

PURKEYS

DIRECT™ -04

INSTALLATION GUIDE





CONTENTS

General Information.....	2
Direct-04 Diagram for Straight Truck.....	3
Mounting the Direct Controller	4
Straight Truck Input Harness Installation	5
Main Harness Installation.....	7
Part List.....	11
Limited Commercial Warranty Policy	16

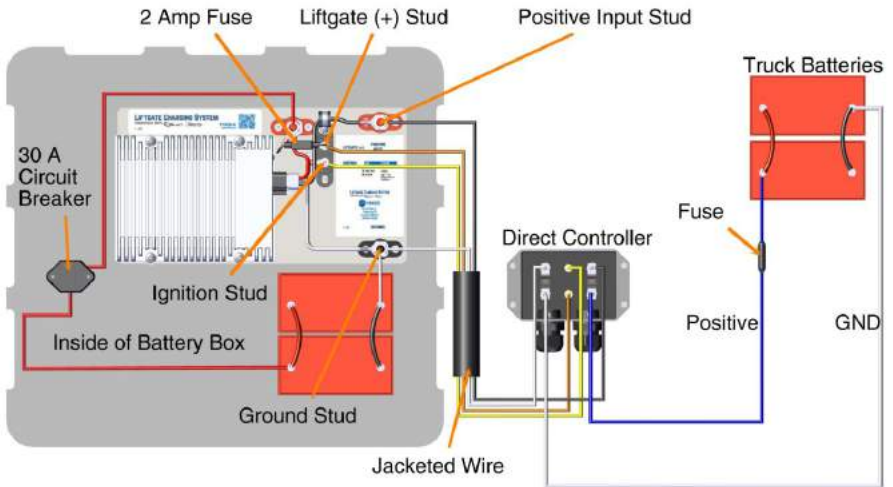
GENERAL INFORMATION

The Purkeys Direct™ system improves the charging of liftgate batteries by utilizing a DC/DC Converter to boost the voltage for optimal charging. The boost in voltage overcomes the normal voltage drop caused by the extended distance between the liftgate batteries and the vehicle charging system. Also, in cold temperatures batteries require increased charging voltages to maintain a high state of charge. The DC/DC Converter in the Direct system compensates for temperature as well as for voltage drop and provides the best voltage to the remotely located liftgate batteries. The result is well-charged liftgate batteries that will last longer and have ample power for liftgate operation.

The Direct system is automatic and has easy to interpret LED indicators to assure drivers and technicians of proper system function. The Direct Controller increases the time that the DC/DC Converter can charge the liftgate batteries by monitoring the source power and “extending” the liftgate battery charge time to take full advantage of the available power, without compromising the source batteries’ ability to crank the engine. Simply put, the Direct system provides opportunity charging for the liftgate batteries that is essential in low mileage, high frequency liftgate operation applications. The LED indicators clearly show the status of the source as well as the status of the liftgate batteries. A quick glance at the Direct Controller assures the driver that the liftgate batteries are ready to go, or alerts the driver that the batteries need maintenance.

DIRECT-04 INSTALLATION GUIDE

DIRECT-04 DIAGRAM FOR STRAIGHT TRUCK



MOUNTING THE DIRECT CONTROLLER

Step 1: Mount the Direct Controller at the front of the trailer via the mounting holes on the L-bracket.



Note: If the L-bracket is not used, mount the Direct Controller at the front of the trailer via the mounting holes on the mounting plate.

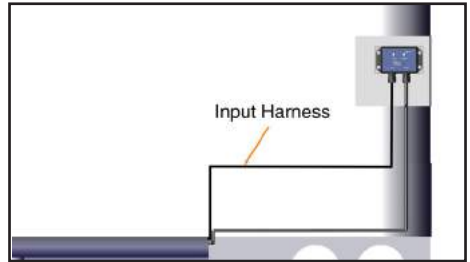


Direct Controller Mounting Complete.

DIRECT-04 INSTALLATION GUIDE

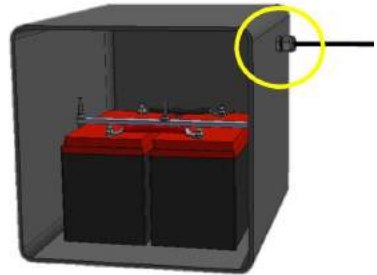
STRAIGHT TRUCK INPUT HARNESS INSTALLATION

Step 1: Route the jacketed 2-conductor input harness toward the vehicle battery box.



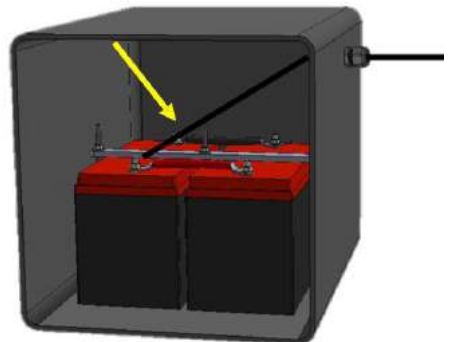
Note: Place the cable clamps along the input harness every 6 inches to ensure proper support for the cable. Avoid sharp edges and possible chaffing points.

Step 2: Once you are near the vehicle battery box, begin routing the jacketed 2-conductor input harness into the battery box through a dome nut or rubber grommet.



Note: Ensure that the jacketed 2-conductor main harness enters the vehicle battery box through a dome nut or rubber grommet to prevent chaffing the harness, which could result in possible electrical short in the system.

Step 3: Position the jacketed 2-conductor input harness so that it will reach the positive and negative battery studs. Mark the jacketed 2-conductor main harness so it can be taken back out of the battery box to be trimmed and the inline fuse assembly and 3/8" eyelet can be added.



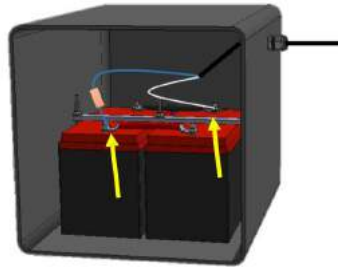
Step 4: Cut about 6 inches off the jacketed portion of the white and blue wires. Apply the supplied $\frac{3}{4}$ inch black heat shrink where the jacket was stripped off.



Step 5: Slide the supplied red $\frac{1}{4}$ inch heat shrink over the blue wire. Slide the supplied black $\frac{1}{4}$ inch heat shrink over the white wire. Crimp a $\frac{3}{8}$ ring terminal onto the white wire and the fuse assembly onto the blue wire. Position the heat shrink over the crimps and apply heat.



Step 6: Connect the fused, blue wire to the battery positive post and the white wire to the battery negative post. Tighten connections.



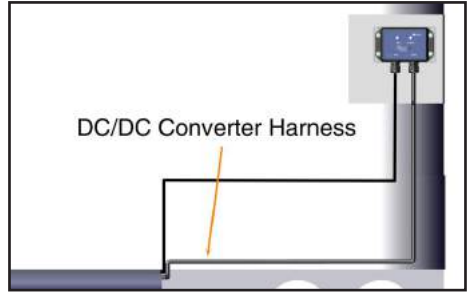
Note: It may be necessary to re-route the jacketed 2-conductor back into the battery box before making any terminations to the wires to prevent the cable from not fitting through the dome nut or rubber grommet.

Straight Truck Input Harness Installation Complete.

DIRECT-04 INSTALLATION GUIDE

MAIN HARNESS INSTALLATION

Step 1: Route the Direct jacketed 4-conductor DC/DC converter main harness down the front of the straight truck box and back to the liftgate battery box.



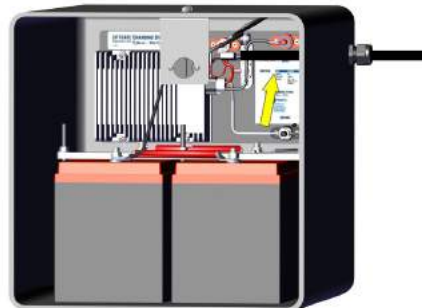
Note: Place the cable clamps along the 4-conductor jacketed main harness every 6 inches to ensure proper support for the cable. Avoid sharp edges and possible chaffing points.

Step 2: Once you are near the liftgate battery box, begin routing the Direct jacketed 4-conductor main harness into the liftgate battery box through a dome nut or rubber grommet.



Note: Ensure that the jacketed 4-conductor main harness enters the liftgate battery box through a dome nut or rubber grommet to prevent chaffing the harness, which could result in possible electrical short in the system.

Step 3: Position the Direct jacketed 4-conductor main harness so it will reach the 2-stud strip and all the slack has been taken up. Mark the jacketed 4-conductor main harness so it can be taken back out of the battery box to be terminated.

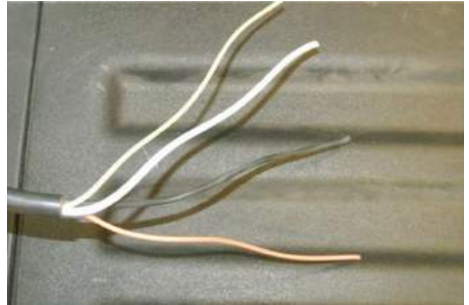


Note: If your battery box includes a slide-out tray, include enough slack to allow the tray to fully extend without tugging the wire connections.

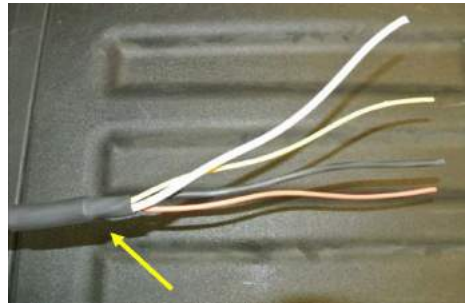
Step 4: Pull the jacketed 4-conductor main harness out of the box (making it easier to work on), and cut off the excess at the mark.



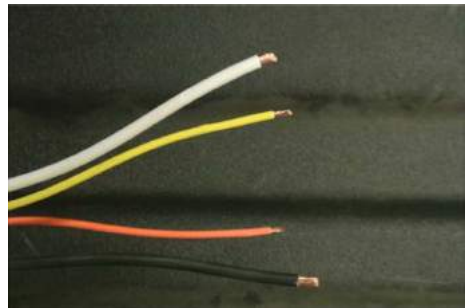
Step 5: Cut about 8 inches off the jacketed portion of the 4 wires.



Step 6: Apply the supplied $\frac{3}{4}$ inch black heat shrink where the jacket was stripped off.

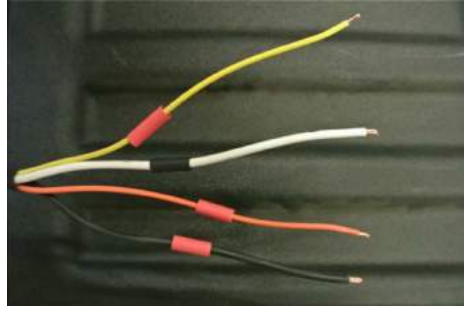


Step 7: Strip $\frac{3}{8}$ inch of insulation off all 4 wires.

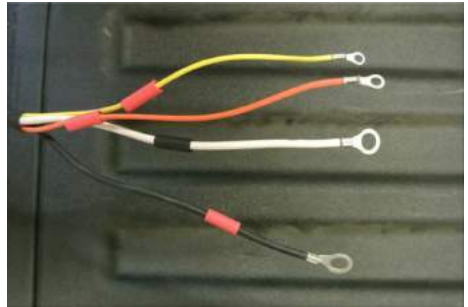


DIRECT-04 INSTALLATION GUIDE

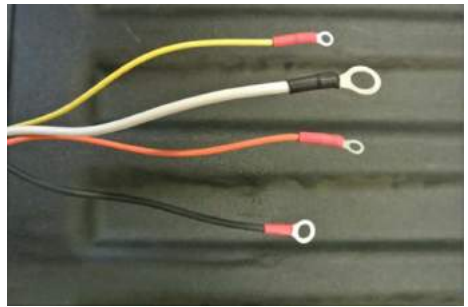
Step 8: Slide the supplied red ¼ inch heat shrink over the orange, yellow, and black wires. Slide the supplied black ¼ inch heat shrink over the white wire.



Step 9: Crimp 3/8 ring terminals onto the white and black 8-gauge wires. Crimp #10 ring terminals onto the 14-gauge orange and 16-gauge yellow wires.

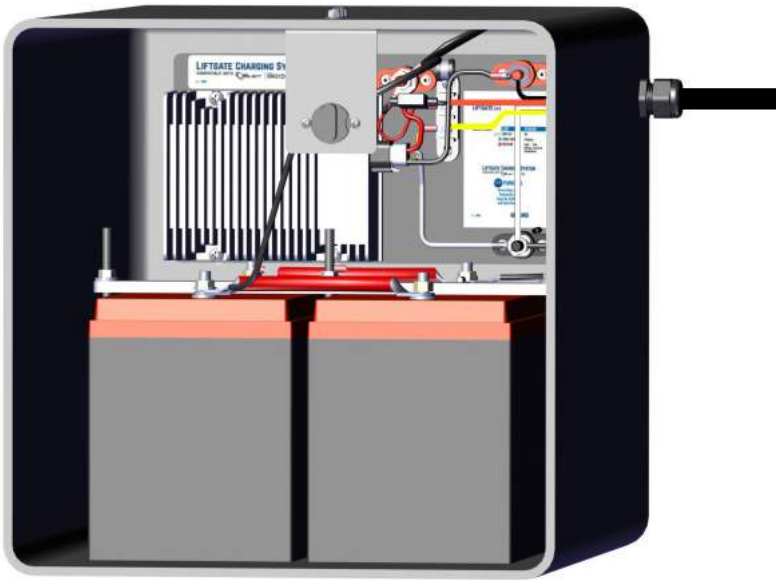


Step 10: Position the heat shrink over the crimps and apply heat to the 4 terminals.



Step 11: Re-route the jacketed 4-conductor main harness back into the battery box (see diagram on page 3 for stud location).

- Connect the 8-gauge black wire to the red positive input stud.
- Connect the 8-gauge white wire to the black ground stud.
- Connect the 14-gauge orange wire to the liftgate (+) stud.
- Connect the 16-gauge yellow wire to the ignition stud.



Main Harness Installation Complete.

DIRECT-04 INSTALLATION GUIDE

PART LIST



PART# MOD00077
DIRECT CONTROLLER
REPLACEMENT



PART# H-00286
50 FT MAIN HARNESS



PART# H-00345
20 FT SELECT/DIRECT INPUT
HARNESS



**PART# BK-1049 (Revision B)
TERMINAL BAG KIT**



**PART# BK-1054 (Revision B)
HARDWARE BAG KIT**

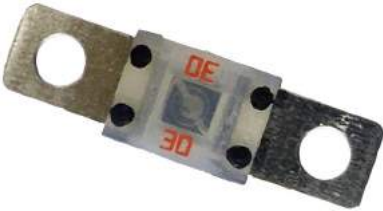


**PART# DIRECT-04
DIRECT STRAIGHT TRUCK**

DIRECT-04 INSTALLATION GUIDE



PART# FH00043
MIDI FUSE HOLDER



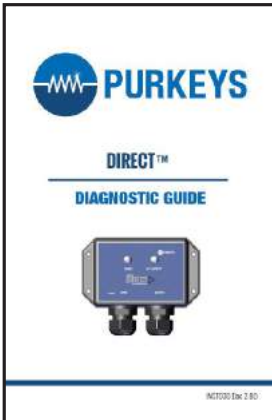
PART# F00062
30 AMP MIDI FUSE



PART# PL00079
DIRECT MOUNTING PLATE



PART# INST041
DIRECT-04 INSTALLATION
GUIDE



PART# INST030
DIRECT DIAGNOSTIC GUIDE

DIRECT-04 INSTALLATION GUIDE

NOTES

LIMITED COMMERCIAL WARRANTY POLICY

Purkeys Fleet Electric, Inc. (hereafter “Purkeys”), warrants each product to be free of defects in material or workmanship under normal use and service. This warranty is for the benefit of Original Equipment Manufacturers, Dealers, Warehouse Distributors, Fleets, or other End Users (hereafter “Customers”) and covers products manufactured by Purkeys and sold new to Customers either directly by Purkeys or by its authorized dealers, distributors, or agents. The length of the Warranty Period is 24 months.

The warranty period commences on the in-service or install date and is not transferable. Failure to provide the in-service or install date on the warranty claim form will cause the warranty period to begin on the date the part was manufactured or date of sale recorded on the original sales invoice, whichever is earlier.

A completed warranty claim form should accompany all parts submitted to Purkeys for consideration for repair or replacement under warranty. The submitted claim form should contain all of the information required. Lack of a properly or fully completed claim form will result in delay or denial of warranty claim. Claims must be submitted no later than 30 days after part is removed.

This warranty does not apply if, in sole judgement of Purkeys, the product has been damaged or subjected to accident, faulty repair, improper adjustment, improper installation or wiring, neglect, misuse, or alteration or if the product failure is caused by defects in peripheral vehicle components or components attached to the Product or failure of a part not manufactured by Purkeys.

This warranty shall not apply if any Purkeys product is used for a purpose for which it is not designed or is in any way altered without the specific prior written consent of Purkeys. ANY Product alleged by a Customer to be defective must be inspected by Purkeys as a part of the warranty claims process in order to confirm that the part has failed as a result of a defect in material or workmanship.

Transportation for products and parts submitted to Purkeys for warranty consideration must be prepaid by Customer. Repaired or replaced products and or components will be returned to Customer pre-paid by Customer or “freight collect” to the address provided by Customer in the warranty claim form. No charge will be made for labor or material in effecting such repairs.

The Warranty provided by Purkeys hereunder is specifically limited to repair or replacement of the Product as Purkeys deems most appropriate in its sole discretion. Purkeys neither assumes nor authorizes any other person to assume on its behalf any other warranty or liabilities in connection with Purkeys products. The Warranty does not apply to fuses or other “consumable” or maintenance items which are or may be a part of any Purkeys product.

THIS WARRANTY DOES NOT APPLY TO LOSS OF VEHICLE OR EQUIPMENT, LOSS OF TIME, INCONVENIENCE, OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES. PURKEYS SPECIFICALLY DISCLAIMS AND SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES arising out of or from the use of Purkeys products by the Customer.

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, INCLUDING COMMON LAW WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, AND ANY OTHER EXPRESS OR IMPLIED WARRANTIES. ALL OTHER SUCH WARRANTIES ARE SPECIFICALLY DISCLAIMED.

This Limited Commercial Warranty supersedes all previous Warranty Policies issued by Purkeys and any of its suppliers.

DIRECT-04 INSTALLATION GUIDE



WATT Keeps You Trucking