CNG
LPG
LNG
A-1 Alternative Fuel Systems

(559) 485-4427
Fax (559) 264-4961
www.a1altfuels.com

Clean Air is our Business
2320 Stanislaus St. Fresno, CA 93721

Bruce York, Chief
Medium & Heavy Duty Vehicle Division
Office of Defects Investigation
National Highway Traffic Safety Administration
1200 New Jersey Ave. SE
Room number W46-322
Washington DC 20590

Reference Number: 10534095

Dear Mr. York;

The purpose of this letter is to respond to the Office of Defects Investigation regarding the Preliminary Evaluation (PE13-038) regarding a fractured CNG tank mounting bracket on VVTA Bus #2014.
A-1 Alternative Fuel Systems is a company based in Fresno California that performs alterations on new vehicles by adding fuel tanks and components in order for the vehicle to run on Compressed Natural Gas fuel. A-1 has been in the business of performing vehicle CNG work for since 1995. These upgrades are performed for various manufactures and vehicle dealerships. We use CNG components and installation kits supplied by several manufactures. We do not perform retrofits on used equipment or for the end user of the vehicle. Most often we are unaware of the end user or the agency that the vehicle will be sold to.
We have attached our failure analysis report (attachment B) outlining the circumstances and the preliminary evaluation of the incident that was started the day of the initial report and has been an ongoing assessment.
After viewing the allegation in the ODI letter, most of the facts as stated are similar to what we were told and match with our investigation with a couple of discrepancies. The allegation stated that a second bus of similar design also had bracket fractures. We viewed the bus the following day and no fractures were visible. Furthermore, these brackets were removed and were more closely examined and no damage was visible.
The second allegation involves a wire to a solenoid valve that had made contact with a CNG tank. We were made aware of this concern. However, the components were not made available to us for inspection, nor were we able to examine or evaluate this issue. Furthermore, we contend that this issue should have been identified during the initial or on-going tank inspection.
When we became aware of the initial incident we immediately started our investigation. Within a week it seemed evident that this was the only incident regarding a fractured bracket. We did not see any evidence that we were facing a design failure. However, due to the nature of the incident, and because we had made earlier improvements on this bracket design, we made a business decision and took the necessary precautionary steps to inspect and change out all bracket of this 1st design. This bracket design was installed on 18 buses upgraded from May of 2011 to 4/13/12. After this incident we made the business decision to avoid any unwarranted repercussions. All of the brackets on buses with this design were inspected. None of the inspected brackets on the 17 remaining buses had any evidence of cracks or fatigue.

After reviewing all the information your department has provided we will attempt to answer your questions as best we can. Some of this information seems a little overwhelming to us in terms of the process. We are having difficulty understanding and using the documents provided on the CD. Along with this letter answering your questions, we have attachments that should answer your questions. After discussions with your staff we hope that the information that we provide will adhere to your procedures.

Question number 1

-a.b,c,d We do not sell to the end user and the information provided was obtained from our records at the time of the modification by us. We have included an excel spreadsheet (please see attachment A) listing all of the vehicles effected by our change-out decision. This information was gathered from August 7, 2013 to Mid-September 2013.

-e A-1 Alternative Fuel System was an Alterer on these vehicles.

-f Subject component did not have a part number assigned to it.

-g The first subject brackets were manufactured in February/March of 2011. These brackets were installed onto a F550 bus that was sent to Altoona for crash testing. The remaining brackets were manufactured by a contractor during the period of June 2011 to March 2012. We cannot determine the exact date the brackets were manufactured for the VVTA unit 2014. Information was obtained through our vendor receipts and job records.

-h Our warranty period begins with the date vehicle delivery.

-i We are an alterer and do not sell the vehicle. All of our business is performed at our Fresno Cal facility and the vehicle may go through multiple dealers before final sale to the end user.

Question number 2

-a The customer complaint was received by an email on August 7, 2013 12:03pm from Ron Zirges of Victor Valley Transit Authority. (Please see attachment B)

-b No dealer field report was issued. The first field report was taken by us on 8/8/13, when we arrived at VVTA to view bus 2014. (Please see attachment B)

-c No report issued to us other than a C/C on the 8/7/13 email describing the incident. No reports have been issued concerning Fatalities or injuries. We were informed that there were no passengers on the bus at the time of the incident.

-d No fire, explosion, burst, or release of CNG form container. (Please see attachment B)

-e We viewed the dislodged tank and our technician indicated a level two damage on the tank. (Please see tank pictures in attachment B)

-f We issued new tank for bus 2014 and paid for the repairs on the bus body. (See attachment B for damage)

-g No arbitration

-h No suites

Question number 3

-a No file or incident number necessary

-b Notification of the incident was issued to our shop supervisor by email the day after the incident.

-c Victor Valley Transportation Authority, Ron Zirges, Director of Maintenance & Facilities 17150 Smoketree St., Hesperia CA 92345

-d Vehicle's VIN, (please see attachment A) Attachment A has listed all of the information for all 18 of the F550 buses that we desire to upgrade the brackets on.

-e Again in addition to the subject VVTA bus 2014, attachment A has all of the identifying information for all 18 buses involved in our decision.

-f Mileage; please see attachment A

-g August 6, 2013

-h August 7, 2013

-I unknown

-j No fire, explosion, or burst of CNG from the tank. The following day during our inspection the tank from bus 2014 still had pressure.

-k A-1 Technician reported level 2 damage on tank.

-l Subject bus had damage on the R/S skirt panel
-m No injuries
-n No fatalities
-o The bus was repaired during the customer scheduled tank upgrade that was being performed on all 6 buses. A-1 paid for body repairs after the agencies contractor completed their upgrade work.

Question number 4

- The only documentation collected concerning the failure is email correspondence. They are organized by date. Repair job orders are organized by customer. We also have one email containing an invoice for body repairs.

Question number 5

-a No claim, however we issued VVTA a new CNG tank and paid a local body repair shop for body repairs for bus #2014.
-b VVTA 17150 Smoketree St. Hesperia CA 92345
-c please see attachment A
-d repair was not necessary. During this time the customer was involved with removing and installing a larger fuel cylinder on all six buses. We supplied a new tank for 2014.
-e Mileage during our inspection was 65046
-f Tank upgrade was being performed by a different company. We did not perform the work and do not know when the vehicle was placed back into service. We did authorize and make payment to a body repair company for body repairs.
-g No labor operation number.
-h No problem codes. Mounting bracket failed.
-i Replaced with new 2nd design bracket that was being used on all buses after the first 18 bus modifications. (Tank and brackets were not uses due to agency tank upgrade project).
-j No concern stated by customer other that defected bracket on subject vehicle. Notification of desired repair was initiated and performed by A-1.
-k A-1 Alternative Fuel Systems performed upgrades on 18 buses for four customers. This 1st design brackets were on buses owned by 4 different end users. One bracket failed on bus #2014 owned and operated by Victor Valley Transportation Authority. Because of the nature of this failure we made a business decision based on fit and standardization to replace this bracket on 18 buses, all of which had this 1st design bracket installed.

Question number 6

- A-1 alternative Fuel Systems used information within our files to determine all of the vehicles that we wanted to inspect and to install new brackets on. We also contacted our customers and the end users to further evaluate our business decision. In terms of problem codes and labor operations, A-1 performed inspections and replacement of brackets using our staff. Additionally we hired Premier Truck 6574 Paramount Blvd. Long Beach CA 90805 and Royal Auto Repair, 1331 San Mateo Ave. South San Francisco 94080 to perform some of the replacements in the Los Angeles area and San Francisco Areas.

Our warrant coverage is 1 year on parts and labor and most warranty is controlled by the CNG component manufacturer. Our warranty procedures follow the conditions specified by the OEM and the CNG component manufactures.
In terms of extended warranties and special circumstances we would work with and use procedures prescribed by the OEM, CNG component, and body manufacturers.

Question number 7

- No documents

Question number 8

-a Please see attachment B
-b Start date was the following day after the notice of the failure. Please see Attachment B
-c All inspections were completed by September 22 2013.

-d Failure of one bracket caused CNG fuel tank to dislodge. The following day after our notification we dispatched a technician to inspect the vehicle. We also brought replacement (2nd design) brackets for a possible replacement. The customer was performing a tank upgrade to larger tanks on the six vehicles that we performed the original modification on. The bracket replacement was not performed. This upgrade was being performed by another company and was using their bracket and a larger tank configuration.
-e N/A
-f Our finding on the subject bus #2014 was that the brackets broke above the top weld at the Cantilevered part of the bracket. Additionally, the brakeage of the rear bracket was most likely responsible for the fatigue of the forward bracket causing it also to brake.

Question number 9
-a, b, c As indicated in Attachment B, through our quality control methods our production Technicians recommendations some improvements to the original 1st design bracket. After further quality team evaluation we determined some changes were desirable for reasons of fit, standardization, and installation. After our initial decision our ideas were submitted to our project designer and a design was implemented and a drawing developed. The drawing was approved and the plans were submitted to our contractor and the samples were sent back to the quality team for implementation. The first 2nd design bracket was installed on 7/19/12
-d No part numbers were assigned to this part. This part was installed by us and was not issued for sales.
-e M-0000-316 is the drawing number that has been assigned to the 2nd design bracket. This part is used on our modifications and is generally not sold. If a replacement was necessary it would be issued to the owner of the vehicle or installed by our company.
-f This product was used on our 18 original modifications. After 5/1/12 it was withdrawn from production.
-g The 2nd design bracket designed after 4/13/12 is the standard design used for this modification.
-h The 2nd design bracket has replaced the 1st design.

Question number 10
-a Please see Attachment B for design comparison
-b Please see Attachment B. All brackets being used are the 2nd design bracket and have been since 7/19/12.

Question Number 11
-a 1st design bracket for F550 CNG bus design
-b No brackets were sold. All brackets were used in our production and have all been removed from any vehicles.

Question number 12
-a Application was submitter to Ford Motor company in 2011 for participation in the Ford QVM program. We were approved in 2012 as a QVM installer.
-b A-1 developed and adheres to prescribed quality control measures adopted by our company. A Process Control Manual was developed and contains the methods and techniques used in the vehicle alternation processes. This process control is developed in accordance with the Ford Body Builders Advisory Guidelines manual.
-c A-1 Process Control Guidebook and accompanying procedures and bulletins comply with the Ford Common Guidebook. A-1 is not a Ship-Thur company.
-d All Q185R1 as well as NFPA and other requirements are part of our Process Control Guidelines.
-E Fords oversight is maintained with on-site inspections of our facility and examination of our Quality Control procedures. We are also in commutation with Ford and view Ford publications and bulletins.

Question number 13

-a Tank and bracket inspections should be performed on a regular basis. The California Highway Patrol requires that the vehicle including all mountings and structure be inspected ever 45 day on buses.

-b Possible failures should be on-going examination of tank securement inspections.

-c Any signs of stress, cracks, loose fitting, or misaligned components should be evaluated and repaired as necessary.

-d Any structure or frame brakeage would be a safety concern.

-e Would depend on the severity and the circumstances.

-f **Attachment A**: spreadsheet listing the vital vehicle information as needed in Request Number TwoData (PEL13-38), tblQuestionTWOData.

Attachment B: A-1 Memorandum to file documenting the incident, circumstances, and corrective actions on VVTA bus #2014. This document also initiated our decision to the perform a safety recall on the vehicles equipped with the 1st design bracket.

NHTSA requested documents: Copy of Production Data (PE13-038) (3) VIN [redacted]

Copy of Request Number Two Data (PE13-038) VIN [redacted]

Copy of Warranty Data (PE13-038) VIN [redacted]

Regards;

Bob Hall
Quality Control Manager,
A-1 Alternative Fuel Systems
559/485-4427 ex17
559/250-0418