

# RZR Charge Tube and J-tube Instructions

The easiest way to access the charge tube's factory T-Bolt clamp and MAP sensor on the factory charge tube is by removing the muffler, heat shield, and mufflers mount. This is very easy and how we have demonstrated it in these instructions. However people have done it through the passenger side of the machine. It is also easily accessible if you happen to have your bed off. Due to the variety of mufflers available it would complicate our instructions to cover the uninstalling process. With that being said we will not be covering the removal of the factory muffler but this is our recommendation for easiest installation of the charge tubes and we will say it is very easy to uninstall and reinstall.

**These instructions will cover the installation of the Charge Tube and BOV first and then the J-Tube installation.**

#1 Unplug the factory throttle body Motor and factory map sensor to gain access easily to the factory T-bolt clamp on the throttle body.



#2 Remove the factory map sensor by unscrewing the T25 screw on top and lifting up in order to keep it safe during removal of the factory charge tube.



#3 Loosen the factory T-bolt clamp on the throttle body completely and remove it from the charge tube.



#4 Remove the beds access cover to gain access to the factory T-bolt clamp on the turbo cold side exit and loosen it completely and remove it.



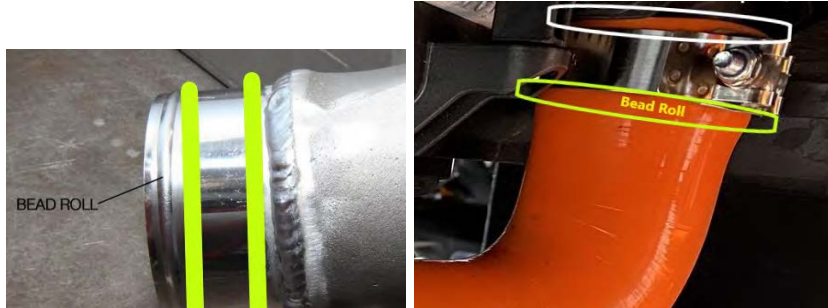
#5 Loosen the clamps for the factory BOV ( AKA recirculation valve ) and remove the valve from the charge tube.

#6 The factory charge tube is made of stiff plastic, you will need to really push and pull on it to remove it, it is easiest to remove it from the throttle body, push it forward, and swing it out the driver side.

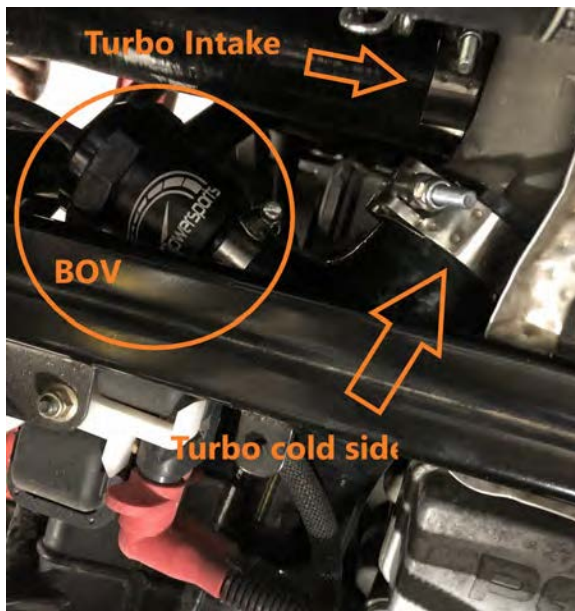
#7 At this time you can begin to install the RPM charge tube. You will install it from the driver side, snaking it in towards the turbo cold side, on the turbo cold side first, then down onto the throttle body. You can now adjust it so the it is fully seated to the turbo and throttle body. You can now put the t-bolt clamps on.



#8 **Remember to always have T-bolt & Worm clamps ABOVE the bead roll, and below the top of the silicone on EVERY spot a clamp goes. If this is not done properly you run the risk of the charge tubes coming off under boost.**



#9 Once the turbo cold side and throttle body t-bolt clamps are secured, you can install the RPM BOV ( or factory recirculation valve ) into the port and tighten the worm gear clamp. This port may feel loose at first depending on which valve is reinstalled but when tightened the void will collapse securely around the RPM BOV ( or factory recirculation valve ).



#10 You can now reinstall the map sensor with the supplied 8mm bolt and connect the throttle body motor **we recommend lubing the o-ring with grease before putting it in the new aluminum MAP sensor holder.** At this time you may test start the machine!

**If you also purchased the RPM J-Tube / Intake Tube you will continue with these instructions below.**

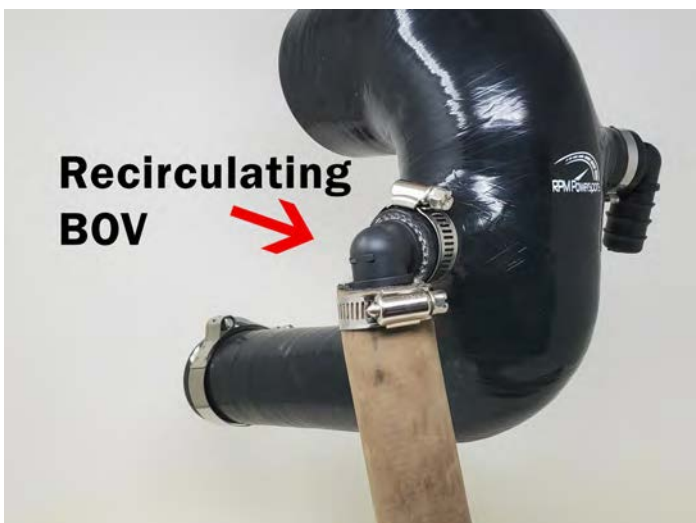
#1 Unhook the factory map sensor located on the top side of the tube near the firewall.

#2 You will need to remove the 1" hoses on each side of the factory intake tube by cutting the factory ear clamps and pulling the hoses off the tube.

#3 To gain access to the factory intake hose's clamps remove the bed access cover.

#4 Here you will loosen both clamps completely. You can now remove the factory intake tube.

#5 If you are running a BOV and not recirculating it, you can cap the left side 1" port with the BOV plug supplied with your RPM BOV kit. If you ARE recirculating or decide to later, you will cut the 1" hose immediately after the 90° factory bend as your new J-Tube comes with a 90° plastic port which your factory 1" hose will now secure too.



#6 The right side's factory 1" hose will be cut immediately after the 90° factory bend as your new J-Tube comes with a 90° plastic port which your factory 1" hose will now secure too.

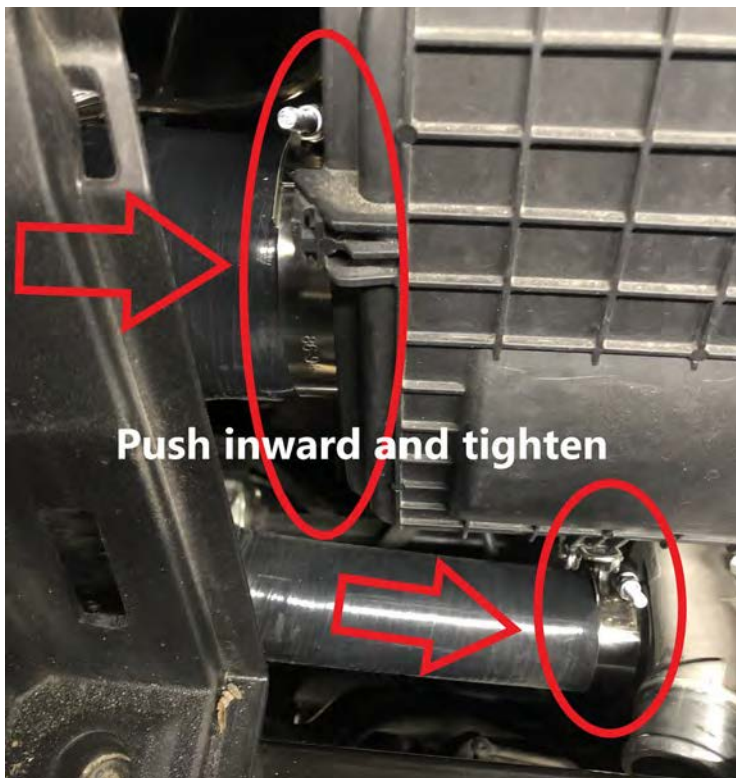


#7 You can now reinstall the map sensor into the J-Tube with the supplied 8mm bolt, **we recommend lubing the o-ring with grease before putting it in the new aluminum MAP sensor holder.**

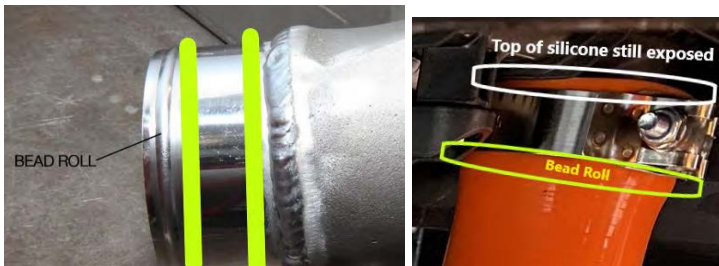
#8

J-tube onto the turbo inlet and air box.

Install the supplied T-Bolt clamps in the factory "positions or angles" and install the



#9 Tighten the T-Bolt clamps, make sure the tube is not touching the shock springs. If it is rotate the tube away then re-tighten the clamps. We recommend keeping force towards the inlet and air box to ensure the charge tubes are flush against the air box and turbo inlet. **Remember to always have T-bolt & Worm clamps ABOVE the bead roll, and below the top of the silicone on EVERY spot a clamp goes. If this is not done properly you run the risk of the charge tubes coming off under boost.**



#10 Tighten the now cut 1" tubes to the 90° plastic ports with the supplied worm gear clamps.

#11 Plug the map sensor back in and inspect your work.



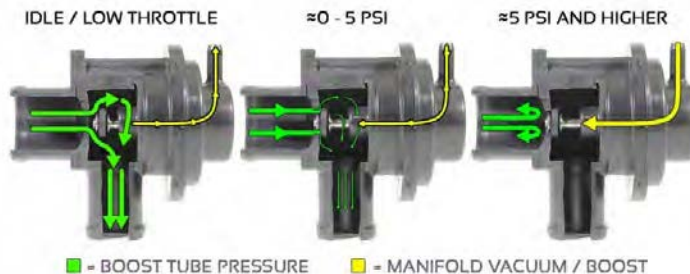
#12 At this time your kit should be completely installed. If you have ANY questions feel free to reach out to us via email, Facebook, or give us a call!

## If using the RPM BOV:

- The BOV filter and pre filter are NOT required unless running in constant deep water and mud. The filter and pre filter act as a muffler and will make the BOV quieter.
- The orientation of the BOV should always be pointed downward.
- Q&A BOV videos and How to test  
<https://www.youtube.com/watch?v=5syyKt7r8yE>  
<https://www.youtube.com/watch?v=lxhLipiMUUQ>
- This Blow off valve is setup with the Medium spring. This is our recommended setting. The extra springs will simply change the tone the BOV makes.
- The billet plug can be used to plug the tube if ever to need to remove the BOV from the silicone hose
- The extra spring will simply change the tone the BOV makes.
- To change out springs simply unscrew the top of the valve.
- The heavier the spring the slower the valve can open to dump boost.
- When reinstalling the cap make sure the o-ring is seated, lubricated, and is sealed correctly.
- Tighten the exhausting tip of the valve before installation



## Tips & Frequent Questions::



The X3's should have some blow off during idle and cruising speeds. Trying to keep the valve closed with an extremely heavy spring builds heat in the charge tube from pushing air on the backside of the essentially closed throttle blade.

The purpose of the spring in a BOV is not to hold your BOV closed under boost pressure! All BOVs have a reference line coming into the top of the BOV from your post-throttle body intake manifold. Under high boost, the force holding the BOV closed is BOOST! The pressure coming through the reference line is equal to the pressure under the BOV piston. Therefore a VERY mild spring will hold it shut just fine under these conditions.

Your goal when selecting a BOV spring and adjusting the BOV should NOT be to select a spring based on your boost level. Using the very smallest amount of spring energy possible equates to allowing the BOV to snap open as rapidly as possible when pressure release is necessary.

For a loud sound in the cab point the BOV's exit towards the seats and downward. To quiet it down point it towards the back and downward.