Valves Seats and Valve Guides
High-performance powder metal materials improve valve, valve seat and valve guide wear

Valves
Hollow valves lower the valve head temperature and reduce weight

Ignition
SureFire spark plugs enable voltages of more than 42kV

Rings
LKZ-Rings reduce oil consumption by up to 50% and friction by up to 15%

Pistons
EcoTough® coating reduces fuel consumption up to 0.8% and friction up to 10%

Bearings
IROX® coating enables 5X longer life for increased reliability

Heat Shields
Nimbus® GII is 80% lighter than typical steel sandwich heat shields (not pictured)

Systems Protection
ThermFlex® exhaust sleeving reduces weight and improves durability (not pictured)

Cylinder Liner
Hybrid liners reduce engine oil consumption by up to 40%

Seals
MicroTorq® enables improved fuel economy of 0.49%, reduction in CO₂ emissions of 1-2 g/km and friction reduction of up to 70%

At the Heart of Every “Best Engine” are Enabling Technologies for Fuel Economy Improvements and CO₂ Emission Reduction