

HSNS 636809

REPORT NUMBER 110(IND)-GTL-03-016

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

**FORD MOTOR CO. IN U.S.A.  
2003 FORD EXPLORER, MPV  
NHTSA NO. C30213**

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



SEPTEMBER 11, 2003

FINAL REPORT

PREPARED FOR

**U. S. DEPARTMENT OF TRANSPORTATION  
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION  
SAFETY ENFORCEMENT  
OFFICE OF VEHICLE SAFETY COMPLIANCE  
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WASHINGTON, D.C. 20590**

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Approval Date: 09/11/03

FINAL REPORT ACCEPTANCE BY OVSC:

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9. Performing Organization Name and Address General Testing Laboratories, Inc. 1623 Leedstown Road Colonial Beach, Va 22443	13. Type of Report and Period Covered Final Test Report June 03, 2003	
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15. Supplementary Notes		
16. Abstract This test was conducted on the subject 2003 Ford Explorer MPV in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-110-02 (partial), to gather data relating to the normal load requirements specified in FMVSS 110. NHTSA's Office of Safety Performance Standards requested this data to support the agency's TREAD tire rulemaking efforts.		
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## SECTION 1

### INTRODUCTION

#### 1.0 PURPOSE OF INDICANT TEST

A 2003 Ford Explorer MPV was subjected to a FMVSS No. 110 (Indicant) test intended to gather data relating to the normal load requirements specified in FMVSS 110. NHTSA's Office of Safety Performance Standards requested this data to support the agency's TREAD tire rulemaking efforts.

#### 1.1 TEST VEHICLE

The test vehicle was a 2003 Ford Explorer MPV. Nomenclature applicable to the test vehicle are:

- A. Vehicle Identification Number: 1FMZU73K83UC29228
- B. NHTSA No.: C30213
- C. Manufacturer: FORD MOTOR CO. IN U.S.A.
- D. Manufacture Date: 05/03

#### 1.2 TEST DATE

The test vehicle was subjected to testing on June 03, 2003.

## SECTION 2

### TEST PROCEDURE AND SUMMARY OF RESULTS

#### 2.0 TEST PROCEDURE

The vehicle was inspected, photographed and filled with fuel. It was then weighed to establish total curb weight and the weights of all wheels were measured and recorded. The vehicle was then ballasted to its normal load condition (refer to appendix) and the weights of all wheels were measured and recorded. Tire information labeling data and tire sidewall data were recorded.

This indicant test did not include any other requirements in FMVSS 110.

#### 2.1 SUMMARY OF RESULTS

Currently FMVSS 110 applies only to passenger cars. The subject Ford Explorer is a multipurpose passenger vehicle (MPV) and therefore it is not required to meet FMVSS 110 requirements. It was subjected to the normal load testing as executed for FMVSS 110 compliance verification for information only.

SECTION 3  
TEST DATA

DATA SHEET 1  
SUMMARY

VEHICLE MAKE/MODEL/BODY STYLE: 2003 FORD EXPLORER MPV  
 VEHICLE NHTSA NO.: C30213 ; VIN: 1FMZU73K83UC29228  
 LABORATORY: GENERAL TESTING LABORATORIES  
 TEST DATE: 06/03/03

<u>REQUIREMENT</u>	<u>YES/NO</u>
The vehicle is equipped with tires that meet the requirements of FMVSS 109 or FMVSS 119.	YES__
The vehicle normal load on the tire is not greater than the high speed performance test load specified in FMVSS 109 paragraph S5.5 or FMVSS 119 paragraph S7.4.	YES__
For passenger cars, the tire information placard is permanently affixed to the glove compartment door or equally accessible location; and displays the required information (FMVSS 110, S4.3).	N/A__
For vehicles other than passenger cars, a combined certification/ tire information label or separate tire information label is permanently affixed to either the hinge pillar, door-latch post or to the inward-facing surface of the door next to the driver's seating position (FMVSS 120, S5.3).	YES__

REMARKS:

RECORDED BY: *M.A. Bl...*

DATE: 06/03/03

APPROVED BY: *D. Musick*



**DATA SHEET 2**  
**TEST VEHICLE INFORMATION/RECEIVING INSPECTION**

LABORATORY: GENERAL TESTING LABORATORIES      DATE: 06/03/03

VEHICLE MODEL YEAR/MAKE/MODEL/BODY STYLE: 2003 FORD EXPLORER MPV

MANUFACTURE DATE: 05/03 NHTSA NO.: C30213 BODY COLOR: WEDGEWOOD BLUE

VIN: 1FMZU73K83UC29228      VEHICLE TYPE: MPV

GVWR 2667 kg (5880 lbs)    GAWR(Fr) 1240 kg (2735 lbs)    GAWR(Rr) 1508 kg (3325 lbs)

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

ENGINE DATA:      6 Cylinders 4.0 Liters           Cubic Inches

TRANSMISSION DATA:      X Automatic      Manual      5 No. of Speeds

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

INSTALLED TIRE DATA: Size - P235/70R16      Mfr. - MICHELIN

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

<input checked="" type="checkbox"/>	Air Conditioning		Traction Control	<input checked="" type="checkbox"/>	Clock
<input checked="" type="checkbox"/>	Tinted Glass		All Wheel Drive	<input checked="" type="checkbox"/>	Roof Rack
<input checked="" type="checkbox"/>	Power Steering	<input checked="" type="checkbox"/>	Cruise Control	<input checked="" type="checkbox"/>	Console
<input checked="" type="checkbox"/>	Power Windows	<input checked="" type="checkbox"/>	Rear Window Defroster	<input checked="" type="checkbox"/>	Driver Air Bag
<input checked="" type="checkbox"/>	Power Door Locks		Sun Roof or T-Top	<input checked="" type="checkbox"/>	Passenger Air Bag
<input checked="" type="checkbox"/>	Power Seat Driver Side	<input checked="" type="checkbox"/>	Tachometer	<input checked="" type="checkbox"/>	Front Disc Brakes
<input checked="" type="checkbox"/>	Power Brakes	<input checked="" type="checkbox"/>	Tilt Steering Wheel	<input checked="" type="checkbox"/>	Rear Disc Brakes
<input checked="" type="checkbox"/>	Antilock Brake System	<input checked="" type="checkbox"/>	AM/FM/CD		Other -

ARE ALL OPTIONS LISTED ON "WINDOW STICKER" PRESENT ON THE TEST VEHICLE:  
(YES/NO)      Yes

REMARKS:

RECORDED BY: M. P. [Signature]

DATE: 06/03/03

APPROVED BY: D. [Signature]

DATA SHEET 3  
CURB WEIGHT WITH OPTIONS AND NORMAL LOAD

VEHICLE MAKE/MODEL/BODY STYLE: 2003 FORD EXPLORER MPV  
 VEHICLE NHTSA NO.: C30213 ; VIN: 1FMZU73K83UC29228  
 LABORATORY: GENERAL TESTING LABORATORIES  
 TEST DATE: 06/03/03

Full Fluid Levels:

Fuel Full ; Coolant Full ; Other Fluids Full

Tire Pressure: LF 205 KPA (30 psi) LR 240 KPA (35 psi)  
 RF 205 KPA (30 psi) RR 240 KPA (35 psi)

A. MEASURED CURB WEIGHT WITH INSTALLED OPTIONS AND ACCESSORIES

LF <u>552 KG (1218 LB)</u>	LR <u>489 KG (1078 LB)</u>
RF <u>552 KG (1217 LB)</u>	RR <u>519 KG (1144 LB)</u>
Front Axle <u>1104 KG (2435 LB)</u>	Rear Axle <u>1008 KG (2222 LB)</u>
Total Vehicle <u>2112 KG (4657 LB)</u>	

B. MEASURED VEHICLE WEIGHT IN NORMAL LOAD CONDITION

(1) Seating Capacity (from Tire Information Placard) = N/A  
 Seating Capacity (# of belted seating positions) = 7

(2) Normal Load # of Occupants from Appendix  
 Occupant 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 each Wheel and Axles (Sum)

LF <u>597 KG (1316 LB)</u>	LR <u>543 KG (1197 LB)</u>
RF <u>601 KG (1325 LB)</u>	RR <u>574 KG (1265 LB)</u>
Frnt Axle <u>1198 KG (2641 LB)</u>	Rr Axle <u>1117 KG (2462 LB)</u>
Total Vehicle <u>2315 KG (5103 LB)</u>	

## DATA SHEET 3 - CONTINUED

- (5) Calculated Vehicle Normal Load on the Tire  
 Front Tires (measured front axle normal load/2) = 599 KG (1320 LB)  
 Rear Tires (measured front axle normal load/2) = 558 KG (1231 LB)
- (6) High Speed Test Load from ( ) FMVSS 109 (S5.5), or (X) FMVSS 119 (S7.4)
- |  | Front                   | Rear                    |
|--|-------------------------|-------------------------|
| (a) Installed Tire Size                                    | <u>P235/70R16</u>       | <u>P235/70R16</u>       |
| Max. Load Rating on Sidewall                               | <u>900 KG(1984 LBS)</u> | <u>900 KG(1984 LBS)</u> |
| Reduced Sidewall Load Rating<br>(if applicable)*           | <u>818 KG(1804 LBS)</u> | <u>818 KG(1804 LBS)</u> |
| High Speed Test Load<br>(88% of sidewall max. load rating) | <u>720 KG(1588 LBS)</u> | <u>720 KG(1588 LBS)</u> |
| (b) Optional Tire Size(s)                                  | <u>NONE</u>             | <u>NONE</u>             |

\* If a passenger car tire is installed on a multipurpose passenger vehicle (MPV), truck or bus, the tire's load rating shall be reduced by dividing by 1.10.

REMARKS: The Vehicle Normal Load on the Tire is not greater than the High Speed Test Load.

RECORDED BY: *M.P. [Signature]*

DATE: 06/03/03

APPROVED BY: *D. Music*

DATA SHEET 4  
TIRE INFORMATION LABEL OR PLACARD

VEHICLE MAKE/MODEL/BODY STYLE: 2003 FORD EXPLORER MPV  
VEHICLE NHTSA NO.: C30213 ; VIN: 1FMZU73K83UC29228  
LABORATORY: GENERAL TESTING LABORATORIES  
TEST DATE: 06/03/03

A. Vehicle Type from Certification Label: MPV

B. Identify Vehicle Labeling:

Vehicle has a combined Certification Tire Information Label  Yes  No  
Is Label Permanently Affixed:  Yes  No  
Label Location: Driver's Door  
Description of Label: Vinyl

Vehicle has a separate Tire Information Label or Placard  Yes  No  
Is Label Permanently Affixed:  Yes  No  
Label Location: \_\_\_\_\_  
Description of Label: \_\_\_\_\_

C. Enter Information from Combined or Separate Tire Information Label/Placard

Vehicle Capacity Weight - N/A(see remarks)

Designated Seating Capacity (DSC) - N/A(see remarks)

Expressed In—

(1) Total No. of Occupants  Yes  No

(2) Terms of Occupants for Each Seat Location  Yes  No

Manufacturer's Recommended Tire Size(s) and Cold Tire Inflation Pressure(s) for Maximum Load Vehicle Weight:

P235/70R16 FRONT - 205 kPa (30 psi)  
REAR - 240 kPa (35 psi)

Manufacturer's Recommended Tire Size(s) and Cold Tire Inflation Pressure(s) for Other Load Conditions: NONE

REMARKS: The vehicle labeling requirements of FMVSS 120 for an MPV do not include Vehicle Capacity Weight (VCW) or Designated Seating Capacity (DSP) as required by FMVSS 110 passenger car labeling.

RECORDED BY: *M. A. Ashby*

DATE: 06/03/03

APPROVED BY: *D. Messick*

DATA SHEET 5  
VEHICLE TIRE DATA

VEHICLE MAKE/MODEL/BODY STYLE: 2003 FORD EXPLORER MPV  
 VEHICLE NHTSA NO.: C30213 ; VIN: 1FMZU73K83UC29228  
 LABORATORY: GENERAL TESTING LABORATORIES  
 TEST DATE: 06/03/03

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

INFORMATION FROM TIRE SIDEWALL:

Right Front Tire

Tire Size Designation P235/70R16

Tire Load Index/Speed Symbol 104S

Maximum Inflation Pressure 300 kPa (44 psi)

Maximum Load Rating 900 KG (1984 LBS.)

Mfr. Name or Brand & Code MICHELIN CROSS TERRAIN

Tube or Tubeless TUBELESS

Treadwear/Traction/Temp. Grades 420/A/B

Sidewall (Plies & Composition) 2 PLY POLYESTER

Tread (Plies & Composition) 2 PLY POLYESTER  
2 PLY STEEL

Serial Number: Right Front - DOT-B37P DH8X 1503

Tire has "DOT" markings: (X) YES ( ) NO ( ) UNDETERMINED

REMARKS:

RECORDED BY:  DATE: 06/03/03

APPROVED BY: 

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	06/02	06/20/03
	#2 199744RF	199744RF	06/02	06/20/03
	#3 199744LR	199744LR	06/02	06/20/03
	#4 199744RR	19974RR	06/02	06/20/03
PRESSURE GAGE	WESKLER	0-100	05/03	05/04
SURFACE LEVEL	GTL	N/A	BEFORE USE	BEFORE USE

SECTION 5  
PHOTOGRAPHS

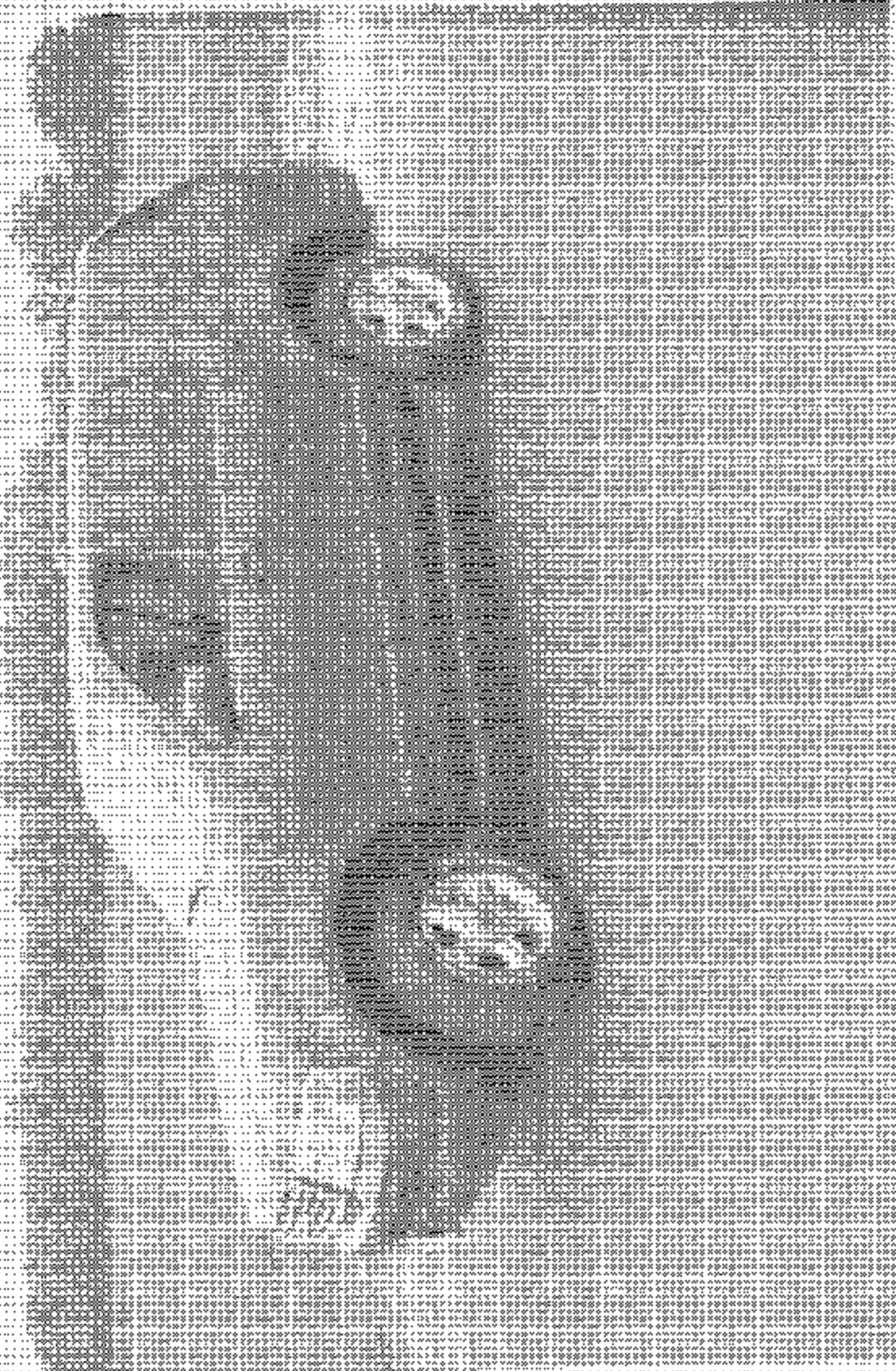


FIGURE 5-1  
FRONTAL VIEW OF VEHICLE

2003 FORD EXPLORER XLT  
NHTSA NO. 200213  
FRANSR NO. 110 (INDICATED)



**MFD. BY FORD MOTOR CO. IN U.S.A.**

DATE: 05/03  
FRONT GAWR: 2735LB  
1240KG  
P235/70R16SL  
16X7.0J  
AT 205 kPa/30 PSI COLD

GWR: 5880LB / 2667KG  
REAR GAWR: 3325LB  
1508KG  
P235/70R16SL  
16X7.0J  
AT 240 kPa/35 PSI COLD

WITH  
TIRES  
RIMS  
PSI COLD

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR  
VEHICLE SAFETY AND THEFT PREVENTION STANDARDS IN  
EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.

VIN: 7FMZU73K83UC29228  
TYPE: MPV

F0083  
T0181



EXT. PNT: LD  
WD: BRK INT IR TP/PS R AGE TR SPR  
114 4 GT K 45 V DB F05  
1200305120213 UTC 2USA-1520472-AA

2003 FORD EXPLORER XLT  
NHTSA NO. C30213  
FMVSS NO. 110 (INDICANT)

FIGURE 5.2  
VEHICLE'S CERTIFICATION AND TIRE  
INFORMATION LABEL



- SPEED CONTROL W/ 18" WHEELS
- CARGO MANAGEMENT SYSTEM
- 12V AUXILIARY POWER POINT

**FUNCTIONAL**

- 4.0L SOHC I-4 V6 ENGINE
  - 5-SPD AUTO O/D TRANS
  - INDEPENDENT FRT/RR SUSPEN
  - CONTROL - TRAC 4WD
  - 4-WHEEL DISC BRAKES W/ABS
  - REMOTE KEY ENT W/2 KEYFOBS
  - MAINT FREE BATTERY W/SAVER
  - 22.5 GALLON FUEL TANK
- SAFETY/SECURITY**
- 2ND GEN DUAL FRONT AIRBAGS
  - SIDE INTRUSION DOOR BEAMS
  - HEIGHT ADJUST SAFETY BELTS
  - SECURITY LOCK ANTI-THEFT
- WARRANTY**
- 36/36 BUMPER TO BUMPER
  - 24 HR ROADSIDE ASSISTANCE

**FREE FUEL ECONOMY GUIDE**



2003 FORD EXPLORER XLT  
 NHTSA NO. C30213  
 FMVSS NO. 110 (INDICANT)

FIGURE 5.4  
 VEHICLE'S MONROEY LABEL (PART 2)

PRICE INFORMATION

Manufacturer's  
Suggested Retail Price

STANDARD VEHICLE PRICE **\$31,250.00**

KEY STANDARD EQUIPMENT

ORDER CODE 220A  
FLOOR MATS C/K CARPET  
AIR CONDITIONING W/APPROACH FREE  
AUTO LAMP HEADLIGHTS  
GLASS, PRIVACY

OPTIONAL EQUIPMENT

3.5L V6 ENGINE	REGULAR AXLE	NO CHARGE
FRONT AIR BAGS	PLATE BRACKET	395.00
WHEELS	SPK CONTROL	619.00
AUXILIARY SEAT	IMPACT PROTECT	655.00
3RD ROW SEAT	BUCKET W/PHR DRVR	

**TOTAL VEHICLE & DELIVERY 33,589.00**

2003 FORD EXPLORER XLT  
NHTSA NO. C30213  
FMVSS NO. 110 (INDICANT)

FIGURE 5.5  
VEHICLE'S MONRONEY LABEL (PART 3)

**CLE DESCRIPTION**

# EXPLORER

2003 4DR XLT 4X4  
114" WHEELBASE  
4.0L SOHC V6 FLEX FUEL ENG  
5-SPEED AUTOMATIC O/D TRANS

**ID EXTRA CHARGE**

- SPEED CONTROL/TILT WHEEL
- CARGO MANAGEMENT SYSTEM
- 12V AUXILIARY POWER POINT FUNCTIONAL
- 4.0L SOHC FFV V6 ENGINE
- 5-SPD AUTO O/D TRANS
- INDEPENDENT FRT/RR SUSPEN
- CONTROL TRAC 4WD
- 4-WHEEL DISC BRAKES W/ABS
- REMOTE KEY ENT W/2 KEYS FORS
- MAINT FREE BATTERY W/SAVER
- 22.5 GALLON FUEL TANK

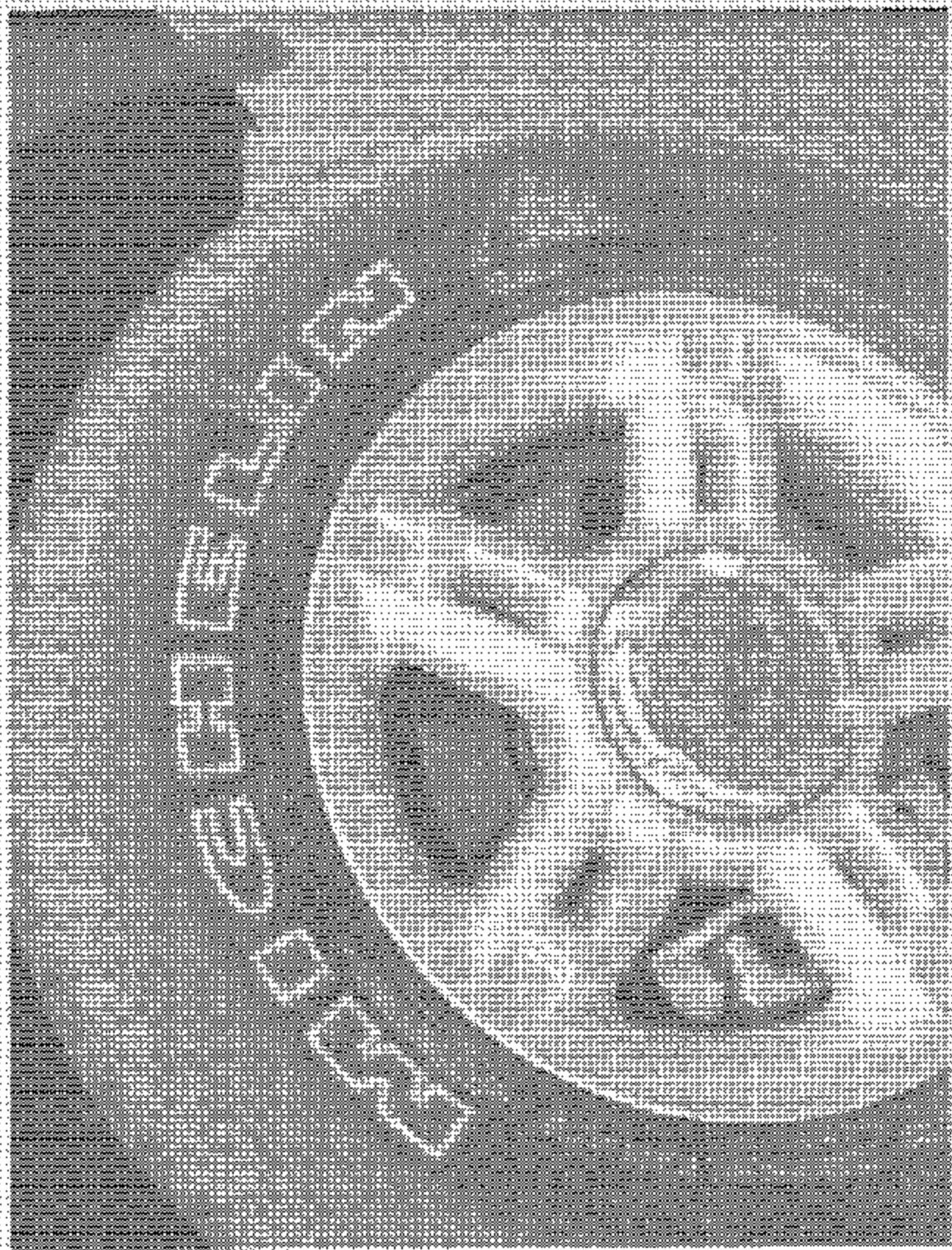
**PRICE INFORMATION**

**STANDARD**

KEY STANDARD EQUIPMENT  
ORDER CODE 2003  
FLORIDA MATS  
LAWR CONDUIT  
GLASS, PRIVACY

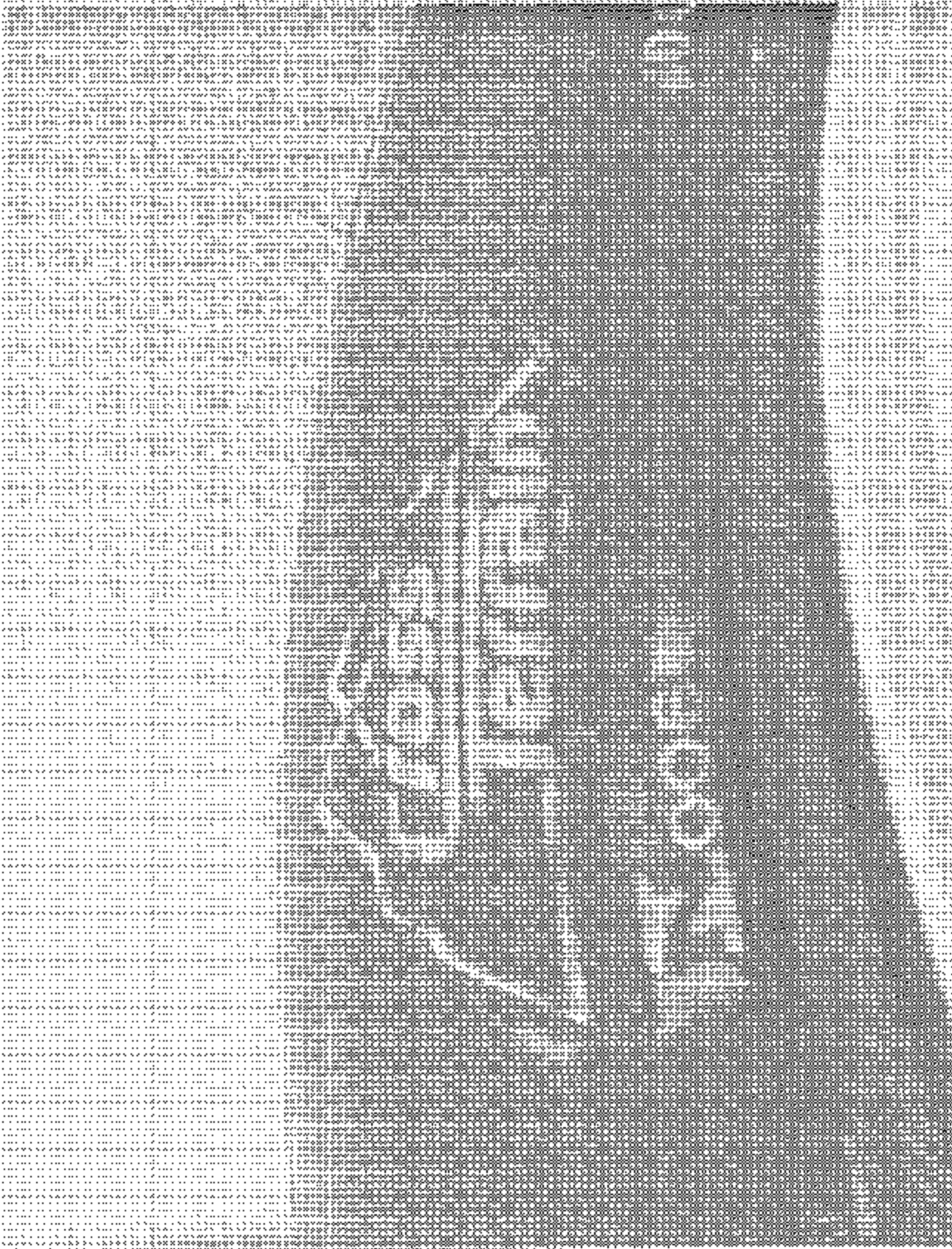
2003 FORD EXPLORER XLT  
NHTSA NO. C30213  
FMVSS NO. 110 (INDICANT)

FIGURE 5.6  
VEHICLE'S MONROONEY LABEL (PART 4)



2000 FORD EXHAUSTER XUI  
KMPDA NO. 236213  
TANZANIA NO. 110 (INDICANT)

FIGURE 17  
TANZANIA BRAND



2005 FORD EXPLORER XLT  
NHTSA NO. C30213  
FMVSS NO. 110 (INDICANT)

FIGURE 68  
FRONT VIEWING ANGLE



2000 FORD EXPLORER XLT  
NHTSA NO. C300213  
FMVSS NO. 110 (INDICANT)

FIGURE 10  
TRIP-SHOWING SERIAL LOAD INDEX AND SERIAL  
SYMBOL



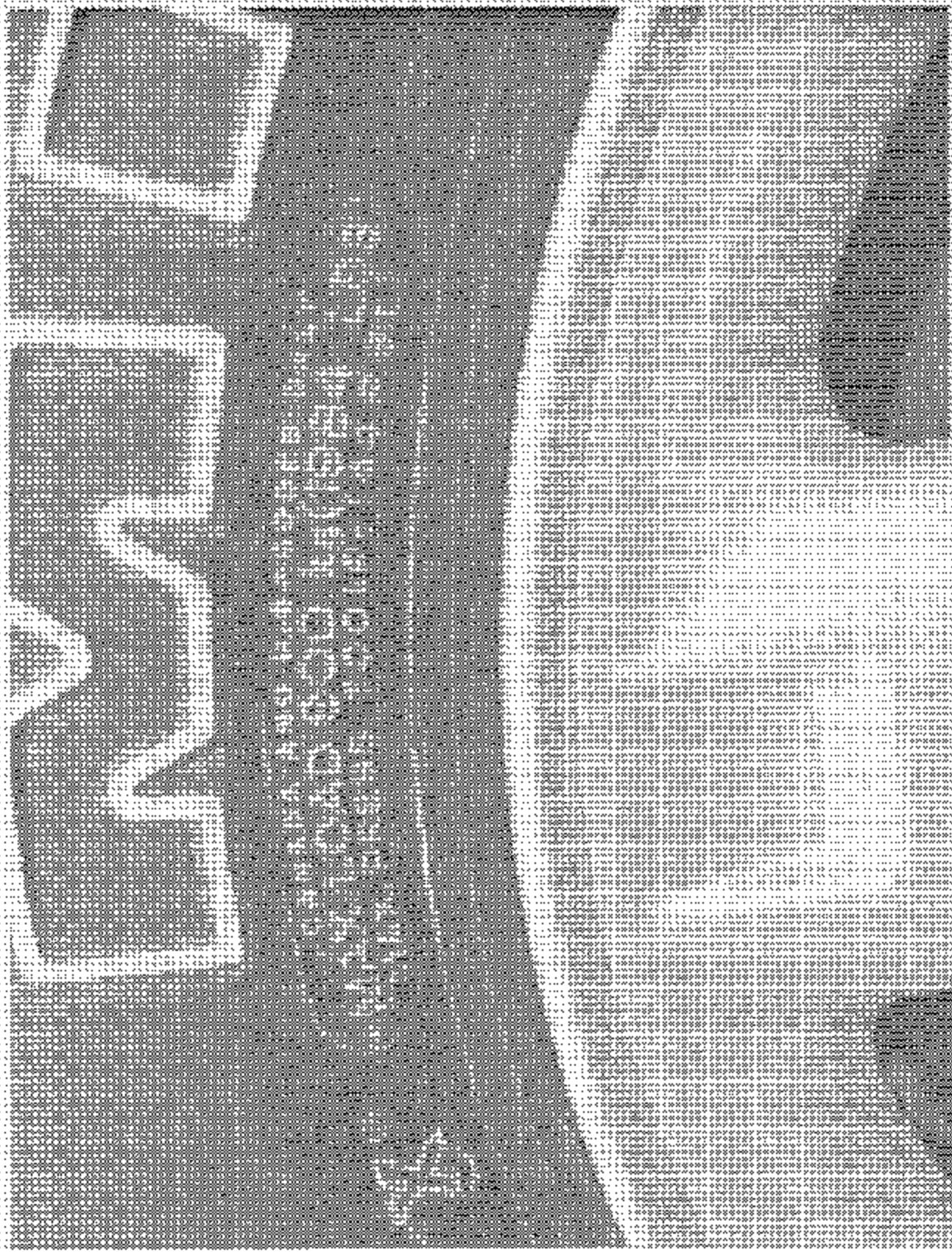
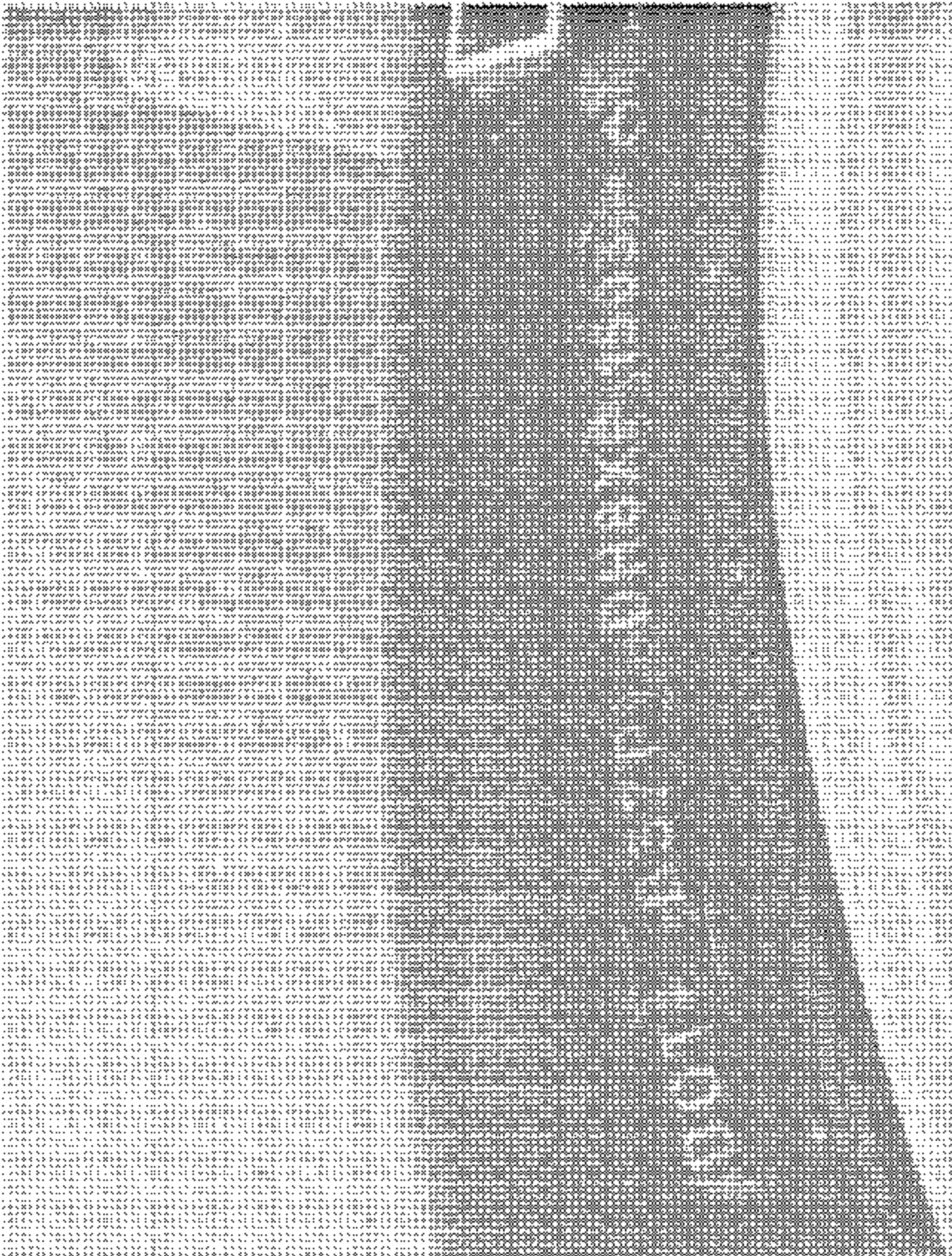


FIGURE 6.10  
 TIRE SHOWING MAX LOAD RATINGS AND MAX  
 INFLATION PRESSURE

2003 FORD EXPLORER XLT  
 NHTSA NO. C80212  
 FMVSS NO. 110 AND 112



FILELINE 6 11  
THE STORING SERIAL NUMBER

2024 700EXPLORER KIT  
NHTSA NO. CE0213  
FMVSS NO. 110 ENDOCAVE



M09 FONDISPLOERER KL=  
SHTSA NO. C50215  
SWISS NO. 110 (INDICANT)

FIGURE 5.12  
VEHICLE EVALUATED TO EMULATE  
NORMALIDAD CONDITION

## APPENDIX

Table 1 – Occupant Loading and Distribution for Vehicle Normal Load for Various Designated Seating Capacities

Designated Seating Capacities, numbers of Occupants	Vehicle normal load, number of occupants	Occupant distribution in a normally loaded vehicle
2 through 4	2	2 in front
5 through 10	3	2 in front, 1 in second seat
11 through 15	5	2 in front, 1 in second seat, 1 in third seat, 1 in fourth seat
16 through 22	7	2 in front, 2 in second seat, 2 in third seat, 1 in fourth seat

NOTE: For the indicant test each seat was adjusted to its full down and mid forward to aft position with the seat back adjusted to a 25° reclined angle. Each designated seat position was ballasted with 54 KG (120 LBS) in the seat and 14 KG (30 LBS) on the floor directly in front of the respective seat position.