

REPORT NO. 208-MGA-96-005
212-MGA-96-005
301-MGA-96-005

V2412
V2412

VEHICLE SAFETY COMPLIANCE TESTING
FOR
FMVSS 208, OCCUPANT CRASH PROTECTION
FMVSS 212, WINDSHIELD MOUNTING
FMVSS 219, WINDSHIELD INTRUSION (PARTIAL)
FMVSS 301, FUEL SYSTEM INTEGRITY

NISSAN MOTOR COMPANY
1996 Nissan 4 x 2 Pickup
NHTSA NO. CT5204

MGA RESEARCH CORPORATION
5000 WARREN ROAD
BURLINGTON, WI 53105



Test Date: March 21, 1996

Report Date: April 12, 1996

Final Report

Prepared For:

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

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APPROVED BY: Gary Strassburg DATE: 4-18-96
Gary Strassburg
MGA Research Corporation

APPROVED BY: John I. Fleck DATE: 4/19/96
John Fleck
MGA Research Corporation

FINAL REPORT ACCEPTED BY:
Charles K. Pave
Contracting Officer's Technical Representative (COTR)
NHTSA, Office of Vehicle Safety Compliance

10/21/96
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SECTION 1
PURPOSE AND TEST PROCEDURE

PURPOSE

This 30 mph flat frontal barrier impact test is part of the Federal Motor Vehicle Safety Standard (FMVSS) 208, 212, 219 (partial), and 301 compliance test program conducted for the National Highway Traffic Safety Administration (NHTSA) by the MGA Research Corporation (MGA) under Contract No. DTNH22-93-D-21089. The purpose of this test was to determine whether the subject vehicle, a 1996 Nissan 4 x 2 Pickup, NHTSA No. CT5204, meets the performance requirements of FMVSS 208, "Occupant Crash Protection"; FMVSS 212, "Windshield Mounting"; FMVSS 219 (partial), "Windshield Zone Intrusion"; and FMVSS 301, "Fuel System Integrity," in the flat frontal barrier impact mode.

TEST PROCEDURE

This test was conducted in accordance with NHTSA's Office of Vehicle Safety Compliance (OVSC) Laboratory Test Procedure No. TP-208-09 dated March 15, 1993. Data was obtained relative to FMVSS 208, "Occupant Crash Protection"; FMVSS 212, "Windshield Mounting"; FMVSS 219 (partial), "Windshield Zone Intrusion"; and FMVSS 301, "Fuel System Integrity," performance.

The test vehicle was instrumented with seven (7) accelerometers to measure longitudinal axis accelerations and one (1) accelerometer to measure vertical axis acceleration. The vehicle's specified impact velocity range was 28.9 to 29.9 mph. A fixed flat barrier with a 3/4 inch thick plywood face was impacted by the vehicle.

The test vehicle contained one (1) Part 572 E 50th percentile adult male anthropomorphic test device (ATD) in the front left outboard seating and one Part 572 B 50th percentile adult male ATD in the front right outboard seating position. The dummies were positioned according to the dummy placement procedures specified in Appendix C of the Laboratory Test Procedure.

Both dummies were instrumented with head and chest accelerometers to measure longitudinal, lateral, and vertical accelerations, and with left and right femur load cells to measure axial forces. The Part 572 E (driver) dummy's instrumentation also included a chest potentiometer to measure longitudinal deflection and lower leg load cells to measure tibia forces and moments.

The thirty-five (35) data channels were multiplexed and recorded on four IBM PC compatible computers. Three of the computers had Metrabyte DAS-16F A/D converter boards and one had a Metrabyte DAS-40 G2 A/D converter board. The data was digitally sampled at 10,000 samples per second and processed per Section 11.13 through 11.15 of the Laboratory Test Procedure.

The crash event was recorded by one (1) real-time panning motion picture camera and fourteen (14) 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, 212, 219 (partial) and 301 data are 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
SUMMARY OF FRONTAL BARRIER IMPACT TEST

TEST RESULTS SUMMARY

This flat frontal barrier test was conducted at MGA Research Corporation on March 21, 1996.

The test vehicle, a 1996 Nissan 4 x 2 Pickup, NHTSA No. CT5204, appeared to comply with the performance requirements of FMVSS 208, 212, 219 (partial), and 301 in the flat frontal barrier impact mode. The Head Injury Criteria (HIC) calculations were less than 1000, the driver chest resultant acceleration over 3 msec did not exceed 60 g's. The compressive forces transmitted through the upper legs did not exceed 2,250 pounds as measured by the ATDs seated in the front outboard designated seating positions. The Part 572 E dummy's chest deflection did not exceed 3.0 inches. The vehicle's restraint system met the applicable comfort and convenience requirements. The windshield periphery retention on each side of the vehicle centerline was greater than 50 percent. There was no penetration into any portion of the windshield. No fluid spilled from the vehicle's fuel system following the impact.

The test vehicle was equipped with an airbag and a Type 2 seat belt in the left front outboard designated seating position and a Type 2 seat belt in the front right outboard seating position. The driver dummy in the left front outboard seating position was restrained only by the airbag. The passenger dummy was restrained only with the vehicle seat belt. The vehicle's test weight was 3554 pounds. The vehicle's impact speed was 29.5 mph. The vehicle's maximum static crush was 13.4 inches.

The driver's HIC was 469. The driver's chest maximum resultant acceleration with three (3) milliseconds minimum duration was 52.5 g's. The driver's chest maximum deflection was 1.8 inches. The driver's left and right femur maximum compressive forces were 1512 pounds and 1577 pounds, respectively.

The right front passenger's HIC was 443. The passenger chest and femur results are not provided in this report due to the magnitude of the recorded data prior to the impact of the vehicle with the impact barrier. The plots of this data can be found in Appendix B.

There was no loss of windshield periphery retention and no penetration through the windshield.

Following the impact, no fluid spilled from the vehicle's fuel system prior to the static rollover test.

TEST NOTES

1. Due to the apparent non-compliance, the FMVSS 301 static rollover test was not conducted.
2. The passenger chest and femur results are not provided in this report due to the magnitude of the recorded data prior to the impact of the vehicle with the impact barrier. The plots of this data can be found in Appendix B.
3. The post-test dummy chest circumference was not within specification for the passenger dummy (S/N 466).

TABLE 1 CRASH TEST SUMMARY

Vehicle Yr/Make/Model/Body Style: 1996/Nissan/4x2/Pickup
 Vehicle NHTSA No.: CT5204 Test Type: Frontal Barrier Impact
 Test Date: 3/21/96 Time: 3:59 p.m. Temp: 70°F
 Vehicle Test Weight: 3554 lbs. Vehicle/Barrier Impact Angle: 0°
 Impact Velocity: 29.5 mph Maximum Static Crush: 13.4 inches
 Vehicle Rebound: 16.7 inches

Dummies:	Driver	Passenger
Dummy Type	<u>Part 572E</u>	<u>Part 572B</u>
Serial Number	<u>340</u>	<u>466</u>
Restraint System	<u>Airbag</u>	<u>Type 2 Seat Belt</u>
No. of Data Channels	<u>19</u>	<u>8</u>

Number of Cameras: 1 Real Time
14 High Speed

Door Opening Data: Left Front: Opened Left Rear: Not Applicable
 Right Front: Opened Right Rear: Not Applicable

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, Visor, Headrest</u>	<u>Chin to Chest, Headrest</u>
Chest	<u>Airbag</u>	<u>None Noted</u>
Left Knee	<u>Dash, Steering Column</u>	<u>Dash</u>
Right Knee	<u>Dash</u>	<u>Dash</u>

TABLE 2 GENERAL TEST AND VEHICLE PARAMETER DATA

Vehicle Yr/Make/Model/Body Style: 1996/Nissan/4x2/Pickup

NHTSA No: CT5204 VIN: 1N6SD11S8TC308388 Body Color: Blue

Engine: 4 Cylinders; C.I.D.; 2.4 liters; CC

X Gas; Diesel; Turbocharged

X Longitudinal; Transverse

Transmission: 5 Speed; X Manual; Automatic; Overdrive

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

Major Option: X A/C; X P/S; X P/B; P/wdo; P/door locks;
 P/seats; X Tilt Wheel; Anti-skid Brakes; X Cruise Control

Date Received: 3/13/96; Odometer Reading: 46 miles

Dealer's Name/Address: Gordie Boucher Nissan
10606 W. Arthur Avenue
West Allis, WI 53227

DATA FROM VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured By: Nissan

Date of Manufacture: 1/96; VIN: 1N6SD11S8TC308388

GVWR: 4400 lbs; GAWR Front: 2200 lbs. GAWR Rear: 2544 lbs.

DATA FROM TIRE PLACARD:

Tire Pressure with maximum capacity vehicle load: Front 26 psi Rear 35 psi

Recommended Tire Size: P195/75R14

Recommended Cold Tire Pressure: Front 26 psi; Rear 35 psi

Tires on Vehicle: P195/75R14; Manufacturer: Firestone

Type of Spare Tire: Space Saver

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

Type of Front Seats: Bucket; X 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'd)

WEIGHT OF TEST VEHICLE AS RECEIVED FROM DEALER

(WITH MAXIMUM FLUIDS) = UDW:

Right Front = 839 lbs Right Rear = 649 lbs
Left Front = 812 lbs Left Rear = 631 lbs
TOTAL FRONT WEIGHT = 1651 lbs (56.3 % of Total Vehicle Weight)
TOTAL REAR WEIGHT = 1280 lbs (43.7 % of Total Vehicle Weight)
TOTAL UNLOADED DELIVERED WEIGHT (UDW) = 2931 lbs

CALCULATION FOR TARGET TEST WEIGHT:

UDW (Unloaded Delivered Weight) = 2931 lbs
VCW (Vehicle Capacity Weight) = * lbs
DSC (Designated Seating Capacity) = 3
RCLW*(Rated Cargo/Luggage Weight) = VCW - 150 (DSC) = 300 lbs*
Target Test Weight = UDW + RCLW + (2 Dummies x Dummy Weight)
Target Test Weight = 2931 + 300 + 336 = 3567 lbs

WEIGHT OF TEST VEHICLE WITH REQUIRED DUMMIES AND CARGO WEIGHT:

Right Front = 949 lbs Right Rear = 881 lbs
Left Front = 878 lbs Left Rear = 846 lbs
TOTAL FRONT WEIGHT = 1827 lbs (51.4 % of Total Vehicle Weight)
TOTAL REAR WEIGHT = 1727 lbs (48.6 % of Total Vehicle Weight)
TOTAL TEST WEIGHT = 3554 lbs
Weight of ballast secured in vehicle = 115 lbs
Vehicle components removed to meet target weight: None

VEHICLE ATTITUDE (all dimensions in inches):

Delivered Attitude: RF 28.7 LF 28.7 RR 30.1 LR 30.3
Fully Loaded Attitude: RF 28.1 LF 28.2 RR 28.6 LR 28.7
Test Attitude: RF 28.2 LF 28.5 RR 28.6 LR 28.7
Wheel Base: 104.7 in; C.G. = 50.9 in rearward of front wheel centerline

*Cargo weight for multi-purpose passenger vehicles, truck, and buses is the vehicle's rated cargo and luggage weight from the vehicle's label or 300 pounds, whichever is less.

TABLE 3 POST-IMPACT DATA

Type of Test: Frontal Barrier Impact Impact Angle: 0°
Test Date: 3/21/96 Time: 3:59 p.m. Temperature: 70° F
Vehicle NHTSA No.: CT5204 VIN: 1N6SD11S8TC308388

BARRIER IMPACT VELOCITY

Required Impact Velocity Range: 28.9 to 29.9 mph
Impact Velocity: Primary = 29.5 mph; Secondary = 29.5 mph
Distance From Front Bumper to Barrier Face When:
 Entering Speed Trap: 51.4 inches
 Exiting Speed Trap: 12.0 inches

VEHICLE STATIC CRUSH AND REBOUND (inches):

Vehicle Length:	Pre-test	= R <u>177.7</u>	C _L <u>179.6</u>	L <u>177.7</u>
	Post-test	= R <u>165.6</u>	C _L <u>166.2</u>	L <u>164.5</u>
	Crush	= R <u>12.1</u>	C _L <u>13.4</u>	L <u>13.2</u>
	Average	= <u>12.9</u>		

Distance from front of test vehicle to point of impact (rebound):

R 17.6 in C_L 16.5 in L 16.2 in

TABLE 4 ACCIDENT INVESTIGATION DIVISION DATA

Vehicle Year/Make/Model/Body Style: 1996/Nissan/4x2/Pickup

Veh. NHTSA No.: CT5204; VIN: 1N6SD11S8TC308388

Build Date: 1/96; Test Date: 3/21/96

Veh. Size Category: Pickup; Test Weight: 3554 lbs

Veh. Wheelbase: 104.7 in; Front Overhang: 28.0 in;

Overall Width: 64.8 in

ACCELEROMETER DATA:

Location: As per measurements on page 2-11

Calibration Procedure: As per MGA Calibration Procedure

Linearity: >99.9%; Integration Algorithm: Trapezoidal

COLLISION DEFORMATION CLASSIFICATION (CDC) CODE:

Impact Mode: Frontal Barrier

Crush Depth C1 = 13.2 inches

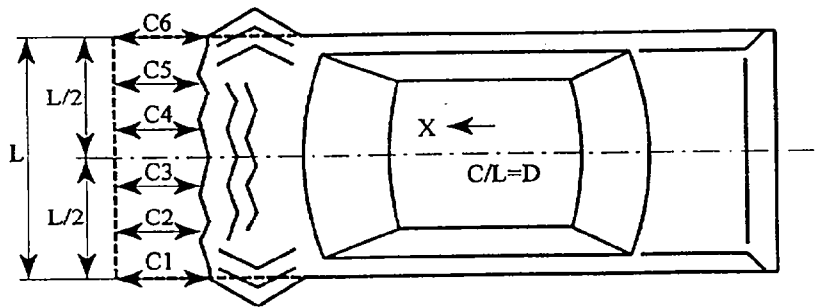
Dimensions: C2 = 12.7 inches

C3 = 13.1 inches

C4 = 13.0 inches

C5 = 12.6 inches

C6 = 12.1 inches



Midpoint of D = Vehicle Longitudinal Centerline

Damage:

Length of L = 59.6 inches

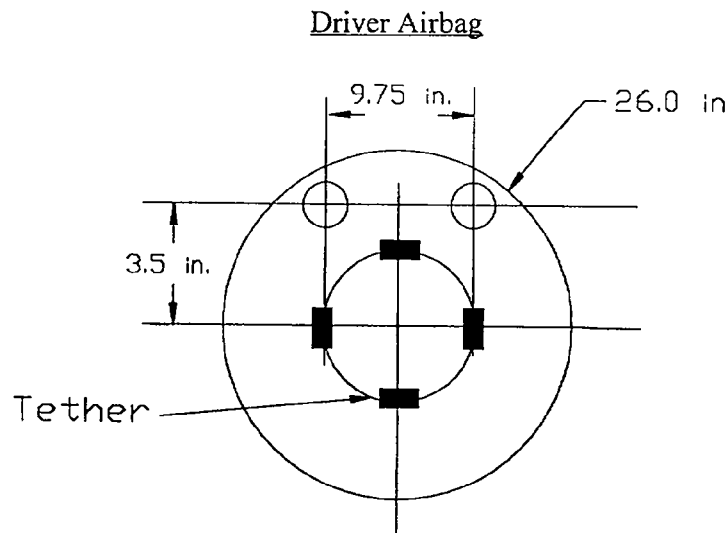
Damaged Region:

TABLE 5 POST TEST AIRBAG DATA

Vehicle Year/Make/Model/Body Style: 1996/Nissan/4x2/Pickup

NHTSA No: CT5204; Test Date: 3/21/96; Technician: Gary Strassburg

- A. No of Vent Holes: Driver 2;
- B. Size of Vent Holes: Driver 1.75 in. dia.;
- C. Total Vent Area: Driver 4.8 in²;
- D. Deflated Airbag Length and Width Dimensions or, if Round, Diameter
Driver; Length N/A; Width N/A; Diameter 26.0 in
- E. Is the Airbag Tethered?
Driver; X Yes; (2) No; If yes, record length of tether 9.0 in



- F. Part Numbers and Manufacture Name of Airbag and Gas Generator

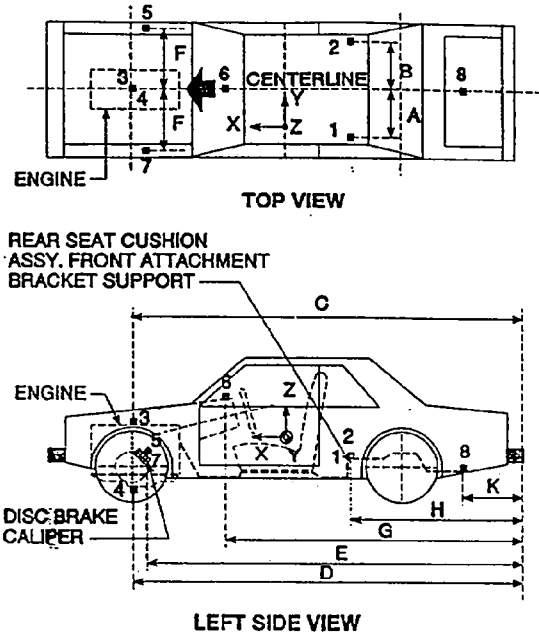
Driver: Mfr *; Airbag 180566C; Gen 4ILM006112598

* Not Available

TABLE 6 VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY

Vehicle Year/Make/Model/Body Style: 1996/Nissan/4x2/Pickup

Vehicle NHTSA No.: CT5204; Test Date: 3/21/96



ACCELEROMETER LOCATION (inches)		
	PRE-TEST	POST-TEST
A	21.0	21.0
B	21.1	20.9
C	149.8	149.1
D	146.8	141.0
E	146.5	146.6
F	23.2	24.3
G	123.1	124.5
H	85.2	84.9
K	8.9	9.6

ACCELEROMETER DATA SUMMARY					
No.	DESCRIPTION	MAXIMUM (g's)	TIME (msec)	MINIMUM (g's)	TIME (msec)
1	Left Rear Seat Crossmember	4.5	73	-47.2	22
2	Right Rear Seat Crossmember	3.5	75	-48.8	23
3	Top of Engine Block	43.2	38	-172.5	29
4	Bottom of Engine	32.2	37	-147.0	30
5	Right Disc Brake Caliper	43.5	37	-133.4	23
6	Instrument Panel	10.2	67	-46.3	39
7	Left Disc Brake Caliper	25.6	35	-116.0	23
8	Trunk	14.0	96	-27.0	51

TABLE 7 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: 1996/Nissan/4x2/Pickup

Vehicle NHTSA No.: CT5204 Body Color: Blue

VIN: 1N6SD11S8TC308388 Cost: \$14,298.00

Odometer: Arrival Date: 3/13/96 Reading: 46 miles

Completion Date: 3/18/96 Reading: 48 miles

Engine: 4 Cylinders; 2.4 Liters; X Gas; Diesel

Transmission: 5 Speed; X Manual; Automatic

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

Tire Size: P195/75R14; Manufacturer: Firestone

Air Conditioner	<u>Yes</u>	Console	<u>Yes</u>	Brakes	<u>Power</u>
Tinted Glass	<u>Yes</u>	Tachometer	<u>Yes</u>	Front	<u>Disc</u>
Power Steering	<u>Yes</u>	Cruise Control	<u>Yes</u>	Rear	<u>Disc</u>
Power Windows	<u>No</u>	Rear Window Def.	<u>No</u>	Front Seats	<u>Bench</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>Manual</u>
Clock	<u>Yes</u>	Tilt Steering Wheel	<u>Yes</u>	Rear	<u>Not Adjustable</u>
Roof Rack	<u>No</u>	Other Options:	<u>None</u>	No. of Seats	<u>Three</u>

Equipment that is no longer on the vehicle as noted above: None

Explanation:

Items removed to allow installation of data acquisition system.

Vehicle Condition:

The vehicle was subjected to a 30 mph frontal crash test. There is severe structural damage on the front body. 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. Stoddard solvent replaced the fuel in the fuel system and engine. **THE VEHICLE IS FOR SALVAGE ONLY AND IS NOT TO BE REPAIRED FOR HIGHWAY USE.**

SECTION 3
SUMMARY OF RESULTS FOR FMVSS 208
212, 219 (PARTIAL), AND 301

TABLE 8 FMVSS 208 OCCUPANT INJURY CRITERIA

Veh. Yr./Make/Model/Body Style: 1996/Nissan/4x2/Pickup

Veh. NHTSA No.: CT5204 Test Date: 3/21/96

MAXIMUM ACCELERATION VALUES: (g's)	DRIVER DUMMY #340	PASSENGER DUMMY #466
Head Channel X	-62.2 @ 67	-26.9 @ 81
Head Channel Y	8.3 @ 70	16.7 @ 106
Head Channel Z	17.9 @ 71	57.0 @ 59
HEAD RESULTANT	64.1 @ 67	60.5 @ 59
Chest Channel X	-53.5 @ 76	Data Irregular
Chest Channel Y	-7.1 @ 59	Data Irregular
Chest Channel Z	-17.0 @ 100 7.7 @ 71	Data Irregular
CHEST RESULTANT	53.7 @ 76	Data Irregular

HEAD INJURY CRITERIA (HIC)
VALUES:

HIC	469	443
t ₁ = (msec)	56.2	50.6
t ₂ = (msec)	83.1	86.6

[The maximum time interval from t₁ to t₂ is 36 milliseconds.]

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

CLIP	52.5	Data Irregular
t ¹ = (msec)	74.4	Data Irregular
t ² = (msec)	77.5	Data Irregular
CHEST DEFLECTION (in)	1.8	Not Applicable

TABLE 8 FMVSS 208 OCCUPANT INJURY CRITERIA (CONTINUED)

Veh. Yr./Make/Model/Body Style: 1996/Nissan/4x2/Pickup

Veh. NHTSA No.: CT5204 Test Date: 3/21/96

MAX. COMPRESSIVE FEMUR FORCES: (lbs)	DRIVER DUMMY #340	PASSENGER DUMMY #466
Left Side	-1512 @ 48	Data Irregular
Right Side	1577 @ 63	Data Irregular

TIBIA FORCES: (LBS)	DRIVER DUMMY #340
Left Lower Tibia Force X	-266 @ 45
Left Lower Tibia Force Z	-783 @ 45
Right Lower Tibia Force X	-750 @ 50
Right Lower Tibia Force Z	-1072 @ 50

TIBIA MOMENTS: (IN/LBS)	
Left Lower Tibia Moment Y	601 @ 49
Left Upper Tibia Moment X	-1272 @ 46
Left Upper Tibia Moment Y	-984 @ 41
Right Lower Tibia Moment Y	No Valid Data
Right Upper Tibia Moment X	-1104 @ 53
Right Upper Tibia Moment Y	-1160 @ 44

TABLE 9 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 and chest 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 instrument panel. The right front passenger dummy was restrained by the lap and shoulder belts. The dummy's head rotated forward until the dummy's chin hit his chest. The dummy rebounded rearward into the seat back with the dummy's head contacting the headrest. The right front passenger dummy came to rest in the seat.

TABLE 10 FMVSS 208 SEAT BELT COMFORT AND CONVENIENCE TEST SUMMARY
FRONT OUTBOARD DESIGNATED SEATING POSITIONS

Vehicle Year/Make/Model/Body Style: 1996/Nissan/4x2/Pickup

NHTSA No.: CT5204; Date of Comfort/Convenience Check: 3/20/96

Technician Performing Check: Nikki Walter

GVWR: 4400 lbs

Automatic seat belts installed in any vehicle, other than a walk-in van-type vehicle which has a gross vehicle weight rating of 10,000 pounds or less, and is manufactured on or after September 1, 1986, shall meet the requirements for convenience hooks, webbing tension relieving devices, and belt contact force.

Manual seat belts installed for compliance with this standard in front outboard designated seating positions of any vehicle, other than a walk-in van-type vehicle which has a gross vehicle rating of 10,000 pounds or less, and is manufactured on or after September 1, 1989, shall meet the requirements for belt contact force, plate access, retraction and seat belt guides, and hardware.

VEHICLE EQUIPMENT:

The vehicle's front outboard seating positions were equipped with manual Type 2 seat belts which must comply with the dynamic test requirements of S5.1; requirements for webbing tension-relieving devices (S7.4.2), belt contact force (S7.4.3), latchplate access (S7.4.4), retraction (S7.4.5), and seat belt guides and hardware (S7.4.6) apply.

CONVENIENCE HOOKS (S7.4.1):

Not applicable, the vehicle was not equipped with automatic seat belts.

WEBBING TENSION-RELIEVING DEVICE (S7.4.2)

The seat belt assembly on the front outboard seating positions did not have webbing tension-relieving devices.

TABLE 10 FMVSS 208 SEAT BELT COMFORT AND CONVENIENCE TEST SUMMARY
FRONT OUTBOARD DESIGNATED SEATING POSITIONS. (Cont'd)

BELT CONTACT FORCE (S7.4.3)

The belt contact force on the chest of the test dummy was 0.65 pounds.

LATCHPLATE ACCESS (S7.4.4)

The seat belt latchplates, in their normal stowed position, were within the reach envelope.

The clearance test block moved unhindered to the latchplate or buckle.

RETRACTION (S7.4.5):

The seat belt automatically retracted when the seat belt latchplate was released.

The stowed seat belt webbing and hardware were not pinched when the door was closed.

SEAT BELT GUIDES AND HARDWARE (S7.4.6)

The seat cushion was movable, but the seat back did not serve as a function other than seating.

The seat was not removable.

The seat was not movable so that the space formerly occupied by the seat could be used for a secondary function.

Note: If the seat or seat cushion is removable or if the seat is movable so that the space formerly occupied by the seat can be used for a secondary function, the seat belt guides and hardware requirements do not apply.

TABLE 10 FMVSS 208 SEAT BELT COMFORT AND CONVENIENCE TEST SUMMARY
FRONT OUTBOARD DESIGNATED SEATING POSITIONS, (Cont'd)

SEAT BELT GUIDES AND HARDWARE (S7.4.6)(Cont'd)

The webbing was not designed to pass through the seat cushion or between the cushion and seat back.

The remaining two parts (the seat belt latchplate and the buckle) were accessible under normal conditions.

The latchplate and buckle did not pass through the guides provided and fall behind the seat when the belt was completely retracted (or detached if not retractable) and the seat was moved to any position.

TABLE 11 FMVSS 208 EQUIPMENT DATA

Vehicle Year/Make/Model/Body Style: 1996/Nissan/4x2/Pickup

Vehicle NHTSA No.: CT5204 Date of Check: 3/20/96

Technician Performing Check: Nikki Walter

GVWR: 4400 lbs

FMVSS 208 SEAT BELT WARNING SYSTEM DATA

With an occupant in the driver's position and the lap belt/unibelt in stowed position and the ignition switch placed in the "start/on" position, the duration of audible warning signal was 5.0 seconds and the reminder light stayed on.

With an occupant in the driver's position and the lap belt/unibelt in use and the ignition switch placed in the "start/on" position, the duration of audible warning signal and the reminder light operation was 0 second.

Note: The audible warning should not operate.

The wording of the visual seat belt warning was the symbol from Table 2 of FMVSS 101.

FMVSS 208 LABELING AND DRIVER'S MANUAL DATA

The labels which describe manufacturer's maintenance or replacement schedule for the crash-deployed occupant protection system were located on the sunvisor.

The airbag system is required to be inspected after a time interval of 10 years.

Appropriate instructions concerning maintenance and/or replacement of this system were provided in the owner's manual on page 2-16.

TABLE 11 FMVSS 208 EQUIPMENT DATA, (Cont'd)

FMVSS 208 LABELING AND DRIVER'S MANUAL DATA (Cont'd)

A description of the functional operation of the system was provided in the owner's manual on page 2-13.

A reference to the instructions and description of the system was included on a label located on the sunvisor.

An owner's manual was provided.

The owner's manual contained appropriate information concerning maintenance and/or replacement and a description of the functional operation of the systems on pages 2-12 through 2-24.

FMVSS 208 READINESS INDICATOR DATA

The vehicle contained a crash-deployed occupant protection system which was not totally mechanical. The readiness indicator was located on the lower left corner of the instrument panel.

The readiness indicator was clearly visible to the driver.

A list of the elements in the occupant restraint system, being monitored by the readiness indicator, was provided in the owner's manual on page 2-15.

FMVSS 208 REAR OUTBOARD SEATING POSITION SEAT BELTS

No rear seating.

TABLE 12 FMVSS 212, "WINDSHIELD MOUNTING", DATA SUMMARY

Vehicle Year/Make/Model/Body Style: 1996/Nissan/4x2/Pickup

Vehicle NHTSA No.: CT5204 Test Date: 3/21/96

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

Rubber trim with glue retention

CLIPS OR BRACKETS USED TO RETAIN WINDSHIELD: None

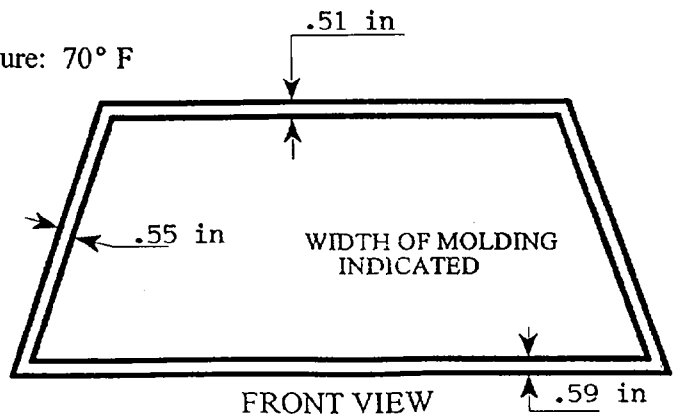
FMVSS 212 REQUIREMENTS: The post-test periphery retention amount must be at least 75% of the pre-test periphery measurement for vehicles NOT equipped with automatic restraints, and 50% for each side of windshield for vehicles equipped with automatic restraint systems for front occupants.

FMVSS 212 TEST DATA:

	WINDSHIELD PERIPHERY (inches)		PERCENT RETENTION
	PRE-TEST	POST-TEST	
RIGHT SIDE	79.1	79.1	100%
LEFT SIDE	77.8	77.8	100%
TOTAL	156.9	156.9	100%

Pre-Test Windshield Mounting Material Temperature: 70° F

* Lower Trim Extends To Firewall



FAILURE DETAILS: None

TABLE 13 FMVSS 219, "WINDSHIELD ZONE INTRUSION", DATA SUMMARY

Vehicle Year/Make/Model/Body Style: 1996/Nissan/4x2/Pickup

Vehicle NHTSA No.: CT5204 Test Date: 3/21/96

PROTECTED ZONE LOWER EDGE REQUIREMENT:

The lower edge of the protected zone is determined by placing a 6.5" dia. rigid sphere weighing 15 pounds in a position such that it simultaneously contacts the inner surface of the windshield and the top surface of the instrument panel including padding. Draw the locus of points on the inner surface of the windshield contacted by the sphere across the width of the instrument panel. From the outermost contact points, extend the locus line horizontally to the edges of the windshield, and then draw a line on the inner surface of the windshield below and 1/2" distant from the locus line. The LOWER EDGE OF THE PROTECTED ZONE is the longitudinal projection onto the outer surface of the windshield of this line.

WINDSHIELD MEASUREMENTS:

A= 47.8 in

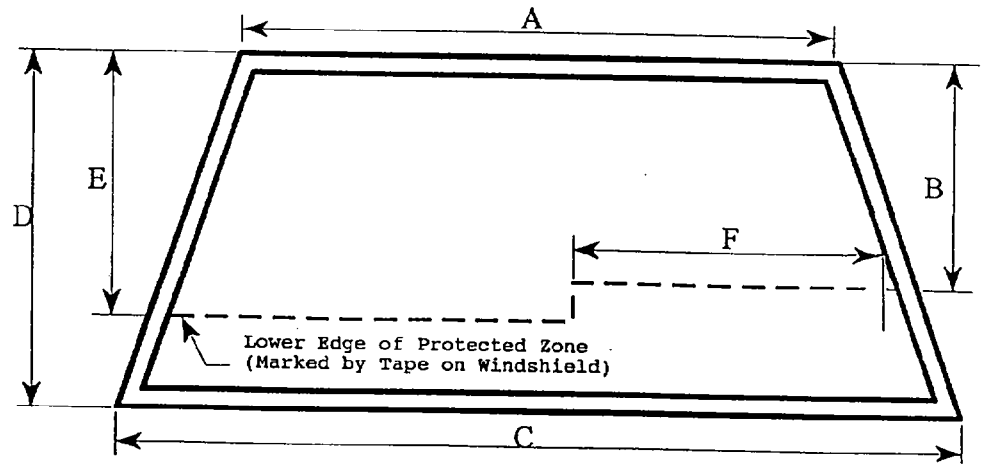
B= 16.1 in

C= 57.8 in

D= 25.9 in

E= 18.0 in

F= 22.4 in



FRONT VIEW

AREAS OF WINDSHIELD TEMPLATE PENETRATION GREATER THAN 1/4 IN:

None

AREAS OF WINDSHIELD PENETRATION, BELOW THE PROTECTED ZONE, THROUGH THE INNER SURFACE OF THE WINDSHIELD:

None

TABLE 14 FUEL SYSTEM DATA

Vehicle Year/Make/Model/Body Style: 1996/Nissan/4x2/Pickup

Vehicle NHTSA No.: CT5204 Test Date: 3/21/96

Fuel System Capacity from Owner's Manual = 15.8 gallons

Usable Capacity Figure Furnished by COTR = 15.8 gallons

Test Volume Range (92 to 94% of Usable Capacity)

 = 14.5 to 14.9 gallons

Actual Test Volume = 14.6 gallons

Test Fluid Type: Stoddard Solvent; Spec. Grav. = 0.77

 Kinematic Viscosity = 1.788 centistokes; Color = Purple

Type of Fuel Pump: Electric; Mechanical

Does electric pump operate with ignition switch "On" and engine "Off"?

Yes; No

Details of Fuel System:

Vehicle contained an EFI fuel system.

TABLE 15 FMVSS 301 POST IMPACT TEST DATA

Vehicle Year/Make/Model/Body Style: 1996/Nissan/4x2/Pickup

Vehicle NHTSA No.: CT5204 Test Date: 3/21/96

TEST REQUIREMENTS:

Test vehicle's fuel tank filled to 92 to 94% of manufacturer's usable capacity and with electric fuel pump operating (if it will operate without engine operation). Part 572E test dummies located at each front designated seating position.

TEST VEHICLE IMPACT TYPE:

- Frontal (30 mph)
- Oblique (30 mph) with ___ ° barrier face first contacting (driver/passenger) side
- Rear Moving Barrier (30 mph)
- Lateral Moving Barrier (20 mph)

FUEL SPILLAGE MEASUREMENT:

POST IMPACT TEST	TEST RESULTS	MAXIMUM ALLOWABLE
1. From impact until vehicle motion ceases	0 oz	1 oz
2. For 5 minute period after vehicle motion ceases	0 oz	5 oz
3. For next 25 minutes	0 oz	1 oz./1 min

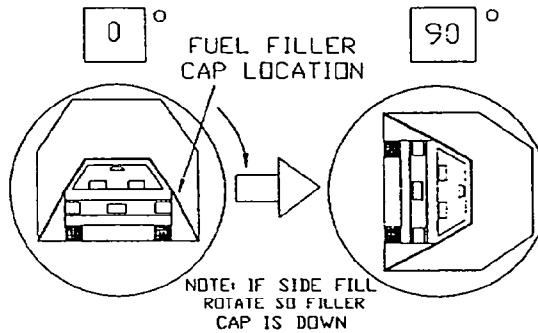
FUEL SPILLAGE LOCATION(S): None

TABLE 16 FMVSS 301 STATIC ROLLOVER TEST DATA

Vehicle Year/Make/Model/Body Style: 1996/Nissan/4x2/Pickup

Vehicle NHTSA No.: CT5204 Test Date: 3/21/96

TEST PHASE: 0° - 90°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = N/A minutes N/A seconds
 (Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = N/A minutes N/A seconds

TOTAL TIME = N/A minutes N/A seconds

Next Whole Minute Interval = N/A minutes

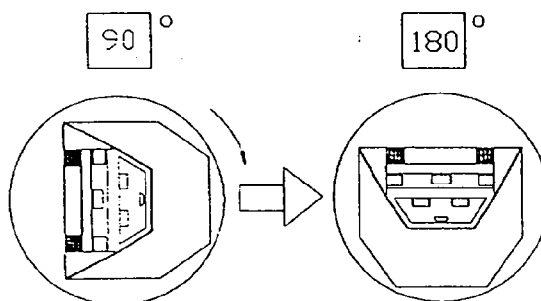
FUEL SPILLAGE MEASUREMENT:

0° TO 90° ROTATION (FILLER CAP DOWN)	TEST RESULTS	MAXIMUM ALLOWABLE
1. First 5 Minutes From Onset of Rotation	Not Performed	5 oz
2. Sixth Minute From Onset of Rotation	Not Performed	1 oz
3. Seventh Minute From Onset of Rotation	Not Performed	1 oz
4. Eighth Minute if Required	Not Performed	1 oz

FUEL SPILLAGE LOCATIONS(S):

TABLE 16 FMVSS 301 STATIC ROLLOVER TEST DATA (Cont'd)

TEST PHASE: 90° - 180°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = N/A minutes N/A seconds
 (Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = N/A minutes N/A seconds

TOTAL TIME = N/A minutes N/A seconds

Next Whole Minute Interval = N/A minutes

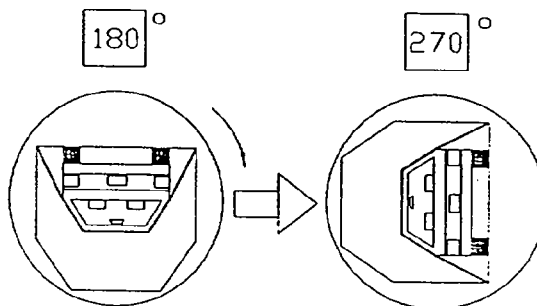
FUEL SPILLAGE MEASUREMENT:

0° TO 90° ROTATION (FILLER CAP DOWN)	TEST RESULTS	MAXIMUM ALLOWABLE
1. First 5 Minutes From Onset of Rotation	Not Performed	5 oz
2. Sixth Minute From Onset of Rotation	Not Performed	1 oz
3. Seventh Minute From Onset of Rotation	Not Performed	1 oz
4. Eighth Minute if Required	Not Performed	1 oz

FUEL SPILLAGE LOCATIONS(S):

TABLE 16 FMVSS 301 STATIC ROLLOVER TEST DATA (Cont'd)

TEST PHASE: 180° - 270°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = N/A minutes N/A seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = N/A minutes N/A seconds

TOTAL TIME = N/A minutes N/A seconds

Next Whole Minute Interval = N/A minutes

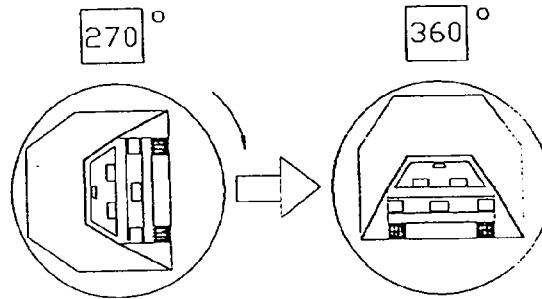
FUEL SPILLAGE MEASUREMENT:

0° TO 90° ROTATION (FILLER CAP DOWN)	TEST RESULTS	MAXIMUM ALLOWABLE
1. First 5 Minutes From Onset of Rotation	Not Performed	5 oz
2. Sixth Minute From Onset of Rotation	Not Performed	1 oz
3. Seventh Minute From Onset of Rotation	Not Performed	1 oz
4. Eighth Minute if Required	Not Performed	1 oz

FUEL SPILLAGE LOCATIONS(S):

TABLE 16 FMVSS 301 STATIC ROLLOVER TEST DATA

TEST PHASE: 270° - 360°



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time = N/A minutes N/A seconds
 (Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time = N/A minutes N/A seconds

TOTAL TIME = N/A minutes N/A seconds

Next Whole Minute Interval = N/A minutes

FUEL SPILLAGE MEASUREMENT:

0° TO 90° ROTATION (FILLER CAP DOWN)	TEST RESULTS	MAXIMUM ALLOWABLE
1. First 5 Minutes From Onset of Rotation	Not Performed	5 oz
2. Sixth Minute From Onset of Rotation	Not Performed	1 oz
3. Seventh Minute From Onset of Rotation	Not Performed	1 oz
4. Eighth Minute if Required	Not Performed	1 oz

FUEL SPILLAGE LOCATIONS(S):

SECTION 4
OCCUPANT, VEHICLE, AND CAMERA INFORMATION

TABLE 17 SEAT AND STEERING COLUMN POSITIONING DATA

Vehicle Year/Make/Model/Body Style: 1996/Nissan/4x2/Pickup

Vehicle NHTSA No.: CT5204 Test Date: 3/21/96

NOMINAL DESIGN RIDING POSITION:

Driver Seat: Seat Back Angle = Fixed

Passenger Seat: Seat Back Angle = Fixed

SEAT FORE AND AFT POSITIONS:

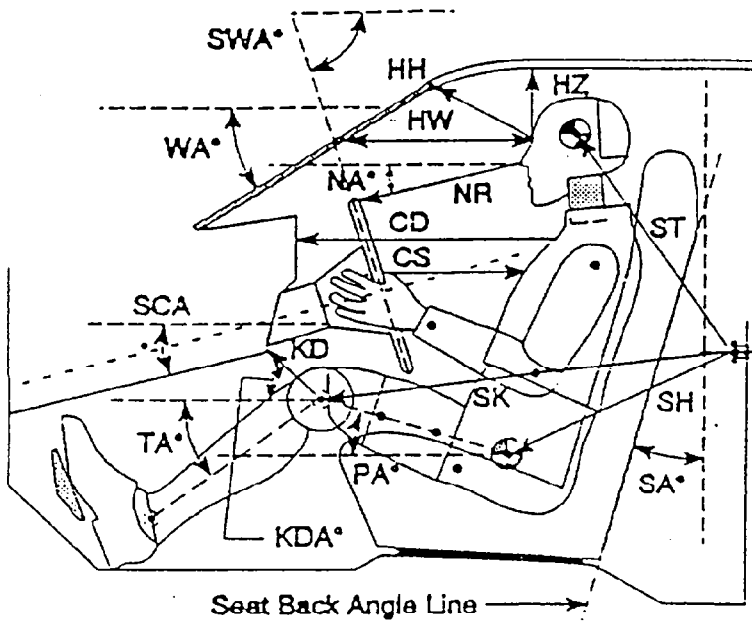
Driver Seat: The seat track had a total position movement of 14 notches and was positioned 7 notches rearward from the foremost position with the forwardmost locking position as zero.

Passenger Seat: The seat track had a total position movement of 14 notches and was positioned 7 notches rearward from the foremost position with the forwardmost locking position as zero.

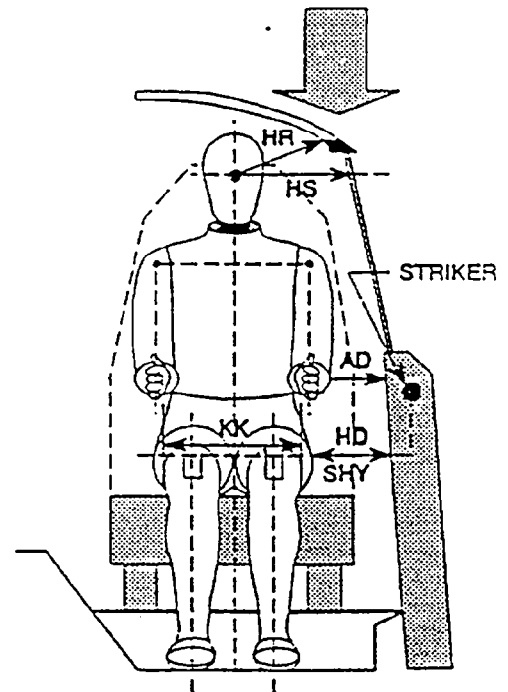
STEERING COLUMN ADJUSTMENTS:

The steering column was positioned at the mid-point of its swing. The angle of the steering column was 26.4 °.

FIGURE 1 DUMMY MEASUREMENT LOCATIONS FOR FRONT SEAT OCCUPANTS



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



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

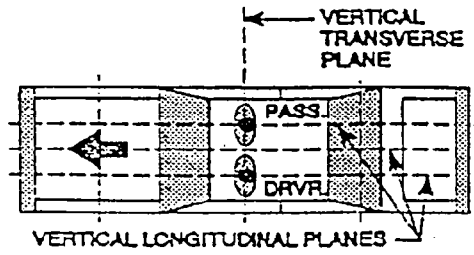


TABLE 18 DUMMY MEASUREMENT DATA FOR FRONT SEAT OCCUPANTS

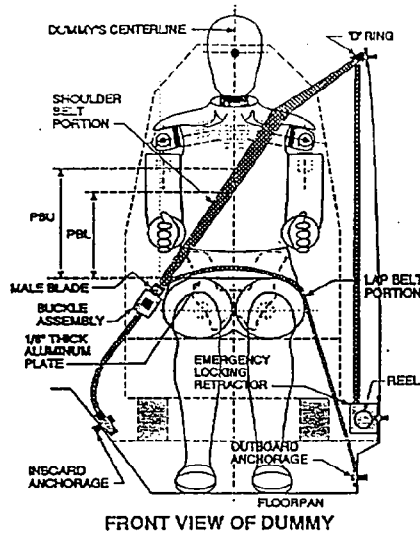
Vehicle Year/Make/Model/Body Style: 1996/Nissan/4x2/Pickup

Vehicle NHTSA No.: CT5204 Test Date: 3/21/96

	DRIVER (Serial #340)	PASSENGER (Serial #466)
WA°	35.9°	35.9°
SWA°	63.6°	N/A
SCA°	26.4°	N/A
SA°	10.2°	10.2°
HZ	7.7 in	6.6 in
HH	15.7 in	18.7 in
HW	22.4 in	23.5 in
HR	10.7 in	10.2 in
NR	15.3 Angle 13.8°	N/A
CD	22.8 in	24.6 in
CS	12.3 in	N/A
RA	7.4 in	N/A
KDL	7.1 in Angle (KDA) 22°	8.9 in
KDR	7.9 in	8.9 in Angle (KDA) 25.6°
PA°	21.9°	N/A
TA°	36°	35.8°
KK	11.9 in	12.0 in
ST*	23.6 in Angle 75.5°	23.4 in Angle 76.4°
SK*	26.1 in Angle 2.8°	25.4 in Angle -4°
SH*	11.4 in Angle -12.4°	10.4 in Angle -17.9
SHY	8.8 in	8.6 in
HS	12.7 in	12.1 in
HD	5.7 in	5.9 in
AD	3.7 in	3.7 in

N/A = Not Applicable

TABLE 19 SEAT BELT POSITIONING DATA



illustration

	DRIVER DUMMY	PASSENGER DUMMY
<u>PBU</u> -- Top Surface of Aluminum Plate to Upper Edge	Not Applicable	352 mm
<u>PBL</u> -- Top Surface of Aluminum Plate to Belt Lower Edge	Not Applicable	270 mm

BELT LENGTH DATA:

	<u>Driver</u>	<u>Passenger</u>
Length from trim above retractor reel to "D" ring as measured on dummy.	Not Applicable	Not Recorded
Shoulder belt length as measured on Part 572 Dummy.	Not Applicable	Not Recorded
Lap belt length as measured on Part 572 Dummy.	Not Applicable	Not Recorded

FIGURE 2 VEHICLE TARGET LOCATIONS

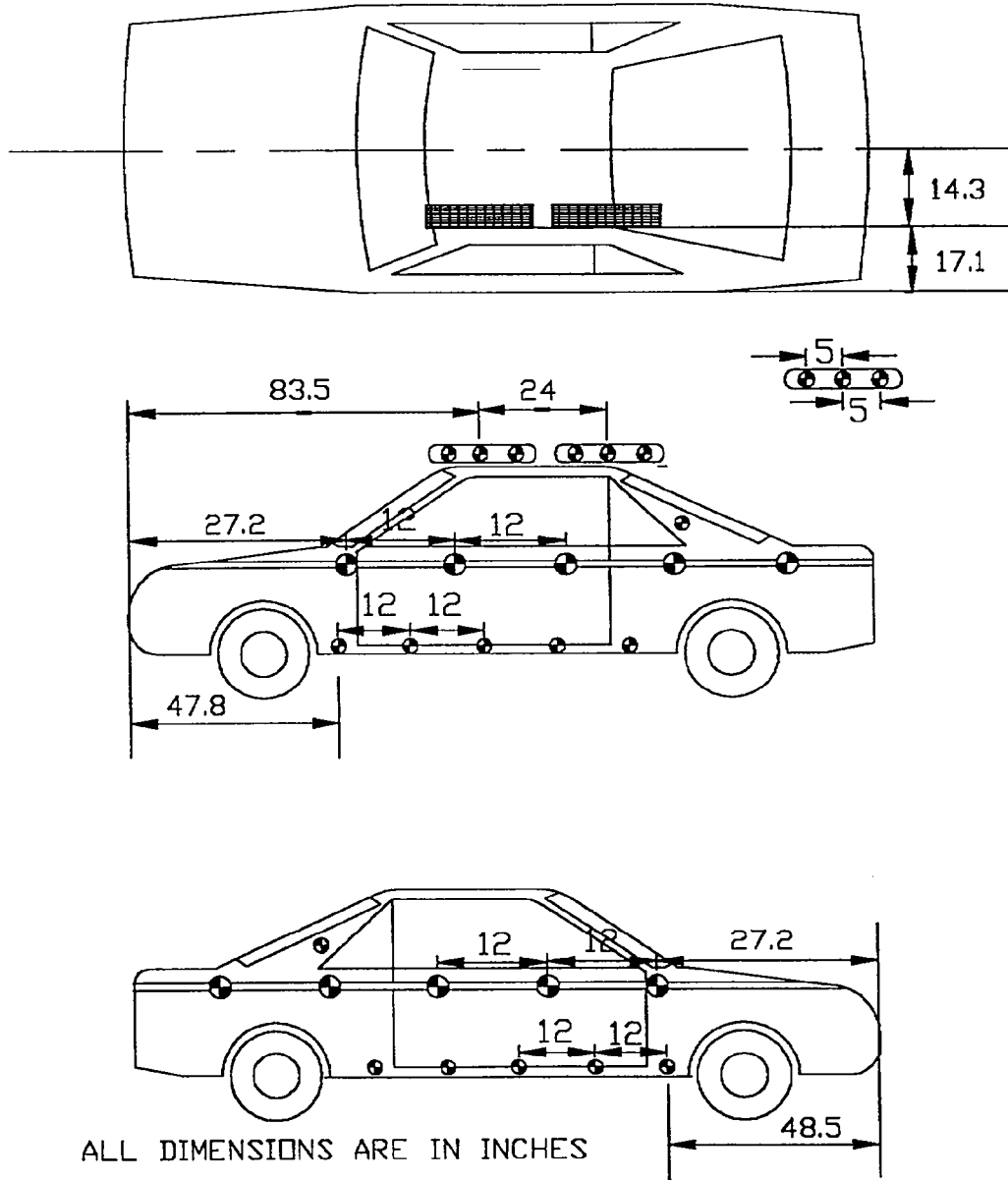


FIGURE 3 CAMERA POSITIONS

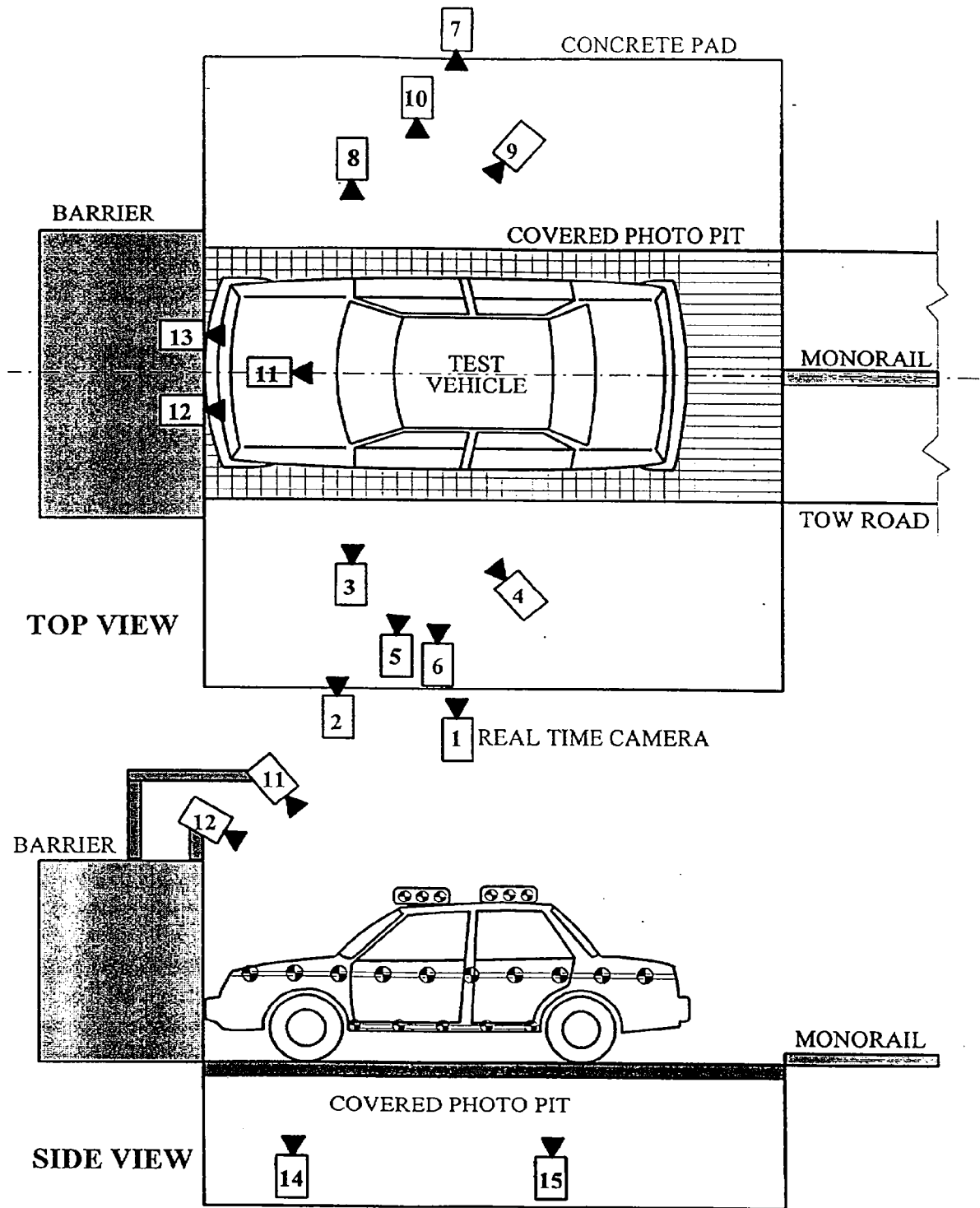


TABLE 20 CAMERA LOCATIONS

Veh. Year/Make/Model/Body Style: 1996/Nissan/4x2/Pickup

Vehicle NHTSA No.: CT5204 ; Test Date: 12/18/95

	VIEW	CAMERA POSITIONS (inches)*			ANGLE (deg)	FILM PLANE TO HEAD TARGET	LENS (mm)	SPEED (fps)
		X	Y	Z				
1	Real-Time Left Side View						10	24
2	Left Front	-31.9	-372.0	-61.0	90°	354.3	25	1136
3	Driver Close Up	-45.7	-349.6	-60.8	90°	331.9	50	1031
4	Driver Angle	-232.7	-233.9	-79.1			50	870
5	Steering Column Top	-64.2	-370.9	-61.2	90°	353.1	25	1020
6	Steering Column Bottom	-63.0	-370.9	-40.7	90°	353.1	25	1053
7	Right Overall	-81.1	342.1	-51.4	90°	324.6	13	1099
8	Right Close-Up	-36.6	387.0	-51.0	90°	369.5	25	N/T
9	Right Angle	-252.0	244.8	-78.3			50	1124
10	Right Angle	-45.3	395.3	-53.7	90°	377.8	50	985
11	Top Overall	-72.0	0	-204.7			8	1000
12	Driver Windshield	-8.7	-26.0	-67.9			13	1099
13	Passenger Windshield	-10.6	27.6	-67.9			13	943
14	Pit Front	-51.2	0	124.2			13	1042
15	Pit Rear	-100.4	0	124.2			13	1020

- * +X = Film plane rearward of barrier
- +Y = Film plane to left of monorail centerline
- +Z = Film plane to above ground level

N/T = No Timing

FIGURE 4 AMBIENT TEMPERATURE

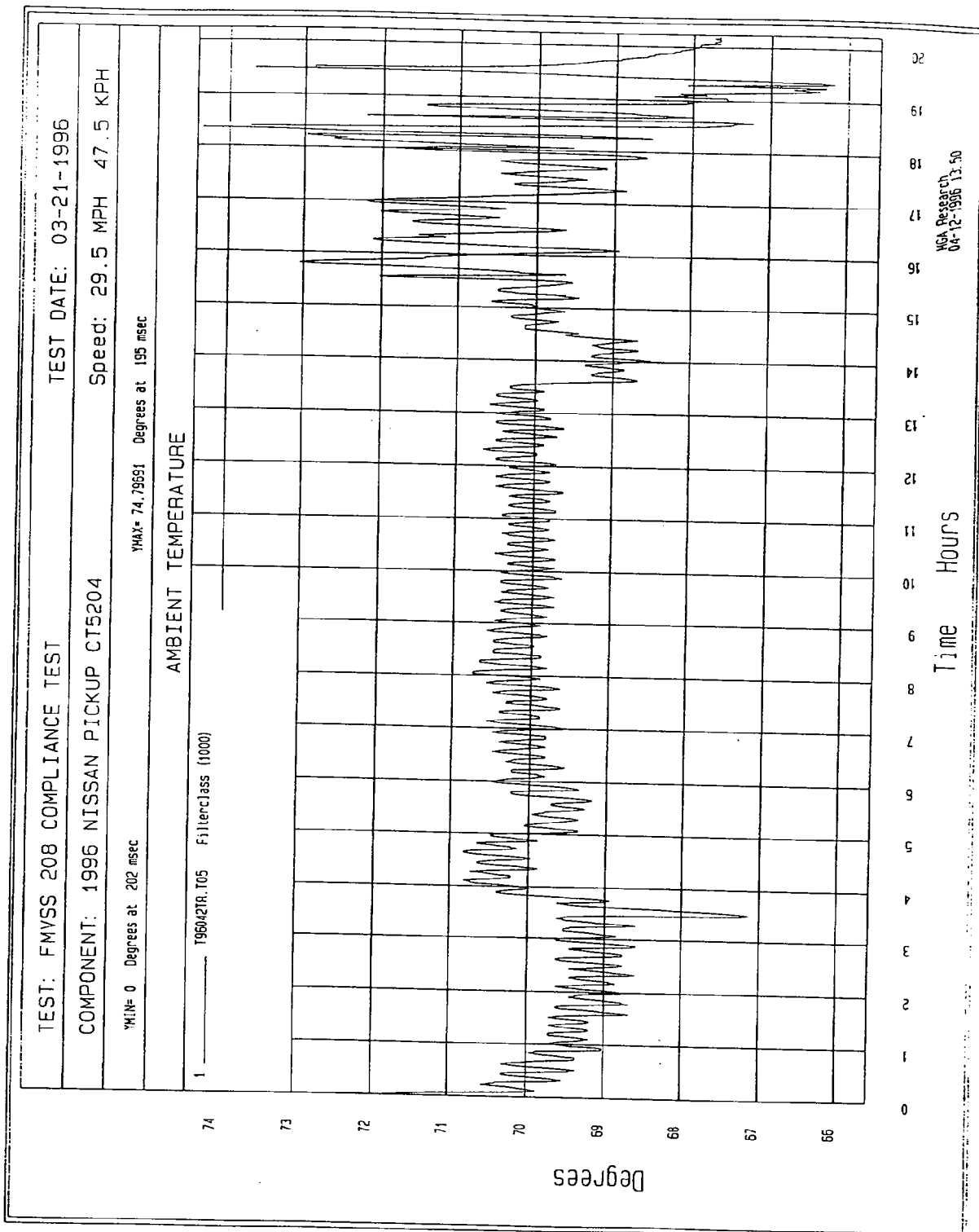
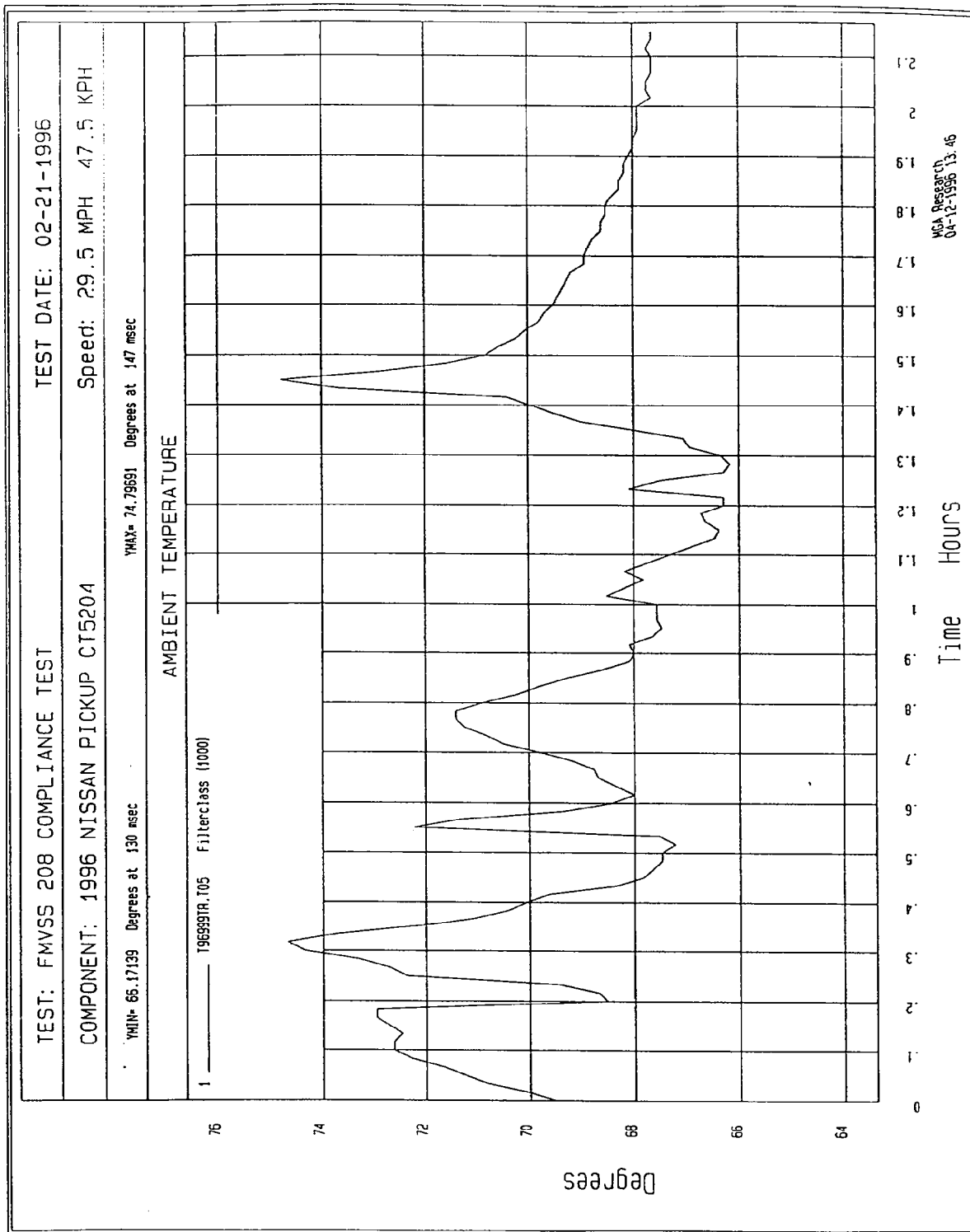


FIGURE 5 DRIVER AMBIENT TEMPERATURE



MGA Research
04-12-1996 13.46

FIGURE 6 DRIVER CHEST TEMPERATURE

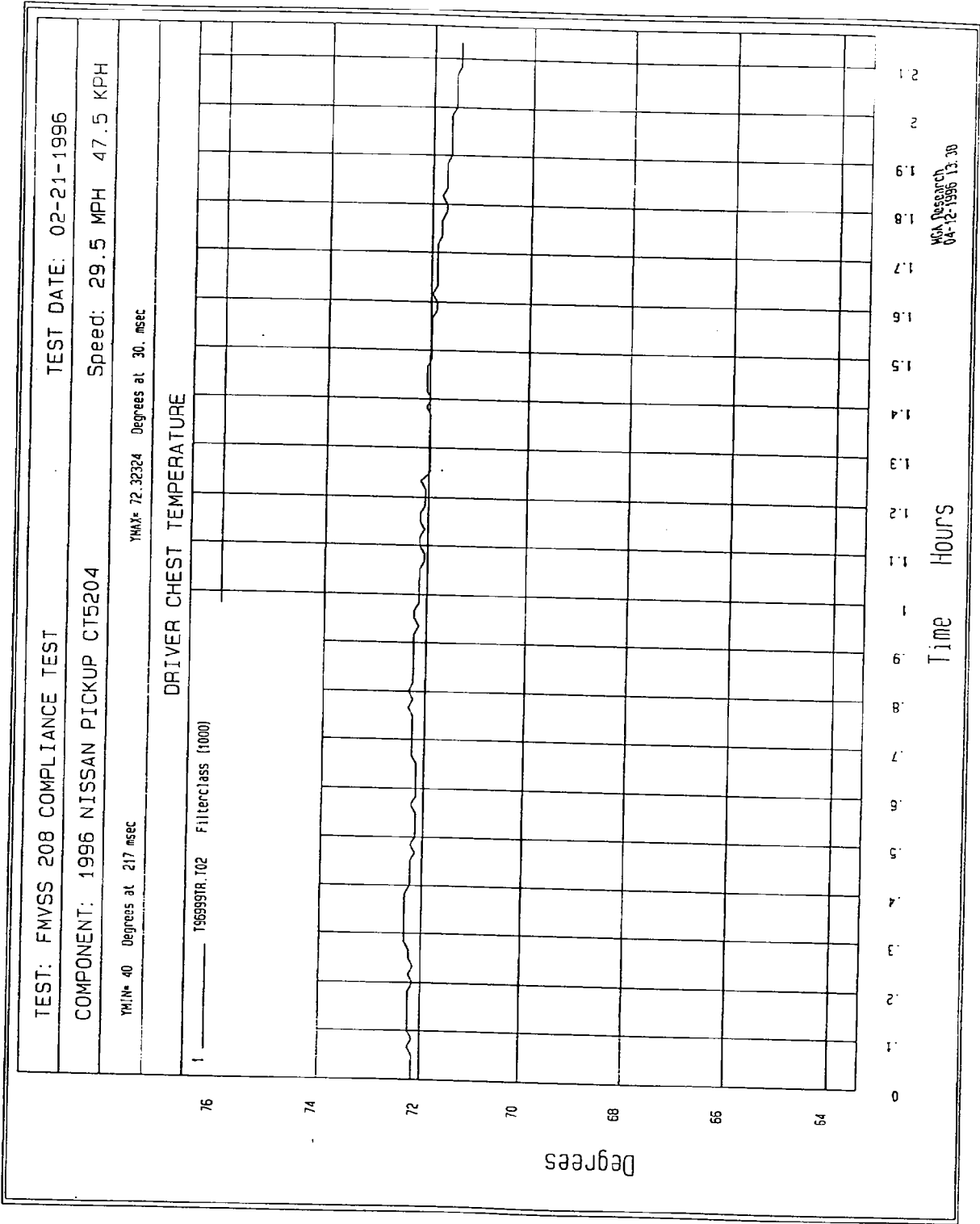


FIGURE 7 DRIVER HEAD TEMPERATURE

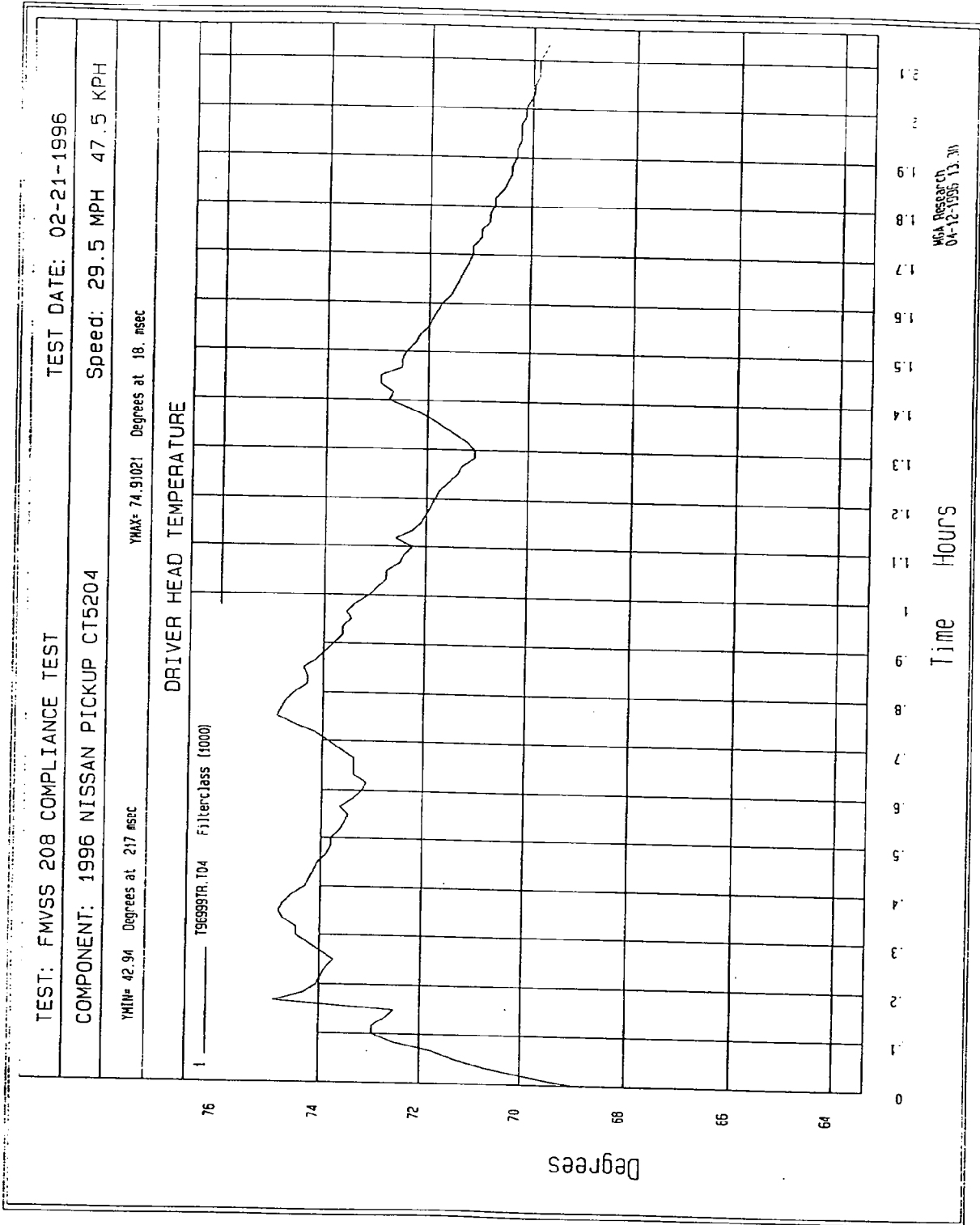


FIGURE 8 DRIVER NECK TEMPERATURE

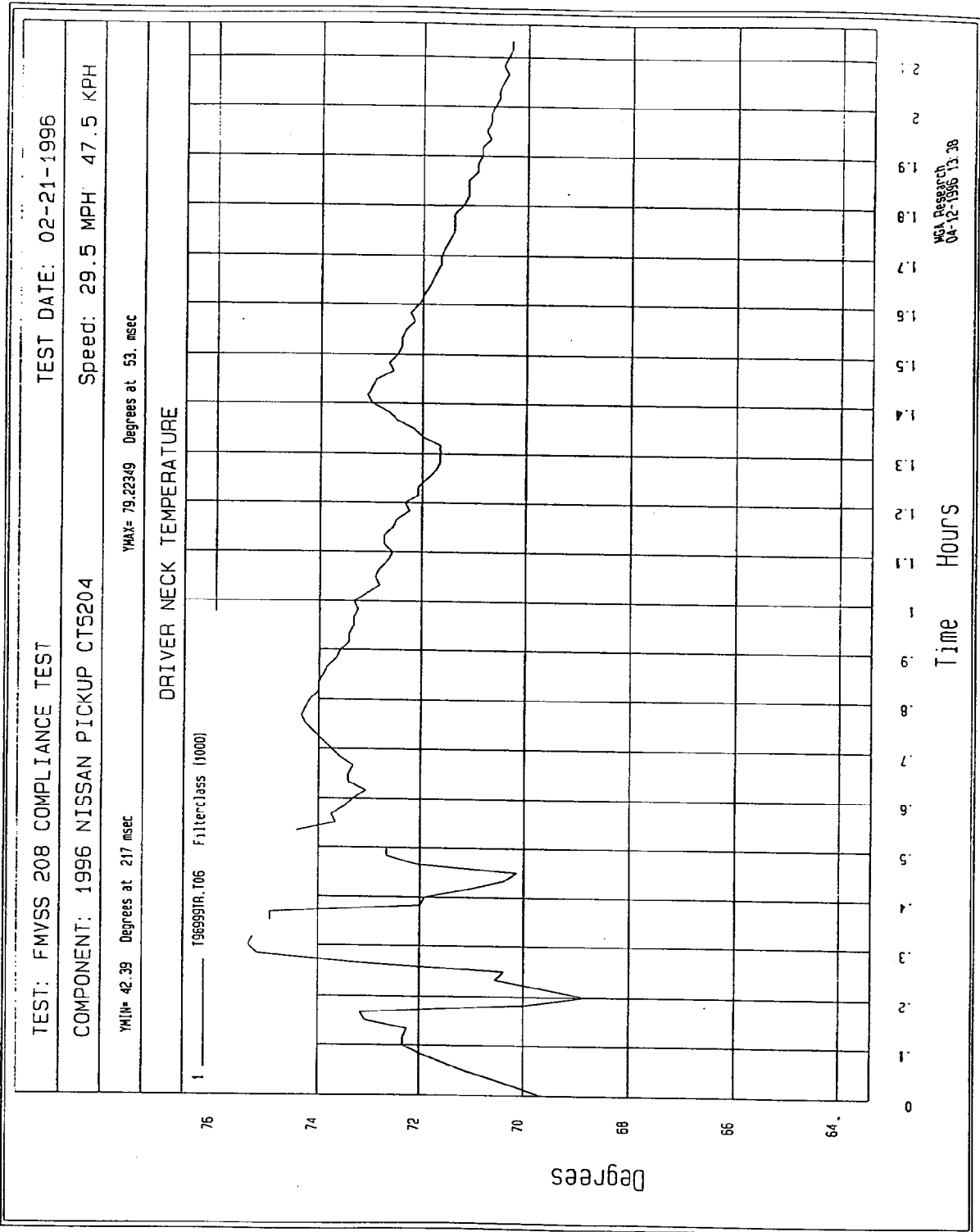
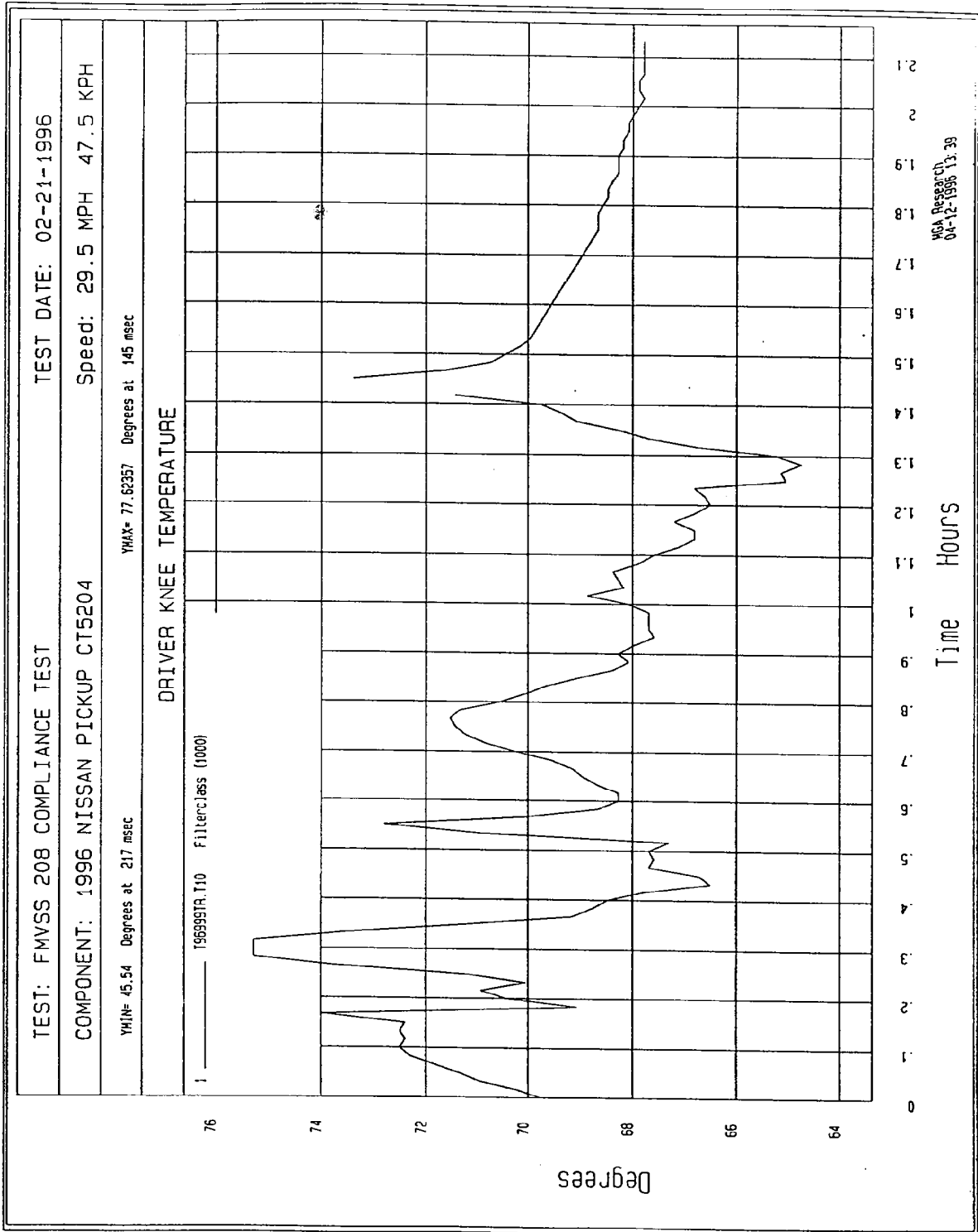


FIGURE 9 DRIVER KNEE TEMPERATURE



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Photo No. A-49 - Vehicle Certification Label	A-49

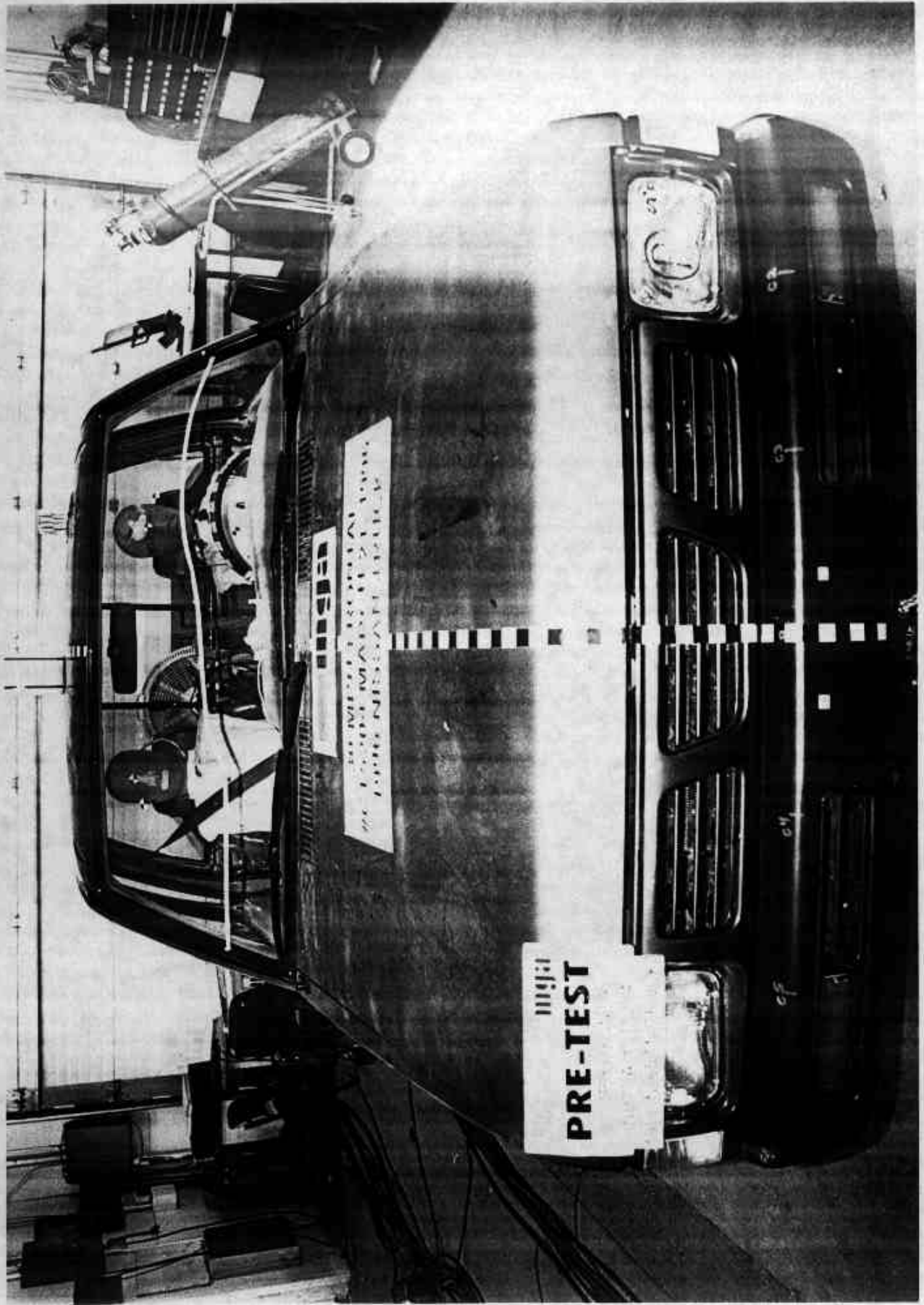


Photo No. A-1 - Pre-Test Front View

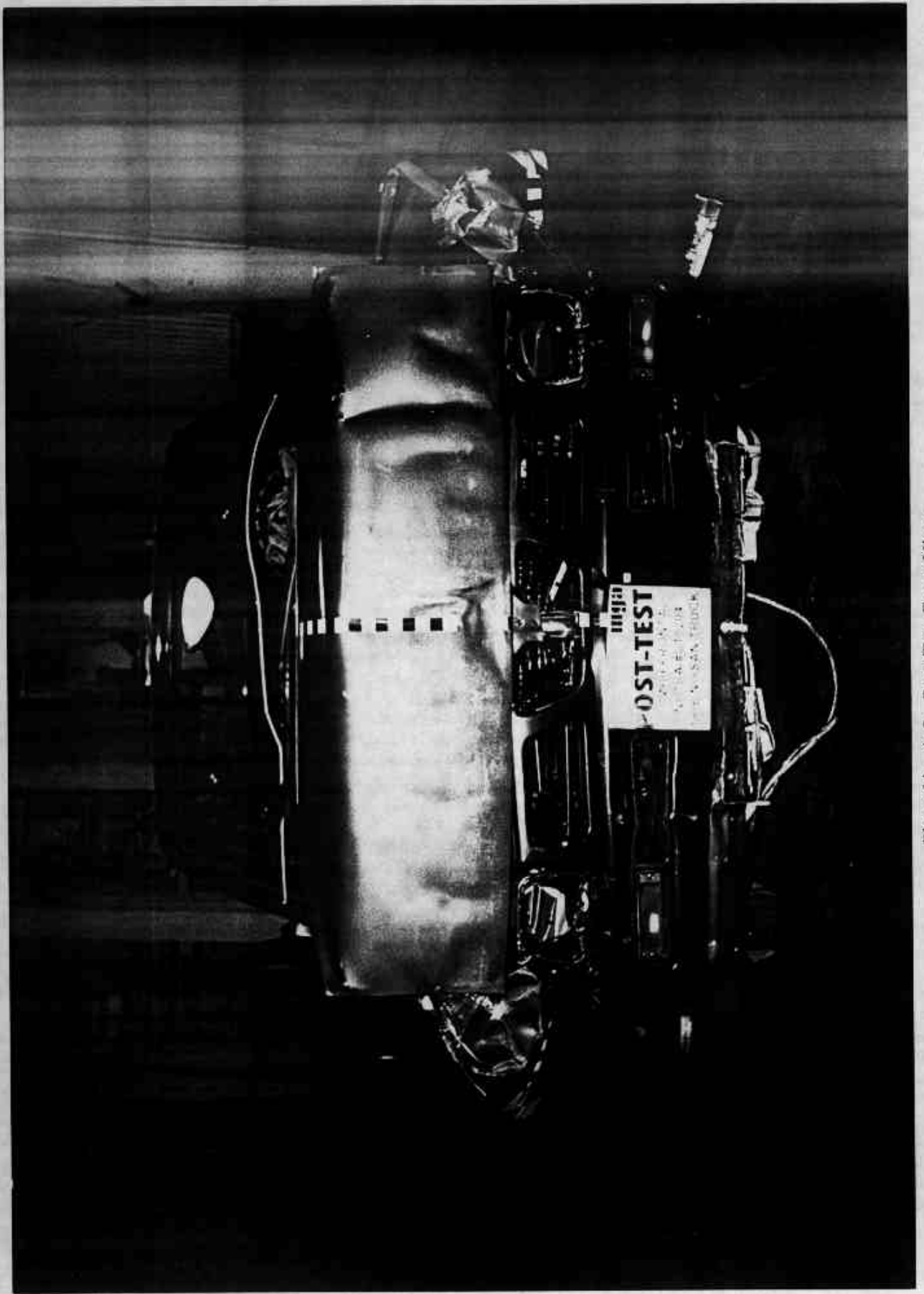


Photo No. A-2 - Post-Test Front View

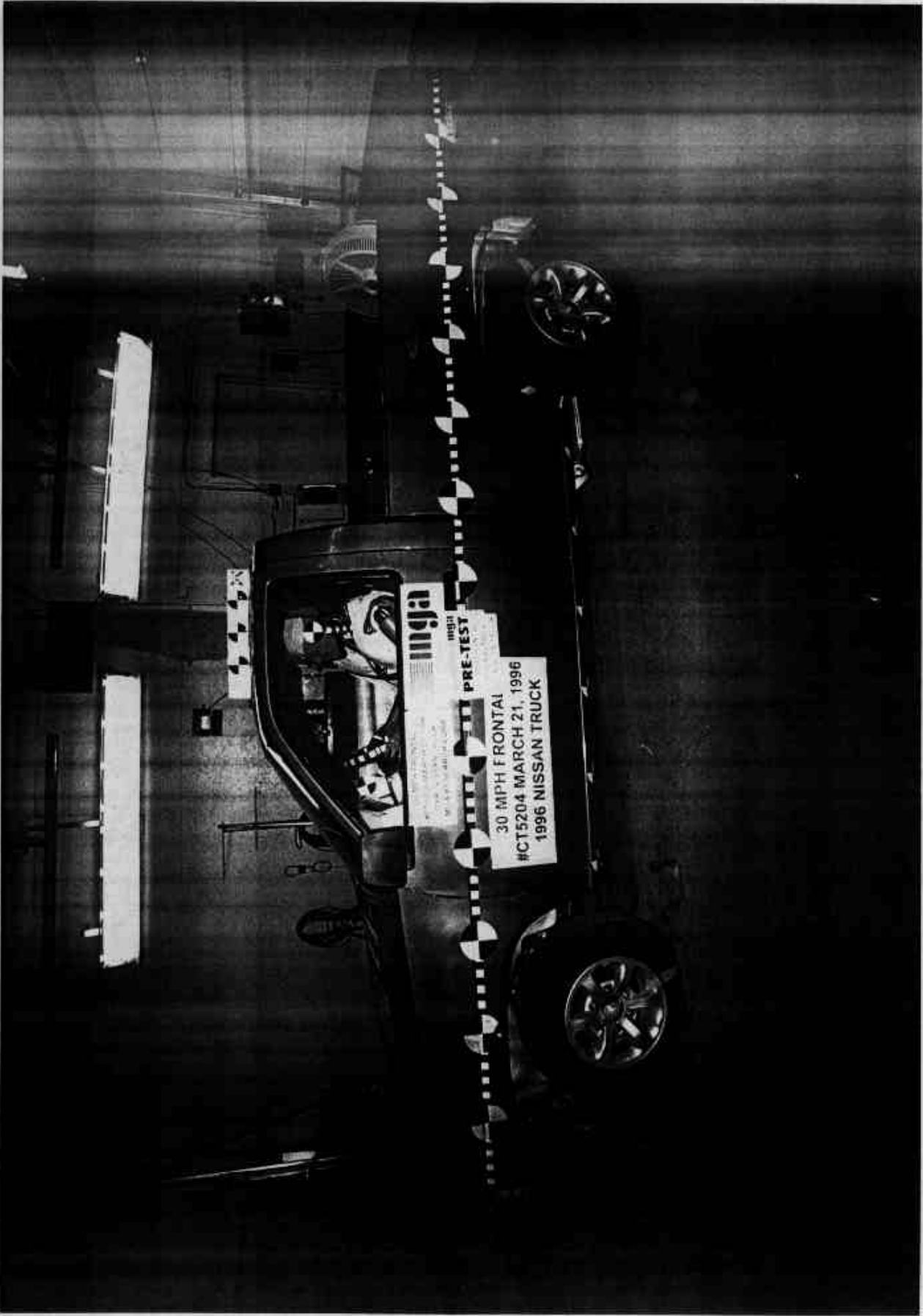
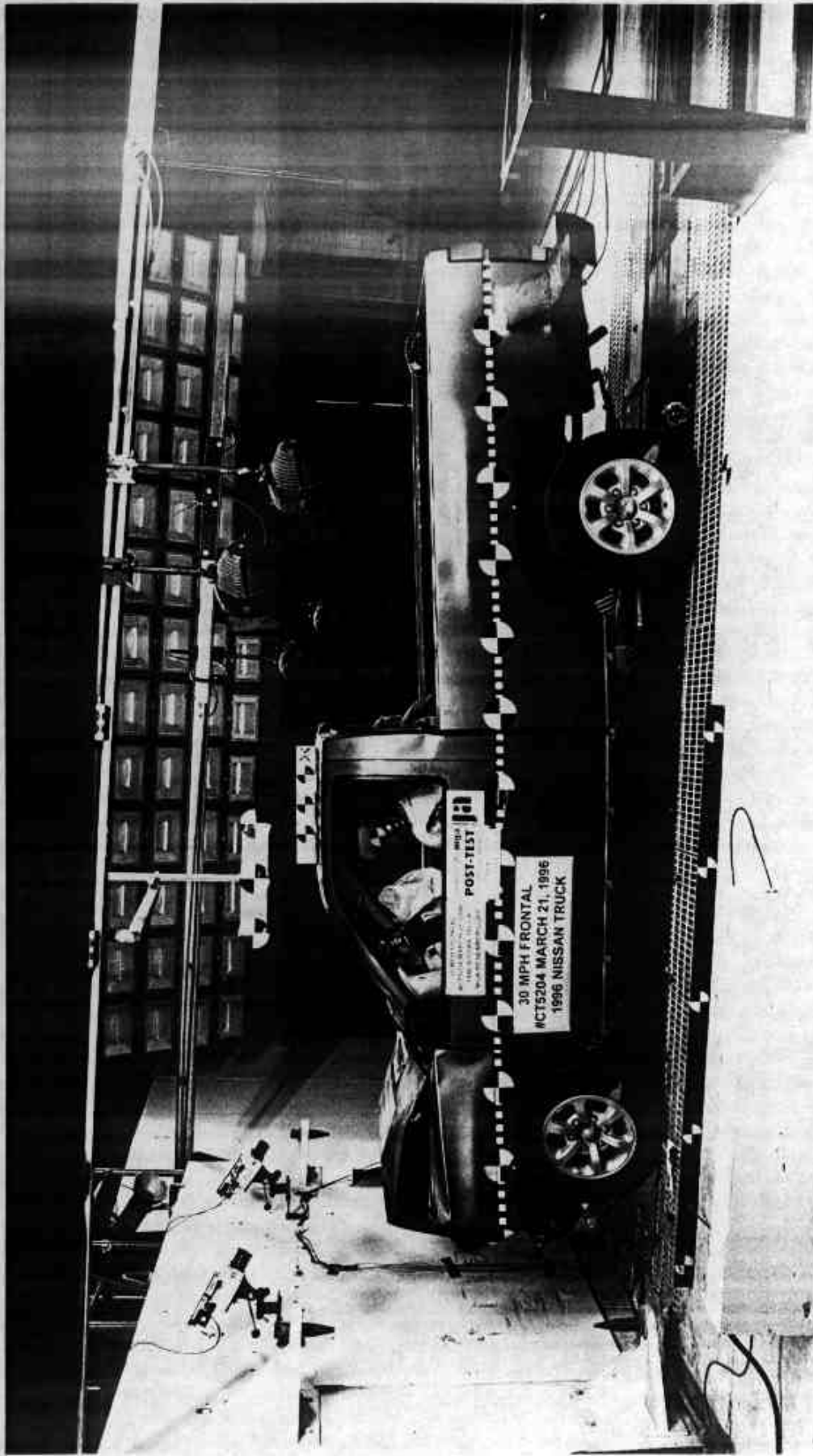


Photo No. A-3 - Pre-Test Left Side View



A-4

Photo No. A-4 - Post-Test Left Side View

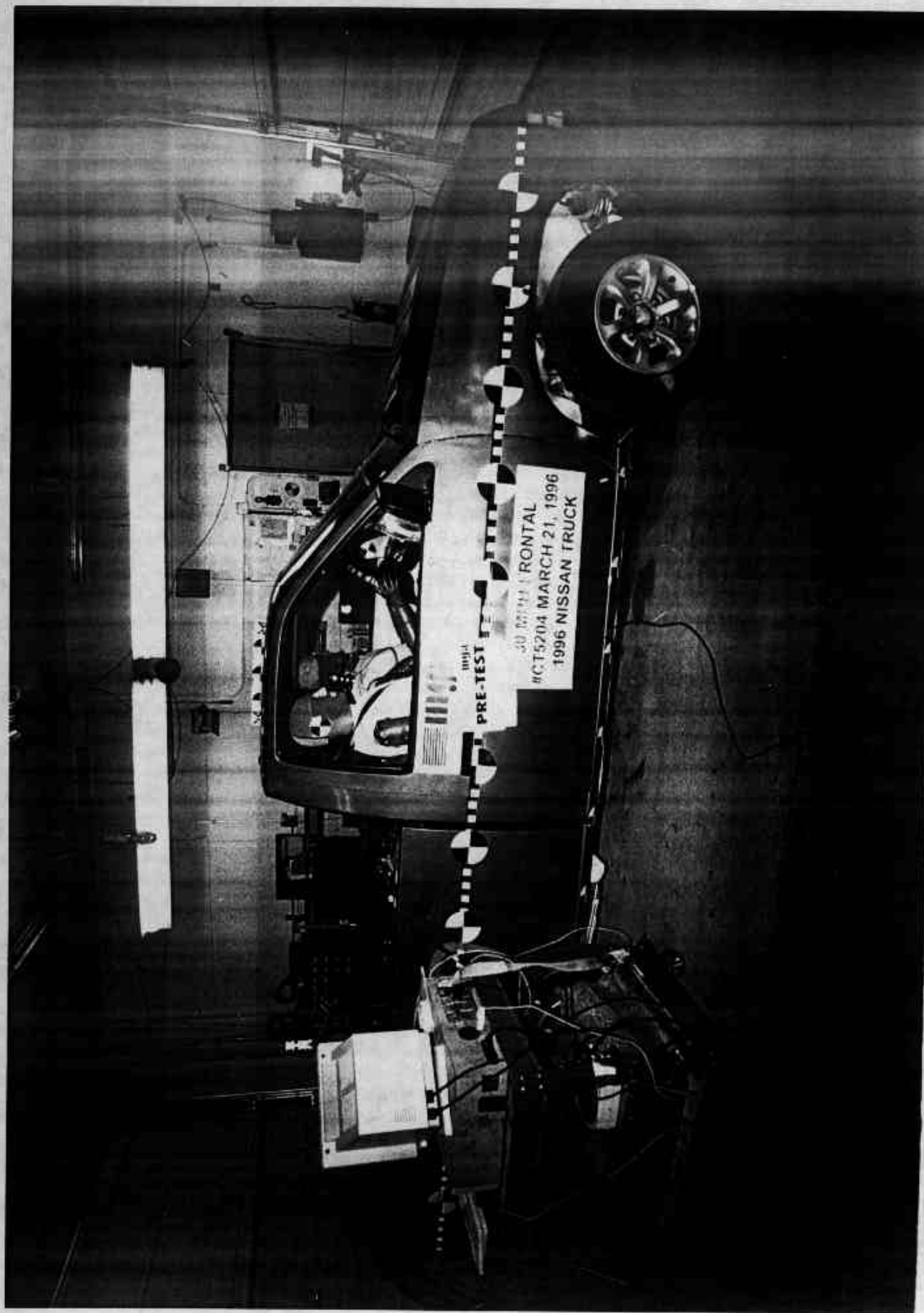


Photo No. A-5 - Pre-Test Right Side View

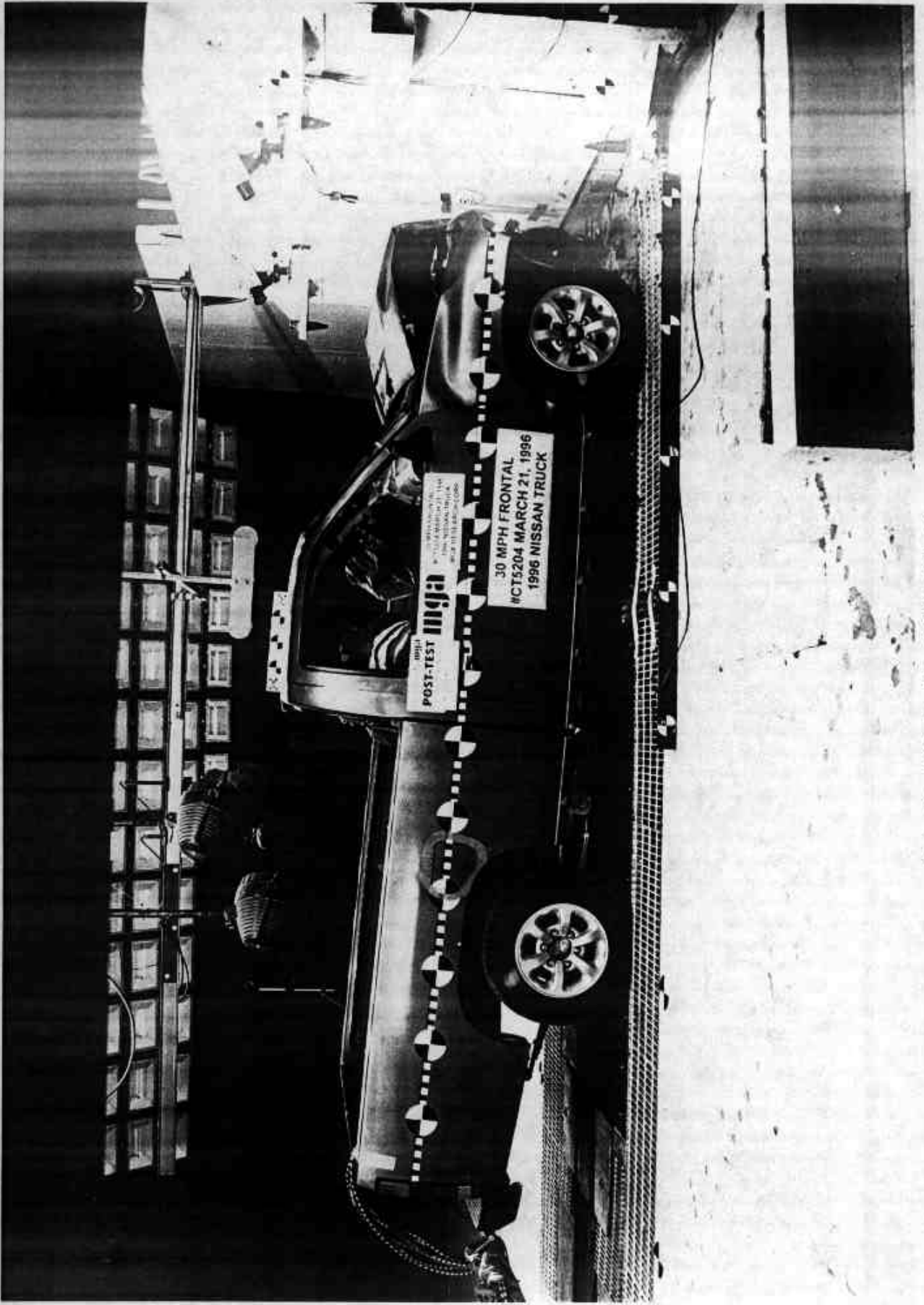


Photo No. A-6 - Post-Test Right Side View

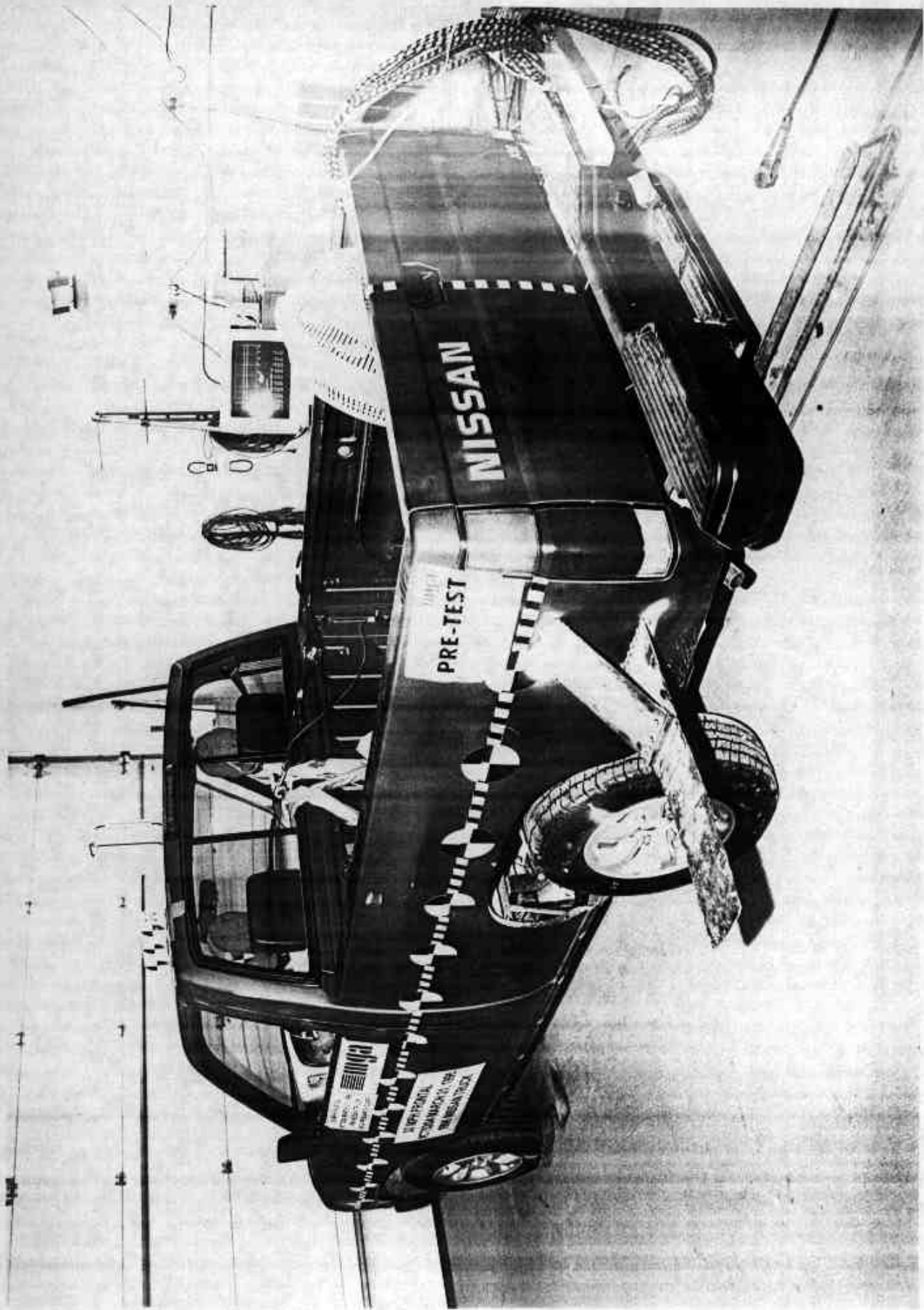


Photo No. A-7 - Pre-Test 3/4 Left Rear View

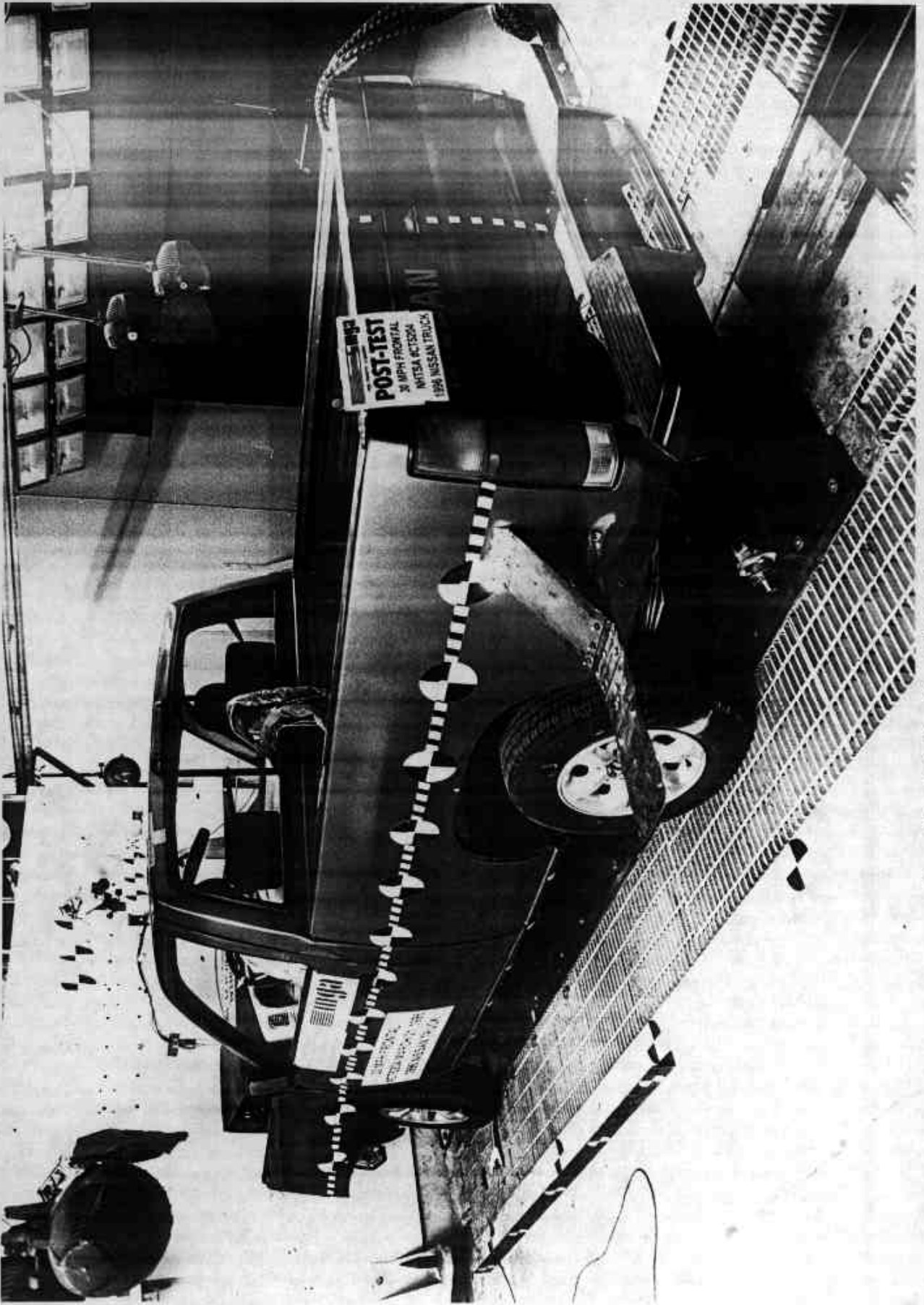


Photo No. A-8 - Post-Test 3/4 Left Rear View

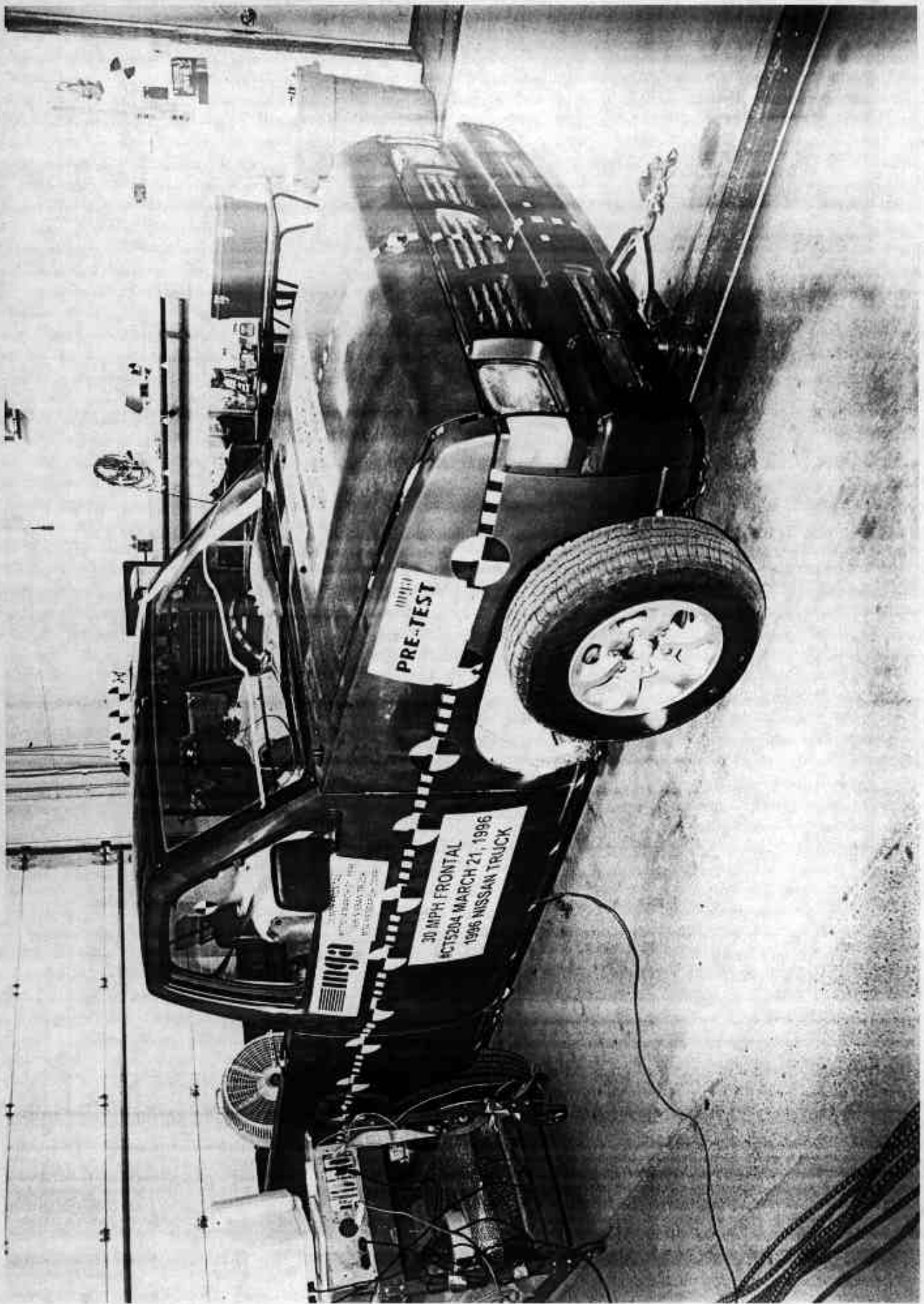


Photo No. A-9 - Pre-Test 3/4 Right Front View

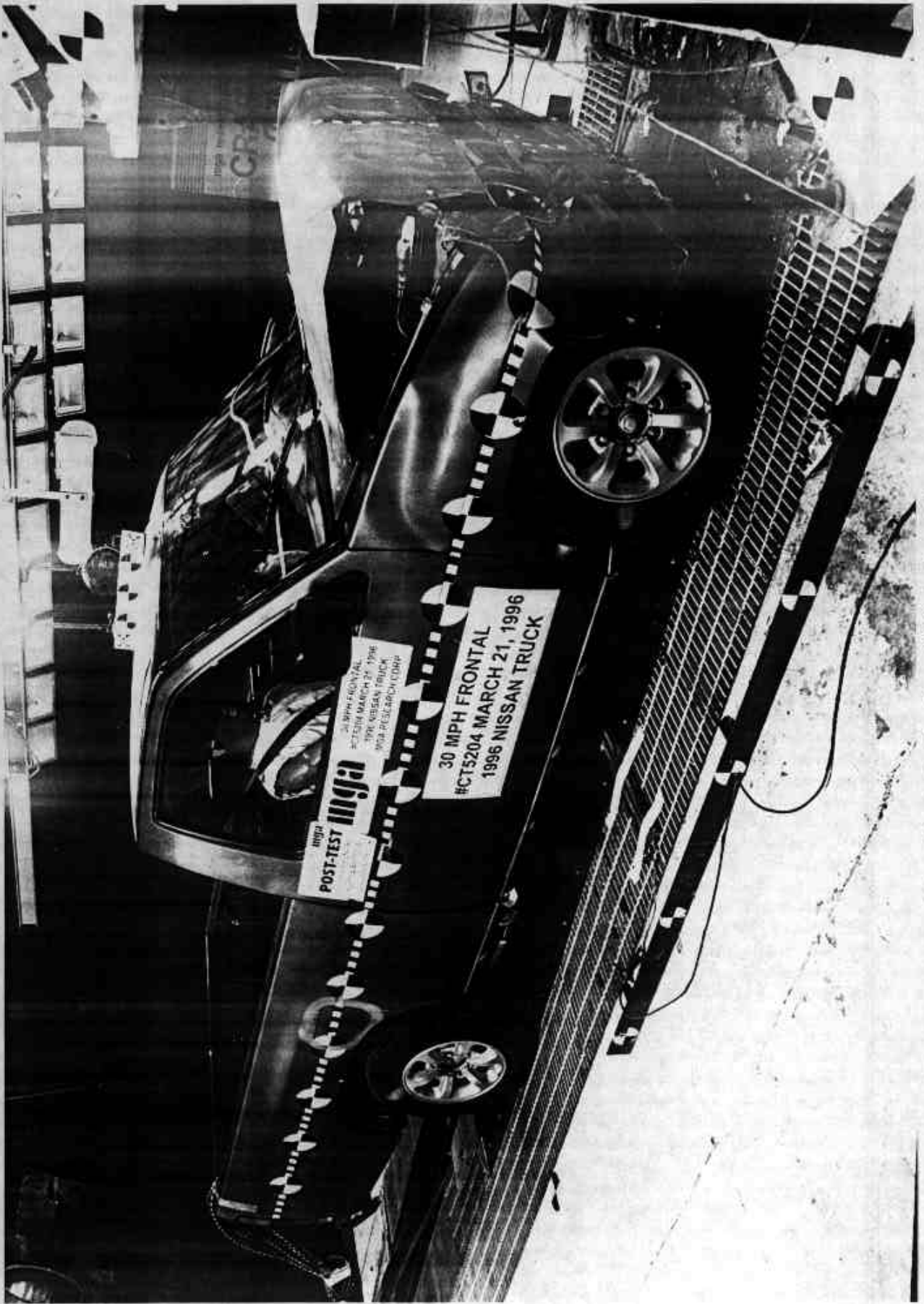


Photo No. A-10 - Post-Test 3/4 Right Front View

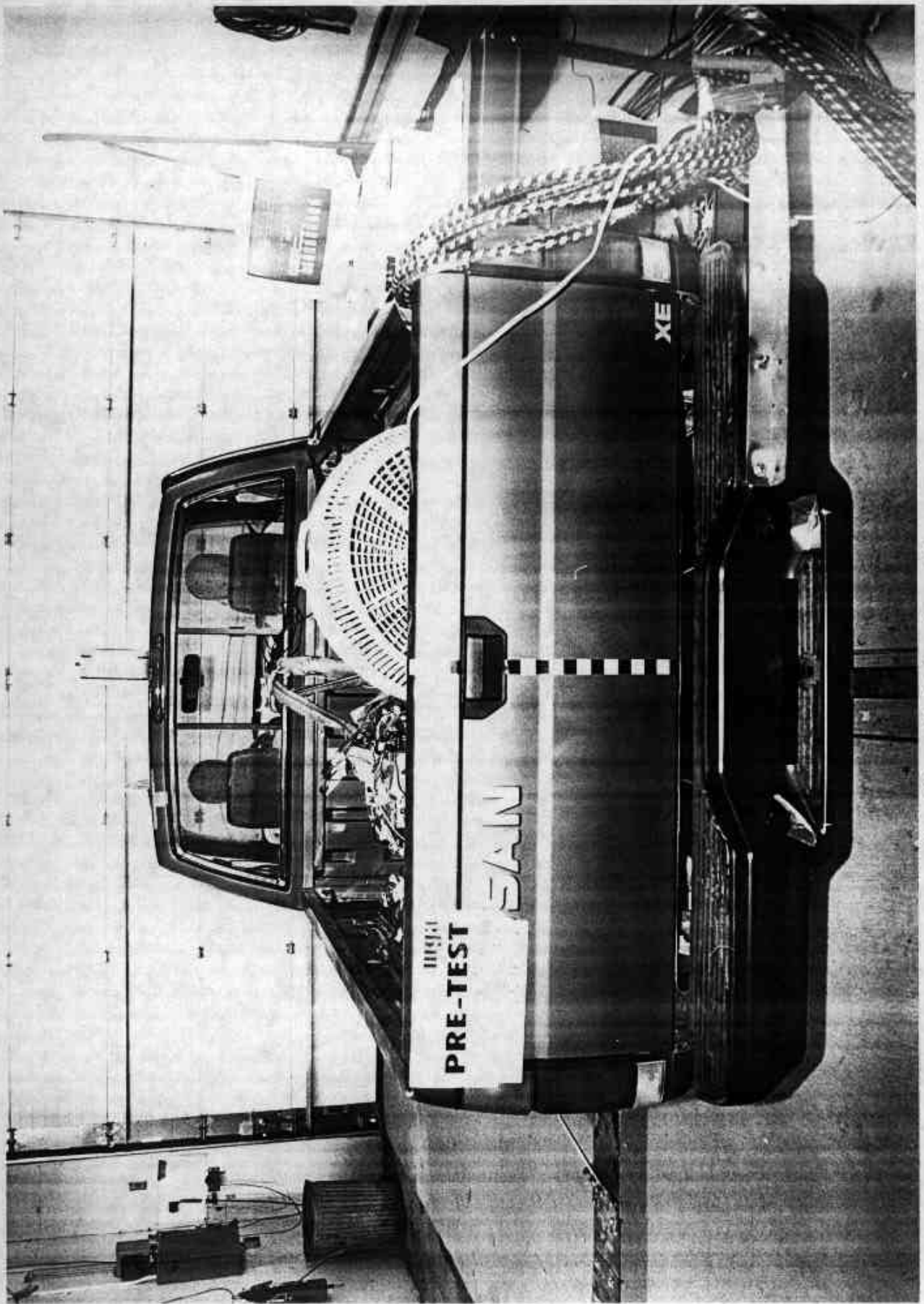


Photo No. A-11 - Pre-Test Rear View

A-11

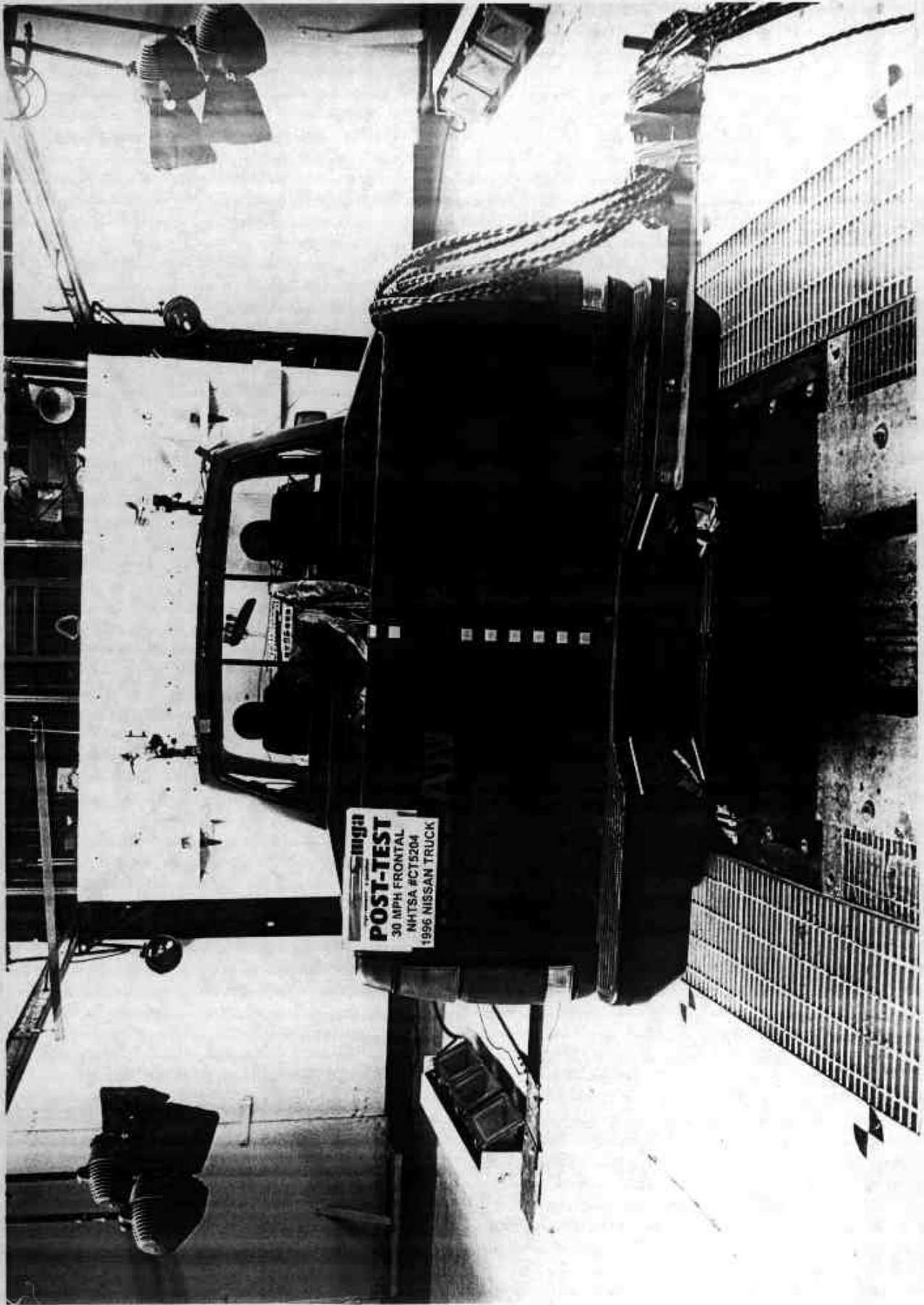


Photo No. A-12 - Post-Test Rear View

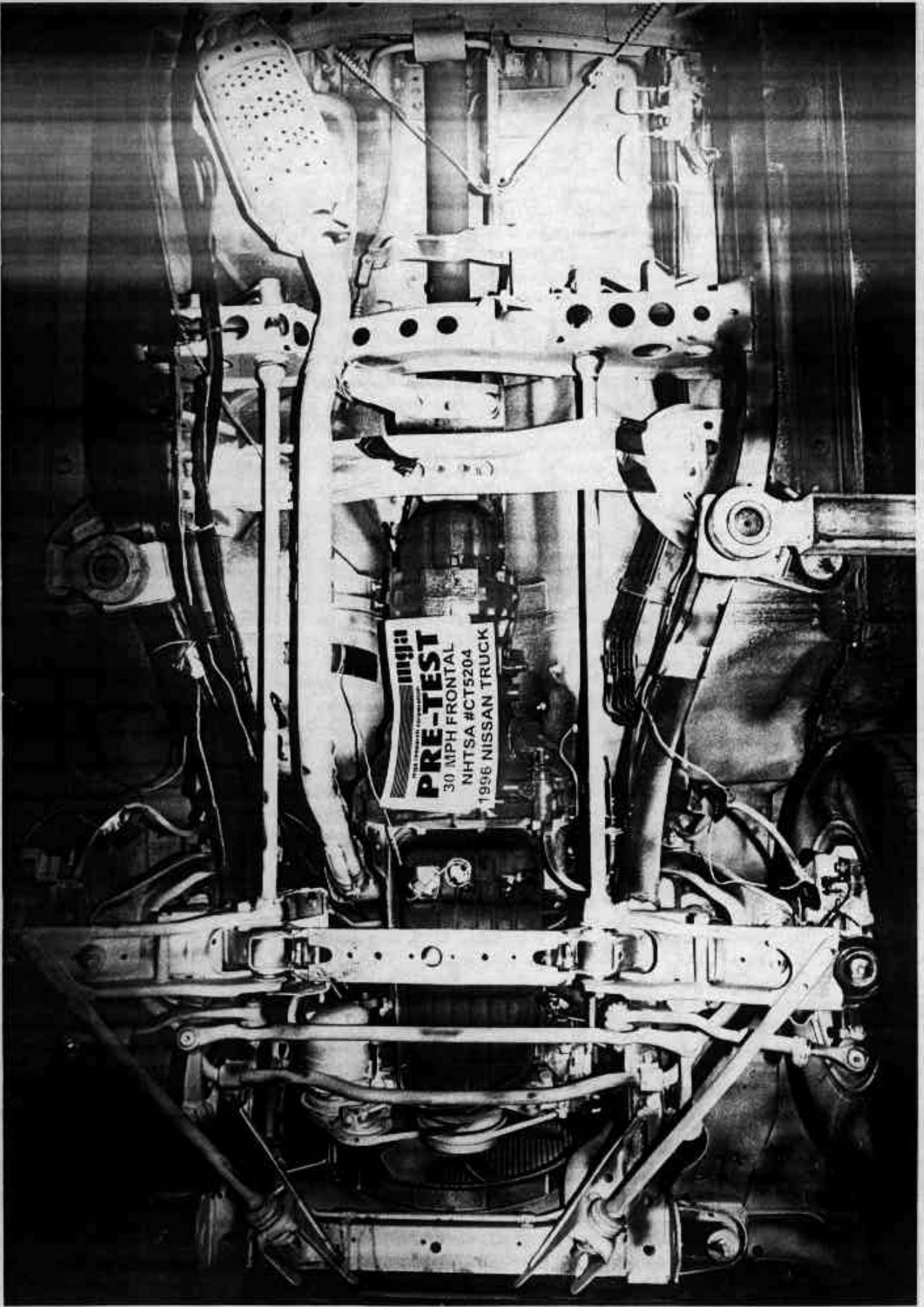


Photo No. A-13- Pre-Test Front Underbody View

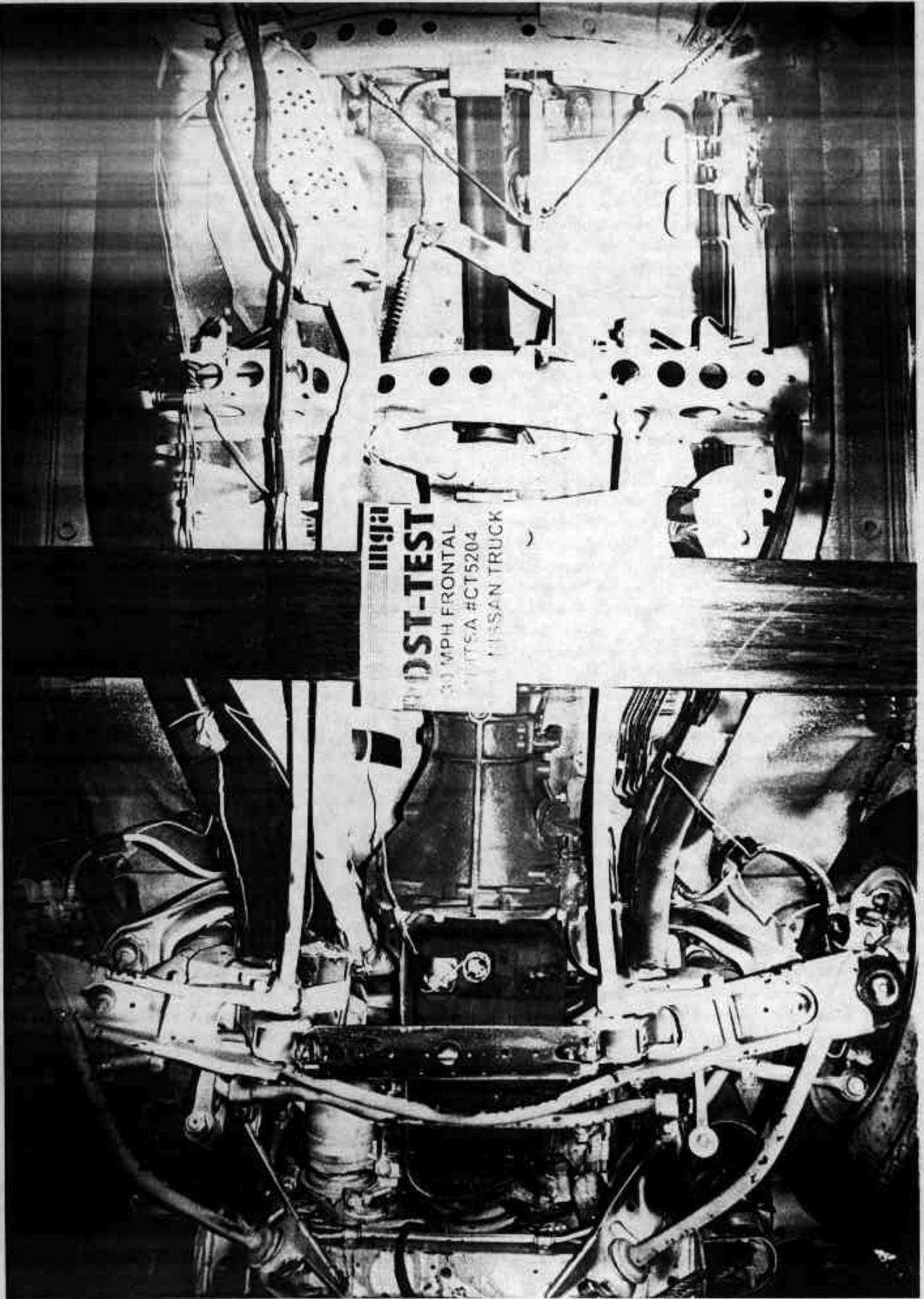


Photo No. A-14 - Post-Test Front Underbody View

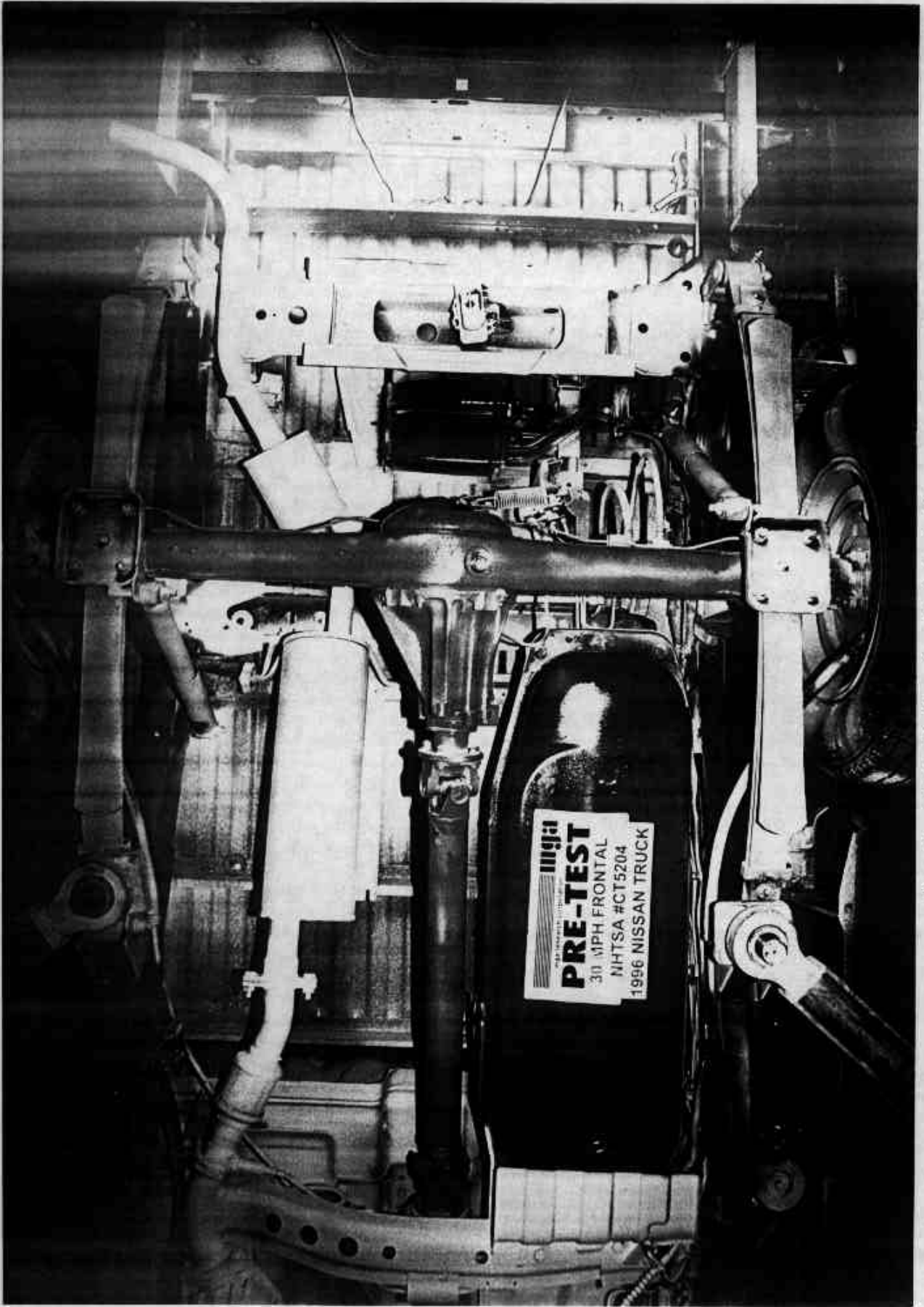


Photo No. A-15 - Pre-Test Rear Underbody View



Photo No. A-16 - Post-Test Rear Underbody View

A-16

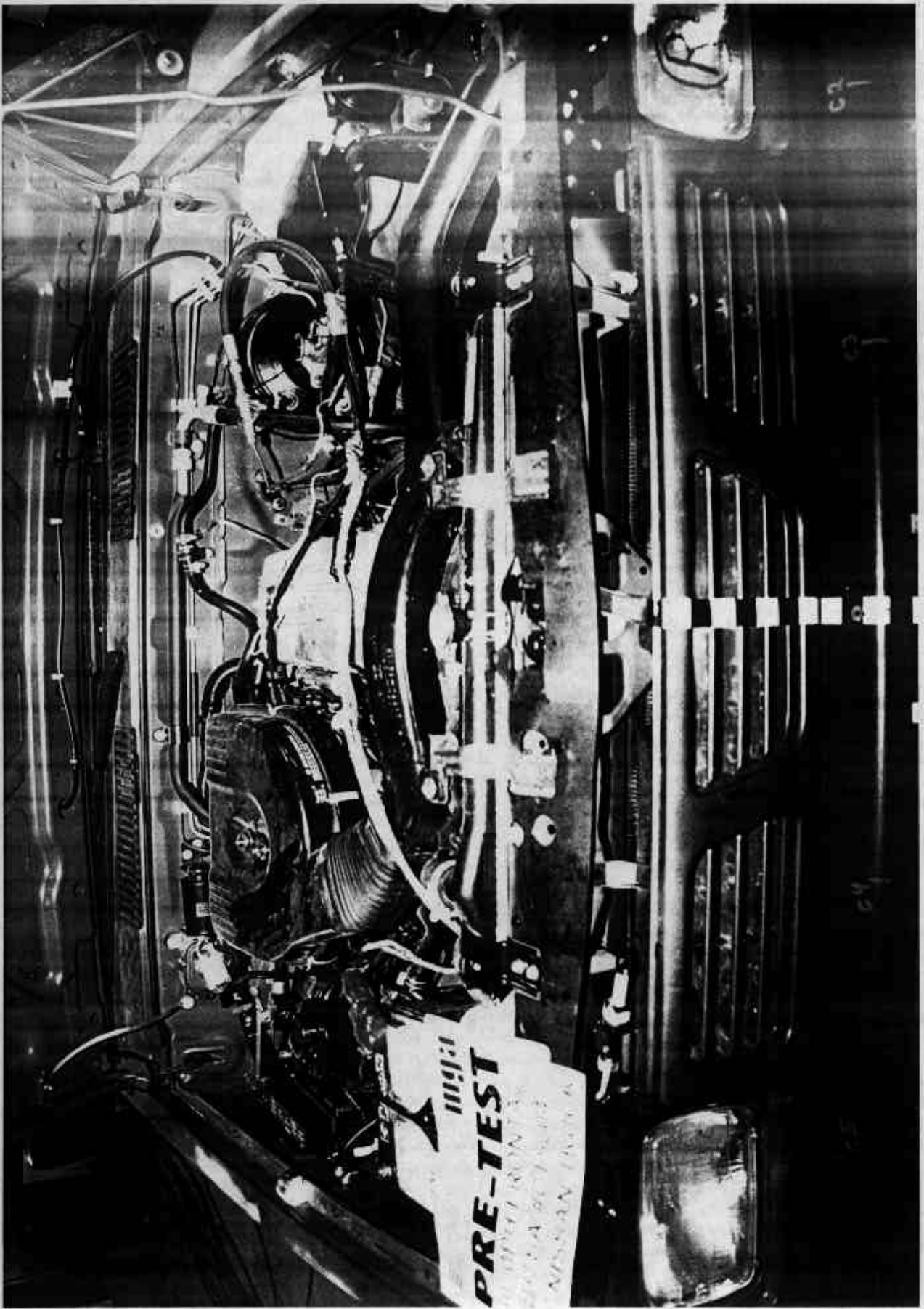


Photo No. A-17 - Pre-Test Engine Compartment View

A-17

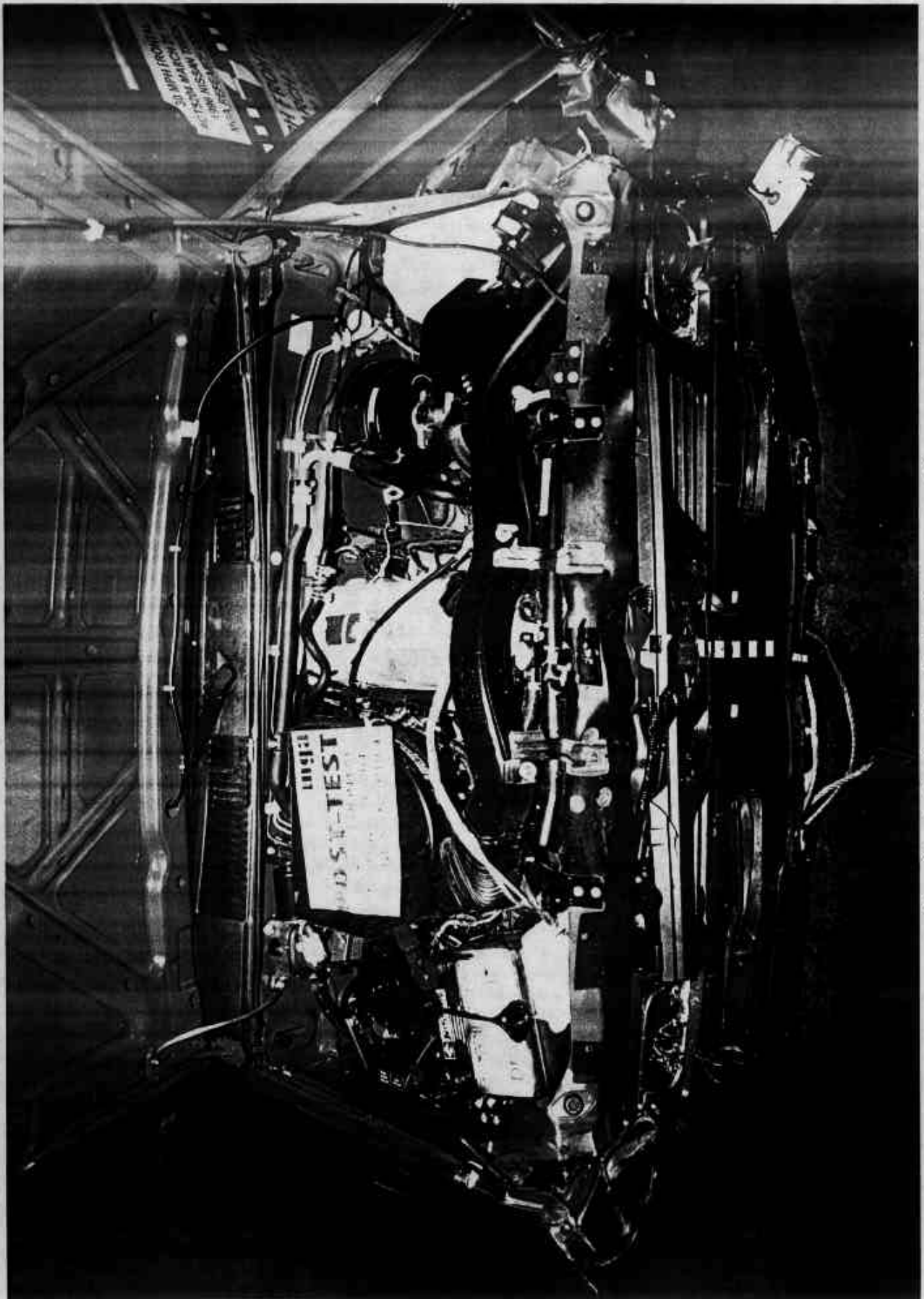


Photo No. A-18 - Post-Test Engine Compartment View

A-18



PRE-TESTI
31 SUP-FRONTAL
NHTSA #CT5204
1996 NISSAN TRUCK

Photo No. A-19 - Pre-Test Fuel Filler Cap View



30 MPH FRONTAL
#CT5204 MARCH 21, 1996
1096 NISSAN TRUCK

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

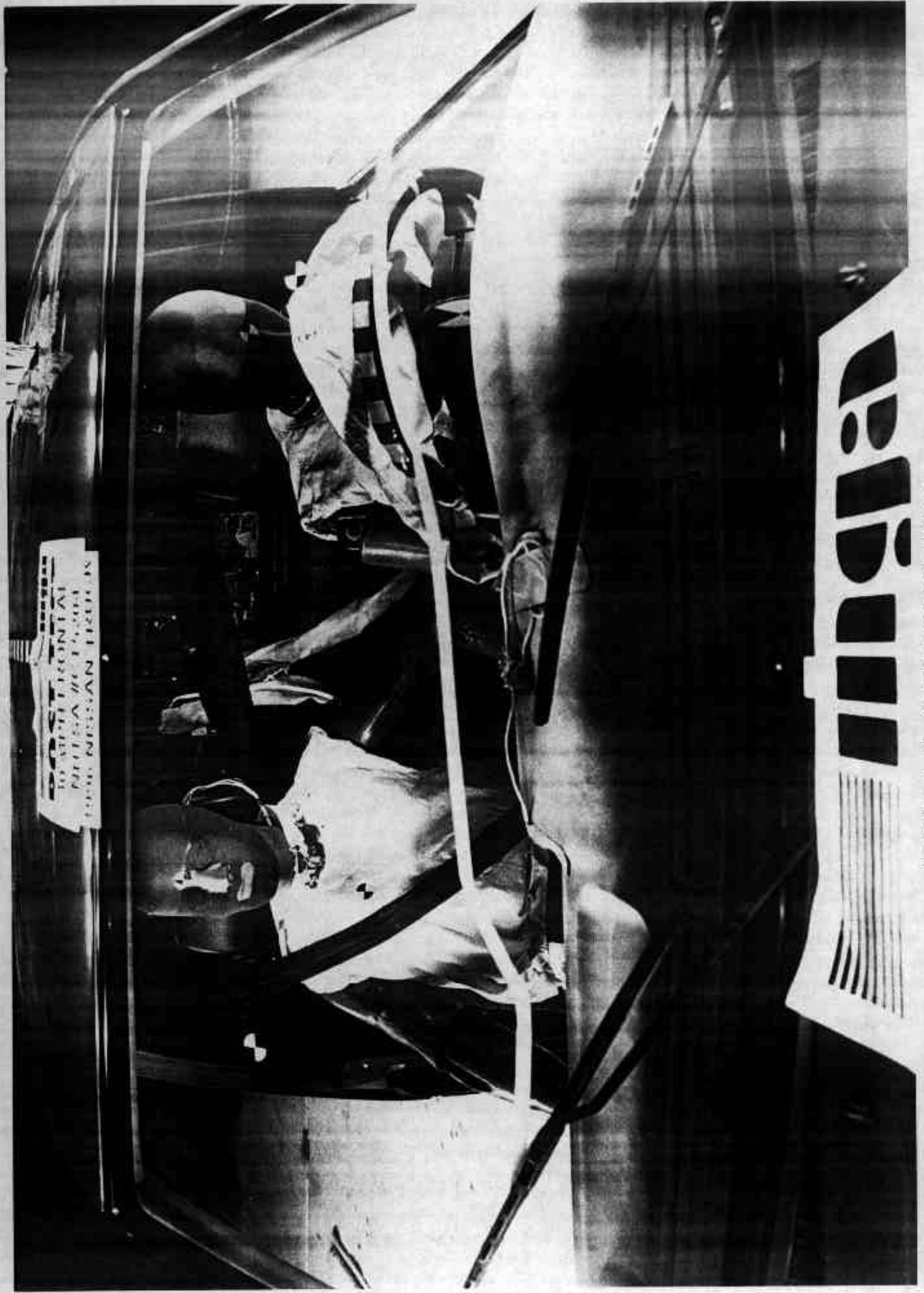


Photo No. A-21 - Post-Test Windshield View

A-21

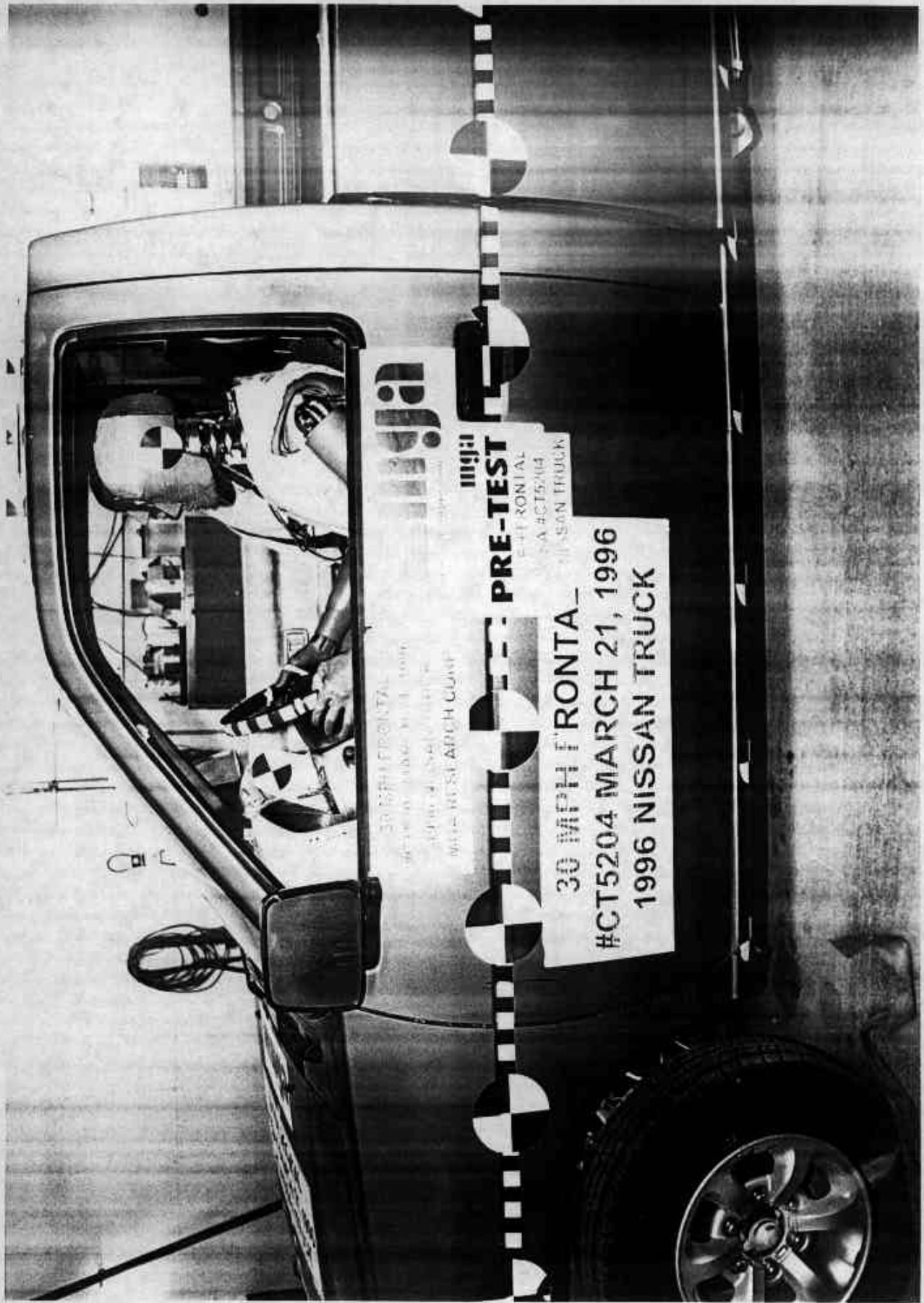
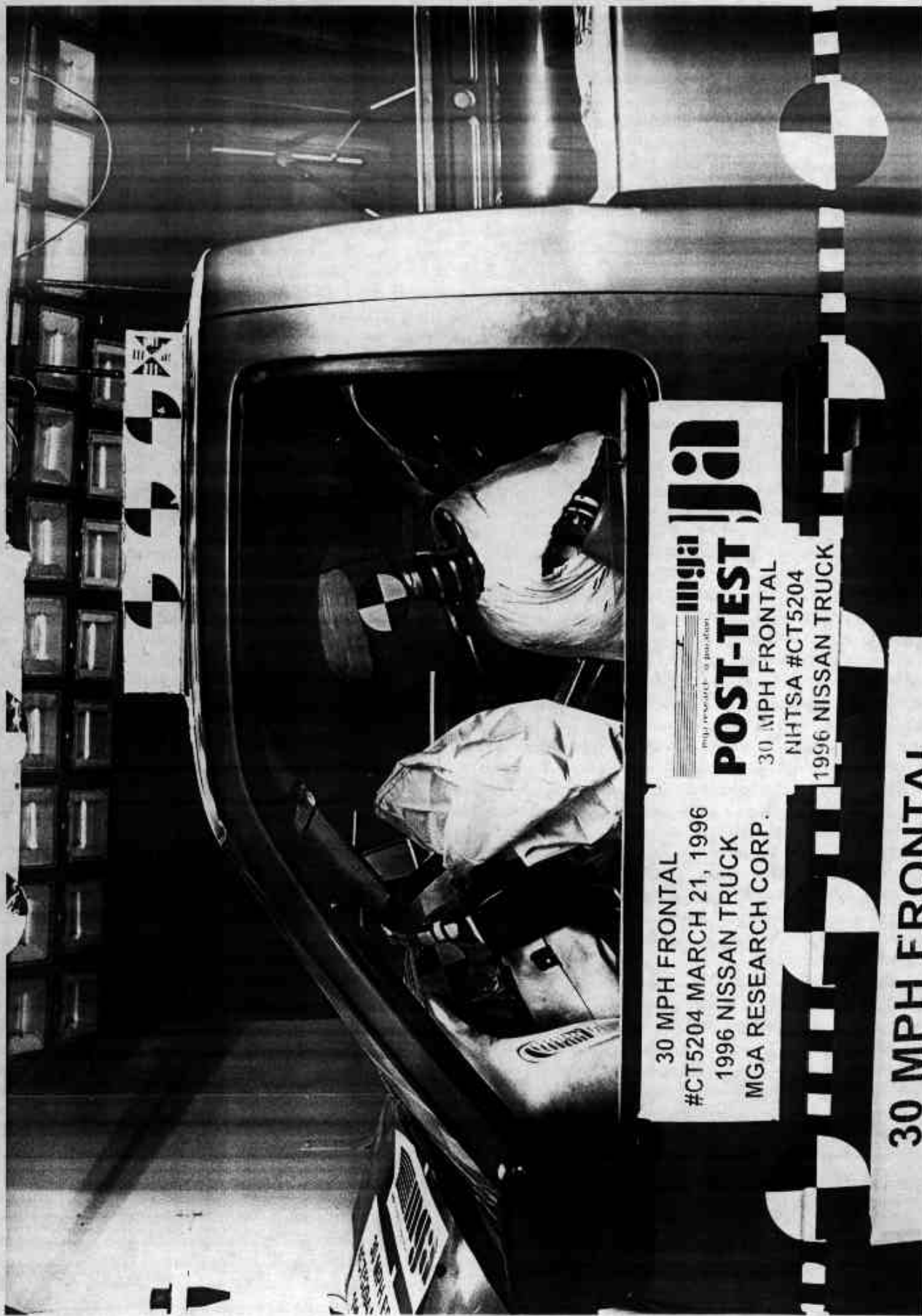


Photo No. A-22 - Pre-Test Driver Dummy Position View



30 MPH FRONTAL
#CT5204 MARCH 21, 1996
1996 NISSAN TRUCK
MGA RESEARCH CORP.

ja
POST-TEST
30 MPH FRONTAL
NHTSA #CT5204
1996 NISSAN TRUCK

30 MPH FRONTAL

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

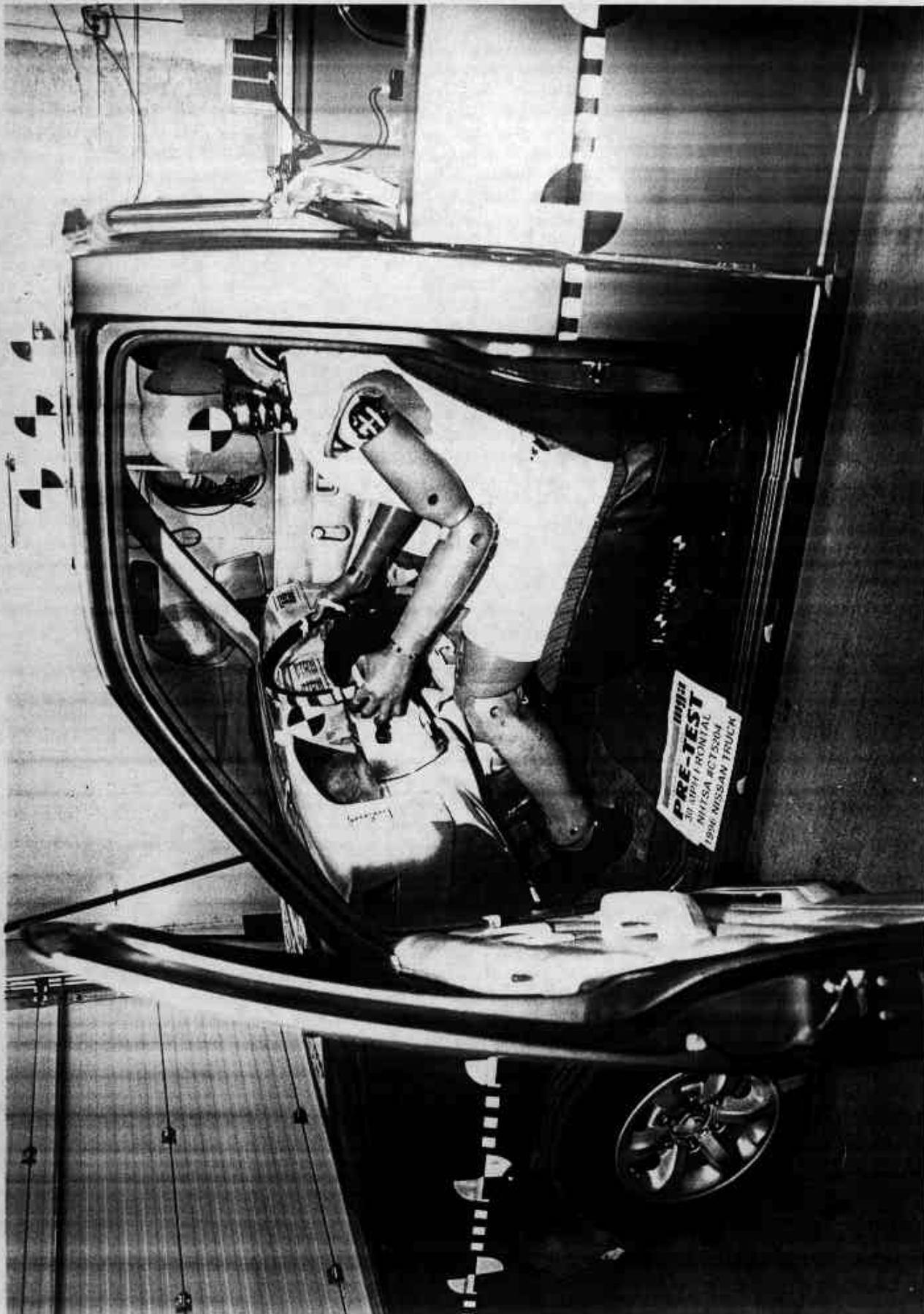


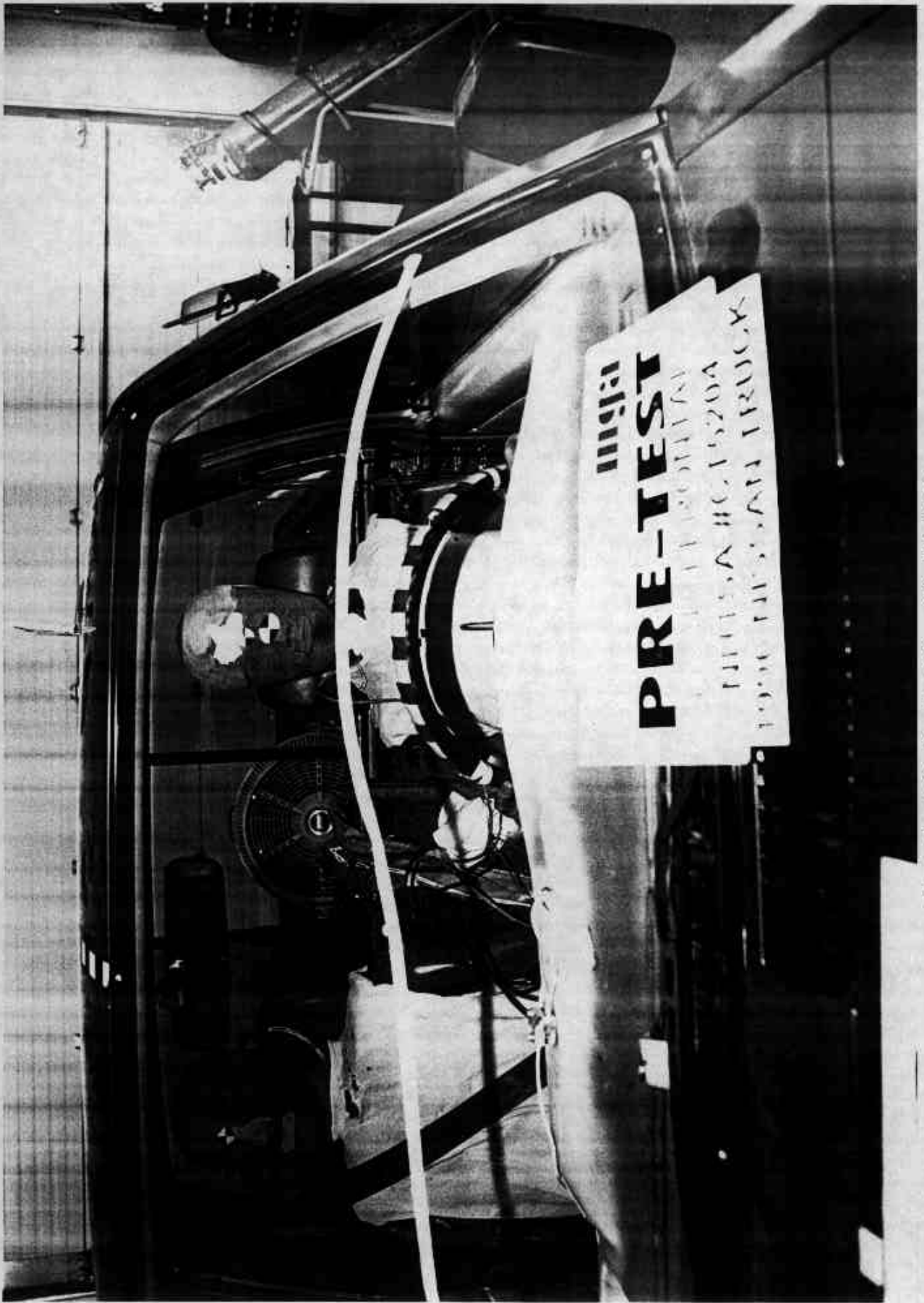
Photo No. A-24 - Pre-Test Driver Dummy Position View (Door Open)

A-24



Photo No. A-25 - Post-Test Driver Dummy Position View (Door Open)

A-25



A-26

Photo No. A-26 - Pre-Test Driver Windshield View



Photo No. A-27 - Post-Test Driver Windshield View

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Photo No. A-28 - Pre-Test Driver Seat Position View



Photo No. A-29 - Post-Test Driver Seat Position View



Photo No. A-30 - Pre-Test Driver Knee Bolster View



Photo No. A-31 - Post-Test Driver Knee Bolster View

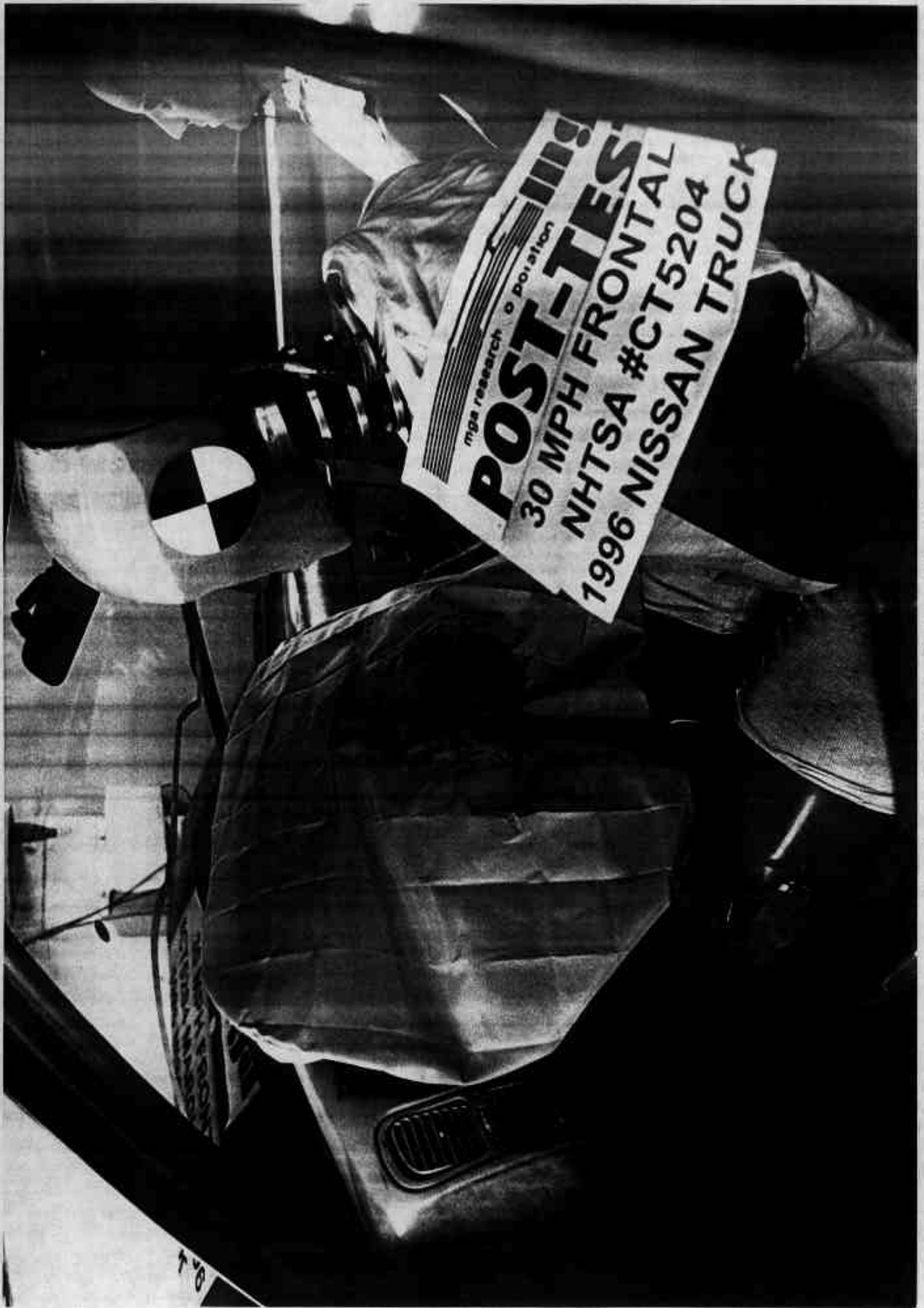


Photo No. A-32 - Post-Test Driver Airbag View



Photo No. A-33 - Post-Test Driver Knee Contact View

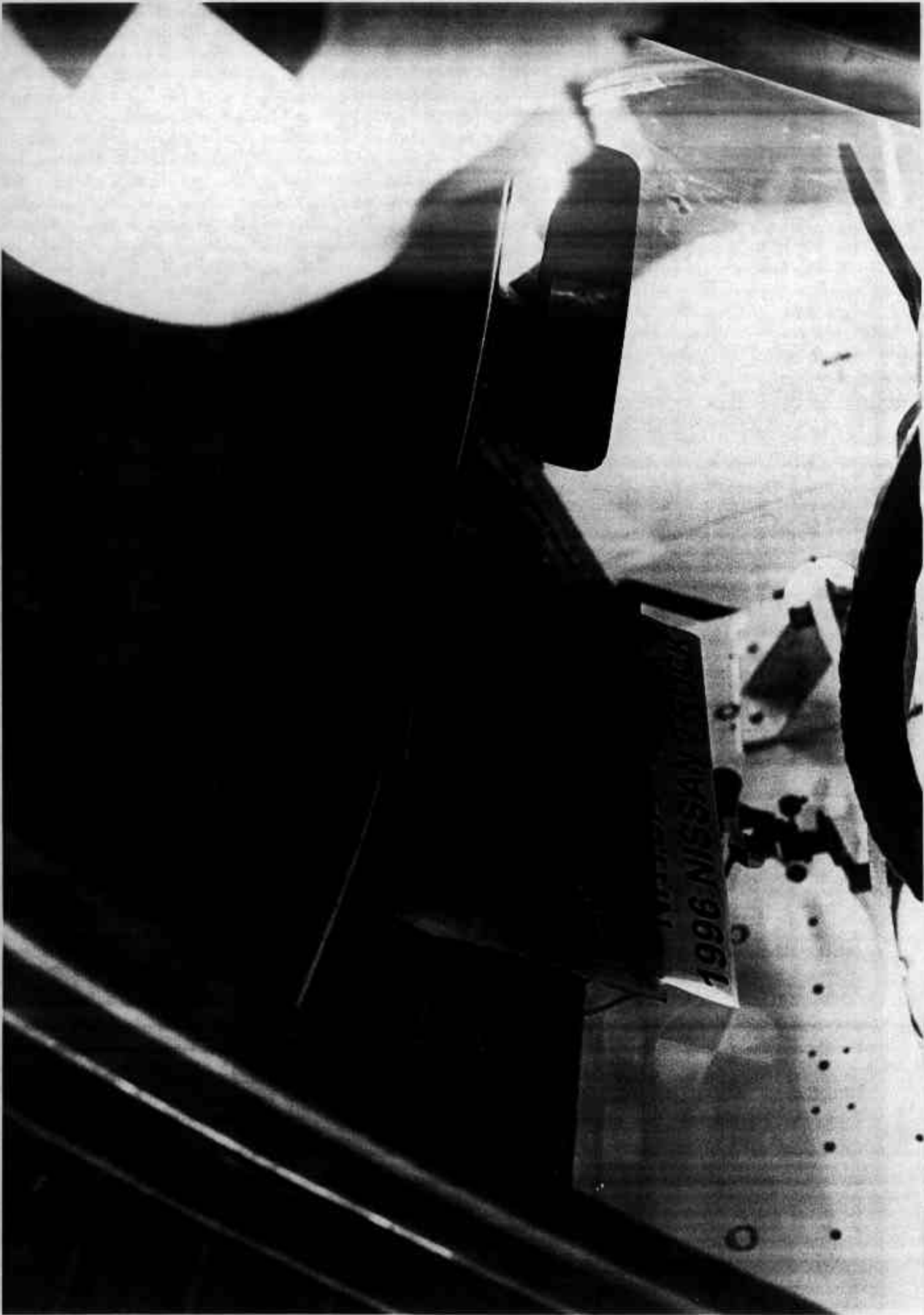
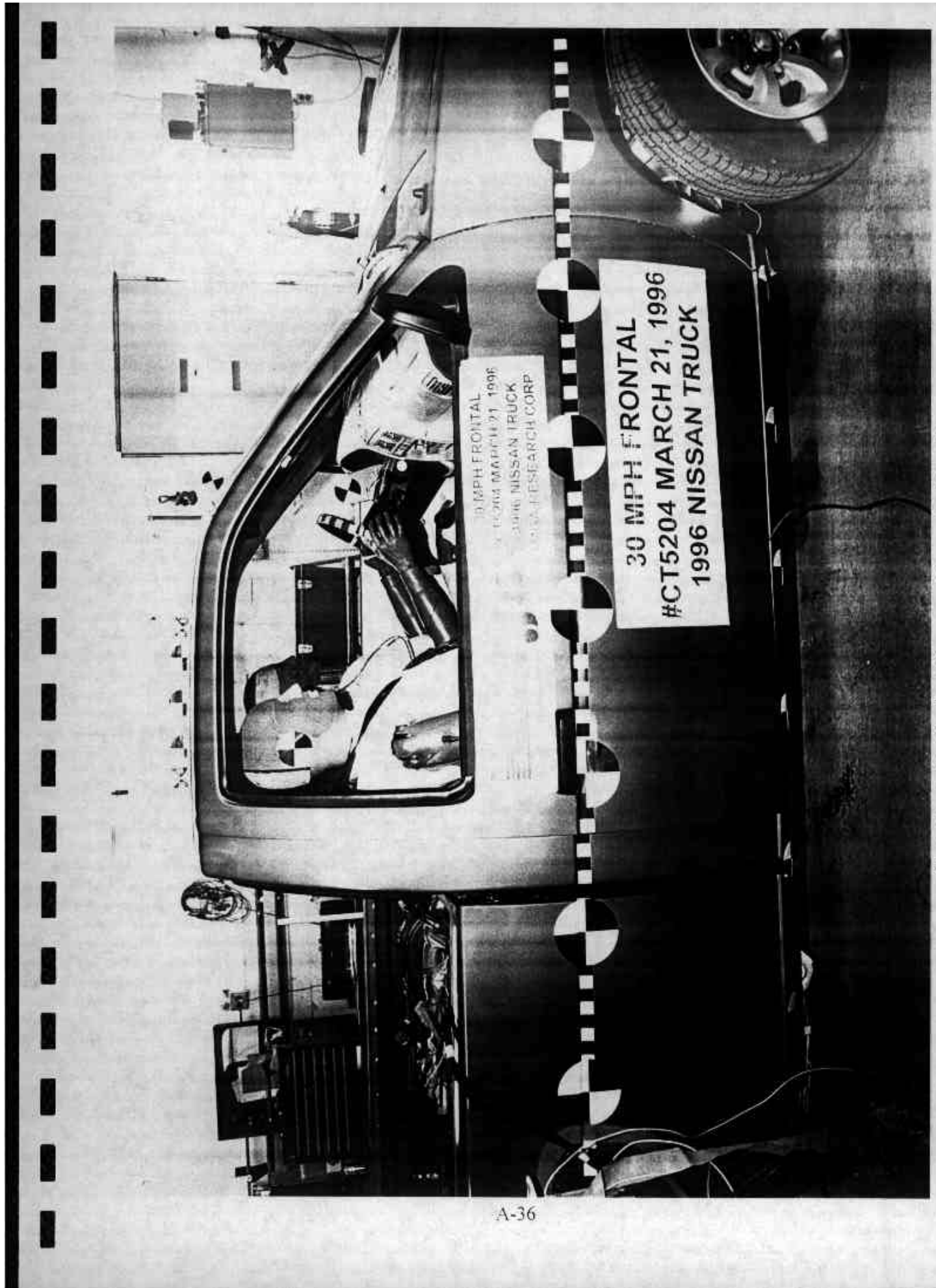


Photo No. A-34 - Post-Test Driver Head Contact View

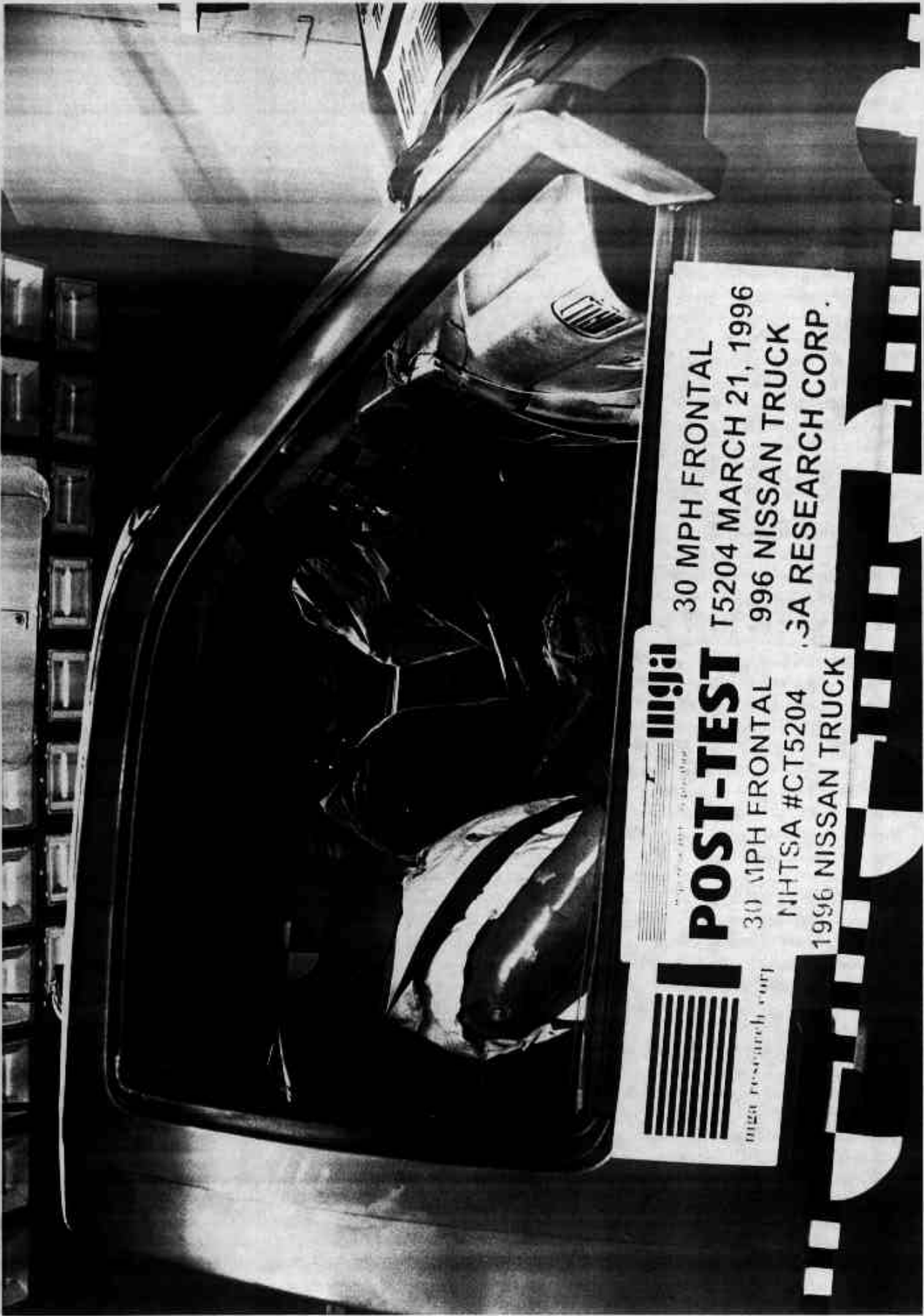


Photo No. A-35 - Post-Test Driver Head Contact View



A-36

Photo No. A-36 - Pre-Test Passenger Dummy Position View



30 MPH FRONTAL
T5204 MARCH 21, 1996
996 NISSAN TRUCK
.3A RESEARCH CORP.

nihtsa

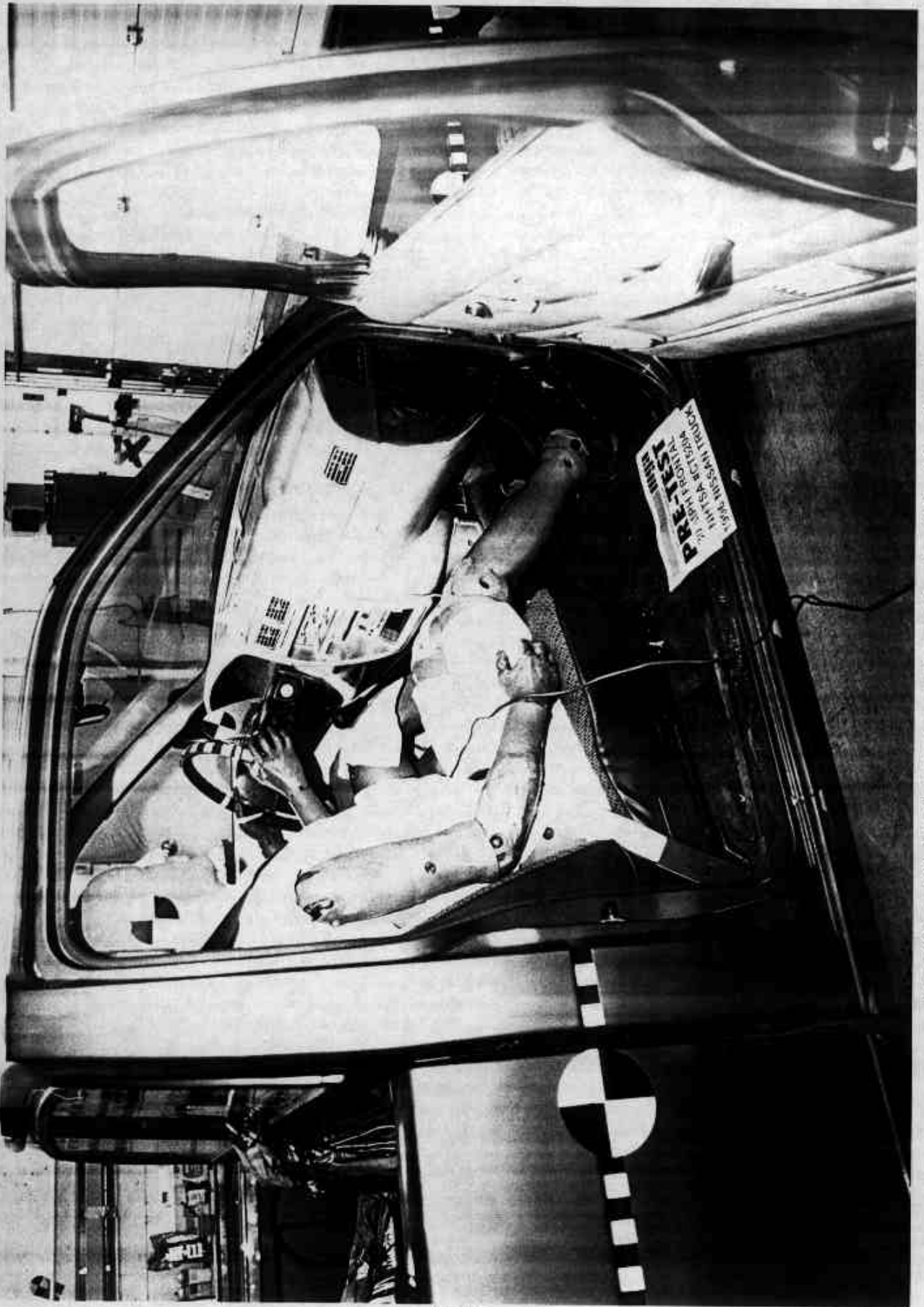
POST-TEST

30 MPH FRONTAL
NIHTSA #CT5204
1996 NISSAN TRUCK



nihtsa research corp

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



A-38

Photo No. A-38 - Pre-Test Passenger Dummy Position View (Door Open)



Photo No. A-39 - Post-Test Passenger Dummy Position View (Door Open)



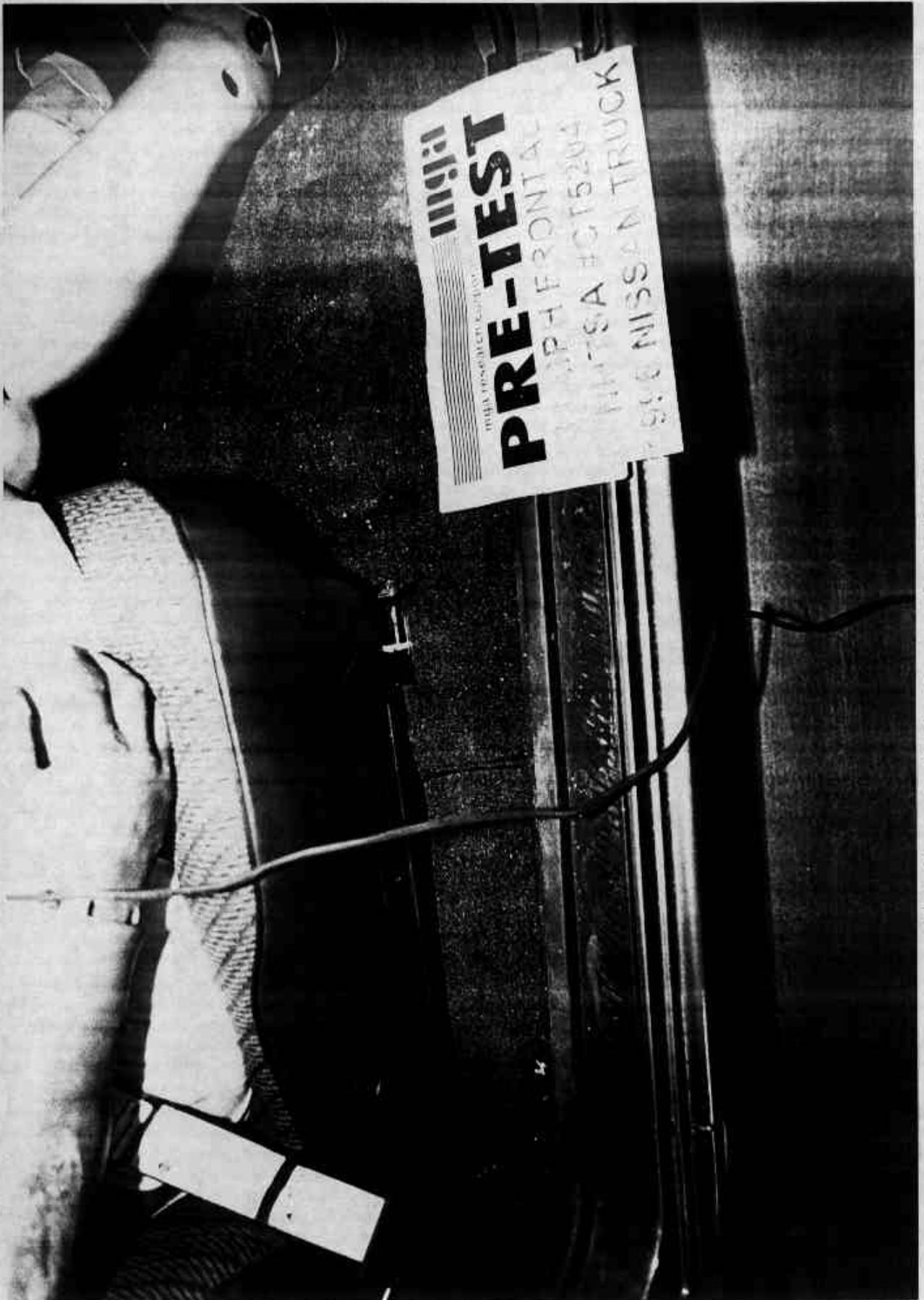
Photo No. A-40 - Pre-Test Passenger Windshield View

A-40



Photo No. A-41 - Post-Test Passenger Windshield View

A-41

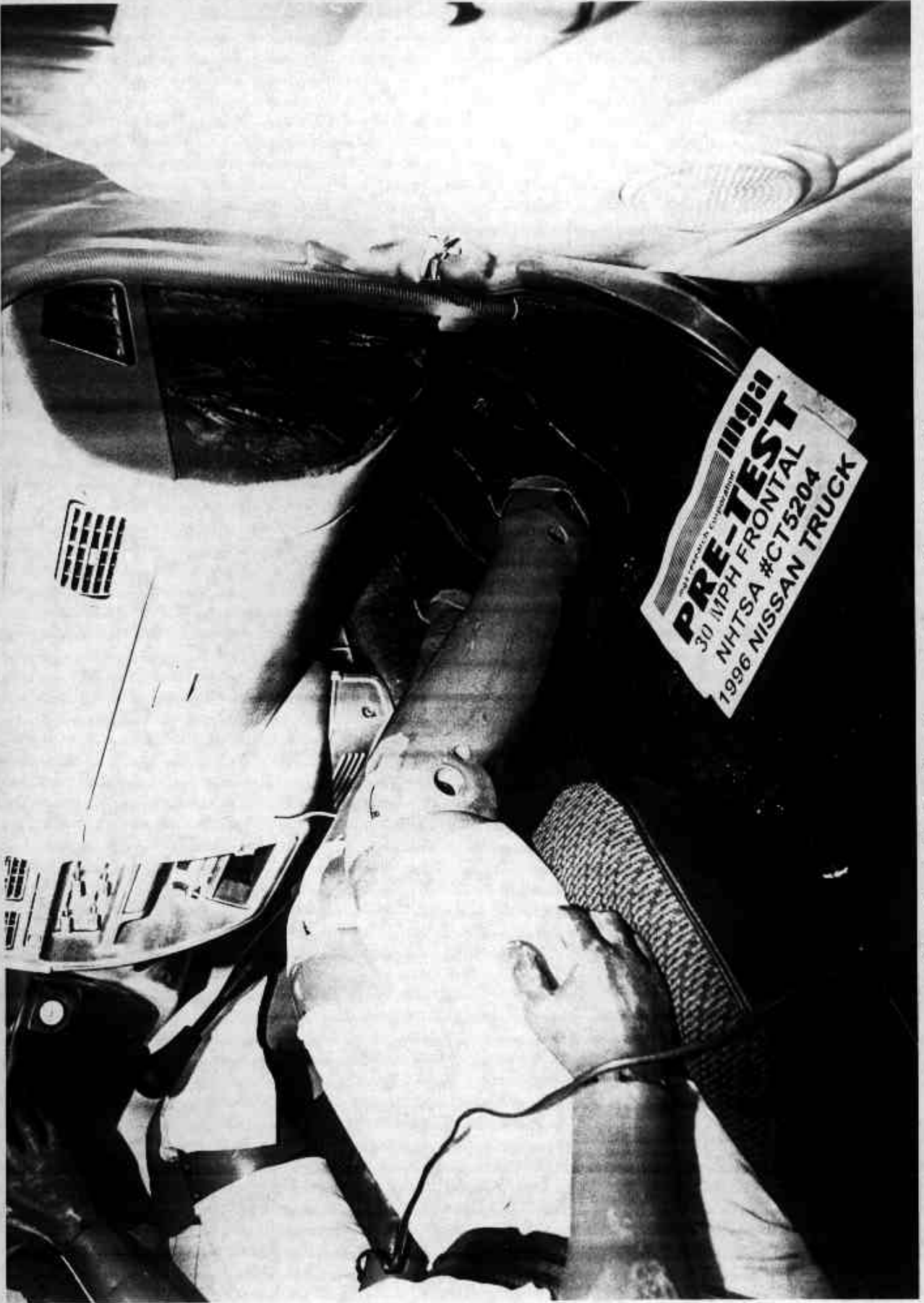


A-42

Photo No. A-42 - Pre-Test Passenger Seat Position View



Photo No. A-43 - Post-Test Passenger Seat Position View



A-44

Photo No. A-44 - Pre-Test Passenger Dummy Knee Bolster View



Photo No. A-45 - Post-Test Passenger Dummy Knee Bolster View

A-45



Photo No. A-46 - Post-Test Passenger Dummy Head Contact View



Photo No. A-47 - Post-Test Passenger Dummy Knee Contact View

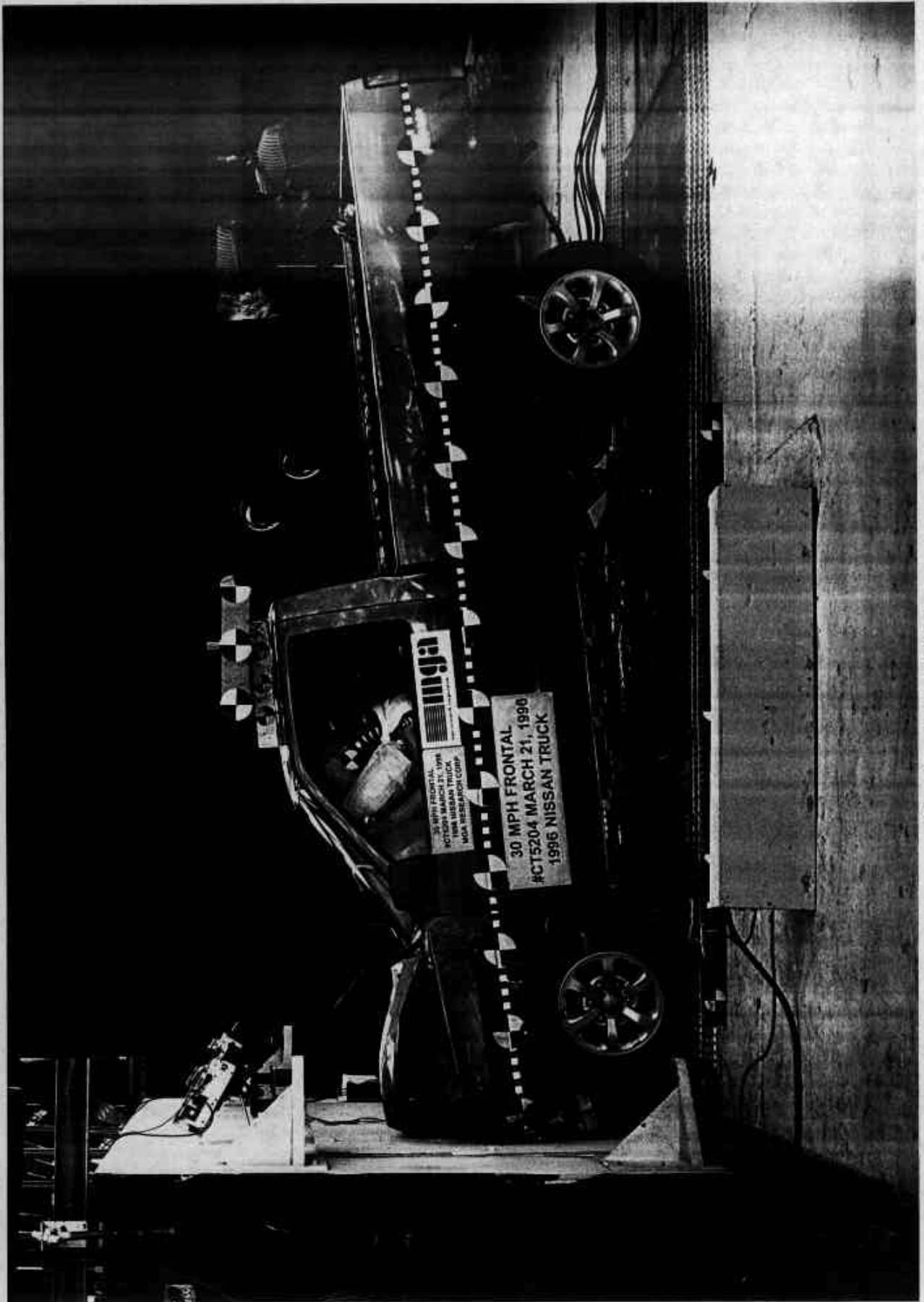


Photo No. A-48 - Vehicle Impact

APPENDIX B
DATA PLOTS

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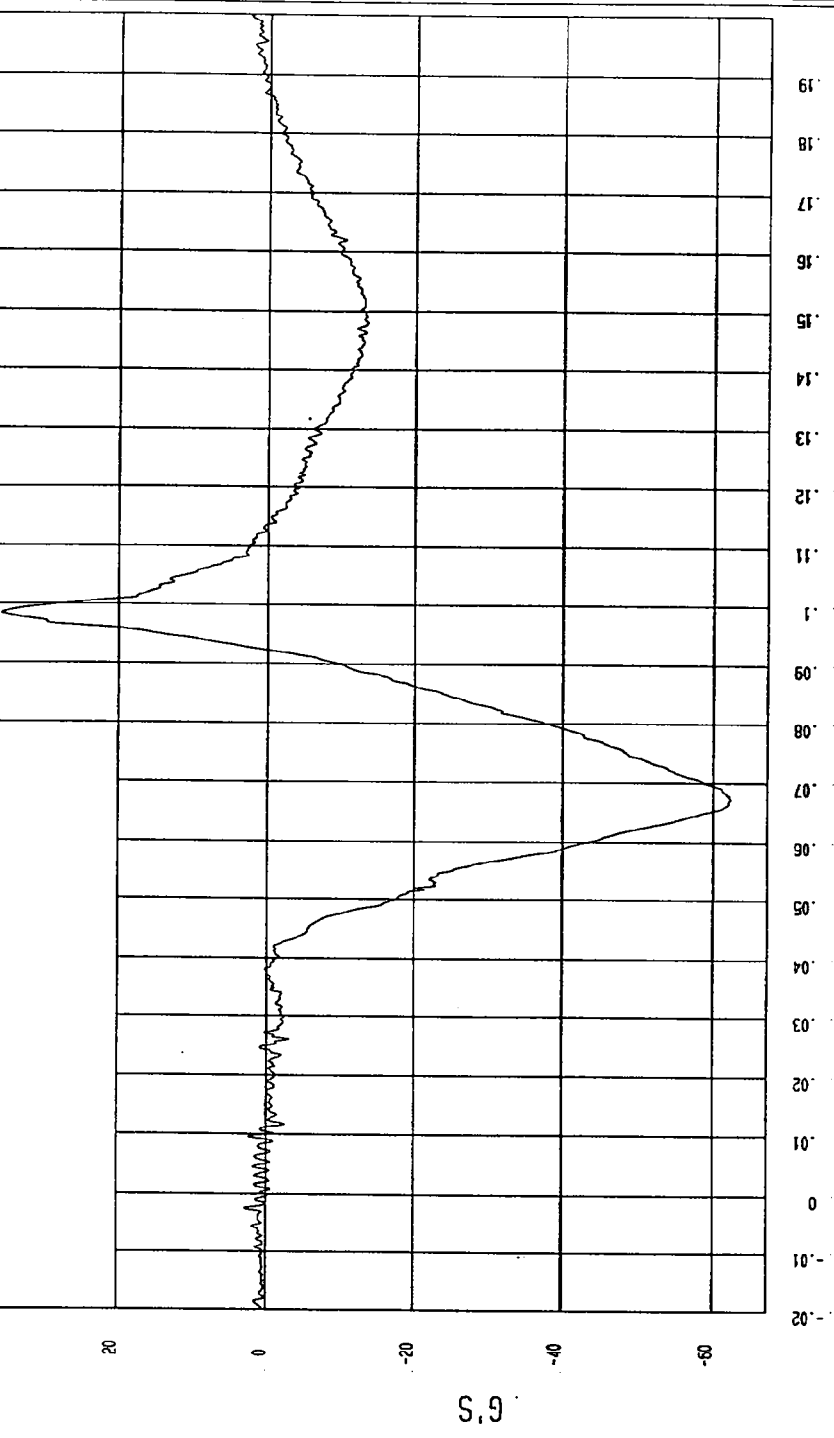
TEST: FMVSS 208 COMPLIANCE TEST TEST DATE: 03-21-1996

COMPONENT: 1996 NISSAN PICKUP (CT5204) Speed: 29.5 MPH 47.5 KPH

YMIN=-62.17213 G'S at 67. msec YMAX= 35.46564 G'S at 98. msec

DRIVER HEAD X ACCELERATION

1 895042AF A20 Filterclass (1000)



NSA PROPERTY
03-21-1998 16:51

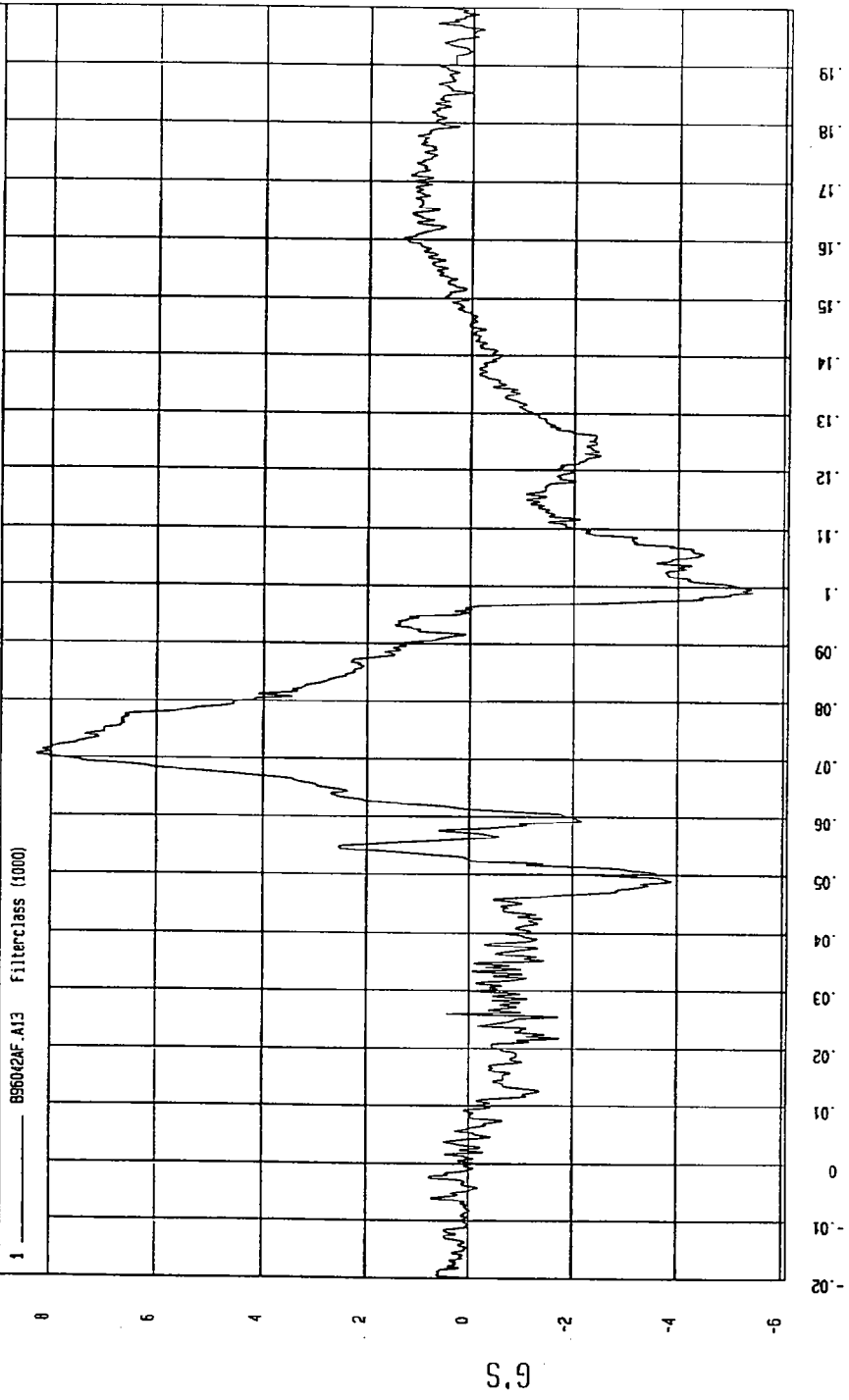
TEST: FMVSS 208 COMPLIANCE TEST

TEST DATE: 03-21-1996

COMPONENT: 1996 NISSAN PICKUP (CT5204) Speed: 29.5 MPH 47.5 KPH

YMIN=-5.406799 G'S at 99 msec YMAX= 8.25787 G'S at 70. msec

DRIVER HEAD Y ACCELERATION



MSA Research
03-21-1996 16:52

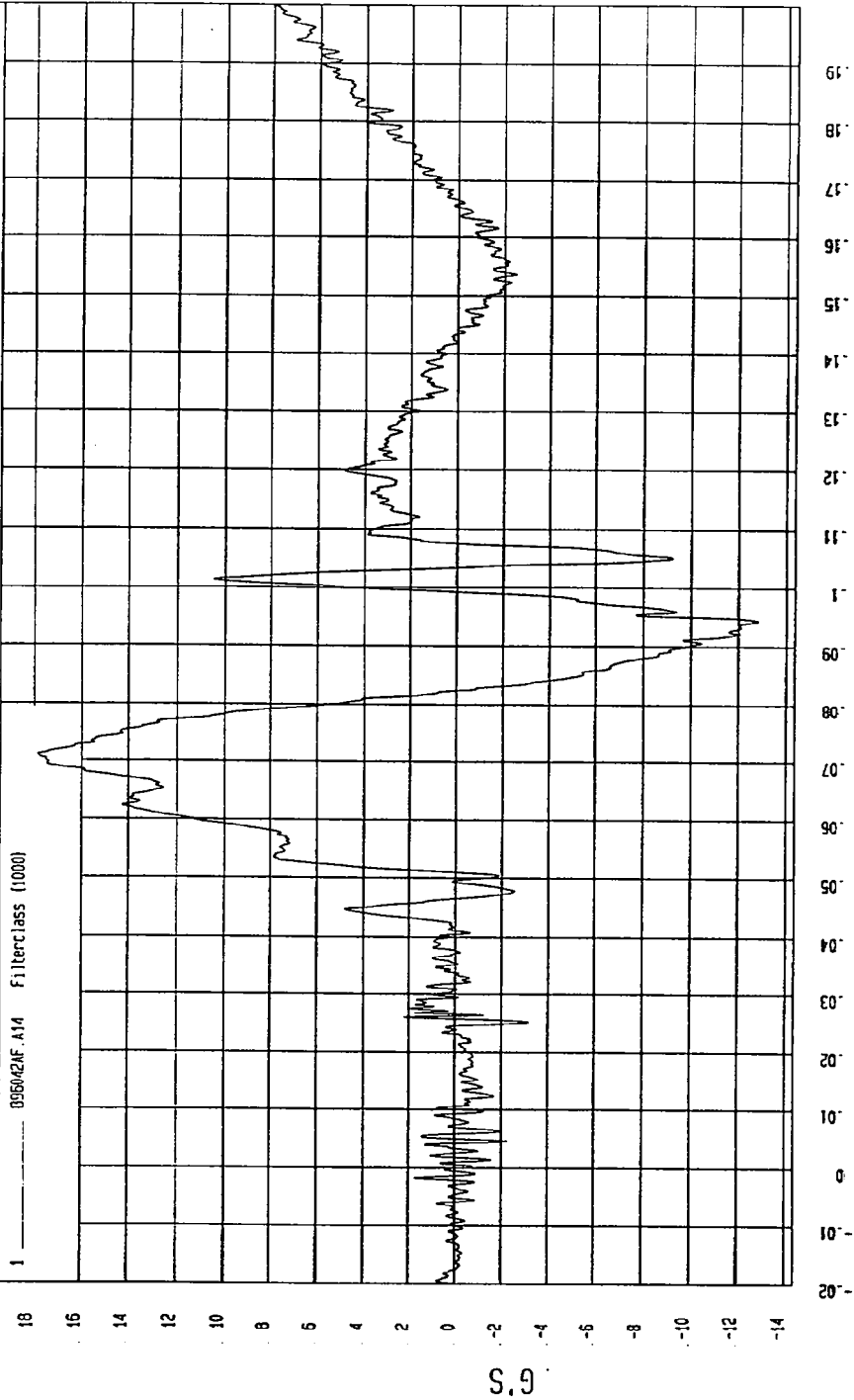
TEST: FMVSS 208 COMPLIANCE TEST TEST DATE: 03-21-1996

COMPONENT: 1996 NISSAN PICKUP (CT5204) Speed: 29.5 MPH 47.5 KPH

.YMIN=-12.82347 G'S at 94. msec .YMAX= 17.85775 G'S at 71. msec

DRIVER HEAD Z ACCELERATION

1 - - - - - 035042AF.A14 Filterclass (1000)



MCA Research
03-21-1996 16:52

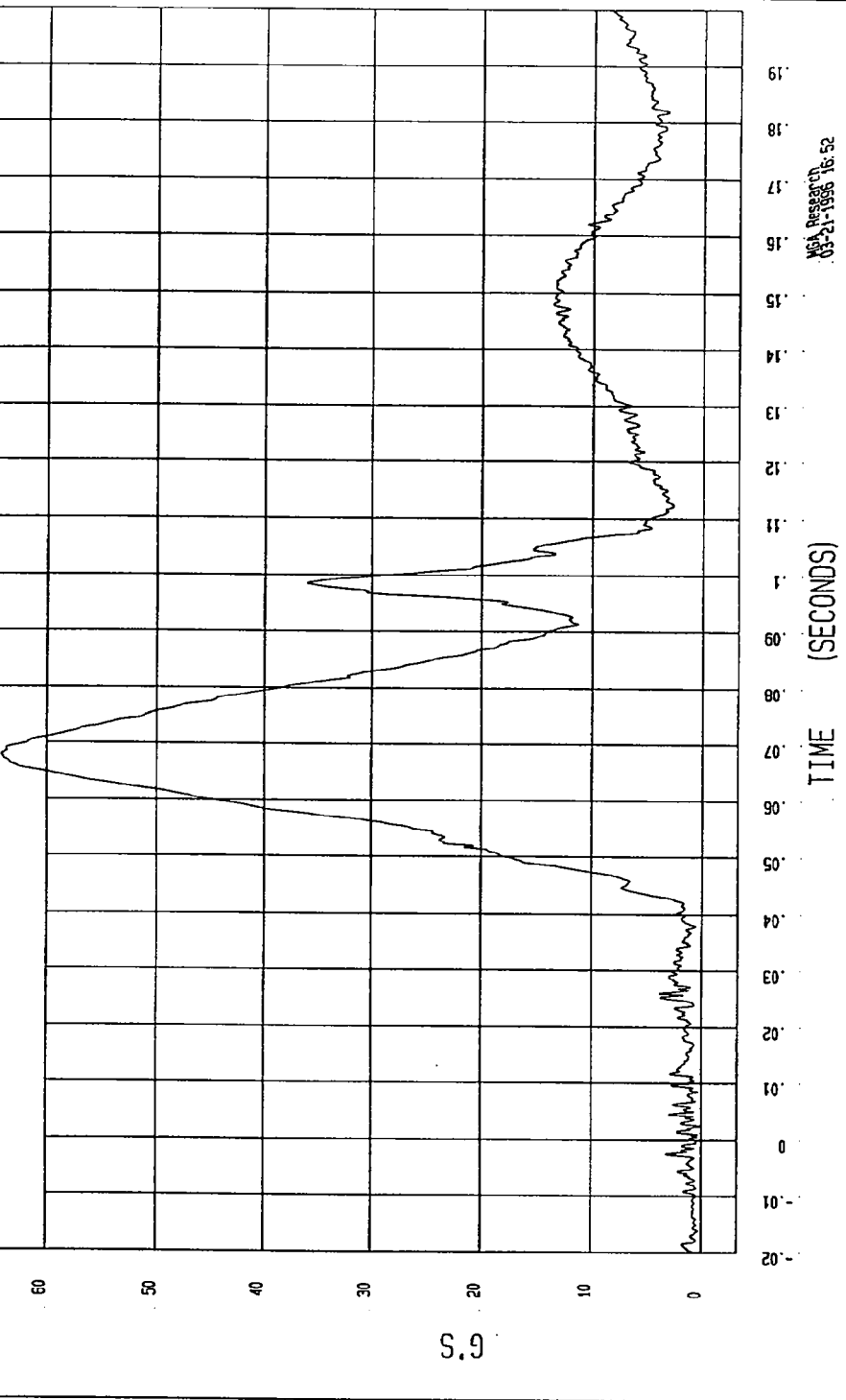
TEST: FMVSS 208 COMPLIANCE TEST TEST DATE: 03-21-1996

COMPONENT: 1996 NISSAN PICKUP (CT15204) Speed: 29.5 MPH 47.5 KPH

YMIN= 5.465765E-02 G'S at 2.5 msec YMAX= 64.12531 G'S at 67. msec

DRIVER HEAD RESULTANT ACCELERATION

1 896042AV.A13 Filterclass (1000)



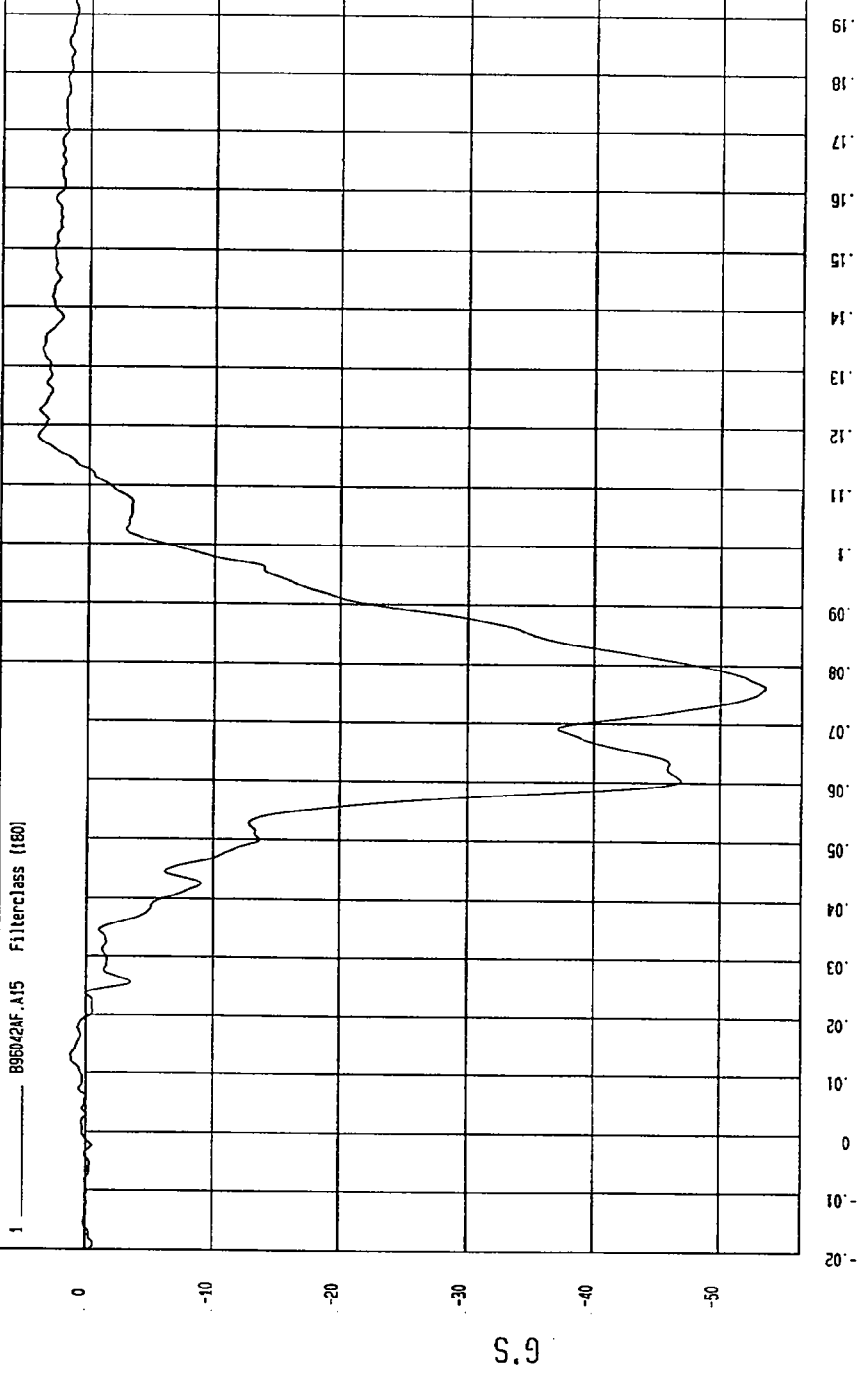
NSA Research
03-21-1996 16:52

TEST: FMVSS 208 COMPLIANCE TEST TEST DATE: 03-21-1996

COMPONENT: 1996 NISSAN PICKUP (CT5204) Speed: 29.5 MPH 47.5 KPH

YMIN=-53.47597 G'S at 76. msec YMAX= 4.02823 G'S at 118 msec

DRIVER CHEST X ACCELERATION



NSA Research
03-21-1996 16:52

TEST: FMVSS 208 COMPLIANCE TEST TEST DATE: 03-21-1996

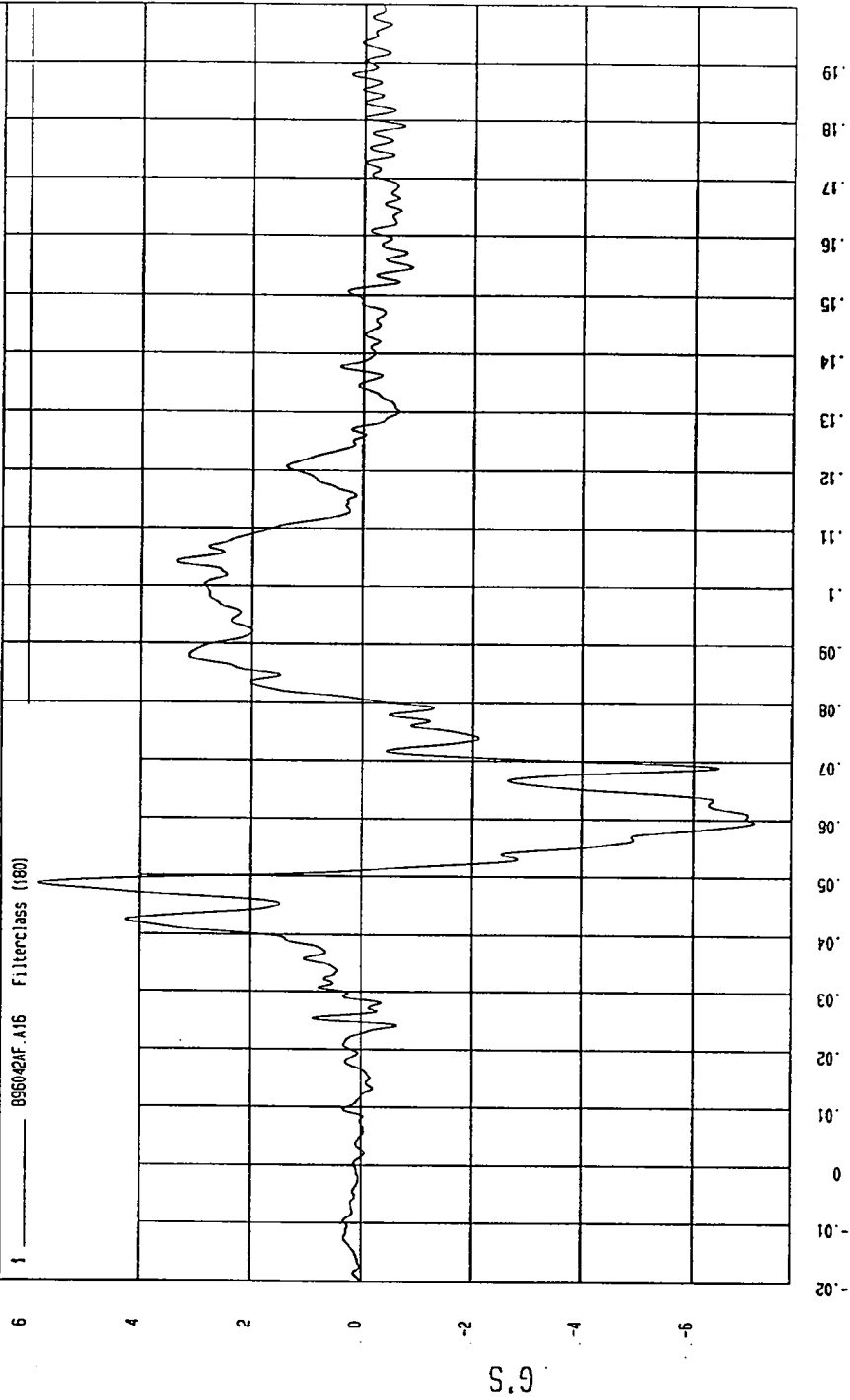
COMPONENT: 1996 NISSAN PICKUP (CT5204) Speed: 29.5 MPH 47.5 KPH

MIN=-7.086417 G'S at 59. msec

MAX= 5.815053 G'S at 48. msec

DRIVER CHEST Y ACCELERATION

1 095042AF.A16 Filterclass (180)



TIME (SECONDS)

NCA Research
03-21-1996 16:52

TEST: FMVSS 208 COMPLIANCE TEST TEST DATE: 03-21-1996

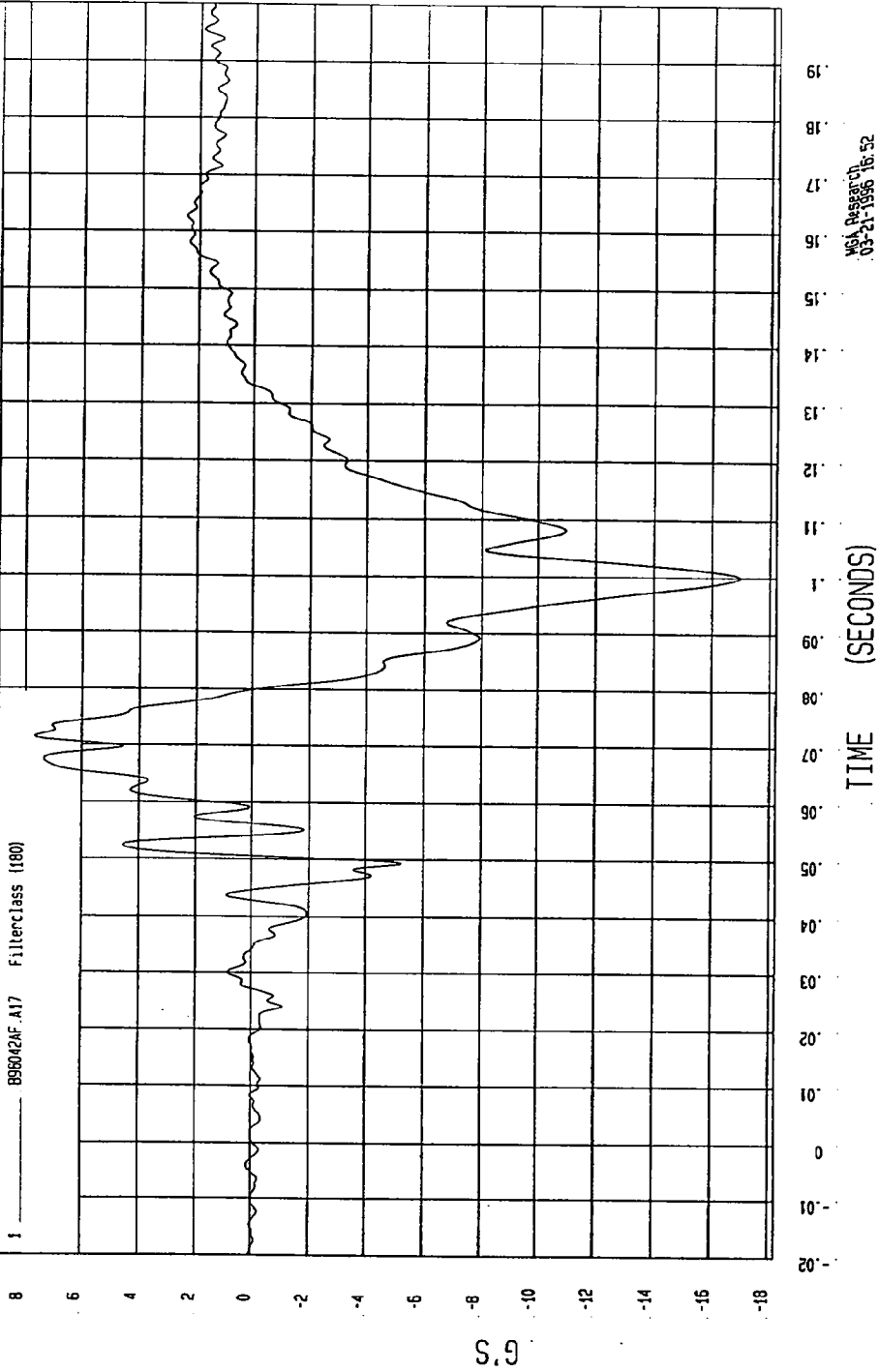
COMPONENT: 1996 NISSAN PICKUP (CT5204) Speed: 29.5 MPH 47.5 KPH

YH1H-16.97972 6'S at 100 msec

YMAX= 7.67773 6'S at 71. msec

DRIVER CHEST Z ACCELERATION

896042AF.A17 FilterClass (180)



MSA Research
03-21-1996 16:52

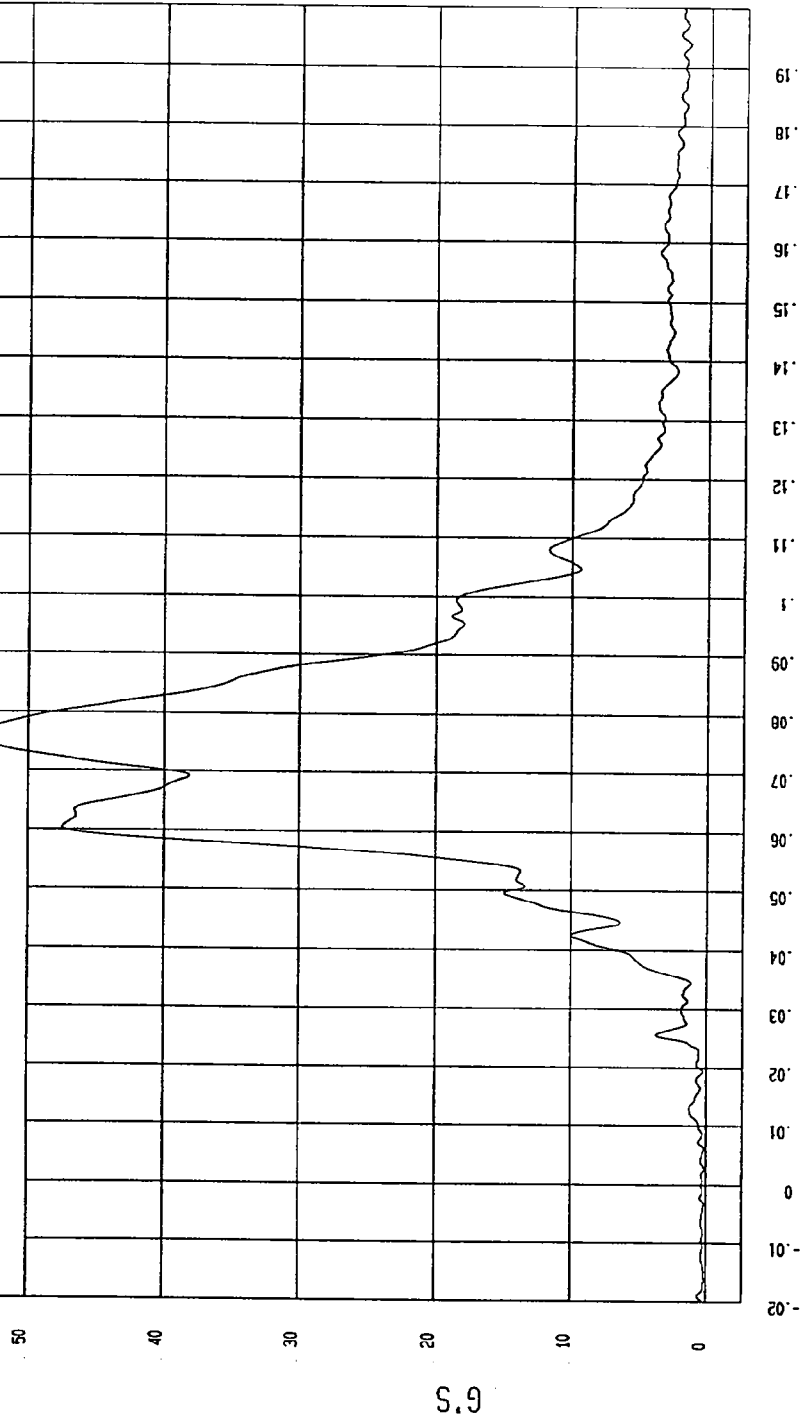
TEST: FMVSS 208 COMPLIANCE TEST TEST DATE: 03-21-1996

COMPONENT: 1996 NISSAN PICKUP (C15204) Speed: 29.5 MPH 47.5 KPH

YMIN= 4.886501E-02 G'S at 2.6 msec YMAX= 53.65434 G'S at 76. msec

DRIVER CHEST RESULTANT ACCELERATION

1 896042AV.A15 FilterClass (180)



MSH Research
03-21-1996 16:52

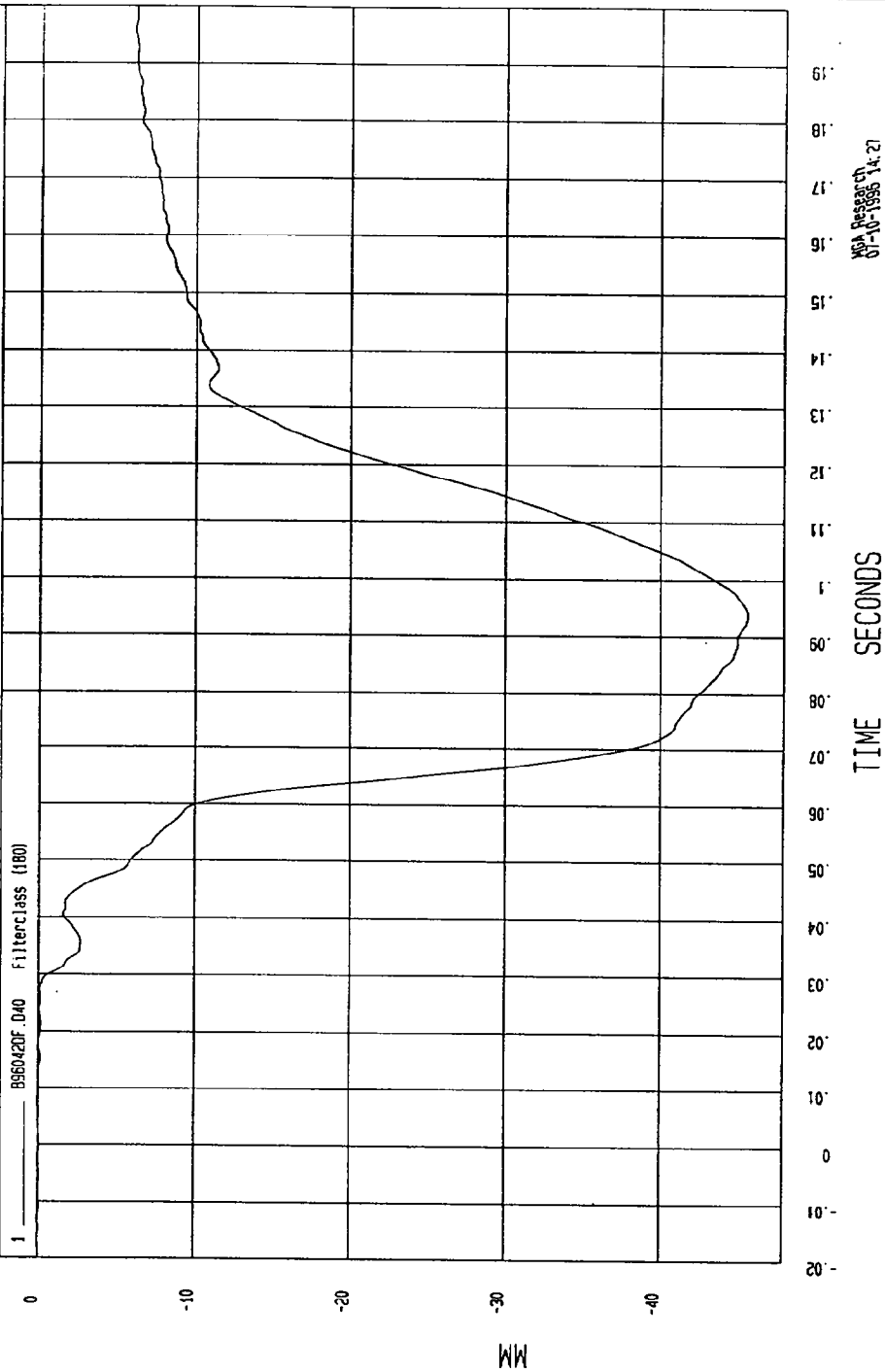
TEST: FMVSS 208 COMPLIANCE TEST TEST DATE: 03-21-1996

COMPONENT: 1996 NISSAN PICKUP (CT5204) Speed: 29.5 MPH 47.5 KPH

YMIN=-45.53933 MM at .93. msec

YMAX=.0917007 MM at -.13 msec

DRIVER CHEST COMPRESSION

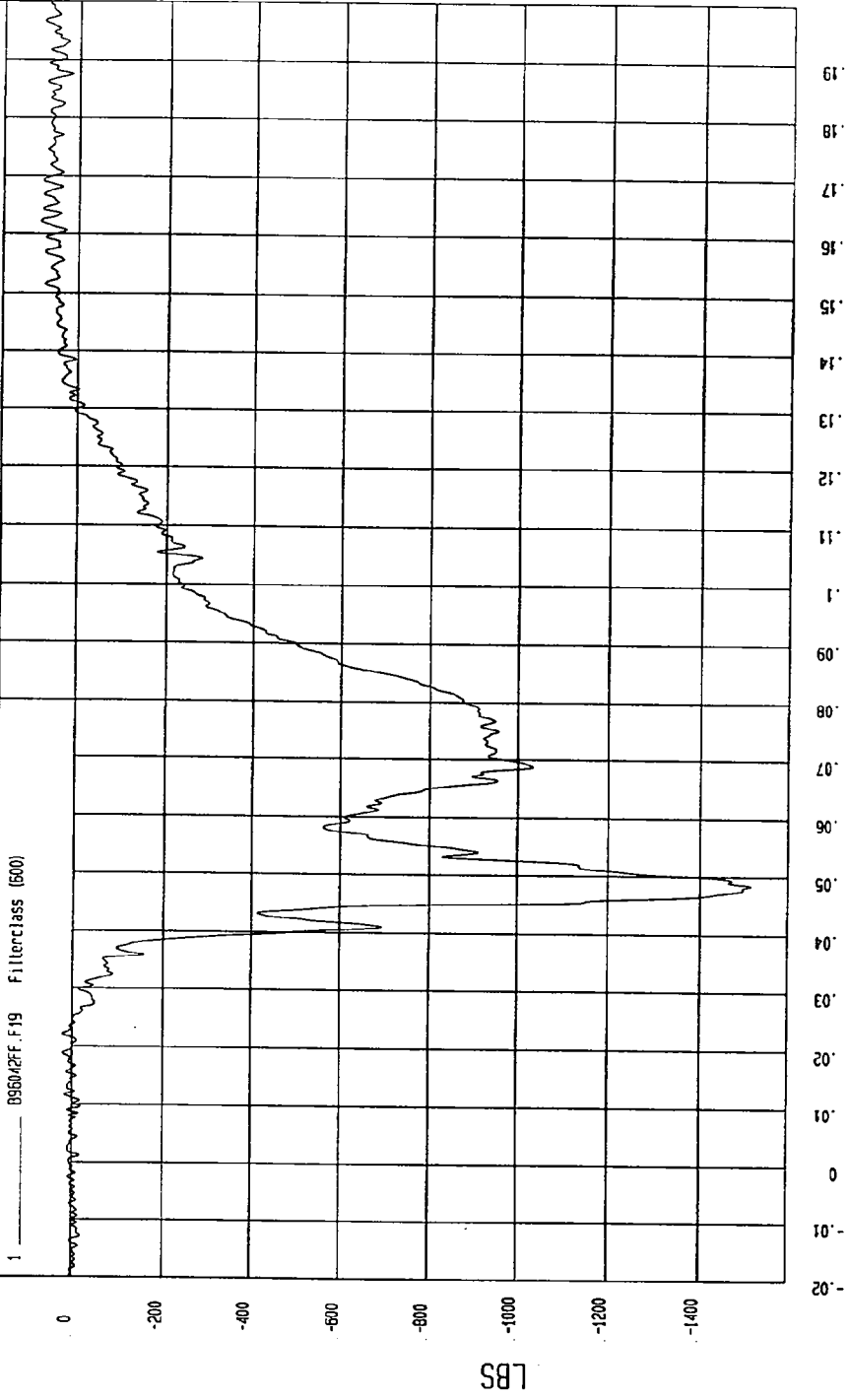


TEST: FMVSS 208 COMPLIANCE TEST TEST DATE: 03-21-1996

COMPONENT: 1996 NISSAN PICKUP (CT5204) Speed: 29.5 MPH 47.5 KPH

YMIN=-1512.078 LBS at 48. msec YMAX= 83.59538 LBS at 162 msec

DRIVER LEFT FEMUR FORCE



MCA Research
04-05-1998 10:24

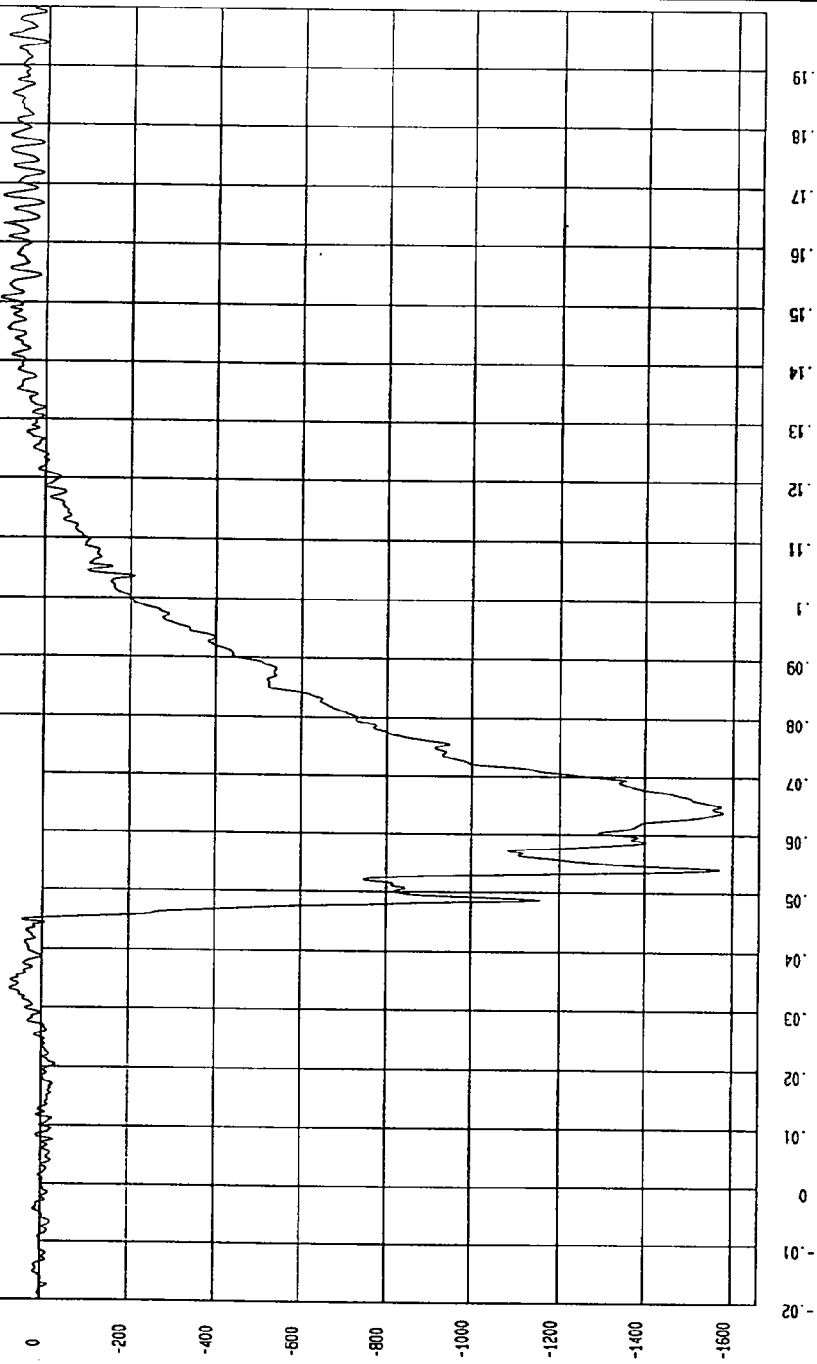
TEST: FMVSS 208 COMPLIANCE TEST TEST DATE: 03-21-1996

COMPONENT: 1996 NISSAN PICKUP (CT5204) Speed: 29.5 MPH 47.5 KPH

YMIN=-1577.149 LBS at 63. msec YMAX= 103.9634 LBS at 150 msec

DRIVER RIGHT FEMUR FORCE

1 896042FF.F18 Filterclass (600)



MSL Research
04-05-1996 10:22

TEST: FMVSS 208 COMPLIANCE TEST TEST DATE: 03-21-1996

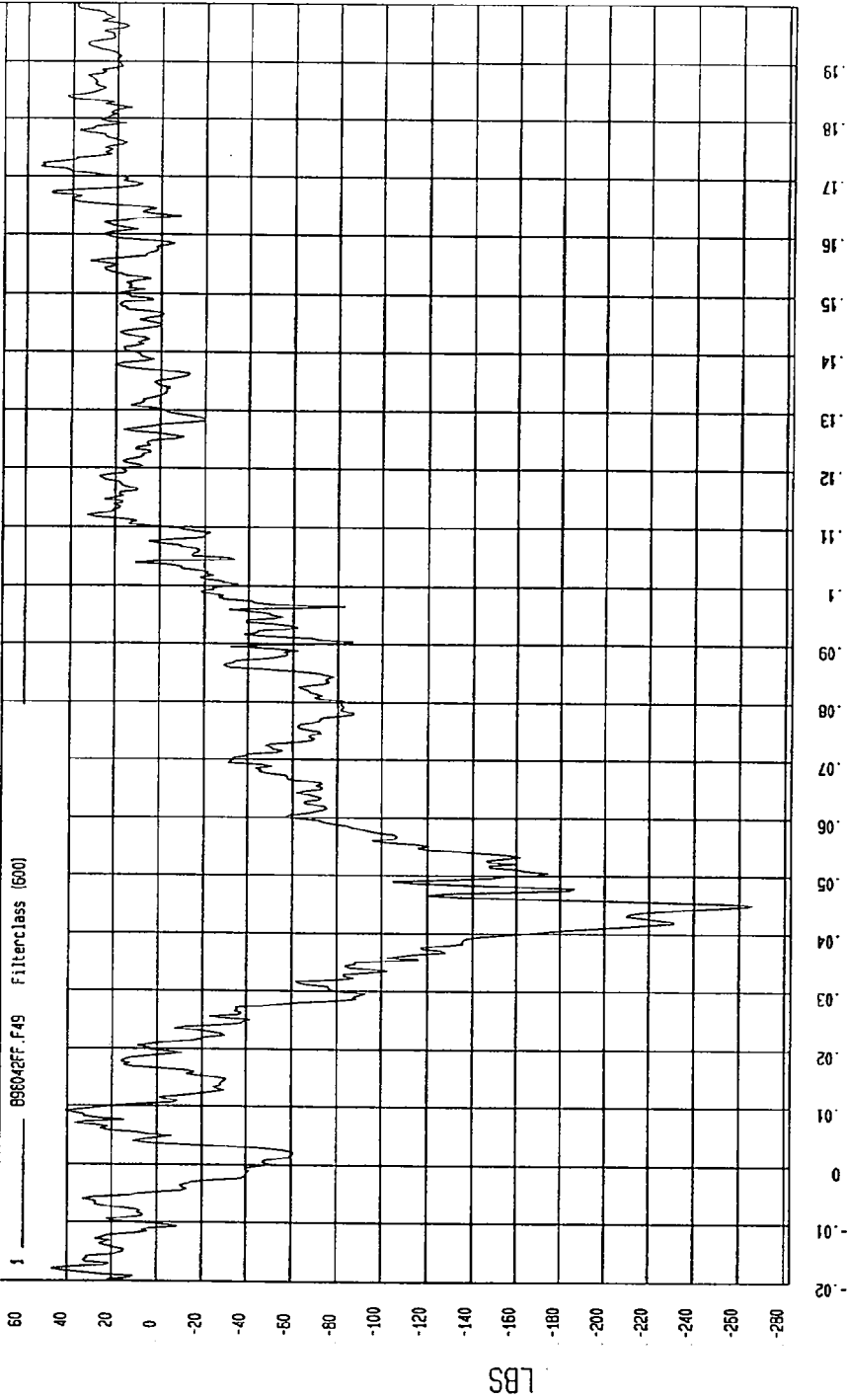
COMPONENT: 1996 NISSAN PICKUP (C15204) Speed: 29.5 MPH 47.5 KPH

YMIN=-265.4511 LBS at 45 msec

YMAX= 54.18647 LBS at 171 msec

DRIVER LEFT LOWER TIBIA FORCE X

1 898042FF.F49 Filterclass (500)



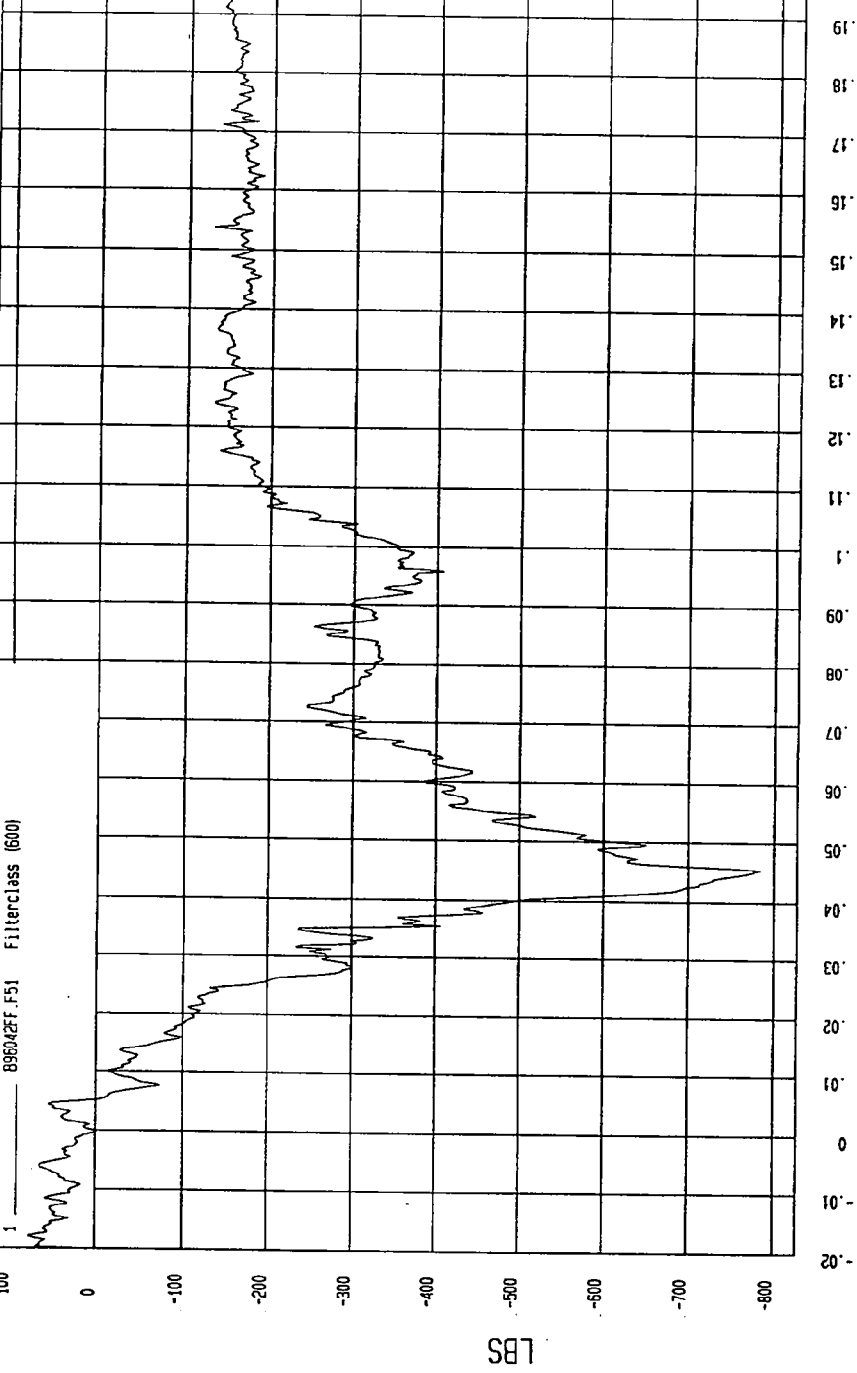
NEA PROJECT
04-05-1996 10:22

TEST: FMVSS 208 COMPLIANCE TEST TEST DATE: 03-21-1996

COMPONENT: 1996 NISSAN PICKUP (CT5204) Speed: 29.5 MPH 47.5 KPH

MIN=-783.4153 LBS at 45. msec YMAX= 78.17978 LBS at -17. msec

DRIVER LEFT LOWER TIBIA FORCE Z



TIME (SECONDS)

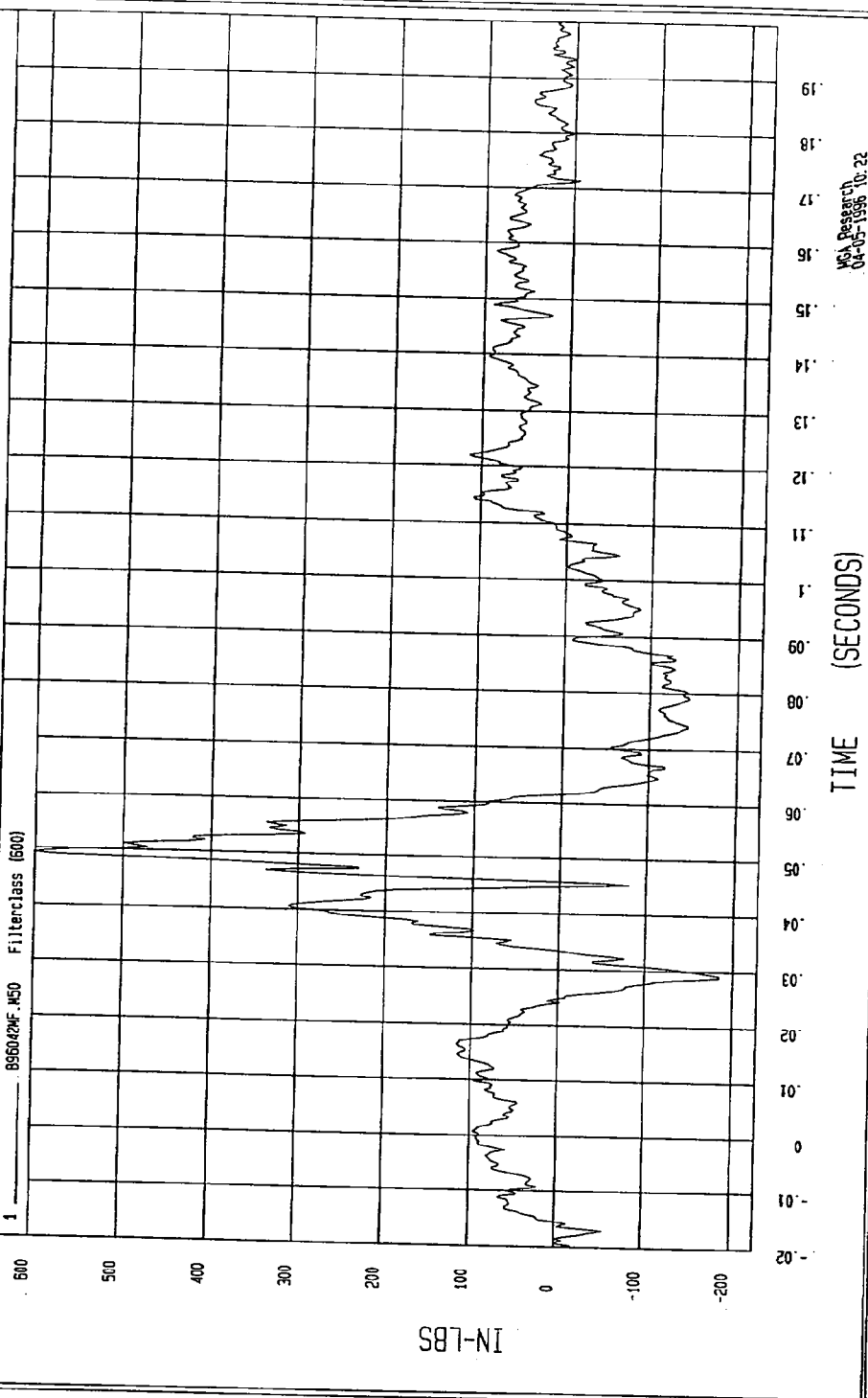
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01-05-1998 10:22

TEST: FMVSS 208 COMPLIANCE TEST TEST DATE: 03-21-1996

COMPONENT: 1996 NISSAN PICKUP (CT5204) Speed: 29.5 MPH 47.5 KPH

YMIN=-187.6504 IN-LBS at 29. msec YMAX= 601.1579 IN-LBS at 49. msec

DRIVER LEFT LOWER TIBIA MOMENT Y



NSA Research
04-05-1996 10:22

TEST: FMVSS 208 COMPLIANCE TEST TEST DATE: 03-21-1996

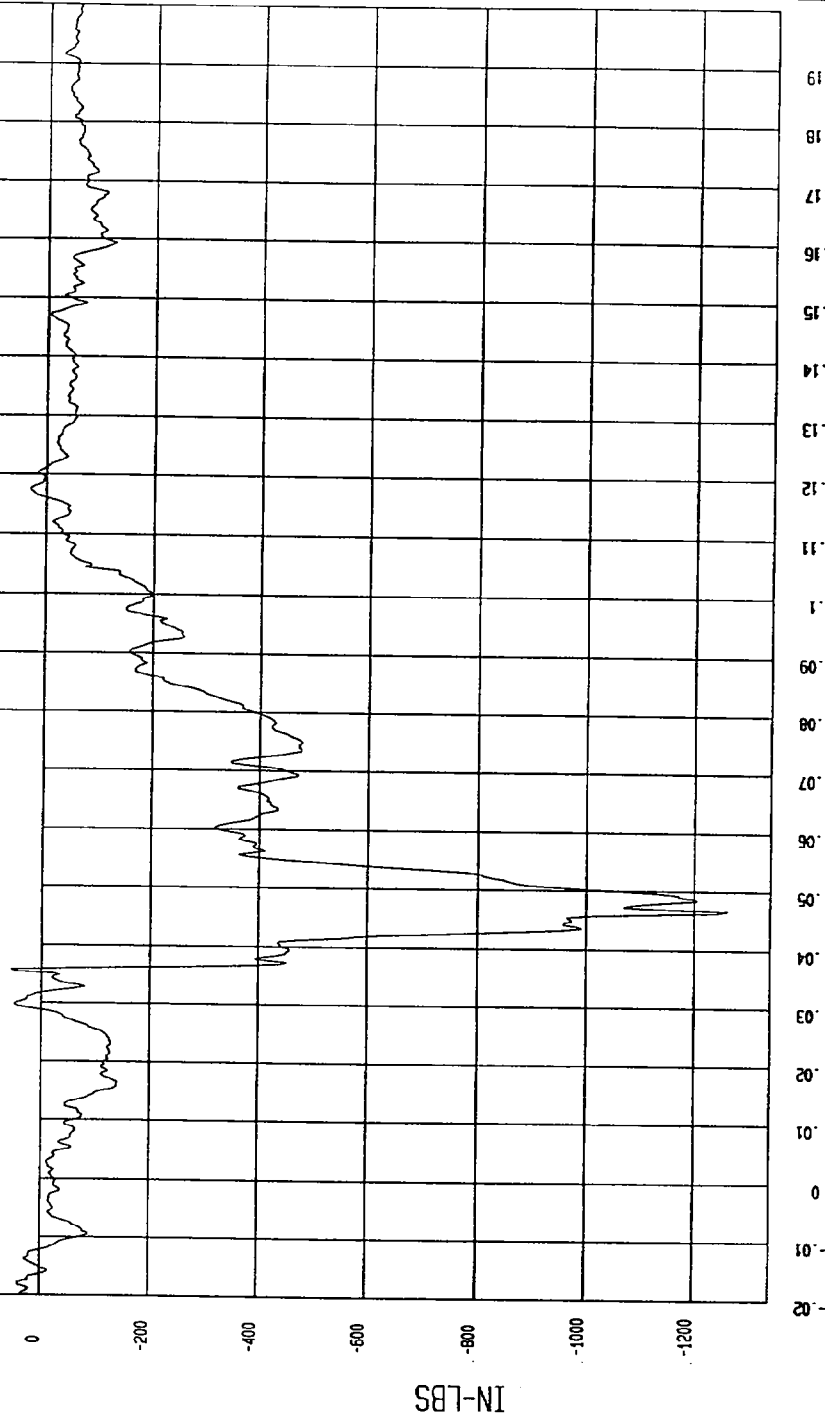
COMPONENT: 1996 NISSAN PICKUP (C15204) Speed: 29.5 MPH 47.5 KPH

YMIN=-1271.762 IN-LBS at 46. msec

YMAX= 68.06153 IN-LBS at 35. msec

DRIVER LEFT UPPER TIBIA MOMENT X

1 89042MF.M47 FilterClass (600)



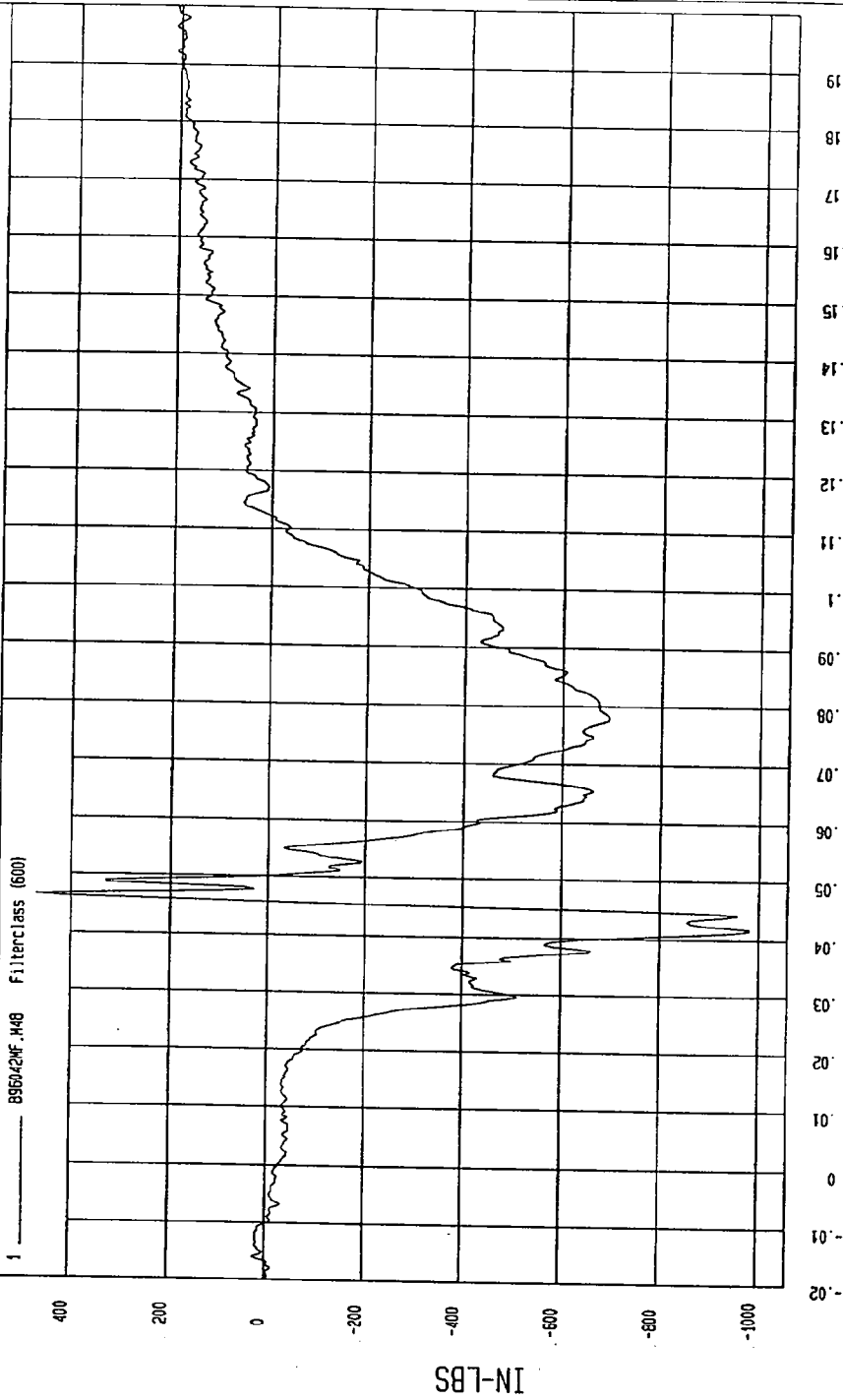
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04-05-1996 10:22

TEST: FMVSS 208 COMPLIANCE TEST TEST DATE: 03-21-1996

COMPONENT: 1996 NISSAN PICKUP (CT5204) Speed: 29.5 MPH 47.5 KPH

YMIN=-984.1838 IN-LBS at 41. msec YMAX= 468.7466 IN-LBS at 46. msec

DRIVER LEFT UPPER TIBIA MOMENT Y



NEA Research
03-21-1996 10:22

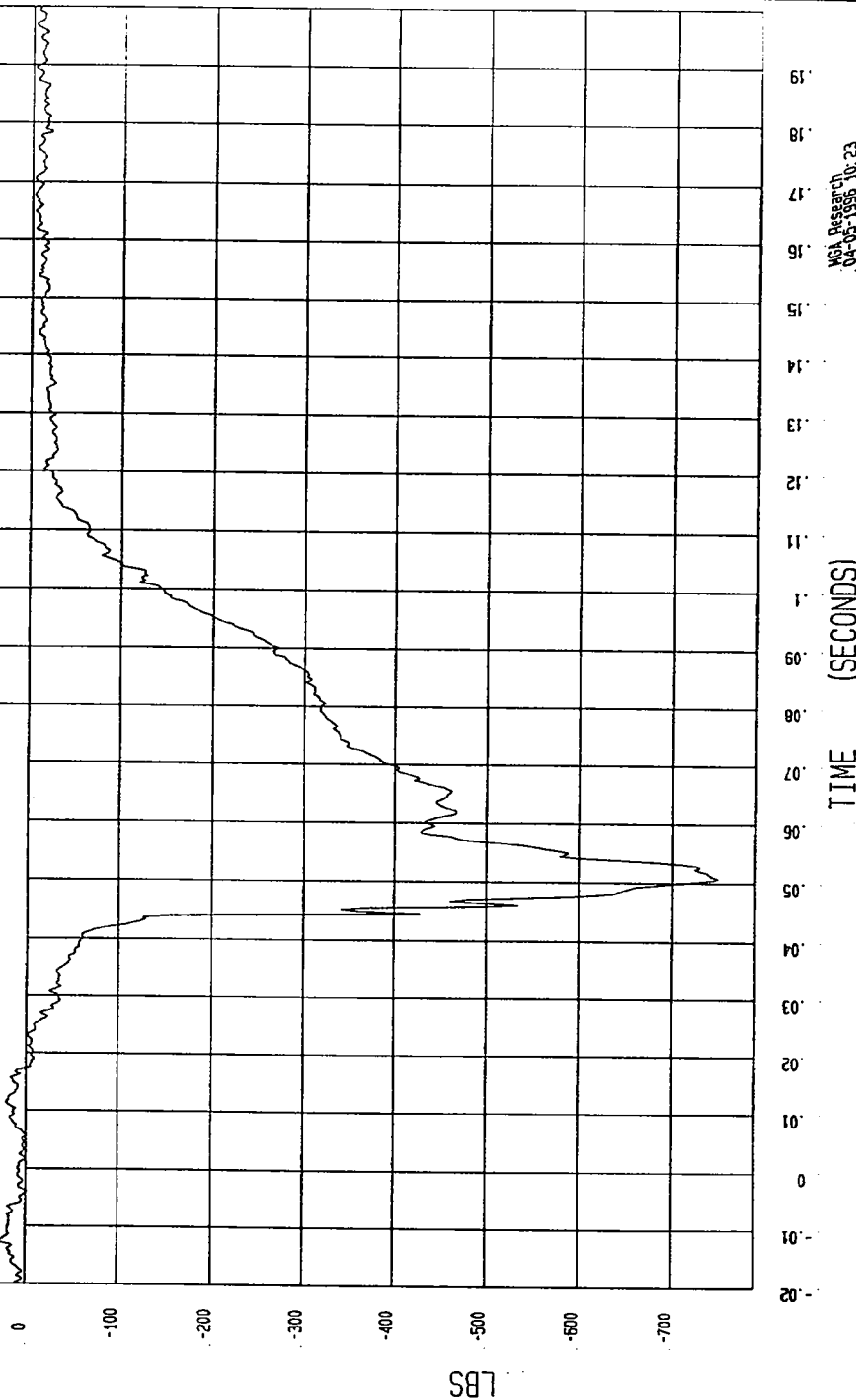
TEST: FMVSS 208 COMPLIANCE TEST TEST DATE: 03-21-1996

COMPONENT: 1996 NISSAN PICKUP (C15204) Speed: 29.5 MPH 47.5 KPH

YMIN=-749.5945 LBS at 50. msec YMAX= 29.94963 LBS at -12. msec

DRIVER RIGHT LOWER TIBIA FORCE X

1 896048FF.F44 FilterClass (600)



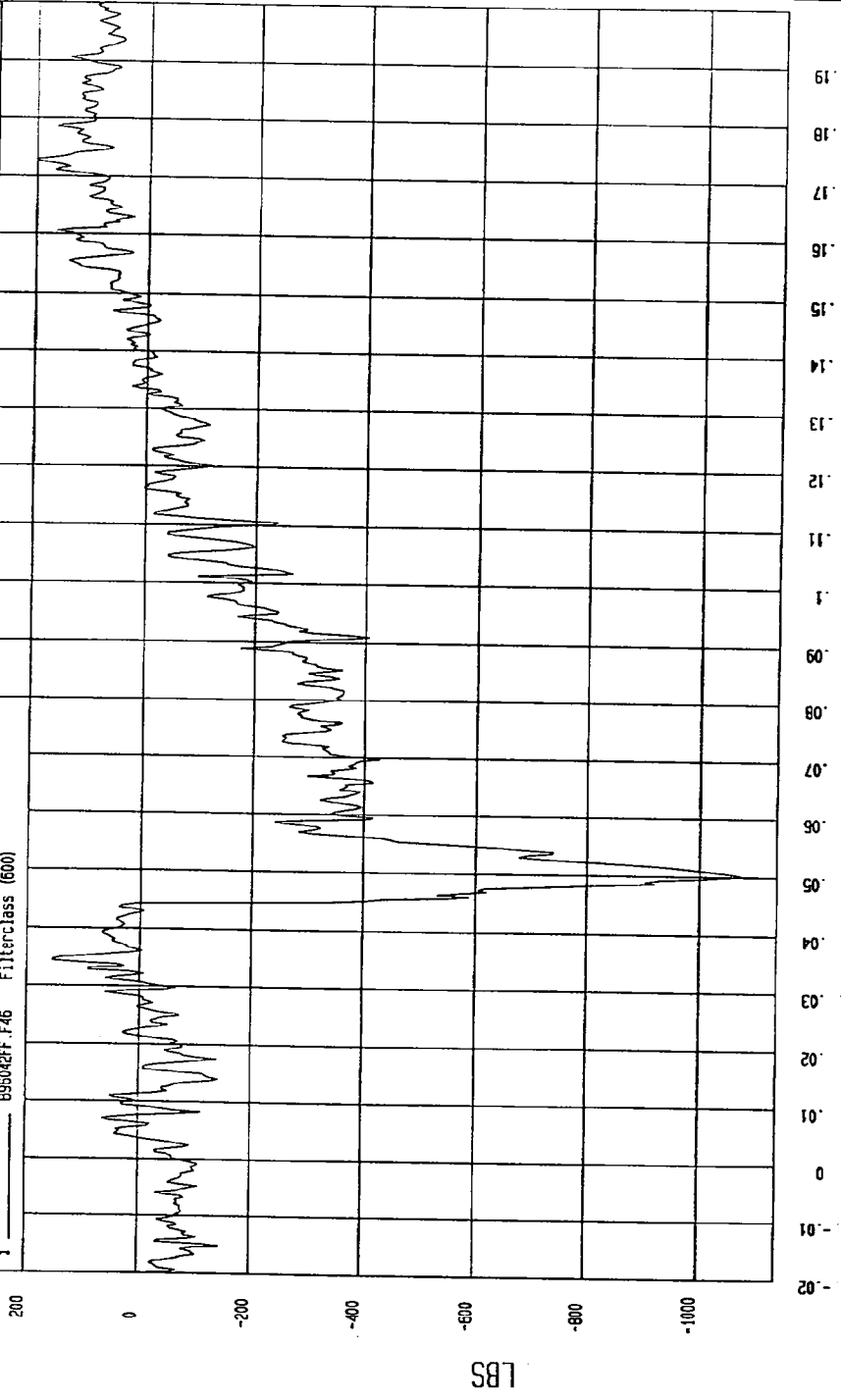
MGA Research
03-05-1996 10:23

TEST: FMVSS 208 COMPLIANCE TEST TEST DATE: 03-21-1996

COMPONENT: 1996 NISSAN PICKUP (CT5204) Speed: 29.5 MPH 47.5 KPH

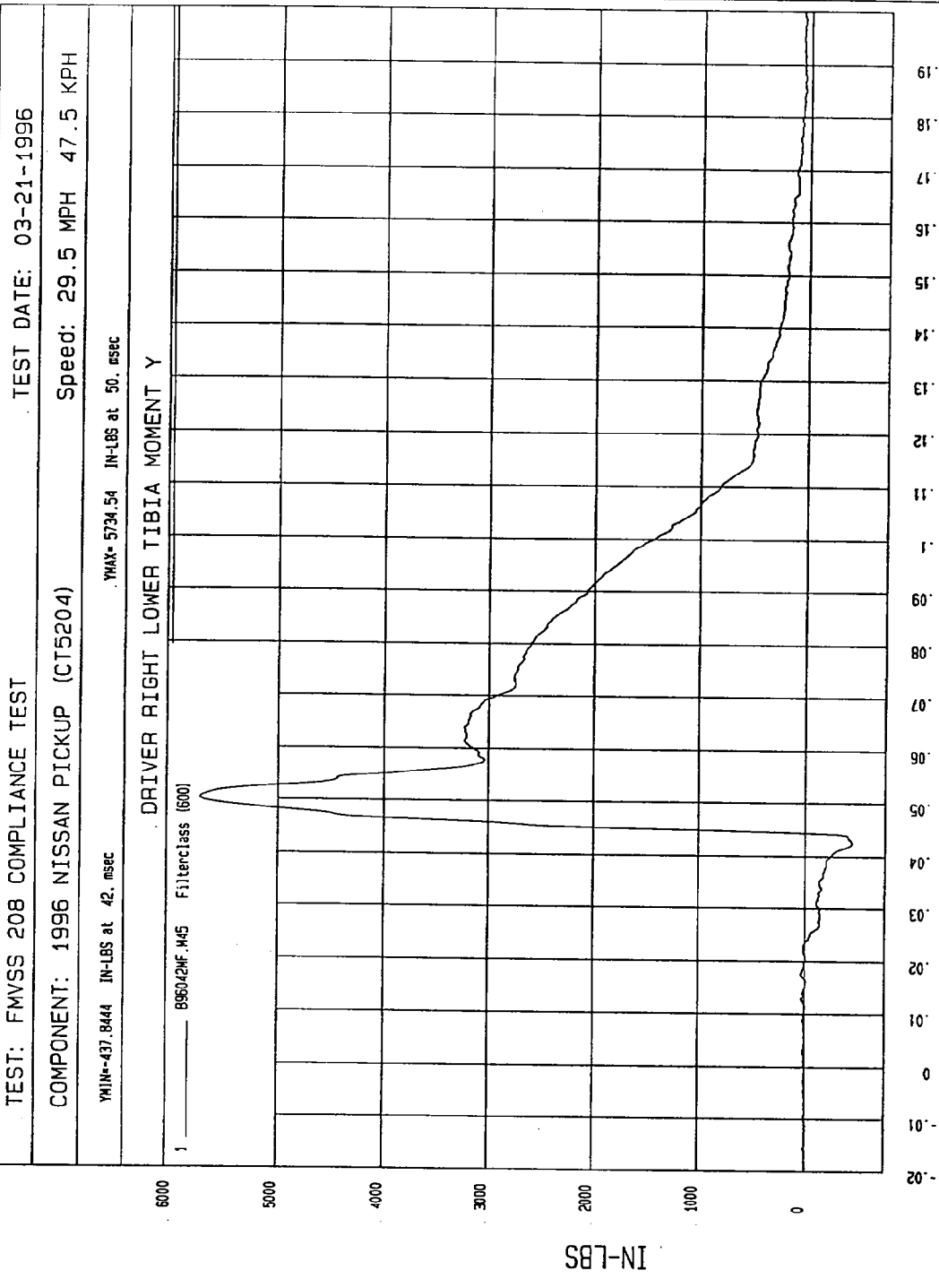
YMIN=-1071.869 LBS at 50. msec YMAX= 204.4882 LBS at 172 msec

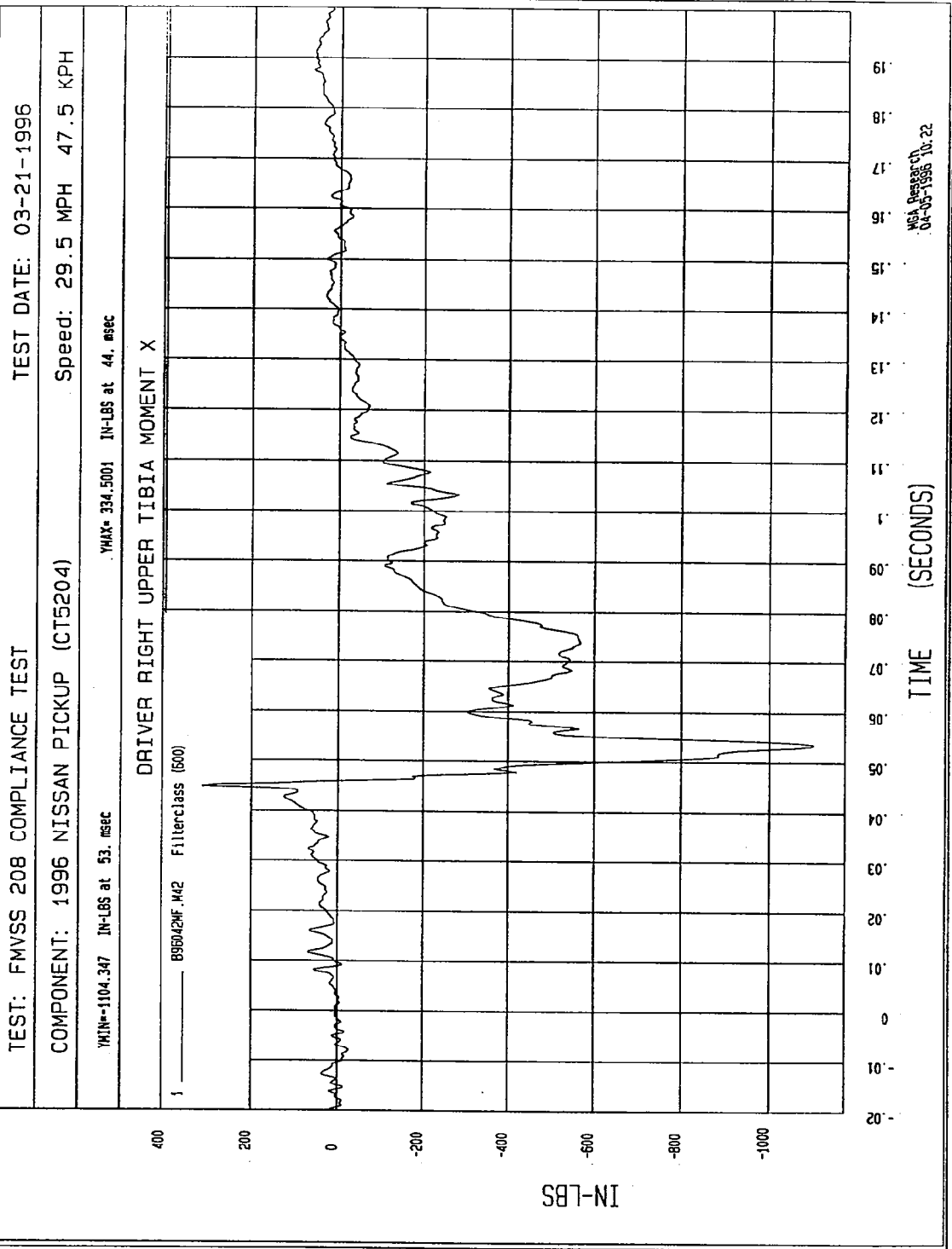
DRIVER RIGHT LOWER TIBIA FORCE Z



TIME (SECONDS)

MVA Research
04-05-1996 10:23





TEST: FMVSS 208 COMPLIANCE TEST TEST DATE: 03-21-1996

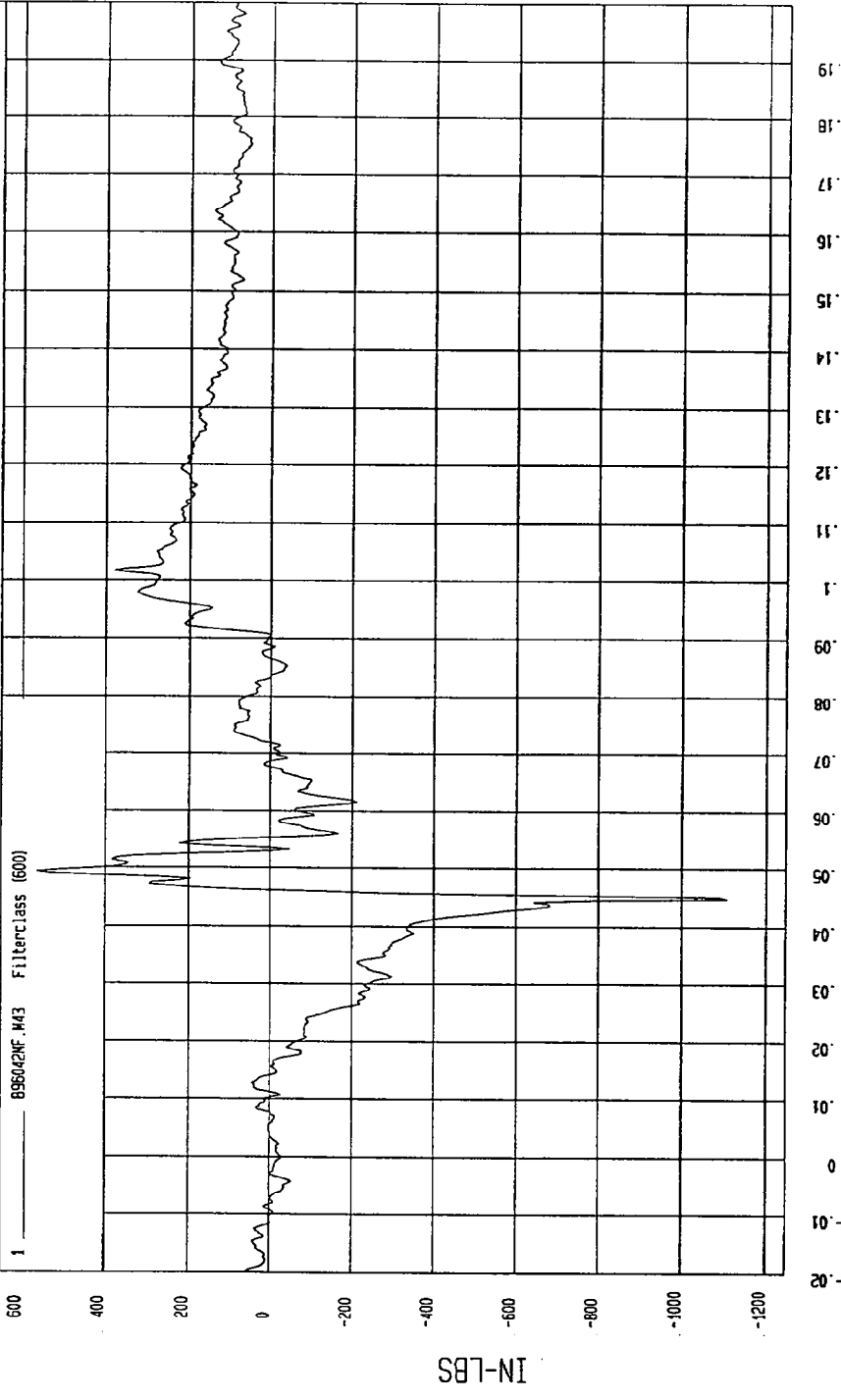
COMPONENT: 1996 NISSAN PICKUP (CT5204) Speed: 29.5 MPH 47.5 KPH

YMIN=-1160.018 IN-LBS at 44. msec

YMAX= 563.7084 IN-LBS at 49. msec

DRIVER RIGHT UPPER TIBIA MOMENT Y

1 895042NF.M43 Filterclass (600)



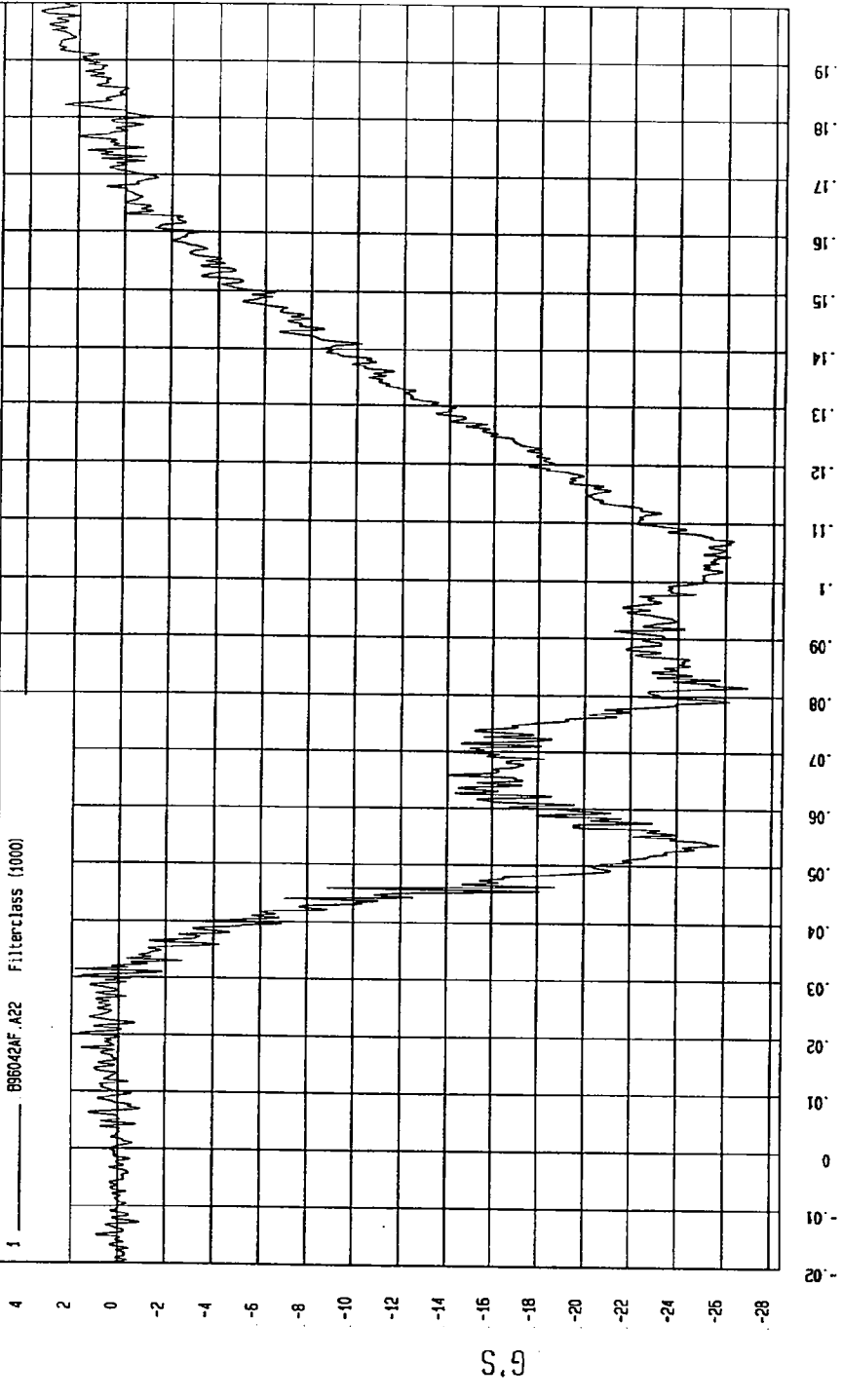
MCA Research
04-05-1996 10:22

TEST: FMVSS 208 COMPLIANCE TEST TEST DATE: 03-21-1996

COMPONENT: 1996 NISSAN PICKUP (CT5204) Speed: 29.5 MPH 47.5 KPH

YMIN=-26.92678 6'S at 81. msec YMAX= 3.629871 6'S at 198 msec

PASSENGER HEAD X ACCELERATION



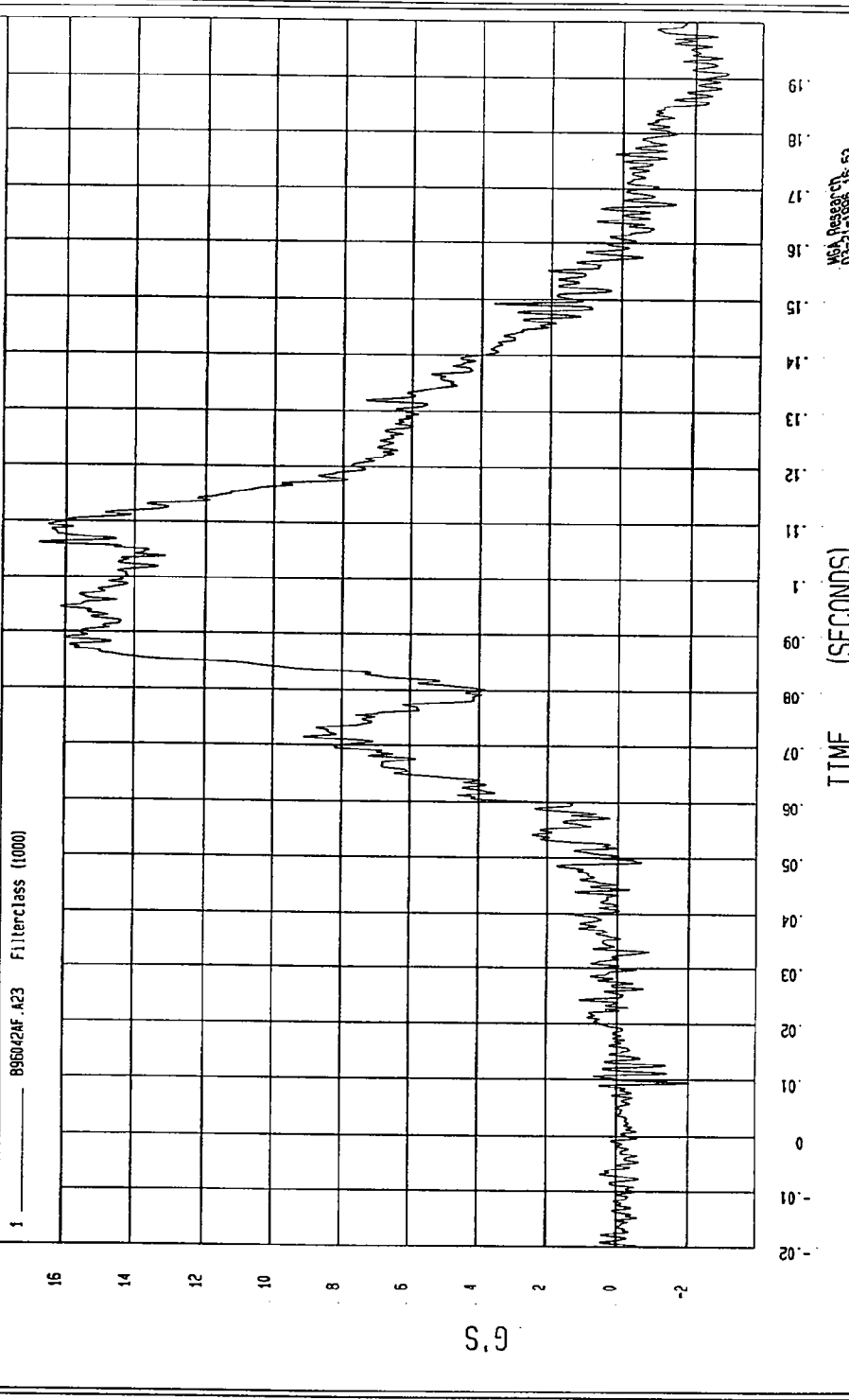
MCA Research
03-21-1996 16:53

TEST: FMVSS 208 COMPLIANCE TEST TEST DATE: 03-21-1996

COMPONENT: 1996 NISSAN PICKUP (CT5204) Speed: 29.5 MPH 47.5 KPH

YMIN=-2.934183 G'S at 190 msec YMAX= 16.7485 G'S at 106 msec

PASSENGER HEAD Y ACCELERATION



M&A Research
03-21-1996 16:53

TEST: FMVSS 208 COMPLIANCE TEST

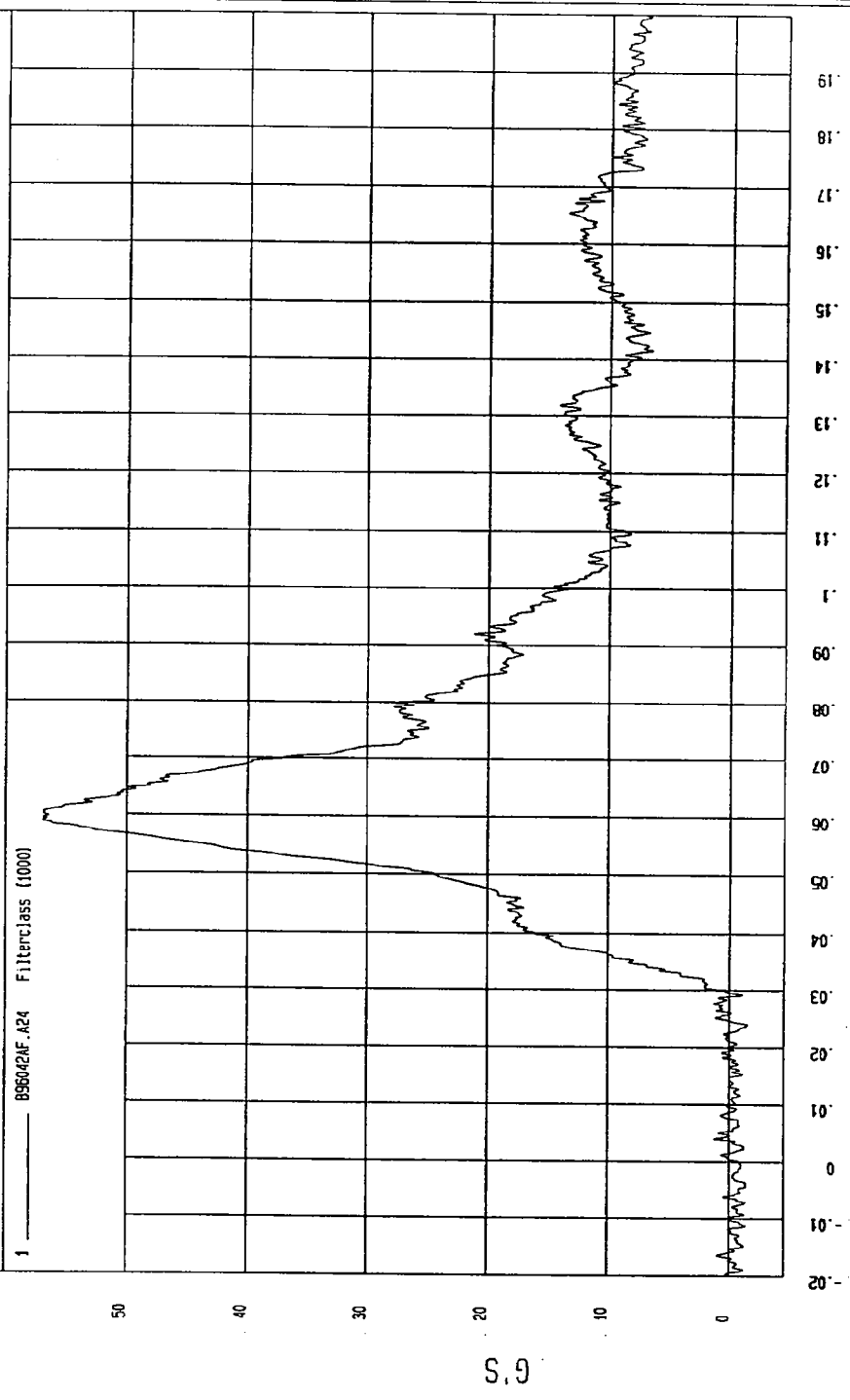
TEST DATE: 03-21-1996

COMPONENT: 1996 NISSAN PICKUP (CT5204) Speed: 29.5 MPH 47.5 KPH

MIN--1.416751 G'S at 23. msec

MAX= 56.96498 G'S at 59 msec

PASSENGER HEAD Z ACCELERATION



WSA Research
03-21-1996 16:53

TEST: FMVSS 208 COMPLIANCE TEST

TEST DATE: 03-21-1996

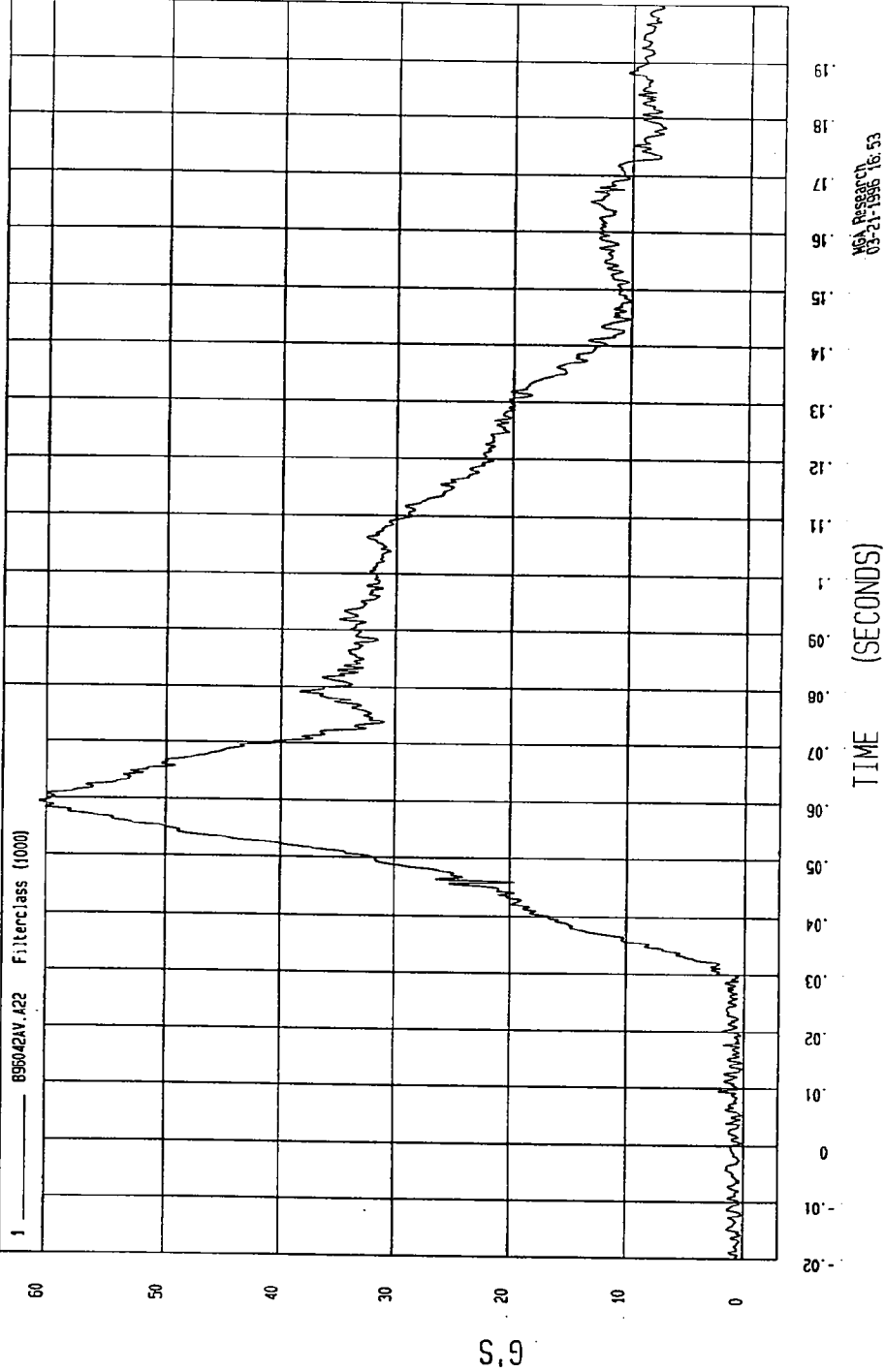
COMPONENT: 1996 NISSAN PICKUP (CT5204)

Speed: 29.5 MPH 47.5 KPH

YMIN = .1316462 G'S at .39 msec

YMAX = 60.54277 G'S at 59. msec

PASSENGER HEAD RESULTANT ACCELERATION



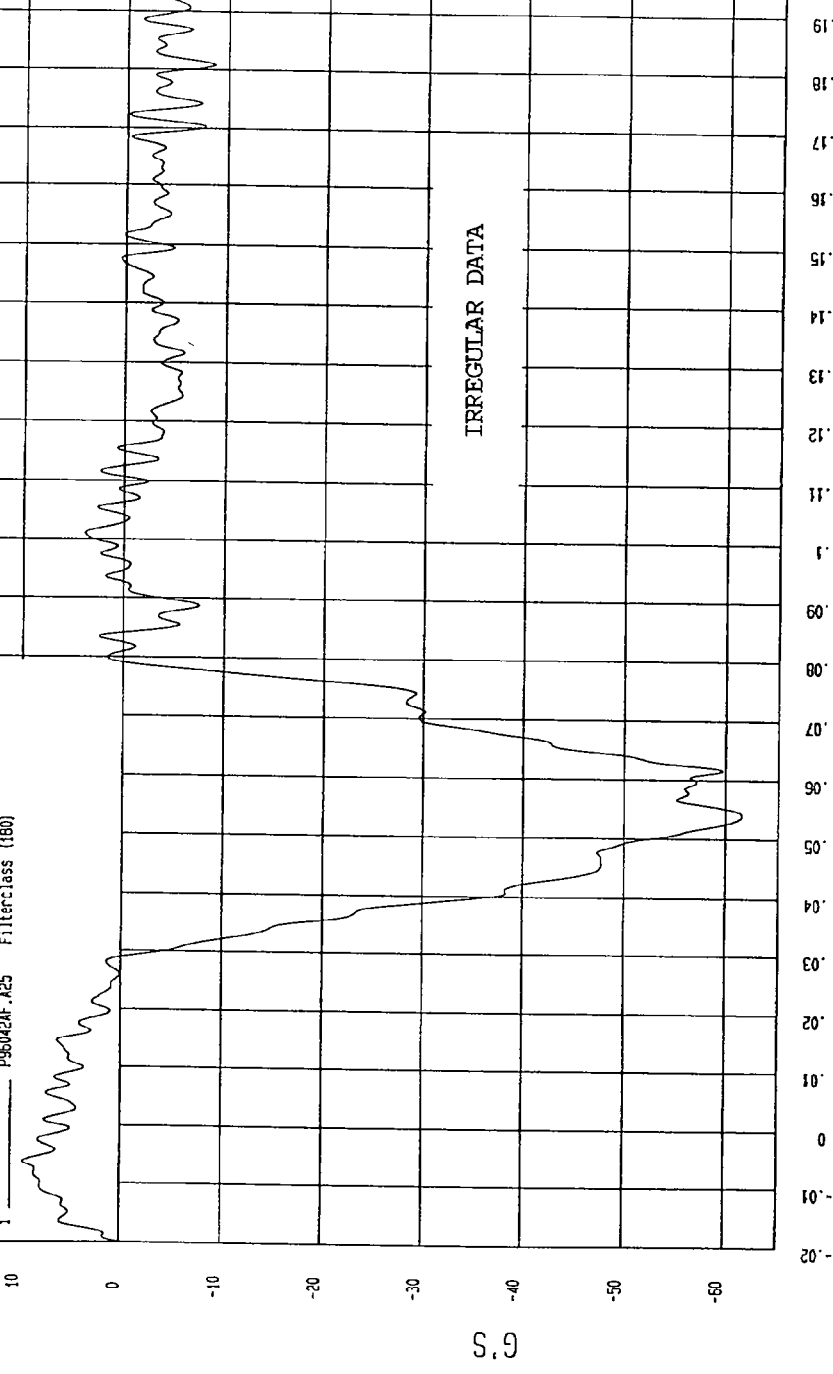
MEA Pressure
03-21-1996 16:53

TEST: FMVSS 208 COMPLIANCE TEST TEST DATE: 03-21-1996

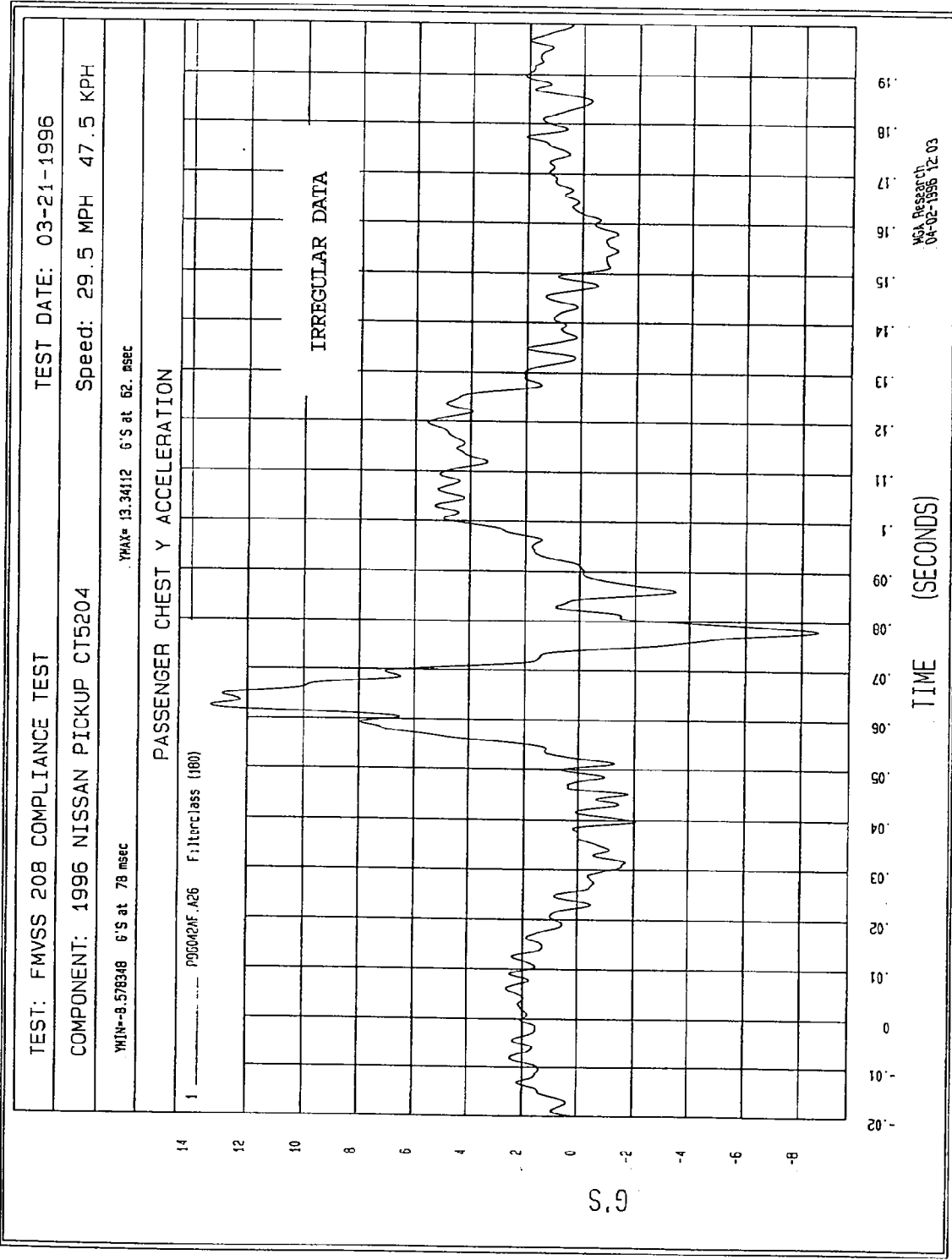
COMPONENT: 1996 NISSAN PICKUP CT5204 Speed: 29.5 MPH 47.5 KPH

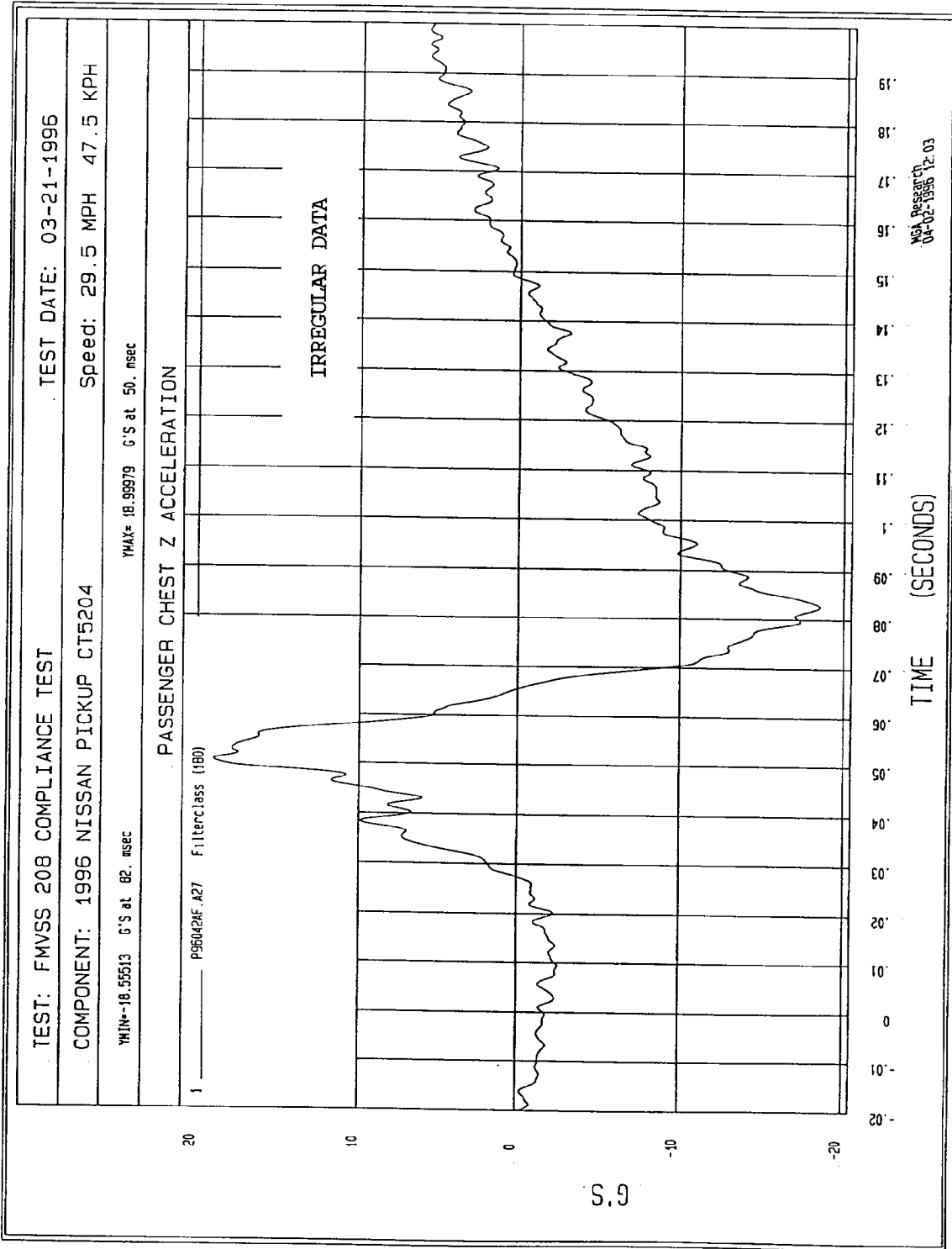
Y1H-61.65525 G'S at 53. msec YMAX= 9.72625 G'S at -6.3 msec

PASSENGER CHEST X ACCELERATION



MSA Research
04-02-1996 12:03





TEST DATE: 03-21-1996

TEST: FMVSS 208 COMPLIANCE TEST

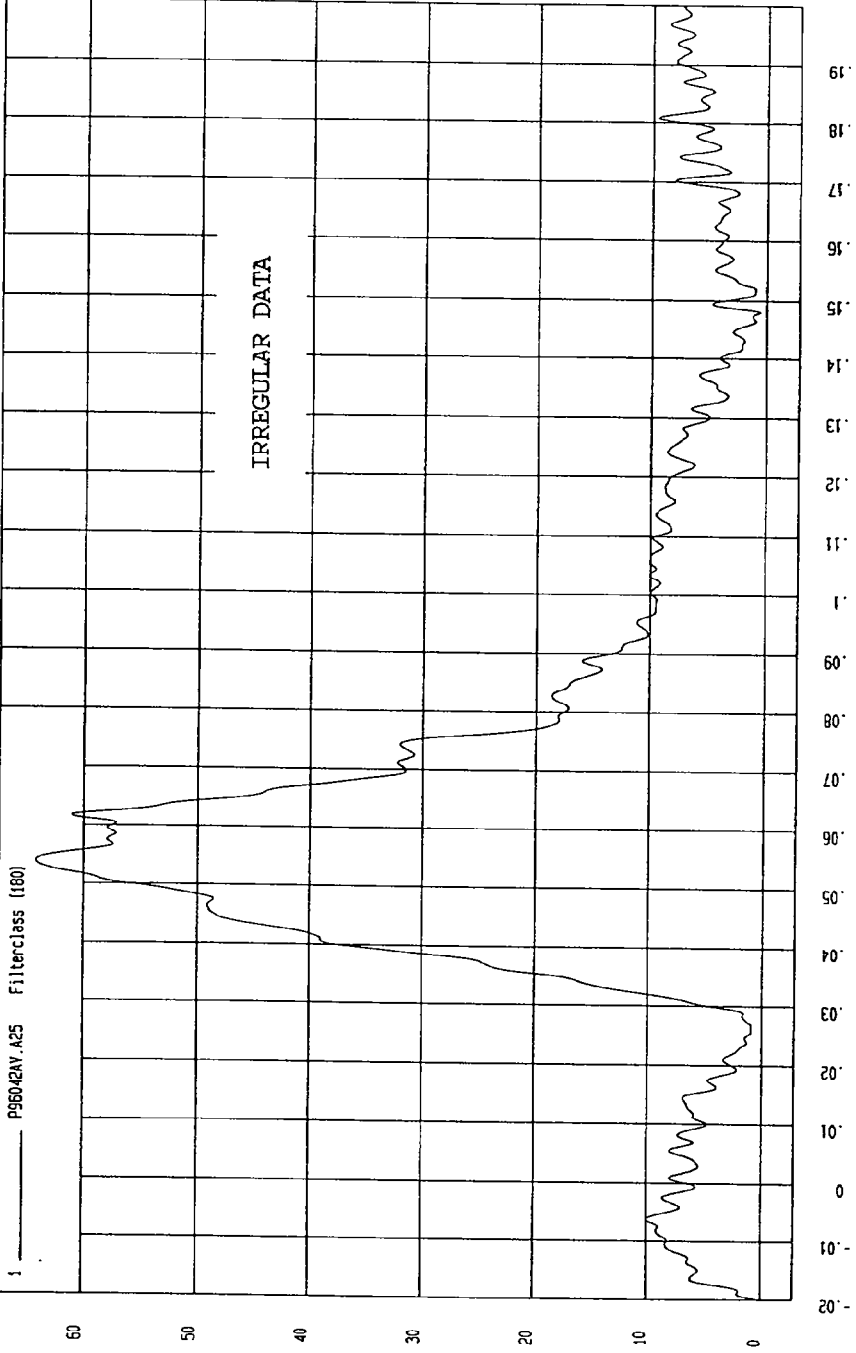
Speed: 29.5 MPH 47.5 KPH

COMPONENT: 1996 NISSAN PICKUP CT5204

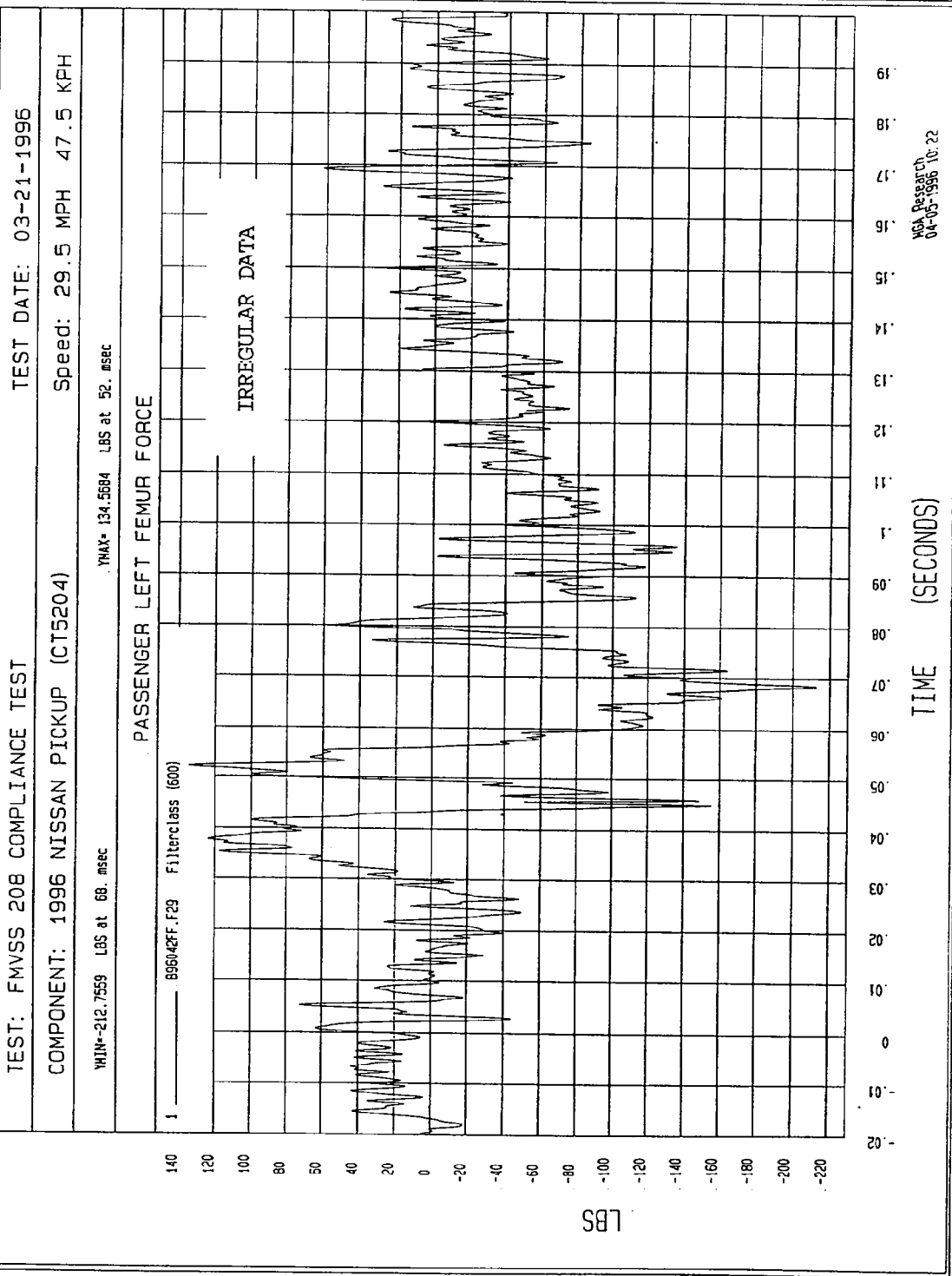
YMIN= .3741509 G'S at -.19. msec

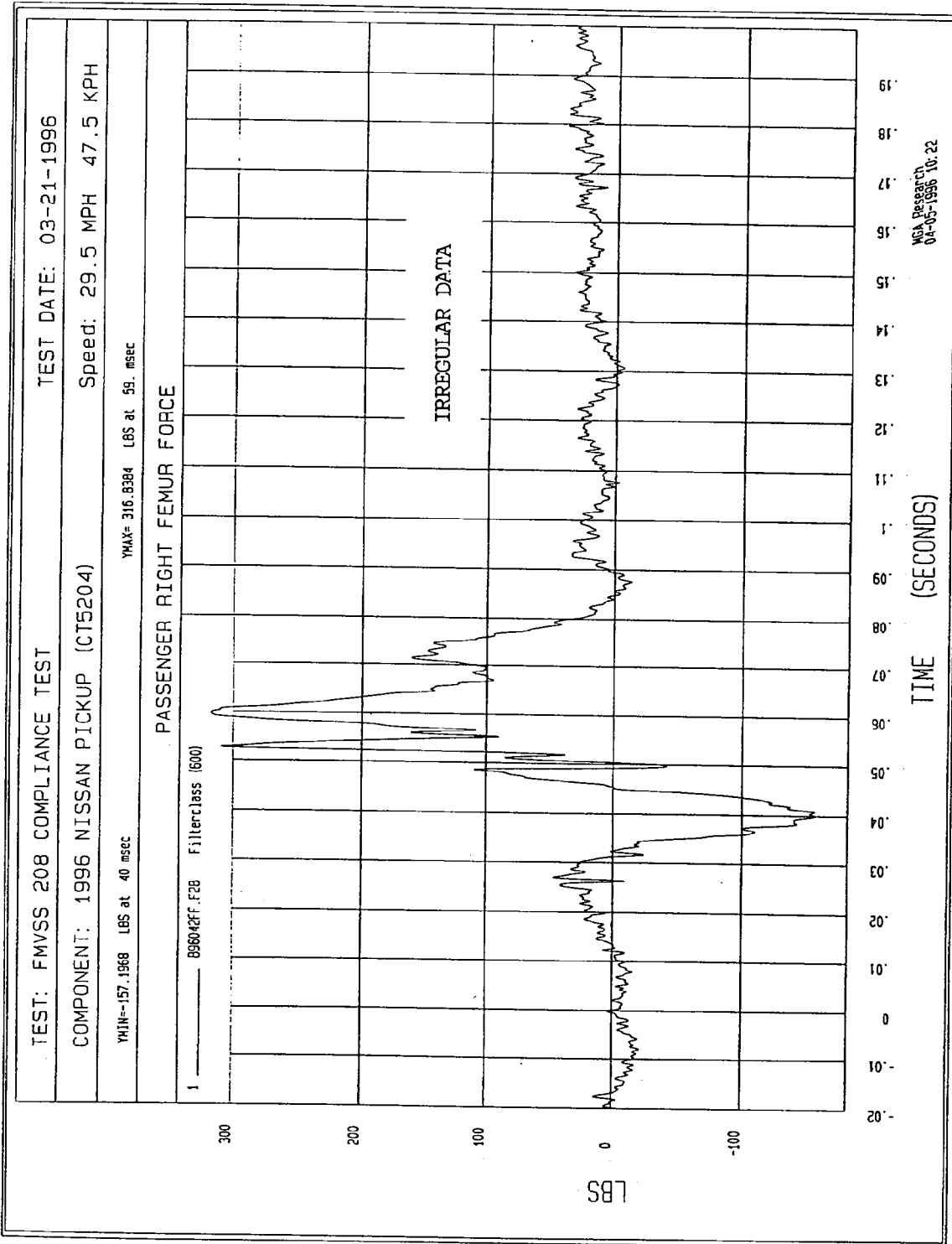
YMAX= 64.07257 G'S at 53. msec

PASSENGER CHEST RESULTANT ACCELERATION



MOA Research
04-02-1996 12.03





TEST: FMVSS 208 COMPLIANCE TEST TEST DATE: 03-21-1996

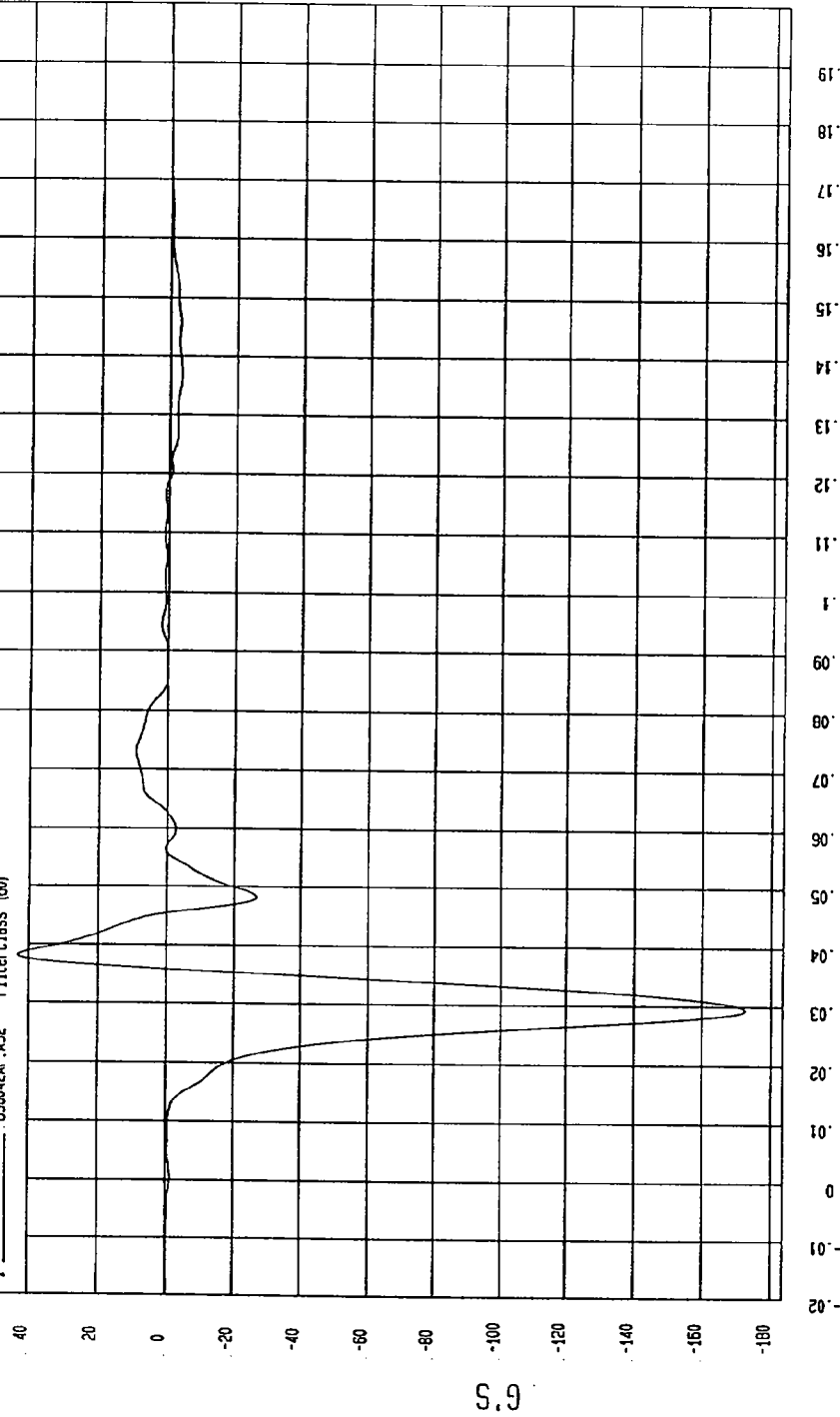
COMPONENT: 1996 NISSAN PICKUP (C15204) Speed: 29.5 MPH 47.5 KPH

YMIN=-172.5352 G'S at 29. msec

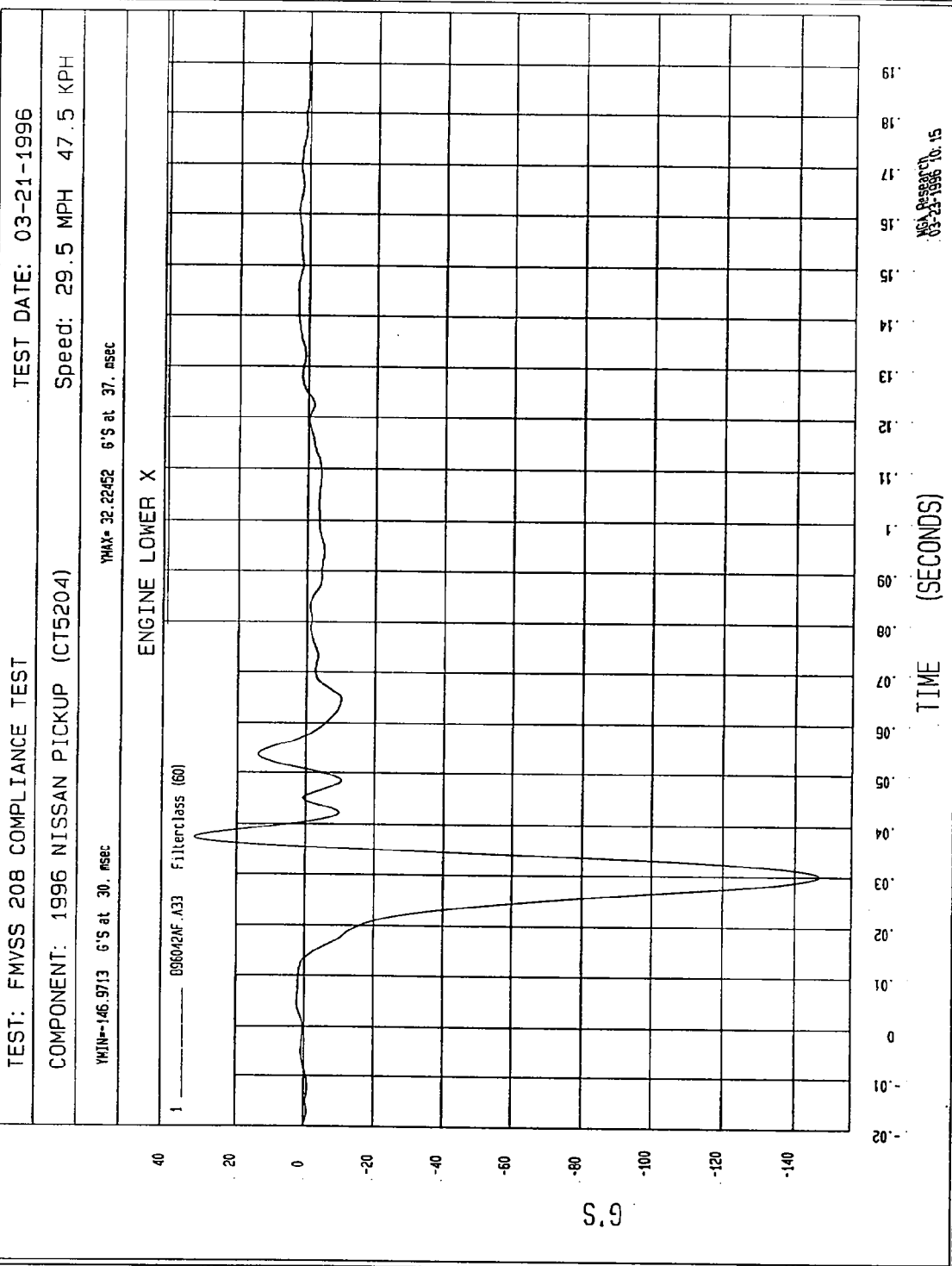
YMAX=43.19159 G'S at 38. msec

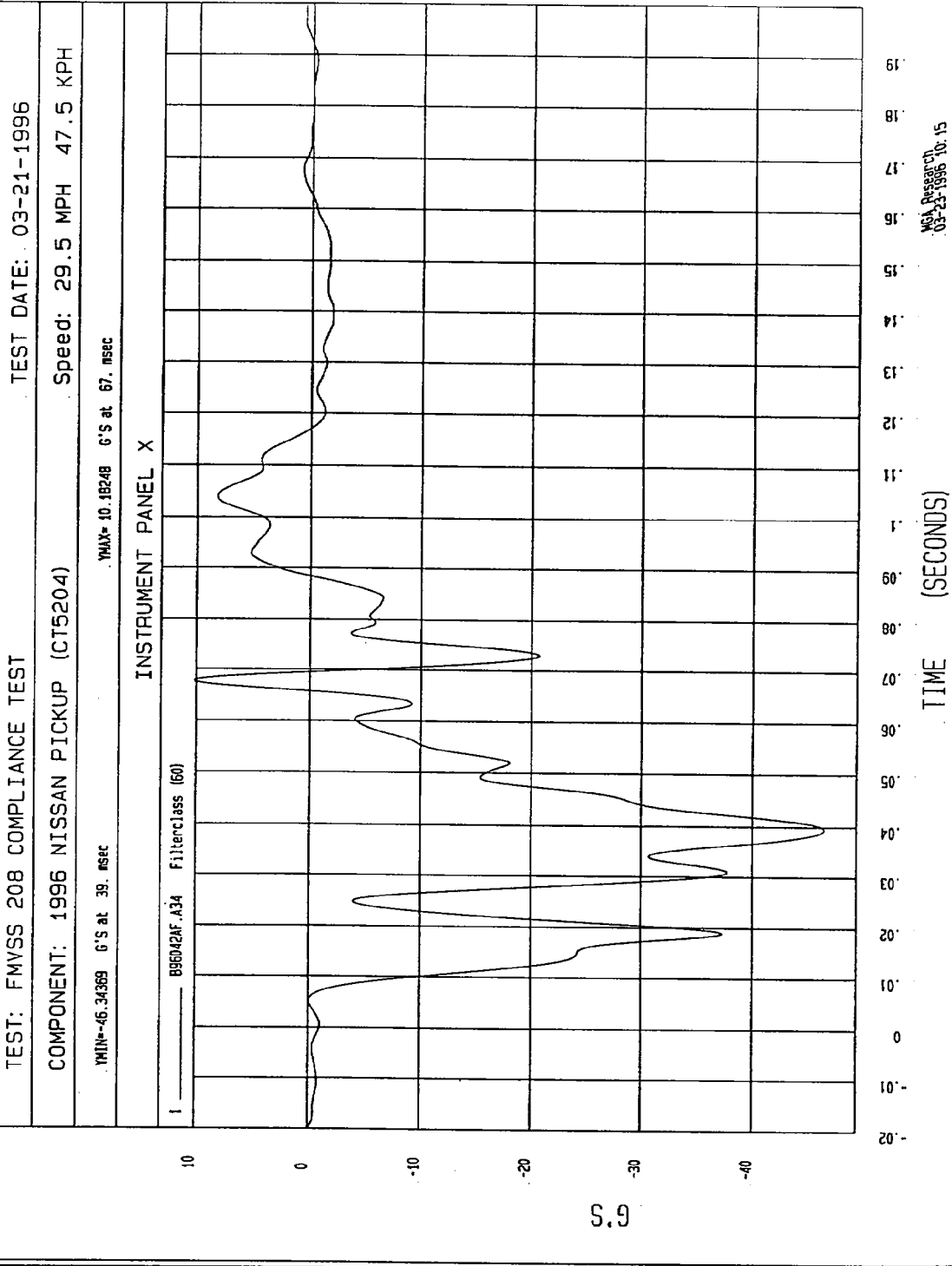
ENGINE UPPER X

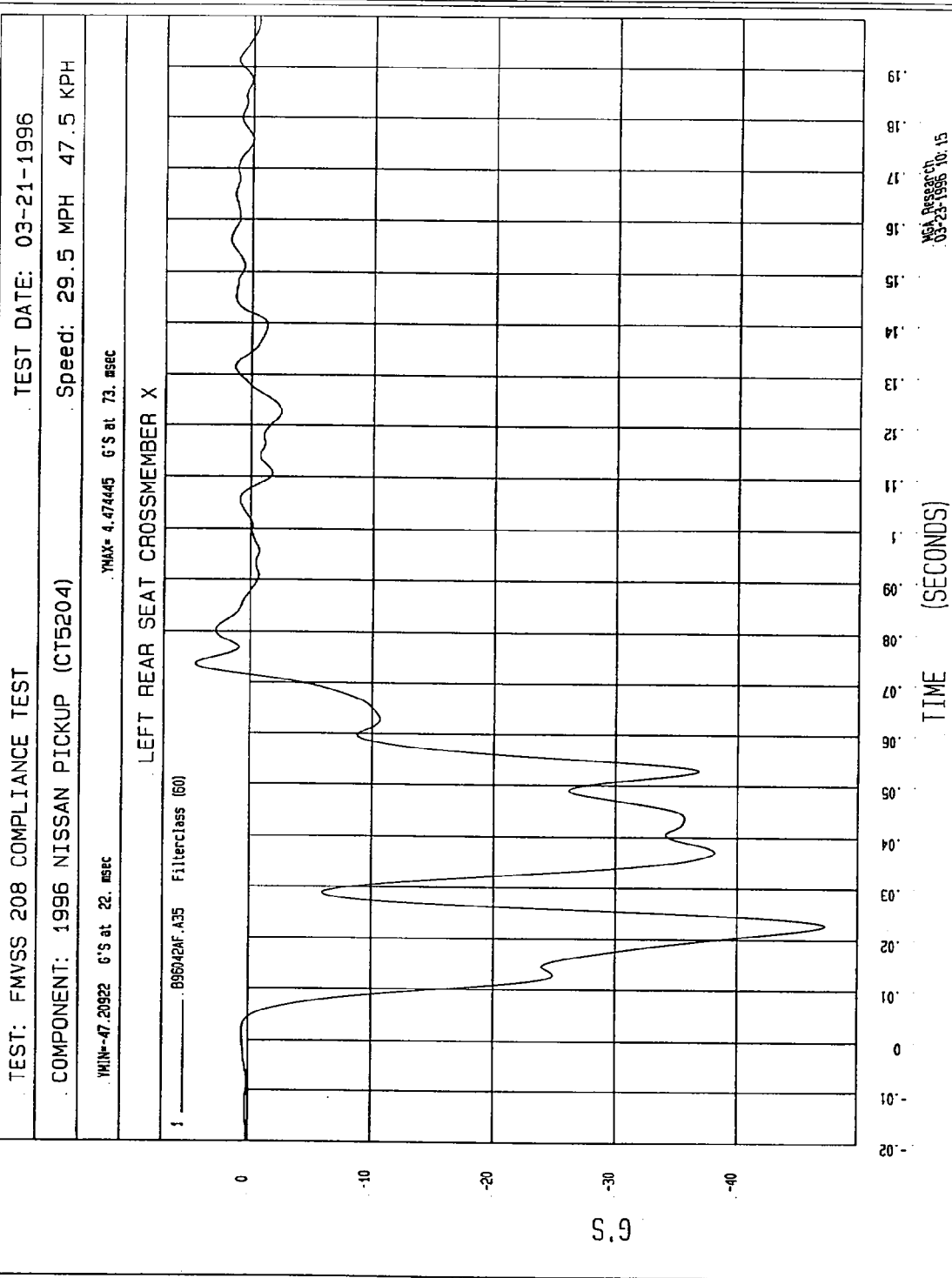
1 886042AF.A32 Filterclass (50)



NSI Research
03-23-1996 10:15





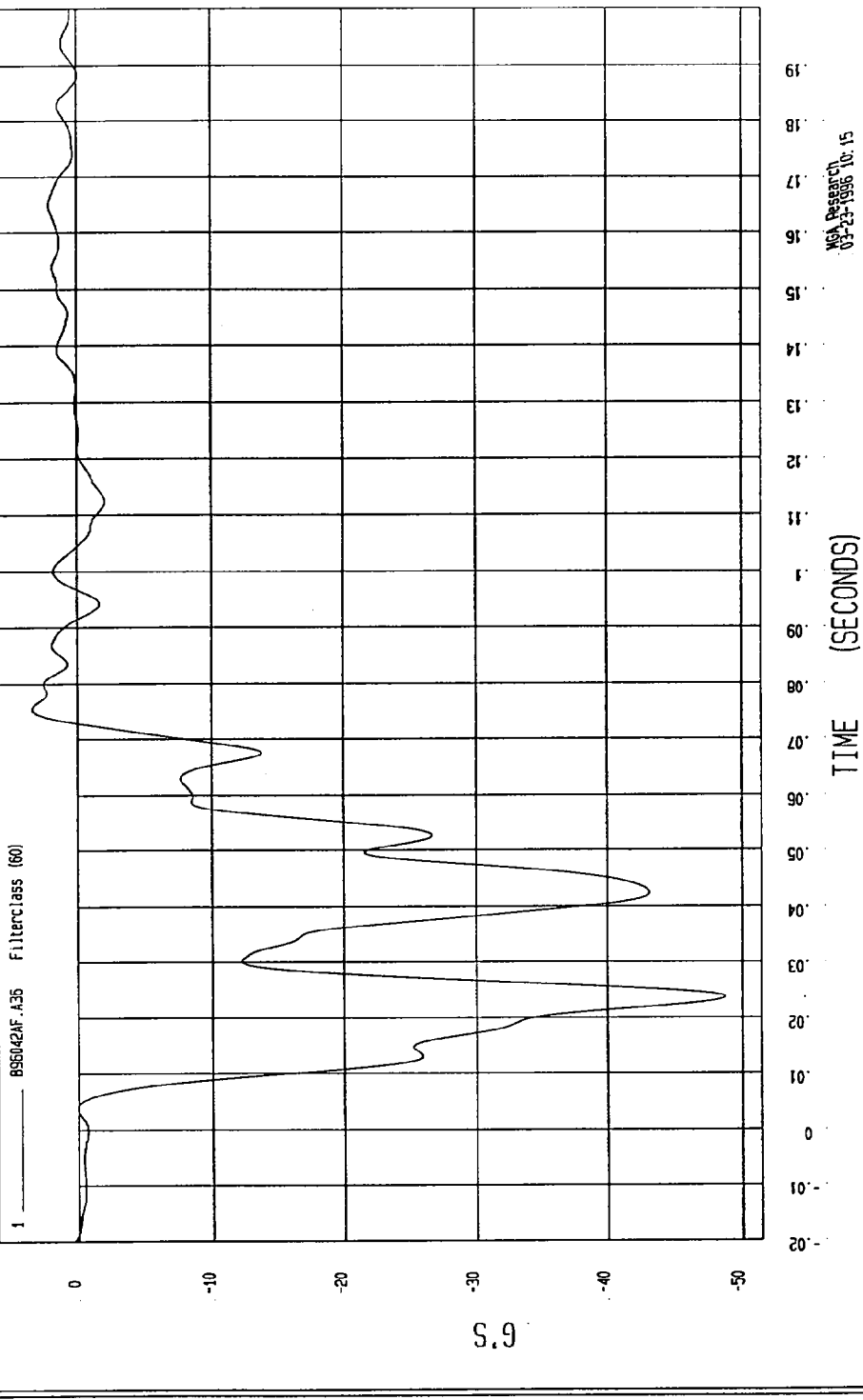


TEST: FMVSS 208 COMPLIANCE TEST TEST DATE: 03-21-1996

COMPONENT: 1996 NISSAN PICKUP (CT5204) Speed: 29.5 MPH 47.5 KPH

YMIN=-48.77897 G'S at 23. msec YMAX= 3.47967 G'S at 75. msec

RIGHT REAR SEAT CROSSMEMBER X

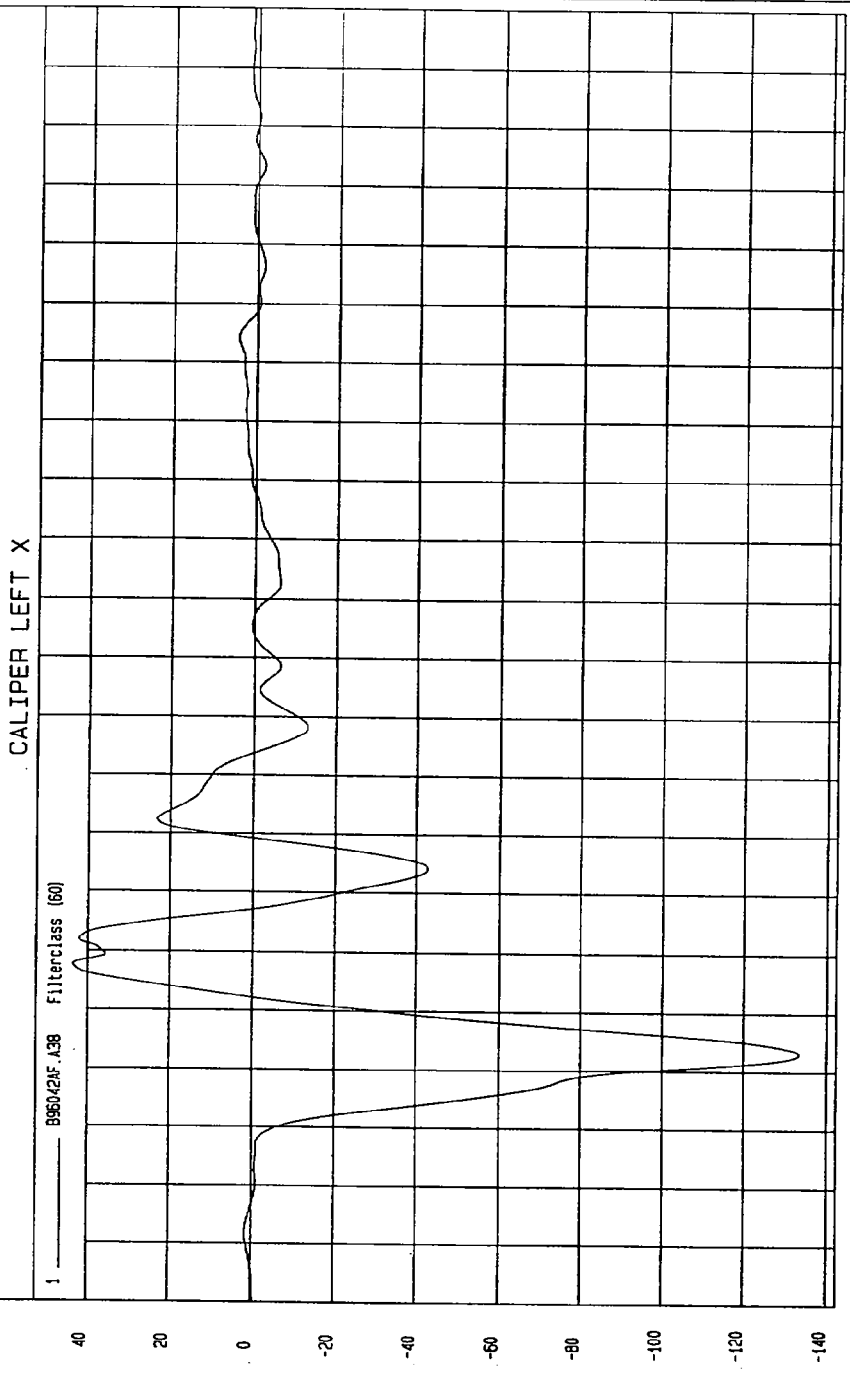


MPA Report CT
03-23-1996 10:15

TEST: FMVSS 208 COMPLIANCE TEST TEST DATE: 03-21-1996

COMPONENT: 1996 NISSAN PICKUP (CT5204) Speed: 29.5 MPH 47.5 KPH

YMIN=-133.4419 G'S at 23. msec YMAX= 43.49793 G'S at 37. msec



NSA Preserved
03-21-1996 10:15

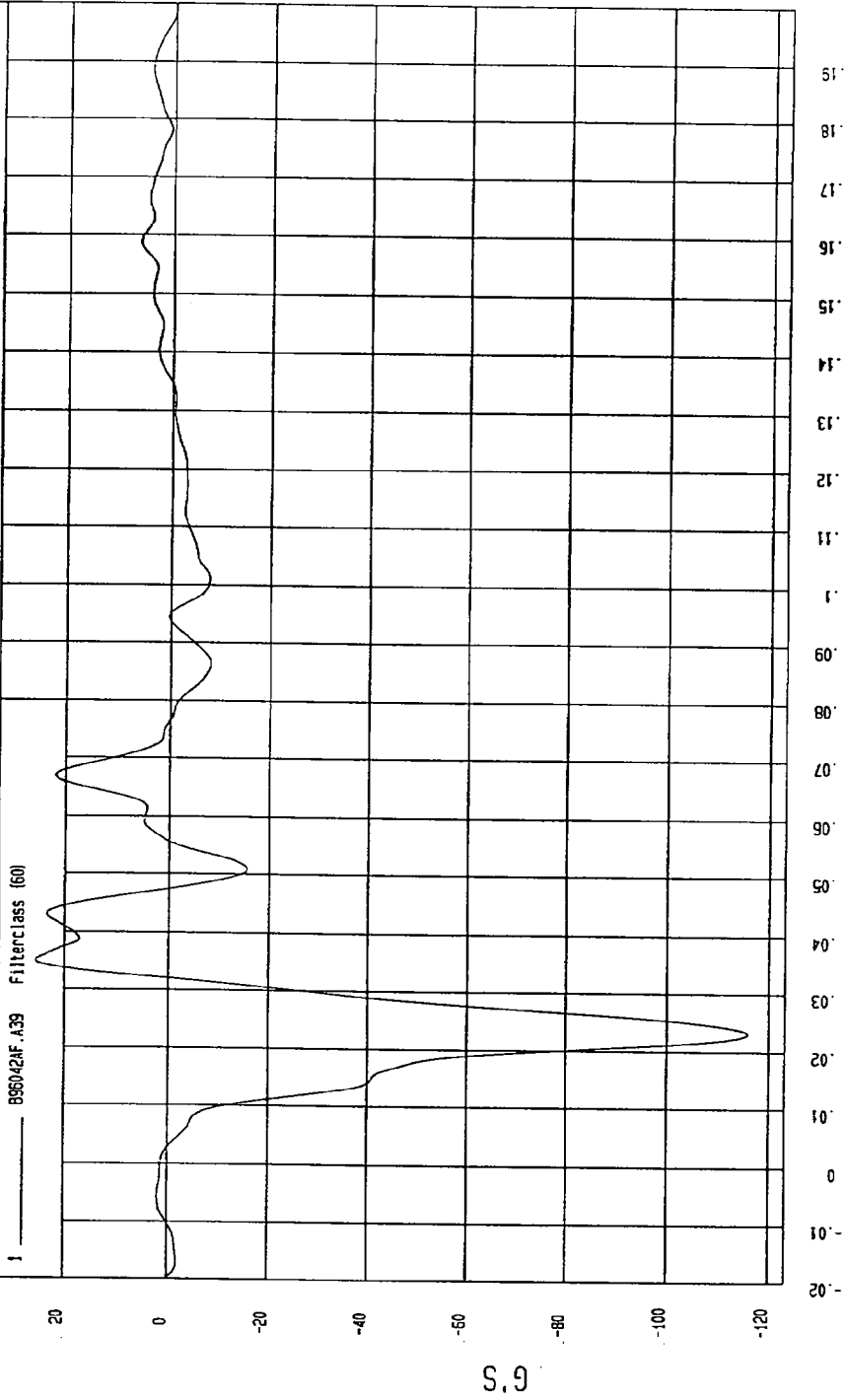
TEST: FMVSS 208 COMPLIANCE TEST TEST DATE: 03-21-1996

COMPONENT: 1996 NISSAN PICKUP (CT5204) Speed: 29.5 MPH 47.5 KPH

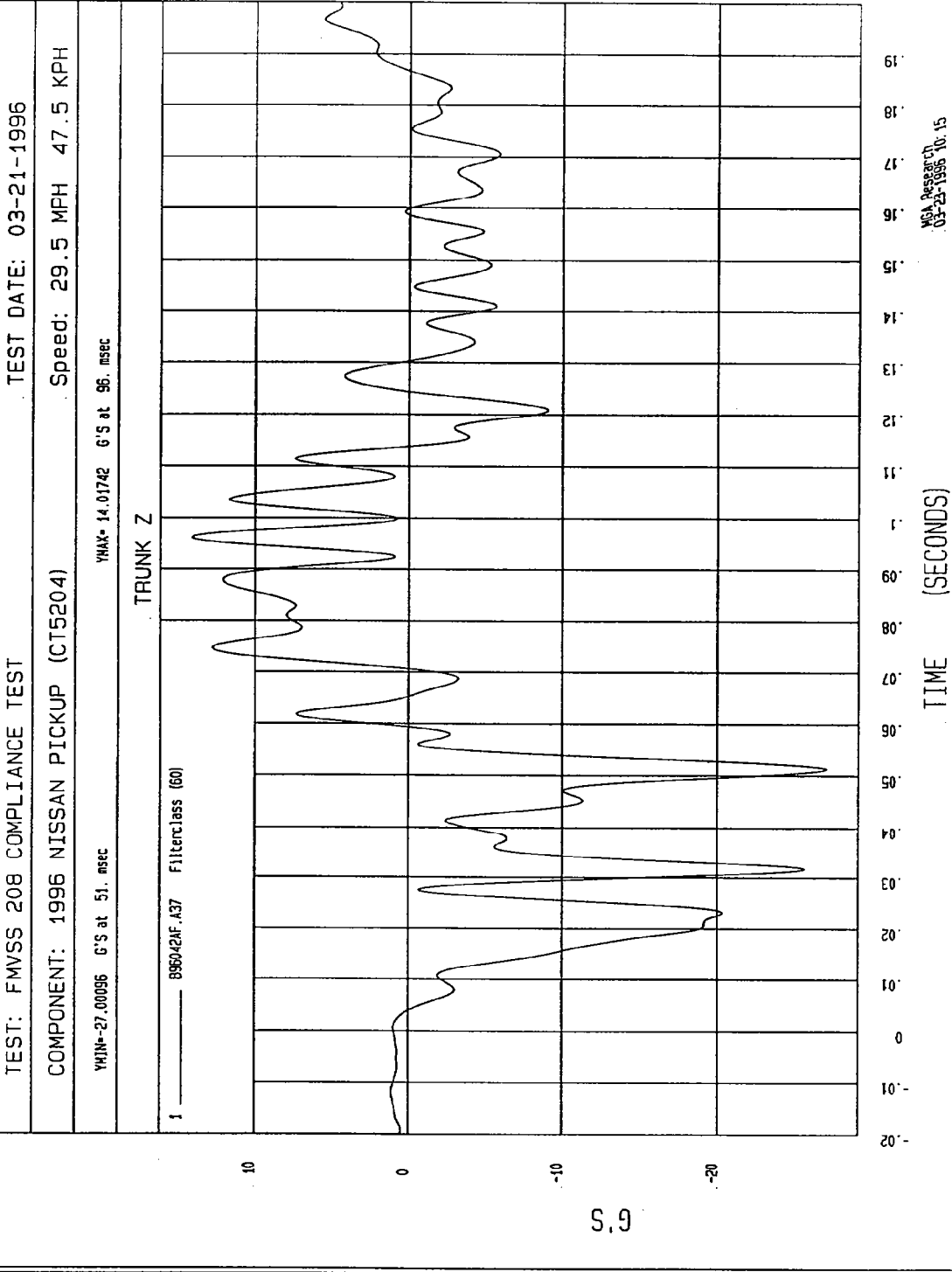
YMIN=-115.978 G'S at 23. msec

YMAX= 25.61462 G'S at 35. msec

CALIPER RIGHT X



MGA Research
03-23-1996 10:15



APPENDIX C
MANUFACTURER'S VEHICLE INFORMATION

1996 Model Year Nissan Truck (2-wheel drive)
Response to IR 1649 for FMVSS 208:
"Occupant Crash Protection"

- 1) The restraint system provided at the driver and passenger seating position in the 1996 Nissan Truck (2-wheel drive) is installed to meet the requirements of FMVSS No. 208, S4.1.2.1(C)(2).
- 2) Not applicable.
- 3) The manual safety belt provided at each outboard designated seating position is installed to meet the requirements of FMVSS No. 208, S4.1.2.1(C)(2).

Tables #1 and #2 summarize Nissan's certification test data for each manual safety belt in the fastened and unfastened modes for the 1996 Nissan Truck (2-wheel drive).
- 4) Not applicable.
- 5) Not applicable.
- 6) An explosive device is used to inflate the air bags in the 1996 Nissan Truck (2-wheel drive). The certification letters from the air bag and module suppliers that indicate conformance to the requirements of S9.2 of FMVSS No. 208 are enclosed as Attachment #5 of this submission.
- 7) The safety belt system in the 1996 Nissan Truck (2-wheel drive) is not equipped with tension relieving devices.
- 8) The windows were open during Nissan's certification testing. The 1996 Nissan Truck (2-wheel drive) is not equipped with vents.
- 9) The Part 572(E) "Hybrid III" anthropomorphic test dummy (ATD), manufactured by Humanoid, was employed in the front left outboard (driver) seating position in the left and right angular certification tests for the vehicle. All other seating positions in the certification trials for the vehicle were conducted using test dummies manufactured by ARL, Inc. The dummy seating positioning information is provided in Appendix C. The 1996 Nissan Truck (2-wheel drive) is not equipped with a driver foot rest. A split bench seat is not available.
- 10) The seating position, steering column positioning, and fuel tank capacity data are provided in the completed Form #1 that was supplied by the Office of Vehicle Safety Compliance (Attachment #1).
- 11) The 1996 Nissan Truck (2-wheel drive) is not equipped with adjustable seat belt anchorages.
- 12) Tables #1 and #2 contain data on impact speed, vehicle test weight and the resulting injury criteria that was recorded for all certification tests

conducted to meet the requirements of S4.1.2.1. The ATD head and chest acceleration-time traces and femur load-time traces for the full frontal barrier crash tests are provided in Annexes #1 and #2.

13) Attachment #4 shows the priority of order of removed components to obtain the proper test vehicle weights.

14) Table #3 contains the information that demonstrates compliance with the performance requirements of FMVSS No. 204. The diagram of the steering control system and the description of the energy management are provided as Attachment #2.

15) The 1996 Nissan Truck (2-wheel drive) is not equipped with built-in child restraint system.

Nissan is also providing supplemental information relating to the dimensions for seat back angle and seat slide positioning (Appendix A) and steering column positioning information (Appendix B).

NISSAN MOTOR CO., LTD.

TABLE-1

TITLE 1996 NISSAN TRUCK THE CRASH TEST DATA CONCERNING TO DUMMY READING

1. SUBJECT

- This is the summarized crash test results of FMVSS No.208 conducted by NISSAN.
- Occupant restraint system in this vehicle is installed to meet the requirements of S4.1.2.1 (C) (2).
- Restraint system for each seating position is as follows:

APPLIED MODEL

- D21
- Federal
- California Models

Driver	The active 3 - point Safety belt and air bag.
Passenger	The active 3 - point Safety belt .

2. SUMMARY OF TEST RESULTS

2.1 TEST RESULTS

2WD Model

Barrier	Active 3-point Safety belt	Driver					* Passenger				Test condition		
		HIC	Chest G-3ms (G)	Femur load (lbs)		Chest deflection (in)	HIC	Chest G-3ms (G)	Femur load (lbs)		Chest deflection (in)	Velocity (mph)	Weights (lbs.)
				RH	LH			RH	LH				
Frontal barrier	Without	615	55	1598	1604	2.6	N.A.				30.3	3651	
	With	759	56	670	1101	1.7	323	40	484	441	N.A.	30.5	3856
Right side angular barrier(30°)	Without	190	46	1355	1523	1.9	N.A.				30.4	3856	
	With	(1)					187	28	216	270	N.A.	30.8	3653
Left side angular barrier(30°)	Without	290	43	1490	883	2.2	N.A.				30.4	3855	
	With	(1)					133	36	284	595	N.A.	30.1	3653

4WD Model

Barrier	Active 3-point Safety belt	Driver					* Passenger				Test condition		
		HIC	Chest G-3ms (G)	Femur load (lbs)		Chest deflection (in)	HIC	Chest G-3ms (G)	Femur load (lbs)		Chest deflection (in)	Velocity (mph)	Weights (lbs.)
				RH	LH			RH	LH				
Frontal barrier	With	825	53	1071	480	1.9	344	41	276	100	N.A.	30.3	4365
Right side angular	With	(1)					307	35	345	312	N.A.	30.0	4403
Left side angular	With	(1)					165	32	309	343	N.A.	30.3	4219

* : Passenger test results are carry over from '93MY certification testing.

(1) : Results of tests conducted in "frontal barrier with active belt condition" provides engineering judgement with high confidence of compliance in the less severe "angular barrier with active belt condition".

2.2 TYPE OF DUMMY

Driver : Subpart E of PART 572 (HYB-III) produced by ARL,INC./Humanoid
 Passenger: Subpart B of PART 572 (HYB-II) produced by ARL,INC.

2.3 POSITION OF MOVABLE WINDOWS

The windows were opened during Nissan's certification testing.

TEST VEHICLE INFORMATION

Vehicle Model Year & Make: 1996 NISSAN
 Vehicle Model & Body Style: TRUCK

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 = 25° *1 degrees.
 Measurement Instructions: 22° *3
 Separate Seat 14.2° *4

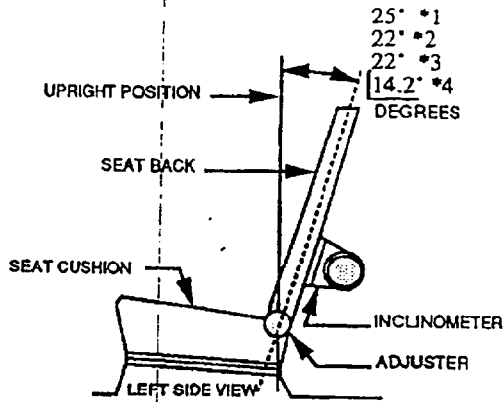
- 1) Pull the folded seat back until the lock position is attained.
 2) Release the lock by actuating the reclining lever and pushing the seat back to the 7th rearward notch

Bench Seat

- 1) Pull the folded seat back until the lock position is attained.

Seat back angle for passenger's seat = 22° *2 degrees.
 Measurement Instructions: 22° *3
14.2° *4

Same as Driver Data



- *1: Nominal designated seat back angle. (Separate Seat)
 *2: Nominal designated seat back angle. (Bench Seat)
 *3: Seat back angle measured as shown in Attachment 3. (Separate Seat)
 *4: Seat back angle measured as shown in Attachment 3. (Bench Seat)

2. SEAT FOR & 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:

For Both Separate and Bench Seat

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

- 2) With the initial position designated as "0", adjust the seat to the 7th detent to attain the proper position.

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

Separate Seat

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

- 2) With the initial position designated as "0", adjust the seat to the 5th detent to attain the proper position.

Bench Seat

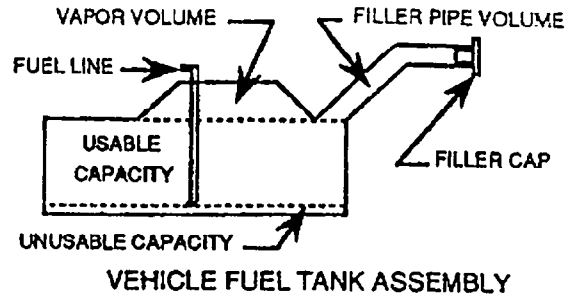
- 1) Actuate seat track slide mechanism by lifting the lock lever and push the seat to its forwardmost position on the track

- 2) With the initial position designated as "0", adjust the seat to the 7th detent to attain the proper position.

Rev. 7/11/94

3. FUEL TANK DATA ••

- 3.1 A. "Usable Capacity" of standard equipment fuel tank = 15.8 gallons.
- B. "Usable Capacity" of optional equipment fuel tank = N/A gallons.
- C. Capacity used when certification testing to requirements of FMVSS 301 = 15.8 gallons.



Operational Instructions:

3.2 Amount of stoddard solvent added to vehicle for certification test = 14.9 gallons

3.3 Is vehicle equipped with electric fuel pump? YES NO
If YES, explain the vehicle operating conditions under which the fuel pump will pump fuel.
The fuel pump will pump fuel: 1) for 5 second after the ignition is switched to "on".

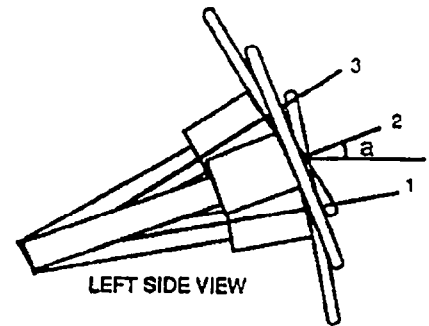
2) while the engine is running.

4. STEERING COLUMN ADJUSTMENTS ••

Steering wheel and column adjustments are made so that the steering wheel hub is at the geometric center of the locus it describes when it is moved through its full range of driving positions. If the tested vehicle has any of these adjustments, does your company use any specific procedures to determine the geometric center.

Operational Instructions: a = 24.3°

- 1) Set the inclinometer on the steering column cover
- 2) Measure the column angle using the inclinometer with the steering column at the highest and lowest elevation and record the resultant angles.
- 3) Adjust the steering column to the mid position.



STEERING COLUMN ASSEMBLY

1996 NISSAN TRUCK

Attachment 2

Attachment 2

ADJUSTABLE FRONT SEAT BACK ANGLE

(USE INCLINOMETER)

DATA FOR 1996 NISSAN TRUCK

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Refer to Appendix C Photos. 2,3

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After adjusting the back according to Attachment 1, Seat back angle is 14.2°
when measured at the position shown in the photograph.

APPENDIX A

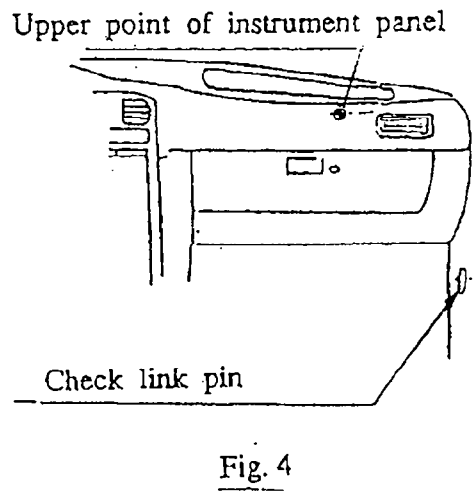
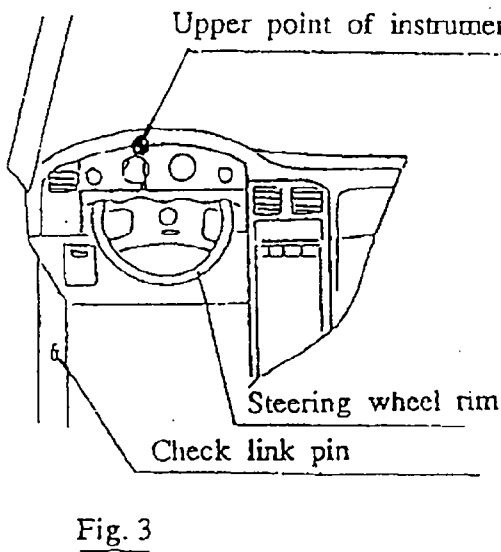
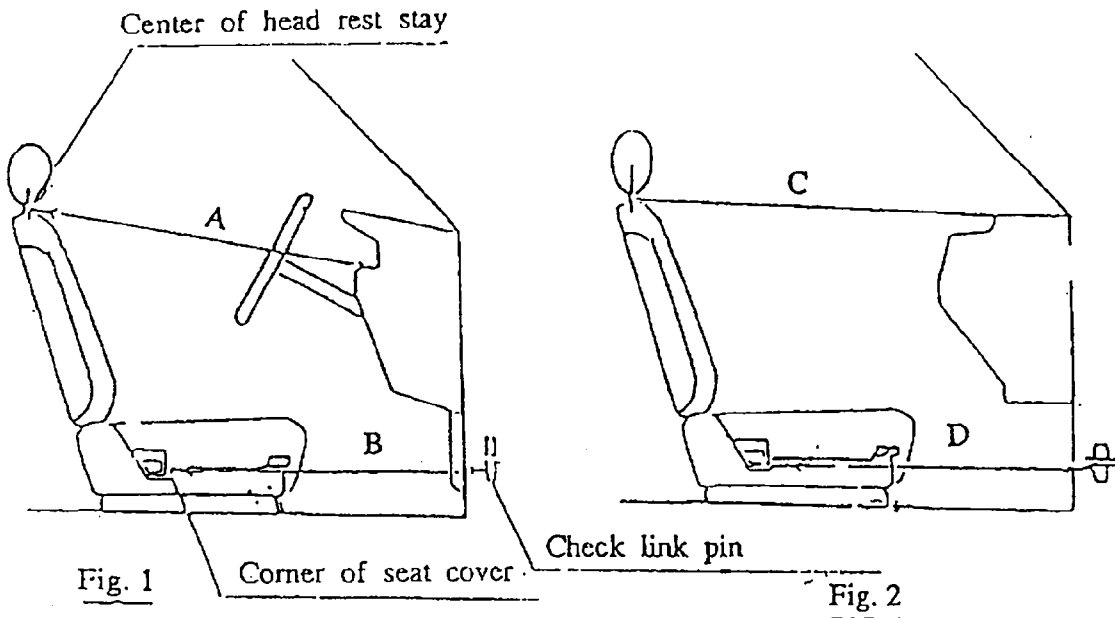
VEHICLE MODEL YEAR: 1996 VEHICLE MAKE: NISSAN

VEHICLE MODEL & BODY STYLE: TRUCK

DIMENSIONS FOR SEAT BACK ANGLE AND SEAT SLIDE SETTING

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

	Measurements Points	Photographs	Dimensions	
Driver Side	A Center of headrest stay - Upper point of instrument Panel	1 to 3	35.2 in.	Seat back setting data
	B Corner of seat cover- Check link pin	4 to 6	38.1 in.	Seat slide setting data
Passenger Side	C Center of headrest stay - Upper point of instrument Panel	7 to 9	35.1 in.	Seat back setting data
	D Corner of seat cover- Check link pin	10 to 12	38.1 in.	Seat slide setting data



Driver Seat (Dimension A)



Photo.1

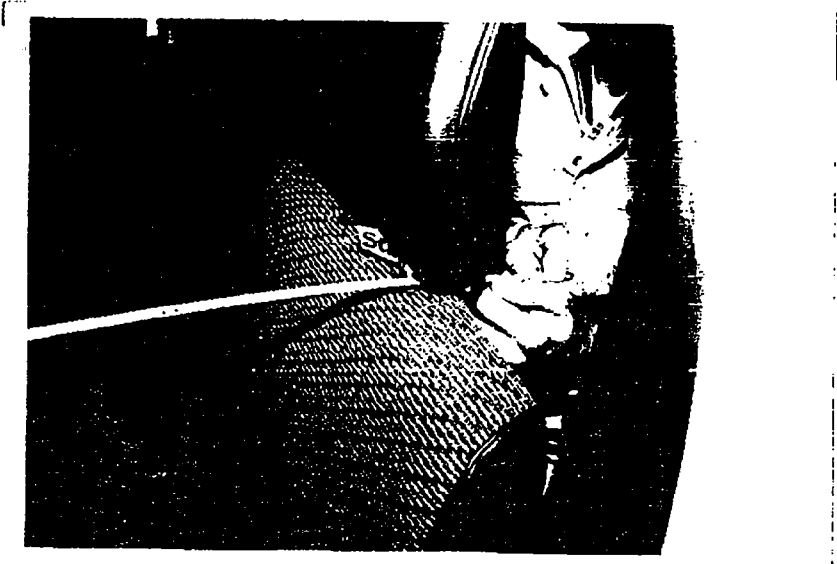


Photo.2

Center of head
rest stay

Driver Seat (Dimension A)



Photo.3

Upper point of

Instrument Panel

Driver Seat (Dimension B)

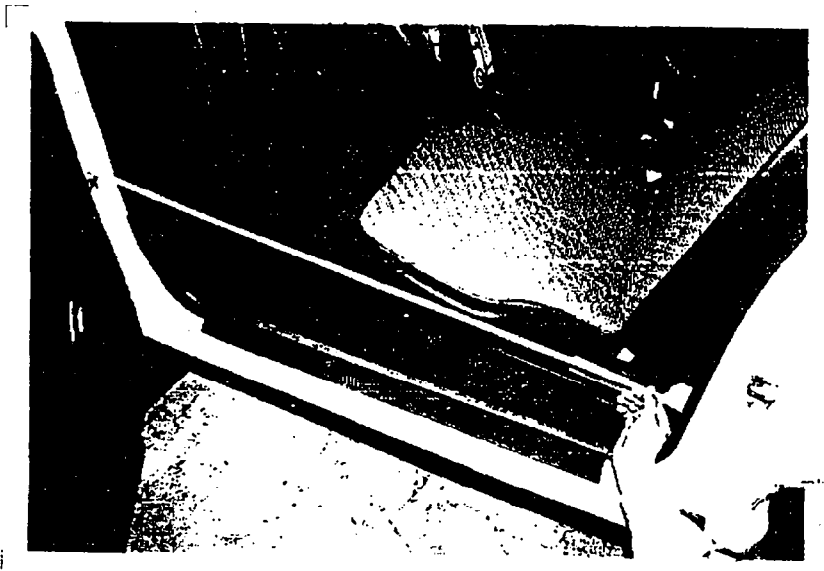


Photo. 4

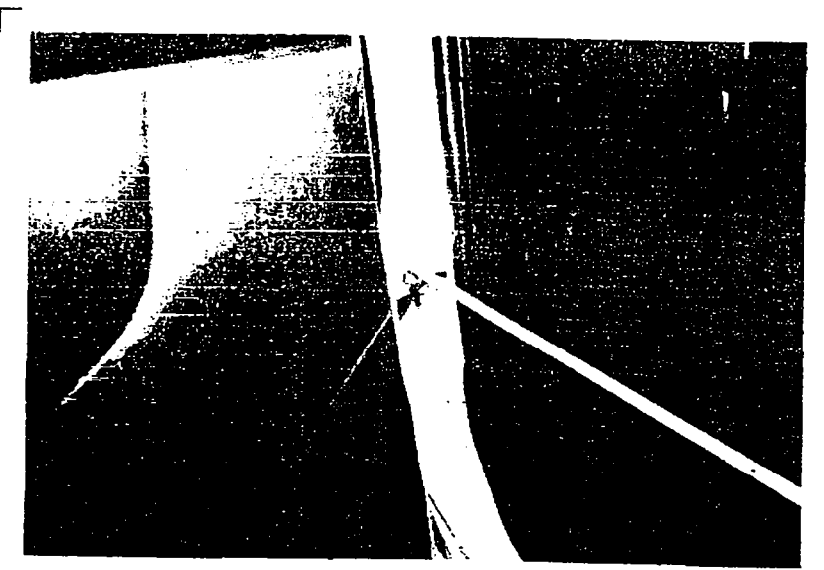


Photo.5

Check link pin

1996 NISSAN TRUCK

Appendix A

6/10

Driver Seat (Dimension B)

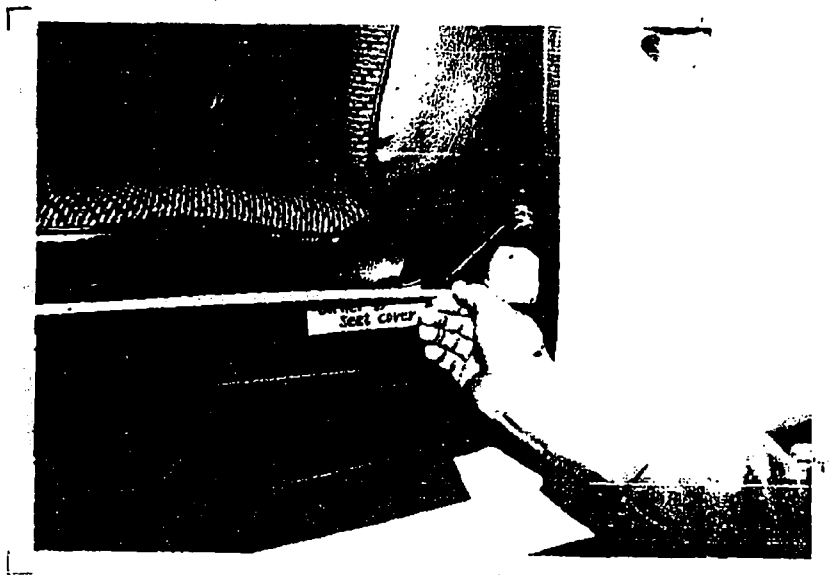


Photo. 6
Corner of seat
cover

APPENDIX B

VEHICLE MODEL YEAR: 1996 VEHICLE MAKE: NISSAN
 VEHICLE MODEL & BODY STYLE: TRUCK

DIMENSIONS FOR TILT STEERING COLUMN POSITIONING

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

	Measurements Points	Photographs	Dimensions
Driver Side	A Center of steering horn pad - Edge of header rail	1,2,3	17.5 in.
	B Lower point of steering wheel rim - Edge of header rail	4,5	24.6 in.

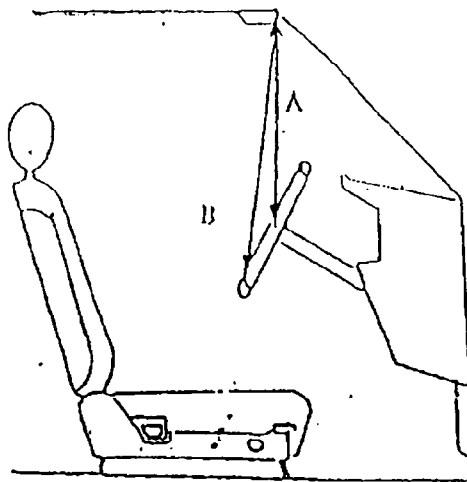


Fig. 1

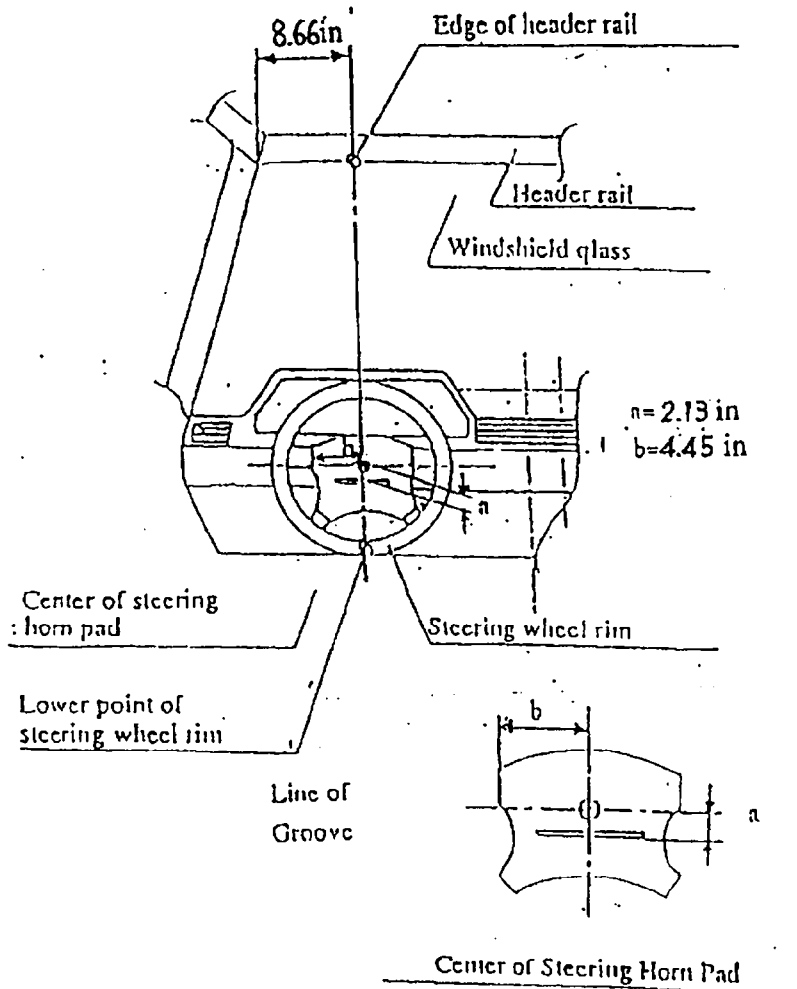


Fig. 2

1996 NISSAN TRUCK

Appendix B

3/5

Driver Seat (Dimension A)

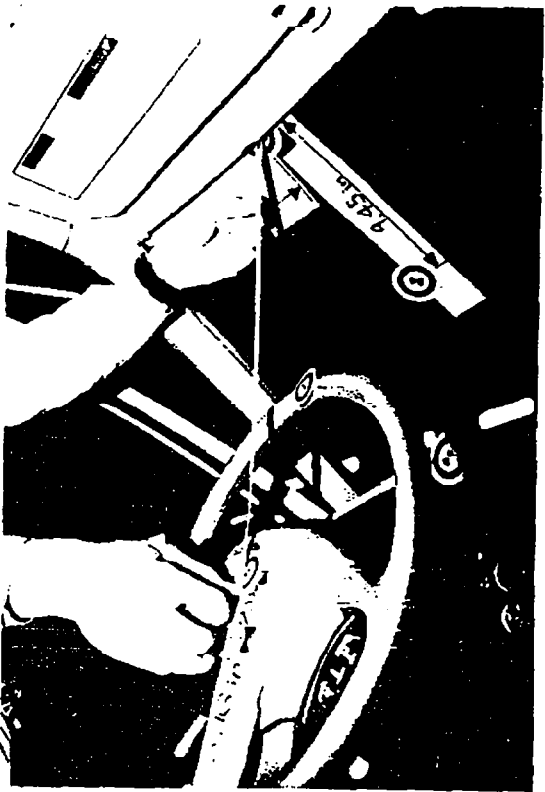


Photo. 1

Driver Seat (Dimension A)

┌

Photo.2

Center of steering

horn pad

Refer to Photo.4

Driver Seat (Dimension A&B)

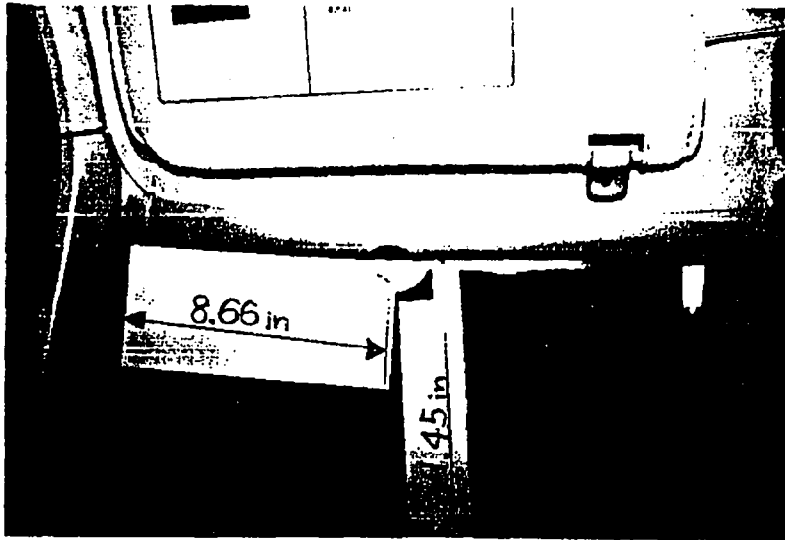
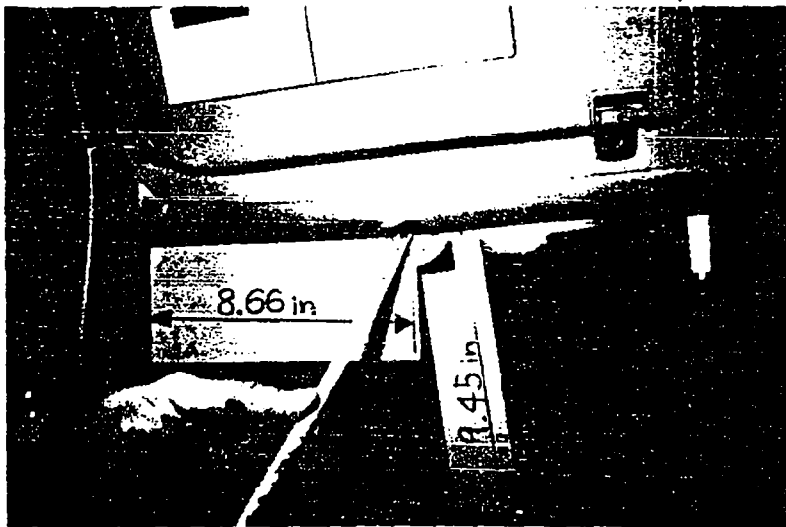


Photo. 3

Edge of header rail



Driver Seat (Dimension B)

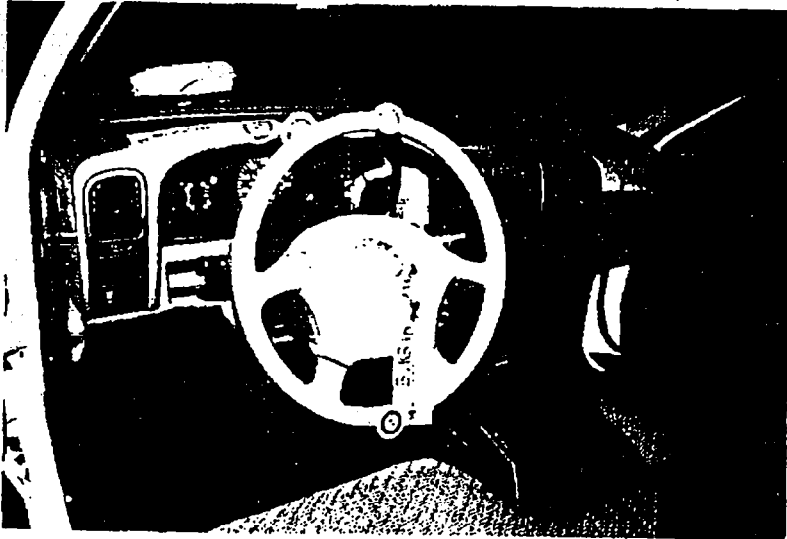


Photo. 4

Steering wheel

Driver Seat (Dimension B)



Photo.5

Lower point of
steering wheel rim

DUMMY POSITIONING IN VEHICLE FRONT SEAT MEASUREMENT TABLE

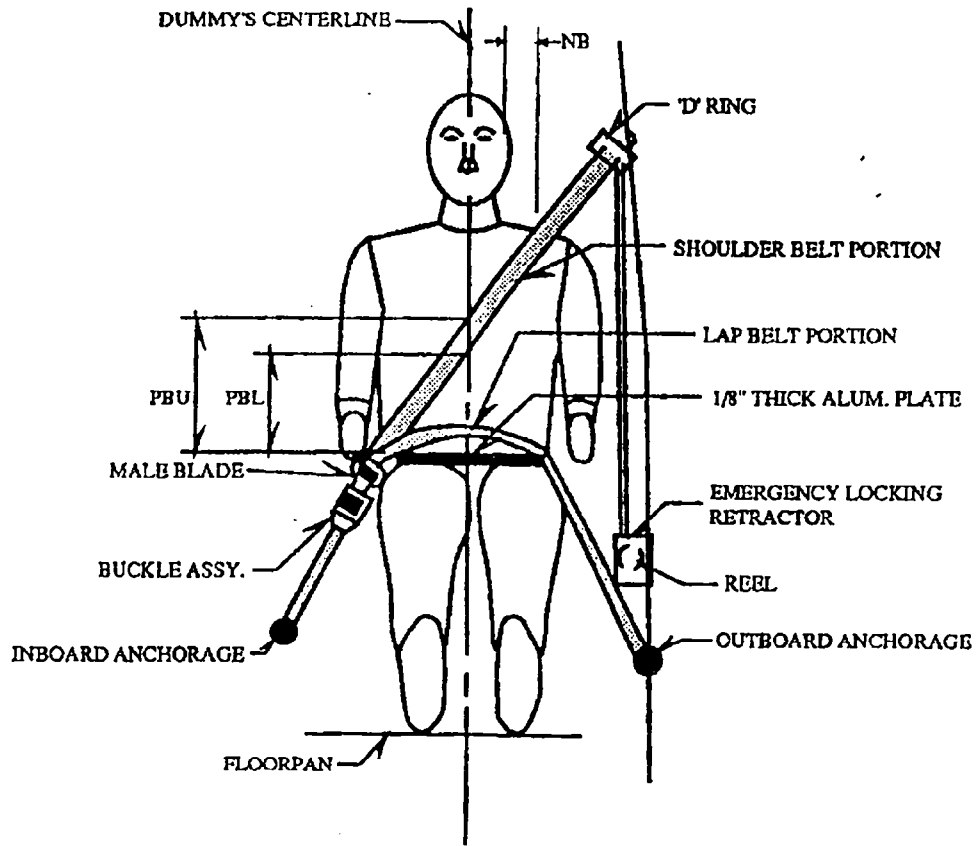
	DRIVER (Serial #)			PASS. (Serial #)		
WA°	_____					
SWA°	65.7deg					
SCA°	24.3deg					
SA°	14.2deg			14.2deg		
HZ	_____			_____		
HH	16.4			18.3		
HW	23.1			26.1		
HR	9.8			9.8		
NR	14.8			Angle (NA) N/A		
CD	22.2			24.0		
CS	11.1			_____		
RA	_____			_____		
KDL	4.9	Angle (KDA) N/A		8.9		
KDR	4.6			8.7	Angle (KDA) N/A	
PA°	N/A			N/A		
TA°	N/A			N/A		
KK	9.7			9.2		
ST	N/A	Angle N/A		N/A	Angle N/A	
SK	N/A	Angle N/A		N/A	Angle N/A	
SH	N/A	Angle N/A		N/A	Angle N/A	
SHY	N/A			N/A		
HS *1	15.7			17.5		
HD *2	12.1			13.0		
AD	6.0			8.3		
HC *3	31.6			28.9		

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

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

*3; HC-H-point to Check link pin. Center of hip point hole-Check link pin of front door.

Pre-Test
SEAT BELT POSITIONING DATA



FRONT VIEW OF DRIVER DUMMY
(sample belt configuration)

	DRIVER DUMMY (inches)	PASSENGER DUMMY (inches)
<u>PBU</u> --- Top surface of alum. plate to upper edge (inches)	12.9	12.8
<u>PBL</u> --- Top surface of alum. plate to belt lower edge (inches)	9.2	9.6
<u>LAP BELT TENSION</u> (lbs.)	NO DATA	NO DATA
<u>SHOULDER BELT TENSION</u> (lbs.)	NO DATA	NO DATA
<u>NB</u> - Edge of neck to edge of belt	NO DATA	NO DATA