To Turbocharger or Supercharger...

The aftermarket age-old question endures: “I am looking to boost my engine, do I turbocharge or supercharge?” Let’s look at some features that make the turbocharger the most powerful and economical power adder for your engine.

A Turbocharger is:

**More Versatile** - A turbocharger is equally appropriate whether your goal is a mild street application or an all-out drag racer. A properly matched turbo can provide superb response and the ability to run boost levels that will push your limits. As you will see in the graphs below, Garrett® GT Ball Bearing Turbochargers come up on boost very quickly and make more engine power than a supercharger over a broad operating band. The curves correspond to a highly boosted 2.0 liter engine.

As for so-called “turbo lag”, modern GT-series high-flow wheels are smaller than ever to reduce inertia, and in combination with the ball bearing system give throttle response that has to be driven to be believed. In fact, one Garrett® customer has boosted his engine to an amazing 35 psi in two tenths of a second using a modern Garrett® GT ball bearing turbocharger! Additionally, a turbo’s smaller and more compact package allows for greater flexibility in installation locations.

**More Durable** - A turbocharger only has one moving part, the rotating assembly; no pulleys, belts or geared transmissions. This makes for a less-complicated device with fewer moving components to fail. Nowhere is this more obvious than with the Garrett® Motorsports teams, where performance and reliability are a must.

No race beats on a turbocharger like the 24 Hours of Le Mans. The Garrett® turbochargers used at Le Mans have been put to the test over the past several years with the most notable results being all three podium positions at the 2000, 2001 and 2002 24 Hours of Le Mans. And don’t forget the impressive wins during the grueling World Rally Drivers Championships, Champ Car, NHRA Drag Racing, Formula D Drifting and Time Attack.

**More Efficient** - The turbo uses energy that is otherwise wasted through the tailpipe, where a supercharger has high parasitic drag since the power to drive it comes from the crankshaft. The Garrett® modern GT-series compressor and turbine aerodynamics push the state-of-the-art limit for stage efficiency and flow range.

www.TurboByGarrett.com