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Char-Kee®

QUALITY PRODUCTS



AIR COMPRESSORS

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

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

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

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Drills, grinders and saws for DIY and professional use.

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

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Angle grinders, cordless drill sets, saws and sanders.

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All sizes for car & commercial use.

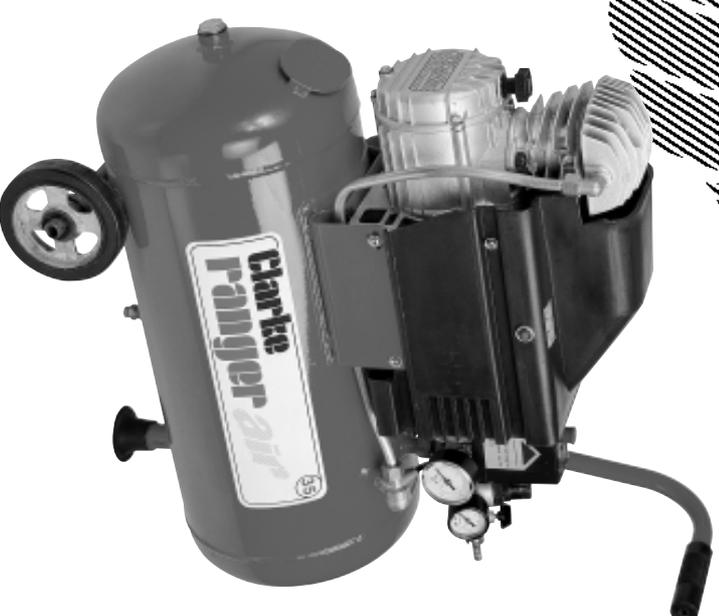
Char-ke INTERNATIONAL

For spare parts and servicing, please contact your nearest dealer, or Char-ke International on

020 - 8988 - 7400

e-mail: Parts@charkeinternational.com e-mail: Service@charkeinternational.com

Char-Kee™



RANGER 35 AIR COMPRESSOR

Part No: 2331000

OPERATING & MAINTENANCE
INSTRUCTIONS



Clarke[®]

INTERNATIONAL



DECLARATION OF CONFORMITY

We declare that this product complies to the following standards/directives:

- 98/37/EC
- 87/404/EEC
- EN 292-2
- EN 60 335-1

Description: **AIR COMPRESSOR**

Model Number: **RANGER 35**

Serial (Batch) No: **See Product Data Plate**

Signed _____

Clarke INTERNATIONAL

Hemel Hempstead, Epping, Essex CM19 4UG

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PO Box 10000

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Clarke

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air

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 Temperatures -40°C - 70°C
- Duty Cycle S1 at max. 7 bar
(i.e. Compressor may run continuously at 7 bar max.)

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 machines 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. For details contact your local dealer.

A complete kit is available which is ideal for almost all applications (see below).

Please quote **KIT400**....part number **3110165**



Also available without the spray Gun - **Part No. 3110170**

- or items sold separately

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

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Clarke

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.

Faulty goods should be returned to their place of purchase, no product can be returned without prior permission.

This guarantee does not effect your statutory rights.

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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:

- ✗ 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 using the compressor have read and fully understand 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.

COMPRESSOR

No. Description	Qty Part No.	No. Description	Qty Part No.
1 Head Bolt	4 CMECR3501	21 Bearing	1 CMECR3521
2 Elbow	1 CMECR3502	22 Crankshaft Assy.	1 CMECR3522
3 Cylinder Head	1 CMECR3503	23 End Housing Gasket	1 CMECR3523
4 Filter Unit	1 CMECR3504	24 Dipstick	1 CMECR3524
5 Head Gasket (Upper)	1 CMECR3505	25 End Housing	1 CMECR3525
6 Valve Block	1 CMECR3506	26 Screw	1 CMECR3526
7 Valve	1 CMECR3507	27 Screw	3 CMECR3527
8 Valve	1 CMECR3508	28 Bolt	2 CMECR3528
9 Head Gasket (Lower)	1 CMECR3509	29 Motor Housing	1 CMECR3529
10 Screw	2 CMECR3510	30 Rotor	1 CMECR3530
11 Cylinder Block	1 CMECR3511	31 Stator Assy	1 CMECR3531
12 Gasket	1 CMECR3512	32 Bearing	1 CMECR3532
13 Piston Ring set	1 CMECR3513	33 Housing	1 CMECR3533
14 Piston	1 CMECR3514	34 Nut	1 CMECR3534
15 Gudgeon Pin	1 CMECR3515	35 Fan Assy.	1 CMECR3535
16 Circlip	2 CMECR3516	36 Cover	1 CMECR3536
17 Piston Assy compl.	1 CMECR3517	37 Overload Reset	1 CMECR3537
18 Con-Rod	1 CMECR3518	38 Capacitor	1 CMECR3538
19 Washer	1 CMECR3519		
20 Nut	1 CMECR3520	- Gasket Set	1 CMECR3540

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

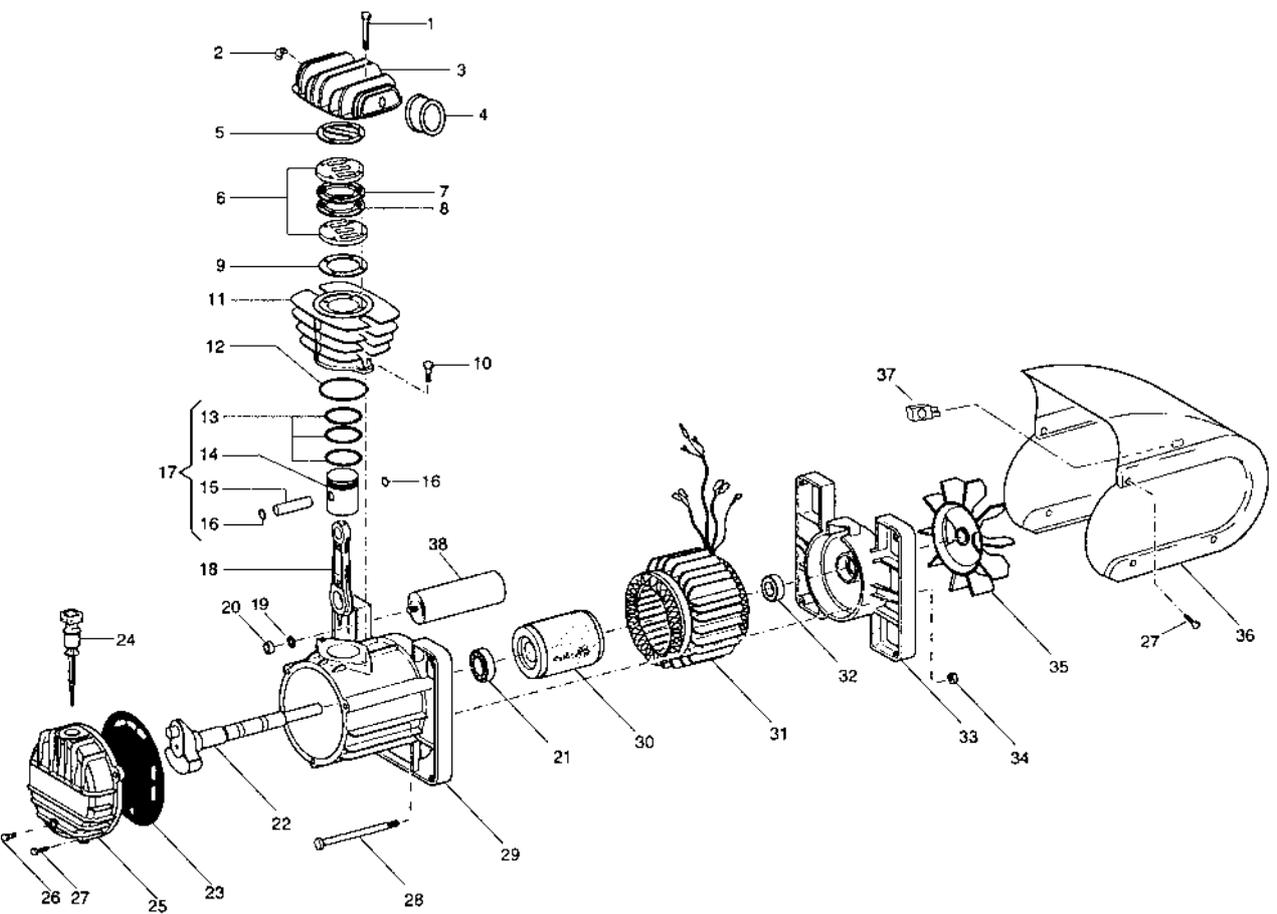
PARTS & SERVICE FAX: 020 8558 3622

or e-mail as follows:

PARTS: Parts@clarkeinternational.com

SERVICE: Service@clarkeinternational.com

COMPRESSOR



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 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 on Pages 12 - 15

1. Remove the plastic travel plug from the oil filler hole, on the top of the crank case, and insert the dip stick (see Fig. 7 - page 9).
2. Check the oil level is at the correct level on the dipstick, (refer to Fig. 1). Where necessary, top up 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.

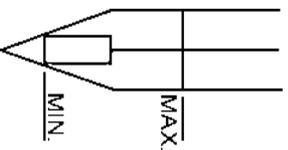


Fig.1

OPERATION (Ref. Fig. 2)

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.

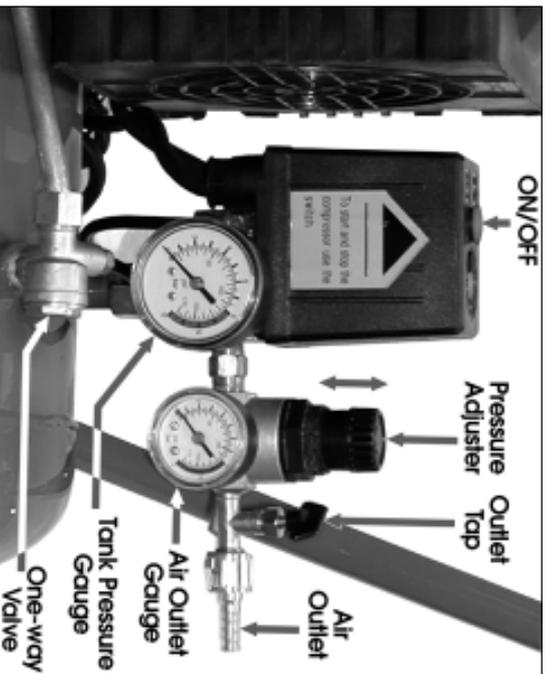
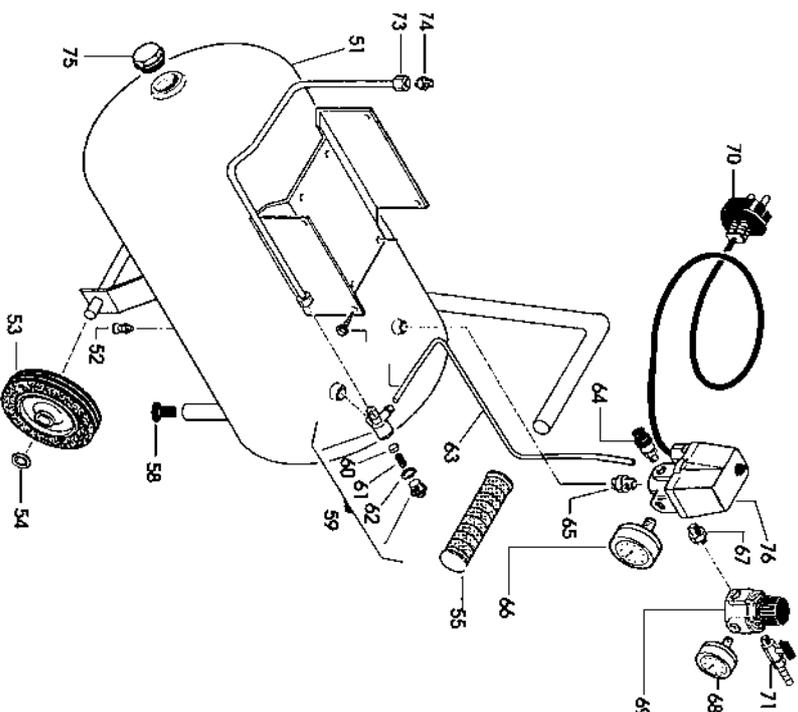


Fig.2

PARTS LISTS AND DIAGRAMS

AIR TANK & FITTINGS



No. Description	Qty	Part No.	No. Description	Qty	Part No.
51 Reservoir	1	CMECR3551	65 Adapter	1	CMECR3565
52 Drain valve	1	CMECR3552	66 Tank Gauge	1	CMECR3566
53 Wheel	2	CMECR3553	67 Adapter	1	CMECR3567
54 Push on Fasteners	2	CMECR3554	68 Output Reg. Assy	1	CMECR3568
55 Hand Grip	1	CMECR3555	69 Pressure Regulator	1	CMECR3569
58 Rubber Foot	1	CMECR3558	70 Power Cable w/plug	1	CMECR3570
59 Valve Assembly	1	CMECR3559	71 Outlet Tap Assy	1	CMECR3571
60 Valve	1	CMECR3560	73 Delivery Pipe	1	CMECR3573
61 Spring	1	CMECR3561	74 Pipe Connector	1	CMECR3574
62 Gasket	1	CMECR3562	75 End Plug	1	CMECR3575
63 Tube	-	CMECR3563	76 Pressure Switch Assy	1	CMECR3576
64 Pressure Relief Valve	1	CMECR3564			

FAULT FINDING

PROBLEM	PROBABLE CAUSE	REMEDY
The compressor stops and will not start again.	Bad connections. Blown fuse Overload cutout switch has tripped.	Check the electrical connections. Clean and tighten as necessary. Renew/Replace fuse Switch off and wait 5 minutes before pressing the reset button.
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 the head and replace any broken components. Carefully clean all sealing surfaces before reassembling. If in doubt contact Clarke International NOTE: It is also possible that you are using more air than the compressor is capable of delivering.
Compressor does not start.	Air receiver charged (see also item 1)	Open drain cock to expel air. Compressor should start again when pressure reduces to approx 95 psi.
Air leaking from the pressure switch valve when the compressor is not running.	Faulty non-return valve.	First drain the receiver completely of air. Remove the valve end plug, carefully clean the valve seat and the gasket and reassemble. See Fig 7.
Air pressure from the regulator will not adjust.	The diaphragm within the regulator body is broken.	Replace Regulator
The compressor is very noisy and makes a metallic knocking sound.	Compressor damaged and needs overhaul.	Return the machine to Clarke International.

NOTE: Should the motor fail to start immediately, it is probable that the air receiver is already full of air. Check the tank pressure gauge (see fig. 2). If you release air, by opening air outlet tap, the motor will start automatically once the cut-in pressure is reached.

- 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.
- Close the outlet tap, then connect one end of suitable air hose to the compressor air outlet, and the other end to the equipment to be used.

Set the outlet pressure by adjusting the Output Pressure Regulator. To do this, pull the Regulator Knob upwards and turn it clockwise to increase pressure, anticlockwise too reduce. 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 such as air tools, tyre gauges, staple guns, paraffin guns etc., it may be necessary to set the operating pressure at a higher (or lower) level.

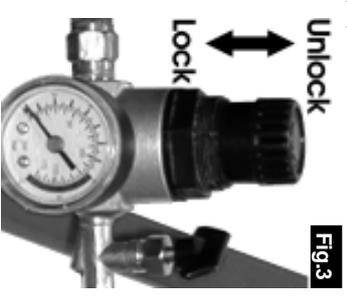


Fig 3

IMPORTANT: Always refer to the accessory manufacturers' recommendations for optimum operating pressures for their equipment.

- With operating pressure set, reopen the air outlet tap.
- The Pressure Switch, located within the plastic cover beneath the ON/OFF 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 falls to the minimum preset value. This operation is completely automatic and does not affect the spraying process in any way. However, should problems develop with the cut-in, cut-out settings, consult your local Clarke International Service Dept.

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 local Clarke International outlet.*
- The motor is protected by a Thermal Overload so that if the motor overheats for any reason - the thermal overload will trip, stopping the motor. To restart, allow a period for the motor to cool down (5 min), before pressing the Reset Button, illustrated in fig. 4.*



Fig 4

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' (0) 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).

WARNING!

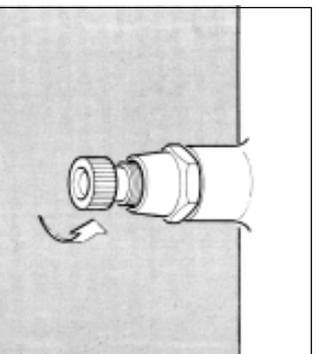
ALWAYS trigger the air tool/spray gun BEFORE disconnecting the air hose.

MAINTENANCE

A. DAILY

1. Check the oil level before you start and top-up if necessary - (use Clarke International compressor oil).
2. Drain any condensate that may have accumulated in the receiver by unscrewing the drain plug underneath the air receiver (fig. 5).

Fig.5



B. PERIODICALLY

1. After the first 5 hours of running the compressor, check the cylinder head bolts and motor housing screws and if any have worked loose retighten to 8.8Nm max. (6.5lbf ft).
2. Every 50 hours (more frequently if used in a dusty environment), change the air intake filter, by carefully unscrewing it from the head, (see fig 6) and screwing on a replacement - available from your Clarke dealer.

Fig.6



Fig.7

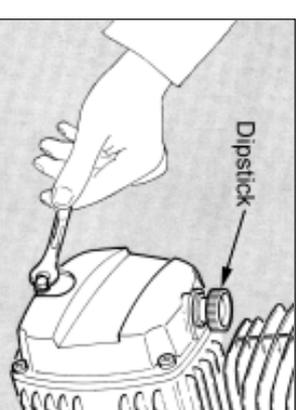
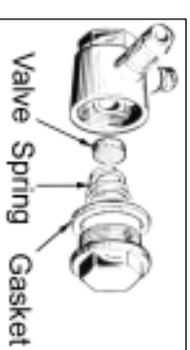


Fig.8



Parts List Item No. 59

WARNING

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