



www.KronaPerformance.com

Saab V6 9-3 2.8T 3" Krona Downpipe and Midpipe Installation Guide



General Disassembly Instructions:

The simplicity of this installation is largely dependent upon the overall condition of your vehicle as well as your mechanical skills and level of patience. The installation of the downpipe and midpipe on this vehicle is more thorough than most. You will need to use great care and follow the steps as they are written in this installation guide for success. We have done installs where all the fasteners are rusted which makes it quite difficult and we have also done installs where everything comes apart as it should. We have had great luck when using a lubricant spray on the fasteners a couple days prior to the install to begin softening all the bolts up for removal. The design of this vehicle may prohibit you from being able to soak all fasteners prior to your install as a lot of them are hidden by heat shields etc. This installation guide was written using the 2wd platform. Although there are many similarities between the 2wd and the xwd some stuff will be slightly different, so please keep that in mind if you are using this for the xwd installation. We have done our best to notate this in one installation document.

Disassembly

- 1) Place the vehicle in a secure location and allow the vehicle to cool. Support the vehicle high enough off the ground that you can work easily under the car (please be very diligent when supporting the vehicle, you can't enjoy all the performance you're about to gain if the car falls on your head). It is best to use a lift to tackle this install as there are areas on both the top and underside of the vehicle that will need to be disassembled.
- 2) Disconnect and remove the battery (10mm socket/wrench).
- 3) Once the battery is removed you must now disconnect the array of electronics attached to the battery tray (be careful not to break any clips!!!!). You may now remove the battery tray (x3 T40 Torx's). The engine harness running along the side of the battery can be lifted/moved out of the way for easy disassembly/installation without disconnecting.



- 4) The coolant overflow tank and lines will need to be removed before proceeding. You will also need to drain the coolant from the vehicle to avoid a massive mess of lifting a disconnected coolant overflow bottle out of the way with fluid in it. Remove the rubber lines that run from the engine to the overflow bottle (Pliers work great for this step). A little bit of residual antifreeze will more than likely leak out during this step.



- 5) Now you will need to go underneath the car and drain your coolant system. On the passenger side above the axle and behind the alternator there is a coolant line going into the engine block. This is the location to disconnect and drain your coolant system. This step will also get pretty messy.



- 6) While underneath the vehicle and with the coolant drained this is a good time to start removing the fasteners that hold the downpipe to the oil pan and also the downpipe to the midpipe. These fasteners (if original) are generally pretty weathered. A lubricant spray and a torch may be necessary for there removal. Our kit will provide you with new studs/nuts/bolts for the installation of your New Krona Downpipe kit. The support brackets are 17mm bolts and the flanges are held together using x3 13mm nuts. The removal of the brackets from the engine will provide you the space to get to 17mm bolt directly above the axle which initially looked unreachable (this will allow for the pipe to flex).



- 7) To assist in removal it is also necessary to remove the bolts holding the brackets to the oil pan (13mm)



- 8) With the coolant now drained from the car you may now remove the coolant expansion tank located on the firewall. This can simply be lifted away from the firewall. There is a coolant hose on the back of the tank that will also need to be unclipped (Same connection as the one located underneath the car). Be sure to also disconnect the sensor located on the bottom of the tank. It is easily removable by twisting it out of the bottle but we recommend disconnecting it and leaving it in the tank to reduce the risk of it becoming damaged (or lost) during this process.



- 9) Now with the coolant tank out of the way you can begin removing the heat shield(s) surrounding the factory downpipe and O2 sensor (x2 10mm bolts and X1 10mm nut/stud). You may also lift the factory engine cover out of the way at this time by gently lifting on the corners. Before proceeding to the next step this is what your engine bay should look like.

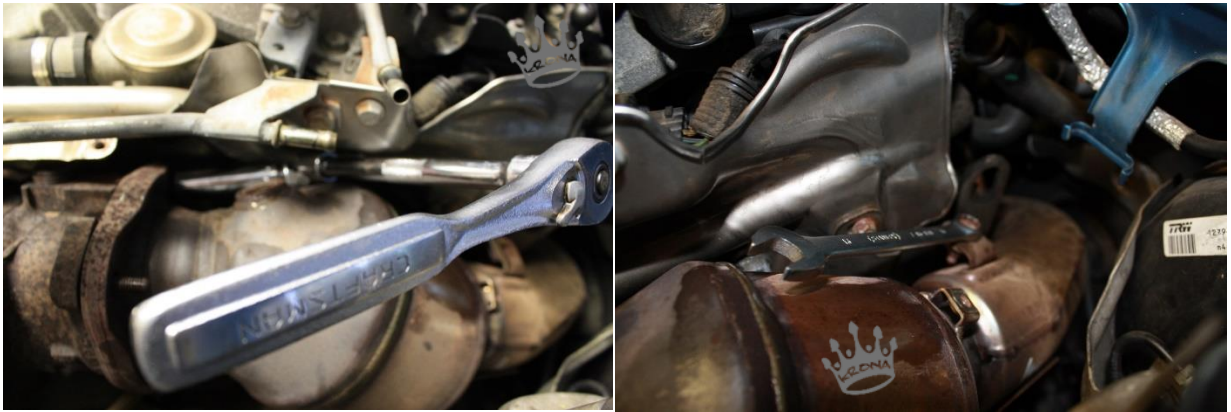


- 10) There are a total of 3 heat shields that will need to be removed to get this pig of a factory downpipe off your car. The top one, the one directly underneath the downpipe, and also the one that protects the brake booster (pictured right to left). These are all held in place with 10mm bolts/nuts with the exception of the one connected to the brake booster which is a T30. Be patient and use care not to damage or use force in their removal as they will need to be reinstalled with your new Krona Downpipe Kit.



- 11) Remove the primary O2 sensor (This is a fun one to disconnect). 7/8 wrench will get the sensor out of the downpipe but tracing the wiring harness to the back of the engine requires some patience. It is possible to leave the sensor plugged in and non completely unhooked if you choose to go that route(doin g it this way could damage the wires).
- 12) Now that you have a proper mess of coolant and parts scattered in your shop/work space, you may now (Finally) get to the meat and potatoes of this installation. You may now begin to remove the downpipe! (Side note: We have never worked on a vehicle which required the coolant to be drained for removal of an exhaust system.)

- 13) The use of a lubricant spray and a torch may be necessary (depending on the condition of your vehicle) to assist in the removal of the nuts and studs holding the factory downpipe to the turbo. All 3 of these are 13mm, and you will need both a wobble extension/deep socket to get to all of the nuts. You may also remove the 13mm bolt holding the downpipe to the side of the engine.



- 14) Now that the downpipe is loose and you are disconnected underneath the car (both from the midpipe and support brackets) the downpipe should move around in the space you have created from the removal of the heatshields (disregard the heat shields still in place in our picture as we had to figure out what needed to be removed as we took the car apart). Yes those heat shields will need to be removed 😊.



- 15) The secondary O2 sensor will need to be disconnected and removed to get the factory downpipe off the car. We are adding this information in this step as we found it much easier to get a wrench on secondary O2 once to you can manipulate the downpipe in the little bit of space provided. The connector for this sensor is also on the back of the engine (below the one for the Primary O2). This step will also test your patience as the working space to disconnect the sensor is very small. The clip on top will need to be released and then squeezing the sides of the connector will allow it to separate.



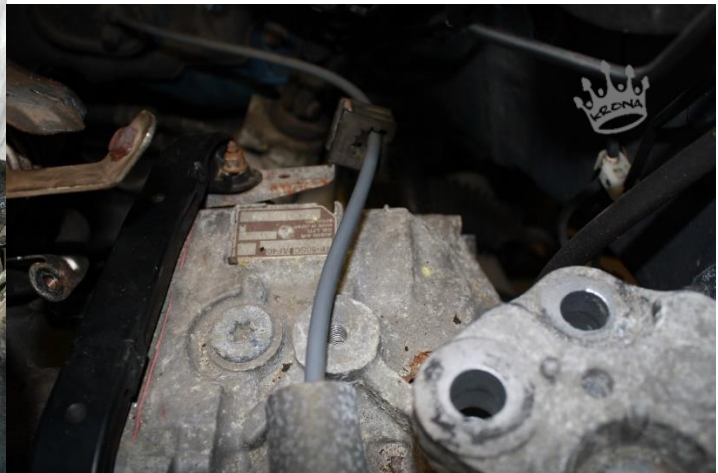
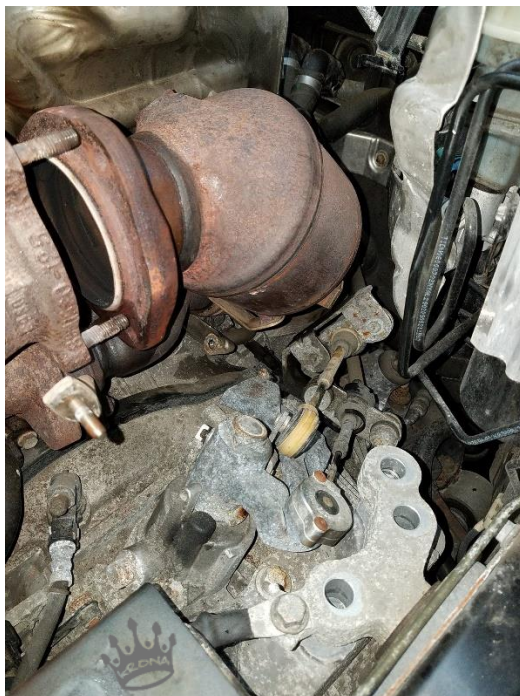
- 16) This is now the time where you will need to place a jack underneath the engine and unbolt the transmission mount which is located underneath the battery tray. X3 E14 star head bolts. Once removed carefully lower the jack and engine/transmission. This will move the transmission down about 1-2 inches which allows just enough space to get your factory downpipe out.



- 17) As you know things are very tight in this area. But you are almost ready to get the downpipe off the car. You now need to remove the hard return line coming off the turbo (17mm at the turbo and 10mm on the bracket). Be sure not to lose the copper crush washers which go to the side of the turbo and banjo fitting!



- 18) Ok this is the last step before removing the downpipe! Lastly you will need to unbolt the wiring harness from the top of the transmission (x1 10mm nut). This line will not need to be removed but will need enough slack to move it off the stud and out of the way of the downpipe. Simply lift the harness off the stud and move it towards the engine once the nut is removed. You may also move the linkage cable out of the way by sliding it out of the bracket. On models which have a manual transmission it may also be necessary to temporarily unbolt the shifter linkage from the transmission.



- 19) YOU ARE NOW READY TO REMOVE YOUR FACTORY DOWNPIPE!! It will take a little convincing but you now have enough room to manipulate the downpipe to get it completely removed. You will have to pull and twist the downpipe to get it off the car. Don't get frustrated and damage your brake booster or hard brake lines. It will lift out with some convincing (twisting and turning) 😊.



- 20) You will need to save the downpipe gasket pictured below, or buy another one at your local automotive store. (<https://www.eeuroparts.com/Parts/131791/Catalytic-Converter-Gasket-55557507/>)



- 21) With the downpipe out of the way it will also now be a piece of cake to remove your factory mid pipe by loosening the rear clamp and sliding it forward of the hangers. Now set the factory crap aside and begin your Kroma installation!



Assembly

- 1) Reattached transmission wiring harness using a 10mm socket. This is also a good time to put the linkage cable back in the bracket on the side of the transmission (if you had to remove it).
- 2) Unpackage your new Krona downpipe kit (as if you have waited this long to see how bad ass it is?) and install the provided hardware on the lower flange as shown in the picture. The factory gasket may also be reinstalled (or replaced) at this time. Place the 3 flange nuts and the flange bolts in a safe place as you will need all of that when it's time to bolt the mid pipe together.



- 3) You may now slide your new Krona downpipe into the provided space. This will require some twisting and turning but nothing in comparison to the removal of the factory unit. Before bolting the downpipe in it is best to go ahead and install your rear O2 as it is much easier to reach before its bolted to the turbo.



- 4) You may now bolt your downpipe into place. The use of a high temp silicone or sealer may be needed around in the inside of the turbo where the downpipe seats, as this surface may be rusty or pitted. Use extreme care to tighten all nuts evening on the turbo. We recommend starting with the one on the inside. These must be tightened evenly to ensure a tight seal and from damaging the flange (if you have already bolted anything underneath it will not allow the downpipe to pull itself tight to the turbo to seal). This is also a good time to install your front O2 sensor and make sure both the front and rear O2 sensors are plugged into place and the wiring is routed as it was in stock form away from the exhaust.



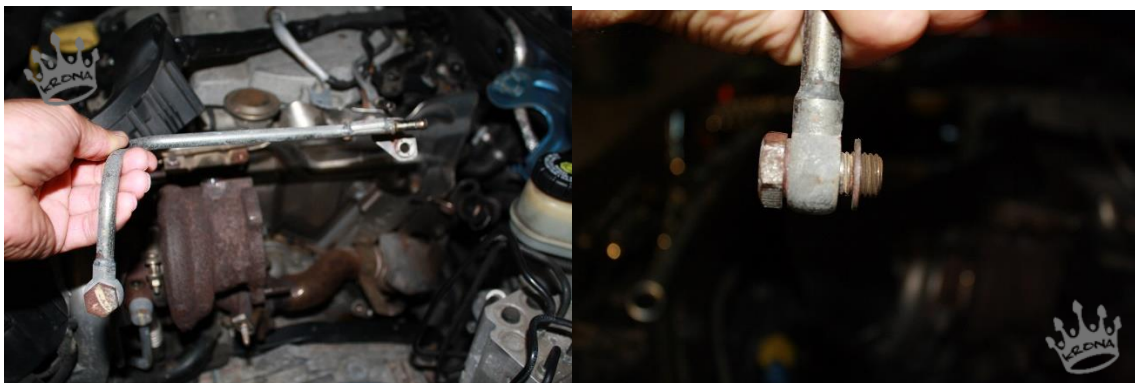
- 5) Next you will need to put a jack underneath the transmission and carefully jack the transmission back into place so you can connect the transmission mount. Once tightened you may lower and remove the jack.



- 6) Now install the heat shield that covers the brake booster. There is a T30 bolt that connects the heat shield to the brake booster and a 10mm nut located on the firewall.



- 7) Next install the lower heat shield. You will need two 10mm bolts for the rear and one 10mm nut for the stud located in the front. You will need a long extension to tighten the lower rear bolt. This is also a good time to take some glass cleaner or brake clean and wipe the downpipe down of any dirt or debris as it will soon be inaccessibly hidden by all the heat shields.
- 8) Reinstall Turbo Water line. Be sure you reinstall your crush washer between the turbo and banjo fitting as pictured. Also, be sure to bolt the line to the turbo (17mm) before bolting the bracket to the engine. This will ensure you get a good seal and proper alignment.

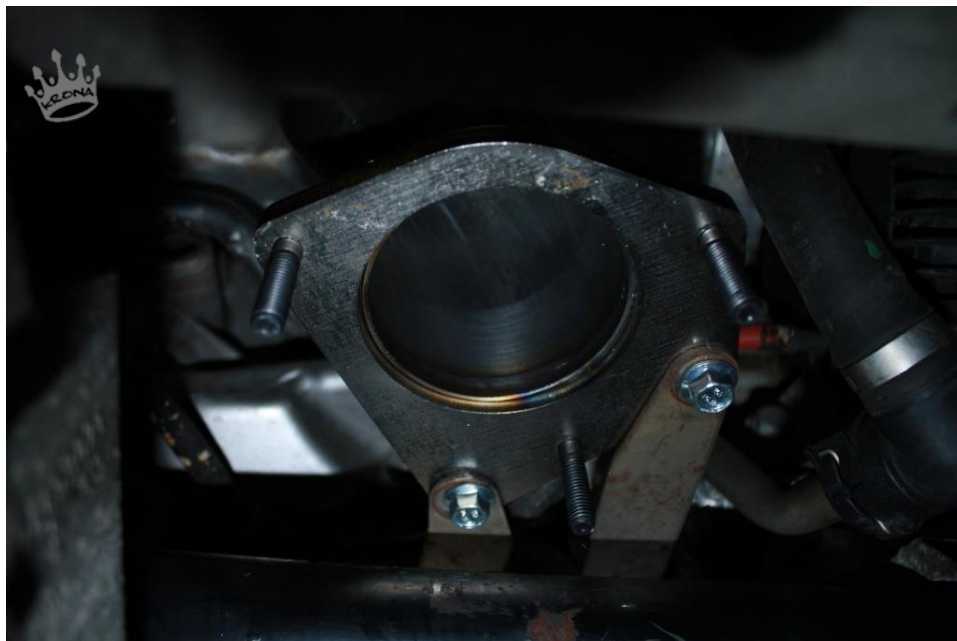


- 9) You may now install your coolant reservoir. Be sure to properly connect all 3 lines as well as your coolant level sensor (one on the bottom and 2 on the top). It is possible to install the top heat shield prior to the coolant bottom but we found it MUCH easier to connect the lower line without the heat shield in place. This is also an excellent time to put water/antifreeze back in the vehicle.
- 10) Next install your upper heat shield. This one will be held in place using the same 10mm nut and stud as the lower portion and also one 10mm bolt on top.

- 11) Now onto reinstalling your battery box and accessories. Be careful not to break anything as the plastic clips are brittle. Also, double check that all your relays and fuses are still seated in the fuse block located on the front side of the battery. You may also install and connect your battery at this time.



- 12) Moving back underneath the car. Attach the 2 downpipe support brackets (it is best to leave the bolts connecting the brackets to the motor loose so you may easily move them for adjustment), using the x2 12mm bolts supplied in this kit. You will need a wrench for the bolt closest to the axle as there is little clearance for a socket. Also install your downpipe/mid pipe gasket if you failed to do so in a previous step. The use of a high temp RTV is also helpful to ensure a seal at this connection, especially if you decided to re-use your stock gasket.



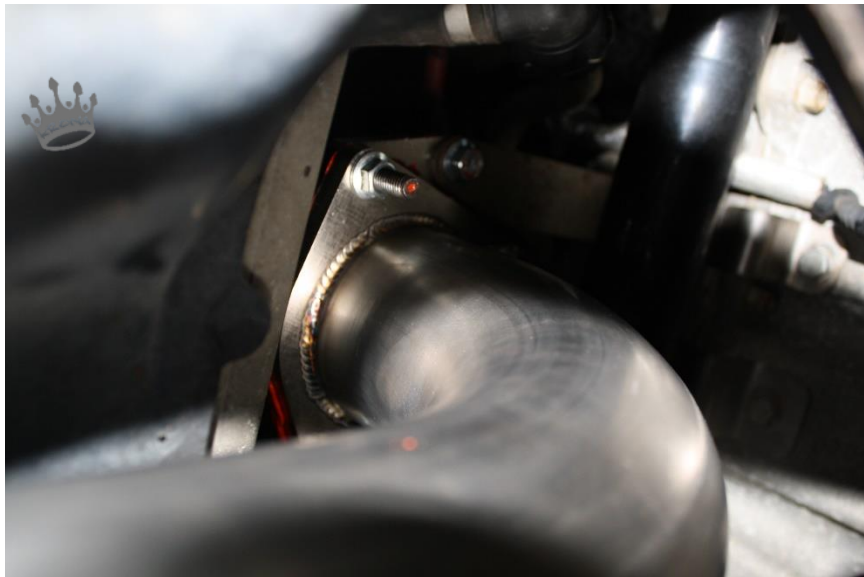
***On xwd models you will need to modify this bracket as pictured below as it will cause interference when bolting the downpipe and mid pipe back together. ***
This bracket will need to be marked and then cut so it does not overlap the flanges as pictured.



- 13) Install your mid pipe by first sliding the reducing section into the cat back. Be sure the flange is facing downward at this time. If your clamp at the reducer has seen better days this would also be a good time to put a new clamp on (we sell them on our site ☺). The factory clamp will need to be cut or chiseled off as it is tac welded to the exhaust (if original).
- 14) Now rotate the pipe and slide it forward to align the exhaust hangers and then the downpipe to mid pipe connection. Space is very limited (as it has been for this entire project) so you will need to be careful in the turning and twisting of the pipe. The mid pipe being connected at the reducing section and spinning freely will allow for this movement. Be sure to slide your new clamp onto the exhaust before making the cat back connection (if you are installing a new clamp).



- 15) Install and tighten the 3 supplied flange nuts to the connection using a 12mm socket or wrench.



- 16) Tighten your mid pipe to cat back connection using a 15mm socket. Proper pipe/clamp alignment should be as pictured below. If your factory clamp is worn out we do also offer replacements on our website (as pictured).



- 17) Do you have any parts left over? You should also install your engine cover and double check all your work at this time. If you used some high temp silicone it might be a good idea to let it setup before starting your car up.
- 18) With all connections and wiring double and triple checked you may now start your car up and check for leaks. It is common as the exhaust breaks in from thermal expansion to have to retighten your connections within the first few hundred miles.

Final Check-Off List

1. Double check that all connections are tight.
2. Ensure your O2 sensors are installed and the wiring is reconnected.
3. **IMPORTANT: Wipe the system clean of all dirt, finger prints or debris using a glass cleaner, simple green or similar. Once the exhaust gets hot, any remaining dirt particles will be burned onto the finish and become permanent.**
4. Start your car and check for leaks....and to hear your new B.A.M.F. Krona Exhaust system!
5. Now go let everyone within a 30-mile radius know that you just installed the best exhaust system on the market!

Note: It is completely normal for the exhaust to smell initially and for the first couple drives. This will slowly dissipate as the system heat cycles several times.

Upon breaking the system in and the thermal expansion and contraction of the metal it may be necessary to retighten your connections.

If you have any questions or comments, please feel free to send us an email: info@KronaPerformance.com