

BORON OPERATIONS

Truck Shop MAINTENANCE

TASK LIST GROUP:

COUNTER:

OPERATION:

DESCRIPTION: Haul Truck Kronos Clock Installation

CREATION DATE: 6/20/2022

MODIFIED DATE: 7/18/2022

MODIFIED BY: Emerson Calhoun

FUNCTIONAL LOCATION: Truck Shop

MAINTAINER NAME: _____

SAFETY MESSAGE:

These tasks will be performed while the equipment is locked out. Follow all Rio Tinto safety standards for isolating the specified equipment before completing the subsequent work. If you do not know, or have questions, ask. Be aware that some areas might be wet or muddy and can be very slippery so use caution when working in this area.

SAFETY PROCEDURES

COMPLETE

1. Review Work Order information and perform a Take 5.

TASK DETAILS:

Verify Lockout and Test

Complete



Section 1: Begin by taking apart the cab

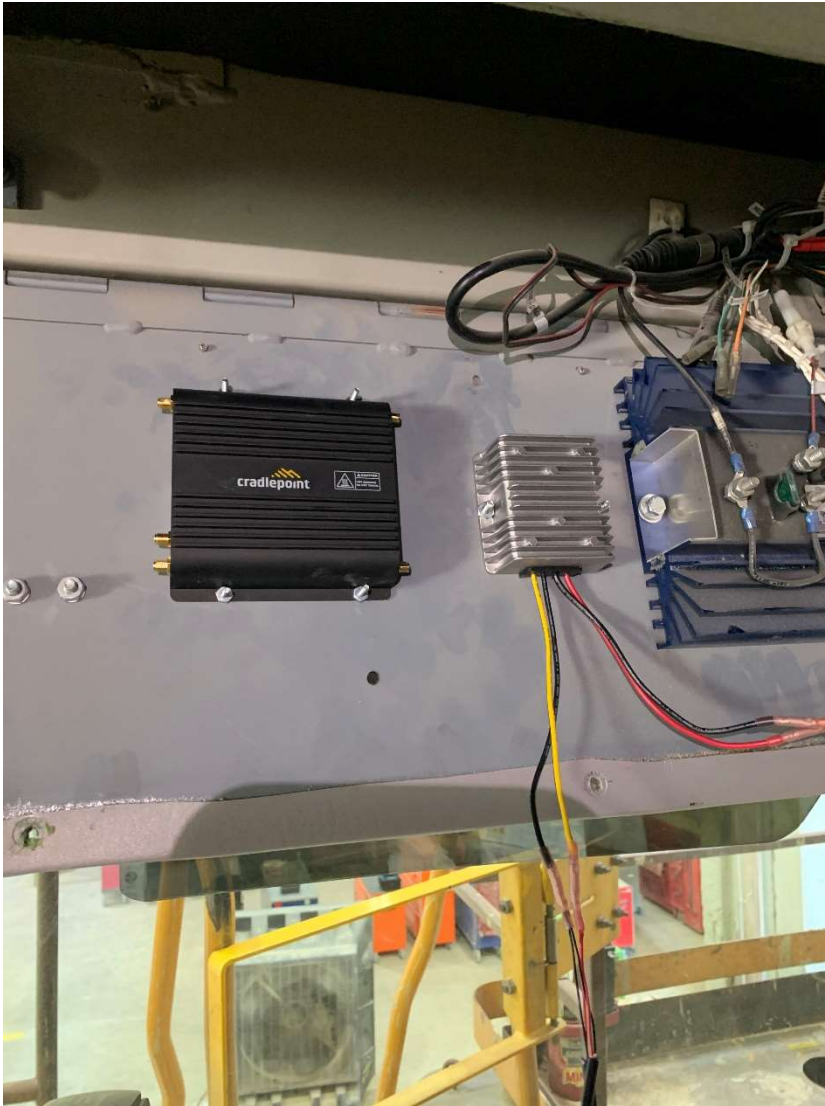
First take off the top panel where the visors are connected to, along with removing the passenger side Colum panel to run wires. Screw Locations are shown in the picture below.

Int_____



A. Then, mount the router and the converter

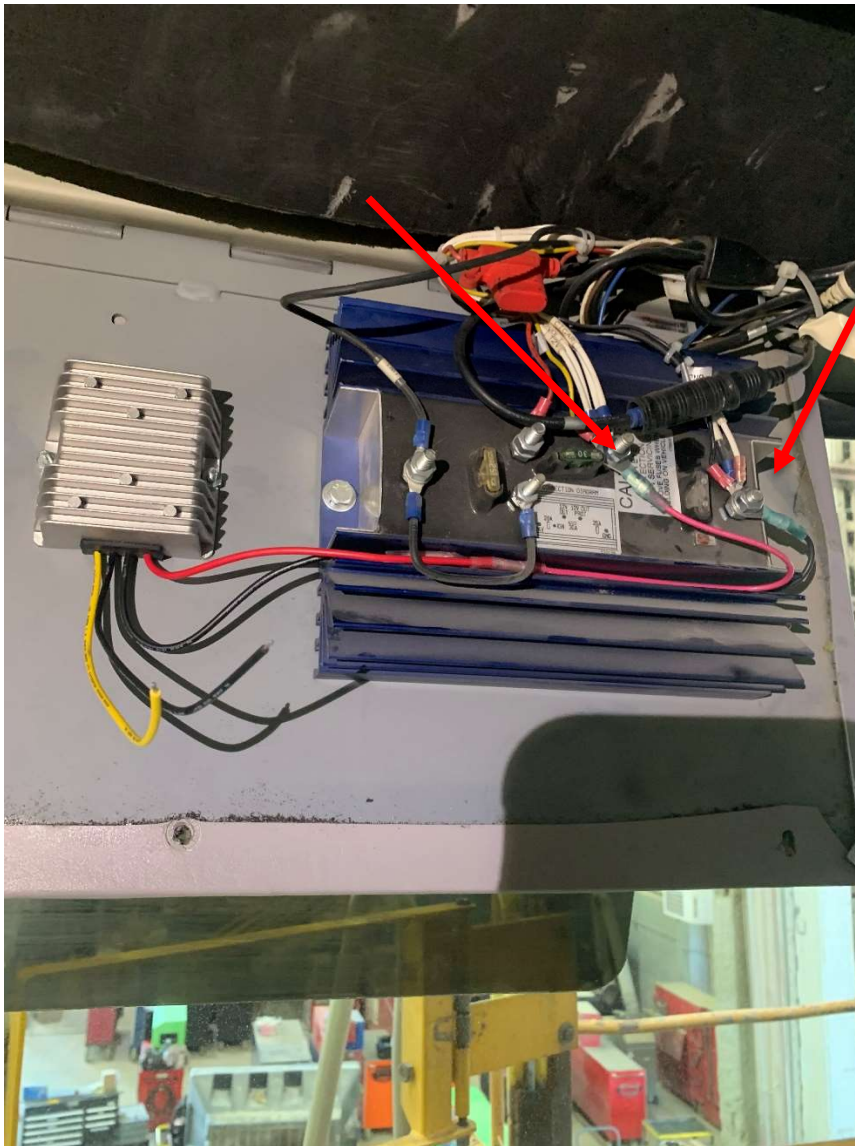
Be sure to make the boxes as level as possible. Inserting bolts to hold them in place. **Int_____**



**B. Then extend the most left two wires from the converter and connect them to the 25v
volt inverter.**

Use eyelets at the end of the cables to make it easier to attach to the converter. The
black wire is connected to the ground and the red one is connected to the protected 12v
output.

Int_____



C. Connect the Pig tail wires to the converter

Cut the orange and blue wires back from the pig tail as they are not necessary. Connect the two red wires to the yellow output wire on the converter and put the two black wires on the black output wire.

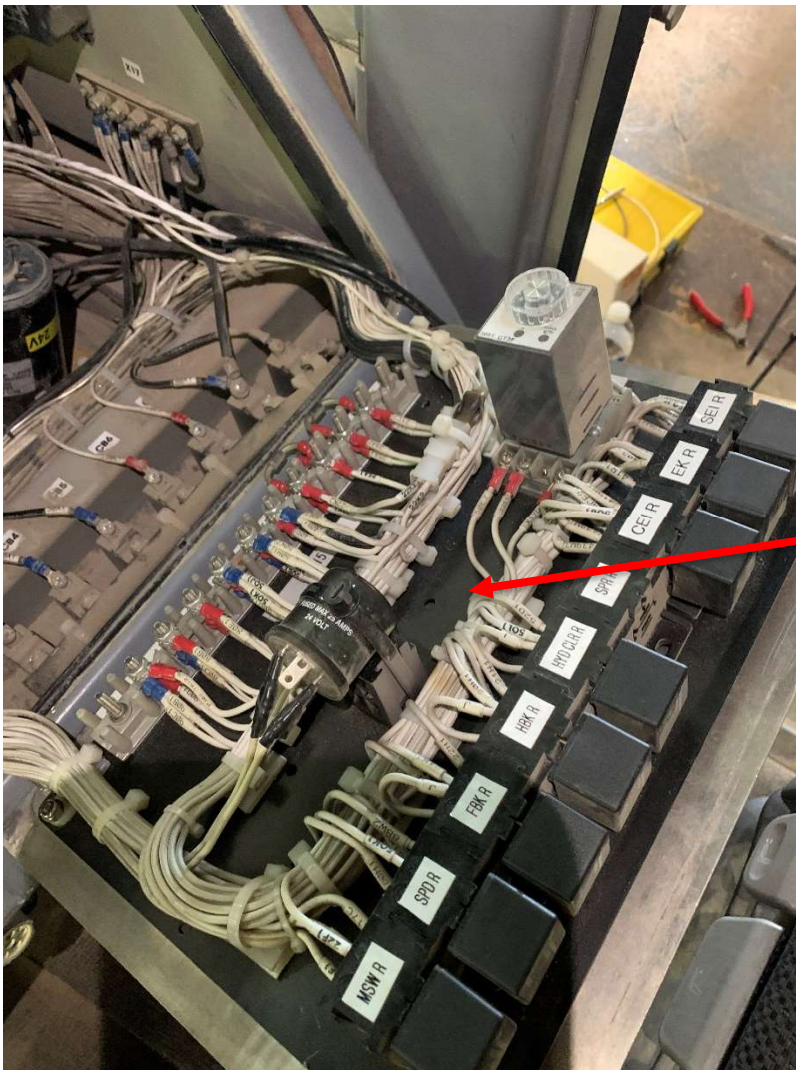


Int _____

- D. Pull the ethernet cable through the Colum and to the glove box, along with the other power cable. **Int**_____



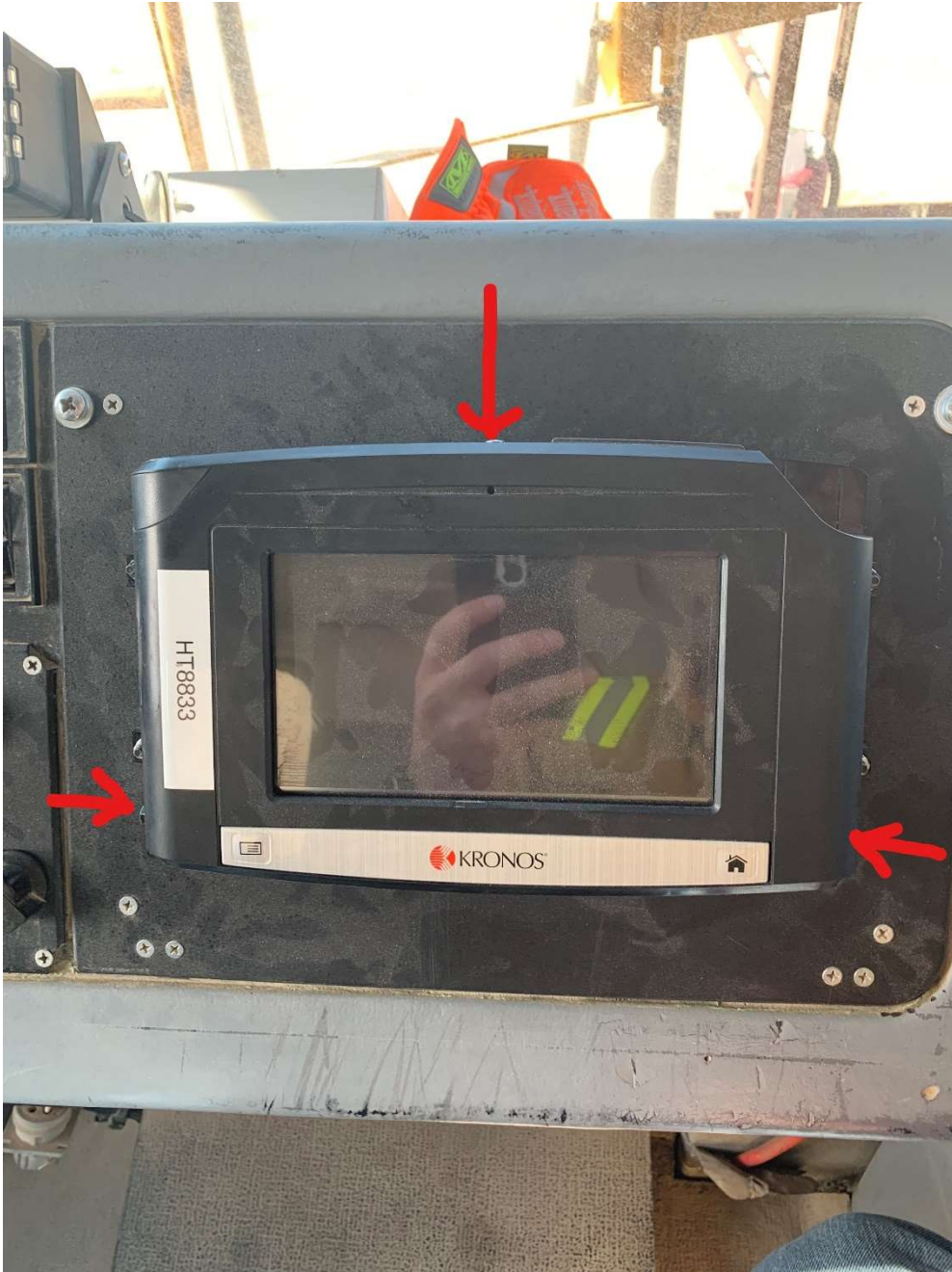
- E. Then cut a hole big enough to fit a ethernet cable through.
The hole will go through the two layers of the material. An additional hole will need to be drilled in the outer material to fit the power cable. **Int_____**



- F. Next, drill through the first plate using the mounting plate as a template. Then attach the wires through the hole, a second hole for the power cable will be necessary to fit the power cable through it. **Int_____**



- G. Before mounting the Kronos clock to panel, switch out the factory bolts from the Kronos clock to M4x20 bolts for the side, along with a M4x20 nut and bolt for the top of the bracket. MOUNT THE CLOCK TO THE BRACKET BEFORE INSTALLING TO THE PANEL using regular and locking washers where possible and using all 3 mounting holes. Locations of Nuts are shown in picture below. **Int_____**



H. Face the bolts inward so the head of the bolts will be on the outside, nuts will be on the inside of the panel when closed. Be sure to use locking and regular washers when possible.

Int_____

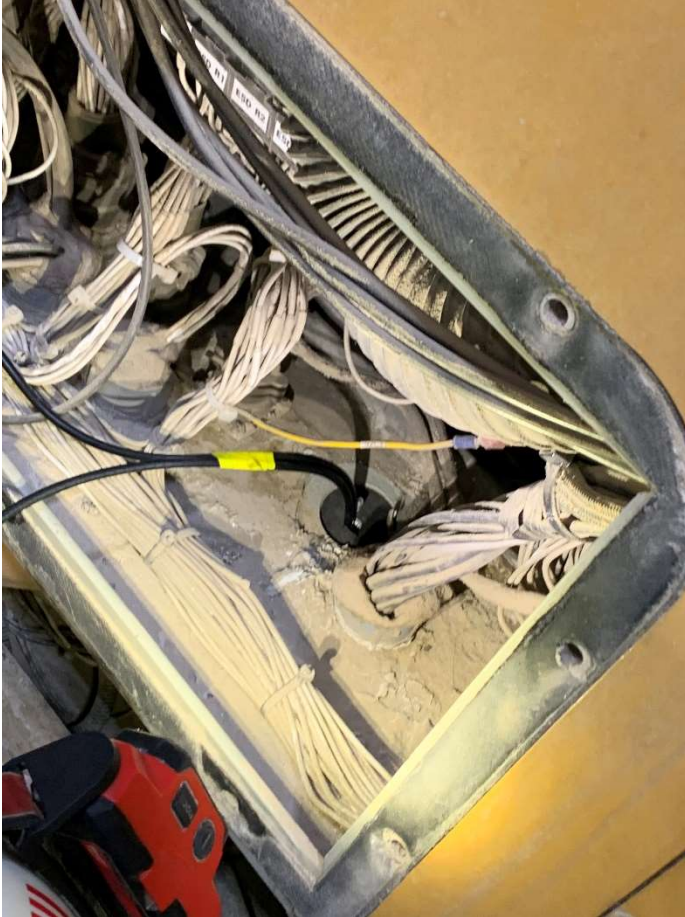
- I. The completed Kronos clock will look like the picture below, the mounting bracket bolts facing inward and M4 bolts and locking washers used to connect the Kronos clock to the mount. Bundle the excess wire with zip ties in the top of the cab where the router was mounted.

Int_____



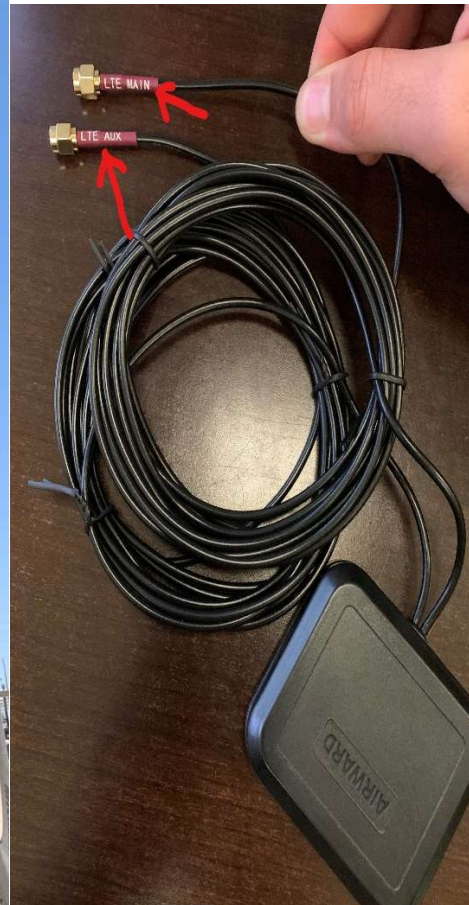
- J. Now, mark the end of the antenna cables so it's possible to distinguish them. Start with them at the router at the top of the cab and run them down the column and out the front of the cab. You will have to drill through one of the cover plates in the front of the cab. Once the cable is run outside the cab, run it is important to add a cover to the cables.

Int_____

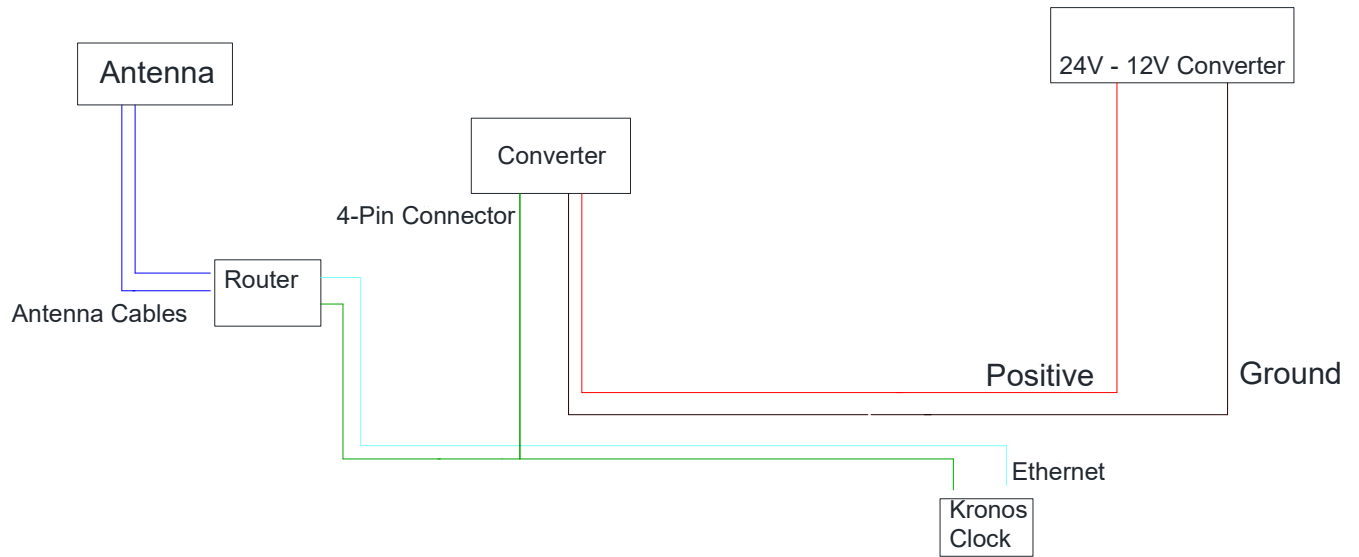


- K. After running it down below the deck bring it up to the top of the rail. And mount it in the middle of the rack with the other 2 antennas. Attach the actual antenna to the extensions and connect them together. **From the antennas to the router, The LTE Main port will be connected to main. The LTE AUX will be connected to the GPS port on the router.** Safely secure it with zip ties and a cord cover and bound the extra near the bottom of the toe rail.

Int_____



Wire Diagram:



- L. Once all the previous steps are complete, live test the system to be sure it turns on and connections were properly made. The router will take a minute to connect but will eventually have all the lights that are on be green lights, which means it is connected to the internet. When working put back all panels that were removed. And clean up as necessary. **Int_____**