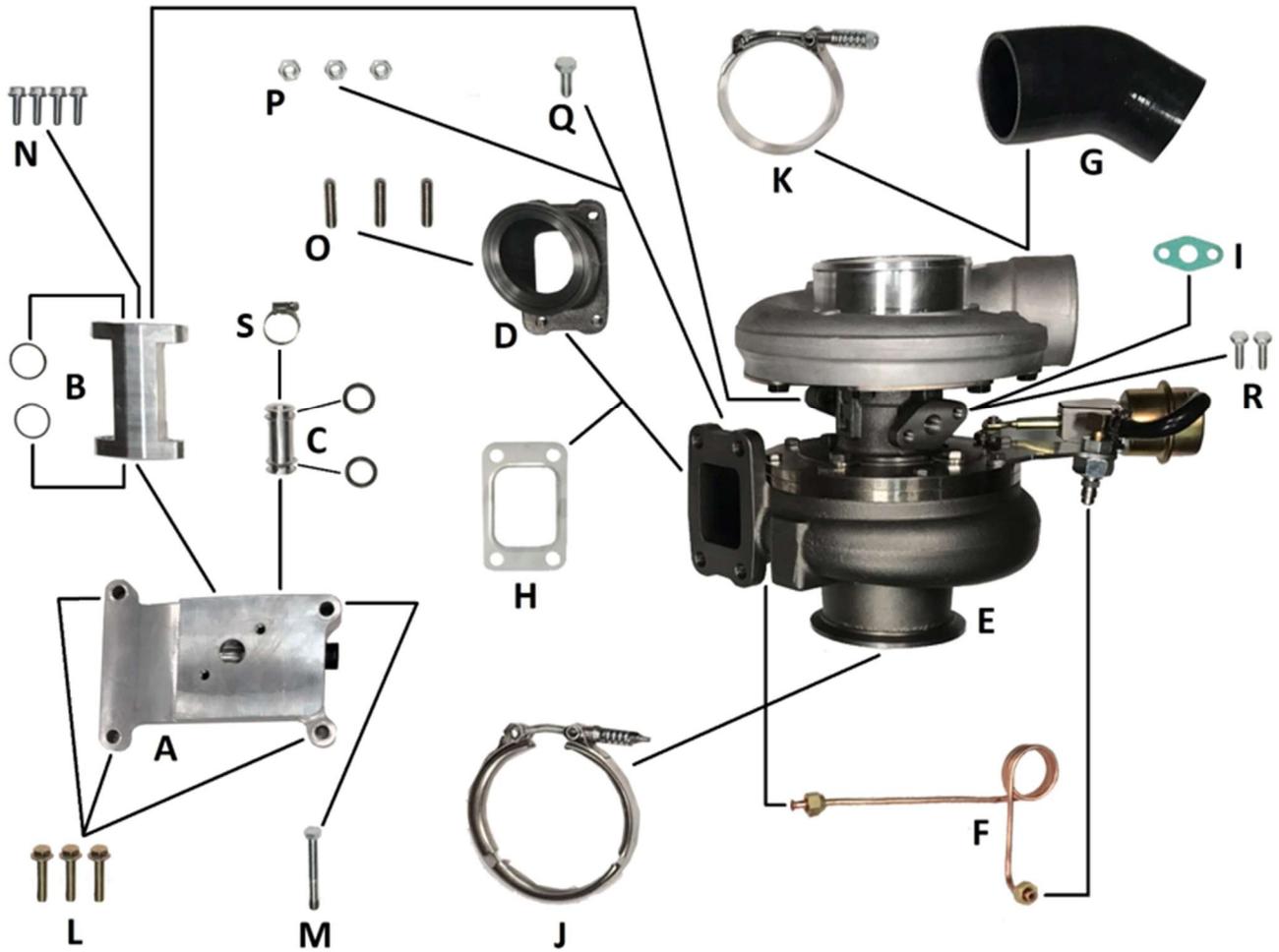


Installation Instructions

TURBONATOR® VGT



Bill of Materials

Reference Letter	Part Description	Referenced Step
A	Pedestal Base	6
B	Pedestal	15-16
C	Oil Drain Tube	5-6
D	Turbine Inlet Adapter Flange	9-10
E	Turbonator VGT	7-8,10-11,13-14
F	Copper Tube	11
G	Silicone Coupler	18
H	T3 Flange Gasket	10
I	Oil Supply Flange Gasket	17
J	4.4 inch V-Band Clamp	12-13
K	3 inch T-Bolt Clamp	18-19
L	M8-1.25x40mm Bolt x3	6
M	M8-1.25x60mm Bolt	6
N	M8-1.25x25mm Flange Head Bolt x4	16
O	M10-1.5x40mm Set Screw x3	9-10
P	M10-1.5 Hex Nut x3	10
Q	M10-1.5x25mm Bolt x1	10
R	M8-1.25x25mm Bolt x2	17
S	1 inch Worm Gear Clamp	5-6

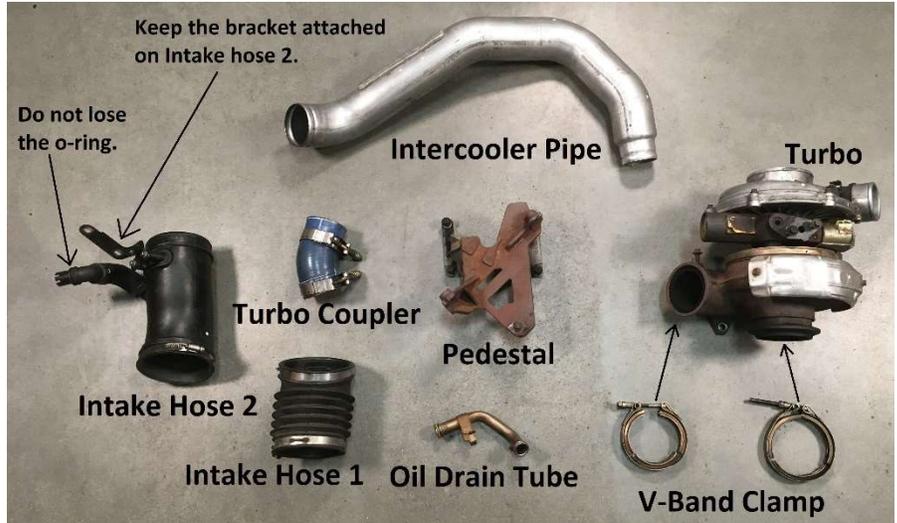
Installation Instructions for 6.0L Ford VGT Turbo Kit

Please read all instructions before installation.

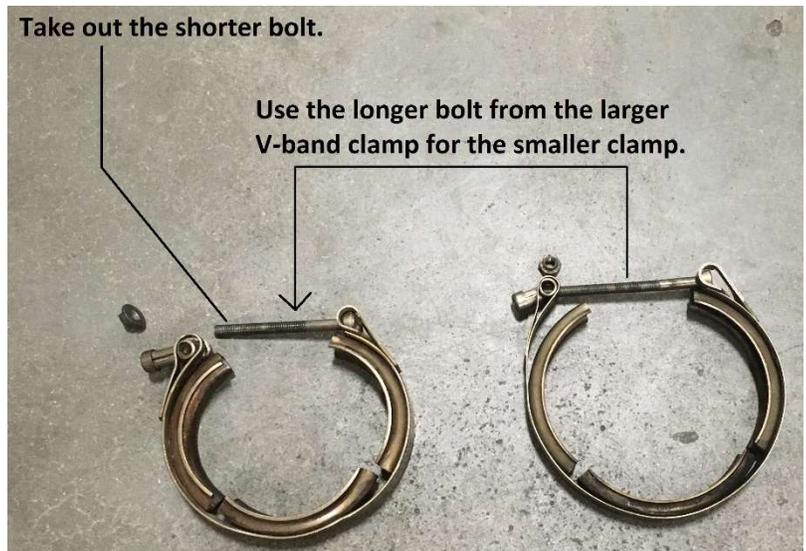
1. Prior to installation, change the engine oil and oil filter.
2. Make sure your vehicle is parked on level ground and parking brake is applied.

3. Uninstall intake hose 1 and 2, Intercooler pipe, turbo coupler, turbo, pedestal and oil drain tube from your truck as shown. Do not lose the o-ring attached to the intake hose. We recommend keeping the bracket attached on the intake hose. It is not required but it will make installation easier.

Do not discard intake hose 1 and 2, intercooler pipe, one of the T-bolt clamps from turbo coupler, and V-band clamp from the turbine inlet side (2.5in). They will be reinstalled later.



We recommend using the longer bolt from the larger V-band clamp for the smaller V-band clamp. It will make installation easier.



We also recommend taping the back side of the smaller factory V-band clamp, so the longer bolt does not fall out while attempting to install the turbine housing.

Use Zip Ties to keep the wiring cover out of your way of installation.



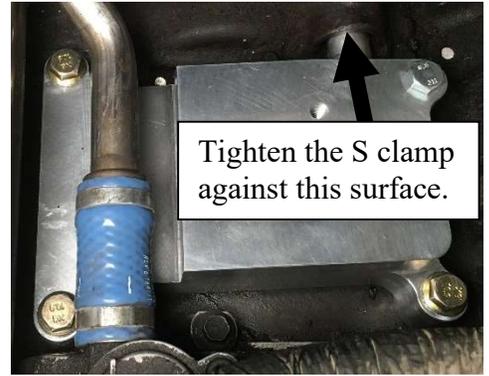
4. Clean the pedestal area the best you can. Make sure there is no debris in the four threaded holes. If you blow air, make sure nothing gets blown into the oil supply line or oil drain hole.



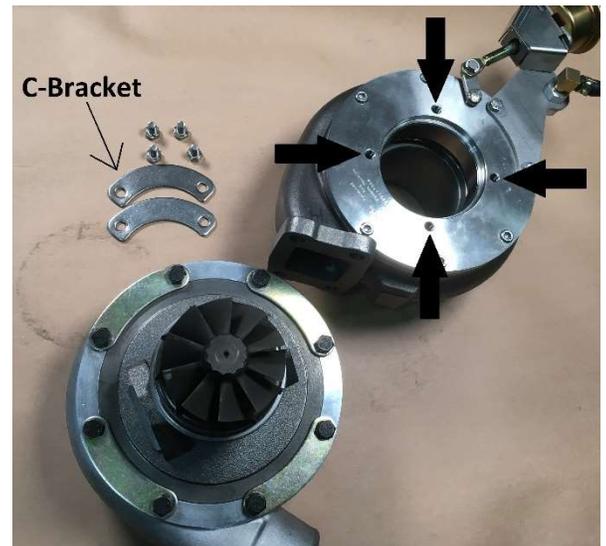
5. Make sure the o-rings are attached on both sides of oil drain tube (C) then tighten the worm gear clamp (S) onto the middle of the oil drain tube. Keep the clamp loose enough so that it can still move along the length of the oil drain tube. Insert the oil drain tube into the drain hole on the pedestal base (A). Make sure there is no debris in the drain hole of pedestal base. Blow it out if needed.



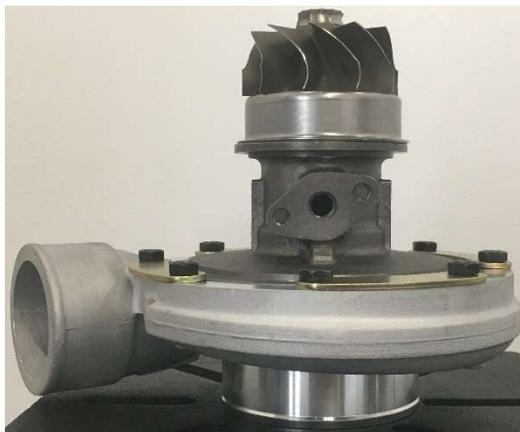
- Then, place the pedestal base in place (Slide in from the driver's side to get under the tube shown in the pic). Then use pliers to grab the oil drain tube and push it into the oil drain port on the engine block. Mount the pedestal using M8-1.25x60mm bolt (M) closest to the drain tube and M8-1.25x40mm (L) for the other three. Now push the worm gear clamp (S) until its flush against the engines surface. Tighten the worm gear clamp tight so it cannot move down the oil drain tube (C). The worm gear clamp acts like a stopper preventing the oil drain tube from moving. It may be a good idea to cover the pedestal with a cloth for now to prevent things from getting into the drain hole.



- Separate the Center Section (CHRA) from the Turbine Housing (E) by loosening four bolts that are holding two C-brackets as shown. (Leave CHRA and Compressor housing assembly together)



- Inspect the turbo clocking. Make sure the turbo is clocked correctly. If you need to adjust the clocking, loosen all 8 bolts on the compressor housing and rotate to match the photos below. After adjusting the clocking, tighten all 8 bolts to secure it in position.



9. Thread in the three set screws (O) provided into the turbine inlet flange adapter (D) as shown. Make sure the hex hole for the Allen wrench is not facing the machined surface side.



10. Slide a gasket (H) onto the three set screws installed in the previous step. Then attach the adapter onto the turbine housing. Finger tighten the provided three nuts (P) onto the set screws first, then thread in the provided hex bolt (Q) into the last hole. Before you tighten with a wrench, make sure the set screws have not shifted. Sometimes they spin together with the nut and thread in deeper. You could adjust the depth by holding onto the nut with your finger and rotating the set screws using an allen wrench. Tighten the bolt and three nuts to 35ft-lbs. As you tighten one, the gasket gets crushed and may loosen the other three fasteners. When you think you finished tightening all four, tighten all four again to make sure. If one is loose, tighten it to spec and repeat the process until all four are tight.



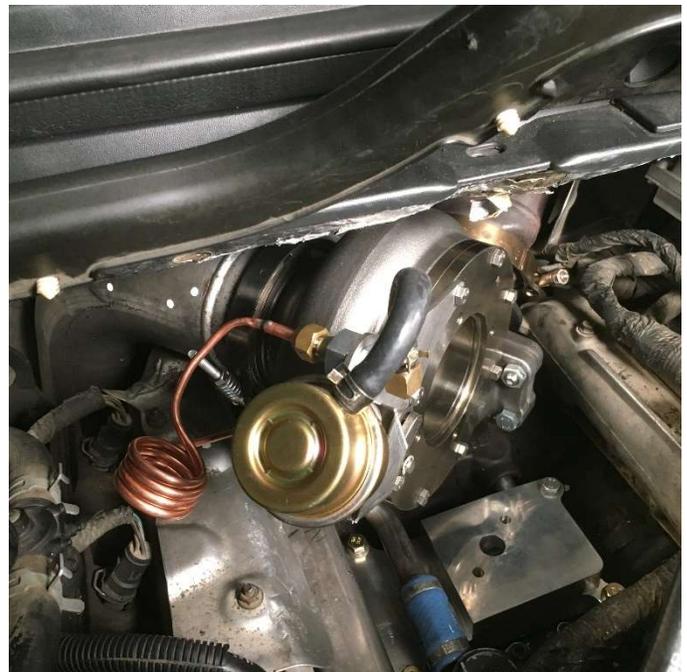
11. Attach the Copper tube (J) to the fittings attached to the turbine housing as shown.



12. Before installing the turbine housing on your truck, rest the provided V-band clamp (F) on down pipe and factory clamp on exhaust pipe. Point the bolts as shown to make sure you have enough room to tighten them.



13. Install the turbine housing on your truck. Start by attaching the outlet side to downpipe. Tighten the clamp enough so the turbine housing stays in place, but you can still rotate the housing. Rotate the turbine housing so the turbine inlet side is flush with the exhaust flange, then tighten the factory V-band clamp. Once the inlet side clamp is tightened, tighten the outlet side all the way. If you chose to tape the factory clamp bolt to keep it in place, be sure to remove the tape off after the turbine housing is installed.



14. Install the Supercore (CHRA and Compressor housing assembly) into the turbine housing. BE CAREFUL to not damage the exposed turbine blades as you maneuver the Supercore into its place. The wheel could be dented and damaged if you drop it or hit it on hard surfaces. Make sure you insert the turbine wheel into the turbine housing straight. Secure the supercore in place by using four bolts and two C-brackets from step 7, but finger tighten at this point of installation so that the CHRA can rotate.



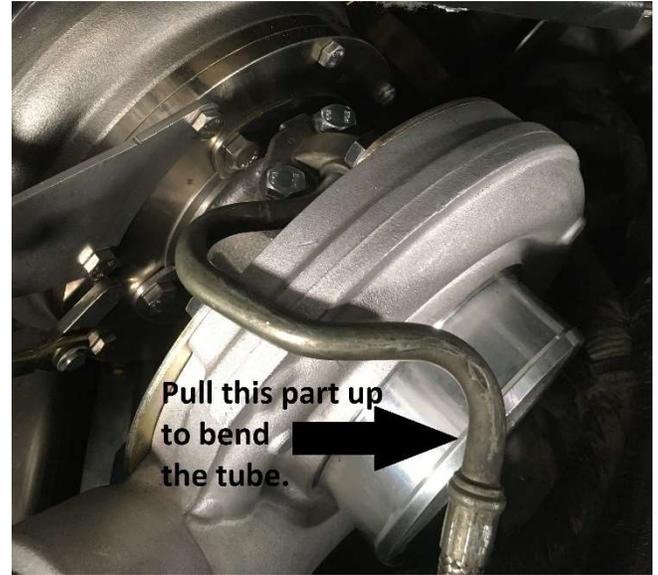
15. Inspect the o-rings on the pedestal (B) and make sure it is secured in the groove. If they seem loose, you may want to use superglue to secure them in place and let it dry before proceeding forward with installation. Also, it may be a good idea to grease the o-rings so the pedestal can slide easier while installing.



16. If you have a cloth covering the oil drain hole on the pedestal base, remove it at this time. Place a pry bar underneath the turbine housing and pry it up slightly while sliding the pedestal in place between turbo and pedestal base. Be sure to rotate the turbo so the turbo drain flange face is parallel with pedestal base before attempting to slide the pedestal in place. Also make sure the o-rings stay attached as you install the pedestal. Use 4 provided bolts (N) to fasten the pedestal on the pedestal base and turbo drain flange. The two bolts on the driver side are difficult to install due to it being a very tight space. We recommend to finger tightening all of them as much as you can first, and then after snug them with crowfoot wrench or stubby wrench. After those 4 bolts are tightened, tighten the 4 bolts on turbine housing to secure the Supercore in place.



17. Attach the factory oil supply line to the turbo using the two provided bolts (R). It may not look like it is going to fit at first, but as you tighten in the two bolts the metal tube will bend around the compressor housing. First, place the gasket (I) on the oil supply flange of turbo, then thread in both bolts onto the flange as deep as you can by hand. Tighten both bolts gradually and evenly using a wrench and try to keep the flange face level as shown until finally tightened all the way. Once it is tightened all the way, pull the tube up to bend it slightly so the tube is not touching the compressor housing.



18. Attach the new silicone coupler (G) provided with the kit on turbo with the provided T-bolt clamp (K) as shown. Point the bolt to a convenient spot so you can tighten the nut but leave the clamp loose at this point.



19. Before installing the intercooler pipe, place one of the T-bolt clamps from the factory turbo coupler with bolt away from the actuator and pointing upwards. The bump or lip inside the coupler needs to fit into the groove on the intercooler pipe (See the picture). The clamp should be tightened on the groove. Insert the intercooler pipe into both the new coupler and in the factory coupler on the intercooler. When the intercooler pipe is in place, tighten all three clamps after making sure both couplers are properly installed.



20. Install intake hose 2. Make sure the o-ring is all the way in, then tighten the two nuts on the bracket. After the bracket is tightened, push on the intake hose toward turbo as you tighten the clamp on turbo inlet. After tightened, make sure the o-ring is still seated tightly all the way in.



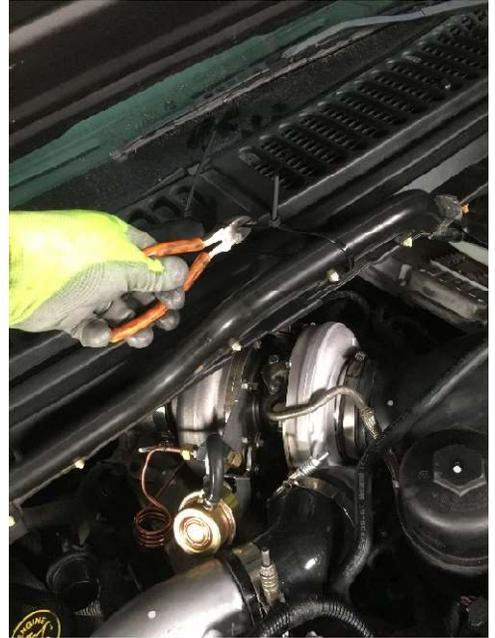
21. Install intake hose 1 as shown.



22. Remove all tools and parts from the engine bay. Start the truck and check for any oil leaks, air leaks, and vibration. If leaks are found, make sure all the clamps, bolts, or fittings are tight. Be sure that the oil pressure rises to the correct pressure. Allow it to idle for about 2-3 minutes without revving the engine. This allows the oil to reach the bearings of the new turbo. Do not allow truck to idle for long periods of time, especially on new turbo because it may cause turbo leaks.



23. Before you close the hood, don't forget to cut the zip tie and put the wiring cover back in place.



24. Drive conservatively for about 100 miles to allow some break-in time on the turbocharger.