SAFETY COMPLIANCE TESTING FOR
FMVSS NO. 118
POWER-OPERATED WINDOW, PARTITION
AND ROOF PANEL SYSTEMS

FORD MOTOR CO.
2010 LINCOLN MKS, PASSENGER CAR
NHTSA NO. CA0209

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

June 24, 2010

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
This publication is distributed by the U.S. Department of Transportation, National Highway Traffic Safety Administration, in the interest of information exchange. The 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. The United States Government does not endorse products or manufacturers.

Prepared By:  
Approved By:  
Approval Date: 06/24/10

Final Report Acceptance by OVS.
Accepted By:  
Acceptance Date: 6/24/10
Compliance tests were conducted on the subject 2010 Lincoln MKS 4-door Passenger Car in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-118-06 for the determination of FMVSS 118 compliance.

Test failures identified were as follows:
None

Copies of this report are available from NHTSA Technical Information Services (TIS) Room W45-212 (NPO-411) 1200 New Jersey Ave., S.E. Washington, DC 20590 Telephone No. (202) 366-4947
TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>SECTION</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Purpose of Compliance Test</td>
<td>1</td>
</tr>
<tr>
<td>2. Test Procedure and Summary of Results</td>
<td>2</td>
</tr>
<tr>
<td>3. Test Data</td>
<td>3</td>
</tr>
<tr>
<td>4. Test Equipment List</td>
<td>13</td>
</tr>
<tr>
<td>5. Photographs</td>
<td>14</td>
</tr>
<tr>
<td>5.1 ¾ Frontal View from Left Side of Vehicle</td>
<td></td>
</tr>
<tr>
<td>5.2 ¾ Rear View from Right Side of Vehicle</td>
<td></td>
</tr>
<tr>
<td>5.3 Close-up View of Vehicle Certification Label</td>
<td></td>
</tr>
<tr>
<td>5.4 Close-up View of Tire Information Label</td>
<td></td>
</tr>
<tr>
<td>5.5 Close-up View of Power Window Master Switch</td>
<td></td>
</tr>
<tr>
<td>5.6 Close-up View of Right Front Power Window Switch</td>
<td></td>
</tr>
<tr>
<td>5.7 Close-up View of Left Rear Power Window Switch</td>
<td></td>
</tr>
<tr>
<td>5.8 Close-up View of Right Rear Power Window Switch</td>
<td></td>
</tr>
<tr>
<td>5.9 Remote Control</td>
<td></td>
</tr>
<tr>
<td>5.10 Sphere Test on Master Switch</td>
<td></td>
</tr>
<tr>
<td>5.11 Sphere Test on Right Front Switch</td>
<td></td>
</tr>
<tr>
<td>5.12 Sphere Test on Left Rear Switch</td>
<td></td>
</tr>
<tr>
<td>5.13 Sphere Test on Right Rear Switch</td>
<td></td>
</tr>
<tr>
<td>5.14 Instrumentation Test Set-Up</td>
<td></td>
</tr>
<tr>
<td>5.15 Force Test Instrument Set-Up on Left Front Window</td>
<td></td>
</tr>
<tr>
<td>5.16 Force Test Instrument Test at 100 mm</td>
<td></td>
</tr>
<tr>
<td>5.18 Force Test Instrument Test at 200 mm</td>
<td></td>
</tr>
<tr>
<td>6. Owner's Manual Information</td>
<td>32</td>
</tr>
<tr>
<td>7. Plots</td>
<td>37</td>
</tr>
</tbody>
</table>
SECTION 1

PURPOSE OF COMPLIANCE TEST

1.0 PURPOSE OF TEST

A model year 2010 Lincoln MKS Passenger Car was subjected to Federal Motor Vehicle Safety Standard (FMVSS) No. 118 testing to determine if the vehicle was in compliance with the requirements of the standard. FMVSS 118 specifies requirements for power-operated window, partition, and roof panel systems to minimize the likelihood of death or injury from their accidental operation.

1.1 The test vehicle was a 2010 Lincoln MKS Passenger Car. The vehicle was identified as follows:

A. **Vehicle Identification Number:** 1LNHL9DR0AG603297

B. **NHTSA No.:** CA0209

C. **Manufacturer:** FORD MOTOR CO.

D. **Manufacture Date:** 08/09

E. **Color:** Cinnamon Metallic

1.2 TEST DATE

The test vehicle was subjected to FMVSS No. 118 testing on May 11, 2010.
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-118-06 dated 12 April 2006 and General Testing Laboratories, Inc. (GTL) Test Procedure, TP-118-03A, “Power Operated Window, Partition and Roof Panel Systems”.

FMVSS 118 Compliance Testing was performed in the following sequence:

A. Test Vehicle Identification/Documentation
B. Power Window, partition and roof panel identification/documentation
C. Interior, exterior and remote control switch identification/documentation
D. Pre-test operation of all power windows, partitions and roof panels
E. Photograph vehicle and interior, exterior and remote control devices
F. Perform Interior Locking System Off Test
G. Perform Interior Locking System with Key Removed Test
H. Perform Exterior Locking System Test
I. Perform Remote Actuation Device Test
J. Perform Occupant Compartment Actuation Device Test(Sphere Test/Pull up or Pull Out Test)
K. Perform Automatic Reversal System Test

2.1 SUMMARY OF RESULTS

The power window operational test resulted in no anomalies being noted. Test data indicate the FMVSS 118 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 118 testing on the 2010 Lincoln MKS.
VEHICLE MAKE/MODEL/BODY STYLE: 2010 LINCOLN MKS

VEHICLE NHTSA NO: CA0209
VIN: 1LNHL9DR0AG603297

VEHICLE TYPE: PASSENGER CAR
DATE OF MANUFACTURE: 08/09

LABORATORY: GENERAL TESTING LABORATORIES
TEST DATE: 05/11/10

<table>
<thead>
<tr>
<th>REQUIREMENT</th>
<th>PASS</th>
<th>FAIL</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>S4 Interior Locking system in Off Position(s)</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>S4 Interior Locking System with Key Removed</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>S4 Exterior Locking System</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>S4 Remote Actuation Device</td>
<td></td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>S6 Occupant Compartment Actuation Devices</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>(Sphere Test/Pull Up or Pull Out Test)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S5 Automatic Reversal System</td>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

REMARKS: * Does not meet S4 requirements for remote actuation, therefore it must meet the requirements of S5 for auto reversal.

Vehicle utilizes a smart key push-button ignition system.

RECORDED BY: G. Farrand
DATE: 05/11/10

APPROVED BY: D. Messick
WPRP PRE-OPERATIONAL CHECK

VEHICLE MAKE/MODEL/BODY STYLE: 2010 LINCOLN MKS
VEHICLE NHTSA NO: CA0209 VIN: 1LNHL9DR0AG603297
VEHICLE TYPE: PASSENGER CAR DATE OF MANUFACTURE: 08/09
LABORATORY: GENERAL TESTING LABORATORIES TEST DATE: 05/11/10

Identify power-operated WPRP and WPRP actuation devices

<table>
<thead>
<tr>
<th></th>
<th>LEFT FRONT</th>
<th>LEFT REAR</th>
<th>RIGHT FRONT</th>
<th>RIGHT REAR</th>
<th>TAIL GATE</th>
<th>PARTITION</th>
<th>ROOF PANEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power WPRP Installed</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual Interior Actuation Devices</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master Control Panel Actuation Devices</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WPRP Operated by Exterior Locking System</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WPRP Operated by Remote Control</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WPRP with Auto-Reverse Capability</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WPRP with Express-Up Capability</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Master Control Panel Location: Driver’s Door Panel

Exterior Locking System Location: Driver’s Door Handle

Remote Control Type: ( ) Line of Sight (X) Non-line of Sight ( ) Both

WPRP Actuation Device Design (Toggle, Rocker, Push/Pull (Lever) or describe other):
  Master Control Panel: Push/Pull
  Individual Window: Push/Pull
  Roof Panel: Push/Pull
  Vents: Push/Pull

Interior Locking System Key Positions (clockwise): Keyless-Go, Push Button Start with Off/Lock, Accessory, On, Start

All WPRP open/close cycles are satisfactory with key in “ON” position:
  (X) YES ( ) NO If NO, compliance test shall not proceed

All WPRP open/close cycles are satisfactory with key in “ACCESSORY” position:
  (X) YES ( ) Not Applicable –No power to WPRP’s

REMARKS:

RECORDED BY: G. Farrand DATE: 05/11/10
APPROVED BY: D. Messick
DATA SHEET 1
INTERIOR LOCKING SYSTEM TEST

VEHICLE MAKE/MODEL/BODY STYLE: 2010 LINCOLN MKS
VEHICLE NHTSA NO: CA0209  VIN: 1LNHL9DR0AG603297
VEHICLE TYPE: PASSENGER CAR  DATE OF MANUFACTURE: 08/09
LABORATORY: GENERAL TESTING LABORATORIES  TEST DATE: 05/11/10

Key lock position at start of test execution: (X) ON ( ) ACCESSORY, Then to:
Key lock off position during test execution: (X) LOCK (X) OFF ( ) ACCESSORY

<table>
<thead>
<tr>
<th>ACTUATION DEVICES</th>
<th>DOORS CLOSED</th>
<th>LEFT DOOR OPEN</th>
<th>RIGHT DOOR OPEN</th>
<th>PASS/FAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>INOP. OPER.</td>
<td>INOP. OPER.</td>
<td>INOP. OPER.</td>
<td></td>
</tr>
<tr>
<td>Master Control Panel Actuation Devices</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left Front (LF)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>P</td>
</tr>
<tr>
<td>Right Front (RF)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>P</td>
</tr>
<tr>
<td>Left Rear (LR)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>P</td>
</tr>
<tr>
<td>Right Rear (RR)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>P</td>
</tr>
<tr>
<td>Vent Window(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tail Gate (TG)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partition (P)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roof Panel (RP)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Individual Actuation Devices | | | |
| Left Front (LF) | X | X | X | P |
| Right Front (RF) | X | X | X | P |
| Left Rear (LR) | X | X | X | P |
| Right Rear (RR) | X | X | X | P |
| Vent Window(s) | | | | |
| Tail Gate Window | | | | |
| Partition Window | | | | |
| Roof Panel Window | | | | |

REMARKS:

RECORDED BY: G. Farrand  DATE: 05/11/10
APPROVED BY: D. Messick
DATA SHEET 2
INTERIOR LOCKING SYSTEM WITH KEY REMOVED TEST

VEHICLE MAKE/MODEL/BODY STYLE: 2010 LINCOLN MKS
VEHICLE NHTSA NO: CA0209
VIN: 1LNHL9DR0AG603297
VEHICLE TYPE: PASSENGER CAR
DATE OF MANUFACTURE: 08/09
LABORATORY: GENERAL TESTING LABORATORIES
TEST DATE: 05/11/10

Key lock position at start of test execution: (X) ON ( ) ACCESSORY, Then to: off, park and door(s) open.

<table>
<thead>
<tr>
<th>ACTUATION DEVICES</th>
<th>DOORS CLOSED</th>
<th>LEFT DOOR OPEN</th>
<th>RIGHT DOOR OPEN</th>
<th>PASS/FAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>INOP.</td>
<td>OPER.</td>
<td>INOP.</td>
<td>OPER.</td>
</tr>
<tr>
<td>MASTER CONTROL PANEL ACTUATION DEVICES</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left Front (LF)</td>
<td>*</td>
<td>X</td>
<td>X</td>
<td>P</td>
</tr>
<tr>
<td>Right Front (RF)</td>
<td>*</td>
<td>X</td>
<td>X</td>
<td>P</td>
</tr>
<tr>
<td>Left Rear (LR)</td>
<td>*</td>
<td>X</td>
<td>X</td>
<td>P</td>
</tr>
<tr>
<td>Right Rear (RR)</td>
<td>*</td>
<td>X</td>
<td>X</td>
<td>P</td>
</tr>
<tr>
<td>Tail Gate (TG)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vent Window(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partition (P)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roof Panel (RP)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

INDIVIDUAL ACTUATION DEVICES

| Left Front (LF) | * | X | X | P |
| Right Front (RF) | * | X | X | P |
| Left Rear (LR) | * | X | X | P |
| Right Rear (RR) | * | X | X | P |
| Vent Window(s) |       |       |       |         |
| Tail Gate Window |       |       |       |         |
| Partition Window |       |       |       |         |
| Roof Panel Window | * | X | X | P |

REMARKS: *Vehicle has push button “keyless go” system and vehicle must be turned off, in park and door opened to remove key code from vehicle system.

RECORDED BY: G. Farrand          DATE: 05/11/10
APPROVED BY: D. Messick
DATA SHEET 3
EXTERIOR LOCKING SYSTEM TEST

VEHICLE MAKE/MODEL/BODY STYLE: 2010 LINCOLN MKS
VEHICLE NHTSA NO: CA0209 VIN: 1LNHL9DR0AG603297
VEHICLE TYPE: PASSENGER CAR DATE OF MANUFACTURE: 08/09
LABORATORY: GENERAL TESTING LABORATORIES TEST DATE: 05/11/10

Is vehicle equipped with an exterior locking system that can close any of the power windows, partitions, or roof panels? ( ) YES  (X) NO

Location of exterior locking system: _____________________________________________________________

Describe how the exterior locking system is activated: ____________________________________________

Identify the windows, partitions or roof panels that can be closed by the exterior system. Also, in each case, identify whether continuous activation of the locking system is required.

<table>
<thead>
<tr>
<th>WINDOW, PARTITION AND ROOF PANEL IDENTIFICATION</th>
<th>EXTERIOR LOCKING SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OPERABLE (YES/NO)</td>
</tr>
<tr>
<td></td>
<td>CONTINUOUS ACTIVATION REQUIRED (YES/NO)</td>
</tr>
<tr>
<td>LEFT FRONT (LF)</td>
<td></td>
</tr>
<tr>
<td>RIGHT FRONT (RF)</td>
<td></td>
</tr>
<tr>
<td>LEFT REAR (LR)</td>
<td></td>
</tr>
<tr>
<td>RIGHT REAR (RR)</td>
<td></td>
</tr>
<tr>
<td>VENT WINDOW(S)</td>
<td></td>
</tr>
<tr>
<td>PARTITION(P)</td>
<td></td>
</tr>
<tr>
<td>ROOF PANEL (RP)</td>
<td></td>
</tr>
<tr>
<td>TAIL GATE (TG)</td>
<td></td>
</tr>
</tbody>
</table>

*NOTE: Continuous activation of the locking system is required for each WPRP to pass the exterior locking system safety standard requirement.

REMARKS:

RECORDED BY: G. Farrand DATE: 05/11/10
APPROVED BY: D. Messick
VEHICLE MAKE/MODEL/ BODY STYLE: 2010 LINCOLN MKS
VEHICLE NHTSA NO: CA0209 VIN: 1LNHL9DR0AG603297
VEHICLE TYPE: PASSENGER CAR DATE OF MANUFACTURE: 08/09
LABORATORY: GENERAL TESTING LABORATORIES TEST DATE: 05/11/10

Type of remote actuation device installed on vehicle (check one):
(X) Non Line-Of-Site  ( ) Line-of-Site

Measured range of Operation:
Record the maximum operating distance of the remote actuation device in the boxes below. The range of operation shall not exceed six meters for a Non Line-of-Site Device or eleven meters for a Line-of-Site Device in any measured direction and continuous activation of the remote actuation device is required until all operable windows, partitions, or roof panels are completely closed.

Pass/Fail N/A

REMARKS: *Continuous activation is not required and distance for non-line-of-site device is exceeded, therefore all WPRP’s must meet reversal pinch force requirements of S5. See Data Sheet 7 for reversal forces.

RECORDED BY: G. Farrand DATE: 05/11/10
APPROVED BY: D. Messick
DATA SHEET 5
OCCUPANT COMPARTMENT ACTUATION DEVICE TEST
SPHERE TEST

VEHICLE MAKE/MODEL/BODY STYLE: 2010 LINCOLN MKS
VEHICLE NHTSA NO: CA0209
VIN: 1LNHL9DR0AG603297
VEHICLE TYPE: PASSENGER CAR
DATE OF MANUFACTURE: 08/09
LABORATORY: GENERAL TESTING LABORATORIES
TEST DATE: 05/11/10

<table>
<thead>
<tr>
<th>ACTUATION DEVICES</th>
<th>APPLICABLE (YES/NO*)</th>
<th>SPHERE ACTIVATED ACTUATION DEVICE CLOSES WPRP (YES/NO)</th>
<th>TEST RESULT PASS/FAIL</th>
<th>COMPLIANCE REQUIRED (Y/N**)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MASTER CONTROL PANEL ACTUATION DEVICES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left Front (LF)</td>
<td>Yes</td>
<td>No</td>
<td>Pass</td>
<td>Yes</td>
</tr>
<tr>
<td>Right Front (RF)</td>
<td>Yes</td>
<td>No</td>
<td>Pass</td>
<td>Yes</td>
</tr>
<tr>
<td>Left Rear (LR)</td>
<td>Yes</td>
<td>No</td>
<td>Pass</td>
<td>Yes</td>
</tr>
<tr>
<td>Right Rear (RR)</td>
<td>Yes</td>
<td>No</td>
<td>Pass</td>
<td>Yes</td>
</tr>
<tr>
<td>Tail Gate (TG)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vent Window(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partition (P)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roof Panel (RP)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>INDIVIDUAL ACTUATION DEVICES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left Front (LF)</td>
<td>Yes</td>
<td>No</td>
<td>Pass</td>
<td>Yes</td>
</tr>
<tr>
<td>Right Front (RF)</td>
<td>Yes</td>
<td>No</td>
<td>Pass</td>
<td>Yes</td>
</tr>
<tr>
<td>Left Rear (LR)</td>
<td>Yes</td>
<td>No</td>
<td>Pass</td>
<td>Yes</td>
</tr>
<tr>
<td>Right Rear (RR)</td>
<td>Yes</td>
<td>No</td>
<td>Pass</td>
<td>Yes</td>
</tr>
<tr>
<td>Vent Window(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tail Gate (TG)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partition (P)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roof Panel (RP)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*This requirement does not apply to actuation devices that are mounted in a vehicle’s roof, headliner, or overhead console and that can close a window, partition, or roof panel only by continuous rather than momentary switch actuation or actuation devices that comply with the reversing requirement of FMVSS 118, S5.

** Requirement is effective 1 October 2008. Early compliance is voluntary and test results are used for information only.

RECORDED BY: G. Farrand
DATE: 05/11/10
APPROVED BY: D. Messick
**Requirement is effective 1 October 2008. Early compliance is voluntary and test results are used for information only.**

<table>
<thead>
<tr>
<th>ACTUATION DEVICES</th>
<th>SWITCH ORIENTATION</th>
<th>CLOSES POWER-OPERATED WINDOW ONLY IF: PULL UP OR PULL OUT</th>
<th>TEST RESULT PASS/FAIL</th>
<th>COMPLIANCE REQUIRED (Y/N**)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MASTER CONTROL PANEL ACTUATION DEVICES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left Front (LF)</td>
<td>A</td>
<td>Pull Up</td>
<td>Pass</td>
<td>Yes</td>
</tr>
<tr>
<td>Right Front (RF)</td>
<td>A</td>
<td>Pull Up</td>
<td>Pass</td>
<td>Yes</td>
</tr>
<tr>
<td>Left Rear (LR)</td>
<td>A</td>
<td>Pull Up</td>
<td>Pass</td>
<td>Yes</td>
</tr>
<tr>
<td>Right Rear (RR)</td>
<td>A</td>
<td>Pull Up</td>
<td>Pass</td>
<td>Yes</td>
</tr>
<tr>
<td>Vent Window(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>INDIVIDUAL ACTUATION DEVICES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left Front (LF)</td>
<td>A</td>
<td>Pull Up</td>
<td>Pass</td>
<td>Yes</td>
</tr>
<tr>
<td>Right Front (RF)</td>
<td>A</td>
<td>Pull Up</td>
<td>Pass</td>
<td>Yes</td>
</tr>
<tr>
<td>Left Rear (LR)</td>
<td>A</td>
<td>Pull Up</td>
<td>Pass</td>
<td>Yes</td>
</tr>
<tr>
<td>Right Rear (RR)</td>
<td>A</td>
<td>Pull Up</td>
<td>Pass</td>
<td>Yes</td>
</tr>
<tr>
<td>Vent Window(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Recorded by:** G. Farrand  
**Date:** 05/11/10  
**Approved by:** D. Messick
### DATA SHEET 7

**WPRP PHYSICAL CONTACT REVERSAL CAPABILITY**

**VEHICLE MAKE/MODEL/BODY STYLE:** 2010 LINCOLN MKS  
**VEHICLE NHTSA NO.:** CA0209  
**VIN:** 1LNHL9DR0AG603297  
**VEHICLE TYPE:** PASSENGER CAR  
**DATE OF MANUFACTURE:** 08/09  
**LABORATORY:** GENERAL TESTING LABORATORIES  
**TEST DATE:** 05/11/10

WPRP’s equipped with reversal capability: Yes

WPRP’s that must meet reversal requirement: All

Locking System Position: Off/Lock

<table>
<thead>
<tr>
<th>GTL Test #</th>
<th>Window, Partition, Roof Panel</th>
<th>Test Rod Placement in Window, Partition or Roof Panel</th>
<th>Test Rod Size/Deflection</th>
<th>Window, Partition or Roof Panel Opening Before/After Closing (mm)</th>
<th>Maximum Force Measured on Test Rod (Newtons)</th>
<th>Window, Partition, or Roof Panel Reversing Distance (mm)</th>
<th>Pass/Fail*</th>
</tr>
</thead>
<tbody>
<tr>
<td>6602</td>
<td>L.F. Window Top 6mm/65N/mm</td>
<td>116/287</td>
<td>94</td>
<td>287</td>
<td>P</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6603</td>
<td>L.R. Window Top 6mm/65N/mm</td>
<td>123/253</td>
<td>99</td>
<td>253</td>
<td>P</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6604</td>
<td>R.R. Window Top 6mm/65N/mm</td>
<td>70/250</td>
<td>102</td>
<td>250</td>
<td>**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6605</td>
<td>R.R. Window Top 6mm/65N/mm</td>
<td>70/247</td>
<td>94</td>
<td>247</td>
<td>P</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6606</td>
<td>R.F. Window Top 6mm/65N/mm</td>
<td>150/250</td>
<td>108</td>
<td>285</td>
<td>**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6607</td>
<td>R.F. Window Top 6mm/65N/mm</td>
<td>68/285</td>
<td>97</td>
<td>285</td>
<td>P</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6608</td>
<td>R.F. Window Top 6mm/65N/mm</td>
<td>70/285</td>
<td>98</td>
<td>285</td>
<td>P</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6609</td>
<td>L.F. Window Top 100mm/20N/mm</td>
<td>30/290</td>
<td>76</td>
<td>290</td>
<td>P</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6610</td>
<td>L.R. Window Top 100mm/20N/mm</td>
<td>120/255</td>
<td>71</td>
<td>255</td>
<td>P</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6611</td>
<td>R.R. Window Top 100mm/20N/mm</td>
<td>85/250</td>
<td>70</td>
<td>250</td>
<td>P</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6612</td>
<td>R.F. Window Top 100mm/20N/mm</td>
<td>20/280</td>
<td>77</td>
<td>280</td>
<td>P</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6613</td>
<td>L.F. Window Top 25mm/65N/mm</td>
<td>148/293</td>
<td>120</td>
<td>293</td>
<td>***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6614</td>
<td>L.F. Window Top 25mm/65N/mm</td>
<td>130/275</td>
<td>123</td>
<td>275</td>
<td>***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6615</td>
<td>L.F. Window Top 25mm/20N/mm</td>
<td>118/278</td>
<td>81</td>
<td>278</td>
<td>***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6616</td>
<td>L.F. Window Top 25mm/10N/mm</td>
<td>152/270</td>
<td>63</td>
<td>270</td>
<td>***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6617</td>
<td>L.F. Window Top 200mm/20N/mm</td>
<td>10/280</td>
<td>85</td>
<td>280</td>
<td>P</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6618</td>
<td>L.R. Window Top 200mm/20N/mm</td>
<td>20/255</td>
<td>73</td>
<td>255</td>
<td>P</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*WPRP must reverse direction before contacting or exerting a squeezing force of 100 Newtons. Upon such reversal, the WPRP must open to one of the following positions.

A. A position that is at least as open as the position at the time closing was initiated
B. A position that is not less than 125 mm more open than the position at the time the window reversed direction, or
C. A position that permits a semi-rigid cylindrical rod that is 200 mm in diameter to be placed through the opening at the same contact point(s) used in 12.5.

**REMARKS:** ** Test was re-run a second time with a pass
*** Test was performed to gather data only.

**NOTE:** Additional reversal force data requested by COTR from Ford confirms values less than 100N.

**RECORDED BY:** G. Farrand  
**DATE:** 05/11/10

**APPROVED BY:** D. Messick
### SECTION 4
#### TEST EQUIPMENT LIST

**VEHICLE MAKE/MODEL/BODY STYLE:** 2010 LINCOLN MKS

**VEHICLE NHTSA NO:** CA0209

**VIN:** 1LNHL9DR0AG603297

**VEHICLE TYPE:** PASSENGER CAR

**DATE OF MANUFACTURE:** 08/09

**LABORATORY:** GENERAL TESTING LABORATORIES

**TEST DATE:** 05/11/10

<table>
<thead>
<tr>
<th>ITEM</th>
<th>MFR</th>
<th>MODEL</th>
<th>S/N</th>
<th>CAL. PERIOD</th>
<th>DATE OF LAST CALIB.</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLR DIGITAL CAMERA</td>
<td>NIKON</td>
<td>D50</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>PINCH FORCE SENSOR</td>
<td>SENSOR DEVELOPMENTS, INC.</td>
<td>10293</td>
<td>179104</td>
<td>12 MO.</td>
<td>04/10</td>
<td></td>
</tr>
</tbody>
</table>

**REMARKS:**

**RECORDED BY:** G. FARRAND

**DATE:** 05/11/10

**APPROVED BY:** D. MESSICK
SECTION 5
PHOTOGRAPHS
FIGURE 5.2
¾ REAR VIEW FROM RIGHT SIDE OF VEHICLE
2010 LINCOLN MKS
NHTSA NO. CA0209
FMVSS NO. 118

FIGURE 5.3
CLOSE-UP VIEW OF VEHICLE CERTIFICATION LABEL
<table>
<thead>
<tr>
<th>TIRE</th>
<th>SIZE</th>
<th>COLD TIRE PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRONT</td>
<td>P235/55R18</td>
<td>220 KPA, 32 PSI</td>
</tr>
<tr>
<td>REAR</td>
<td>P235/55R18</td>
<td>220 KPA, 32 PSI</td>
</tr>
<tr>
<td>SPARE</td>
<td>T155/70D17</td>
<td>415 KPA, 60 PSI</td>
</tr>
</tbody>
</table>

The combined weight of occupants and cargo should never exceed: 430 kg or 950 lbs.

SEATING CAPACITY  TOTAL: 5  FRONT: 2  REAR: 3
FIGURE 5.5
MASTER CONTROL SWITCH
FIGURE 5.6
CLOSE-UP VIEW OF RIGHT FRONT POWER WINDOW SWITCH
FIGURE 5.7
CLOSE-UP VIEW OF LEFT REAR POWER WINDOW SWITCH
Figure 5.8
Close-up view of right rear power window switch.
FIGURE 5.10
SPHERE TEST ON MASTER SWITCH
FIGURE 5.11
SPHERE TEST ON RIGHT FRONT SWITCH
FIGURE 5.12
SPHERE TEST ON LEFT REAR SWITCH
FIGURE 5.13
SPHERE TEST ON RIGHT REAR SWITCH
FIGURE 5.14
INSTRUMENTATION TEST SET-UP
FIGURE 5.15
FORCE TEST INSTRUMENT SET-UP ON LEFT FRONT WINDOW
FIGURE 5.16
FORCE TEST INSTRUMENT TEST AT 100 MM
SECTION 6
OWNER’S MANUAL INFORMATION
**Driver Controls**

Auxiliary power point can be found in the following location:

- On the center console
- Inside the utility compartment
- On the rear of the center console accessible from the rear seat

Do not use the power point for operating the cigarette lighter element (if equipped).

To prevent the fuse from being blown, do not use the power point(s) over the vehicle capacity of 12 VDC/180W. If the power point or cigarette lighter socket is not working, a fuse may have blown. Refer to "Fuses and relays" in the "Roadside Emergencies" chapter for information on checking and replacing fuses.

To have full capacity usage of your power point, the engine is required to be running to avoid unintentional discharge of the battery. To prevent the battery from being discharged:

- do not use the power point longer than necessary when the engine is not running,
- do not leave battery chargers, video game adapters, computers and other devices plugged in overnight or when the vehicle is parked for extended periods.

Always keep the power point caps closed when not being used.

**POWER WINDOWS**

⚠️ **WARNING:** Do not leave children unattended in the vehicle and do not let children play with the power windows. They may seriously injure themselves.

⚠️ **WARNING:** When closing the power windows, you should verify they are free of obstructions and ensure that children and/or pets are not in the proximity of the window openings.

Press and pull the switches to open and close windows.

- Press down (to the first detent) and hold the switch to open.
- Pull up (to the first detent) and hold the switch to close.

**Rear Window Buffeting:** When one or both of the rear windows are open, the vehicle may generate a wind throb or buffeting noise. This noise can be alleviated by lowering a front window approximately two to three inches.

**Express-down (One-touch down, all windows)**

Allows the windows to open fully without holding the control down. Press the switch completely down to the second detent and release quickly. The window will open fully. Momentarily press the switch to any position to stop the window operation.

**Express-up (One-touch up, all windows)**

Allows the windows to close fully without holding the control up. Pull the switch completely up to the second detent and release quickly. The window will close fully. Momentarily press the switch to any position to stop the window operation.

**Global open windows**

You can open the vehicle's windows, and (if equipped) vent the moon roof (power shade opens) by using the control on the remote transmitter.

Press and hold the control on the transmitter for at least two seconds, to begin to open the windows and vent the moon roof (power shade opens). For the transmitter, pressing either the or control on the transmitter will stop all motion.
Driver Controls

Note: The ignition must be off and the accessory delay feature must not be activated in order for this feature to operate.

Note: This feature can be disabled or enabled by your authorized dealer.

Global close windows
You can close the vehicle’s windows and moon roof (if equipped) by using the control on the remote transmitter.
Press and hold the control on the transmitter for at least two seconds to begin to close the windows and moon roof.

Note: The ignition must be off and the accessory delay feature must not be activated in order for this feature to operate.

Note: This feature can be disabled or enabled by your authorized dealer.

⚠️ WARNING: To avoid personal injury and vehicle damage, verify that windows and moon roof are free of obstructions before operating and ensure that children and/or pets are not in the proximity of window openings.

Bounce-back
When an obstacle has been detected in the window opening as the window is moving upward, the window will automatically reverse direction and move down. This is known as “bounce-back”. If the ignition is turned off (without accessory delay being active) during bounce-back, the window will move down until the bounce-back position is reached.

Security override
To override a bounce-back condition, within two seconds after the window reaches the bounce-back position, pull and hold the switch up and the window will travel up with no bounce-back or pinch protection. If the switch is released before the window is fully closed, the window will stop. For example, this can be used to overcome the resistance of ice on the window or seals.

Window lock
The window lock feature allows only the driver to operate the power windows.
To lock out all the window controls (except for the driver’s) press the right side of the control. Press the left side to restore the window controls.

Accessory delay
With accessory delay, the radio, power windows, and moon roof (if equipped) operate for up to 10 minutes after the ignition switch is turned from on to off or until one of the front doors are opened.

POWER REAR SUNSHADE (IF EQUIPPED)
Your vehicle may be equipped with a power rear sunshade that covers the rear window of your vehicle. The control is located in the center console access bin next to the power point.
Press the control to move the shade up or down.
The power sunshade is equipped with an automatic, one-touch, auto down feature. To stop motion at any time during the auto down operation, press the control a second time. To activate the automatic, one-touch, auto down feature, press the control and release quickly.

INTERIOR MIRROR
The interior rear view mirror has two pivot points on the support arm which let you adjust the mirror up or down and from side to side.

⚠️ WARNING: Do not adjust the mirror while the vehicle is in motion.
LOCKS AND SECURITY

KEYS

Integrated Keyhead Transmitters (IKTs) (If equipped)

Your vehicle may be equipped with two Integrated Keyhead Transmitters (IKTs). The key blade functions as a programmed key which starts the vehicle and unlocks/locks all the doors. The transmitter portion functions as the remote entry transmitter.

Your IKTs are programmed to your vehicle; using a non-programmed key will not permit your vehicle to start. If you lose one or both of your IKTs, replacements are available through your authorized dealer. Standard SecurLock® keys without remote entry transmitter functionality can also be purchased from your authorized dealer if desired.

Always carry a spare key with you in case of an emergency.

For more information regarding programming replacement IKTs, refer to the SecurLock® passive anti-theft system section later in this chapter.

Note: Your vehicle’s IKTs were issued with a security tag that provides important vehicle key cut information. It is recommended that you keep the tag in a safe place for future reference.

Intelligent Access Key (IA key) (If equipped)

Your vehicle may be equipped with two Intelligent Access keys which operate the power locks and the remote entry system. You have to have the IA key in the vehicle to activate the push button start system.

The IA key also contains a removable mechanical key blade that can be used to unlock the driver door. To release the mechanical key blade, press the release button on the back of the transmitter and slide the blade out.

Your IA keys are programmed to your vehicle. You cannot enter or start your vehicle with an unprogrammed key. If you lose one or both of your IA keys, replacements are available from your authorized dealer. For more information on programming replacement IA keys, refer to the SecurLock® passive anti-theft system section in this chapter.

Note: Your vehicle’s IA backup keys were issued with a security tag that provides important vehicle key cut information. It is recommended that you keep the tag in a safe place for future reference.
Locks and Security

POWER DOOR LOCKS
- Press the control to unlock all doors.
- Press the control to lock all doors.

Smart unlocks
This feature helps to prevent you from locking yourself out of the vehicle if your key is still in the ignition.
When you open one of the front doors and you lock the vehicle with the power door lock control (on the driver or passenger door trim panel), all the doors will lock, then all doors will automatically unlock reminding you that your key is still in the ignition.
The vehicle can still be locked, with the key in the ignition, by locking the driver's door with a key using the control on the transmitter, or locking the vehicle with the keyless entry keypad.
If both front doors are closed, the vehicle can be locked by any method, regardless of whether the key is in the ignition or not.

Smart unlocks for Intelligent Access Keys (if equipped)
The smart unlock feature is intended to prevent you from unintentionally locking your key inside your vehicle's passenger compartment or trunk.
When you lock your vehicle using the driver or passenger power door lock control (with the door open), after you close the door the vehicle will search for an IA key in the passenger compartment. If an IA key is found inside the vehicle, all of the doors will immediately unlock and the horn will chime, indicating that the IA key is inside.
In order to override the smart unlock feature and intentionally lock the IA key inside the vehicle, you can lock your vehicle using your keyless entry keypad or using the control on another IA key. Refer to Keyless entry system in this chapter for more information on keyless entry keypad operation.

If your vehicle's perimeter alarm is in the armed state, the smart unlock feature will not allow you to lock your IA key inside the trunk. When the alarm is armed, if the IA key is detected in the trunk, the door will automatically be released when you attempt to close it, and the horn will chime, as a reminder that the IA key is inside. If you would like to intentionally lock your IA key in the trunk of your vehicle, first disarm the perimeter alarm by unlocking the vehicle, then place the IA key in the trunk, close the trunk, and rearm your perimeter alarm system by locking the vehicle using your keyless entry keypad or another IA key.
For more information on arming/disarming of the perimeter alarm system, refer to Perimeter alarm system in this chapter.

Opening windows and moon roof (if equipped)
You can open the vehicle's windows, and (if equipped) vent the moon roof (power sunroof opens) by using the control on the transmitter. Refer to Power windows in the Driver Controls chapter for more information.

Closing windows and moon roof (if equipped)
You can close the vehicle's windows and moon roof (if equipped) by using the control on the transmitter. Refer to Power windows in the Driver Controls chapter for more information.

Central locking/Two-stage unlocking
When unlocking the driver door with the key, turn it once toward the rear of the vehicle to unlock that door only. If the two-stage unlocking is enabled, turn the key a second time to unlock all doors. When locking, turn the key toward the front of the vehicle to lock all doors.
Two-stage unlocking may be disabled and re-enabled (to allow all vehicle doors to unlock simultaneously) by simultaneously pressing the and controls on the transmitter for four seconds.

Note: The turn lamps will flash twice to confirm that a change to the feature has occurred.

Auto lock feature
The auto lock feature will lock all the doors when:
• all the doors are closed,
• the ignition is on,
• you shift into any gear putting the vehicle in motion, and
• the vehicle attains a speed greater than 12 mph (20 km/h).
SECTION 7
PLOTS
GTL 6602, NHTSA CA0209.

FMVSS 118, Left Front W/6mm/65N-mm Rod.

Force in Newtons.
GTL 6603, NHTSA CA0209.

FMVSS 118, Left Rear W/6mm/65N-mm Rod.
GTL 6605, NHTSA CA0209.

FMVSS 118, Right Rear W/6mm/65N-mm Rod.

Force in Newtons.

Time in Seconds
GTL 6606, NHTSA CA0209.

FMVSS 118, Right Front W/6mm/65N-mm Rod.
GTL 6609, NHTSA CA0209.

FMVSS 118, Left Front W/100mm/20N-mm Rod

Force in Newtons:

Time in Seconds:

2.2  2.4  2.6  2.8
GTL 6610, NHTSA CA0209.

FMVSS 118, Left Rear W/100mm/20N-mm Rod

Force in Newtons.

Time in Seconds
GTL 6611, NHTSA CA0209.

FMVSS 118, Right Rear W/100mm/20N-mm Rod

Force in Newtons.

Time in Seconds
GTL 6614, NHTSA CA0209.

FMVSS 118, Left Front W/ 25mm/65N-mm Rod

Force in Newtons.

Time in Seconds

3.2
GTL 6615, NHTSA CAD209.

FMVSS 118: Left Front W/25mm/20N-mm Rod

Force in Newtons.
GTL 6617, NHTSA CA0209.

FMVSS 118, Left Front W/200mm/20N-mm Rod

Force in Newtons

Time in Seconds
GTL 6618, NHTSA CA0209.

FMVSS 118, Left Rear W/200mm/20N-mm Rod

Force in Newtons.

Time in Seconds