

485 Maintenance

As with any other tool, Your Hakko 485 will require periodic maintenance. General maintenance will keep your unit running optimally and prevent any issues from occurring such as Accumulation of Dross, loss of Flow pressure and will also prevent the nuts and screws on your unit from becoming Seized.

Tools needed.

PPE (personal protective equipment appropriate for handling molten solder and hot surfaces)

Hex wrench (2mm)

Socket wrench (10mm socket)

Adjustable pliers (To grip and remove the Flow chamber)

Spatula (part number B2932) included with your unit (used to remove accumulation of Dross)

Needle nose pliers (to grip and remove washers and spacers)

**** Possibly needed ****

Lightly abrasive wire brush (To clean excess debris from the bath)

(7mm) Crescent Wrench

Flathead Screwdriver

Solder ladle (or equivalent for removing molten solder)

Disassembly Process:

Cleaning and maintenance of a 485 Solder fountain

1. While the unit is cool and the Solder is Solid, start by first loosening the three (2mm) hex screws that secure the Impeller Joint.

*** NOTE *** Take precautions when removing the screws from the impeller joint as they are very small and can be easily misplaced. If you find the screws are lost or damaged Replacement Screws (Part number # 777-002) can be purchased from American Hakko.

2. With the three hex screws removed, use your Pliers to Slide the impeller Joint upward and away from the impeller body.

***NOTE *** If you find that your impeller joint has become Seized to the impeller Follow these simple steps to remove the impeller joint

Secure the motor shaft with a pair of pliers, using your opposite hand insert a (7mm) wrench through the space between the impeller joint and the top side of the unit where the motor shaft resides. using the pliers try to slide the impeller joint upward. If you find the joint still cannot be removed, use a flat head screwdriver to apply an upward force onto the bottom of the joint and move it upwards.

1. First ensure the solder level is low enough that the two securing nuts are exposed, and the threads are clear of any excess solder that could potentially damage the nut and/or Stud. (You may need to power on the unit and Allow for the solder to become molten to remove some first if the Bolts are submerged)
2. Using your (10mm) socket wrench Gradually loosen the two nuts securing the flow chamber into the bath.

*** NOTE *** To prevent the studs for the bath from being broken, loosen the nut gradually to remove it. If the nuts are forcibly turned, the studs can be broken, and the bath must be replaced or repaired. (If you find that you have broken a Stud please contact American Hakko Products To open a Case for the evaluation and repair of your unit)

1. This is the step where we will power on the unit and wait approximately 30-40 minutes for the Solder to become Fully molten

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2. Using your Needle nose pliers, carefully remove the two spring washers and spacers from the studs.
3. With the nuts and spacers removed from the top of the Flow chamber, use your Adjustable pliers to grip the rectangular opening of the flow chamber and carefully remove it from the bath. The anti-oxidizer plate will be loose on top of the flow chamber take caution when removing the chamber.

!!!CAUTION!!! Molten Solder will reside inside of the flow chamber Take caution when removing the chamber and lift from front to back to allow any residual solder to flow out of the chamber. Remember the Anti oxidizer plate will be loose and freely seated on top of the flow chamber.

1. With the flow chamber removed, go ahead, and set your Anti – oxidizer plate aside for now.
2. With the flow chamber removed and still warm carefully grip the chamber from the rectangular opening, with the Chamber in one hand use a screwdriver inserted through the rectangular opening to tap the bottom plate of the flow chamber and separate it from the upper section.
3. Set the four separated portions of the flow chamber aside for now as we will now focus on cleaning the solder.
4. With the solder still molten take the spatula provided with your unit gently scrape the inner walls and all other submerged portions of the solder bath to remove Dross and other oxides from the inner portions.
5. If you find the need to replace the solder in the bath entirely, You must first allow for the solder to become molten then using a Solder Ladle begin to remove the molten solder and properly dispose of it.

!!! CAUTION !!! If the spatula is aggressively forced against the bath, the inner portions of the bath can become physically damaged, which in turn can shorten the life span of the bath itself. Remember to not only remove oxides from the surface of the solder but also from the

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bottom and inner walls of the bath.

1. Using a lightly abrasive wire brush. Begin scrubbing the dried solder and debris inside of the bath and remove as much of the debris as possible.
2. Repeat the cleaning process on all portions of the flow chamber, as well as the impeller.
3. With all the oxides and solder debris removed from the bath you can now start Reassembling the unit for use

485 assembly process

1. Reinstall all portions of the flow chamber that were removed during cleaning, this will consist of the impeller, Flow chamber, and the bottom plate.
2. Install the Anti oxidizer plate to the Top of the flow chamber, the square opening of the anti-oxidizer should seat at the backside of the bath where the impeller would enter the chamber.
3. Reinstall the impeller joint onto the Impeller body.
4. After reinstalling the impeller joint, using your adjustable pliers grip the flow chamber assembly and place it onto the studs inside of the bath, the rectangular opening of the flow chamber should face the front of the unit.
5. With the Flow chamber reseated in the bath, Place the two spacers that we previously removed onto the studs followed by the spring washer and finally the 10mm nut.
6. Secure the 10mm nuts onto the studs using your socket wrench.
7. Connect the impeller to the motor shaft.

*** NOTE *** When viewing the motor shaft and impeller from the side hole on the

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impeller joint, you should be able to slightly see both, The set screws should be aligned with the Flat spots on both the impeller and motor shaft

1. Using your hand, spin the impeller joint and ensure it does not contact the Flow chamber or anti-oxidation plate. **NOTE** If you find that the impeller does not rotate smoothly, check the alignment of the joint connection if the contact appears to happen vertically, If the contact is occurring horizontally please check the alignment of the anti – oxidizer plate.

Your unit is now reassembled and ready to use!

HakkoUSA Knowledge Base

<http://kb.hakkousa.com/Knowledgebase/11860/Cleaning-and-maintenance-of-a-48...>