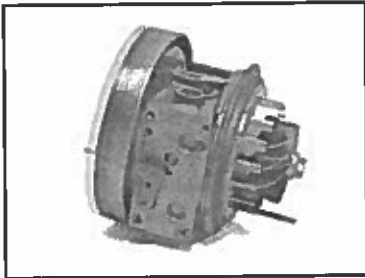


2010 MP7 / D11 Turbocharger Updates

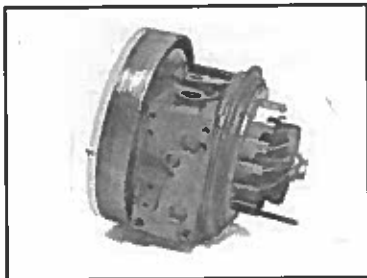


Sliding nozzle ring turbocharger

- The US'07 turbocharger uses an 85 mm compressor wheel and a 12 bladed turbine wheel
- The 2010 turbocharger uses an 85 mm compressor wheel and an 11 bladed turbine wheel
- Reducing the number of blades on the US2010 turbocharger makes the blades thicker which results in a higher natural frequency (reduced high cycle fatigue failures)
- The US'07 compressor wheel was manufactured from cast titanium
- The 2010 compressor wheel is manufactured from a single piece of forged solid aluminum (reduction in casting variations)

Note: US'07 and 2010 turbochargers are not interchangeable.

2010 MP8 / D13 Turbocharger Updates



Sliding nozzle ring turbocharger

- The US'07 turbocharger uses an 85 mm compressor wheel and a 12 bladed turbine wheel (the "B" turbine wheel)
- The US2010 turbocharger uses a 92 mm compressor wheel and an 11 bladed turbine wheel (the "D" turbine wheel)
- Changing the compressor wheel size allows for reduced wheel speed while maintaining the same amount of boost
- Reducing the number of blades on the US2010 turbocharger makes the blades thicker which results in a higher natural frequency (reduced high cycle fatigue failures)
- The US'07 compressor wheel was manufactured from cast titanium
- The 2010 compressor wheel is manufactured from a single piece of forged solid aluminum (reduction in casting variations)

Note: US'07 and 2010 turbochargers are not interchangeable.