September 20, 2006

Mr. Mark Aesch, CEO
Rochester Genesee-Regional Transportation Authority
1372 East Main Street
Rochester, NY  14609

RE: PTSB CASE #8876

Dear Mr. Aesch:

The Public Transportation Safety Board received notice of a mechanical failure bus accident involving Rochester-Genesee Regional Transportation Authority (RGRTA), which occurred at the intersection of Mt. Read Blvd. and Lyell Ave, in the City of Rochester, New York on February 15, 2006.

Based on a review of the enclosed Abbreviated Report, no further action is necessary.

Sincerely,

John F. Guinan
Assistant Commissioner
Office of Passenger and Freight Transportation, and
Executive Director, Public Transportation Safety Board.

Enclosure
1. **CASE:** 8876
2. **PROPERTY NAME:** Rochester-Genesee Regional Transportation Authority
3a. **ACCIDENT TYPE:** Mechanical Failure  
3b. **Accident Severity Index:** 0
4a. **DATE:** February 15, 2006  
4b. **TIME:** 1:40 p.m.
5. **ACCIDENT LOCATION:** Intersection of Mt. Read Blvd and Lyell Ave.
6. **TOWN/CITY/BOROUGH:** Rochester
7. **SUMMONS:** None
8. **BUS NUMBER:** 805  
8a. **YEAR:** 2004  
8b. **MAKE:** Gillig
9. **NUMBER OF INJURIES:** 0  
10. **FATALITIES:** 0
11. **HOURS OF SERVICE:** 8 hrs in the last 24 hrs/ 40 hrs in last 7 days
12. **SYNOPSIS:**

At approximately 1:40pm, Rochester-Genesee Regional Transportation Authority (RGRTA) Bus #805 was traveling southbound on Mt. Read Blvd, in the curb lane, approaching the intersection of Lyell Avenue when the right rear wheels became detached from the axle. The operator stated he felt a thump, pulled the bus to the right of Mt. Read Blvd and stopped. The right outside wheel rolled by the bus and crossed the southbound lane striking an auto (Ford Taurus) in the right rear quarter panel. The auto was stopped at the intersection for red light. The second wheel/tire came off and laid on the road next to the curb. The Rochester Police Department responded to the scene. The bus operator, passengers and the driver of the auto claimed no injuries. The bus was towed to RGRTA garage and secured.

In the vicinity of the accident site, Mt. Read Blvd. is a slightly inclined roadway with four lanes of travel (two northbound and two southbound) divided by a raised median. This is a moderate to heavily traveled roadway, asphalt paved, with residential homes and business on both north and south sides. At the time of the accident it was daylight and the weather was clear and dry. The posted area speed limit is 30 mph.

Bus #1263 is a New Flyer forty-foot transit type bus with a seating capacity for forty-eight passengers. A review of the bus records showed that Preventive Maintenance Inspections are performed at regular 6,000 mile intervals or 90 days in accordance with the RGRTA System Safety Program Plan and the manufacturer’s recommended service intervals. The most recent (PMI) was completed on December 24, 2003 and the bus had traveled 5,210 miles at the time of the accident.

A post accident inspection of the bus was conducted by RGRTA maintenance staff in conjunction with Arvin Meritor’s engineering staff (the axle and hub manufacturer). Arvin Meritor was asked by RGRTA to assist in determining the cause of the wheel mounting hardware failure. The failure can be attributed to RGRTA practices of installing wheels using a one inch drive impact wrench, which over torques and damages the mounting hardware. Arvin Meritor has provided correct wheel mounting procedures. Arvin Meritor is currently investigating a process in order to provide greater convenience to the customer and more robustness to the hardware in the event of over tightening.
In response, RGRTA hired a consultant (FleetPro Inc.) to provide a third party review and to develop a training program in conjunction with RGRTA Training Department to train the maintenance staff in the correct procedures for wheel and hub maintenance. RGRTA has implemented a fleet wide program to find and correct all wheel mounting hardware damaged by their previous procedures. The consultant firm will also inspect a sampling of the fleet and perform a forensic inspection on old parts removed from their buses. RGRTA will fix all 1 inch drive impact wrenches in the reverse position so they can not be used to tighten. The maintenance staff will use ½ inch drive impact wrench for wheel installation and will finish by using a hand torque wrench to achieve the proper manufactures recommended torque values.

The bus operator was hired on November 05, 1984 after completing the “Standard New Bus Operator Training Program”. A review of the bus operator's Department of Motor Vehicle records for the last three years showed no suspensions or violations. New York State Vehicle & Traffic Law, Article 19-A records were found in-order and up-to-date. A review of the operator's RGRTA record for the past three years revealed one non-preventable accident on 2/25/2004 and one preventable accident on 8/15/2005. The operator was re-trained in proper procedures regarding the use of a mobility device (wheelchair). Post accident drug and alcohol test was administered to the bus operator within 2 hours and the results were negative.

In an interview with the PTSB staff the bus operator stated he was traveling southbound on Mt. Read Blvd just before Lyell Avenue in the right lane. The operator stated he heard a loud thumping sound and felt the bus drop down on it’s right side. The operator stated a tire rolled ahead of the bus and struck the right rear of a Ford Taurus that was stopped at a traffic light. The operator stated he pulled the bus over and secured the vehicle, when he looked into the right outside mirror he observed a second wheel/tire laying in the roadway. The operator immediately notified dispatch of the accident.

The Public Transportation Safety Board staff finds that the most probable cause of the bus accident was the failure of the wheel attachment hardware due to RGRTA maintenance practices.

The accident on February 15, 2006 at 1:40 pm was not reported to the PTSB within the 90 minute window as is required by the Public Transportation Safety Board Rules and Regulations, Title 17 of the Transportation Law, Section 990.10 ( Notification of Bus Accidents).

In response, RGRTA acknowledged and took full responsibility for the error in not immediately reporting the accident to the PTSB. This was the result of an internal miscommunication.

RGRTA reviewed the accident on March 7, 2006 and found it to be preventable. The following measures have been taken by RGRTA to ensure fleet safety. A procedure has been established for proper torquing, the entire fleet was re-torqued and plastic arrows have been installed on each wheel which shows if any lug nuts have become loose, FleetPro, Inc.
was contracted to implement a training curriculum and to perform a training class for the entire maintenance staff which was completed on July 09, 2006. RGRTA staff traveled to Arvin Metor in Ohio to gain their approval of a redesigned oil slinger. RGRTA staff purchased new tooling and stocked their parts department with anticipated needed parts.

Based on the actions taken by RGRTA in this case, the Public Transportation Safety Board staff makes no further recommendations.

INVESTIGATOR: M. F. GLUSKIN

______________________________   __________________________
CHIEF, ACCIDENT INVESTIGATION SECTION   DATE

______________________________   __________________________
DIRECTOR, PCSB, NYSDOT   DATE