Volkswagen MK4 Golf/Jetta 1.8T/2.0/VR6/R32 Luft-Technik Intake System Installation

INTRODUCTION

ECS Tuning Volkswagen MK4 Golf/Jetta Luft-Technik Cold Air Intake Systems

The ECS Tuning MK4 Golf/Jetta Luft-Technik Cold Air Intake Systems offer the following features:

- High flow, large diameter aluminum pipes with show quality finishes.
- ECS Tuning silicone coupling hoses.
- High flow air filter.
- Breather filter (where applicable) and all mounting hardware.
- Kits tailored specifically to your application.
- Available in Wrinkle Black, Polished, and Red finishes.

ECS Difficulty Gauge

1 - Easy Pro - 4

2 - Moderate Advanced - 3

Installing an ECS Tuning Luft-Technik Air Intake System on your MK4 Volkswagen Golf/Jetta is an afternoon project that can be easily completed with basic hand tools. The rewards of this project will be immediately available with performance gains and show quality looks. Before you begin, read and familiarize yourself with these instructions and make sure you have all the required tools on hand. Thank you for purchasing our ECS Tuning Luft-Technik Air Intake System, we appreciate your business!

Golf R32 Only Kits

Wrinkle Black..... ES#2972699
Polished ..... ES#2972700
Red..... ES#2972702

Golf/Jetta VR6 Non-R Kits

Wrinkle Black..... ES#2804339
Polished ..... ES#2804344
Red..... ES#2804342

Golf/Jetta 1.8T/2.0L Kits

Wrinkle Black..... ES#2804333
Polished ..... ES#2804335
Red..... ES#2804334

Golf/Jetta 1.8T Kits w/Turbo Inlet Hose

Wrinkle Black..... ES#2855160
Polished ..... ES#2855158
Red..... ES#2855159

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KIT CONTENTS

Upper Intake Pipe

Lower Intake Pipe

Straight Coupler

Hump Coupler

High Flow Air Filter

Secondary Air Filter & Hardware

Lower Pipe Mounting Hardware

Upper Pipe Mounting Hardware

Hose Clamps

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
- 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
- Air Nozzle/Blow Gun
- Bench Mounted Vise
- Crows Foot Wrenches
- Hook and Pick Tool Set ..... ES#2778980

Required For This Install

- 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

Available On Our Website

Specialty Tools

- VAG Connector Tool ..... ES#2628676
- Locking Hose 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.
- 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.

PREPARING FOR INSTALLATION

Step 1:

Identify the type of intake system currently installed on your car. You will have either:

A: The original air box and ductwork

-OR-

B: An aftermarket system


Original MK4 Air box

Step 2:

If you currently have an aftermarket filter or system which you are upgrading to the new ECS Tuning Luft-Technik Intake System, remove your old system then proceed to Page 16 for your new intake installation.

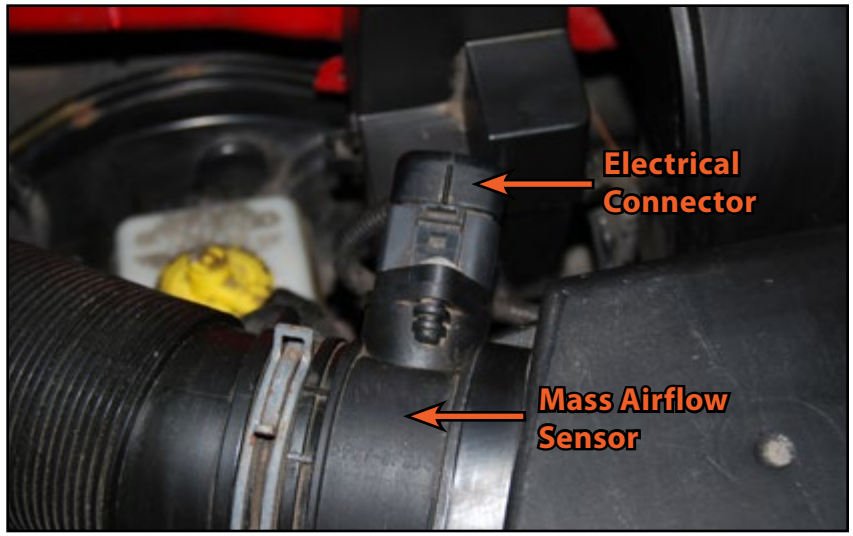
If you have the original air box or any of the original ductwork remaining, proceed to page 9 and follow the procedures for removal.


Aftermarket System

REMOVING THE ORIGINAL AIR BOX

Step 1:

Locate the mass air flow sensor (between the original air box lid and flexible intake tube) and note the orientation of the electrical connector.



Step 2: VAG Connector Tool

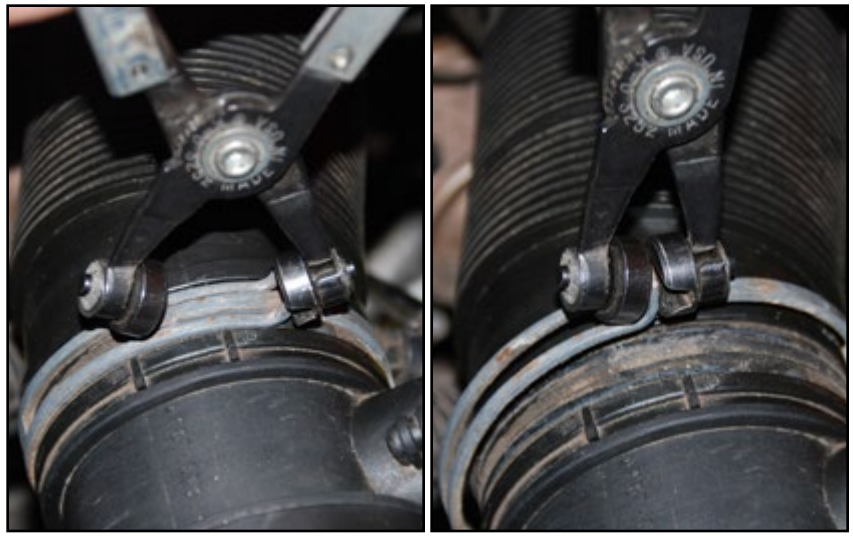
Release the electrical connector locking tab and pull the connector off the mass airflow sensor.

For tips on using the VAG Connector Tool, please refer to page 24 for detailed photos and procedures.

REMOVING THE ORIGINAL AIR BOX

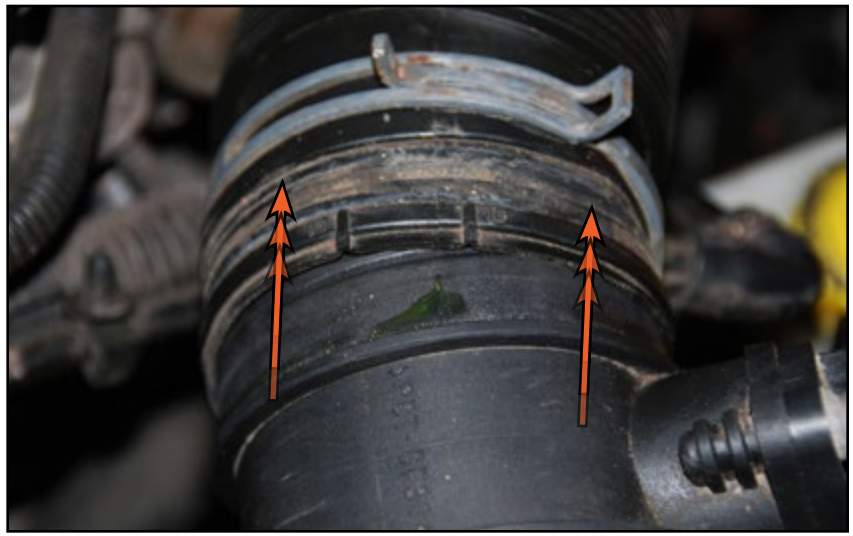
Step 3: Locking Hose Clamp Pliers

Expand the spring clamp holding the flexible intake tube to the mass airflow sensor.



Step 4: Locking Hose Clamp Pliers

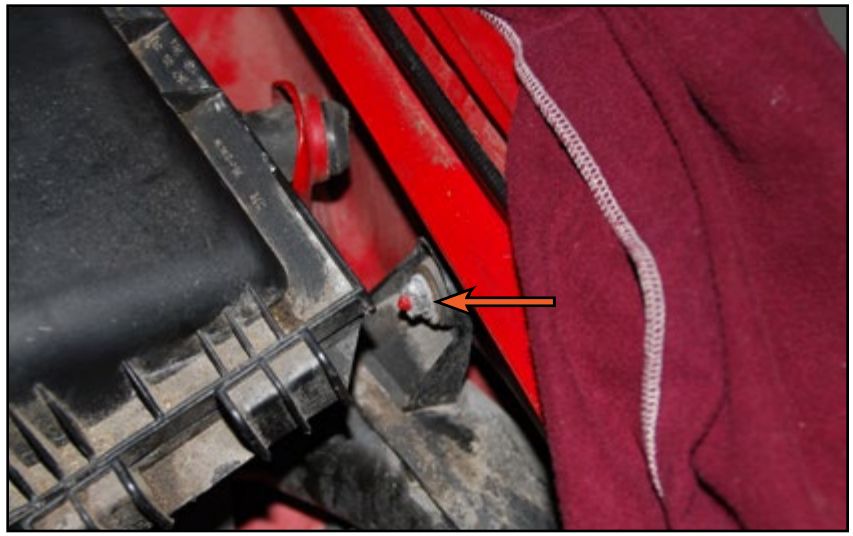
Pull the flexible tube off the end of the mass airflow sensor and carefully release the tension on the spring clamp.



REMOVING THE ORIGINAL AIR BOX

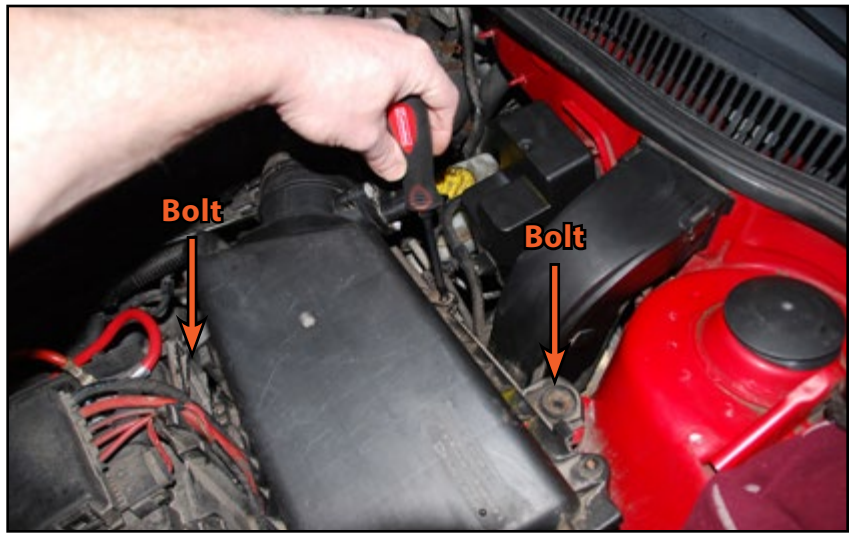
Step 5: 10mm Wrench

Remove the nut (arrow) holding the intake air duct to the inner fender.



Step 6: Phillips Screwdriver, 3/8" Ratchet, 10mm Socket, Extension

Remove the screws on the air box lid, hinge it upward, unhook it from the other side and remove it (see note below). Next, remove the two hold down bolts on the lower air box and remove it by lifting it up and out of the car. Now remove the intake air duct which will be completely visible after removing the lower air box.



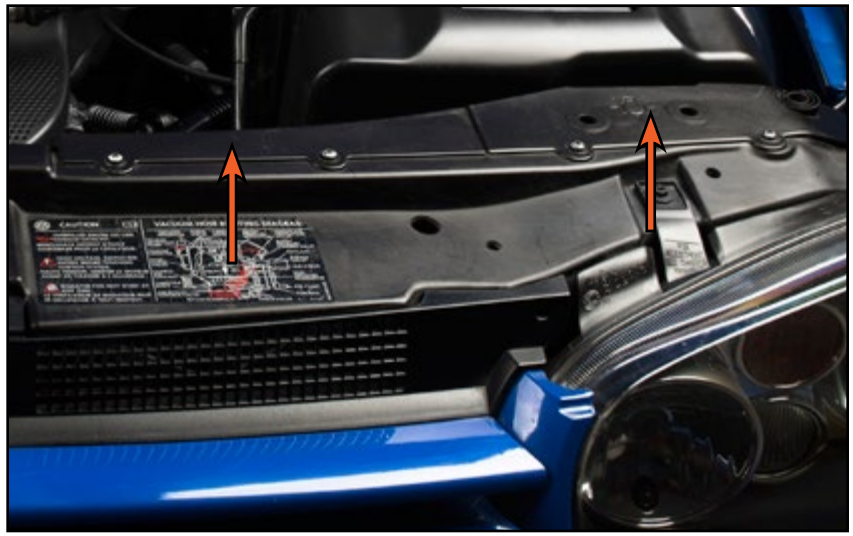
NOTE

Depending on application, there may be a tube for the secondary air injection system connected to the airbox lid. If equipped, disconnect this tube.

REMOVING THE ORIGINAL AIR BOX

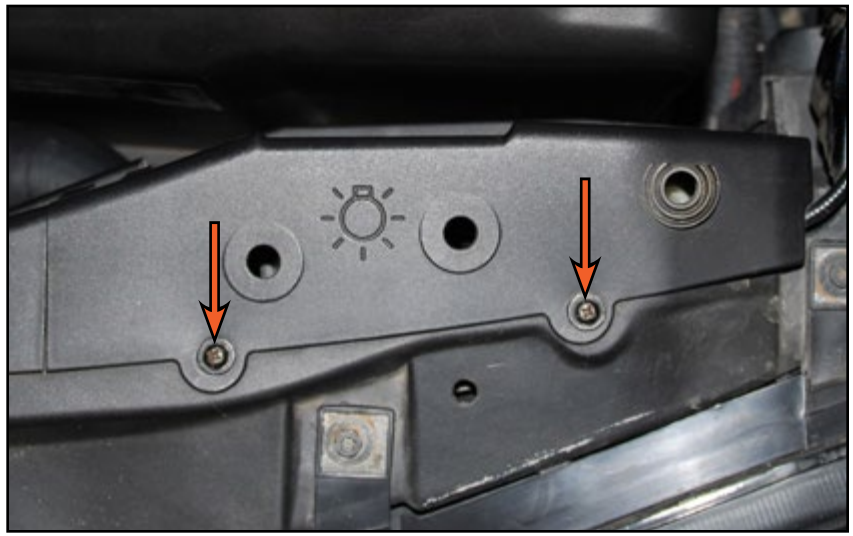
Step 7:

At this point, the original air box is removed, but there is still some original ductwork that is behind the LH headlight. The lower portion of this ductwork will need to be removed. To begin, locate the two upper air duct panels above the LF headlight (arrows).



Step 8: Phillips Screwdriver

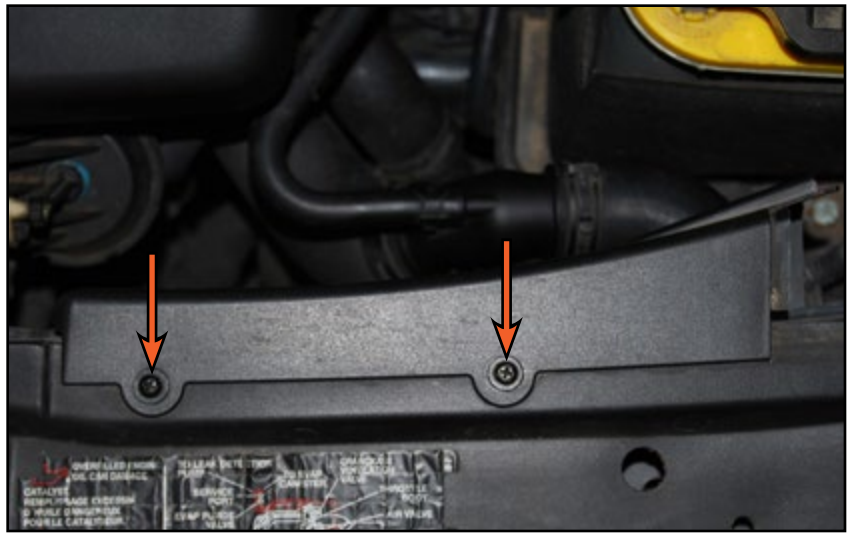
Remove the two screws on the panel just above the LH headlight and slide it straight up to remove it.



REMOVING THE ORIGINAL AIR BOX

Step 9: Phillips Screwdriver

Remove the two screws on the inner panel, tilt it slightly backwards then pull it up to remove it.



Step 10:

You can now see the lower duct, highlighted here, which wraps around and underneath the LH headlight.

REMOVING THE ORIGINAL AIR BOX

Step 11: 3/8" Ratchet, 10mm & 13mm Sockets

The battery must be removed in order to remove the lower duct. Remove the battery cover, then remove the battery hold down. Disconnect both battery terminals, slide the fusible link panel back, remove the panel support, and lift the battery out.

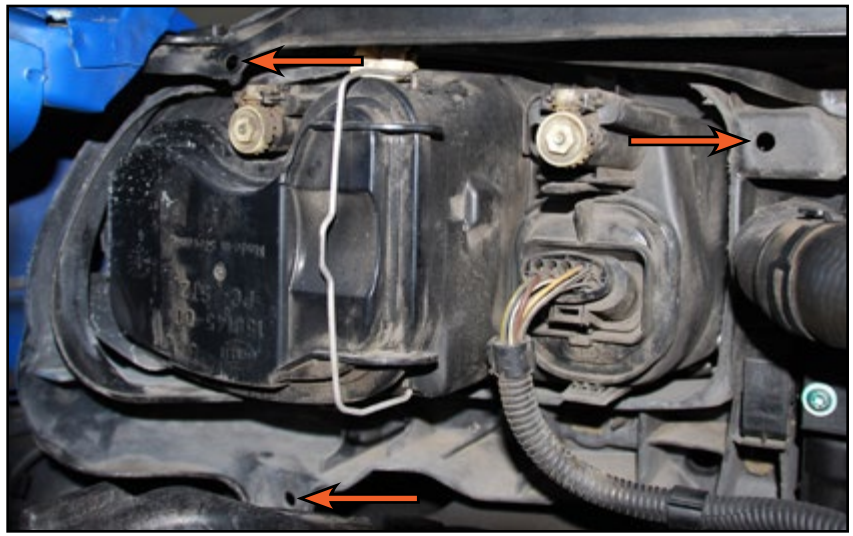
To reduce the risk of fire, explosion, or personal injury, **ALWAYS** disconnect the battery by removing the negative battery terminal.

NOTE

Due to easier access, we will leave the battery out to install the new intake system, then reinstall it afterwards.

Step 12: Small Pick

The lower duct is held on by three expanding rivets. They are difficult to see with the duct installed. Here you can see where the rivets are located with the duct removed (arrows). Remove the three expanding rivets by pushing the center pins out (towards the headlight) with a small pick or similar tool, then pull the rivets out and remove the duct.



REMOVING THE ORIGINAL AIR BOX

Step 13:

Lastly, on the LH inner fender, there is a connector which interferes with the path of the lower intake tube. Lift the connector out of its bracket and position it off to the side.

Step 14: 1/4" Ratchet, T25 Torx Socket - Or - T25 Torx Driver

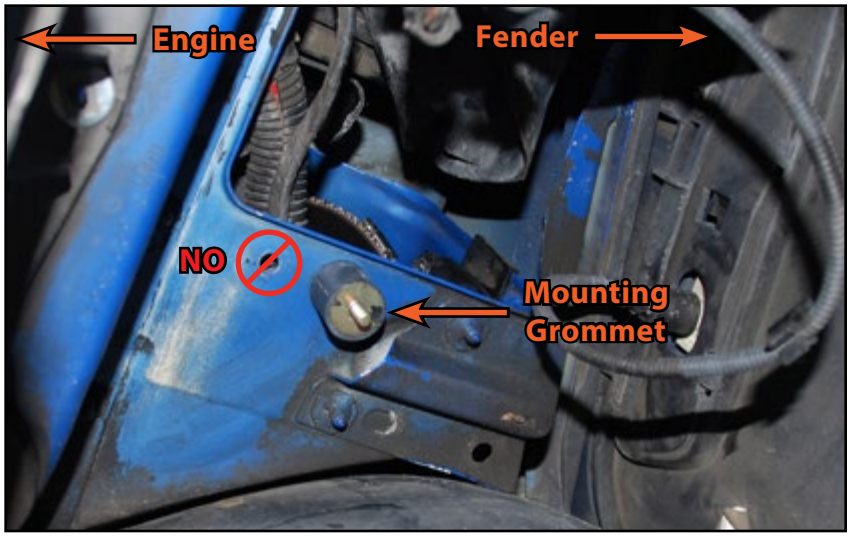
Now remove the bracket from the inner fender. The easiest way to do this is to remove the three lower screws on the front of the LH fender liner, pull it back to access the back of the bracket, squeeze the bracket retainers together, and push it out of the inner fender.

You are now ready to install your new Luft-Technik Intake System!

INSTALLING THE LUFT-TECHNIK SYSTEM

Step 1: 3/8" Ratchet, 10mm Socket

Working underneath the LF of the car, just behind the bumper cover, you will see two holes in the fender support brace. Install the lower pipe mounting grommet into the outer hole (the one closest to the fender as shown in the photo). Install a flat washer and nut on top and tighten them until they are snug.



If you have removed an aftermarket system, please review pages 12 through 15 to make sure all original ductwork and brackets have been removed before proceeding.

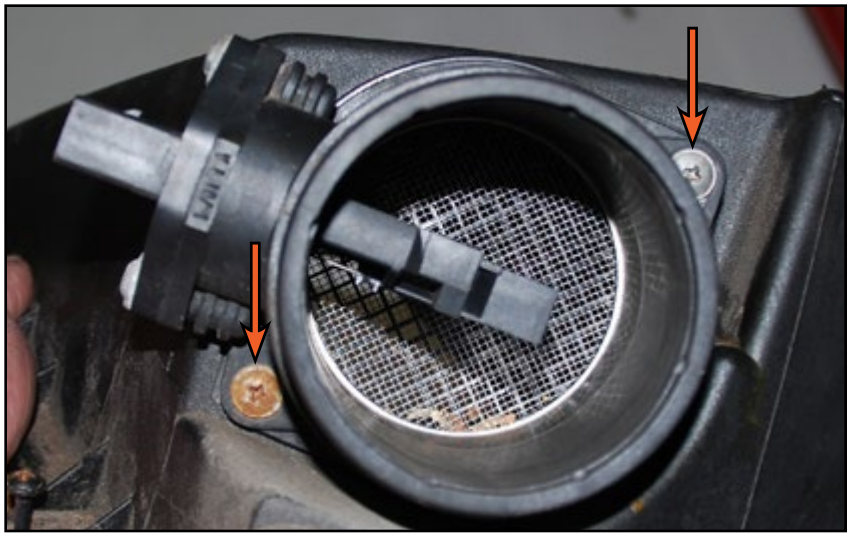
Step 2:

Carefully slide the lower pipe up through the opening in the fender support, and loosely install a flat washer and nut.

INSTALLING THE LUFT-TECHNIK SYSTEM

Step 3: Phillips Screwdriver

Remove the two screws which secure the mass airflow sensor to the original air box lid, then remove the sensor and set it aside.



Step 4:

Loosely install a hose clamp over each end of the silicone hump coupler and push it onto the end of the mass airflow sensor.

NOTE

On four cylinder engines, one of the hose clamps is smaller than the other three. This clamp is for the connection between the hump coupler and the mass air flow sensor.

NOTE

Make sure you install the mass airflow sensor in the correct direction. On most mass airflow sensors, there is an arrow that should point towards the engine, indicating the direction of air flow.

INSTALLING THE LUFT-TECHNIK SYSTEM

Step 5:

Install the rubber grommet into the ear on the upper pipe.

Step 6:

Push the straight coupler about 1" onto the angled end of the upper intake pipe.

INSTALLING THE LUFT-TECHNIK SYSTEM

Step 7:

Loosely install the two remaining hose clamps over the straight coupler.

Step 8:

Slide the straight coupler onto the lower pipe and guide the upper pipe grommet onto the stud on the inner fender.

INSTALLING THE LUFT-TECHNIK SYSTEM

Step 9: Flat Blade Screwdriver

Slide the mass airflow sensor and the hump coupler onto the end of the upper pipe. Make sure the electrical connector is properly oriented so it does not sit too high, then reconnect the flexible intake tube and spring clamp. Make sure the silicone hump coupler is fully seated, then tighten the hose clamps and connect the electrical connector to the mass airflow sensor.

Step 10: 3/8" Ratchet, 10mm Socket

Install the supplied flat washer and nut onto the fender stud, then tighten the fender stud nut until it is snug.

INSTALLING THE LUFT-TECHNIK SYSTEM

Step 11: Flat Blade Screwdriver

Tighten the hose clamps on the straight coupler.

Step 12:

Inspect the air filter and note the lip on the inside of the filter.

INSTALLING THE LUFT-TECHNIK SYSTEM

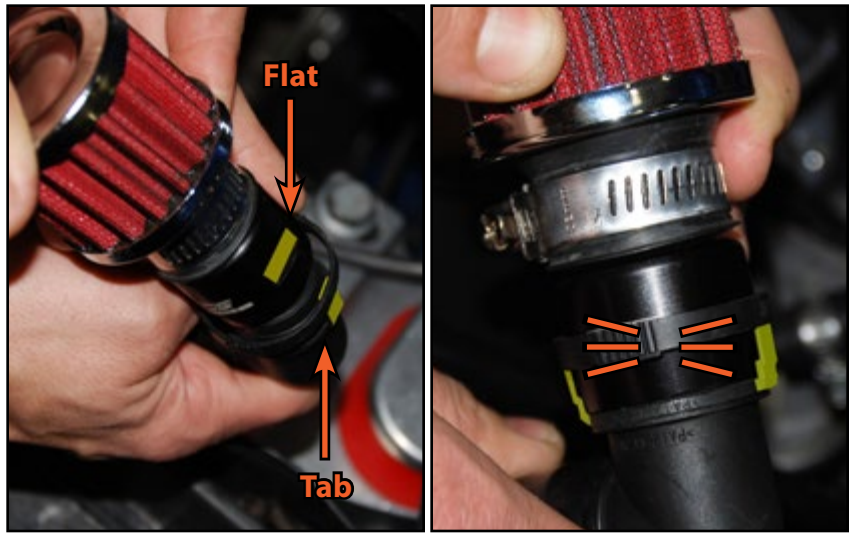
Step 13: 3/8" Ratchet, 10mm socket

Tighten the nut on the lower intake pipe, then with the clamp in place on the filter, push the filter up onto the lower intake pipe until it is fully seated against the lip in the filter and tighten the clamp.

Step 14: Flat Blade Screwdriver

If your car has an intake hose for the secondary air injection (originally connected to the factory air box), you will need to install the secondary air injection filter and adapter. Begin by pushing the filter adapter into the filter and tightening the hose clamp.

Line the two flats in the filter adapter up with the two tabs in the secondary intake pipe, then push the filter adapter into place until you hear an audible “click”, indicating that the adapter is fully seated.



1/4” Ratchet, 4mm Allen Socket, Extension

Mount the secondary intake tube to the threaded hole on the back of the battery tray as shown in the picture. Use the cushion clamp and hex head screw included with the kit to secure the tube.

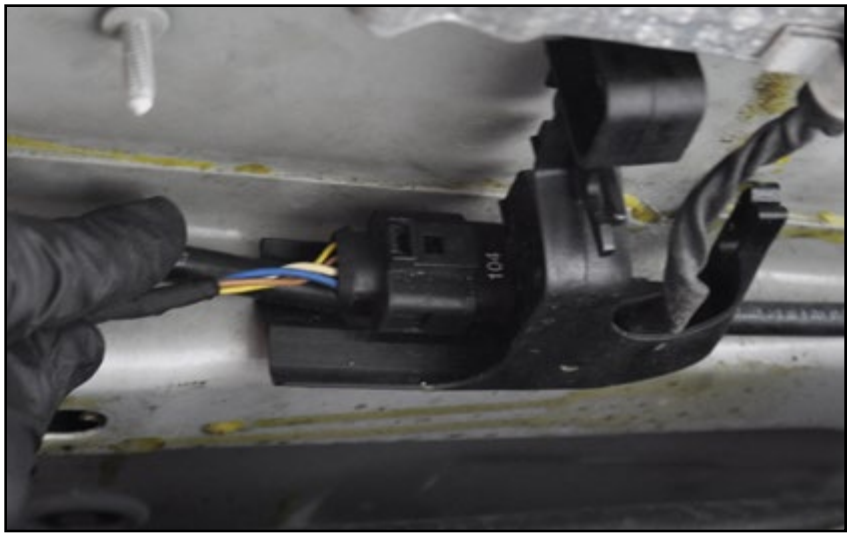
Perform the following final steps:

- [ ] Install the battery and battery hold down.
- [ ] Connect and tighten the terminals, positive first, then negative.
- [ ] Install the battery cover.

USING THE VAG CONNECTOR TOOL

Step 1:

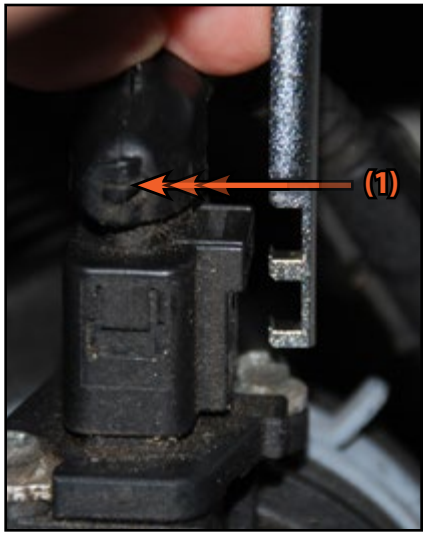
These connectors are commonly referred to as “Push and Pull” connectors, in reference to the method used to disconnect them.

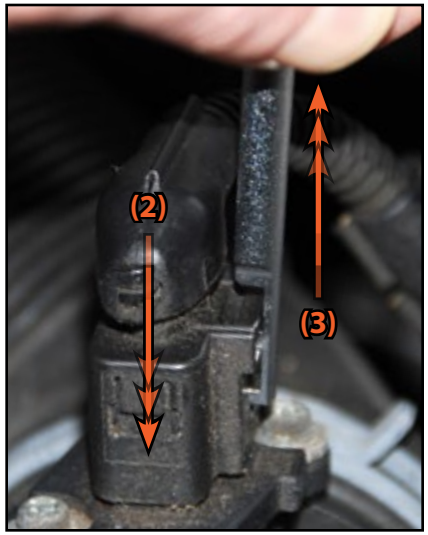


Step 2: VAG Connector Tool

To disconnect one of these connectors, follow this procedure:

1. Engage the connector release tool into the connector housing.
2. Push inward gently on the connector.
3. While holding pressure inward on the connector, pull up on the handle of the release tool.
4. Pull the connector off of the component and move the harness out of the way.





To return to the air box removal instructions, simply click HERE.

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 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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