

VW MK7 Golf R / Audi 8V S3 Valved Exhaust System Installation Instructions - Click HERE to Shop



Skill Level 1 - Easy -Basic Skills Required



Proper service and repair procedures are vital to the safe, reliable operation of all motor vehicles as well as the personal safety of those performing the repairs. Standard safety procedures and precautions (including use of safety goggles and proper tools and equipment) should be followed at all times to eliminate the possibility of personal injury or improper service which could damage the vehicle or compromise its safety.



TABLE OF CONTENTS

Kit Contents	<u>pg.3</u>
Required Tools and Equipment	<u>pg.4</u>
Installation and Safety Information	<u>pg.5</u>
Removing the Stock Exhaust System	<u>pq.6</u>
Installing the New Valved Exhaust System	pq.7



KIT CONTENTS



Our valved exhaust system is available with chrome or black chrome tips. Your new valved cat-back system will come with two adapters; one to use with a stock downpipe, and one to use with an aftermarket downpipe. The Golf R we used for these instructions had a stock downpipe, so that is the adapter you will see us using.

3



REQUIRED TOOLS

Note: The tools required for each step will be listed by the step number throughout these instructions.

Standard Automotive Tools

Required For This Install

Available On Our Website

Protecta-Sockets (for lug nuts)	<u>ES#2221243</u>
• ³ / ₈ " Drive Ratchet	<u>ES#2765902</u>
• ³ / ₈ " Drive Torque Wrench	<u>ES#2221245</u>
• ³ / ₈ " Drive Deep and Shallow Sockets	<u>ES#2763772</u>
• ³ / ₈ " Drive Extensions	<u>ES#2804822</u>
Hydraulic Floor Jack	<u>ES#2834951</u>
Torx Drivers and Sockets	<u>ES#11417/8</u>
• ¹ / ₂ " Drive Deep and Shallow Sockets	<u>ES#2839106</u>
• ¹ / ₂ " Drive Ratchet	
• ¹ / ₂ " Drive Extensions	
• ¹ / ₂ " Drive Torque Wrench	<u>ES#2221244</u>
• ¹ / ₂ " Drive Breaker Bar	<u>ES#2776653</u>
Bench Mounted Vise	
Crows Foot Wrenches	
Hook and Pick Tool Set	<u>ES#2778980</u>

• ¼″ Drive Ratchet	. <u>ES#2823235</u>
• ¹ / ₄ " Drive Deep and Shallow Sockets	. <u>ES#2823235</u>
• ¹ / ₄ " Drive Extensions	
Plier and Cutter Set	
Flat and Phillips Screwdrivers	. <u>ES#2225921</u>
• Jack Stands	
• Ball Pein Hammers	
Pry Bar Set	. <u>ES#1899378</u>
Electric/Cordless Drill	
Wire Strippers/Crimpers	
• Drill Bits	
 Punch and Chisel Set 	
Hex Bit (Allen) Wrenches and Sockets	. <u>ES#11420</u>
Thread Repair Tools	. <u>ES#1306824</u>
Open/Boxed End Wrench Set	. <u>ES#2765907</u>

Specialty Tools

Exhaust Hanger Removal Pliers
 <u>ES#2784927</u>

INSTALLATION NOTES

- **RH** refers to the *passenger side* of the vehicle.
- LH refers to the *driver side* of the vehicle.
- Always use the proper torque specifications.
- If applicable to this installation, torque specifications will be listed throughout the document and at the end as well.
- Please read all of these instructions and familiarize yourself with the complete process **BEFORE** you begin.

GENERAL PREPARATION AND SAFETY INFORMATION

ECS Tuning cares about your health and safety, please read the following safety information. This information pertains to automotive service in general, and while it may not pertain to every job you do, please remember and share these important safety tips.

- Park your car in a safe, well lit, level area.
- Shut the engine off and remove the key from the ignition switch.
- Make sure any remote start devices are properly disabled.
- ALWAYS wear safety glasses.
- Make sure the parking brake is applied until the vehicle is safely lifted and supported.
- Whether lifting a vehicle using an automotive lift or a hydraulic jack, be sure and utilize the factory specified lift points.
- Lifting a vehicle in an incorrect location can cause damage to the suspension/running gear.
- **ALWAYS** support the vehicle with jack stands.
- ALWAYS read and follow all safety information and warnings for the equipment you are using.



NEVER get underneath a vehicle that is supported only by a jack, and ALWAYS make sure that the vehicle is securely supported on jack stands.

REMOVING THE STOCK EXHAUST SYSTEM

Step 1: 13mm Socket & Ratchet, Exhaust Hanger Removal Pliers

Safely lift and support the vehicle. Support the exhaust system from below. Loosen the clamp which secures the cat-back to the downpipe (arrows in **Photo #1** below), then slide the clamp forward onto the downpipe (not shown).

Release the two frontmost hangers from the exhaust system (circled in **BLUE**) with exhaust hanger removal pliers. Disconnect the wiring harness from each electronic muffler valve, then remove the bolts which secure the muffler hangers to the chassis (arrows in the **YELLOW** inset photo). Carefully lower the entire system to the ground and set it aside.



6

Step 1: Ball Pein Hammer

Before we begin it's a good idea to unpack your new exhaust system and carefully lay it out on the floor (**Photo #1**). Inspect all of the slip joints for any signs of damage during shipping. Test fit the pipes together at every slip joint to make sure they slide together easily (**Photo #2**). If they do not slide together easily, gently tap on the ends of the pipes with a ball pein hammer to straighten them, then recheck fitment.

Please note that during this installation, you will be installing the exhaust from front-to-back **WITHOUT** fully tightening the clamps until after we've adjusted for proper fitment. Proceed to the next page once all of the slip joints slide together easily.



Step 2: 8mm Socket & Ratchet

Remove the electronic valves from the stock muffler and transfer them over to the new one (**Photo #1**). It's important to note that the spring seat inside the muffler needs to be aligned with the spring underneath the electronic valve (**ORANGE** arrows in the **YELLOW** inset photo). This can be a bit tricky, but a flashlight and a small screwdriver can really come in handy here.

Remove the rubber hangers from the stock muffler and transfer them onto the new one. Be sure to install them so that the bolt holes are oriented toward the inside of the vehicle (**RED** note in **Photo #1**). They must be installed in this orientation due to the larger size of the new muffler assembly.



Step 3: 13mm & 15mm Sockets, Ratchet

Loosely install the exhaust system in the order shown in **Photo #1** below.

Next, we'll need to adjust the exhaust system for proper fitment. The key to proper adjustment is patience, take your time and **DO NOT** fully tighten any of the clamps until **AFTER** instructed to do so on Page 11.

Closely inspect the exhaust system from front to back, we need to check for clearance between the pipes and nearby chassis components.

CAUTION: You can tighten the exhaust clamps until they are "snug", but DO NOT USE AN IMPACT WRENCH and do not fully tighten them yet!



Step 4:

Check the hangers on the muffler and the extension pipe to ensure that they are sitting level side-to-side (**Photo #1 & Photo #2**).

Finally, we want to ensure that the exhaust hangers are rotated at least slightly toward the front of the vehicle (**Photo #3**). The exhaust hangers should be inclined toward the front of the vehicle so that lower hole is approximately 10-15mm forward of the upper hole, this will allow the hangers to pivot backwards as the system heats up and expands.



Due to differences in manufacturing, as well as variations from one car to another, you might not be able to get all of your hangers to pitch forward. This is acceptable as long as they are at least close to vertical.



CAUTION: You can tighten the exhaust clamps until they are "snug", but **DO NOT USE AN IMPACT WRENCH** and do not fully tighten them yet!







10

Step 5: 13mm & 15mm Sockets, Ratchet & Torque Wrench

Center and level the each of the exhaust tips inside the bumper cut outs (**Photo #1**). Push upward on the exhaust system as you fully tighten each clamp from the front of the system to the back (**Photo #2**). Allow the exhaust to settle, then check again for clearance around all pipes.

Wipe any oil, grease, or fingerprints from the exhaust system. Reinstall the belly pans and chassis cross brace.

Perform a system check by performing the following steps: <u>Stock (electronic) valve control only</u>:

- Start the engine.
- Cycle the vehicle drive mode from "comfort" to "race" mode, this will open and close the valves.
 - You should be able to hear a difference in both exhaust tone and volume when the valves are opened and closed.

Recheck all fasteners after the vehicle has been driven 500 miles.

Aftermarket valve controller only:

- Start the engine.
- Press the "lock" and "unlock" buttons on the remote to open and close the valves.
 - You should be able to hear a difference in both exhaust tone and volume when the valves are opened and closed.





Your ECS Valved Exhaust System installation is complete!



These instructions are provided as a courtesy by ECS Tuning

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