

Customized Test System for Wiper Motors

DESCRIPTION

Magtrol has developed an automatic testing bench for front wiper motors, rear wiper motors (pendulum with measure of angle) and ABS motors (excenter). The test setup is equipped to handle torque ratings from 3 to 50 N·m and a speed range of 0 to 10,000 rpm. The test rig consists of 2 benches; one with a Magtrol 2PB65 Powder Brake Dynamometer with water-cooling (for medium and higher range motors), the other with a Magtrol HD-700 Hysteresis Dynamometer (for low range motors); and a custom motor fixture adaptable to 6 different motors. Also included in the system is a power supply (3 kW–100 A), Magtrol DSP6001 High Speed Programmable Dynamometer Controller (100 Hz) with IEEE-488 interface, Magtrol 6510e Single-Phase Power Analyzer, PC and printer, all conveniently mounted into a heavy-duty equipment rack. The hardware is integrated with a customized version of Magtrol's M-TEST 4.0 Motor Testing Software, which provides full control of the dynamometers and allows test sequences to be configured directly from a PC.



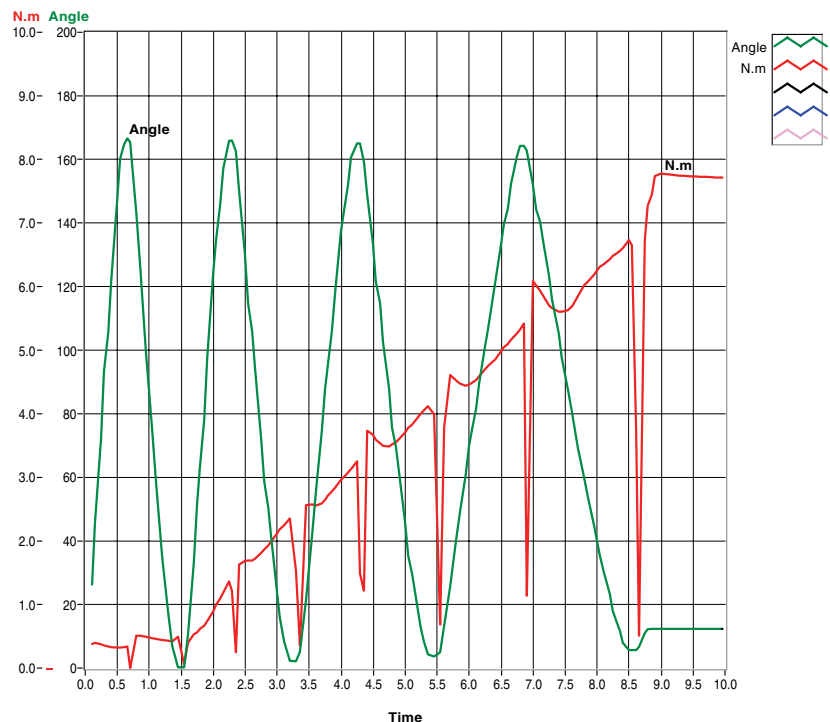
Wiper Motor CMTS featuring Magtrol 2PB65 Powder Brake Dynamometer with custom motor fixturing, DSP6001 Dynamometer Controller, 6510e Single-Phase Power Analyzer and customized M-TEST 4.0 Motor Testing Software.

MOTOR FIXTURING

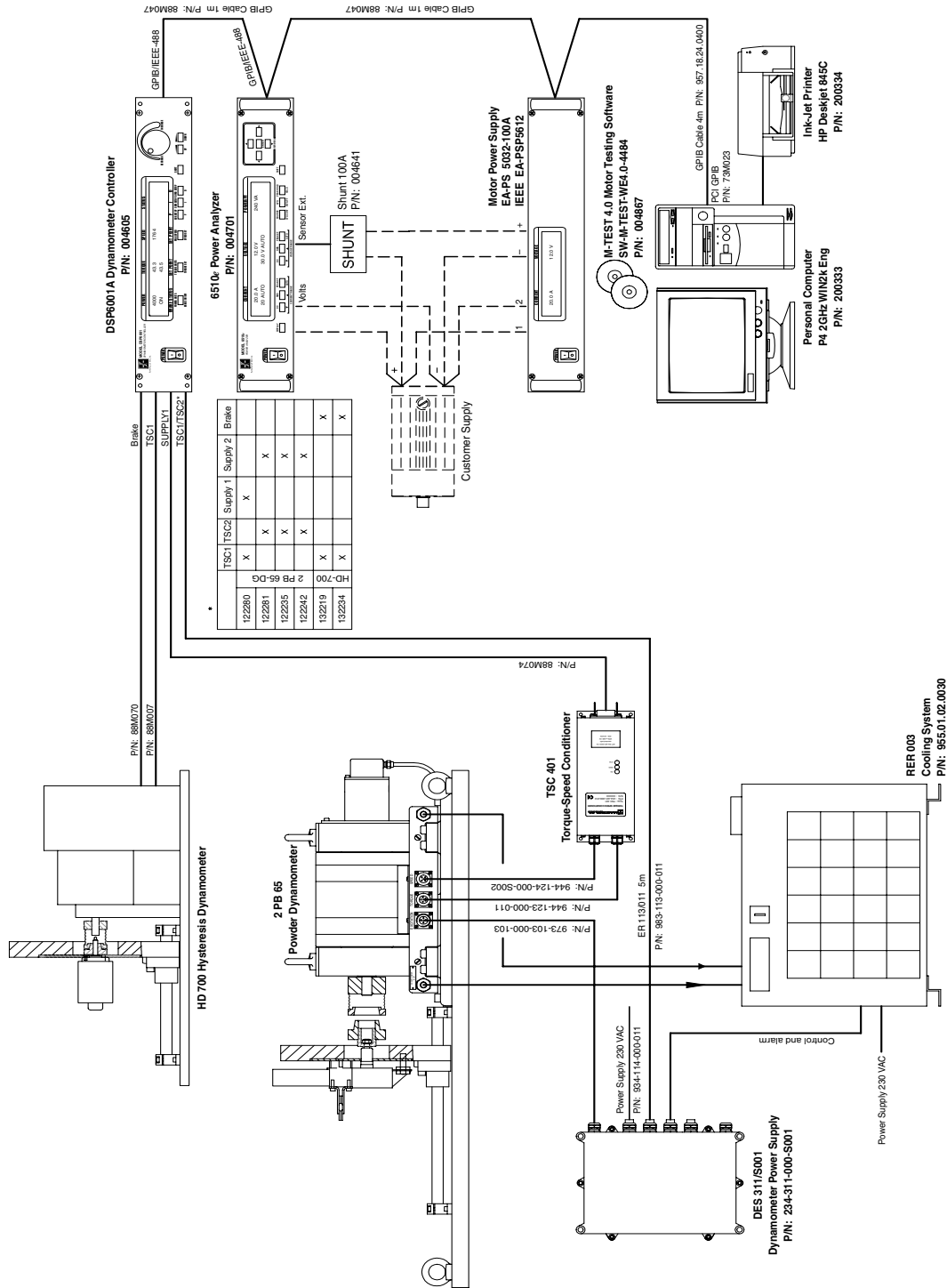
The fixture is flexible, permitting easy adaptation of any of the 6 types of motors to be tested. The motor is first mounted onto a disc plate, which allows specific adaptation to the motor fixing points. The disc is then self-centered and fast clamped onto a vertical plate. The vertical plate is mounted on sliding bars to allow the axial positioning of each motor. The couplings used are also fast clamping with a tapered, press-fit connection.

TESTING

Magtrol's Wiper Motor CMTS provides high repeatability and quick response time for sample lab testing. A single wiper motor can be tested within 3 minutes time including fixturing, adaptation and loading the test setup from the software. Data can be displayed in either graphical or tabular format for up to 10 parameters including voltage, current, power, torque, speed, efficiency and temperature. The software allows the user to quickly acquire data, store several different test configurations and print customized test certificates.



Example of rear windshield wiper motor measuring curves obtained with M-TEST 4.0 Software.



Due to the continual development of our products, we reserve the right to modify specifications without forewarning.



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