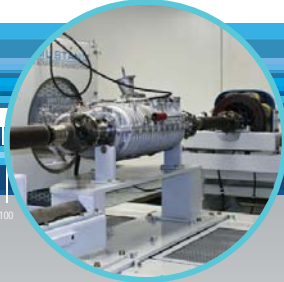


Project Spotlights

July 2007

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

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Mustang Advanced Engineering Delivers end-of-line Standard & Anti-Lock Brake Systems with Load Dynamometers to Honda of America.

The testing equipment is designed for use as an End-of-Line Motorcycle Standards & Anti-Lock Brake Tester with a Full Speed Load Dynamometer capability with software prompting for test execution. The specific equipment this test stand has been designed for are Honda Motorcycles with a wheelbase between 53.75" (1365.25 mm) and 67.00" (1930.4 mm). The EOL Motorcycle Brake Tester and Load Dynamometer will allow functional testing of standard user brakes at low speeds and anti-lock braking systems at higher speeds as well as full speed loading of motorcycle.

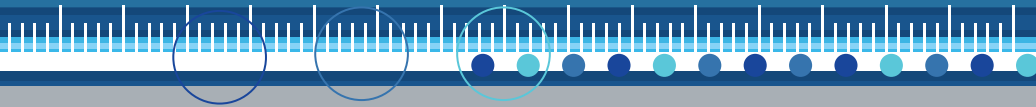
The EOL High Speed ABS design combines the dual functionality of a low and high speed brake tester with a loading dynamometer. A 10" diameter Rear Roll assembly coupled with an AC motor gearbox assembly provides the required low speed force to test the functionality of the standard braking system.

During the High Speed ABS test, the motorcycle is driven into the tester. The 10" rear roll clutch on both decks is disengaged from the low speed gearbox motor assembly. The driveshaft clutch located between the rear deck's 20" roll and the right-angle gearbox is engaged so the motorcycle can spin both roll sets up to speed. The operator is prompted to drive the motorcycle. When at a high enough speed set point, the clutch is disengaged and the operator is prompted to apply the brakes. The applied force to the rolls is determined by detecting the acceleration of the known inertia of each roll set.

During the Low Speed Brake Test, the 10" rear roll clutch on both decks is engaged to the low speed gearbox motor assembly. The driveshaft clutch located between the rear deck's 20" roll and the right-angle gearbox is engaged. The operator is prompted to enable the front deck low speed brake motor. Next the operator is prompted to apply the front brake. The brake drag is checked. The tester displays and records the brake force and disables the brake motor. The operator is prompted to enable the rear deck low speed brake motor, next the operator is prompted to apply the rear brake. The results are then displayed and recorded.

The system also performs a dyne test, the 10" rear roll clutch on both decks is disengaged from the low speed gearbox motor assembly. The driveshaft clutch located between the rear deck's 20" roll and the right-angle gearbox is engaged so the motorcycle can spin both roll sets up to speed. The PAU (Power Absorbing Unit) will apply load according to a predefined Force vs. Speed curve. The operator is prompted to drive the motorcycle according to the displayed Speed vs. Time drive cycle. Once the drive cycle is completed the tester displays and records results.





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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.

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.

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