Tesla Coolant Delete Cap Installation Manual

product page

OVERVIEW

This manual provides step-by-step instructions for installing the Tesla coolant delete cap. This is a “How- To” guide intended to get you through the installation safely and correctly.

THE WHY

Tesla large drive units from 2012 to 2016 are known to have a common failure point where coolant can leak internally into the inverter section. This occurs when the factory coolant manifold or seals fail, allowing coolant to migrate into sensitive electronic areas, causing corrosion, electrical shorts, and eventual inverter failure.

We highly recommend you to perform this service ASAP to prevent expensive damage to your drive unit.

Installing a **coolant delete cap** is a preventative solution that blocks off these vulnerable coolant ports—eliminating the risk of coolant intrusion entirely. Whether you're using the drive unit in an EV conversion or performing maintenance on an existing system, this simple cap helps **protect your inverter from costly and irreversible damage** caused by internal coolant leaks.

In short, it’s a small upgrade that solves a big problem.

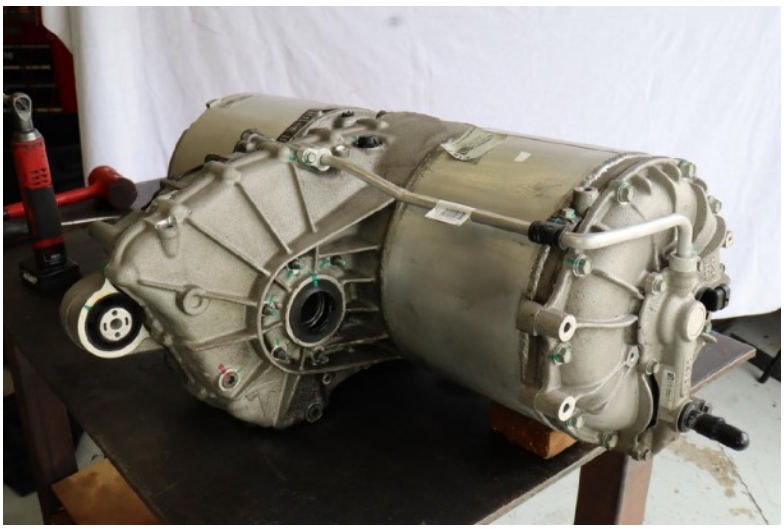
TOOLS & MATERIALS REQUIRED

- 10mm socket
- Ratchet or cordless impact
- Flat Head Screw Driver or Small Prybar
- Steel tube (to fit over the aluminum coolant tube)
- RTV silicone (sensor-safe, high-temp)
- Tesla coolant delete cap
- Aluminum slug or other means to press cap (sized to match the internal diameter of the cap)
- Clean rags or paper towels
- Safety glasses and gloves

INSTALLATION INSTRUCTIONS

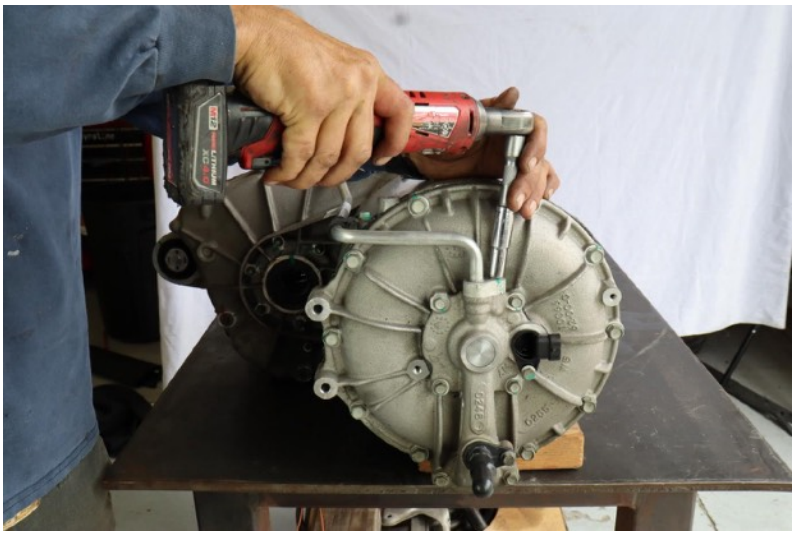
Set Up Your Work Area

- Once your Tesla motor is fully removed and placed securely on a workbench or table.
- Confirm you have approximately 10"–12" of clearance at the coolant port location.
- This space is necessary for removal and cap installation procedures.

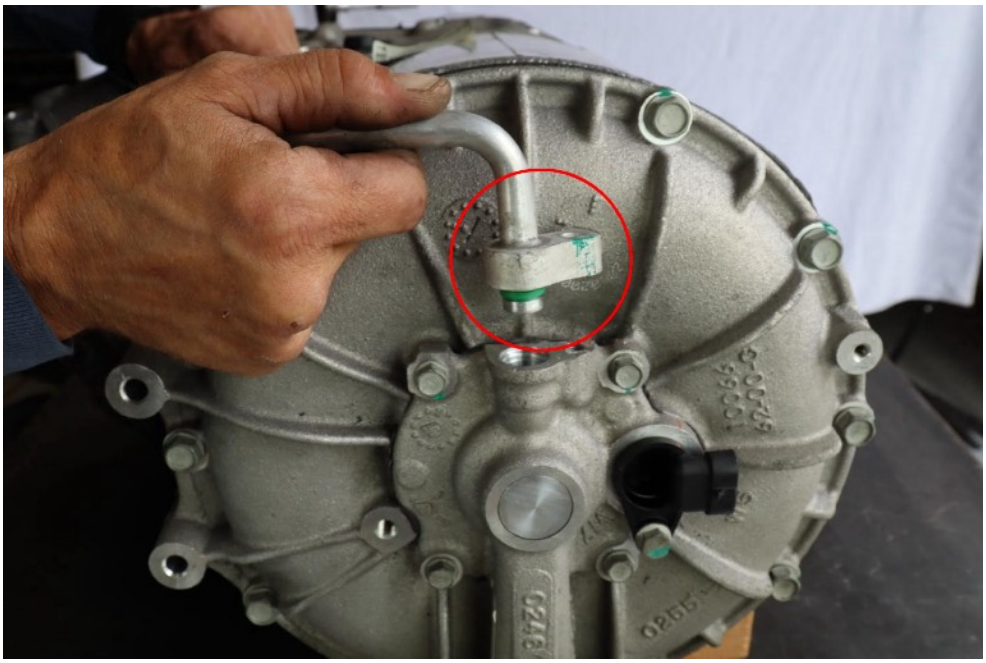


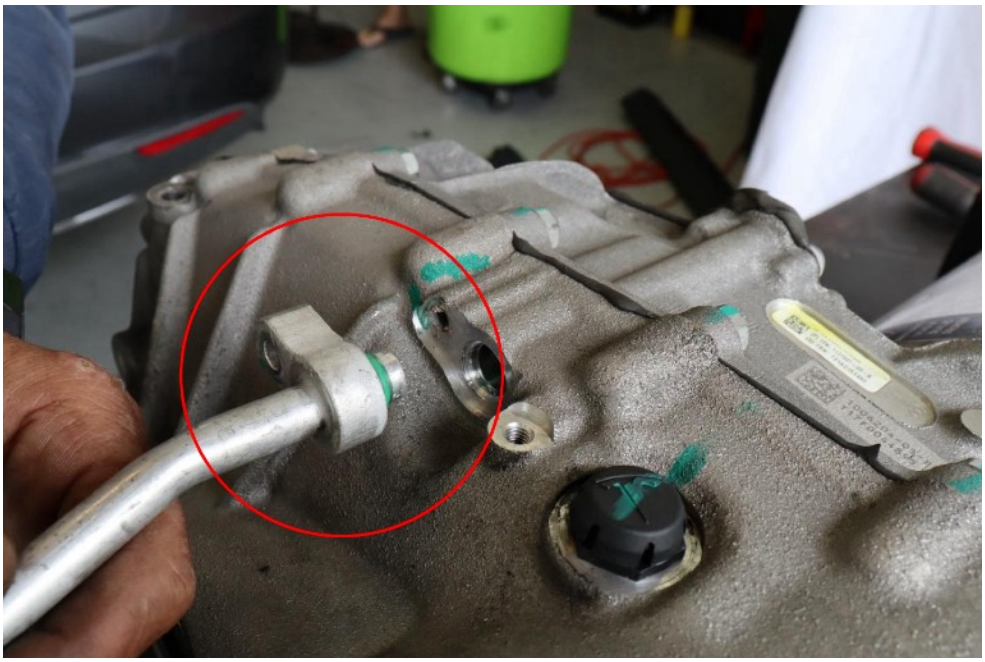
Remove the Coolant Crossover Tube

- Locate the coolant crossover tube that goes from the side of the motor that houses the coolant cap tube to the top of the motor.
- Carefully unbolt and remove the crossover tube using a 10mm socket



Make sure to keep the O-Rings on the Crossover Tube

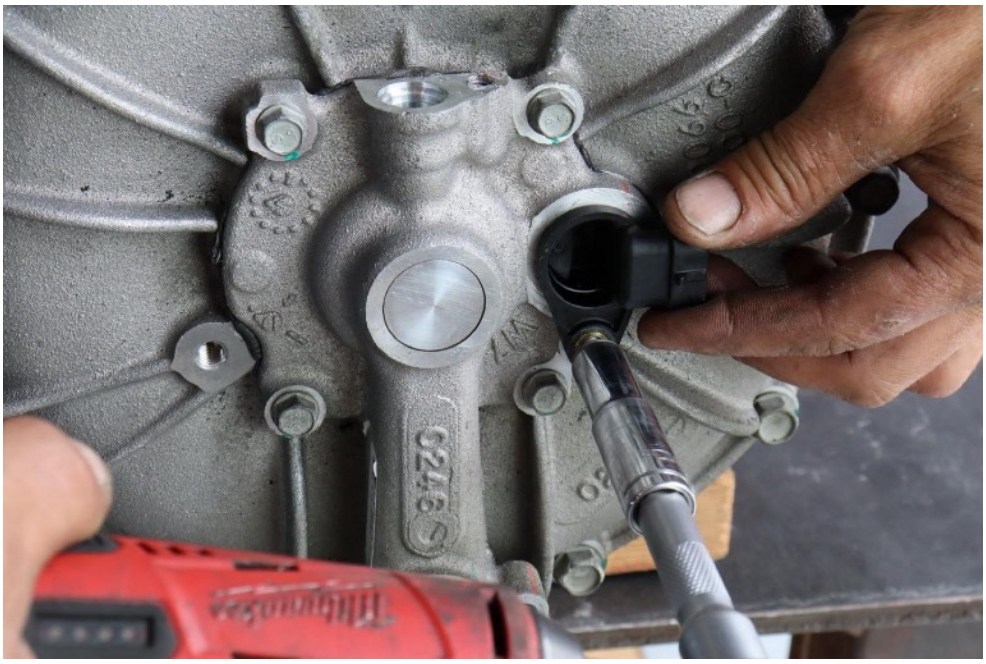




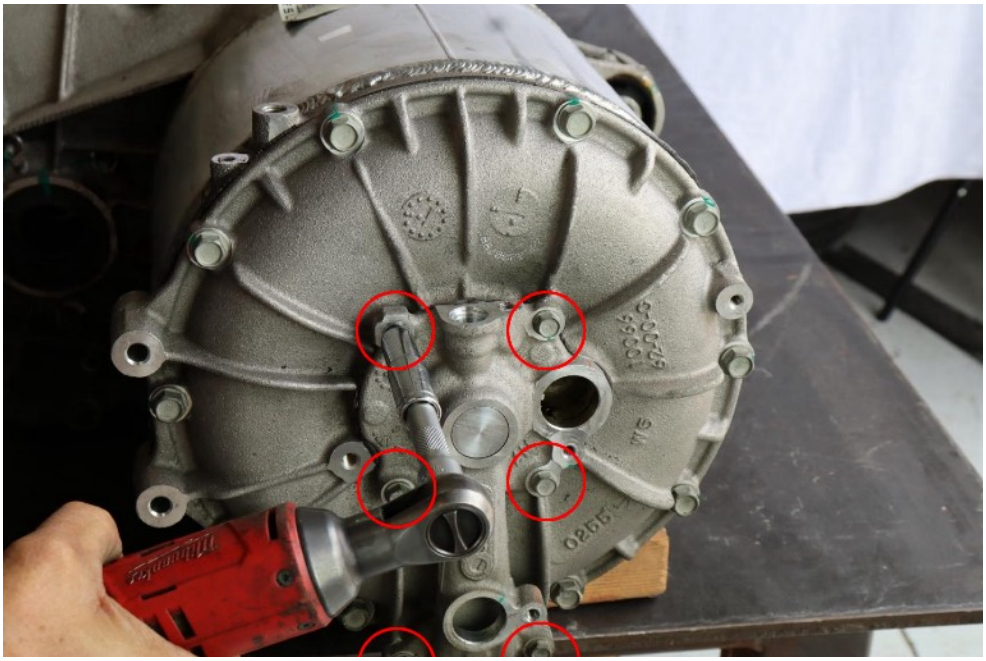
Remove the Lower Coolant Inlet port using a 10mm socket

Billet Aluminum Coolant Port Link

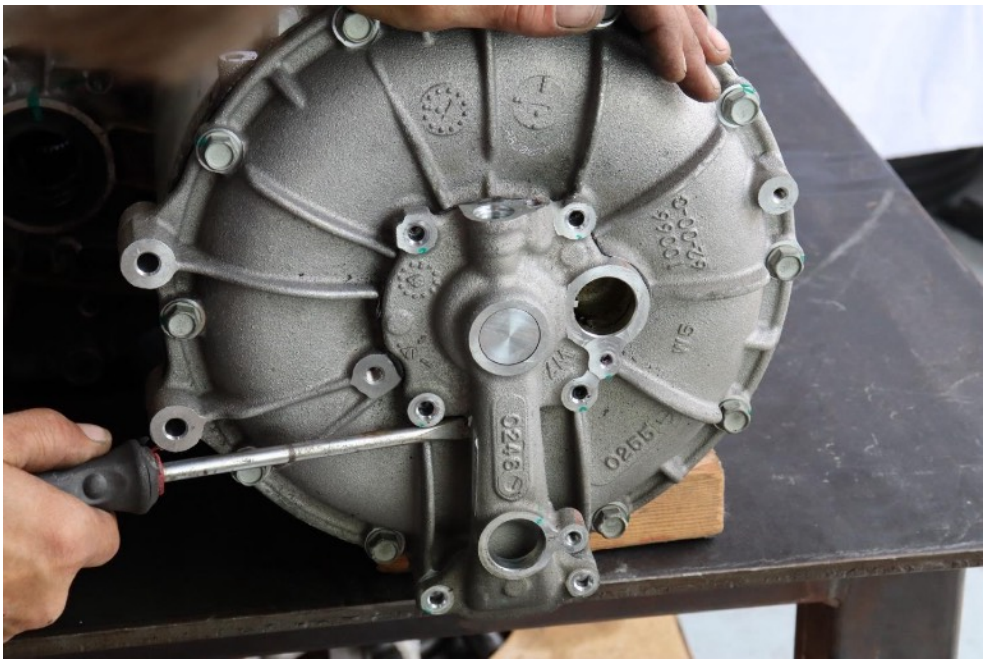
EV West Coolant Port Option - If you are wanting to get away from the push on hose we do offer a Billet Aluminum Coolant Port that is a 1/2"NPT that you can then use a 1/2" NPT to AN10 fitting for braided line. Scan QR code for link to the coolant port.

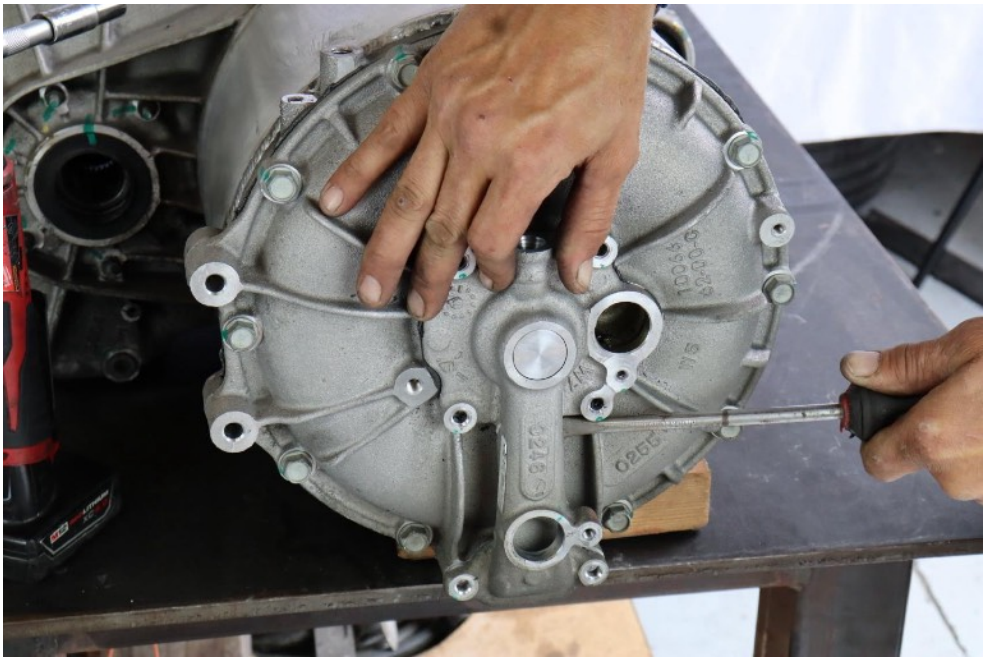


Remove the Encoder plug and then the encoder as well, using a 10mm socket.

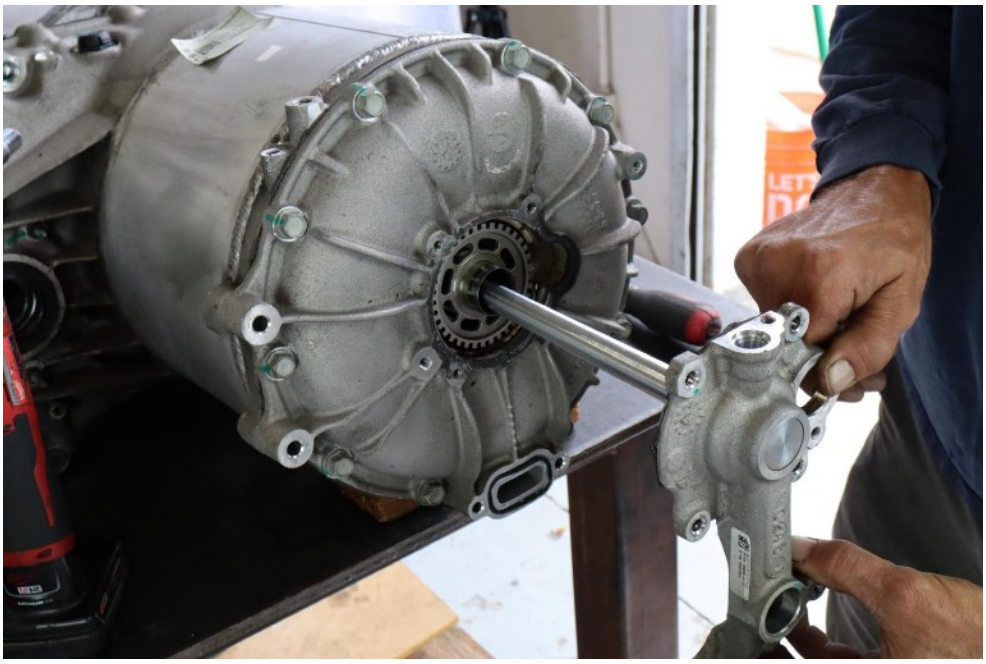


Remove the 6 bolts holding on the coolant cover from the motor using a 10mm socket

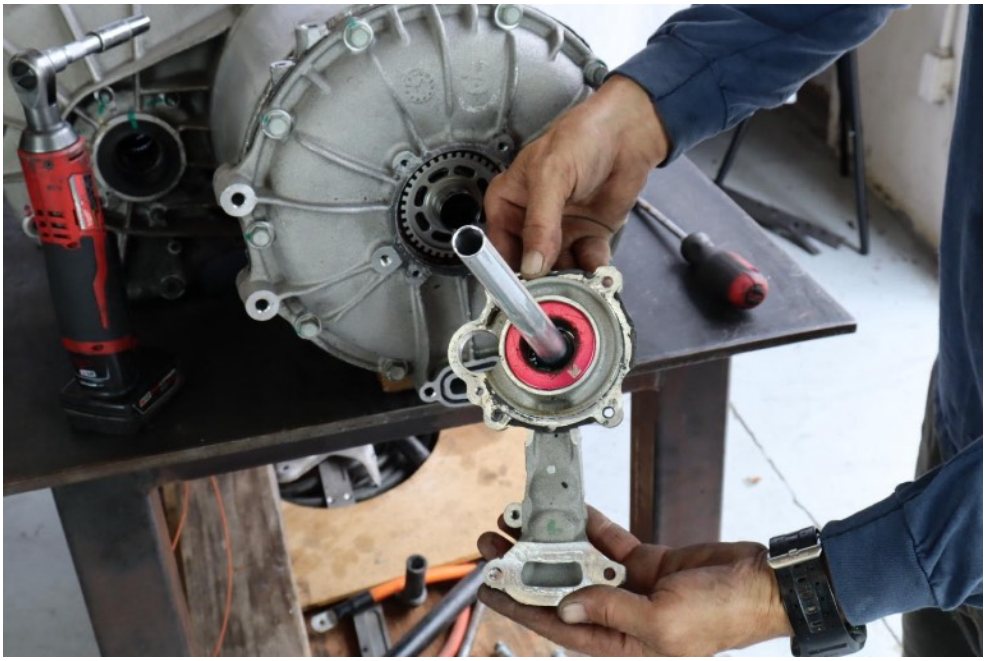




Using a small pry bar or flat head screwdriver from both sides carefully pry the cover off the motor.

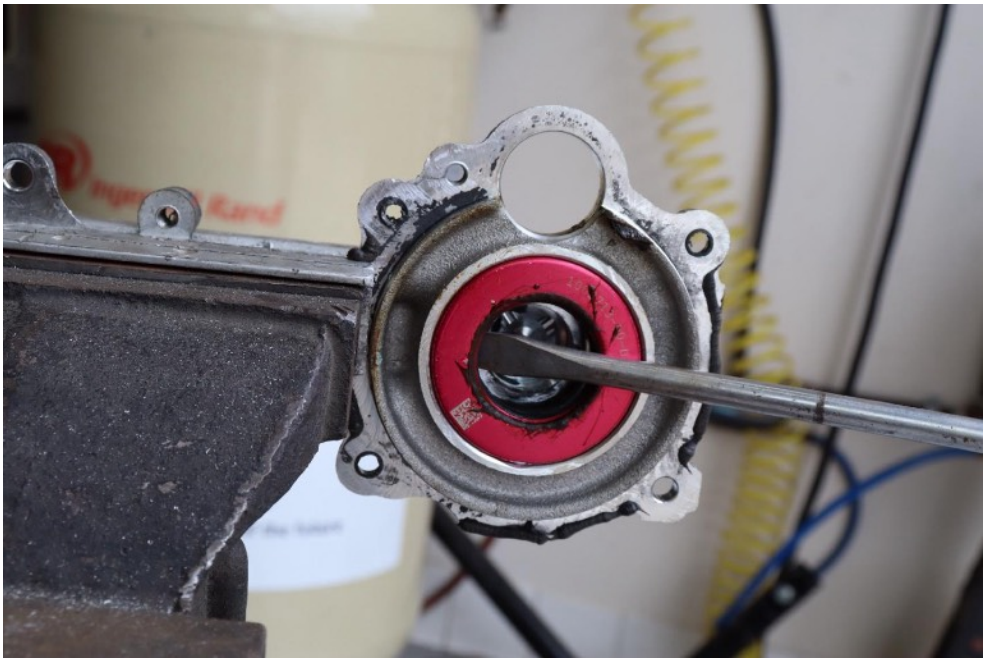


Pull the cover to remove it and the coolant tube from the motor.



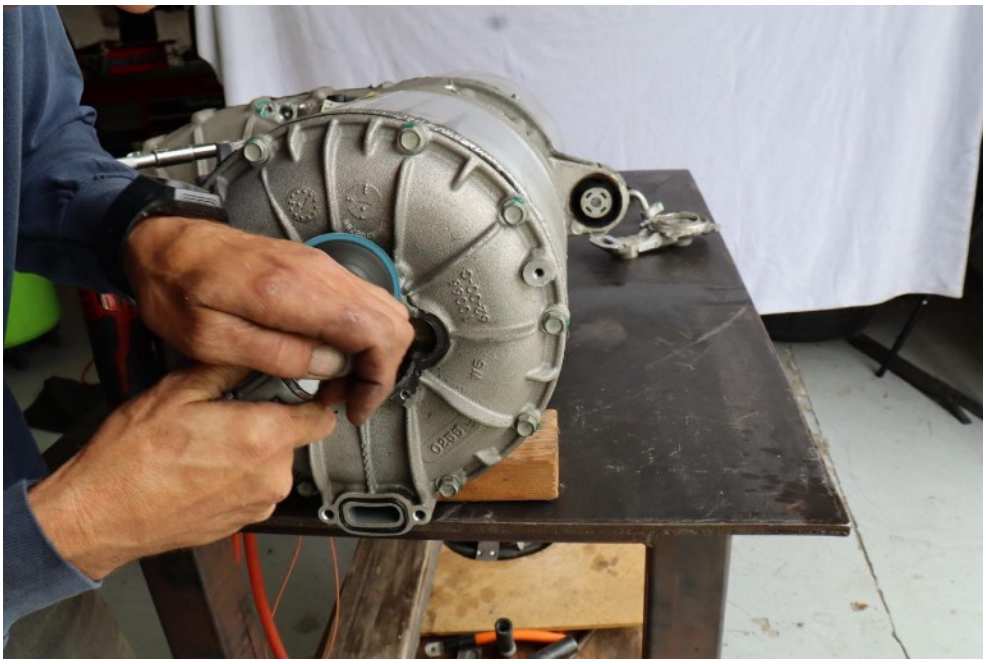
Carefully secure the coolant cover in a vise making sure not to damage the mounting surface when doing so.

Using a piece of pipe or something that can fit over the coolant tube you can gently pry up and down on the tube until it breaks free from the cap.



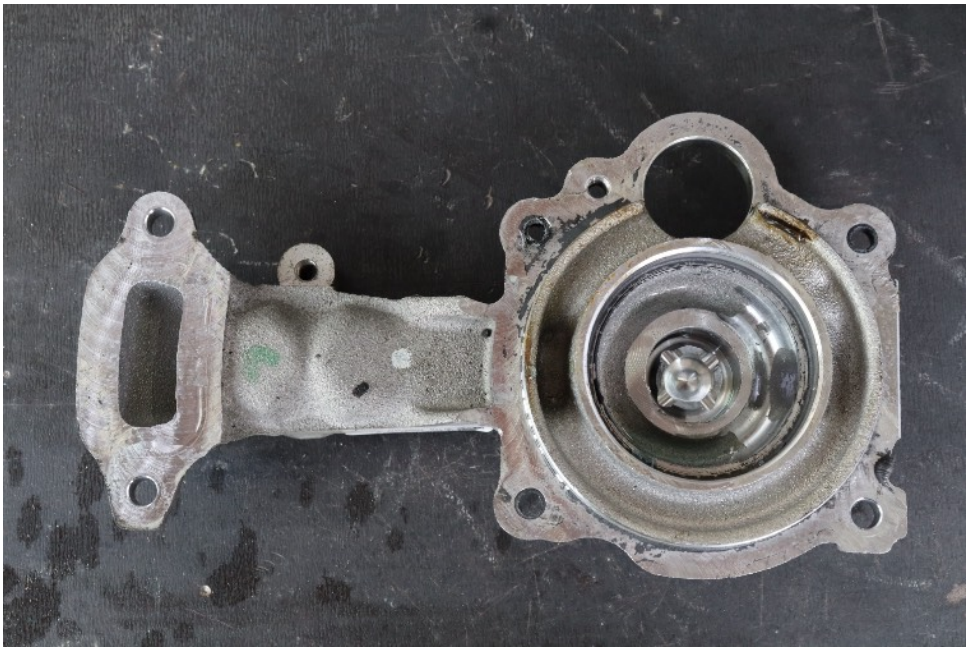
Using the flat head screw driver or small pry bar remove the coolant seal from the cap

Remove the RTV/Sealant under the seal



Using a soft abrasive or razor blade clean the mating surface of all old gasket material.

“**Wipe That Exciter Wheel Clean – If You Spot Coolant, You Just Dodged a Bullet!"**
Coolant on the exciter wheel means trouble was on its way. Catching it now just saved your inverter—and your wallet. Clean it up, and continue on.



Using a black silicone RTV, run a 1-2mm bead around the coolant cap prior to pressing it into the cover.

Press the cover into the housing using an aluminum slug or something else that is the same diameter as the inside of the cap. Wipe off the excess RTV that comes out during installation.

Tool specs: Base diameter: 37mm, Step Height: 8mm, Top diameter: 50mm, Top height 20mm

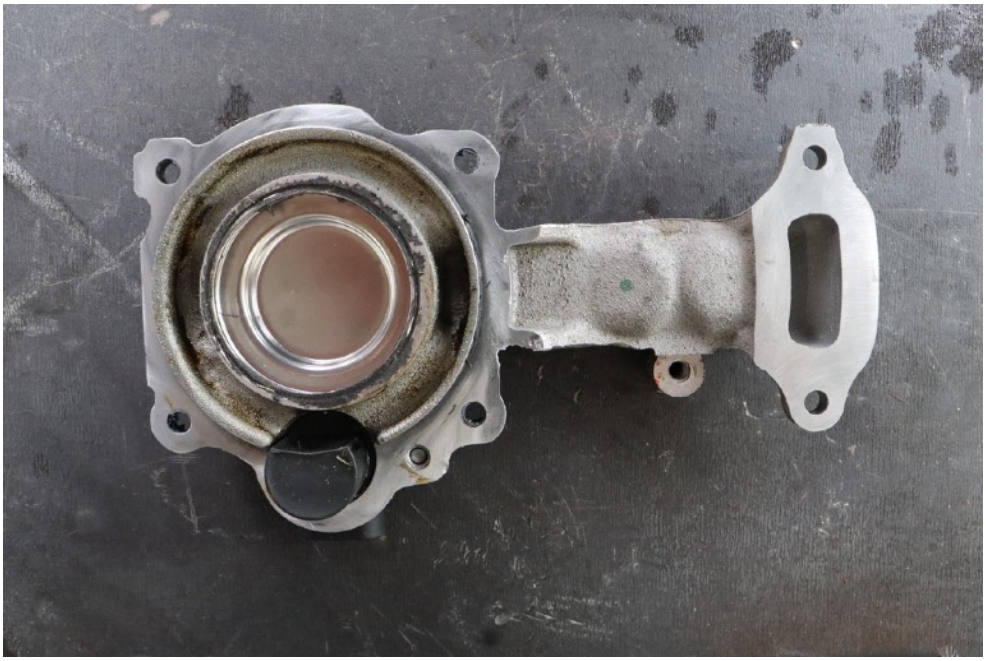
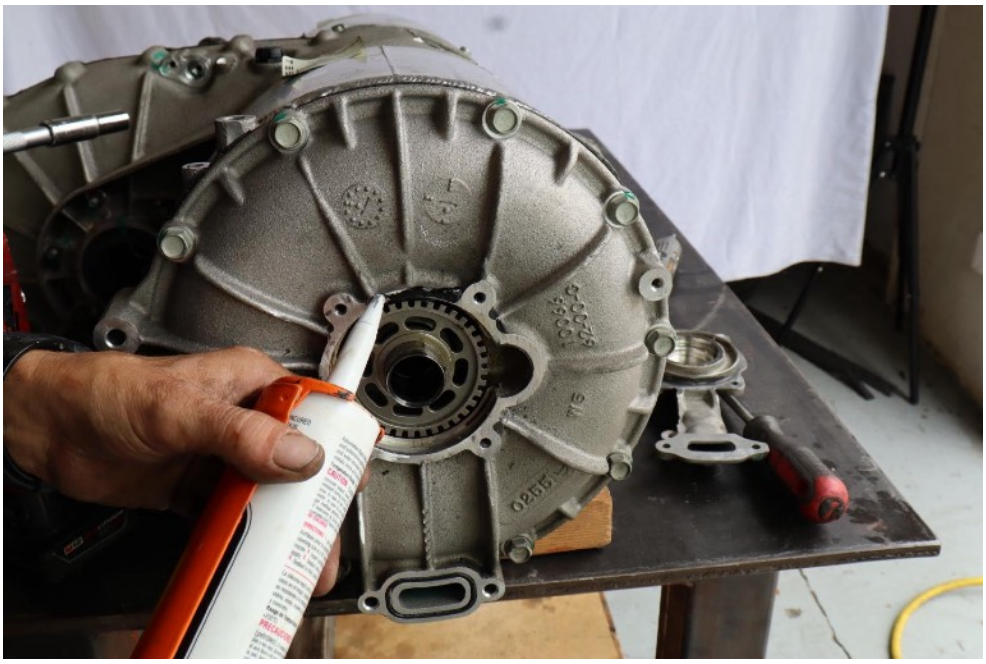
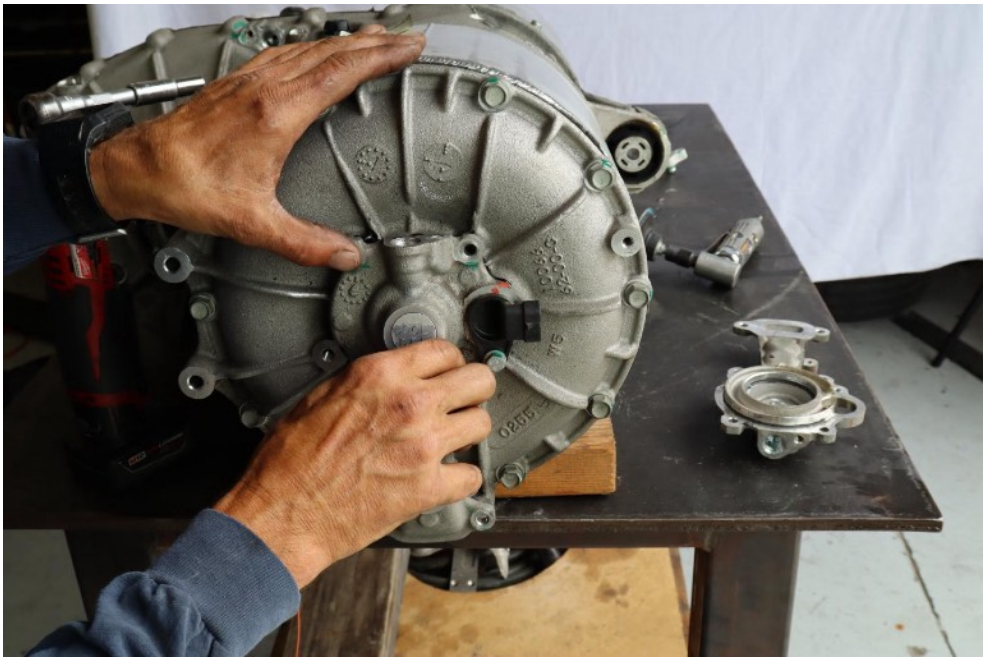


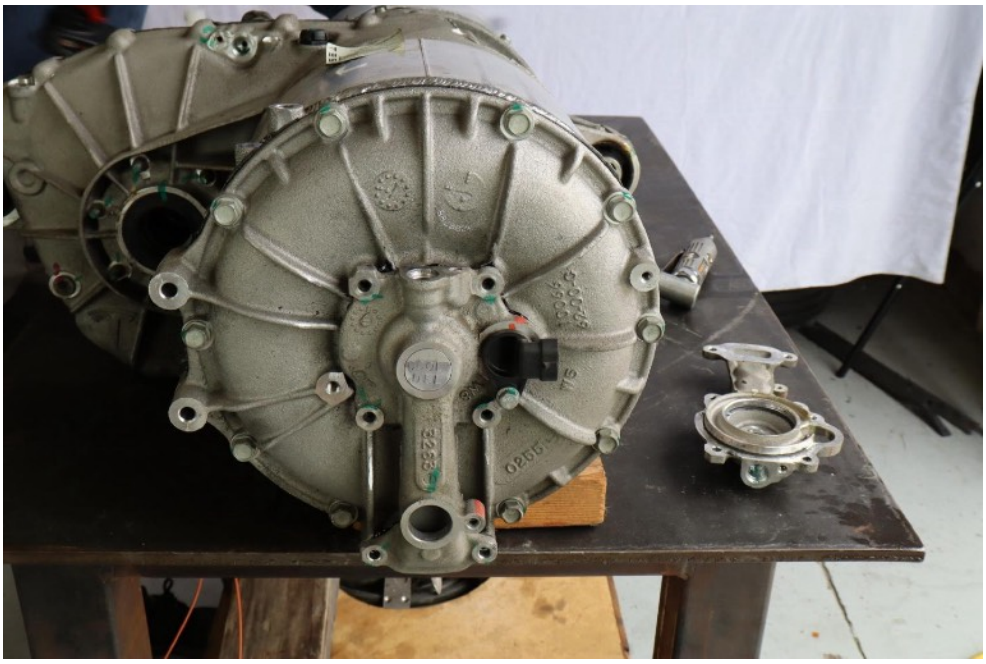
Photo of coolant plug installed successfully.



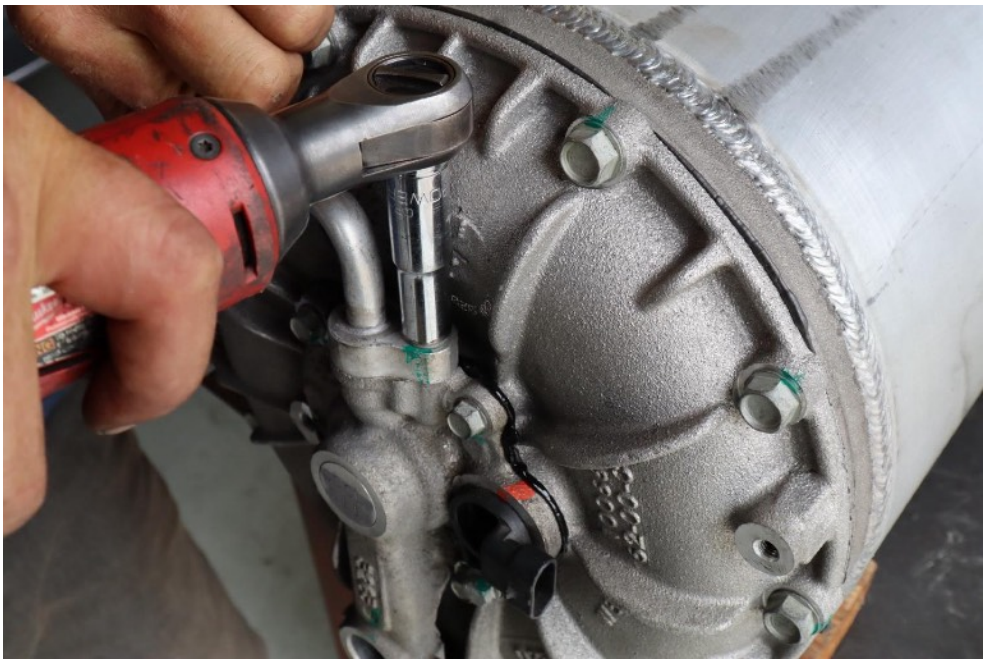
Using the same Black silicone RTV place a 1-2mm bead around the rotor housing to seal the cap back on the motor.



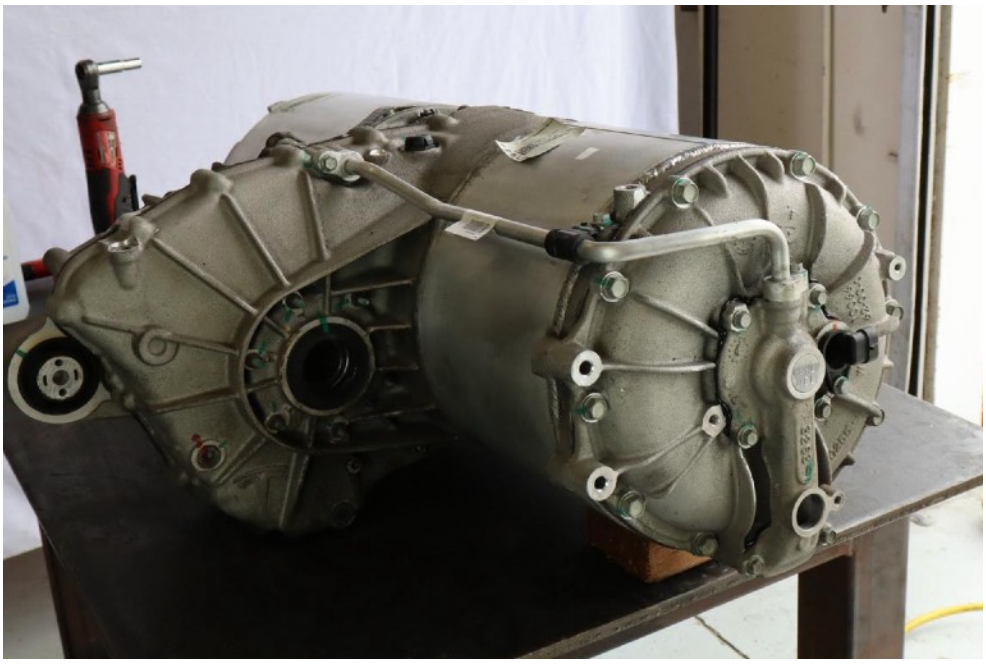
Reinstall the coolant cap bolts using the 10mm socket torque to 8-12nm

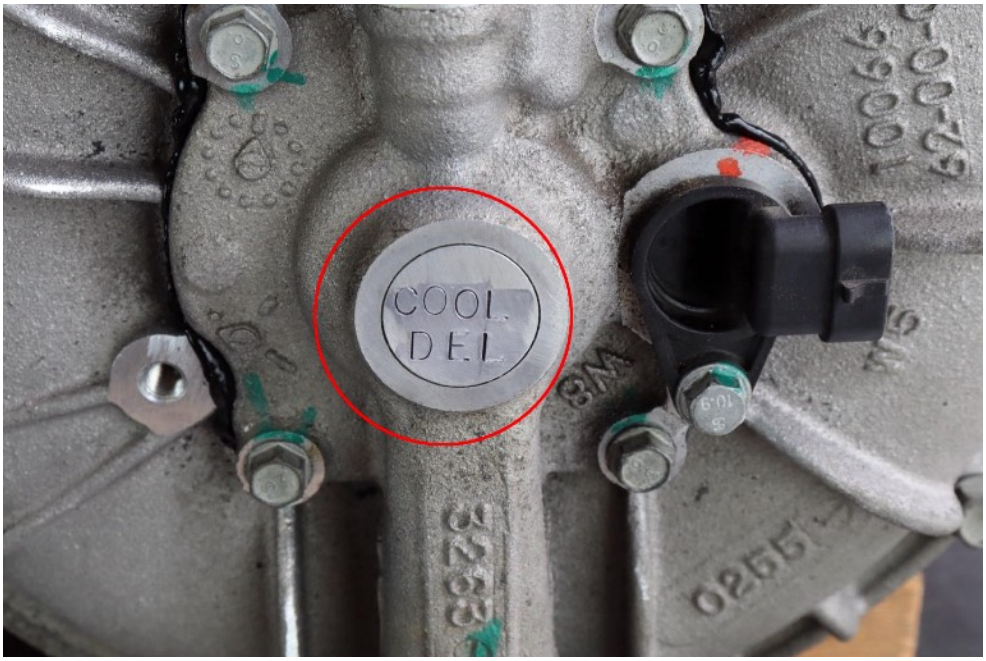


Reinstall the coolant crossover tube using the 10mm bolts making sure that the o-rings are still installed on the fittings and seated properly in place.



Wipe off any excess RTV before reinstalling the motor into your car. Let RTV cure for 4-6 hours before filling with coolant. Make sure it is G48 Tesla compatible.





We like to make a note or marking on the motor stating that the motor has the coolant delete cap already installed and highly recommend making a similar mark on your LDU.

YOU JUST COMPLETED YOUR COOLANT DELETE CAP INSTALLATION!

Nice work! With the coolant ports securely sealed, your drive unit is now protected from one of the most common causes of inverter failure—coolant intrusion. This small upgrade goes a long way toward keeping your EV running strong and reliable.

If you have any questions, concerns, or just want to double-check something, we're always happy to help.

📧 **Email:** support@evwest.com

📞 **Phone:** 888-591-5830

Thanks for choosing EV West