



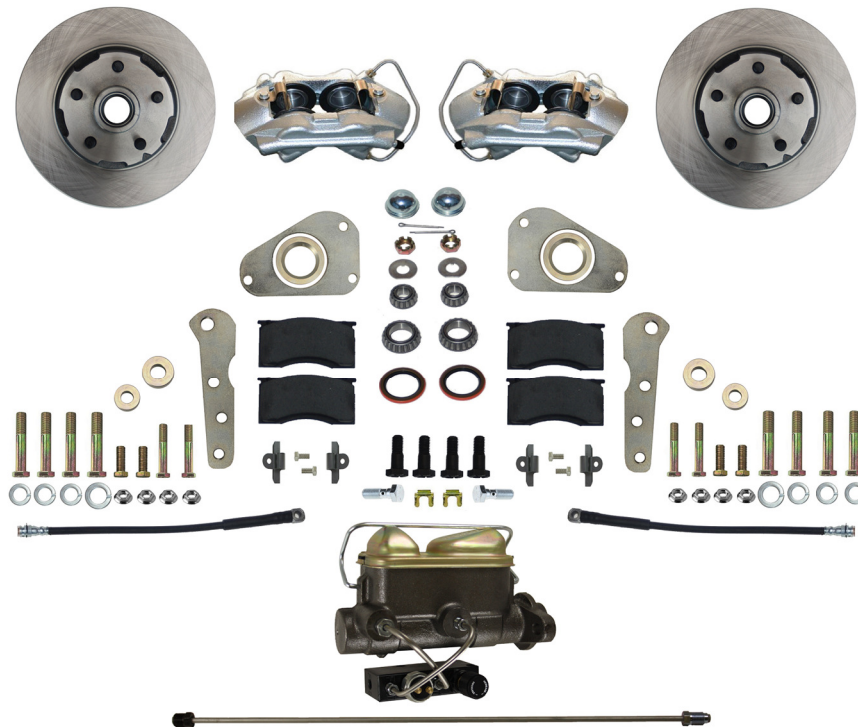
## Installation Instructions

### Manual Disc Brake Conversion Kit

Item # FC0025-405

**Applications:** 1957-68 Edsel, Ford & Mercury Full Size Cars

---



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. Starting at the front wheel hub, remove the grease cap, cotter pin, lock nut and flat washer from the spindle as well as the outer bearing.
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. From under the dash disconnect the pushrod from the pedal assembly.
6. Disconnect the brake line(s) from your master cylinder. Remove the retaining hardware and remove the master cylinder and or power booster from the firewall. This assembly will also include the pushrod that was previously disconnected from the pedal.
7. Disconnect the hard brake line from your flexible hose at the frame rail. 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.
8. Remove the horseshoe clip from the brake hose at the frame mount.
9. Remove the drum brake backing plate assembly by removing the 2 retaining bolts and nuts near the bottom of the backing plate and the large anchor bolt near the top. Again the use of penetrating oil is recommended on any rusty hardware for easy removal.

## Inspection:

Once you have removed all drum brake components from your spindles it is recommended that you clean your spindles bearing surfaces. Check for any debris or signs of damage to the spindle. Any light damage caused by rust can usually be cleaned up with an emery cloth.

## Brake Kit Installation:

1. The calipers will be installed on the rear side of the spindle pointing back towards the firewall. The base brackets will bolt to the outside face of the spindle using the 3/8" holes that held on the drum brake backing plate. The 7/16" hole in the base bracket should point back towards the firewall. Secure the assembly using the 3/8" bolts and nuts supplied, but leave them finger tight at this point. **Photo 1 & 2**
2. The upper brackets will be installed between the base bracket and the 9/16" anchor bolt hole in the spindle. Slide the 9/16" bolt and lock washer supplied into the spindle from the backside. Slide the larger supplied spacer over the bolt and then thread the bolt into the larger tapped hole of the upper bracket. Leave this bolt finger tight at this point. **Photo 3 & 4**
3. There are (3) 7/16" tapped holes in the upper bracket. Align the center hole with the 7/16" hole in the base bracket. Slide one of the 7/16" bolts and lock washers supplied through the hole in the base bracket. Slide one of the smaller spacers supplied over the bolt and then thread it into the hole in the upper bracket. Leave this bolt finger tight at this point. **Photo 5**
4. Check the upper brackets to insure they are aligned properly and are not binding against the spindle anywhere along their edge. If everything is clear and properly aligned the fasteners can be tightened. Torque the 3/8" base bracket bolt first to 40-45 ft/lbs. Next torque the 7/16" bolt between the brackets to 50-55ft/lbs. Lastly torque the 9/16" bolts to 70-75ft/lbs. **Photo 6**
5. Next install the inner bearing spacer onto the spindle shaft. The spacer must be installed with the large chamfer pointing in towards the engine. **Photo 7**
6. Next you will need to properly pack the inner and outer bearings with grease prior to installation.
7. Remove the protective coating from your rotors on both the braking surface and bearing race surfaces using a brake cleaner available at your local parts store.
8. Install the greased inner bearing into the inner race of the rotor. **Photo 9**
9. Lightly pack grease into the inner lip of the grease seal. Next install the grease seal into the inner portion of the rotor using a soft mallet or piece of wood. This will prevent any damage from occurring during installation. \* The lip of the seal should face the bearing when installed. **Photo 10**
10. Slide the rotor onto the spindle and install the greased outer bearing, slotted washer and adjusting nut. **Photo 11**
  - a. Proper adjustment of the bearings is VERY IMPORTANT. Rotate the rotor while tightening the spindle nut to 18-24 ft lbs. Next back off the adjustment nut about 1/2 turn and retighten to 10-15 ft lbs while aligning the retaining slots with the cotter pin hole in the spindle.
  - b. Install cotter pin, bend cotter pin so that each side is bent in the opposite direction of the other.
  - c. Install the grease cap. **Photo 12**
  - d. Spin the rotor to insure there is no interference with the grease cap and retaining assembly.

11. Calipers should arrive preloaded, if they are not you must install the brake pads so that the friction material is facing each other. Next install the metal retaining clips using the ¼” bolts and lock washers supplied. Torque to 7-11 ft lbs. **Photo 13**
12. Install the calipers with the bleeder facing up. Use the 7/16” bolts and lock washers provided. Torque to 50-55 ft. lbs. **Photo 14**
13. Once the calipers are installed spin the rotors to insure there is no interference between the caliper and the rotor.
14. Install the flex hose to the caliper using the banjo bolt and copper washers supplied. **Photo 16**
15. Install the other end of the flex hose to the frame bracket and retain it using the horseshoe clip provided. Reconnect the original hard line and tighten using a tube wrench.
16. 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 insure 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.

### **Brake Line Installation**

1. For cars with a **single reservoir master cylinder** remove the steel brake line going from the original master cylinder to the factory distribution block.
2. Disconnect the line that goes to the rear brakes from the distribution block and plug that port with the 3/8-24 plug provided.
3. Temporarily install the master cylinder and combination block assembly on the firewall. Keep in mind the master cylinder must be removed and bench bleed prior to completing the installation.
4. Using one of the lines provided connect the Front Out port of the combination block to the open port on your factory distribution block,
5. Using the other brake line and the union supplied connect the Rear Out port of the combination block to your original rear brake line.
6. Use the other plug provided to plug the other Front Out port of the combination block.
7. If your car was already equipped with a **dual reservoir master cylinder** you either need to bend and or shorten the lines supplied to connect the combination block to your original distribution block or you can cut your original lines and flare the fittings supplied onto them. In either case be sure to connect the Front Out and Rear Out ports of the combination block to the correct ports of your original distribution block. Also be sure to install the supplied plug into the remaining port of the combination block.
8. If your car has a hydraulic brake light switch to operate the tail lights you will need to utilize the new switch and pigtail supplied in the combination block. If your brake light switch is located on the brake pedal you can skip this step.
9. You can now remove the master cylinder for bench bleeding.

## Master Cylinder Bench Bleeding

1. Before you install your master cylinder you must **bench bleed** it in a vice off of the vehicle using the **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 insuring 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 firewall, secure with factory hardware. ***Be very careful not 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.
4. Remove the factory pushrod from your original master cylinder and install it into the new master cylinder with the original dust boot. If your master cylinder has never been replaced it may be difficult to remove the pushrod from your old master cylinder. There is a metal retaining clip that holds it in the master cylinder piston. It is usually necessary to break the clip to release the pushrod.
5. If you do not have your factory pushrod or you would like to adjust the pedal position contact GPS Automotive for information on our optional adjustable pushrod.
- 6.

## 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 insure 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:** 1957-68 Edsel, Ford & Mercury Full Size Cars



← Front of Car

Photo 1



**Photo 2**



**Photo 3**



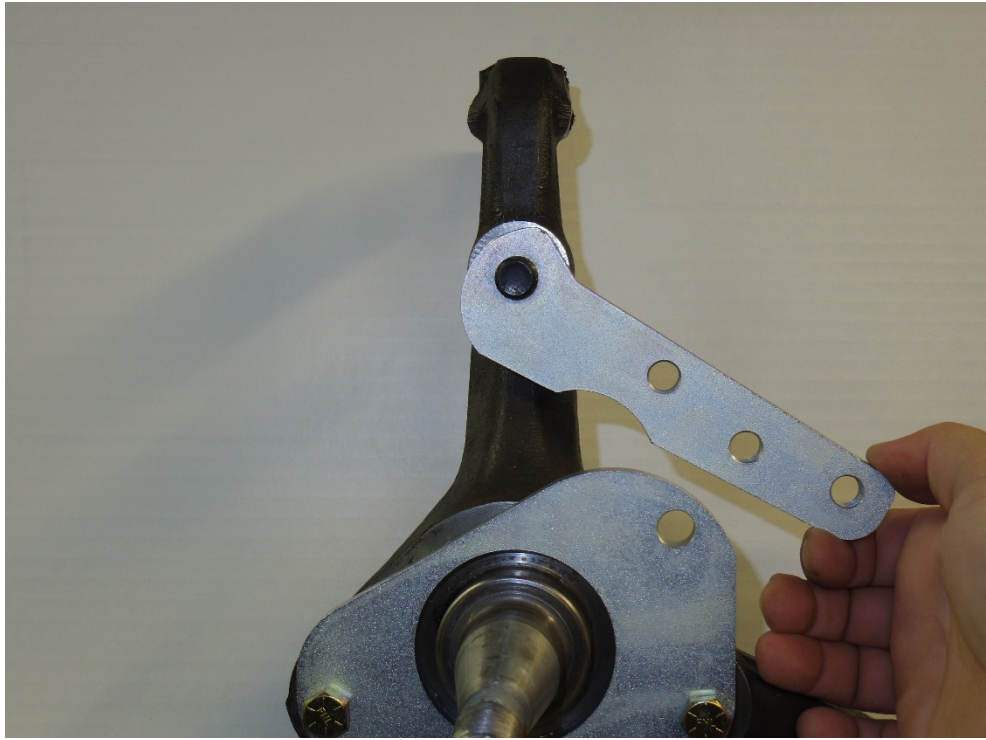


Photo 4

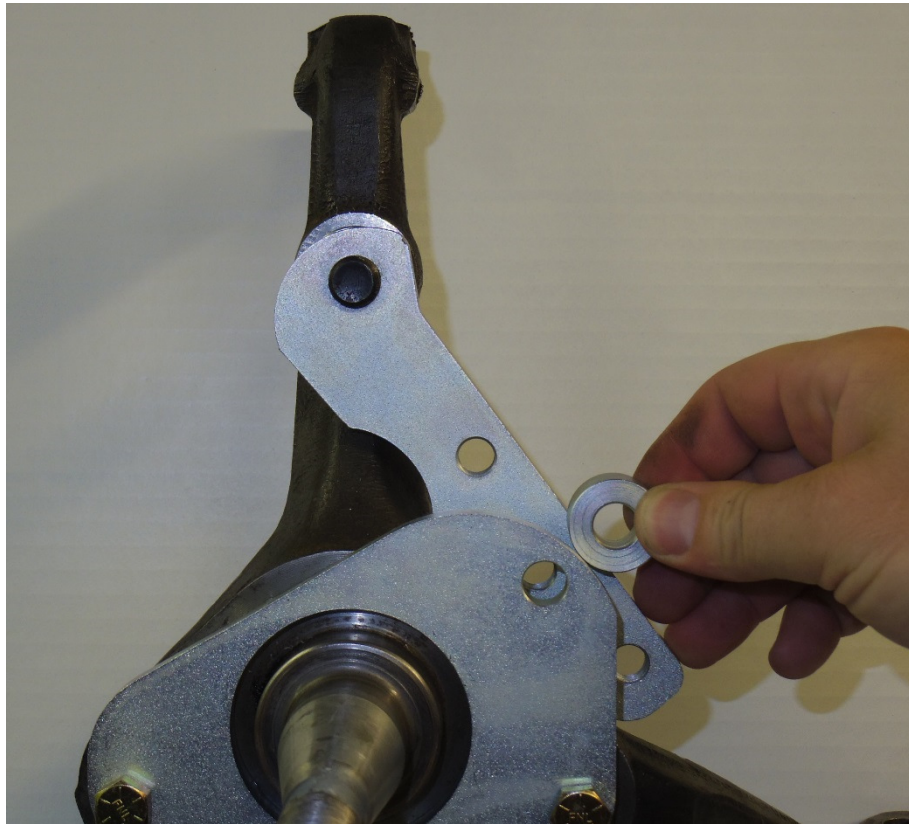


Photo 5

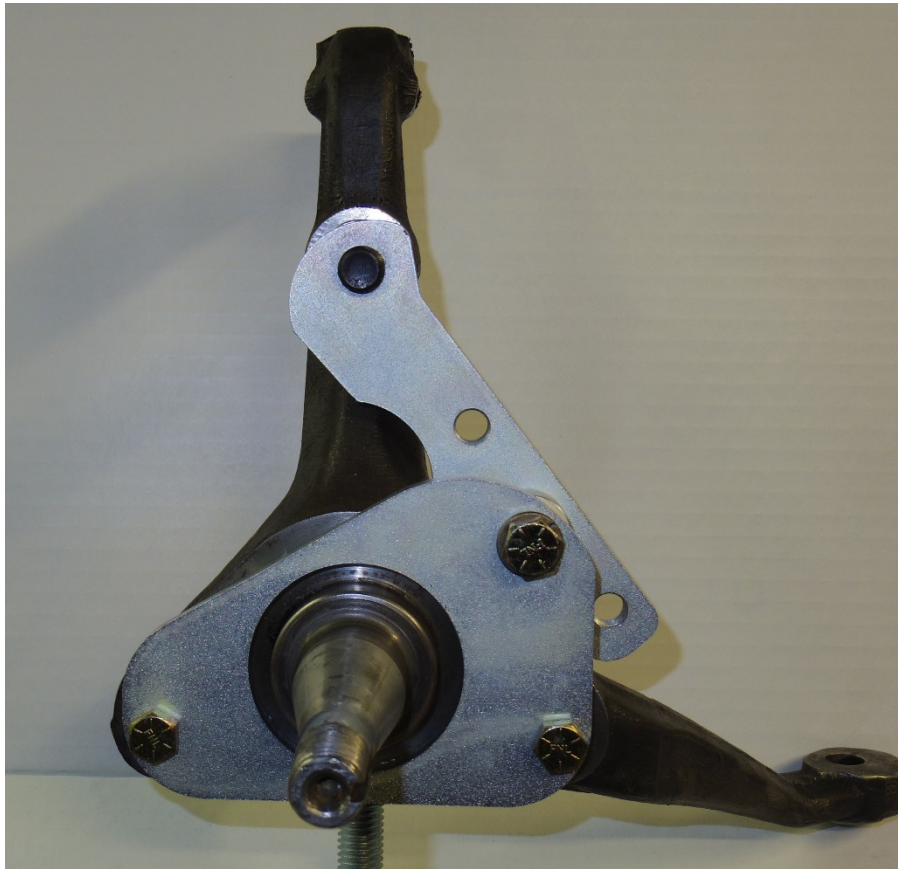


Photo 6



Photo 7



Photo 8



Photo 9

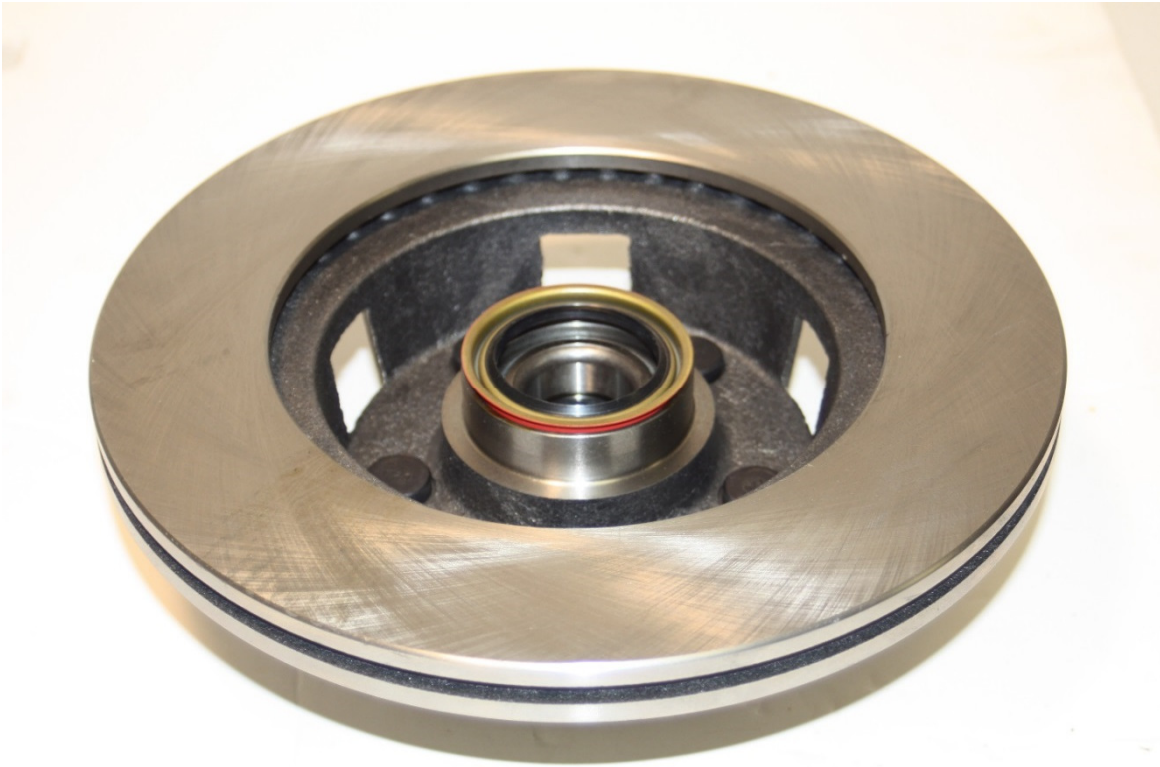


Photo 10



Photo 11



Photo 12

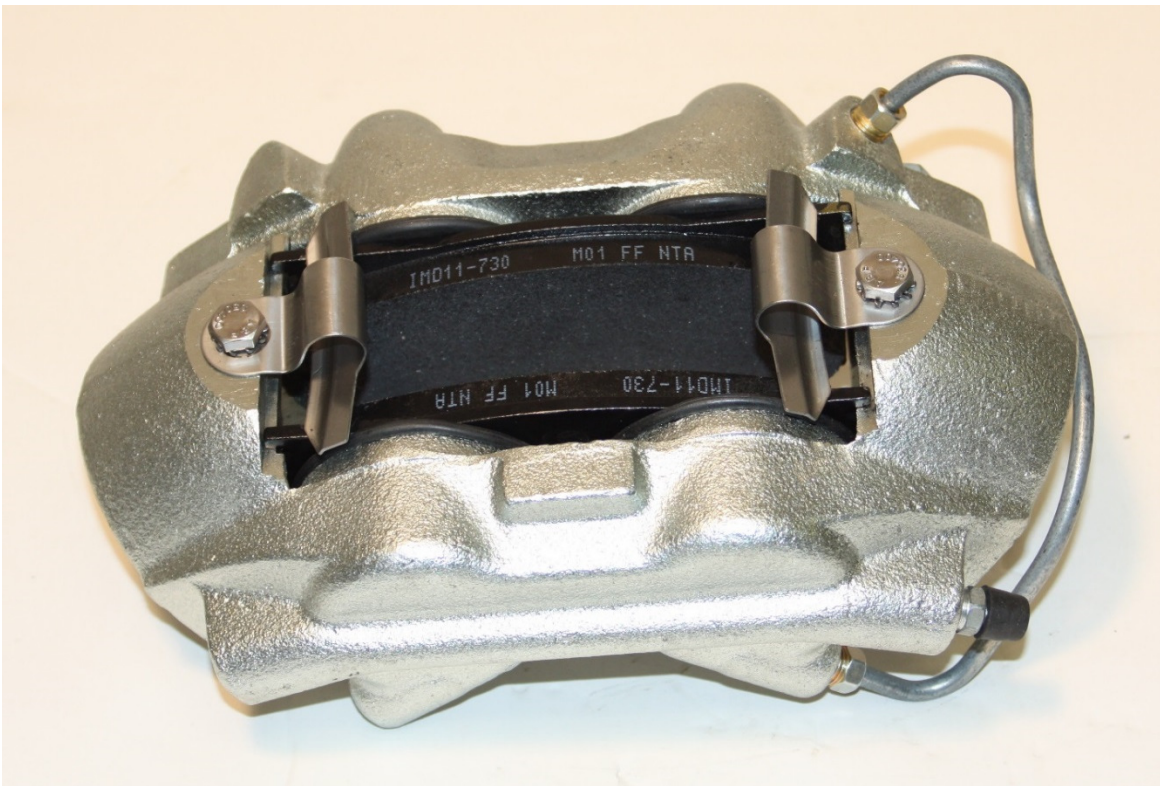
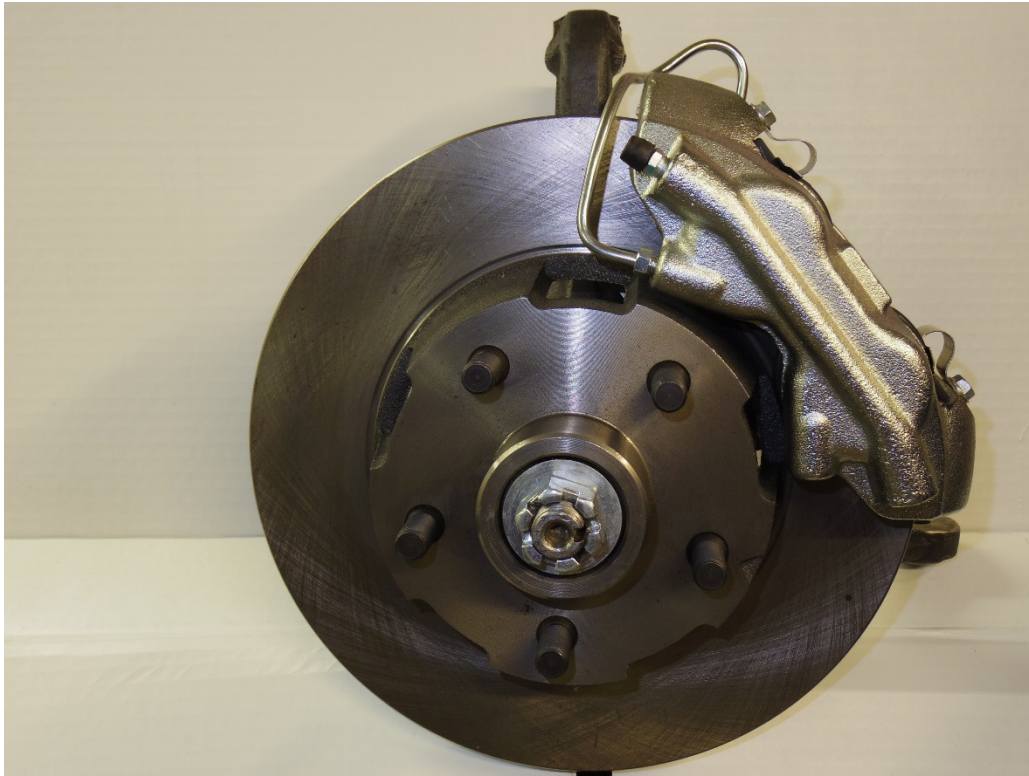
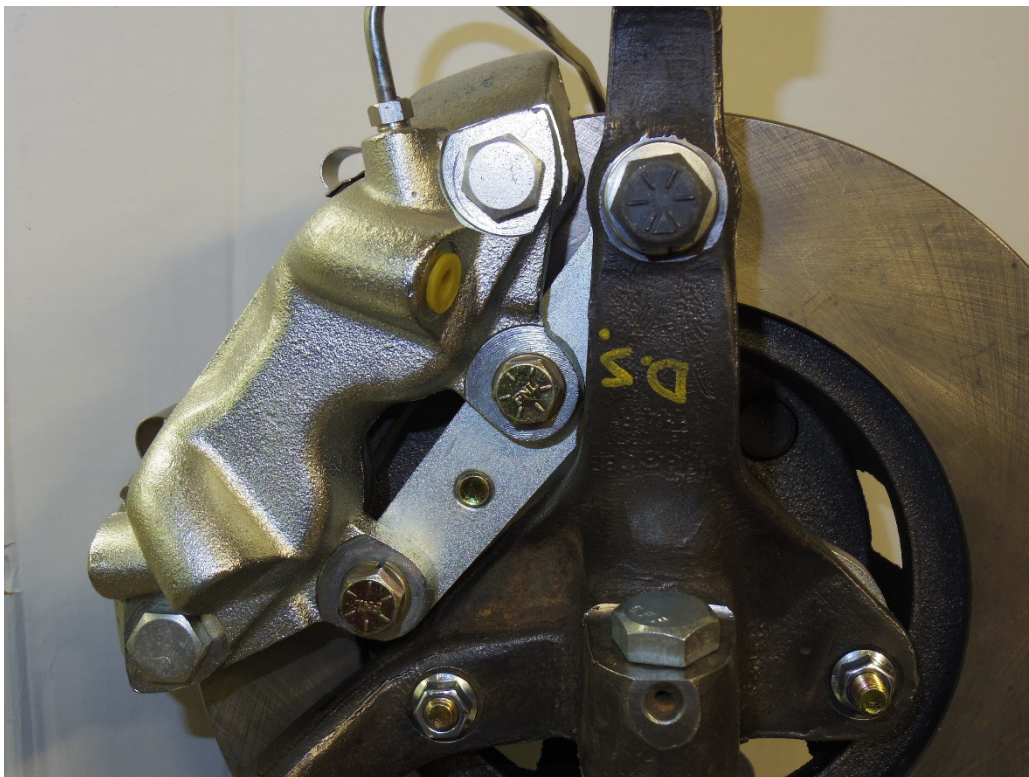


Photo 13



← Front of Car

Photo 14



Front of car→

Photo 15



**Photo 16**