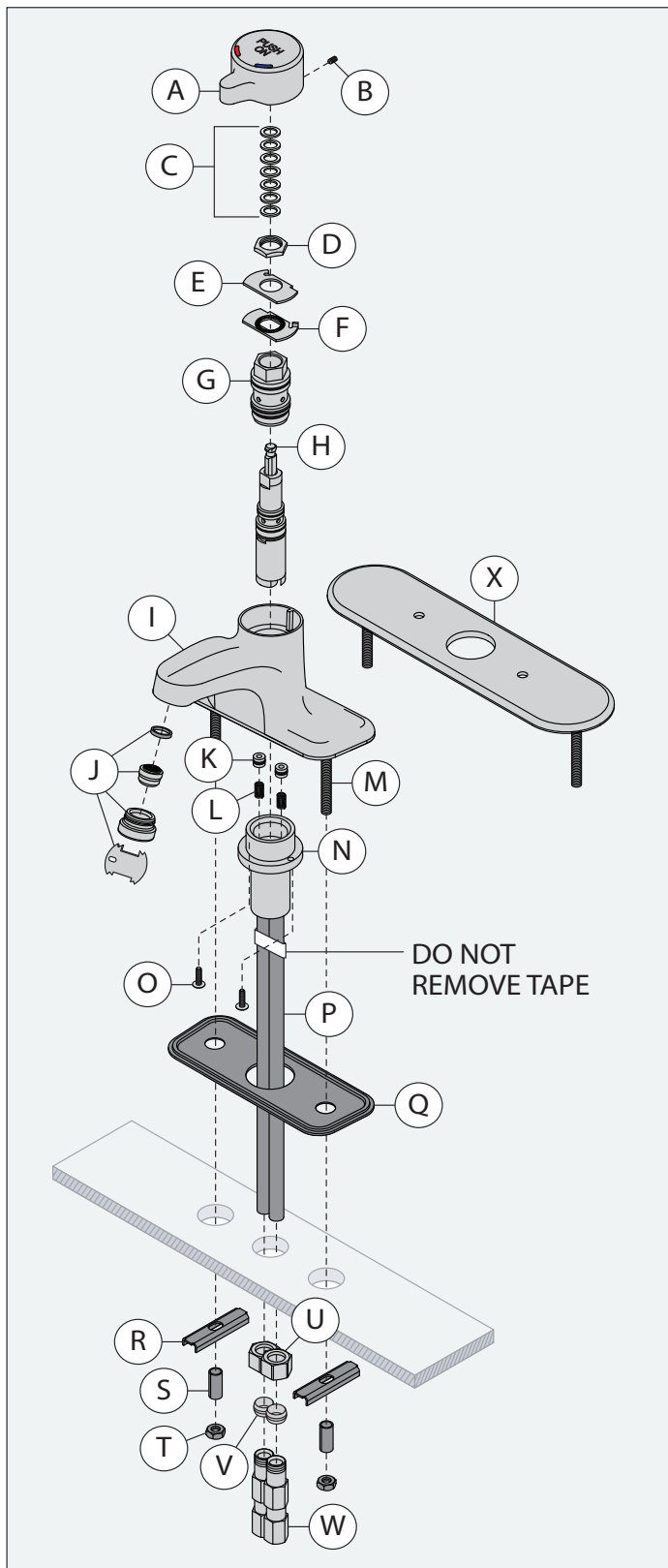
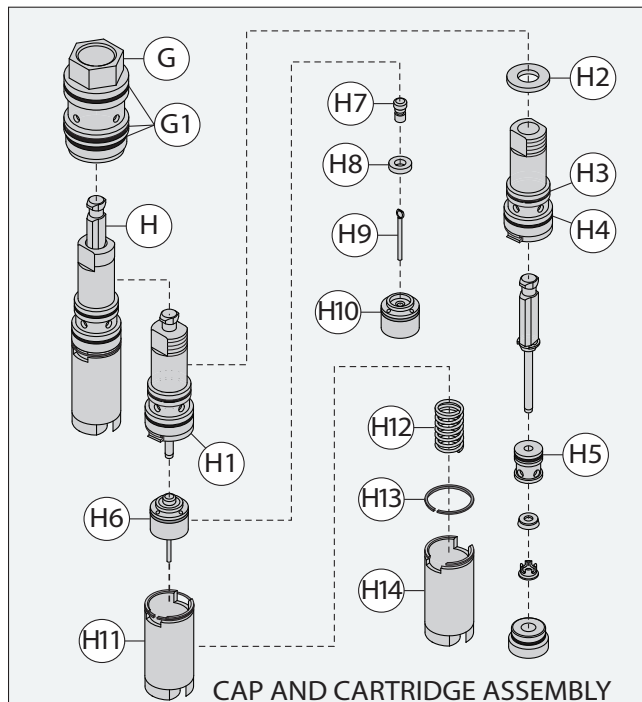


## Parts Breakdown



- Notes:** 1) Apply plumber tape to all threaded connections.  
2) Compression nuts (U) and ferrules (V) not included.



### Replacement Parts

Item	Description	Part Number
A	Handle	RL-290
B	Set Screw	LL-290
B	Set Screw	LL-27
C	Cycle Timing Washers (7)	LL-28
D	Nut	
E	Limit Stop Washer	RL-268
F	Limit Stop Washer, Fixed	
G	Upper Housing	LL-3N
G1	Upper Housing O-rings (3)	LL-48
G1	Upper Housing O-rings (3)	
H3	Cartridge O-ring	
H4	Cartridge O-ring	RL-272
H5	Guide O-ring	
H10	Piston Quading	
H	Cartridge	LL-1A
H	Quick Closing Cartridge	LL-1B
H1	Control Spindle Kit	RL-266
H6	Piston Assembly	RL-266
H2	Thrust Washer	LL-35
H6	Piston Assembly	LT-4AA
H11	Piston Spring/Cylinder	RL-267
J	0.5 gpm Vandal Resistant Aerator Kit with Key	RL-292
K	Check	
L	Spring	RL-269
Q	Mounting Gasket	
R	Mounting Bracket	
S	Spacer	SPF-KIT
T	Mounting Nut	
W	Check/Screen Assembly	LL-71B
X	8" Deck Plate	RL-291

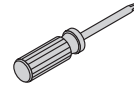
## Installation / Tools Required



Adjustable Wrench



Allen Wrench: 2.5 mm



Phillips Head Screwdriver

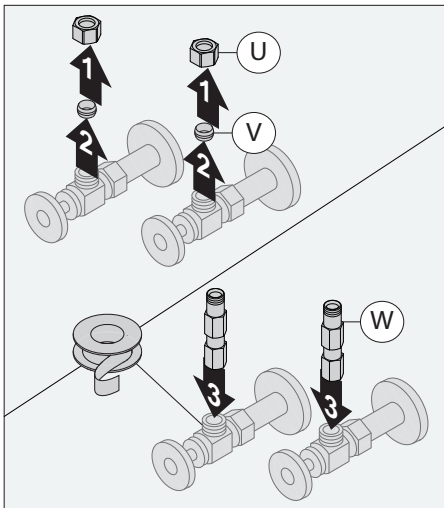


Plumber Tape

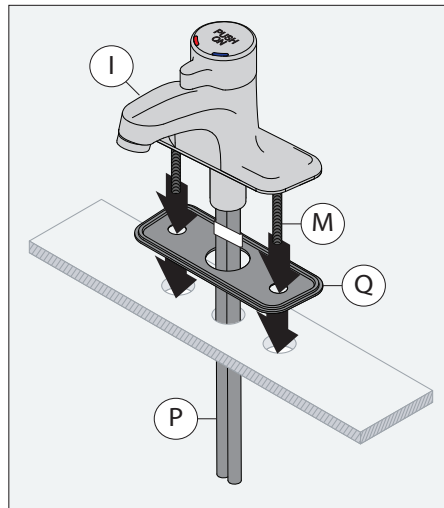
**!** Water lines MUST be thoroughly flushed BEFORE and AFTER installing the faucet to prevent foreign matter i.e. copper chips, sand, stones, etc. from clogging and possibly damaging the sealing surfaces of the cartridge.

- Notes:** 1) Recommended minimum operating water supply pressure is 40 psi.  
2) Supply stop valves must have 3/8" O.D. compression outlet.

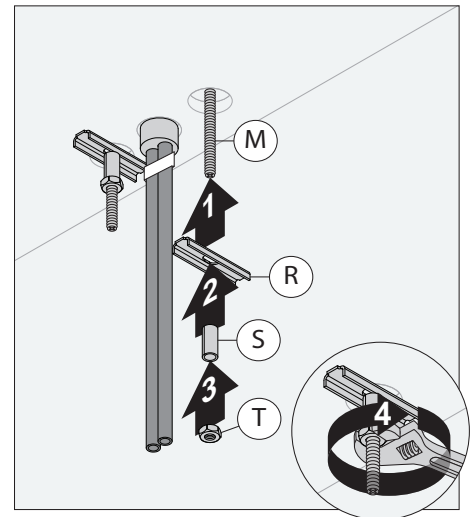
- 1) Remove compression nuts (U) and ferrules (V) from supply stops. Install check/screen assemblies (W) to supply stops.



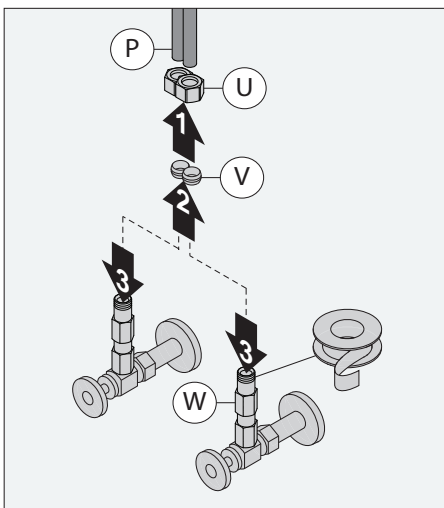
- 2) Install faucet (I), threaded rods (M), mounting gasket (Q), and 3/8" copper tubing (P) to deck surface.



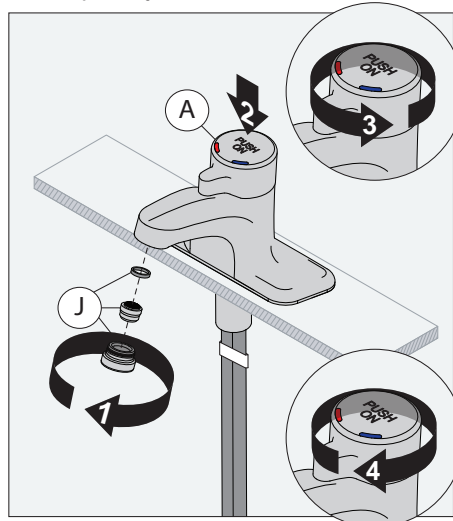
- 3) Place mounting brackets (R) and spacers (S) onto threaded rods (M). Secure hardware by tightening mounting nuts (T) clockwise.



- 4) Connect compression nuts (U) and ferrules (V) to copper tubing (P). Carefully bend copper tubing (P) to meet check/screen assemblies (W). Attach compression nuts to check/screen assemblies.



- 5) Remove aerator (J). Turn handle (A) to full cold position. Open supply, holding down handle for 10 seconds. Rotate handle to full hot position, open supply and repeat above procedure. Hold down handle and rotate from left to right to flush lines completely.

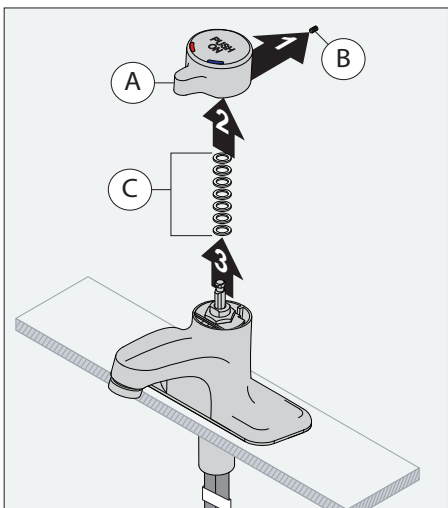


- 6) After faucet has been operated through a number of cycles, and supply water temperature is at desired levels, adjustments to these features can be made (see page 4).

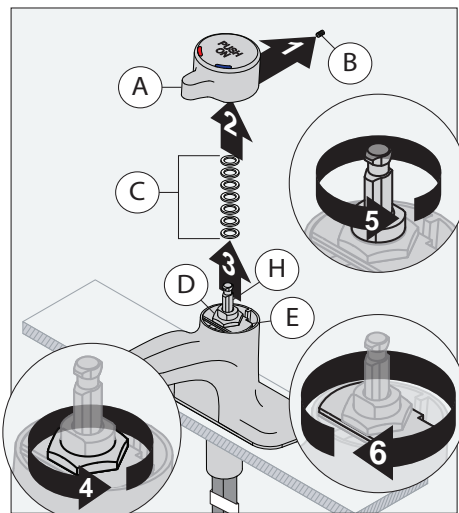
**Important:** DO NOT REMOVE tape on copper tubing.

## Installation (adjustments)

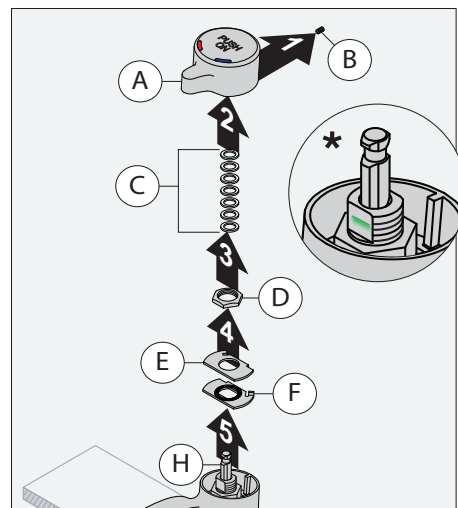
- 1) Faucet is factory set to shortest cycle time with 7 cycle timing washers (C).  
**To increase time**, loosen set screw (B), remove handle (A) and remove one or more of the washers.  
**To reduce time**, add washers.  
 Reassemble faucet reversing above procedure.
- 2) **To limit temperature** loosen set screw (B), remove handle (A), loosen nut (D) and turn cartridge stem (H) to desired maximum temperature (110°F recommended). Turn limit stop washer (E) clockwise until a positive stop is reached against back of faucet. Reassemble faucet reversing above procedure.
- 3) **For reverse operation** (in back to back installations or when hot supply is on the right) loosen set screw (B), remove handle (A), nut (D) and limit stop washers (E) & (F). Turn cartridge stem (H) 180° so green marking\* is facing toward front of faucet. Adjust temperature limit (see step 2). Reassemble faucet, reversing the above procedure.



**Note:** When setting MAXIMUM cycle time, you MUST maintain at least 5 timing washers (C) so as not to exceed .25 gal/cyl at 60 psi (per ASME A112.18.1)

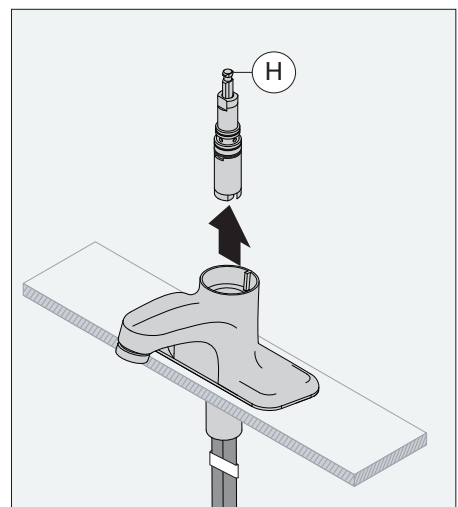
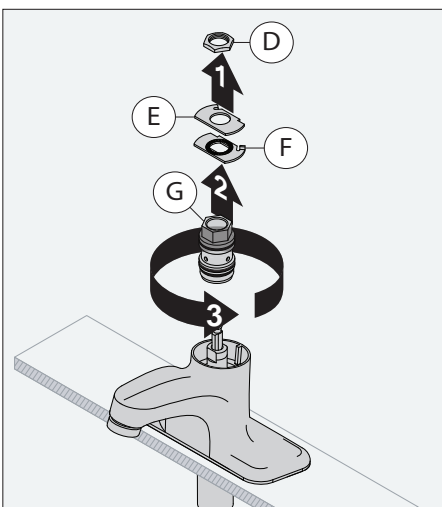
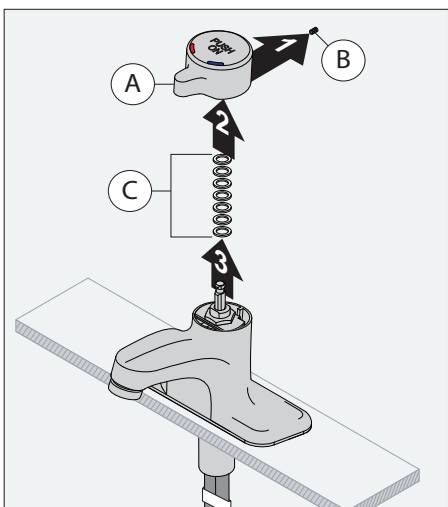


**Note:** Faucet will operate from the full cold position to the maximum hot temperature that has been set.

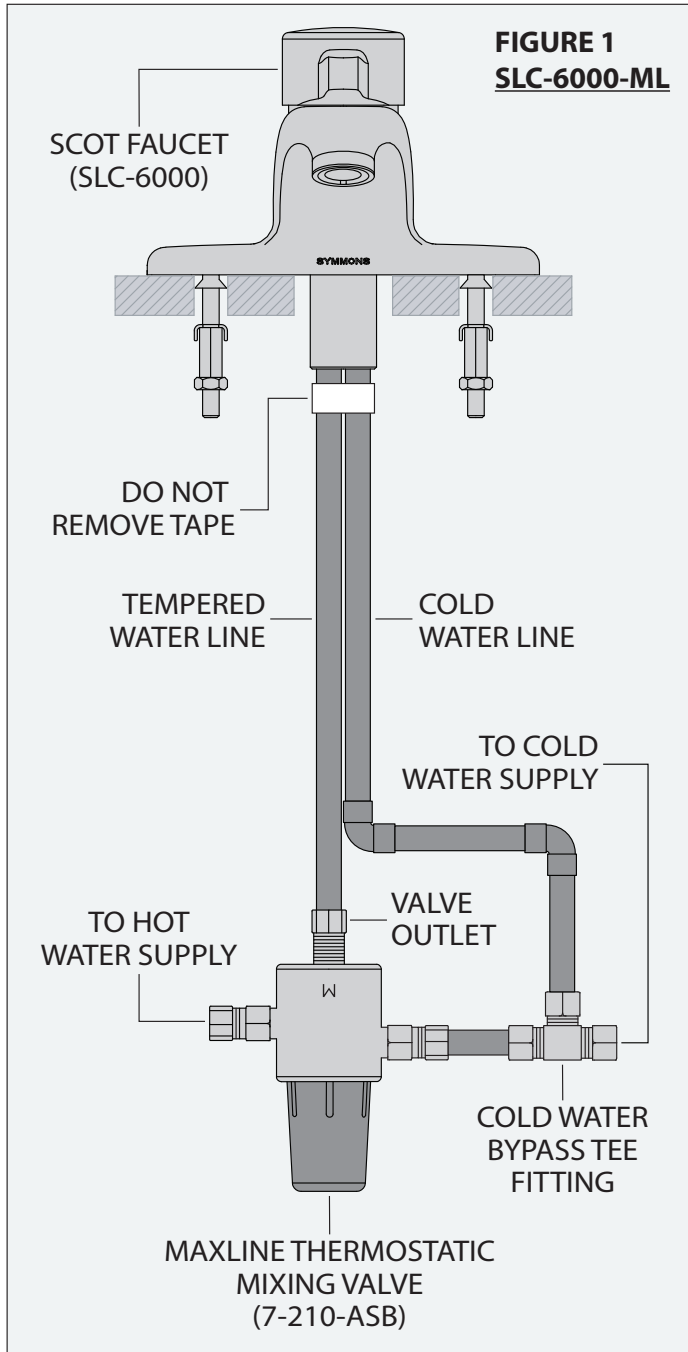


## Maintenance

- 1) Loosen set screw (B), remove handle (A) and remove cycle timing washers (C).
- 2) Remove nut (D), limit stop washers (E) & (F) and cartridge housing (G).
- 3) Remove cartridge (H) and inspect for debris. Replace cartridge if necessary. Reassemble faucet reversing procedure outlined in Steps 1 & 2.



## Installation with MAXLINE™ Thermostatic Mixing Valve



For applications using MAXLINE thermostatic mixing valve.

- 1) Turn off water supplies.
  - 2) Connect tempered water line of faucet to thermostatic mixing valve outlet (see Figure 1 for piping reference).
- Note:** Valve and cold water bypass use compression fittings (fittings not supplied).
- 3) Connect cold water line of faucet to the cold water bypass using supplied tee fitting.
  - 4) Connect copper tubing from cold water bypass tee fitting to thermostatic mixing valve.
  - 5) Connect hot water supply to thermostatic mixing valve and cold water supply to cold water bypass tee fitting.
  - 6) Remove aerator from faucet. Turn handle to full cold position. Open supply, holding down handle for 10 seconds. Rotate handle to full hot position, open supply and repeat above procedure. Hold down handle and rotate from left to right to flush lines to prevent foreign matter i.e. copper chips, sand, stones, etc. from clogging and possibly damaging the sealing surfaces of the faucet cartridge.

**Important:** DO NOT REMOVE tape on copper tubing.

## Troubleshooting Chart

Problem	Cause	Solution
Faucet runs too long or too short.	Cycle timing washers have not been adjusted.	Remove handle (A) then add cycle timing washers (C) to stem to shorten time or remove washers to lengthen time.
Faucet drips.	Seat washer worn or foreign matter (chips, dirt, solder, etc.) is between washer and seat surface.	Disassemble cartridge (H) and remove piston* (H6). Remove screw (H7) and clean seat washer (H8). Check control rod pin (H9) for burr then reassemble.
Faucet runs constantly.	Seat washer not closing on seat surface or seat washer and/or seat surface is worn.	Remove piston (H6) and spring** (H12). Check for burr on pin (H9) and check spring. Both piston and spring may have to be replaced. Excessive wear may require cartridge (H) replacement.
Water leaks from under handle.	Stem washers worn.	Remove cartridge (H) and replace with housing o-rings (G1). If leak persists replace control spindle kit (H1).
Faucet leaks on or under counter.	Supply housing o-rings worn.	Replace housing o-rings (G1).
Faucet bleeding between hot and cold.	LL-71B check/screens NOT installed.	Two chrome plated 3/8" check/screens are supplied with every faucet and MUST be installed.
Faucet bleeding between hot and cold.	LL-71B check/screens ARE installed.	Replace check springs (K,L).
Handle is loose.	Set screw has loosened.	Tighten set screw (B).
Handle is sticking to cartridge.	Accumulation of sediment in cartridge.	Remove handle (A) and all cycle timing washers (C) from cartridge (H). Secure handle back onto cartridge. After moving handle to the hot position, cycle faucet by pressing down on handle. Cycle faucet 12 times. Remove handle and replace timing washers.
Finish is spotting.	Elements in water supply may cause water staining on finish.	Clean finished trim area with a soft cloth using mild soap and water or a non-abrasive cleaner and then quickly rinse with water.

**Notes:** \*1) Use caution not to damage piston quading (H10) while servicing piston assembly (H6).

\*\*2) Do not squeeze ends of spring (H12) causing spring to fully compress.

For California Residents

**WARNING:** This product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.