



INSTALLATION INSTRUCTIONS

FRONT DISC CONVERSION KIT A154-4

1957-61 Mopar Fullsize

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 716-759-8666.

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

JACK & JACK STANDS
TORQUE WRENCH
LUG WRENCH
SOCKET SET
BRAKE CLEANER

WRENCH SET
TUBE WRENCHES
MALLET
WHEELBEARING GREASE
BRAKE FLUID

This kit uses the following pads:

SSBC#: A1033

FMSI#: D-11

Revised to level 4 3/02/12

TIP: BEFORE BEGINNING INSTALLATION, SPRAY ALL FITTINGS AND FASTENERS WITH PENETRATING OIL.

1) Front Drum Brake Removal

- a) Raise the car until the wheels and tires clear the floor and support the car on jack stands. Remove the tire and wheel assemblies from the drums.
- b) Remove the grease cap from the hub. Then remove the cotter pin, nut lock, adjusting nut and flat washer from the spindle.
- c) Pull the drum and hub assembly from the spindle. If the brake drum will not come off easily, retract the shoes by inserting a narrow screwdriver through the brake adjusting slot and disengage the adjusting lever from the adjusting screw. While holding the lever away from the adjusting screw, back off the adjuster.

2) Drain the system of all brake fluid.

- a) Remove the master cylinder cover. Using a syringe, remove as much fluid as possible from the master cylinder reservoirs.
- b) Attach hose to front bleeder screws and place other end of hose in a container. Open bleeder screw and allow the fluid to drain.



BE CAREFUL NOT TO GET BRAKE FLUID ON THE PAINT. IT CAN CAUSE SEVERE DAMAGE!

- c) When fluid stops draining, disconnect the flexible hose from the rigid brake line at the frame and remove the horse shoe clips. Use plenty of penetrating oil between the tube nut and the tube. We strongly recommend the use of a tube wrench (available from any tool supply store including Sears).

3) Drum Brake Plate Removal

- a) Remove the two upper bolts that secure the backing plate to the spindle ($\frac{7}{16}$ "-20 bolts).
- b) Remove the lower two bolts that secure both the backing plate and the steering arm to the spindle.
- c) Remove the entire drum brake backing plate assembly as a unit and discard the bolts.
- d) Thoroughly clean up the face of the spindle but NOT the bearing surfaces using a wire brush. Brake cleaner can then be used to clean the machined surfaces of the spindle.

4) Installation of Caliper Mounting Brackets

- a) Attach the caliper mounting bracket to the spindle using the $\frac{7}{16}$ " bolts supplied. The bolts go in from the back of the spindle and thread into the mounting bracket. The $1\frac{1}{2}$ " long bolts will pass through the spindle into the bracket. The $2\frac{1}{2}$ " long bolt will go through the upper steering arm hole, through the spindle, and into the bracket. The 3" long bolt will go through the lower steering arm hole, through the spindle and into the mounting bracket.
- b) Be sure to use the supplied lockwashers and torque all bolts to 55 - 60 ft/lbs.



NOTE: THE CALIPER MOUNTING BRACKETS SHOULD BE ORIENTED SO THE CALIPER WILL BE ON THE OPPOSITE SIDE OF THE STEERING ARM.

5) Installation of Rotors

- a) Begin by installing the spindle spacer supplied onto the spindle shaft with the rounded portion facing inwards.
- b) Prepare rotor for installation by cleaning the protective coating using brake cleaner.
- c) Pack the inner (larger) wheel bearing with hi-temp disc brake bearing grease and place them in the inner rotor cup (which is already in the rotor assembly). Pack grease lightly between the lips of the grease seal before installation. Use a soft mallet or a piece of wood so as not to distort seal while tapping it into place.
- d) Install the rotor assembly on the spindle.
- e) Pack and install the outer wheel bearing over the spindle and into the outer cup of the rotor. Install the washer and adjusting nut onto the spindle.
- f) Wheel bearing adjustment as follows is especially important with disc brakes: Rotate rotor while torquing spindle nut to 17-25 ft / lbs. Back off the adjusting nut $\frac{1}{2}$ turn and retighten to 10-15 ft / lbs. Lock the adjusting nut with the cotter pin supplied. If the cotter pin hole does not line up, turn the nut until the cotter pin can be installed. Install the grease cap and make sure the rotor spins freely.

6) Caliper Installation



BE CAREFUL THAT ALL HYDRAULIC COMPONENTS ARE KEPT CLEAN AND FREE OF DEBRIS INSIDE AND OUT.

- a) Slide brake pads into calipers from the top. The linings on the pads will face each other.
- b) Install the two pad retaining clips onto each caliper to retain the pads. The loops on the clips should point up and they will be secured to the calipers using the $\frac{1}{4}$ " bolts and lock washers supplied. Torque the bolts to 15 ft / lbs.
- c) Attach the flex lines to the caliper using the copper washers supplied with the kit and torque them to 20-30 ft / lbs.
- d) Route the flex line between the shock absorber and spindle upright. Slide caliper into position over the rotor.
- e) With the holes in the caliper and mounting brackets lined up, the $\frac{7}{16}$ " - 20 caliper mounting bolts and lock washers can be installed. These bolts should be torqued to 55 ft / lbs.
- f) Attach the flex lines to the rigid brake lines at the frame rail and secure them in the brackets using the horseshoe clips supplied with the kit. Run the steering through a full left to right turn to make sure the hoses do not become kinked or take a double bend. If the hoses do bend incorrectly, reorient them in the brackets until the problem is solved.

7) Master Cylinder Removal / Installation



WHEN INSTALLING YOUR NEW MASTER CYLINDER, REMEMBER THAT THE REAR PORT OF THE MASTER CYLINDER IS FOR THE FRONT BRAKES AND THE FRONT PORT OF THE MASTER CYLINDER IS FOR THE REAR BRAKES.

- a) First remove the old drum brake master cylinder. Use a tube wrench to disconnect the steel lines from the master cylinder. Be careful not to get brake fluid on any paint surfaces.

- b) Disconnect the pushrod from the brake pedal by removing the nut and bolt that go through the pushrod. Remove the four nuts that secure the master cylinder to the firewall. On some cars, the nuts will be under the dash while on others the nuts will be out on the firewall. The master cylinder and pushrod can then be removed from the firewall as an assembly.
- c) The pushrod, dust boot and retainer plate can be transferred to the new master cylinder. By securing the pushrod in a vice and tapping on the back of the master cylinder with a hammer, the pushrod will pop out of the back of the master cylinder. The dust boot and retainer plate can be removed by removing the two retaining screws. Be careful as the spring loaded pistons will pop out the back of the master cylinder when the plate is removed. Brake fluid will also come out when the plate is removed. These parts can then be transferred to the new master cylinder.
- d] Before installation, the master cylinder must be bench bled (refer to attached page for proper procedure). With the master cylinder bench bled and the cap installed, the master cylinder can be installed directly in place of the drum master. Be sure to reconnect the pushrod to the pedal and insure proper brake light switch adjustment.

8) Installation of Line and Adjustable Proportioning Valve

- a) If your car was originally equipped with a dual reservoir master cylinder, the master cylinder lines can be reconnected to the new master
 - 1) Disconnect the line going to the rear of the car from the brass distribution block.
 - 2) Install the brass adapter fitting into the adjustable proportion valve and connect the original front to rear line to the "out" port of the proportioning valve.
 - 3) Use the 10" long pre-flared brake line from the kit to connect the "in" port of the adjustable proportioning valve to the brass distribution block.
- b) If your car was originally equipped with a single reservoir master cylinder, you will use the two 18" long steel lines supplied with the kit to tie into the existing brake lines.
 - 1) The line with the blue and red fittings will be used to connect the larger bowl of the master cylinder to the top port of the brass distribution block.
 - 2) Disconnect the original steel line going from the brass distribution block to the rear brakes. Install the small steel plug supplied in the kit into the open port of the distribution block and tighten with a tube wrench.
 - 3) Install the brass adapter fittings into the adjustable proportioning valve from the kit. Connect the original front to rear brake line to the "out" port of the adjustable proportioning valve. Use the other 18" long steel line from the kit to connect the small bowl of the master cylinder to the "in" port of the adjustable proportioning valve.

9) Filling and Bleeding System

- a) 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 vapor lock situation under extreme braking conditions. Flush system with clean brake fluid and replace with a good grade of disc brake fluid DOT 3 or DOT 4.
- b) The simplest and most effective way to bleed your brakes is to use the gravity bleeding approach as follows:
 - 1) With calipers installed, make sure all fittings are tight and master cylinder is topped off.

- 2) Starting at the wheel farthest from the master cylinder and working your way around the car to the wheel closest to the master cylinder, 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 $\frac{1}{3}$ FULL.

- 3) After bleeding all four 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

- a) 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.
- b) 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.

NOTE: BOTH FRONT ROTORS WILL BE RIGHT HAND THREAD.

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!

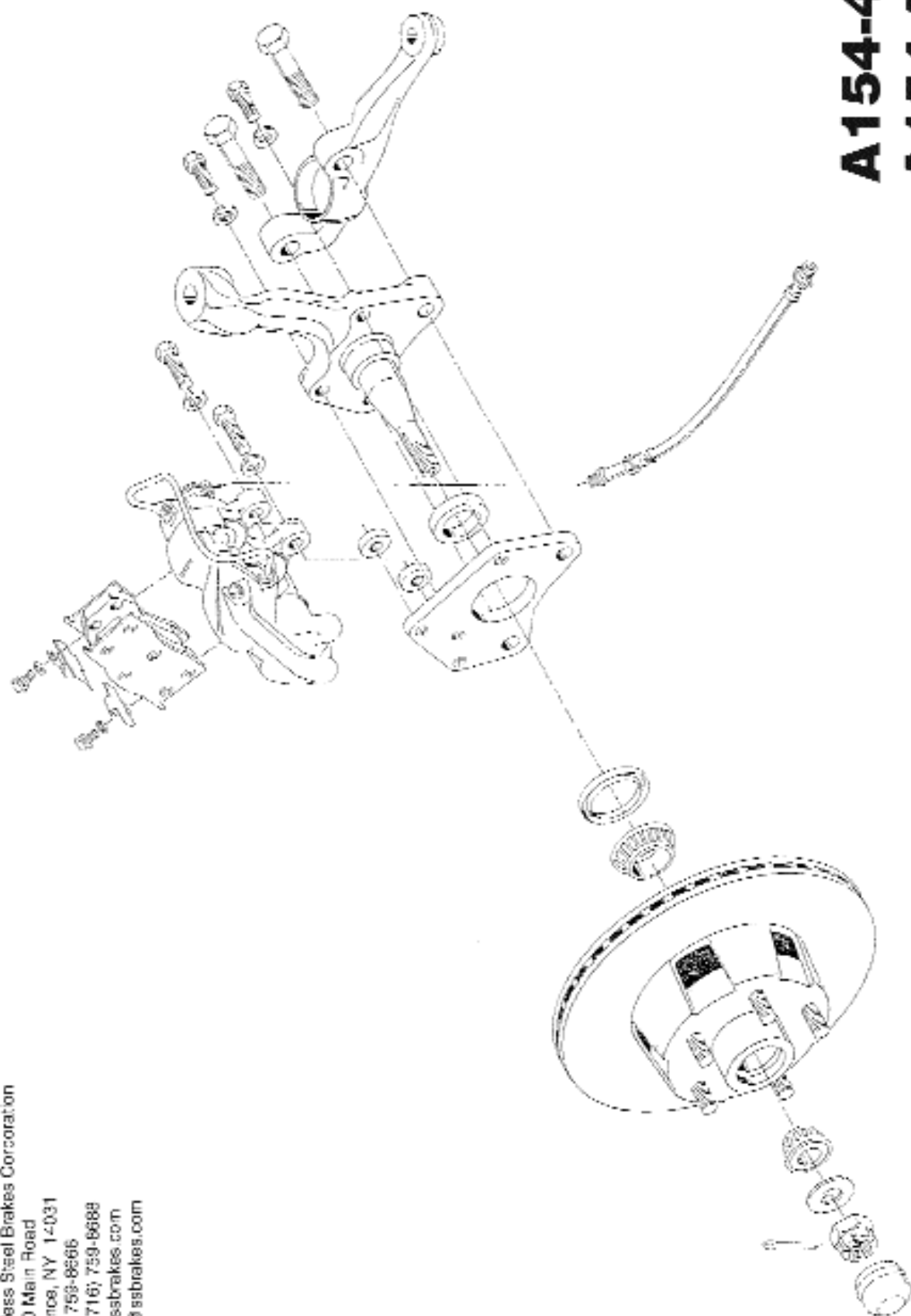
NOTE: For frequently asked questions and technical reference information please visit the tech section of our website at www.ssbrakes.com.

TECH LINE -- If technical help is required, please call 716-759-8666.

NOW ENJOY ULTIMATE STOPPING POWER!!!



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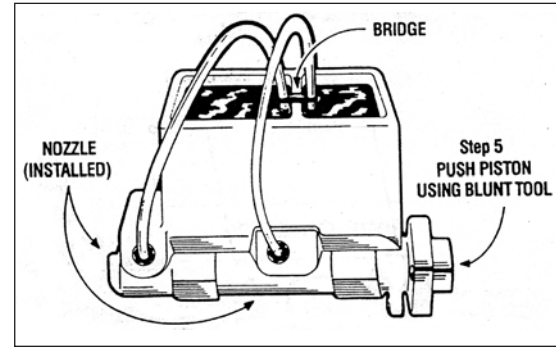


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A154-5

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.