SAFETY COMPLIANCE TESTING FOR FMVSS NO. 114 THEFT PROTECTION

CHRYSLER GROUP LLC 2011 JEEP GRAND CHEROKEE LAREDO, MPV NHTSA NO. CB0302

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



September 6, 2011

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:	
Approved By:	
Approval Date:	09/06/11
FINAL REPORT	TACCEPTANCE BY OVSC:
Accepted By:	Smaller ?
Acceptance Dat	e: 19/6/i1

Technical Report Documentation Page

	10	schilical Report Documentation Lage
1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
114-GTL-11-012	N/A	N/A
4. Title and Subtitle		5. Report Date
Final Report of FMV	SS 114 Compliance Testing of a	September 6, 2011
2011 JEEP GRAND	CHEROKEE LAREDO MPV	6. Performing Organ. Code
NHTSA No. CB0302	2	GTL
7. Author(s)		8. Performing Organ. Rep#
Grant Farrand, Proje	ect Engineer	GTL-DOT-11-114-012
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9. Performing Organ	nization Name and Address	10. Work Unit No. (TRAIS)
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1623 Leedstown I	Road	11. Contract or Grant No.
Colonial Beach, V	'a 22443	DTNH22-06-C-00032
	ncy Name and Address	13. Type of Report and Period
U.S. Department of	Transportation	Covered
National Highway Tr	affic Safety Admin. Enforcement	Test Date
Office of Vehicle Sat	fety Compliance (NVS-220)	August 4, 2011
1200 New Jersey Av	/e., S.E.,	14. Sponsoring Agency Code
Washington, DC 20	0590	NVS-221
45 0		

15. Supplementary Notes

16. Abstract

Compliance tests were conducted on the subject 2011 Jeep Grand Cherokee Laredo MPV in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-114-04 for the determination of FMVSS 114 compliance.

Test failures identified were as follows:

None

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Form DOT F 1700.7 (8-72)

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PURPOSE OF COMPLIANCE TEST

1.0 PURPOSE OF TEST

A model year 2011 Jeep Grand Cherokee Laredo MPV 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 2011 Jeep Grand Cherokee Laredo MPV. The vehicle was identified as follows:
 - A. Vehicle Identification Number: 1J4RR4GGXBC552754
 - B. NHTSA No.: CB0302
 - C. Manufacturer: CHRYSLER GROUP LLC
 - D. Manufacture Date: 09-10
 - E. Color: Natural Green Pearl

1.2 TEST DATE

The test vehicle was subjected to FMVSS No. 114 testing on August 4, 2011.

TEST PROCEDURE AND SUMMARY OF RESULTS

2.0 <u>TEST PROCEDURE</u>

All tests were conducted in accordance with NHTSA, Office of Vehicle Safety Compliance (OVSC) Laboratory Procedure TP-114-04 and General Testing Laboratories, Inc. (GTL) Test Procedure, TP-114-04, "Theft Protection and Rollaway Prevention".

2.1 <u>SUMMARY OF RESULTS</u>

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.

TEST DATA

3.0 <u>TEST RESULTS</u>

The following data sheets document the results of FMVSS 114 testing on the 2011 Jeep Grand Cherokee Laredo.

FMVSS 114, THEFT PROTECTION DATA SHEET 1 – VEHICLE IDENTIFICATION

	B.: General Testing Laboratories
CONTRACT: DTNH22-06-C-00032 VE	H. NHTSA NO.: <u>CB0302</u>
	ILD DATE: <u>09-10</u>
MY/MAKE/MODEL/BODY STYLE: 2011 Jeep Gra	and Cherokee Laredo
TRANSMISSION TYPE:	
Automatic X ; Manual; Other (d	escribe:)
DRIVE TRAIN TYPE: Front Wheel; Rear Wheel;	4-Wheel X
FUEL TANK LEVEL: 100 (% OF max.)	MILEAGE:17
VEHICLE STARTING SYSTEM:	
Location of the starting system:	
Located on Dash to the Right Side of Steering Col	umn.
Selectable settings: Off, Accessory, Run and Start	
Explain how the system is activated: Depress brake pedal and push the start button for	· · · · · · · · · · · · · · · · · · ·
activate when a key FOB with matching embedded	d code is present inside the vehicle.
KEY Description of the key: Electronic Key FOB with embedded code.	
STARTING SYSTEM ACTIVATION Describe how the key is inserted into the starting s	
Vehicle is equipped with push button start for norm	
into the ignition by removing the start/stop button (55B).
Describe how the key is used to activate the startir The system is activated when the key FOB is pres	
compartment and the start/stop button is pushed.	
Describe how the key is removed from the starting The electronic code is removed from the vehicle's with the start/stop button and the vehicle is placed	starting system when vehicle is turned off
with the start stop pattori and the verilor is placed	πι ρατι ρυσιτιστι.

FMVSS 114, THEFT PROTECTION DATA SHEET 1 continued

GEAR SELECTION CONTROL

Describe the gear selection. Shift selector located on or	on control: center console between fror	nt seats.			
With key FOB inserted int	election control is activated: to starting system and the b		dal depre	essed, mov	e the selector
Describe all of the selecta Park, Reverse, Ne	able settings: utral, Drive				
<u>IMMOBILIZER</u>					
Is the vehicle equipped w	ith an immobilizer YES	X	. N	0	_
When the electronic key of	device and how it prevents code is removed from the vening.	<u>ehicle, th</u>	<u>ie immob</u>		ivated and
OPTIONAL RELEASE DE	-				
	equipped with optional relea Yes				
OPTIONAL RELEASE DE					
Key Removal	Gear Selection Control	X	None		Other
VEHICLE FLUIDS					
Check all vehicle fluids ar	nd adjust to the proper level	ls for ope	eration:	Full	_
VEHICLE TIRE PLACAR	<u>D INFORMATION</u>				
Vehicle Mfg. Recommend	ded Tire Inflation Pressure (kPa): Front <u>230</u>	Rear_	230		
TIRE INFLATION PRESS	SURES:				
Measured (kPa): LF 230	LR 230	RF	230	RR	230
WEIGHT Vehicle Curb Weight(kg):	2118 Weight of Driver (kg):	<u>91</u> (1	target = 91	kg)

FMVSS 114, THEFT PROTECTION DATA SHEET 2

REQUIREMENT S5.1.1	PASS	FAIL
Engine cannot be started without using the key X YesNo	X	
With key removed, steering wheel locks: Yes: No: _X		
Identify steering wheel locking position(s) on wheel using arrow(s)		
Clockwise: (degrees) Counterclockwise: (degrees)		
	270 0 00	
Service brake must be depressed in order to start engine Yes X N		
Key removal prevents forward self-mobility: Yes: X No: No:		
If yes describe: Engine will not start when the coded key is not present.		
When key is removed from the starting system, starting of the engine or motor and either steering or self mobility is prevented. Yes: X No:	Х	

FMVSS 114, THEFT PROTECTION DATA SHEET 2 continued

REQUIREMENT S5.1.3	PASS	FAIL
An audible warning is activated whenever the key is in any starting system position with the exception of "on" and "start" and the door closest to the driver's designated seating position is opened. Yes X No	X	
Identify ALL key/starting system position setting: OFF, ACC, RUN AND START		

REQUIREMENT S5.1.4	PASS	FAIL
With the vehicle engine or motor shut down and the transmission gear selection control in any position other than "park";	X	
The steering wheel can rotate without locking? Yes_X No		
The vehicle is free to roll forward? Yes_X No	V	
	X	

REMARKS:				
		DATE	00/04/44	
RECORDED BY: _		 DATE:	08/04/11	
APPROVED BY:	D. Messick			

FMVSS 114, ROLLAWAY PREVENTION DATA SHEET 3

(for vehicles equipped with transmission with a "park" position)

VEH. NHTSA NO.:	CB0302	TEST DATE:	08/04/11

REQUIREMENT S5.2.1	PASS	FAIL
The starting system prevents key removal in ALL gear selection control positions except "park". YesX No		
Can the gear selection control be placed between each gear selection position and will it remain there without assistance? Yes No _X	X	
If yes, can the key be removed from the starting system? Yes No		
If the key can be removed from the vehicle starting system when the gear selection control is not locked in "park", a mechanism shall exist which, upon key removal, the vehicle transmission or gear selection control shall become locked in "park" as the direct result of removing the key. If such a mechanism exists, describe the mechanism and its function:		

REQUIREMENT S5.2.2	PASS	FAIL
The gear selection control is locked in the "park" position when the key is removed from the starting system. YesX No	Х	

REQUIREMENT S5.2.3	PASS	FAIL
KEY REMOVAL OVERRIDE OPTION:		
The vehicle is equipped with an override device that allows the user to Remove the key from the "starting system without the transmission or gear selection control in the "park" position. Yes No X	X	
If yes, describe the override device design and mode of activation:		
Fill in the section below that describes the condition for which the user is allowed to remove the key from the starting system without the transmission or gear selection control in the "park" position:		
ELECTRICAL FAILURE		
In the event of an electrical failure, including battery discharge, key removal from the starting system without the transmission or gear selection control locked in "park" is permitted". Yes X No	X	
OVERRIDE DEVICE WITH NO COVER:		
The following condition is prevented: Steering Self-Mobility	N/A	
The device requires both the use of a tool to activate and simultaneous activation of the override device and removal of the key from the starting system Yes No	IN//A	
OVERRIDE DEVICE WITH AN OPAQUE COVER		
The following condition is prevented: Steering Self-Mobility		
The device is covered by an opaque surface which prevents sight of and use of the device. Yes No	N/A	
The opaque surface can only be removed by using a screwdriver or other tool: Yes No		

REQUIREMENT S5.2.4	PASS	FAIL
GEAR SELECTION CONTROL OVERRIDE DEVICE		
The vehicle is equipped with an override device that allows the user to move the gear selection control from "park" after the key has been removed from the starting system. Yes X No	Х	
If yes, select the type of override device used: Key Opaque Cover No Cover		
Describe the override device design and mode of activation (if equipped): Located in bottom of cup holder under a snap-in cover.		
FILL IN THE SECTION BELOW THAT APPLIES:		
OVERRIDE OPERATED WITH KEY:		
The key is required to operate the override device that allows the user to move the gear selection control from "park" after the key has been removed from the starting system.		
Yes No_X	N/A	
OVERRIDE DEVICE WITH NO COVER		
As a direct result of removing the key from the starting system, the following is prevented: Steering Self-Mobility		
The override device requires the use of a tool to operate. Yes No	N/A	
Simultaneous activation of the override device and movement of the gear selection control from "park" is required Yes No		
OVERRIDE DEVICE WITH AN OPAQUE COVER		
As a direct result of removing the key from the starting system, the following is prevented: Steering Self-Mobility _X		
The opaque surface cover prevents sight of and use of the device: YesX No	X	
The opaque surface cover can only be removed by using a screwdriver or other tool: Yes X No	,	

REQUIREMENTS S5.2.5	PASS	FAIL
VEHICLE FACING UPHILL ON 10% GRADE		
With the gear selection control in "park" measure movement of the vehicle down the slope upon releasing the service brake.		
Test grade: % (9% to 15%) Measured movement: 69 mm (150mm maximum)	Х	
NOTE: Repeat procedure if vehicle fails on grade in excess of 10%.		
Test grade: % (9% to 10%) Measured movement: mm (150 mm maximum)		
VEHICLE FACING DOWNHILL ON 10% GRADE		
With the gear selection control in "park" measure movement of the vehicle down the slope upon releasing the service brake.		
Test grade:15% (9% to 15%) Measured movement:43 mm (150mm maximum)	X	
NOTE: Repeat procedure if vehicle fails on grade in excess of 10%.		
Test grade: % (9% to 10%) Measured movement: mm (150 mm maximum)		

REQUIREMENTS S5.3	PASS	FAIL
With the key in the "OFF" position, the transmission will shift out of "PARK" without the service brake being applied. Yes No \underline{X}	_x	
With the key in the "ACC" position, the transmission will shift out of "PARK" without the service brake being applied. Yes No \underline{X}	<u>x</u>	
With the key in the "ON" position (engine off), the transmission will shift out of "PARK" without the service brake being applied. Yes No \underline{X}	_x	
With the key in the "START" position, the transmission will shift out of "PARK" without the service brake being applied. Yes No X	_x	
With the key in the "OTHER" position (please specify), the transmission will shift out of "PARK" without the service brake being applied. Yes No	<u>N/A</u>	
Does the key stay between starting system positions without being held by operator? Yes No \underline{X} If so, please describe.	<u>x</u>	
With the vehicle battery disconnected, the gear selection control is locked in the "PARK" position. Yes_X_ No	<u>x</u>	
Brake force readings (force required to allow the transmission to shift out of "park"):		
The vehicle is equipped with adjustable pedals: Yes No X		
Fore Position: Aft Position (if applicable)		
Reading 1 69.8 N Reading 1 Reading 2 Reading 2 Reading 2 Reading 2 Reading 3 Reading 3 Reading 3 Reading 3 Reading 3 Reading 4 Reading 5 Reading 5 Reading 5 Reading 5 Avg. Avg.		
*For vehicles equipped with adjustable pedals, record readings for both the Fore and Aft positions. For non-adjustable pedal vehicles, use the Fore position column to record values.	<u>x</u>	

REMARKS:

RECORDED BY: _	G. Farrand	DATE:	08/04/11	
APPR∩\/FD RV·	D Massick			

SECTION 4 TEST EQUIPMENT LIST

ITEM	MFR	MODEL	S/N	CAL. PERIOD	DATE OF NEXT CALIB.	REMARKS
SLR DIGITAL CAMERA	NIKON	D50	N/A	N/A	N/A	
TIRE PRESSURE GAUGE	WESKLER	45-0/100	107	12 MO.	04/12	
INCLINOMETER	MITUTOYO	PRO 360	950-315	N/A	BEFORE USE	
STEEL TAPE	STANLEY	FAT MAX	33-890	12 MO.	01/12	
WHEEL SCALES	INTERCOMP	SERIES 94	199744	12 MO.	03/12	
WHEEL SCALES	INTERCOMP	SERIES 94	199744	12 MO.	03/12	
WHEEL SCALES	INTERCOMP	SERIES 94	199744	12 MO.	03/12	
WHEEL SCALES	INTERCOMP	SERIES 94	199744	12 MO.	03/12	
SPRING SCALE	CHATILLON	DPP-10	4729	12 MO.	BEFORE USE	

PHOTOGRAPHS



2011 JEEP GRAND CHEROKEE NHTSA NO. CB0302 FMVSS NO. 114

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



2011 JEEP GRAND CHEROKEE NHTSA NO. CB0302 FMVSS NO. 114

FIGURE 5.2 VEHICLE CERTIFICATION LABEL

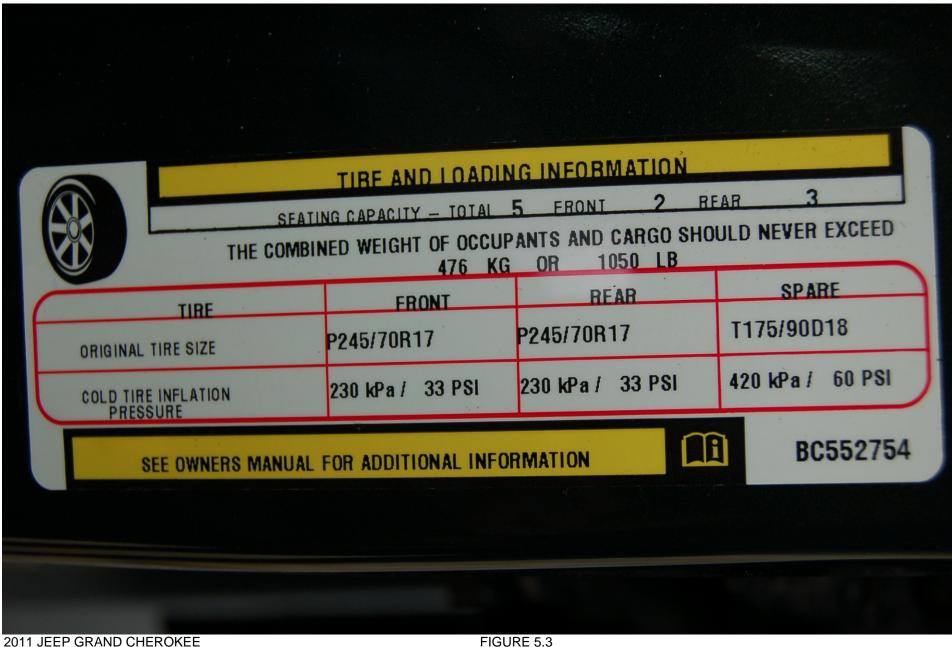


FIGURE 5.3 VEHICLE TIRE INFORMATION LABEL



2011 JEEP GRAND CHEROKEE NHTSA NO. CB0302 FMVSS NO. 114

FIGURE 5.4 CLOSE-UP VIEW OF KEY FOB



2011 JEEP GRAND CHEROKEE NHTSA NO. CB0302 FMVSS NO. 114

FIGURE 5.5 CLOSE-UP OF START/STOP BUTTON



2011 JEEP GRAND CHEROKEE NHTSA NO. CB0302 FMVSS NO. 114

FIGURE 5.6 TRANSMISSION GEAR SELECTION CONTROL



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FIGURE 5.7 CUP HOLDER WITH COVER FOR OVERRIDE DEVICE



2011 JEEP GRAND CHEROKEE NHTSA NO. CB0302 FMVSS NO. 114

FIGURE 5.8 OVERRIDE BUTTON WITH COVER REMOVED



FIGURE 5.9 ACTIVATING OVERRIDE DEVICE WITH FINGER



FIGURE 5.10 VEHICLE OFF TELLTALE

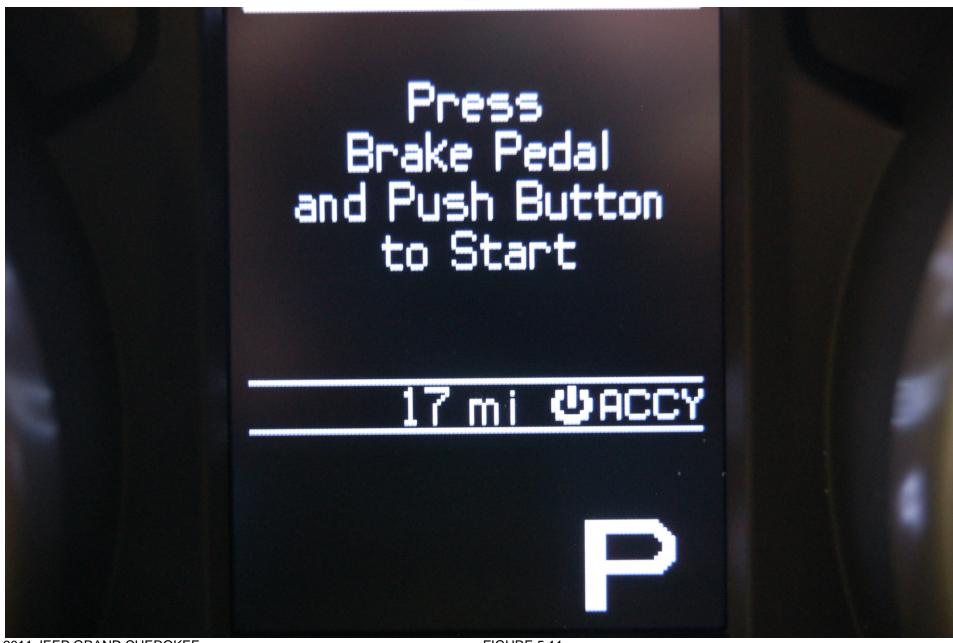


FIGURE 5.11 VEHICLE ACCESSORY TELLTALE



FIGURE 5.12 VEHICLE RUN TELLTALE

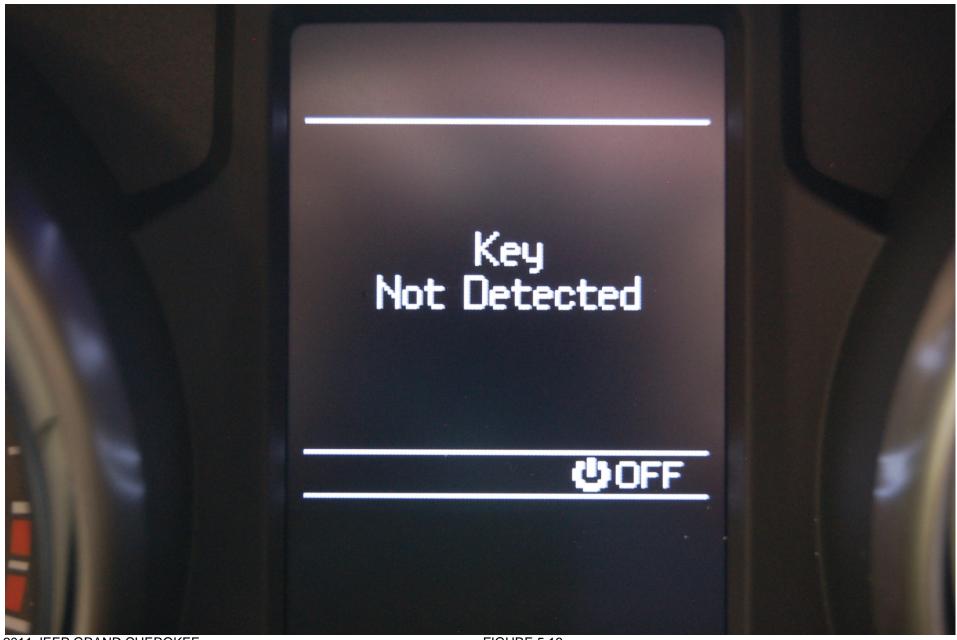


FIGURE 5.13 KEY NOT DETECTED – VEHICLE OFF TELLTALE