



TECH TIPS

Dixie Part Numbers: A-766 A-767 A-775 A-792
 A-793 A-798 A-7004 A-7006
 A-7010 A-7011 3507-2015

Applications: Various applications with a battery isolator and “Duvac” system.

Conditions: The operator of the vehicle may complain of a no charge condition or that the “coach” battery is charging but the “house” battery is not. The technician may observe no voltage or incorrect voltage readings or extremely high voltage readings.

Cause: Potential causes for the above conditions may include the following conditions:

- Tripped circuit breakers or blown fuses
- Loose or damaged connections.
- Broken, damaged or corroded wiring.
- A faulty, damaged or worn alternator.
- A damaged battery isolator.

Correction: When diagnosing problems with the charging system check for proper voltage at each of the terminals. The attached sketch may help with trouble shooting charging issues on the vehicle.

Alternator:

There should be no voltage between the alternator + and – terminals either with the key on or off unless the engine is running. If voltage is present check the connections to the battery isolator and the functionality of the isolator if connected properly.

Ignition Terminal:

There should be no voltage to the ignition terminal with the key off. There should be 12V to the terminal with the key on (with or without the engine running).

DUVAC Terminal:

The DUVAC terminal requires 12V (coach battery voltage) to function, this functions as the “battery sense.” Depending on the application this may be

12V with the key on only, as some vehicles have a relay with the ignition system.

Battery Isolator:

The battery isolator is typically 2 or more diode connections which prevent one battery from draining or charging the other. Current must flow in one direction only (from the alternator to the battery). Typically the terminal marked as 1 is to be connected to the alternator and the other 2 or more terminals are connected to the battery banks. The battery isolator can be checked by using an Ohm meter. With the red lead connected to terminal 1 (or the alternator connection) there should be 0 (or close to) ohms to each of the battery connections. With the black lead to the alternator terminal there should be infinite resistance (open circuit). When measuring from one battery post of the isolator to the other there should be infinite resistance regardless of the ohm meter connections.

Warning - the + and - locations vary depending on part number and application this is only a sketch for clarity

