

**Schuler, Kelly**

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**From:** Coursen, John (SCI) [JCoursen@harsco.com]  
**Sent:** Thursday, June 03, 2004 5:54 PM  
**To:** Schuler, Kelly  
**Subject:** RE: 823D shipment Information

Kelly,

The last sentence below should read January 2002 through January 2004.

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**From:** Coursen, John (SCI)  
**Sent:** Thursday, June 03, 2004 11:17 AM  
**To:** 'kschuler@nhtsa.dot.gov'  
**Subject:** 823D shipment Information

Kelly,

As you requested, we shipped CNG tank model ALT823D to Orion Bus for use on some of their Orion VII buses in the period from late November 2001 through late November 2003 inclusive. Installation of our tanks on the bus is done near the final stages of the bus fabrication process and close to the time of shipment. For this reason, it is expected that Orion shipped affected buses in the time frame of January 2003 through January 2004.

John Coursen

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Any questions should be directed to <mailto:administrator@harsco.com>

6/4/2004

Mr. Jeffrey Giuseppe  
Chief, Equipment Division  
Office of Vehicle Safety Compliance  
Nat'l Highway Traffic Safety Admin.  
400 Seventh Street S.W.  
Washington, D.C. 20590

RECEIVED  
NVS-215

04E-038

2004 MAY 20 A 9 55

OFFICE OF  
MAY 19 2004  
DEFECTS INVESTIGATION

Re: Structural Composites Industries  
NVS-222A1a  
PE-904-090905

Dear Mr. Giuseppe:

Structural Composites Industries (SCI) continues to disagree with NHTSA's conclusion that SCI's compressed natural gas fuel container model no. ALT823D ("the ALT823D") fails to comply with FMVSS 304. We believe that the tests upon which NHTSA bases that conclusion may have been improperly conducted in that they impermissibly caused the wind velocity at the container to exceed the five mile per hour limit set forth in section S8.3.10 of the standard, and as a result, a uniform fire source was not applied as required by section S8.3.5 of the standard. Regretfully, none of the bonfire tests conducted on the ALT823D included sensors for measuring the wind velocity at the container, and therefore there is no direct evidence to show that the bonfire tests were performed in accordance with section S8.3.10. In SCI's engineering judgment, the temperature and video data indicate that the test enclosures were positioned in such a way to create a draft and actually increased wind velocity, rather than limit it to the five mile per hour maximum permitted under S8.3.10. SCI believes this phenomenon drove the bonfire flames toward one portion of the container, thereby isolating the pressure relief devices ("PRDs" or "PRD") from the heat source and preventing them from activating in a timely manner. Accordingly, we feel the test results were corrupted.

In view of the costs and uncertainties of protracted litigation, SCI is nevertheless prepared to undertake the requested recall and begin a corrective action to remedy the noncompliance. Accordingly, SCI has identified two possible remedies. Either remedy could be effected as a retrofit to ALT823D units in the field. One possible remedy would be to attach a thermal canopy directly to the ALT823D assembly. The thermal canopy would direct and concentrate heat around a PRD, thereby causing the PRD to activate more rapidly. SCI is currently developing the thermal canopy design in preparation for bonfire testing on the ALT823D assembly. A preliminary illustration is attached here for NHTSA review.

A second possible remedy would be to relocate the aft end PRD, currently attached at the non-valve end of the tank, to a mid-span location along the fuel container length. SCI is likewise developing this remedy, including drawings for the connective tubing, the tube supports, the vent tubing, and the new vent hole

which would be cut into the bus roof module enclosure. A preliminary illustration of this remedy is also attached here for your review.

Based on the complexities associated with the prospective remedies, SCI formally requests up to and including sixty (60) days to finalize the respective designs in parallel, to develop and submit final detailed drawings of the remedies, and to complete bonfire testing. During this process, SCI could provide NHTSA with periodic progress updates and schedule the bonfire tests so that NHTSA representatives could attend those tests as NHTSA deems appropriate.

Simultaneous to the sixty (60) day development period, SCI would formally notify Orion Bus Industries ("Orion") of the non-compliance. Orion is the sole purchaser of the ALT828D tank assembly. During this time SCI would also obtain from Orion the names and addresses of those owners having buses equipped with ALT828D tank assemblies. Once this owners list is complete and a final remedy is selected based on the development work, SCI will provide NHTSA with a draft owner notification letter and a draft technical service bulletin.

SCI expects that retrofit parts and supplies for either remedy can be fabricated within sixty (60) days after completion of design, development, and testing. Simultaneous to this sixty (60) day fabrication period, SCI would issue formal notification of non-compliance to each ALT823D owner. SCI's records indicate that 2,030 ALT823D fuel containers were shipped to Orion Bus Industries. SCI presently understands that several transit agencies have buses equipped with ALT823D tank assemblies, and each transit agency might have several different stations where the affected buses are kept and maintained.

With cooperation from the affected transit agencies, SCI expects that its service representatives and/or SCI approved local technicians would be able to retrofit all ALT823D tank assemblies in the field within 6-12 months after parts are available.

SCI is of course available to discuss with NHTSA the above courses of action in greater detail. In the meantime, we ask NHTSA to confirm the grant of the additional period of time within which to implement the corrective action.

Sincerely,



John Courson  
Product Manager - NGV Fuel Tanks