Audi B8 RS5 Kohlefaser Luft-Technik
Carbon Fiber Intake System
Installation Instructions

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.

INTRODUCTION

Red Hot is how we describe our new Kohlefaser Luft-Technik Intake System for the Audi RS5, and we're going to install one on our car today. This is a beautifully crafted system that fits with OEM quality, performs with attitude, and it will blow you away with its looks. It's easy to install, only requiring a few tools, and we've turned the hardest part of the job - disconnecting the crank vent hoses from the intake pipes - into child's play, with our ***exclusive*** Quad-Lock release tool. We're going to walk you through the installation step by step, and when you're done, you'll see what we mean. There's only one way to describe it. Red Hot.

ECS Difficulty Gauge

1: Easy
Basic Skills Required

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 8 before you begin. Thank you for looking to ECS Tuning for all your performance and repair needs. We appreciate your business!

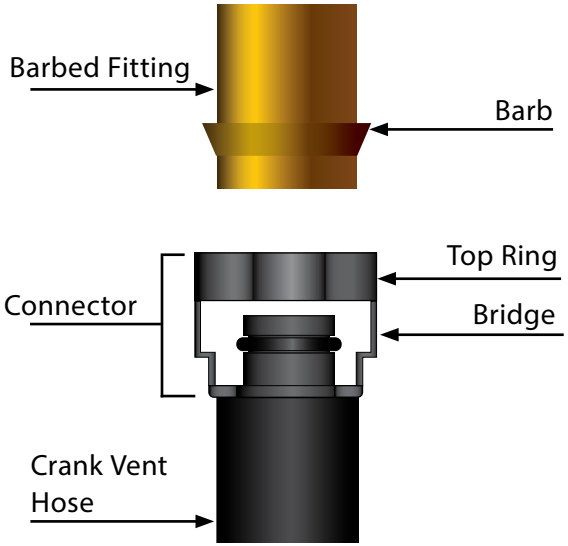
ECS Tuning's ***exclusive*** Quad-Lock release tool

TABLE OF CONTENTS

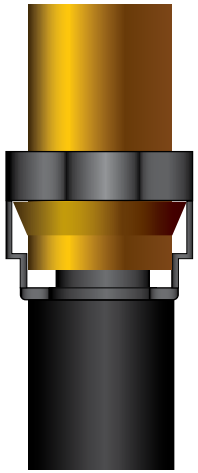
ECS TUNING'S EXCLUSIVE QUAD-LOCK RELEASE TOOL

For a number of years now, Audi has been installing posi-lock/tamperproof connectors on the ends of many of their crank vent hoses. These connectors are intended to stay put, and believe us when we tell you, they do. If you've ever had to remove them, you know it can be difficult. ***Do not*** mistake these for the standard squeeze lock connectors (see page 18) that you may have seen before. ***They are different!*** Traditional attempts at removing these new connectors can easily cause them to break, requiring the replacement of an expensive hose, and in the case of the RS5, a time consuming job as well. But luckily, we've just made the job a lot easier! Our new Quad-Lock release tool will allow you to remove these connectors on your RS5 with ease, and since they're not very easy to get to, this tool is worth its weight in gold. Here's a run down on these connectors and how our tool works:

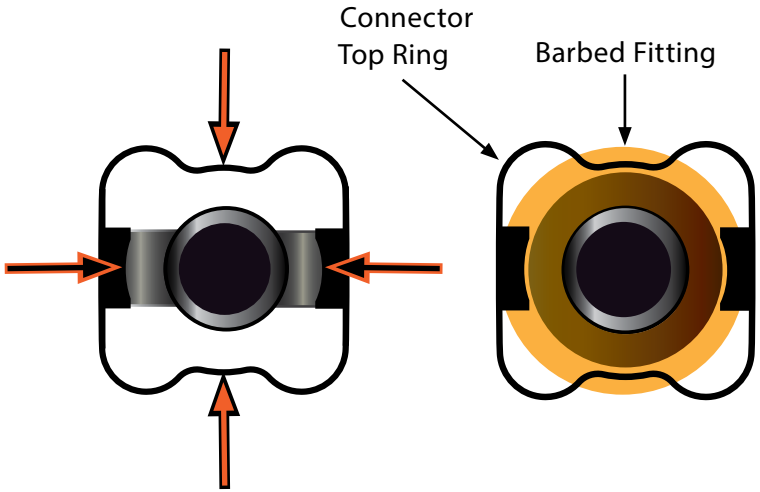
Let's start with the connectors. They are always installed onto a barbed fitting, and when installed, they lock over the lip of the barb at four points. No matter how you squeeze or pinch them, at least two of the four points remain locked over the lip of the barb. The only way to remove them is to expand all four points open at the same time.



Here's a side view of one of these new connectors and its components, and the barbed fittings that they attach to.

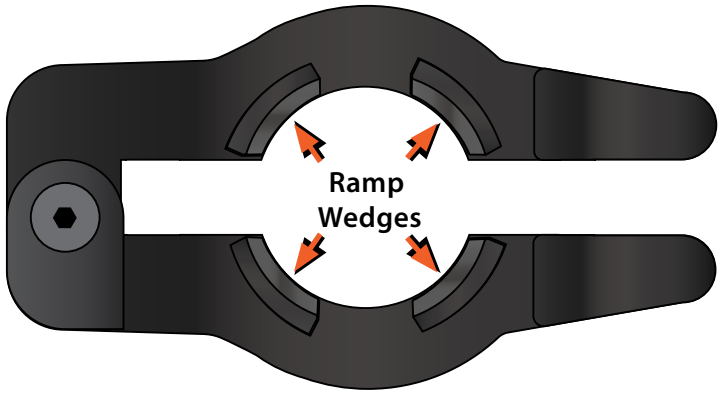


When the connector is installed onto the fitting as shown here, you can see how the barb is locked underneath the top ring of the connector.



In these top views, you can see the four points that lock onto the barb of the fitting (LH arrows), and when the connector is installed onto the fitting (RH), how they are engaged on top of the barb.

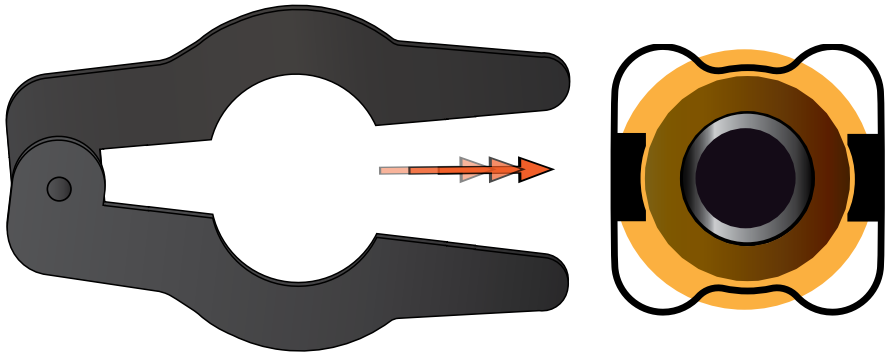
Here's our new tool. It is open on one end with a hinge on the other. The center is cut out to fit around the barbed fitting that the connector is attached to, and there are four precisely positioned ramp wedges located around the center opening of the tool.

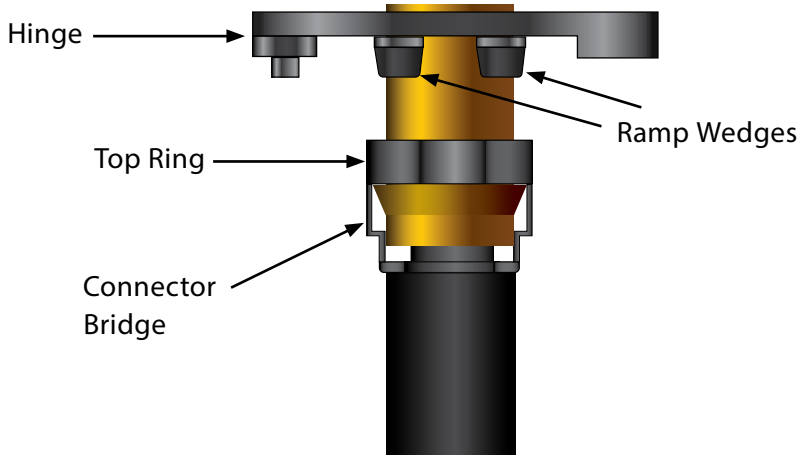


There is a flat section at the base of each ramp wedge that will engage into the top of the connector, holding the tool in place and preventing it from slipping out.

Our new Quad-Lock release tool is also precisely machined from billet aluminum for an accurate fit and smooth hinge operation.

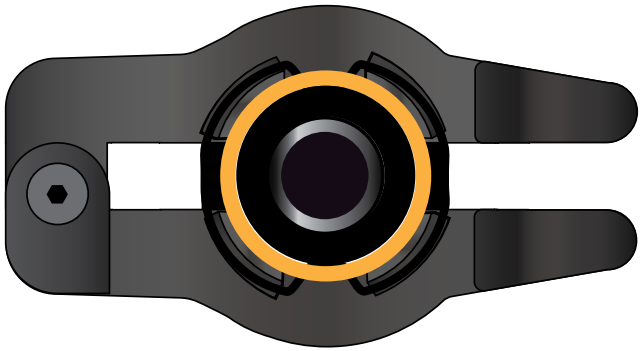
To use the tool, you first hinge it open and slide it over the barbed fitting so it is located ***on top*** of the posi-lock/tamperproof connector, making sure the ramp wedges are facing toward the top ring of the connector. Also note that the hinge of the tool must be located on the same end as one of the connector bridges.



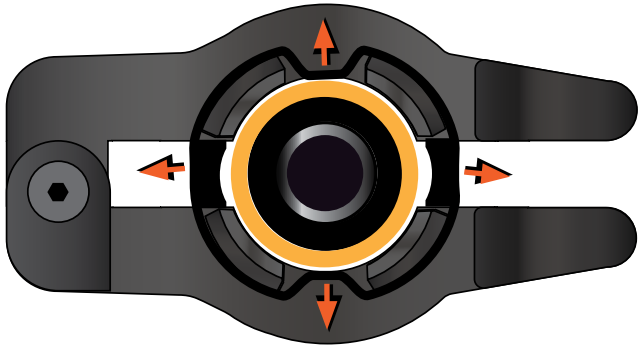


Next, close the tool, line up the four ramp wedges with the corner loops of the top ring, and push the tool into the connector. As you push the tool in place, the ramp wedges will expand all four locking points evenly, pulling them away from lip of the barb.

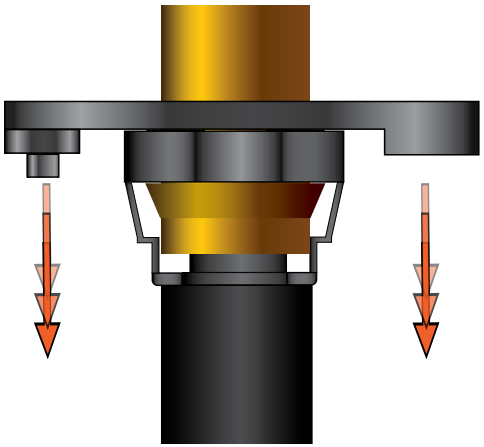
Tool in place, with the wedges lined up in the corner loops on the top ring.



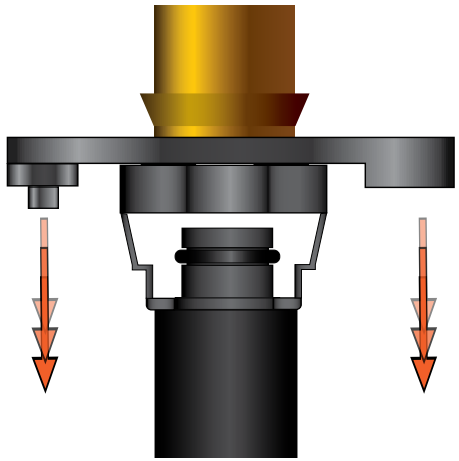
Tool fully pushed into the corner loops, evenly expanding the top ring of the connector and pulling it off the lip of the barb.



Keep downward pressure on the tool as you push it into place, and rock it gently back and forth to help it seat in the connector.



The connector and crank vent hose will slide off of the barbed fitting.



KIT CONTENTS

REQUIRED TOOLS

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

Tool Recommendations: The following list of tools are part of a standard automotive tool set, and are used in various combinations for most automotive repairs. The tools required for this installation are highlighted in red, but we recommend you have this complete standard selection to overcome any issues that may arise such as rust, corrosion, or broken and stripped fasteners. The specific tools required for each step will be listed by the step number throughout these instructions, and any tools listed below with a hyperlink are available on our website.

- Protecta-Sockets (for lug nuts) ..... ES#2221243
- 3/8" Drive Ratchet ..... ES#2765902
- 3/8" Drive Torque Wrench ..... ES#2221245
- 3/8" Drive Deep and Shallow Sockets ..... ES#2763772
- 3/8" Drive Extensions ..... ES#2804822
- Hydraulic Floor Jack ..... ES#240941
- Torx Drivers and Sockets ..... ES#11417/8
- 1/2" Drive Deep and Shallow Sockets ..... ES#2839106
- 1/2" Drive Ratchet
- 1/2" Drive Extensions
- 1/2" Drive Torque Wrench ..... ES#2221244
- 1/2" Drive Breaker Bar ..... ES#2776653
- Bench Mounted Vise
- Crows Foot Wrenches
- Hook and Pick Tool Set ..... ES#2778980
- 1/4" Drive Ratchet ..... ES#2823235
- 1/4" Drive Deep and Shallow Sockets ..... ES#2823235
- 1/4" Drive Extensions ..... ES#2823235
- Plier and Cutter Set ..... ES#2804496
- Flat and Phillips Screwdrivers ..... ES#2225921
- Jack Stands ..... ES#2763355
- Ball Pein Hammers
- Pry Bar Set ..... ES#1899378
- Electric/Cordless Drill
- Wire Strippers/Crimpers
- Drill Bits
- Punch and Chisel Set
- Hex Bit (Allen) Wrenches and Sockets ..... ES#11420
- Thread Repair Tools ..... ES#1306824
- Open/Boxed End Wrench Set ..... ES#2765907

Specialty Tool Requirements: The following specialty tools are not considered part of a standard tool set and are required specifically for the installation of our Audi B8 RS5 Kohlefaser Luft-Technik Intake. Tools with a hyperlink are available on our website.

- ECS Tuning Quad-Lock Release Tool ..... Included with the kit

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. Always make sure that the vehicle is securely supported on jack stands.

THE PROJECT: A QUICK OVERVIEW

Let's take a quick look at what we're going to do: We're going to remove the upper radiator shroud, both intake ducts, both stock air boxes, and both stock intake pipes. Then we'll simply install our RS5 Kohlefaser Intake in its place, utilizing a few of the original components for mounting. It'll be easy, and fun. Familiarize yourself with these components, then scroll to page 12 and begin.

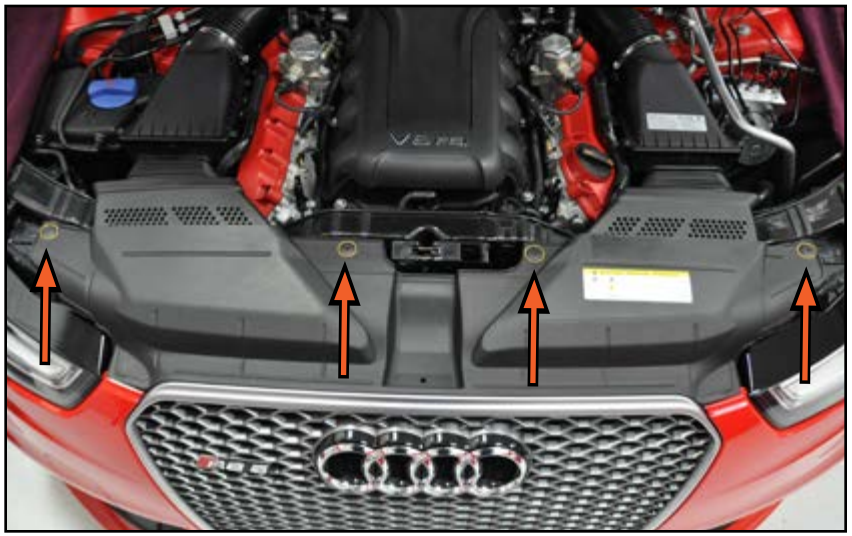
REMOVING THE ORIGINAL INTAKE

Step 1:

Begin by placing soft fender covers on the left and right - you'll be leaning over the sides for most of the work.

Step 2:

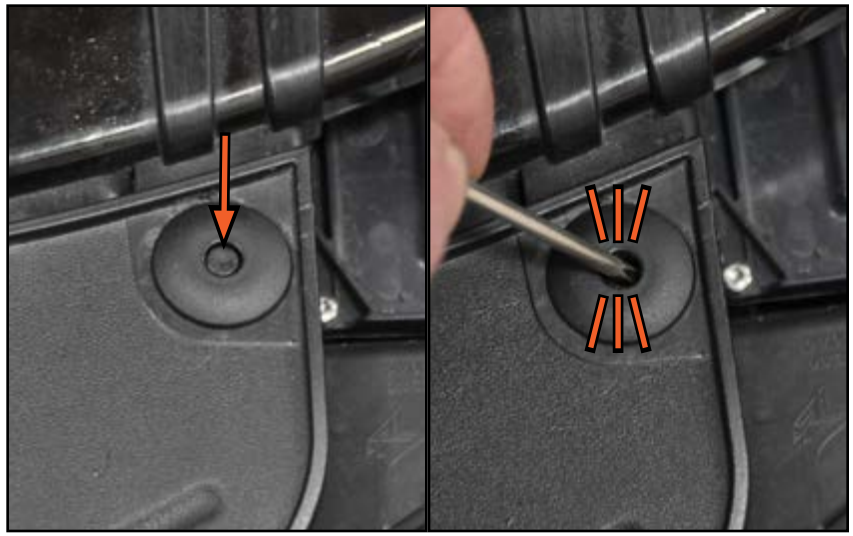
Locate the four radiator shroud retaining rivets.



REMOVING THE ORIGINAL INTAKE

Step 3: Small Screwdriver or Punch

While listening carefully, gently push in the center pin of each radiator shroud rivet until you hear a faint “click” indicating that it is unlocked.



Step 4:

With the rivet center pins unlocked, pull them out of the radiator shroud. Slightly lifting the edge of the shroud will pull the rivets up so you can get a hold of them.

REMOVING THE ORIGINAL INTAKE

Step 5:

Lift up the rear edge of the shroud, then pull it rearwards and remove it. Set it aside for now.

Step 6: T25 Torx

Remove the two torx screws securing the front of the intake duct to the core support.

Repeat steps 6 through 24 for both sides. You can alternate sides with each step as you go, or completely remove one side then the other, depending on your preference.

REMOVING THE ORIGINAL INTAKE

Step 7:

Squeeze the intake duct accordian boot together where it connects to the air box, pull it out of the air box and remove the duct. Set it aside for now.

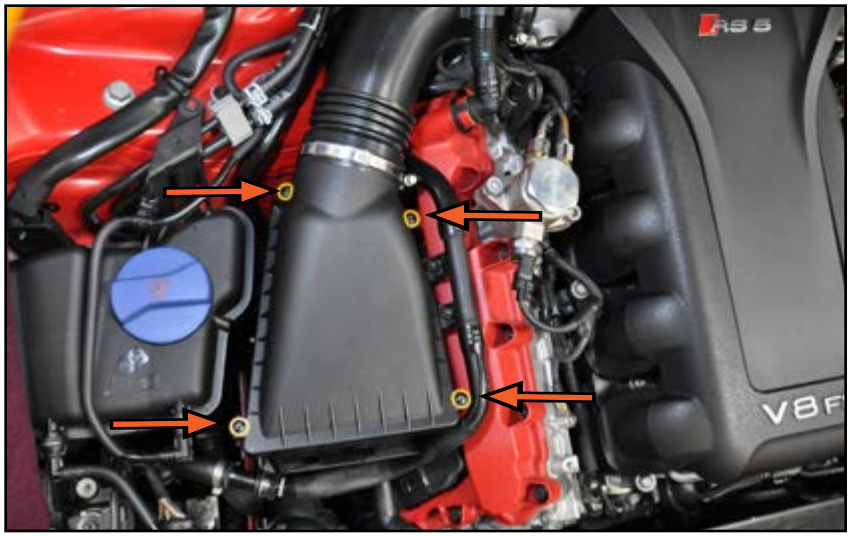
Step 8: Flat Blade Screwdriver

Loosen the clamp that secures the intake pipe to the air box lid.

REMOVING THE ORIGINAL INTAKE

Step 9: T20 Torx

Remove all four air box lid screws.



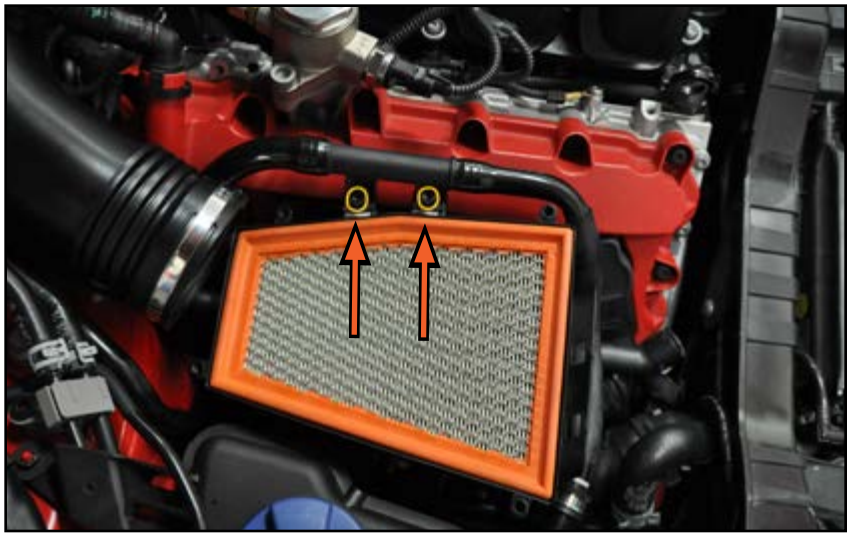
Step 10:

Lift up the front edge of the air box lid and pull it forward, out of the intake pipe.

REMOVING THE ORIGINAL INTAKE

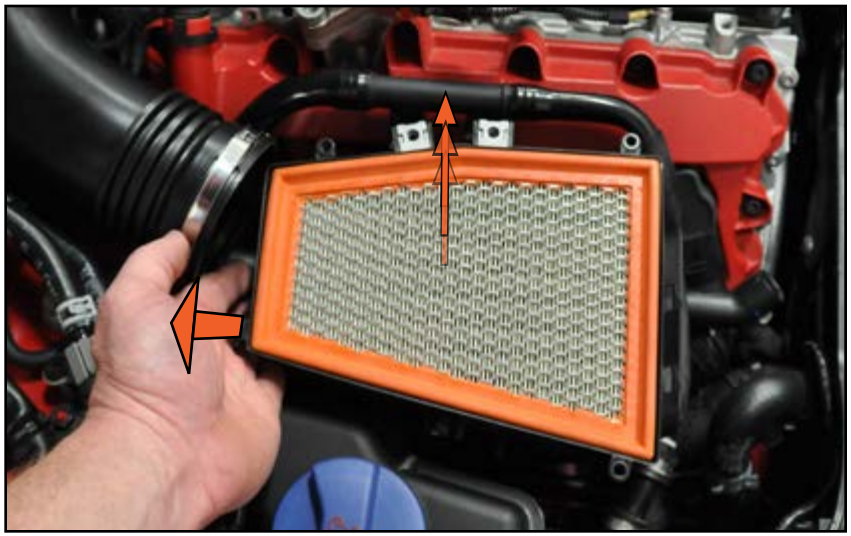
Step 11: T30 Torx

Remove the two bolts securing the secondary air injection pipe to the side of the air box.



Step 12:

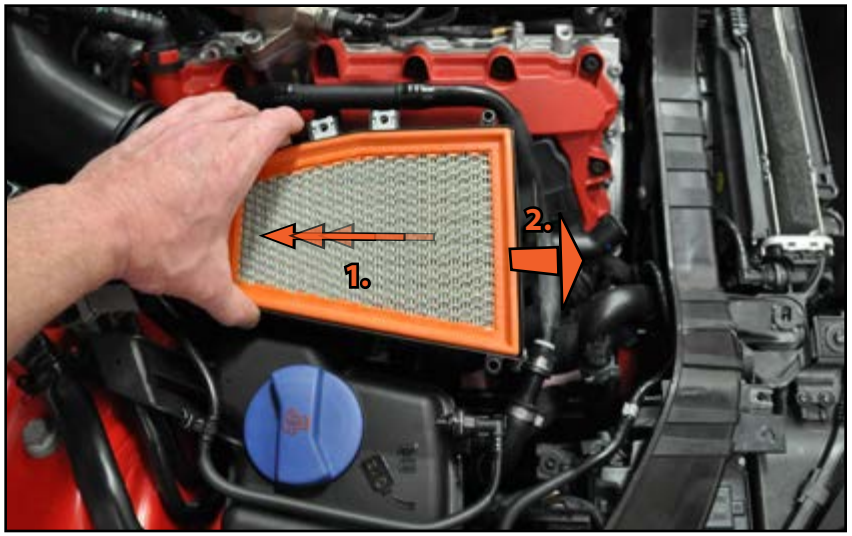
Push the secondary air injection pipe off to the side, then pull up on the rear of the air box as shown. It is only necessary to pull the rear of the air box up by about one inch.



REMOVING THE ORIGINAL INTAKE

Step 13:

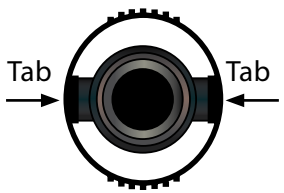
Slide the air box rearward about one inch, then lift it up at the front and remove it.



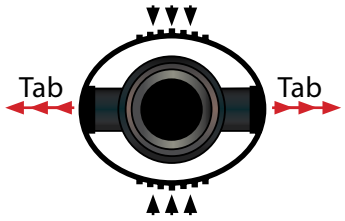
Step 14:

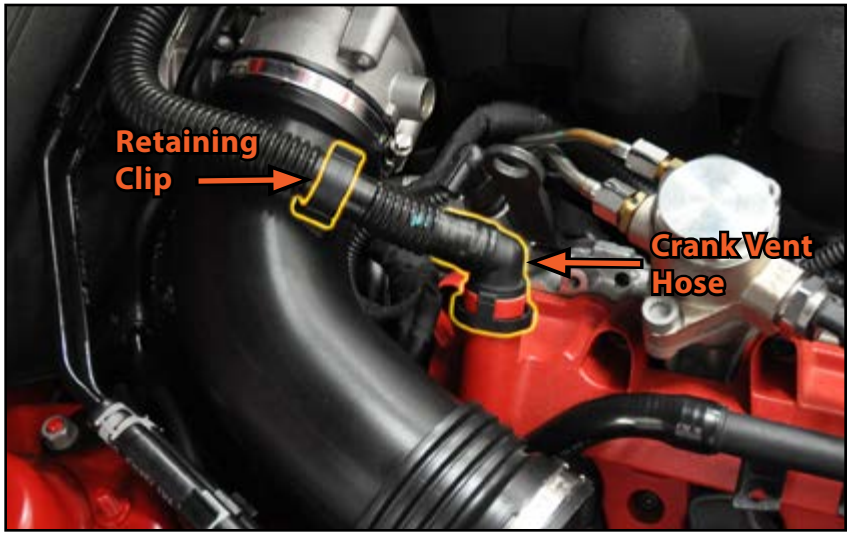
Remove the crank vent hose from the valve cover and the retaining clip on the intake pipe. The crank vent hose is held onto the valve cover by a squeeze-lock connector. The diagram below explains how to remove them:

Normal Installed State: The tabs keep the hose "locked" onto the valve cover.



To Remove: Squeeze the knurled sides of the locking ring together and the tabs will expand out and unlock, allowing you to pull the connector off of the valve cover.





REMOVING THE ORIGINAL INTAKE

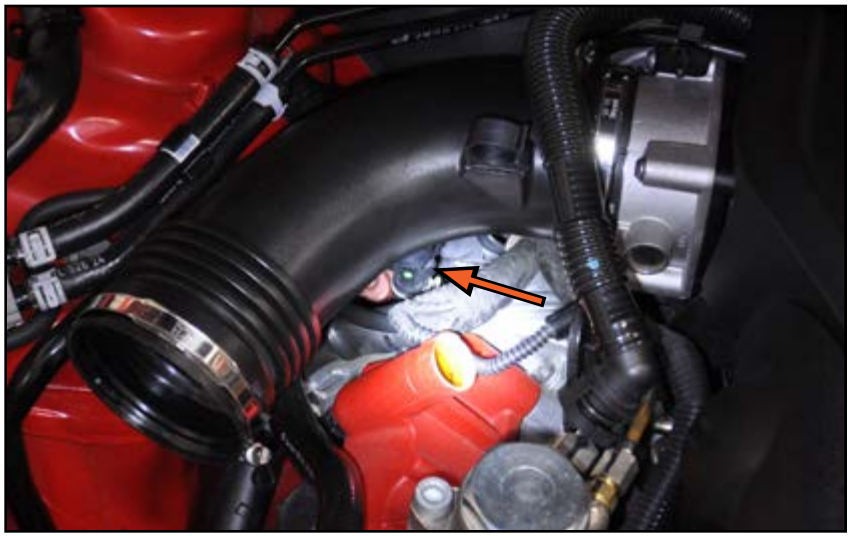
Step 15: Flat Blade Screwdriver

Loosen the clamp that secures the intake pipe to the throttle body.

Step 16:

Now we have to remove those tricky crank vent hoses with the posi-lock connectors. First, locate the hose underneath the intake pipe. You can move the pipe around a little bit for access, but ***be careful***, don't move it too much. These connectors are easy to break and the crank vent hoses are difficult to replace. This is where our exclusive ECS Tuning Quad-Lock release tool comes into play.

In the picture on the right, we've used a flashlight to get a better view of the hose where it connects to the intake pipe.

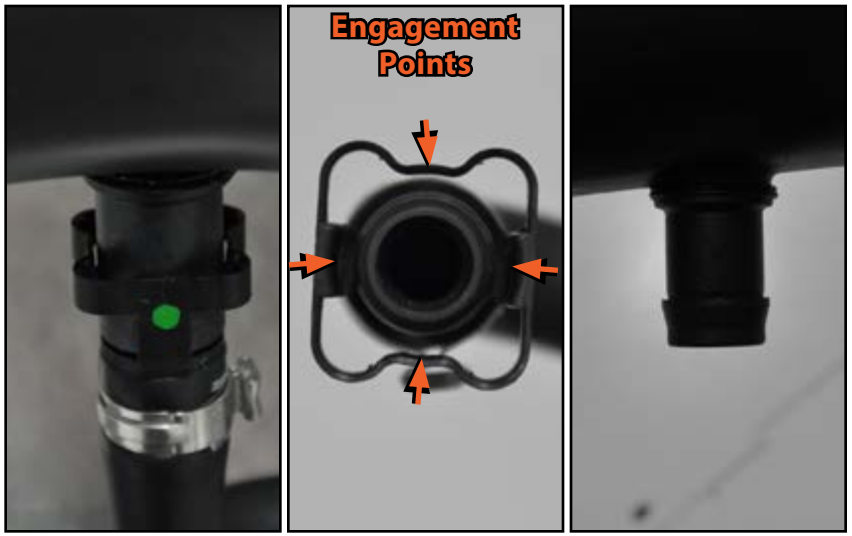


ECS Tuning Quad-Lock Release Tool

It's not possible to photograph any detail with the intake pipe installed, so we've removed one of the crank vent hoses to be able to demonstrate how to disconnect it using our ECS Tuning Quad-Lock release tool. Even though you'll have to do it more by "feel", once you see how it's done, you'll find it's pretty easy.

Here you can see the crank vent hose connected to the bottom of the intake pipe.

These close up photos show the crank vent hose connected, a top view of the hose disconnected, and a side view of the barbed fitting on the intake pipe. You can see how the posi-lock connector engages and locks in place at four points. Inspect the photos then proceed with step 19.



NOTE

You may also review pages 4, 5, and 6 for additional information on the posi-lock connectors and use of our ECS Tuning Quad-Lock release tool.

REMOVING THE ORIGINAL INTAKE

Step 19: ECS Tuning Quad-Lock Release Tool

Open the release tool and slip it over the fitting on the intake pipe, above the posi-lock connector.

Step 20: ECS Tuning Quad-Lock Release Tool

Close the release tool and line up the ramp wedges with the corner loops on the top ring of the posi-lock connector. Make sure the hinge is located on the same end as one of the connector bridges.

REMOVING THE ORIGINAL INTAKE

Step 21: ECS Tuning Quad-Lock Release Tool

Push the tool down into the connector until it is completely seated in the corner loops. This will expand the top ring of the connector.

Step 22: ECS Tuning Quad-Lock Release Tool

Keeping downward pressure on the tool, slowly rock it back and forth in a circular motion.

REMOVING THE ORIGINAL INTAKE

Step 23: ECS Tuning Quad-Lock Release Tool

The crank vent hose will slide off of the fitting on the intake pipe.

Step 24:

Now that the crank vent hose is disconnected, pull the intake pipe off of the throttle body.

If you have only removed one side, then repeat steps 6 through 24 for the other side.

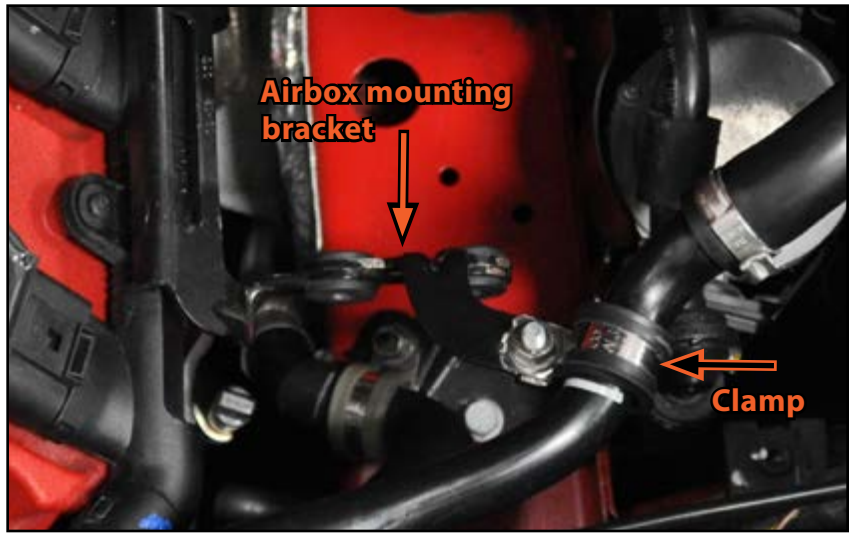
REMOVING THE ORIGINAL INTAKE

Step 25:

Ok, we've removed everything that we need, but we just have one small detail to take care of before installing the new intake system.

On the LH (Drivers) side only, locate the clamp that secures the secondary air injection pipe to the airbox mounting bracket.

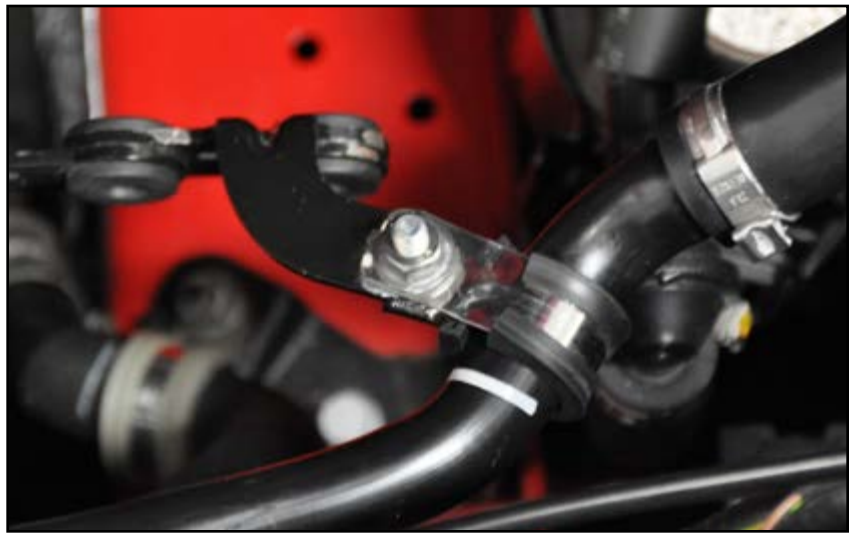
The air box mounting brackets can easily be bent, especially when removing the air boxes. If you find that the new air boxes do not line up perfectly when installed, you may need to bend these brackets slightly to acheive the proper alignment.



Step 26: 10mm Socket, Ratchet

Remove the nut holding the clamp in place, then remove the clamp from the secondary air pipe, flip it over, and reinstall it. This will lower the position of the secondary air pipe so it does not interfere with the new carbon fiber air box.

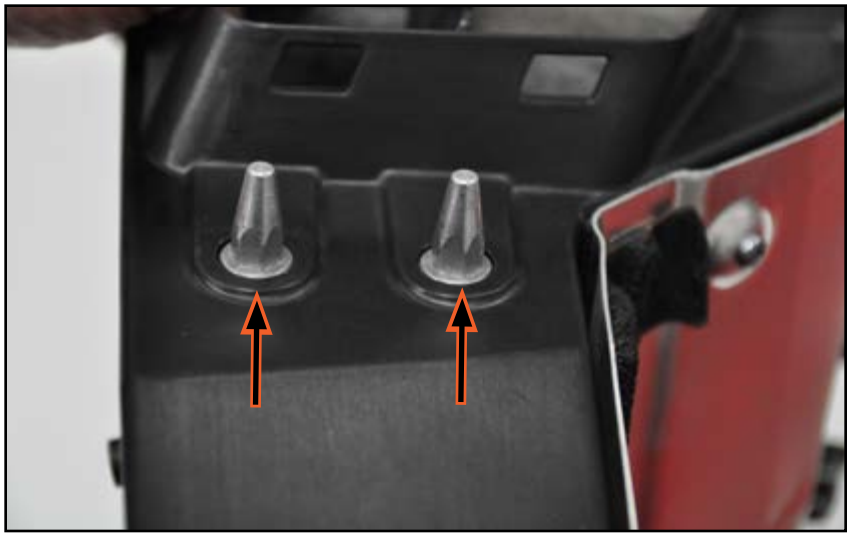
It's time to install the new Kohlefaser Luft-Technik Intake System!



INSTALLING THE NEW INTAKE SYSTEM

Step 1: 8mm Wrench

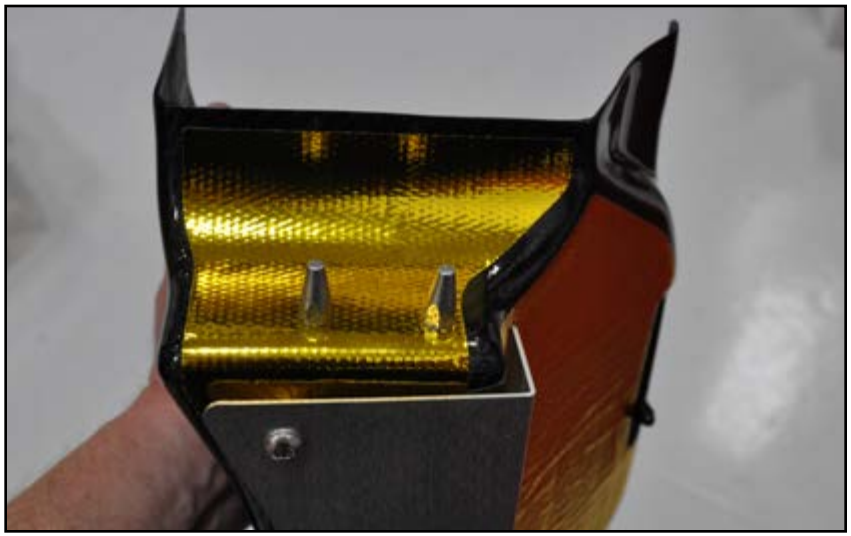
Remove the two mounting posts from the original air box.



Repeat steps 1 through 26 for both sides. You can alternate sides with each step as you go, or completely install one side then the other, depending on your preference.

Step 2: 8mm Wrench

Install the two mounting posts into the new carbon fiber air box and tighten them just until they are they are snug.



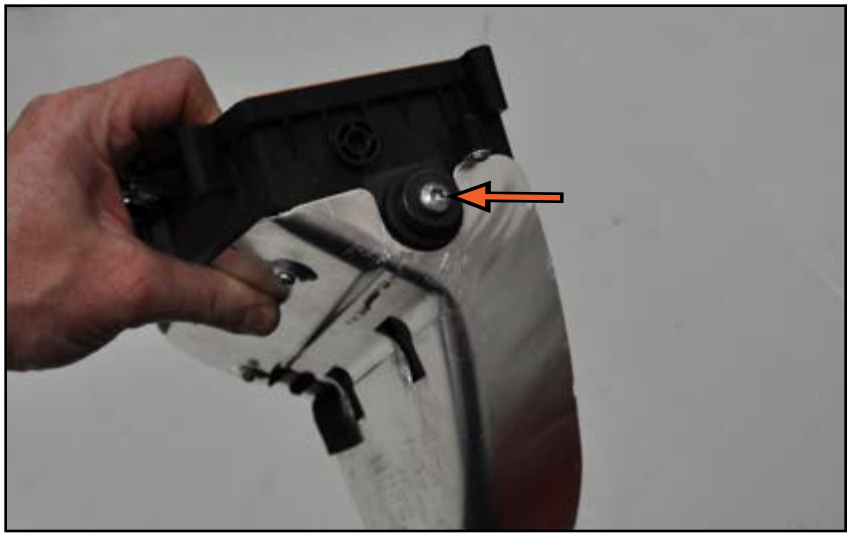
Carbon Fiber Cautions:

- Be careful not to nick or scratch the clear coat surface of the intake, this could lead to water intrusion and damage the carbon fiber.
- Never excessively tighten any fittings into the carbon fiber. This could crack the crack the clear coat and lead to water intrusion.

INSTALLING THE NEW INTAKE SYSTEM

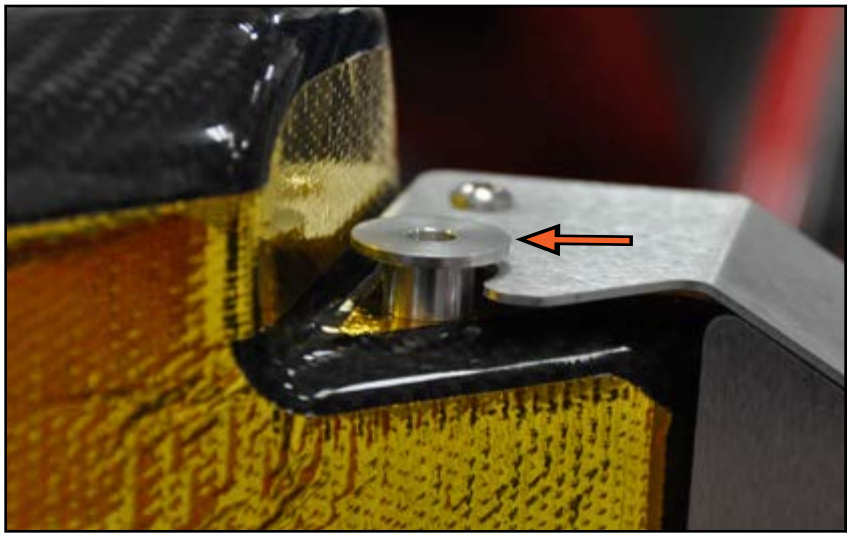
Step 3: T30 torx

Unthread the bolt from the original air box rear mount and remove the bushing and metal spacer. The bushing and spacer will come off together as one piece.



Step 4:

Place a mount pedestal onto the rear of the new carbon fiber air box so it clears the heat shield as shown.



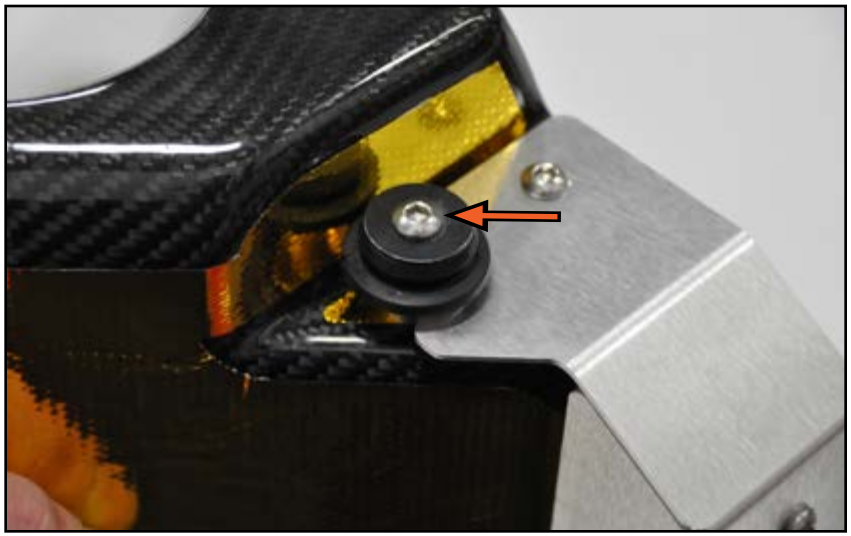
INSTALLING THE NEW INTAKE SYSTEM

Step 5:

Place the original rear mount bushing and spacer on top of the mount pedestal so the large metal washer is facing up, as shown.

Step 6: 4mm Allen, 10mm Wrench

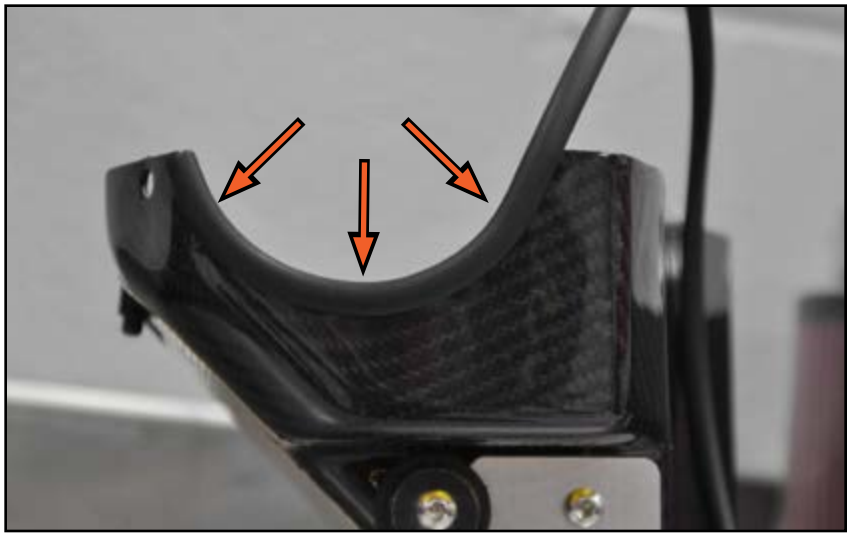
Install the new mount bushing bolt and nut included with the kit and tighten them just until snug. The head of the bolt should be located on the outside as shown.



INSTALLING THE NEW INTAKE SYSTEM

Step 7:

Now we're going to cut and Install the intake pipe seals. First, install the seal onto the air box, beginning one end flush with the edge. Be sure to push the seal completely into place.



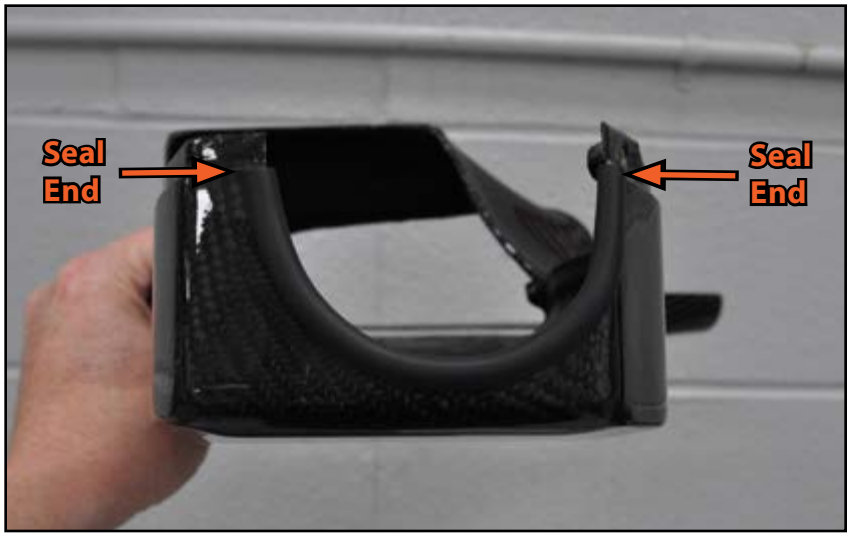
Step 8: Razor Knife

Carefully trim the other end so that it is flush with the edge.

INSTALLING THE NEW INTAKE SYSTEM

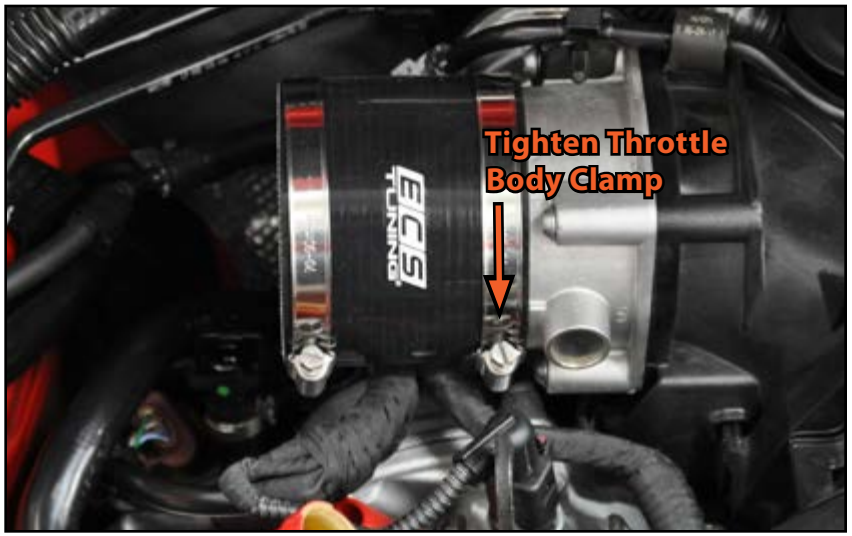
Step 9: Razor Knife

Now cut and install a piece of the intake pipe seal onto the air box lid. Make sure that the ends of the seal are flush with the outside of the lid where it meets the air box, the inset lip will fit inside the air box base and the seal should not extend onto the inset lip.



Step 10: Flat Blade Screwdriver

Place a hose clamp over both ends of the silicone intake pipe coupler, then push the coupler onto the throttle body. When the coupler is fully seated, tighten the clamp that secures it to the throttle body.



INSTALLING THE NEW INTAKE SYSTEM

Step 11: Flat Blade Screwdriver

Inspect the opening for the air filter. You will see that there is a lip on the inside. Wipe away any oil or grease from this surface, then insert the carbon fiber tube into the air filter until it is fully seated against the lip, then tighten the clamp on the filter.

TECH TIP

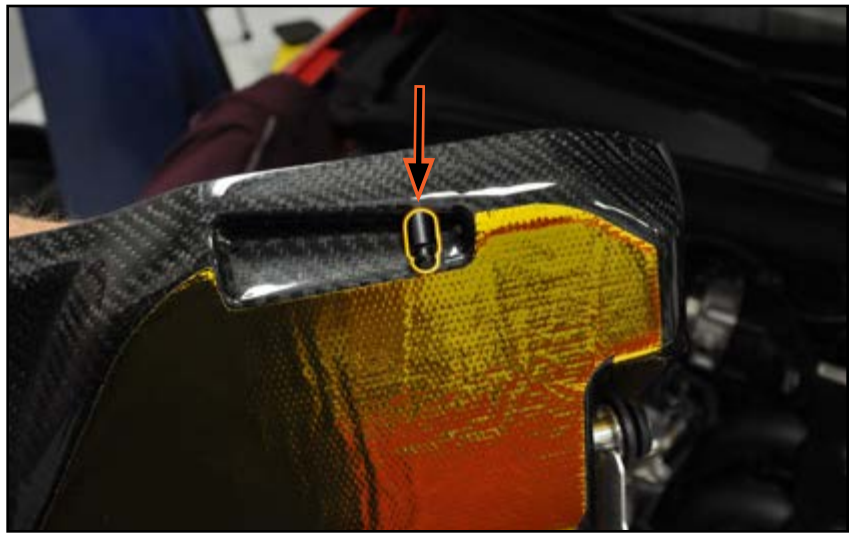
Use rubbing alcohol to wipe the oily residue from the inner surface of the filter to prevent it from sliding off.

CAUTION

Be careful not to overtighten the clamp. Overtightening can crack the carbon fiber.

Step 12:

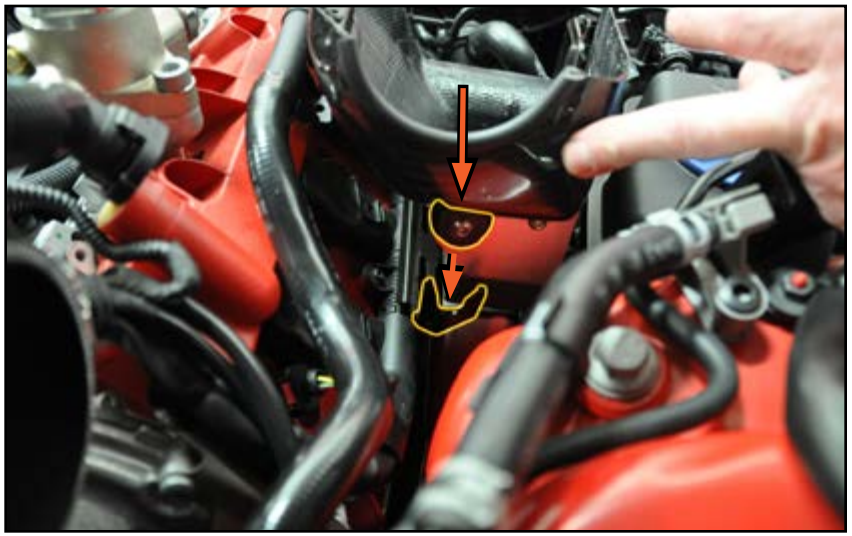
Inspect the side of the new carbon fiber air box and note the location of the stud on the side. This will hold the secondary air pipe in place when the air box is installed.



Angle the front of the carbon fiber air box downward and guide the two mounting posts in the front into the grommets on the air box bracket. Be sure you do not accidentally push the grommets out of the bracket.

The air box mounting brackets can easily be bent, especially when removing the air boxes. If you find that the new air boxes do not line up perfectly when installed, you may need to bend these brackets slightly to acheive the proper alignment.

When the mounting posts on the front of the air box are fully seated into their grommets, the rear mount bushing will be lined up with the rear mount bushing bracket.



INSTALLING THE NEW INTAKE SYSTEM

Step 15:

Push down on the rear of the air box until the rear mount bushing is fully seated.

Step 16:

Align the rearmost hole in the secondary air pipe and snap the stud on the side of the air box into the hole.

INSTALLING THE NEW INTAKE SYSTEM

Step 17:

Insert the end of the carbon fiber intake pipe into the silicone coupler, making sure it is angled upward as shown.

Step 18:

Locate the crank vent hose underneath the intake pipe.

INSTALLING THE NEW INTAKE SYSTEM

Step 19:

Line up the crank vent hose with the barbed fitting on the intake pipe, then rotate the intake pipe downward while guiding the crank vent hose into place. Make sure the posi-lock connector on the crank vent hose is fully seated onto the barbed fitting, then push the intake pipe down until it is seated against the seal in the air box.

Step 20: Flat Blade Screwdriver

Tighten the remaining clamp on the silicone coupler and reattach the crank vent hose to the valve cover.

CAUTION

Be careful not to overtighten the clamp. Overtightening can crack the carbon fiber.

INSTALLING THE NEW INTAKE SYSTEM

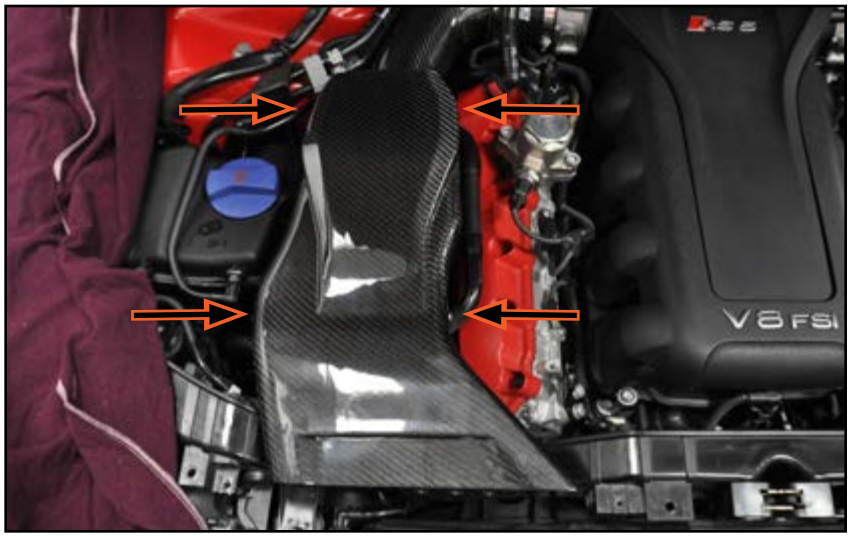
Step 21:

Place the carbon fiber air box lid onto the airbox.

Step 22: 4mm Allen

Loosely install all four air box lid screws, making sure you place a nylon washer under the head of each screw.

With all four screws loosely installed, push down on the air box lid to make sure it is fully seated, then tighten all four screws until they are snug.



NOTE

The lid screws for the RH side are shown in this picture. The LH side differs slightly. Proceed to step 23 for the LH side.

INSTALLING THE NEW INTAKE SYSTEM

Step 23: 4mm Allen

On the LH side only, one of the air box lid screws is vertcally mounted in the location shown in the picture (arrow).

Step 24: Small Flat Blade Screwdriver

Separate the top and bottom half of the intake duct by unhooking it at the sides.

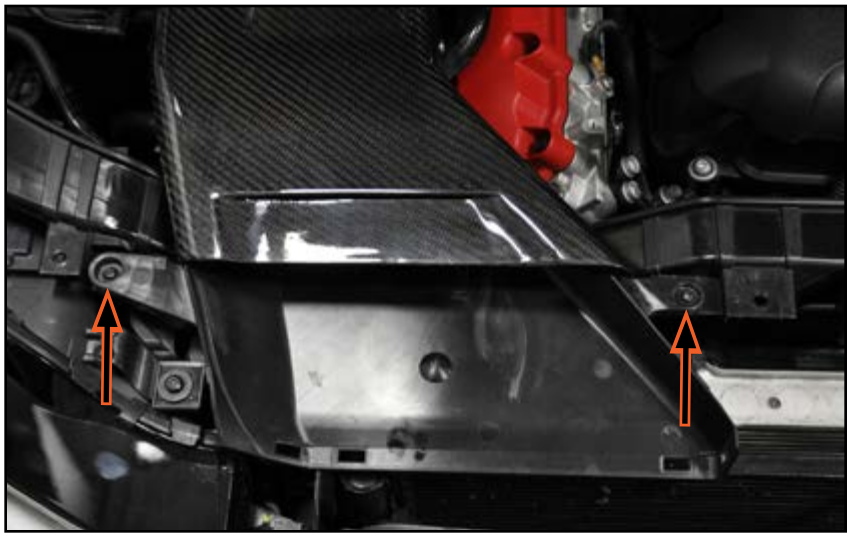
INSTALLING THE NEW INTAKE SYSTEM

Step 25:

Pull off the accordian boot so you just have the lower half of the intake duct.

Step 26: T25 Torx

Slide the lower half of the intake duct underneath the air box lid and back into place on the core support. Install and tighten the two original hold down screws.



If you have only installed one side, repeat steps 1-26 for the other side.

INSTALLING THE NEW INTAKE SYSTEM

Step 27:

Clean the edge on the underside of the radiator shroud and install one shroud seal on each side in the highlighted areas indicated in the picture. This will protect the surface of the carbon fiber air box lid.

Step 28:

Install the upper radiator shroud in place, then install the four expanding rivets.

Your RS5 Kohlefaser Luft-Technik Intake system installation is complete!

SERVICE TIP

Our ECS Tuning Quad-Lock release tool will release the posi-lock connectors from the bottom side as well. In the event that you need to remove the intake pipes for service, the increased size and flow of the carbon fiber pipes will prevent installing the tool from the top.

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

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- Stethoscope
- Battery Terminal Brush
- Wheel Chocks
- Torx Sockets
- Sockets
- E-Drive Sockets
- Car Ramps
- Torx Drivers
- Jack Stands
- Circuit Tester
- Ratchets
- Exhaust Hanger Pliers
- Bubble Flaring Tool
- Thread Chaser
- Drain Pans
- Wrenches
- Impact Sockets
- Torque Wrenches

Your Audi RS5 Kohlefaser Luft-Technik Intake 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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