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Model Kit Report

Iwata Professional Airbrush Maintenance Tools

The correct tools always make a job easier.



Iwata has just introduced its Professional Airbrush Maintenance Tools that will make the process of caring for and repairing airbrushes much easier and much more efficient. Most modelers will eventually invest in an airbrush, as airbrushes vastly increase the capability and flexibility for finishing models in any scale. Airbrushes provide modelers with better coverage, thinner paint coats, enhanced ability to shade and fade paint finishes, better control over the amount of paint applied, and a variety of paint effects. Novice modelers will want to create the beautiful finishes that they see in contest or magazine models, and experts often own multiple airbrushes that they use for different painting purposes.

When talking about an airbrush, investment is the word of choice, as even value-priced airbrushes can be costly and high-end precision airbrushes are usually extremely expensive. Proper care and maintenance is essential to ensure the owner can successfully use the airbrush for several years and through many, many modeling projects. The Iwata set includes an Air Valve Guide Wrench, Soft Jaw Pliers, Needle Packing Screw Drivers, a Nozzle Wrench, and a Needle Storage Tube. It comes in a zippered nylon case (which is also available separately as a storage case for airbrushes or other tools) that features elastic and Velcro loops for holding the tools securely in place.

The Needle Storage Tube is simply a rigid clear plastic tube with a soft vinyl cap on each end. While it might seem like an unimportant part of the tool set, it will probably be the most used item in the kit. The needles from airbrushes are honed to a fine, sharp point on one end

that contacts the nozzle and controls the paint flow through it. The sharp points are easily bent if the needle is dropped or allowed to roll off the workbench, which can potentially permanently damage the needle. If a bent needle is inserted into an airbrush, not only can it split the tip, rendering it useless, but it could also scratch and damage the needle packing seal, which would allow paint under pressure to flow backwards into the body of the airbrush.



Every airbrush, from the basic starter unit to the most advanced design, is a sizable investment and requires proper maintenance.

By removing one of the caps from the end of the Storage Tube, the needle can be placed inside and the tube capped again. This will prevent damage to the needle, even if the tube is dropped on the floor. It is probably the best practice to insert and remove the needle by holding the end that is not honed. A dot of paint, strip of tape, or even a bit of ink from a magic marker would easily designate the end of the tube for the sharp point, allowing quick identification of which end of the tube to open for removal of the needle each time. Although specifically designed for Iwata airbrushes, this particular tool could be useful for any brand.

The Soft Jaw Pliers are quite similar to a standard mechanic's slip-joint pliers. With the single notch in the hinge, they are adjustable from a standard to a wider opening for fitting around virtually any size nozzle cap. The pliers have comfortable soft grips on the handles to provide increased grip strength, although that is not likely to be necessary for normal use. The specialized hard Nylon jaw



inserts can grip the nozzle cap securely for safe removal without scratching or otherwise damaging the chrome finish used on most airbrushes.

Designed specifically for the line of Iwata airbrushes, the jaw surfaces have both notched and knurled sections, which would likely allow the tool to work for a number of brands in addition to Iwata.

The Iwata Nozzle Wrench is a unique tool, designed to allow the tiny paint nozzles to be removed or tightened without the risk of stripping the threads. Normally, airbrushes with the screw-in nozzle types come with a small wrench, approximately two inches long, which has a head opening specifically sized for the nozzle. A common wrench creates torque which is the applied pressure multiplied by the length of the handle. As with most wrenches, increasing the amount of pressure applied to the handle increases the torque applied to the parts. Too much torque can overpower the strength of the metal parts leading to damage to the threads of the nozzle or to the threads in the socket of the airbrush body to which the nozzle is being attached.

The Iwata Wrench is designed in a linear fashion like a screwdriver rather than the perpendicular orientation of most common wrenches. Because the leverage is decreased by the change in angles, the torque is also greatly decreased, which will limit the likelihood of overtightening and damaging the threads of the nozzle or in the body. Also available separately and included in the Iwata Airbrush Cleaning Kit, this tool is specifically sized for Iwata airbrushes and will fit most Iwata products except for the Eclipse Series airbrushes and the NEO for Iwata TRN2 side-feed trigger airbrush. It may or may not fit other brands, depending on the size of the nozzles and the way the nozzles are attached to the body.

The Needle Packing Screw Drivers are a highly specialized tool used for replacing the packing seal in the body of the airbrush. The seal holds tight around the needle, preventing paint or cleaner from flowing backwards into the body. While the seals do not fail very often, on a rare occa-

Proper maintenance is essential to the performance of an airbrush and all of the tools needed are included in the Iwata set.

tion, it might be necessary to replace them. The two screwdrivers are a unique design, with each having a shaft of 1.2 mm and 1.4 mm at the mid-point of a flat-bladed screwdriver. It looks like a shaft with two flat wings on either side.

The purpose, while fairly simple, is actually ingenious. It allows the seal and screw to be placed in alignment on the shaft and the shaft can be inserted into the body of the airbrush for installation. The screwdriver shaft then acts similar to the needle shaft, sliding into the needle passage and perfectly centering the packing seal and screw. Removing the packing seal is just as simple: running the screwdriver into the needle passage, seating the blades onto the needle packing screw, and turning counter-clockwise to loosen and remove the screw and seal together.

Sized specifically for Iwata airbrushes, it is not likely that this tool could be used with any other brands. [Author's note: *A friend asked me to replace the needle packing on his airbrush a few years ago. I had to find and purchase a slim-shafted screwdriver and then grind off the metal sides of the blade so that it would fit into the body to reach the packing screw. It was a tedious and time-consuming process of trial-and-error until I was able to fit the tool and remove the needle packing screw. This Iwata tool would have saved me hours of work.*]



The soft nose pliers can grasp almost any size nozzle cap securely and can safely remove the cap without any damage.

Also included in the kit is an Air Valve Guide Wrench. While it is not common to replace an air valve or its parts during regular use or maintenance, over time the spring can become weakened or the seal contaminated, both of which will affect the air pressure. The pressure could weaken which would decrease the flow of paint, it could pulsate causing a corresponding pulsation in the

paint flow, or it could become erratic by dropping off unexpectedly and coming back suddenly. There is never an opportune time for air pressure problems, but these issues usually begin gradually and can be corrected before a crucial painting session or a full load of paint in the airbrush cup. The air valve is held in place by a brass screw guide, which

has two small slots for removal and installation.

While the guide could be removed with very small needle-nose pliers, it is always so much easier to use the proper tool for the job. The Iwata Air Valve Guide Wrench is designed specifically for this purpose, and it has the added bonus of being double-ended with sizes appropriate to fit all Iwata airbrushes.

Another potential advantage for experienced users is that the wrench could also adjust the spring tension of the trigger, allowing the user to reduce the trigger pressure which would make long painting sessions easier with less hand fatigue.

Although a couple of the tools, such as the Needle Storage Tube and Soft Jaw Pliers, could possibly be used for a number of brands in addition to Iwata, most of the tools in this set are designed only for use on Iwata airbrushes. Those scale modelers, dioramists, and various other hobbyists who use Iwata products regularly will definitely want to consider this tool set. In addition to reducing the chance of damage by makeshift tools, the set would save time and effort in the overall maintenance their airbrushes.

The Iwata HP-C Plus airbrush is well known among professionals as a workhorse. It is an outstanding quality double-action airbrush, from Iwata's High Performance Series, that features a cutaway handle and a pre-set adjustment knob for the needle travel. Each airbrush is hand tested to ensure overall quality, control and atomization.

Internally, the PTFE needle packing is resistant to solvents, making it an excellent choice for enamels and lacquers even though it works just as well with acrylic paints. The auxiliary lever/needle chucking guide is also one piece, for ease of assembly and smooth-as-silk trigger action. The trigger spring tension is also adjustable. The .3mm paint nozzle features larger threads, so that it is more easily inserted and tightened for a secure fit, allowing for perfect centering of the needle into the tip. The nozzle is made of steel rather than brass, which increases the durability and dependability. The needle is finely ground and polished for the best possible paint atomization.

The body of the airbrush holds a top-mounted 9ml paint cup, which is tapered and polished so that paint feeds smoothly and cleanup is easy. At the rear, the handle features a cutaway section, which allows the user to manually pull the needle back to quickly clear the airbrush tip of paint if the need arises. The pre-set handle adjusts the needle trav-



The nozzle wrench allows the tiny paint nozzles to be removed without the risk of stripping the threads.

el quickly and easily. Tightened to restrict the movement, this allows the finest lines possible (hairline width) to be painted at the tip. Opened, the needle moves in the full range allowing controlled spraying with the broadest coverage up to approximately one inch in diameter. Line widths can be repeated consistently by setting the adjustment and then pulling the trigger to the stop while spraying each line. While the specifications would indicate the airbrush to be extremely well suited to smaller scale projects and detail painting, it can still be used to paint larger models in stages.

For testing, with an air pressure of 10psi or less, fine lines are sprayed easily with the tip held close to the surface being painted, and the line width can be controlled by either a light trigger pull or with the pre-set adjustment. After the air pressure was increased to 15psi, the airbrush tip was held approximately one inch from the surface, and some medium width lines were sprayed. The atomization was excellent, with little to no overspray and soft, smooth edges. Held 2-3 inches from the surface, the airbrush smoothly sprayed its one inch diameter maximum. Used to spray paint on some smaller parts that were taped to a strip of cardboard, the airbrush worked flawlessly and complete coverage was as easy as expected. Turning down the pressure, some panel lines were pre-shaded on a model aircraft wing. The pre-set was adjusted to specific point, the tip was held close to the surface, and the line width varied only in the distance of the tip from the surface. Again, the trigger



The Needle Packing screwdriver is a highly specialized tool used to replace the packing seal in the airbrush body.

action was smooth and control was easy. Cleaning was done with no difficulty. After filling the color cup with paint thinner and spraying it through the Iwata Cleaning Station a couple of times, the color cup was wiped clean and the airbrush disassembled. The handle was removed and the needle pulled out and wiped down with a paper towel dampened with paint thinner (Iwata Studio Wipes are an excellent choice for this task). The nozzle cap was removed, and the nozzle unscrewed and then soaked in cleaner while the paint passages were cleaned. Once all the parts were thoroughly cleaned, the airbrush was reassembled and ready to go.

The Iwata HP-C Plus is an impressive airbrush, and could fulfill the needs of most scale modelers. While novices and expert modelers would both be able to produce outstanding results, those with some experience will be able to utilize the capabilities of the airbrush to its fullest extent. **HM**