

# Champion®



## **AIR OPERATED CLUTCH & BRAKE BLEEDING KIT**

**MODEL NO: CHT637**

**Part No: 1801637**

### **OPERATING & MAINTENANCE INSTRUCTIONS**

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## INTRODUCTION

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Thank you for purchasing this CLARKE Clutch & Brake Bleeding Kit.

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.

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## GUARANTEE

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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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## TECHNICAL SPECIFICATION

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Feature	Specification
Extractor Fluid Capacity	2 Litres
Typical Air Consumption	8 cfm @ 100 psi (with 3/8" hose)
Working Air Pressure	70-170 psi
Air Inlet size	1/4"
Refill Bottle Capacity	1 Litre
Dimensions (L x W x H) mm	250 x 250 x 355 (extractor), 150 x 120 x 275 (reservoir)
Weight	1.6 kg (extractor), 0.5 kg (refilling unit)

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.

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# GENERAL SAFETY PRECAUTIONS

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**Warning: As with all equipment, there are certain hazards involved with its operation and use. Exercising caution will reduce the risk of personal injury.**

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## WORK AREA

1. **Keep the work area clean and well lit.** Floors should always be kept clear. Cluttered or dark areas invite accidents.
2. **Keep children and bystanders away while operating machines and using tools.** Distractions can cause loss of control.

## PERSONAL SAFETY

1. **ALWAYS stay alert, watch what you are doing and use common sense when operating this product.** Do not use the product while you are tired or under the influence of medication, drugs or alcohol. A moment of inattention can result in personal injury.
2. **Do not over-reach.** Keep your proper footing and balance at all times when positioning the product.
3. Brake fluid is highly corrosive. It is advisable to always wear gloves and approved safety glasses at all times and always prevent contact with painted surfaces.
4. **ALWAYS** store this product out of reach of children and do not allow persons unfamiliar with these instructions to operate it.
5. **ALWAYS** thoroughly familiarise yourself with this product & its operation, and always read and understand the instructions and warnings in this manual before using the equipment.

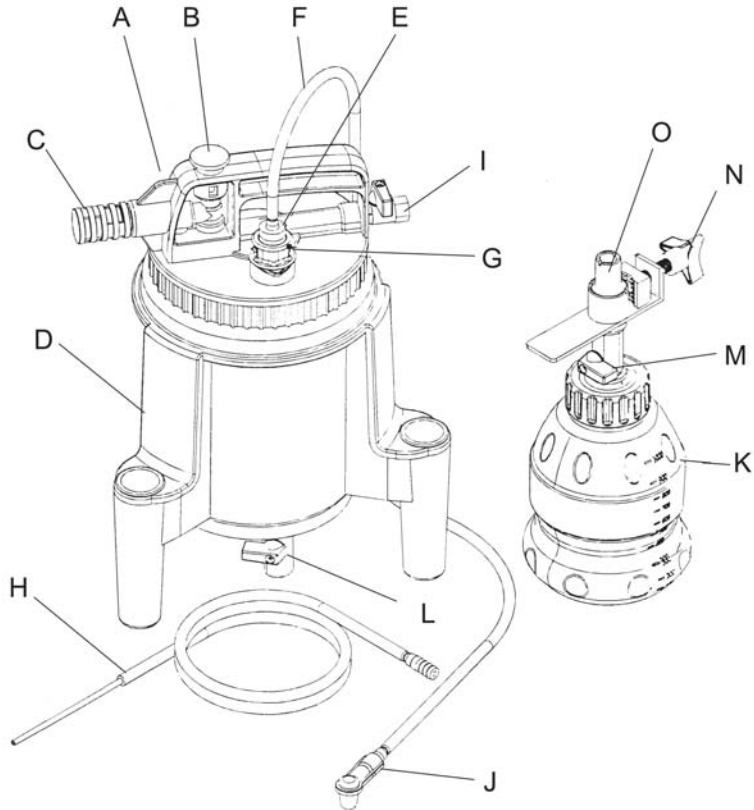
## GENERAL EQUIPMENT USE AND CARE

1. **ALWAYS** maintain the product with care and keep it clean for best / safest performance.
2. **NEVER** use this product if any part is damaged. Have it inspected and repaired by your local Clarke dealer.
3. **NEVER** modify or tamper with this product in any way. Use it only for the purpose for which it is designed.
4. **NEVER** use the unit to extract or store flammable liquids, toxic or corrosive chemicals or hold any fluids at very high temperatures
5. **ALWAYS** consult and follow the vehicle manufacturers recommended procedures when working on any hydraulic system.

6. **ALWAYS** drain, wash and clean the unit immediately after each use.
7. **ALWAYS** ensure the extractor is in a level position.
8. **NEVER** drop, throw or mishandle this unit.
9. **NEVER** attempt to pressurise this unit. It is designed for vacuum use only.
10. **ALWAYS** make sure that the bleeding kit is in perfect condition before use with no cracks which would result in oil leaks.
11. If fluid is spilt, the area must be cleaned completely and sand or sawdust scattered on the area to absorb the fluid and then cleaned up. You should also alert people in the vicinity to the possible danger of slipping.
12. **ALWAYS** comply with all local authority regulations when disposing of any type of used oil.
13. **ALWAYS** have the unit repaired by your local CLARKE dealer, using only identical replacement parts. This will ensure the safety of the unit is maintained. The use of non standard parts could be hazardous.

Your CLARKE Bleeding Kit has been designed to give long and trouble free service. If, however, having followed the instructions in this booklet carefully, you encounter problems, take the unit to your local CLARKE dealer.

# EQUIPMENT COMPONENTS



No	Description
A	COVER HOUSING
B	PUSH BUTTON
C	MUFFLER
D	TANK
E	ADAPTER FOR EXTRACT TUBE
F	BLEED TUBE
G	FLUID INLET PLUG
H	FLUID EXTRACT TUBE

No	Description
I	AIR INLET VALVE
J	BLEED CONNECTOR
K	AUTOMATIC REFILLING BOTTLE
L	DRAIN VALVE
M	REFILL VALVE
N	SECURING CLAMP
O	REFILL NOZZLE

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## PRINCIPAL OF OPERATION

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The Clarke clutch & brake bleeding kit is designed for one-man operation. It is used to drain brake fluid from a hydraulic system such as the clutch or brake systems on an vehicle. It can also be used to extract a variety of fluids from reservoirs including the master cylinders or those for power steering fluid.

It uses a normal workshop compressed air supply between 70 to 170 psi (4.8-11.6 bar), to create a vacuum in the tank. The vacuum can be connected by attaching the adapter to the fluid inlet plug located on the top of the unit.

The automatic refill bottle is designed for use with a standard bottle of brake fluid, to maintain an adequate fluid level in the master cylinder while the hydraulic system is bled. The bleeder air inlet will shut off automatically when the hydraulic fluid reaches the maximum level.

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## OPERATING INSTRUCTIONS

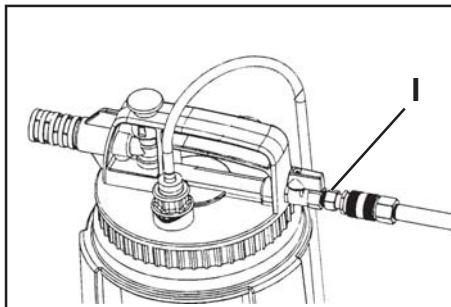
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### **IMPORTANT:**

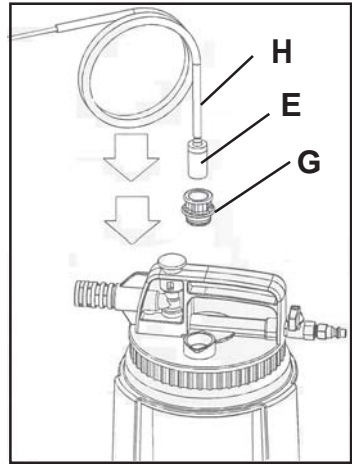
In addition to this manual, always follow the manufacturers recommended procedures when servicing each vehicle.

### **REMOVING OLD HYDRAULIC FLUID FROM THE MASTER CYLINDER**

1. Park the vehicle securely on level ground with the engine off.
2. Clean the outside of the master cylinder and master cylinder cap to prevent dirt entering the master cylinder when the cap is removed.
3. Remove the cap from the master cylinder reservoir.
4. Connect compressed air supply to the Air Inlet Valve (I).



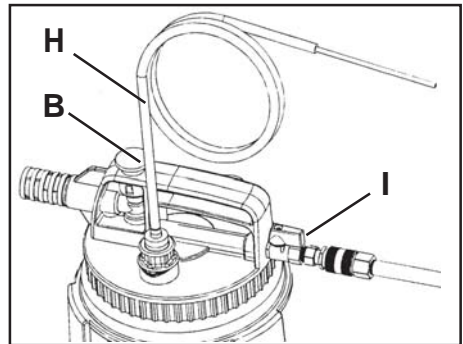
5. Connect the Extract Tube (H) to the Fluid Inlet Plug (G) using the adaptor (E) .



6. Insert the free end of the Extract Tube (H) into the master cylinder on the vehicle.
7. Turn the air valve (I) on, if no air flows through the unit then press the Push Button (B) to create the vacuum.

(Allow a few seconds for vacuum to build in the bleeder tank before suction occurs).

8. While extracting the old fluid, agitate the fluid to dislodge and remove any sludge that has accumulated on the bottom and walls of the master cylinder.
9. When all fluid has been removed, turn off the bleeder and refill the master cylinder with the vehicle manufacturers recommended replacement hydraulic fluid.



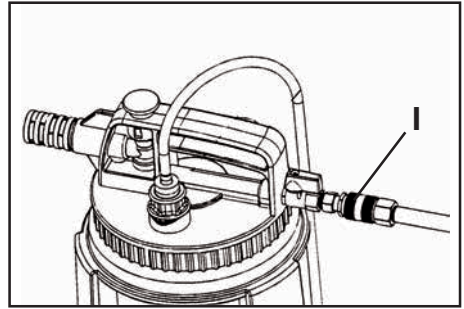
## VACUUM BLEEDING HYDRAULIC LINES AND SLAVE CYLINDERS

Prior to bleeding, ensure that the master cylinder is full of the vehicle manufacturers recommended replacement hydraulic fluid. The automatic refill unit should be used to maintain the level of new fluid in the master cylinder during the bleeding process. This will prevent air from being sucked into the master cylinder, hydraulic lines and slave cylinders.

1. Park the vehicle securely on level ground with the engine off, for safe access to the brake bleed screws located on each wheel brake cylinder or to the clutch slave cylinder as required.



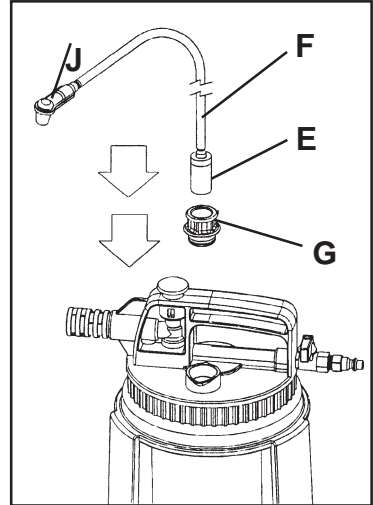
2. Make sure all the bleed screws are clean.
3. Connect compressed air supply to the Air Valve (I).



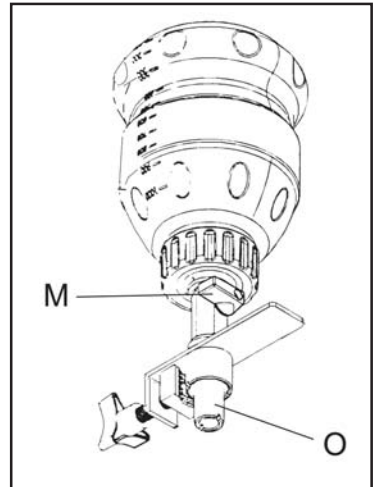
4. Connect the adaptor (E) of the Bleed Tube (F) to the Fluid Inlet Plug (G).

**Note: Consult the vehicle manufacturers guidelines for the vacuum bleeding procedure and any specific wheel bleeding sequence.**

5. Slip the Bleed Connector (J) located on the opposite end of the Bleed Tube (F), over the bleed screw nipple on the vehicle.



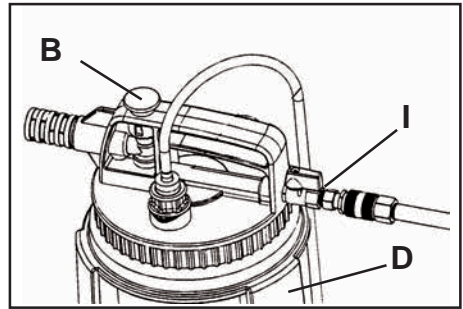
6. Fill the refill unit with fresh hydraulic fluid and secure it to the master cylinder with the nozzle (O) immersed below the level of the old fluid. Open the refill valve (M).



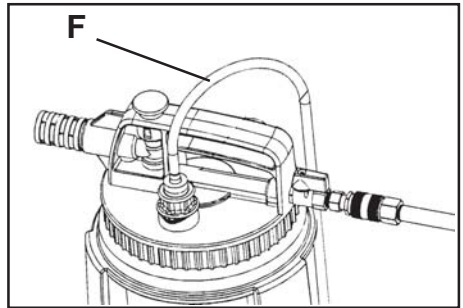
7. Turn the air valve (I) on, if no air flows through the unit then press the Push Button (B) to create the vacuum.

Allow a few seconds for vacuum to build in the bleeder tank before suction occurs.

8. Using a wrench, loosen/open the bleed screw slightly, until you can see fluid draining through the Bleed Tube and into the Tank (D).



**Note: During the bleeding process, as hydraulic fluid is being drawn through the bleed screw, air may also be sucked into the bleed tube from around the bleed screw threads. This can give the impression that air is bleeding from the lines, however it is normal and does not affect operation. To prevent or reduce this kind of air leak, coat the bleed screw threads with silicon grease before bleeding.**



9. Keep the bleed screw open until new fluid is visibly flowing through the Bleed Tube (F) (typically 20 to 30 seconds).
10. Close the bleed screw firmly, without over tightening, prior to removing the Bleed Tube from the vehicle and shutting off the unit.
11. Close the refill valve and remove the refill unit.

**Note: It is important to ensure that the Bleed Tube connector remains connected to the bleed screw, and the unit is still holding a vacuum while the bleed screw is closed. This prevents air from being sucked back into the brake or clutch slave cylinder from around the bleed screw threads before the bleed screw is tightened and sealed.**

**Note: If the automatic refilling bottle is not used, be sure to periodically check the level and top up the fluid in the master cylinder.**

## TROUBLESHOOTING

PROBLEM	SOLUTION
Extractor unit will not start when the Air Valve is turned to the OPEN position and the button is pushed down.	Press the blue button on the cover housing. If the click sound is heard, the unit is sound but if not there is a fault.
	Try standing the unit body upside down if not connected to the fluid. If containing fluid, lean the body at 45 deg, shake several times. Press the button and if the "click " sound is heard then everything is normal.
Extractor fails to shut off automatically when the fluid in the tank reaches the "full" level	Close the air valve to stop bleeding, then dispose of the used fluid.
The extractor unit is operating but will not remove any more fluid.	Check that the tube is firmly located and not slipped out.
	Check that the fluid inside the extractor has reached the "Full" level position.
	Confirm that all the fluid has been removed.

If you are still having difficulties with this product, contact your CLARKE International Service Department on 020-8988-7400.

## MAINTENANCE

No maintenance is required but always drain, wash and clean the unit after each use. Never clean the unit with aggressive detergents or chemicals.

Always store both the main unit and connecting tubes in a dry place which is not exposed to direct sunlight or extremes of temperature.

## ENVIRONMENTAL PROTECTION

One of the most damaging sources of environmental pollution is oil products. Never throw away used hydraulic oil with domestic refuse or flush it down a sink or drain. Collect all the hydraulic oil in a leak proof container and take it to your local waste disposal site.



Do not dispose of this product with general household waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of appropriately.

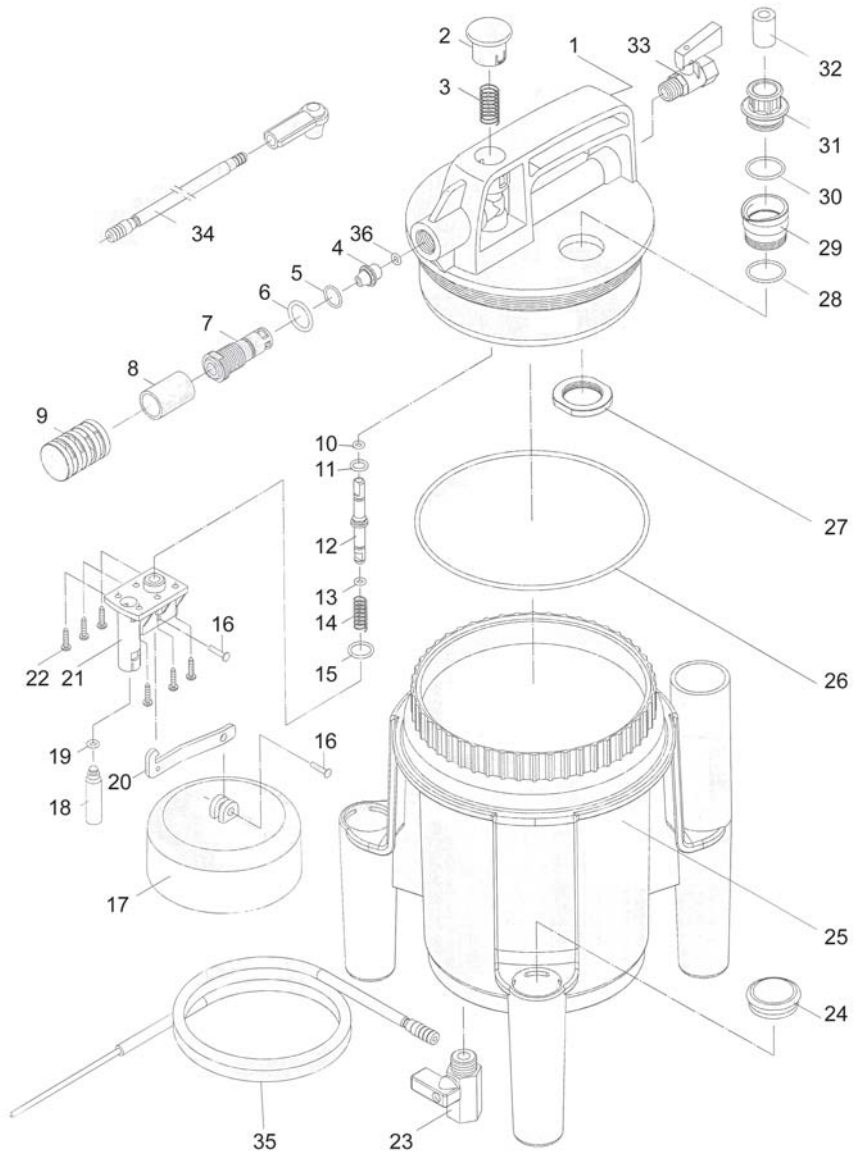
## PARTS LIST - EXTRACTION UNIT

No	Description	Part No
1	COVER HOUSING	HTCHT637001
2	PUSH BUTTON	HTCHT63702
3	SPRING	HTCHT63703
4	VACUUM VALVE	HTCHT63704
5	O - RING	HTCHT63705
6	O - RING	HTCHT63706
7	VACUUM BODY	HTCHT63707
8	MUFFLER INSERT	HTCHT63708
9	MUFFLER SHELL	HTCHT63709
10	O - RING	HTCHT63710
11	O - RING	HTCHT63711
12	SHAFT	HTCHT63712
13	O - RING	HTCHT63713
14	SPRING	HTCHT63714
15	O - RING	HTCHT63715
16	PIN	HTCHT63716
17	FLOAT	HTCHT63717
18	SAFETY CUP	HTCHT63718

No	Description	Part No
19	O - RING	HTCHT63719
20	ARM	HTCHT63720
21	SAFETY VALVE HOUSING	HTCHT63721
22	SCREW	HTCHT63722
23	FLUID OUTLET VALVE	HTCHT63723
24	LEG CAP	HTCHT63724
25	TANK	HTCHT63725
26	PACKING	HTCHT63726
27	LOCK NUT	HTCHT63727
28	O - RING	HTCHT63728
29	FLUID INLET HOUSING	HTCHT63729
30	O - RING	HTCHT63730
31	FLUID INLET COVER	HTCHT63731
32	ADAPTOR	HTCHT63732
33	AIR VALVE	HTCHT63733
34	BRAKE TUBE & FITTING	HTCHT63734
35	EXTRACT TUBE	HTCHT63735
36	O - RING	HTCHT63736

IMPORTANT: The use of parts other than genuine CLARKE replacement parts may result in safety hazards, decreased performance, and will invalidate your warranty.

# PARTS DIAGRAM - EXTRACTION UNIT

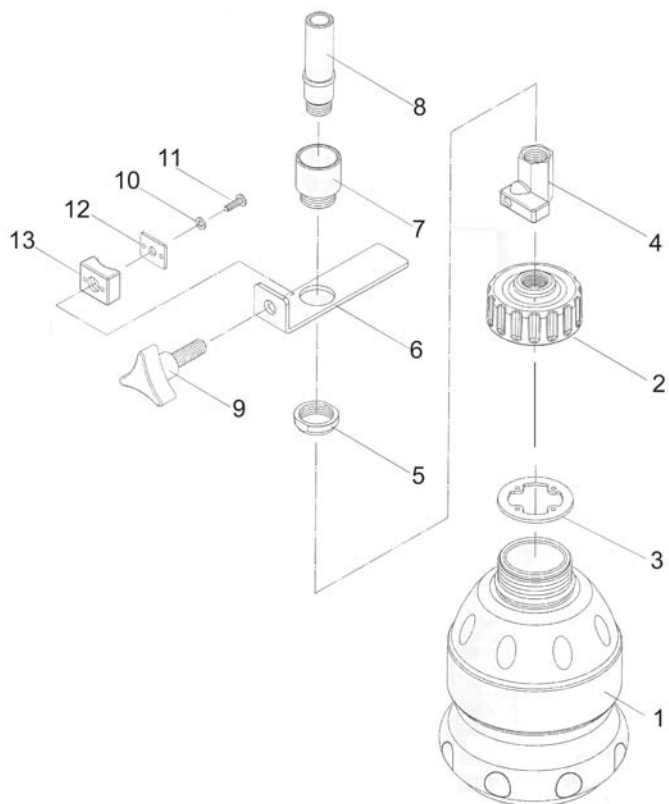


## PARTS LIST- REFILLING BOTTLE

No	Description	Part No
1	BOTTLE	HTCHT63737
2	LID	HTCHT63738
3	PACKING	HTCHT63739
4	VALVE	HTCHT63740
5	LOCK NUT	HTCHT63741
6	BRACKET	HTCHT63742
7	SWIVEL SOCKET	HTCHT63743

No	Description	Part No
8	NOZZLE	HTCHT63744
9	KNOB	HTCHT63745
10	WASHER	HTCHT63746
11	SCREW	HTCHT63747
12	PLATE	HTCHT63748
13	MOUNTING BLOCK	HTCHT63749

# PARTS DIAGRAM - REFILLING BOTTLE



# A SELECTION FROM THE VAST RANGE OF

# Clarke®

## QUALITY PRODUCTS

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

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