FREIGHTLINER LLC
A DaimlerChrysler Company

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April 15, 2004

Richard Boyd, Chief
Medium & Heavy Duty Vehicle Division
Office of Defects Investigation
National Highway Traffic Safety Administration
400 Seventh Street, S.W.
Washington, D.C. 20590

Re: NHTSA File PE04-008

Mr. Boyd:

This information is in response to your March 26, 2004 letter regarding Freightliner LLC subsidiary Thomas Built Buses, Inc. (Thomas) buses built on General Motors and Ford cutaway chassis.

1. Furnish the total number of Thomas buses built on General Motors and Ford cutaway chassis manufactured for sale or lease in the United States.

> ANSWER: Thomas manufactured 6465 Thomas Minotour buses on Ford and GM cutaway chassis and 543 CL-100 buses on Ford cutaway chassis during the period of 2000 through 2002.

2. Furnish the number of and copies of all owner complaints and field reports, studies, surveys, or investigations from all sources which have been received or authorized by Thomas, or of which Thomas is aware, pertaining to the alleged defect in the subject vehicles. This should include information pertaining to the report included with this letter. Separate the number and copies of owner complaints from other sources. Also, if Thomas has issued any service or technical bulletins, advisories, or other communications to dealers pertaining to the alleged defect in the subject vehicle, provide a copy of each document. If no such documents have been issued, so state.

> ANSWER: Thomas performed one investigation that may pertain to the alleged defect. A copy of the resulting report is attached. Thomas has issued no service or technical communications pertaining to the alleged defect.

3. Identify and describe all accidents, subrogation claims, or lawsuits known to Thomas pertaining to the alleged defect (where Thomas is or was a defendant or codefendant).

Provide Thomas analysis of each item, clearly identifying the vehicle (model year and VIN), the vehicle owner and any injuries or property damage which may have occurred.

ANSWER: Thomas is not aware of any accidents, subrogation claims or lawsuits pertaining to the alleged defect in the subject vehicles.

4. Identify and describe all significant modifications or changes that could relate to the alleged defect in the manufacture of the subject vehicles. The following information must be included for each modification or change:

a. the reason for the modification or change
b. a description of the modification or change
c. the approximate calendar date on which the modification or change was incorporated into production, and
d. state whether the modified or changed components could be interchanged with earlier production components.

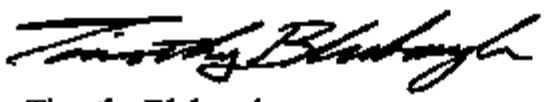
ANSWER: Thomas does not significantly modify or change engine compartment components supplied by Ford or GM.

5. Furnish the number of warranty claims related to the alleged defect on the subject vehicles by model series code, calendar month, and problem code. Each problem claim code must be identified.

ANSWER: Thomas has one warranty claim for a Minotour bus built on a 2000 model year Ford E450 chassis. The Feb. 2003 claim is for the value of the bus due to the fire identified in the answer to question number 2 above.

If you have any further questions, please do not hesitate to contact me.

Sincerely yours,



Timothy Blubaugh

Cc: John O'Leary
Ken Dodson
Jim Freiburger

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Mr. James W. Freiburger
Senior Staff Engineer
Thomas Built Buses, Inc.
PO Box 2450
1408 Courtesy Road
High Point, NC 27260

RE: Laidlaw Transit Inc.
Washington, DC

Dear Mr. Freiburger:

At approximately 9:43 am on Monday, June 3, 2002 a fire occurred in a 2000 Ford Econoline FS450SD/Thomas Built Minotaur school bus owned by [redacted] of Washington, DC while the vehicle was being driven in Washington, DC. The vehicle had been in operation for approximately three hours, and the drive was an route to a fuel stop after delivering all of her passengers. On October 21, 2002 you requested that we investigate this occurrence and determine, if possible, the origin and cause of the fire. This report describes our observations and findings in as brief a manner as possible.

Our field investigation was conducted by John K. Maurus of Probe, Inc. on October 30, 2002, when the vehicle was examined on the outdoor lot of the [redacted] [redacted]he body shop manager, provided access to the vehicle, which was identified by means of its Vehicle Identification Number (see below). Our

investigative work consisted of examining, diagramming, and photographing the vehicle, and interviewing by telephone Mr. [redacted] facility in Washington, DC telephone [redacted] in order to obtain information on circumstances surrounding the loss. To facilitate further understanding of this report, a schematic plan view of the vehicle and thirty-nine digital photographs taken in the course of the investigation are appended as Exhibits A & B, respectively. Exhibit B consists of the photographs in digital JPEG format on a compact disc, and a descriptive index accompanying the report text.

The subject vehicle was a 2000 Ford Econoline FS450SD/Thomas Built Minotaur school bus with Vehicle Identification Number (VIN) 1 FDXE45F2[redacted] (serial no. A82441). The VIN was ascertained by means of the metal VIN plate at the lower left edge of the front windshield. The Ford Econoline incomplete vehicle (chassis) was manufactured in January 2000 at the Lorain, Ohio plant of Ford Motor Company. The completed vehicle was manufactured at the High Point, North Carolina plant of Thomas Built Buses. The purchasing customer was [redacted] The vehicle was domiciled at the Laidlaw facility in Washington, DC. The [redacted] asset number was 219210; fleet number was BE3288. The odometer reading at the time of the fire was 21749 miles.

The vehicle was equipped with a steel body on the cab, steel frame and aluminum body on the coach, 20-passenger capacity (10 seats), Navistar 7.3 liter V8 turbocharged diesel engine, automatic transmission with a column-mounted shifter, rear drive, 4X2 wheel/drive configuration, hydraulic drum brakes, steel wheels, exhaust system terminating along the right side at the rear, fuel filler along the left side near the rear, power brakes, power steering, cab air conditioning, auxiliary coach air conditioning, and a battery in the right front of the engine compartment.

According to Mr. [redacted] weather conditions at the time of the fire were good. The vehicle was running at the time, and had been driven from approximately 6:40 am on Monday, June 3, 2002 until approximately 9:43 am when the fire occurred. The vehicle was operated continuously throughout that time period. The driver had picked up and delivered all of her passengers, and was on her way to a fuel stop, when the lights in the dashboard went out, the engine quit, she smelled rubber burning, and then observed smoke coming through the air conditioning register on the dashboard, and also under the engine hood.

The repair history for the vehicle was unavailable at the time of this investigation.

Exterior examination of the vehicle revealed that heavy damages extended from the upper front part of the engine compartment to the rear of the coach. The

heaviest overall damages were on the bodywork surrounding the upper part of the engine compartment and upward across the windshield area at the front of the coach. On the front grill, heavy damages occurred at the upper right, and decreased in intensity toward the center and left. The front tires were moderately damaged by the fire, and there were also moderate damages within the front wheel wells. The damages extended across virtually all of the coach bodywork, but these damages were of lesser intensity than those which occurred surrounding the engine compartment. There were no damages along the underside of the vehicle and it was concluded that the fire did not originate beneath or exterior to the vehicle.

On the interior of the vehicle, the heaviest overall damages occurred in the upper right front part of the engine compartment. The damages decreased in intensity toward the left, rear, and lower parts of the engine compartment. There was fire extension into the cab, where heavy damages occurred in the front dashboard area and across the upper part of the coach. The damages were less intense in the lower part of the coach. As a point of reference, the electric fuse/relay panel on the floor in the right front corner of the cab was only damaged by smoke. This panel had a steel rectangular cover, which was most heavily damaged along its front surface, with only smoke damage along the rear and sides.

Examination and evaluation of the flame and heat damage patterns described above, both on the exterior and interior of the vehicle, and giving consideration to the observations of the driver, it was concluded that the fire originated in the upper right front part of the engine compartment, adjacent to the left rear corner of the battery, as denoted by a cross in Exhibit A and shown in Figures 27-30 of Exhibit B. The fire then spread through the upper part of the engine compartment, and also extended rearward into the cab and coach via the bulkhead, engine cowl, and windshield.

The fire was caused by an electric fault or short circuit along a power cable with a stranded copper size 8 AWG conductor which ran from the positive battery terminal to the electric relay/distribution panel on the floor in the right front corner of the cab. The fault occurred at a point approximately twelve inches along the cable from the battery terminal, where the power cable was beaded and severed, as shown in Figures 32-36 of Exhibit B. The power cable also showed additional evidence of fault activity along a length of approximately five inches upstream of the point where the cable faulted and severed, and also along the right side of the engine adjacent to the valve cover. Due to the extent of fire damage in and around the fire origin area, and post-fire disturbance of the power cable, it could not be determined where the cable faulted to a grounded component. Energy generated by the electric fault was sufficient to melt, bead,

and sever the power cable, and to ignite nearby combustible materials, including the cable insulation, convoluted tubing surrounding the cable, other plastics, and grease and dirt accumulations.

The proximate cause for the fire, i.e. the reason the electric fault occurred, was abrasion and damage to the power cable insulation in such a manner that the live cable conductor came into fault or short circuit contact with a grounded component. Due to the extent of damage in and around the fire origin area, it could not be determined whether the power cable was secured by any brackets or clamps, however the cable appeared to be approximately twelve inches longer than necessary to accommodate its routing to the electric relay/distribution panel. There were no Thomas Built exemplar vehicles available at the Laidlaw facility for comparison purposes.

Other sources of natural and accidental activation energy and incendiarism were eliminated from consideration as causative agents for the fire. These included the battery, other parts of the electric distribution system and accessories, other power cables, the alternator, the AC compressor, belt slippage, overheating of the engine and transmission, the exhaust system, the brakes, fuel and fluid leakage, misuse of smoking materials, spontaneous ignition, providential acts, and an intentionally set fire.

In summary, our conclusions regarding this occurrence may be stated, within a reasonable degree of fire investigation certainty, as follows:

1. At approximately 9:43 am on Monday, June 3, 2002 a fire occurred in a 2000 Ford Econoline FS450SD/Thomas Built Minotaur school bus owned by [redacted] while the vehicle was being driven in [redacted]. The vehicle had been in operation for approximately three hours, and the drive was en route to a fuel stop after delivering all of her passengers.

2. The fire originated in the upper right front part of the engine compartment, adjacent to the left rear corner of the battery, as denoted by a cross in Exhibit A and shown in Figures 27-30 of Exhibit B.

3. The fire was caused by an electric fault or short circuit along a power cable with a stranded copper size 8 AWG conductor which ran from the positive battery terminal to the electric relay/distribution panel on the floor in the right front corner of the cab. The fault occurred at a point approximately twelve inches along the cable from the battery terminal, where the power cable was beaded and severed, as shown in Figures 32-36 of Exhibit B.

4. The proximate cause for the fire, i.e. the reason the electric fault occurred, was abrasion and damage to the power cable insulation in such a manner that the live cable conductor came into fault or short circuit contact with a grounded component.

5. Other sources of natural and accidental activation energy and incendiarism were eliminated from consideration as causative agents for the fire.

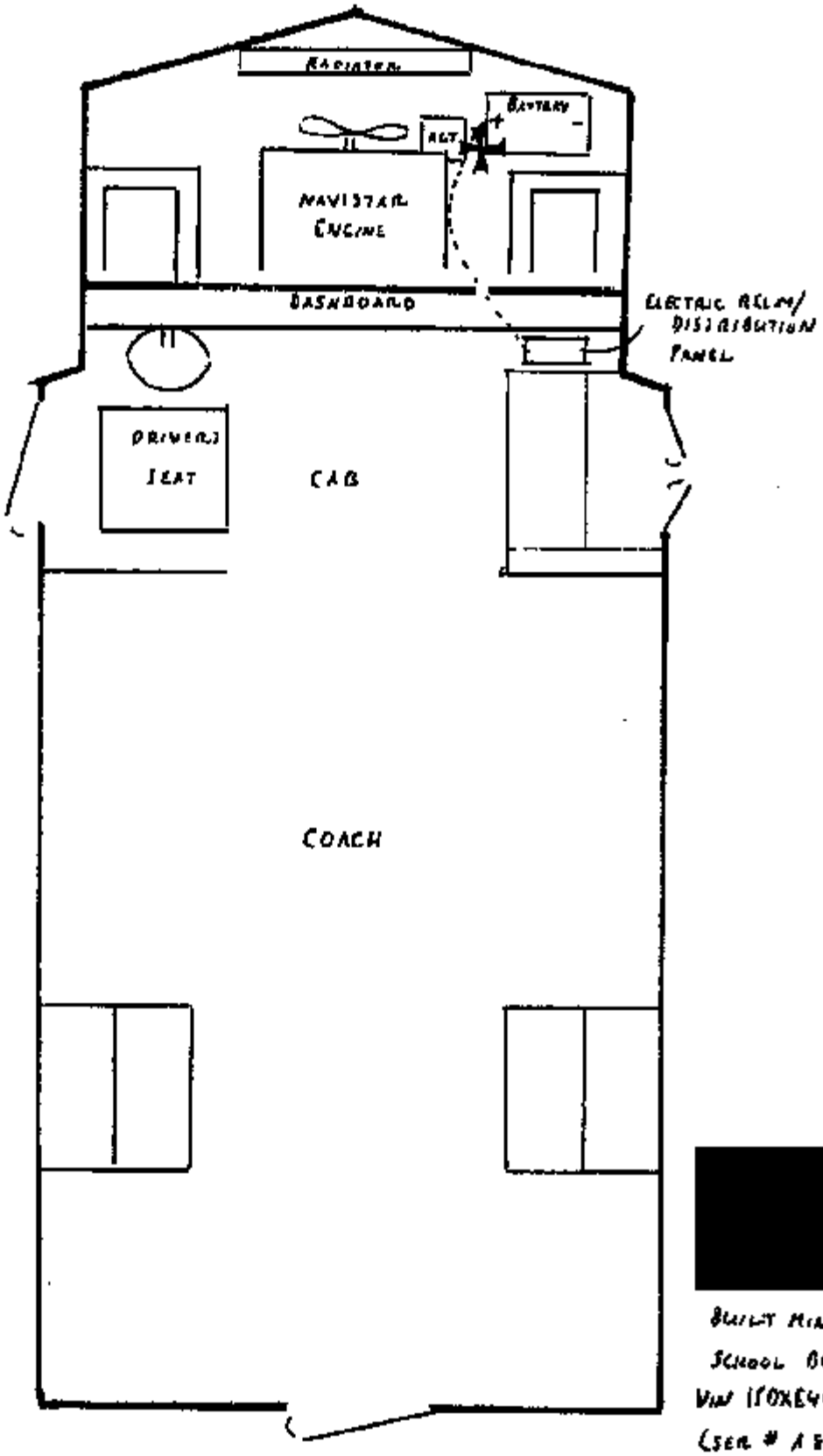
No physical evidence was removed from the vehicle by this investigator.

Should there be any questions regarding this investigation or the findings, or if we may be of further assistance, please feel free to contact us.

Respectfully submitted,

PROBE, INC.

John K. Maurus, CFI
Director of Fire and Explosion Analysis



[redacted]

BLUEBIRD MANUFACTURING
SCHOOL BUS
VIN 1FDXE45F1[redacted]
(SER # A82441)
INSPECTION for CLARKSBURG
WV
B/O 6/3/02
FRAME PROJECT 02-4765 V

EXHIBIT B
PHOTOGRAPHS

The following photographs were taken by John K. Maurus of Probe, Inc. on October 30, 2002 in the course of examination of the vehicle.

Figure 1 – Exterior view of vehicle with camera facing from left front oblique.

Figure 2 – Exterior view of vehicle with camera facing from front.

Figure 3 – Exterior view of vehicle with camera facing from right front oblique.

Figure 4 – Exterior view of vehicle with camera facing from right.

Figure 5 – View of VIN plate at lower left edge of front windshield.

Figure 6 – Exterior view of engine compartment and forward part of cab with camera facing from left, showing heat signatures on bodywork.

Figure 7 – Exterior view of engine compartment and forward part of cab with camera facing from right, showing heat signatures on bodywork.

Figure 8 – Exterior view of front end of vehicle with camera facing from front, showing grill area and engine compartment. Please note that damages are heaviest at the right end (shown at left in photograph).

Figure 9 – Exterior view of upper front part of cab with camera facing from front.

Figure 10 – View of coach interior with camera facing from front.

Figures 11 & 12 – Views of cab with camera facing from left and right, respectively.

Figures 13 & 14 -Views of dashboard area in front of cab with camera facing from left.

Figures 15 & 16 – Views of dashboard area in front of cab with camera facing from right.

Figure 17 – View of lower right front corner of cab with camera facing from right, showing steel cover over electric relay/distribution panel.

Figure 18 – View of electric relay/distribution panel on floor in right front part of cab with camera facing from right.

Figure 19 – View of wire harnesses leading to electric relay/distribution panel, at left end of panel, with camera facing from right. The innermost harness in convoluted tubing contained the main power lead from the battery.

Figure 20 – View of electric relay/distribution panel on floor in right front part of cab with camera facing from right, showing connection of power cable from the battery.

Figure 21 – View of engine compartment with camera facing from front.

Figure 22 – View of engine compartment with camera facing from left.

Figure 23 – View of engine compartment with camera facing from right.

Figure 24 – View of left part of engine compartment with camera facing from front.

Figure 25 -View of left center part of engine compartment with camera facing from front, showing AC compressor.

Figure 26 -View of right center part of engine compartment with camera facing from front, showing alternator.

Figure 27 -View of right part of engine compartment with camera facing from front, showing battery, and the fire origin area.

Figures 28-30 – Views of fire origin area in upper right part of engine compartment with camera facing from right front oblique, left front oblique, and right, respectively.

Figure 31 – View of part of the positive battery terminal, with camera facing from front, showing size 8 AWG stranded conductor connected to the terminal. This conductor was a part of the power cable leading to the electric relay/distribution panel on the floor in the right front part of the cab.

Figures 32-36 – Views of evidence of electric faulting which was causative of the fire, along the power cable leading from the positive terminal on the battery to the electric relay/distribution panel on the floor in the lower right front part of the cab.

Figures 37 & 38 -Views of right side valve cover on engine, showing where power cable leading from the positive battery terminal to the electric relay/distribution panel has fused against the valve cover.

Figure 39 -View of engine cowl in lower front center part of cab with camera facing from right, showing where the fire has burned part way through the cowl.