

OPTIMUS No. 111 C HIKER

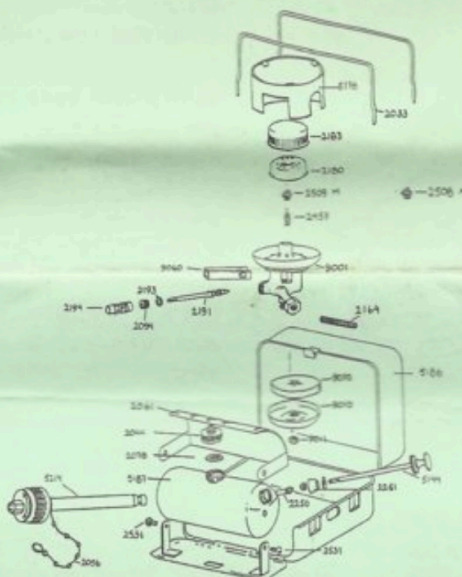
Multifuel Expedition Stove
Expeditionskök för flytande bränslen

INSTRUCTIONS FOR USE - BRUKSANVISNING



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SWEDEN



PARTS OF THE STOVE - KÖKETS DELAR

Art.No.	Description	Beskrivning
2033	Cooking pot support	Rostbygel
2044	Tank lid with security valve	Ifyllningslock med säkerhetsventil
2056	Chain	Kedja
2061	Heat protection shield	Värmeskyddsplåt
2078	Rubber packing	Gummipackning
2094	Graphite packing	Grafitpackning
2164	Strainer	Sil
2180	Inner cap	Innerhuv
2183	Outer cap	Ytterhuv
2191	Valve spindle	Ventilspindel
2193	Metal ring	Spindelbricka
2194	Stuffing box	Packbox
2250	Pump valve with packing	Pumpventil med packning
2261	Pump leather cup	Pumpläder
2457	Cleaning needle	Rensnål
2508	Alcohol/spirits jet 'A'	Spritmunstycke 'A'
2509	Multifuel jet 'M'	Munstycke flerbränsle 'M'
2531	Fastening screw	Fästskruv
5144	Pump rod compl. with leather cup	Pumpstång kompl. med pumpläder
5176	Wind shield	Vindskydd
5186	Box	Låda
5214	Multikey	Multinyckel
9001	Burner compl. with spindle	Brännare komplett m. spindel
9010	Priming cup	Förvärmarskål
9011	Nut	Mutter
9060	Slide valve	Luftspjäll
9070	Priming wick	Veke

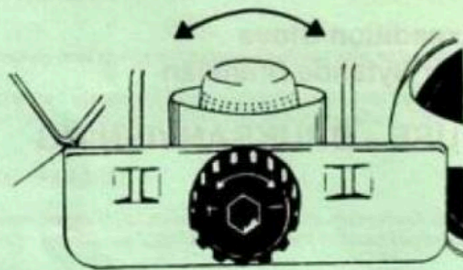


Diagram 1a & 1b.

Multikey attached to the burner spindle. Turn the spindle to the left (+) to open fuel supply/increase output. When multikey is turned to a full left, the cleaning needle clears the jet orifice. Turn the spindle to the right (-) to close fuel supply/simmer. When spindle is turned to a full right, stove turns off.

Illustration 1a & 1b.

Multinyckeln påsatt på brännarens spindel. Vrid multinyckeln åt vänster (+) för att öppna bränsletillförseln/öka effekten. När multinyckeln vrids helt åt vänster rensar rensnålen brännarens munstycke. Vrid multinyckeln åt höger (-) för att stänga bränsletillförseln/minska effekten. När multinyckeln vrids helt åt höger stängs köket av.

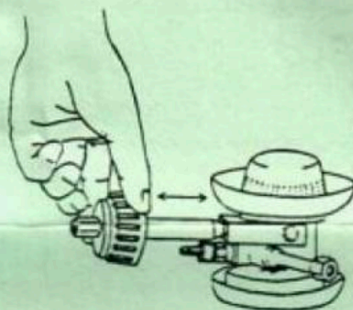
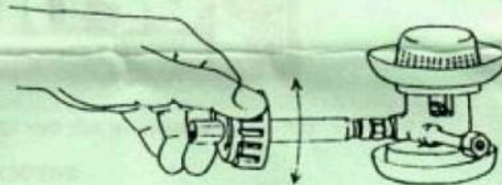


Diagram 2.

When necessary, adjust air/fuel mixture by gently pushing/pulling the slide valve (9060). Hook the tip of the multikey onto the slide valve as shown in the diagram.

Illustration 2.

Om nödvändigt, justera bränsle-/luftblandningen genom att försiktigt skjuta in/dra ut luftspjället (9060). Haka multinyckeln i luftspjället som illustrationen visar.

Diagram 3.

To tighten/unscrew the burner jet, first remove outer cap (2183) and then tighten/unscrew the jet using the tip of the multikey.

Illustration 3.

För att efterdraga/skruva loss brännarens munstycke, avlägsna först ytterhuv (2183) och drag sedan åt/skruva ur munstycket med hjälp av multinyckeln spets.

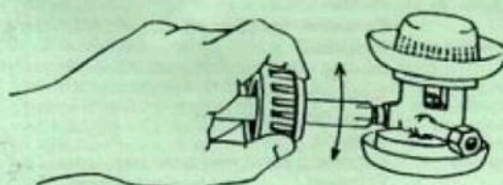
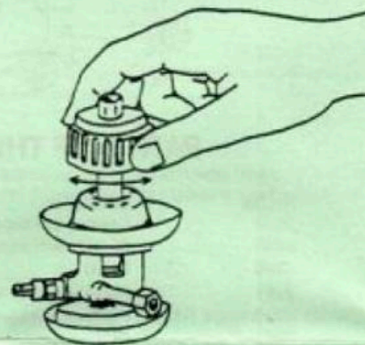


Diagram 4.

To tighten/unscrew the stuffing box, use the capped key of the multikey.

Illustration 4.

Använd multinyckeln fasta sex-kantnyckel för att efterdraga/skruva loss brännarens packbox.

I. SAFETY - READ THIS PRIOR TO USING THE STOVE

A. Study the instructions for use carefully prior to using the stove. Get acquainted with all parts and functions of the stove before using it. A good advise is to run the stove in favourable conditions when using it for the first time.

B. The stove needs a breaking-in period of approximately ten minutes when it is brand new. Run the stove and then if necessary tighten the jet (2509) and the stuffing box (2194) by using the multikey (5214). Tightening the jet and/or stuffing box is needed whenever a small flame occurs by jet/stuffing box.

C. The stove should produce a controlled blueish flame. When the stove is brand new (during breaking-in), the flame may be yellowish.

D. Never keep an uncapped fuel bottle near a stove in use.

E. Never fill fuel near an open flame, a lit cigarette or similar.

F. Should a small flame occur at the stuffing box (2194) or at the jet, tighten the stuffing box (approx. 1/4 of a rev.) or the jet by using the multikey (5214). Repeat if necessary.

G. When changing fuels, empty the fuel tank first. Let the stove cool off prior to priming and lighting it again. Do not mix different kinds of fuel.

H. The alcohol jet (2508, marked 'A' - Alcohol) MUST NOT be used for kerosene/paraffin, diesel oil, gasoline/petrol or Coleman fuel.

I. Never release air pressure when stove is in use, near an open flame, a lit cigarette or similar - fuel vapour may ignite on contact with flames etc. Air pressure is released by opening the tank lid.

J. Unless you are an experienced user of liquid fuel stoves, we advise you not to use gasoline as fuel. If using gasoline, do it with extreme care. Gasoline is very volatile and flammable and consequently it may ignite explosively.

K. Never use automobile (car) gasoline. Car gasoline contains a lot of additives that are needed as lubricants etc. in a car engine. These additives are not burnt properly in a stove. Instead they escape as extremely health hazardous fuel vapour and exhaust fumes that may cause cancer. Furthermore, unleaded car gasoline may in some cases cause the rubber in the pump valve (2250) and the tank lid (2044) to expand. If this happens, the pump valve may leak fuel into the pump tube and the security valve of the tank lid may malfunction. Use white gasoline, heptane, Coleman fuel and similar instead of car gasoline. If available in your country, unleaded environmental gasoline can be used, provided that it is free of benzene and additives. Unleaded environmental gasoline is usually sold as a fuel for garden machines (e.g. lawn mowers) with 4-stroke engines. Please note that any gasoline containing benzene and other additives is extremely health hazardous.

L. Never use other fuels than the ones the stove is designed for.

M. Never use an expedition stove indoors (e.g. in a tent) since open flames may cause fire hazard and toxic fumes.

II. FUEL

Optimus No. 111C Hiker is a multifuel stove designed to use kerosene/paraffin, diesel oil, white gasoline/petrol, Coleman fuel and methylated alcohol/spirits. Always use clean fuel of best quality. Dirty fuels soot and can reduce the stove's output. Using dirty fuels during long periods may result in clogged jets and fuel pipes.

Always use clean, good quality kerosene/paraffin as a first choice. Kerosene/paraffin is not as volatile as many other liquid fuels and is consequently less dangerous than many other fuels. As a second choice, we recommend white gasoline/heptane/Coleman fuel. White gasoline is less volatile and its vapour and fumes are less hazardous than those of car gasoline.

Methylated alcohol/spirits can be used. Always apply the alcohol jet (2508, marked 'A') when using methylated alcohol/spirits. The alcohol jet has a larger orifice than the original jet (2509, marked 'M' - Multifuel) which is used for other fuels. Please note that methylated alcohol/spirits contains less energy than other recommended fuels. Consequently, use of methylated alcohol/spirits will in comparison with other fuels give less output and result in a higher fuel consumption.

The Hiker can in most cases use automobile diesel. In some countries, however, diesel is too crude and has a too high boiling/vaporization point. This could typically be the case with marine diesel. In such cases, the diesel will not vaporize and can not be used in your Hiker. This can be noticed if the burner flame is high, sooting, and yellow despite thorough priming.

III. SETTING UP THE STOVE AND FILLING FUEL

1. Open the lid of the stove's box and slide out the tank.

2. When using kerosene/paraffin, gasoline or diesel there is normally no need to use the slide valve (9060), consequently the slide valve may be removed from the burner and kept in a safe place. When using methylated alcohol/spirits, the alcohol jet (2508) must be fitted. Change jets by using the tip of the multikey. Furthermore, when using methylated alcohol/spirits, the slide valve must be fitted and pushed in fully (i.e. in position for minimum air mixture).

3. Refer to II. Fuel above for permitted fuels. Unscrew the tank lid. Fill the fuel tank with 0.35 liters (11 fl oz) of fuel (approximately 2/3 of the tank capacity). NOTE: Do not fill the tank completely since there must air left in the tank to pressurize by pumping. A good advise is to use a funnel with a strainer when filling fuel. Fit the tank lid tightly.

IV. PREHEATING/PRIMING THE BURNER

In order to vaporize/gasify the fuel, the burner must be primed (preheated). Priming should be done carefully, otherwise the stove will not work as designed or even cause hazard. Lighting a stove that is not properly primed will result in high, yellowish flames. Please note that in cold and windy weather conditions, priming takes longer time than when it is hot and calm. Similarly, the priming time varies with fuel types. Gasoline/petrol needs shorter priming time (due to earlier vaporization) than kerosene/paraffin and diesel oil. There are two different ways to prime your burner:

A. Priming with fuel contained in the tank:

1. Make sure that the tank lid is tightened and that the multikey is turned fully to the right (fuel supply/spindle closed).

2. Pump some 10-20 full strokes with the pump to pressurize air in the tank. Check for fuel leakages, NEVER prime or light the stove if a leakage should occur.

3. Turn the multikey to the left (open fuel supply/spindle). Fuel will now come out of the burner jet and pour down on the priming wick. When the wick is moistened in fuel (some 2-3 teaspoons), immediately turn the multikey to full right (close spindle).

4. Light the wick with a match. The fuel contained in the wick will now burn and preheat the burner. Keep your head clear from the stove when lighting the wick.

B. Priming with Optimus burning paste/fuel poured directly on the wick:

1. Follow paragraphs 1-2 above. Then squeeze out some Optimus burning paste/pour 2-3 teaspoons of fuel onto the wick.

Light the wick as described in paragraph 4 above.

VI. LIGHTING THE STOVE

1. When the priming fuel has burnt out, immediately turn the multikey to the left. KEEP YOUR HEAD CLEAR from the stove and light the vapourized/gasified fuel with a match.
2. The stove should now produce a controlled, blueish flame. If the flames are high and yellowish, the burner is not sufficiently primed - turn off the stove (multikey to the right) and repeat priming.
3. Pump to obtain desired flame. Adjust output by turning the multikey (left-boil, right-simmer).
4. Do not keep the multikey attached to the spindle when the stove is in use. If attached, the multikey may get very hot.
5. If necessary (normally only when using methylated alcohol/spirits), adjust the air mixture with the slide valve. This is done by hooking the edge of the slide valve on the tip of the multikey and then gently pulling/pushing the slide valve until optimal flame is obtained (i.e. a blueish controlled flame). If, when using other fuels than methylated alcohol/spirits, the flame has a tendency to leave the outer cap (2183) or to go out, it may be necessary to fit the slide valve on the burner and adjust it until the flame is optimal.
6. To turn off the stove, turn the multikey completely to the right.

VII. CLEARING THE BURNER JET

All fuel kinds can contain impurities which may eventually clog the jet. The burner of your Explorer stove is equipped with a unique cleaning needle which permits clearing the jet when the stove is in use: (Check how the needle works when stove is not in use.)

1. Turn the multikey quickly to a complete left and then back again. During this operation, a needle will rise through the jet orifice and push out dirt. Keep a match ready if the flame should go out during the clearing.

VIII. TURNING OFF THE STOVE

1. Turn the multikey fully to the right.
2. If the stove is to be disassembled/not to be used for a while, air pressure should be released from the fuel tank. Turn off the stove and let it cool off, then open the tank lid slowly. Air pressure will now escape. Remember to tighten the tank lid when pressure has been released.

IX. GENERAL MAINTENANCE HINTS

1. Make a habit of keeping your stove clean. Wipe off dirty components with a cloth. If necessary, use a few drips of methylated alcohol/spirits for cleaning.
2. The leather cup of the pump rod is a key component. Should the leather cup get dry (squeaking and sluggish operation), it may crack and cause pump malfunction. Lubricate the leather cup from time to time, and especially when the stove has not been in use for a long period of time. Unscrew the pump rod, pull it out and lubricate the leather cup in mineral oil or grease (pref. silicone based). If you intend to use your stove in severe cold, make sure that the lubricant used will cope with low temperatures.
3. Should a small flame occur by the stuffing box (2194) or the jet, turn off the stove. Tighten the stuffing box or the jet by using the multikey. Repeat if necessary.
4. If the inner cap (located under the outer cap 2183) is not fitted in its right position, air/fuel mixture will be affected which may result in a yellowish flame. Should this occur, turn off the stove, remove the outer cap (bayonet joint) and push down the inner cap as far as possible on the burner air tube. Refit outer cap again.

BURNER MAINTENANCE

Spare parts kits are available containing all wear parts of the Hiker's burner. If necessary, parts may easily be replaced. The replacement of spare parts can be done using the multikey. To dis-/reassemble the burner spindle, proceed as follows:

1. Make sure the stove has cooled off. Empty the fuel tank.
2. Unscrew the outer cap (2183) (bayonet joint).
3. Using the multikey, unscrew the jet.
4. Attach multikey to the spindle (2191) and turn it to the left until the cleaning needle (2457) is released. Lift out (w. a pair of tweezers) or shake out the cleaning needle.
5. Unscrew the stuffing box (2194) by using the cap key at the end of the multikey.
6. Turn the spindle to the left until it is released from its threading. Pull out the spindle with graphite packing (2094) and spindle washer (2193).
7. Fit new spindle washer and graphite packing on spindle. The conical groove of the washer should face the graphite packing. Screw in the new spindle fully into the burner.
8. Fit the new stuffing box.
9. Turn the spindle fully to the right.
10. Attach the new cleaning needle at the end of a match (or similar) and slide it down through the burner air tube to its position. Make sure the teeth of the needle are facing the teeth of the spindle.
11. Very gently press the cleaning needle against the spindle while simultaneously turning the spindle slowly approx. 1/2 of a rev. to the left (during this operation, the needle should 'skip' 4-5 teeth of the spindle).
12. With multikey attached to the spindle, turn it fully to the right to make sure the cleaning needle is retracted into the burner.
13. Fit a new jet tightly and refit the outer cap. Make sure the outer cap is secured (bayonet joint).
14. Turn the multikey/spindle fully to the left and ensure that the cleaning needle rises through the jet. Turn the spindle to a full right again. Make sure that the valve is fully closed by, for example, pumping up a good pressure in the tank - no air should escape through the jet. If air escapes, the position of the cleaning needle must be readjusted. Follow paragraph 11 above but reduce the number of teeth to 'skip' by one.

REPLACING PUMP VALVE

1. Empty the fuel tank.
2. Unscrew and pull out the pump rod.
3. Use the tip of the multikey to unscrew the pump valve (2250). Pull/shake out the pump valve from the pump tube. Make sure the packing is also removed.
4. Fit new pump valve with packing tightly. Refit the pump rod. Be careful not to deform or fold the leather cup.