

42 Draft Designs

Mk5 FSI/TSI 3" Downpipe – Installation Instructions

Tools Recommended: 16mm, 22mm, 7/16" and 1/2" open end wrenches, 10mm, 13mm, 16mm, 7/16" and 1/2" sockets & ratchet, 10mm Allan wrench, anti-seize, penetrating oil, soft face hammer

Warning! Hot metal burns! Always work on a cool motor.

Before You Begin:

Please read our Mk5 3" Downpipe FAQ prior to performing this installation. A copy will be provided with the product; however our website will always be up to date. Reading our FAQ will ensure that you are 100% familiar with the product and expected results before performing the installation or paying for installation.

Make arrangements to get the car up in the air. If you have access to an automobile lift – use it. The factory downpipe is fairly large and requires some manipulation to remove. This is much easier and safer to do with the car up high. If you do not have access to an automobile lift, this installation can be performed using a floor jack and 4 jack stands. When using jack stands, always follow these precautions:

- Never use the stock jack! It's dangerous.
- Always lift the car on a flat concrete surface! Jack stands will sink into asphalt.
- Never, ever get under the car when supported by only a floor jack.
- Be smart – use 4 jack stands on the proper lift points.
- Always test to be sure the car is sitting solid on the jack stands. It cannot wobble or teeter.
- Always wear eye protection when underneath a car!
- Always work on a cold car! Exhaust piping can be hot for 1-2 hours after driving.

If you haven't removed the engine covers on your motor please research removal online. There are many DIYs online which outline removal of the covers without breaking them.

1. With the car on the ground, remove all engine covers and intake plumbing above the turbocharger and downpipe
2. If equipped with a first oxygen sensor in the downpipe, unplug the sensor and remove the wiring from any clamps. Using a 16mm open end wrench, loosen and remove the top two nuts on the factory downpipe flange.
3. Raise the car.
4. Remove the passenger side axle shield by removing the two 16mm bolts. Loosen and remove the bottom two nuts on the factory downpipe flange. Don't remove the downpipe flange just yet.
5. Using a 10mm socket, remove the 4 plastic nuts on the passenger side underbody shield closest to the exhaust tunnel. Pull the shield down to find the second oxygen sensor electrical connector. Unplug the connector and remove the wiring. If equipped with a third oxygen sensor, unplug the connector and remove the wiring.
6. Using a 13mm socket, remove the 13mm bolts from the front hanger assembly. Leave the hanger installed on the downpipe. Using the same tools, loosen and remove the 8 nuts on the factory exhaust braces. These braces are located under the factory exhaust. Loosen the nuts on the factory sleeve clamp. Tap with a soft hammer to loosen the clamp and slide the clamp onto the factory exhaust.
7. The downpipe should now be completely free to be removed. Holding the body of the downpipe with one hand, slide the downpipe flange off the turbo and support the weight of the first catalytic converter. Carefully remove the downpipe by manipulating the catalytic converter and turbo flange through the exhaust tunnel.
8. With the downpipe on the ground, remove the front hanger assembly from the pins. Re-install on the subframe.
9. Using a 22mm open end wrench, remove the oxygen sensors. Don't mix them up! Apply anti-seize to the oxygen sensors (very important) and install in your new downpipe. If not equipped with a first

oxygen sensor in the downpipe, plug the first oxygen sensor hole using the included plug. If equipped with a first oxygen sensor in the downpipe, plug the second hole in our downpipe. Be sure to apply anti-seize to the plug.

10. Remove and inspect the factory downpipe gasket. The factory gasket is made from 2-3 layers of stainless steel and can be re-used many times. We have included a new gasket for convenience, however we recommend re-using the gasket on newer cars. Save the extra – it was expensive!
11. Install the downpipe gasket and slide the new downpipe onto the turbo. Install and tighten the 2 lower nuts on the downpipe flange.
12. Install the new front hanger bracket and pins. The bracket will have our pins pre-installed, but the bracket must be bolted to the first flange. Lift the first flange on the downpipe, slide the hanger pins into place, and lower the downpipe so that the hanger bracket sits in-between the flange and the subframe. Install the included 1/4" bolts, washers and locknuts. Slide a bolt through the flange *then* the bracket, install a washer, then a locknut. Tighten both bolts equally with reasonable torque using a 7/16" socket and open end wrench.
13. Install the catalytic converter (or test pipe). The catalytic converter bolts to the first flange of the downpipe with the oxygen sensor following, pointing towards the passenger side of the car. There is only one way to install this section. The sensor must be downstream from the catalytic converter pointing at the passenger side of the car within the exhaust tunnel. With the catalytic converter in place, slide a gasket between the flanges and install the hardware. Slide a bolt through first, then install a washer and a locknut. The order of the hardware is important. Slide a bolt through both flanges, then on the opposite side install a washer and locknut. Use a 1/2" socket and 1/2" open end wrench to tighten the bolts with reasonable torque.
14. Using the same gasket and hardware, install the factory exhaust adaptor on the long pipe. The adaptor goes on the end of the pipe with the offset bend.
15. Install the assembled long pipe by holding in place, sliding the factory sleeve clamp over the adaptor, and then working on the flange connection. The fitment of this pipe should be obvious. The offset bend and adaptor connect to the factory exhaust, bending to the driver's side of the car. Using the same gasket and hardware connect the long pipe to the catalytic converter.
16. Reconnect the second (and third if equipped) oxygen sensor, fasten the wire in any factory clamps, and re-install the underbody shield.
17. Center the factory sleeve clamp between the two pipes and re-tighten. When tightening it is possible to change the fitment of the exhaust tips. Pay attention to the fitment of your tips and rotate the exhaust to correct as needed.
18. Re-install the factory braces. Re-install the passenger side axle shield.
19. Lower the car. Tighten the top 2 downpipe flange nuts. Reconnect the first oxygen sensor (if equipped) and fasten the wire in any factory clamps. Re-install engine cover and intake plumbing.
20. Start the car and listen for any leaks. Wait for the secondary air injection to turn-off and the motor to quiet down. There will be no leaks, but before removing the car from the lift it's best to check. Check for leftover hardware or any leftover parts. The only thing leftover should be the factory downpipe. Drive it!

What to expect:

- The downpipe should smell like burning oil for about 100 miles. There are oils on the metals leftover from manufacturing. Once burned off, this smell will never return.
- You will feel an immediate increase in boost response. The car will boost faster and maintain power longer.
- The ECU in these cars is smart. It knows something's different and will adapt to the change. You can reset the ECU by disconnecting your battery for 15 minutes. This will reset the settings learned by the ECU and give you the change to start fresh with the boost spike and airflow changes a 3" downpipe provides.
- Removing the two factory catalytic converters and increasing pipe size will result in a louder exhaust note.
- Removing the two factory catalytic converters and replacing with a high-flow converter may result in a CEL. Please read our FAQ carefully if this CEL will be a problem.
- Over the next few years the flanges on the system will rust. This is normal, they are bare steel. The piping will remain the same finish for years, protected by a coating of aluminum. Some rust is normal

and does not indicate a sudden death failure. There are many coatings you can use to protect the downpipe. Please read over our FAQ for tips & available options.

Installation Tips:

- Before loosening the nuts on the sleeve clamp and downpipe flange you should spray the nuts with penetrating oil to loosen the threads. Let them soak before attempting to break them loose.
- ALWAYS apply anti-seize to the threads of an oxygen sensor before installing. Oxygen sensors are incredibly expensive these days. Don't risk a seized sensor.
- Re-use the factory downpipe gasket. The factory gasket is made from 2-3 layers of stainless steel. It will hold up, and is fine to re-use multiple times – especially on a car this new. We include a new gasket for convenience. Whichever you choose to use, save the extra gasket for later. They are expensive.
- The assembly order of the 5 pieces included in this downpipe is critical to fitment. The order has been clearly written in these installation instructions, but we have also included a picture in the Mk5 3" Downpipe FAQ on our website. If you're unsure, check the website.
- Tightening the flange nuts and bolts in our systems can sometimes be tricky. The bolts and nuts use 1/2" hex heads. We recommend having on-hand a combination of 1/2" tools for use. A set of 1/2" wrenches is necessary (open/12pt closed end). You may also use 1/2" sockets. We recommend 1/4" drive tools to gain clearance. A 1/4" drive deep socket on a narrow 1/4" drive ratchet works well. Also, a short 1/4" socket on a 5" extension will get into tight spots. Using our locknuts, minimal torque is required making 1/4" drive possible.
- If you're able to determine the assembly order in advance you can assemble the entire downpipe on the ground and install in one piece. Doing so allows easier installation of all hardware.

Oxygen Sensor Configuration

- FSI and early TSI motors are equipped with two oxygen sensors. The first sensor is located before the first catalytic converter directly after the downpipe flange. The second is located after the second catalytic converter.
- CFBA and later TSI motors are equipped with three oxygen sensors. The first sensor is located on the turbo. The second is located before the second catalytic converter. The third is located after the second catalytic converter.
- Our downpipe accommodates both configurations by including 3 oxygen sensor bungs and a plug for whichever bung is not used.
- If installing on a FSI or early TSI motor, plug the second oxygen sensor bung on our downpipe.
- If installing on a CFBA or later TSI motor, plug the first hole on our downpipe.
- The extra bung can be used for a wideband gauge and sensor at any time.