

CMANKIN010 SkyBitz Kinect Chassis Installation

- Models SHB1000 or SHB6500 required for Tethered power connection
- ABS Power Tap (PN 81033901) required for sealed 7-Way chassis harness power connection

Kinnect Components

- Kinnect Tracking Device & Bracket
- 6, 10-32 Tamper Proof Screws
- 6, 1/8 Inch Sealing Blind Rivets
- 3m Primer 94 Ampoule - **SHB1000 Only**
- Kinnect Short Shroud
- Activation Magnet
- Kinnect Serial Number Sticker

Tether Power Kit

- Kinnect Power Cable ACBLA00090
- Long Shroud
- Small and Large Grommets
- Cable Clamps & Self Drilling Screws
- Self-Resetting Fuse
- Heat Shrink Crimp Splice
- Crimp on #10 Ring Lug

Shelf Bracket Kit option

- Shelf Bracket
- 1/4-20 mounting hardware

Tools Required:

- Power Drill
- 1/8 Inch Drill Bit
- 1/4 Inch Drill Bit
- 7/16 Inch Drill Bit
- 5/32 Inch Pin-In-Hex Tamper Proof Screwdriver
- Blind Rivet Tool
- 3/8 & 5/16 Nut Drivers
- 7/16 Inch Wrench and Deep Socket
- Silicone Sealant
- 50/50 Isopropyl Alcohol/Water Solution
- Clean Rags
- Heat source for Crimp Splice
- Green Scotch-Brite pad
- Tape Measure
- Fish Tape
- Wire Stripping tools
- Wire Crimping Tools
- 7-Way Box Cover Removal Tools
- Electrical Tape

Kinnect Activation

Begin by activating the Kinnect to ensure it receives all its updates by the time the installation is completed. This will help to expedite the installation verification testing required to release the asset into service.

- Remove the Kinnect from the box and make sure it is outdoors with a clear view of the Sky
- To activate the SkyBitz Kinnect, hold the magnet in the location shown until the LED begins to blink rapidly
- Once the LED begins to blink rapidly, hold the magnet in place until the LED changes to a slower blink of about once a second
- This fast to slow blink transition confirms the Kinnect has been activated and should occur within 15 seconds after the fast blink starts

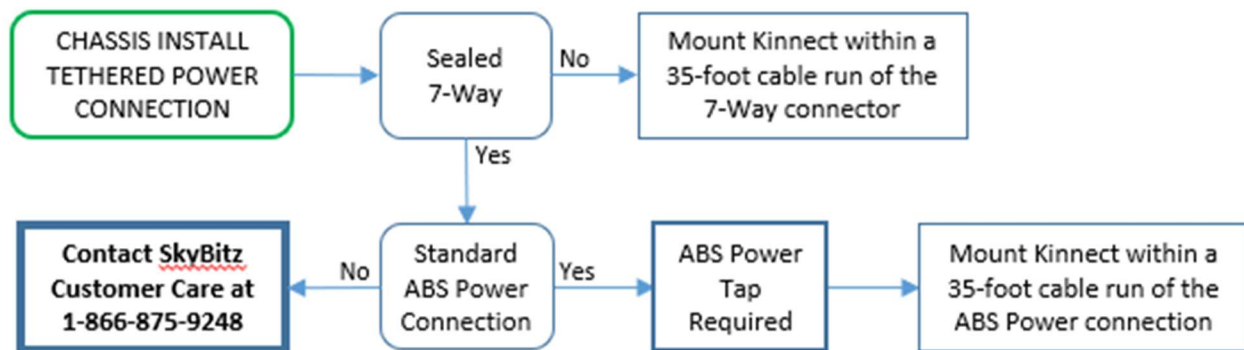


Kinnect Chassis Mounting Locations

SkyBitz recommends the following Kinnect mounting locations and install methodologies due to the differences within the chassis trailer family. Maximized solar charging and device protection, as well as tether power connection availability, are determining factors for these locations. Due to the limited mounting locations that allow the Kinnect to see the sun once a container has been mounted to the chassis, a Tethered Power connection to the chassis 7-Way ABS power is required.

The installation of the required **Tether Power Cable** and the **optional ABS Power Tap** is covered here as well. The type of chassis 7-Way connector wiring harness also comes into play when determining the Kinnect Mounting location. This due to the limitations of the 35 foot long **Tethered Power Cable**. For chassis with an open back or non-sealed 7-Way, the Kinnect needs to be mounted more towards the front of the chassis. For seal 7-Way chassis wiring harnesses the Kinnect will require a chassis with an ABS system and the **optional ABS Power Tap**. Be aware of any adjustable features in the chassis and avoid mounting where chassis adjustments will cause interference with the Kinnect or Tethered Power Cable routing.

This decision tree will help determine mounting location based on the chassis wiring harness type.



Once a mounting location has been determined and the customer has agreed on the mounting location, this installation guide can be used to perform the chosen installation. This guide covers installs using the standard mounting bracket that is included with the Kinnect as well as the **optional Shelf Bracket** installation which is required for some chassis installs.

Here are some typical mounting locations for common chassis applications

- Typical Gooseneck Chassis Trailer Installation
 - Mounts to crossmember that does not get covered by a container
 - Uses Standard Kinnect Mounting Bracket



• Typical Chassis Rear Recess Installation

- Better solar charging capability as it is not blocked by a mounted container
- Uses Standard Kinnect Mounting Bracket
- Requires recessed flat mounting surface at rear of Chassis
- Kinnect must not protrude past the structure of the chassis
- Do not install over stickers or asset ID's
- Will require chassis with ABS and **Optional ABS Power Tap**



• Chassis Cross Member installation

- **Non-Sealed 7-Way Chassis** will be mounted just aft of the landing legs near the front for a short run to the 7-Way Tethered power connection
- **Sealed 7-Way Chassis** will be mounted to one of the rear cross members for a short run to the ABS connector and will require the **Optional ABS Power Tap**
- **Be aware of any adjustable features in the chassis and avoid mounting where chassis adjustments will cause interference with the Kinnect or Tethered Power Cable routing**



Install Kinnect on first crossmember in front of the landing legs

Secure Kinnect power cable to existing cabling

Make power connection at front of chassis for non-sealed 7-way harnesses

Mount Kinnect towards rear of chassis and use ABS Power Tap to make power connection at rear of chassis for sealed 7-Way harnesses

- **Typical Chassis Rear Recess Shelf Bracket Installation**

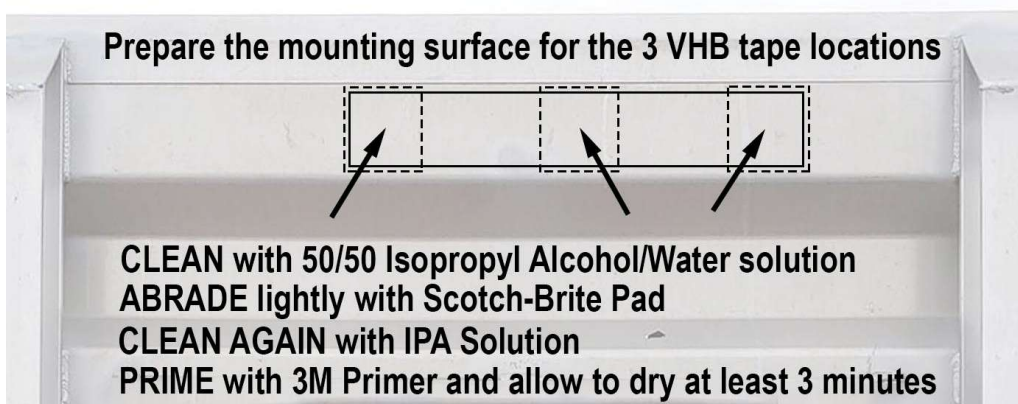
- Better solar charging capability as it is not blocked by a mounted container
- Requires the **Optional Kinect Shelf Mounting Bracket**
- Kinect and bracket must not protrude past the structure of the chassis
- Do not install over stickers or asset ID's
- Will require chassis with ABS and the **Optional ABS Power Tap**



Kinnect Standard Bracket Installation

- The following installation method should be use for all SHB1000 standard install bracket mounting
- The 3M Primer is **NOT REQUIRED** for the SHB6500 Bracket installation
 - Locate and install the Kinnect as shown in the “Kinnect Mounting Locations” section for Standard Bracket installs
 - Use the Kinnect bracket as a template to mark the bracket location, and the 3 VHB tape locations on the trailer

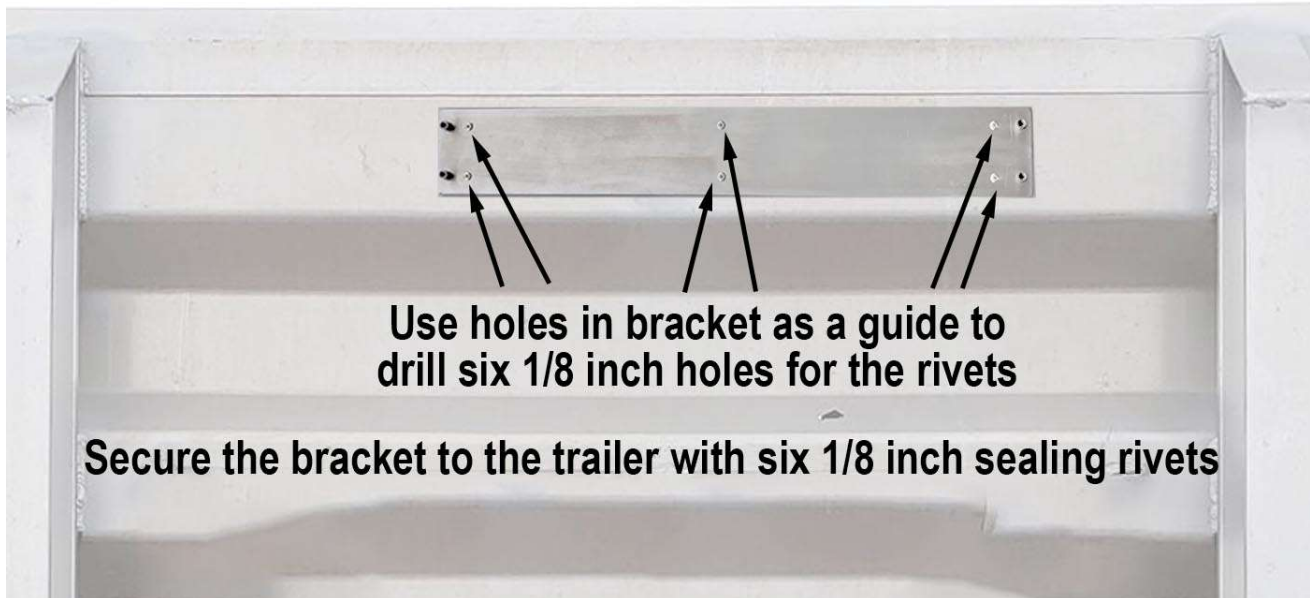
Use the bracket to mark the mounting location on the trailer



Primer only required for SHB1000 Bracket

- Prep the installation area for the 3 VHB tape mounting surface locations
 - **Clean** with IPA solution
 - **Abrade** lightly with Scotch-Brite pad
 - **Clean again** with IPA solution
 - **Prime** with 3M Primer 94 and wait at least 3 minutes - **SHB1000 ONLY**
- Remove the liner from the 3 VHB tape locations on the bracket, place the bracket onto the mounting location, and firmly press it onto the mounting surface

Remove liner from VHB and press bracket onto mounting surface



- Use the rivet holes in the bracket as a guide and drill six 1/8-inch holes in mounting surface
- Secure the bracket to the chassis with the six, 1/8-Inch sealing rivets
- Orient the Kinect as shown and install it on the bracket

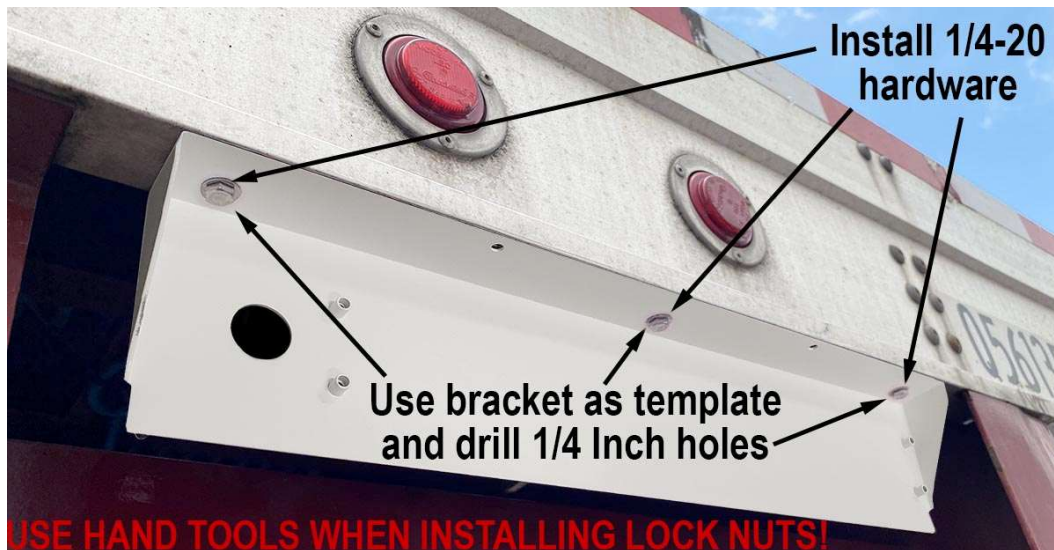
Secure the Kinect to the bracket with 4 tamper proof screws



- **Using a hand driver**, secure the Kinect to the bracket with four, 10-32 tamper proof screws
- **For a Non-Sealed 7-Way Tethered Power Installation, proceed to the “Make the tethered power source connection for a Non-Sealed 7-Way Harness” section on page 9**

Kinnect Optional Shelf Bracket Installation

- Locate the Kinnect as shown making sure it does not protrude past the rear of the chassis



- Use the Kinnect shelf bracket as a template to mark the location of the shelf bracket mounting holes on the chassis
- Drill the 1/4-inch mounting holes in the chassis
- Use the 1/4-20 bolts, flat washers, and lock nuts to secure the shelf bracket to the chassis

DO NOT USE POWER TOOLS ON LOCK NUTS! USE HAND TOOLS ONLY!

- Install the Kinnect on the shelf bracket with the connector end next to the 1-inch hole in the bracket

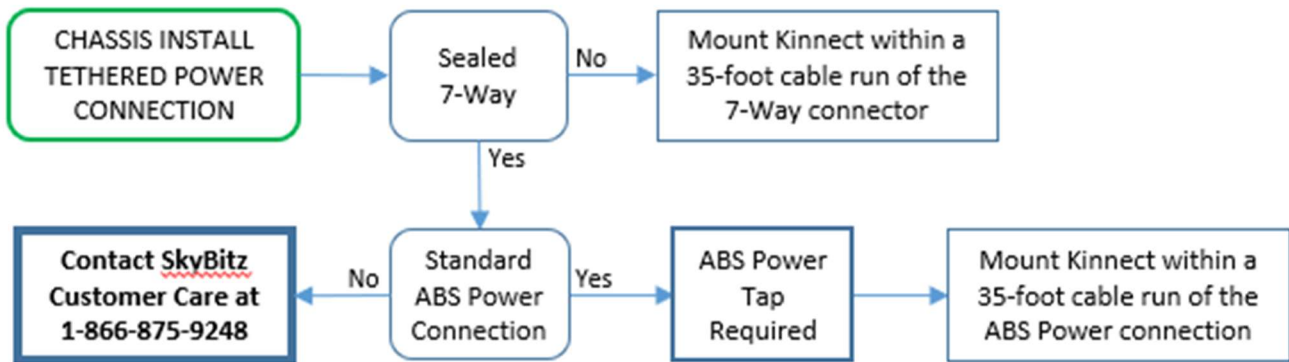


- **Using a hand driver**, secure the Kinnect to the bracket with four, 10-32 tamper proof screws
- Proceed to the “Make the tethered power source connection for a Sealed 7-Way Harness” section on page 9

Kinnect Tethered Power Cable Connections

Mounting Location and Power Connection Points: Models SHB1000 or SHB6500

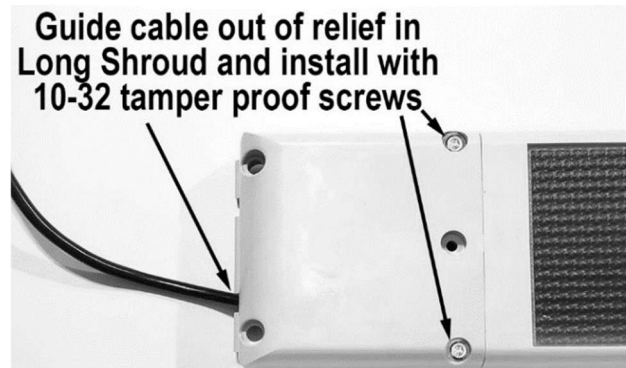
- Rear mounting limits you to connecting power using the ABS Power Tap
 - Will not work for the 7-Way connection up front due to cable length limitation
- If the trailer has a sealed 7-Way, and no standard ABS module power connector, then no reliable connection to power is available
 - Splicing into the main trailer harness can be done, but is costly, time consuming, and can be prone to water intrusion over time, so it is not recommended



Connect the Tether Power Cable to the Kinnect

Standard Bracket Guide

- Remove the protective cap from the Kinnect I/O Connector
- Connect the Power Cable to the Kinnect and confirm the connector lock ring is locked
- Guide the power cable out of the relief and secure the Long Shroud to the Kinnect with two, 10-32 tamper proof screws using a hand driver – **DO NOT USE POWER TOOLS!**



Shelf Bracket Guide

- **Route Power Cable through the 1-inch hole in the bracket**
 - Remove the protective cap from the Kinnect I/O Connector
 - Connect the Power Cable to the Kinnect and confirm the connector lock ring is locked
 - Install large rubber grommet into 1 inch hole in shelf bracket
 - Route the tether power cable through the grommet and secure to the Kinnect with a cable tie



- Fasten the Long Shroud to the Kinnect with two, 10-32 tamper proof screws using a hand driver – **DO NOT USE POWER TOOLS!**

Kinnect Tethered Power Cable Routing

- Once the shroud has been installed, the tethered power cable will be routed towards the front for a Non-Sealed 7-Way Harness or the rear for the Sealed 7-Way Harness
 - This will either be the 7-Way connector box or the ABS Power Module connector using the Optional ABS Power Tap
 - The power decision flowchart on page 7 can help with the selection of the power source
- Once the power source has been identified, route the power cable towards the connection point
 - Route the power cable alongside existing chassis power cables when possible
 - Secure the cable to the chassis with cable clamps and cable ties every 12 to 18 inches
 - Install looming over the exposed cable near the connection points and where the cable passes over any sharp edges
 - Use grommets wherever the cable transitions through a chassis surface
 - **Be aware of any adjustable features in the chassis and route the cable accordingly**



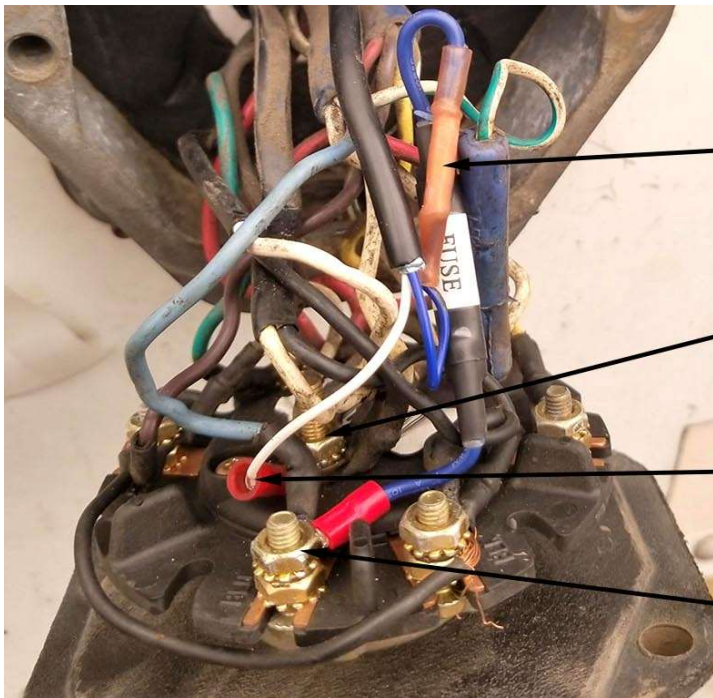
Mount Kinnect towards rear of chassis and use ABS Power Tap to make power connection at rear of chassis for sealed 7-Way harnesses

Secure Kinnect power cable to existing cabling

Make power connection at front of chassis for non-sealed 7-way harnesses

Kinnect Tethered Power Source Connections

- **Make the tethered power source connection for a Non-Sealed 7-Way Harness**
 - Route tethered power cable into 7-Way box alongside the existing Chassis wiring and cut off excess cable
 - Use the heat shrink crimp splice to connect the Blue wired Fuse to the Blue wire on the Kinnect Power Cable
 - Seal the splice with a heat source
 - Install the #10 ring lug on the Kinnect Power Cable White wire Connect the Kinnect Power cable White wire ring lug to Chassis Trailer Ground (White)
 - Connect the Blue wire fuse ring lug to the trailer Auxiliary/ABS Power (Blue)
 - Reinstall the 7-Way Box Cover
 - Remove the SkyBitz Kinnect serial number sticker and tape from the Kinnect and adhere the sticker to the Chassis near the 7-Way box



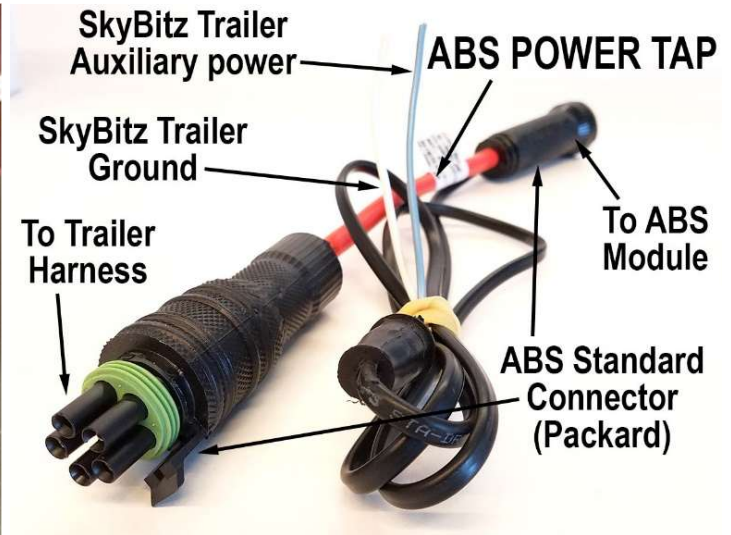
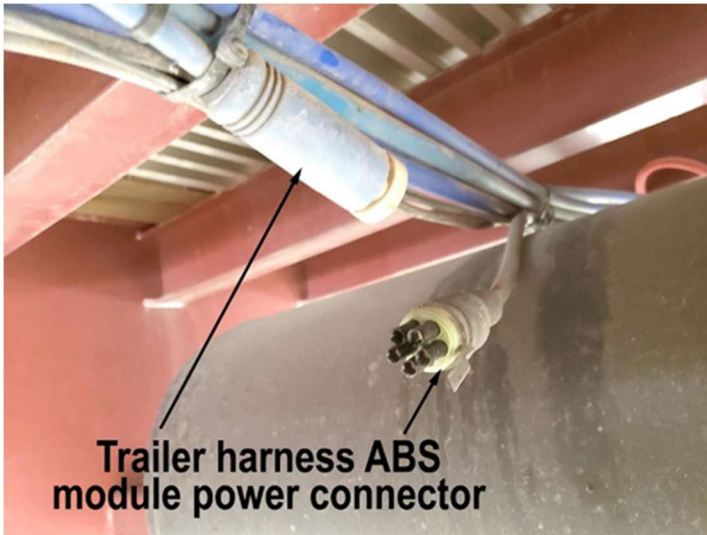
Install the Fuse on the Kinnect Blue wire with a heat shrink crimp splice and use a heat source to seal the splice

Connect the White wire ring lug to Trailer Ground White

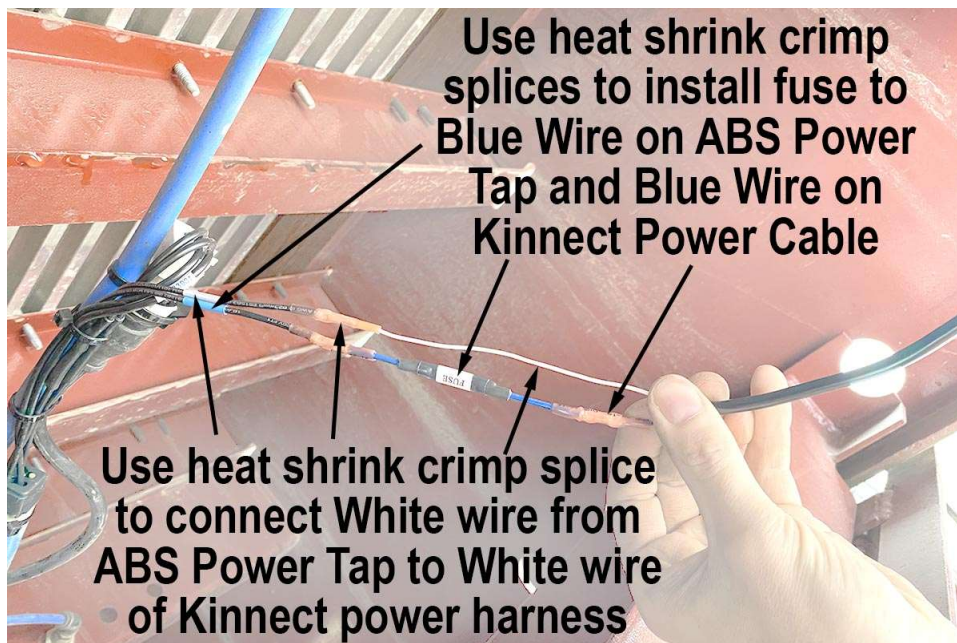
Install the #10 ring lug on the Kinnect White wire

Connect the Blue fuse ring lug to Aux Power Blue

- **Make the tethered power source connection for a Sealed 7-Way Harness**
 - A chassis with a Sealed 7-Way Harness requires the chassis to have a standard ABS system in place in order to make the power connection to the chassis Auxiliary Power
 - Contact Customercare.SkyBitz@Ametek.com if the chassis has a Sealed 7-Way Harness but no ABS system
 - A sealed 7-Way harness will require the use of the “ABS Power Tap” to connect to Auxiliary power at the ABS system power connection
 - Route tethered power cable to the ABS Module Power Connector alongside the existing chassis wiring and cut off excess cable
 - Disconnect the ABS module power connector and connect one end of the SkyBitz ABS Power Tap harness to the ABS Module power connector and the other end to the trailer harness ABS Module connector



- Use a heat shrink crimp splice to connect the blue wire of the Kinnect tethered power cable to the fuse and seal the connection
- Use a heat shrink crimp splice to connect the blue wire of the ABS Power tap to the other end of the fuse and seal the connection
- Use a heat shrink crimp splice to connect the white wire of the Kinnect tethered power cable to the white wire of the ABS Power Tap and seal the connection
- Use cable ties to secure the ABS Power tap and Kinnect power wiring to the existing chassis wiring



Kinnect Asset Association and Install Verification

- Use the SkyBitz SkyMobile App to associate the Asset ID with the Kinnect Serial Number
- Continue using SkyMobile to complete the installation process and confirm the installation was a success

Contact Customercare.SkyBitz@Ametek.com for SkyBitz SkyMobile App credentials if needed

Changes or modifications to this not expressly approved by Telular could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

The device meets RF exposure requirements for FCC and Industry Canada RSS-102 for general population

at 20 CM distance from users and bystanders.

Les modifications apportées à ce projet qui ne sont pas expressément approuvées par Telular pourraient annuler le pouvoir de l'utilisateur d'utiliser l'équipement.

L'appareil est conforme à la partie 15 des règles de la FCC. Le fonctionnement est soumis aux deux conditions suivantes:

- (1) Cet appareil ne peut pas causer d'interférences
- (2) Cet appareil doit accepter toute interférence reçue, y compris les interférences qui peuvent causer un fonctionnement indésirable.

L'appareil répond aux exigences d'exposition aux radiofréquences pour la FCC et Industrie Canada RSS-102 pour la population en général