TOP TEN AIRBRUSH TROUBLESHOOTING TIPS

Prepared and provided courtesy of BADGER AIR-BRUSH CO.

1) Bubbling in color reservoir (color cup or jar). When this occurs it is the result of air entering into the paint channel. This concern can have several causes; the most common are a bad seal somewhere in the nozzle, tip dry, incorrect spray regulator/air cap alignment, or a split paint tip.

-If a bad nozzle seal is the cause, in the case of a threaded paint tip nozzle, make certain the paint tip thread is properly sealed with beeswax or other sufficient sealing agent. In the case of a drop in paint tip nozzle, make certain the paint tip is properly seated in the angled recess of the airbrush body, and that all surfaces between the two components are cleared of any debris and are not marred or scratched. Lastly, in the case of airbrushes that require a "head" seal between the nozzle assembly and the airbrush body, be certain the head seal is in place and is in proper condition to create the necessary seal at this point of air flow.

-If tip dry is the cause, remove the dried paint from the needle/nozzle tip by either picking it off with your finger tips/nails or spraying cleaner through the airbrush. If tip dry occurs frequently in your application it may be helpful to keep a paint brush and small container of water nearby to wet the nozzle and get your airbrush spraying properly again when necessary. Tip dry will usually occur more frequently in detail airbrushing applications.

-If you think the bubbling may be occurring due to incorrect spray regulator/air cap alignment tighten or loosen your spray regulator/air cap in ¼ turn or lesser increments to determine if that is the certain cause of the problem. If it is, your airbrush will stop bubbling and resume spraying once you hit the spray regulator/air cap's "sweet spot".

-If a split paint tip is the cause of the bubbling, the only corrective measure is to replace the paint tip.

2) Off-center spray. This is caused by a bent needle tip. As media exits the airbrush it "rolls" off of the needle. If the needle is bent it will cause the spray to "lean" to one side or the other. To correct this problem carefully attempt to straighten the needle tip. A grooved sharpening stone is an effective device for trying to straighten airbrush needle tips. If you are unable to straighten the needle tip, a replacement needle will need to be installed to correct the off-center spray concern.

3) Spray will not shut off and/or occurs without sliding the trigger back. This concern can have several causes; the most common are improper seating of the needle in the paint tip, a "flared" pain tip, or partial tip dry.

-If the needle is not seated properly in the paint tip, it is necessary to re-seat it. To do so access and loosen the needle chuck, slide the needle forward until it stops and seats in the paint tip, and re-tighten the needle chuck. DO NOT USE FORCE when seating the needle in the paint tip, when it stops it should be seated properly.

-If the spray will not shut off due to a flared tip, it is necessary to replace the paint tip.

-If the spray will not shut off because of partial tip dry/clogging remove the dried paint from the needle/nozzle tip by either picking it off with your finger tips/nails or spraying cleaner through the airbrush.

4) Spray pattern pulsation. This concern can have several causes; the most common are a bad seal (usually one that cannot be trained to properly play well with other seals, LOL, just kidding – we do have a sense of humor though), inconsistent media viscosity (usually paint being too thick), or an inadequate or improperly performing air compressor.

-A bad seal can occur anywhere air could potentially leak from while traveling from the air source through the airbrush. Although some low levels of air leakage are common, and may not adversely affect an airbrush's spray performance, if you are experiencing a pulsation in your airbrush's spray pattern, you should check all threaded parts and seals to ensure there is no excessive air leakage at any of these points. Airbrushes that require a "head" seal between the nozzle assembly and the airbrush body may leak air, causing a pulsating spray, if the head seal is not properly in place. If this occurs it is advisable to reposition or replace the "head" seal. Additionally, many airbrushes have inner seals (inside of the airbrush body) that the needle passes through. These seals are designed to make sure paint is properly directed to the airbrush nozzle and does not flow to the rear of the airbrush. If the airbrush's inner seal is broken, it can also cause a pulsating spray. To fix a bad inner seal it is necessary to replace it. In many instances this seal replacement is best done at the factory by the airbrush's manufacturer. (This is a lifetime warranted part on Badger airbrushes). Lastly, although not likely to cause a pulsating spray, the hose connections at the airbrush and the air source should be properly sealed. This can usually be done effectively with the wrapping of Teflon "plumber's" tape around the male threaded part.

-If spray pulsation is caused by an inconsistent paint viscosity, the paint should be adjusted to proper spraying viscosity. It is also important to make sure that paint is properly blended so that pigment is evenly distributed through the paint to ensure spray consistency. The rule of thumb for preparing paints (or other materials) for airbrushing is to reduce them to the approximate visual viscosity of 2% milk. As starting paint viscosities often vary from color to color, even within a specific paint brand, it is best to avoid fixed thinning ratios. It is also best to vigorously mix/stir paint, rather than shaking it, before use. Mixing/stirring paint better blends pigment and base creating a more consistent paint from the top to the bottom of the bottle. Mixing/stirring paint also causes pigment to re-settle slower.

-If paint pulsation is caused by an inadequate or improperly performing air compressor, it may be necessary to have the compressor repaired or replaced. Over time air compressors can incur diminished performance that can adversely affect their performance efficiency. This is especially noticeable with small "tankless" diaphragm compressors that can present pulsation of the diaphragm action in an airbrushes spray pattern if the compressor operates inefficiently.

5) Grainy spray. This is caused by paint (or other media) not being properly reduced, meaning it is too thick to atomize properly, or not operating the airbrush at a high enough pressure.

Paint (or other media) should be the viscosity equivalent of 2% milk to spray properly through an airbrush. Sparingly add the appropriate thinner to the paint (or other media) until it is the proper sprayable viscosity. Also check the needle tip and nozzle tip to make sure no tip dry has formed on the nozzle.

A bottom feed airbrush should have at least 16 PSI (higher for heavier media) while spraying to operate properly. A gravity feed airbrush can be operated at spray pressures as low as 8 PSI. Check the pressure you are spraying at to be sure it is high enough for the type of airbrush you are using, and the type of media you are spraying.

6) Buckling surface. This is caused if paint (or other media) is too thin or "runny" or applied too heavily on a thin porous substrate (usually a rag type paper). If working close to the surface take care not slide the airbrush trigger back too far releasing more paint than desired and over saturating the surface you're spraying. You should only work close to the surface when wanting to do fine lines,

and only sliding the trigger back a little bit. If working with an extremely thin media apply it in fine coats, letting one coat dry before applying another. This will prevent over saturating your surface and give you greater control in developing your artwork to your desired end.

7) Paint blobs at the ends of the stroke or barbell patterns. This is caused by sliding the trigger back before beginning your hand movement and stopping your hand movement before and not sliding your trigger forward to shut off paint flow before stopping your hand movement. This can only be remedied by being aware of your triggering and practicing proper triggering techniques. Practice, practice, practice. Creating a grid of dots (on a blank sheet) with your airbrush – then going back and connecting the dots, drawing figure eights, and/or simply writing your name with the airbrush all airbrushing exercises. Using your airbrush to color in coloring books is also a very helpful, skill developing, method of airbrush practice. Practice, practice, practice.

8) Flared ends or curved stroke. This is caused by turning the wrist at the end of the airbrush stroke or arcing closer to the surface during the airbrush stroke. Unless these spray pattern effects are desired, it is important to maintain consistent parallel distance from the surface you are spraying through your entire airbrush stroke. This again is best corrected by practicing and developing your skill level and a comfort with how the airbrush works. Creating a grid of dots (on a blank sheet) with your airbrush – then going back and connecting the dots, drawing figure eights, and/or simply writing your name with the airbrush are all good airbrushing practice exercises. Coloring in a coloring book with your airbrush is also a helpful, skill developing, method of airbrush practice. To practice airbrush technique on three dimensional objects, paint items such as scratch plastic/metal, pop cans, empty plastic bottles, or other contoured items that are of little or no value.

9) Centipede or spidering spray patterns. This is caused if paint (or other media) is too thin or "runny" or applied too heavily on a non-porous substrate (metals, plastics, etc.). If working close to the surface take care not slide the airbrush trigger back too far - releasing more paint than desired. On hard surfaces excess paint cannot be absorbed and will scatter over the surface in a centipede or spidering pattern. When wanting to do fine lines and working close to the surface you should only slide the trigger back a little bit to release a small amount of media. If working with an extremely thin media apply it in fine coats and let one coat dry before applying another to avoid a "scattering" effect when air (and additional paint) passes back through still wet paint. The probability of this undesired effect is increased if spraying your airbrush at too high of an air pressure, so check to make sure your air pressure is properly set for the type of airbrush you are using, the media you are spraying, and the type of surface you are finishing.

10) Dot blotching or splattering at the start of end of spraying. This is caused by an incorrect triggering technique of stopping air flow (releasing downward trigger pressure) before turning off paint flow (sliding trigger/needle forward to close off paint tip). By turning air flow off before paint flow, paint goes around the needle and "floods" the nozzle. The result of this "flooding" is either one of two things. 1. As the needle returns forward upon releasing the trigger, it pushes the paint that has flooded the paint tip out in a burst or splatter of blotched dots. 2. If possibility 1 does not occur the "flooded" paint remains in the nozzle and is blown out in a burst or splatter of blotched dots when the trigger is depressed to resume airbrushing. This is another technique issue that can be prevented by learning and developing proper triggering technique. Remember to carefully slide the trigger back forward to stop paint flow, don't let it "snap" back.

The only thing that you cannot be taught is practice. The more you practice your airbrushing the greater your airbrush skills will become and the more your airbrushing confidence and enjoyment will increase. (See tip #8 above for a few recommended triggering practice techniques)