Charge-air cooler

As a turbocharger compresses the intake air, it heats up, reaching temperatures between 120 and 150 degrees Celsius (between 248 and 302 degrees Fahrenheit). Hot air has a lower density, however, and thus contains less oxygen for combustion. A charge-air cooler is therefore placed downstream of the turbocharger to cool the compressed air before it enters the combustion chamber.

Charge-air coolers are standard equipment at Audi. Depending on their design, they use air and/or water from the coolant circuit as a cooling medium. The supercharged 3.0 TFSI has two coolers made from aluminum. Audi has also taken measures to maximize efficiency in the charge-air cooler, too – in terms of weight, efficacy and lower flow resistance.

Status: 2011

Source: www.audi-technology-portal.com
AUDI AG 2026