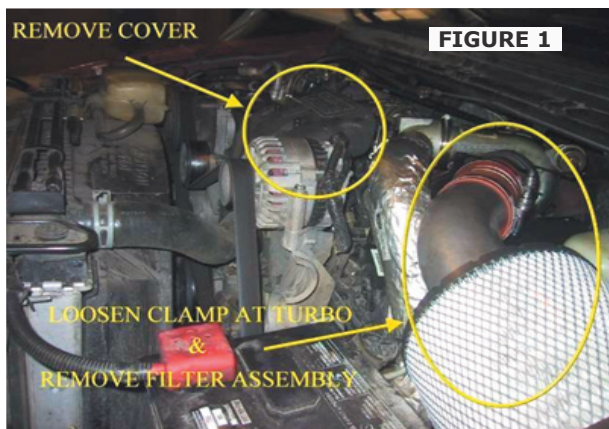




WICKED WHEEL[®] INSTALLATION INSTRUCTIONS

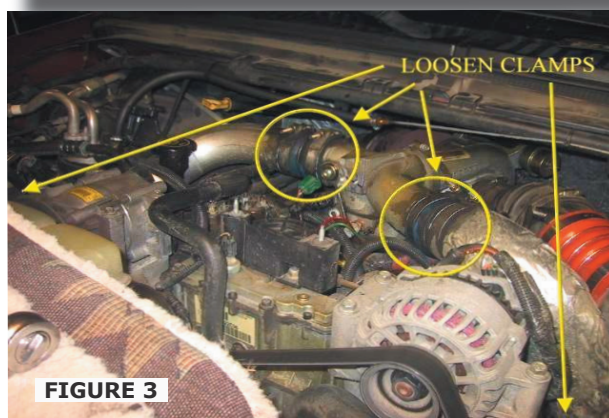
This is the experience of one install and your truck may differ slightly. Please use this as a guide and not a word-for-word "how to" for this installation. Also, some of the pictures may depict conflicting stages of the process, so use the written instructions for direction and the pictures simply for guidance on a particular step. Good luck! ****Not intended for use as a horsepower modification****



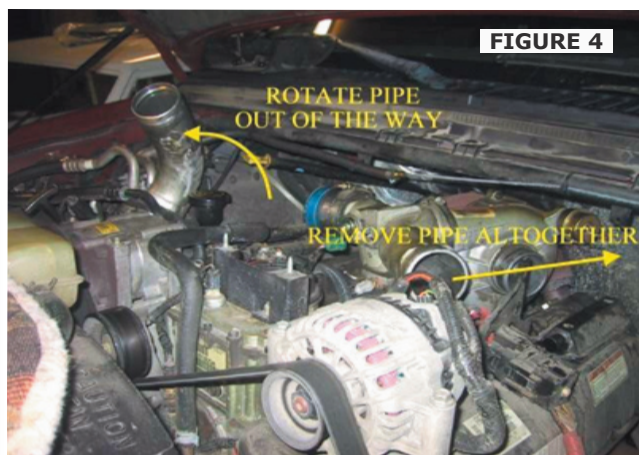
STEP 1 – Disconnect both batteries. Remove the tube connecting the turbo to the air box. Remove the plastic engine cover (the black piece of plastic that says Powerstroke)(fig1). NOTE: There is a crankcase vent hose that attaches to the bottom of the turbo inlet tube. It is underneath the black plastic coupling in the tube and uses a pinch-clamp to secure it to the breather box on the valve cover. Gently pry the clamp open or cut the clamp off and pull the elbow off of the breather box. Once the clamp is loosened and the green hose is out, the inlet tube should come right out.



STEP 2 – Unplug the red vacuum line from the wastegate actuator and trace it back to the Y-pipe (fig2). Here you will find a bracket with a single bolt holding it to the Y-pipe. Remove this bolt, unplug the green harness connector, and remove the assembly (with green and red lines still attached) from the engine. Be careful not to bend or break either line while removing this assembly.



STEP 3 – Loosen all intercooler pipe clamps. There are two obvious ones up top that attach to the Y-pipe. There are two more that attach to the intercooler itself (fig3). With all clamps loosened, remove the driver side intercooler pipe and rotate the passenger side pipe counterclockwise so that it is out of the way (fig4).



STEP 4 – Loosen Y-pipe clamps and remove the Y-pipe. There are three clamps that hold the Y-pipe in place. One connects to the compressor outlet of the turbo and two more connect to the intake plenums on each head (fig5). The compressor clamp may require a slight bump to break it free once you have loosened it. You can now remove the Y-pipe. Note that there is an o-ring in between the compressor and y-pipe. DO NOT LOSE THIS! If you haven't installed the DIESELSITE[®] air intake heater plug, you'll need to remove the wires from the heating element installed on the passenger side of the Y-pipe. To remove the Y-pipe, gently rock it to one side and pull it from the intake clamp hoses. Place clean rags into the intake clamp hoses to prevent dirt or tools from falling into the engine.



INSTALLATION INSTRUCTIONS - CONT'D.

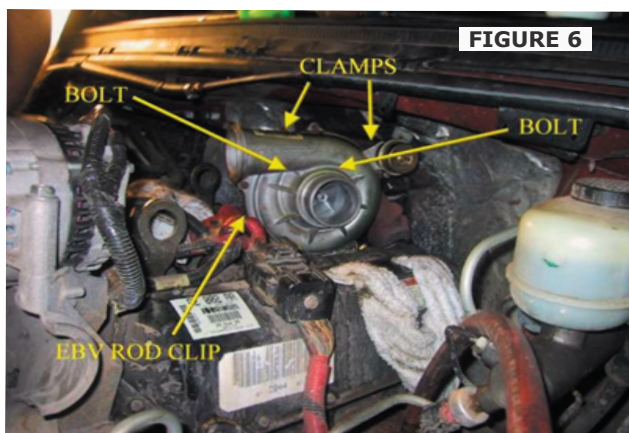


FIGURE 6

STEP 5 – Loosen the clamps to the downpipe & up-pipe collector and remove the two bolts on top of the turbo. *WARNING*: Unless your truck is brand new (or you are very lucky), these clamps will probably be very hard to get loose. The immense amount of heat they see daily contributes to making them stick in place. Spray both clamps (one at the downpipe and one behind the turbo at the up-pipe collector) thoroughly with penetrating oil and allow them to sit while you disconnect the EBV rod clip and remove the pedestal bolts (fig6).

The pedestal bolts are pretty easy to get to (13mm), while the clip is just below the turbine housing and is rather funny shaped. Slide the clip towards the driver's side of the vehicle. The clip is a slide "c-clip" style that requires no tools for removal. Loosen the exhaust clamps (11mm). They probably won't come loose with you wiggling the turbo by hand, so the easiest way is to completely remove the "tee-bolt" and use a flat screwdriver to pop the clamp loose. This clamp is very difficult to get to -- and this is why the penetrating oil is imperative. In some cases, heavy lubrication with penetrating oil will help pop the clamp loose so you aren't struggling with it. Once, you have the turbo loose (but not off), slowly raise it up and look for the o-rings on the underside of

the turbo. They may be sitting on top of the pedestal. In either case, discard them. Use the new o-rings we have supplied when you replace the turbo. Remove the turbo. Bring the turbine housing out first, directly over the fuel filter. You'll need to maneuver the turbo in order to keep it from snagging on the cowl. Take note of how it comes out, as you'll be putting it back in later. Be sure to cover up the pedestal to prevent contamination of oil.

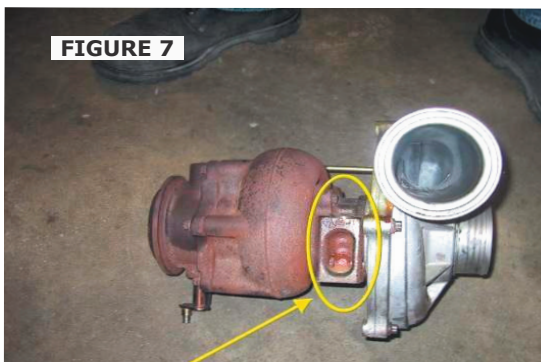


FIGURE 7

STEP 6 – Remove the compressor and turbine housing. Using an 8mm 12-point wrench, remove the 4 bolts that hold the turbine housing to the center section (fig7). They are fairly tight and aren't the easiest bolts to get a bite on with the wrench. Use Caution: DO NOT USE A STANDARD 5/16" wrench. You WILL round them off if you do so. Let them soak in penetrating oil for a few minutes and then slip the boxed end of a larger wrench over the smaller 8mm wrench in order to increase your leverage. Keeping the 8mm wrench seated snugly on the bolt, "bump" the larger wrench with some force. The bolts should pop loose and be fairly easy to finish removing. Use the same procedure for the 5 compressor housing bolts (fig8). Be careful not to damage the large compressor housing o-ring, you will re-use this. It does like to expand fairly easily so try not to stretch it any more than necessary.

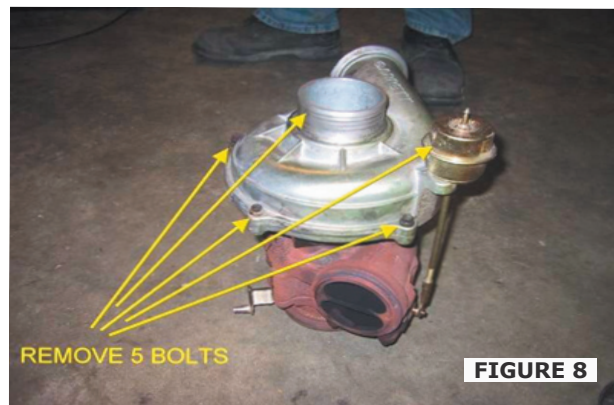


FIGURE 8

STEP 7 – With both wheels exposed, you now need to put the turbo in a vice in order to remove the compressor wheel. Set the turbo vertically in a vice with the exhaust(turbine) wheel nut clamped between the jaws. Clamp it good. Hold the turbo upright and steady. Now, using a 5/8 or 16mm wrench (your choice), loosen and remove the compressor wheel (fig9). It is a regular thread so unscrew it like any other bolt/nut. Replace it with the **Wicked Wheel®**. Hand tighten then snug it up firmly with a wrench. There are no torque specs. The wheel is actually a self-tightening thread. Remove the turbo from vice and re-attach the housings making sure to insert the compressor o-ring.



FIGURE 9

STEP 8 – Reinstall everything by reversing the removal process.

- Don't forget to reinstall pedestal o-rings before placing turbo back onto the pedestal.
- Get the turbo seated and lightly bolt everything up before tightening anything. This ensures that everything lines up and there is no undue stress on any bolts of any one component
- Make sure to put the compressor to y-pipe o-ring back in
- With the turbo in place check endplay and make sure you can spin the turbo freely by hand
- There aren't any unnecessary brackets, clamps, etc... that can be left out, so make sure that the only leftover parts you have are an old turbo wheel and the discarded o-rings.

PLEASE NOTE: This install can take anywhere from 2 hours to 9 hours depending on level of experience and difficulty of clamps to remove. Don't get impatient as you're likely to damage something or worse. Take your time and be persistent in removal of turbo. Take a break when needed and be sure to pad the top of the engine with blankets – you'll be spending a lot of time up there. Again, take your time and use caution.