



CAUTION: Turn off the water supply to the faucet.

DISASSEMBLY:

1. Remove button (1) from clear handle or loop handle faucets. Unscrew handle screw (2) with a number 2 Phillips screwdriver and set handle aside. For lever handle faucets, unscrew rear set screw with a 1/8" Allen wrench. Move the ball lever to middle of heart shaped opening of the cartridge.
2. Wrap a clean dry rag around the centerpiece nut and unscrew the centerpiece nut (5) and set it aside. To break loose tight centerpiece nuts, use an 1 1/2" wrench very carefully on the wrenching flats provided. On centerpiece nuts without the wrenching flats, carefully apply the tongue and groove pliers over the rag so that the jaw teeth do not penetrate the chrome plating.
3. Remove and set aside the white plastic ball cap with the heart shaped opening; it will not be reused.
4. Pull up on the metal ball lever, rocking it back and forth to disengage the bonnet middle from the underbody. Discard these parts as they will not be reused.
5. Remove the bonnet bottom with a top o-ring, the two black rubber seat washers and springs (springs for metal underbodies may have white spring inserts). Discard all of these parts, as they will not be reused. For kitchen faucets, the spout (3) may be removed to help drain the mixing chamber of water. Rotate and pull straight up on the spout. Hold the spout tube close to the hub area to eliminate binding. Mop up any excess water.

REASSEMBLY:

1. Open the service kit and using a sharpened number 2 pencil, assemble the smaller diameter of the seat washer first over the end of the pencil. Assemble the spring next (the spring fits inside the larger opening of the seat washer). Position the pencil to the faucet and push the parts into one of the underbody seat bores. Repeat for the other seat bore.
2. Pick up and position the smaller o-ring to the bonnet bottom, which has three lobed sides. Smear silicone grease (DO NOT USE PETROLEUM JELLY) across the o-ring and on the opposite flat bottom side. Position the bonnet bottom in the center of the mixing chamber of the faucet with the flattened area of the hole at the 12 o'clock position. The key way of the underbody mixing chamber is at 9 o'clock.

CAUTION: Do not use petroleum jelly or any petroleum based lubricant for lubrication, as some o-ring compounds will swell in its presence.

3. Pick up the remaining o-ring and assemble to the ball seat and position the ball seat to the faucet. The key must fit in the key way of the faucet, which will be at 9 o'clock.
4. Pick up the metal ball lever and line up the flat at the bottom with the flat of the ball seat. Push through the ball seat only, rotate the stem 90 degrees counterclockwise and push it further to seat into the flat of the

REPAIR INSTRUCTIONS FOR SINGLE LEVER CARTRIDGE KITS

NOTE: This instruction cover models with or without a side spray.

the ball seat ball socket with the larger of the two plastic pins at the 9 o'clock position.

5. Pick up the new white plastic ball cap and position the keyway on the underneath side at the 12 o'clock position with respect to the ball seat. Push the ball cap over the metal ball stem drive and onto the ball seat. Make sure the mating key and key way are engaged with each other. **CAUTION:** Make sure the key at the 9 o'clock position of the ball seat
6. is in the centerpiece keyway. If the seat springs have pushed the ball seat upwards, push the key side down to engage the keyway and let the other side ride up.
7. Reassemble the centerpiece nut (5) and wrap with a clean dry rag and tighten securely. Tighten with an 1 1/4" wrench across the flats if necessary.
8. Reassemble the handle to the metal stem.
9. Pick up and position the lock washer and screw to the acrylic or loop handle and tighten hand tight with the Phillips screw driver. Pick up and position the button to the handle and seat securely with the red arrow on the left. For lever handle faucets, pick up the 5" lever handle, position it over the stem and tighten securely with an 1/8" Allen wrench.
10. Turn the water back on and check for leaks. Turning off the water supply at the main shut off may disturb sediment in the lines and cause the sediment to be dislodged and delivered to all faucets.
11. If the faucet leaks at the handle stem, turn off the water and check to see that all keys are fully engaged in their respective key ways. Check all O-rings for debris. Reassemble and recheck.
12. If the faucet will not shut off, turn off the water and check for debris in or around the seat washers. Sharp debris may also score the bonnet bottom, and this will cause a shut off leak. Reassemble and recheck.
13. If the flow is still low, check the aerator screen or shower head orifice for debris that is blocking the outlet.

CARE AND CLEANING

Many of the bathroom cleaners in use today contain aggressive chemicals and abrasives for the purpose of removing soap scum and stains from porcelain, enamel, and ceramic tile surfaces. Often these cleaners are also used to clean the chrome, polished brass, or other finishes on faucets, showerheads and other bathroom accessories. Depending on the particular abrasive or chemical, application of these products may result in either immediate or long-term damage or even removal of the finish. Please be aware that unintentional splashing or overspray of cleaners can be as harmful as deliberate application.

Wipe with a soft, damp cloth or towel.

General comments on the potential effects of various types of cleaners are noted below:

- * **Foaming Cleaners-** may cause crazing or cracking of acrylic handles and plastic parts. Repeated use may cause softening of protective organic overcoats on polished brass finishes.
- * **Bleach-** may cause long term corrosion, damage to finishes.
- * **Solvent Stain and Spot Removers-** may cause cracking of plastic parts, damage to finishes.
- * **Cleaners with Alcohol-** may cause cracking in acrylic handles, other plastic parts.
- * **Tile/Grout Cleaners-** these will remove finishes.
- * **Lime Removers-** typically contain either phosphoric or hydrofluoric acids, which remove finishes.
- * **Abrasive Cleansers-** even mild ones, will dull, scratch, and eventually remove chrome, brass, or any other finish.