SAFETY COMPLIANCE TESTING FOR FMVSS 301R
FUEL SYSTEM INTEGRITY – REAR IMPACT

DAIMLER AG STUTTGART
2009 MERCEDES-BENZ C300
NHTSA NUMBER: C90513

PREPARED BY:
MGA RESEARCH CORPORATION
5000 WARREN ROAD
BURLINGTON, WI 53105

Test Date: July 7, 2009
Final Report Date: July 24, 2009

FINAL REPORT

PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
ENFORCEMENT
OFFICE OF VEHICLE SAFETY COMPLIANCE
1200 NEW JERSEY AVENUE, S.E., NVS-220
WASHINGTON, D.C. 20590
This final test report was prepared for the U.S. Department of Transportation, National Highway Traffic Safety Administration, in response to Contract Number DTNH22-06-C-00030.

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: Joe Fleck, Project Engineer  Date: 7/21/09

Reviewed by: David Winkelbauer, Facility Director  Date: 7/21/09

FINAL REPORT ACCEPTED BY:

Edward E. Chan  
COTR, Rear Impact  
7/24/2009  
Date of Acceptance
A rear impact was conducted on a 2009 Mercedes-Benz C300 at MGA Research Corporation on July 7, 2009. This test was conducted to obtain data indicative of FMVSS 301R. The impact velocity was 79.5 km/h. The ambient temperature at the time of impact was 19.4 degrees Celsius.
## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Purpose and Summary of Test</td>
<td>1</td>
</tr>
<tr>
<td>2 Data Sheets</td>
<td>2</td>
</tr>
</tbody>
</table>

### Data Sheet No. Page No.

<table>
<thead>
<tr>
<th>Data Sheet No.</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Test Vehicle Specifications</td>
<td>2</td>
</tr>
<tr>
<td>2 Pre-Test Data</td>
<td>4</td>
</tr>
<tr>
<td>3 Moving Barrier Data</td>
<td>6</td>
</tr>
<tr>
<td>4 Post-Test Data</td>
<td>7</td>
</tr>
<tr>
<td>5 Static Rollover Test Data</td>
<td>8</td>
</tr>
</tbody>
</table>

### Form No. Page No.

<table>
<thead>
<tr>
<th>Form No.</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Test Vehicle Information</td>
<td>10</td>
</tr>
</tbody>
</table>

### Appendix Page No.

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Photographs</td>
<td>A</td>
</tr>
</tbody>
</table>
SECTION 1

PURPOSE AND SUMMARY OF TEST

PURPOSE

This rear impact test is sponsored by the National Highway Traffic Safety Administration (NHTSA) under contract number DTNH22-06-C-00030. The purpose of this test is to reduce deaths and injuries occurring from fires that result from fuel spillage during and after motor vehicle crashes and resulting from ingestion of fuels during siphoning.

SUMMARY

A 2009 Mercedes-Benz C300 was impacted by a Moving Deformable Barrier (MDB) at a velocity of 79.5 km/h. The test was performed at MGA Research Corporation on July 7, 2009. Pre-and post-test photographs of the vehicle and dummies can be found in Appendix A.

One real-time camera and four high-speed cameras were used to document the impact event.

- Left Rear Half 1000 fps
- Right Rear Half 1000 fps
- Overhead Overall 1000 fps
- Right Overall 1000 fps
- Real Time Pan 24 fps

Two ballast Part 572E, 50th percentile male anthropomorphic test devices (ATDs) were placed in the driver and right-front passenger seating positions according to dummy placement instructions specified in the Laboratory Indicant Test Procedure.

There was no Stoddard Solvent leakage after the event or during any phase of the static rollover.

The vehicle appeared to comply with all the requirements of FMVSS No. 301 “Fuel System Integrity.”
## DATA SHEET NO. 1
### TEST VEHICLE SPECIFICATIONS

Test Vehicle: 2009 Mercedes-Benz C300  
NHTSA No.: C90513  
Test Program: FMVSS 301 Fuel System Integrity  
Test Date: 7/7/2009

### TEST VEHICLE INFORMATION

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Daimler AG Stuttgart</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>C300</td>
</tr>
<tr>
<td>Body Style</td>
<td>Passenger Car</td>
</tr>
<tr>
<td>Major Options</td>
<td>333 Sport Sedan Package</td>
</tr>
<tr>
<td>NHTSA No.</td>
<td>C90513</td>
</tr>
<tr>
<td>VIN</td>
<td>WDDGF54X49F226527</td>
</tr>
<tr>
<td>Color</td>
<td>Arctic White</td>
</tr>
<tr>
<td>Delivery Date</td>
<td>5/29/2009</td>
</tr>
<tr>
<td>Odometer Reading (mile)</td>
<td>561</td>
</tr>
<tr>
<td>Dealer</td>
<td>Enterprise Motorcars, Inc.</td>
</tr>
<tr>
<td>Transmission</td>
<td>Manual</td>
</tr>
<tr>
<td>Final Drive</td>
<td>Rear Wheel Drive</td>
</tr>
<tr>
<td>Number of Cylinders</td>
<td>6</td>
</tr>
<tr>
<td>Engine Displacement (L)</td>
<td>3.0</td>
</tr>
<tr>
<td>Engine Placement</td>
<td>Longitudinal</td>
</tr>
</tbody>
</table>

### DATA FROM VEHICLE’S CERTIFICATION LABEL

<table>
<thead>
<tr>
<th>Manufactured By</th>
<th>Daimler AG Stuttgart</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Manufacture</td>
<td>07/08</td>
</tr>
<tr>
<td>GVWR (kg)</td>
<td>2040</td>
</tr>
<tr>
<td>GAWR Front (kg)</td>
<td>995</td>
</tr>
<tr>
<td>GAWR Rear (kg)</td>
<td>1085</td>
</tr>
</tbody>
</table>

### VEHICLE CAPACITY DATA

<table>
<thead>
<tr>
<th>Measured Parameter</th>
<th>Front</th>
<th>Rear</th>
<th>Third</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Seats</td>
<td>Bucket</td>
<td>Bench</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Occupants</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Capacity Wt. (VCW) (kg)</td>
<td></td>
<td></td>
<td></td>
<td>375</td>
</tr>
<tr>
<td>Number of Occupants x 68 kg.</td>
<td></td>
<td></td>
<td></td>
<td>340</td>
</tr>
<tr>
<td>Cargo Wt. (RCLW) (kg)</td>
<td></td>
<td></td>
<td></td>
<td>35</td>
</tr>
</tbody>
</table>
DATA SHEET NO. 1 (continued)

TEST VEHICLE SPECIFICATIONS

Test Vehicle: 2009 Mercedes-Benz C300  
NHTSA No.: C90513
Test Program: FMVSS 301 Fuel System Integrity  
Test Date: 7/7/2009

DATA FROM VEHICLE’S TIRE PLACARD

<table>
<thead>
<tr>
<th>Measured Parameter</th>
<th>Front</th>
<th>Rear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Tire Pressure (kPa)</td>
<td>350</td>
<td>350</td>
</tr>
<tr>
<td>Cold Pressure (kPa)</td>
<td>190</td>
<td>230</td>
</tr>
<tr>
<td>Recommended Tire Size</td>
<td>225/45R17</td>
<td>245/40R17</td>
</tr>
<tr>
<td>Recommended Load Range</td>
<td>91H</td>
<td>91H</td>
</tr>
<tr>
<td>Tire Size on Vehicle</td>
<td>225/45R17</td>
<td>245/40R17</td>
</tr>
<tr>
<td>Tire Manufacturer</td>
<td>Continental</td>
<td>Continental</td>
</tr>
<tr>
<td>Location of Placard of Vehicle</td>
<td>Lower B-Post</td>
<td></td>
</tr>
<tr>
<td>Type of Spare Tire (full size/space saver)</td>
<td>Space Saver</td>
<td></td>
</tr>
</tbody>
</table>
DATA SHEET NO. 2
PRE-TEST DATA

Test Vehicle: 2009 Mercedes-Benz C300
Test Program: FMVSS 301 Fuel System Integrity
NHTSA No.: C90513
Test Date: 7/7/2009

WEIGHT OF TEST VEHICLE

<table>
<thead>
<tr>
<th></th>
<th>Units</th>
<th>As Delivered (UVW) (Axle)</th>
<th>As Tested (ATW) (Axle)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Front</td>
<td>Rear</td>
<td>Total</td>
</tr>
<tr>
<td>Left</td>
<td>kg</td>
<td>417.3</td>
<td>369.7</td>
</tr>
<tr>
<td>Right</td>
<td>kg</td>
<td>403.7</td>
<td>383.7</td>
</tr>
<tr>
<td>Ratio</td>
<td>%</td>
<td>52.1</td>
<td>47.9</td>
</tr>
<tr>
<td>Totals</td>
<td>kg</td>
<td>821.0</td>
<td>753.4</td>
</tr>
</tbody>
</table>

CALCULATION OF TARGET TEST WEIGHT (TTW)

<table>
<thead>
<tr>
<th>Measured Parameter</th>
<th>Units</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Delivered Weight (UVW)</td>
<td>kg</td>
<td>1574.4</td>
</tr>
<tr>
<td>Rated Cargo/Luggage Weight (RCLW)</td>
<td>kg</td>
<td>35</td>
</tr>
<tr>
<td>Weight of 2 P572E ATDs</td>
<td>kg</td>
<td>148</td>
</tr>
<tr>
<td>Calculated Vehicle Target Weight (TVTW)</td>
<td>kg</td>
<td>1757.4</td>
</tr>
</tbody>
</table>

Vehicle Wheelbase: 2761 mm
Vehicle Width: 1779 mm
Weight of Ballast Secured in Rear Seat: 34.9 kg
Method of Securing Ballast: Ratchet Straps
Vehicle Components Removed for Weight Reduction: None

VEHICLE ATTITUDES

<table>
<thead>
<tr>
<th></th>
<th>Units</th>
<th>LF</th>
<th>RF</th>
<th>LR</th>
<th>RR</th>
</tr>
</thead>
<tbody>
<tr>
<td>As Delivered</td>
<td>mm</td>
<td>657</td>
<td>659</td>
<td>656</td>
<td>660</td>
</tr>
<tr>
<td>As Tested</td>
<td>mm</td>
<td>640</td>
<td>644</td>
<td>643</td>
<td>646</td>
</tr>
</tbody>
</table>
## DATA SHEET NO. 2 (continued)

### PRE-TEST DATA

Test Vehicle: 2009 Mercedes-Benz C300  
NHTSA No.: C90513  
Test Program: FMVSS 301 Fuel System Integrity  
Test Date: 7/7/2009

### FUEL SYSTEM DATA

<table>
<thead>
<tr>
<th>Description</th>
<th>Units: Liters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usable Capacity of “Standard Tank” (Owner's Manual)</td>
<td>66</td>
</tr>
<tr>
<td>Usable Capacity Figure Furnished by COTR</td>
<td>66</td>
</tr>
<tr>
<td>Usable Capacity of “Optional” Tank</td>
<td>60.7 to 62.0</td>
</tr>
<tr>
<td>92-94% of Usable Capacity</td>
<td></td>
</tr>
<tr>
<td>Actual Test Volume (entire fuel system filled)</td>
<td>61.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Fluid Type</td>
<td>Stoddard Solvent</td>
</tr>
<tr>
<td>Test Fluid Kinematic Viscosity (centistokes)</td>
<td>2.1 cSt @ 20° C</td>
</tr>
<tr>
<td>Test Fluid Color</td>
<td>Purple</td>
</tr>
<tr>
<td>Type of Vehicle Fuel Pump</td>
<td>Electrical</td>
</tr>
<tr>
<td>Activate Electric Fuel Pump Operation with Ignition Switch ON, but Engine OFF</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Comments (noticeable attributes of fuel system components, capacity, etc.)**  
None
DATA SHEET NO. 3
MOVING BARRIER DATA

Test Vehicle: 2009 Mercedes-Benz C300  NHTSA No.:  C90513
Test Program: FMVSS 301 Fuel System Integrity  Test Date:  7/7/2009

MOVING BARRIER'S TEST WEIGHT

<table>
<thead>
<tr>
<th>Units</th>
<th>Front</th>
<th>Rear</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left</td>
<td>kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>374.2</td>
<td>308.8</td>
<td></td>
</tr>
<tr>
<td>Right</td>
<td>kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>389.5</td>
<td>291.2</td>
<td></td>
</tr>
<tr>
<td>Ratio</td>
<td>%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>56.0</td>
<td>44.0</td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>763.7</td>
<td>600.0</td>
<td>1363.7</td>
</tr>
</tbody>
</table>

Tires (Mfr, line, size) | Yokohama
Tire Pressure (kPa)    | 207
Brake Abort System (Yes/No)? | Yes
Date of Last Calibration | 8/6/2008
## IMPACT VELOCITY

<table>
<thead>
<tr>
<th></th>
<th>Units: km/h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Impact Velocity</td>
<td>80.0</td>
</tr>
<tr>
<td>Actual Impact Velocity (Trap No. 1)</td>
<td>79.5</td>
</tr>
<tr>
<td>Actual Impact Velocity (Trap No. 2)</td>
<td>79.5</td>
</tr>
<tr>
<td>Average Impact Speed</td>
<td>79.5</td>
</tr>
</tbody>
</table>

| Temperature at Time of Impact (°C) | 19.4 |
| Test Time                         | 2:55 pm |

## WELDING ROD IMPACT POINT

<table>
<thead>
<tr>
<th></th>
<th>Units: mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical distance from target center (+ above target / - below target)</td>
<td>2 mm down</td>
</tr>
<tr>
<td>Horizontal distance from target center (+ to the right / - to the left)</td>
<td>14 mm left</td>
</tr>
</tbody>
</table>
DATA SHEET NO. 5
STATIC ROLLOVER TEST DATA

Test Vehicle: 2009 Mercedes-Benz C300  NHTSA No.: C90513
Test Program: FMVSS 301 Fuel System Integrity  Test Date: 7/7/2009

STODDARD SOLVENT SPILLAGE MEASUREMENT

A. From impact until vehicle motion ceases: ___0___ g
   (Maximum Allowable = 28 grams)
B. For the 5 minute period after motion ceases: ___0___ g
   (Maximum Allowable = 28 grams)
C. For the following 25 minutes: ___0___ g
   (Maximum Allowable = 28 grams/minute)
D. Spillage: None

FMVSS 301 STATIC ROLLOVER DATA

1. The specified fixture rollover rate for each 90°
   of rotation is 60 to 180 seconds.
2. The position hold time at each position is 300
   seconds (minimum).
3. Details of Stoddard Solvent spillage locations: Not Applicable
DATA SHEET NO. 5 (continued)
STATIC ROLLOVER TEST DATA

Test Vehicle: 2009 Mercedes-Benz C300  
Test Program: FMVSS 301 Fuel System Integrity  
NHTSA No.: C90513  
Test Date: 7/7/2009

STODDARD SOLVENT SPILLAGE MEASUREMENT
Hold Time = 5 minutes at all intervals

<table>
<thead>
<tr>
<th>Test Phase</th>
<th>Spillage (g)</th>
<th>Spillage Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>0° TO 90° Rotation Time (sec)</strong></td>
<td>= 119 sec</td>
<td></td>
</tr>
<tr>
<td>First 5 minutes from onset of rotation</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Sixth minute from onset of rotation</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Seventh minute from onset of rotation</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Eight minute if required</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Test Phase</th>
<th>Spillage (g)</th>
<th>Spillage Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>90° TO 180° Rotation Time (sec)</strong></td>
<td>= 115 sec</td>
<td></td>
</tr>
<tr>
<td>First 5 minutes from onset of rotation</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Sixth minute from onset of rotation</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Seventh minute from onset of rotation</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Eight minute if required</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Test Phase</th>
<th>Spillage (g)</th>
<th>Spillage Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>180° TO 270° Rotation Time (sec)</strong></td>
<td>= 110 sec</td>
<td></td>
</tr>
<tr>
<td>First 5 minutes from onset of rotation</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Sixth minute from onset of rotation</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Seventh minute from onset of rotation</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Eight minute if required</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Test Phase</th>
<th>Spillage (g)</th>
<th>Spillage Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>270° TO 360° Rotation Time (sec)</strong></td>
<td>= 120 sec</td>
<td></td>
</tr>
<tr>
<td>First 5 minutes from onset of rotation</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Sixth minute from onset of rotation</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Seventh minute from onset of rotation</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Eight minute if required</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>
FORM 1
TEST VEHICLE INFORMATION

Test Vehicle: 2009 Mercedes-Benz C300  
Test Program: FMVSS 301 Fuel System Integrity  
NHTSA No.: C90513  
Test Date: 7/7/2009

NORMAL DESIGN RIDING POSITION

With the seat in the mid fore-aft seat track position the angle of the driver’s seat back when it is in the nominal riding position is set at 21 degrees, front passenger is set at 21 degrees.

<table>
<thead>
<tr>
<th>Driver Seat Back Angle</th>
<th>21°</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passenger Seat Back Angle</td>
<td>21°</td>
</tr>
</tbody>
</table>

SEAT FORE/AFT POSITIONING

<table>
<thead>
<tr>
<th></th>
<th>Total Fore/Aft Travel</th>
<th>Placed in Position #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driver Seat</td>
<td>285 mm</td>
<td>143 mm</td>
</tr>
<tr>
<td>Passenger Seat</td>
<td>285 mm</td>
<td>143 mm</td>
</tr>
</tbody>
</table>

D-RING ADJUSTMENT

The driver and passenger D-rings were full up.

STEERING COLUMN ADJUSTMENT

The steering column was placed in the mid position.
APPENDIX A

PHOTOGRAPHS
<table>
<thead>
<tr>
<th>Photo No.</th>
<th>Description</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Vehicle’s Certification Label</td>
<td>A-1</td>
</tr>
<tr>
<td>2.</td>
<td>Vehicle’s Tire Placard</td>
<td>A-2</td>
</tr>
<tr>
<td>3.</td>
<td>Pre-Test Front View of Vehicle</td>
<td>A-3</td>
</tr>
<tr>
<td>4.</td>
<td>Post-Test Front View of Vehicle</td>
<td>A-4</td>
</tr>
<tr>
<td>5.</td>
<td>Pre-Test Left Side View of Vehicle</td>
<td>A-5</td>
</tr>
<tr>
<td>6.</td>
<td>Post-Test Left Side View of Vehicle</td>
<td>A-6</td>
</tr>
<tr>
<td>7.</td>
<td>Pre-Test Left Rear Close-up View of Vehicle</td>
<td>A-7</td>
</tr>
<tr>
<td>8.</td>
<td>Post-Test Left Rear Close-up View of Vehicle</td>
<td>A-8</td>
</tr>
<tr>
<td>9.</td>
<td>Pre-Test Right Side View of Vehicle</td>
<td>A-9</td>
</tr>
<tr>
<td>10.</td>
<td>Post-Test Right Side View of Vehicle</td>
<td>A-10</td>
</tr>
<tr>
<td>11.</td>
<td>Pre-Test Right Rear Close-up View of Vehicle</td>
<td>A-11</td>
</tr>
<tr>
<td>12.</td>
<td>Post-Test Right Rear Close-up View of Vehicle</td>
<td>A-12</td>
</tr>
<tr>
<td>13.</td>
<td>Pre-Test Rear View of Vehicle</td>
<td>A-13</td>
</tr>
<tr>
<td>14.</td>
<td>Post-Test Rear View of Vehicle</td>
<td>A-14</td>
</tr>
<tr>
<td>15.</td>
<td>Pre-Test ¾ Frontal View From Right Side of Vehicle</td>
<td>A-15</td>
</tr>
<tr>
<td>16.</td>
<td>Post-Test ¾ Frontal View From Right Side of Vehicle</td>
<td>A-16</td>
</tr>
<tr>
<td>17.</td>
<td>Pre-Test ¾ Rear View From Right Side of Vehicle</td>
<td>A-17</td>
</tr>
<tr>
<td>18.</td>
<td>Post-Test ¾ Rear View From Right Side of Vehicle</td>
<td>A-18</td>
</tr>
<tr>
<td>19.</td>
<td>Pre-Test ¾ Rear View From Left Side of Vehicle</td>
<td>A-19</td>
</tr>
<tr>
<td>20.</td>
<td>Post-Test ¾ Rear View From Left Side of Vehicle</td>
<td>A-20</td>
</tr>
<tr>
<td>21.</td>
<td>Pre-Test Impact Point</td>
<td>A-21</td>
</tr>
<tr>
<td>22.</td>
<td>Post-Test Impact Point</td>
<td>A-22</td>
</tr>
<tr>
<td>23.</td>
<td>Pre-Test Underbody View 1</td>
<td>A-23</td>
</tr>
<tr>
<td>24.</td>
<td>Post-Test Underbody View 1</td>
<td>A-24</td>
</tr>
<tr>
<td>25.</td>
<td>Pre-Test Underbody View 2</td>
<td>A-25</td>
</tr>
<tr>
<td>26.</td>
<td>Post-Test Underbody View 2</td>
<td>A-26</td>
</tr>
<tr>
<td>27.</td>
<td>Pre-Test Underbody View 3</td>
<td>A-27</td>
</tr>
<tr>
<td>Photo No.</td>
<td>Description</td>
<td>Page No.</td>
</tr>
<tr>
<td>----------</td>
<td>--------------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>28</td>
<td>Post-Test Underbody View 3</td>
<td>A-28</td>
</tr>
<tr>
<td>29</td>
<td>Pre-Test Front View of MDB</td>
<td>A-29</td>
</tr>
<tr>
<td>30</td>
<td>Post-Test Front View of MDB</td>
<td>A-30</td>
</tr>
<tr>
<td>31</td>
<td>Pre-Test ¾ Right Side View of MDB</td>
<td>A-31</td>
</tr>
<tr>
<td>32</td>
<td>Post-Test ¾ Right Side View of MDB</td>
<td>A-32</td>
</tr>
<tr>
<td>33</td>
<td>Pre-Test ¾ Left Side View of MDB</td>
<td>A-33</td>
</tr>
<tr>
<td>34</td>
<td>Post-Test ¾ Left Side View of MDB</td>
<td>A-34</td>
</tr>
<tr>
<td>35</td>
<td>Pre-Test Top View of MDB</td>
<td>A-35</td>
</tr>
<tr>
<td>36</td>
<td>Post-Test Top View of MDB</td>
<td>A-36</td>
</tr>
<tr>
<td>37</td>
<td>Static Rollover at 90 Degrees</td>
<td>A-37</td>
</tr>
<tr>
<td>38</td>
<td>Static Rollover at 180 Degrees</td>
<td>A-38</td>
</tr>
<tr>
<td>39</td>
<td>Static Rollover at 270 Degrees</td>
<td>A-39</td>
</tr>
<tr>
<td>40</td>
<td>Static Rollover at 360 Degrees</td>
<td>A-40</td>
</tr>
<tr>
<td>Label Type</td>
<td>Value 1</td>
<td>Value 2</td>
</tr>
<tr>
<td>------------------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>MFD BY DAIMLER AG STUTTGART</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GVWR</td>
<td>2040</td>
<td>4497</td>
</tr>
<tr>
<td>GAWR FRONT</td>
<td>995</td>
<td>2193</td>
</tr>
<tr>
<td>GAWR REAR</td>
<td>1085</td>
<td>2391</td>
</tr>
<tr>
<td>WDDGF54X49F226527</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This vehicle conforms to all applicable U.S. Federal Motor Vehicle Safety, Bumper and Theft Prevention Standards in effect on the date of manufacture shown above.

Made in Germany
**Vehicle's Tire Placard**

<table>
<thead>
<tr>
<th>ORIGINAL TIRE SIZE</th>
<th>COLD TIRE INFLATION PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>225/45 R17</td>
<td>FRONT 190 KPA, 28 PSI</td>
</tr>
<tr>
<td>245/40 R17</td>
<td>REAR 230 KPA, 33 PSI</td>
</tr>
<tr>
<td>COMPACT SPARE TIRE</td>
<td>COLD TIRE INFLATION PRESSURE</td>
</tr>
<tr>
<td>T125/90 R16 98M</td>
<td>420 KPA, 60 PSI</td>
</tr>
</tbody>
</table>

The combined weight of occupants and cargo should never exceed **375 kg** or **826 lbs.**
Pre-Test Front View of Vehicle
Pre-Test Left Side View of Vehicle
Post-Test Left Side View of Vehicle
Pre-Test Left Rear Close-up View of Vehicle
Post-Test Left Rear Close-up View of Vehicle
Pre-Test Right Side View of Vehicle
Post-Test Right Side View of Vehicle
Pre-Test Right Rear Close-up View of Vehicle
Post-Test Right Rear Close-up View of Vehicle
Pre-Test Rear View of Vehicle
Post-Test Rear View of Vehicle
Post-Test ¾ Rear View From Right Side of Vehicle
Post-Test ¾ Rear View From Left Side of Vehicle
Pre-Test Impact Point
Post-Test Impact Point
Pre-Test Underbody View 1
Pre-Test Front View of MDB
Post-Test Front View of MDB
Post-Test ¾ Right Side View of MDB
Post-Test ¾ Left Side View of MDB
Pre-Test Top View of MDB
Static Rollover at 90 Degrees
Static Rollover at 180 Degrees
Static Rollover at 270 Degrees