

ClarkeTM

air

RANGER 25A

OIL FREE

Part No. 2220066



**OPERATING & MAINTENANCE
INSTRUCTIONS**

Product Serial No.

SAFETY PRECAUTIONS

WARNING

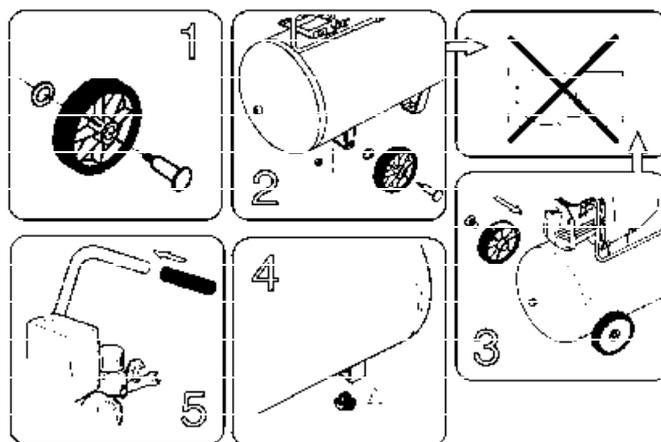
As with all machinery, there are certain hazards involved with their operation and use. Exercising respect and caution will considerably lessen the risk of personal injury. However, if normal safety precautions are overlooked, or ignored, personal injury to the operator, or damage to property may result. It is in your own interest to read and pay attention to the following rules:

1. **NEVER** direct a jet of air at people or animals, and NEVER discharge compressed air against the skin. COMPRESSED AIR IS DANGEROUS,
2. **NEVER** operate your compressor with any guards removed.
3. Electrical or mechanical repairs should only be carried out by a qualified engineer. If problems occur, contact your Clarke dealer.
4. Before carrying out any maintenance, ensure the pressure is expelled from the air receiver, and the machine is disconnected from the mains.
5. **NEVER** leave pressure in the receiver overnight, or when transporting.
6. **NEVER** adjust, or tamper with the safety valves. The maximum pressure is factory set, and clearly marked on the machine.
7. **NEVER** operate in wet or damp conditions. Keep the machine dry at all times.
8. **NEVER** use in dusty or otherwise dirty locations. A clean atmosphere will ensure efficient operation.
9. Some of the metal parts can become quite hot during operation. Take care not to touch these until the machine has cooled down.
10. **ALWAYS** adjust the pressure regulator to the recommended setting for the particular spray gun or tool being used.
11. **ALWAYS** ensure there is adequate ventilation when spraying inflammable materials e.g., cellulose paint, and keep clear of any possible source of ignition.
12. **ALWAYS** protect yourself. Think carefully about any potential hazards which may be created by using the air compressor and use the appropriate protection. e.g. Goggles will protect your eyes from flying particles. Face masks will protect you against paint spray and/or fumes.
13. **ALWAYS** consult paint manufacturers instructions for safety and usage Before spraying any material .

14. Personal safety products can be obtained from your local dealer.
15. **NEVER** exert any strain on electrical cables and ensure that air hoses are not tangled or wrapped around machinery etc.
16. When disconnecting air hoses or other equipment from your compressor **ALWAYS** ensure that the air supply is turned off at the machine outlet and expel all pressurised air from within the machine and other equipment attached to it.
17. **ALWAYS** keep children and animals well away from the compressor and any equipment attached to it.
18. **ALWAYS** ensure that all individuals using the compressor have read and fully understand the Operating Instructions supplied.

ASSEMBLY

The wheel assembly, handle grip and rubber foot are packed separately. The method of assembly is shown on the packaging, and is duplicated below.



ELECTRICAL CONNECTIONS

Connect the mains lead to a standard, 230 Volt (50Hz) electrical supply through an approved 13 amp BS 1363 plug, or a suitably fused isolator switch.

WARNING! THIS APPLIANCE MUST BE EARTHED

IMPORTANT: The wires in the mains lead are coloured in accordance with the following code:

Green & Yellow	-	Earth
Blue	-	Neutral
Brown	-	Live

As the colours of the flexible lead of this appliance may not correspond with the coloured markings identifying terminals in your plug proceed as follows:

Connect GREEN & YELLOW cord to terminal marked with a letter "E" or Earth symbol "⏚" or coloured GREEN or GREEN & YELLOW.

Connect BROWN cord to terminal marked with a letter "L" or coloured RED.

Connect BLUE cord to terminal marked with a letter "N" or coloured BLACK.

If this appliance is fitted with a plug which is moulded onto the electric cable (i.e. non-rewireable) please note:

1. The plug must be thrown away if it is cut from the electric cable. There is a danger of electric shock if it is subsequently inserted into a socket outlet.
2. Never use the plug without the fuse cover fitted.
3. Should you wish to replace a detachable fuse carrier, ensure that the correct replacement is used (as indicated by marking or colour code).
4. Replacement fuse covers can be obtained from your local dealer or most electrical stockists.

FUSE RATING

The fuse in the plug must be replaced with one of the same rating (**13 amps**) and this replacement must be ASTA approved to BS1362.

We strongly recommend that this machine is connected to the mains supply via a Residual Current Device (RCD)

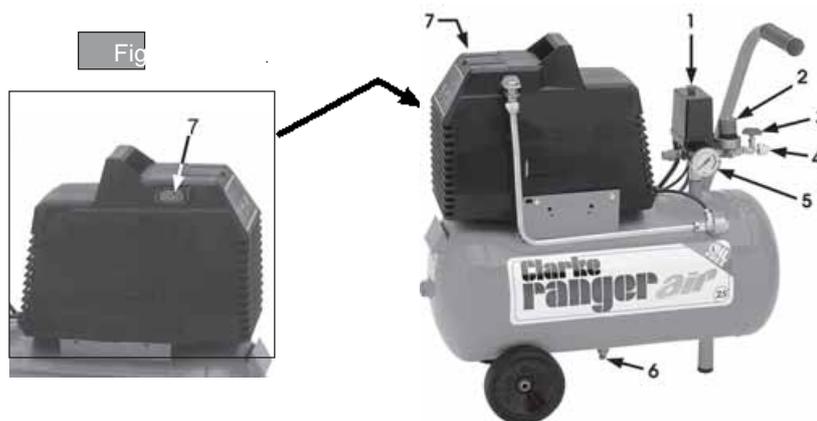
If in any doubt, consult a qualified electrician. DO NOT attempt any repairs yourself.

OPERATION (Numbers in brackets refer to fig. 1 below)

Before connecting your Ranger25 to the mains supply, check the following:-

- The mains voltage is 230V.
- The ON/OFF control knob (1) is in the OFF (lower) position.
- The pressure regulator (2) should be set at its lowest setting, i.e. turned fully anticlockwise, and the tap (3) screwed IN to its closed position.
- If the machine has not been used for 24 hours or so, open the air receiver drain valve (6) to drain any condensate which may have accumulated. When clear, close the valve, finger tight.

IMPORTANT: If the receiver is under pressure, keep your hands well away from the air being expelled.... remember, compressed air is DANGEROUS!



Now connect a suitable air hose, fitted with quick-fit adaptors, between the air outlet (4) and the spray gun or air tool being used.

Ensure that the rubber washers are in place to form the necessary air tight seals. These fittings should be screwed by hand but take care not to over tighten. If a rubber seal is damaged then it should be replaced.

If you do not wish to use the Quick Fit method of hose connection, simply remove the Quick Fit retaining nut and use an air hose fitted with conventional 1/4 BSP connectors.

Once the hose connections are complete, CHECK AGAIN to ensure the pressure regulator (2) is turned fully anticlockwise so that compressed air cannot reach the air tool, and switch the compressor ON, by lifting the ON/OFF knob (1), until it clicks into the upper position. The air compressor will now start, and pressure will build up in the receiver to a regulated maximum pressure of 115 psi (8 Bar) as indicated on the pressure gauge (5).

Turn ON the air supply to your air tool by opening the tap (3), and turn the pressure regulator (2) clockwise so that your chosen setting, shown on the label on top of the regulator knob, is opposite the inverted vee mark on the side of the casting. Note that the pressure gauge registers the pressure in the air receiver only.

Check to ensure that there are no air leaks at any of the couplings or in other parts of the system before operating the spray gun or air tool in the normal way.

When the compressor reaches its maximum working pressure, the motor will automatically cut out, and will restart when the pressure has fallen by approximately 20 psi. This automatic STOP/START process will continue, as necessary, to maintain pressure in the receiver.

When you have finished the job in hand **ALWAYS** switch OFF at the ON/OFF switch, NOT the mains supply, and release any pressure remaining in the system by opening the drain valve until all air is expelled. This also allows any condensate to drain off.

Operate the air tool to further ensure that there is no pressure in the system before disconnecting the tool.

ROUTINE MAINTENANCE

Daily before use, always open the drain valve to ensure that any condensate, which may have accumulated, is drained off.

It is important to keep the CLARKE Air Compressor clean, and this may be done with the help of a small soft brush and vacuum cleaner. In particular, the air intake filter should be inspected AT LEAST MONTHLY, and more often in dusty conditions, so that it is always kept free of any dirt particles, which if not cleaned away, will affect the performance of the machine. Also, particles must not at any time be allowed to pass through into the cylinder head as this would adversely affect the valves, possibly causing damage, and entail more extensive dismantling and cleaning.

Before carrying out any of this service work, always disconnect the machine from the mains supply, drain the air receiver and, if necessary, allow the machine to cool down before starting work.

To clean the air intake filter, carefully prise off the plastic cover and remove the sponge element from inside. (See fig. 1, item 7). Clean the sponge and the inner housing using a soft brush.

If necessary, the sponge filter may be gently washed in warm soapy water, rinsed and allowed to dry thoroughly before refitting. Ensure that the outer filter cover is then clipped back into its original position. If any part of the filter is damaged then you should obtain a replacement.

TROUBLE SHOOTING

With considerate use, your CLARKE Air Compressor should provide you with a long and trouble free period of operation. Routine checks should be made on both the electrical supply as well as on all the compressed air lines and connections. If any fault appears, the reason for which is not immediately obvious, we recommend that you contact your local CLARKE Dealer.

PROBLEM	PROBABLE CAUSE	REMEDY
The compressor stops and will not start again.	Bad connections. Overload cutout switch has tripped. Motor windings burnt out.	Check electrical connections. Clean and tighten as necessary. Switch off and wait 5 minutes before switching on. Contact your local dealer for a replacement motor.
The compressor does not reach the set pressure and overheats easily.	Compressor head gasket blown or valve broken.	Wait for compressor to cool down, disassemble head and replace any broken components. Carefully clean all sealing surfaces before reassembling. If in doubt contact your CLARKE dealer.
Compressor does not start.	Air receiver charged	Open drain cock to expel air. Compressor should start again when pressure reduces to approx. 95 psi.

CAUTION Do not attempt any repair or adjustment if you are uncertain as to how it should be done. If you have any queries, contact your local CLARKE Dealer.

ACCESSORIES

Your RANGER 25 Oil Free compressor can be used with a wide range of optional accessories, for inflating tyres, paint spraying, air brushing, stapling, blowing etc. For details, please contact your dealer or your local dealer.



SPECIFICATIONS

Electrical Supply	230 V, 1 Phase 50Hz
Motor Rating	1.5 HP
Max. Air Pressure	115 lbf/in ²
Max. Air Pressure	8 bar
Air Displacement	7 cuft/min
Air Receiver	24 litre
Weight (Packed)	26kg
Dimensions	660x330x630mm

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. Always consult the machine's data plate

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.
- 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, air pressure is too low. above 50 psi, unless	Add thinners Increase air pressure (not specified by paint manuf.
Paint dries before hitting surface, leaving it dry with a rough texture	Paint is too thin. Air pressure is too high	Add more paint. Reduce air pressure
Finish is pitted like Orange peel	Air pressure too high or spray too close to work	Reduce air pressure, increase distance between gun and workpiece

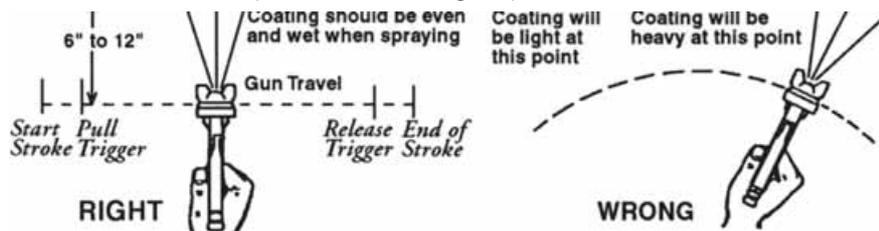
For a professional looking finish paint must be thinned. If the manufacturers recommendations on thinning are not available, the following can be used as a general guide: Water based paints (emulsions) - 10-20% water
 Oil based paints (gloss) - up to 10% white spirit thinners
 Cellulose paints - up to 50% cellulose thinners

3. HANDLING THE GUN

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

The distance between gun and surface should be 6 to 12 inches depending on material and atomizing 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 atomizing air pressure.



4. SPRAY GUN MAINTENANCE

1. Immerse only the front end of the gun until solvent just covers the fluid connection.
2. Use a bristle brush and solvent to wash off accumulated paint.
3. Do not submerge the entire spray gun in solvent because:
 - a. the lubricant in the gland packings will dissolve and the packings will dry out.
 - b. the lubricant will dissolve causing harder operation and faster wear.
 - c. residue from dirty solvent may clog the narrow air passages in the gun.
4. Wipe down the outside of the gun with solvent dampened rag.
5. Lubricate gun daily. Use a light machine oil on:
 - a. fluid needle packing.
 - b. air valve packing.
 - c. fan control packing.
 - d. trigger pivot point.

Coat the fluid control spring with vaseline.

Caution: Never use lubricants containing silicone as this may cause finish defects.

PARTS LIST

No.	Description	Qty	Part No.	No.	Description	Qty	Part No.
1	Air Reservoir	1	FN168HQ1000V	25	Filter Assembly	1	FN317028000
2	Plug	2	FN011008000	26	Comp. Head	1	FN116005031
3	Wheel Insert	2	FN168HQ0004	27	Head Bolt	4	FN014013027
4	Wheel	2	FN020188000	28	Head Gasket	1	FN116005017
5	Washer	2	FN014005006	29	Valve Block	1	FN416005008
6	Nut	2	FN014003005	30	Ring Silicone	1	FN010057000
7	Drain Valve	1	FN022020000	31	Cylinder	1	FN016005007
8	Foot Antivibration	1	FN020146000	32	Bearing 6203	1	FN033059000
9	Screw	2	FN014013042	33	Piston Assy.	1	FN416005002
10	O-Ring	1	FN010041000	34	Screw	1	FN014002027
11	Spring	1	FN047113002	35	Washer	1	FN116010013
12	Element	1	FN047113001	36	Fan	1	FN116010004
13	Valve Kit	1	FN347043000	37	Shaft	1	FN116115001
14	Tube	1	FN046001000	38	Crankcase Hsg.	1	FN016010007
15	Connector	1	FN199110140	39	Bolt	3	FN014002121
16	Pressure Gauge	1	FN330004000	40	Bearing 6204	1	FN033028000
17	Connector	1	FN011017000	41	Rotor	1	FN034133000
18	Pressure Regulator	1	FN319044000	42	Stator	1	FN316115604
19	Tap Assembly	1	FN322007000	43	Bearing 6202	1	FN033070000
20	Regulator Assy.	1	FN321053000	44	Spring Ring	1	FN027011000
21	Valve	1	FN347022000	45	Housing	1	FN016010016
22	Power Cable	1	FN101GA0200	46	Nut	3	FN014004001
23	Handle	1	FN020147000	47	Capacitor	1	FN009200014
24	Tube	1	FN117HL0010	48	Fuse Protection 8A	1	FN008040000
	- Wheel Kit compl.		FN117HL0010				

For Spare Parts and Service, please contact your nearest dealer, or CLARKE International, on one of the following numbers.

PARTS & SERVICE TEL: 020 8988 7400

PARTS & SERVICE FAX: 020 8558 3622

or e-mail as follows:

PARTS: Parts@clarkeinternational.com

SERVICE: Service@clarkeinternational.com

PARTS DIAGRAM

