

REPORT NUMBER 225-GTL-03-001

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

**BAYERISCHE MOTOREN WERKE AG  
2003 MINI COOPER, PASSENGER CAR  
NHTSA NO. C30506**

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



NOVEMBER 4, 2003

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**

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

Prepared By: Dulcie Messick  
Approved By: [Signature]  
Approval Date: 11/04/03

FINAL REPORT ACCEPTANCE BY OVSC:

Accepted By: [Signature]  
Acceptance Date: 12/18/2003

1. Report No. 225-GTL-03-001	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 2003 MINI COOPER, PASSENGER CAR NHTSA No. C30506		5. Report Date November 4, 2003	
		6. Performing Organ. Code GTL	
7. Author(s) Grant Farrand, Project Engineer Debbie Messick, Project Manager		8. Performing Organ. Rep# GTL-DOT-03-225-001	
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 7 <sup>th</sup> Street, S.W., Room 6111 Washington, DC 20590		13. Type of Report and Period Covered Final Test Report July 31- August 1, 2003	
		14. Sponsoring Agency Code NVS-221	
15. Supplementary Notes			
16. Abstract Compliance tests were conducted on the subject, 2003 Mini Cooper passenger car 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 Compliance Testing Safety Engineering FMVSS 225		18. Distribution Statement Copies of this report are available from NHTSA Technical Reference Div., Rm. 5108 (NPO-230) 400 7 <sup>th</sup> St., S.W. Washington, DC 20590 Telephone No. (202) 366-4946	
19. Security Classif. (of this report) UNCLASSIFIED	21. No. of Pages 76	22. Price	
20. Security Classif. (of this page) UNCLASSIFIED			

## TABLE OF CONTENTS

SECTION		PAGE
1	Purpose of Compliance Test	1
2	Compliance Test Results Summary	2
3	Compliance Test Data	3
4	Test Equipment List	12
5	Photographs	13
	5.1 Left Side View of Vehicle	
	5.2 Close-up View of Vehicle Certification Label	
	5.3 Close-up View of Vehicle Tire Information Label	
	5.4 ¾ Frontal Left Side View of Test Vehicle with Test Apparatus in Place	
	5.5 ¾ Frontal Right Side View of Test Vehicle with Test Apparatus in Place	
	5.6 Right Front Vehicle Tie Down	
	5.7 Right Rear Vehicle Tie Down	
	5.8 Left Front Vehicle Tie Down	
	5.9 Left Rear Vehicle Tie Down	
	5.10 Pre-Test View of 2 <sup>nd</sup> Row Left Top Tether Anchor	
	5.11 Pre-Test View of 2 <sup>nd</sup> Row Right Top Tether Anchor	
	5.12 Pre-Test View of 2 <sup>nd</sup> Row Left Outboard Lower Anchor	
	5.13 Pre-Test View of 2 <sup>nd</sup> Row Left Inboard Lower Anchor	
	5.14 Pre-Test View of 2 <sup>nd</sup> Row Right Inboard Lower Anchor	
	5.15 Pre-Test View of 2 <sup>nd</sup> Row Right Outboard Lower Anchor	
	5.16 Pre-Test 2 <sup>nd</sup> Row Left Lower Anchors with Covers in Place	
	5.17 Pre-Test 2 <sup>nd</sup> Row Right Lower Anchors with Covers in Place	
	5.18 View of 2D Template in 2 <sup>nd</sup> Row Left Seat	
	5.19 View of 2D Template in 2 <sup>nd</sup> Row Left Seat	
	5.20 View of 2D Template in 2 <sup>nd</sup> Row Right Seat	
	5.21 View of 2D Template in 2 <sup>nd</sup> Row Right Seat	
	5.22 View of CRF in 2 <sup>nd</sup> Row Right Seat	
	5.23 View of CRF in 2 <sup>nd</sup> Row Left Seat	
	5.24 Pre-Test Set-up 2 <sup>nd</sup> Row Left Position	
	5.25 Pre-Test Set-up 2 <sup>nd</sup> Row Left Position	
	5.26 Pre-Test Set-up 2 <sup>nd</sup> Row Right Position	
	5.27 Post Test 2 <sup>nd</sup> Row Left Position	
	5.28 Post Test 2 <sup>nd</sup> Row Left Position	
	5.29 Post Test 2 <sup>nd</sup> Row Right Position	
	5.30 Post Test 2 <sup>nd</sup> Row Left Tether Anchor	
	5.31 Post Test 2 <sup>nd</sup> Row Left Outboard Lower Anchor	
	5.32 Post Test 2 <sup>nd</sup> Row Left Inboard Lower Anchor	
	5.33 Post Test 2 <sup>nd</sup> Row Right Inboard Lower Anchor	
	5.34 Post Test 2 <sup>nd</sup> Row Right Outboard Lower Anchor	
	5.35 Load System Control and Data Recording Device in Test Position	
	5.36 Loading Device with Load Cell and Test Fixture in Test Position	

## TABLE OF CONTENTS (continued)

6	Plots	50
---	-------	----

6.1 2<sup>nd</sup> Row Left Top Tether Anchor, GTL 5103

6.2 2<sup>nd</sup> Row Left Top Tether Anchor, GTL 5103

6.3 2<sup>nd</sup> Row Left Top Tether Anchor, GTL ~~5104~~ 5103

6.4 2<sup>nd</sup> Row Right Lower Anchor, GTL 5104

6.5 2<sup>nd</sup> Row Right Lower Anchor, GTL 5104

6.6 2<sup>nd</sup> Row Right Lower Anchor, GTL 5104

Appendix A – Owner's Manual Child Restraint Information

Appendix B – Manufacturer's Data

**SECTION 1****PURPOSE OF COMPLIANCE TEST****1.0 PURPOSE OF COMPLIANCE TEST**

A 2003 Mini Cooper passenger car 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 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 2003 Mini Cooper passenger car. Nomenclature applicable to the test vehicle are:

A. Vehicle Identification Number: WMWRC33493TC41282

B. NHTSA No.: C30506

C. Manufacturer: BAYERISCHE MOTOREN WERKE AG

D. Manufacture Date: 11/02

**1.2 TEST DATE**

The test vehicle was subjected to FMVSS No. 225 testing on July 31-August 1, 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 Procedures, TP-225T dated 3 May 2001 and TP-225L dated 11, June, 2001.

Based on the test performed, the 2003 Mini Cooper passenger car appears 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)
5103	SFAD II Tether Strap	2 <sup>nd</sup> Row Left	9927	30.3
5104	Lower Anchorage	2 <sup>nd</sup> Row Right	7926	26.3

Table 2. General Test and Vehicle Parameter Data

VEH. MOD YR/MAKE/MODEL BODY	2003 Mini Cooper
VEH. NHTSA NO.	C30506
VIN	WMWRC33493TC41282
VEH. BUILD DATE	11/02
TEST DATE	07/31/03 - 08/01/03
TEST LABORATORY	GTL
OBSERVERS	Grant Farrand, Jimmy Latane

## GENERAL INFORMATION:

Date Received: 04/28/03 Odometer Reading: 44.8

## DATA FROM VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured by: Bayerische Motoren Werke AG

Date of Manufacture: 11/02 VIN: WMWRC33493TC41282

GVWR: 1515 kg; GAWR FRONT: 870 kg  
GAWR REAR: 730 kg

**SECTION 3****COMPLIANCE TEST DATA****3.0 TEST RESULTS**

The following data sheets document the results of testing on the 2003 Mini Cooper passenger car.



DATA SHEET 1  
CHILD RESTRAINT TETHER ANCHORAGE CONFIGURATION

VEH. MOD YR/MAKE/MODEL/BODY: 2003 MINI COOPER PASSENGER CAR

VEH. NHTSA NO: C30508; VIN: WMWRC33493TC41282

VEH. BUILD DATE: 11/02; TEST DATE: JULY 31, 2003

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=       
Total= 4

SEATING POSITION		OBSERVED CONFIGURATION			
		Permit the attachment of a tether hook	Accessible without the need for any tool other than a screwdriver or 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	N/A	N/A	N/A	N/A
Second	Left	YES	YES	YES	YES
	Right	N/A	N/A	N/A	N/A
	Center	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: *G. Farrand*

DATE: 07/31/03

APPROVED BY: *D. Messick*

**DATA SHEET 2**  
**CHILD RESTRAINT LOWER ANCHORAGES CONFIGURATION**

VEH. MOD YR/MAKE/MODEL/BODY: 2003 MINI COOPER PASSENGER CAR

VEH. NHTSA NO: C30506; VIN: WMWRC33493TC41282

VEH. BUILD DATE: 11/02; TEST DATE: JULY 31, 2003

TEST LABORATORY: GENERAL TESTING LABORATORIES

OBSERVERS: GRANT FARRAND, JIMMY LATANE

OBSERVED LOWER ANCHORAGE CONFIGURATION	SEAT POSITION			
	FRONT	REAR	THIRD	
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	NO	N/A
	Center	N/A	N/A	N/A
	Right	N/A	NO	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	YES*	N/A
	Center	N/A	N/A	N/A
	Right	N/A	YES*	N/A
Diameter of the bar (mm)	Left	N/A	5.97	N/A
	Center	N/A	N/A	N/A
	Right	N/A	5.97	N/A
Inspect if the bars are straight, horizontal and transverse	Left	N/A	YES	N/A
	Center	N/A	N/A	N/A
	Right	N/A	YES	N/A

\* BARS ARE VISIBLE AFTER OPENING THE COVER PLATE WHICH CONCEALS THE BAR WHEN NOT IN USE.

DATA SHEET 2 CONTINUED  
CHILD RESTRAINT LOWER ANCHORAGES CONFIGURATION

VEH. MOD YR/MAKE/MODEL/BODY: 2003 MINI COOPER PASSENGER CAR

VEH. NHTSA NO: C30506; VIN: WMWRC33493TC41282

VEH. BUILD DATE: 11/02; TEST DATE: JULY 31, 2003

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 30 MM	N/A
	Center	N/A	N/A	N/A
	Right	N/A	YES 30 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 $\pm$ 1 mm.	Left	N/A*	280	N/A
	Center	N/A	N/A	N/A
	Right	N/A	280	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: *G. Farrand*

DATE: 07/31/03

APPROVED BY: *A. Murrell*

DATA SHEET 2 CONTINUED  
CHILD RESTRAINT LOWER ANCHORAGES CONFIGURATION

VEH. MOD YR/MAKE/MODEL/BODY: 2003 MINI COOPER PASSENGER CAR

VEH. NHTSA NO: C30506; VIN: WMWRC33493TC41282

VEH. BUILD DATE: 11/02; TEST DATE: JULY 31, 2003

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*	YES	N/A
	Center	N/A	N/A	N/A
	Right	N/A	YES	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	N/A
	Right	N/A	N/A	N/A

\* DRIVER'S SEAT

RECORDED BY: *G. Farrand*

DATE: 07/31/03

APPROVED BY: *D. Messick*

**DATA SHEET 3**  
**LOCATION AND DIMENSIONAL MEASUREMENTS**

VEH. MOD YR/MAKE/MODEL/BODY: 2003 MINI COOPER PASSENGER CAR

VEH. NHTSA NO: C30508; VIN: WMWRC33493TC41282

VEH. BUILD DATE: 11/02; TEST DATE: JULY 31, 2003

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= N/A  
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	N/A	N/A	N/A
	Right	NO	NO	N/A
SECOND	Left	YES	YES	YES
	Center	N/A	N/A	N/A
	Right	YES	YES	YES

RECORDED BY: 

DATE: 07/31/03

APPROVED BY: 

**DATA SHEET 3 CONTINUED  
LOCATION AND DIMENSIONAL MEASUREMENTS**

VEH. MOD YR/MAKE/MODEL/BODY: 2003 MINI COOPER PASSENGER CAR

VEH. NHTSA NO: C30508; VIN: WMWRC33493TC41282

VEH. BUILD DATE: 11/02; TEST DATE: JULY 31, 2003

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=     Total= 4

SEAT POSITION FOR LOWER ANCHORAGE		PRESENCE OF ANCHORAGES				COMMENTS		
		REQUIRED		OBSERVED				
FRONT		NONE		NONE		N/A		
REAR		2		2		LEFT & RIGHT		
THIRD		N/A		N/A		N/A		
SEAT POSITIONS FOR LOWER ANCHORAGES		LOCATION OF ANCHORAGE				COMMENTS		
		MEASURED FROM "Z" (mm)		MEASURED FROM "SRP" (mm)				
		Left	Right	Left	Right			
FRONT	Left	N/A		N/A		DRIVER'S SEAT		
	Center	N/A		N/A				
	Right	N/A		N/A				
REAR	Left	41	42	153	154	13°	0°	0°
	Center							
	Right	45	41	153	153	13°	0°	0°

RECORDED BY: *[Signature]*

DATE: 07/31/03

APPROVED BY: *[Signature]*

DATA SHEET 4  
ANCHORAGE STATIC LOADING

VEH. MOD YR/MAKE/MODEL/BODY: 2003 MINI COOPER PASSENGER CAR

VEH. NHTSA NO: C30506; VIN: WMWRC33493TC41282

VEH. BUILD DATE: 11/02; TEST DATE: AUGUST 1, 2003

TEST LABORATORY: GENERAL TESTING LABORATORIES

OBSERVERS: GRANT FARRAND, JIMMY LATANE

TEST # 5103

**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	FIXED	FIXED	DOWN	2	0°	0.0	395 N/SEC	9927 N	30.3	30.3
	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: 1)TESTED TO S8.3.4, 2) TESTED WITH HEADREST DOWN AND TETHER STRAP BETWEEN SEAT BACK AND HEADREST PER THE OWNER'S MANUAL INSTRUCTIONS. DURING TEST THE HEAD REST EXTENDED UP AS THE TETHER STRAP TIGHTENED.

RECORDED BY: *G. Farrand*

APPROVED BY: *D. Messick*

DATE: 08/01/03

DATA SHEET 5  
ANCHORAGE STATIC LOADING

VEH. MOD YR/MAKE/MODEL/BODY: 2003 MINI COOPER PASSENGER CAR  
 VEH. NHTSA NO: C30506; VIN: WMWRC33493TC41282  
 VEH. BUILD DATE: 11/02; TEST DATE: AUGUST 1, 2003  
 TEST LABORATORY: GENERAL TESTING LABORATORIES  
 OBSERVERS: GRANT FARRAND, JIMMY LATANE

TEST # 4751

**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	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	FIXED	DOWN	10°	0°	0.0	8000 N/SEC	7926 N	26.3 mm	26.3 mm
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

RECORDED BY: *[Signature]*

DATE: 08/01/03

APPROVED BY: *[Signature]*

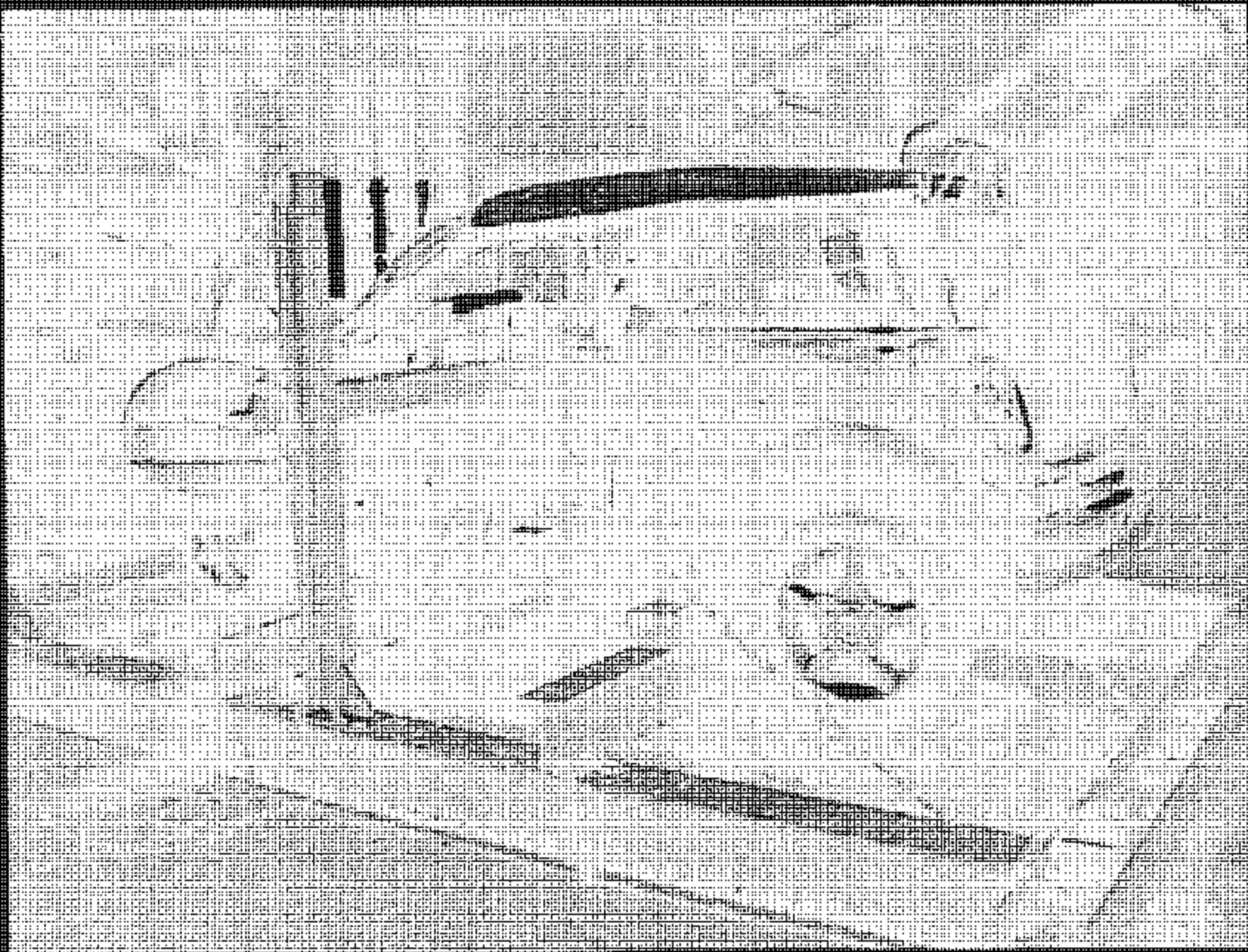


**SECTION 4  
INSTRUMENTATION AND EQUIPMENT LIST**

**TABLE 1 - INSTRUMENTATION & EQUIPMENT LIST**

<b>EQUIPMENT</b>	<b>DESCRIPTION</b>	<b>MODEL/ SERIAL NO.</b>	<b>CAL. DATE</b>	<b>NEXT CAL. DATE</b>
COMPUTER	AT&T	486DX286	BEFORE USE	BEFORE USE
LOAD CELL	REVERE	1353	08/03	08/04
LINEAR TRANSDUCER	CELESCO	69	BEFORE USE	BEFORE USE
LINEAR TRANSDUCER	CELESCO	70	BEFORE USE	BEFORE USE
LINEAR TRANSDUCER	CELESCO	71	BEFORE USE	BEFORE USE
LEVEL	STANLEY	42-449	04/03	04/04
FORCE GAUGE	CHATILLON	8761	BEFORE USE	BEFORE USE
CALIPER	N/A	Q9322365	BEFORE USE	BEFORE USE

SECTION 5  
PHOTOGRAPHS

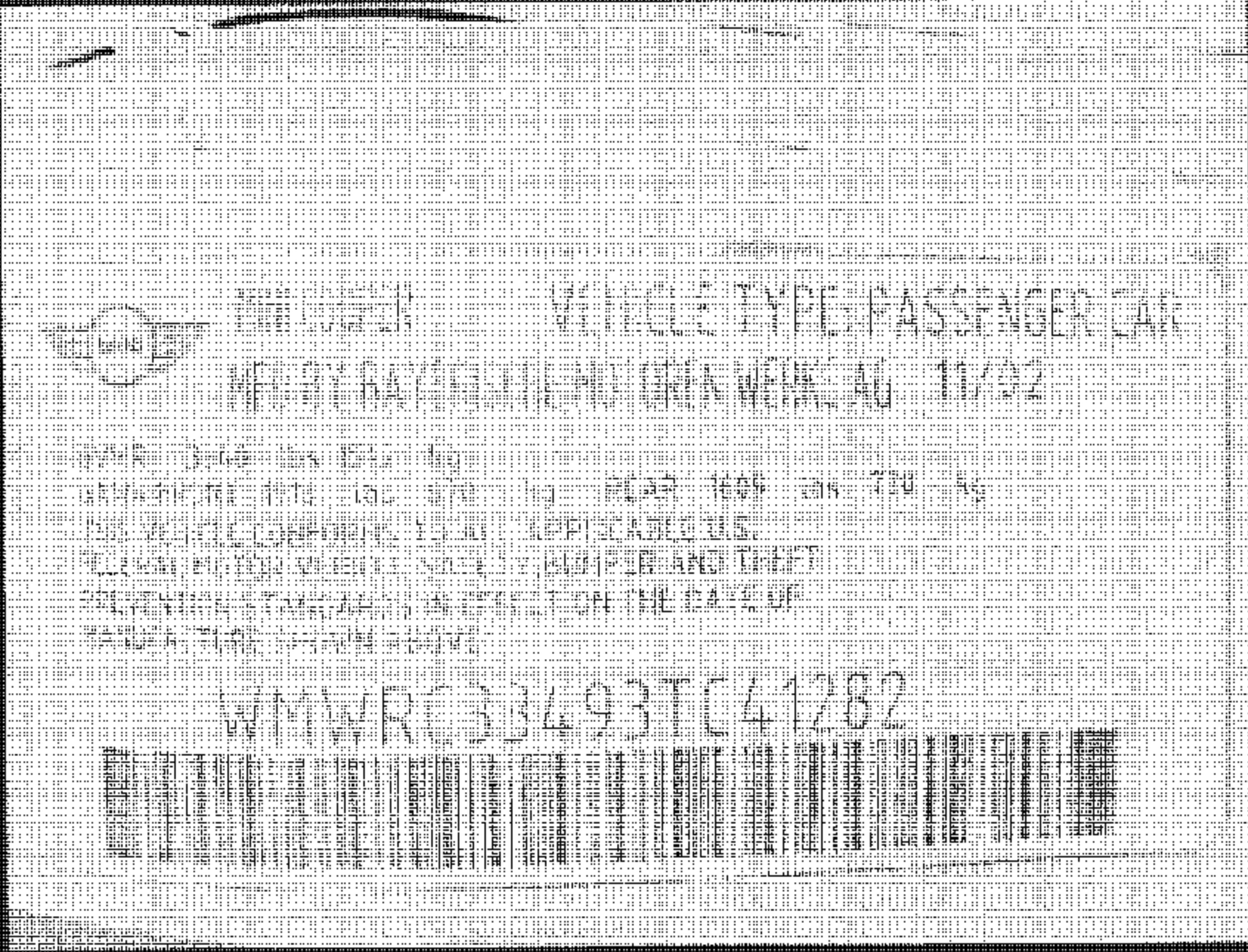


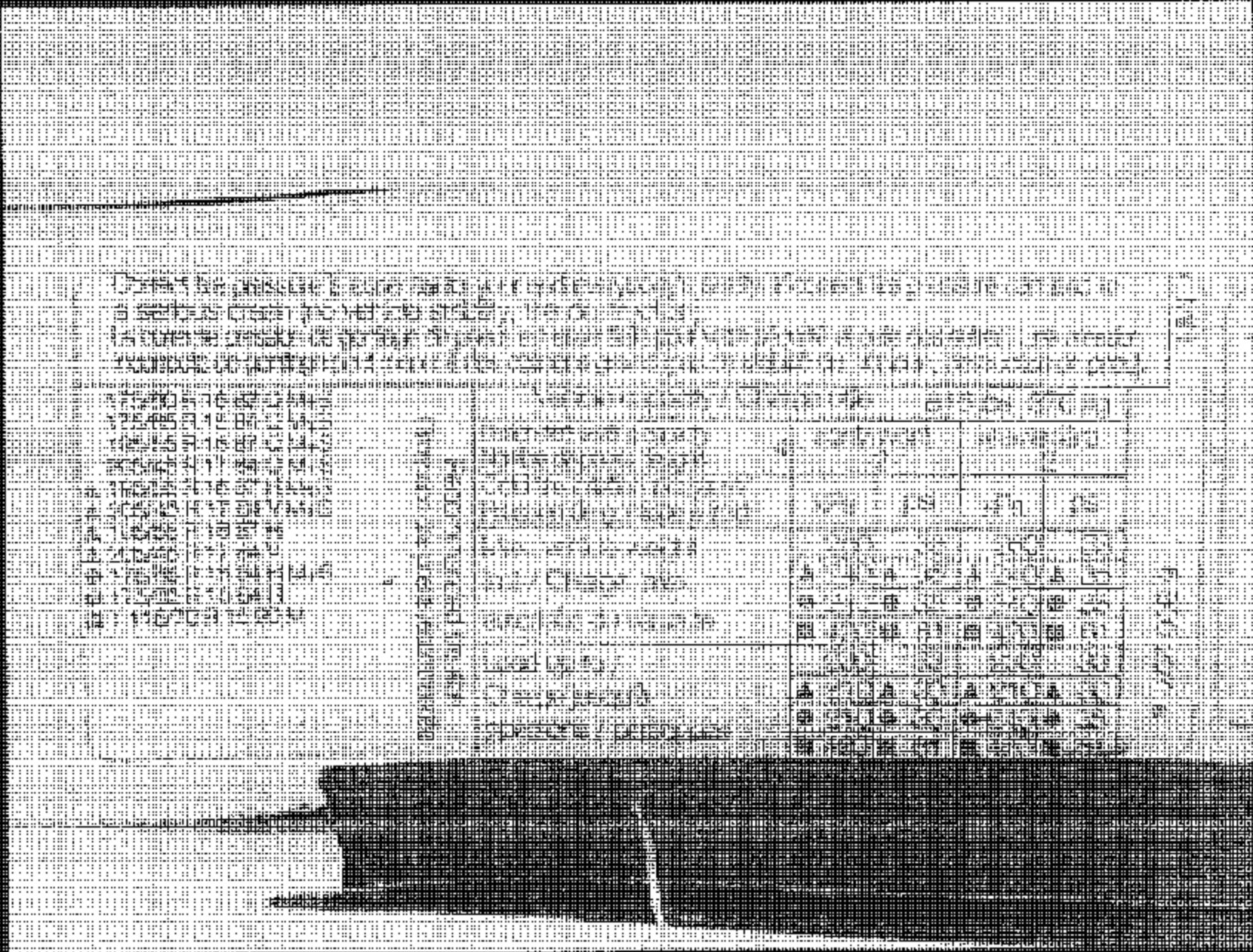
2003 BMW MINI COOPER  
NHTSA NO. C30505  
FMVSS NO. 225

FIGURE 5.1  
LEFT SIDE VIEW OF VEHICLE

2003 BMW MINI COOPER  
NHTSA NO. C30608  
FMVSS NO. 225

FIGURE 6.2  
CLOSE-UP VIEW OF VEHICLE CERTIFICATION  
LABEL





2003 BMW MINI COOPER  
NHTSA NO. C31505  
FMVSS NO. 225

FIGURE 5.3  
CLOSE-UP VIEW OF VEHICLE TIRE  
INFORMATION LABEL.



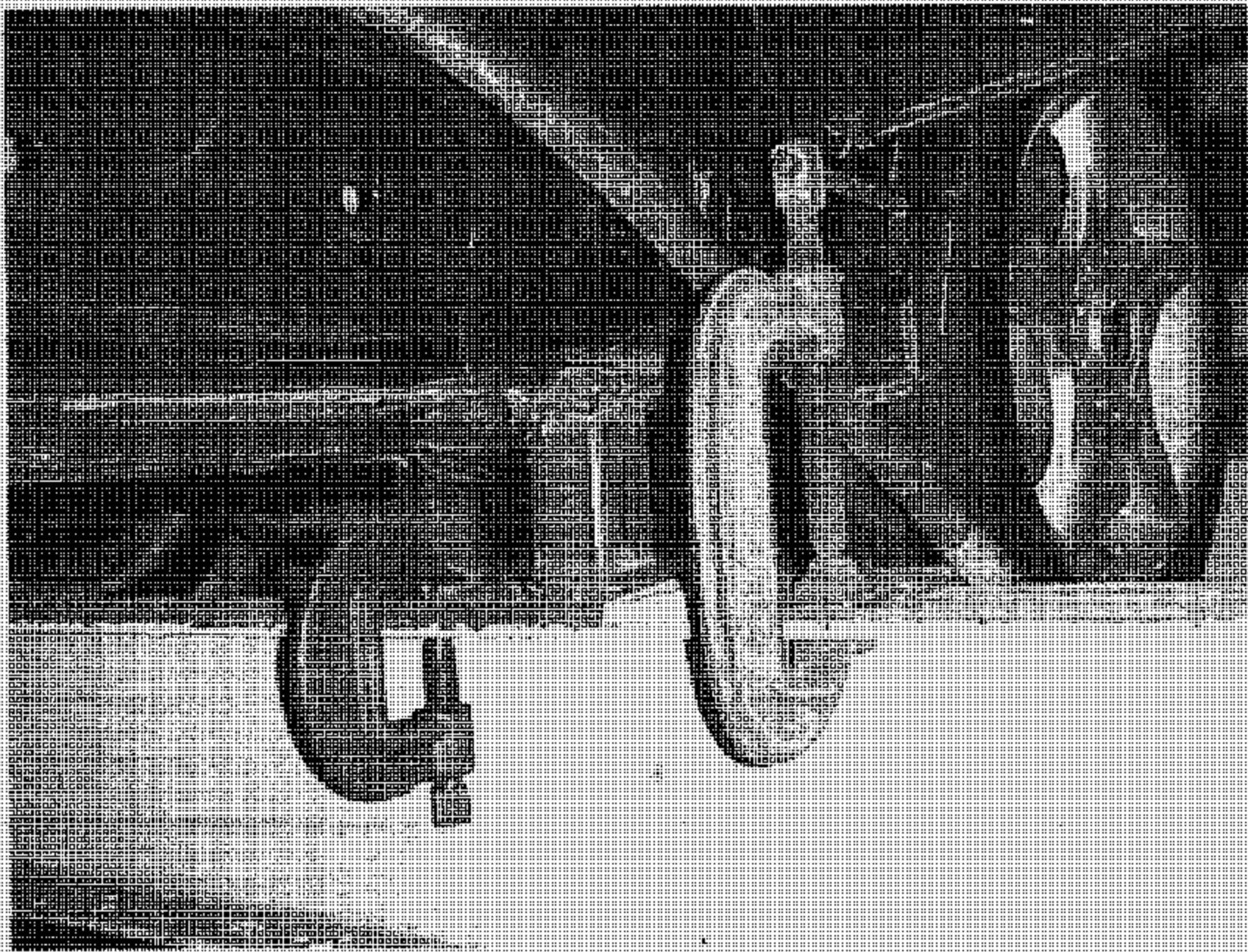
2003 BMW MINI COOPER  
NHTSA NO. C3050S  
FMVSS NO. 225

FIGURE 5.4  
3/4 FRONTAL LEFT SIDE VIEW OF TEST VEHICLE  
WITH TEST APPARATUS IN PLACE



2003 BMW MINI COOPER  
NHTSA NO. C30538  
FMVSS NO. 225

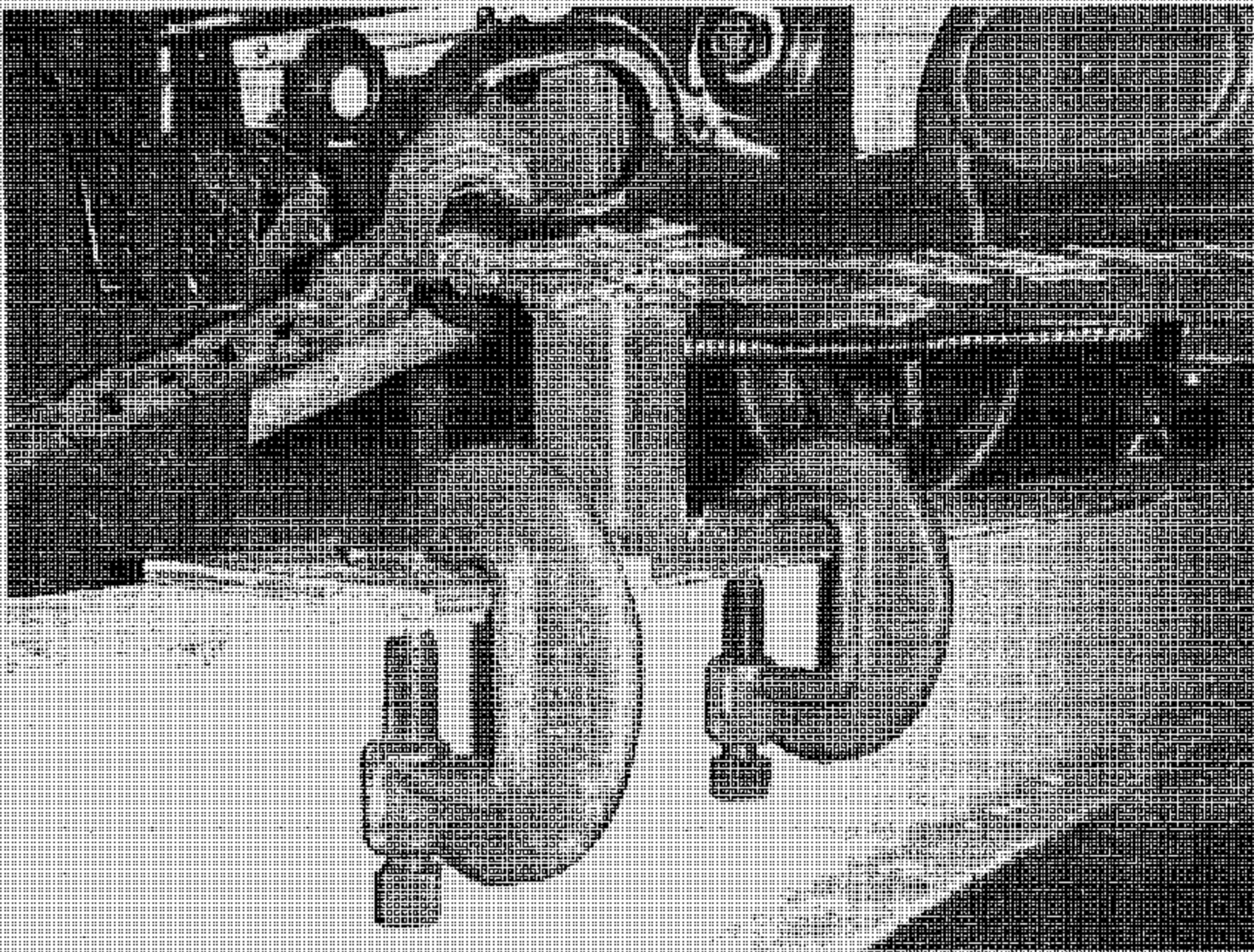
FIGURE 6.3  
3/4 FRONTAL RIGHT SIDE VIEW OF TEST  
VEHICLE WITH TEST APPARATUS IN PLACE



2003 BMW MINI COOPER  
NHTSA NO. C30606  
FMVSS NO. 225

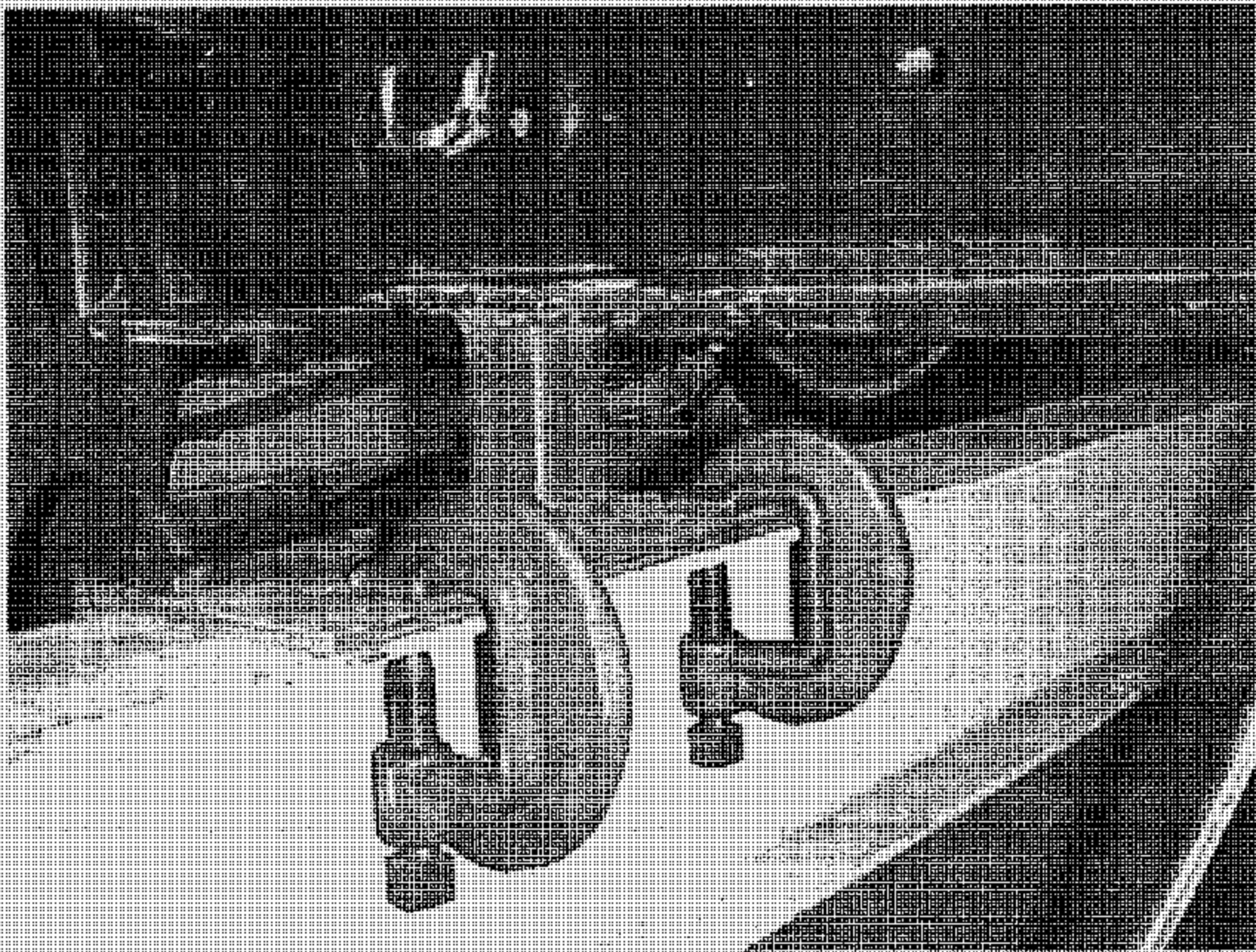
FIGURE 5.8  
RIGHT FRONT VEHICLE TIE DOWN





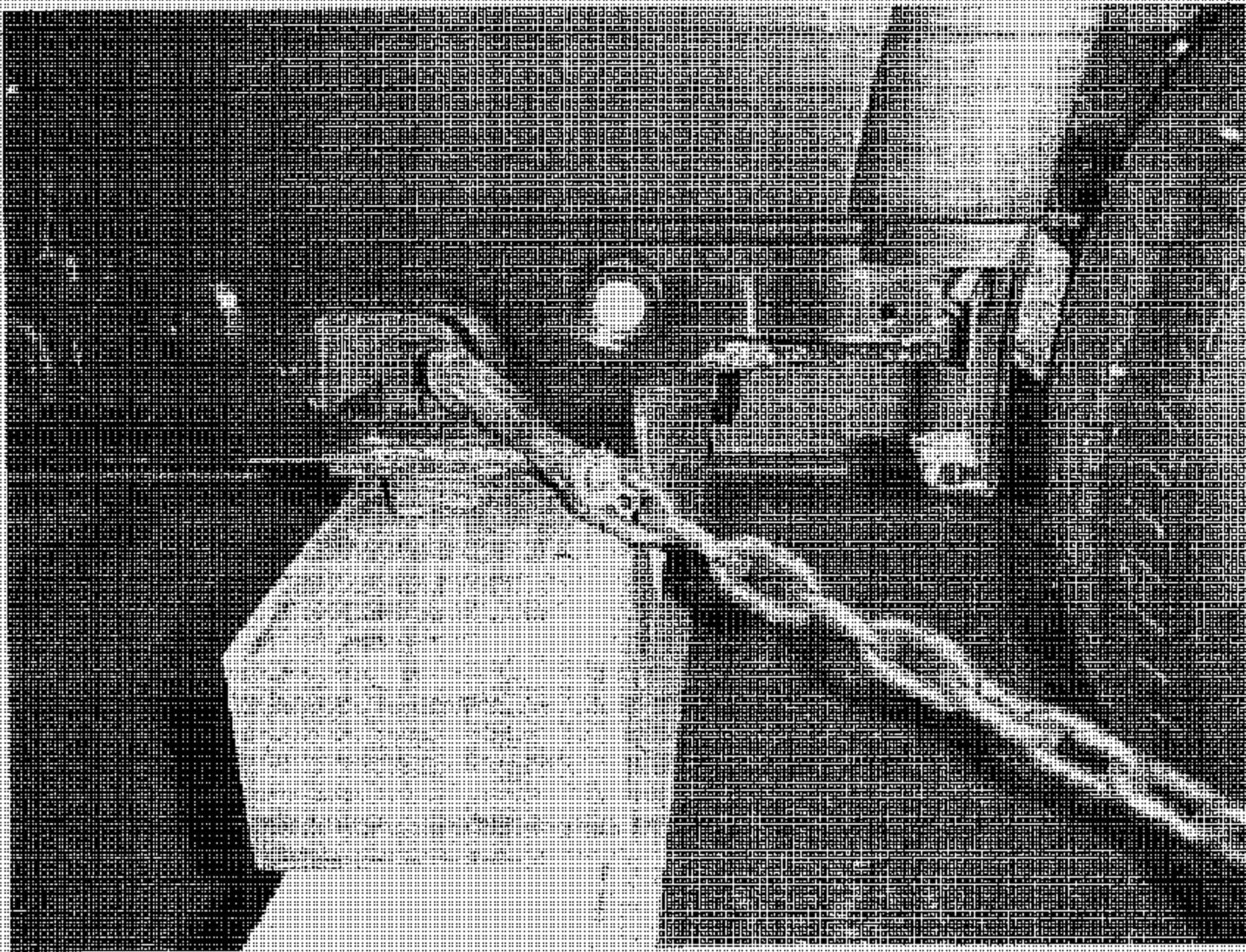
2003 BMW MINI COOPER  
NHTSA NO. C30503  
FMVSS NO. 225

FIGURE 5.7  
RIGHT REAR VEHICLE TIE DOWN



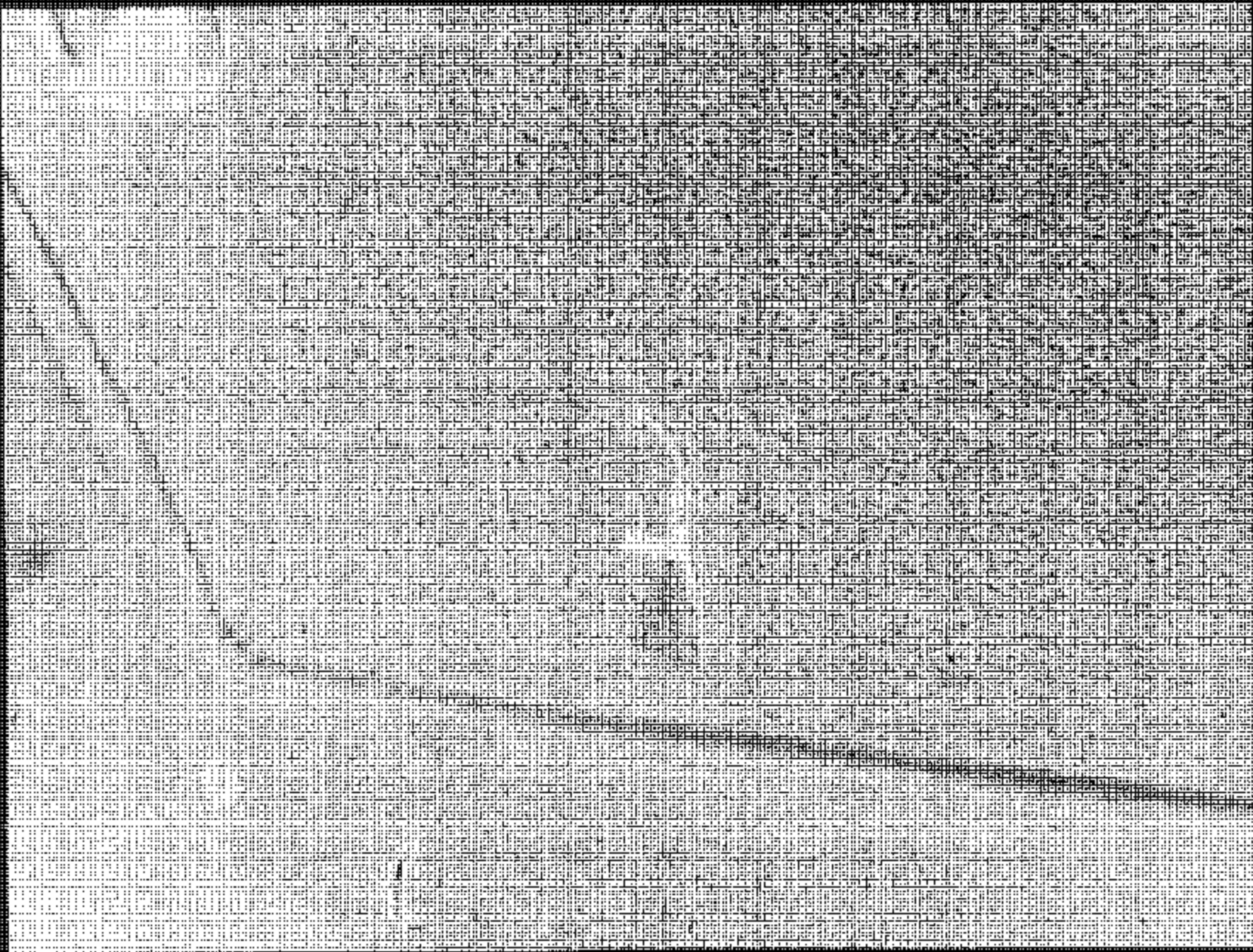
2003 BMW MINI COOPER  
NHTSA NO. C30506  
FMVSS NO. 225

FIGURE 5-3  
LEFT FRONT VEHICLE TIE DOWN



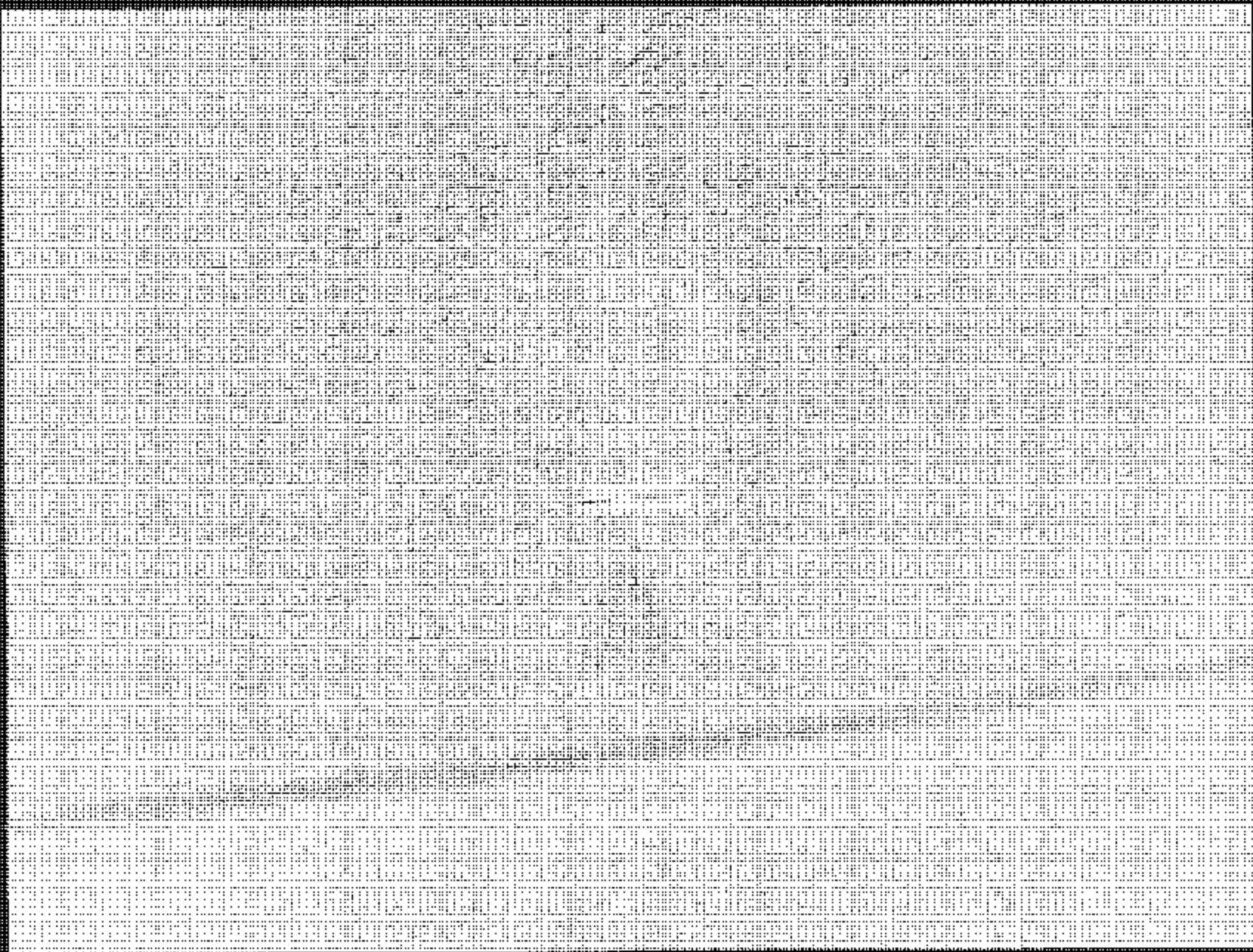
2003 BMW MINI COOPER  
NHTSA NO. C30508  
FMVSS NO. 225

FIGURE 5.9  
LEFT REAR VEHICLE TIE DOWN



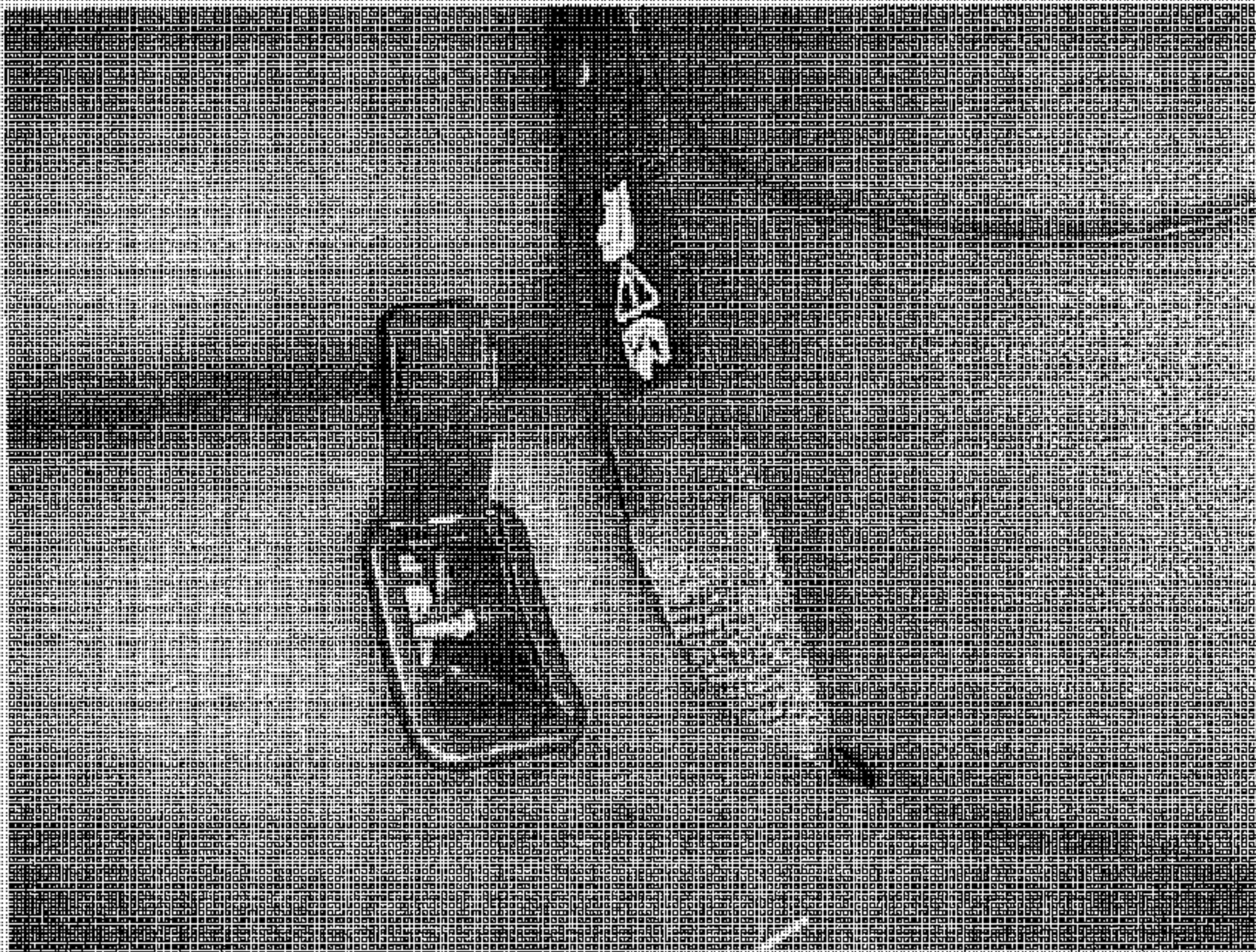
2003 BMW MINI COOPER  
NHTSA NO. C30505  
FMVSS NO. 225

FIGURE 6.53  
PRE-TEST VIEW OF 2<sup>ND</sup> ROW LEFT TOP  
TETHER ANCHOR



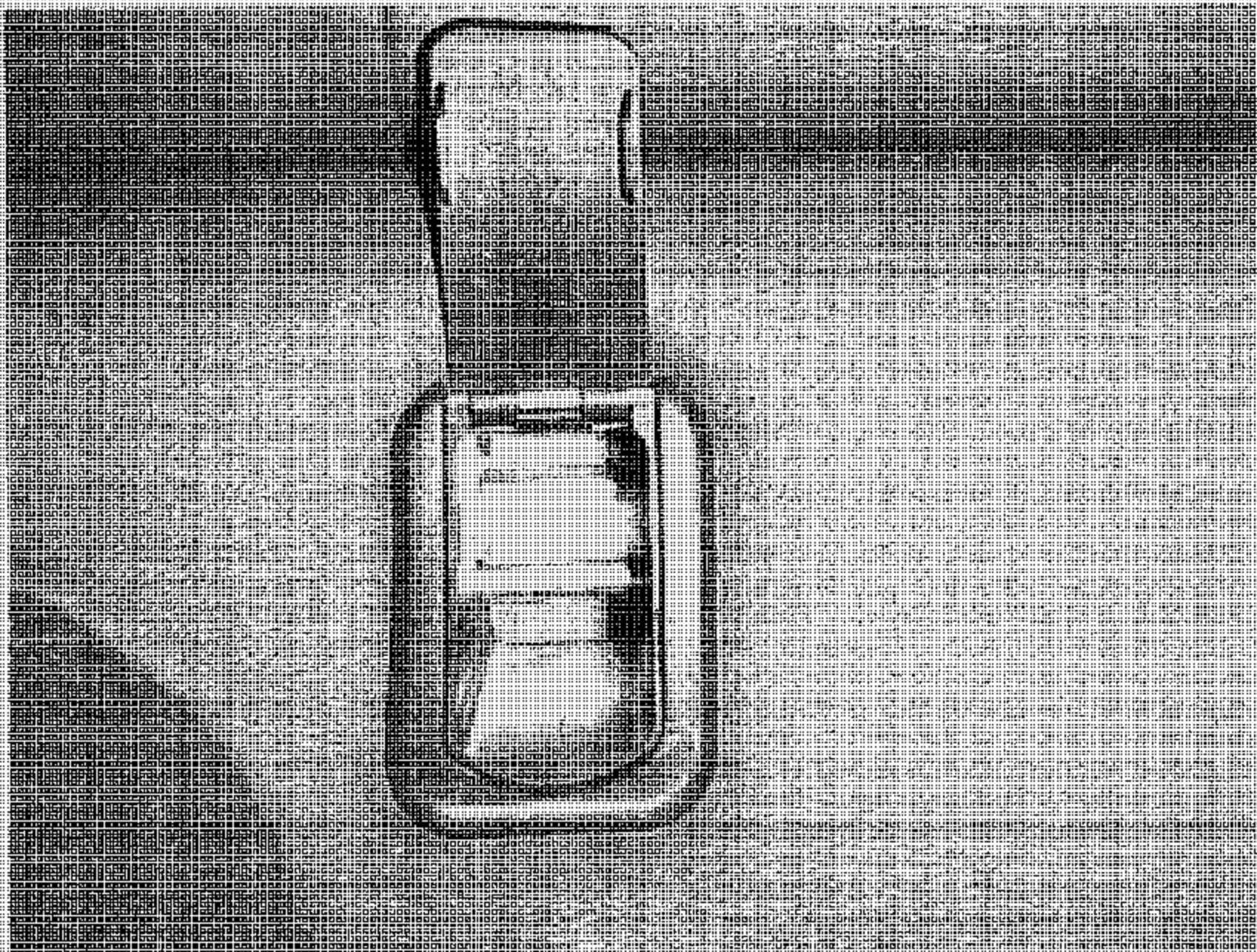
2003 BMW MINI COOPER  
NHTSA NO. C30505  
FMVSS NO. 225

FIGURE 6-51  
PRE-TEST VIEW OF 2<sup>ND</sup> ROW RIGHT TOP  
TETHER ANCHOR



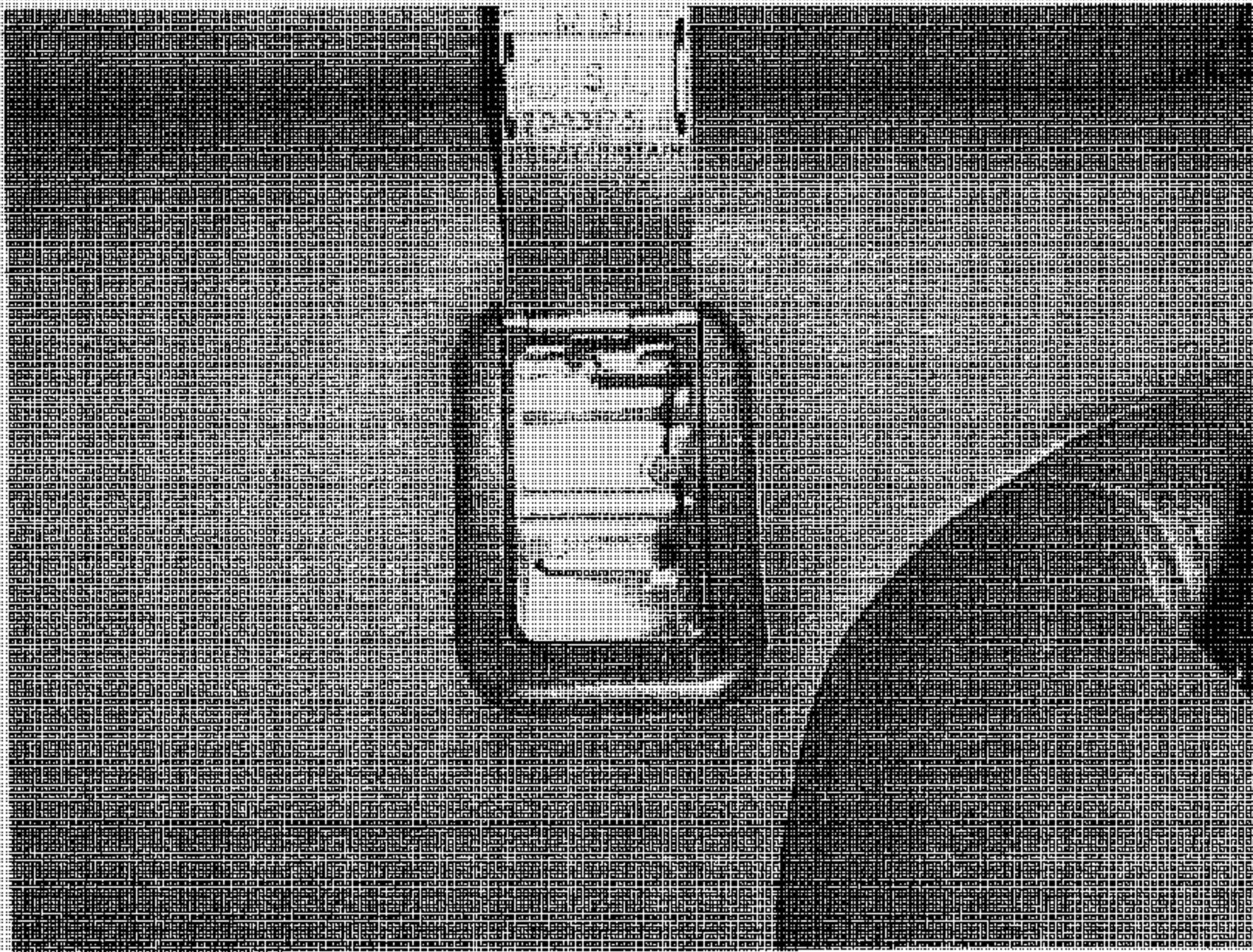
2003 BMW MINI COOPER  
NHTSA NO. C30506  
FMVSS NO. 225

FIGURE 5.12  
PRE-TEST VIEW OF 2<sup>ND</sup> ROW LEFT OUTBOARD  
LOWER ANCHOR



2003 BMW MINI COOPER  
NHTSA NO. C30506  
FMVSS NO. 225

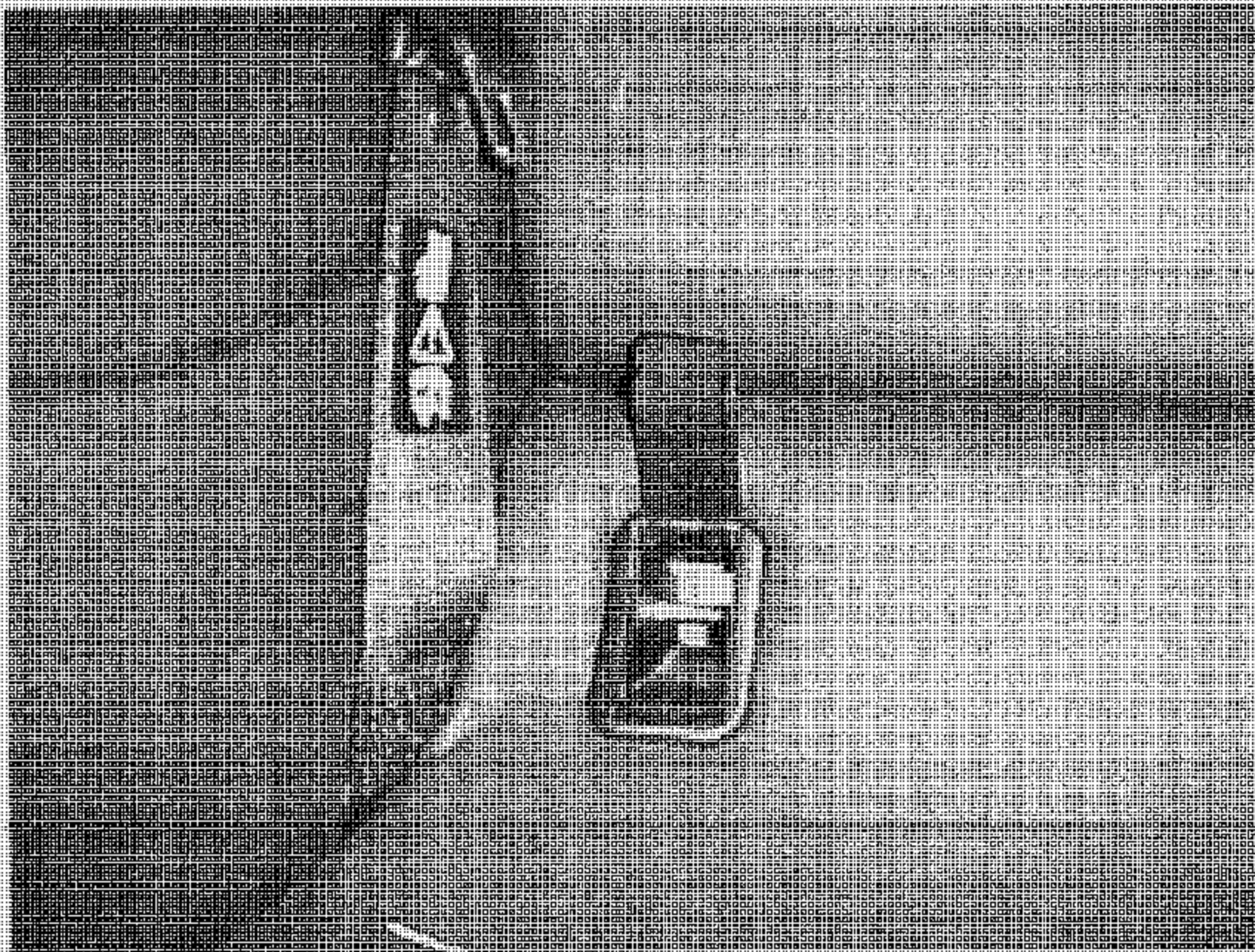
FIGURE 5.13  
PRE-TEST VIEW OF 2<sup>ND</sup> ROW LEFT INBOARD  
LOWER ANCHOR



2003 BMW MINI COOPER  
NHTSA NO. C30503  
FMVSS NO. 225

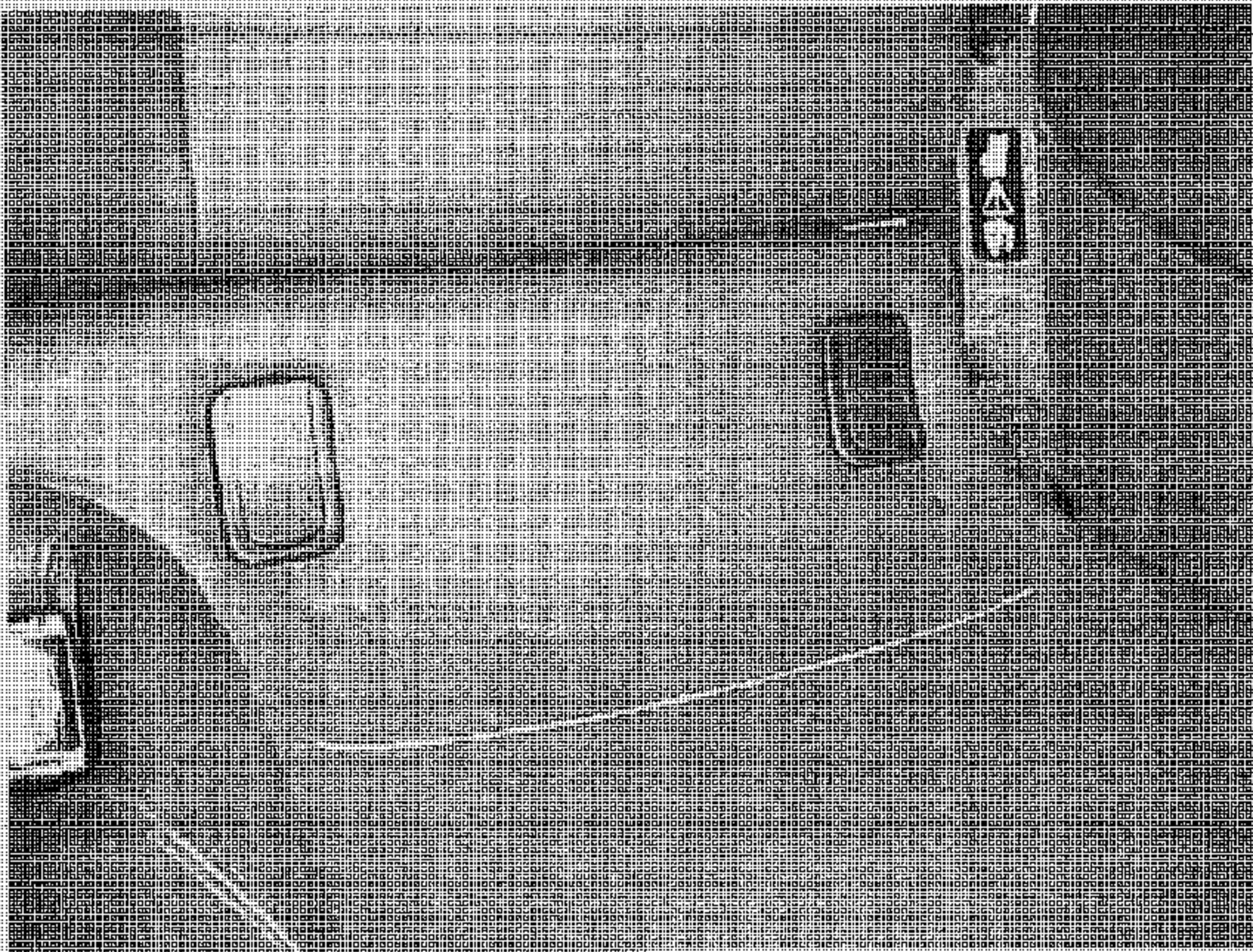
FIGURE 5.14  
PRE-TEST VIEW OF 2<sup>ND</sup> ROW RIGHT INBOARD  
LOWER ANCHOR





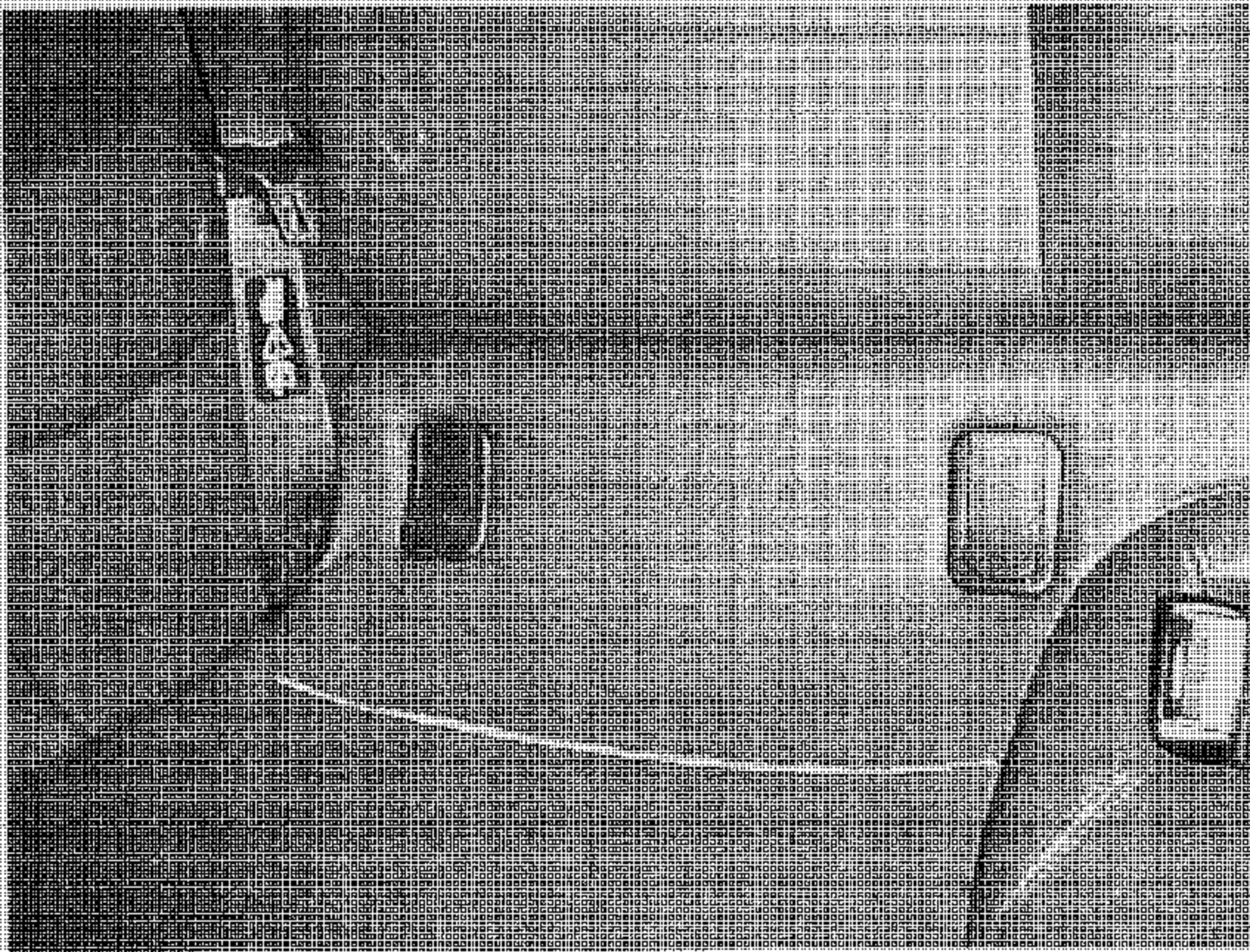
2003 BMW MINI COOPER  
NHTSA NO. G30503  
FMVSS NO. 225

FIGURE 5.15  
PRE-TEST VIEW OF 2<sup>ND</sup> ROW RIGHT  
OUTBOARD LOWER ANCHOR



2003 BMW MINI COOPER  
NHTSA NO. C30503  
FMVSS NO. 225

FIGURE 5 16  
2<sup>ND</sup> ROW LEFT LOWER ANCHORS WITH  
COVERS IN PLACE



2003 BMW MINI COOPER  
NHTSA NO. C30503  
FMVSS NO. 225

FIGURE 5.17  
2<sup>ND</sup> ROW RIGHT LOWER ANCHORS WITH  
COVERS IN PLACE



2003 BMW MINI COOPER  
NHTSA NO. C30506  
FMVSS NO. 225

FIGURE 5.16  
VIEW OF 2D TEMPLATE IN 2<sup>ND</sup> ROW LEFT SEAT



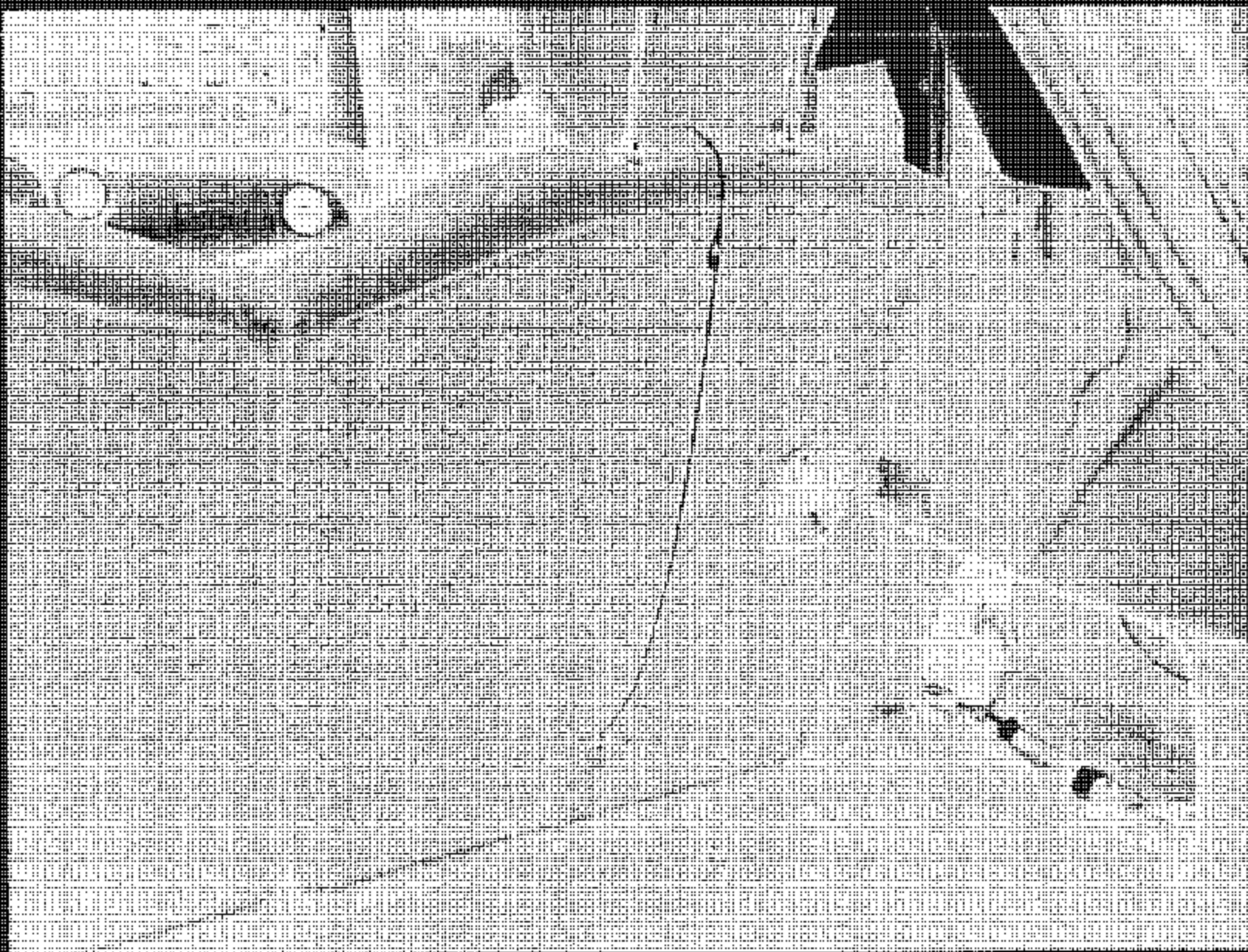
2004 BMW MINI COOPER  
NHTSA NO. C30607  
FMVSS NO. 225

FIGURE 6-18  
VIEW OF 2D TEMPLATE IN 2<sup>ND</sup> ROW LEFT SEAT



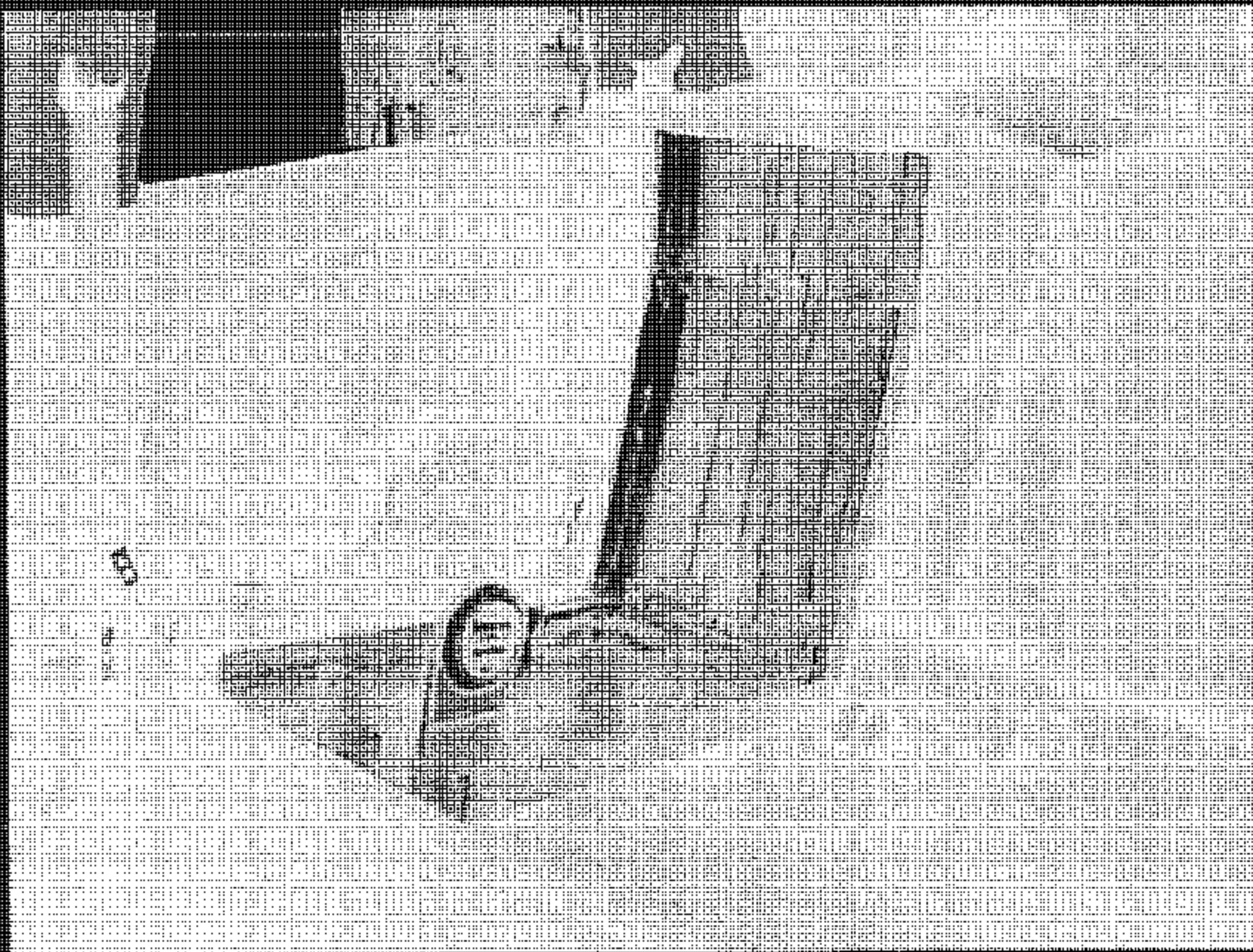
2003 BMW MINI COOPER  
NHTSA NC. C30506  
FMVSS NO. 223

FIGURE 5-23  
VIEW OF 2D TEMPLATE IN 2<sup>ND</sup> ROW RIGHT  
SEAT



2003 BMW MINI COOPER  
NHTSA NO. C30506  
FMVSS NO. 226

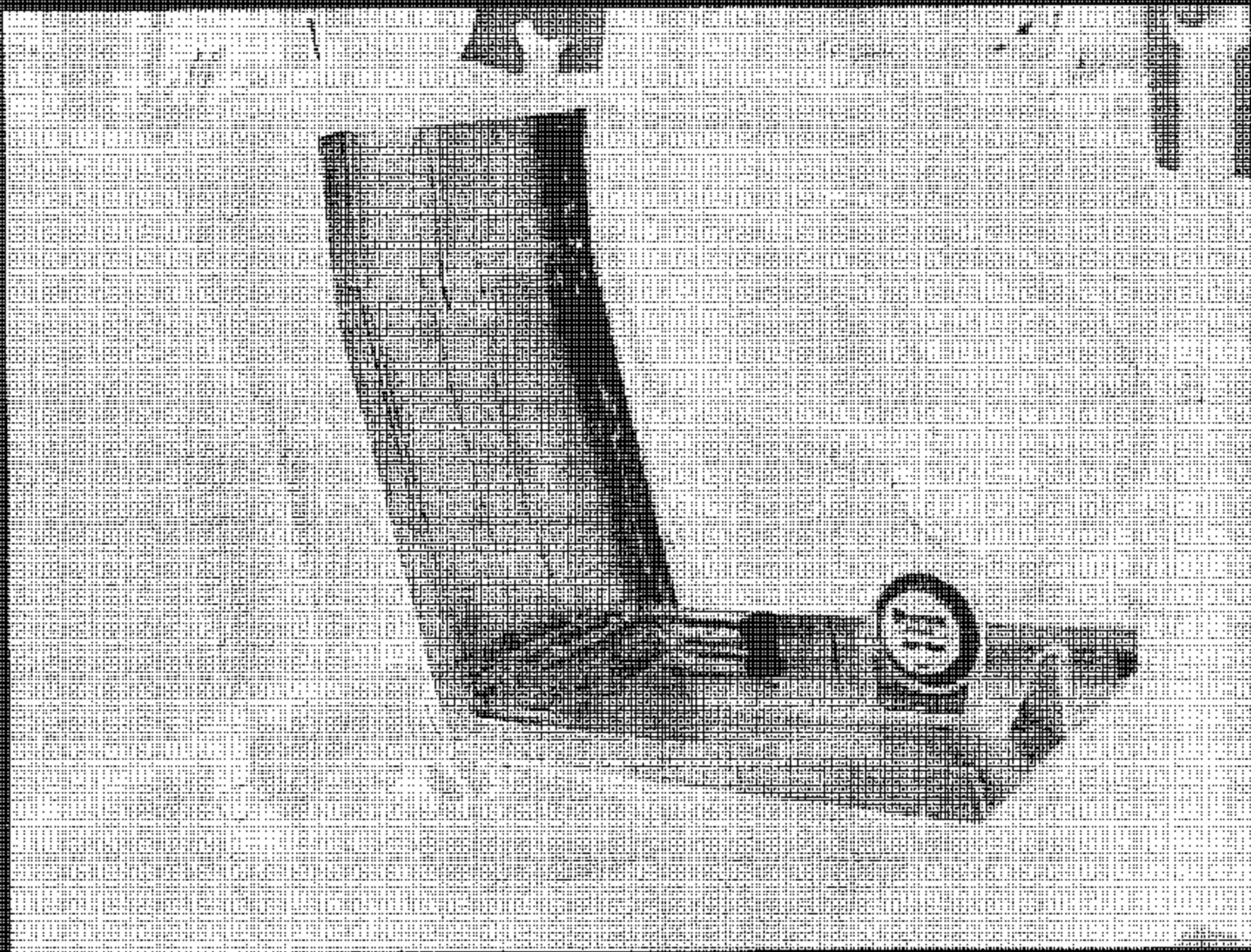
FIGURE 5.21  
VIEW OF 2D TEMPLATE IN 2<sup>ND</sup> ROW RIGHT  
SEAT



2003 BMW MINI COOPER  
NHTSA NO. C30508  
FMVSS NO. 225

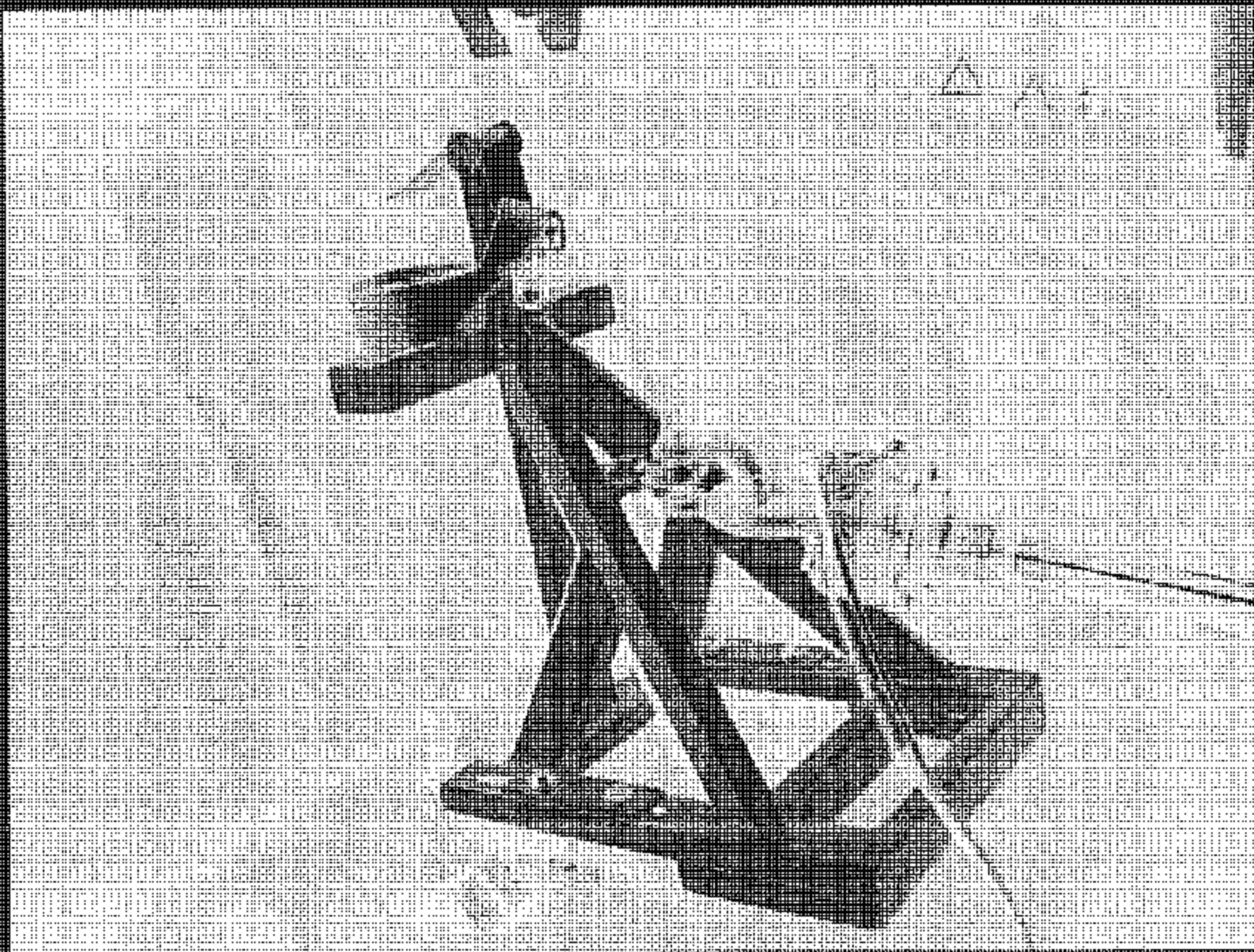
FIGURE 5.22  
VIEW OF CRS IN 2<sup>ND</sup> ROW RIGHT SEAT





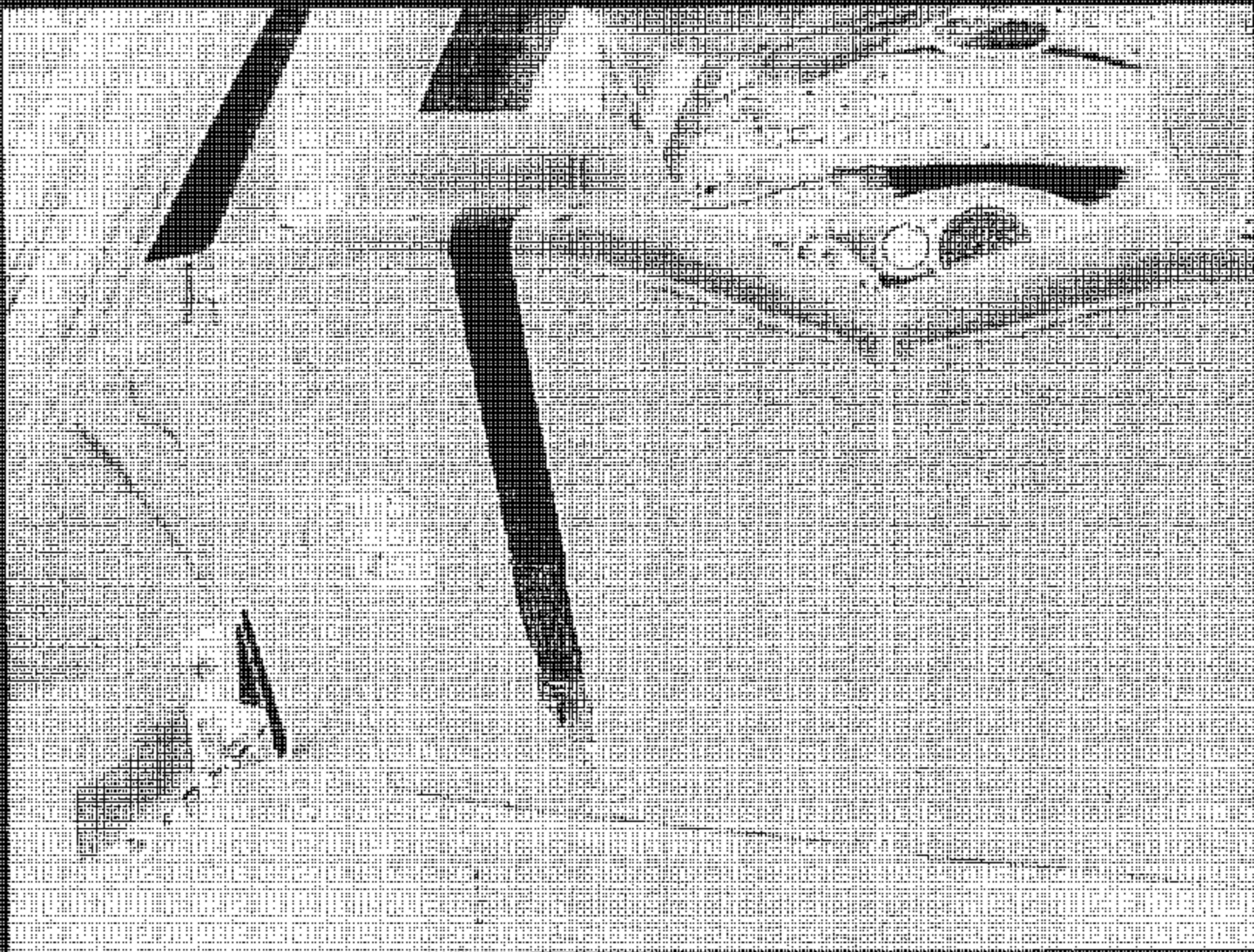
2003 BMW MINI COOPER  
NHTSA NO. C30506  
FMVSS NO. 225

FIGURE 5.23  
VIEW OF ORF IN 2<sup>ND</sup> ROW LEFT SEAT



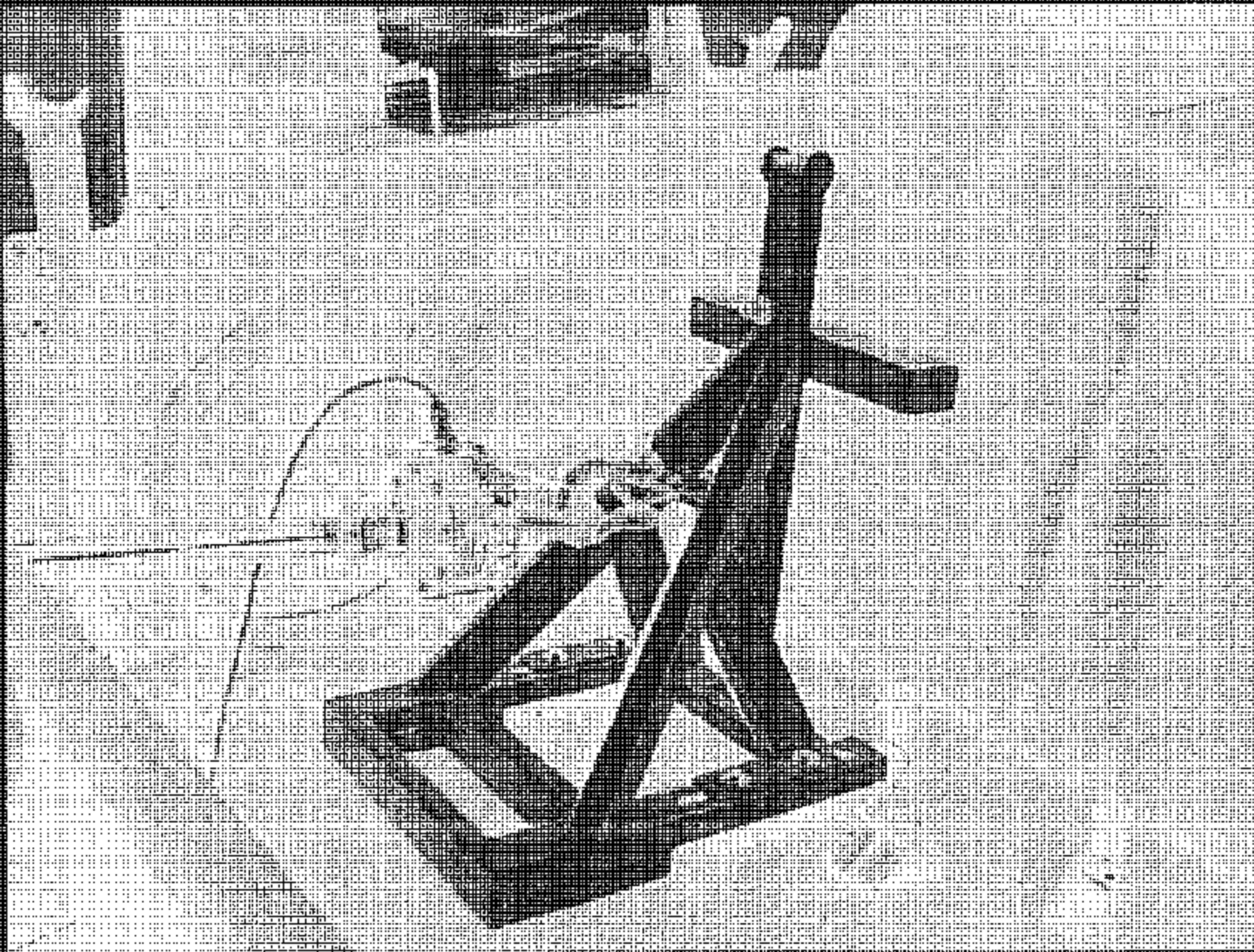
2003 BMW MINI COOPER  
NHTSA NO. C30508  
FMVSS NO. 225

FIGURE 5.24  
PRE-TEST SET-UP 2<sup>ND</sup> ROW LEFT POSITION



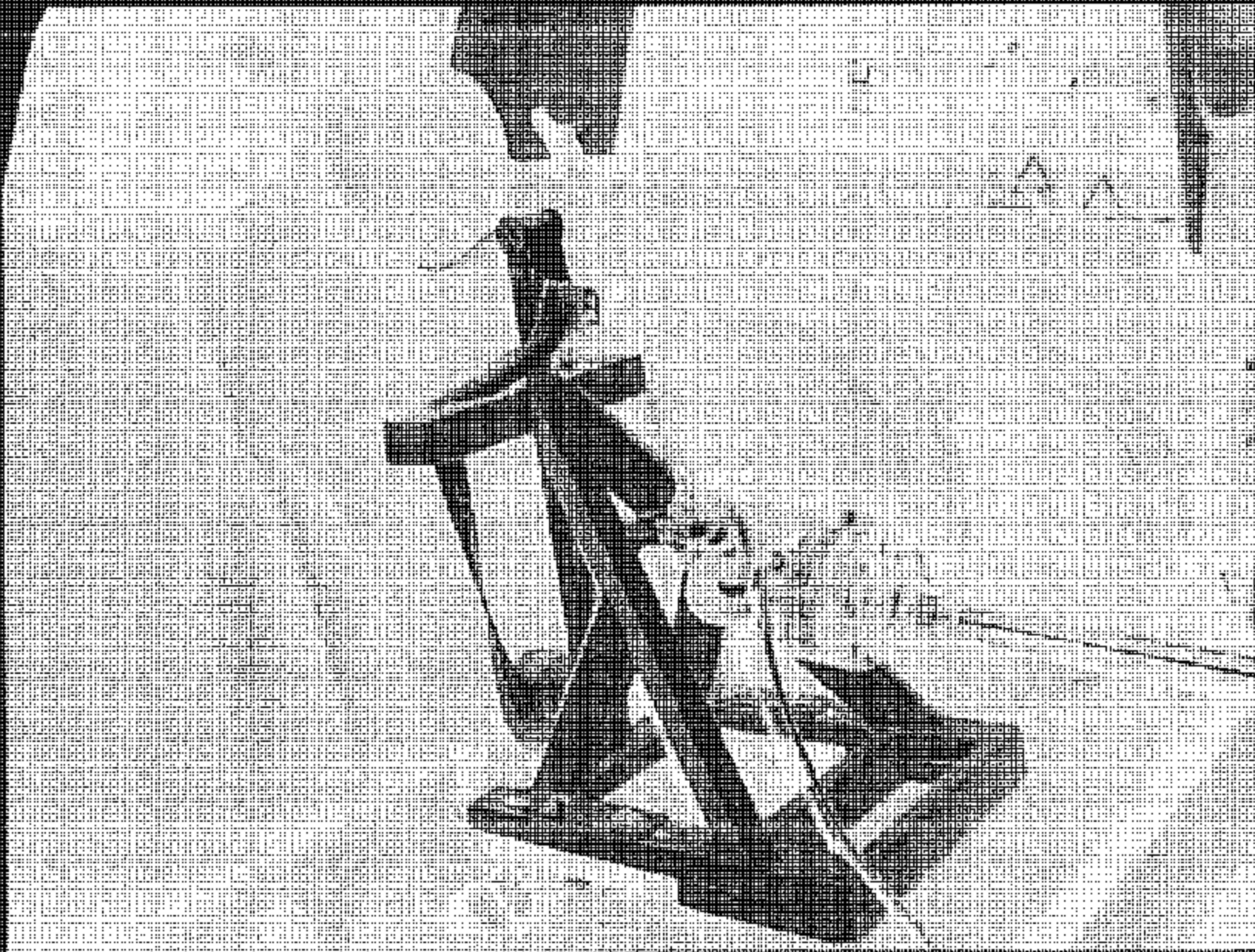
2003 BMW MINI COOPER  
NHTSA NO. C30506  
FMVSS NO. 225

FIGURE 6.25  
PRE-TEST SET-UP 2<sup>ND</sup> ROW LEFT POSITION



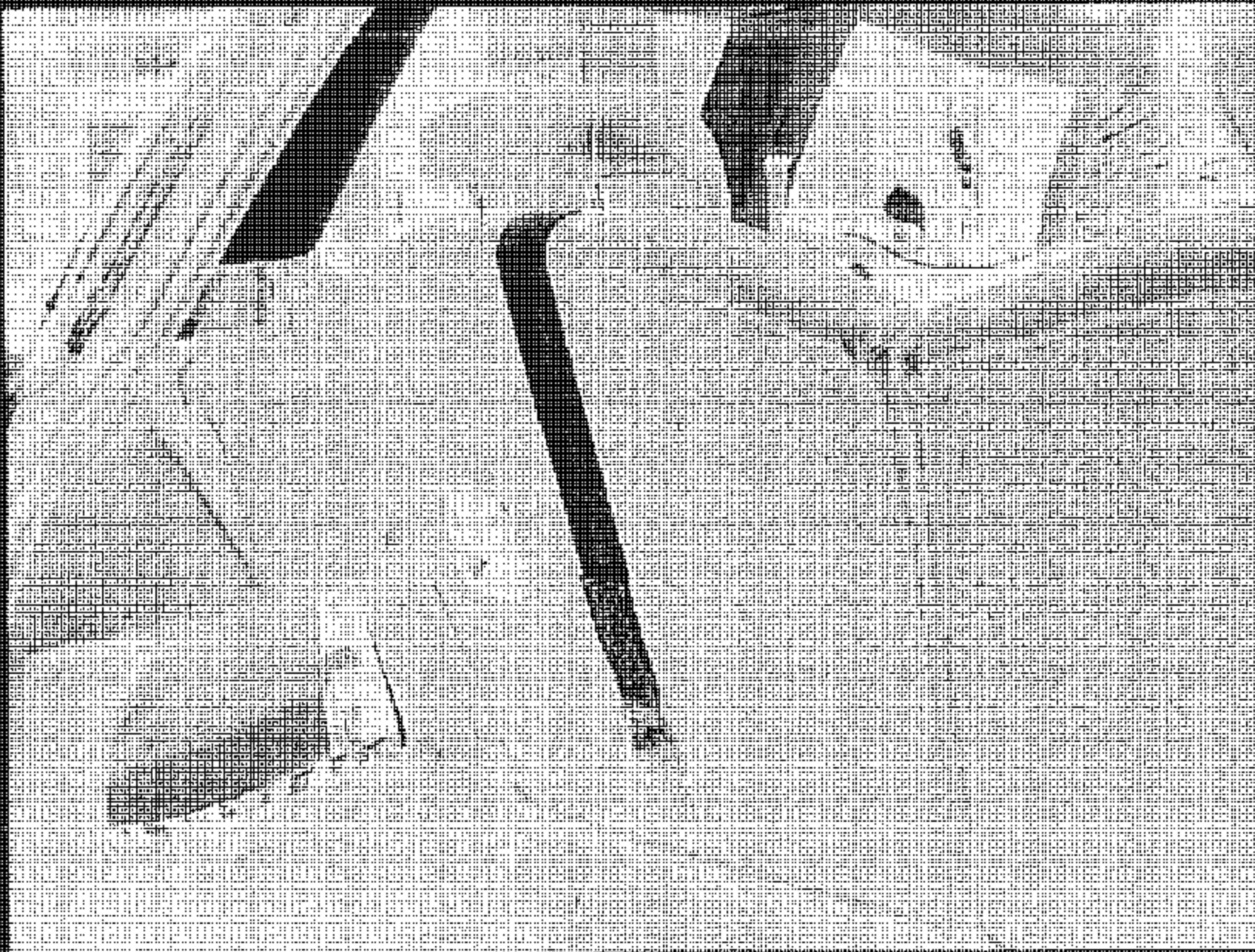
2003 BMW MINI COOPER  
NHTSA NO. C30506  
FMVSS NO. 225

FIGURE 5.26  
PRE-TEST SET-UP 2<sup>ND</sup> ROW RIGHT  
POSITION



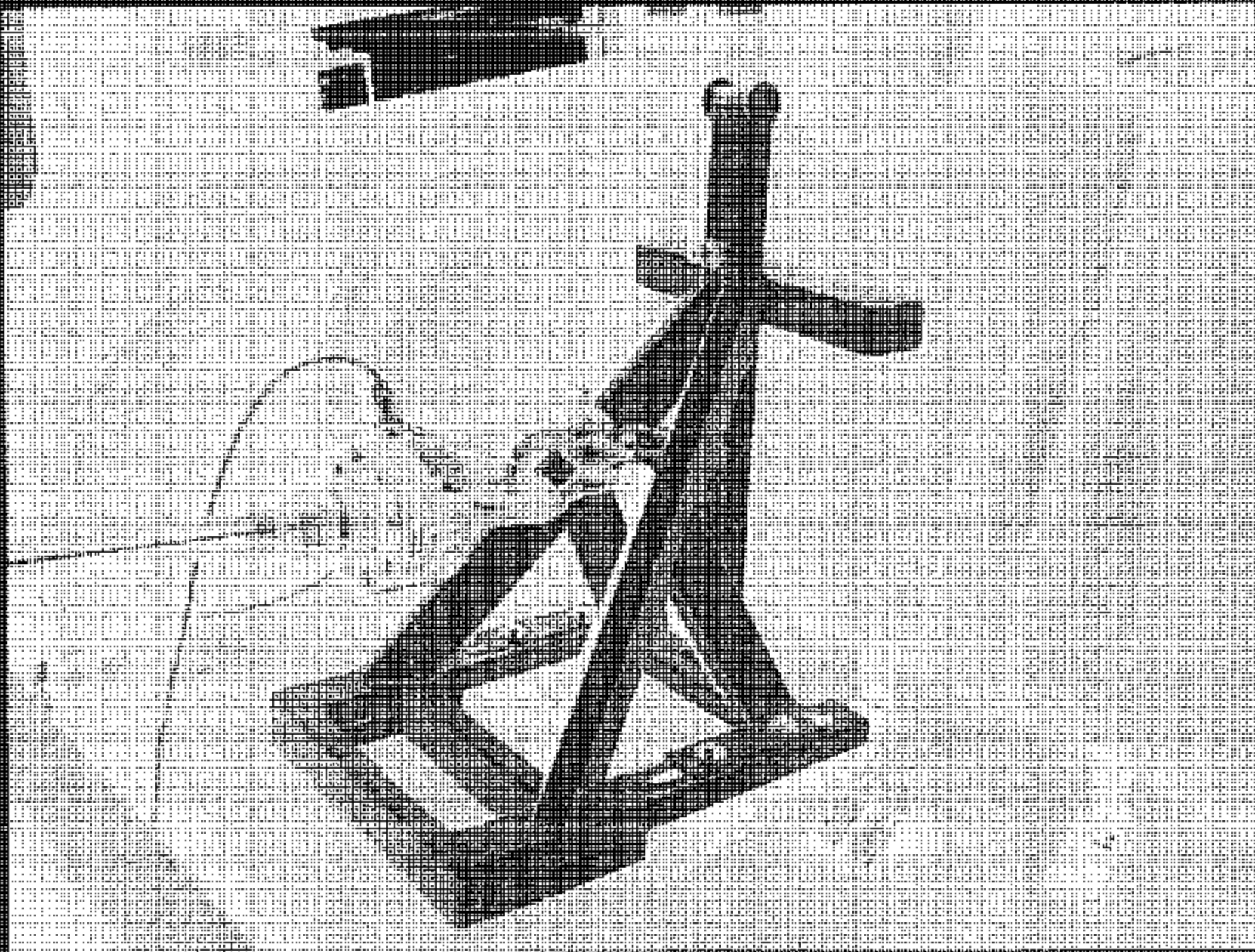
2003 BMW MINI COOPER  
NHTSA NO. C30E06  
FMVSS NO. 225

FIGURE S.27  
POST TEST 2<sup>ND</sup> ROW LEFT POSITION



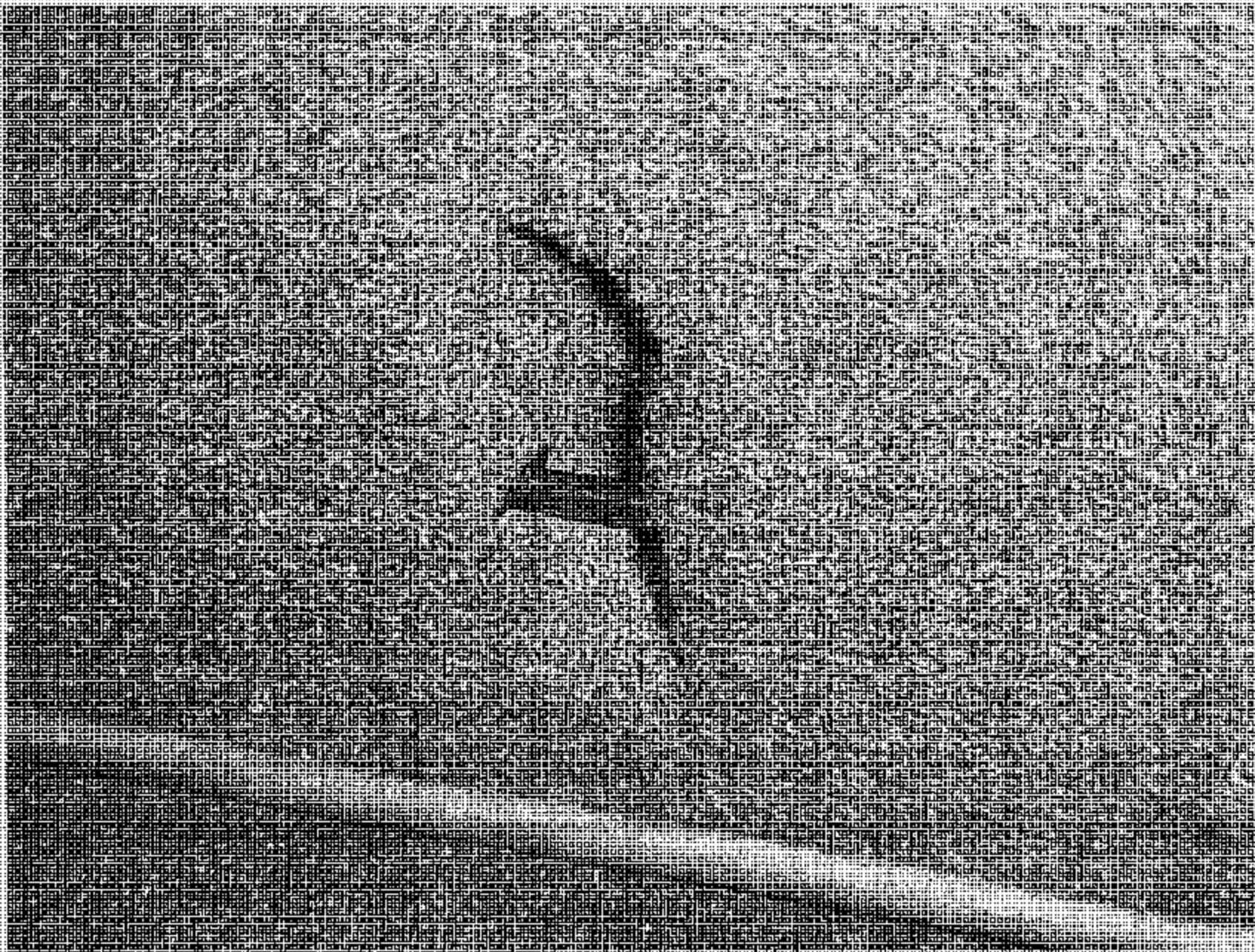
2003 BMW MINI COOPER  
NHTSA NO. C30503  
FMVSS NO. 225

FIGURE S-28  
POST TEST 2<sup>ND</sup> ROW LEFT POSITION



2003 BMW MINI COOPER  
NHTSA NO. C30606  
FMVSS NO. 325

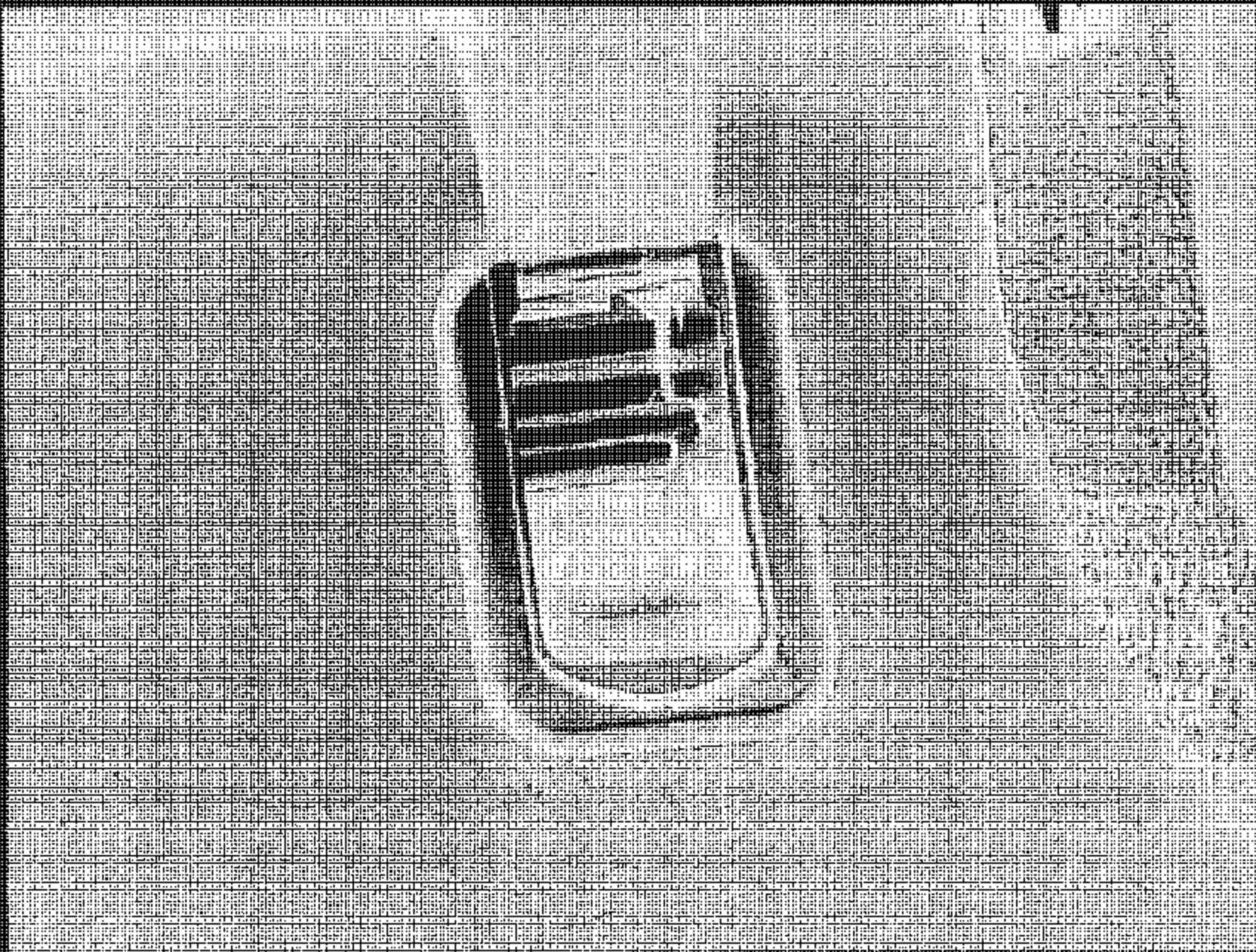
FIGURE 6.26  
POST TEST 2<sup>ND</sup> ROW RIGHT POSITION



2003 BMW MINI COOPER  
NHTSA NO. C30506  
FMVSS NO. 225

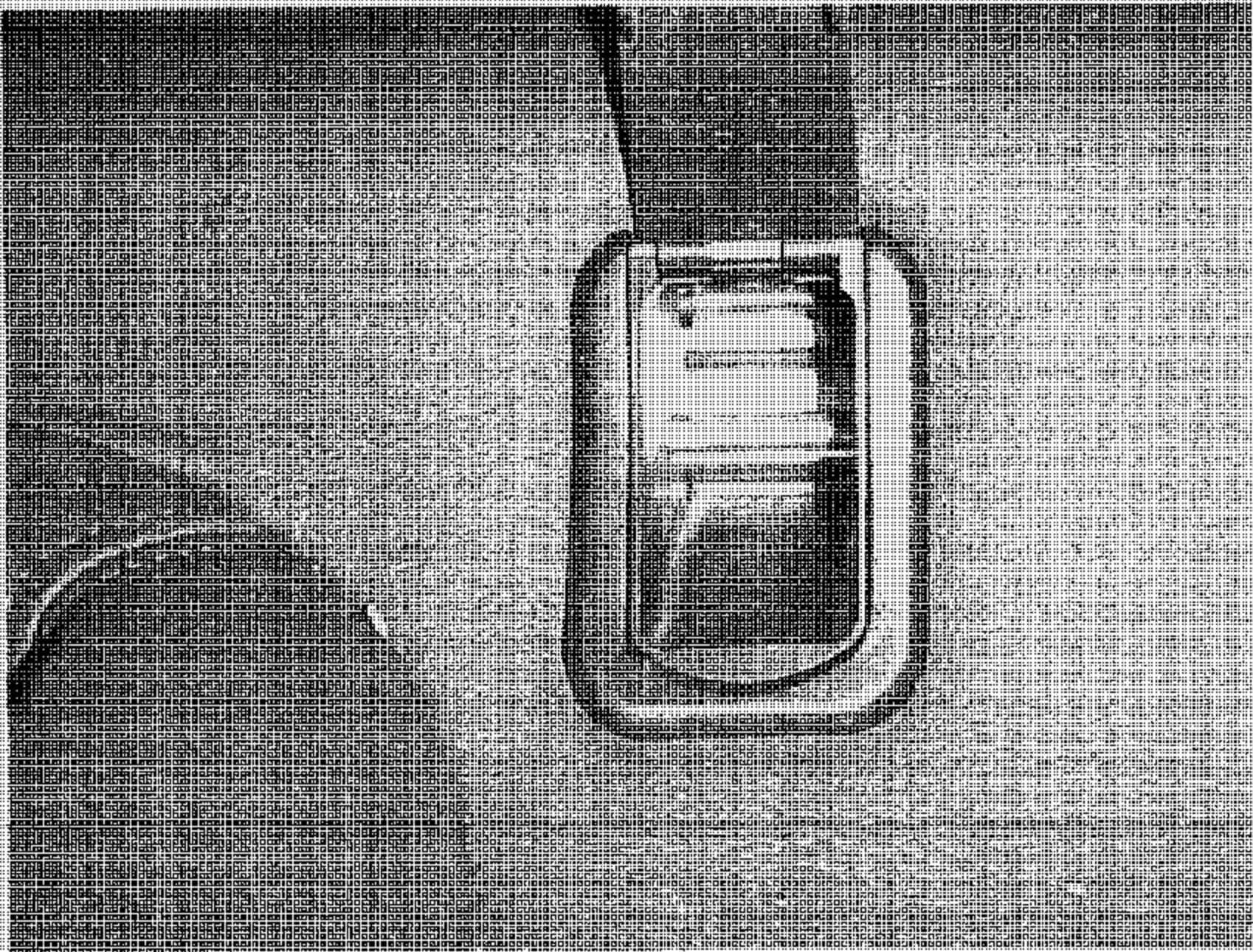
FIGURE 5.30  
POST TEST 2<sup>ND</sup> ROW LEFT TETHER ANCHOR





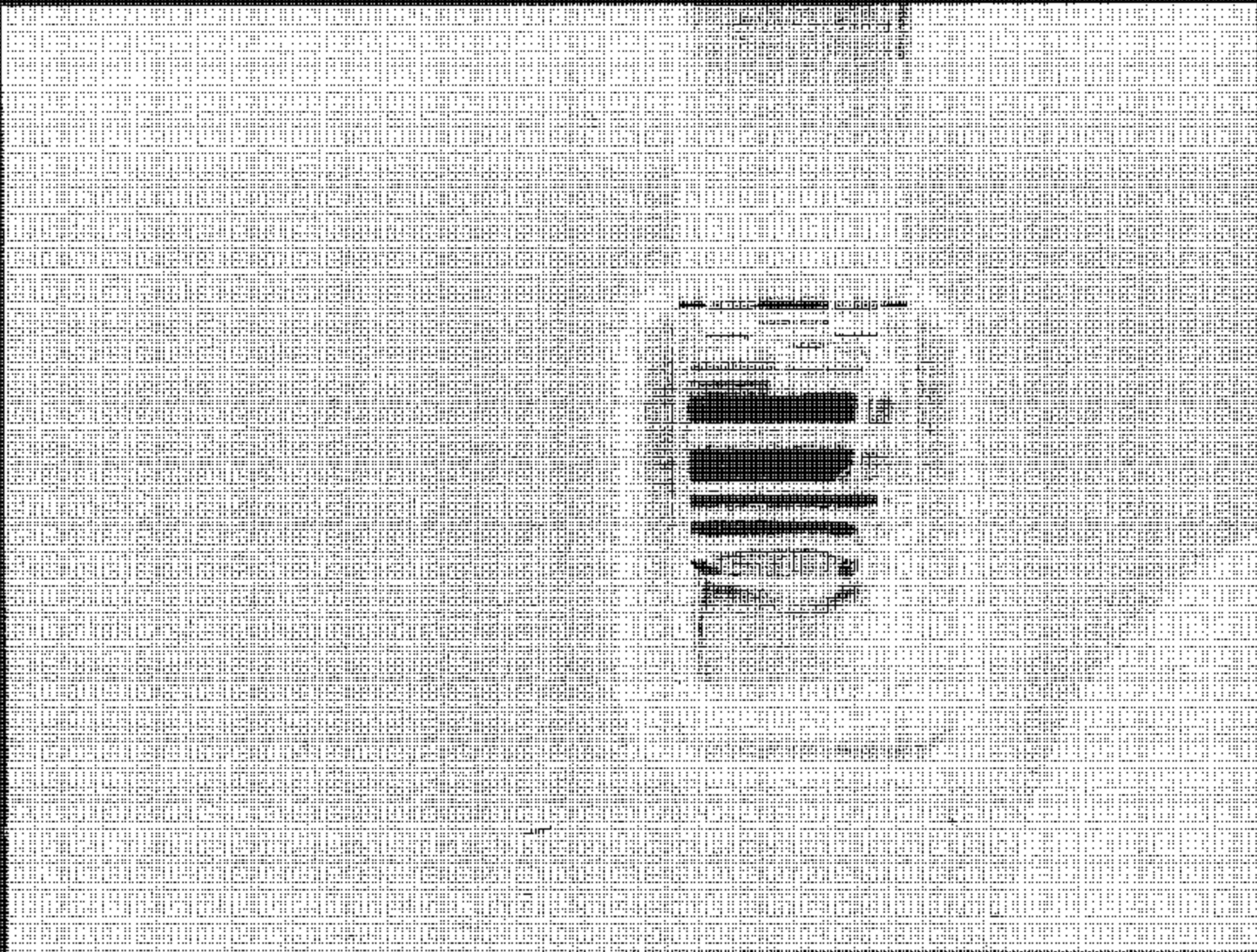
2003 BMW MINI COOPER  
NHTSA NO. C30506  
FMVSS NO. 225

FIGURE 5.31  
POST TEST 2<sup>ND</sup> ROW LEFT OUTBOARD  
LOWER ANCHOR



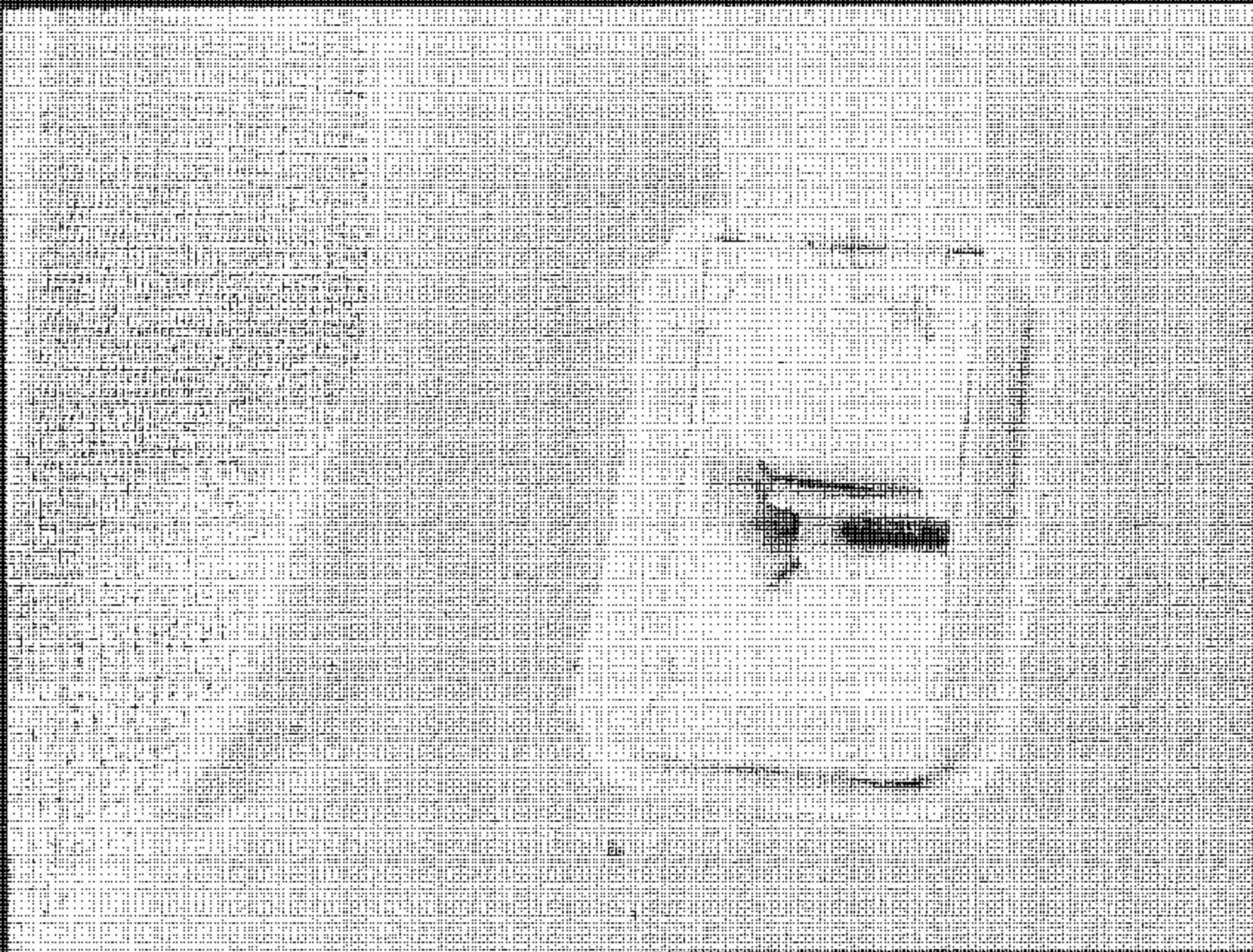
2003 BMW MINI COOPER  
NHTSA NO. C30506  
FMVSS NO. 225

FIGURE 5.32  
POST TEST 2<sup>ND</sup> ROW LEFT INBOARD LOWER  
ANCHOR



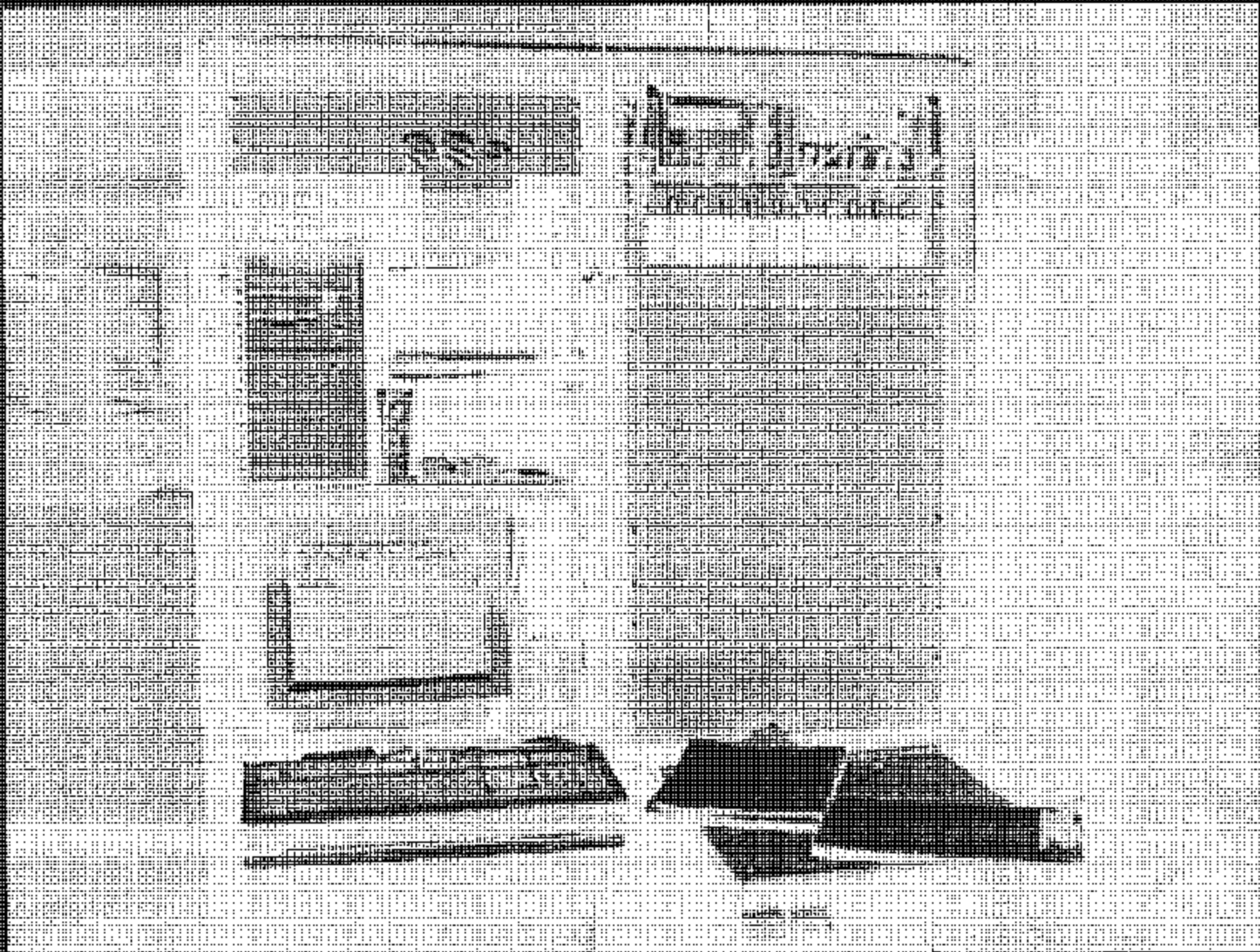
2006 BMW MINI COOPER  
NHTSA NO. C30306  
FMVSS NO. 225

FIGURE 6-23  
POST TEST 2<sup>ND</sup> ROW RIGHT INBOARD  
LOWER ANCHOR



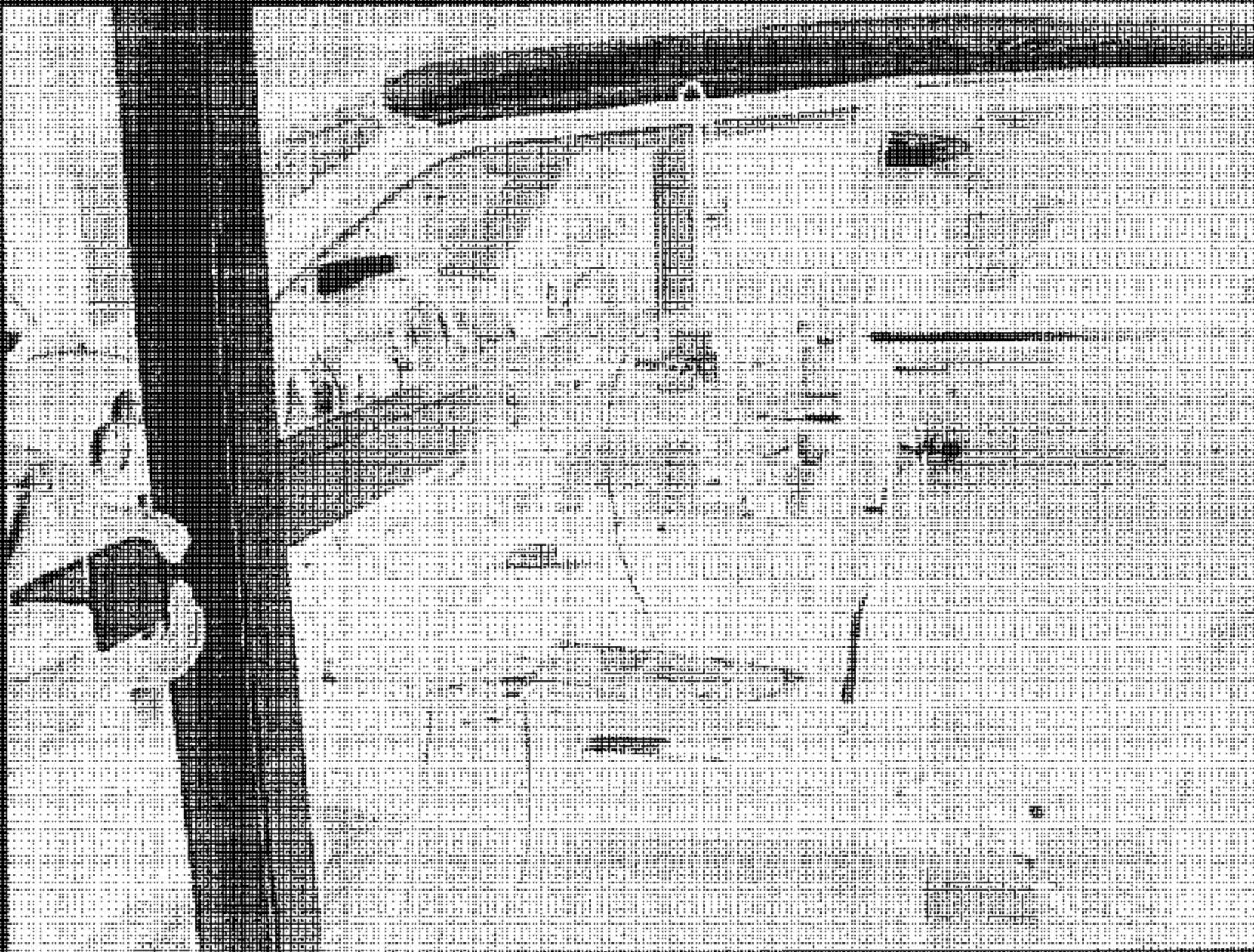
2003 BMW MINI COOPER  
NHTSA NO. C30503  
FMVSS NO. 225

FIGURE 5.34  
POST TEST 2<sup>ND</sup> ROW RIGHT OUTBOARD  
LOWER ANCHOR



2003 BMW MINI COOPER  
NHTSA NO. C30606  
FMVSS NO. 225

FIGURE S.36  
LOAD SYSTEM CONTROL AND DATA  
RECORDING DEVICE IN TEST POSITION



2103 BMW MINI COOPER  
NHTSA NO. C30508  
FMVSS NO. 225

FIGURE 5.36  
LOADING DEVICE WITH LOAD CELL AND  
TEST FIXTURE IN TEST POSITION

SECTION 8

PLOTS

FIGURE 6.1

2<sup>ND</sup> ROW LEFT TOP TETHER ANCHOR

GTL 5103, NHTSA C30506.

225, Child Restraint, Top Tether, S6.3.4

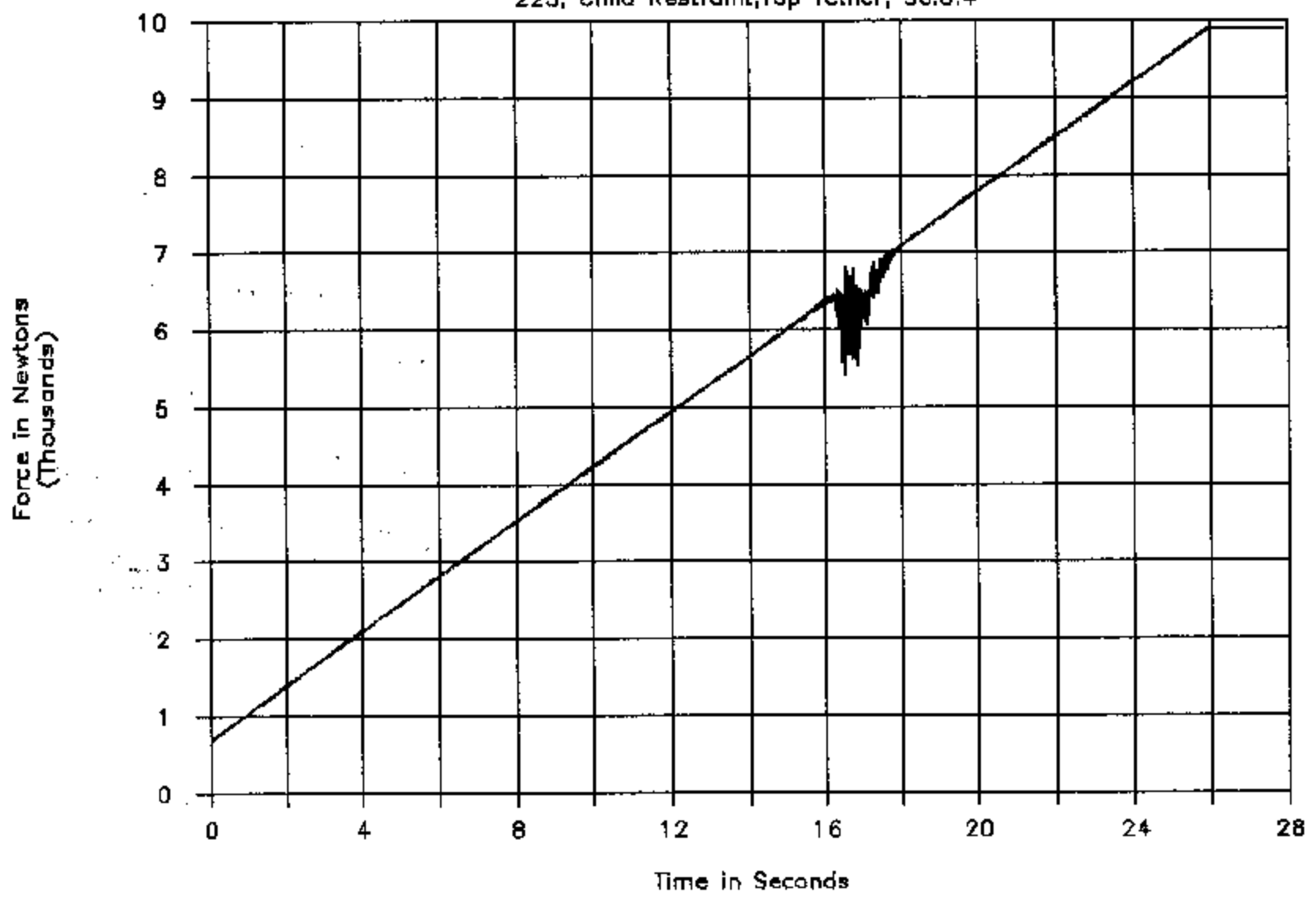




FIGURE 6.2  
2<sup>ND</sup> ROW LEFT TOP TETHER ANCHOR  
GTL 5103, NHTSA C30506.  
225, Child Restraint, Top Tether, S6.3.4

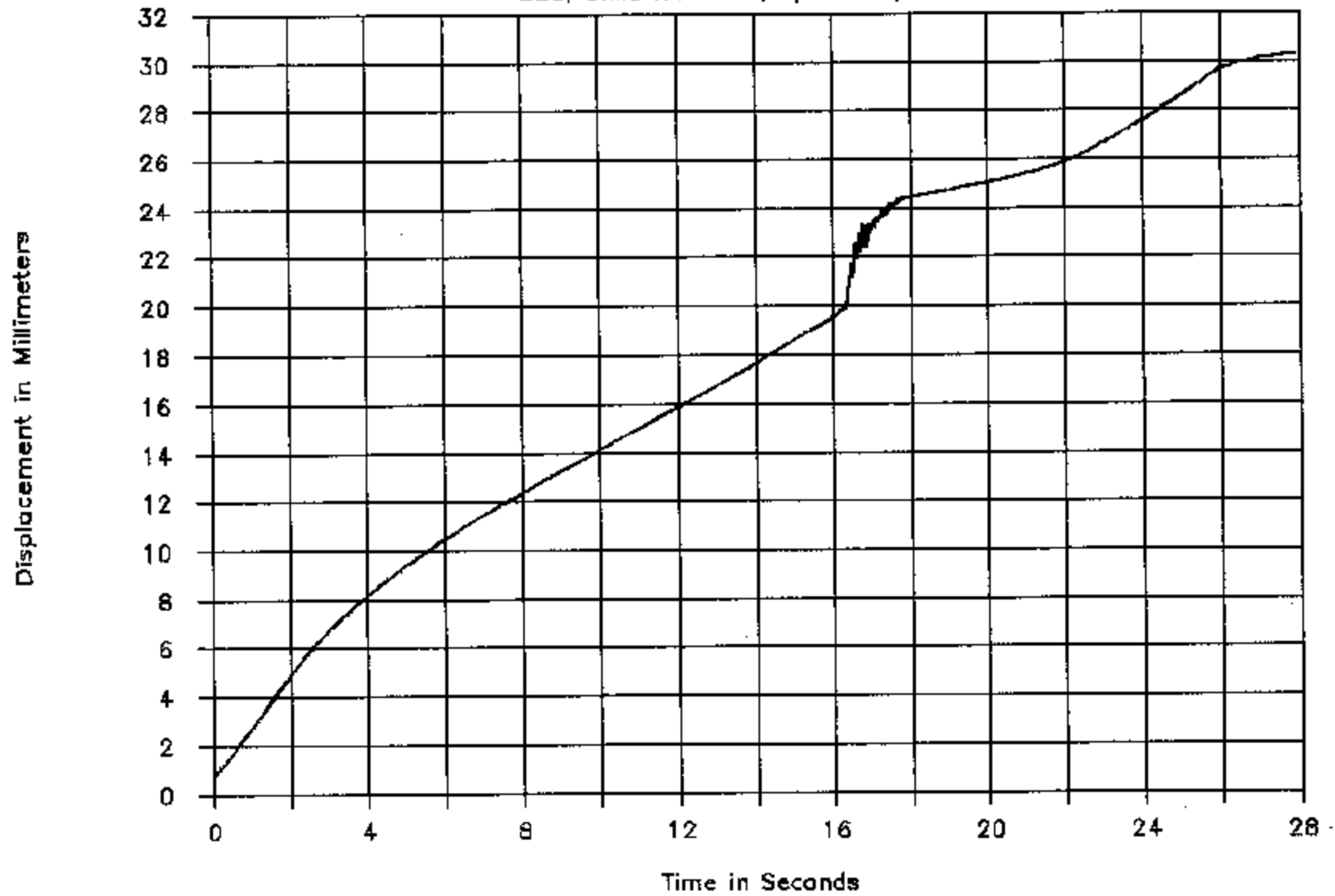


FIGURE 6.3  
2<sup>ND</sup> ROW LEFT TOP TETHER ANCHOR  
GTL 5103, NHTSA C30506.  
225, Child Restraint, Top Tether, S6.3.4

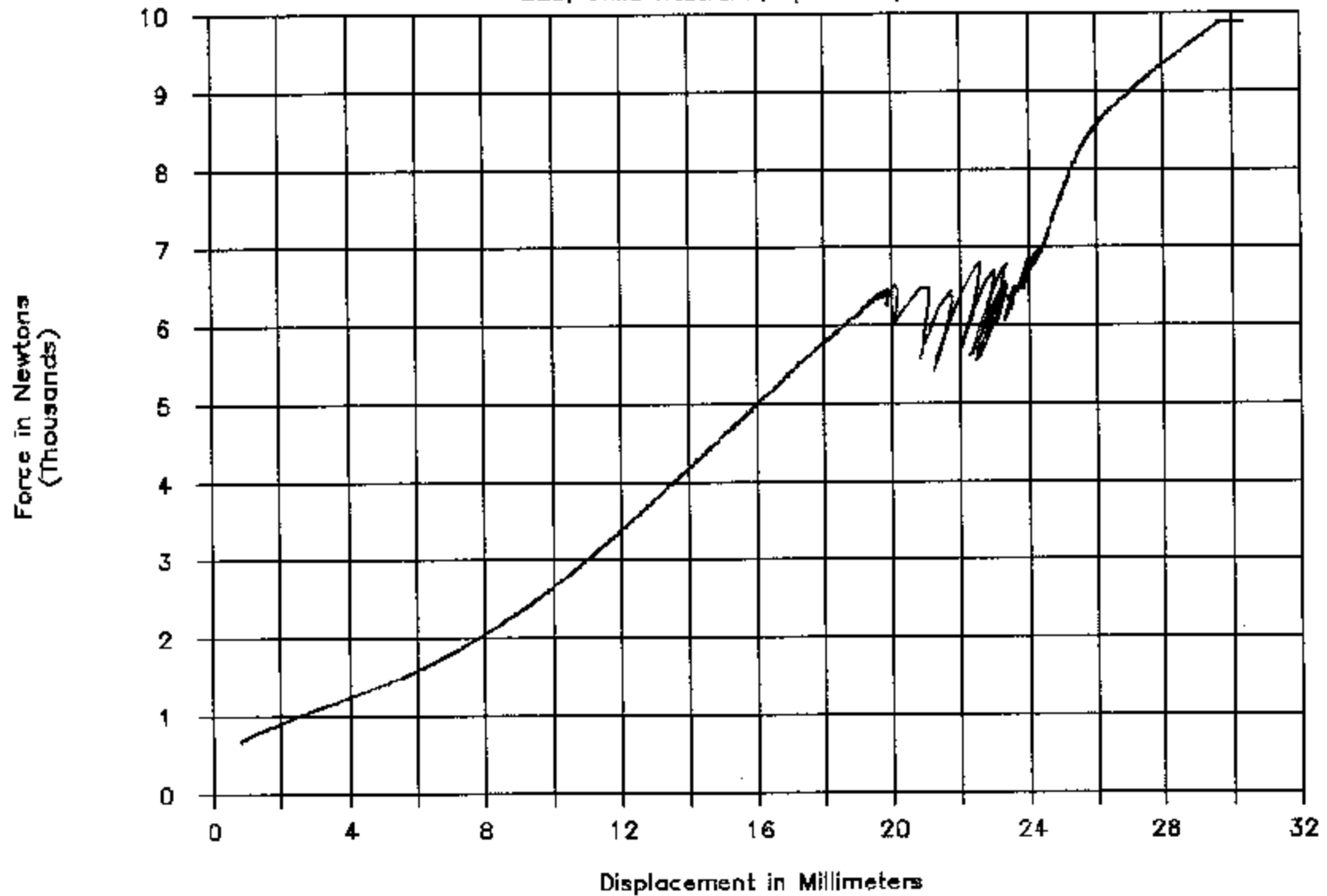


FIGURE 6.4

2<sup>ND</sup> ROW RIGHT LOWER ANCHOR

GTL 5104, NHTSA C30506

225, Child Restraint, Lower Anchor, S15

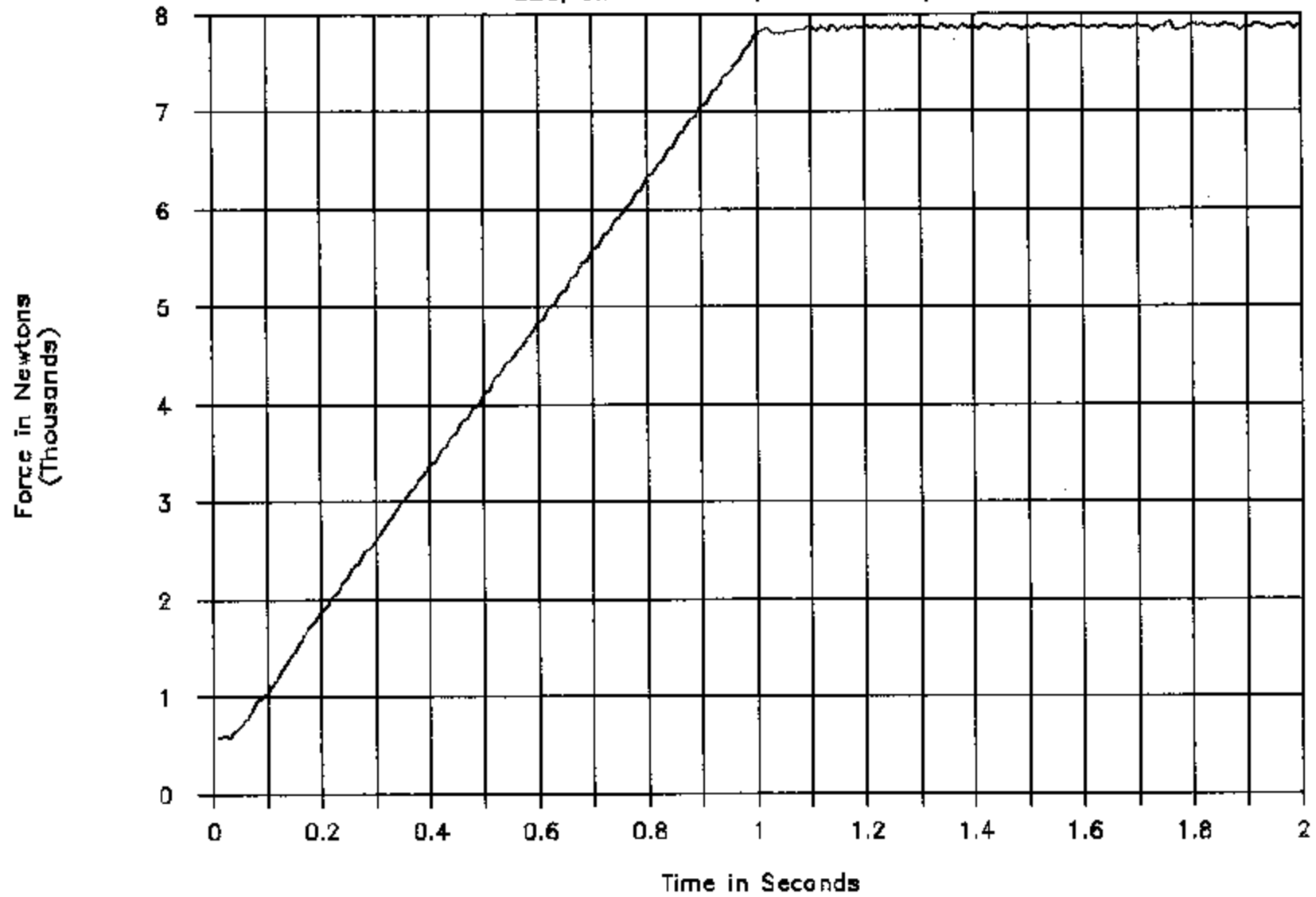


FIGURE 6.5  
2<sup>ND</sup> ROW RIGHT LOWER ANCHOR  
GTL 5104, NHTSA C30506  
225, Child Restraint, Lower Anchor, S15

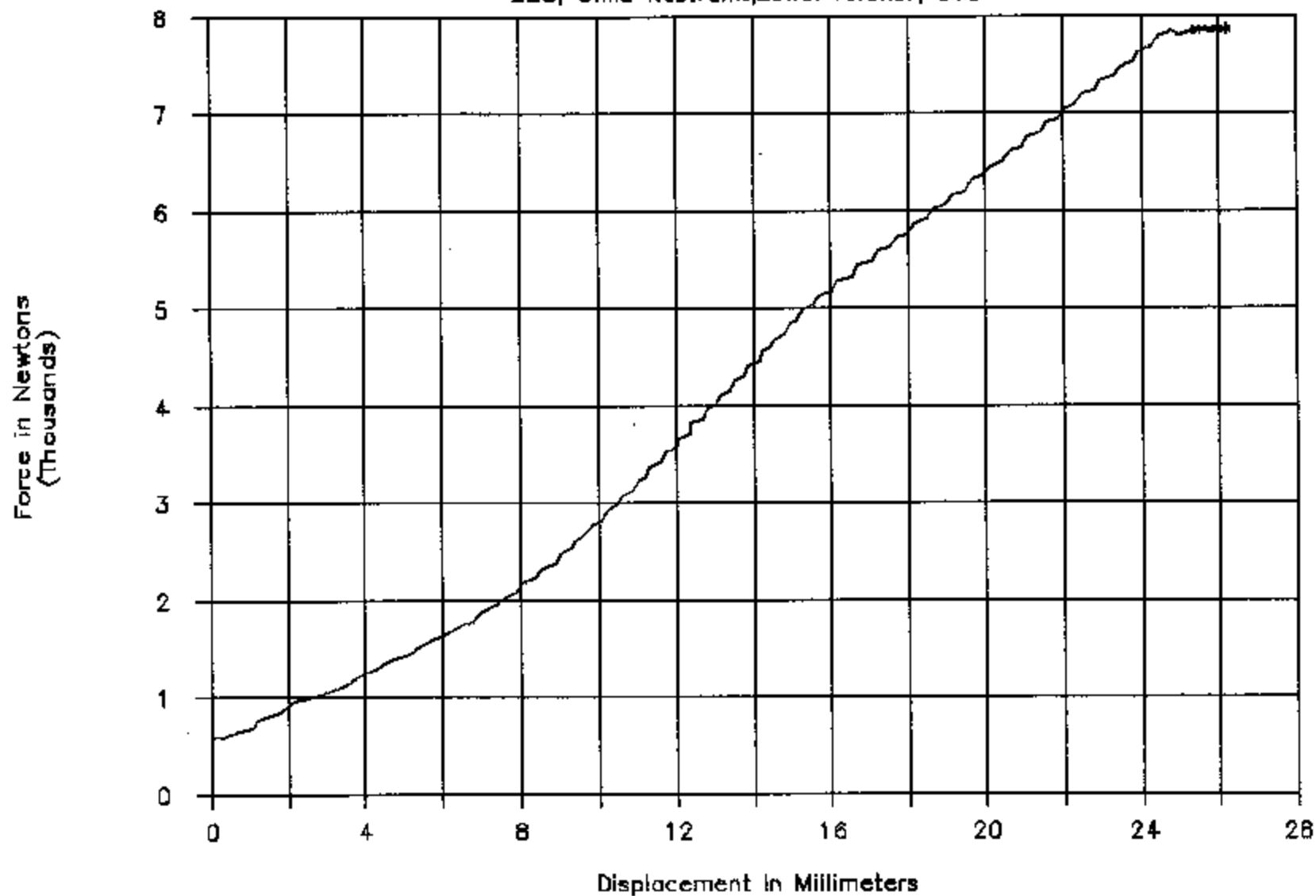
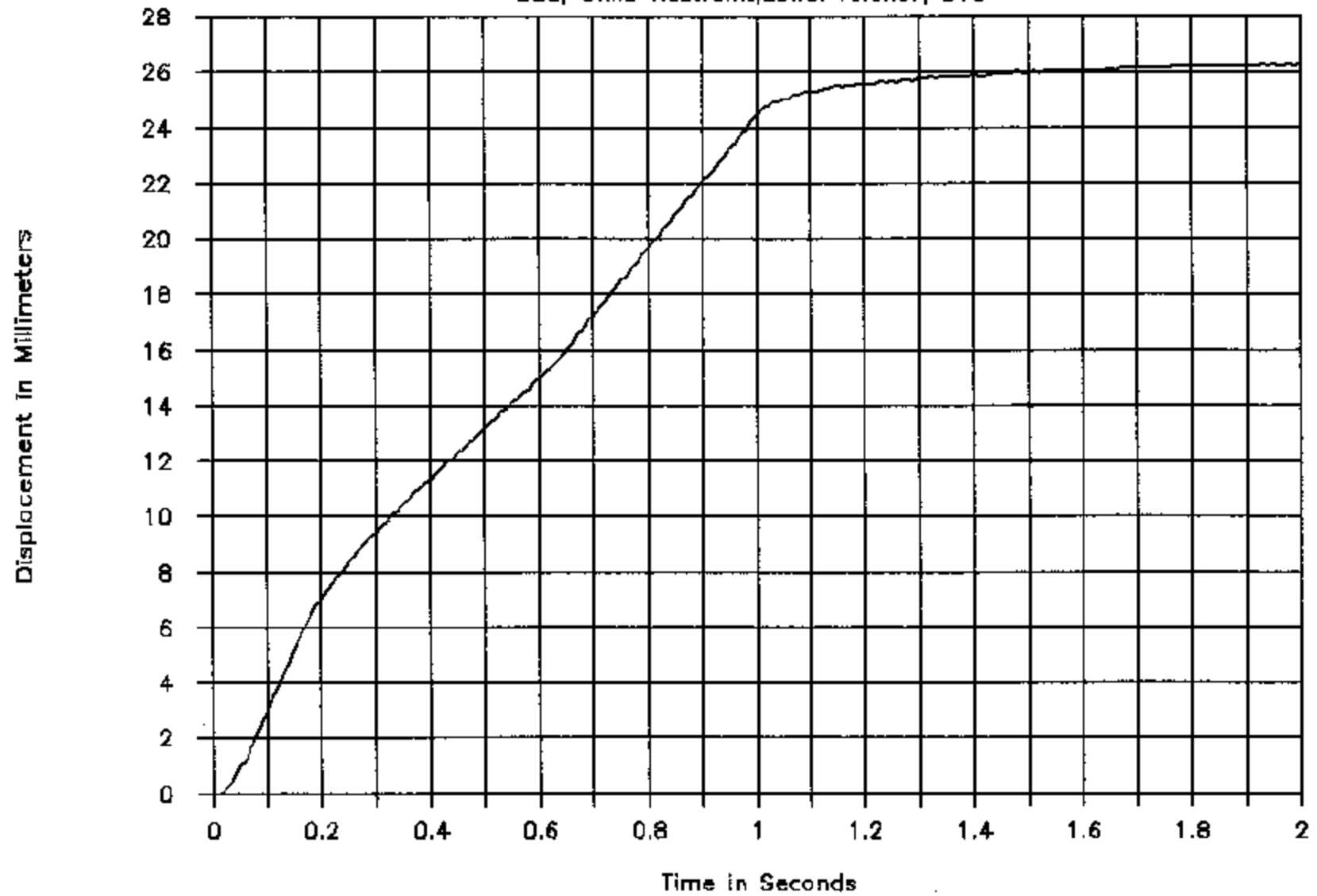


FIGURE 6.6  
2<sup>ND</sup> ROW RIGHT LOWER ANCHOR

GTL 5104, NHTSA C30506

225, Child Restraint, Lower Anchor, S15




**APPENDIX A**

**OWNER'S MANUAL CHILD RESTRAINT INFORMATION**

## AIRBAGS

### Indicator lamp

 The indicator lamp on the instrument panel shows the airbag system status starting from ignition key position 1.

#### System operational:

▷ The indicator lamp comes on briefly.

#### System malfunction:

- ▷ The indicator lamp does not come on
- ▷ The indicator lamp fails to go out after the engine has been started, or it comes on during normal driving.

A system defect could prevent the airbags from deploying in response to a severe impact occurring within the system's normal triggering range.

Have the airbag system checked as soon as possible by your MINI Dealer.

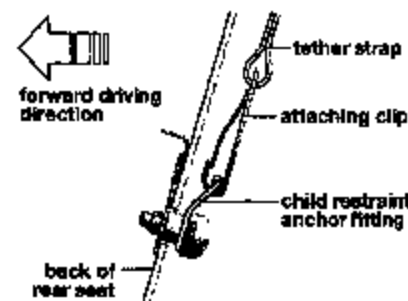
## TRANSPORTING CHILDREN SAFELY



Children younger than 12 years of age or smaller than 5 ft / 150 cm must be transported in suitable child-restraint system. Otherwise there is an increased risk of injury in the event of an accident.

Commercially-available child-restraint systems are designed to be secured with a lap belt or with the lap belt portion of a combination lap/shoulder belt. Improperly or inadequately installed restraint systems can increase the risk of injury to children. Always read and follow the instructions that come with the system.


If you use a child-restraint system with a tether strap:



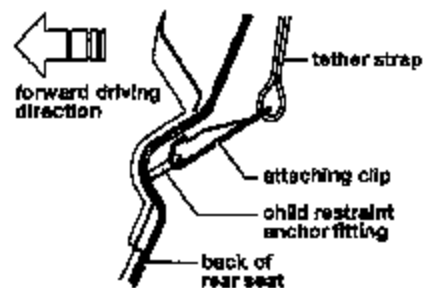
Your vehicle has one of two different types of child-restraint anchor fittings on the back of the rear seats, see arrows 1 or 2.

Depending on the location selected for seating in the rear passenger area, attach the tether strap to the corresponding anchorage point to secure the child-restraint system.

Adjust the tether strap according to the child-restraint manufacturer's instructions.

 Anchor fitting 1 is shown above. Anchor fitting 2 is shown in the next column. ◀

## TRANSPORTING CHILDREN SAFELY



Both seating positions are fitted with a head restraint. Lift the head restraint and pass the tether strap between the head restraint and the seat back. It is recommended to readjust the head restraint into the lowest possible position.

**⚠** Adjust the tether strap according to the child-restraint manufacturer's instructions. Before installing any child-restraint system, please read the following: Never install a rearward-facing child-restraint system in the front passenger seat of this vehicle.

Your vehicle is equipped with an airbag supplemental restraint system for the front passenger. Because the backrest on any rearward-facing child-restraint system — of the kind designed for infants under 1 year and 20 lbs. / 9 kg — would be within the airbag's deployment range, you should never mount such a device in the front passenger seat, since the impact of the airbag against the child-restraint's backrest could lead to serious or fatal injuries.

If it is necessary for a child — not an infant — to ride in the front seat, certain precautions should be taken. First, move the passenger seat as far away from the instrument panel as possible. This important precaution is intended to maximize the distance between the airbag and the child. Older children should be tightly secured with a safety belt, after they have outgrown a booster seat that is appropriate for their age, height and weight. Younger children should be secured in an appropriate forward-facing child-restraint system that has

first been properly secured with a safety belt. Never install a rearward-facing child-restraint system in the front passenger seat.

We strongly urge you to carefully read and comply with the instructions for installation and use provided by the child-restraint's manufacturer whenever you use such a device.

Be sure that all occupants — of all ages — remain properly and securely restrained at all times.

According to accident statistics, children are safer when properly restrained in the rear seats than in the front seating positions. ◀

All rear seats in your vehicle conform to the guidelines defined in SAE J1819, an industry recommended practice for securing child-restraint systems in motor vehicles.



## TRANSPORTING CHILDREN SAFELY



MEINZBERGMA

### To lock the belt

Pull the entire length of the belt from the belt retractor. Allow the reel to retract the belt somewhat and engage the buckle, then tighten the belt against the child-restraint system.

The retraction mechanism is now locked.

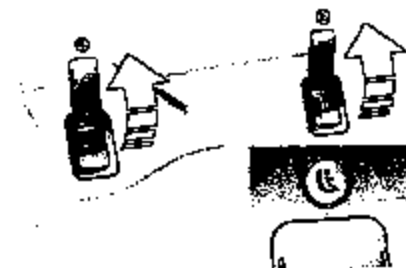
### To unlock the belt

Release the buckle, remove the child-restraint system and allow the belt retractor to reel the belt completely in.

### Child seat security

All of the rear belt retractors and the front passenger's safety belt can be locked for mounting and securing child-restraint systems.

Information regarding this is located near the buckle latch of each safety belt.



MEINZBERGMA

### LATCH child-restraint system


Open the cover.

The illustration is an example showing the mounts for the LATCH, Lower Anchors and Tethers for Children, child-restraint mounting system at the right rear.

The system is also available at the left rear position.

Canadian models only:

The LATCH anchorage points are identified by buttons, see illustration.

 Always follow all manufacturer's instructions and observe all safety precautions when installing the LATCH child-restraint system. ◀

OVERVIEW

CONTROLS

OPERATION

REPAIRS

DATA

INDEX

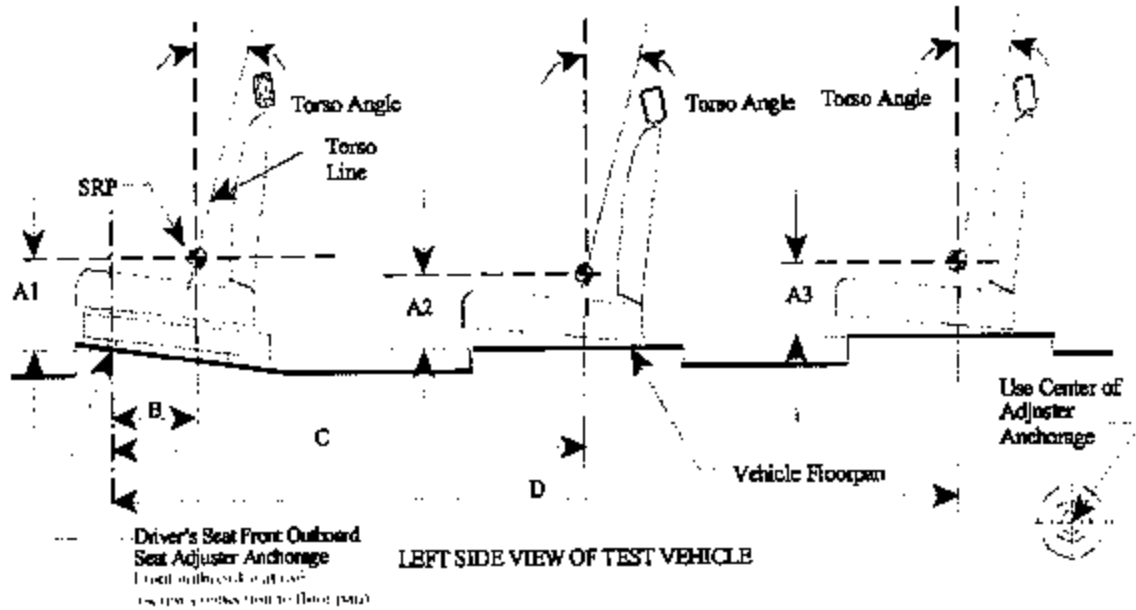
43

**APPENDIX B**  
**MANUFACTURER'S DATA**

FORM 14  
Page 1 of 10

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

Model Year: 2003; Make: MINI; Model: MINI Cooper; Body Style: Hatchback  
Seat Style: Front row: not applicable; Second row: individual seat; Third row: not applicable



C30506

FORM 14  
Page 2 of 10

Table 1. Seating Positions and Torso Angles

		Left (Driver Side)	Center (if any)	Right
A1	(Driver)	not applicable	not applicable	(Front Passenger) not applicable
A2		not applicable	not applicable	not applicable
A3		not applicable	not applicable	not applicable
B		not applicable	not applicable	not applicable
C		not applicable	not applicable	not applicable
D		not applicable	not applicable	not applicable
Torso Angle (degree)	Front Row	not applicable	not applicable	not applicable
	Second Row	24°	not applicable	25°
	Third Row	not applicable	not applicable	not applicable

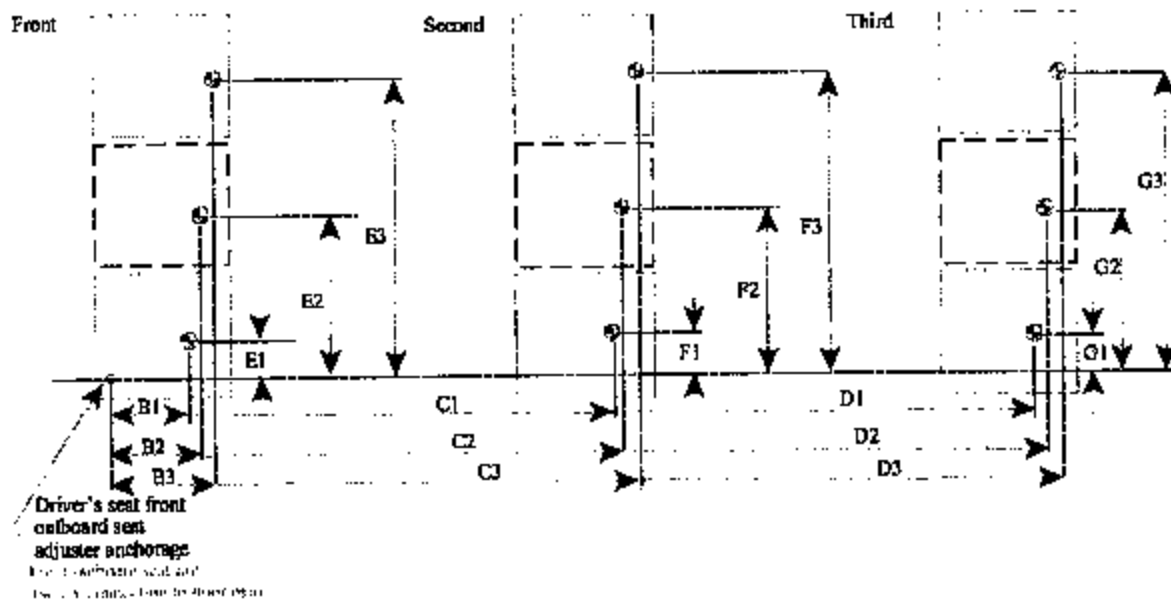
Note: 1. All dimensions are in mm. If not, provide the unit used.

\* Measured to "Driver's Seat Front Outboard Seat Adjuster Anchorage" (if non-adjusted seat) or, alternatively, to floor pan.

FORM 14  
Page 3 of 10

SEATING REFERENCE POINT  
FOR FMVSS 225  
(All dimensions in mm)

Model Year: 2003; Make: MINI; Model: MINI Cooper; Body Style: hatchback  
Seat Style: Front row: not applicable; Second row: individual seat; Third row: not applicable



FORM 14  
Page 4 of 10

Table 2. Seating Reference Point and Tether Anchorage Locations

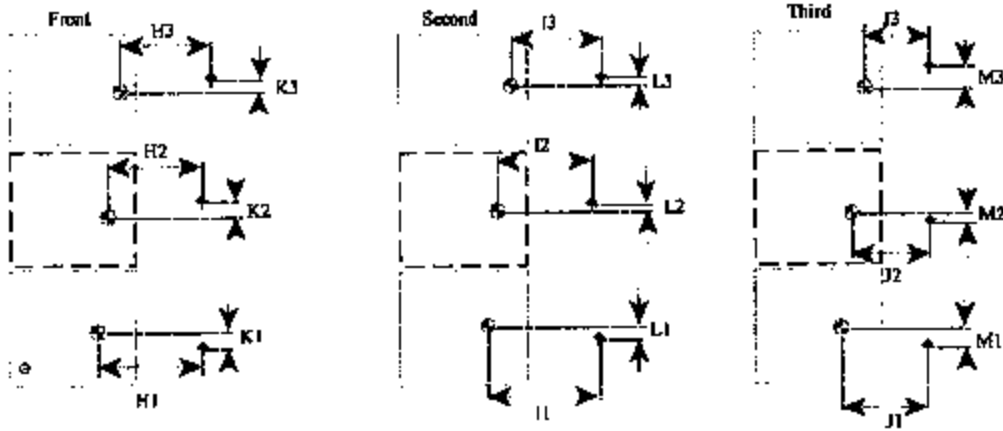
Seating Reference Point (SRP)		Distance from Driver's front outboard seat adjuster anchorage <sup>1</sup>
Front Row	B1	not applicable
	E1	not applicable
	B2	not applicable
	E2	not applicable
	B3	not applicable
	E3	not applicable
Second Row	C1	995.3
	F1	263
	C2	not applicable
	F2	not applicable
	C3	995.5
	F3	813
Third Row	D1	not applicable
	G1	not applicable
	D2	not applicable
	G2	not applicable
	D3	not applicable
	G3	not applicable

Note: 1. Use the center of anchorage.

FORM 14  
Page 5 of 10

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

Model Year: 2003; Make: MINI; Model: MINI Cooper; Body Style: hatchback  
Seat Style: Front row: not applicable; Second row: individual seat; Third row: not applicable



5: SRP

↑: Tether anchorage

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

FORM 14  
Page 6 of 10

Table 3. Seating Reference Point and Tether Anchorage Locations

Seating Reference Point (SRP)	Distance from SRP	
	Front Row	H1
K1		not applicable
H2		not applicable
K2		not applicable
H3		not applicable
K3		not applicable
Second Row	I1	274.9
	L1	-30 *
	I2	not applicable
	L2	not applicable
	I3	274.9
	L3	-30 *
Third Row	J1	not applicable
	M1	not applicable
	J2	not applicable
	M2	not applicable
	J3	not applicable
	M3	not applicable

Note: 1. Use the center of anchorage.

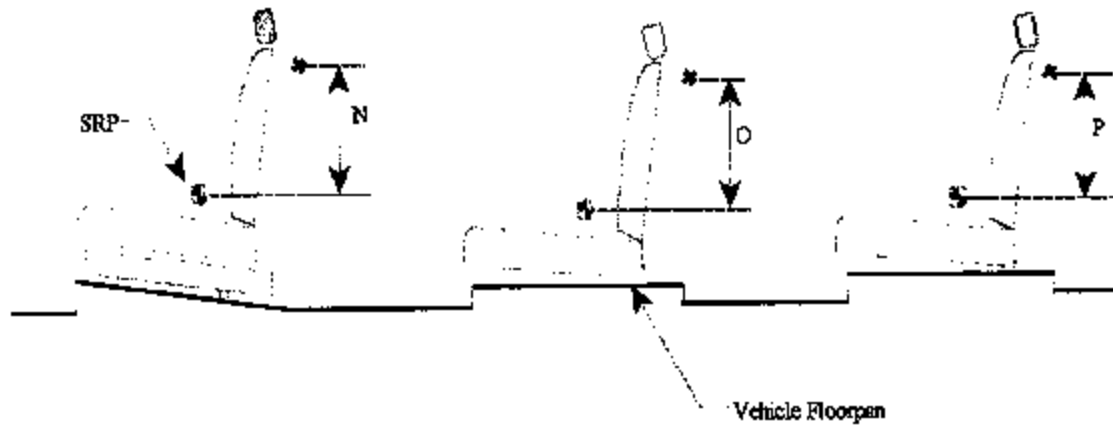
\* Further inboard than SRP



FORM 14  
Page 7 of 10

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

Model Year: 2003; Make: MINI; Model: MINI Cooper; Body Style: Hatchback  
Seat Style: Front row: not applicable; Second row: individual seat; Third row: not applicable



LEFT SIDE VIEW OF TEST VEHICLE

FORM 14  
Page 8 of 10

Table 4. Vertical Dimension For The Tether Anchorage

Seating Row	Vertical Distance from Seating Reference Point	
Front Row	N1 (Driver)	N/A
	N2 (Center)	not applicable
	N3 (Right)	not applicable
Second Row	O1 (Left)	N/A
	O2 (Center)	not applicable
	O3 (Right)	N/A
Third Row	P1 (Left)	not applicable
	P2 (Center)	not applicable
	P3 (Right)	not applicable

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

FORM 14  
Page 9 of 10

Test Procedures Used for Compliance Tests

Tether Anchorages

Seating Location		FMVSS Section(s) - Req.
Front	Driver	N/A
	Center (if any)	not applicable
	Right (if any)	not applicable
Second	Left	Not App
	Center	not applicable
	Right (if any)	Not App
Third	Left	not applicable
	Center	not applicable
	Right	not applicable
Fourth	Left	not applicable
	Center	not applicable
	Right	not applicable

Lower Anchorages

Seating Location		FMVSS Section(s) - Req.
Front	Driver	N/A
	Center (if any)	not applicable
	Right (if any)	not applicable

FORM 14  
Page 10 of 10

For each anchorage system, provide the following information:

1. **Lower Anchorage Dimensions:** Whether the anchorages are certified with S15.1.2.1 of FMVSS No. 225.

Yes

2. **Lower Anchorage Location:** Whether the anchorages are certified with S15.1.2.2 of FMVSS No. 225.

Yes

If the anchorages are certified with S15.1.2.2, provide the pitch, roll and yaw angles.

Pitch 12.9°

roll 0°

yaw 0°

3. **Lower Anchorage Marking and Conspicuity:** Whether the anchorages are certified with S15.4 of FMVSS No. 225.

Yes

If guidance fixtures are used, provide the location of the seating systems that are equipped with the guidance fixture.

Yes

4. **Location of Tether Anchorage:** Applicable section of FMVSS No. 225 for the option used for its certification.

S6.2.1

5. **Number of Tether Anchorage:** Applicable section of FMVSS No. 225 for the option used for its certification.

S4.4 (b)