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OFFICE OF
DEFECTS INVESTIGATION
Associate Administrator for Enforcement,
National Highway Traffic Safety
Room 5326
400 Seventh Street S. W.
Washington, DC 20590

03V-120 D or 11

March 24, 2003

Subject: **PART 573— DEFECT AND NONCOMPLIANCE REPORTS**
Emergency Window Handle pull force, installed in Orion buses

In accordance with 49 U.S.C. § 30118 and 49 CFR Part 573.5 Orion Bus Industries is submitting information regarding a potential defect that is currently under our investigation. The defect relates to the emergency window installed in, Orion transit busses.

We will provide the remaining data as the details are determined. I have enclosed our data recorded as outlined in the 49 CFR Part 573.

Should you have any questions or wish to discuss this matter further, please do not hesitate to contact me.

Sincerely,

Joe Labonte
Compliance and Safety Officer
Member of American Society of Safety Engineers
(905) 403-7832 ext. 3335

Orion Bus Industries Ltd.
360 Hazelhurst Road
Mississauga, Ontario
L5J 4T8
Tel: (905) 403-1111
Fax: (905) 403-8800

Orion Bus Industries Inc.
165 Base Road,
PO Box 748
Oriskany, NY 13424-0748
Tel: (315) 223-4100
Fax: (315) 756-8520

Orion Paris - Canada
360 Hazelhurst Road
Mississauga, Ontario L5J 4T8
Tel: (905) 403-7800
Tel: (800) 888-2871
Fax: (800) 297-8249

Orion Paris - US
165 Base Road, PO Box 748
Oriskany, NY 13424-0748
Tel: (315) 223-4410
Tel: (800) 756-8089
Fax: (800) 211-3750

PART 573 Defect and Noncompliance Report¹

On March 21, 2003 Orion Bus Industries [MFR] decided that (a defect which relates to motor vehicle safety)(a noncompliance with Federal Motor Vehicle Safety Standard No. 217) exists in the motor vehicles listed below, and is furnishing notification to the National Highway Traffic Safety Administration in accordance with 49 CFR Part 573 Defect and Noncompliance Reports.

Date this report was prepared: March 24, 2003

Furnish the manufacturer's identification code for this recall (if applicable): _____

1. Identify the full corporate name of the fabricating manufacturer of the vehicle being recalled. If the recalled vehicle is imported, provide the name and mailing address of the designated agent as prescribed by 49 U.S.C. §30164.

ORION BUS INDUSTRIES, INC.
165 Base Road, PO Box 748
Oriskany, NY 13424-0748

Identify the corporate official, by name and title, whom the agency should contact with respect to this recall.

Joe Labonte
Compliance and Safety Officer
JLabonte@OrionBus.com
Orion Bus Industries Ltd.
350 Hazelhurst Road
Mississauga, Ontario
L5J 4T8

Telephone Number: (905) 403-7832 ext. 3335 Fax No.: (905) 403-8800
Name and Title of Person who prepared this report.

Joe Labonte
Compliance and Safety Officer

Signed: _____

J. Labonte

¹Each manufacturer must furnish a report, to the Associate Administrator for Safety Assurance, for each defect or noncompliance condition which relates to motor vehicle safety.

I. Identify the Vehicle Models Involved in the Recall

2. Identify the Vehicles Involved in the Recall, for each make and model or applicable vehicle line (provide illustrations or photographs as necessary to describe the vehicle), provide:

Make(s): Orion Model Years Involved: 1995 - 2001 Model(s): II, V & VI

Production Dates: Beginning: January 1995 Ending: December 2002

VIN Range: Beginning: TBD Ending: TBD

Vehicle Type: All Bodystyle: All

Descriptive information which characterizes/distinguishes the recalled vehicles from those model vehicles not included in the recall:

Attwood windows have a 6" red handle located at the midpoint of the vertical edge of the window frame.

Identify the approximate percentage of the production of all the recalled models manufactured by your company between the inclusive dates of manufacture provided above, that the recalled model population represents. For example, if the recall involved Widgets equipped with certain items of equipment from January 1, 1996 through April 1, 1997, then what was the percentage of the recalled Widgets of all Widgets manufactured during that time period. 80%

II. Identify the Recall Population

3. Furnish the total number of vehicles recalled potentially containing the defect or noncompliance.

Model	Year	Number of Vehicles Potentially Involved
II	1995 - 2001	352
V	1995 - 2002	3318
VI	1995 - 2002	521

Total Number Potentially Affected by the Recall:

4191

4. Furnish the approximate percentage of the total number of vehicles estimated to actually contain the defect or noncompliance: 20%

Identify and describe how the recall population was determined—in particular how the recalled models were selected and the basis for the beginning and final dates of manufacture of the recalled vehicles:

The previous 8 years of all models having a windows with a vertical red emergency handle but that certain style of windows may not require all steps of the corrective action. The quantity provided is for all produced busses in those years. A refined quantity may be provided as details are made available.

Orion will also distribute a general notice reminding all Orion customers of the need to maintain these windows as set out in the service manual.

III. Describe the Defect or Noncompliance

5. Describe the defect or noncompliance. The description should address the nature and physical location of the defect or noncompliance. Illustrations should be provided as appropriate.

The handle pull force exceeding the 89N force to release the emergency window.

Describe the cause(s) of the defect or noncompliance condition.

Insufficient glue applied to the wedge block has caused the handle pull force to exceed 89N. The window retention spring was incorrect alignment.

Describe the consequence(s) of the defect or noncompliance condition.

The force required to release the emergency window exceeds the regulatory requirement. Additional force is required to release the window.

Identify any warning which can (a) precede or (b) occur.

There is no warning that wedge blocks are loose and may have moved or that springs are not aligned.

If the defect or noncompliance is in a component or assembly purchased from a supplier, identify the supplier by corporate name and address.

ATWOOD MOBILE PRODUCTS, LAGRANGE OPERATIONS, LA GRANGE, IN , 46761 Phone: 219 463 2116

Identify the name and title of the chief executive officer or knowledgeable representative of the supplier:

Kipp Ellis, Account Manager

IV. Provide the Chronology in Determining the Defect/Noncompliance

If the recall is for a defect, complete item 6, otherwise item 7.

6. With respect to a defect, furnish a chronological summary (including dates) of all the principle events that were the basis for the determination of the defect. The summary should include, but not be limited to, the number of reports, accidents, injuries, fatalities, and warranty claims.

7. With respect to a noncompliance, identify and provide the test results or other data (in chronological order and including dates) on which the noncompliance was determined.

July 11, 2002 NHTSA conducted testing of Bus emergency Exits and Window Retention and Release" on one Orion VI. Investigation NAS - 31Apr PE-217-020725

July 25, 2002 NHTSA conducted testing of Bus emergency Exits and Window Retention and Release" on two Orion V. Investigation NAS - 31Apr PE-217-020711

V. Identify the Remedy

8. Furnish a description of the manufacturer's remedy for the defect or noncompliance. Clearly describe the differences between the recall condition and the remedy.

See attached preliminary remedy procedure.

Clearly describe the distinguishing characteristics of the remedy component/assembly versus the recalled component/assembly.

Pull force measured is within the 89N requirement.

Identify and describe how and when the recall condition was corrected in production. If the production remedy was identical to the recall remedy in the field, so state. If the product was discontinued, so state.

Metering of glue to hold the wedge block in place and quality control checks ensure blocks do not dislodge. A jig locates the spring before tightening of the two screws.

VI. Identify the Recall Schedule

Furnish a schedule or agenda (with specific dates) for notification to other manufacturers, dealers/retailers, and purchasers. Please, identify any foreseeable problems with implementing the recall.

To be determined.

VII. Furnish Recall Communications

9. Furnish a final copy of all notices, bulletins, and other communications that relate directly to the defect or noncompliance and which are sent to more than one manufacturer, distributor, or purchaser. This includes all communications (including both original and follow-up) concerning this recall from the time your company determines the defect or noncompliance condition on, not just the initial notification. A DRAFT copy of the notification documents should be submitted to this office by Fax (202-366-7882) for review prior to mailing.

Note that these documents are to be submitted separately from those provided in accordance with Part 573.8 requirements.

Maintenance and Trouble Shooting Guide for Excel™ Egress Window Assemblies

Regular Maintenance

Atwood Mobile Products has designed and tested the release handles on emergency egress windows to be in full compliance with FMVSS 217. FMVSS #217 requires that the release locking mechanism operation force is not to exceed 20 lbf. Regular inspection and maintenance as outlined in the Orion Service Manual (S.19) must be integrated into the owner's regular maintenance program to ensure ongoing compliance over the life of the vehicle.

Note: Regular maintenance of the emergency release handle mechanism requires the operator to inspect and remove debris, lubricate window components, and test, as part of the regular maintenance cycle performed every 6,000 miles (9,600 km)/1,200 hours of operation, whichever comes first.

Note: Contamination and lack of lubrication are the most common and frequent cause of the pull force exceeding the FMVSS/CMVSS requirement.

Maintenance Procedure

- Open the window. From the outside of the vehicle, check the cream colored release bolts for dirt, foreign matter and debris, or any other contaminants that could restrict the bolt sliding motion (Illustration 1). Remove all debris.

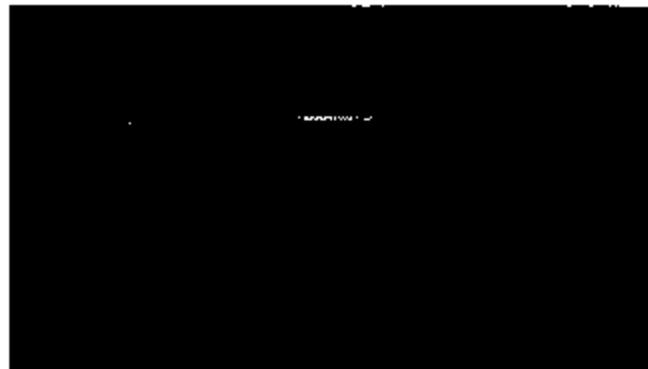


Illustration # 1

- Inspect the cable between the egress handle on one end of the cable and the steel bar on the opposite end (Illustration 2). Note where the cable tracks around the corner of the window, and inspect for additional debris or frayed cable. Clean debris away, and replace frayed cable.

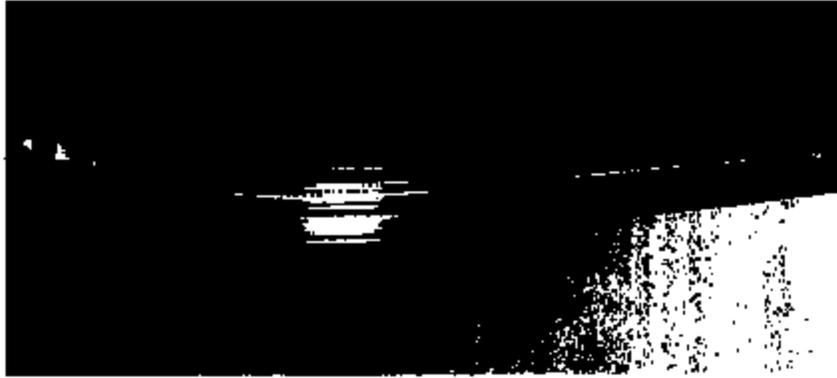


Illustration #2

- Using white lithium grease, lubricate the release bolts, the aluminum channel area where the release bolts slide, and the cable. Following lubrication, operate the handle several times to “wet out” the components.

Note: use only aerosol white lithium grease. Other lubricants may carry solvents (chlorine or fluorine compounds) that will damage the integrity of the release bolts.



Pull Force Test Procedure

The testing procedure on the emergency handle pull force is to be performed after each 6,000 mile maintenance procedure.

Attach a pull scale (also known as a "fish scale") to the release handle. Apply force to operate the handle. Use a rope, cable, or wire, to provide a means to keep the force perpendicular to the handle throughout the entire stroke until the mechanism is unlatched.

Perform three consecutive tests, and calculate the average pull force. The average is to be below 20 lbf.



If you have any questions during this procedure, or the test exceeds 20 lbf., contact:

Atwood Mobile Products
LaGrange Operations
Engineering Department
(260) 463-2116

DRAFT Recall Notice

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1. Regular Maintenance Procedure

Perform maintenance at the regular maintenance interval in accordance with the Orion Vehicle Service Manual.

2. Pull Force Test

Attach a pull scale to the release handle. Apply force to operate the handle. Use a rope, cable, or wire, to provide a means to keep the force perpendicular to the handle throughout the entire stroke until the mechanism is unlatched.

Perform three consecutive tests, and calculate the average pull force. The average is to be below 20 lbf. If the pull force exceeds 20 lbf proceed to Steps 3 and 4.

3. Retention Spring

- Visually inspect (Picture to be provided) the two retention springs to ensure that the spring is aligned with the frame (Illustration 1).
- If the spring is not aligned, lightly loosen the two screws and push the retention spring as far as possible towards the exterior of the bus (Picture to be provided).
- Tighten the screws to torque (To be provided)

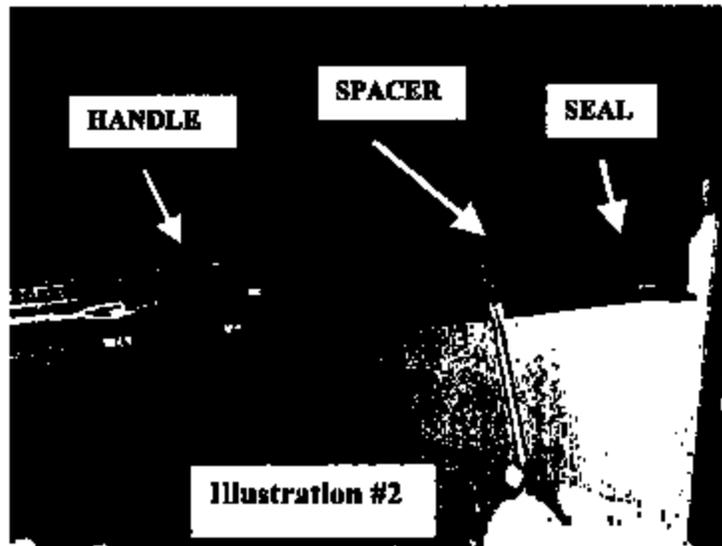


DRAFT Recall Notice

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4. Wedge Spacer Blocks

Inspect the wedge spacer block located above the emergency handle mechanism. If the wedge block is loose, remove by prying the block out of the channel with a screw driver (Illustration 2).



Atwood Contact

Note: If you have any questions on how to perform this procedure please contact:

Atwood Mobile Products
LaGrange Operations
Engineering Department
(260) 463-2116

Labor Allowance

The cost of labor will be reimbursed for steps 3 and 4 – alignment of retention spring, and removal of wedge block.

Procedure Time Allowed 5 minutes Per Window.

Record of Completion

Report the completion of this work for each vehicle and deliver to:

Atwood Mobile Products
LaGrange Operations
Engineering Department

DRAFT Recall Notice

(260) 463-2116

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Claims for Credit

Reimbursement will be issued only after the record of completion report has been submitted. Include the campaign number and the date the work was performed on the copy of the work order along with the standard warranty claim form.

If, after contacting Atwood Mobile Products at the location listed above, you are still unable to have the safety defect remedied, US residents may submit a complaint to the Administrator, National Highway Traffic Safety Administration, 400 Seventh Street, S.W., Washington, DC 20590 or call the toll free Auto Safety Hotline at 1-800-424-9393 - Washington DC area residents may call (202) 366-0123. Canadian residents may submit a complaint to the Director, Vehicle Safety and Energy Operations, Road Safety and Motor Vehicle Regulation, Transport Canada, Ottawa, ON, K1A 0N5 or call (613) 993-9542.