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OFFICE OF DEFECTS  
INVESTIGATION

December 21, 2007

Mr. Richard Boyd  
Office of Defects Investigation  
U.S. Department of Transportation  
National Highway Traffic Safety Administration  
400 Seventh St. S.W.  
Washington, D.C. 20590

Subject: **Preliminary Evaluation PE07-053 – 8 Nov 07**

Dear Mr. Boyd

The purpose of this letter is to respond to the Preliminary Evaluation notification (PE07-053) (the "Notification") issued by the Office of Defects Investigation (the "ODI") of the National Highway Traffic Safety Administration ("NHTSA") received by New Flyer of America Inc. ("New Flyer") on November 9, 2007. The Notification relates to "bus fires that allegedly started from condensation from the air conditioner's evaporator drain hose, shorting electrical connections and various electrical components" on New Flyer model year 1997 to 2003 Diesel 60 foot High Floor articulated (D60HF) buses, and New Flyer model year 1997 to 2003 Diesel 40 foot Low Floor (D40LF) buses.

### Responses

As required in the Notification, the following text (in italics) are the numbered information requests of the ODI contained in the Notification, followed by the New Flyer's response (indicated by the word, "Response"):

1. *State, by model and model year, the number of subject vehicles New Flyer has manufactured for sale or lease in the United States. Separately, for each subject vehicle manufactured to date, state the following:*
  - a. *Vehicle Identification Number (VIN);*
  - b. *Make;*
  - c. *Model;*
  - d. *Model Year;*
  - e. *Date of manufacture;*
  - f. *Date warranty coverage Commenced; and*
  - g. *The State in the United States where the vehicle was originally sold or leased (or delivered for sale or lease).*

*Provide the table in Microsoft Access 2000, or a compatible format, entitled 'PRODUCTION DATA', that lists by model year, model, build date and manufacturing location, the total*

**Headquarters/  
Winnipeg Facility**

711 Kernaghan Ave.  
Winnipeg, Manitoba  
R3C 3T4 Canada

Ph: (204) 224-1251  
Fx: (204) 224-0551  
e-mail: bussales@newflyer.com

**Customer  
Services**

25 DeBaets St.  
Winnipeg, Manitoba  
R2J 4G5 Canada

Ph: (204) 982-8400

**New Jersey Service  
Support Center**

808 Garfield Ave.  
Jersey City, New Jersey  
07305-4423 USA

Ph: (201) 369-1200  
Fx: (201) 369-0345

**New Product  
Development**

Unit 7, 45 Beghin Ave.  
Winnipeg, Manitoba  
R2J 4B9 Canada

Ph: (204) 982-8413  
Fx: (204) 654-4941

**Crookston  
Facility**

214 5<sup>th</sup> Ave. SW  
Crookston, Minnesota  
56716 USA

Ph: (218) 281-5752  
Fx: (218) 281-5672

**St. Cloud  
Facility**

6200 Glenn Carlson Dr.  
St. Cloud, Minnesota  
56301 USA

Ph: (320) 203-0576  
Fx: (320) 203-0584

number of subject vehicles that New Flyer has manufactured for sale or lease in the United States.

**Response:** See attached Microsoft Excel file "PE07-053 Response - Data.xls", Spreadsheet "No.1 PRODUCTION DATA"

2. State the number of each of the following, received by New Flyer, or of which New Flyer is otherwise aware, which relate to, or may relate to, the alleged defect in the subject vehicles:
- a. Consumer complaints, including those from fleet operators;

**Response:** No formal complaints relating to this alleged issue have been received by New Flyer from consumers or fleet operators.

- b. Field reports, including dealer field reports;

**Response:** Two incidents were discovered through New Flyer-initiated communications with New York City Transit Authority ("NYCTA"). These inquiries were conducted as a result of an informal inquiry from the ODI on July 11, 2007. The first event occurred on or around April 4, 2007, and had been discussed with the New Flyer Regional Manager on or around June 18, 2007. This event however, was not raised to a safety or technical issue status, and NYCTA indicated that it would handle the issue internally. New Flyer was later advised that a second event occurred on or around June 27, 2007. These two events were not discussed during regularly-scheduled warranty and technical issue meetings between New Flyer and NYCTA which took place after the initial event and after the second event. Further inquiries of NYCTA by New Flyer determined that a third event had occurred on or around October 10, 2007. New Flyer has not received any formal report from NYCTA regarding these three events (which normally NYCTA would issue to New Flyer in respect of a technical or safety-related issue).

- c. Reports involving a crash, injury, or fatality, based on claims against the manufacturer involving a death or injury, notices received by the manufacturer alleging or proving that a death or injury was caused by a possible defect in a subject vehicle, property damage claims, consumer complaints, or field reports;

**Response:** No reports or claims involving a crash, injury, or fatality relating to this alleged defect have been received by New Flyer.

- d. Reports involving a fire, based on claims against the manufacturer involving a death or injury, notices received by the manufacturer alleging or proving that a death or injury was caused by a possible defect in a subject vehicle, property damage claims, consumer complaints, or field reports;

**Response:** No reports or claims involving a fire relating to this alleged defect have been received by New Flyer.

- e. Property damage claims;

**Response:** No reports or claims involving property damage claims relating to this alleged defect have been received by New Flyer.

- f. *Third-party arbitration proceedings where New Flyer is or was a party to the arbitration; and*

**Response:** New Flyer is not and was not a party to any third party arbitration proceedings relating to this alleged defect.

- g. *Lawsuits, both pending and closed, in which New Flyer is or was a defendant or codefendant.*

**Response:** To its knowledge, New Flyer is not a party to any lawsuit, either pending or closed, relating to the alleged defect.

*For subparts "a" through "e", state the total number for 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).*

*For items "f" through "g", summaries are acceptable. Please identify in the summary the caption, court, docket number, and filing date of each lawsuit if a copy of the complaint initiating the lawsuit is not provided. Multiple attempts to repair the complaint should be listed separately. For each claim listed, separately include New Flyer's assessment and conclusion of the alleged incident.*

3. *Separately for each item (complaint, report, claim, notice, or matter) within the scope of your response to Request No. 2, state the following information:*
- a. *New Flyer's file number or other identifier used;*
  - b. *The category of the item, as identified in Request No. 2 (i.e., consumer complaint, field report, etc.);*
  - c. *Vehicle owner or fleet name (and fleet contact person), address, and telephone number;*
  - d. *Vehicle's VIN;*
  - e. *Vehicle's make, model and model year;*
  - f. *Vehicle's mileage at time of incident;*
  - g. *Incident date;*
  - h. *Report or claim date;*
  - i. *Whether a crash is alleged;*
  - j. *Whether a fire is alleged;*
  - k. *Whether property damage is alleged;*
  - l. *Number of alleged injuries, if any; and*
  - m. *Number of alleged fatalities, if any.*

*Provide this information in Microsoft Access 2000, or a compatible format, entitled "REQUEST NUMBER TWO DATA".*

**Response:** See attached Microsoft Excel file "PE07-053 Response - Data.xls", Spreadsheet "No.2 REQUEST NUMBER TWO DATA"

4. *Produce copies of all documents related to each item within the scope of Request No. 2. Organize the documents separately by category (i.e. consumer complaints, field reports, etc.) and describe the method New Flyer used for organizing the documents.*

**Response:** The majority of documentation related to this issue, has been in the form of email correspondence. See attachments # 01 through # 13 as described in attached

Microsoft Excel file "PE07-053 Response - Data.xls", Spreadsheet "No.4 SEQUENCE OF EVENTS".

5. State, by model and model year, a total count for all of the following categories for claims, collectively, that have been paid by New Flyer to date that relate to, or may relate to, the alleged defect in the subject matter 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.

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

- a. New Flyer's claim number;
- b. Vehicle owner or fleet name (and fleet contact person) and telephone number;
- c. VIN;
- d. Repair date;
- e. Vehicle mileage at time of repair;
- f. Repairing dealer's or facility's name, telephone number, city, state or ZIP code;
- g. Labor operation number;
- h. Problem code;
- i. Replacement part number(s) and description(s);
- j. Concern stated by customer; and
- k. Comment, if any, by dealer/technician relating to claim and/or repair.

Provide this information in Microsoft Access 2000, or compatible format, entitled "WARRANTY DATA".

**Response:** See attached Microsoft Excel file "PE07-053 Response - Data.xls", Spreadsheet "No. 3 WARRANTY DATA"

6. Describe in detail the search criteria used by New Flyer to identify the claims identified in response to Request No. 5, 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 alleged defect in the subject vehicles. State, by make and model year, the terms of the new vehicle warranty coverage offered by New Flyer 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 options(s) that New Flyer offered for the subject vehicles and state by option, model, and model year, the number of vehicles that are covered under each such extended warranty.

**Response:** No claims were received for Request No. 5 above in relation to the alleged issue. A search of the warranty database, as well as a search of the Field service Action Report (FSAR) database, was initiated as a result of the receipt of the ODI summary. No items relating to the alleged defective configuration were found.

7. Produce copies of all service, warranty, and other documents that relate to, or may relate to, the alleged defect in the subject vehicles, that New Flyer 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 New Flyer is planning to issue within the next 120 days.

**Response:** See attachment # 14 – New Flyer Technical Service Information Bulletin TSIB 04\_0001 Line Routings – Issued to all customers in October 2004.

8. *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 alleged defect in the subject vehicles that have been conducted, are being conducted, are planned, or are being planned by, or for New Flyer. For each action provide the following information:*

a. *Action title or identifier;*

**Response:** Other than inquiries into claims (legal, warranty, customer concerns) no other assessments, analyses, tests, test results, studies, surveys, simulations, investigations, inquiries and or evaluations that relate to, or may relate to, the alleged defect in the subject vehicles that have been conducted, are being conducted, are planned, or are being planned.

b. *The actual or planned start date;*

**Response:** Not applicable

c. *The actual or expected end date;*

**Response:** Not applicable

d. *Brief summary of the subject and objective of the action;*

**Response:** Not applicable

e. *Engineering group(s)/supplier(s) responsible for designing and for conducting the action; and*

**Response:** Not applicable

f. *A brief summary of the findings and/or conclusions resulting from the action.*

**Response:** Not applicable

*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.*

**Response:** See attached Microsoft Excel file "PE07-053 Response - Data.xls", Spreadsheet "No. 4 SEQUENCE OF EVENTS" and associated attachments # 01 through # 13.

9. *Describe all modifications or changes made by, or on behalf of, New Flyer in the design, material composition, manufacture, quality control, supply, or installation of components related to the alleged defect 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;*

**Response:** No changes have been incorporated as a result of the alleged defect. In January of 2000, a new style of lighting panel was incorporated into production for low floor buses only. The New York low floor buses have the new style lighting panel and are therefore, not within the population for the alleged defect.

*b. A detailed description of the modification or change;*

**Response:** The new style of lamp assembly has significant separation between the Thermo King evaporator hose and the ballast assembly for the lighting panel.

*c. The reason(s) for the modification or change;*

**Response:** New style of lamp was employed to increase interior lighting in the low floor buses. Modification was not related to the alleged defect.

*d. The part number(s) (service and engineering) of the original component;*

**Response:** New Flyer installation 012414 (see attachment # 15).

*e. The part number(s) (service and engineering) of the modified component;*

**Response:** New Flyer installation 221352 (see attachment # 16).

*f. Whether the original unmodified component was withdrawn from production and/or sale, and if so, when;*

**Response:** Original unmodified component is still incorporated in high floor bus design.

*g. When the modified component was made available as a service component; and*

**Response:** January 2000.

*h. Whether the modified component can be interchanged with earlier production components.*

**Response:** Old and new style lighting panels are not interchangeable.

*Also, provide the above information for any modification or change components related to the alleged defect that New Flyer is aware of which may be incorporated into vehicle production within the next 120 days.*

**Response:** No modifications or changes are currently planned for the installation.

10. *Furnish New Flyer's assessment of the alleged defect in the subject vehicle, including:*

*a. The casual or contributory factors(s);*

**Response:** The drain line for the Thermo King Rooftop evaporator unit contacted the ballast inverter for the fluorescent lighting panel. The eventual failure of the drain line due to abrasion resulted in low pressure, low volume, moisture being introduced into the lighting panel.

*b. The failure mechanism;*

**Response:** The evaporator line was damaged from being allowed to remain in contact with the ballast assembly for an extended period, which resulted in a line failure due to abrasion. Buses were seven to nine years old at the time of the failure.

*c. The failure mode(s);*

**Response:** The shorting of the connector at the #5 lighting panel on the New York 60 foot buses was the result of exposure to moisture from a damaged rooftop evaporator drain line, coming in contact with a 3 pin electrical connector for the fluorescent lighting panel ballast inverter. In this condition (moisture soaked connector), the path of least resistance for the electrical current at the 3 pin connector was still through the fluorescent tube. The short of the 3 pin connector only occurred after the fluorescent tube of the lighting assembly had "burnt out" normally due to expiration of its service life. Once the fluorescent tube was no longer functional, the path of least resistance for the electrical current was across the moisture contacting the 3 pin connector for the lighting assembly.

*d. The risk to motor vehicle safety that it poses;*

**Response:** None. The wiring circuit is protected by a circuit breaker to prevent prolonged application of power to the shorted circuit.

*e. What warnings, if any, the operator and other persons both inside and outside the vehicle would have that the alleged defect was occurring or subject component was malfunctioning; and*

**Response:** In the event, that moisture was allowed to accumulate in significant quantities in an overhead lighting panel to make contact with the lighting circuit 3 pin connector, the moisture would be visible leaking out of the panel. If the moisture is allowed to remain in the panel until such time as the fluorescent tube suffered normal failure, the resulting short of the 3 pin connector would trip the interior lighting circuit breaker. All interior fluorescent lights in the forward half (60 foot bus) or left hand side (40 foot bus) would then extinguish.

*f. The reports included with this inquiry.*

**Response:**

- A copy of the final Maintenance Directive from NYCTA – Issued July 2007 (attachment # 07).
- New Flyer Technical Service Information Bulletin TSIB 04\_0001 Line Routings – Issued to all customers in October 2004 (attachment # 14).

### **Summary**

It is New Flyer's position that this was, and is, a maintenance related issue which is covered by the Technical Service Information Bulletin TSIB 04\_0001 sent to all customers in November of 2004. New Flyer's assessment, is that there is minimal potential for damage or fire, and no potential for injury or loss of vehicle control due to a failure resulting from this alleged defect. New Flyer's estimate of damages and for repair of the buses in respect of these three events would be less than an aggregate amount of \$150.00 in parts and labor.

NYCTA's verbal advice to New Flyer regarding its inspection of the fleet, indicated very limited results amounting to less than two percent of the buses which were determined to have evaporator drain lines with a potential for making contact with the lighting panel ballast. The NYCTA D60HF fleets in question have gone through multiple modifications by NYCTA during their seven to eleven years of service, both in and around these lighting panels.

New Flyer's position is that the contact between the two components (i.e., the ballast and the drain line) did not exist at the time of manufacture. Of the 1,583 buses manufactured by New Flyer in this configuration (in both Canada and the U.S.), commencing with New Flyer's first installation of a Thermo King rooftop evaporator in 1992, only these three events have occurred (all of which are the subject matter of this inquiry, took place on buses owned by NYCTA, and which occurred within the last year).

At no time did New York formally or informally contact New Flyer requesting assistance with this issue, nor did it provide information regarding damage estimates, photographs of damages and repair costs. As indicated above, formal notification of an issue is a common practice for NYCTA when it either has a safety-related concern, or it experiences failure rates on any component above the expected norm.

The ODI Resume dated October 29, 2007, lists reports of seven thermal events associated with this installation. New Flyer is aware of only the three events discussed in this letter. New Flyer believes that the ODI included in the ODI Resume an unrelated event which occurred on a Sutrak rooftop installation on a 2007 model year of the D40LF. This incident occurred in respect of a group of six newly-delivered 40-foot low floor buses to a customer in Florida that contained a new style installation of an evaporator drain line for a different model air conditioning system (i.e., Sutrak). In this case, the evaporator drain line was being restricted, resulting in moisture collection in the rooftop area of the bus. This moisture accumulation resulted in the shorting out of a power module for the Sutrak evaporator. This event occurred on only one bus. The Sutrak rooftop installation issue described above became apparent within one month of initial delivery of the buses and was corrected shortly afterward (both on the customer's vehicles and for future manufacture, see attachment #17, page 8).

Sincerely,  
NEW FLYER OF AMERICA INC.



Mr. Kerry Legg  
Safety & Compliance Manager  
New Flyer Industries Canada ULC  
(204) 934-4876

cc: Colin Pewarchuk  
Hans Peper

Attachments: MicroSoft Excel Spreadsheet – "PE07-053 Response - Data.xls"  
Numbered attachments; 1 through 17 in PDF format.