



**Exhaust System Installation**  
**3" Turbo-Back Exhaust System**  
**2010 Volkswagen Golf R MK.VI**  
**Center Rear Exit w/Twin 4.0" Tips**  
**FE100047**

**Please take the time to read and understand installation instructions.**

APR recommends that installation of this system be performed by a qualified service center or professional muffler installer who has the necessary equipment, tools and experienced personnel. However, if you decide to perform this install, the use of a hoist and an additional person will be required.

**CAUTION:** Never work on a hot exhaust system. Allow time for the vehicle to cool. Always wear eye protection when working under a vehicle.

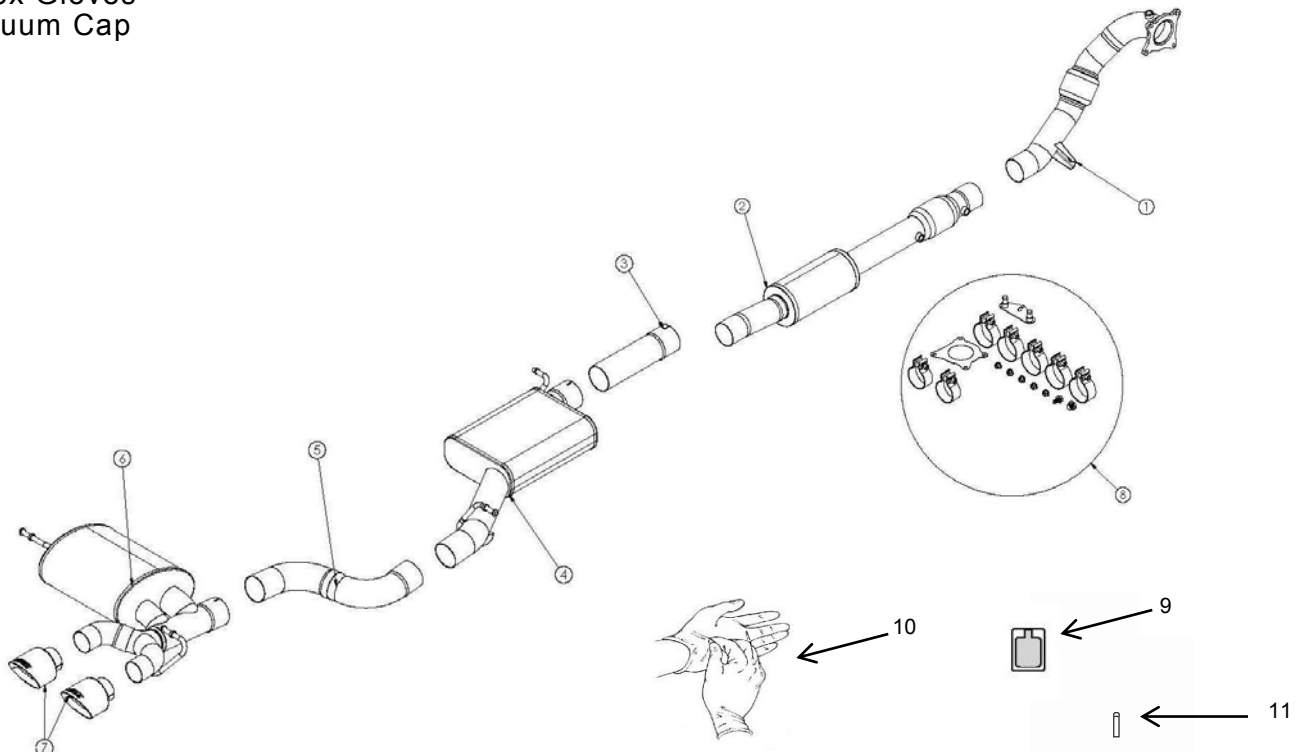
**Please confirm that all parts are present before beginning the factory exhaust system removal and APR exhaust system installation.**

## Bill of Materials:

1. Upper Downpipe Assembly
2. Lower Downpipe Assembly
3. Downpipe Adapter Pipe
4. Tunnel Muffler Assembly
5. Axle Pipe Assembly
6. Rear Muffler Assembly
7. Tip Assemblies
8. Hardware Kit
9. Anti-Seize Lubricant Packet
10. Latex Gloves
11. Vacuum Cap

## Recommended Tools:

- Safety Glasses
- 13mm socket and ratchet
- 15mm socket
- 17mm socket
- 10mm 12 point socket
- Grommet pullers
- Penetrating Spray (PB Blaster or equiv.)
- Soapy water solution
- Torque wrench
- 22mm oxygen sensor wrench
- Locking style pliers
- Long extension





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## Removal of Stock System:

The factory exhaust will be removed in two sections: the cat-back (rear) section first, followed by the downpipe (front) section.

### Catback Section

1. Using a 13mm socket and ratchet, loosen both nuts on the factory cat-back to downpipe clamp. **(SEE Fig. A)**
2. Using grommet pullers or a similar device, remove the hanger near the front of the catback section from the grommet. **(SEE Fig. B)**  
NOTE: The use of a soapy water solution may aid in the removal and later installation of the hangers in the rubber isolators.
3. Remove the hanger near the middle of the factory cat-back section from the rubber isolator. **(SEE Fig. C)**
4. Locate and remove the vacuum line attached to the factory muffler. **(SEE Fig. D)**
5. Using a 13mm socket and a long extension, unbolt the left and right side hanger mounts from the vehicle by removing the two retaining bolts. **(SEE Fig. E & F)** Carefully slide the factory catback section back from the factory sleeve clamp and lower from the vehicle.
6. With the factory rear section on the ground, remove the hanger mounts from the factory system. Set aside both the rear muffler hanger mounts and retaining bolts to be reused during the installation process. **(SEE Fig. G & H)** This completes the removal of the cat-back section.



FIG. A



FIG. B



FIG. C



FIG. D



FIG. E



FIG. F



FIG. G



FIG. H



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**Downpipe Section**

1. Open the hood and disconnect the negative terminal from the battery.
2. Disconnect the MAF sensor plug near the top left side of the engine shroud, and remove the wire from the clip holding it to the shroud. **(SEE Fig. I)** Unclip the turbo intake pipe from the engine shroud, and separate the two pieces, being careful not to lose the O-ring gasket that is used to seal this connection. **(SEE Fig J & K)**
3. Using a pair of locking pliers (i.e. channel locks) or a similar device, unclip the air snorkel from the engine shroud. **(SEE Fig. L)**
4. Remove the hose on the left side of the engine shroud from the retaining clips that are attached to the engine shroud. **(SEE Fig. M)**
5. Remove the engine shroud by pulling upwards to free it from the four retaining studs. **(SEE Fig. N)**
6. Unplug the upper downpipe oxygen sensor connector near the brake master cylinder on the left side of the vehicle, and remove the wire from the clip anchoring it to the firewall. **(SEE Fig. O)**
7. Using a 22mm oxygen sensor wrench, remove the upper downpipe oxygen sensor from the factory downpipe **(SEE Fig. P)**. Note: breaking the sensor loose from the factory downpipe may be easier from the underside of the vehicle.

Warning: Be careful to not contaminate the sensor end of the oxygen sensors with dirt, grease, etc as it may prevent them from functioning properly.



FIG. I



FIG. J



FIG. K



FIG. L



FIG. M



FIG. N



FIG. O



FIG. P



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8. Spray the downpipe flange mounting nuts with PB Blaster or an equivalent rust penetrating spray. Allow product to soak in per product recommendations. Then remove the two upper downpipe flange nuts using a 17mm sockets and ratchet. **(SEE Fig. Q)**
9. Use the 22mm oxygen sensor wrench to remove the oxygen sensor(s) for the lower section of the downpipe. The sensor(s) are located in the tunnel underneath the vehicle near the factory catalytic converter. **(SEE Fig. R)**
10. Using a 13mm socket and ratchet with an extension, remove the two bolts holding the driveshaft carrier in place. **(SEE Fig S)** Temporarily support the driveshaft in the center of the vehicle.
11. Using a 10mm 12-point socket and ratchet with an extension, remove the bolts connecting the driveshaft to the differential. **(SEE Fig. T)** Move the driveshaft towards the right of the vehicle to allow clearance for removal of the factory downpipe. **(SEE Fig. U)** You will need to pull the driveshaft towards the rear of the vehicle while moving it to the right in order to free the driveshaft from the transfer case.
12. Using a 17mm socket and ratchet, remove the two lower downpipe flange nuts. **(SEE Fig. V)**
13. Remove the oxygen sensor heat shield from the turbo flange studs. Make sure to note the orientation of the heat shield for proper re-installation later on. **(SEE Fig. W)**
14. Unbolt the downpipe grommet bracket from the vehicle by removing the two bolts with a 13mm socket and ratchet. **(SEE Fig. X)**
15. Using a 13mm socket and ratchet, remove the retaining bolts holding the cross brace in the tunnel near the end of the factory downpipe. **(SEE Fig. Y)** Use caution as the factory downpipe will droop after removing the tunnel cross brace.
16. Remove the downpipe from the vehicle by sliding the mounting flange off of the studs coming from the turbo. Remove the downpipe grommet bracket from the factory downpipe hangers. This completes the removal of the downpipe section.



FIG.Q



FIG.R

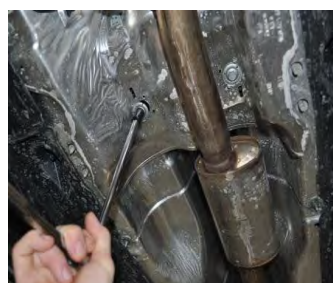


FIG. S



FIG. T



FIG. U



FIG.V



FIG. W



FIG. X



FIG. Y



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## Installation of APR Exhaust System:

**NOTE:** Apply the anti-seize lubricant (supplied) to the threads **ONLY** of all the clamps and flange bolts. Failure to follow this procedure can cause nuts to seize on clamps and potentially destroy threads. After applying anti-seize lubricant, be sure to thoroughly clean hands as lubricant will tarnish stainless steel.

Align all clamps so that the center of the clamp bolt is 90 degrees from the notch on the pipe (SEE Fig. A)

**NOTE:** All clamps should be tightened using a properly calibrated Torque Wrench. Using an air impact gun will damage the clamp and reduce its ability to effectively seal the joint. It may also cause the joint to separate thereby causing damage to your exhaust system and your vehicle.

1. Remove all exhaust system components for the shipping carton, including the five 3.0" clamps, the two 2.5" clamps, the M10 flange bolt, the five M10 flange nuts, the M18 oxygen sensor port block off bolt, and the downpipe flange gasket.
2. Locate the APR upper downpipe assembly, four of the M10 flange nuts, and the downpipe flange gasket. Place the new OEM downpipe flange gasket over the studs coming out of the turbo. (SEE Fig. B) Then slide the mounting flange of the upper downpipe assembly over the mounting studs.
3. Re-install the factory oxygen sensor heat shield that was removed during removal of the factory downpipe onto the mounting studs paying attention to correct orientation. (SEE Fig. C)
4. Hand thread on the four M10 flange nuts. Tighten the two lower downpipe flange mounting nuts using a 15mm socket and ratchet. (SEE Fig. D)
5. Tighten the two upper downpipe flange mounting nuts with the 15mm socket and ratchet. (SEE Fig. E). Torque all flange mounting nuts to 22 ft-lbs (30 N-m).
6. Install the upper downpipe oxygen sensor and tighten with the 22mm oxygen sensor wrench (SEE Fig F). Reconnect the oxygen sensor connector to the plug near the brake master cylinder, and anchor the wire with the retaining clip on the firewall. (SEE Fig. G).

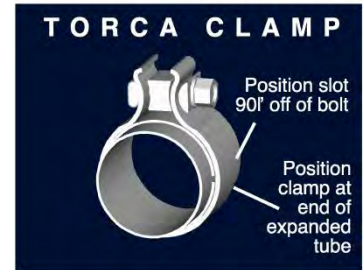


FIG.A



FIG.B



FIG.C



FIG.D



FIG.E



FIG.F



FIG.G



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7. Re-install the engine shroud by aligning it with the mounting studs and pushing it firmly onto the engine. Reconnect all factory hoses and connectors as they were removed, making sure all clips, o-rings, and harnesses are positioned and oriented correctly. **(SEE Fig. H, I, J & K)**
8. Locate the APR downpipe hanger assembly and the factory downpipe grommet bracket. Push the hanger assembly studs into the grommet bracket, and re-install the grommet bracket onto the vehicle. Tighten the bolts to 18 ft-lbs (24N-m). **(SEE Fig. L)**
9. Locate the remaining M10 flange nut and the M10 x 20mm long bolt. With the center hole aligned with the slotted hole on the upper downpipe mounting tab. Install the M10 bolt through these holes from the engine side, and secure with the M10 flange nut. Snugly tighten with a 15mm socket and ratchet. **(SEE Fig. M)**
10. Re-install the driveshaft and torque all bolts to factory specifications. **(SEE Fig. N & O)**
11. Locate the APR lower downpipe assembly and one of the 3" clamps. Properly align the clamp on the catalytic converter side of the lower downpipe, and slide the lower downpipe inlet over the end of the upper downpipe assembly. Check the orientation of the lower downpipe, so that the oxygen sensor bungs are oriented toward the passenger side of the vehicle and level with the vehicle. The outlet pipe coming out of the tunnel resonator should only offset upward in the vehicle with no side-to-side offset. Snugly tighten the clamp to retain the lower downpipe section. **(SEE Fig. P & Q)**



FIG. H



FIG. I



FIG. J



FIG. K



FIG. L



FIG. M



FIG. N



FIG. O

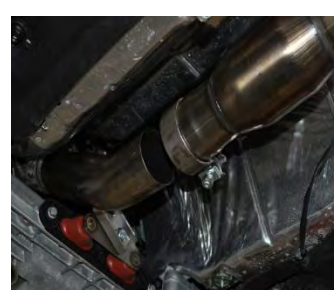


FIG. P



FIG. Q



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12. Install the downpipe oxygen sensor in the bung corresponding to the vehicle factory exhaust using a 22mm oxygen sensor wrench. Make sure that the oxygen sensor wire has some slack to prevent damage to it. Install the oxygen sensor block off bolt (supplied) in the extra oxygen sensor bung. **(SEE Fig. R&S)**
13. Locate the APR downpipe adapter pipe and a 3" clamp. Properly align the clamp on the expanded side of the adapter pipe and slide the expanded side of the adapter pipe onto the outlet pipe of the lower downpipe assembly. Snugly tighten the 3" clamp to retain the adapter pipe. **(SEE Fig. T)**
14. Locate the APR tunnel muffler assembly and a 3" clamp. Properly align the clamp on the expanded inlet of the tunnel muffler assembly and slide the inlet of the tunnel muffler onto the outlet of the downpipe adapter pipe. Insert the hangers on the tunnel muffler assembly into the factory rubber grommets. A soapy water solution will aid in the installation process of the hangers. Snugly tighten the 3" clamp to retain the tunnel muffler section. **(SEE Fig. U, V&W)**
15. Reinstall the factory tunnel crossbrace and tighten using a 13mm socket and ratchet. Torque nuts to factory specifications. **(SEE Fig. X)**
16. Locate the APR axle pipe and a 3" clamp. Properly align the clamp on the expanded inlet of the axle pipe and slide the axle pipe onto the outlet of the tunnel muffler assembly. Align the axle pipe so that the outlet is centered in the vehicle and has proper clearance to all frame and suspension components. Snugly tighten the 3" clamp. **(SEE Fig. Y&Z)**
17. Locate the factory hanger mounting brackets that were removed earlier during the removal of the factory cat-back exhaust. Using a 13mm socket and ratchet, reinstall the factory hangers onto the vehicle paying attention to correct orientation of the hanger brackets. Hanger brackets should be oriented identical to stock. Leave the bolts slightly loose at this time.



FIG. R



FIG. S



FIG. T



FIG. U



FIG. V

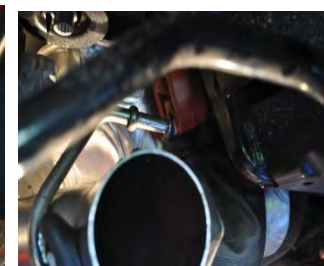


FIG. W



FIG. X

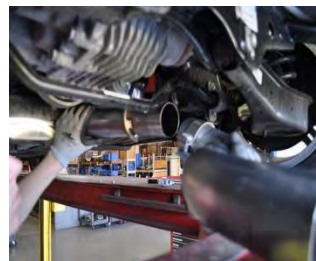


FIG. Y



FIG. Z



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18. Locate the supplied vacuum cap and cap the vacuum line that was connected to the factory rear muffler. **(SEE Fig. AA)** Feed as much of the vacuum line into the bumper as possible and tuck away for clearance to the APR exhaust.

19. Locate a 3" clamp and properly align it on the expanded inlet of the rear muffler assembly. Slide the inlet of the rear muffler assembly onto the outlet of the axle pipe. Install the rear muffler hangers into the factory grommets. **(SEE Fig. BB, CC & DD)**



FIG. AA

20. Align the muffler outlets so that they are centered in the tip openings in the rear fascia. Snugly tighten the muffler clamp and factory hanger bracket bolts at this time.

21. Locate the APR tip assemblies and the two 2.5" clamps. Properly align the clamp on the tip assembly inlet and slide the tips onto the muffler outlet pipes. Both clamps should be oriented so that the bolt is on top and pointing toward the passenger side of the vehicle. Installing the driver side tip first and loosely tightening the clamp, followed by installing the passenger side tip and loosely tighten the clamp will make the installation easier. There are multiple access points in the fascia & bumper that will allow the use of various extensions to tighten the tip clamps. **(SEE Fig. EE)**

22. Align the tips so that they are centered, rotated square to the vehicle, and even depth with each other. Loosely snug the tip clamps at this time.

23. Visually inspect the exhaust system position, tip alignment, clamp orientation, and all exhaust system clearances. Make any necessary adjustments at the slip joints and at the front downpipe bracket.

24. When the exhaust system is in the desired location, tighten the nuts on the clamps. Torque nuts to 45 ft-lbs (61 N-m). Tighten the M10 nut and bolt at the front downpipe hanger assembly to 22 ft-lbs (30 N-m).

25. Reconnect the negative battery terminal. Let the car sit for at least three minutes with the ignition key on and engine off. Close the hood. This completes the installation of the APR system.

26. It is **STRONGLY SUGGESTED** that all clamps be checked and re-tightened (if necessary) to the recommended torque after initial road testing of the vehicle, as thermal cycling has occurred on the system. Wait until the system has fully cooled to perform this step.



FIG. BB



FIG. CC

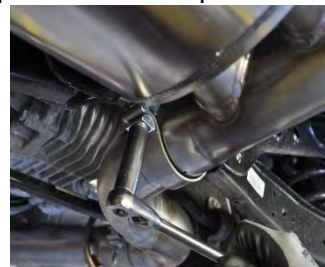


FIG. DD

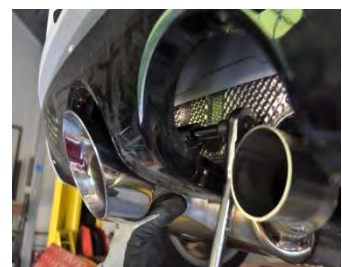


FIG. EE

**NOTE:** During cold weather start-ups, you may experience an exhaust sound that is deeper and louder in tone than usual. This is temporary and will diminish to normal levels once your engine has reached its normal operating temperature.

**NOTE:** Immediately following the installation of your exhaust system, you may experience a trace of smoke after initial start-up. **DO NOT** be alarmed. The smoke is caused by the burning of a small amount of forming oil residue used in the manufacturing process.