



U.S. Department
of Transportation
**National Highway
Traffic Safety
Administration**

ODI RESUME

Investigation: PE09-018
Date Opened: 04/01/2009 Date Closed: 05/08/2009
Principal Investigator: Sonny Murianka
Subject: Weld Separation

Manufacturer: North American Bus Industries, Inc.
Products: NABI – Models 60BRT, 65BRT & 60LFW – 3/2004 – 9/2007
Population: 579

Problem Description: Weld separation at the articulating joint that holds the two compartments of the bus together.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	4	4	4
Crashes/Fires:	0	0	0
Injury Incidents:	0	0	0
# Injuries:	0	0	0
Fatality Incidents:	0	0	0
# Fatalities:	0	0	0
Other:	0	0	0

Description of Other:

Action: This investigation is closed. NABI has filed a Safety Recall (09V-133) to address this issue.

Engineer: Sonny Murianka
Div. Chief: Richard Boyd
Office Dir.: Kathleen C. DeMeter

Date: 05/08/2009
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Summary:

This investigation was opened as the result of a report alleging that an articulating bus owned by the Chicago Transit Authority (CTA) had experienced a weld failure at the articulation joint of the bus.

In early April, ODI and VRTC engineers visited with the CTA and confirmed the failure allegation. The separation of the NABI articulating bus was the result of a weld failure that occurred in the parent metal of the rolled plate bracket. The fracture occurred just beyond the weld line where the bracket is welded to the articulating joint casting. The fatigue fracture appeared to be caused by torsional force loading through the joint configuration. Bending moment fatigue initiated the fracture caused by fore and aft rotational loading that could be generated by, among other forces, both positive and negative wheel torque (acceleration and braking). A visual evaluation of the surrounding structure suggests that several welded members form a box beam and are intended to react to the torque and prevent the main structural weld from bending, but the un-reinforced materials appear to be inadequate for the forces generated in this application.

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On April 16, 2009, NABI identified a defective welded crossmember assembly in the understructure of these buses. After further evaluation, NABI decided to file a defect report with the agency.

NABI will arrange to inspect and repair all affected buses, including installation of additional reinforcement to the affected areas.

This recall action resolves the issues raised by this investigation. Accordingly, this investigation is closed.