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Clarke® INTERNATIONAL
For spare parts and servicing, please contact your nearest dealer, or Clarke International on:
020 - 8938 - 7400
E-mail: Parts@clarkeinternational.com; e-mail: Service@clarkeinternational.com
Hemnall Street, Epping, Essex CM16 4LG

Clarke air

OPERATING & MAINTENANCE
INSTRUCTIONS FOR
RANGER 25 & RANGER 50
<table>
<thead>
<tr>
<th>Specification</th>
<th>Ranger25</th>
<th>Ranger50</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Displacement</strong></td>
<td>7cfm</td>
<td></td>
</tr>
<tr>
<td><strong>Max Pressure</strong></td>
<td>115psi</td>
<td></td>
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<tr>
<td><strong>Power</strong></td>
<td>1.5hp</td>
<td></td>
</tr>
<tr>
<td><strong>Voltage</strong></td>
<td>230 V 1phase</td>
<td></td>
</tr>
<tr>
<td><strong>Receiver</strong></td>
<td>Ranger25, 24litres</td>
<td>Ranger50, 50litres</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>Ranger25, 660x330x630mm</td>
<td>Ranger50, 1055x310x660mm</td>
</tr>
<tr>
<td><strong>Part Number</strong></td>
<td>Ranger25, 2220061</td>
<td>Ranger50, 2220062</td>
</tr>
</tbody>
</table>
SAFETY PRECAUTIONS

Before using your compressor it is in your own interest to read and pay attention to the following safety rules:

1) COMPRESSED AIR IS DANGEROUS - Never direct a jet of air at people or animals.
2) Do not operate your air compressor with any guards removed.
3) Electrical or mechanical repairs should only be carried out by a qualified electrician/engineer. If you have a problem, contact your local dealer.
4) Before attempting any repair ensure pressure is expelled from the air receiver and disconnect from electrical supply.
5) Do not leave pressure in air receiver overnight or when transporting.
6) Do not adjust or tamper with any safety valves. The maximum working pressure of the compressor is clearly stated on the machine.
7) Exercise caution when transporting the machine to avoid tipping the machine over.
8) Do not operate in a wet/damp environment.
9) Locate your air compressor on a firm flat surface and ensure an adequate supply of clean air is available to the pump unit.
10) Do not exert any strain on electrical cables and ensure that air hoses are not tangled or wrapped around machinery etc.
11) The cylinder head and delivery pipes of your compressor become quite hot during operation. Do not touch. After switching off remember to leave an adequate cool-down period before touching.
12) Ensure that any equipment/tools used in conjunction with your compressor have a safe working pressure exceeding the output pressure of the machine.
13) When disconnecting air hoses of other equipment from your compressor ensure that the air supply is turned off at the machine outlet and expel all pressurised air from within the air hose and other equipment attached to it.
14) If using your compressor for paint spraying:
(a) Never spray close to any source of flame or heat.
(b) Always ensure that the spraying area has adequate fresh air ventilation.
(c) Refer to material manufacturer's guidance/safety information.
15) Make sure that children and animals are kept well away from the compressor and any equipment attached to it.
16) Always ensure that all individuals using the compressor have read and fully understood the Operating Instructions supplied.
17) Do not use machine on an electrical extension cable.
**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:

1. Connect GREEN & YELLOW cord to terminal marked with a letter "E" or Earth symbol "ī" or coloured GREEN or GREEN & YELLOW.
2. Connect BROWN cord to terminal marked with a letter "L" or coloured RED.
3. 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.
2. Never use the plug without the fuse cover fitted.
3. Should you wish to replace a detachable fuse cartridge 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 the replacement must be ASTA approved to BS 1362.

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.
PREPARING FOR USE

Ranger 50 only

1) Locate the stub axle fittings in the legs of the air receiver and secure a wheel onto each axle using the caps provided.

2) Attach the front rubber foot using the bolt provided.

Ranger 25 and 50

3) Remove the plastic travel plug from the oil filling hole on the side of the crankcase and insert the oil filter supplied.

4) Check the oil (SAE 40) is at the correct level by ensuring that the oil level is between the minimum and maximum marks indicated on the Dipstick (7).

5) When operating any air operated tools or equipment always refer to the manufacturers instructions.

Ranger spray kits only

6) Your spray kit is supplied with Spraygun, hose and couplings for paint spraying. Connect the rubber hose to the Spraygun inlet using the couplings supplied.
OPERATING AND SPRAYING

Important: If you intend using your compressor for spraying read the "Helpful Hints on Spraying" booklet supplied with the machine.) In conjunction with these instructions.

1) Check that the mains voltage corresponds with that shown on the data sticker on the crankcase cover (6) of the machine.

2) Ensure that the switch on the Pressure Switch (5) is in the "OFF" (0) position, then switch on the mains (Picture 1).

3) To start the compressor switch the Pressure Switch (5) to the "ON" (1) position (Picture 1). The motor should start immediately.

Note: Should the motor fail to start immediately it is probable that the receiver tank is already full of air. Check the tank pressure gauge (2) and release air if necessary by opening air outlet tap (5 in Picture no. 2). The motor will start automatically when the tank pressure is reduced.

4) Before connecting your airline to the compressor allow it to run with the air outlet tap (5) completely open to permit a good distribution of the lubricating oil.

5) Close the outlet tap, connect one end of suitable air hose(s) to the compressor air outlet, and the other end to the equipment to be used. Set the operating pressure by adjusting the pressure regulation knob (4 in Picture no. 2). Adjust the pressure by turning the knob (clockwise to increase, anticlockwise to decrease) (Picture 2). When the required pressure is reached push the knob down again to hold the setting.

Note: For most spraywork do not exceed 50 psi (unless following paint manufacturer’s instructions). For other airline equipment not supplied such as air tools, tyre gauge, staple gun, paraffin gun etc. it may be necessary to set the operating pressure at a higher (or lower) level. Please refer to the ACCESSORY MANUFACTURERS RECOMMENDATIONS FOR OPTIMUM OPERATING PRESSURE OF THEIR EQUIPMENT.

TROUBLESHOOTING

Problem: Pressure drop in Tank.
Cause: Leakage at connections.
Remedial action: Pump up the compressor to maximum pressure. Un-plug at mains and brush a soapy water solution onto all connections and joints. Look for bubbles. Tighten connections or joints where leakage is visible. (Isolate) un-plug at mains

Problem: The pressure switch valve leaks when the compressor is stopped.
Cause: Non-return valve seal dirty or defective.
Remedial action: Release any air in tank. Remove non-return valve plug and carefully clean the valve seats. If necessary replace the seal.

Problem: The pressure switch valve leaks air when the compressor has been running for more than 1 minute.
Cause: Failure of empty-start valve located under pressure switch.
Remedial action: Replace the empty-start-valve.

Problem: The compressor stops and will not start again.
Cause: Bad connections.
Remedial action: (Isolate) un-plug at mains. Check the electrical connections. Clean and tighten as necessary.

Cause: Overload cut out. Switch has cut out.
Remedial action: 1) Automatic overload cut-out. Switch off and wait 5 minutes before switching on.

Cause: Motor windings burnt out.
Remedial action: 2) Contact your local dealer or Clarke International for a replacement motor.

Problem: The compressor does not reach the set pressure and overheats easily.
Cause: Compressor head gasket blown or valve broken.
Remedial action: (Isolate) un-plug at mains. Wait for compressor to cool down. Disassemble the head and replace any broken components. Carefully clean all sealing surfaces before reassembling.
1) Oil Filler Dipstick
2) Air Filter
3) Pressure Switch
4) Pressure Regulator
5) Air Outlet Cock
6) Outlet Pressure Gauge
7) Tank Pressure Gauge
8) Receiver Drain Tap
9) Crankcase Cover

6) With operating pressure set, re-open the air outlet tap.

7) The Pressure Switch should not require adjustment. This is an automatic device and has been preset at the factory to stop the motor when pressure in the receiver reaches its maximum, and to start it again when the pressure in the receiver falls to the minimum preset value. This operation is completely automatic and does not affect the spraying process in any way.

NOTE: If the machine pumps continuously without cutting out then the compressor is too small for the application tool being used, and damage may result. Consult your dealer.

SHUTTING DOWN THE COMPRESSOR

1) The Pressure Switch is furnished with an ON/OFF switch (See Picture 1) which, when moved to the OFF (O) position not only cuts the motor, but also opens the breather valve. Always use this switch to shut down the compressor. NEVER USE THE MAINS SWITCH TO STOP MOTOR.

2) Close the air outlet tap and trigger the equipment (spraygun, airlsotol, etc.) to release air from the air hose before disconnecting the hose from the machine.

3) Before transporting your compressor or when leaving overnight, expel all air from the receiver by opening the air outlet tap.

ACCESSORIES

Your Ranger Air Compressor can be used in conjunction with a range of optional accessories, for inflation, tyres, air brushing, stapling, blowing and many other uses. For further details please contact your nearest dealer or Clarke International (Sales Dept.) on 081 986 6231.

SPARES AND SERVICING

For spare parts and/or further servicing information please contact your nearest Clarke Dealer or Clarke International on one of the following telephone numbers.

*Illustrations p89
MAINTENANCE

After the first 6 hours of running the compressor, check the cylinder head bolts and motor housing screws and retighten if any have worked loose.

Check the oil level before you start working and top-up if necessary (use Clarke SAE 40 compressor oil).

After the first 100 hours use replace the oil completely using Clarke SAE 40 compressor oil. Replace the oil completely after every 500 hours of operation or every 6 months. To empty the oil from the machine remove the nut on the crankcase cover (see picture 3).

Every 50 hours use (more frequently if used in a dusty environment), remove the air filter (2) and clean it with compressed air, blowing in the opposite direction to the usual air passage. Caution: Wear eye protection.

Drain the moisture out of the receiver daily by unscrewing the drain plug (6) underneath the air receiver (Picture 4).

Every 500 hours of operation or every 6 months:
- clean all the external parts of the compressor.
- This cleaning makes cooling processes more efficient and prolongs the life of the machine.
- Check and clean the inlet and outlet valves.
- Examine the non-return valve and replace the valve disc if necessary.

In the event of an air leak follow the procedure below:
- Load compressor to maximum pressure
- Unplug the compressor
- With a brush and soapy water wet all "screwed" connections
- Any leaks will show through the formation of air bubbles.

NEVER UNSCREW A CONNECTION WHILE THE RECEIVER TANK IS UNDER PRESSURE ALWAYS MAKE CERTAIN THAT THE TANK HAS FIRST BEEN EMPTIED.