Also available without the spray gun - PART NO. 3110170 or items sold separately.

If you experience any difficulties obtaining accessories please contact Clarke International by telephoning 01992 565300 for details of your nearest Clarke international dealer.

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.

ACCESSORIES

Your Ranger Air Compressor can be used in conjunction with a range of optional accessories for inflating tyres, air brushing, stapling, blowing and many other uses. A comprehensive range of accessories is available from your local dealer. For details please contact your local dealer.

Please quote part number 3110165.

SPECIFICATIONS

- Rotational Speed: 2850 rpm
- Max. Pressure: 8 bar
- Air Displacement: 7 cu ft/min
- Electric Motor: 1.5 hp (1.1kW)
- Receiver: 24 LTR
- Cylinder Head Bolt Torque Setting: 8.8Nm (6.5lbf ft)
- Fuse Rating: 13amps
- Max. Operating Temperature: -40°C to 70°C
- Duty Cycle: S1 at max. 7 bar (i.e. Compressor may run continuously at 7 bar max.)
- Drain Valve: 7 bar
- Max. Operating Temperature: -40°C to 70°C
- Electrical Requirements: 8.8Nm (6.5lbf ft)
- Receiver: 24 LTR
- Cylinder Head Bolt Torque Setting: 8.8Nm (6.5lbf ft)
- Electric Motor: 1.5 hp (1.1kW)
- A displacement: 2850 rpm
- Max. Pressure: 8 bar
Thank you for purchasing this Ranger Air Compressor.

Before attempting to operate the machine, please read this leaflet thoroughly and carefully follow the instructions given. In doing so you will ensure the safety of yourself and that of others around you, and you can also look forward to the compressor giving you long and satisfactory service.

GUARANTEE

This 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.

Additional service charges for parts and components will be added to the purchase price.

CONTENTS

Page

Accessories ........................................................................ 15
Specifications .................................................................... 15
Parts and Service ................................................................ 13
Parts Lists and Diagrams .............................................. 17- 13
Fault Finding ...................................................................... 10
Maintenance ....................................................................... 8
Shutting Down ..................................................................... 8
Operation ........................................................................... 6
Preparation for Use ............................................................. 6
General Commercials ......................................................... 5
Safety Precautions .............................................................. 4

This guarantee does not affect your statutory rights.
SAFETY PRECAUTIONS

WARNING

As with all machinery, there are certain hazards involved with the operation of your compressor. However, the 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:

NEVER direct a jet of air at people or animals, and NEVER discharge compressed air against the skin.

COMPRESSED AIR IS DANGEROUS, NEVER operate your compressor with any guards removed.

NEVER carry out electrical or mechanical repairs unless you are fully qualified. If problems occur, contact your Clarke dealer.

NEVER exert any strain on electrical cables and ensure that air hoses are not tangled or wrapped around machinery etc.

NEVER leave pressure in the receiver overnight, or when transporting.

NEVER adjust, or tamper with the safety valves. The maximum pressure is factory set, and clearly marked on the machine.

NEVER operate in wet or damp conditions. Keep the machine dry at all times. Similarly, a clean atmosphere will ensure efficient operation. Do not use in dusty or otherwise dirty locations.

Some of the metal parts can become quite hot during operation. NEVER touch these until the machine has cooled down.

ALWAYS adjust the pressure regulator to the recommended setting for the particular spray gun or tool being used.

ALWAYS ensure that there is adequate ventilation and keep clear of any possible source of ignition when spraying inflammable materials e.g. cellulose paint.

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.

ALWAYS consult paint manufacturers instructions for safety and usage before spraying any material always.

ALWAYS ensure the pressure is expelled from the air receiver, and the machine is disconnected from the mains supply before carrying out any maintenance.

ALWAYS ensure that the air supply is turned off at the machine outlet when disconnecting air hoses or other equipment from your compressor. Expel all pressurised air from within the machine and other equipment attached to it.

ALWAYS ensure that children and animals are kept well away from the compressor and any equipment attached to it.

ALWAYS ensure that all individuals who will come into contact with the machine have read and fully understood the Operating Instructions supplied.

ALWAYS ensure that any equipment or tool used in conjunction with your compressor has a safety working pressure exceeding that of the machine.

NEVER use the operating instructions supplied.

NEVER use compressed air and any equipment or tool used in conjunction with the machine without first checking the pressure rating of the equipment or tool.

NEVER use compressed air or any equipment or tool used in conjunction with the machine for any purpose other than that for which it is intended.

NEVER operate your compressor with any guards removed.

PARTS and SERVICE CONTACTS

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

COMPRESSOR

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Qty</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Head Bolt</td>
<td>4</td>
<td>CMECR3501</td>
</tr>
<tr>
<td>2</td>
<td>Elbow</td>
<td>1</td>
<td>CMECR3502</td>
</tr>
<tr>
<td>3</td>
<td>Cylinder head</td>
<td>1</td>
<td>CMECR3503</td>
</tr>
<tr>
<td>4</td>
<td>Valve Block</td>
<td>1</td>
<td>CMECR3504</td>
</tr>
<tr>
<td>5</td>
<td>Valve</td>
<td>1</td>
<td>CMECR3505</td>
</tr>
<tr>
<td>6</td>
<td>Valve</td>
<td>1</td>
<td>CMECR3506</td>
</tr>
<tr>
<td>7</td>
<td>Valve</td>
<td>1</td>
<td>CMECR3507</td>
</tr>
<tr>
<td>8</td>
<td>Valve</td>
<td>1</td>
<td>CMECR3508</td>
</tr>
<tr>
<td>9</td>
<td>Head Gasket (Upper)</td>
<td>1</td>
<td>CMECR3509</td>
</tr>
<tr>
<td>10</td>
<td>Screw</td>
<td>2</td>
<td>CMECR3510</td>
</tr>
<tr>
<td>11</td>
<td>Cylinder Block</td>
<td>1</td>
<td>CMECR3511</td>
</tr>
<tr>
<td>12</td>
<td>Gasket</td>
<td>1</td>
<td>CMECR3512</td>
</tr>
<tr>
<td>13</td>
<td>Piston Ring set</td>
<td>1</td>
<td>CMECR3513</td>
</tr>
<tr>
<td>14</td>
<td>Piston</td>
<td>1</td>
<td>CMECR3514</td>
</tr>
<tr>
<td>15</td>
<td>Gudgeon Pin</td>
<td>1</td>
<td>CMECR3515</td>
</tr>
<tr>
<td>16</td>
<td>Circlip</td>
<td>2</td>
<td>CMECR3516</td>
</tr>
<tr>
<td>17</td>
<td>Piston Assy.</td>
<td>1</td>
<td>CMECR3517</td>
</tr>
<tr>
<td>18</td>
<td>Con-Rod</td>
<td>1</td>
<td>CMECR3518</td>
</tr>
<tr>
<td>19</td>
<td>Washer</td>
<td>1</td>
<td>CMECR3519</td>
</tr>
<tr>
<td>20</td>
<td>Nut</td>
<td>1</td>
<td>CMECR3520</td>
</tr>
<tr>
<td>21</td>
<td>Bearing</td>
<td>1</td>
<td>CMECR3521</td>
</tr>
<tr>
<td>22</td>
<td>Crankshaft Assy.</td>
<td>1</td>
<td>CMECR3522</td>
</tr>
<tr>
<td>23</td>
<td>End Housing Gasket</td>
<td>1</td>
<td>CMECR3523</td>
</tr>
<tr>
<td>24</td>
<td>Dipstick</td>
<td>1</td>
<td>CMECR3524</td>
</tr>
<tr>
<td>25</td>
<td>End Housing</td>
<td>1</td>
<td>CMECR3525</td>
</tr>
<tr>
<td>26</td>
<td>Screw</td>
<td>1</td>
<td>CMECR3526</td>
</tr>
<tr>
<td>27</td>
<td>Screw</td>
<td>3</td>
<td>CMECR3527</td>
</tr>
<tr>
<td>28</td>
<td>Bolt</td>
<td>2</td>
<td>CMECR3528</td>
</tr>
<tr>
<td>29</td>
<td>Motor Housing</td>
<td>1</td>
<td>CMECR3529</td>
</tr>
<tr>
<td>30</td>
<td>Rotor</td>
<td>1</td>
<td>CMECR3530</td>
</tr>
<tr>
<td>31</td>
<td>Stator Assy</td>
<td>1</td>
<td>CMECR3531</td>
</tr>
<tr>
<td>32</td>
<td>Bearing</td>
<td>1</td>
<td>CMECR3532</td>
</tr>
<tr>
<td>33</td>
<td>Housing</td>
<td>1</td>
<td>CMECR3533</td>
</tr>
<tr>
<td>34</td>
<td>Nut</td>
<td>1</td>
<td>CMECR3534</td>
</tr>
<tr>
<td>35</td>
<td>Fan Assy.</td>
<td>1</td>
<td>CMECR3535</td>
</tr>
<tr>
<td>36</td>
<td>Cover</td>
<td>1</td>
<td>CMECR3536</td>
</tr>
<tr>
<td>37</td>
<td>Overload reset</td>
<td>1</td>
<td>CMECR3537</td>
</tr>
<tr>
<td>38</td>
<td>Capacitor</td>
<td>1</td>
<td>CMECR3538</td>
</tr>
<tr>
<td>39</td>
<td>Gasket Set</td>
<td>1</td>
<td>CMECR3540</td>
</tr>
</tbody>
</table>
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 the GREEN & YELLOW cord to terminal marked with a letter "E" or Earth symbol or coloured GREEN or GREEN & YELLOW.
2. Connect the BROWN cord to terminal marked with a letter "L" or coloured RED.
3. Connect the 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 approved to BS1362.

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

If in any doubt, DO NOT attempt any connections or repairs yourself. Consult a qualified electrician or your local Clarke International dealer.
PREPARATION FOR USE

NOTE: All numbered items throughout this manual refer to the parts list item number.

1. Remove the plastic travel plug from the oil filler hole, on the top of the crank case, and insert the dipstick (see Fig. 7 - page 9).

2. Check the oil level is at the correct level on the dipstick, (refer to Fig. 1). Where necessary, topup with Clarke international Compressor Oil (Available from your local Clarke dealer).

3. Remove plastic travel plug from air filter inlet and screw on air filter using the single screw provided.

OPERATION

NOTE: If you intend using your compressor for spraying, read also the "Helpful Hints on Spraying" booklet supplied with the machine.

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

2. Ensure that the ON/OFF switch is in the 'OFF' (0) position, i.e. pushed DOWN, then plug in and switch on at the mains supply.

3. To start the compressor pull UP the ON/OFF switch to the ‘ON’ (1) position - the motor should start immediately.

PARTS LISTS AND DIAGRAMS
NOTE: Should the motor fail to start immediately, it is probable that the air receiver is already full of air. Check the air receiver for water and drain if necessary before attempting to start. If you release air by opening the air outlet tap, the motor will start automatically once the cut-in pressure is reached.

4. Before connecting your airline to the compressor allow it to run with the air outlet tap completely open for 10 - 15 seconds to permit a good distribution of the lubricating oil.

5. Close the outlet tap then connect one end of the airline to the compressor head, the other end to the equipment to be used. The compressor head is interchangeable with other Clarke accessories.

NOTE: Always refer to the accessory manufacturers’ instructions for correct operating procedure.

6. With the outlet pressure set, connect the air outlet.

NOTE: With pressure gauge showing, read the operating pressure. If the operating pressure is lower (or higher) than normal, check for leaks or air loss, and reconnect the air outlet.

IMPORTANT: Always refer to the accessory manufacturers’ instructions for correct operating procedure.

### FAULT FINDING

<table>
<thead>
<tr>
<th>Problem</th>
<th>Probable Cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>The compressor stops and will not start again.</td>
<td>Bad connections or valves. Check the connections and replace any broken components.</td>
<td>Return the machine to Clarke International.</td>
</tr>
<tr>
<td>Overheating</td>
<td>Compressor head gasket blown or valve broken.</td>
<td>Wait for compressor to cool down, disassemble the head and replace any broken components. Carefully clean all sealingsurfaces before reassembling. If in doubt contact Clarke International.</td>
</tr>
<tr>
<td>The compressor does not reach the set pressure and overheats easily.</td>
<td>Compressor head gasket blown or valve broken.</td>
<td>Wait for compressor to cool down, disassemble the head and replace any broken components. Carefully clean all sealingsurfaces before reassembling. If in doubt contact Clarke International.</td>
</tr>
<tr>
<td>Compressor does not start.</td>
<td>Air receiver charged (see also item 1).</td>
<td>Open drain cock to expel air.</td>
</tr>
<tr>
<td>Compressor does not start.</td>
<td>Air receiver charged (see also item 1).</td>
<td>Open drain cock to expel air.</td>
</tr>
<tr>
<td>Compressor does not start.</td>
<td>Air receiver charged (see also item 1).</td>
<td>Open drain cock to expel air.</td>
</tr>
<tr>
<td>Compressor does not start.</td>
<td>Air receiver charged (see also item 1).</td>
<td>Open drain cock to expel air.</td>
</tr>
</tbody>
</table>

### Output Pressure Regulator

Set the outlet pressure by adjusting the Output Pressure Regulator. To do this, pull the Regulator Knob upwards and turn it slowly until the desired pressure is reached. Pushing the knob down again holds the pressure setting. Read the operating pressure on the outlet pressure gauge.

NOTE: For most spray work do not exceed 50 psi (unless following paint manufacturers instructions). For other airline equipment, staplers, paraffin guns, etc., it may be necessary to set the operating pressure at a higher (or lower) level.

IMPORTANT: Always refer to the accessory manufacturers’ recommendations for optimum operating pressures for their equipment.
Parts List item No. 59

SHUTTING DOWN THE COMPRESSOR

1. The Pressure Switch is provided with an ON/OFF switch (See Fig. 2) which, when pushed down to the 'OFF' (O) position, cuts off the motor. 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, air tool 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 drain valve (52).

MAINTENANCE

A. DAILY

1. Check the oil level before you start and top-up if necessary - (use Clarke International compressor oil).

B. PERIODICALLY

1. After the first 5 hours of running the compressor, check the cylinder head for any loose bolts and make sure the non-return valve is clean and not damaged.

2. After the first 100 hours use, replace the oil completely using Clarke International compressor oil. Thereafter, replace the oil completely after every 500 hours of operation or every 6 months.

To empty the oil from the machine, remove the drain plug from the crankcase cover (see fig. 7).

3. Every 500 hours of operation or every 6 months, clean all the external parts of the compressor. Clean all the external parts of the compressor. (This cleaning makes the cooling process more efficient and prolongs the life of the machine).

4. Every 500 hours of operation or every 6 months, clean and check the inlet and outlet valves - Examine the non-return valve and other valves.

5. Check and clean the air filter (see fig. 6).

6. Check and clean the air filter before starting.

- Never unscrew a connection whilst the air receiver is under pressure. Always make certain that the tank has first been emptied.

WARNING:

ALWAYS trigger the air tool/spray gun BEFORE disconnecting the air hose.

ALWAYS trigger the air tool/spray gun BEFORE disconnecting the air hose from the receiver (fig. 5).

 When working in the vicinity of the equipment, make sure that the equipment is switched off and unplugged to prevent injuries.

WARNING:

Never use the switch to shut down the compressor when the pressure is high. This may cause the compressor to overheat and may damage the motor.

Swing into shop motors.

Always use the switch to shut down the compressor when the pressure is high. This may cause the compressor to overheat and may damage the motor.