



## SRP – Stage One Turbo Systems Instruction Guide.

### PREPERATION:

\*\*\* Disconnect battery \*\*\*

1. Remove the bodywork side fairings, underbelly fairing, upper inner fairings, and gas tank (which requires removing the front seat)
2. Remove the PAIR system if still equipped, and install either block off plates, or tap the holes in the head and screw in 6mm bolts. PAIR is gone for good, discard.
3. Remove entire air box from throttle bodies, but take the map sensor off of it-we need that still.
4. Remove the complete exhaust system, it will not be used.
5. Remove the oil cooler, both lines for it, and the brackets-they will not be used.
6. Drain and remove the radiator
7. Remove the clutch line support bracket, but leave the hydraulics connected. The line will need to be moved for up pipe fitment.
8. Drain oil and remove the oil pan.
9. Remove the throttle bodies off of the head, leaving the intake boots in place.
10. Replace the stock 10amp fuse for the fuel pump with the spare 15 amp which is in the fuse box, located to the left of the gauges, under the trim panel.

\* Install heavy duty clutch springs, sold separately. But are recommended.

The first thing to do is modify the oil pan. Drill a 23/32 hole in the left side of the oil pan (left as in sitting on the bike), making sure to get it in the right position. The fitting should have a flat surface to seal on, inside and out. Refer to pics. I think I actually used a 3/4 bit. Just make sure it's not too big. This will not be a tapped or threaded hole; the fitting should slide right into the pan. In the first pic, you're looking at the



\* In the second pic, you'll see the fittings you need for the outside. They are rather large, as the oil return line from the turbo is big. There is an o-ring sandwiched between the fitting and the oil pan. Once the pieces are in place, tighten it pretty tight. You should be able to grab it, and not turn it easily by hand. The male end should be level and pointing toward the turbo. Don't worry about the hose yet, it'll go on later. Reinstall the oil pan.



### IMPORTANT!

\* Remove the oil plug (reducer) located behind the oil filter, with an 8mm Allen. With the oil cooler gone, you must remove this, or the engine will starve for oil! Install new oil filter.

\* Remove the oil sending unit and install the "T" fitting for the oil feed line to the turbo. The oil sending unit will screw on one end of the "T", and the other end will accommodate the oil feed line to the turbo. Use a thread sealer or loc-tite, or Teflon tape on the threads. I used Loc-tite's thread sealer (different than thread locker), but either method should work.



\* Install the oil block-off plates (2), where the oil lines originally were. Seal the threads on these as well.

Install the Exhaust header/turbo/waste gate assembly. It's a bit heavy, so don't drop it! If you're by yourself, sit on the floor, and support it with your knee. You'll need a ball end Allen, 6mm. I tightened the bottom first, simply because they go in easy if they go in first. The top bolts are much easier to tighten down. Once it's tightened down, install the metal braided feed line to the "T" fitting from the previous step. Thread sealer is NOT needed here, because of the flare fitting.

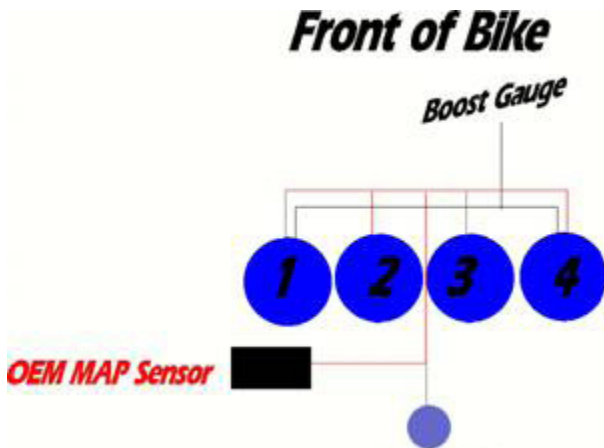


Fuel system...On the throttle bodies; remove the 3 screws that hold the fuel rail in place. Remove the fuel rail and disassemble it. Remove the O-Rings from the stock inserts, and install them onto the billet fuel rail inserts included with the kit. Reassemble the fuel rail using the billet inserts, and reinstall the rail to the throttle bodies. Install the barb fittings into each of the 2 inserts, using lock-tite thread locker to seal the threads. Leave the first thread clean, and apply a small amount to about 3 threads, and tighten down. Don't get them too tight, you don't want to crack the rail.

Fuel Inserts for Fuel Pressure gauge, sold separately.



The "T" fittings for the vacuum lines on the throttle bodies need to be replaced. The stock T's do hold the vacuum hose very well, and under boost, the hoses could get blown off....so, we are going to swap them. Simply remove the stock T's and install new ones. If you prefer, as we did, you can use the new hose as well-it's a tighter fit. See pic. But ZIP TIE ALL Vacuum Lines at the fittings...





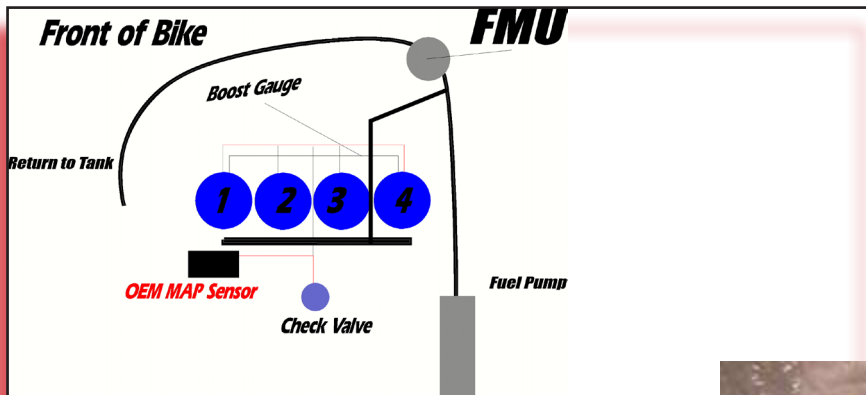
The Blue Line will run up to the Plenum/ Intake on the right side...

\* Remove the fuel pump from the bottom of the fuel tank. The stock pump and regulator is not going to be used, but we need to get them out of the tank. Remove the fuel pump, fuel pressure regulator which is on top of the sending unit and the grommets, etc. Basically, gut the thing. All that we are leaving is the fuel level sending unit, and it's mounting fixture. Sorry, but I have no pics of this procedure. It's fairly simple. Leave the sending unit assembly off of the tank, as it needs to be modded...

\* The fuel feed for the external, aftermarket fuel pump we are going to use, requires the bottom of the sending unit housing to be tapped. To do this, drill a hole straight into the middle of the "bowl" ....sorry, I'm not sure of the size you need. I start small, and get progressively bigger until it's just big enough. Too big a hole will leak. Install the "L" fitting, Oring, and backing nut to the "bowl" with the O-ring on the outside, between the bowl and the fitting-just like the oil tap for the oil pan. When tightened down, it should be in about the 2 o'clock position from an UNDER the tank view. Tighten it down fairly tight, and use lock-tite on the inside threads with the nut-we don't need this thing loosening up! See pics.



Now, the fuel pump wiring harness needs to be modified. Power is no longer needed to go into the tank, but we do need it to power the external fuel pump. So, cut the fuel pump wires just before they go into the "bowl", or sending unit housing. The pump wires are the 2 larger wires out of the 4-the other 2 smaller wires are for the sending unit-DO NOT CUT THEM! You want the fuel gauge to work don't you? The Yellow/Red wire is the positive, and the black/white is ground. Remember that. We'll wire the pump later. Reinstall the sending unit/bowl into the tank. See pic.



Install the rubber boots onto the throttle bodies and tighten down the clamps. It might be easier to install the to the plenum first, and that's fine, whichever you choose to do. Keep in mind that the position of the head of the clamp should be in a position that it will not be right between the intake runner. The fuel hoses will be routed in between the runners, and you don't want the hoses to rub on any of the clamp heads. You can see in the below pic that for the bottom clamps, I put the heads to the front of the bike, and for the top clamps, I put the heads to the rear of the bike. At this point, I'd tighten down the bottom clamps, if you choose to put the boots onto the throttle bodies first-I did. Note the fuel hose routed between throttle bodies....



Ok, now fit the other rubber boot onto the intake pipe of the plenum along with 2 clamps to clamp it down with. Install the plenum onto the throttle bodies, making sure you have all the clamps in place, but do not tighten them yet.

Slide the rubber boot on the plenum over to mate with the Up-Pipe, but leave the clamps loose.

Install the plenum tie down aluminum straps. 4 supplied with kit, The rear ones are straight forward enough. The long one goes on the right side, from the right rear corner of the plenum down to the bolt that holds the battery "-" cable to the frame. The tie-down for the left rear is the next longest one, and it mounts in the same fashion-there is a bolt on the inside of the frame where the vacuum controls mount-you know, the controls for the flapper valve on the airbox that we no longer need.....remove that junk, btw... we don't need those valves, that vacuum reservoir, or the vacuum lines for it. Yank it, if you haven't already, and install your tie-down strap. With the bolt that holds the bottom of this strap, you'll need to also screw down the barometric sensor and the map sensor (removed from the airbox earlier). Position them level, and don't forget that the map needs a vacuum line to it....more on that later.....For the right front strap, I cut one of them to fit in this area. It's all I could figure.....Reinstall the inner fairing bracket, which was removed earlier, and using the bolt for that, fasten the right front strap in that area. Cut and drill a hole to match the plenum if need be. See pics.



Here's the pic of the map sensor, barometric pressure sensor, and the air intake temp sensor mounted to the left rear tie-down bolt. I insulated the temp sensor to keep it on the cooler side, as if it really mattered. It's tie wrapped to the other sensors. My thumb is on the air temp sensor, the index finger is on the baro sensor, and the Mid Fig is on the map sensor. See below pic.



Notice also that the tie-downs are not straight like they come. You'll need to push and bend them inwards once installed, so they won't interfere with the gas tank closing.....ask me how I know, go ahead ask..... It may prevent you from taking the tank back off and wondering why the hinge wouldn't go down.....har har.....grrrrr.....

On a side note, I had to lengthen some of the bolt holes on the some of the straps, due to my engine having a spacer plate in it. The holes wouldn't line up quite right....no biggie.

\* With the plenum secured, tighten all the clamps on the plenum and Up-Pipe. Get 'em on there good, we don't want any leaks.

\* Now, we need to hook up the map sensor with a little modification to the line. Install a "T" fitting into the map sensor vacuum line, having the map sensor T to the side, and install the check valve on the straight through path from the T. The valve must be position so that boost pressure coming through the line can be vented to the atmosphere. Notice in the pic (I've installed an additional Y, and another check valve in mine) how the check valve is positioned-the black end is facing out. Also note that the line to the map sensor is run off to the left. The purpose of this modification is to prevent the map sensor from seeing boost, as this will trip the FI light. It doesn't hurt anything, but it makes the light blink. The map is only used by the ECU at low engine speed and throttle openings, so when under vacuum conditions, the check valves will allow vacuum as normal to reach the map sensor.