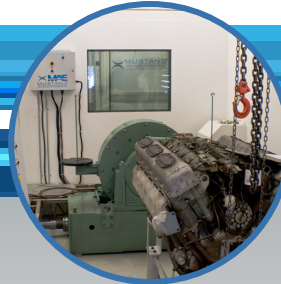
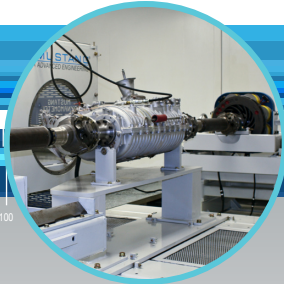


Project Spotlights

January 2012

An MAE publication highlighting some of the latest advanced engineering projects.



Mustang Advanced Engineering Delivers End-of-Line Greensmower Tester to The TORO Company

January 26, 2012 - Mustang Advanced Engineering delivers an end-of-line tester to The TORO Company for their line of Greensmowers. The unit is replacing The TORO Company's existing outdated unit.

The custom dynamometer designed for The TORO Company uses two 6.5"-diameter rubber-coated rolls that provide a special grip for the lawnmowers. Two strain-gauge load cells accurately measure the precise reaction torque from the dynamometer's two 150-hp motors, with easy calibration to ensure continuous accuracy.

Adjustable motor bases and telescoping drive shafts give the unit flexibility for the variations in size between Greensmower machines. Loading and unloading mowers is as simple as decoupling the drive shafts and removing the mower from the test stand.

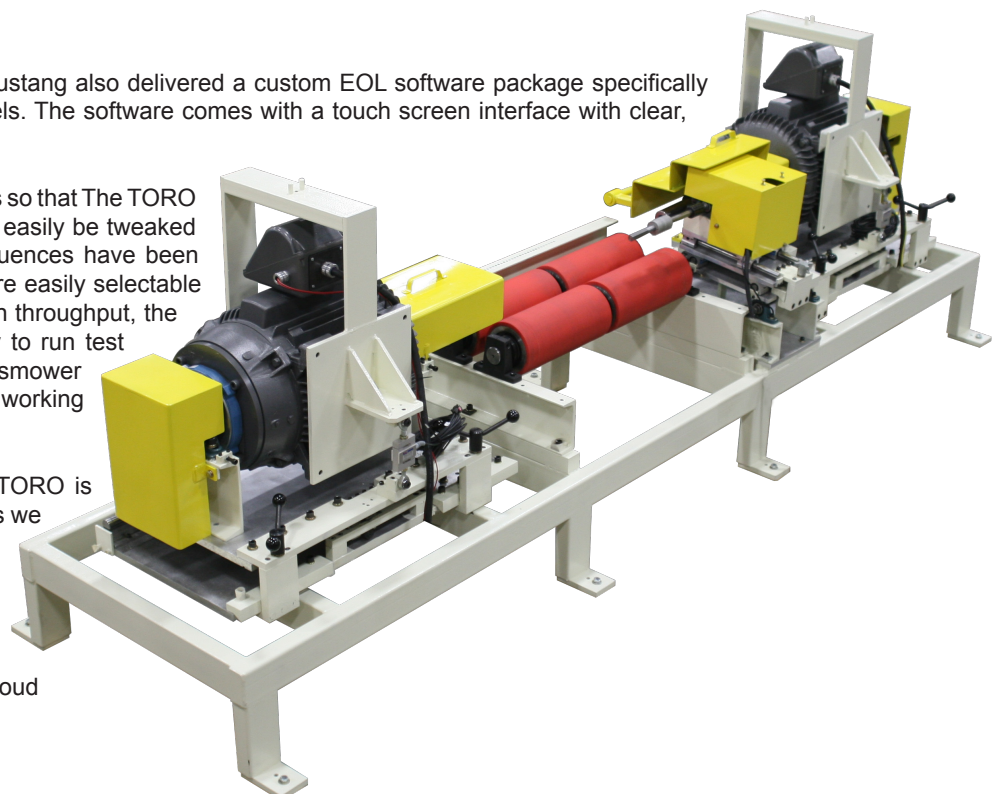
The end-of-line tester was designed to allow continuous, real-time monitoring of the mower's speed and temperature. Throughout the test sequence, other values that are tested include:

- Oil Pressure
- Engine Coolant Temperature
- Engine RPM
- Engine Oil Temperature
- Vehicle Power Output

With the end-of-line testing dynamometer, Mustang also delivered a custom EOL software package specifically designed for both electric and gasoline models. The software comes with a touch screen interface with clear, easy-to-read controls and pass/fail results.

The software has robust customization options so that The TORO Company's rigorous PASS/FAIL criteria can easily be tweaked and adjusted in the future. Specific test sequences have been written for each unique lawn mower, which are easily selectable at the beginning of the test. Designed for high throughput, the software is simple and clear, making it easy to run test after test, and assuring that every Greensmower that leaves The TORO Company's facility is working perfectly.

"This comprehensive End-of-Line tester for TORO is another great example of the custom solutions we design and build for our customers" said Dean Ganzhorn, Mustang President and CEO. "This particular project was exciting because of the unique form factors of the mowers and the very thorough testing procedures that TORO puts their equipment through. We're proud to have supplied TORO with this tester."





About MAE

Mustang Advanced Engineering is a leading provider of comprehensive testing solutions for the development and testing of engines, powertrain systems and complete vehicles. Founded in 1975, Mustang has long been a trusted source of expertise in measurement and testing technologies for the global industrial market. World-class product offerings, custom design support and technical assistance, backed by a dedicated factory service team, has positioned MAE among the global leaders in providing advanced testing solutions.

MAE's "custom solutions" approach focuses all of our product, application and automation experience on your specific measurement and testing requirements. Our goal is to provide tailored solutions that optimize our customers testing and development operations by providing intelligent system designs coupled with outstanding technical expertise and world-class customer support. MAE provides specialized testing systems designed for the customer's specific application - from engine, transmission, powertrain, hybrid, racing, and component testing applications. MAE's modular design philosophy allows for a high degree of scalability, from simple durability testing to highly sophisticated and complex powertrain development test cells.

As a full service supplier/partner, MAE offers a wide array of services to customers all over the world. Working with your staff, our experienced team of engineers uses the latest solid modeling CAD and CAE software and offers a comprehensive resource for your testing design and development needs. Our engineers specialize in finding the most practical and economical solutions for new or unusual testing applications. Whether your application is fully conceived or you need a design partner, the engineers at Mustang Advanced Engineering invite you to tap into their decades of experience in testing and measurement systems development.

As a global leader in the design, manufacturing, and integration of advanced testing and measurement systems, MAE has delivered and continually supports literally thousands of test systems to virtually every corner of the globe.

Our mission is to achieve the highest possible level of customer satisfaction by providing innovative technical solutions and product designs and by striving to achieve perfection in product quality, delivery and service. At MAE, our customers are our highest priority - we do everything in our power to satisfy our customers. Our entire organization understands that the customer comes first and nothing else is more important.

To learn more about how MAE can help solve your most demanding testing challenges contact one of our sales engineers or visit www.mustangae.com.

ISO 9001:2000 Certified

Offices Worldwide

U.S. Corporate Headquarters
Mustang Advanced Engineering
2300 Pinnacle Parkway
Twinsburg, OH 44087
Phone: (330) 963-5400
Fax: (330) 425-3310
Email: sales@mustangae.com

www.mustangae.com

advanced engineered testing solutions