

Thank you for purchasing this CLARKE, Paraffin fired Space Heater.

This range of portable heaters is designed for **industrial applications only**. As with all mechanical equipments, optimum performance will only be achieved if the correct application and servicing procedures are followed. Please read this leaflet thoroughly and follow the instructions carefully before attempting to use the heater. In doing so you will ensure the safety of yourself and that of others around you, and you can look forward to it giving you long and reliable service.

# GUARANTEE

This CLARKE 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.

Faulty goods should be returned to their place of purchase, no product can be returned to us without prior permission. This guarantee does not effect your statutory rights.

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# SAFETY PRECAUTIONS

### WARNING!

#### Lack of ventilation can cause Carbon Monoxide poisoning. CARBON MONOXIDE CAN KILL

Signs of Carbon Monoxide poisoning are, headaches, dizziness and/or nausea. Should anyone show these signs, they must GET FRESH AIR IMMEDIATELY.

Turn off the heater and have it serviced before using again.

Pregnant women, persons with a heart or lung condition, anaemia or under the influence of alcohol, or those at high altitudes, are more likely to be effected by Carbon Monoxide than others.

Read, and make sure you fully understand the following precautions and the hazards associated with this type of equipment.

- Use ONLY clean paraffin, Diesel Oil.
- NEVER use Gasoline, Naphtha, Paint thinners, Alcohol or other highly flammable fuels.
- Use ONLY with the electrical voltage specified
- NEVER use the heater where Gasoline, Paint thinner or other highly flammable vapour or high dust content is present.
- Ensure the appliance is properly earthed.
- Use ONLY in well ventilated areas. Provide ventilation of at least 2.75 square feet of fresh air for every 100,000 BTU/ hr of rating.
- The minimum clearance from any combustible materials is 8 feet (250cm) from hot air outlet and 4 feet (125cm) from the top and sides.
- Maintain the heater on a stable, level surface whilst hot or operating, or a fire could occur.
- Keep children and animals away from heater at all times.
- When used with a thermostat, bear in mind, the heater may start at anytime.
- Store the heater in a level position when filled, or fuel leakage may occur.
- Use heater in accordance with all fire regulations.
- NEVER use heater in living or sleeping areas.
- NEVER leave a heater plugged in without adult supervision if children or animals are likely to be present.
- NEVER move, handle, refuel or service the heater when it is hot, operating or plugged in.
- NEVER cover or impede air flow into or out of heater.
- NEVER attach duct work to the front of heater.
- Disconnect the heater from the power supply when not in use.

## 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 cord 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 " 4" 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-rewirable) please note:

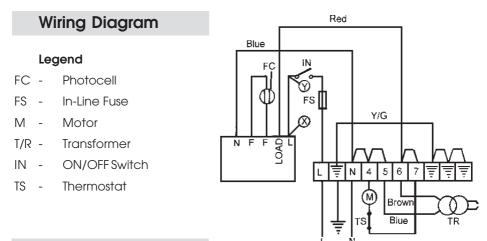
- 1. The plug must be thrown away if it is cut from the electric cable. There is a danger of electric shock if it is subsequently inserted into a socket outlet.
- 2. Never use the plug without the fuse cover fitted.
- 3. Should you wish to replace a detachable fuse carrier, ensure that the correct replacement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

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

## 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.

If in doubt, consult a qualified electrician. Do not attempt any electrical repairs yourself.



### **External Thermostsat**

A suitable external thermostat for measuring ambient temperature, should be fitted between points X and Y (Wiring diagram), **by a qualified electrician only.** 

### UNPACKING ref. Fig. 1

Unpack and check the heater for possible shipping damage. If any damage is found, immediately notify the dealer from whom heater was purchased.

These models (except XR55) are equipped with wheels and handles.

The loose items listed below, can be found in the shipping carton.

- 1. Handle(2)
- 2. Wheel Support Frame (3)
- 3. Wheels 2 pcs
- 4. Axle (6)
- 5. End Caps 2 PCs (5)
- 6. Washers 2 pcs
- 7. Screws w/nuts and washers 6 sets (7)

# ASSEMBLY ref. Fig.1

1. Slide the axle (6) through the wheel support frame (3), and install the wheels on the axle.

#### NOTE: The extended wheel hubs should be facing inwards.

Position the caps (5) on the axle ends and gently tap with a hammer to secure.

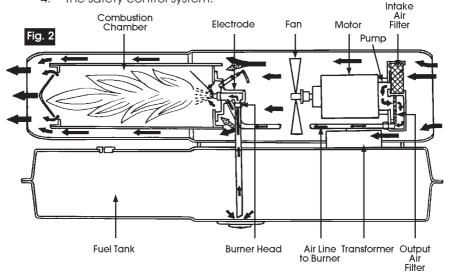
- 2. Position heater on the wheel support frame assembly, with air outlet end over the wheels.
- 3. Use the screws and nuts (7) to attach the handle (2), to the top of the fuel tank flange. The screws will go through the handles, the fuel tank flange, and the wheel support frame.
- 4. Tighten all nuts.

## OPERATION

Understanding the basic operation of the heater, will reinforce the need to maintain the unit in top condition at all times, whilst **always** observing the safety precautions.

The heater comprises four basic systems:

- 1. The fuel system.
- 2. The air system.
- 3. The ignition system.
- 4. The safety control system.



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### 1. The Fuel System.

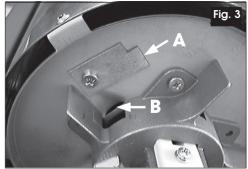
Fuel is held in the tank at the base of the system, at atmospheric pressure. An air pump, mounted on the end of the motor, draws air through a filter, compresses it, and forces it through a second filter, and via an air line, directly to the burner head nozzle. The speed of the air over the nozzle, causes a depression. Fuel is therefore forced up the tube by atmospheric pressure, through a filter, and out of the nozzle in the form of a spray.

It is important to ensure that the vent in the filler cap is not blocked at any time, otherwise fuel will not reach the nozzle.

#### This heater is capable of burning Paraffin or Diesel oil. NEVER use petrol.

As these fuels burn at different rates, provision is made to ensure that the correct volume of air is allowed into the combustion chamber for each type of fuel.

This is achieved by means of a blanking plate, at the rear of the burner, shown in Fig. 3,



The blanking plate is factory set to burn PARAFFIN, so that tab'A' covers vent 'B'

#### WARNING!

TO BURN DIESEL, THE BLANKING PLATE *MUST* BE MOVED TO THE POSITION SHOWN IN FIG.3, OTHERWISE DAMAGE TO THE COMBUSTION CHAMBER WILL OCCUR

#### NOTE:

A. In the case of MODEL XR75, there is insufficient room to store the blanking plate in the position shown above. The plate should therefore be removed and retained for possible future use.
 B. In the case of Model XR55, no changes are required for the burning of Diesel oil.

### 2. The Air System.

Additional air is supplied to the combustion chamber by a fan, which is mounted on the opposite end of the motor shaft to the Air Pump. Openings around the burner head allow a portion of this air to be drawn into the combustion chamber, where it mixes with the air and fuel from the nozzle, and ensures that all the fuel is burned, preventing the emission of black smoke.

The remaining air is directed around and over the combustion chamber, until it finally mixes with the heated air from the combustion chamber, and is ejected as a jet of clean hot air.

### 3. The Ignition System.

A constant arc is struck between the electrodes, which ignites the air and fuel mixture. It is important that the electrode gap is correctly maintained, otherwise arcing will not take place...see Maintenance.

### 4. The Safety Control System.

A light sensitive photo cell (flame sensor) trips the motor if the flame goes out for any reason, causing the heater to shut down.

# STARTING PROCEDURE

### Warning!

# Before starting the heater, you MUST ensure that the minimum ventilation requirements are observed, to avoid the risk of carbon monoxide poisoning.

Ensure the fuel tank is filled with the correct fuel, before plugging in to a suitably earthed supply. If you are changing the type of fuel, ensure the blanking plate at the rear of the burner is set to the correct position (see Notes on page 7).

It will be necessary to remove the top cover, by removing its 6 securing screws, to gain access to the rear of the burner, and the blanking plate.

If necessary, slacken off the blanking plate securing screw, turn the plate to its required position and tighten the securing screw. Replace the top cover, then, observing all precautions previously stated, push The start switch - `1' located on the left side of the machine, and shown at 8, fig. 1.

It is important to ensure that adequate ventilation is provided. The following chart gives the  ${\sf MINIMUM}$  requirements

| Heater Model | Minimum<br>Ventilation ft <sup>2</sup> | Minimum<br>Ventilation mtrs <sup>2</sup> |
|--------------|--|--|
| XR55         | 1.6                                    | 0.15                                     |
| XR75         | 2.5                                    | 0.23                                     |
| XR105        | 3.0                                    | 0.28                                     |
| XR155        | 4.6                                    | 0.43                                     |

#### Minimum fresh air opening requirements

eg. For XR75, a 3ft window must be open by 10" minimum

### PARTS & 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

# MAINTENANCE (ref. Parts List)

#### IMPORTANT

Before carrying out any adjustment or maintenance, ensure the heater is switched OFF, disconnected from the mains supply, and has been given adequate time to cool down, unless otherwise stated.

It is essential that the heater is correctly maintained and kept in top condition at all times.

Those items requiring regular maintenance comprise,

- 1. Intake Air Filter (Item 2)
- 2. Output Air Filter (Item 5)
- 3. Fan (Item 20)
- 4. Fuel Nozzle (Item 26)
- 5. Ignition Electrodes (Item 23)
- 6. Fuel Filter (Integral part of item 27)

The Intake and Output Air Filters, are accessible by removing the Grille (by removing the single hex socket centre screw), whereas accessibility to the remaining items requires the removal of the top cover (by removing the six screws at the centre joint).

### Monthly

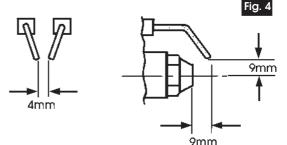
#### **Intake Air Filter**

Pull off the Intake Air Filter, which lies directly behind the Grille, and wash in a light detergent. Thoroughly dry before re-installing.

In dusty environments it may be necessary to carry out this procedure weekly. Never allow the filter to get blocked..

#### **Ignition Electrodes**

Having removed the heaters' top cover, remove the single screw retaining the electrode holder. Withdraw the holder, clean and adjust the gap between the electrodes, to 4mm.



When re-installing the electrode holder, there must be a gap of 9mm between the electrodes and the nozzle (see fig. 4). If this adjustment needs to be re-set, it is preferable to remove the burner head complete, by removing the securing screws around its' edge, taking care not to damage the photocell. The electrodes may then be adjusted to their correct clearance before replacing the Burner Head.

### **Bi-Monthly**

#### Fan.

Having removed the top cover, thoroughly clean the fan using a cloth moistened with paraffin or light solvent, and dry using an air line if possible.

#### Output Air Filter.

Remove the grille, and pull off the Intake Air Filter, revealing the 3 screws securing the filter housing. Remove the screws and pull off the housing to reveal the Output Air Filter. If contaminated, this filter must be renewed.

In dusty environments this procedure should be carried out, monthly

#### Nozzle.

Having removed the top cover, gently unscrew and remove the burner head, and unscrew the nozzle. Clean, using compressed air and a soft brush, if necessary. DO NOT prod or poke the nozzle in any way, with a metal tool.

### Following a period of Storage.

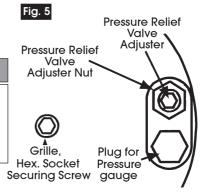
#### Pump Pressure.

Before putting the heater back into service, following a period of storage, you should carry out all checks previously specified. In addition, you should test and adjust if necessary, the Air Pump Pressure, as follows:

Near the centre of the Grille, is a cut-out to accommodate the Air Pump Pressure Relief Valve, and a plug for installing a Pressure Gauge as shown in fig. 5.

Remove the plug, and install a gauge with a resolution of at least 0.02 bar (0.3psi). Start the heater, and observe the pressure reading, which should be as follows:

| Model | Air Pump Pressure   |
|-------|---|
| XR55  | 0.28 - 0.30bar (4.06 - 4.35psi)<br>0.26 - 0.33bar (3.84 - 4.8psi) |
| XR75  | 0.26 - 0.33bar (3.84 - 4.8psi)                                    |
| XR105 | 0.30 - 0.36bar (4.45 - 5.3psi)                                    |
| XR155 | 0.30 - 0.39bar (4.45 - 5.7psi)                                    |



To adjust the pressure, insert an Allen key into the hex socket in the end of the Relief Valve Adjuster, and undo the Adjuster Nut. Turn the Allen key clockwise to increase pressure, and anticlockwise to decrease. Tighten the securing nut when the correct pressure is reached, ensuring the Allen key does not turn in the process.

### **Fuel Filter**

Removal of the fuel filter should it become blocked or contaminated, and require cleaning, involves the removal of the burner head complete. The fuel pipe, complete with filter, may then be detached, cleaned, using a good quality solvent, and dried with compressed air. It is recommended however, that if the filter becomes blocked, the complete assembly - fuel pipe with filter- should be renewed.

### General

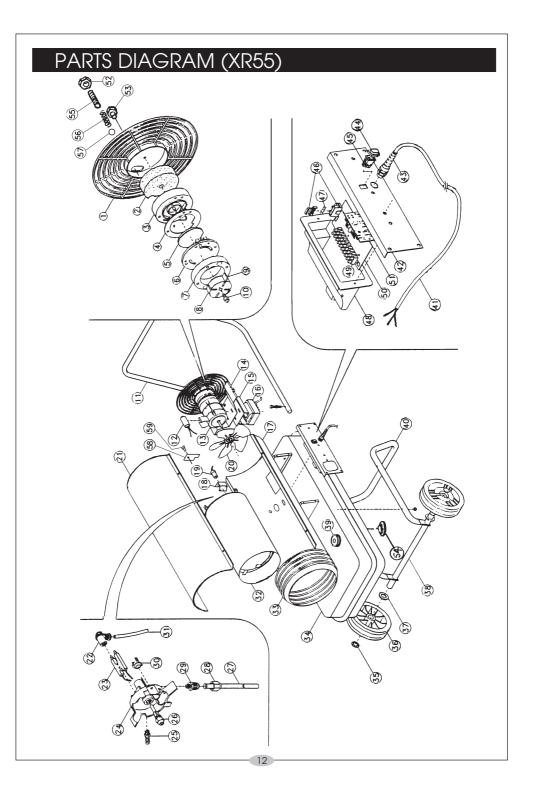
It should be noted that should the heater be used with Diesel oil or 35 second oil, servicing will need to be more frequent, due to the fact that these fuels do not burn as cleanly as paraffin, and some 'sooting up' will therefore occur.

It is recommended, that paraffin be used wherever possible

### Storage

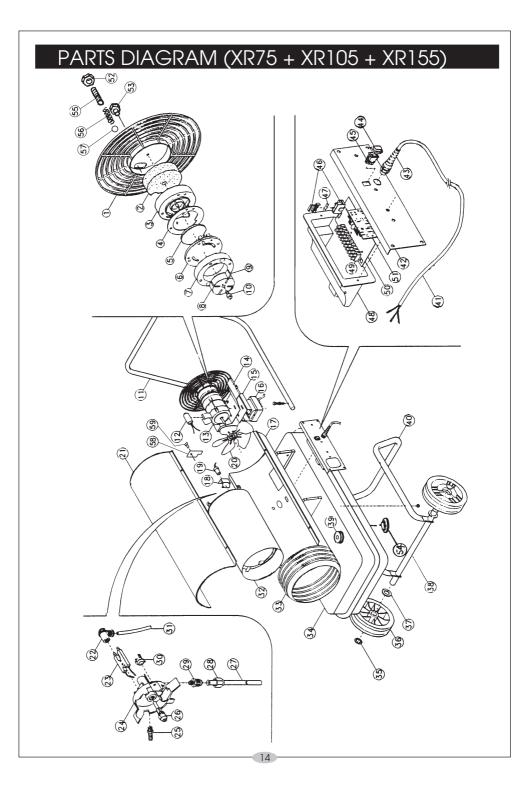
Drain all fuel from tank before storing.

- 1. Drain the fuel tank completely and add approximately one gallon of clean paraffin. Attach the fuel cap and move the heater forwards and backwards to circulate the fuel. Remove fuel cap or drain plug and drain tank completely
- 2. Replace fuel cap or drain plug and properly dispose of the old and dirty fuel.
- 3. Store the heater in a dry location free from corrosive fumes and dust.
- 4. Do not store kerosene over summer months for next seasons usage.



# Parts List (XR55)

| No. | Description       | Part No.     | No. | Description          | Part No.     |
|-----|-------------------|--------------|-----|----------------------|--------------|
| 1   | Rear Guard        | AX1006000111 | 32  | Burner Control Unit  | AX1047003611 |
| 2   | Air Inlet Filter  | AX1086001711 | 33  | Washer               | AX1018000800 |
| 3   | Cover             | AX1094007211 | 34  | Screw                | AX1016010200 |
| 4   | Gasket            | AX1002001311 | 35  | Motor Support        | AX1094005911 |
| 5   | Air Outlet Filter | AX1086000111 | 36  | Fan                  | AX1087006011 |
| 6   | Plate             | AX1094007311 | 37  | Lower Casing         | AX15911      |
| 7   | Stator Ring       | AX1094008111 | 38  | Ignition Transformer | AX1033003711 |
| 8   | Rotor Th. 17mm    | AX1099001611 | 39  | Front Disc           | AX1094051411 |
| 9   | Blade Th. 17 Mm   | AX1099001511 | 40  | Filling Cap          | AX1094004311 |
| 10  | Joint             | AX1001008211 | 41  | Tank                 | AX020MN820   |
| 11  | Screw             | AX1016005011 | 42  | Right Side Panel     | AX020C20     |
| 12  | Washer            | AX1018001600 | 43  | Comb. Chamber        | AXGRY015     |
| 13  | Screw             | AX1016005100 | 44  | Rubber Gasket        | AX1002002100 |
| 14  | Washer            | AX1018001600 | 45  | Flame Sensor         | AX1050000311 |
| 15  | Screw             | AX1016007700 | 46  | Upper Casing         | AX015MNG911  |
| 18  | Screw             | AX1023002511 | 47  | Handle               | AX1001002700 |
| 19  | Nut               | AX1017002111 | 48  | Motor 70 W           | AX1040011411 |
| 20  | Spring            | AX1023004211 | 49  | Capacitor            | AX1049001411 |
| 21  | Ball              | AX1023002411 | 50  | Suction Gasket       | AX1002005711 |
| 22  | Cover             | AX1001007736 | 51  | Ht Cable + Conn.     | AX1039033311 |
| 23  | Left Side Panel   | AX020N20     | 52  | Ignition Electrode   | AX1030002311 |
| 24  | Screw             | AX1016001700 | 53  | Combustion Head      | AX1094077211 |
| 25  | Screw             | AX1016008711 | 54  | Rubber Hose          | AX1078000111 |
| 26  | Fuse 3,15 A       | AX1035001111 | 56  | Hose Holder          | AX1067006011 |
| 27  | Power Cord        | AX1500UKSP2  | 58  | Nozzle               | AX1088010111 |
| 28  | Rivet             | AX1019002800 | 59  | Seeger Ring          | AX1018004011 |
| 29  | Spacer            | AX1001015680 | 60  | Nozzle Holder        | AX1067015911 |
| 30  | Switch Cover      | AX1002002755 | 61  | Oil Suction Filter   | AX1086004011 |
| 31  | Switch            | AX1032001900 |     |                      |              |



# PARTS LIST (XR75 + XR105 + XR155)

|     | Description        | Part No.     | Part No.     | Part No.     |
|-----|--------------------|--------------|--------------|--------------|
| No. | Description        | XR75         | XR105        | XR155        |
| 1   | Grille             | AX1001039711 | AX1001039811 | AX1001039911 |
| 2   | Air Intake Filter  | AX1008100911 | AX1008100911 | AX1008100911 |
| 3   | Air Pump End Plate | AX2003162911 | AX2003162911 | AX2003162911 |
| 4   | Gasket             | AX1001039611 | AX1001039611 | AX1001039611 |
| 5   | Air Output Filter  | AX1001039511 | AX1001039511 | AX1001039511 |
| 6   | Air Pump Cover     | AX2003162811 | AX2003162811 | AX2003162811 |
| 7   | Air Pump Ring      | AX1008100711 | AX1008100711 | AX1008100811 |
| 8   | Air Pump Rotor     | AX1008112511 | AX1008112511 | AX1008113211 |
| 9   | Air Pump Blade     | AX1008112411 | AX1008112411 | AX1008100311 |
| 10  | Coupling           | AX1001042011 | AX1001042011 | AX1001042011 |
| 11  | Handle             | AX2002022211 | AX2002022311 | AX2002022411 |
| 12  | Capacitor          | AX1005108900 | AX1005011432 | AX1005011432 |
| 13  | Motor              | AX1005103211 | AX1005103311 | AX1005103411 |
| 14  | Bracket            | AX2003174511 | AX2003174611 | AX2003174711 |
| 15  | Bracket            | AX2003176311 | AX2003176311 | AX2003176411 |
| 16  | Transformer        | AX1005106111 | AX1005106111 | AX1005106111 |
| 17  | Lower Body         | AX2003174111 | AX2003174211 | AX2003174311 |
| 18  | Bracket            | AX2003176611 | AX2003176611 | AX2003176611 |
| 19  | Photocell          | AX1005105911 | AX1005105911 | AX1005105911 |
| 20  | Fan                | AX1008101611 | AX1008101711 | AX1008101811 |
| 21  | Top Cover          | AX2003173811 | AX2003173911 | AX2003174011 |
| 22  | Spark Plug Cap     | AX1001000521 | AX1001000521 | AX1001000521 |
| 23  | Electrode          | AX1005103111 | AX1005103111 | AX1005103111 |
| 24  | Burner Head        | AX2003162711 | AX2003162711 | AX2003162711 |
| 25  | Holder             | AX1006029111 | AX1006029111 | AX1006022911 |
| 26  | Nozzle             | AX1008100511 | AX1008100411 | AX1008100611 |
| 27  | Hose               | AX200202911  | AX2002021011 | AX2002021111 |
| 28  | Screw Fitting      | AX1006028811 | AX1006028811 | AX1006028811 |
| 29  | Coupling           | AX1006028711 | AX1006028711 | AX1006028711 |
| 30  | Thermostat         | AX1005107911 | AX1005107911 | AX1005107911 |

### cont.

| 31       Cc         32       Cc         33       Air         34       Fue         35       Wr         36       Wr         37       Wc         38       Ax         39       Fue         40       Lov         41       Cc         42       Ins         43       Cc         44       Sw         45       Sw         46       Fue         47       Fue         48       Cc         49       Ter         50       PC         51       Floc | able<br>able<br>ombustion Chamber<br>r Diffuser<br>el Tank<br>heel End Cap<br>heel<br>asher<br>de<br>el Cap<br>wer Frame<br>able<br>strument Panel<br>able Cover | XR75           AX2005002000           AX2003173511           AX2003135211           AX2003176511           AX1004047911           AX1001040111           AX1004050511           AX2002022511           AX1006029811           AX1005102600           AX2003177211 | XR105<br>AX2005002000<br>AX2003173611<br>AX2003135411<br>AX2003177511<br>AX1004048011<br>AX1001040211<br>AX1001040211<br>AX1004050511<br>AX2002022611<br>AX2002022611<br>AX1006029811<br>AX2002022111<br>AX1005102600<br>AX2003177911 | XR155<br>AX2005002000<br>AX2003173711<br>AX2003135611<br>AX2003176711<br>AX1004048011<br>AX1001002000<br>AX1004050411<br>AX2002022711<br>AX1006029811<br>AX2002021511<br>AX2002021511 |
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| <ul> <li>34</li> <li>35</li> <li>35</li> <li>36</li> <li>37</li> <li>36</li> <li>37</li> <li>37</li> <li>37</li> <li>38</li> <li>Ax</li> <li>39</li> <li>40</li> <li>40</li> <li>40</li> <li>40</li> <li>41</li> <li>42</li> <li>43</li> <li>43</li> <li>44</li> <li>50</li> <li>40</li> <li>51</li> <li>Flore</li> </ul>   | el Tank<br>heel End Cap<br>heel<br>asher<br>de<br>el Cap<br>wer Frame<br>able<br>strument Panel  | AX2003176511<br>AX1004047911<br>AX1001040111<br>AX1004050511<br>AX2002022511<br>AX1006029811<br>AX2002021411<br>AX1005102600<br>AX2003177211  | AX2003177511<br>AX1004048011<br>AX1001040211<br>AX1004050511<br>AX2002022611<br>AX1006029811<br>AX2002022111<br>AX1005102600  | AX2003176711<br>AX1004048011<br>AX1001002000<br>AX1004050411<br>AX2002022711<br>AX1006029811<br>AX2002021511<br>AX1005102600  |
| <ul> <li>35</li> <li>35</li> <li>36</li> <li>37</li> <li>38</li> <li>38</li> <li>39</li> <li>40</li> <li>40</li> <li>40</li> <li>41</li> <li>42</li> <li>43</li> <li>43</li> <li>45</li> <li>5w</li> <li>46</li> <li>47</li> <li>48</li> <li>49</li> <li>49</li> <li>50</li> <li>50</li> <li>Flor</li> </ul>  | heel End Cap<br>heel<br>asher<br>de<br>el Cap<br>wer Frame<br>able<br>strument Panel   | AX1004047911<br>AX1001040111<br>AX1004050511<br>AX2002022511<br>AX1006029811<br>AX2002021411<br>AX1005102600<br>AX2003177211  | AX1004048011<br>AX1001040211<br>AX1004050511<br>AX2002022611<br>AX1006029811<br>AX2002022111<br>AX1005102600  | AX1004048011<br>AX1001002000<br>AX1004050411<br>AX2002022711<br>AX1006029811<br>AX2002021511<br>AX1005102600  |
| <ul> <li>36</li> <li>37</li> <li>37</li> <li>38</li> <li>Ax</li> <li>39</li> <li>Fue</li> <li>40</li> <li>Lov</li> <li>41</li> <li>Co</li> <li>42</li> <li>Ins</li> <li>43</li> <li>Co</li> <li>44</li> <li>Sw</li> <li>45</li> <li>Sw</li> <li>46</li> <li>Fue</li> <li>47</li> <li>Fue</li> <li>48</li> <li>Co</li> <li>49</li> <li>Ter</li> <li>50</li> <li>PC</li> <li>51</li> </ul>  | heel<br>asher<br>de<br>el Cap<br>ower Frame<br>able<br>strument Panel  | AX1001040111<br>AX1004050511<br>AX2002022511<br>AX1006029811<br>AX2002021411<br>AX1005102600<br>AX2003177211  | AX1001040211<br>AX1004050511<br>AX2002022611<br>AX1006029811<br>AX2002022111<br>AX1005102600  | AX1001002000<br>AX1004050411<br>AX2002022711<br>AX1006029811<br>AX2002021511<br>AX1005102600  |
| <ul> <li>37</li> <li>38</li> <li>38</li> <li>39</li> <li>40</li> <li>40</li> <li>40</li> <li>41</li> <li>42</li> <li>43</li> <li>43</li> <li>44</li> <li>45</li> <li>50</li> <li>47</li> <li>50</li> <li>Flor</li> <li>51</li> <li>Flor</li> </ul>  | asher<br>«le<br>wer Frame<br>able<br>strument Panel  | AX1004050511<br>AX2002022511<br>AX1006029811<br>AX2002021411<br>AX1005102600<br>AX2003177211  | AX1004050511<br>AX2002022611<br>AX1006029811<br>AX2002022111<br>AX1005102600  | AX1004050411<br>AX2002022711<br>AX1006029811<br>AX2002021511<br>AX1005102600  |
| <ul> <li>38</li> <li>38</li> <li>Ax</li> <li>39</li> <li>Fue</li> <li>40</li> <li>Lo<sup>3</sup></li> <li>41</li> <li>Cc</li> <li>42</li> <li>Ins</li> <li>43</li> <li>Cc</li> <li>44</li> <li>Sw</li> <li>45</li> <li>Sw</li> <li>46</li> <li>Fue</li> <li>47</li> <li>Fue</li> <li>48</li> <li>Cc</li> <li>49</li> <li>Ter</li> <li>50</li> <li>PC</li> <li>51</li> <li>Flor</li> </ul>   | de<br>lel Cap<br>wer Frame<br>able<br>strument Panel   | AX2002022511<br>AX1006029811<br>AX2002021411<br>AX1005102600<br>AX2003177211  | AX2002022611<br>AX1006029811<br>AX2002022111<br>AX1005102600  | AX2002022711<br>AX1006029811<br>AX2002021511<br>AX1005102600  |
| <ul> <li>39 Fue</li> <li>40 Lov</li> <li>41 Coc</li> <li>42 Ins</li> <li>43 Coc</li> <li>44 Sw</li> <li>45 Sw</li> <li>45 Sw</li> <li>46 Fue</li> <li>47 Fue</li> <li>48 Coc</li> <li>49 Ter</li> <li>50 PC</li> <li>51 Flor</li> </ul>   | el Cap<br>ower Frame<br>able<br>strument Panel   | AX1006029811<br>AX2002021411<br>AX1005102600<br>AX2003177211  | AX1006029811<br>AX2002022111<br>AX1005102600  | AX1006029811<br>AX2002021511<br>AX1005102600  |
| <ul> <li>40 Lo<sup>3</sup></li> <li>41 Co</li> <li>42 Ins</li> <li>43 Co</li> <li>44 Sw</li> <li>45 Sw</li> <li>45 Sw</li> <li>46 Fus</li> <li>47 Fus</li> <li>48 Coo</li> <li>49 Ter</li> <li>50 PC</li> <li>51 Flor</li> </ul>  | wer Frame<br>able<br>strument Panel  | AX2002021411<br>AX1005102600<br>AX2003177211  | AX2002022111<br>AX1005102600  | AX2002021511<br>AX1005102600  |
| <ul> <li>41 Cc</li> <li>42 Ins</li> <li>43 Cc</li> <li>44 Sw</li> <li>45 Sw</li> <li>45 Sw</li> <li>46 Fus</li> <li>47 Fus</li> <li>48 Cc</li> <li>49 Ter</li> <li>50 PC</li> <li>51 Flo</li> </ul>   | able<br>strument Panel   | AX1005102600<br>AX2003177211  | AX1005102600  | AX1005102600  |
| <ul> <li>42 Ins</li> <li>43 Cc</li> <li>44 Sw</li> <li>45 Sw</li> <li>46 Fus</li> <li>47 Fus</li> <li>48 Cc</li> <li>49 Ter</li> <li>50 PC</li> <li>51 Flo</li> </ul>   | strument Panel   | AX2003177211  |   |   |
| <ul> <li>43 Cc</li> <li>44 Sw</li> <li>45 Sw</li> <li>46 Fus</li> <li>47 Fus</li> <li>48 Cc</li> <li>49 Ter</li> <li>50 PC</li> <li>51 Flo</li> </ul>   |  |   | AX2003177011  |   |
| <ul> <li>44 Sw</li> <li>45 Sw</li> <li>46 Fus</li> <li>47 Fus</li> <li>48 Cc</li> <li>49 Ter</li> <li>50 PC</li> <li>51 Flo</li> </ul>  | able Cover   |   | AA2000177911  | AX2003178011  |
| <ul> <li>45 Sw</li> <li>46 Fus</li> <li>47 Fus</li> <li>48 Cc</li> <li>49 Ter</li> <li>50 PC</li> <li>51 Flor</li> </ul>  |  | AX1005001021  | AX1005001021  | AX1005001021  |
| <ul> <li>46 Fus</li> <li>47 Fus</li> <li>48 Cc</li> <li>49 Ter</li> <li>50 PC</li> <li>51 Flo</li> </ul>  | vitch Cover  | AX1005092955  | AX1005092955  | AX1005092955  |
| <ul> <li>47 Fus</li> <li>48 Cc</li> <li>49 Ter</li> <li>50 PC</li> <li>51 Flo</li> </ul>  | vitch  | AX1005092855  | AX1005092855  | AX1005092855  |
| <ul><li>48 Cc</li><li>49 Ter</li><li>50 PC</li><li>51 Flo</li></ul>   | se Carrier   | AX1005099600  | AX1005099600  | AX1005099600  |
| 49 Ter<br>50 PC<br>51 Flo   | se   | AX1005002700  | AX1005002700  | AX1005002700  |
| 50 PC<br>51 Flo   | over   | AX1001040411  | AX1001040411  | AX1001040411  |
| 51 Flo  | rminal Block (12 pole)   | AX1005002400  | AX1005002400  | AX1005002400  |
|   | CBoard   | AX1014064311  | AX1014064311  | AX1014064311  |
|   | ame Control Board  | AX1005106011  | AX1005106011  | AX1005106011  |
| 52  Nu  | ut   | AX1004051011  | AX1004051011  | AX1004051011  |
| 53 Plu  | g  | #   | #   | #   |
| 54 Dro  | ain Plug   | #   | #   | #   |
| 55 Sc   | rew  | AX1004049811  | AX1004049811  | AX1004049811  |
| 56 Sp   | pring  | AX1008101111  | AX1008101111  | AX1008101111  |
| 57 Ba   |  | AX1004049711  | AX1004049711  | AX1004049711  |
| 58 Blc  | الد  | #   | #   | #   |
| 59 Blc  | all<br>anking Plate  |   | #   | #   |
| - Clo   |  | #   |   | #   |

#...See your Clarke dealer

# TROUBLE-SHOOTING

| FAULT  | CAUSE  | REMEDY  |
|--|--|---|
| Motor does not start   | 1. No power  | 1. Check power supply, power<br>cable and fuse, and replace<br>if necessary. Check External<br>Thermostat if fitted.                                      |
|  | 2. Faulty Motor/Capacitor  | 2. Check and if necessary, replace  |
|  | 3. Lock out of appliance due to overheating.   | 3. Detect cause of overheating.<br>Check air inlet and outlet.<br>Wait for 5 minutes, and<br>restart. If condition persists<br>contact your Clarke dealer |
|  | 4. Internal Fuse Blown   | 4. Check an replace fuse  |
| Motor runs, but the heater does not ignite.                              | <ol> <li>Empty fuel tank, dirty or<br/>wrong fuel.</li> </ol>                            | <ol> <li>Drain dirty or wrong fuel,<br/>clean filter and fill with clean<br/>paraffin or equivalent.</li> </ol>   |
|  | 2. Fuel filter clogged   | 2. Clean or replace fuel filter   |
|  | 3. Air leaks in fuel line  | <ol> <li>Check pipes, tighten<br/>connections, if necessary<br/>replace pipe.</li> </ol>  |
|  | 4. Burner nozzle Clogged   | 4. Clean nozzle with compressed air. Replace if necessary   |
|  | 5. Oil viscosity increased due to low temperature.                                       | 5. Mix with 10-20% paraffin.  |
| Flames emitted from<br>Air Outlet  | 1. Insufficient air flow into combustion chamber.  | <ol> <li>Check air inlet is not blocked.<br/>Check fan is not damaged<br/>and is operating correctly.</li> </ol>  |
|  | 2. Pump pressure too high.   | 2. Check air pump pressure,<br>and reduce to nominal value.   |
| Heater starts normally,<br>but flame-out control<br>system shuts off the | 1. Dirty photocell   | 1. Check photocell and ensure<br>it acknowledges the flame.<br>(Contact your Clarke dealer)   |
|  | 2. Faulty photocell  | 2. Replace photocell.   |
|  | <ol> <li>Defective connection<br/>between photocell and<br/>flame-out control</li> </ol> | 3. Check, and connect properly.   |
|  | 4. Faulty flame-out control  | 4. Check and replace if necessary.  |



# SPECIFICATIONS

|   | XR55      | XR75      | XR105     | XR155     |
|---|-----------|-----------|-----------|-----------|
| Thermal Power (kW)                          | 15        | 19.0      | 26.7      | 40.7      |
| Thermal Power<br>(BTU/hr)                   | 51,000    | 79,000    | 96,000    | 150,000   |
| Air Delivery (m3/hr)                        | 350       | 400       | 500       | 1050      |
| Fuel Cons. (Paraffin -<br>ltr/hr - approx.) | 1.5       | 2.3       | 2.8       | 4.3       |
| Tank Capacity                               | 11 L      | 21 L      | 30 L      | 46 L      |
| Motor Voltage                               | 230V 50Hz | 230V 50Hz | 230V 50Hz | 230V 50Hz |
| Power - Watts                               | 100       | 100       | 150       | 250       |
| Current Rating<br>(Input) - Amps            | 0.6       | 0.68      | 0.95      | 2         |
| Length (mm)                                 | 805       | 800       | 860       | 920       |
| Width (mm)                                  | 350       | 420       | 460       | 560       |
| Height (mm)                                 | 345       | 430       | 530       | 615       |

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

# DECLARATION OF CONFORMITY

| CE   | B<br>CIADATIONAL<br>Hemnall Street, Epping, Essex CM16 4LG  |
|--|---|
|  | DECLARATION OF CONFORMITY   |
| This is  | an important document and should be retained.   |
| 2004/108/EC Elect<br>2006/42/EC Mach<br>2006/95/EC Low<br>The following standards ha<br>EN 12100, EN 13842,<br>The technical documentation | product(s) complies with the following directive(s):<br>romagnetic Compatibility Directive.<br>innery Directive.<br>Voltage Equipment Directive.<br>ve been applied to the product(s):<br>EN 60335-1, EN 60335-2-102, EN 55014.<br>required to demonstrate that the product(s) meet(s) the requirement(s) of the<br>las been compiled and is available for inspection by the relevant enforcement<br>The CE mark was first applied in: 2010 |
| Product Description:<br>Model number(s):<br>Serial / batch Number:<br>Date of Issue:<br>Signed:  | Paraffin / Diesel Fired Space Heaters.<br>XR55,75,105,155.<br>N/A<br>06/03/2013   |
|  | Director  |

XR Heaters D O C(rv1)

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