

REPORT NUMBER 110(IND)-GTL-03-012

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

**HONDA OF AMERICA MFG., INC.
2003 HONDA ELEMENT, MPV
NHTSA NO. C35309**

**GENERAL TESTING LABORATORIES, INC.
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SEPTEMBER 10, 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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15. Supplementary Notes		
16. Abstract This test was conducted on the subject, 2003 Honda Element 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 Honda Element 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 Honda Element MPV. Nomenclature applicable to the test vehicle are:

A. Vehicle Identification Number: 5J6YH28513L025140

B. NHTSA No.: C35309

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

D. Manufacture Date: 05/03

1.2 TEST DATE

The test vehicle was subjected to testing on June 05, 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 Honda Element 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

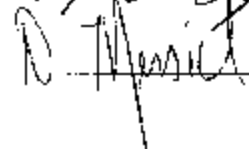
VEHICLE MAKE/MODEL/BODY STYLE: 2003 HONDA ELEMENT MPV
 VEHICLE NHTSA NO.: C35309 ; VIN: 5J6YH28513L025140
 LABORATORY: GENERAL TESTING LABORATORIES
 TEST DATE: 06/05/03

<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: 

DATE: 06/05/03

APPROVED BY: 

DATA SHEET 2 TEST VEHICLE INFORMATION/RECEIVING INSPECTION

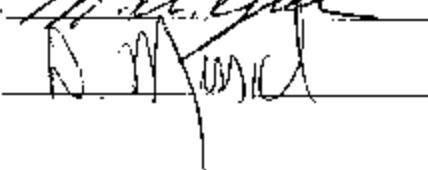
LABORATORY: GENERAL TESTING LABORATORIESDATE: 06/05/03VEHICLE MODEL YEAR/MAKE/MODEL/BODY STYLE: 2003 HONDA ELEMENT MPVMANUFACTURE DATE: 05/03 NHTSA NO.: C35309 BODY COLOR: BLUEVIN: 5J6YH28513L025140VEHICLE TYPE: MPVGVWR 2020 kg (4450 lbs) GAWR(Fr) 1045 kg (2300 lbs) GAWR(Rr) 1000 kg (2205 lbs)BELTED SEATING POSITIONS: FRONT 2 MID N/A REAR 2 OTHER N/AENGINE DATA: 4 Cyinders 2.4 Liters Cubic InchesTRANSMISSION DATA: X Automatic Manual No. of SpeedsFINAL DRIVE DATA: Rear Drive Front Drive X 4 Wheel DriveINSTALLED TIRE DATA: Size - P215/70R16 Mfr. - GOODYEAR

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	X	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
	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 -

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

REMARKS:

RECORDED BY: DATE: 06/05/03APPROVED BY: 

DATA SHEET 3
CURB WEIGHT WITH OPTIONS AND NORMAL LOAD

VEHICLE MAKE/MODEL/BODY STYLE: 2003 HONDA ELEMENT MPV
 VEHICLE NHTSA NO.: C35309; VIN: 5J6YH28513L025140
 LABORATORY: GENERAL TESTING LABORATORIES
 TEST DATE: 06/05/03

Full Fluid Levels:

Fuel Full; Coolant Full; Other Fluids Full

Tire Pressure: LF 220 KPA (32 psi) LR 235 KPA (34 psi)
 RF 220 KPA (32 psi) RR 235 KPA (34 psi)

A. MEASURED CURB WEIGHT WITH INSTALLED OPTIONS AND ACCESSORIES

LF	<u>458</u>	KG (1010 LB)	LR	<u>354</u>	KG (781 LB)
RF	<u>445</u>	KG (980 LB)	RR	<u>342</u>	KG (753 LB)
Front Axle <u>903</u> KG (1990 LB)			Rear Axle <u>696</u> KG (1534 LB)		
Total Vehicle <u>1598</u> KG (3524 LB)					

B. MEASURED VEHICLE WEIGHT IN NORMAL LOAD CONDITION

(1) Seating Capacity (from Tire Information Placard) = N/A
 Seating Capacity (# of belted seating positions) = 4

(2) Normal Load # of Occupants from Appendix
 Occupant Distribution: Front Seat- 2 Second Seat- 0
 Third Seat- N/A Fourth Seat- N/A

(3) Total Normal Occupant Load 136 KG (300 LB)
 (# of occupants x 68 KG per occupant)

(4) Measured Normal Load on each Wheel and Axles (Sum)

LF	<u>497</u>	KG (1096 LB)	LR	<u>383</u>	KG (845 LB)
RF	<u>483</u>	KG (1064 LB)	RR	<u>369</u>	KG (814 LB)
Frt Axle <u>980</u> KG (2160 LB)			Rr Axle <u>753</u> KG (1669 LB)		
Total Vehicle <u>1732</u> KG (3819 LB)					

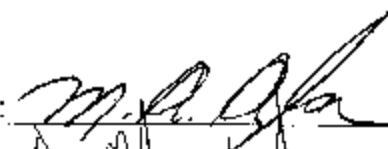
DATA SHEET 3 – CONTINUED

- (5) Calculated Vehicle Normal Load on the Tire
 Front Tires (measured front axle normal load/2) = 490 KG (1080 LB)
 Rear Tires (measured front axle normal load/2) = 376 KG (830 LB)
- (6) High Speed Test Load from () FMVSS 109 (S5.5), or (X) FMVSS 119 (S7.4)

	Front	Rear
(a) Installed Tire Size	<u>P215/70R16</u>	<u>P215/70R16</u>
Max. Load Rating on Sidewall	<u>775 KG(1709 LBS)</u>	<u>775 KG (1709 LBS)</u>
Reduced Sidewall Load Rating (if applicable)*	<u>705 KG(1554 LBS)</u>	<u>705 KG (1554 LBS)</u>
High Speed Test Load (88% of sidewall max. load rating)	<u>620 KG(1368 LBS)</u>	<u>620 KG(1368 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: 06/05/03

APPROVED BY: 

DATA SHEET 4
TIRE INFORMATION LABEL OR PLACARD

VEHICLE MAKE/MODEL/BODY STYLE: 2003 HONDA ELEMENT MPV
 VEHICLE NHTSA NO.: C35309 VIN: 5J6YH28513L025140
 LABORATORY: GENERAL TESTING LABORATORIES
 TEST DATE: 06/05/03

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: _____
 Description of Label: _____

Vehicle has a separate Tire Information Label or Placard ☒ Yes ☐ No
 Is Label Permanently Affixed: ☒ Yes ☐ No
 Label Location: Driver Door
 Description of Label: Vinyl

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

Vehicle Capacity Weight - 675 LBS

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:

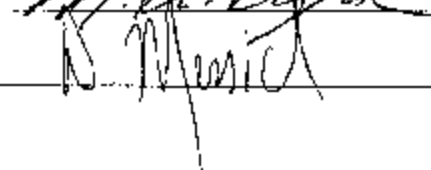
P215/70R16 FRONT - 220 kPa (32 psi)
 REAR - 235 kPa (34 psi)

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: 

DATE: 06/05/03

APPROVED BY: 

DATA SHEET 5
VEHICLE TIRE DATA

VEHICLE MAKE/MODEL/BODY STYLE: 2003 HONDA ELEMENT MPV
 VEHICLE NHTSA NO.: C35309 ; VIN: 5J6YH28513L025140
 LABORATORY: GENERAL TESTING LABORATORIES
 TEST DATE: 06/05/03

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

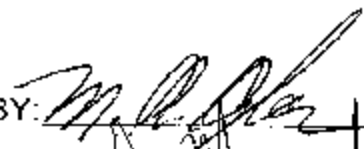
INFORMATION FROM TIRE SIDEWALL:

Right Front Tire

Tire Size Designation	<u>P215/70R16</u>
Tire Load Index/Speed Symbol	<u>99S</u>
Maximum Inflation Pressure	<u>300 kPa (44 psi)</u>
Maximum Load Rating	<u>775 KG (1709 LBS.)</u>
Mfr. Name or Brand & Code <u>GRANDTREK</u>	<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-EUYV 2K7R 1203</u>

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

REMARKS:

RECORDED BY: 

DATE: 06/05/03

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	05/03	05/04
SURFACE LEVEL	GTL	N/A	BEFORE USE	BEFORE USE

SECTION 5 PHOTOGRAPHS



FIGURE 1
FRONTAL VIEW OF VEHICLE

2003 HONDA ELEMENT EX
AUTOMATIC, 5-SPD
SAFARI, 110 (INFLANT)

MFG. BY HONDA OF AMERICA MFG. INC. 500

GVWR 4400LBS GAWR F 2300LBS R 2205LBS

GVWR 2020KG GAWR F 1045KG R 1000KG

THIS VEHICLE CONFORMS TO ALL APPLICABLE

FEDERAL MOTOR VEHICLE SAFETY

AND THEFT PREVENTION STANDARDS IN EFFECT

ON THE DATE OF MANUFACTURE SHOWN ABOVE

VIN: 5J6YH28513L025140 TYPE: MPV



SCV 3 AB7

— 696P

— 0

— 1

2003 HONDA ELEMENT EX
NHTSA NO. C25218
FMVSS NO. 110 (INDICANT)

FIGURE 5.2
VEHICLE'S CERTIFICATION LABEL

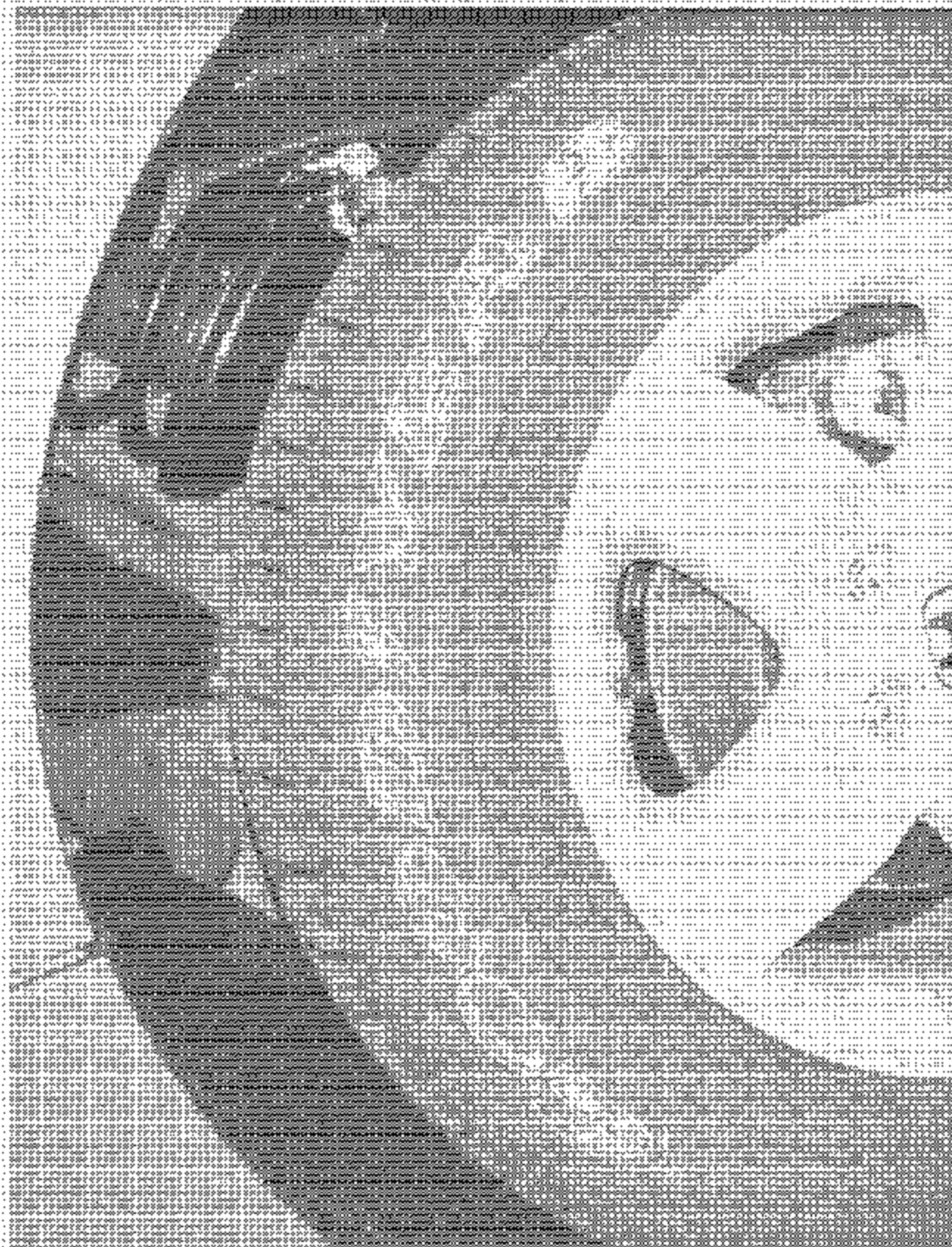


FIGURE 3-
THE SHOWN BRAND

MODERNDA ELEMENT 3X
NHTSA INC. 199302
PRAISE NO. 110 (RECENT)

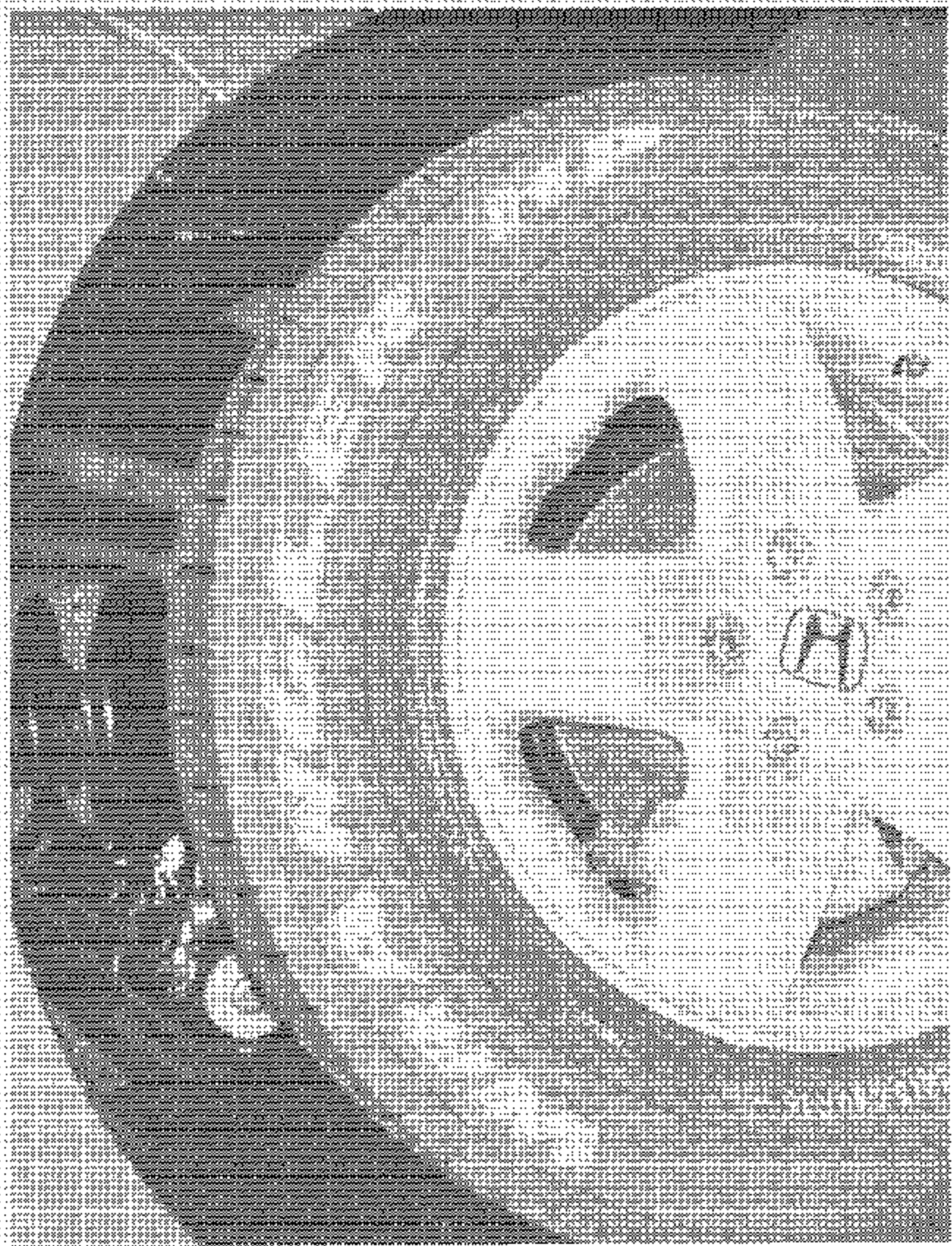


FIGURE 35
TYPE SHOWING MODEL

2001 HONDA ELEMENT EX
SINTRA NO. 35564
FAUSS NO. 110 (INDICANT)



FIGURE 3.6
TIRE SIZE, LOAD INDEX AND SPEED
SYMBOL

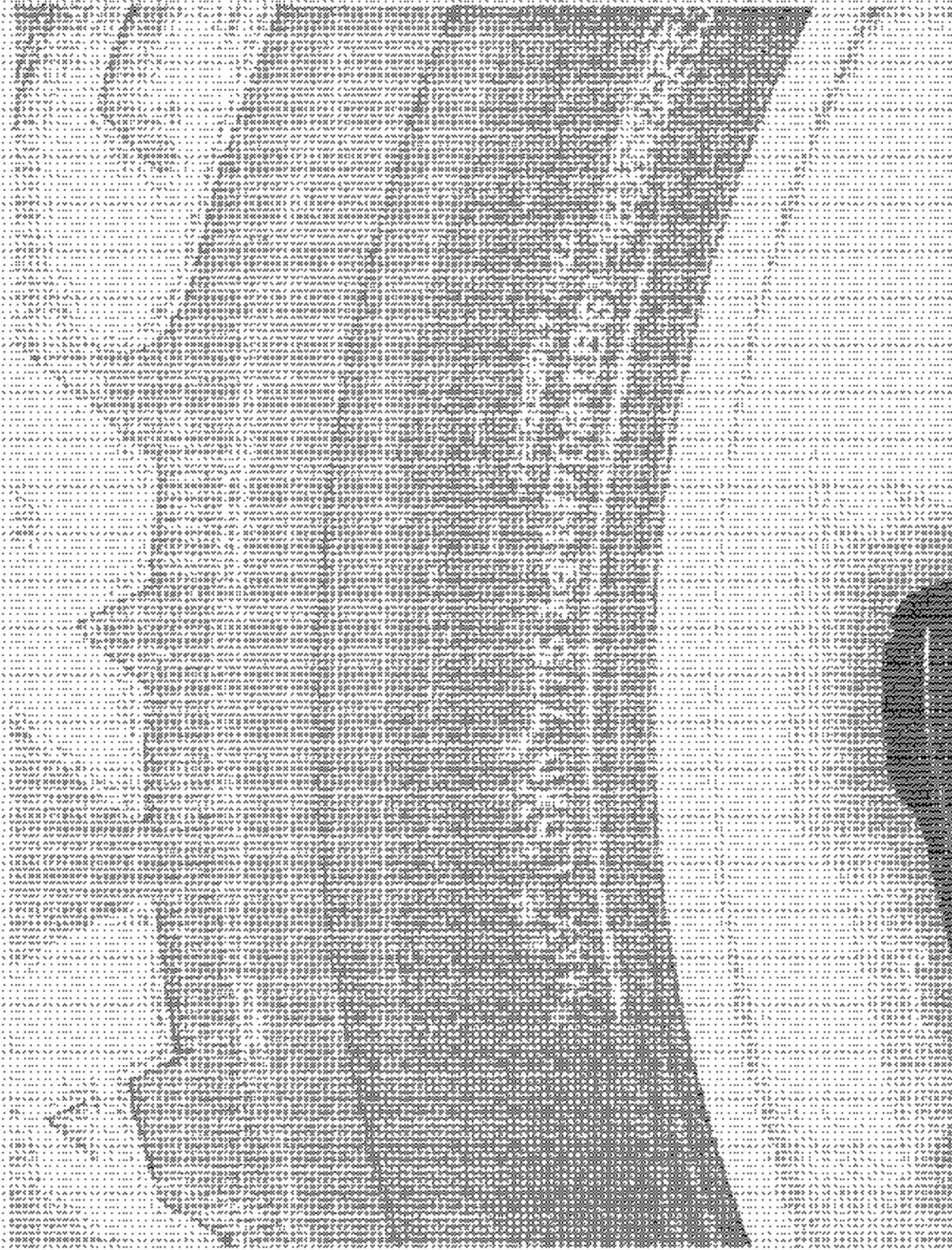


FIGURE 37
THREE SHOWING MAX LOAD RATING

2003 HONDA ELEMENT EX
NHISA NC C3550R
FAYSS NO. 110 (INDICANT)

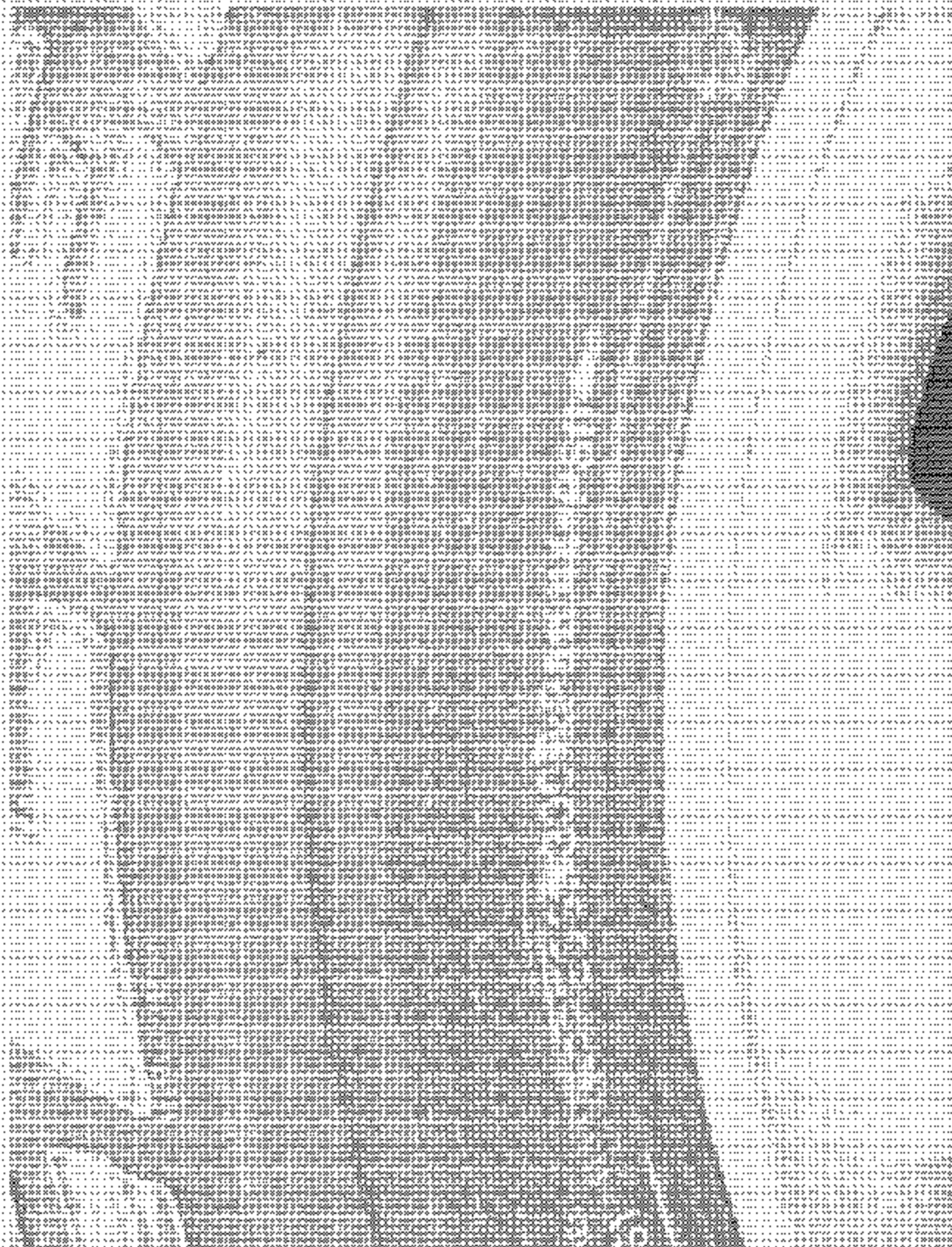


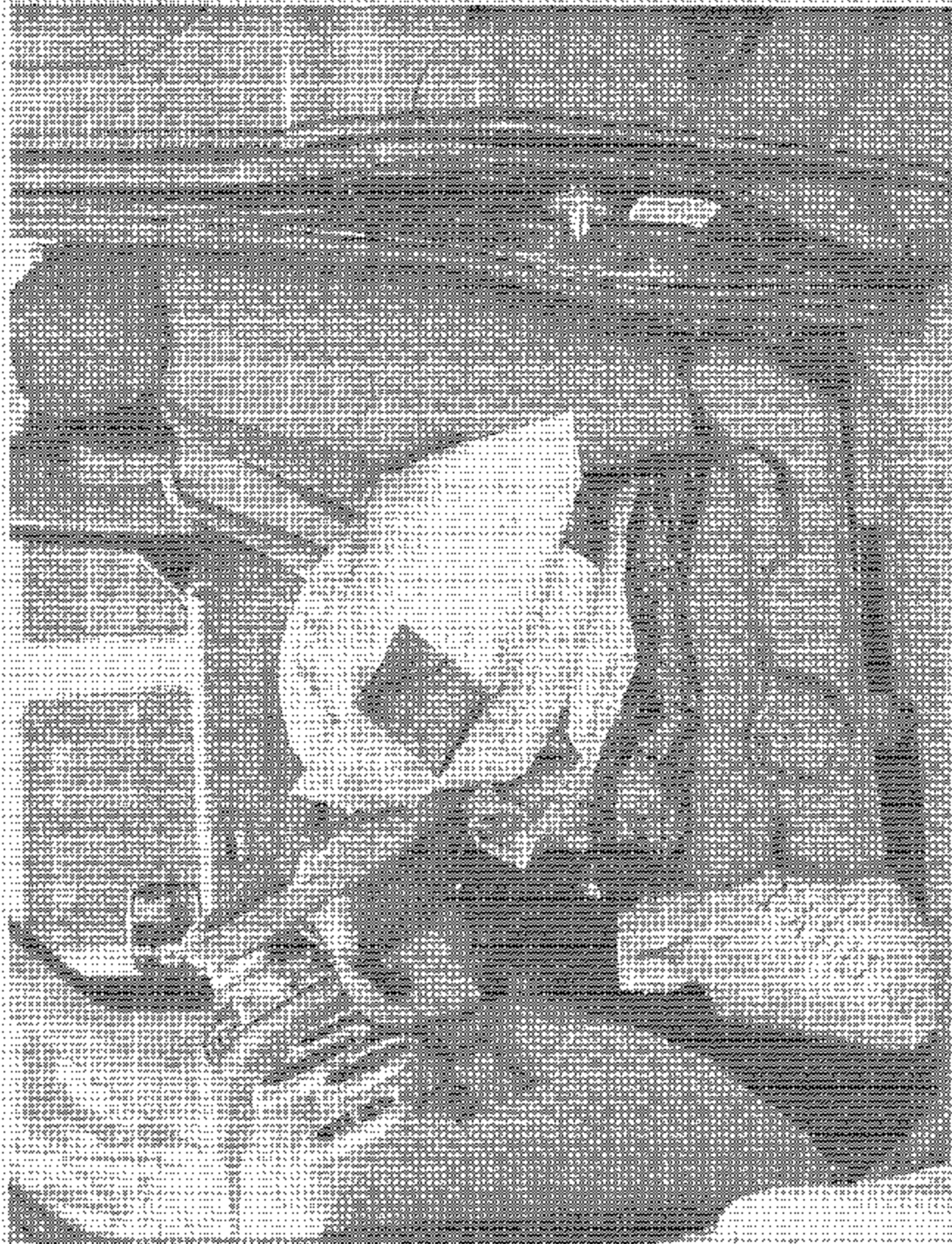
FIGURE 5-4
THE SHOWING MAX INFLATION PRESSURE

2003 HONDA ELEMENT EX
AHTSA NO. 1355-02
SAVSS NO. 110 (MIXCANT)



FIGURE 5-6
TIRE SHOWING SERIAL NUMBER

SECTIONAL ELEMENT EX
NHISA NO. 53509
PHYS NO. 110 (MURKIN)



2003 HONDA ELEMENT EX
NHTSA NO. C25500
FMVSS NO. 201.015 (BULB CAN)

FIGURE 5.10
VEHICLE EVALUATED TO SIMULATE NORMAL
LOCAL 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.