

Project Spotlights



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



Mustang Advanced Engineering Delivers Three Self-Contained End-Of-Line (EOL) Test Cells to Harley-Davidson's York Assembly Plant.

Mustang Advanced Engineering recently supplied three automated end-of-the-line test systems to Harley-Davidson Motor Company. The project, dubbed the "Keystone Project", called for Harley-Davidson to build a new \$145 million, 350,000-square-foot manufacturing facility on the site of its existing assembly plant in York, Pennsylvania. The York plant provides machining, fabrication, paint and final assembly of the Dyna, Softail and Touring models and builds limited edition custom models.

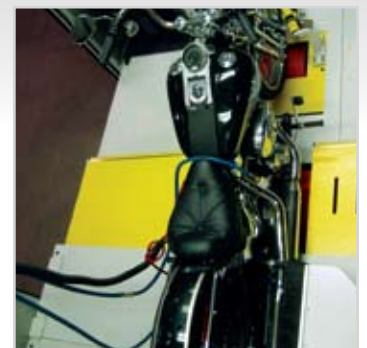
For this project, Mustang supplied all equipment, software and engineering requirements including system design, installation, start-up and training for three self-contained end-of-line test cells. The new test systems were installed in late 2002 and will begin testing in early 2003.

Each of the three test cells contained a multi-function chassis dynamometer capable of variable wheelbase adjustment, vehicle load testing, brake testing, road simulation and function testing. A front and rear wheel restraint system limits the motorcycle's movement while under test. All of these tests are performed while the motorcycle is on the build cart.

In addition to the dynamometers, the test systems also were outfitted with exhaust removal systems, motorcycle cooling systems, fuel control systems, ECM read/write control interfaces, charging and starting systems, boom arm closed interconnect and operator interface panels, conveyor system interfaces, factory automation system interfaces, as well as fire and sound suppression systems.

"The unique testing approach of these systems enabled Harley-Davidson to test all motorcycles while on the build cart attached to the conveyor line, removing the requirement and liability of manually moving motorcycles in and out of the testing and packaging stations. This is the only motorcycle production line that I am aware of that completely builds, test and packages a motorcycle while on the conveyor build cart" said Donald Ganzhorn, Executive Vice President and Chief Engineer for Mustang Dynamometer.

"Mustang is extremely proud to have worked with Harley-Davidson for this project" said Dean Ganzhorn, Mustang President and CEO. "Mustang's experience with this type of tightly integrated, advanced end-of-line test system was key to us winning this contract and Mustang looks forward to a long working relationship with Harley-Davidson on future production and related R&D projects."





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