

REPORT NUMBER 110-GTL-04-001

**SAFETY COMPLIANCE TESTING FOR
FMVSS NO. 110
TIRE SELECTION AND RIMS**

**FORD MOTOR CO. IN U.S.A.
2004 LINCOLN LS, PASSENGER CAR
NHTSA NO. C40210**

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



AUGUST 30, 2004

FINAL REPORT

PREPARED FOR

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

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| 16. Abstract Compliance tests were conducted on the subject 2004 Lincoln LS passenger car in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-110-02 for the determination of FMVSS 110 compliance. Test failures identified were as follows: NONE | | |
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SECTION 1

INTRODUCTION

1.0 PURPOSE OF COMPLIANCE TEST

A 2004 Lincoln LS 4-door passenger car was subjected to FMVSS No. 110 testing to determine if the vehicle was in compliance with the requirements of the standard. All tests were conducted in accordance with NHTSA, Office of Vehicle Safety Compliance (OVSC) Laboratory Procedure, TP-110-02 dated 14 December 1989 and General Testing Laboratories, Inc (GTL) Test Procedure, TP-110-02 dated 22 May 2002.

1.1 TEST VEHICLE

The test vehicle was a 2004 Lincoln LS 4-door passenger car. Nomenclature applicable to the test vehicle are:

A. Vehicle Identification Number: 1LNHM86S44Y632047

B. NHTSA No.: C40210

C. Manufacturer: FORD MOTOR CO. IN U.S.A.

D. Manufacture Date: 11-03

1.2 TEST DATE

The test vehicle was subjected to FMVSS No. 110 testing during the time period July 16-28, 2004.

SECTION 2

TEST PROCEDURE AND SUMMARY OF RESULTS

2.0 GENERAL

The 2004 Lincoln LS 4-door passenger car, NHTSA No. C40210, was subjected to FMVSS No. 110 during the time period July 16-28, 2004.

2.1 TEST PROCEDURE

Prior to test, the test vehicle was inspected for completeness, systems operability and appropriate fuel and liquid levels, i.e., oil and coolant. The vehicle was then photographically documented as required by the DOT/NHTSA and GTL test procedures. Subsequent events included weighing the vehicle to establish delivered curb weight and the distribution of weight on the front and rear axles and each wheel position. The vehicle normal load as well as the maximum load on each wheel was measured. Data from each tire furnished with the vehicle were recorded. The vehicle tire placard was surveyed and photographed. Required dimensional data and other identifying data for the left front and right rear rims were obtained. The contour of the aforementioned rims was documented photographically.

In preparation for the deflated tire retention test, test instrumentation was installed in the vehicle. With the driver aboard, the vehicle was ballasted to equal the "vehicle maximum load on the tire" on the front and rear axle, as previously established. The tire pressure of all tires was adjusted to placard specifications for cold tire inflation at maximum loaded vehicle weight. The deflated tire retention test was then conducted on the left front tire followed by the right rear tire. The tests were conducted with the vehicle traveling in a straight line at 96.8 kph (60 mph). The respective tire was blown by an explosive charge on the tire's sidewall. Test data collected during the test included vehicle speed, pressure, deceleration, stopping distance and distance of uncontrolled deviation from a straight line. After the vehicle was stopped, any tire bead separation from the rim flange was documented photographically.

2.2 SUMMARY OF RESULTS

The test vehicle appears to be in compliance with the requirements of FMVSS No. 110.

SECTION 3

TEST DATA

DATA SHEET 1 SUMMARY

VEHICLE MAKE/MODEL/BODY STYLE: 2004 LINCOLN LS PASSENGER CAR
 VEHICLE NHTSA NO.: C40210 ; VIN: 1LNHM86S44Y
 LABORATORY: GENERAL TESTING LABORATORIES
 TEST DATE: 07/16/04

| <u>REQUIREMENT</u> | <u>PASS/FAIL</u> |
|--|------------------|
| TIRE LOAD LIMITS AND PLACARD | |
| The vehicle is equipped with tires that meet the requirements of FMVSS 109. (FMVSS 110, S4.1) | <u>PASS</u> |
| The vehicle maximum load on the tire shall not be greater than the applicable maximum load rating as marked on the sidewall of the tire. (FMVSS 110, S4.2.1) | <u>PASS</u> |
| The vehicle normal load on the tire shall not be greater than the high speed performance test load specified in FMVSS 109 paragraph S5.5. (FMVSS 110, S4.2.2) | <u>PASS</u> |
| The placard must be permanently affixed to the glove compartment door or equally accessible location; and display the required information. (FMVSS 110, S4.3) | <u>PASS</u> |
| No inflation pressure other than the maximum permissible inflation pressure is specified unless as required. (FMVSS 110, S4.3.1) | <u>PASS</u> |
| RIM DIMENSIONS | |
| Each rim shall be constructed to the dimensions of a rim or alternate specified for the tire size. (FMVSS No. 110, S4.4.1 (a)) | <u>PASS</u> |
| DEFLATED TIRE RETENTION | |
| Each rim shall retain the deflated tire until the vehicle can be stopped. (FMVSS 110, S4.4.1(b)) | <u>PASS</u> |
| Statement of Indication of compliance or noncompliance to FMVSS 110 and data reference: <u>THE LINCOLN APPEARS TO COMPLY WITH THE REQUIREMENTS OF FMVSS 110</u> | |

REMARKS:

RECORDED BY: [Signature]
 APPROVED BY: [Signature]

DATE: 07/16/04

DATA SHEET 2
TEST VEHICLE INFORMATION/RECEIVING INSPECTION

LABORATORY: GENERAL TESTING LABORATORIES DATE: 07/16/04

VEHICLE MODEL YEAR/MAKE/MODEL/BODY STYLE: 2004 LINCOLN LS

MANUFACTURE DATE: 11-03 NHTSA NO.: C40210 BODY COLOR: BLACK

VIN: 1LNHM86S44Y VEHICLE TYPE: PASSENGER CAR

GVWR 2195 kg (4840 lbs) GAWR(Fr) 1181 kg (2604 lbs) GAWR(Rr) 1181 kg (2604 lbs)

BELTED SEATING POSITIONS: FRONT 2 MID N/A REAR 3 OTHER N/A

ENGINE DATA: 8 Cylinders Liters Cubic Inches

TRANSMISSION DATA: X Automatic Manual 3 No. of Speeds

FINAL DRIVE DATA: X Rear Drive Front Drive 4 Wheel Drive

INSTALLED TIRE DATA: Size - P225/55R16 Mfr. - CONTINENTAL

CHECK APPROPRIATE BOXES FOR VEHICLE EQUIPMENT/MAKE SURE ALL OPTIONS ON WINDOW STICKER ARE LISTED:

| | | | | | |
|---|-----------------------|---|-----------------------|---|-------------------|
| X | Air Conditioning | | Traction Control | X | Clock |
| X | Tinted Glass | | All Wheel Drive | | Roof Rack |
| X | Power Steering | X | Cruise Control | X | Console |
| X | Power Windows | X | Rear Window Defroster | X | Driver Air Bag |
| X | Power Door Locks | | Sun Roof or T-Top | X | Passenger Air Bag |
| X | Power Seat(s) | X | Tachometer | X | Front Disc Brakes |
| X | Power Brakes | X | Tilt Steering Wheel | X | Rear Disc Brakes |
| X | Antilock Brake System | X | AM/FM/CD | | Other - |

REMARKS:

RECORDED BY: *L. L. L...*

DATE: 07/16/04

APPROVED BY: *D. Messick*

DATA SHEET 3

CURB WEIGHT WITH OPTIONS, NORMAL LOAD, VEHICLE MAXIMUM LOAD

VEHICLE MAKE/MODEL/BODY STYLE: 2004 LINCOLN LS PASSENGER CARVEHICLE NHTSA NO.: C40210 ; VIN: 1LNHM86S44YLABORATORY: GENERAL TESTING LABORATORIESTEST DATE: 07/16/04

Full Fluid Levels:

Fuel Full ; Coolant Full ; Other Fluids FullTire Pressure: LF 205 KPA (30 psi) LR 205 KPA (30 psi)
RF 205 KPA (30 psi) RR 205 KPA (30 psi)

A. MEASURED CURB WEIGHT WITH INSTALLED OPTIONS AND ACCESSORIES

| | | | |
|--|------------------------|-----------------------------------|------------------------|
| LF | <u>433 KG (955 LB)</u> | LR | <u>397 KG (876 LB)</u> |
| RF | <u>432 KG (952 LB)</u> | RR | <u>409 KG (901 LB)</u> |
| Front Axle <u>865 KG (1907 LB)</u> | | Rear Axle <u>806 KG (1777 LB)</u> | |
| Total Vehicle <u>1671 KG (3684 LB)</u> | | | |

B. VEHICLE NORMAL LOAD ON THE TIRE

(1) Seating Capacity (from Tire Information Placard) = 5(2) Normal Load # of Occupants from FMVSS 110, Table I 3Occupant Distribution: Front Seat- 2 Second Seat- 1
Third Seat - N/A Fourth Seat- N/A(3) Total Normal Occupant Load 204 KG (450 LB)
(# of occupants x 68 KG per occupant)

(4) Measured Normal Load on Axles

| | | | |
|--|-------------------------|---------------------------------|-------------------------|
| LF | <u>471 KG (1038 LB)</u> | LR | <u>462 KG (1018 LB)</u> |
| RF | <u>478 KG (1054 LB)</u> | RR | <u>464 KG (1024 LB)</u> |
| Frt Axle <u>949 KG (2092 LB)</u> | | Rr Axle <u>926 KG (2042 LB)</u> | |
| Total Vehicle <u>1875 KG (4134 LB)</u> | | | |

DATA SHEET 3 – CONTINUED

- (5) Calculated Vehicle Normal Load on the Tire
 Front Tires (measured front axle normal load/2) = 475 KG (1047 LB)
 Rear Tires (measured front axle normal load/2) = 463 KG (1021 LB)

- (6) High Speed Test Load from FMVSS 109 (S5.5)

| | Front | Rear |
|---|-------------------------|-------------------------|
| Installed Tire Size | <u>P225/55R16</u> | <u>P225/55R16</u> |
| Max. Load Rating on Sidewall | <u>670 KG(1477 LBS)</u> | <u>670 KG(1477 LBS)</u> |
| High Speed Test Load (88% of sidewall max. load rating) | <u>590 KG(1299 LBS)</u> | <u>590 KG(1299 LBS)</u> |
| Optional Tire Size(s) | <u>N/A</u> | <u>N/A</u> |
| Max. Load Rating on Sidewall (Obtain from approved reference manual) | <u>N/A</u> | <u>N/A</u> |
| High Speed Test Load (88% of sidewall max. load rating) | <u>N/A</u> | <u>N/A</u> |

Vehicle Normal Load on the Tire is not greater than the High Speed Test Load

PASS/FAIL

| | | |
|---------------------------------|-------------|-------------|
| Installed Tires; [(5) < (6)] | Front Tires | <u>PASS</u> |
| | Rear Tires | <u>PASS</u> |
| Optional Tires; [(5) < (6)] | Front Tires | <u>N/A</u> |
| | Rear Tires | <u>N/A</u> |

C. MEASURED VEHICLE WITH FULL OCCUPANT LOAD

| | | | |
|---------------|--------------------------|-----------|--------------------------|
| LF | <u>488 KG (1076 LB)</u> | LR | <u>512 KG (1129 LB)</u> |
| RF | <u>493 KG (1086 LB)</u> | RR | <u>518 KG (1143 LB)</u> |
| Front Axle | <u>981 KG (2162 LB)</u> | Rear Axle | <u>1030 KG (2272 LB)</u> |
| Total Vehicle | <u>2011 KG (4434 LB)</u> | | |

DATA SHEET 3 – CONTINUED

D. VEHICLE MAXIMUM LOAD ON THE TIRE

(1) Vehicle Capacity Weight (from Placard) 408 KG (900 LB)

(2) Seating Capacity (from Placard) 5

(3) Total Occupant Load (seating capacity x 68 KG) 340 KG (750 LB)

(4) Luggage/Cargo Load (Subtract (3) from (1)) 68 KG (150 LB)

(5) Measured Maximum Load on Axles

| | | | | | | | |
|--|------------|--------------|--------------|------------|--------------|-------------|--------------|
| LF | <u>484</u> | KG (1066 LB) | LR | <u>553</u> | KG (1220 LB) | | |
| RF | <u>486</u> | KG (1071 LB) | RR | <u>557</u> | KG (1227 LB) | | |
| Frt Axle | | <u>969</u> | KG (2137 LB) | Rr Axle | | <u>1110</u> | KG (2447 LB) |
| Total Vehicle <u>2079</u> KG (4584 LB) | | | | | | | |

- (6) Calculated Vehicle Maximum Load on the Tire
- Front Tires (measured front axle max. load/2) = 485 KG (1068.5 LB)
- Rear Tires (measured rear axle max. load/2) = 555 KG (1223.5 LB)
- (7) Maximum Load Rating on Tire Sidewall (obtain data from B.(6))

| | Front | Rear |
|--|--------------------------|--------------------------|
| Installed Tire Size | <u>P225/55R16</u> | <u>P225/55R16</u> |
| Max. Load Rating on Sidewall | <u>670 KG (1477 LBS)</u> | <u>670 KG (1477 LBS)</u> |
| Optional Tire Size(s) | <u>N/A</u> | <u>N/A</u> |
| Max Load Rating on Sidewall (obtain from approved reference manual) | <u>N/A</u> | <u>N/A</u> |

Vehicle Maximum Load on the Tire is not greater than the Maximum Load Rating Marked on the Tire Sidewall

| | | |
|---------------------------------|---------------------------|---|
| Installed Tires; [(6) < (7)] | Front Tires Rear Tires | Pass/Fail <u>PASS</u> <u>PASS</u> |
| Optional Tires; [(6) < (7)] | Front Tires Rear Tires | <u>N/A</u> <u>N/A</u> |

DATA SHEET 3 - CONTINUED

E. VEHICLE LOAD ON THE TIRE FOR OTHER DISPLAYED LOAD AND TIRE INFLATION PRESSURE CONDITIONS

- (1) Condition Description (Load, Tire Size, Inflation Pressure)
Vehicle at maximum load of 408 kg (900 lbs) with P225/55R16 tire at
205 kPa (30 psi) on tire label
- (2) Condition Load on Tire/Axle
- | | | | | | |
|---------------------------------|-----|--------------|---------------------------|-----|--------------|
| LF | 484 | KG (1066 LB) | LR | 553 | KG (1220 LB) |
| RF | 486 | KG (1071 LB) | RR | 557 | KG (1227 LB) |
| Frt Axle 969 KG (2137 LB) | | | Rr Axle 1110 KG (2447 LB) | | |
| Total Vehicle 2079 KG (4584 LB) | | | | | |

- (3) Load Rating of Tire at Recommended Inflation Pressure

| | Front | Rear |
|--|--------------------------|--------------------------|
| Displayed Tire Size | <u>P225/55R16</u> | <u>P225/55R16</u> |
| Recommended Inflation Pressure | <u>205 kPa (30 psi)</u> | <u>205kPa (30 psi)</u> |
| Tire Load Rating (obtained from 2004 Tire and Rim Association Yearbook) | <u>620 KG (1367 LBS)</u> | <u>620 KG (1367 LBS)</u> |

Vehicle Load on the Tire Is not greater than the Tire Load Rating at the Tire Recommended Inflation Pressure

| | |
|-------------------------|-------------|
| | Pass/Fail |
| Front Tires [(2) < (3)] | <u>PASS</u> |
| Rear Tires [(2) < (3)] | <u>PASS</u> |

NOTE: Section E should be repeated for every different load/tire inflation pressure condition displayed.

REMARKS:

RECORDED BY: 

DATE: 07/16/04

APPROVED BY: 

DATA SHEET 4
TIRE INFORMATION LABEL OR PLACARD

VEHICLE MAKE/MODEL/BODY STYLE: 2004 LINCOLN LS PASSENGER CAR
 VEHICLE NHTSA NO.: C40210 ; VIN: 1LNHM88S44Y
 LABORATORY: GENERAL TESTING LABORATORIES
 TEST DATE: 07/16/04

| | | |
|---|---|--------------------------------|
| A. | Description of Placard: <u>Self Adhesive plastic coated label with Black letters on blue/white background</u> | PASS/FAIL <u>Pass</u> |
| B. | Description of Placard Location: <u>Driver side "A" pillar post</u> | <u>Pass</u> |
| | Permanently Affixed <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | |
| C. | Enter Information from Placard: | |
| | Vehicle Capacity Weight - <u>408 KG (900 LBS)</u> | |
| | Designated Seating Capacity (DSC) - <u>5</u> | <u>Pass</u> |
| | Expressed In— | |
| | (1) Total No. of Occupants <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| | (2) Terms of Occupants for Each Seat Location <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | <u>Pass</u> |
| Manufacturer's Recommended Cold Tire Inflation Pressure for Maximum Load Vehicle Weight: | | |
| | FRONT - <u>205 kPa (30 psi)</u> | REAR - <u>205 kPa (30 psi)</u> |
| All Other Recommended Inflation Pressures: <u>None</u> | | |
| All Other Recommended Loading Conditions: <u>None</u> | | |
| Manufacturer's Recommended Size Designation: <u>P225/55R16</u> | | |
| All Other Manufacturer's Recommended Size Designation: <u>None</u> | | |

DATA SHEET 4 continued

PASS/FAIL

DATA CORRECTLY DISPLAYED

Pass

D. For Every Inflation Pressure Listed Above Indicate:

(1) Less than Maximum? (YES/NO) Yes
(2) Loading Condition Stated? (YES/NO) Yes

PassPass

DATA INDICATES COMPLIANCE (X) YES () NO

REMARKS: Tire Placard label is combined with Vehicle Certification Label.

RECORDED BY: DATE: 07/16/04APPROVED BY:

**DATA SHEET 5
VEHICLE TIRE DATA**

VEHICLE MAKE/MODEL/BODY STYLE: 2004 LINCOLN LS PASSENGER CAR
 VEHICLE NHTSA NO.: C40210 ; VIN: 1LNHM86544Y
 LABORATORY: GENERAL TESTING LABORATORIES
 TEST DATE: 07/18/04

All tires on the vehicle are the same size: (Yes/No) Yes

INFORMATION FROM TIRE SIDEWALL:

| | Front Axle (R.F. Tire) | Rear Axle (L.R. Tire) | Spare |
|------------------------------------|--|--|----------------------|
| Tire Size Designation | <u>P225/55R16</u> | <u>P225/55R16</u> | <u>T145/80D16</u> |
| Tire Load Index/Speed Symbol | <u>94V</u> | <u>94V</u> | <u>N/A</u> |
| Maximum Inflation Pressure | <u>300 kPa (44 psi)</u> | <u>300 kPa (44 psi)</u> | <u>420kPa(60psi)</u> |
| Maximum Load Rating | <u>670 KG (1477 LBS)</u> | <u>670 KG(1477 LBS)</u> | <u>925KG(2039LB)</u> |
| Mfr. Name or Brand & Code | <u>Continental</u> | <u>Continental</u> | <u>Maxxis</u> |
| Tube or Tubeless | <u>Tubeless</u> | <u>Tubeless</u> | <u>Tubeless</u> |
| Treadwear/Traction/Temp. Grades | <u>380-A-A</u> | <u>380-A-A</u> | <u>N/A</u> |
| Sidewall (Plies & Composition) | <u>2 polyester</u> | <u>2 polyester</u> | <u>3 Nylon</u> |
| Tread (Plies & Composition) | <u>2 polyester</u> <u>2 steel</u> <u>1 nylon</u> | <u>2 polyester</u> <u>2 steel</u> <u>1 nylon</u> | <u>3 Nylon</u> |
| Serial Number: | Left Front - <u>DOT ACT4-465B-3803</u> Right Front - <u>DOT ACT4-465B-3803</u> Left Rear - <u>DOT ACT4-465B-3803</u> Right Rear - <u>DOT ACT4-465B-3803</u> Spare - <u>DOT UYMP ABC 3003</u> | | |

Tires have "DOT" markings: (X) YES () NO

REMARKS:

RECORDED BY: [Signature]

DATE: 07/18/04

APPROVED BY: [Signature]

DATA SHEET 6 RIM DIMENSIONS

VEHICLE MAKE/MODEL/BODY STYLE: 2004 LINCOLN LS PASSENGER CAR

VEHICLE NHTSA NO.: C40210 ; VIN: 1LNHM86S44Y

LABORATORY: GENERAL TESTING LABORATORIES

TEST DATE: 07/16/04

A. Rim Size & Flange

| | Tire Size | Specfd. Rims | Measured Width of Rims | Measured Height of Rims | PASS/ FAIL |
|--------------|-------------------|--------------------|------------------------------|-------------------------------|---------------|
| Right Front: | <u>P225/55R16</u> | <u>6"thru 8" J</u> | <u>7.5"</u> | <u>16"</u> | <u>Pass</u> |
| Left Rear: | <u>P225/55R16</u> | <u>6"thru 8" J</u> | <u>7.5"</u> | <u>16"</u> | <u>Pass</u> |

REFERENCE USED: 2004 Tire and Rim Association

B. Trade Stamps, Marks, Symbols: 16 x 7.5 JX60MM

Rim Manufacturer's Name or Label: Ford

Other Rim/Wheel Marking: #3W43-1007-AA, 30776, 190683-3

Rim Inspection Comments: No "D.O.T." Stamp

Tire Inspection Comments: None

Wheel/Rim Construction (i.e., welded, one piece, cast, deep dish, etc.)

One piece cast aluminum deep dish

DATA INDICATES COMPLIANCE: (X) YES () NO

REMARKS:

RECORDED BY: [Signature]

DATE: 07/16/04

APPROVED BY: [Signature]

DATA SHEET 7 DEFLATED TIRE RETENTION

VEHICLE MAKE/MODEL/BODY STYLE: 2004 LINCOLN LS PASSENGER CAR
 VEHICLE NHTSA NO.: C40210 ; VIN: 1LNHM86S44Y
 LABORATORY: GENERAL TESTING LABORATORIES
 TEST DATE: 07/27/04 - 07/28/04

Tire Pressures: LF 205 kPa (30 psi) LR 205 kPa (30 psi)
 (cold) RF 205 kPa (30 psi) RR 205 kPa (30 psi)

Test Weight (should be the same weight and distribution recorded on Data Sheet 3 Section D.5.

 LF 504 kg (1111 lb) LR 555 kg (1224 lb)
 RF 454 kg (1001 lb) RR 566 kg (1247 lb)
 Front Axle 958 kg (2112 lb) Rear Axle 1121 kg (2471 lb)

TOTAL VEHICLE 2079 kg (4583 lb)

Description of Weight Distribution: Sand bags in front passenger seat, rear seat and trunk.

A. Retention Test Left Front:

Odometer (START): 258 km (160.3 miles) Fuel Level: Full

Tire Pressure: 205 kPa (30 psi)

Ambient Temperature: 26.6 degrees C (80 F)

Wind Speed: 1.0 kmph (1.0 mph)

Size of Deflation Opening: 2.54 cm (1 in.) in diameter

Speed: 96.5 kmph (60 mph)

Deceleration Rate: 2.13 mpsps avg. (7 fpsps)

Distance Traveled After Initial Release of Air: 157.8 m (518 ft)

Distance of Deviation: < .6 m (<2 ft)

Description of Bead Separation, Outboard: None

Description of Bead Separation, Inboard: None

NOTE: Tire did not rotate on rim

DATA SHEET 7 continued
DEFLATED TIRE RETENTION

B. Retention Test Right Rear:

Odometer (START): 262 km (163 miles) Fuel Level: Full

Tire Pressure: 205 kPa (30 psi)

Ambient Temperature: 25.5 degrees C (78 F)

Wind Speed: 1.6 kmph (1 mph)

Size of Deflation Opening: 2.54 cm (1.0 in.) in diameter

Speed: 96.5 kmph (59.9 mph)

Deceleration Rate: 2.13 mpsps avg. (7 fpsps)

Distance Traveled After Initial Release of Air: 140 m (458 ft)

Distance of Deviation: <.6 m (<2 ft)

Description of Bead Separation, Outboard: None

Description of Bead Separation, Inboard: None

NOTE: Tire Rotated 12 inches on rim.

C. REMARKS: (Stability, Control, Suspension, etc.)

Good control, normal stopping

PASS/FAIL

Left Front
Right Rear

Pass
Pass

DATA INDICATES COMPLIANCE: (X) YES () NO

REMARKS:

RECORDED BY: [Signature]

DATE: 07/28/04

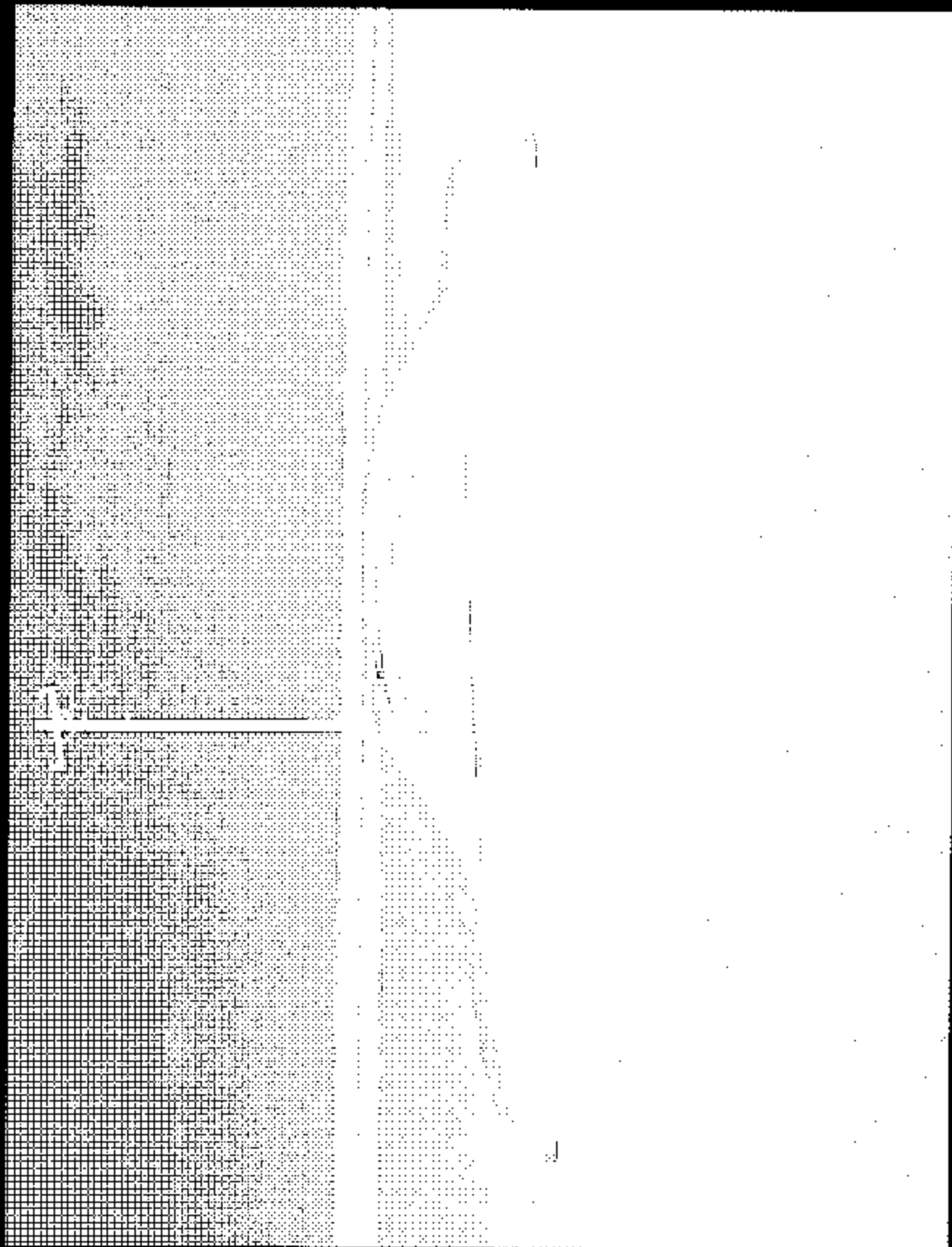
APPROVED BY: [Signature]

SECTION 4
INSTRUMENTATION AND EQUIPMENT LIST

TABLE 1 - INSTRUMENTATION & EQUIPMENT LIST

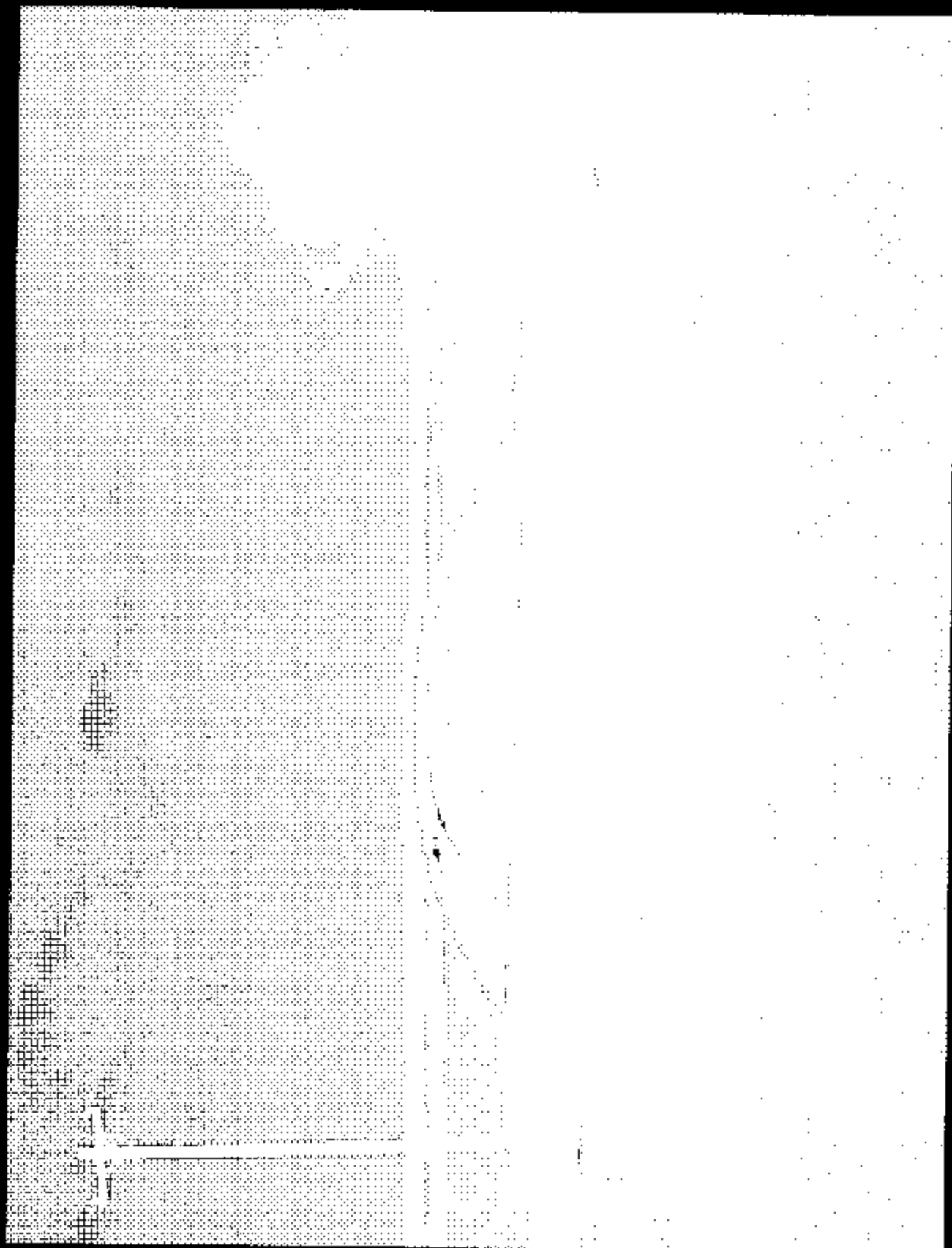
| EQUIPMENT | DESCRIPTION | MODEL/ SERIAL NO. | CAL. DATE | NEXT CAL. DATE |
|--|--------------------|------------------------------|-----------------------|---------------------------|
| PAD SCALES | #1 199744LF | 199744LF | 07/04 | 07/05 |
| | #2 199744RF | 199744RF | 07/04 | 07/05 |
| | #3 199744LR | 199744LR | 07/04 | 07/05 |
| | #4 199744RR | 19974RR | 07/04 | 07/05 |
| PRESSURE TRANSDUCER | BLH | D-HF #65409 | BEFORE USE | BEFORE USE |
| SURFACE LEVEL | STANLEY | 641186 | 02/04 | 02/05 |
| DATA ACQUISITION COMPUTER | GEO1 | N/A | BEFORE USE | BEFORE USE |
| ANEMOMETER | HASTINGS | RM-1 | 05/04 | 05/05 |
| SLIP RING ASSEMBLY | GTL | N/A | BEFORE USE | BEFORE USE |
| DECELEROMETER | GTL | N/A | BEFORE USE | BEFORE USE |
| INCLINOMETER | STARRETT | 002 | 02/04 | 02/05 |
| VBOX | RACELOGIC | VB2 #004337 | BEFORE USE | BEFORE USE |

SECTION 5
PHOTOGRAPHS



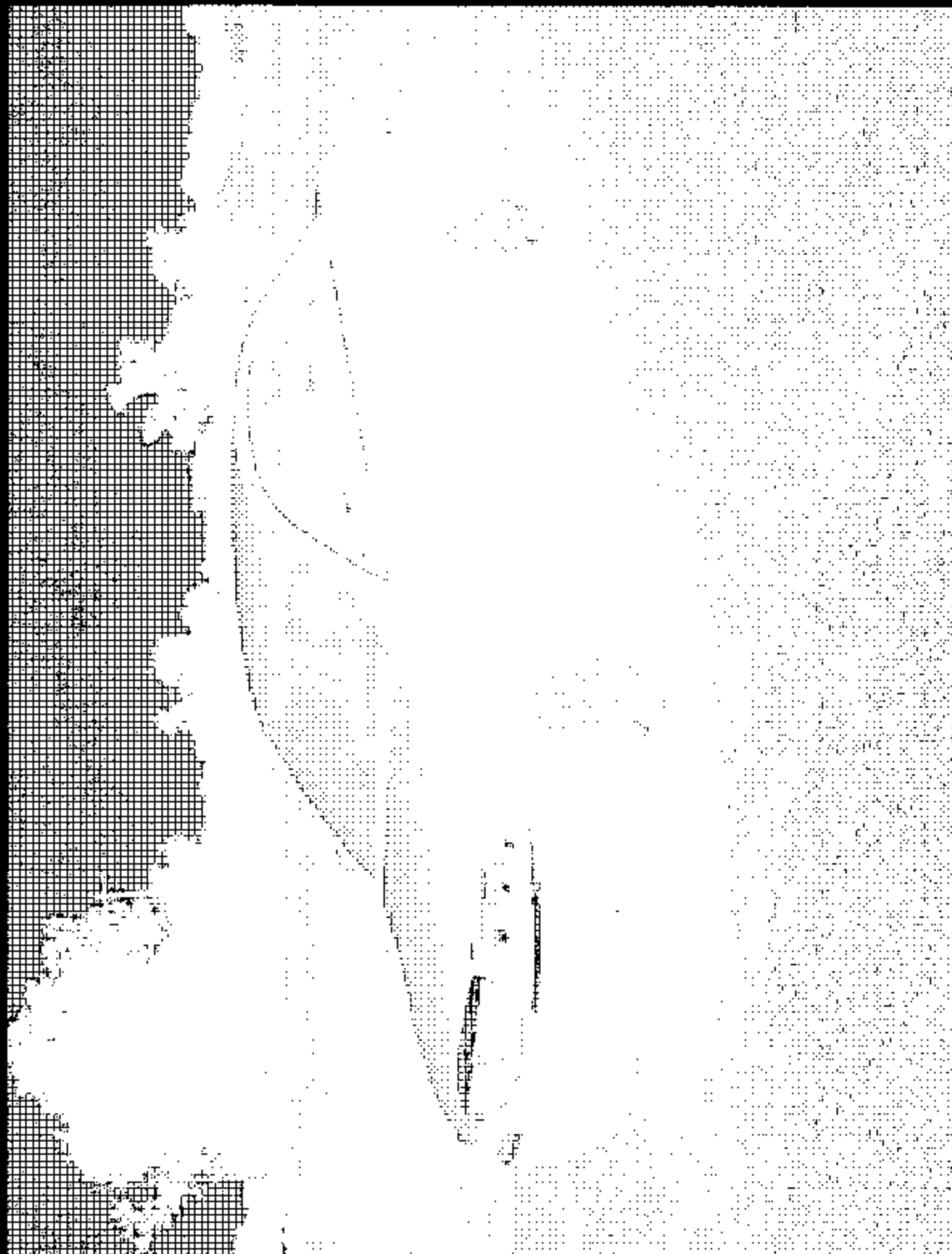
2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110

FIGURE 5.1
LEFT SIDE VIEW OF VEHICLE



2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110

FIGURE 5.2
RIGHT SIDE VIEW OF VEHICLE



2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110

FIGURE 5.3
¾ FRONTAL VIEW FROM LEFT SIDE OF VEHICLE



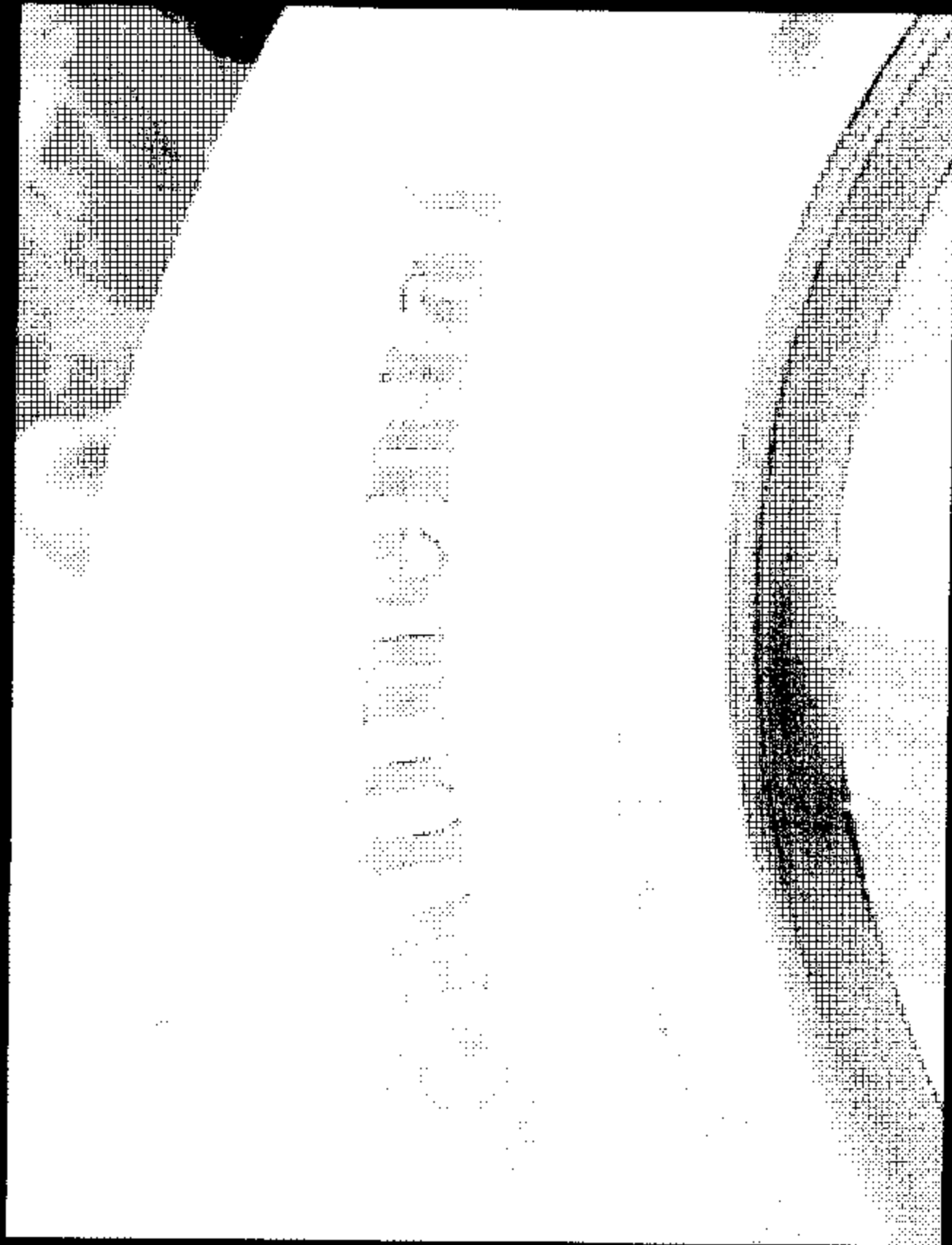
2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110

FIGURE 5.4
¾ REAR VIEW FROM RIGHT SIDE OF VEHICLE



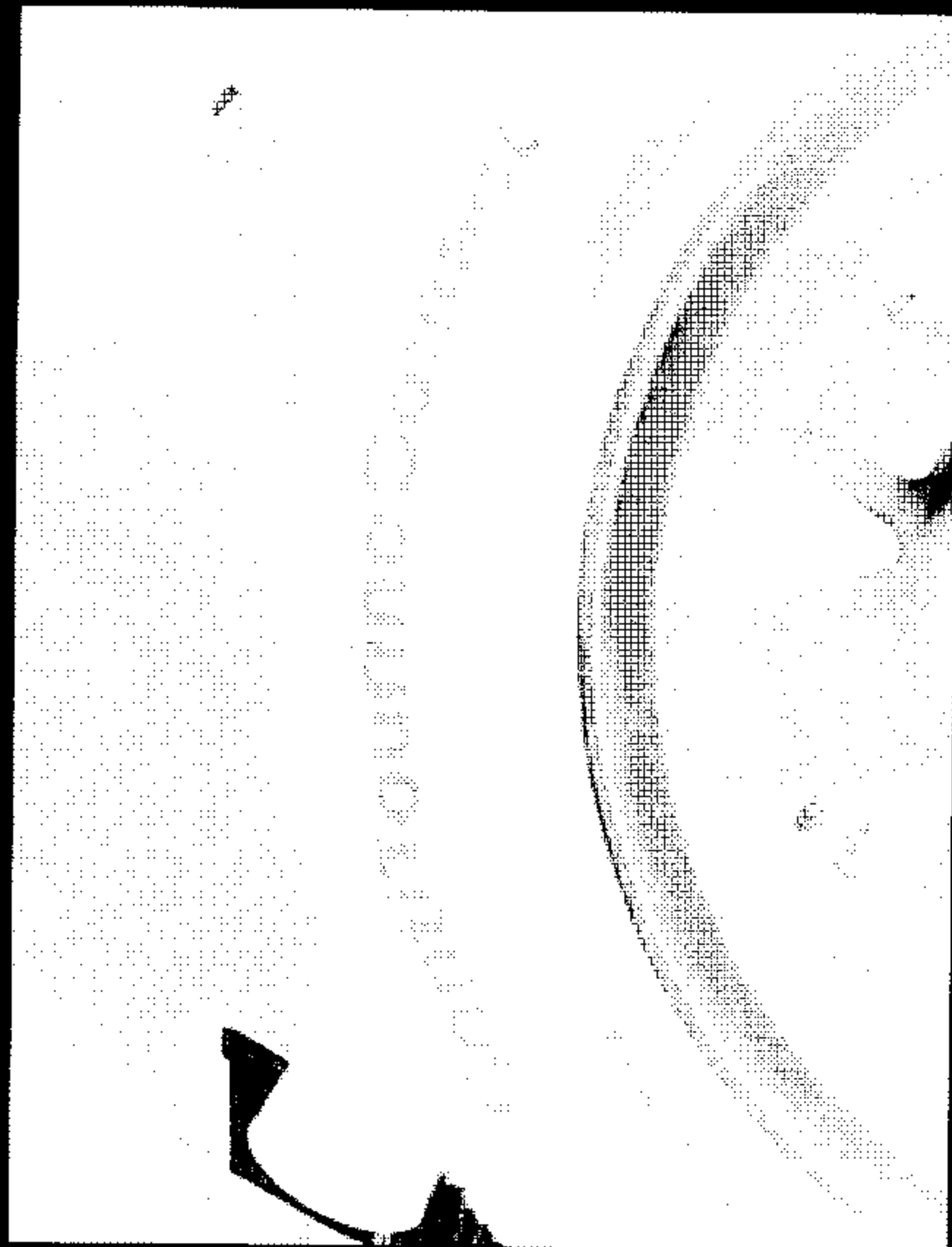
2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110

FIGURE 5.5
VEHICLE CERTIFICATION AND TIRE INFORMATION
LABEL



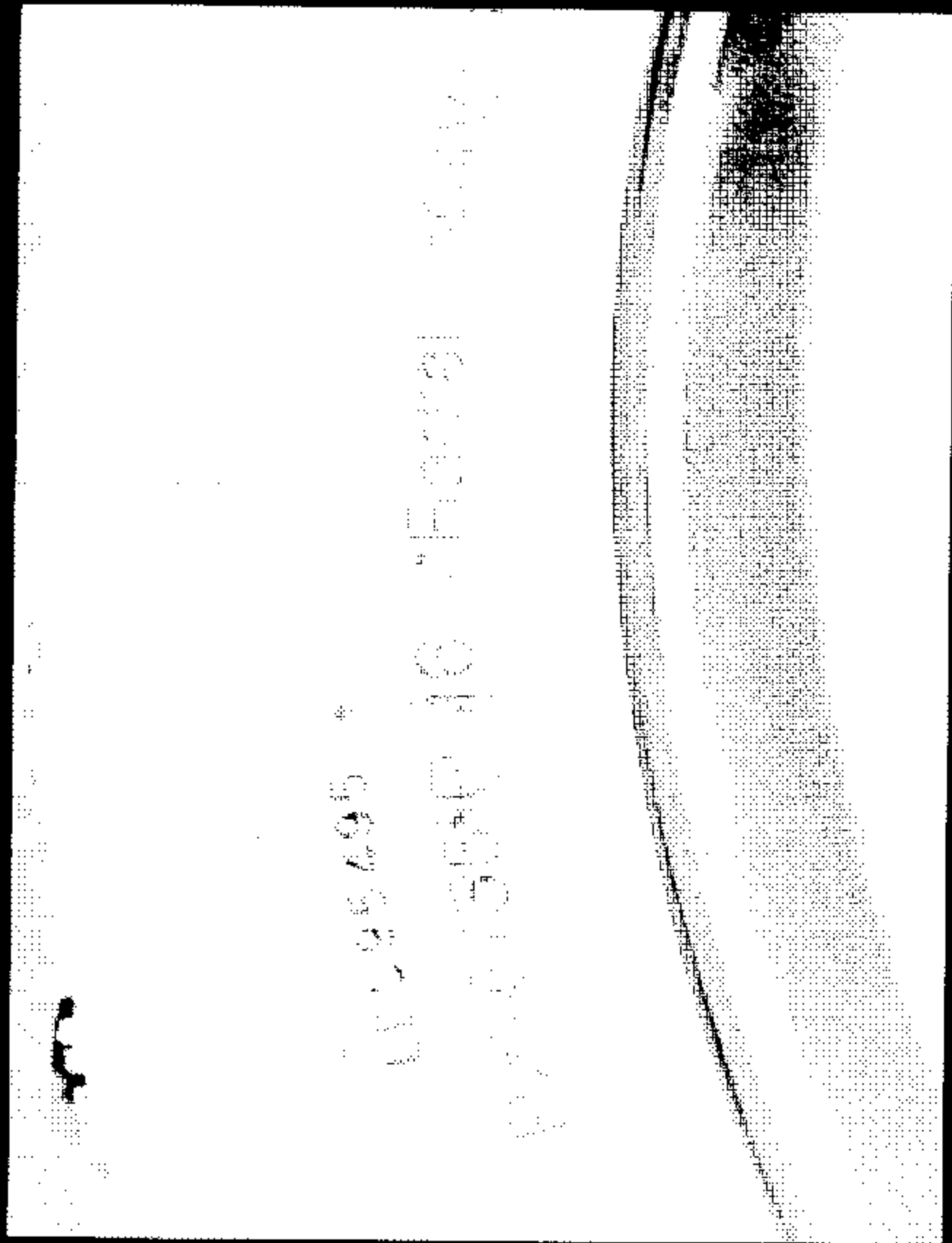
2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110

FIGURE 5.6
TIRE SHOWING BRAND



2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110

FIGURE 5.7
TIRE SHOWING MODEL



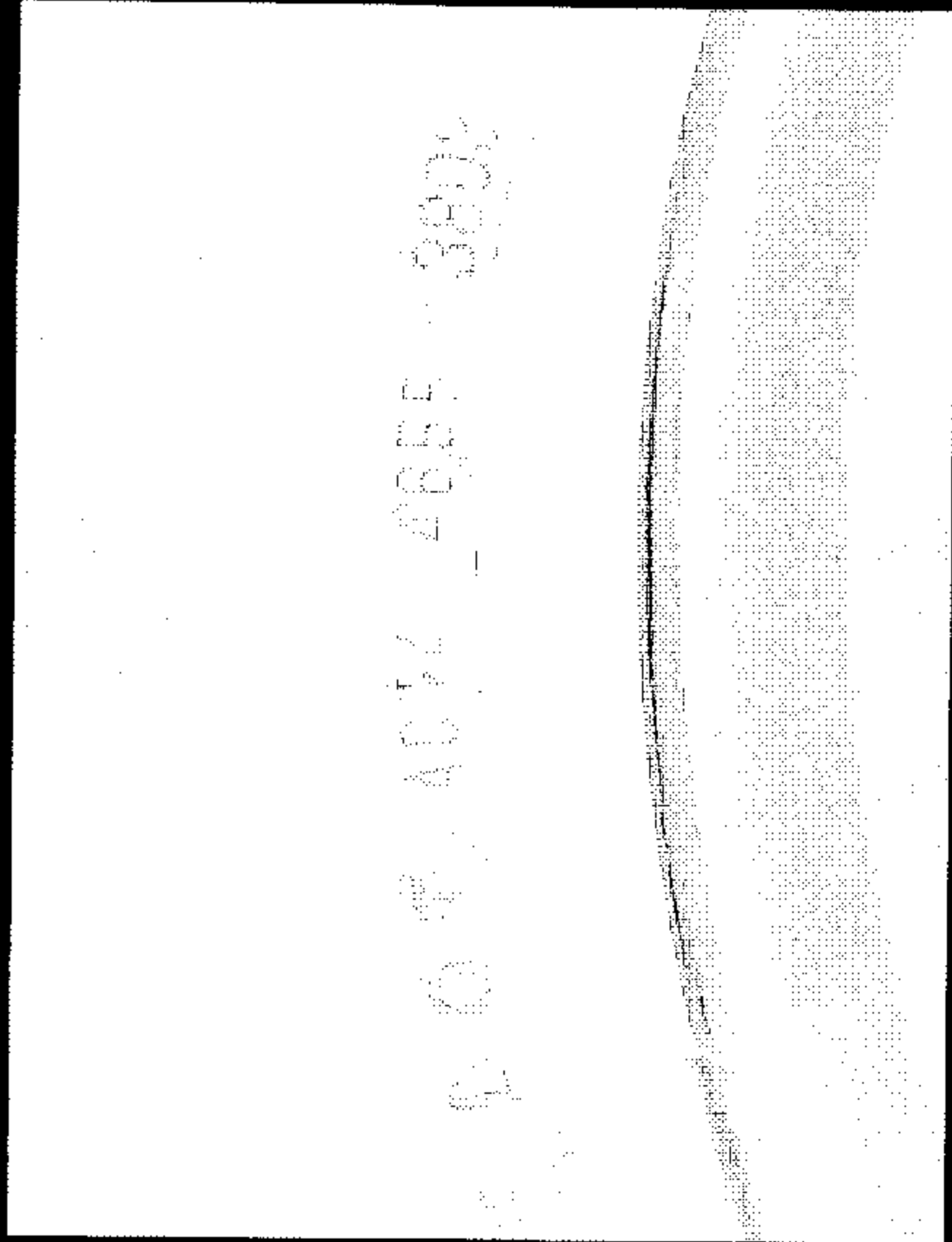
2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110

FIGURE 5.8
TIRE SHOWING SIZE AND RATING



2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110

FIGURE 5.9
TIRE SHOWING MAX LOAD RATING AND MAX
INFLATION PRESSURE



2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110

FIGURE 5.10
TIRE SHOWING SERIAL NUMBER

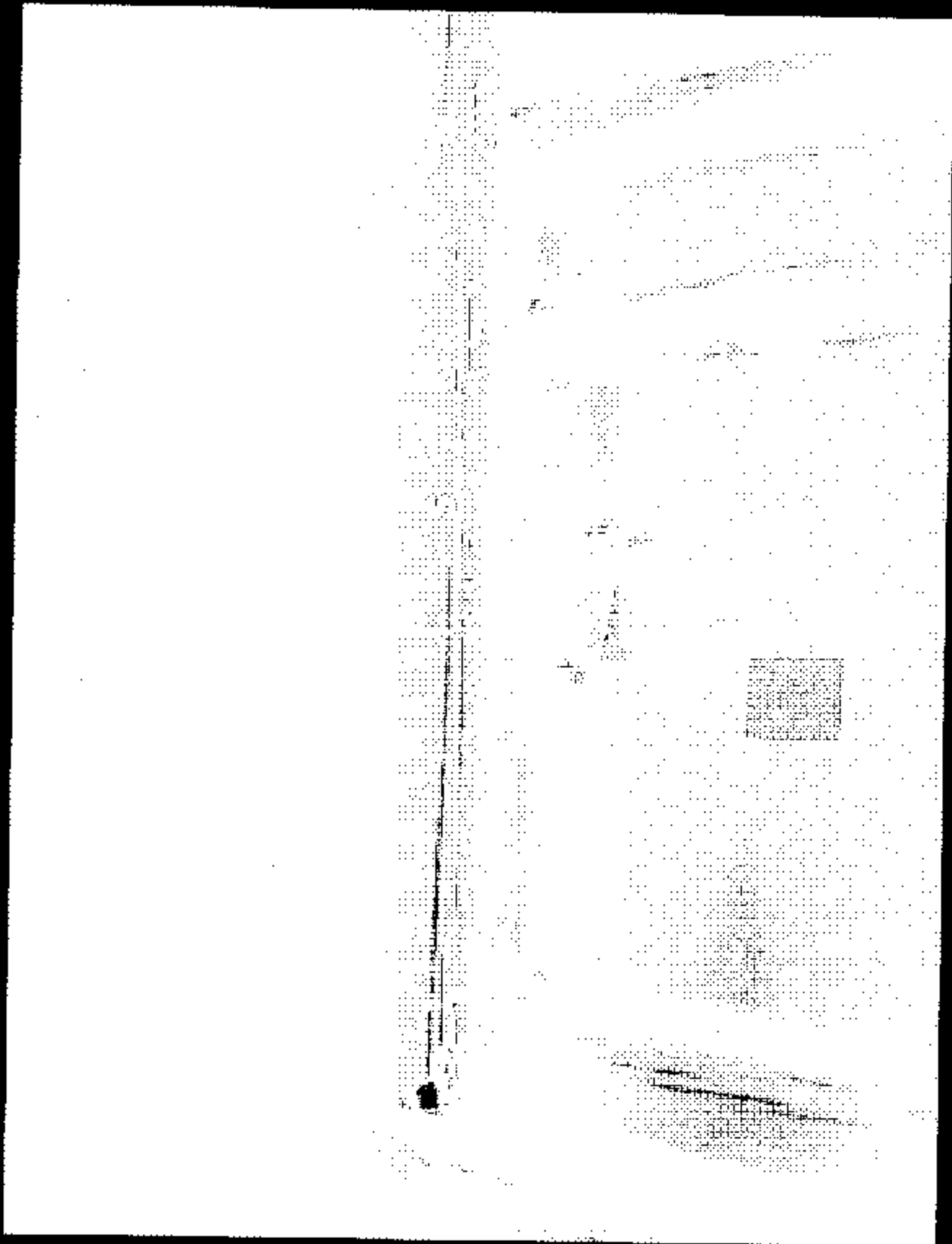
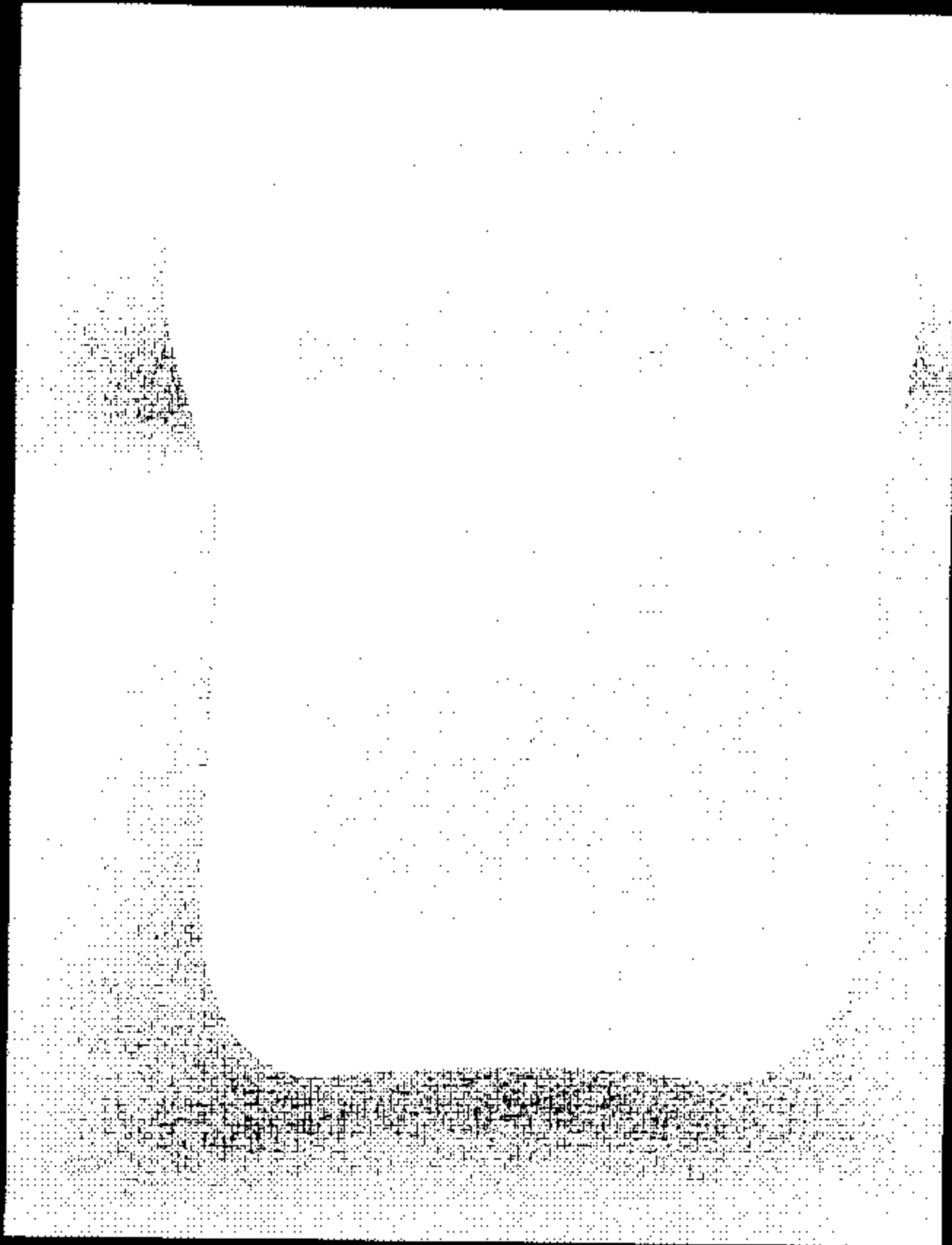


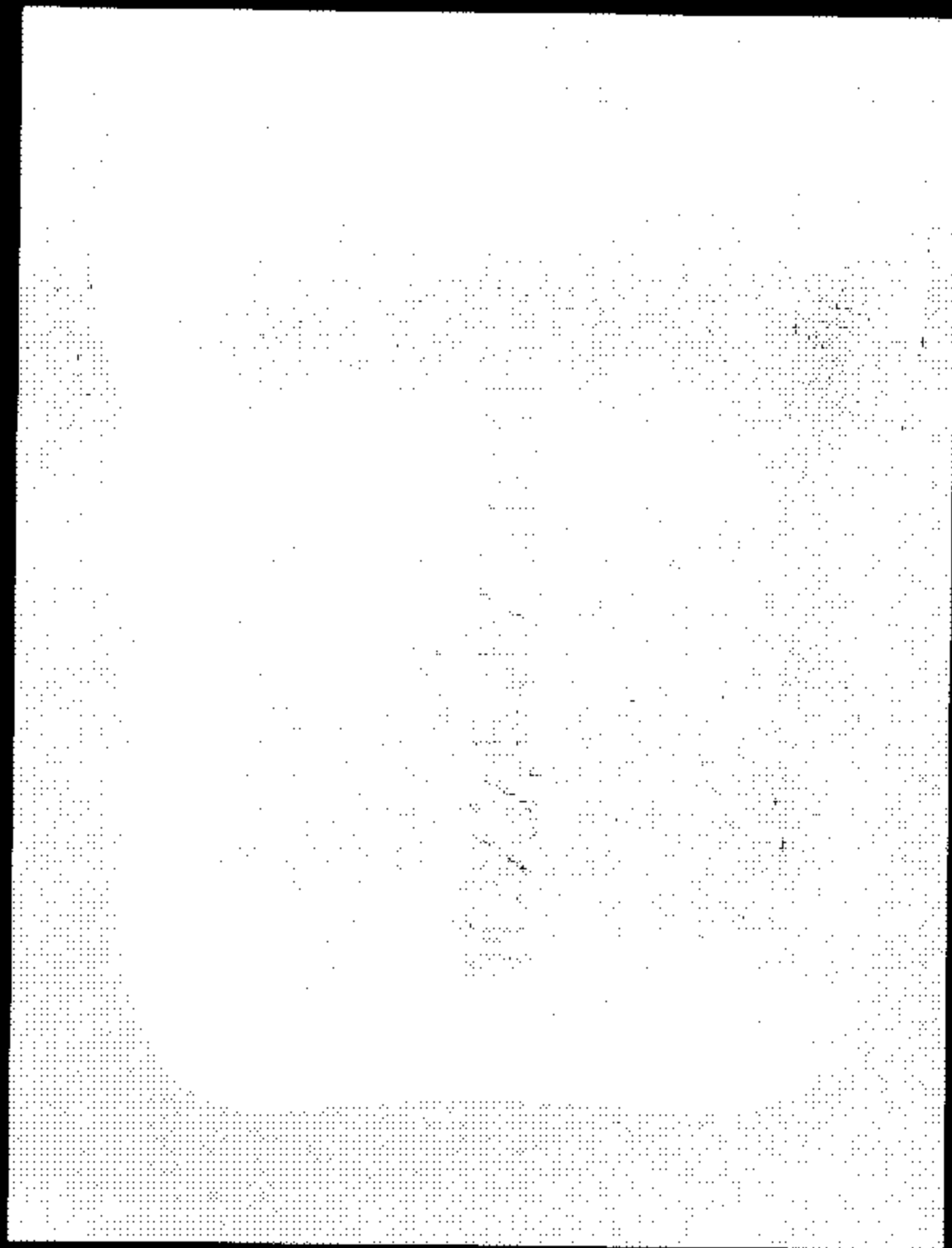
FIGURE 5.11
VIEW OF RIM CONTOUR

2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110



2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110

FIGURE 5.12
RIM MARKINGS (MANUFACTURER)



2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110

FIGURE 5.13
RIM MARKINGS (SIZE)

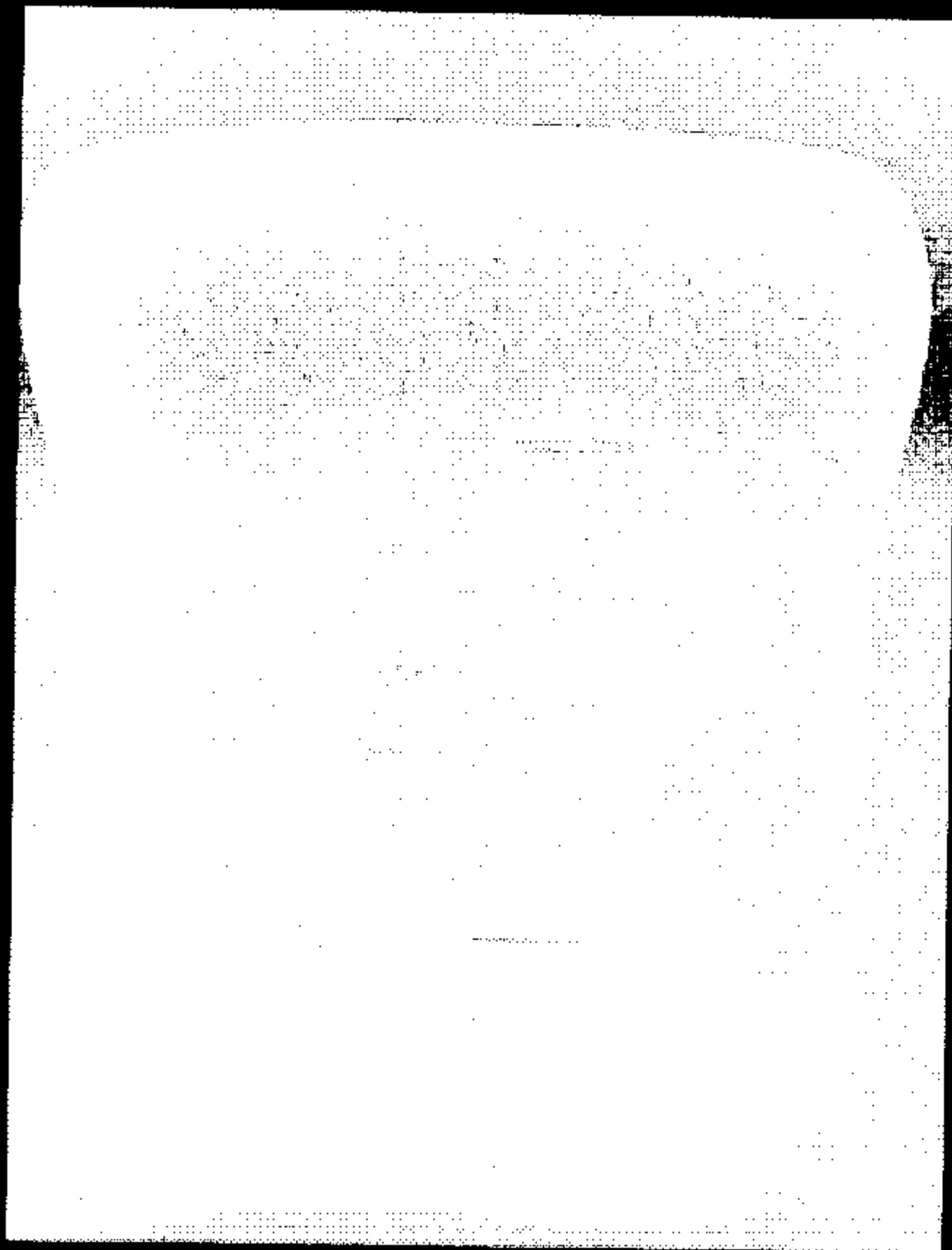
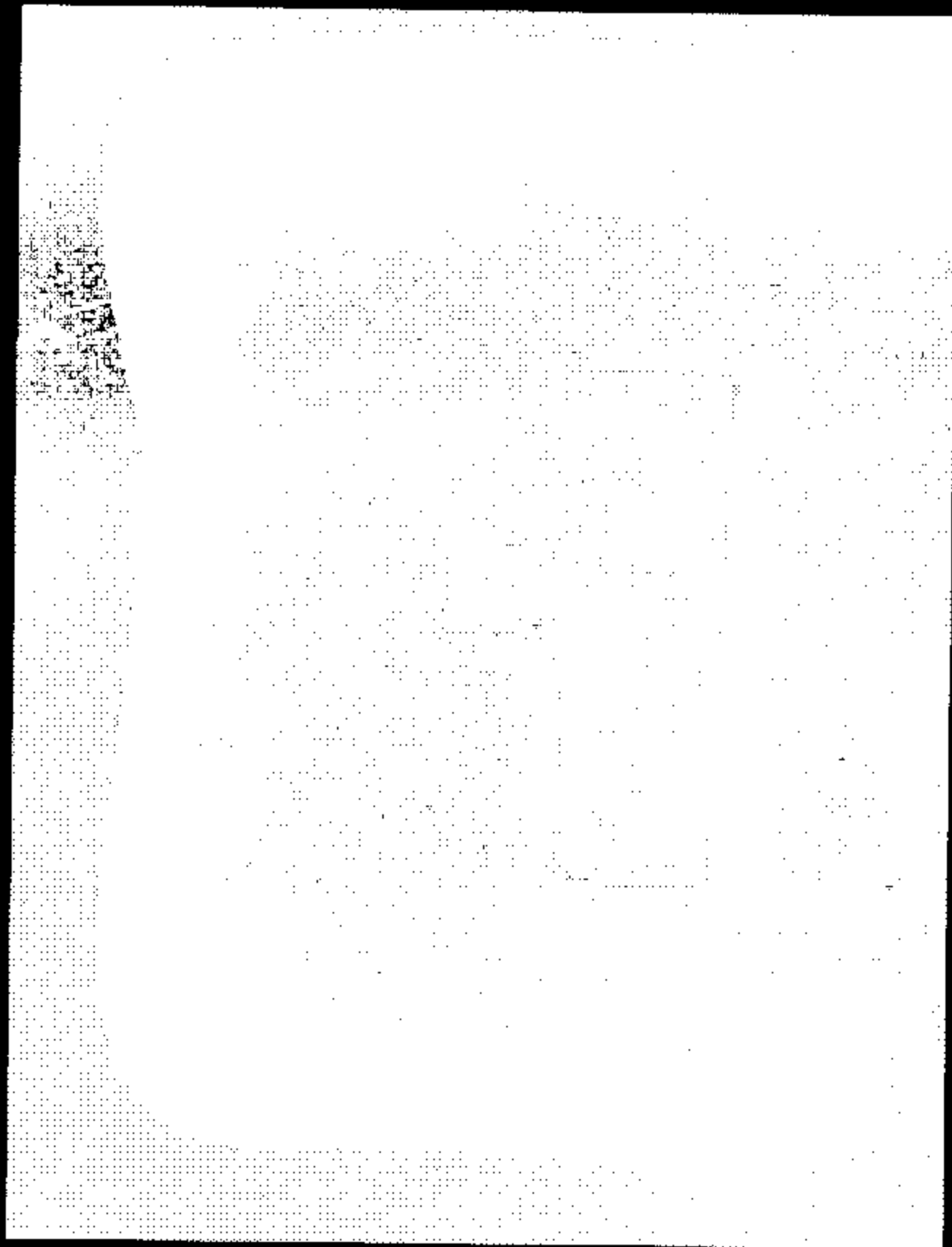


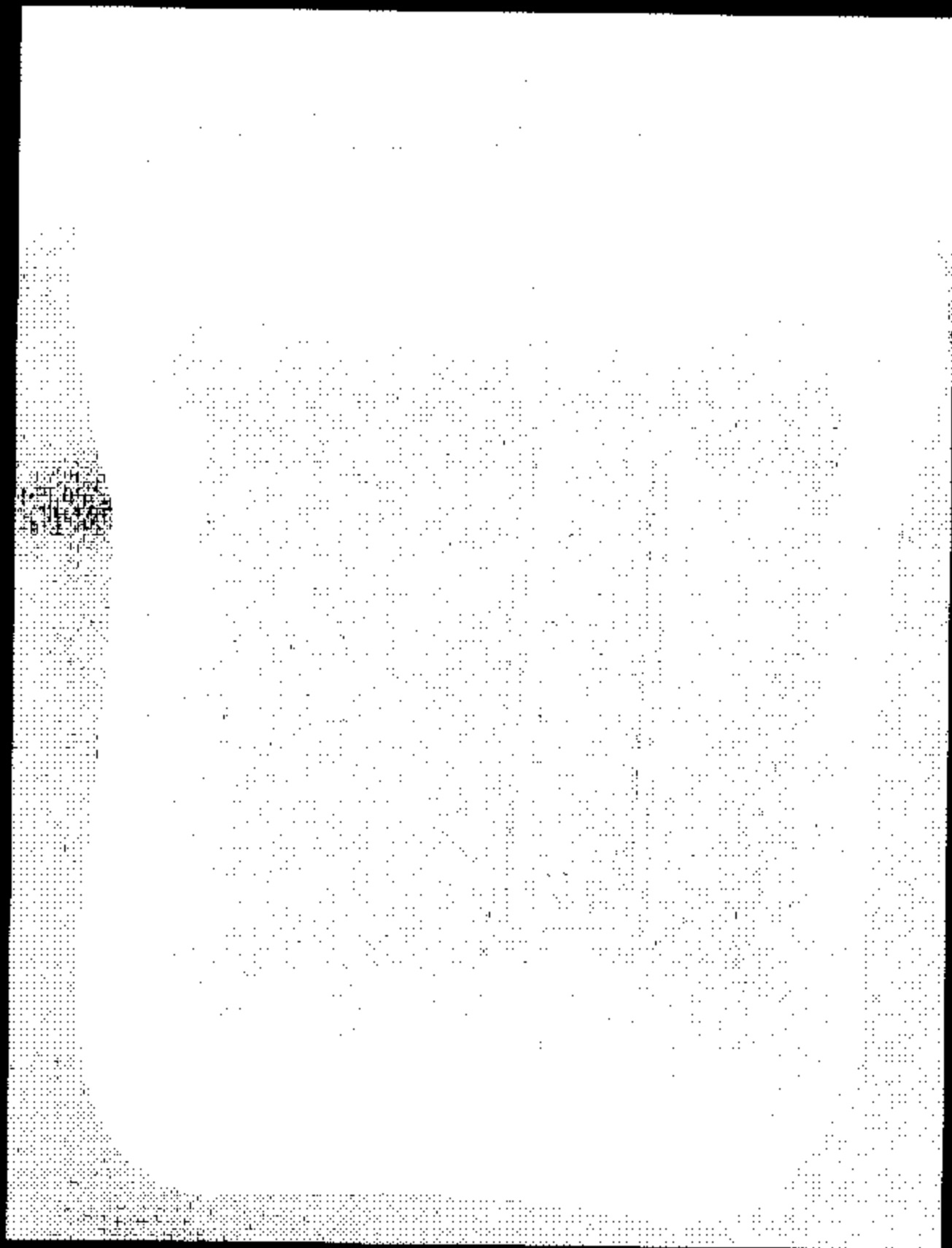
FIGURE 5.14
RIM MARKINGS

2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110



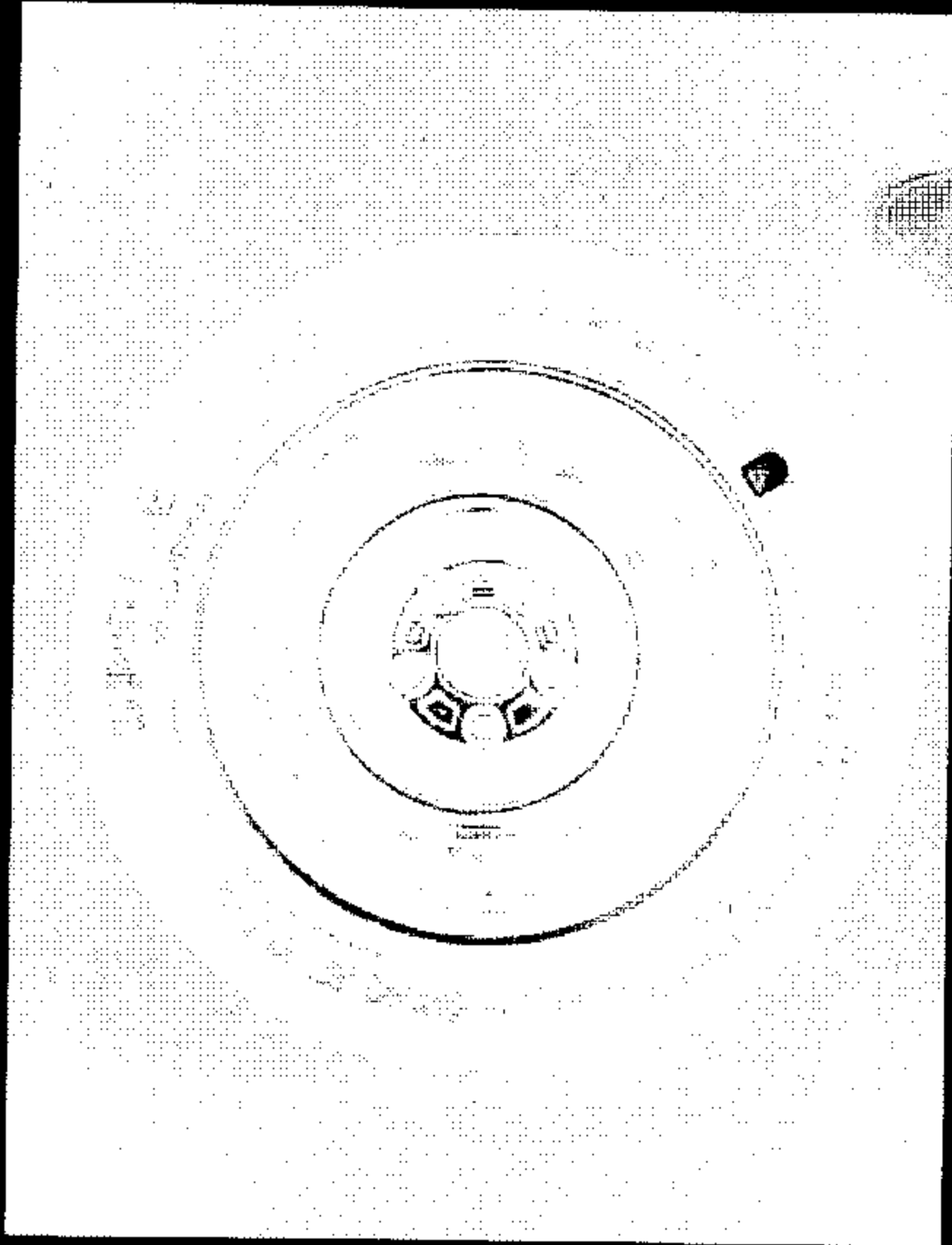
2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110

FIGURE 5.15
RIM MARKINGS



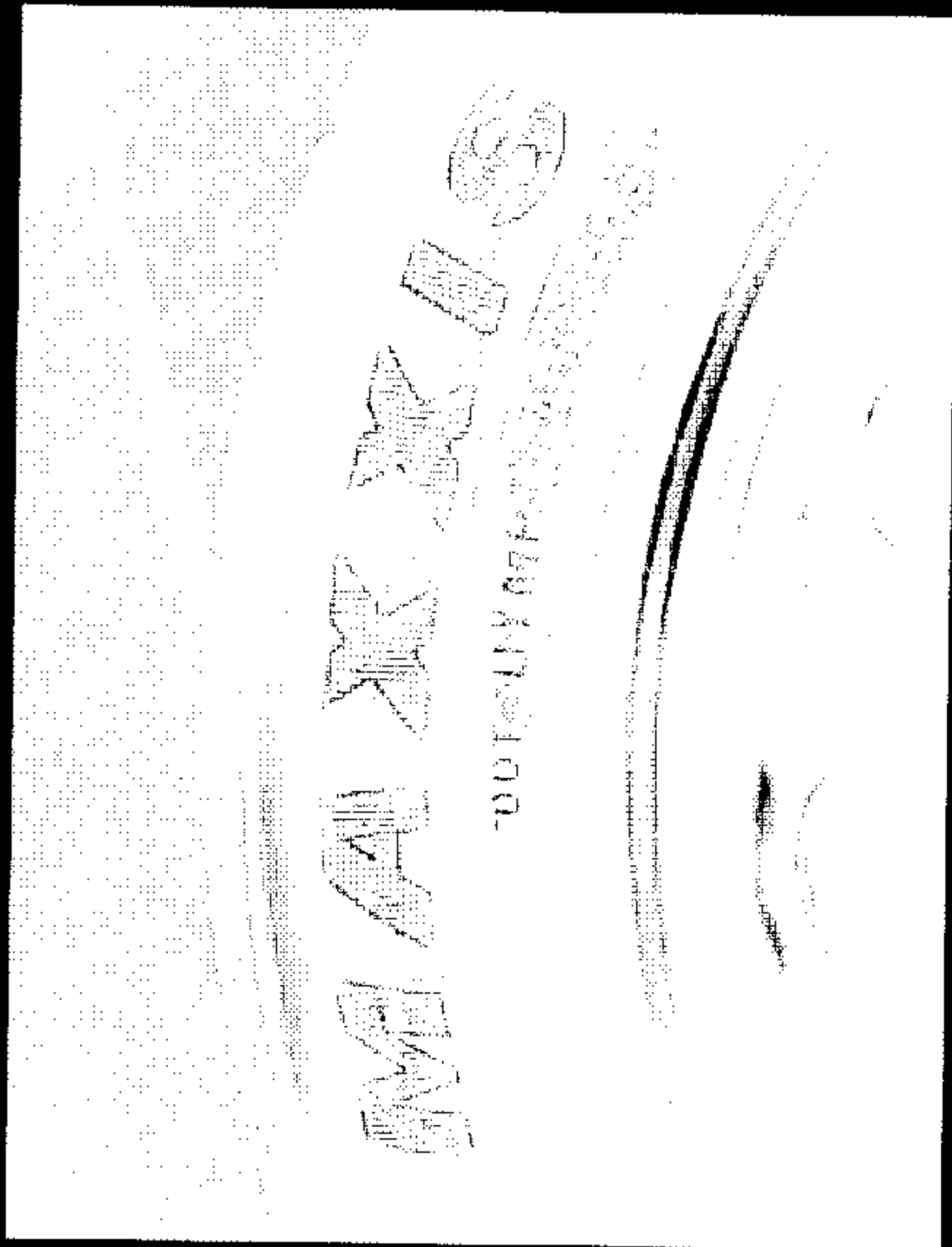
2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110

FIGURE 5.18
RIM MARKINGS



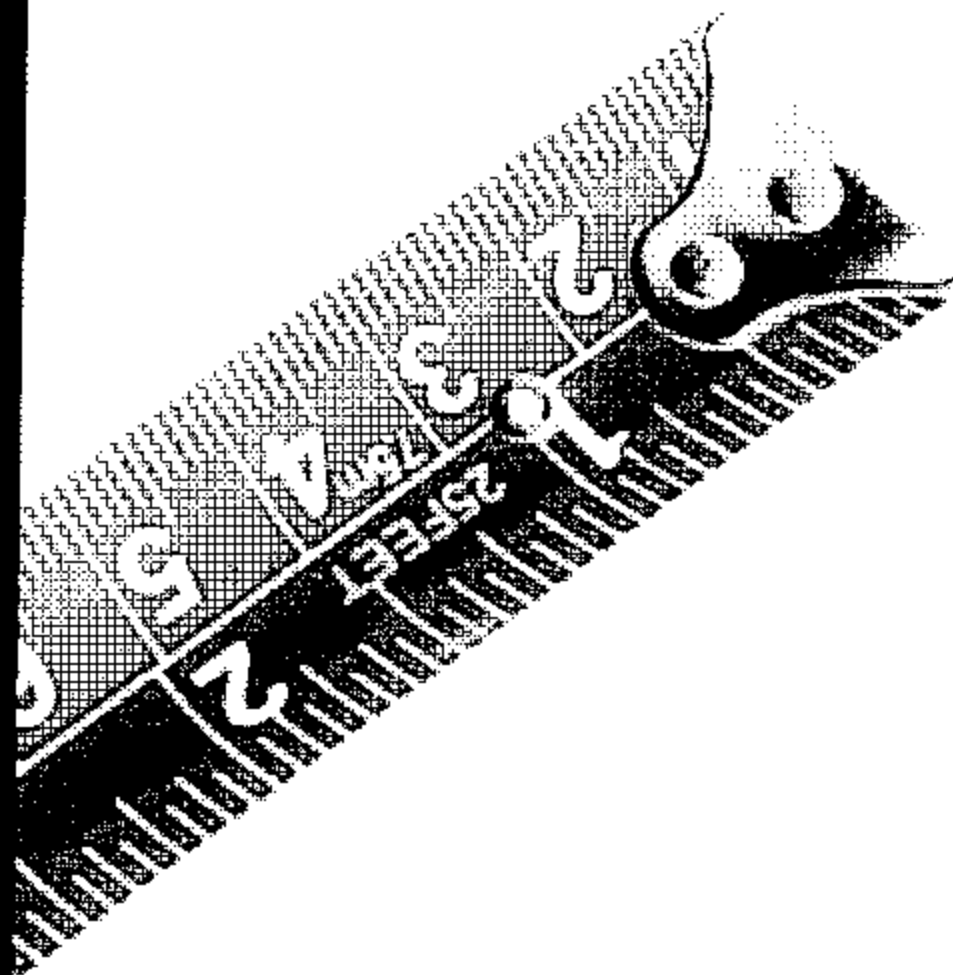
2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110

FIGURE 5.17
SPARE TIRE



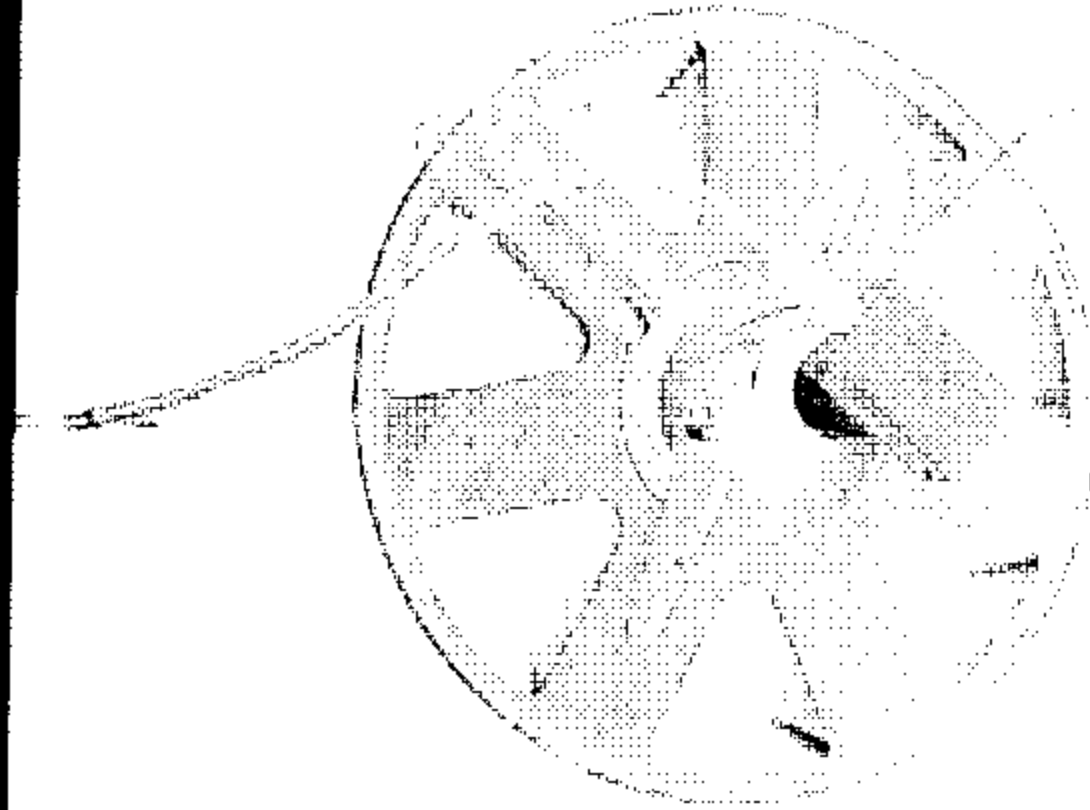
2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110

FIGURE 5.18
SPARE TIRE NAME AND SERIAL NUMBER



2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110

FIGURE 5.19
LEFT FRONT TIRE AFTER BLOW-OUT WITH RULER
NEXT TO HOLE



2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110

FIGURE 5.20
OUTSIDE VIEW OF LEFT FRONT TIRE AFTER
BLOW-OUT

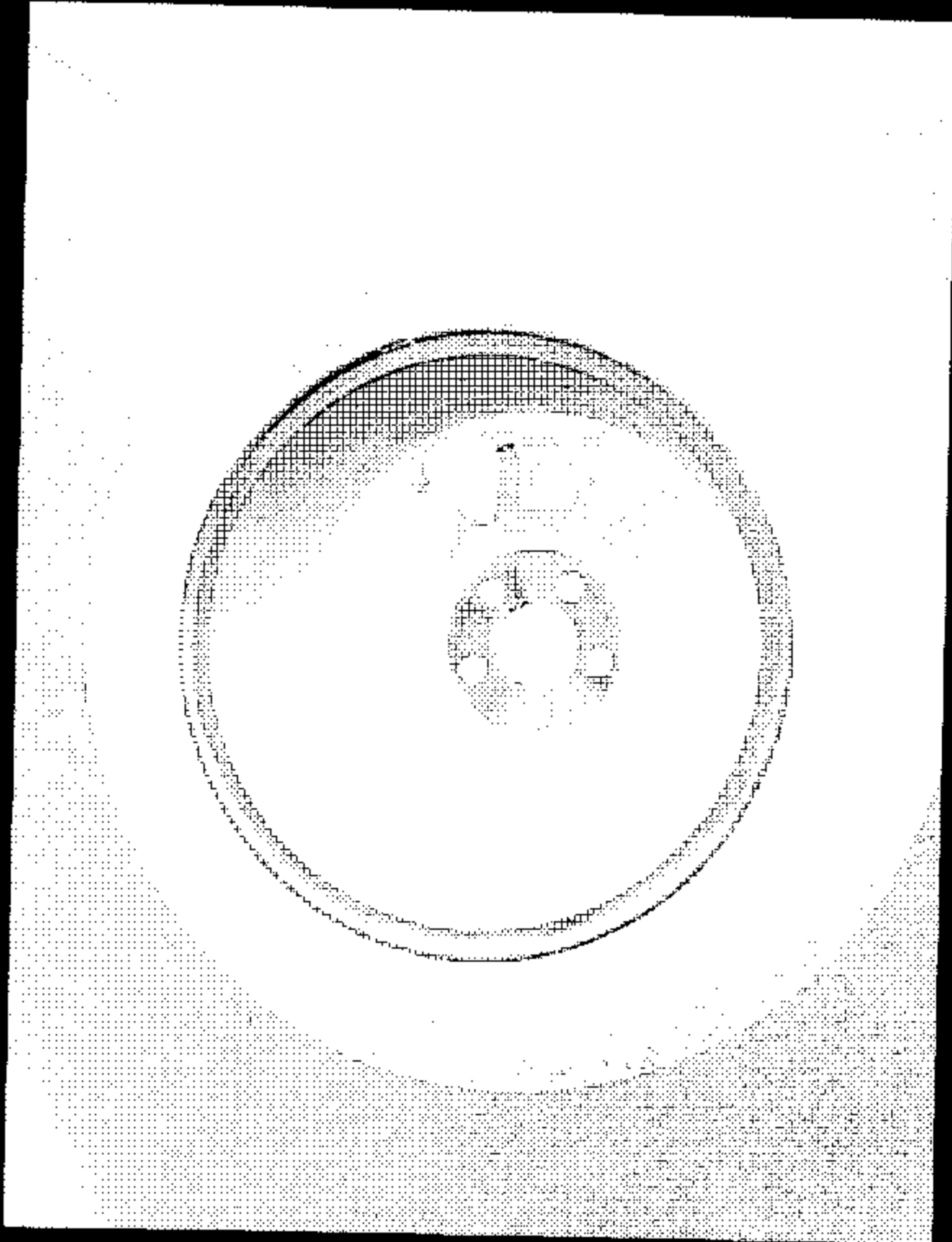
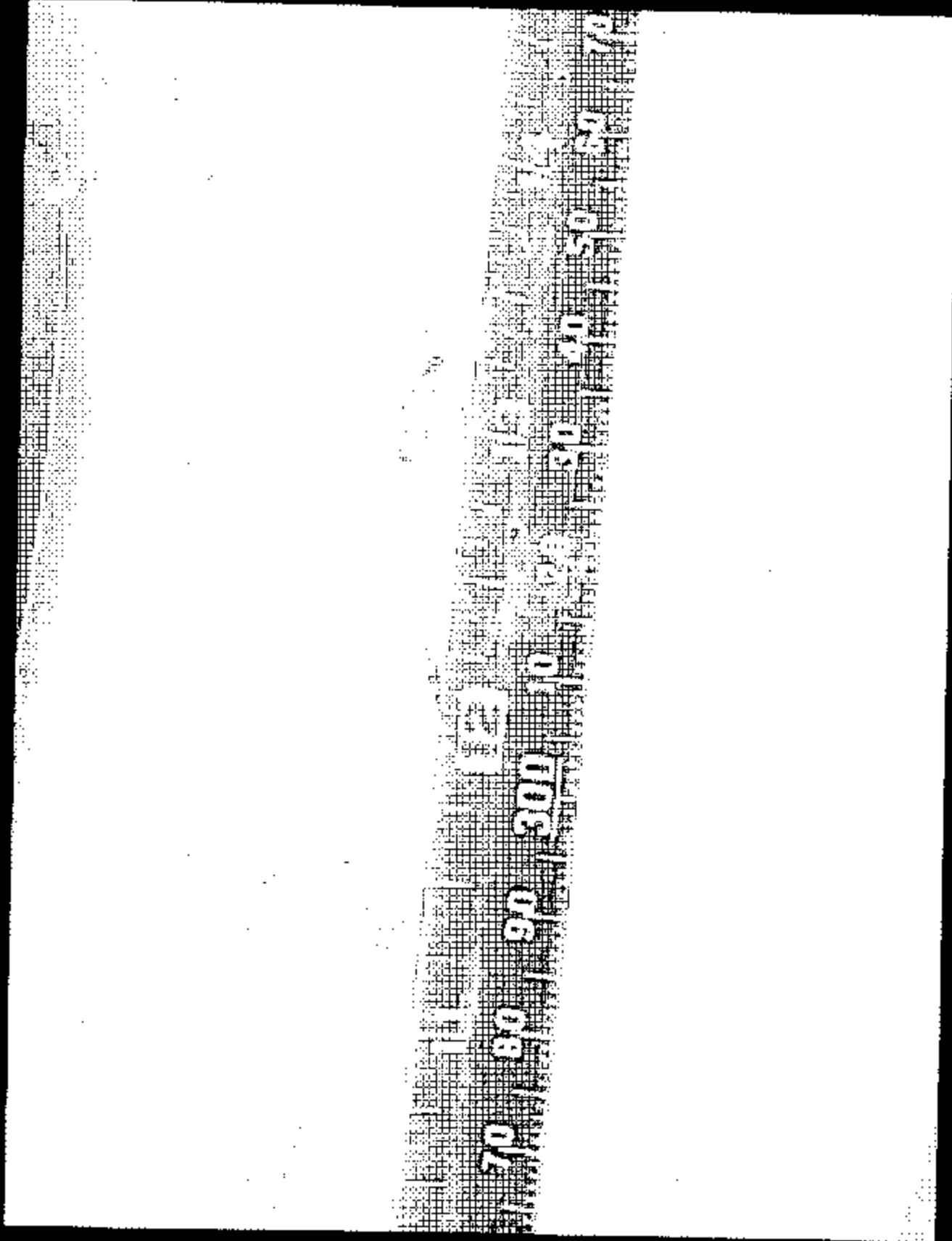


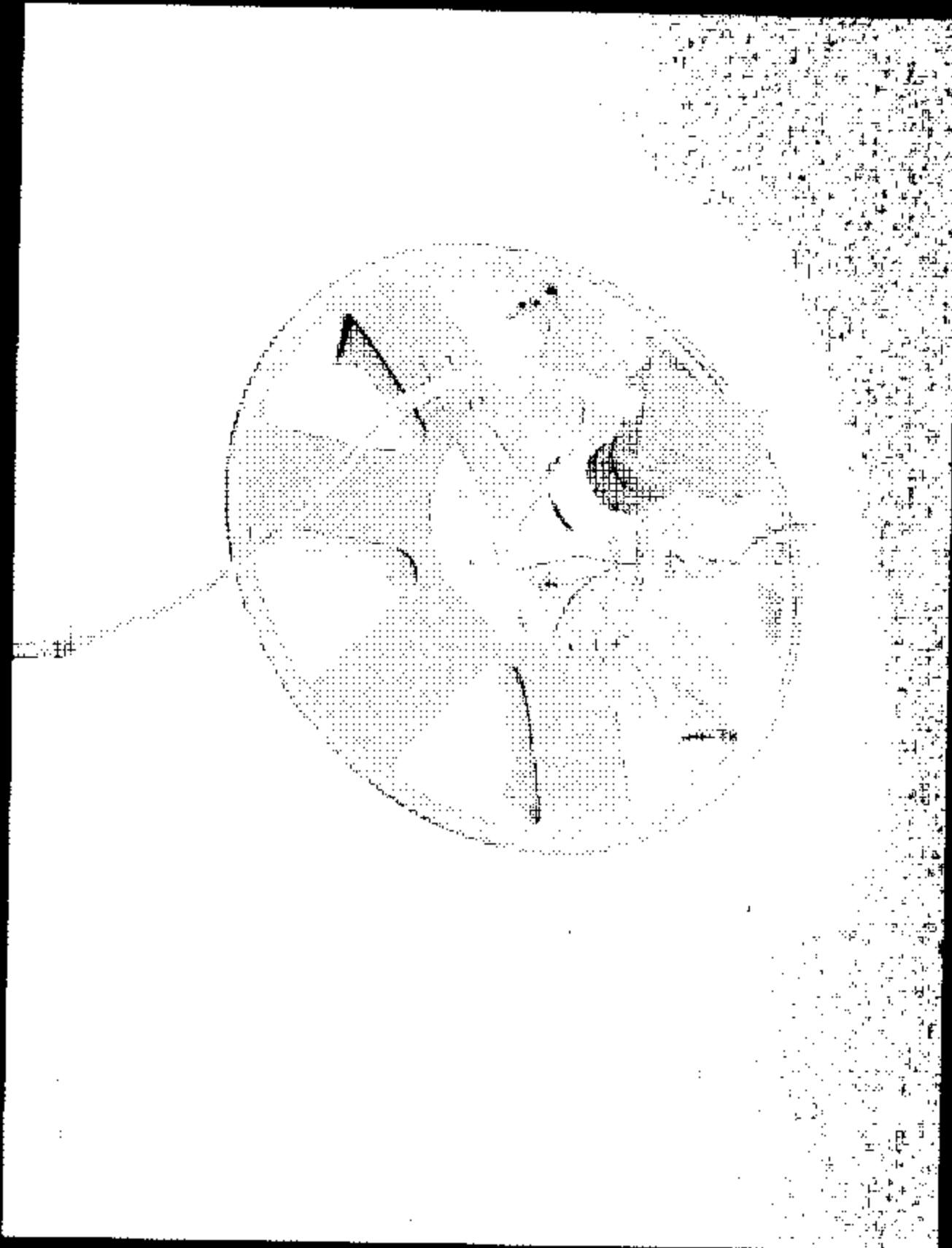
FIGURE 5.21
INSIDE VIEW OF LEFT FRONT TIRE AFTER BLOW-OUT

2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110



2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110

FIGURE 5.22
RIGHT REAR TIRE AFTER BLOW-OUT WITH RULER
NEXT TO HOLE



2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110

FIGURE 5.23
OUTSIDE VIEW OF RIGHT REAR TIRE AFTER
BLOW-OUT

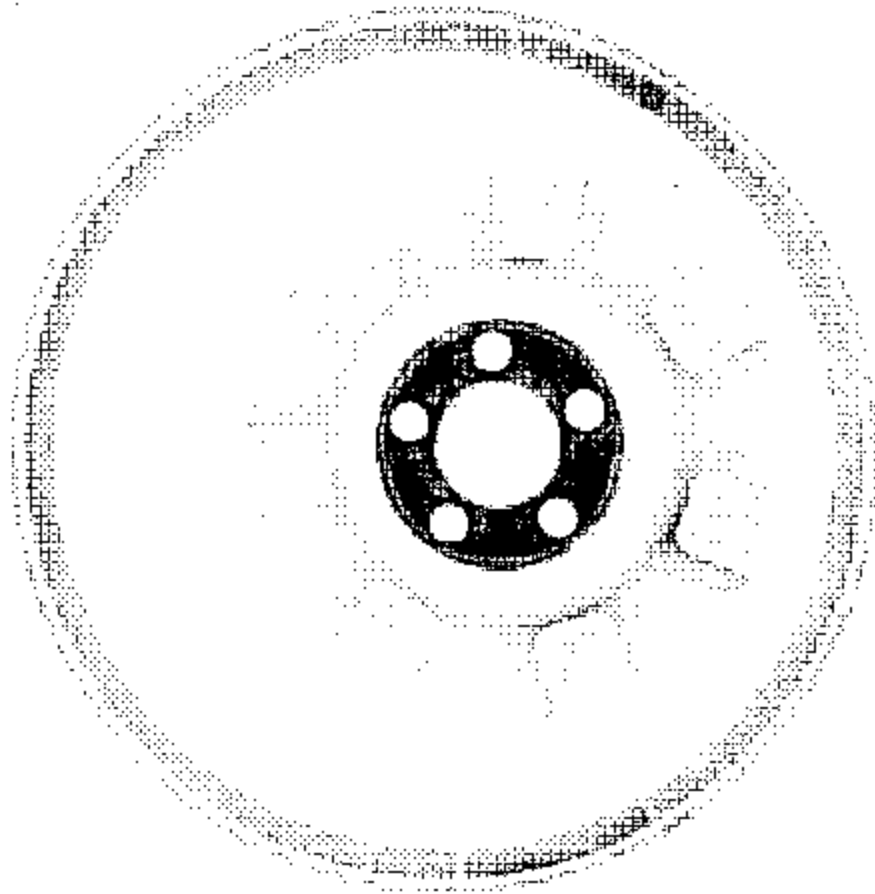
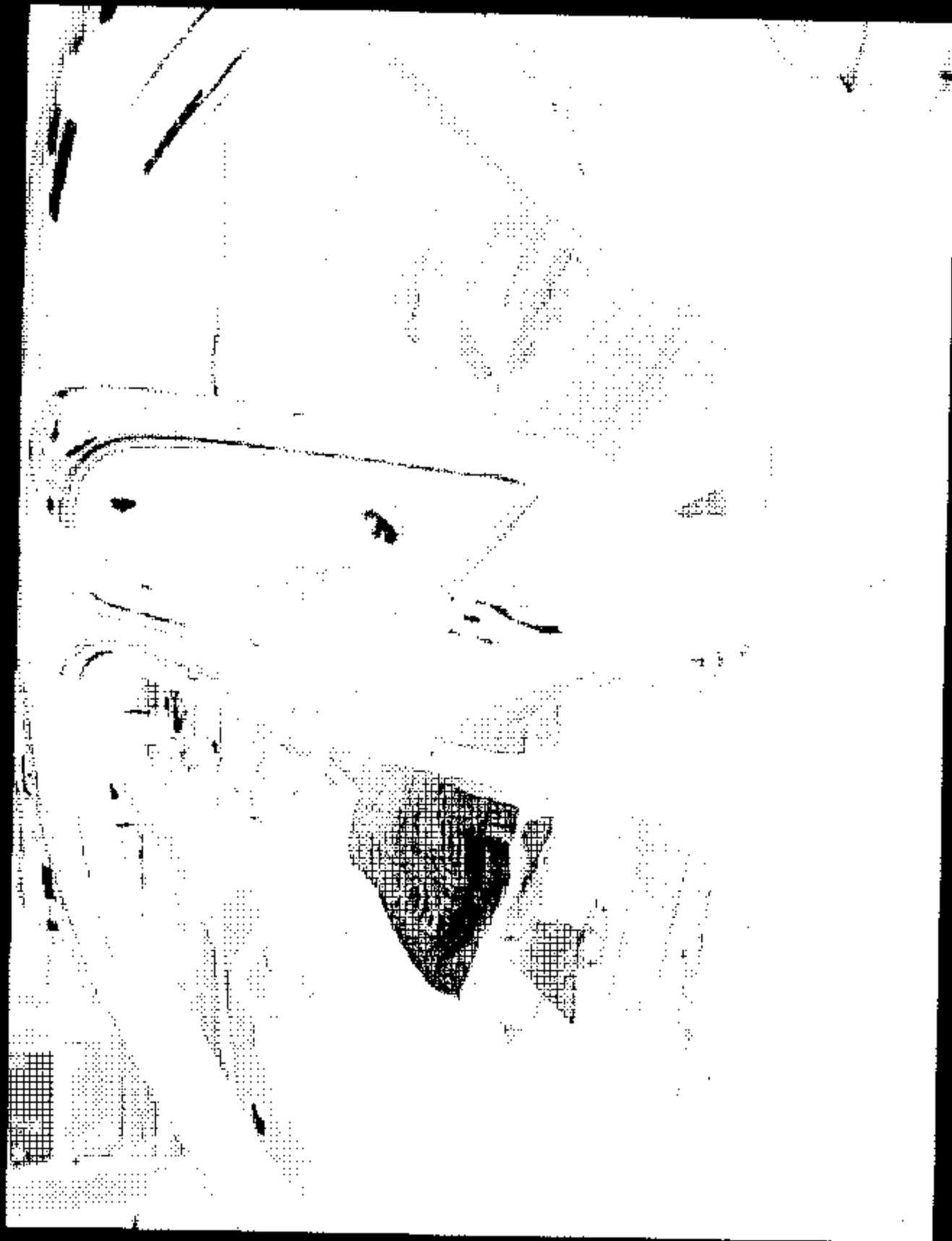


FIGURE 5.24
INSIDE VIEW OF RIGHT REAR TIRE AFTER BLOW-OUT

2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110



2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110

FIGURE 5.25
VEHICLE BALLASTED FOR NORMAL LOAD



2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110

FIGURE 5.26
VEHICLE BALLASTED FOR MAXIMUM LOAD



2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110

FIGURE 5.27
VEHICLE BALLASTED FOR CARGO LOAD



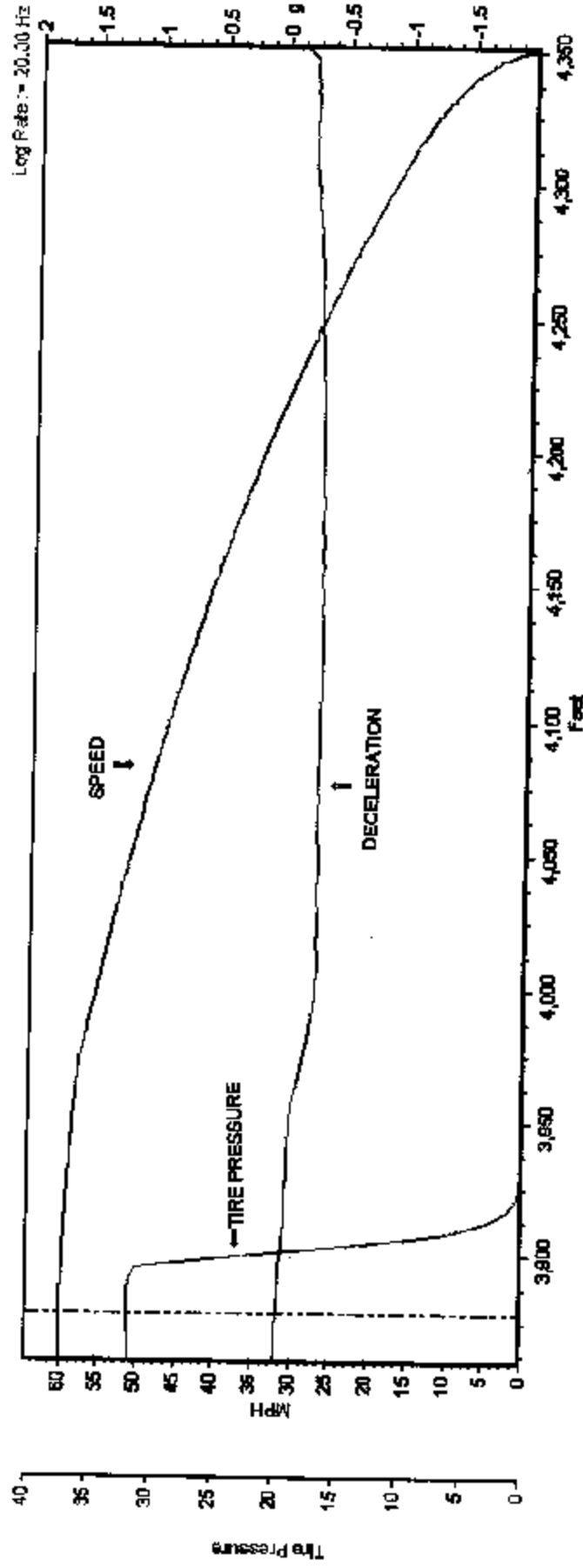
2004 LINCOLN LS
NHTSA NO. C40210
FMVSS NO. 110

FIGURE 5.28
VIEW OF VEHICLE ON SCALES

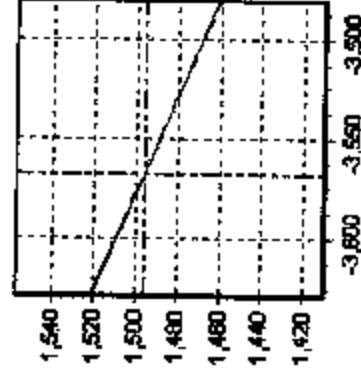
SECTION 6
TEST PLOTS

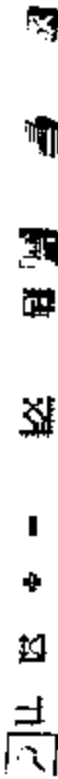


Lincoln LS,C40210,Right Rear 110 Blow-out

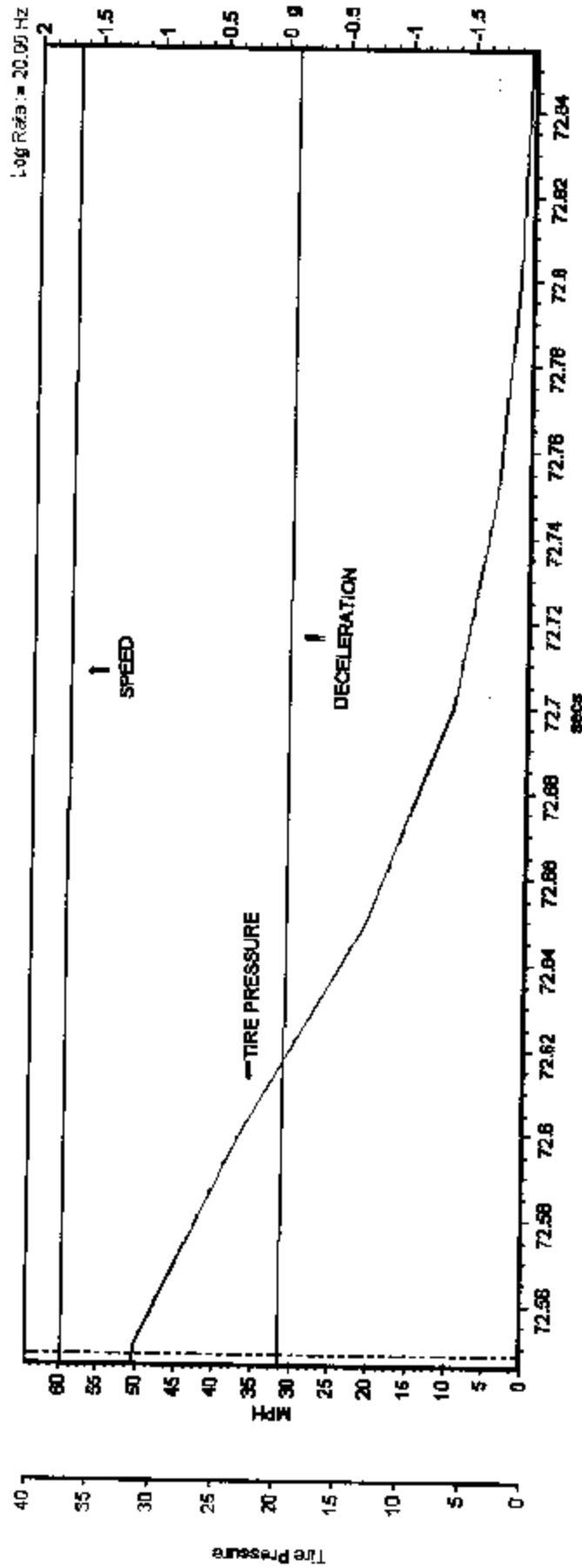


| | |
|-------------------------------|--------------------|
| Run Time | VBCX 003.W80 |
| Cursor (Feet) | 3 minute 21.45 sec |
| Speed (MPH) | 3977.81 |
| Tire_Press (PSI) | 59.85 |
| Longitudinal Acceleration (g) | 31.762 |
| Lateral Acceleration (g) | -0.029 |
| Height (Feet) | -0.011 |
| Vertical Velocity (MPH) | -112.032 |
| Satellites (Number of) | 0.000 |
| | 8 |

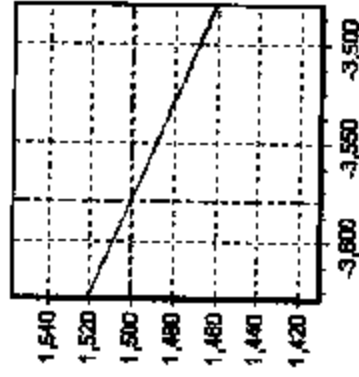




Lincoln L8, C40210, Right Rear 110 Blow-out

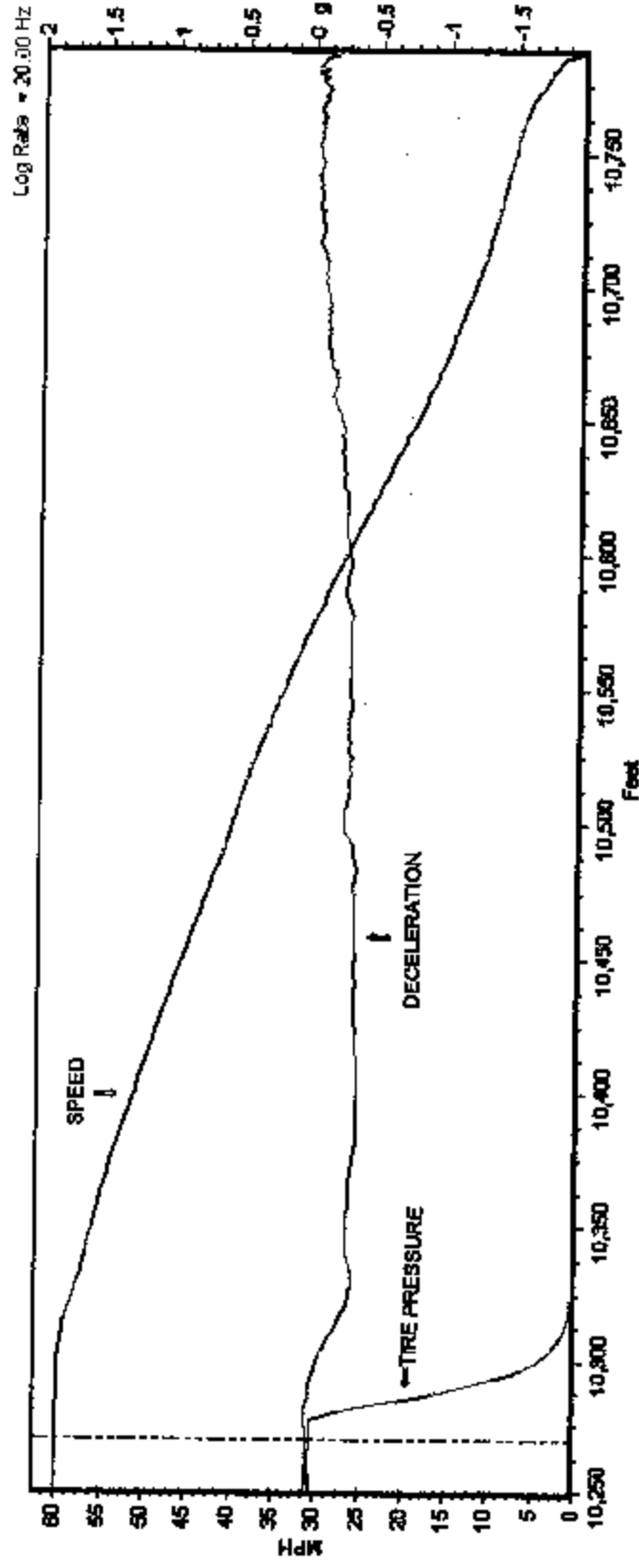


| | |
|-------------------------------|---------------------|
| Run Time | VBOX_003.VBO |
| Cursor (secs) | 3 minute 21.45 secs |
| Speed (MPH) | 72.54 |
| Tire Press (PSI) | 59.72 |
| Longitudinal Acceleration (g) | 31.309 |
| Lateral Acceleration (g) | -0.045 |
| Height (Feet) | -0.015 |
| Vertical Velocity (MPH) | -111.944 |
| Satellites (Number of) | 9,000 |
| | 9 |

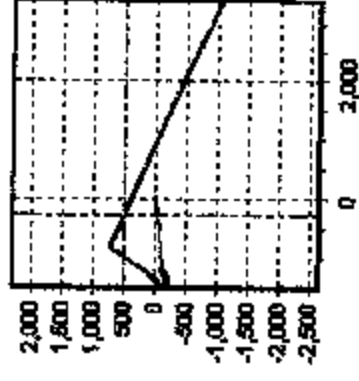


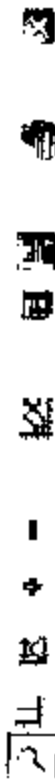


Lincoln LS, C40210, Left Front 110 Blow-out

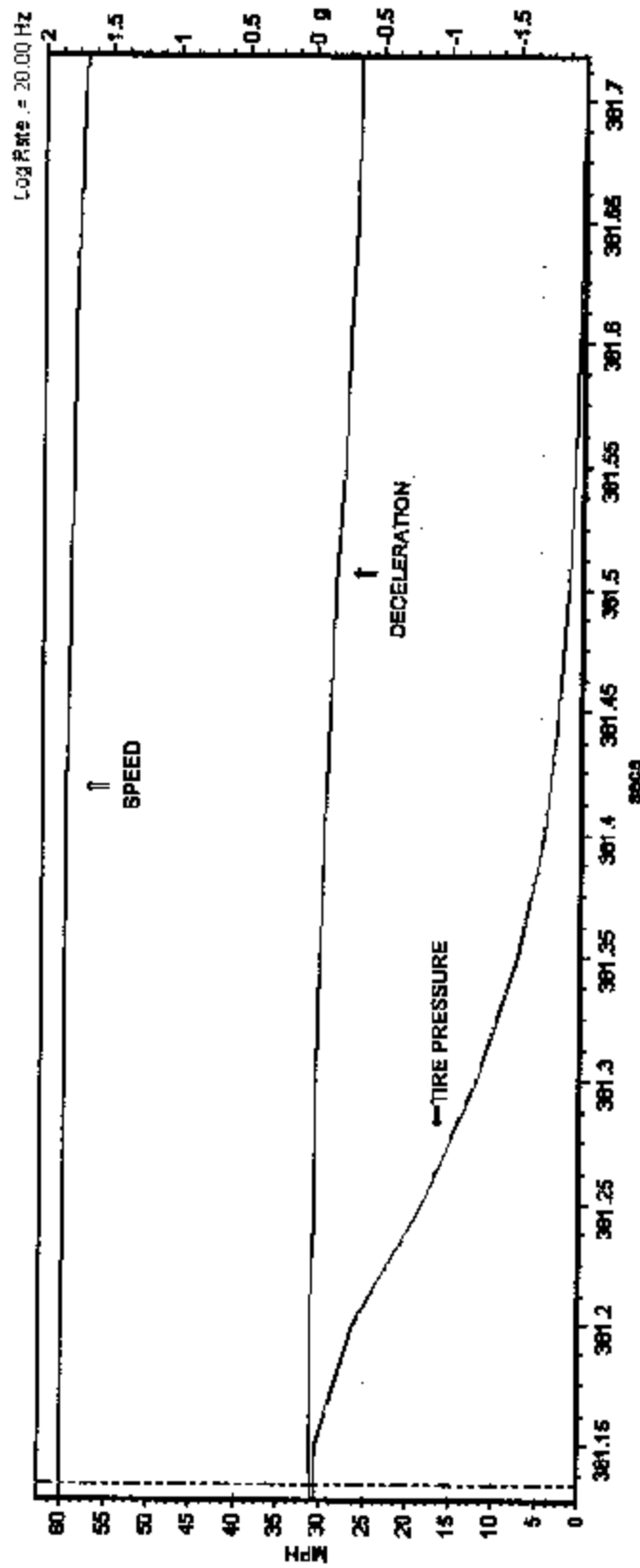


| | | |
|-------------------------------|-------------------|--|
| Run Time | YBOX_001.VBO | |
| Speed (MPH) | 8 minute 7.0 secs | |
| Tire Press (PSI) | 60.05 | |
| Longitudinal Acceleration (g) | 30.576 | |
| Heading (Degrees) | -0.027 | |
| Height (Feet) | 292.197 | |
| Vertical Velocity (MPH) | -115.825 | |
| Sabotages (Number of) | 0.000 | |
| | 9 | |





Lincoln LB, C40210, Left Front 110 Blow-out



| Run Time | VBOX 001.VBO | 8 minutes 7.0 secs |
|-------------------------------|--------------|--------------------|
| Speed (MPH) | 60.06 | |
| Tire Press (PSI) | 30.434 | |
| Longitudinal Acceleration (g) | -0.021 | |
| Heading (Degrees) | 295.224 | |
| Height (Feet) | -115.524 | |
| Vertical Velocity (MPH) | 0.0620 | |
| Satellites (Number of) | 9 | |

