

Clarke®



BACKPACK SPRAYERS

MODEL NOS: KSP16 & KSP20

Part Nos: 3402270 & 3402275

OPERATING & MAINTENANCE INSTRUCTIONS

INTRODUCTION

Thank you for purchasing this CLARKE Sprayer, designed for use only with insecticides or other water-based products.

Before attempting to operate the product, it is essential that you read this manual thoroughly and carefully follow all 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 product giving you long and satisfactory 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 its intended purpose.

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.

GENERAL SAFETY PRECAUTIONS

1. Never use this sprayer to store or spray flammable solvents.
2. If pesticide is being sprayed, always wear a protective mask and gloves to protect the skin and face. Never spray pesticide facing into the wind.
3. Never spray pesticide in the direction of other people, animals or food products.
4. Never use the sprayer for handling hot liquids and avoid operating in excessively hot environments.
5. Always comply with any applicable chemical product safety instructions/directives when using pesticides.
6. Always wash off any chemical product coming into contact with the skin.
7. Always store chemical products in a secure place away from children.
8. Stop using the sprayer if the container or hose is found to be damaged.
9. Never pump the operating arm continuously prior to use due to the risk of damaging the pump components with excess pressure.
- 10 Always take care not to allow the escape of chemicals into the environment, especially when cleaning the equipment.

SPECIFICATION

Container Capacity	16 (KSP16) / 20 litres(KSP20)
Material	Polyethylene
Lance Length	550mm
Hose Length	1280mm
Max Working Pressure	6kgf/cm
Pump type	Piston (brass construction)
Net Weight	4.1(KSP16) / 4.2kg (KSP20)

OVERVIEW



MAJOR COMPONENTS

Container with pump assembly & agitator
Operating Rod
Lance
Filter Basket

Trigger Assembly
Operating Arm
Shoulder Strap Assembly

ACCESSORIES & SPARES PACK CONTAINING:

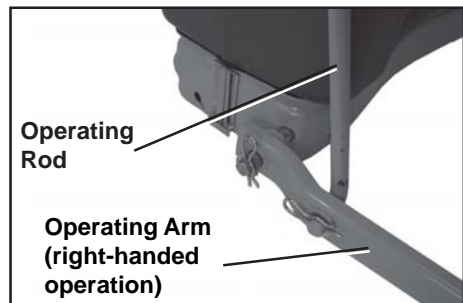
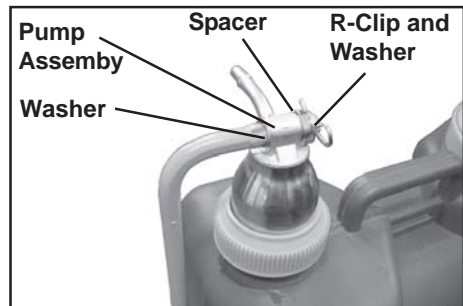
- 5 x Flat Washers
- 1 x Stainless Steel Ball
- 3 x 'R' Clips
- 1 x 'O' Ring (14mm)
- 1 x 'O' Ring (33mm)
- 2 x Connecting Collet Seals
- 1 x Metal Spacer
- 2 x Hose Clips
- 2 x Strap Retaining Clips
- 2 x Spray Nozzles (Conical and Flat Fan)
- 2 x Base Connecting Clips
- 2 x Piston Cups

ASSEMBLY

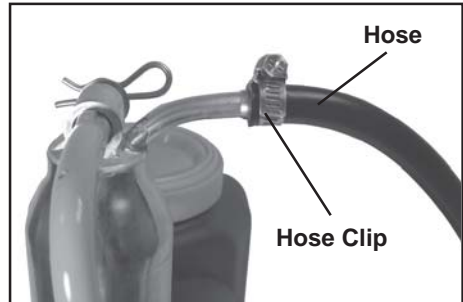
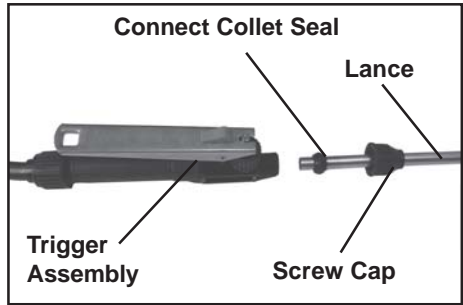
Upon receipt of the sprayer, unpack all components and lay them out to check for any missing parts as listed above. Any deficiencies should be reported to your Clarke dealer.

1. Fit a flat washer onto the operating rod before passing it through the hole in the pump assembly and adding the metal spacer, washer and R-clip.
2. Fit the operating arm onto the spindle at the base of the sprayer and secure in place with a flat washer and R-clip.
3. Connect the operating rod to the arm, securing with another washer and R-clip.

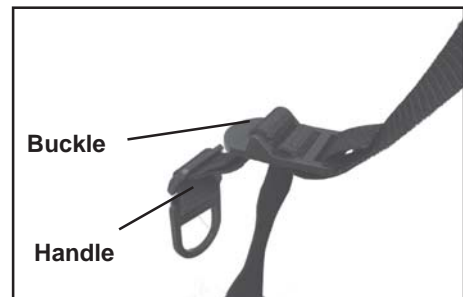
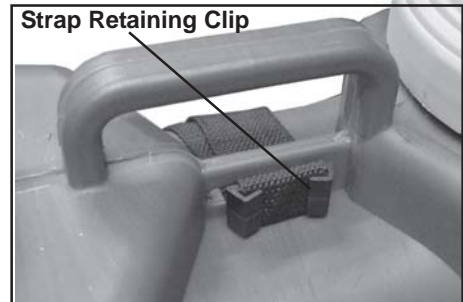
Once assembled, the operating arm can be clipped to the operating rod for easy carriage.



4. Push the lance into the trigger assembly and secure with the screw cap.
5. Attach one of the nozzles provided to the other end of the lance and secure with the screw cap.
 - A telescopic brass lance is also available with a choice of nozzles as listed on page 7.
6. Connect the hose to the pump outlet securing it with a screw connector.

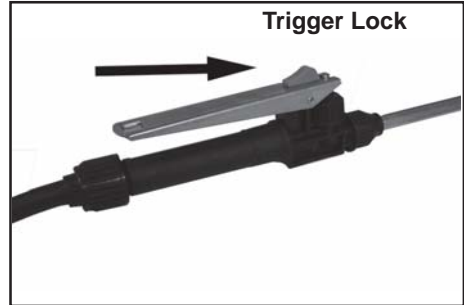


7. Attach the shoulder strap by engaging the hooks into the keyholes in the base of the container.
8. Pass the strap through the slot in the top of the container and lock in position with a strap retaining clip.
9. The straps can be adjusted so as to correctly position the sprayer on the operators back, taking care that the straps are not twisted.
10. To tighten, hold the strap buckle with one hand and pull the handle downward with the other hand.
11. To loosen, tilt the buckle up with one hand and pull the strap downward with the other hand.



OPERATION

1. Unscrew the filler cap and ensure the filter is in place.
2. Fill the container with the required liquid up to the desired graduation on the side and replace the filler cap.
3. Pump the operating arm a few times to pressurise the container until the action of the pump stiffens
4. Squeeze the trigger of the spray gun to start spraying. If spraying continuously, squeeze the trigger and engage the trigger lock by pushing it forward.
5. Pump the operating arm to maintain pressure.
6. Secure the operating arm in its retaining clip when not in use. Likewise attach the lance to the clip on the operating arm.



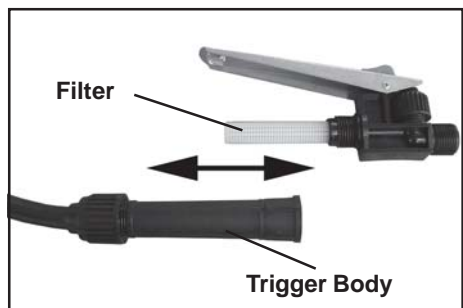
MAINTENANCE

AFTER USE

After use, the sprayer should be flushed thoroughly with clean water until the discharge runs clear, to avoid the possibility of blockages from product residue, or any cross-contamination between different products.

After extensive use, unscrew the trigger body and remove and clean the filter fitted inside the trigger assembly.

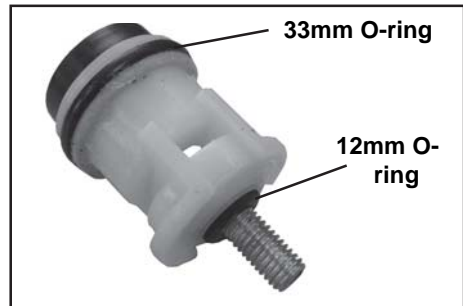
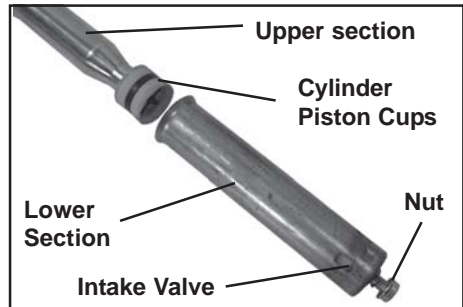
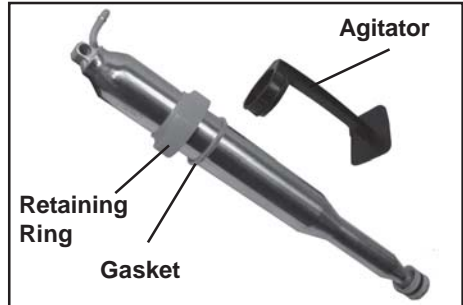
If not used for long periods or used continuously for several days, add a light smear of vaseline to the piston cups and other moving parts to reduce wear and assist free movement. Store in a cool place out of reach of children.



REMOVING THE PUMP COMPONENTS

In order to lubricate or replace the piston cups with those supplied, the pump assembly can be removed as follows:

1. Unscrew the retaining ring with fibre gasket and withdraw the upper section, (together with the agitator). Reach inside the container and slide the agitator off the upper pump section.2. Release the lower pump section by removing the nut holding it to the base fitting bracket and unscrewing the pump section from the container.
- Both the O-rings fitted to the intake valve are supplied as replacements as listed on page 4.
2. To replace the 33mm O-ring, the inlet valve must be pushed out of the lower pump cylinder from below.
 3. Once removed, the O-rings can be replaced. Always re-pack with a smear of vaseline prior to re-assembly.
- The lower cylinder has a pressed groove close to the base, which the valve body must align with.
 - The steel balls in both the intake valve and the upper section, can only be replaced by prising open their respective housings.



ACCESSORIES

The following brass spray attachments are available from your Clarke dealer.

Telescopic Brass Lance:	Part No 3402280
Jet Spray Brass Nozzle:	Part No 3402285
Twin Spray Brass Nozzle:	Part No 3402290

TROUBLESHOOTING

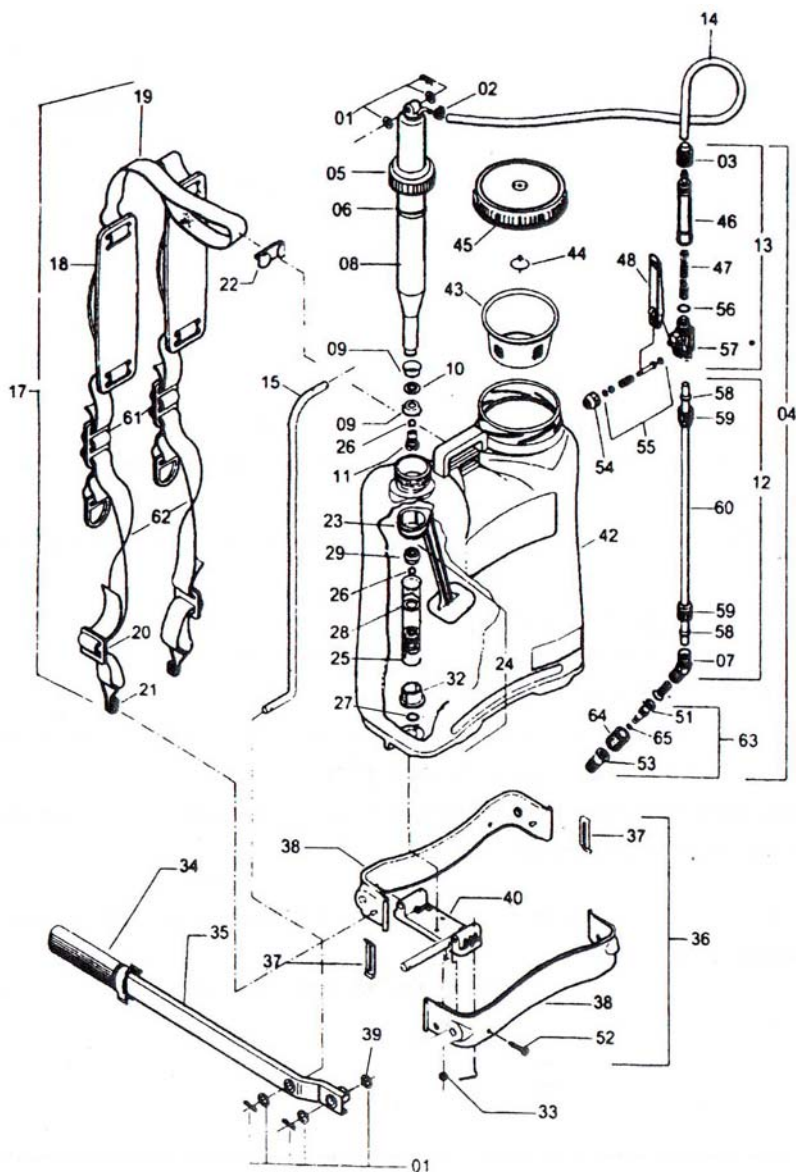
Symptom	Cause	Remedy
Leakage though the upper cylinder.	Worn or dried and perished piston cups.	Lubricate or replace the piston cups.
After pumping the unit to pressurize the chamber, pressure is quickly lost as soon as the lever is operated.	The intake valve is not seating correctly due to wear or foreign material present.	Clean or replace the valve.
After pumping the unit to pressurize the chamber, the lever rises slowly when released.	The chamber valve is not seating correctly due to wear or foreign material present.	Clean or replace the valve.
Poor delivery and leaking lance.	Loose connections or damaged connecting collets/o-rings	Inspect condition of connecting collets and o-rings & replace if necessary.
Vibration or resistance felt from the operating arm.	Contamination clogging the trigger assembly or nozzle.	Clean out filter inside trigger assembly and clean the nozzle.

COMPONENT PARTS

No	Description
1	Washer & R-Clip Set
2	Screw Hose Clip
3	Plastic Screw Connector
4	Spray Lance Assembly
5	Retaining Ring
6	Fibre Gasket
7	Nozzle Elbow
8	Upper Pump Chamber
9	Piston Cup
10	Piston Cup Spacer
11	Upper Pump Chamber Valve
12	Lance Assembly
13	Trigger Assembly
14	Hose 5/16" x 1350
15	Operating Rod
16	N/a
17	Strap Assembly (items 18-22 & 61-62)
18	Shoulder Protector
19	Strap 950mm
20	Adjuster
21	Strap Hook
22	Strap Lock
23	Agitator
24	Cylinder Assembly (items 25-33)
25	Lower Pump Cylinder
26	Steel Ball
27	O-Ring Seal 12mm
28	O-Ring (34mm)
29	Ball Retainer
30	N/a
31	N/a
32	Intake Valve Body (with stud)
33	Flanged Nut

No	Description
34	Handgrip with clip
35	Operating Arm
36	Container Base (items 37-41)
37	Base Connecting Clip
38	Split Base
39	Circlip
40	Base Fitting Bracket c/w pivot shaft
41	N/a
42	Container
43	Strainer
44	Lid Diaphragm
45	Lid with Diaphragm
46	Trigger Handle
47	Filter 12 dia x 80
48	Trigger
49	N/a
50	N/a
51	Nozzle Body
52	Screw
53	Nozzle Cap (blue)
54	Trigger Valve Cap
55	Trigger Valve Needle Assembly
56	O-Ring
57	Trigger Valve Body
58	Collet Packer
59	Screw Cap
60	Lance Tube
61	Strap Adjuster
62	Strap with Adjuster
63	Blue Adjustable Cone Nozzle Assy
64	Nozzle Cap

COMPONENT PARTS



When requesting spare parts, quote Product Reference AH, followed by the model number KSP16 or KSP20 and part numbers 1-64.

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