



Brake Line Assembly Instructions

1 Identify Problem

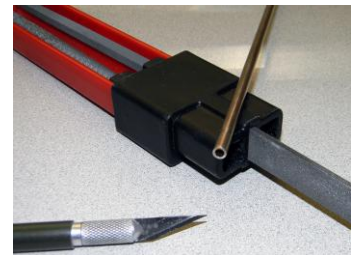
- Find the initial source of the problem (i.e. leaking brake fluid location on the line itself).
 - **Homework**-Before beginning the repair, use AGS Mr. Penetrant® or a similar penetrating lubricant and liberally coat both ends of the defective line on the tube nuts and also all bleeder screws. Allow the penetrating oil to sit for at least an hour and then check bleeder screw(s) of closest wheel(s) and make sure that they can be opened/loosened, in order to make sure that once line is replaced, you can bleed the fluid out of that part of the system.
- Roughly measure the leaking line from connection point to connection point.

2 Disassembly

- Locate points where line is connected; both at ends and where supported on frame/axle.
- Attempt to break nuts loose on brake line without twisting ends off (The FlexForce® by Xforce®/AGS Company is an excellent tool for really stubborn and worn nuts).
- Once loose, remove line from all manufacturer's frame/axle supports.

3 Bending/Flaring of New Line

- Measure old line for length so that coiled line may be cut at the correct length before flaring.
- Do not discard old line as you will use it as a pattern for the correct shape and bends for the replacement line.
- With the coiled line measured and cut with a good tubing cutter, square the end of the tubing with a file, removing all burrs. Clean the center of both ends of the tubing using a sharp knife to remove any burrs that may be present on the inside diameter of the cut tubing.
- Flare first end, installing correct tube nut with threads facing the flared end and verify you are putting the correct flare on the tubing (inverted or bubble). Follow flare tool manufacturer's instructions exactly.
- Once you have the first end flared, bend the replacement line to fit using the removed line as a guide and check for the fitment and length. In most cases NiCopp™ can easily be bent by hand to follow the defective line so a tubing bender will not be necessary, but it's a good idea to have one handy if needed.
- After bending the NiCopp™ line to match the original line, thread the fitting into one of the ends where the defective line was removed and check the line for fitment, taking care to make sure that it fits into the factory clips and guides and bring the open end up close to the second attachment point, making sure the length will fit and the tube nut will reach.
- Once you have the test fit complete, remove the line and flare second end following the exact order and directions above in the third bullet point in section 3 instructions.



Bubble Flare



Inverted Flare



4 Install/Test New Brake Line

- Using compressed air, blow through the replacement line to make sure there is no debris left inside the line before installing.
- Install both ends of brake line into respective female components (i.e.-wheel cylinder, brake hose, proportioning valve, master cylinder).
- Bleed the brake system to remove all air by opening the corresponding brake bleeder screw(s) and allowing the fluid to drip out into a pan or on a heavy towel. Make sure to keep the master cylinder full with clean brake fluid, checking often.
- Once there is a steady flow/drip out of the bleeder screws you have opened, tighten them up to stop the flow, refill the master cylinder to the vehicle manufacturer's specs with clean brake fluid and install the cap, making sure it seals.
- Check the brake pedal to make sure that it has a firm feel to it when depressed by first depressing lightly several times to make sure that everything is back in place.
- Lower and test drive vehicle.

