HSNO 63725 7

REPORT NUMBER 225-GTL-04-003

SAFETY COMPLIANCE TESTING FOR FMVSS NO. 225 CHILD RESTRAINT ANCHORAGE SYSTEMS LOWER AND TETHER ANCHORAGES

HONDA OF AMERICA MFG., INC
2004 HONDA ELEMENT, MPV
NHTSA NO. C45300

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

JULY 23, 2004

FINAL REPORT

PREPARED FOR

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

Prepared By: Debbie Musick

Approved By: [signature]

Approval Date: 7/23/04

FINAL REPORT ACCEPTANCE BY OVSC:

Accepted By: [signature]

Acceptance Date: 8/4/04

entered in Cora
8-2004 gbs

Technical Report Documentation Page

1. Report No. 225-GTL-04-003	2. Government Accession No. N/A	3. Recipient's Catalog No. N/A
4. Title and Subtitle Final Report of FMVSS 225 Compliance Testing of 2004 HONDA ELEMENT, MPV NHTSA No. C45300		5. Report Date July 23, 2004 6. Performing Organ. Code GTL
7. Author(s) Grant Farrand, Project Engineer Debbie Messick, Project Manager		8. Performing Organ. Rep# GTL-DOT-04-225-003
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. DTNH22-02-D-01043
12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Admin. Safety 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 21, 2004 14. Sponsoring Agency Code NVS-221
15. Supplementary Notes		

16. Abstract

Compliance tests were conducted on the subject, 2004 Honda Element MPV in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-225T and TP-225L for the determination of FMVSS 225 compliance.
Test failures identified were as follows:
NONE

17. Key Words	18. Distribution Statement
Compliance Testing Safety Engineering FMVSS 225	Copies of this report are available from NHTSA Technical Reference Div., Rm. 5108 (NPO-230) 400 7th St., S.W. Washington, DC 20590 Telephone No. (202) 366-4946

19. Security Classif. (of this report) UNCLASSIFIED	21. No. of Pages 79	22. Price
20. Security Classif. (of this page) UNCLASSIFIED		

Form DOT F 1700.7 (8-72)

TABLE OF CONTENTS

TABLE OF CONTENTS (continued)

SECTION 1

PURPOSE OF COMPLIANCE TEST

1.0 PURPOSE OF COMPLIANCE TEST

A 2004 Honda Element MPV was subjected to Federal Motor Vehicle Safety Standard (FMVSS) No. 225 testing to determine if the vehicle was in compliance with the requirements of the standard. The purpose of this standard is to is to establish requirements for child restraint anchorage systems to ensure their proper location and strength for the effective securing of child restraints, to reduce the likelihood of the anchorage systems' failure and to increase the likelihood that child restraints are properly secured and thus more fully achieve their potential effectiveness in motor vehicles.

1.1 The test vehicle was a 2004 Honda Element MPV. Nomenclature applicable to the test vehicle are:

A. Vehicle Identification Number: 5J6YH28254L000085

B. NHTSA No.: C45300

C. Manufacturer: HONDA OF AMERICA MFG., INC.

D. Manufacture Date: 12/03

1.2 TEST DATE

The test vehicle was subjected to FMVSS No. 225 testing during the time period June 17-21, 2004.

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 Procedures, TP-225T dated 3 May 2001 and TP-225L dated 11, June, 2001.

Based on the test performed, the 2004 Honda Element MPV appeared to meet the requirements of FMVSS 225 testing. Strength and displacement summary data are provided below.

Table 1. Summary Data for Strength and Displacement

GTL Test #	Fixture Type	Seating Position	Max. Load (N)	Displacement (mm)
5226	SFAD II Tether Strap	2nd Row Right	14,958	57.0
5227	Lower Anchorage	2nd Row Left	10,947	66.5

Table 2. General Test and Vehicle Parameter Data

VEH. MOD YR/MAKE/MODEL BODY	2004 Honda Element
VEH. NHTSA NO.	C45300
VIN	5J6YH28254L000085
VEH. BUILD DATE	12/03
TEST DATE	06/17/04-06/21/04
TEST LABORATORY	GTL
OBSERVERS	Grant Farrand, Jimmy Latane

GENERAL INFORMATION:

Date Received: 01/27/04 Odometer Reading: 115

DATA FROM VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured by: Ford Motor Co.

Date of Manufacture: 12/03 VIN: 5J6YH28254L000085

GVWR: 2020 kg; GAWR FRONT: 1045 kg
GAWR REAR: 1000 kg

SECTION 3

COMPLIANCE TEST DATA

3.0 TEST RESULTS

The following data sheets document the results of testing on the 2004 Honda Element MPV.

DATA SHEET 1
CHILD RESTRAINT TETHER ANCHORAGE CONFIGURATION

VEH. MOD YR/MAKE/MODEL/BODY: 2004 HONDA ELEMENT MPV
VEH. NHTSA NO: C45300; VIN: 5J6YH28254L000085
VEH. BUILD DATE: 12/03 ; TEST DATE: JUNE 17-21, 2004
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

Number of DSP's In Test Vehicle As Stated on Tire Label using Figures for Maximum Vehicle Loading:

Front Seat= 2
Rear Seat= 2
Third Seat= 0
Total= 4

SEATING POSITION		OBSERVED CONFIGURATION			
		Permit the attachment of a tether hook	Accessible without the need for any tool other than a screwdriver of coin	Ready for use without the need for any tools	Sealed to prevent the entry of exhaust fumes
Front	Left	N/A	N/A	N/A	N/A
	Center	N/A	N/A	N/A	N/A
	Right	NO	N/A	N/A	N/A
Second	Left	YES	YES	YES	YES
	Center	N/A	N/A	N/A	N/A
	Right	YES	YES	YES	YES
Third	Left	N/A	N/A	N/A	N/A
	Center	N/A	N/A	N/A	N/A
	Right	N/A	N/A	N/A	N/A

REMARKS:

RECORDED BY: L. Farrand DATE: 06/17/04

APPROVED BY: D. Mussi

DATA SHEET 2
CHILD RESTRAINT LOWER ANCHORAGES CONFIGURATION

VEH. MOD YR/MAKE/MODEL/BODY: 2004 HONDA ELEMENT MPV
VEH. NHTSA NO: C45300; VIN: 5J6YH28254L000085
VEH. BUILD DATE: 12/03 ; TEST DATE: JUNE 17-21, 2004
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

OBSERVED LOWER ANCHORAGE CONFIGURATION	SEAT POSITION	FRONT	REAR LEFT	REAR RIGHT	THIRD LEFT	THIRD RIGHT
Above anchorage permanently marked with a circle not less than 13 mm in Dia.; and whose color contrasts with its background; and its center is not less than 50 mm and not more than 75 mm above the bar, and in the vertical longitudinal plane that passes through the center of the bar.	Left	N/A	YES	YES	N/A	
	Center	N/A	N/A		N/A	
	Right	N/A	YES	YES	N/A	
Each of the bars is visible, without the compression of the seat cushion or seat back, when the bar is viewed, in a vertical longitudinal plane passing through the center of the bar, along a line marking an upward 30 degree angle with a horizontal plane.	Left	N/A	NO	NO	N/A	
	Center	N/A	N/A		N/A	
	Right	N/A	NO	NO	N/A	
Diameter of the bar (mm)	Left	N/A	6.01	6.01	N/A	
	Center	N/A	N/A		N/A	
	Right	N/A	6.01	6.01	N/A	
Inspect if the bars are straight, horizontal and transverse	Left	N/A	YES	YES	N/A	
	Center	N/A	N/A		N/A	
	Right	N/A	YES	YES	N/A	

DATA SHEET 2 CONTINUED
CHILD RESTRAINT LOWER ANCHORAGES CONFIGURATION

VEH. MOD YR/MAKE/MODEL/BODY: 2004 HONDA ELEMENT MPV
VEH. NHTSA NO: C45300; VIN: 5J6YH28254L000085
VEH. BUILD DATE: 12/03 ; TEST DATE: JUNE 17-21, 2004
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

OBSERVED LOWER ANCHORAGE CONFIGURATION		SEAT POSITION FRONT	REAR	THIRD
Inspect if the centroidal longitudinal axes are collinear within 5 degrees.	Left	N/A*	YES	N/A
	Center	N/A	N/A	N/A
	Right	N/A	YES	N/A
Inspect the inside surface of the bar that is straight and horizontal section of the bars, and determine they are not less than 25 mm, but not more than 40 mm in length.	Left	N/A*	YES 32 MM	N/A
	Center	N/A	N/A	N/A
	Right	N/A	YES 32 MM	N/A
Inspect if the bars can be connected to, over their entire inside length by the connectors of child restraint system.	Left	N/A*	YES	N/A
	Center	N/A	N/A	N/A
	Right	N/A	YES	N/A
Measure the distance between the center of the length of one bar to the center of the length of the other bar. The requirement is 280 mm ± 1 mm.	Left	N/A*	281	N/A
	Center	N/A	N/A	N/A
	Right	N/A	281	N/A
Inspect if the bars are an integral and permanent part of the vehicle.	Left	N/A*	YES	N/A
	Center	N/A	N/A	N/A
	Right	N/A	YES	N/A
Inspect if the bars are rigidly attached to the vehicle. If feasible, hold the bar firmly with two fingers and gently pull.	Left	N/A*	YES	N/A
	Center	N/A	N/A	N/A
	Right	N/A	YES	N/A

* DRIVER'S SEAT

RECORDED BY: _____ DATE: 06/17/04
APPROVED BY: D. Flessick

DATA SHEET 2 CONTINUED
CHILD RESTRAINT LOWER ANCHORAGES CONFIGURATION

VEH. MOD YR/MAKE/MODEL/BODY: 2004 HONDA ELEMENT MPV
VEH. NHTSA NO: C45300; VIN: 5J6YH28254L000085
VEH. BUILD DATE: 12/03 ; TEST DATE: JUNE 17-21, 2004
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

OBSERVED LOWER ANCHORAGE CONFIGURATION		SEAT POSITION FRONT	REAR	THIRD
Optional Marking: At least one anchorage bar (when deployed for use, if storable anchorages), one guidance fixture, or one seat marking is visible	Left	N/A*	N/A	N/A
	Center	N/A	N/A	N/A
	Right	N/A	N/A	N/A
Optional Marking: If guidance fixtures are used, the fixture(s) must be installed.	Left	N/A*	N/A	N/A
	Center	N/A	N/A	NO
	Right	N/A	N/A	N/A

* DRIVER'S SEAT

RECORDED BY: _____ DATE: 06/17/04

APPROVED BY: _____

DATA SHEET 3
LOCATION AND DIMENSIONAL MEASUREMENTS

VEH. MOD YR/MAKE/MODEL/BODY: 2004 HONDA ELEMENT MPV
VEH. NHTSA NO: C45300; VIN: 5J6YH28254L000085
VEH. BUILD DATE: 12/03 ; TEST DATE: JUNE 17-21, 2004
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

Number of DSP's in Test Vehicle As Stated on Tire Label using Figures for Maximum Vehicle Loading:

Front Seat= 2
Rear Seat= 2
Third Seat= 0
Total= 4

SEAT POSITION FOR TETHER		LOCATION OF DSPs	TETHER ANCHORAGE LOCATION	
		TETHER OBSERVED	REQUIRED	MEASURED Is it in the required zone?
FRONT	Left	NO	NO	N/A
	Center	NO	NO	N/A
	Right	YES	NO	YES
SECOND	Left	YES	YES	YES
	Center	NO	NO	N/A
	Right	YES	YES	YES
THIRD	Left	N/A	N/A	N/A
	Center	N/A	N/A	N/A
	Right	N/A	N/A	N/A

RECORDED BY: G. Farrand DATE: 06/21/04

APPROVED BY: D. Mussi

DATA SHEET 3 CONTINUED
LOCATION AND DIMENSIONAL MEASUREMENTS

VEH. MOD YR/MAKE/MODEL/BODY: 2004 HONDA ELEMENT MPV
VEH. NHTSA NO: C45300; VIN: 5J6YH28254L000085
VEH. BUILD DATE: 12/03 ; TEST DATE: JUNE 17-21, 2004
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

Number of DSP's in Test Vehicle As Stated on Tire Label using Figures for Maximum Vehicle Loading: Front Seat= 2 Rear Seat 2 Third Seat= 0 Total= 4

SEAT POSITION FOR LOWER ANCHORAGE	PRESENCE OF ANCHORAGES		COMMENTS
	REQUIRED	OBSERVED	
FRONT	NONE	NONE	N/A
REAR	2	2	LEFT & RIGHT
THIRD	NONE	NONE	N/A

SEAT POSITIONS FOR LOWER ANCHORAGES		LOCATION OF ANCHORAGE				COMMENTS		
		MEASURED FROM "Z" (mm)		MEASURED FROM "SRP" (mm)				
		Left	Right	Left	Right	PITCH	ROLL	YAW
FRONT	Left	N/A		N/A		N/A		
	Center	N/A		N/A		N/A		
	Right	N/A		N/A		N/A		
REAR	Left	67	67	175	175	14°	0°	0°
	Center	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Right	65	67	175	169	14°	0°	0°
THIRD	Left	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Center	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Right	N/A	N/A	N/A	N/A	N/A	N/A	N/A

RECORDED BY: [signature] DATE: 06/21/04
APPROVED BY: [signature]

DATA SHEET 4
ANCHORAGE STATIC LOADING

VEH. MOD YR/MAKE/MODEL/BODY: 2004 HONDA ELEMENT MPV
VEH. NHTSA NO: C45300; VIN: 5J6YH28254L000085
VEH. BUILD DATE: 12/03 ; TEST DATE: JUNE 17-21, 2004
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE
TEST # 5226
TETHER ANCHORAGE- WITH SFAD:

SEATING POSITION		Seat, Seat Back & Head Restraint positions			Type of SFAD used	Angle	Initial location	Onset rate	Force Applied	Final location	Horizontal Displacement
		Seat	Seat Back	Head Restraint							
Front	Driver	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Center	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Right	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Second	Left	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Center	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Right (if any)	FIXED	23°	REMOVED	2	10°	0.0	577 N/SEC	14,958	57.0	57.0
Third	Left	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Center	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Right	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

REMARKS: TESTED TO S6.3.1

RECORDED BY: _____ DATE: 06/21/04
APPROVED BY: _____

DATA SHEET 5
ANCHORAGE STATIC LOADING

VEH. MOD YR/MAKE/MODEL/BODY: 2004 HONDA ELEMENT MPV
VEH. NHTSA NO: C45300; VIN: 5J6YH28254L000085
VEH. BUILD DATE: 12/03 ; TEST DATE: JUNE 17-21, 2004
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

TEST # 5227
LOWER ANCHORAGE- FORWARD FORCE APPLICATION:

SEATING POSITION		Seat, Seat Back & Head Restraint positions			Measured Angles		Initial location	Onset rate	Force Applied	Final location	Displacement
		Seat	Seat Back	Head Restraint	Vertical	Horizontal					
Front	Driver	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Center	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Right	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rear	Left	FIXED	23°	REMOVED	10°	0°	0.0	423 N/SEC	10,947	66.5	66.5
	Center	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Right (if any)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Third	Left	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Center	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Right	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

REMARKS:

RECORDED BY: [signature] DATE: 06/21/04
APPROVED BY: [signature]

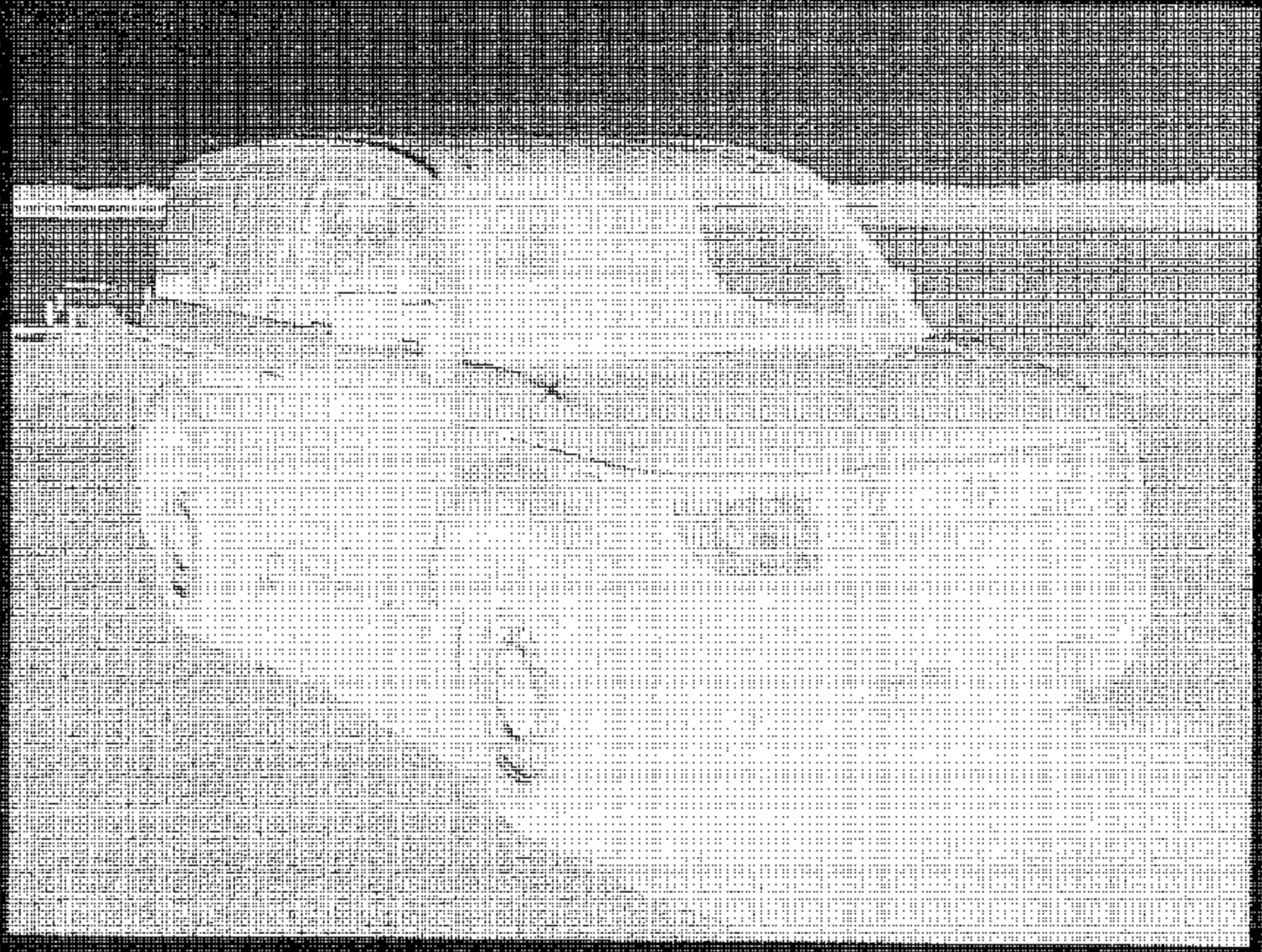
SECTION 4
INSTRUMENTATION AND EQUIPMENT LIST

TABLE 1 - INSTRUMENTATION & EQUIPMENT LIST

EQUIPMENT	DESCRIPTION	MODEL/ SERIAL NO.	CAL. DATE	NEXT CAL. DATE
COMPUTER	AT&T	486DX266	BEFORE USE	BEFORE USE
LOAD CELL	INTERFACE	496	06/03	06/04
LINEAR TRANSDUCER	CELESCO	69	BEFORE USE	BEFORE USE
LINEAR TRANSDUCER	CELESCO	70	BEFORE USE	BEFORE USE
LINEAR TRANSDUCER	CELESCO	72	BEFORE USE	BEFORE USE
LEVEL	STANLEY	42-449	02/04	02/05
FORCE GAUGE	CHATILLON	8761	BEFORE USE	BEFORE USE
CALIPER	N/A	Q9322365	BEFORE USE	BEFORE USE

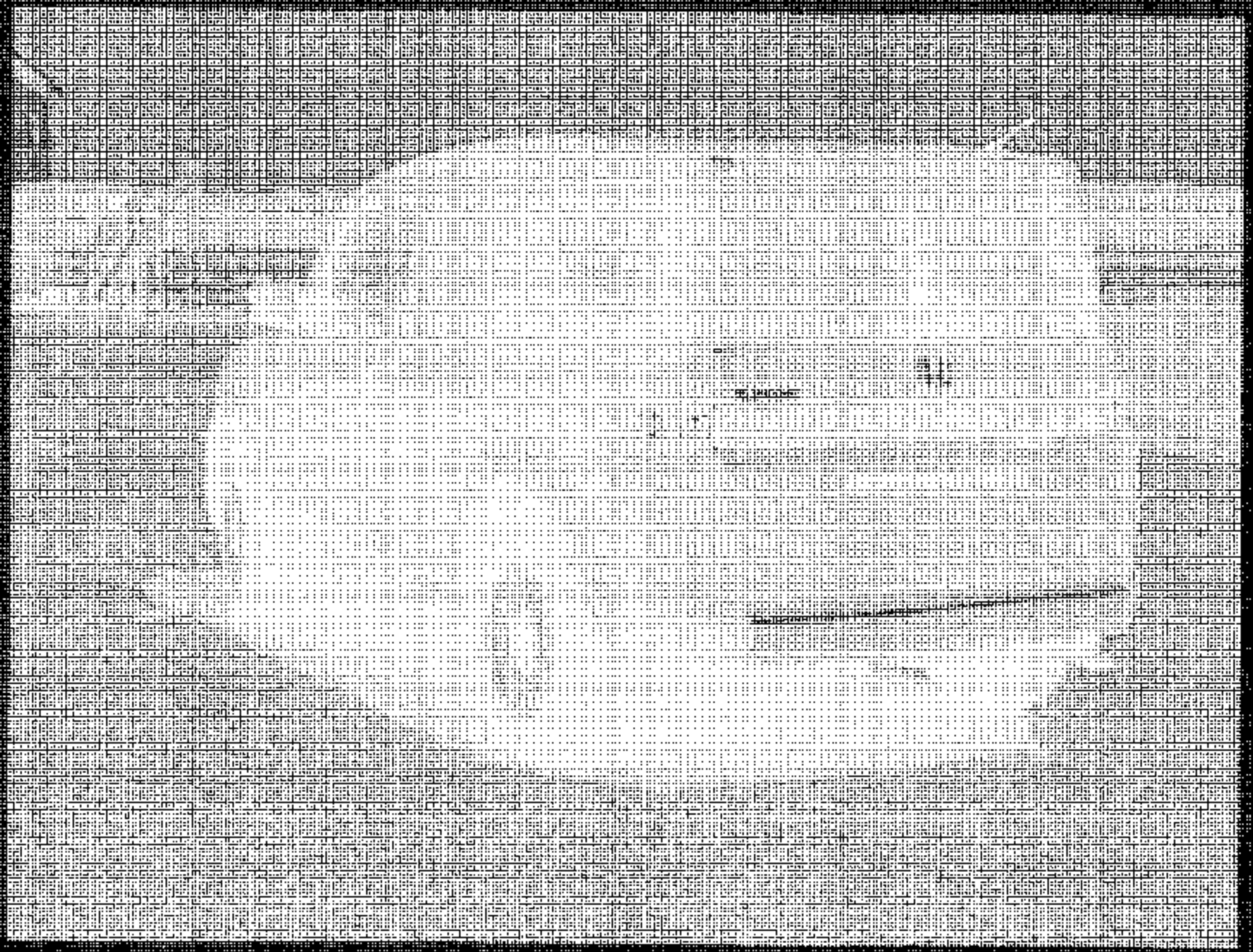
SECTION 5

PHOTOGRAPHS



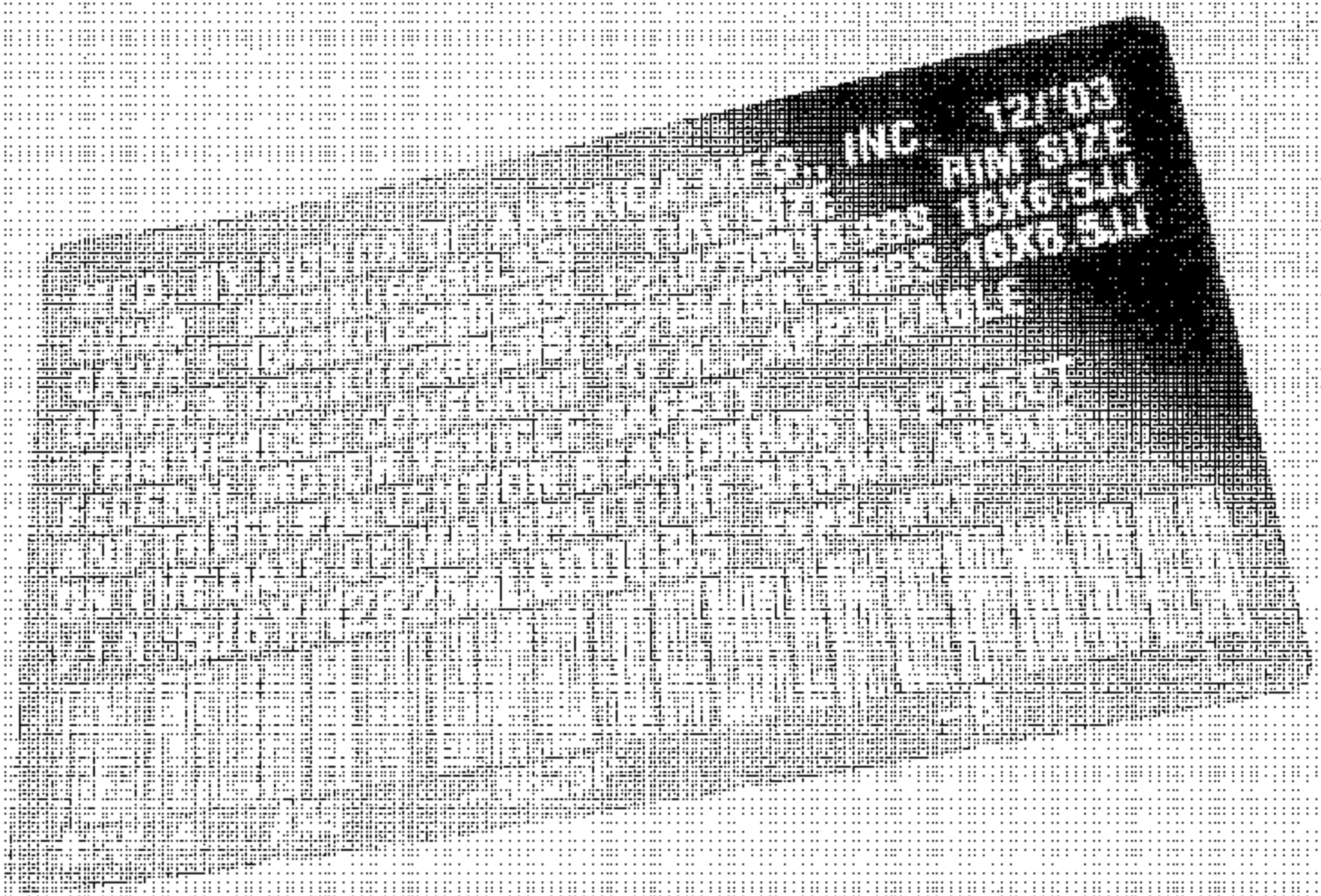
2004 HONDA ELEMENT
NHTSA NO. C43900
FMVSS NO. 225

FIGURE 9.1
¾ FRONTAL RIGHT SIDE VIEW OF VEHICLE



2004 HONDA ELEMENT
NHTSA NO. C45309
FMVSS NO. 226

FIGURE 6.2
¾ REARWARD LEFT SIDE VIEW OF VEHICLE

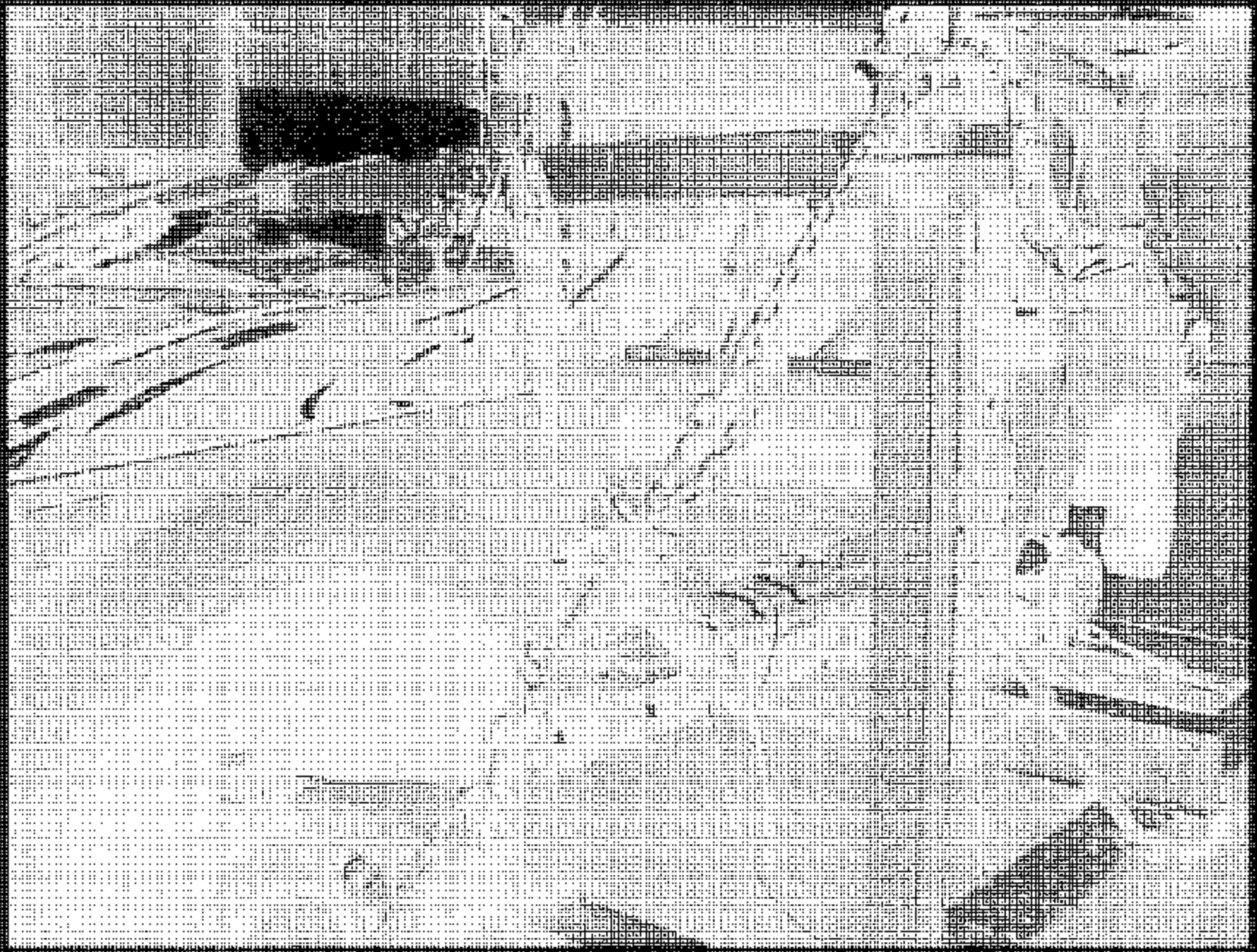


2004 HONDA ELEMENT
NHTSA NO. C45S00
FMVSS NO. 226

FIGURE 5.3
CLOSE-UP VIEW OF VEHICLE CERTIFICATION LABEL

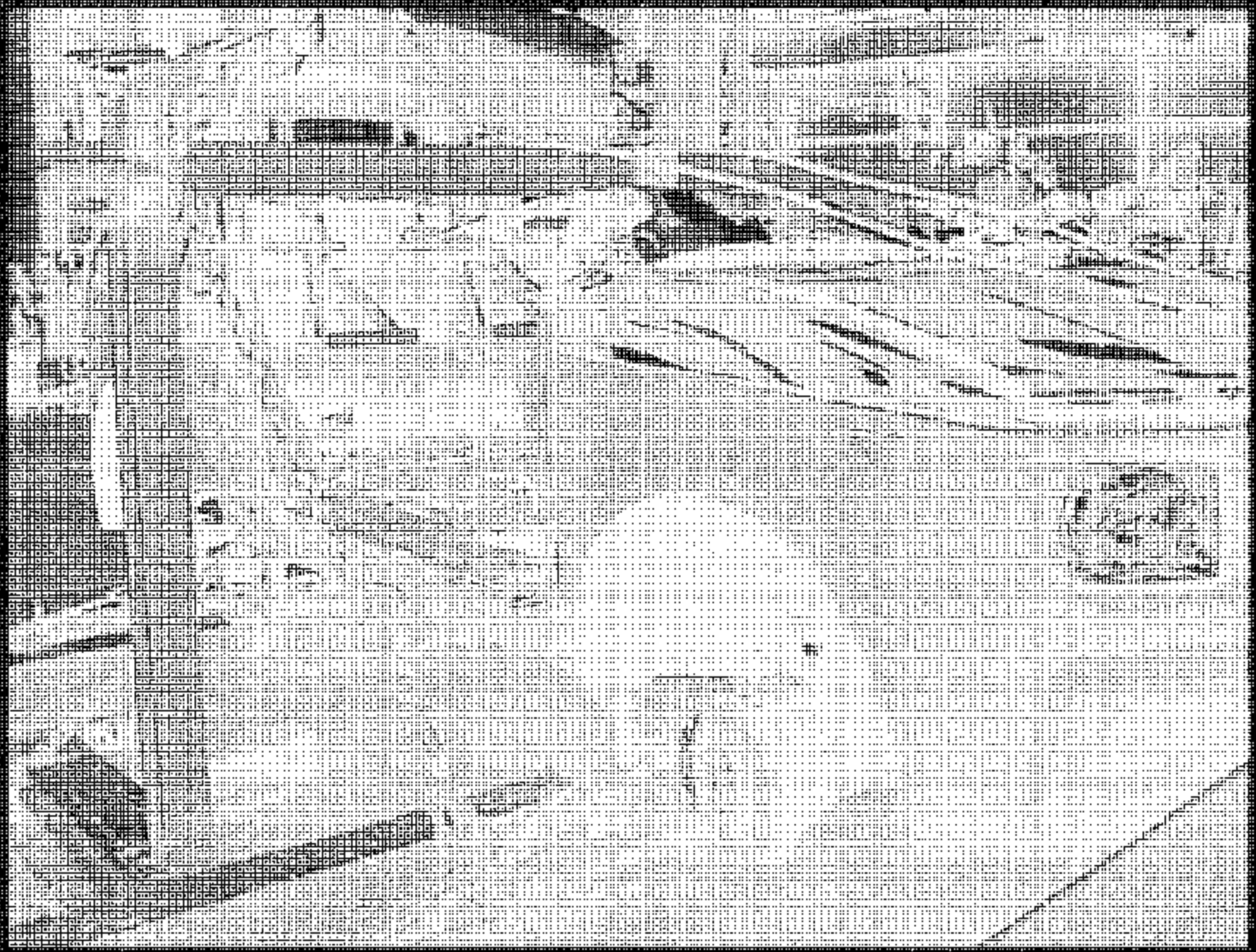
2004 HONDA ELEMENT
NHTSA NO. C45300
FMVSS NO. 226

FIGURE 5.4
CLOSE-UP VIEW OF TIRE INFORMATION LABEL



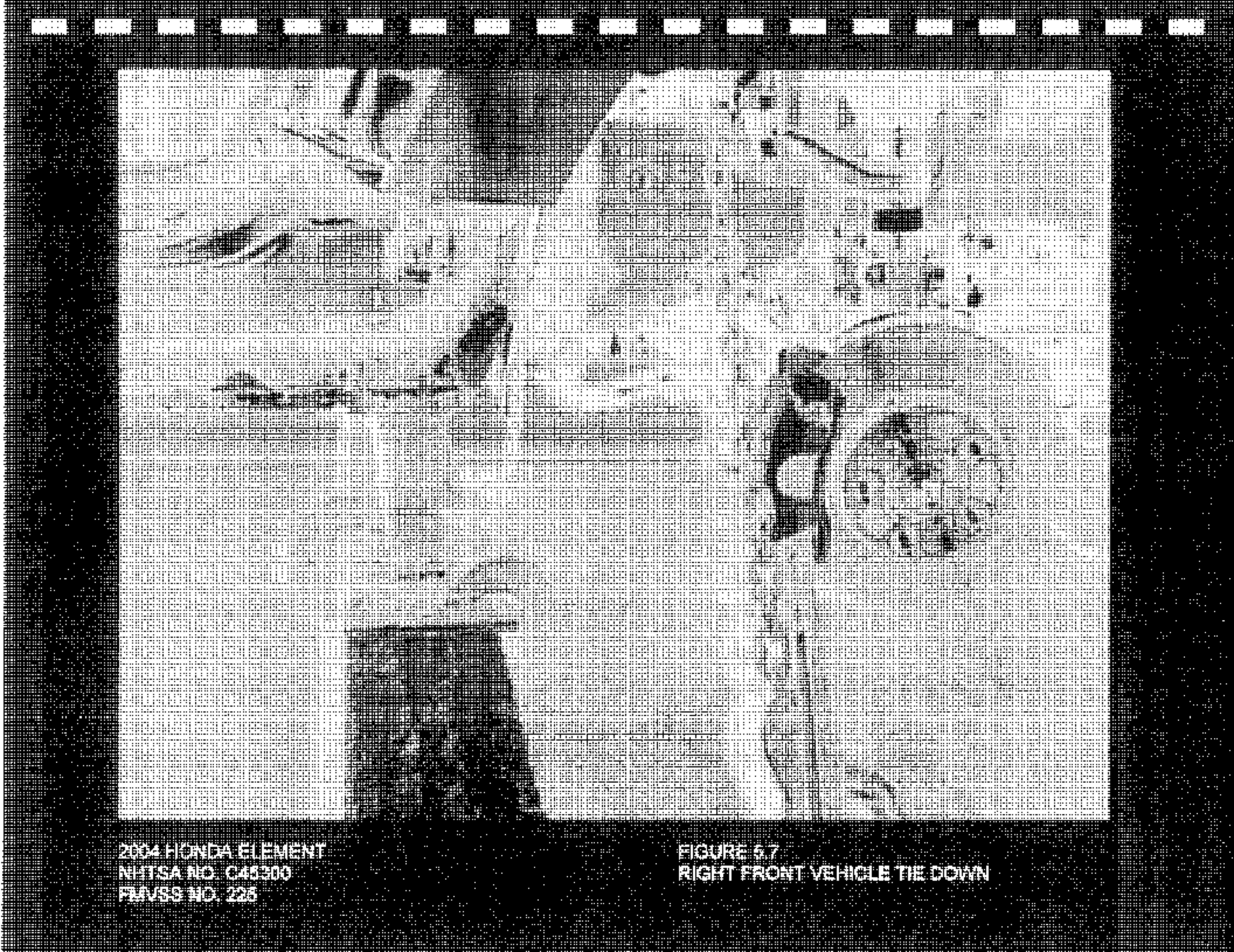
2004 HONDA ELEMENT
NHTSA NO. C45300
FMVSS NO. 225

FIGURE 5.5
¾ LEFT FRONT VIEW OF TEST VEHICLE IN TEST RIG



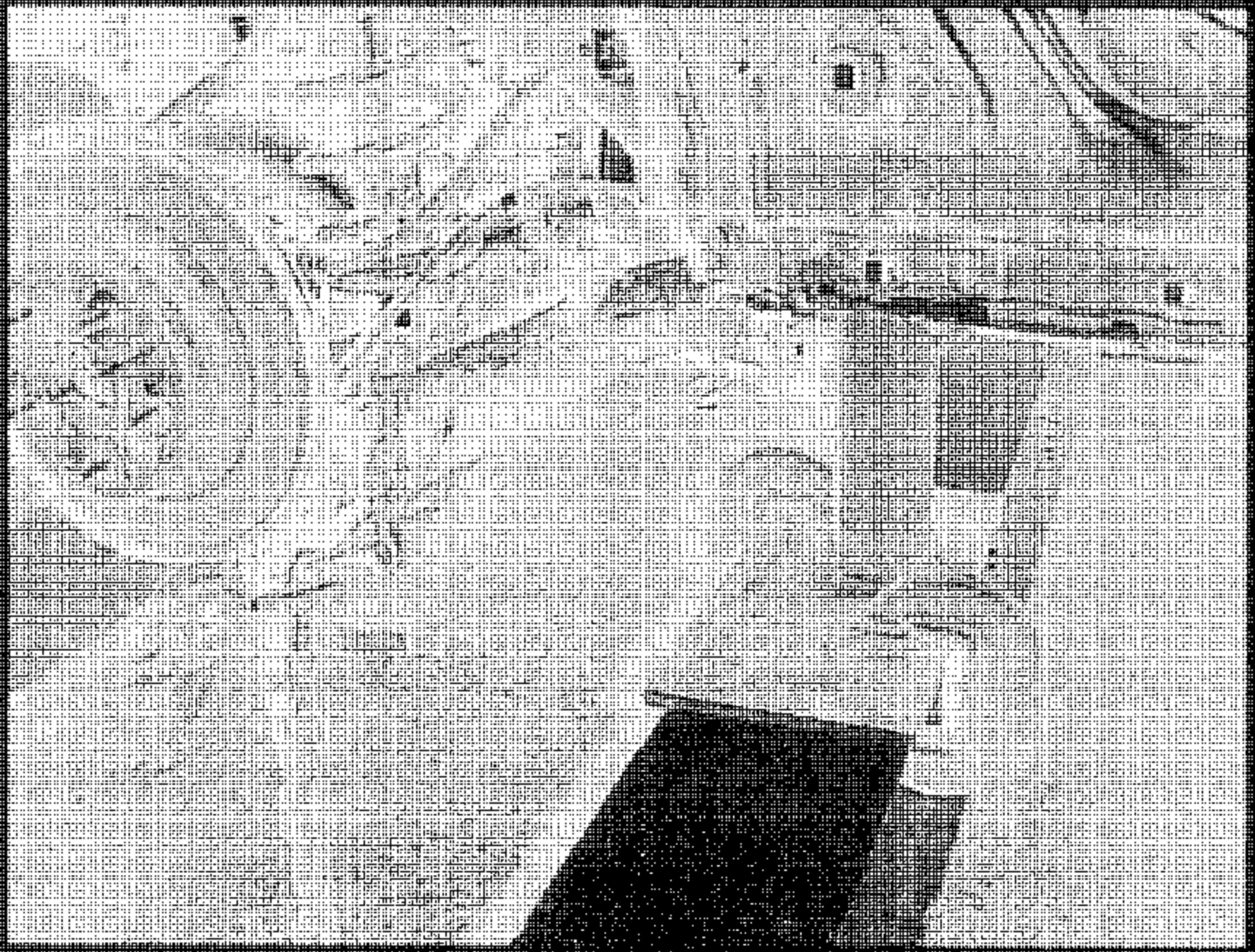
2004 HONDA ELEMENT
NHTSA NO. C45300
FMVSS NO. 225

FIGURE 5.6
¾ RIGHT FRONT VIEW OF VEHICLE IN TEST RIG



2004 HONDA ELEMENT
NHTSA NO. C45300
FMVSS NO. 225

FIGURE 5.7
RIGHT FRONT VEHICLE TIE DOWN

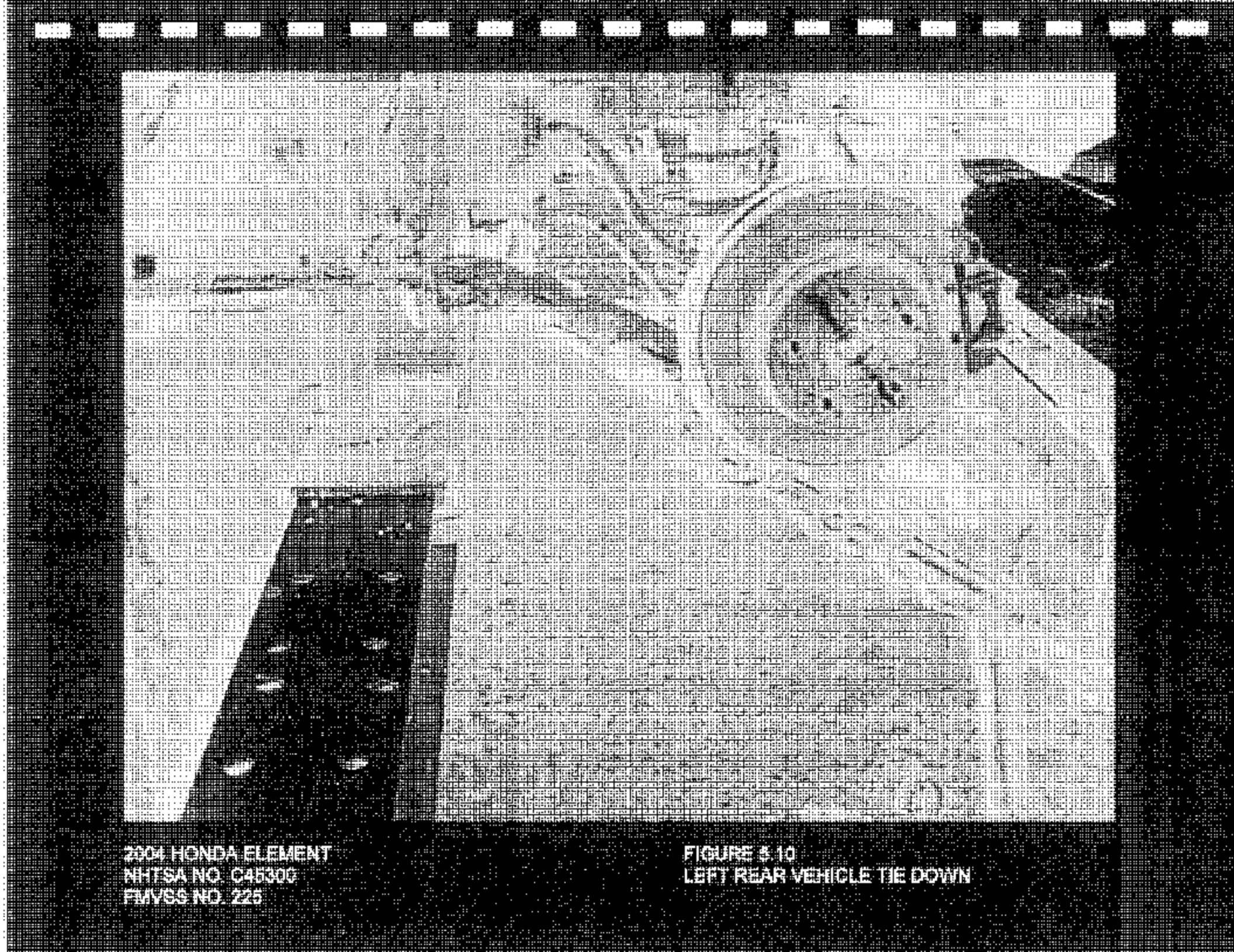


2004 HONDA ELEMENT
NHTSA NO. C45160
FMVSS NO. 225

FIGURE 5.8
RIGHT REAR VEHICLE TIE DOWN

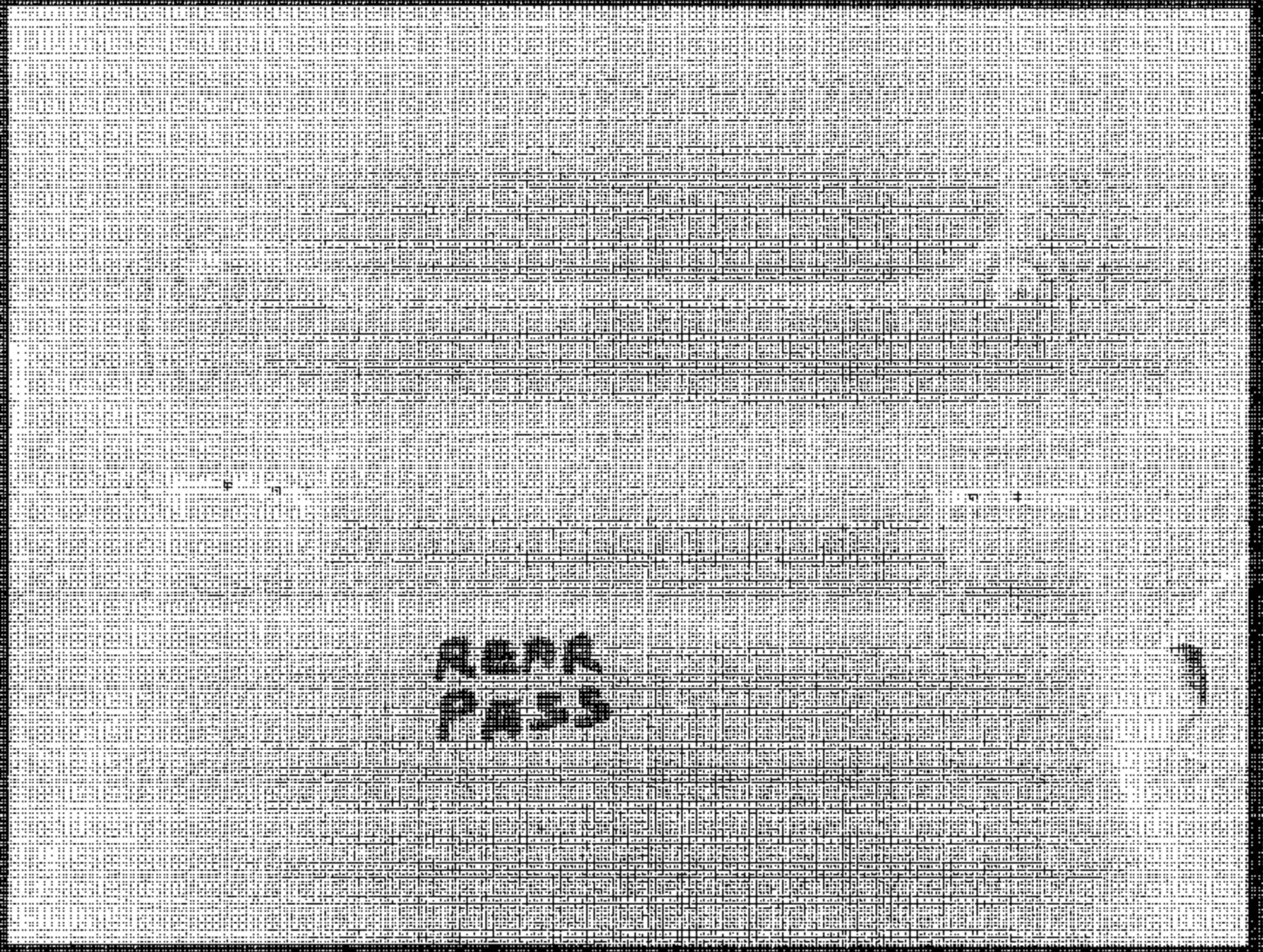
2004 HONDA ELEMENT
NHTSA NO. C45301
FMVSS NO. 228

FIGURE 6.9
LEFT FRONT VEHICLE TIE DOWN



2004 HONDA ELEMENT
NHTSA NO. C45300
FMVSS NO. 225

FIGURE 5.10
LEFT REAR VEHICLE TIE DOWN

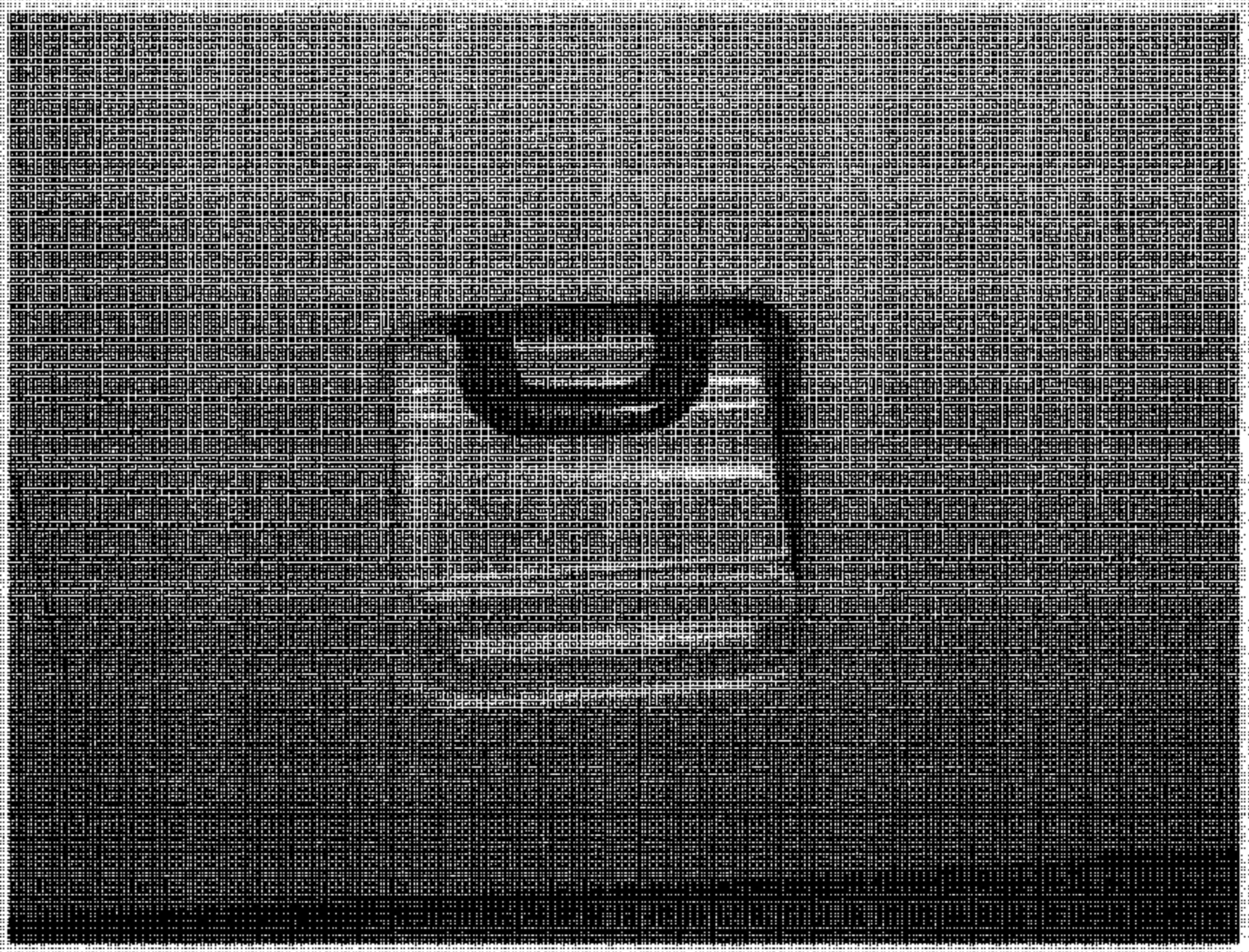


2004 HONDA ELEMENT
NHTSA NO. C40300
FMVSS NO. 225

FIGURE 5.11
PRE-TEST 2ND ROW RIGHT LOWER ANCHORS
FRONT VIEW

2004 HONDA ELEMENT
NHTSA NO. C45300
FMVSS NO. 225

FIGURE 5.12
PRE-TEST 2ND ROW RIGHT LOWER ANCHORS
SIDE VIEW

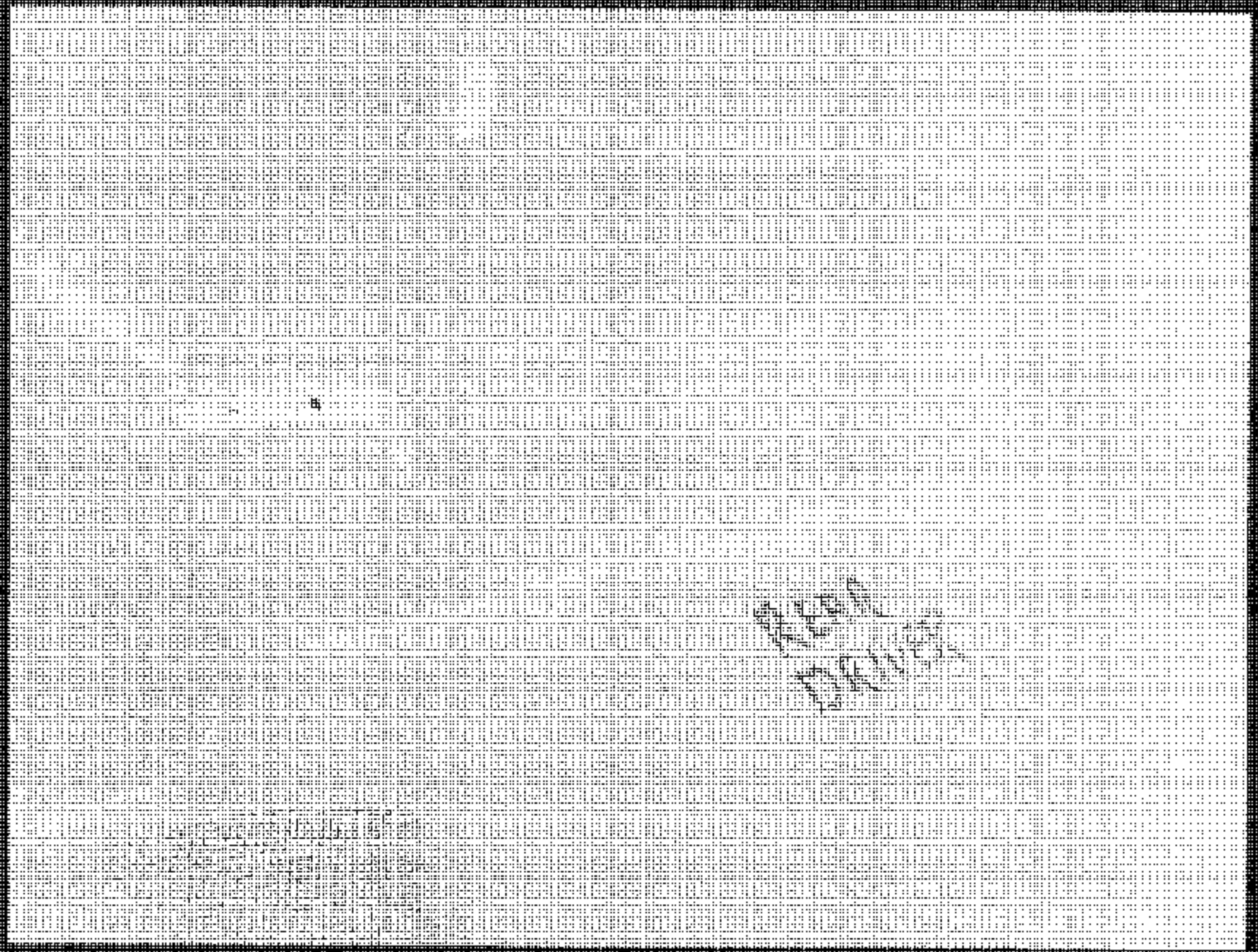


2004 HONDA ELEMENT
NHTSA NO. C45300
FMVSS NO. 225

FIGURE 5.13
PRE-TEST 2ND ROW RIGHT TOP TETHER ANCHOR

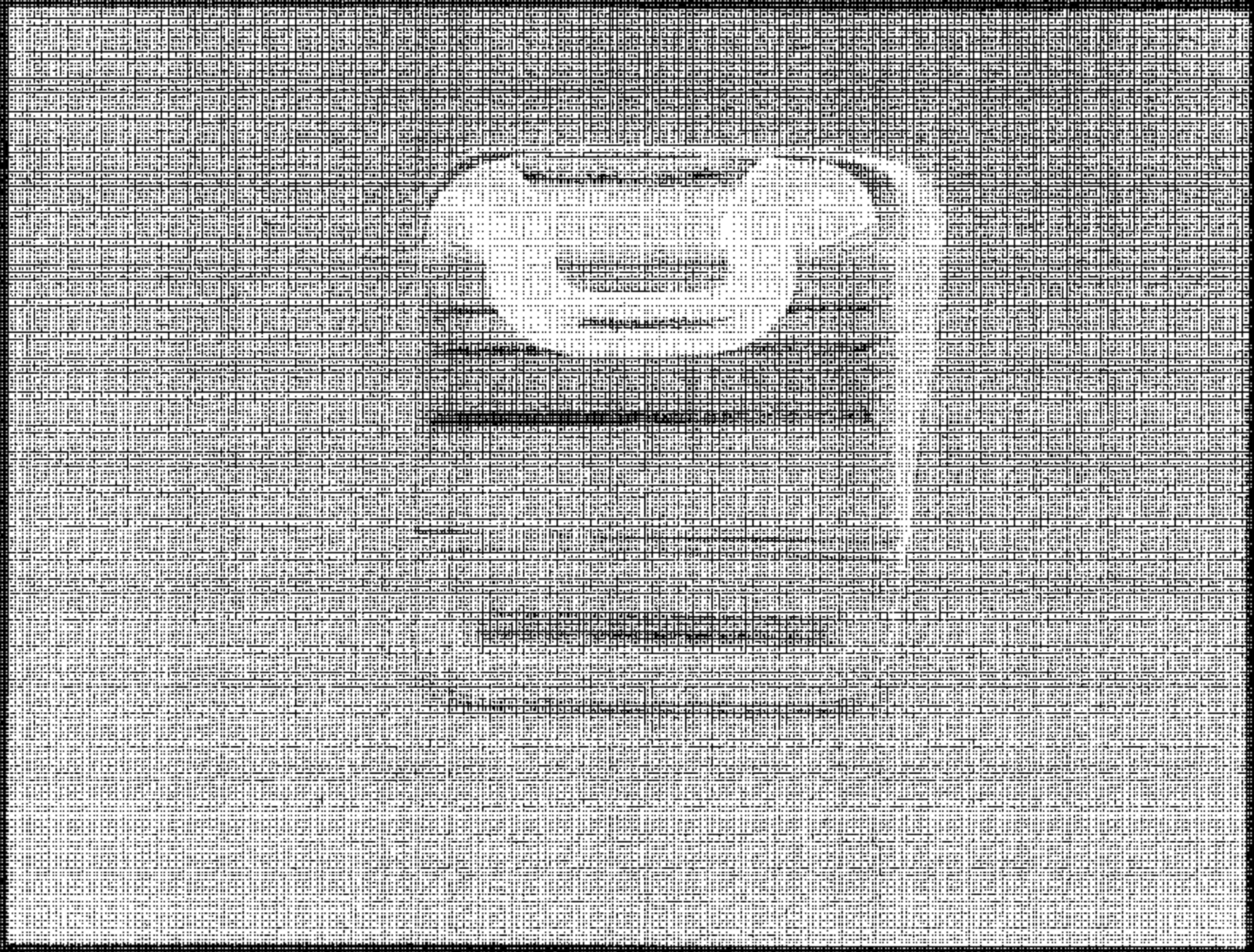
2004 HONDA ELEMENT
NHTSA NO. C46300
FMVSS NO. 225

FIGURE 5.14
PRE-TEST 2ND ROW LEFT LOWER ANCHORS
FRONT VIEW



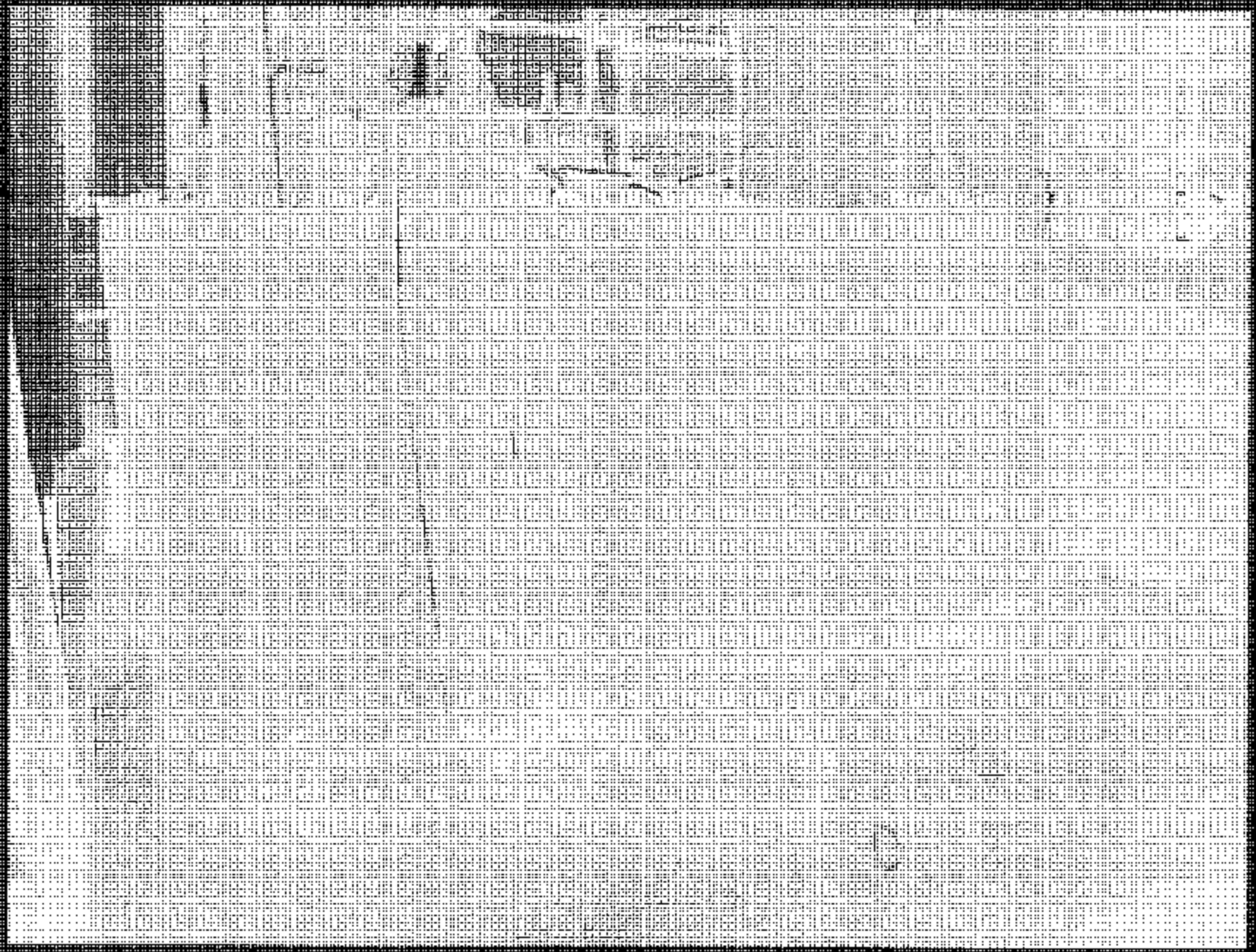
2004 HONDA ELEMENT
NHTSA NO. C45360
FMVSS NO. 225

FIGURE 5.15
PRE-TEST 2ND ROW LEFT LOWER ANCHORS
SIDE VIEW



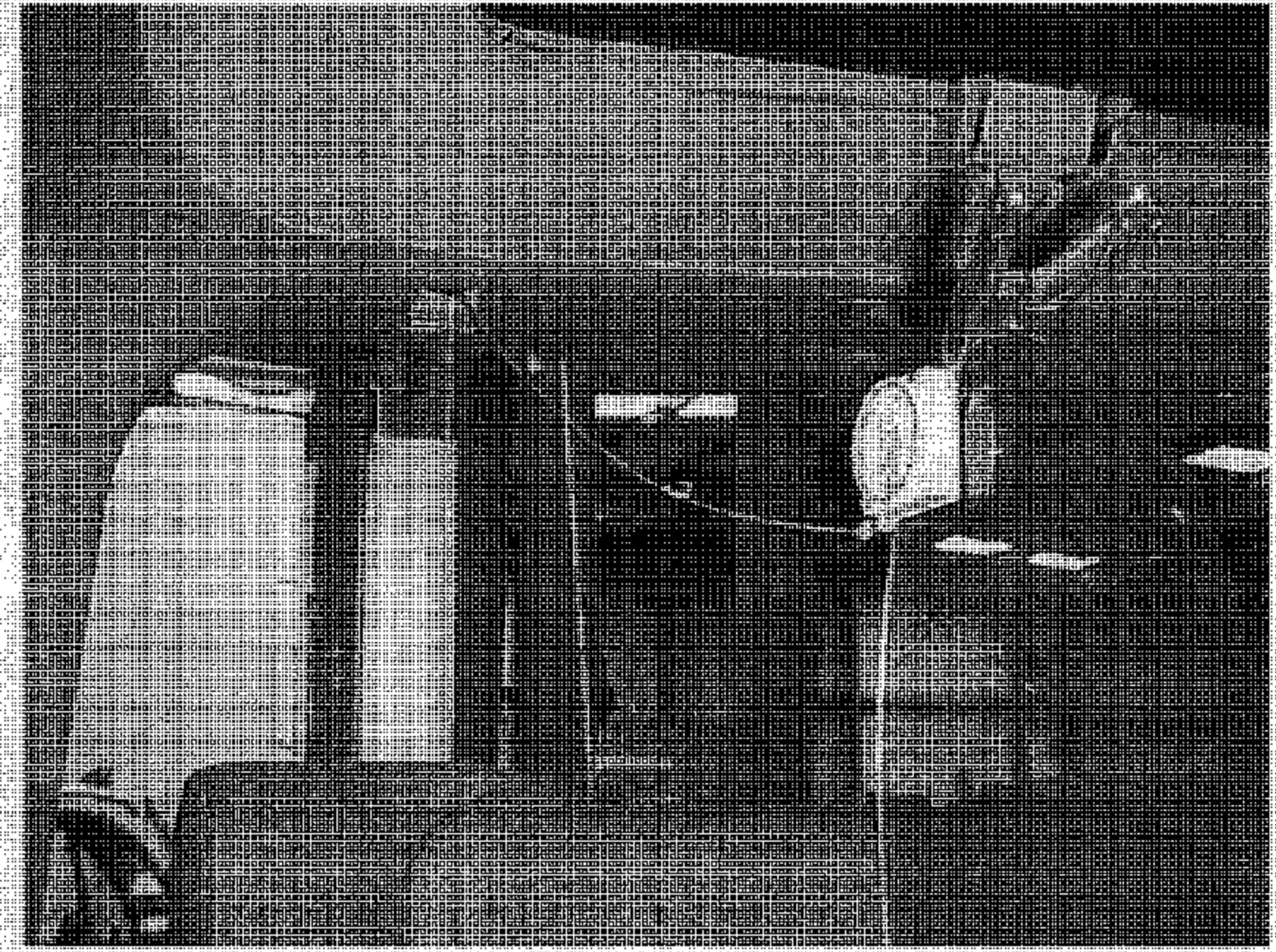
2004 HONDA ELEMENT
NHTSA NO. C46300
FMVSS NO. 225

FIGURE 5-16
PRE-TEST 2ND ROW LEFT TOP TETHER ANCHOR



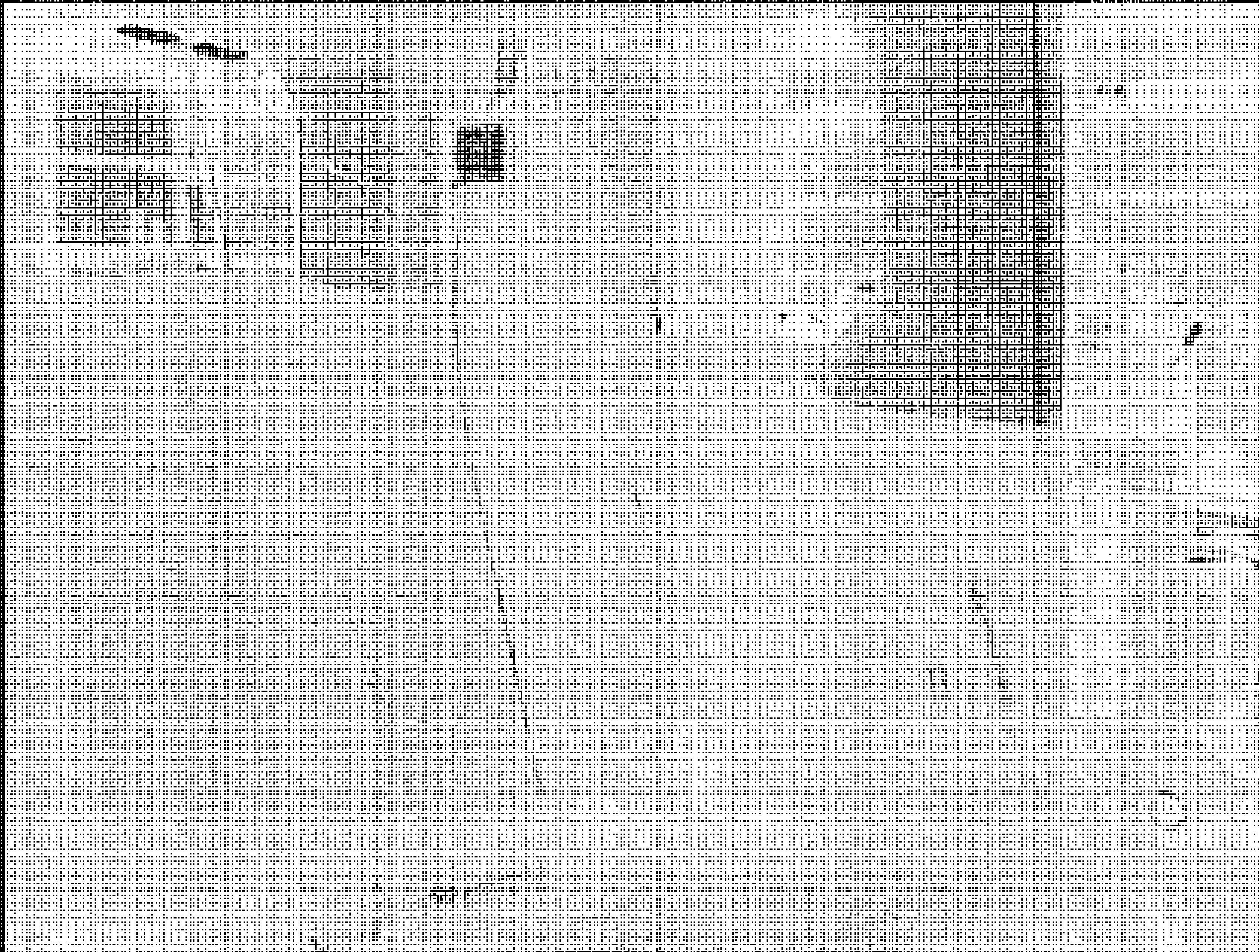
2004 HONDA ELEMENT
NHTSA NO. C45500
FMVSS NO. 225

FIGURE 5.17
VIEW OF 2D TEMPLATE IN 2ND ROW RIGHT SEAT



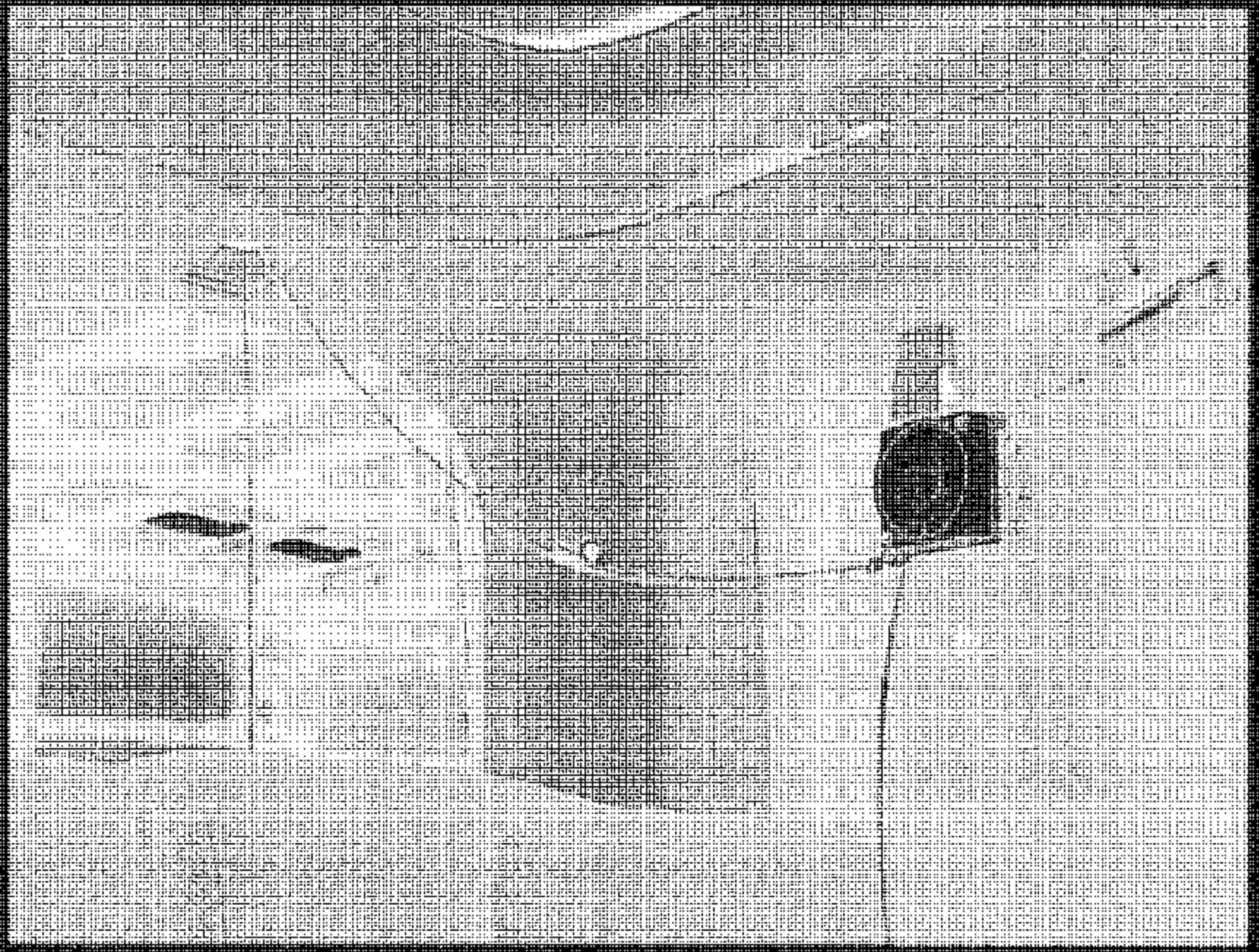
2004 HONDA ELEMENT
NHTSA NO. C45300
FMVSS NO. 225

FIGURE 5.18
VIEW OF 2D TEMPLATE IN 2ND ROW RIGHT SEAT



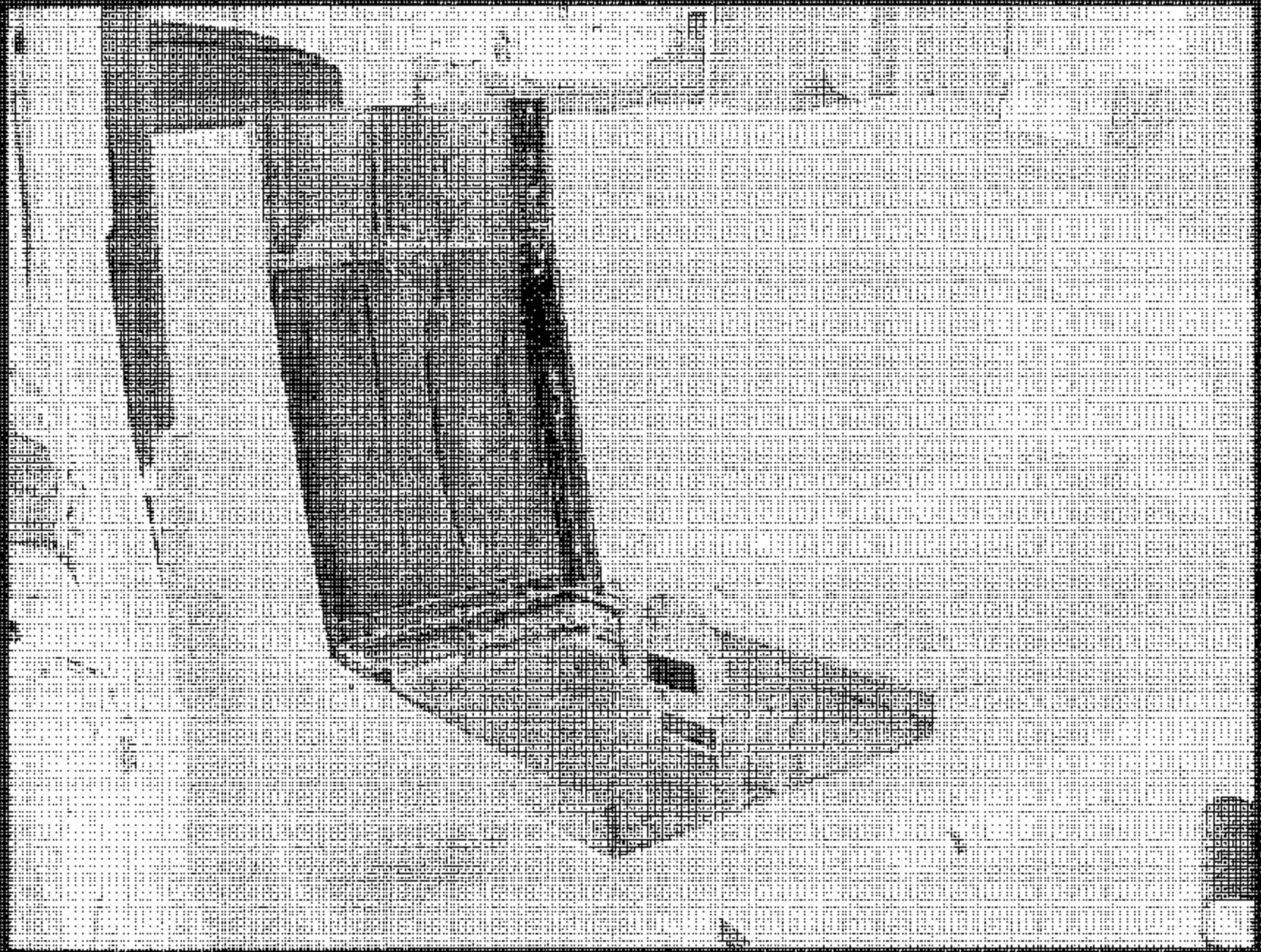
2004 HONDA ELEMENT
NHTSA NO. C45300
FMVSS NO. 228

FIGURE 5.19
VIEW OF 2D TEMPLATE IN 2ND ROW LEFT SEAT



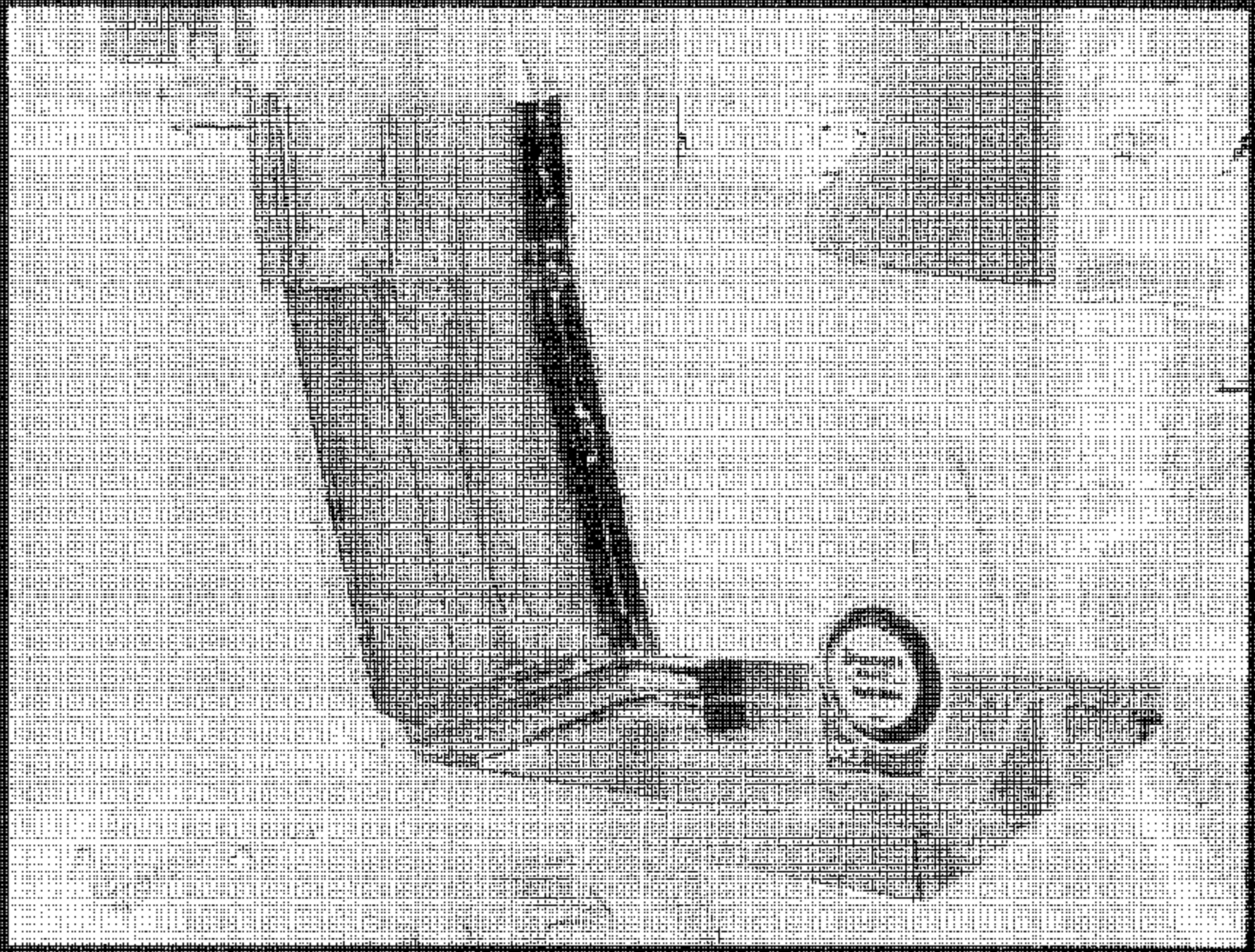
2004 HONDA ELEMENT
NHTSA NO. C45300
FMVSS NO. 226

FIGURE 5.20
VIEW OF 2D TEMPLATE IN 2ND ROW LEFT SEAT



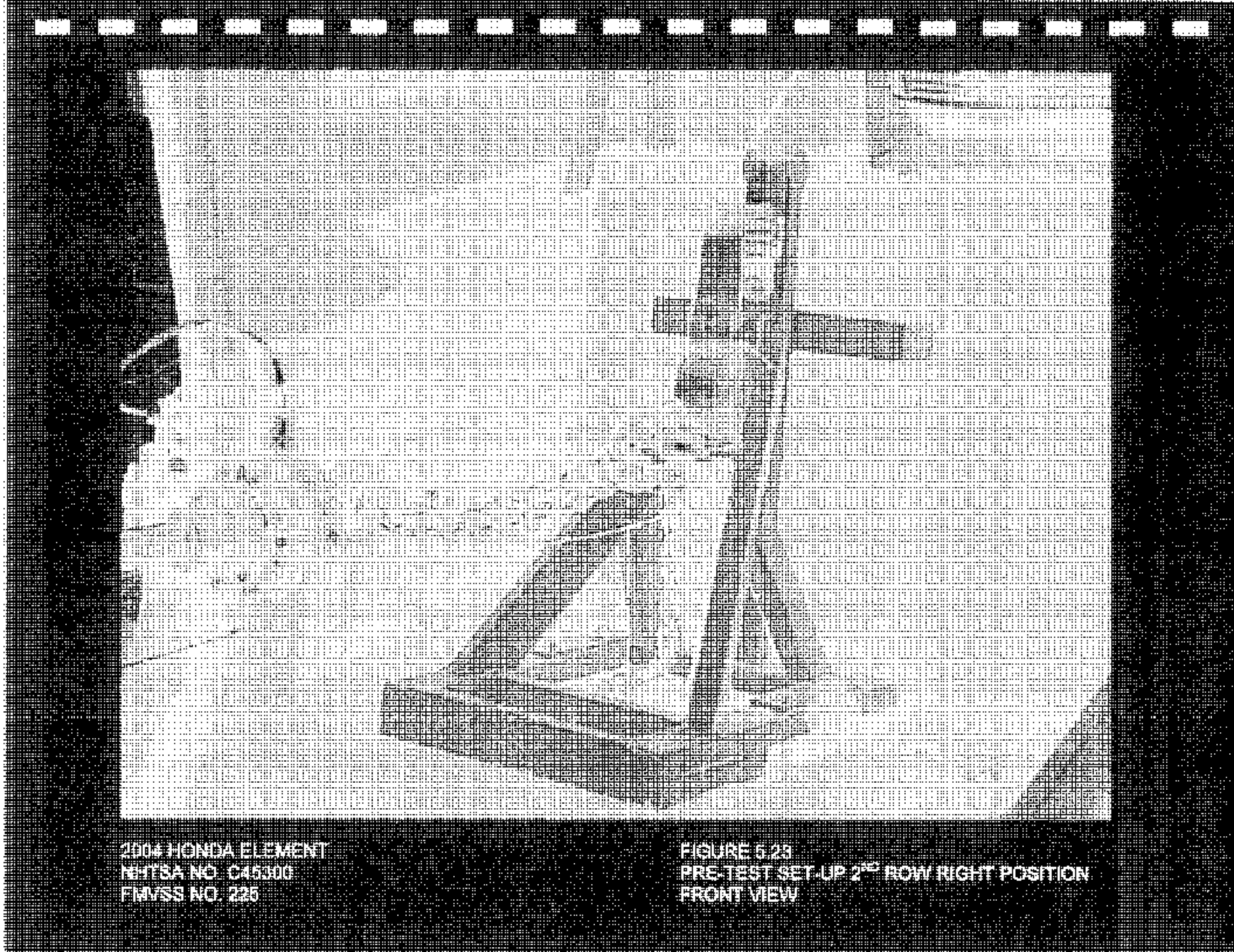
2004 HONDA ELEMENT
NHTSA NO. C45300
FMVSS NO. 225

FIGURE 5.21
VIEW OF CRF IN 2ND ROW RIGHT SEAT



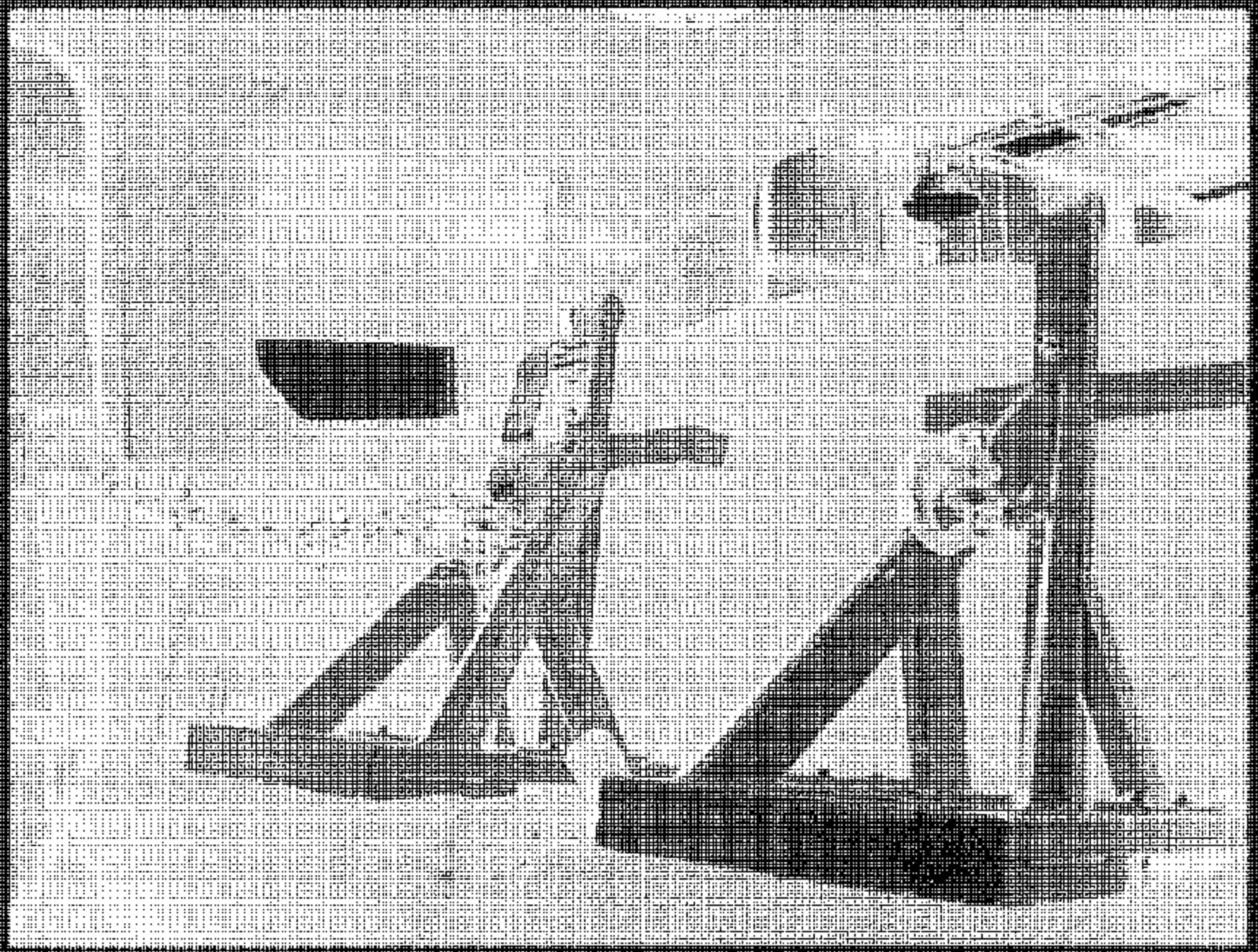
2004 HONDA ELEMENT
NHTSA NO. C45300
FMVSS NO. 225

FIGURE 5.22
VIEW OF CRF IN 2ND ROW LEFT SEAT



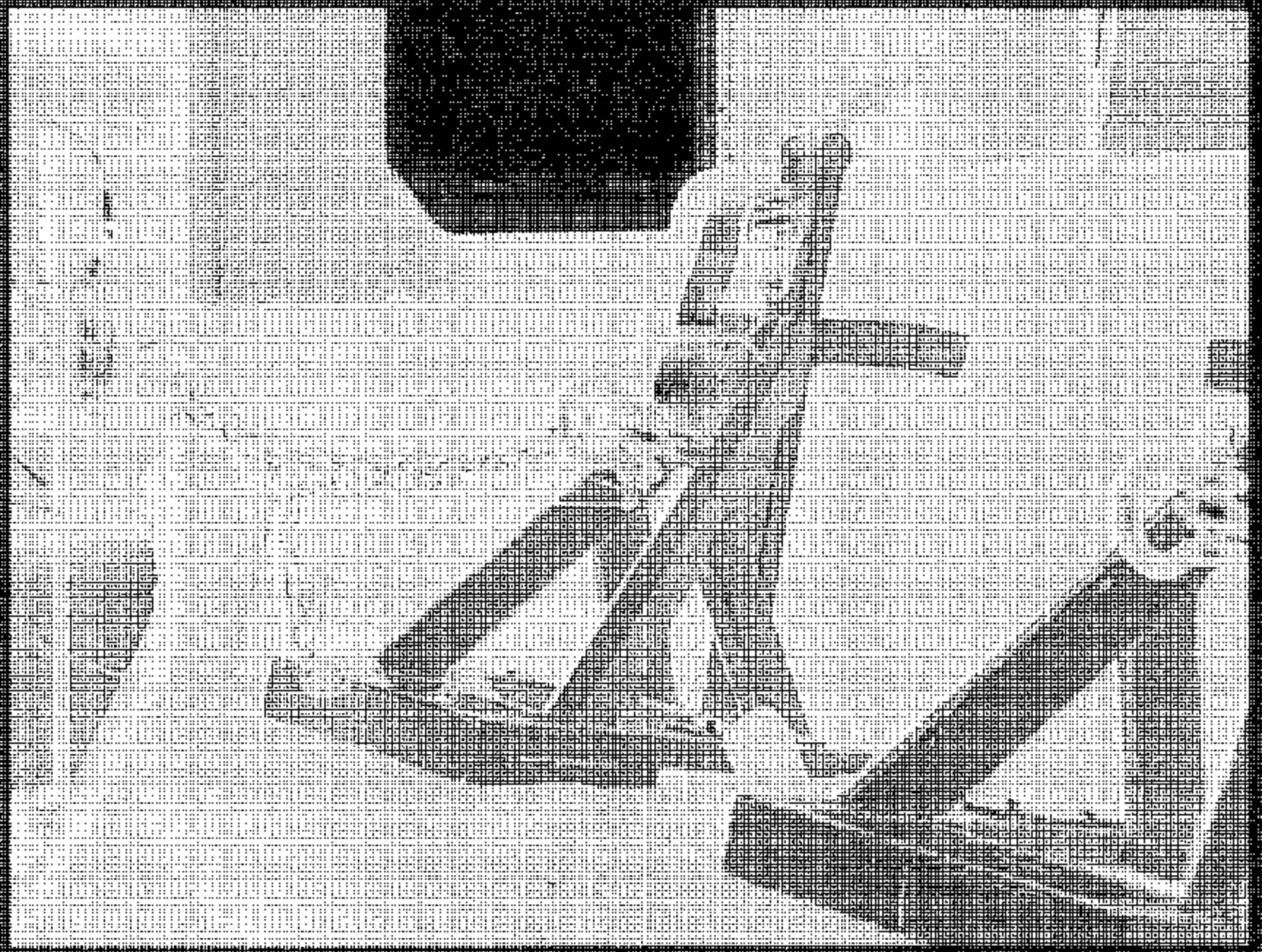
2004 HONDA ELEMENT
NHTSA NO. C45300
FMVSS NO. 225

FIGURE 6.23
PRE-TEST SET-UP 2ND ROW RIGHT POSITION
FRONT VIEW



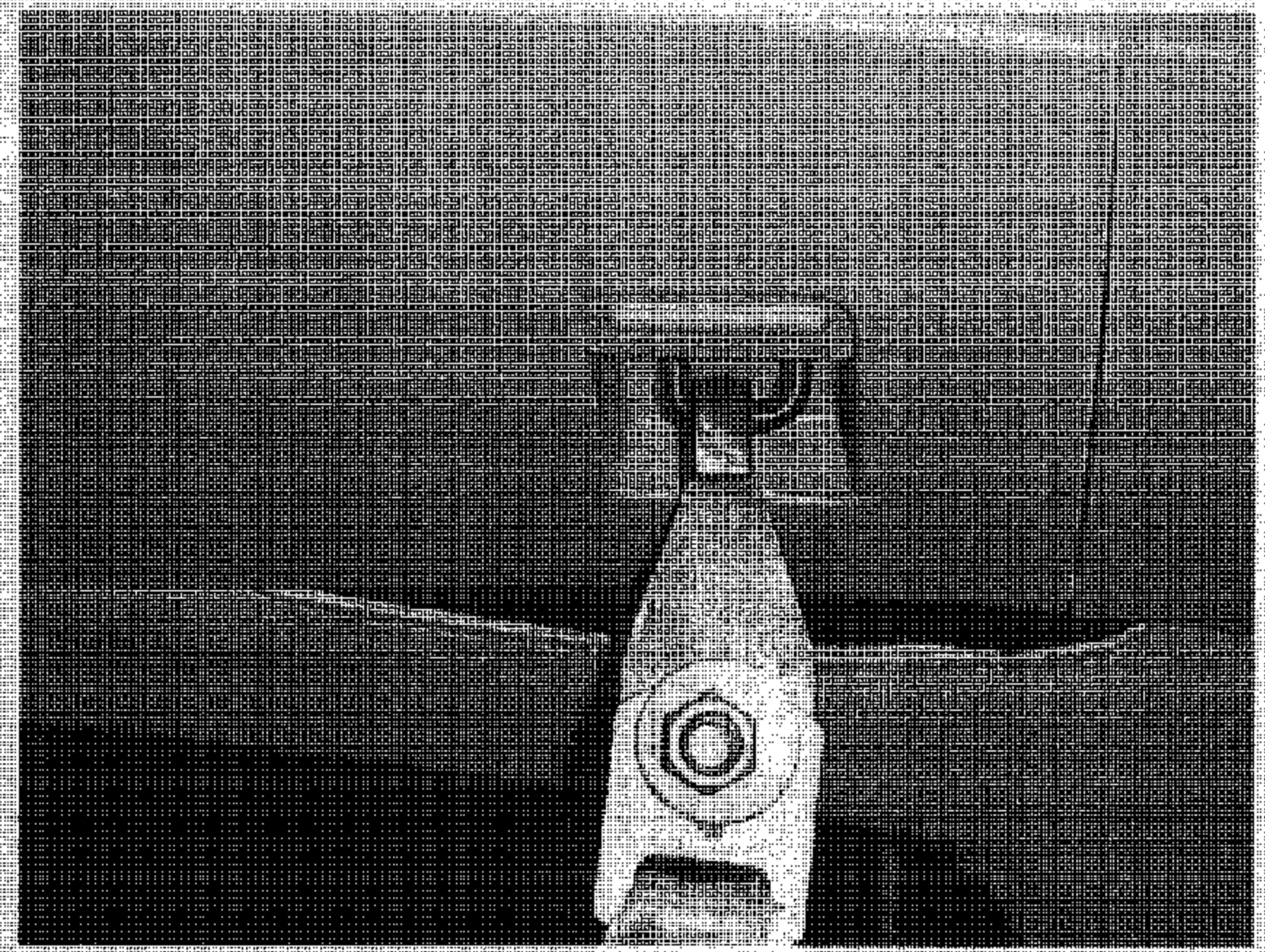
2004 HONDA ELEMENT
NHTSA NO. C45306
FMVSS NO. 225

FIGURE 5.24
PRE-TEST SET-UP 2ND ROW RIGHT POSITION
SIDE VIEW



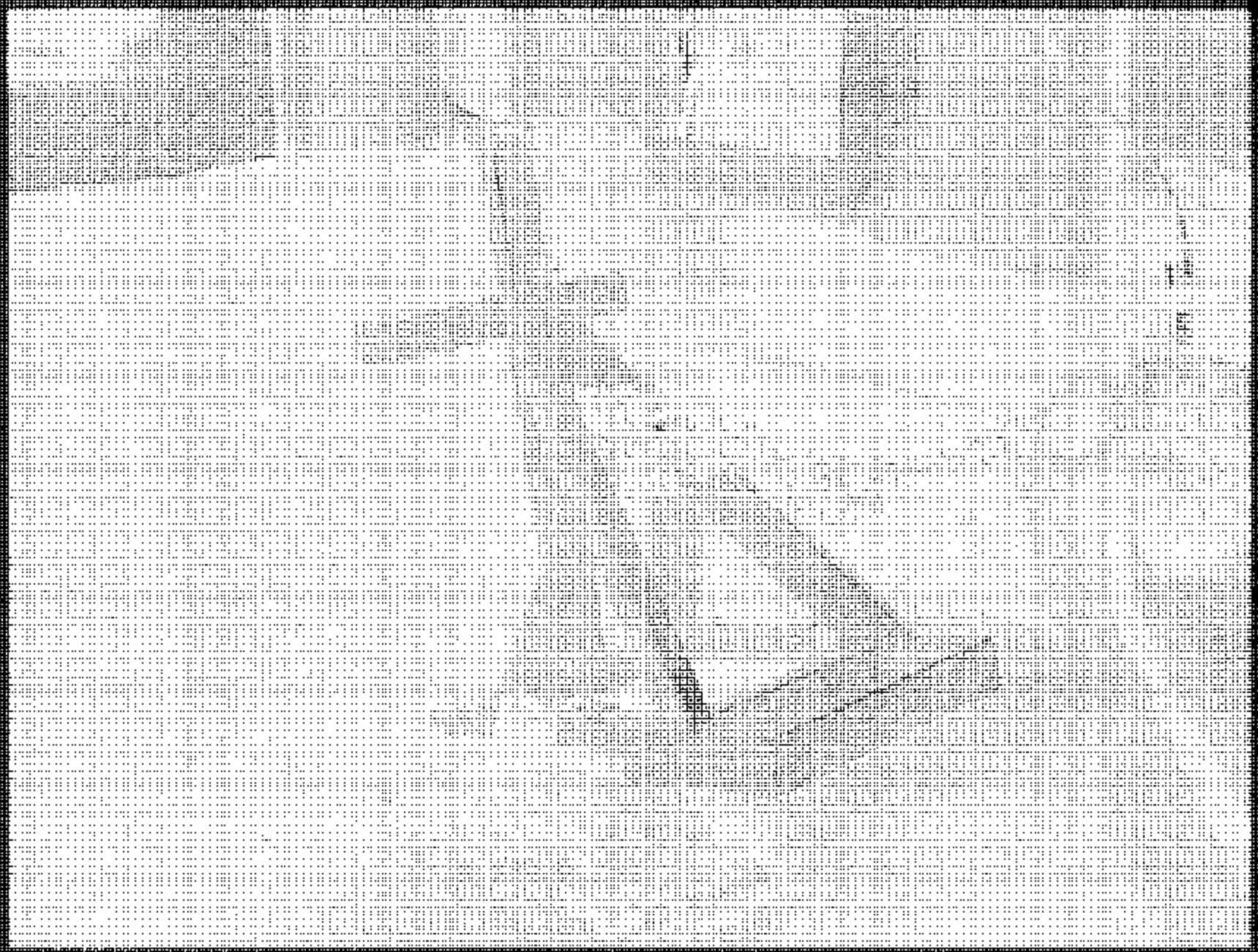
2004 HONDA ELEMENT
NHTSA NO. C46300
FMVSS NO. 226

FIGURE 5.25
POST TEST 2ND ROW RIGHT POSITION



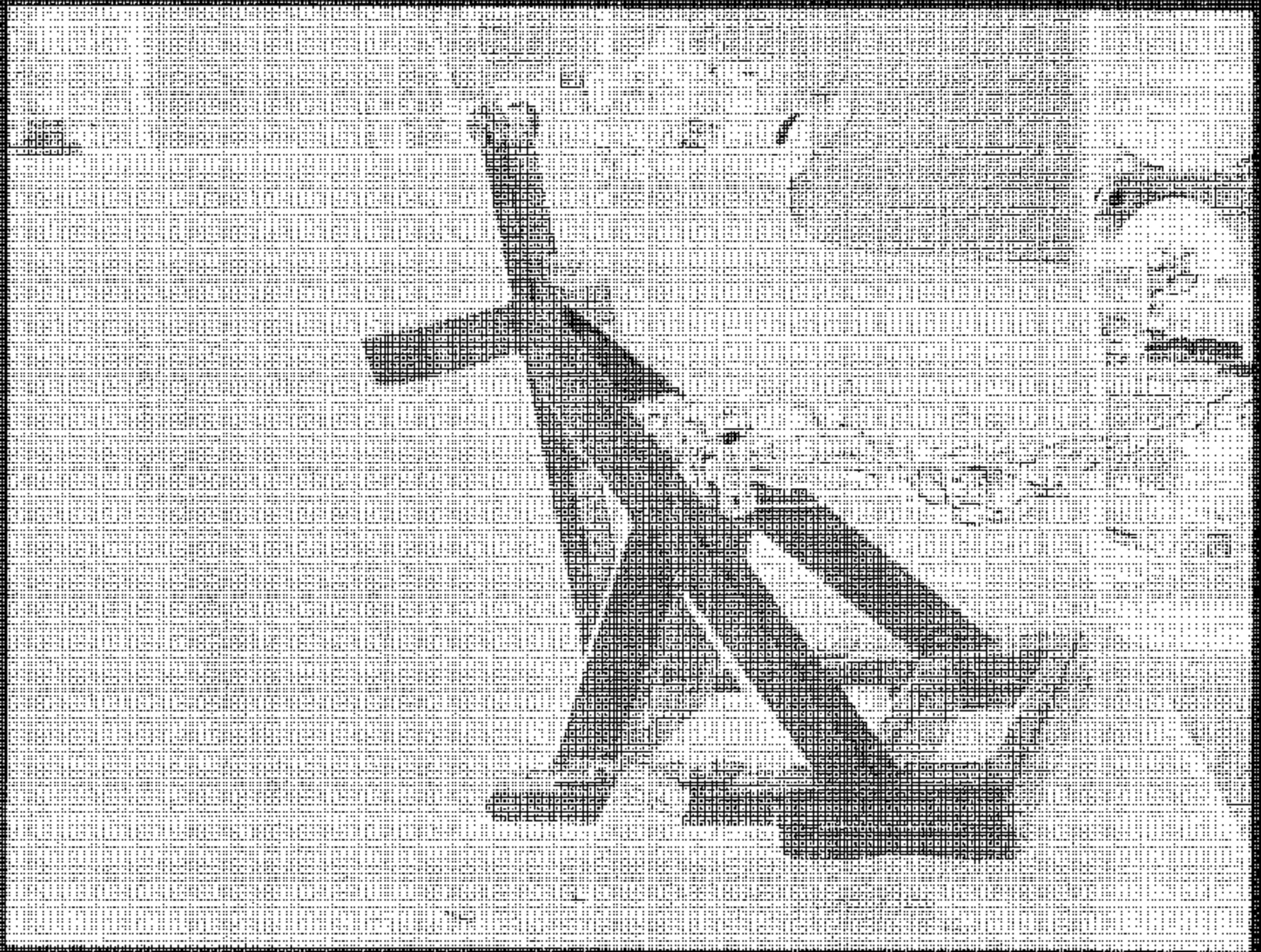
2004 HONDA ELEMENT
NHTSA NO. C45300
FMVSS NO. 225

FIGURE 5.28
POST TEST 2ND ROW RIGHT TOP TETHER ANCHOR



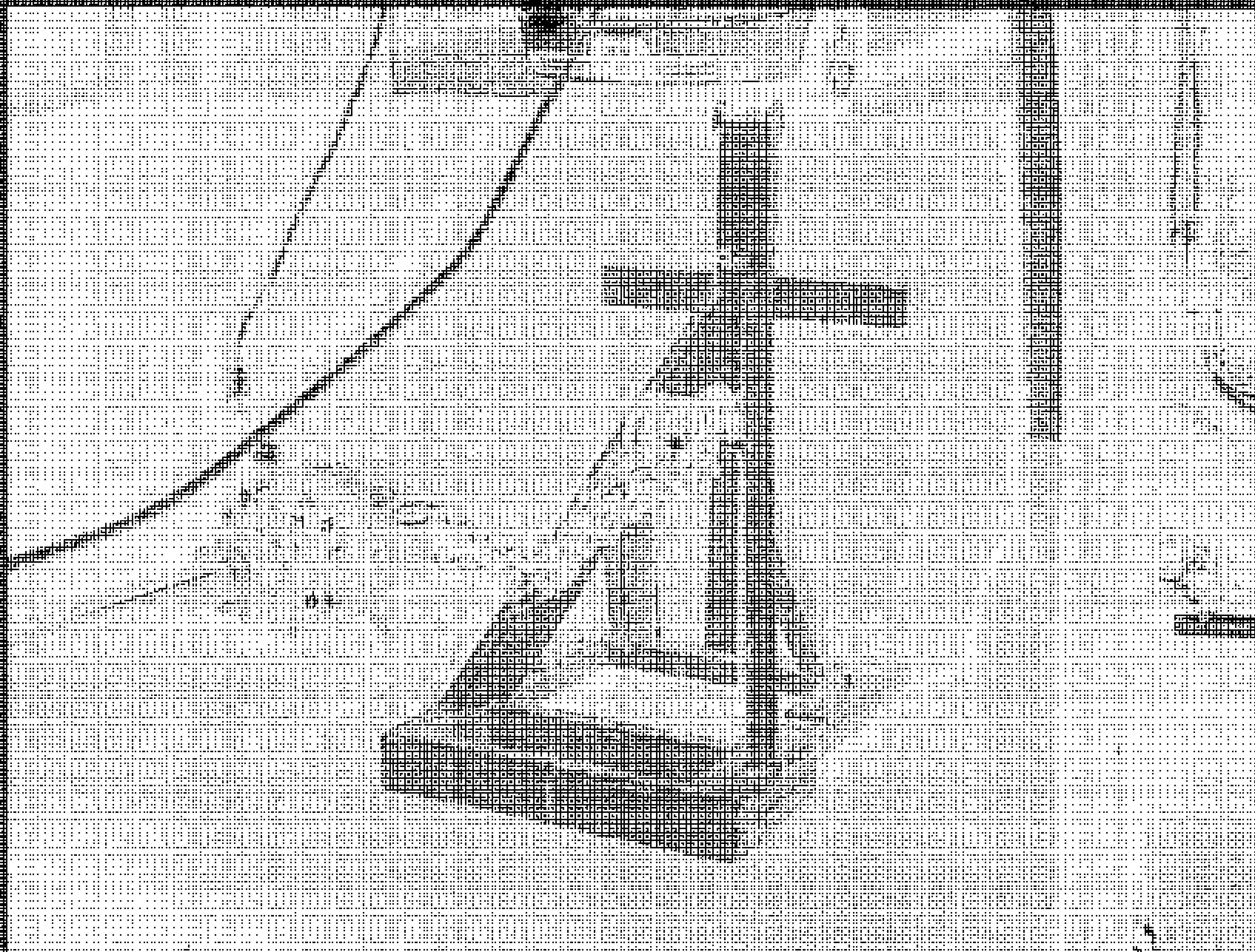
2004 HONDA ELEMENT
NHTSA NO. C45300
FMVSS NO. 225

FIGURE 5.27
PRE-TEST SET-UP 2ND ROW LEFT POSITION
FRONT VIEW



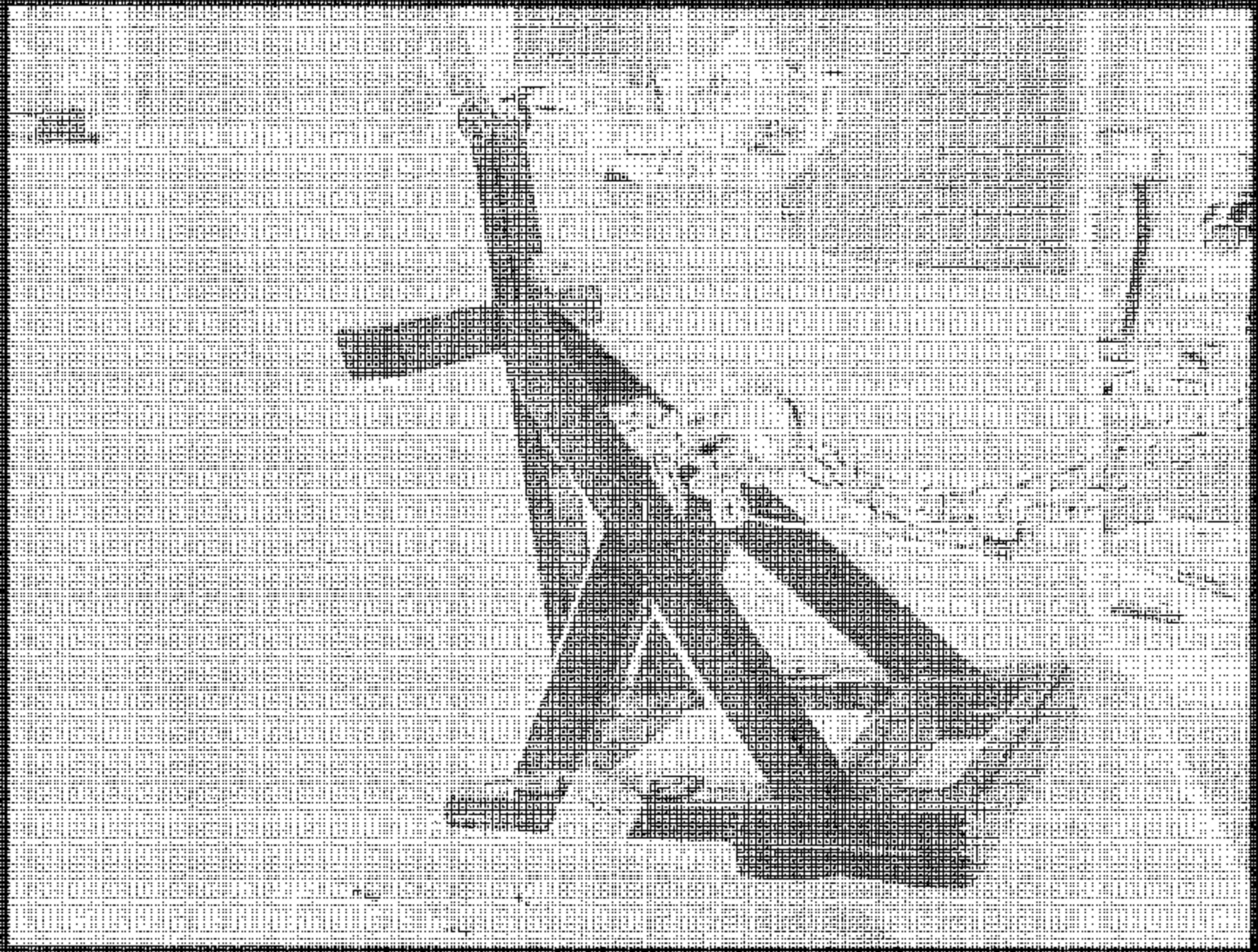
2004 HONDA ELEMENT
NHTSA NO. C48300
FMVSS NO. 225

FIGURE 5.28
PRE-TEST SET-UP FOR 2ND ROW LEFT POSITION



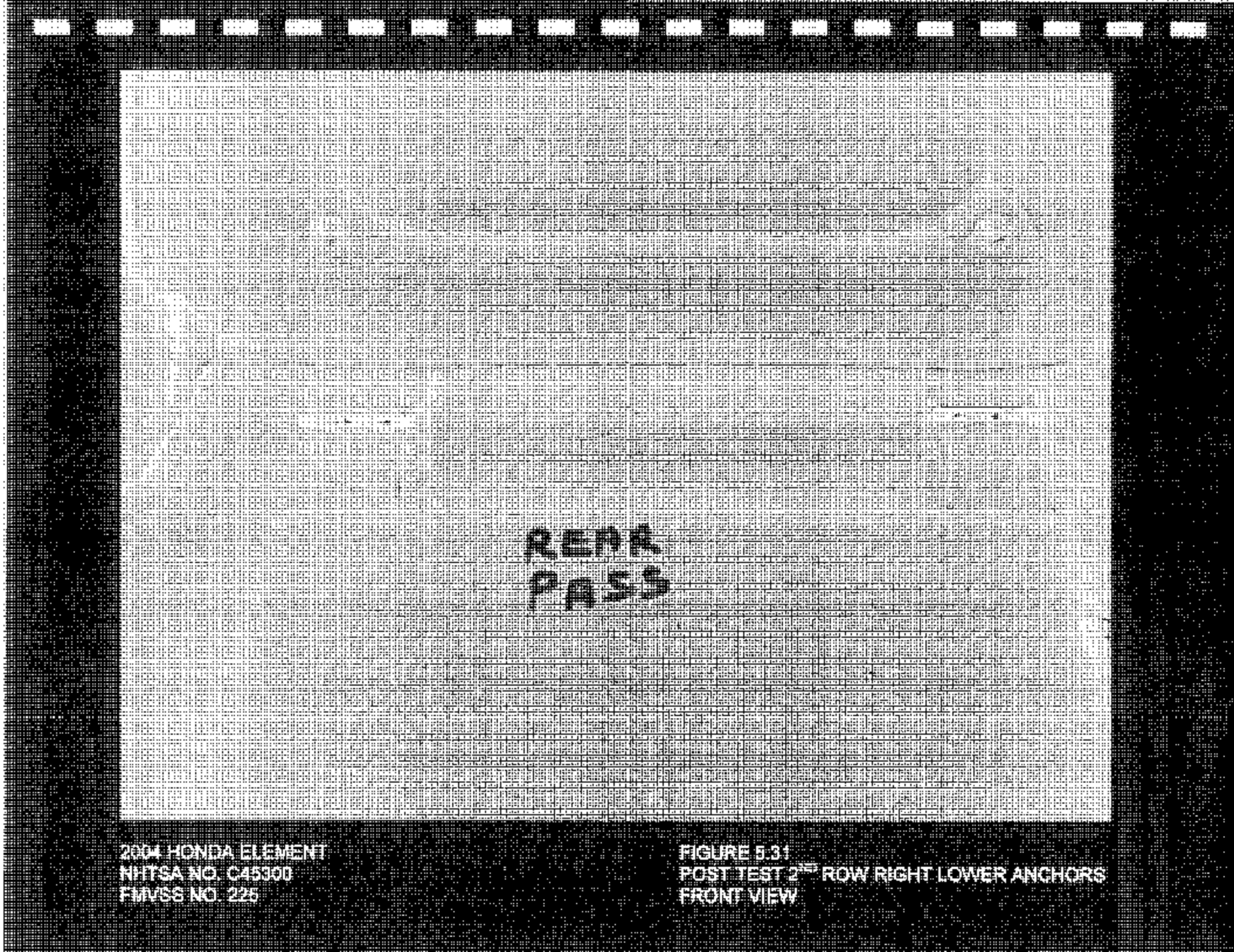
2004 HONDA ELEMENT
NHTSA NO. C45300
FMVSS NO. 226

FIGURE 5.29
POST TEST 2^{ND} ROW LEFT POSITION FRONT VIEW



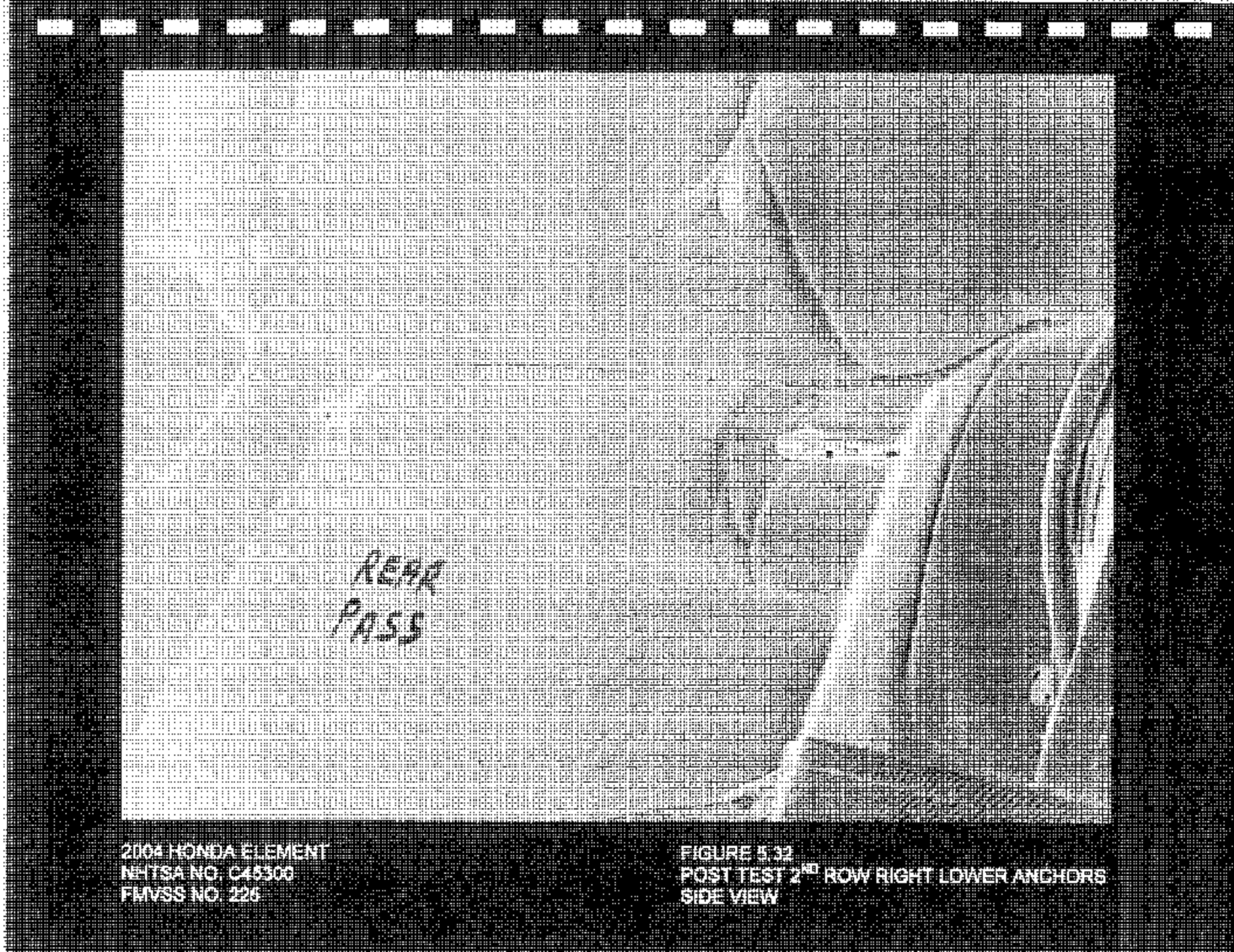
2004 HONDA ELEMENT
NHTSA NO. C46306
FMVSS NO. 226

FIGURE 5.30
POST TEST 2ND ROW LEFT POSITION SIDE VIEW



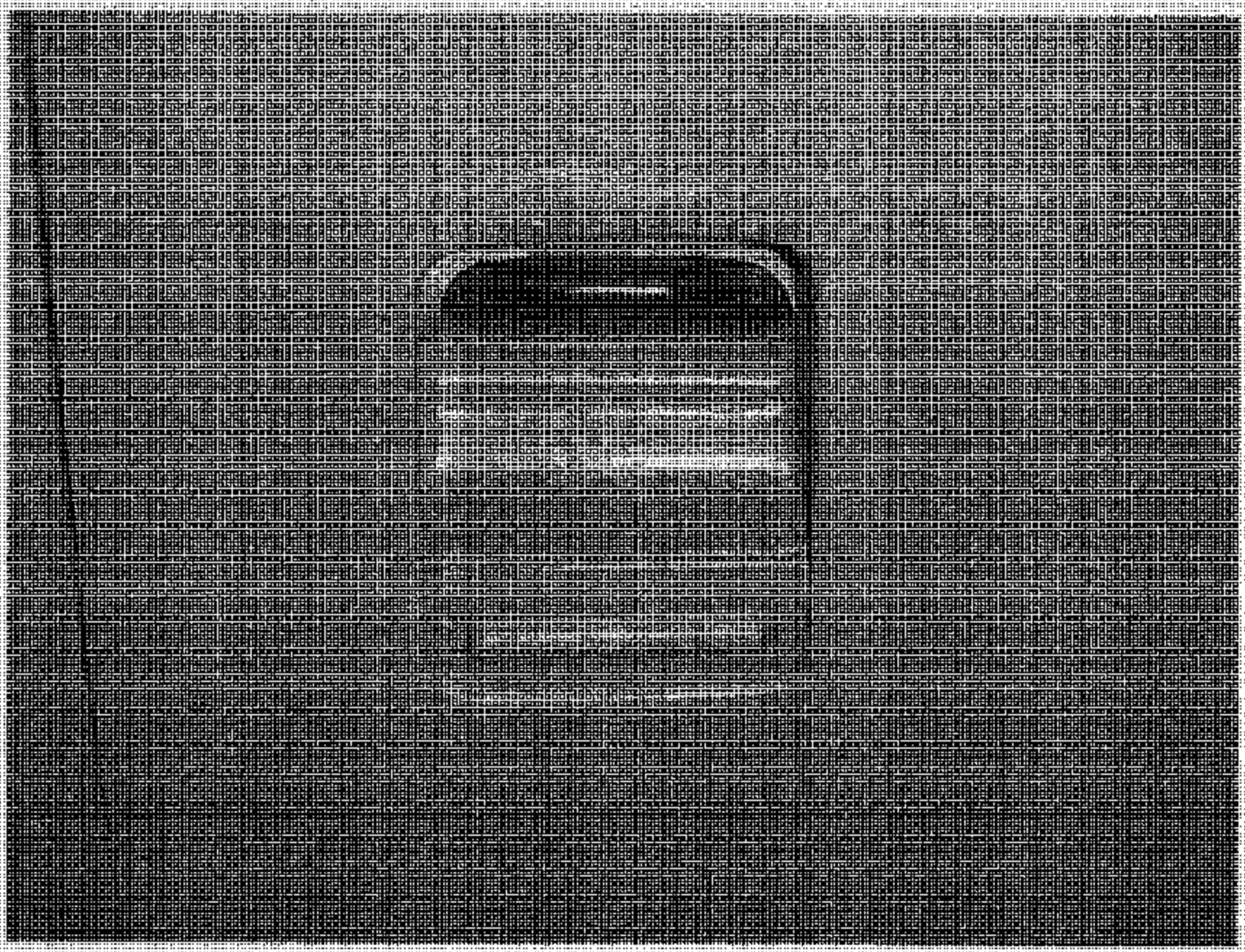
2004 HONDA ELEMENT
NHTSA NO. C45300
FMVSS NO. 225

FIGURE 5.31
POST TEST 2ND ROW RIGHT LOWER ANCHORS
FRONT VIEW



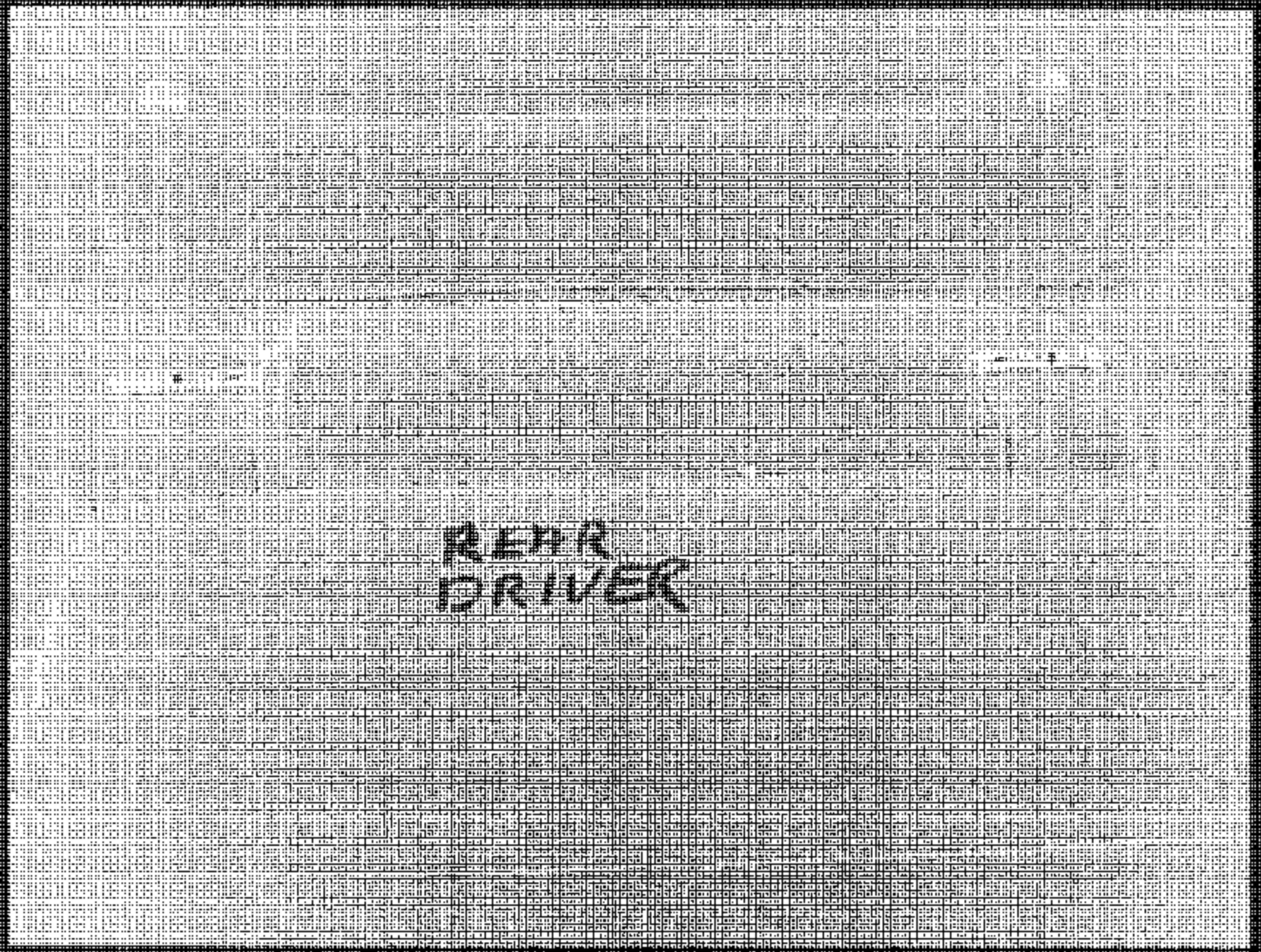
2004 HONDA ELEMENT
NHTSA NO. C45300
FMVSS NO. 225

FIGURE 5-32
POST TEST 2ND ROW RIGHT LOWER ANCHORS
SIDE VIEW



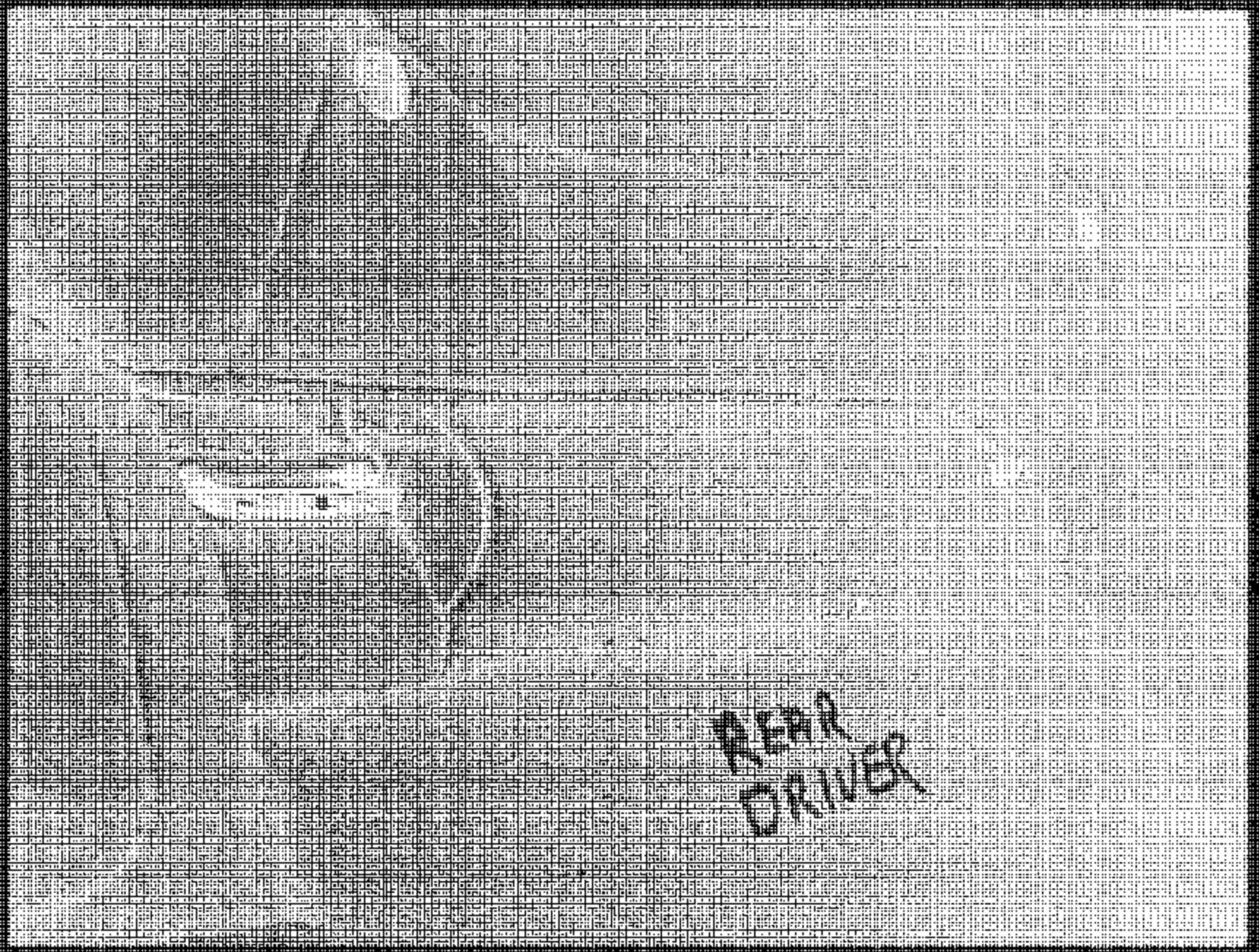
2004 HONDA ELEMENT
NHTSA NO. C45300
FMVSS NO. 226

FIGURE 6.33
POST TEST 2ND ROW RIGHT TOP TETHER ANCHOR



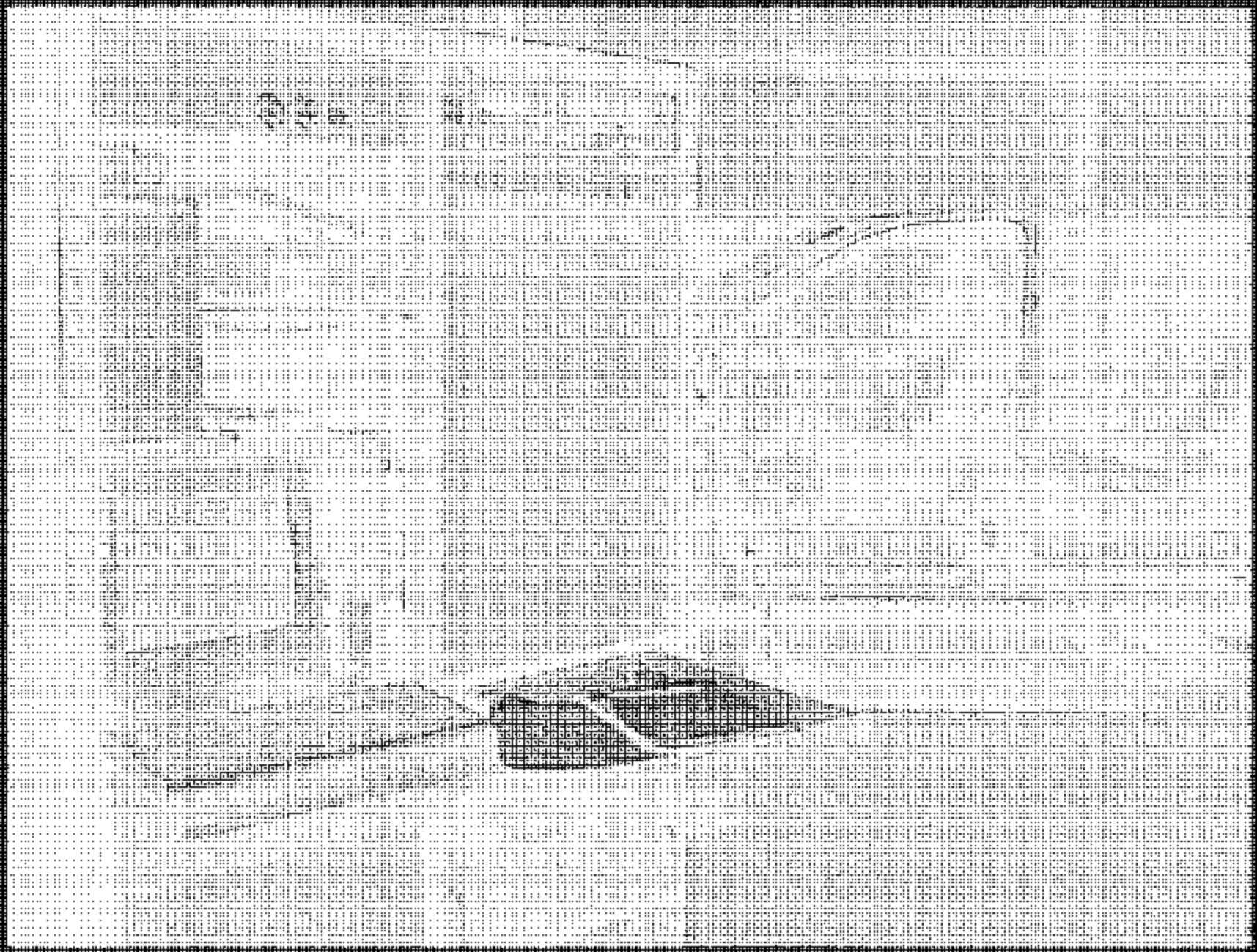
2004 HONDA ELEMENT
NHTSA NO. C45300
FMVSS NO. 225

FIGURE 8.34
POST TEST 2ND ROW LEFT LOWER ANCHORS
FRONT VIEW



2004 HONDA ELEMENT
NHTSA NO. C45300
FMVSS NO. 225

FIGURE 5-35
POST TEST 2ND ROW LEFT LOWER ANCHORS
SIDE VIEW

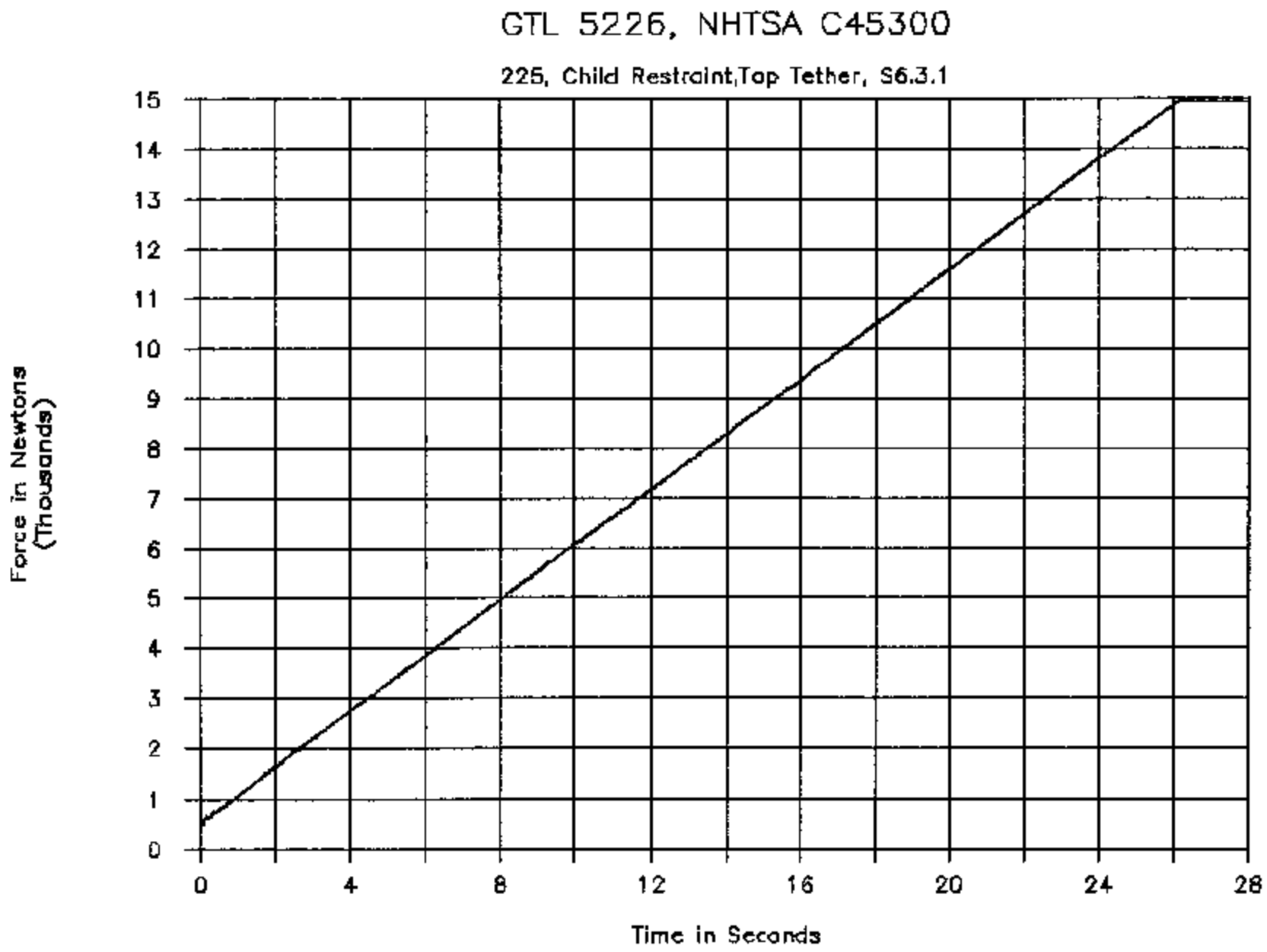


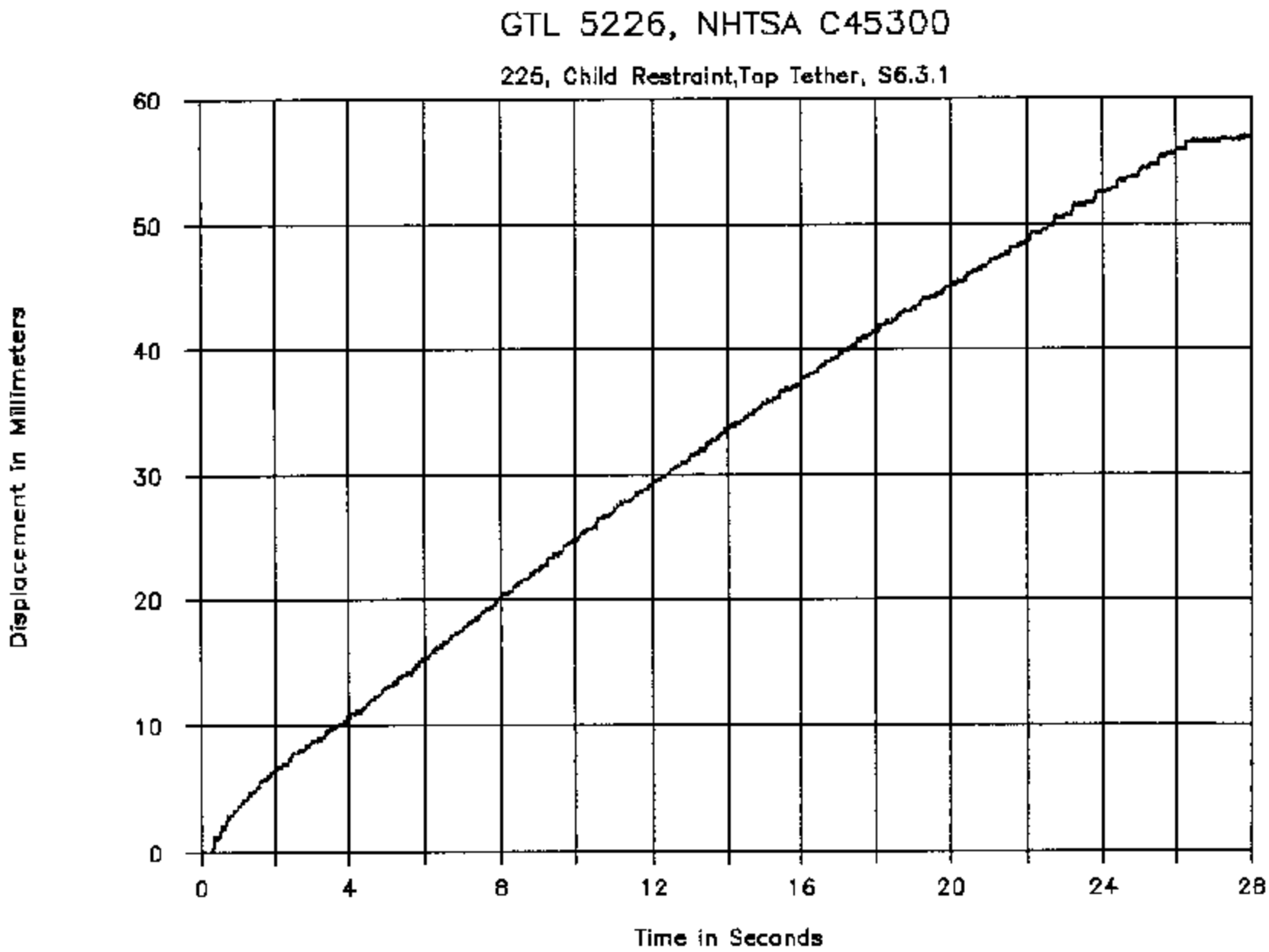
2004 HONDA ELEMENT
NHTSA NO. C45300
FMVSS NO. 225

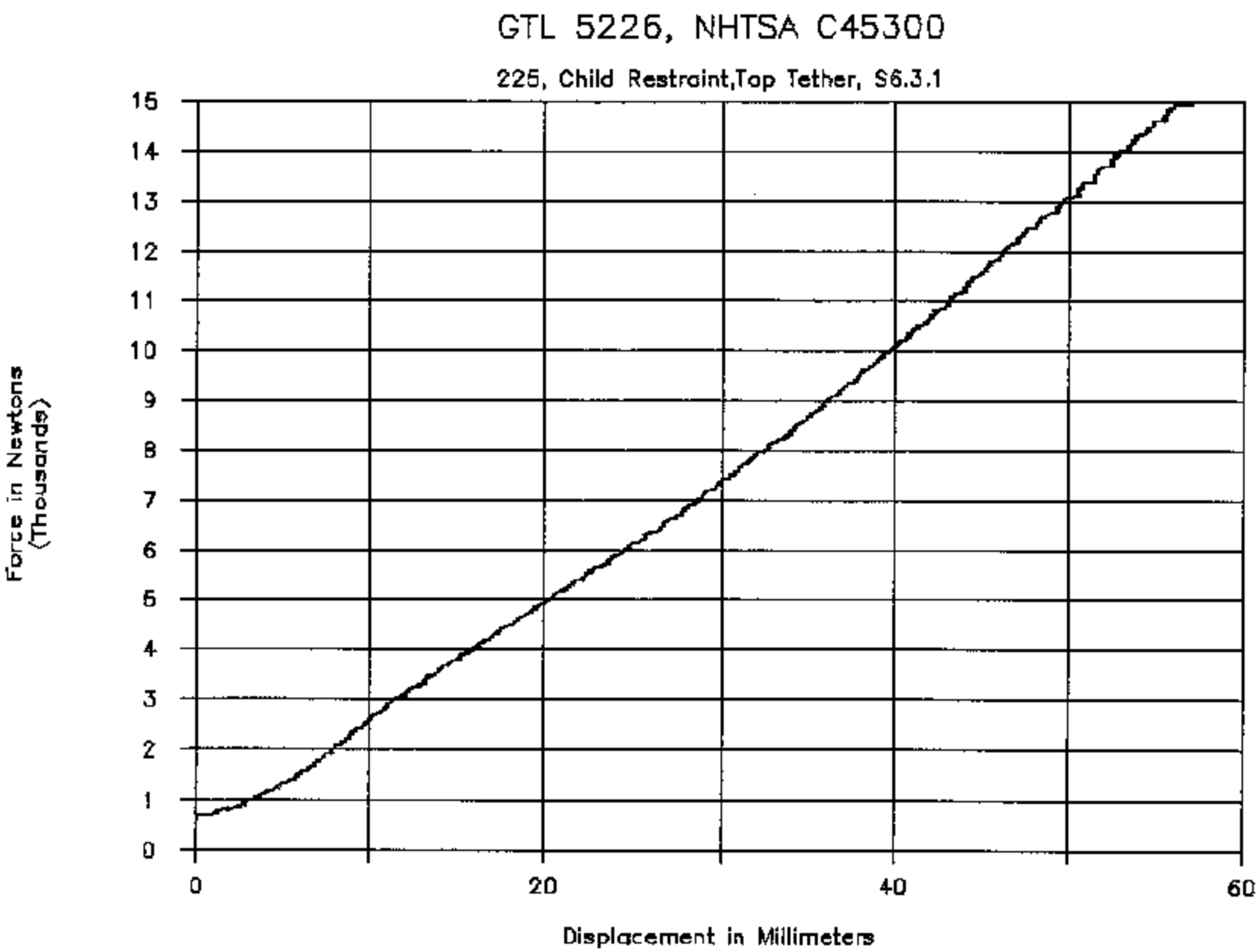
FIGURE 5-36
LOAD SYSTEM CONTROL AND DATA
RECORDING DEVICE IN POSITION

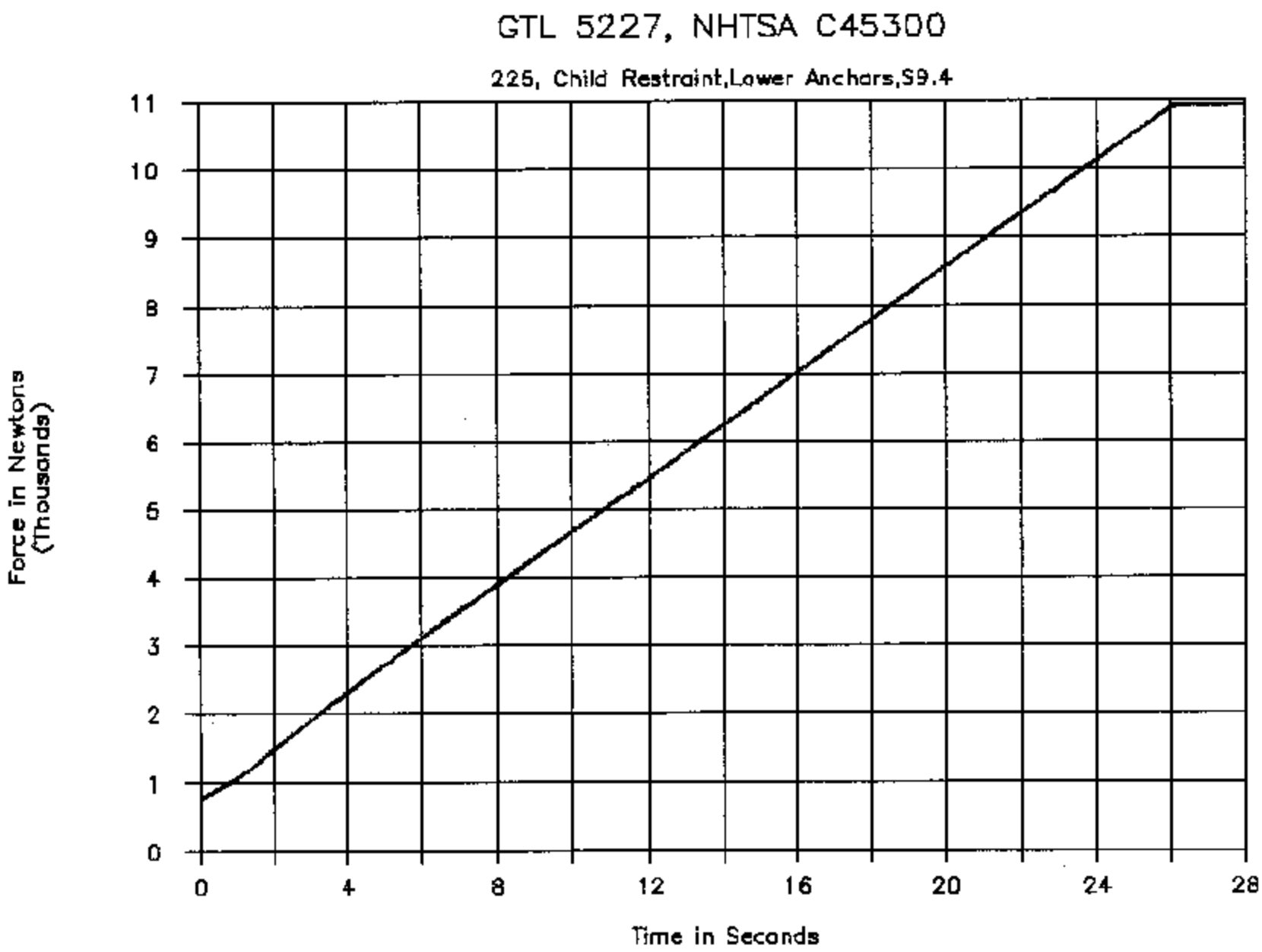
SECTION 6

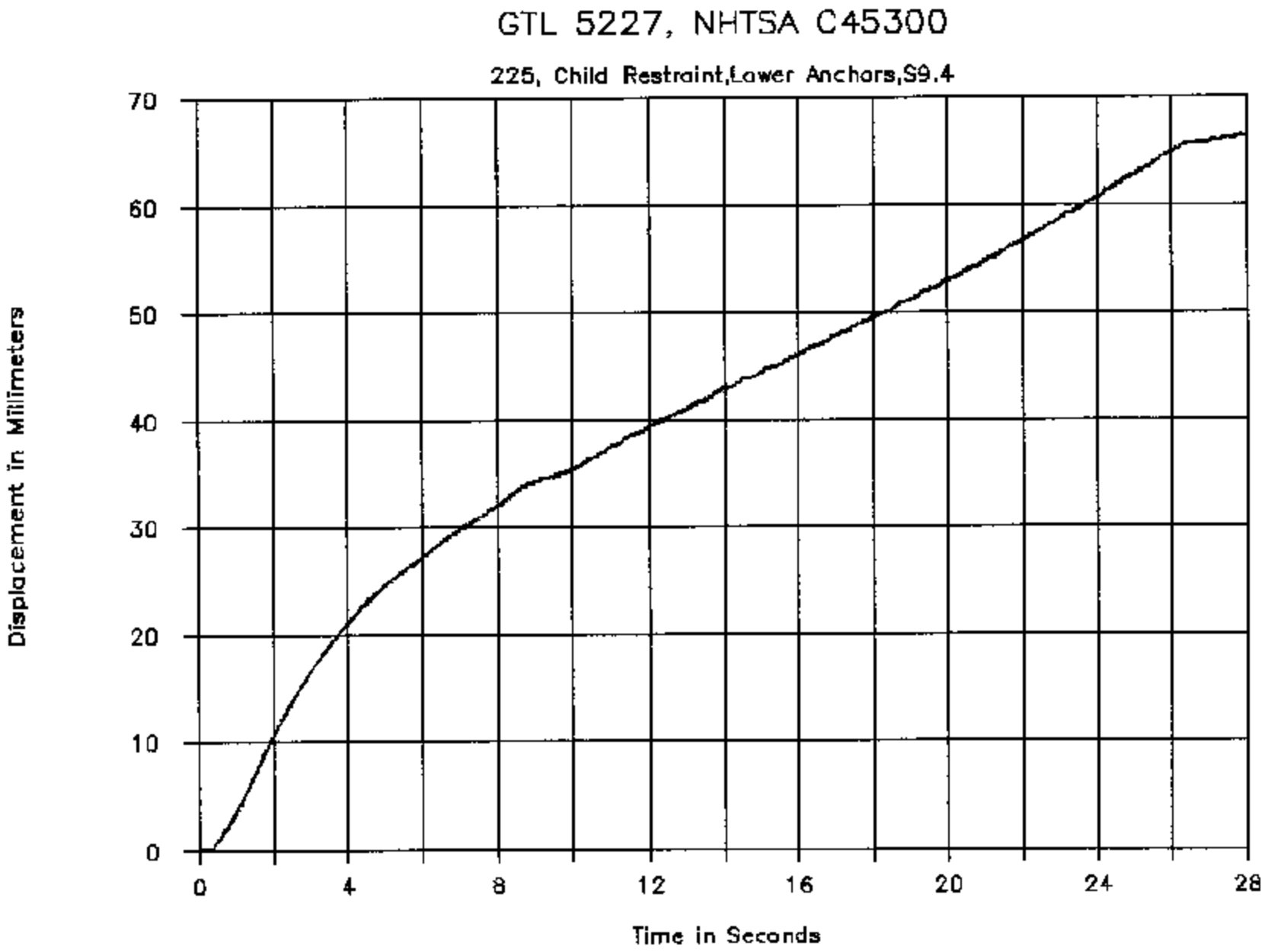
PLOTS

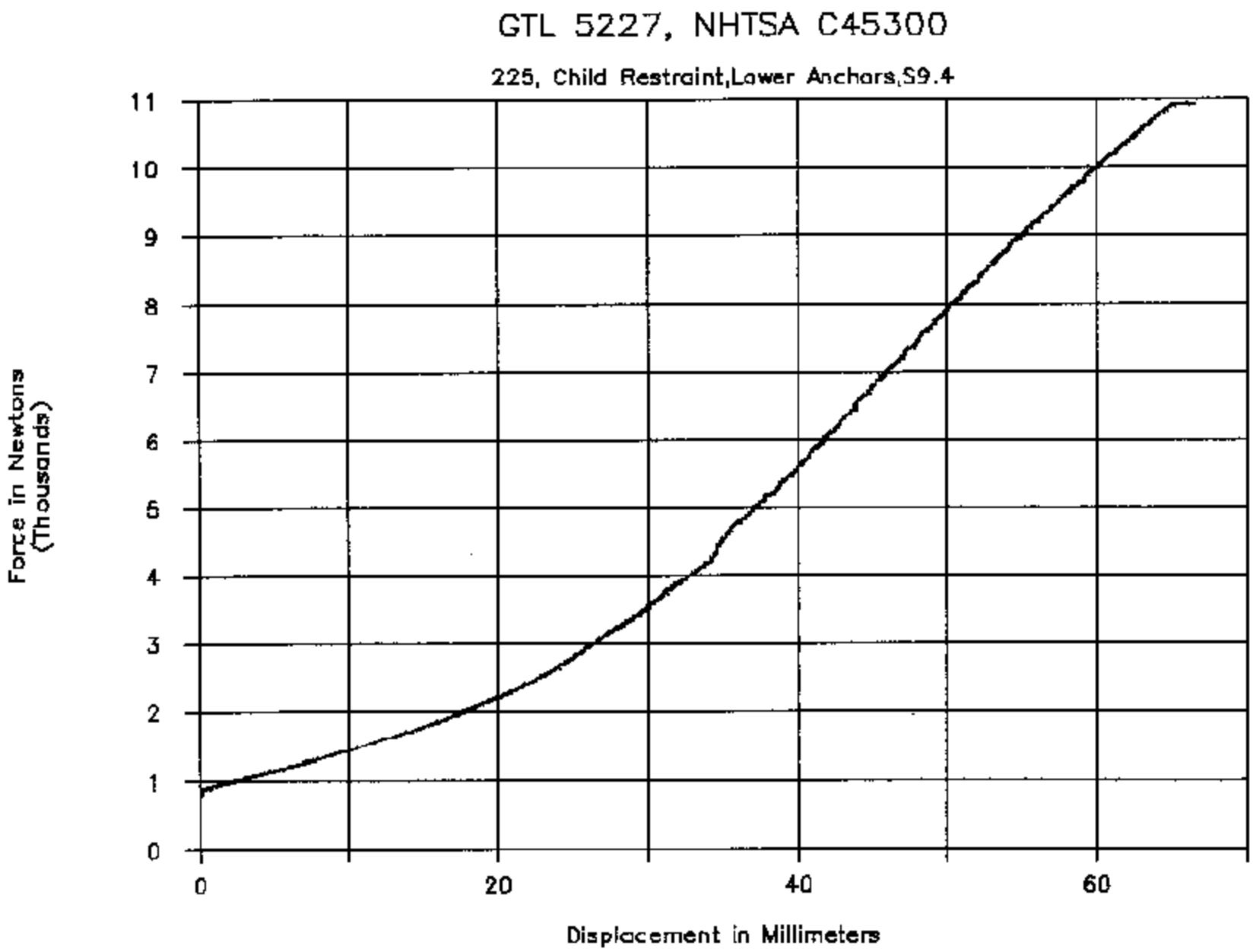

GTL 5226, NHTSA C45300
225, Child Restraint,Top Tether, S6.3.1
Force in Newtons (Thousands)
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
0
4
8
12
16
20
24
28
Time in Seconds


GTL 5226, NHTSA C45300
225, Child Restraint,Top Tether, S6.3.1
Displacement in Millimeters
60
50
40
30
20
10
0
0
4
8
12
16
20
24
28
Time in Seconds


GTL 5226, NHTSA C45300
225, Child Restraint,Top Tether, S6.3.1
Force in Newtons
(Thousands)
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
0
20
40
60
Displacement in Millimeters


GTL 5227, NHTSA C45300
225, Child Restraint,Lower Anchors,S9.4
Force in Newtons (Thousands)
11
10
9
8
7
6
5
4
3
2
1
0
0
4
8
12
16
20
24
28
Time in Seconds

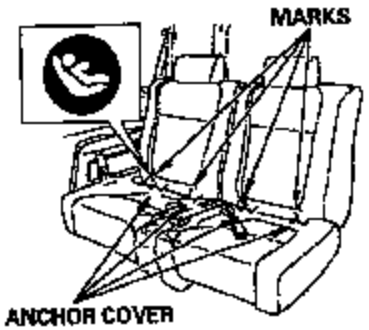

GTL 5227, NHTSA C45300
225, Child Restraint,Lower Anchors,S9.4
Displacement in Millimeters
70
60
50
40
30
20
10
0
0
4
8
12
16
20
24
28
Time in Seconds


GTL 5227, NHTSA C45300
225, Child Restraint,Lower Anchors,S9.4
Force in Newtons (Thousands)
11
10
9
8
7
6
5
4
3
2
1
0
0
20
40
60
Displacement in Millimeters

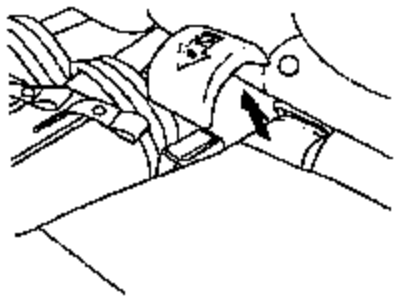
APPENDIX A

OWNER'S MANUAL CHILD RESTRAINT INFORMATION

Installing a Child Seat Using LATCH



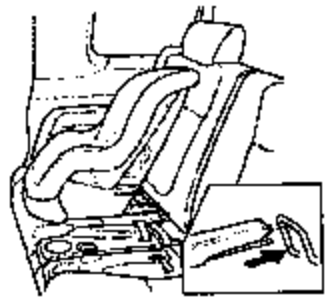
Your vehicle is equipped with LATCH (Lower Anchors and Tethers for Children) at the rear seats. The lower anchors are located between the seat-back and seat bottom, and are to be used only with a child seat designed for use with LATCH.
The location of each lower anchor is marked with a small button above the point.



To install a LATCH-compatible child seat:

1. Remove both anchor covers by pulling forward.

2. Make sure there are no objects near the anchors that could prevent a secure connection between the child seat and anchors.

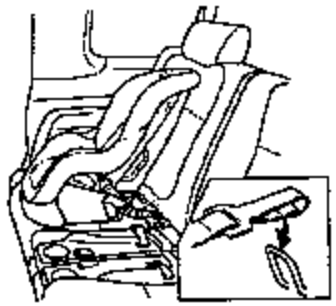


Rigid type

3. Place the child seat on the vehicle seat, and attach the seat to the lower anchors according to the child seat maker's instructions.

   Some LATCH-compatible seats have a rigid-type connection as shown above.

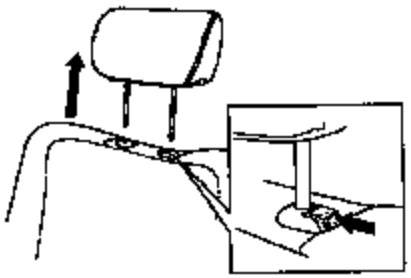
CONTINUED



Flexible type

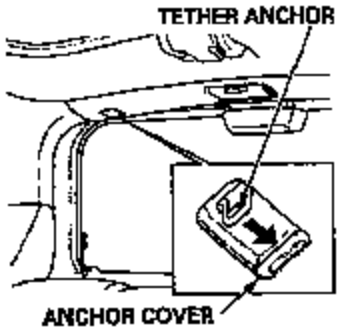
Other LATCH-compatible seats have a flexible-type connection as shown above.

4. Whatever type you have, follow the child seat maker's instructions for adjusting or tightening the fit.

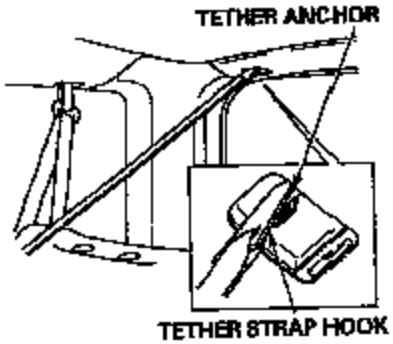


5. Remove the head restraint (see page 75). Make sure the removed head restraints are secured in the cargo area, and reinstalled when the child seat is removed.

6. Route the tether strap over the top of the seat-back, making sure the strap is not twisted.



7. Slide the anchor cover open.



8. Attach the tether strap hook to the tether anchor, then tighten the strap as instructed by the child seat maker.

9. Push and pull the child seat forward and from side-to-side to verify that it is secure.

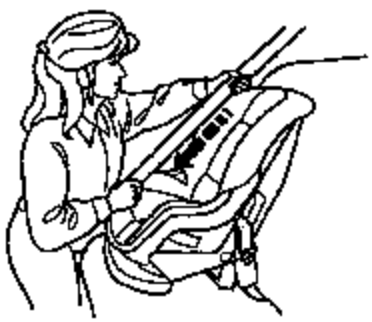
Installing a Child Seat with a Lap/Shoulder Belt

When not using the LATCH system, all child seats must be secured to the vehicle with the lap part of a lap/shoulder belt.

In addition, the lap/shoulder belts in the back seating positions, and in the front passenger seat, have a locking mechanism that must be activated to secure a child seat.

1. With the child seat in the desired seating position, route the belt through the child seat according to the seat maker's instructions, then insert the latch plate into the buckle.

CONTINUED

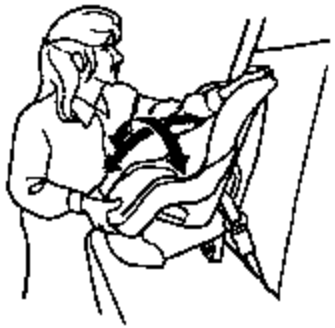


2. To activate the lockable retractor, slowly pull the shoulder part of the belt all the way out until it stops, then let the belt feed back into the retractor.

3. After the belt has retracted, tug on it. If the belt is locked, you will not be able to pull it out. If you can pull the belt out, it is not locked, and you will need to repeat these steps.

4. After confirming that the belt is locked, grab the shoulder part of the belt near the buckle and pull up to remove any slack from the lap part of the belt. Remember, if the lap part of the belt is not tight, the child seat will not be secure.

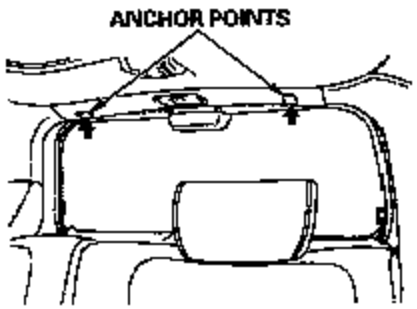
   To remove slack, it may help to put weight on the child seat, or push on the back of the seat while pulling up on the belt.



5. Push and pull the child seat forward and from side to side to verify that it is firmly secured. If the child seat is not secure, unlatch the belt, allow it to retract fully, then repeat these steps.

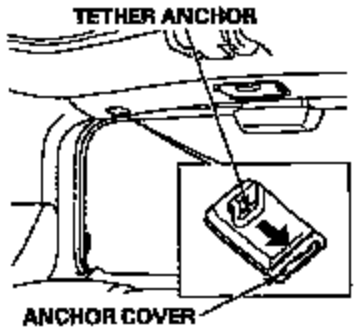
   To deactivate the locking mechanism and remove a child seat, unlatch the buckle, unroute the seat belt, and let the belt fully retract.

Installing a Child Seat with a Tether

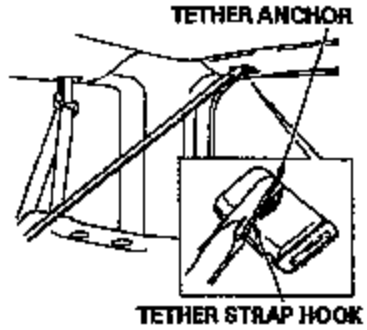


A child seat with a tether can be installed in either seating position in the back seat, using one of the anchorage points shown above.

Since a tether can provide additional security to the lap/shoulder belt installation, we recommend using a tether whenever one is required or available. (Tethers are required in Canada.)



1. After securing the child seat in the desired position (see page 41), remove the head restraint, then route the tether strap over the top of the seat-back.



2. Slide the anchor cover open, then attach the tether strap hook to the anchor, making sure the strap is not twisted.

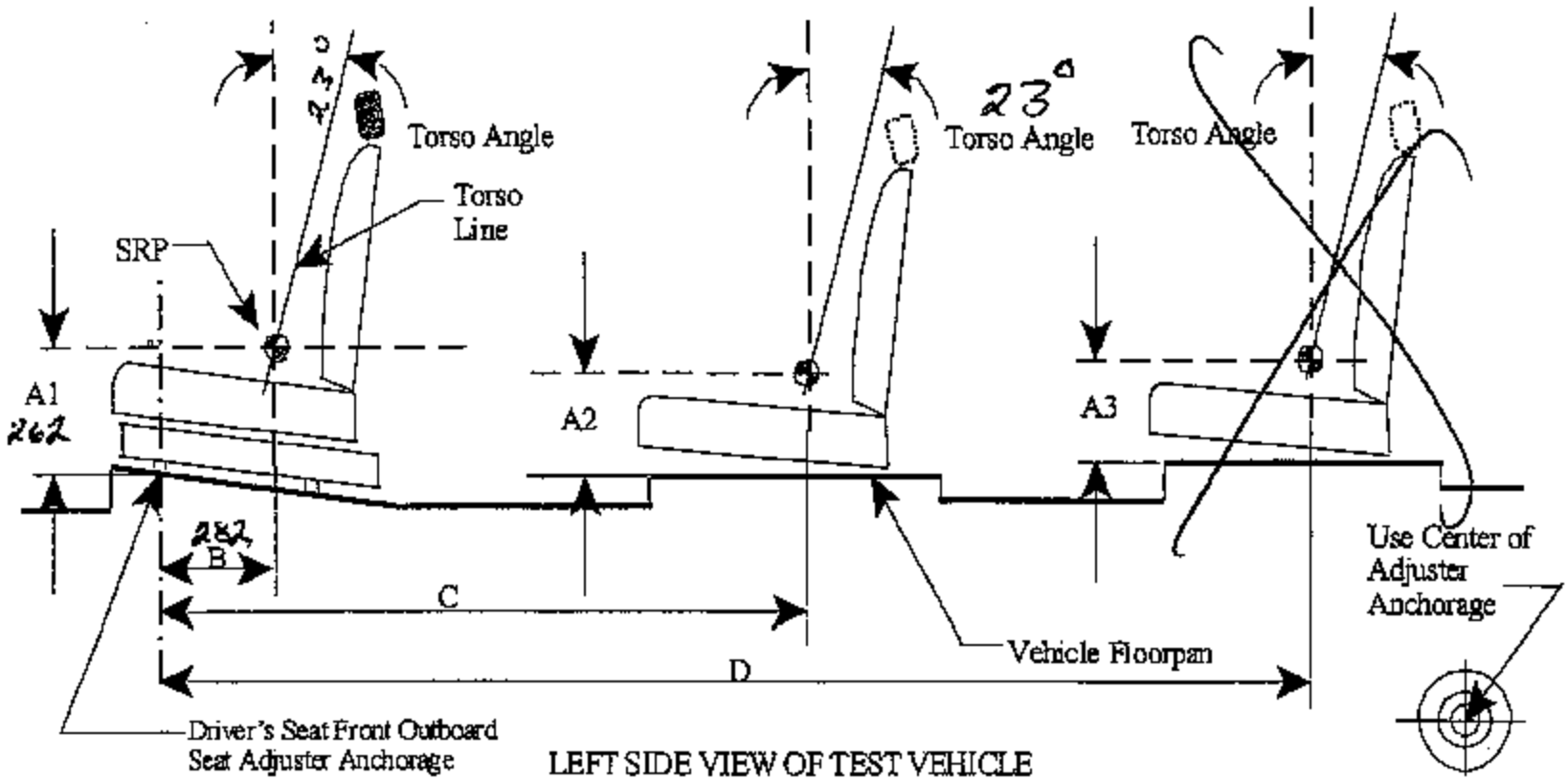
3. Tighten the strap according to the seat maker's instructions.

APPENDIX B

MANUFACTURER'S DATA

SEAT REFERENCE POINT (SRP) AND TORSO ANGLE DATA
FOR FMVSS 225
(All dimensions in mm[1])

Model Year: 2004 ; Make: HONDA ; Model: ELEMENT ; Body Style: 5 DOOR WAGON
Seat Style: Front row: BUCKET ; Second row: SPRIT BENCH(Contoured) ; Third row: N/A



LEFT SIDE VIEW OF TEST VEHICLE

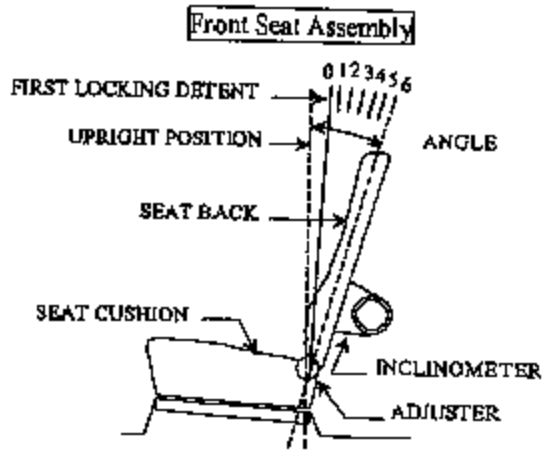
Table 1. Seating Positions[1] and Torso Angles

		Left (Driver Side)	Center (if any)	Right
A1		(Driver) 262	N/A	(Front Passenger) 262
A2 *1		321	N/A	321
A3		N/A	N/A	N/A
B		282	N/A	282
C		1315	N/A	1315
D		N/A	N/A	N/A
Torso Angle (degree)	Front Row	23 degrees	N/A	23 degrees
	Second Row	23 degrees	N/A	23 degrees
	Third Row	N/A	N/A	N/A

Note: 1. All dimensions are in mm. If not, provide the unit used.

*1: Since the floor of this model slopes, A2 is obtained by measuring distance from upper edge of fore fixed-striker positioning in inner side of 2nd row seat to SRP.

NOMINAL DESIGN RIDING POSITION – For adjustable driver, passenger, 2nd row and 3rd row seat backs, 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.



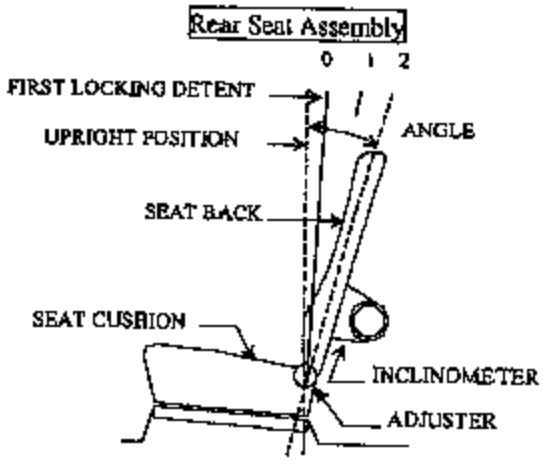
LEFT SIDE VIEW

Seat back angle for driver's seat = ___ degrees
Measurement Instructions:

6 detents rearward from the first locking detent ("0").
See page 3 of Form-1.

Seat back angle for passenger's seat = ___ degrees
Measurement Instructions:

Same as the driver's seat.



LEFT SIDE VIEW

Seat back angle for 2nd row seat = ___ degrees
Measurement Instructions:

2 detents rearward from the first locking detent ("0").

Seat back angle for 3rd row seat = ___ degrees
Measurement Instructions:

Not applicable.

SEATING REFERENCE POINT
FOR FMVSS 225
(All dimensions in mm)
(Note: The Child Restraint Anchorage Location determines the 225 SRP locations)

Model Year: 2004 ; Make: HONDA ; Model: ELEMENT ; Body Style: 5 DOOR WAGON
Seat Style: Front row: BUCKET ; Second row SPRIT BENCH(Contoured) ; Third row: N/A

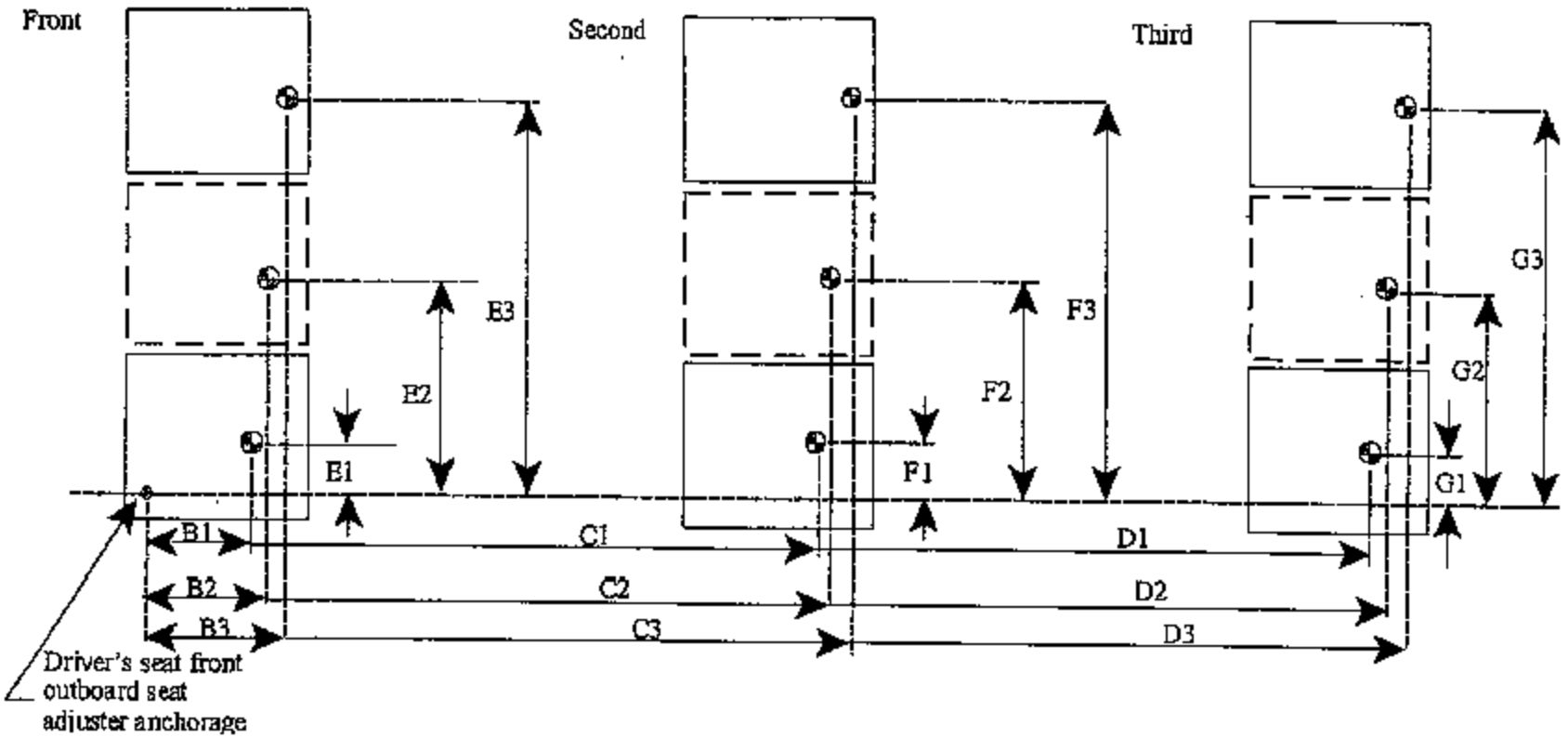


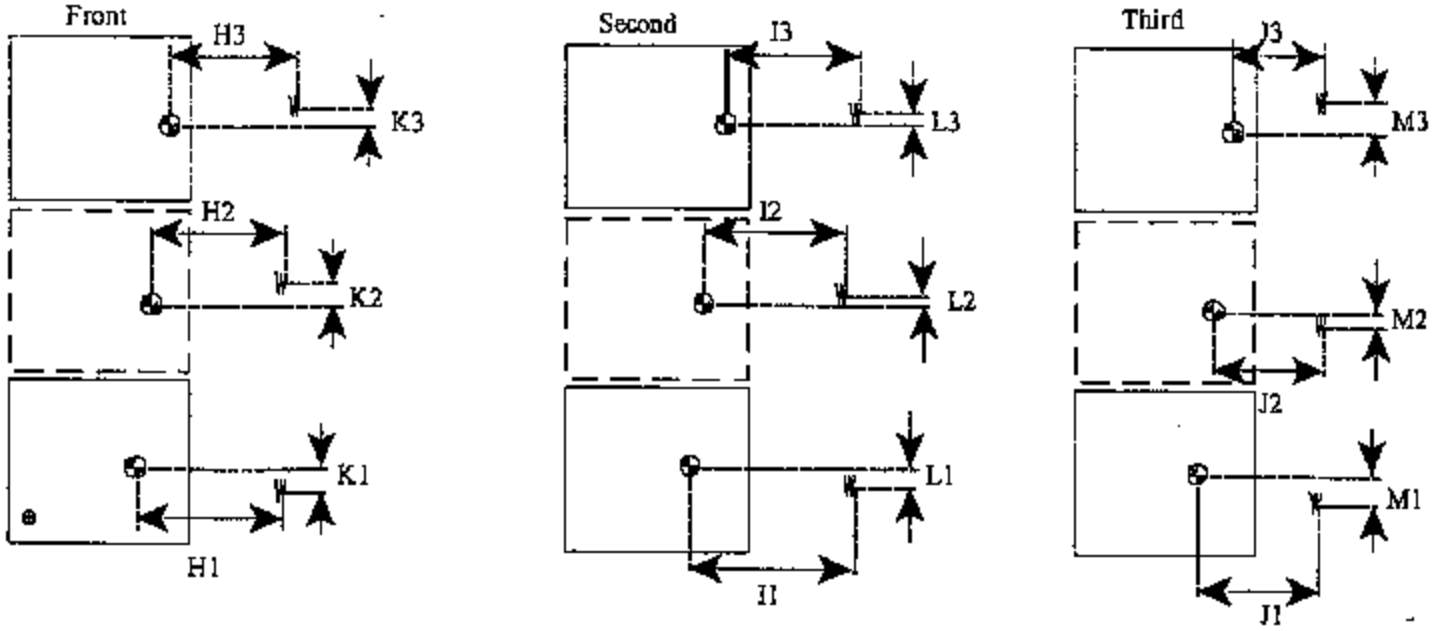
Table 2. Seating Reference Point and Tether Anchorage Locations

Seating Reference Point (SRP)		Distance from Driver's front outboard seat adjuster anchorage[1]
Front Row	B1	282
	E1	210
	B2	N/A
	E2	N/A
	B3	282
	E3	985
Second Row	C1	1315
	F1	303
	C2	N/A
	F2	N/A
	C3	1315
	F3	893
Third Row	D1	N/A
	G1	N/A
	D2	N/A
	G2	N/A
	D3	N/A
	G3	N/A

Note: 1. Use the center of anchorage.

TETHER ANCHORAGE LOCATIONS
FOR FMVSS 225
(All dimensions in mm)

Model Year: 2004 ; Make: HONDA ; Model: ELEMENT ; Body Style: 5 DOOR WAGON
Seat Style: Front row: BUCKET ; Second row: SPRIT BENCH(Contoured) ; Third row: N/A



: SRP

: Tether anchorage

Note: 1. The location shall be measured at the center of anchorage.

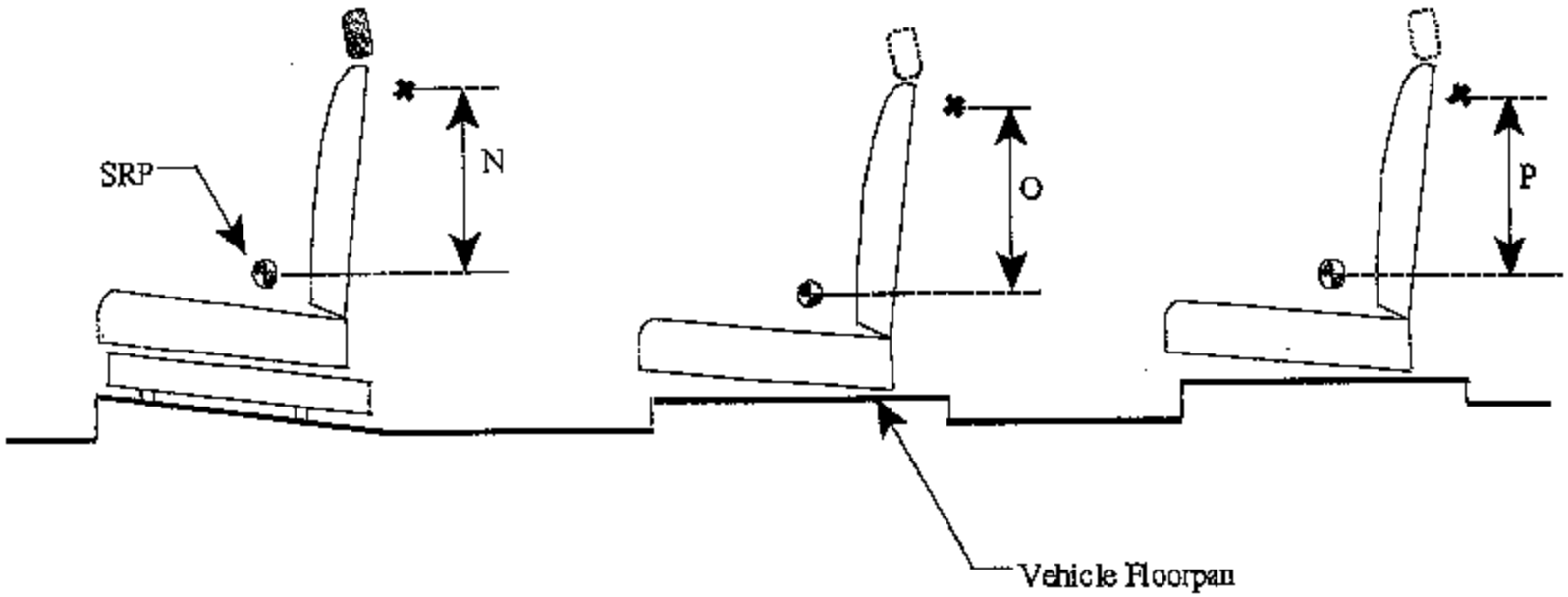
Table 3. Seating Reference Point and Tether Anchorage Locations

Seating Reference Point (SRP)	Distance from SRP	
Front Row	H1	N/A
	K1	N/A
	H2	N/A
	K2	N/A
	H3	N/A
	K3	N/A
Second Row	I1	697
	L1	20
	I2	N/A
	L2	N/A
	I3	697
	L3	20
Third Row	J1	N/A
	M1	N/A
	J2	N/A
	M2	N/A
	J3	N/A
	M3	N/A

Note: 1. Use the center of anchorage.

TETHER ANCHORAGE LOCATIONS - VERTICAL
FOR FMVSS 225
(All dimensions in mm)

Model Year: 2004 ; Make: HONDA ; Model: ELEMENT ; Body Style: 5 DOOR WAGON
Seat Style: Front row: BUCKET ; Second row: SPRIT BENCH(Contoured) ; Third row: N/A



LEFT SIDE VIEW OF TEST VEHICLE

Table 4. Vertical Dimension For The Tether Anchorage

Seating Row	Vertical Distance from Seating Reference Point	
Front Row	N1 (Driver)	N/A
	N2 (Center)	N/A
	N3 (Right)	N/A
Second Row	O1 (Left)	762
	O2 (Center)	N/A
	O3 (Right)	762
Third Row	P1 (Left)	N/A
	P2 (Center)	N/A
	P3 (Right)	N/A

Note: 1. All dimensions are in mm. If not, provide the unit anchorage.

Test Procedures Used for Compliance Tests

Lower Anchorages

For each seating location in each row record applicable FMVSS Section		FMVSS 225 Section(s)			
Block 1		Lower anchorage location certification method used (Enter applicable section used in block 1 of each position by circling A or B) A) 9.2.1 or B) 15.1.2.2			
Block 2		Lower anchorage dimension (Enter applicable section used in block 2 by circling A or B) A) 9.1.1 or B) 15.1.2.2 (also provide roll and yaw angles) pitch_____° (If it's turned up, the value is plus.) roll _____ ° (If it's turned in, the value is plus.) yaw_____° (If it's turned in, the value is plus.)			
Block 3		Lower anchorage marking (Enter applicable section used in block 3 by circling A or B) A) 9.5 or B) 15.4			
Block 4		Strength requirement (Enter applicable section used in block 4 by circling A or B) A) Section 9 or B) Section 15			
Front	Driver	N/A			
	Center (if any)	Block 1 A B	Block 2 A B Pitch °, Roll °, Yaw °	Block 3 A B	Block 4 A B
	Right (if any)	Block 1 A B	Block 2 A B Pitch °, Roll °, Yaw °	Block 3 A B	Block 4 A B
Second	Left	Block 1 (A) B	Block 2 (A) B Pitch 12.6°, Roll -0.3°, Yaw 1.4°	Block 3 (A) B	Block 4 (A) B
	Center	Block 1 A B	Block 2 A B Pitch °, Roll °, Yaw °	Block 3 A B	Block 4 A B
	Right (if any)	Block 1 (A) B	Block 2 (A) B Pitch 12.6°, Roll 0.4°, Yaw 2.0°	Block 3 (A) B	Block 4 (A) B
Third	Left	Block 1 A B	Block 2 A B Pitch °, Roll °, Yaw °	Block 3 A B	Block 4 A B
	Center	Block 1 A B	Block 2 A B Pitch °, Roll °, Yaw °	Block 3 A B	Block 4 A B
	Right	Block 1 A B	Block 2 A B Pitch °, Roll °, Yaw °	Block 3 A B	Block 4 A B
Fourth	Left	Block 1 A B	Block 2 A B Pitch °, Roll °, Yaw °	Block 3 A B	Block 4 A B
	Center	Block 1 A B	Block 2 A B Pitch °, Roll °, Yaw °	Block 3 A B	Block 4 A B
	Right	Block 1 A B	Block 2 A B Pitch °, Roll °, Yaw °	Block 3 A B	Block 4 A B

Test Procedures Used for Compliance Tests

Tether Anchorages

For each seating location in each row record applicable FMVSS Section		FMVSS Section(s) - Req.		
Block 1		Tether anchorage location certification method used (Enter applicable section used in block 1 by circling A, B, C, D, E or F) A) 6.2.1 B) 6.2.1.1 C) 6.2.1.2 D) 6.2.2 E) 6.2.2.1 F) 6.2.2.2		
Block 2		Number or tether anchorages based upon the applicable section (Enter applicable section used in block 2 by circling A or B) A) 4.4 B) 4.5		
Block 3		Tether anchorage strength requirement (Enter applicable section used in block 3 by circling A, B, or C) A) 6.3.1 B) 6.3.2 C) 6.3.4		
Front	Driver	N/A		
	Center (if any)	Block 1 A B C D E F	Block 2 A B	Block 3 A B C
	Right (if any)	Block 1 A B C D E F	Block 2 A B	Block 3 A B C
Second	Left	Block 1 (A) B C D E F	Block 2 (A) B	Block 3 (A) B C
	Center	Block 1 A B C D E F	Block 2 A B	Block 3 A B C
	Right	Block 1 (A) B C D E F	Block 2 (A) B	Block 3 (A) B C
Third	Left	Block 1 A B C D E F	Block 2 A B	Block 3 A B C
	Center	Block 1 A B C D E F	Block 2 A B	Block 3 A B C
	Right	Block 1 A B C D E F	Block 2 A B	Block 3 A B C
Fourth	Left	Block 1 A B C D E F	Block 2 A B	Block 3 A B C
	Center	Block 1 A B C D E F	Block 2 A B	Block 3 A B C
	Right	Block 1 A B C D E F	Block 2 A B	Block 3 A B C