SAFETY COMPLIANCE TESTING FOR
FMVSS 124
ACCELERATOR CONTROL SYSTEMS

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

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

May 5, 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
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Digitally signed by Grant Farrand  
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Approval Date: 05/05/10

FINAL REPORT ACCEPTANCE BY OVSC

Accepted By:  

Acceptance Date: 5/5/10
### Abstract
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-124-06 for the determination of FMVSS 124 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   Purpose of Compliance Test</td>
<td>1</td>
</tr>
<tr>
<td>2   Test Procedure and Discussion of Results</td>
<td>2</td>
</tr>
<tr>
<td>3   Compliance Test Data</td>
<td>4</td>
</tr>
<tr>
<td>4   Test Equipment List and Calibration Information</td>
<td>11</td>
</tr>
<tr>
<td>5   Photographs</td>
<td>12</td>
</tr>
<tr>
<td>5.1 Front View of Vehicle</td>
<td></td>
</tr>
<tr>
<td>5.2 Left Side View of Vehicle</td>
<td></td>
</tr>
<tr>
<td>5.3 Right Side View of Vehicle</td>
<td></td>
</tr>
<tr>
<td>5.4 Close-Up View of Vehicle’s Certification Label</td>
<td></td>
</tr>
<tr>
<td>5.5 Close-Up View of Vehicle Placard</td>
<td></td>
</tr>
<tr>
<td>5.6 APS and Accelerator Pedal Assembly</td>
<td></td>
</tr>
<tr>
<td>5.7 Close-up of Springs #1 &amp; #2</td>
<td></td>
</tr>
<tr>
<td>5.8 Close-up of Springs #1 &amp; #2</td>
<td></td>
</tr>
<tr>
<td>5.9 Test Set-Up</td>
<td></td>
</tr>
<tr>
<td>5.10 Accelerator Test Set-Up</td>
<td></td>
</tr>
<tr>
<td>5.11 Engine Instrumentation Set-Up</td>
<td></td>
</tr>
<tr>
<td>5.12 Throttle Body</td>
<td></td>
</tr>
<tr>
<td>5.13 TPS and Spring #3</td>
<td></td>
</tr>
<tr>
<td>6   Plots</td>
<td>26</td>
</tr>
</tbody>
</table>
SECTION 1
PURPOSE OF COMPLIANCE TEST

FMVSS 124 specifies requirements for the return of a vehicle’s throttle to the idle position when the driver removes the actuating force from the accelerator control, or in the event of a severance or disconnection in the accelerator control system. The purpose of FMVSS 124 is to reduce the number of deaths and injuries resulting from engine overspeed caused by malfunctions in the accelerator control system. This standard applies to passenger cars, multipurpose passenger vehicles (MPV’s), trucks and buses.
SECTION 2
TEST PROCEDURES AND DISCUSSION OF RESULTS

Compliance testing was conducted on a 2010 Lincoln MKS Passenger Car, NHTSA No. CA0209 in accordance with the National Highway Traffic Safety Administration (NHTSA) Laboratory Procedure TP-124-06.

The vehicle is equipped with two throttle position sensors (TPS) on the air throttle plate shaft. Output from one of the two sensors was used to measure throttle position and data was recorded at 100 HZ with GTL’ s data acquisition system. Testing was conducted to simulate the normal removal of the driver’s foot from the accelerator pedal. This was performed by depressing the accelerator with a control rod which incorporated an electrical contact strip in the depressing end. The accelerator was depressed to the required amount and then the control rod was quickly removed from the pedal, releasing the accelerator and activating the contact strip for time zero. Failures (excluding spring disconnect) were induced simultaneously with release of the accelerator pedal. Testing was performed with the vehicle in drive and the engine running. Testing could not be conducted in neutral as throttle plate movement in this condition was limited upon accelerator pedal application.

Return to idle times were determined for four throttle plate positions (25%, 50%, 75% and 100%) with the accelerator control system complete and with each of the two return springs in the accelerator pedal assembly independently disconnected and disconnection of the throttle body return spring #3. With each of the wires to the APS and throttle plate position sensor disconnected and shorted to ground, return to idle times were determined at the worst case condition – wide open throttle (100%).

In addition, tests were conducted with the APS and TPS connectors disconnected.

A number of induced failures resulted in the throttle plate return to or below the idle state then shifting to a Limp-Home mode position which allows the vehicle to be removed from the roadway.

This testing was performed at mid ambient temperature of 10º C to 46º C, in accordance with the NHTSA Test Procedure TP-124-06.
SECTION 3
COMPLIANCE TEST DATA

Test data for this test can be found on the following pages. Photographs are found in Section 5 and Test Plots are found in Section 6.
VEHICLE MY/MAKE/MODEL/BODY STYLE: 2010 LINCOLN MKS PASSENGER CAR
VEHICLE NHTSA NO.: CA0209
VEHICLE VIN: 1LNHL9DR0AG603297
DATE OF TEST: APRIL 26-27, 2010
TEST LAB: GENERAL TESTING LABORATORIES

VEHICLE ENGINE TYPE: GAS
GVWR: 2404 KG

VEHICLE ENGINE SIZE: 3.7 L

VEHICLE ACCEL. CONTROL SYSTEM (ACS) (Air or Fuel Throttled): AIR
MAX. BHP ENGINE SPEED: Unknown
MFR. IDLE RPM: 625 RPM
FUEL METERING DEVICE (Carburetor, fuel injection, etc): FUEL INJECTION

REMARKS:

RECORDED BY: G. FARRAND DATE: 04/26/10
APPROVED BY: D. MESSICK
DATA SHEET 2
NORMAL OPERATION TEST
(fully operational system)

VEHICLE MY/MAKE/MODEL/BODY STYLE: 2010 LINCOLN MKS PASSENGER CAR
VEHICLE NHTSA NO.: CA0209
DATE OF TEST: APRIL 26, 2010

Check one:
Mid Temp. Test: X Low Temp. Test: High Temp. Test:

SYSTEM CONDITION: COMPLETE (no modifications) Normal Operation

<table>
<thead>
<tr>
<th>GTL #</th>
<th>ACCELERATOR POSITION % WIDE OPEN THROTTLE (WOT)</th>
<th>THROTTLE POSITION SENSOR READING</th>
<th>RPM</th>
<th>TEMPERATURE (°C)</th>
<th>THROTTLE POSITION SENSOR READING @ IDLE (BASELINE)</th>
<th>RETURN TIME TO IDLE (Msec)</th>
<th>PASS/FAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>6493</td>
<td>100%</td>
<td>99%</td>
<td>625</td>
<td>200</td>
<td>76</td>
<td>17%-18%</td>
<td>580</td>
</tr>
<tr>
<td>6494</td>
<td>75%</td>
<td>68%</td>
<td>625</td>
<td>201</td>
<td>76</td>
<td>17%-18%</td>
<td>730</td>
</tr>
<tr>
<td>6495</td>
<td>50%</td>
<td>48%</td>
<td>625</td>
<td>200</td>
<td>76</td>
<td>17%-18%</td>
<td>620</td>
</tr>
<tr>
<td>6496</td>
<td>25%</td>
<td>25%</td>
<td>625</td>
<td>199</td>
<td>76</td>
<td>17%-18%</td>
<td>290</td>
</tr>
</tbody>
</table>

RETURN TIME REQUIREMENTS:

1 second (1000 ms) for vehicles less than 4536 kg.
2 seconds (2000 ms) for vehicles more than 4536 kg.
3 seconds (3000 ms) for vehicles exposed to -18° C or less

PASS X FAIL 

REMARKS:

RECORDED BY: G. FARRAND DATE: 04/26/10
APPROVED BY: D. MESSICK
FAIL-SAFE OPERATION
DISCONNECTION

VEHICLE MY/MAKE/MODEL/BODY STYLE: 2010 LINCOLN MKS PASSENGER CAR
VEHICLE NHTSA NO.: CA0209
DATE OF TEST: APRIL 26, 2010

Check one:
Mid Temp. Test: X  Low Temp. Test:   High Temp. Test:   

SYSTEM CONDITION: #1 SPRING DISCONNECTED (OUTER SPRING) ON ACCELERATOR PEDAL ASSEMBLY

<table>
<thead>
<tr>
<th>GTL #</th>
<th>ACCELERATOR POSITION % WIDE OPEN THROTTLE (WOT)</th>
<th>THROTTLE POSITION SENSOR READING</th>
<th>RPM</th>
<th>TEMPERATURE (°C) ENGINE COOLANT</th>
<th>AMBIENT</th>
<th>THROTTLE POSITION SENSOR READING @ IDLE (BASELINE)</th>
<th>RETURN TIME TO IDLE (Msec)</th>
<th>PASS/FAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>6497</td>
<td>100%</td>
<td>99%</td>
<td>625</td>
<td>200</td>
<td>76</td>
<td>17%-18%</td>
<td>800</td>
<td>P</td>
</tr>
<tr>
<td>6498</td>
<td>75%</td>
<td>72%</td>
<td>625</td>
<td>202</td>
<td>76</td>
<td>17%-18%</td>
<td>720</td>
<td>P</td>
</tr>
<tr>
<td>6499</td>
<td>50%</td>
<td>47%</td>
<td>625</td>
<td>201</td>
<td>76</td>
<td>17%-18%</td>
<td>610</td>
<td>P</td>
</tr>
<tr>
<td>6500</td>
<td>25%</td>
<td>24%</td>
<td>625</td>
<td>204</td>
<td>76</td>
<td>17%-18%</td>
<td>310</td>
<td>P</td>
</tr>
</tbody>
</table>

RETURN TIME REQUIREMENTS:

1 second (1000 ms) for vehicles less than 4536 kg.
2 seconds (2000 ms) for vehicles more than 4536 kg.
3 seconds (3000 ms) for vehicles exposed to -18° C or less

PASS _____ X _____  FAIL _____________

REMARKS:

RECORDED BY: G. FARRAND  DATE: 04/26/10
APPROVED BY: D. MESSICK
FAIL-SAFE OPERATION DISCONNECTION

VEHICLE MY/MAKE/MODEL/BODY STYLE: 2010 LINCOLN MKS PASSENGER CAR
VEHICLE NHTSA NO.: CA0209
DATE OF TEST: APRIL 26, 2010

Check one:
Mid Temp. Test: X Low Temp. Test: High Temp. Test:

SYSTEM CONDITION: #2 SPRING DISCONNECTED (INNER SPRING) ON ACCELERATOR PEDAL ASSEMBLY

<table>
<thead>
<tr>
<th>GTL #</th>
<th>ACCELERATOR POSITION % WIDE OPEN THROTTLE (WOT)</th>
<th>THROTTLE POSITION SENSOR READING</th>
<th>RPM</th>
<th>TEMPERATURE (°C) ENGINE COOLANT AMBIENT</th>
<th>THROTTLE POSITION SENSOR READING @ IDLE (BASELINE)</th>
<th>RETURN TIME TO IDLE (Msec)</th>
<th>PASS/FAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>6501</td>
<td>100%</td>
<td>99%</td>
<td>625</td>
<td>200</td>
<td>76</td>
<td>17%-18%</td>
<td>790</td>
</tr>
<tr>
<td>6502</td>
<td>75%</td>
<td>72%</td>
<td>625</td>
<td>200</td>
<td>76</td>
<td>17%-18%</td>
<td>680</td>
</tr>
<tr>
<td>6503</td>
<td>50%</td>
<td>48%</td>
<td>625</td>
<td>201</td>
<td>76</td>
<td>17%-18%</td>
<td>590</td>
</tr>
<tr>
<td>6504</td>
<td>25%</td>
<td>25%</td>
<td>625</td>
<td>201</td>
<td>76</td>
<td>17%-18%</td>
<td>310</td>
</tr>
</tbody>
</table>

RETURN TIME REQUIREMENTS:

1 second (1000 ms) for vehicles less than 4536 kg.
2 seconds (2000 ms) for vehicles more than 4536 kg.
3 seconds (3000 ms) for vehicles exposed to -18° C or less

PASS X FAIL

REMARKS:

RECORDED BY: G. FARRAND DATE: 04/26/10
APPROVED BY: D. MESSICK
DATA SHEET 3 (3 of 3)
FAIL-SAFE OPERATION
DISCONNECTION

VEHICLE MY/MAKE/MODEL/BODY STYLE: 2010 LINCOLN MKS PASSENGER CAR
VEHICLE NHTSA NO.: CA0209
DATE OF TEST: APRIL 27, 2010

Check one:
Mid Temp. Test: X Low Temp. Test: High Temp. Test: 

SYSTEM CONDITION: #3 SPRING DISCONNECTED INSIDE THROTTLE BODY

<table>
<thead>
<tr>
<th>GTL #</th>
<th>ACCELERATOR POSITION % WIDE OPEN THROTTLE (WOT)</th>
<th>THROTTLE POSITION SENSOR READING</th>
<th>RPM</th>
<th>TEMPERATURE (ºC)</th>
<th>THROTTLE POSITION SENSOR READING @ IDLE (BASELINE)</th>
<th>RETURN TIME TO IDLE (Msec)</th>
<th>PASS/FAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>6520</td>
<td>100%</td>
<td>99%</td>
<td>625</td>
<td>198</td>
<td>67</td>
<td>17%-18%</td>
<td>830</td>
</tr>
<tr>
<td>6521</td>
<td>75%</td>
<td>82%</td>
<td>625</td>
<td>199</td>
<td>67</td>
<td>17%-18%</td>
<td>780</td>
</tr>
<tr>
<td>6522</td>
<td>50%</td>
<td>47%</td>
<td>625</td>
<td>200</td>
<td>67</td>
<td>17%-18%</td>
<td>630</td>
</tr>
<tr>
<td>6523</td>
<td>25%</td>
<td>25%</td>
<td>625</td>
<td>200</td>
<td>67</td>
<td>17%-18%</td>
<td>430</td>
</tr>
</tbody>
</table>

RETURN TIME REQUIREMENTS:

1 second (1000 ms) for vehicles less than 4536 kg.
2 seconds (2000 ms) for vehicles more than 4536 kg.
3 seconds (3000 ms) for vehicles exposed to -18º C or less

PASS X FAIL 

REMARKS:

RECORDED BY: G. FARRAND DATE: 04/27/10
APPROVED BY: D. MESSICK
DATA SHEET 4
FAIL-SAFE OPERATION
DISCONNECTION

VEHICLE MY/MAKE/MODEL/BODY STYLE: 2010 LINCOLN MKS PASSENGER CAR
VEHICLE NHTSA NO.: CA0209
DATE OF TEST: APRIL 26, 2010

Check one:

Mid Temp. Test: X Low Temp. Test: High Temp. Test:

SYSTEM CONDITION: SEVERANCE OF APS CONNECTOR

<table>
<thead>
<tr>
<th>GTL #</th>
<th>ACCELERATOR POSITION % WIDE OPEN THROTTLE (WOT)</th>
<th>THROTTLE POSITION SENSOR READING</th>
<th>RPM</th>
<th>TEMPERATURE (°C)</th>
<th>THROTTLE POSITION SENSOR READING @ IDLE (BASELINE)</th>
<th>RETURN TIME TO IDLE (Msec)</th>
<th>PASS/FAIL</th>
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<tbody>
<tr>
<td>6505</td>
<td>100%</td>
<td>99%</td>
<td>625</td>
<td>200</td>
<td>75</td>
<td>17%-18%</td>
<td>140* P</td>
</tr>
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</table>

RETURN TIME REQUIREMENTS:

1 second (1000 ms) for vehicles less than 4536 kg.
2 seconds (2000 ms) for vehicles more than 4536 kg.
3 seconds (3000 ms) for vehicles exposed to -18° C or less

PASS _____ X _____ FAIL ________________

REMARKS: *Limp home mode at 840 RPM.

RECORDED BY: G. FARRAND DATE: 04/26/10
APPROVED BY: D. MESSICK
DATA SHEET 5
FMVSS 124

VEHICLE MY/MAKE/MODEL/BODY STYLE: 2010 LINCOLN MKS PASSENGER CAR
VEHICLE NHTSA NO.: CA0209
DATE OF TEST: APRIL 27, 2010

<table>
<thead>
<tr>
<th>GTL #</th>
<th>CONNECTOR</th>
<th>WIRE/PIN DESCRIPTION</th>
<th>FAULT CONDITION</th>
<th>ENGINE TEMP. °F</th>
<th>% THROTTLE/RETURN TIME (MS)</th>
<th>PASS/FAIL/NOTES</th>
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<tbody>
<tr>
<td>6506</td>
<td>APS</td>
<td>#1/Purple/Green</td>
<td>OPEN</td>
<td>200</td>
<td>100/800</td>
<td>P</td>
</tr>
<tr>
<td>6507</td>
<td>APS</td>
<td>#2/Yellow/Orange</td>
<td>OPEN</td>
<td>200</td>
<td>100/610*</td>
<td>P</td>
</tr>
<tr>
<td>6508</td>
<td>APS</td>
<td>#3/Yellow/Green</td>
<td>OPEN</td>
<td>199</td>
<td>100/570</td>
<td>P</td>
</tr>
<tr>
<td>6509</td>
<td>APS</td>
<td>#4/Blue/White</td>
<td>OPEN</td>
<td>200</td>
<td>100/780</td>
<td>P</td>
</tr>
<tr>
<td>6510</td>
<td>APS</td>
<td>#5/Green/Yellow</td>
<td>OPEN</td>
<td>200</td>
<td>100/730</td>
<td>P</td>
</tr>
<tr>
<td>6511</td>
<td>APS</td>
<td>#6/Blue/Gray</td>
<td>OPEN</td>
<td>200</td>
<td>100/750</td>
<td>P</td>
</tr>
<tr>
<td>6512</td>
<td>APS</td>
<td>#7/Green/White</td>
<td>OPEN</td>
<td>199</td>
<td>100/780</td>
<td>P</td>
</tr>
<tr>
<td>6513</td>
<td>APS</td>
<td>#1/Purple/Green</td>
<td>SHORT</td>
<td>199</td>
<td>100/770</td>
<td>P</td>
</tr>
<tr>
<td>6514</td>
<td>APS</td>
<td>#2/Yellow/Orange</td>
<td>SHORT</td>
<td>200</td>
<td>100/720</td>
<td>P</td>
</tr>
<tr>
<td>6515</td>
<td>APS</td>
<td>#3/Yellow/Green</td>
<td>SHORT</td>
<td>199</td>
<td>100/770</td>
<td>P</td>
</tr>
<tr>
<td>6516</td>
<td>APS</td>
<td>#4/Blue/White</td>
<td>SHORT</td>
<td>198</td>
<td>100/590</td>
<td>P</td>
</tr>
<tr>
<td>6517</td>
<td>APS</td>
<td>#5/Green/White</td>
<td>SHORT</td>
<td>199</td>
<td>100/20**</td>
<td>P</td>
</tr>
<tr>
<td>6518</td>
<td>APS</td>
<td>#6/Blue/Gray</td>
<td>SHORT</td>
<td>200</td>
<td>100/20**</td>
<td>P</td>
</tr>
<tr>
<td>6519</td>
<td>APS</td>
<td>#7/Green/White</td>
<td>SHORT</td>
<td>201</td>
<td>100/760</td>
<td>P</td>
</tr>
<tr>
<td>6524</td>
<td>TPS</td>
<td>#1/Brown</td>
<td>OPEN</td>
<td>200</td>
<td>100/350*</td>
<td>P</td>
</tr>
<tr>
<td>6525</td>
<td>TPS</td>
<td>#2/Blue/Orange</td>
<td>OPEN</td>
<td>200</td>
<td>100/300**</td>
<td>P</td>
</tr>
<tr>
<td>6526</td>
<td>TPS</td>
<td>#3/Yellow</td>
<td>OPEN</td>
<td>200</td>
<td>100/20**</td>
<td>P</td>
</tr>
<tr>
<td>6527</td>
<td>TPS</td>
<td>#4/Green/White</td>
<td>OPEN</td>
<td>199</td>
<td>100/230**</td>
<td>P</td>
</tr>
<tr>
<td>6528</td>
<td>TPS</td>
<td>#5/Yellow/White</td>
<td>OPEN</td>
<td>198</td>
<td>100/80*</td>
<td>P</td>
</tr>
<tr>
<td>6529</td>
<td>TPS</td>
<td>#6/Green/Black</td>
<td>OPEN</td>
<td>199</td>
<td>100/110*</td>
<td>P</td>
</tr>
<tr>
<td>6530</td>
<td>TPS</td>
<td>1 through 6 DISCONNECT</td>
<td>OPEN</td>
<td>200</td>
<td>100/110*</td>
<td>P</td>
</tr>
<tr>
<td>6531</td>
<td>TPS</td>
<td>#1 SHORTED</td>
<td>200</td>
<td>100/730</td>
<td></td>
<td>P</td>
</tr>
<tr>
<td>6532</td>
<td>TPS</td>
<td>#2 SHORTED</td>
<td>198</td>
<td>100/900</td>
<td></td>
<td>P</td>
</tr>
<tr>
<td>6533</td>
<td>TPS</td>
<td>#3 SHORTED</td>
<td>199</td>
<td>100/10**</td>
<td></td>
<td>P</td>
</tr>
<tr>
<td>6534</td>
<td>TPS</td>
<td>#4 SHORTED</td>
<td>199</td>
<td>100/10</td>
<td></td>
<td>P</td>
</tr>
<tr>
<td>6535</td>
<td>TPS</td>
<td>#5 SHORTED</td>
<td>200</td>
<td>100/70</td>
<td></td>
<td>P</td>
</tr>
<tr>
<td>6536</td>
<td>TPS</td>
<td>#6 SHORTED</td>
<td>200</td>
<td>100/240**</td>
<td></td>
<td>P</td>
</tr>
</tbody>
</table>

*Limp Home Mode at 840 RPM and 25%.
**Limp Home Mode at 1300 RPM and 27%.

REMARKS: Wires in TPS connector also control throttle plate motor.
Data trace #6525 and 6527 – Return to idle state time is based on Laboratory Observations and
is estimated as the TPS output is lost during the failures.

RECORDED BY: G. FARRAND DATE: 04/27/10
APPROVED BY: D. MESSICK
## 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>
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<td>THERMOCOUPLES</td>
<td>OMEGA</td>
<td>43P136P</td>
<td>08/09</td>
<td>08/10</td>
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<tr>
<td>ENGINE RECORDING</td>
<td>GTL COMPUTER</td>
<td>CPU1</td>
<td>BEFORE USE</td>
<td>BEFORE USE</td>
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<tr>
<td>TACHOMETER</td>
<td>MONARCH</td>
<td>1444664</td>
<td>05/09</td>
<td>05/10</td>
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</table>
2010 LINCOLN MKS
NHTSA NO. CA0209
FMVSS NO. 124

FIGURE 5.2
LEFT SIDE VIEW OF VEHICLE
2010 LINCOLN MKS
NHTSA NO. CA0209
FMVSS NO. 124

FIGURE 5.3
RIGHT SIDE VIEW OF VEHICLE
FIGURE 5.4
CLOSE-UP VIEW OF VEHICLE CERTIFICATION LABEL
TIRE AND LOADING INFORMATION

SEATING CAPACITY
TOTAL: 5
FRONT: 2
REAR: 3

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

<table>
<thead>
<tr>
<th>TIRE</th>
<th>SIZE</th>
<th>COLD TIRE PRESSURE</th>
</tr>
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<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>
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</table>

SEE OWNERS MANUAL FOR ADDITIONAL INFORMATION

FIGURE 5.5
CLOSE-UP VIEW OF VEHICLE PLACARD
FIGURE 5.7
CLOSE-UP OF SPRINGS 1 & 2
FIGURE 5.9
TEST SET-UP
FIGURE 5.11
ENGINE INSTRUMENTATION SET-UP
SECTION 6
PLOTS
GTL 6493, NHTSA CA0209, FMVSS 124.

100% Throttle, Normal Operation.
GTL 6495, NHTSA CA0209, FMVSS 124.

50% Throttle, Normal Operation.
GTL 6496, NHTSA CA0209, FMVSS 124.

25% Throttle, Normal Operation.
GTL 6497, NHTSA CA0209, FMVSS 124.

100% Throttle, Spring 1 Removed.
GTL 6498, NHTSA CA0209, FMVSS 124.

75% Throttle, Spring 1 Removed.
GTL 6499, NHTSA CA0209, FMVSS 124.

50% Throttle, Spring 1 Removed.

% Throttle & Foot Release.

Time in Seconds
GTL 6500, NHTSA CA0209, FMVSS 124.

25% Throttle, Spring 1 Removed.
GTL 6501, NHTSA CA0209, FMVSS 124.

100% Throttle, Spring 2 Removed.
GTL 6502, NHTSA CA0209, FMVSS 124.

75% Throttle, Spring 2 Removed.

% Throttle & Foot Release.

Time in Seconds
GTL 6503, NHTSA CA0209, FMVSS 124.

50% Throttle, Spring 2 Removed.
GTL 6504, NHTSA CA0209, FMVSS 124.

25% Throttle, Spring 2 Removed.

% Throttle vs Foot Release.

Time in Seconds
GTL 6505, NHTSA CA0209, FMVSS 124.  

100% Throttle, APS Connector Disconnect
GTL 6506, NHTSA CA0209, FMVSS 124.

100% Throttle, APS Wire 1 Open.

% Throttle & Foot Release.

Time in Seconds
GTL 6507, NHTSA CA0209, FMVSS 124.

100% Throttle, APS Wire 2 Open.

% Throttle & Foot Release.

Time in Seconds
GTL 6508, NHTSA CA0209, FMVSS 124.

100% Throttle, APS Wire 3 Open.

% Throttle & Foot Release.

Time in Seconds
GTL 6509, NHTSA CA0209, FMVSS 124.

100% Throttle, APS Wire 4 Open.
GTL 6510, NHTSA CAO209, FMVSS 124.

100% Throttle, APS Wire 5 Open.
GTL 6511, NHTSA CA0209, FMVSS 124.

100% Throttle, APS Wire 6 Open.
GTL 6513, NHTSA CA0209, FMVSS 124.

100% Throttle, APS Wire 1 Shorted.
GTL 6515, NHTSA CA0209, FMVSS 124.

100% Throttle, APS Wire 3 Shorted.
GTL 6516, NHTSA CA0209, FMVSS 124.

100% Throttle, APS Wire 4 Shorted.
GTL 6517, NHTSA CA0209, FMVSS 124.

100% Throttle, APS Wire 5 Shorted.

% Throttle vs Foot Release.

Time in Seconds

0.1

0.3

0.5

0.7

0.9
GTL 6518, NHTSA CA0209, FMVSS 124.

100% Throttle, APS Wire 6 Shorted.
GTL 6519, NHTSA CA0209, FMVSS 124.

100% Throttle, APS Wire 7 Shorted.

% Throttle & Foot Release.

Time in Seconds
GTL 6520, NHTSA CA0209, FMVSS 124.

100% Throttle, Spring 3 Removed.
GTL 6521, NHTSA CA0209, FMVSS 124.

75% Throttle, Spring 3 Removed.
GTL 6522, NHTSA CA0209, FMVSS 124.

50% Throttle, Spring 3 Removed.
GTL 6523, NHTSA CA0209, FMVSS 124.

25% Throttle, Spring 3 Removed.
GTL 6524, NHTSA CA0209, FMVSS 124.

100% Throttle, TPS Wire 1 Open.
GTL 6525, NHTSA CA0209, FMVSS 124.

100% Throttle, TPS Wire 2 Open.

Time in Seconds
GTL 6526, NHTSA CA0209, FMVSS 124.

100% Throttle, TPS Wire 3 Open.
GTL 6527, NHTSA CA0209, FMVSS 124.

100% Throttle, TPS Wire 4 Open.

% Throttle & Foot Release.

Time in Seconds
GTL 6528, NHTSA CA0209, FMVSS 124.

100% Throttle, TPS Wire 5 Open.

% Throttle x Foot Release.

Time in Seconds
GTL 6529, NHTSA CA0209, FMVSS 124.

100% Throttle, TPS Wire 6 Open.
GTL 6530, NHTSA CA0209, FMVSS 124.

100% Throttle, TPS Connector, Disconnect

% Throttle & Foot Release.

Time in Seconds

0.1
0.3
0.5
0.7
0.9

100 90 80 70 60 50 40 30 20 10 0
GTL 6531, NHTSA CA0209, FMVSS 124.

100% Throttle, TPS Wire 1 Shorted.
GTL 6532, NHTSA CA0209, FMVSS 124.

100% Throttle, TPS Wire 2 Shorted.
GTL 6533, NHTSA CA0209, FMVSS 124.

100% Throttle, TPS Wire 3 Shorted.
GTL 6534, NHTSA CA0209, FMVSS 124.

100% Throttle, TPS Wire 4 Shorted.
GTL 6535, NHTSA CA0209, FMVSS 124.

100% Throttle, TPS Wire 5 Shorted.
GTL 6536, NHTSA CA0209, FMVSS 124.

100% Throttle, TPS Wire & Shorted.