# Clarke®



**READ THIS BOOK** 

This book has important information for the use and safe operation of this machine. Read and understand this book before starting the machine. Keep this book and tell all operators to read the book. If you do not follow the instructions, you can cause injury, or damage equipment, furniture or buildings.

All directions given in this book are as seen from the operator's position at the rear of the machine.

For new books, write to: Clarke, 2100 Highway 265, Springdale, Arkansas 72764.

OPERATOR'S MANUAL and PARTS LIST

Models C-1600, C-1800 and C-2000

The Clarke® Models C-1600, C-1800 and C-2000 are floor maintaining machines that can be used for polishing, spraying, buffing and stripping. The machine can be used on wood, vinyl, terrazzo or cement floors. With the shampoo brush, use the machine to clean carpet.

# HOW TO PREPARE THE MACHINE FOR OPERATION

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WARNING: Disconnect the machine from the power source before installing or removing the brush.

NOTE: After use, a new pad will expand approximately one inch. Use only 19" pads on this machine.

#### How To Install The Brush Or Pad Driver

To install the brush or pad driver, follow this procedure:

- 1. Put the handle in the upright position.
- 2. To lock the handle, push the locking lever down. See figure 1.
- 3. Tilt the machine backward until the handle is on the floor. See figure 2.
- 4. Put one foot on each side of the machine. See figure 2.
- 5. Align the lugs on the locking plate into the drive adapter openings. See figure 3.
- 6. To lock the brush or pad into position turn the brush or pad driver to the right.
- 7. Turn the brush or pad driver to the left to unlock and remove the brush.
- 8. Lift the machine to the vertical position.

NOTE: To prevent damage to the brush or pad driver, remove the accessory while not in use. Keep the brush in a cool dry place.

#### How To Adjust The Handle

To adjust the handle, follow this procedure:

- The locking lever is on the lower part of the handle tube. See figure 1. Lift the lever with your foot.
- Lower the handle to the best operating position.

# NOTE: For the best operating position, keep your back straight, bend only your arms. See figure 4.

- 3. Using your foot, push the locking lever down.
- 4. Hold the handle against your body for the best control.

#### Accessories

The different brushes and attachments are available for the Models C-1600, C-1800 and C-2000:

- 1. Polishing and waxing brushes.
- Brushes with natural or synthetic bristles for scrubbing.
- Brushes with steel wire bristles.
- 4. Synthetic pad holders.
- 5. Synthetic pads for polishing, scrubbing, stripping and spray buffing.
- 6. Lambswool polishing pad.
- 7. Brushes with metal or wood backs and with holes to let the solution flow through.
- 8. Solution tank.

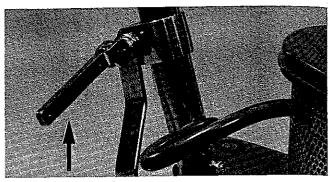


Figure 1
The Locking Lever



Figure 2

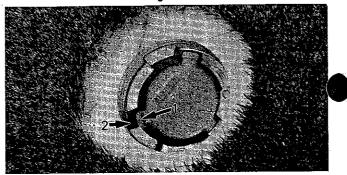


Figure 3

- 1. The Lugs
- 2. The Drive Adapter Openings



Figure 4
The Best Operating Position

#### 120 VOLT MACHINES

#### INSTRUCTIONS FOR CONNECTION TO THE POWER SUPPLY AND THE ELECTRICAL GROUND

This machine must be connected to the electrical ground to protect the operator from electric shock. The machine has an approved power cord with three conductors and a plug with three terminals. Connect the plug to a receptacle that has three holes and is connected to the electrical ground. For maximum protection against electric shock, use a circuit that is protected by a ground fault circuit interrupter. The green (or green and yellow) conductor in the cord is the ground wire. Never connect this wire to any terminal other than the ground terminal.

This machine uses a 120 volt AC 60 cycle electrical circuit. Make sure you have the correct frequency and voltage before connecting the power cord to an outlet. The machine has a plug as shown in figure 5. If a receptacle connected to the electrical ground as shown in figure 5 is not available, have one installed by an electrical contractor. Do not use an adapter.



WARNING: To prevent possible electric shock, protect the machine from rain. Keep the machine in a dry building.



WARNING: To prevent possible electric shock, always use a 3-wire electrical system connected to the electrical ground. For maximum protection against electrical shock, use a circuit that is protected by a ground fault circuit interrupter. Consult your electrical contractor.



WARNING: Do not cut, remove or break the ground pin. If the outlet does not fit the plug, consult your electrical contractor.



WARNING: Have worn, cut or damaged cords replaced by an authorized service person.

#### **EXTENSION CORDS**

Use only an approved extension cord with three conductors, a plug with three terminals, and a connector body with three holes. The machine has a power cord with wire size 14 AWG (AWG means American Wire Gauge).



WARNING: If you use an extension cord, use an extension cord with minimum wire size 12 AWG. Do not use an extension cord longer than 50 feet. Do not join two extension cords.

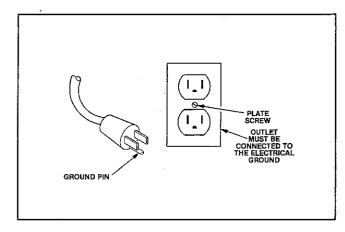


Figure 5

#### 230 VOLT MACHINES

## INSTRUCTIONS FOR CONNECTION TO THE POWER SUPPLY AND THE ELECTRICAL GROUND



CAUTION: This machine will operate only on the AC frequency and electrical voltage shown on the nameplate. Make sure you have the correct frequency and voltage before connecting the power cord to an outlet.

This machine must be connected to the electrical ground to protect the operator from electric shock. The machine has a power cord with two main conductors and one earthing conductor. Connect the plug to the type of receptacle shown in figure 00. The green and yellow conductor in the cord is the ground wire. Never connect this wire to any terminal other than the ground terminal.



WARNING: Always use this machine with an AC three-conductor electrical system connected to the electrical ground. Replace any worn, cut, or damaged cords. Replace any damaged plugs, receptacles, or connector bodies. Do not move the machine over an electrical cord. Always lift the cord over the machine.

#### **EXTENSION CORDS**

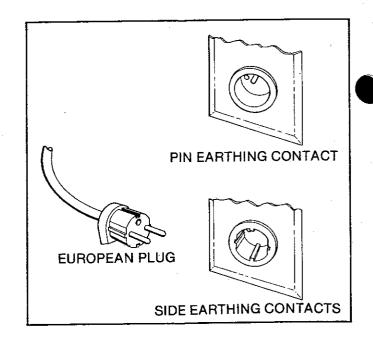
Use only an approved extension cord with two main conductors and one earthing conductor. The machine has a power cord with wire size 1.5 mm<sup>2</sup>.



WARNING: If you use an extension cord, use an extension cord with minimum wire size 1.5 mm<sup>2</sup>. Do not use an extension cord longer than 15 meters. Do not join two extension cords.



WARNING: Do not cut, remove, or break the ground terminal. Do not try to fit a three-terminal plug into a receptacle or connector body that does not fit the plug. If the receptacle or connector body does not fit the plug, see your Authorized person to make the connection.



## HOW TO OPERATE THE MACHINE

How To Start/Stop The Machine



WARNING: Never start a polisher when the handle is in the vertical position.

NOTE: You must have training in the operation of this machine before you use this machine.

The switch to start and stop the machine is activated by the interlock switch, and the levers under the handle grips. See figure 6. To start the machine, follow this procedure:

- 1. Lower the handle.
- 2. Lock the handle in the best position for operation.
- 3. Push the interlock switch, and apply pressure to the levers. See figure 7.



WARNING: Control safety interlock switch with hands only.

#### **How To Control The Machine**

The side to side movement of the machine is controlled by lifting the handle and pressing down on the handle. Raise the handle to move the machine to the right. Press down the handle to move the machine to the left.



WARNING: Maintenance should be performed by qualified personnel only.

#### MAINTENANCE

The motor is a capacitor-induction type motor. A capacitor-induction type motor does not require motor brushes.

If repairs to the gear unit or motor are needed, do not disassemble the gears and motor. Return the machine to the nearest Clarke Service Branch or Clarke Authorized Service Center.

For safe operation, and longer life of your Clarke product, use only Clarke parts.

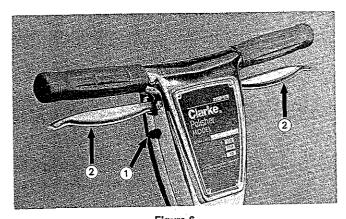


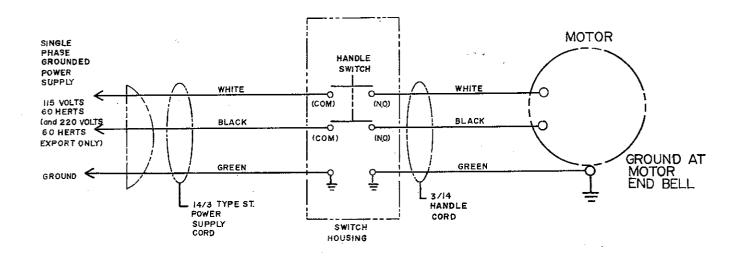
Figure 6

1. The Interlock Switch 2. The Start/Stop Levers



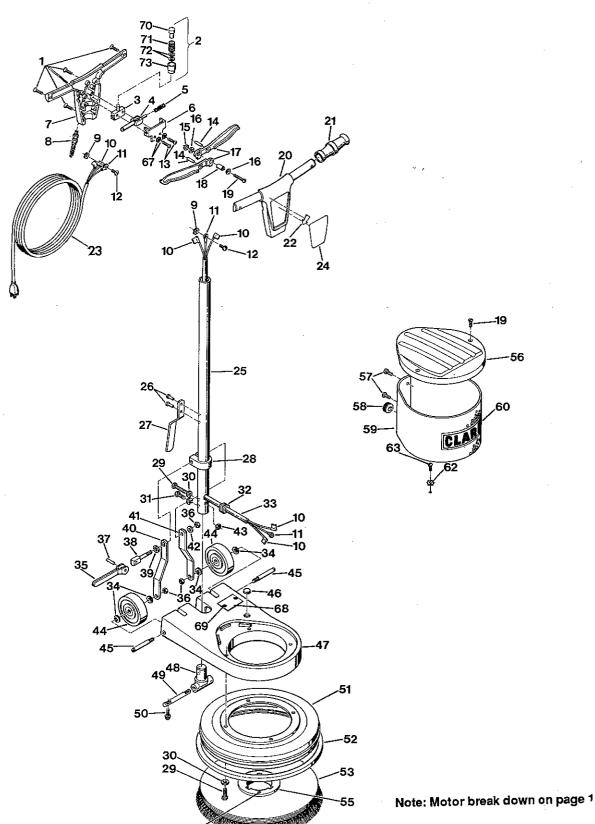
Figure 7

# CLARKE® MODELS C-1600, C-1800 & C-2000 WIRING DIAGRAM 120 VOLT 7/86





WARNING: All electrical repairs must be performed by qualified personnel only.



Note: Gearbox break down or

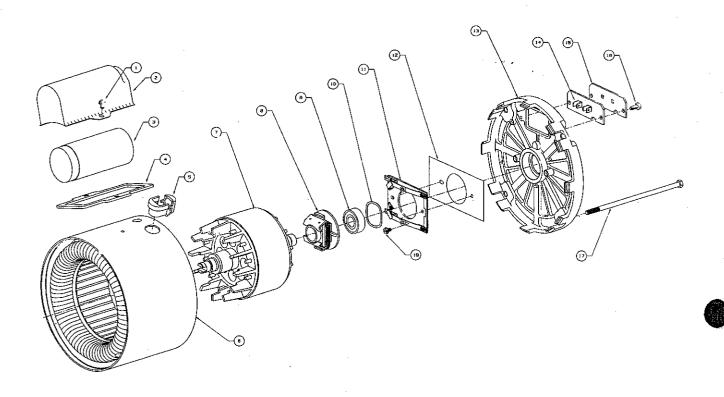
# Clarke® C-1600, C-1800 & C-2000 Parts List #1, Assembly 11/90

Ref.	Part No.		Qty.
1	962487	Screw 1/4-20 x 3/4	5
2 3	16029A	Kit, Switch Adapter	1
3	911690	Switch	1
4	448573	Stop-Switch	1
5	58665A	Switch-Interlock Spring	1
6	440873	Bracket	1
7	442376	Cover	1
8	467504	Strain Reliever	1
9	980621	Washer SH 1108	2
	911594	Terminal	<u>6</u> 3
11	911933	Terminal	
	962065	Screw 8-32 x 1/4 Pan Head	2
13	962980	Screw 6-32 x 1 Pn St.	2 2 2
14	925189	Pin 3/16 x 1" Dowel	2
15	920296	Nut 10-24 Hex	1
16	980982	Washer - #10 Plain	2
17	445174	Lever	2
18	508204	Spacer	1
19	962794	Screw 10-24 x 1 Pan Hd	3
20	444274	Housing	1
21	503702	Grip	2
22	445178	Label - Interlock	1
23	909014	Cord Assembly - Power	1
	73904A	Label - Switch Housing	1
25	449071	Tube	1
26	930005	Pop Rivet	2
27	414552	Hook Cord	1
28	442001	Clamp	1
29	85817A	Screw 5/16-18 x 2" Hex Hd.	5
30	980652	Washer 5/16 Lock	7
31	85812A	Screw 5/16-18 x 7/8 Hex Hd.	11
32	737502	Strain Relief	1
33	909022	Cord	1
34	980681	Washer - Wave	4
35	461404	Cam Assembly	1
36	920248	Nut - 3/8-16 Hug Lock	3
37	925592	Pin 1/4 x 1"	1
38	441301	Bolt	1
39	980349	Washer - Wear	1
40	440301	Arm Link - R.H.	1
1			

Ref.	Part No.	Description	Qty.
41	440302	Arm Link - L.H.	1
42	980645	Washer - 3/8" Plain	1
43	920110	Nut 5/16-18 Elastic Stop	. 1
44	419752	Wheel	2
45	437761	Shaft - Wheel	2 2 1
46	411370	Plug	
47	443201	Main Frame	1
48	449201	Tongue- Handle	1
49	447702	Shaft	1
50	962830	Screw 1/4-20 x 1" Tap Lite	<u>2</u> 1
51	67501B	Shield 20"	
	447831	Shield 18"	1
	447821	Shield 16"	1
52	441296	Bumper Model C-2000	1
	441272	Bumper Model C-1800	1
	441271	Bumper Model C-1600	_ 1
53	480916	Brush Assy Model C-2000	1
} :	410974	Brush Assy Model C-1800	1
	410953	Brush Assy Model C-1600	1
54	962427	Screw 12 x 1" Flat Hd Wood	3
55	466616	Locking Plate	1
56	442371	Cover	1
57	962731	Screw 8 x 1/2 Sheet Metal	2
58	611101	Bushing	1
59	448502	Shroud	1
60	505106	Label	_1_
61	980603	Washer - Shakeproof	1
62	962333	Screw 10-32 x 1/4 Rd. Hd.	1
63	419271	Terminal Strip	1
64	962808	Screw 8-32 x 1/2 Pan Hd	2
65			
66			
67	980607	Washer #6 Shakeproof	2
68	446303	Plate-Warning	1
69	930074	Rivet - 1/8" Dia. Closed End	2
70	51512A	Bushing #6 Nylon	1
71	58664A	Spring, Switch Adapter	1
72	87023A	Washer, #4 Stainless Steel	. 2
73	30117A	Switch - Adapter	1
Ref	441401	Assy includes Item #35,37, & 38	

## Clarke® C-1600, C-1800 & C-2000 Drawing #2 , Motor Assembly & Parts List 11/90 Beginning w/Serial No. OK

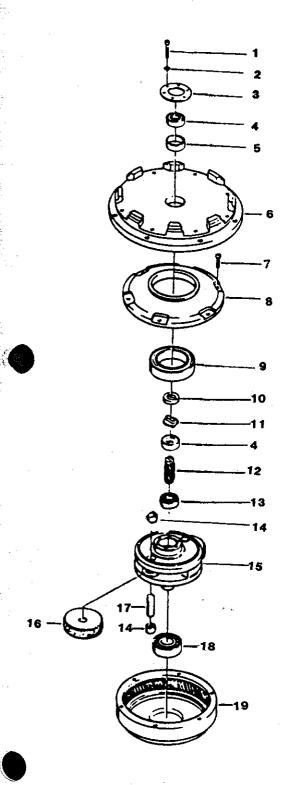
Note: If your machine has motor #44635A refer to this drawing for service part replacement



Ref.	Part No.	Description	Qty.
1	58030A	Screw #10-32 x.31 LG.	2
2	52018A	Capacitor Case	1 1
3	52019A	Start Capacitor	1 1
4	54330A	Gasket, capacitor Case	1 1
5	57341A	Strain Relief	
6	58028A	Wound Stator Frame Assy	1
7	50400A	Rotor and shaft Assembly	1 1
8	58029A	Centrifugal Switch Assembly	1 1
9	902550	203 Bearing	
10	58673A	Wave Spring Washer	1 1
11	58032A	Stationary Switch	
12	54713A .	Stationary Switch Insulation	1 1
13	53523A	Bracket Opp. Shaft End	1 1
14	58911A	Terminal Board Assy	1 1
15	58912A	Terminal Board	1 1
16	58034A	Screw #10-32 x .31	2
17	50691A	Bolt, .250-28 x 6.75 LG	4
18	58031A	Screw, #8-32 x .38 LG	2

### Clarke® C-1600, C-1800 & C-2000 Drawing #3, Gearbox Assembly & Parts List 11/90 Beginning w/Seriał No. OK

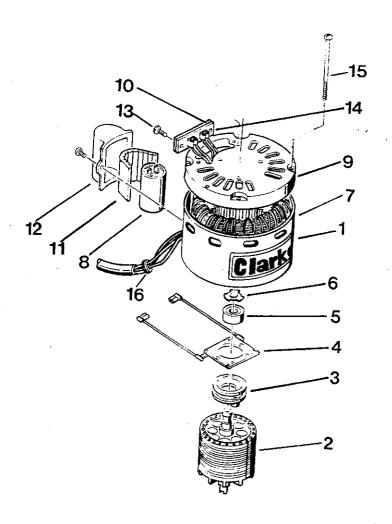
Note: If your machine has gearbox #/54409A refer to this drawing for service part replacement



Ref.	Part No.	Description	Qty.
1	962966	Screw, Socket Hd. Cap	6
2	980650	Washer, Lock	6
3	56922A	Plate, Retainer	1
4	<del>-51161</del> A	Bearing 902666	2
5	58513A	Spacer, Sleeve	1_1_
6	53524A	Endshield	1
7	962794	Screw 10-24" x 1"	6.
8	54858A	Cover, Housing	1
9	902736	Bearing	". <b>1</b>
10	58314A	Retainer	1
11	442473	Coupling	1
12	58313A	Gear, Pinion	1.
13	902606	Bearing	-1
14	902737	Bearing, Needle	6
15	52020 <b>A</b>	Cage	1
16	54408A	Gear, Idler	3
17	58312A	Shaft	3
18	902573	Bearing	1
19	54856A	Housing, Drive	1

# Clarke® C-1600, C-1800 & C-2000 Drawing #4 Motor Assembly & Parts List 11/90

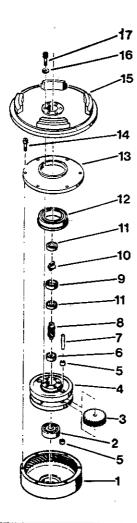
Note: If your machine has motor #44626A/44627A refer to this drawing for service part replacement



Ref.	Part No.	Description	Qty.
1	73323A	Label, Clarke	1
2	447571	Armature	1
3	911866	Centrifugal Switch	1
4	448507	Stationary Switch	1
5	902550	Ball Bearing	2
6	980217	Washer - Wave	1
7	57917A	Stator - complete	1
8	412481	Capacitor	1
9	442901	End Bell	1
10	419270	Terminal Board	1
11	414870	Insulation	1
12	442305	Capacitor Cover	1
13	962727	Screw, 8-32 x 1/2 Pn Hd.	2
14	419271	Terminal Strip	1
15	960107	Screw, 1/4-28 x 6-3/8 Hx. Hd.	4
16	611101	Bushing	1

# Clarke® C-1600, C-1800 & C-2000 Drawing #5, Gearbox Assembly & Parts List 11/90

Note: If your machine has gearbox #443571 refer to this drawing for service part replacement



Ref.	Part No.	Description	Qty.
1	444272	Housing	1
2	902573	Bearing	1 1
3	443572	Gear	2
4	444271	Housing	1
5	902737	Bearing	4
6	902735	Bearing	1
7	447771	Shaft	2
8	447071	Pinion	1 1
9	448272	Spacer	1 1
10	442473	Coupling	1
11	902606	Bearing	1 1
12	902736	Bearing	1 1
13	442372	Cover	1 1
14	962967	Screw - socket Hd. Cap	6
15	440271	Adapter	1
16	980650	Washer - Lock	6
17	962966	Screw 10-32 x 1-1/4	6