

REPORT NUMBER 110(IND)-GTL-03-030

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

**HONDA OF CANADA MFG.
2003 HONDA CIVIC EX PASSENGER CAR
NHTSA NO. C35311**

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SEPTEMBER 25, 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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16. Abstract This test was conducted on the subject, 2003 Honda Civic EX passenger car 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 Civic EX passenger car 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 Civic EX. Nomenclature applicable to the test vehicle are:

- A. Vehicle Identification Number: 2HGES25703H577405
- B. NHTSA No.: C35311
- C. Manufacturer: HONDA OF CANADA MFG.
- D. Manufacture Date: 04/03

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

Test results are provided in Section 3.

SECTION 3
TEST DATA

DATA SHEET 1
SUMMARY

VEHICLE MAKE/MODEL/BODY STYLE: 2003 HONDA CIVIC EX PASSENGER CAR
VEHICLE NHTSA NO.: C35311 ; VIN: 2HGES25703H577405
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>YES</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>N/A</u>

REMARKS:

RECORDED BY: *M. A. [Signature]*
APPROVED BY: *D. [Signature]*

DATE: 06/05/03

DATA SHEET 2
TEST VEHICLE INFORMATION/RECEIVING INSPECTION

LABORATORY: GENERAL TESTING LABORATORIES DATE: 06/05/03

VEHICLE MODEL YEAR/MAKE/MODEL/BODY STYLE: 2003 HONDA CIVIC EX

MANUFACTURE DATE: 04/03 NHTSA NO.: C35311 BODY COLOR: RED

VIN: 2HGES25703H577405 VEHICLE TYPE: PASSENGER CAR

GVWR 1610 kg (3550 lbs) GAWR(Fr) 830 kg (1830 lbs) GAWR(Rr) 780 kg (1720 lbs)

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

ENGINE DATA: 4 Cylinders 1.7 Liters ___ Cubic Inches

TRANSMISSION DATA: ___ Automatic X Manual 5 No. of Speeds

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

INSTALLED TIRE DATA: Size - P185/65R15 Mfr. - FIRESTONE

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

X	Air Conditioning		Traction Control	X	Clock
	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
	Power Seat(s)	X	Tachometer	X	Front Disc Brakes
X	Power Brakes	X	Tilt Steering Wheel		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: 06/05/03

APPROVED BY: 

DATA SHEET 3
CURB WEIGHT WITH OPTIONS AND NORMAL LOAD

VEHICLE MAKE/MODEL/BODY STYLE: 2003 HONDA CIVIC EX PASSENGER CAR
 VEHICLE NHTSA NO.: C35311 ; VIN: 2HGES25703H577405
 LABORATORY: GENERAL TESTING LABORATORIES
 TEST DATE: 06/05/03

Full Fluid Levels:

Fuel Full ; Coolant Full ; Other Fluids Full

Tire Pressure: LF 210 KPA (30 psi) LR 210 KPA (30 psi)
 RF 210 KPA (30 psi) RR 210 KPA (30 psi)

A. MEASURED CURB WEIGHT WITH INSTALLED OPTIONS AND ACCESSORIES

LF <u>360 KG (793 LB)</u>	LR <u>244 KG (537 LB)</u>
RF <u>337 KG (744 LB)</u>	RR <u>234 KG (515 LB)</u>
Front Axle <u>697 KG (1537 LB)</u>	Rear Axle <u>477 KG (1052 LB)</u>
Total Vehicle <u>1174 KG (2589 LB)</u>	

B. MEASURED VEHICLE WEIGHT IN NORMAL LOAD CONDITION

- (1) Seating Capacity (from Tire Information Placard) = 5
 Seating Capacity (# of belted seating positions) = 5
- (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>407 KG (898 LB)</u> | LR <u>299 KG (659 LB)</u> |
| RF <u>383 KG (845 LB)</u> | RR <u>290 KG (639 LB)</u> |
| Frnt Axle <u>791 KG (1743 LB)</u> | Rr Axle <u>589 KG (1298 LB)</u> |
| Total Vehicle <u>1379 KG (3041 LB)</u> | |

DATA SHEET 3 – CONTINUED

- (5) Calculated Vehicle Normal Load on the Tire
 Front Tires (measured front axle normal load/2) = 396 KG (872 LB)
 Rear Tires (measured front axle normal load/2) = 294 KG (649 LB)
- (6) High Speed Test Load from (X) FMVSS 109 (S5.5), or () FMVSS 119 (S7.4)

	Front	Rear
(a) Installed Tire Size	<u>P185/65R15</u>	<u>P185/65R15</u>
Max. Load Rating on Sidewall	<u>530 KG(1168 LBS)</u>	<u>530 KG(1168 LBS)</u>
Reduced Sidewall Load Rating (if applicable)*	<u>N/A</u>	<u>N/A</u>
High Speed Test Load (88% of sidewall max. load rating)	<u>466 KG(1028 LBS)</u>	<u>466 KG(1028 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 CIVIC EX PASSENGER CAR
VEHICLE NHTSA NO.: C35311 ; VIN: 2HGES25703H577405
LABORATORY: GENERAL TESTING LABORATORIES
TEST DATE: 06/05/03

A. Vehicle Type from Certification Label: Passenger Car

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's "B" Pillar
Description of Label: Vinyl

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

Vehicle Capacity Weight - 386 KG (850 LBS)

Designated Seating Capacity (DSC) - 5

Expressed In—

(1) Total No. of Occupants Yes No

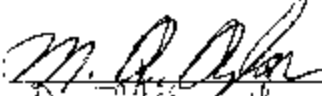
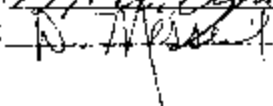
(2) Terms of Occupants for Each Seat Location Yes No

Manufacturer's Recommended Tire Size and Cold Tire Inflation Pressure For Maximum Load Vehicle Weight:

P185/65R15 FRONT - 210 kPa (30 psi)
REAR - 210 kPa (30 psi)

Manufacturer's Recommended Tire Size and Cold Tire Inflation Pressure For Other Load Conditions: NONE

REMARKS:

RECORDED BY: 
APPROVED BY: 

DATE: 06/05/03

DATA SHEET 5
VEHICLE TIRE DATA

VEHICLE MAKE/MODEL/BODY STYLE: 2003 HONDA CIVIC EX PASSENGER CAR
 VEHICLE NHTSA NO.: C35311 ; VIN: 2HGES25703H577405
 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:

Left Front Tire

Tire Size Designation	<u>P185/65R15</u>
Tire Load Index/Speed Symbol	<u>86H</u>
Maximum Inflation Pressure	<u>300 kPa (44 psi)</u>
Maximum Load Rating	<u>530 KG (1168 LBS.)</u>
Mfr. Name or Brand & Code	<u>FIRESTONE FR690</u>
Tube or Tubeless	<u>TUBELESS</u>
Treadwear/Traction/Temp. Grades	<u>440/A/B</u>
Sidewall (Plies & Composition)	<u>1 PLY POLYESTER</u>
Tread (Plies & Composition)	<u>1 PLY POLYESTER</u> <u>2 PLY STEEL</u>
Serial Number: Right Front -	<u>DOT VNFP F9H 1403</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

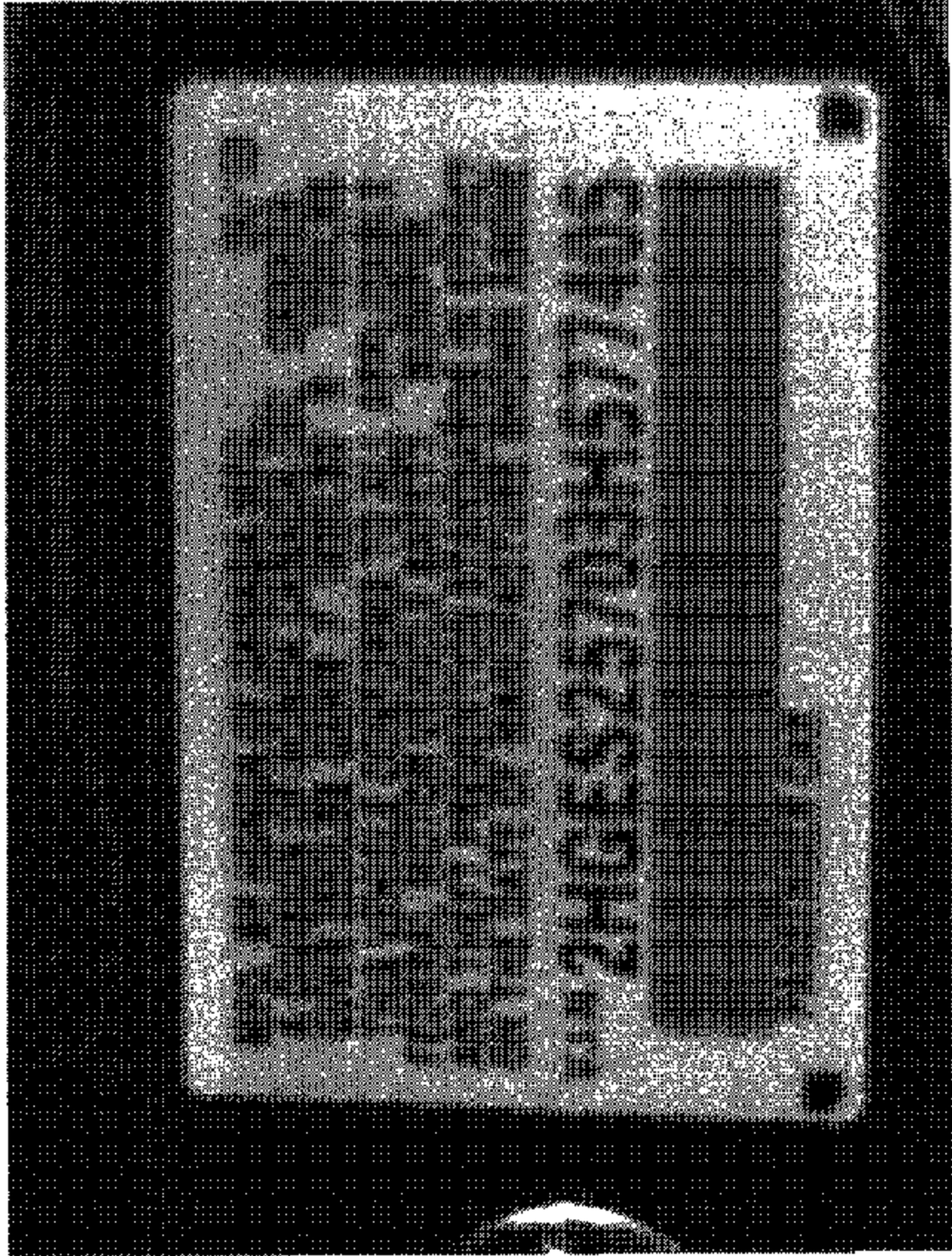
EQUIPMENT	DESCRIPTION	MODEL/ SERIAL NO.	CAL. DATE	NEXT CAL. DATE
PAD SCALES	#1 199744LF	199744LF	06/02	06/20/03
	#2 199744RF	199744RF	06/02	06/20/03
	#3 199744LR	199744LR	06/02	06/20/03
	#4 199744RR	19974RR	06/02	06/20/03
PRESSURE GAGE	WESKLER	0-100	05/03	05/04
SURFACE LEVEL	GTL	N/A	BEFORE USE	BEFORE USE

SECTION 5
PHOTOGRAPHS



FIGURE 5.1
% FRONTAL VIEW OF VEHICLE

2003 HONDA CIVIC EX
NHTSA NO. C35311
FMVSS NO. 110 (INDICANT)



2003 HONDA CIVIC EX
NHTSA NO. C35311
FMVSS NO. 110 (INDICANT)

FIGURE 5.2
VEHICLE'S CERTIFICATION LABEL

TIRE INFORMATION		VEHICLE WEIGHT	
SEATING CAPACITY	5	TOTAL WEIGHT	4200 LBS
RECOMMENDED TIRE SIZE	COLD TIRE INFLATION PRESSURE		
P185/65R15 86H	FRONT 210PSI		
	REAR 210PSI		
COMPACT SPARE TIRE	UP TO VEHICLE CAPACITY		
T125/70D15 75M	4200 P.S. 600 PSI		

FIGURE 5.3
VEHICLE'S TIRE INFORMATION LABEL

2003 HONDA CIVIC EX
 NHITSA NO. C35311
 FMVSS NO. 110 (INDICANT)



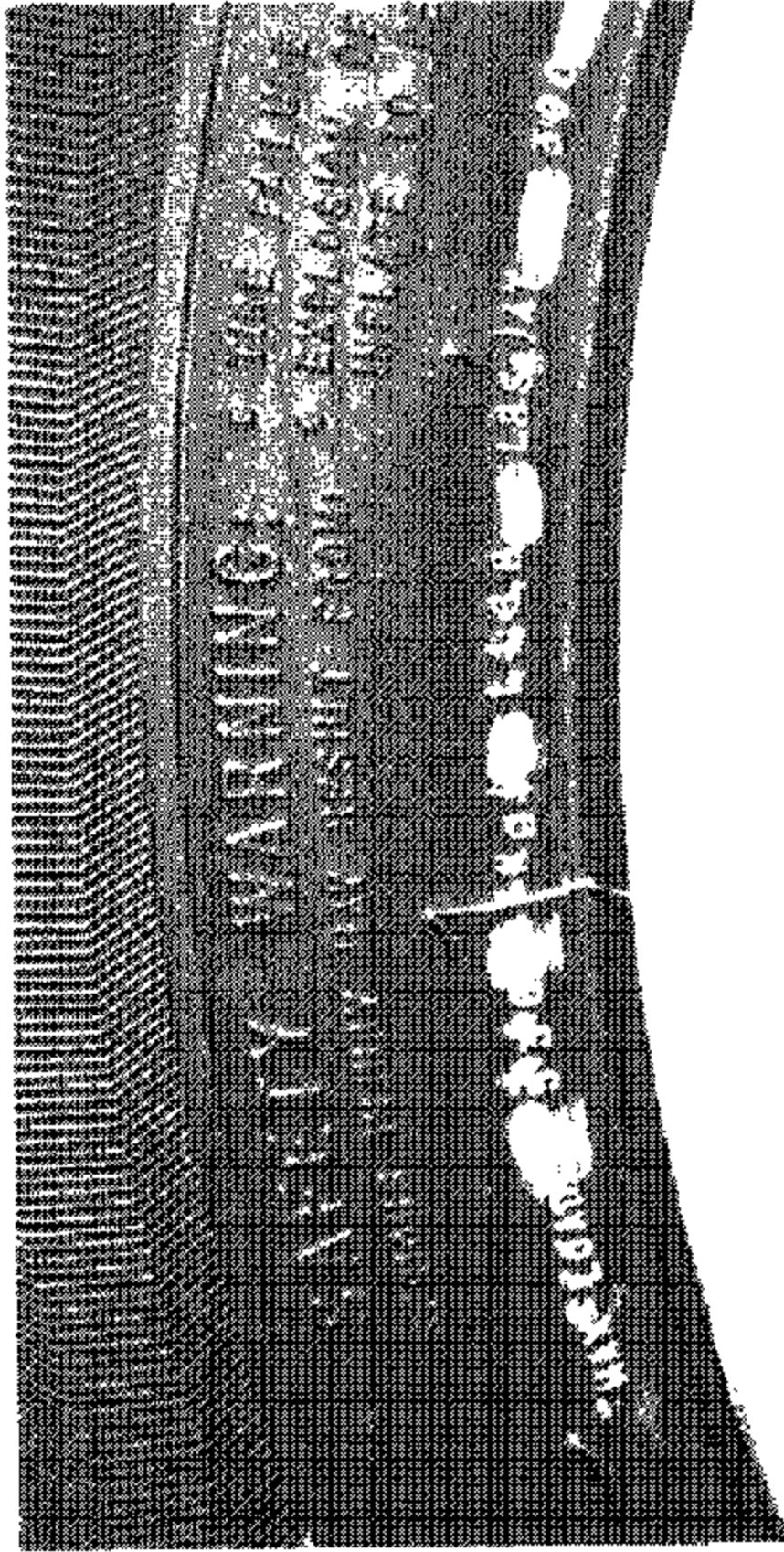
FIGURE 5.4
TIRE SHOWING BRAND AND MODEL

2003 HONDA CIVIC EX
NHTSA NO. C35311
FMVSS NO. 110 (INDICANT)



2003 HONDA CIVIC EX
NHTSA NO. C35311
FMVSS NO. 110 (INDICANT)

FIGURE 5.5
TIRE SHOWING SIZE, LOAD INDEX AND SPEED
SYMBOL



2003 HONDA CIVIC EX
NHTSA NO. C35311
FMVSS NO. 110 (INDICANT)

FIGURE 5.6
TIRE SHOWING MAX LOAD RATING

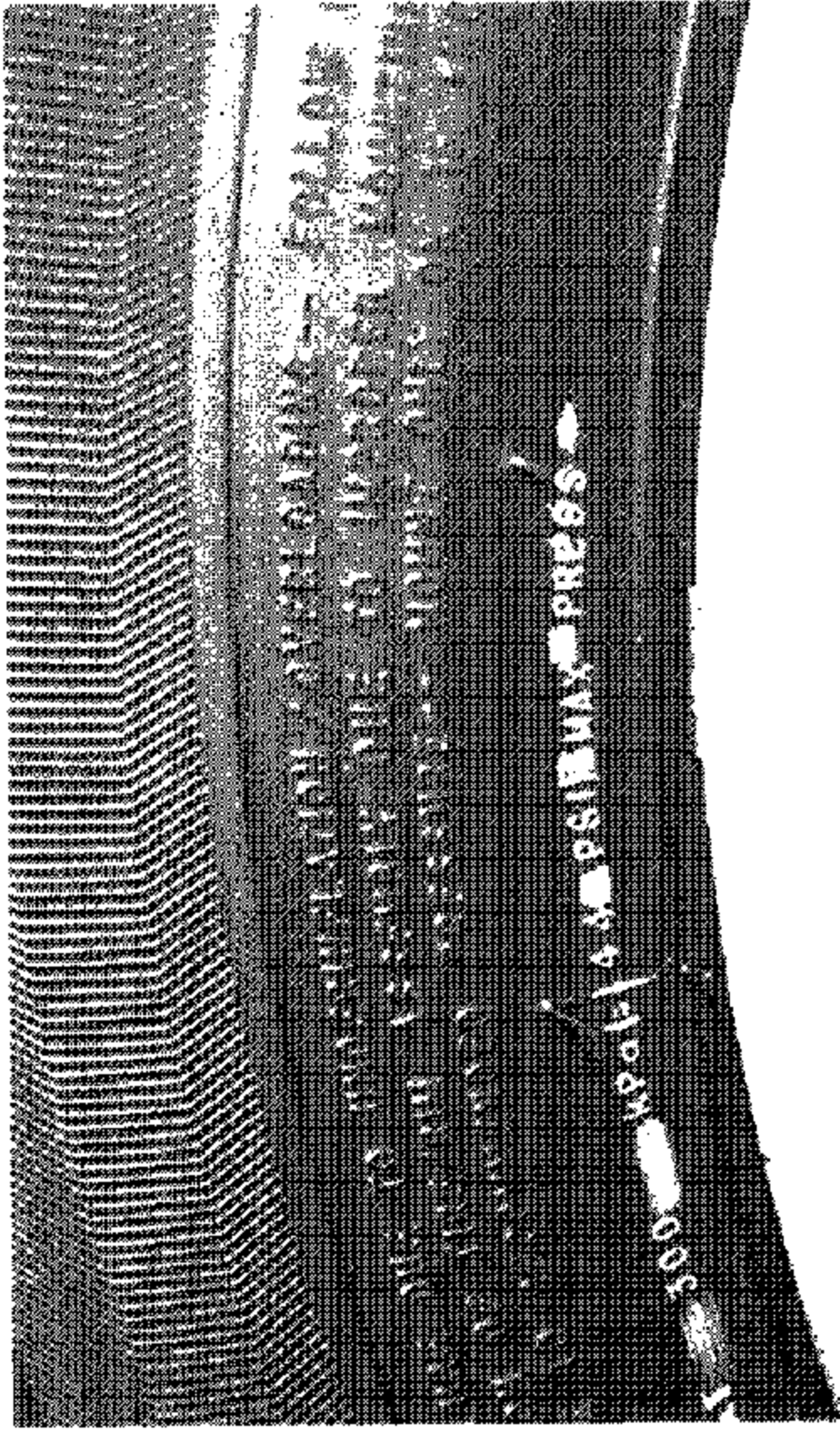
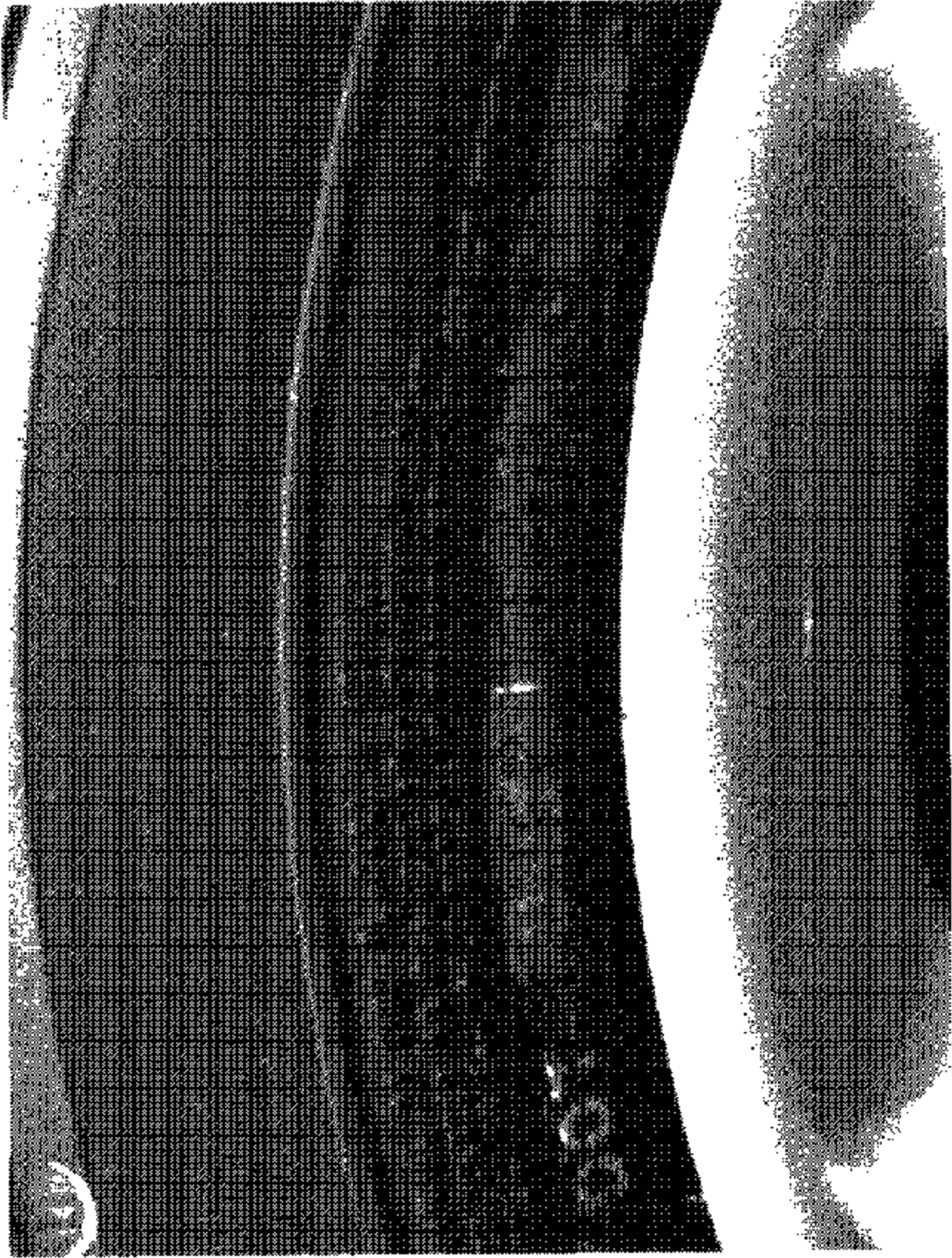


FIGURE 5.7
TIRE SHOWING MAX INFLATION PRESSURE

2003 HONDA CIVIC EX
NHTSA NO. C35311
FMVSS NO. 110 (INDICANT)



2003 HONDA CIVIC EX
NHTSA NO. C35311
FMVSS NO. 110 (INDICANT)

FIGURE 5.8
TIRE SHOWING SERIAL NUMBER



2003 HONDA CIVIC EX
NHTSA NO. C35311
FMVSS NO. 110 (INDICANT)

FIGURE 5.9
VEHICLE BALLASTED TO SIMULATE NORMAL
LOAD 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.