Fishing Lake Metis Settlement Housing Maintenance Manual

The purpose of this manual is to increase the knowledge and responsibility of the Settlement member and homeowner so they have the ability to do the following

1. Preventative Maintenance. This allows the homeowner to save money and lengthen the life expectancy of their home by repairing items prior to any damage occurring.
2. Complete simple repairs on their own.
3. Upgrade some features to decrease the likelihood of damage or lessen the maintenance on a house.

Throughout the manual will be pictures or YouTube links as to how to repair and maintain your home for your convenience.

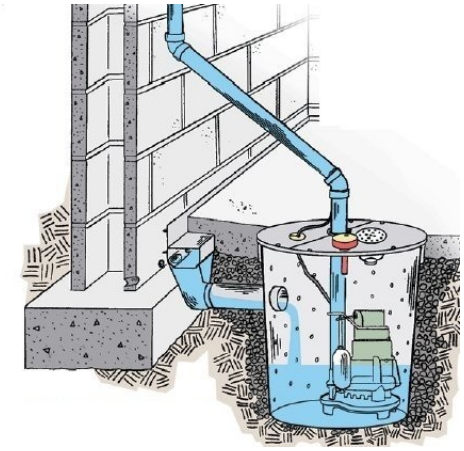
Table of Contents

Components to the Home.

1. **The foundation of the home**
    a. **This may be a basement a crawlspace or a void space under a housing unit such as a modular home.**
    b. **Can consist of a footing that the entire building sits on or it may be on blocking or it may be resting on pilings.**
        i. **The maintenance of these components will fall into sump pit maintenance and landscaping.**
        ii. **The frame of the home**
            1. **This includes the flooring, wall and roof systems.**
2. **The HVAC systems**
    a. **This stands for the Heating, venting and air conditioning systems**
    b. **Gas will be included here**
3. **The Plumbing System**
    a. **This will also include the Private sewage system**
4. **The Water System**
    a. **This will include a well or water cistern**
5. **The electrical system**
6. **Exterior finishes**
    a. **This includes parging or skirting, siding, soffit and fascia, decks and roof finishes.**
7. **Doors and windows**
8. **Drywall**
9. **Interior finishes**

Maintaining the Foundation and Frame of your Home

In this area you will find what you need to do inside the basement as well as outside the basement complete with YouTube links.



Maintaining your sump pump and pit.

https://youtu.be/Uf3ddFuDj-Q

Be sure to check your sump pump every spring to ensure that it is working, simply lift the floats on the pump to ensure that the pump engages and can pump water.

Cleaning and maintaining your eavestrough is an important part to protecting the foundation of your house.

https://youtu.be/7fQ1Kcwzju8

Eavestrough grates are a great way to lower the maintenance on your eavestrough.

These should run at least 4 feet away from the house and ensure that water does not come off the roof and into the basement.

Maintaining all of these will greatly assist in the maintenance of your home and prevent damage from occurring.

The HVAC Systems

This consists of the furnace, fresh air intake, and venting to all appliances including furnaces, fans (bathroom and kitchen), and dryer.

Keep the airflows unobstructed to maximize the efficiency of the system.

Change your furnace filter, this should be completed at least 4 times per year.

https://youtu.be/-lO4xAsTyqM

https://youtu.be/l4JVmZT_lN4

How to change a thermocouple

A thermocouple runs from the gas valve and into the burner of an older model furnace and most gas hot water tanks, when it is broken (it will not look broken) the gas valve can no longer sense that there is flame present and will not start.

The thermocouple is a gas furnace component located near the pilot light burner. It is a safety device that shuts off the gas if the pilot light goes out or the electric igniter fails.

If the pilot light won't stay lit, the thermocouple may be faulty and should be adjusted or replaced. To adjust the thermocouple, you must tighten the thermocouple nut with a wrench. Take care not to apply too much pressure to the nut -- just tighten it slightly. Then try lighting the pilot. If the pilot won't stay lit, replace the thermocouple with a new one of the same type. Here's how to replace a thermocouple:

What You'll Need

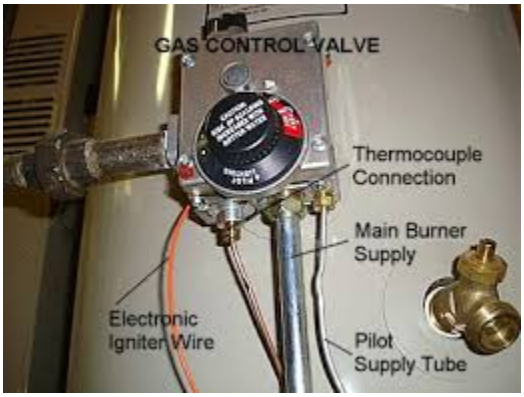
You'll want to have these tools on hand to replace a thermocouple:

- Wrench
- Replacement thermocouple

Step 1: Unscrew copper lead and connection nut inside threaded connection to gas line. Under mounting bracket at thermocouple tube, unscrew bracket nut that holds tube in place.

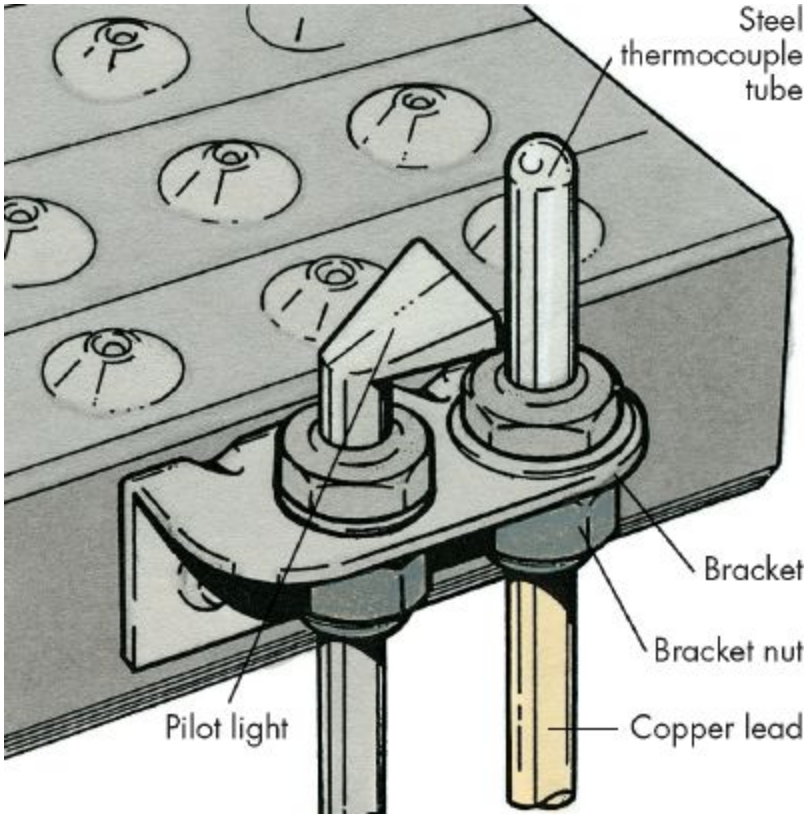
Step 2: Insert new thermocouple into hole in bracket. Be sure steel tube is up and copper lead is down. Under bracket, screw bracket nut over tube. Push connection nut to threaded connection where copper lead connects to gas line. Make sure connection is clean and dry.

Step 3: Tightly screw nut into place, but do not over-tighten. Both bracket nut and connection nut should be only a little tighter than if hand-tightened.



Hot water tank

furnace



The thermocouple is installed next to the pilot light. A bracket holds it in place, steel tube up and copper lead down.

.

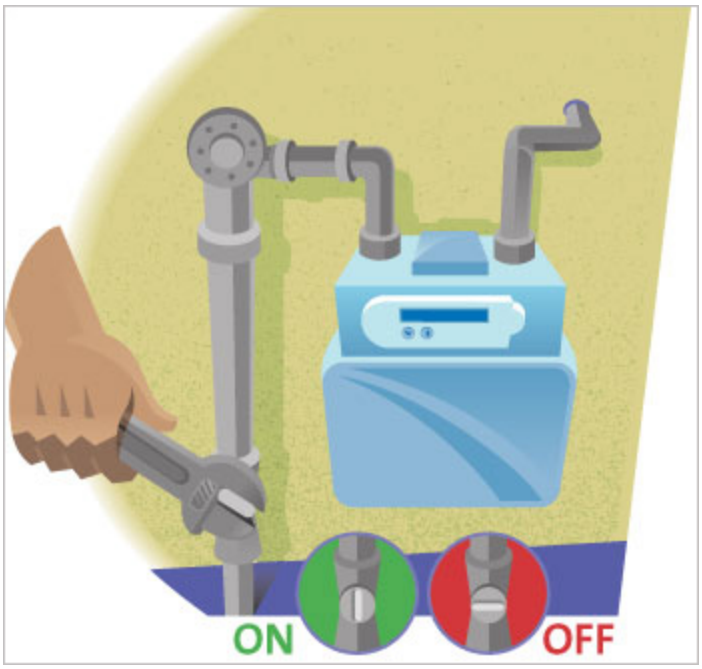
https://youtu.be/UNd2TAddg78

Turning Off the Gas to Your House.

https://youtu.be/aOd-X8pA-MU

How to turn off your meter

You can turn your gas off at the main shut-off valve on the inlet pipe next to your gas meter.



Using a wrench or other suitable tool, give the valve a quarter turn in either direction so that it is crosswise to the pipe (see diagram).

Keep your vents clean and clear

This includes cleaning the dryer vent a few times a year

Go to www.*altagasutilities*.com *for more information*

WOOD STOVES.

Maintenance of Modern Stoves, Fireplaces, Inserts, Furnaces and Boilers

It is not always possible to generalize accurately about service and maintenance because of the differences among the categories of wood burning equipment. But, here are some suggestions for keeping your wood burner working the way it was intended to.

Door Adjustment

Test the seal on the loading door with paper money. Open the door on a cold stove, place the bill across the gasketed area of the door, then close and latch the door. Try to remove the bill by pulling. The bill should not pull out easily. If there is an area where the bill slips out easily the door seal needs attention.

The first thing to try is to adjust the door latch. Some stoves have a mechanism to adjust the door as the gaskets compact through use, and others can be adjusted by bending the hook welded to the stove body.

If you can't adjust the door, or if after adjustment the bill pulls out easily in one or more places, you should replace the door gasket because once it is compressed too far, no adjustment can produce a good seal.

Door gaskets

All air-controlled appliances have a method of reducing random leaks into the firebox so that air only enters the stove through the air control. While a very few older stoves have carefully fitted ground cast iron surfaces that seal reasonably well without gaskets, virtually all modern wood heaters use gasket material around the loading doors to seal them. Some ash pan doors also have gaskets.

 This view shows both the door and glass gaskets. It is a good idea to replace them at the same time.Gasket material has evolved over the years from asbestos rope to fiberglass ropes in various sizes and densities. The usual gaskets are 3/8" to 1" thick. If in doubt about what size and density to use, remove the door and take it to a wood stove store to test a variety of gaskets in the groove. The right gasket may be cut to length from a large reel or packaged by the manufacturer in a kit for your stove. Cement to hold the gasket in place is often included in kits.

You can purchase gasket cement in a small tube or tub. If you can't find gasket cement don't despair. You can use common silicone sealant in a caulking tube. Some have said that silicone hardens the gasket sooner than stove cement, but that's not a clear consensus, so don't be afraid to try it. High temperature silicone is not necessary because the temperature rating of household grade seems to work well enough.

To install the gasket, remove the door and place it on cardboard or cloth to prevent scratching of the finish. Pull out the existing gasket; on some stoves you'll have to disassemble the door to get the gasket out. Clean the gasket groove with an old screwdriver to remove any lumps of old cement. Clean the groove thoroughly with a wire brush and/or course steel wool to produce a clean surface for the cement to stick to.

Using the cement or silicone, apply a narrow (usually 1/4" to 1/2" wide, depending on gasket size) bead along the entire groove. Lay the gasket in the groove without stretching or bunching it, starting on a long straight part of the groove. Cut the gasket slightly long so that the ends can be tucked into each other forming a good seal. Press the gasket into the cement.

Mount the door and test the seal. Slamming the door lightly, you should hear the muffled sound of the gasket, not metal, hitting the stove body. Test the seal with the bill.

Door Glass

Modern wood heaters use a clear ceramic material instead of the tempered glass that older fireplaces used. It will not break with heat generated by wood burners, but it can break if the fasteners are over-tightened or if it is struck hard with a poker or piece of wood.

 Here is the glass, with gasket installed, being mounted in the door frame.The glass must be sealed tightly to the door to prevent air leaks. This is normally done with a flat woven gasket, usually with adhesive on one side. Clean the glass before installing the gasket. Remove the paper backing from a length of gasket and lay it on a flat surface, sticky side up. Center the edge of the glass along the gasket and press it into the adhesive. Now rotate the glass and press the next edge into the next length of gasket. Repeat until you get back to where you started and cut the gasket to the right length. Now wrap the edges of the gasket around the edges of the glass. The glass gasket may need replacement as often as the door gasket, but this depends on the design. If you see brown streaks on the glass coming in from the door frame, it usually indicates the need to replace the glass gasket.

Stove glass is very expensive, but should never need to be replaced. Some stove models seem to cause etching of the glass with normal use over time. You may wish to replace it to renew the clear fireviewing.

Regular maintenance and re-installing glass will require you to tighten glass fasteners. When so doing, ensure that you tighten them lightly, allowing room for the glass to expand when heated.

This ceramic glass is very stable and does not shatter, so if you crack your glass, you may be able to use the stove for a short term while you find a replacement. Replacement glass can be cut to size by a specialty wood heating store or sweep. Alternatively, you can buy replacement glass supplied by the stove manufacturer.

Some EPA certified stoves use specially coated glass. Check your manual. If this is the case, you can buy replacement coated glass from a dealer. Coated glass has a special side facing out. Check it and ensure you are installing the right way out.

Cleaning Door Glass

A good airwash system should keep glass clear for weeks of full time use.

Most stoves built since the mid-1980s that have ceramic glass panels in their doors also have a air-wash system. The air-wash system supplies most of the primary air to the fire through a narrow slot along the top inside edge of the glass. The objective is for the combustion air sweep down between the glass and the fire so that soot cannot stick to the glass. Good airwash systems are remarkably effective at keeping the glass clear. When combined with seasoned fuel and good operating technique, these systems can keep the glass door clear for weeks of 24/7 operation. After a period of use, a white or grey haze forms on the glass. The haze is easily removed with a damp paper towel when the stove is cool.

Light brown stains that form at the lower corners of the glass can be removed with a special wood stove glass cleaner by following the product instructions. Dark stains are difficult to remove and are a sign either that the stove has a poor air-wash system or the fuel is wet or the stove is being turned down too much. Smouldering fires and damp fuel are the most common reasons for dirty glass. Dark stains can be made easier to remove by burning very hot for a couple of load cycles.

Do not use abrasives on door glass. Some people recommend using a razor blade to remove black stains from ceramic glass, but this will almost certainly scratch the material because it is much softer than regular window glass. Other people use a small amount of light ash on a damp paper towel for cleaning glass. The objective, however, should be to run the stove or fireplace so that the only deposits are white or grey and are removable with a damp paper towel.

Paint

Stoves have been painted with high temperature paint since the 1970s. Good stove paint is widely available and will withstand high stove temperatures. Spray cans of stove paint can be used to touch up your installed stove to make it look like new without removing it to a shop. Let the stove cool down first. Mask those parts not to be painted and protect everything around the stove from over spray with large sheets of cardboard or paper. Most stove paint dries to the touch in about fifteen minutes.

Colors are widely available too, so you can experiment by changing from traditional black to a more decorative color. How about a two-tone paint job?

Enamel

Some stoves are factory enameled, a finish that cannot be added later. Enamel is very tough, even under heat stress, but can be damaged by chipping. Touch up and enamel filler kits may be available from stove dealers.

Cast Iron Stove Rebuilding

Cast iron stoves are built from several separate panels which are held together with long threaded rods that clamp sides, front and back between the top and bottom. As the stove is assembled at the factory, stove cement and sometimes gasket is placed in the joint and compressed as the rods are tightened.

The owner's manual usually suggests breaking the stove in over time with a few fires. These increasingly hot fires soften the stove cement in the channels allowing the cement to fill every crevasse, thus ensuring air tightness.

If a cast stove is moved from its original location cracks in the cement can develop, meaning that the stove will leak air and be harder to control. If a cast stove leaks too much air, and the gaskets are in good shape, it should be torn down, cleaned and rebuilt with new stove cement in the grooves.

Rebuilding a cast iron stove is a big job that if not done right, can result in more leaks than it had before tearing down. Unless you are well prepared with good advice and a full set of tools, have a dealer do the rebuild for you.

Firebrick

Firebrick is used in many wood stoves to protect steel or cast iron while increasing firebox temperatures for better combustion. Modern EPA certified wood heaters often use a lighter, lower density brick for higher performance. When replacing such brick it's important to replace with the same brick type to maintain your stove's efficiency.

Cracked firebricks, which remain in position, do not have to be replaced immediately. The bricks in most stoves and furnaces are a standard size, which is half the size of a normal house brick. They measure about 4 1/2" x 9" x 1 1/4" inches, and are referred to as firebrick 'splits'. Standard splits can be purchased at some building supply stores, but the special low density bricks found in some EPA certified stoves must be purchased from a wood stove dealer.

Baffles

Baffles in wood heaters reflect heat towards the fire, increase the length of the flame path and create a chamber for secondary combustion, all of which are essential for clean burning and high efficiency. They may be stainless steel, cast iron, firebrick, ceramic fiber board or a combination of these materials. Since they are exposed to flame on both sides, baffles get very hot and will deteriorate over time. Removal and replacement is usually detailed in the owner's manual. For mainstream stoves, replacement parts can be ordered from a stove retailer or directly from the manufacturer. Cheaper stoves may have baffles that are not replaceable, meaning that the stove is ruined when the baffle fails.

Some horizontal baffles include a ceramic fiber blanket, which usually lies on top of the baffle. During maintenance and cleaning, this blanket must be pressed down flat so that it doesn't block the area above the baffle where the exhaust flows. Ceramic fibers should be treated like asbestos; airborne particles should not be inhaled. Wearing a respirator is recommended when doing this kind of maintenance.

Special refractory

The term refractory means a material that can tolerate high temperatures and is usually in the form of firebrick or ceramic fiber. Some stoves use custom-cast refractory components using ceramic fibers for a secondary combustion chamber. These are usually white or off-white material and may be very soft board-like material or a hard masonry material. In either case they should be handled gently. Avoid breathing any dust created by handling. Repair may be possible in cases of breakage in some cases. Replace when necessary with factory-supplied components.

Air tubes

Stainless steel air tubes are used at the top of the fire under the horizontal baffle in many modern EPA certified non-catalytic stoves. The intense heat in this location can cause them to sag or disintegrate in time. The tubes are removable by undoing the fastener or turning to unlock the keyed ends. Replace with factory parts and new fasteners.

Catalysts

Catalytic elements deteriorate over time, generally lasting 12,000 hours or about six years, if they are cared for properly. Your owner's manual gives directions on cleaning, inspecting and replacing them. EPA standards dictate a six year prorated warranty, which you should be read to understand how to care for the combustor.

After a few years of use, or if you see a change in stove performance, it is a good idea to inspect the catalyst. This can usually be done without removing it from the stove. If

the catalytic element looks good, is all about the same beige color and has no pieces missing, it is probably still functioning and suitable for continued use.

You can check the condition of the catalyst by watching the smoke at the top of the chimney. There will be smoke as the stove heats up but it should decrease dramatically or disappear completely when the catalyst is engaged.

Cleaning the catalyst involves removal from the stove and gentle vacuuming and/or sweeping with a soft brush. If a catalytic element has pieces missing or if the coating shows signs of flaking, replacement is the only option.

Warped steel parts

Interior steel parts in a stove may warp over time. In some cases this distortion is acceptable because it does not affect performance. In other cases, warping may allow exhaust to bypass the combustion system, producing a drop in efficiency. Warped parts should be replaced with components supplied by the appliance manufacturer.

Structural welded steel plates, such as sides, back and top, that warp may be unsightly, but as long as there are no cracks, the appliance can continue to be used. These parts of welded steel stoves are not replaceable so if they crack or badly distort it means the body is not suitable for continued use and should be recycled.

Cracked castings

Cast iron may warp or crack through time, but it's usually a sign of severe stress caused by overfiring, often due to leaks in joints between castings. Interior parts may be replaced with manufacturer-supplied parts. Exterior parts can be replaced during a complete teardown and rebuilding.

CLEANING YOUR CHIMNEY

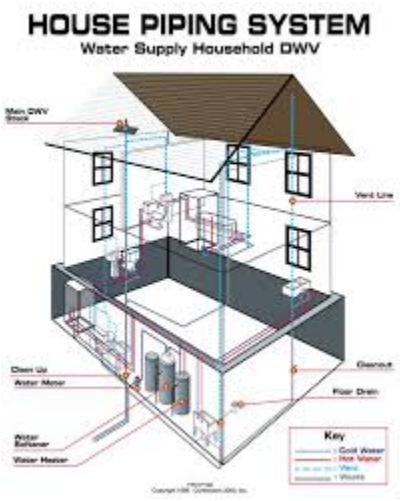
https://youtu.be/tYNglZ6ck60

PLUMBING SYSTEM.

The removal of all wastewater and its gases are what make up the Plumbing system in your home. For the purposes of this manual, the Septic system is included in this portion of the manual.

This system is designed to take waste water and solid waste out of the house and into a municipal disposal system or to a private sewage system and to help prevent the system from failing, do not flush or dispose of any product or material that it the system is not designed to dispose of. This includes rags and chemicals and solvents.

GENERAL MAINTENANCE



https://youtu.be/-KTbLGtMp2k

SEPTIC TANK MAINTENANCE

https://youtu.be/d8jfv4K1AIo

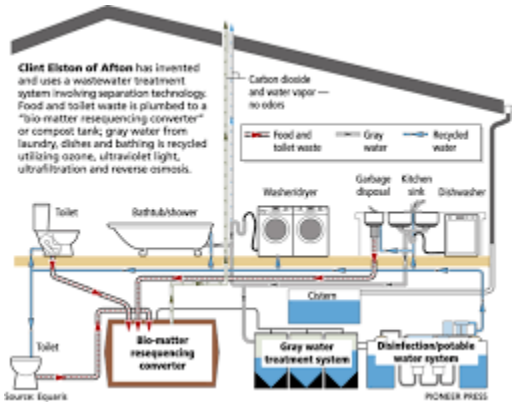
PLUMBING VENT MAINTENANCE

https://youtu.be/Wtu3fUs9i7M

HOW TO UNCLOG

https://youtu.be/N0oEJNaUTWs

THE WATER SYSTEM



Your water system consists of the water source whether that be from a municipal water system or from a well or cistern.

Know where your water shut off is in the event that there is a leak in the system.

EXTERIOR MAINTENANCE OF YOUR HOME.

Houses are being built with a lot less maintenance but general upkeep is still required such as cleaning your siding, painting or staining your deck.

https://youtu.be/_pHboWL-ewY

Vinyl Siding

https://youtu.be/YTHnyZRiSuc