

BorgWarner turbocharges the 'world engine'

by Bend Weekly News Sources

BorgWarner Turbo & Emissions Systems Supplies Turbochargers for New Audi 1.8-Liter TFSI Engine Family

Audi's recently launched 1.8-liter TFSI engine was developed in close cooperation with BorgWarner Turbo & Emissions Systems. The new engine continues the collaboration that built Audi's award-winning 2.0-liter TFSI engine - the first to combine turbocharging with gasoline direct injection worldwide - and represents the starting point for a completely new sporty and efficient world engine family.

"BorgWarner's innovative turbocharger technology blends fuel efficiency and reduced emissions with powerful, smooth performance over the entire engine speed range," said Roger Wood, President and General Manager, BorgWarner Turbo & Emissions Systems. "We are pleased to continue our collaboration with Audi to set a new standard of spontaneous yet economical performance for this family of worldwide engines."

For the design and construction of the new Audi power plant, BorgWarner Turbo & Emissions Systems developed a number of innovative turbocharging solutions. Combining the manifold and the turbine housing into a single component made of high temperature-resistant material offers both compact dimensions and thermodynamic benefits. The electric recirculation valve is integrated into the compressor housing, guaranteeing fast response times when the throttle valve closes. The use of a latest-generation turbine wheel substantially increases the turbocharger's efficiency, and the optimized turbine wheel improves the aerodynamics in the turbocharger, ensuring an even more spontaneous response at lower speeds. Finally, the compact dimensions of both the turbocharger and the entire engine make it equally suitable for transverse or longitudinal installation, a decisive factor for an engine family designed for a wide range of models on all five continents.

The 1.8-liter TFSI four-cylinder will be produced at Audi's engine factories in Győr, Hungary, and Döhl, China. BorgWarner will build the turbochargers at its facilities in Oroszlány, Hungary, and Ningbo, China.

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