



## **Achates Power Debuts Gasoline Opposed-Piston Engine in a Light-Duty Truck at 2018 NAIAS**

*The truck features an OP GCI engine that will exceed CAFE 2025 requirements*

**DETROIT, January 15, 2018** – Achates Power revealed their demonstration pickup truck, featuring an Opposed-Piston Gasoline Compression Ignition engine, at the 2018 North American International Auto Show. The truck will be on display in the Aramco exhibit on the NAIAS main floor.

The pickup truck features an Achates Power Opposed-Piston Engine featuring Gasoline Compression Ignition (OP GCI) and is estimated to achieve 37 mpg; nearly five MPG better than the proposed CAFE 2025 requirements for a vehicle of a similar size. The clean, fuel efficient OP engine produces 270 hp and 480 lb.-ft. This performance is achieved without vehicle modifications and is projected to cost \$1,000 less per vehicle than widely accepted technology roadmaps currently being considered by OEMs.

“We choose a full-size pickup truck for our first demonstration vehicle because of the significant need and opportunity in this market segment. It is an ideal segment to showcase the Opposed-Piston Engine, the fuel efficiency improvements our engine offers will have a massive economic and environmental impact on this important vehicle segment,” said David Johnson, president and CEO, Achates Power. “Light trucks representing 41% of sales use 55% of the fuel use and emissions because they’re driven more miles per year and their fuel economy has the greatest potential for improvement.

Achates Power chose to demonstrate our ultra-clean, ultra-efficient OP Engine in a full-size light-duty pickup truck because of the significant need for improvement in this segment. These trucks are driven more miles, sold in higher volume, consume more fuel and emit more CO<sub>2</sub> than other light duty vehicles. Using our OP GCI engines in light duty trucks would reduce CO<sub>2</sub> and fuel usage in the same way as completely eliminating half of all cars sold each year.

“Using our OP GCI engines in future light trucks has the same fuel savings and CO<sub>2</sub> reduction as completely eliminating more than half of the cars sold each year.”

The Achates Power Opposed-Piston (OP) Engine is engineered to achieve superior thermal efficiency by virtue of its lower heat losses, improved combustion, and reduced pumping losses. The OP Engine eliminates the cylinder head for an improved surface-area-to-volume ratio of the combustion chamber for reduced heat transfer and rejection. In addition, conventional engine valvetrain and related components are eliminated, and due to the architecture the OP Engine offers a reduction in the aftertreatment system size and cost – a comparison between the 2.7L OP Engine and a comparable V6 with supercharger shows a part reduction of more than 60 percent, enabling an approximate 10 percent cost reduction.

“An Opposed-Piston Engine is 30-50% more fuel efficient than comparable diesel and gasoline engines, it is a no-excuses way to meet future efficiency and emissions standards,” said Johnson. “The technology and infrastructure to meet these future standards exists and will be available for consumers in the near future.”

Achates Power is showing the light duty demonstration pickup truck in the Aramco display as part of a joint development agreement, which formalizes the cooperative relationship between

the companies. Achates Power and Aramco have agreed to work together on a series of projects to develop and demonstrate highly efficient and clean OP engines. The first project to be announced is the in-vehicle demonstration of the 2.7L OP Engine.

The OP GCI engine was designed and developed by Achates Power with a \$9 million award from the Department of Energy's ARPA-E, along with partners Delphi and Argonne National Laboratory. Testing of the OPGCI engine was conducted at Argonne, and Achates Power facilities in San Diego. Development and testing of the new 2.7L engine will continue at Achates Power facilities, and at Aramco Services research center in metro-Detroit. Based on current testing, the engine is anticipated to be fully integrated into the vehicle and drivable in late 2018.

Please visit: <http://bit.ly/apinaias> for high-res images of the Achates Power Opposed-Piston Engine and demonstration truck.

### **About Achates Power, Inc.**

The Achates Power Opposed-Piston Engine is engineered to meet future emissions and fuel economy standards more cost effectively than any other solution. Founded in 2004 with the mission to build cleaner, more efficient engines, the company has an experienced staff of engineers and scientists working with leading engine manufacturers to bring the OP Engine to market. Achates Power is backed by the Oil and Gas Climate Initiative, Climate Investments; Sequoia Capital Partners; RockPort Capital Partners; Madrone Capital Partners; InterWest Partners; and, Triangle Peak Partners. For more information, visit [www.achatespower.com](http://www.achatespower.com), [www.facebook.com/AchatesPowerInc](https://www.facebook.com/AchatesPowerInc), [www.twitter.com/achatespower](https://www.twitter.com/achatespower) and [www.youtube.com/achatespowerinc](https://www.youtube.com/achatespowerinc).

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