

April 14, 2017

Dear Shareholder,

The past two weeks have been exciting and encouraging. Following years of dedicated research by our engineering staff, supported primarily by your financial commitments and perseverance, I am pleased to report that the Hansen Supercharger™ became a subject of keen interest and relevance at the SAE 2017 World Congress™ held annually in Detroit' Cobo Hall. This "Event" is the key world-wide automotive engineering forum supported and attended by automakers and their suppliers.

Hansen Staff provided a "Paper" co-authored with two engineers from Ford Motor Company on April 5. The paper was well-received with more than one hundred guests seated resulting in "standing room only accommodation." This was followed by a Staff "Learning Lab Presentation" on April 6 which discussed the trajectory that the new Hansen Supercharger™ is likely to take as it challenges current supercharger and turbocharger art. At the Company's Exhibit Booth, hundreds of engineers from industry and academia stopped to engage Craig and Paul as they daily provided scores of hands-on explanations of the structure, theory of operation, applications, and benefits to be realized from the new supercharger. The attached page evidences the presence and participation of Hansen staff with attendees at the Event.

The value and favorable reception of this first public disclosure of the Hansen Supercharger™ at a forum of this professional level would be difficult to overstate. Rather than seeking to communicate my understandably subjective opinion, I am attaching a letter from a senior consultant. He has been engaged from time to time to augment the management team's capabilities, wisdom, and experience in gaining traction with a new technology in a major industry. I believe that his comments define our recent experiences in Detroit. They also signal the relevance and magnitude of the opportunity. Second, you will note a page that communicates the opinions and reaction of two automotive trade journalists. Their comments are independently sourced and no consideration was provided to them or their publishers. Both signal that Hansen's technology appears to be competitive and pertinent to auto industry interest.

Of course, the key to building value and gaining a financial return which this opportunity can help provide lies in staff and ally follow-up. Hansen management must gain credence, relevance, and timeliness sufficient to motivate one or more companies to negotiate to license, acquire, or otherwise secure ownership of Hansen Engine Corporation. In addition to Mr. Jacobs, the Hansen team includes Mr. Jacob Schlaeger, President, Graham/Harper Consulting, Minneapolis. His firm provides company to company transaction expertise. Jacob accompanied and supported Hansen management presence at the Detroit Event and is participating in the effort to identify and consummate a transaction in 2017.

I believe that growing evidence suggests that we are moving closer to our transaction goal for 2017. If successfully introduced in production, the Hansen Variable Displacement Supercharger™ could become profoundly disruptive of current art. This contingency can create extreme defensiveness within an industry where revenues, income, and assets are counted in the billions of dollars. Change is expensive and can obsolete and erode earlier investments. Aggressive, competent, persistent, yet cordial efforts are required to make headway. Innovation also requires sustained financial support. Hansen maintains a lean operation. I am confident that in the weeks ahead our shareholders, and if required, other new investors, will smell the coffee, step up, provide the capital required utilizing our 7% Preferred Stock with a Stock Warrant attached. Management and its allies can then focus fully upon securing a favorable transaction.

With gratitude for your support and confidence,

Robert D. Hansen
Chairman/CEO

*Genesis Business Centers, Ltd.
901 ½ First Street North
Hopkins MN 55343*

14 April 2017

Mr. Robert Hansen, CEO
Hansen Engine Corporation
12920 Highway 55
Plymouth MN 55441

Re: Congratulations on your Success at the WCX17 Conference

Dear Bob:

I must tell you that experiencing the conference first hand in your booth took me backwards in time to the early 1980s when I had the privilege to help Roy Larson and Gene Erickson, the co-founders of FilmTec Corporation, at one of their early desalination conferences where they unveiled the FilmTec reverse osmosis membranes with its world class disruptive technology.

We were one of the “must-see booths” back then as our product offered both high quality desalination drinking water and high throughput of the desalinated seawater in an era when the major desalination membrane companies required that the user make a tradeoff between quality and quantity.

When FilmTec disclosed its twin virtues of high quality and high quantity we startled the industry. Dow Chemical subsequently bought FilmTec. It was a great Minnesota success story.

And now it seems that Hansen Engine Corporation may be making a similar breakthrough introduction with its unique “variable displacement” supercharger featuring the twin benefits of rapid throttle response and competitive fuel economy.

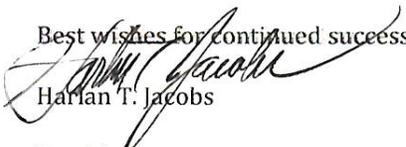
Standing in the booth with you folks I could see first hand how the major companies and their key engineering personnel lined up to get a first hand impression of the Hansen Supercharger™. It must have been very gratifying to you and Craig and Paul. It was certainly impressive to observe. The responses that I observed among the visitors seemed to reflect a genuine appreciation for the technical breakthroughs your team has achieved.

My impression is that Hansen Engine Corporation is destined to become another one of the Minnesota success stories just as the FilmTec breakthrough achieved over 37 years ago.

My congratulations to you and your fellow officers. No doubt the Board of Directors and the shareholders of your company must be very proud of your accomplishments.

It has been an honor and a rewarding professional experience for me to be of assistance over the last two years. Thank you for the opportunity to be of service.

Best wishes for continued success!


Harlan T. Jacobs
President

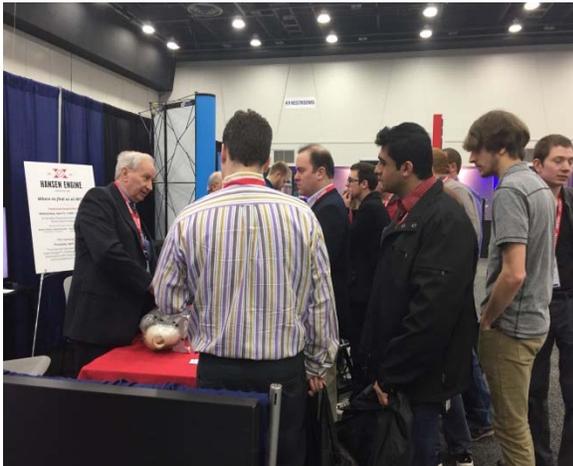
Society of Automotive Engineering Society
WCX-17 Annual Congress and Exhibition
Detroit Michigan, April 4-6, 2017



The Hansen team ready to introduce the new technology



Craig and Paul engage two parties simultaneously, a common occurrence during the exhibition



Craig Hansen teaching the operating principles of the Hansen Variable Displacement Supercharger™



Paul Cross explaining the Hansen Variable Displacement Supercharger™ to an auto industry journalist



Bob Hansen making industry connections at the exhibit



Paul Cross presenting a PowerPoint and animation to teach the concepts of the Hansen Variable Displacement Supercharger™ during the "SAE Learning Lab"

<http://www.motortrend.com/news/12-future-car-technologies-sae-world-congress/>



Hansen Variable-Displacement Supercharger



A dozen promising developments on display at Detroit's annual Society of Automotive Engineers confab

Share this article in: [f](#) [t](#) [g+](#)



It's a tough job sorting through the widgets, gizmos, and candy dishes filled with Halloween leftovers to find evidence of technological solutions to problems we might not have even conceived of as yet, but each year we invest the shoe leather and alimentary distress to bring you news of scientific and manufacturing advances that promise to brighten our collective automobility future. Please enjoy highlights of the 2017 Society of Automotive Engineers World Congress, more hiply referred to now as WCX17.

After eight years of R & D and considerable testing with a Big Three OE, Minnesota-based Hansen Engine Technologies introduced its variable-displacement supercharger at SAE. The idea is pretty simple: Never tax the crankshaft with creating air pressure the engine can't use. The unit employs a Lysholm type positive displacement twin-screw supercharger, but there's a sliding window in one side of the housing. When that window is open, no pressure is generated, so there's just a bit of frictional load on the crankshaft. The system is set up to use a typical throttle to control airflow into the engine. It gets to wide-open when the accelerator's about a third of the way down. The additional airflow required for the next third of the pedal travel gets met by compressing the intake air, gradually closing the window in the blower housing. (Compression only happens in that portion of the housing that is closed.) Pressing the accelerator farther will trigger a downshift and higher-rpm engine speeds that would result in a typical turbo or blower opening its wastegate, but here the window just starts opening back up. The result is turbo efficiency with the superior full-range engine responsiveness of a supercharger. If further testing bears out initial results from converted turbo engines, this concept could become a real disruptor in the booming downsized pressurized engine market.

<http://www.designworldonline.com/sightings-cool-technology-saes-wcx2017-world-congress/8/>

Design World
April 14, 2017

Confused about ISO Codes? We've got you covered. [Click here to watch.](#) **HY-PRO**

HOME VIDEOS ARTICLES SUPPLIERS 3D CAD MODELS WEBINARS LEADERSHIP ENGINEERING RESOURCES EBOOKS / TECH TIPS

Home > Design World Articles > Sightings of cool technology at SAE's WCX2017 World Congress

Sightings of cool technology at SAE's WCX2017 World Congress

April 7, 2017 Lee Teschler · 0 Comments

A supercharged challenge to turbochargers

The last time most of us probably saw a supercharger was on a fuel dragster. Hansen Engine Technologies Inc. in Plymouth, Minn. wants to put them on production vehicles. They claim their "continuously variable displacement" technology makes this a feasible idea. In operation, a servo motor would replace the human hand visible in the image. The servo motor would continuously adjust the blower displacement. Lab tests have established that the variable displacement system consumes only half the power of a conventional same-sized supercharger to operate at the speeds and boost pressures that dominate the US-EPA automotive driving cycles. Conventional blowers are typically sized to give peak power at the engine's highest speed and power setting. This wastes fuel during low speeds and power settings of normal driving. Hansen claims a vehicle equipped with its blower can meet or exceed a turbocharged vehicle's fuel economy when operating at the variable speeds and manifold pressures typical of the US-EPA drive cycles. And with no turbo lag.

NEXT PAGE: A "hell" of advanced lighting

Pages: 1 2 3 4 5 6 7 8 9 10 11

Sorbithane
INNOVATING SHOCK & VIBRATION SOLUTIONS
sorbithane.com
800.638.3906

Enews Sign Up
SIGN UP FOR OUR NEWSLETTER

SMALLEY