ALTERNATOR TESTER OM.82

The tester supports the following alternators:

ST35C010 Citroën

ST35C013, ST35016, STC017, ST35C018 SMART MHD

ST35C015 MERCEDES

These are reversible start/stop alternators equipped with dual functionality: battery charging and engine starting.

The alternators send signals to the vehicle's ECU (Engine Control Unit) via three Hall sensors. Additionally, they supply three-phase power from the alternator's winding to the control system responsible for switching the phases of the inverter, which serves as the starter.

After repairs or bearing replacements, it is essential to calibrate the sensors. Using the **OM.82 Tester**, Hall sensors can be positioned relative to the stator and the magnetic poles of the ring mounted on the rotor shaft.

The tester screen allows you to check and adjust the position of these sensors.

Operation of the OM.82 Tester

The OM.82 tester is an auxiliary device designed for servicing ST35-type alternators and operates in conjunction with other equipment for driving the alternator.

Connect the red (+B) and black (-) cables to the corresponding sockets on the tester and to the terminals of the machine driving the alternator.

Connecting Alternator ST35C013, ST35C016, ST35C017, ST35C019

Connect the triple cable from the tester to the alternator's phase terminal using an M8 nut.

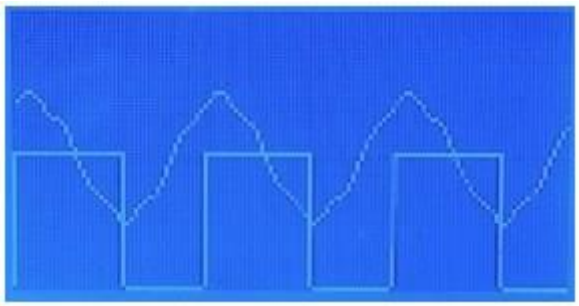
Ensure it is securely tightened.

Connect cable no. 2 (Hall sensors) and cable no. 4 (rotor).

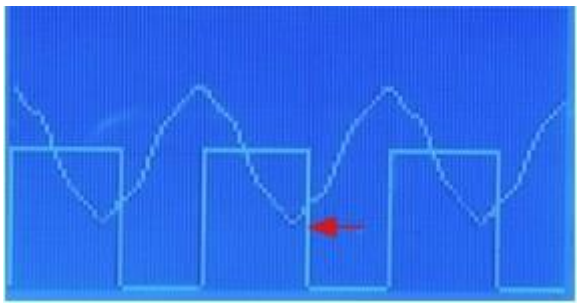
Start the alternator drive.

Indicator lights should all blink, and the screen should display two waveforms: one rectangular signal from the Hall sensor and one sinusoidal waveform.

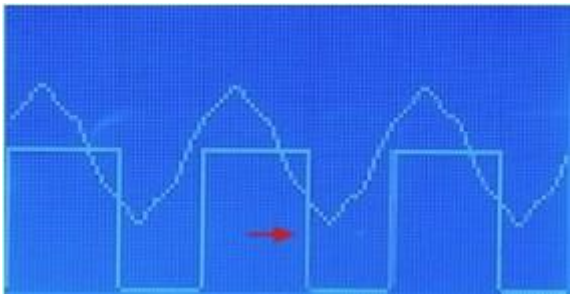
If no signal appears, set the switch to positions W1, W2, or W3



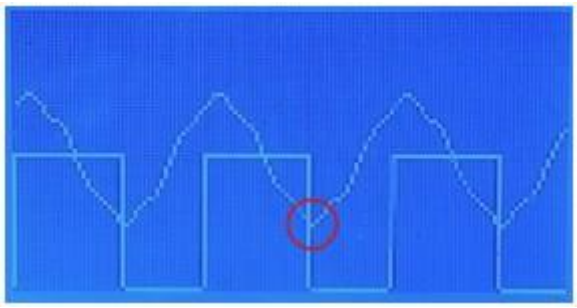
Adjust the speed to approximately 1000 RPM.



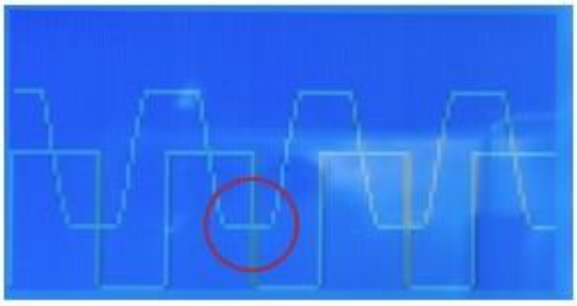
If the falling edge of the sinusoidal waveform is to the right of the bottom peak, move the sensor to the left.

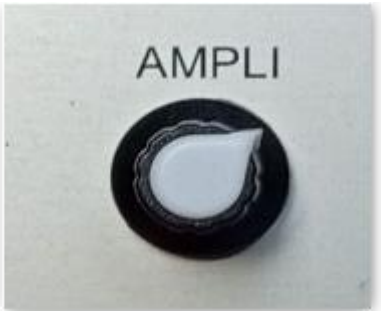


If the falling edge is to the left of the bottom peak, move the sensor to the right.



If the falling edge aligns at the center of the bottom peak, the Hall sensors are correctly positioned.





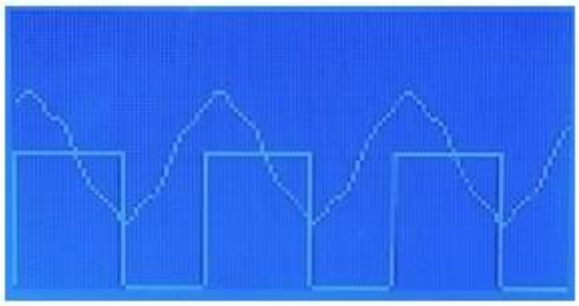
If the waveform looks correct, make fine adjustments using the potentiometer.

Connecting Alternator ST35C010, ST35015

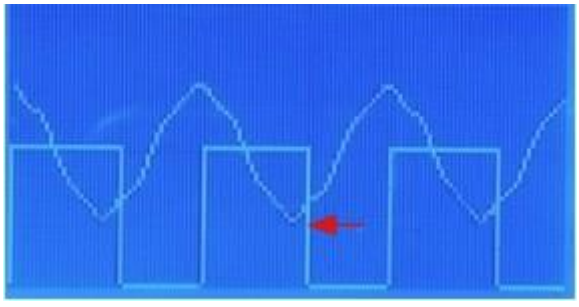
Connect plugs no. 1, no. 2, and no. 3. Start the alternator drive.

The indicator lights should all blink, and the screen should display two waveforms: one rectangular signal from the Hall sensor and one sinusoidal waveform.

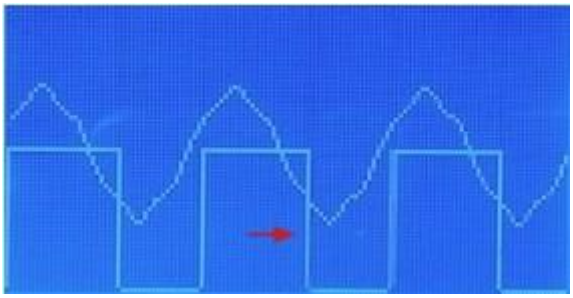
If no signal appears, set the switch to positions W1, W2, or W3



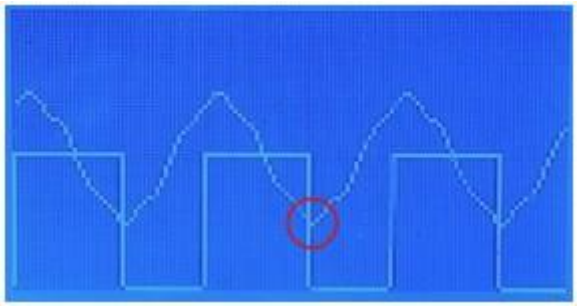
Adjust the speed to approximately 1000 RPM.



If the falling edge of the sinusoidal waveform is to the right of the bottom peak, move the sensor to the left.



If the falling edge is to the left of the bottom peak, move the sensor to the right.



If the falling edge aligns at the center of the bottom peak, the Hall sensors are correctly positioned.

Note: If the bottom peak of the sinusoidal waveform coincides with the rising edge, the rotor power supply wires must be swapped.

Checking the Performance of Alternators ST35C013, ST35016, ST35C017, ST35C019

Start the alternator drive and press the "MODE" button. The tester will switch to full-performance mode. A screen will appear showing the output voltage and rotor load.

The charging voltage can be adjusted using the dial.

Note**:** To protect the tester, the charging process will automatically shut off after 2 minutes.

Checking the Performance of Alternators ST35C010, ST35C015 follows a similar process but requires prior installation of the covers and the contact plate.