636590

REPORT NUMBER 301L-GTL-03-007

SAFETY COMPLIANCE TESTING FOR FMVSS NO. 301L FUEL SYSTEM INTEGRITY

GENERAL MOTORS DE MEXICO
2003 BUICK RENDEZVOUS, MPV
NHTSA NO. C30106

GENERAL TESTING LABORATORIES, INC.
1623 LEEDSTOWN ROAD
COLONIAL BEACH, VIRGINIA 22443

JUNE 26, 2003

FINAL REPORT

PREPARED FOR

U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
[redacted]-ENFORCEMENT
OFFICE OF VEHICLE SAFETY COMPLIANCE
400 SEVENTH STREET, SW
ROOM 6111 (NVS-220)
WASHINGTON, D.C. 20590

Prepared By: D. Messick

Approved By: [signature]

Approval Date: 06/26/03

FINAL REPORT ACCEPTANCE BY OVSC:

Accepted By: [signature]

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7. Author(s) Grant Farrand, Project Engineer Debbie Messick, Project Manager	8. Performing Organ. Rep# GTL-DOT-03-301L-007
9. Performing Organization Name and Address General Testing Laboratories, Inc. 1623 Leedstown Road Colonial Beach, Va 22443	10. Work Unit No. (TRAIS) N/A 11. Contract or Grant No. DTNH22-01-C-11025
12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Admin. [redacted] Enforcement Office of Vehicle Safety Compliance (NVS-220) 400 7th Street, S.W., Room 6111 Washington, DC 20590	13. Type of Report and Period Covered Final Test Report June 09, 2003 14. Sponsoring Agency Code NVS-221

15. Supplementary Notes

16. Abstract
Compliance tests were conducted on the subject, 2003 Buick Rendezvous MPV in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-301-02 for the determination of FMVSS 301 compliance.
Test failures identified were as follows:
NONE

17. Key Words	18. Distribution Statement
Compliance Testing Safety Engineering FMVSS 301	Copies of this report are available from NHTSA NHTSA Technical Reference Div., Rm. 5108 (NPO-230) 400 7th St., S.W. Washington, DC 20590 Telephone No. (202) 366-4946

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SECTION 1

PURPOSE OF COMPLIANCE TEST

1.0 PURPOSE OF COMPLIANCE TEST

A 2003 Buick Rendezvous MPV was subjected to Federal Motor Vehicle Safety Standard (FMVSS) No. 301 testing to determine if the vehicle was in compliance with the requirements of the standard. The purpose of this standard is to reduce deaths and injuries occurring from fires that result from fuel spillage during and after motor vehicle crashes, and resulting from ingestion of fuels during siphoning.

1.1 The test vehicle was a 2003 Buick Rendezvous MPV. Nomenclature applicable to the test vehicle are:

A. Vehicle Identification Number: 3G5DA03E03S560384

B. NHTSA No.: C30106

C. Manufacturer: GENERAL MOTORS DE MEXICO

D. Manufacture Date: 12/02

1.2 TEST DATE

The test vehicle was subjected to FMVSS No. 301 testing on June 09, 2003.

SECTION 2

COMPLIANCE TEST RESULTS SUMMARY

2.0 TEST RESULTS

All tests were conducted in accordance with NHTSA, Office of Vehicle Safety Compliance (OVSC) Laboratory Procedure, TP-301-02 dated 8 November 1994 and General Testing Laboratories, Inc. (GTL) Test Procedure, TP-301-02, "Fuel System Integrity".

Based on the test performed, the 2003 Buick Rendezvous MPV appears to meet the lateral impact requirements of FMVSS 301 testing.

SECTION 3

COMPLIANCE TEST DATA

3.0 TEST RESULTS

The following data sheets document the results of testing on the 2003 Buick Rendezvous.

SUMMARY OF RESULTS

Vehicle's NHTSA No.: C30106 Test Model: RENDEZVOUS

Test Date.: 06/09/03 Time: 15:55 Temperature 83 ° F

Vehicle Model Year, Make, Model and Body Style:
2003 BUICK RENDEZVOUS MPV

Vehicle Test Weight: 4923 lbs.; Impact Velocity: 19.5 mph

Type of Front Occupant Restraint System Installed in Test Vehicle:

Driver's DSP: TYPE 2 BELT WITH FRONTAL AIR BAG IN STEERING WHEEL

Right Passenger's DSP: TYPE 2 BELT WITH FRONTAL AIR BAG IN DASH

Stoddard solvent spillage from Vehicle's Fuel System: None

REMARKS:

RECORDED BY: DATE: 06/09/03
APPROVED BY:

DATA SHEET 1
TEST VEHICLE SPECIFICATIONS

TEST VEHICLE INFORMATION:

NHTSA No.: C30106
Year/Make/Model/Body Style: 2003 BUICK RENDEZVOUS MPV
Engine Data: 3.4 LITER V6
Transmission Data: 4 SPEED AUTOMATIC WITH OVERDRIVE
Final Drive Data: FRONT WHEEL DRIVE
Major Options: TIRE INFLATION MONITOR
Date Received: 03/17/03 ; Odometer Reading: 65 miles

DATA FROM VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured By: GENERAL MOTORS DE MEXICO
Date of Manufacture: 12/02
VIN: 3G5DA03E035560384

GVWR: 2430 kg (5357 lbs.);GAWR Front: 1230 kg(2712 lbs.)GAWR Rear: 1210 kg (2668 lbs.)

DATA FROM VEHICLE'S TIRE PLACARD:

Location of Placard on Vehicle: DRIVER'S DOOR
Tire Pressure With Maximum Capacity Vehicle Load —
Front: 35 psi; Rear: 35 psi
Recommended Tire Size: P215/70R16
Recommended Cold Tire Pressure: Front = 240 kPa(35 psi) Rear = 240 kPa (35 psi)
Size of Tires on Test Vehicle: P215/70R16
Type of Spare Tire: SPACE SAVER T135/70R16

Vehicle Capacity Data —

Type of Front Seat(s): BUCKET
Number of Occupants: Front = 2 ; Mid = ___ Rear = 3 ; Total = 5

A. VEHICLE CAPACITY WEIGHT (VCW) =	1477	lbs.
B. Number of Occupants x 150 lbs. =	750	lbs.
RATED CARGO AND LUGGAGE WEIGHT (RCLW) = A - B =	727	lbs.

RECORDED BY: _____ DATE: 06/05/03
APPROVED BY: _____

DATA SHEET 2
PRE-TEST DATA

WEIGHT OF TEST VEHICLE:

A. As Received At Laboratory (Maximum Fluids) —

Right Front = 529.3 kg (1167 lbs.) Right Rear = 349.7 kg (771 lbs.)

Left Front = 523.4 kg (1154 lbs.) Left Rear = 357.4 kg (788 lbs.)

TOTAL FRONT = 1052.7 kg (2321 lbs.) TOTAL REAR = 707.1 kg (1559 lbs.)

% of TOTAL = 60 % % of TOTAL = 40 %

TOTAL DELIVERED WEIGHT = 1759.9 kg (3880 lbs.)

B. Calculation of Target Test Weight —

1. Total Delivered Weight = 1759.9 kg (3880 lbs.)

2. Rated Cargo & Lugg. Weight (RCLW) = 329.7* kg (727 lbs.)

3. Weight of 2 Dummies (164 lbs. each) = 148.8 kg (328 lbs.)

TARGET TEST WEIGHT = 1 + 2 + 3 = 2238.4 kg (4935 lbs.)

C. Vehicle, Dummies and 329.7 kg (727 lbs.) of Cargo Weight —

Right Front = 603.7 kg (1331 lbs) Right Rear = 520.7 kg (1148 lbs)

Left Front = 589.2 kg (1299 lbs) Left Rear = 519.3 kg (1145 lbs)

TOTAL FRONT = 1192.9 kg (2630 lbs) TOTAL REAR = 1040.0 kg (2293 lbs)

% of TOTAL = 54 % % of TOTAL = 46 %

TOTAL TEST WEIGHT = 2233.03 kg (4923 lbs)

Weight of Ballast secured in cargo area = 329.7 kg (727 lbs)
Type of Ballast: SALT AND SAND BAGS
Method of Securing Ballast: REAR SEAT BELTS AND CARGO HOOKS
Vehicle Components Removed for Weight Reduction:
NONE

* VEHICLE WAS LOADED TO AN RCLW OF 329.7 KG per S7.1.6a as specified for a passenger car and should have been loaded per S7.1.6b to 136 KG or RCLW whichever is less, therefore this test was performed in a worse case overload condition.

DATA SHEET 2
PRE-TEST DATA CONTINUED

TEST VEHICLE ATTITUDE:

As Delivered —
Right Front: 795 mm (31.3 inches)
Left Front: 800 mm (31.5 inches)
Right Rear: 815 mm (32.1 inches)
Left Rear: 815 mm (32.1 inches)

As Tested —
Right Front: 781 mm (30.7 inches)
Left Front: 785 mm (30.9 inches)
Right Rear: 768 mm (30.2 inches)
Left Rear: 766 mm (30.1 inches)

Vehicle's Wheelbase = 2855 mm (112.4 inches)

FUEL SYSTEM DATA:

Fuel System Capacity Listed in Owner's Manual = 68.1 liters (18.0 gallons)
Usable Capacity Figure Furnished By COTR = 68.1 liters (18.0 gallons)

Test Volume Range (91 to 94% of Usable Capacity) — 92.5%

61.9 liters (16.3 gallons) TO 64.0 liters (16.9 gallons)

ACTUAL TEST VOLUME = 63.0 liters (16.6 gallons) (with entire fuel system filled)

Test Fluid Type: Stoddard solvent
Test Fluid Specific Gravity: .7583
Test Fluid Kinematic Viscosity: 1.7 centistokes at 77° F
Test Fluid Color: BLUE ("red" is preferred)
Type of Vehicle Fuel Pump: ELECTRIC
Electric Fuel Pump Operation with Ignition Switch ON and Engine OFF —
YES, FOR 3 SECONDS AND THEN TURNS OFF UNLESS ENGINE IS RUNNING

Details of Fuel System: FUEL INJECTION, PUMP IN TANK

REMARKS:

RECORDED BY: [signature] DATE: 06/05/03
APPROVED BY: [signature]

DATA SHEET 3
POST IMPACT DATA

TYPE OF TEST: 301L
TEST DATE: 06/09/03 ; TIME: 15:55 ; TEMP.: 83 °F
VEH. NHTSA NO.: C30106 ; VIN: 3G5DA03E03S560384

REQUIRED IMPACT VELOCITY RANGE: 18.9 to 19.9 mph

ACTUAL IMPACT VELOCITY: (speed traps located within 5 feet of impact plane)

Trap No. 1 = 19.5 mph Trap No. 2 = 19.5 mph
Average Impact Speed = 19.5 mph

REMARKS:

RECORDED BY: [signature] DATE: 06/09/03
APPROVED BY: D. Mossi

DATA SHEET 4
SUMMARY OF FMVSS 301 DATA

TEST VEHICLE NHTSA NO.: C30106 ; TEST DATE: 06/09/03

VEHICLE YEAR/MAKE/MODEL/BODY STYLE:
2003 BUICK RENDEZVOUS

TYPE OF IMPACT: 301L

STODDARD SOLVENT SPILLAGE MEASUREMENT:

A. From impact until vehicle motion ceases —

Actual = 0 oz. Maximum Allowable = 1 ounce

B. For 5 minute period after vehicle motion ceases —

Actual = 0 oz. Maximum Allowable = 5 ounces

C. For next 25 minutes —

Actual = 0 oz. Maximum Allowable = 1 oz./minute

D. Provide Spillage Details: NONE

REMARKS:

RECORDED BY: _____ DATE: 06/09/03
APPROVED BY: _____

DATA SHEET 5
STATIC ROLLOVER TEST DATA:

A. Test Phase = 0° to 90°

Determination of Stoddard Solvent Collection Time Period:

1. Rollover Fixture 90° Rotation Time = 1 minutes, 34 seconds

(Specified Range is 1 to 3 minutes)

2. FMVSS 301 Position Hold Time = 5 minutes, 0 seconds

3. TOTAL = 6 minutes, 34 seconds

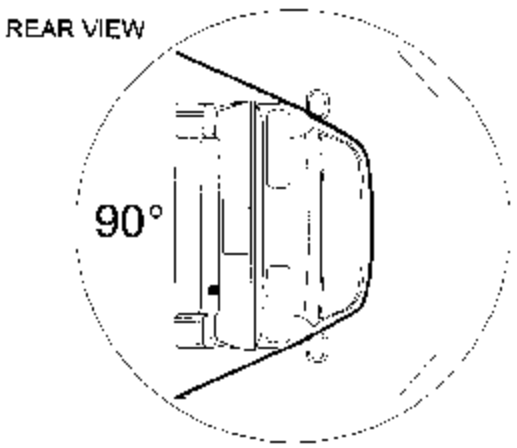
4. NEXT WHOLE MINUTE INTERVAL = 7 minutes

Actual Test Vehicle Stoddard Solvent Spillage:

1. First 5 minutes from onset of rotation = 0 oz.
(5 oz. allowed)

2. 6th minute = 0 oz.
(1 oz. allowed)

3. 7th minute = 0 oz.
(1 oz. allowed)

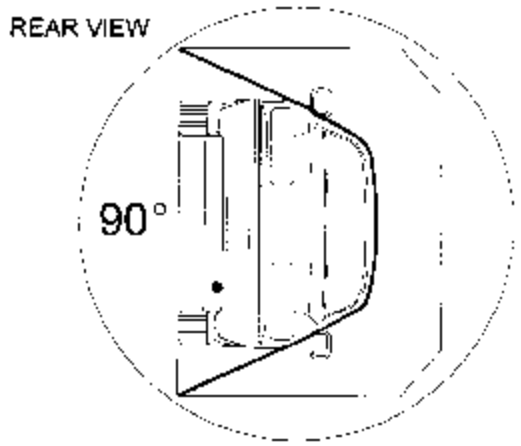


4. 8th minute (if required) = N/A oz. (1 oz. allowed)

Provide Details of Stoddard Solvent Spillage Locations — NONE

DATA SHEET 5 CONTINUED

B. Test Phase = 90° to 180°



Determination of Stoddard Solvent Collection Time Period:

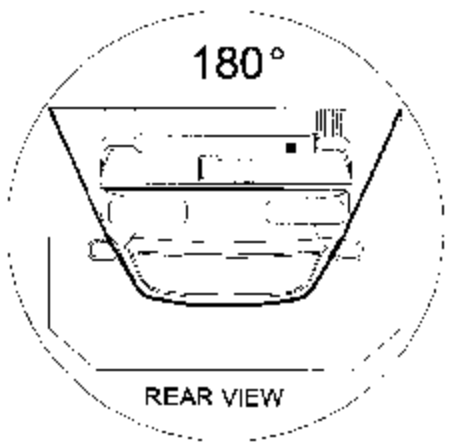
1. Rollover Fixture 90° Rotation Time = 1 minutes, 35 seconds

(Specified Range is 1 to 3 minutes)

2. FMVSS 301 Position Hold Time = 5 minutes, 0 seconds

3. TOTAL = 6 minutes, 35 seconds

4. NEXT WHOLE MINUTE INTERVAL = 7 minutes



Actual Test Vehicle Stoddard Solvent Spillage:

1. First 5 minutes from onset of rotation = 0 oz.
   (5 oz. allowed)

2. 6th minute = 0 oz.
   (1 oz. allowed)

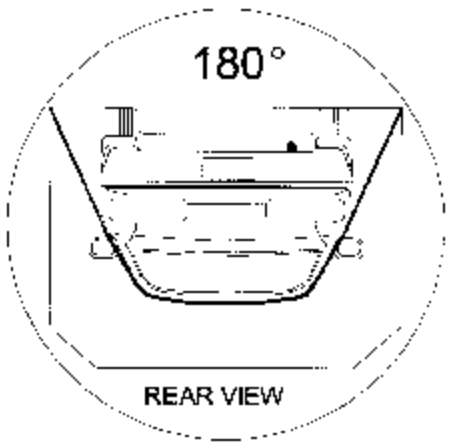
3. 7th minute = 0 oz.
   (1 oz. allowed)

4. 8th minute (if required) = N/A oz. (1 oz. allowed)

Provide Details of Stoddard Solvent Spillage Locations — NONE

DATA SHEET 5 CONTINUED

C. Test Phase = 180° to 270°



Determination of Stoddard Solvent Collection Time Period:

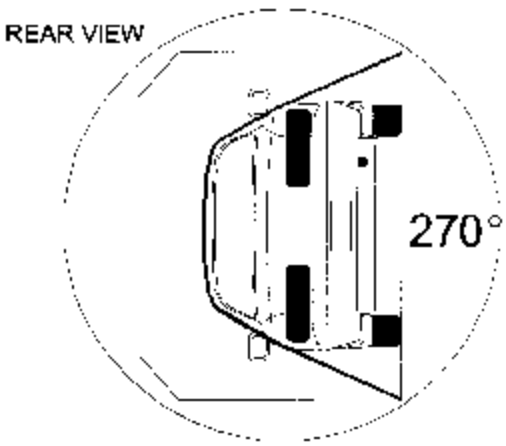
1. Rollover Fixture 90° Rotation Time = 1 minutes, 27 seconds

(Specified Range is 1 to 3 minutes)

2. FMVSS 301 Position Hold Time = 5 minutes, 0 seconds

3. TOTAL = 6 minutes, 27 seconds

4. NEXT WHOLE MINUTE INTERVAL = 7 minutes



Actual Test Vehicle Stoddard Solvent Spillage:

1. First 5 minutes from onset of rotation = 0 oz. (5 oz. allowed)

2. 6th minute = 0 oz. (1 oz. allowed)

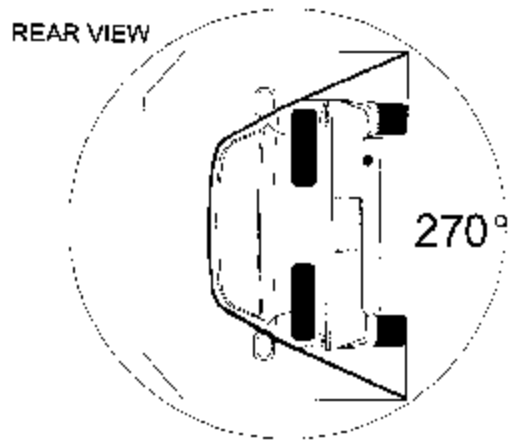
3. 7th minute = 0 oz. (1 oz. allowed)

4. 8th minute (if required) = N/A oz. (1 oz. allowed)

Provide Details of Stoddard Solvent Spillage Locations — NONE

DATA SHEET 5 CONTINUED

D. Test Phase = 270° to 360°



Determination of Stoddard Solvent Collection Time Period:

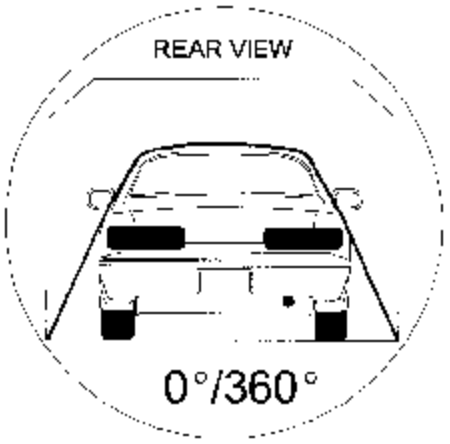
1. Rollover Fixture 90° Rotation Time = 1 minutes, 45 seconds

(Specified Range is 1 to 3 minutes)

2. FMVSS 301 Position Hold Time = 5 minutes, 0 seconds

3. TOTAL = 6 minutes, 45 seconds

4. NEXT WHOLE MINUTE INTERVAL = 7 minutes



Actual Test Vehicle Stoddard Solvent Spillage:

1. First 5 minutes from onset of rotation = 0 oz.
   (5 oz. allowed)

2. 6th minute = 0 oz.
   (1 oz. allowed)

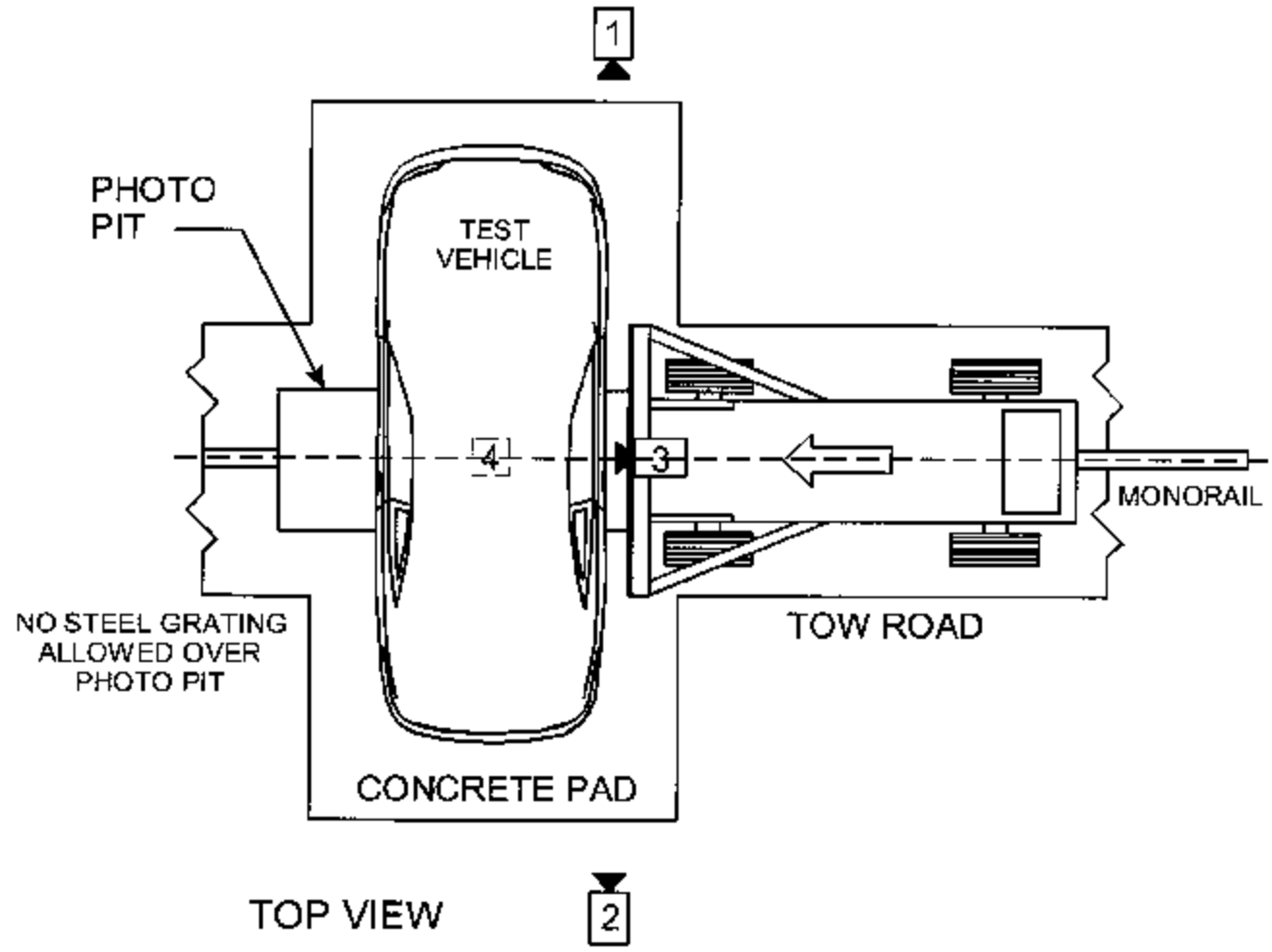
3. 7th minute = 0 oz.
   (1 oz. allowed)

4. 8th minute (if required) = N/A oz. (1 oz. allowed)

Provide Details of Stoddard Solvent Spillage Locations — NONE

DATA SHEET 6
CAMERA LOCATION

VEHICLE NHTSA NO.: C30106 TEST DATE: 06/09/03



CAMERA 1 – REAR SIDE VIEW OF VEHICLE DURING CRASH
CAMERA 2 – FRONT SIDE VIEW OF VEHICLE DURING CRASH
CAMERA 3 – OVERHEAD VIEW OF ENTIRE IMPACT
CAMERA 4 – UNDERBODY VIEW OF FUEL TANK LOCATED IN PIT

SECTION 4
INSTRUMENTATION AND EQUIPMENT LIST

TABLE 1 - INSTRUMENTATION & EQUIPMENT LIST

EQUIPMENT	DESCRIPTION	MODEL/ SERIAL NO.	CAL. DATE	NEXT CAL. DATE
COUNTER/TIMER	SYSTRON DONNER	19 353-10	04/03	04/04
COUNTER/TIMER	SYSTRON DONNER	19 353- 11	03/03	03/04
SPEED TRAP 2	GTL ST1	N/A	08/02	08/03
SPEED TRAP 3	GTL ST2	N/A	08/02	08/03
STOP WATCH	ACCUSPLIT	ACT 1 A&B	05/03	05/04
STOP WATCH	ACCUSPLIT	ACT 2 A&B	05/03	05/04
SCALES	INTERCOMP	199744	05/03	05/04
TIRE PRESSURE GAUGE	WEKSLER	0-100	05/03	05/04
STEEL SCALES	STARRETT	C416R	05/03	05/04
STEEL TAPE	STANLEY	GF2	05/03	05/04
LEVEL	STANLEY	42-449	05/03	05/04
TEMP. INDICATOR	OMEGA	B/5562/14/1	05/03	05/04
TEMP. RECORDER	OMEGA	B/5562/14/1	05/03	05/04

SECTION 5

PHOTOGRAPHS

2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.1
FRONT VIEW OF VEHICLE PRE-TEST

2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.2
LEFT SIDE VIEW OF VEHICLE PRE-TEST

2005 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.3
RIGHT SIDE VIEW OF VEHICLE PRE-TEST

2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

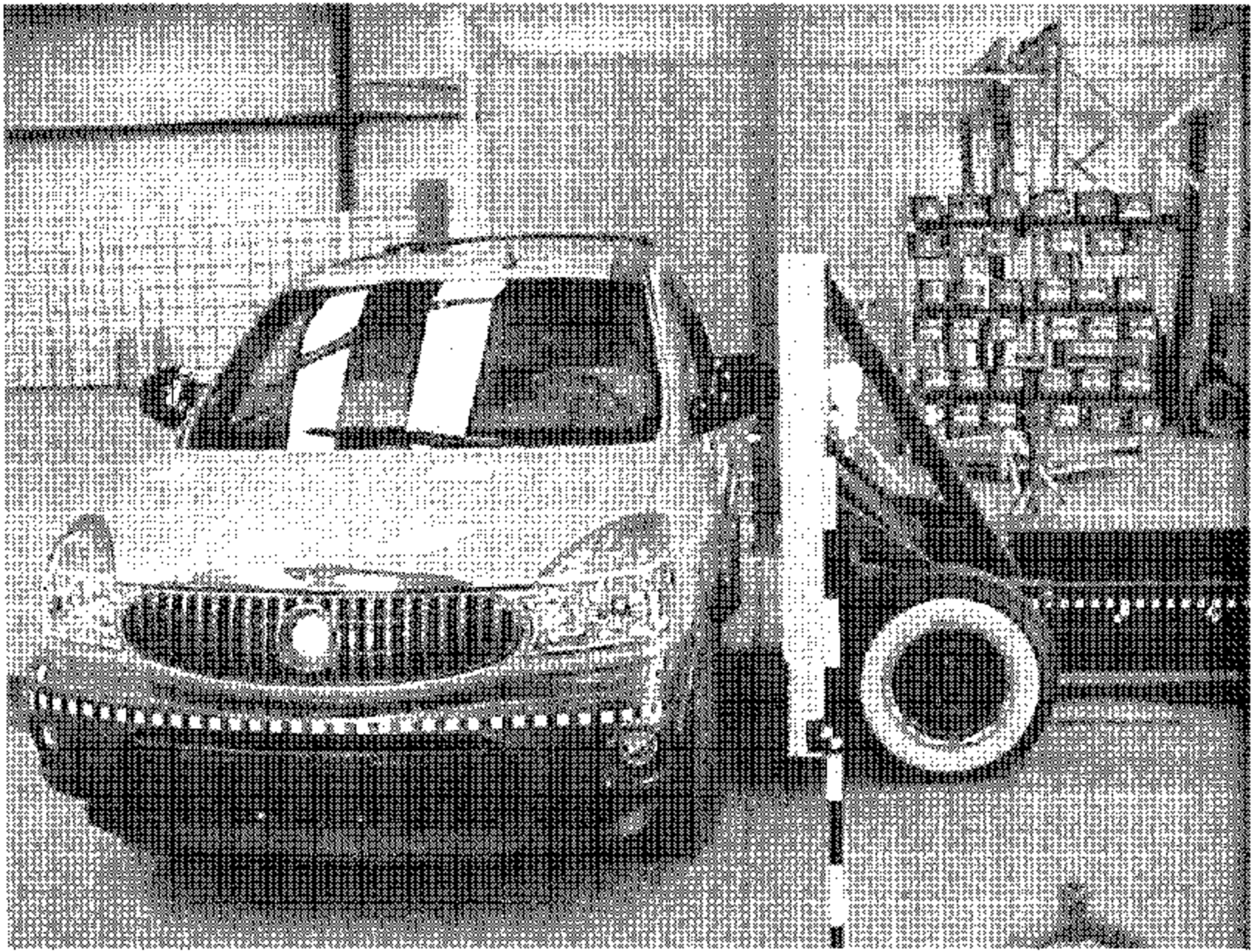
FIGURE 5.4
REAR VIEW OF VEHICLE PRE-TEST

2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301.

FIGURE 5.5
¾ FRONTAL VIEW FROM LEFT SIDE OF VEHICLE PRE-TEST

2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.6
¾ REAR VIEW FROM RIGHT SIDE OF VEHICLE PRE-TEST



2003 BUICK RENDEZVOUS
NHTSA NO. C30106
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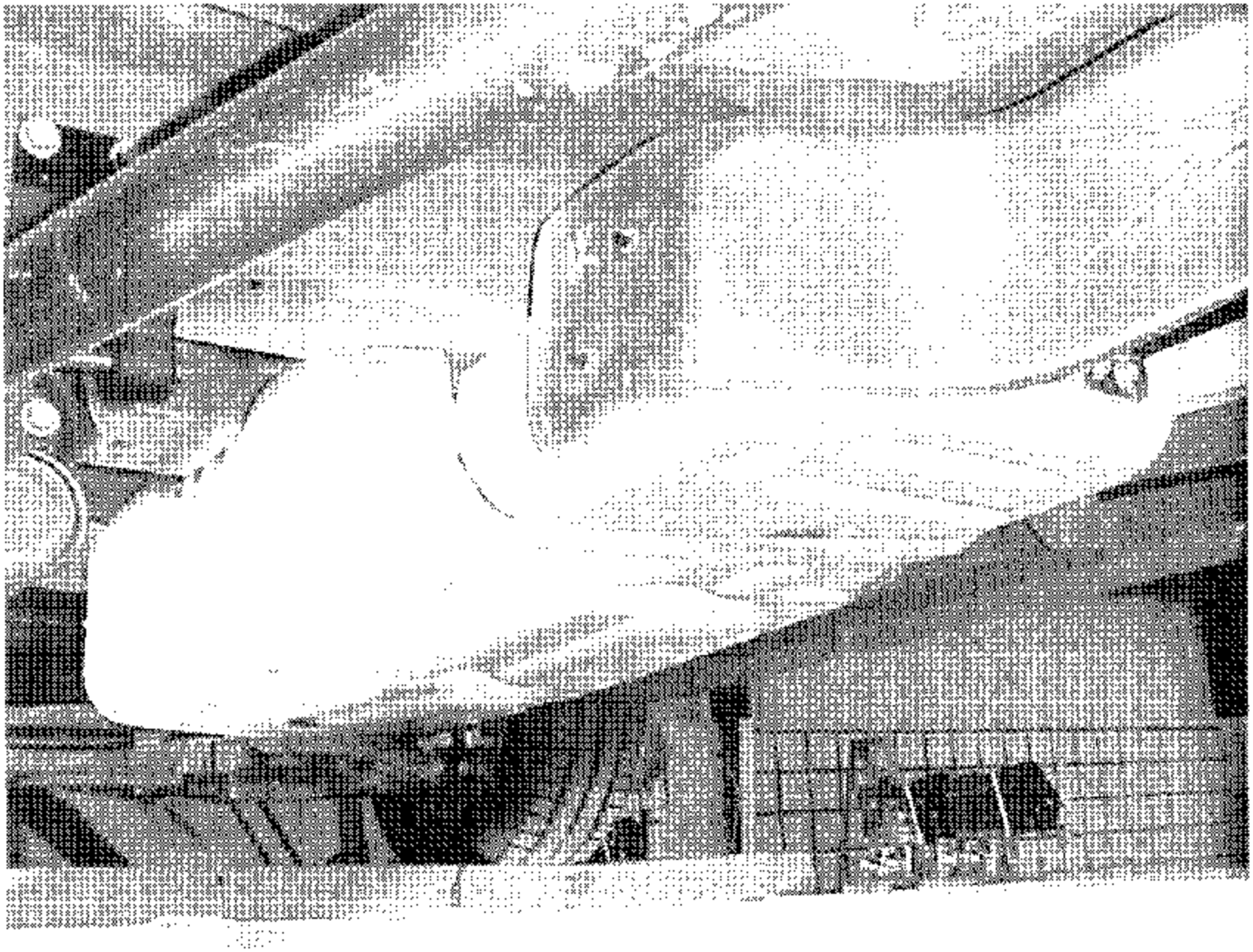
FIGURE 5.7
LEFT VIEW OF VEHICLE/BARRIER
PRE-TEST

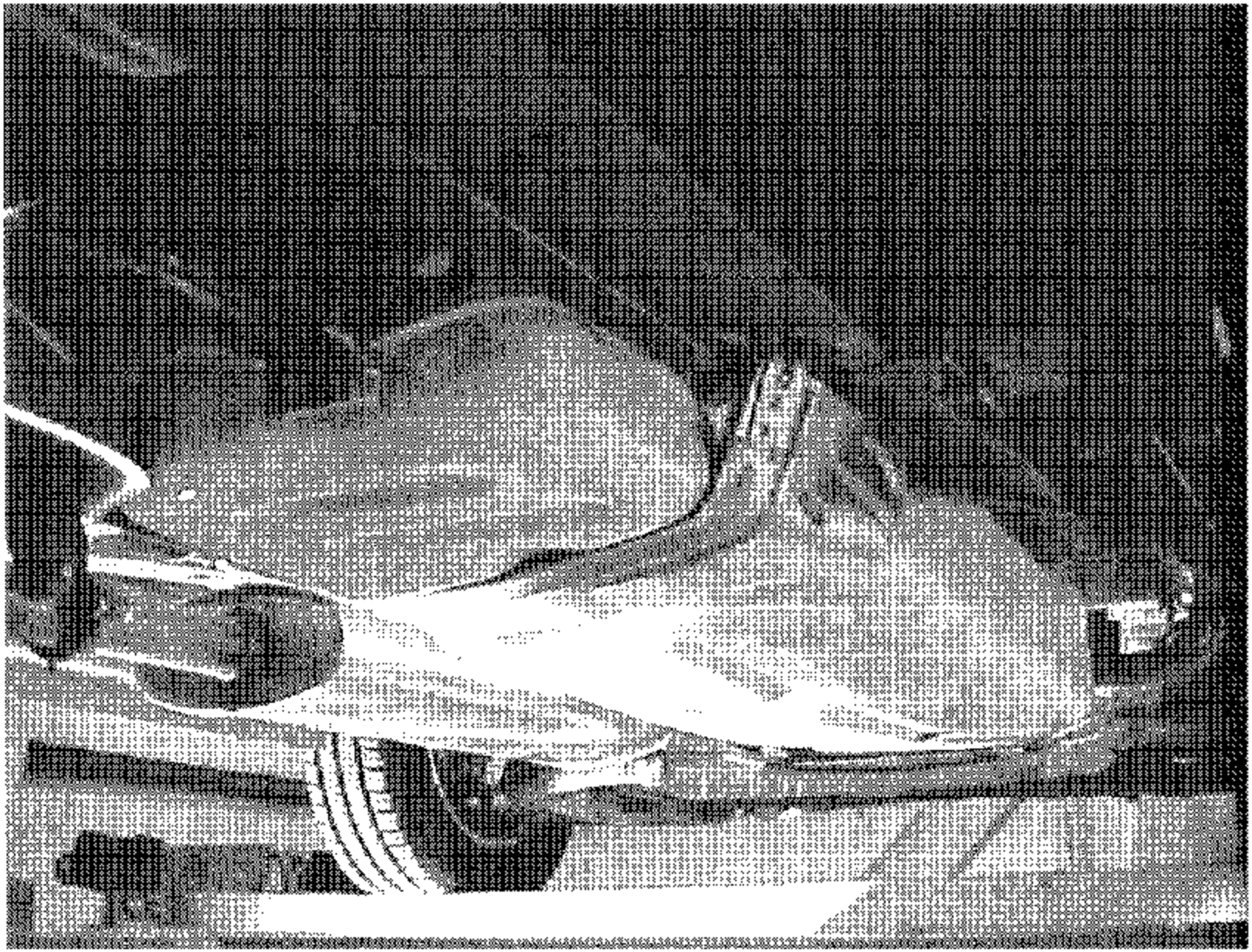
2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.8
RIGHT VIEW OF VEHICLE/BARRIER
PRE-TEST



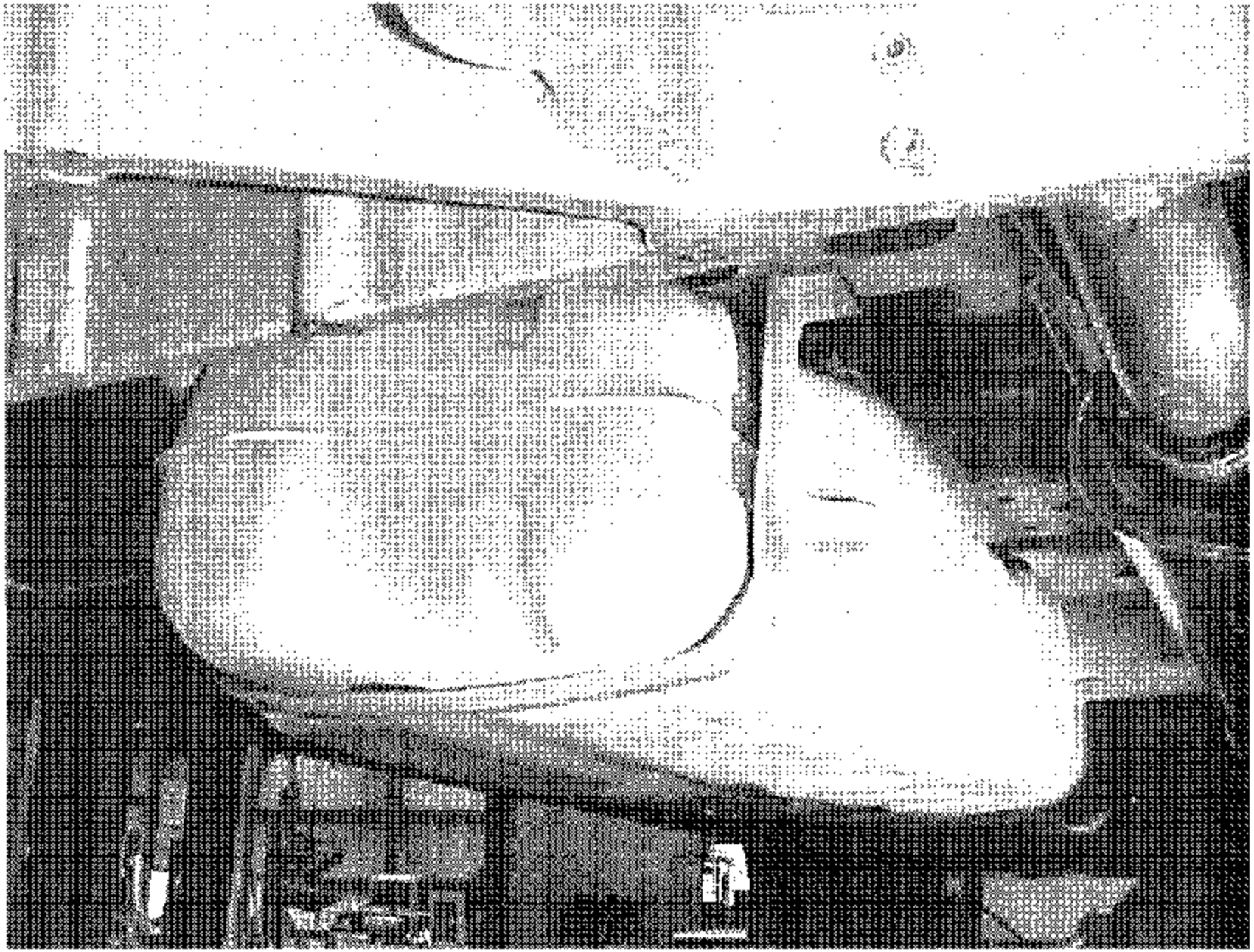
2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.9
UNDERBODY VIEW OF FUEL TANK RIGHT VIEW PRE-TEST



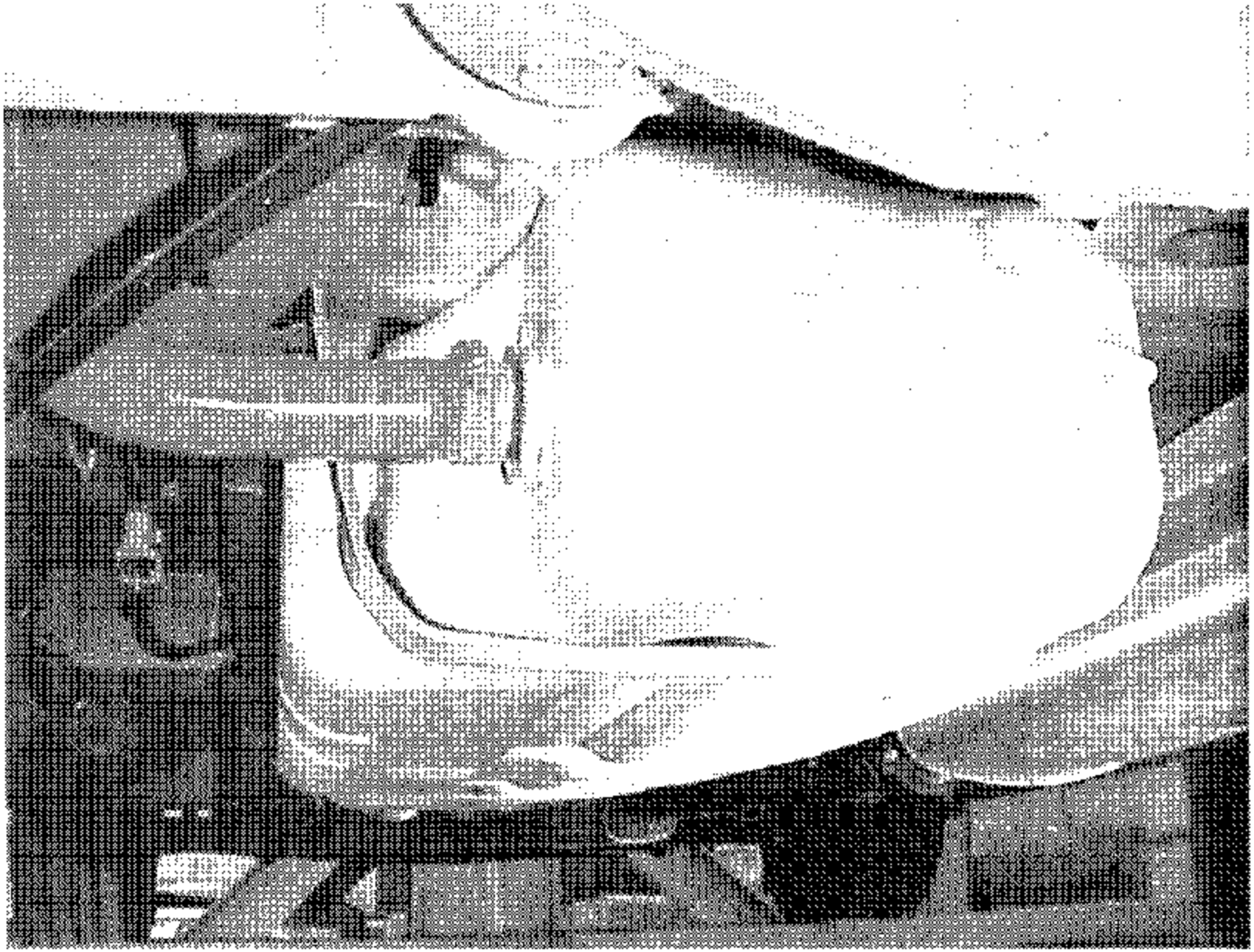
2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.10
UNDERBODY VIEW OF FUEL TANK LEFT
VIEW PRE-TEST



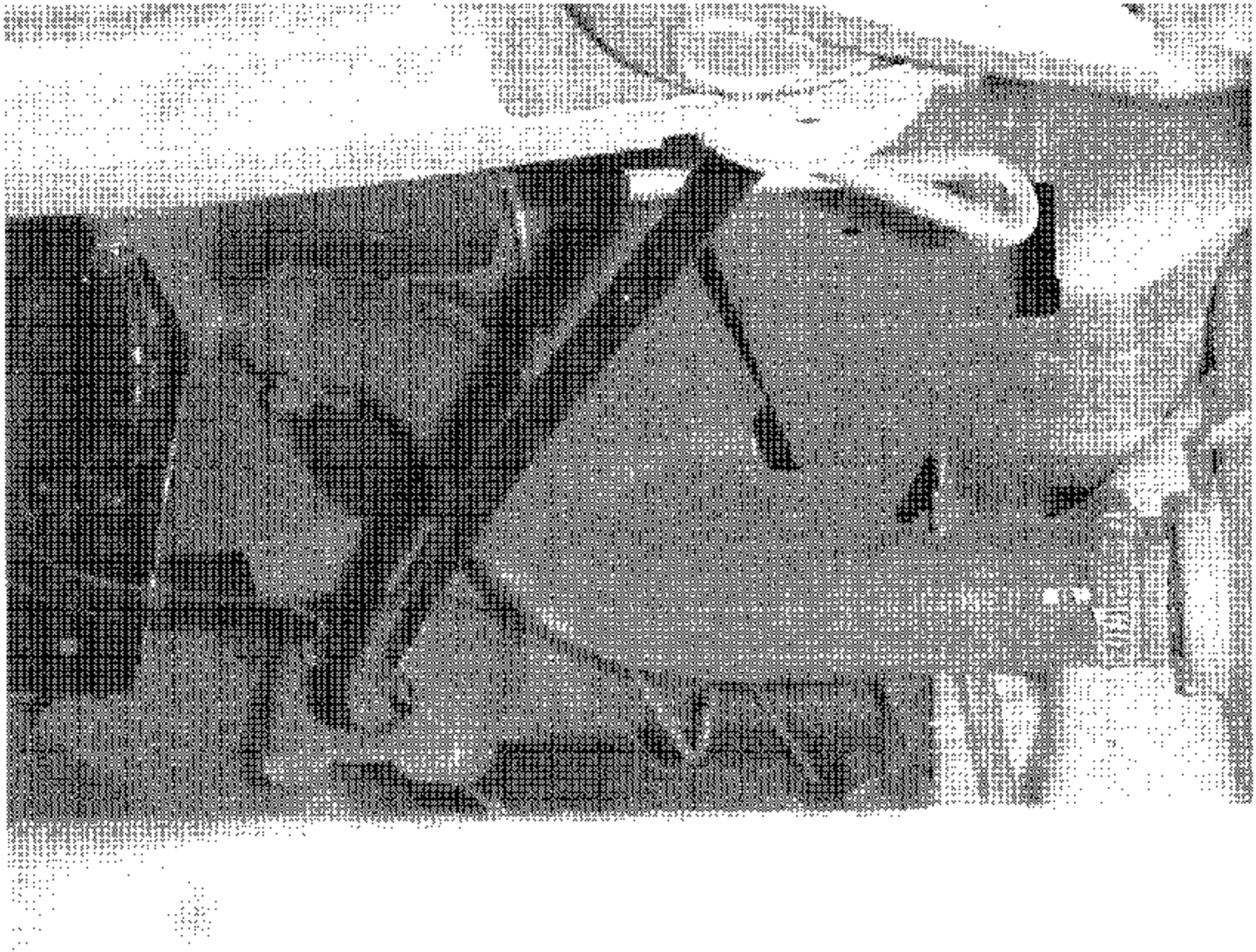
2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.11
UNDERBODY VIEW OF FUEL TANK REAR
VIEW PRE-TEST



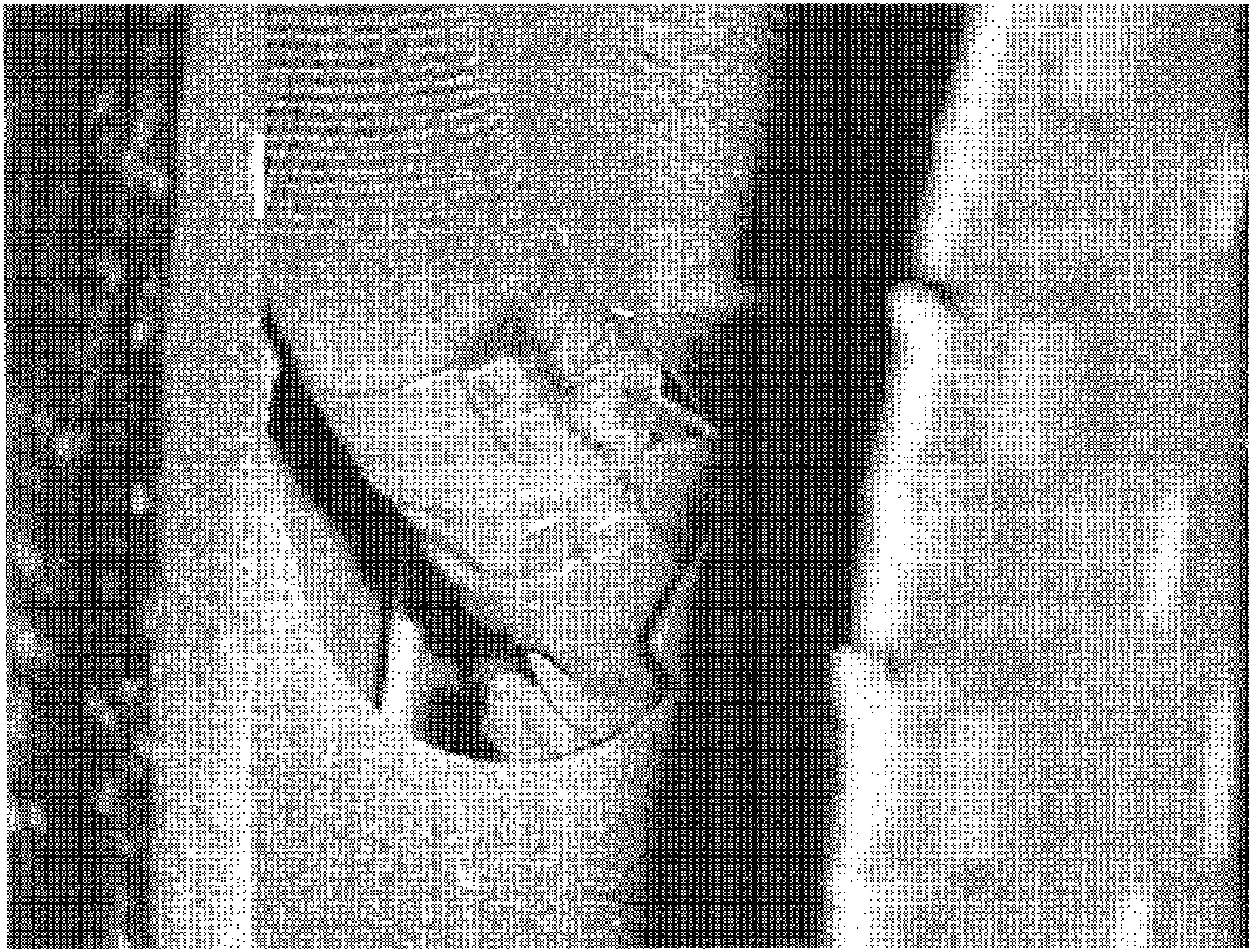
2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.12
UNDERBODY VIEW OF FUEL FILL HOSE AT
TANK PRE-TEST



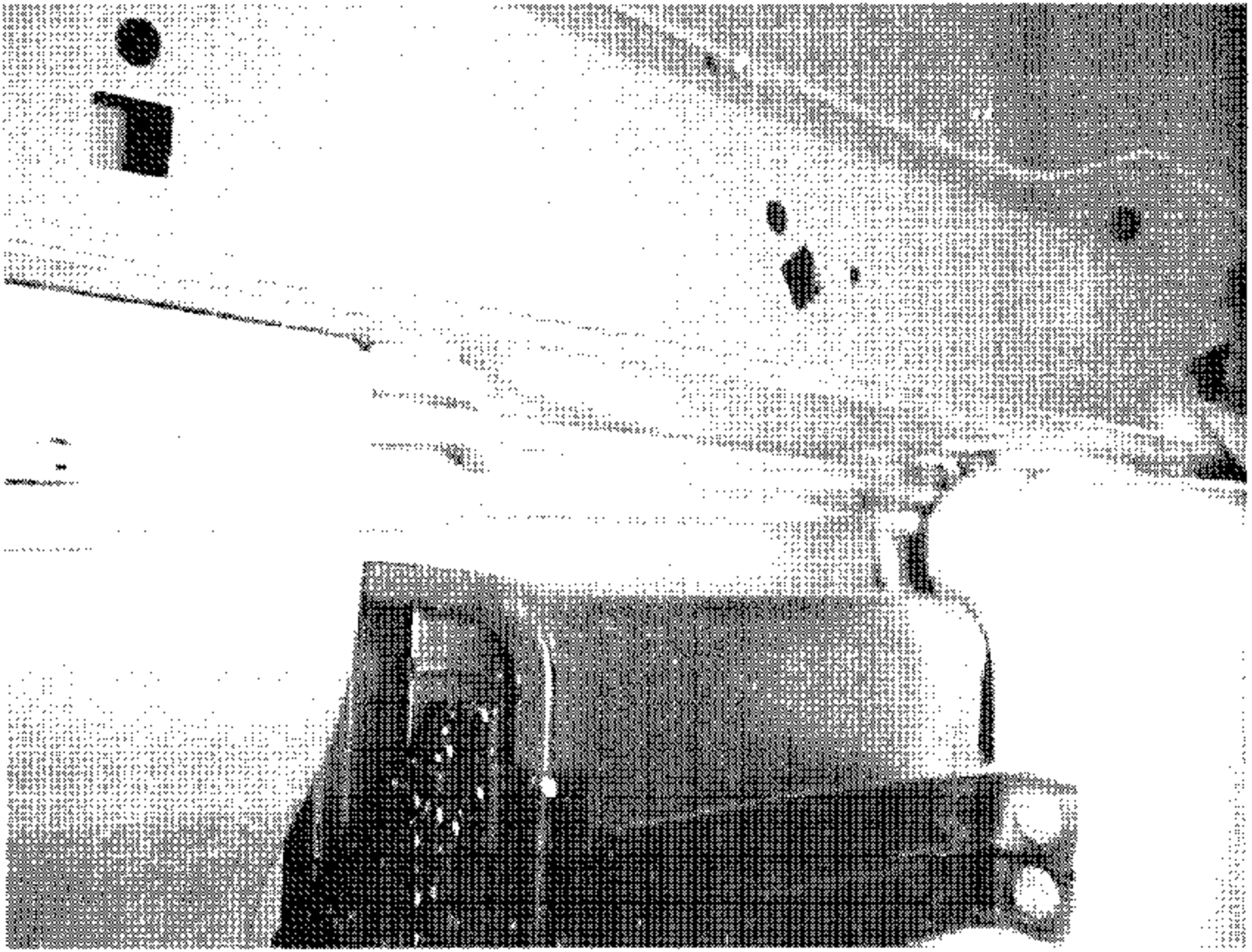
2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.13
UNDERBODY VIEW OF FUEL FILL HOSE IN CENTER PRE-TEST



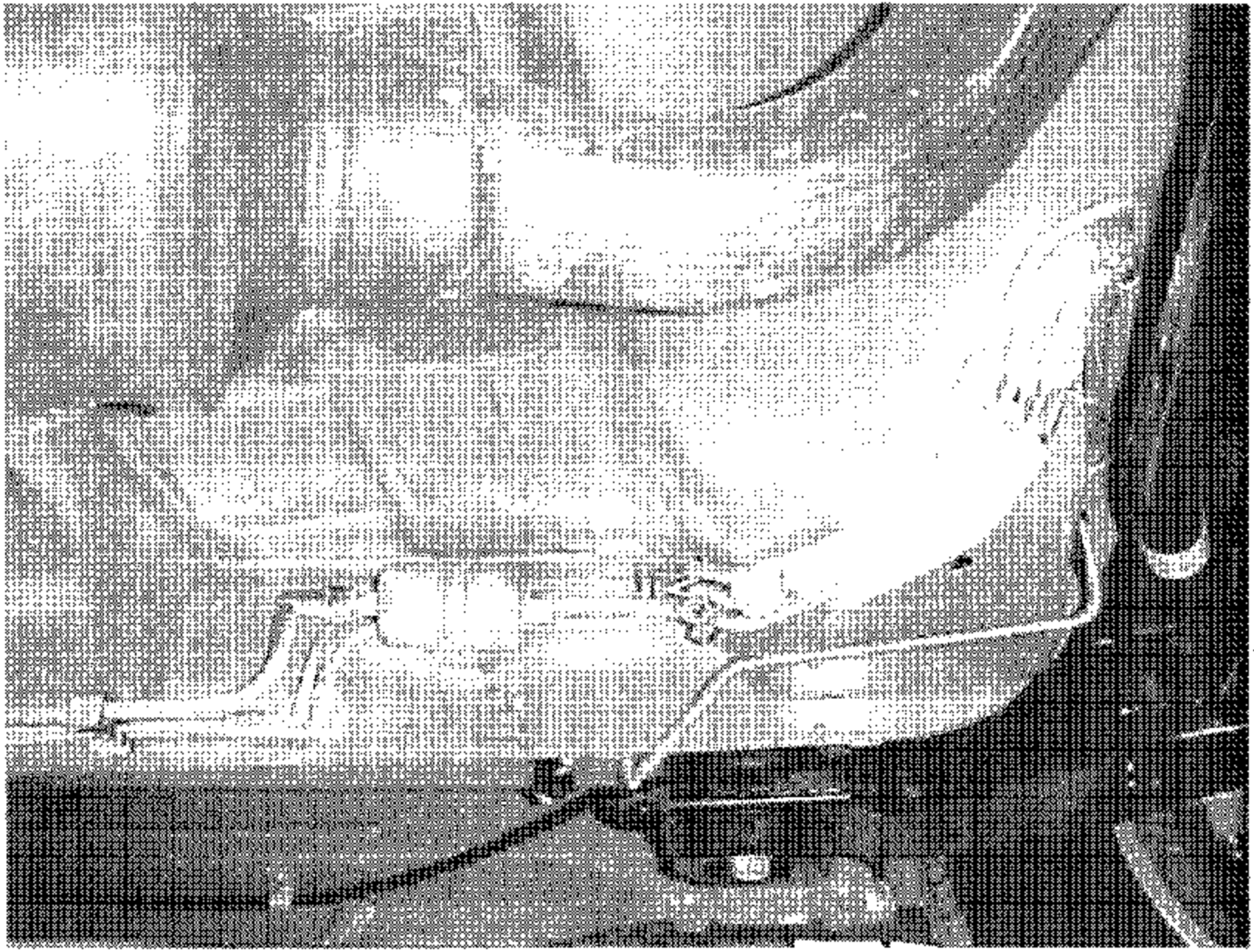
2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.14
UNDERBODY VIEW OF FUEL FILL HOSE AT WHEEL WELL PRE-TEST



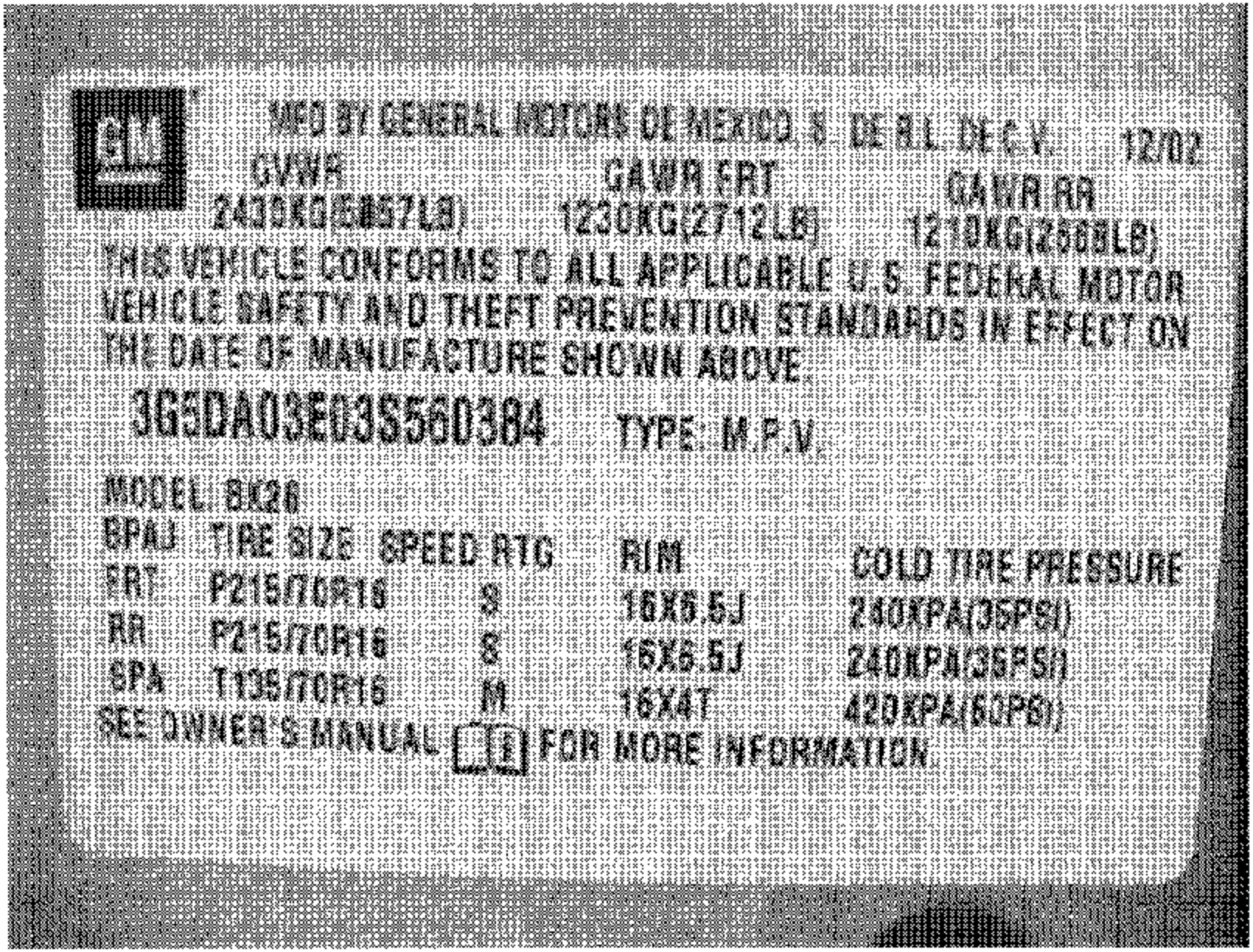
2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.15
UNDERBODY VIEW OF FUEL LINES AT
TANK PRE-TEST



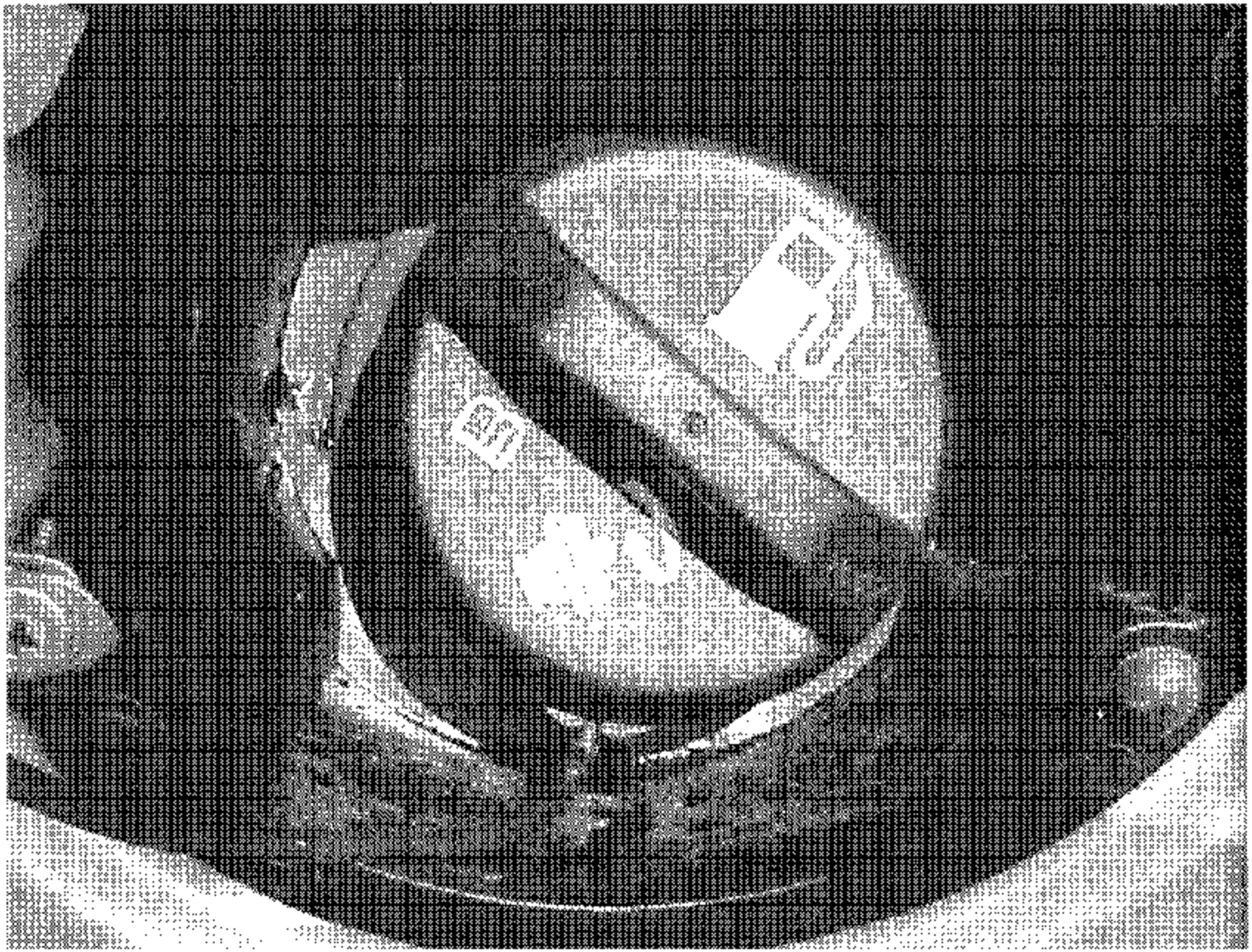
2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.16
UNDERBODY VIEW OF FUEL LINES AND
FUEL FILTER PRE-TEST



2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.17
VEHICLE CERTIFICATION AND TIRE INFORMATION LABEL



2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.18
VEHICLE FUEL CAP PRE-TEST

2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301

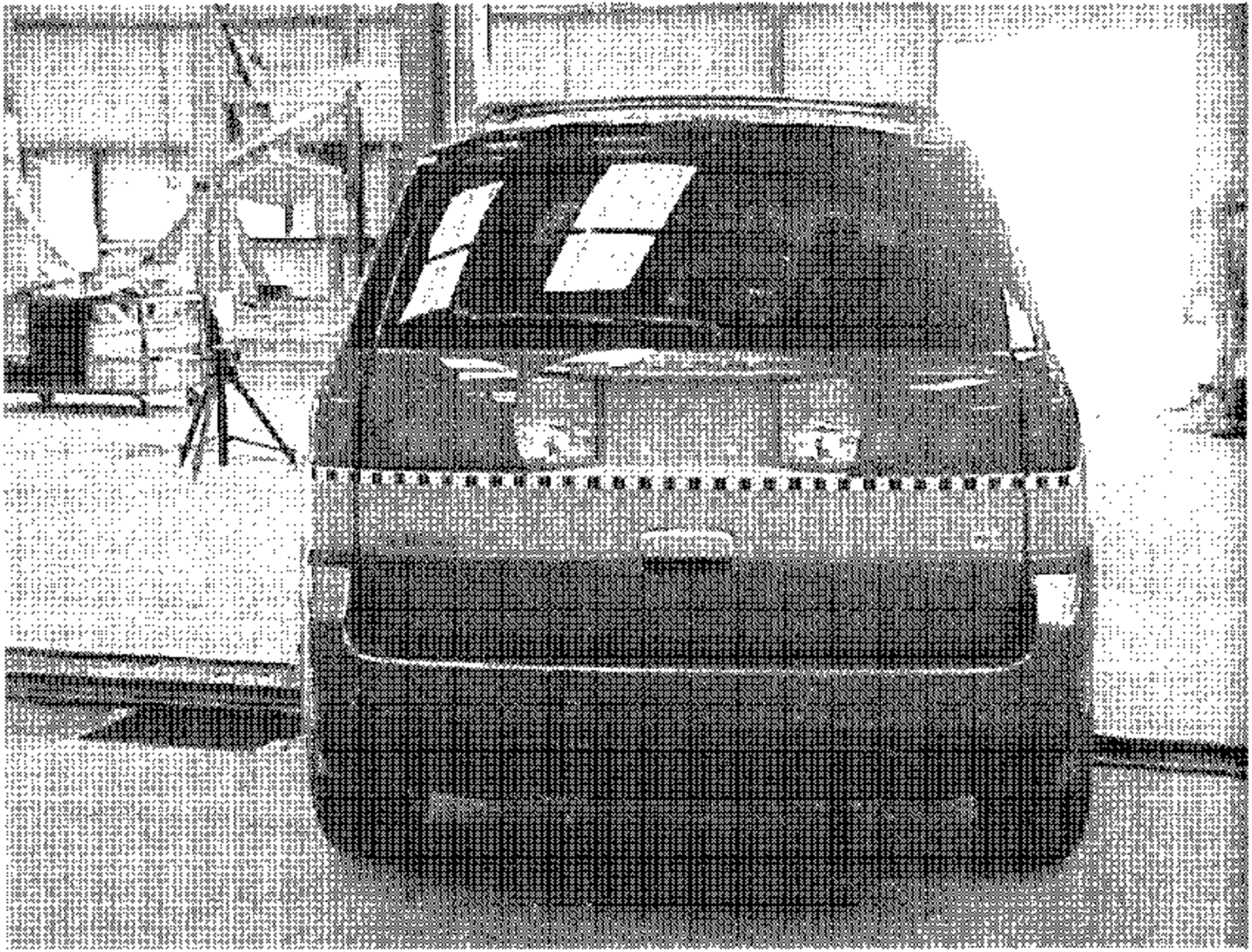
FIGURE 5.19
FRONT VIEW OF VEHICLE POST TEST

2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.20
LEFT SIDE VIEW OF VEHICLE POST TEST

2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301

FIGURE 5.21
RIGHT SIDE VIEW OF VEHICLE POST TEST



2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

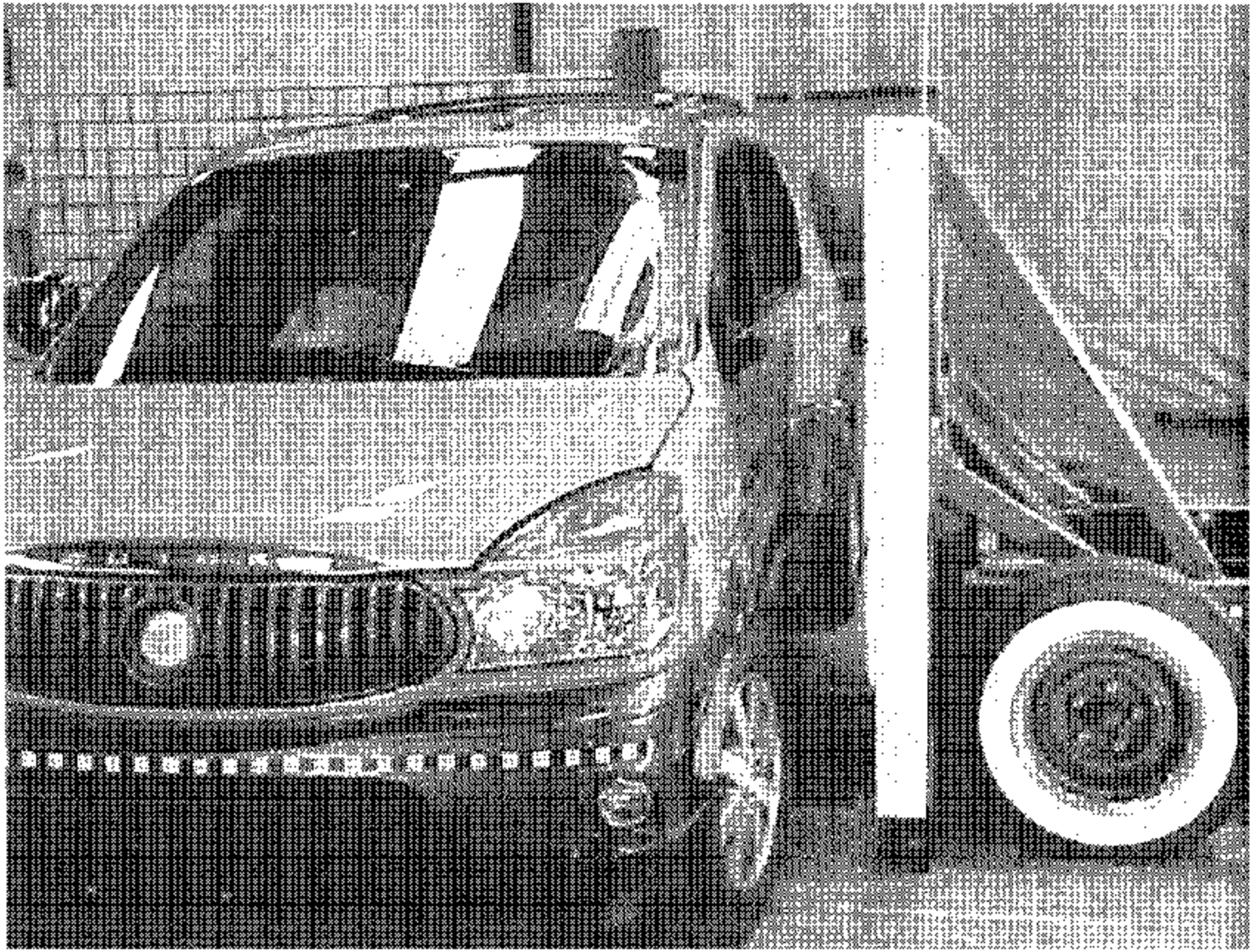
FIGURE 5.22
REAR VIEW OF VEHICLE POST TEST

2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.23
¾ FRONTAL VIEW FROM LEFT SIDE OF VEHICLE POST TEST

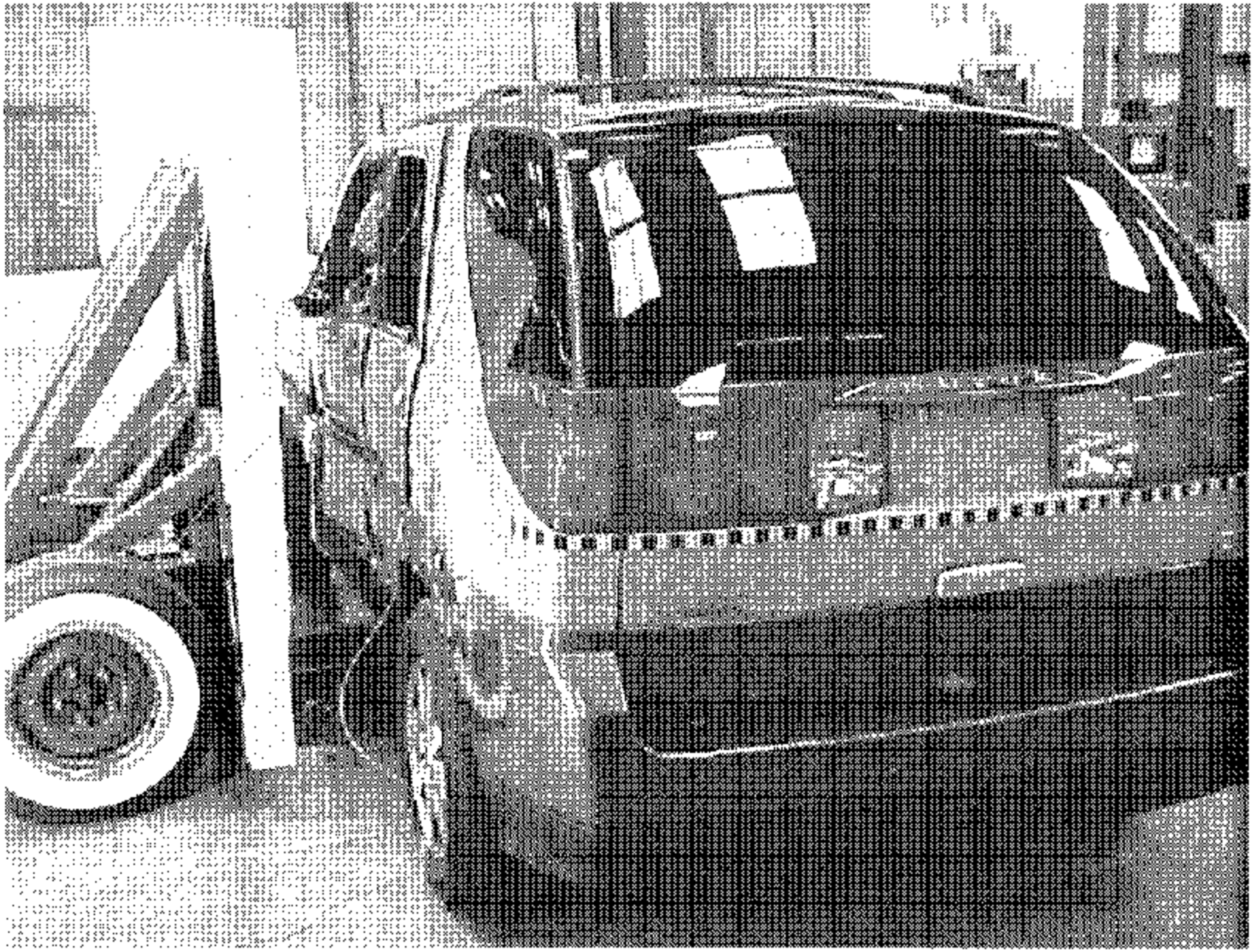
2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 3.24
¾ REAR VIEW FROM RIGHT SIDE OF
VEHICLE POST TEST



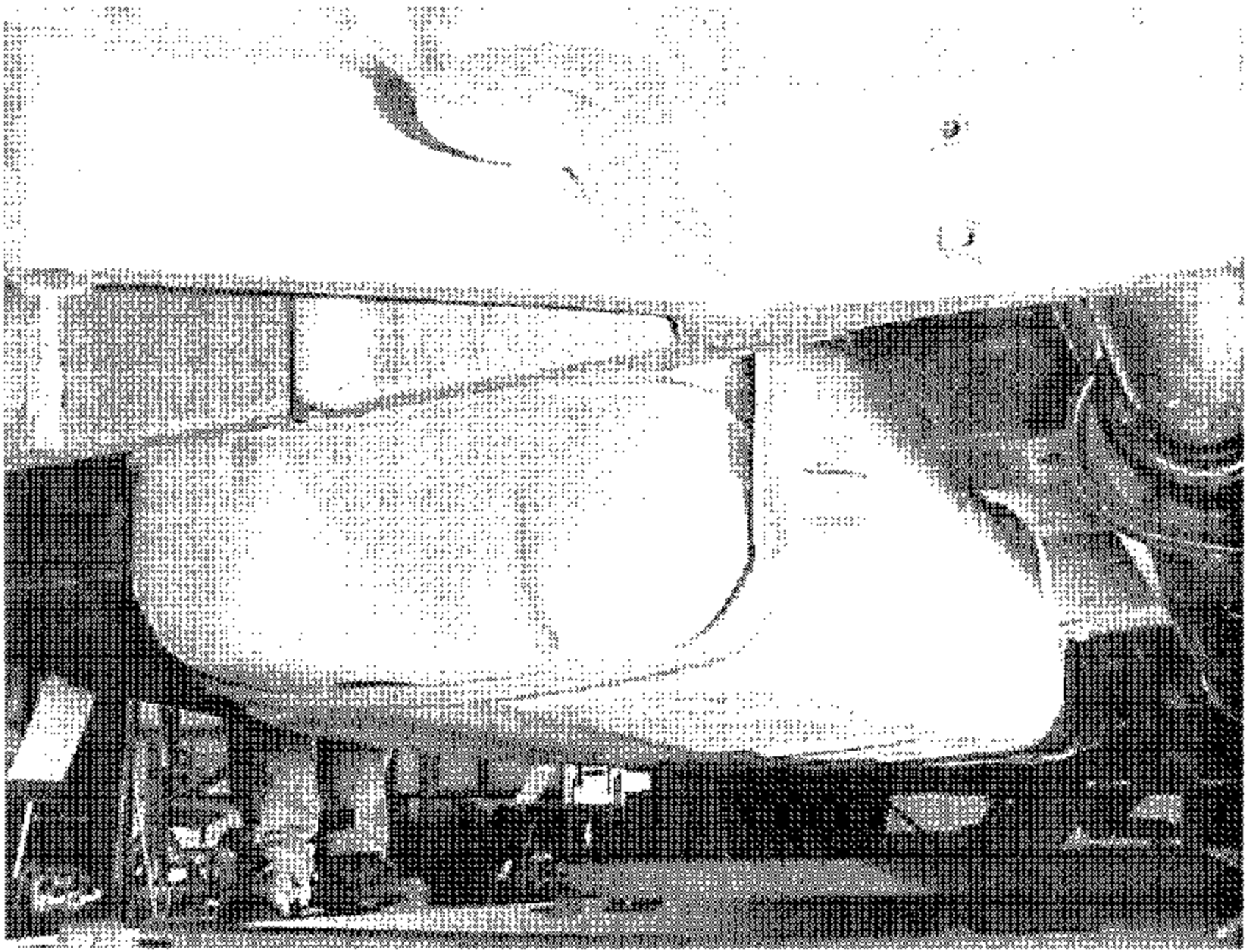
2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE S.25
LEFT VIEW OF VEHICLE/BARRIER
POST TEST



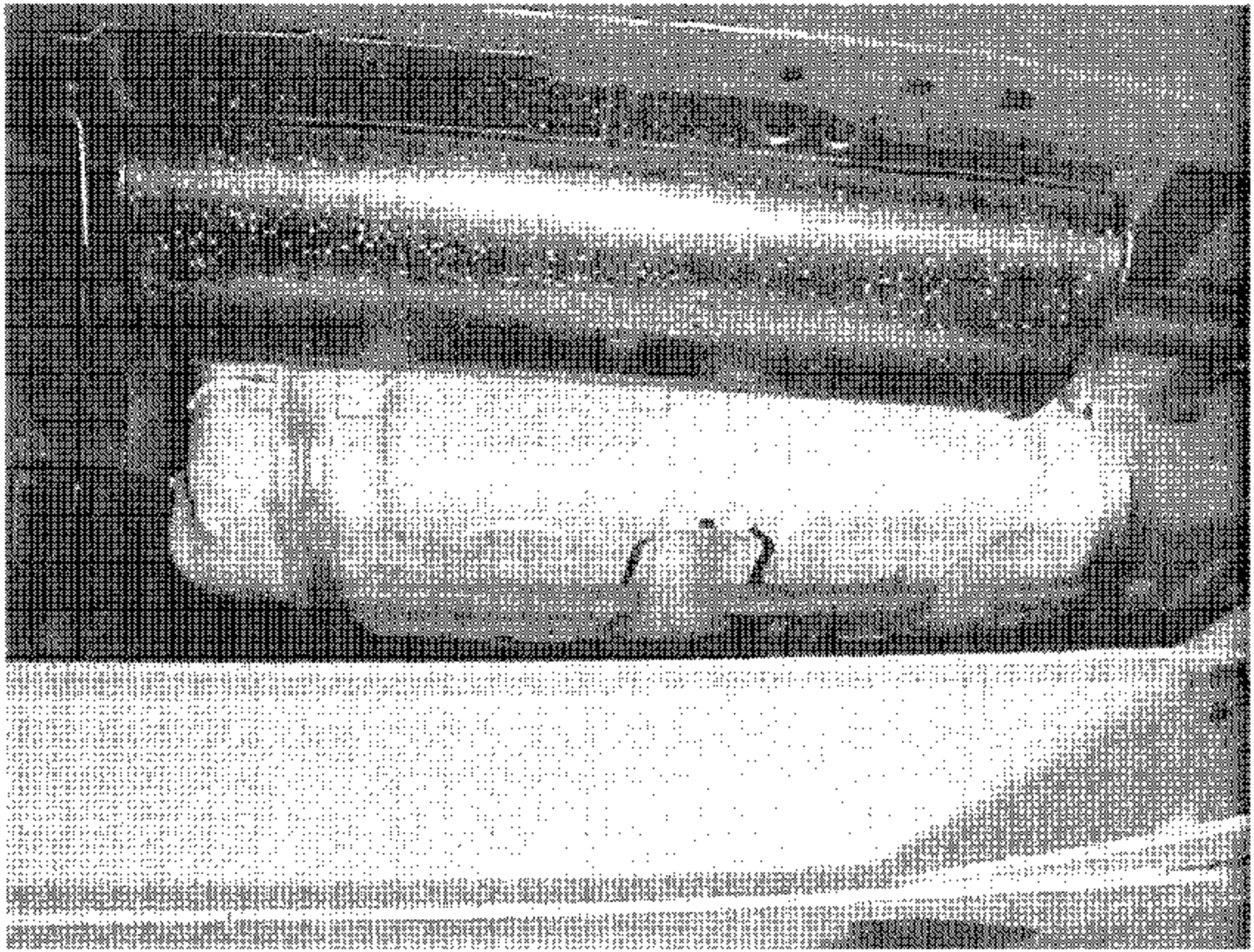
2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.26
RIGHT VIEW OF VEHICLE/BARRIER
POST TEST



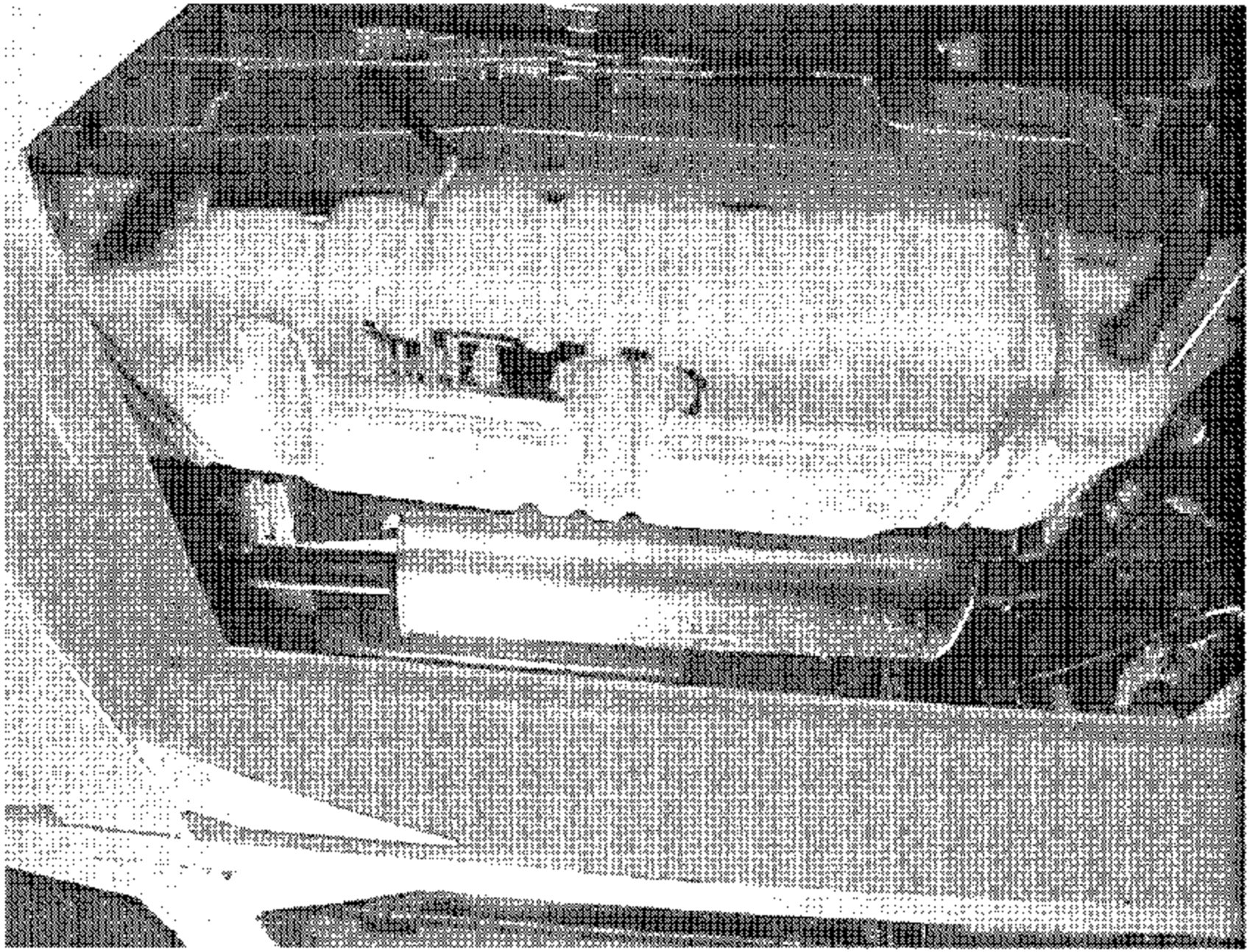
2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.27
UNDERBODY VIEW OF FUEL TANK RIGHT VIEW POST TEST



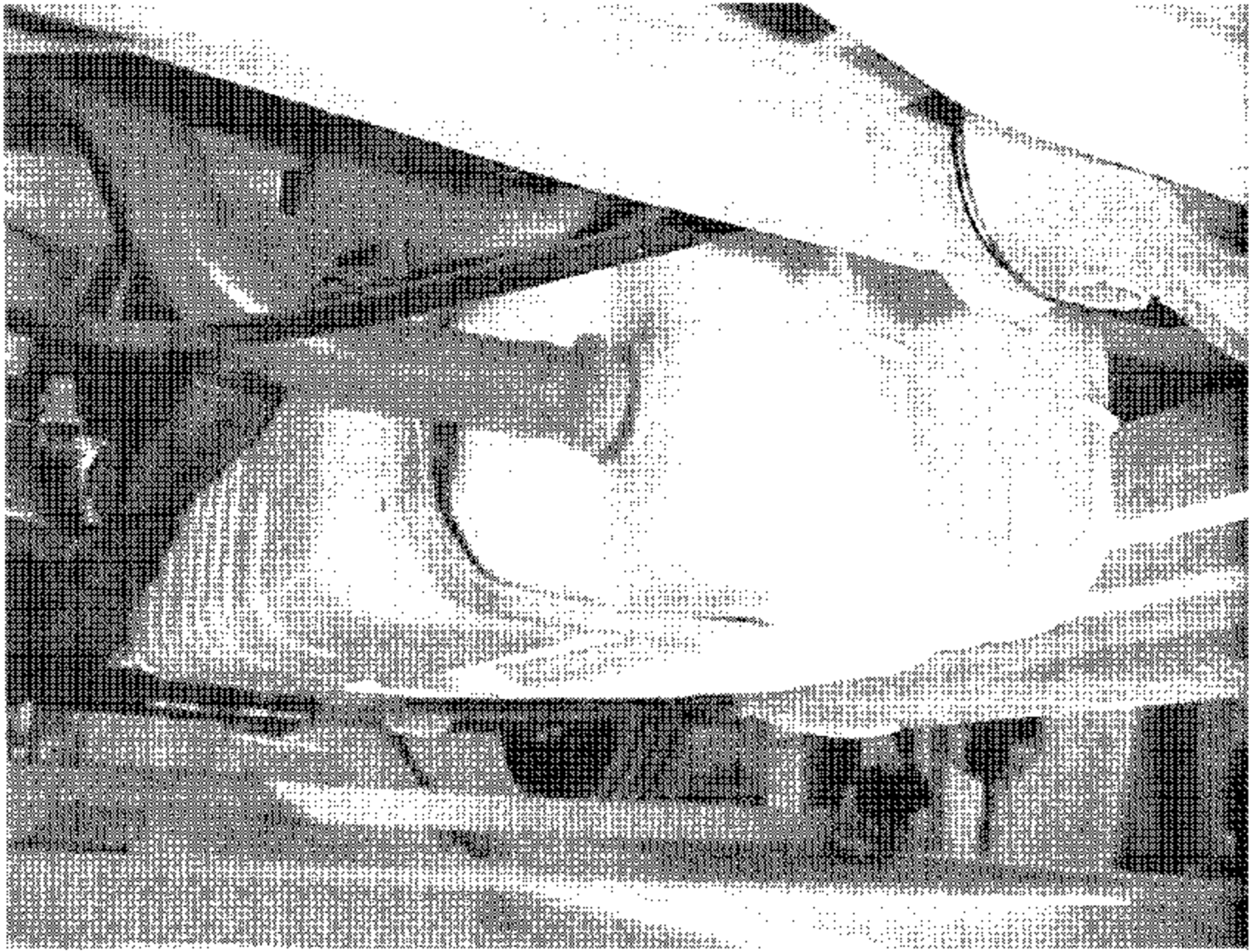
2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.28
UNDERBODY VIEW OF FUEL TANK RIGHT SIDE VIEW POST TEST



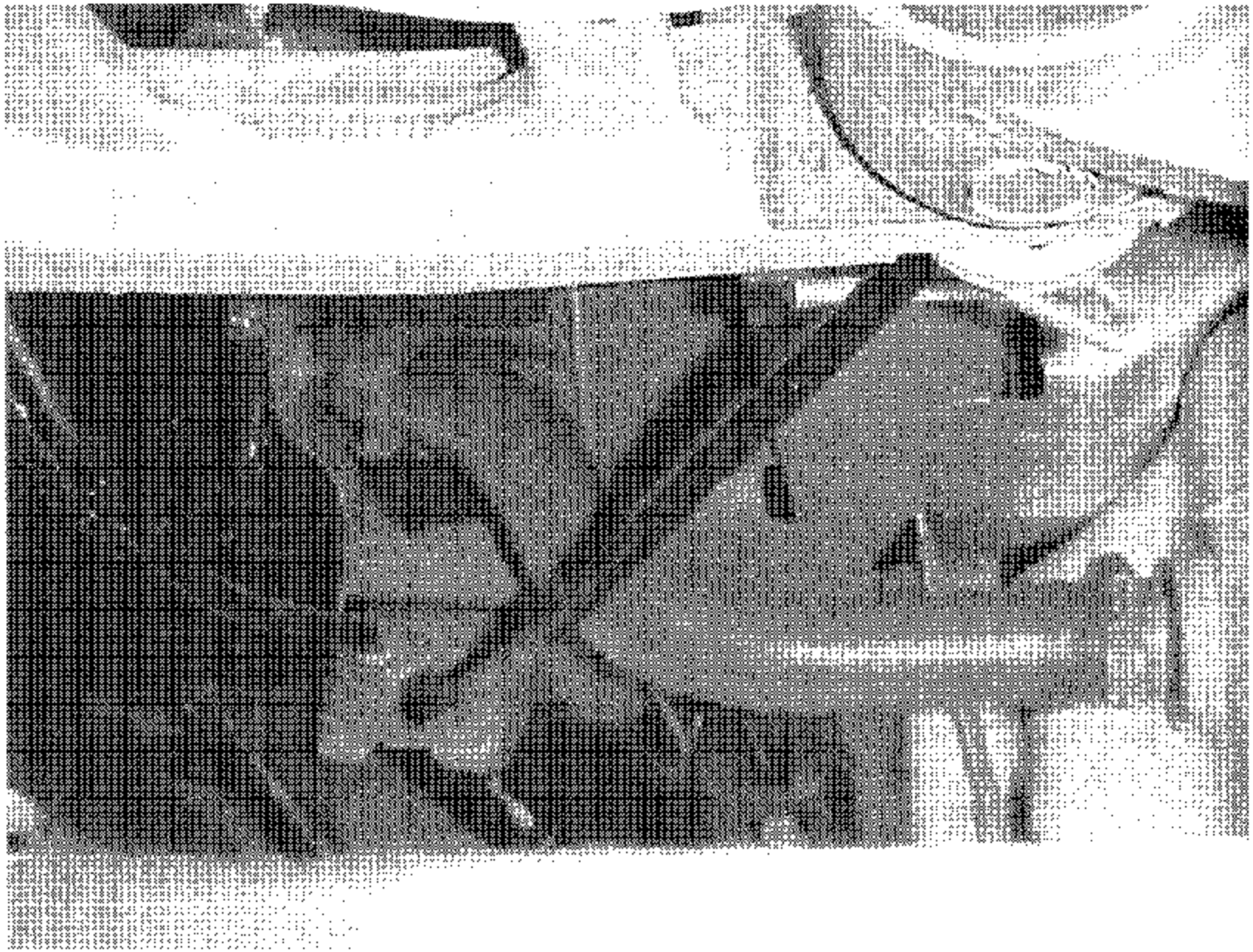
2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.29
UNDERBODY VIEW OF FUEL TANK (LEFT)
VIEW POST TEST



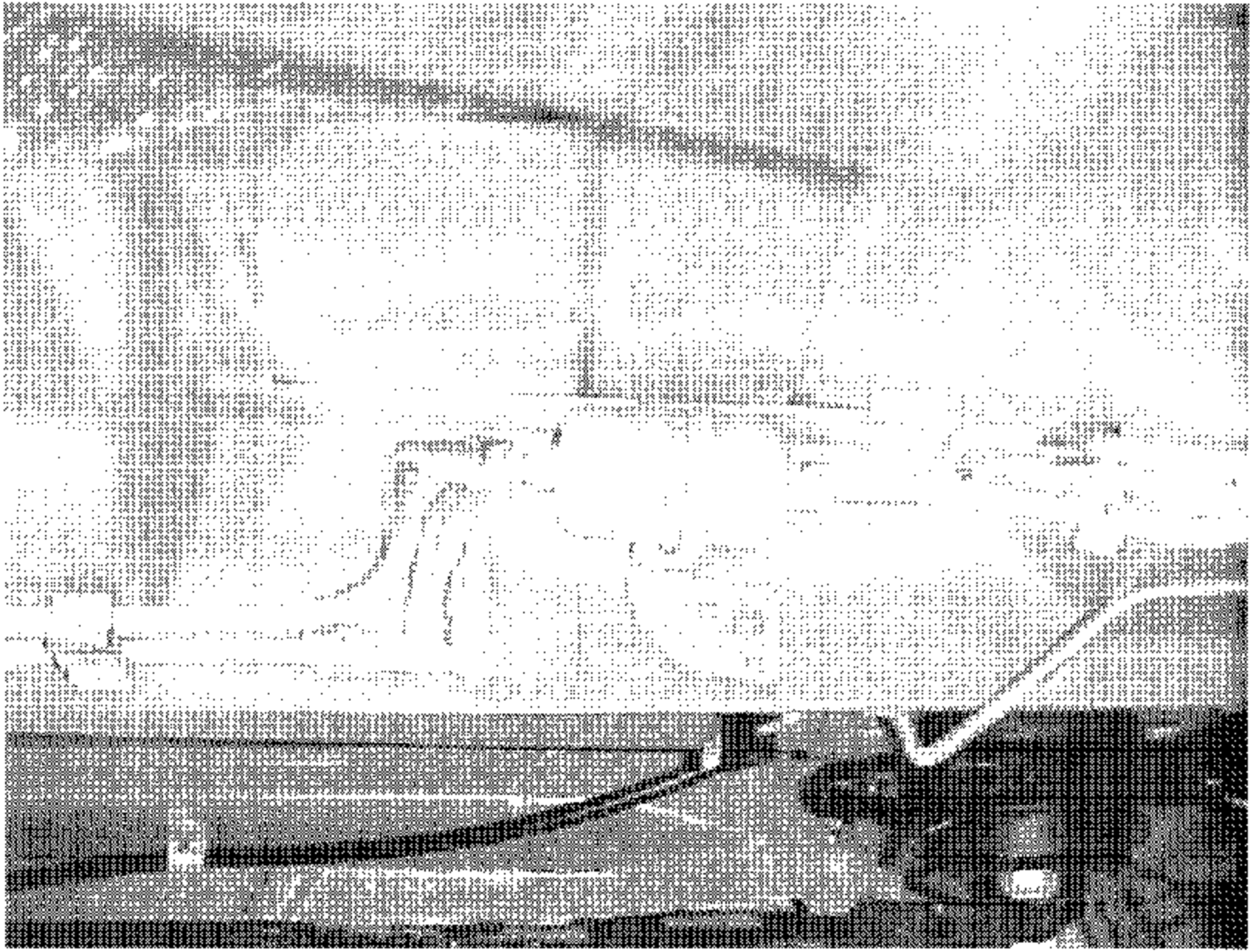
2009 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.30
UNDERBODY VIEW OF FUEL TANK AND
FILL HOSE REAR VIEW POST TEST



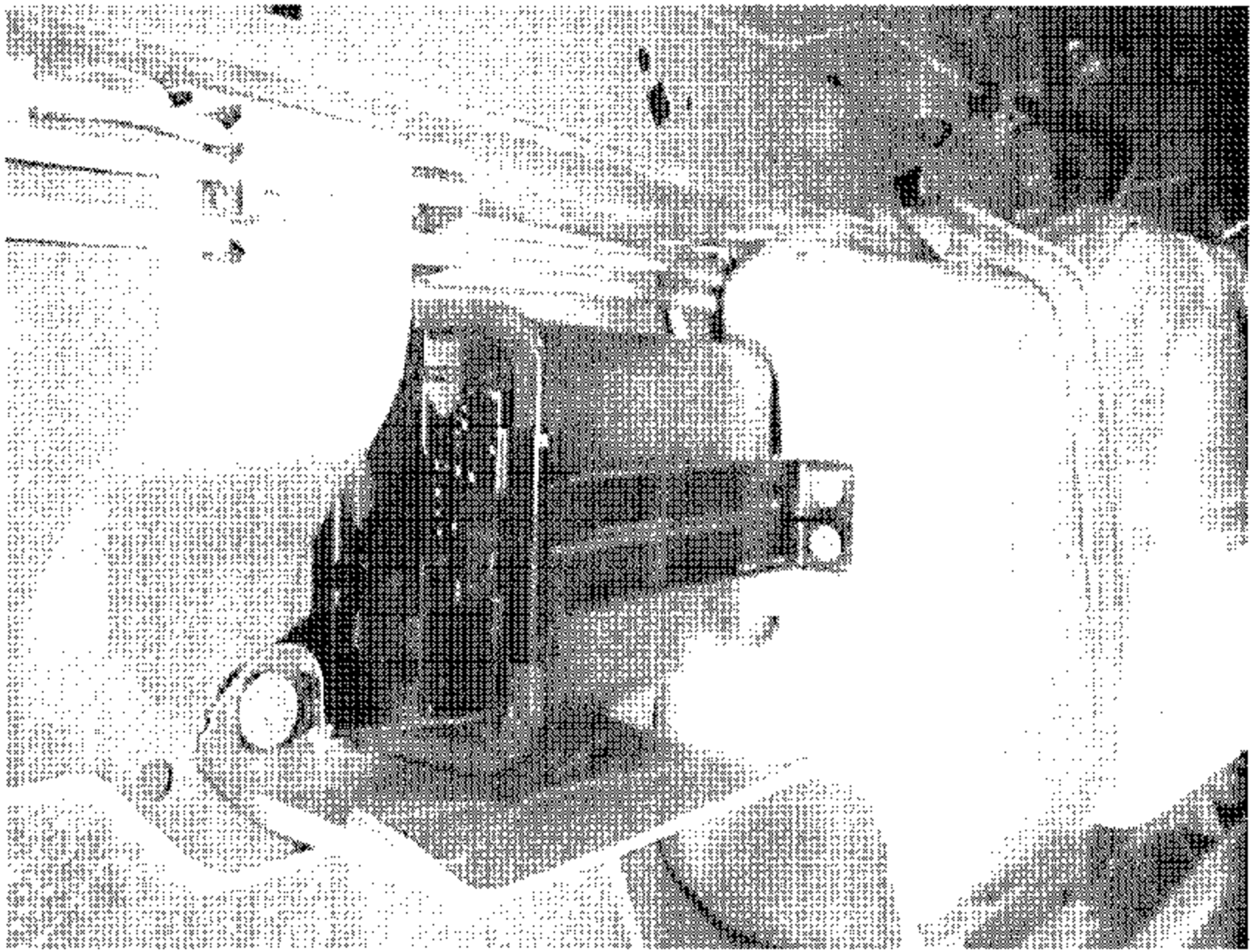
2003 BUICK RENDEZVOUS
NHTSA NO. C50106
FMVSS NO. 301L

FIGURE 5.31
UNDERBODY VIEW OF FUEL FILL HOSE
POST TEST



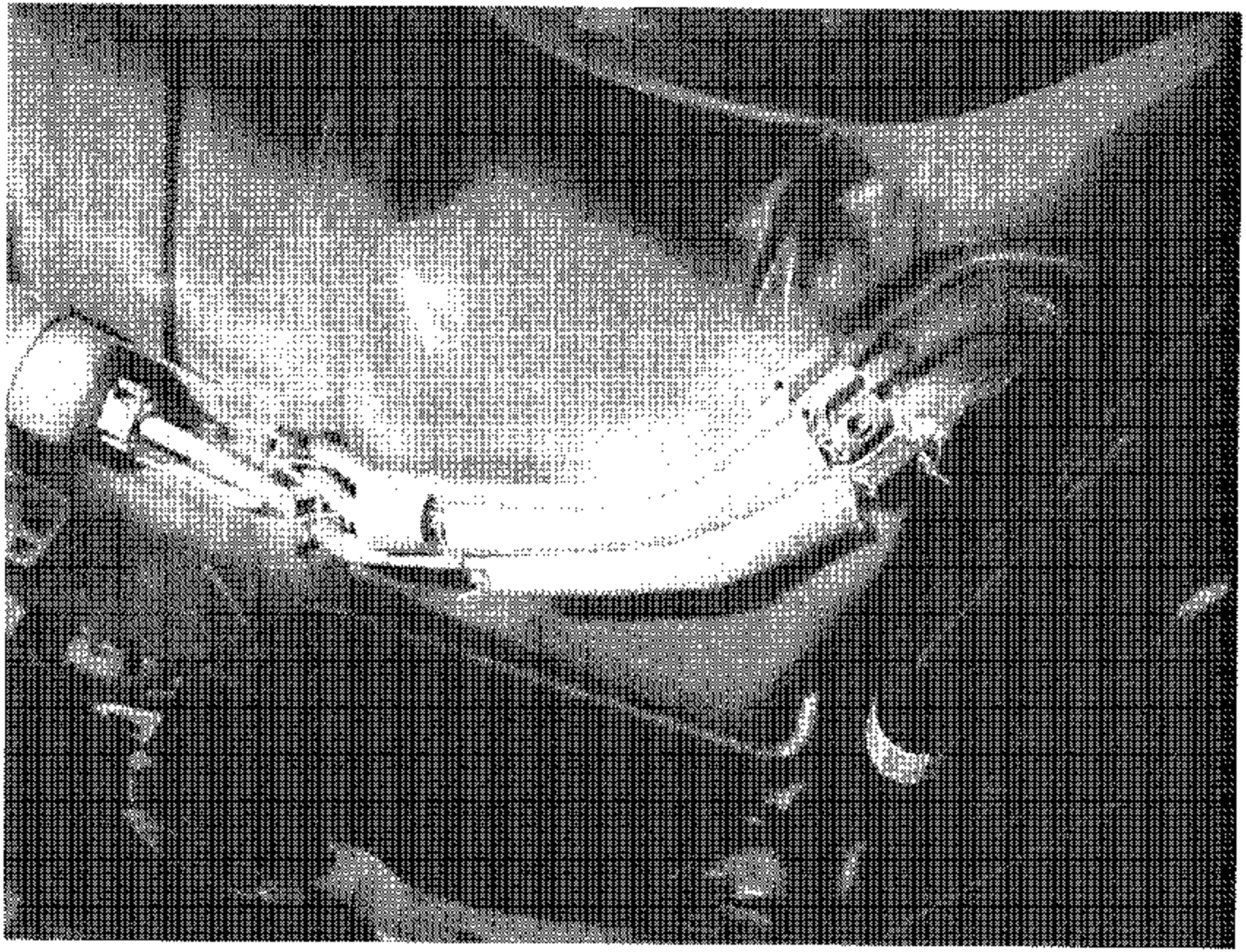
2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.32
UNDERBODY VIEW OF FUEL FILTER AND
FUEL LINES POST TEST



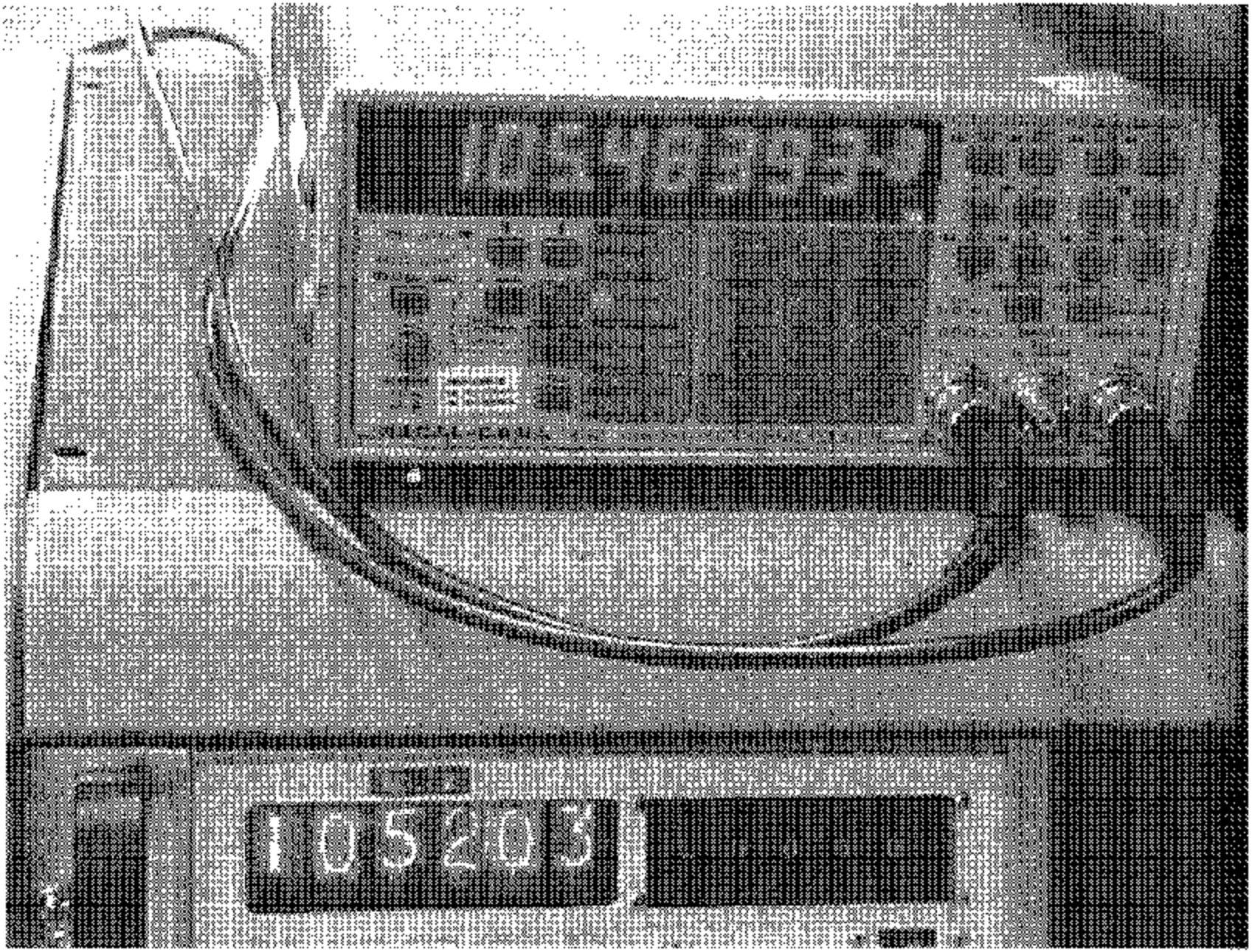
2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301.

FIGURE 5.33
UNDERBODY VIEW OF FUEL LINES AT
TANK POST TEST



2003 BUICK RENDEZVOUS
NHTSA NO. C10106
FMVSS NO. 301L

FIGURE 5.34
UNDERBODY VIEW OF FUEL LINES TO ENGINE POST TEST

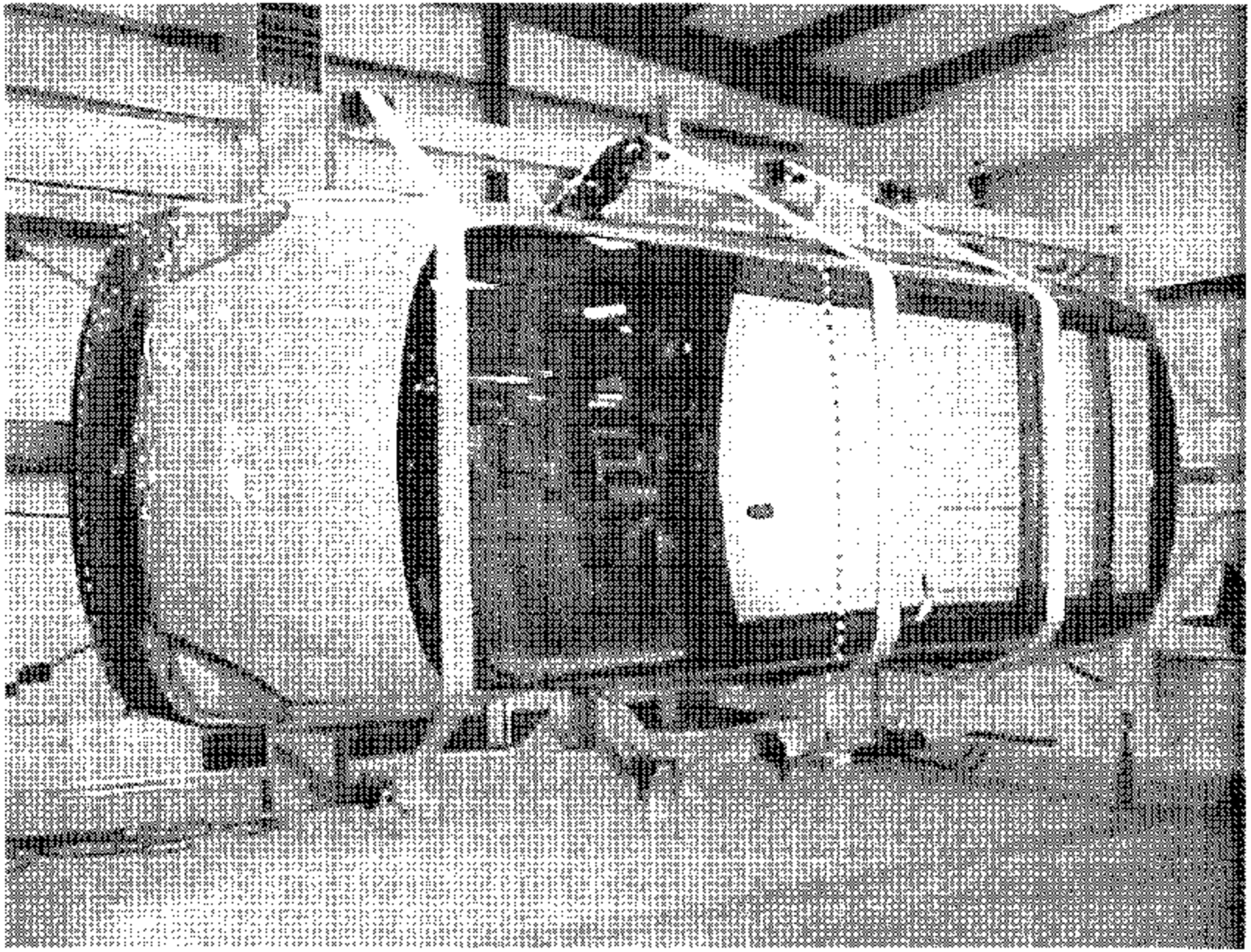


2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.35
SPEED COUNTERS POST TEST

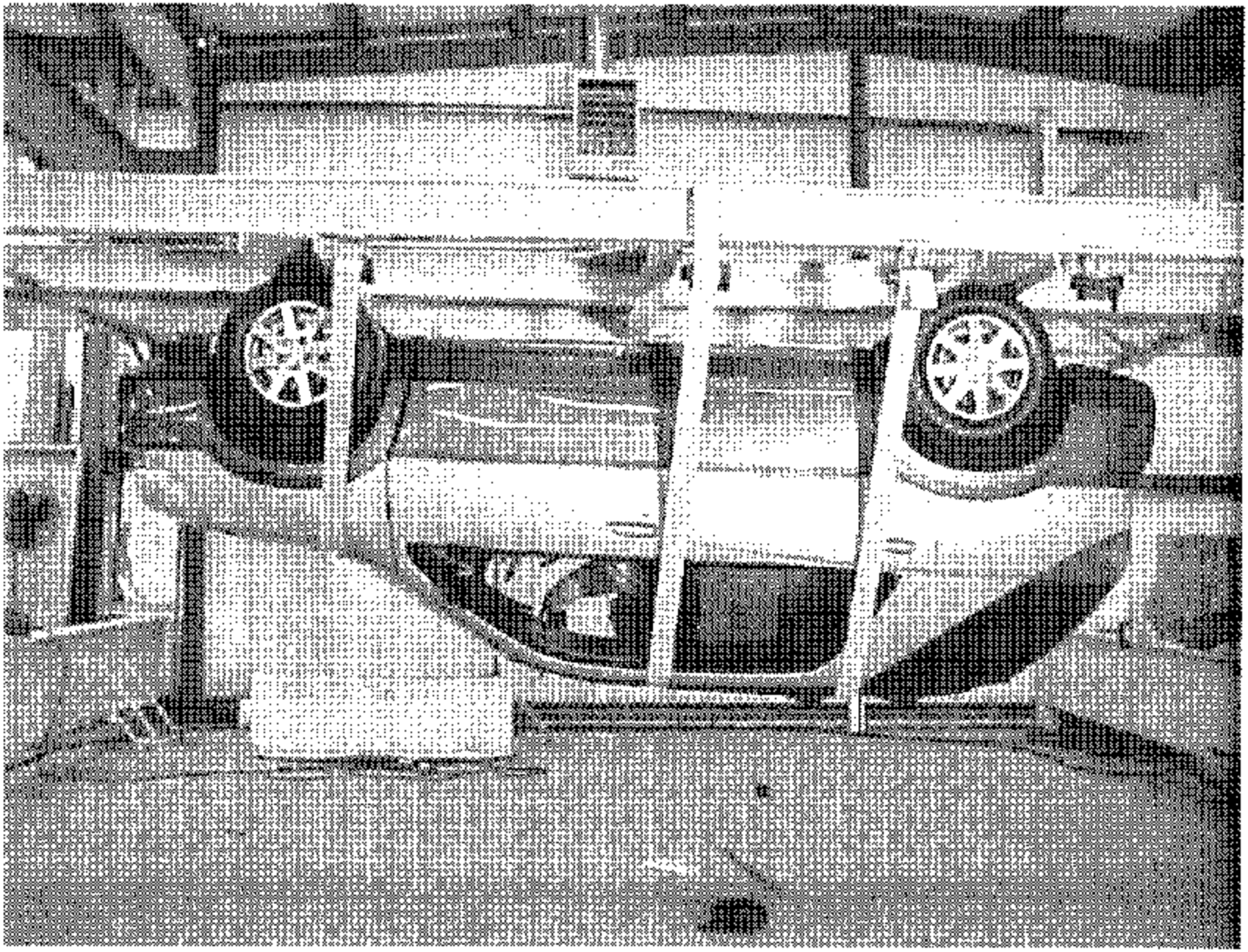
2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.36
VEHICLE IN ROLLOVER FIXTURE AT 0°



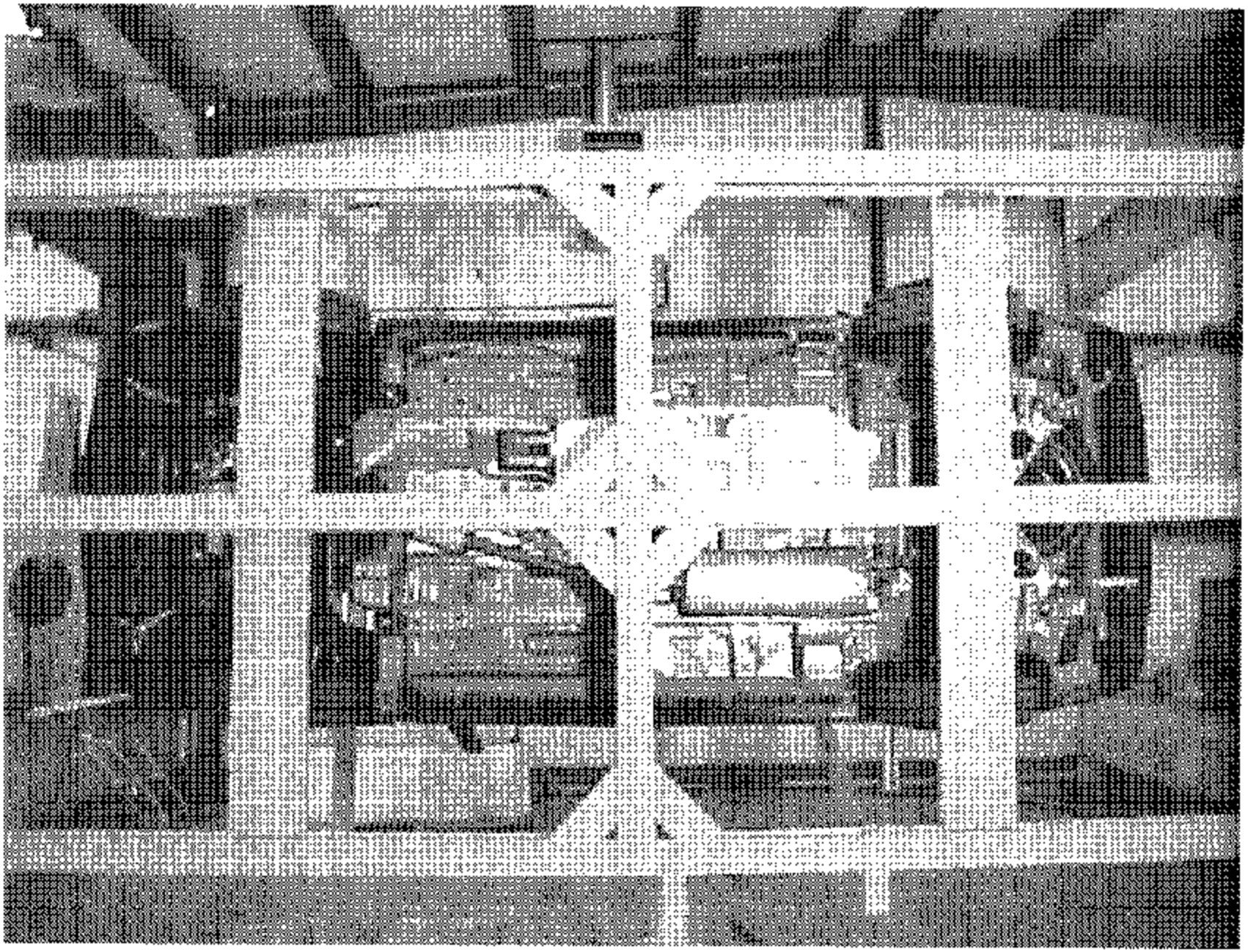
2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.37
VEHICLE IN ROLLOVER FIXTURE AT 90°



2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

FIGURE 5.38
VEHICLE IN ROLLOVER FIXTURE AT 180°

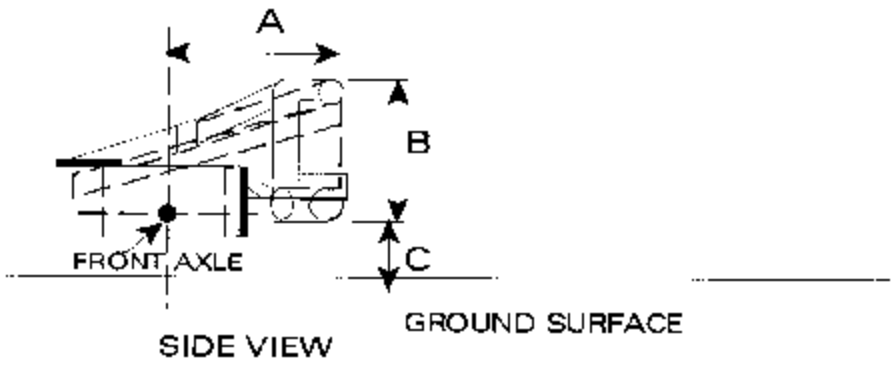


2003 BUICK RENDEZVOUS
NHTSA NO. C30106
FMVSS NO. 301L

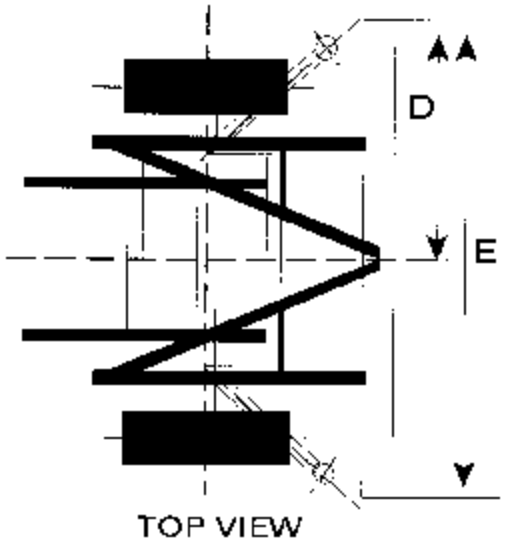
FIGURE 5.39
VEHICLE IN ROLLOVER FIXTURE AT 270°

SECTION 6

BARRIER INFORMATION



SIDE VIEW



TOP VIEW

DIMENSIONS SHOWN IN TABLE ON NEXT PAGE

NOTES:
1. Face Plate 0.50 in. (19mm) thick cold rolled steell
2. All Inner Reinforcements 4.0 x 2.0 x 0.19 in. (102 x 51 x 5mm) Steel Tubing
3. Impact Surface above shown without .75 x 48 x 96 in. Plywood Face attached

LETTER	INCHES	MILLIMETERS
A	20.5*	521*
B	60.0	1524
C	5.0	127
D	39.0	991
E	78.0	198

TEST SET-UP OF COMMON CARRIAGE WITH 60" x 78" FLAT FACE IMPACT SURFACE INSTALLED:

LEFT FRONT WEIGHT	1081
RIGHT FRONT WEIGHT	1079
LEFT REAR WEIGHT	882
RIGHT REAR WEIGHT	873
TOTAL WEIGHT	3915

* EXCLUDING 3/4" PLYWOOD FACE

DIMENSIONS FOR GTL 60" x 78" FLAT FACE IMPACT SURFACE