

# TECH TIP # 25



One of a series of dealer contractor technical advisories prepared by HARDI wholesalers as a customer service.

## Power Outage and Heating Equipment

Recent severe winters coupled with energy shortages have combined to cause more and longer interruptions of electric power in parts of North America. The central Ohio chapter of the Air Conditioning Contractor of America and utility company representatives published the following recommendations for Ohio consumers.

### RECOMMENDED HEATING PROCEDURES

All heating equipment:

1. Be certain that all equipment is in good, safe condition, that safety controls are operational, and that manufacturer's printed guidelines are followed.
2. Avoid manual or unusual operation of your equipment.
3. Do not attempt to change the control wiring of your equipment.
4. Do not attempt to operate your equipment with a battery.
5. Do not, unless you are an expert, attempt to use a generator.
6. Do not attempt to use supplemental heating devices.
7. If you are unsure, after reading the following specific information, call your licensed heating dealer.

### **GAS FURNACE -- GRAVITY (No Blower)**

Most gas furnaces are operated by 24 volt AC controls. In the event of a power outage, the controls will not operate.

Some gas gravity furnaces are operated by a self-generating millivolt control system. In this application the pilot flame generates the current necessary to operate the gas valve and controls. In the event of a power outage, these furnaces will continue to operate normally.

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## **GAS FURNACE - FORCED AIR**

The most common type of furnace in the Columbus area is the gas forced air furnace. This furnace has a fan or blower that forces the heated air through the ducts and pipes. Most forced air furnaces have an air filter that must be changed at various intervals. Gas forced air furnaces are operated by 24 volt AC controls and in the event of a power outage the furnace will not operate.

## **OIL FURNACE**

Oil furnaces employing a gun type or high pressure atomizing burner will *not* operate without electric power. Pot type or vaporizing oil burners, if controlled by electricity, will *not* operate in the event of a power outage.

## **ELECTRIC FURNACE**

All types of electric heating, including baseboard, ceiling cable, forced air, and heat pumps will, of course, *not* operate without electricity.

## **HEAT PUMPS**

If you have a heat pump, you should, in addition to following the procedures recommended by the media, set your thermostat to “Emergency Heat” (it could also be labeled “EM HT”) if your unit is so equipped. If not so equipped, and the power is off for more than two or three hours during very cold weather you should turn the unit OFF at the thermostat and wait one to two hours after power is restored to start your unit. If you do not have an “Emergency Heat” switch on your heat pump, your heating and air conditioning dealer can install one for you.

## **BOILERS -- GAS, OIL or ELECTRIC**

Your heating and air conditioning dealer can add enough anti-freeze to a hot water boiler to prevent freezing during power outages. Adding anti-freeze to a boiler should not be attempted by anyone not thoroughly familiar with hot water heating systems as there are some adverse side effects and safety procedures to be considered. Steam boilers will not operate with anti-freeze. They must be drained if a prolonged power outage is expected.

Q. Can an automotive (12 volt) battery be connected to a gas furnace to provide emergency heat?

A. NO. The 12 volt DC current will operate the 24 volt alternating current controls on some gas furnaces. However, many problems could result. The problems could range from damage to the components of the control system to the danger of overheating and ruining the furnace, or causing a fire. **IT IS NOT RECOMMENDED THAT ANYONE TRY TO OPERATE ANY HEATING DEVICE IN THIS MANNER.**

Q. Can a portable generator be used to operate a furnace?

A. Yes and NO. A properly sized and installed generator will operate a furnace.

CAUTION: Improper sizing (insufficient capacity) or installation could damage your heating system or cause a dangerous condition to arise. Consult a reputable licensed electrical contractor and be sure all local and state codes are followed. If you have a new style of furnace that incorporates an electronic ignition device or flame rectification, your furnace may not operate because it needs to have a dedicated ground to prove itself. If this is the case then follow the situation below.

Q. What should I do to my furnace if the power goes off?

A. Watch and listen to the news media and follow instructions. Gas and electric company officials will publicize do's and don't for those without power. The recommendations will probably be to turn your thermostat to its lowest setting, and not try to turn it on for some specified time after power is restored. The high demand placed on the gas and electric distribution systems when many furnaces try to start at once could cause problems in the system and could damage your furnace.