

Testing Late Ford Application Regulators Requiring PWM Signal

The Transpo VRC101-31 Regulator Signal-Supply is a valuable tool for screening late Motorcraft, Marelli and Mitsubishi regulators before re-using them in production.

The [VRC101-31](#) is engineered to provide sample duty cycles of the true PWM (pulse width modulated) square wave signal normally inputted into the regulator by the vehicle PCM (power- train control module). A controlled PWM signal is required to establish the varying charging Voltages required by the vehicle charging system. Known Ford application regulators that

require a PWM signal from the vehicle PCM for full range function include the XW4U-10C359-AB on Motorcraft 6G and YF1U-10C359-AA on Motorcraft 4G, the Marelli 85562541 and 85582601, and the Mitsubishi 529 (A866T52970). They are A-Circuit (low- side) regulators.

The terminal-pin connections for these regulators are known as LI-RC-AS. The [VRC101-31](#) provides the PWM signal to the RC-Terminal. Please refer to the Transpo Dec04/Jan05 Forum (flyer) for additional information on LI-RC-AS regulators.



*Set-Up View Uses Fixture [VRC101-28](#),
Signal-Supply [VRC101-31](#), and New
Regulator Tester [VRC1000](#)*

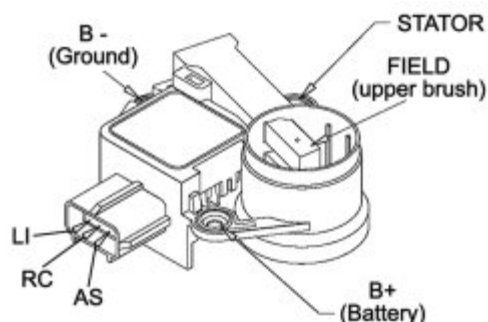


Diagram depicts Ford 6G Regulator XW4U-10C359-AB. Test-Lead hook-up instruction sheet is provided with [VRC101-31](#).

VRC101-31 Switch Positions

- **Set Point 1:** Regulation Voltage should read approximately 12.5V.
- **Set Point 2:** Regulation Voltage setting read approximately 13.5V
- **Set Point 3:** Regulation Voltage should read approximately 14.5V.
- **Set Point 4:** Regulation Voltage should read approximately 15.5V.

Notes

- A known fully functional 'golden-sample' regulator should be tested and benchmarked, prior to disqualifying suspect regulators..
- If regulation voltage varies more than +/-0.2V, regulator functionality is suspect..
- Regulator 'LI' has no direct control over Lamp . function. Vehicle Indicator Lamp function is solely controlled by the vehicle PCM. LI terminal function may be tested using an oscilloscope and a 1 k-Ohm pull up resistor.



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