

Delphi Injected FL/Dyna/Softail Turbo Kit Installation

◀ The following procedures should be followed in the order they are listed to avoid extra work. The installation should take 8-10 hours. The tools you will need are standard hand tools. Included in the kit are all necessary drills and taps needed for the installation. Footnotes are provided to help with additional problems you might encounter.

◀ Trask Performance has designed the **TRASK** turbo system to provide usable, dependable horsepower for many trouble free miles. It was intended to make 8 lbs of boost on 91 or higher octane fuel. At this level the bike should make 110 horsepower. If the customer chooses to increase the boost level, the fuel system will have to be tuned and other modifications may be needed to supply enough fuel for higher levels of performance. Also engine modifications may be needed to support higher levels of horsepower. Trask Performance does not recommend raising boost levels beyond the kit-preset levels unless you make the proper modifications. Expensive engine damage may result if these warnings are not observed. With that said lets get started.

◀ If you increase boost level above the kit settings, the bike will need to be tuned to insure the engine doesn't run dangerously lean, resulting in engine damage.

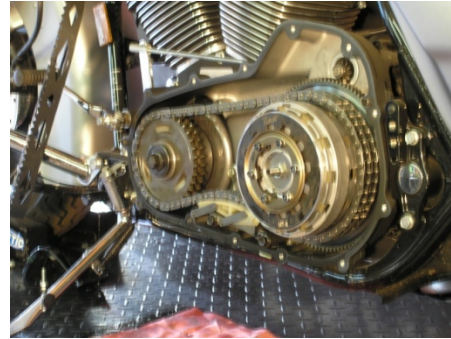
NOTE: For maximum power, we recommend having the bike dyno tuned to achieve maximum power potential. Air fuel ratio should be set around 13.5 cruise and 12.8 – 13.0 for power. Running to lean will result in temperature increase and engine damage may occur.

DELPHI INJECTED FL/DYNA/SOFTAIL TURBO KIT INSTALLATION PROCEDURES

Make sure you have a Service Manual for your model and year bike before you start. Remove your gas tank – It is much easier to work on the intake. Also, make sure you remove the fuel pump fuse or unplug the fuel pump connector and start the engine and let it run out of gas.



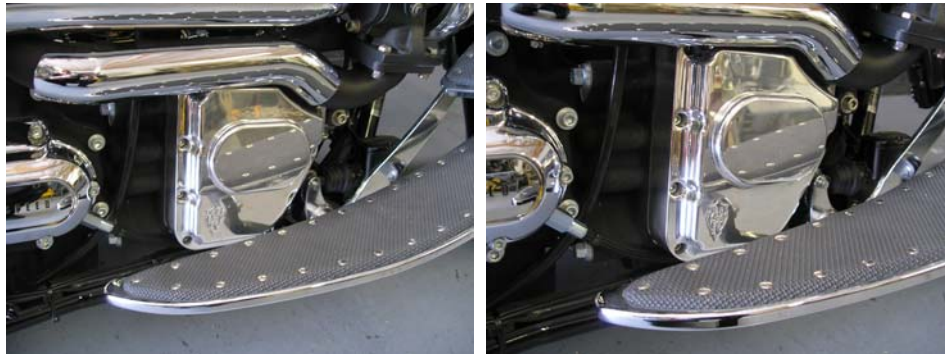
Step 1: Remove the exhaust system, air filter and backing plate. Remove and discard your spark plugs. Install the plugs supplied in the kit, gap .032" and use anti-seize on threads.



Step 2: Remove outer primary cover and install the performance clutch spring as per factory manual procedures. Adjust clutch cable per manual. Replace gaskets and re-install with new primary oil.



Step 3: Remove throttle body. Before you install the new fuel injectors, you will need to drill and tap the bottom side of the manifold. Just above the part number, center punch and drill with the #21 drill bit supplied in the kit. Now tap with the 10-32 tap, also provided in the kit. Blow out all metal chips and shavings. Apply red thread lock to the threads of the fitting and install. Snug the fitting to the manifold. Do not over tighten. You don't want to strip the fine threads. Install the vacuum line. Secure the vacuum line with a cable tie on the fitting. Install the new fuel injectors. Re-assemble the throttle body/manifold with new intake seals. (Provided in the kit)



Step 4: Remove the cam cover. Re-install supplied cam cover and new gasket.



Step 5: Remove dash. Unplug the fuel pump connector and overflow hose. Start the engine to release the fuel pressure.



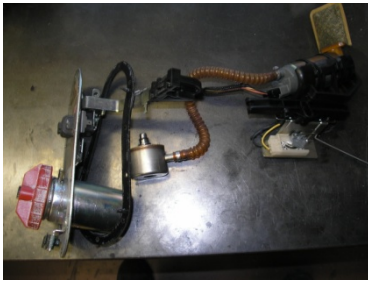
Step 6: Remove the fuel pump access plate.



Step 7: Lift the pump assembly out of the tank enough to remove the bail clip. Hold on to the tab that the clip connects to, otherwise it will fall into the tank



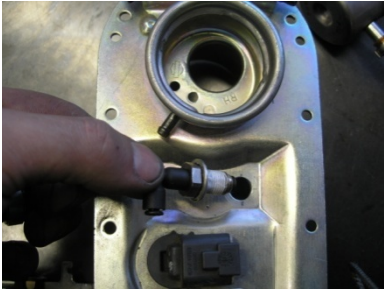
Step 8: Disconnect the regulator from the filter. You don't need to remove any fuel lines or clamps. Pull the regulator assembly from its housing.



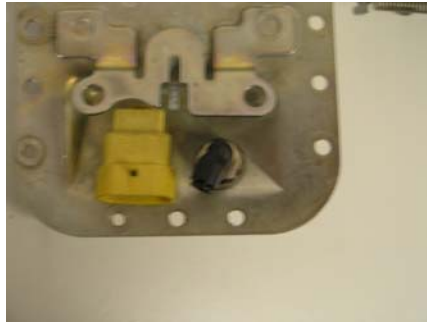
Step 9: Remove the pump assembly from the tank. Disconnect the wires from the plug. Remove the bail spring and separate the pump section from the plate section.



Step 10: Measure 9/32" from the edge of the stamped section. This is where you will need to drill for the bulkhead fitting. Be sure not to be any further away from the stamped section, otherwise it will interfere when you reassemble the pump assembly.



Step 11: Drill a small pilot hole then enlarge to 13/32". Install the bulkhead fitting with the 90° end and the o-ring washer on the outside. Apply some thread sealer to the threads on the fitting. Do not over tighten the plastic nut on the inside.



Step 12: On softtail models, locate position for drilling by looking at photos. Also, make sure when lowering the dash that the fitting and boost line don't interrupt the speedo housing.



Step 13: Remove the regulator unit from the housing and tap the atmosphere port with the 10-32 tap from the hardware kit.

Step 14: Install the fitting with red loctite on the threads. Plug the modified regulator back into its housing with the boost port fitting in line with the fuel line. (Towards the rear of the bike) Reassemble the fuel pump assembly. Connect the supplied 1/8" polly line from the black head fitting to the boost regulator fitting.



Step 15: Be sure the line is long enough so it won't crimp. Secure the fuel pump access plate back onto the fuel tank. Route the boost line to the front of the tank, then to the canister. Use the anti-abrasion sheath to protect the line from chafing and heat. Connect to the canister. Reinstall the dash.

Step 16: Remove the oil pressure switch, install the aluminum adapter with thread sealer.

Step 17: There are two holes taped into the adapter; the 1/4 NPT should point down and the 1/8 NPT should point up. Install the oil pressure switch with thread sealer on the bottom side and the 1/8 NPT - #3 AN on the top.



Step 18: Remove from your old exhaust systems 2-exhaust flanges and 2-retaining rings. Install onto the Trask Turbo header. Apply some ultra copper RVT silicone inside the slip fit to seal. Put exhaust clamp provided on the slip fit and assemble the header. Install the header on the engine and use the 4 new exhaust nuts provided. Tighten the pipe to the heads only enough to hold with enough movement to align the system later. (This may be a really tight fit)



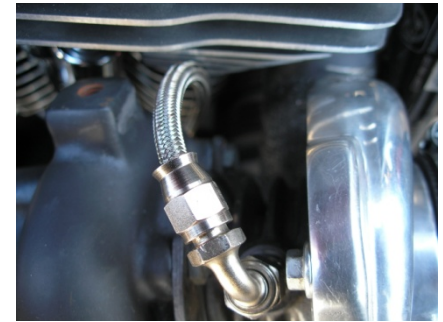
Step 19: Install the oil drain line on to the cam cover fitting first as it will be easier to get to. Bolt the turbo onto the header loosely. Install supplied 4-Bolt Gasket. Do not tighten until next step. Install the oil drain line onto the cam cover fitting then install the drain adapter on the other end. Secure the drain adapter onto the turbo last. Tighten the hose clamps.



Step 20: Install tailpipe with gasket.. Start the 5 socket head bolts onto the turbine housing. Before tightening the socket head tail pipe bolts start the 3/8 tail pipe to header support bolt. Tighten all the hardware on the tail pipe, then the turbo to header bolts.



Step 21: Secure the tail pipe to the bag support bracket. Longer bolts and spacers are provided in the hardware pack. Install the tail pipe heat shield.



Step 22: Route the oil feed line behind the turbo and connect both ends, one on the turbo and the other on the oil feed adapter.



Step 23: Install the oil mister breathers, use red loctite. Check clearance from the canister.



Step 24: Replace your stock throttle body to air cleaner gasket seal and install the canister. Use blue loctite on the support bolts.



Step 25: Start by installing the front hex head support bolt, then the three 1/4 - 20 socket head bolts and gasket, then the rear support bolt.



Step 26: Place the velocity stack into the canister over the three bolts. Align the pen marks and tighten the set screw. Next, install the cover with the gasket.



Step 27: Connect the turbo to the canister with the 2" dia. 90° silicone elbow. Trim to fit if needed.



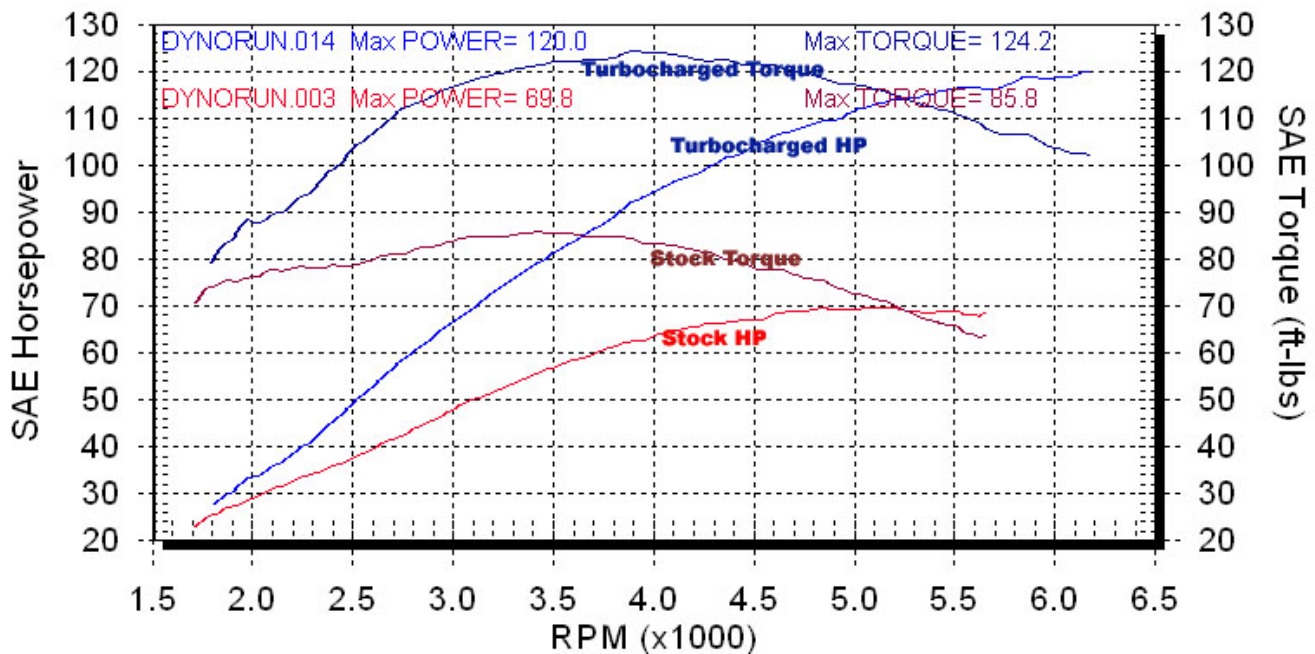
Step 28: Plug the blow off line into the manifold vacuum port. Install the air filter.

Make sure everything is connected and tight, check to see whether hoses have clearance from the exhaust. Top off the oil and start the engine. Check for exhaust leaks and oil leaks.

After everything is double checked and the engine is started, take a short ride and check for loose connections.

Now you need to load the fuel map supplied with the kit. Maps for both Power Commander and Race Tuner are provided. The bike should be dynotuned for optimum power.

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NOTE: If you plan to drag race your bike, we recommend using 100 Octane fuel.

Trouble Shooting

The following is a trouble-shooting guide, for our Delphi turbo kits.

1. When on start-up, bike won't idle below 2,500 rpm.
 - Check intake leaks.
 - Check IAC function.
 - Reset IAC with Scanalyzer.
 - Make sure throttle plate fully closes.
 - Check TPS voltage. If set too high, above .55 volts, back throttle stop screw until TPS voltage reads .45 volts.
 - Reset IAC and double check IAC steps. Should be around 30 – 80 steps when fully warmed up. Idle should not drop below 1,000 rpm. Oil feed to turbo may become insufficient.
2. Lack of power.
 - Check BOV on front of surge canister. Make sure valve is sealing.
 - Check for leaks in canister, cracks, etc.
 - Check fuel pressure. Needs around 50 – 60 psi to operate correctly.
3. Heavy Surge/Bucking when at cruise.
 - Check map signal. Make sure vacuum line is installed on map sensor.
 - Call Trask Performance for remedy.
4. Smoking out tailpipe.
 - Make sure turbo drain hose is not restricted/kinked.
 - Call Trask Performance Tech. Support.



**NOTE: MAKE SURE NGK DCPR9E
SPARK PLUGS ARE INSTALLED WITH
THIS SYSTEM AND GAPPED TO .034.**

**ENGINE DAMAGE OR SPARK PLUG
FAILURE MAY OCCUR IF CORRECT
SPARK PLUGS, REFERENCED ABOVE,
ARE NOT INSTALLED.**



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performance

!!!! WARNING !!!!

THIS PRODUCT IS FOR OFF-ROAD
USE ONLY

- EACH ENGINE IS DIFFERENT AND MUST BE DYNO-TUNED AFTER INSTALL

**IF YOUR DYNO TECHNICIAN HAS ANY
QUESTIONS, PLEASE CONTACT RON OR
NICK AT TRASK PERFORMANCE**

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RETURN POLICY

Dear Valued Customer:

We at Trask Performance have found it increasingly difficult to return parts to our suppliers. It is now necessary to tighten our own Return Policy and need your full cooperation in this matter. There will be no exceptions to this policy.

Return Policy Procedure

1. There will be NO CREDIT TO YOUR CREDIT CARD ACCOUNT OR CASH REFUNDS. Your monthly statement will NOT show any credit when you return an item. Your account with Trask Performance will be issued a credit for merchandise or exchange for the same value.
2. All returns MUST HAVE A PRIOR AUTHORIZATION NUMBER.
3. A RETURN AUTHORIZATION NUMBER AND A COPY OF THE INVOICE must accompany all returns. Returns will not be accepted without return authorization.
4. Parts authorized for return must be in original packing only. ABSOLUTELY NO SUBSTITUTIONS WILL BE ACCEPTED.
5. Parts that were originally shipped in vendor plastic bags, boxes or shrink-wrapped must be returned in that original packing and condition. No writing of any kind is permitted on original supplier packages or boxes. Defaced items will be returned to customer. NO SUBSTITUTIONS WILL BE ACCEPTED.
6. Trask Performance must be contacted within 10 days for any returns or problems. NO RETURNS ACCEPTED AFTER 30 DAYS.
7. If the return is NOT the error of Trask Performance, there will be a 20% RESTOCKING FEE.

Thank you for your cooperation.



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WARRANTY

NO WARRANTY ON PERFORMANCE WORK. We warranty products to be free in defects in material or workmanship for 12 months from purchase date. In the event of such a defect within the warranty time period, we will, at our discretion, replace or recondition the product at no charge.

We shall not be responsible for any costs, including but not limited to costs resulting from labor charges, shipping charges, delays, vandalism, negligence, fouling caused by foreign materials, damage from adverse air or weather conditions, chemicals, or other circumstances over which we have no control.

This warranty shall be invalid by any abuse, misuse, misapplication or improper installation of these products. Products not manufactured by Trask Performance are covered under the manufacturer's warranty. These products contain their product warranty in the package. Please contact the manufacturer for warranty claims. The installation of some aftermarket products may void your vehicle warranty.

ALL SALES ARE FINAL



TRASK BOOST GAUGE KIT INSTRUCTIONS

1. Remove 2 x clutch perch clamp bolts. Using original washers and supplied longer bolts, install gauge mount.
2. Install gauge into mount, adjust and gently lock down set screw to hold gauge in mount.
3. Route 1/8" plastic boost line from gauge along side of handlebar down to pressure source port. (Trask V-Rod system has a port on front of plenum) Use adapter supplied in the kit to attach pressure line to pressure port fitting.

