SAFETY COMPLIANCE TESTING FOR
FMVSS 110
TIRE SELECTION AND RIMS

GENERAL MOTORS CORPORATION
2009 CHEVROLET IMPALA
FOUR-DOOR PASSENGER CAR
NHTSA NO. C90100

U.S. DOT SAN ANGELO TEST FACILITY
131 COMANCHE TRAIL, BUILDING 3527
GOODFELLOW AFB, TEXAS  76908

January 15, 2009
FINAL REPORT

PREPARED FOR
U. S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
ENFORCEMENT
OFFICE OF VEHICLE SAFETY COMPLIANCE
1200 NEW JERSEY AVENUE, S.E.
WEST BUILDING, FOURTH FLOOR, NVS-220
WASHINGTON, D.C. 20590
This publication is distributed by the National Highway Traffic Safety Administration in the interest of information exchange. Opinions, findings and conclusions expressed in this publication are those of the author(s) and not necessarily those of the Department of Transportation or the National Highway Traffic Safety Administration. The United States Government assumes no liability for its contents or use thereof.

If trade or manufacturers' names or products are mentioned, it is only because they are considered essential to the object of the publication and should not be construed as an endorsement.

Prepared By: Doris Bech

Approved By: [Signature]

Accepted By: [Signature]

Acceptance Date: 1-15-2009
Compliance tests were conducted on the subject 2009 Chevrolet Impala four-door passenger car in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-110P-03 for the determination of FMVSS 110 compliance. Test failures identified were as follows: NONE.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>SECTION</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction</td>
</tr>
<tr>
<td>2</td>
<td>Test Procedure and Summary of Results</td>
</tr>
<tr>
<td>3</td>
<td>Test Data</td>
</tr>
<tr>
<td>4</td>
<td>Test Equipment List and Calibration Information</td>
</tr>
<tr>
<td>5</td>
<td>Photographs</td>
</tr>
</tbody>
</table>

## Figure

- 5.1 ¾ Frontal View from Left Side of Vehicle
- 5.2 ¾ Rear View from Right Side of Vehicle
- 5.3 Vehicle Certification Label
- 5.4 Vehicle Placard
- 5.5 Tire Showing Brand
- 5.6 Tire Showing Model
- 5.7 Tire Showing Size, Load Index and Speed Symbol
- 5.8 Tire Showing Max Load Rating
- 5.9 Tire Showing Max Inflation Pressure
- 5.10 Tire Showing Serial Number
- 5.11 Rim Contour for Full Width of Cross Section
- 5.12 Right Front Rim Showing Letter Designation for Source of Published Dimensions, Size, DOT Symbol, Manufacturer’s Symbol, Date of Manufacture, and Other Rim Markings
- 5.13 Left Rear Rim Showing Letter Designation for Source of Published Dimensions, Size, DOT Symbol, Manufacturer’s Symbol, Date of Manufacture, and Other Rim Markings
- 5.14 Vehicle Front Seat Ballasted for Normal and Maximum Loads
- 5.15 Vehicle Rear Seat Ballasted for Normal Load
- 5.16 Vehicle Rear Seat Ballasted for Maximum Load
- 5.17 Vehicle Trunk Shown Ballasted for Maximum Load
- 5.18 Vehicle on Weight Scales
SECTION 1

INTRODUCTION

1.1 PURPOSE OF COMPLIANCE TEST

A 2009 Chevrolet Impala passenger car was tested to determine if the vehicle was in compliance with the requirements of FMVSS No. 110. All tests were conducted in accordance with NHTSA, Office of Vehicle Safety Compliance (OVSC) Laboratory Test Procedure TP-110P-03, dated August 31, 2007.

1.2 TEST VEHICLE

The test vehicle was a 2009 Chevrolet Impala four-door passenger car. Nomenclatures applicable to the test vehicle are:

A. Vehicle Identification Number: 2G1WB57K991103176

B. NHTSA Number: C90100

C. Manufacturer: General Motors Corporation

D. Manufacture Date: 07/2008

1.3 TEST DATE

The test vehicle was tested December 8 and 9, 2008.
SECTION 2

TEST PROCEDURE AND SUMMARY OF RESULTS

2.1 TEST PROCEDURE

Prior to test, the test vehicle was inspected for completeness, systems operability and appropriate fuel and liquid levels, i.e. oil and coolant. The vehicle was then photographically documented. The right front and left rear wheels were removed from the vehicle. Pertinent information on the tires and rims furnished with the vehicle were recorded and tires and rims were photographed.

The vehicle tire placard was photographed and checked for compliance to location, format, and information requirements. Subsequent events included weighing the vehicle to establish delivered curb weight and the distribution of weight on the front and rear axles and each wheel position. Vehicle was ballasted to Normal Load weight, Full Occupant Load, and Maximum Vehicle Load weight. At each step of the ballasting procedure, data was recorded. Ballast was photographically documented for the Normal and Maximum Vehicle Load weights. The owner’s manual was checked for all required information on placard, tire loading, and general tire and loading parameters.

2.2 SUMMARY OF RESULTS

The data indicate compliance of the Chevrolet Impala with all requirements tested.
SECTION 3

TEST DATA
DATA SUMMARY SHEET

VEHICLE MAKE/MODEL/BODY STYLE: 2009 Chevrolet Impala four-door passenger car

VEHICLE NHTSA NUMBER: C90100 VIN: 2G1WB57K991103176

VEHICLE TYPE: passenger car DATE OF MANUFACTURE: 07/2008

LABORATORY: US DOT San Angelo Test Facility

<table>
<thead>
<tr>
<th>PASSENGER CAR REQUIREMENTS</th>
<th>PASS/FAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General</strong> (Data Sheet 2)</td>
<td></td>
</tr>
<tr>
<td>The vehicle is equipped with tires that meet the requirements of S139. (S110, S4.1)</td>
<td><strong>PASS</strong></td>
</tr>
<tr>
<td><strong>Tire Load Limits</strong> (Data Sheet 5)</td>
<td></td>
</tr>
<tr>
<td>The vehicle maximum load on the tire shall not be greater than the maximum load rating as marked on the sidewall of the tire. (S110, S4.2.1.1)</td>
<td><strong>PASS</strong></td>
</tr>
<tr>
<td>The vehicle normal load on the tire is not greater than the value of 94 percent of the load rating at the vehicle manufacturer’s recommended cold inflation pressure for that tire. (S110, S4.2.1.2)</td>
<td><strong>PASS</strong></td>
</tr>
<tr>
<td><strong>Placard and Tire Inflation Pressure Label</strong> (Data Sheets 4 and 5)</td>
<td></td>
</tr>
<tr>
<td>The placard and tire inflation pressure label (if provided) are affixed and located correctly, and display the information and format required. (S110, S4.3)</td>
<td><strong>PASS</strong></td>
</tr>
<tr>
<td>No inflation pressure other than the maximum permissible inflation pressure may be shown on the placard and, if any, tire inflation pressure label unless as required. (S110, S4.3.4)</td>
<td><strong>PASS</strong></td>
</tr>
<tr>
<td><strong>Rim</strong> (Data Sheet 3)</td>
<td></td>
</tr>
<tr>
<td>Each rim is constructed to the dimensions of a rim specified for the application. (S110, S4.4.1(a))</td>
<td><strong>PASS</strong></td>
</tr>
<tr>
<td><strong>Owner’s Manual</strong> (Data Sheet 6)</td>
<td></td>
</tr>
<tr>
<td>Owner’s manual or other document has discussion of Vehicle Placard Loading and Tires. (575.6 (a) (4))</td>
<td><strong>PASS</strong></td>
</tr>
<tr>
<td>Owner’s manual includes exact statement relating to “Steps for Determining Correct Load Limits.” (575.6(a)(5))</td>
<td><strong>PASS</strong></td>
</tr>
</tbody>
</table>
DATA SHEET 1
TEST VEHICLE INFORMATION/RECEIVING INSPECTION

VEHICLE MAKE/MODEL/BODY STYLE: 2009 Chevrolet Impala four-door passenger car

VEHICLE NHTSA NUMBER: C90100 TEST DATE: December 8, 2008

VIN: 2G1WB57K991103176 MANUFACTURE DATE: 07/2008

GVWR: 2,066 kg (4,554 lb) GAWR(front): 1,118 kg (2,464 lb)
GAWR(rear): 948 kg (2,090 lb)

SEATING POSITIONS: FRONT 2 MID N/A REAR 3

ODOMETER READING AT START OF TEST: 108.3 km (67.3 mi)

ENGINE DATA: 6 Cylinders 3.5 Liters _____ Cubic Inches

TRANSMISSION DATA: X Automatic _____ Manual 4 No. of Speeds

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

INSTALLED VEHICLE EQUIPMENT:

<table>
<thead>
<tr>
<th></th>
<th>X</th>
<th></th>
<th>X</th>
<th></th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Conditioning</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Tinted Glass</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Steering</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Windows</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Door Locks</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Seat(s)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Brakes</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antilock Brake System</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Navigation System</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traction Control</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Tachometer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cruise Control</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Rear Window Defroster</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Sun Roof or T-Top</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tilt Steering Wheel</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stereo</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Telephone</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Driver Air Bag</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Passenger Air Bag</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Side Curtain Air Bag(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Front Disc Brakes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trailer Hitch</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other -</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

REMARKS: None

RECORDED BY: Jack R. Stewart DATE: December 8, 2008

APPROVED BY: Kenneth H. Yates
**DATA SHEET 2**  
**VEHICLE TIRE IDENTIFICATION**

**VEHICLE MAKE/MODEL/BODY STYLE:**  2009 Chevrolet Impala four-door passenger car  
**VEHICLE NHTSA NUMBER:**  C90100  
**VIN:**  2G1WB57K991103176  
**LABORATORY:**  US DOT San Angelo Test Facility  
**TEST DATE:**  December 8, 2008

All tires on the vehicle (excluding the spare) are the same size:  (X) YES  ( ) NO  
Spare tire is the same size as all other tires:  ( ) YES  (X) NO

<table>
<thead>
<tr>
<th>Tire Sidewall</th>
<th>Right Front</th>
<th>Left Rear</th>
<th>Spare Tire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer and Model</td>
<td>Goodyear Integrity</td>
<td></td>
<td>Maxxis Temporary Use Spare</td>
</tr>
<tr>
<td>Tire Size Designation</td>
<td>P225/60R16</td>
<td></td>
<td>T125/70D16</td>
</tr>
<tr>
<td>Load Index/Speed Symbol</td>
<td>97S</td>
<td></td>
<td>96M</td>
</tr>
<tr>
<td>Maximum Inflation Pressure</td>
<td>300 kPa (44 psi)</td>
<td></td>
<td>420 kPa (60 psi)</td>
</tr>
<tr>
<td>Maximum Load Rating</td>
<td>730 kg (1,609 lb)</td>
<td></td>
<td>710 kg (1,565 lb)</td>
</tr>
<tr>
<td>Tread/Traction/Temperature</td>
<td>460/A/B</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Tires Have “DOT” Markings</td>
<td>Yes</td>
<td></td>
<td>Yes</td>
</tr>
</tbody>
</table>

Serial Number:  
- Right Front: M6XOE6DR2908  
- Left Front: M6XOE6DR2908  
- Right Rear: M6XOE6DR2908  
- Left Rear: M6XOE6DR2908  
- Spare: UYMYABC1708

DATA INDICATES COMPLIANCE:  
**PASS/FAIL:**  PASS

**REMARKS:**  None

**RECORDED BY:**  Jack R. Stewart  
**DATE:**  December 8, 2008

**APPROVED BY:**  Kenneth H. Yates
VEHICLE MAKE/MODEL/BODY STYLE: 2009 Chevrolet Impala four-door passenger car

VEHICLE NHTSA NUMBER: C90100  VIN: 2G1WB57K991103176

LABORATORY: US DOT San Angelo Test Facility  TEST DATE: December 8, 2008

Rim Markings (if available):

Right Front  Left Rear
Manufacturer's Name, Symbol or Trademark: Topy  Topy

Rim Size: 16X6½ J  16X6½ J

Date of Manufacture: 6 19 08  6 19 08

Does Rim contain "DOT" symbol? (YES/NO): Yes  Yes

Other Rim Markings: See page 29  See page 30

Rim Inspection Comments: None

Rim Size:  Tire Size: P225/60R16  Measured  Measured Rim Width: 6.5 in (16.5 cm)  Rim Diameter: 16.0 in (40.6 cm)

Right Front Wheel  Left Rear Wheel

Does stamped rim size (if available) agree with the measured rim size?
Right front rim:  ( X ) YES ( ) NO  Left rear rim:  ( X ) YES ( ) NO

Installed rims are suitable for installed tires?  ( X ) YES ( ) NO

Reference document: 2008 Tire & Rim Association Yearbook

DATA INDICATES COMPLIANCE:  PASS/F fail:  PASS

REMARKS: None

RECORDED BY: Jack R. Stewart  DATE: December 8, 2008

APPROVED BY: Kenneth H. Yates
DATA SHEET 4 (1 of 2)
VEHICLE PLACARD, AND TIRE INFLATION PRESSURE LABEL

VEHICLE MAKE/MODEL/BODY STYLE: 2009 Chevrolet Impala four-door passenger car
VEHICLE NHTSA NUMBER: C90100
VIN: 2G1WB57K991103176
LABORATORY: US DOT San Angelo Test Facility
TEST DATE: December 8, 2008

Identification of Vehicle Labeling

<table>
<thead>
<tr>
<th>Yes/No</th>
<th>Location</th>
<th>PASS/FAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Driver's side door</td>
<td>PASS</td>
</tr>
<tr>
<td>Yes</td>
<td>Driver's side B pillar</td>
<td>PASS</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Vehicle Placard

Vehicle Placard has the exact color and format as specified in Figure 1 and text is in English language.  (X) YES ( ) NO
Vehicle Placard is permanently affixed.  (X) YES ( ) NO

Vehicle Placard Information:

Combined weight of occupants and cargo 428 kg (944 lb)
Seating Capacity: Total 5 Front 2 Rear 3
Is the number of belted seating positions the same as the labeled seating capacity?  (X) YES ( ) NO
Is the tire size and pressure provided?  (X) YES ( ) NO

Vehicle Placard

Tire Inflation Pressure Label

FIGURE 1B
(70 FR 14425)

FIGURE 2B
(70 FR 14426)
Vehicle Placard Tire Information:

Tire size:
- Front: P225/60R16
- Rear: P225/60R16

Tire Inflation Pressure:
- Front: 210 kPa (30 psi)
- Rear: 210 kPa (30 psi)

Are the sizes of the installed tires the same as the sizes of the labeled tires?
( X ) YES (   ) NO

Is the labeled cold tire inflation pressure equal to or less than the sidewall labeled maximum cold tire inflation pressure?
- Front axle: ( X ) YES (   ) NO
- Rear axle: ( X ) YES (   ) NO

DATA INDICATES COMPLIANCE:
PASS/FAIL: __PASS__

REMARKS: None

RECORDED BY: Jack R. Stewart DATE: December 8, 2008
APPROVED BY: Kenneth H. Yates
DATA SHEET 5 (1 of 4)
CURB WEIGHT, NORMAL LOAD WEIGHT & MAXIMUM VEHICLE WEIGHT

VEHICLE MAKE/MODEL/BODY STYLE: 2009 Chevrolet Impala four-door passenger car

VEHICLE NHTSA NUMBER: C90100
VIN: 2G1WB57K991103176

LABORATORY: US DOT San Angelo Test Facility
TEST DATE: December 9, 2008

Full Fluid Levels: Fuel Full Coolant Full Other Fluids* Full
* Transmission, windshield washer, power steering fluid, battery, & engine oil

Tire Pressures: LF 210.0 kPa (30.5 psi) LR 210.1 kPa (30.5 psi)
RF 210.2 kPa (30.5 psi) RR 210.1 kPa (30.5 psi)

A. MEASURED CURB WEIGHT WITH INSTALLED OPTIONS AND ACCESSORIES

<table>
<thead>
<tr>
<th></th>
<th>LF</th>
<th>LR</th>
<th>RF</th>
<th>RR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>497 kg (1,095 lb)</td>
<td>303 kg (668 lb)</td>
<td>504 kg (1,112 lb)</td>
<td>313 kg (690 lb)</td>
</tr>
</tbody>
</table>

Front Axle 1,001 kg (2,207 lb) Rear Axle 616 kg (1,358 lb)

Total Vehicle 1,617 kg (3,565 lb)

B. MEASURED VEHICLE NORMAL LOAD WEIGHT

(1) Seating Capacity from Vehicle Placard = 5

(2) Normal Load Number of Occupants (Table in Section 10) = 3

Occupant Distribution: Front Seat 2 Second Seat 1

(3) Total Normal Occupant Load: 204 kg (450 lb)

[ # of occupants x 68 KG per occupant]

(4) Measured Normal Load on Axles:

<table>
<thead>
<tr>
<th></th>
<th>LF</th>
<th>LR</th>
<th>RF</th>
<th>RR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>542 kg (1,195 lb)</td>
<td>359 kg (792 lb)</td>
<td>552 kg (1,217 lb)</td>
<td>367 kg (810 lb)</td>
</tr>
</tbody>
</table>

Front Axle 1,094 kg (2,412 lb) Rear Axle 726 kg (1,602 lb)

Total Vehicle 1,820 kg (4,014 lb)
DATA SHEET 5 (2 of 4)
CURB WEIGHT, NORMAL LOAD WEIGHT & MAXIMUM VEHICLE WEIGHT

(5) Calculated Vehicle Normal Load on the Tire:

Front Tires \([\text{measured front axle normal load}/2]\) = 547 kg (1,206 lb)

Rear Tires \([\text{measured rear axle normal load}/2]\) = 363 kg (801 lb)

(6) Calculated 94% of tire load rating at recommended cold inflation pressure:

Load rating at recommend cold inflation pressure= 670 kg (1,477 lb)

94% of load rating = 630 kg (1,388 lb)

Vehicle Normal Load on the Tire must not be greater than 94% of Load Rating Value.

PASS/FAIL

\([\text{B.(5)}<\text{B.(6)}]\)  Front Tires  PASS

Rear Tires  PASS

C. MEASURED VEHICLE WEIGHT WITH FULL OCCUPANT LOAD

(1) Seating Capacity from Placard:

Total 5  Front 2  Rear 3

(2) Full Occupant Load: 340 kg (750 lb)

[\# of total occupants from C.(1) x 68 KG per occupant]

(3) Measured Vehicle Weight with Full Occupant Load:

LF 555 kg (1,224 lb)  LR 415 kg (915 lb)

RF 561 kg (1,237 lb)  RR 425 kg (936 lb)

Front Axle 1,116 kg (2,461 lb)  Rear Axle 840 kg (1,851 lb)

Total Vehicle 1,956 kg (4,312 lb)
D. MEASURED MAXIMUM VEHICLE LOAD WEIGHT

(1) Vehicle Capacity Weight (from placard): 428 kg (944 lb)

(2) Full Occupant Load (from C.(2)): 340 kg (750 lb)

(3) Luggage/Cargo Load (subtract (2) from (1)): 88 kg (194 lb)

(4) Measured Vehicle Maximum Load on Axles:

<table>
<thead>
<tr>
<th></th>
<th>LF</th>
<th>LR</th>
<th>RF</th>
<th>RR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>550 kg</td>
<td>462 kg</td>
<td>559 kg</td>
<td>474 kg</td>
</tr>
<tr>
<td></td>
<td>(1,213 lb)</td>
<td>(1,019 lb)</td>
<td>(1,233 lb)</td>
<td>(1,044 lb)</td>
</tr>
</tbody>
</table>

Front Axle 1,109 kg (2,446 lb) Rear Axle 936 kg (2,063 lb)

Total Vehicle 2,045 kg (4,509 lb)

(5) Calculated Vehicle Maximum Load on the Tire:

Front Tires [measured front axle maximum load/2] = 555 kg (1,223 lb)
Rear Tires [measured rear axle maximum load/2] = 468 kg (1,032 lb)

(6) Tire Sidewall Maximum Load Ratings:

<table>
<thead>
<tr>
<th></th>
<th>Front</th>
<th>Rear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installed Tire Size</td>
<td>P225/60R16</td>
<td>P225/60R16</td>
</tr>
<tr>
<td>Max. Load Rating on Sidewall</td>
<td>730 kg (1,609 lb)</td>
<td>730 kg (1,609 lb)</td>
</tr>
</tbody>
</table>

Vehicle Maximum Load on the tire must not be greater than the Maximum Load Rating Marked on the Tire Sidewall.

PASS/FAIL

[D.(5)<D.(6)] Front Tires PASS
Rear Tires PASS
## DATA SHEET 5 (4 of 4)
### CURB WEIGHT, NORMAL LOAD WEIGHT & MAXIMUM VEHICLE WEIGHT

(7) Tire Load Ratings at Vehicle Placard or Tire Inflation Pressure Label Recommended Cold Tire Inflation Pressure.

<table>
<thead>
<tr>
<th></th>
<th>Front Axle</th>
<th>Rear Axle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labeled Tire Size</td>
<td>P225/60R16</td>
<td>P225/60R16</td>
</tr>
<tr>
<td>Labeled Cold Inflation Pressure</td>
<td>210 kPa (30 psi)</td>
<td>210 kPa (30 psi)</td>
</tr>
<tr>
<td>Load Rating at This Pressure*</td>
<td>670 kg (1,477 lb)</td>
<td>670 kg (1,477 lb)</td>
</tr>
</tbody>
</table>

*Reference used to obtain Load Rating: 2008 Tire & Rim Association Yearbook

Vehicle Normal Load on the Tire must not be greater than the Tire Load Rating at the Labeled Cold Tire Inflation Pressure.

<table>
<thead>
<tr>
<th></th>
<th>Front Tires</th>
<th>Rear Tires</th>
</tr>
</thead>
<tbody>
<tr>
<td>[B.(5)&lt;D.(7)]</td>
<td>PASS</td>
<td>PASS</td>
</tr>
</tbody>
</table>

Vehicle Maximum Load on the tire must not be greater than the Tire Load Rating at the Labeled Cold Tire Inflation Pressure.

<table>
<thead>
<tr>
<th></th>
<th>Front Tires</th>
<th>Rear Tires</th>
</tr>
</thead>
<tbody>
<tr>
<td>[D.(5)&lt;D.(7)]</td>
<td>PASS</td>
<td>PASS</td>
</tr>
</tbody>
</table>

DATA INDICATES COMPLIANCE: PASS/FAIL: PASS

REMARKS: None

RECORDED BY: Jack R. Stewart DATE: December 9, 2008

APPROVED BY: Kenneth H. Yates
### Owner's Manual Discusses:

<table>
<thead>
<tr>
<th>Part 575.6(a) Paragraph</th>
<th>Required Discussion Topic</th>
<th>Discussed in Manual? (YES/NO)</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>(4)(i)</td>
<td>Tire labeling, including a description and explanation of each marking on the tires provided with the vehicle, and information about the location of the Tire Identification Number (TIN).</td>
<td>Yes</td>
<td>5-54 to 5-56</td>
</tr>
<tr>
<td>(4)(ii)</td>
<td>(A) Description and explanation of recommended cold tire inflation pressure.</td>
<td>Yes</td>
<td>5-60, 5-61</td>
</tr>
<tr>
<td></td>
<td>(B) Description and explanation of FMVSS 110 Vehicle Placard and Tire Inflation Pressure Label and their location(s).</td>
<td>Yes</td>
<td>5-60</td>
</tr>
<tr>
<td></td>
<td>(C) Description and explanation of adverse safety consequences of under-inflation including tire failure.</td>
<td>Yes</td>
<td>5-60</td>
</tr>
<tr>
<td></td>
<td>(D) Description and explanation for measuring and adjusting air pressure to achieve proper inflation.</td>
<td>Yes</td>
<td>5-61</td>
</tr>
<tr>
<td>(4)(iii)</td>
<td>Glossary of tire terminology, including &quot;cold tire pressure,&quot; maximum inflation pressure,&quot; and &quot;recommended inflation pressure,&quot; and all non-technical terms defined in S3 of FMVSS 110 &amp; 139.</td>
<td>Yes</td>
<td>5-57 to 5-59</td>
</tr>
<tr>
<td>(4)(iv)</td>
<td>Tire care, including maintenance and safety practices.</td>
<td>Yes</td>
<td>5-66 to 5-69, 5-95</td>
</tr>
<tr>
<td>(4)(v)</td>
<td>(A) Description and explanation of locating and understanding load limit information, total load capacity, seating capacity, towing capacity, and cargo capacity.</td>
<td>Yes</td>
<td>4-9 to 4-24, 4-29</td>
</tr>
<tr>
<td></td>
<td>(B) Description and explanation for calculating total and cargo load capacities with varying seating configurations including quantitative examples showing/illustrating how the vehicle’s cargo and luggage capacity decreases as the combined number and size of occupants increases.</td>
<td>Yes</td>
<td>4-22, 4-23</td>
</tr>
<tr>
<td></td>
<td>(C) Description and explanation for determining compatibility of tire and vehicle load capabilities.</td>
<td>Yes</td>
<td>4-23</td>
</tr>
<tr>
<td></td>
<td>(D) Description and explanation of adverse safety consequences of overloading on handling and stopping and on tires.</td>
<td>Yes</td>
<td>4-24</td>
</tr>
</tbody>
</table>
The following statement, in the English language, is provided verbatim in the Owner’s Manual. Reference Part 575.6(a)(5)  YES ( )  NO ( )

Steps for Determining Correct Load Limit --
(1) Locate the statement “The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs.” on your vehicle’s placard.
(2) Determine the combined weight of the driver and passengers that will be riding in your vehicle.
(3) Subtract the combined weight of the driver and passengers from XXX kg or XXX lbs.
(4) The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the “XXX” amount equals 1400 lbs. and there will be five 150 lb passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs. (1400-750 (5x150) = 650 lbs.)
(5) Determine the combined weight of the luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.
(6) If your vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle. Consult this manual to determine how this reduces the available cargo and luggage load capacity of your vehicle.

DATA INDICATES COMPLIANCE:  PASS/FAIL:  PASS

REMARKS:  None

RECORDED BY:  Jack R. Stewart  DATE:  December 8, 2008
APPROVED BY:  Kenneth H. Yates
### SECTION 4

**TEST EQUIPMENT LIST AND CALIBRATION INFORMATION**

<table>
<thead>
<tr>
<th>EQUIPMENT</th>
<th>DESCRIPTION</th>
<th>MODEL/ SERIAL NO</th>
<th>CAL. DATE</th>
<th>NEXT CAL. DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLATFORM SCALE (BALLAST)</td>
<td>HOWE RICHARDSON</td>
<td>MODEL #6401 SERIAL #0181-5509-26</td>
<td>8/5/2008</td>
<td>8/5/2009</td>
</tr>
<tr>
<td>AIR PRESSURE GAUGE</td>
<td>ASHCROFT GENERAL PURPOSE DIGITAL GAUGE</td>
<td>MODEL #D1005PS 02L 100 PSI SERIAL #20017398-01</td>
<td>11/20/2008</td>
<td>11/20/2009</td>
</tr>
<tr>
<td>FLOOR SCALES (VEHICLE)</td>
<td>INTERCOMP SW DELUXE SCALES</td>
<td>PART #100156 SERIAL #27032382</td>
<td>8/5/2008</td>
<td>8/5/2009</td>
</tr>
</tbody>
</table>
SECTION 5
PHOTOGRAPHS
2009 CHEVROLET IMPALA
NHTSA NO. C90100
FMVSS 110

FIGURE 5.1
¾ FRONTAL VIEW FROM LEFT SIDE OF VEHICLE
2009 CHEVROLET IMPALA
NHTSA NO. C90100
FMVSS 110

FIGURE 5.2
¾ REAR FROM RIGHT SIDE OF VEHICLE
MFD BY GENERAL MOTORS OF CANADA LTD.

DATE  GVWR  GAWR FRT  GAWR RR
07/08  2066 KG  1118 KG  948 KG
       4554 LB   2464 LB  2090 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.

2G1WB57K991103176  TYPE: PASS CAR

FIGURE 5.3
VEHICLE CERTIFICATION LABEL
<table>
<thead>
<tr>
<th>TIRE</th>
<th>ORIGINAL SIZE</th>
<th>COLD TIRE PRESSURE</th>
<th>SEE OWNER’S MANUAL FOR ADDITIONAL INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRONT</td>
<td>P225/60R16</td>
<td>210 kPa, 30 PSI</td>
<td></td>
</tr>
<tr>
<td>REAR</td>
<td>P225/60R16</td>
<td>210 kPa, 30 PSI</td>
<td></td>
</tr>
<tr>
<td>SPARE</td>
<td>T125/70D16</td>
<td>420 kPa, 60 PSI</td>
<td></td>
</tr>
</tbody>
</table>

The combined weight of occupants and cargo should never exceed 428 kg or 944 lbs.
2009 CHEVROLET IMPALA
NHTSA NO. C90100
FMVSS 110

FIGURE 5.6
TIRE SHOWING MODEL
2009 CHEVROLET IMPALA
NHTSA NO. C90100
FMVSS 110

FIGURE 5.7
TIRE SHOWING SIZE, LOAD INDEX, AND SPEED SYMBOL
FIGURE 5.8
TIRE SHOWING MAX LOAD RATING
300 kPa (44 psi) MAX. PRESS.
2009 CHEVROLET IMPALA
NHTSA NO. C90100
FMVSS 110

FIGURE 5.10
TIRE SHOWING SERIAL NUMBER
Figure 5.11
RIM CONTOUR FOR FULL WIDTH OF CROSS SECTION

2009 CHEVROLET IMPALA
NHTSA NO. C90100
FMVSS 110
2009 CHEVROLET IMPALA
NHTSA NO. C90100
FMVSS 110

FIGURE 5.12
RIGHT FRONT RIM SHOWING LETTER DESIGNATION FOR SOURCE OF PUBLISHED DIMENSIONS, SIZE, DOT SYMBOL, MANUFACTURER'S SYMBOL, DATE OF MANUFACTURE, AND OTHER RIM MARKINGS
LEFT REAR RIM SHOWING LETTER DESIGNATION FOR SOURCE OF PUBLISHED DIMENSIONS, SIZE, DOT SYMBOL, MANUFACTURER’S SYMBOL, DATE OF MANUFACTURE, AND OTHER RIM MARKINGS
2009 CHEVROLET IMPALA
NHTSA NO. C90100
FMVSS 110

FIGURE 5.14
VEHICLE FRONT SEAT BALLASTED FOR
NORMAL AND MAXIMUM LOADS
2009 CHEVROLET IMPALA
NHTSA NO. C90100
FMVSS 110

FIGURE 5.15
VEHICLE REAR SEAT BALLASTED
FOR NORMAL LOAD
2009 CHEVROLET IMPALA
NHTSA NO. C90100
FMVSS 110

FIGURE 5.17
VEHICLE TRUNK BALLASTED
FOR MAXIMUM LOAD