

# AVR Installation

By Iman Razak

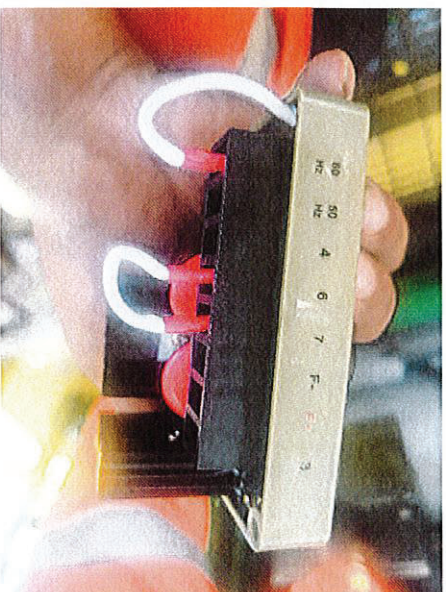


# AUTO VOLTAGE REGULATOR (AVR) INFO

Function: Automatic Voltage Regulator (AVR) is used for automatically maintaining generator output terminal voltage at a set value, even though, the generator load or operating temperature changes. AVR is one of the generator's excitation system.

## How Does it Work?

- The voltage from the generator terminals are identified through terminals 3 and 4 and compared it to a stable reference. The error signal is then used adjust the whether increasing or decreasing the current flow to the excitor stator which will adjust lower or higher voltage at the main stator terminals through F+ and F- terminals.



- Fuctions of every terminals:
- 60 Hz / 50 Hz = Initial roll-of point preset for frequency of the AC Voltage
  - 3 / 4 = Input power and sensing terminals
  - F+ / F- = Regulator to the F+ / F- field terminals
  - 6 / 7 = Removable jumper for remote voltage adjust



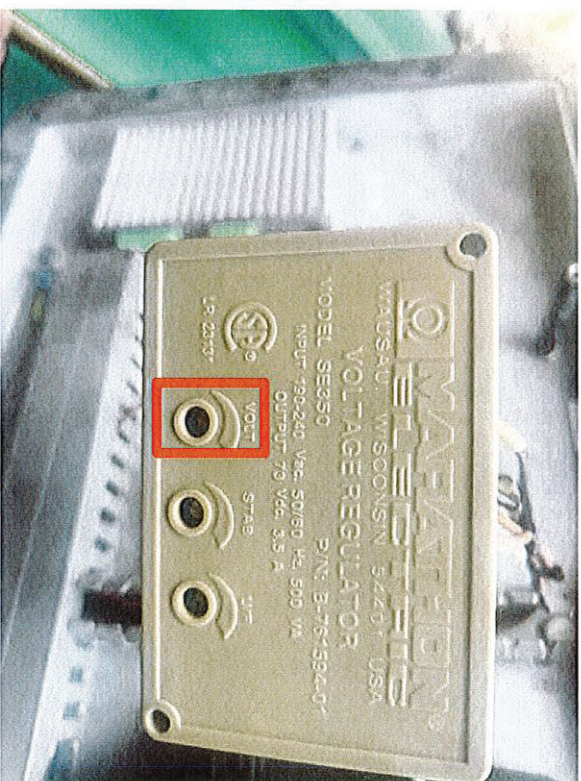




# AVR SETTING PROCEDURE

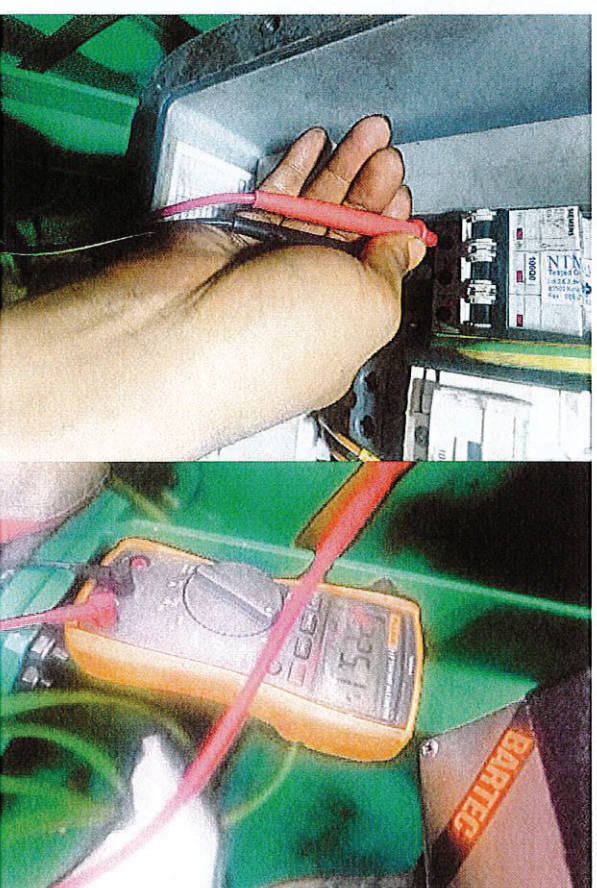
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- Set voltage settings (1<sup>st</sup> knob AVR) that will control the voltage output.



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- Check main supply line at the main circuit breaker (MCB)
  - Line 1 & Line 3: 220 VAC
  - Line 1 & Line 2: 110 VAC
  - Line 2 & Line 3: 110 VAC



# AVR SETTING PROCEDURE

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- Set for STAB Settings (2<sup>nd</sup> knob AVR) that will control the stability of the voltage output.



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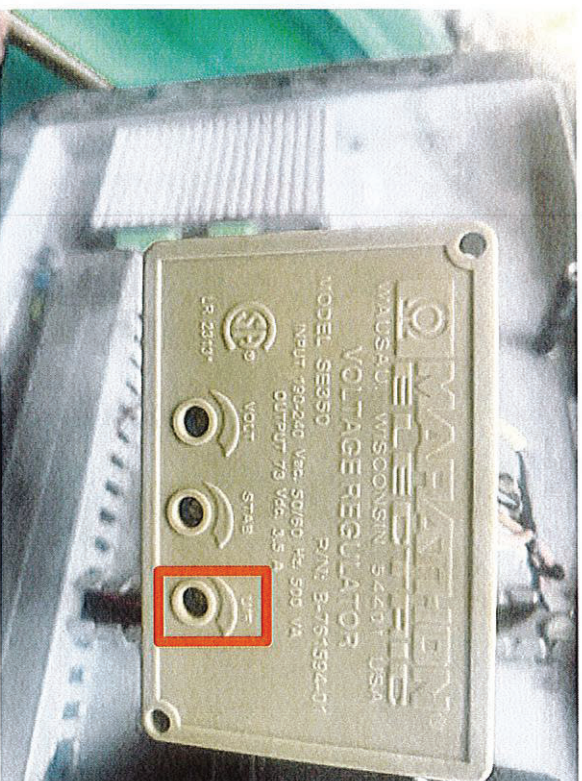
- Check at the generator box Line 1 and Line 2
- Adjust the stab until the value of 11-12 VDC obtained and stable.



# AVR SETTING PROCEDURE

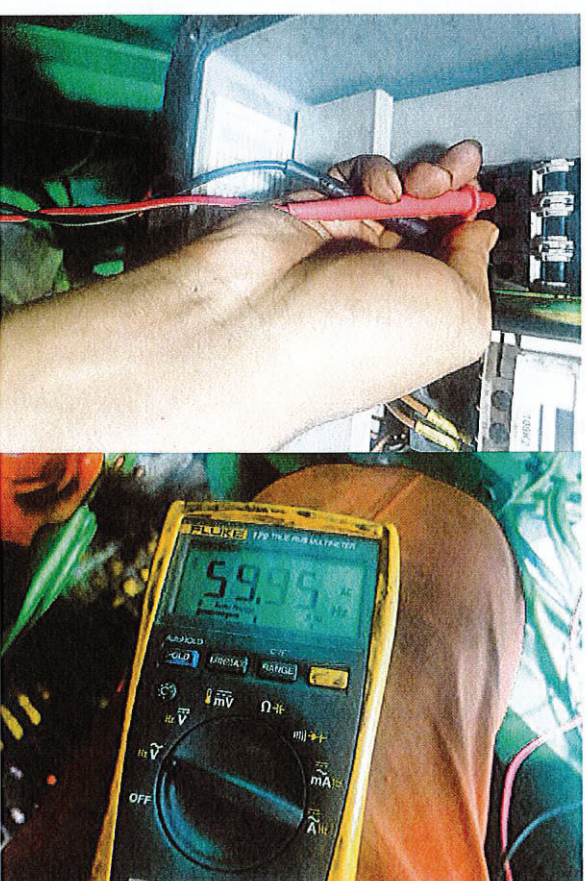
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- Set for U/F Settings (3<sup>rd</sup> knob AVR) that will control the frequency of AC Voltage.



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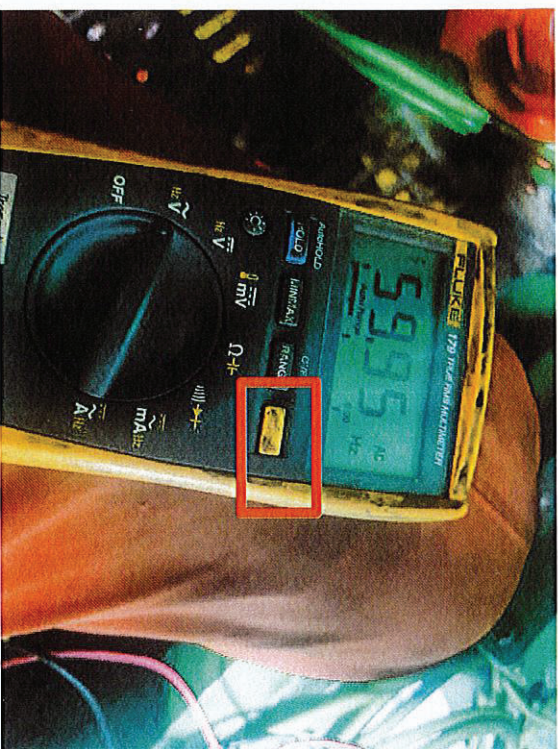
- Check the main supply line at the Main Circuit Breaker in the Powerpack Junction Box.
  - Line 1 & Line 3 = 60 Hz
  - Line 1 & Line 2 = 60 Hz
  - Line 2 & Line 3 = 60 Hz



# AVR SETTING PROCEDURE

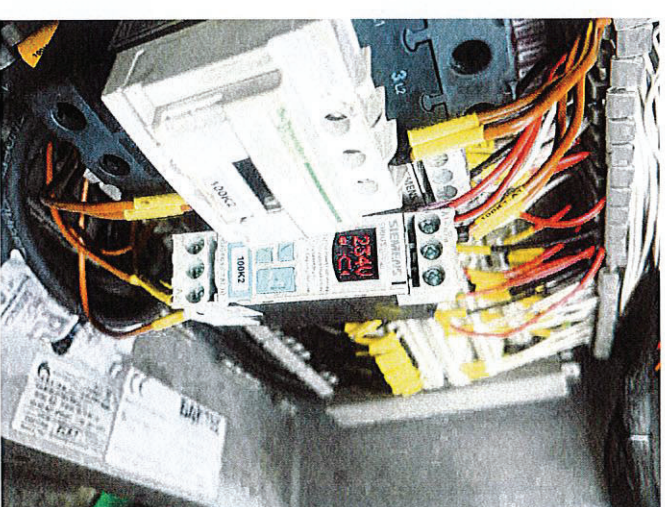
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- To check for frequency, the multimeter set to measure  $\tilde{V}$  (Hz) and press the yellow button to check for the AC Voltage frequency



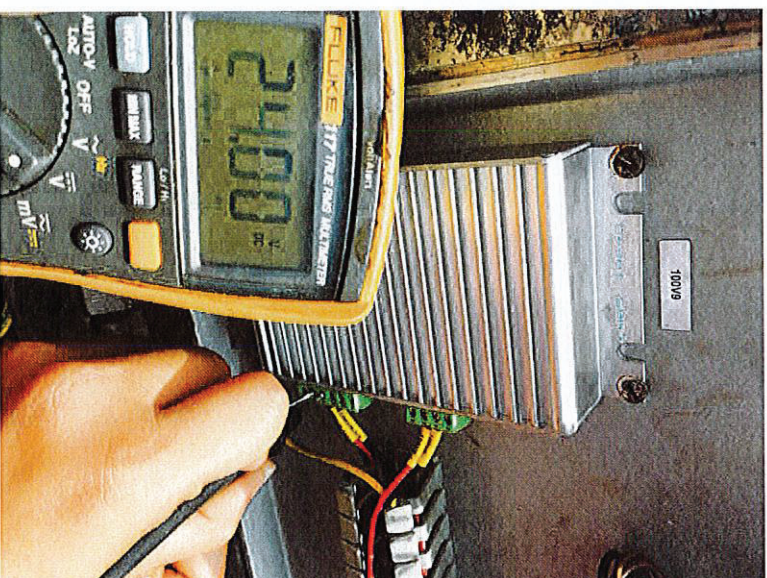
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- Monitor the Undervoltage Relay (100k1) screen that will show the output voltage 220 – 230 VAC.



# AVR SETTING PROCEDURE

- 13 • Check 12/24 VDC Sensor Module (100V9). Ensure that the reading is around 24 – 29 VDC from alternator.



# Thank you !

Questions and Answering Session



PREPARED AND SUBMITTED BY

SIGNATURE



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