



MASTER POWER BRAKES



Pro Driver Maxx 14" 6-Piston Front Disc Brake Kit

1991-1997 Toyota FJ80/FZJ80 & Lexus LX450

P/N: DB7011B



Thanks for purchasing our Pro Driver Maxx Front Disc Brake Kit for the 1991-1997 Toyota FJ80/FZJ80 and Lexus LX450. 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 without modifications to the vehicle and installed using simple hand tools.

*****IMPORTANT*****

This kit requires the use of at least 17" wheels for clearance and this kit has a 6 x 5.500" bolt pattern

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 6-Piston Billet Aluminum Brake Caliper <i>(w/brake pads)</i>
1	Passenger Side 6-Piston Billet Aluminum Brake Caliper <i>(w/brake pads)</i>
1	14" LH Slotted & Zinc Washed Brake Rotor Assembly <i>(w/ Billet Aluminum Hat Installed)</i>
1	14" RH Slotted & Zinc Washed Brake Rotor Assembly <i>(w/ Billet Aluminum Hat Installed)</i>
2	Custom Machined Primary Caliper Mounting Bracket <i>(BRCA-80TLC6P-FT)</i>
12	M12-1.25 x 30mm JIS Hex Head Bolt
4	M12-1.25 x 40mm Hex Head Bolt
4	M12-1.75 x 45mm Socket Head Cap Screws
16	M12 Split Lock Washers
2	12mm Bolt Shim Kit
1	Hose Kit (12.875" Hoses w/10mm Banjo Bolt & Hardware)

Replacement Brake Pads	
FMSI Number:	D731
MPB Part Number:	PD0731R

Installation:

1. With the vehicle properly supported, remove the front wheels and tires.
2. Removal of the OEM disc brake assembly is required. Remove the OEM brake caliper first, followed by the OEM hub and rotor assembly from the steering knuckle leaving a bare spindle shaft. After the OEM hub and rotor assembly is removed, unbolt the 6 - M12 bolts and remove the OEM rotor from the hub. **NOTE: You will also have to remove the OEM stamped steel backing plate from the steering knuckle. Be sure once the backing plate is removed you reinstall and torque the 8) M10 bolts back to 82Nm (60 ft/lbs)** See Figure 1a and 1b below for reference.

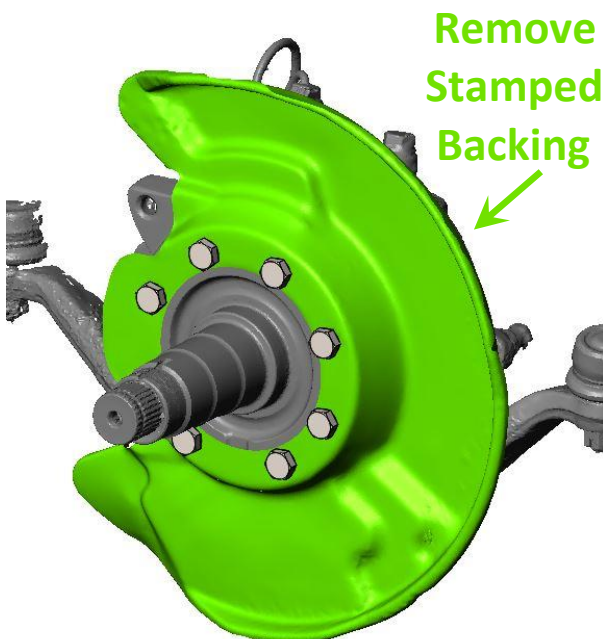


Figure 1a – OEM Stamped Steel Backing Plate Identification (RH Shown)



Figure 1b – OEM Stamped Steel Backing Plate Removed

- Before installing the disc brake kit components, inspect the spindle shaft for any excessive wear or damage. If any damage is present, replace the spindle shaft(s) as necessary. If spindle shafts are good, clean all attachment points along with the shaft to insure proper installation of the new components.
- Next install the provided 14" Rotor Assembly onto the OEM hub. Use the provided M12-1.25 x 30 JIS Hex Head Bolts and M12 Split Lock Washers when installing to hold the rotor assembly tight against the hub. The rotors are LH and RH side specific, when installing be sure to follow the direction of rotation as indicated below in Figure 2a. Figure 2b and 2c below shows the proper rotor installation. **Torque the M12-1.25 x 30 JIS Hex Head Bolts to 101Nm (75 ft/lbs)**

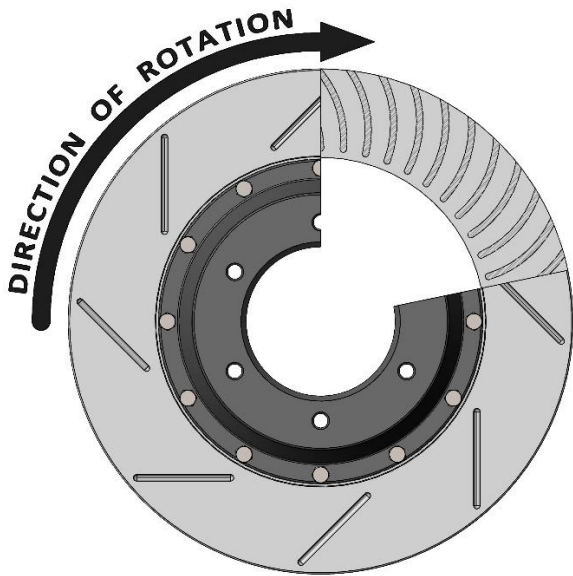


Figure 2a – Proper Rotor Direction (RH Shown)

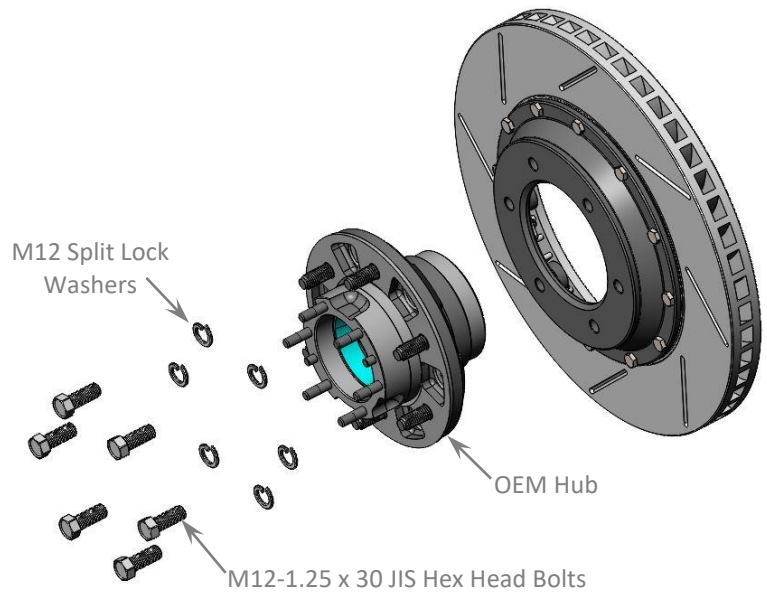


Figure 2b – Proper Rotor Installation (RH Shown)

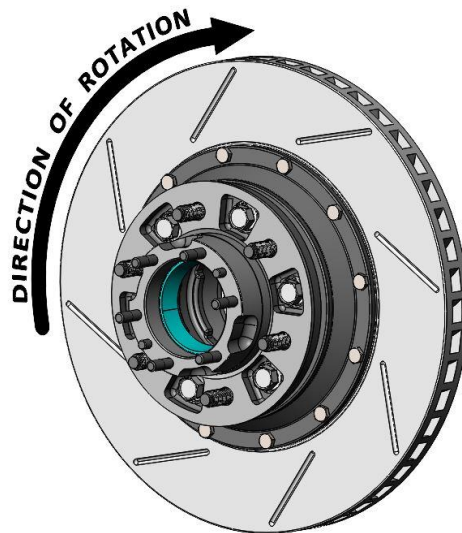
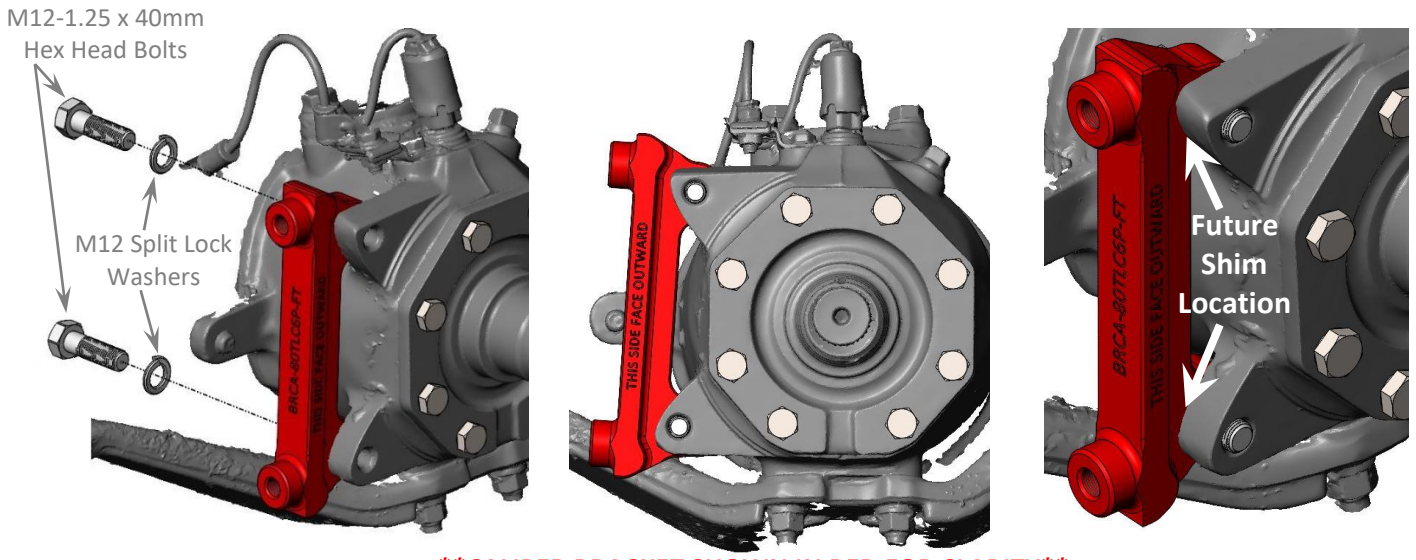


Figure 2c – Rotor Assembly Installed on OEM Hub (RH Shown)

- The Primary Caliper Mounting Bracket can now be attached to the OEM knuckle. The provided M12-1.25 x 40mm Hex Head Bolts with M12 Split Lock Washers under their heads are to be inserted through the Primary Caliper Mounting Bracket and thread into the OEM caliper mounting ears on the knuckle. **NOTE: "THIS SIDE FACE OUTWARD" that is engraved on the Primary Caliper Mounting Bracket must face the outside of the vehicle for proper fitment. Only snug the bolts now to allow for future caliper shimming process.** Figures 3a and 3b on the next page shows the proper installation. Also pay close attention to Figure 3c on the next page because the space between the Primary Caliper Mounting Bracket and the OEM caliper mounting ears will be the location for the shims in the future caliper shimming process.



****CALIPER BRACKET SHOWN IN RED FOR CLARITY****

Figure 3a – Primary Caliper Mounting Bracket Installation (RH Shown)

Figure 3b – Primary Caliper Mounting Bracket Installed (RH Shown)

Figure 3c – Future Shim Location Shown (RH Shown)

6. At this time the OEM hub with the previously installed correct 14" rotor assembly may be reinstalled back onto the spindle shaft. Please refer to Toyota installation procedures and specifications to accomplish this.
7. 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 4 below for reference.

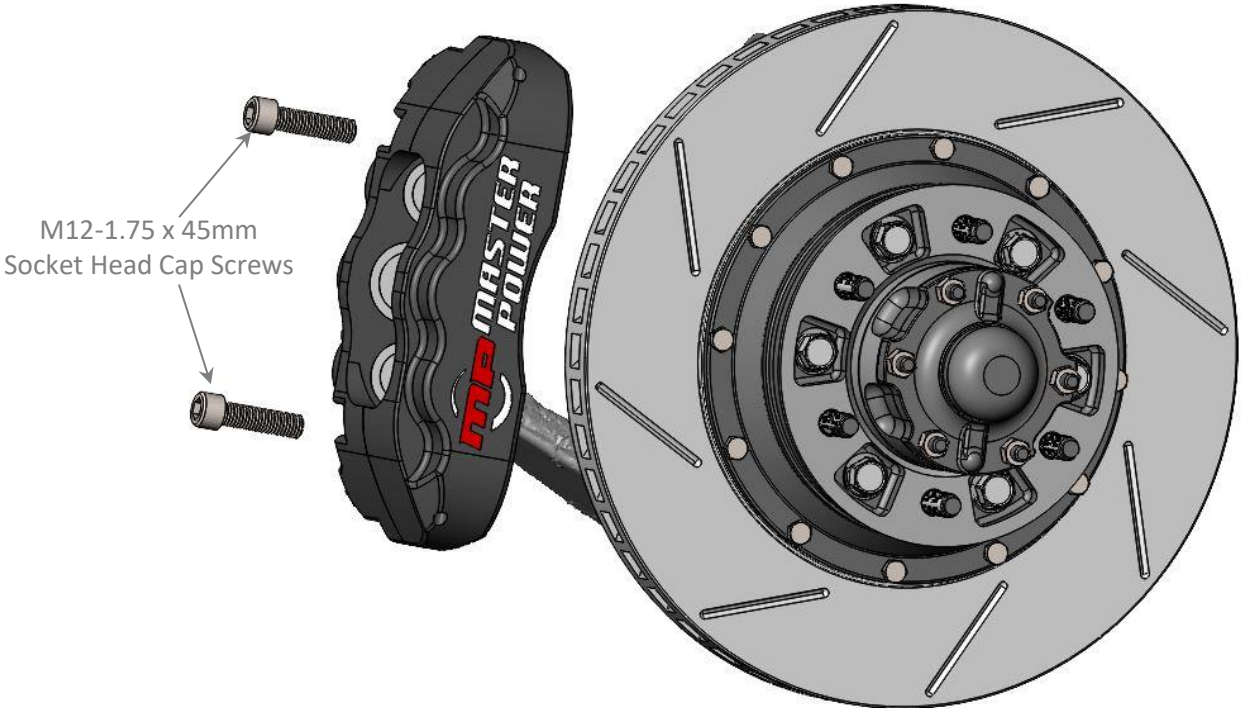
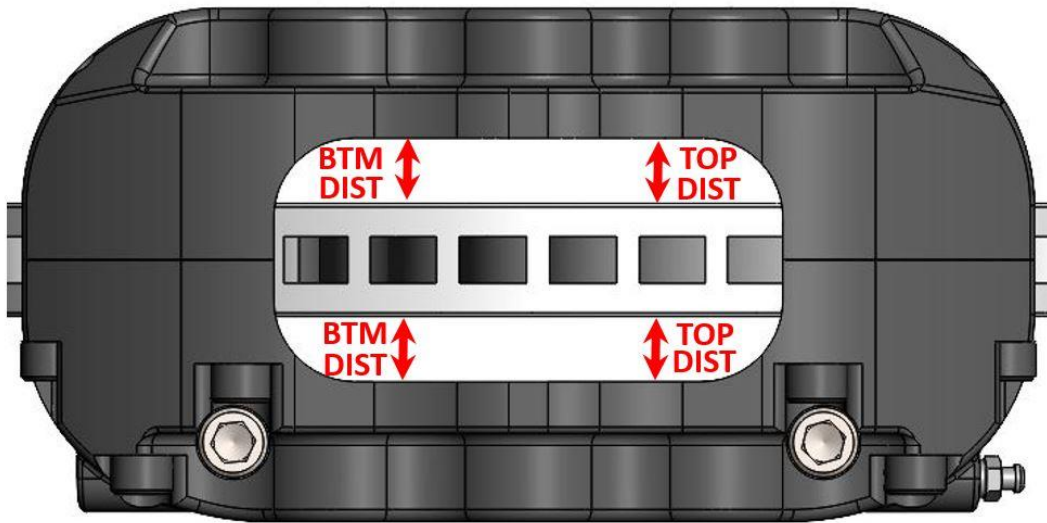


Figure 4 – Caliper Installation (RH Shown)

8. 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 5. 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 the OEM caliper mounting ears removing only one bolt at a time. Snug both bolts after both shim locations are installed. **Refer to Figure 3c on Page 4 for shim location.**
- 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 and machining tolerances of the new braking components.



Shimming Process Example

SAE UNITS SHOWN

$$\frac{\left(\begin{array}{c} \text{TOP} \\ \text{LARGER} \\ \text{DISTANCE} \end{array} - \begin{array}{c} \text{TOP} \\ \text{SMALLER} \\ \text{DISTANCE} \end{array} \right)}{2} = \text{TOP SHIM THICKNESS NEEDED}$$

$$\frac{.690'' - .630''}{2} = .030'' \text{ TOP SHIM THICKNESS NEEDED}$$

** REPEAT CALCULATION FOR BOTTOM DISTANCES **

Figure 5 – Caliper Shimming Reference

9. With the shimming complete, remove the caliper and tighten the M12-1.25 x 40mm Hex Head Bolts securing the Primary Caliper Mounting Bracket to 115 Nm (85 ft/lbs).
10. Re-install the caliper with the pads installed. Torque the M12-1.75 x 45mm Socket Head Cap Screws to 115 Nm (85 ft/lbs).
11. Install the Stainless Steel braided hose using one copper crush washer on each side of the banjo fitting. When installed properly the banjo fitting that is crimped onto the hose will point in the upward direction. Secure the opposite end of the hose to the OEM brake line mounting location on the front axle using the supplied the hose lock. Torque the banjo bolt to 20-27 Nm (15-20 ft/lbs). Refer to Figures 6a and 6b below for proper brake hose mounting.

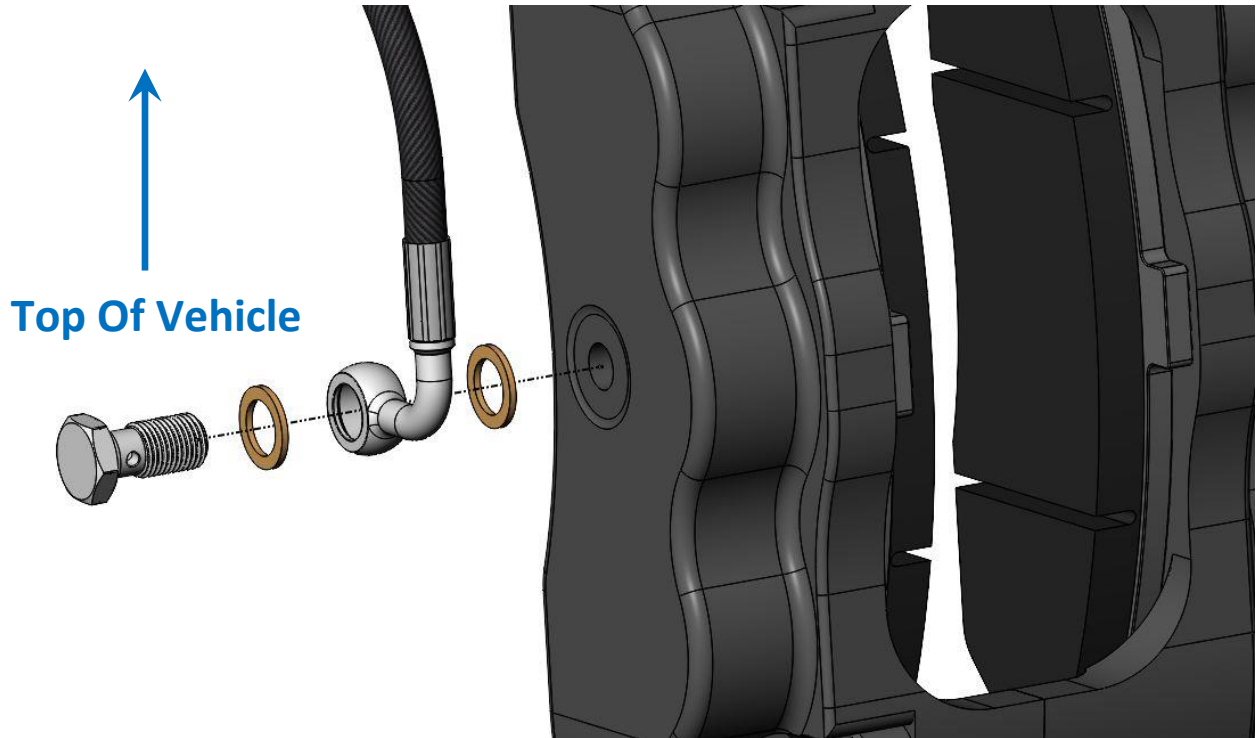


Figure 6a – Stainless Steel Braided Hose Installation (RH Shown)

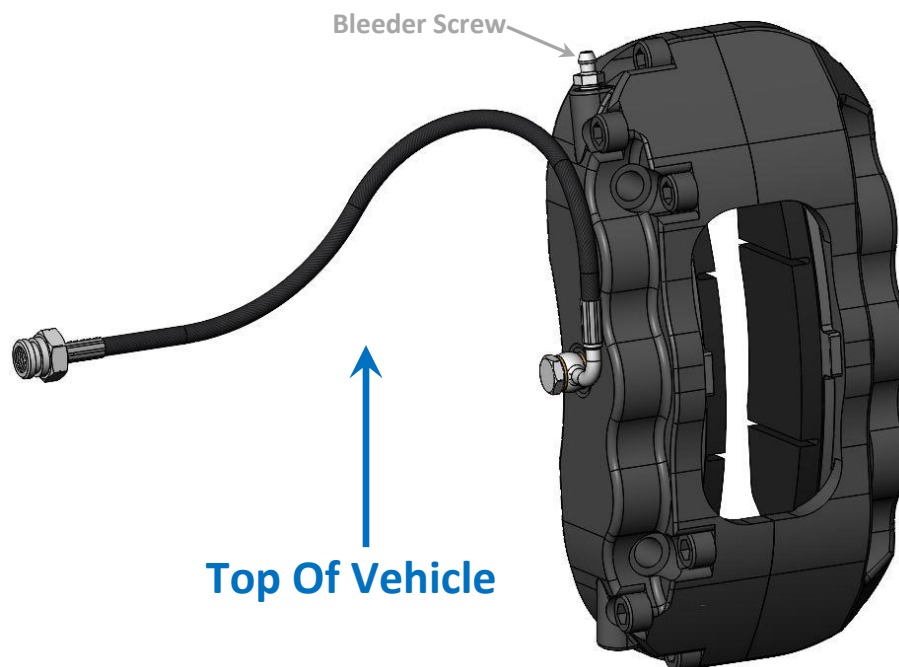


Figure 6b – Stainless Steel Braided Hose Properly Installed (RH Shown)

12. Repeat these steps for the other side and recheck all attachment points and fittings.
13. 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 7 (**Available at Master Power Brakes P/N: ACJ1703**).

***** ANY WARRANTY IS VOID IF DOT 5 FLUID IS USED*****



Figure 7 – Pentosin Super DOT 4

14. The installation is now complete.

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

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