


It's What's Inside that Counts



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It's not the wrapper, but the contents of the wrapper that you spend your money for. It's not the box, but what's inside the box that matters. 

When it comes to commercial ZTR engines, it's not the crankcase, the plastic and the sheet metal that you see that delivers the durability and the reliability you're seeking although, obviously, you're expecting quality even there. Indelicately put, it's the guts, the innards of the engine that matter. In a sentence or two, that's the message that the folks at Briggs & Stratton say applies to their new Vanguard 810cc commercial 24-hp and 26-hp engines. *(Right: Scott Moore showing how to assemble an engine.)*


It's the engine components that you will likely never see that make the big difference terms of mowing productivity, they insist. I'll take their word for it. The Milwaukee-based company has been building gasoline-powered engines since 1908. Their products are in eight of 10 of America's leading mower brands.

But, seeing the difference between a consumer engine and a new commercial engine model that's taken three years to engineer, develop, test and finally put into production is one thing – actually assembling it and holding each of its vital components it in your hands is quite another.

That's what I experienced during a recent visit to Auburn, Ala. That is where I, in the company of a small group of editors, assembled the new Briggs & Stratton Vanguard 810cc commercial engine.

That's right. Not only did we get our first look at the engine, we (working three to a team) assembled Vanguard 810s. Yes, we put them together. Starting with the block and crankshaft, with the other components arranged neatly nearby, we assembled the one step at a time – connecting rods, camshaft, valves, pistons, head, practically everything up to the sheet metal and plastic.

Some of the editors had never had a socket or torque wrench in their hands before. Having, back in my salad days, owned MGBs and Triumph Spitfires, English roadsters of a former era, I was quite familiar with both tools. Even so, it took a team effort to get the job done.

In the spirit of full disclosure, we couldn't have assembled the engines without the assistance of Scott Moore, Briggs & Stratton Distributor Sales & Service Manager. It was relatively easy with his help, though. Moore has been with Briggs & Stratton for 27 years, and provides OEM, dealer and customer service support and training. He's an excellent instructor, knows the Vanguard 810 engine intimately and moved from one table to the next offering friendly advice. 

But the editors' adventures assembling engines is not the story. The story here is the new Vanguard 810cc commercial engine that will be turning up on many of the ZTR mowers that you will be seeing at your dealers this coming spring. (*Right: Katie Sands wielding an electronic torque wrench likes she means it.*)

This new engine is being manufactured and assembled on a state-the-art production line (soon to be expanded into several) at the Briggs & Stratton plant in Auburn. At the time of our visit, more than 100 Vanguard 810s have been produced and have been field-tested. The engines go into full production this coming January.

Tough features

OK, here are just a few of the many features of the Vanguard 810cc engines that should attract your attention if you're a commercial cutter:

- *Automotive 52N material pistons* with advanced pin design, and the top compression ring is plasma coated for durability and oil control.
- *Forged connecting rods* with a large bearing surface and Big Block aluminum casting process for added density and strength.
- *Forged crankshaft* for superior tensile strength and longer service life; dynamically balanced for smooth operation.
- *Fire ring head gaskets*. The motorsport design maintains seal of higher combustion pressures.
- *Solenoid shift starter* for quick starts under high inertia load.
- *Mag bearing*. Larger mag journal and crankpin share bearing load over a larger surface area. Viton seals control surface debris and maintain oil film.

Company officials would not disclose which commercial ZTR brands will be equipped with the new 810cc engines. Stay tuned to Turf's website and social media sites, as we'll let you know as soon as Briggs & Stratton lets us know.

Meanwhile, look for expanded coverage of my experiences at the Auburn, Ala.,

manufacturing plant and the Vanguard 810cc commercial engines in the pages of the October issue of *Turf* magazine.

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