

Disposal 廢物處理

Waste Disposal Units 廢物處理裝置

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## Waste-Disposal Units

The first thing to know about waste-disposal units is that they're not substitutes for trash cans. Despite the claims of some manufacturers, the list of things that a disposal unit can safely handle is fairly short.

Soft food items like boiled potatoes and oatmeal or crispy vegetables such as lettuce, carrot, or potato peels, and the like are easily ground into a pulp that can be flushed away with enough water. Hard or stringy food items, on the other hand, are troublesome. Celery, eggs shells, coffee grounds, and even apple seeds are common sources of trouble. And of course, you should keep trash such as paper, plastic, twist-ties, and so on from making its way into a waste-disposal unit.

### GARBAGE DISPOSAL PARTS IDENTIFICATION



## General Repairs and Maintenance

When a waste-disposal unit won't work, the problem is most likely either a jammed drum or a burned-out motor. It's easy to clear a jammed drum, but unless the motor is still under warranty, it may not be worth repairing. The labor cost to diagnose and fix a used unit is often almost as much as the cost of a new unit.

### Restarting a Jammed Unit

Manufacturers expect their units to stop once in a while, so they build in two useful features. One is a wrench slot in the unit's motor shaft: the other is an electric restart button. Both are located on the underside of the motor housing.

If you can't see or feel the obstruction from above, find the wrench that came with your waste-disposal unit or a large Allen wrench, and move to the bottom of the unit. Unplug the disposal; insert the wrench into the shaft at the bottom-center of the unit; and crank or rotate the motor back and forth.

This will almost always clear the obstruction. You'll know you've made progress when the motor spins freely, without continuous resistance. Plug in the unit, and press the reset button to allow it to run again. Once the unit starts up again, test it. But make sure you use plenty of running water.



**1** Insert a hex wrench (either a regular Allen wrench or one supplied with the unit) into the motor shaft and rotate the motor right and left.



**2** When the motor seems to spin freely, press the reset button to restart the stalled motor. Do this several times, if needed.

### Routine Maintenance

Use cold water when grinding food scraps. To sharpen impeller blades, fill the waste-disposal unit with ice cubes and turn it on. Do this every couple months. To keep a unit from developing a bad odor, use it often and with lots of running water. If your unit already smells, pour lemon juice into the drum and let it stand for a few minutes.

### SMART TIP When to Replace a Waste-Disposal Unit

If, when using a wrench to free up a jammed waste-disposal unit, you can feel or hear a bearing grind or see lateral movement in the shaft, it is probably time to replace the unit. Also, if after pressing the reset button your unit makes a low humming noise and then trips again you should replace it. As a last-ditch effort, you might drop the unit of the sink and remove the large rubber gasket at its top. This allows you to see directly into the drum. You might find a piece of string or some other object binding one of the impellers. In most cases, however, the symptoms just mentioned signal a dead or dying unit.

### SMART TIP Switching Options

If cutting a new switch box into a kitchen wall sounds like more of a project than

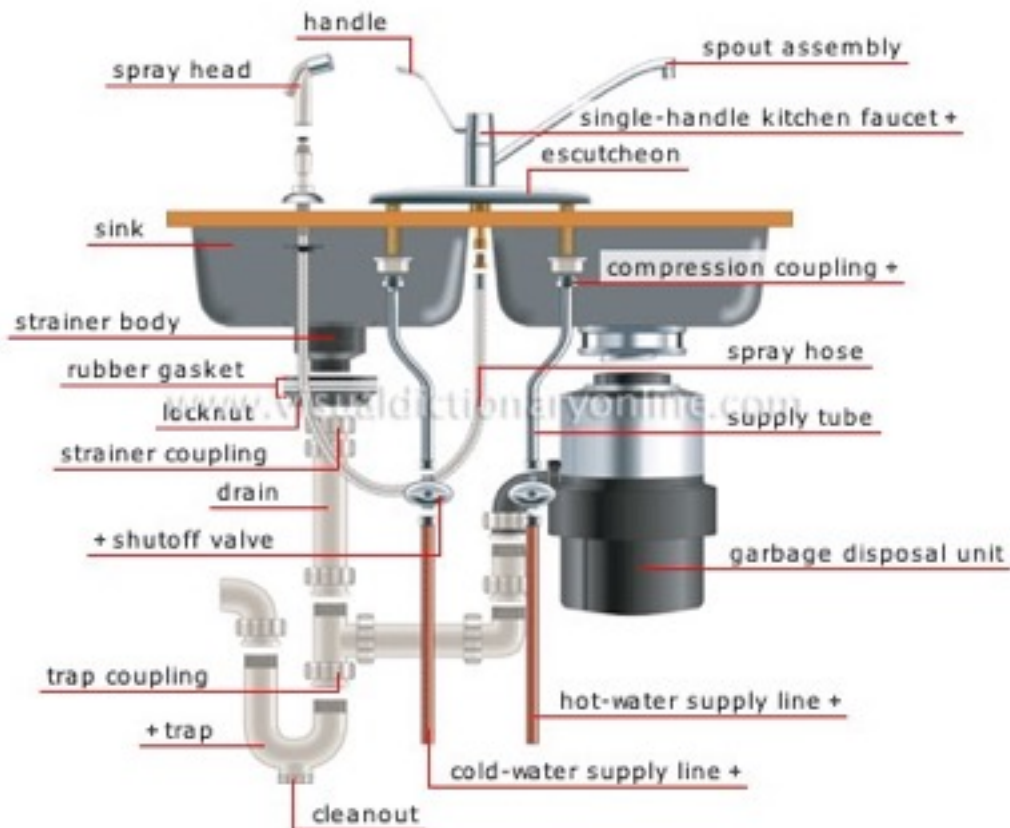
you'd care to tackle think again. The convenience of a readily accessible switch may be worth the extra work you'll have to do. If you're not convinced, an alternative you might consider is surface-mounting a switch box in the cabinet, just inside one of the cabinet doors. If this sounds like a great idea now, however, keep in mind that reaching into a cabinet to turn the waste-disposal unit on and several times a day won't be very handy.

Another way to avoid cutting a switch into a wall is to buy a batch-feed waste-disposal unit. To activate this type of unit, you press the stopper into the drain and give it a twist. These units can be ordered with three-prong plugs, so all you'd need to provide is a 120-volt, 15-amp grounded receptacle inside the cabinet. This arrangement still requires a new circuit, however, so you may as well opt for the more convenient wall switch option.

### **SMART TIP** Choosing a New Waste-Disposal Unit

As you shop, you'll notice a great range of prices. What's the difference? Materials and features. The inexpensive models may have only one impeller inside a steel drum, driven by a single-direction  $\frac{1}{2}$  hp motor. The higher dollar models will likely have corrosion-proof stainless-steel upper bodies and  $\frac{1}{2}$  hp motors that are capable of driving in both directions. (A reversing motor alternates directions each time it is turned on.) These waste-disposal units are not as prone to the sort of one-way bind that an apple seed or fruit stem can cause. A reversing motor does automatically what you might have to do with a wrench.

Is a \$200 model worth that much more than a \$60 model? The answer depends on your expectations. The more expensive waste-disposal units are less prone to stoppage and certainly have better components and a longer life span. But if you don't mind wrenching a stuck unit a couple of times a year, then something in the midrange (\$80 to \$100) will probably work fine.



### Removing a Waste-Disposal Unit

Unlike drain fittings, waste-disposal units don't become hopelessly stuck to sinks. The reason has to do with the mounting mechanisms, which range from simple hose-clamp fasteners to threaded-plastic collars to triple-layer bolt-on assemblies. The triple-layer mechanism described here is the most common and the most complicated.

To remove an old waste-disposal unit, start by shutting off the electrical power to the unit, either within the cabinet or at the main service panel. If your disposal unit also drains a dishwasher, loosen the hose clamp that secures the dishwasher discharge hose and pull the adapter from the waste-disposal unit nipple.

1. Next loosen the horizontal waste tube's slip nut at the waste T-fitting, and undo the bolt or compression nut that secures the tube to the side of the disposal unit.
2. Remove this tube.



### **Disengage the Unit**

To release the waste-disposal unit, look for three rolled edge slots on the mounting ring. The ring is mounted at the top of the unit and has three such slots. Insert a screwdriver into one of the slots, and rotate the ring counterclockwise. If it won't budge, tap it with a hammer. As soon as the unit breaks free, support its bottom with one hand (block up with 2 x 4s or a jack) and rotate the nut about 2 inches until the unit falls away. This will leave only the bolted drain fitting in place.

With the disposal unit out, loosen the screw that holds the cover plate to the unit's electrical box. Pull the wires from the box, and undo the twist connectors and grounding screw. 5. Then remove the fastening nut from the threaded box connector. This nut is located just inside the box, and you can turn it with your fingers as soon as you knock it loose with the screw driver. With the nut removed, pull the connector and wires from the unit.

### **Remove the Drain Fitting**

To undo the drain assembly, use a slotted screwdriver to loosen all three bolts separating the layers of the drain. With the bolts unscrewed about  $\frac{1}{2}$  inch, push the mounting flange up to reveal the locking ring. Pry this ring from its groove, and all the under-sink components will fall away. Lift the drain from the sink, and scrape away any old putty you find clinging to the basin under the flange.

## Removing a Waste-Disposal Unit

### Tools & Material

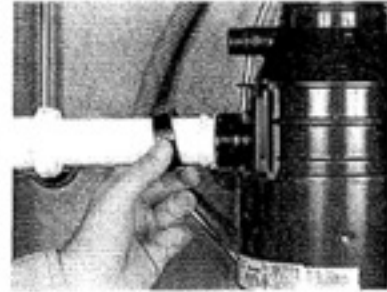
Screwdriver  
Groove-joint pliers

Time: 30 mins.

**PLUMBING TIP:** If you're not up to wiring a first-time disposal unit, pull the cable and install the boxes, then hire an electrician to install the breaker and switch.



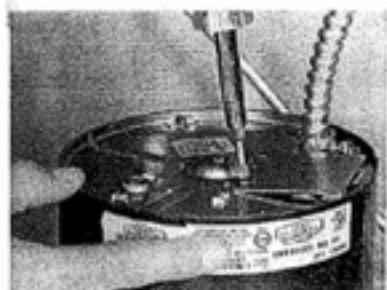
**1** Unscrew the hose clamp on the dishwasher discharge hose. Pull the hose from the disposal unit's inlet nipple.



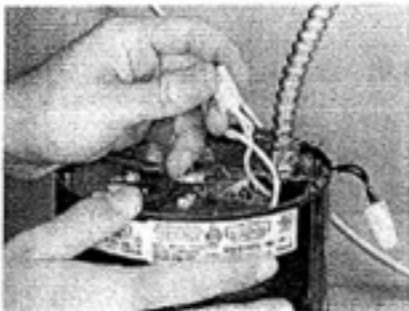
**2** Remove the waste connection at the side of the disposal unit. Some are bolted in, and some have a compression nut.



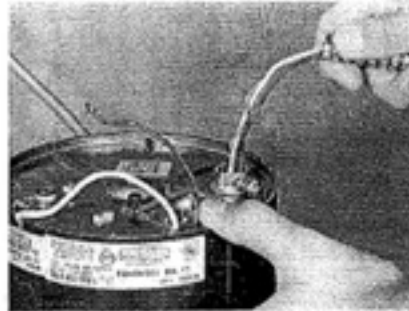
**3** Insert a screwdriver into one of the tabs of the retaining ring as shown, and rotate the ring counter clockwise.



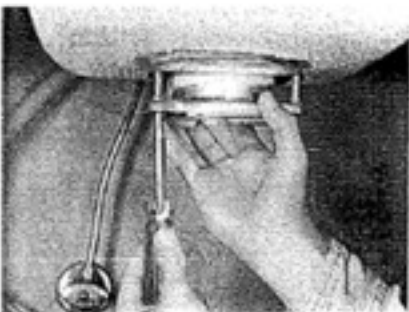
**4** Once you have disconnected the disposal unit, lower it and turn it over. Use a screwdriver to remove the electrical box cover.



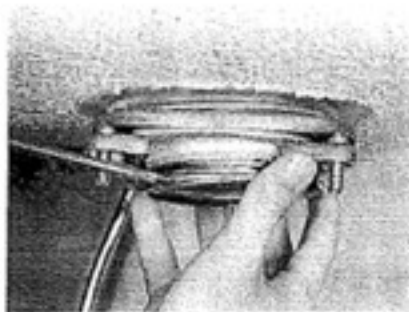
**5** With the power shut off at the main panel, reach into the box and pull out the wires. Remove the twist connectors.



**6** Disconnect the ground wire, and loosen the box connector. Pull the conduit and wires from the connector.



**7** To remove the waste disposal unit drain fitting from under the sink, loosen the three bolts in the retaining ring.



**8** With the pressure removed, slide the retaining ring up and use a screw driver to pry off the snap ring to release the components

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