

REPORT NUMBER 110(IND)-GTL-03-024

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

**GENERAL MOTORS OF CANADA LTD.
2004 PONTIAC GRAND PRIX PASSENGER CAR
NHTSA NO. C30121**

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



SEPTEMBER 17, 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
ROOM 6111 (NVS-220)
WASHINGTON, D.C. 20590**

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7. Author(s) Grant Farrand, Project Engineer Debbie Messick, Project Manager	9. Performing Organization Name and Address General Testing Laboratories, Inc. 1623 Leedstown Road Colonial Beach, Va 22443	10. Work Unit No. (TRAIS)
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15. Supplementary Notes		
16. Abstract This test was conducted on the subject, 2004 Pontiac Grand Prix 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 2004 Pontiac Grand Prix 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 2004 Grand Prix. Nomenclature applicable to the test vehicle are:

- A. Vehicle Identification Number: 2G2WR524841112041
- B. NHTSA No.: C30121
- C. Manufacturer: GENERAL MOTORS OF CANADA LTD
- D. Manufacture Date: 03/03

1.2 TEST DATE

The test vehicle was subjected to testing on May 21, 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: 2004 PONTIAC GRAND PRIX PASSENGER CAR
VEHICLE NHTSA NO.: C30121 ; VIN: 2G2WR524841112041
LABORATORY: GENERAL TESTING LABORATORIES
TEST DATE: 05/21/03

<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. AgorDATE: 05/21/03APPROVED BY: D. Messick

DATA SHEET 2

TEST VEHICLE INFORMATION/RECEIVING INSPECTION

LABORATORY: GENERAL TESTING LABORATORIES DATE: 05/21/03

VEHICLE MODEL YEAR/MAKE/MODEL/BODY STYLE: 2004 PONTIAC GRAND PRIX

MANUFACTURE DATE: 03/03 NHTSA NO.: C30121 BODY COLOR: BLACK

VIN: 2G2WR524841112041 VEHICLE TYPE: PASSENGER CAR

GVWR 2078 kg (4582 lbs) GAWR(Fr) 1150 kg (2536 lbs) GAWR(Rr) 928 kg (2046 lbs)

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

ENGINE DATA: 6 Cylinders 3.8 Liters Cubic Inches

TRANSMISSION DATA: X Automatic Manual 4 No. of Speeds

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

INSTALLED TIRE DATA: Size - P225/55R17 Mfr. - MICHELIN

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

X	Air Conditioning	X	Traction Control	X	Clock
X	Tinted Glass		All Wheel Drive		Roof Rack
	Power Steering	X	Cruise Control	X	Console
X	Power Windows	X	Rear Window Defroster	X	Driver Air Bag
X	Power Door Locks	X	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 -

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

REMARKS:

RECORDED BY: M. A. Bfor

DATE: 05/21/03

APPROVED BY: P. M. Murrice

DATA SHEET 3
CURB WEIGHT WITH OPTIONS AND NORMAL LOAD

VEHICLE MAKE/MODEL/BODY STYLE: 2004 PONTIAC GRAND PRIX PASSENGER CAR
 VEHICLE NHTSA NO.: C30121 ; VIN: 2G2WR524841112041
 LABORATORY: GENERAL TESTING LABORATORIES
 TEST DATE: 05/21/03

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>522</u> KG (1151 LB)	LR <u>297</u> KG (655 LB)
RF <u>516</u> KG (1137 LB)	RR <u>311</u> KG (685 LB)
Front Axle <u>1038</u> KG (2288 LB)	Rear Axle <u>608</u> KG (1340 LB)
Total Vehicle <u>1646</u> KG (3628 LB)	

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>569</u> KG (1254 LB)	LR <u>352</u> KG (777 LB)
RF <u>565</u> KG (1246 LB)	RR <u>366</u> KG (807 LB)
Frt Axle <u>1134</u> KG (2500 LB)	Rr Axle <u>718</u> KG (1584 LB)
Total Vehicle <u>1852</u> KG (4084 LB)	

DATA SHEET 3 – CONTINUED

- (5) Calculated Vehicle Normal Load on the Tire
 Front Tires (measured front axle normal load/2) = 567 KG (1250 LB)
 Rear Tires (measured front axle normal load/2) = 359 KG (792 LB)
- (6) High Speed Test Load from (X) FMVSS 109 (S5.5), or () FMVSS 119 (S7.4)

	Front	Rear
(a) Installed Tire Size	<u>P225/55R17</u>	<u>P225/55R17</u>
Max. Load Rating on Sidewall	<u>690 KG(1521 LBS)</u>	<u>690 KG(1521 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>607 KG(1338 LBS)</u>	<u>607 KG(1338 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: 05/21/03

APPROVED BY: 

DATA SHEET 4
TIRE INFORMATION LABEL OR PLACARD

VEHICLE MAKE/MODEL/BODY STYLE: 2004 PONTIAC GRAND PRIX PASSENGER CAR
 VEHICLE NHTSA NO.: C30121 ; VIN: 2G2WR524841112041
 LABORATORY: GENERAL TESTING LABORATORIES
 TEST DATE: 05/21/03

A. Vehicle Type from Certification Label: Passenger Car

B. Identify Vehicle Labeling:

Vehicle has a combined Certification Tire Information Label () Yes (X) No
 Is Label Permanently Affixed: () Yes () No
 Label Location: _____
 Description of Label: _____

Vehicle has a separate Tire Information Label or Placard (X) Yes () No
 Is Label Permanently Affixed: (X) Yes () No
 Label Location: Trunk Lid Jam
 Description of Label: White/Black Sticker

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

Vehicle Capacity Weight - 416 KG (917 LBS)

Designated Seating Capacity (DSC) - 5
 Expressed In—

(1) Total No. of Occupants (X) Yes () No

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

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

<u>P225/55R17</u>	FRONT - <u>210 kPa (30 psi)</u>
	REAR - <u>210 kPa (30 psi)</u>

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

REMARKS: LOCATION OF TIRE INFORMATION PLACARD IS QUESTIONABLE.

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

DATE: 05/21/03

DATA SHEET 5
VEHICLE TIRE DATA

VEHICLE MAKE/MODEL/BODY STYLE: 2004 PONTIAC GRAND PRIX PASSENGER CAR
VEHICLE NHTSA NO.: C30121 ; VIN: 2G2WR524841112041
LABORATORY: GENERAL TESTING LABORATORIES
TEST DATE: 05/21/03

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

INFORMATION FROM TIRE SIDEWALL:

Left Front Tire

Tire Size Designation	<u>P225/55R17</u>
Tire Load Index/Speed Symbol	<u>95H</u>
Maximum Inflation Pressure	<u>300 kPa (44 psi)</u>
Maximum Load Rating	<u>690 KG (1521 LBS.)</u>
Mfr. Name or Brand & Code	<u>MICHELIN MXV4 PLUS</u>
Tube or Tubeless	<u>TUBELESS</u>
Treadwear/Traction/Temp. Grades	<u>400/A/A</u>
Sidewall (Plies & Composition)	<u>2 PLY POLYESTER</u>
Tread (Plies & Composition)	<u>2 PLY POLYESTER</u> <u>2 PLY STEEL</u> <u>1 PLY POLYAMIDE</u>
Serial Number: Right Front -	<u>DOT B98KH 5RX D403</u>

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

REMARKS:

RECORDED BY: 

DATE: 05/21/03

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



2004 PONTIAC GRAND PRIX GTP
NHTSA NO. C30121
FMVSS NO. 110 (INDICANT)

FIGURE 5.1
¾ FRONTAL VIEW OF VEHICLE



MFD BY GENERAL MOTORS OF CANADA LTD.

DATE
03/03

GVWR
2078 KG
4582 LB

GAWR FRT
1150 KG
2536 LB

GAWR RR
928 KG
2046 LB

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

2G2WR524841112041

TYPE: PASS CAR

2004 PONTIAC GRAND PRIX GTP
NHTSA NO. C30121
FMVSS NO. 110 (INDICANT)

FIGURE 5.2
VEHICLE'S CERTIFICATION LABEL

2004 GRAND PRIX GTP SEDAN

3.6L 3000 SERIES V6 VTEC

Exterior BLACK

4-SPEED AUTOMATIC TRANSMISSION

Interior DARK PEWTER



STANDARD EQUIPMENT

Many Features Below are included at NO EXTRA CHARGE in the Standard Vehicle Price Shown at Right.

MECHANICAL

- 3.6L V6 SUPERCHARGED ENGINE
- ELECTRONIC THROTTLE CONTROL
- 4-SPEED AUTO TRANSMISSION
- WIDE TRACK HANDLING SYSTEM
- MAGNASTEER® STEERING

SAFETY

- DUAL STAGE FRONT AIR BAGS
- ONSTAR COMMUNICATIONS SYSTEM
- 1 YEAR OF SAFE & SOUND PLAN
- DAYTIME RUNNING LAMPS
- 3-POINT SAFETY BELTS W/ LATCH
- PASS-KEY® THEFT DETECTION
- TIRE INFLATION MONITOR
- ABS W/ FULL FUNCTION TRACTION CONTROL

EXTERIOR

- AIR COND. RR. WINDOW DEFOG
- AM/FM STEREO, CD, 6 SPEAKERS
- STEERING WHEEL RADIO CONTROLS

- 60/40 SPLIT FOLDING RR. SEATS
- CRUISE CONTROL, TILT COLUMN
- DRIVER INFO CENTER, 3-BUTTON
- 17" BUCKET SEATS OR PWR LUMBAR
- PWR DR LKS/WINDOWS/TRUNK REL
- REMOTE KEYLESS ENTRY
- FLOOR CONSOLE W/ 2 PWR OUTLETS
- DRIVER'S PWR SEAT, FR/RR MATS
- FRONT PASS FOLDING SEAT
- CARGO MAT, NET, COVERED STORAGE
- PREMIUM LIGHTING PACKAGE

INTERIOR

- 10 SPEAKERS W/ 2 PWR OUTSIDE MIRRORS
- 2-DIN, 2-DIN DUAL EXHAUST TIPS
- 100% VINYL PROTECTIVE MOLDINGS
- LIFT LIFT OVER TRUNK OPENING
- WIDE OPENING REAR DOOR
- 17" ALUMINUM WHEELS
- 17" TOURING TIRES

MSRP \$24,999

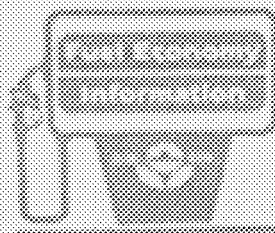
Grand Prix 3000 3.6L V6 Supercharged 4-Speed Automatic 4-Door

CITY MPG

18

Actual mileage will vary with driving conditions, driving habits and vehicle condition. Always use proper driving techniques and maintain proper vehicle maintenance.

18 mpg city/24 mpg highway/21 mpg combined.



2004 GRAND PRIX
3.6L V6 SUPERCHARGED ENGINE
4-SPEED AUTOMATIC TRANSMISSION
4-DOOR ELECTRONIC THROTTLE
CONTROL, Traction Control System

ESTIMATED ANNUAL FUEL COST \$1,118

HIGHWAY MPG

28

For complete driving information, please refer to the Owner's Manual. Fuel economy may vary with driving conditions and vehicle condition.

TOTAL

FIGURE 5.3
VEHICLE'S MONRONEY LABEL (PART 1)

2004 PONTIAC GRAND PRIX GTP
NHTSA NO. C30121
FMVSS NO. 110 (INDICANT)



PONTIAC

WE ARE DRIVING EXCITEMENT.

2004 Pontiac Grand Prix GTP

MSRP. Excludes destination charge, taxes, license, title, and dealer fees. Dealer sets actual price.

STANDARD VEHICLE PRICE	\$26,869.00
Options Installed by Manufacturer	
LEATHER TRIM PACKAGE INCLUDING: - LEATHER APPROPRIATE SEATING - HEATED DRIVER & FRONT PASS SEATS	\$425.00
PREMIUM AUDIO PACKAGE INCL: - IN DASH 6 DISC CD CHANGER AND 245 WATT MONITOR 9 SPEAKER SYSTEM (REPLACES STD OPT. 1 AND RADIO)	\$495.00
POWER SEAT	795.00
DELTA TENSION	
WHEELS	\$445.00
ALLOY	
XM SATELLITE RADIO OF CHOICE TO GO (SUBSCRIPTION & ACTIVATION FEE 15-STATE FEE)	\$325.00 NO CHARGE
TOTAL VEHICLE & OPTIONS	\$28,935.00
DESTINATION CHARGE	\$25.00

MSRP. Excludes destination charge, taxes, license, title, and dealer fees. Dealer sets actual price.

MPG

8

See dealer for more information.
MSRP. Excludes destination charge, taxes, license, title, and dealer fees. Dealer sets actual price.

See dealer for more information.
MSRP. Excludes destination charge, taxes, license, title, and dealer fees. Dealer sets actual price.

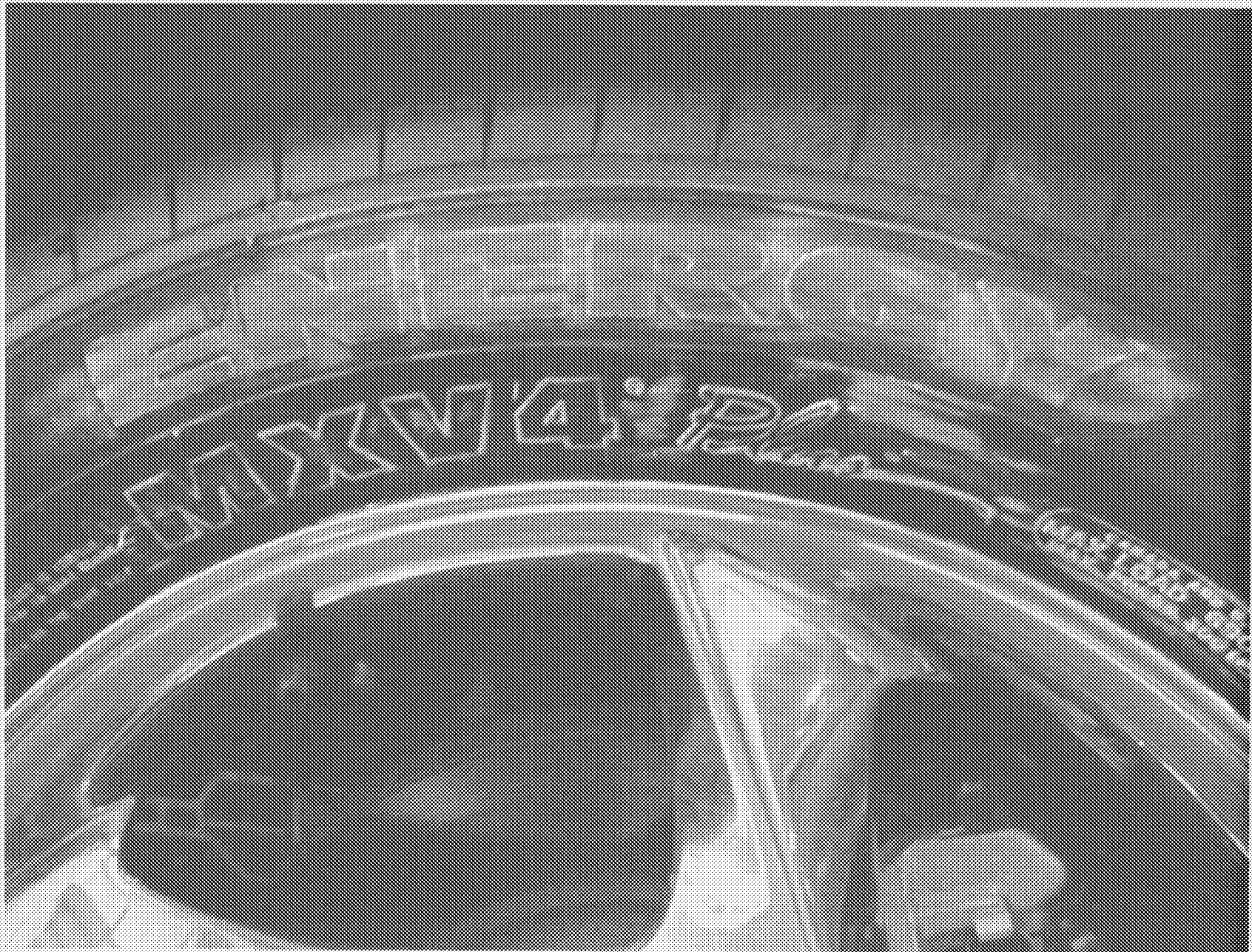
FIGURE 5.4
VEHICLE'S MONRONEY LABEL (PART 2)

2004 PONTIAC GRAND PRIX GTP
NHTSA NO. C30121
FMVSS NO. 110 (INDICANT)



2004 PONTIAC GRAND PRIX GTP
NHTSA NO. C30121
FMVSS NO. 110 (INDICANT)

FIGURE 5.5
TIRE SHOWING BRAND



2004 PONTIAC GRAND PRIX GTP
NHTSA NO. C30121
FMVSS NO. 110 (INDICANT)

FIGURE 5.6
TIRE SHOWING MODEL



2004 PONTIAC GRAND PRIX GTP
NHTSA NO. C30121
FMVSS NO. 110 (INDICANT)

FIGURE 5.7
TIRE SHOWING SIZE, LOAD INDEX AND SPEED
SYMBOL



2004 PONTIAC GRAND PRIX GTP
NHTSA NO. C30121
FMVSS NO. 110 (INDICANT)

FIGURE 5.8
TIRE SHOWING MAX LOAD RATING AND
MAX INFLATION PRESSURE



2004 PONTIAC GRAND PRIX GTP
NHTSA NO. C30121
FMVSS NO. 110 (INDICANT)

FIGURE 5.9
VEHICLE BALLASTED TO SIMULATE NORMAL
LOAD CONDITIONS

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.