Converting A2-317 Regulator to A2-330 Remote-Mounted Regulator with C803 Alternator on LA Metro Buses

Conversion Instructions

1. Disconnect battery master switch.
2. Identify and mark wires at regulator IGN, P (when applicable), and D+ terminals.
3. Cut wires at IGN, P (when applicable), and D+ terminals on regulator close to the terminals.
4. Remove regulator mounting hardware.
5. Remove regulator harness from regulator and remove regulator.
6. Strip 1/4" insulation from previously cut wires that connected to IGN, P (when applicable), and D+ regulator terminals.
7. Crimp extension harness pigtail connector wires: green to IGN terminal wire, brown to P terminal wire (when applicable), and white to D+ terminal wire.
8. Connect extension pigtail to extended harness assembly and connect regulator connector to the regulator harness at alternator, tighten securely.
9. Route the extension harness along existing harness in engine compartment above air filter housing to air intake manifold on side of vehicle.
10. Using P clamps and properly sized wire ties, secure the new harness where appropriate.
11. Secure regulator end of harness to a vertical pipe near air intake duct with P clamps.
12. Set replacement regulator setpoint to required voltage (copy setting from existing regulator).
13. Mount regulator to air intake manifold using self-tapping screws with connector on regulator positioned at 12 o'clock (pointing up).
14. Connect extension harness to regulator, tighten securely.
15. Connect IGN, P (when applicable), and D+ terminal wires to regulator.
16. Connect battery master switch.
17. Start vehicle and verify charge voltage setpoint, harness routing, and harness support.

Buses 9500-up late style have IGN, D+, and P terminal wires attached to regulator. A three-wire harness assembly and pigtail will be provided.
Buses 9200-9400 early style have ONLY the IGN and D+ terminal wires attached to regulator. P terminal is empty. A two-wire harness assembly and pigtail will be provided.

Figure 1 – Remote Mounted A2-330 Regulator with Extended Wire Harness Assembly

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Extension harness pigtail connector with shrink sleeves
Harness includes 20 A slow-blow fuse (Bussman MDA20 or equiv.) in each fuse holder

Connect this end to regulator harness at alternator

Step 7: Green wire (Pin A) to IGN terminal wire
Step 7: White wire (Pin B) to D+ terminal wire
Step 7: When applicable, brown wire (Pin C) to P terminal wire

4 places—5mm x 0.8 screws and disc spring washers torque to 8.5 Nm/75 lb. in.

Step 15: When applicable, brown wire from pin C in 3-pin connector to P terminal on regulator—torque to 4.5 Nm/40 lb. in.
Step 15: Green wire from pin A to IGN terminal on regulator—torque to 4.5 Nm/40 lb. in.
Step 15: White wire from pin B to D+ terminal on regulator—torque to 4.5 Nm/40 lb. in.

P terminal
Diagnostic LED