

INITIAL INSTALLATION AND START-UP TIPS WALLAS 85 DU & DP COOKTOP

The 85 series Wallas cook-top is the third generation of cooking devices from this Finnish company. Starting in 1995, Wallas introduced a #2 diesel fueled cook-top called the Model 95D, designed primarily for the North American market. This model was manufactured through 2005.

Though primarily intended for “recreational” use, many 95Ds were placed into “commercial” use, with reasonable success, and most units, recreational and commercial, are still in service today. Most 95Ds sold here in North America were fitted with the model 25 blower lid, that combination of stove and lid was marketed as the 125D. Early 25 lids had a wood veneer top, while the later 25E models had a tooled metal top.

85DU w/270 Lid



85DP w/270 Lid



In 2006, the current Model 85 started into production. This model grew out of the information received from nearly 10,000 Model 95D's sold throughout the world. Some of the major improvements in the model 85D over the model 95D include a dramatically strengthened “case” with a “bonded” ceramic surface, a highly refined PC board with internal hour meter, and super long life “brushless” motors for combustion and heating.

As of 2011, over 8,000 of these 85D units have been sold and have proven to have a very robust design and a significantly longer service interval than the Model 95D. Blower and combustion fan life is many times that of the 95D.

In most cases the 85D has been sold in North America fitted with the 270 blower lid, a significant improvement over the 25 lid, with variable blower speed to match combustion power level. Both the 95 and 85 have been made available in DU (flush mounted) and DP (countertop mounted) versions. The DP models are essentially DU models mounted in an aluminum enclosure that can sit on top of a counter or table.

TIPS TO INSURE SUCCESSFUL INSTALLATION

In addition to the instructions supplied with your model 85D, please follow these easy, extra steps during your installation.

PRIOR TO INSTALLATION

1. Please assemble this short list of tools and keep them handy for installation and future repairs and maintenance:
 - (1) 12mm end wrench;
 - (1) #2 Phillips driver;
 - (1) 1/8" blade slot driver;
 - (1) small adjustable wrench or vise grip.
2. Take the time to verify that ALL electrical connections on the underside of the cook-top are secure and tight. The units are manufactured in Finland and have traveled many miles and handled many times before your purchase. Things can, and often do "get loose."
3. Make sure the two set screws holding the white "male" plug on the main power wires are tight
4. On units built prior to 2008, the small black plug from the lid blower assembly must be oriented correctly and inserted fully until it "clicks" into position in the back of the stove section. The small clip that holds the power cord securely into the receptacle is always in the DOWN position. Lids built in 2008 and later do not use this cord and plug, the lid being captive to the lower assembly (lid not removable).

AFTER INSTALLATION AND BEFORE START-UP

1. Make sure the black connect cable from the controller to the front of the cook-top under the counter on the DU model, "clicks" into position on both the controller and the cook-top.
2. Make sure the red and black power cable with the white plug is fully inserted into the white receptacle on the back side of the cook-top under the ceramic.
3. VERY IMPORTANT! The fuel line to fuel pump connection under the cook-top is critical for proper starting and running of the Wallas 85. The fuel line fitting is a well designed part and must be assembled and installed correctly. IF THERE IS EVEN A TINY AIR LEAK AT THIS CONNECTION, THE UNIT MAY NOT START OR RUN PROPERLY.
4. If assembling a new crimp on fuel fitting, make sure the tiny internal tube support is fully inserted into the clear plastic fuel line. Slide the compression nut onto the fuel line, be sure the ferrule is flush with the end of the plastic fuel line, and then CAREFULLY pre-crimp the assembly, by fastening the fitting assembly onto the fuel pump elbow. Remove the fitting and examine the crimp. If satisfied, retighten the fitting WITH TWO WRENCHES. This connection must be TIGHT.

INITIAL START-UP

The control panel is dual purpose. It controls the start-up and heat output of the cook top and it serves as a diagnostic tool. This second purpose is particularly valuable if the unit will not start. On the panel are two LED lights. The right side "yellow" light verifies the power supply, and the left side "red" light verifies that ignition is complete and the unit is starting to warm up. If either or both lights are blinking there is a problem you need to solve. This diagnostic feature is described on page 13 in the owner's manual. We recommend you copy this page, have it laminated, and keep in on the boat. Here is an additional description of the "light messages" you eventually see:

- I. Pushing the start switch to "on" will trigger an alternating red and yellow flashing, changing to a "steady" yellow in a few seconds. During this initial flashing the unit is doing a self test to insure all critical components are in working order. The steady yellow means that voltage at the unit is sufficient for the unit to start and the glow plug is "on".
- II. A flickering or flashing yellow light ONLY means voltage is NOT sufficient to start the unit. Check all the power line connections for tight crimps on the wire and tight connects to the power source. Check the power source for voltage that is AT LEAST 12.6v. Check the voltage at the white power plug.
- III. A persistent, simultaneous flashing of BOTH red and yellow lights means the units is "locked up" from more than two unsuccessful starts. This is an intentional indication, not a failure. To unlock the machine:
 - a. Leave the power switch in the "on" position.
 - b. Disconnect the main power supply in some way:
 - i. Pull the fuse or,
 - ii. Pull the plug out of the stove or,
 - iii. Disconnect the battery wire or,
 - iv. Some other way specific to your application
 - c. Reconnect power
 - d. Turn power switch off
 - e. Turn power switch back on to start stove.
- IV. A solid yellow light accompanied by a uniformly flashing red light means the unit is in "after cooling." Basically this means the unit did not start on the last try or the power was disconnected before the after cooling cycle (about 3 minutes) was completed. Turn off the switch and wait for the flashing red to stop before restarting.

If you get a solid yellow light and no flashing red, the unit is now in the start mode. At this time the lid motor and the combustion motors under the cook top will start running. You should be able to hear both of them, and feel the cool air coming from under the lid, and a steady flow of air out the exhaust. At the same time the glow plug inside the cook-top is starting to preheat. At the 35 second point after the start cycle has

begun the fuel pump will start pulsing (making a subtly "clicking" sound) and fuel will start to travel from the fuel tank towards the cook-top.

The start cycle is timed to about 5 minutes. If the fuel does not reach the inside of the combustion chamber in that time period, the red light will start flashing telling you the unit did not start. Not to worry. Turn the switch off and wait for the red light to stop flashing (about 3 minutes.) Turn the start switch on again and proceed as before. If the fuel is coming from a remote plastic "day tank" and is within a few feet of the cook-top, the unit should start on the second try and the red light will come on steady. Full heat will occur in about 12 minutes. We tell customers that you can boil a pint of cold water in 20 minutes from a cold start.

If your fuel is coming from a "main" tank and/or the fuel run is more than a few feet, it will take several and possibly many tries for the fuel to reach the cook-top. REMEMBER, the unit will "lock-up" after two unsuccessful tries to start (both light flashing on the third try.) You may want to pre-fill the fuel line as best you can if the run is longer than 5-6 feet.

TROUBLESHOOTING

It is important to understand that initial start-up of the Model 85 may be challenging for some owners because of the many variables encountered during the large variety of installations. Please be assured that once these shortcomings are overcome, your unit will give you hundreds and often thousands of hours of trouble free use. Here are a few of the simple "problems" we solve every day over the telephone:

Problem: "The unit will not start, and the operator only gets a flashing red light after a few minutes."

Solution: The most likely cause for this situation is that the unit is not getting enough fuel (if any). Please make these checks:

1. Make sure the fuel line fitting is assembled correctly and is DOUBLE WRENCH TIGHT.
2. Check ALL electrical connections. If the externally available connections are good and the system still does not function properly, remove the protection "cage" on the DU model.
 - a. Make sure that the blue and red power leads from the PC board to the back side of the white power plug are tight using a small slot driver on the two set screws. Check all connections inside the cage area and re-assemble the cage to the body of the stove.

3. Make sure that the fuel pump is ACTUALLY “clicking” starting at the 35 to 90 second point after starting. If you can’t hear the clicking, put your thumb and forefinger on the fuel line to fuel pump connection, You should feel a “pulse”, much like a human pulse at about 30 beats per minute.
 - a. If there is no pulse or click, the small piston inside the pump may be dry or stuck. The piston can most often be “unstuck” by several sharp taps to the fuel line to fuel pump connection with the end of the 12mm end wrench.
 - b. If there IS clicking, verify that fuel is actually moving along the fuel line. If not, the pump may need to be primed. Disconnect the fuel line and squirt a small amount of light oil into the bottom of the pump and retighten the line securely.
 - i. Make sure there are no vacuum leaks at the inline filter if the fuel is coming from a main tank.
 - ii. Make sure the fuel has its own dedicated fuel pickup if it is coming from a main tank, and that the fuel supply does not share a common supply with ANY other device.
 - iii. Make sure the fuel line and filter have not been pushed too far into a day tank and the filter is now above the fuel level.

Here are some more common problems and solutions:

Problem: “I have two lights flashing at start-up.”

Solution: In this case the unit is “locked up.” Perform the unlock procedure in section III. a, above. However, the reason for “lock up” is likely that the unit would not start after two tries for lack of fuel. Please review the seven checks above.

Problem: “I always have a solid yellow and red flashing at start up.”

Solution: In this case, the most likely cause is that the small black lid plug has been inserted under the cook-top incorrectly, OR that the plug on the cord has a loose wire. Look closely at the plug end for proper construction. Units built in 2008 or later do not have this feature.

Problem: "I have a flickering yellow light and the unit won't do anything."

Solution: The control panel has determined that the voltage is insufficient for starting. Check all the power wire connections all along the main power leads and inside the cage on the DU model. Test for voltage at the unit and charge your battery as necessary.

While it is not a permanent solution, you may try starting your main engine and then start the stove while the main engine runs. If the stove starts successfully, wait five minutes and then stop your engine. Wallas devices require more voltage/amperage to start than they do to run. If you continue running your Wallas, take care not to run your battery(s) so low you can't start your engine!

SUMMARY

We here at Scan Marine hope this supplement will help you with a trouble-free installation. We know that in theory the installation of Model 85 does not require any special skills or tools for installation, but we also recognize that some meaningful time spent in planning your installation, along with a good measure of patience, some care, and a few specialized tools will usually insure quick success in using this unique and most remarkable product.

Should you need any additional assistance with the installation, or have any questions about operation or maintenance of the Model 85 please feel free to contact the staff during business hours by phone at (206)285-3675 or our toll free number below.

HAPPY BOATING



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