TECAT Engineering, Incorporated

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TECAT TODAY

TECAT's Tidbit Corner

- NASCAR racing has been an American icon for 53 years.
- An opposed piston engine is one in which the cylinders are double ended, with a piston at each end, and no cylinder head.
- To learn how you can help to support the U.S Army, visit www4.army.mil/outreach/support/
- Find more information about other TECAT projects online at: www.tecatengineering.com

TECAT's Torque Telemetry Takes to the Track in Homestead, FL

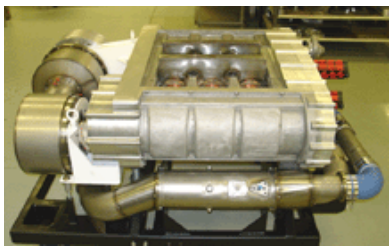
This October, TECAT's torque telemetry device hit the track in Homestead, Florida on a NASCAR test vehicle. The vehicle was outfitted with a TECAT Torque Telemetry (T3) system to measure drive shaft torque. This was the first on-track test of the system, exposing it to 10,000RPM, temperatures in excess of 250 degrees Fahrenheit, and the typical debris found on race tracks everywhere. The team was anxious to see how well the electronics would withstand the heat and the harsh environmental conditions. While the electronics performed perfectly, there was a mechanical failure in the method used to attach the strain gage cable, which came off after the third lap. The team is in the process of devising a new attachment strategy for the cable, and will be testing that system on track later this year. Many thanks go to our friends at ITW DynoTech, Pi Research, and Robert Yates Racing for making this testing possible.

A view of Victory Lane at the track in Homestead, FL.

TECAT will be displaying this torque sensing drive shaft with ITW DynoTech at the Performance Racing Industry (PRI) conference in Orlando, FL on December 14-16, 2006. PRI is the gateway to the worldwide racing marketplace, and will be our first opportunity to show race teams across the globe just what the T3 system can do for them. Ω

Army Engine Performs to TECAT Predictions

TECAT Engineering and Baker Engineering, just completed the first round of testing on a 500 horsepower opposed piston diesel engine designed and developed for use by the US Army. TECAT used their proprietary engine simulation software to predict engine performance parameters, such as peak horsepower and fuel consumption. TECAT's predictions were validated by engine testing on the very first test. TECAT's horsepower predictions were within xx% of those measured on the dynamometer, and fuel consumption predictions were within xx% of those measured. TECAT also designed and built a calibration test rig to calibrate the in cylinder pressure transducer that was used during engine testing. TECAT will continue to work with Baker Engineering on this engine, which is being developed under a Phase II SBIR contract. Ω



500hp Opposed Piston Diesel Engine