

REPORT NUMBER 110-GTL-08-001

**SAFETY COMPLIANCE TESTING FOR
FMVSS NO. 110
TIRE SELECTION AND RIMS
FOR MOTOR VEHICLES WITH A
GVWR OF 4536 KILOGRAMS OR LESS**

**DAIMLERCHRYSLER AG
2008 SMART CAR FORTWO, PASSENGER CAR
NHTSA NO. C80501**

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



JUNE 13, 2008

FINAL REPORT

PREPARED FOR

**U. S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
ENFORCEMENT
OFFICE OF VEHICLE SAFETY COMPLIANCE
1200 NEW JERSEY AVE., SE
WASHINGTON, D.C. 20590**

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Prepared By: Debbie Messick
Approved By: Grant S. S. S. S.
Approval Date: 6/13/08

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16. Abstract Compliance tests were conducted on the subject 2008 Smart Car Fortwo 2-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		
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SECTION 1

INTRODUCTION

1.0 PURPOSE OF COMPLIANCE TEST

A 2008 Smart Car Fortwo 2-door passenger car was subjected to FMVSS No. 110 testing to determine if the vehicle was in compliance with the requirements of the standard. All tests were conducted in accordance with NHTSA, Office of Vehicle Safety Compliance (OVSC) Laboratory Procedure, TP-110P-03 dated 31 August 2007 and General Testing Laboratories, Inc (GTL) Test Procedure, TP-110-03A dated 13 May 2008.

1.1 TEST VEHICLE

The test vehicle was a 2008 Smart Car Fortwo 2-door passenger car. Nomenclature applicable to the test vehicle are:

A. Vehicle Identification Number: WMEEJ31X68K100508

B. NHTSA No.: C80501

C. Manufacturer: DAIMLERCHRYSLER AG

D. Manufacture Date: 12/07

E. Color: Deep Black/Tridion Silver Metallic

1.2 TEST DATE

The test vehicle was subjected to FMVSS No. 110 testing during the time period May 16 through June 3, 2008.

SECTION 2

TEST PROCEDURE AND SUMMARY OF RESULTS

2.0 GENERAL

The 2008 Smart Car 2-door passenger car, NHTSA No. C80501, was subjected to FMVSS No. 110 testing during the time period May 16 through June 3, 2008.

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 as required by the DOT/NHTSA and GTL test procedures. 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. The vehicle normal load as well as the maximum load on each wheel were measured. Data from each tire furnished with the vehicle were recorded. The vehicle tire placard was surveyed and photographed. Required dimensional data and other identifying data for the left front and right rear rims were obtained. The contour of the aforementioned rims was documented photographically.

2.2 SUMMARY OF RESULTS

The test vehicle appears to be in compliance with the requirements of FMVSS No. 110.

SECTION 3

TEST DATA

DATA SUMMARY SHEET (1 of 2)

VEHICLE MAKE/MODEL/BODY STYLE: 2008 SMART CAR FORTWO
 VEHICLE NHTSA NO: C80501 VIN: WMEEJ31X68K100508
 VEHICLE TYPE: PASSENGER CAR DATE OF MANUFACTURE: 12/07
 LABORATORY: GENERAL TESTING LABORATORIES TEST DATE: 06/03/08

PASSENGER CAR REQUIREMENTS

PASS/FAIL

GENERAL (DATA SHEET 2)

The vehicle must be equipped with tires that meet the requirements of S139. (S110, S4.1)

Pass

TIRE LOAD LIMITS (DATA SHEET 5)

The vehicle maximum load on the tire is not greater than the maximum load rating as marked on the sidewall of the tire. (S110, S4.2.1.1)

Pass

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)

Pass

PLACARD AND TIRE INFLATION PRESSURE LABEL (DATA SHEETS 4 AND 5)

The placard and tire inflation pressure label (if provided) are affixed and located correctly, and display the information and format required. (S110, S4.3)

Pass*

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)

Pass

RIMS (DATA SHEETS 3 AND 6)

Each rim is constructed to the dimensions of a rim referred to in FMVSS 139 that is listed by the manufacturer of the tires as suitable for use with those tires. (S110, S4.4.1(a)).

Pass

DATA SUMMARY SHEET (2 of 2)

PASSENGER CAR REQUIREMENTS

PASS/FAIL

Vehicle rims retain deflated tires during a controlled braking application (S110, S4.4.1(b)).

Pass

OWNER'S MANUAL (DATA SHEET 7)

Owner's manual or other documentation has discussion of Vehicle Placard, Loading and Tires (575.6 (a)(4)).

Pass

Owner's manual includes exact statement to "Steps for Determining Correct Load Limits." (575.6(a)(5))

Pass

REMARKS: *The tire figure on the vehicle placard is somewhat small at 11.5 mm x 12.5 mm instead of the required dimensions of 13 mm x 14 mm. Table format depicting tire location and size does not follow exact format provided in FMVSS No. 110 vehicle placard figure.

RECORDED BY: G. Farrand ;
APPROVED BY: D. Messick

DATE: 06/03/08

DATA SHEET 1
TEST VEHICLE INFORMATION/RECEIVING INSPECTION

VEHICLE MODEL YEAR/MAKE/BODY STYLE: 2008 SMART CAR FORTWO PASSENGER CAR
 NHTSA NO.: C80501 TEST DATE: 06/03/08
 VIN.: WMEEJ31X68K100508 MANUFACTURE DATE: 12/07

GVWR 1050 KG (2315 LBS) GAWR(Fr) 440 KG (970 LBS) GAWR(Rr) 660 KG (1455 LBS)

SEATING POSITIONS: FRONT 2 MID _____ REAR _____ OTHER _____

BODY COLOR: DEEP BLACK/TRIDION SILVER METALLIC

ODOMETER READINGS: ARRIVAL - 920.54 KILOMETERS (572 MILES)

ENGINE DATA: 3 Cylinders 1 Liters 61 Cubic Inches

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

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

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

X	Air Conditioning		Traction Control		Clock
X	Tinted Glass		Telephone		Roof Rack
	Power Steering		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
	Power Seat(s)		Tachometer	X	Side Curtain Air Bag(s)
	Power Brakes		Tilt Steering Wheel	X	Front Disc Brakes
X	Antilock Brake System		Stereo		Rear Disc Brakes
	Navigation System		Trailer Hitch		Other -

REMARKS: Front tires and rims are different size than rear tires and rims. No spare tire supplied with vehicle.

RECORDED BY: G. Farrand ;
 APPROVED BY: D. Messick

DATE: 06/03/08

DATA SHEET 2
VEHICLE TIRE IDENTIFICATION

VEHICLE MAKE/MODEL/BODY STYLE: 2008 SMART CAR FORTWO
 VEHICLE NHTSA NO: C80501 VIN: WMEEJ31X68K100508
 VEHICLE TYPE: PASSENGER CAR DATE OF MANUFACTURE: 12/07
 LABORATORY: GENERAL TESTING LABORATORIES TEST DATE: 06/03/08

All tires on the vehicle (excluding the spare) are the same size: () Yes (X) No

Spare tire is the same size as all other tires: () Yes () No (X) N/A

<u>TIRE SIDEWALL</u>	Right Front	Left Rear	Spare Tire
Manufacture and Model	<u>Continental</u> <u>ContiProContact</u>	<u>Continental</u> <u>ContiProContact</u>	<u>N/A</u>
Tire Size Designation	<u>155/60R15</u>	<u>175/55R15</u>	<u>N/A</u>
Load Index/Speed Symbol	<u>74T</u>	<u>77T</u>	<u>N/A</u>
Maximum Inflation Pressure	<u>300 KPA (44 psi)</u>	<u>300 KPA (44 psi)</u>	<u>N/A</u>
Maximum Load Rating	<u>375 KG (827 lbs)</u>	<u>412 KG (908 lbs)</u>	<u>N/A</u>
Tread/Traction/ Temperature	<u>400/AA/A</u>	<u>400/AA/A</u>	<u>N/A</u>
Tires have "DOT" Symbol	<u>YES</u>	<u>YES</u>	<u>N/A</u>

Serial Number: Right Front CN93 PVH6 4507 Left Front CN93 PVH6 4507
 Right Rear CNHW PVH6 4907 Left Rear CNHW PVH6 4907
 Spare N/A

DATA INDICATES COMPLIANCE: PASS/FAIL PASS

REMARKS: No spare tire supplied with vehicle.

RECORDED BY: G. Farrand ; DATE: 06/03/08
 APPROVED BY: D. Messick

DATA SHEET 3
VEHICLE RIM IDENTIFICATION

VEHICLE MAKE/MODEL/BODY STYLE: 2008 SMART CAR FORTWO
 VEHICLE NHTSA NO: C80501 VIN: WMEEJ31X68K100508
 VEHICLE TYPE: PASSENGER CAR DATE OF MANUFACTURE: 12/07
 LABORATORY: GENERAL TESTING LABORATORIES TEST DATE: 06/03/08

<u>RIM MARKINGS (if available)</u>	<u>Right Front</u>	<u>Left Rear</u>
Manufacturer's Name, Symbol or Trademark	<u>SM</u>	<u>SM</u>
Rim Size	<u>4.5Jx15</u>	<u>5.5Jx15</u>
Load Rating and Max Inflation Pressure	<u>N/A</u>	<u>N/A</u>
Date of Manufacture	<u>12/07</u>	<u>12/07</u>
Does Rim contain "DOT" Symbol (Yes/No)	<u>No</u>	<u>No</u>
Other Rim Markings	<u>See Photographs</u>	<u>See Photographs</u>

Rim Inspection Comments: _____

Tire Inspection Comments: _____

<u>RIM SIZE:</u>	<u>Tire Size</u>	<u>Measured Rim Width</u>	<u>Measured Rim Diameter</u>
<u>RIGHT FRONT</u>	<u>155/60R15</u>	<u>4.5"</u>	<u>15"</u>
<u>LEFT REAR</u>	<u>175/55R15</u>	<u>5.5"</u>	<u>15"</u>

Does stamped rim size (if available) agree with the measured rim size?

Right Front Rim (X) Yes () No Left Rear Rim (X) Yes () No () Not Applicable

Installed rims are suitable for installed tires? (X) Yes () No

REFERENCE USED: 2008 ETRTO MANUAL

DATA INDICATED COMPLIANCE: PASS/FAIL PASS

RECORDED BY: G. Farrand ; DATE: 06/03/08
 APPROVED BY: D. Messick

DATA SHEET 4 (1 of 2)

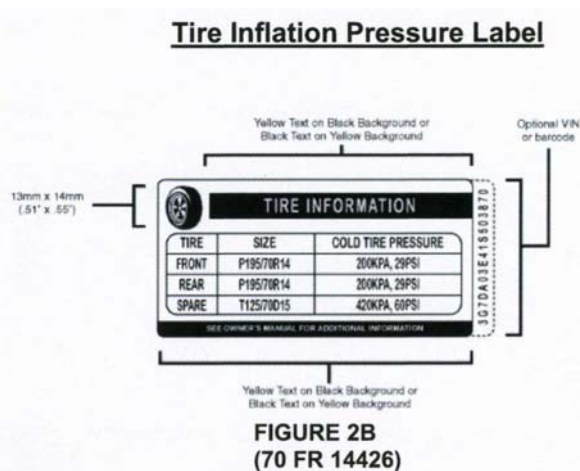
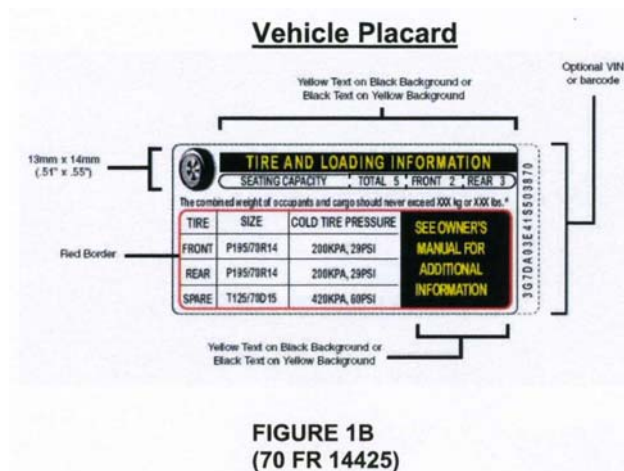
VEHICLE PLACARD, AND TIRE INFLATION PRESSURE LABEL

VEHICLE MAKE/MODEL/BODY STYLE: 2008 SMART CAR FORTWO
 VEHICLE NHTSA NO: C80501 VIN: WMEEJ31X68K100508
 VEHICLE TYPE: PASSENGER CAR DATE OF MANUFACTURE: 12/07
 LABORATORY: GENERAL TESTING LABORATORIES TEST DATE: 06/03/08

IDENTIFICATION OF VEHICLE LABELING

	(Yes/No)	Location	Pass/Fail
1. Certification Label	<u>YES</u>	<u>Driver "B" Pillar</u>	<u>Pass</u>
2. Vehicle Placard*	<u>YES</u>	<u>Driver "B" Pillar</u>	<u>Pass</u>
3. Tire Inflation Pressure Label*	<u>NO</u>	<u></u>	<u>N/A</u>

* Labels are to be affixed to the driver's side B-pillar otherwise refer to FMVSS 110 requirements.



Labeling Notes:

1. Tire size and pressure can be omitted from Vehicle Placard if same data is displayed on a Tire Inflation Pressure Label.
2. The Alphanumeric Identifier or Barcode, is optional. It can be located vertically, along the right edge or the left edge of the placard or label, or horizontally, along the bottom edge of the placard or label.
3. Tire size can include the tire load range identification symbol("XL" or "reinforced", "B", "C", "D", "E", or "F"), the load index number, and speed rating symbol, located immediately to the right of the tire size designation.
4. The tire "SIZE" heading can be replaced with "ORIGINAL TIRE SIZE" or "ORIGINAL SIZE"
5. The "SPARE" tire heading can be replaced with "SPARE TIRE."
6. For full size spare tires, the recommended cold tire inflation pressure can be replaced with "SEE ABOVE."
7. If no spare tire is provided, the word "NONE" is to replace the manufacturer's cold tire inflation pressure.

DATA SHEET 4 (2 of 2)
VEHICLE PLACARD, AND TIRE INFLATION PRESSURE LABEL

Vehicle Placard has the exact color and format as specified in the above Figure 1B and text is in English. ☐ Yes ☒ No

If no, explain: Table format depicting tire location and size does not follow exact format provided in FMVSS No. 110 vehicle placard figure. The tire figure is 11.5 mm x 12.5 mm and should be 13 mm x 14 mm.

Tire Inflation Pressure Label, if provided, has the exact color and format as specified in the above Figure 2B and text is in English. ☐ Yes ☐ No ☒ N/A

If no, explain: _____

Vehicle Placard and, if provided, Tire Inflation Pressure Label are permanently affixed.
☒ Yes ☐ No

Vehicle Placard information:

Combined weight of occupants and cargo 230 kg (507 lbs)

Seating capacity: Total 2 Front 2 Rear _____

Is the number of belted seating positions the same as the labeled seating capacity?
☒ Yes ☐ No

If no, explain _____

Is the tire size and pressure provided? ☒ Yes ☐ No

If no, is the tire size and pressure provided on a Tire Inflation Pressure Label?
☐ Yes ☐ No

Vehicle Placard or Tire Inflation Pressure Label tire information:

Tire size Front 155/60R15 Rear 175/55R15
Tire Inflation Pressure Front 200KPA (29psi) Rear 250KPA (36psi)

Are the sizes of the installed tires the same as the sizes of the labeled tires?
☒ Yes ☐ No

If no, explain _____

Is the labeled cold tire inflation pressure equal to or less than the sidewall labeled maximum cold tire inflation pressure?

Front axle: ☒ Yes ☐ No Rear axle: ☒ Yes ☐ No

DATA INDICATED COMPLIANCE: PASS/FAIL PASS

RECORDED BY: G. Farrand ;
APPROVED BY: D. Messick

DATE: 06/03/08

DATA SHEET 5 (1 of 4)
CURB WEIGHT, NORMAL LOAD WEIGHT & MAXIMUM VEHICLE WEIGHT

VEHICLE MAKE/MODEL/BODY STYLE: 2008 SMART CAR FORTWO
 VEHICLE NHTSA NO: C80501 VIN: WMEEJ31X68K100508
 VEHICLE TYPE: PASSENGER CAR DATE OF MANUFACTURE: 12/07
 LABORATORY: GENERAL TESTING LABORATORIES TEST DATE: 05/16/08

Full Fluid Levels: Fuel Full Coolant Full Other Fluids Brake Fluid
Windshield Washer Fluid

Tire Pressures: LF 200 KPA (29 psi) LR 250 KPA (36 psi)
 RF 200 KPA (29 psi) RR 250 KPA (36 psi)

A. MEASURED CURB WEIGHT WITH INSTALLED OPTIONS AND ACCESSORIES

LF 177 KG (390.21 lbs) LR 233 KG (513.67 lbs)
 RF 175 KG (385.80 lbs) RR 238 KG (524.69 lbs)
 Front Axle 352 KG (776.02 lbs) Rear Axle 471 KG (1038.37 lbs)
 Total Vehicle 823 KG (1814.40 lbs)

B. MEASURED VEHICLE NORMAL LOAD WEIGHT

1. Seating Capacity from Vehicle Placard 2
2. Normal Load Number of Occupants (from table in Section 10) 2
 Occupant Distribution: Front Seat 2 Second Seat
 Third Seat Fourth Seat
3. Total Normal Occupant Load 136 KG (299.82 lbs)
 (# of occupants x 68 KG per occupant)
4. Measured Normal Load on Axles
 LF 208.5 KG (459.66 lbs) LR 269.5 KG (594.14 lbs)
 RF 207 KG (456.35 lbs) RR 274 KG (604.06 lbs)
 Front Axle 415.5 KG (916.01 lbs) Rear Axle 543.5 KG (1198.21 lbs)
 Total Vehicle 959 KG (2114.23 lbs)
5. Calculated Vehicle Normal Load on the Tire
 Front Tires (Measured front axle normal load/2) 207.75 KG (458.00 lbs)
 Rear Tires (Measured rear axle normal load/2) 271.75 KG (599.10 lbs)

DATA SHEET 5 (2 of 4)
CURB WEIGHT, NORMAL LOAD WEIGHT & MAXIMUM VEHICLE WEIGHT

6. Value of 94 percent of the load rating at the vehicle manufacturer's recommended cold inflation pressure for that tire

Installed Tire Size	Front Axle <u>155/60R15</u>	Rear Axle <u>175/55R15</u>
Load Rating at recommended cold inflation pressure	<u>315 KG (694.44 lbs)</u>	<u>412 KG (908.29 lbs)</u>
94% of load rating	<u>296 KG (652.56 lbs)</u>	<u>387 KG (853.17 lbs)</u>

Vehicle Normal Load on the Tire should not be greater than the Value of 94% of the load rating at the vehicle manufacturer's recommended cold inflation pressure.

		PASS/FAIL
[(5) < (6)]	Front Tires	<u>PASS</u>
	Rear Tires	<u>PASS</u>

C. MEASURED VEHICLE WEIGHT WITH FULL OCCUPANT LOAD

1. Seating Capacity from Placard:
Total 2 Front 2 Rear _____

2. Full Occupant Load 136 KG (299.82 lbs)
(# of occupants x 68 KG per occupant)

3. Measured Vehicle Weight with Full Occupant Load

LF 208.5 KG (459.66 lbs) LR 269.5 KG (594.14 lbs)
RF 207 KG (456.35 lbs) RR 274 KG (604.06 lbs)

Front Axle 415.5 KG (916.01 lbs) Rear Axle 543.5 KG (1198.21 lbs)

Total Vehicle 959 KG (2114.23 lbs)

D. MEASURED VEHICLE WEIGHT WITH MAXIMUM LOAD (PLACARD)

- Vehicle Capacity Weight (from placard) 230 KG (507.06 lbs)
- Full Occupant Load (from C.2 above) 136 KG (299.82 lbs)
- Luggage/Cargo Load (subtract 2 from 1) 94 KG (207.23 lbs)

DATA SHEET 5 (3 of 4)
CURB WEIGHT, NORMAL LOAD WEIGHT & MAXIMUM VEHICLE WEIGHT

4. Measured Vehicle Maximum Load on Axles

LF <u>208.5</u> KG (459.66 lbs)	LR <u>316.5</u> KG (697.76 lbs)
RF <u>206</u> KG (454.15 lbs)	RR <u>322</u> KG (709.88 lbs)
Front Axle <u>414.5</u> KG (913.81 lbs)	
Rear Axle <u>638.5</u> KG (1407.65 lbs)	
Total Vehicle <u>1053</u> KG (2321.46 lbs)	

5. Calculated Vehicle Maximum Load on the Tire

Front Tires (Measured front axle maximum load/2)	<u>207.25</u>	KG (456.90 lbs)
Rear Tires (Measured rear axle maximum load/2)	<u>319.25</u>	KG (703.82 lbs)

6. Tire Sidewall Maximum Load Ratings

	Front	Rear
Installed Tire Size	<u>155/60R15</u>	<u>175/55R15</u>
Max. Load Rating on Sidewall	<u>375 KG (826.73 lbs)</u>	<u>412 KG (908.30 lbs)</u>

Vehicle Maximum Load on the Tire should not be greater than the Maximum load rating marked on the Tire Sidewall.

		PASS/FAIL
[(5) < (6)]	Front Tires	<u>PASS</u>
	Rear Tires	<u>PASS</u>

7. Tire Load Ratings at Vehicle Placard and Tire Inflation Pressure Label
Recommended Cold Tire Inflation Pressure.

	Front Axle	Rear Axle
Labeled Tire Size	<u>155/60R15</u>	<u>175/55R15</u>
Labeled Cold Inflation Pressure	<u>200 KPA (29psi)</u>	<u>250 KPA (36 psi)</u>
Load Rating at this Pressure*	<u>315 KG (694.44 lbs)</u>	<u>412 KG (908.29 lbs)</u>

*Reference used to obtain Load Rating: 2008 ETRTO MANUAL

DATA SHEET 5 (4 of 4)
CURB WEIGHT, NORMAL LOAD WEIGHT & MAXIMUM VEHICLE WEIGHT

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

		PASS/FAIL
[(5) < (7)]	Front Tires	<u>PASS</u>
	Rear Tires	<u>PASS</u>

DATA INDICATES COMPLIANCE: PASS/FAIL PASS

REMARKS:

RECORDED BY: G. Farrand ;
APPROVED BY: D. Messick

DATE: 06/03/08

DATA SHEET 6 (1 of 2)
OWNER'S MANUAL REQUIREMENTS

VEHICLE MAKE/MODEL/BODY STYLE: 2008 SMART CAR FORTWO
 VEHICLE NHTSA NO: C80501 VIN: WMEEJ31X68K100508
 VEHICLE TYPE: PASSENGER CAR DATE OF MANUFACTURE: 12/07
 LABORATORY: GENERAL TESTING LABORATORIES TEST DATE: 06/03/08

Owner's Manual Discusses:

Part 575.6(a) Paragraph	Required Discussion Topic	Discussed in Manual? (Yes/No)
(4) (i)	Tire labeling, including a description and explanation of each marking on the tire provided with the vehicle, and information about the location of the Tire Identification Number (TIN)	YES
(4) (ii)	A. Description and explanation of recommended cold tire inflation pressure.	YES
	B. Description and explanation of FMVSS 110 Vehicle Placard and Tire Inflation Pressure Label and their location(s)	YES
	C. Description and explanation of adverse safety consequences of under-inflation including tire failure	YES
	D. Description and explanation for measuring and adjusting air pressure to achieve proper inflation	YES
(4) (iii)	Glossary of tire terminology, including "cold tire pressure", "maximum inflation pressure", and all non-technical terms defined in S3 of FMVSS 110 and 139	YES
(4) (iv)	Tire care, including maintenance and safety practices	YES
(4) (v)	A. Description and explanation of locating and understanding load limit information, total load capacity, seating capacity, towing capacity and cargo capacity.	YES
	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.	YES
	C. Description and explanation for determining compatibility of tire and vehicle load capabilities	YES
	D. Description and explanation of adverse safety consequences of overloading on handling and stopping and on tires	YES

DATA SHEET 6 (2 of 2)
OWNER'S MANUAL REQUIREMENTS

The following verbatim statement, in the English language, is provided in the Owner's Manual.
Reference Part 575.6 (a)(5) (X)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 passenger that will be riding in your vehicle
3. Subtract the combined weight of the driver and passenger 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 passenger in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs. ($1400 - 750 (5 \times 150) = 650$ 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 you vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle. Consult the manual to determine how this reduces the available cargo and luggage load capacity of your vehicle.

DATA INDICATES COMPLIANCE

PASS/FAIL PASS

REMARKS:

RECORDED BY: G. Farrand ;
APPROVED BY: D. Messick

DATE: 06/03/08

SECTION 4
TEST EQUIPMENT LIST

TABLE 1 – TEST AND EQUIPMENT LIST

EQUIPMENT	DESCRIPTION	MODEL/ SERIAL NO.	CAL. DATE	NEXT CAL. DATE
PAD SCALES	#1 199744LF #2 199744RF #3 199744LR #4 199744RR	199744LF 199744RF 199744LR 19974RR	01/08 01/08 01/08 01/08	01/09 01/09 01/09 01/09
PRESSURE TRANSDUCER	BLH	D-HF #65409	BEFORE USE	BEFORE USE
DATA ACQUISITION COMPUTER	GEO1	N/A	BEFORE USE	BEFORE USE
ANEMOMETER	OMEGA	HHF616	06/08	06/09
SLIP RING ASSEMBLY	GTL	N/A	BEFORE USE	BEFORE USE
DECELEROMETER	GTL	N/A	BEFORE USE	BEFORE USE
INCLINOMETER	MITUTOYO	PRO 360	BEFORE USE	BEFORE USE
VBOX	RACELOGIC	VB2 #004337	05/08	05/09

SECTION 5
PHOTOGRAPHS



2008 SMART CAR FORTWO
NHTSA NO. C80501
FMVSS NO. 110

FIGURE 5.1
LEFT SIDE VIEW OF VEHICLE



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FIGURE 5.2
RIGHT SIDE VIEW OF VEHICLE



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FIGURE 5.3
 $\frac{3}{4}$ FRONTAL VIEW FROM LEFT SIDE OF VEHICLE

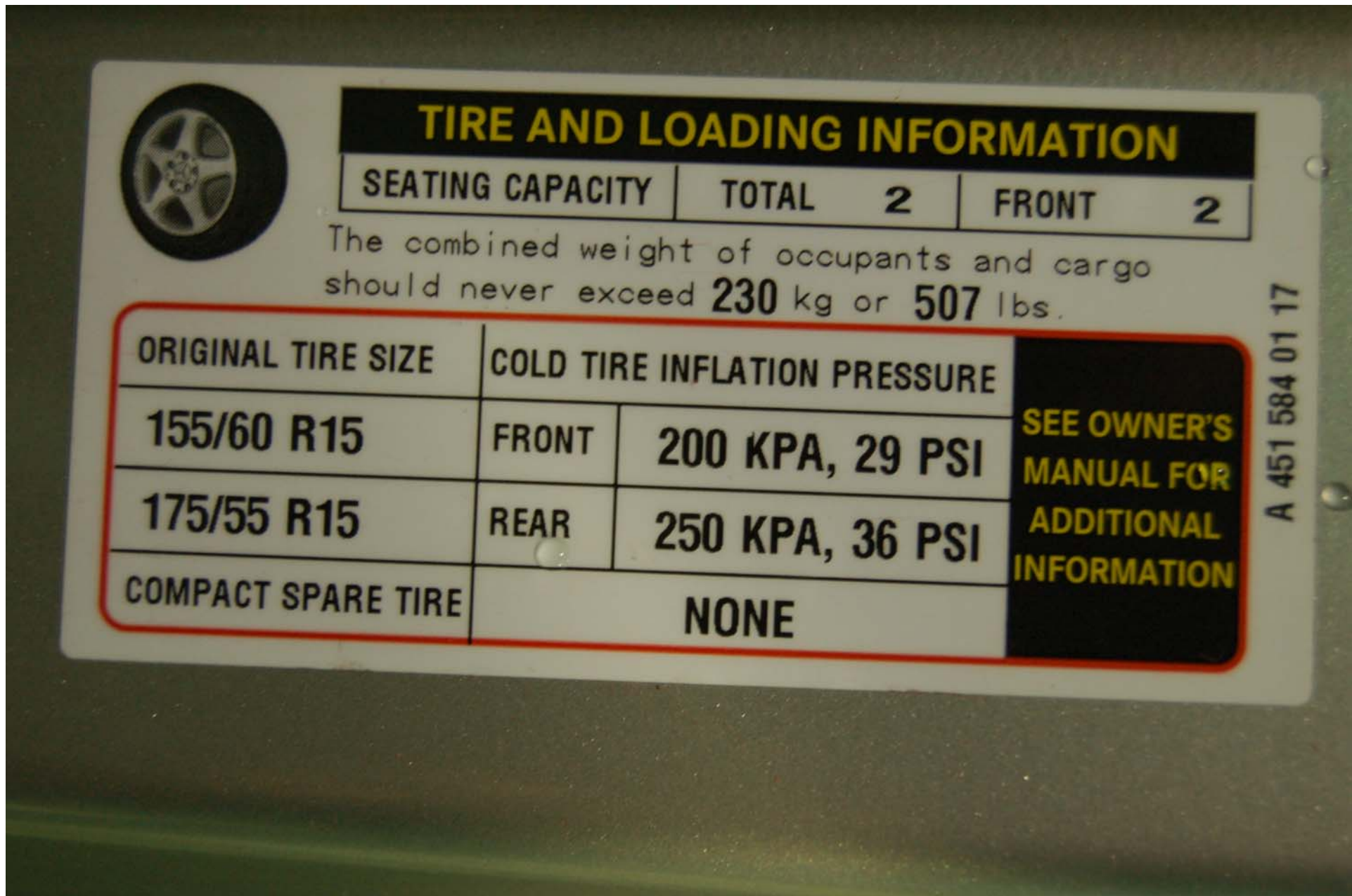


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FIGURE 5.4
¾ REAR VIEW FROM RIGHT SIDE OF VEHICLE



FIGURE 5.5
VEHICLE CERTIFICATION LABEL



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FIGURE 5.6
 VEHICLE TIRE INFORMATION LABEL



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FIGURE 5.7
FRONT TIRE SHOWING MANUFACTURER



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FIGURE 5.8
FRONT TIRE SHOWING MODEL



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FIGURE 5.9
FRONT TIRE SHOWING SIZE/LOAD INDEX/SPEED
SYMBOL



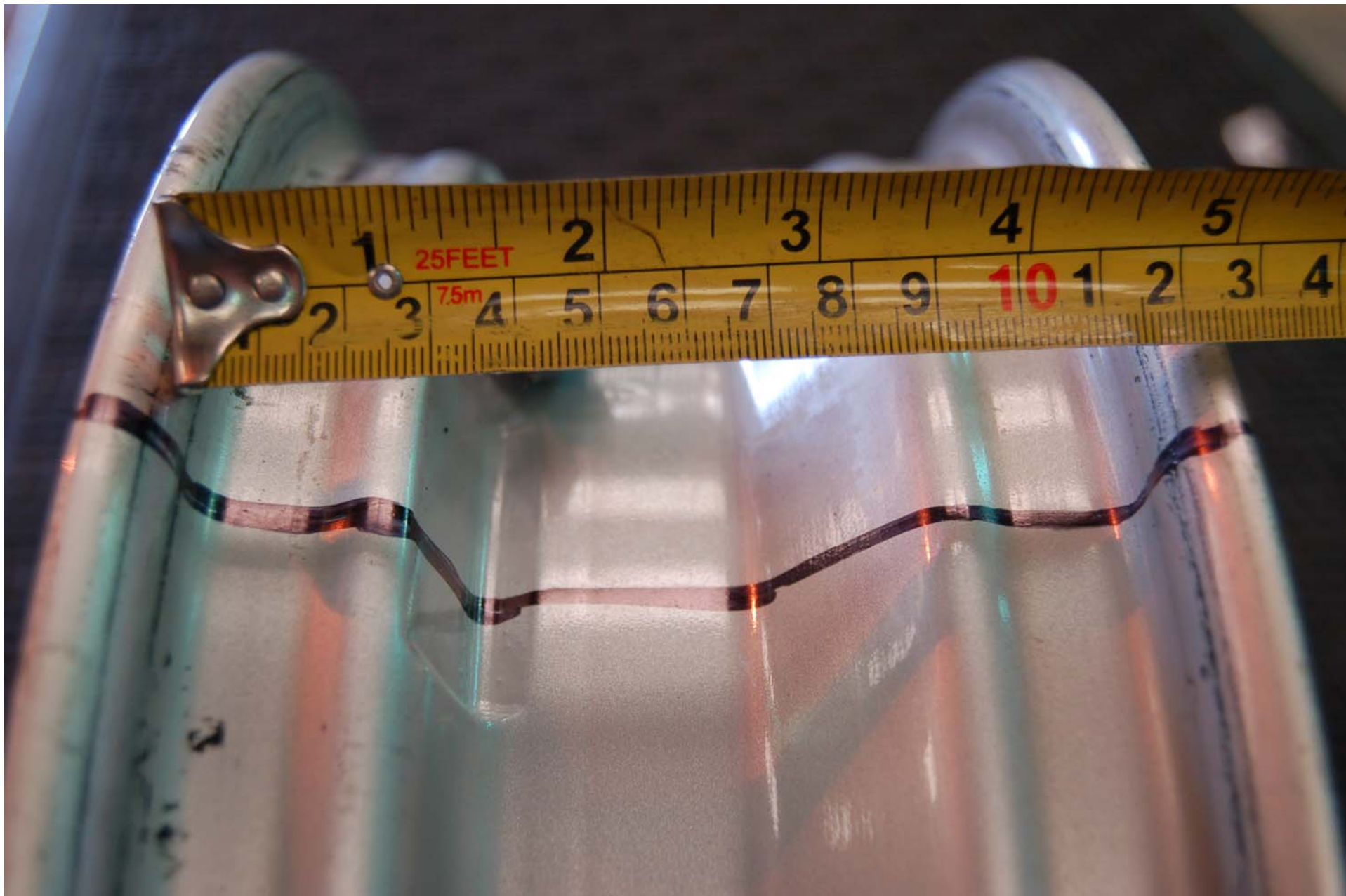
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FIGURE 5.10
FRONT TIRE SHOWING MAX INFLATION PRESSURE
AND MAX LOAD RATING



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FIGURE 5.11
FRONT TIRE SHOWING SERIAL NUMBER



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FIGURE 5.12
FRONT RIM SHOWING CONTOUR FOR FULL WIDTH
OF RIM SECTION



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FIGURE 5.13
FRONT RIM SHOWING SIZE



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FIGURE 5.14
FRONT RIM SHOWING "FRONT"



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FIGURE 5.15
FRONT RIM SHOWING DATE



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FIGURE 5.16
FRONT RIM SHOWING MANUFACTURER



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FIGURE 5.17
FRONT RIM SHOWING OTHER MARKINGS



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FIGURE 5.18
FRONT RIM SHOWING OTHER MARKINGS



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FIGURE 5.19
REAR TIRE SHOWING MANUFACTURER



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FIGURE 5.20
REAR TIRE SHOWING MODEL



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FIGURE 5.21
REAR TIRE SHOWING SIZE/LOAD INDEX/SPEED SYMBOL



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FIGURE 5.22
REAR TIRE SHOWING MAX INFLATION PRESSURE AND
MAX LOAD RATING



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FMVSS NO. 110

FIGURE 5.23
REAR TIRE SHOWING SERIAL NUMBER



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FIGURE 5.24
REAR RIM SHOWING CONTOUR FOR FULL WIDTH
OF RIM CROSS SECTION



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FMVSS NO. 110

FIGURE 5.25
REAR RIM SHOWING SIZE



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FIGURE 5.26
REAR RIM SHOWING "REAR"



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FIGURE 5.27
REAR RIM SHOWING DATE



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FIGURE 5.28
REAR TIRE SHOWING MANUFACTURER



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FIGURE 5.29
REAR RIM SHOWING OTHER MARKINGS



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FIGURE 5.30
REAR RIM SHOWING OTHER MARKINGS



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FIGURE 5.31
VEHICLE BALLASTED WITH OCCUPANTS
IN EACH DESIGNATED SEATING POSITION



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FIGURE 5.32
VEHICLE BALLASTED WITH LUGGAGE/CARGO



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FIGURE 5.33
VIEW OF VEHICLE ON SCALES