MAXON®

DC/DC COVERTER BASED AUXILIARY BATTERY CHARGING SOLUTIONS 2015

PURKEYS

The Challenge – Keeping Auxiliary Liftgate Batteries Charged

The performance and proper function of a liftgate depends on an adequately charged auxiliary battery pack.

The issue:

On applications where auxiliary liftgate batteries are mounted a long distance from the primary vehicle's electrical system, voltage drop will occur. In order to charge auxiliary liftgate batteries, the correct voltage must be applied to these batteries. Without the correct voltage (i.e. electrical pressure) to push the available current through the liftgate batteries, inadequate recharging will occur and the batteries will run down.

The heavy-duty commercial vehicle alternator is normally set at 14.0 volts and flat compensated. The typical vehicle's primary battery pack is maintained at approximately 13.8 volts (the difference occurs because of the voltage drop between the battery and the alternator). With this fact in mind, the starting voltage for the liftgate batteries is 13.8 volts. The circuit to charge the auxiliary liftgate batteries can be well over 60 feet (on trailer applications). All of this length and connections (including fuses) create voltage drop in the system.

Under these circumstances it is impossible to have the correct level of voltage at the liftgate batteries. This reduced voltage results in an auxiliary battery pack that is not maintained at a proper state of charge which in turn results in shortened battery life, less operating time and possible damage to the liftgates electrical components (e.g. starter solenoid, motor, switches, etc.).

The Solution – DC/DC Converter Based Charging Solutions

A DC/DC converter eliminates the above problem by amplifying (boosting) any input voltage (9 to 14) to the correct voltage necessary to charge and maintain the liftgate batteries. Additionally the DC/DC converter mitigates the impact of cold temperatures by increasing the voltage even higher. The complete solution consists of a Direct (one power source) or Select (multiple power sources) module, hardware / connection harness, and the DC/DC converter (already pre-installed and complete with battery box).

A – DIRECT™ or SELECT™ System

B – Different Hardware/ Connection Kits

C – DC/DC Converter Installed in Battery Box

CHARGING SOLUTIONS

SELECT™ AND DIRECT™ VALUE

Direct™ System Options

Choose a single source to control and extend charge time

DIRECT-01	With Dual Pole Connection
DIRECT-02	With Dual Combo Connection 50’ Harness
DIRECT-03	With 7-Way Connection
DIRECT-04	For Reefer Connection or Straight Truck Application

Select™ System Options

Selects the best available from multiple sources to maximize charge time

SELECT-21	With Reefer and Dual Pole Connections
SELECT-24	With Dual Pole and 7-Way Connections
SELECT-25	With Dual Combo and 7-Way Connections
SELECT-32	With Dual Pole Combo, Reefer and 7-Way Connections

Optional System Bypass Kit*

SELECT/DIRECT BYPASS KIT	This Bypass Kit allows you to manually bypass the DC/DC converter

* This kit is optional and can work with above “Direct & Select Trail Charger Kits” with dual pole or combo connectors.

CHARGING SOLUTIONS

CHARGING SYSTEM SELECTION GUIDE

Direct™ and Select™ Built-In Diagnostics

POWER SOURCE

- GOOD INPUT POWER OR BEING UTILIZED
- LOW VOLTAGE OR FAULT

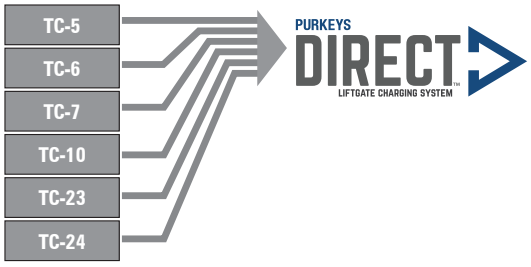
STATE OF CHARGE (BATTERY WITHOUT POWER)

- FLASH EVERY TWO SECONDS IF OVER 12.4 VOLTS
- FLASH EVERY TWO SECONDS IF UNDER 12.4 VOLTS

STATE OF CHARGE (BATTERY WITH POWER)

- SOLID GREEN NORMAL CHARGING
- FAST FLASHING CHARGER FAULT

Former TC-Kit to Direct™ / Select™ Conversion Chart



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