

# Clarke®

# *air*



## AIRLINE FILTER

MODEL NO: CAT187

PART NO: 3120504

## OPERATING & MAINTENANCE INSTRUCTIONS

ORIGINAL INSTRUCTIONS

GC0122 - Rev 1

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## INTRODUCTION

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Thank you for purchasing this CLARKE Airline Filter.

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 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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	CAT187
Dimensions (D x W x H)	110 x 120 x 302 mm
Air Inlet /Outlet Size	3/4" BSP (female)
Max Flow	325 CFM
Max Inlet Pressure	250 psi
Element Micron Rating	5µ
Max working Temperature	175 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 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

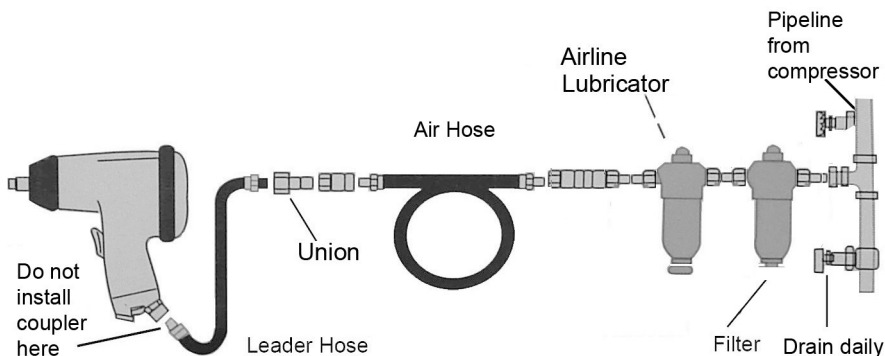
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**WARNING: COMPRESSED AIR CAN BE DANGEROUS. ENSURE THAT YOU ARE FAMILIAR WITH ALL PRECAUTIONS RELATING TO THE USE OF COMPRESSORS AND COMPRESSED AIR SUPPLY.**

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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 below. 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 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.

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## INSTALLATION

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**WARNING: COMPRESSED AIR CAN BE DANGEROUS. ENSURE THAT YOU ARE FAMILIAR WITH ALL PRECAUTIONS RELATING TO THE USE OF AIR COMPRESSORS AND COMPRESSED AIR SYSTEMS.**

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1. Ensure the compressor is turned off. Before using the airline, drain water from the air reservoir at the compressor.
  - The filter should be installed with reasonable accessibility for service whenever possible.
2. Keep pipe or tubing lengths to a minimum with the inside clean and free of dirt. Pipe joint compound should be used sparingly and applied only to the male pipe — never into the female port.
3. Take care using PTFE tape to seal pipe joints — pieces have a tendency to break off and lodge inside the unit, possibly causing malfunction.
4. Install the filter so that air flows as marked by the arrow on the filter body.
5. Installation should be downstream of the regulator but upstream of any lubricator.

6. Install the filter vertically with the bowl drain mechanism at the bottom, ensuring there is sufficient free space below the filter for future access.
7. Remove the blanking plugs from the connection ports and connect to the supply and delivery hoses.
8. A drain hose can be screwed to the drain port or the filter bowl drained manually.
9. Your filter is now ready for use.

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## **USE AND CARE IN SERVICE**

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1. Let the filter run with the air supply on. Ensure that the pressure to the air inlet of the filter from air line does not exceed the maximum pressure specified.
2. The filter is equipped with a manual drain valve. Turn the drain valve to expel accumulated liquid inside the bowl whenever necessary and always keep the liquid below the filter element.
3. 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 (See Specification). Refer to the maximum flow rate of your filter and make sure that the required CFM of the tool is within the maximum flow rate of your filter for best tool operation.
4. Check the visual indicator and drain the filter bowl when required using the drain tap. A hose may be connected to drain the condensate into a suitable container.

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## **MAINTENANCE**

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### **DISASSEMBLY**

1. The filter can be disassembled without removal from the air line.
2. Shut off inlet pressure. Reduce pressure in the inlet and outlet lines to zero.
3. Unscrew the bowl.
4. Disassemble in accordance with the parts illustrated on page 7. Do not remove the drain unless replacement is necessary. Remove and replace only when the drain malfunctions or is being replaced with an optional automatic drain.

## CLEANING

1. Clean all parts with warm water and soap.

**CAUTION: Some 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, gasolene or synthetic fire resistant lubricants.**

2. Rinse and dry the parts. Blow out internal passages in the body with clean, dry, compressed air. Blow air through the filter element from inside to outside to remove surface contaminants.
3. Inspect all parts and replace any found to be damaged.

## ASSEMBLY

1. Lubricate the O-rings, the portion of the manual drain body that contacts the bowl, and the hole in the manual drain body that accommodates the stem of the drain valve with O-ring grease.
2. Assemble the filter as shown on page 7. Place the O-ring on the louver, then press into place in the body. Screw the baffle on the center post until contact is made with the filter element, then tighten an additional 1/4 turn.
3. Assemble the Sight glass kit (Ref. No.6) to the bowl. Apply a gentle clamping force to the upper and lower sight glass brackets to pull the brackets together, then tighten the screws per the table below.
4. Tighten these parts listed in Torque Settings table.
5. Twist the bowl into the body until the arrowhead is in line with or to the right of the arrowhead on the body.

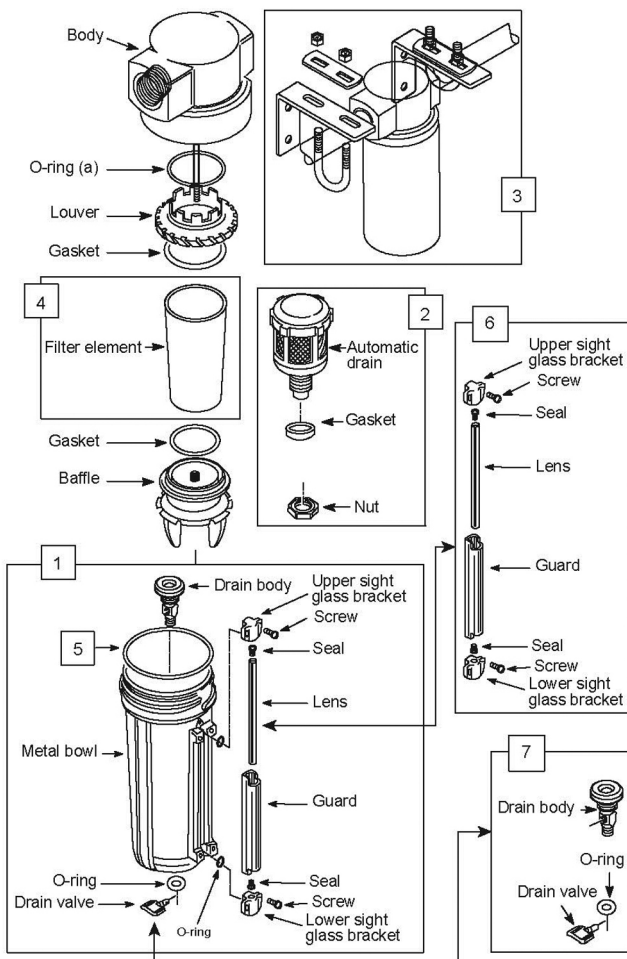
Torque Settings	
Part	Inch Pounds (N-m)
Screw	8 to 10 (0.9 to 1.13)
Nut	20 to 25 (2.3 to 2.8)

## ACCESSORIES

A wide range of accessories is available including filter/regulators, lubricators, high-pressure hoses (5 to 50 metres) etc.

Contact your CLARKE dealer for further information or CLARKE International Service Department.

# PARTS LIST & DIAGRAM



No	Description
1	Metal bowl and O-ring
2	Auto drain kit
3	Wall bracket
4	5 micron filter element

No	Description
5	O-Ring
6	Sight glass kit
7	Manual drain kit

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### WATER PUMPS

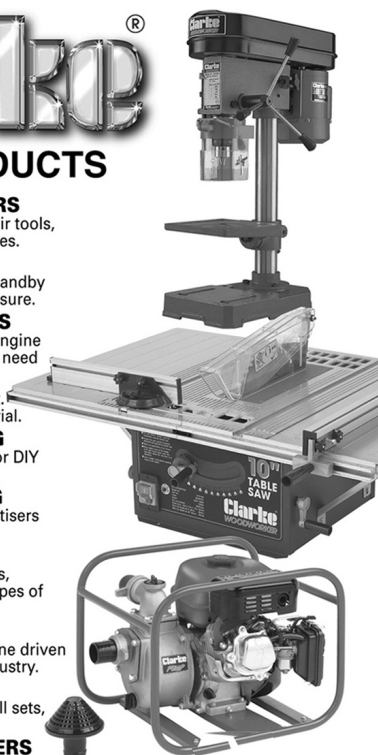
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## Guarantee

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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