



WE CARE! *Guidelines For Installation Of Brake Pads And Rotors*

! CAUTION !

Performing work on your automobile without having proper knowledge, mechanical ability or the proper tools and safety equipment, CAN CAUSE SEVERE INJURY OR DEATH!

BLAUfergnugen! Inc. recommends that you have an 'A.S.E. Certified Audi Technician' install your parts to ensure safety. ALWAYS WEAR SAFETY GLASSES AND OTHER SAFETY ITEMS WHEN PERFORMING THE FOLLOWING WORK !

Please read through this entire document prior to beginning work on your vehicle. By following the guidelines prescribed below, you will prevent 'hanging' brakes or premature warping of brake rotors. Many times these critical details are overlooked.

Preliminary Assessment Of Your Existing Brake System:

- 1) If your brake rotors have warped prematurely, or your brake pads have worn unevenly, you likely have a brake system problem or someone may have overlooked one or more details in the installation of your brake parts. BLAUfergnugen Inc. only offers brake parts from Europe's highest quality O.E. Manufacturers. Brake rotors are precision components and are likely not the cause of a brake problem. In fact, for over 15 years we have not experienced a manufacturing defect associated with the brake rotors we sell and use in our service shop.
- 2) We have many times found that old brake fluid within the brake system is the root cause of 'hanging' brakes. Old fluid leaves sediment in the brake master cylinder and can cause the brake masters piston to stick or hang. This sediment can also build up in the caliper piston housing, filling the air gap in-between the side of the caliper piston and the caliper housing. Even if the brakes have been flushed with new fluid, any remaining sediment can still cause the brakes to 'hang'. Brake hoses can also build up with unwanted sediment. If your brake fluid is black, a dark caramel color, or if it has not been replaced in the past 2 years be sure to flush the system thoroughly.
- 3) Always inspect and replace any brake hoses that show signs of swelling or cracking. Brake hoses have an Inner lining that can contract or swell. This can cause a restricted flow of fluid and the release of pressure after brake pedal depression, resulting in dragging for a few seconds. If your brake hoses are 5 years or older they should be replaced even if they appear on the surface to be in good condition.
- 4) Failure to follow these and other important guidelines can lead to premature brake failure, occasional or consistent brake 'hanging', which can cause warping of the rotors.

Disassembly Procedure:

- 1) To compress caliper pistons: A) Loosen brake bleeder carefully. B) Using large flat blade screw driver, insert it in-between the brake rotor face and brake pads (Figure 1). C) Compress pistons uniformly. (If you have twin piston calipers, alternate between upper piston and lower piston.)
- 2) Remove the caliper from the carrier bracket. Be sure to secure or hang the caliper in such a way that it will not pull on the brake hose.
- 3) Remove the caliper carrier bracket from the strut housing.

4) Secure the caliper carrier bracket in large vice. Using a medium coarse file, remove any rust or scale from the brake pad contact points. The contact points should be filed level to the indentations on the carrier bracket (Figure 2). **Important:** Failure to do so can cause the brakes to hang or drag.

5) Remove the guide pins from the carrier bracket. Clean and inspect for trueness, indentations, and corrosion. File any imperfections off of the carrier pins (Figure 3 with guide pin that has a slight uneven spot). If the imperfections are significant you will need to replace the carrier bracket. Reusing a carrier bracket in poor condition can also cause brakes to 'hang'. (Note: **Front** caliper guide pins **are not** sold separately. Only the complete carrier bracket which includes the guide pins is available. **Rear** caliper guide pins **are** sold separately and are available from BLAUfergnugen Inc.) Clean the carrier bracket pin cavities of old grease. If the cavities are rusty, you will need to replace the entire carrier bracket. Lubricate the carrier bracket pins with a medium coat of anti-seize grease (included in the carrier guide pin boot kit). Note that too much grease in the carrier bracket cavity could limit the carrier pin from floating properly and could also cause brakes to drag.

6) Replace the caliper carrier guide pin boots with new boots (Kit 443-698-470 utilizing guide pins shown in illustrations).

Caliper Inspection:

7) GENTLY Press down the vehicle's brake pedal, only to extend the caliper piston by approximately 1/2".
(CAUTION: Pushing the brake pedal too far down can pop the caliper pistons out of caliper housing !)

8) Using a pick tool, carefully get under the lip of the boot at the calipers piston groove, then loosen the caliper piston boot around the entire perimeter of caliper piston groove (Figure 4).

9) Gently push back the dust boot and inspect the caliper pistons for corrosion (Figure 4). Note: If the caliper piston has excessive corrosion replace the caliper. If the dust boot is ripped or torn replace the caliper or install a caliper seal kit. Failure to repair as outlined above can cause brakes to 'hang'.

10) Using a large pliers or compression tool, compress the caliper pistons to full inward position. Be careful as to not rip the piston dust boot.

11) Using a medium course file, remove all rust scale and file level any imperfections in the caliper claw fingers (Figure 6). Failure to do this will cause brake pad misalignment and premature failure.

12) Using a medium coarse file, remove rust scale and file level any imperfection the face of the caliper pistons (Figure 7). Failure to do this will cause brake pad misalignment and premature failure.

13) Using a medium coarse file, remove all rust and file level any imperfections in the wheel hub (Figure 8). Apply a medium coat of anti-seize grease to the hub face. Failure to do this will cause brake caliper misalignment and wheel balance problems.

14) Install the new brake rotors and caliper carrier brackets. (Rear Caliper Installation requires Piston adjustment for the Emergency Brake - See last page of this document) Secure the carrier bracket bolt to factory specs.

15) Apply a thin coat of anti-seize grease to the area on the carrier where the brake pad rests. Verify that the brake pads 'float' properly on the carrier bracket by sliding them from side to side (Figure 9, 9A).

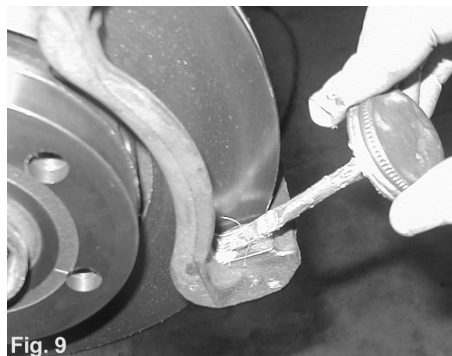
16) Install the caliper to the carrier bracket. Make sure the spring tab on brake pad is in proper position (Figure 10 shows correct - Figure 10A shows incorrect). Torque the carrier pin bolts to factory specs.

17) Inspect and remove all of the rust scale on the back side of the alloy wheel at wheel hub area.. Apply a healthy coat of anti-seize grease to this area before reinstalling the wheel (Figure 11).

18) Install the wheels and tighten all lug bolts in a crisscross pattern, then torque to factory specs.

19) Before lowering the car, make several hard depressions to the vehicles brake pedal. Then rotate each wheel by hand to verify that the brakes are not dragging. The 'feel' of the rotating wheel should be consistent after each pedal depression. (Note: It is normal to have a slight scuffing noise due to the brake pads riding over the face of the brake rotor.)

20) Triple check each lug bolt torque when vehicle is on ground.



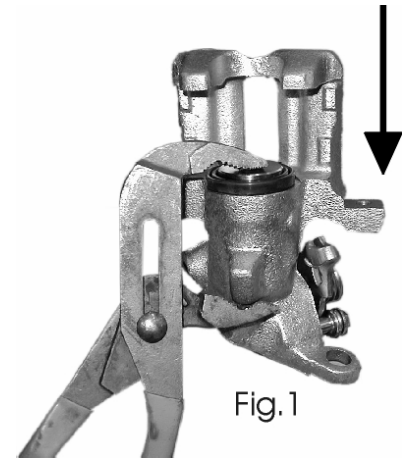
Important Guidelines for Audi - VW Rear Brake Caliper Installation

New and Remanufactured Brake Calipers need to be examined prior to installation for proper Piston adjustment.
Improper adjustment could mean the Failure of proper Parking Brake operation.

Follow guidelines as listed below to adjust the Pistons for Proper Emergency Brake operation.

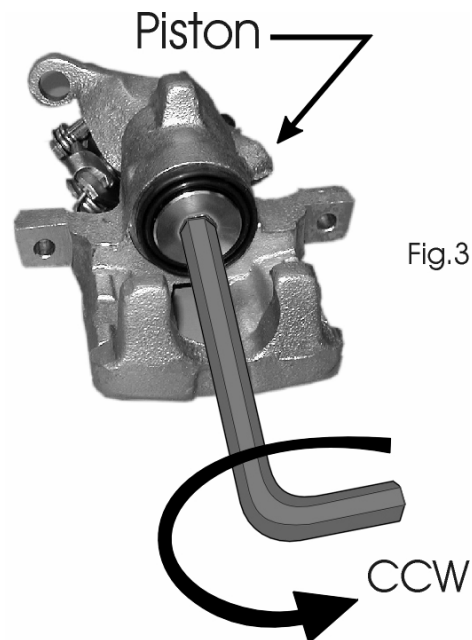
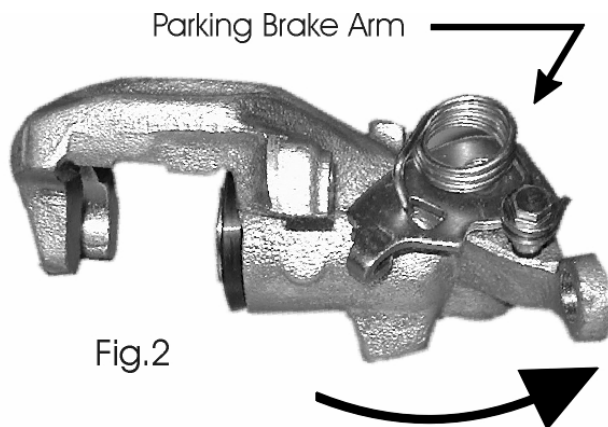
1. Bottom Piston in caliper cylinder using a large pliers. Assembly should look similar to Fig. 1.

2. Locate Parking brake arm. Activate arm by hand or with pliers, simulating the action that occurs when the Parking Brake is applied as shown in Fig. 2. Watch for movement of the Piston. If the Caliper is adjusted properly, You should see Outward movement of the piston. It will move only about 1/16" So you will need to watch Closely. If you need to activate arm repeatedly, be sure to re-compress Piston into Cylinder each time. If the Piston does move as described, push Piston back into the Cylinder and continue installing the Caliper, disregarding any further instructions.



3. If your Piston DOES NOT move as described above, You will need to unscrew the Piston by turning the Piston Counterclockwise $\frac{1}{2}$ to 1 turn as shown in Fig. 3. Use an appropriate tool (Hex Key shown) inserted firmly into the drive socket(s) found on the very top of the Piston. Continue to turn the Piston out until you can successfully conduct the test in paragraphs 1 and 2.

4. Maintenance: Make it a practice to lubricate the parking brake arm shaft on the caliper (fig 2) using A.T.F. oil at every oil change or every six month to prevent parking brake arm shaft seizure.



To promote Safety, BLAUfergnügen Inc.
ALWAYS recommends you take your automobile
to a Qualified Service Facility.