

# Clarke®

# air



## AIR FILTER/REGULATOR

MODEL NO: CAT193

PART NO: 3120510

## OPERATING & MAINTENANCE INSTRUCTIONS

ORIGINAL INSTRUCTIONS

GC0122 - Rev 1

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## INTRODUCTION

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Thank you for purchasing this CLARKE Air Filter Regulator.

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.

Your Filter Regulator has been designed to give long and trouble free service. If, however, having followed the instructions in this booklet carefully, you encounter problems, take the unit to your local CLARKE dealer.

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## SPECIFICATIONS

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	CAT193
Dimensions (D x W x H)	70 x 68 x 250 mm
Air Inlet /Outlet Size	3/8" BSP (female)
Max Flow	120 CFM
Max Inlet Pressure	150 psi
Regulating range	5-150 psi
Element Micron Rating	40µ
Max working Temperature	125 deg F

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## GENERAL SAFETY RULES

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CAUTION: FAILURE TO FOLLOW THESE PRECAUTIONS COULD RESULT IN PERSONAL INJURY, AND/OR DAMAGE TO PROPERTY.

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## WORK ENVIRONMENT

1. Keep the work area clean and tidy.
2. Dress appropriately - do not wear loose clothing or jewellery. Tie long hair out of the way.

3. Keep children and visitors away - do not let children handle the air tools.
4. Do not operate air tools where there are flammable liquids or gases.

## **USE OF AIRLINE EQUIPMENT**

1. Stay alert and use common sense - do not operate an air tool when you are tired or under the influence of alcohol, drugs or medication.
2. Do not overreach - Keep proper footing and balance at all times.
3. Never use oxygen, CO<sub>2</sub>, combustible gases or any type of bottled gas as a source of power for air tools.
4. Do not exceed the maximum pressure for the airline component stated in the specification.
5. Check airline hoses for leaks or worn condition before use and ensure that all connections are secure.
6. Keep the air supply hose away from heat, oil and sharp edges.
7. Avoid damaging the component for example by applying excessive force of any kind.
8. Always maintain the air tool with care. Keep it clean for the best and safest performance.

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## **COMPRESSED AIRLINE REQUIREMENTS**

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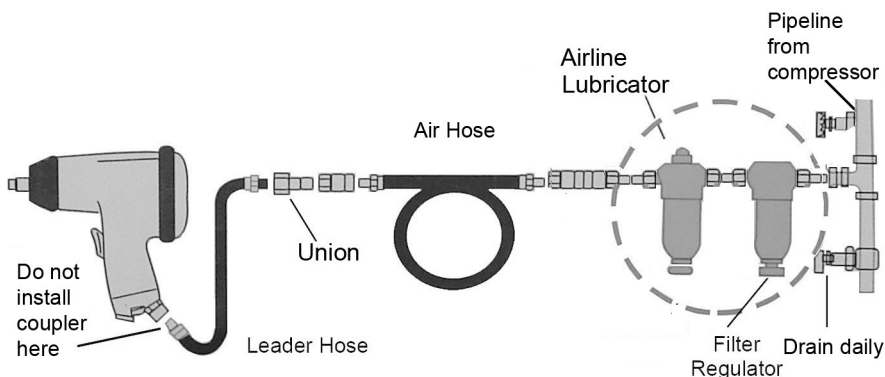
Use only clean, dry, regulated compressed air as a power source.

Air compressors must comply with the appropriate European Community Safety Directives.

A build-up of moisture in the air compressor will accelerate wear and corrosion in the air tool. Ensure any moisture is drained from the compressor daily and the airline filter is kept clean.

If an unusually long air hose is required, (over 8 metres), the line pressure or the hose inside diameter may need to be increased.

The air hose must be rated at least 150% of the maximum operating pressure of the air tool.



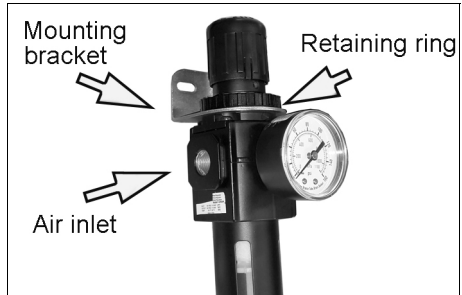
A typical air line layout is shown above. If an automatic in-line filter/regulator is used it will keep the tool in good condition. The lubricator should be adjusted to approx 2 drops per minute and SAE 10 oil should be used.

Never exceed the maximum operating pressure for the air tool. Ensure that air pressure does not exceed that stated in the specification for the air tool when running. Higher pressures and contaminated air will shorten the life of the air tool due to faster wear and is a possible safety hazard.

## INSTALLATION

1. Shut off the air pressure from the air system.
2. Install the filter/regulator vertically with the bowl vertically down. Ensure that the filter/regulator is installed with inlet/outlet air flow in the direction of the arrow on the unit.
3. Note the arrow mark on the regulator body, indicating the direction of air flow. Connect pipes to the inlet and outlet ports using pipe thread sealant tape on male threads only. When screwing pipes together, prevent ingress of shavings and sealant to the interior of the unit. Contamination in the unit may cause it to fail.
4. The filter/regulator should be installed upstream of any lubricator and cycling valve(s) in the air line, and should be as close as possible to the air tools when used as a main line filter/regulator and/or as a final filter/regulator.
5. The filter/regulator must be installed in such a way that no mechanical strain occurs.
6. Fit the mounting bracket to a suitable support, situated in line with the compressed air supply.

- Ensure sufficient free space above the regulator for adjustment.
7. Remove the blanking plugs from the connection ports and connect to the supply and delivery hoses.
  8. Install a pressure gauge to either of the side connecting ports facing the operator. The other connecting port should be plugged or can be used as an additional air outlet for regulated air.
  9. Fit the regulator to the mounting bracket from below and secure with the retaining ring.
  10. Make sure that all connections are tight and secure.
  11. Push the bowl into the filter/regulator body and turn fully clockwise before pressurizing.
  12. Your filter regulator is now ready for use.



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## USE AND CARE IN SERVICE

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1. Ensure that the supply airline pressure does not exceed 150psi.
2. The outlet air pressure can be set by turning the adjustment knob. Pull the knob upwards until you hear the click, turn it clockwise to increase the pressure or anti-clockwise to decrease the pressure. When the desired pressure is obtained, press the knob downwards until you hear the click to secure the setting.
  - + and - are marked on the knob.
3. The air pressure set is displayed on the pressure gauge.
4. The filter/regulator is equipped with a manual drain. Turn the manual drain valve to drain accumulated liquid inside the bowl. Take care to drain the liquid from the bowl whenever necessary and always keep the liquid below the baffle.
5. The filter element should be replaced when the pressure drop across the element exceeds 15 psi. When an excessive pressure drop across a saturated but uncontaminated element occurs, it may indicate that the tool being operated exceeds the maximum flow rate (CFM) of the filter/regulator (See Specifications). Refer to the maximum flow rate of your filter/regulator and make sure that the required CFM of the tool is within the maximum flow rate of your filter/regulator for best tool operation.

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# MAINTENANCE

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## DISASSEMBLY

1. The filter/regulator can be disassembled without removal from air line.
2. Shut off the inlet pressure. Reduce pressure in inlet and outlet lines to zero.
3. Turn the adjustment knob fully anti-clockwise.
4. Remove the bowl by pushing into the body and turning anti-clockwise.
5. Disassemble in accordance with the parts illustrated on page 7. Do not remove the drain unless replacement is necessary. Remove and replace only if the drain malfunctions or if converting to automatic drain.

## CLEANING

1. Clean the plastic bowl with warm water only. Clean other parts with warm water and soap.

**CAUTION: Certain components may be made from polycarbonate which can be severely damaged if it comes into contact with some chemicals. These include acetone, benzene, carbon tetrachloride, ethylene di-chloride, gasoline or synthetic fire resistant lubricants.**

2. Rinse and dry all parts. Blow out internal passages in the body with clean, dry, compressed air. Blow air through the filter element from inside to remove surface contaminants.
3. Inspect all parts and replace any found to be damaged. Replace the plastic bowl with a metal bowl if the plastic bowl is cracked or cloudy.

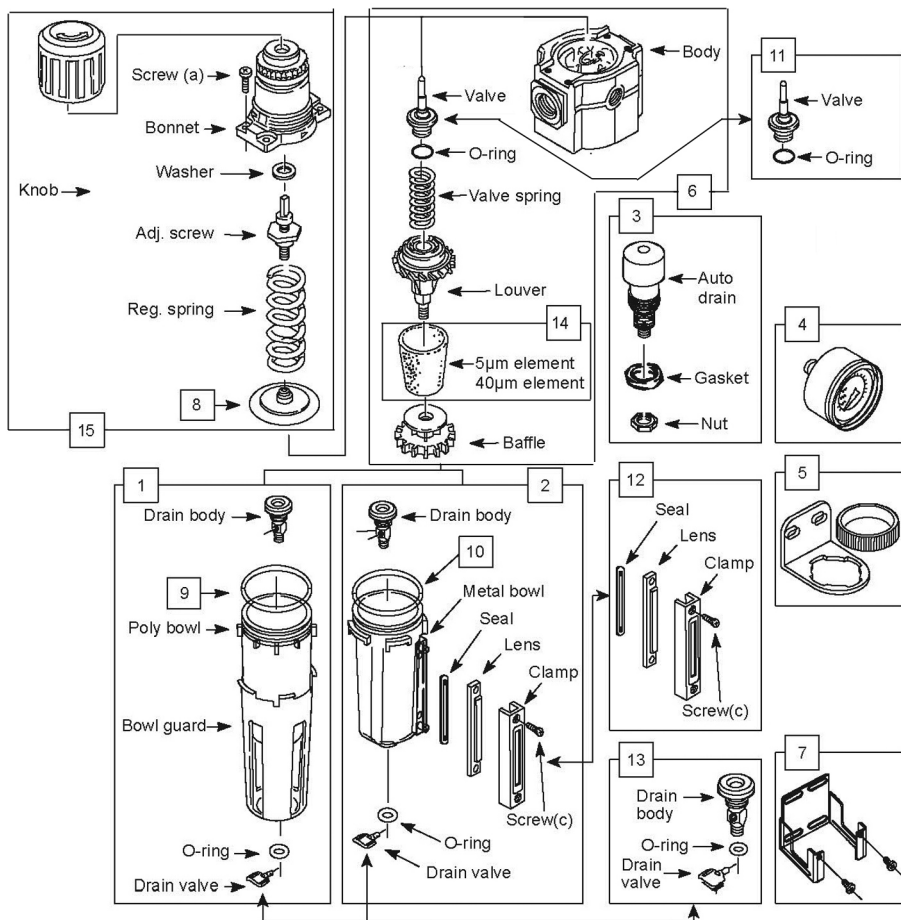
## ASSEMBLY

1. Lubricate all o-rings, adjusting screw threads and tip, outer circumference and both sides of thrust washer, the portion of the manual drain body that contacts the bowl, the hole in the manual drain body that accommodates the stem of the drain valve and valve stem with o-ring grease.
2. Assemble as shown on page 7 using the torque values listed in the table.

Torque Settings	
Part	Inch Pounds (Nm)
Screws (a) and (b)	20 to 30 (2.3 to 3.4)
Screw (c)	15 to 30 (1.7 to 3.4)
Baffle, louvre	10 to 20 (1.1 to 1.2)
Nut	20 to 25 (2.3 to 2.8)

3. Push the bowl into the body and turn fully clockwise.

# COMPONENT PARTS



1	Polycarbonate bowl assembly
2	Metal bowl assembly with O-ring
3	Auto drain kit
4	Gauge
5	Neck bracket & nut
6	Main body assembly
7	Universal wall bracket
8	Diaphragm

9	O-ring for polycarbonate bowl
10	O-ring for metal bowl
11	Valve assembly
12	Sightglass kit
13	Manual drain kit
14	5 micron filter element
	40 micron filter element
15	Pressure regulator assembly

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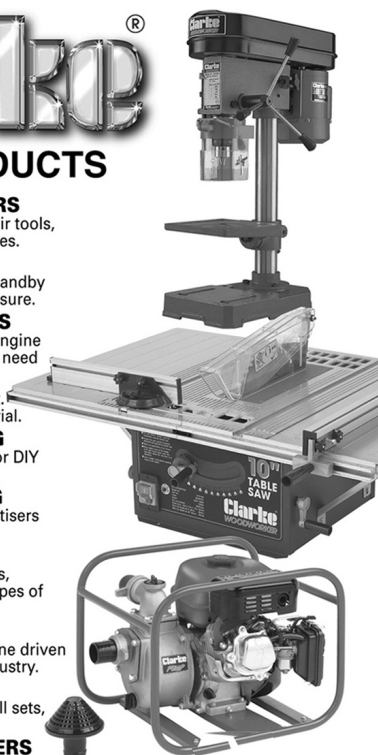
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## Guarantee

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 without prior permission.

This guarantee does not affect you statutory rights.

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