

# PROJECT SPOTLIGHT

## Tow Dynamometer for Case New Holland Industrial



Mustang Advanced Engineering (MAE), an American manufacturer of quality, industry-leading testing equipment, dynamometers, and related products, has delivered an MDT-400KN-M tow dynamometer to Case New Holland Industrial (CNH Industrial), a manufacturer of world-class agricultural and construction equipment headquartered in Racine, Wisconsin. The mobile, self-propelled MDT-400KN-M tow dynamometer design was based on a CNH Industrial articulating tractor and heavily modified by MAE to integrate a 400 KN (89,924 lb-f) loading system from air-cooled eddy current power absorbers units (PAU's) to simulate grades or road profiles taken from pre-recorded data without ever having to leave the safe and controlled confines of the flat test track.

CNH Industrial provided the following for the project:

- articulating tractor
- 16-speed PS6 transmission
- diesel generator with heater
- cooling fans



MAE then extensively modified the articulating tractor:

- Engineering/labor to stretch /modify the tractor to accept all tow dynamometer components (PAU's, drivelines, etc.)
- Installation of the CNH Industrial 16-speed PS6 transmission
- Integration of a front mounted PTO loading system
- Integration of a front mounted hydraulic loading system
- Mounting & plumbing an air compressor
- Integration of an adjustable front hitch
- Integration of a 5th wheel speed sensor, fuel consumption measurement system, data acquisition, PC, and control system

MAE's advanced control system allows for grade control, speed control, drawbar control, manual control, polynomial drawbar control as a function of velocity, Mountain Climbing Test as a function of distance, Cycle Testing as function of distance or time and Engine Speed Control. Equipped with an integrated fuel flow measurement system to measure the fuel burn rate of the test vehicle's diesel engines, the tow dynamometer will also be equipped with a RPM measurement system, a fifth wheel speed sensor, and a wheel slip measurement system in order to perform the certification testing.

### SNAPSHOT

Project: Heavy-Duty Tow Dynamometer  
Customer: Case New Holland Industrial  
Where: Racine, Wisconsin

*"...As the worldwide tow dynamometer supplier of choice, MAE is more than capable of producing any testing instruments any scale such as this mobile style tow dynamometer."*

*- David Ganzhorn,  
V.P. Sales at MAE*

"Mustang has had extensive experience in designing and creating such high-quality heavy-duty pieces of equipment both meeting the requirements and specifications of the customer," said David Ganzhorn, V.P. Sales. "As the worldwide tow dynamometer supplier of choice, MAE is more than capable of producing any testing instruments any scale such as this mobile style tow dynamometer," Ganzhorn continued. "Our rugged design philosophy along with state-of-the-art control technology provides our customers unparalleled performance in these challenging applications."



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### About MAE

Mustang Advanced Engineering is a leading supplier of advanced, custom engineered testing and measurement systems. Located in Twinsburg, Ohio since 1986, MAE delivers world-class testing solutions, custom design support, technical assistance, backed by a dedicated factory service team, making them a trusted source of expertise for the global industrial market. Visit [MustangAE.com](http://MustangAE.com) for more information. Follow them on Facebook, Twitter, LinkedIn, and Instagram

