

REPORT NUMBER 110(IND)-GTL-03-037

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

**FORD MOTOR CO. IN. U.S.A.
2003 FORD F-150 PICKUP TRUCK
NHTSA NO. C30214**

**GENERAL TESTING LABORATORIES, INC.
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SEPTEMBER 26, 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
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16. Abstract This test was conducted on the subject 2003 Ford F-150 Pickup Truck 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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TABLE OF CONTENTS

SECTION		PAGE
1	Introduction	1
2	Test Procedure and Summary of Results	2
3	Test Data	3
4	Test Equipment List	10
5	Photographs	11
	5.1 ¾ Frontal View of Vehicle	
	5.2 Vehicle's Certification and Tire Information Label	
	5.3 Vehicle's Monroney Label	
	5.4 Tire Showing Brand	
	5.5 Tire Showing Model	
	5.6 Tire Showing Size, Load Index and Speed Symbol	
	5.7 Tire Showing Max Load Rating	
	5.8 Tire Showing Max Inflation Pressure	
	5.9 Vehicle Ballasted to Simulate Normal Load Condition	

APPENDIX – Normal Load Occupation Distribution

SECTION 1

INTRODUCTION

1.0 PURPOSE OF INDICANT TEST

A 2003 Ford F-150 Pickup Truck 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 F-150 Pickup Truck. Nomenclature applicable to the test vehicle are:

A. Vehicle Identification Number: 1FTRW08613KC82592

B. NHTSA No.: C30214

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

D. Manufacture Date: 03/03

1.2 TEST DATE

The test vehicle was subjected to testing on June 02, 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 F-150 Pickup is a truck 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
SUMMARYVEHICLE MAKE/MODEL/BODY STYLE: 2003 FORD F-150 PICKUP TRUCKVEHICLE NHTSA NO.: C30214 ; VIN: 1FTRW08613KC82592LABORATORY: GENERAL TESTING LABORATORIESTEST DATE: 06/02/03

<u>REQUIREMENT</u>	<u>YES/NO</u>
The vehicle is equipped with tires that meet the requirements of FMVSS 109 or FMVSS 119.	<u>YES</u>
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.	<u>YES</u>
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).	<u>N/A</u>
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).	<u>YES</u>

REMARKS:

RECORDED BY: M. A. AshDATE: 06/02/03APPROVED BY: D. Must

DATA SHEET 2 TEST VEHICLE INFORMATION/RECEIVING INSPECTION

 LABORATORY: GENERAL TESTING LABORATORIES DATE: 06/02/03

 VEHICLE MODEL YEAR/MAKE/MODEL/BODY STYLE: 2003 FORD F-150 PICKUP TRUCK

 MANUFACTURE DATE: 03/03 NHTSA NO.: C30214 BODY COLOR: WHITE

 VIN: 1FTRW08613KC82592 VEHICLE TYPE: TRUCK

 GVWR 2948 kg (6500 lbs) GAWR(Fr) 1632 kg (3600 lbs) GAWR(Rr) 1723 kg (3800 lbs)

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

 ENGINE DATA: 8 Cylinders 4.6 Liters Cubic Inches

 TRANSMISSION DATA: X Automatic Manual 4 No. of Speeds

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

 INSTALLED TIRE DATA: Size - P255/70R16 Mfr. - GOODYEAR

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

☒	Air Conditioning	☐	Traction Control	☒	Clock
☒	Tinted Glass	☐	All Wheel Drive	☐	Roof Rack
☒	Power Steering	☒	Cruise Control	☒	Console
☒	Power Windows	☐	Rear Window Defroster	☒	Driver Air Bag
☒	Power Door Locks	☐	Sun Roof or T-Top	☒	Passenger Air Bag
☒	Power Driver's Seat	☒	Tachometer	☒	Front Disc Brakes
☒	Power Brakes	☒	Tilt Steering Wheel	☒	Rear Disc Brakes
☒	Antilock Brake System	☒	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: 06/02/03

 APPROVED BY: [Signature]

DATA SHEET 3
CURB WEIGHT WITH OPTIONS AND NORMAL LOAD

VEHICLE MAKE/MODEL/BODY STYLE: 2003 FORD F-150 PICKUP TRUCK
 VEHICLE NHTSA NO.: C30214 ; VIN: 1FTRW08613KC82592
 LABORATORY: GENERAL TESTING LABORATORIES
 TEST DATE: 06/02/03

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 670 KG (1477 LB) LR 487 KG (1074 LB)
 RF 654 KG (1442 LB) RR 507 KG (1117 LB)
 Front Axle 1324 KG (2919 LB) Rear Axle 994 KG (2191 LB)
 Total Vehicle 2318 KG (5110 LB)

B. MEASURED VEHICLE WEIGHT IN NORMAL LOAD CONDITION

(1) Seating Capacity (from Tire Information Placard) = N/A
 Seating Capacity (# of belted seating positions) = 6

(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 726 KG (1600 LB) LR 530 KG (1169 LB)
 RF 709 KG (1563 LB) RR 556 KG (1225 LB)
 Frt Axle 1435 KG (3163 LB) Rr Axle 1086 KG (2394 LB)
 Total Vehicle 2521 KG (5557 LB)

DATA SHEET 3 – CONTINUED

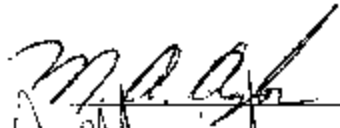
- (5) Calculated Vehicle Normal Load on the Tire
 Front Tires (measured front axle normal load/2) = 718 KG (1582 LB)
 Rear Tires (measured front axle normal load/2) = 543 KG (1197 LB)

- (6) High Speed Test Load from () FMVSS 109 (S5.5), or (X) FMVSS 119 (S7.4)

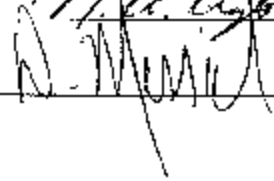
	Front	Rear
(a) Installed Tire Size	<u>P255/70R16</u>	<u>P255/70R16</u>
Max. Load Rating on Sidewall	<u>1030KG(2271 LBS)</u>	<u>1030KG(2271 LBS)</u>
Reduced Sidewall Load Rating (If applicable)*	<u>936 KG (2065 LBS)</u>	<u>936 KG (2065 LBS)</u>
High Speed Test Load (88% of sidewall max. load rating)	<u>824 KG(1817 LBS)</u>	<u>824 KG(1817 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: 

DATE: 06/02/03

APPROVED BY: 

DATA SHEET 4
TIRE INFORMATION LABEL OR PLACARD

VEHICLE MAKE/MODEL/BODY STYLE: 2003 FORD F-150 PICKUP TRUCK
 VEHICLE NHTSA NO.: C30214 ; VIN: 1FTRW08613KC82592
 LABORATORY: GENERAL TESTING LABORATORIES
 TEST DATE: 06/02/03

A. Vehicle Type from Certification Label: TRUCK

B. Identify Vehicle Labeling:

Vehicle has a combined Certification Tire Information Label ☒ Yes ☐ No

Is Label Permanently Affixed: ☒ Yes ☐ No

Label Location: "B" Pillar

Description of Label: Black/White Sticker

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:

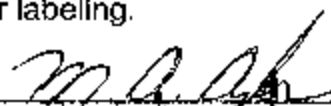
P255/70R16

FRONT - 205 kPa (30 psi)

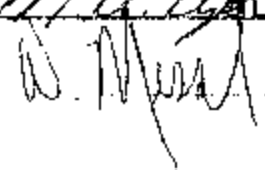
REAR - 240 kPa (35 psi)

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 a truck do not include Vehicle Capacity Weight (VCW) or Designated Seating Capacity (DSP) as required by FMVSS 110 passenger car labeling.

RECORDED BY: 

DATE: 06/02/03

APPROVED BY: 

DATA SHEET 5
VEHICLE TIRE DATA

VEHICLE MAKE/MODEL/BODY STYLE: 2003 FORD F-150 PICKUP TRUCK
 VEHICLE NHTSA NO.: C30214 ; VIN: 1FTRW08613KC82592
 LABORATORY: GENERAL TESTING LABORATORIES
 TEST DATE: 06/02/03

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

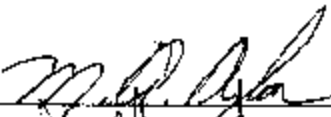
INFORMATION FROM TIRE SIDEWALL:

Right Front Tire

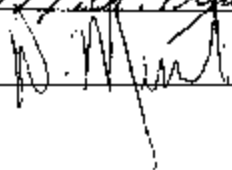
Tire Size Designation	<u>P255/70R16</u>
Tire Load Index/Speed Symbol	<u>109S</u>
Maximum Inflation Pressure	<u>300 kPa (44 psi)</u>
Maximum Load Rating	<u>1030 KG (2271 LBS)</u>
Mfr. Name or Brand & Code	<u>GOODYEAR WRANGLER</u>
Tube or Tubeless	<u>TUBELESS</u>
Treadwear/Traction/Temp. Grades	<u>340/A/B</u>
Sidewall (Plies & Composition)	<u>2 PLY POLYESTER</u>
Tread (Plies & Composition)	<u>2 PLY POLYESTER</u> <u>2 PLY STEEL</u>
Serial Number: Right Front -	<u>DOT 4BCU C6WR 0703</u>

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

REMARKS:

RECORDED BY: 

DATE: 06/02/03

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

SECTION 5 PHOTOGRAPHS

MFD. BY FORD MOTOR CO. IN

DATE 03/03
 FRONT GAWR 3600LB
 1632KG
 P255/70R16S
 16X7.0J
 AT 205 kPa/30 PSI (CID, AT 230 kPa)
 GVWR 6500LB/2950KG
 REAR GAWR 1723KG
 TRMS P255/70R16S
 RIMS 16X7.0J

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL
 VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE
 OF MANUFACTURE SHOWN ABOVE.
 VIN 1FTRW08613KC82592
 TYPE TRUCK



EXC. PNL. YZ
 WB BRK ENI TR A12
 139 B
 TP/PS R A01 TR U 69
 /A S 19 U 69
 270030319079? UTC
 DSC 27 SPR 705.152

2003 FORD F-150 PICK-UP
 NHTSA NO. C30214
 FMVSS NO. 110 (INDICANT)

FIGURE 5.2
 VEHICLE'S CERTIFICATION AND TIRE
 INFORMATION LABEL

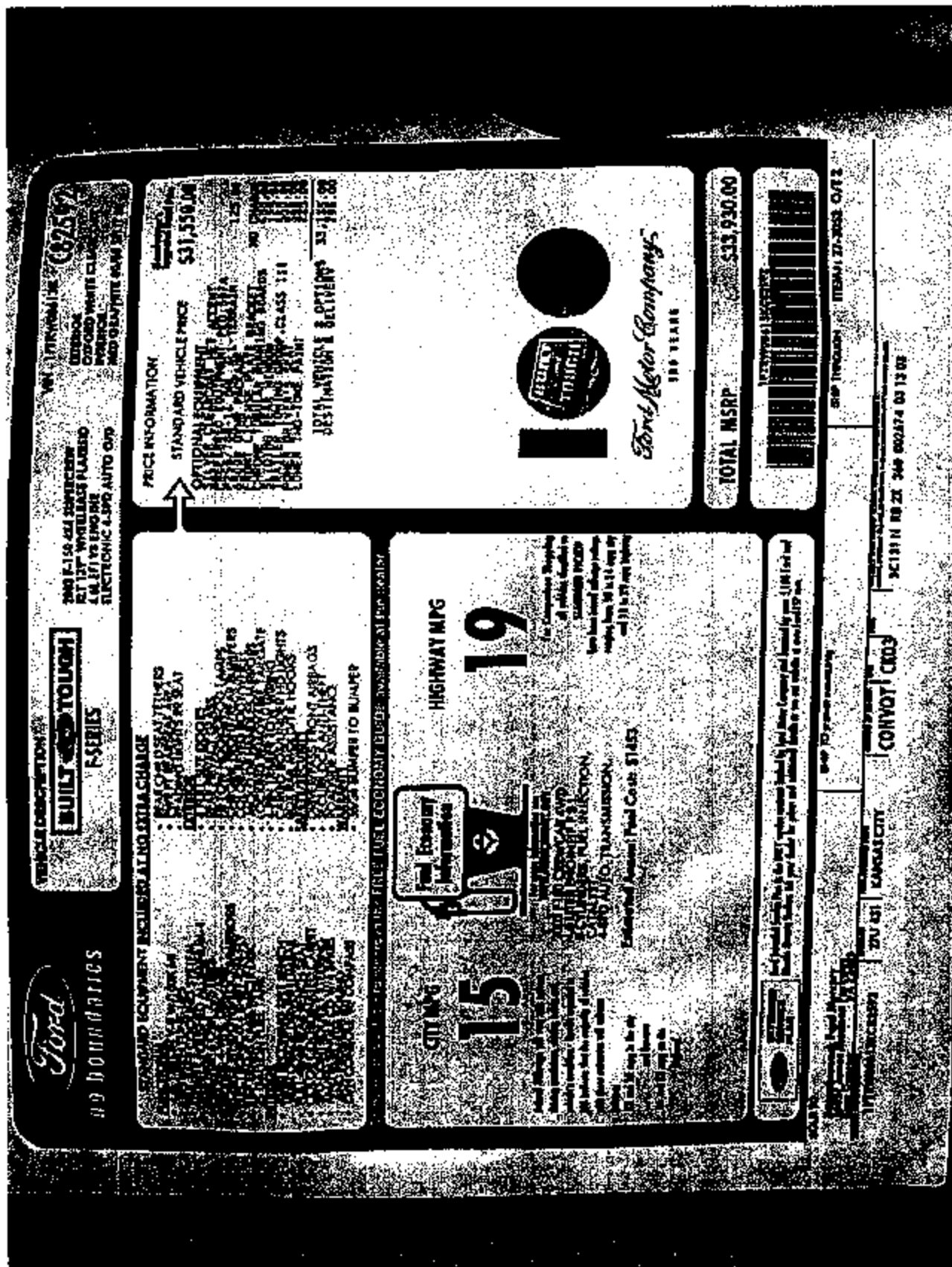


FIGURE 5.3
 VEHICLE'S MONRONEY LABEL

2003 FORD F-150 PICK-UP
 NHTSA NO. C30214
 FMVSS NO. 110 (INDICANT)



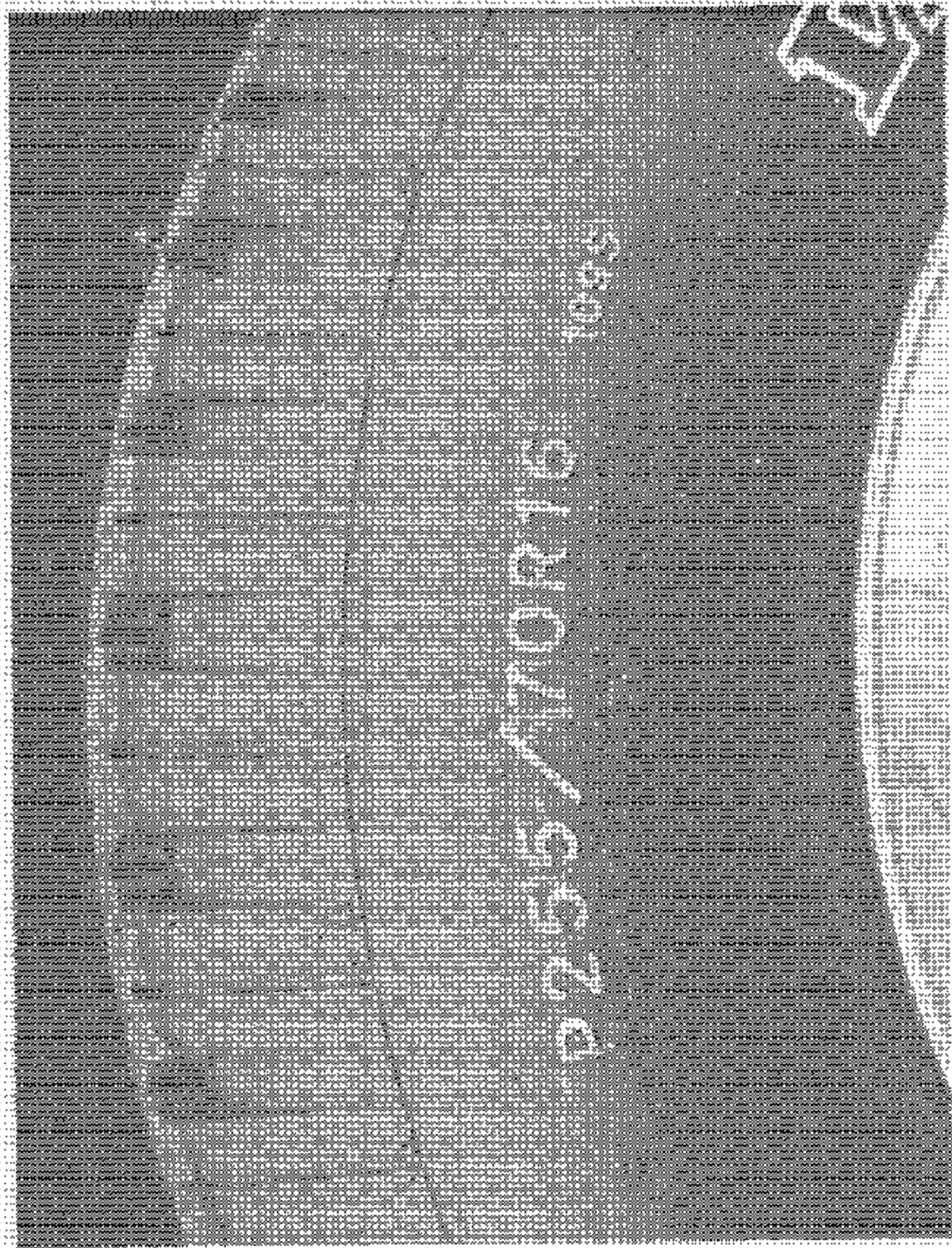
2003 FORD EXPLORER PICK UP
NHTSA NO. G10214
FMVSS NO. 201 (RADIANT)

FIGURE 5.6
TIRE SHOWING BRAND



FIGURE 3.5
TIRE SHOOTING MODEL

2003 FORD F150 PICK UP
VIN: 1F150G10000000000
ENGINE NO. 0000000000
TUNING NO. 110 (INDICATED)



2003 FORD F150 PICKUP
NHTSA NO. 600214
FRAVSS DC, THE INDICANT

FIGURE 56
TIRE SHOWING SIZE, LOAD INDEX AND SPEED
SYMBOL



2003-ORD-150-PICKUP
NHTSA NO. 030284
EVES NO. 110 (INDICANT)

FIGURE 57
TIRE SHOWING MAX LOAD RATING



2066 FORD F-150 PICKUP
NHTSA NO. C36214
FMVSS NO. 110 (INDICANT)

FIGURE 5.8
FIRE SHOWING MAX DEFLECTION PRESSURE

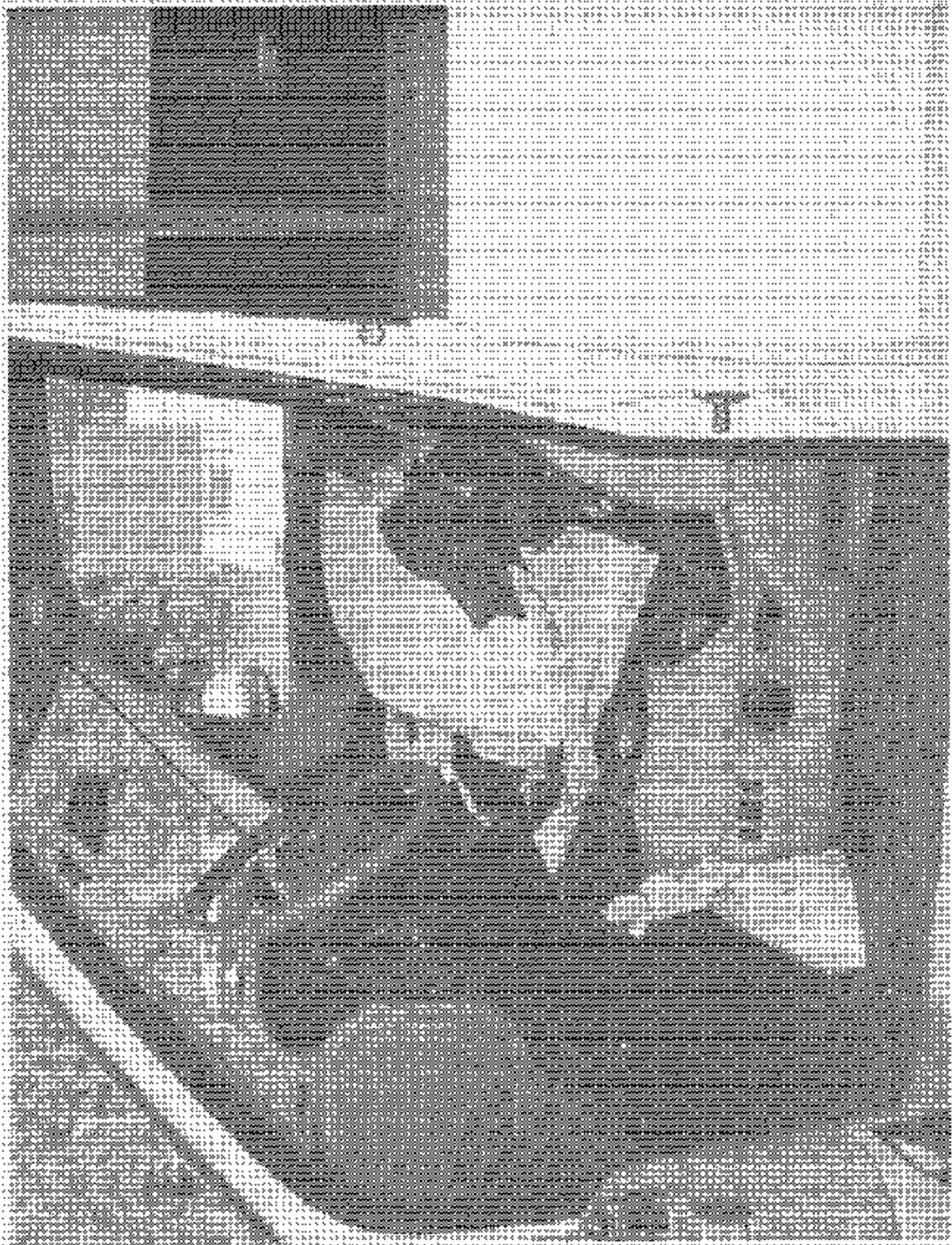


FIGURE 3-9
VEHICLE BALLASTED TO SIMULATE
NORMAL LOAD CONDITION

2003 FORD F-150 P (X-100)
NHTSA NO. 600714
CLASS NO. 110 (INDICANT)

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.