LODESTAR® VS INTELLI-CONNECT™ MOBILE INSTALLATION INSTRUCTIONS

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This instruction sheet covers the assembly and installation of both the V1 and V2 Lodestar Intelli-Connect Mobile Kit.

The kit accompanying this instruction sheet includes all the necessary parts to convert from the existing Lodestar® V1 or V2 hoist with a hardline data port to the wireless data Intelli-Connect Mobile. The Intelli-Connect™ Mobile Application is available as a free download on Google Play or the Apple® App Store®*.

For more information on downloading or using the Intelli-Connect Mobile app, visit www.cmco.com/intelli-connect-mobile.

> ⚠ **WARNING**
>
> Failure to disconnect the hoist from the power supply may result in injury from exposure to high electrical potential.

NOTE: You will need the following tools (not provided):

- 17 mm wrench to remove the M12 data port connector
- Small flathead screwdriver to remove M12 data port connector wires from variable frequency drive (VFD)
- 3/16" Allen wrench to remove end cover bolts
- 20 mm wrench to install cable gland and tighten cord grip

V1 INTELLI-CONNECT MOBILE HARDWARE KIT

Figure 1 shows the V1 pre-assembled contents of the Intelli-Connect Mobile hardware kit (ethernet cord assembly and 2 replacement end cover bolts with O-ring and washer replacement as well not shown).
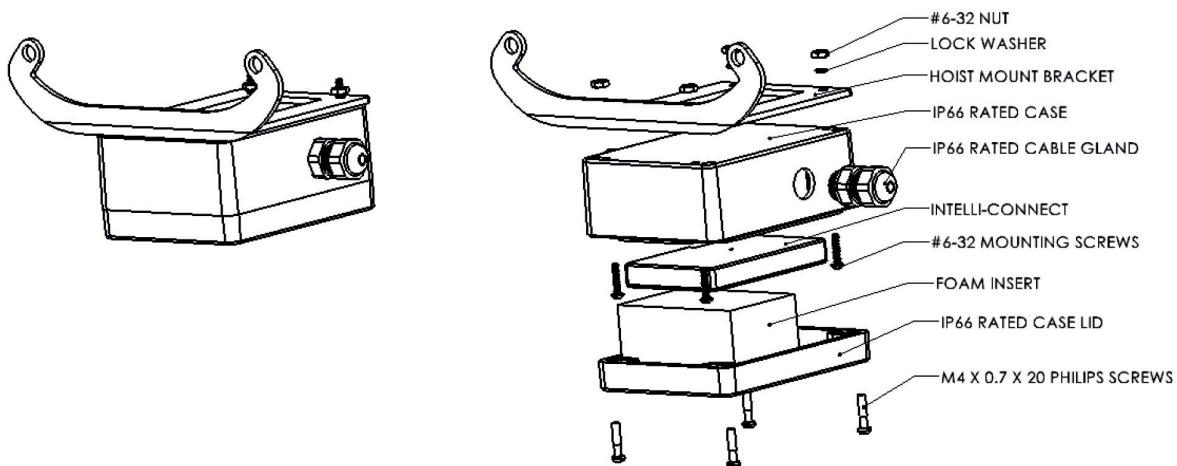

Figure 1: Pre-assembled Intelli-Connect Mobile Kit

1. Remove the hoist VFD end cap to access the VFD location connecting the M12 data port wires.
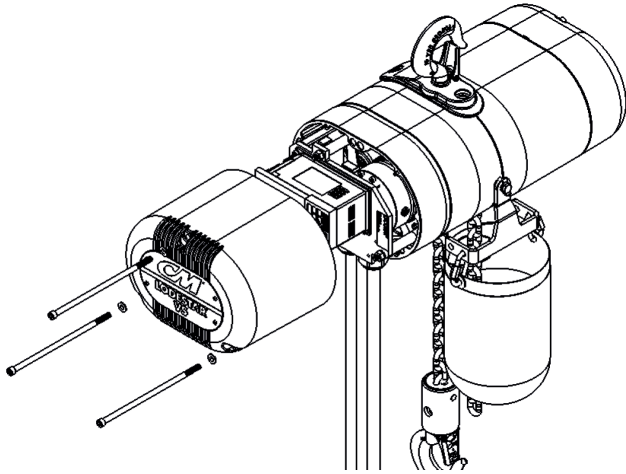

Figure 2: V1 End Cover Removal

2. Disconnect the M12 data port cable (*Figure 3*) from the VFD using a small flathead screwdriver and tighten the loose screws back down.

3. Using the 17 mm wrench, loosen and remove the M12 data port from the hoist. Take care to prevent excessive twisting of the wires.
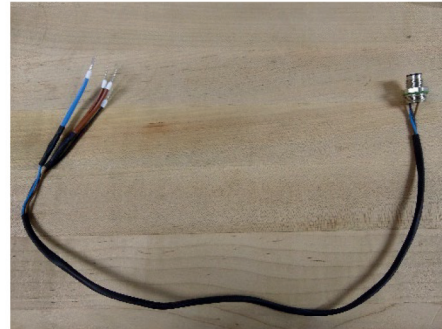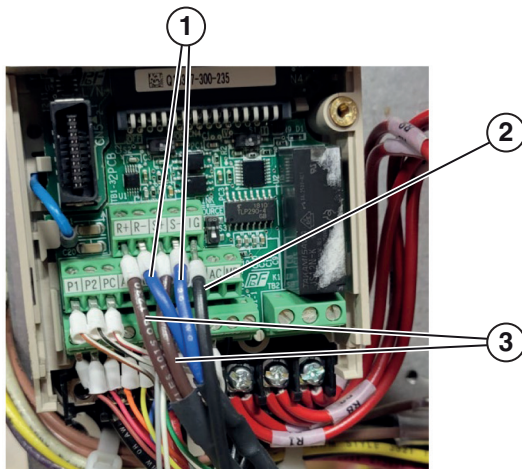

Figure 3: M12 Data Port Cable and Connection

1 - Two Blue Wires
2 - One Black Wire

3 - Two Brown Wires

4. Install the free end RJ45 of the ethernet cable and gland into the now open M16 threaded hole in the hoist from the outside (shown in *Figure 4*) and tighten base of gland (not gland dome nut) finger-tight plus 1/4 to 1/3 turn. **Make sure the O-ring does not twist.** *The angled RJ45 connector will be a tight fit through the threaded hole and will scar the RJ45 molding.*
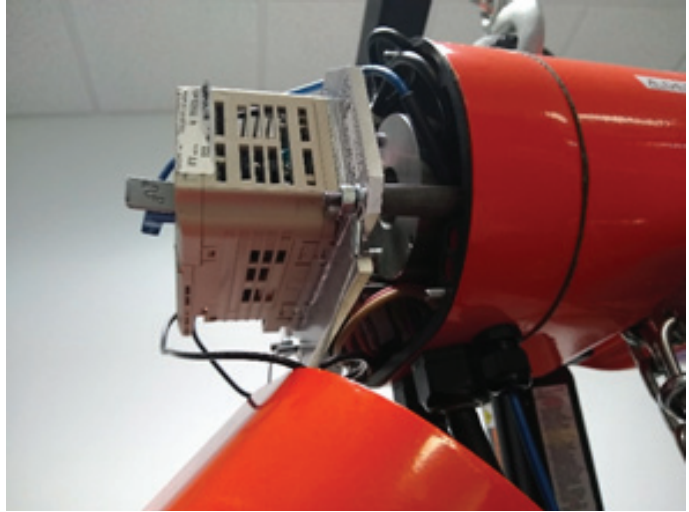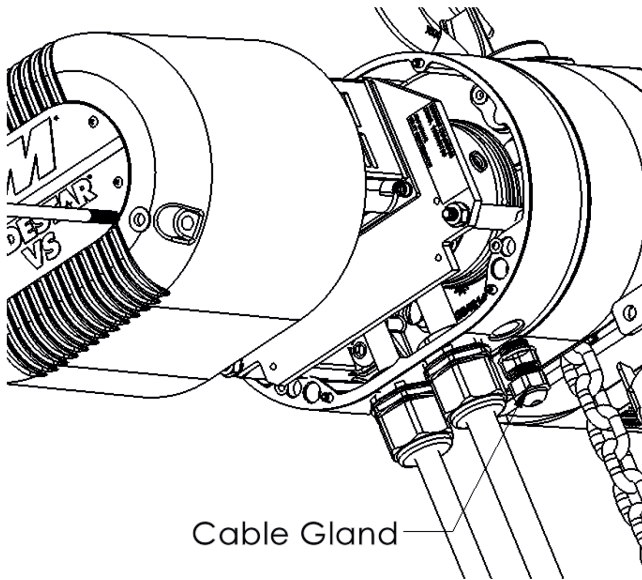
Figure 4: Cable Gland Installation

5. Bring the assembled Intelli-Connect Mobile kit box/bracket from *Figure 1* close enough to the hoist to plug the ethernet cord into the VFD and follow *Figure 4* and *Figure 5* for the optimal cable routing inside the hoist. A small amount of cable slack should exist between both cable glands, as shown in *Figure 6*.
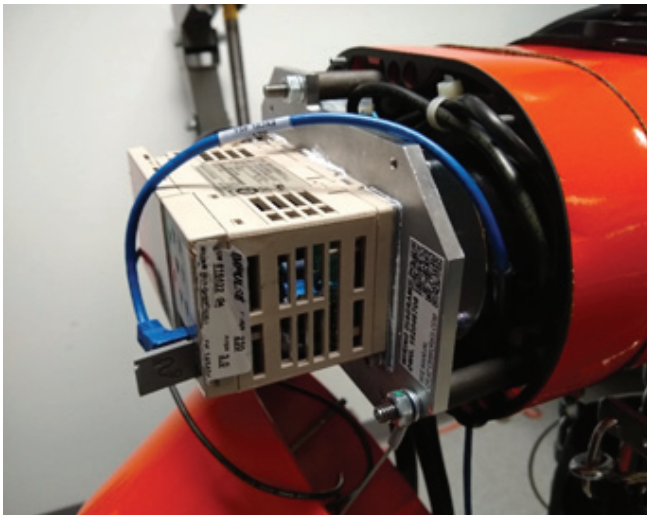

Figure 5: Cable Routing

Figure 6: Cable Installed Between Both Glands

6. Tighten the hoist cable gland dome nut to clamp down on the ethernet cable, sealing it from the environmental elements. The cable should not slide if the hoist cable gland dome nut has undergone proper tightening.

7. With the ethernet now plugged into the VFD, use the 2 longer replacement end cover bolts (2 & 3) (shown with the replacement O-ring and washer in *Figure 7* and *Figure 8*). Place the hoist VFD end cover back on and torque the bolts to (50-60 in-lbs). Bolt 1 on the top of the hoist for the end cover does not require replacement unless it suffers damage, since it does not need to be longer to accommodate the bracket. Place the bolt retaining O-rings on the inside of the cover while the washer is between the cover and the bracket.
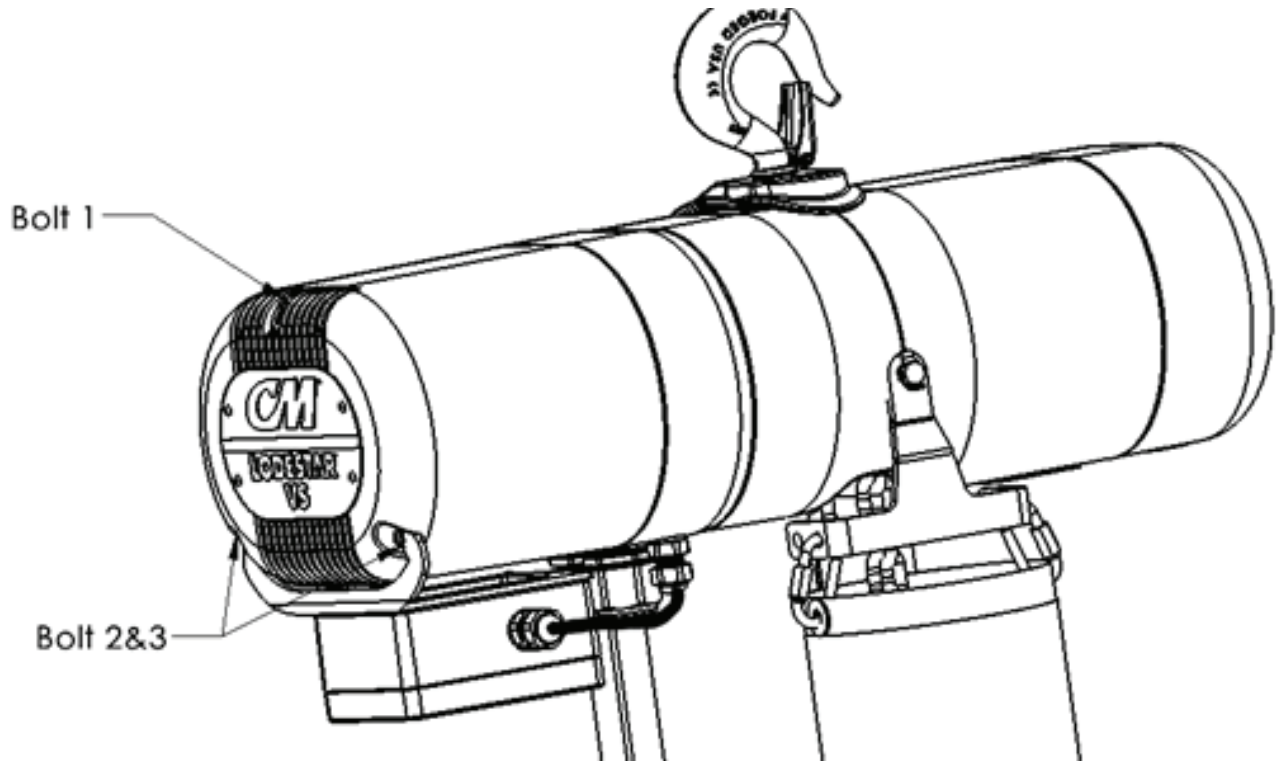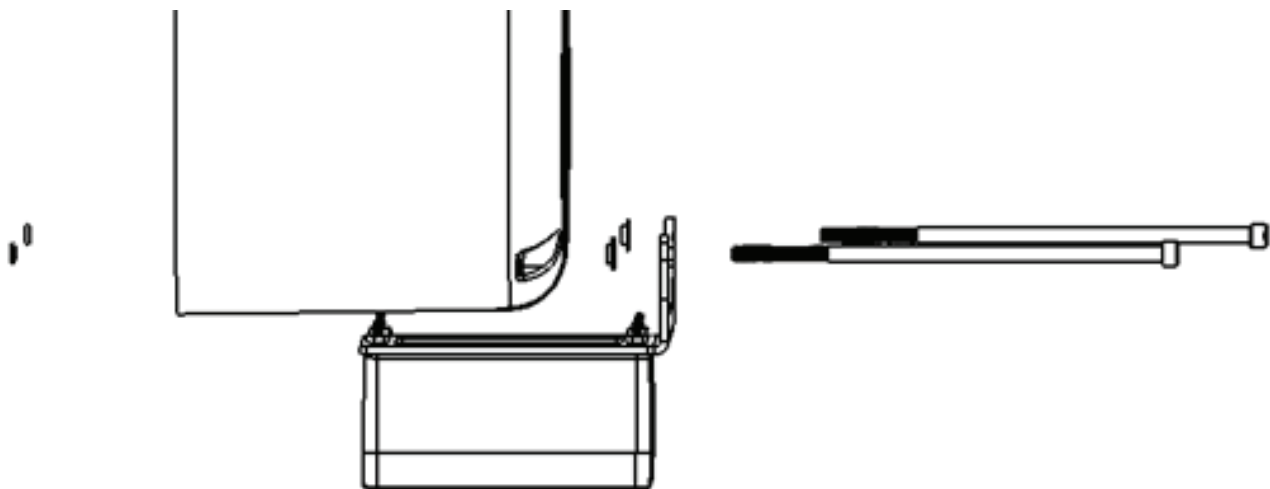
Figure 7: Replacement End Cover Bolts 2 & 3

Figure 8: End Cover Assembly Order
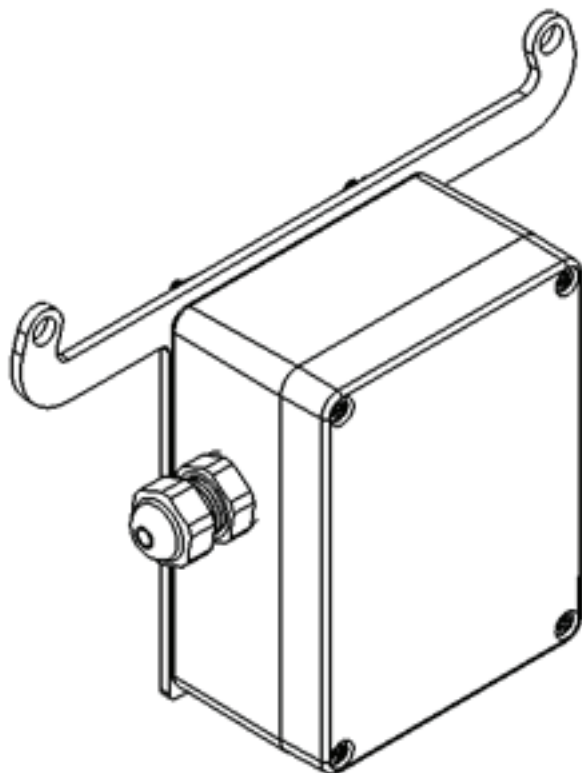
V2 INTELLI-CONNECT MOBILE HARDWARE KIT

Figure 9 shows the V2 pre-assembled contents of the Intelli-Connect Mobile hardware kit (same as the V1 kit but with a different mounting bracket).

1. Remove the hoist VFD end cover to access the VFD location connecting the M12 data port wires (shown in *Figure 10*).
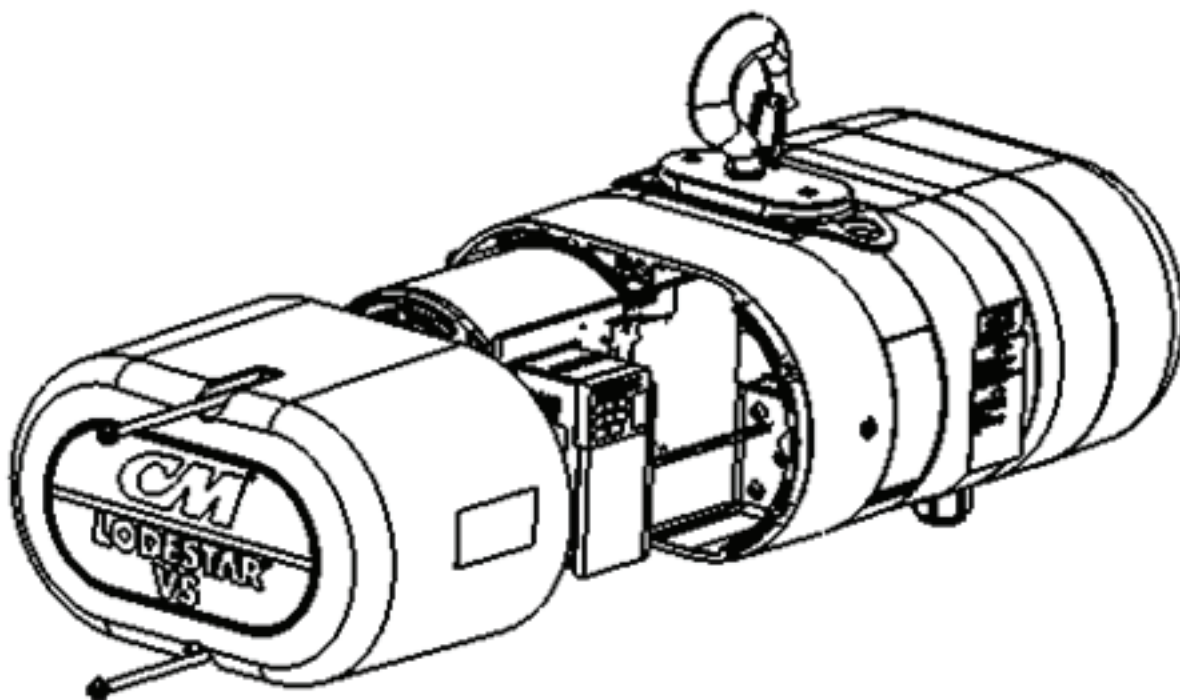

Figure 9: Pre-assembled V2 Intelli-Connect Mobile Kit

Figure 10: VFD End Cover Removal

2. Disconnect the M12 data port cable *(Figure 11)* from the VFD using a small flathead screwdriver and tighten the loose screws back down.
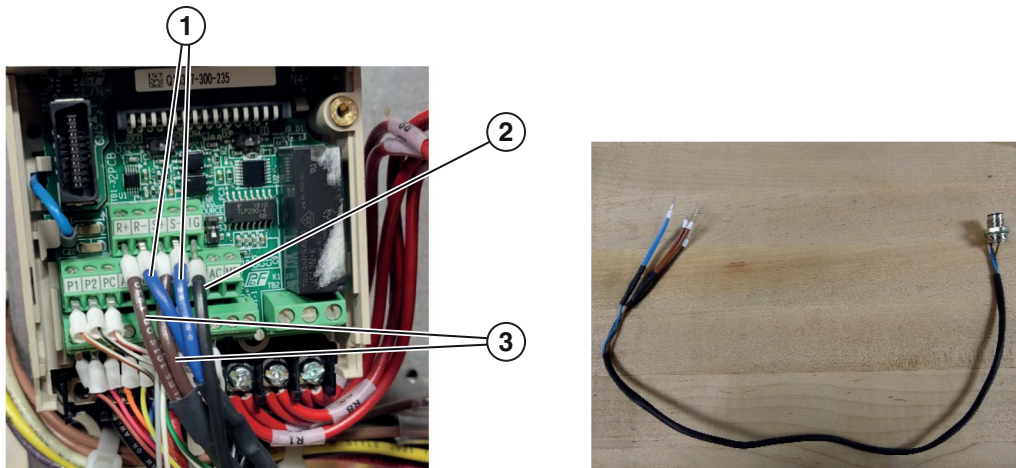

Figure 11: M12 Data Port Cable and Connection

1 - Two Blue Wires
2 - One Black Wire
3 - Two Brown Wires

3. Remove the brake end cover shown in *Figure 12* to access the M12 data port. Using the 17 mm wrench, loosen and remove the M12 data port from the hoist. Take care to prevent excessive twisting of the wires.
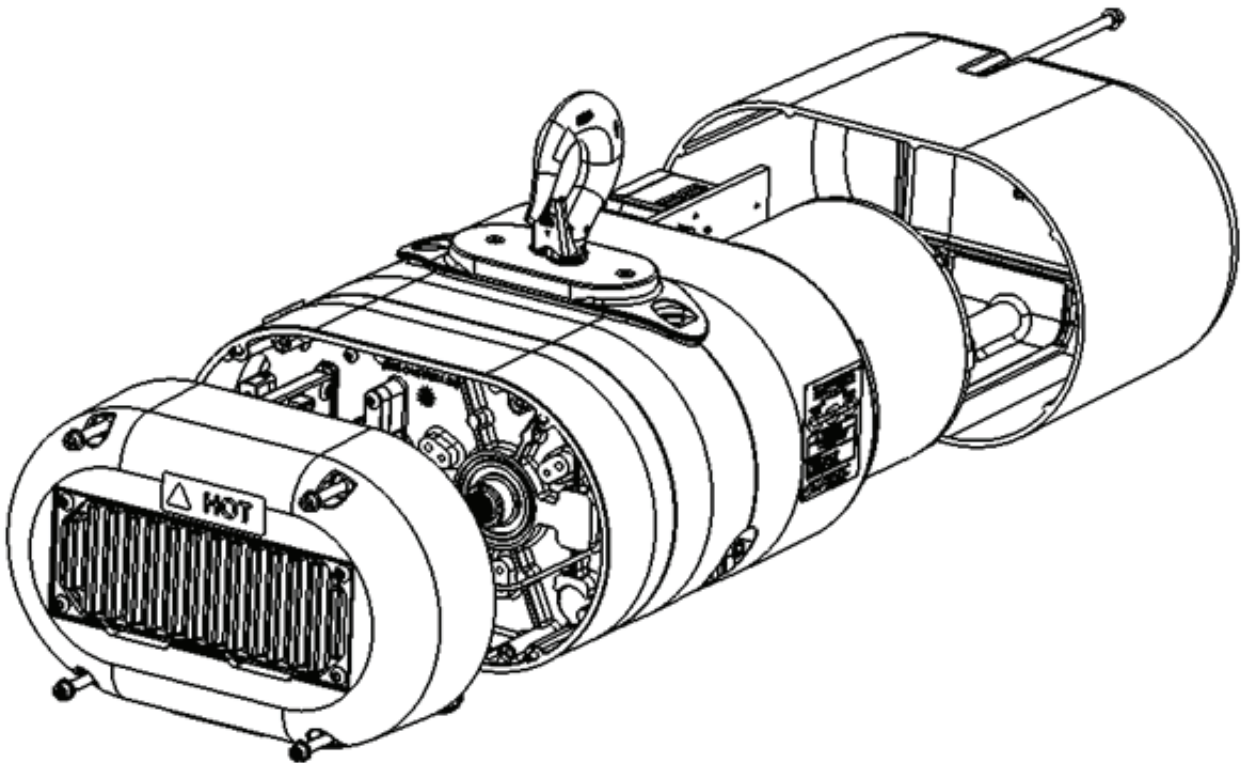

Figure 12: Brake End Cover

4. Install the free end RJ45 of the ethernet cable and gland into the now open M16 threaded hole in the hoist from the outside (shown in *Figure 13*). Tighten base of gland (not gland dome nut) finger-tight plus 1/4 to 1/3 turn. **Make sure the O-ring does not twist.** *The angled RJ45 connector will be a tight fit through the threaded hole and will scar the RJ45 molding.*
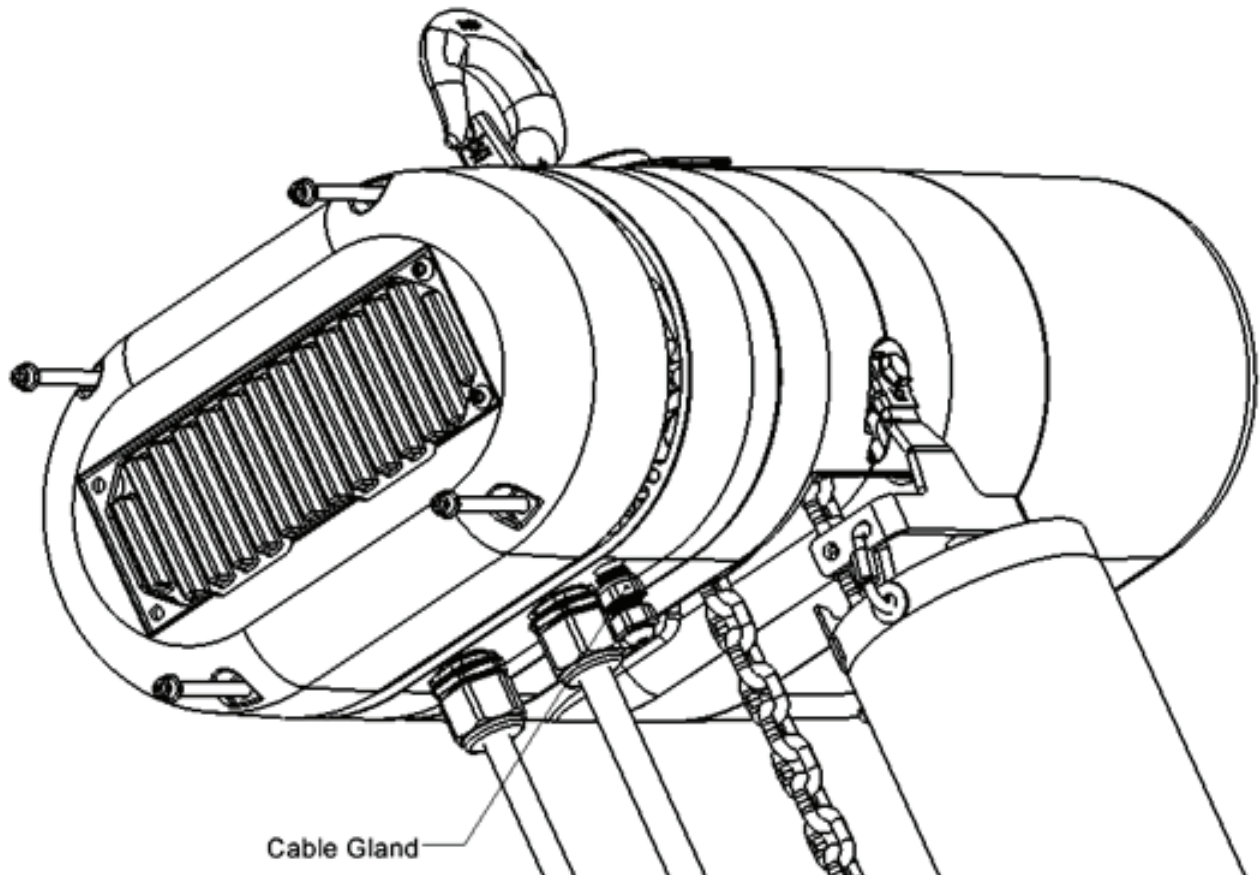

Cable Gland

Figure 13: Cable Gland Installation

5. Run the ethernet cable down the side of the hoist, alongside the existing wiring harness, to plug the ethernet cable into the VFD ethernet port. Bring the assembled Intelli-Connect Mobile kit box/bracket from *Figure 9* close enough to the hoist to plug the ethernet cord into the VFD. Follow *Figure 14* for the cable routing inside the hoist as well as the optimal position of the RJ45 to guide it through the wireway as shown in *Figure 15*.
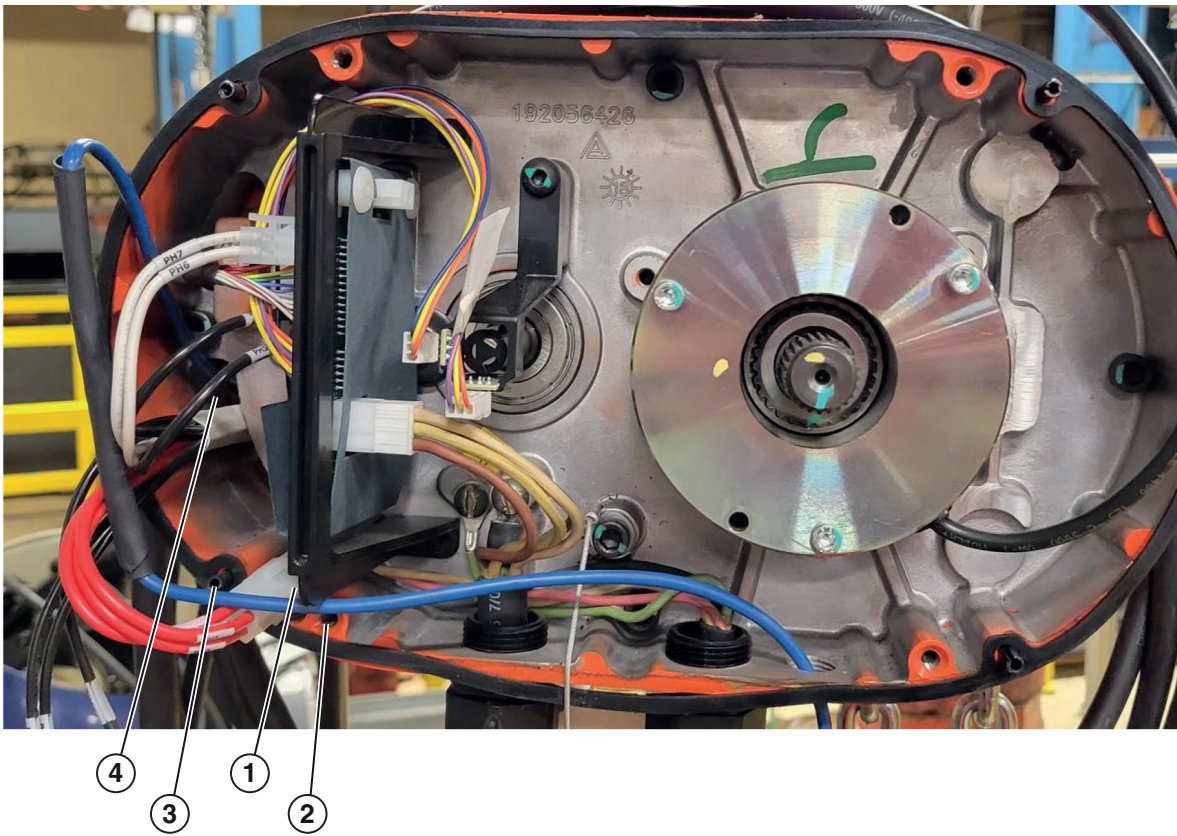
Figure 14: Cable Routing

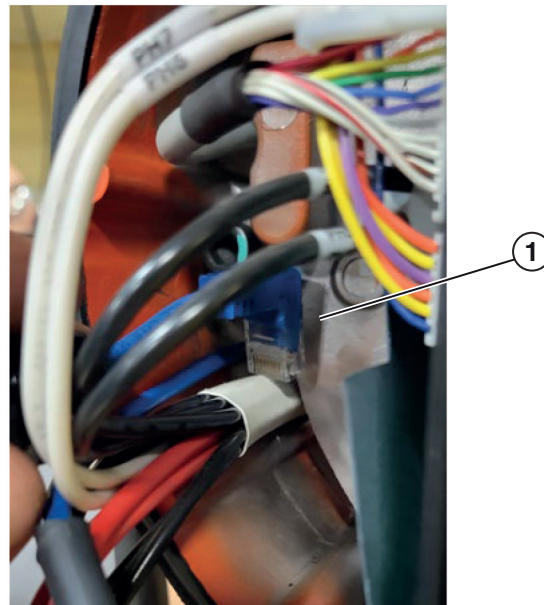|			
1	- Under the Bracket	3	- Clear of the Dowel Pin
2	- Clear of the Cover Hole	4	- Through the Bottom Wireway Slot

Figure 15: RJ45 Orientation to Route Through Bottom Wireway

1 - Facing down for connector to slide along existing harness

6. Tighten the hoist cable gland dome nut to clamp down on the ethernet cable, sealing it from the environmental elements. The cable should not slide if the hoist cable gland dome nut has undergone proper tightening. Then re-install the VFD end cover.

7. Use the 2 longer replacement end cover bolts (shown with the replacement O-ring and washer in *Figure 16* and *Figure 17*). Place the hoist brake end cover back on and torque the bolts to (50-60 in-lbs). The bolts on the top of the hoist for the end cover do not require replacement unless they suffer damage, since they do not need to be longer to accommodate the bracket. Place the bolt retaining O-rings on the inside of the cover while the washer is between the cover and the bracket.
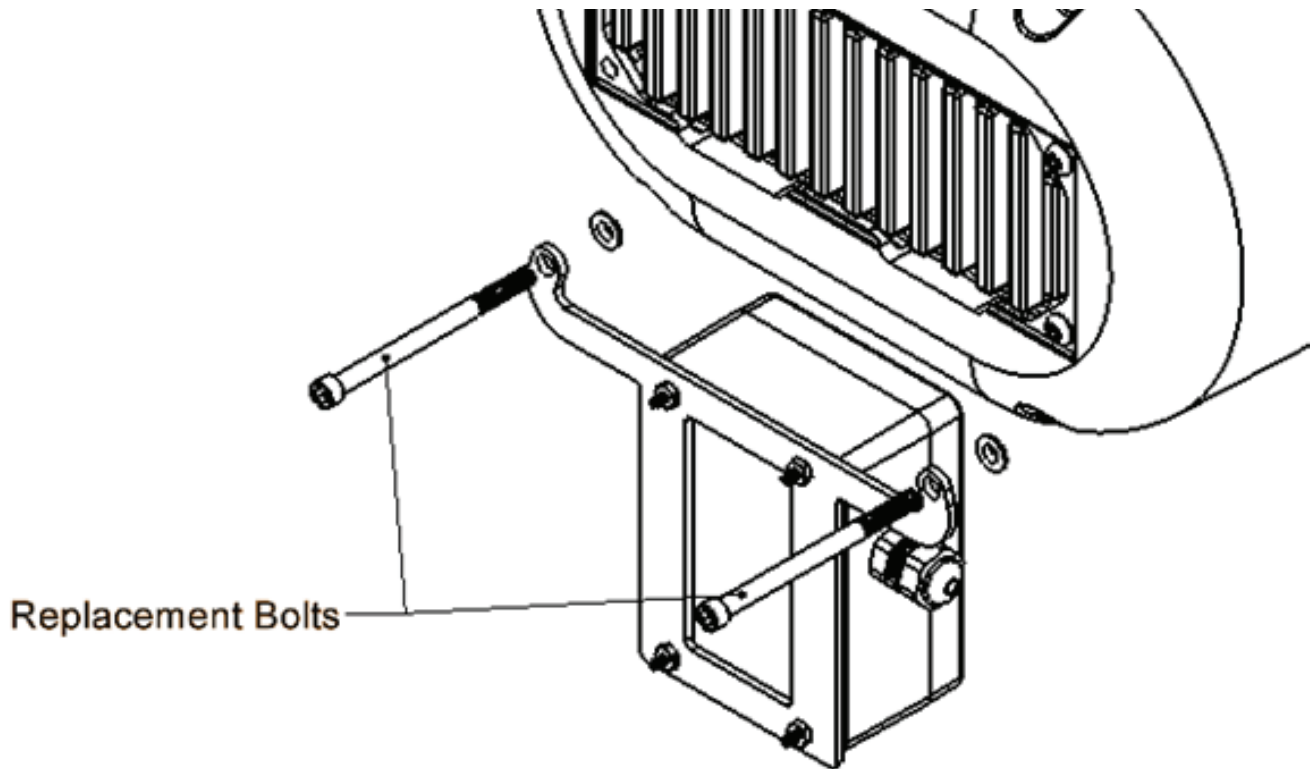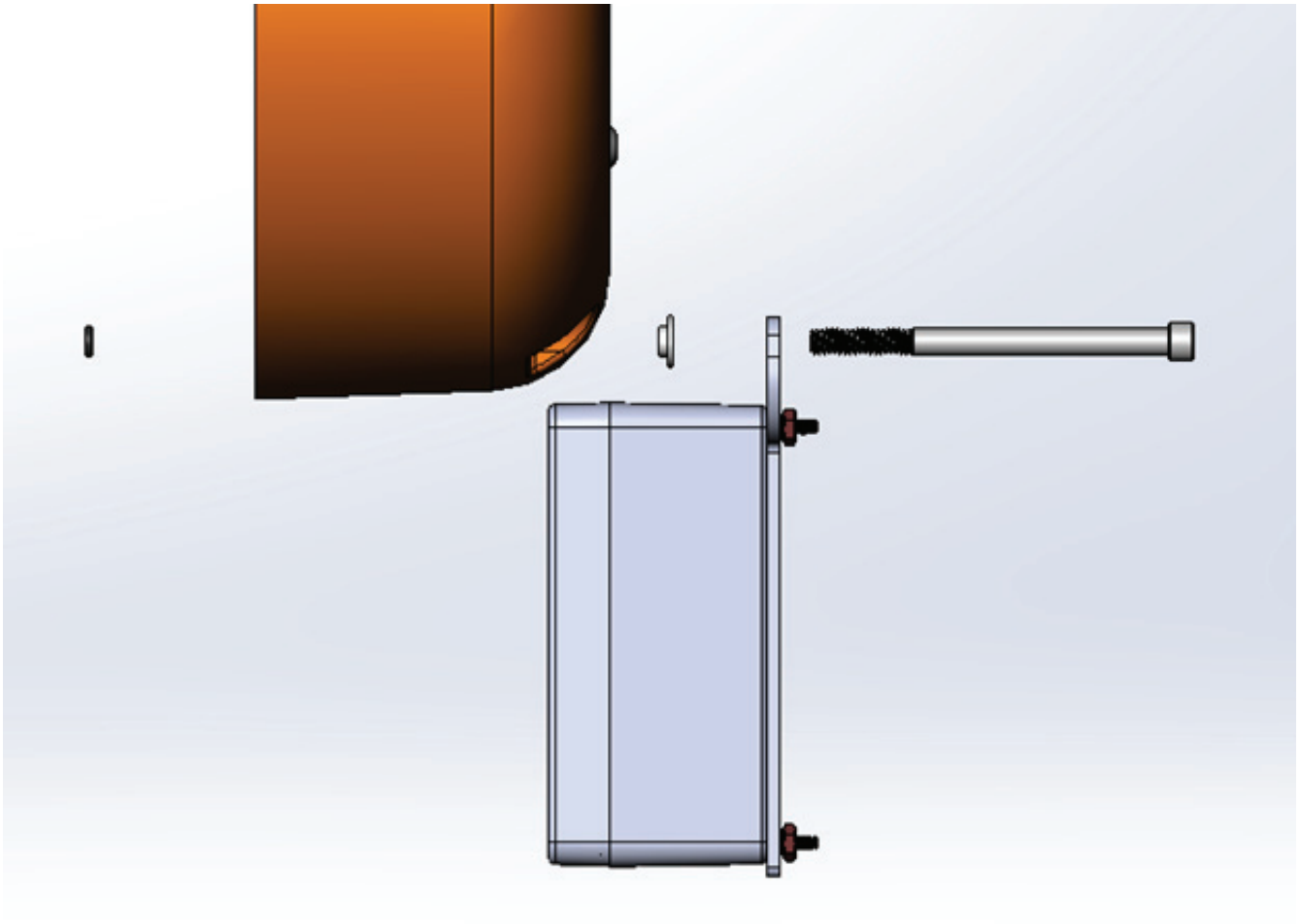

Figure 16: Replacement End Cover Bolts

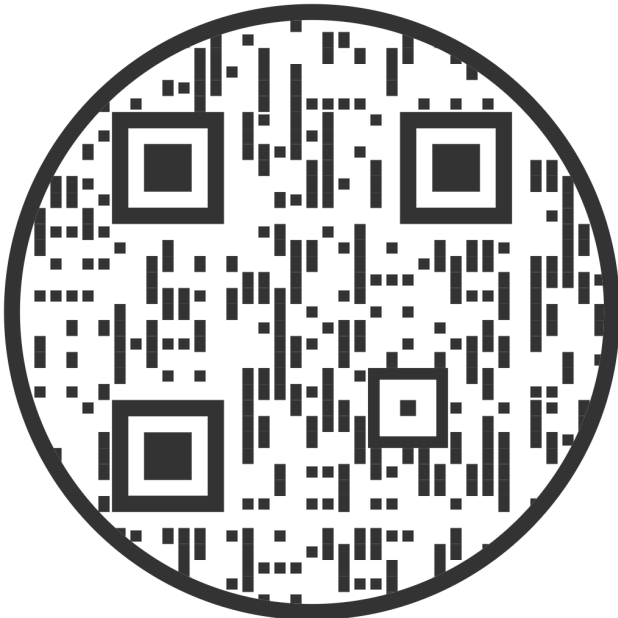**Figure 17: End Cover Assembly Order**

INSTALLATION VIDEOS

Watch an installation video on V1 Lodestar Units

Visit https://motion.cmco.com/lodestar-VS-V1-field-installation
or scan QR code below.

Watch an installation video on V2 Lodestar Units

Visit https://motion.cmco.com/lodestar-VS-V2-field-installation
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CM® Lodestar® VS Intelli-Connect Mobile Operating, Maintenance & Parts Manual Supplement

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