



August 14<sup>th</sup>, 2009

Jennifer Timian  
Recall Management Division  
National Highway Traffic Safety Administration  
1200 New Jersey Avenue SE.  
Washington, DC 20590  
[Jennifer.timian@dot.gov](mailto:Jennifer.timian@dot.gov)

Re: Additional Information Needed – Safety Recall 09V-215

Dear Jennifer Timian,

This is in response to a letter received from National Highway Traffic Safety Administration, Recall Management Division regarding a defect notice, Safety Recall 09V-215 having to deal with delamination of passenger windows on Orion transit Buses. As requested the replies to questions of the NHTSA letter follows each below:

1. In describing the cause of the defect and its consequences Daimler Buses used the acronym "TBD." What does that acronym mean? If that acronym means "to be determined," please explain what needs to be determined and why.

TBD does mean "To be Determined".

The defect report stated:

**Describe the cause(s) of the defect or noncompliance condition.**

The bond of the glass to the aluminum frame is bonded less than 75% TBD

With further explanation here: The defect may create a safety concern when the bond of the glass to the aluminum frame is bonded less than 75% along the bond joint perimeter. This is the bonding surface that connects the glass to the internal aluminum frame. This frame is bonded using a Sikaflex®, Polyurethane Adhesives material and process. The bond along the length of the connection has been found to be incomplete. Although at no time has a glass dislodged from the frame, Daimler and Hehr have attempted to determine at what point or at what percentage a window could dislodge. This was not determined, however we determined that windows having a bond less than 75% along its length are to be replaced under this safety defect.

Also the original defect report stated:

**Describe the consequence(s) of the defect or noncompliance condition.**

If not inspected and corrected the window may dislodge from the bus. TBD

Daimler nor Hehr could determine if a window could dislodge from the frame. We remove the TBD and are conducting the safety recall because if not attended to a window may dislodge as a matter of error on safety.

Daimler Buses North America Ltd.  
350 Haverhurst Road  
Mississauga, Ontario L4V 1T8  
Phone: 905.403.1111  
Fax: 905.403.6800  
[www.daimlerbuses.com](http://www.daimlerbuses.com)



2. In its chronological summary of the principal events that served as the basis for its defect determination, Daimler Buses indicated that it had inspections with "TTC" and an investigation with "Sika." Who or what is TTC and who or what is Sika, and explain the reason for its or their involvement.

TTC is the acronym for the Toronto Transit Commission who operate Orion buses exhibiting delamination of the frame to glazing bond.

Sika refers to Hehr International's bonding material supplier. Sika refers to Sika Corporation  
201 Polito Ave  
Lyndhurst, NJ 07071

Sika provides the bonding material and specification for creating the bond of the glazing to the aluminum. Hehr referred to Sika for testing and investigation into this bond failure.

3. The chronology of events indicates three items: an inspection in April 2009 with TTC; an investigation in May 2009 with Hehr; and an investigation in May 2009 with Hehr and Sika. This chronology, however, does not provide any information as to what precipitated the investigation and inspections or what information was learned from those activities. Nor does the chronology provide any information as to field or service reports, complaints, warranty claims, or other incidents or events associated with the defect that would help us understand the context in which the defect determination was made, or the timing of that determination. Accordingly, and pursuant to 49 CFR 573.6(c), please provide a chronological summary and provide dates of receipt, of all warranty claims, field or service reports, complaints, and any other information, that Daimler Buses reviewed or considered in coming to its determination. Please also include any other information you believe sheds light on what information or events precipitated the investigation, the timing of Daimler Buses' decision to investigate, as well as the timing of its decision that the vehicle had a defect that presented an unreasonable risk to motor vehicle safety.

Only TTC have complained of this bond issue.

Initial complaint of a window delaminated at TTC August 2008. Subsequent complaint September 2008

There are no warranty claims associated with any other owner.

There are no incident reports of windows dislodging from the frame or bus due to a loss of bond.

Field or service reports:

April 2009 Inspections with TTC

Found various amounts of delamination. 46 buses checked, 28 buses having some delamination, 3 buses having 75% delamination, 18 buses with no delamination.



May 2009 Investigation with Hehr

One window has been identified with more than 50% delamination  
29 buses inspected, 2 buses have severe delamination

May 2009 Investigation with Hehr and Sika

Delaminated windows tested pass FMVSS 217 window retention testing having varying bond failure percentages.

Sika Theoretical Bond Strength Calculations Calculations show that bond strength is high enough to hold the glass to the inner frame even with significant reductions in the bondline.

June 2009 DBNA Conduct FMVSS 217 window retention test.

A 75% delaminated window and find pass results.

We trust this addresses the additional information requested regarding Safety Recall 09V-215.

Yours truly,

Joe Labonte  
Product Safety and Compliance Officer  
Member of American Society of Safety Engineers  
Daimler Buses North America  
350 Hazelhurst Road,  
Mississauga, Ontario  
L5J 4T8  
Joe.Labonte@DCBUSNA.com  
905-403-7807  
Fax: (905)403-8808

Daimler Buses North America Inc.  
350 Hazelhurst Road  
Mississauga, Ontario L5J 4T8  
Phone: 905.403.1111  
Fax: 905.403.8808  
www.dcbusa.com