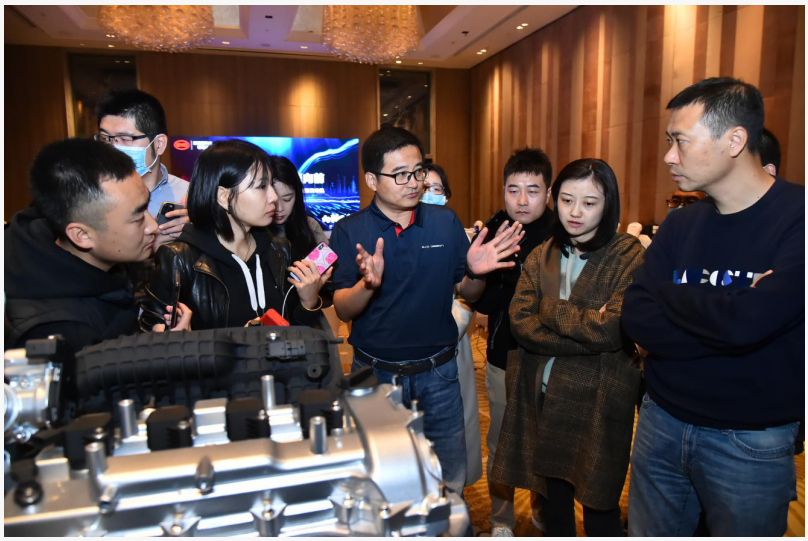
BYD Introduces New DM-i Hybrid Technology and 1.5L New Xiaoyun Engine

SHENZHEN, CHINA, November 20, 2020 /EINPresswire.com/ -- On November 13, BYD launched the DM-i hybrid technology alongside the official announcement of the high efficiency version, which is dedicated for plug-in hybrid vehicles (PHEVs), of the 1.5L Xiaoyun engine. As a leader in new energy vehicles (NEVs), the announcements underline BYD's lead in strategically segmenting its plug-in hybrid technologies. After defining new performance standards for PHEVs with the DM-p technology, BYD continues to break new ground with the DM-i , this time prioritizing ultra-efficient fuel consumption.



Eric Li, Subdirector General de Ventas de Automóviles BYD (Medio) presentando detalles técnicos del Motor Xiaoyun.

The new highly efficient 1.5L plug-in hybrid engine, is specifically built for the DM-i hybrid technology. With a Brake Thermal Efficiency (BTE) of 43%, it stands as the world's highest thermally efficient gasoline engine in production. The engine's immense fuel efficiency easily meets China's newest national emissions standards, while also providing a distinctly smooth and quiet driving experience.

The DM-i Hybrid Technology – Bold new advances for a more fuel-efficient world

In the Chinese government's recent New Energy Vehicle Industry Development Plan (2021-2035), NEVs are expected to account for 20% of the total sales of new vehicles in China by 2025. Among these, the path for PHEVs shows immense potential.

By leveraging its Dual Platform strategy, BYD's dual-mode (DM) hybrid technologies – the DM-p and the DM-i – further enhances the competitiveness of PHEVs against traditional fuel vehicles.

The DM-p platform, with a focus on exceptional performance, provides a power output that

surpasses large fuel cars. This has drawn the interest of consumer groups that strongly care about environmental protection and sustainable lifestyles, while also holding high expectations for driving experiences.

New models with the DM-i hybrid technology will see a wide array of improvements, including further reductions in fuel consumption, faster acceleration, smoother and quieter rides, and more environmentally-friendly electric power. When compared to traditional fuel cars, vehicles equipped with DM-i hybrid technology stand out as superior products with their enhancement of driving experiences while being less reliant on fossil fuels. In addition, the prices of models with the DM-i hybrid technology are similar to the cost (tax and fee included) of fuel vehicles of the same type from outside of China. This is positioned to be a significant shift in the competition between PHEVs and fuel vehicles, impacting consumer and market perceptions of NEVs.

Eric Li, Deputy General Manager of BYD Auto Sales, said, "BYD has always insisted on self-reliance to build its core technology. With our advantages in new energy technologies, we have achieved major breakthroughs in several key areas. The DM-i hybrid will rigorously accelerate the replacement of traditional fuel cars with new energy vehicles."

The Xiaoyun engine – Hardcore technology for premium thermal efficiency

Powering the ultra-high thermal efficiency of the Xiaoyun is a multitude of innovative technical features, allowing it to reach its world-leading 43% BTE.

The Xiaoyun boasts an ultra-high compression ratio (CR) of 15.5, an increased B/S ratio, an Atkinson cycle for improved combustion efficiency, an Exhaust Gas Recirculation (EGR) system, a series of friction-reducing measures and an engine control system that is uniquely optimized for high thermal efficiency targets.

In addition, the Xiaoyun engine takes full advantage of the electrification of plug-in hybrid models, electrifying accessories and removing the traditional front-engine accessory drive system, further reducing wear and tear and improving efficiency.

For the first time ever, BYD has implemented split cooling technology for an engine. Through on-demand cylinder head and cylinder block temperature measurements, this enables precise and accurate cooling for the Xiaoyun engine to reach optimal running temperatures. By mitigating heating losses, this shortens the length of warming up the engine after a cold start by 15-20%, reducing fuel consumption and carbon emissions during the process.

To dramatically improve noise, vibration, and harshness (NVH) performance, the engine has specially-optimized designs for the crankshaft, bearings, cylinder block, intake manifold, oil pan, timing cover, cylinder head cover and other components of the plug-in hybrid system.

About BYD

BYD Company Ltd. is one of China’s largest privately-owned enterprises. Since its inception in 1995, the company quickly developed solid expertise in rechargeable batteries and became a relentless advocate of sustainable development, successfully expanding its renewable energy solutions globally with operations in over 50 countries and regions. Its creation of a Zero Emissions Energy Ecosystem – comprising affordable solar power generation, reliable energy storage, and cutting-edge electrified transportation – has made it an industry leader in the energy and transportation sectors. BYD is listed on the Hong Kong and Shenzhen Stock Exchanges. More information on the company can be found at http://www.byd.com.

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