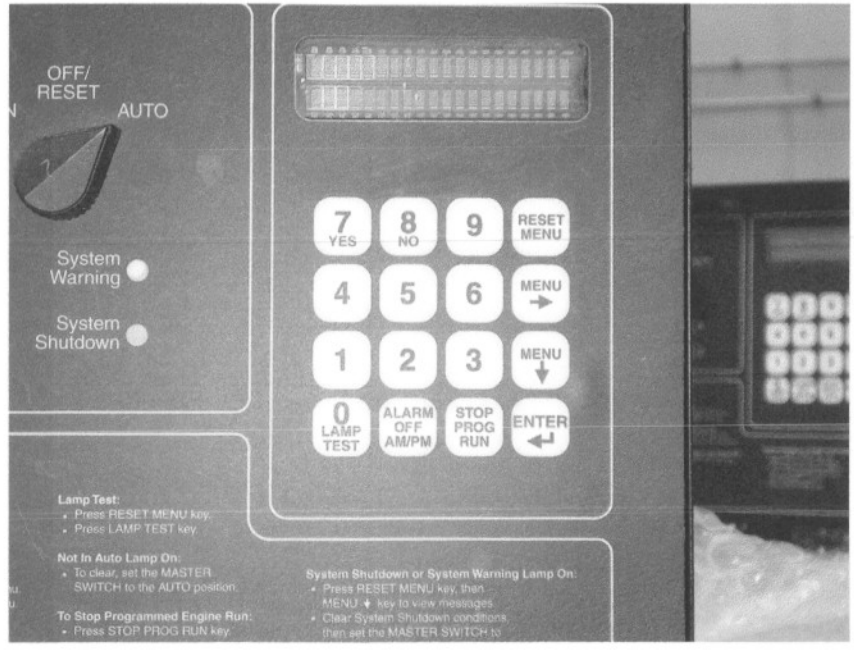
Macom 550 Controller

Repairing overvoltage alarm faults

Finding the fault

- To find the alarm, press the reset menu, then 5 for Menu 5, history. Scroll through the history using the down arrow on the controller to find the latest alarm.

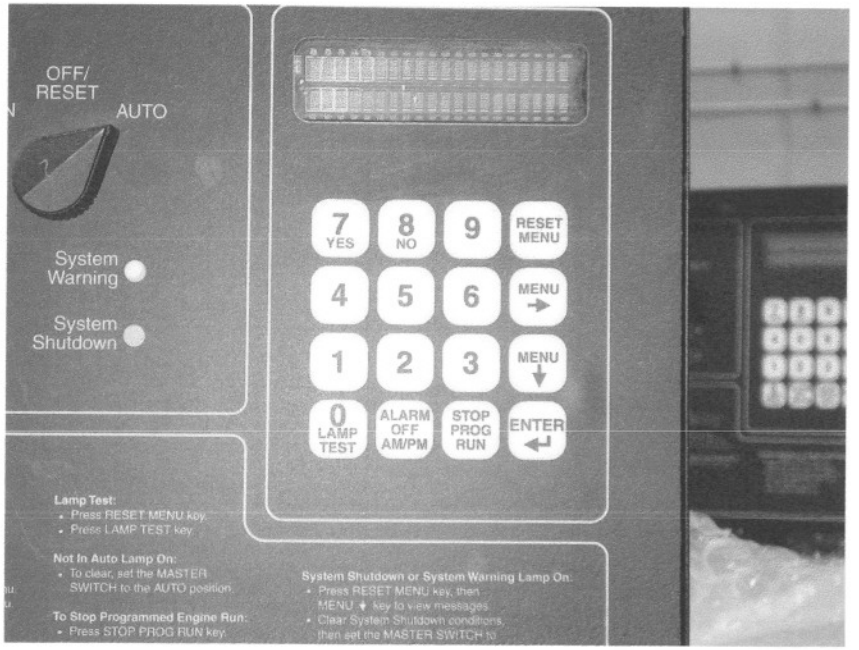


If alarm is Overvoltage alarm

If you find the cause of the alarm is an overvoltage alarm, then you need to recalibrate the voltage regulator. The following pages will show you how to do this.

Put the controller in local control

- Enter menu 14. Press the down arrow to enter the control options (local, remote, off) continue until you get to local. Press yes, then enter. When asked for a code, press 0, then enter. The control mode LED light to the left of the keypad should now be blinking.

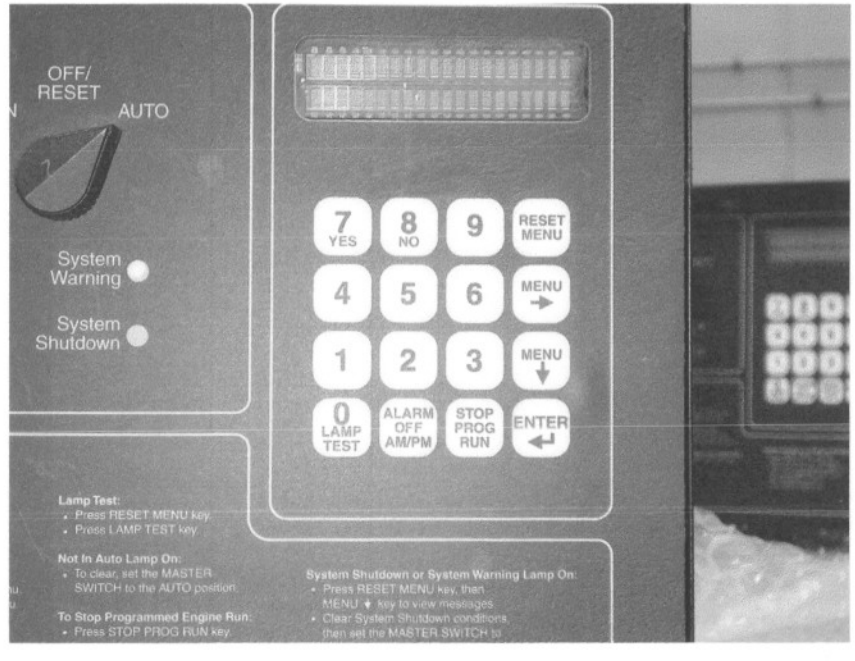


Start the generator

- Clear the alarm by turning the knob on the 550 controller from auto to off, then back to auto. The alarm will clear, and the alarm buzzer will silence.
- Turn the knob from auto to run. The generator will start. Do not put any load on the generator until after calibration is complete.

continue

- Press reset menu, then12, and enter for menu 12, regulator calibration. Scroll down to LN Voltage v1 to N. enter the proper voltage number, then press enter. (for Macom generators, this would be 120 volts)



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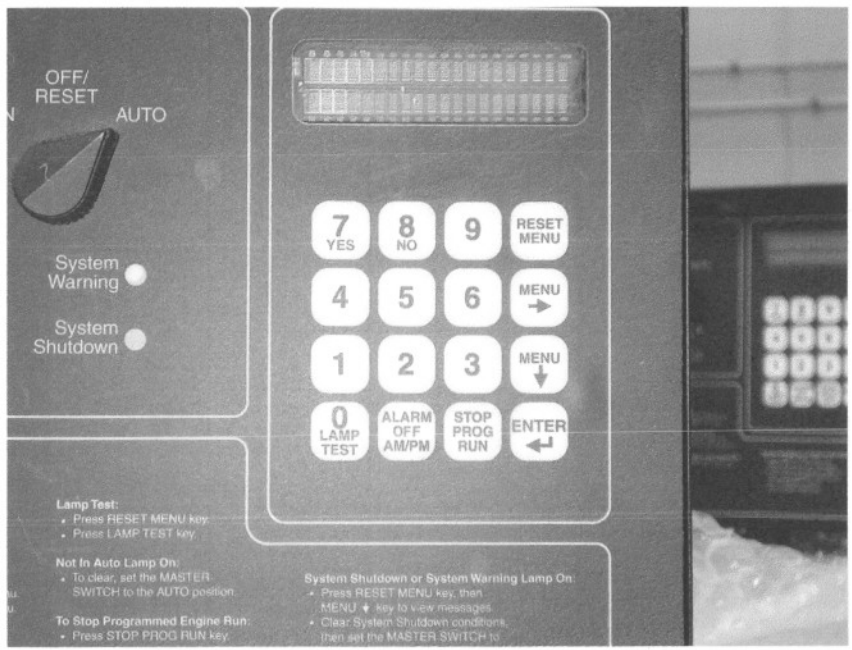
- Press the down arrow to get to L2 to N voltage. Enter the proper voltage and press enter.



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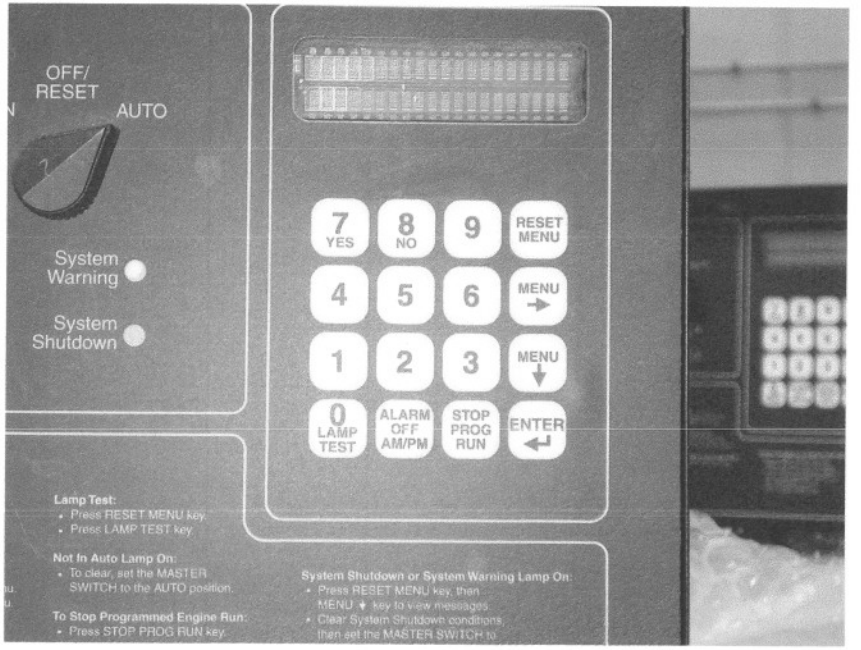
- Now, scroll down using the down arrow until the display reads LN. Press the right arrow to chance the display to LL. Press the down arrow. Now enter the proper voltage for the line – line voltage (240 for Macom). Press enter



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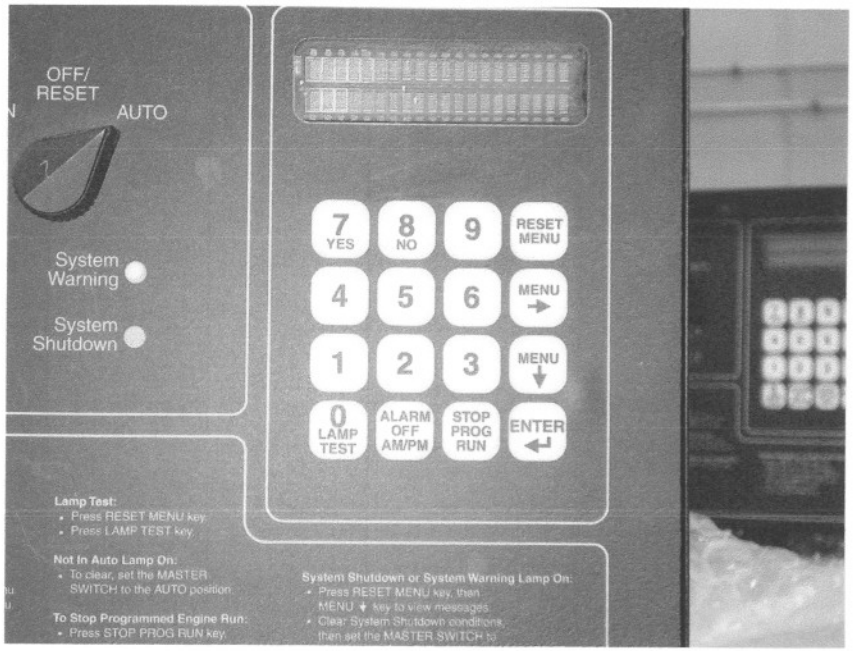
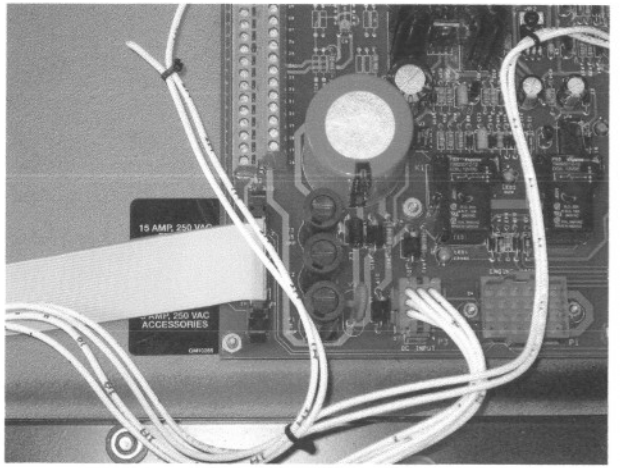
- Press the down arrow. The display should now read “calibrate regulator?” Press yes and enter. The display will read wait, then r4eturn to the original question display. The regulator is now recalibrated.



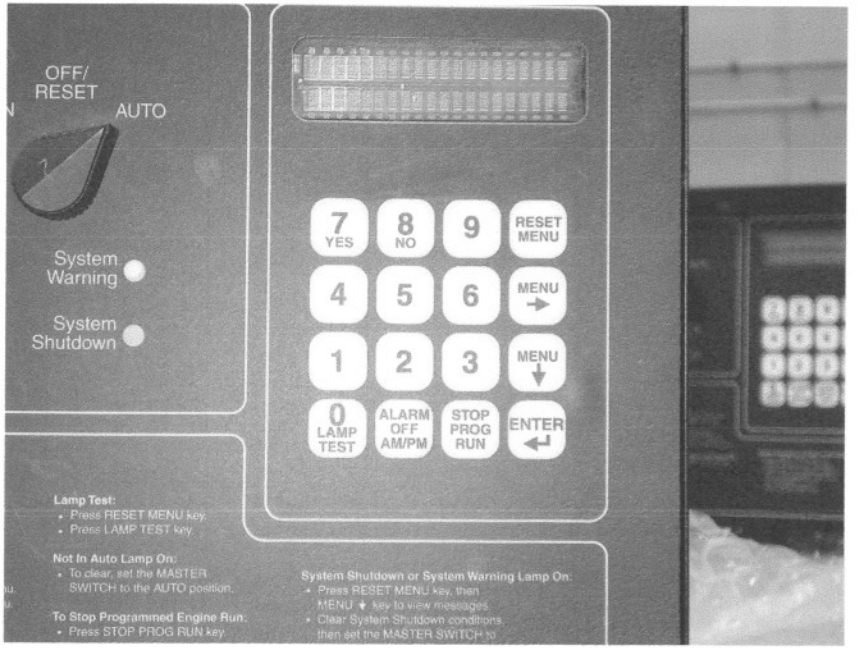
continue

- In order for the new calibration to set, the controller needs to be rebooted. Turn the generator off by turning the knob back to off. To reboot, either disconnect the battery and unplug the battery charger, or remove the middle fuse in the three fuse block on the rear card on the 550 controller. Leave powered down for 5 seconds.



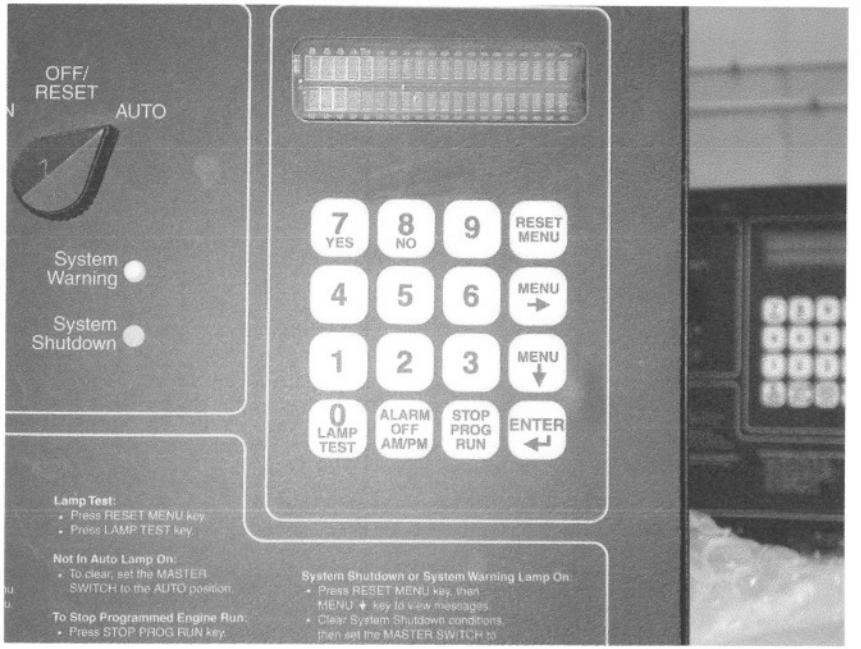
Testing

- Restore the power and return the generator knob to auto. The generator is now recalibrated. Test the generator to see if the problem is solved. Turn the knob to off, enter reset menu, then menu 1



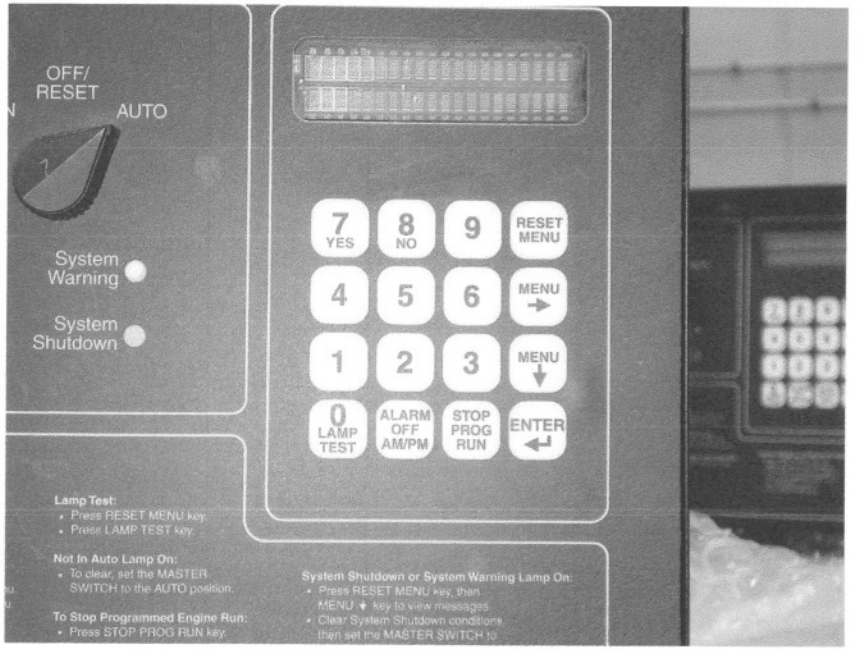
Testing (cont'd)

- Scroll down using the down arrow until you see the line voltage display and the number. Turn the knob to run, and watch the voltage as the generator starts. It should no go above a few volts over the proper voltage value. (240 for Macom)



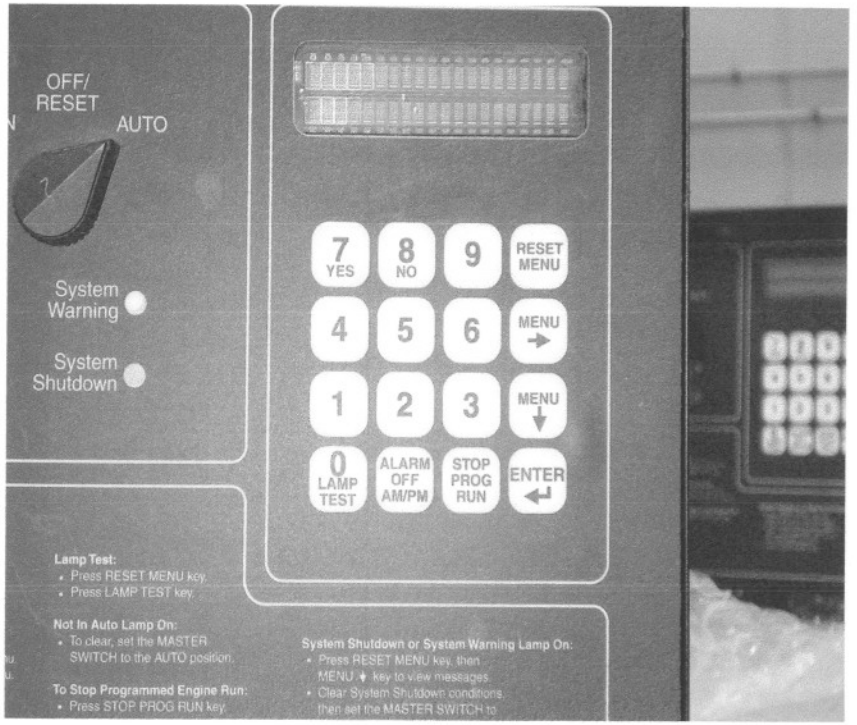
Testing (complete)

- Once the generator is running at speed, and you have verified the voltage, turn the knob to off and auto. If the voltage is still going past the set voltage level, then you can change the start ramp time.



Changing the start ramp time

- Press 20, then enter. Menu 20 is the factory information. Press the down arrow until you see the clock menu and 0000 in the display. Press the right arrow for “enter code” and enter 0. This will unlock menu 20.



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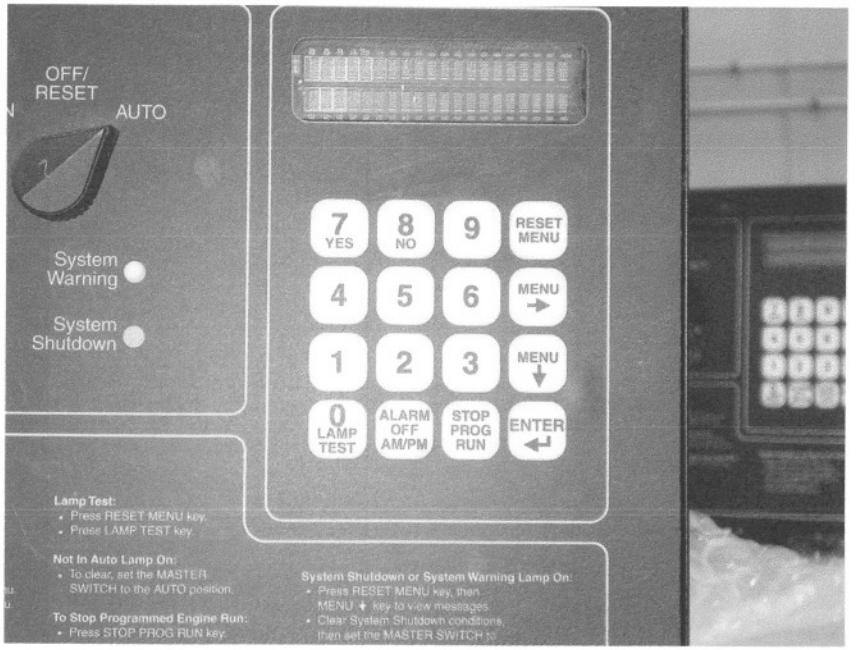
- Press the down arrow until you again see the clock menu and the "0000" display.
- Press the right arrow and enter the code to unlock the regulator parameters. This code will be the total of the year, day, and month. (example: May 15th 2004 would be 2004 + 5 + 15 =2024, enter 2024).Press enter. The display should say the entry was valid



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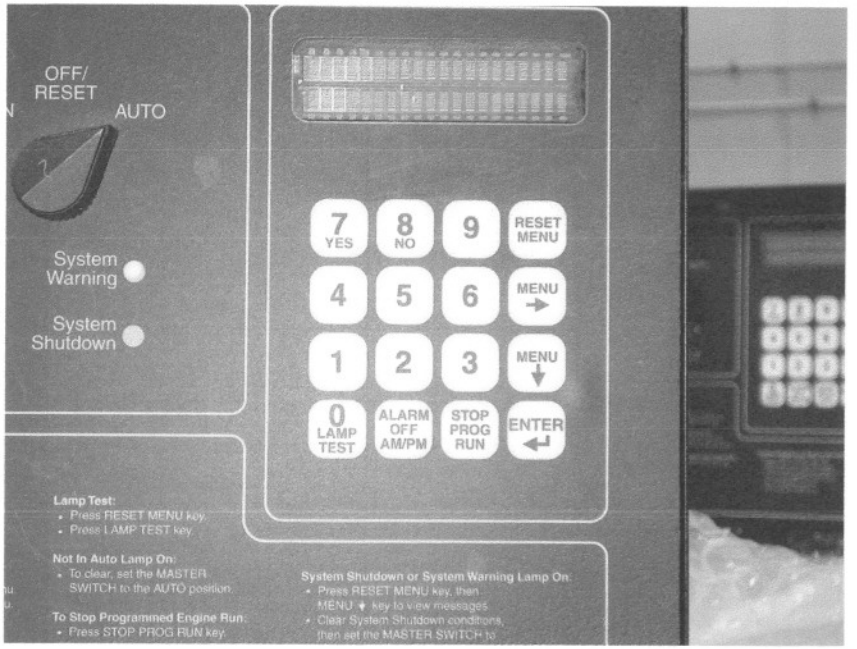
- Press the down arrow until you get to the display "Regulator parameters". Press the right arrow until you see "Start ramp time" there should also be a numerical value there. This number represents the programmed ramp start time in milliseconds.



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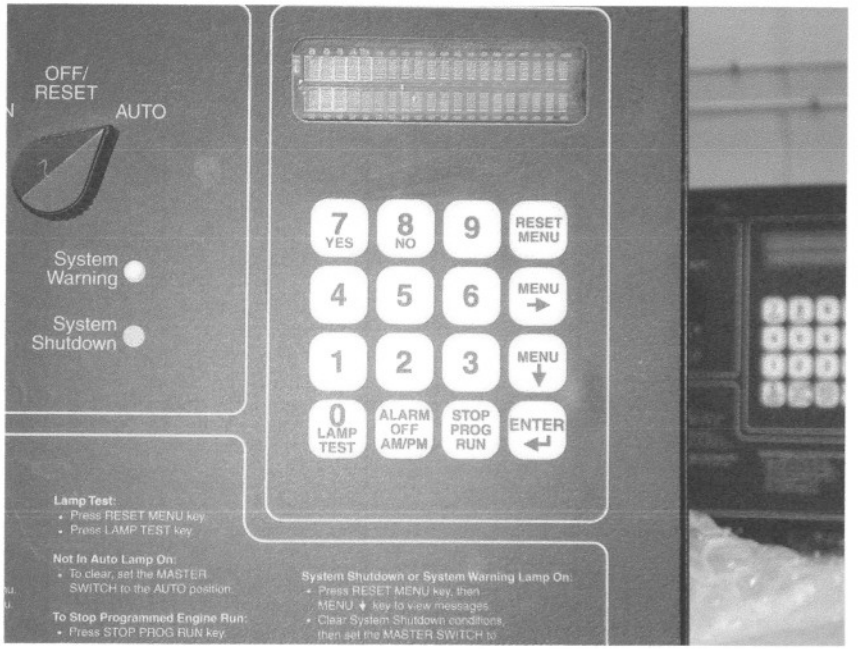
- If the machine you are working on is a LPG or Natural gas engine, enter 100 for the number. Press enter. Many machines have been programmed with 10, causing the regulator to ramp prior to reaching speed, which is causing the voltage to overshoot.



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- Press the reset menu button to exit menu 20. Reboot the controller to set the entry, then test the generator again. There should be very little overshooting of the voltage at this point. I have not had this problem of ramp start time on any diesel generators yet, so I don't know the number to enter there.