

The background of the entire page is a high-contrast, stylized image of a car, likely a Volkswagen R32, with a red and black color scheme. The ECS Tuning logo is prominently displayed in the top left corner.

ECS TUNING®

ES4406

**VWR32
MKI TT**

Stage V Big Brake Kit front

Installation
Instructions

This tutorial is provided as a courtesy by ECS Tuning.

best viewed in Acrobat® Reader®

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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ES 4406 Kit Contents:

- Stage V - R32 Two-piece brake rotors, vented, drilled, and slotted
- Porsche 955 six-piston brake calipers (black, blue, or red)
- Hawk HPS Performance Brake Pads
- ECS Stage V caliper mounting brackets
- stainless steel rotor set screws
- caliper bracket mounting bolts
- caliper mounting bolts
- Exact Fit brake lines
- brake line retainer clips
- ATE Super Blue DOT 4 brake fluid



Step 1

Raise and safely support the vehicle.

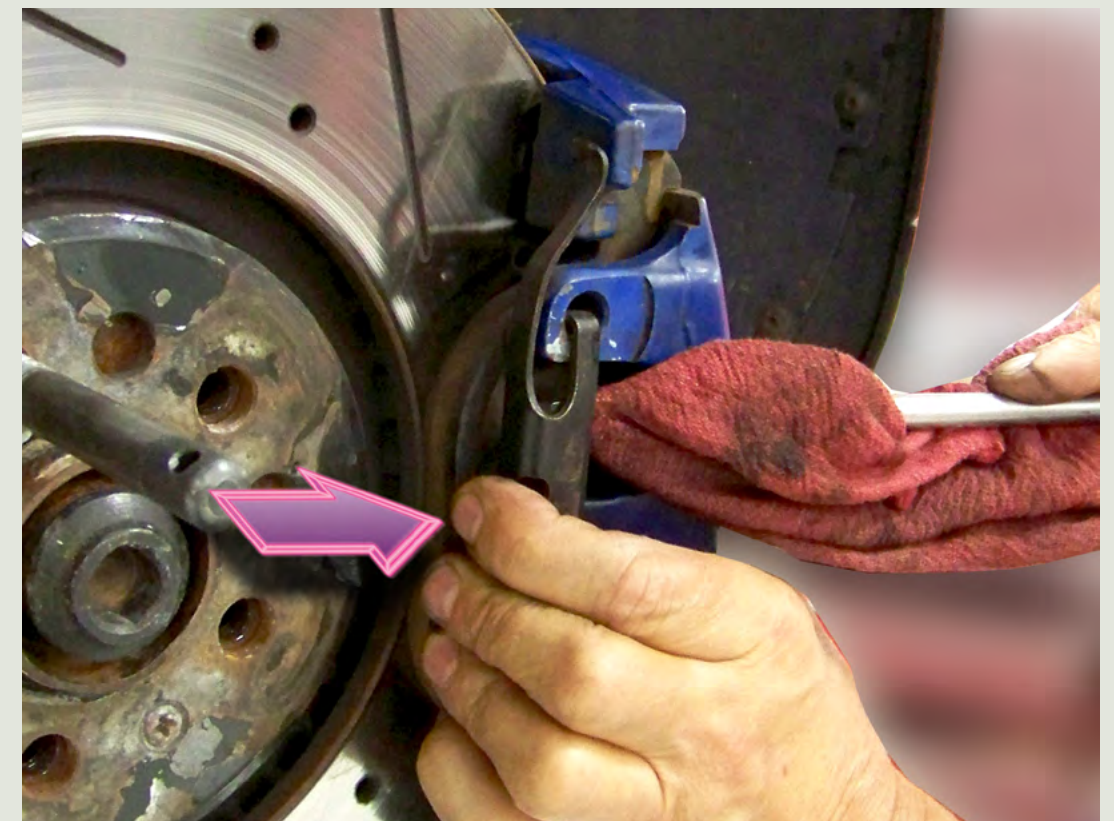
Remove the wheels.



Step 2

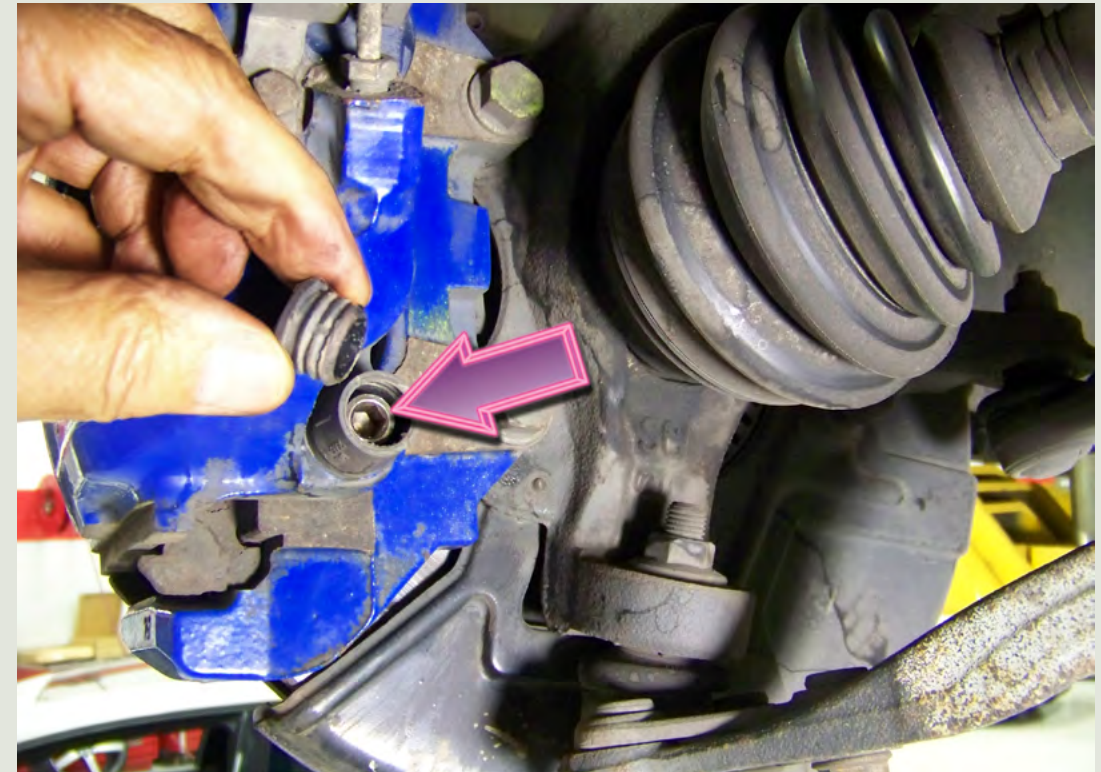
Remove the brake caliper spring clips.

Squeeze the clips with one hand as you pry sideways with a large screwdriver or pry bar. A shop cloth wrapped around the screwdriver will prevent damage to the caliper finish.



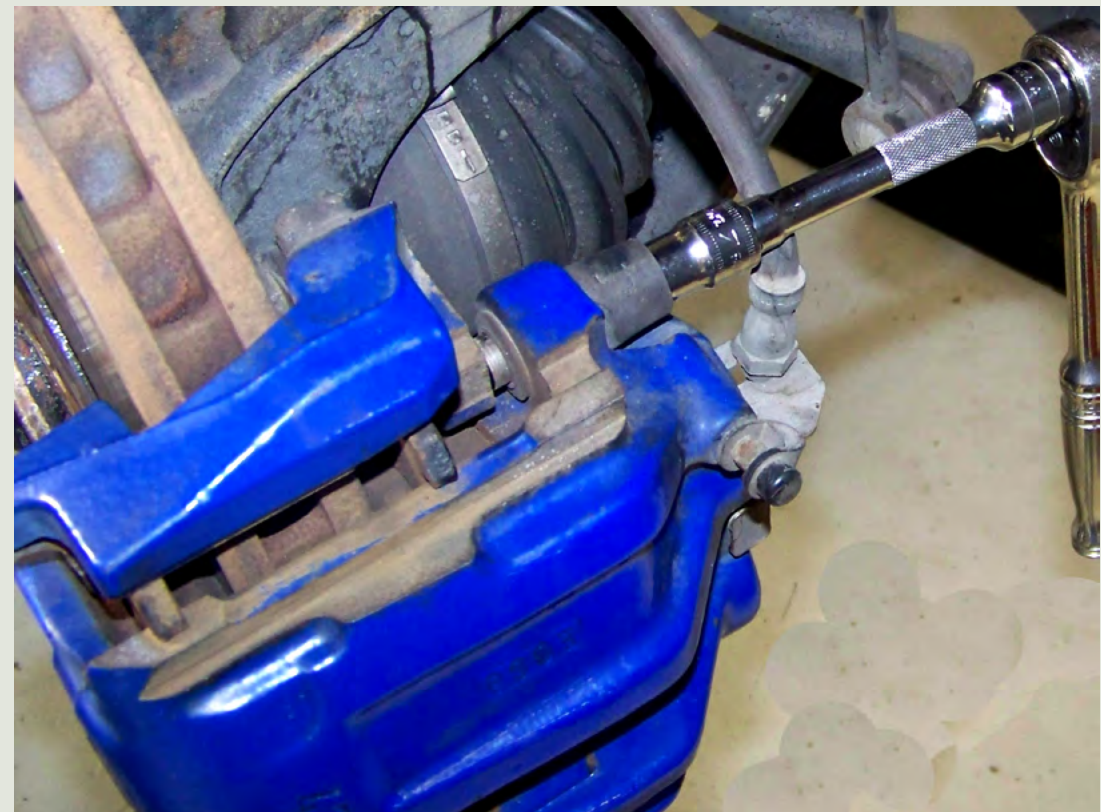
Step 3

Working at the backside of the caliper, pry the plastic covers from the rubber caliper slide pin boots to expose the caliper slide pins (arrow).



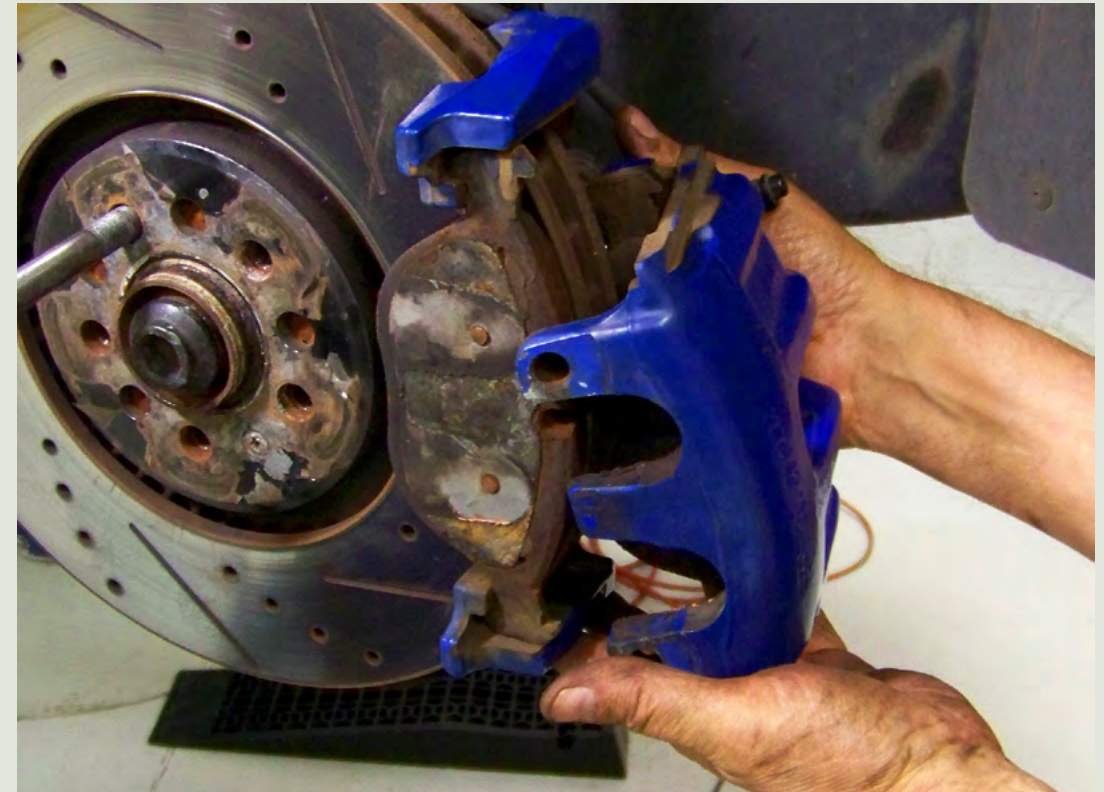
Step 4

Use a 7mm hex driver and ratchet or Allen wrench to remove the two caliper slide pins.



Step 5

Slide the caliper off the carrier and pads and hang it to one side for now.

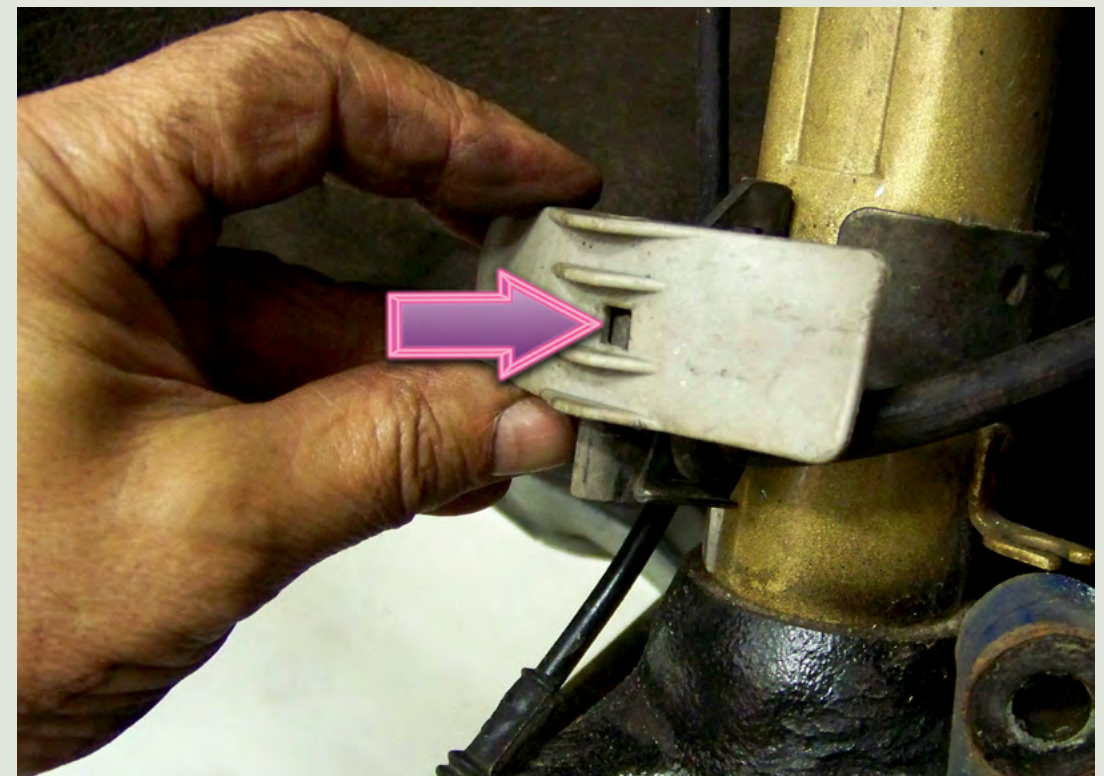


Step 6

Follow the brake hose from the caliper you just removed to the brake hose support bracket bolted to the front strut.

Remove the plastic cover from the brake hose support bracket.

Service Tip: Insert a small screwdriver or pick in the opening in the cover (arrow) and pry the locking tab to one side as you wiggle the cover upward to remove it.



Step 7

Use an 11mm brake line wrench to disconnect the steel chassis brake line (arrow) from the brake hose.

Then pry the u-shaped retainer clip from the hose and pull the hose end down and out of the bracket.

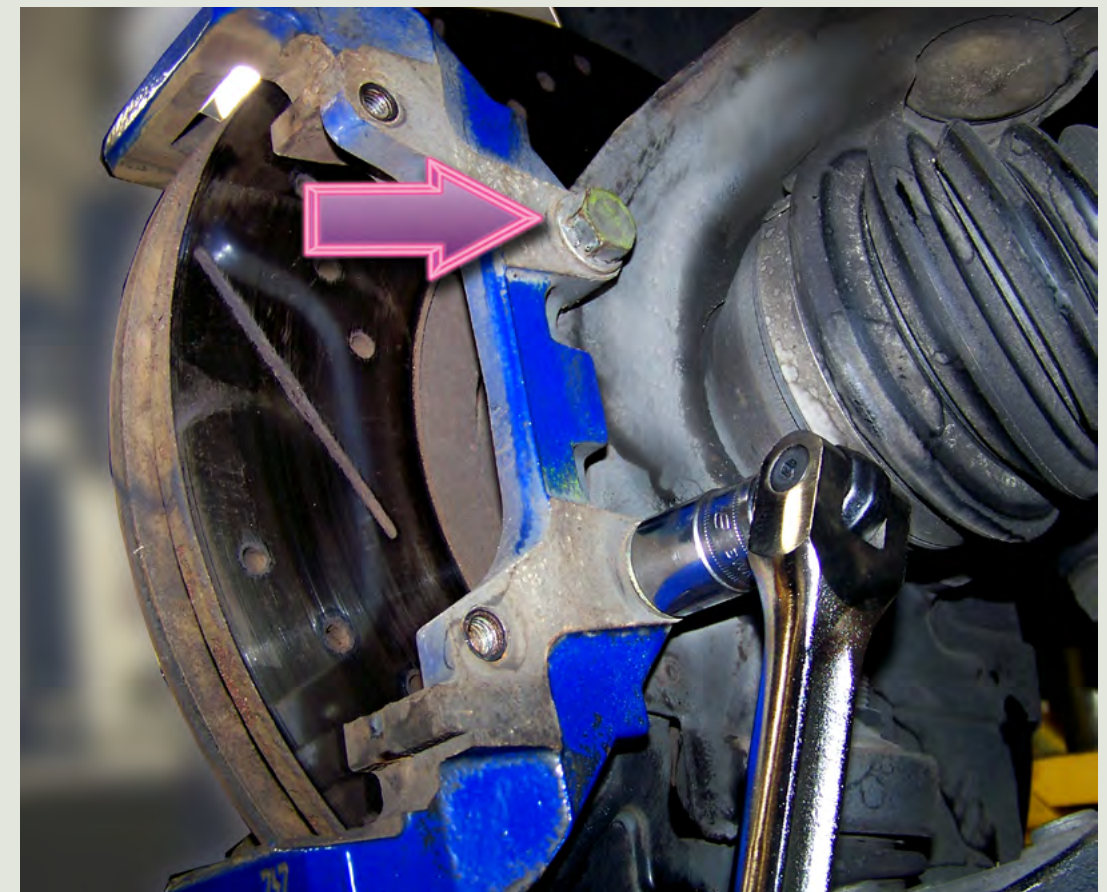
With the brake line disconnected, you can remove the caliper with hose attached from the car, and lay it aside.

Service Tip: Cap the open end of the chassis brake line to keep dirt out of the system and prevent brake fluid from draining on the floor in the work area.



Step 8

Use an 18mm socket and long-handled breaker bar or ratchet to unbolt and remove the caliper carrier from the knuckle.



Step 9

Remove the rotor set screw. Remove the old rotor from the hub.

Service Tip: Rotor set screws made of common steel rust in place tightly and can be hard (or impossible!) to remove with a screwdriver alone.

An impact driver and hardened Phillips head bit do a good job of breaking these free, without stripping the heads.

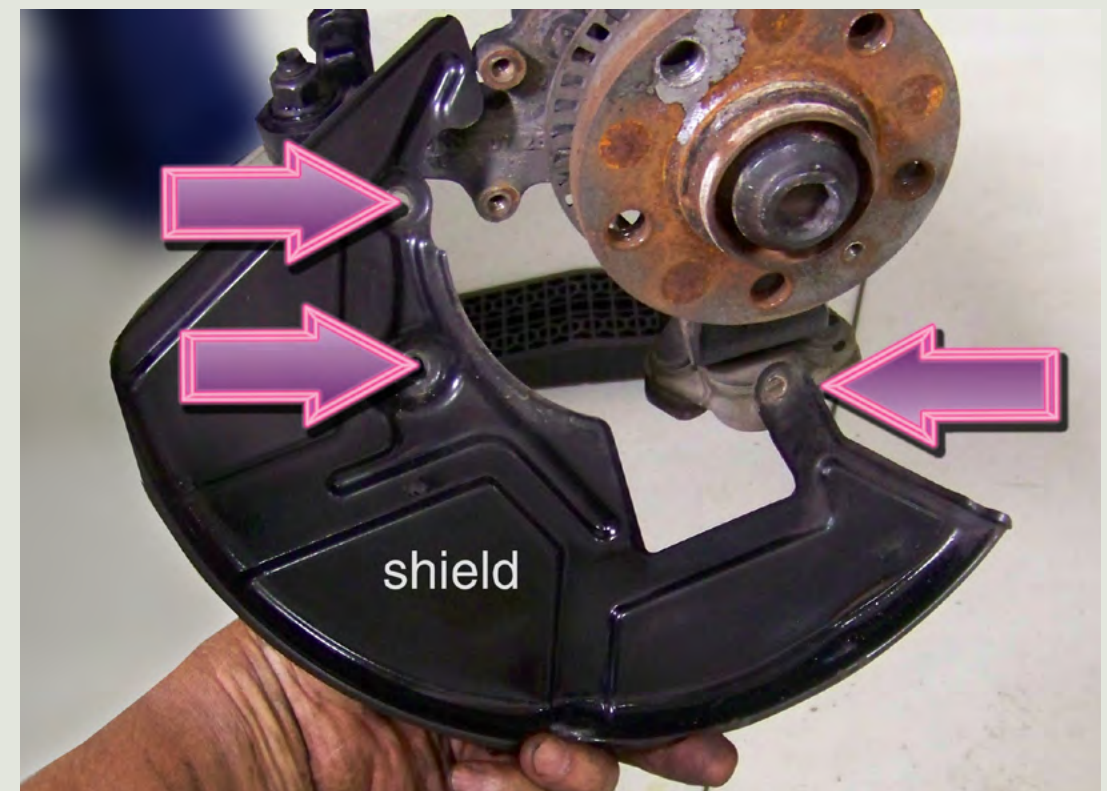
Our [free online video](#) demonstrates how to use the Schwaben® Impact Driver to remove these and other stubbornly tight fasteners.



Step 10

Remove the three retaining screws holding the rotor shield to the knuckle.

Remove and discard the shield..



Step 11

Use an abrasive disc attached to a drill or die grinder to clean the hub face. Remove all heavy scale so the new rotor will sit flush and true with the hub.



Step 12

Install the caliper carrier.

Remove the cap head screws from the kit, and apply a few drops of medium strength thread locker.

You'll need an M10 driver to install the bolts.



Step 12

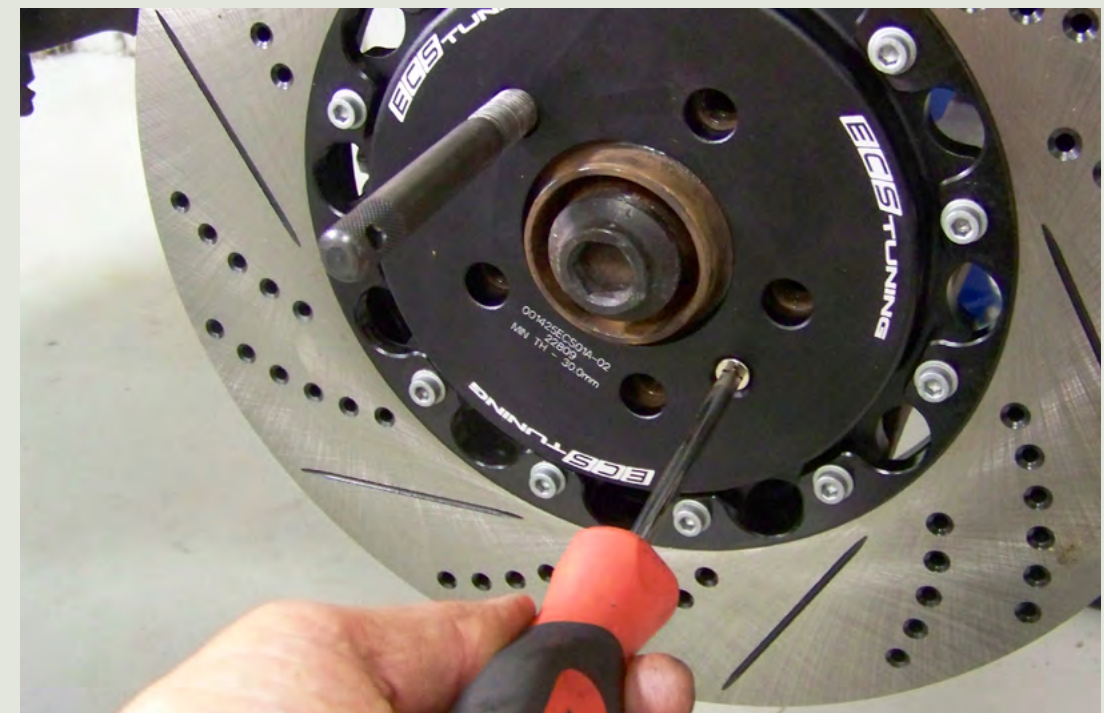
Bolt the caliper carrier to the knuckle.

Torque the bolts to 108Nm (80 ft-lb).



Step 13

Install the new rotor and secure it to the hub with a new stainless steel rotor set screw from the kit.

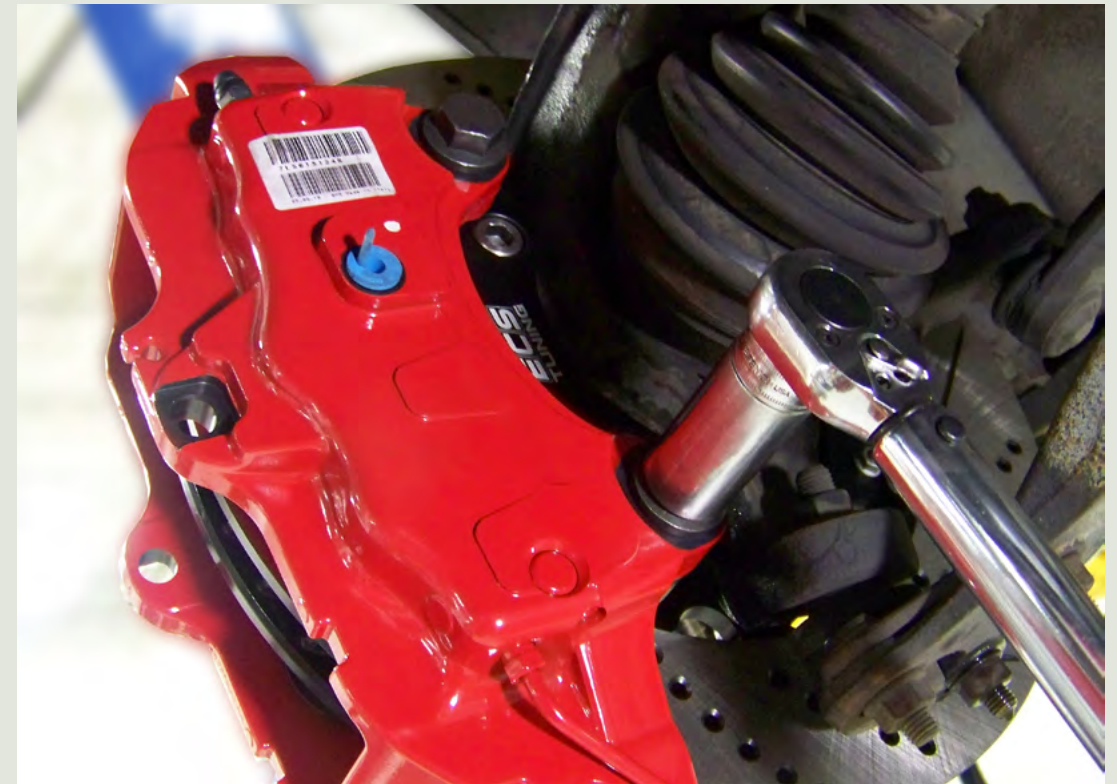


Step 14

Use the hardened 12mm bolts from the kit to bolt the caliper to the carrier. Apply a few drops of thread locker to the bolt threads and torque them to 124Nm (92 ft-lb).

Important: Install the caliper with the bleeder screws at the top or you will not be able to bleed the brakes.

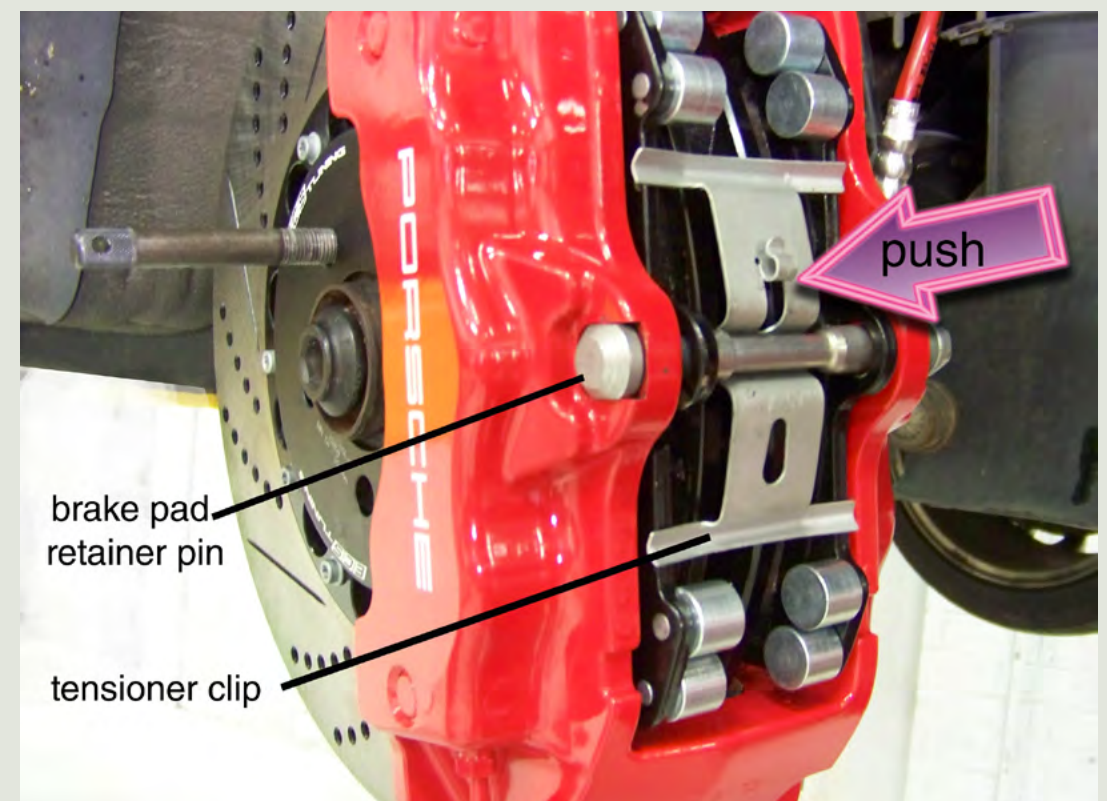
Do not remove the blue plastic shipping plug from the caliper yet.



Step 15

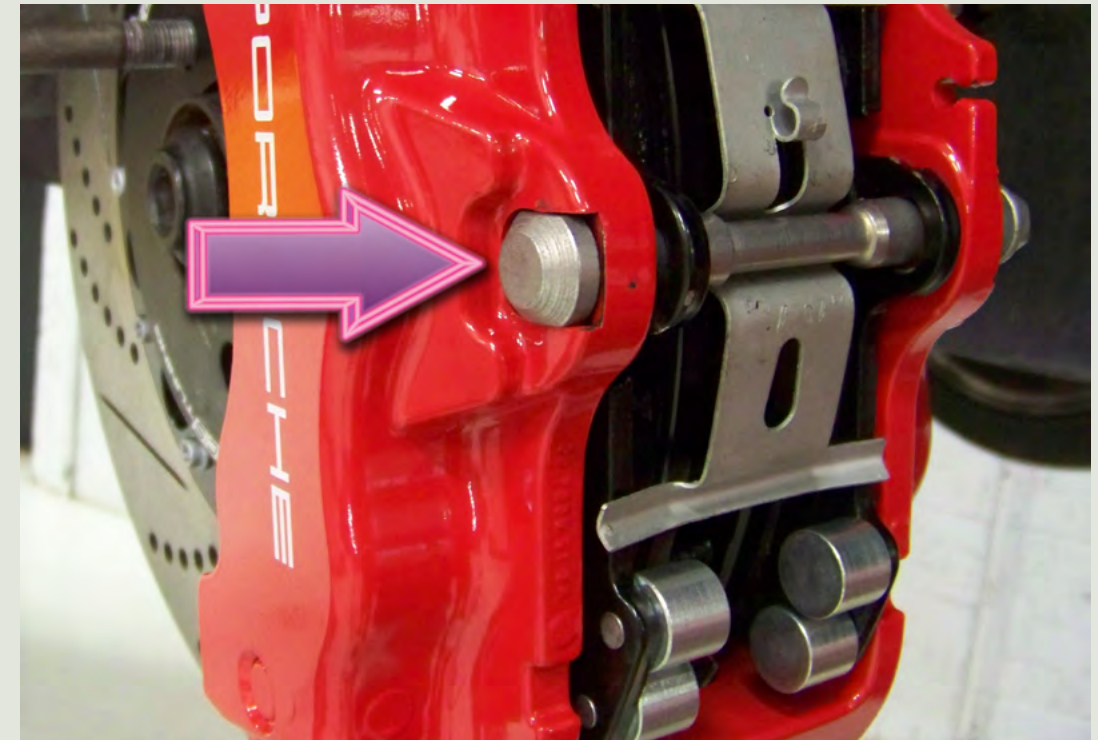
Slide the pads into the caliper and place the silver tensioner clip over the pads, as shown here.

Push inward against the tensioner clip, pressing in the direction of the arrow. Then slide the pad retainer pin horizontally through the holes in the caliper and brake pads.



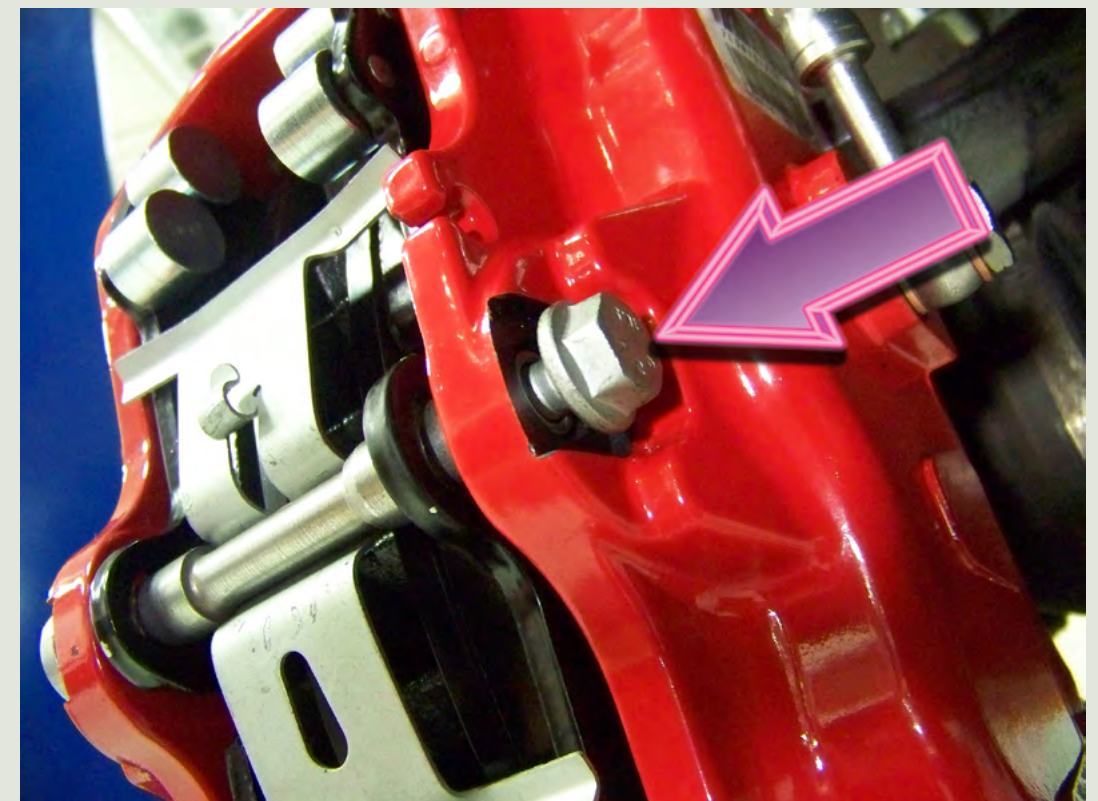
Step 16

This closeup show how the flats in the head of the brake pad retainer pin align with the flats in the caliper body when the pin is properly installed and fully seated.



Step 17

With the retainer pin fully seated, thread the small bolt (arrow) into the opposite end of the pin and tighten it to 27Nm (20 ft-lb).

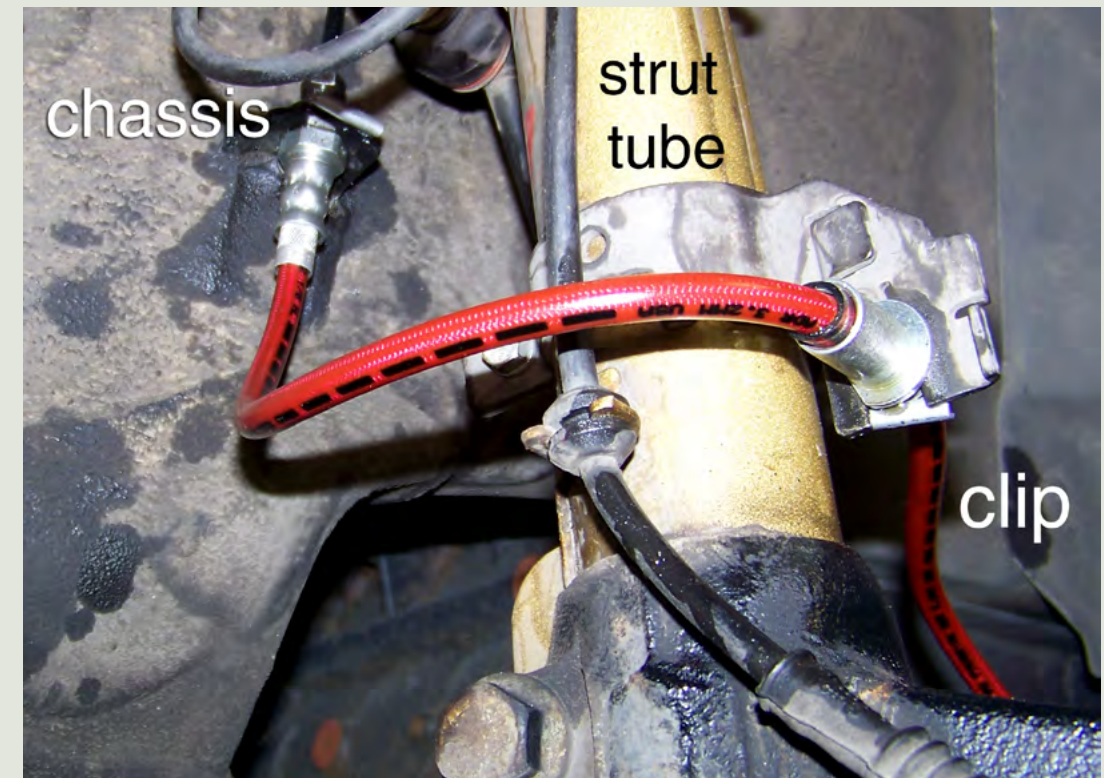


Step 18

Connect the new Exact Fit brake line to the rigid steel brake line at the chassis. After the fitting is tightened, install the u-shaped retainer clip to secure the line to the chassis bracket.

Route the line forward and insert the metal collar on the line into the support bracket bolted to the strut tube. Secure the hose collar into the bracket with a clip. There are four new clips in your kit: two per side.

Service Tip: The metal collars in both brackets must be full inserted to expose the retainer clip grooves. A dab of light grease on the clips will help them slide in place more easily.

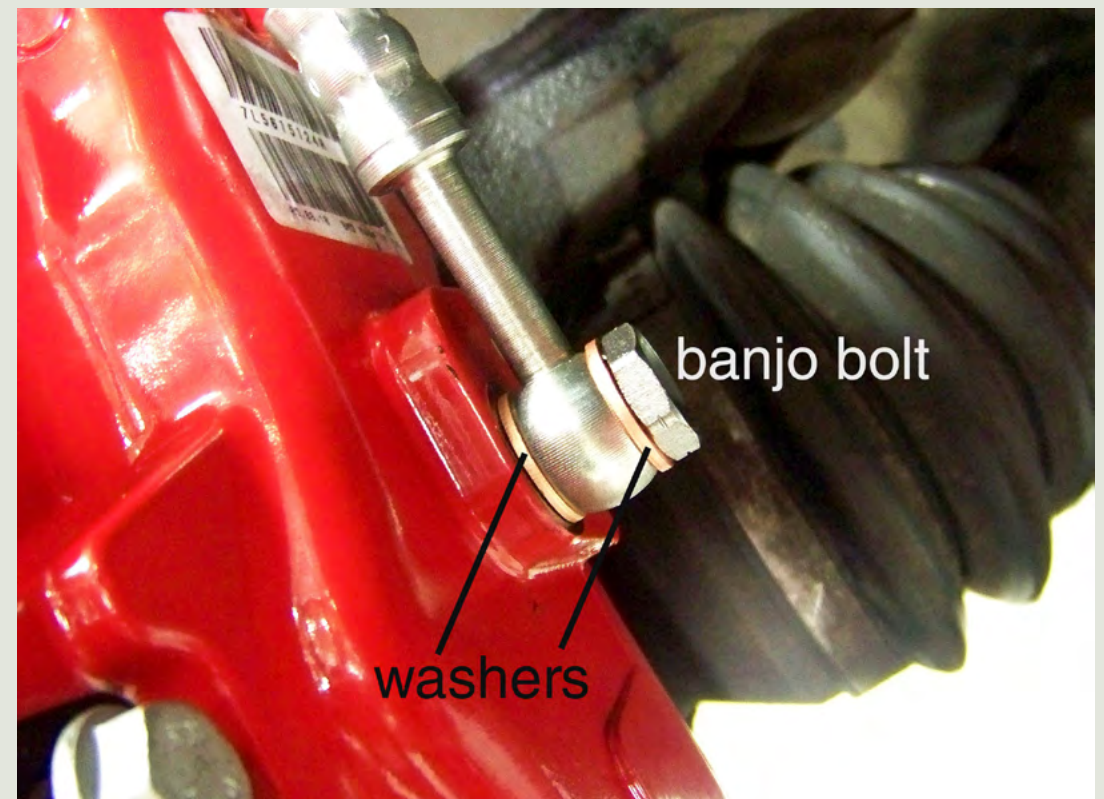


Step 19

Remove the blue plastic shipping plug from the threaded fluid port in the rear of the caliper.

Insert the banjo bolt through the banjo fitting, placing one copper washer on either side of the fitting head.

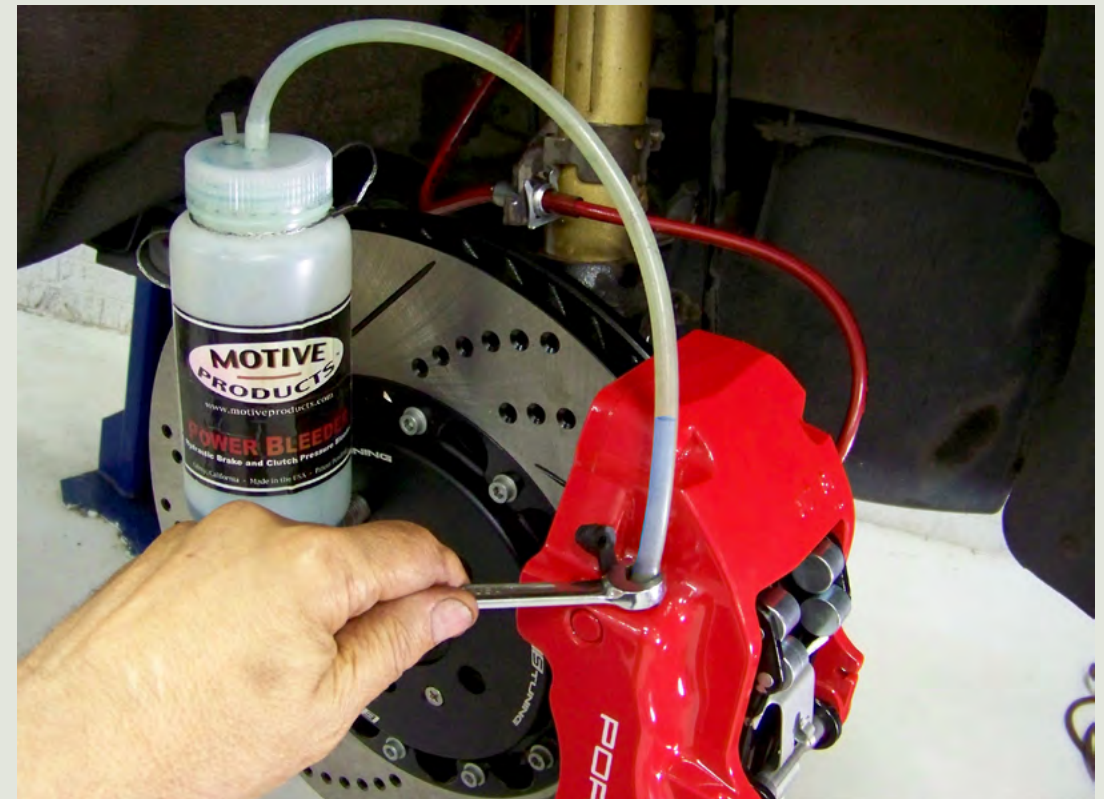
Thread the banjo bolt into the port and tighten it to 20Nm (15 ft-lb).



Step 20

Using your method of choice, bleed the brakes. Your kit comes with a bottle of ATE Super Blue Dot 4 brake fluid, enough to do a complete system flush.

Our [free online video](#) demonstrates how to power bleed your system using a Motive pressure bleeder attached to the master cylinder fluid reservoir.

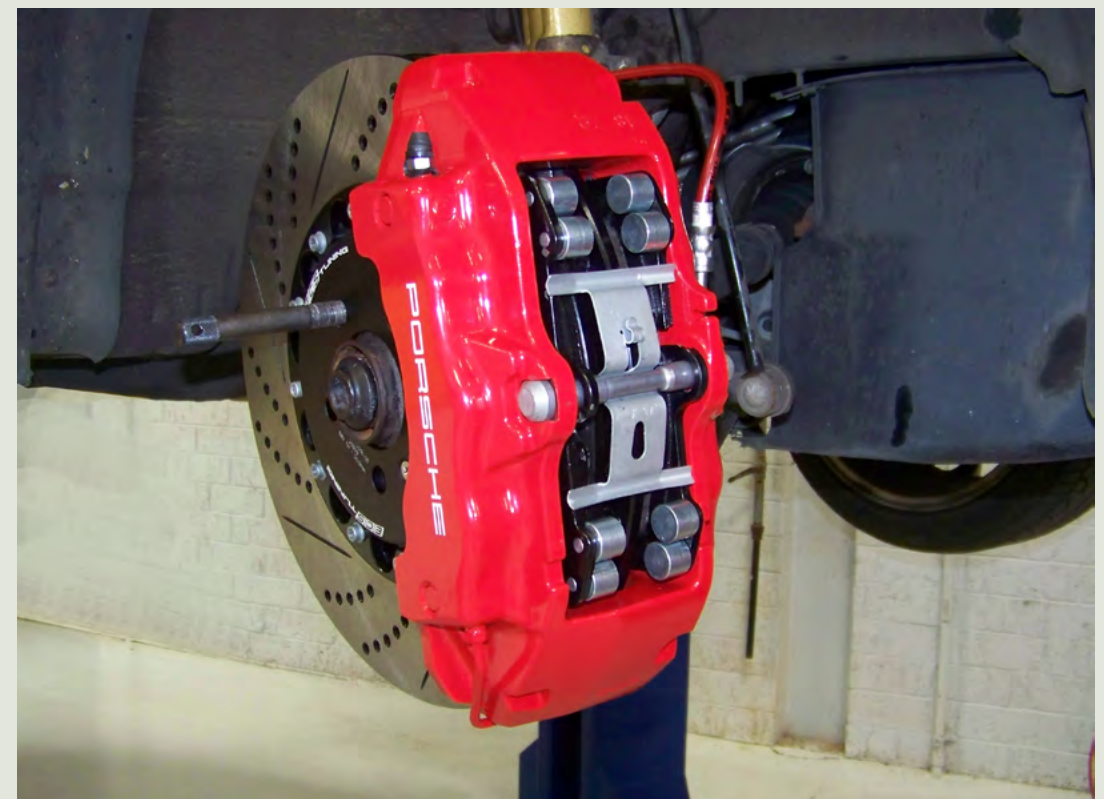


Step 21

Have an assistant pump the brakes several times after they are bled. Check all fittings and connections for leaks before reinstalling the wheels.

Torque the wheel bolts to 120Nm (88 ft-lb).

Then bed the brakes, using the instructions on the next page.



Bedding the Brakes

Your brake installation is not complete until you bed the brakes. Bedding makes your brakes work as they should. Use the instructions on the brake box, or follow the steps below. (Please perform bedding on a quiet road with limited traffic, and observe all traffic signs and local ordinances.)

- 1) Test your brakes **before** going out on the highway. The pedal should feel firm and responsive. If it is soft or spongy, check that all air has been removed by the bleeding process, and that there are no fluid leaks.
- 2) Take the car out on the road. At vehicle speeds of 50-60mph, gently apply the brakes several times to slow, but not stop, the vehicle. This warms the brakes.
- 3) Make 6-10 stops from 35 mph to 5 mph, applying moderate pedal pressure.
- 3) Cruise for several minutes without applying the brakes, allowing them to cool.
- 4) Make 2-3 moderately hard stops from 45 to 5 mph. Brake aggressively, but not hard enough to trigger the ABS.
- 5) Do not ride the pedal. Either apply the brakes to slow the vehicle or fully release them.

Let the brakes cool for 10-15 minutes. Then drive normally.

Thanks!

Thank you for purchasing an **ECS Tuning Big Brake Kit**.

We appreciate your business, and hope this installation guide has been helpful.