



For Immediate Release

Major Structural Tests on GTB-40 PHEV Hybrid Bus Completed Successfully

Innovative chassis design easily exceeds structural load requirements.

Troy, Michigan – September 11, 2008. Fisher Coachworks announces the successful completion of a major engineering milestone today as the first GTB-40 chassis easily surpassed load test requirements set by a Department of Energy research program for the development of the next-generation hybrid transit bus.

A funding milestone for the \$2.5 million DOE program to build the first GTB-40 PHEV transit bus was completed today with the successful load testing of the chassis. The test included loading the passenger compartment with a simulated 30,000 pound live load to check for structural deflection and possible deformation. The test load represented 2.5 times the anticipated maximum loading, or the equivalent of 200 passengers standing between the front and rear wheel wells. The load was applied repeatedly over several days as testing equipment measured maximum deflection of the Nitronic¹ stainless steel monocoque chassis.

“Applying such a large load uniformly over the floor was an engineering challenge in itself” commented Bruce Emmons, Fisher Coachworks Chief Technology Officer. “We considered the use of sand bags and water barrels, but instead decided on the more novel approach of using atmospheric pressure to apply the load for us. Our test rig was comprised of a large vacuum chamber fabricated below the bus between the front and rear wheels. The chamber was attached to the smooth underside of the bus floor with a special gasket material, and then we applied a precise vacuum to the chamber which uniformly loaded the floor to a pressure of 1.42 PSI. Applying the test load in just this part of the floor actually represented a much higher loading factor, because evenly dispersed passengers would have placed offsetting moment leverage both fore and aft of the structural wheel housings. The resulting load of 30,000 pounds caused a maximum deflection of just 3/8”; well below the yield limit of our Nitronic stainless chassis.”

“I had no doubt that the bus would excel in structural testing” commented Griffin Burgh, Chief Operating Officer for Fisher Coachworks, “but it was just as impressive to see another stellar example of Bruce’s engineering innovation. Implementing such a carefully controlled test procedure at one of the ‘Big Three’ could have been a million dollar exercise for a one-time test. Our skunk-works approach continues to generate substantial savings while helping to drive creating problem-solving at all levels. One of our visitors recently commented that this confirmation prototype would



have required an investment of well over \$25 million using a traditional prototyping approach. I believe they are correct, and we will take that this same innovative spirit forward as we ramp-up our assembly operations in 2009.”

Earlier this year, the same GTB-40 chassis also completed vibration or “modal” testing to investigate the onset of possible harmonic resonance at various frequencies and amplitudes. The testing was successful and data recorded will contribute to further chassis tuning to achieve exceptionally low road noise under power.

Further tests for braking, suspension durability, bumper protection, passenger safety, and overall maintainability will be conducted in 2009 during federally subsidized evaluations at the Bus Research and Testing Center near Altoona Pennsylvania.

About Fisher Coachworks, LLC

Fisher Coachworks was formed in 2007 to manufacture advanced hybrids using a patented ultra-lightweight stainless steel unibody structural system and low-cost fabrication process. The company’s launch product is the GTB-40 PHEV Transit Bus which began road testing in Summer 2008. By applying a total vehicle optimization engineering approach enabled the company to significantly reduce vehicle mass, and as a result, achieve step-change improvements in fuel economy, emissions and operating cost efficiency. Currently based in Troy, Michigan, the company will soon be relocating to a larger manufacturing facility to prepare for ramped vehicle production beginning in 2009.

Nitronic™ is a trademark of AK Steel Company.

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