

# CLARKE®

## *air*



## AIRBRUSH KIT

MODEL NO: CAB3B

PART NO: 3110320

## OPERATION & MAINTENANCE INSTRUCTIONS

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ORIGINAL INSTRUCTIONS

GC0720 - ISS 3

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## INTRODUCTION

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Thank you for purchasing this CLARKE Airbrush kit.

Before attempting to use this product, please read this manual thoroughly and follow the instructions carefully. In doing so you will ensure the safety of yourself and that of others around you, and you can look forward to your purchase giving you long and satisfactory service.

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## GUARANTEE

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This product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt which will be required as proof of purchase.

This guarantee is invalid if the product is found to have been abused or tampered with in any way, or not used for the purpose for which it was intended.

Faulty goods should be returned to their place of purchase, no product can be returned to us without prior permission.

This guarantee does not effect your statutory rights.

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## SPECIFICATION

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|                                |                                  |
|--------------------------------|----------------------------------|
| Paint jar capacity             | 22 cc                            |
| Metal paint cup capacity       | 5 cc                             |
| Connecting hose                | 4 mm dia x 1550 mm length        |
| Airline connector size         | 1/4" bsp                         |
| Minimum airline hose size      | 3/8" (10mm)                      |
| Recommended operating pressure | 29 psi/2bar (min15psi/max 50psi) |
| Average air consumption        | 0.2 cfm                          |

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## **GENERAL SAFETY RULES**

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Before using this equipment it is in your own interest to read and pay attention to the following safety rules.

### **COMPRESSED AIR EQUIPMENT**

1. Compressed air can be dangerous. Ensure that you are familiar with all precautions relating to the use of compressors and compressed air.
2. Never direct a jet of compressed air at people or animals.
3. Always ensure that the equipment being used has a safe working pressure exceeding the output pressure of the compressor that it is connected to.
4. Always ensure that the air supply is turned off and vent all compressed air from the hose and equipment attached to it before disconnecting air hoses or other equipment from your compressor.
5. Never exceed the operating pressure of 50 psi.

### **PAINT SPRAYING EQUIPMENT**

We strongly recommend that paint spraying equipment be used in conjunction with appropriate eye and face protecting goggles, glasses or spray masks available from most DIY and hardware stores.

1. Always keep the equipment perfectly clean. This will not only prolong its life but will also ensure you get the best results. See Maintenance.
2. Always ensure there is adequate ventilation. Do not spray or handle paint in enclosed areas.
3. Never spray close to any source of heat or flame.
4. Always wear a suitable approved breathing mask when spraying, to protect against inhalation of paint spray or fumes. An air feed mask may be required when spraying some toxic types of paint. If in doubt, check with the paint manufacturer.
5. Always check the manufacturer's data sheets for the paint products being sprayed for any particular hazards and follow the manufacturer's instructions. Take particular care if spraying isocyanate paints. Paint products may be covered by COSHH Regulations.
6. Always disconnect the airbrush from the air supply when it is not in use and before any disassembly.
7. Never spray paint towards people or animals.
8. Never smoke while spraying or preparing paints, or spray near a naked flame or electrical sparks. Solvent based paints are flammable.

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## **AIR SUPPLY**

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For best results, the air supply to the airbrush must be clean and dry, with no oil or water contamination. Follow the air compressor manufacturer's guidelines on installation and operation to ensure that your air supply is as clean as possible.

The compressed air supply line to the airbrush must be fitted with a filter capable of removing any oil or water together with a suitable pressure regulator.

Higher pressure and contaminated air will shorten the airbrush life due to faster wear and could become a safety hazard.

Water in the air line will also cause damage and may contaminate the paint being used. Therefore ensure the air supply is properly filtered.

Line pressure, or supply hose inside diameter, should be increased to compensate for unusually long air hoses (over 10 m). Minimum hose diameter should be 10mm (3/8") ID and fittings should have the same inside dimensions.

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## **AIRBRUSH ASSEMBLY**

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Connect one end of the mini air hose (supplied) to the airbrush. If using a compressor, connect the airline hose to the airbrush mini hose, using the hose adapter (supplied). Set the air pressure at the compressor to approx. 2 bar.

Alternatively, for smaller jobs, your airbrush can be used with CLARKE airbrush propellant cans by screwing the air hose connector onto the air can.

Your airbrush is now ready for use.

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## **PREPARATION BEFORE PAINTING**

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Mix the paint to the correct viscosity for spraying according to the manufacturer's instructions, make sure that you have enough thinners left to clean the spray gun after use.

Do not fill the paint container more than 3/4 full. Make sure that the threaded joint between the container and the airbrush are clean and before screwing on the container. Always clean around the container sealing lip and keep any container vent clear.

Remember that some modern paints require specialist respiratory protection...always consult the paint manufacturers instructions.



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**WARNING: NEVER SPRAY PAINT UNLESS YOU ARE WEARING SUITABLE, APPROVED RESPIRATORY AND EYE PROTECTION.**

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Ensure that the area in which you will be spraying is clean and dust free. To obtain best results, it is vital that the surface to be sprayed is well prepared. It must be clean and dry, and free from dust, dirt oil or grease. Mask areas not to be sprayed and cover adjacent equipment to protect from overspray.

Check the paint manufacturer's instructions for any special surface preparation required.

REMEMBER - TIME SPENT PREPARING SAVES TIME SPENT FINISHING.

## **PAINT THINNING**

Paint thinning is particularly important when spraying. Many paints are supplied ready for brush application and need to be sufficiently diluted for spraying purposes. Always follow the paint manufacturers instructions. If in doubt, always consult the paint manufacturer.

The following information can be used as a rough guide.

- Water based paints (emulsions) 10-20% water.
- Oil based paints (gloss) up to 10% thinners.
- Cellulose paints up to 50% cellulose thinners.

If in any doubt, contact the paint manufacturer.

- **DO NOT OVERFILL PAINT CONTAINER** - never more than three quarters full.

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## OPERATION

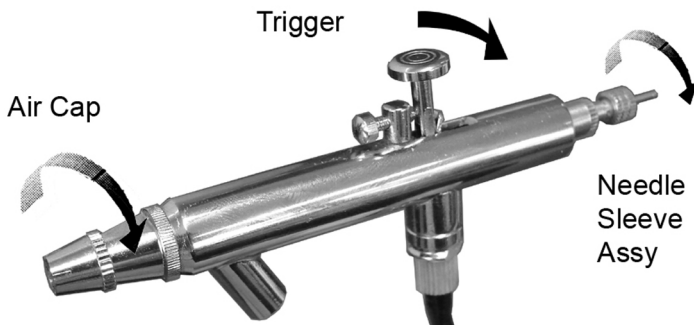
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After mixing and thinning the paint, fill the paint jar no more than about 2/3 full. Attach the jar to the airbrush, turn the compressed air on, and depress the trigger. Test on an old newspaper or similar and make any necessary spray adjustments before spraying the workpiece.

### ADJUSTING THE PAINT FLOW

Paint flow and spray pattern are adjusted by turning the air cap at the tip of the airbrush. Paint flow is also affected by the amount the trigger is pulled back.

The air cap is fully closed when it has been turned fully clockwise. Using the



thumb and forefinger, turn the air cap anti-clockwise to obtain various degrees of paint flow.

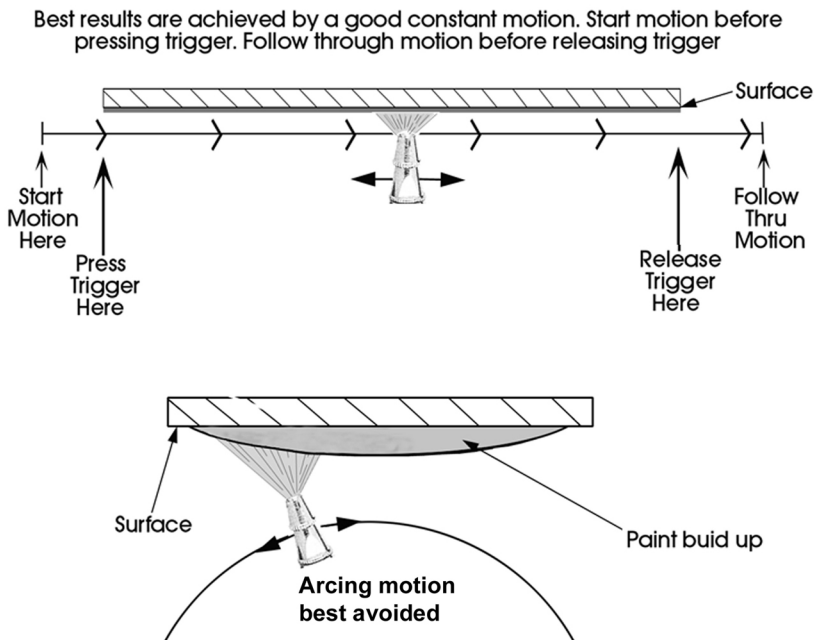
Also check the adjustment of the needle sleeve which can also effect paint flow when screwed in and out. Maximum flow will be attained by turning the needle sleeve assembly approximately two full turns anti-clockwise.

Pull back on the trigger to obtain more paint and a wider coverage.

### PAINTING PROCEDURES

1. Prepare the workpiece, masking off any areas not to be painted, (ensuring the workpiece is clean and free of dust, grease etc).
2. Hold the nozzle of the airbrush about 6" from the surface being sprayed. Use short strokes, moving steadily and parallel to the surface.
3. Spray several light coats, allowing each coat to dry before adding the next until the desired coverage is achieved.

4. Always test on a practice piece first to ensure the airbrush is working correctly.



## SPRAYING TECHNIQUES

Practice spraying on a piece of material with the same type of surface as the article you wish to spray, eg. metal for a car body panel, wood for a piece of furniture etc.

Always make adjustments to the spray pattern according to the conditions. You may need to increase the paint and air flow when using a wider fan setting.

To reduce overspray, always use the lowest possible air pressure that produces an acceptable spray pattern.

- If the airbrush is too far from the surface or the paint is too thin, the paint will start to dry before hitting the surface, resulting in a rough, sandy finish. Allowing overspray to fall on a finished area will also result in a rough finish. Too much paint feed or holding the airbrush too close to the work can lead to runs and sagging.
- The paint should be agitated by gentle shaking at regular intervals during use to ensure consistency and avoid colour difference due to the paint settling in the container.

To obtain the best results, keep your airbrush level and parallel to the surface at all times. Keep the nozzle 23 - 30 cm from the surface and spray evenly from side to side or up and down.

The airbrush should be perpendicular to the surface being covered and moved parallel to it. The stroke is best started before the trigger is pulled and likewise released before the stroke is ended. This gives accurate control of the airbrush and material.

Do not spray at an angle as this will lead to paint runs on the surface. Try to use smooth and even strokes.

When spraying large areas, using a criss-cross pattern as shown.

Try to avoid starting or stopping the airbrush while it is aimed at the surface to be sprayed. Evenly control the speed of movement of the airbrush.

- Moving quickly over the surface will give a thin coat and slow movement will give a heavy coat.
- Apply one coat at a time. If a further coat is required, make sure you observe the manufacturers drying time recommendations before applying a second coat.
- When spraying small areas, keep the output control on a low setting as this will avoid using too much paint and prevent overspray.
- Where possible, avoid stopping and starting when spraying an object. This can lead to too much or not enough paint being applied.
- The material deposited should always be even and wet. Lap each stroke over the preceding stroke to obtain a uniform finish.
- To ensure the edges are covered, start spraying just to the side of the area being sprayed and do not stop until the spray has gone past the opposite edge.
- Damage to the needle or nozzle, or any of the air ports, will result in a faulty spray pattern. Take care when cleaning or assembling these components.



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## TROUBLESHOOTING

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The following are typical faults encountered during airbrush work:

1. **Grainy Spray:** Caused by the paint being too thick. Dilute the paint as appropriate, check the needle for dried up paint etc, check the air supply pressure etc.
2. **Buckling Paper:** The paint may be too thin. Add paint to thicken the mixture. Do not apply too heavily in one area. Move more quickly across the work or reduce the spray.
3. **Paint blobs at end of stroke:** Depress the trigger before moving the airbrush or stopping before releasing the trigger.
4. **Flared ends:** Caused by turning the wrist while airbrushing. The whole forearm should move horizontally or vertically across the workpiece.
5. **Centipedes:** Caused by spraying too much paint too close to the surface. If a fine line is desired, lightly pull back on the trigger, practice on a test piece first).
6. **Splattering:** Caused by allowing the needle to snap back into the tip. Always release the trigger gently. Check for dried paint on the needle or tip.
7. **Curved stroke:** Caused by moving the arm in an arc, too close to the surface. The arm should always be parallel to the work.
8. **Restricted spray:** Can be caused by the needle being screwed in too far. Undo the needle sleeve a turn.
9. **Bubbles through paint cup:** The air pressure may be too high. Adjust the airline regulator. The paint cup stem may be clogged.
10. **Spray cannot be shut off:** The nozzle may be clogged. This is recognized by a 'spongy' feel when the needle is set into the nozzle. Strip and clean the airbrush, (see Maintenance).
11. **Spitting:** Caused by contamination either on the needle or in the paint cup, the paint may be too thick.

If the airbrush motion is uneven, the paint finish will be uneven.

The most common problems are runs and sags, which are caused by one or more of the following:

1. Not releasing the trigger at the end of the stroke.
2. Holding the airbrush still or moving too slowly.
3. Holding the airbrush too close to the surface.
4. Arcing motion with the airbrush.

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# MAINTENANCE

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## ROUTINE CLEANING

The airbrush is a precision tool, so taking good care of your airbrush will result in a longer service life.

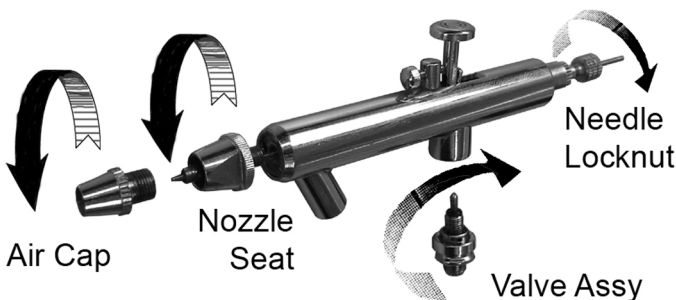
Keep the airbrush and paint cup / jar clean at all times and do not leave the airbrush standing with paint in the paint cup for long periods. This tends to gum up the cup and the internal feeding channels. Most poor spraying results can be traced back to an airbrush that has not been cleaned properly. Always clean immediately after use. To clean the airbrush thoroughly, proceed as follows.

1. Remove and empty the paint jar, wipe thoroughly including the inside of the cover.
2. Fill the jar ½ full of thinners or water depending upon the paint being sprayed, re-attach the airbrush and operate the spray to clean the needle, air cap & nozzle etc. Take care to spray into a safe area, i.e., directly into a cleaning cloth.
3. Operate the spray until the fluid is clear and no paint residue is visible on the cloth. Remove the jar and operate the spray to expel thinners etc.
4. Dry with a clean cloth before packing away.

## STRIPPING FOR FURTHER CLEANING

Should the airbrush become clogged, it is necessary to strip and clean the unit which should be carried out on a clear work area. To do this, proceed as follows:

1. Unscrew and remove the valve assembly using the wrench.
2. Unscrew and remove the tail cover.



3. Loosen the needle locknut and gently withdraw the needle from the airbrush assembly. Do not fully remove the locknut.



**WARNING: THE NEEDLE IS VERY SHARP; ALSO, TAKE CARE NOT TO BEND OR BREAK IT.**

4. Remove the airbrush end cap.
5. Unscrew and remove the air cap.
6. Unscrew and remove the spray nozzle seat using the wrench.

At this stage it should not be necessary to strip down any further. Clean all parts with solvent/thinners using cotton buds and a lint free cleaning cloth.

Take care when cleaning the inlet valve assembly and spray nozzle assembly. These both have 'O' rings which need to be removed as they can be damaged by solvents.

## **REASSEMBLY**

Once all parts have been cleaned and dried, reassemble as follows:

1. Refit the 'O' rings to the valve (item 24) and spray nozzle (item 5) assemblies, (shown in the parts diagram on page 10), replacing them with new ones if damaged.
2. Refit the spray nozzle seat and gently tighten with the wrench.
3. Refit the air cap finger tight.
4. Refit the airbrush end cap.
5. Carefully insert the needle through the needle sleeve assembly. Push carefully home until the needle seats into the air nozzle. Re-tighten the needle locking nut, finger tight.
6. Refit the tail cover.
7. Replace the valve assembly and gently tighten with the wrench.

## **REMOVING & REPLACING THE NEEDLE SLEEVE**

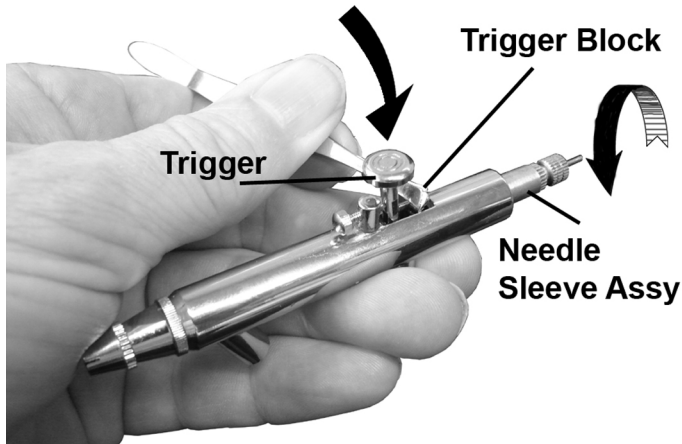
Should it be necessary to remove the needle sleeve assembly for cleaning, dismantle the parts described above, then continue as follows:

1. Unscrew and remove the needle securing sleeve assembly.
2. Without the restraint of the needle sleeve assembly, the trigger and trigger block will both fall out.

To reassemble, proceed as follows:

1. Position the trigger block back into the trigger slot on the top of the airbrush body, with the curved block face towards the tail opening.

**NOTE:** A pair of tweezers will be needed for this.



2. Gripping the tab of the trigger block to steady the airbrush assembly, insert the trigger into the trigger slot. Ensure the needle slot is in line with the airbrush body to enable the needle to pass through.
3. Still maintaining a grip of the trigger block, screw the needle sleeve assembly into the airbrush body until the end appears in the trigger slot. The trigger and trigger block are now held in position.
4. Carefully insert the needle through the needle securing sleeve, trigger block and trigger, and tighten the needle locking nut to hold the needle in place against the nozzle.
5. Refit the tail cover.

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## AIRLINE ACCESSORIES AND EQUIPMENT

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An extensive range of airline equipment and accessories is available from your Clarke dealer including hoses, retractable hose reels, filter/regulators, in-line regulators, pressure gauges, spray gun cleaning kit, respiratory masks and safety goggles, Airbrush Propellant etc.

Contact your CLARKE dealer for further information, or CLARKE International Sales Department on 01992 565300.

# DECLARATION OF CONFORMITY



**Clarke**<sup>®</sup>  
**INTERNATIONAL**

Hemnal Street, Epping, Essex CM16 4LG

## DECLARATION OF CONFORMITY

**This is an important document and should be retained.**

**We hereby declare that this product(s) complies with the following directive(s):**

*2006/42/EC*

*Machinery Directive.*

**The following standards have been applied to the product(s):**

*EN ISO 11148-4:2012, EN ISO 12100:2011.*

The technical documentation required to demonstrate that the product(s) meet(s) the requirement(s) of the aforementioned directive(s) has been compiled and is available for inspection by the relevant enforcement authorities.

The CE mark was first applied in: 2010

**Product Description:** Air Brush Kit

**Model number(s):** CAB 3P

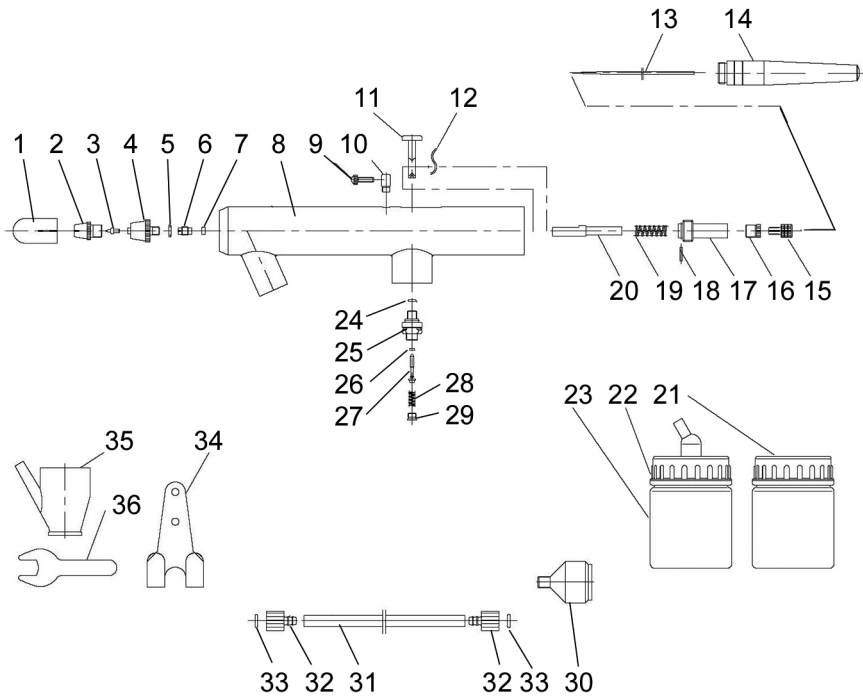
**Serial / batch Number:** N/A

**Date of Issue:** 29/06/2020

**Signed:**

**J.A. Clarke**  
**Director**

# PARTS DIAGRAM



## PARTS LIST

| No | DESCRIPTION        |
|----|--------------------|
| 1  | Airbrush End Cap   |
| 2  | Air Cap            |
| 3  | Spray Nozzle       |
| 4  | Spray Nozzle Seat  |
| 5  | O-ring             |
| 6  | Direction Screw    |
| 7  | Sealing Washer     |
| 8  | Airbrush Body      |
| 9  | Trigger Stop Screw |
| 10 | Screw Seat         |
| 11 | Trigger            |
| 12 | Trigger Block      |
| 13 | Needle             |
| 14 | Tail Cover         |
| 15 | Needle locknut     |
| 16 | Sleeve end cap     |
| 17 | Securing sleeve    |
| 18 | Spring Pin         |

| No | DESCRIPTION          |
|----|----------------------|
| 19 | Needle Spring        |
| 20 | Needle Sleeve        |
| 21 | Paint Jar Lid (1)    |
| 22 | Paint Jar Lid (2)    |
| 23 | Glass Paint Jar      |
| 24 | O-Ring               |
| 25 | Air Inlet Valve Body |
| 26 | O-ring               |
| 27 | Inlet Valve Pin      |
| 28 | Inlet Valve Spring   |
| 29 | Fixed Screw          |
| 30 | Inlet Hose Adaptor   |
| 31 | Inlet Air Hose       |
| 32 | Hose Connector       |
| 33 | O-ring               |
| 34 | Suspension Hook      |
| 35 | Paint Cup            |
| 36 | Open Wrench          |

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