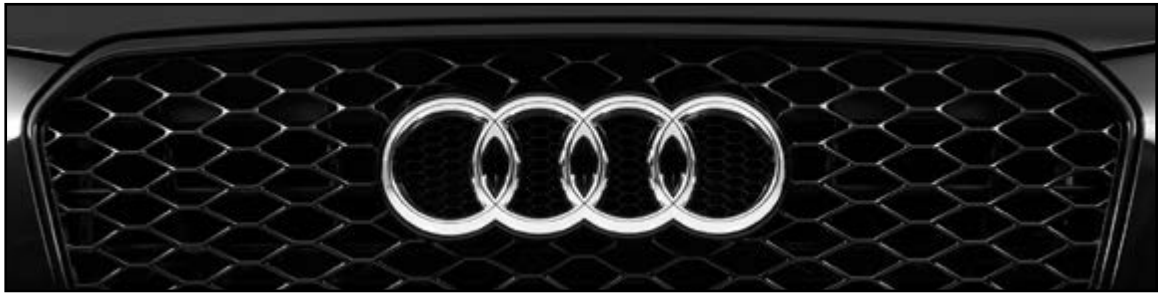
Audi B8 19Z Front Big Brake Kit Installation Instructions

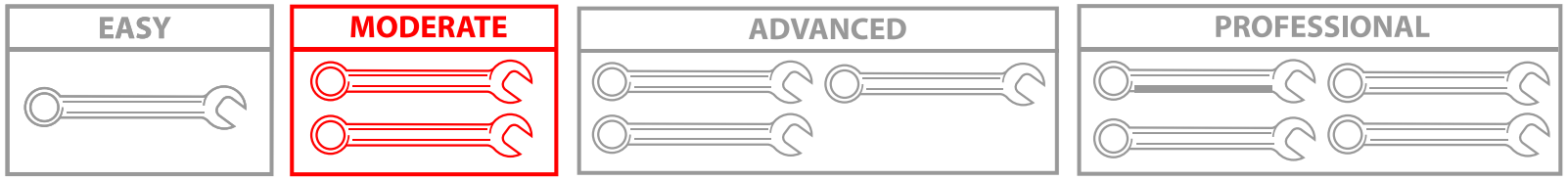


INTRODUCTION

Audi B8 19Z Front Big Brake Kit ES#2763019

The Audi B8 19Z Front Big Brake Kit comes complete with the following:
- Two Porsche 19Z Front Brake Calipers
- Two ECS Tuning 2-Piece 365mm Cross Drilled and Slotted Front Brake Rotors
- Brake pad set of your choice
- Two in-house engineered ECS Tuning Caliper Brackets
- Two ECS Tuning Exact Fit Front Brake Lines
- Brake Fluid and a new Pad Wear Sensor
- New Caliper Bolts and Hardware

Installation of this kit will require bleeding the brakes. Bleeding the brakes is normally routine, but can be difficult at times. We do not cover a specific in depth bleeding procedure in this PDF. If you are not familiar with brake bleeding, be sure to research and familiarize yourself with the proper procedures or consult a professional repair facility.



Installing the Audi Front Big Brake Kit is a weekend project that can be completed with relative ease. Before you begin, read and familiarize yourself with these instructions and make sure you have all the required tools on hand. If you do not have previous brake experience and need additional information, be sure to have all reference material on hand before beginning. Thank you for purchasing our Audi B8 19Z Big Brake Kit. We appreciate your business!

TABLE OF CONTENTS

AUDI B8 19Z BIG BRAKE KIT CONTENTS

LF 19Z Caliper w/hardware

RF 19Z Caliper w/ hardware

ECS Tuning 2-Piece Rotors

Exact Fit Brake Lines

Pad Wear Sensor

Adapter Harness

Caliper Bracket Bolts

ECS Tuning Caliper Brackets

Brake Pads of your choice (appearance may vary)

Brake Fluid

REQUIRED TOOLS

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

We recommend that you have a complete selection of tools and equipment necessary for automotive repair. Below is a list of the tools we used to install the Audi B8 19Z Big Brake kit. Additional tools may be required for any issues that arise during installation such as rust, corrosion, or broken and stripped fasteners.

- 17mm Protecta-Socket (for lug nuts)..... Available at ecstuning.com ..... ES#2221243
- 3/8" Drive Torque Wrench ..... Available at ecstuning.com ..... ES#2221245
- 1/2" Drive Torque Wrench ..... Available at ecstuning.com ..... ES#2221244
- Flat and Phillips Blade Screwdriver(s)..... Available at ecstuning.com ..... ES#2225921
- Wheel Hanger..... Available at ecstuning.com ..... ES#2678092
- Drain Pan..... Available at ecstuning.com ..... ES#2748892
- Torx Bit Sockets: T30..... Available at ecstuning.com ..... ES#11418
- Impact Driver..... Available at ecstuning.com ..... ES#11416
- Brake Fluid Catch Bottle ..... Available at ecstuning.com ..... ES#2773388
- 3/8" Sockets: 13mm..... Available at ecstuning.com ..... ES#2763772
- 3/8" Drive Ratchet, Extensions
- 1/2" Drive Ratchet, Breaker Bar
- 1/2" Drive Sockets: 21mm
- Flare Nut Wrenches: 10mm,11mm
- Caliper Hangers
- Hex Bit Socket: 10mm
- Angle Grinder with Cleaning Disc
- Ball Pein Hammer
- Safety Glasses

SHOP SUPPLIES AND MATERIALS

- Hand Cleaner/Degreaser..... Available at ecstuning.com ..... ES#2167336
- Aerosol Brake Cleaner..... Available at your local auto parts store
- Shop Rags ..... Available at your local auto parts store
- Aerosol Spray Lubricant/Penetrating Oil..... Available at your local auto parts store

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.

REMOVING THE ORIGINAL FRONT BRAKES

Step 1: 17mm Protecta-Socket, Impact Wrench

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

NOTE

For safety and convenience, we have threaded in a wheel hanger to support the weight of the wheel while removing the lug bolts.

Step 2:

Using one hand on each side of the grommet, pull up on each front brake hose to remove the grommets from their retaining brackets.

REMOVING THE ORIGINAL FRONT BRAKES

Step 3: Flat Blade Screwdriver

On the LH (drivers) side of the vehicle only, remove the brake pad warning sensor connector from it's bracket by first gently prying out the locking tab and then rotating the connector 90 degrees in either direction. Finally, pull down to slide the connector out of the bracket.

Step 4:

On the LH side only, depress the locking tab on the brake pad warning harness connector and pull the two connector halves apart.

TECH TIP

These connectors may be difficult to disconnect due to dirt and debris in the locking tab. Pushing the two halves toward each other before depressing the locking tab will assist with removal.

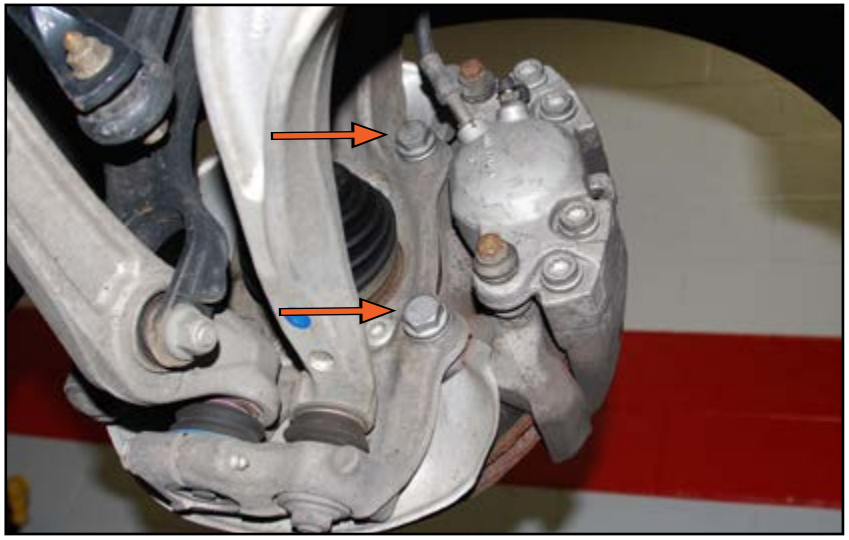
REMOVING THE ORIGINAL FRONT BRAKES

Step 5: Flat Blade Screwdriver

Lever between the rotor and inboard brake pad as shown and push the inboard pad just a slight distance away from the rotor. This will push the piston into the caliper, allowing the pads to clear the rotors for easy removal.

Step 6: 21mm Socket, 1/2" Ratchet

Remove the two caliper bracket mounting bolts on each side.



REMOVING THE ORIGINAL FRONT BRAKES

Step 7: Caliper Hanger

Lift off both brake calipers and hang them to keep weight off of the brake hoses.

NOTE

We leave the brake hoses connected until we are ready to install the new ones because it keeps the mess to a minimum. Even though the kit comes with new hoses, we prefer to hang the calipers so the hose integrity is not compromised in the event they get used on another vehicle.

Step 8: T30 Torx Socket, Impact Driver

Remove each front rotor screw, then remove both front rotors.

TECH TIP

An impact driver can be helpful to loosen stuck rotor screws and using a wheel hanger will support the rotors after the screws are removed.

REMOVING THE ORIGINAL FRONT BRAKES

Step 9: Angle Grinder with Sanding Disc

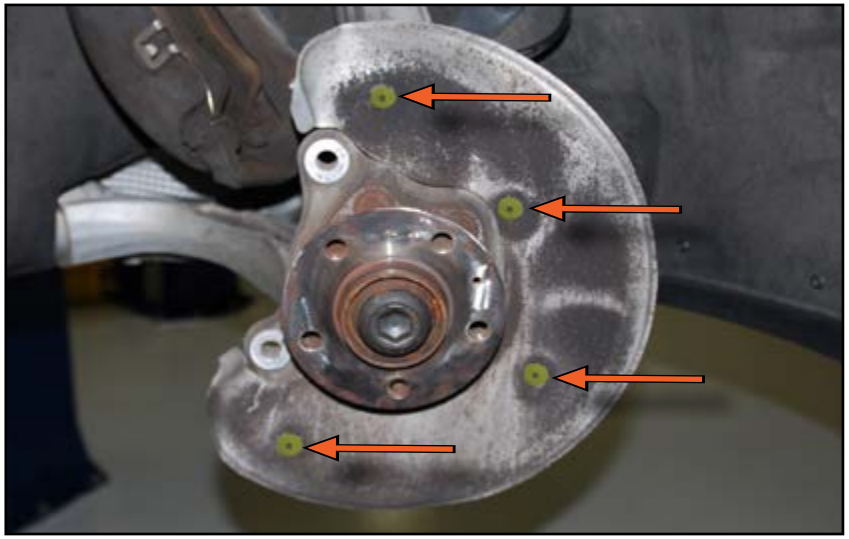
Remove all rust buildup from the surface of the drive hub. Any rust buildup left on the surface will prevent the new rotor from properly seating and may cause a vibration.

CAUTION

Be sure to always wear safety glasses when using power tools.

Step 10: T30 Torx Socket

Remove the four retaining screws on each side and remove both front brake shields.



INSTALLING THE NEW FRONT BRAKES

Step 1: 10mm Hex Bit Driver, Breaker Bar

The calipers come with the original Porsche mounting brackets installed. Secure each caliper in a vice (use soft jaws to prevent damage to the bracket) and remove both caliper mounting bolts to separate the caliper from the mounting bracket.

Step 2: 21mm Socket, Torque Wrench

Install a new ECS Tuning Caliper Bracket on each side using the new bracket mounting bolts supplied with the kit. Torque the bolts to 196 Nm (144 Ft-lbs).

INSTALLING THE NEW FRONT BRAKES

Step 3:

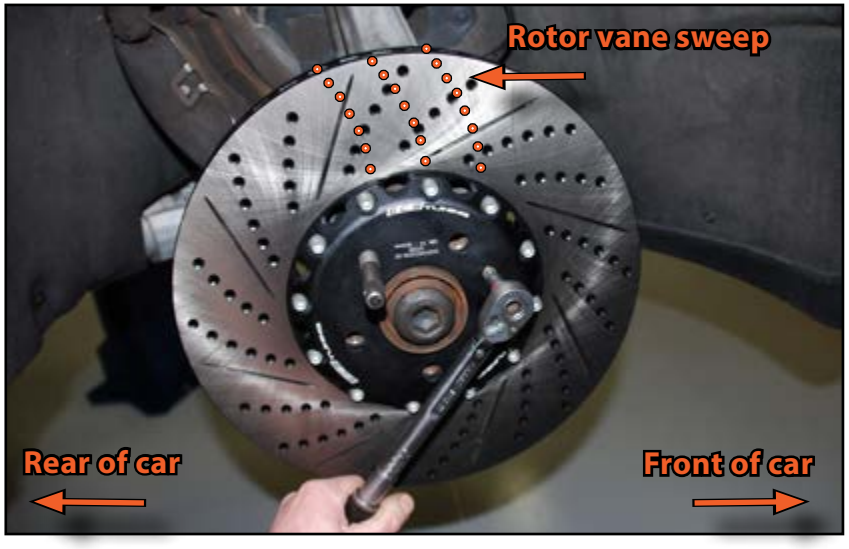
Wipe the rotor surfaces using a new rag and brake parts cleaner to remove any traces of grease or oil.

NOTE

Be sure to place the rotor on a soft fender cover or towel so you do not scratch or mar the surface.

Step 4: T30 Torx Socket, Torque Wrench

Position a new rotor in place on each drive hub, then install and tighten the rotor screws to 5 Nm (3.7 Ft-lbs). Here we have used a wheel hanger to make rotor installation easier.



NOTE

Be sure to install the correct rotor on each side. The LH and RH are different. At the 12 o'clock position, the rotor vanes should sweep back. The illustration at right indicates the sweep of the rotor vanes. Reference page 22 for additional information.

INSTALLING THE NEW FRONT BRAKES

Step 5: 10mm Hex Bit Socket

Carefully slide a new caliper in place on each side, making sure not to damage the rotor surface with the pad seat pins. Install the caliper bolts and tighten them hand tight. Rotate the drive hub and closely inspect the clearance between the pad seat pins and the rotors, making sure they do not contact or rub at any point. If the rotors contact the pins, remove the rotor and make sure any debris or rust buildup is cleaned off of the drive hub.

NOTE

The LH and RH calipers are different. When correctly installed the bleeder screws should be facing up.

Step 6: 10mm Hex Bit Socket, Torque Wrench

After confirming proper clearance between the caliper and rotor, torque the caliper bolts to 109 Nm (80 Ft-lbs).

INSTALLING THE NEW FRONT BRAKES

Step 7:

Slide one of the brake pads into place in a caliper.

NOTE

All four brake pads are identical, and can be used in any position. No lubrication is required.

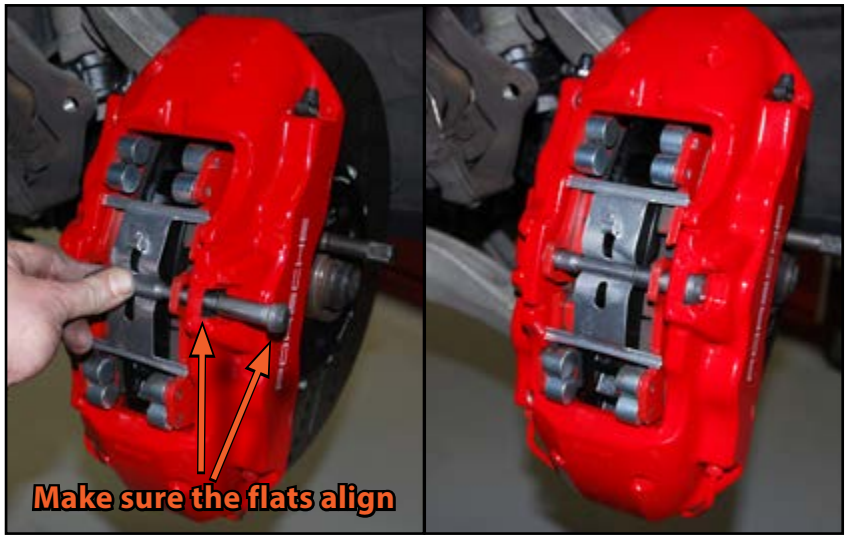
Step 8:

Slide the remaining brake pads into place on both sides.

INSTALLING THE NEW FRONT BRAKES

Step 9:

Hold the brake pad spring clip in place on top of the pads, then while pushing down on the clip, insert the brake pad retaining pin as shown in the picture until the flats on the end of the pin are fully seated into the caliper. You will need to keep constant pressure on the brake pad spring clip while installing the pin.



NOTE

On the LH side, make sure the clip for the brake pad warning harness is located on the top half of the caliper. See page 19 for additional reference.

Step 10:

Install the brake pad retaining pin bolt and torque it to 30 Nm (22 Ft-lbs).

INSTALLING THE NEW FRONT BRAKES

Step 11:

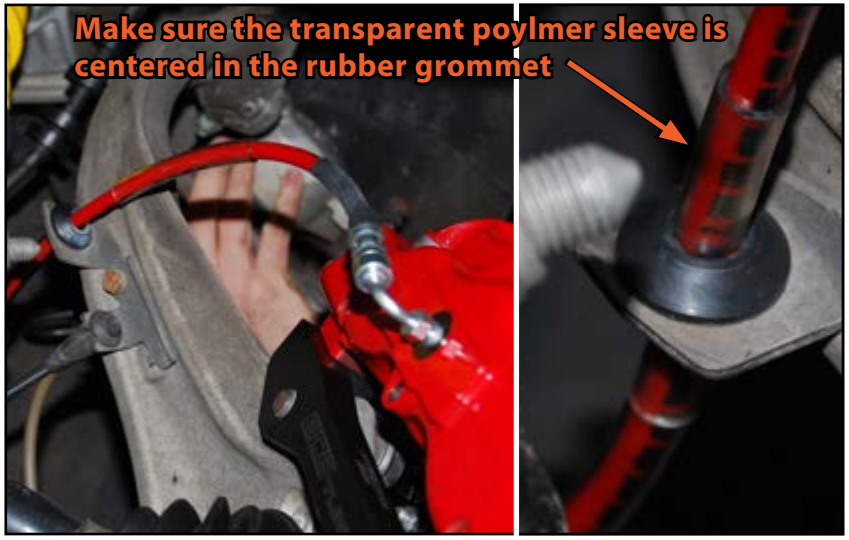
Install a new ECS Tuning Exact Fit Brake Line into each caliper. Thread the fittings in by hand but do not tighten them at this time.

NOTE

Both ECS Tuning Exact Fit front brake lines are the same.

Step 12:

First route each brake line upwards and towards the front of the vehicle, then push the brake line grommets into their brackets, as shown in the picture. Then slide the transparent polymer sleeve into the the rubber grommet until it is centered.



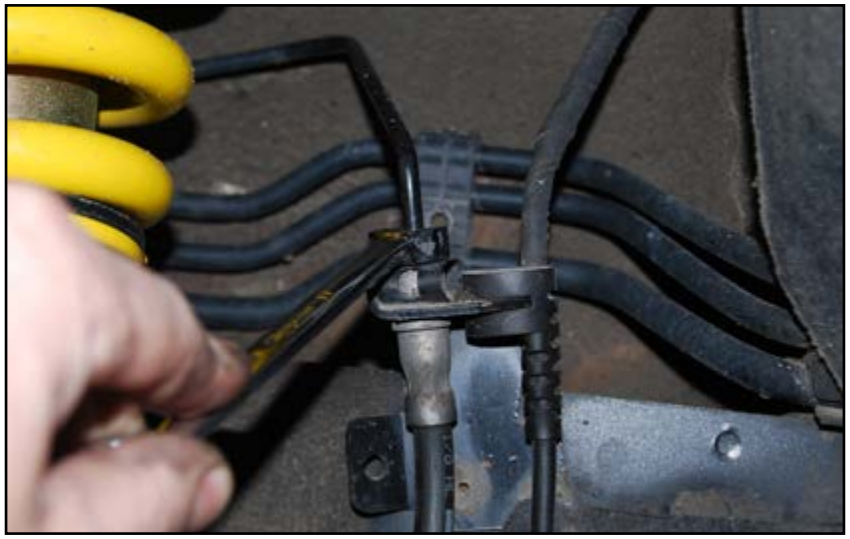
INSTALLING THE NEW FRONT BRAKES

Step 13:

Using a pressurized brake parts cleaner or compressed air, thoroughly clean the areas around the front brake line to hose connections. This will prevent dirt and contaminants from entering the new brake lines during installation.

Step 14: 11mm Flare Nut Wrench

Place a drain pan underneath to catch any lost brake fluid, then disconnect the front brake lines from the original brake hoses. You can now remove the original front brake calipers from the vehicle.



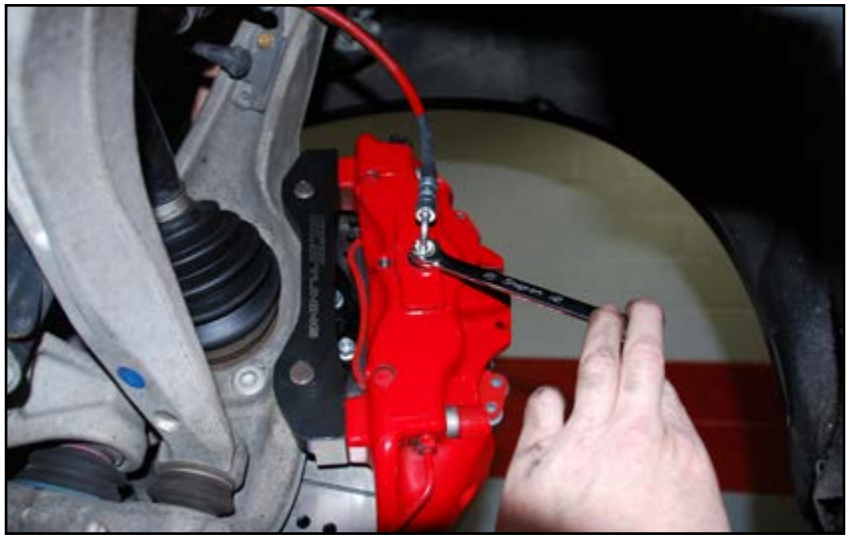
CAUTION

Brake fluid is extremely corrosive and damaging. Be sure to protect all surroundings with fender covers and rags, and clean up any spills immediately.

INSTALLING THE NEW FRONT BRAKES

Step 15: 10mm, 11mm Flare Nut Wrenches

Connect and tighten the new ECS Tuning Exact Fit Brake Lines to the original hard lines on the car, then tighten the brake line fittings at each front brake caliper.

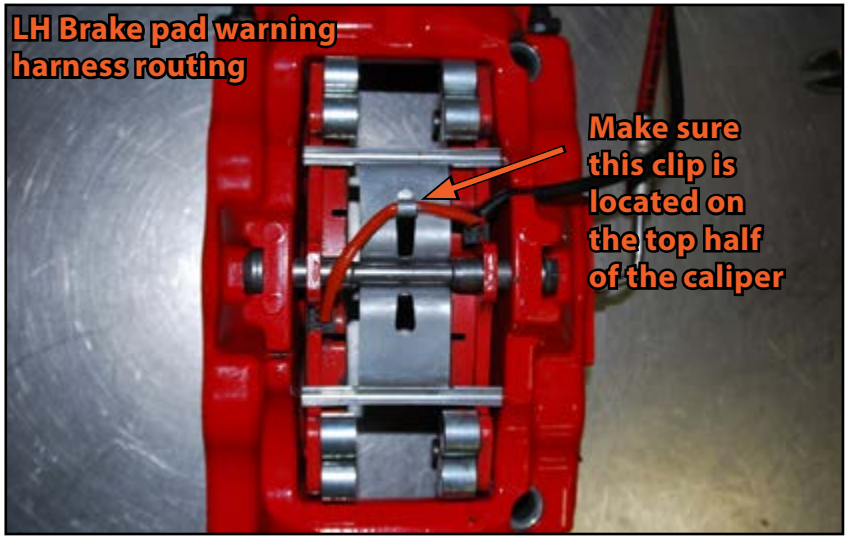


NOTE

There is generally no specific torque specification for brake flare fittings. As a standard rule of thumb, tighten the flare nut until it is fully seated, then an additional 1/6 turn. These brake lines have ISO flares. When the flare nut becomes tight, it is bottomed out, applying a predetermined amount of pressure on the ISO flare to create the seal. Additional tightening of the flare nut does not increase the sealing ability of an ISO flare, it can only weaken the threads on the nut or component.

Step 16:

Install the new brake pad warning sensor on the LH side. The picture on the right shows the routing of the sensor in the caliper. Connect the new sensor using the adapter harness supplied with the kit and secure it in place as necessary using nylon cable ties.



11mm Flare Nut Wrench

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.

NOTE

It is not uncommon for air to get trapped in these calipers. We recommend performing the bleed procedure a second time after the initial test drive.

Complete the following checklist for final installation.

- [ ] Hold firm pressure on the brake pedal for 30 seconds.
- [ ] Carefully check all brake fittings for leaks.
- [ ] Fill the brake fluid reservoir as necessary.
- [ ] Install both front wheels and torque them to 120 Nm (89 Ft-lbs).
- [ ] Review brake pad break in on page 21 and test drive the vehicle.

TORQUE SPECIFICATIONS

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.

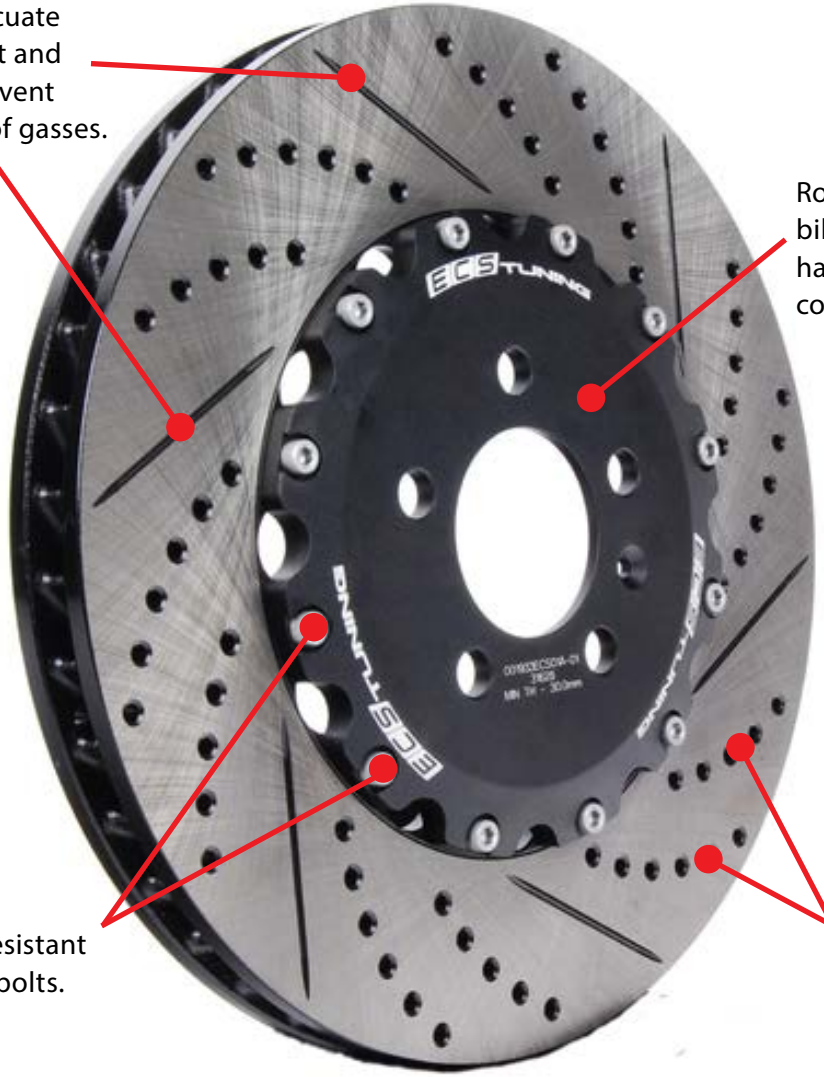
• To ensure even wear, consistent performance, and long life of your brake pads, it is a good idea to remove the pads once a year and clean any rust, dirt, or debris from the brake pad and caliper.

• 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.

ANATOMY OF AN ECS TUNING 2-PIECE ROTOR

Slots: Evacuate brake dust and water, prevent build up of gasses.

Rotor Hat: CNC machined from billet 6061-T6 aluminum, then hard anodized for durability and corrosion resistance.



Corrosion resistant high grade bolts.

Cross Drilling: Improved cross flow ventilation for maximum cooling, chamfered to prevent stress risers and cracking.

Rotor Ring

Rotor Ring: Constructed of high quality, heat treated FC-30 cast iron.

Corrosion resistant high temperature paint.

Directional Rotor Vanes: Curved and designed for maximum air flow and cooling.

Your Audi B8 19Z Front Big Brake Kit 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.