

Audi B9 A4 2.0T Kohlefaser Luft-Technik Intake System Installation Instructions













### INTRODUCTION

# **ECS Tuning Kohlefaser Luft-Technik Intake Systems**

The art of engineering - the defining trait of ECS Tuning - has been skillfully applied to yet another canvas, with our new Audi B9 A4 2.0T Kohlefaser Luft-Technik Intake System. A sleek, beautiful machine from the factory, the stock 2.0T performs well, but yearns for more. Our Kohlefaser Luft-Technik Intake Systems have a track record of success, and our newest is no exception. Proven on the dyno and proven on the street, our new B9 A4 2.0T Kohlefaser Luft-Technik Intake opens up a new world of performance for the 2.0T and compliments the lines and under hood style with tasteful precision. The easy installation, accurate fit, and affordable price make every aspect of it a winner, and prove once again that we are engineering works of art.

# **ECS Difficulty Gauge**



Take your time and enjoy the project, it'll only take you a couple of hours or less. Read these instructions completely first, and with the project overview under your belt, you'll breeze right through it. Just to make sure you have everything you need, reference the required tool list on Page 6 before you begin. Thank you for looking to ECS Tuning for all your performance and repair needs, we appreciate your business!





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# KIT CONTENTS



Carbon Fiber Air Box Lid (QTY 1)



**Primary Heat Shield** (QTY 1)



High Flow Air Filter (QTY 1)



Silicone Turbo Inlet Hose (QTY 1)



60-80mm Hose Clamp (QTY 1)



70-90mm Hose Clamp (QTY 1)



Secondary Heat Shield (QTY 1)



# KIT CONTENTS (CONTINUED)



M5x14mm Screw (QTY 2)



M5 Lock Washer (QTY 2)



M6x16mm Screw (QTY 1)



M6x50mm Screw (QTY 1)



M6x60mm Screw (QTY 1)



M6 Ball Stud (QTY 1)



M6 Nylon Flat Washer (QTY 4)



M6 Steel Flat Washer (QTY 5)



M6 Lock Nut (QTY 5)



M8x16mm Screw (QTY 1)



Heat Shield Grommet (QTY 1)



Heat Shield Foot Adapter (QTY 2)



90° Elbow Fitting (QTY 1)



24" Length Edge Seal (QTY 1)



Anodized Air Filter Coupler (QTY 1)



# 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>	• 1/4" Drive Ratchet
• 3/8" Drive Ratchet <u>ES#2765902</u>	• 1/4" Drive Deep and Shallow Sockets ES#2823235
• 3/8" Drive Torque Wrench	• 1/4" Drive Extensions <u>ES#2823235</u>
• 3/8" Drive Deep and Shallow Sockets ES#2763772	• Plier and Cutter Set <u>ES#2804496</u>
• 3/8" Drive Extensions	Flat and Phillips Screwdrivers ES#2225921
Hydraulic Floor Jack <u>ES#240941</u>	• Jack Stands <u>ES#2763355</u>
Torx Drivers and Sockets  ES#11417/8	Ball Pein Hammers
• ½" Drive Deep and Shallow Sockets <u>ES#2839106</u>	• Pry Bar Set <u>ES#1899378</u>
• ½" Drive Ratchet	Electric/Cordless Drill
• ½" Drive Extensions	Wire Strippers/Crimpers
• ½" Drive Torque Wrench <u>ES#2221244</u>	• Razor Blade
• ½" Drive Breaker Bar <u>ES#2776653</u>	<ul> <li>Punch and Chisel Set</li> </ul>
Bench Mounted Vise	Hex Bit (Allen) Wrenches and Sockets ES#11420
Crows Foot Wrenches	• Thread Repair Tools <u>ES#1306824</u>
Hook and Pick Tool Set      ES#2778980	Open/Boxed End Wrench Set



## SHOP SUPPLIES AND MATERIALS

Standard Shop Supply Recommendations: We recommend that you have a standard inventory of automotive shop supplies before beginning this or any automotive repair procedure. The following list outlines the basic shop supplies that we like to keep on hand. Shop supplies with a hyperlink are available on our website.

- Hand Cleaner/Degreaser Click Here
- Pig Mats for protecting your garage floor and work area from spills and stains Click Here
- Spray detailer for rapid cleaning of anything that comes into contact with your paint such as brake fluid Click Here
- Micro Fiber Towels for cleaning the paint on your car Click Here
- Latex Gloves for the extra oily and dirty jobs Click Here
- Medium and High Strength Loctite Thread lock compound to prevent bolts from backing out Click Here
- Anti-Seize Compound to prevent seizing, galling, and corrosion of fasteners Click Here
- Aerosol Brake/Parts Cleaner for cleaning and degreasing parts
- Shop Rags used for wiping hands, tools, and parts
- Penetrating oil for helping to free rusted or stuck bolts and nuts
- Mechanics wire for securing components out of the way
- Silicone spray lube for rubber components such as exhaust hangers
- Paint Marker for marking installation positions or bolts during a torquing sequence
- Plastic Wire Ties/Zip Ties for routing and securing wiring harnesses or vacuum hoses
- Electrical tape for wrapping wiring harnesses or temporary securing of small components



### **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.
- If using an automotive lift, be sure and utilize the factory specified lift points. Lifting a vehicle in an incorrect location can cause damage to the suspension/running gear.
- When lifting a vehicle using a jack, always 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.



### Step 1:

Look along the back edge of the hood release lever and you will see a release button.



#### Step 2:

Push in on the button with your finger, then pull the release lever off.







### Step 3:

Remove the radiator shroud by pulling up on the front edge to unclip it from the grille, then pull it forward to slide it out of the core support.



#### Step 4:

T25 Torx

Remove the two intake duct screws.





### Step 5:

Pull the intake duct back from the core support, then pull it out of the air box.



#### Step 6:

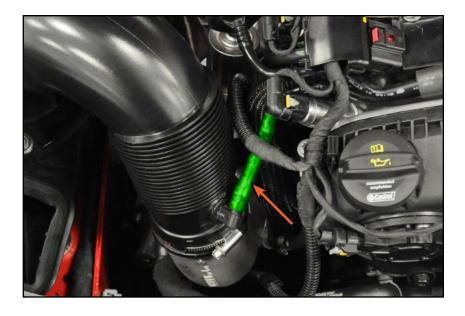
Remove the engine cover by pulling up at the four corners.





Step 7: Small Flat Blade Screwdriver

Locate the vent tube (highlighted) that attaches to the turbo inlet pipe elbow, then carefully remove it from the elbow.



Flat Blade Screwdriver -or- 7mm Socket & Ratchet Step 8:

Loosen the upper hose clamp on the turbo inlet pipe at the air box.





Step 9:

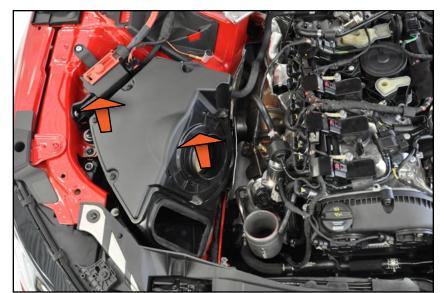
Flat Blade Screwdriver -or- 7mm Socket & Ratchet

Loosen the lower hose clamp on the turbo inlet pipe at the turbo, then remove the pipe from the vehicle.



#### Step 10:

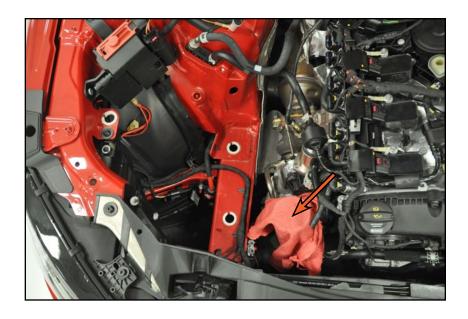
Now, simply pull straight up on the air box with both hands and remove it.





### Step 11:

Place a rag over the turbo inlet to prevent anything from falling into it.



#### Step 12: 5mm Allen, 15mm Wrench

Remove the two screws (arrows) from the original turbo heat shield, then remove the RH nut from the downpipe (the nut and bolts are highlighted in GREEN in the photo). Discard the downpipe nut, we've included a replacement in the kit. Set the bolts aside, you'll be using them in just a few steps.

### Removal is complete, you're ready to install the new intake!





#### 5mm Allen Step 1:

Carefully guide the ECS secondary heat shield into place as shown, using caution not to snag any wires or scratch the paint with the edges of the shield. Line up the two bolt holes on the top of the shield and the hole for the downpipe stud (not shown), then loosely install the two Allen screws that you just removed.



#### 15mm Wrench Step 2:

Install the new downpipe nut onto the stud and tighten it until snug. Tighten the two Allen screws that you just installed (not shown).



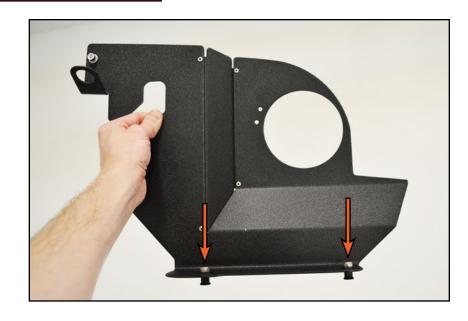


### Step 3:

Using four (4) M6 steel flat washers and two (2) M6 lock nuts, loosely install the two heat shield foot adapters into the elongated slots in the primary heat shield. Be sure to locate a washer on the top and bottom of the heat shield for each foot.



If you have purchased the optional Reflect-A-Gold kit (ES3221001), refer to Page 30 and install it at this time.



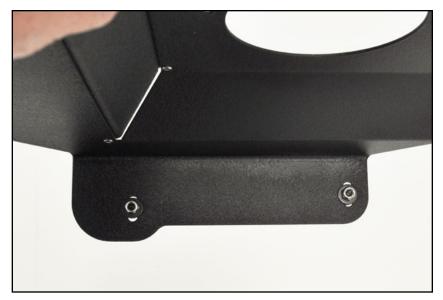
#### Step 4:

8mm, 10mm Wrenches

Hold each foot stationary with an 8mm wrench while you tighten the nut with a 10mm wrench until snug.



The placement of the feet inside these slots may vary from one vehicle to another. If you have trouble getting the intake components to line up later on, you can use these slots to move the heat shield inward or outward depending on your needs.





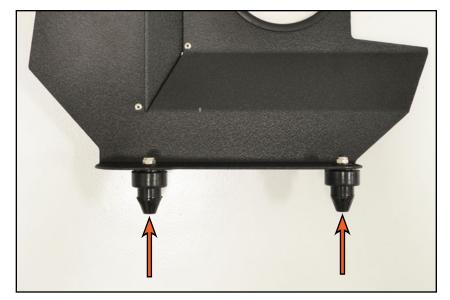
### Step 5:

Pull all three of the rubber mounts off the bottom of the original air box.



#### Step 6:

Push two of the rubber mounts onto the foot adapters of the primary heat shield.





### Step 7:

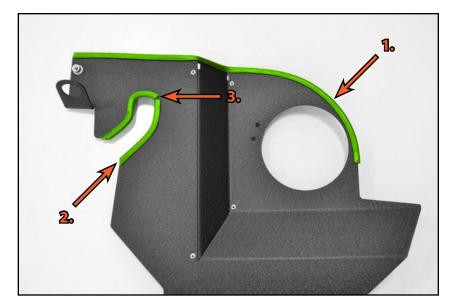
Install the grommet into the ear of the primary heat shield.



#### Step 8: Razor Blade

Install the small edge seal (highlighted) onto the primary heat shield in the areas shown, cutting it to length as required. Note the following:

- 1. Leave enough of a gap at the top to install the bulb seal.
- 2. Leave enough of a gap by these mounting holes to install the anodized air filter coupler.
- 3. We chose to install the edge seal in two pieces around the hole for the fuel lines. This is optional, but it does make it easier to install.





#### Step 9:

Small Flat Blade Screwdriver

Gently pry the plastic cap out of the negative jump-start boss. Note the threads in the center of the boss, we will be utilizing them to mount the primary heat shield later on.





#### Step 10:

Install the primary heat shield into place by lining up the rubber mounts with the holes in the frame horn, guiding the fuel lines into the heat shield cut out, then pushing it down into place until the mounts are fully seated.



The photos which follow will show the small edge seal installed in the round hole in the heat shield. The seal no longer needs to be installed there and it can be ignored.





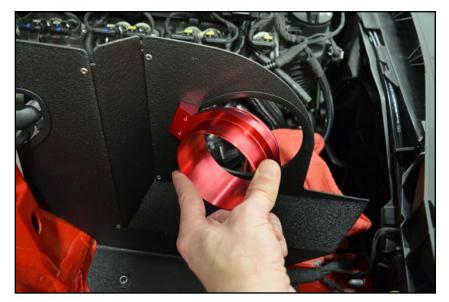
Step 11: 5mm Allen

Install and tighten the M8x16mm bolt through the grommet.



#### Step 12:

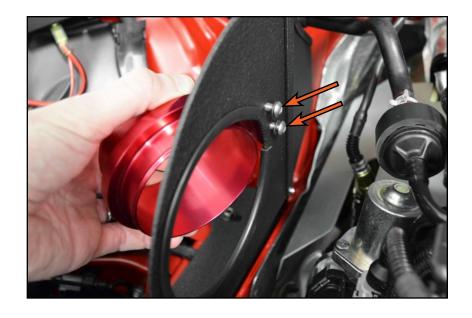
Align the anodized air filter coupler with the mounting holes in the primary heat shield as shown in the photo.





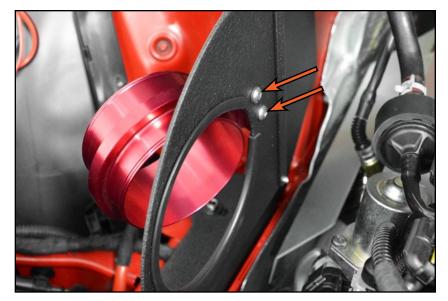
### Step 13:

Place an M5 lock washer onto each of the M5 screws, then start both screws through the primary heat shield and into the anodized air filter coupler. If the air filter coupler is properly lined up with the primary heat shield, both screws should start easily and thread in smoothly.



#### 3mm Allen Step 14:

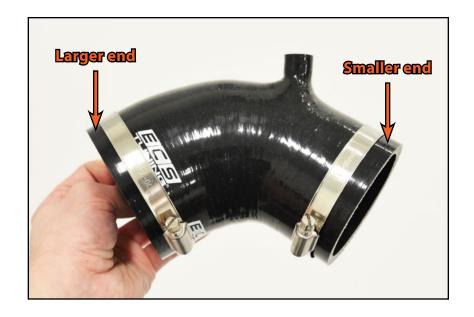
Tighten both of the M5 screws.





### Step 15:

Place the hose clamps over the end of the silicone turbo inlet hose. Be sure and place the 70-90mm hose clamp over the larger end and the 60-80mm hose clamp over the smaller end, and face the two clamp screws as shown in the photo.



#### Step 16:

Remove the rag that is covering the turbo inlet, then slide the turbo inlet hose onto the anodized air filter coupler and the turbo inlet. Do not tighten the clamps at this time.





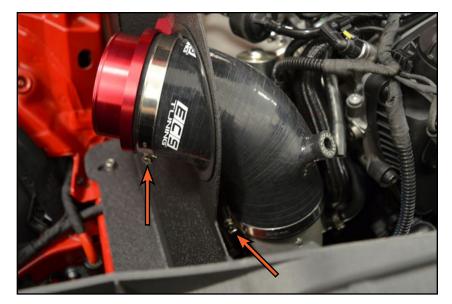
### Step 17:

Twist and adjust the turbo inlet hose until both ends sit flush, you can leave the clamps loose for now.



#### Flat Blade Screwdriver - OR - 7mm Socket & Ratchet Step 18:

Once the turbo inlet hose has been adjusted, tighten the clamps until they are snug. As you can see here, we have rotated the clamps so the screw head is underneath, providing a clean look.





### Step 19:

Push the 90 degree elbow into the silicone turbo inlet hose and reconnect the vent tube.



#### Flat Blade Screwdriver - OR - 8mm Socket & Ratchet Step 20:

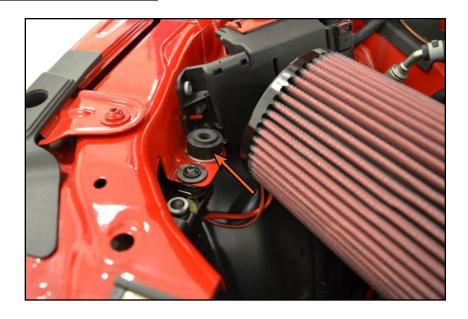
Push the air filter onto the end of the coupler, then tighten the filter clamp. As seen here, push the filter on by the end, **DO NOT** hold it by the pleats. They will easily distort and bend, and take away from the clean look. Also, note that we rotated the clamp drive underneath before we tightened it.





### Step 21:

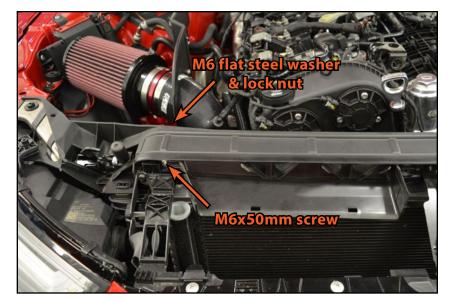
Install the remaining rubber mount into the factory air box mounting location near the end of the air filter. We will be utilizing this mount for the corner of the carbon fiber air box lid.



#### Step 22: 4mm Allen, 10mm Wrench

Using the supplied M6x50mm screw, M6 flat steel washer, and M6 lock nut, secure the factory inlet shroud to the core support.

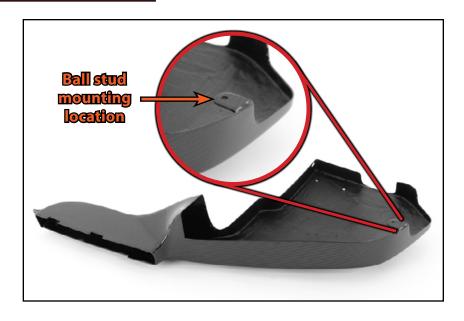
We are doing this to replace one of the intake duct screws we removed in Step 4 on Page 10, but be sure to use the mounting hole shown in the photo. The remaining mounting hole will be used to secure the carbon fiber air box lid later on.





### Step 23:

Locate the inner mounting tab on the bottom side of the carbon fiber air box lid, this is the part of the lid which will utilize the factory air box rubber mount near the air filter.

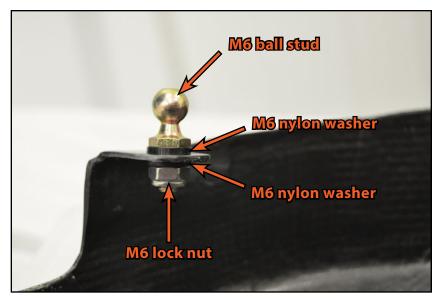


#### Step 24: 10mm Wrench

Install the M6 ball stud into the carbon fiber air box lid using the hardware listed in the photo. Tighten the M6 lock nut until it is snug.



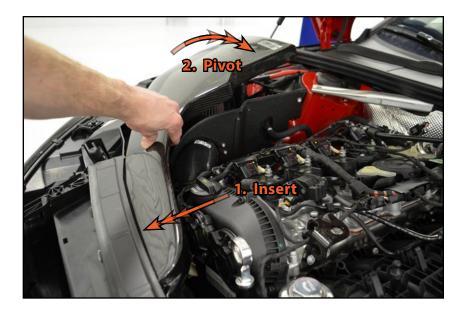
**CAUTION:** Be careful not to over tighten the hardware, over tightening can cause the carbon fiber to crack.





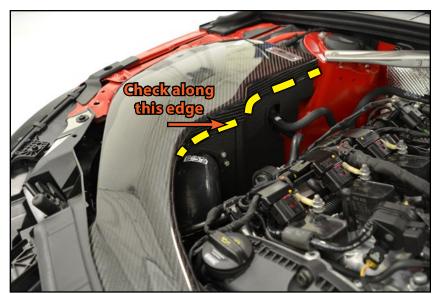
### Step 25:

To install the carbon fiber air box lid, begin by inserting it into the air inlet shroud along the front of the engine compartment. Next we need to pivot the lid downward until it rests over the primary heat shield. In most cases, you'll need to squeeze the silicone turbo inlet hose by hand while pivoting the lid in order to get it into position.



#### Step 26:

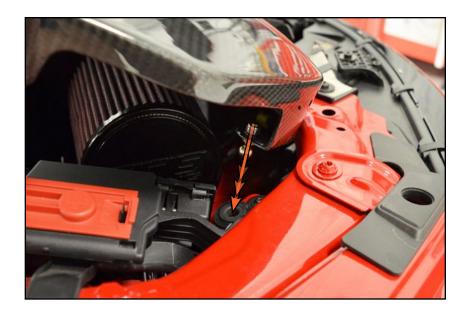
Ensure that the carbon fiber air box lid is installed **OVER** the primary heat shield. The photo on the right shows the edge of the lid, when installed properly the heat shield will be tucked up behind the lid along this edge.





### Step 27:

Ensure that the ball stud on the carbon fiber air box lid lines up with the rubber mount, then push it into place.



#### Step 28: 4mm Allen

Place an M6 nylon washer onto the end of the M6x16mm screw, then thread the screw through the carbon fiber air box lid and into the primary heat shield and tighten it until it is snug.



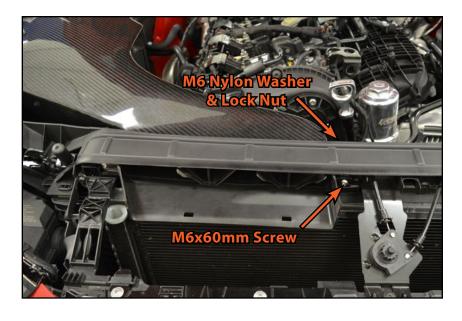
**CAUTION:** Be careful not to over tighten the hardware, over tightening can cause the carbon fiber to crack.





4mm Allen, 10mm Wrench Step 29:

Using the supplied M6x60mm screw, M6 nylon washer, and M6 lock nut, secure the carbon fiber air box lid to the core support. Be sure to use the mounting hole shown in the photo.



#### Step 30:

Reinstall the radiator shroud, hood release lever and engine cover.

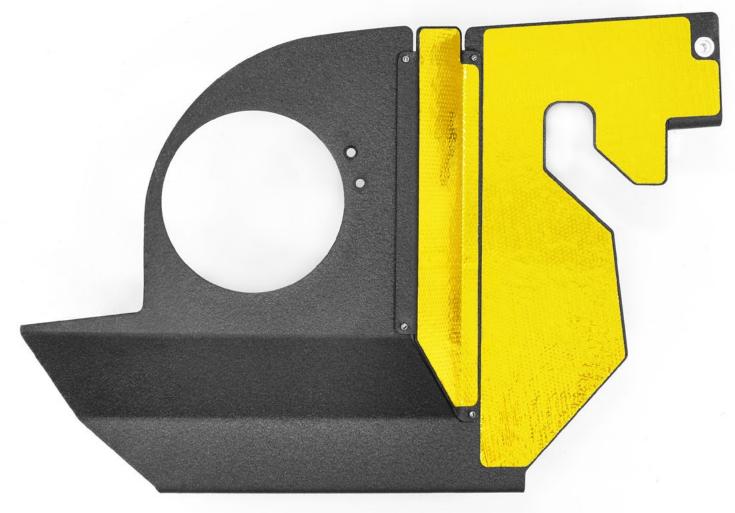
Your Kohlefaser Luft-Technik Intake installation is complete!





## REFLECT-A-GOLD INSTALLATION

If you have purchased the optional Reflect-A-Gold heat deflection, apply the two pieces to the primary heat shield in the locations shown. Be sure to wipe the surface of the heat shield clean with a surface prep solvent or an alcohol wipe to remove any traces of oil or contaminants. Line them up, making sure to leave room at the rivets and hardware, remove the backing and carefully apply it, smoothing out any wrinkles along the way.



Return to Intake Installation: Step 3



## CARBON FIBER CLEANING AND CARE

ECS Tuning Carbon Fiber Intakes are clear coated for excellent finish durability and UV resistance right out of the box.

Carbon fiber can be washed with any gentle cleanser or soap. If it is safe for the paint on your car, it will be safe for the carbon fiber.

Be extra careful not to nick or deeply scratch the clear coat on the carbon fiber. This can lead to water intrusion into the carbon fiber which will damage the finish and the integrity of the intake.

If the clear coat does get nicked or deeply scratched to expose the carbon fiber, seal the damaged area thoroughly with a clear coat touch up or clear nail polish.

To retain UV resistance and protect the finish, we recommend regular waxing with a high quality caranuba wax.

Small surface scratches and light oxidation can be buffed out using the same methods and cautions you would use on the vehicle paint.

**Carbon Fiber Cleaning and Care** Kit, available at ecstuning.com.

ES#2914954





## **SCHWABEN - BUILD THE ULTIMATE TOOL COLLECTION**

At ECS Tuning, we carry a line of high quality Schwaben Tools and Equipment to help you build your ultimate tool collection. Never before has affordability and quality been so closely related. Our entire Schwaben line is subjected to strict in house testing for strength and durability. See what we have to offer and equip your garage without breaking the bank.

### Your Kohlefaser Luft-Technik Intake System installation is complete!



### These instructions are provided as a courtesy by ECS Tuning

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.

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