FINAL REPORT NUMBER 401-NSA-04-003

SAFETY COMPLIANCE TESTING FOR
FMVSS 401
Interior Trunk Release

2004 Chevrolet Monte Carlo 2-Door
NHTSA No. C40117

Prepared by:
NHTSA
OFFICE OF VEHICLE SAFETY COMPLIANCE
400 7th Street, SW
Washington, D.C. 20590

March 30, 2004

FINAL REPORT

PREPARED FOR:

U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
ENFORCEMENT
OFFICE OF VEHICLE SAFETY COMPLIANCE
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Prepared By: Stuart Seigel, Safety Compliance Engineer

Accepted By: Stuart Seigel

Date: 3/30/07
**TECHNICAL REPORT STANDARD TITLE PAGE**

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<tr>
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<tbody>
<tr>
<td>6. Performing Organization Code</td>
<td>OVSC</td>
<td>7. Author(s)</td>
<td>Stuart Seigel, Safety Compliance Engineer</td>
</tr>
<tr>
<td>10. Work Unit No.</td>
<td>11. Contract or Grant No.</td>
<td>12. Sponsoring Agency Name and Address</td>
<td>U.S. Department of Transportation National Highway Traffic Safety Administration Enforcement Office of Vehicle Safety Compliance (NVS-221) 400 Seventh Street, SW Room 6111 Washington, DC 20590</td>
</tr>
<tr>
<td>15. Supplementary Notes</td>
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<tr>
<td>16. Abstract</td>
<td>A compliance test was conducted on the subject 2004 Chevrolet Monte Carlo 2-Door, NHTSA No. C40117, in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-401-01 for the determination of FMVSS 401 compliance. The test was conducted at a Chevrolet Dealership in Northern Virginia, by NHTSA personnel on March 10, 2004. Test failures identified were as follows: NONE</td>
<td></td>
<td></td>
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<tr>
<td>22. Price</td>
<td></td>
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</table>
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C. Trunk Open  
D. Vehicle Certification Label  
E. Trunk Release Handle  
F.

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1.0  PURPOSE OF COMPLIANCE TEST

The purpose of this compliance test was to determine whether the subject vehicle, a 2004 Chevrolet Monte Carlo 2-Door, meets the performance requirements of FMVSS 401, Interior Trunk Release.

The test was conducted in accordance with the U. S. Department of Transportation, National Highway Traffic Safety Administration's Laboratory Test Procedure TP-401-01.

The test was conducted at a Chevrolet Dealership in Northern Virginia on March 10, 2004 by NHTSA Office of Vehicle Safety Compliance test engineers.
2.0 TEST PROCEDURE AND DISCUSSION OF RESULTS

Based on the test performed, the 2004 Chevrolet Monte Carlo 2-Door, NHTSA No. C40117 appeared to meet the requirements of FMVSS 401.

The vehicle was tested by entering the trunk and closing the lid. The release handle was easily observed in the darkened, enclosed trunk. A force gauge was attached to the release handle and 3 separate attempts were made to exit the trunk by applying a load to the instrument. For each attempt, the trunk released from the single latching position at a force level of approximately 6.8 newtons (1.5 lbs.) or less.
3.0 COMPLIANCE TEST DATA

DATA SHEET 1

FMVSS 401 - VEHICLE DESCRIPTION

VEHICLE MY/MAKE/MODEL 2004/CHEVROLET / MONTE CARLO

BODY STYLE: 2-DOOR

VEH. NHTSA NO.: C40117  VIN: 2G1WZ151549338599

DATE OF TEST: 03/10/04  TEST LAB: BY CVSC @ DEALER

GVWR: 2042 KG  MANUFACTURED DATE: 02/04

TRUNK LOCATION: REAR X  FRONT

If Front, Front Opening? na

NUMBER OF TRUNK LID LATCHING POSITIONS: 1

INTERIOR TRUNK RELEASE: MANUAL X, AUTOMATIC, BOTH

POWER OPERATED CLOSURE: na

OWNER'S MANUAL DESCRIPTION OF TRUNK RELEASE: YES X

NO

REMOVABLE EQUIPMENT DELIVERED IN TRUNK:

SPARE TIRE: X (SIZE)

TIRE JACK: X

LUG WRENCH: X

TOOL BOX: (SIZE)

PARTITIONS:

OTHER:

REMARKS:

RECORDED BY: SSe DATE: 03/10/04

APPROVED BY: S. Seigel
DATA SHEET 2 (1 of 2)

FMVSS 401 - All trunks except for front trunk compartments with front opening hoods

MANUAL TRUNK RELEASE OPERATION

VEHICLE MAKE/MODEL/BODY STYLE: 2004/ CHEVROLET/MONTE CARLO/2-DOOR

VEH. NHTSA NO.: C40117___________; VIN: 2G1WZ151549333599

DATE OF TEST: 3/10/04

Method used to actuate interior trunk release:_T-shaped grab handle to cable
(Grab handle, Rotating lever, etc.)

Can test personnel enter trunk and be closed within: Yes X No

If Yes, size of occupant: At least 50th percentile male

Is there access to the trunk compartment by folding down rear seat or partition:

Yes X No

Does Release Mechanism require electric power: Yes X No

Can release mechanism be easily seen inside the closed trunk: Yes X No

Describe method used by vehicle manufacturer to ensure that release mechanism is visible in a closed trunk compartment: Phosphorescence (Phosphorescence, auxiliary lighting, etc)

Describe laboratory test method used to determine visibility of release mechanism: Trunk Entry (Trunk entry, darkened room, etc.)

<table>
<thead>
<tr>
<th>Vehicle Stationary (0 km/h)</th>
<th>Force Required to Release Trunk Lid (Newtons)</th>
<th>Trunk Released from All latching positions</th>
<th>Pass/Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO KEY IN IGNITION</td>
<td>[no requirement]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attempt 1</td>
<td>6.8 N - 1.5 pounds</td>
<td>Yes</td>
<td>pass</td>
</tr>
<tr>
<td>Attempt 2</td>
<td>4.5 N - 1.0 pounds</td>
<td>Yes</td>
<td>pass</td>
</tr>
<tr>
<td>Attempt 3</td>
<td>4.5 N - 1.0 pounds</td>
<td>Yes</td>
<td>pass</td>
</tr>
<tr>
<td>Average</td>
<td>5.3 N - 1.2 pounds</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
DATA SHEET 2 (2 of 2)

FMVSS 401 - MANUAL TRUNK RELEASE OPERATION (continued)

NOTE: Interior Trunk Release is a totally mechanical system with its operation and functioning not dependent upon engine operation or vehicle speed. The release mechanism will function identical to that of the stationary vehicle with the no key in the ignition (as previously tested) and thus the following tests were not required to be conducted.

<table>
<thead>
<tr>
<th>Vehicle Stationary (0 km/h)</th>
<th>Force Required to Release Trunk Lid (Newtons) [no requirement]</th>
<th>Trunk Released from All latching positions</th>
<th>Pass/Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attempt 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attempt 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attempt 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average -</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vehicle Speed (km/h)</th>
<th>Force Required to Release Trunk Lid (Newtons) [no requirement]</th>
<th>Trunk Released from All latching positions</th>
<th>Pass/Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Describe method used to propel vehicle: __________________________________________

PASS  X  FAIL _____________________________

REMARKS:

RECORDED BY:  SSe  DATE:  3/10/04

APPROVED BY:  S. Seigel
## DATA SHEET 3
### FMVSS 401 - TEST SUMMARY

<table>
<thead>
<tr>
<th>Description</th>
<th>PASS</th>
<th>FAIL</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic or Manual release mechanism inside the trunk compartment. S4.1</td>
<td></td>
<td>X</td>
<td>Manual release lever handle</td>
</tr>
<tr>
<td>If manual release, lighting feature is included. S4.2(a)</td>
<td></td>
<td>X</td>
<td>Self Lighting</td>
</tr>
<tr>
<td>If automatic release, unlashes trunk lid within 5 minutes. S4.2(b)</td>
<td>na</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Except as provided by S4.3(b), actuation of release mechanism required by S4.1 completely releases trunk lid from all latching positions of the trunk lid latch. S 4.3(a)</td>
<td></td>
<td>X</td>
<td>Single Latch Position Only</td>
</tr>
<tr>
<td>For front trunk compartments, front opening hood, when vehicle is stationary latch releases trunk lid from all locking positions. When moving forward at a speed less than 5km/h, must release the primary latch and may release all latches. At speeds greater than 5km/h must release the primary latch only. S4.3(b)</td>
<td>na</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PASS X FAIL

REMARKS: RECORDED BY: SSea

APPROVED BY: S Seigel

DATE: 3/10/04
### 4.0 - Test Equipment List and Calibration Information

<table>
<thead>
<tr>
<th>EQUIPMENT</th>
<th>DESCRIPTION</th>
<th>MODEL/SERIAL NO.</th>
<th>CALIBRATION DATE</th>
<th>NEXT CAL. DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Force Transducer</td>
<td>Viking Jr. Hanson Instrument</td>
<td>Model 890</td>
<td>Manufacturer</td>
<td>Manufacturer</td>
</tr>
</tbody>
</table>
5.0 - Photographs
MFD BY GENERAL MOTORS OF CANADA LTD.

DATE: 02/04
QVWR: 2042 KG
GAWR: 1136 KG
4502 LB
2502 LB

THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY, BUMPER, AND THEFT PREVENTION STANDARDS EFFECTIVE ON THE DATE OF MANUFACTURE SHOWN ABOVE.

2G1WZ15154938599 TYPE: PASSANO

2004 CHEVROLET MOTECANIO
NHTSA # C40117
VEHICLE CERTIFICATION LABEL
6.0 Vehicle Owner's Manual (applicable pages)
Emergency Trunk Release Handle

Notice: Using the emergency trunk release handle as a tie-down or anchor point when securing items in the trunk may damage it. Use the emergency trunk release handle only to help you open the trunk lid.

There's a glow-in-the-dark emergency trunk release handle located on the inside of the trunk lid of your vehicle. This handle will glow following exposure to light. Pull the release handle up to open the trunk from the inside.