



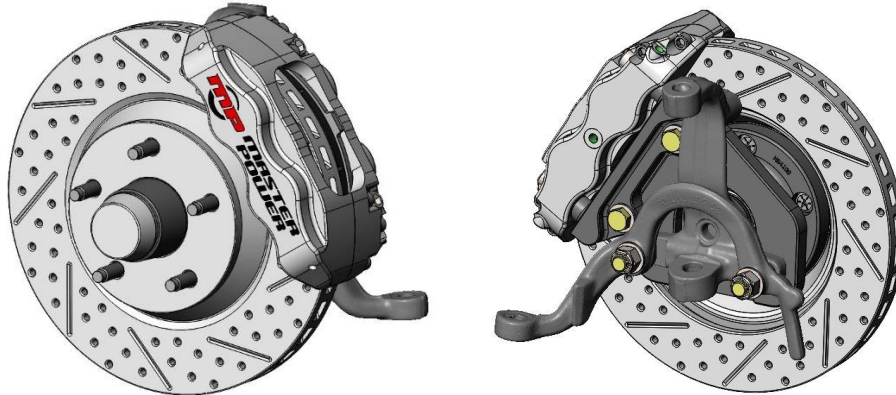
MASTER POWER BRAKES



13" Pro Driver Front Disc Brake Conversion Kit

1967-1970 Oldsmobile 88 & 98

P/N: DB4100B



Thanks for purchasing our 13" Pro Driver Front Disc Brake Conversion Kit for your 1967-1970 Oldsmobile 88 & 98. This system does not require removal of the spindles from the vehicle. This system is a complete bolt-on and should be able to be completed with minor modifications to the LH spindle and installed using simple hand tools.

*****IMPORTANT*****

This kit requires the use of at least 17" wheels for clearance and this kit has a 5 x 5.000" bolt pattern

*****MUST DRILL COTTER PIN HOLE ON LH SPINDLE*****

*****WILL NOT WORK WITH OEM SPEEDOMETER CABLE*****

Installation Notes:

- Please read all instructions before attempting the installation.
- Proper operation of your brakes is essential for your safety and the safety of others. Any brake service should be performed by a professional technician experienced in the installation of brake systems.
- Any installation requiring you to remove a wheel or gain access under the vehicle requires use of jack stands or a lift appropriate to the weight of the vehicle. In all cases, recommended ratings for jack stands should be at least 2-tons. If using a floor jack, be sure to use the appropriate wheel chocks.
- All installations require proper safety procedures and protective eyewear.
- A selection of hand tools sufficient to engage in the installation of these products is assumed and is the responsibility of the installer to have in his/her possession prior to beginning this installation. All installations, which require removal of hydraulic hoses and/or bleeding of the brakes, require appropriate fitting/line wrenches, as well as a safety catch can and protective eyewear. Other than these items, if unique or special tools are required they are listed in the section for that step.
- **ALWAYS CONFIRM WHEEL FITMENT PRIOR TO BEGINNING THE INSTALLATION OF ANY BRAKE SYSTEM!!** Returns will not be accepted for ANY installed part or assembly. Use great care to prevent cosmetic damage when performing wheel fit check!
- Before starting the installation, verify that all parts are included with the brake kit. If items are missing, notify Master Power Brakes immediately.
- Master Power Brakes requires the use of a high quality DOT 3 or DOT 4 brake fluid. Synthetic DOT 4 fluids are acceptable. **ALL WARRANTY IS VOID IF SILICONE DOT 5 FLUID IS USED.**

Parts List	
Quantity	Description
1	Driver Side 4-Piston Billet Aluminum Caliper (w/brake pads)
1	Passenger Side 4-Piston Billet Aluminum Caliper (w/brake pads)
1	13" LH Slotted, Drilled, & Zinc Washed Brake Rotor
1	13" RH Slotted, Drilled, & Zinc Washed Brake Rotor
2	Billet Aluminum Hub Assembly (w/ 1/2"-20 Wheel Studs & Bearing Races Installed)
1	LH Secondary Caliper Bracket (BRCA4100-LH)
1	RH Secondary Caliper Bracket (BRCA4100-RH)
2	Custom Machined Primary Caliper Bracket (BRCA-4004P-1)
2	HWA3 Bearing (Outer)
2	HWA5 Bearing (Inner)
2	HW8871 Inner Grease Seal
2	HW615005 Spindle Washer
2	HW615065 Spindle Nut
2	1/8" x 1 1/2" Cotter Pin
2	Billet Aluminum Grease Caps
4	9/16"-18 x 3.500" Grade 8 Hex Head Bolt
8	9/16" SAE Flat Washer
4	9/16"-18 Nylon Lock Nut
4	1/2"-20 x 1.750" Grade 8 Hex Head Bol
4	1/2" SAE Flat Washer
4	M12-1.75 x 45mm Socket Head Cap Screw
1	1/2" Bolt Shim Kit
1	Hose Kit (18" Hoses w/10mm Banjo Bolt & Hardware)

Replacement Brake Pads	
FMSI Number:	D749
MPB Part Number:	PD0749

Installation:

1. With the vehicle properly supported, remove the front wheels and tires.
2. Removal of the factory drum brake assembly is required next. Remove all components from the spindle leaving a bare spindle. **NOTE: It is not necessary to remove the spindle from the vehicle unless other work is required. The steer arms can be left attached to the outer tier rod ends.**
3. Before installing the disc brake kit, inspect the spindles for any excessive wear or damage. If any damage is present, replace the spindle(s) as necessary. If spindles are good, clean all attachment points along with the spindle pin to insure proper installation of the new components.

4. The Secondary Caliper Mounting Brackets can now be attached to the spindles. The provided 9/16"-18 x 3.500" Grade 8 Hex Head Bolts along with 9/16" SAE Flat Washers under their heads are to be inserted through the Secondary Caliper Mounting Brackets, lower spindle bolt holes, and lower steer arm bolt holes. Once inserted, secure it with the provided 9/16" SAE Flat Washers and 9/16"-18 Nylon Lock Nut. Now you can torque the 9/16" bolts to 100 ft/lbs. Figures 1a and 1b below show the proper installation. **NOTE: LH (Driver Side) bracket has BRCA4100-LH engraved on it and RH (Pass Side) has BRCA4100-RH engraved on it.**

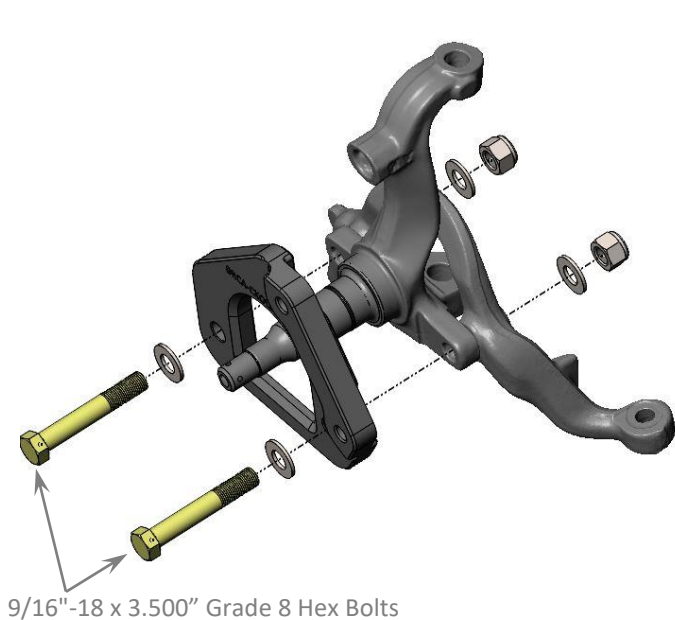


Figure 1a – Secondary Caliper Mounting Bracket Assembly Installation Process (LH Shown)



Figure 1b – Secondary Caliper Mounting Bracket Assembly Installed On Spindle (LH Shown)

5. The wheel bearings can now be packed and installed. We recommend the use of Lucas Oil "Red-N-Tacky" Grease (**Available At Master Power Brakes P/N: ACNLG12**) or other high quality NLGI rated wheel bearing grease. Once the inner bearing is installed, tap the inner seal in at this point. Figure 2 below shows the bearing and seal being installed.

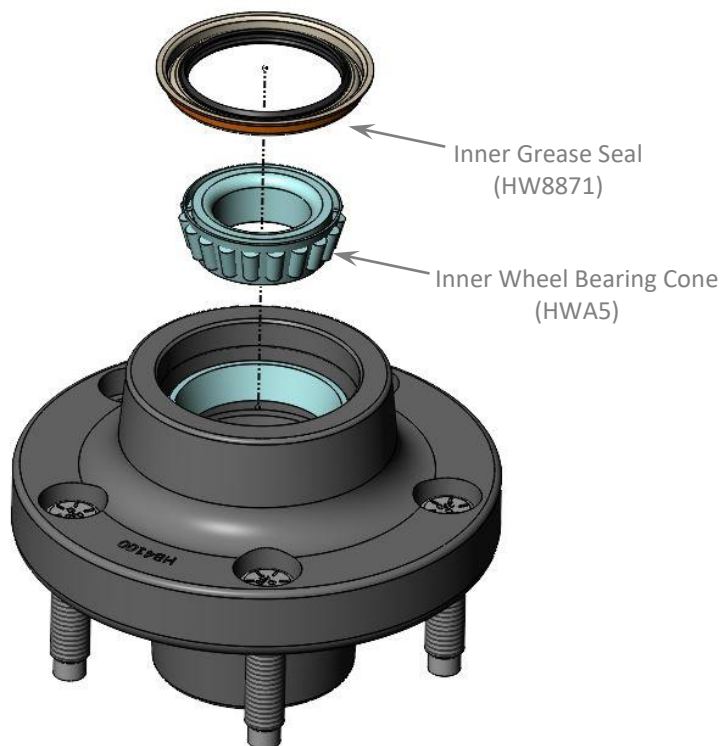


Figure 2 – Inner Wheel Bearing Installation

- On the LH spindle you must drill a cotter pin hole. This is because the OEM speedometer cable assembly components held the OEM hub on. A 3D printed drill fixture has been provided to ease this process. Slide the 3D printed drill fixture onto the spindle pin, making sure to gently tap it to make sure it is fully seated on the spindle pin. While holding the fixture against the spindle pin, use a drill with a 1/8" drill bit to mark the 4 locations to be drilled through the holes on the fixture. After the holes are slightly marked with the drill bit, remove the fixture, and completely drill the holes. See Figures 3a and 3b below for reference.

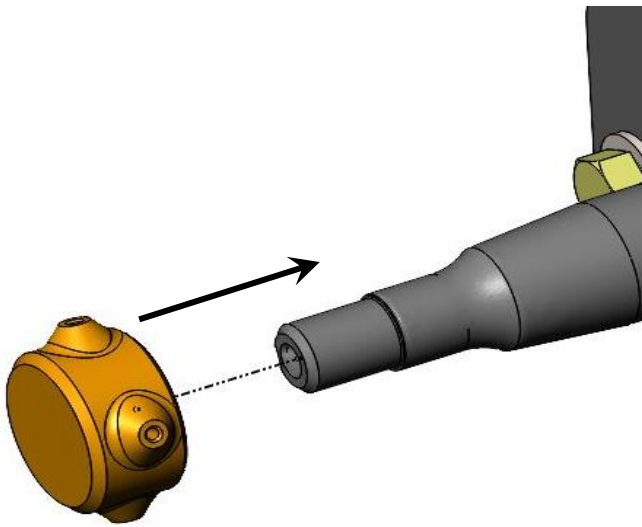


Figure 3a – 3D Printed Drill Fixture Installation

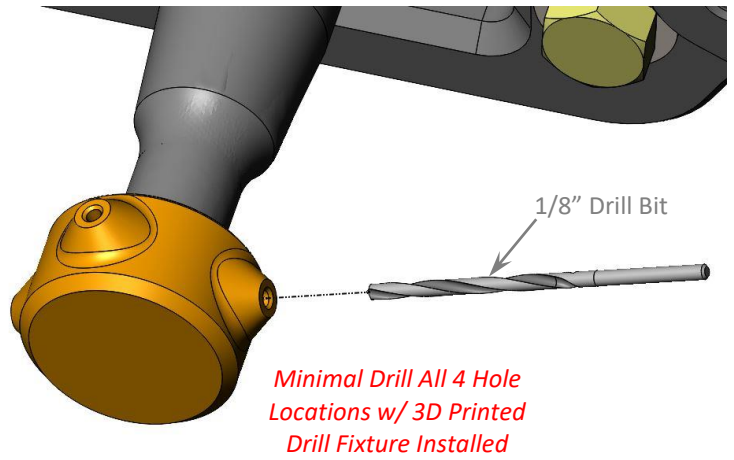


Figure 3b – Cotter Pin Drilling Locations

- Slide the Billet Aluminum Hub onto the spindle. The inner wheel bearing and grease seal should be installed at this point. With the Billet Aluminum Hub fully pushed onto the spindle, install the outer wheel bearing followed by the spindle washer and spindle nut. When tightening the spindle nut, tighten to 5-10 ft/lbs. Loosen the nut and tighten again using the same 5-10 ft/lbs. Do this a couple of times spinning the rotor to fully seat the wheel bearings onto the spindle. Loosen the nut a final time and re-tighten to remove all play. Tighten approximately an additional 1/16th of a turn to give the appropriate pre-load and line up the cotter pin hole. Install the cotter pin to secure the nut followed by the Billet Aluminum Grease Cap. Figure 4 below shows the proper location of each component. **IMPORTANT: The Billet Aluminum Grease Caps are held in using rubber o-rings. Slightly lubricate o-ring with grease to help installation of the cap.**

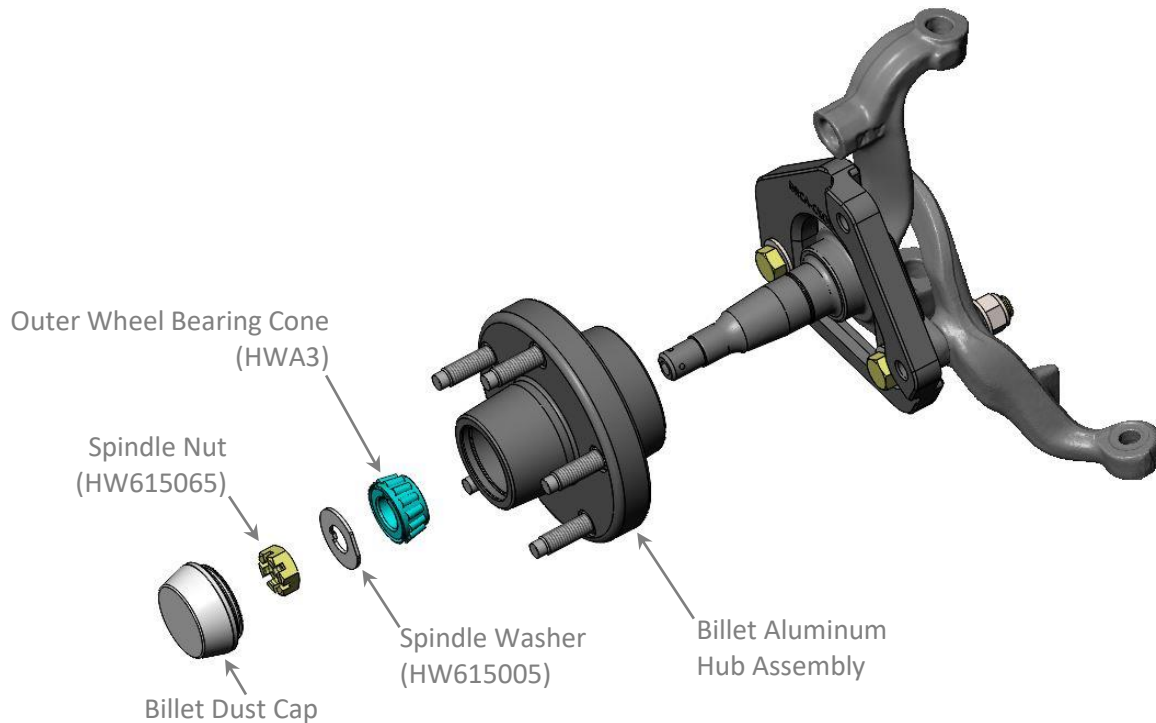


Figure 4 – Component Location (LH Shown)

8. Place the correct LH or RH rotor onto the hub assembly. Use three lug nuts when installing to hold the rotor tight against the hub which will allow for accurate shimming of the calipers which will be done in a later step. When installing rotors, be sure to follow the direction of rotation indicated on the rotor hat area with either an arrow or with an “L” for driver side or an “R” for passenger side. Figure 5 below shows the direction for reference.

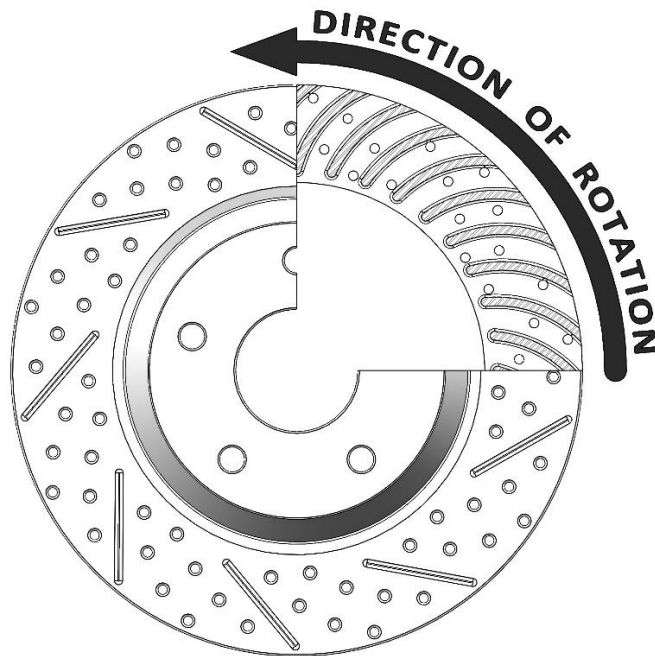


Figure 5 – Proper Rotor Orientation (LH Shown)

9. Mount the Primary Caliper Mounting Bracket to the previously installed Secondary Caliper Mounting Bracket using the supplied 1/2"-20 x 1.75" Grade 8 Hex Head Bolts and 1/2" SAE Flat Washers. **NOTE: Only snug these bolts at this time because during the caliper shimming process in a later step this will be the location where shims will be installed.** See Figure 6a and 6b below for reference.

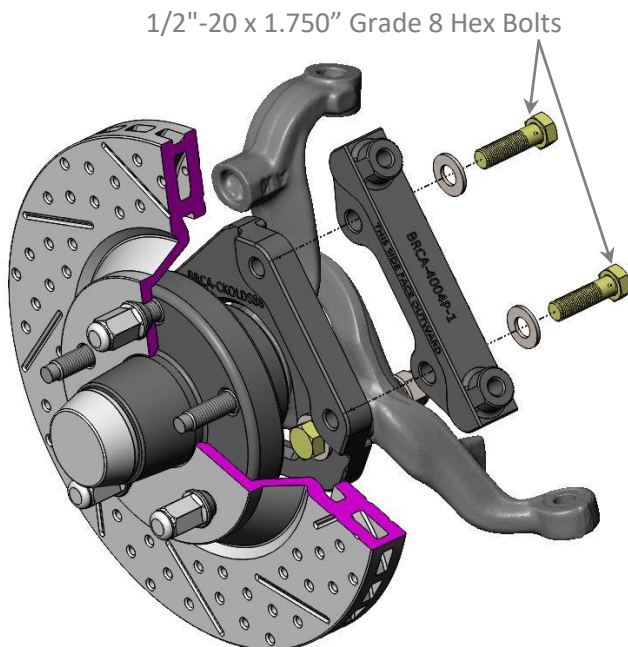


Figure 6a – Primary Caliper Bracket Installation (LH Shown)

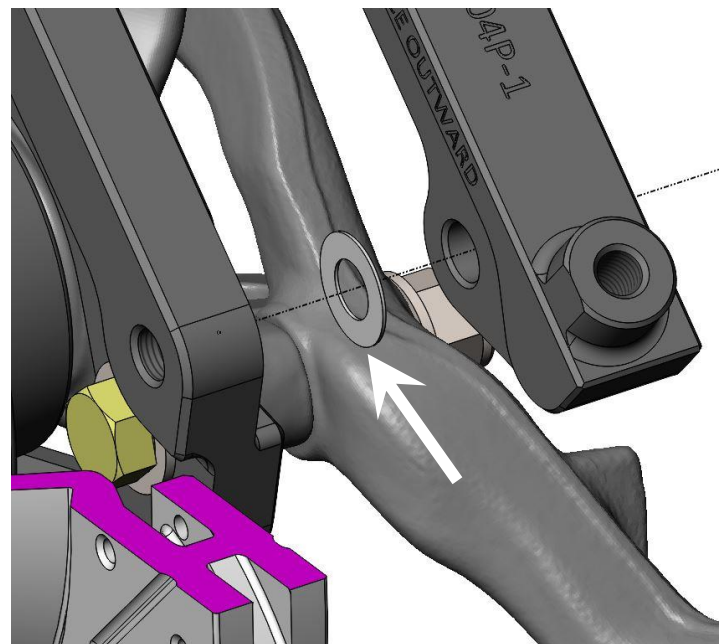


Figure 6b – Shim Location (Use For Future Caliper Shimming Process)

10. Next, remove the brake pads and place the brake caliper onto the radial mount bosses of the Primary Caliper Mounting Bracket, securing it with the supplied M12-1.75 x 45mm Socket Head Cap Screws. Make sure the bleeder screw is pointed upwards. **Only snug the bolts for now because of future caliper shimming process.** Refer to Figure 7 below for reference.

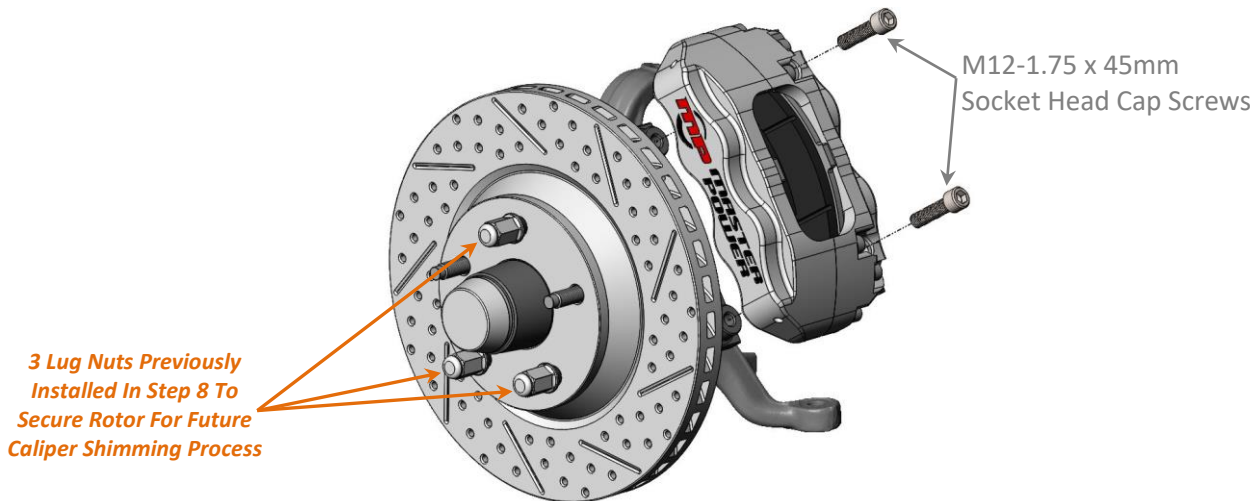


Figure 7 – Caliper Installation (LH Shown)

11. After installing the caliper, it is necessary to center the caliper over the rotor using the supplied shim kit. Measure the gap from the rotor to caliper body with feeler gauges. With all measurements taken, **SUBTRACT THE SMALLER DISTANCE FROM THE LARGER DISTANCE.** Take that difference and divide it by two to determine the proper shim thickness required. For example, the outside measurement is .690” and the inside measurement is .630” leaving a difference of .060”. Divide the difference by two leaving the necessary shim at .030”. **Do this procedure at both the top and bottom of the caliper to determine appropriate shim thickness for each caliper mounting ear. It is possible for each caliper mounting ear to require different thickness shims.** Set the gaps to within .005-.010” of each other. An example of the shim thickness calculation is shown below in Figure 8. Follow the steps below for proper shimming of the calipers once the measurements have been taken:

- a. Select the required shims from the shim kit provided.
- b. Loosen the bolts that hold the caliper on.
- c. Install the appropriate shims between the Primary Caliper Mounting Bracket and Secondary Caliper Mounting Bracket removing only one bolt at a time. Snug both bolts after both shim locations are installed.
- d. Recheck the gap as described above. If necessary, add or remove shims.

NOTE: Shimming of the caliper is required due to variations in OEM component manufacturing, machining tolerances of the new braking components.

Shimming Process Example

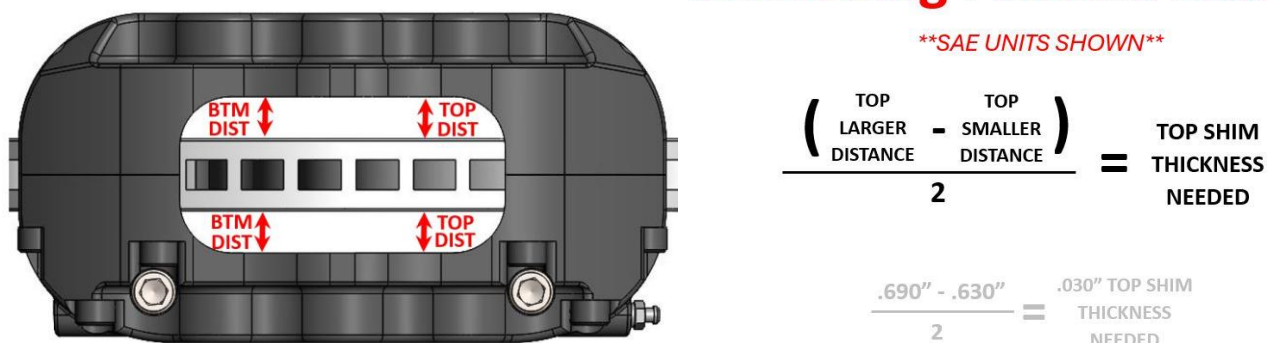


Figure 8 – Caliper Shimming Reference

12. With the shimming complete, remove the caliper and tighten the 1/2-20 x 1.75" Grade 8 Hex Head Bolts holding the Secondary Caliper Mounting Bracket to 80 ft/lbs
13. Re-install the caliper with the pads installed. Torque the M12-1.75 x 45mm Socket Head Cap Screws to 85 ft/lbs.
14. Install the Stainless Steel braided hose using one copper crush washer on each side of the banjo fitting. Connect the hose to the hardline and install the hose lock. **IMPORTANT: Position the hose to avoid interference with the wheel and suspension components through the entire range of motion.** Torque the banjo bolt to 15-20 ft/lbs. See Figure 9 below for reference.

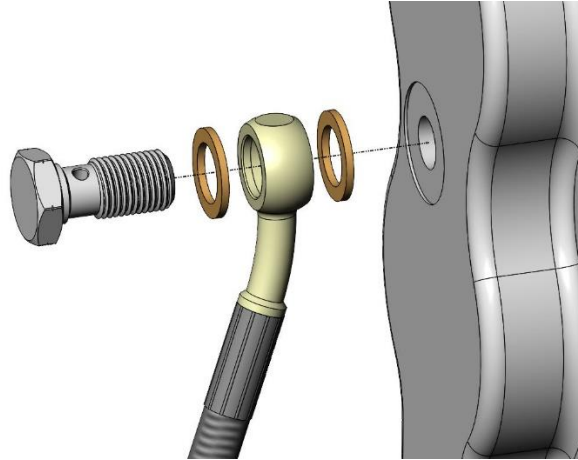


Figure 9 – Caliper Installed

15. Repeat these steps for the other side and recheck all attachment points and fittings.
16. If the master cylinder has been removed or replaced, make sure it is properly bench bled and then installed on the vehicle. Then the remaining brake system can be bled to remove all of the air from the system. **REMEMBER:** Master Power Brakes requires the use of either DOT 3 or DOT 4 brake fluid. We Recommend the use of Pentosin Super Dot 4 fluid as seen below in Figure 10 (**Available at Master Power Brakes P/N: ACJ1703**).
***** ANY WARRANTY IS VOID IF DOT 5 FLUID IS USED*****

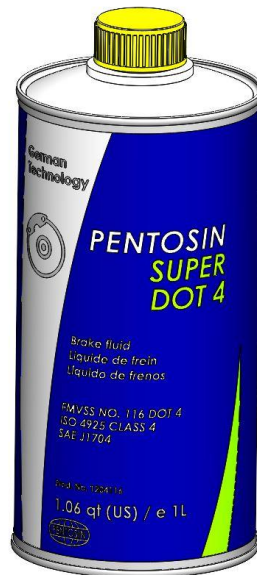


Figure 10 – Pentosin Super DOT 4

17. The installation is now complete.

***** CONTACT INFORMATION ON NEXT PAGE *****

If you have any questions regarding installation, feel free to contact us!

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