

Bringing electrification to the masses
Bosch's technology solutions are electrifying the powertrains of tomorrow

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- ▶ Leading global supplier to highlight electrification and powertrain technologies at The North American International Auto Show (NAIAS)
- ▶ Innovations for internal combustion engines, hybrids and full electric vehicles provide choice and sustainable performance
- ▶ Automated and connected technologies complement electrification for future mobility solutions

DETROIT – Bosch, a leading global supplier of technology products and services, showcases the future for electrification technologies with a variety of powertrain solutions at The North American International Auto Show (NAIAS). Innovations from Bosch demonstrate how powertrains of tomorrow will be electrified through promising technology that provides consumers choice and sustainable performance.

“Through both OEM feedback and consumer interest, we are seeing that electrification is moving to prominence,” said Mike Mansuetti, president of Robert Bosch LLC. “At NAIAS, we will showcase solutions that make electrification accessible to the masses so OEMs can deliver on the promise of this technology to mainstream consumers.”

Consumers show strong interest in electrification

New research from Bosch showed 62 percent of U.S. new car buyers believe they will own at least one full-electric vehicle in their household within 10 years or less. Of those who anticipate having a full-electric vehicle in their household at any point in their lifetime, 71 percent believe all of their household vehicles will be full-electric vehicles within 15 years.

While new car buyers demonstrated a growing desire to purchase full-electric vehicles, anxieties remain pertaining to specific criteria, including purchase criteria as vehicle reliability, distance between re-charging stops, time required to re-charge, new car purchase price and cost of repair/maintenance. In addition, a significant subset of respondents, 32 percent, indicated they are not interested in

purchasing or leasing a full-electric vehicle within the next 15 years, signaling a preference toward other powertrain options.

Bosch solutions make electrification technology accessible and offer powertrain choices for OEMS

Making its global debut at NAIAS, Bosch's electric axle drive system (eAxle) makes electrification accessible for automakers through a scalable, modular platform that can bring 5-10 percent cost efficiency as compared to stand-alone components. The eAxle is flexible for multiple platforms and brings together top-of-the-line Bosch powertrain components into one system.

The Thermal Management Station will show how Bosch technology efficiently manages heat flows in electric vehicles and extends range by up to 25 percent, especially in winter driving conditions. The holistic thermal management approach for electric vehicles makes heating in the winter and cooling in the summer cost effective and energy efficient.

Advancements in the electrified powertrain are not limited to battery-powered vehicles. Bosch continues to drive innovation in the internal combustion engine. Direct injection (DI) makes up nearly 50 percent of today's internal combustion engine market, and its share continues to grow as it enters its third generation of system technology. This new generation can provide significant improvements in efficiency, as well as reduced particulate and gaseous emissions, and improved acoustic performance to decrease overall noise.

Electrification enhanced by collaboration with automated and connected technologies

In addition to powertrain technologies, Bosch will also feature automated and connected technologies including the global debut of a key requirement on the path to fully automated driving. The Electric Power Steering (EPS) system with fail-operational function is a highly redundant feature that enables either a driver or auto pilot system to independently return to a minimal risk condition while maintaining about 50 percent electric steering support in the rare case of a single failure. This technology will enable OEMs to comply with the fall back strategies as proposed in the Federal Automated Vehicles Policy documents from the U.S. Department of Transportation and National Traffic Highway Safety Association.

EXPERIENCE BOSCH AT NAIAS 2017 in Detroit, Michigan, USA: At NAIAS 2017, Bosch is presenting automated, connected and electrified technologies with a focus on how vehicle electrification is becoming more desired and accessible. For more information on Bosch's electrification strategy, visit: <http://electrifieddrive.bosch-mobility-solutions.us/>.

BOSCH BOOTH: Monday to Thursday, January 9-12, 2017, on Level Three,
Rooms 336-338, Cobo Center.

Press photos: #456246, #534889, #594711, #949352, #949354

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About Bosch

Having established a regional presence in 1906 in North America, the Bosch Group employs some 31,000 associates in more than 100 locations, as of December 31, 2015. In 2015, Bosch generated consolidated sales of \$14 billion in the U.S., Canada and Mexico. For more information, visit www.boschusa.com, www.bosch.com.mx and www.bosch.ca.

The Bosch Group is a leading global supplier of technology and services. It employs roughly 375,000 associates worldwide (as of December 31, 2015). The company generated sales of \$78.3 billion (70.6 billion euros) in 2015. Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology. The Bosch Group comprises Robert Bosch GmbH and its roughly 440 subsidiaries and regional companies in some 60 countries. Including sales and service partners, Bosch's global manufacturing and sales network covers some 150 countries. The basis for the company's future growth is its innovative strength. Bosch employs 55,800 associates in research and development at roughly 118 locations across the globe. The Bosch Group's strategic objective is to deliver innovations for a connected life. Bosch improves quality of life worldwide with products and services that are innovative and spark enthusiasm. In short, Bosch creates technology that is "Invented for life."

Additional information is available online at www.bosch.com, www.bosch-press.com and twitter.com/BoschPresse.

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