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Prepared by: Eric Peschman, Project Engineer Date: November 7, 2011

Reviewed by: Michael Janovicz, Program Manager Date: November 7, 2011

FINAL REPORT ACCEPTED BY:

Edward E. Chan

Date of Acceptance

Digitally signed by Edward E. Chan
DN: cn=Edward E. Chan, o=National Highway Traffic Safety Administration, ou=Office of Vehicle Safety Compliance, email=ed.chan@dot.gov, c=US
Date: 2011.12.13 09:49:15 -05'00'

NHTSA No.: CA0900

Data Sheet 5 omitted as test was not performed.

Failure: The parallelepiped base did not fit fully inside the rear emergency exit.

Compliance tests were conducted on the subject 2010 StarTrans MFSAB School Bus, NHTSA No.: CA0900, in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-217-06 for the determination of FMVSS 217 compliance.
<table>
<thead>
<tr>
<th>Section</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Purpose of Compliance Test</td>
<td>1</td>
</tr>
<tr>
<td>2 Test Data Summary</td>
<td>2</td>
</tr>
<tr>
<td>3 Compliance Test Data</td>
<td>3</td>
</tr>
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<td>4</td>
</tr>
<tr>
<td>Data Sheet 2 - Provision of Emergency Exits</td>
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</tr>
<tr>
<td>Data Sheet 3 - Emergency Exit Door Operational Requirements</td>
<td>7</td>
</tr>
<tr>
<td>Data Sheet 4 - Emergency Exit Identification and Labeling</td>
<td>8</td>
</tr>
<tr>
<td>Data Sheet 6 - Force Tests to Unlatch the Emergency Exit</td>
<td>13</td>
</tr>
<tr>
<td>Data Sheet 7 - Force Tests for Open the Emergency Exit</td>
<td>15</td>
</tr>
<tr>
<td>Data Sheet 8 - Emergency Exit Extension</td>
<td>18</td>
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<tr>
<td>Data Sheet 9 - Window Retention Test</td>
<td>19</td>
</tr>
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<td>4 Instrumentation and Equipment List</td>
<td>22</td>
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<td>23</td>
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<td>6 Test Plots</td>
<td>47</td>
</tr>
<tr>
<td>7 Laboratory Notice of Test Failure to OVSC</td>
<td>51</td>
</tr>
</tbody>
</table>
SECTION 1
PURPOSE OF COMPLIANCE TEST

Tests were conducted on a 2010 StarTrans MFSAB School Bus, NHTSA No.: CA0900, in accordance with the specifications of the Office of Vehicle Safety Compliance (OVSC) Test Procedures TP-217-06 to determine compliance to the requirements of Federal Motor Vehicle Safety Standards (FMVSS) 217, “School Bus Emergency Exits and Window Retention and Release”.

This program is sponsored by the National Highway Traffic Safety Administration (NHTSA), under Contract No. DTNH22-08-D-00075.
SECTION 2
TEST DATA SUMMARY

Based on the tests performed, the 2010 StarTrans MFSAB School Bus, NHTSA No.: CA0900, does not appear to meet the requirements of FMVSS 217. See Data Sheet 1 for Test Summary.
The following data sheets document the results of testing on the 2010 StarTrans MFSAB School Bus, NHTSA No.: CA0900.
# DATA SHEET 1
## TEST SUMMARY

### GENERAL VEHICLE IDENTIFICATION

<table>
<thead>
<tr>
<th>Model Year / Mfr. / Make / Model</th>
<th>2010 / StarTrans / MFSAB</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHTSA No.</td>
<td>CA0900</td>
</tr>
<tr>
<td>GVWR</td>
<td>6,441 kg / 14,200 lb</td>
</tr>
<tr>
<td>Build Date for Bus Chassis</td>
<td>11/09</td>
</tr>
<tr>
<td>VIN</td>
<td>1GB9G5AG4A1118869</td>
</tr>
<tr>
<td>Seating Capacity</td>
<td>1 Driver, 20 Passengers</td>
</tr>
<tr>
<td>Type of Bus</td>
<td>MFSAB</td>
</tr>
<tr>
<td>Tire Pressure from tire placard (at capacity)</td>
<td>Front: 450 kPa</td>
</tr>
<tr>
<td>Odometer Reading</td>
<td>1,542 miles</td>
</tr>
</tbody>
</table>

### Pass / Fail

<table>
<thead>
<tr>
<th>S5.1 WINDOW RETENTION</th>
<th>PASS</th>
</tr>
</thead>
<tbody>
<tr>
<td>S5.2 PROVISION OF EMERGENCY EXITS</td>
<td>PASS</td>
</tr>
<tr>
<td>Meets minimum exit provisions</td>
<td>PASS</td>
</tr>
<tr>
<td>Meets all other exit requirements</td>
<td>PASS</td>
</tr>
<tr>
<td>Meets requirements for additional exits</td>
<td>PASS</td>
</tr>
<tr>
<td>S5.2.3.1.A EMERGENCY EXIT DOOR OPERATIONAL REQUIREMENTS</td>
<td>PASS</td>
</tr>
<tr>
<td>S5.3 EMERGENCY EXIT RELEASE</td>
<td>PASS</td>
</tr>
<tr>
<td>Forces to unlatch the emergency exits</td>
<td>PASS</td>
</tr>
<tr>
<td>Forces to open the emergency exits</td>
<td>PASS</td>
</tr>
<tr>
<td>S5.4 EMERGENCY EXIT OPENING</td>
<td>FAIL</td>
</tr>
<tr>
<td>S5.5 EMERGENCY EXIT LABELING AND IDENTIFICATION</td>
<td>PASS</td>
</tr>
<tr>
<td>S5.5 TAPE REFLECTIVITY (49CFR 571.131)</td>
<td>Not Tested</td>
</tr>
</tbody>
</table>

**Comments:** None

**Recorded By:**

**Approved By:**

Date: 10/27/11
DATA SHEET 2
PROVISION OF EMERGENCY EXITS

Test Vehicle: 2010 StarTrans MFSAB School Bus
Test Lab: MGA Research Corporation
NHTSA No.: CA0900
Test Date: 10/27/11

Seating Capacity: 21 (Including Driver & Passengers)

<table>
<thead>
<tr>
<th></th>
<th>Height (mm)</th>
<th>Width (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rear Emergency Exit (Door)</td>
<td>1,450</td>
</tr>
<tr>
<td>2</td>
<td>Emergency Exit (Windows) W2, W4, W6, W7, W8, W10</td>
<td>855</td>
</tr>
</tbody>
</table>

Requirements
Bus meets minimum emergency exit provision, based upon Table 1. Yes – Pass; No – Fail

PASS
## DATA SHEET 2 (CONTINUED)
### PROVISION OF EMERGENCY EXITS

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Pass / Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Rear Emergency Door – opens outward and is hinged on the right side (either side, if the bus has a GVWR of 10,000 pounds or less). Yes – Pass; No – Fail</td>
<td>PASS</td>
</tr>
<tr>
<td>2 Side Emergency Door – hinged on its forward side. No more than one side emergency exit door is located, in whole or in part, within the same post and roof bow panel space.</td>
<td>N/A</td>
</tr>
<tr>
<td>3 Rear Push Out Window – provides a minimum opening clearance 41 cm high and 122 cm wide (16&quot; x 48&quot;).</td>
<td>N/A</td>
</tr>
<tr>
<td>4 Roof Exit – is hinged on its forward side, and operable from both the inside and outside the vehicle.</td>
<td>N/A</td>
</tr>
<tr>
<td>5 There is an even number of side emergency exit windows on each side of bus. Yes – Pass; No – Fail</td>
<td>PASS</td>
</tr>
<tr>
<td>6 The bus is not equipped with both sliding and push-out windows, (except for buses equipped with rear push out emergency exit windows).</td>
<td>N/A</td>
</tr>
<tr>
<td>7 A right side emergency exit door, if any, is located as near as practicable to the midpoint of the passenger compartment.</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Comments: None

Recorded By: [Signature]

Approved By: [Signature]  Date: 10/27/11
## DATA SHEET 3
### EMERGENCY EXIT DOOR OPERATIONAL REQUIREMENTS

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Pass / Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The engine starting system does NOT operate if any Emergency Exit is LOCKED. Yes – Pass; No – Fail</td>
<td>PASS</td>
</tr>
<tr>
<td>2. All Emergency Door and Roof Exits can be released by one person (from inside and outside of bus). Yes – Pass; No – Fail</td>
<td>PASS</td>
</tr>
<tr>
<td>3. When the Release Mechanism is NOT in the closed position and the vehicle ignition is in the “ON” position, there is a continuous warning sound audible at the Driver’s DSP and in the vicinity of the Emergency Door(s) having the unclosed mechanism. Yes – Pass; No – Fail</td>
<td>PASS</td>
</tr>
<tr>
<td>4. Emergency exit release mechanism does not use remote controls or central power systems. Yes – Pass; No – Fail</td>
<td>PASS</td>
</tr>
</tbody>
</table>

Comments: None

Recorded By: [Signature]

Approved By: [Signature] Date: 10/27/11

---

Test Vehicle: 2010 StarTrans MFSAB School Bus  
Test Lab: MGA Research Corporation  
NHTSA No.: CA0900  
Test Date: 10/27/11
DATA SHEET 4A
EMERGENCY EXIT IDENTIFICATION AND LABELING

Test Vehicle: 2010 StarTrans MFSAB School Bus
NHTSA No.: CA0900
Test Lab: MGA Research Corporation
Test Date: 10/27/11

EMERGENCY EXIT LABELING - INTERIOR

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Exit Description</td>
<td>Door</td>
<td>Window</td>
<td>Window</td>
<td>Window</td>
<td>Window</td>
<td>Window</td>
<td>Window</td>
</tr>
<tr>
<td>Letter Height (cm)</td>
<td>5.2</td>
<td>1.4</td>
<td>1.4</td>
<td>1.4</td>
<td>1.4</td>
<td>1.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Background Color</td>
<td>White</td>
<td>White</td>
<td>White</td>
<td>White</td>
<td>White</td>
<td>White</td>
<td>White</td>
</tr>
<tr>
<td>Location Inside</td>
<td>Above Door</td>
<td>Above Window</td>
<td>Above Window</td>
<td>Above Window</td>
<td>Above Window</td>
<td>Above Window</td>
<td>Above Window</td>
</tr>
<tr>
<td>Pass / Fail</td>
<td>PASS</td>
<td>PASS</td>
<td>PASS</td>
<td>PASS</td>
<td>PASS</td>
<td>PASS</td>
<td>PASS</td>
</tr>
</tbody>
</table>

OPERATING INSTRUCTIONS - INTERIOR

<table>
<thead>
<tr>
<th>Exit Location</th>
<th>Rear Emergency Exit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructions</td>
<td>Lift Handle</td>
</tr>
<tr>
<td>Letter Height (cm)</td>
<td>1.17</td>
</tr>
<tr>
<td>Letter Color</td>
<td>Red</td>
</tr>
<tr>
<td>Background Color</td>
<td>White</td>
</tr>
<tr>
<td>Distance From Release (cm)</td>
<td>11.5</td>
</tr>
<tr>
<td>Reflective Tape Color</td>
<td>N/A</td>
</tr>
<tr>
<td>Reflective Tape Width (cm)</td>
<td>N/A</td>
</tr>
<tr>
<td>Pass / Fail</td>
<td>PASS</td>
</tr>
</tbody>
</table>
## OPERATING INSTRUCTIONS – INTERIOR (ON WINDOW)

<table>
<thead>
<tr>
<th>Exit Location</th>
<th>Left Front Emergency Exit W2</th>
<th>Left Mid Emergency Exit W4</th>
<th>Left Rear Emergency Exit W6</th>
<th>Right Front Emergency Exit W10</th>
<th>Right Mid Emergency Exit W8</th>
<th>Right Rear Emergency Exit W7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructions</td>
<td>Pull Handles Push Window to Open</td>
<td>Pull Handles Push Window to Open</td>
<td>Pull Handles Push Window to Open</td>
<td>Pull Handles Push Window to Open</td>
<td>Pull Handles Push Window to Open</td>
<td>Pull Handles Push Window to Open</td>
</tr>
<tr>
<td>Letter Height (cm)</td>
<td>.47</td>
<td>.47</td>
<td>.47</td>
<td>.47</td>
<td>.47</td>
<td>.47</td>
</tr>
<tr>
<td>Letter Color</td>
<td>Red</td>
<td>Red</td>
<td>Red</td>
<td>Red</td>
<td>Red</td>
<td>Red</td>
</tr>
<tr>
<td>Background Color</td>
<td>Clear</td>
<td>Clear</td>
<td>Clear</td>
<td>Clear</td>
<td>Clear</td>
<td>Clear</td>
</tr>
<tr>
<td>Distance From Release (cm)</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Reflective Tape Color</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Reflective Tape Width (cm)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Pass / Fail</td>
<td>PASS</td>
<td>PASS</td>
<td>PASS</td>
<td>PASS</td>
<td>PASS</td>
<td>PASS</td>
</tr>
</tbody>
</table>
### OPERATING INSTRUCTIONS – INTERIOR (ABOVE WINDOW)

<table>
<thead>
<tr>
<th>Exit Location</th>
<th>Left Front Emergency Exit W2</th>
<th>Left Mid Emergency Exit W4</th>
<th>Left Rear Emergency Exit W6</th>
<th>Right Front Emergency Exit W10</th>
<th>Right Mid Emergency Exit W8</th>
<th>Right Rear Emergency Exit W7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructions</td>
<td>Pull Latch Push Window to Open</td>
<td>Pull Latch Push Window to Open</td>
<td>Pull Latch Push Window to Open</td>
<td>Pull Latch Push Window to Open</td>
<td>Pull Latch Push Window to Open</td>
<td>Pull Latch Push Window to Open</td>
</tr>
<tr>
<td>Letter Height (cm)</td>
<td>.1</td>
<td>.1</td>
<td>.1</td>
<td>.1</td>
<td>.1</td>
<td>.1</td>
</tr>
<tr>
<td>Letter Color</td>
<td>Red</td>
<td>Red</td>
<td>Red</td>
<td>Red</td>
<td>Red</td>
<td>Red</td>
</tr>
<tr>
<td>Background Color</td>
<td>White</td>
<td>White</td>
<td>White</td>
<td>White</td>
<td>White</td>
<td>White</td>
</tr>
<tr>
<td>Distance From Release (cm)</td>
<td>70</td>
<td>70</td>
<td>70</td>
<td>70</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>Reflective Tape Color</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Reflective Tape Width (cm)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Pass / Fail</td>
<td>PASS</td>
<td>PASS</td>
<td>PASS</td>
<td>PASS</td>
<td>PASS</td>
<td>PASS</td>
</tr>
</tbody>
</table>

**Comments:** None

**Recorded By:** [Signature]

**Approved By:** [Signature]  Date: 10/27/11
## EMERGENCY EXIT LABELING - EXTERIOR

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Exit Description</td>
<td>Door</td>
<td>Window</td>
<td>Window</td>
<td>Window</td>
<td>Window</td>
<td>Window</td>
<td>Window</td>
</tr>
<tr>
<td>Letter Height (cm)</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
</tr>
<tr>
<td>Background Color</td>
<td>White</td>
<td>White</td>
<td>White</td>
<td>White</td>
<td>White</td>
<td>White</td>
<td>White</td>
</tr>
<tr>
<td>Location Inside</td>
<td>Above Exit Door</td>
<td>Above Window</td>
<td>Above Window</td>
<td>Above Window</td>
<td>Above Window</td>
<td>Above Window</td>
<td>Above Window</td>
</tr>
<tr>
<td>Pass / Fail</td>
<td>PASS</td>
<td>PASS</td>
<td>PASS</td>
<td>PASS</td>
<td>PASS</td>
<td>PASS</td>
<td>PASS</td>
</tr>
</tbody>
</table>

## OPERATING INSTRUCTIONS – EXTERIOR

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructions</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Letter Height (cm)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Letter Color</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Background Color</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Distance From Release (cm)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Reflective Tape Color</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Reflective Tape Width (cm)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Pass / Fail</td>
<td>PASS</td>
<td>PASS</td>
<td>PASS</td>
<td>PASS</td>
<td>PASS</td>
<td>PASS</td>
<td>PASS</td>
</tr>
</tbody>
</table>

Comments: There are no operating instructions on the exterior of the vehicle.
## DATA SHEET 4
### EMERGENCY EXIT IDENTIFICATION AND LABELING

**Test Vehicle:** 2010 StarTrans MFSAB School Bus  
**Test Lab:** MGA Research Corporation  
**NHTSA No.:** CA0900  
**Test Date:** 10/27/11

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Pass / Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Each required Emergency Exit is labeled with the words “Emergency Exit” or “Emergency Door” as appropriate in letters at least 5 cm high (2”) of a color that contrasts with its background. Yes – Pass; No – Fail</td>
<td><strong>PASS</strong></td>
</tr>
<tr>
<td>2 Emergency Doors – The designation “Emergency Exit” or “Emergency Door” is located at the top of, or directly above the exit door on both inside and outside surfaces of the bus. Yes – Pass; No – Fail</td>
<td><strong>PASS</strong></td>
</tr>
<tr>
<td>3 Roof Exits – The designation for roof exits is located on an inside surface of the exit, or within 30 cm (11.8”) of the roof exit opening.</td>
<td><strong>N/A</strong></td>
</tr>
<tr>
<td>4 Emergency Window Exits – The designation is located at the top of, or directly above, or at the bottom of the emergency window exit on both the inside and outside surfaces of the bus.</td>
<td><strong>PASS</strong></td>
</tr>
<tr>
<td>5 Exit Operating Instructions indicate all motions required to unlatch and open the exit, in letters at least 1 cm (.39”) high and of a color that contrast with its background and shall be located within 15 cm (5.9”) of the release mechanism on the inside surface of the bus. Yes – Pass; No – Fail</td>
<td><strong>PASS</strong></td>
</tr>
<tr>
<td>6 Each required Emergency Exit opening is outlined around its perimeter with a 2.5 cm (1”) wide retroreflective tape of red, white, or yellow color. Yes – Pass; No – Fail</td>
<td><strong>PASS</strong></td>
</tr>
</tbody>
</table>

**Comments:** None

**Recorded By:**  
**Approved By:**  
**Date:** 10/27/11
# Force Tests to Unlatch the Emergency Exits - Interior

**Test Vehicle:** 2010 StarTrans MFSAB School Bus  
**NHTSA No.:** CA0900  
**Test Lab:** MGA Research Corporation  
**Test Date:** 10/27/11

<table>
<thead>
<tr>
<th>Exit Location</th>
<th>Exit Description</th>
<th>High / Low Force Area</th>
<th>Maximum Force Requirement (N)</th>
<th>Actual Force Measured (N)</th>
<th>Motion(s) Required to Release Exit</th>
<th>Actual Motion(s) to Release Exit</th>
<th>Pass / Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rear Emergency Exit Door</td>
<td></td>
<td>High</td>
<td>178</td>
<td>1. 71.2</td>
<td>Straight</td>
<td>Lift Handle Upward</td>
<td>PASS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. 73.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3. 80.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Average 74.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left Front Emergency Exit W2</td>
<td>Window</td>
<td>High</td>
<td>178</td>
<td>1. L 26.7 R 66.7</td>
<td>Straight</td>
<td>Lift Handles Upward &amp; Push Window Outward</td>
<td>PASS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. 31.1 53.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3. 26.7 62.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Average 28.2 R 60.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left Mid Emergency Exit W4</td>
<td>Window</td>
<td>High</td>
<td>178</td>
<td>1. 35.6 35.6</td>
<td>Straight</td>
<td>Lift Handles Upward &amp; Push Window Outward</td>
<td>PASS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. 35.6 35.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3. 35.6 40.0</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Average 35.6 R 37.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left Rear Emergency Exit W6</td>
<td>Window</td>
<td>High</td>
<td>178</td>
<td>1. 40.0 44.5</td>
<td>Straight</td>
<td>Lift Handles Upward &amp; Push Window Outward</td>
<td>PASS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. 44.5 44.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3. 44.5 53.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Average 43.0 R 47.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Right Front Emergency Exit W10</td>
<td>Window</td>
<td>High</td>
<td>178</td>
<td>1. 35.6 93.4</td>
<td>Straight</td>
<td>Lift Handles Upward &amp; Push Window Outward</td>
<td>PASS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. 35.6 102.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3. 40.0 97.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Average 37.1 R 97.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Right Mid Emergency Exit W8</td>
<td>Window</td>
<td>High</td>
<td>178</td>
<td>1. 31.1 26.7</td>
<td>Straight</td>
<td>Lift Handles Upward &amp; Push Window Outward</td>
<td>PASS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. 31.1 26.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3. 31.1 26.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Average 31.1 R 26.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Right Rear Emergency Exit W7</td>
<td>Window</td>
<td>High</td>
<td>178</td>
<td>1. 26.7 89.0</td>
<td>Straight</td>
<td>Lift Handles Upward &amp; Push Window Outward</td>
<td>PASS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. 26.7 93.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3. 26.7 89.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Average 26.7 R 90.5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments:** None

**Recorded By:** [Signature]

**Approved By:** [Signature]  
**Date:** 10/27/11
DATA SHEET 6B
FORCE TESTS TO UNLATCH THE EMERGENCY EXITS – EXTERIOR

Test Vehicle: 2010 StarTrans MFSAB School Bus  NHTSA No.: CA0900
Test Lab: MGA Research Corporation  Test Date: 10/27/11

<table>
<thead>
<tr>
<th>Exit Location</th>
<th>Exit Description</th>
<th>High / Low Force Area</th>
<th>Maximum Force Requirement (N)</th>
<th>Actual Force Measured (N)</th>
<th>Motion(s) Required to Release Exit</th>
<th>Actual Motion(s) to Release Exit</th>
<th>Pass / Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rear Emergency Exit</td>
<td>Door</td>
<td>High</td>
<td>178</td>
<td>1. 113.4</td>
<td>Straight</td>
<td>Lift Handle Upward</td>
<td>PASS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. 115.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3. 111.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Average 113.4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments: None

Recorded By: [Signature]

Approved By: [Signature]  Date: 10/27/11
### DATA SHEET 7A
FORCE TESTS TO OPEN THE EMERGENCY EXITS – INTERIOR

**Test Vehicle:** 2010 StarTrans MFSAB School Bus  
**NHTSA No.:** CA0900  
**Test Lab:** MGA Research Corporation  
**Test Date:** 10/27/11

<table>
<thead>
<tr>
<th>Exit Location</th>
<th>Exit Description</th>
<th>High / Low Force Area</th>
<th>Maximum Force Requirement (N)</th>
<th>Actual Force Measured (N)</th>
<th>Motion(s) Required to Release Exit</th>
<th>Actual Motion(s) to Release Exit</th>
<th>Passage of Ellipsoid or Parallelepiped</th>
<th>Pass / Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rear Emergency Exit</td>
<td>Door</td>
<td>High</td>
<td>178</td>
<td>1. 31.1</td>
<td>Straight</td>
<td>Push Outward</td>
<td>114x61x30 Parallelepiped Lower Surface Was Not in Contact With the Bus Floor at all Times During Testing</td>
<td>FAIL</td>
</tr>
<tr>
<td>Left Front Emergency Exit W2</td>
<td>Window</td>
<td>High</td>
<td>178</td>
<td>1. 4.4</td>
<td>Straight</td>
<td>Push Outward</td>
<td>Ellipsoid</td>
<td>PASS</td>
</tr>
<tr>
<td>Left Mid Emergency Exit W4</td>
<td>Window</td>
<td>High</td>
<td>178</td>
<td>1. 4.4</td>
<td>Straight</td>
<td>Push Outward</td>
<td>Ellipsoid</td>
<td>PASS</td>
</tr>
<tr>
<td>Left Rear Emergency Exit W6</td>
<td>Window</td>
<td>High</td>
<td>178</td>
<td>1. 4.4</td>
<td>Straight</td>
<td>Push Outward</td>
<td>Ellipsoid</td>
<td>PASS</td>
</tr>
<tr>
<td>Right Front Emergency Exit W10</td>
<td>Window</td>
<td>High</td>
<td>178</td>
<td>1. 4.4</td>
<td>Straight</td>
<td>Push Outward</td>
<td>Ellipsoid</td>
<td>PASS</td>
</tr>
<tr>
<td>Right Mid Emergency Exit W8</td>
<td>Window</td>
<td>High</td>
<td>178</td>
<td>1. 4.4</td>
<td>Straight</td>
<td>Push Outward</td>
<td>Ellipsoid</td>
<td>PASS</td>
</tr>
<tr>
<td>Right Rear Emergency Exit W7</td>
<td>Window</td>
<td>High</td>
<td>178</td>
<td>1. 4.4</td>
<td>Straight</td>
<td>Push Outward</td>
<td>Ellipsoid</td>
<td>PASS</td>
</tr>
</tbody>
</table>
DATA SHEET 7A (CONTINUED)
FORCE TESTS TO OPEN THE EMERGENCY EXITS – INTERIOR

Test Vehicle: 2010 StarTrans MFSAB School Bus  NHTSA No.: CA0900
Test Lab: MGA Research Corporation  Test Date: 10/27/11

Describe in the comments section if more than one force and motion are required to unlatch the exit.

Comments: None

Recorded By: [Signature]

Approved By: [Signature]  Date: 10/27/11
<table>
<thead>
<tr>
<th>Exit Location</th>
<th>Exit Description</th>
<th>Maximum Force Requirement (N)</th>
<th>Actual Force Measured (N)</th>
<th>Motion(s) to Release Exit</th>
<th>Passage of Ellipsoid or Parallelepiped</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rear Emergency Exit</td>
<td>Door</td>
<td>High</td>
<td>178</td>
<td>26.7</td>
<td>Pull Outward</td>
</tr>
</tbody>
</table>

**Actual Force Measured (N)**
1. 26.7
2. 26.7
3. 26.7
Average: 26.7

**Motion(s) to Release Exit**
- Straight

**Pass / Fail**
PASSED

**Comments:** None

Describe in the comments section if more than one force and motion are required to unlatch the exit.

Recorded By: ________________________
Approved By: ________________________
Date: 10/27/11
## DATA SHEET 8
### EMERGENCY EXIT EXTENSION

<table>
<thead>
<tr>
<th>Test Vehicle:</th>
<th>2010 StarTrans MFSAB School Bus</th>
<th>NHTSA No.:</th>
<th>CA0900</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Lab:</td>
<td>MGA Research Corporation</td>
<td>Test Date:</td>
<td>10/27/11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Pass / Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Exit(s) can be extended by a single person. Yes – Pass; No – Fail</td>
<td>PASS</td>
</tr>
<tr>
<td>2 Each emergency exit door is equipped with a positive door opening device that meets the requirements (outlined in Section S5.4.1 (3) of FMVSS 217).</td>
<td>PASS</td>
</tr>
<tr>
<td>3 There is a 30 cm (11.81”) wide clear aisle space for each side emergency door exit.</td>
<td>N/A</td>
</tr>
<tr>
<td>4 For flip-up seat adjacent to the side emergency door exit it automatically assumes and retain a vertical position when not in use, so that no portion of the seat bottom is within the 30 cm (11.81”) aisle clearance space</td>
<td>N/A</td>
</tr>
<tr>
<td>5 There is no seat or barrier which extend past the side door opening</td>
<td>PASS</td>
</tr>
<tr>
<td>6 There is no obstruction of door latch mechanism for the rear emergency door. Yes – Pass; No – Fail</td>
<td>PASS</td>
</tr>
</tbody>
</table>

Comments: None

Recorded By: [Signature]

Approved By: [Signature] Date: 10/27/11
DATA SHEET 9
WINDOW RETENTION TEST

Test Vehicle: 2010 StarTrans MFSAB School Bus  
NHTSA No.: CA0900
Test Lab: MGA Research Corporation  
Test Date: 10/27/11

<table>
<thead>
<tr>
<th></th>
<th>Test Window Identification:</th>
<th>Rear Emergency Exit Upper Pane</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Provide a detailed description of the window such as fixed, push out, single or double glazed, horizontal or vertical sliding, etc.</td>
<td>Fixed, Single Glaze</td>
</tr>
</tbody>
</table>
| 3 | Provide the horizontal and vertical glazing dimensions for each panel. | Horizontal: 475 mm  
Vertical: 555 mm |
| 4 | Did the window pass the retention requirements? Describe how the window structure and glazing withstood the force per the force per the PASS / FAIL criteria: Yes – Pass; No – Fail | Glazing Cracked at 24 sec, 1,911 N  
PASS |
|   | Did the window pass the force tests to unlatch and open the exit after the completion of the retention test? Yes – Pass; No – Fail | Unlatch Force Measured (N)  
Open Force Measured (N)  
Pass / Fail |
| 1 | 80.1  
1. 4.4 | PASS |
| 2 | 75.6  
2. 4.4 | PASS |
| 3 | 75.6  
3. 4.4 | PASS |

Comments: Maximum calculated displacement is 54.9 mm (2.16 in).

Recorded By: Date: 10/27/11

Approved By: Date: 10/27/11
# DATA SHEET 9

## WINDOW RETENTION TEST

**Test Vehicle:** 2010 StarTrans MFSAB School Bus  
**NHTSA No.:** CA0900

**Test Lab:** MGA Research Corporation  
**Test Date:** 10/27/11

<table>
<thead>
<tr>
<th></th>
<th>Test Window Identification:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Emergency Exit (Window W6)</td>
<td>Side Exit Window Lower Pane</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Provide a detailed description of the window such as fixed, push out, single or double glazed, horizontal or vertical sliding, etc.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Fixed, Single Pane</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Provide the horizontal and vertical glazing dimensions for each panel.</th>
<th></th>
</tr>
</thead>
</table>
| 3 | Horizontal: 490 mm  
Vertical: 450 mm                                                                                             |   |

<table>
<thead>
<tr>
<th></th>
<th>Did the window pass the retention requirements? Describe how the window structure and glazing withstood the force per the PASS / FAIL criteria:</th>
<th></th>
</tr>
</thead>
</table>
| 4 | Yes – Pass; No – Fail  
Reached Maximum Displacement of 53.5 mm  
And Then Glazing Cracked at 39.66 sec, 2,165 N  
PASSED |   |

<table>
<thead>
<tr>
<th></th>
<th>Did the window pass the force tests to unlatch and open the exit after the completion of the retention test?</th>
<th></th>
</tr>
</thead>
</table>
| 5 | Yes – Pass; No – Fail  
Unlatch Force Measured (N)  
Open Force Measured (N)  
Pass / Fail                                                                                           |   |
|   | L       | R       | 40.0    | 40.0    | 4.4     | PASS   |   |
|   | 62.3    | 40.0    | 4.4     | PASS    |   |
|   | 48.9    | 40.0    | 4.4     | PASS    |   |

**Comments:** Maximum calculated displacement is 53.5 mm (2.10 in).

**Recorded By:** 

**Approved By:** Michael January  
**Date:** 10/27/11
# DATA SHEET 9
## WINDOW RETENTION TEST

**Test Vehicle:** 2010 StarTrans MFSAB School Bus  
**NHTSA No.:** CA0900  
**Test Lab:** MGA Research Corporation  
**Test Date:** 10/27/11

<table>
<thead>
<tr>
<th></th>
<th>Test Window Identification:</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Emergency Exit (Window W7)</td>
</tr>
<tr>
<td></td>
<td>Side Exit Window Upper Pane</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Provide a detailed description of the window such as fixed, push out, single or double glazed, horizontal or vertical sliding, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Vertical Sliding – Single Glazing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Provide the horizontal and vertical glazing dimensions for each panel.</th>
</tr>
</thead>
</table>
| 3 | Horizontal: 490 mm  
   | Vertical: 330 mm                                                      |

<table>
<thead>
<tr>
<th></th>
<th>Did the window pass the retention requirements? Describe how the window structure and glazing withstood the force per the PASS / FAIL criteria: Yes – Pass; No – Fail</th>
</tr>
</thead>
</table>
| 4 | Reached Maximum Displacement of 45.8 mm  
    | PASS                                                                                               |

<table>
<thead>
<tr>
<th></th>
<th>Unlatch Force Measured (N)</th>
<th>Open Force Measured (N)</th>
<th>Pass / Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>22.2</td>
<td>4.4</td>
<td>PASS</td>
</tr>
<tr>
<td>R</td>
<td>71.2</td>
<td>4.4</td>
<td>PASS</td>
</tr>
</tbody>
</table>

**Comments:** Maximum calculated displacement is 45.8 mm (1.80 in).

**Recorded By:** [Signature]  
**Approved By:** [Signature]  
**Date:** 10/27/11
## SECTION 4
### INSTRUMENTATION AND EQUIPMENT LIST

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Description</th>
<th>Model / Serial No.</th>
<th>Cal. Date</th>
<th>Next Cal. Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head Form</td>
<td>MGA</td>
<td>217</td>
<td>When Used</td>
<td>When Used</td>
</tr>
<tr>
<td>Sphere</td>
<td>MGA</td>
<td>Sphere – 1A</td>
<td>When Used</td>
<td>When Used</td>
</tr>
<tr>
<td>Load Cell</td>
<td>Interface</td>
<td>1010AF-5K-B / 258576</td>
<td>10/07/11</td>
<td>04/07/12</td>
</tr>
<tr>
<td>String Pot.</td>
<td>Ametek</td>
<td>P-25A / 1102-19183</td>
<td>09/02/11</td>
<td>03/02/12</td>
</tr>
<tr>
<td>Inclinometer</td>
<td>Digital Protractor</td>
<td>Pro 360 / 006</td>
<td>When Used</td>
<td>When Used</td>
</tr>
<tr>
<td>Digital Calipers</td>
<td>Mitutoyo</td>
<td>CD 6&quot;CSX / 07416506</td>
<td>12/28/10</td>
<td>12/28/11</td>
</tr>
<tr>
<td>Steel Tape</td>
<td>Stanley</td>
<td>Powerlock / 604</td>
<td>08/04/11</td>
<td>02/04/12</td>
</tr>
<tr>
<td>Ellipsoid</td>
<td>MGA</td>
<td>ELLIP – 1A</td>
<td>When Used</td>
<td>When Used</td>
</tr>
<tr>
<td>Parallelepiped</td>
<td>MGA</td>
<td>PARA – 1A</td>
<td>When Used</td>
<td>When Used</td>
</tr>
<tr>
<td>Force Gauge</td>
<td>Wagner</td>
<td>FDK-60 / 18109</td>
<td>09/08/11</td>
<td>03/08/12</td>
</tr>
</tbody>
</table>

Test Vehicle: 2010 StarTrans MFSAB School Bus  
Test Lab: MGA Research Corporation  
Test Date: 10/27/11  
NHTSA No.: CA0900
TABLE OF PHOTOGRAPHS

<table>
<thead>
<tr>
<th>No.</th>
<th>Photograph Description</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Exterior Left Side View of School Bus</td>
<td>24</td>
</tr>
<tr>
<td>2</td>
<td>Exterior Right Side View of School Bus</td>
<td>25</td>
</tr>
<tr>
<td>3</td>
<td>Exterior Left Front ¾ View of School Bus</td>
<td>26</td>
</tr>
<tr>
<td>4</td>
<td>Exterior Right Front ¾ View of School Bus</td>
<td>27</td>
</tr>
<tr>
<td>5</td>
<td>Exterior Left Rear ¾ View of School Bus</td>
<td>28</td>
</tr>
<tr>
<td>6</td>
<td>Exterior Right Rear ¾ View of School Bus</td>
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Test Vehicle: 2010 StarTrans MFSAB School Bus

NHTSA No.: CA0900

Test Lab: MGA Research Corporation

Test Date: 10/27/11
Test Vehicle: 2010 StarTrans MFSAB School Bus
NHTSA No.: CA0900
Test Lab: MGA Research Corporation
Test Date: 10/27/11

Exterior Left Front ¾ View of School Bus
Test Vehicle: 2010 StarTrans MFSAB School Bus

NHTSA No.: CA0900

Test Lab: MGA Research Corporation

Test Date: 10/27/11

Exterior Right Front ¾ View of School Bus
Test Vehicle: 2010 StarTrans MFSAB School Bus
Test Lab: MGA Research Corporation
NHTSA No.: CA0900
Test Date: 10/27/11

MFD. BY:
StarTrans
A Supreme Indiana Operations Inc. Company
JONESTOWN, PA

DATE OF MFR: MO. 10 YR. 10

INC VEH. MFD BY:
GENERAL MOTORS

DATE OF INC. VEH. MFR
MO. 11 YR. 09

GVWR: 6441 KG, (14200 LB)

GAWR-FRONT: 2087 KG, (4600 LB)

GAWR-REAR: 4354 KG, (9600 LB)

THIS VEHICLE HAS BEEN COMPLETED IN
ACCORDANCE WITH THE PRIOR
MANUFACTURER'S IVD WHERE APPLICABLE.
THIS VEHICLE CONFORMS TO ALL APPLICABLE
FEDERAL MOTOR VEHICLE SAFETY
STANDARDS AND BUMPER AND THEFT
PROTECTION STANDARDS, IF APPLICABLE
EFFECT IN: MO. 11 YR. 09
Test Vehicle: 2010 StarTrans MFSAB School Bus
Test Lab: MGA Research Corporation
NHTSA No.: CA0900
Test Date: 10/27/11
Test Vehicle:
2010 StarTrans MFSAB School Bus

NHTSA No.:
CA0900

Test Date:
10/27/11

Test Lab:
MGA Research Corporation

Interior Rear to Front View Depicting Seating Arrangement
Test Vehicle: 2010 StarTrans MFSAB School Bus
Test Lab: MGA Research Corporation
NHTSA No.: CA0900
Test Date: 10/27/11

Rear Emergency Exit Identification (Outside View)
Test Vehicle: 2010 StarTrans MFSAB School Bus
Test Lab: MGA Research Corporation
NHTSA No.: CA0900
Test Date: 10/27/11

Rear Emergency Exit Identification (Inside View)
Test Vehicle: 2010 StarTrans MFSAB School Bus
NHTSA No.: CA0900
Test Lab: MGA Research Corporation
Test Date: 10/27/11

Rear Emergency Exit Parallelepiped Clearance
Test Vehicle: 2010 StarTrans MFSAB School Bus
Test Lab: MGA Research Corporation
NHTSA No.: CA0900
Test Date: 10/27/11

Emergency Exit Window Ellipsoid Clearance
Test Vehicle: 2010 StarTrans MFSAB School Bus
Test Lab: MGA Research Corporation
NHTSA No.: CA0900
Test Date: 10/27/11

Window Retention Test of W6 Rearmost Passenger Side Lower Window Pane Pre-Test
Window Retention Test of W6 Rearmost Passenger Side Lower Window Pane Post-Test
Window Retention Test of W6 Rearmost Passenger Side Lower Window Pane Post-Test Damage
Test Vehicle: 2010 StarTrans MFSAB School Bus
Test Lab: MGA Research Corporation
NHTSA No.: CA0900
Test Date: 10/27/11

Window Retention Test of W6 Rearmost Passenger Side Lower Window Pane Post-Test Damage
Test Vehicle: 2010 StarTrans MFSAB School Bus
NHTSA No.: CA0900
Test Lab: MGA Research Corporation
Test Date: 10/27/11

Window Retention Test of W7 Rearmost Driver Side Upper Window Pane Pre-Test
Test Vehicle: 2010 StarTrans MFSAB School Bus
Test Lab: MGA Research Corporation
NHTSA No.: CA0900
Test Date: 10/27/11

Window Retention Test of W7 Rearmost Driver Side Upper Window Pane Post-Test
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<th>2010 StarTrans MFSAB School Bus</th>
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<td>NHTSA No.:</td>
<td>CA0900</td>
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Window Retention Test of Rear Emergency Door Upper Pane Pre-Test
Window Retention Test of Rear Emergency Door Upper Pane Post-Test
# SECTION 6
## TEST PLOTS

### TABLE OF TEST PLOTS

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SECTION 6
TEST PLOTS

W6 Rearmost Passenger Side Lower Window Pane Displacement vs. Time

W6 Rearmost Passenger Side Lower Window Pane Force vs. Time
SECTION 6
TEST PLOTS

W7 Rearmost Driver Side Upper Window Pane Displacement vs. Time

W7 Rearmost Driver Side Upper Window Pane Force vs. Time
SECTION 6
TEST PLOTS

Rear Emergency Door Upper Pane Displacement vs. Time

Rear Emergency Door Upper Pane Force vs. Time
LABORATORY NOTICE OF TEST FAILURE TO OVSC

Test Procedure: FMVSS 217
Test Date: 10/27/11
Test Vehicle: 2010 StarTrans MFSAB
Test Lab: MGA Research Corp.
NHTSA No.: CA0900
Project Engineer: Eric Peschman
Contract No.: DTNH22-08-D-00075
Delivery Order No.: 3
MFR.: StarTrans
VIN: 1GB9G5AG4A1118869
Build Date: 10-2010

TEST FAILURE DESCRIPTION

The parallelepiped base did not fit fully inside the rear emergency exit.

FMVSS REQUIREMENTS DESCRIPTION

S5.4.2.1 School buses with a GVWR of more than 10,000 pounds.

(a) Emergency exit doors. After the release mechanism has been operated, each emergency exit door of a school bus shall, under the conditions of S6., before and after the window retention test required by S5.1, using the force levels specified in S5.3.3, be manually extendable by a single person to a position that permits:

(1) In the case of a rear emergency exit door, an opening large enough to permit unobstructed passage into the bus of a rectangular parallelepiped 1,145 millimeters (45 inches) high, 610 millimeters (24 inches) wide, and 305 millimeters (12 inches) deep, keeping the 1,145 millimeter (45 inch) dimension vertical, the 610 (24 inch) millimeter dimension parallel to the opening, and the lower surface in contact with the floor of the bus at all times, until the bottom edge of the rearmost surface of the parallelepiped is tangent to the plane of the door opening;

Remarks: No remarks.

Notification to NHTSA (COTR): Lawrence Valvo

Date: 10/28/11

By: [Signature]