

The Abilene Reflector-Chronicle

Engine designers with tie to region believe product will change industry

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Is it possible that the next major technological breakthrough for the automobile industry and the internal combustion engine is going to happen in our own backyard?

It certainly appears the answer could be yes. Matthew Riley and Nicholas Bennington, a pair of mechanical engineers from Wichita along with local attorney, Doug Thompson have formed Grail Engine Technologies, Inc. a Kansas corporation to develop, patent and license the newest state of the art technological advancements for the automobile industry and the internal combustion engine.

Imagine the day where the typical automotive transportation vehicle yields over 100 miles per gallon -- without the use of expensive electric batteries and operating with lower emissions output than currently mandated by state and federal regulations.

Grail Engine Technologies (www.grailengine.com) is dedicated to designing and developing a state of the art two-stroke engine that will accomplish this feat. The company consists of experts in the field of internal combustion engine design, ignition systems and emissions technology. Patent and copy written applications have been filed with an engine concept that will revolutionize the internal combustion two stroke engine. Their power plant will operate on multiple fuels with increased performance levels while extensively reducing exhaust emissions.

In addition, the revolutionary two stroke engine design does not experience cross contamination with the engine's combustion and lubrication requirements - the first of its kind. It is also to simultaneously run using the "Miller Cycle" and HCCI (Homogeneous Charged Compression Ignition) for maximum efficiency.

The market opportunity for our technology is tremendous and subject to a significant growth trend, company officials said. The goal of Grail Engine Technologies is to extend the life of the internal combustion engine with a patented design that improves fuel efficiency over 50 percent of what is currently marketed today while exceeding currently legislated CO2 emissions requirements.

The engine design will reduce dependency on foreign oil, reduce production costs of automobiles in North America, stabilize the automotive job market in North America and could return automotive dominance to giants such as General Motors and Ford. The Grail Engine design is not only suitable for the automotive market but other markets as well: lawn and garden, marine, and recreational off road vehicles.

Grail Engine Technologies began its design development in April 2009. By using sophisticated tools available from Autodesk Inventor 2010, they say they were able to bring their “paper design” to a completed constrained and animated 3D assembly model in 19 weeks. The Autodesk Inventor suite of tools enabled the team to optimize design weight, engine flow characteristics, stress analysis and reduced bill of material costs. In addition, they utilized Stereo Lithography Apparatus (SLA) rapid prototyping tools to identify design issues and facilitate investor involvement.

The discovery of the Grail Engine, with its multi-market use and environmental and sustainable energy capabilities is what they believe is “a design that will change the world.”

Riley is the chief executive officer and chief research scientist with more than 20 years of experience on research projects involving engines.

Bennington is a mechanical engineer who has worked in the aerospace and aviation industry. Engineers Riley and Bennington teamed with local attorney, Doug Thompson to bring the concepts together under the umbrella of Grail Engine Technologies, Inc.

Thompson stated, “I was initially approached by Matthew Riley with a concept for the development of revolutionary internal combustion engine design that could have a major impact on this country’s dependency on foreign oil, restoration of automobile industry jobs in this country and a shift of economic resources into our state.

Matthew Riley introduced me to Nicholas Bennington, a mechanical engineer. Both men were totally dedicated to the project investing up to 16 to 18 hours a day.”

Matthew and Nicholas were working with Salina Area Technical College staff and students for several months to fine tune the product.

Riley stated, “I had been working on the project for some time. As soon as I refined my thoughts and concepts, I brought my good friend, Nicholas Bennington on board and the two of us have been running full speed since then. Early this year, we brought Doug Thompson on board as a part of the team. Doug is not only our corporate attorney, but also one of the owners and a director of the com-

pany. His background with racing engines and the internal combustion engine have enabled us to move forward rapidly.”

Nicholas Bennington added, “This past week, our provisional patents for the revolutionary engine design have been approved. Grail Engine Technologies has also been selected as a major presenter at next month’s Great Plains Capital Conference in Wichita as well as secured a local Salina company (Exline Inc.) in the assistance in advancing our technology at a rapid pace.”

Grail Engine Technologies is in the process of developing three prototype working models with further research and developing continuing through the balance of 2009.

The company anticipates all prototype models, research and development and licensing agreements will be completed by mid 2010.

It is possible the new design will be in passenger vehicles as early as 2011.

This revolutionary new design has applications from weed eaters, lawn mowers as well as generators which operate power stations and other markets.

This company is dedicated to keeping its principal offices, research and development facilities and staff located in central Kansas. The team consisting of PhDs, professors, engineers, attorneys and marketing experts are committed to benefiting society with this technology.

For further information concerning Grail Engine Technologies, Inc. Visit their website at:

www.Grailengine.com