



# INSTALLATION INSTRUCTIONS

FRONT QUICK CHANGE ALUMINUM CALIPER UPGRADE KIT A193-2

2005 - 12 Ford F-250 & F-350

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Thank you for choosing STAINLESS STEEL BRAKES CORPORATION for your braking needs. Please take the time to read and carefully follow these instructions to insure the ease of your installation as well as the proper performance of the complete system.

Before beginning your installation, please verify you have received all the parts indicated on the packing slip. If you believe anything to be missing or incorrect, please call our Customer Service Department at (716) 775-6700.

To assure your installation will go safely and smoothly, have the following items on hand to assist you:

**JACK & JACK STANDS**  
**LUG WRENCH**  
**TORQUE WRENCH**  
**METRIC SOCKET SET**

**BRAKE FLUID - DOT 4**  
**BRAKE CLEANER**  
**TUBE WRENCHES**

**This kit uses the following pads:**

**SSBC#: 10118**

**FMSI#: D-785**



**BEFORE INSTALLING, PLEASE LAY OUT ALL OF THE CONTENTS OF THIS KIT AND THOROUGHLY READ THROUGH THIS INSTRUCTION MANUAL TO ENSURE THAT YOU HAVE ALL OF THE PARTS NEEDED TO COMPLETE THE INSTALL!**

**IF YOU FIND YOU ARE MISSING ITEMS, PLEASE CONTACT SSBC IMMEDIATELY, REGARDLESS OF WHAT DEALER YOU PURCHASED THIS KIT FROM.**

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**IF YOU HAVE ANY QUESTIONS REGARDING MISSING ITEMS, WARRANTY CLAIMS, DEFECTIVE ITEMS, OR SIMPLY INSTALLATION ISSUES, PLEASE CONTACT SSBC DIRECTLY.**

## Removal of Old Brakes

- 1) Raise front of truck until the wheels and tires clear the floor and support the vehicle on jack stands. Remove lug nuts and take tire and wheel assemblies off car.
- 2) Using a tube wrench, remove the hollow banjo bolt that holds the end of the flexible brake hose to the caliper.

***BRAKE FLUID WILL CAUSE SEVERE DAMAGE TO YOUR PAINT. ALWAYS USE EXTREME CAUTION WHEN HANDLING BRAKE FLUID.***



***TIP: With the flex lines off the caliper, brake fluid will be free to drain from the hoses. The use of a hose pinch clamp (not vise grips!) or a plug in the end of the hose will prevent this. This will also be important since you do not want the master cylinder to go dry.***

- 3) With the hose removed, the caliper can be taken off by removing the two 16mm bolts that hold the caliper bracket to the spindle.

## Installation of Kit

- 4) Calipers are sent as complete assemblies ready to be installed. Slide the caliper into position over the rotor and line it up with the holes in the axle. Secure the assembly using the 16mm bolts removed in step 3. Torque to 150 ft/lbs.
- 5) Install the brass adapter block to the back of the caliper using the metric banjo bolt and copper washers supplied. Secure the original flex hose to the adapter block using the 3/8" banjo bolt and copper washers supplied. Torque the banjo bolts to 20 ft/lbs. See figures 1 & 2.
- 6) With all hardware bolted on, turn the wheels' lock to lock making sure there is no interference or twisting of the flex hoses.
- 7) Turn the rotors by hand to insure they turn freely and there are no interferences.

## Filling and Bleeding System

- 8) It is advisable to replace the brake fluid if the color is brown or muddy. This is due to water that has been absorbed by the fluid which will eventually corrode the brake lines and master cylinder. This absorbed moisture can also cause a vapor lock situation under extreme braking conditions. Flush system with clean brake fluid and replace with a good grade of disc brake fluid DOT 4.
- 9) The simplest and most effective way to bleed your brakes is to use the gravity bleeding approach as follows:
  - a) With calipers installed, make sure all fittings are tight and master cylinder is topped off.
  - b) Open one bleeder screw and observe for several minutes. At first the fluid will begin to escape with intermittent air bubbles. When the air bubbles stop and a steady flow of fluid is observed, close the bleeder and repeat process on other side of vehicle.



***MAKE SURE TO KEEP A CLOSE WATCH OVER THE FLUID LEVEL INSIDE THE MASTER CYLINDER DURING THE BLEEDING PROCESS. NEVER LET THE RESERVOIR RUN DRY. ALWAYS KEEP IT AT LEAST 1/3 FULL!***

- c) After bleeding both wheels and topping of the master cylinder, make several applications of the brake pedal. If a hard pedal is experienced, no further bleeding is required. If pedal is spongy, repeat bleeding process until a hard pedal is achieved.

## **FINAL INSPECTION**

- 10) Once a hard pedal is achieved, all fittings and connections must be inspected to make sure there are no leaks. Also check the level in both reservoirs of the master cylinder and top off if needed.
- 11) Put wheels back on the car and turn wheel by hand to insure that the wheel spins freely and does not interfere with any brake components.

**DO NOT DRIVE IN TRAFFIC UNTIL THE BRAKES SAFELY STOP THE CAR A SAFE DISTANCE WITHOUT A SPONGY PEDAL FEEL!**

**BRAKING TESTS SHOULD ALWAYS BE DONE IN A SAFE OPEN AREA!**

## **PROPER BRAKE PAD BED IN PROCEDURE:**

### Street Oriented Pads

For a street driven vehicle running non-race application brake pads, a proper bed in sequence should be performed to properly bed in the brake pads, achieve maximum performance, and reduce the amount of brake noise emanating from the system.

A typical brake pad bed in procedure can be accomplished by a minimum of ten stops, but recommended twenty stops. Follow the procedure listed below to maximize your braking system:

- 1. Perform a series of ten stops from 60 to 15mph. Don't let the vehicle come to a 100% stop, this can cause uneven pad material transfer to the rotor causing excessive vibration!
- 2. When performing the stops, the brakes should be between 50-60%. Pedal effort should be 50-60% of full brake lockup.
- 3. These series of stops should be performed in succession allowing slight cooling time for brakes between stops. This is to ensure that the brakes will reach sufficient temperature to drive out the bonding resins in the pads. Make sure the rotors and pads do not cool excessively between stops.
- 4. Let the brakes cool to ambient temperature.
- 5. Perform another ten 60 to 15mph stops to complete the pad bed in following steps 1 thru 4 listed above.
- 6. Even after completing the bed in procedure, it is necessary to complete 200-250 miles of easy driving before full break in is complete.

**TECH LINE** -- If technical help is required, please call (716) 775-6700.

**NOTE: For frequently asked questions and technical reference information please visit the tech section of our website at [www.ssbrakes.com](http://www.ssbrakes.com).**

**NOW ENJOY TRUE PERFORMANCE BRAKING!**

## Installation Photos (Drivers Side Shown)



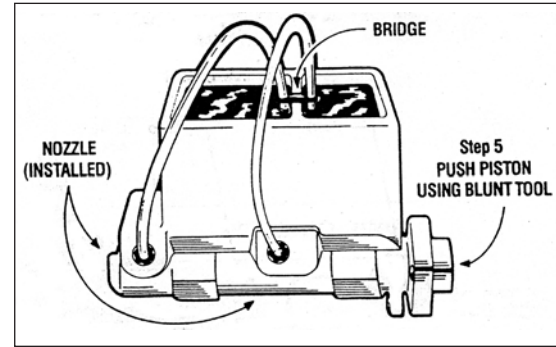
Complete installation of Quick Change calipers



Proper connection of adapter block and flexline.

# How and why do I bench bleed a master cylinder?

When installing or replacing a master cylinder, it is critical that all air is removed from the master cylinder. This can easily be done by bench bleeding the master cylinder prior to installation. Using the SSBC master cylinder bleeder kit (#0460):



- 1) Place your master cylinder in a vise by the ears (not body). Make sure it is level.
- 2) Attach a piece of clear plastic hose to the short end of one of the plastic nozzles. Do the same to the other hose and nozzle.
- 3) Clip the plastic bridge to the wall and push the ends of the hose through the holes so they are SUBMERGED in the reservoir on either side of the wall.
- 4) Press the tapered end of the nozzle FIRMLY into the cylinder port hole with a twisting motion. Repeat this procedure on the other port hole.
- 5) Fill the reservoir with CLEAN brake fluid recommended by the manufacturer.
- 6) Using full strokes, push the piston in, then release. Do this until ALL the air bubbles have disappeared from the clear plastic hose. **(CAUTION-MASTER CYLINDER WILL NOT BLEED PROPERLY UNLESS HOSES ARE SUBMERGED IN BRAKE FLUID UNTIL THE BLEEDING PROCESS IS COMPLETED.)**

Now mount master cylinder and avoid brake fluid leaking out of front and rear ports during installation.

## Bleeding steps for Dual Port Master Cylinder

If you have a master cylinder with dual port holes (4 port holes - 2 on each side), it is necessary to bleed both port sides of the master cylinder. If both sides of the master cylinder are not bled, there will be air trapped in the master cylinder and your brakes will not function properly.

To bleed dual port master cylinders:

- 1) Follow steps 1 - 6 above on the side you will be hooking the brake lines to. Plug the other side.
- 2) Once the air bubbles are no longer visible in the plastic hose, open the bleeder screws in the supplied plugs and allow the mater cylinder to gravity bleed. **DO NOT** push the master cylinder piston in while the plugs are gravity bleeding.
- 3) When clear, steady streams of fluid are coming out of both bleeders, close and tighten the bleeders. Give the master cylinder piston several strokes, making sure there are still no bubbles present in the clear plastic tubes.
- 4) Remove the tubes and plastic fittings and mount the master cylinder on the vehicle being careful not to spill brake fluid on any painted surfaces.