



## HVLP SPRAY GUN

MODEL NO: AP16GF

PART No: 3090095

### OPERATION & MAINTENANCE INSTRUCTIONS



0903



***Please read these instructions carefully before operating the tool***

Thank you for purchasing this **CLARKE** HVLP spray gun. Before using the device, please read this manual thoroughly and carefully follow all instructions given. This is for your own safety and that of others around you, and is also to help you achieve long and trouble free service from your new spray gun.

### **CLARKE GUARANTEE**

This CLARKE product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt 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 affect your statutory rights.

Please be aware that certain parts of this spray gun will wear, requiring replacement and that these parts may not be covered by your guarantee.

The wear on certain parts depends on the abrasiveness of the materials being sprayed. More abrasive materials such as latex paint (emulsions) will cause these parts to wear much faster.

Replacement parts are available from your nearest Clarke International dealer.

**PARTS & SERVICE TEL: 020 8988 7400**

**or e-mail as follows:**

**PARTS: [Parts@clarkeinternational.com](mailto:Parts@clarkeinternational.com)**

**SERVICE: [Service@clarkeinternational.com](mailto:Service@clarkeinternational.com)**

## SPECIFICATIONS

### HVLP SPRAY GUNS

Professional spray guns with external paint mix and 600ml gravity fed cup for cellulose, enamels, polyurethane, acrylics, metallics and all similar viscosity finishes

| SPECIFICATIONS              |             |
|-----------------------------|-------------|
| Model : .....               | AP16GF      |
| Part No : .....             | 3090095     |
| Cup Capacity : .....        | 600ml       |
| Air Consumption : .....     | 9.5 CFM     |
| Air Inlet Connector : ..... | ¼" BSP      |
| Nozzle : .....              | 1.4mm       |
| Operating Pressure : .....  | 20 - 43 PSI |

| CONTENTS             | page    |
|----------------------|---------|
| Guarantee            | 2       |
| Safety Precautions   | 4       |
| General Arrangement  | 5       |
| Air Supply           | 5       |
| Using The Spraygun   | 6       |
| Maintenance          | 7       |
| Paint Spraying Hints | 8 / 9   |
| Parts List           | 11 / 12 |

Please note that the details and specifications contained herein are correct at the time of going to print. However CLARKE International reserve the right to change specifications at any time without prior notice.

## SAFETY PRECAUTIONS

### **WARNING**

Compressed air can be dangerous. Ensure that you are thoroughly familiar with all precautions relating to the use of compressors and compressed air supply.

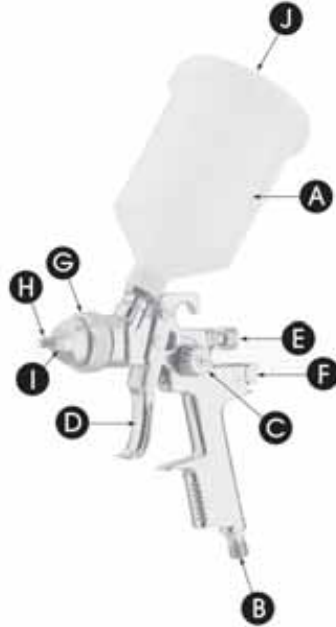


For your personal safety and that of others around you. Follow these safety instructions carefully.

**NOTE** : products used in this spray gun may be covered by COSHH Regulations.

- **ALWAYS** check the manufacturer's data sheets on the products being sprayed for any particular hazards, and follow the manufacturer's instructions. Take particular care if spraying isocyanate paints.
- **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 types of paint. If in doubt, check with the paint manufacturer.
- **ALWAYS** make sure there is adequate ventilation. Do not spray in confined or enclosed areas.
- **ALWAYS** disconnect the spray gun from the air supply when it is not in use, and before any disassembly.
- **ALWAYS** keep the spray nozzle in place when spraying.
- **ALWAYS** thoroughly clean the spray gun after use. See 'Maintenance'
- **NEVER** spray paint towards people or animals. In the case of injury, seek expert medical advice immediately.
- **NEVER** smoke while spraying or preparing paints, or spray near a naked flame, heat source and electric sparks. Many paints are flammable.
- **NEVER** allow children to use or play with this appliance.
- **NEVER** spray products containing halogenated hydrocarbons (such as trichloroethane or methylene chloride) with this gun as they can react chemically with aluminium or zinc to produce an explosion hazard.
- **NEVER** exceed the maximum input air pressure of 43 psi (3 bar).

## GENERAL ARRANGEMENT



- |                           |                         |
|---------------------------|-------------------------|
| A. Paint Cup              | F. Air Adjuster         |
| B. Air Inlet              | G. Knurled Locking Ring |
| C. Spray Width Adjuster   | H. Wings                |
| D. Trigger.               | I. Nozzle               |
| E. Fluid Control Adjuster | J. Cap                  |

## AIR SUPPLY

HVLP AP16GF spray guns are available with one nozzle size (1.4mm), ensure your spray gun is matched to the capacity of your compressor.

| Model  | Nozzle size | Compressor Required |
|--------|-------------|---------------------|
| AP16GF | 1.4 mm      | 3 hp and above      |

For best results, the air supply to the spray gun 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 spray gun must be fitted with an oil and water extractor and a suitable pressure regulator.

Connect the air supply to the spray gun using a suitable 1/4" BSP fitting.

## USING THE SPRAYGUN

HVLP AP16GF spray guns are fed with paint by gravity from the paint cup. The air flow through the air cap draws paint into the nozzle assembly, where it is atomised and sprayed forward.

Attach the paint cup to the gun, ensure any seals etc are sound first, mix the paint to the correct viscosity for spraying according to the manufacturers instructions, and strain it into the paint cup through a fine mesh filter. When mixing the paint, make sure that you have enough thinners left to clean the spray gun after use, do not fill the paint cup to more than 3/4 full. Make sure that the top edge of the cup and the cup sealing gasket are clean and free from damage before screwing the cap on, it is also very important to keep the cup vent clear.

Ensure that the top edge of the cup and the cup sealing gasket are clean and free from damage. The cap must be screwed on securely to prevent any leaks from around the cup rim.

Set the spray pattern and fluid flow using the adjustment screws on the spray gun. The spray pattern is variable between round and fan by adjusting the air flow through the air cap. Turn the spray width adjusting screw anticlockwise to increase flow and give a fan shaped spray pattern, turning clockwise to close off the air flow will give a circular pattern. The fan can be adjusted vertically or horizontally to suit your requirements by loosening the knurled locking ring and turning the wings to the desired position. Set the fluid flow according to the paint in use and the spray pattern by using the fluid flow adjustment screw; anticlockwise to increase flow, clockwise to reduce flow. As the width of the spray is increased, fluid flow will also need to be increased.

The air pressure needed will vary according to the paint in use, with thicker paints needing greater pressure. For most paints, a pressure of between 20 - 43 psi is adequate.

To reduce overspray and to obtain maximum transfer efficiency, always use the lowest possible air inlet pressure that produces an acceptable spray pattern.

The first requirement for a good resultant finish is the proper handling of the gun. The gun should be perpendicular to the surface being covered and moved parallel with it. The stroke should be started before the trigger is pulled and likewise, released before the stroke is ended. This gives accurate control of the gun and material.

The distance between the gun and the surface to be covered should be 6 to 12 inches depending on the material and atomising pressure. The material deposited should always be even and wet. Lap each stroke over the preceding stroke to obtain a uniform finish.

NOTE: To reduce overspray and obtain maximum efficiency, always spray with the lowest possible atomising air pressure.

Damage to the fluid needle or nozzle, or any of the air ports, will result in a faulty spray pattern. Take care when cleaning or assembling these components.

When spraying, the gun should be held square to the surface being painted, at a distance of 6 to 12 inches depending on the paint and atomising pressure. Keep the gun parallel to the surface being sprayed, starting the stroke before pulling the trigger, and releasing the trigger before ending the stroke. Overlap each stroke over the preceding stroke to obtain an even finish. The paint cover should be even and wet when spraying.

If the gun is too far from the surface, or the paint is too thin, the paint will dry before hitting the work, 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 gun too close to the work will lead to runs and sagging.

## MAINTENANCE Figures in brackets refer to parts List Page 11/12

### WARNING

**Disconnect the spray gun from the air supply, and relieve any pressure in the gun and hose, before any disassembly.**

It is essential that the spray gun is kept clean. Dried paint in the nozzle assembly or airways will stop the gun from working. For the gun to perform at its best it must be cleaned and lubricated after every use.

After use, empty any remaining paint from the paint cup, wipe the cup clean with a dry, lint free rag, and fill with thinners. Spray the thinners through the spray gun until it is clean.

1. Immerse only the front end of the gun until solvent just covers the fluid connection.

NOTE : do not submerge the entire spray gun in solvent because :

- a, the lubricant in the leather packings will dissolve and the packings will dry out.
  - b, the lubricant at wear surfaces will dissolve resulting in harder operation and premature wear.
  - c, residue from dirty solvent may clog the narrow air passages in the gun.
2. Use a small bristle brush and solvent to wash off accumulated paint.
  3. Wipe down the outside of the gun with solvent dampened cloth.
  4. Lubricate gun daily, using a light machine oil on :
    - a, fluid needle packing
    - b, air valve packing
    - c, trigger pivot point

Coat the fluid control spring with vaseline.

**CAUTION** : never use silicon based lubricants as this may cause paint finish defects.

DO NOT poke any of the holes in the air cap or nozzle with metal instruments. These holes are precision drilled, and can be damaged by probing with anything harder than a wooden toothpick.

Make sure that the air inlet vent to the paint cup is kept clean. Blockages in this vent will prevent an even material flow to the gun.

It is possible to strip the fluid nozzle etc for better cleaning as follows.

- Unscrew (anticlockwise) and remove the air cap set (01).
- Unscrew (anticlockwise) and remove the fluid nozzle (02), (using the spanner provided).
- Unscrew and remove Fluid Control Knob Assy (14).
- Carefully withdraw fluid needle (11).
- Using the socket spanner unscrew (clockwise), and remove, the brass ring (07).
- Using other end of socket spanner unscrew (anticlockwise), and remove, the packing screw assy (03).

Store all items carefully. reassemble in reverse order.

Do not mix components from spray guns, even those of the same type. Do not overtighten components, and be careful not to cross thread any parts on assembly.

Check the air supply hose regularly for any signs of damage, and replace it if necessary. Do not use damaged or leaking hoses.

## PAINT SPRAYING HINTS

### WARNING

*NEVER attempt to spray unless you are wearing suitable, approved respiratory and eye protection.*

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

### 1. General Preparation

- a. Ensure that the area in which you will be spraying is clean and dust free.
- b. Connect spray gun to compressor via suitable flexible hose.
- c. With no paint in spray gun, test system for air leaks.
- d. Cover adjacent pieces of equipment to prevent overspray. Mask areas of the article not to be sprayed.
- e. Ensure surface to be painted is clean, dry and free from oil and dust.  
Check paint manufacturer's instructions for any special surface preparation required.

REMEMBER - TIME SPENT PREPARING SAVES TIME SPENT FINISHING

### 2. Paint Preparation

- a. Achieve the correct paint viscosity. This should be done according to paint manufacturer's instructions, and will vary according to type of paint, (see paint thinning on page 9).
- b. Having mixed the paint thoroughly in a separate container, pour into the spray gun paint container through a fine filter.

DO NOT OVERFILL SPRAY GUN PAINT CONTAINER - three quarters full is maximum

- c. It is usually best to experiment with a couple of practice spray coats 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.
- d. Some common problems:

| PROBLEM  | CAUSE   | CORRECTION  |
|--|---|---|
| Paint does not atomise (comes out in blobs).                             | Paint is too thick.<br>Air pressure is too low.   | Add thinners.<br>Increase air pressure.                         |
| Paint dries before hitting surface, leaving it dry with a rough texture. | Paint is too thin.<br>Air pressure is too high.   | Add more paint.<br>Reduce air pressure.                         |
| Finish is pitted like Orange peel.                                       | Air pressure too high or spray too close to work. | Reduce air pressure,<br>increase distance between gun and work. |



## PAINT SPRAYING HINTS Cont

To obtain best results, it is vital that the surface to be sprayed is well prepared. It must be clean, free from dust, dirt and grease. Mask any area that is not to be sprayed.

### Paint Thinning

Thinning is particularly important when paint spraying. Most 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.

A Viscous Cup (not supplied), will assist in determining the correct thickness of the paint. Ensure the paint is free from lumps or other matter, if necessary strain it through a coarse filter.

The ideal viscosity for most paints is given in the chart opposite.

Dip the cup into the paint and fill to the brim. Time how long it takes for the cup to empty.



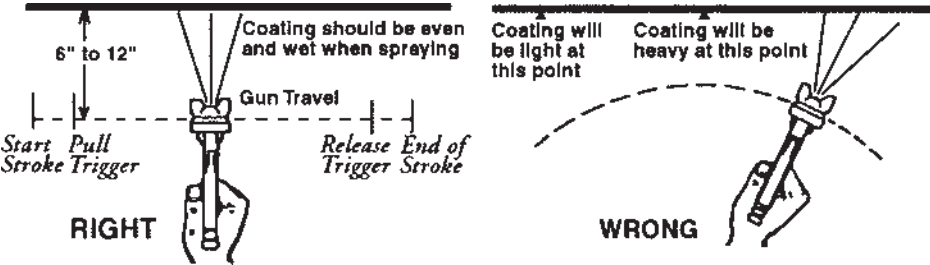
|                           |                   |
|---------------------------|-------------------|
| Water based paints .....  | 35 - 45 secs      |
| Oil based paints .....    | 15 - 25 secs      |
| Enamel paints .....       | 15 - 25 secs      |
| Primers .....             | 20 - 30 secs      |
| Varnishes .....           | 20 - 25 secs      |
| Aluminium paints .....    | 15 - 25 secs      |
| Wood preservatives .....  | Do Not Dilute     |
| Wood Stains .....         | Do Not Dilute     |
| Smooth Masonry paint..... | dilute by 5 - 10% |

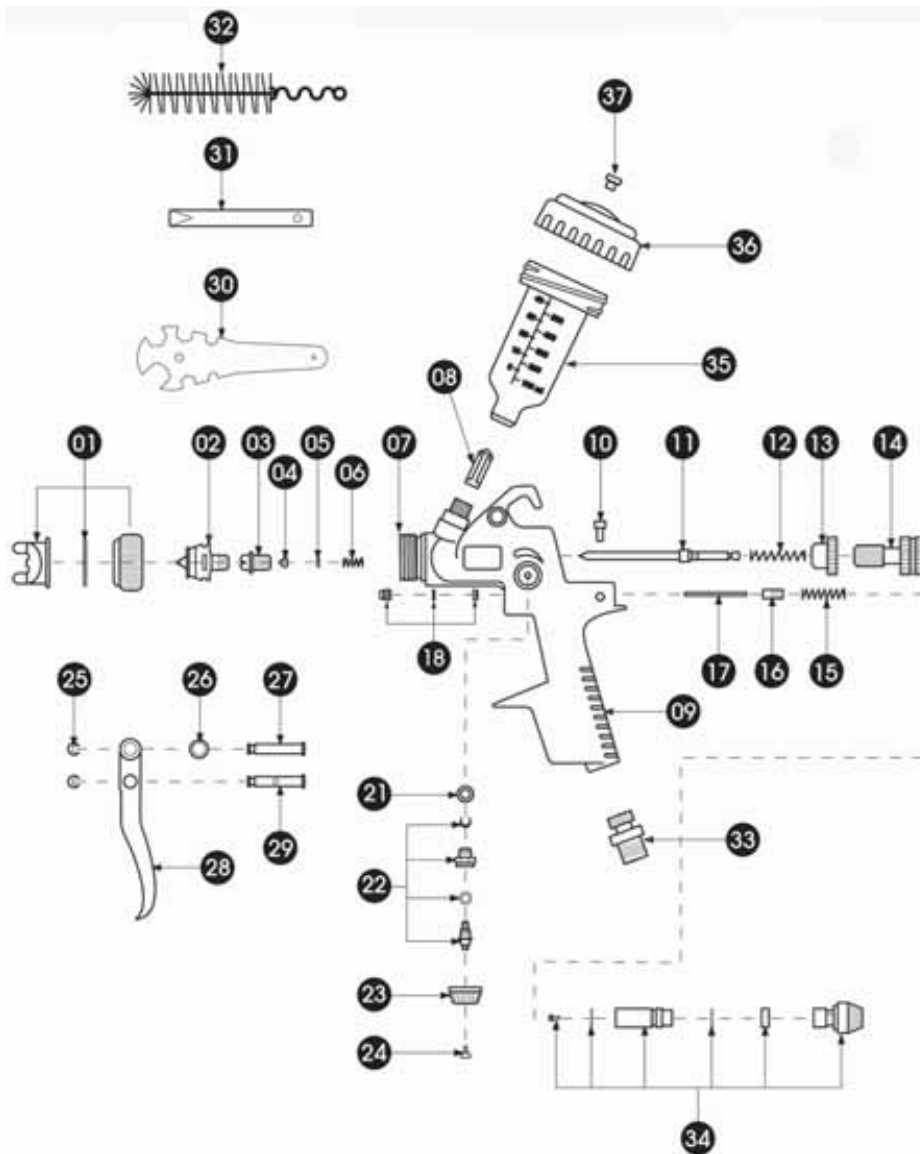
**Thin as required until times are achieved**

Alternatively if a viscous cup is not available, 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**





**PARTS & SERVICE TEL: 020 8988 7400**  
 or e-mail as follows:  
**PARTS: [Parts@clarkeinternational.com](mailto:Parts@clarkeinternational.com)**  
**SERVICE: [Service@clarkeinternational.com](mailto:Service@clarkeinternational.com)**

## PARTS LIST AP16GF

| No | DESCRIPTION                              | PART NUMBER | Qty |
|----|--|-------------|-----|
| 01 | Nozzle Set                               | NS1701      | 1   |
| 02 | Fluid Nozzle                             | NS1704      | 1   |
| 03 | Packing Screw For paint Needle           | NS1705      | 1   |
| 04 | Self Tensioning Needle Packing           | NS1706      | 1   |
| 05 | Washer                                   | NS1707      | 1   |
| 06 | Spring                                   | NS1708      | 1   |
| 07 | Brass Ring                               | NS1709      | 1   |
| 08 | Material Sieve                           | NS1727      | 1   |
| 09 | Gun Body                                 | NS9112      | 1   |
| 10 | Screw                                    | NS9122      | 1   |
| 11 | Paint Needle Complete                    | NS1716      | 1   |
| 12 | Spring                                   | NS9617      | 1   |
| 13 | Locknut For Fluid Control Knob           | NS9618      | 1   |
| 14 | Fluid Adjustment Knob                    | NS9619      | 1   |
| 15 | Spring                                   | NS9120      | 1   |
| 16 | Air Piston                               | NS9119 - 1  | 1   |
| 17 | Stem                                     | NS9719      | 1   |
| 18 | Stuffing Box for Air Piston              | NS9713      | 1   |
| 21 | Gasket                                   | NS1714 - 5  | 1   |
| 22 | Spray Regulating Nut Assy                | NS1714      | 1   |
| 23 | Stepless Regulation For Round/Flat Spray | NS1715      | 1   |
| 24 | Countersunk Screw                        | NS1720      | 1   |
| 25 | 'E' Ring                                 | NS1714 - 1  | 2   |
| 27 | Pin                                      | NS1724      | 1   |
| 28 | Trigger                                  | NS1722      | 1   |
| 29 | Pin                                      | NS1725      | 1   |
| 30 | Spanner                                  | NS1730      | 1   |
| 31 | Socket Spanner                           | NS1731      | 1   |
| 32 | Cleaning Brush                           | NS1732      | 1   |
| 33 | Connector                                | NS1726      | 1   |
| 34 | Air Micrometer Set                       | NS9121      | 1   |
| 35 | Paint Cup                                | NS1728      | 1   |
| 36 | Cap                                      | NS1729      | 1   |
| 37 | Non Drip Control Device                  | NS1729 - 1  | 1   |