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PE 14-020 DTNA Response

Please repeat the applicable request verbatim above each response. After DTNA's response to each request, identify the source of the information and indicate the last date the information was gathered.

1. State, by model and model year, the number of subject vehicles and other CNG vehicles that DTNA has manufactured for sale or lease in the United States.

The following chart includes model year 2011 through 2015 DTNA manufactured vehicles with a DTNA installed CNG fuel system. Incomplete vehicles that do not have a fuel system installed and all other fuel types are excluded.

Vehicle Model	Model Year	Number of Vehicles
Freightliner Business Class M2	2011	[REDACTED]
Freightliner Business Class M2	2012	[REDACTED]
Freightliner Business Class M2	2013	[REDACTED]
Freightliner Business Class M2	2014	[REDACTED]
Freightliner Business Class M2	2015	[REDACTED]
Freightliner 114SD	2012	[REDACTED]
Freightliner 114SD	2013	[REDACTED]
Freightliner 114SD	2014	[REDACTED]
Freightliner 114SD	2015	[REDACTED]
Freightliner Cascadia	2014	[REDACTED]
Freightliner Cascadia	2015	[REDACTED]
Thomas Built Buses Minotour	2013	[REDACTED]
Thomas Built Buses Minotour	2014	[REDACTED]
Thomas Built Buses Minotour	2015	[REDACTED]
Thomas Built Buses SAF-T-Liner HDX	2011	[REDACTED]
Thomas Built Buses SAF-T-Liner HDX	2012	[REDACTED]
Thomas Built Buses SAF-T-Liner HDX	2013	[REDACTED]
Thomas Built Buses SAF-T-Liner HDX	2014	[REDACTED]
Thomas Built Buses SAF-T-Liner HDX	2015	[REDACTED]

Source – DTNA Production Records as of December 10, 2014

Separately, for each subject vehicle and other CNG vehicle manufactured to date by DTNA, state the following:

- a. Vehicle identification number (VIN);
- b. Make;
- c. Model;
- d. Model Year;
- e. Date of manufacture;
- f. Date warranty coverage commenced;
- g. The State in the United States where the vehicle was originally sold or leased (or delivered for sale or lease);

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- h. Describe the CNG fuel containers equipped by DTNA, their mounting design and configuration, including:
- i) Manufacturer (e.g. 3M, Hexagon Lincoln, Luxfer, Quantum, Worthington);
 - ii) Type (Type 1, 2, 3 and/or 4 as defined by 49 CFR 571.304);
 - iii) Quantity (e.g. one, two, four, six);
 - iv) Location (e.g. roof mount, behind cab, side mount on frame rail and/or front of body);
 - v) Orientation (e.g. horizontal / vertical, longitudinal / transverse);
 - vi) Mounting method (e.g. boss, strap, cradle);
 - vii) Configuration (e.g. single, dual side-saddle, 2x2 array, 4x1 array);
 - viii) Size, expressed in both nominal dimensions (e.g. 14x35, 21x60) and diesel gallon equivalent (DGE);
 - ix) Date(s) marking the end of the fuel container manufacturer's recommended service life;
 - x) What protection exists, if any, from damage that occurs due to vehicle use, road hazards, loading, unloading and accidental cargo spillage, single-vehicle and multiple-vehicle crashes; and
 - xi) The customer's intended application, if known (e.g. Pickup and Delivery, Refuse, Regional Short Haul, Sweeper, etc.).

Provide the table in Microsoft Access 2010, or a compatible format, entitled "PRODUCTION DATA." A pre-formatted data collection file, which provides further details regarding this submission, will be emailed to you.

Files – Confidential Business Information Production DATA.xls

2. State, by model and model year, the number of peer vehicles DTNA has manufactured for sale or lease in the United States.

Vehicle Model	Model Year	Number of Vehicles
Freightliner Business Class M2	2011	[REDACTED]
Freightliner Business Class M2	2012	[REDACTED]
Freightliner Business Class M2	2013	[REDACTED]
Freightliner Business Class M2	2014	[REDACTED]
Freightliner Business Class M2	2015	[REDACTED]

Source – DTNA Production Records as of December 10, 2014

3. State the number of each of the following, received by DTNA, or of which DTNA is otherwise aware, which relate to, or may relate to, the subject condition in the subject vehicles and/or other CNG vehicles:
- a. Consumer complaints, including those from fleet operators;
 - b. Field reports, including dealer field reports;
 - c. Reports involving a crash, injury or fatality;
 - d. Reports involving unsecured cargo or cargo spillage;
 - e. Reports involving a fuel container rupture, burst or explosion;
 - f. Reports involving a fire;
 - g. Property damage claims;
 - h. Third-party arbitration proceedings where DTNA is or was a party to the arbitration; and
 - i. Lawsuits, both pending and closed, in which DTNA is or was a defendant or codefendant.

For subparts "a" through "i," state the total number of each item (e.g., consumer complaints, field reports, etc.) separately. Multiple incidents involving the same vehicle are to be counted separately. Multiple reports of the same incident are also to be counted separately (i.e., a consumer complaint and a field report involving the same incident in which a crash occurred are to be counted as a crash report, a field report and a consumer complaint).

In addition, for items “c” through “i,” provide a summary description of the alleged problem and causal and contributing factors and DTNA’s assessment of the problem, with a summary of the significant underlying facts and evidence. For items “g” and “h,” identify the parties to the action, as well as the caption, court, docket number, and date on which the complaint or other document initiating the action was filed.

Category	Number of Reports
a. Consumer Complaint	0
b. Field Reports	2
c. Reports involving crash, injury, or fatality	2
d. Reports involving unsecured cargo or cargo spillage	1
e. Reports involving a fuel container rupture, burst or explosion	2
f. Reports involving a fire	1
g. Property damage claims	2
h. Third-party arbitration proceedings	0
i. Lawsuits	0
Total number of vehicles with reports	2

Source – DTNA Service and Legal records as of January 12, 2015

Separately, state the number of each of the above items “a” through “i,” received by DTNA, or of which DTNA is otherwise aware, which relate to, or may relate to, the peer condition in the peer vehicles.

Category	Number of Reports
a. Consumer Complaint	0
b. Field Reports	3
c. Reports involving crash, injury, or fatality	0
d. Reports involving unsecured cargo or cargo spillage	0
e. Reports involving a fuel container rupture, burst or explosion	0
f. Reports involving a fire	0
g. Property damage claims	0
h. Third-party arbitration proceedings	0
i. Lawsuits	0

Source – DTNA Service and Legal records as of January 12, 2015

4. Separately, for each item (complaint, report, claim, notice, or matter) within the scope of your response to Request No. 3 which relate to, or may relate to, the subject condition in the subject vehicles and/or other CNG vehicles, state the following information:
 - a. DTNA's file number or other identifier used;
 - b. The category of the item, as identified in Request No. 3 (i.e., consumer complaint, field report, etc.);
 - c. Vehicle owner or fleet name (and fleet contact person), street address, email address and telephone number;
 - d. Vehicle's VIN;
 - e. Vehicle's make, model and model year;
 - f. Vehicle's hours/mileage at time of incident;
 - g. Incident date;
 - h. Report or claim date;
 - i. Whether a crash is alleged;
 - j. Whether unsecured cargo or cargo spillage is alleged;
 - k. Whether a fuel container rupture, burst or explosion is alleged;
 - l. Whether a fire is alleged;
 - m. Whether property damage is alleged;
 - n. Number of alleged injuries, if any;
 - o. Number of alleged fatalities, if any;
 - p. State the level of subject component damage alleged, reported or observed as defined by CGA C-6.4-2012 and who made the determination regarding the level of subject component damage (e.g. customer, fuel container manufacturer, DTNA); and
 - q. Provide a summary of the incident, including DTNA's assessment of the root cause and contributing factors.

Provide this information in Microsoft Access 2010, or a compatible format, entitled "INCIDENT DATA." See Enclosure 1, Data Collection Disc, for a pre-formatted table that provides further details regarding this submission.

Files – Confidential Business Information INCIDENT DATA.xls

5. Produce copies of all documents related to each item within the scope of Request No. 3 which relate to, or may relate to, the subject condition in the subject vehicles and/or other CNG vehicles. Organize the documents separately by category (i.e., consumer complaints, field reports, etc.) and describe the method DTNA used for organizing the documents. Describe in detail the search methods and search criteria used by DTNA to identify the items in response to Request No. 3.

The DTNA Service and Legal databases were searched for reports that contained "CNG", "compressed", or "natural gas". Those reports were manually reviewed to determine if they relate to, or may relate to, the subject condition in the subject vehicles and/or other CNG vehicles. All related documents and information are in the data file named "Request No. 5 Data Files". The information is organized by the DTNA File Number from Request No. 4.

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6. State, by model and model year, a total count for all of the following categories of claims, collectively, that have been paid by DTNA to date that relate to, or may relate to, the subject condition in the subject vehicles and/or other CNG vehicles: warranty claims; extended warranty claims; claims for good will services that were provided; field, zone, or similar adjustments and reimbursements; and warranty claims or repairs made in accordance with a procedure specified in a technical service bulletin or customer satisfaction campaign.

Vehicle Model	Model Year	Number of Claims
Freightliner Business Class M2	2011	1
Freightliner Business Class M2	2012	1
Freightliner Business Class M2	2013	1
Freightliner Business Class M2	2014	1
Freightliner Business Class M2	2015	1
Freightliner 114SD	2012	1
Freightliner 114SD	2013	1
Freightliner 114SD	2014	1
Freightliner 114SD	2015	1
Freightliner Cascadia	2014	1
Freightliner Cascadia	2015	1
Thomas Built Buses Minotour	2013	1
Thomas Built Buses Minotour	2014	1
Thomas Built Buses Minotour	2015	1
Thomas Built Buses SAF-T-Liner HDX	2011	1
Thomas Built Buses SAF-T-Liner HDX	2012	1
Thomas Built Buses SAF-T-Liner HDX	2013	1
Thomas Built Buses SAF-T-Liner HDX	2014	1
Thomas Built Buses SAF-T-Liner HDX	2015	1

Source – DTNA Warranty records as of January 14, 2015

Separately, for each such claim, state the following information:

- a. DTNA's claim number;
- b. Vehicle owner or fleet name (and fleet contact person), street address, email address and telephone number;
- c. VIN;
- d. Repair date;
- e. Vehicle hours/mileage at time of repair;
- f. Repairing dealer's or facility's name, telephone number, city and state or ZIP code. If portions of the diagnosis and repair were completed by multiple parties (e.g. DTNA dealer and fuel container manufacturer), please provide a response for each such repairing dealer or facility;
- g. Labor operation number;
- h. Problem code;
- i. Replacement part number(s) and description(s);
- j. Concern stated by customer;
- k. Cause as stated on the repair order;

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- l. Correction as stated on the repair order; and
- m. Additional comments, if any, by dealer/technician relating to claim and/or repair;
- n. State the level of subject component damage alleged, reported or observed as defined by CGA C-6.4-2012 and who made the determination regarding the level of subject component damage (e.g. customer, fuel container manufacturer, DTNA); and
- o. Provide a summary of the incident, including DTNA's assessment of the root cause and contributing factors.

Provide this information in Microsoft Access 2010, or a compatible format, entitled "WARRANTY DATA." See Enclosure 1, Data Collection Disc, for a pre-formatted table that provides further details regarding this submission.

7. State, by model and model year, a total count for all of the following categories of claims, collectively, that have been paid by DTNA to date that relate to, or may relate to, the peer condition in the peer vehicles: warranty claims; extended warranty claims; claims for good will services that were provided; field, zone, or similar adjustments and reimbursements; and warranty claims or repairs made in accordance with a procedure specified in a technical service bulletin or customer satisfaction campaign.

Vehicle Model	Model Year	Number of Claims
Freightliner Business Class M2	2011	[REDACTED]
Freightliner Business Class M2	2012	[REDACTED]
Freightliner Business Class M2	2013	[REDACTED]
Freightliner Business Class M2	2014	[REDACTED]
Freightliner Business Class M2	2015	[REDACTED]

Source – DTNA Warranty records as of January 14, 2015

8. Describe in detail the search methods and search criteria used by DTNA to identify the claims in response to Request No. 6 and Request No. 7, including the labor operations, problem codes, part numbers and any other pertinent parameters used. Provide a list of all labor operations, labor operation descriptions, problem codes, and problem code descriptions applicable to the subject condition in the subject vehicles.

The DTNA warranty database was searched to respond to requests number 6 and number 7. VRMS codes were used to narrow the scope of the search. For request number 6, all claims on all model year 2011 through 2015 vehicles with VRMS system code 044, fuel system, and VRMS assembly level code 012, tank – fuel, gaseous, were identified. These claims were manually reviewed to determine if they related to, or may relate to, the subject condition. For request number 7, all claims on Business class M2 model year 2011 through 2015 vehicles with VRMS system code 044, fuel system, and VRMS assembly level code 001, tank – fuel, liquid, were identified. Claims with VRMS component level codes, 001 – tank-fuel, 019 – strap – fuel tank, 053 – hardware, mounting – fuel tank strap, 059 – bracket – step, fuel tank, 060 – brace – step, fuel tank, 063 – hardware, mounting – mounting bracket, fuel tank were manually reviewed to determine if they related to, or may relate to, the Peer Condition.

State, by make and model year, the terms of the new vehicle warranty coverage offered by DTNA on the subject vehicles (i.e., the number of months and mileage for which coverage is provided and the vehicle systems that are covered). Describe any extended warranty coverage option(s) that DTNA offered for the subject

Confidential

vehicles and state by option, model, and model year, the number of vehicles that are covered under each such extended warranty.

The Freightliner Business Class M2 base warranty is 2 years/unlimited miles. Additional extended coverage for the vehicle and or components may be negotiated at the time of vehicle purchase.

9. Produce copies of all service, warranty, and other documents that relate to, or may relate to, the subject condition in the subject vehicles, that DTNA has issued to any dealers, regional or zone offices, field offices, fleet purchasers, or other entities. This includes, but is not limited to, bulletins, advisories, informational documents, training documents, or other documents or communications, with the exception of standard shop manuals. Also include the latest draft copy of any communication that DTNA is planning to issue within the next 120 days.

Files – Natural Gas Information Page Image.pdf

Files – Agility Fuel Systems Product Support.pdf

Files – Agility Fuel Systems Routine Maintenance.pdf

Files – Agility Fuel Systems Training Information.pdf

Files – Agility Universal CNG Inspections.pdf

10. Produce copies of all operating and maintenance manuals that relate to the subject components in the subject vehicles that DTNA has issued to any dealers, regional or zone offices, field offices, fleet purchasers, customers, end users or other entities, including any supplements or addendums.

Files – Business Class M2 Driver's Manual CNG Section.pdf

Files – Business Class M2 Workshop Manual CNG Section.pdf

11. Describe all assessments, analyses, tests, test results, studies, surveys, simulations, investigations, inquiries and/or evaluations (collectively, "actions") that relate to, or may relate to, the subject condition in the subject vehicles that have been conducted, are being conducted, are planned, or are being planned by, or for, DTNA. For each such action, provide the following information:

- a. Action title or identifier;
- b. The actual or planned start date;
- c. The actual or expected end date;
- d. Brief summary of the subject and objective of the action;
- e. Engineering group(s)/supplier(s) responsible for designing and for conducting the action; and
- f. A brief summary of the findings and/or conclusions resulting from the action.

For each action identified, provide copies of all documents related to the action, regardless of whether the documents are in interim, draft, or final form. Organize the documents chronologically by action.

- [REDACTED]
- a. [REDACTED]
 - b. [REDACTED]
 - c. [REDACTED]
 - d. [REDACTED]

Confidential

- e. [REDACTED]
- f. [REDACTED]
- [REDACTED]

- [REDACTED]
- a. [REDACTED]
- b. [REDACTED]
- c. [REDACTED]
- d. [REDACTED]
- e. [REDACTED]
- g. [REDACTED]
- [REDACTED]

- [REDACTED]
- a. [REDACTED]
- b. [REDACTED]
- c. [REDACTED]
- d. [REDACTED]
- e. [REDACTED]
- f. [REDACTED]
- [REDACTED]

12. Describe all modifications or changes made by, or on behalf of, DTNA in the design, material composition, manufacture, quality control, supply, or installation of the subject component, from the start of production to date, which relate to, or may relate to, the subject condition in the subject vehicles. For each such modification or change, provide the following information:
- a. The date or approximate date on which the modification or change was incorporated into vehicle production;
 - b. A detailed description of the modification or change;
 - c. The reason(s) for the modification or change;
 - d. The part number(s) (service and engineering) of the original component;
 - e. The part number(s) (service and engineering) of the modified component;
 - f. Whether the original unmodified component was withdrawn from production and/or sale, and if so, when;
 - g. When the modified component was made available as a service component; and
 - h. Whether the modified component can be interchanged with earlier production components.

Also, provide the above information for any modification or change that DTNA is aware of which may be incorporated into vehicle production within the next 120 days.

DTNA has not made or requested any changes to the CNG fuel systems that relate to, or may relate to, the subject condition in the subject vehicles.

Confidential

13. State the number of each of the following that DTNA has sold that may be used in the subject vehicles by component name, part number (both service and engineering/production), model and model year of the vehicle in which it is used and month/year of sale *(including the cut-off date for sales, if applicable)*:
- Subject components; and
 - Any kits that have been released, or developed, by DTNA for use in service repairs, updates or upgrades to the subject component/assembly.

For each component part number, provide the supplier's name, address, and appropriate point of contact (name, title, and telephone number). Also identify by make, model and model year, any other vehicles of which DTNA is aware that contain the identical component, whether installed in production or in service, and state the applicable dates of production or service usage.

A review of DTNA aftermarket sales records shows that DTNA has not sold any replacement subject components. DTNA has not developed or sold any kits to update or upgrade the subject component.

14. State the number of peer components that DTNA has sold that may be used in the peer vehicles by component name, part number (both service and engineering/production), model and model year of the vehicle in which it is used and month/year of sale *(including the cut-off date for sales, if applicable)*.

DTNA offers a significant level of customization in the Business Class M2 Vehicle line. The peer vehicles in Request No. 2 were manufactured with [REDACTED] unique fuel tank configurations. [REDACTED] The fuel tanks may not be unique to Business Class M2 vehicles. The following is a listing of production and replacement parts usage for the 10 diesel fuel tanks with the highest production usage in model year 2011 through 2015 Freightliner Business Class M2 vehicles. The totals are for calendar year 2010 through 2014 production usage on all DTNA vehicles and all aftermarket sales.

Part Number	Description	Production	Aftermarket Sales
A03-38144-260	FTK-25IN,30D,80G,LH,SU,PLN	[REDACTED]	[REDACTED]
A03-38039-002	FTK,50G SHORT,RF,SU,LH	[REDACTED]	[REDACTED]
A03-35654-200	FTK,50G,SU,LH RECT	[REDACTED]	[REDACTED]
A03-35654-203	FTK,50G,RH RECT	[REDACTED]	[REDACTED]
A03-35654-400	FTK,80G,SU,LH	[REDACTED]	[REDACTED]
A03-38039-000	FTK,50G SHORT,SU,LH RECT	[REDACTED]	[REDACTED]
A03-35654-260	FTK,50G,RF,SU,LH RECT	[REDACTED]	[REDACTED]
A03-35654-600	FTK,100G,SU,LH	[REDACTED]	[REDACTED]
A03-38039-004	FTK,50G SHORT,SU,POL,LH	[REDACTED]	[REDACTED]
A03-35654-300	FTK,60G,SU,LH RECT	[REDACTED]	[REDACTED]

Source – DTNA Production and Aftermarket Records as of January 20, 2015

15. Describe, in general terms, the design requirements for the subject components on the subject vehicles and other CNG vehicles with regards to safety, including how DTNA protects the integrity of the fuel system during foreseeable events likely to occur during the life of the vehicle, such as damage that occurs due to vehicle use, road hazards, loading, unloading and accidental cargo spillage, single-vehicle and multiple-vehicle crashes, and how DTNA mitigates the risk of accidental fuel container rupture. Provide copies of all Failure Modes and Effects Analysis (FMEA) documents related to the subject components on the subject vehicles, regardless of whether the documents are in interim, draft, or final form. Organize the documents chronologically by action.

DTNA works with CNG fuel system suppliers to ensure that CNG fuel systems installed in DTNA vehicles meet applicable government regulations and industry standards. The applicable standards include FMVSS 304 – Fuel System Integrity of Compressed Natural Gas Vehicles, FMVSS 304 – Compressed Natural Gas Fuel Container Integrity, ANSI NGV2 - Basic Requirements for Compressed Natural Gas, and NFPA 52 – Vehicular Gaseous Fuel Systems Code.

16. Furnish DTNA's assessment of the subject condition in the subject vehicles, including:

a) Causal and Contributory Factors

Certain actions during the loading and operation of the subject vehicle may have contributed to the event in question, and are documented in the report titled, "On-Site Compressed Natural Gas Vehicle Explosion Investigation" issued by the Indiana University Transportation Research Center. The points below are taken from that report.

1. The lift truck was loaded into the dry van with the forks facing forward.
2. The lift truck was not secured appropriately in accordance with specific CFR and CVSA documented requirements, as noted in the Cargo Securement Requirements section of this response, and instead relied on the lift truck's parking brake to hold it in place.
3. The report stated that the driver drove the truck at speeds over 17mph (driving at a slower speed may have reduced the opportunity for the unsecured cargo to shift).
4. The driver may not have stayed focused on the task of transporting an unsecured cargo, and may have been distracted by conversation.
5. The report states that the driver did not begin braking at a point prior to the driveway. Braking prior to the driveway may have allowed vehicle speed reduction without exceeding the capacity of the lift truck's parking brake.
6. The report states that the driver, when made aware that they were approaching the driveway, braked aggressively- instead of passing the turn while using an appropriate level of braking and returning after a controlled stop.

b) The failure Mechanism

According to the Indiana University report, the Freightliner's driver was braking to initiate a right turn into a driveway when the unsecured forklift was displaced forward as a result of the deceleration and the forks impacted and pierced the front panel of the cargo box. The left fork then impacted and ruptured the lowest of the five CNG fuel cylinders

resulting in a explosion. “The shape of the fork tip probably produced a cut perpendicular to the critical hoop direction reinforcing fibers. These fibers carry the greatest load in a pressure vessel and the orientation of the fork tip was such to maximize the number of hoop fibers that were damaged.”

- c) The Failure Mode

See section b)

- d) The Risk to Motor Vehicle Safety

No unreasonable risk to motor vehicle safety is identified, provided industry required cargo securement and safe driving practices are followed.

- e) What warnings, if any, the operator and the other persons both inside and outside the Vehicle would have that the subject condition was occurring or subject component was malfunctioning.

There has been no malfunction identified on the Freightliner vehicle. The driver may have been aware the load was shifting when the brakes were applied by input through steering wheel, pedals and seat

- f) The role of cargo securement, both pre- and post- incident;

Operators of commercial trucks are required to secure their load per 49 CFR 39.102 to “0.8 g deceleration in the forward direction”. Required practice is delegated by FMCSA to the Commercial Vehicle Safety Alliance (CVSA) which administers road side inspections at which point non-compliant vehicles may be put out-of-service depending upon the severity of the non-compliance. CVSA publishes a handbook “Practical Cargo Securement” that applies to this event. Chapter 16 addresses the securing light vehicles (i.e. those weighing less than 10,000 lb. in the USA). Illustrations in the chapter indicate that lift trucks are specifically included in this chapter.

- g) The role of accidental cargo spillage;

See section a) and b).

- h) DTNA’s Interpretation of provisions in the following voluntary industry standards and what processes, including performance requirements, DTNA has adopted to ensure conformance with them;

DTNA installs commercially available CNG fuel systems developed by the supplier for specific vehicle mounting locations. DTNA ensures that the installed fuel system meets DTNA durability expectations as noted in request number 11.