Volkswagen MK5/MK6 FSI
ECS Intake Systems
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

VW MK5/MK6 FSI Luft-Technik and Kohlefaser Luft-Technik Intake Systems

Our ECS Intake Systems offer the following features for your MK5/MK6 FSI:

- CNC bent aluminum pipes available in either polished or wrinkle black powder coat finishes
- Available in an open-element design (Luft-Technik systems) or with a hand-laid carbon fiber air box (Kohlefaser Luft-Technik systems)
- Dyno proven results
- In-house designed by ECS Tuning Engineers
- 4 Ply silicone couplers
- High flow cotton gauze air filter
- All mounting hardware included
- Easy installation

ECS Difficulty Gauge

1 - Easy
2 - Moderate
Advanced - 3
Pro - 4

Installing an ECS Tuning Luft-Technik Intake System on your VW MK5/MK6 FSI is an enjoyable project that you can complete in just a short couple of hours. There is no easier way to give your engine a boost and to make you eager to pop your hood and show off the looks of your new intake system. Before you begin, read and familiarize yourself with these instructions and make sure you have all the required tools on hand. Thank you for making ECS Tuning your choice for performance parts and accessories, we appreciate your business!

TABLE OF CONTENTS

MK5 FSI INTAKE SYSTEMS

MK5 FSI Luft-Technik Intake Systems:
w/wrinkle black aluminum tubes: ES#2981595
w/polished aluminum tubes: ES#2981601
(See Pages 5-6)

MK5 FSI Kohlefaser Luft-Technik Intake Systems:
w/wrinkle black aluminum tubes: ES#2981600
w/polished aluminum tubes: ES#2981602
(See Pages 7-8)

MK6 FSI INTAKE SYSTEMS

MK6 FSI Luft-Technik Intake Systems:
w/wrinkle black aluminum tubes: ES#3494042
w/polished aluminum tubes: ES#3494041
(See Pages 5-6)

MK6 FSI Kohlefaser Luft-Technik Intake Systems:
w/wrinkle black aluminum tubes: ES#3494040
w/polished aluminum tubes: ES#3493906
(See Pages 7-8)

KIT CONTENTS: LUFT-TECHNIK INTAKE SYSTEMS

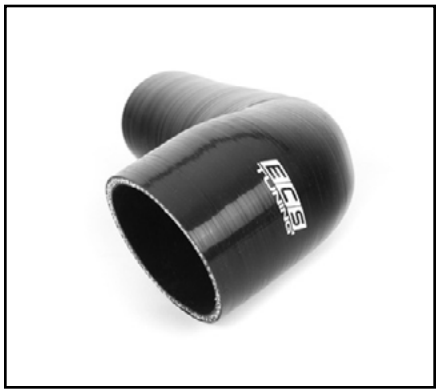
Luft-Technik Aluminum Heat Shield Assembly
(QTY 1)

Upper Intake Tube **(QTY 1)**
(Polished or Wrinkle Black)

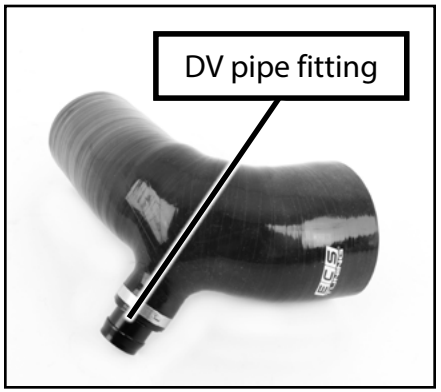
Lower Intake Tube **(QTY 1)**
(Polished or Wrinkle Black)

Air Filter (w/Band Clamp)
(QTY 1)

Accordion Coupler
(QTY 1)



MK5 FSI Silicone Turbo Inlet Hose
(QTY 1)



MK6 FSI Silicone Turbo Inlet Hose
(QTY 1)

Your kit will include **ONE** of these

Turbo Heat Shield
(QTY 1)

KIT CONTENTS: LUFT-TECHNIK INTAKE SYSTEMS

50-70mm Band Clamp
(QTY 1)

70-90mm Band Clamps
(QTY 3)

M6x16mm Bolt
(QTY 1)

Heat Shield Mounting Grommets
(QTY 2)

Air Box Snorkel Screws
(QTY 2)

M6 Flat Washer
(QTY 1)

Rubber Intake Tube Isolator
(QTY 1)

M4x8mm MAF Sensor Screws
(QTY 2)

M6 Vibration Damper
(QTY 1)

M6 Flanged Nut
(QTY 1)

KIT CONTENTS: KOHLEFASER LUFT-TECHNIK INTAKE SYSTEMS

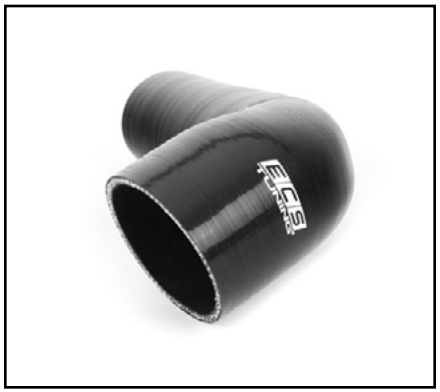
Carbon Fiber Air Box Assembly

Upper Intake Tube **(QTY 1)**
(Polished or Wrinkle Black)

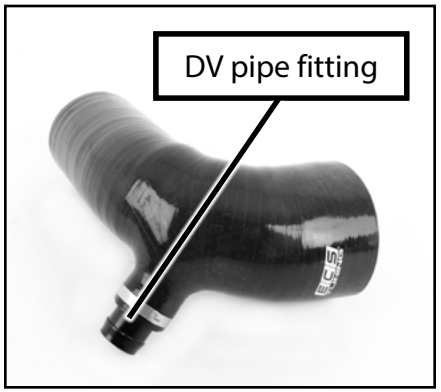
Lower Intake Tube **(QTY 1)**
(Polished or Wrinkle Black)

Air Filter (w/Band Clamp)
(QTY 1)

Accordion Coupler
(QTY 1)



MK5 FSI Silicone Turbo Inlet Hose
(QTY 1)



MK6 FSI Silicone Turbo Inlet Hose
(QTY 1)

Your kit will include **ONE** of these

Turbo Heat Shield
(QTY 1)

KIT CONTENTS: KOHLEFASER LUFT-TECHNIK INTAKE SYSTEMS

50-70mm Band Clamp
(QTY 1)

70-90mm Band Clamps
(QTY 3)

M6x16mm Bolts
(QTY 6)

M6 Nylon Washers
(QTY 5)

Air Box Snorkel Screws
(QTY 2)

M6 Flat Washer
(QTY 1)

Rubber Intake Tube Isolator
(QTY 1)

M4x8mm MAF Sensor Screws
(QTY 2)

M6 Vibration Damper
(QTY 1)

M6 Flanged Nut
(QTY 1)

Air Box Mounting Grommets
(QTY 3)

REQUIRED TOOLS

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

Standard Automotive Tools

- Protecta-Sockets (for lug nuts) ES#2221243
- ⅜" Drive Ratchet ES#2765902
- ⅜" Drive Torque Wrench ES#2221245
- **⅜" Drive Deep and Shallow Sockets** ES#2763772
- **⅜" Drive Extensions** ES#2804822
- Hydraulic Floor Jack ES#240941
- **Torx Drivers and Sockets** ES#11417/8
- ½" Drive Deep and Shallow Sockets ES#2839106
- ½" Drive Ratchet
- ½" Drive Extensions
- ½" Drive Torque Wrench ES#2221244
- ½" Drive Breaker Bar ES#2776653
- Bench Mounted Vise
- Crows Foot Wrenches
- Hook and Pick Tool Set ES#2778980

Required For This Install

- **¼" Drive Ratchet** ES#2823235
- **¼" Drive Deep and Shallow Sockets** ES#2823235
- **¼" 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

Available On Our Website

Specialty Tools

- **½" Drive Deep 24mm 12-Point Socket** ES#2652185
- **VAG Connector Release Tool** ES#2628676
- **Locking Spring Clamp Pliers** ES#2702616

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.
- 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.

PROJECT OVERVIEW

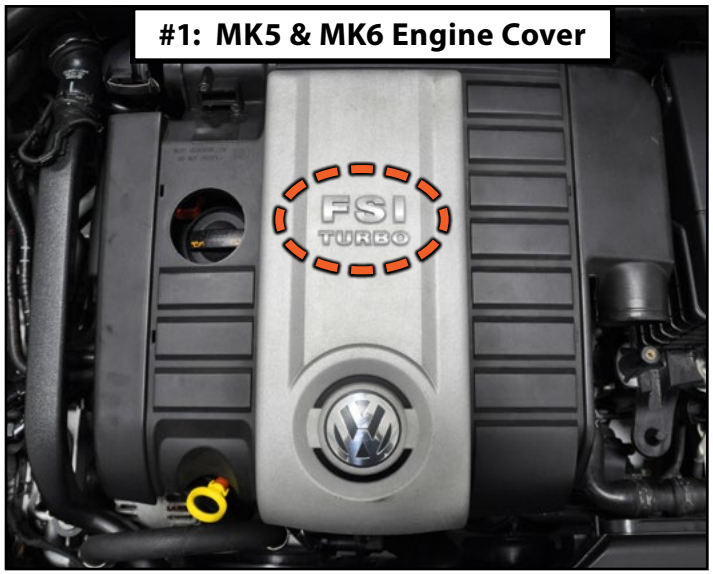
Let's take a moment and look at some of the key differences between the MK5 and the MK6 FSI:

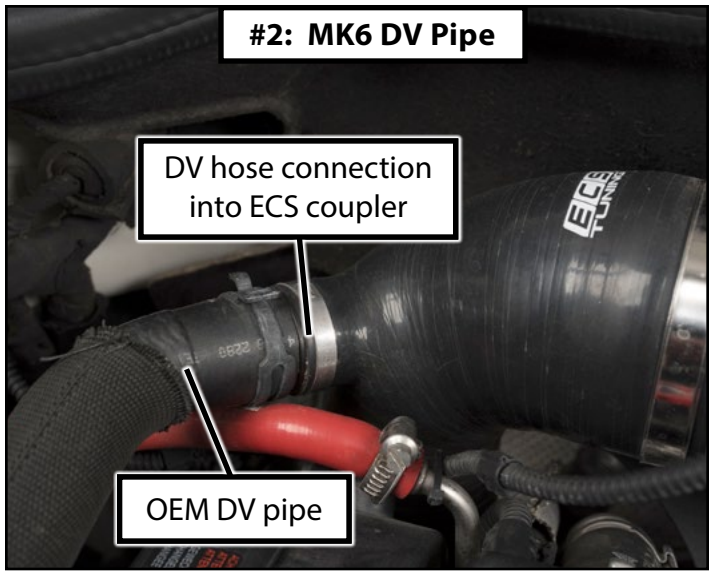
#1: The engine cover for the MK5 FSI looks slightly different than the one found in the MK6 FSI, but the removal procedure is identical for both of them.

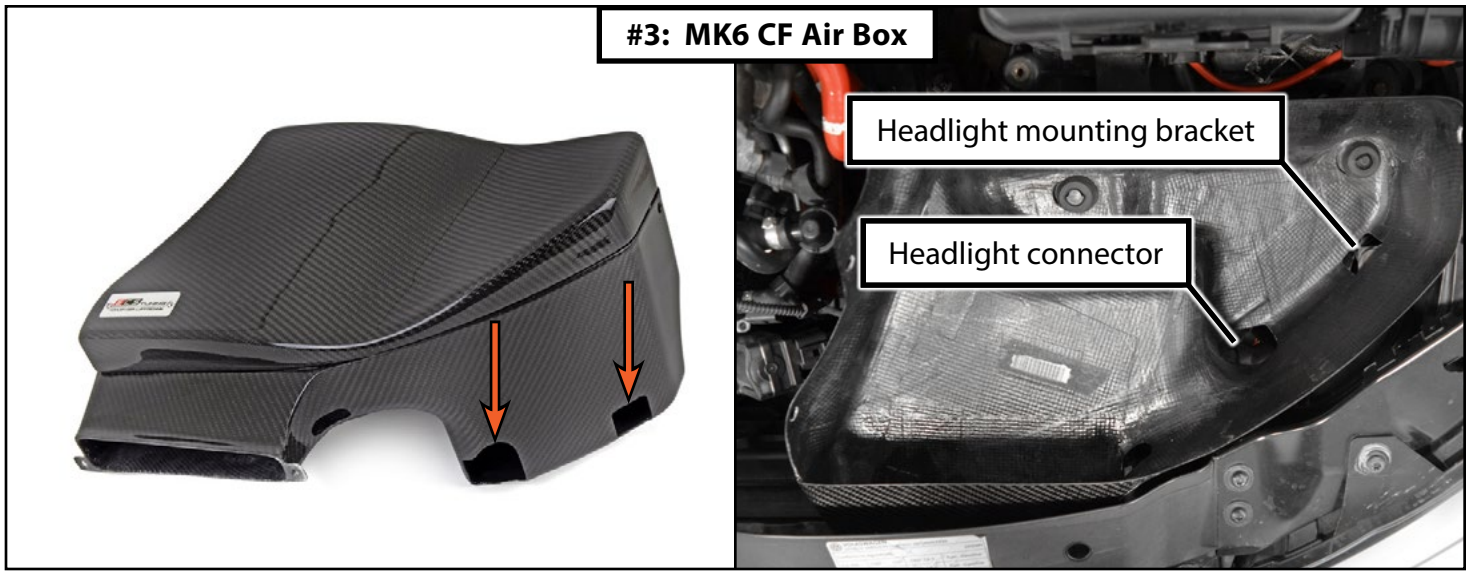
#2: The Diverter Valve (DV) on the MK6 FSI is relocated to the front of the engine compartment and away from the heat generated by the turbo, it is connected to the turbo inlet pipe by the DV hose.

#3: The MK6 FSI CF Air Box has two small cutouts along the lower front edge, these are to provide clearance for an electrical connector and mounting bracket on the MK6R headlight.

Now let's get to it!



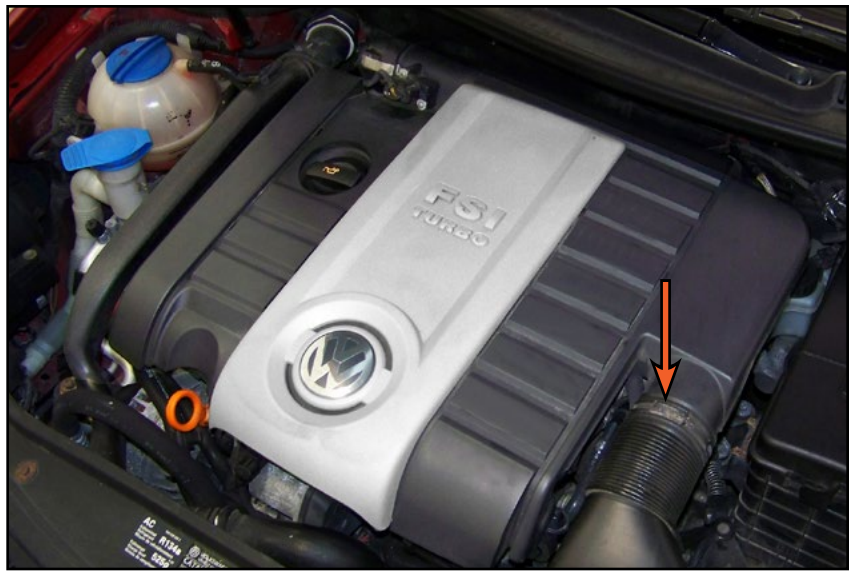




REMOVING THE ORIGINAL INTAKE

Step 1: Locking Spring Clamp Pliers

The first thing we are going to do is release the tension on the spring clamp (arrow) between the flexible intake tube and the air box.



NOTE

Locking spring clamp pliers are best suited for this, however if you do not have any, a large pair of slip-joint or groove-joint (channel lock) pliers will work - but be careful, the clamp can easily slip off.

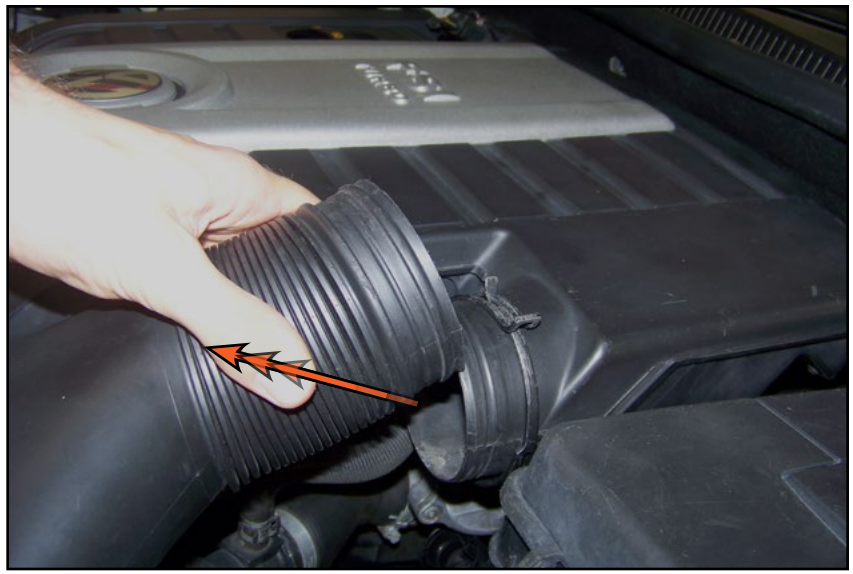
Step 2: Locking Spring Clamp Pliers

Compress the spring clamp to release the tension.

REMOVING THE ORIGINAL INTAKE

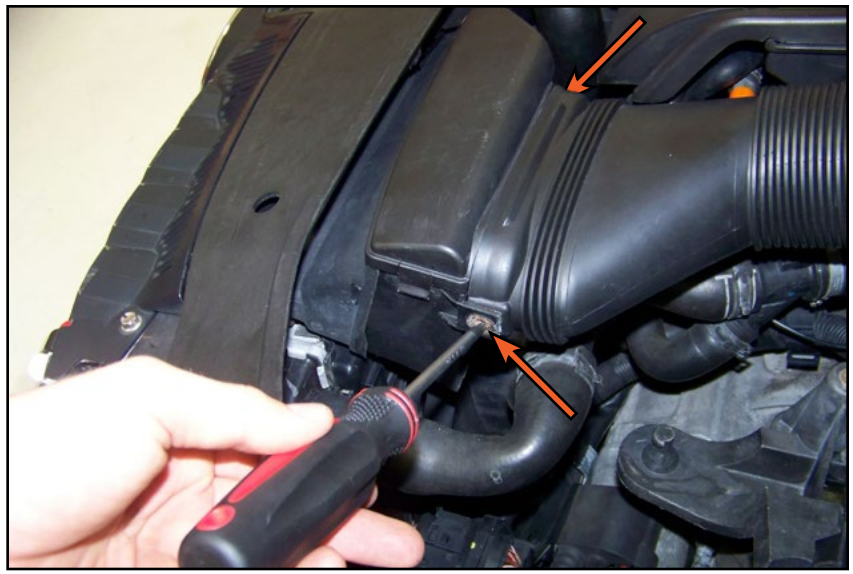
Step 3:

Pull the intake tube off of the air box and release the tension on the clamp, leaving it over the opening.



Step 4: T25 Torx

Remove the two screws that secure the air intake tube to the air duct.



REMOVING THE ORIGINAL INTAKE

Step 5:

Pull the intake tube off of the air duct.

Step 6: VAG Connector Tool

Disconnect the MAF sensor.

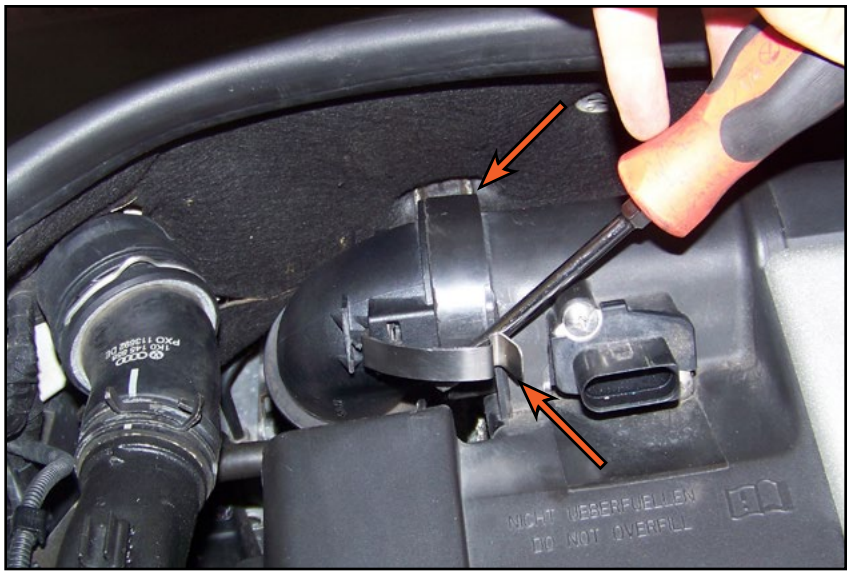
NOTE

MK6 FSI only: Use locking spring clamp pliers to disconnect the DV hose from the intake pipe, then unclip the DV hose from the air box.

REMOVING THE ORIGINAL INTAKE

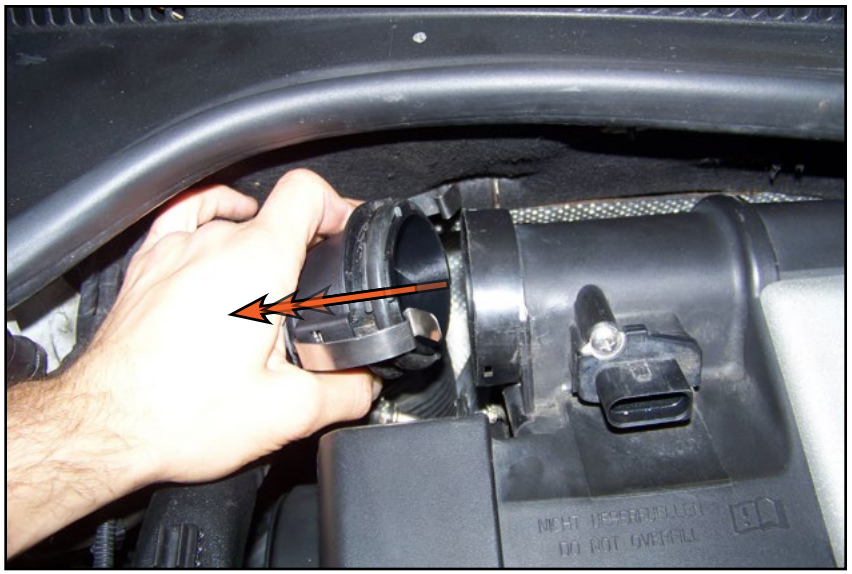
Step 7: Flat Blade Screwdriver

Release the two clips that secure the turbo inlet pipe to the air box.



Step 8:

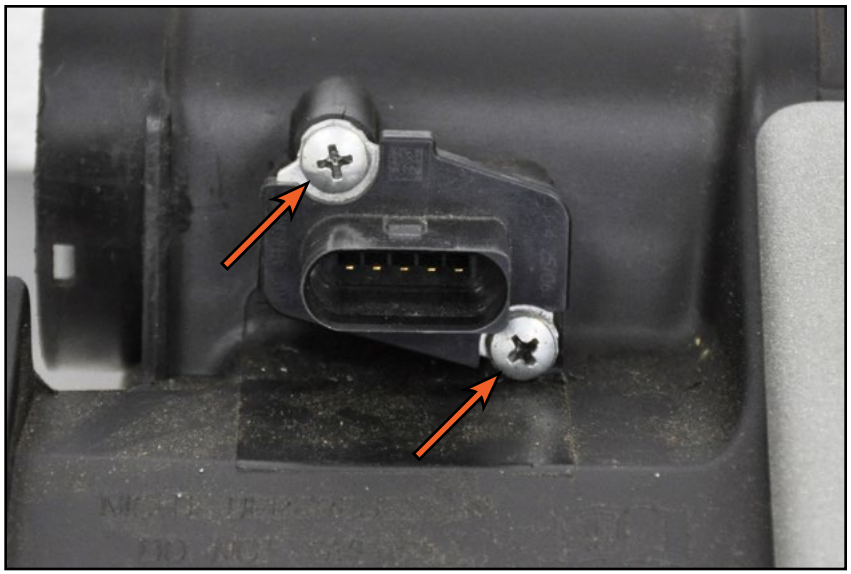
Separate the turbo inlet pipe from the air box.



REMOVING THE ORIGINAL INTAKE

Step 9: Phillips Screwdriver

Remove the two securing screws, then pull the MAF sensor off of the air box.



Step 10:

Remove the air box by first pulling it up ***one corner at a time***, in the order shown below, reaching your hand underneath to get as ***close as possible*** to the grommets. This will prevent you from cracking the air box.

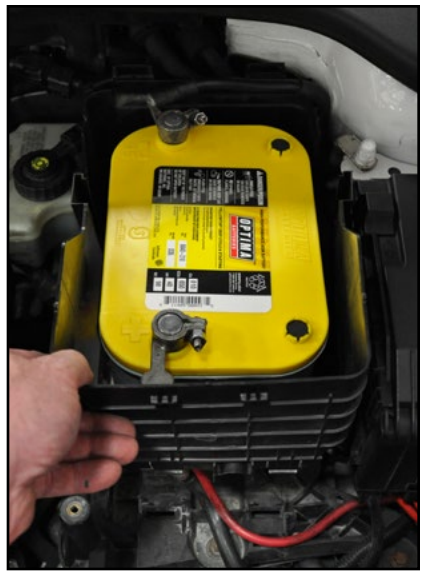
1. LH (Driver's side) Front
2. LH rear
3. RH Rear
4. RH Front

Grommet location and removal order is indicated in the photo. Once all four grommets are released, lift the air box off and remove it.

REMOVING THE ORIGINAL INTAKE

Step 11:

Push the battery cover release lever in the direction of the arrow, then pivot the cover upward and unhook it at the rear. Remove the front half of the battery box by lifting it up and separating it from the rear half.

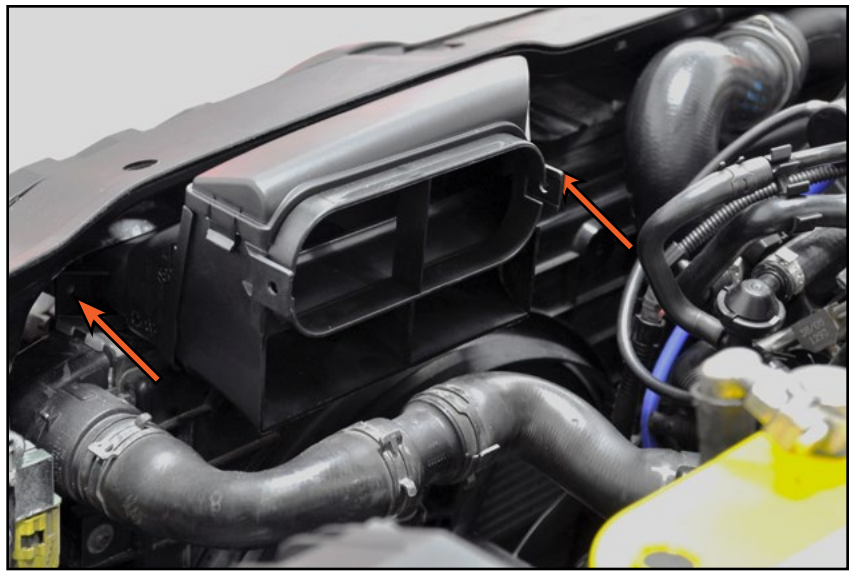


NOTE

The battery cover and box are being removed in order to gain a little extra room while installing and adjusting the new intake system.

Step 12: T25 Torx

Remove the two securing screws, then separate the air duct from the radiator core support.



REMOVING THE ORIGINAL INTAKE

Step 13: 7mm Socket & Ratchet

Loosen the clamp and remove the turbo inlet pipe. The clamp is slightly hidden, but you access it using a small socket and ratchet. Once the clamp is loose, you will be able to pull the turbo inlet pipe up off of the turbo inlet.

CAUTION: Be careful not to drop anything or allow any dirt or debris to fall into the turbo inlet.

Step 14: 24mm 12-Point Socket

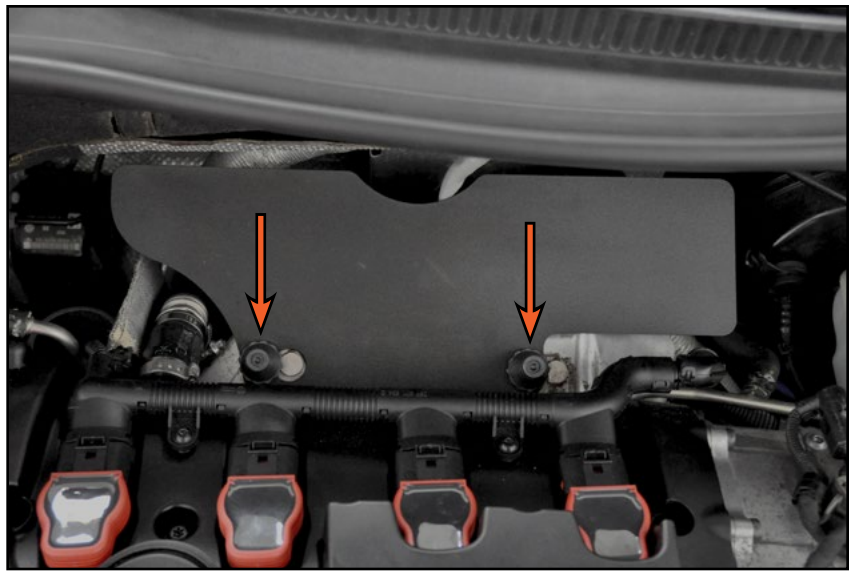
Remove the two rear air box mounting studs (arrows).

Now it's time to install your new intake system!

INSTALLING THE NEW ECS INTAKE SYSTEM

Step 1: 24mm 12-Point Socket

Install the new turbo heat shield in place as shown, securing it with the two rear air box mounting studs. Tighten these by hand until they are snug, but do not tighten them any further.



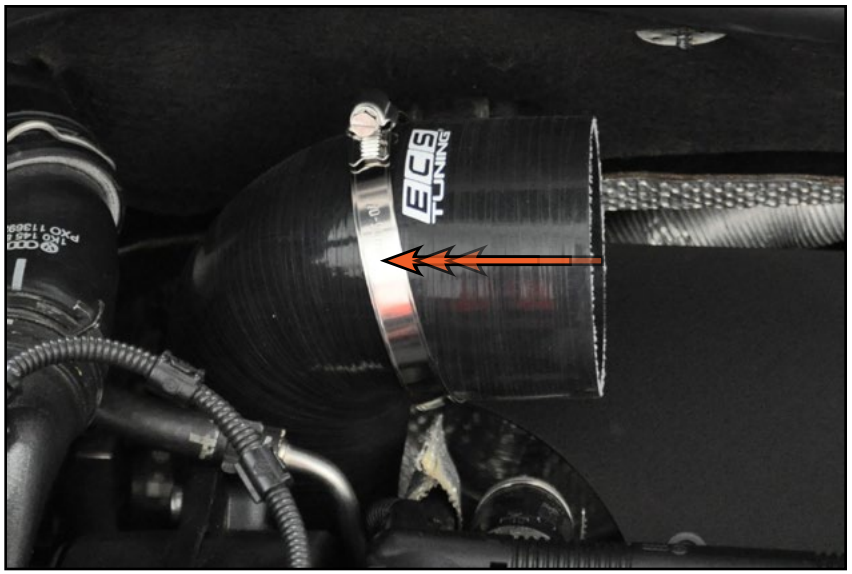
Step 2:

Loosen the 50-70mm hose clamp as necessary, then slide it onto the smaller end of the turbo inlet hose. Be sure to orient the clamp screw so you will be able to access it once the hose is installed, then push the hose onto the turbo inlet.

INSTALLING THE NEW ECS INTAKE SYSTEM

Step 3:

Place one of the 70-90mm clamps over the upper end of the turbo inlet hose, loosening it if necessary.

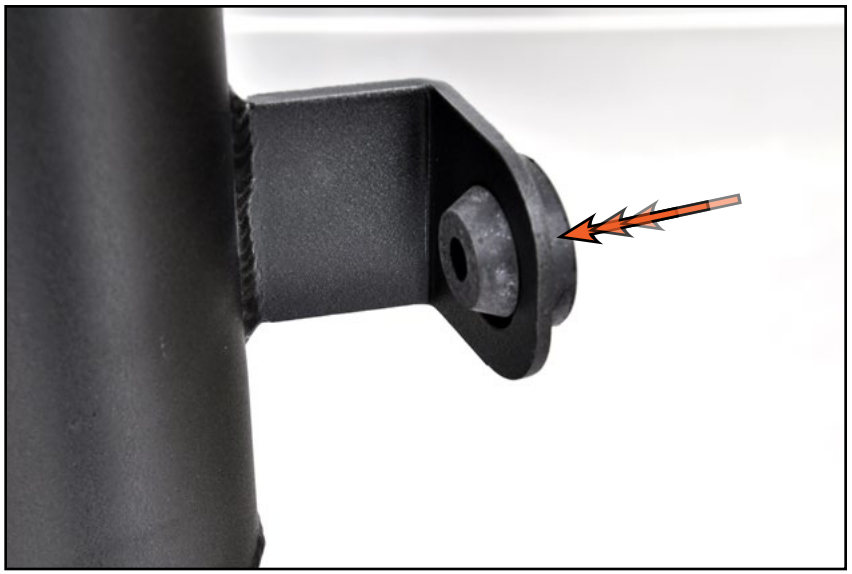


NOTE

The clamp screws may be located on the top or bottom of the hose, depending on the desired appearance of the final installation.

Step 4:

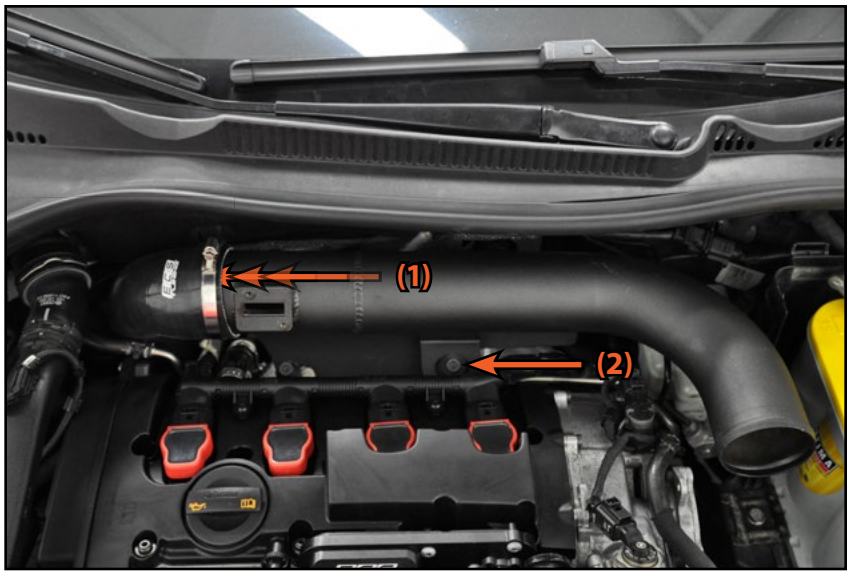
Push one of the grommets into the upper intake tube bracket as shown.



INSTALLING THE NEW ECS INTAKE SYSTEM

Step 5:

Push the upper intake tube into the end of the turbo inlet hose (1), then push the bracket grommet onto the mounting stud (2).



Step 6:

Place a loosened 70-90mm clamp onto each end of the flex coupler.

INSTALLING THE NEW ECS INTAKE SYSTEM

Step 7:

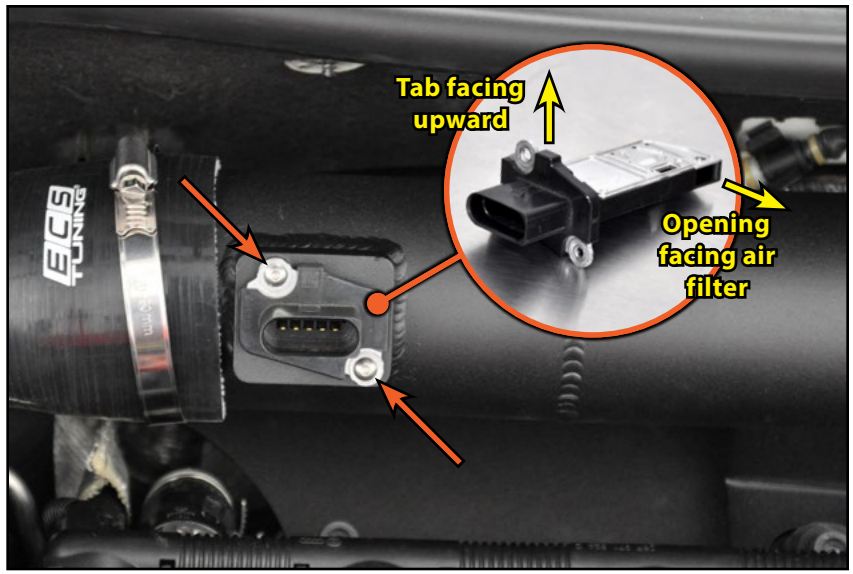
Push the flex coupler onto the end of the upper intake tube.

NOTE

The clamp screws may be located on the top or bottom of the flex coupler, depending on the desired appearance of the final installation.

Step 8: 2.5mm Hex (Allen)

Install the MAF sensor into the new upper intake tube, using the new MAF screws supplied with the kit. Make sure it is oriented as shown in the picture.



INSTALLING THE NEW ECS INTAKE SYSTEM

Step 9:

Plug in the electrical connector for the MAF sensor.

Step 10:

MK6 FSI only: Connect the DV hose to the fitting located on the new silicone turbo inlet hose.

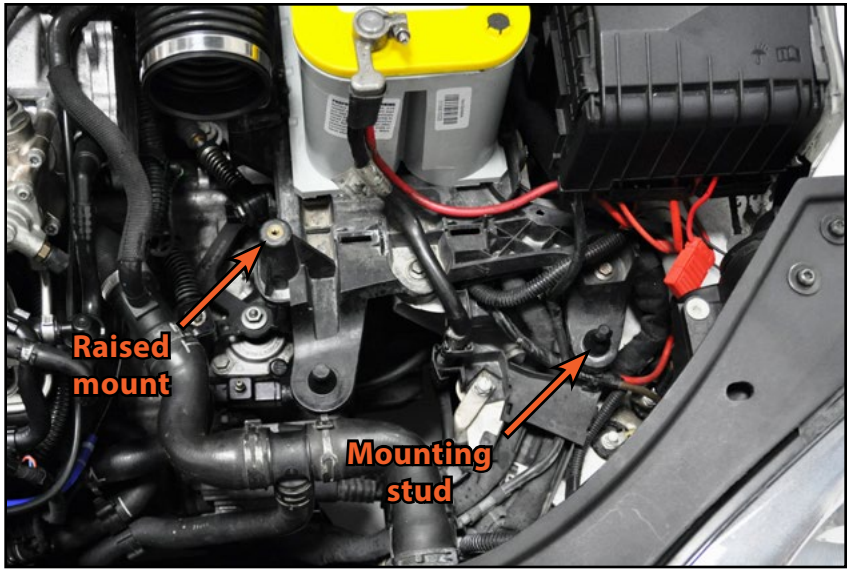
If you are installing a **Luft-Technik** intake system with an open-air filter element, continue on the next page.

If you are installing a **Kohlefaser Luft-Technik** system with a carbon fiber air box, continue on Page 30.

INSTALLING THE NEW ECS INTAKE SYSTEM: LUFT-TECHNIK

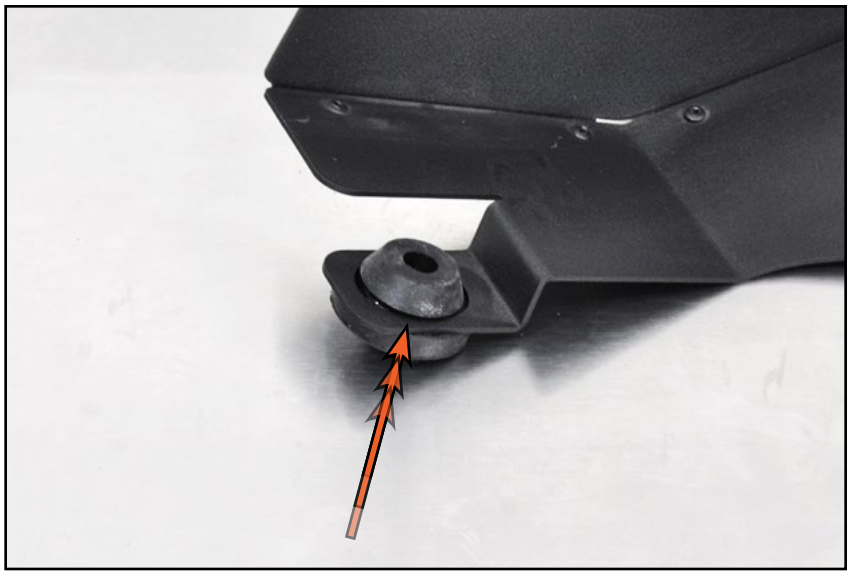
Step 11:

Note the locations of the mounting stud for the heat shield bracket, and the raised mount for the air filter pipe bracket, located on the battery tray.



Step 12:

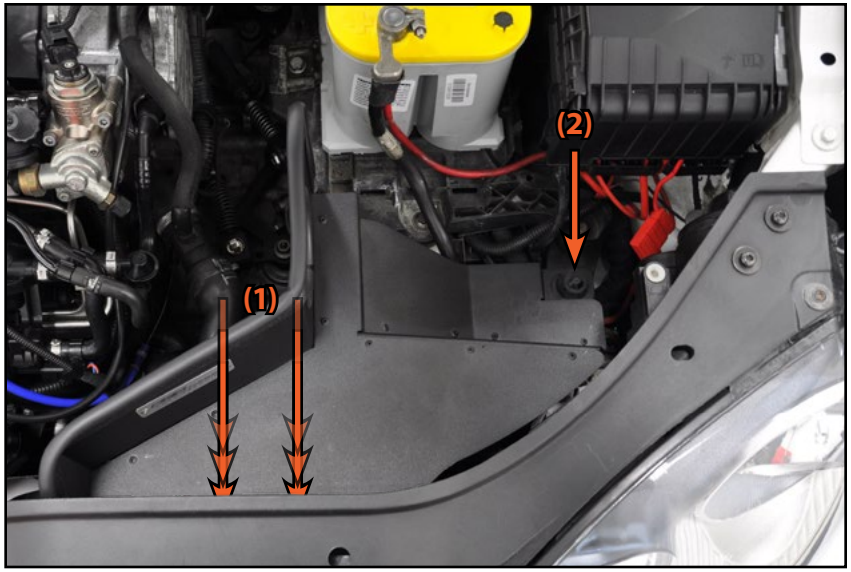
Push a grommet into the lower mounting ear of the heat shield as shown in the picture.



INSTALLING THE NEW ECS INTAKE SYSTEM: LUFT-TECHNIK

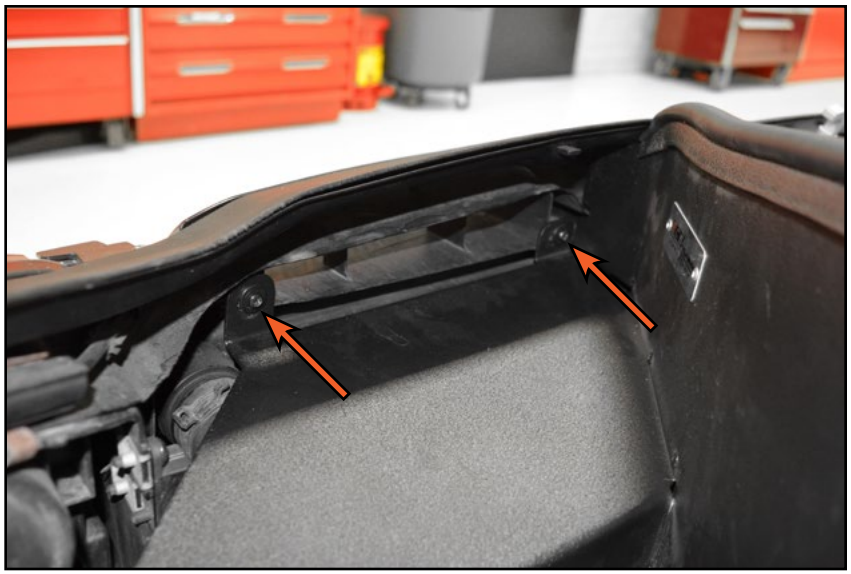
Step 13:

With the mounting eyelets facing forward, place the edge of the heat shield under the lip of the radiator support (1), then push the grommet onto the mounting stud (2).



Step 14: T25 Torx

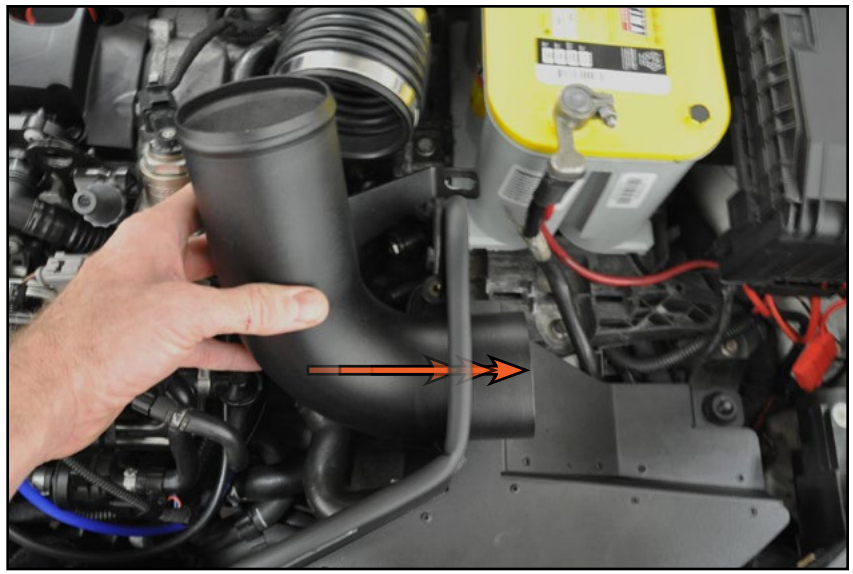
Install the mounting screws through the eyelets and into the air duct mounting holes located on the radiator core support.



INSTALLING THE NEW ECS INTAKE SYSTEM: LUFT-TECHNIK

Step 15:

Place the flat (non-beaded) end of the lower intake tube through the opening in the heat shield.



TECH TIP

Use silicone spray lube on the rubber seal of the heat shield for ease of installation.

Step 16:

Rotate the lower intake tube downward and insert the beaded end into the flex coupler, lifting up slightly on the end of the upper tube as the lower tube is rotated downward. Align the mounting bracket on the lower tube with the raised mount on the battery tray.

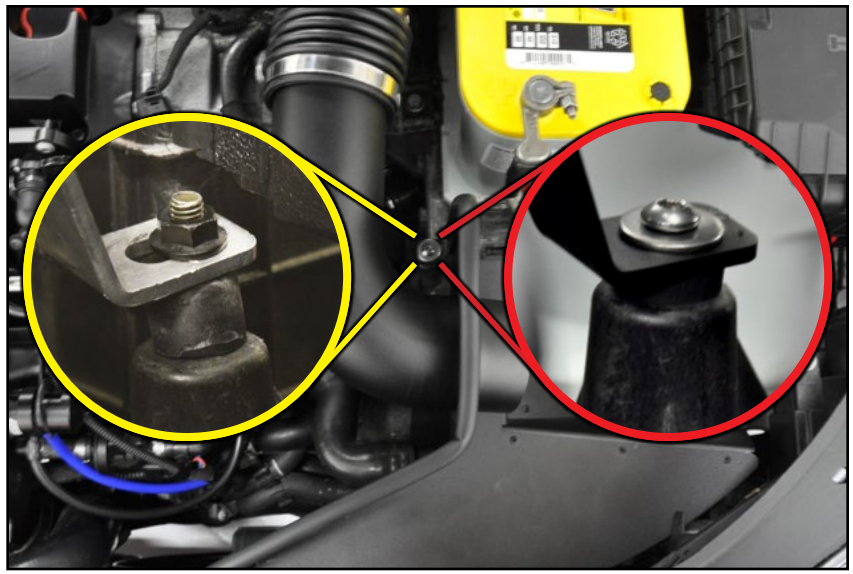
INSTALLING THE NEW ECS INTAKE SYSTEM: LUFT-TECHNIK

Step 17: 4mm Hex (Allen) - OR - 10mm Socket

Due to variations in fitment on the vehicles we've tested this system with, we have included two different options for mounting hardware. Select whichever option provides you with the best fitment.

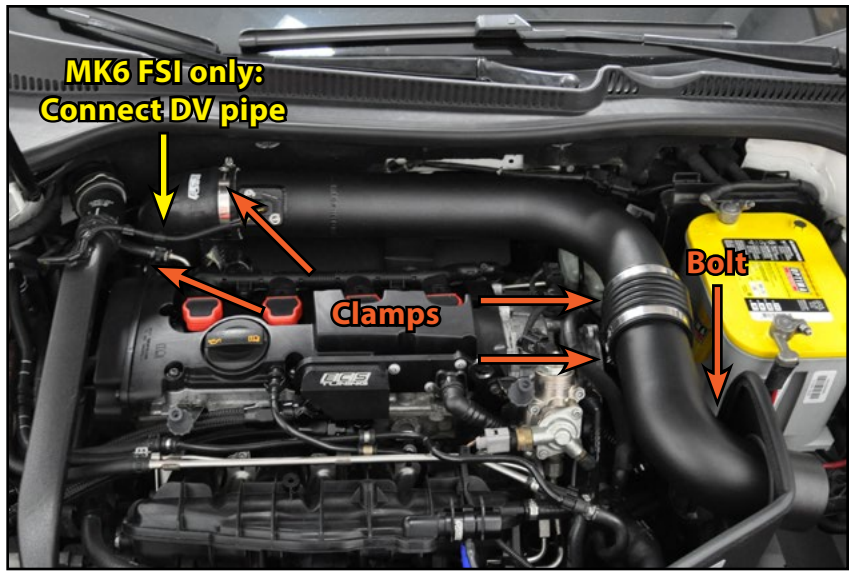
If you select the vibration damper (highlighted in **YELLOW** in the photo), thread the damper into the raised mount, then install the lower tube and install the nut into place.

If you select the rubber isolator (highlighted in **RED** in the photo), place the isolator between the lower intake tube bracket and the raised mount, then place the M6 steel washer onto an M6x16mm bolt, and install the bolt through the bracket and into the mount.



Step 18: 7mm Socket & Ratchet, 4mm Hex (Allen) - OR - 10mm Socket

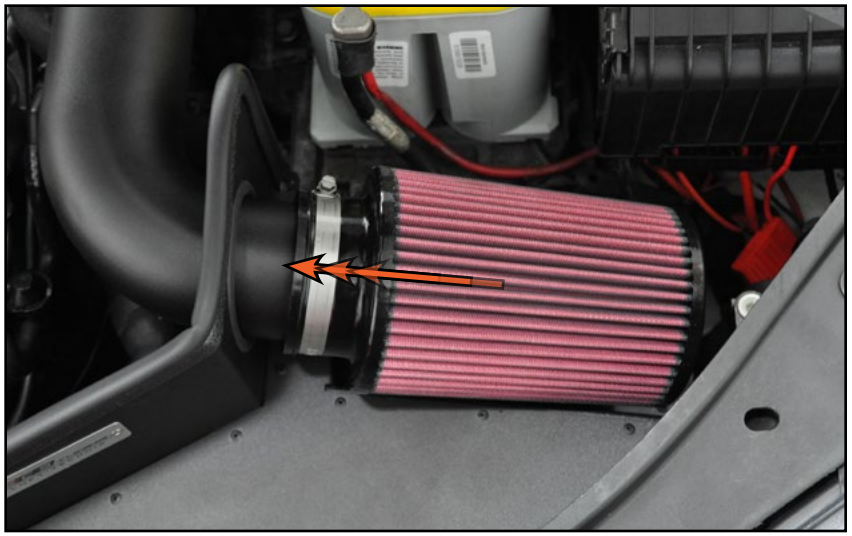
Make sure all hoses are properly positioned and aligned, then tighten all four hose clamps and the lower intake tube mounting hardware.



INSTALLING THE NEW ECS INTAKE SYSTEM: LUFT-TECHNIK

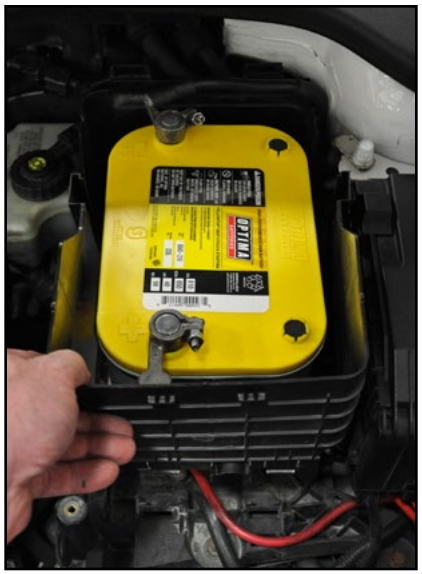
Step 19: 8mm Socket & Ratchet - OR - Flat Blade Screwdriver

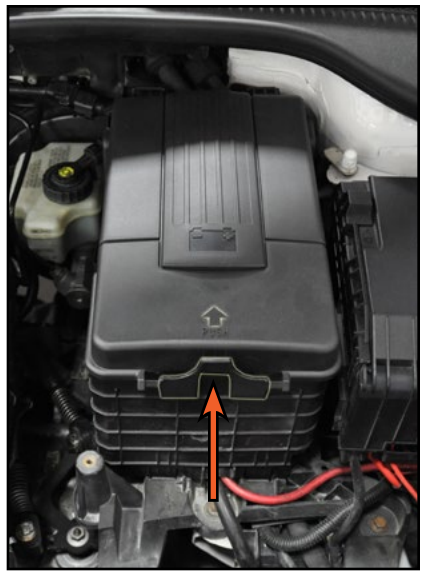
Push the air filter onto the end of the lower intake tube, then tighten the clamp.



Step 20:

Reinstall the battery covers.



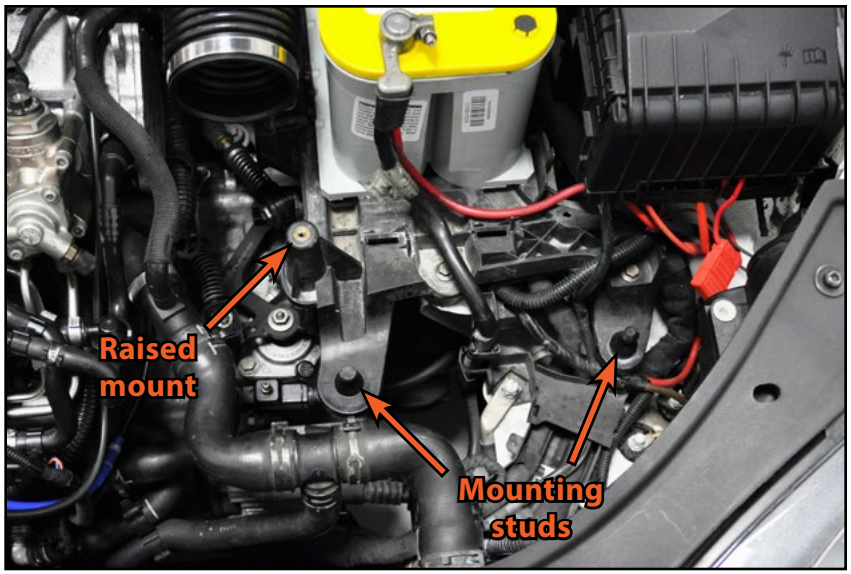


Your Luft-Technik Intake System installation is complete!

INSTALLING THE NEW ECS INTAKE SYSTEM: KOHLEFASER LUFT-TECHNIK

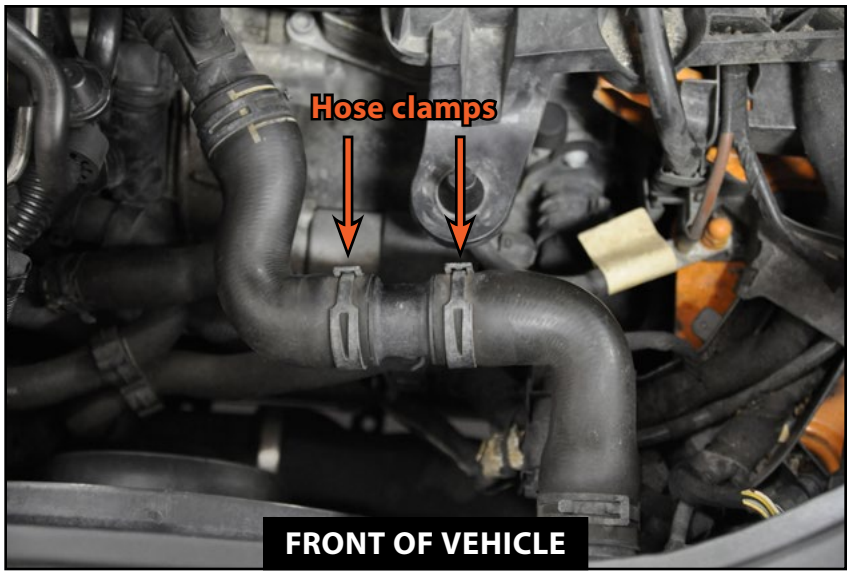
Step 11:

Note the locations of the mounting studs for the carbon fiber air box, and the raised mount for the lower intake tube bracket, located on the battery tray.



Step 12:

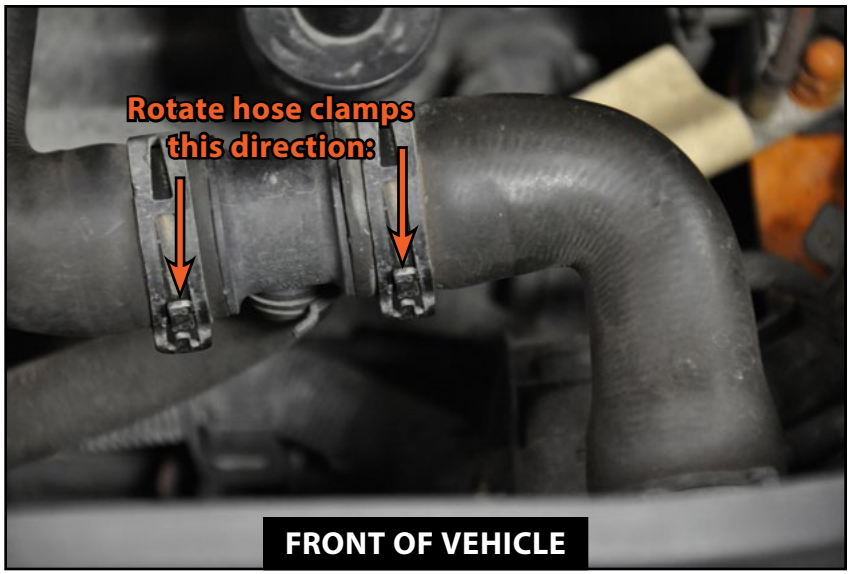
Locate the radiator hose which runs underneath the air box. There is a strong possibility that these hose clamps will rub against the bottom of your carbon fiber air box assembly, and they can also prevent the air box from fully seating into place. Please proceed to the next step to see how to correct this.



INSTALLING THE NEW ECS INTAKE SYSTEM: KOHLEFASER LUFT-TECHNIK

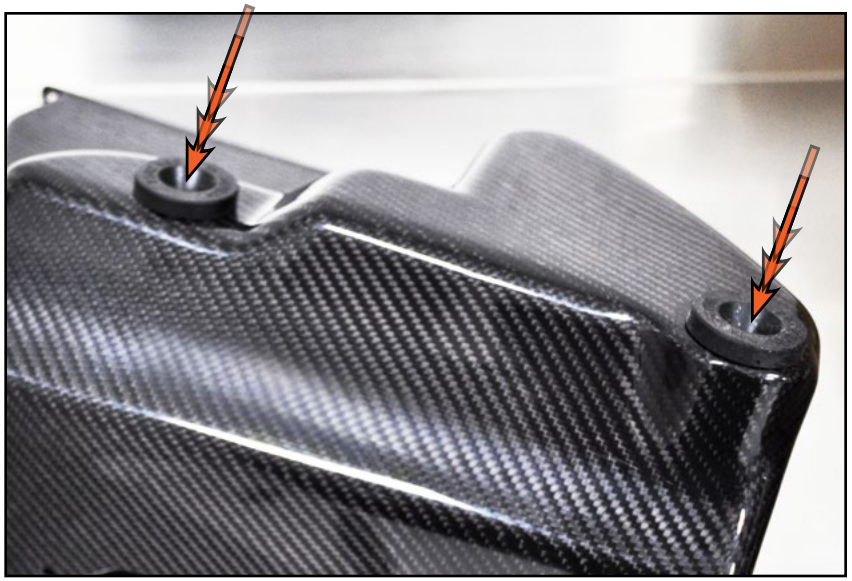
Step 13: Locking Hose Clamp Pliers

Rotate the hose clamps until they are oriented as shown in the photo, they must be pointing away from the battery and should be rotated downward as much as possible in order to clear the carbon fiber air box.



Step 14:

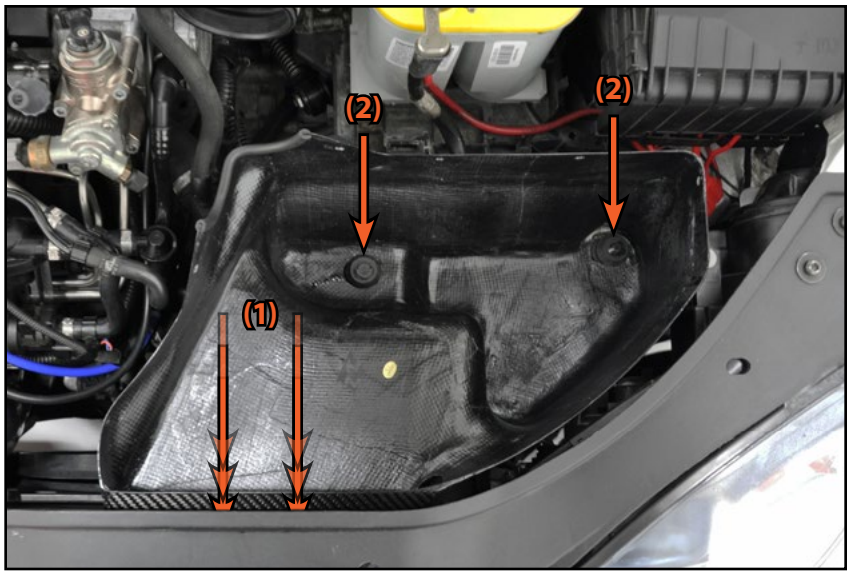
Install a grommet into each opening on the bottom of the carbon fiber air box.



INSTALLING THE NEW ECS INTAKE SYSTEM: KOHLEFASER LUFT-TECHNIK

Step 15:

Place the intake duct of the air box under the lip of the radiator core support (1), then line up the grommets with the mounting studs and press them into place (2).



Step 16: T25 Torx

Install and hand tighten the mounting screws through the eyelets in the air box, and into the air intake duct mounting holes located on the radiator core support. Be careful not to over tighten these screws or you may strip the threads in the core support.

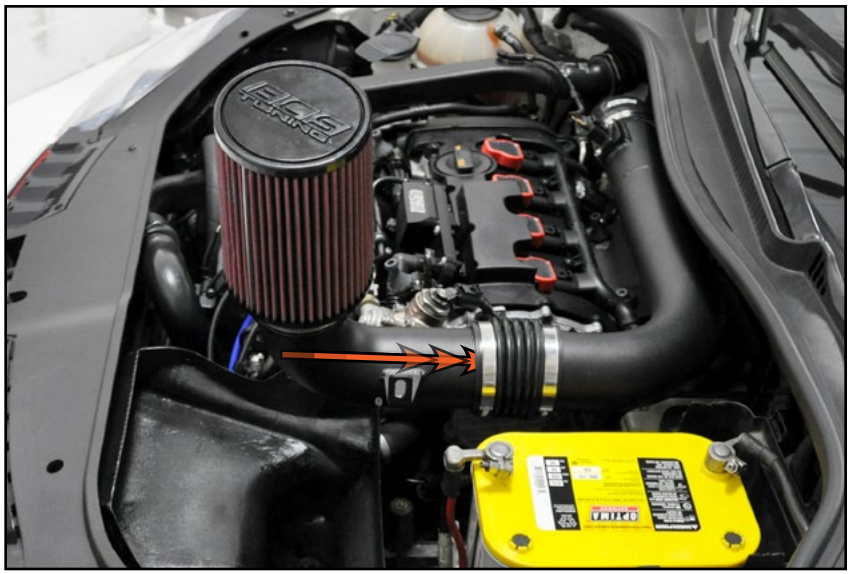
INSTALLING THE NEW ECS INTAKE SYSTEM: KOHLEFASER LUFT-TECHNIK

Step 17:

Push the air filter onto the flat (non-beaded) end of the lower intake tube.

Step 18:

Insert the lower intake tube assembly into the flex coupler with the air filter element facing upwards, so that the bracket clears the edge of the air box base.



INSTALLING THE NEW ECS INTAKE SYSTEM: KOHLEFASER LUFT-TECHNIK

Step 19:

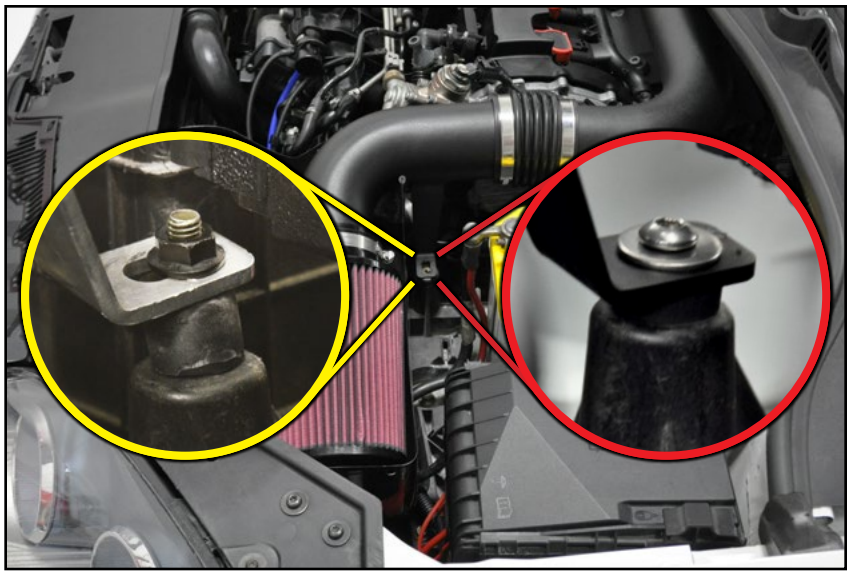
Turn the lower intake tube assembly downward so that the air filter element fits into the air box and the mounting bracket is aligned with the raised mount on the battery tray.

Step 20: 4mm Hex (Allen) - OR - 10mm Socket

Due to variations in fitment on the vehicles we've tested this system with, we have included two different options for mounting hardware. Select whichever option provides you with the best fitment.

If you select the vibration damper (highlighted in **YELLOW** in the photo), thread the damper into the raised mount, then install the lower tube and install the nut into place.

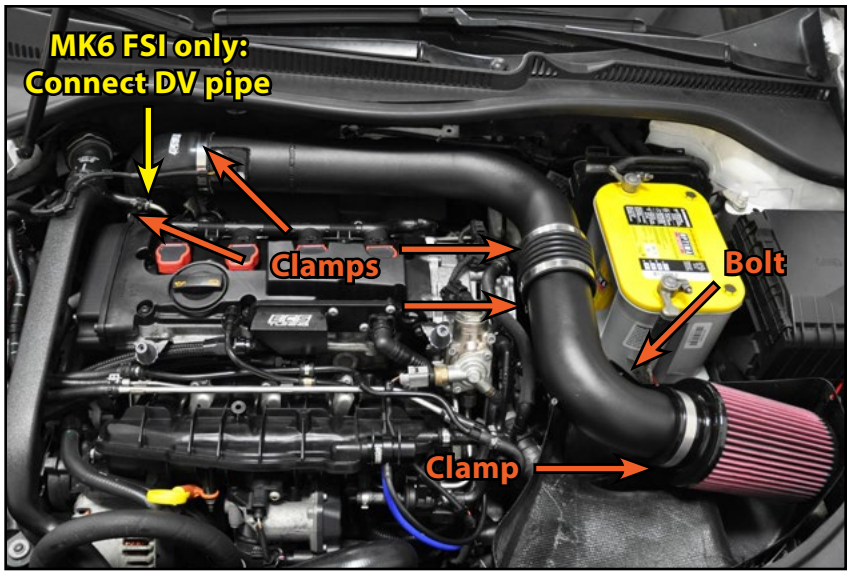
If you select the rubber isolator (highlighted in **RED** in the photo), place the isolator between the lower intake tube bracket and the raised mount, then place the M6 steel washer onto an M6x16mm bolt, and install the bolt through the bracket and into the mount.



INSTALLING THE NEW ECS INTAKE SYSTEM: KOHLEFASER LUFT-TECHNIK

Step 21: 7mm Socket & Ratchet, 4mm Hex (Allen) - OR - 10mm Socket

Make sure all hoses are properly positioned and aligned, then tighten all four hose clamps and the lower intake tube mounting hardware.



Step 22: 4mm Hex (Allen)

Slide the air box lid into place, then install the supplied M6x16 air box lid bolts and M6 nylon washers. Thread in all five bolts by hand at first, then once they are all in place tighten them only until they are snug.

Reinstall the battery covers.

CARBON FIBER CAUTION: Be careful not to over tighten the bolts, over tightening can crack the carbon fiber.

Your Kohlefaser Luft-Technik Intake System installation is complete!

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.

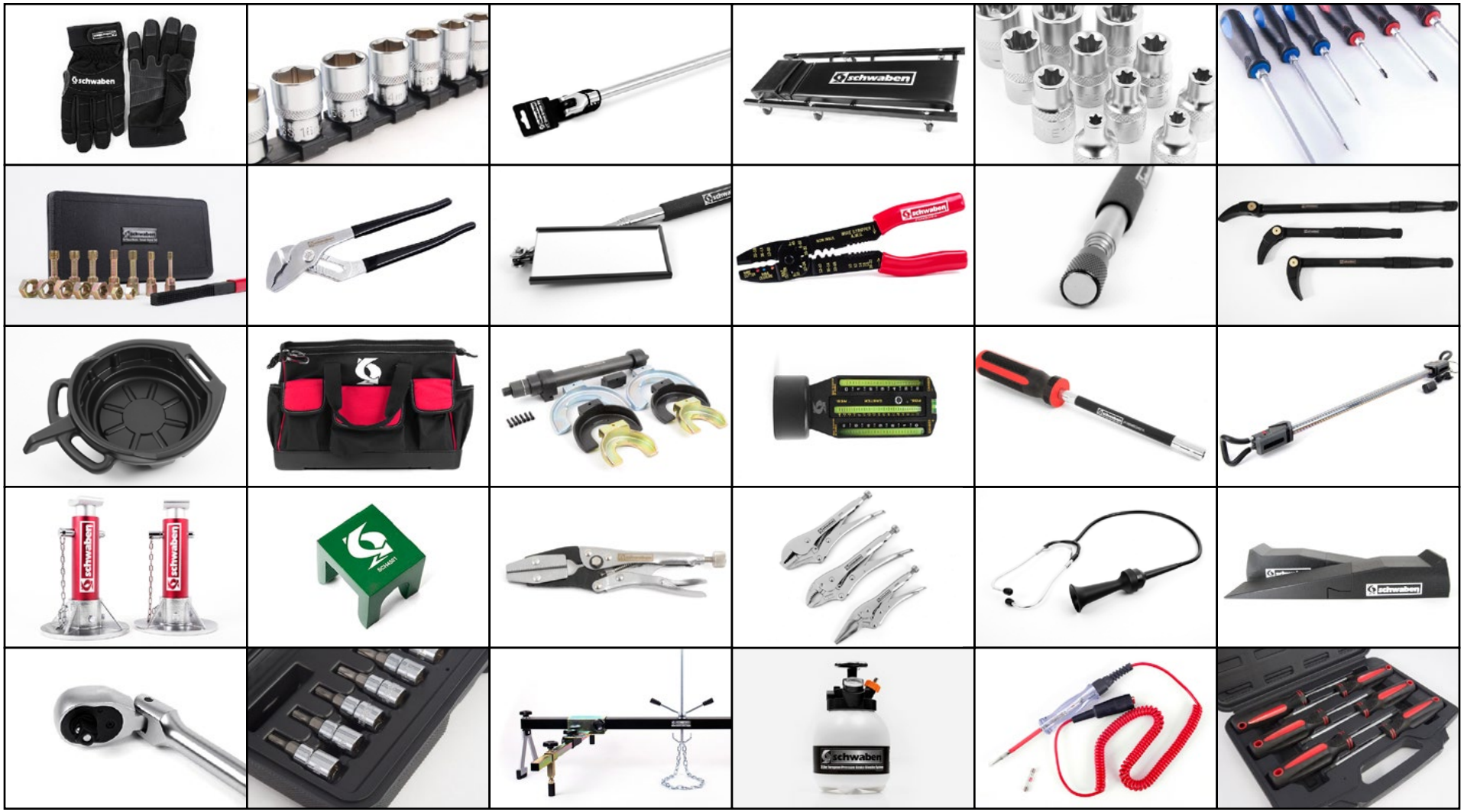
To retain UV resistance and protect the finish, we recommend regular waxing with a high quality caranuba wax.

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

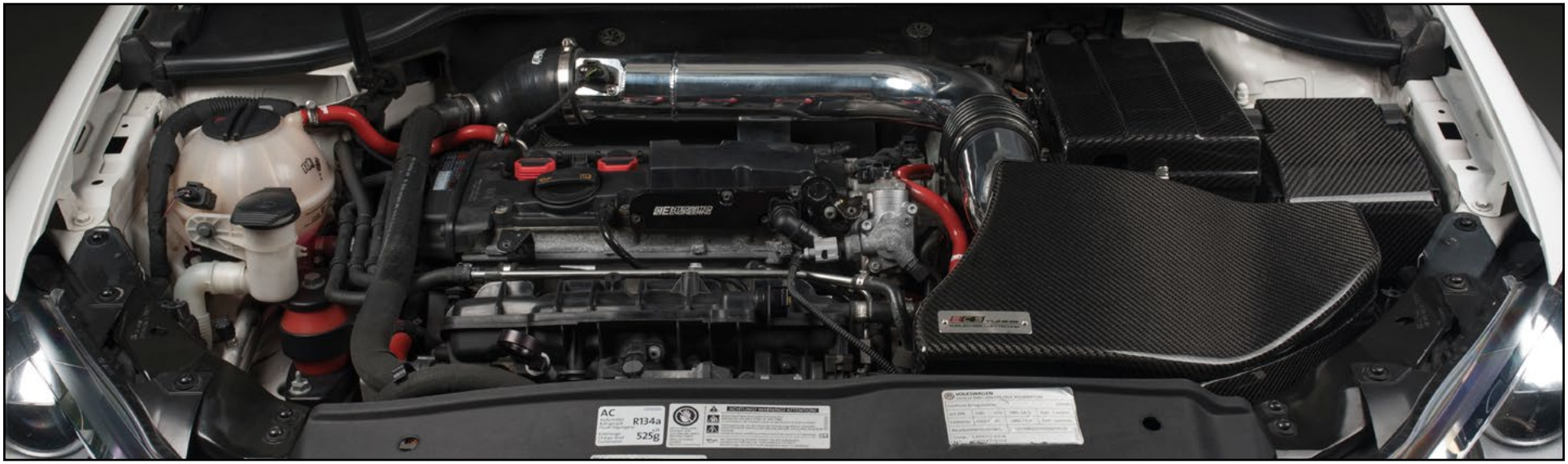
Carbon Fiber Cleaning and Care Kit, available at ecstuning.com.

ES#2914954

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 MK5/MK6 FSI ECS 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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