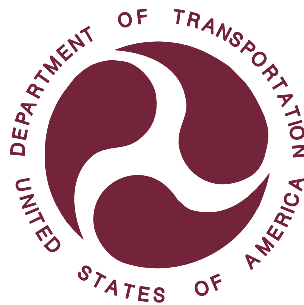


REPORT NUMBER 114-GTL-08-001

# SAFETY COMPLIANCE TESTING FOR FMVSS NO. 114 THEFT PROTECTION

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

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



JULY 22, 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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Approved By: \_\_\_\_\_

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15. Supplementary Notes		
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-114-01 for the determination of FMVSS 114 compliance.  Test failures identified were as follows: None		
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## SECTION 1

## PURPOSE OF COMPLIANCE TEST

1.0 PURPOSE OF TEST

A model year 2008 Smart Car Fortwo passenger car was subjected to Federal Motor Vehicle Safety Standard (FMVSS) No. 114 testing to determine if the vehicle was in compliance with the requirements of the standard. FMVSS 114 specifies requirements to decrease the likelihood that a vehicle is stolen, or accidentally set in motion.

1.1 The test vehicle was a 2008 Smart Car Fortwo Passenger Car. The vehicle was identified as follows:

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. 114 testing on June 3, 2008.

## SECTION 2

### TEST PROCEDURE AND SUMMARY OF RESULTS

#### 2.0 TEST PROCEDURE

All tests were conducted in accordance with NHTSA, Office of Vehicle Safety Compliance (OVSC) Laboratory Procedure TP-114-01 dated 17 Dec. 1997 and General Testing Laboratories, Inc. (GTL) Test Procedure, TP-114-01, "Theft Protection".

#### 2.1 SUMMARY OF RESULTS

Test data indicate the FMVSS 114 requirements appear to have been satisfied. All test data resulting from the tests were recorded on test data sheets in Section 3.

## SECTION 3

## TEST DATA

3.0 TEST RESULTS

The following data sheets document the results of FMVSS 114 testing on the 2008 Smart Car.

DATA SHEET 1 (1 of 2)  
FMVSS 114, THEFT PROTECTION

TEST DATE: JUNE 3, 2008                      LAB.: GENERAL TESTING LABS  
 CONTRACT: DTNH22-06-C-00032              VEH. NHTSA NO.: C80501  
 VIN: WMEEJ31X68K100508                      BUILD DATE: 12/07  
 MY/MAKE/MODEL/BODY STYLE: 2008 SMART FORTWO PASSENGER CAR

LOCATION OF KEY LOCKING SYSTEM: ON CENTER CONSOLE BETWEEN FRONT SEATS

TRANSMISSION TYPE:

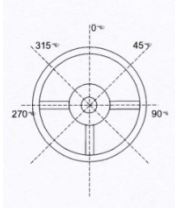
Automatic X; Manual \_\_\_\_\_; Other \_\_\_\_ (describe: \_\_\_\_\_)

DRIVE TRAIN TYPE:

Front Wheel \_\_\_\_\_; Rear Wheel X; 4-Wheel \_\_\_\_\_

OPTIONAL RELEASE DEVICES:

Key \_\_\_\_;                      Transmission \_\_\_\_;                      None X

REQUIREMENT S4.2	PASS	FAIL
Engine cannot be started without utilizing the ignition key	X	
<p>With key removed, steering wheel locks:            Yes: __      No: <u>X</u></p> <p>Identify locking position on wheel using an arrow</p> <div style="text-align: center;">  </div>		
<p>Key removal prevents forward self-mobility:    Yes: <u>X</u>    No: __</p> <p>If yes describe: Vehicle cannot be removed from park.</p>		
Locking system, with key removed, prevents starting the engine and either steering or self mobility or both.	X	



DATA SHEET 1 (2 of 2)  
FMVSS 114, THEFT PROTECTION

REQUIREMENT S4.5	PASS	FAIL
Warning system is activated when the ignition key is left in any switch position except "on" and "start" and the driver door is opened.	X	

REMARKS:

RECORDED BY: G. Farrand

DATE: 06/03/08

APPROVED BY: D. Messick

DATA SHEET 2 (1 of 2)  
AUTOMATIC TRANSMISSION VEHICLES ONLY

VEH. NHTSA NO.: C80501 TEST DATE: JUNE 3, 2008  
 MY/MAKE/MODEL/BODY STYLE: 2008 SMART FORTWO PASSENGER CAR  
 VEHICLE TEST WEIGHT (kg): 823 WEIGHT OF DRIVER (kg): 91  
 FUEL TANK LEVEL: 100 (% of max.)  
 ADDITIONAL WEIGHT OF OPTIONAL ENGINE - IF APPLICABLE (kg): N/A

TIRE PRESSURE:

Vehicle Mfg. Recommended (PSI): Front 29; Rear 36

Measured (PSI): LF 29; LR 36; RF 29; RR 36

REQUIREMENT S4.2.1(a)(2)	PASS	FAIL
Key locking system prevents key removal from any shift mechanism detent position except "park".	<b>X</b>	<u>see note</u>
Key locking system prevents key removal from any position between the detent positions where the shift mechanism will remain without assistance.	<b>X</b>	<u>see note</u>
<b>NOTE:</b> In the event that the key can be removed at <b>any</b> of the transmission shift lever positions, the vehicle's transmission or transmission shift lever shall become locked in park as the direct result of removing the key. If such a mechanism exists, describe the mechanism and its function:		
System prevents movement of the shift mechanism out of "park" position after removal of key.	<b>X</b>	

DATA SHEET 2 (2 of 2)  
AUTOMATIC TRANSMISSION VEHICLES ONLY

REQUIREMENTS S4.2.1(a)(3)	PASS	FAIL
<p>With the transmission in "park" measure movement of the vehicle down the slope upon releasing the service brake.</p> <p>Test grade: <u>  12  </u> % (9% to 15%) Measured movement: _____ mm (150mm maximum)</p> <p><b>NOTE:</b> Repeat procedure if vehicle fails on grade in excess of 10%.</p> <p>Test grade: _____ % (9% to 10%) Measured movement: _____ mm (150 mm maximum)</p>	X	<u>see note</u>
	N/A	

REQUIREMENT S4.3	PASS	FAIL
<p>Transmission in any position other than "park" or "reverse" and the key locking system in the "off" position. The steering wheel must remain unlocked and the vehicle must remain free to roll.</p>	X	

REMARKS:

RECORDED BY:   G. Farrand  

DATE:   06/03/08  

APPROVED BY:   D. Messick

DATA SHEET 3 (1 of 2)  
SPECIAL DEVICES

VEH. NHTSA NO.: C80501 TEST DATE: JUNE 3, 2008  
MY/MAKE/MODEL/BODY STYLE: 2008 SMART FORTWO PASSENGER CAR

REQUIREMENTS S4.2.2(a)	PASS	FAIL
<p>Electrical failure capability permits ignition key removal with transmission shift lever in other than the "park" position. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>Upon key removal steering wheel locks.</p>	X	
<p>Device permits key removal when the transmission is in other than the "park" position. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>The means for activating this device is covered by a non-transparent surface which prevents sight of and activation of the device. The non-transparent surface is removable only by use of a screwdriver or other tool.</p> <p>Describe the device, its cover and its location: None</p> <p>Describe how the device is activated:</p>	X	
<p>Upon key removal, steering wheel locks. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	X	

REMARKS:

DATA SHEET 3 (2 of 2)  
SPECIAL DEVICES

REQUIREMENTS S4.2.2(b)	PASS	FAIL
<p>Device permits moving the transmission shift lever from "park" after key removal. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>The means for activating this device is covered by a non-transparent surface which prevents sight of and activation of the device. The non-transparent surface is removable only by use of a screwdriver or other tool.</p> <p>Describe the device, its cover and its location: None</p> <p>Describe how the device is activated:</p> <p>Upon device activation, the steering wheel remains locked. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	X	
	X	

REMARKS:

RECORDED BY: G. Farrand

DATE: 06/03/08

APPROVED BY: D. Messick

SECTION 4  
TEST EQUIPMENT LIST

ITEM	MFR	MODEL	S/N	CAL. PERIOD	DATE OF LAST CALIB.	REMARKS
SLR DIGITAL CAMERA	NIKON	D50	N/A	N/A	N/A	
TIRE PRESSURE GAUGE	WESKLER	PSI	107	12 MO.	04/08	
INCLINOMETER	MITUTOYO	PRO 360	950-315	N/A	BEFORE USE	
TAPE MEASURE	STANLEY	12 FT.	GF-2	N/A	N/A	

SECTION 5  
PHOTOGRAPHS



2008 SMART CAR FORTWO  
NHTSA NO. C80501  
FMVSS NO. 114

FIGURE 5.1  
3/4 FRONTAL VIEW FROM LEFT SIDE OF VEHICLE





2008 SMART CAR FORTWO  
NHTSA NO. C80501  
FMVSS NO. 114

FIGURE 5.2  
VEHICLE CERTIFICATION LABEL



2008 SMART CAR FORTWO  
NHTSA NO. C80501  
FMVSS NO. 114

FIGURE 5.3  
CLOSE-UP OF IGNITION SWITCH