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## Customized Test System for Starter Motors

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### APPLICATION/DESCRIPTION

Magtrol designed this CMTS with the capability to test one starter motor while loading another, via a specially designed dual motor fixture. This custom feature allows for continuous (18-second) cycle testing.

A built-in pneumatic air pressure system, complete with air filter/regulator, provides a clamping force that holds the motor down while testing.

Integrated safety features ensure that both the motor and fixture are secured in place before a test will run. Testing is also halted if there is insufficient air pressure to hold the motor in place.

### COMPONENTS

- Heavy-Duty Equipment Rack
- Custom Dynamometer Table: with many safety features
- HD-800 Hysteresis Dynamometer: with short base plate
- DSP6001 High-Speed Programmable Dynamometer Controller
- M-TEST 5.0 Motor Testing Software
- 6510e Single-Phase Power Analyzer
- Custom Dual Motor Fixture: on sliding base plate
- PC, Monitor, Keyboard

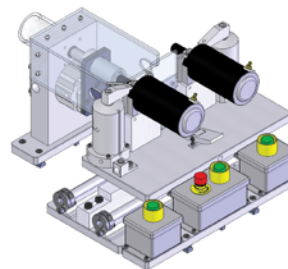
### SAFETY FEATURES

- Air Pressure Verification: When air pressure falls below 80 PSI, a signal light is illuminated and the test will halt.
- “No Motor” Detection: Position sensors, located on the back of the motor clamps, prevent testing if the motor under test is not secured in place.
- “Motor-in-Position” Detection: Permits testing only when the sliding fixture is locked in place.
- Emergency Stop Button: Turns off all power to the motor.



### CUSTOM FIXTURE

The custom fixture is on a sliding base that easily centers either one of two mounted motors in front of the dynamometer.



When a test is complete, the entire fixture can be shifted to the left or right so that the second motor can be tested. The first motor can then be disconnected and replaced with another motor to test. In the 18 seconds that it takes to test one motor, a new motor can be mounted in place.



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