

# Bleeding and Bedding Procedures

Please see the TCE web page for more assembly tips!

## **Bleeding the brakes**

- Top off the fluid reservoir.
- Open the outer bleeder fitting using a 1/4" wrench allowing the brake fluid to flow freely from it. Give it time, it will get there. \*If you caliper has bleeders top and bottom **use only the UPPER fittings**. *Bleeding is done with only the small nipple and not the brass fitting.*
- **WARNING:** *When gravity bleeding the caliper; not fitting a secure hose to the nipple may lead to damages to the finish of Powder Coated calipers! Avoid free flowing fluid on the caliper body at all times.*
- Once flowing, close it and then open the inner bleeder nipple. This will allow the caliper to become full of fluid, and may take several minutes.
- When both sides are completed top off the fluid level and slowly pump the brake pedal. This will seat the pads and you are now ready to pressure bleed the system.
- Fit a short length of clear vinyl tubing to the outer bleeder and curve it upwards, then down into a suitable catch bottle.
- Using another person to pump the pedal, pump three times, and open the bleeder screw. Start with the outer and then follow up with the inner. Fluid and air will be visible in the tubing. When the pedal is down close the bleeder. Repeat this process 5 times. It is NOT necessary to develop extreme pressure in the system to bleed, only light pressure is required and excessive line pressure of 1500psi may damage calipers or lines.
- Fit the bleeder hose to the inner bleeder nipple and repeat the process again.
- Some applications require the vehicle be raised in the rear for a final bleed. This is to allow any trapped air in the upper piston to free up and be at the bleeder nipple. Bleed calipers in the most vertical manner possible.
- Repeat the bleed process the same way once again doing each of the nipples 3-5 times. Be sure the fluid level in the reservoir is maintained during all of this bleed work. By now you should be well on the way to flushing the entire system also. This is simply an added bonus if it has not been done lately.
- Satisfied that all air has been purged from the system you can now refit the wheels and tighten the lug nuts to factory specs.
- RECHECK caliper clearances at this time very carefully as not all Factory wheels are cast exactly the same.

## **Bedding the pads**

- Start the car and proceed slowly to an open area where you can drive back and forth on for the next 20 minutes or so.
- Test for basic stopping and that there are no obvious signs of initial problems.
- Run the car up to about 35mph and at the same time lightly drag your left foot on and off the brake pedal causing the car to cycle in an acceleration, deceleration mode.
- Continue this for about 5 minutes.
- Now increase the speed to about 50mph and bring the car to a near stop 4-5 times. Brake smell and light smoke is expected. Run the brakes HARD! This ensures pad curing and if not done well may result in pad transfer.
- Slowly drive the car for a few minutes without using the brakes to allow cooling off BEFORE bringing it to a complete stop. After stopping, slowly push the car forward a few times to prevent any "hot spots" from developing. This procedure can be performed again if you like for faster bedding or you can now simply drive the car in a modest manner for the next 100 miles or so allowing the pads and rotors to become "friendly" with each other. Total curing and bedding can take 100-200 miles of light street use, hard track use will produce immediate results.
- During the bedding the zinc will be removed from the swept area of the rotor, this will produce a zinc dust and may also plug up the gas slots some.
- **When replacing pads for service clean the pistons with an old tooth brush and lube them with Silicone Spray (not WD40) before pushing them back in.**

## **Follow up**

After the initial bedding, it's suggested you remove the pads, sand them lightly on a flat surface, and clean any build up from the gas slots. Flip the pad over and insert them on the opposite side of the caliper when re installing them. To aide in keeping pulsation down you may also wish to grind a taper into the leading edge of the pad to remove the square cut as delivered. Recheck all the hardware, hose fittings, and re-bleed the system 3-4 times per bleeder nipple. Check for moisture at the adapter fitting since this is a common area for leaks to develop. Tighten if needed and re-bleed.

**AUTOMATIC TRANSMISSION ALERT** If your vehicle has an automatic transmission your new brake system may be subject to pad transfer and rotor 'hot spotting'. This is due to continuously applied pressure after stopping where the pads are crystallized to the rotor surface. Creep your car or remove your foot from the brake pedal when possible! Baking pad material to the rotor will lead to a greater chance of rotor pulsation.

**FLARE NUT or HARDLINE ALERT** Lately more and more M10 hardline ends seem difficult to thread into the supplied ss flex hose. This is due to the factory line being torqued so tight as to flare or mushroom the lead threads on the nut behind the steel hardline tubing. The only solution is to very lightly file the end in a spinning motion to relieve this and allow for the end to thread into the supplied hose. This is NOT a ss flex hose manufacturing defect.