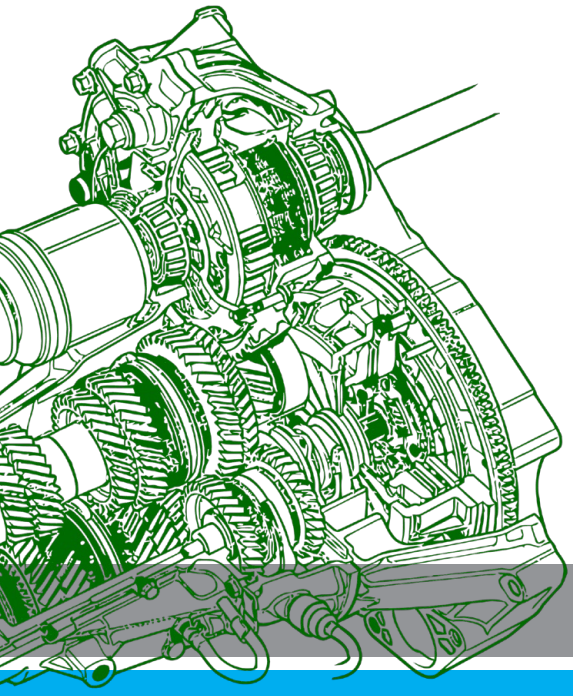
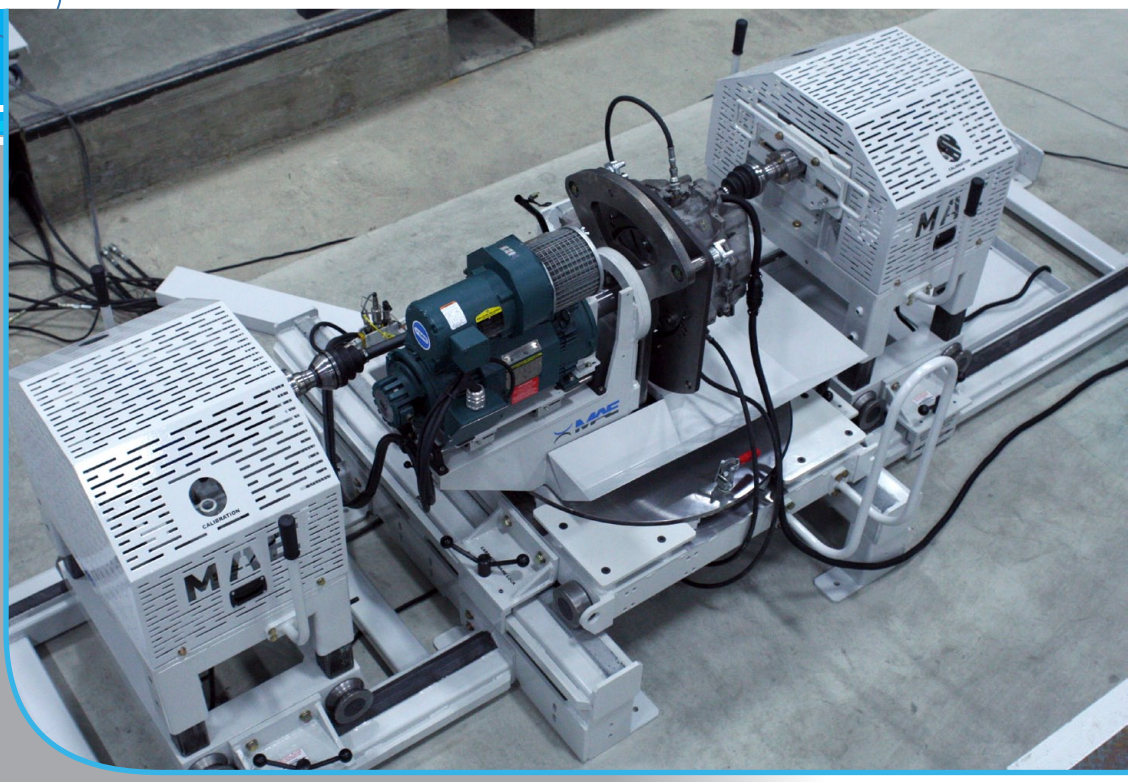


LDU-40

Universal Transmission Dynamometers



Smarter By Design

MUSTANG™ ADVANCED ENGINEERING

A better way to test your light-duty automotive transmissions - Mustang's MAE-LDU-40 - Smarter by Design.

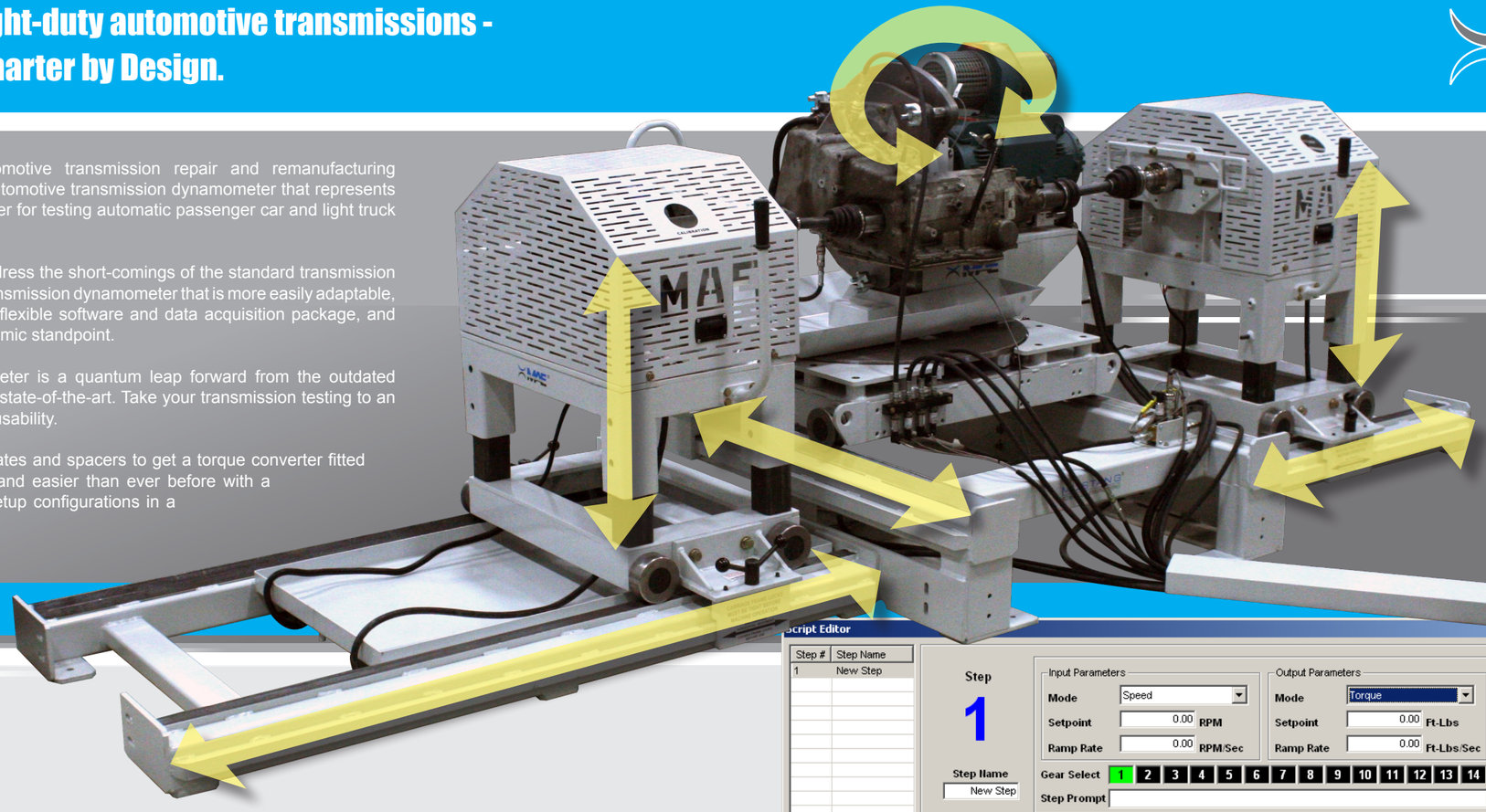
LDU-40

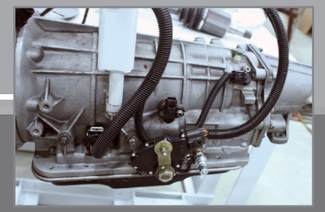
Mustang's latest product innovation for automotive transmission repair and remanufacturing professionals is the MAE-LDU-40, a universal automotive transmission dynamometer that represents the most advanced, next-generation dynamometer for testing automatic passenger car and light truck inline and transverse transmissions.

Mustang designed the LDU-40 to specifically address the short-comings of the standard transmission dynos found in the market today. The result is a transmission dynamometer that is more easily adaptable, more accurate, more user friendly, with a more flexible software and data acquisition package, and most importantly, is more sensible from an economic standpoint.

The LDU-40 Universal Transmission Dynamometer is a quantum leap forward from the outdated systems that once upon a time were considered state-of-the-art. Take your transmission testing to an unprecedented level of accuracy, efficiency and usability.

Forget the hassles of using custom mounting plates and spacers to get a torque converter fitted just right. Mount and test transmissions faster and easier than ever before with a universal system so flexible, you can change setup configurations in a matter of minutes, with a single operator.





The MAE-TCM gives you the ability to test a transmission using the correct frequency and duty cycle, which ensures that the transmissions are being tested exactly as they perform in a vehicle.

Universal Hardware

The MAE-LDU-40 dynamometer is by far the most easily adaptable test system on the market. Test a wide variety domestic and foreign rear-wheel transmissions without the need to purchase countless custom mounting plates.

Our patented Universal Adapter Plate virtually eliminate the need to have expensive custom plates for each transmission you need to test – saving you both time and money and simplifying your testing operations.

Mustang's system easily adjusts to fit any torque converter without the need for complicated spacers and bushing combinations, making it easier to center and mount more transmissions faster.

Our rotating head stock also allows you to easily adapt and configure the test stand to test front wheel drive transverse transmissions, including Honda and Mitsubishi, and longitudinal 42LE transmissions such as the Chrysler A606.

Our use of U-joint drive shafts simplifies set up and dramatically minimizes the chance of damaging rear seals due to misalignment issues.

More Accurate Test Results

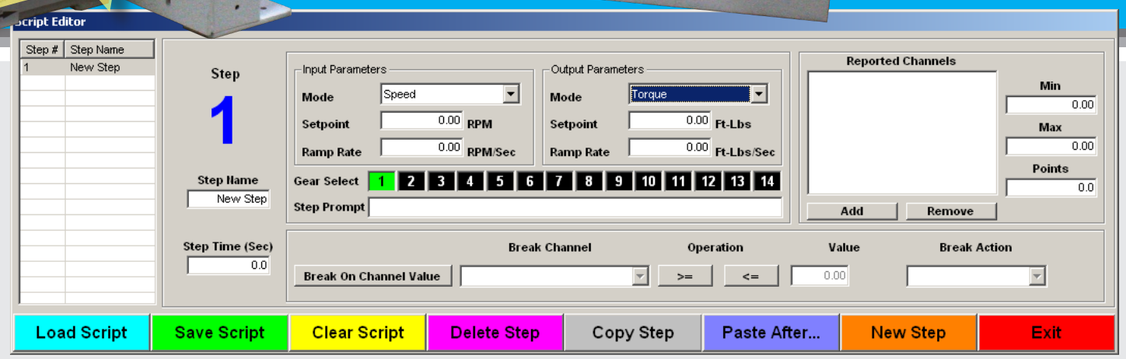
The LDU-40 achieves the highest level of accuracy in the industry thanks to its high quality electronics package.

Cradle-mounted PAUs and precision strain-gauge-type load cells on each output PAU provide continuous feedback to the control loop, allowing for more precise load control and more accurate testing results.

A 30-tooth speed encoder ensures a higher resolution speed signal, and therefore a more accurate gear ratio calculation.

The LDU-40 also includes Mustang's Transmission Control Module, The MAE-TCM, standard with every unit. The MAE-TCM gives you the ability to test a transmission using the correct frequency and duty cycle, which ensures that the transmissions are being tested exactly as they perform in a vehicle.

All this results in a more accurate dynamometer so you can test with more confidence.



Powerful & Flexible Software

The most important feature of the LDU-40 dynamometer is the power and flexibility of Mustang's TransTester Control Software, the true heart of the system. With TransTester, you have a software package that also easily adapts to keep up with your changing needs.

Some of the significant advantages that TransTester offers include a Script Builder Utility, a Shift Table Editor, and a powerful graphing and data analysis utility. The Script Builder Utility gives you an unlimited ability to add new or modify existing scripted test procedures. With the Script Builder, you can define an unlimited number of test steps, each of which include fully customizable testing parameters. For the input and output parameters, you can choose between speed, torque, power or manual mode and establish mode-specific setpoints and ramp rates. The gear select control allows you to specify a gear range for this step. The step prompt allows you to enter custom text to be displayed on the test screen during this step in the test sequence. The Break on Channel Value feature can command the software to skip to a user-defined step once a user-defined condition is met. For example, once a sump temperature of 180° is reached, skip to step 6. Reported channels allows the user to define channels to record as well as minimum and maximum pass/fail criteria for each defined channel. Additional steps can be easily created by copying, pasting and editing existing steps.

TransTester's Shift Table Editor ensures that you have the flexibility you need to set up a new transmission when the need arises. Using the Shift Table Editor, you have the ability to customize the software to shift any new transmission that may come through your door.

TransTester's powerful graphing utility allows you to graph, analyze and export all data in an Excel-friendly format.

LDU-40

UNIVERSAL AUTOMOTIVE TRANSMISSSION DYNAMOMETER

Smarter By Design

MUSTANG ADVANCED ENGINEERING

ISO 9001:2000 Certified

Offices Worldwide

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Twinsburg, OH 44087
Phone: (330) 963-5400
Fax: (330) 425-3310
Email: sales@mustangae.com

www.mustangae.com

Specifications

Trans Input AC Motor / Engine Simulator	
Power:	43 Hp (32kW)- Continuous, 60 Hp (45kW)– Peak
Torque:	90 lb-ft (120 N-m)-Continuous, 125 lb-ft (170 N-m) – Peak
Speed:	4,000 rpm
Inertia:	Low inertia for proper engine simulation
Torque Measurement:	Electronic, Direct Torque Control
Torque Calibration:	NIST Load Cell Transfer
Type:	AC Motor, variable speed low inertia
Cooling:	Blower Cooled for continuous operation
Mounting:	Variable Linear Movement with respect to the trans mounting face plate for easy transmission mounting adjustment without shimming or spacers
Transmission Mounting	
Bell Housing Mounting:	Universal Mounting Plate, Independent Mounting Plate, No mounting plate shim spacers required
Tail Support:	Foot mount jack stand
Torque Converter Adapter:	Universal TC adapter, Independent TC flex plate, TC pilot centering bushing set
Output Adapter:	Balanced U-joint based for smooth high speed operation with transmission output adapter hubs
Transmission Output Loading	
Type:	Air-Cooled Eddy Current with electronic torque feedback
Output Loading:	95-hp @ 1,800 rpm (cold), 45-hp @ 1,800 rpm (hot) 135-hp @ 6,000 prm (cold), 65-hp @ 6,000 rpm (hot)
Max Speed Deceleration / Rate:	6,000 rpm / 13,000 rpm/sec
Base Inertia:	6.3 lb-ft² (0.63 Kg-m²)
Vehicle Simulated Inertia Range:	1,000 - 5,000 lb. vehicle (trans dependent)
Output Torque Response Rate:	≤ 95 ms
Torque Calibration:	NIST Dead Weight
Mounting:	Cradle mount with electronic load cell, measure both dynamic and stall torque.
Stall Lock:	With electronic torque feedback readings
Dyne & Transmission Controls	
Input Motor:	Torque Control — Speed Control Torque Converter Kfactor — Manual % Engine Emulation with throttle control (Optional) Engine Torsional Vibration Overlay (Optional)
Output Dyne Control:	Vehicle Simulation Control with/without Inertia Simulation Independent L/R/3O* Speed Control, Torque Control, Manual % Stall
Trans Control:	Manual lever shift (hydraulic) Direct Solenoid Electronic Shift (External ECM) CAN Communications Shift (internal ECM) Modulator +/- (Optional) Vacuum Simulation (Optional) Fluid Cooler (Optional)
System Data Acquisition:	Pressure #1 :Mainline or other — Pressure #2 :Coolant or other Pressure #3 :Clutch 1 or other — Pressure #4 :Clutch 2 or other Pressure #5 :Clutch 3 or other — Pressure #6 :Clutch 4 or other Pressure #7 :Clutch 5 or other — Flow: Coolant Temp: Fluid — Input Speed (rpm) measured Input Torque (lb-ft) measured — Input Power (Hp) Calculated Output L Speed (rpm) measured — Output L Torque (lb-ft) measured Output L Power (Hp) calculated — Output R Speed (rpm) measured Output R Torque (lb-ft) measured — Output R Power (Hp) calculated
Power Requirements:	460 VAC, 3 Phase, 80 AMP, 60 Hz - Motor 230 VAC, 3 Phase, 80 AMP, 60 Hz - Dyne Control
Machine Dimensions:	95” x 175” x 96.5” (241 x 437 x 246 cm) **(includes crane)**
Machine Shipping Weight:	4,500 lbs. (204 Kg)