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MAINTENANCE MATTERS — Generation Gap: Replacing your Voltage Regulator

Picture this: The "No Gen" telltale light is on, and the HVAC will not turn on. You turn the engine off, turn off the batteries and engage the starter cut-out switch on the engine control box, in the engine compartment. You know you have a problem, and it might just be the voltage regulator.

Your first step will likely be a visual check for a missing or loose alternator belt, or broken or loose cables on the back of the alternator.

If they appear to be in good working order, then you'll take the next step: Turn on the engine start switch on the engine control box, turn the batteries on, start the engine, make sure air pressure is over 110 psi, and turn on fast idle. Once you confirm that the "No Gen" light is still on, it's time to get out the voltmeter and put on the safety glasses. Turn on the voltmeter and set to DC voltage with at least a 30-vdc range. Open the battery compartment door and check voltage at the batteries. If the voltage is less than 26 VDC, then locate voltage regulator so you can conduct a check of it as well.

On older MCIs, MC5s to 102DL3s, the voltage regulator is found inside the last baggage compartment, curbside, on the bulkhead that faces the drive axle, behind a cover. A 1/4" bolt needs to be removed to gain access to the regulator. This is a picture with the cover open.



On newer MCIs, the voltage regulator is located inside the battery compartment, mounted on the back wall above the batteries.

Once you locate the voltage regulator, check for voltage at the "POS" terminal. If there is none, direct your next step to the alternator; but if found, check for voltage at the "FIELD" terminal. If there is no voltage found on the FIELD terminal, the regulator has failed and needs to be replaced. Turn off the ignition and batteries, and order a new regulator.

When the new regulator arrives, you may notice that it is smaller than the original, with five terminals instead of three. Inside the box is also a plastic bag with the instructions and two small metal plates. One is shaped like a "U" and the other is 1-1/2" long. After reading the instructions, it is time to remove the old regulator.

After making sure that the engine is off and the batteries have been disconnected, label the wires on the old regulator with masking tape. After they are labeled, remove the screws from the wires, and then remove the old regulator. The new regulator has a different mount and will require new holes be drilled to mount it to the bulkhead.

After the regulator is mounted, you'll need to install the wires — but you'll likely find that you have only three wires for the new regulator's five terminals. No need to panic. Notice that the five terminals are "GRND," "FIELD," "POS," "IGN" and "SENCE". Remove the screws from the GRND, FIELD and POS terminals. Install the corresponding wires on each terminal. Then loosen the screws on the POS and IGN terminals. Retrieve the U-shaped metal tab that came with the regulator, and insert it under the screws on the POS and IGN terminals. Tighten the screws. The last terminal, SENCE, does not need a wire for this application.

The installation is now done.

Turn the battery switch back on. Start the engine, turn on fast idle and recheck voltage at batteries: 27.8 vdc should be present. Because the regulator comes preset by the factory, it should not need to be adjusted. Close the cover and install the screws.

The charging system should now work properly.

Whenever you are working on your coach, always consult your owners and / or maintenance manual for full instructions and follow all safety precautions. If you have additional questions that are not addressed in your maintenance manual, consult your

additional questions that are not addressed in your maintenance manual, contact your nearest [MCI Service Center](#) or call [MCI's Technical Call Center](#).

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