FRU Guide - EXPP PL2.0 CCS1 Phoenix Contact Liquid-Cooled-Cable Latch Upgrade Kit

Service Bulletin

ChargePoint EXPP PL2.0 Latch Upgrade

Power Link 2000

FRU Guide: October 2025

Affected Models and Down Version: Some ChargePoint Power Link 2000 with Phoenix Contact HPC CCS1 Charge Cable

Required Action: Upgrade the latch design on the Phoenix Contact HPC Cable.

Issue: Charging cable may get stuck onto the customer's vehicle if latch breaks due to direct hit on the floor.

WARNING: Do not install or service the charging station in inclement weather. If you work in snow, rain, or wind, you must use a weatherproof shelter that covers all boxes and components.

CAUTION: Warranty Limitation

- If the charging station is not installed, commissioned, or serviced by a ChargePoint certified installer or technician using a ChargePoint-approved method, it is *excluded* from all ChargePoint and other warranties and ChargePoint is not responsible.
- You must be a licensed electrician and complete training at chargepoint.com/installers to become ChargePoint certified and to access ChargePoint's web-based installer tools or ChargePoint Installer app.

Contact ChargePoint at chargepoint.com/support with any questions related to this bulletin.

Introduction

Power Link 2000 with a Phoenix Contact Liquid Cooled CCS1 Charge Cable can be safely upgraded in the field by trained ChargePoint employees using this procedure.

Materials

Note: the upper cover and metal latch of the cable to upgraded per this procedure will be scrapped.

1. Upgraded Upper Cover (with drilled hole)
    a. Upper Cover Insert (this piece comes pre-assembled with Item #1 “Upgrade Upper Cover”)
2. Upgraded Metal Latch (with drilled hole)
3. Metal Pin (38 mm long with 4 mm outside diameter)

Note: the materials listed below are ONLY included in the kit as spares. The same materials from current series cable can be re-used if their cosmetic and functional conditions are acceptable.

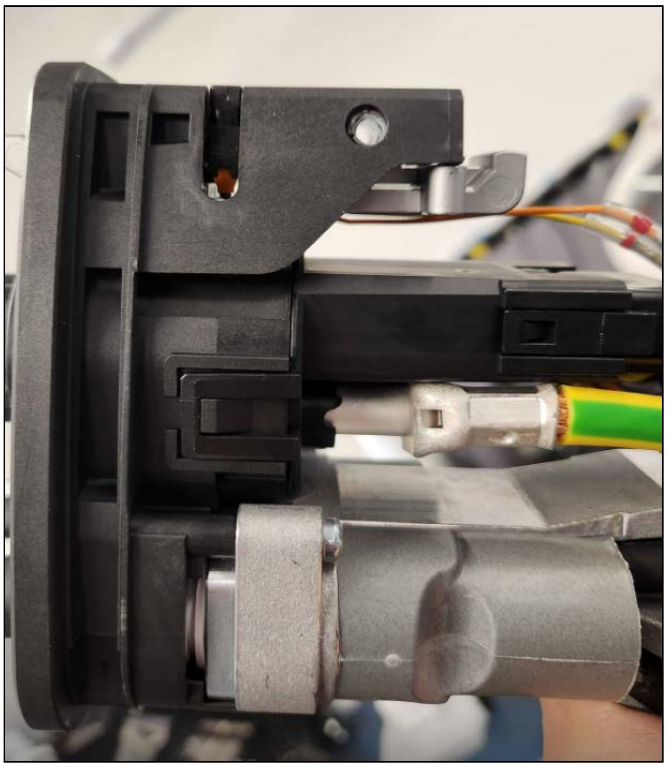
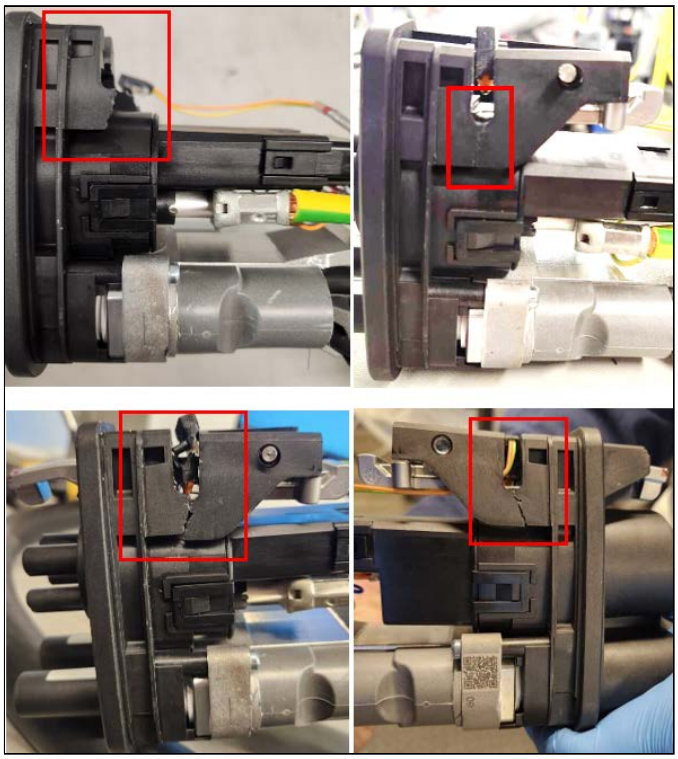
4. ChargePoint Logo Sticker
5. Hand Grip
6. Hand Grip Spring
7. Latch Lever
8. Latch Seal
9. Latch Spring
10. M4X70-5TX screws (4x)
11. 5X20-TORX screw (1x)
12. 4X20-TORX (2x)
13. M4X10-5TX (5x)
14. 30X14-5TX (6x)

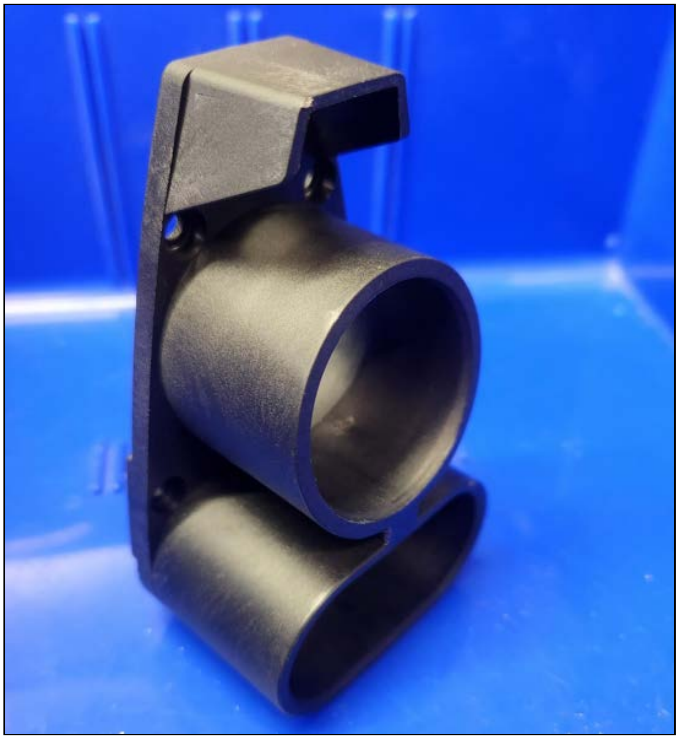
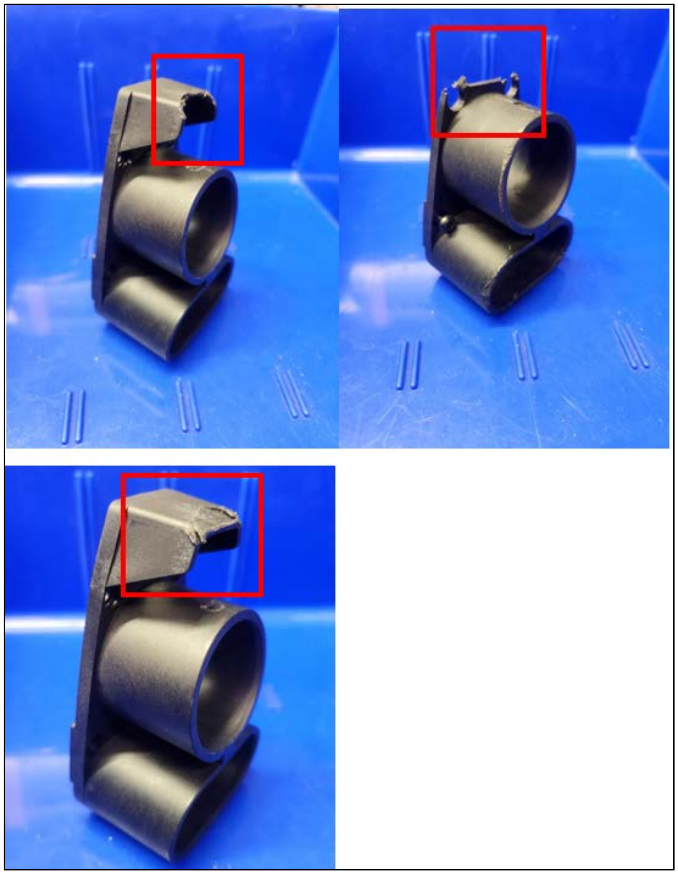
Upgrade Kit

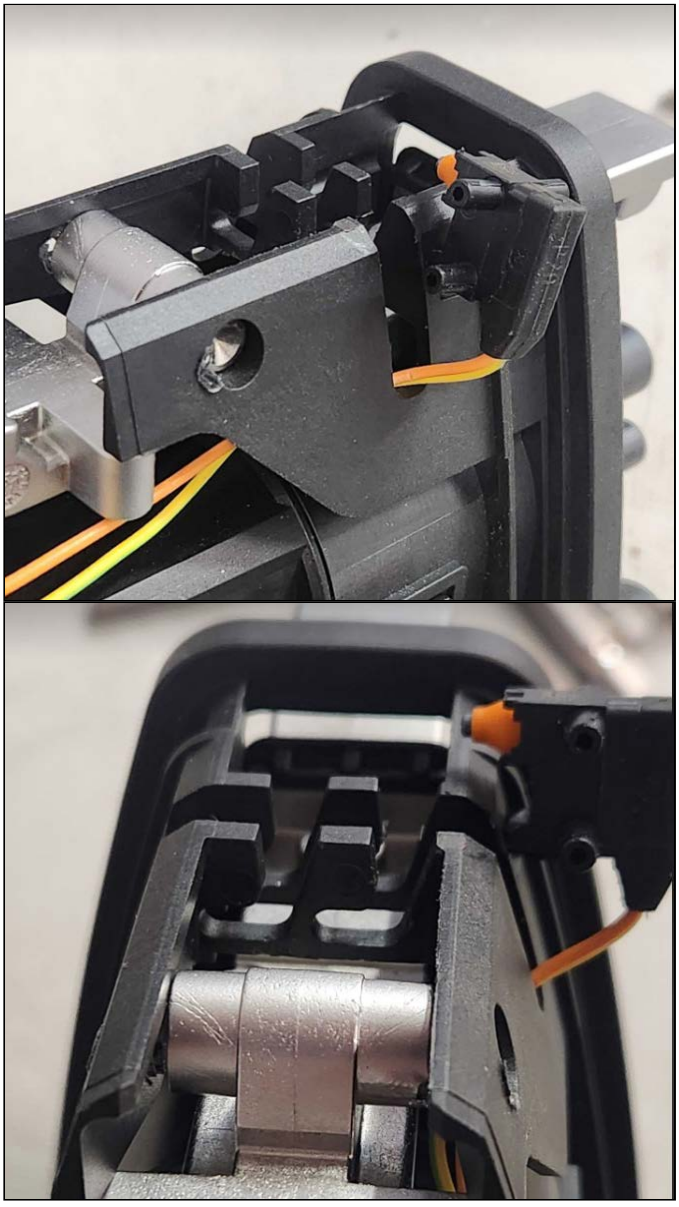
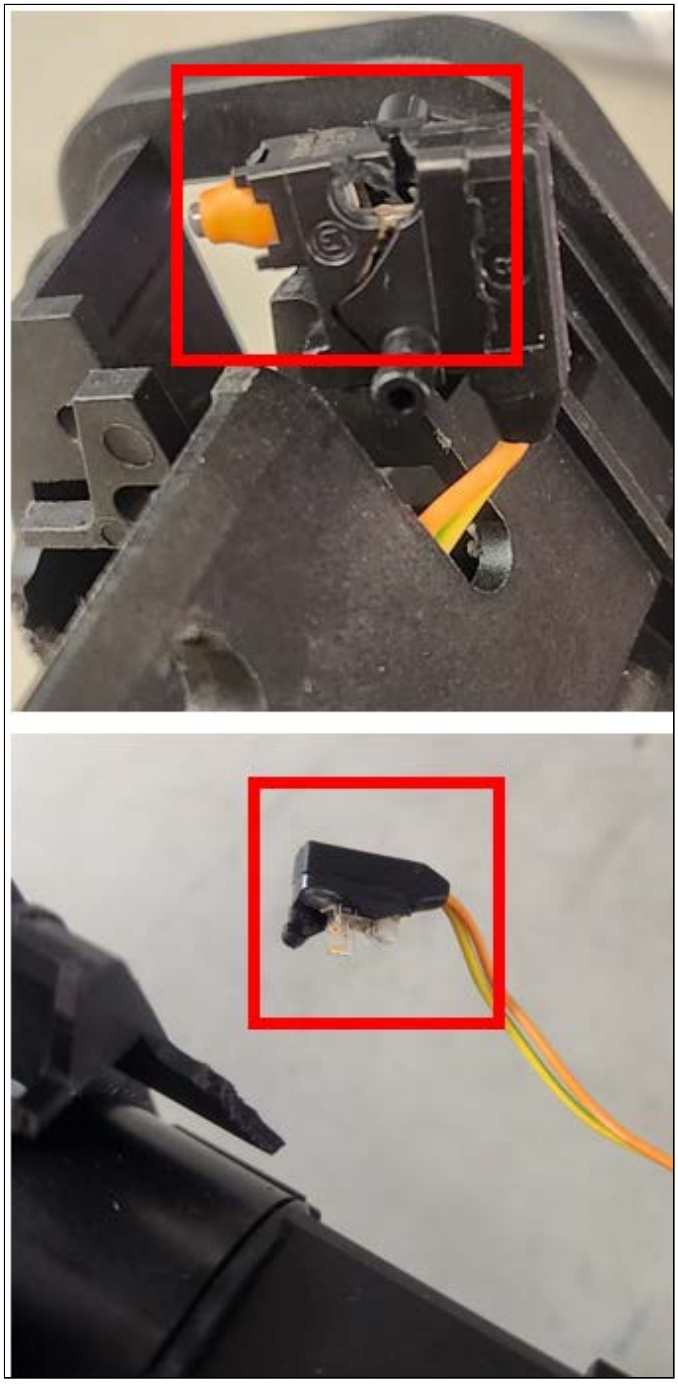
Tools Needed

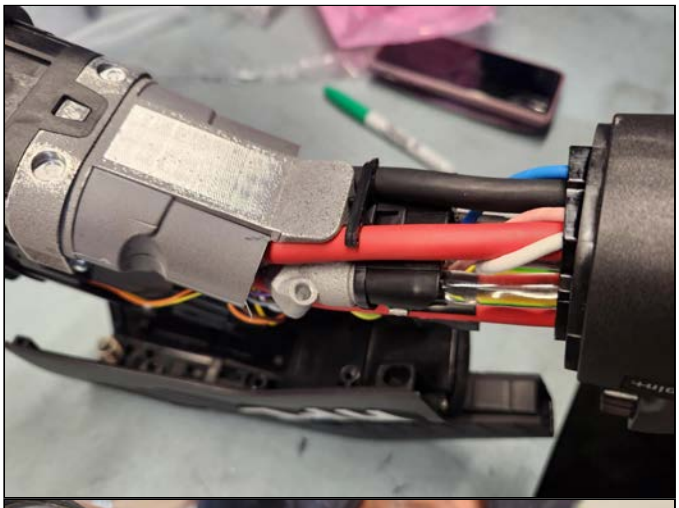
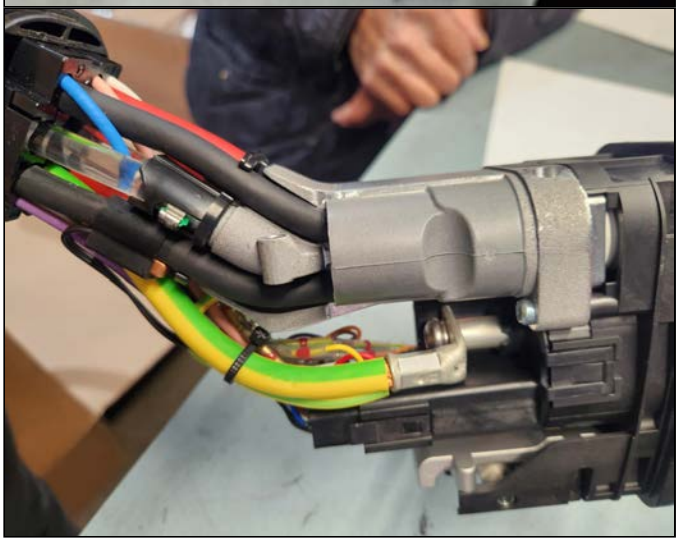
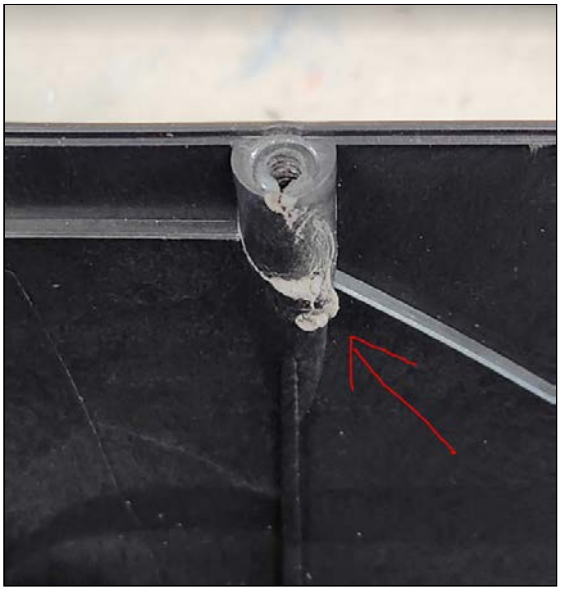
Screwdriver	Plastic Crowbar	Digital Multimeter with Fine Tip	Adjustable Calibrated Torque Driver
			
S2 TT20 screw head	**S2 T15 screw head**	**S2 T10 screw head**	**Mallet**
			
ChargePoint Pin Insertion Fixture	**Hand Ratchet**	**ChargePoint Mounting Fixture**	**14 mm Socket**
			

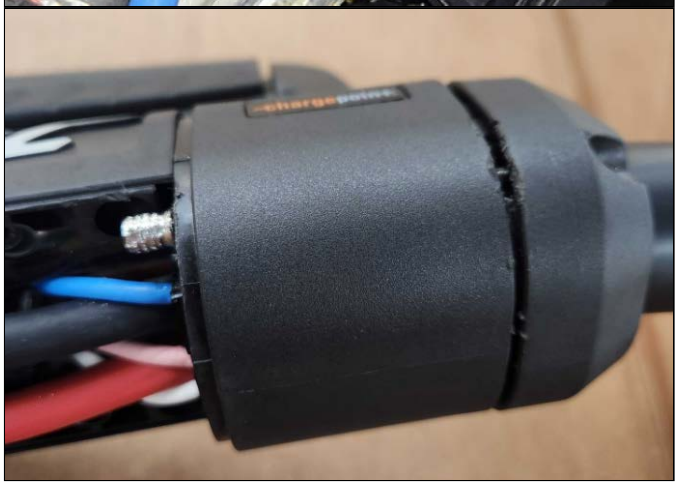
Visual Inspection Standard

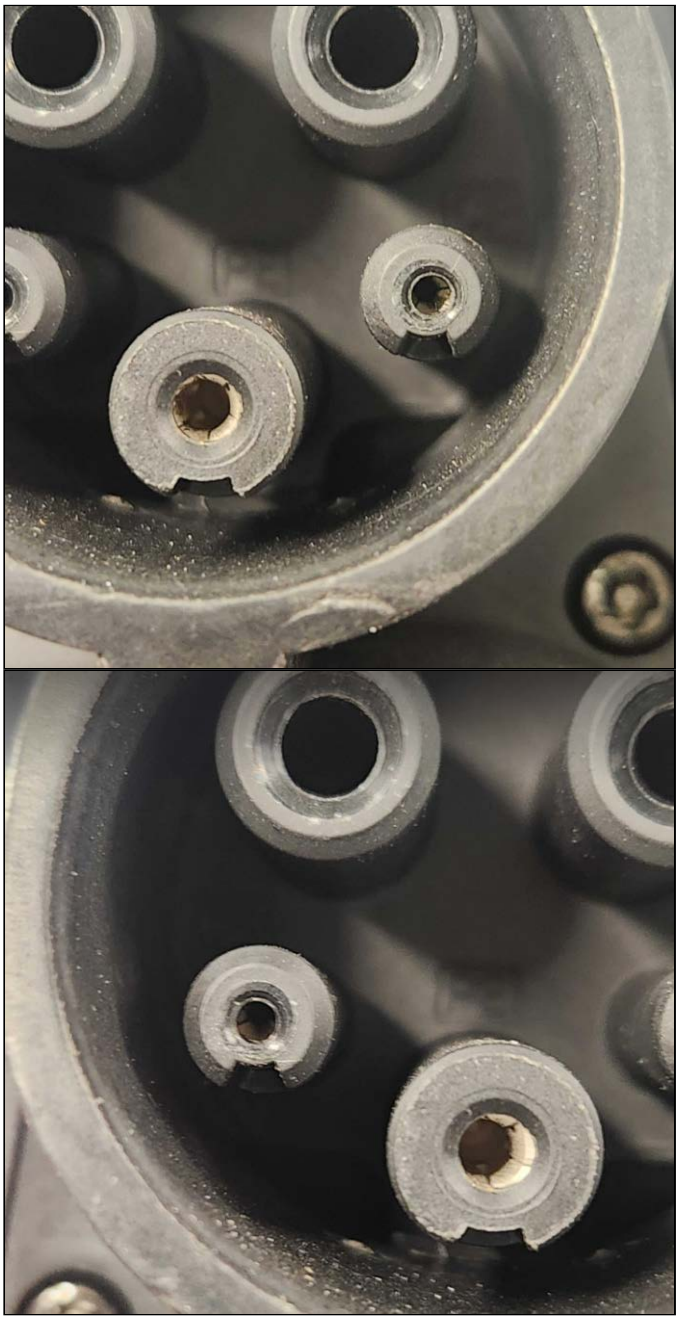
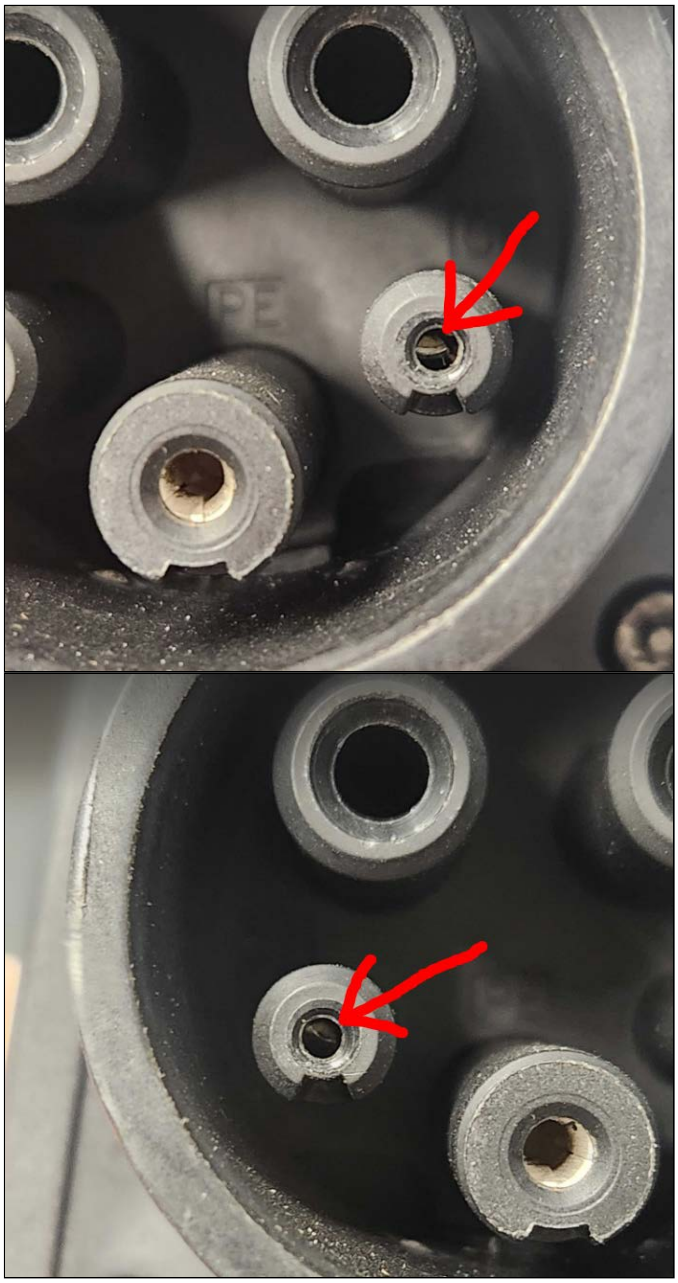
ACCEPT	REJECT
CLEAN PARTS FREE OF CRACKS AND BROKEN PIECES 	REJECT ANY BROKEN OR CRACKS ON ANYC PARTS 

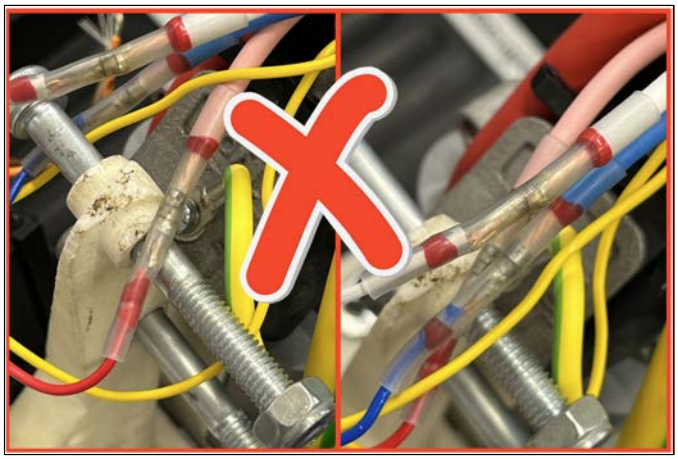
ACCEPT	REJECT
	

ACCEPT	REJECT
	

ACCEPT	REJECT
 	Exposed Copper Wire on DC Wiring  Broken Plastic Cover which could have been caused by over-torque on the screws 

ACCEPT	REJECT
THREAD INSERTS SHALL BE FLUSH AGAINST THE UPPER AND BOTTOM COVER AS SHOWN BELOW:  	Pulled-out thread inserts  

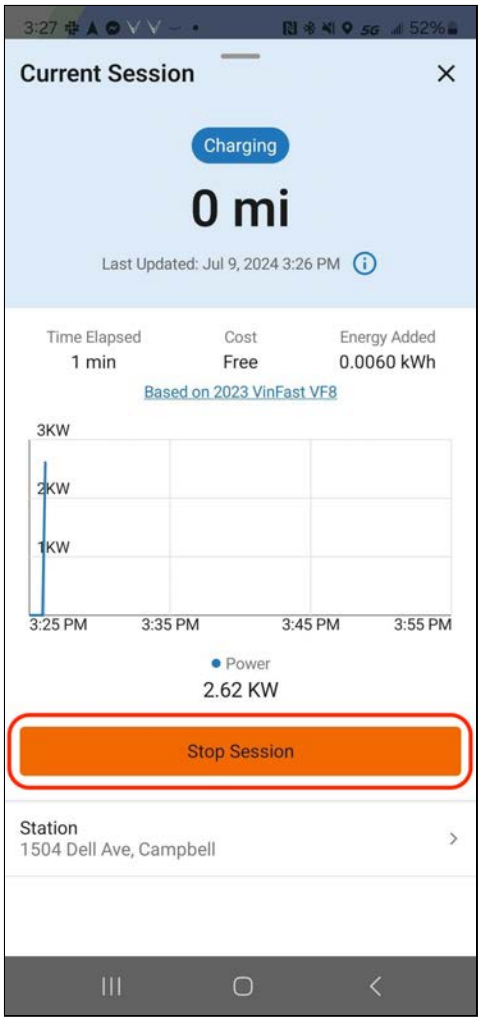
ACCEPT	REJECT
	DAMAGED TERMINALS 

ACCEPT	REJECT
Solder sleeved melted correctly and heat shrink sealing area 	Insufficient solder sleeve; solder not distributed and heat shrink loose 

Procedure

1. **Stop any active charging sessions.**

Examples of stopping an active charging session :

Charging Station Display	ChargePoint Mobile Application	Vehicle Dashboard
		

2. **Release Power Link 2000 Liquid Cooled Cable from vehicle by squeezing the handle and pulling :**

4. **Power down all Power Blocks in the Power Link 2000 EXPP cluster at the main electrical panel(s). Follow lock-out tag-out procedure.**

DANGER: Risk of electric shock

5. **Use ChargePoint Approved Latch Repair Kit to upgrade the Phoenix Liquid-Cooled-Cable:**

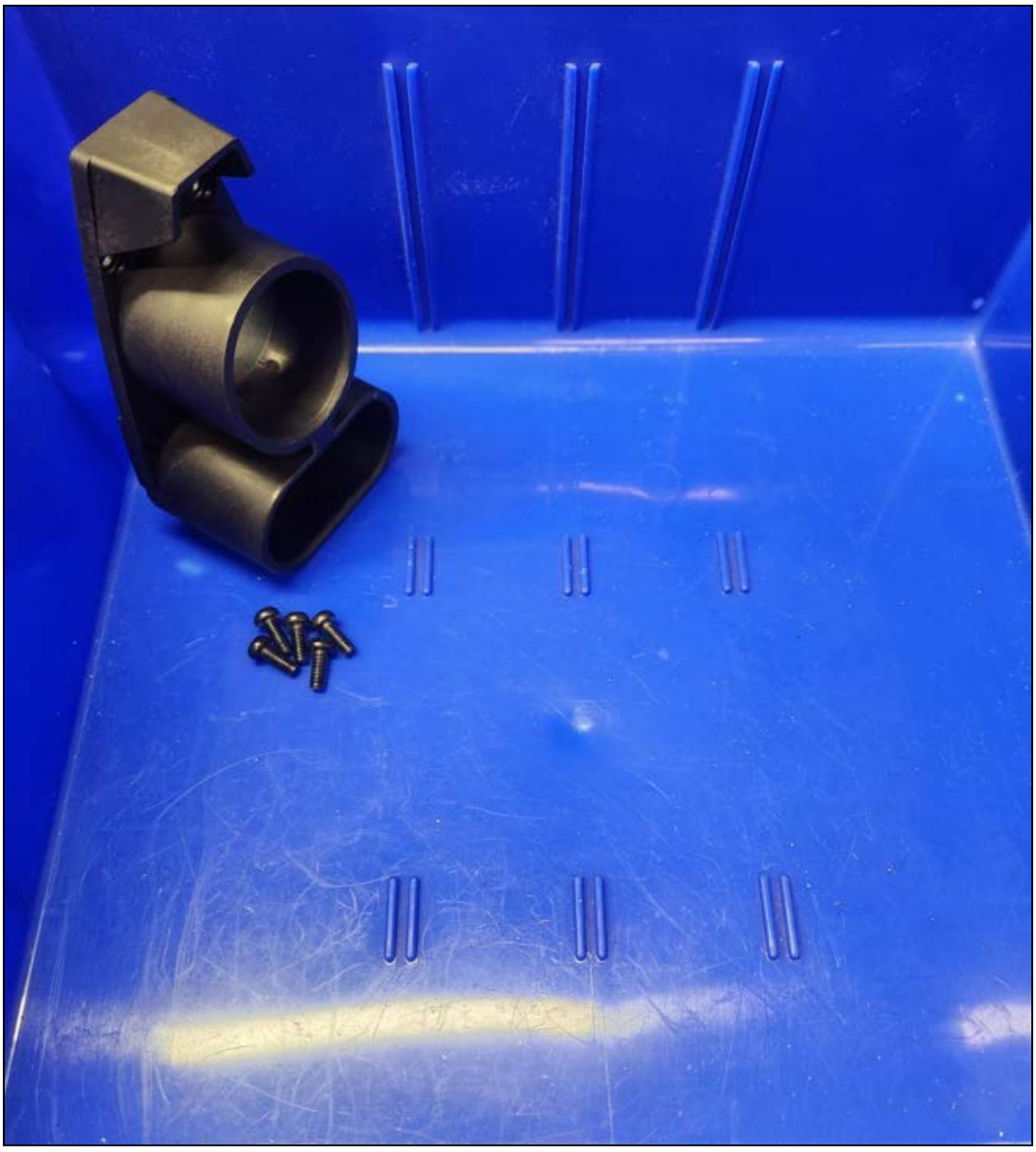
Maintain three bins for the materials in your work area.

1. Bin for the the upgrade kit.
2. Bin for the parts that will dis-assembled from the cable plug which will be re-used.
3. Bin for the scrapped parts. Use this bin for any damaged parts or screws found during the upgrade process.

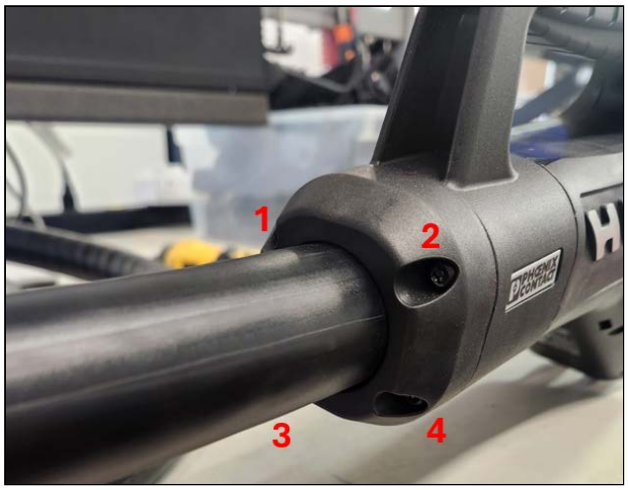
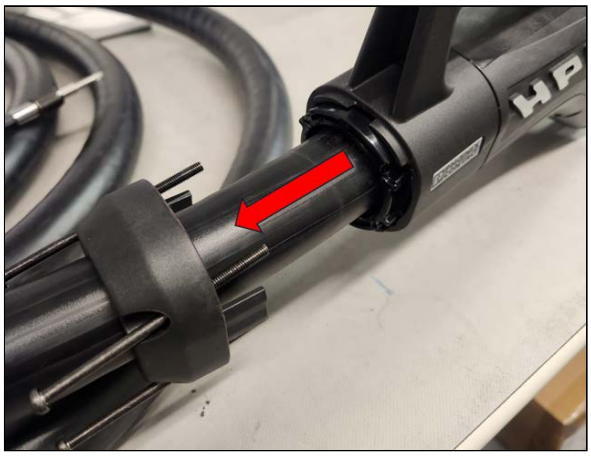
Remove 5x front screws and mating front plastic frame:

Use the screwdriver and the S2 T20 screw head to remove the 5 M4X10-5TX screws located on the front side of the cable handle:	After removing all 5 screws, manually remove the front cover from the connector.
	

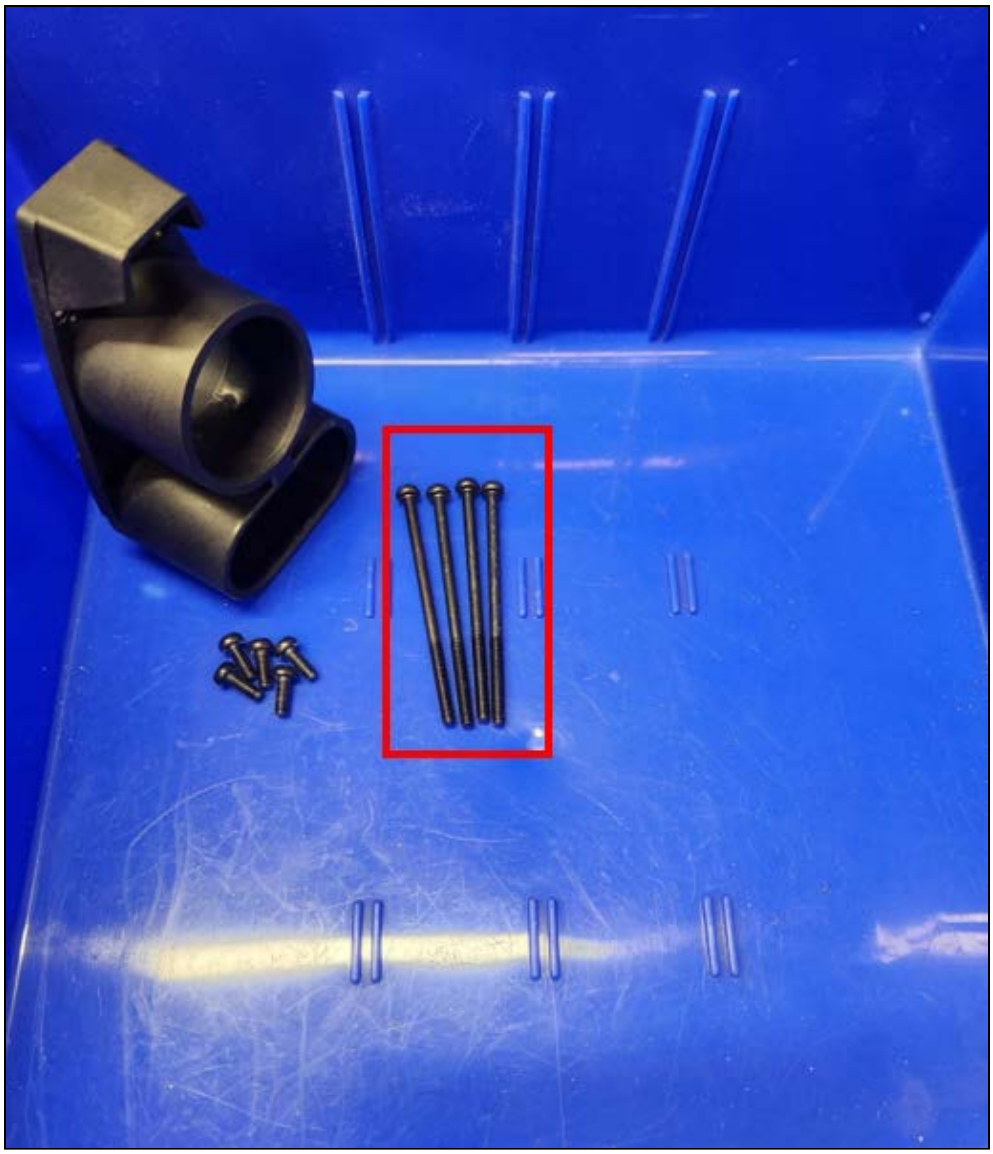
Store both, the front cover and the 5x M4X10-5TX screws, in a safe bin as they will be used later to re-assemble the cable back together.

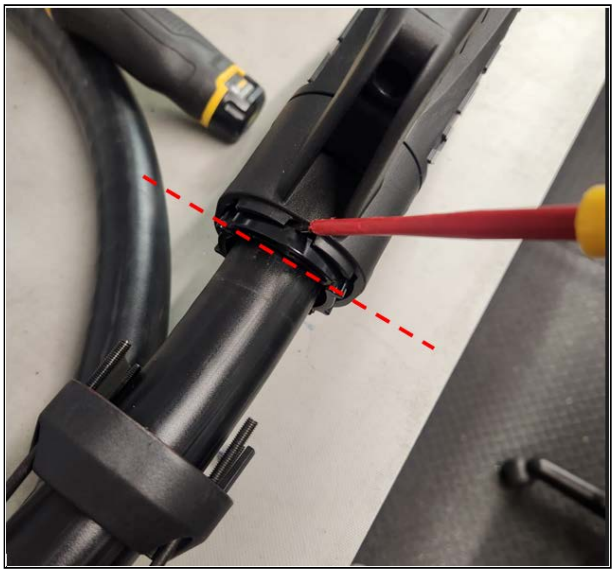


Disassemble the rear screws, retained endcap, strain relief, and handle retainer.

Use the screwdriver and the S2 T20 screw head to remove the 4x M4X70-5TX screws screws located back side of the cable handle: **NOTE 2: If any of the 4 M4X70-5TX screws are found spinning endlessly it is very likely the thread insert is loose due to factory over torque. Stop the upgrade, move the cable aside and notify engineering to recover the unit.**	After removing all 4x M4X70-5TX , pull back the rear plastic cover away from the handle at least 15 cm and secure it against the cable jacket with tape to keep it in place.
	

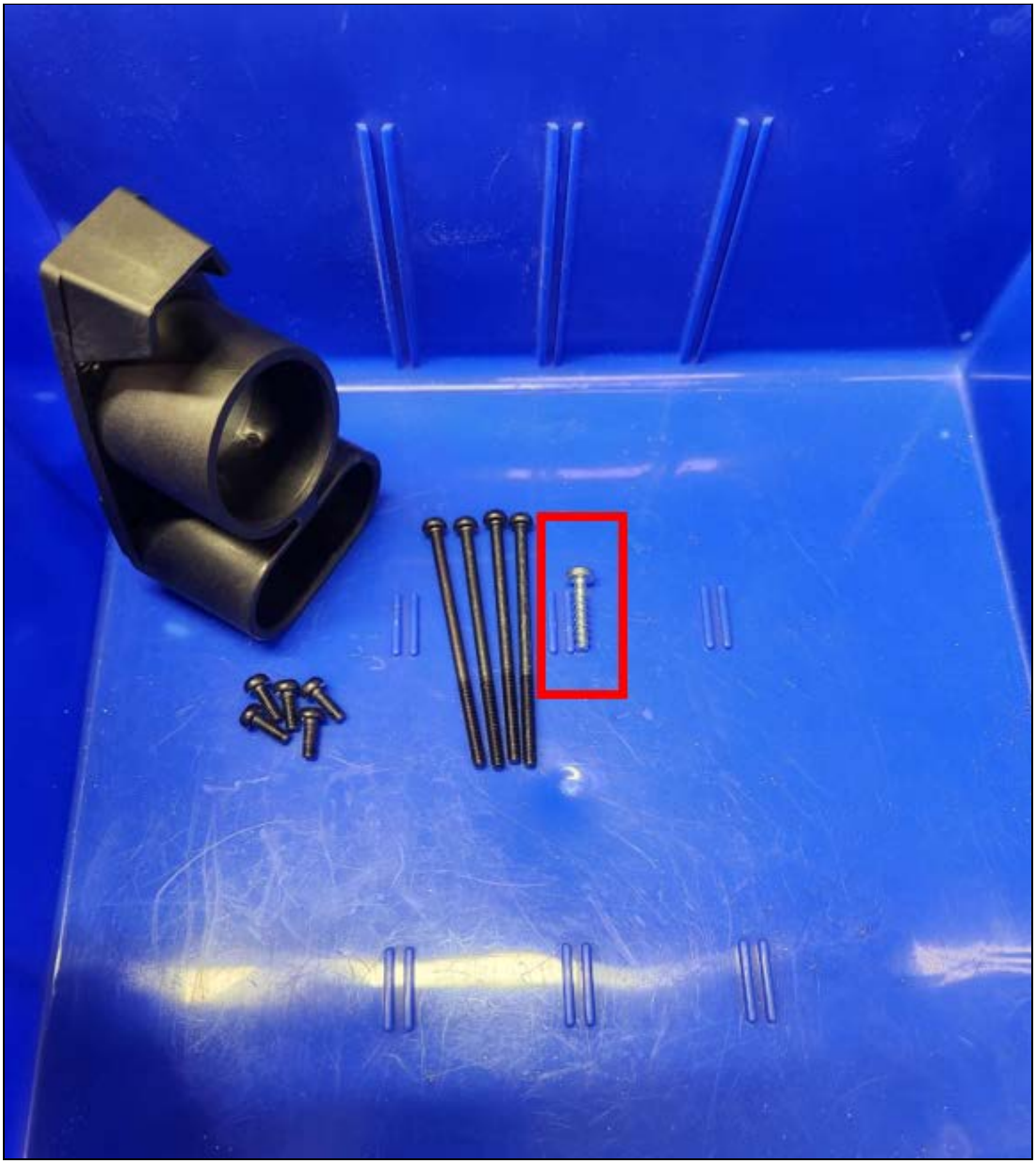
Store the 4x M4X10-5TX screws in a safe bin as they will be used later to re-assemble the cable back together.



Mark the original location of the strain relief on the cable jacket. Use a sharpie or pen.	Use the plastic crowbar to pull back the strain relief away from the cable handle. Pull back at least 2 cm.
	

Use screwdriver and the S2 T20 screw head to remove the 1x 5X20-TORX screw located on left top side of the cable handle:	Gently pull back at least 2 cm the 2nd rear cover of the away from the cable handle to continue disassembly
	

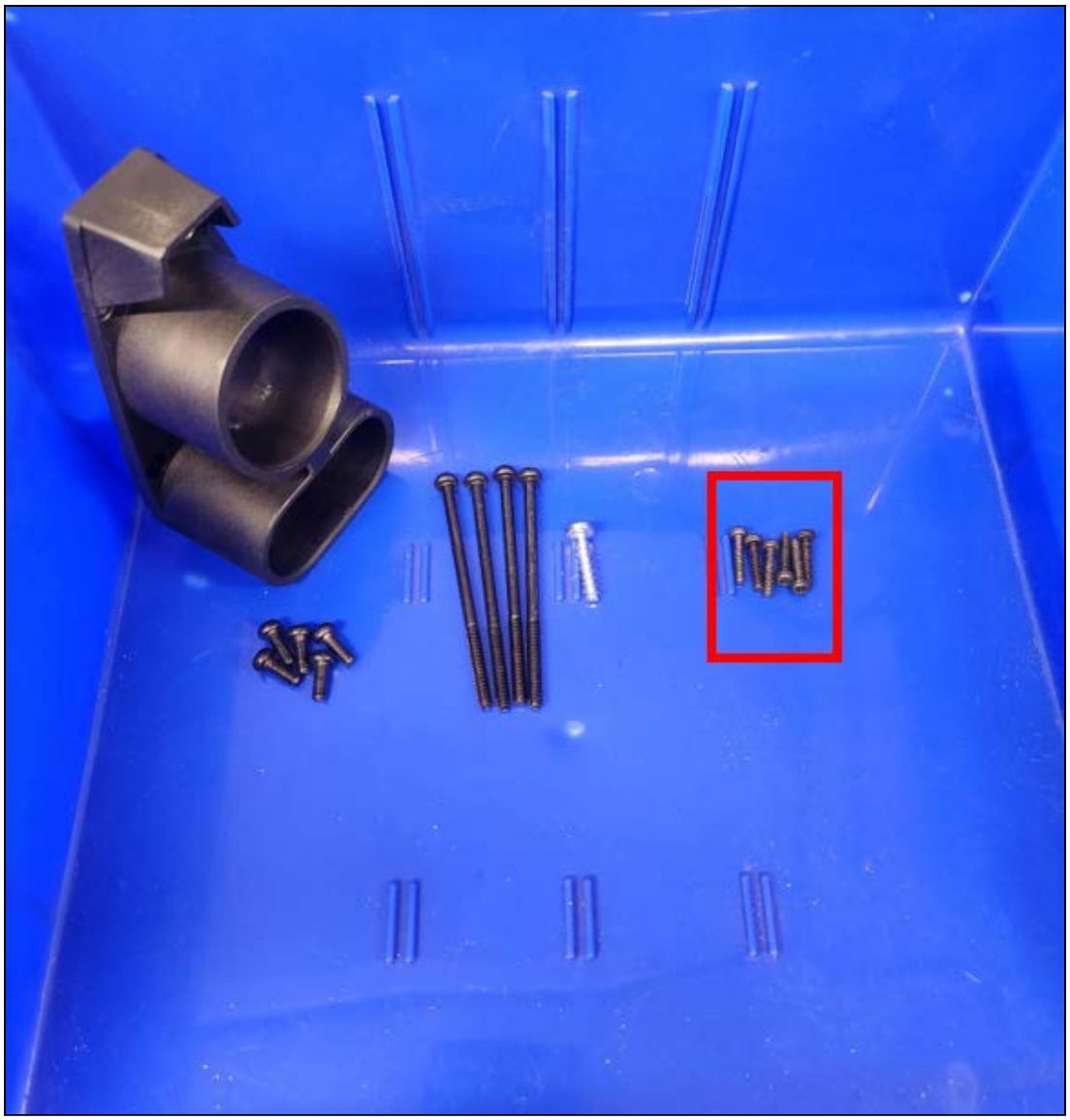
Store the 1x 5X20-TORX screw in a safe bin as it will be used later to re-assemble the cable back together.

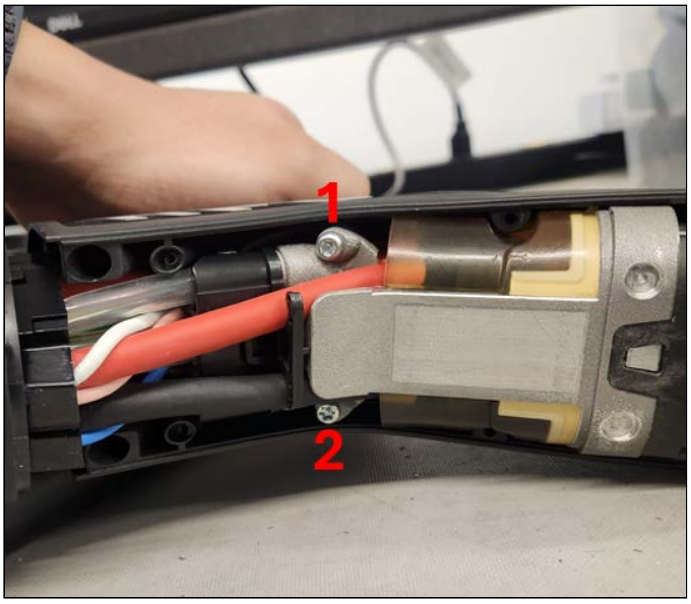


Removing the bottom and upper cover.

Use screwdriver and S2 T10 screw head to remove the 6x 30X14-5TX screws located on the bottom cover of the cable handle: **NOTE: If any screws are found stripped use a bigger screw head size (i.e., S2 T15 → S2 T20)**	After removing the 6x 30X14-5TX screws use the flat head driver to gently pull the bottom cover away from the handle
	 

Store the 6x 30X14-5TX screws in a safe bin as they will be used later to re-assemble the cable back together.

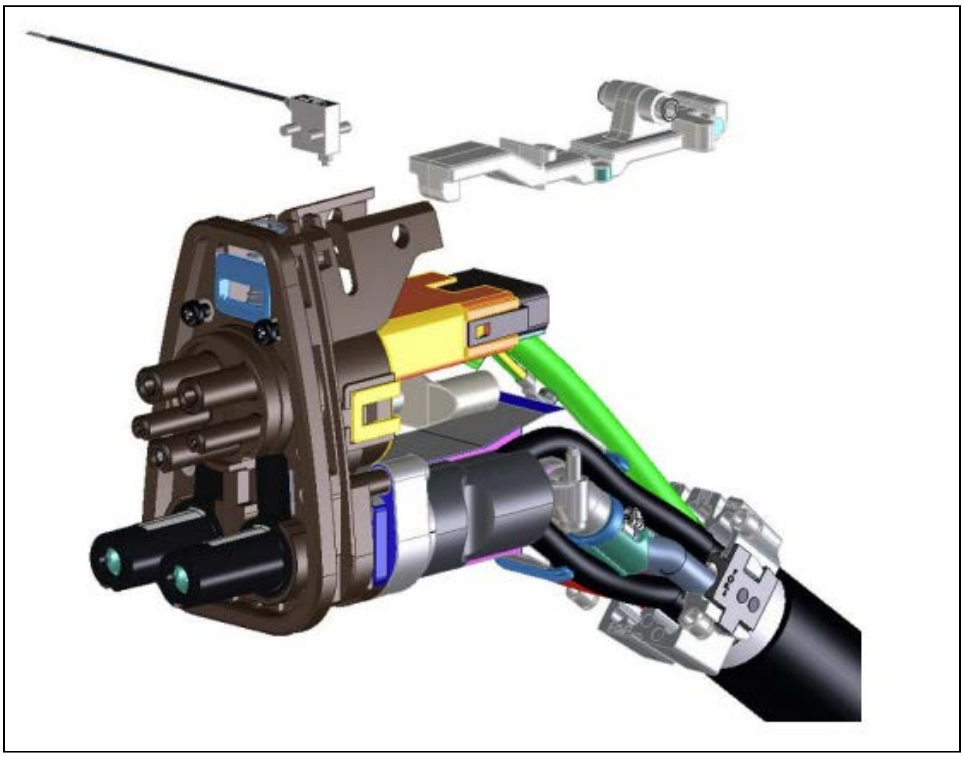


Use the screwdriver and S2 TT20 screw head to remove the 2x 4X20-TORX screws located on the bottom internal area of the cable: **NOTE: If any screws are found stripped use a bigger screw head size (i.e., S2 T15 → S2 T20)**	After removing the 2x 4X20-TORX screws, gently remove the upper cover by sliding it up away from the cable as shown below: **Note: scrap the old upper cover, this will no longer be needed to upgrade the cable.**
	

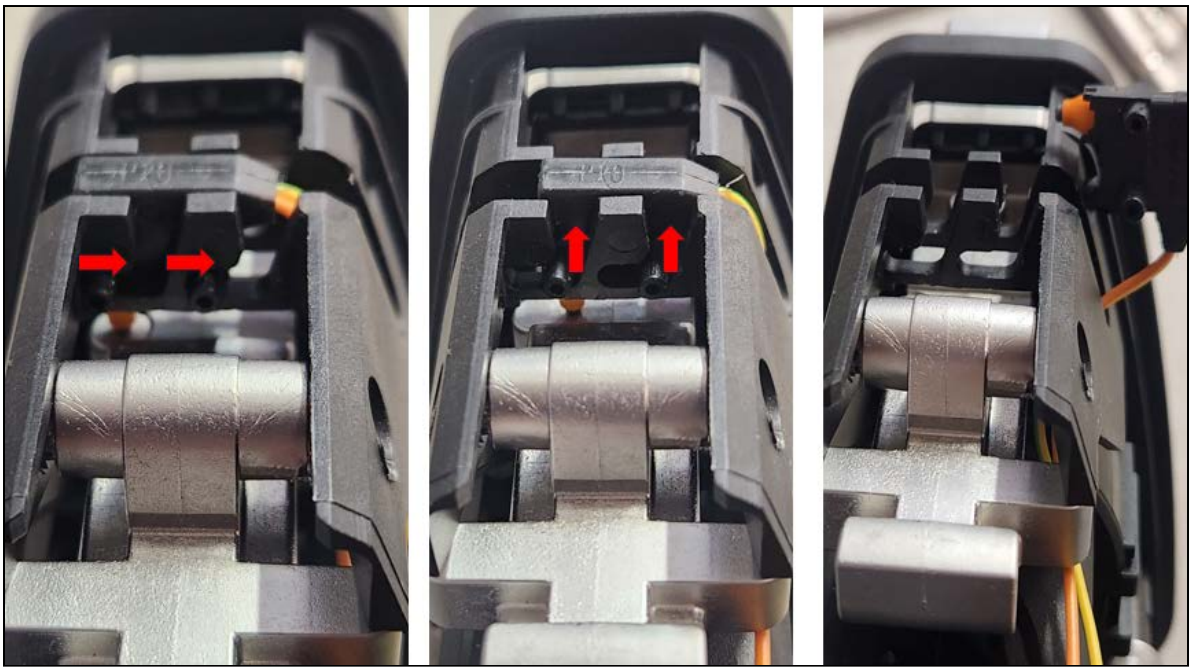
Store the 2x 4X20-TORX screws + hand grip + hand grip spring + latch lever + latch spring + ChargePoint sticker in a safe bin as they will be used later to re-assemble the cable back together.

Inspect the the upper, bottom and two sides of the opened-up cable for pinched/cut/damaged wires and/or broken parts, see Visual Standard (page 9-12).

Disassemble microswitch and replace latch:



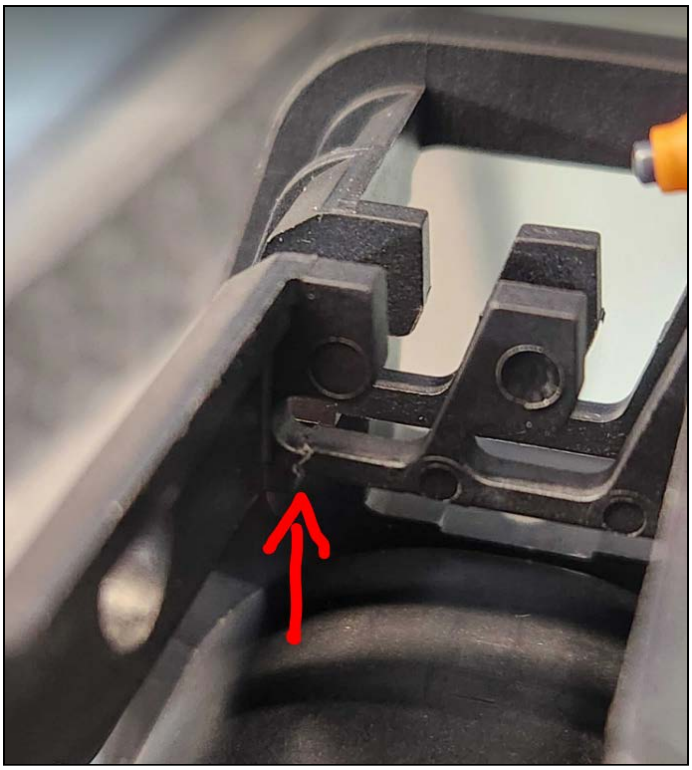
Gently slide the 2x bottom plastic supports of the microswitch to the right to unlock it, then it slide up to remove the sensor from the cable handle as shown below.



Replacing the latch; follow the steps exactly as described and shown below:
Note: scrap the old metal latch, it will no longer be needed.

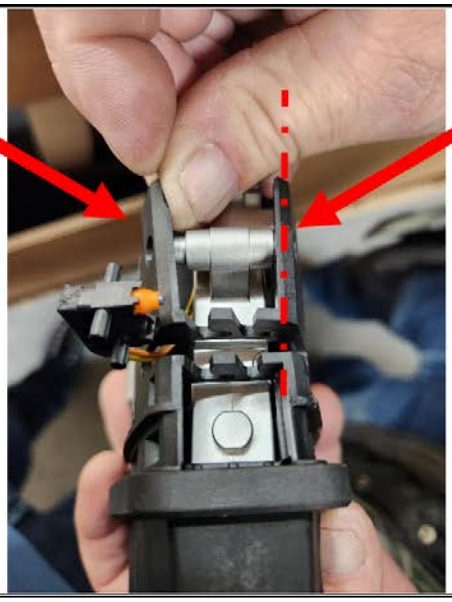
WARNING: EXCESSIVE FORCE WHEN PULLING METAL LATCH COULD BREAK THE PARTS. PROCEED WITH CAUTION AND STOP THE REPAIR IF BROKEN PARTS ARE FOUND. REJECT AND STOP UPGRADE PROCESS IF BROKEN PIECES ARE FOUND, SEE VISUAL STANDARD FOR REFERENCE AND IMAGE BELOW:

Pulling the latch frame wings aggressively may crack the microswitch holder

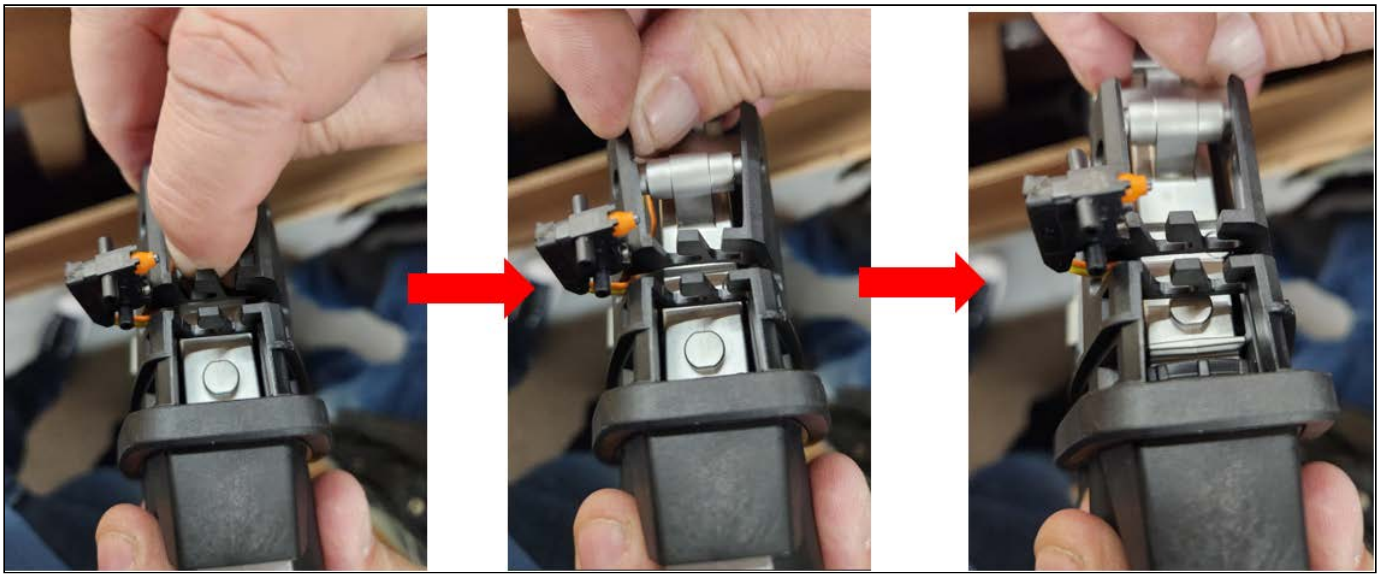


From a front/upper view like shown below, start by pulling gently the left plastic wing to detach the left side of the latch

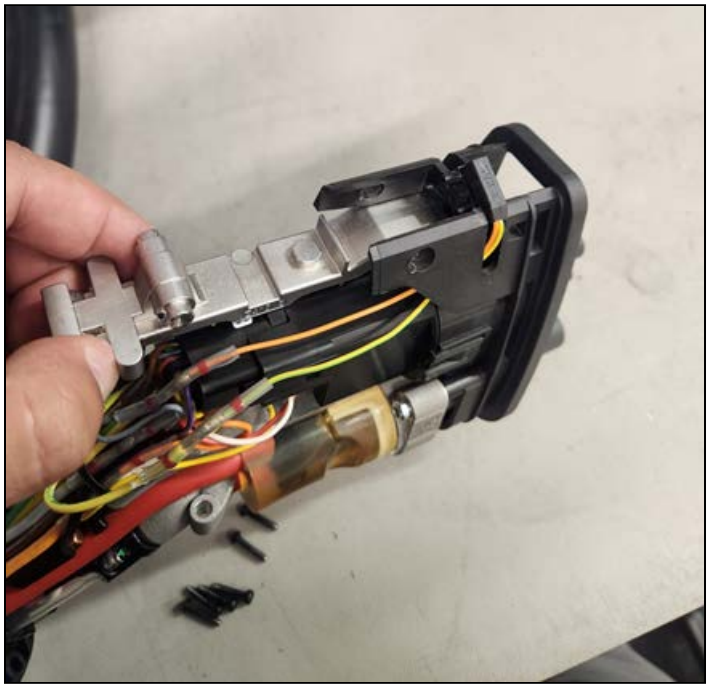
Replacing the latch; follow the steps exactly as described and shown below:
Note: scrap the old metal latch, it will no longer be needed.

Critical Step: From a front and upper view as shown in the picture, slightly and gently pull the left plastic wing to detach the left side of the latch		Maintain the right wing straight, pullig it will cause the plastic to break

Once the left side of the latch is detached, gently pull back the latch to detach the right side too. Then once both sides are detached from the plastic holes, pull out the entire latch from the plastic assembly, see below:



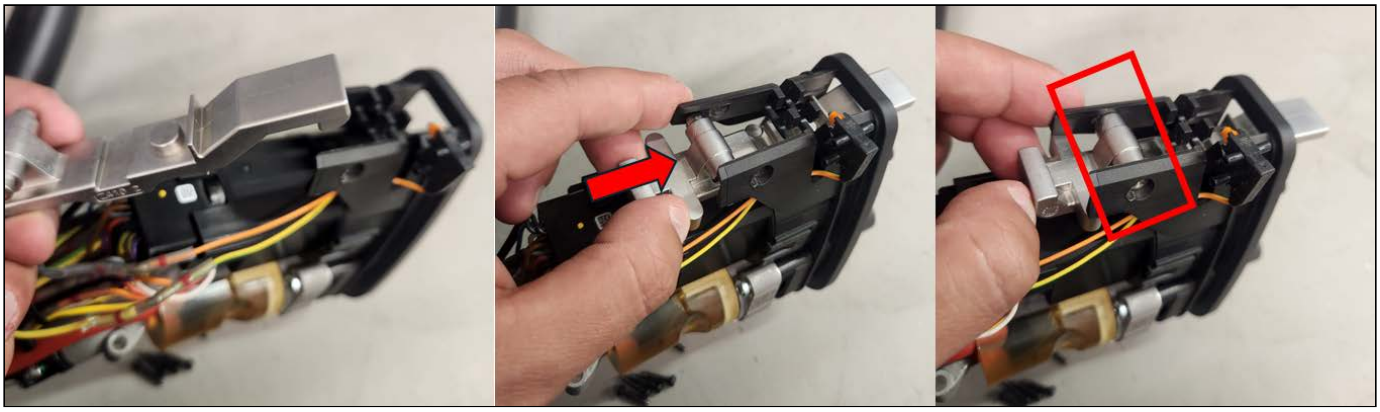
Remove latch by pulling it out gently from the connector assembly



Store the latch grommet in a safe bin as it will be used later to re-assemble the cable back together.

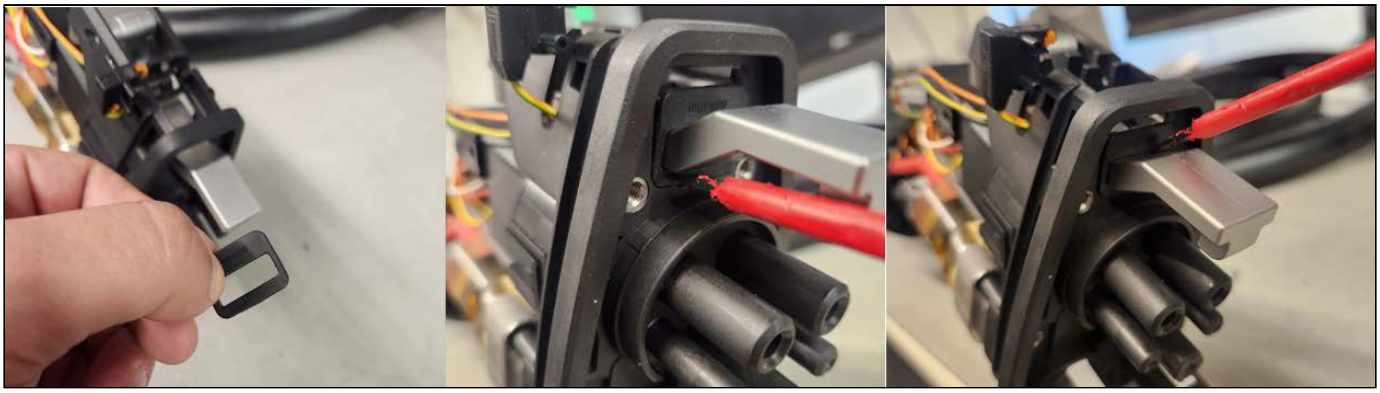
Inspect the the upper, bottom and two sides of the opened-up cable for pinched/cut/damaged wires and/or broken parts, see Visual Standard (page 9-12)

Insert the new latch through the connector frame as shown below. Ensure latch is assembled correctly by inserting both pivoting holes from latch into the pivoting holes of the latch frame. Latch shall stay locked in place after.

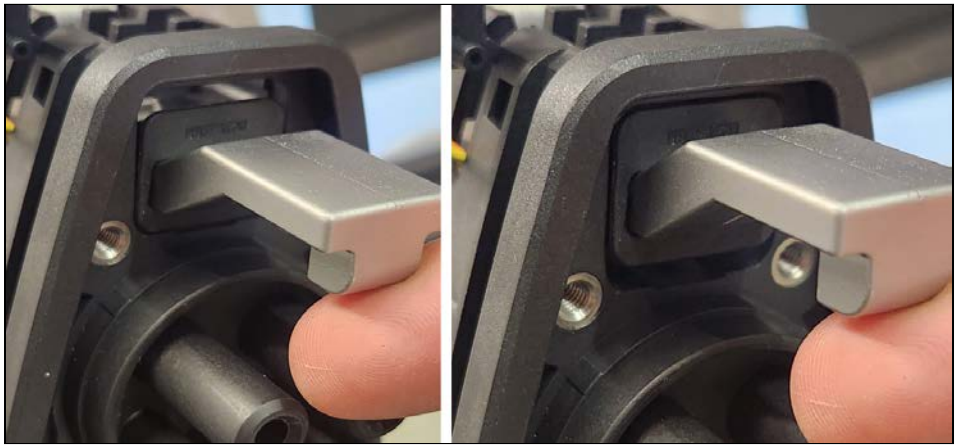


Inspect the the upper, bottom and two sides of the opened-up cable for pinched/cut/damaged wires and/or broken parts, see Visual Standard.

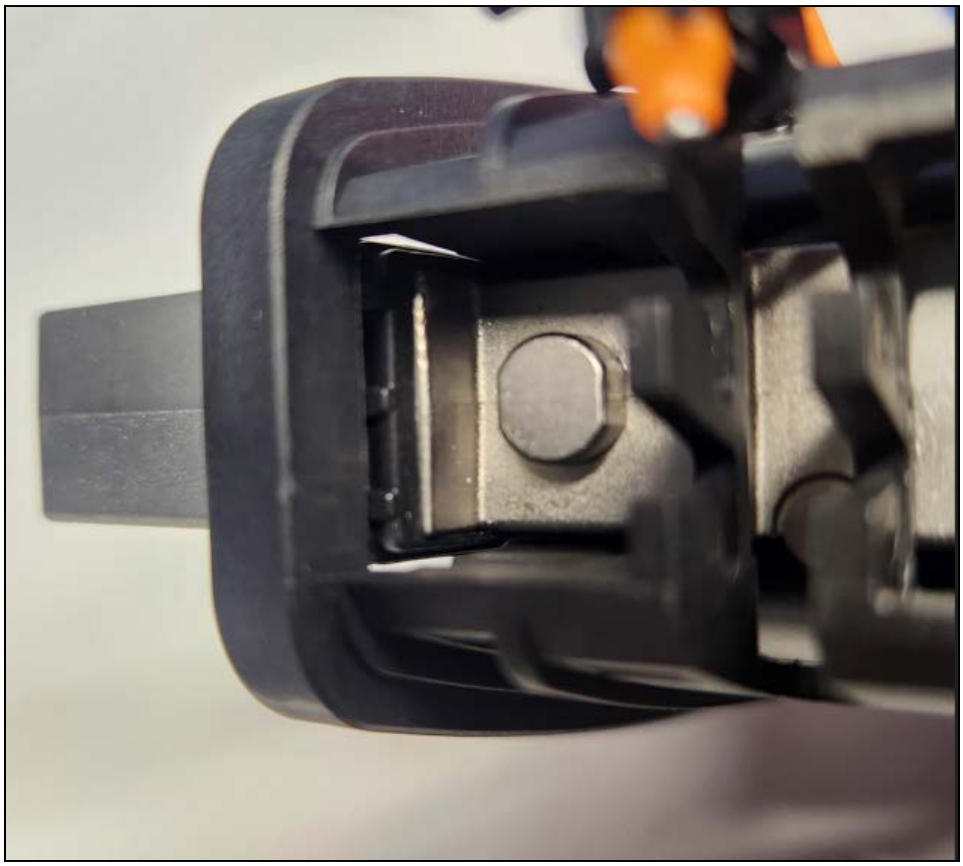
Insert the grommet from the upgrade kit into the latch tip with the engraving on the top side and facing away from the connector side. Push it through until it is aligned with the connector frame. Use the flat head screwdriver if needed to push the grommet in place.



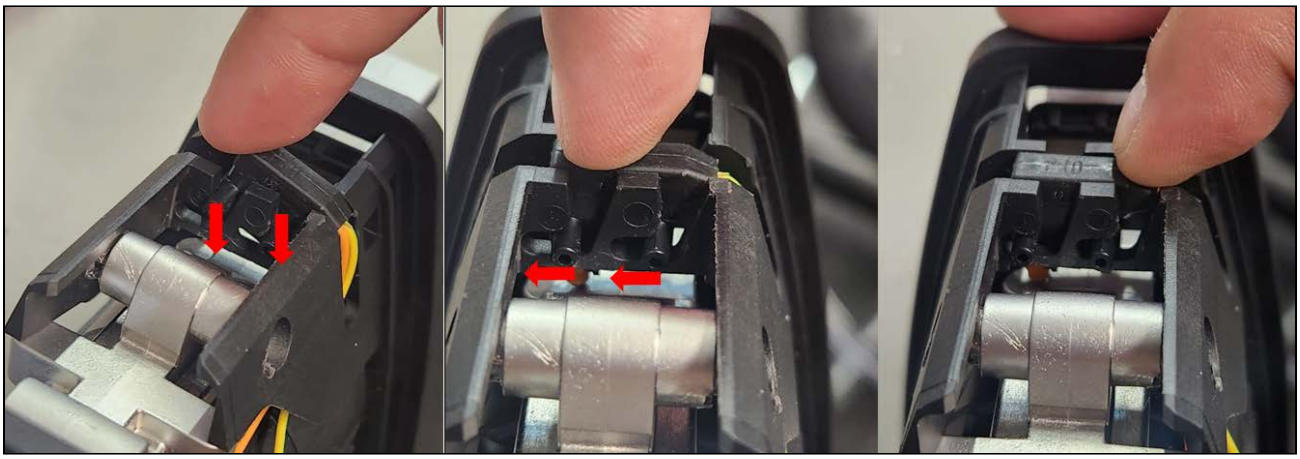
Move the latch up and down to ensure the grommet is flush with the connector frame.



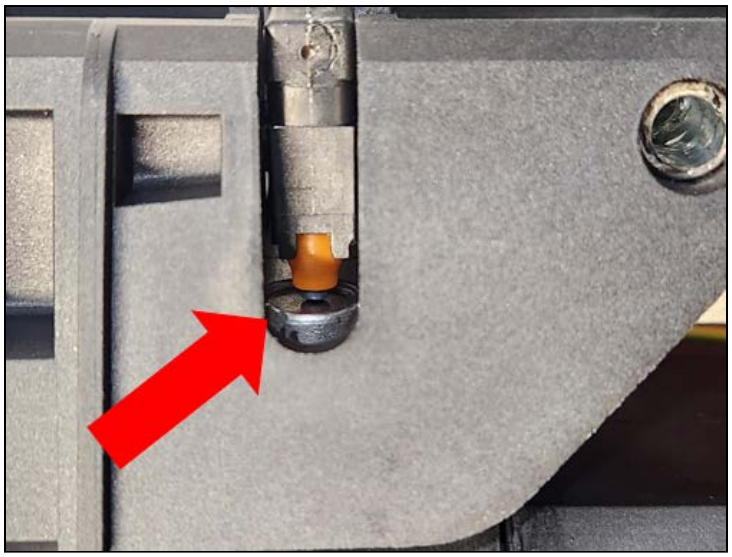
Inspect the latch seal from the interior of the cable as well, see below for acceptable orientation:



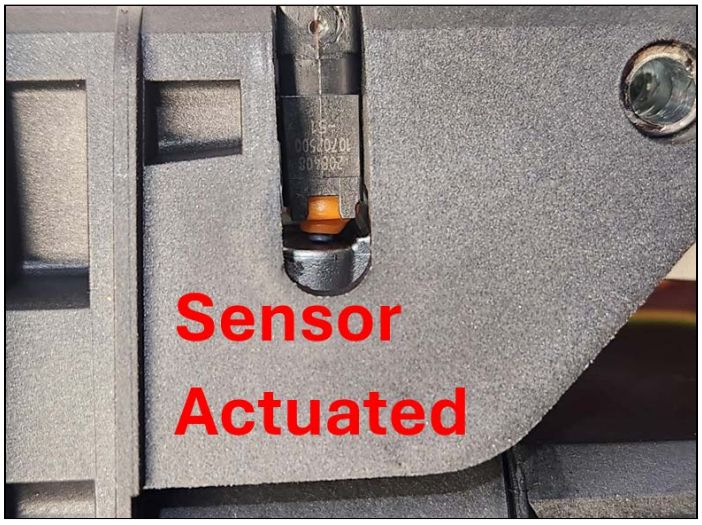
Re-insert the microswitch into the connector frame by gently sliding the bottom plastic supports downwards in a vertical position, then slide the supports to the left to lock the sensor
NOTE: if necessary align the two plastics tabs on the microswitch horizontally, then gently push down to complete the insertion.



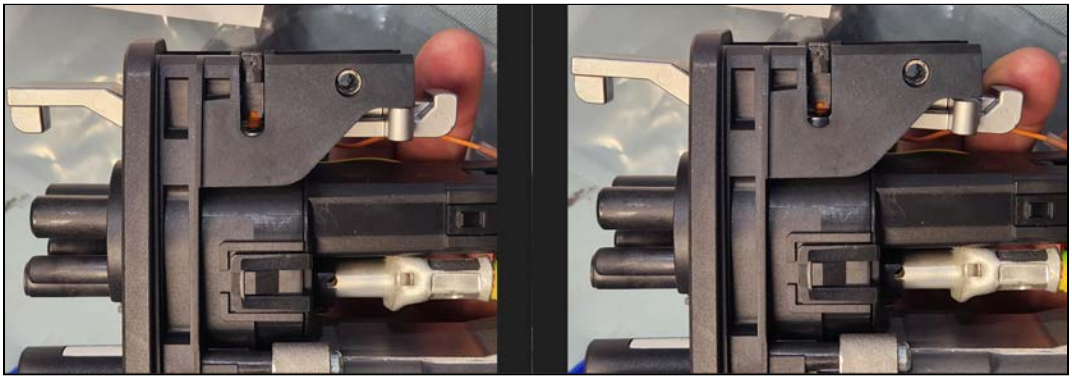
Verify the latch and microswitch sensor by ensuring the pressure sensor is located above the circular marked area on the metal latch.



Push the latch tip up and down to ensure the pressure sensor of the switch actuates along with the latch movement:



LEFT SIDE: Latch and sensor resting. RIGHT SIDE: Latch actuated and sensor actuated



If not assembled together, insert the latch handle + spring into upper cover

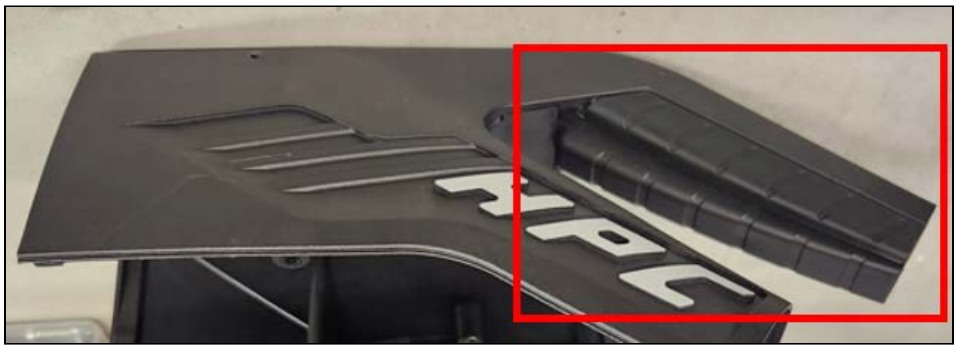
Insert spring into the hole of the hand grip plastic part as shown below:

Assemble the hand grip + spring assembly into the upper plastic cover by sliding through the grip as shown below:

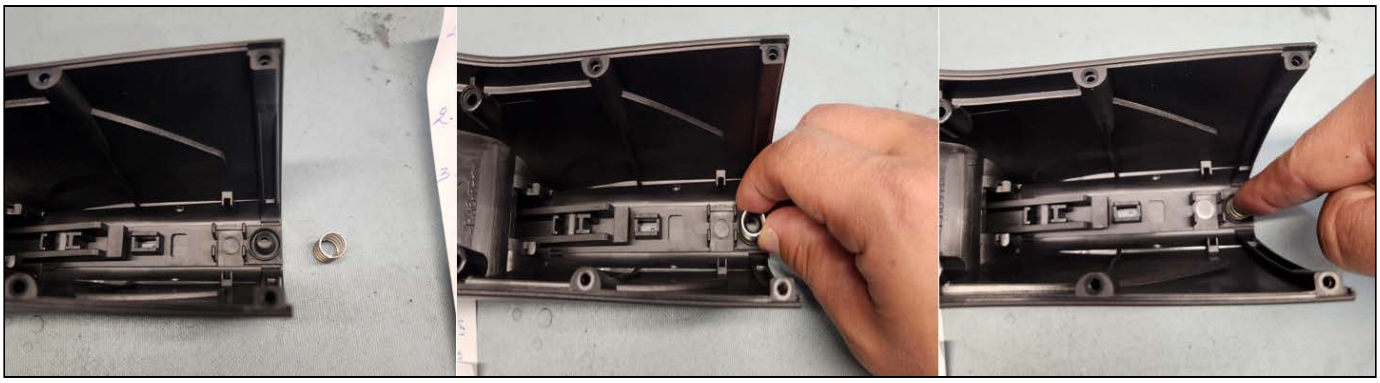
From the side view shown below press the hand grip against the upper cover to eventually push in the plastic feature of the hand grip highlighted below into the upper cover part:

To verify the hand grip + spring + upper cover assembly is working as intended, press down the hand grip and release multiple times to ensure the spring works and the assembly is well secured

Below the final assembly for the upper cover + hand grip + had grip spring:



Install the latch spring as shown below, push down to lock it in the circular feature of the upgraded upper cover

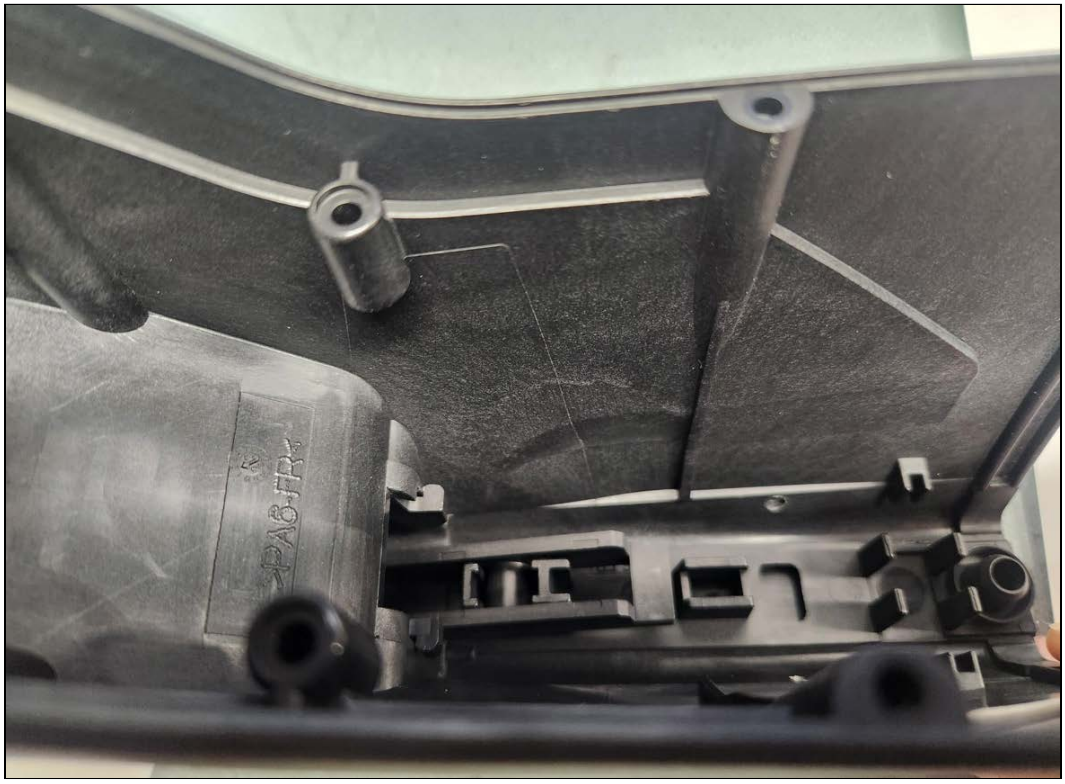


Assemble the upper cover, the spring, and the latch actuator by inserting the spring in the extruded features located on the right inner side of the cover, then insert the latch actuator into the cover in the following manner and orientation:

See below for correct orientation and position of the lever:

See below for correct orientation and position of the lever:

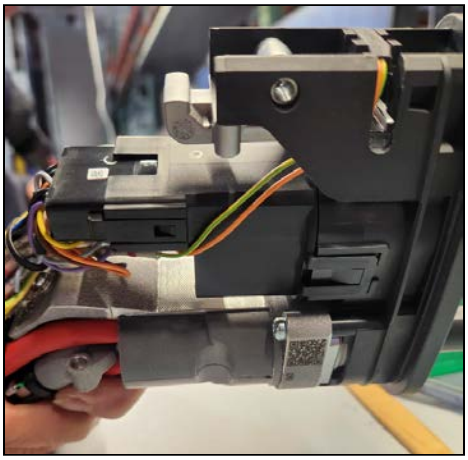
See below for correct orientation and position of the lever:



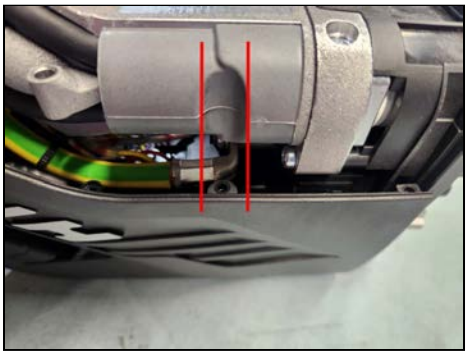
Inspect the the upper, bottom and two sides of the opened-up cable for pinched/cut/damaged wires and/or broken parts, see Visual Standard.

While having the upper cover and cable in upside position insert the cable back into the cover. Ensure the cable assembly tabs aligns with the cover plastic rails during insertion. Once aligned push down and mate both pieces.

Ensure the signal wires are away from the walls and centered in the middle of the interior of the plug assembly as shown below:



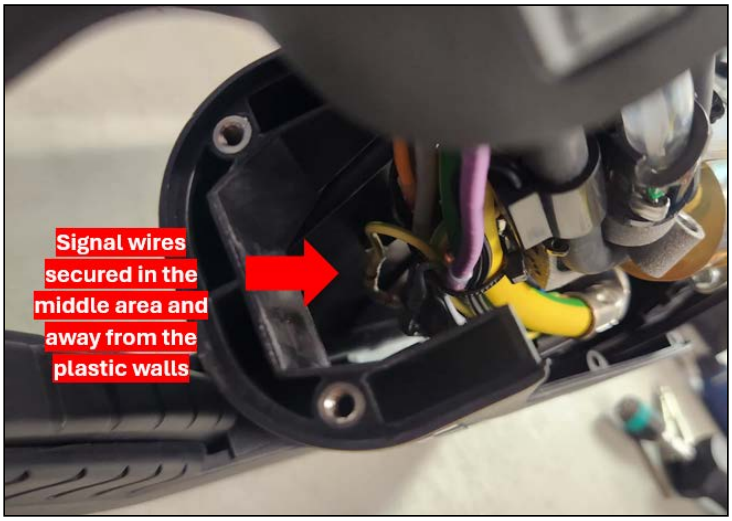
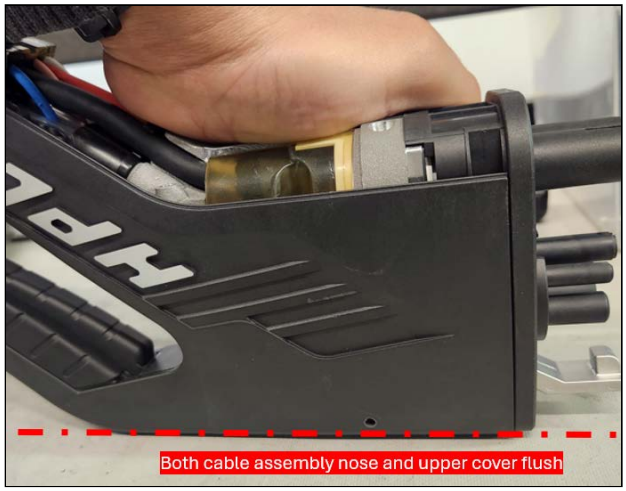
Align the die casting holes with the upper cover tabs



As optional use the mounting fixture for additional stability. First place the upper cover facing down into the fixture cavity and then insert the cable into the upper cover following the precautions and requirements specified in Page 45, 46 and 47.

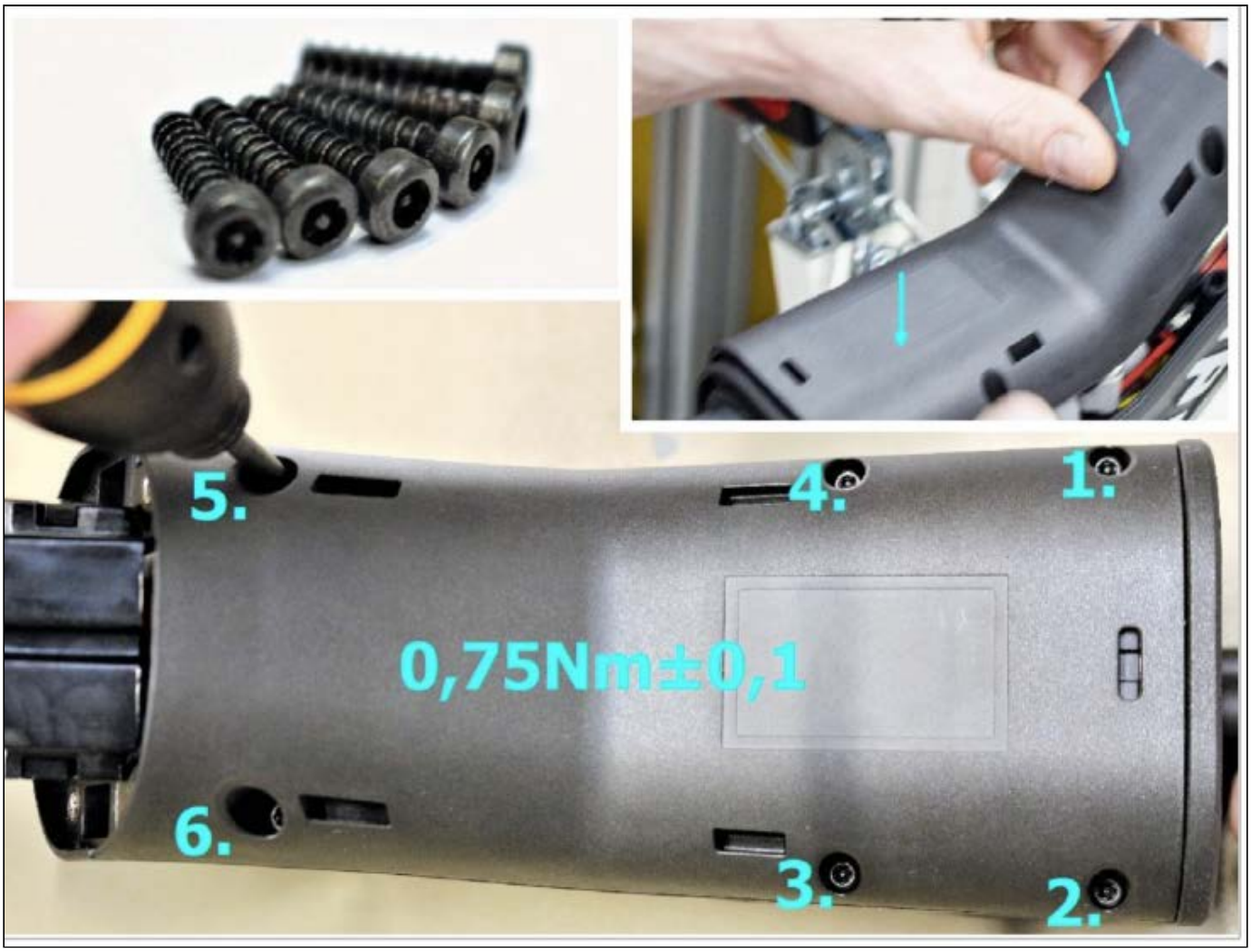
The upper cover shall be inserted smoothly, if any interference is noticed stop the assembly process to verify what is blocking the insertion (i.e., component at the edge blocking the cover; see below)

Once all wires and components are cleared process with the cover insertion:

Ensure all wires remain in the middle of the cable assembly and away from the plastic walls during insertion to avoid teardown or damages	Gently continue pushing down cable assembly until upper cover and nose of cable assembly are flush with each other
	

Hand tight the 2x upper cover screws using the S2 TT20 screw head, then torque down to 1.6 +/-0.1 Nm. Then test the lever to ensure it moves the latch up and down as intended.

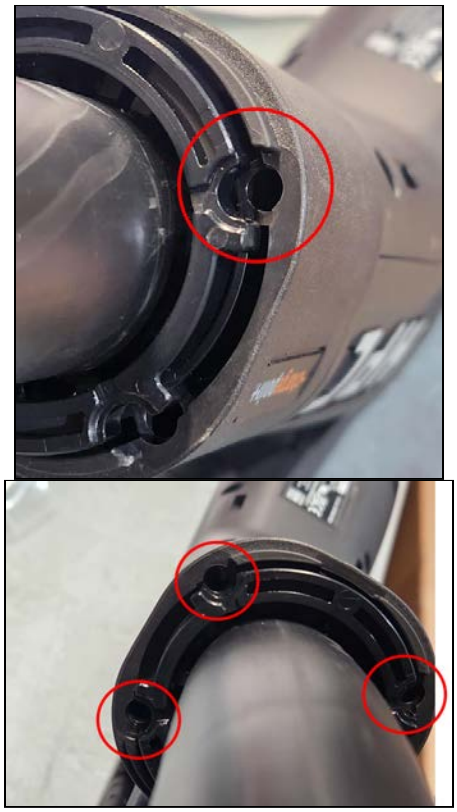
Use the S2 T10 head to screw the 6x bottom cover screws, then torque down to 0.75 +/-0.1 Nm in the following sequence:



The cable assembly can be upside down again to its rest position. Push the 2nd rear cover back its original position (flush against upper and bottom cover). Insert screw with S2 T20 head and torque down to 2.4 +/-0.1 Nm

Using the flat head screw driver push the strain relief back to its original position. Use the 1st rear cover as support to push the strain relief if necessary. The strain relief needs to be flush against 2nd rear cover.
NOTE: The cable shall be in relaxed/rest position. DO NOT BEND OR TWIST CABLE DURING THIS STEP.

Ensure the strain relief screw holes are aligned with the rear end screw holes:



Ensure the rear end cap orientation matches the images shown below:
NOTE: The cable shall be in relaxed/rest position. DO NOT BEND OR TWIST CABLE DURING THIS STEP.

Inspect the spring on the tip of the latch. Ensure it is in right spot as shown in the picture.

Ensure the rear end cap orientation matches the images shown below:
NOTE: The cable shall be in relaxed/rest position. DO NOT BEND OR TWIST CABLE DURING THIS STEP.

SIDE VIEW

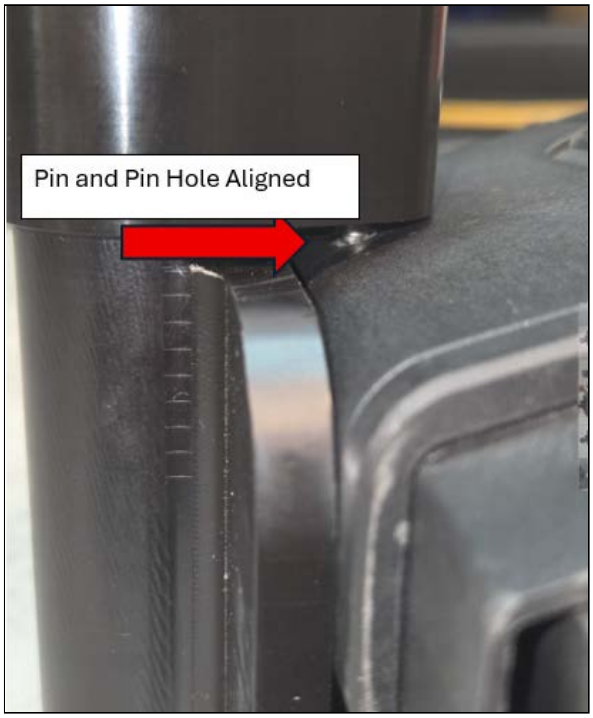
UPPER VIEW

Push the 1st rear cover back to its original location and insert the 4x long screws to complete the assembly. Use the S2 T20 screw head to torque down to 0.75 +/-0.1 Nm per the sequence shown below. Then use the S2 T20 screw head again to torque down to 1.2 +/-0.1 Nm using the same sequence **NOTE: The cable shall be in relaxed/rest position. DO NOT BEND OR TWIST CABLE DURING THIS STEP.**	Rear cover should be flush against cable handle, no gaps allowed between handle and rear cover. **NOTE: The cable shall be in relaxed/rest position. DO NOT BEND OR TWIST CABLE DURING THIS STEP.**
	

Use the screwdriver and the S2 T20 screw head to assemble back the 5 M4X10-5TX screws and the front plastic cover. Torque down to 1.2 +/-0.1 Nm

Insert metal pin

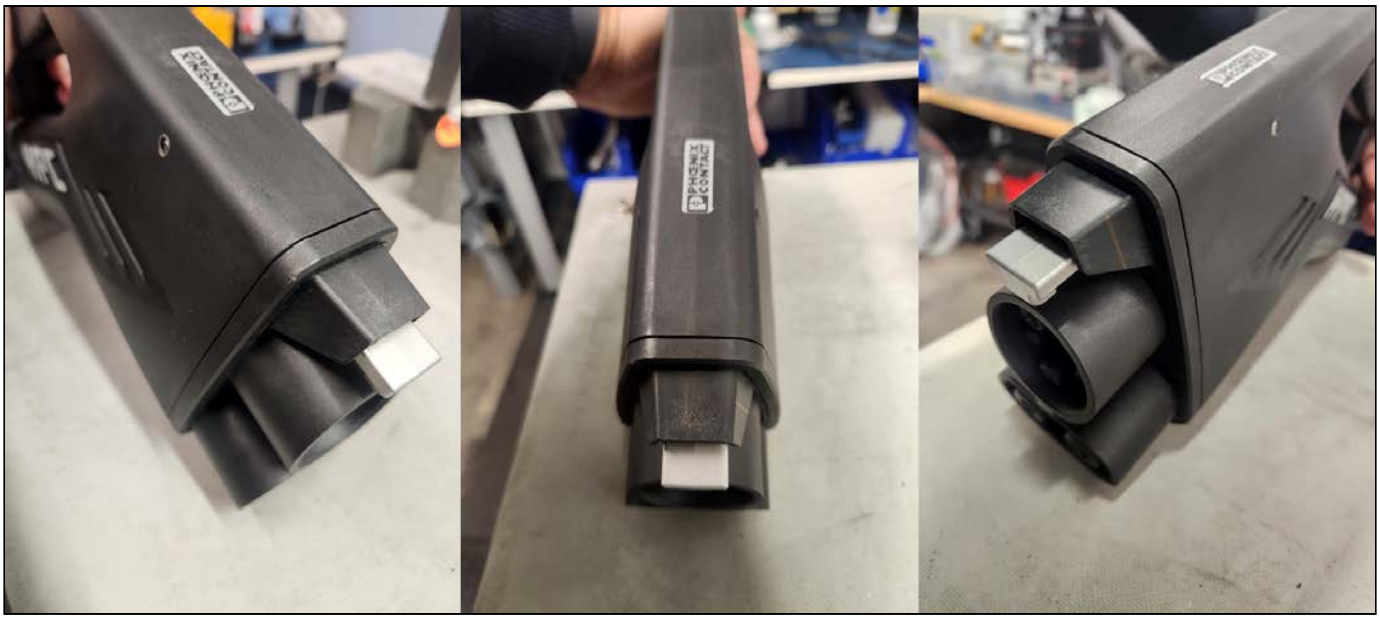

Use the ChargePoint Insertion Fixture to insert in the pin into the handle. Mount the cable on the fixture as shown below	Mount the pin guide into the fixture as shown below
	

Insert the pin of the kit into the pin guide and the fixture bolt in the threaded hole	Align the pin with the pin hole by rotating the pin guide and inspecting the alignment on the bottom side
	

After aligning the pin, use the ratchet and the 14 mm socket to secure the pin guide on to the fixture	Insert the nut from the ChargePoint fixture kit into the pin guide cavity, then the threaded screw to begin the insertion
	

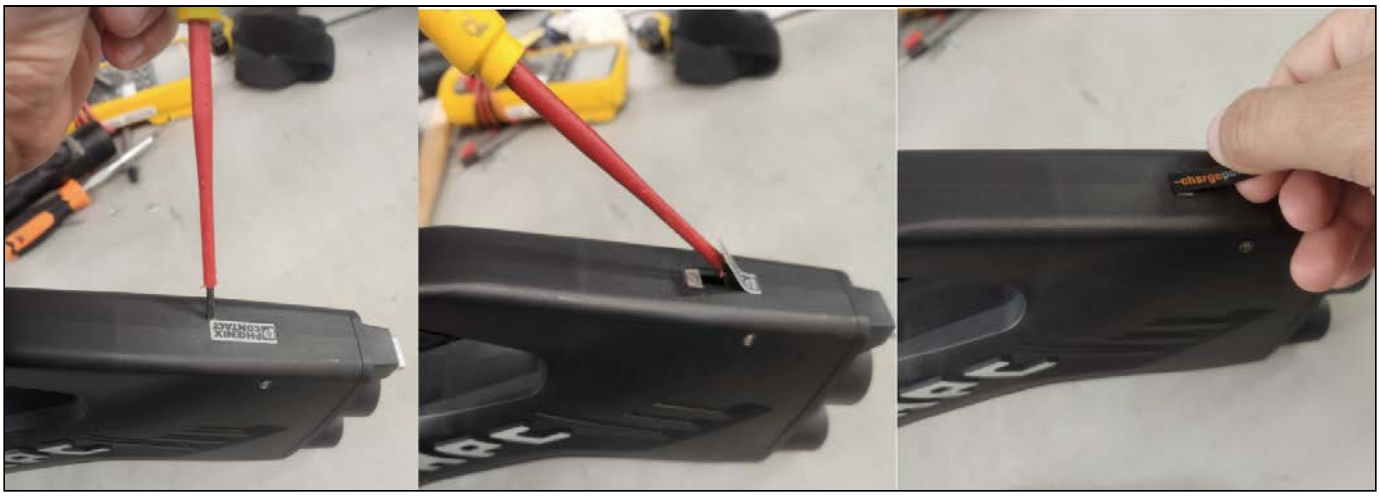
Use the allen key from the ChargePoint fixture to rotate the threaded screw and start inserting the pin reinforcement into the pin hole	The pin insertion step is complete once you are able to see the pin reinforcement tip flush with the surface of the cable handle as shown below
	

Remove the cable handle from the fixture and inspect both sides. Ensure metal pin is flush evenly against both sides of the upper cover hole

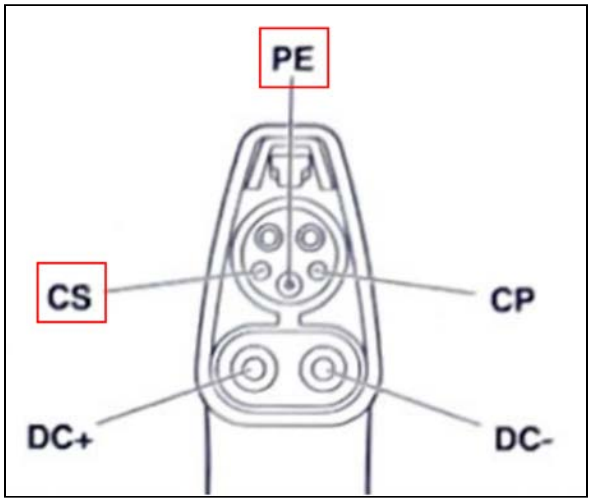


As optional, use a mallet and a screwdriver 3 or 4 mm OD (outer diameter) to even the metal pin across the hole in the plug.

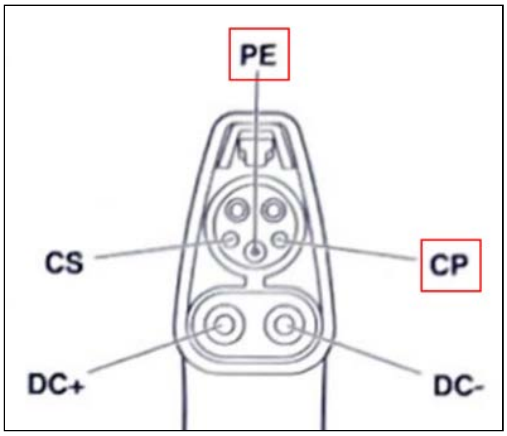
Remove Phoenix Contact Sticker from the upper plastic cover using a flat head screwdriver, then paste new ChargePoint Sticker as shown below:



Measure the resistance across CS (+) and PE (-) using a Digital Multimeter with the terminal adapter.
NOTE: DO NOT ATTEMPT MEASUREMENTS WITHOUT THE TERMINAL ADAPTER, OTHERWISE THE PROBING MAY DAMAGE THE TERMINALS IN THE CONNECTOR.



- With the latch at rest (level not operated) the resistance shall be 150 +/- 10 Ohms.
- With latch actuated (level operated) the resistance shall be 480 +/- 10 Ohms.

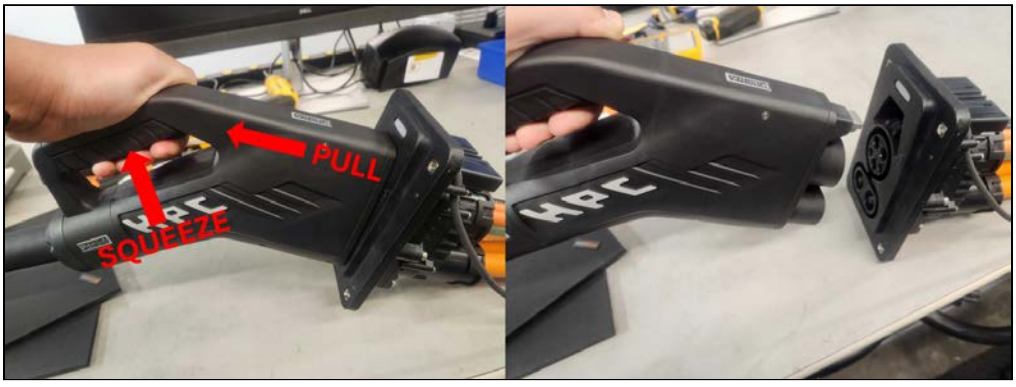
As optional, measure the resistance across CP (+) and PE (-) using a Digital Multimeter with the terminal adapter. **NOTE: DO NOT ATTEMPT MEASUREMENTS WITHOUT THE TERMINAL ADAPTER, OTHERWISE THE PROBING MAY DAMAGE THE TERMINALS IN THE CONNECTOR.**	If measuring standalone cables the resistance shall be 201 +/- 10 kOhm. If measuring mounted cable on powered off Power Link 2.0 station the resistance shall be 161 +/- 10 kOhm.
	

Functionally test the upgraded plug as follows:

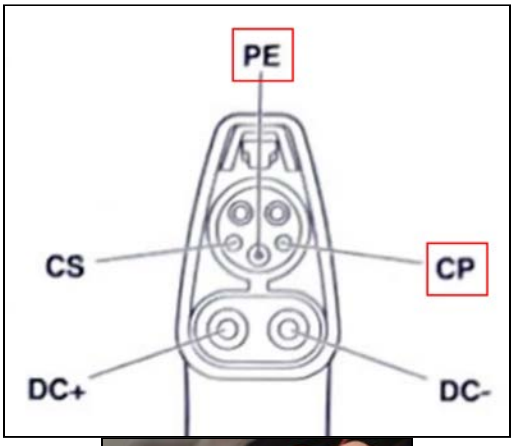
Plug charging cable connector into a golden or known good CCS1 EV inlet

Verify the latch locking mechanism works as intended by pulling away the charging cable from the vehicle inlet (without level operated)

Operate the lever and pull the connector away from the EV inlet. Ensure connector is able to disconnect smoothly from CCS1 EV inlet.



As optional and after returning the Power Link 2.0 Power Blocks power back, measure the voltage (DC) across CP (+) and PE (-) using a Digital Multimeter. The voltage measurement shall be 12 +/- 0.9 V DC.
NOTE: DO NOT ATTEMPT MEASUREMENTS WITHOUT THE TERMINAL ADAPTER, OTHERWISE THE PROBING MAY DAMAGE THE TERMINALS IN THE CONNECTOR.



7. **Check for correction functioning of the cable by running a charging session with an electric vehicle. Make sure that the charging connector can be correctly plugged in and removed from the vehicle charging inlet.**
8. **Go to** http://chargepoint.com/support **, find your region's technical support number, and contact ChargePoint Support before releasing the charging station for use.**

Limitation of Liability

CHARGEPOINT IS NOT LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION LOST PROFITS, LOST BUSINESS, LOST DATA, LOSS OF USE, OR COST OF COVER INCURRED BY YOU ARISING OUT OF OR RELATED TO YOUR PURCHASE OR USE OF, OR INABILITY TO USE, THE CHARGING STATION, UNDER ANY THEORY OF LIABILITY, WHETHER IN AN ACTION IN CONTRACT, STRICT LIABILITY, TORT (INCLUDING NEGLIGENCE) OR OTHER LEGAL OR EQUITABLE THEORY, EVEN IF CHARGEPOINT KNEW OR SHOULD HAVE KNOWN OF THE POSSIBILITY OF SUCH DAMAGES. IN ANY EVENT, THE CUMULATIVE LIABILITY OF CHARGEPOINT FOR ALL CLAIMS WHATSOEVER RELATED TO THE CHARGING STATION WILL NOT EXCEED THE PRICE YOU PAID FOR THE CHARGING STATION. THE LIMITATIONS SET FORTH HEREIN ARE INTENDED TO LIMIT THE LIABILITY OF CHARGEPOINT AND SHALL APPLY NOTWITHSTANDING ANY FAILURE OF ESSENTIAL PURPOSE OF ANY LIMITED REMEDY.

FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Important: Changes or modifications to this product not authorized by ChargePoint, inc., could affect the EMC compliance and revoke your authority to operate this product.

Exposure to Radio Frequency Energy: The radiated power output of the 802.11 b/g/n radio and cellular modem (optional) in this device is below the FCC radio frequency exposure limits for uncontrolled equipment. The antenna of this product, used under normal conditions, is at least 20 cm away from the body of the user. This device must not be co-located or operated with any other antenna or transmitter by the manufacturer, subject to the conditions of the FCC Grant.

ISED (formerly Industry Canada)

This device complies with the licence-exempt RSS standard(s) of Innovation, Science and Economic Development Canada (ISED). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme aux flux RSS exemptés de licence d'Innovation, Sciences et Développement économique Canada (ISDE). L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter.

Radiation Exposure Statement: This equipment complies with the IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

Énoncé d'exposition aux rayonnements: Cet équipement est conforme aux limites d'exposition aux rayonnements ioniques RSS-102 Pour un environnement incontrôlé. Cet équipement doit être installé et utilisé avec un Distance minimale de 20 cm entre le radiateur et votre corps.

FCC/IC Compliance Labels

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N/A R1