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Repair Instructions for Single Lever Cartridge Kits

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

Tools:
- 1/8" Allen wrench (6-1101-5-0 kit only)
- Number 2 Phillips screwdriver
- Clean dry rag
- 1 ¼" open end wrench or large adjustable wrench that will open to 1 ¼"
- 1 ¾" tongue and groove pliers (for older faucets with knurled centerpiece nuts)

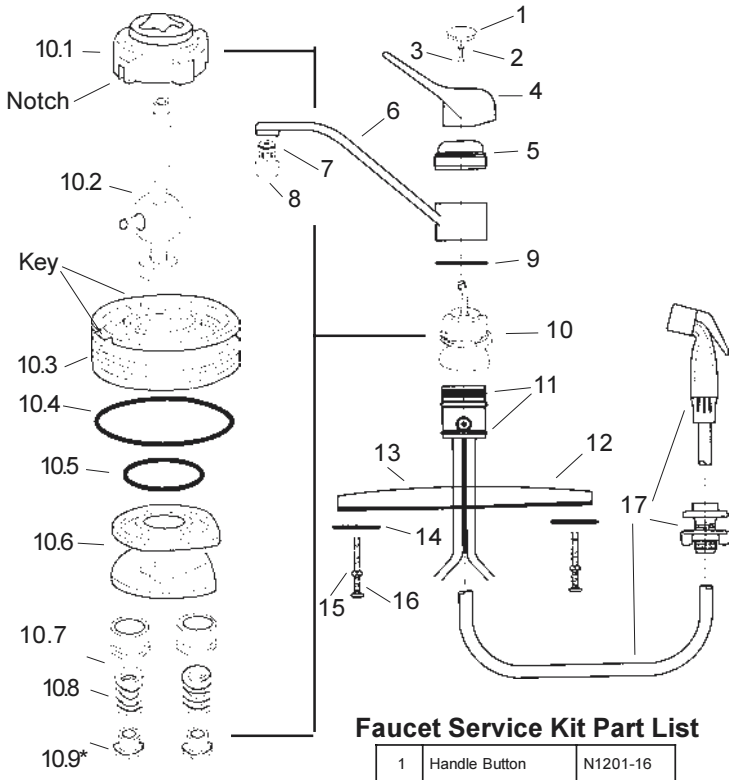
Parts required (One or more service kits. Handles not included):

Service kits:
- **6-1101-5-0** Service Kit - Stainless steel stem with rear screw for 5" lever handle
- **6-1201-5-0** Service kit - Brass stem with square drive, top screw for brass underbody
- **6-N1201-5-0** Service kit - Brass stem with square drive, top screw for plastic underbody

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 (10.2) to middle of heart shaped opening of the cartridge (10).
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 ¼" 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 (10.1) 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)(10.6-10.9). Discard all of these parts, as they will not be reused. For kitchen faucets, the spout (6) 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.



Cartridge Service Kit Part List

10.1	Ball Cap	N1201-4-5
10.2	Ball Lever	N1201-4-0
10.3	Ball Seat	N1201-4-2
10.4	O-ring	48-7-6
10.5	O-ring	42-5-6
10.6	Bonnet Bottom	
	for Metal body	1201-5-3
	for Plastic body	N1201-5-5
10.7	Seat Washer	N1201-5-2
10.8	Spring	1201-3-4
10.9	Spring Insert	1201-3-1*

* Spring insert not required with new service kits.

Faucet Service Kit Part List

1	Handle Button	N1201-16
2	Handle Screw	N1201-2H
3	Lock Washer	N1201-3
4	Handle	1103-9C
5	Centerpiece nut	1201-11C
6	Spout with spray	1103-7-8C
6a	Spout less spray	1101-7-8C
7	Diverter (spray model only)	1103-23
8	Aerator	50-19C
9	Bearing Washer	1101-7-3
10	Cartridge Kit	6-1201-5-0
11	Spout hub O-ring	1201-14-36
12	Shield	1102-12C
13	Bottom Plate	1102-15
14	Washer	1201-18
15	Nut	1201-11
16	Screw	1201-7-2
17	Side Spray ass'y	151-22-0

REASSEMBLY:

1. Open the service kit and using a sharpened number 2 pencil, assemble the smaller diameter of the seat washer (10.7) first over the end of the pencil. Assemble the spring (10.8) 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 (10.5) to the bonnet bottom (10.6), which has three lobed sides. Smear Dow Corning 111 lubricant 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 flatted 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 (10.4) and assemble to the ball seat (10.3) 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 (10.2) 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 bonnet bottom. The ball portion of the metal ball lever must rest in 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 (10.1) 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.
6. **CAUTION**: Make sure the key at the 9 o'clock position of the ball seat 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 ¼" wrench across the flats if necessary.
8. Reassemble the handle (4) to the metal stem.
9. Pick up and position the lock washer (3) and screw (2) to the acrylic or loop handle and tighten hand tight with the Phillips screw driver. Pick up and position the button (1) 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.

Phoenix Products, Inc. recommends wiping 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 remove chrome, brass, or any other finish. At first the finish will become dull and scratched.