



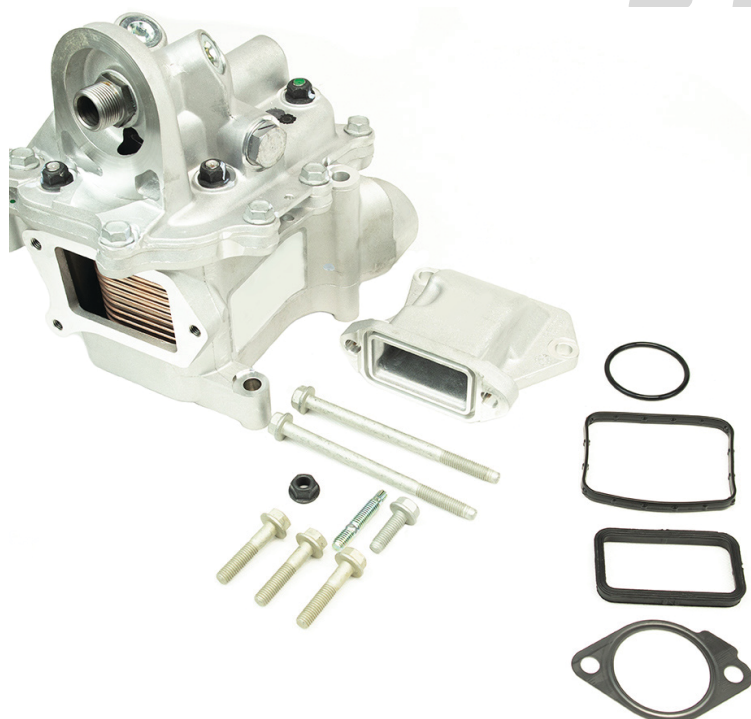
Oil Cooler Upgrade Kit

Included Parts:

- Engine Oil Cooler
- Engine Oil Cooler Gasket
- Engine Oil Cooler Adapter
- Water Pump Outlet Pipe Gasket
- Engine Oil Cooler Adapter Gaskets
- Oil Cooler Inlet Pipe O-ring
- Hardware Kit
- Engine Oil Filter

Optional:

- Manifold and Up-pipe Gasket
- Modified Manifold with Gaskets





We recommend using a vehicle lift when possible to provide easier access while working on the vehicle. If you cannot use a vehicle lift be sure to properly use a jack and jack stands.

Engine Cooler Removal:

1. Begin by removing the front drivers wheel and remove the fender liner.
2. Remove the hot/drivers side boost tube from the turbocharger outlet by loosening the t-bolt clamp. Remove the boost tube from the intercooler and slide the tube down through the engine bay. Be sure to cover the turbo outlet and intercooler inlet so no debris can get into the turbocharging system.
3. Remove the oil drain plug from the engine oil pan and drain the engine oil. Once the engine oil has been drained, remove the oil filter.
4. Reinstall the engine oil drain plug and torque it to 18 ft lbs.
5. Locate the petcock, near the bottom of the radiator, and loosen to drain coolant. Some models may not have a petcock, if this is the case you will need to remove the lower coolant hose and drain coolant from there.
6. If you have a 4wd truck, remove the front driveshaft, mark the driveshaft location to ensure it is realigned properly upon reinstallation. Remove the 4 bolts on the u-joint straps holding the front driveshaft in place. Place and secure the front driveshaft to the side. Tape the U-joint so the caps will not come off.
7. If you have a factory style manifold remove the bolts that secure it to the cylinder head and the up-pipe bolts and proceed to remove the drivers side manifold.
8. Remove the 2 bolts holding the oil cooler adapter elbow to the rear engine cover along with the 5 bolts that secure the oil cooler to the engine block. After removing the bolts you can use a pry bar to carefully pry the oil cooler away from the block. Be sure to have a bucket below to catch any coolant that will come out of the engine block.
9. Remove the adapter elbow that is on the backside of the cooler.

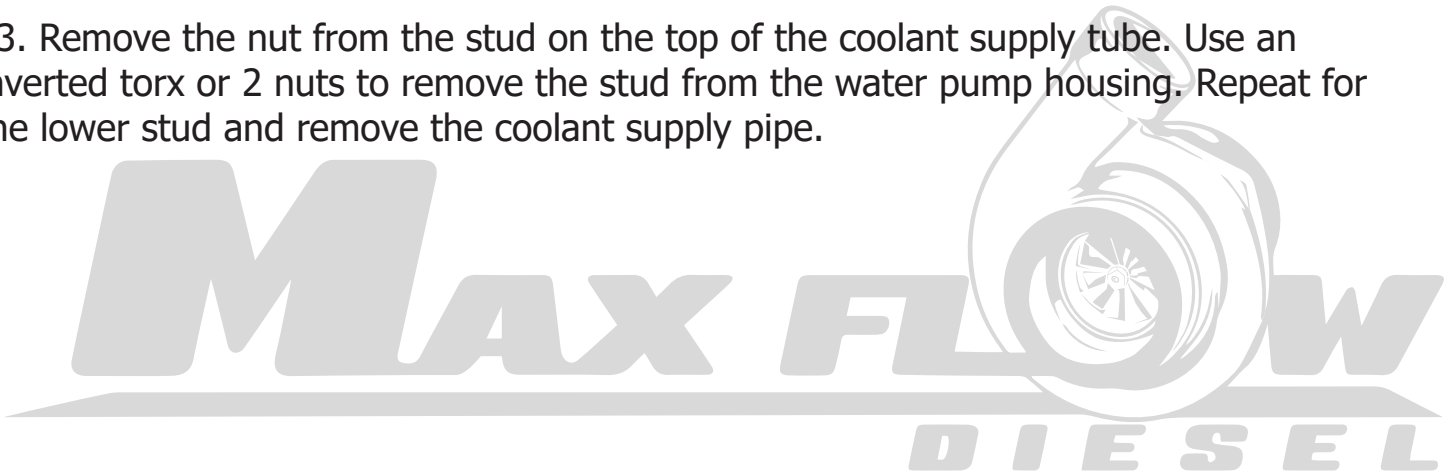


10. Separate the oil cooler from the coolant supply tube, located between the water pump and oil cooler. You may need to use a pry bar to carefully wedge against the cooler and tap with a mallet to break it loose.

11. You can now fully remove the engine cooler.

12. Remove the coolant supply tube starting with the bolt on the bottom, then the plastic retaining clip so you can remove the bracket from the coolant tube.

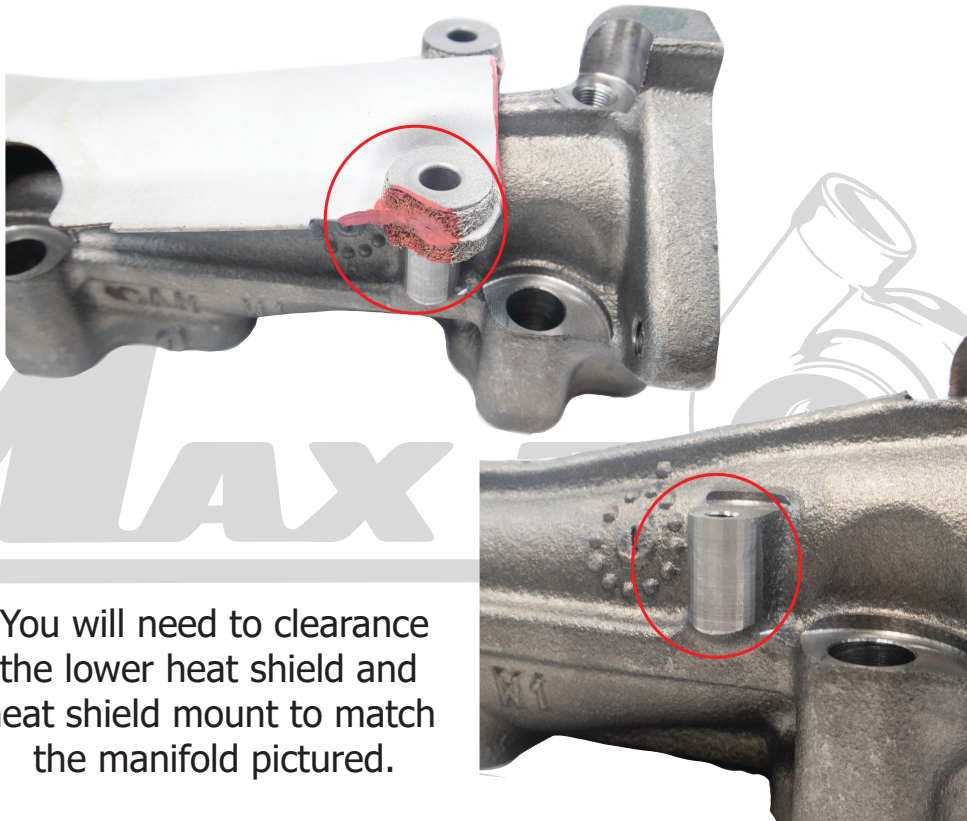
13. Remove the nut from the stud on the top of the coolant supply tube. Use an inverted torx or 2 nuts to remove the stud from the water pump housing. Repeat for the lower stud and remove the coolant supply pipe.



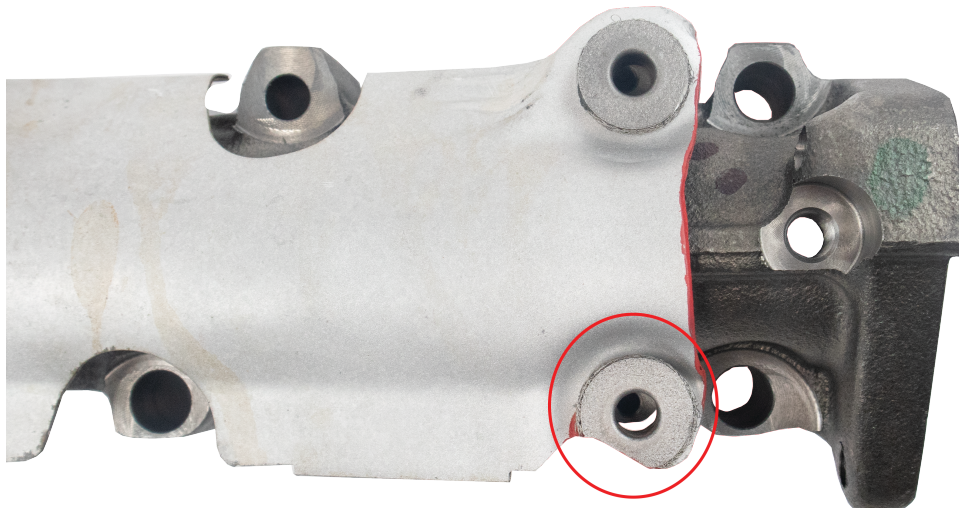


Oil Cooler Assembly and Installation:

1. You may need to modify the stock style manifold and heat shield by clearancing the rear lower heat shield mount and the connection on the manifold. (See figure below)
If you have aftermarket manifolds please disregard.



You will need to clearance the lower heat shield and heat shield mount to match the manifold pictured.





2. Install the provided o-ring onto the coolant supply tube, it is recommended that you use silicone lubricant or similar to install the o-ring.
 3. Apply a small amount of lubricant to the inside of the oil cooler inlet where the coolant supply tube fits. As well as any other o-rings on the cooler.
 4. Install the 2 studs onto the water pump outlet, applying blue threadlocker to the water pump side of the studs. Install the water pump outlet pipe gasket onto the studs. Install the coolant supply tube into place and very loosely place a nut onto the top stud of the water pump outlet to hold the coolant supply tube in place.
 5. Install the cooler into place and slide the coolant supply tube into the inlet very carefully so as to not tear or roll the o-ring on the pipe. Apply threadlocker to the 3 shorter bolts and 2 longer bolts that hold the cooler to the block and tighten.
 6. Insert the o-ring onto the coolant outlet elbow using silicone lubricant or similar.
 7. Apply threadlocker to the remaining 4 bolts and install the elbow hand tightening the 2 bolts that hold it to the cooler first. Thread in the remaining 2 bolts holding the elbow to the rear engine cover. Torque all 4 bolts to 18 ft lbs.
 8. Place the second nut onto the lower stud of the coolant supply tube and torque both nuts down to 80 in lbs. Install the bolt back into the bracket that holds the wire loom to the coolant supply tube.
 9. Reinstall the front driveshaft, lining up your marks to ensure proper alignment. Place the 2 straps and 4 bolts on and tighten to 18 ft lbs.
 10. Be sure to apply a small amount of oil to the seal on the oil filter and proceed to install the oil filter hand tight.
 11. Install the hot side boost tube up through the engine bay. Attach the lower boot to the intercooler and then do the same for the upper boot to turbocharger outlet. Tighten the T-bolt clamps on the upper and lower part of the hot side boost tube.
- Tech Tip: You can apply a small amount of hair spray to get a tacky adhesive to help to stay in place.



12. Reinstall the inner fender liner on the drivers side wheel well. Place the wheel back onto the truck and torque the lug nuts to spec.

13. Make sure to reattach the lower radiator hose or close the petcock on the bottom of the radiator.

14. Fill up your truck with antifreeze, we recommend using dex-cool. Once full, be sure to place the coolant cap back onto the reservoir.

15. Fill your truck with oil, we recommend 15w-40 diesel oil of your choice.

