

**PARTIAL  
STURAA TEST  
7 YEAR  
200,000 MILE BUS  
from  
ARBOC MOBILITY, LLC  
MODEL 2009 GAS HYBRID**

**SEPTMBER 2009**

**PTI-BT-R0916**

PENNSTATE



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## EXECUTIVE SUMMARY

ARBOC Mobility, LLC submitted a model 2009 Gas Hybrid, gasoline-powered 15 seat (including the driver) 23-foot bus, for a partial STURAA test in the 7yr/200,000 mile category. The federal Transit Administration determined that the following test would be performed: 4. Performance, 6. Fuel Economy Test, 7.1 Interior Noise Test and 7.2 Exterior Noise Tests. Testing started on August 28, 2009 and was completed on September 4, 2009. The Check-In section of the report provides a description of the bus and specifies its major components.

The interior of the bus is configured with seating for 15 passengers including the driver. Free floor space will accommodate 13 standing passengers resulting in a potential load of 28 persons. At 150 lbs per person, this load results in a measured gross vehicle weight of 14,740 lbs.

The performance of the bus is illustrated by a speed vs. time plot. Acceleration and gradeability test data are provided in Section 4, Performance. The average time to obtain 50 mph was 16.60 seconds.

A Fuel Economy Test was run on simulated central business district, arterial, and commuter courses. The results were 6.98 mpg, 7.20 mpg, and 10.99 mpg respectively; with an overall average of 7.87 mpg.

A series of Interior and Exterior Noise Tests was performed. These data are listed in Section 7.1 and 7.2 respectively.