GREX™

THE EVOLUTION OF PERFECTION

The new Genesis series of airbrushes from Grex. Premium equipment for creative professionals & hobbyist.

OWNER'S MANUAL

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GENESIS
Series

Congratulations on your purchase of Grex Genesis airbrush; a multi-purpose, reliable and high performance airbrush designed for the demanding professional. Precision machining and carefully selected materials are employed in the manufacturing process of each Grex airbrush to insure consistent high performance and adherence to Grex's high quality standards. To maintain your Genesis at its peak performance, proper care and attention must be observed.

GENERAL OPERATION

Compressors and Air Pressures

Choosing an appropriate air compressor that can supply sufficient pressure for your Genesis airbrush insures optimal operation and performance. Working pressures vary from 30 to 60 psi, depending on the type of work being done and what textures are desired. In general, 45 psi or above is needed to take full advantage of the versatile spray characteristics of the airbrush. Viscosity of the paint also effects which pressures are ideal. In general, larger volumes and/or thicker paints require higher pressures.

Assembling Airbrush for Use

Attach an air hose to the compressor and airbrush. Adjust the air pressure according to type of paint used and desired spray characteristics. Check for any air leaks from the compressor and air hose.

XB, XD, XG, XN, XS - Fill the bottle or color cup with some airbrush cleaner. Pointing the airbrush away from you, press down on the trigger to allow air flow through the airbrush. Pull back on the trigger to open the nozzle of the airbrush allowing cleaner to spray out.

XA - Fill the color cup with some airbrush cleaner. Turn the paint flow adjustment knob on the rear of the airbrush counter-clockwise to open the nozzle. Pointing the airbrush away from you, press down on the trigger to allow cleaner to spray out.

XT - Fill the color cup with some airbrush cleaner. Pointing the airbrush away from you, pull back on the trigger to allow cleaner to spray out.

Caution: The fluid nozzle and needle are very delicate parts. Even the slightest physical damage can adversely affect the spray pattern.

Paint Preparation

Proper preparation and filtering of paint through a nylon mesh is recommended for best performance. Paint should always be thinned with its proper solvent. It is best to prepare the paint relatively thin and make repeated passes across the work to achieve the desired shade. This will also improve the quality of your work and decrease the cleaning time of your airbrush.

Line Width Adjustments

XB, XD, XG, XN, XS, XT - Line widths produced by the airbrush are controlled by adjusting the distance the airbrush is held from the work surface and adjusting the amount of paint flow by positioning of the trigger. As the trigger is pulled further back, the nozzle opens more, releasing more paint and allowing larger spray widths. To help produce constant line widths, your Genesis airbrush is designed with a Width Adjustment Knob on the rear of the handle, which controls how far the trigger can be pulled back. Turning the knob clockwise helps produce finer lines, while turning the knob counter clockwise helps produce wider lines.

XA – The trigger in this model only controls air flow. So aside from adjusting the distance between the airbrush and work surface, line widths are controlled by adjusting the Width Adjustment Knob on the rear of the airbrush.

Fine Line Spraying

XB, XD, XG, XN, XS, XT - To spray a fine line, depress and pull the trigger back slightly while positioning the airbrush close to the work surface.

XA – Fully turn the Width Adjustment Know clockwise to close off paint flow. Then turn the knob clockwise slightly to provide a small opening for fine line widths and depress the trigger.

An extremely fine line can be obtained by carefully removing the needle cap and positioning the airbrush closer to the surface.

Wide Line & Background Spraying

XB, XD, XG, XN, XS, XT - For wider lines and background spraying, depress and pull the trigger further back to release more paint.

XA – Fully turn the Width Adjustment Know counter-clockwise to release maximum paint flow and depress the trigger.

Increasing the air pressure and the distance of the airbrush from the surface further increases spray widths.

Stippling

Stippling is achieved by removing the needle and nozzle cap assembly and adjusting the air pressure between 5 and 50 psi. Lower air pressure will produce courser stipples whereas higher air pressures will provide finer stipple effects. Note that paint viscosity will also affect the stippling texture.

MAINTENANCE

Your Genesis airbrush is a durable precision instrument and as with any precision instrument it is susceptible to damage if handled improperly. It is essential to take care to prevent damaging the components of this highly sensitive tool in order to assure its peak performance during its lifetime. Proper maintenance of the Genesis airbrush demands appropriate cleaning and requires correctly replacing and adjusting the parts. Daily and thorough maintenance of your airbrush will result in spraying that is smooth, consistent and hassle-free.

Cleaning the Airbrush

It is only necessary to clean areas of the airbrush which come in contact with paint namely, the paint reservoir, around the tip of the needle and the head cap assembly. These areas must be kept clean for optimum performance of the airbrush.

Before each use

At the beginning of every session, spray water or appropriate paint solvent through the airbrush to make sure the airbrush is working properly.

Cleaning airbrush between color changes

For the bottle-fed airbrush (XB), changing colors can be accomplished quickly by replacing the color bottle with a bottle containing the appropriate cleaning solution. Spray the cleaner at a heavy spray setting into a paper towel or similar material until the airbrush is flushed free of color. Replace the color bottle and spray with the next color. Repeat the cleaning procedure when finished.

For airbrushes with color cups (XB, XD, XG, XN, XS, XT), empty out remaining paint in the color cup and spray out any excess paint. Wipe off as much residual paint as possible with a paper towel. Partially fill the paint reservoir with appropriate cleaning solution and use a bristle paintbrush to breakdown paint in the reservoir. Spray the cleaner at a heavy spray setting into a paper towel or similar material. Repeat rinse and spray until airbrush is flushed free of color.

Periodic Cleaning

The cleaning procedures described above are recommended before intermittent breaks during your work session to prevent paint from drying inside the airbrush's internal parts. Always empty paint out if the airbrush is not used for relatively long periods of time and spray appropriate cleaning solution until the airbrush is flushed free of color. Blockages caused by dried paint are the biggest problem when using an airbrush. Any time the airbrush becomes clogged, increase the air pressure and spray appropriate cleaning solution through the airbrush for a short period of time.

After each use

At the end of every session, follow the same cleaning procedures as those described for cleaning between color changes. Then remove and clean only those parts which come into contact with paint. Carefully wipe clean the needle, nozzle and needle cap assembly with the appropriate cleaning solution. It is not necessary to dismantle the entire airbrush. Before replacing the needle, apply a light coat of lubrication to the needle to facilitate smooth triggering. After the airbrush parts have been removed and cleaned, they must then be carefully replaced and adjusted in their designated positions. Failure to align each part correctly will prevent the airbrush from functioning properly. In many instances, when an airbrush fails to perform correctly, these problems result from improper cleaning and/or alignment of parts.

Caution: Never soak entire airbrush in any solvent and/or cleaning solution to avoid damaging of o-rings and airbrush packaging.

Lubrication of Airbrush

Caution: Do not use light machine oil or W-40 for lubrication. Doing so will cause the needle to stick as it moves through the needle packing.

To insure smooth operation, lubricate the needle and trigger mechanism regularly. Periodically remove the fluid needle and coat with high quality lubricant. Then wipe the needle with a soft clean cloth, leaving a light coat of lubricant. Several drops of lube should also be placed in to the trigger slot of the airbrush body to lube the trigger mechanism and air valve.

Caution: Do not over-lube the needle or the main lever mechanism. Doing so may transfer excess lube into the nozzle causing severe paint flow problems.

Replacement Parts

Caution: If it is necessary to disassemble the airbrush DO NOT use pliers. In most cases, no tools are required to disassemble the airbrush except those provided in the kit.

Even though Grex airbrushes are manufactured with precision machining and high quality materials, several delicate parts require replacement due to normal wear and tear. These include the fluid nozzle, fluid needle and o-rings.

Fluid Nozzle –Before replacing the fluid nozzle, be sure that the needle is slightly pulled back in the airbrush. To do this, remove the handle, loosen the needle lock nut and carefully pull the needle back. In the case of the Genesis.XA, simply turn the width adjust knob counter-clockwise. Remove the needle cap and nozzle cap then carefully unscrew the nozzle using the wrench supplied with your kit. Replace with a new nozzle and reassemble the airbrush. Do not over tighten any parts of the airbrush.

Note: It is recommended to change the fluid needle at the same time to insure even wear.

Fluid Needle – Grex needles are made of precision ground and hardened stainless steel and will withstand prolonged use. However, because of their fine tip and long taper, they are easily subject to physical damage. This is a highly delicate part and any small deformations to the needle tip will compromise the performance of the airbrush. If the tip is severely bent, it must be straightened before being removed to prevent damage to the fluid nozzle.

TROUBLESHOOTING

Symptom - **Skipping**

Possible Causes

- Dirty Airbrush
- Paint too thick
- Air pressure to high
- Improper nozzle and housing connection
- Crack or damaged nozzle
- Dried paint on tip of needle

Symptom - **No or Restricted Spray**

Possible Causes

- Clogged nozzle
- Loose needle lock nut
- Improper air pressure
- Paint too tick
- Cracked or damaged nozzle
- Vent hole in bottle lid is plugged

Symptom - **Double Line**

Possible Causes

- Dirty Airbrush
- Bent needle
- Debris on tip of nozzle or in nozzle cap
- Dried paint on tip of needle

Symptom - **Spattering**

Possible Causes

- Dirty airbrush
- Paint buildup in needle cap
- Paint too thick
- Air pressure too low
- Dried paint on tip of needle

Symptom - **Bubbling in Paint Resevoir**

Possible Causes

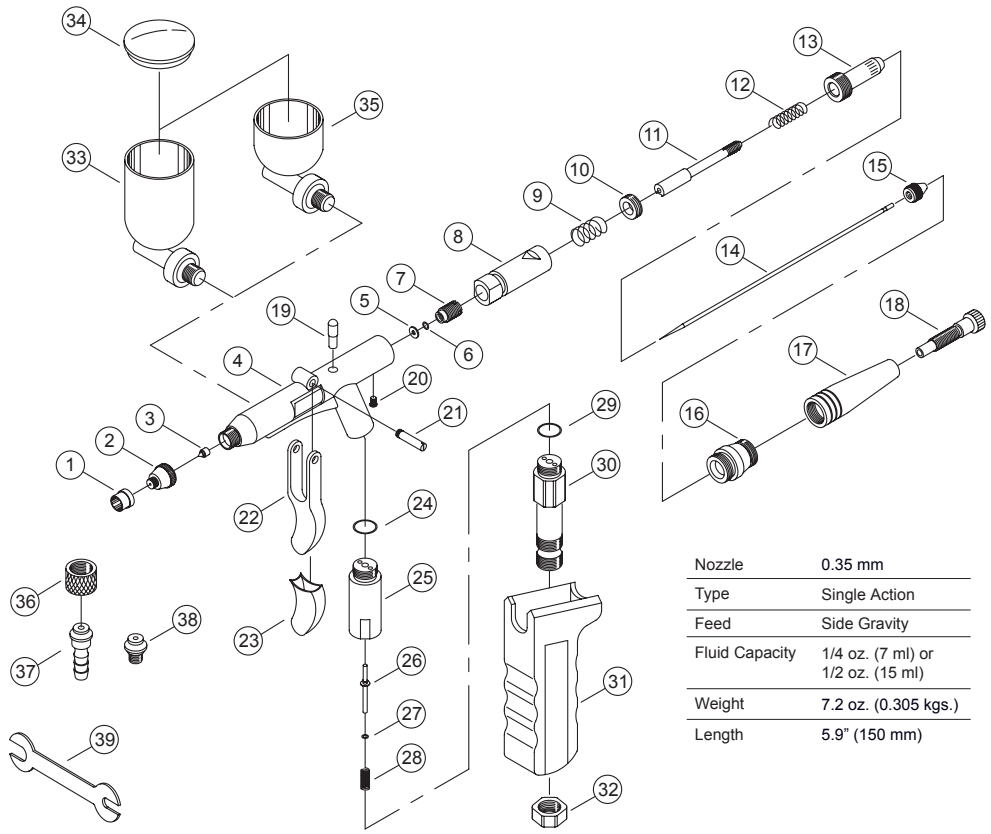
- Improper nozzle and body seal
- Cracked or damaged nozzle

Symptom - **Restricted Trigger Movement**

Possible Causes

- Lubricate area around air valve piston or trigger chamber

Genesis.XT Exploded Diagram & Parts List

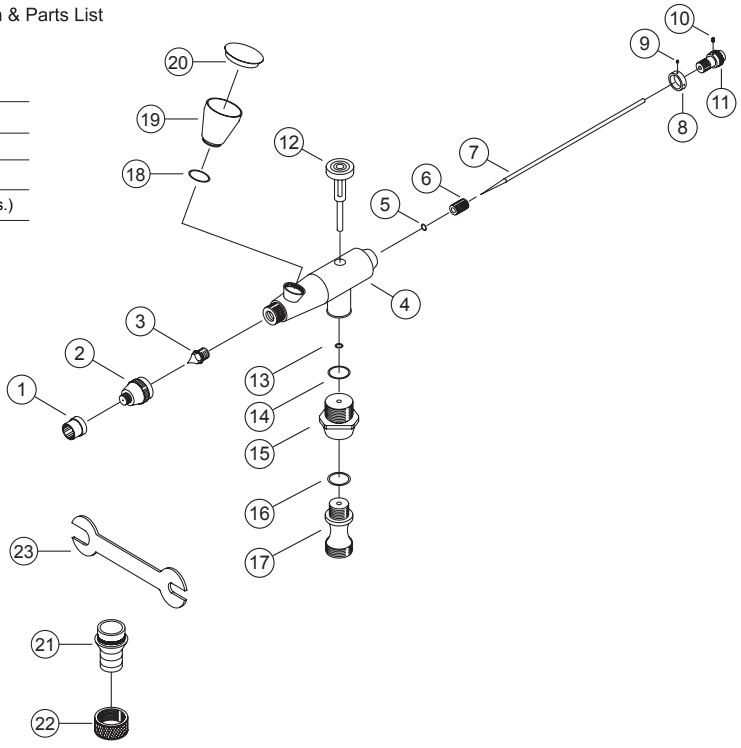


Nozzle	0.35 mm
Type	Single Action
Feed	Side Gravity
Fluid Capacity	1/4 oz. (7 ml) or 1/2 oz. (15 ml)
Weight	7.2 oz. (0.305 kgs.)
Length	5.9” (150 mm)

No.	Part No.	Part Description
1	A031035	Needle cap
2	A041035	Nozzle cap
3	A051035	Fluid nozzle
4	A010004	Body
5	A120004	Packing seal
6	A060002	O-ring
7	A130003	Packing screw
8	A150013	Slider
9	A110004	Slider spring
10	A130007	Guide Screw
11	A071035	Needle chuck
12	A110003	Needle chuck spring
13	A111004	Spring housing
14	A021035	Fluid needle
15	A150001	Needle lock
16	A150014	Slider spring casing
17	A080004	Rear cap
18	A150002	Material adjusment knob
19	A150015	Slider shift pin
20	A130012	Screw
21	A130013	Screw
22	A150016	Trigger
23	A150017	Trigger grip
24	A060003	O-ring
25	A150018	Air valve
26	A150019	Air valve pin
27	A060004	O-ring
28	A110005	Spring
29	A060005	O-ring
30	A150020	Air connection
31	A150021	Grip
32	A150022	Nut
33	A090003	Side color cup (medium)
34	A100003	Color cup lid
35	A090002	Side color cup (small)
36	A150012	Nut
37	A150011	Threaded insert
38	A150023	Threaded insert
39	A150010	Nozzle wrench

Genesis.XA Exploded Diagram & Parts List

Nozzle	0.3 mm
Type	Single Action
Feed	Top Gravity
Fluid Capacity	1/4 oz. (7 ml)
Weight	4.6 oz. (0.135 kgs.)
Length	2.3” (85 mm)



No.	Part No.	Part Description
1.	A033030	Needle cap
2.	A043030	Nozzle cap
3.	A053030	Fluid Nozzle
4.	A010008	Body
5.	A120005	Packing seal
6.	A130004	Packing screw
7.	A023030	Fluid Needle
8.	A150024	Fluid regulator ring
9.	A130008	Set screw
10.	A130009	Set screw
11.	A130014	Fluid regulator screw
12.	A150025	Trigger button
13.	A060006	O-ring
14.	A060007	O-ring
15.	A150026	Air valve connector
16.	A060001	O-ring
17.	A150009	Air valve set
18.	A060008	O-ring
19.	A090004	Color cup
20.	A100004	Color cup lid
21.	A150011	Threaded insert
22.	A150012	Nut
23.	A150010	Nozzle wrench

WARRANTY

All Grex airbrushes are warranted against manufacturing defects of material and manufacture or workmanship for a period of ONE year from the original date of purchase. This warranty does not cover fluid needles, fluid nozzles and o-rings since these parts need to be replaced occasionally due to normal wear. Any parts of the product covered under this warranty will be repaired or replaced at our option, which after examination proves to be defective in workmanship or material during the warranty period.

This warranty does not apply to repair or replacement parts required due to misuse, abuse, normal wear and tear or repairs and alterations attempted. In no event shall Grex be liable for any indirect, incidental, or consequential damage from the sales or use of this product. This disclaimer applies both during and after the term of this warranty.

This is the only warranty and our company makes no warranties express or implied, including merchantability and fitness for a practical purpose, after the two year term of this warranty.

This limited warranty gives you specific rights and you may also have other rights, which vary from state to state.

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