2017-2023 Ford Raptor
2015-2023 Ford F150, Expedition/Navigator
Installation Instructions
LPP439996



Livernois Motorsports
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INTRODUCTION

Before beginning installation, please read these instructions and important notes, don't be "that customer" that called us for tech support without reading these, we will know because this is the first sentence:

• Please verify that all items are in this kit as noted below, it's only 2, and we have faith you can count to 2, but we know one is really big, and the other really small, so make sure you didn't miss the small one. If you are legitimately missing hardware or have any questions, please contact us, we are happy to help, but have designed these instructions to be complete, yet easy to understand and tackle. No swedish furniture here.

RECOMMENDED TOOLS AND SUPPLIES

Parts are installed with tools, and these parts are no different. You are going to need some, which luckily are easy to find, and very common. They're not included in this kit, and are the only way to properly install it, so definitely gather them up and get ready to dive in!

Safety glasses (yeah, these actually are important, you'll shoot your eye out kid, if you don't get this reference, google it, and rent it), 5mm Allen Wrench, 7mm Socket, 8mm Socket, 13mm Socket, 15mm Socket, Push pin removal tool, Torque Wrench capable of in-lbs and ft-lbs and ratchet to fit the aforementioned sockets, and most importantly a buddy willing to help lift everything back into place while you tighten everything. Jack, Jack stands, lift, blue thread locker, all of things make it easier, and will likely make the results better, so they're a solid recommendation as well.

IMPORTANT!

Make sure where you're truck and work area is clean. If you just ran the Baja 1000, and you have 18 cubic yards of sand in your front bumper, you are likely going to get some in the intercooler, or tubing. But, it won't stay there, and will likely find a nice home inside of your engine. In case engines are a new thing for you, sand, dirt, birds, and/or rocks inside of them are a really, really bad thing. So are missing tools, bolts, and just about anything other than good, dry air. So, clean first, to prevent disaster later. And keep track of your tools!

ITEMS INCLUDED (finally, getting closer)

Livernois Motorsports & Engineering Intercooler
(1) 6mm bolt for bypass valve attachment

OK, go to the next page, this is where the real information starts

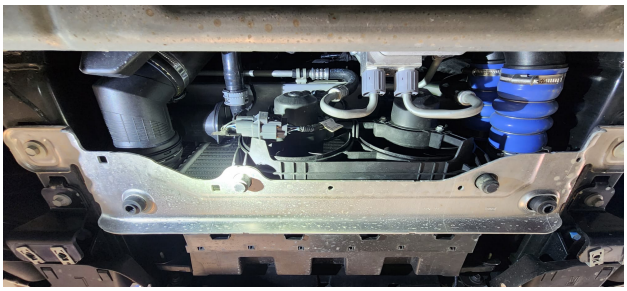
1. Disconnect negative battery cable



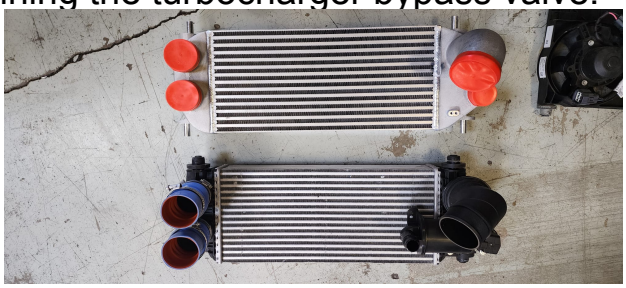
2. Lift the vehicle using a floor hoist, if you do not have access to one, use a hydraulic floor jack and jack stands to raise the vehicle. NOTE: Jack stands must be used on a level surface and be secure. Failure to do so may result in personal injury or vehicle damage.
3. (Raptor Only) Remove the bolts and the spacer from the front underbody skid plate.
4. (Raptor Only) Remove skid plate



5. (Raptor Only) Disconnect the intercooler fans. Detach the retainer and move the wiring harness out of the way.
6. Remove the bolts, lower bracket, and fans.

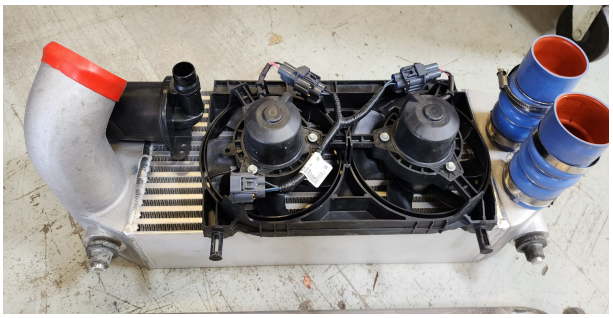


7. Using a sturdy support (or a helpful friend), support the intercooler.
8. Loosen the clamps and position the intercooler intake pipes out of the way.
9. Unhook the bypass valve tubing.
10. Remove the OEM rigid plastic elbow from the factory rubber hose by loosening the hose clamp and removing from the coupler, this will no longer be used.
11. Unplug the bypass valve wiring.
12. Lower the intercooler out of the vehicle.
13. Remove the plastic self-tapping screw retaining the turbocharger bypass valve. Twist the bypass to remove from the intercooler.



14. Mount the bypass valve to the new intercooler with the supplied 6mm socket head cap screw bolt. Torque to 55 in-lbs.

15. (Raptor Only) Remove the small diameter rubber isolators from the cooling fans, installing the 2 lower isolators onto the Livernois Intercooler kit.
16. (Non Raptor F150 only) Transfer the rubber isolators from the OEM intercooler to the Livernois Intercooler.



17. (Raptor Only) Install the fans onto the intercooler and factory support bracket prior to reinstall, these will no longer have any grommets installed, it is by design to have the plastic in direct contact with the support bracket.



18. Raise and install the intercooler into the vehicle.
19. Connect the bypass valve electrical connector.
20. Connect the bypass valve tubing
21. Install the Intercooler into the OEM Rubber couplers and clamps and position the intercooler intake pipes appropriately.
22. Install the lower support bracket and fans (Raptor Only), secure with factory bolts. Torque to 30 ft-lbs, we recommend blue thread locking fluid.
23. (Raptor Only) Connect the intercooler fan wiring.
24. (Raptor Only) Reinstall the front skid plate with factory hardware. Torque to 38 ft-lbs.
25. (Raptor Only) Install the skid plate spacer, secure with factory bolts. Torque to 43 ft-lbs.
26. Reconnect Battery
27. Start the vehicle, check for any leaks or check engine lights.
28. High Five your buddy, and take her for a rip! Pat yourself on the back if this took less than 30 minutes!

Finished Product
(shown with Raptor E-Fans)

