PUBLIC TRANSPORTATION SAFETY BOARD
ABBREVIATED BUS ACCIDENT REPORT

1. CASE: 10135
2. PROPERTY NAME: Rochester-Genesee Regional Transportation Authority
3a. ACCIDENT TYPE: Fire
3b. Accident Severity Index: 0
4a. DATE: March 5, 2009
4b. TIME: 10:15 am
5. ACCIDENT LOCATION: Genesee Street
6. TOWN/CITY/BOROUGH: Rochester
7. SUMMONS: No
8. BUS NUMBER: 1274
   8a. YEAR: 2000
   8b. MAKE: New Flyer
9. NUMBER OF INJURIES: None
10. FATALITIES: 0
11. HOURS OF SERVICE: Not Related
12. SYNOPSIS:

At approximately 10:15am, Rochester-Genesee Regional Transportation Authority (RGRTA) bus #1274 was traveling northbound on Genesee Street. The bus operator smelled something burning as he was looking in his right outside side mirror and noticed smoke coming from the rear of the bus. The bus operator pulled the bus to the curb, shut the engine off, evacuated four passengers to a safe location, and notified dispatch for assistance. The operator and bus passengers claimed no injuries. Bus #1274 was towed to the Rochester maintenance facility and secured.

Bus #1274 is a 2000 New Flyer 40 foot transit type bus with a seating capacity for forty two 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 February 17, 2009 and the bus had traveled 1,718 miles at the time of the bus fire. There were no safety or recurring defects noted in the 60 days prior to the accident that were considered causative to the accident.

A post fire inspection was performed on March 5, 2009 by an outside consultant firm, RGRTA maintenance staff, and the PTSB staff. The fire originated in the right side battery compartment directly above the batteries. Further investigation revealed an electrical short occurred within the power supply bundle. The bundle supplies electrical power to various systems within the bus, such as the positive and negative battery cables going to the alternator and starter, and the positive and negative lead to the jump start connection at the rear engine compartment. The power supply wires are covered with convoluted tubing, wrapped with plastic wire ties and clamped
to the bulkhead jump start with a plastic coated clamp (photo #1). The decay of the convoluted tubing and vibration from the daily operation of the vehicle caused a breakdown of the wiring insulation. The heat and decay caused chafing of the wires and the eventual short circuit. Arcing of the wires ignited the combustible materials such as wiring insulation and convoluted tubing. The wires shorted against the retaining clamp and arced through the clamp (see photo 2). In response, RGRTA maintenance staff did a campaign on 58 New Flyer buses starting March 7, 2009 and completing the inspections on March 14, 2009. They found harnesses were in tact, identified loose nylon ties, installed heater hose to some buses to eliminate chafing and attached new nylon ties to some to secure the harnesses. RGRTA management implemented a new procedure for preventive maintenance inspections regarding electrical cables, components and harness assemblies. The procedure will include a stamp on the PMI form signed with the employees badge number which will verify that electrical cables and component inspections were performed.

The bus operator was hired on August 30, 1999 after completing the standard 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 two non-preventable accidents (9/19/2008, and 5/16/2007). A post accident drug and alcohol test was not administered to the bus operator due to the nature of the accident.

In an interview with the bus operator he stated he was traveling northbound on Genesee Street. He said that he smelled something burning and thought that it might be the heater. The bus operator arrived at Brooks Avenue and Genesee Street when the battery light came on. The operator stated he was at a red light when he called dispatch and informed them of the smell of smoke. The operator stated he pulled the bus to the curb and shut the engine off. The operator stated he looked into his right outside mirror and noticed smoke coming from the rear of the bus. The operator evacuated four passengers to a safe location, and ran to the rear of the bus and noticed flames coming from the battery compartment. The operator called dispatch a second time using his cell phone and was informed the fire department was on their way.

The Public Transportation Safety Board staff finds that the most probable cause of the bus fire were chafing wires which caused short circuit. The arcing of the wires ignited the wiring insulation and convoluted tubing. The wires shorted against the retaining clamp and arced through the clamp causing the fire.
RGRTA reviewed the accident on March 6, 2009 and found the accident to be non-preventable with respect to the bus operator. After review of the fire incident RGRTA policies have been reviewed and changed to include on each PMI that the main power cables in the engine compartment and bundles of electrical wiring above the battery are checked by a mechanic. Additionally, the PMI document will be stamped and signed with the employee's badge number.

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

INVESTIGATOR: M. F. GLUSKIN

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CHIEF, ACCIDENT INVESTIGATION SECTION      DATE

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DIRECTOR, PCSB, NYSDOT                 DATE