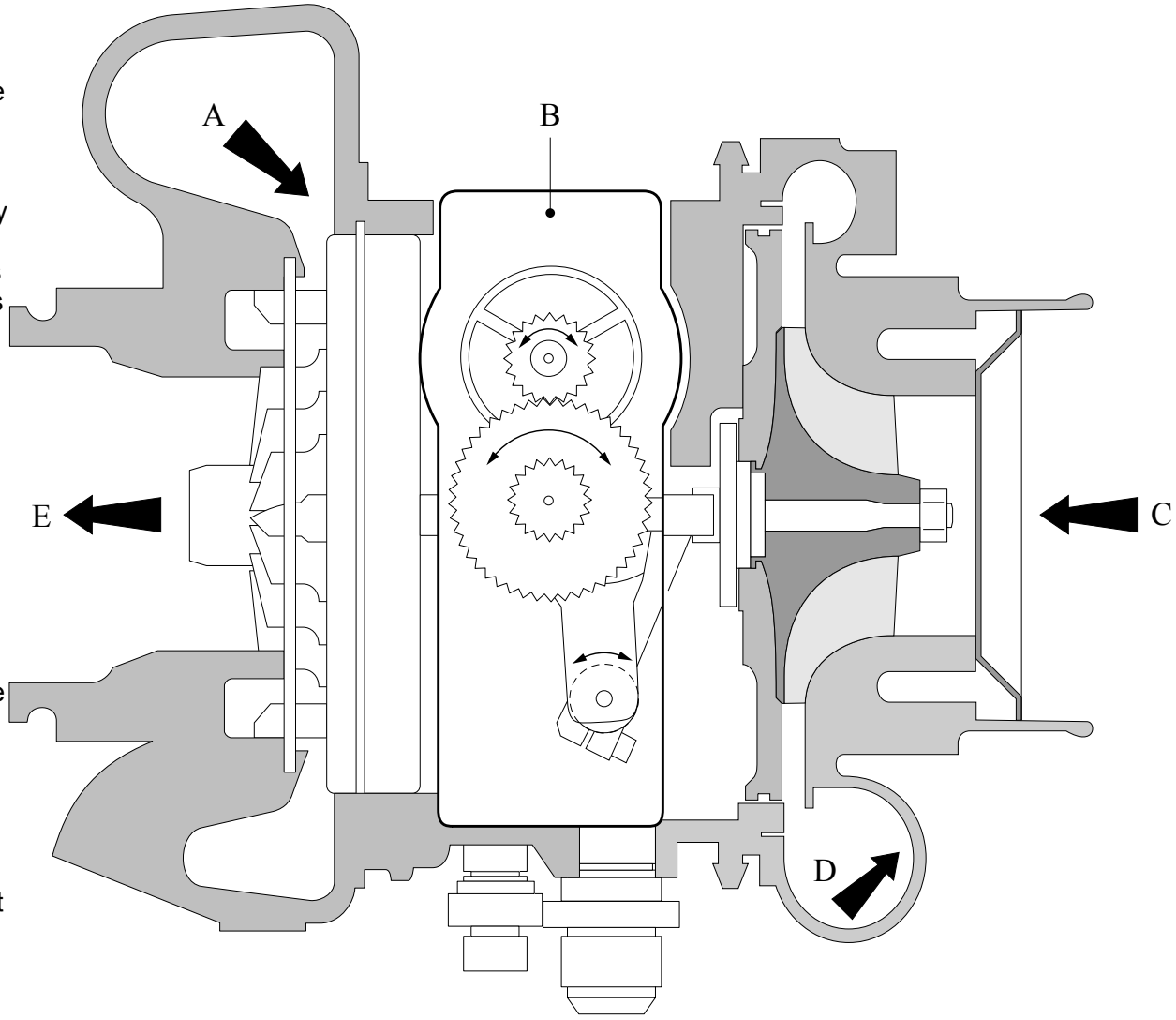
Turbo (VTG)

The VTG uses a turbine stage where the swallowing capacity is automatically varied while the engine is running. This permits boost pressure to be set, providing sufficient energy to drive the compressor at the desired boost level wherever the engine is operating. This is achieved by varying the area of a nozzle; a set of guide vanes controls the flow of exhaust gas through the turbine. The vanes slide axially. The sliding nozzle ring alters the aperture through which the exhaust gases flow onto the turbine wheel. This alteration in the geometry of the turbocharger increases the boost as the nozzle is closed down.



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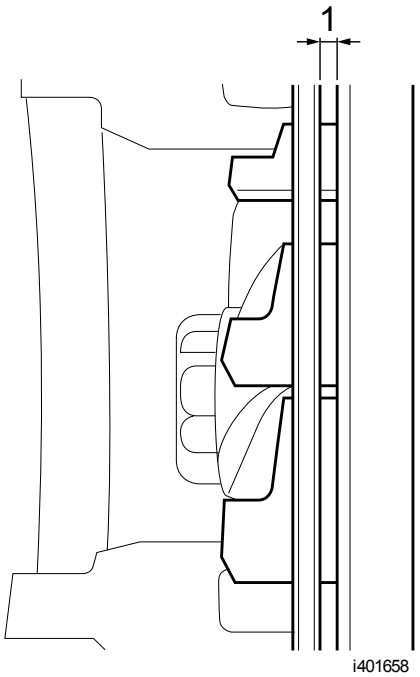
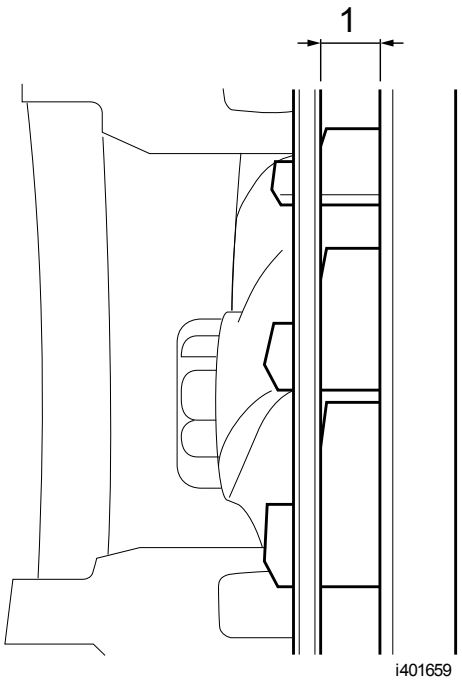
A	Exhaust gas
B	Electronic actuator
C	Inlet air
D	Boost air outlet
E	Exhaust gas outlet

Reducing the aperture increases exhaust manifold pressure and increases the turbocharger speed. As the nozzle ring opens up, the exhaust pressure and the turbocharger boost decrease.

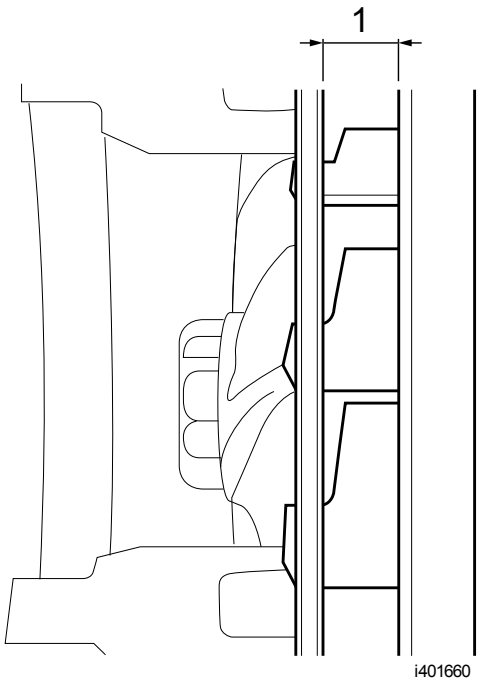
A water-cooled and automatically calibrated electric motor actuator (B) is fitted onto the VTG for precision operation.



* Minimum turbine exit area (1)
* Maximum exhaust manifold pressure
* Maximum shaft speed
* Maximum boost pressure



* Increasing turbine exit area (1)
* Reducing exhaust manifold pressure
* Reducing shaft speed
* Reducing boost pressure



* Maximum turbine exit area (1)
* Minimum exhaust manifold pressure
* Minimum shaft speed
* Minimum boost pressure

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information provided with respect to vehicles and/or components of another series, with another chassis number, and/or of another date. (/)