



HOW-TO BOOKLET #3011

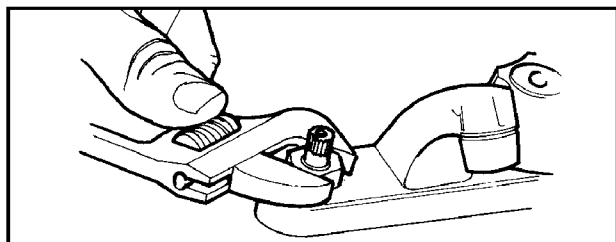
LEAKY FAUCETS



TOOL and MATERIAL CHECKLIST

- Pipe Wrenches
- Adjustable Wrench
- Packing String
- Wiping Cloths
- Steel Wool
- Washer Assortment
- Valve Seat Wrench
- Phillips/Standard Screwdrivers

Read This Entire How-To Booklet For Specific Tools and Materials Not Noted in the Basics Listed Above.



Faucets in a home can be of two types: compression and noncompression. Most compression faucets use washers to seal the inlet in the faucet when water is not wanted. Other styles use some other device, such as neoprene caps. Noncompression faucets use a brass or plastic ball, a ceramic disk, a cartridge, or valve stems called tipping valves to stop the flow of water.

Many of today's more expensive faucets are guaranteed by the manufacturer to be leakproof for life. If a faucet starts to leak, it is replaced free of charge.

Obviously, faucets manufactured without benefit of state-of-the-art technology are not immune from leakage, but making repairs is usually an easy task. You can use the information in this booklet as a guide to repair, but keep in mind that the construction of your particular faucet may differ somewhat from that described here.

There is one cardinal rule when repairing faucets. Turn off the water before you start work. The shut-off (supply) valve is below the sink or lavatory or at the main water entrance to your home.

COMPRESSION FAUCET REPAIRS

Compression faucets for sinks, lavatories, bathtubs, and showers have two handles. The one on the left controls hot water and the one on the right controls cold water (**Fig. 1**). A utility faucet of compression design, such as on the outside of a house for connecting a garden hose, or inside a house used as a main shut-off valve for the water system, is called a gate or globe valve.

Keep in mind that cartridge faucets can also have two handles—one for hot water and one for cold—and are usually indistinguishable from compression faucets until after you disassemble the faucet. If you are uncertain as to whether you are dealing with a compression or cartridge faucet, don't purchase repair parts until after you disassemble the faucet.

Fig. 1

Styles may have changed over the years, but the internal parts of a compression faucet have remained relatively the same.

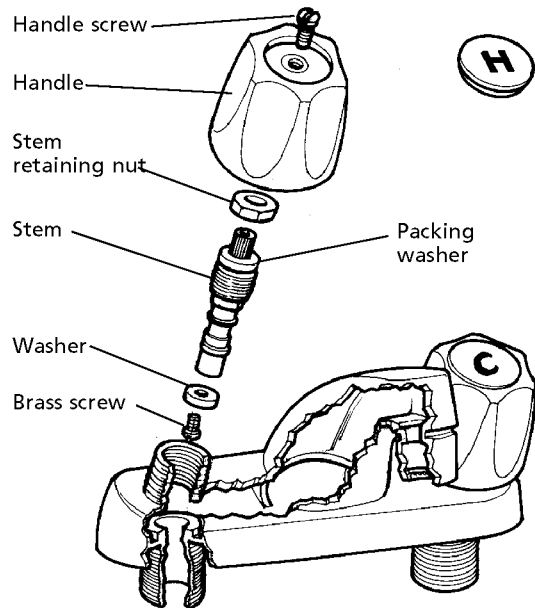
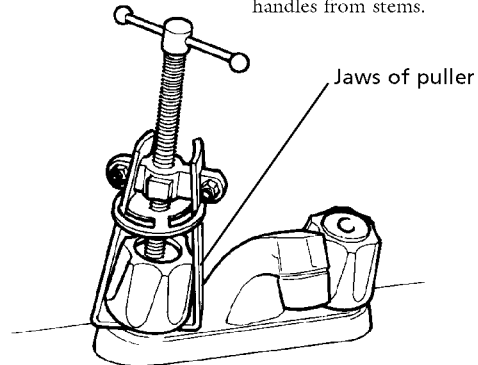


Fig. 2

Avoid damage by using a special puller to remove handles from stems.



Repairing Leaky Spouts:

- 1 Turn off the water at the supply source.
- 2 Remove the screw holding the handle. If the screw is concealed, use the tip of a utility knife to pry off the handle cap. A handle that doesn't have a cap or visible screw is held by an Allen screw in the base of the handle.
- 3 Take off the handle. If it's stuck, use a special puller which you can buy from the plumbing department of any home center or plumbing supply store. Slide the jaws of the puller under the handle and rotate the turn-screw slowly until the handle pops loose (**Fig. 2**).

Fig. 3

Use a wrench or adjustable pliers to loosen the stem retaining nut.

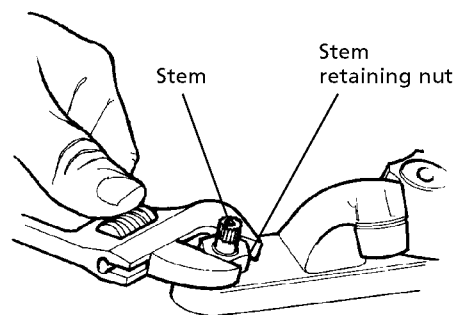
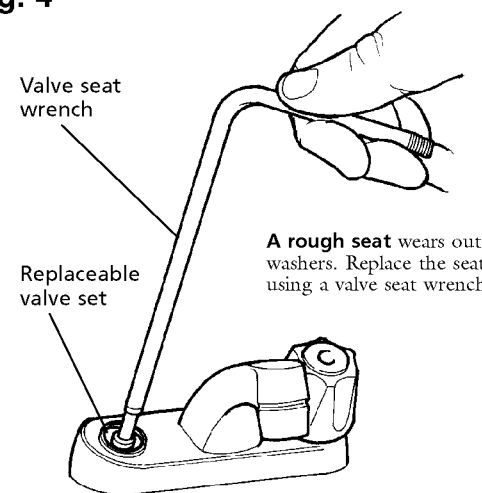


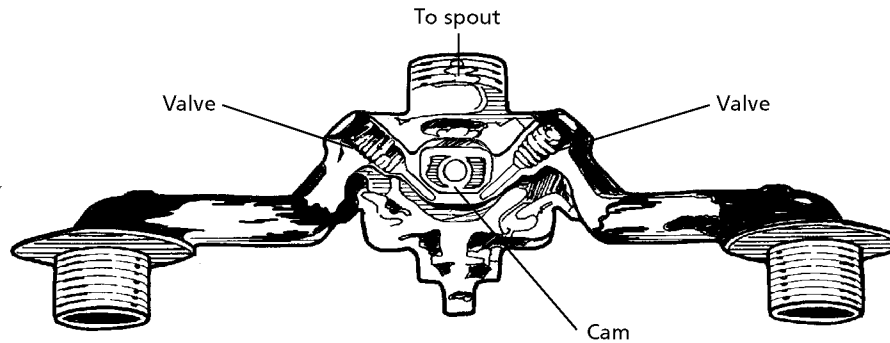
Fig. 4



- 4 If there is one, remove the escutcheon. An escutcheon is a decorative plate used to cover holes made during the installation of plumbing parts.
- 5 Use a wrench or adjustable pliers to remove the stem retaining nut and then remove the stem (**Fig. 3**). You can now determine whether the faucet uses washers or some other type of stem ending, such as a neoprene cap, or whether you have a cartridge faucet.
- 6 Assuming you have a compression faucet that has washers, the washer is held to the stem with a single screw. Undo the holding screw and replace the old washer with a new washer and use a new brass screw.
- 7 If you have to replace a washer frequently, the seat inside the faucet against which the washer sits is probably damaged. You will feel roughness by inserting your finger into the hole and moving it against the seat.

Fig. 5

A handle rotates a cam that applies varying pressure on the tipping valves to control the flow of hot and cold water.



Roughness can be eliminated by rotating a valve seat reamer against the seat for a few revolutions. If this doesn't help, use a valve seat wrench to replace a seat (Fig. 4). A faucet that doesn't have replaceable seats must be discarded for a new one.

Repairing Leaky Handles. To repair a leak around the handle of compression (and noncompression) faucets, the seal(s) have to be replaced. There are three variations, depending on the age of the faucet: O-rings, packing washers, or graphite-impregnated rope-style packing. Take the stem of the faucet to a plumbing supply outlet to get the correct replacement material. O-rings and washers must be properly sized.

TIPPING VALVE FAUCET REPAIRS

Tipping valve faucets are commonplace at both sinks and lavatories. These faucets are sometimes labeled "single lever" and "ball" faucets (Fig. 5). To repair a leaking tipping valve faucet:

- 1 First shut off the water supply. Then, wrap tape around the jaws of an adjustable wrench and loosen the knurled knob at the base of the spout. Unscrew the spout.
- 2 Lift the cover off the faucet body, unscrew the slotted nuts, and remove the tipping valves. Since a tipping valve seldom fails, before replacing one, check the valve seat. In all likelihood the leak is caused by a damaged seat.

- 3 Use a valve seat wrench to remove the seat. Replace it with a new one and reassemble the faucet. If the leak persists, take the unit apart again and replace the tipping valve.

CARTRIDGE FAUCET REPAIRS

There are two different ways that cartridges are held securely. After turning off the water supply do as is appropriate for your faucet:

- 1 Inspect the outside of the handle for a clip that secures the cartridge, which is inside the handle, to the assembly. This is one style of cartridge faucet. Pry out the clip and remove the Allen screw that is probably holding the handle.

Remove the handle and cartridge, separate the two, and install a new, compatible cartridge.

- 2 With the other style of cartridge faucet, the handle is held by a screw that is under a cap. Pry off the cap, remove the screw and take off the handle.

You will probably encounter a retainer that houses the cartridge (Fig. 6). Loosen this by turning it counterclockwise with adjustable pliers. Look for a clip that holds the cartridge and remove that. Then, grab the stem of the cartridge, pull it free, and replace it with a new one (Fig. 7).

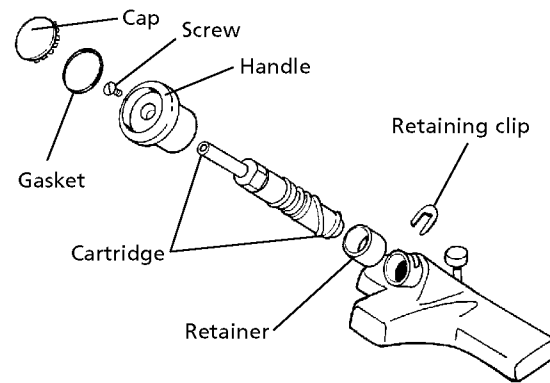
NOTE: Trying to replace the seals that wrap around the cartridge in order to stop a leak is often a time-consuming, futile effort. Replacing a faulty cartridge is more to your benefit.

CERAMIC-DISK FAUCET REPAIRS

Some ceramic-disk faucet designs have O-ring seals at the top of the stem. Remove the handle and the escutcheon covering, which will let you get at the faucet assembly below. Turn off the water first.

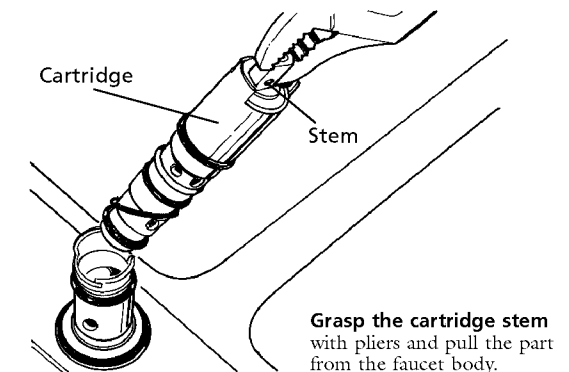
The assembly is held together with two screws. Remove these. Underneath will be an O-ring (on

Fig. 6



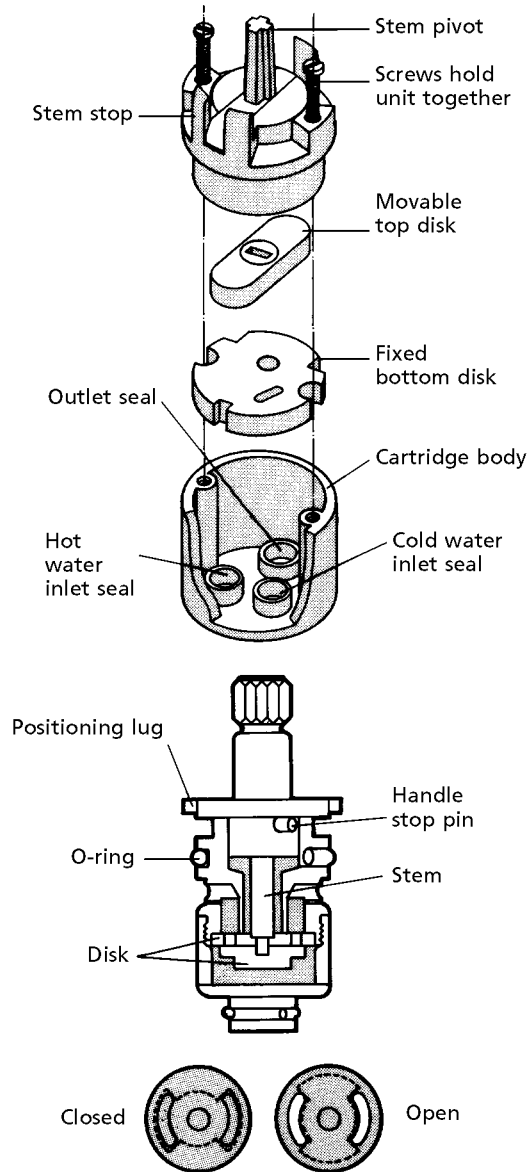
The various parts of a cartridge faucet.

Fig. 7



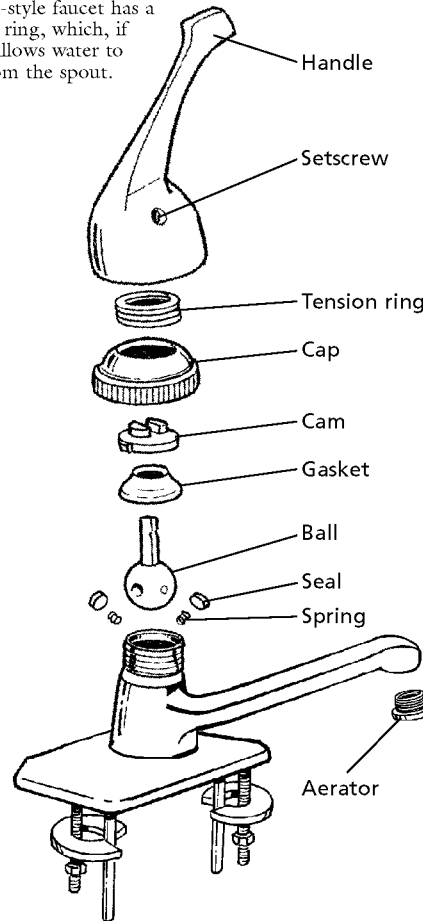
Grasp the cartridge stem with pliers and pull the part from the faucet body.

Fig. 8 It's best to replace, rather than clean, the O-rings, seals, and washers in a ceramic-disk faucet.



A common variation of the ball-style faucet has a tension ring, which, if loose, allows water to drip from the spout.

Fig. 9



some models), a top disk, a bottom disk, and inlet and outlet seals or washers (Fig. 8).

The O-rings, and inlet and outlet seals may be cleaned and replaced, but it is better to replace these parts. The cost is little and the job easy. If you opt to clean the assembly, remove the parts and wash them thoroughly under another faucet. Make sure all the lime deposits are off. Check the disks for wear after cleaning them.

BALL-STYLE FAUCET REPAIR

This type of faucet is common in kitchens (Fig. 9). Before purchasing a repair kit and taking the faucet completely apart, leaks can sometimes be eradicated by loosening the handle setscrew and removing the handle. Then use a ring spanner wrench (sold in the plumbing departments of home centers or plumbing supply stores) to tighten the adjustable tension ring. If doing this does not stop a leak, buy a repair kit, turn off the water, and do the following:

- 1 Wrap tape around the jaws of an adjustable wrench and use it to take off the cap and adjustable ring.
- 2 Lift off the cam and remove the spout.
- 3 Lift out the ball. Notice that the slot in the ball slides onto a pin in the faucet body. When installing the new ball, make sure the slot and pin fit together (Fig. 10).
- 4 Use an awl to pry out the seat spring assemblies. Replace them with those in the repair kit.
- 5 In reassembling parts, make sure the cam lug fits securely into its notch in the swivel base.

Fig. 10

