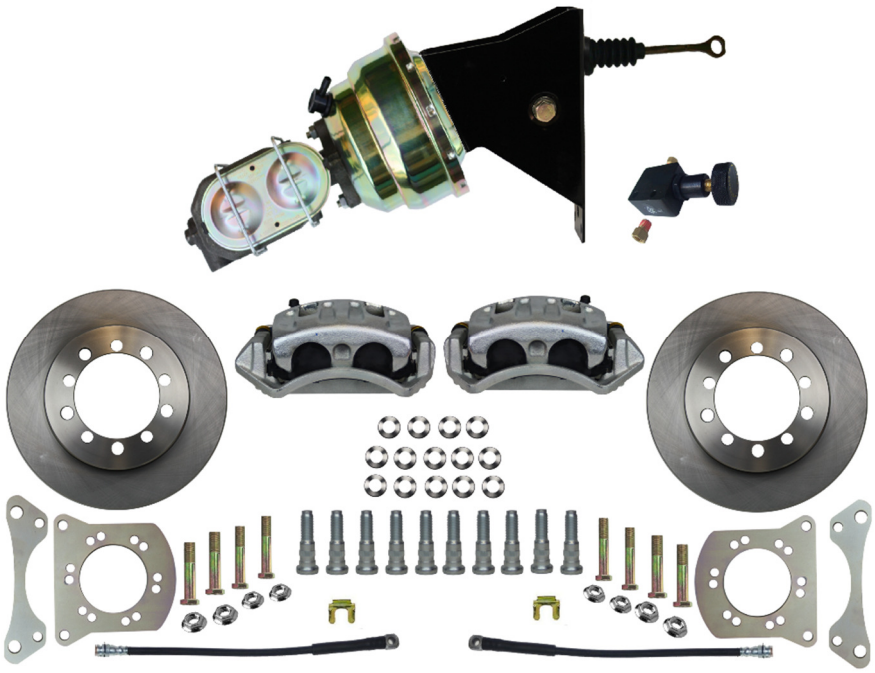
Installation Instructions

Power Disc Brake Conversion Kit

Item # **FC5001-8105**

Applications: 1966-75 Ford Bronco



Thank you for choosing Leed Brakes for your automotive product needs. Before you begin your installation please inspect all parts and review the installation instructions. If you have any missing or damaged parts or if you have any questions regarding the fitment of this kit on your specific vehicle please contact our customer service team at (716) 852-2139 before beginning your installation

Tools required for a safe and smooth installation:

Proper Jack & Jack Stands, Tube Wrenches, Standard Socket Set, Standard Wrench Set, Torque Wrench, Lug Wrench, Pliers, Mallet, Brake Fluid, Brake Cleaner, Wheel Bearing Grease.

Drum Brake Removal:

1. Safely raise the vehicle off the ground until the wheels are clear and spin freely. Support the vehicle using the appropriate Jack Stands and remove the front wheels.
2. Begin by removing the lockout hub assemblies. Please note that the factory or factory replacement lock out hubs will be reused with this kit. Next remove the outer and inner spindle nut assemblies.
3. You should now be able to slide the hub/drum assembly off the spindle. If you have trouble removing this assembly, you may need to retract the brake shoes by inserting a flathead screwdriver into the adjustment slot in the drum brake backing plate. Use the screwdriver to disengage the adjusting lever from the adjusting screw. You should now be able to turn the adjusting screw to retract the brake shoes.
4. Before you remove the drum brake backing plate you will want to remove all brake fluid from your brake system. ***Be very careful not spill any brake fluid on any painted surfaces as it will damage your paint.*** To remove the brake fluid from your system first remove the lid from your master cylinder. Next place one end of a clear hose on the bleeder of your wheel cylinder and the other into a suitable container. Finally open the bleeder screw until all fluid has been removed from your system
5. Disconnect the short hard brake line from the back of the wheel cylinder and from the flex hose at the top of the knuckle. It is recommended you use a tube wrench as to not damage the brake line fittings. If your fittings look rusty spray them with penetrating oil and let them soak for easy removal.
6. Disconnect the front axle hard line from the factory flex hose.
7. Remove the horseshoe clips from both ends of the factory flex hose and remove the hose.
8. Remove the drum brake backing plate assembly by removing the 6 spindle retaining bolts and removing the spindle and backing plate from the knuckle. Use caution not to damage the bearing surfaces on the spindles.
9. Clean and inspect the spindles and the face of the knuckle. Install the spindles back onto the knuckle and align the 6 mounting holes. **Photo 1**

Bracket Installation:

1. The brackets must be pre-assembled prior to installing them on the truck. As shown in **Photo 2** you will need to assemble the base bracket, spacers and upper bracket and secure with the 7/16” bolts and nylon lock nuts supplied. The brackets are machined the same for left and right sides, but the upper bracket will need to be installed on the inboard side of each base bracket. Also, be sure the nylon lock nuts are installed on the outboard side of the bracket assemblies. **Photo 2 & 3**
2. The calipers will be installed on the rear side of the spindle pointing back towards the firewall. The brackets are double drilled allowing you to install them in either the 3 and 9 o’clock position or the 2 and 10 o’clock position. For most installations the 2 and 10 o’clock position will work best, and Dana 44 axles must be installed in this position. **Note that Dana 44 knuckles will require minor grinding to create adequate clearance for the lower caliper bracket bolt. The area marked in Photo 4 shows the general area the grinding will be required. Loosely install your bracket assembly and mark your knuckles accordingly.** The bracket assemblies will bolt to the outside face of the spindles using the (6) 3/8” mounting holes. Secure the brackets using the 3/8” bolts supplied. Use blue Loc-Tite on these bolts and torque to 40-45 ft/lbs. **Photo 4, 5 & 6**

Rotor Installation

1. Remove the brake drums from the hubs if they did not come off when the hubs were removed.
2. The lug studs in the hubs will now need to be removed. If they are the original studs the shoulder above the face of the hub may be crimped. If they are pressed or hammered out of the hubs this will damage the holes and create problems when installing the new studs. The best approach is to cut the studs of flush with the face of the hub and then press out the remaining end of the stud.
3. Clean and inspect the backside of the hubs. They must be clean of any rust or debris and free of any burrs or damage. This is the mounting face for the new brake rotors and any imperfections can cause run out in the brake rotor.
4. Place one of the supplied spacers into the counter bored holes on the backside of the hubs. **The spacers must be flush or slightly below the surface of the hub. If the spacers stick up above the face of the hub they will need to ground or machined down until they are flush.** Factory hub castings varied significantly. We supply spacers for the deepest castings, but some shallower casting will require this extra step. These spacers must be used to ensure the rotor is not damaged when the new studs are pressed in. **Photo 7**
5. Next place the new rotors face down on the back side of the hubs and align the lug stud holes. Make sure the rotor is sitting flat against the back side of the hub face. It should not be held away from the hub by the spacers **Photo 8**
6. From the backside place one of the supplied lug studs in each hole. Be sure the rotor is sitting flat against the back face of the hub and that the lug studs can easily be started into the holes. The studs must now be pressed fully into place to secure the rotor to the hub. A hydraulic press works best for this procedure, but it can be accomplished with a hammer and drift if the hub face is properly supported, and great care is taken not to damage any of the components. **Photo 9**
7. This is a great time to install new wheel bearings and seals. If you choose to reuse your originals or purchase new ones, they must be packed with hi temperature wheel bearing grease for disc brakes. **Do not** reuse your old bearings without repacking them.
8. The hub and rotor assemblies can now be slid onto the spindle and the wheel bearings and spindle nuts can be reinstalled. The spindle nut hardware and lock out hubs can be reinstalled in the reverse of removal. If you are unsure of the assembly procedure, please consult a manual for your hubs.
9. Spin the rotor by hand to ensure it clears all the brackets and hardware and that the rotor runs true without any wobble or runout. **Photo 10**

Caliper Installation

1. Calipers should arrive preloaded, if they are not, you must install the brake pads so that the friction material is facing each other. Install the calipers so the bleeder screws are pointing up and secure with the 14MM bolts and lock washers supplied. The bolts will pass through the upper bracket and thread into the caliper assembly. Torque the bolts to 100 ft/lbs. **Photo 11 & 12**
2. Once the calipers are installed spin the rotors to ensure there is no interference between the caliper and the rotor. If the outboard side on the caliper is too close to the rotor additional flat washers can be used with the supplied spacers to move the caliper outboard away from the rotor. **Photo 13**
3. Install the flex hose to the caliper using the banjo bolt and copper washers supplied. **Photo 14**
4. Install the other end of the flex hose to the bracket on the axle housing and retain it using the horseshoe clip provided. You will no longer use the flex line bracket on the top of the knuckle. Reconnect the original hard line and tighten using a tube wrench.

5. Turn the wheels thru a complete left and right turn to insure there is no interference with the new brake system and any suspension or body components. Also check the rubber hoses during this operation to ensure the hoses are not binding or twisting. If your rubber hoses bind during a turn, you could experience loss of braking while driving. If it looks like they are binding remove the horseshoe clip and reposition the brake hose until it no longer binds.
6. With the truck still on jack stands install the wheel and check for caliper clearance. If the wheel goes on fully and sits flat against the face of the hub install all 5 lug nuts and tighten. Spin the wheel by hand and again check for any interference with either the brake caliper or flex hose. If everything clears you can repeat the process for the other side. If any interference is found optional wheel spacers are available for purchase from Leed Brakes. The spacers will normally only be needed with early factory style wheels. The spacers we offer are .375" thick, but other thickness options may be available through your local performance parts distributor.

Brake Line And Proportioning Valve Installation

1. This kit is supplied with an adjustable style proportioning valve that will be used in conjunction with your factory distribution block. Install the supplied brass fittings into the ports of the adjustable proportioning valve.
2. Disconnect the line from the factory distribution block that goes out to the rear brakes. Connect that line to the **Out** port of the adjustable proportioning valve using the supplied adapter fitting if needed. You will then need to install the supplied line between the factory distribution block and the adjustable proportioning valve. This line will need to be bent to complete the installation. An alternate method would be to cut a section out of the rear brake line after the factory distribution block and flare new end onto the line to make room for the adjustable valve. This allows the valve to be mounted anywhere between the factory block and the rear flex line.

Power Booster Installation

1. The power booster mounting bracket will bolt to the existing holes in your fire wall. You will use one of the master cylinder mounting holes in addition to 3 other existing holes around the perimeter of the master cylinder plate on the firewall. You will need to remove and reinstall the bolts from the other holes.
2. Connect the pushrod of the power booster mounting bracket to the brake pedal in the same way the stock master cylinder was connected. Make sure the brake pedal moves freely and the brake light switch is reinstalled and operating correctly.
3. Remember to connect the power booster to a source of manifold vacuum.
4. This is a good time to temporarily install the master cylinder and run your new brake lines. Keep in mind that the bowl closest to the front bumper is for the front brakes and the bowl closest to the fire wall is for the rear brakes. The front brake port of the master cylinder is ½"-20 thread and the rear brake port is 9/16"-18 thread.
5. Be careful to connect the proper port of the master cylinder to the proper port of the factory distribution block.
6. Once the new lines have been fit the master cylinder must be removed for bench bleeding.

Master Cylinder Bench Bleeding

1. Before you install your master cylinder you must **bench bleed** it in a vice off the vehicle using the **bench bleeder kit** provided.
2. To Bench Bleed
    a. Place your master cylinder in a **vice** by the mounting ears.
    b. Attach a clear plastic hose to the short end of each of the plastic nozzles provided.

c. Clip the plastic bridge onto the partition wall of the master cylinder and insert each plastic tube into the holes ensuring the end of the tube will be fully submerged in the brake fluid.
d. Press the tapered end of the nozzles firmly into the master cylinder ports with a twisting motion.
e. Fill the reservoir with new clean brake fluid (DOT 3 or DOT 4 Recommended).
f. Using a large Phillips head screwdriver push the piston in, then release using full strokes. This MUST be done until ALL air has disappeared from the clear plastic hoses.

CAUTION- MASTER CYLINDER WILL NOT BLEED PROPERLY IF HOSES ARE NOT FULLY SUBMERGED IN BRAKE FLUID UNTIL THE BLEEDING PROCESS IS COMPLETE

Master Cylinder Install:

1. Remove the master cylinder from the vice and install on the power booster, secure with supplied hardware. ***Be very careful not to spill any brake fluid on any painted surfaces as it will damage your paint.***
2. Carefully remove the bleeder kit nozzles and install the brake lines in the appropriate ports.
3. Secure all brake lines and check for leaks.

Bleeding the vehicles braking system:

We recommend that the brake system is bled using a gravity bleed method. While there are many ways to bleed a system, this way is less likely to introduce air in the system causing a spongy pedal. Whenever bleeding your system, you must keep an eye on your fluid level. If your master runs dry you will have to bench bleed the master again.

1. Remove the cap from the master cylinder.
2. Starting at the right rear wheel cylinder or caliper attach a clear hose to the bleeder with the other end in a clear container.
3. Open the bleeder and observe the fluid flow. It may take a couple of minutes for the fluid to flow with a new system. Once the fluid begins to flow let it drip until you do not see any air.
4. Move to the left rear wheel, repeat step 3.
5. Move to the right front wheel, repeat step 3.
6. Move to the left front wheel, repeat step 3.
7. Repeat steps 2 thru 6 once more.
8. Install the lid on the master cylinder.
9. Pump the brake pedal until you achieve a firm pedal.
10. Remove lid on master cylinder & check fluid level
11. Repeat steps 2 thru 6 to ensure all air has been removed.

Adjustable Proportioning Valve Adjustment

1. The adjustable proportioning valve is meant to control rear brake lockup by limiting the pressure to the rear brakes. If the rear brakes lockup prematurely the car can be difficult to control during a hard stop.
2. The valve provides a maximum of a 55% reduction in rear brake pressure. Meaning that even when adjusted to the full decrease position it will not shut off the rear brakes. Count the turns from the full decrease position to the full increase position. Turn the knob back in the full decrease direction half that number of turns. This will give you a good starting point for most vehicles.

3. Once you are confident that the brakes are fully bleed, working properly and broken in you can make several stops in a safe open area to determine your ideal setting. The goal is to provide as much pressure as possible to the rear brakes without locking them up prior to the front brakes.

Once you feel you have successfully removed all air from your brake system check all fittings and lines for leaks and verify all fasteners are tight. Install your wheels and spin them to insure they still spin freely making sure the caliper doesn't interfere with the wheel and your brakes are not dragging or locked up.

You may now take your vehicle for a test drive in a safe area. We recommend that you drive the vehicle with light to medium application of the brakes for the first 150-200 miles. This will allow your brake pads to properly seat to your rotors to insure optimal braking performance.

If you have any questions, please call our tech line at (716) 852-2139

Thank you for purchasing from Leed Brakes we hope you have had an enjoyable experience.

Installation Photos

Disc Brake Conversion Kit

Applications: 1966-75 Ford Bronco & F100/F150

←Back of Truck

Photo 1

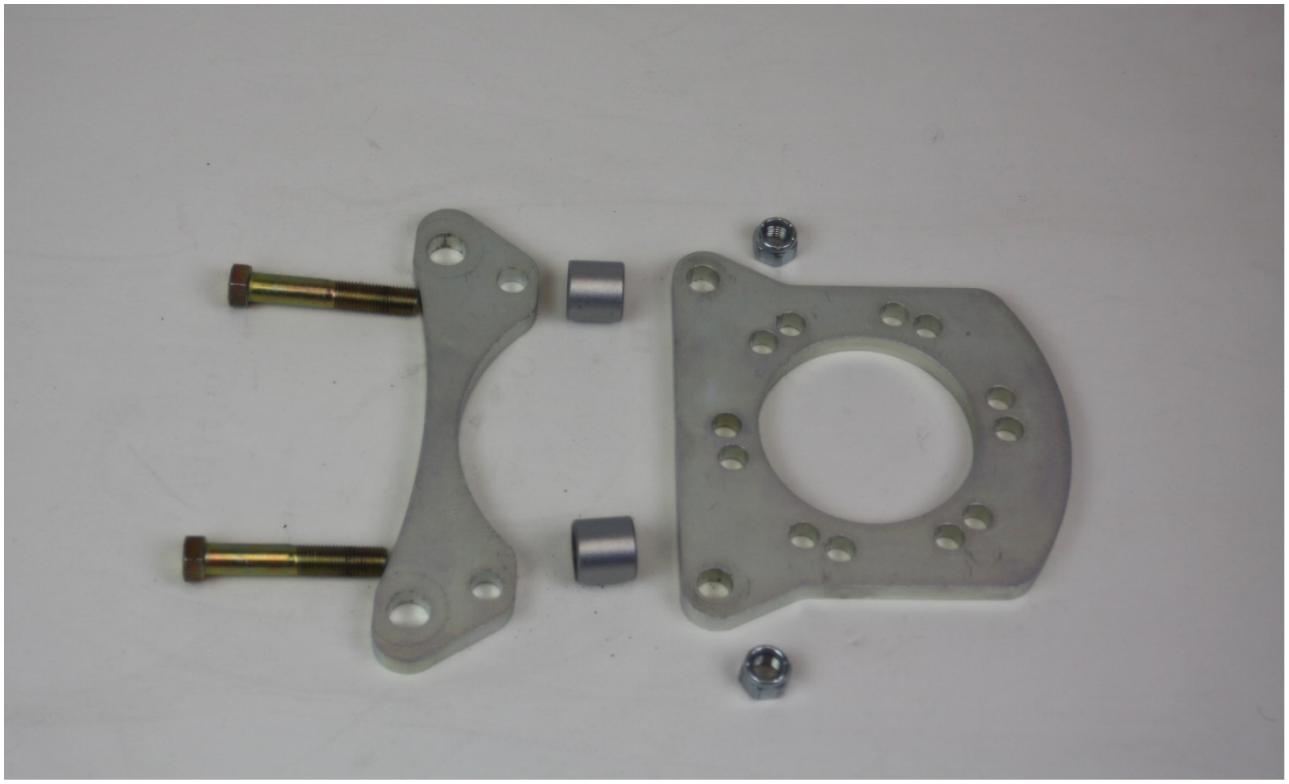


Photo 2

Photo 3

Photo 4

Photo 5

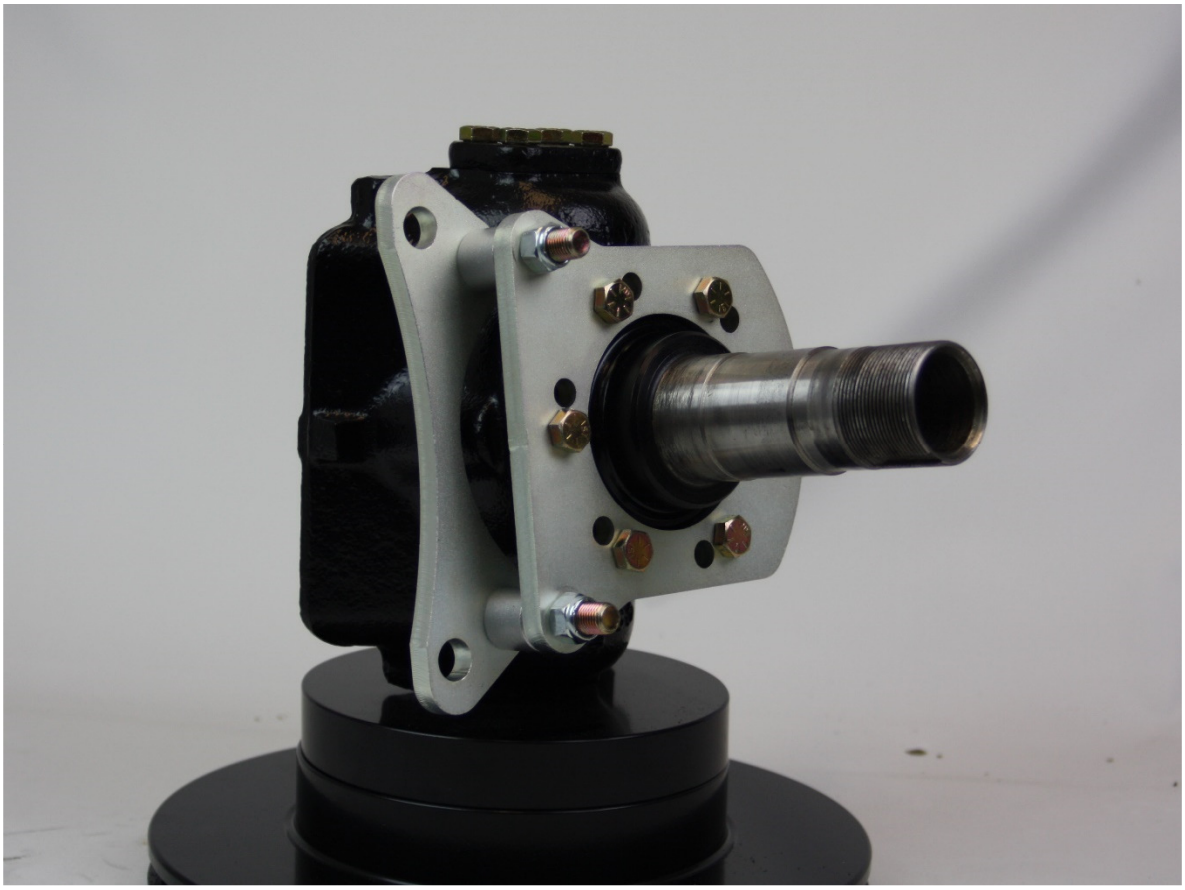


Photo 6

Photo 7

Photo 8

Photo 9

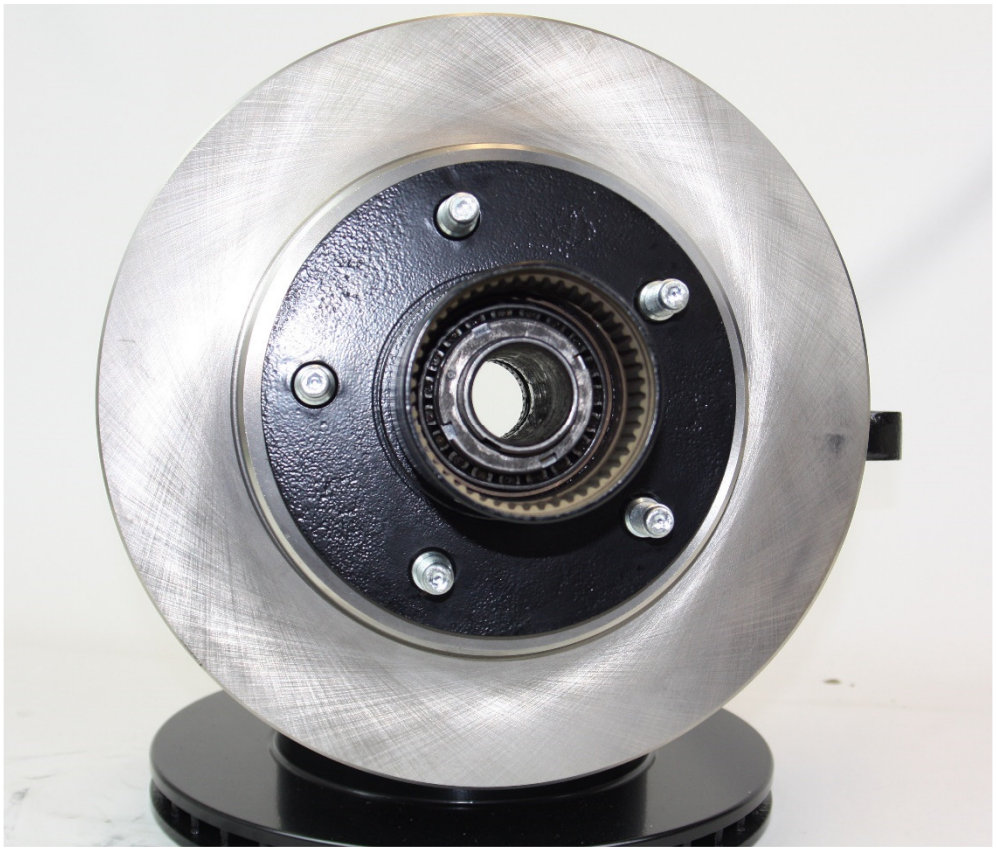


Photo 10

Photo 11

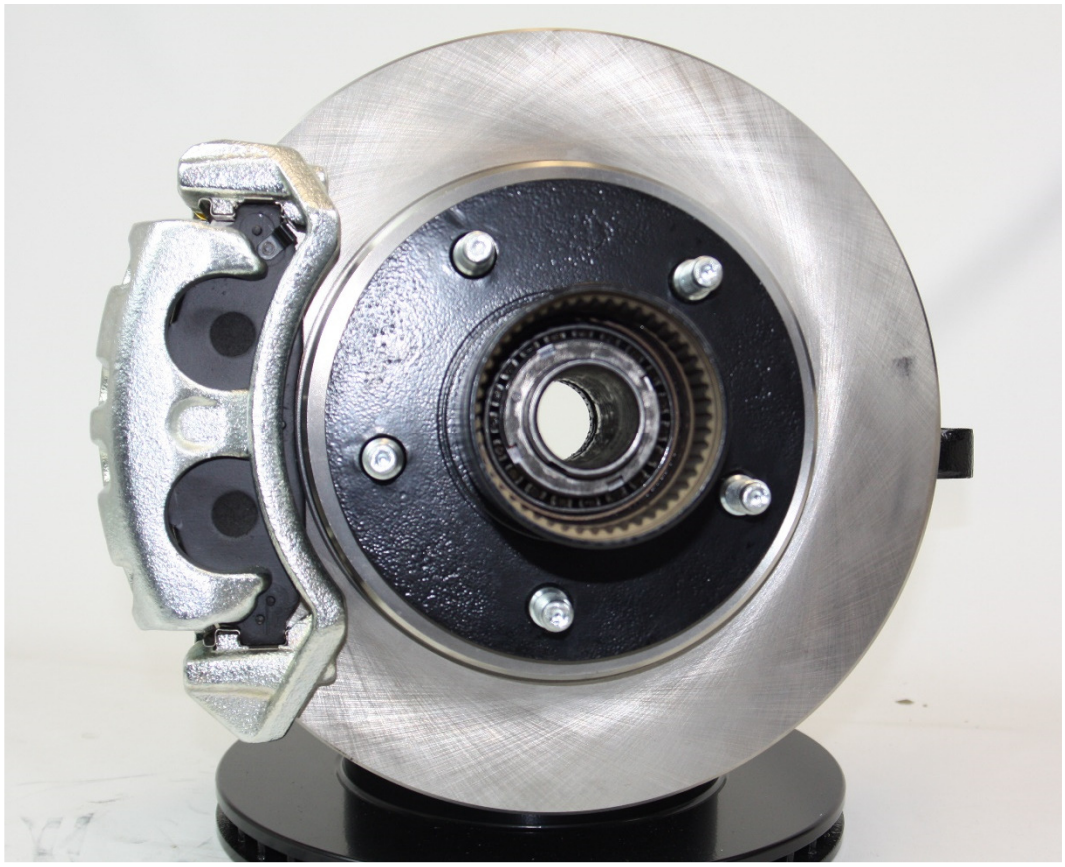


Photo 12

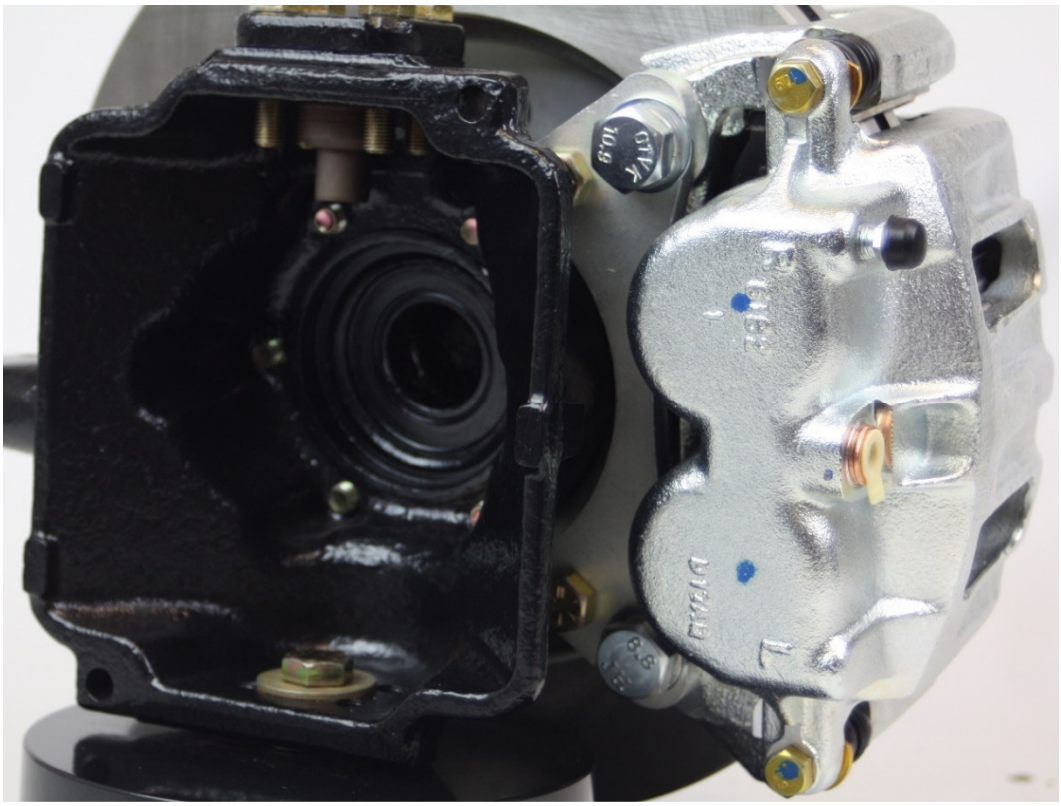


Photo 13

Photo 14