	Inspection / Maintenance Procedure	
	Doc Number GAC - MP - 001	Revision Date : 25 Dec 2018 Revision : 1

The users are expecting to use manufacturers' manual to maintain their assets. These general maintenance procedures to test/inspect assets where no specific manuals are available. When using these procedures, remember that these documents may not specify every single detail of your asset.

Scope: Scope of these procedures cover most residential and/or commercial fixed assets. For mobile assets (like car, bike, RVs etc.) recommend to follow manufacturers' manuals. For pets and human assets recommend to follow medical professionals' recommendations.

How to use: To use maintenance procedure of any asset go through page by page or able to download the procedure and also can print from the link below

[Garburator](#)

[Drainage Line](#)

[Humidifier](#)

[Kitchen Faucet](#)

[Outdoor Faucet](#)

[Shower Faucet](#)

[Vanity Faucet](#)

[Plumbing System](#)

[Toilet](#)


[Water Softener](#)

Test/Inspect Humidifier

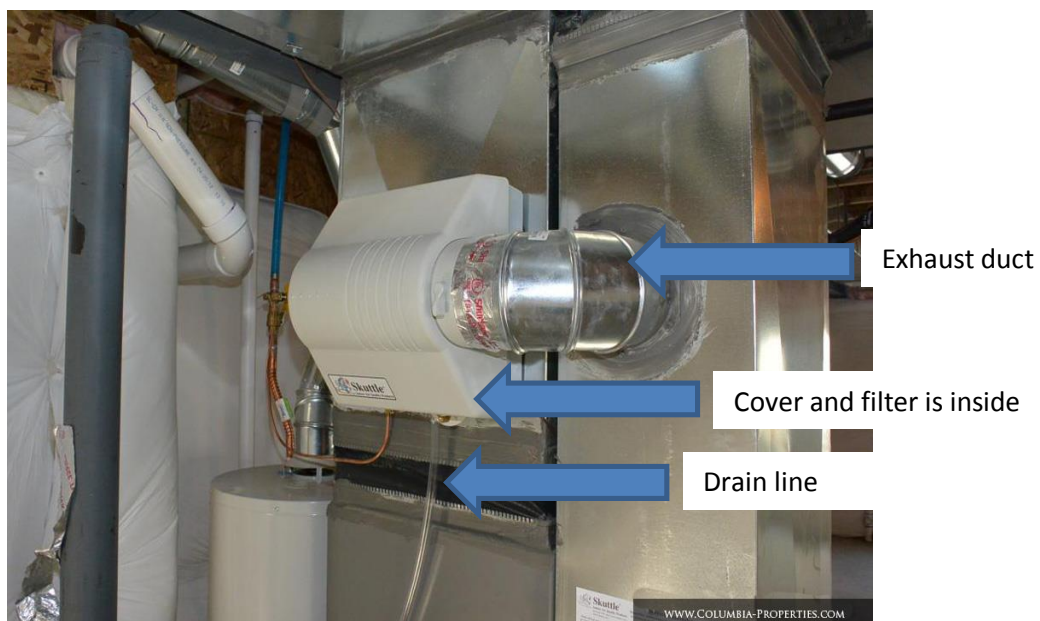
Asset Category: Plumbing

Asset Criticality: Medium critical asset. Regular maintenance is recommended.

Scope	General maintenance procedure to test/inspect Humidifier where no specific manual available.
Precautions	<ul style="list-style-type: none"> Review manufacturers' manual for work and safety requirements Complete hazard / risk assessment prior to any maintenance / inspection / testing work
Tool Required	<ul style="list-style-type: none"> Screw drivers Cleaning brush and rag Angle nose plier Cleaning agent Use proper PPE (e.g. Safety Glass & gloves)


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Maintenance / Inspection / Testing Steps	
Step	Action
1.1	Follow user manual for normal operation
1.2	Turn OFF the inlet water valve
1.3	Check electric connection is properly plugged to receptacle
1.4	Turn the cover knob to open the cover
1.5	Clean the filter with the recommended cleaning agent (any chemical remove calcium)
1.6	Clean the inside and surface of the humidifier with the recommended cleaning agent (any chemical remove calcium)
1.7	Check for any leaks to the water valve and water pipe
1.8	Put the filter back to position and close cover
1.9	Set humidifier knob to moderate level
2.0	Check exhaust duct is properly connected and tightened



Common Failure & Troubleshooting

Failure	Troubleshooting
No water to humidifier	Check inlet water valve is ON and pipe is connected property
Feeling dry inside	Increase control setting

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End of Maintenance Procedure


Test/Inspect Vanity Faucet

Asset Category: Plumbing

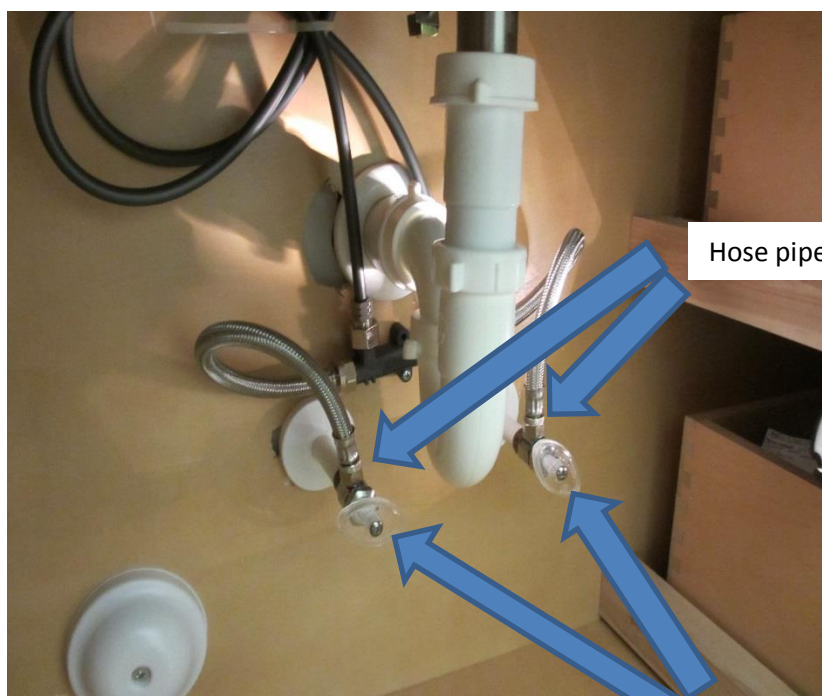
Asset Criticality: Medium critical asset. Regular maintenance is recommended.

Scope	General maintenance procedure to test/inspect Vanity Faucet where no specific manual available.
Precautions	<ul style="list-style-type: none"> Review manufacturers' manual for work and safety requirements Complete hazard / risk assessment prior to any maintenance / inspection / testing work
Tool Required	<ul style="list-style-type: none"> Screw drivers Cleaning brush and rag Angle nose plier Sly Wrench Basin wrench Faucet wrench LN key set Cleaning agent (calcium remover) Use proper PPE (e.g. Safety Glass & gloves)

Maintenance / Inspection / Testing Steps	
Step	Action
1.1	Follow user manual for normal operation
1.2	Ensure water valve is shut off . Check if the OFF/ON is working (inside the vanity/cabinet)
1.3	Clean the faucet aerator
1.4	Check to ensure there is no water leak to the valve, hose connection and faucet connection. If loose, tighten them with a wrench applicable. If water is still leaking, replace the faulty parts
1.5	Check to see if there is water dripping from faucet, replace the rubber ring, washer, cartridge, seat etc (which is applicable on the type of faucet). If water is still dripping, replace the faucet. Please check the number of holes to countertop before buy the faucet.

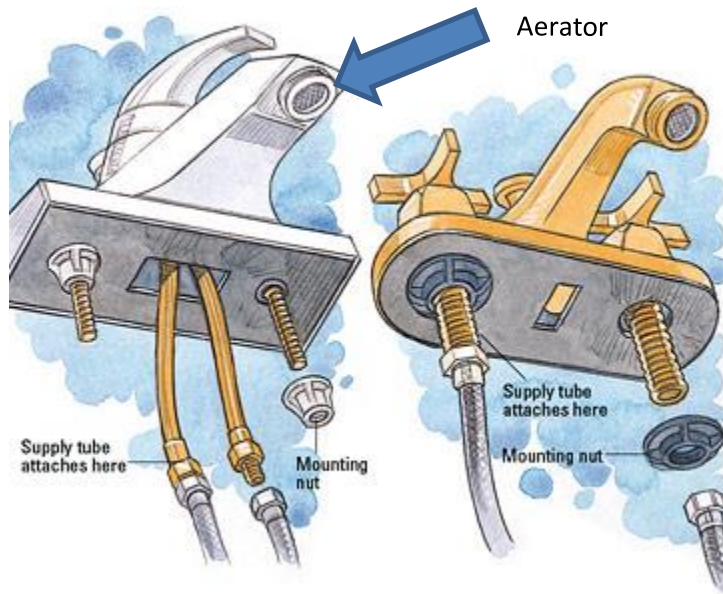
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1.6	<p>To replace faucet, follow the steps:</p> <ul style="list-style-type: none"> • Turn OFF the water shut off valves (hot and cold) if available inside the vanity/cabinet • If there is no water shut off valve, please turn OFF the main water valve of the house and drain the water from the pipes • Disconnect hot and cold water hose from the bottom of the faucet with proper wrench (normally faucet wrench or applicable wrench) • Unscrew mounting nut/screw from the base of the faucet which is attached to the countertop • Take out the faucet and clean the base properly • Put the new faucet and tighten the mounting nut/screw with countertop • Reconnect hot and cold-water hose to the faucet's hot and cold inlet • Turn ON the shut off valve • Test all points for any leaks • Or call a certified technician to do the job
1.7	Clean any calcium deposit with the recommended cleaning agent (any chemical which removes calcium)



Hose pipe connection

Shut off valve



Common Failure & Troubleshooting

Failure	Troubleshooting
No water to faucet	Check inlet water valve is ON and pipe is connected property
Water leak to connections	Tighten the nut moderately. If there is still a leak replace the respective part
Faucet is unstable	Tighten the mounting nuts
Leak to shut off valve	Tighten the connection nut. If there is still a leak, replace the valve
Water dripping from faucet	Depending on the faucet type it may me seat, washer, ring, cartridge inside the faucet are worn out, please replace that part
Less water flow	Faucet aerator blocked. Clean faucet aerator or replace
High water flow with noise	There is no faucet aerator or filter broken. Replace faucet aerator with new one


End of Maintenance Procedure

Test/Inspect Kitchen Faucet

Asset Category: Plumbing

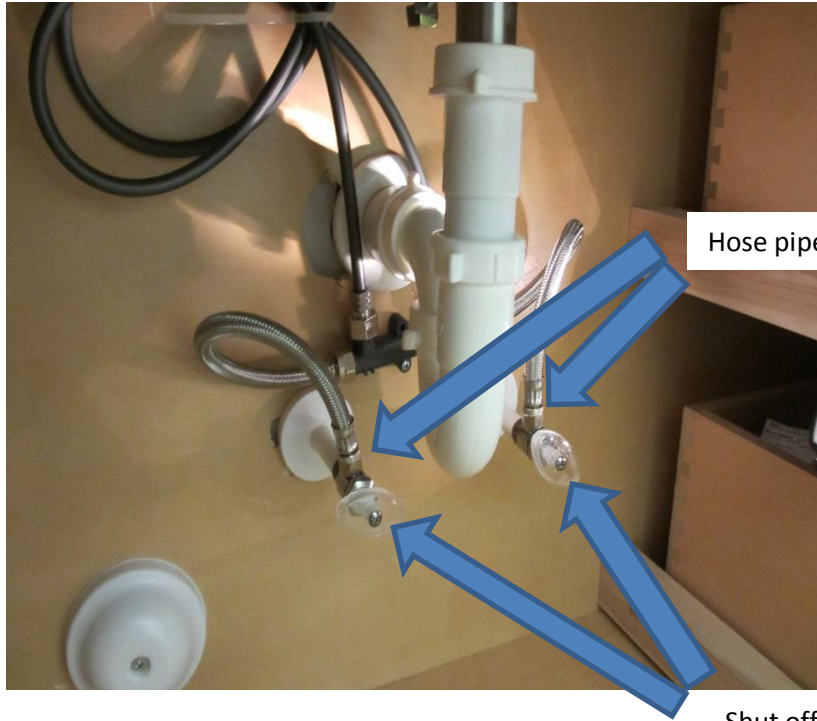
Asset Criticality: Medium critical asset. Regular maintenance is recommended.

Scope	General maintenance procedure to test/inspect Kitchen Faucet where no specific manual available.
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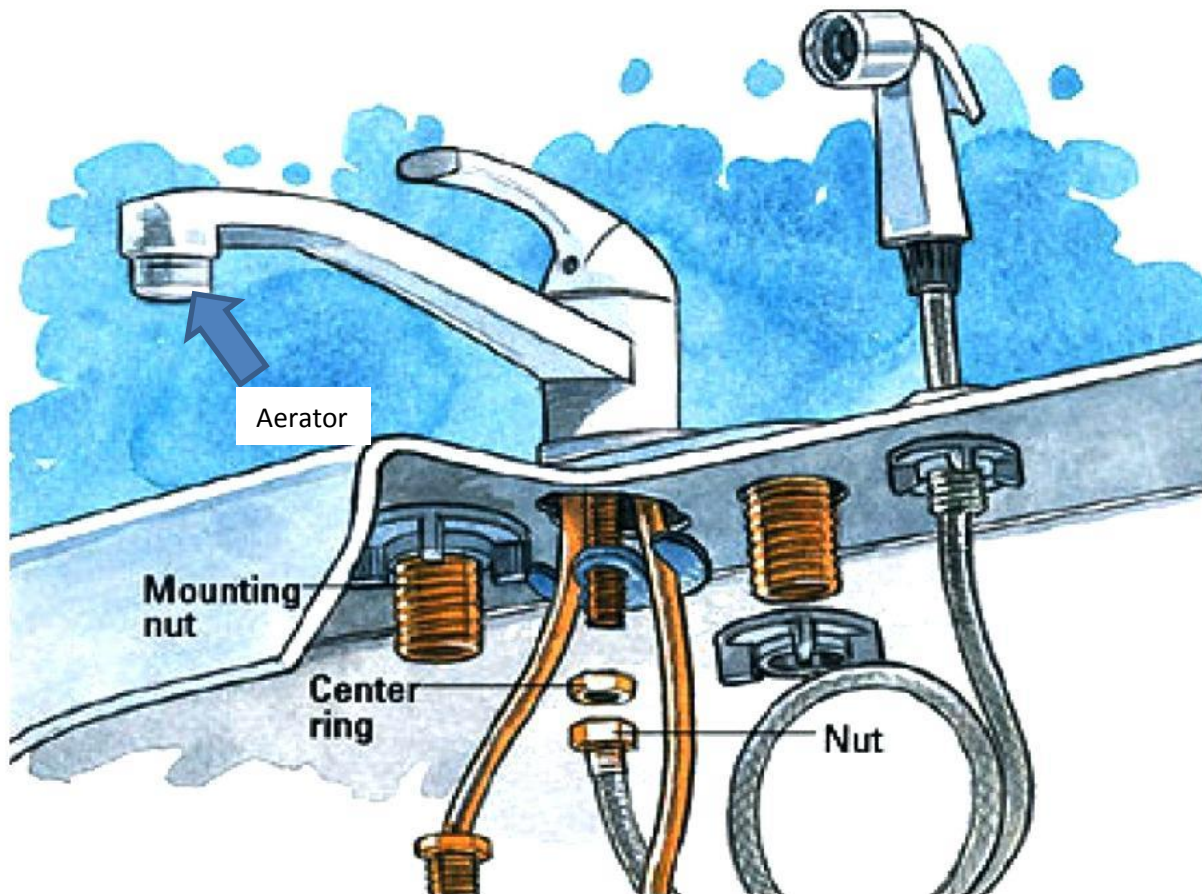
Precautions	<ul style="list-style-type: none"> Review manufacturers' manual for work and safety requirements Complete hazard / risk assessment prior to any maintenance / inspection / testing work
Tool Required	<ul style="list-style-type: none"> Screw drivers Cleaning brush and rag Angle nose plier Sly wrench Basin wrench Faucet Wrench LN key set Cleaning agent (calcium remover) Use proper PPE (e.g. Safety Glass & gloves)

Maintenance / Inspection / Testing Steps	
Step	Action
1.1	Follow user manual for normal operation
1.2	Test water shut off valve OFF and ON is working (normally located inside the vanity/cabinet)
1.3	Clean the faucet aerator
1.4	Check there is no water leak to valve, hose connection and faucet connection. If loose, tighten with wrench applicable. If there is still water leaking replaces the faulty parts
1.5	Check to see if there is water dripping from faucet, replace the rubber ring, washer, cartridge, seat etc. (which is applicable on the type of faucet). If water is still dripping, replace the faucet. Please check the number of holes to countertop before buy the faucet.
1.6	<p>To replace faucet, follow the steps:</p> <ul style="list-style-type: none"> Turn OFF the water shut off valves (hot and cold) if available inside the vanity/cabinet If there is no water shut off valve, please turn OFF the main water valve of the house and drain the water from the pipes Disconnect hot and cold-water hose from the bottom of the faucet with proper wrench (normally faucet wrench or applicable wrench) Unscrew mounting nut/screw from the base of the faucet which is attached to the countertop Take out the faucet and clean the base properly Put the new faucet and tighten the mounting nut/screw with countertop Reconnect hot and cold-water hose to the faucet's hot and cold inlet Connect pull out faucet head as per instruction manual Turn ON the shut off valves Test all points for any leaks <p>Or call a certified technician to do the job</p>
1.7	Clean any calcium deposit with recommended cleaning agent (any chemical which removes calcium)




Hose pipe connection

Shut off valve



Common Failure & Troubleshooting

Failure	Troubleshooting
No water to faucet	Check inlet water valve is ON and pipe is connected properly
Water leak to connections	Tighten the nut moderately. If there is still a leak replace the respective part
Faucet is unstable	Tighten the mounting nuts
Leak to shut off valve	Tighten the connection nut. If there is still a leak, replace the valve
Water dripping from faucet	Depending on the faucet type it may be seat, washer, ring, cartridge inside the faucet are worn out, please replace the parts
Less water flow	Faucet aerator blocked. Clean faucet aerator or replace
High water flow with noise	There is no faucet aerator or filter broken. Please replace faucet aerator with new one

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End of Maintenance Procedure

Test/Inspect Garburator

Asset Category: Plumbing

Asset Criticality: Medium critical asset. Regular maintenance is recommended.


Scope	General maintenance procedure to test/inspect Garburator where no specific manual available.
Precautions	<ul style="list-style-type: none"> • Review manufacturers' manual for work and safety requirements • Complete hazard / risk assessment prior to any maintenance / inspection / testing work
Tool Required	<ul style="list-style-type: none"> • Screw drivers • Cleaning brush and rag • Angle nose plier • Sly Wrench • LN key set • Wire Splicer • Cleaning agent (calcium remover) • Use proper PPE (e.g. Safety Glass & gloves)

Maintenance / Inspection / Testing Steps	
Step	Action
1.1	Follow user manual for normal operation
1.2	Check plug in to receptacle
1.3	Check if there is any water leak through waste and garburator joint
1.4	Ensure there are no water leaks to the drain connections and dish washer hose connection. If loose, tighten with wrench applicable. Still water leak, replace the faulty parts

1.5	<p>To replace garburator, follow the steps:</p> <ul style="list-style-type: none"> • Disconnect electric plug from receptacle • Keep kitchen faucet is OFF • Disconnect the drainage line from the garburator • Turn garburator joint towards the left with screw driver or recommended LN Key to remove from the waste and hold the garburator at the same time to protect it from falling • Remove and reinstall the waste if needed or use the same one if it is in good condition as well as there are no leaks • Open the new garburator box and follow the instruction provided by the manufacturer. Or follow the reverse process as the removal from the waste • Connect all drainage pipes and check for water leaks • Connect dish washer drain line if applicable • Plug in to receptacle and test the operation • Or call a certified technician to do the job
1.6	Clean any calcium deposit with the recommended cleaning agent (any chemical which removes calcium)



Common Failure & Troubleshooting

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Failure	Troubleshooting
Water leak to waste and drain joints	Tighten the joints moderately. If there is still a leak replace the respective part
Garburator is not running	Check plug is connected to the receptacle.
Garburator is not working or making bad noise	Call to certified professional

End of Maintenance Procedure

Test/Inspect Shower Faucet

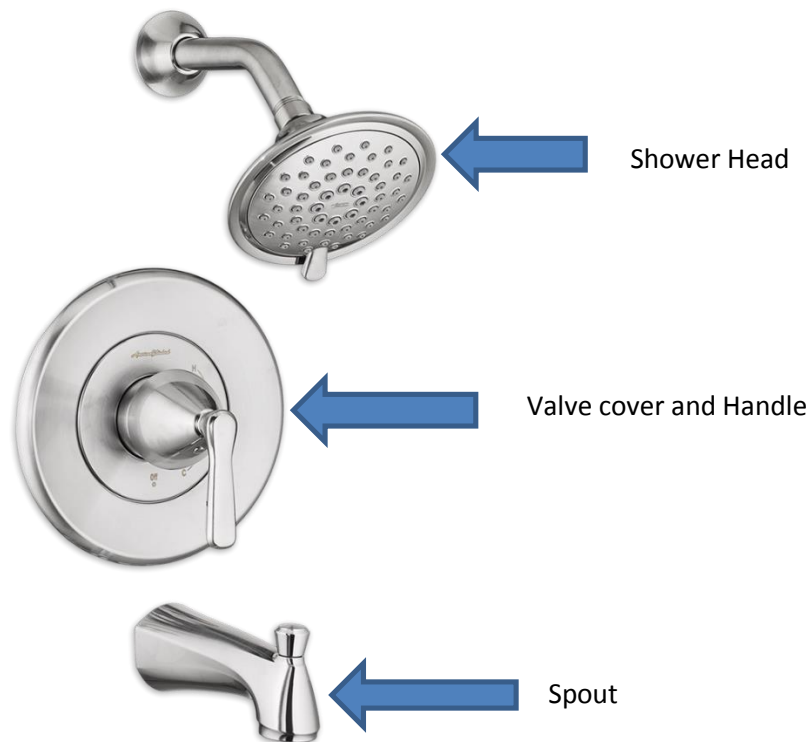
Asset Category: Plumbing

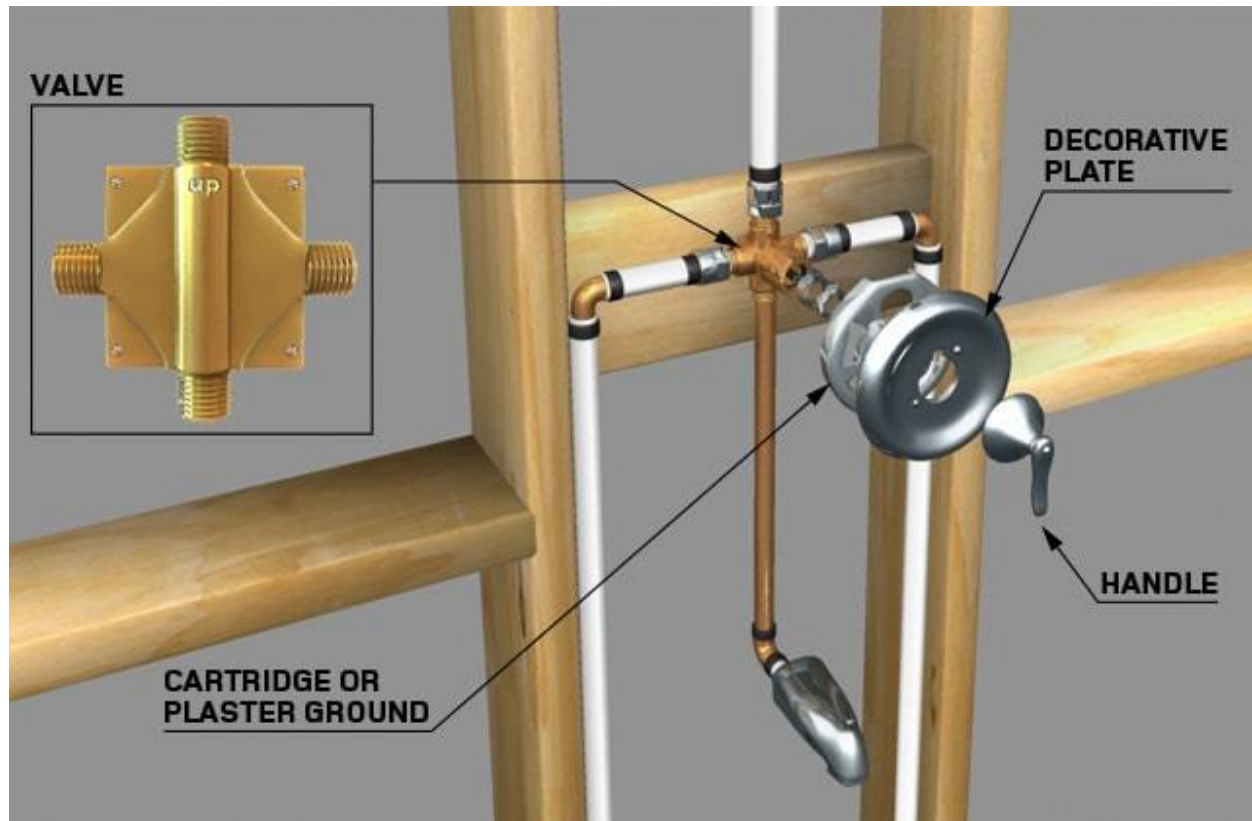
Asset Criticality: Medium critical asset. Regular maintenance is recommended.

Scope	General maintenance procedure to test/inspect Shower Faucet where no specific manual available.
Precautions	<ul style="list-style-type: none"> Review manufacturers' manual for work and safety requirements Complete hazard / risk assessment prior to any maintenance / inspection / testing work
Tool Required	<ul style="list-style-type: none"> Screw drivers Cleaning brush and rag Angle nose plier Sly wrench LN key set Teflon Tape Cleaning agent (calcium remover) Use proper PPE (e.g. Safety Glass & gloves)

Maintenance / Inspection / Testing Steps	
Step	Action
1.1	Follow user manual for normal operation
1.2	Test the shower valve is working on OFF, ON, hot and cold positions as expected
1.3	Clean shower head
1.4	Check there is no water leak to valve, hose connection and faucet connection. If loose, tighten with wrench applicable. If there is still water leaking replaces the faulty parts
1.5	Check to see if there is water dripping from faucet, replace the rubber ring, washer, cartridge, seat etc. (which is applicable on the type of faucet). If water is still dripping, replace the faucet. Please check the number of holes to countertop before buy the faucet.

1.6	<p>To replace shower faucet valve, follow the steps:</p> <ul style="list-style-type: none"> • Turn OFF the water shut off valves (hot and cold) if available beside the faucet • If there is no water shut off valve, turn OFF the main water valve of the house and drain water from the pipes • Open the handle and cover of the faucet to check how difficult to open the valve. Sometime it may be able to replace valve from front otherwise need to replace from the back • Before proceeding decide whether a certified technician is needed • After completion of valve installation, turn ON hot and cold water and check if water is leaking (follow the installation guide of new valve) • Recommended to call a certified technician to do the job
1.7	Clean any calcium deposit with the recommended cleaning agent (any chemical which removes calcium)






Common Failure & Troubleshooting

Failure	Troubleshooting
No water to faucet	Check inlet water valve is ON
Water leak to shower head or spout joint	Tighten moderately. If there are still leaks, open the pipes and use tefton tape then tight again or replace them if faulty
Water going inside the cover	Replace cover water seal
No water to shower head when spout shut off	Spout valve is faulty, replace spout
Water dripping from faucet	Depending on the faucet type seat, washer, ring, cartridge inside the faucet are worn out, replace them. Need to know the make and model number to purchase the parts

End of Maintenance Procedure

Test/Inspect Outdoor Faucet


Asset Category: Plumbing

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Asset Criticality: Medium critical asset. Regular maintenance is recommended.

Scope	General maintenance procedure to test/inspect Outdoor Faucet where no specific manual available.
Precautions	<ul style="list-style-type: none"> Review manufacturers' manual for work and safety requirements Complete hazard / risk assessment prior to any maintenance / inspection / testing work
Tool Required	<ul style="list-style-type: none"> Screw drivers Angle nose plier Sly wrench Teflon tape Use proper PPE (e.g. Safety Glass & gloves)

Maintenance / Inspection / Testing Steps	
Step	Action
1.1	Follow user manual for normal operation
1.2	Test the faucet OFF and ON is working or not
1.3	Check the shut off valve located inside the building of the outdoor faucet OFF and ON is working or not
1.4	Check there is no water leak to valve, hose connection and faucet connection. If loose, tighten with wrench applicable. If there is still water leaking replaces the faulty parts
1.5	To replace outdoor faucet, follow the installation guide of the new faucet
1.6	To replace outdoor faucet, follow the steps? <ul style="list-style-type: none"> Turn OFF the water shut off valves from inside the building Replace the outdoor faucet following the installation guide of new faucet Turn ON the shut off valve from inside the building and check leak

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Open the nut and replace washer

Common Failure & Troubleshooting

Failure	Troubleshooting
No water to faucet	Check shut off water valve is ON from inside the building
Water leak from faucet	Replace rubber washer or the cartridge


End of Maintenance Procedure

Test/Inspect Toilet

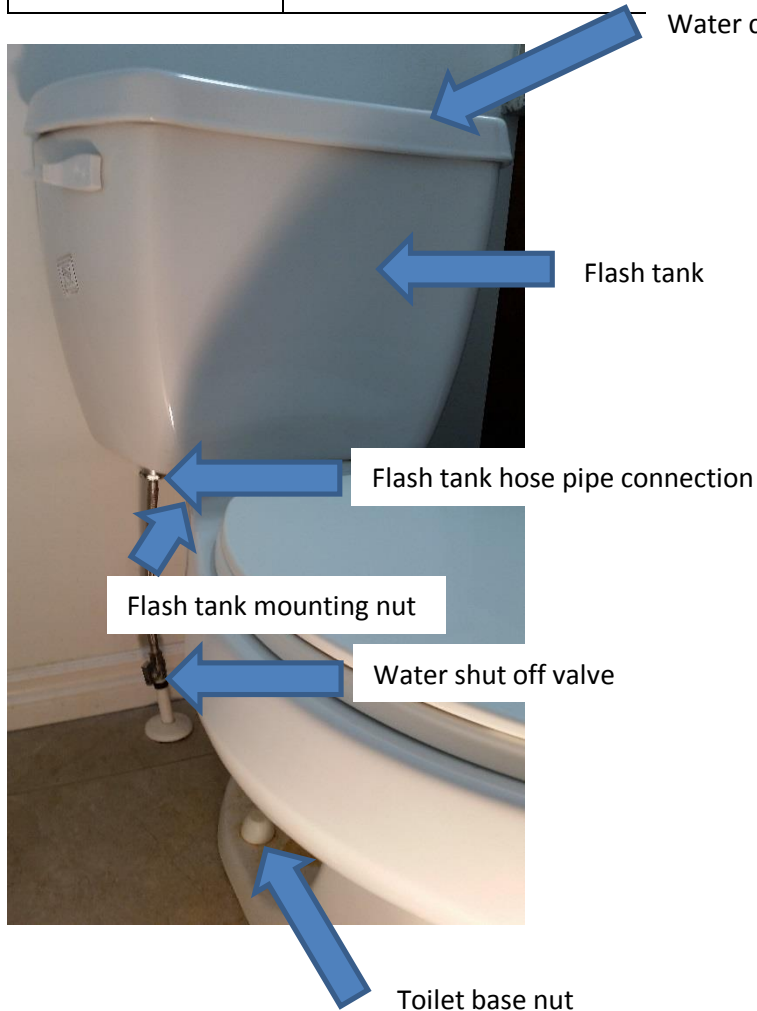
Asset Category: Plumbing

Asset Criticality: Medium critical asset. Regular maintenance is recommended.

Scope	General maintenance procedure to test/inspect Toilet where no specific manual available.
Precautions	<ul style="list-style-type: none"> Review manufacturers' manual for work and safety requirements Complete hazard / risk assessment prior to any maintenance / inspection / testing work
Tool Required	<ul style="list-style-type: none"> Screw drivers Angle nose plier Sly wrench Use proper PPE (e.g. Safety Glass & gloves)


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Maintenance / Inspection / Testing Steps	
Step	Action
1.1	Follow user manual for normal operation
1.2	Test the inlet water valve OFF and ON is working or not and tighten connections if there is a water leak
1.3	Check flashing system is working properly and flash tank fill up in a reasonable time to recommended level
1.4	Check if there are any water leaks from two mounting nuts and base of the flash tank. If yes, tighten them or replace the faulty nut and rubber seal
1.5	Adjust water level of the flash tank by float adjustment to fill up to the recommended level to prevent overflow
1.6	Check toilet base nuts and tighten them if toilet is unstable
1.7	<p>To replace toilet, follow the steps:</p> <ul style="list-style-type: none"> • Turn OFF the inlet water shut off valve from the backside of the toilet and flash water • Open water hose from the flash tank • Remove residual water from flash tank • Unscrew the two nuts from the base of the flash tank • Remove flash tank from the toilet • Unscrew the base nuts of the toilet and remove toilet • Clean the base of the toilet and put new wax ring to the base • Follow the installation guide of the new toilet to re-install (or do the reverse steps of remove toilet) • Connect water hose, turn ON the water and check for any water leaks • Test the toilet to ensure it is working • Recommended to call certified technician to do installation



Common Failure & Troubleshooting

Failure	Troubleshooting
No water to flash tank	Check inlet water valve is ON
Water leak from shut off valve and hose connection	Tighten the connection. Replace faulty part, if there is still a leak
Water leak from mounting nuts or base of flash tank	Tighten the nuts. Replace faulty part, if there is still a leak
Water overflow inside the flash tank	Adjust float to water up to recommended level
Continuous water flow to toilet bowl	Replace flash tank drain valve
Inlet water flow to flash tank	Replace toilet flush valve
Flash knob is not working	Check chain is connected to flash rod and drain valve
Toilet is unstable	Tight the base nuts moderately
Loose toilet seat	Tight the seat nut
Clog to toilet drain	Use toilet plunger or run plumbing snake

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End of Maintenance Procedure

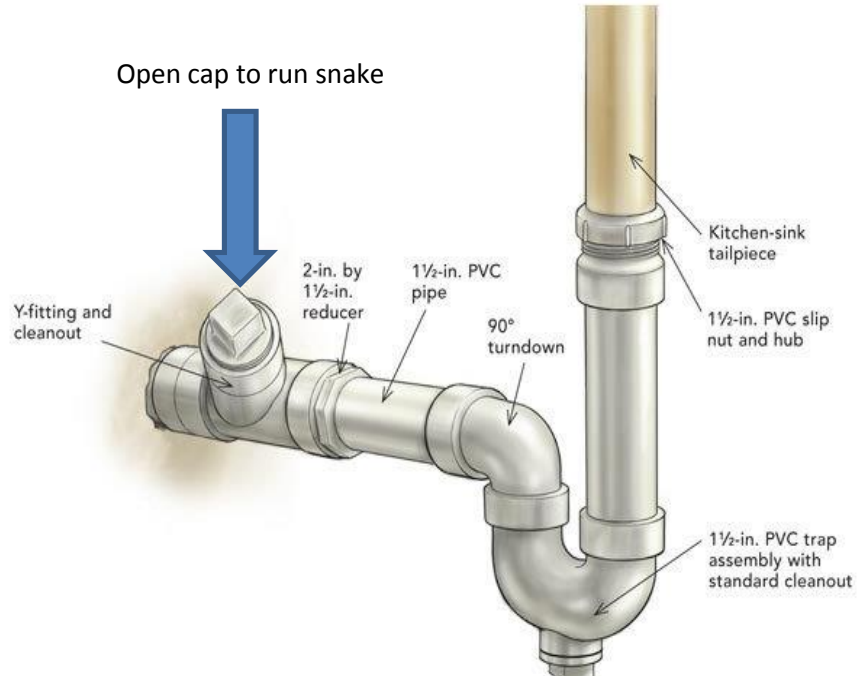
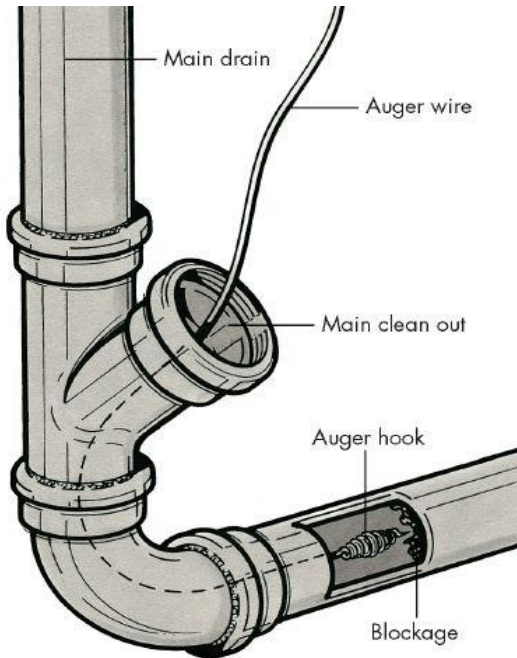
Test/Inspect Drainage Line (all types of drainage)


Asset Category: Plumbing

Asset Criticality: Medium critical asset. Regular maintenance is recommended.

Scope	General maintenance procedure to test/inspect Drainage Line where no specific manual available.
Precautions	<ul style="list-style-type: none"> Review manufacturers' manual for work and safety requirements Complete hazard / risk assessment prior to any maintenance / inspection / testing work
Tool Required	<ul style="list-style-type: none"> Screw drivers Angle nose plier Sly wrench Pipe wrench Drain/plumbing snake (auger) Use proper PPE (e.g. Safety Glass & gloves)

Maintenance / Inspection / Testing Steps	
Step	Action
1.1	Check for blockage or clough to drain line. Water is not draining out with normal flow or stuck
1.2	Check for any water leak to drainage line. If yes, tighten the connections or replace faulty one
1.3	Follow the steps to clean drainage line: <ul style="list-style-type: none"> Rent drain/plumbing snake (depend on the size of drain) from rental place Open the drain cap with proper tools Run the right size drain/plumbing snake (may be manual or electric snake) slowly put through the drain and run water (be careful of overflow) to clean clough May need to run snake more than once If drain is clean, run water normally and reverse the snake. Snake will come back slowly. Re-install drain cap, test all points and return the drain/plumbing snake



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Snake running to pipe

Motorized snake

Common Failure & Troubleshooting

Failure	Troubleshooting
Leak in drainage pipe	Tighten the joint or replace faulty parts
Minor crack or small hole to drainage pipe	Use ABS cement to seal the leak
Water leak to pipe joint where there is a gaskets	Replace gasket with correct size and type
Clog in drainage pipe	Run drain/plumbing snake


End of Maintenance Procedure

Test/Inspect Plumbing System (water leak is the number 1 source of damage to property and expensive to fix after damage)

Asset Category: Plumbing

Asset Criticality: Medium critical asset. Regular maintenance is recommended.

Scope	General maintenance procedure to test/inspect Plumbing System where no specific manual available.
Precautions	<ul style="list-style-type: none"> Review manufacturers' manual for work and safety requirements Complete hazard / risk assessment prior to any maintenance / inspection / testing work

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Tool Required	<ul style="list-style-type: none"> • Screw drivers • Cleaning brush, rag and recommended cleaning agent • Sly wrench • Faucet wrench • Angle nose plier • Use proper PPE (e.g. Safety Glass & gloves)
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Maintenance / Inspection / Testing Steps	
Step	Action
1.1	Test for any water leak to the building: <ul style="list-style-type: none"> • Turned OFF all the faucets of the building • Check the main water meter reading or the water flow indicator to determine if it is running. If it is running, there is a water leak some where in the building. Need to find the leak
1.2	Check for any water leaks for all water valves, hoses and their connections throughout the building
1.3	Check for any water leaks to all the faucet connections
1.4	Check for any water leaks to the toilet bowl
1.5	Check for any water leaks for all appliances
1.6	Any leaks found may need to tight or may need to replace faulty parts
1.7	Check for any water leaks to joints of drainage pipes throughout the building
1.8	Recommended to call certified professional

Common Failure & Troubleshooting

Failure	Troubleshooting
Water leak	Need to address on the basis of leak and may need to call certified professional


End of Maintenance Procedure

Test/Inspect Water Softener

Asset Category: Plumbing

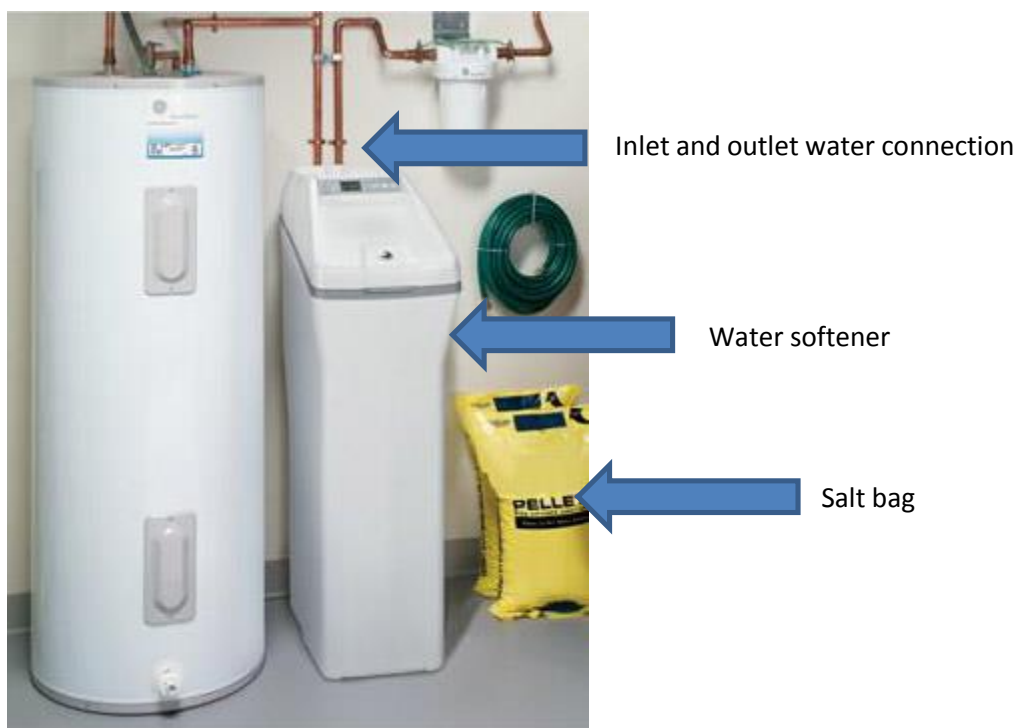
Asset Criticality: Medium critical asset. Regular maintenance is recommended.


Scope	General maintenance procedure to test/inspect Water Softener where no specific manual available.
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Precautions	<ul style="list-style-type: none"> Review manufacturers' manual for work and safety requirements Complete hazard / risk assessment prior to any maintenance / inspection / testing work
Tool Required	<ul style="list-style-type: none"> Screw drivers Cleaning brush and rag Angle nose plier Use proper PPE (e.g. Safety Glass & gloves)

Maintenance / Inspection / Testing Steps	
Step	Action
1.1	Follow user manual for normal operation
1.2	Clean the inside and surface of the water softener
1.3	Check electric connection properly plugged to receptacle
1.4	Test all buttons are functioning properly
1.5	Check for water leak of the inlet and outlet water connection to softener valve
1.6	Check if there are any leaks to the connection of Brine tank and drainage line
1.7	Check the amount of salt to the recommended level
1.8	Check programing of softener to the recommended setting



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Common Failure & Troubleshooting

Failure	Troubleshooting
There is no power to panel	Check there is electric connection or not
Water is not soft enough	<ul style="list-style-type: none"> • Check the setting of the program • Check salt level

End of Maintenance Procedure
