The following pages show you how to use the stove, step-by-step.

1. Fill the bottle with fuel. To fill the fuel bottle to the brim. It should only be filled about ¾ full. You have to leave some space for the pump and the air will be compressed when you pump up the pressure.

Check that the seat is positioned correctly in its groove before you turn the pump into position. The seat must be flat and even all round. Screw on the pump properly and do not tip any spilled fuel. Read more about various fuels in the chapter on fuels.

**WARNING:** Make sure that you stay well away from a lit stove or naked flame when you are filling the bottle with fuel. Use only Trangia fuel bottles.

2. Fold out the fuel control valve and make sure that it’s in the off position. It gets very hot under the stove, so remember to place the stove on a firm base which cannot catch fire. Make sure that the control valve is closed before pumping pressure into the bottle.

**WARNING:** Do not place the stove on or near flammable materials. Avoid exposing the fuel bottle to heat. The bottle may explode if it is exposed to heat.

3. Clear the nozzle in the burner. All fuels contain contaminants that can block the nozzle in the burner. The TMFB has a built-in cleaning needle that is used to clear the nozzle with ease. Move the multi-tool a few times directly beneath the burner’s base nut. The magnets on this tool force the dirt out of the nozzle. Get into the habit of clearing the stove before you start preparing food. This will reduce the risk of the nozzle in the burner getting blocked. See the section entitled “Maintenance & Cleaning” and if the stove functions poorly even though it has been cleared using the multi-tool.

4. Connect the fuel hose to the pump’s quick connect. Make sure that the fuel feed valve is closed (burned fully clockwise). Check the o-ring on the tip of the fuel hose.

5. Replace the pump up fuel in the bottle. The fuel is not pressurized, so you have to pump up pressure before the stove can be lit and used. The fuel can be placed into two different positions, with the worst ON or OFF top of the pump. Place the bottle into the pump until the fuel is pressurized. If the fuel bottle is full (3/4 full), you will need to pump around 25 times. Pump about 45 times if the bottle is half full or less. There must be firm resistance when you pump the pump up.

Go to 5 when you reach the stove’s working pressure. Open the fuel feed fully. The air pressure will not be enough when you start pumping pressure into the fuel. The pump will only become hot as the fuel flow will be too great resulting in a yellow flame.

**WARNING:** Make sure that no fuel leaking out before you light the stove. Never light a stove that is leaking fuel.

6. Release a small amount of fuel for preheating. The stove’s burner has to be hot enough to allow the fuel to vaporize at the nozzle and burn efficiently. Therefore, you have to preheat the burner before you can start preparing food. This is done by first releasing a squirt of fuel and allowing it to burn for a short time, heating up the nozzle in the burner. The preheating time varies depending on what type of fuel you are using. For example, gasoline vaporizes more readily than kerosene and requires less preheating. Preheating takes longer when it is cold and you must place the stove on a heat source for some time before you open the control valve. See the instructions, it is difficult to see how much fuel has run out onto the Wick, but as time goes by you will get a feel for this. Proceed safely as before with yourself and your stove.

**WARNING:** Check for fuel leaks at the pump, hose, hose and before lighting the stove.

7. Light the fuel and wait until the flame has almost burned out. Light the fuel at the Wick using a match of lighter. The Wick is the white pad in the center of the burner, in the bottom of the cup. This is accessed via one of the holes in the cup. Of course, it is important to make sure that you never hold your face or any other part of your body directly over the stove when you light it. The fuel may ignite explosively. If the stove cannot be lit, you might not have released enough fuel. If this is the case, repeat step 6. The fuel will burn with a yellow, flaming flame and heat the water. Wait a short time until the flame has almost burned out and the flame and the blue smoke has become small.

**WARNING:** Keep children away from the stove and never leave it without supervision.

8. Open the control valve again and adjust the flame until it turns blue and there is a hissing sound. Once the preheating flames are almost out, open the control valve again by about a quarter turn. You should then be able to light the stove. The flame will first become yellow and the bottle will seep out. The flame should then turn bluish and hiss gently after a short time. If the vaporized fuel does not ignite, light it carefully with a match. A yellow, flaming flame means that the

**WARNING:** The stove is not hot enough or that you have opened the control valve too far. Start off by closing the control a little. If the flame does not turn blue after 10-15 seconds, the burner is not hot enough. If the burner is hot enough, close the control valve further by closing the control a little. If the flame still does not turn blue after 10-15 seconds, repeat the procedure. Once you have lighted the stove, it is important to check that the fuel is not burning for a while, it may be a good idea to keep a couple of times in order to maintain pressure in the bottle. Too little pressure in the bottle will result in poor performance. To much pressure will lead to poor performance and a yellow, flaming flame. With a little practice, you will learn how often and how much to pump in order to achieve the effective maintenance of the flame.

**WARNING:** Never move a hot stove or a stove that is in use.

9. - Shut off the stove by turning the bottle to OFF position. If you want to avoid annoying fuel spills when you dismantle and transport the stove, shut it off by turning the fuel bottle to OFF position. OFF will then be visible from above on the pump. The fuel in the hose will now burn up and the remaining pressure in the bottle will be seeped out. The flame will go out immediately, but will burn for a few minutes depending on which fuel you are using and how you pump the pump.

**WARNING:** Be very careful when lighting a stove that has just been used. A hot burner can vaporize the fuel. Vaporized fuel is very difficult to see. There is a risk that the fuel will ignite explosively and you get burned.

10. - Let the stove cool down. Allow the stove to cool properly before packing it. We recommend that you complete your entire cooking session before you close the control valve open when you have shut off the stove by turning the bottle to the OFF position. If you close the valve too tight when the stove is hot, it may be hard to open the next time you use the stove.

11. - Remove the fuel hose. Close the fuel feed fully. Remove the fuel hose by releasing the bayonet from the quick connect. Be sure to apply the cover on the tip of the hose to prevent the stove from becoming too hot. Sometimes there may be a little pressure remaining in the bottle which seeps out when you disconnect the quick connect. The same is true when you uncouple the pump from the Stove. Turn your face away from the stove to protect your eyes when separating the quick connect. Be sure to apply the cover on the tip of the fuel hose so dirt will not enter the fuel hose. Fuel may splash on the hot burner and ignite.

**WARNING:** Never disconnect the hose immediately after use with the fuel hose. Fuel may splash on the hot burner and ignite.

**FUELS**

The TMFB is a burner designed to use petroleum-based fuels. Therefore, you cannot use alcohol-based fuels. We recommend that you use chemically pure gasoline (not automotive gas) or low-quality kerosene. Under no circumstances should you have petrol or diesel in the fuel bottle. Use a funnel when filling the fuel bottle so as to avoid dirt and foreign bodies getting into the fuel. Never mix different kinds of fuel. Emery the bottle entirely before putting a different kind of fuel.

**GASOLINE** - It is often very easy to get hold of gasoline, even though the quality is variable. Chemically pure gasoline is preferable. Ordinary automotive gasoline contains...
additives which will contaminate your stove and are hazardous for your health. If you have to use automotive gasoline, use unleaded gasoline wherever possible. Gasoline is highly flammable and preheating occurs quickly. Gasoline is also very volatile and burns explosively.

KEROSENE - Kerosene has more or less the same energy value as gasoline but is considerably less of a hazard in terms of fire. It is used all over the world and is easy to get hold of. You can often find kerosene in places where you would not find other fuels, such as in food stores. Preheating takes slightly longer with kerosene than with gasoline and is slightly sooty, but there is not much of a risk of explosion. Kerosene also requires you to clean the burner more often. We recommend the use of kerosene, as it is primarily designed for use in stoves and heaters. We do NOT advise the use of lamp oil or other lighting fluid (charcoal lighter).

NOTE: In harsh cold, there is a risk of kerosene solidifying, which makes the stove unusable.

DIESEL - Diesel is somewhat similar to kerosene, but preheating takes slightly longer and it produces even more soot. We recommend that you only use diesel as last option. If you do so, use diesel for cars. Avoid marine diesel entirely. One positive aspect of diesel is that it can be found all over the world.

FUEL CONSUMPTION - Expected to use 0.10-0.15 l/hr (3.8 - 5.5 oz) fuel per person per day. In winter, you will use more fuel for melting snow, preheating for longer, etc. In this instance, expect to use twice as much fuel. To keep your fuel consumption down, it is important to adjust the flame so that the stove burns as efficiently as possible. This does not mean opening the control valve as much as possible; quite the opposite, in fact. If you do that, you will use up more fuel but your food will not cook any faster. To heat your food as quickly as possible, it is also a good idea to always use a lid on your pan and make sure that the pan is protected from the wind.

Visit www.optimus.se for more information about fuels.

**TIPS**

**CHOOSING A FUEL**

Liquid fuels work considerably more effectively than gas in cold conditions. The pressure in gas tubes is impaired at just a few degrees below freezing. Keep in mind that some poor qualities of kerosene and diesel will solidify in the cold. If you are not sure what will happen, you can always place a bottle with the fuel in your freezer and see what happens.

**PARTS SUSCEPTIBLE TO COLD**

The quick connect and O-rings are the stove parts most susceptible to cold. The O-rings may stiffen and crack when the temperature falls below -20°C (-4°F). Check them before leaving on your trip, and replace them if they look worn.

**EFFICIENT FOOD PREPARATION**

When the weather is cold, it is of course even more important to use a wind screen and a bellows. You must also make sure that your stove has free access to air. When you use your TMFB on snow, it is important that you place a non-flammable base beneath the stove so that it will not sink into the snow while you cook. Set up a nook on which you can place the stove, bottle and pans, and pack the snow down hard so as to form a firm base.

**MELTING SNOW**

You can melt snow more quickly if you start with a little water in the bottom of the pan. It takes longer to melt ice than it does to melt snow.

**WASHING DISHES IN WINTER**

Washing up pans is always a little more complicated in the winter. Take Teflon coated pans and leave the leftover food to freeze before scraping it out with snow. You can also dissolve grease in the pans using cooking oil and then wash it out. It is a good idea to boil water for dishwashing right after cooking in order to save fuel.

**TMFB AT SNOW**

The TMFB is one of the best stoves on the market for use in extreme situations. Among other things, this stove has been used successfully in the Himalayas at altitudes of 7,400 meters. However, using multifuel stoves with liquid fuels at altitudes of 7,400 meters can cause problems. Burning may be uneven due to the fact that some poor qualities of kerosene and diesel will solidify in the cold. If you are out in winter, you must pay particular attention to all rubber O-rings and seals. These may become hard and brittle in severe cold, and possible crack. To be on the safe side, replace the old ones and take a few spare parts with you if you go out for a long time, a long way from civilization.

**LUBRICATING THE PUMP LEATHER**

You should lubricate the pump leather using Optimus lubricant so the pump will function perfectly. It is particularly important to check this if the stove has not been used for a long time. The pump leather is located at the far end of the pump rod. This is also evident by the pump rod's drain valve. Wipe clean the nozzle body and the inside of the nozzle. Clean the nozzle hole by carefully pushing the cleaning needle through the nozzle.

**CLEANING THE SPINDLE’S FUEL GROOVES**

If the stove is still not getting very hot even though you have cleaned the nozzle and cleaning needle, the spindle’s fuel grooves may need to be cleaned. Remove the burner plate, use the tip of the multitool as a screwdriver and unscrew the nozzle. Remove the cleaning needle from the burner. Wipe clean the nozzle body and the inside of the nozzle. Clean the nozzle hole by carefully pushing the cleaning needle through the nozzle.

**REPLACING THE FUEL FILTER**

If you are still having problems with the stove, the fuel filter may need to be replaced. The fuel filter is located at the end of the plastic tube on the fuel pump. Unscrew the patterned part of the filter holder and push the filter out using a pointed object. Make sure the filter holder is clean before inserting the new filter. If you have problems with the fuel filter, you can use the stove without one for a brief period. It will be more sooty than usual. Some fuels also tend to flare more if no filter is fitted. Replace the filter when you get home.

We recommend that you perform regular maintenance in order to enhance the life and reliability of the stove. For this purpose, Optimus provides a Regular Maintenance Kit ITEM NO. 8510 for your TMFB stove. This will allow you to perform advanced maintenance measures in the field.