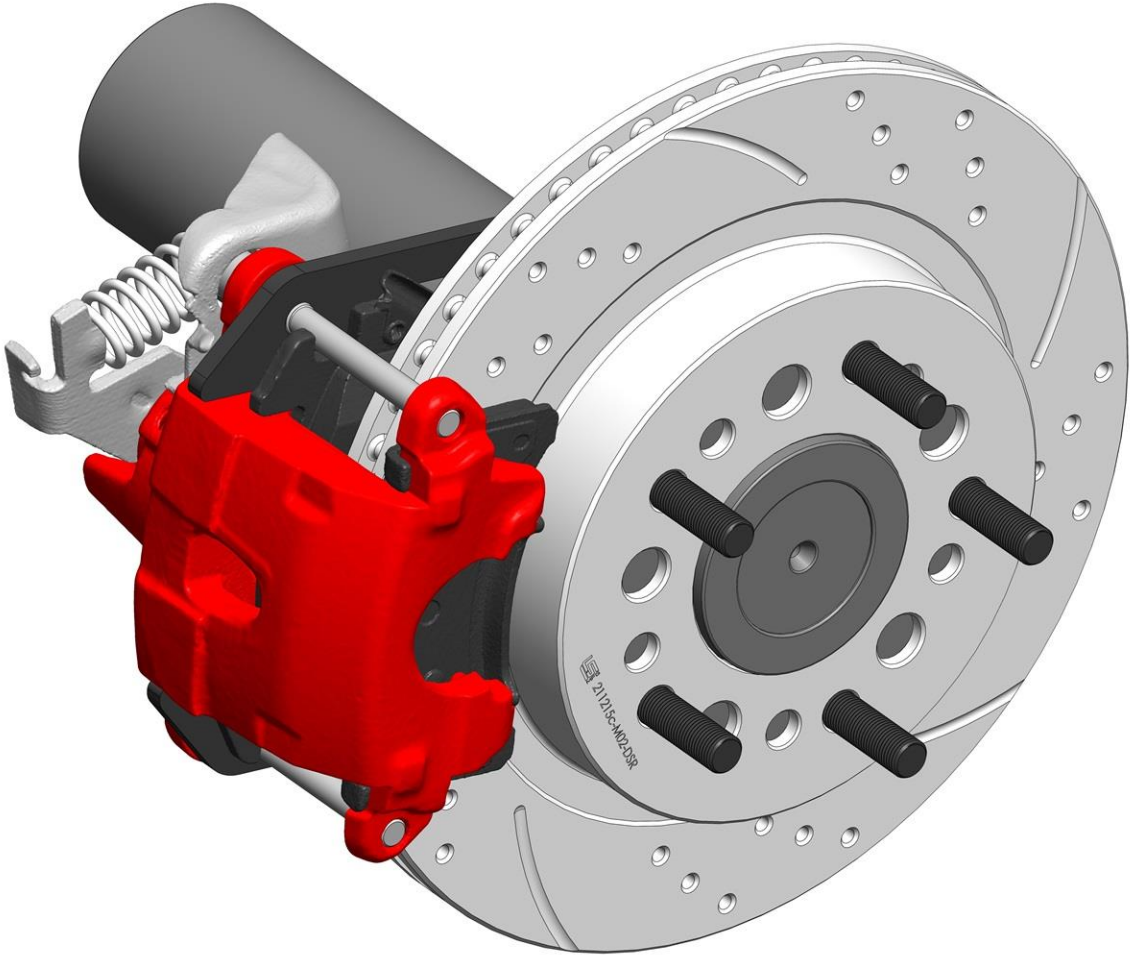


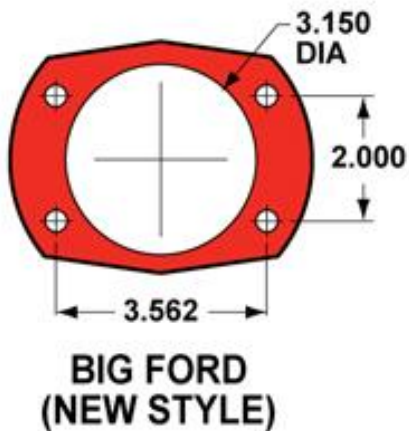


DBC-200518 / DBC-220121
Ford 9" Rear Disc Brake Conversion (New Style and Old Style Flanges)



Fitment

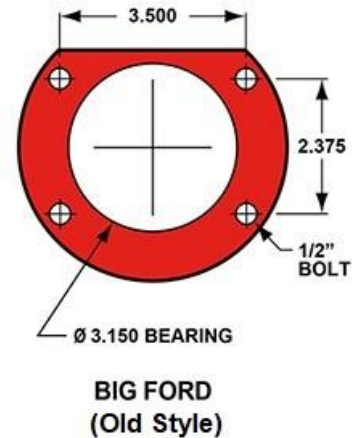
Big Ford New Style 2.5" Offset



If your axle flange and offset do not match the images shown here, then the kit will not fit.

Note: The flange can be measured easily from the back side of the drum, without removing anything.

Big Ford Old Style 2.36" Offset



If your axle flange and offset do not match the images shown here, then the kit will not fit.

Note: The flange can be measured easily from the back side of the drum, without removing anything.

Warning

- Disc brakes should only be installed by someone experienced and competent in the installation and maintenance of disc brakes.
- If you are not sure of how to safely use this brake component or kit, you should not install or use it.
- Do not assume anything. Improperly installed or maintained brakes are dangerous. If you are not sure, get help or return the product.

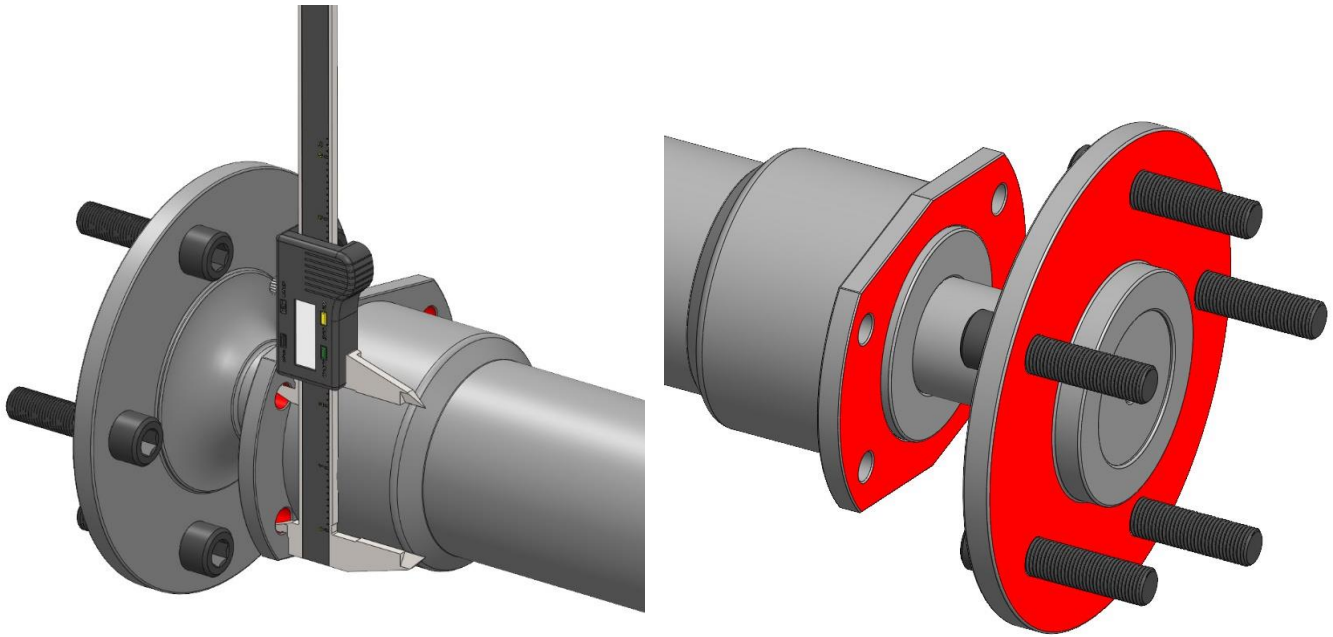
Notes

- As with most suspension and tire modifications (from OEM specifications), changing the brakes may alter the front to rear brake bias. Your specific needs will depend on other modifications to the system.
- For added user control, the factory proportioning valve can be swapped to an adjustable proportioning valve such as [Wilwood 260-10922](#). Installation of a Wilwood adjustable proportioning valve will require brake line work on your end to install since it is not a direct swap.

Notes (continued)

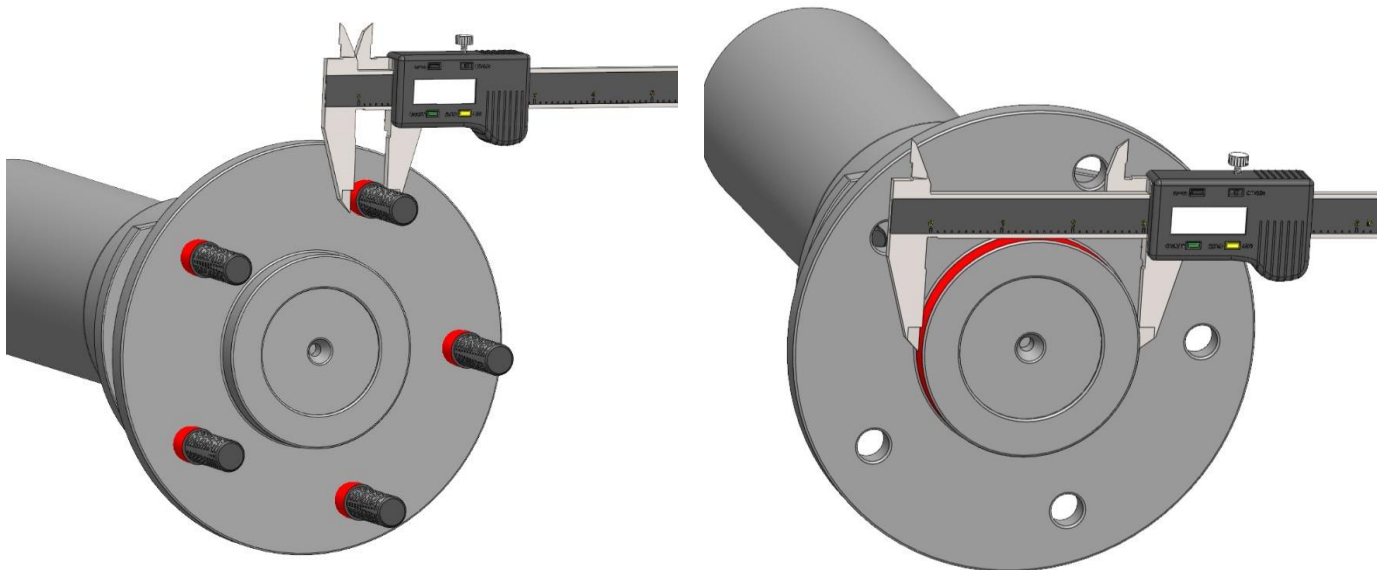
- Your axle shafts **MUST** be removed for installation of the brackets.
- This kit fits most 15-inch diameter wheels and larger. If the caliper contacts the inside of a 15" wheel, in most cases it will be in limited "hot spots." It is acceptable to sand the caliper casting to create clearance in these spots so long as no more than 1/8 inch of material is removed. At the time of installation, prior to any modification, get an estimate of clearance to the wheel. If it cannot be made to work, the kit can be returned to LSMFG so long as it is in resalable condition. Shipping costs will not be included in the refund.
- The use of Loctite® 271 to all threaded mounting bolts is recommended, unless noted differently in the instructions.
- **IMPORTANT:** If you are using a "stock replacement" axle shaft from **ANY** aftermarket company, please verify that the axle shaft flange OD, register (pilot), and wheel studs do not prevent our rotors from sitting flat against the axle shaft. It is quite common for aftermarket axle shafts to vary slightly in some way from a stock axle shaft. Another factor can be axle length versus stock, which changes axle offset. Our kits are verified to fit stock axles, with stock axle shafts. Any deviation from that configuration can cause potential issues.
- The included rotors measure .315 thickness whereas the factory drum measures .125 thick. Technically, the difference moves the wheel outboard by .190, although that amount is typically insignificant.
- **Replacement Parts:** any component in the kit is normally in stock and ready to ship from LSMFG. Refer to the [Disc Brake Parts](#) category to see most of these. If you'd like OEM fitment info on sourcing calipers, hoses, or pads from a parts store then please [CONTACT US](#). The rotors begin as an off-the-shelf part prior to being machined and zinc plated by LSMFG. This work could be copied by a competent machine shop, although it would not likely be as inexpensive as buying them as part of the kit.
- It is the responsibility of the buyer and installer of this kit to verify suitability/fitment of all components and ensure all fasteners and hardware achieve complete and proper engagement. Improper or inadequate engagement can lead to component failure.
- For any questions or suggestions, please [CONTACT US](#)

1 & 2

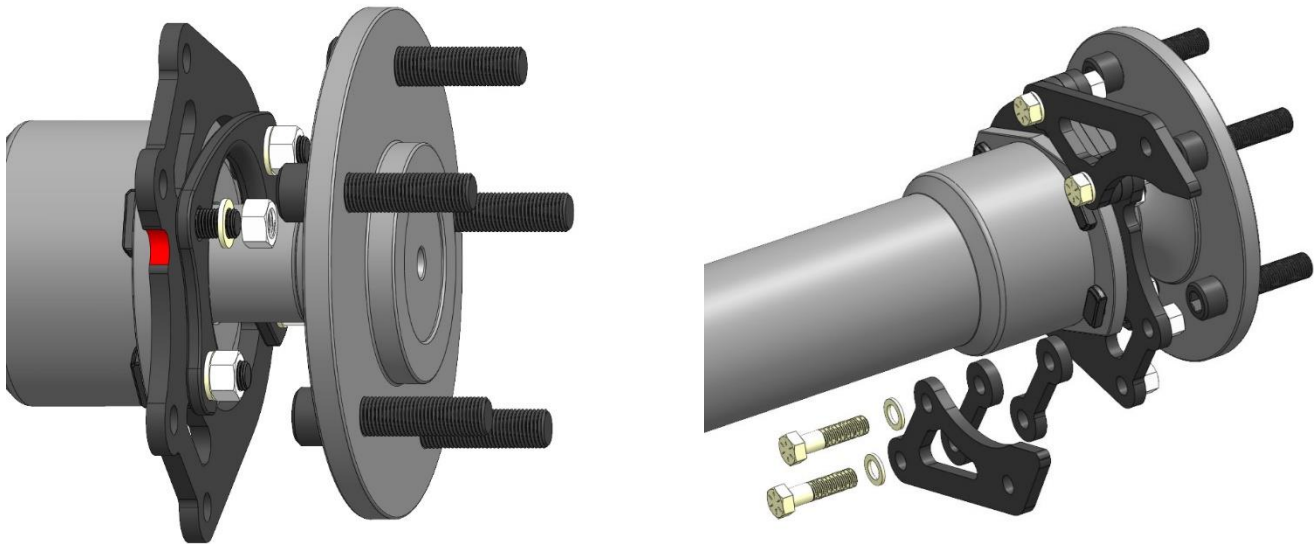


To verify you have ordered the correct kit, measure the axle flange pattern with a digital caliper as shown. Next, measure your axle offset. This is the distance between the 2 red surfaces in step 2. The bolt pattern and offset should match what is shown in the fitment section at the top of this instruction guide. If any of these measurements don't match our fitment information, STOP and [CONTACT US](#).

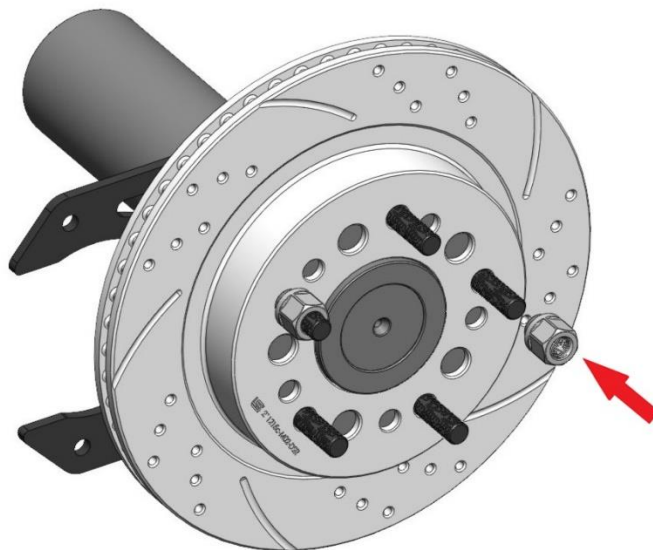
3 & 4



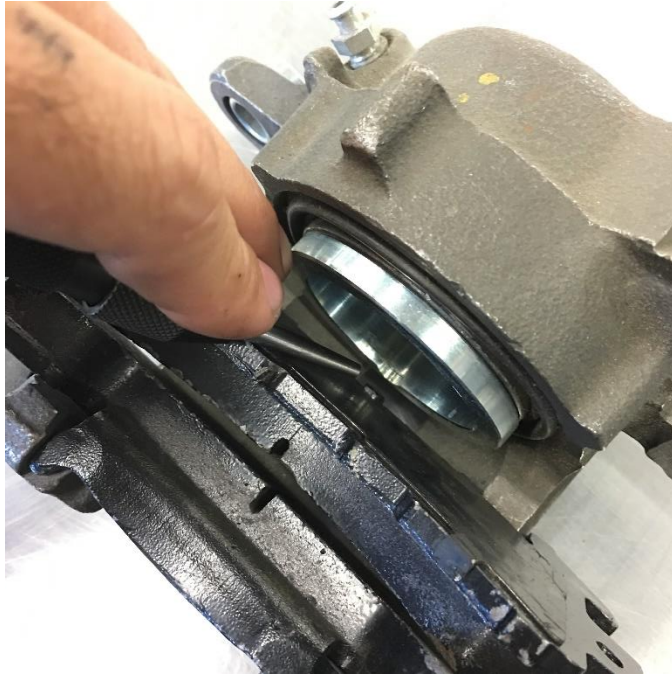
Measure your wheel stud at the base. If there is a shoulder at the base that protrudes past the axle flange surface, measure in that location. Compare this to the rotor lug hole in the bolt pattern you'll be using. Next, measure your axle register. Our rotors have a register dimension of 3.095" (unless custom machined), so your axle register should measure 3.090" or smaller. If any of these measurements don't work for your axle shaft, STOP and [CONTACT US](#).



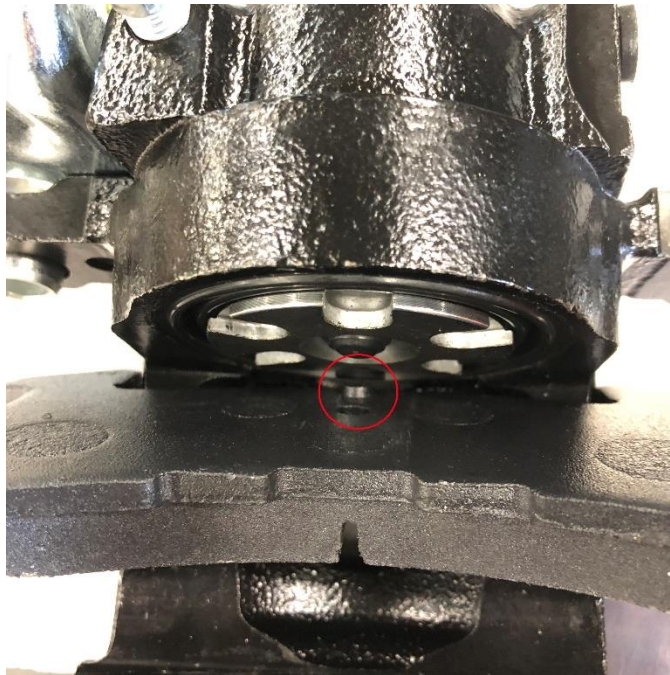
This installation refers to the **passenger side** of the axle. All steps are to be repeated on the driver side. **NOTE:** The axle shafts and stock bearing retainers must be removed for installation. Before installing the brackets, locate the notch as indicated in red. This will be mounted **UP** when the bracket is installed on the axle. Once installed, the brackets will position **BOTH** calipers to the **REAR** of the axle. The included bearing retainer can now be added. Assemble the dog bone spacers and caliper mounts and hardware as shown in step 6. **NOTE:** Ford used 3/8 and 1/2 axle flange bolts throughout the years. Our brackets are cut for 3/8, but you can drill the bracket holes to 1/2 if needed for your axle.



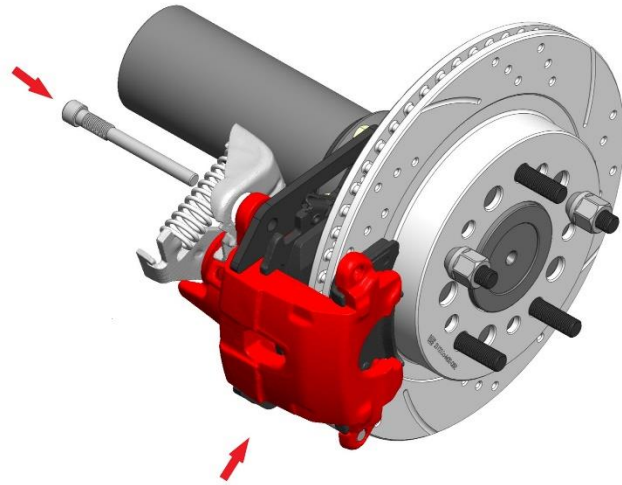
The rotor can now be installed using 2 lug nuts to temporarily secure it. In the case of drilled/slotted rotors, the direction of rotation shown is for the **passenger side**. **NOTE:** Verify that the rotors are sitting flat against the axle shaft.



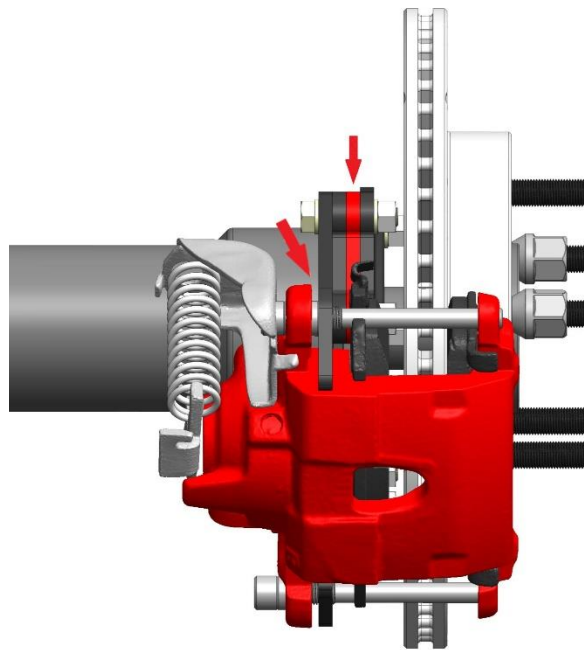
Kits with non-parking brake calipers and .79" thick rotors should be checked to confirm the machined pad spacers are present and make sure the notch in the pad spacer lines up with the corresponding boss on the brake pad. **NOTE:** If your kit has 1" thick rotors, pad spacers are **NOT** required.



Kits with parking brake calipers do not use a machined pad spacer and should be checked to confirm the pad is seated flat against the piston face, with the boss of the brake pad lining up with the notch in the piston face.



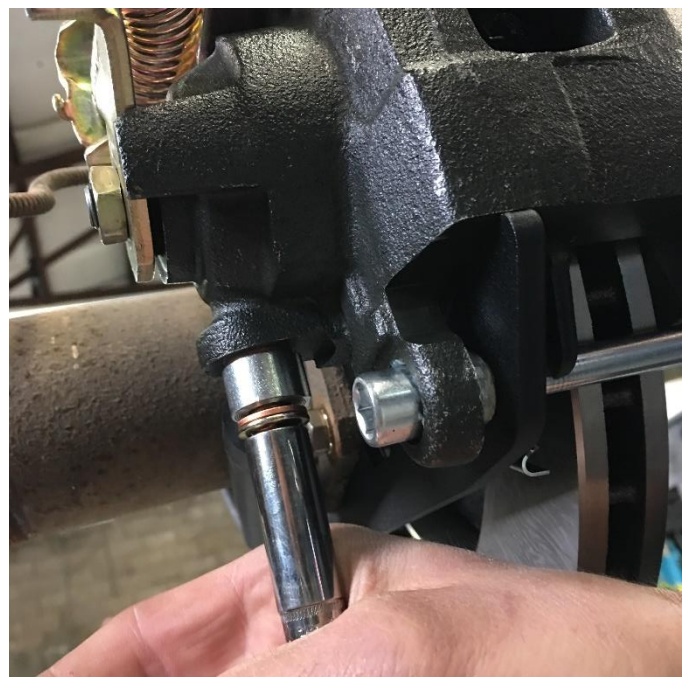
The calipers can now be installed using medium strength threadlocker (such as Loctite 243) on the threads of the two 7/16-20 caliper bolts. **Important: For parking brake calipers, refer to the instructions below for Parking Brake Caliper Setup and Bleeding Procedures for Second-Generation Parking Brake Calipers.**



NOTE: If there is too much pressure on the outside pad once the calipers are installed, (1) dog bone spacer can be removed from the assembly at the top and bottom between the bracket (shown in red).



With the caliper bolted into place, check the corners of the pads against the rotor. The amount of clearance in this spot varies with the multiple caliper options (non-parking brake / parking brake / Wilwood brand) along with brake pad manufacturers. If there is contact in this spot on your particular application, it will be necessary to sand the corners of the pads as shown until 1/8" clearance is made. If you installed Wilwood calipers, check the pad as well as the caliper body and sand both if necessary.



Install the banjo bolt and crush washers onto the hose as shown. If your hose has an offset, place the offset side of the fitting **away** from the caliper. Then install the hose onto the caliper as shown.



Depending on factory cable lengths, the existing cables can sometimes be used without any modification. If they are too long, then cut off the cable stop as shown using cable cutters or a cut-off wheel. The spring can be removed with the cable installed into the parking brake caliper as shown.



The supplied cable stops can be slid over the end of the cable and against the parking brake lever. It is suggested that you tighten the set screws and adjust the system for proper function at this time. There are typically points of adjustment on the factory cables along the chassis (depending on the model and cab configuration). The cable stop itself can be moved forward or back depending on the needs of the system as well. Once it is working correctly, the excess cable can be trimmed closer to the stop. **NOTE:** Long bed or lifted trucks may require our [Parking Brake Cable Kit](#).

Parking Brake Caliper Setup and Bleeding Procedures - PLEASE READ COMPLETELY

Parking brake calipers are preadjusted before they leave our shop so that it is not necessary to adjust them on initial installation. After the caliper is mounted the pads should be very close (within .020") to the rotor surfaces. If there is a large gap between the pads and rotor surfaces, this can cause a soft brake pedal feeling as well as poor brake performance. If the caliper does not slip over the rotor or if re-adjustment becomes necessary for another reason, refer to our [Parking Brake Adjustment Procedure](#). This is **only** in cases where it becomes necessary and not part of a typical installation.

We have found that traditional slow pumping of the pedal works best to bleed brake systems instead of vacuum or power bleeding, which can cause cavitation. We recommend leaving the master cylinder cap off during bleeding for that same reason.

Parking brake calipers in our kits are self-adjusting. Every time you use the parking brake, they adjust themselves for pad wear by clicking to the next stop on an internal ratchet. If you do not use your parking brake during normal operation of the vehicle, over time the pads will wear and there will be insufficient contact between the pads and the rotor. When this happens, the parking brake will never engage. If your calipers require manual adjustment, please contact us. Failure to adjust the parking brake can result in no parking brake, brakes dragging, overheating, premature brake wear, or ineffective rear brakes causing excessive front wear and overheating.

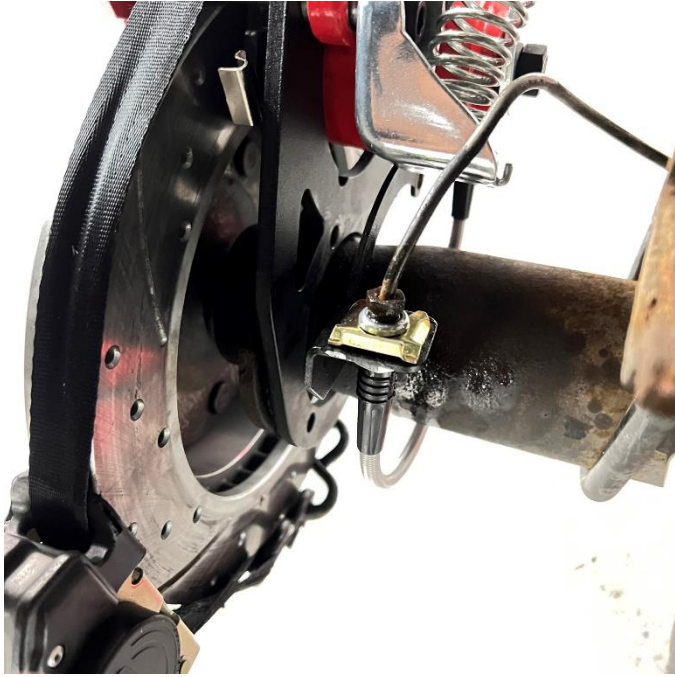
Parking Brake Caliper Bleeding for Second-Generation Caliper Type Shown Below



When bleeding this type of parking brake caliper where the bleeder screw is at a 45° angle once installed, we have found that they bleed best when the bleeder screws are at a **vertical 12 o'clock position**. If they are not, then it will be necessary to reposition the vehicle, the axle, or the caliper. **If the bleeder screw is not vertical while bleeding, then you can bleed gallons of fluid through it without eliminating all of the air.**

CONTINUE TO NEXT PAGE

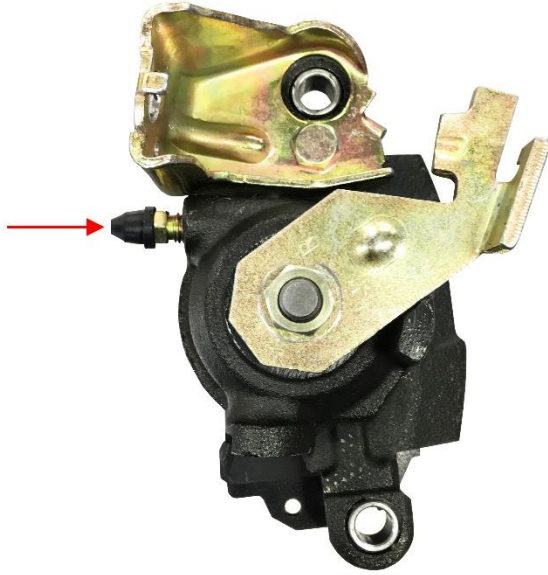
Parking Brake Caliper Bleeding for Second-Generation Caliper Type (continued)



An easy way to accomplish this is to unbolt the main caliper bracket from the axle (leaving the caliper bolted to it) and rotate the caliper around the rotor until the bleeder screw is vertical, then perform the bleeding procedure. Keep the caliper with pads on the rotor during bleeding so that the piston doesn't over-extend outside of its bore.

If you experience any problems during this process, please [CONTACT US](#)

Parking Brake Caliper Bleeding for OEM Caliper Type Shown Below (found in our older kits)



When bleeding this type of parking brake caliper where the bleeder screw is horizontal once installed, we have found that they bleed best when the bleeder screws are **parallel to the ground**. If it is not, then it will be necessary to reposition the vehicle, the axle, or the caliper. **If the bleeder screw is not parallel to the ground while bleeding, then you can bleed gallons of fluid through it without eliminating all of the air.**

If you experience any problems during this process, please [CONTACT US](#)

Additional Information and Recommendations

- As with most suspension and tire modifications (from OEM specifications), changing the brakes may alter the front to rear brake bias. Rear brakes should not lock up before the front. Brake system evaluation and tests should be performed by persons experienced in the installation and proper operation of brake systems. Evaluation and tests should be performed under controlled conditions. Start by making several stops from low speeds then gradually work up to higher speeds. Always utilize safety restraint systems while operating the vehicle.
- To properly bleed the brake system, begin with the caliper farthest from the master cylinder. Repeat the procedure until all calipers in the system are bled, ending with the caliper closest to the master cylinder. **Note:** When using a new master cylinder, it is important to bench bleed the master cylinder first.
- Test the brake pedal. It should be firm (not spongy) and stop at least 1 inch from the floor under heavy load. If the brake pedal is spongy, bleed the system again. If the brake pedal is initially firm, but then sinks to the floor, check the system for leaks. Correct the leaks (if applicable) and then bleed the system again. If the brake pedal goes to the floor and continued bleeding of the system does not correct the problem, either air may be trapped in the system, or a master cylinder with increased capacity (larger bore diameter) may be required.

Brake Testing

- Make sure the pedal is firm: Hold firm pressure on pedal for several minutes, it should remain in position without sinking. If the pedal sinks toward floor, check system for fluid leaks. **DO NOT** drive the vehicle if the pedal does not stay firm or can be pushed to the floor with normal pressure.
- At a very low speed (2-5 mph), apply the brakes hard several times while turning steering from full left to full right, repeat several times. Remove the wheels and check that components are not touching, rubbing, or leaking.
- Carefully examine all brake components, brake lines, and fittings for leaks and interference. Make sure there is no interference with wheels or suspension components.
- Drive the vehicle at a low speed (15-20 mph) making moderate and hard stops. Brakes should feel normal and positive. Again, check for leaks and interference.
- Always test vehicles in a safe place where there is no danger to (or from) other people or vehicles.
- Always wear seat belts and make use of all safety equipment.

Pad and Rotor Bedding

- Once the brake system has been tested and determined safe to operate the vehicle, follow these steps for the bedding of the pads and rotors. These procedures should only be performed on a racetrack, or other safe location where you can safely and legally obtain speeds up to 65 MPH, while also being able to rapidly decelerate.
- Begin with a series of light decelerations to gradually build some heat in the brakes. Use an on-and-off the pedal technique by applying the brakes for 3-5 seconds, and then allow them to fully release for a period roughly twice as long as the deceleration cycle. If you use a 5 count during the deceleration interval, use a 10 count during the release to allow the heat to sink into the pads and rotors.
- After several cycles of light stops to begin warming the brakes, proceed with a series of medium to firm deceleration stops to continue raising the temperature level in the brakes.
- Finish the bedding cycle with a series of 8-10 hard decelerations from 55-65 MPH down to 25 MPH while allowing a proportionate release and heat-sinking interval between each stop. The pads should now be providing positive and consistent response.
- If any amount of brake fade is observed during the bed-in cycle, immediately begin the cool down cycle.
- Drive at a moderate cruising speed, with the least amount of brake contact possible, until most of the heat has dissipated from the brakes. Avoid sitting stopped with the brake pedal depressed to hold the car in place during this time. Park the vehicle and allow the brakes to cool to ambient air temperature.

POST-BEDDING INSPECTION: After the bedding cycle, the rotors should exhibit a uniformly burnished finish across the entire contact face. Any surface irregularities that appear as smearing or splotching on the rotor faces can be an indication that the brakes were brought up to temperature too quickly during the bedding cycle. If the smear doesn't blend away after the next run-in cycle, or if chatter under braking results, sanding or resurfacing the rotors will be required to restore a uniform surface for pad contact.

For any questions or suggestions please [CONTACT US](#)

