



VW MKV/VI Stage 5 Big Brake Kit 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

The Project:

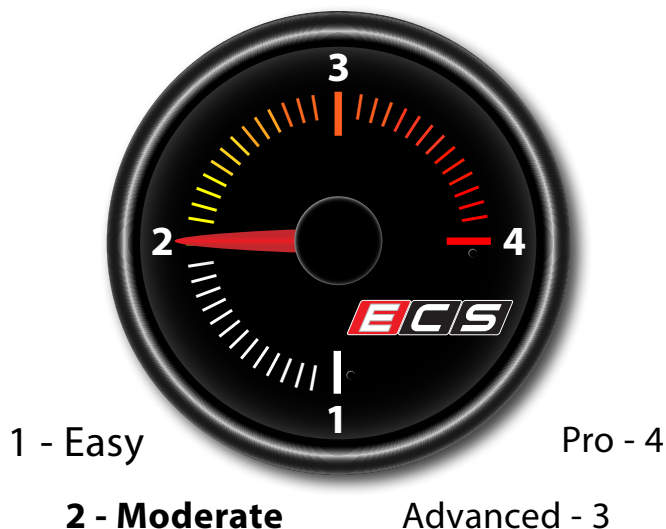
The ECS Tuning Big Brake Kit provides huge improvements in braking power with a specially packaged kit containing:

- ECS Tuning 955/Cayenne calipers available in red, blue, or black
- All caliper mounting hardware
- ECS Tuning two-piece drilled and slotted floating rotor kits
- Hawk Performance brake pads
- ECS Tuning Exact-Fit brake line kit
- High quality Pentosin DOT 4 brake fluid

Stage 5 BBK Kits require minimum 18-inch diameter road wheels with a spoke design and enough offset to clear the larger caliper bodies.

Please download and use the template from the BBK product page to ensure adequate caliper-to-wheel clearance.

ECS Difficulty Gauge



Installing the ECS Tuning big brake kit on your MKV/VI Volkswagen is a great weekend project. Plan your time accordingly based on your experience level. These easy to follow instructions will help you with a smooth trouble free installation. 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 big brake kit. We appreciate your business!

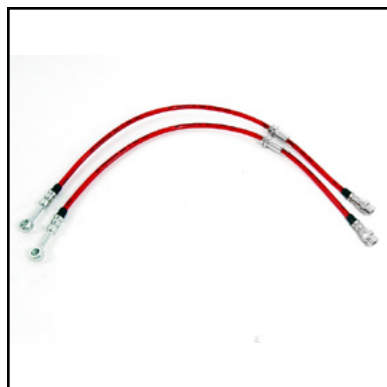
TABLE OF CONTENTS

Kit Contents.....	pg.4
Required Tools and Equipment.....	pg.5
Shop Supplies and Materials.....	pg.6
Installation and Safety Information.....	pg.7
Removing the Original Brakes.....	pg.8
Big Brake Kit Installation.....	pg.13
Brake Line Bleeding Procedure.....	pg.19
Torque Specifications.....	pg.21
Schwaben Tools.....	pg.22

KIT CONTENTS



ECS Tuning 955/Cayenne
Front Calipers



ECS Tuning Exact-Fit Brake
Lines



DOT 4 Brake Fluid



ECS Tuning Two Piece Rotors



Nylock Caliper Nuts



Caliper Holder Bolts



Brake Pad Retainer Screws



Hawk Performance Brake Pads

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](#)
- Bench Mounted Vise
- Crows Foot Wrenches
- Hook and Pick Tool Set [ES#2778980](#)

Required For This Install

Available On Our Website

- **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
- **Flare Nut Wrench Set** [ES#2840737](#)
- **Hex Bit (Allen) Wrenches and Sockets** [ES#11420](#)
- **Thread Repair Tools** [ES#1306824](#)
- **Open/Boxed End Wrench Set** [ES#2765907](#)

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.

REMOVING THE ORIGINAL BRAKES

Step 1:

Safely raise and support the vehicle and remove the front wheels.



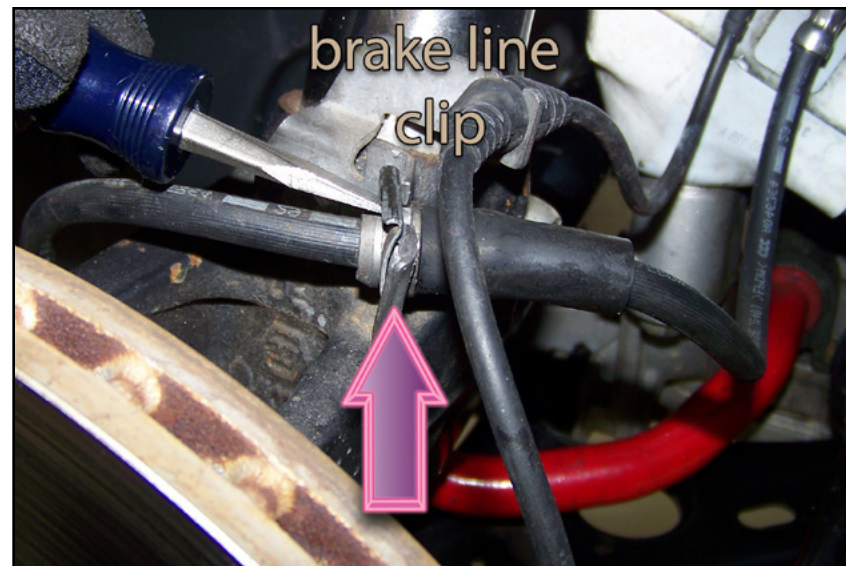
Step 2:

Flat Head Screwdriver

Using a common screwdriver, pry the u-shaped retainer clip from the brake hose bracket at the strut knuckle.



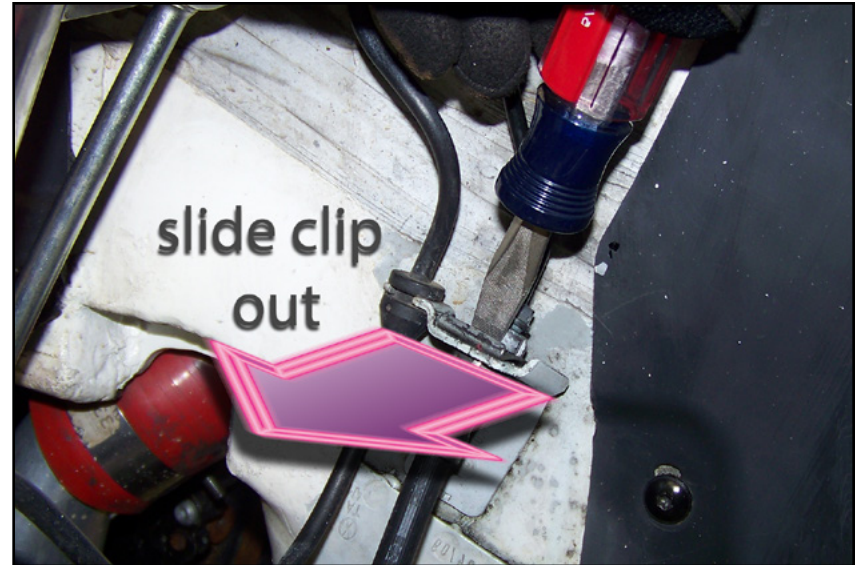
Brake fluid is extremely corrosive and can damage surrounding parts as well as skin and eyes. Before removing the stock brake line, put on gloves and goggles and shield surrounding parts from the fluid.



REMOVING THE ORIGINAL BRAKES

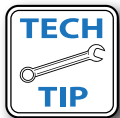
Step 3: Flat Head Screwdriver

Follow the brake hose to the chassis. Using the same common screwdriver or similar tool, pry the u-shaped retainer clip from the chassis support bracket.

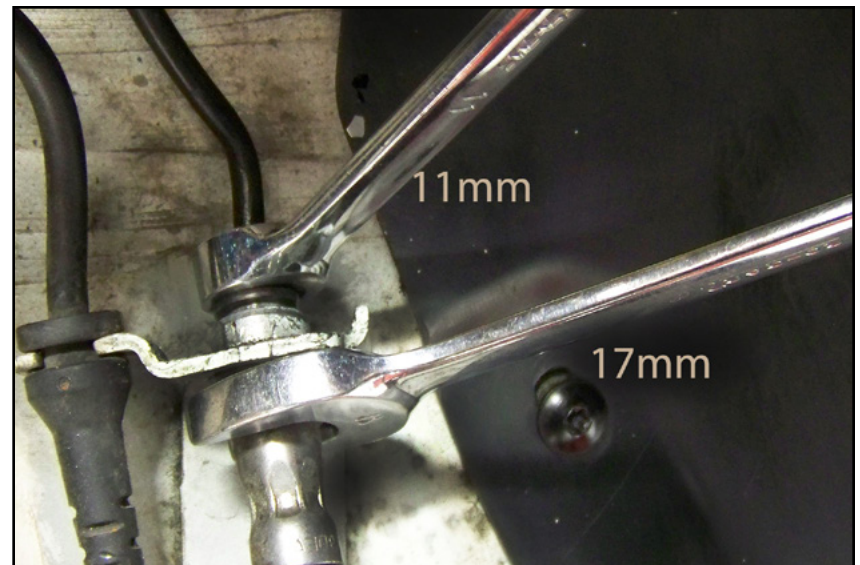


Step 4: 11mm & 17mm Line Wrench

Using two line wrenches loosen and disconnect the solid brake line from the brake hose.



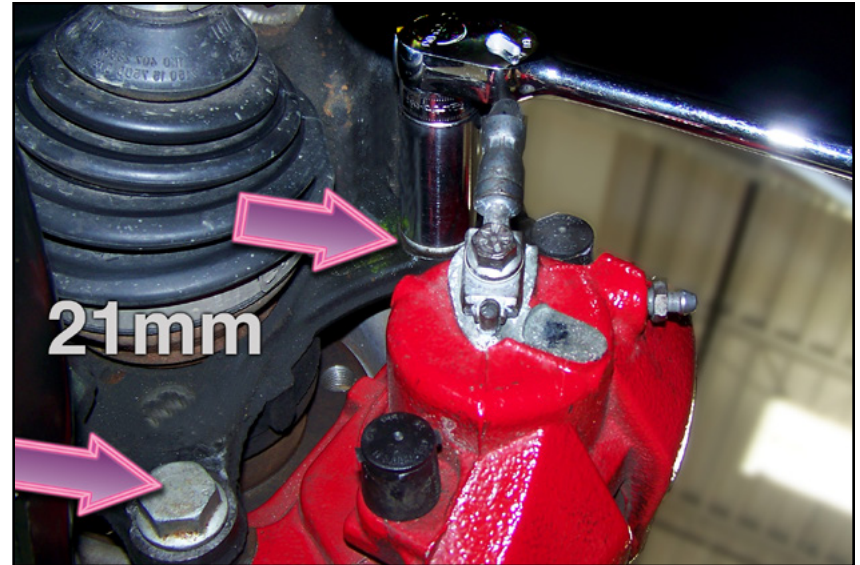
Transfer the rubber cap from the caliper brake bleeder screw to the end of the disconnected solid brake line. This will keep brake fluid from draining onto the floor.



REMOVING THE ORIGINAL BRAKES

Step 5: 21mm Socket & Ratchet

Loosen and set aside the two 21mm caliper carrier bolts and slide the caliper assembly off the rotor



Step 6: Phillips Head Screwdriver or Impact Driver

Remove the entire caliper, caliper carrier, brake pads and brake line from the vehicle as a complete assembly.



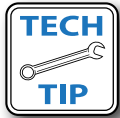
The performance brake pads that come with this kit do not utilize a wear sensor. See Page 20 for information on our wear sensor bypass connector.



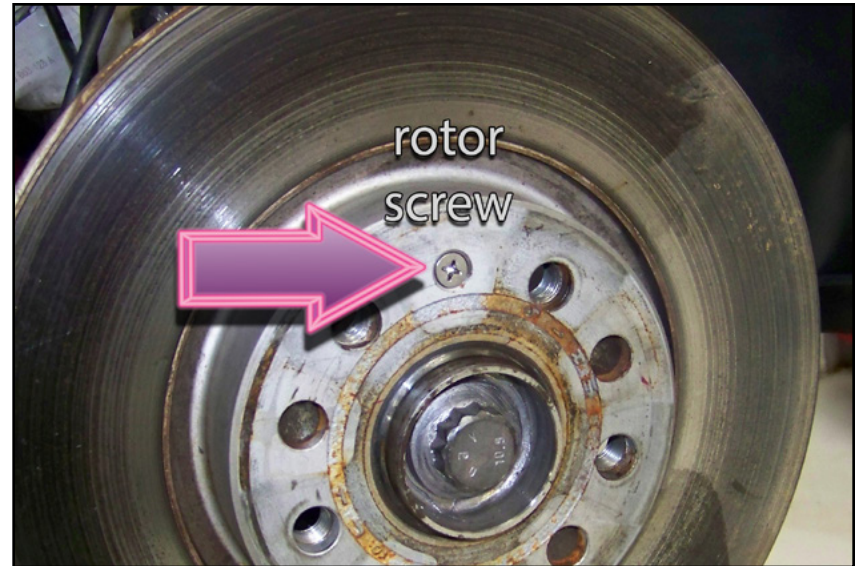
REMOVING THE ORIGINAL BRAKES

Step 7: Phillips Head Screwdriver or Impact Driver

Remove the rotor set screw and pull the rotor off of the hub.



While a screwdriver will remove the set screw in most cases, an impact driver comes in handy for breaking loose especially stubborn, rusted screws. ECS offers an impact screwdriver and it is available on our website or by clicking [HERE](#).



Step 8: Emery Cloth or Wire Brush

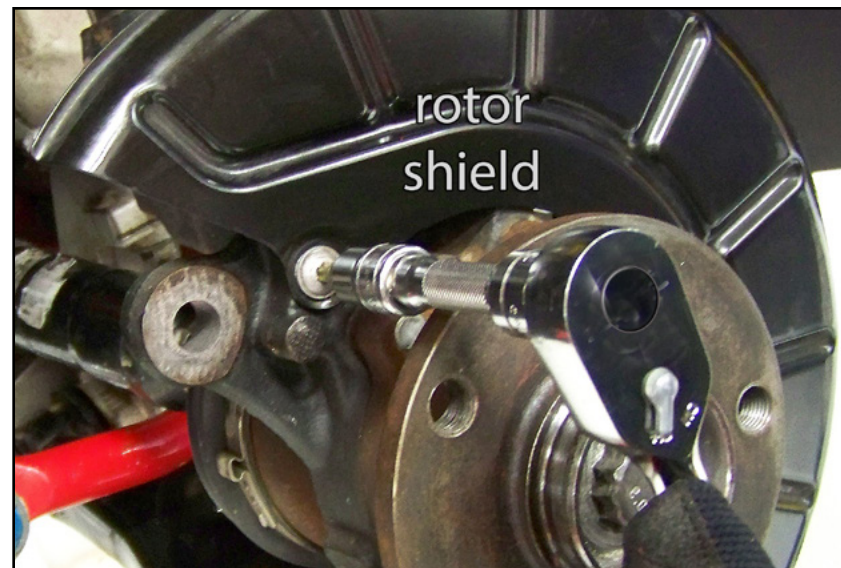
Remove the old rotor and thoroughly clean the hub surface with emery cloth or a wire brush to create a smooth contact surface for the new rotor.



REMOVING THE ORIGINAL BRAKES

Step 9: T30 Torx Socket & Ratchet

Remove the three T30 Torx bolts securing the dust shield and remove it from vehicle.

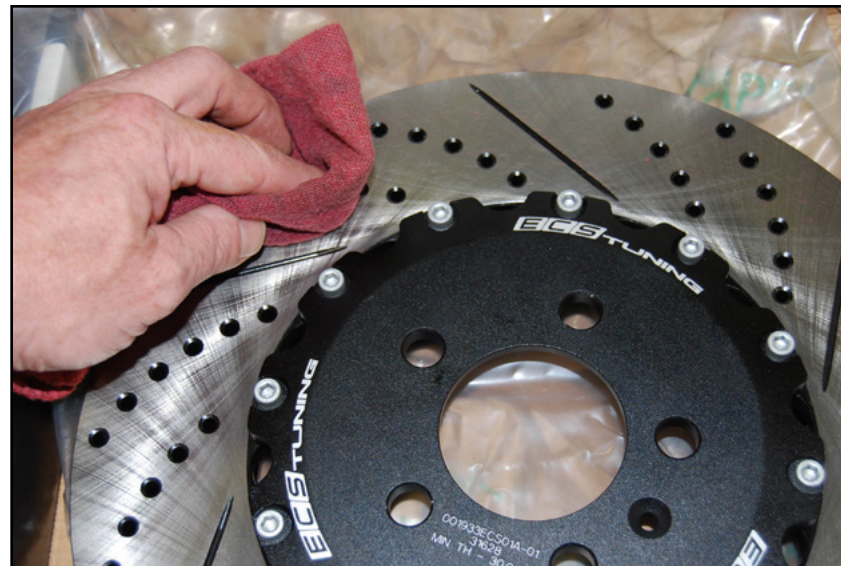


***You are now ready to install the new big brake components.
Proceed with the installation, beginning on the next page.***

BIG BRAKE KIT INSTALLATION

Step 1: Brake Cleaner & Cloth

Thoroughly clean the surface of the new rotor using brake cleaner and a clean, lint free cloth.

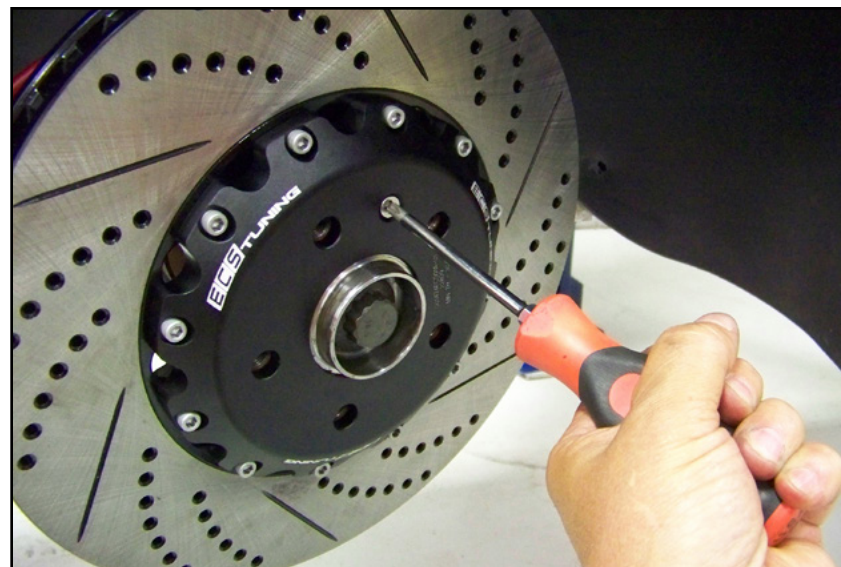


Step 2:

Install the two-piece rotor onto the hub using the stainless steel set screw.



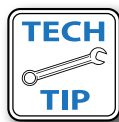
Make certain each rotor is installed on the correct side of the vehicle, with the holes sweeping rearward at the 12 o'clock position.



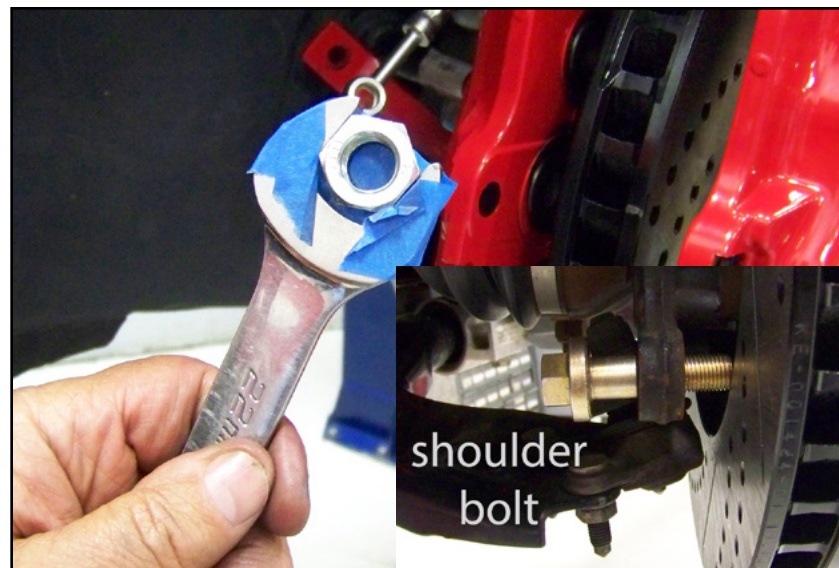
BIG BRAKE KIT INSTALLATION

Step 3: 21mm Wrench, 19mm Socket & Ratchet

To install the new six-piston caliper, use an open ended wrench to hold the nut in place while you thread the bolt through the knuckle and caliper and into the nut.



The shoulder bolt only go in from the back, this means you will have to hold the nylock nut in place. We found using masking tape to hold the nut in the wrench makes tightening the bolts a whole lot easier.



Step 4:

Apply 1-2 grams of brake part lubricant thinly across the brake pad metal backing plate of each pad.



Be careful not to get any lubricant on the brake pad dampening plates or the friction surface of the brake pads.



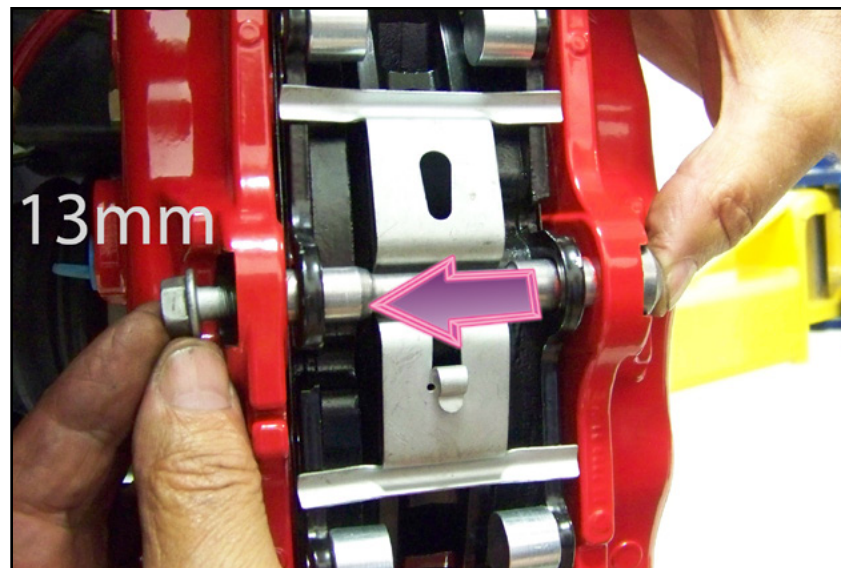
BIG BRAKE KIT INSTALLATION

Step 5:

Install the brake shim over the brake pads in the same orientation as shown. The "V" in the stamped metal shield should engage the notches in the pads. Then, install the long brake pad retainer bolt through the front of the caliper and hand tighten the 13mm retaining screw from the rear.

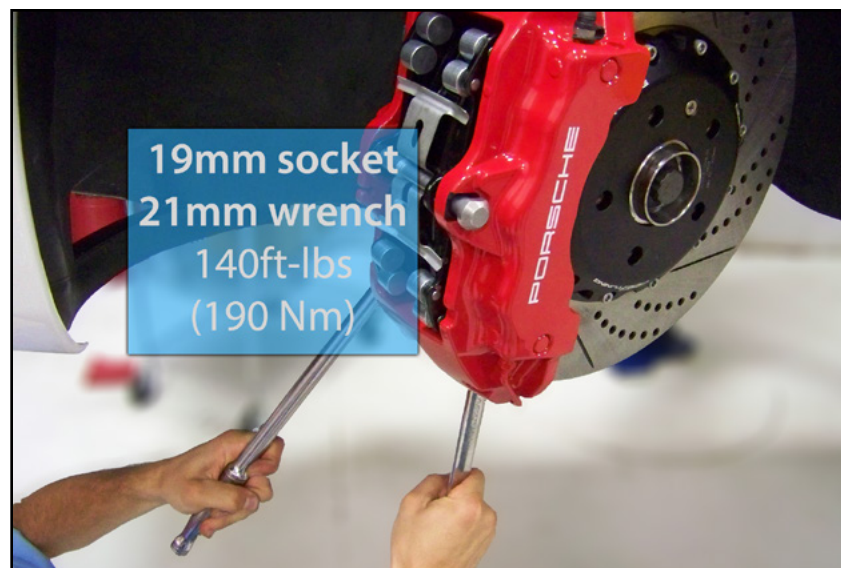


Before moving forward, ensure that the brake caliper is installed with the brake bleeder screws on top; installing them upside down will make it impossible to properly bleed the brakes.



Step 6: 21mm Wrench, 19mm Socket & Ratchet

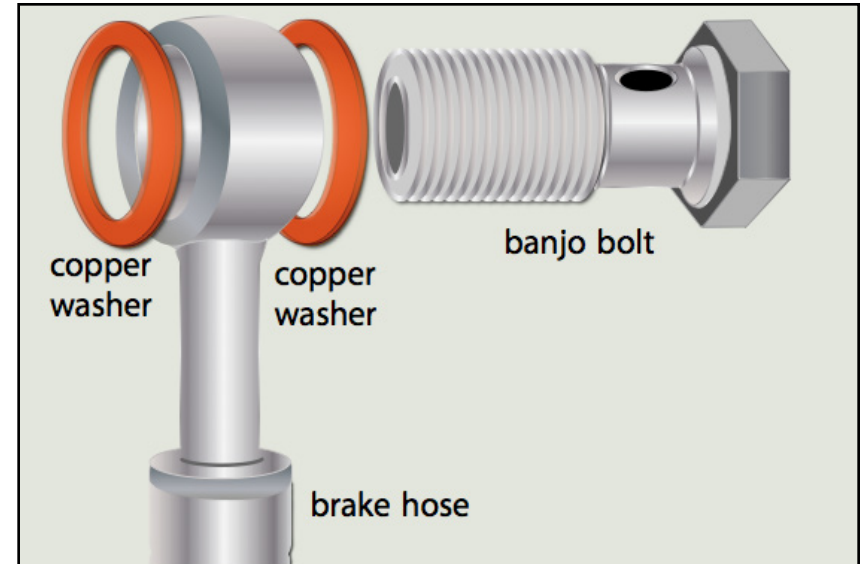
Ensure that the caliper is flush, then hold the 21mm nut in place and torque the 19mm bolt to 190Nm (140 ft-lbs).



BIG BRAKE KIT INSTALLATION

Step 7:

Assemble the banjo bolt and brake line as shown here, with one sealing washer as the head of the banjo bolt and the other between the brake line block connector and caliper.



Step 8: 14mm Wrench

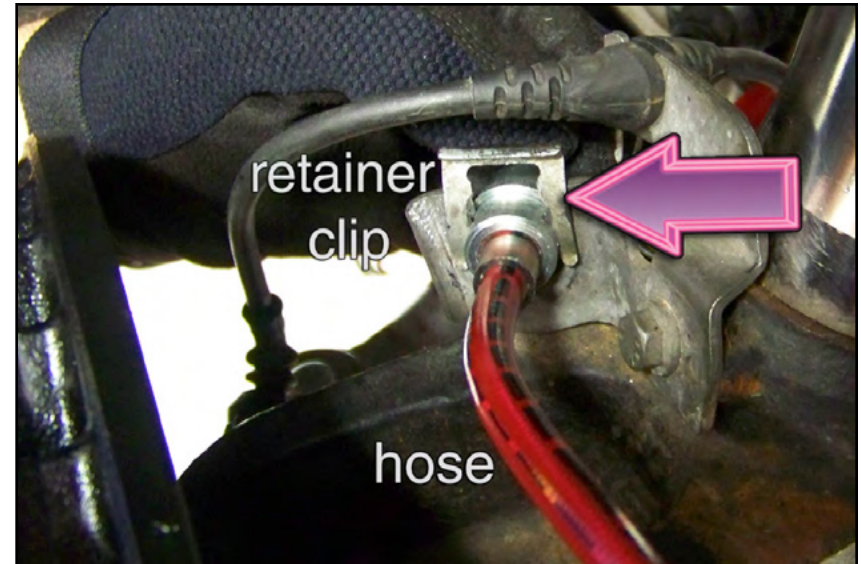
Install the banjo bolt and torque to 16Nm (12ft-lbs).



BIG BRAKE KIT INSTALLATION

Step 9:

Install new brake hose over the knuckle and attach it to the support bracket. Install the u-shaped retainer clip through the groove in the hose collar and push the clip downward until it clicks into place.



Step 10: 17mm Wrench, 11mm Line Wrench

Make the final brake hose connection by screwing the solid brake line at the chassis into the new Exact-Fit brake hose then reinstall the retaining clip and hand-tighten the fitting.



BIG BRAKE KIT INSTALLATION

Step 11:

Bleed the air from the brake system. These calipers have two bleeders each. Bleed the calipers in this order: RF outer bleeder, RF inner bleeder, LF outer bleeder, LF inner bleeder.



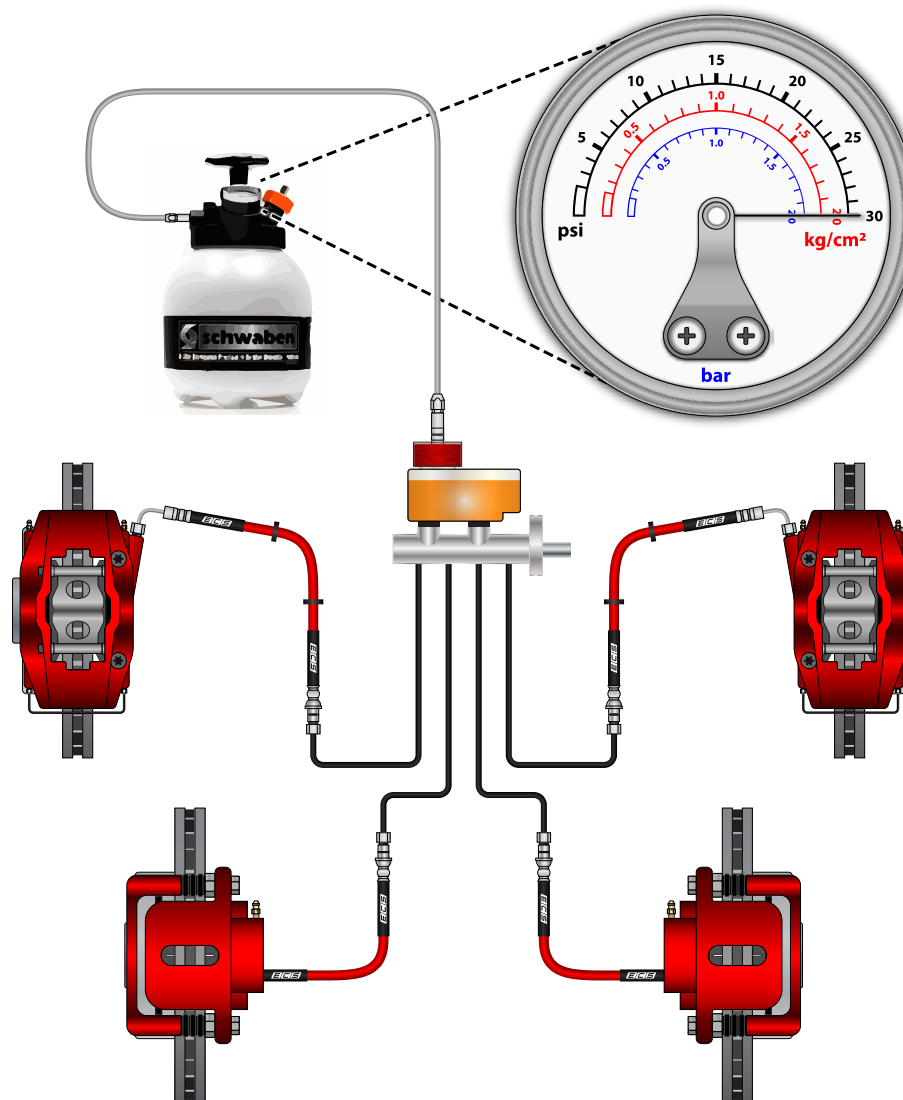
Proceed to next page for master cylinder bleeding procedure.

BRAKE LINE BLEEDING PROCEDURE

Step 12: Brake Bleeder

Whenever the brake lines are serviced you will need to bleed the air from the system, consult your service for model specific instructions.

We suggest the use of our 3-Liter Premium European Brake Bleeder ([ES3125779](#)) for this job because it features a professional grade aluminum master cylinder cap adapter which can handle the higher pressure.



FINAL ASSEMBLY

Perform the following steps for final assembly:

- Install the wheels on the car and torque the wheel bolts to 120 Nm (89 Ft-lbs).
- Lower the car to the ground
- Check hose/line connections and clearance then top off brake fluid in the reservoir.

Proceed to next page for brake pad break in procedure

MKIV STAGE 3 BIG BRAKE KIT

Pad Break in and Maintenance

- Be sure to read the pad break in procedure included with the pads in the kit. Performing this procedure as specified will guarantee the correct performance and wear from your brake pads.
- To ensure even wear, consistent performance, and long life of your brake pads, it is a good idea to remove the pads once a year and clean any rust, dirt, or debris from the brake pad and caliper. Relubricate the contact points as shown on page 16, step 8.

Brake Pad Wear Sensor Bypass

- To prevent the brake pad warning indicator from illuminating, you may install one of our ECS Tuning Brake Pad Wear Sensor Bypass connectors ([ES#2785559](#)).
- We have chosen to remove the wear sensor connector bracket for a clean appearance. In addition, we installed our wear sensor bypass and secured the harness with wire ties along side of the ABS sensor harness.

REPLACEMENT PARTS AND HARDWARE

Stainless Steel Brake Rotor Screw ([ES#257461](#))

TORQUE SPECIFICATIONS

Brake Hose Banjo Bolt	16 Nm (12 Ft-lbs).....	(Page 16)
Caliper Mounting Bolts	190 Nm (140 Ft-lbs).....	(Page 15)
Rotor Screw	4 Nm (3 Ft-lbs).....	(Page 13)
Wheels.....	120 Nm (89 Ft-lbs)	(Page 19)

- A note about torque to yield or “stretch” bolts: Many bolts will have a torque specification listed in the format - xx Nm+xx degrees (xx Ft-lbs+xx degrees). These bolts are torque to yield bolts, commonly referred to as “stretch” bolts. The correct procedure for torquing these bolts is: **Stage One** - torque them to the Nm or Ft-lb specification. **Stage Two** - tighten each one the additional specified number of degrees. To prevent over torquing it is important to mark each fastener with paint **immediately** after performing the second stage or “stretching” of the bolts.

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 VW MKV/VI Stage 5 Big Brake Kit installation is complete!



These instructions are provided as a courtesy by ECS Tuning

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