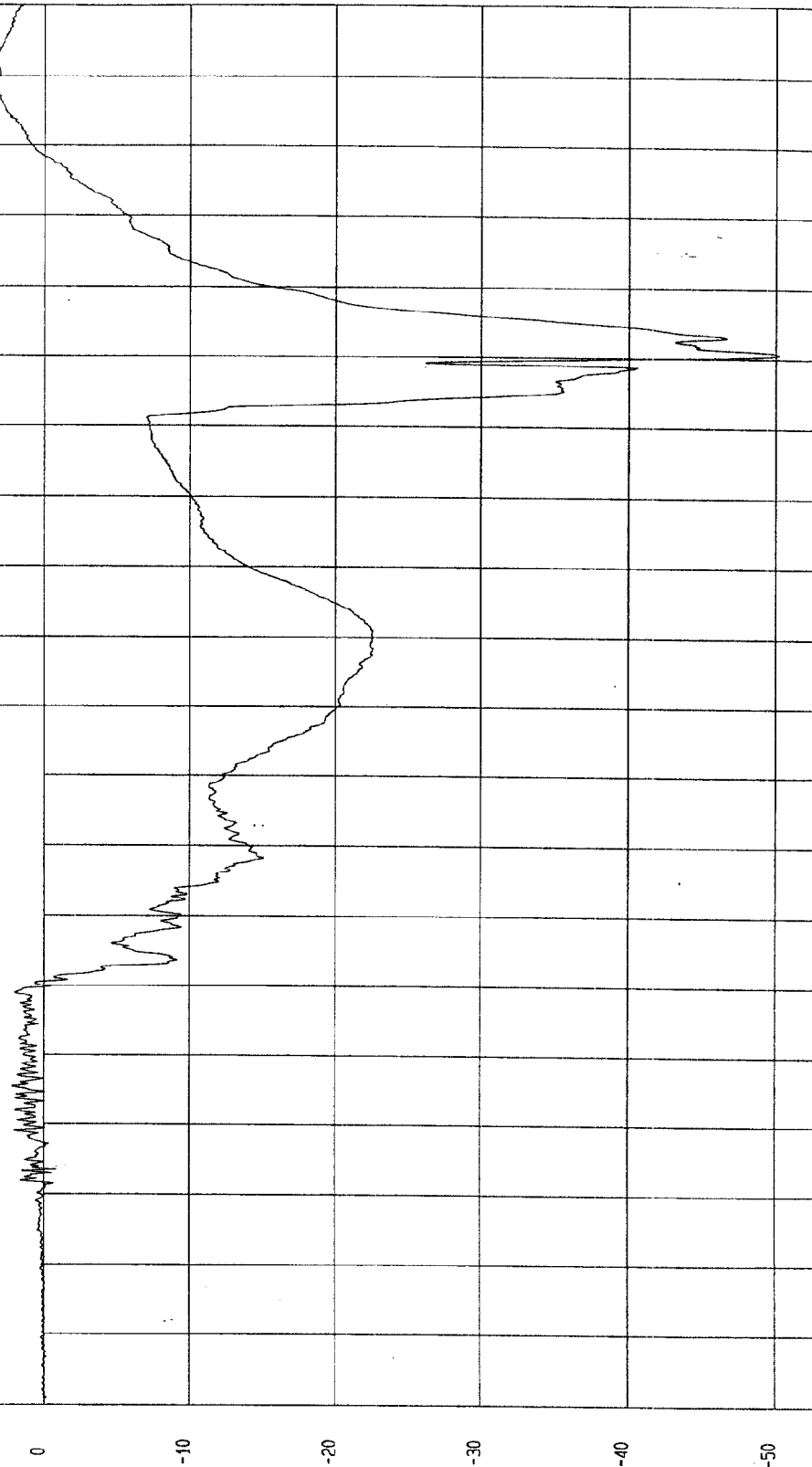
TEST: FMVSS 208 SLED TEST TEST DATE: 05-21-1998

COMPONENT: 1998 DODGE NEON (CW0305)

YMIN=-50.26851 G'S at 150 msec YMAX= 3.25786 G'S at 187 msec

PASSENGER HEAD X ACCELERATION

1 H98113AT.A27 Filterclass (1000)



MEA Research
05-13-1998 13:58

TIME (SECONDS)

G'S

TEST: FMVSS 208 SLED TEST

TEST DATE: 05-21-1998

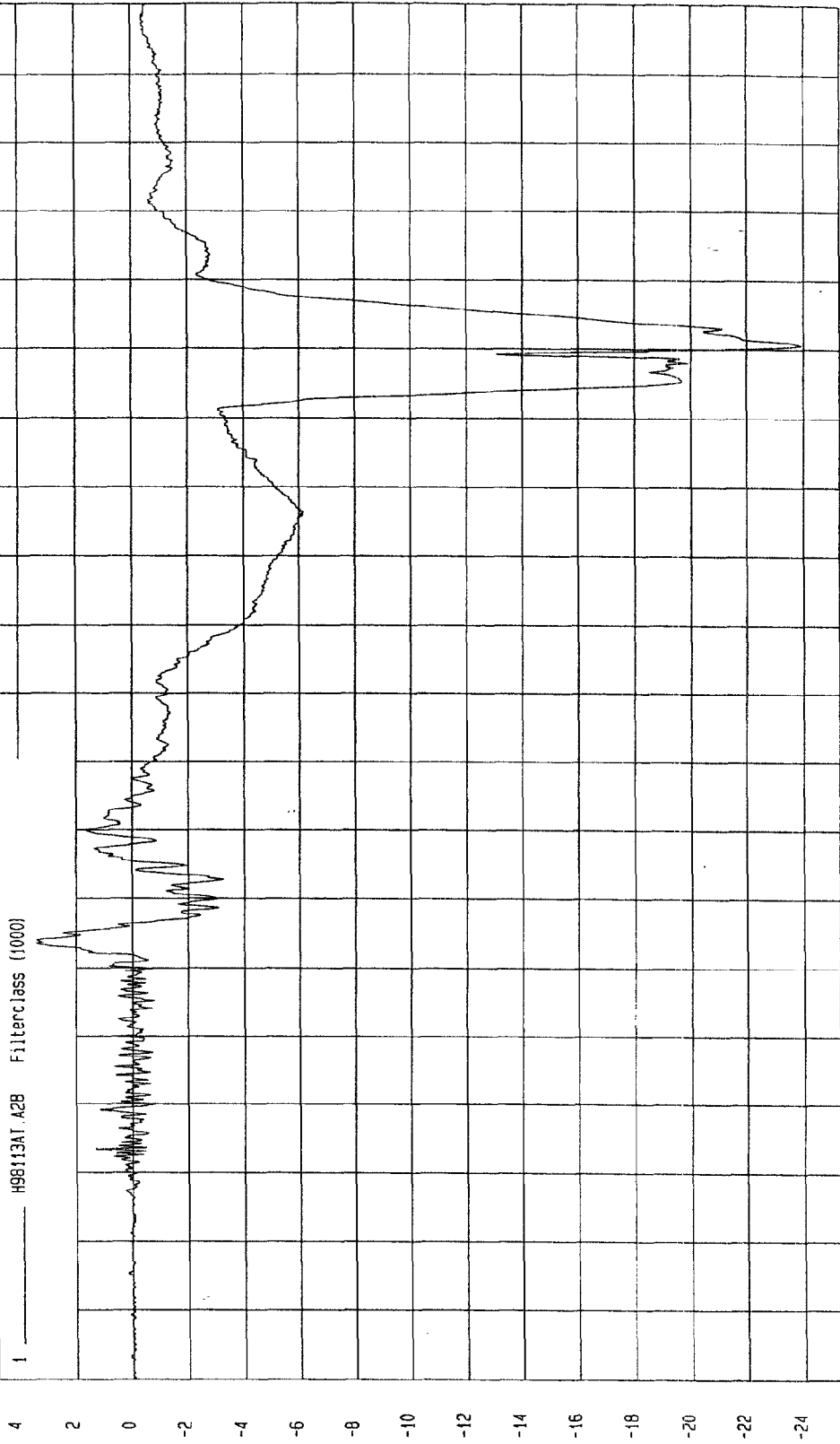
COMPONENT: 1998 DODGE NEON (CW0305)

YMIN=-23.93087 G'S at 150 msec

YMAX= 3.384724 G'S at 63 msec

PASSENGER HEAD Y ACCELERATION

1 H9813AT.A28 Filterclass (1000)



WCA Research
05-13-1998 13:58

TEST: FMVSS 208 SLED TEST

TEST DATE: 05-21-1998

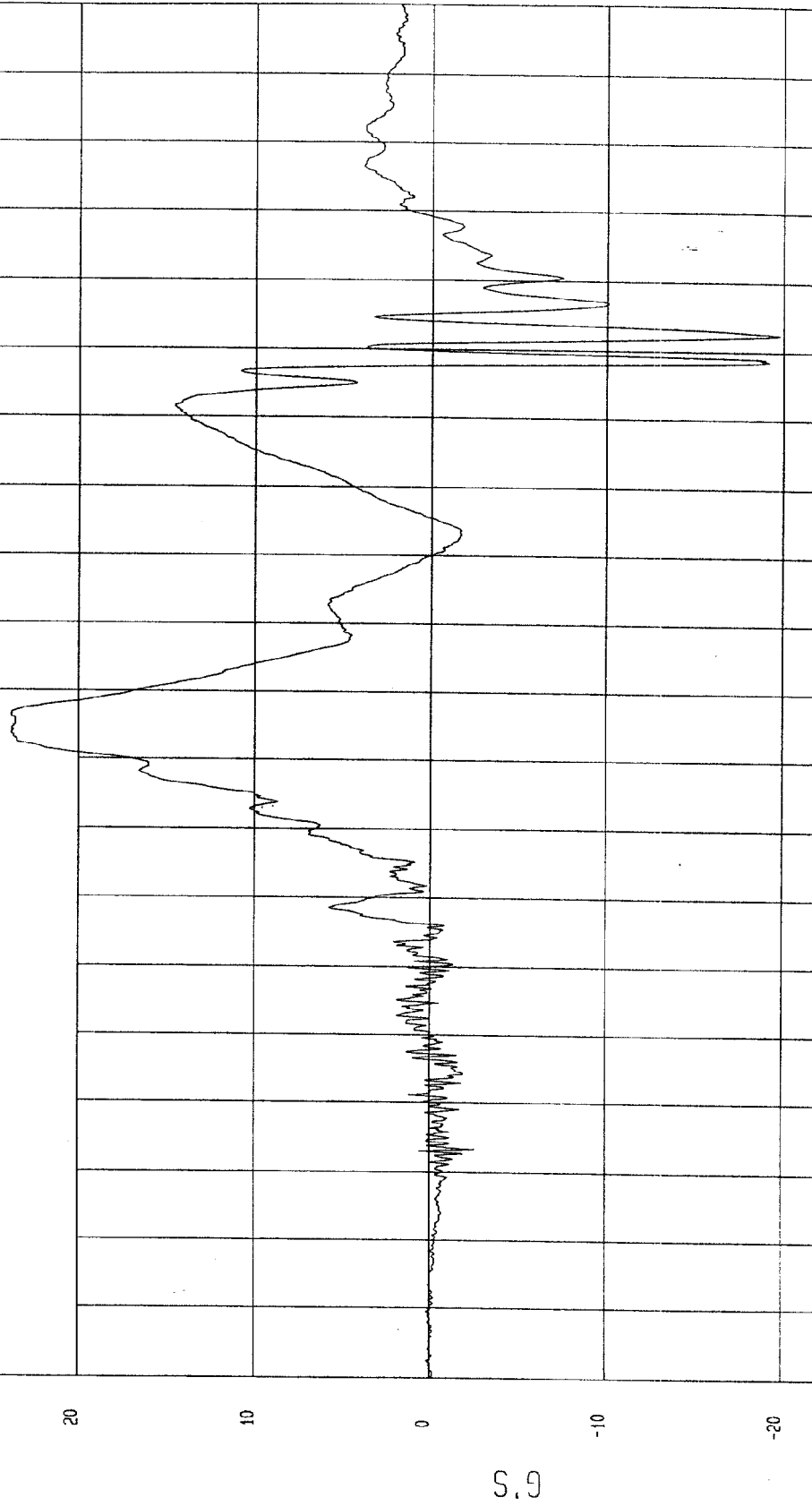
COMPONENT: 1998 DODGE NEON (CW0305)

YMIN=-19.78549 G'S at 152 msec

YMAX= 23.80494 G'S at 93. msec

PASSENGER HEAD Z ACCELERATION

1 _____ H98113AT.A29 Filterclass (1000)



TIME (SECONDS)

MGA Research
05-13-1998 13:59

TEST: FMVSS 208 SLED TEST

TEST DATE: 05-21-1998

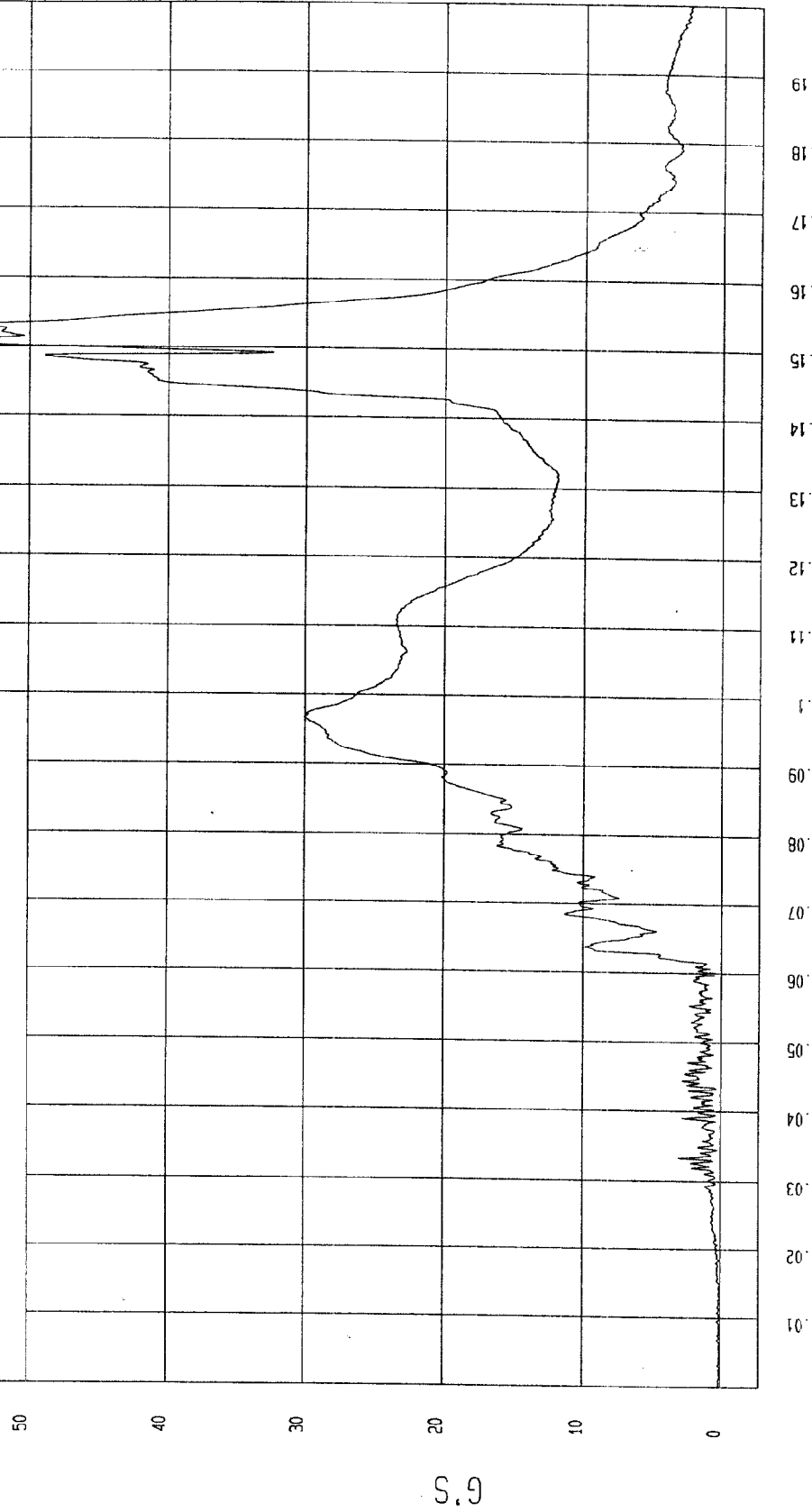
COMPONENT: 1998 DODGE NEON (CW0305)

YMIN= .0571776 G'S at 1.3 msec

YMAX= 55.76387 G'S at 150 msec

PASSENGER HEAD RESULTANT ACCELERATION

1 _____ H98113AV.A27 Filterclass (1000)



MGA Research
05-13-1998 13:59

TEST DATE: 05-21-1998

TEST: FMVSS 208 SLED TEST

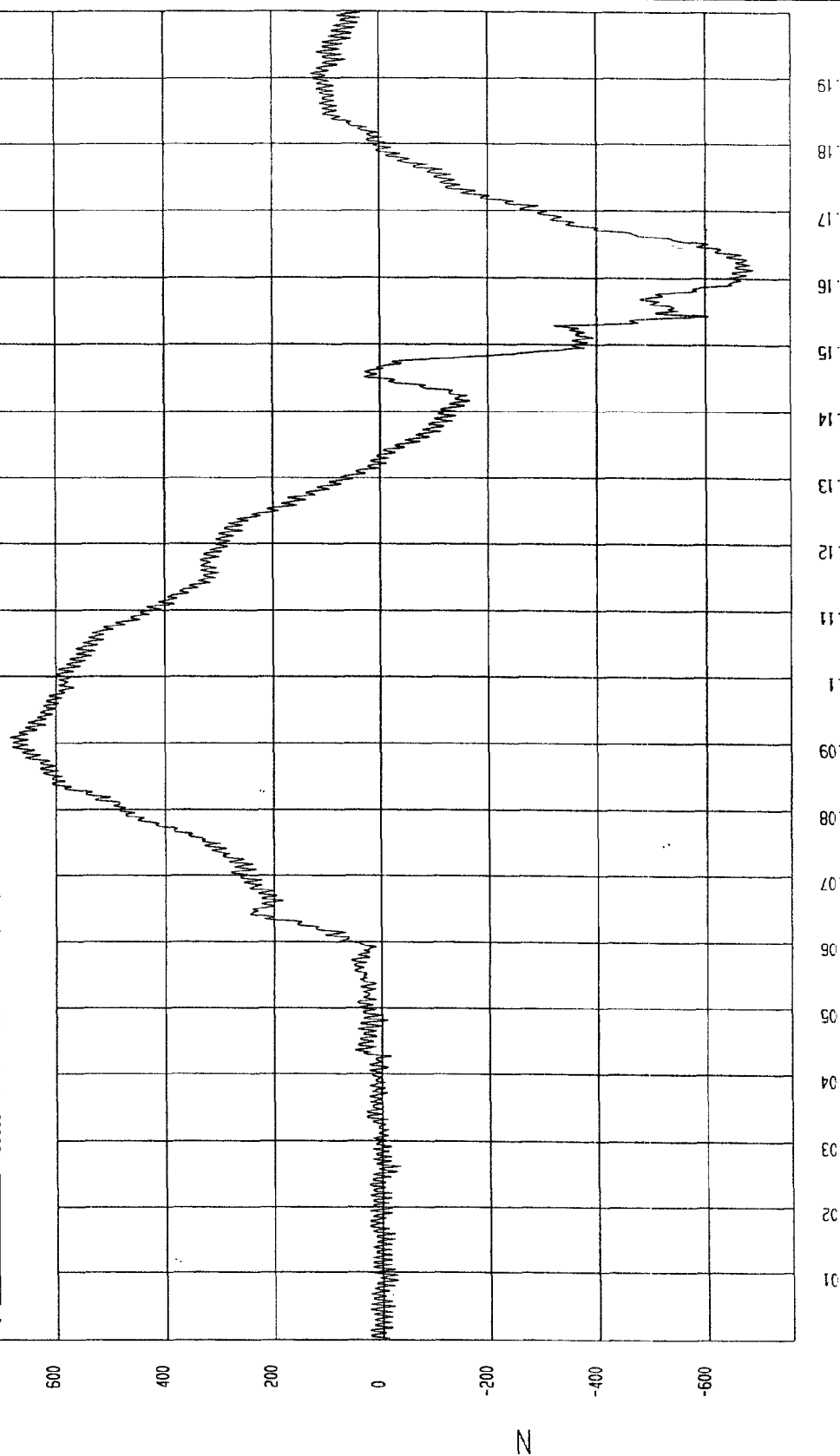
COMPONENT: 1998 DODGE NEON (CW0305)

YMAX= 684.1213 N at 90. msec

YMIN=-689.5705 N at 161 msec

PASSENGER NECK FORCE X

1 ——— H98113FT.F48 Filterclass (1000)



NSA Research
01-22-1998 10:51

TEST: FMVSS 208 SLED TEST TEST DATE: 05-21-1998

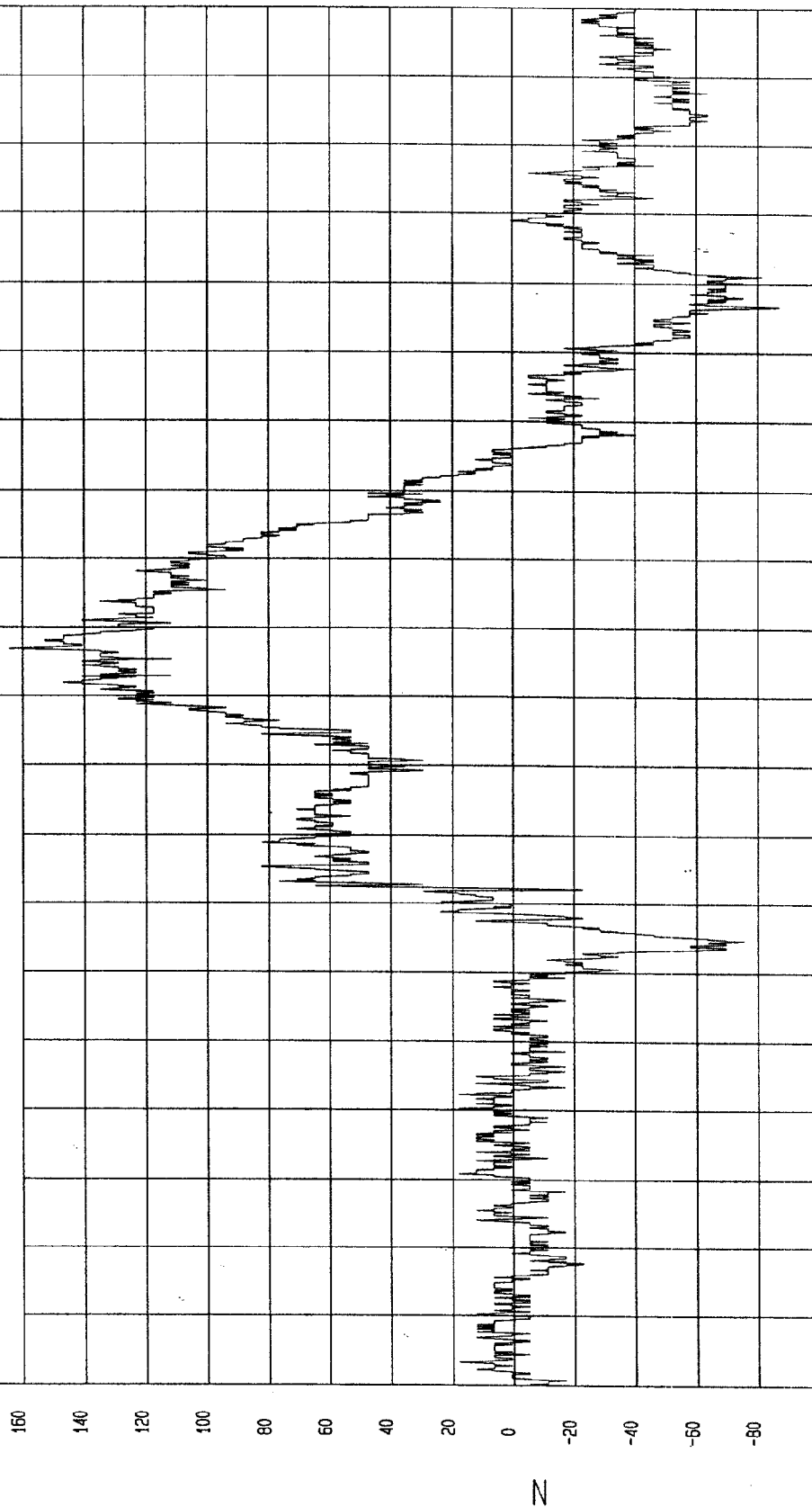
COMPONENT: 1998 DODGE NEON (CW0305)

WIN=-87.07431 N at 156 msec

YMAX=164.231 N at 106 msec

PASSENGER NECK FORCE Y

1 H98113FT.F32 FilterClass (1000)



MSA Research
07-22-1998 10:52

TEST: FMVSS 208 SLED TEST

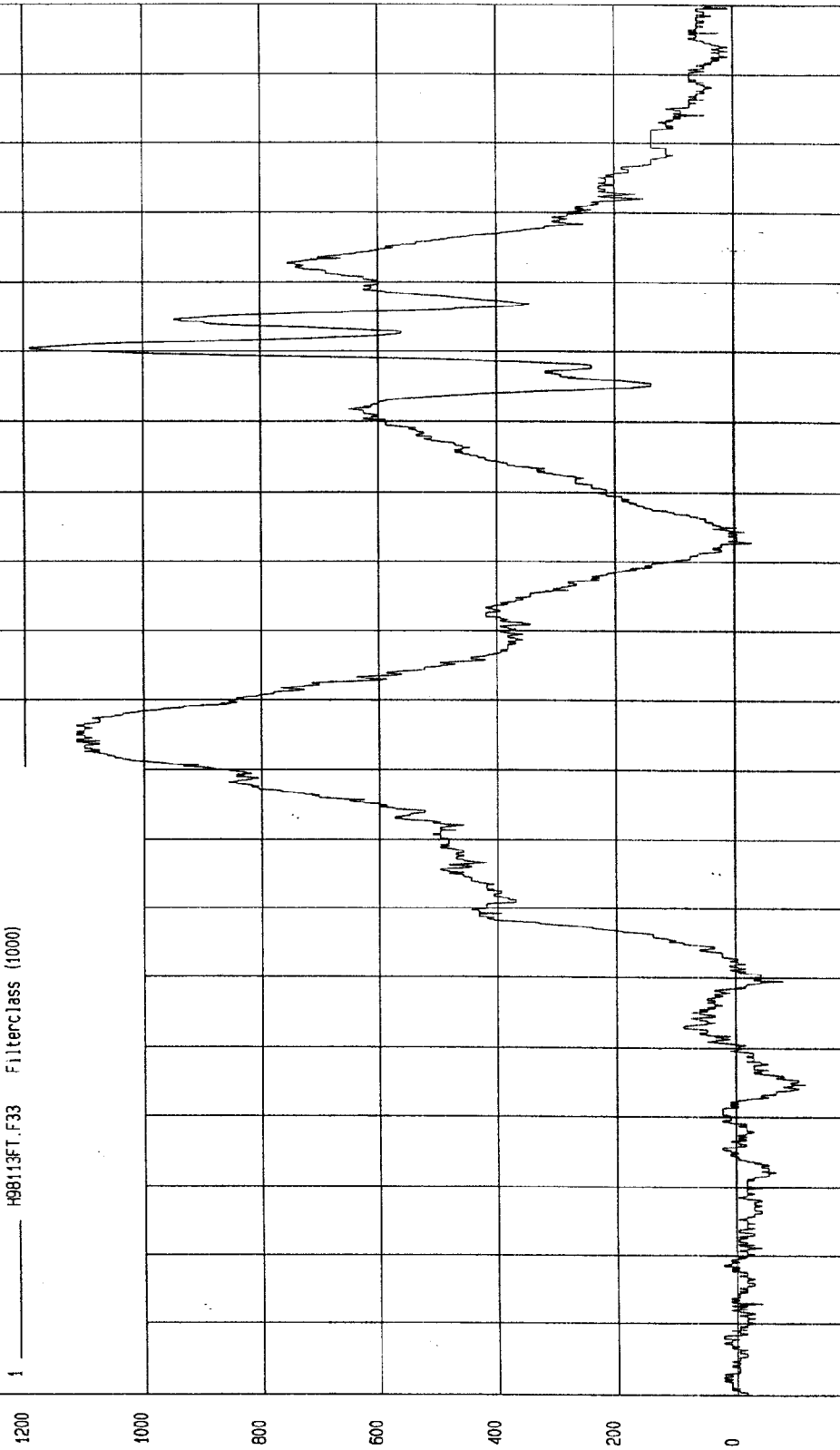
TEST DATE: 05-21-1998

COMPONENT: 1998 DODGE NEON (CW0305)

YMIN=-119.3879 N at 44. msec YMAX= 1189.601 N at 150 msec

PASSENGER NECK FORCE Z

1 ——— H98113FT.F33 Filterclass (1000)



MGA Research
07-22-1998 10:52

TEST DATE: 05-21-1998

TEST: FMVSS 208 SLED TEST

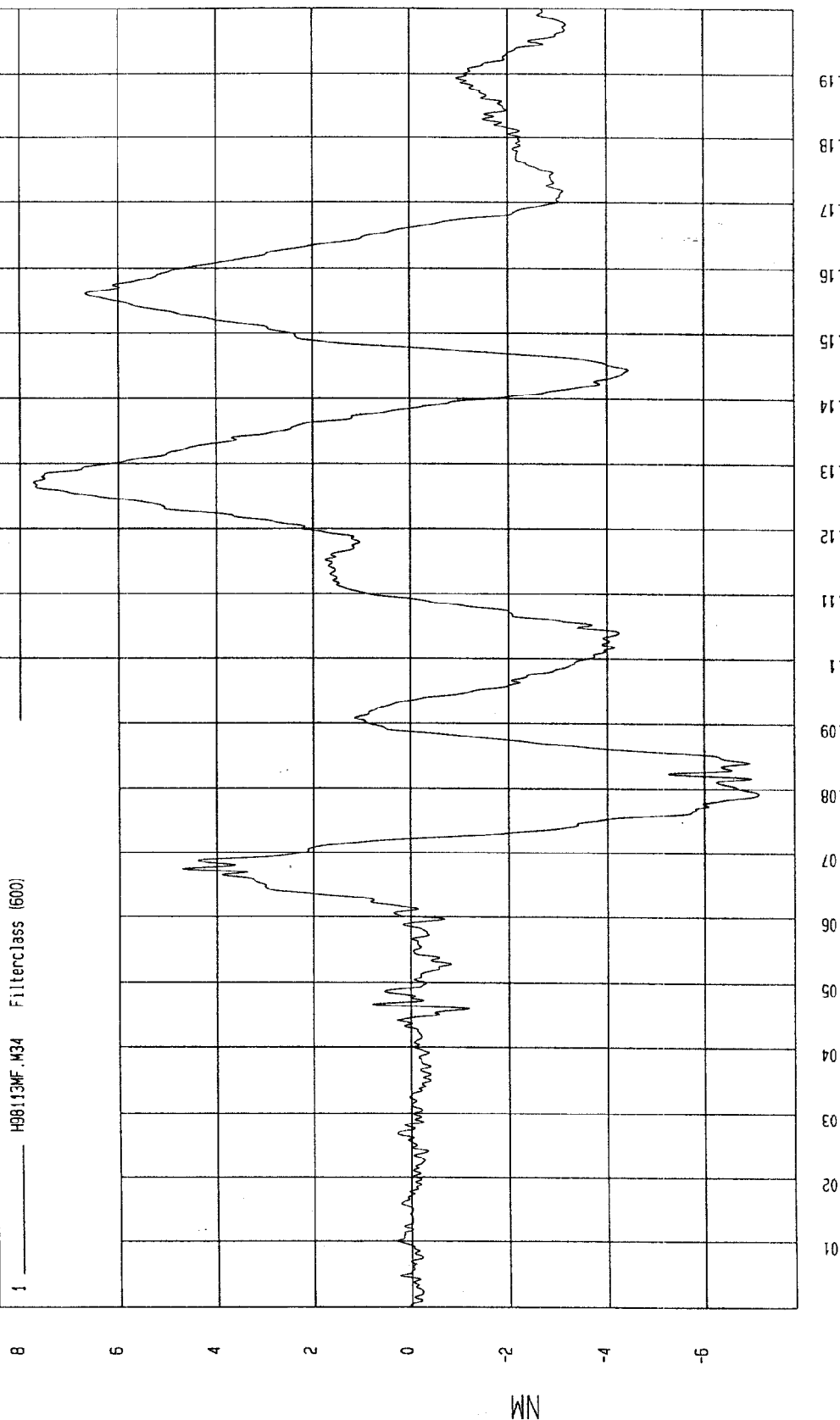
COMPONENT: 1998 DODGE NEON (CW0305)

YMAX= 7.732275 NM at 127 msec

YMIN=-7.111877 NM at 79. msec

PASSENGER NECK MOMENT X

1 _____ H98113MF.M34 Filterclass (600)



MSA Research
05-13-1998 14.01

TEST: FMVSS 208 SLED TEST

TEST DATE: 05-21-1998

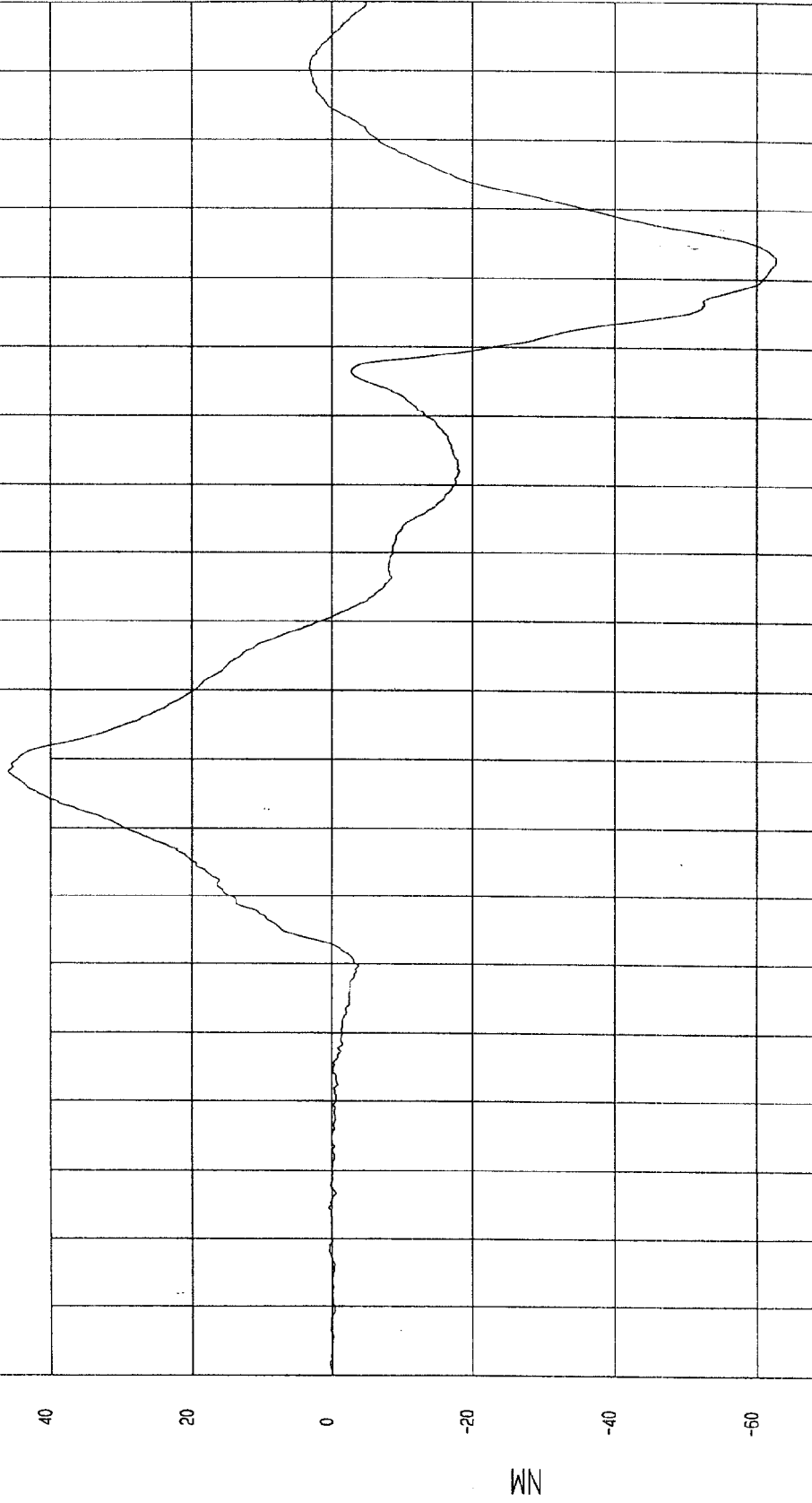
COMPONENT: 1998 DODGE NEON (CW0305)

YMIN=-62.81596 NM at 163 msec

YMAX= 45.89663 NM at 88. msec

PASSENGER NECK MOMENT Y

1 _____ H98113MF.M35 Filterclass (600)



MCA Research
05-13-1998 14: 01

TIME (SECONDS)

TEST: FMVSS 208 SLED TEST

TEST DATE: 05-21-1998

COMPONENT: 1998 DODGE NEON (CW0305)

YMIN=-3.360762 NM at 199 msec

YMAX= 15.84102 NM at 127 msec

PASSENGER NECK MOMENT Z

1 ——— H98113MF M36 Filterclass (600)

16
14
12
10
8
6
4
2
0
-2
-4

NM

TIME (SECONDS)

MOA Research
05-13-1998 14:02

TEST: FMVSS 208 SLED TEST

TEST DATE: 05-21-1998

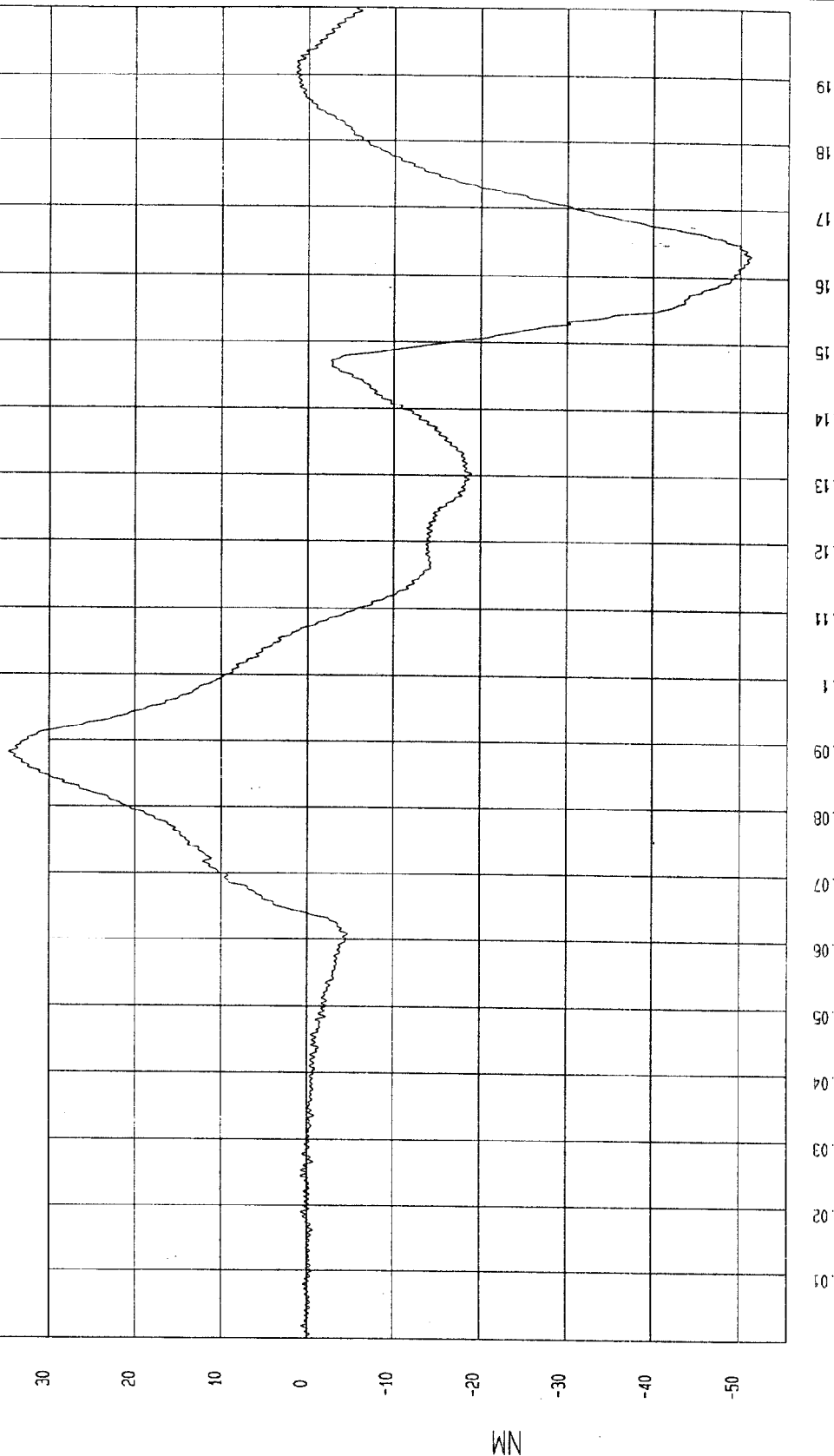
COMPONENT: 1998 DODGE NEON (CW0305)

YMIN=-51.28704 NM at 163 msec

YMAX= 34.64514 NM at 88. msec

PASSENGER OCCIPITAL CONDYLE MOMENT Y

1 H98113M0.M35 Filterclass (600)



MCA Research
05-13-1998 14:11

TIME (SECONDS)

TEST DATE: 05-21-1998

TEST: FMVSS 208 SLED TEST

COMPONENT: 1998 DODGE NEON (CW0305)

YMIN=-30.44844 G'S at 97. msec

YMAX= 1.977541 G'S at 154 msec

PASSENGER CHEST X ACCELERATION

1 ——— H98113AF A17 Filterclass (180)

G'S

TIME (SECONDS)

WSA Research
05-13-1998 14:02

TEST DATE: 05-21-1998

TEST: FMVSS 208 SLED TEST

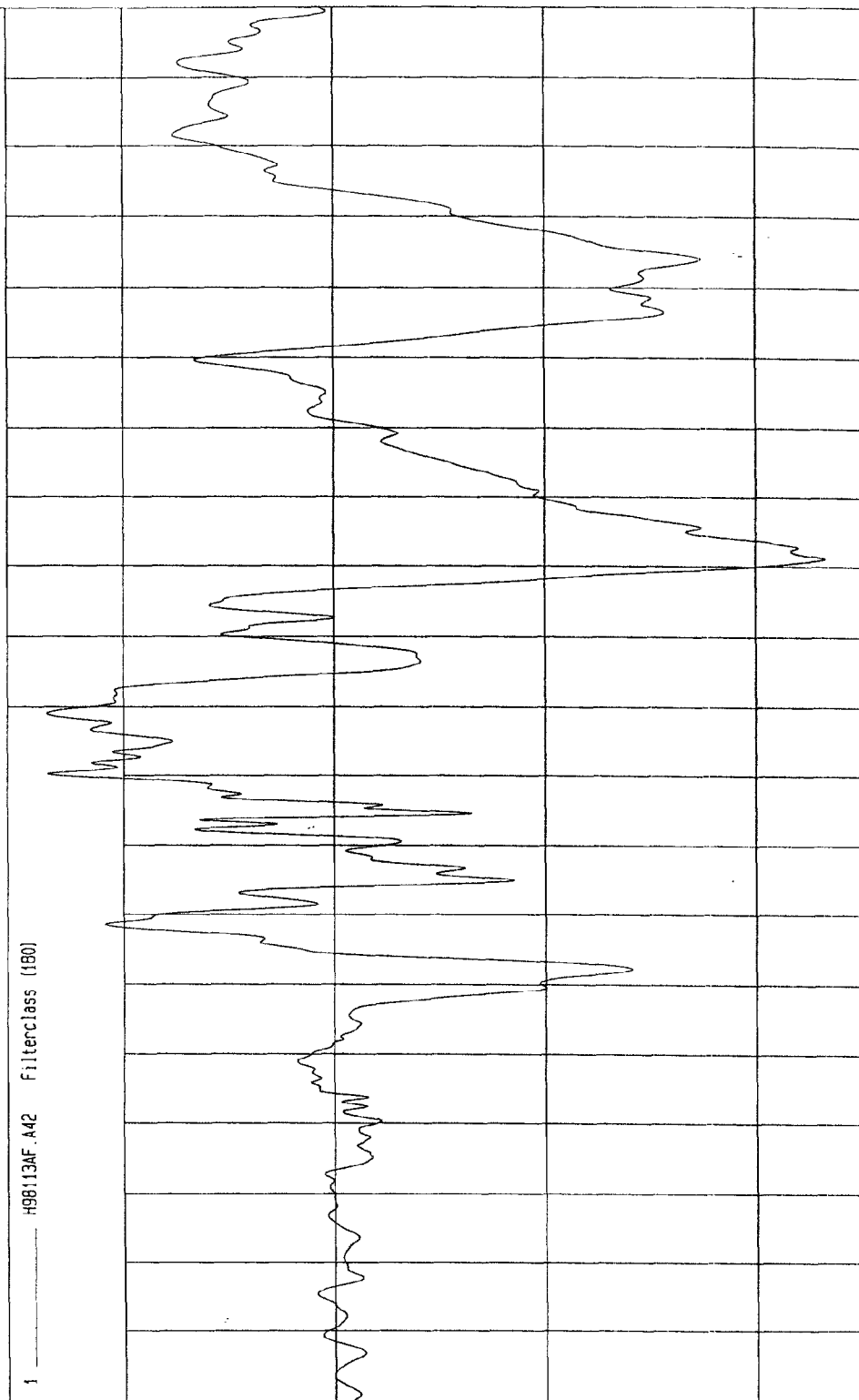
COMPONENT: 1998 DODGE NEON (CW0305)

YMIN=-2.331946 G'S at 121 msec

YMAX= 1.362387 G'S at 99. msec

PASSENGER CHEST Y ACCELERATION

1 _____ H98113AF.A42 Filterclass (180)



TIME (SECONDS)

MCA Research
05-13-1998 14:02

TEST: FMVSS 208 SLED TEST TEST DATE: 05-21-1998

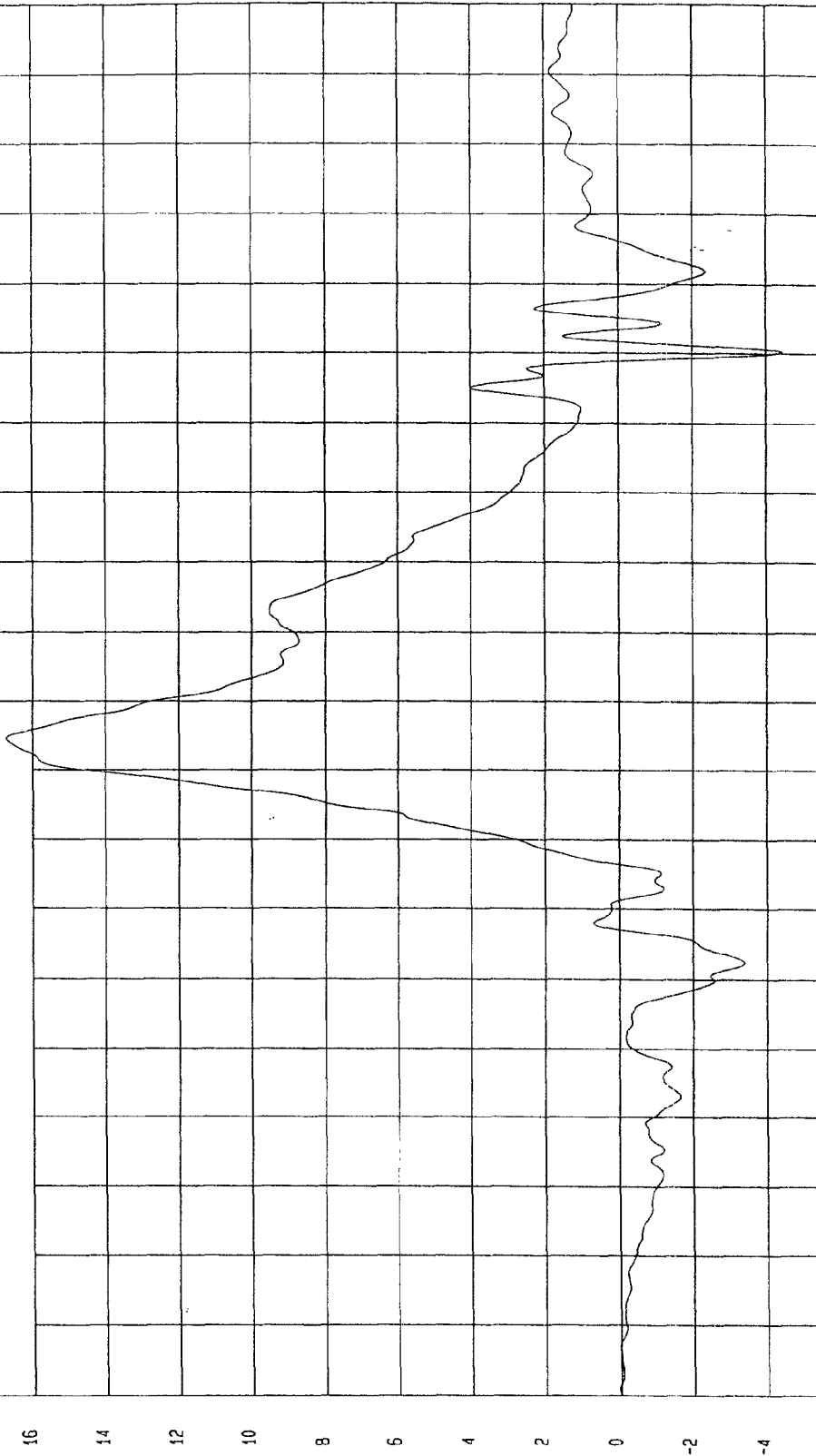
COMPONENT: 1998 DODGE NEON (CW0305)

YMIN=-4.471037 G'S at 150 msec YMAX= 16.71494 G'S at 94 msec

PASSENGER CHEST Z ACCELERATION

1 _____ H981134F.A43 Filterclass (180)

G.S



TIME (SECONDS)

MCA Research
05-13-1998 14:03

TEST: FMVSS 208 SLED TEST

TEST DATE: 05-21-1998

COMPONENT: 1998 DODGE NEON (CW0305)

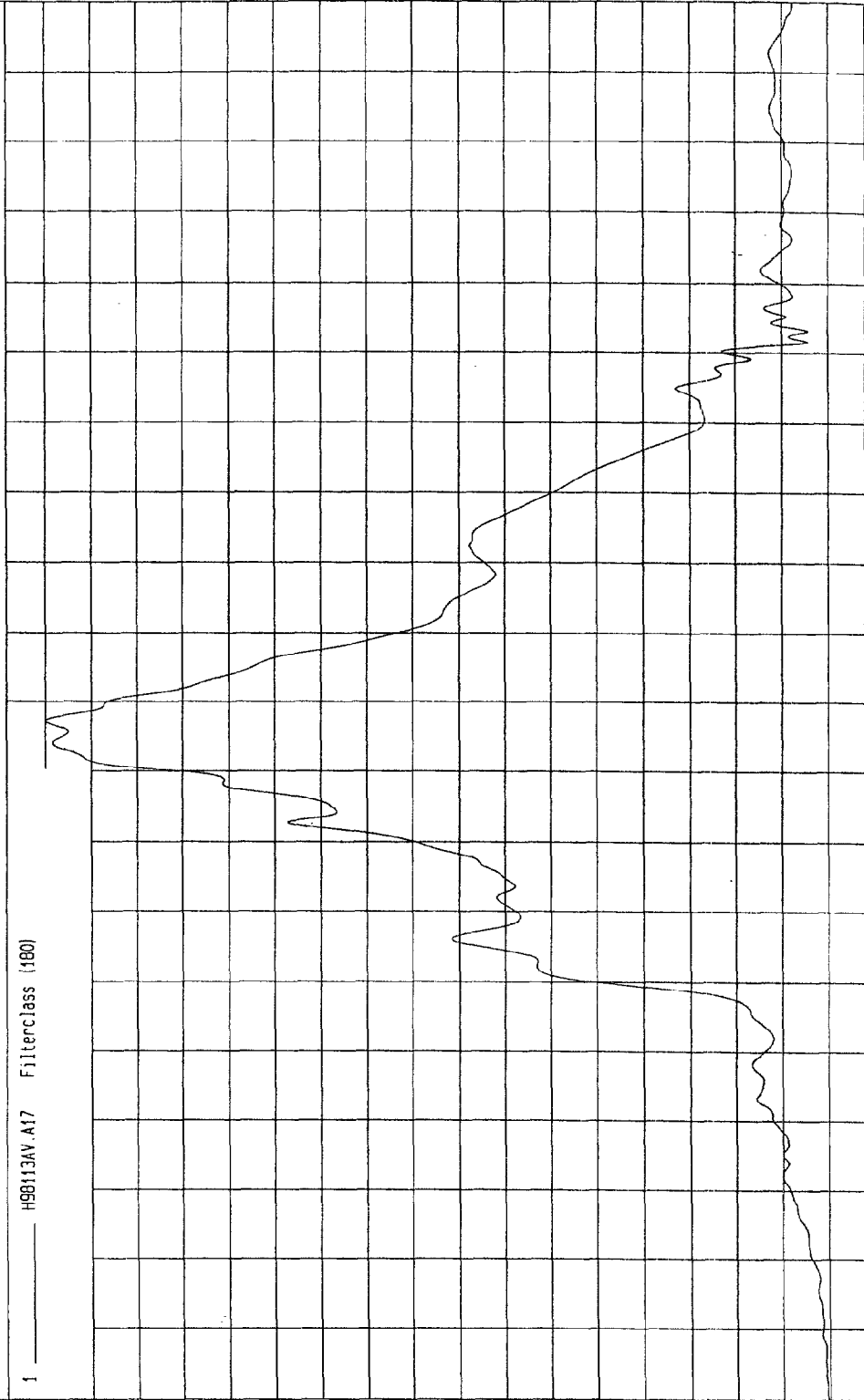
YMIN= 8.295817E-02 G'S at 9.9 msec

YMAX= 33.96323 G'S at 97. msec

PASSENGER CHEST RESULTANT ACCELERATION

1 H98113AV.A17 Filterclass (180)

G.S



MCA Research
05-13-1998 14:03

TIME (SECONDS)

PASSENGER CHEST COMPRESSION VS. TIME
NO VALID DATA COLLECTED

TEST: FMVSS 208 SLED TEST TEST DATE: 05-21-1998

COMPONENT: 1998 DODGE NEON (CW0305)

YMIN=-1020.734 LBS at 89. msec YMAX= 45.67345 LBS at 184 msec

PASSENGER LEFT FEMUR FORCE

1 H98113FF.F44 Filterclass (600)

LBS

0

-200

-400

-600

-800

-1000

TIME (SECONDS)

0.1

0.2

0.3

0.4

0.5

0.6

0.7

0.8

0.9

1.0

1.1

1.2

1.3

1.4

1.5

1.6

1.7

1.8

1.9

MCA Research
05-13-1998 14:04

TEST: FMVSS 208 SLED TEST TEST DATE: 05-21-1998

COMPONENT: 1998 DODGE NEON (CW0305)

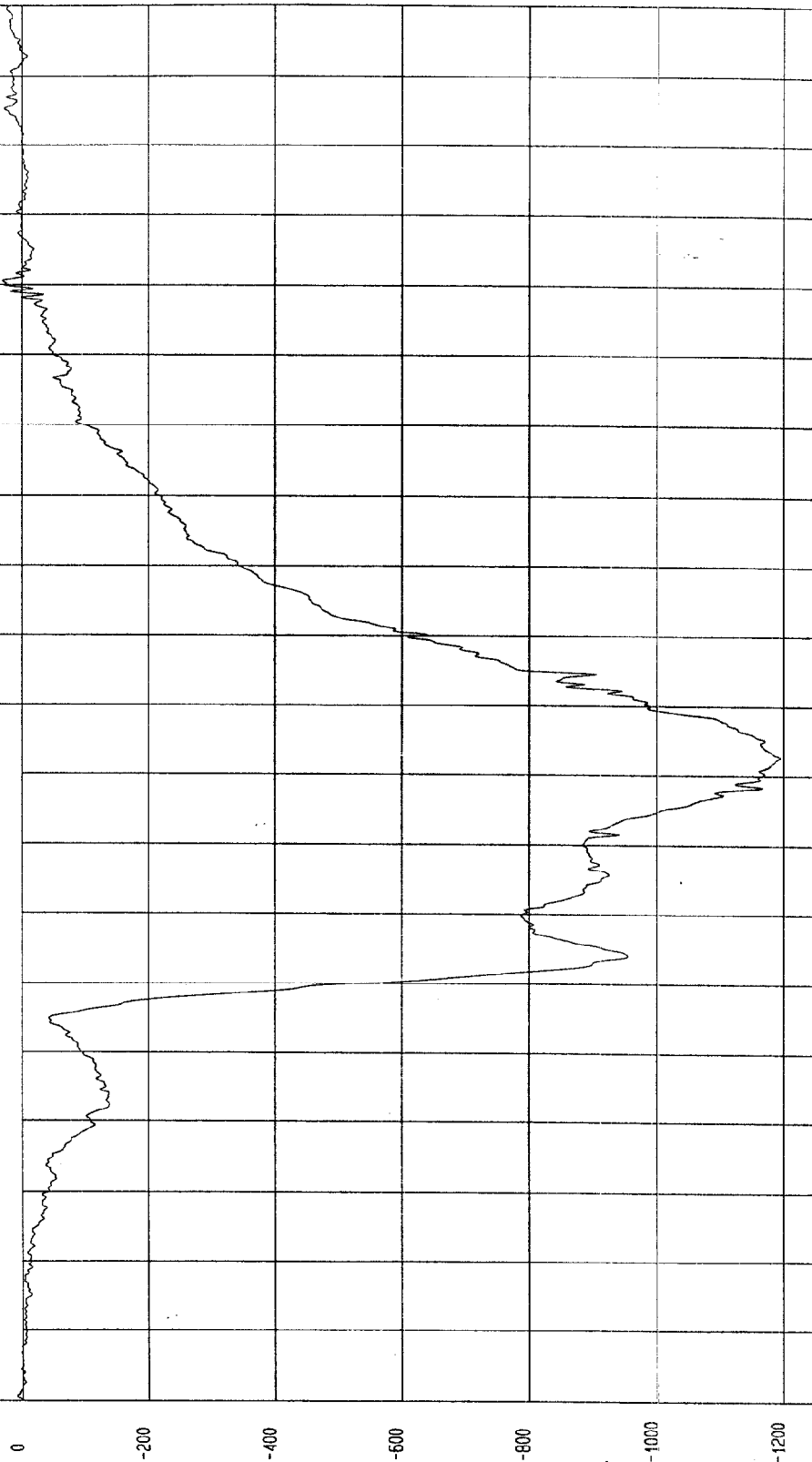
YMAX= 31.64815 LBS at 160 msec

YMIN=-1195.502 LBS at 92. msec

PASSENGER RIGHT FEMUR FORCE

1 H98113FF.F45 Filterclass (600)

LBS



MCA Research
05-13-1998 14: 05

TIME (SECONDS)

TEST: FMVSS 208 SLED TEST

TEST DATE: 05-21-1998

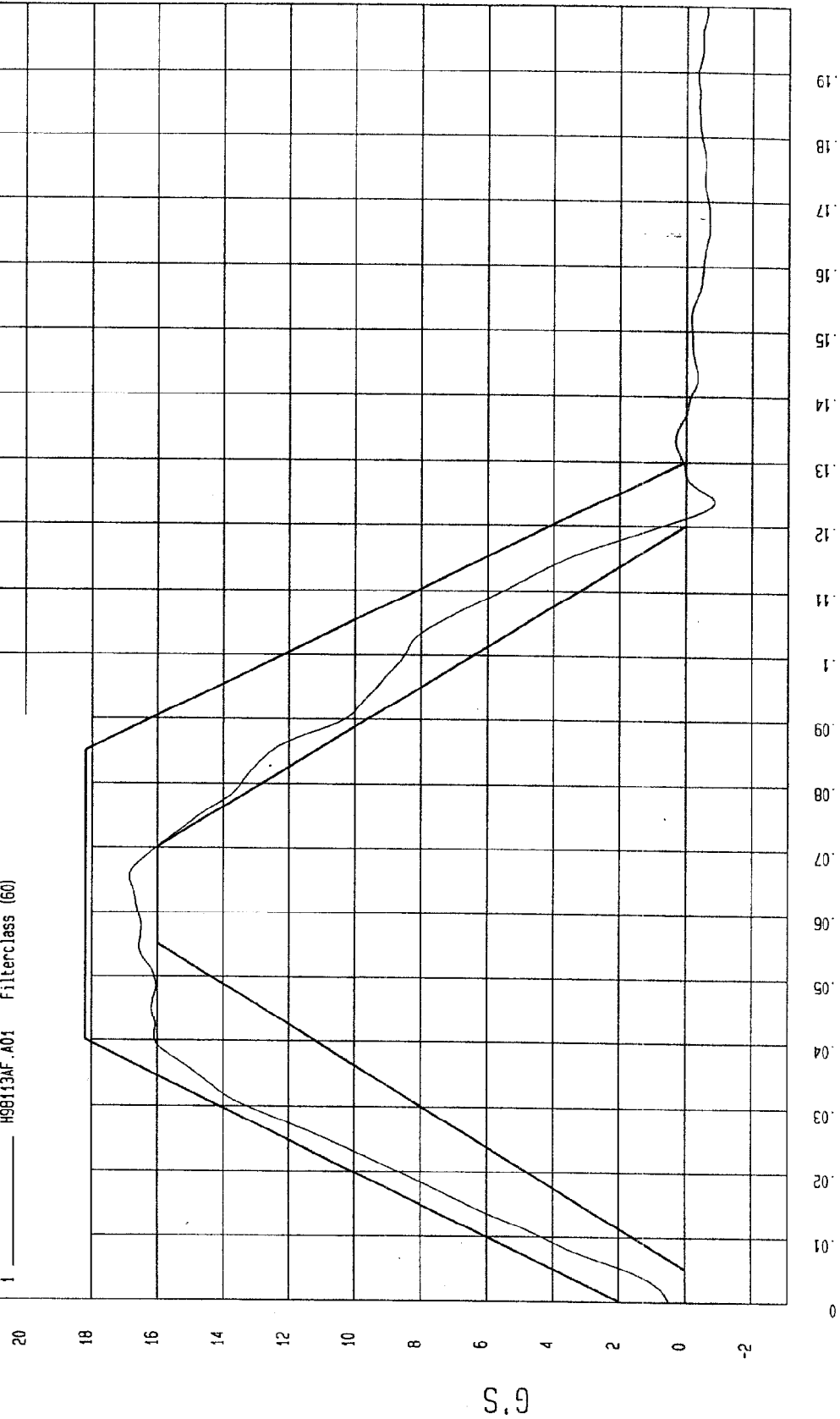
COMPONENT: 1998 DODGE NEON (CW0305)

Minimum = -.86 G'S at 123.8 msec

Maximum = 16.86 G'S at 55.5 msec

SLED ACCELERATION

1 ——— H9813AF.A01 Filterclass (60)



MOA Research
05-13-1998 13:47

TEST: FMVSS 208 SLED TEST

TEST DATE: 05-21-1998

COMPONENT: 1998 DODGE NEON (CW0305)

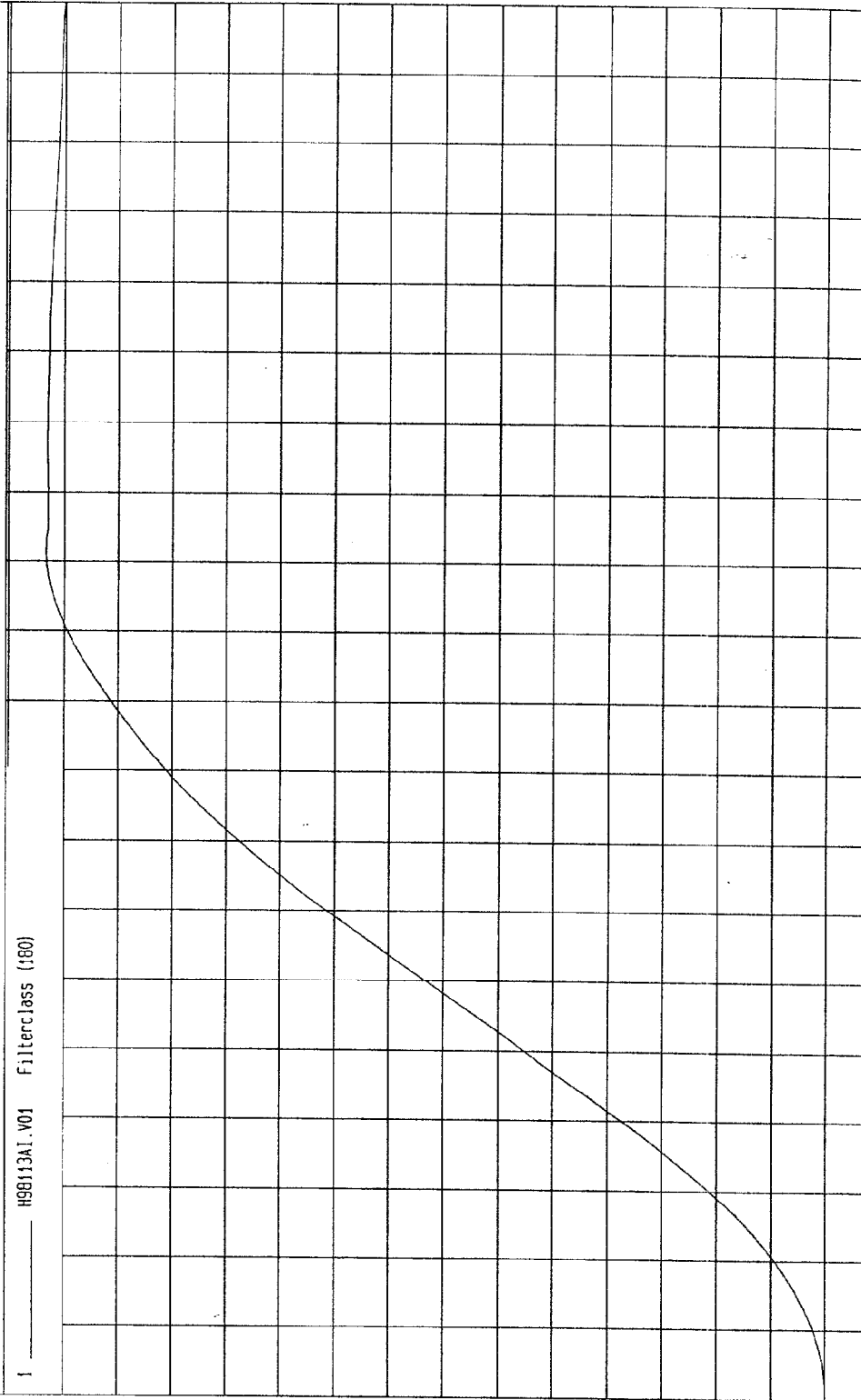
YMIN= 0 MPH at 9.9 msec

YMAX= 28.66302 MPH at 121 msec

SLED X VELOCITY

1 H98113A1.V01 Filterclass (180)

MPH



MCA Research
05-13-1998 13:47

TIME Seconds

TEST DATE: 05-21-1998

TEST: FMVSS 208 SLED TEST

COMPONENT: 1998 DODGE NEON (CW0305)

YMIN= 0 IN at 9.9 msec

YMAX= 70.33138 IN at 200 msec

SLED X DISPLACEMENT

1 H98113A1.001 Filterclass (180)

70

60

50

40

30

20

10

0

NI

19

18

17

16

15

14

13

12

11

10

09

08

07

06

05

04

03

02

01

MCA Research
05-13-1998 13.47

TIME Seconds

TEST DATE: 05-21-1998

TEST: FMVSS 208 SLED TEST

COMPONENT: 1998 DODGE NEON (CW0305)

WVIN-- 2856939 VOLTS at 141 msec

YMAX= 3.925732 VOLTS at 138 msec

1 METER

1 _____ H981130T.010 Filterclass (1000)

4

3

2

1

0

VOLTS

0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9

TIME (SECONDS)

MCA Research
05-13-1998 14:21

TEST: FMVSS 208 SLED TEST

TEST DATE: 05-21-1998

COMPONENT: 1998 DODGE NEON (CW0305)

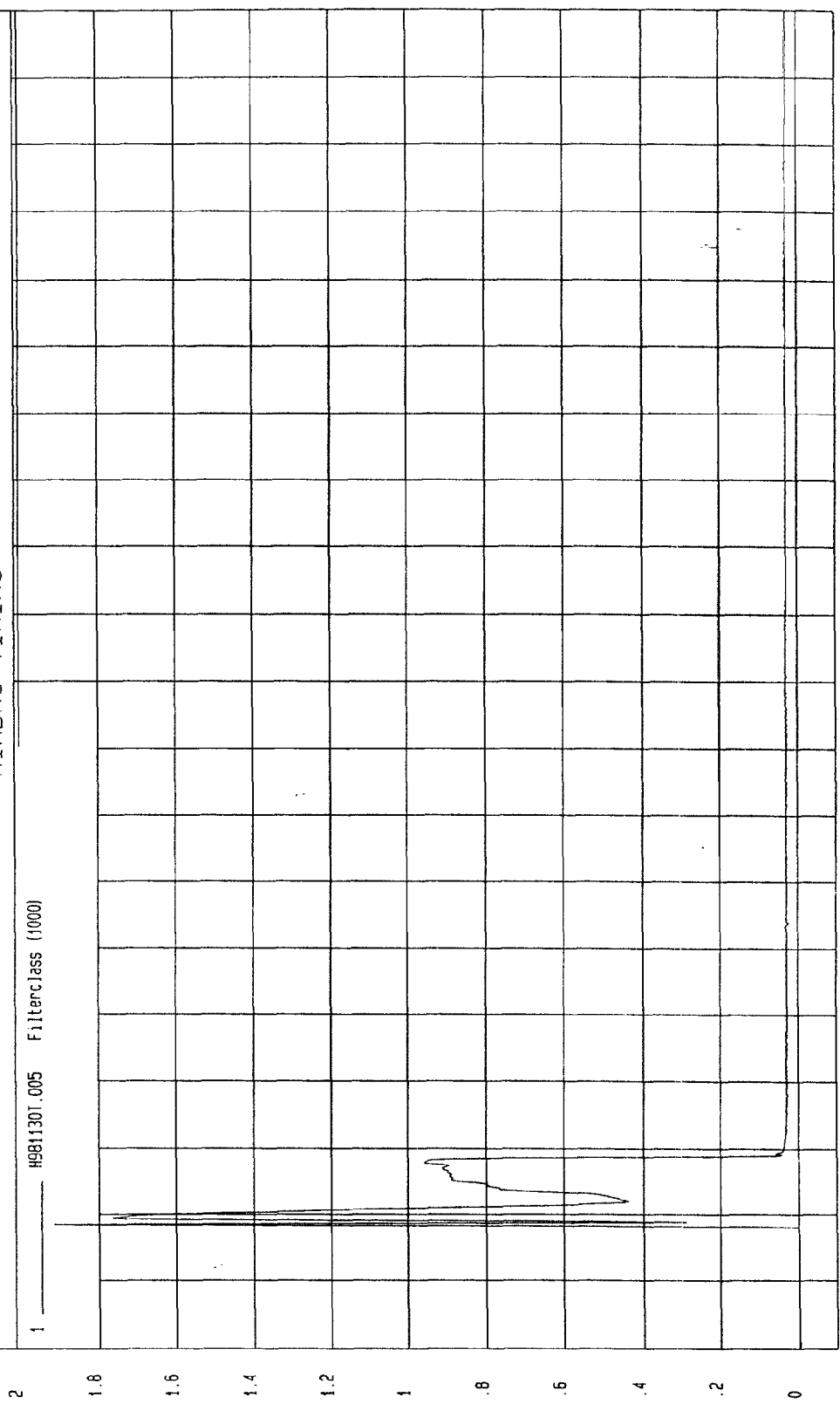
PMIN=-4.537562E-03 VOLTS at .4 msec

YMAX= 1.914408 VOLTS at 18. msec

AIRBAG TIMING

1

H9811301.005 Filterclass (1000)



NSA Research
05-13-1998 14.06

TEST: FMVSS 208 SLED TEST

TEST DATE: 05-21-1998

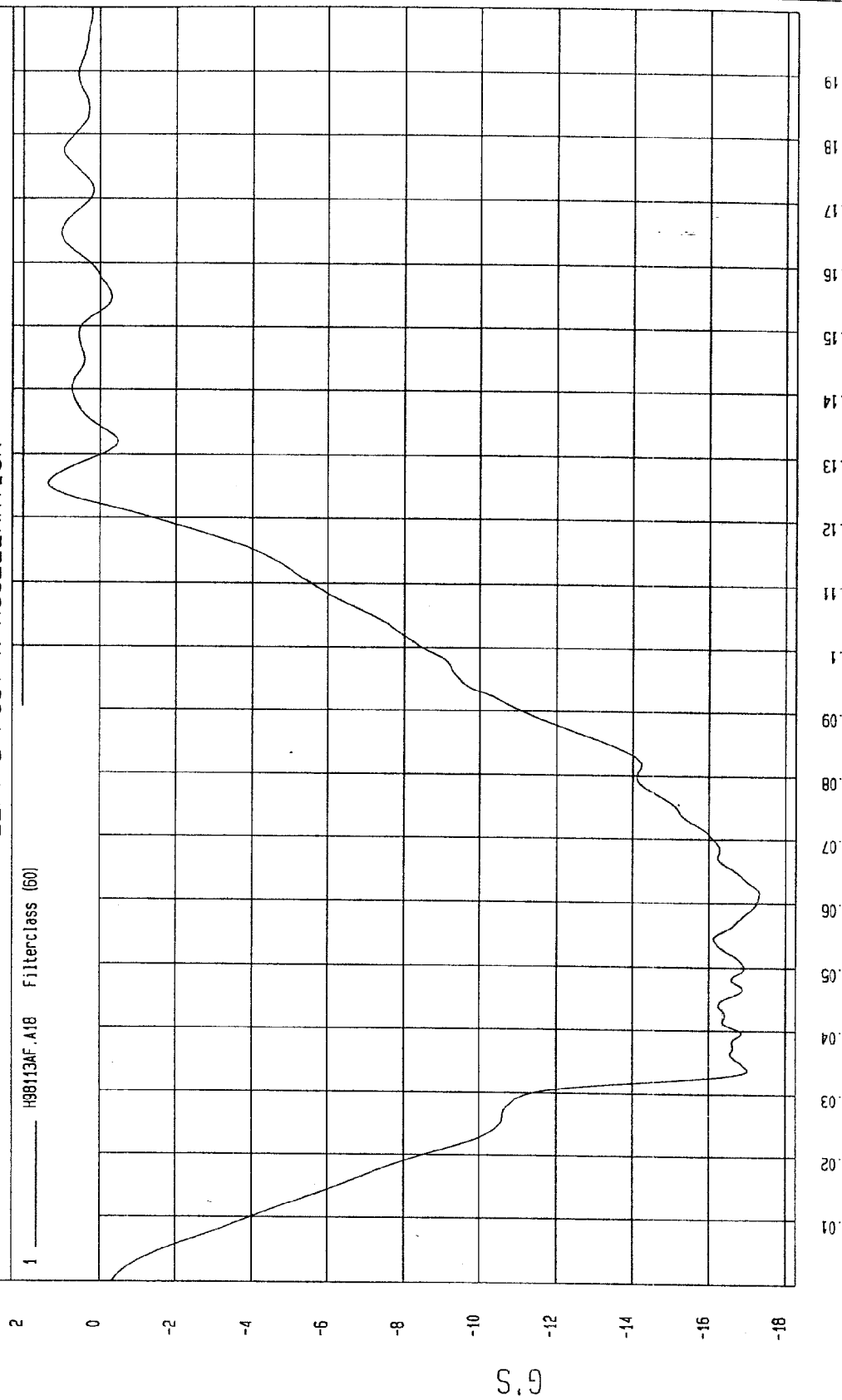
COMPONENT: 1998 DODGE NEON (CW0305)

YMIN=-17.33502 G'S at 61. msec

YMAX= 1.340845 G'S at 125 msec

LEFT B POST X ACCELERATION

1 _____ H98113AF.A18 Filterclass (60)



MGA Research
05-13-1998 14:05

TEST DATE: 05-21-1998

TEST: FMVSS 208 SLED TEST

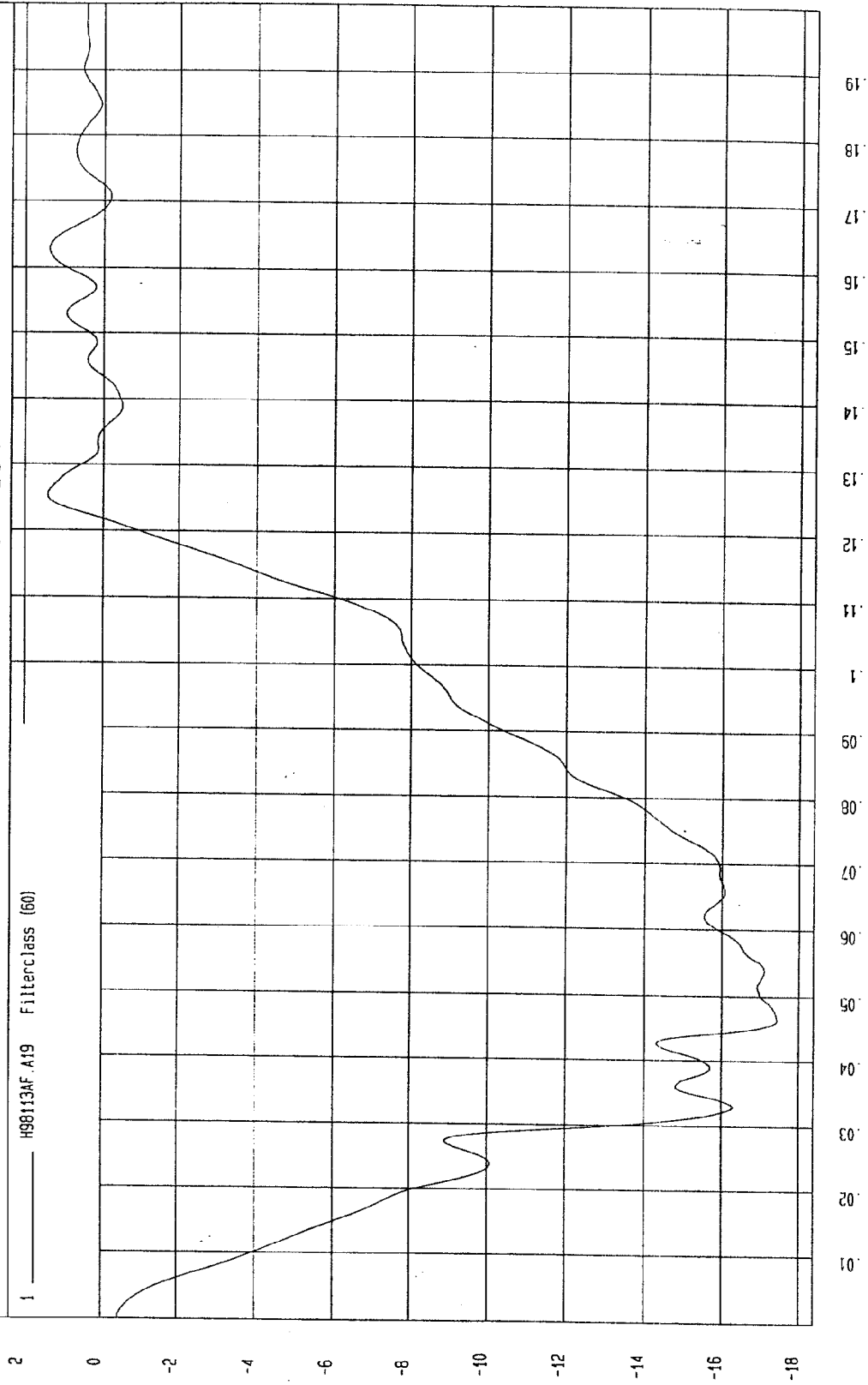
COMPONENT: 1998 DODGE NEON (CW0305)

YMIN=-17.43335 G'S at 46. msec

YMAX= 1.40953 G'S at 125 msec

RIGHT B POST X ACCELERATION

1 H9813AF.A19 Filterclass (60)



MCA Research
05-13-1998 14:06

TIME (SECONDS)

G.S

TEST: FMVSS 208 SLED TEST

TEST DATE: 05-21-1998

COMPONENT: 1998 DODGE NEON (CW0305)

WMIN=-19.63631 G'S at 50 msec

WMAX= 2.010177 G'S at 145 msec

ENGINE X ACCELERATION

1 H98113AF.A49 Filterclass (60)

2
0
-2
-4
-6
-8
-10
-12
-14
-16
-18
-20

G

TIME (SECONDS)

0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9

MSA Research
05-13-1998 14:15

TEST: FMVSS 208 SLED TEST

TEST DATE: 05-21-1998

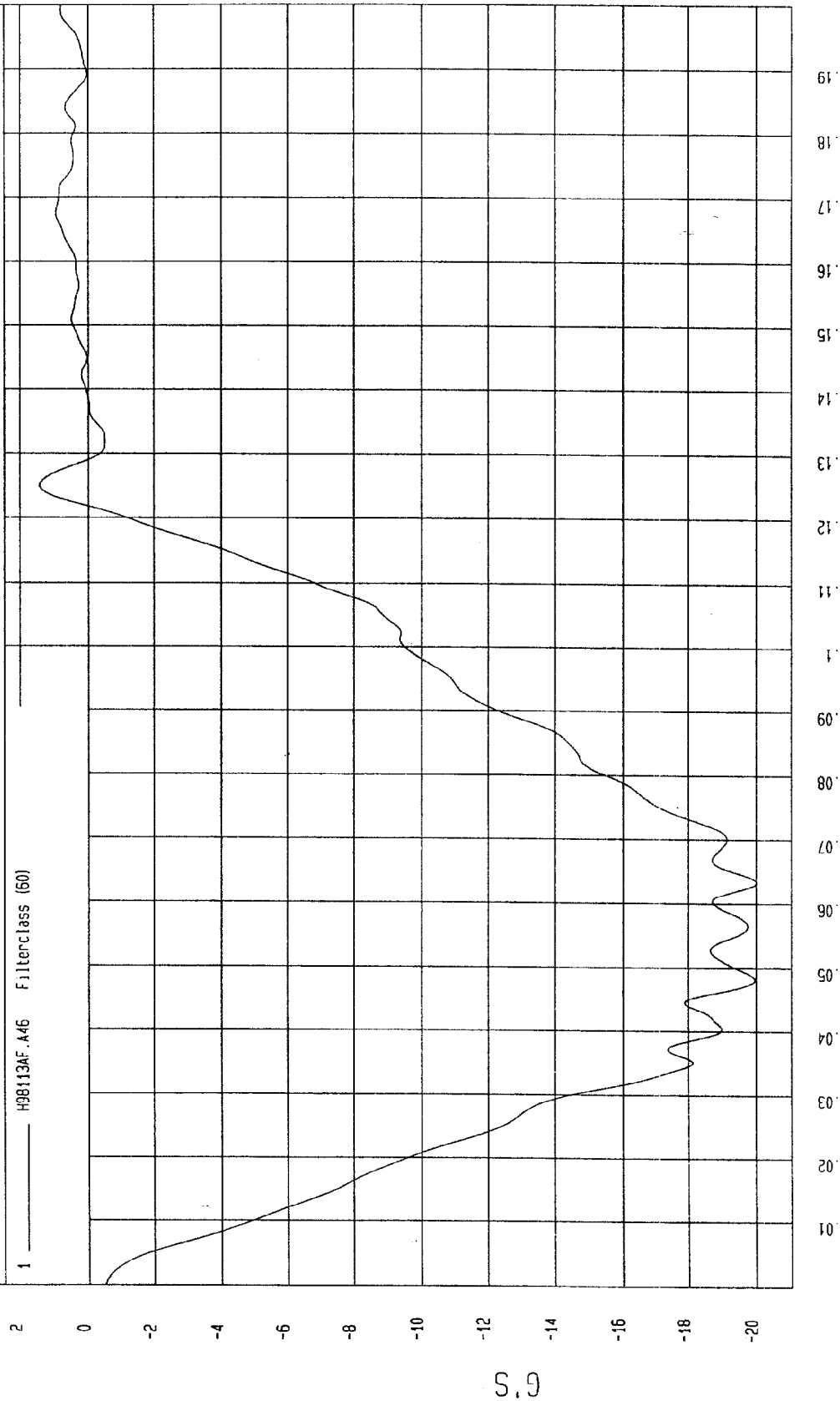
COMPONENT: 1998 DODGE NEON (CW0305)

YMIN=-20.01181 G'S at 63. msec

YMAX= 1.409883 G'S at 125 msec

VEHICLE REAR AXLE X ACCELERATION

1 H98113AF.A46 Filterclass (60)



MGA Research
05-13-1998 1A: 06

TIME (SECONDS)

APPENDIX C
MANUFACTURER'S VEHICLE INFORMATION

Susan M Cischke
Executive Director
Vehicle Certification Compliance and
Safety Affairs

September 26, 1997

Mr. Harry Thompson, Chief
Office of Vehicle Safety Compliance
National Highway Traffic Safety Administration
U.S. Department of Transportation
400 Seventh Street, S.W.
Washington, D.C. 20590

07 SEP 23 P 2: 32

RECEIVED NSA-30

Dear Mr. Thompson:

Reference: NSA-31CCA OA:208970811D: FMVSS 208 – 1998 Dodge Neon

The following is provided in response to your August 18, 1997 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 1998 Dodge Neon is certified to meet the requirements of FMVSS 208 S13. A copy of the Compliance Report is provided in Attachment 1.

Q2. If the air bags are or will be depowered or changed from the previous model year, explain the changes.

A2. Both driver and passenger air bags have been reduced in power from previous model years.

- Q3.** If the air bag has been depowered or changed, explain how it can be determined, prior to purchase, that a particular vehicle has a depowered air bag.
- A3.** The vehicle pricing (Monroney) label affixed to the side glass on new vehicles has language on it which indicates that the driver and passenger air bags are "next generation" and the vehicle has been certified to new impact test regulations.
- Q4.** 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.
- A4.** 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 20 milliseconds following a 1/2 G carriage acceleration event.
- Q5.** 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.
- A5.** The safety belts are not equipped with tension-relieving devices.
- Q6.** 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.
- A6.** All tests were performed with the windows in the full down position.
- Q7.** Submit dummy placement measurements, including diagrams or photographs which show exactly where measurements were taken. Enclosed is a diagram of some of OVSC's dummy measurements. Where possible, use the dimension shown in the diagram to provide the individual dummy placement measurements.
- State whether the vehicle has a foot rest for the driver.
- A7.** Dummy placement measurements, where available, are provided in Attachment 2.
- A driver foot rest is not provided on the Neon.

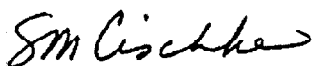
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- Q8.** Provide the seat positioning, steering column positioning, and fuel tank data on the enclosed form. If more than one front seating configuration, steering column, or fuel tank are available on this vehicle, provide separate information for each.
- A8.** No optional fuel tank or optional seats that would change the dummy placement are available on the Neon. An optional low pivot tilt steering column is available. The requested set up information is provided in Attachment 3.
- Q9.** If the vehicle is equipped with adjustable seatbelt anchorages, provide the manufacturer's nominal design position for a 50th percentile adult male occupant.
- A9.** See Attachment 3 for adjustable seat belt anchorage set up information.
- Q10.** 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.
- A10.** The requested information is in the Compliance Report provided in Attachment 1.
- Q11.** 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?
- A11.** If vehicle components are removed, this is the recommended order; spare tire and jack, rear bumper and fascia, deck lid, tail lamps, muffler and tail pipe, rear seat and trim, rear door glass on 4-door models, cross car dynamic side impact beam on 2-door models.
- Q12.** 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.
- A12.** A pressure vessel is not used to inflate the air bags.
- Q13.** 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.
- A13.** Explosive devices are used to deploy the air bags. See Attachment 4 for the requested information.

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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 cursive script, appearing to read "S M Cischke".

S. M. Cischke
Attachments

FMVSS 208

1998 DODGE NEON

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ATTACHMENT 2

RESPONSE TO QUESTION #7

DUMMY PLACEMENT

Answers to NHTSA information request NSA-31CCA/OA:208970811D (Continued).

Driver Dummy Measurements (Inches)					
Test Number	NR	NH	CH	KL	KR
VC6439	14.2	15.1	11.1	3.0	3.0
VC6470	14.7	15.3	10.3	2.5	2.4
VC6476	13.5	14.6	10.3	3.2	2.6
VC6482	14.3	15.9	10.1	3.2	2.8
IS16765	14.6	15.1	10.1	2.6	2.2
Average	14.26	15.20	10.38	2.9	2.6

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

NH = Tip of nose to center of steering wheel rim.

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

KL = Left knee clearance from surface of knee to surface of knee blocker.

KR = Right knee clearance from surface of knee to surface of knee blocker.

Passenger Dummy Measurements (Inches)					
Test Number	A	B	C	KL	KR
VC6439	19.9	24.0	16.2	3.0	3.0
VC6470	22.2	25.7	16.8	3.6	3.6
VC6476	21.8	26.0	16.4	3.3	3.2
VC6482	23.6	26.5	15.8	N/A	N/A
IS16765	20.5	25.6	16.5	3.6	3.4
Average	21.60	25.56	16.34	3.38	3.30

A = Bridge of nose horizontal to windshield.

B = Head target horizontal to 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 knee blocker.

KR = Right knee clearance from surface of knee to surface of knee blocker.

FMVSS 208

1998 DODGE NEON

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ATTACHMENT 3

RESPONSE TO QUESTION #8

SEAT / UPPER ANCHORAGE
/ STEERING COLUMN
POSITIONING
FUEL TANK DATA

TEST VEHICLE INFORMATION

Vehicle Model Year & Make: 1998 Dodge

Vehicle Model & Body Style: Neon

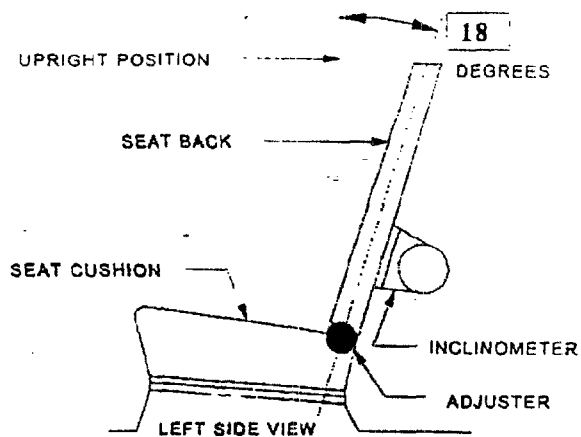
1. NOMINAL DESIGN RIDING POSITION --

For adjustable driver and passenger seat backs.
Please describe how to position the inclinometer to measure the seat back angle. Include description of the location of the adjustment latch detent if applicable. Indicate, if applicable, how the detents are numbered (Is the first detent "0" or "1"?). Indicate if the seat back angle is measured with the dummy in the seat.

Seat back angle for driver's seat = 18°

Measurement Instructions: "No dummy in seat"

1) Slide the seat all the way forward and remove seat back recliner side shield; 2) Put seat back to full upright position; 3) Insert 6mm pin in gage hole at the forward edge of seat back recliner mechanism; 4) Rotate seat back until sector gear touches set up pin; 5) Seat back is at design angle.



Seat back angle for passenger's seat = 18° Measurement Instructions: Same as driver.

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, indicate how the detents are numbered (Is the first detent "0" or "1"?). Provide information to locate the detent in which the seat track is to be locked.

Positioning of the driver's seat:

Front seats are adjusted to the mid-track fore-aft location. When set to mid-track, the upper (sliding portion) track will be approximately 35mm forward of the lower (stationary portion) track when viewed from the rear seat foot well area.

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

Same as driver.

3. FUEL TANK CAPACITY DATA --

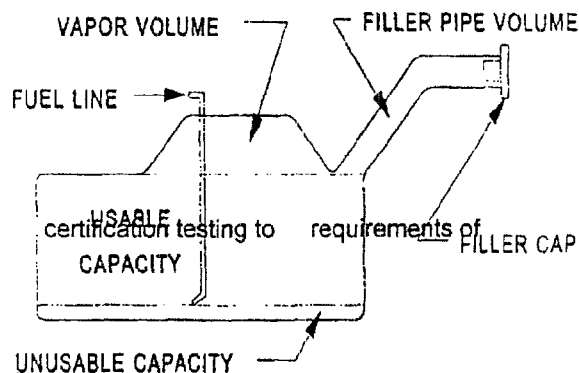
3.1 A. "Usable Capacity" of standard equipment fuel tank = 12.5 gallons.

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

C. "Usable Capacity" of vehicle(s) used for FMVSS 301 = 11.6 gallons.

Operational Instructions:

None



VEHICLE FUEL TANK ASSEMBLY

3.2 Amount of Stoddard solvent added to vehicle(s) used for certification test(s) = 3.0 gallons
(Test No. VC5883)

Rev. 08/97ajr

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:

The upper anchorage self adjusts as the belt is retracted into the B-pillar for the Neon coupe.
The recommended location for the 50th percentile male at mid-track seating position is to place the belt across the shoulder midway between the base of the neck and the outside of the shoulder.

On the Neon 4-door models, the ATL has a total of six different adjustment locations spaced 20 mm apart.
The highest ATL adjustment is considered as location number one. The recommended ATL location for the 50th percentile male at mid-track seating position is at location number four.
Location four is found three "clicks" down from location one.

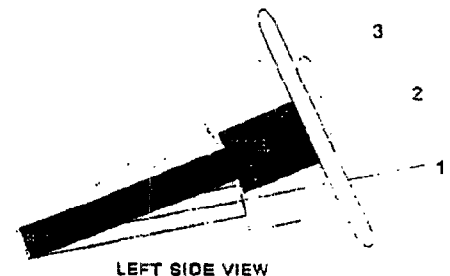
5. STEERING COLUMN ADJUSTMENTS --

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:

A low pivot tilt column is optional equipment. Test position is the mid point of the upper and lower range of motion.
Using an electronic level, place the column in the full down position and record the angle of the steering wheel plane.
Repeat this measurement for the full up position. The mid-point of the two angles will be the proper tilt column test angle. For reference, in the "Z" direction, at mid-point the bottom of the steering wheel rim should be approximately 27 mm above full down.



LEFT SIDE VIEW

STEERING COLUMN ASSEMBLY