



BULLETPROOFDIESEL[®]
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INSTALLATION MANUAL

BULLETPROOF SUPPLEMENTAL COOLING SYSTEM

**FITS 2021 - 2023
JEEP 3.0L ECO - DIESEL**
BPD P/N 90401300

NEAL TECHNOLOGIES, INC.
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Thank you for your purchase of the BulletProof Supplemental Cooling System for the JEEP Eco-Diesel.

Pre-caution

This is just a cooling aid - not to be used as a stand-alone cooler.

Warranty

At Neal Technologies, Inc. we know that if we don't take care of the customer, someone else will. That is why we strive to make each customer's experience as wonderful as possible. With regards to the BulletProof JEEP Supplemental Cooling System, we offer a 1-Year Parts-Only Warranty.

The limitations include:

- Parts-only, exchange-only warranty.
- Warranty is limited to defects in workmanship and materials.
- Shipping is NOT included with warranty returns.

In the rare event that you might have a warranty claim, we will be more than happy to assist you. Please call before you act. We want to track and properly handle any warranty claims. You will need to contact our team at 888-967-6653 or 480-247-2331 so we will help you with your options and return.

Tools needed for installation.

- 5mm Hex Head
- 10mm Socket
- Punch
- 1/4" Drill Bit
- Drill
- Needle nose pliers
- Lift or Jack Stands
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1. Remove the skid plate by removing the four (4) bolts.



2. Drain the radiator using the drain plug on the drivers' side.



3. Remove the upper bumper trim piece. There are five (5) clips and two (2) bolts holding it into place.



4. Lift and safely support the truck in so that the front suspension can fully extend for access.

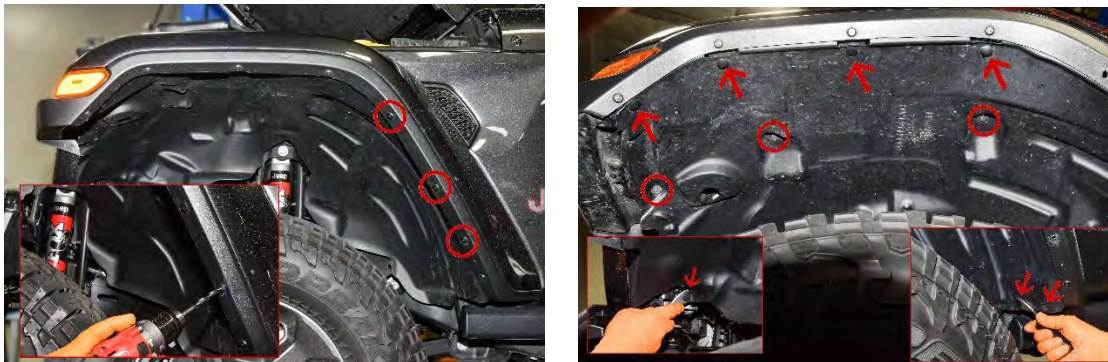
5. Remove the four (4) existing bolts from the inner skid plate brackets, there are two (2) on each side.



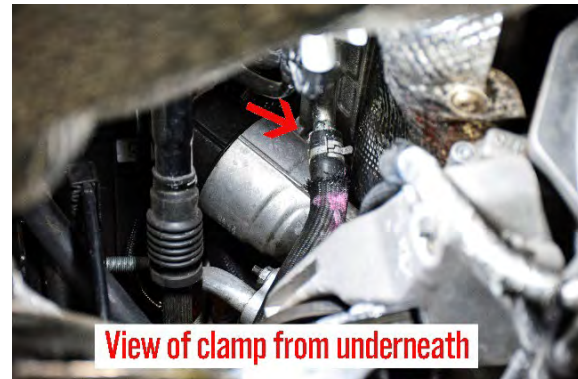
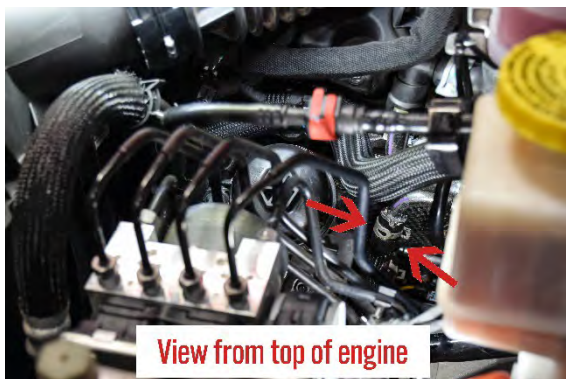
OPTIONAL

You MIGHT want to remove the driver's side fender well for easier access. This will require drilling the three (3) plastic rivets on the rear of the fender. Remove the seven (7) push pins and three (3) bolts to complete the removal.

NOTE: If you opt to remove the fender well, you will need to source replacement rivets or pushpins to replace the plastic rivets that were drilled out.



6. Locate the oil cooler coolant return hose. This hose is towards the front of the oil cooler with a 90-degree molded section that goes up and connects to a metal return tube along the driver side of the engine block. Disconnect the rubber hose from the metal return tube. (WARNING – Coolant will leak out.)



7. Remove the lower spring clamp from the oil cooler and rotate the OE molded hose forward as shown. Reattach the oil cooler spring clamp.



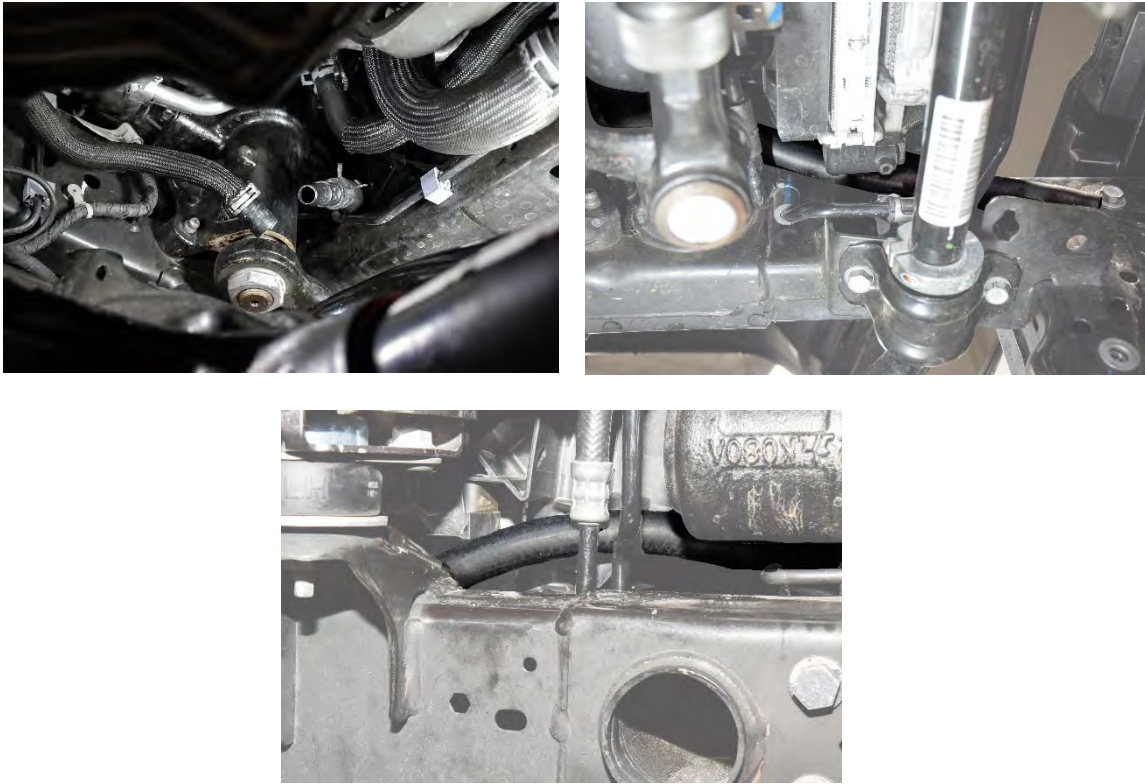
TECH TIP: There is a set of steel lines that might impede access to the spring clamp on the coolant hose. IF you need to move these lines, there are two (2) bolts and one (1) nut that can be removed to easily move these lines to the side.

NOTE: Re-secure the steel lines at this time if you moved them.

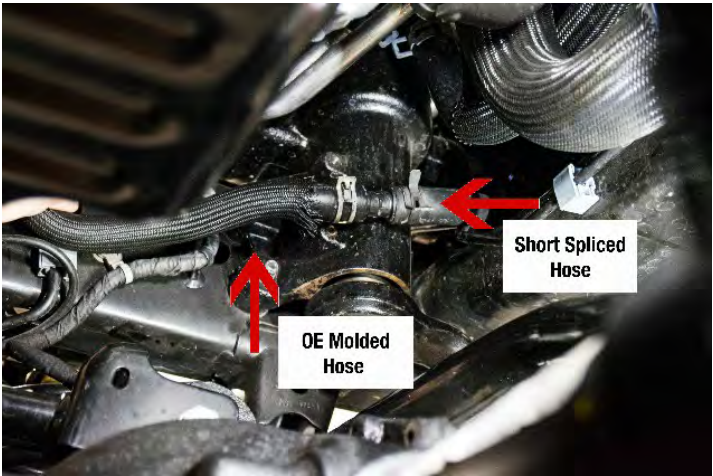
8. Insert the hose splice into the provided shorter coolant hose and secure with a provided spring clamp.



9. From underneath the truck, with the hose splice pointed towards the rear of the vehicle, route the coolant hose over the brake line and frame crossmember, between the radiator and frame as shown.



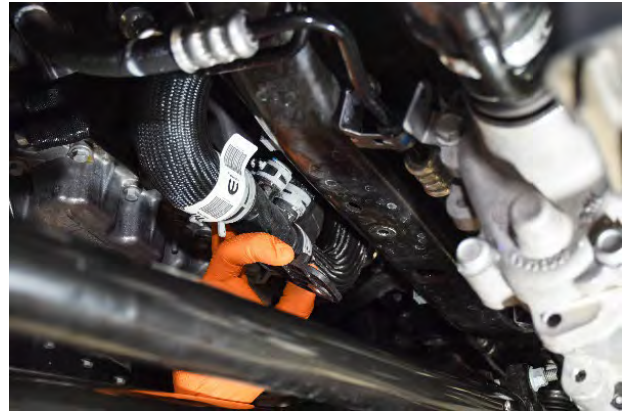
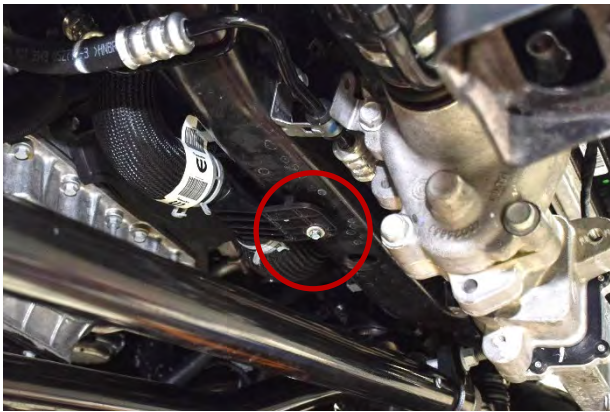
10. Attach the hose splice to the OE molded hose that was rotated forward and secure with the OE spring clamp.



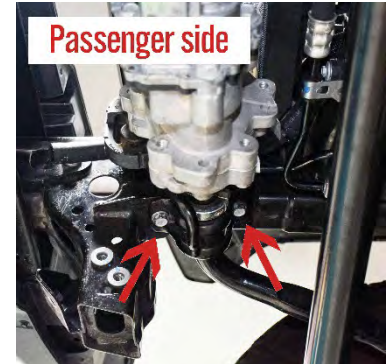
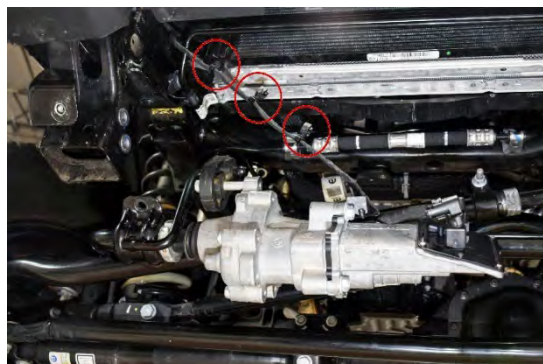
11. Install the smaller loop clamp (with smaller through holes) around the OE molded hose with the mounting holes pointed up. Use the 25mm long hex head screw, washer, and spacer to secure the loop clamp and hoses to the steering box using the upper available threaded hole.



12. Remove the lower radiator hose manifold.



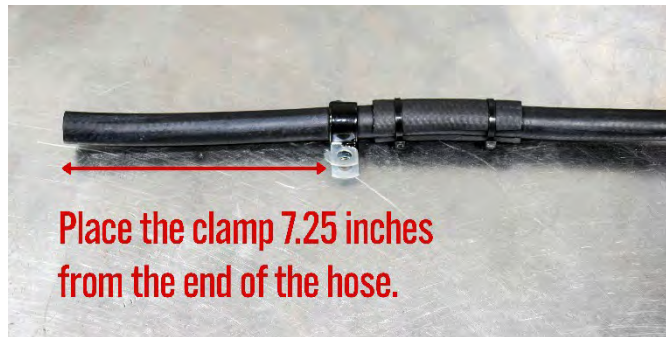
13. Remove four (4) bolts to drop the sway bar. Be sure to unhook the three(3) plastic clips first then gently lower the sway bar.



14. Remove the passenger side loop clamp bolt that secures the power steering hard line.



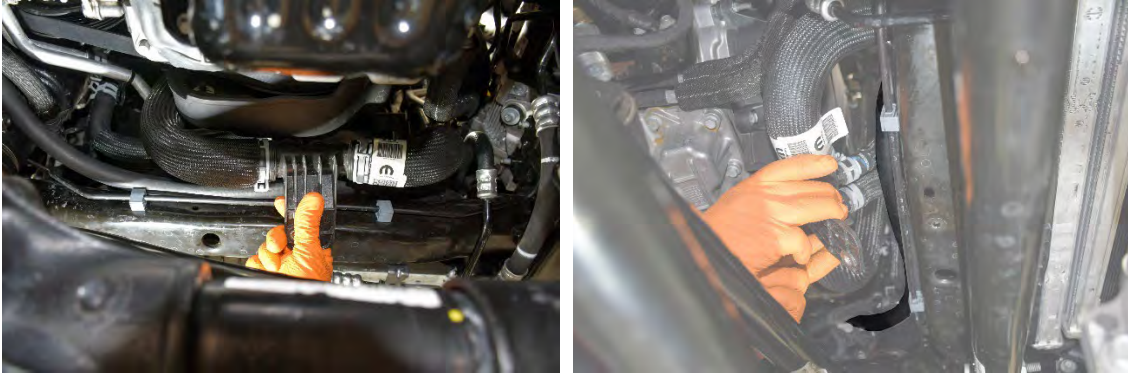
15. Install the provided larger loop clamp with larger through holes onto the provided longer coolant hose with the mounting holes pointed down. Measure and position the loop clamp from the end as shown. Install the protective hose sleeve with two (2) zip-ties adjacent to the loop clamp with the protector opening and zip-tie heads pointed down as shown. Position these carefully as they will be very difficult to adjust once installed.



16. On the passenger side of the vehicle, route the coolant return hose between the power steering line and frame, between the radiator and frame, and over the frame crossmember as shown. Reinstall the OE bolt through the power steering support, through the supplied loop clamp and into the frame securing the coolant return hose.



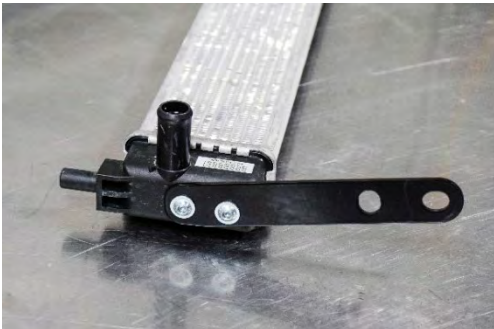
17. Route the coolant return hose along frame cross member.



18. Route the coolant return hose up past oil cooler along the same path as the OE coolant return line. Install provided spring clamp and reconnect the BPD coolant return hose to the engine coolant return tube.



19. Reinstall sway bar mount using the four (4) OE bolts and reconnect wire clips.



20. Use the two (2) Allen head screws to assemble the drivers' side mounting bracket to the BulletProof Supplemental Radiator and tighten.

****NOTE: DO NOT use washers on these two screws.**



21. Use the two (2) Hex head screws and washers to attach the passenger side bracket. Leave these screws loose.



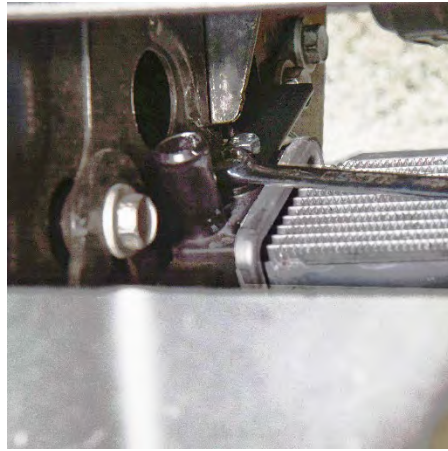
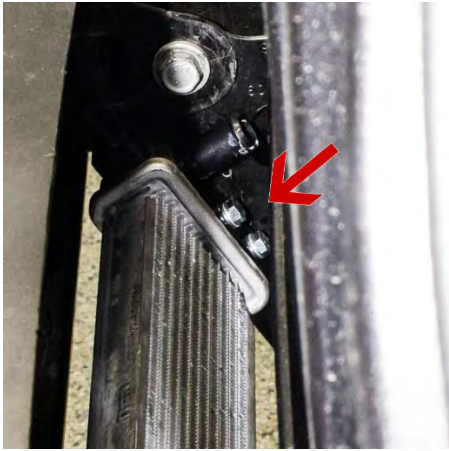
22. Install the BulletProof Supplemental radiator using the OE skid plate mounting bracket bolts. Install the bolts through the BulletProof Supplemental Radiator mounting brackets, through the OE Skid plate mount brackets into the frame on both sides. Position the Supplemental radiator and tighten the driver's side bolts first.



23. Align the Supplemental radiator parallel to the bumper and tighten the passenger side OE skid plate bracket bolts.



24. Tighten the (2) Hex head bolts securing the passenger side mounting bracket to the Supplemental radiator.



25. Install the spring clamp onto the driver's side hose and install it on the Supplemental radiator port.



View from top

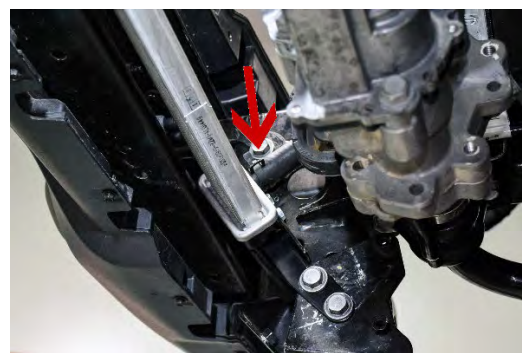


View from bottom

26. Install a spring clamp on the passenger's side hose and install it on the Supplemental radiator port.

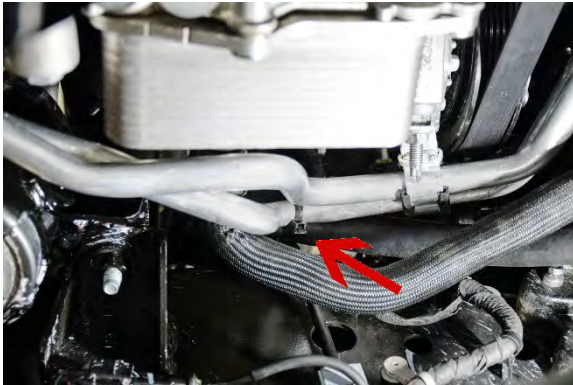


View from top



View from bottom

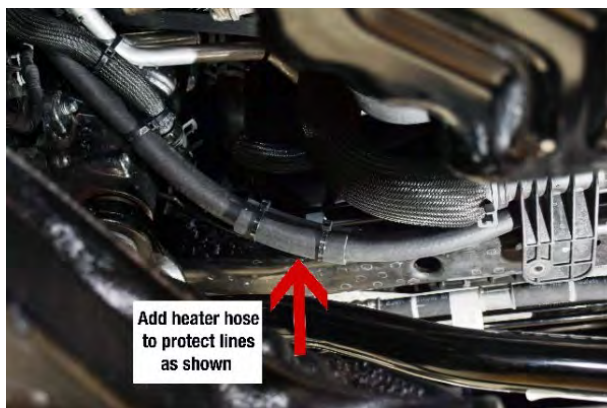
27. Zip-tie the OE coolant hose to the hardline as shown.



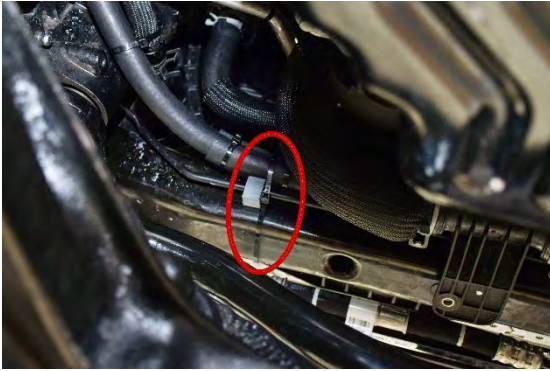
28. Zip-tie the Supplemental radiator coolant return hose to the OE molded hose as shown close to the loop clamp. Zip-tie the OE molded hose to the hardline as shown.



29. Install the protective hose sleeve to the coolant return line to protect it from the plastic OE brake line clip using two (2) zip-ties.



30. Secure coolant return hose in place with two long zip-ties wrapped around the frame crossmember.

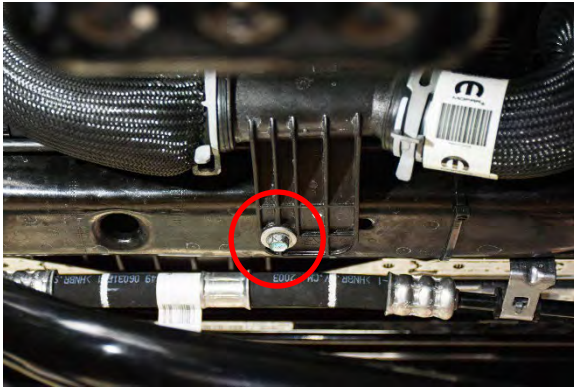


Over the hardline



Under the hardline

31. Reattach the lower radiator hose manifold.



32. Fill and prime the system to double check for leaks, if one is found resolve the connection issue then proceed to complete the process.

- Reinstall skid plate.
- Reinstall bumper trim piece.
- Reinstall inner fender well (if it was removed). *If you drilled out the plastic rivets; they may be replaced with plastic push retainers instead of rivets.



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