

CLARKE®



100L AIR COMPRESSOR

MODEL NO: RAIDER 15/1050

PART NO: 2242119

OPERATION & MAINTENANCE INSTRUCTIONS



ORIGINAL INSTRUCTIONS

LS0520 - ISS 1

INTRODUCTION

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.

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 to us without prior permission.

This guarantee does not effect your statutory rights.

ENVIRONMENTAL RECYCLING POLICY



Through purchase of this product, the customer is taking on the obligation to deal with the WEEE in accordance with the WEEE regulations in relation to the treatment, recycling & recovery and environmentally sound disposal of the WEEE.






In effect, this means that this product must not be disposed of with general household waste. It must be disposed of according to the laws governing Waste Electrical and Electronic Equipment (WEEE) at a recognised disposal facility.

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. DO NOT point a jet of air at persons or animals and do not discharge compressed air against the skin.
2. DO NOT operate your compressor with the guard removed.
3. Repairs must only be carried out by a qualified engineer. If problems occur, contact your local CLARKE dealer.
4. Before carrying out any maintenance, make sure that the pressure is released from the air tank and that the compressor is disconnected from the electrical supply.
5. DO NOT leave pressure in the receiver overnight, or when transporting.
6. DO NOT adjust, or tamper with the safety valves. The maximum pressure is factory set, and clearly marked on the compressor.
7. DO NOT operate in wet or damp conditions. Keep the compressor dry at all times. Similarly, clean air will allow the compressor to work efficiently. DO NOT use in dusty or otherwise dirty locations.
8. Some of the metal parts can become quite hot during operation. DO NOT touch these until the compressor has cooled down.
9. ALWAYS set the pressure regulator to the recommended setting for the tool.
10. When spraying flammable materials e.g. cellulose paint, ensure that there is sufficient airflow and keep clear of any source of ignition.
11. Before spraying any material always consult paint manufacturers instructions for safety and usage.
12. Protect yourself. Goggles will protect your eyes from flying particles. Face masks will protect you against paint spray and fumes.
13. DO NOT apply strain to electrical cables and make sure that air hoses are not kinked or wrapped around the compressor.
14. When disconnecting air hoses or other equipment from your compressor, make sure that the air supply is turned off at the outlet and vent all pressurised air from within the tank and other equipment attached to it.
15. Make sure that children and animals are kept well away from the compressor and any equipment attached to it.
16. Make sure that all individuals using the compressor have had the necessary training and have read and fully understand these operating instructions.
17. Make sure that any equipment or tool used in conjunction with your compressor has a safe working pressure exceeding that of the compressor.
18. Be careful when transporting the compressor to prevent tipping over
19. Permanently installed systems must be installed by a competent engineer.
20. These compressors produce noise levels in excess of 70dB (A). Persons working near the compressor must be supplied with ear protection.

SAFETY SYMBOLS

	Read this instruction booklet carefully before positioning, operating or adjusting the compressor.
	This compressor contains surfaces which may reach a high temperature during operation. Never operate with the motor housing removed.
	Wear safety goggles when using this compressor
	Wear ear protectors when using this compressor
 L _{WA} 97 dB	This compressor produces a high sound level during operation. Ear protection should be worn.

ELECTRICAL CONNECTIONS



WARNING: READ THESE ELECTRICAL SAFETY INSTRUCTIONS THOROUGHLY BEFORE CONNECTING THE PRODUCT TO THE MAINS SUPPLY.

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.

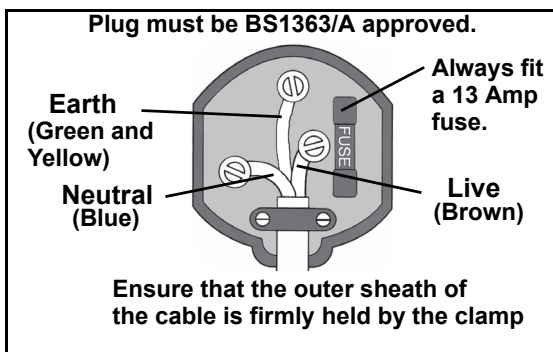
If the plug has to be changed because it is not suitable for your socket, or because of damage, it must be removed and a replacement fitted, following the wiring instructions shown below. The old plug must be discarded safely, as insertion into a power socket could cause an electrical hazard.



**WARNING: THE WIRES IN THE POWER CABLE OF THIS PRODUCT ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE:
BLUE = NEUTRAL BROWN = LIVE YELLOW AND GREEN = EARTH**

If the colours of the wires in the power cable do not agree with the markings on the plug:

- The BLUE wire must be connected to the terminal which is marked N or coloured black.
- The BROWN wire must be connected to the terminal which is marked L or coloured red.
- The YELLOW AND GREEN wire must be connected to the terminal which is marked E or \perp or coloured green.



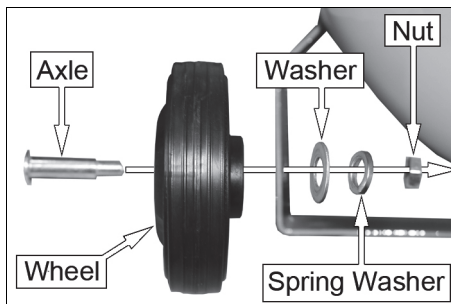
We strongly recommend that this machine is connected to the mains supply through a Residual Current Device (RCD)

If you are not sure, consult a qualified electrician. DO NOT try to do any repairs.

ASSEMBLY

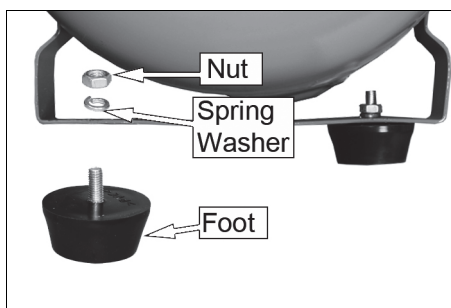
ATTACH THE WHEELS

1. Use a suitable spanner and screwdriver to attach the wheels to the compressor.
 - Use the washers and spring washer in the positions shown.



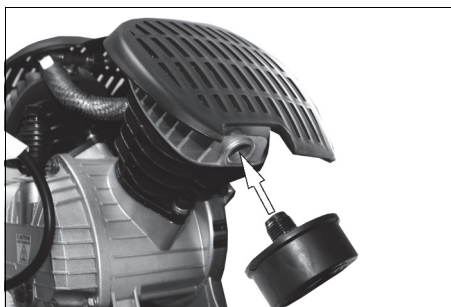
ATTACH THE FEET

1. Insert the feet into the position shown.
2. Use a suitable spanner and screwdriver to attach each foot to the compressor.
 - Use the spring washer in the positions shown.



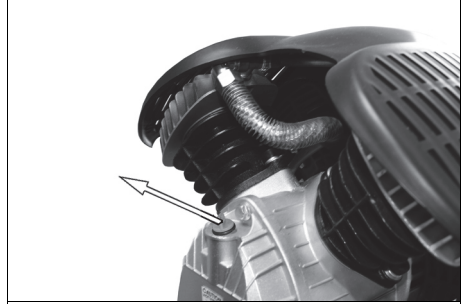
ATTACH THE AIR FILTER

1. Screw the air filters into position.
 - The air filter must be hand tight only.
 - One filter on each side.

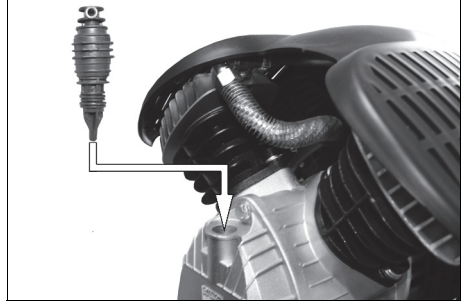


INSTALL THE OIL BREATHER CAP

1. Remove the travel plug.



2. Insert the oil breather cap.



MOVING THE AIR COMPRESSOR



CAUTION: THE COMPRESSOR IS HEAVY AND REQUIRES TWO PEOPLE TO LIFT SAFELY.

- Stop the compressor and disconnect it from the power supply before you move it.
- Always use the handle.
- To prevent damage, do not lift by (or put strain on) valves or hoses.

BEFORE USE

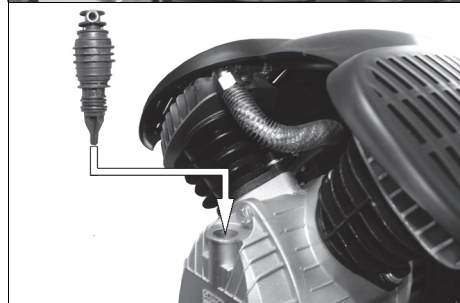
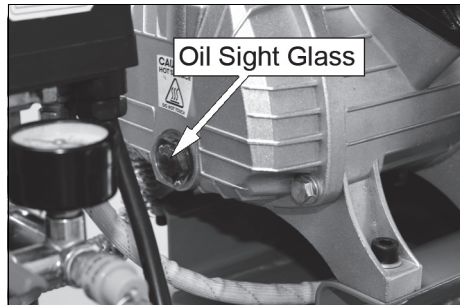
Before you connect your compressor to the power supply, check the following:-

- Set the ON/OFF switch to the OFF position (pushed down).
- Make sure that the compressor is on level ground.
- Make sure that the supply voltage matches the voltage shown on the data label.



CHECK THE OIL LEVEL

1. Make sure that the oil level is half way up the oil sight glass.
 - Only use SAE30 compressor oil, available from your CLARKE dealer.
 - Only fill to the half way point on the sight glass, overfilling may result in damage.
2. If not, remove the oil cap and add oil to the crankcase.
 - Only use SAE30 compressor oil, available from your CLARKE dealer.
 - Only fill to the half way point on the sight glass, overfilling may result in damage.



OPERATION

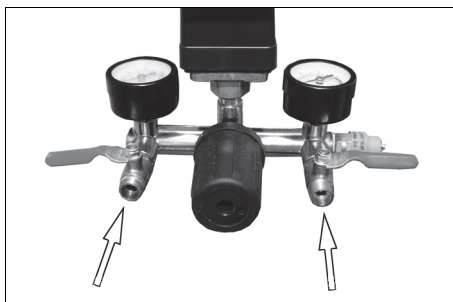
If the compressor has not been used for more than 24 hours, open the drain valve (on the bottom of the tank) and drain any condensate which has collected. See page 12.

ATTACHING AIR TOOLS



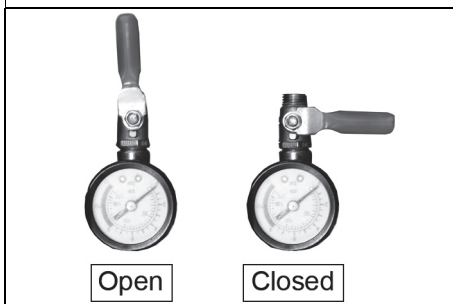
WARNING: BEFORE CONNECTING AIR TOOLS, MAKE SURE THAT YOU READ THE INSTRUCTIONS SUPPLIED WITH THE TOOL, ALSO ENSURE THAT THE TOOL IS SUITABLE FOR USE WITH THE COMPRESSOR AND HOSE SPECIFICATIONS.

1. Attach the air hose to one of the $\frac{1}{4}$ " BSP outlet valves.
2. Attach the air tool to the other end of the air hose.



3. Turn the outlet valve handle to the open position.

NOTE: The outlet valve is shown without the air hose attached for clarity.



TURNING THE COMPRESSOR ON

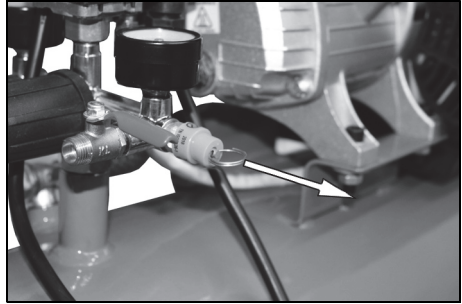
1. Connect the compressor to the power supply.
2. Lift the On/Off button.
 - The compressor will operate until the tank is fully pressurised. It will then stop.
 - The compressor will start up again when the pressure in the tank decreases below a pre-set value.



CHECK THE SAFETY VALVE

To make sure that the safety valve works correctly:

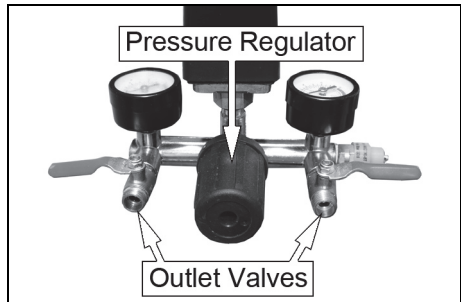
1. Pull on the ring attached.
 - Air will be released when you pull on the ring and stop when you release the ring.
2. If the valve does not operate, do not use the compressor. The compressor must be repaired by an approved service agent.



WARNING: DO NOT REMOVE OR TRY TO ADJUST THE SAFETY VALVE.

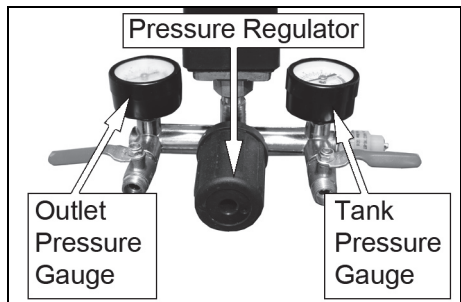
SET THE OUTPUT PRESSURE

1. Use the pressure regulator to set the output pressure of the outlet valves.
 - Turn clockwise to increase the pressure.
 - Turn counterclockwise to decrease the pressure.



GAUGES

1. The tank pressure gauge shows the current pressure in the tank.
2. The outlet pressure gauge shows the 'user set' outlet pressure. This can be adjusted as shown above.



REMOVE TOOLS FROM THE AIR HOSE

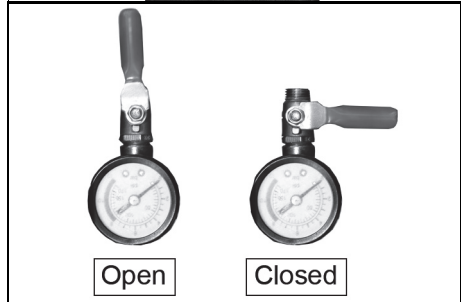


WARNING: ALWAYS SET THE PRESSURE REGULATOR TO ZERO BEFORE YOU REMOVE OR REPLACE A TOOL.

1. Push down on the On/Off button to stop the compressor.



2. Turn the outlet valve handle to the closed position.
3. Operate the tool to depressurise the air hose.
4. Disconnect the tool from the hose.



TURNING THE COMPRESSOR OFF

1. Follow steps 1-3 in "Remove Tools From The Air Hose" above.
2. Disconnect the compressor from the power supply.
3. Slowly open one of the outlet valves to depressurise the tank.
 - You will hear a hissing sound as the tank depressurises.
 - Do not leave the compressor unattended if the tank is pressurised

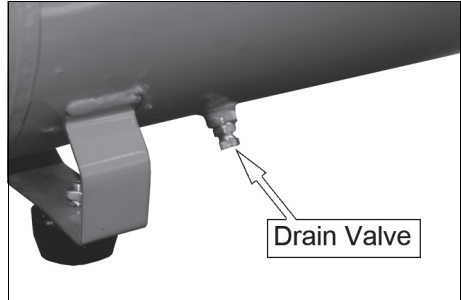


DRAINING THE TANK



CAUTION: YOU MUST DRAIN THE MOISTURE FROM THE TANK AFTER EACH DAYS USE AND BEFORE YOU PUT YOUR COMPRESSOR INTO STORAGE.

1. Turn the compressor off and disconnect from the power supply.
2. Slowly open one of the outlet valves to depressurise the tank.
 - You will hear a hissing sound as the tank depressurises.
 - Do not leave the compressor unattended if the tank is pressurised.
3. Put a container below the drain valve to collect the condensate.
4. Open the drain valve slowly.
 - Condensation will drain from the tank.
5. Close the drain valve when the tank has fully drained.



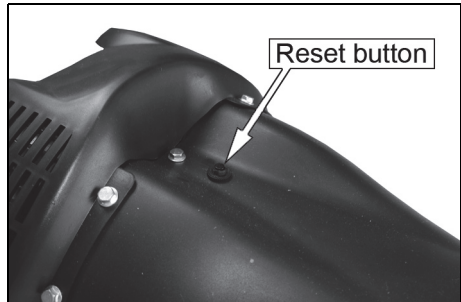
RESET BUTTON

This compressor has a thermal overload device.

If the motor gets too hot, the thermal overload device cuts the power which prevents damage to the motor.

If the thermal overload device operates, let the motor cool down for 5 minutes and push the reset button.

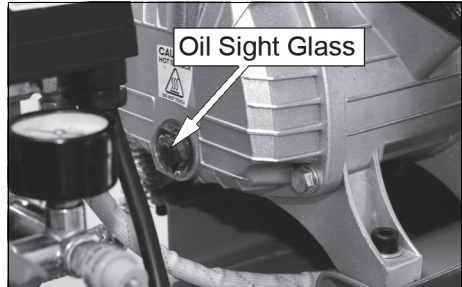
If you start the compressor and the overload cutout operates again, stop the compressor and disconnect from the power supply and have your compressor examined by an approved service agent.



MAINTENANCE

CHECKING THE OIL LEVEL (DAILY)

1. Make sure that the oil level is half way up the oil sight glass.
2. If not, remove the oil breather cap and add oil to the reservoir.
 - Only use SAE30 compressor oil, available from your dealer.



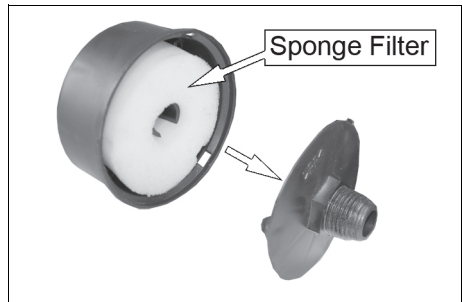
DRAIN THE TANK (DAILY)

After use, always open the drain valve to make sure that any condensate is drained of See "Draining the tank" on page 12.

CLEAN THE AIR FILTER (MONTHLY)

The air filter must be examined monthly, more often in dusty conditions,

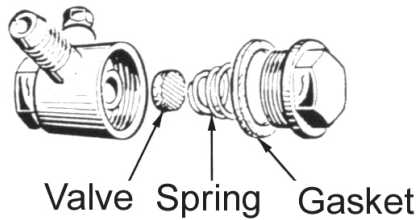
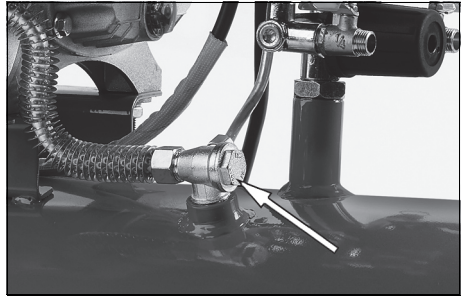
1. Remove the filter cover from the filter.
2. Remove the sponge filter.
3. Use a soft brush to clean the sponge and the filter cover.
 - Clean the filter in warm soapy water if necessary.
 - Rinse and let the filter dry completely before refitting.
4. Make sure that the filter and filter cover are replaced into position.
 - If the filter is damaged you must replace it.



CHECK THE NON-RETURN VALVE (EVERY 6 MONTHS)

If the tank pressure decreases for no apparent reason, it is possible that the non-return valve is leaking. To check,

1. Make sure that the tank is not under pressure and the compressor is switched OFF.
2. Examine the non-return valve, and replace the gasket and valve if necessary.



SPECIFICATIONS

Input Power	2200W / 3HP
Max Pressure	8 Bar (116 psi)
Voltage	230 VAC (50Hz)
Air Displacement	14.55 CFM
Receiver Capacity	100 L
Fuse Rating	13 A
Dimensions (L x W x H)	1030 x 350 x 750 mm
Guaranteed Sound Power Level	97 dB(A)
Weight	52.5 kg

Please note that the details and specifications contained herein, are correct at the time of going to print. We reserve the right to change specifications at any time without prior notice.

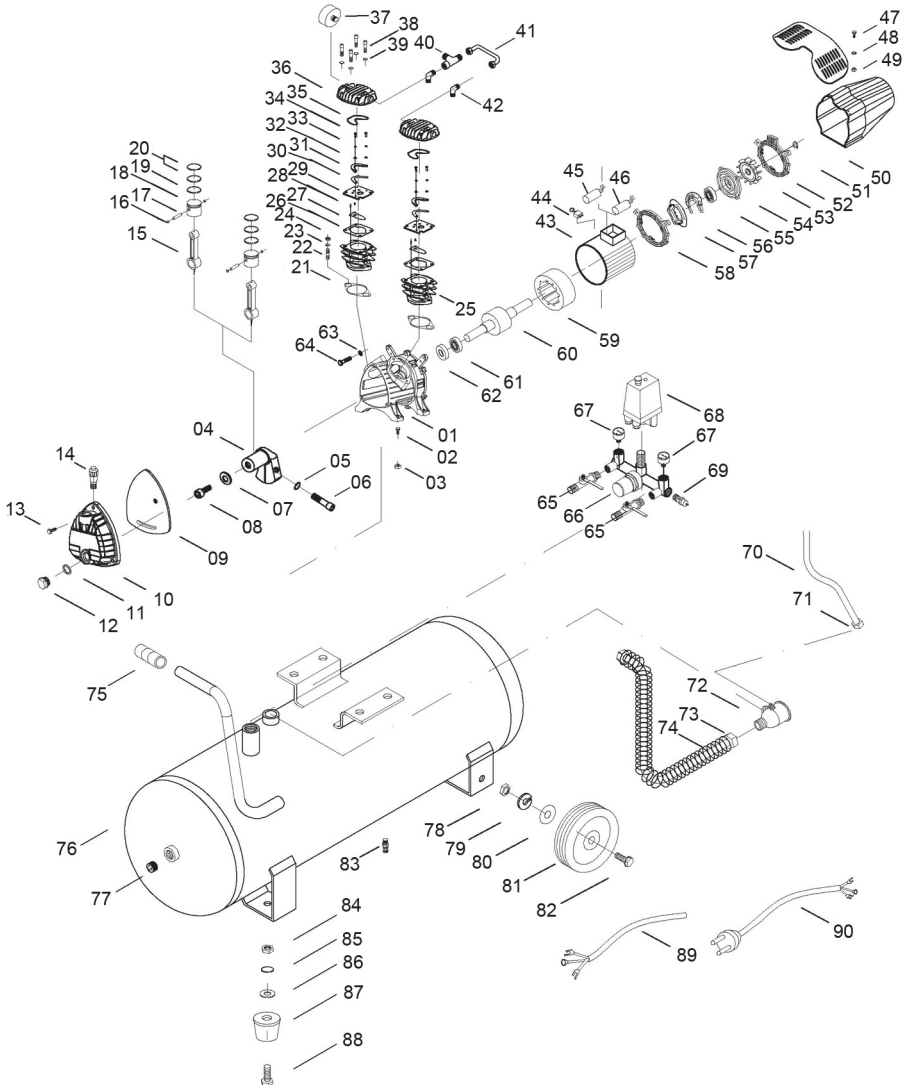
TROUBLESHOOTING



CAUTION: DO NOT TRY TO REPAIR OR ADJUSTMENT IF YOU ARE UNCERTAIN. IF YOU HAVE ANY QUERIES, CONTACT YOUR DEALER.

PROBLEM	PROBABLE CAUSE	REMEDY
The compressor has stopped and does not start.	Bad electrical connections.	<ol style="list-style-type: none"> 1. Check electrical connections. 2. Clean and tighten if necessary.
	Overload cutout switch has tripped.	<ol style="list-style-type: none"> 1. Switch off and wait approx 5 minutes. 2. Press the reset button and switch on again.
	Motor windings burnt out.	<ol style="list-style-type: none"> 1. Return the compressor to your nearest service agent.
The compressor does not reach the set pressure and overheats easily.	Compressor head gasket blown or valve broken.	<ol style="list-style-type: none"> 1. Return the compressor to your nearest service agent.
Compressor does not start.	The tank has already fully pressurised.	<ol style="list-style-type: none"> 1. Open drain valve to expel air. Compressor should start again when pressure reduces.
Air leaking from the non-return valve when the compressor is not running.	Faulty non-return valve.	<ol style="list-style-type: none"> 1. Drain receiver completely of air. 2. Remove the valve end plug, 3. Carefully clean the valve seat and the gasket 4. Reassemble.
Air pressure from the regulator will not adjust.	The diaphragm within the regulator body is broken.	<ol style="list-style-type: none"> 1. Replace regulator
The compressor is very noisy and makes a metallic knocking sound.	Compressor damaged and needs overhaul.	<ol style="list-style-type: none"> 1. Return the compressor to your nearest service agent.
Overload switch activated.	Extension Lead too Long	<ol style="list-style-type: none"> 1. Remove the extension lead and test the compressor near a plug socket.
Compressor does not stop at max pressure.	Pressure switch fault	<ol style="list-style-type: none"> 1. Return to local dealer.
	Filter clogged	<ol style="list-style-type: none"> 1. Clean or replace filter

EXPLODED DIAGRAM



PARTS LIST

1	CRANKCASE
2	BOLT
3	NUT
4	CRANKSHAFT
5	FLAT WASHER
6	BOLT
7	FLAT WASHER
8	BOLT
9	OIL SEAL GASKET
10	FRONT COVER
11	OIL SIGHTGLASS SEAL
12	OIL SIGHTGLASS
13	BOLT
14	OIL BREATHER
15	CONNECTING ROD
16	RETAINING CLIP
17	PISTON PIN
18	PINSTON
19	OIL RING
20	COMPRESSION RING
21	CYLINDER GASKET
22	BOLT
23	FLAT WASHER
24	NUT
25	CYLINDER
26	VALVE REED
27	PIN
28	VALVE PLATE GASKET
29	VALVE PLATE
30	VALVE REED
31	LIMITING STOPPER
32	FLAT WASHER
33	SPRING WASHER
34	SCREW
35	HEAD COVER SEAL
36	HEAD COVER
37	AIR FILTER
38	BOLT
39	FLAT WASHER
40	THREE WAY
41	PIPE
42	ELBOW
43	ALUMINUM COVER
44	BOLT
44	OVERLOAD PROTECTOR
45	CAPACITOR

46	CAPACITOR
47	BOLT
48	FLAT WASHER
49	NUT
50	SHROUD
51	CIRCLIP
52	OUTSIDE BACK COVER
53	FAN
54	BEARING SEAT
55	BEARING
56	CENTRIFUGAL SWITCH
57	CENTRIFUGAL FILM
58	OUTSIDE FRONT COVER
59	STATOR
60	ROTATOR
61	BEARING
62	OIL SEAL
63	NUT
64	BOLT
65	AIR TAP
66	REGULATOR
67	PRESSURE GAUGE
68	PRESSURE SWITCH
69	SAFTY VALVE
70	UNLOADING PIPE
71	NUT
72	CHECK VALVE
73	NUT
74	EXHAUSTING PIPE
75	HANDLE COVER
76	TANK
77	CHECK HOLE PLUG
78	NUT
79	SPRING WASHER
80	FLAT WASHER
81	WHEEL
82	BOLT
83	DRAIN VALVE
84	NUT
85	SPRING WASHER
86	FLAT WASHER
87	FOOT
88	BOLT
89	MOTOR CABLE
90	POWER CORD

DECLARATION OF CONFORMITY



Clarke[®]
INTERNATIONAL

Hemnal Street, Epping, Essex CM16 4LG

DECLARATION OF CONFORMITY

This is an important document and should be retained.

Product Description: Air compressor
Model number(s): Raider 15/1050
Serial / Part Number: 2242119
Date of Issue: 05/02/2020
(Noise Conformity)
Notified Body: TÜV SÜD Industrie Service GmbH
Westendstraße 199
80686 MÜNCHEN
Germany

Technical Documentation Holder: A.R. Pond
Clarke International
2a Shrubland Road
London E10 7RB
UK

Conformity Assessment Procedure: to 2000/14/EC Annex VI
Manufacturer: Clarke International
Noise Related Value: 2.2 kW
Measured Sound Power Level: 95 dB
Guaranteed Sound Power Level: 97 dB

DECLARATION OF CONFORMITY



Clarke[®]
INTERNATIONAL

Hemnal Street, Epping, Essex CM16 4LG

DECLARATION OF CONFORMITY

This is an important document and should be retained.

We hereby declare that this product(s) complies with the following directive(s):

- 2014/30/EU *Electromagnetic Compatibility Directive.*
- 2006/42/EC *Machinery Directive.*
- 2011/65/EU *Restriction of Hazardous substances, (amended by (EU) 2015/863).*
- 2014/29/EU *Simple Pressure Vessel Directive.*
- 2000/14/EC *Noise Emissions Directive, (amended by 2005/88/EC).*

The following standards have been applied to the product(s):

- EN 1012-1:2010, EN 61000-6-1:2007, EN 61000-6-3:2007+A1:2011, EN 61000-3-2:2014,
- EN 61000-3-3:2013.

The technical documentation required to demonstrate that the product(s) meet(s) the requirement(s) of the aforementioned directive(s) has been compiled and is available for inspection by the relevant enforcement authorities.

The CE mark was first applied in: 2020

Signed:

J.A. Clarke
Director

A SELECTION FROM THE VAST RANGE OF

Clarke®

QUALITY PRODUCTS

AIR COMPRESSORS

From DIY to industrial, Plus air tools, spray guns and accessories.

GENERATORS

Prime duty or emergency standby for business, home and leisure.

POWER WASHERS

Hot and cold, electric and engine driven - we have what you need

WELDERS

Mig, Arc, Tig and Spot. From DIY to auto/industrial.

METALWORKING

Drills, grinders and saws for DIY and professional use.

WOODWORKING

Saws, sanders, lathes, mortisers and dust extraction.

HYDRAULICS

Cranes, body repair kits, transmission jacks for all types of workshop use.

WATER PUMPS

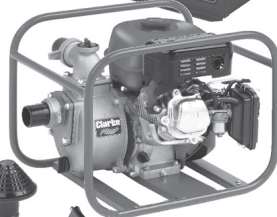
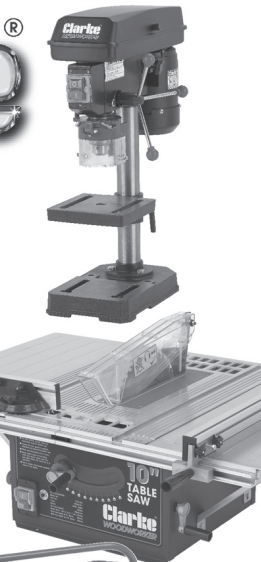
Submersible, electric and engine driven for DIY, agriculture and industry.

POWERTOOLS

Angle grinders, cordless drill sets, saws and sanders.

STARTERS/CHARGERS

All sizes for car and commercial use.



PARTS & SERVICE: 0208 988 7400

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