

Rebuilt Master Cylinder/Caliper/Steel Braided Brake Line Installation Instructions

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Refer to the appropriate section for your specific installation or start at step #1 for full Brake Installation

- 1. Please review the steps below for the appropriate section related to your specific brake installation after Moto-Services Component rebuild or Brake Line Purchase. Note that Step #2 is worthwhile even if Calipers were not serviced.
- 2. Prep Brake Rotors: Scuff with #320 grit auto body paper, clean with brake cleaner. Scuff with Scotchbite, clean with brake cleaner. Inspect rotors for wear such as excessive grooving, minimum thickness (stamped on rotor near mounting bolts), and excessive run-out (refer to specs in manual for thickness & run-out specs. Replace rotors as needed.
- 3. Bolt Calipers & Master Cylinders to mounting brackets, torque mounting bolts, check torque setting on all mounting Bolts. Plug in brake light switch & test. Fit any dust boots at levers, actuators, etc. Fit brake lines to holders & route carefully! Refer to service manual for proper line routing, this is critical!
- 4. Prepare Brake Lines: If reusing Brake Lines dress sealing edges of Banjo Fittings with 400 grit auto body paper, clean with brake cleaner. Install new supplied Sealing Washers with Banjo Bolts & torque to spec. If threaded line fittings clean fittings & tighten carefully. Always use new sealing washers! Inspect Brake Lines carefully, replace as needed.
- 5. After fitting Brake Lines verify there is no pinching, binding or rubbing of the Brake Lines: Turn front end side to side, full lock to full lock while inspecting the Line routing. Re-route IF needed, refer to line routing diagram in the Service Manual as Steel Braided Brake Lines WILL chafe paint, scuff chrome, aluminum, etc.!
- 6. Fill Master Cylinder with fresh DOT4 EBC brake fluid, but do NOT yet pump brake lever!
- 7. Attach clear tubing to caliper bleed fittings, tubing should go into jar with enough brake fluid in it to cover bottom opening of tubing.
- 8. Open bleed fittings on Calipers allow gravity to fill lines & Calipers with fluid for several minutes without pumping brake lever. Monitor Master Cylinder reservoir fluid level, top off as needed. Watch clear tubing for fluid & air bubbles to appear. There may or may not be brake pressure yet.
- 9. After fluid is present in tubing, slowly pump Brake Lever leaving Bleeder fully open. Close off one Bleeder/Caliper if needed. Gently pump Brake Lever until no air is present in clear tubing then move to next Bleeder/Caliper & repeat process for each as needed until brake pressure is developed. One models with Anti-Dive Brakes there are additional Bleeders at the Anti-Dive Units. Bleed these fittings after Caliper Fittings and/or work back & forth between them. Anti-Dive Brake systems can be more difficult to bleed fully.
- 10. After Brake pressure has developed move to other Bleeders (Anit-Dive Units, etc.) repeating process until proper brake pressure is obtained. Make sure NOT to allow Master Cylinder Reservoir to run dry.

- 11. IF Brake pressure is not developing or remains mushy after initial bleeding process noted above: Line bleed at the Master Cylinder by pumping up Brake Lever, holding lever in while cracking open the line fitting at Banjo Bolt. Repeat as needed.
- 12. IF no brake pressure will develop Prime the Master Cylinder: Remove Banjo Bolt/Brake Line, place finger over the line opening on the Master Cylinder. Slowly pump the Lever, hold lever in, remove finger from outlet at one edge allowing air to escape. Replace finger over opening before releasing Lever! Repeat process until pressure is felt at lever. Reinstall Brake Line then repeat line bleeding process first, then standard bleeding process as outlined above steps 8-10.
- 13. Be absolutely sure there are no fluid leaks, no line pinching, all fastener are properly tightened & torqued, brake lights are functioning properly AND that brake lever is solid in feel with brakes operating prior to test riding the motorcycle! Don't forget to check/adjust your Tire Pressure prior to riding: 30-40PSI typical, consult your Service Manual or Tire Manufacturer for specific pressures recommended on your model of Motorcycle & Tire combination.

NOTES:

- Brake Fluid is corrosive & will damage paint/plastic! Cover Tank, Instruments, etc. as needed.
- Wipe away any spilled fluid immediately then clean with brake cleaner as needed to prevent paint damage
- Brake Fluid MAY squirt out top of Master Cylinder Reservoir when pumping lever. This is normal indicating reslief port is clear & pressure is developing.
- Use ONLY DOT 4 Brake fluid from un-opened container within 24-48 hours after opening!
- Clean Brake Pads & Rotors with brake cleaner if any grease/oil/brake fluid gets on them during installation of Calipers. Replace Brake Pads that have been contaminated by brake fluid or fork oil from leaking forks!
- Inspect Brake Lines for any cracks, checking, kinks etc. Verify DOT date on brake lines is less than 10 years old. Replace brake lines as needed, steel braided lines strongly recommended!
- Verify brake pressure, brake light function, line routing, all fasteners/bleeds are tight & brakes are pumped up prior to moving or riding motorcycle!
- Break in new & bead-in new brake pads gently: vary brake pressure/power, do not overheat. Allow 50-100 miles minimum for pads to bead in. Vary brake pressure & do not overheat during bead-in period!

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