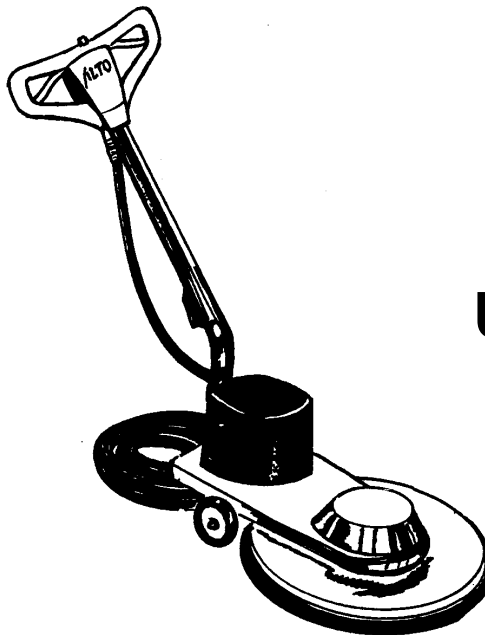


# ALTO<sup>®</sup>

## CLARKE TECHNOLOGY

### Operator's Manual



### ULTRA SPEED BURNISHER 1700

#### READ THIS BOOK

This book has important information for the use and safe operation of this machine. Failure to read this book prior to operating or attempting any service or maintenance procedure to your ALTO machine could result in injury to you or to other personnel; damage to the machine or to other property could occur as well. You must have training in the operation of this machine before using it. If your operator(s) cannot read English, have this manual explained fully before attempting to operate this machine.

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: ALTO U.S. INC., 2100 Highway 265, Springdale, Arkansas 72764.

## Table of Contents

Operator Safety Information .....	3
Features and Specifications .....	4
Pad Selection Chart .....	4
120 Volt Instructions for Electrical Connection .....	5
About the Machine .....	6
How to Prepare Machine for Operation .....	6
How to Operate the Machine .....	7
Care and Maintenance .....	8
How to Correct Problems in the Machine .....	9

## Section II - Parts and Service Manual

Maintenance .....	12
Assembly Drawing .....	14
Assembly Parts List .....	15
Electrical Schematic .....	16
Motor Drawing and Parts List .....	17

## OPERATOR SAFETY INSTRUCTIONS



**WARNING**



**AVERTISSEMENT**



**ADVERTENCIA**

<b>DANGER</b> means:	Severe bodily injury or death can occur to you or other personnel if the <b>DANGER</b> statements found on this machine or in this Owner's Manual are ignored or are not adhered to. Read and observe all <b>DANGER</b> statements found in this Owner's Manual and on your machine.
<b>WARNING</b> means:	Injury can occur to you or to other personnel if the <b>WARNING</b> statements found on your machine or in this Owner's Manual are ignored or are not adhered to. Read and observe all <b>WARNING</b> statements found in this Owner's Manual and on your machine.
<b>CAUTION</b> means:	Damage can occur to the machine or to other property if the <b>CAUTION</b> statements found on your machine or in this Owner's Manual are ignored or are not adhered to. Read and observe all <b>CAUTION</b> statements found in this Owner's Manual and on your machine.



**DANGER:** Failure to read the Owner's Manual prior to operating or attempting any service or maintenance procedure to your machine could result in injury to you or to other personnel; damage to the machine or to other property could occur as well. You must have training in the operation of this machine before using it. **If you or your operator(s) cannot read English, have this manual explained fully before attempting to operate this machine.**



**DANGER:** Machines can cause an explosion when operated near flammable materials and vapors. Do not use this machine with or near fuels, grain dust, solvents, thinners, or other flammable materials. Precautions should be taken during the use of this machine to prevent formation of a combustible mixture of flyings and air. Use this machine only in a well ventilated area.



**DANGER:** Operating a machine that is not completely or fully assembled could result in injury or property damage. Do not operate this machine until it is completely assembled. Inspect the machine carefully before operation.



**DANGER:** Electrocuting could occur if maintenance and repairs are performed on a unit that is not disconnected from the power source. Disconnect the power supply before attempting any maintenance or service. Always remove the electrical plug from the electrical outlet before changing the brush, pad or other attachment and before leaving the machine.



**DANGER:** Using a machine with a damaged power cord could result in an electrocution. Do not use the machine if the power cord is damaged. Do not use the electrical cord to move the machine.



**WARNING:** Maintenance and repairs performed by unauthorized personnel could result in damage or injury. Maintenance and repairs must be performed by authorized personnel only. Keep all fasteners tight. Keep adjustments according to specifications.



**WARNING:** Electrical components of this machine can "short-out" if exposed to water or moisture. Keep the electrical components of the machine dry. Wipe the machine down after each use. For storage, keep the machine in a dry building.



**WARNING:** Always use a three-wire electrical system connected to the electrical ground. For maximum protection against electric shock, use a circuit that is protected by a ground fault interrupter. Consult your electrical contractor.



**WARNING:** To prevent damage to the power cord, do not let the pad, pad driver or wheels touch the power cord when the machine is running. Always lift the cord over the machine. Do not pull the power cord to move the machine.







**WARNING:** Operating a machine without observing all labels and instructional information could result in injury or damage. Read all machine labels before attempting to operate. Make sure all of the labels and instructional information are attached or fastened to the machine. Get replacement labels and decals from your authorized distributor.




**WARNING:** Use of this machine as a step or furniture could result in injury or damage. Do not use this machine as a step or furniture. Do not ride on this machine.

## OPERATOR SAFETY INSTRUCTIONS (cont.)

-  **WARNING:** To avoid injury keep hands, feet and loose clothing away from all moving parts of this machine.
-  **CAUTION:** The machine is heavy. Get assistance before attempting to transport or move it.
-  **CAUTION:** To prevent serious damage to the floor surface, when using burnisher, make sure the machine is always moving forward or backward when the pad is in contact with the floor.
-  **CAUTION:** To prevent overloading motor, do not use burnisher for wet scrubbing. There is no skirt on burnisher to contain water. Water could splatter.

## FEATURES AND SPECIFICATIONS

Electric burnishers are floor polishing machines. They are operated by moving them forward and backward across the floor. **Note: Do not use the machine for wet scrubbing.**

-  **CAUTION:** To prevent serious damage to the floor surface, make sure the machine is always moving forward or backward when the pad is in contact with the floor.

### Specifications

<b>Model</b>	01193B
<b>Voltage (V)</b>	120
<b>Frequency (Hz)</b>	50/60
<b>Current (A)</b>	12.5
<b>Operators Handle</b>	plastic
<b>Pad Driver</b>	20"
<b>Burnishing Swath</b>	20"
<b>Pad Speed (rpm)</b>	1700
<b>Motor Horsepower</b>	1.5
<b>Power Cable Length (ft)</b>	50
<b>Weight (lbs.)</b>	82

### 19" (48cm) 3M Burnishing Pad Selection Chart

Part No.	Description	Application	Use	RPM	Color	Finish
976289	Top Line	Burnish	Dry	1500-3000	Peach	Hard finish/high traffic Soft finish/low traffic
976326	Natural Blend	Burnish	Dry	1500-3000	Off White	Hard finish/high traffic Soft finish/low traffic High traffic/low Maintenance
976235	UHS Tan Buffer	Burnish	Dry	1500-3000	Tan	Hard finish/high traffic Wet-look hard finish
976236	UHS Aqua Buffer	Burnish	Dry	1500-3000	Aqua	Soft finish/low traffic Wet-look soft finish

## 120 VOLT MACHINES

### Instructions for connection to the power supply and the electrical ground.

This product must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electrical shock. This product is equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be inserted into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

- WARNING:** Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the product. If it will not fit the outlet, have a proper outlet installed by a qualified electrician.

This product is for use on a nominal 120 volt circuit and has a grounding attachment plug that looks like the plug illustrated in Figure 1. Make sure that the product is connected to an outlet having the same configuration as the plug. No adaptor should be used with this product.

- 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.

- 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.

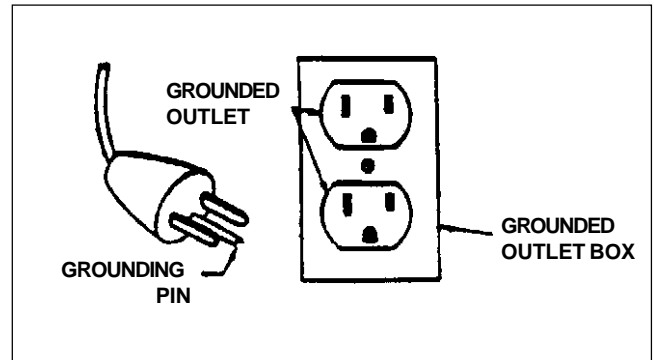


Figure 1

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## ABOUT THE MACHINE

### How To Assemble

This machine is shipped with the handle assembly separate from the base. Assemble as follows:

1. Loosen but do not remove the two square head knobs on the rear of the machine.
2. Insert the handle tube between the frame and handle clamp until it bottoms.
3. Tighten the two square head knobs to secure the handle tube.
4. Connect cord set to the motor pigtail.

Install a pad and the machine is ready to operate.

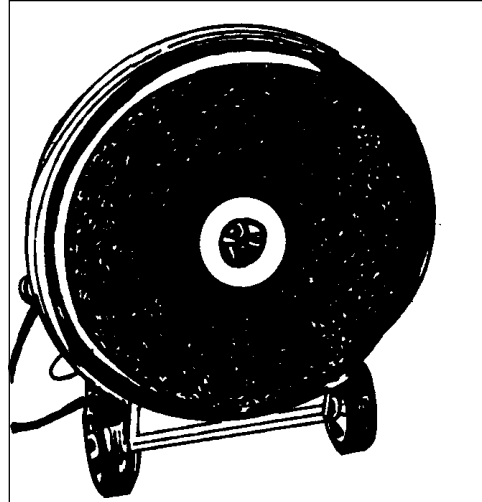


Figure 2

## HOW TO PREPARE THE MACHINE FOR OPERATION

### How To Install the Pads

**⚠ WARNING:** Always remove the electrical plug from the electrical outlet before installing or changing the pad.

The pad driver assembly is on the bottom underside of the machine. The pad holder holds the pad in position. The machine has a screw-on pad holder. To install the pad, follow this procedure:

1. With the handle locked in the operating position, tilt burnisher back on the handle until the underside of the burnisher is fully exposed. (See figure 2).
2. Remove the retainer from the pad holder by unscrewing (turn counterclockwise).
3. Remove the center scored circle from a pad.
4. Place pad on pad driver.
5. Be sure pad is properly centered on the driver.
6. Reinstall the retainer on the pad holder until pad is tightly secured (turn clockwise).

**NEVER OPERATE BURNISHER WITHOUT A PAD.**

## HOW TO OPERATE THE MACHINE

**WARNING:** Machines can ignite flammable materials and vapors. Do not use with or near flammables, such as: gasoline, grain dust, solvents and thinners.

**CAUTION:** Allowing the machine to run without moving forward or backward can cause serious damage to the floor surface. Make sure the machine is always moving when the pad is rotating.

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

### How To Start/Stop The Machine

The normal position of this burnisher, with the pad stationary, is tilted back with the pad off the floor.

1. Remove cable completely from cable hook.
2. With the handle in operating position and the power cable plugged into the proper outlet, depress the interlock button (1) and squeeze the levers beneath the handle grips (2). (See figure 3).
3. As the motor reaches full speed (1-2 seconds), bring the pad into contact with the floor.

**NOTE:** Make sure you hold the handle with both hands.

### How To Operate the Machine

For best results, use a clean pad and change frequently as pad loads up. A motor overload could result from a dirty, loaded pad. If the built-in circuit breaker trips, turn off the machine, wait five (5) seconds, then depress the reset button on the circuit breaker. Change the pad.

### The Circuit Breaker

A circuit breaker is used to protect the motor. If the motor draws high current, the circuit breaker will stop the motor. The circuit breaker reset button is on the rear of the motor cover. Push the reset button to reset the circuit breaker. If the motor continues to stop, consult an authorized service person.

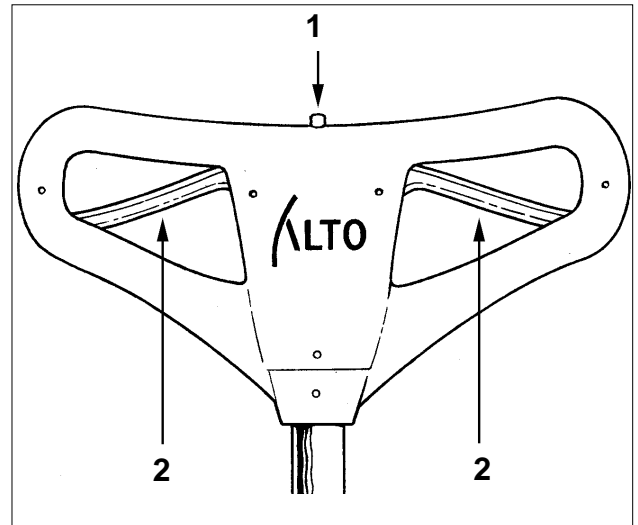


Figure 3

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## CARE AND MAINTENANCE

This burnisher will give you many years of trouble-free service provided it is given proper care. Throwing, dropping, bumping across the thresholds and other misuse may result in a damaged unit and invalidate the warranty. When storing your burnisher, always remove the pad.

Pads can be cleaned by washing in warm water and a mild detergent, rinsing, and hanging up to dry.


The pad driver spindle bearings should be re-lubricated once a year. Do not over lubricate. Allow grease to enter bearings slowly.

**NOTE: Do not store the machine resting on the pad driver, the pad driver will warp and cause vibration.**

### Inspections and Repairs

Take the machine to the nearest Clarke Technology authorized repair location once a year for the maintenance inspections.

To make any repairs, take the machine to the nearest Clarke Technology authorized repair location.

 **WARNING: Maintenance and repairs must be done by authorized personnel only**



## HOW TO CORRECT PROBLEMS IN THE MACHINE

	<b>Cause</b>	<b>Action</b>
<b>The machine will not run.</b>	The machine may not have any power.	Make sure the machine is connected to the correct voltage and frequency and that all connections are tight or,  Make sure the machine is plugged in.
	The power cord may be damaged.	Contact an authorized service person
	The pad is worn or dirty.	Clean the pad. If the pad is worn, replace it.
	The main switch is defective.	Contact an authorized service person.
	The circuit breaker is defective.	Contact an authorized service person.
<b>The machine is noisy.</b>	The motor is defective.	Return to service center.
	The bearings are dry.	Grease the bearings or return to service center.
	The belt is slipping.	Re-tension the drive belt.
<b>The brush warning light illuminates.</b>	The carbon brushes need replacing.	Contact an authorized service person.
<b>The machine is vibrating excessively.</b>	The pad is not installed correctly.	Remove the pad. Install the pad correctly.  Center the pad properly.
	The pad is worn or damaged.	Install a new pad.





**Ultra Speed<sup>®</sup>  
Burnisher  
1700**

**Section II  
Parts and Service Manual**

(70127B)

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## MAINTENANCE



**WARNING:** Maintenance and repairs must be done by authorized personnel only



**WARNING:** To prevent electric shock, always remove the electrical plug from the electrical outlet before doing any repairs or maintenance to the machine.



**WARNING:** Do not operate this machine unless it is completely assembled.



**WARNING:** Keep all fasteners tight. Keep adjustments according to specifications.

### Maintenance of the Motor

This machine has a DC permanent magnet motor that uses a commutator, carbon brushes, and a rectifier.

Keep the machine clean. It will need fewer repairs and have a longer life. Remove or blow dust from the motor frequently.

### The Indicator Light

This machine has an indicator light that illuminates when the brushes are worn. The commutator must be inspected each time the brushes are changed. After the brushes have been replaced two times, have the commutator surface turned. Have an authorized service person make the repairs.

### How to Check the Commutator and the Carbon Brushes



**WARNING:** Electrical inspections must be made by a person authorized to do maintenance. Electrical repairs must be made by a person authorized to make electrical repairs.

To check the commutator and the carbon brushes, follow this procedure:

1. Remove the two top screws of the motor cover.
2. Remove the cover.
3. Pull back each spring and pull the brush out of the holder. Keep the lead wire connected.
4. Turn the pad driver and look at the part of the commutator that the brushes touch.

5. Take the machine to an authorized repair location if you see any of the following conditions:

- 1.) Small holes in the surface of the commutator. See Figure 4 "A".
- 2.) Uneven color. Look for an even dark brown color. Clean areas or very dark areas indicate a problem. See Figure 4 "B".
- 3.) High mica. The mica insulation must be lower than the commutator bars. See Figure 4 "C".

6. Replace all four carbon brushes if any carbon brush is shorter than 7/16 inch. To replace the carbon brushes in the motor, follow this procedure:

- 1.) Remove the screws. Replace the brush and lead. Install the screw.
- 2.) Use a hook to pull the spring out of the way. Install the brush into the slot in the same position as the original brush (the shunt wire on the brush should be located above the brush spring.) Put the spring into position on the end of the brush. The lead must not prevent free movement of the brush in the holder.
- 3.) Install the motor cover.

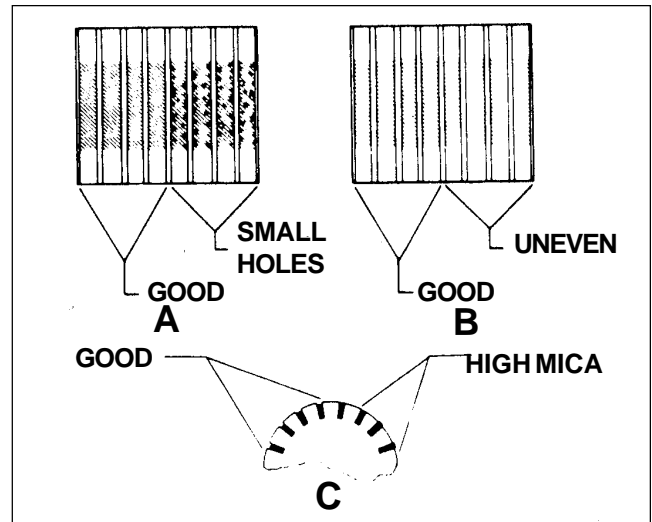
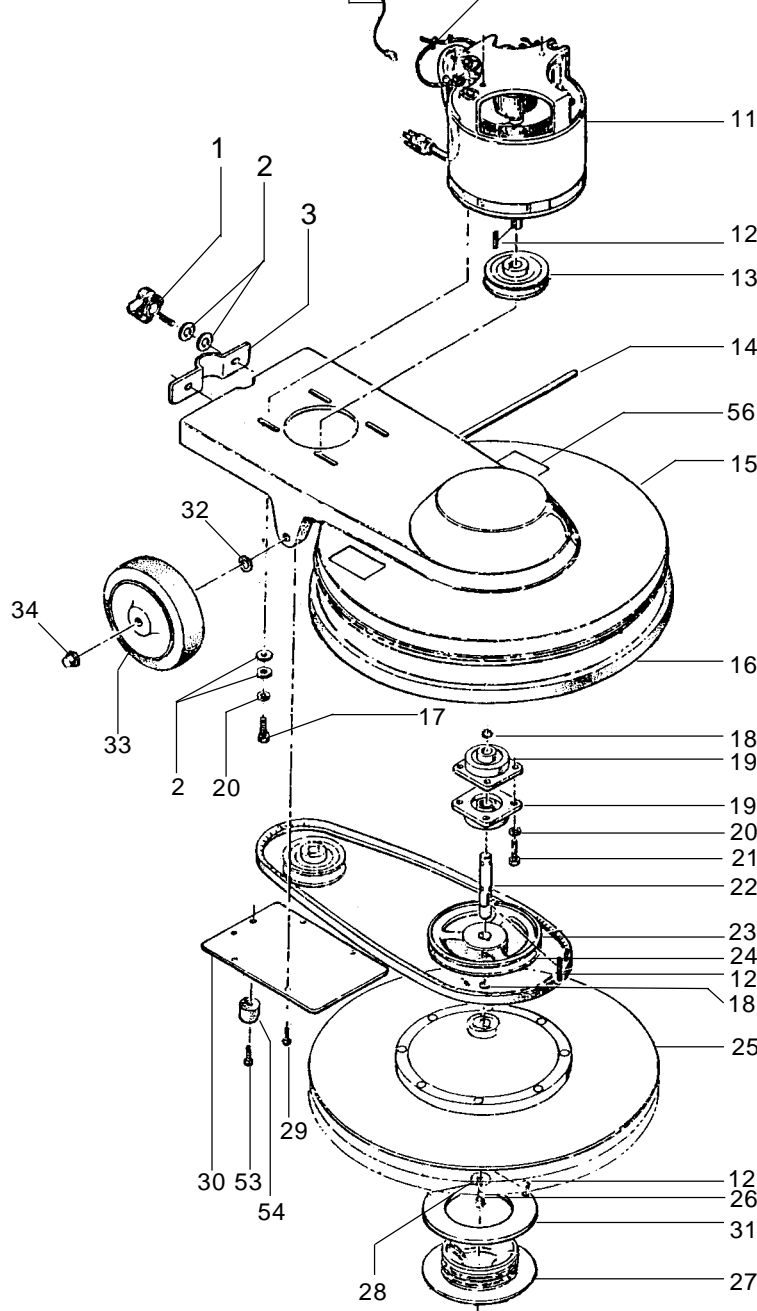
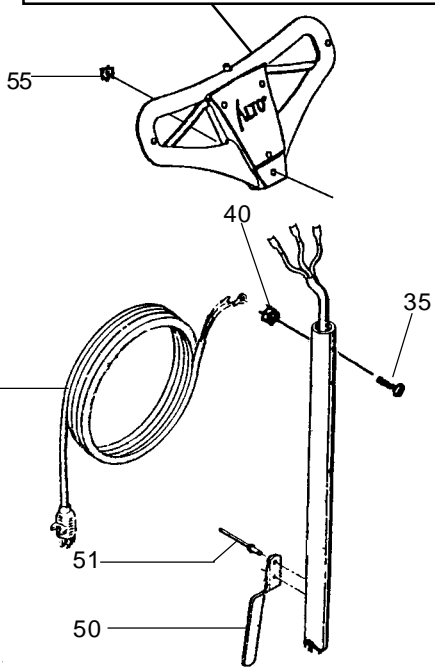
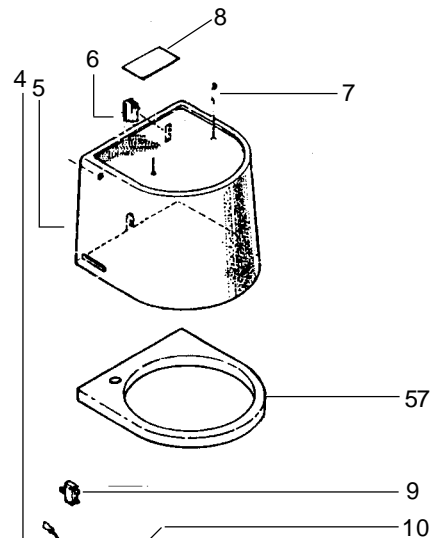
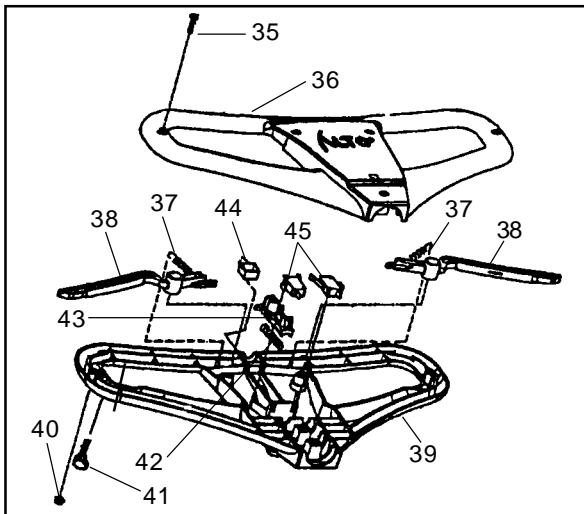


Figure 4

### Rectifier

If the machine has been adjusted, and still blows fuses and runs at half speed, the rectifier may be damaged. Take the machine to an authorized repair location to have a Clarke Technology authorized repair person replace the rectifier.

CLARKE TECHNOLOGY Ultra Speed Burnisher 1700  
 Assembly Parts List 4/01



**CLARKE TECHNOLOGY Ultra Speed Burnisher 1700**  
**Assembly Parts List 4/01**

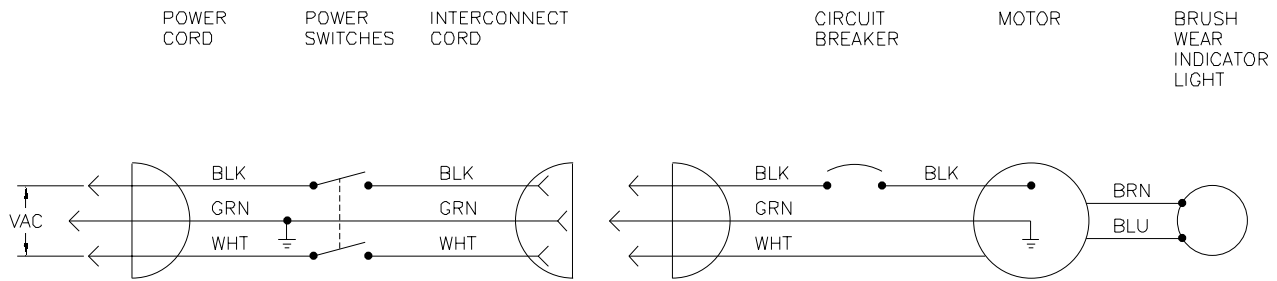
Ref #	Part No.	Description	Qty
1	50774A	Knob	2
2	170860	Washer, Flat	12
3	62423A	Clamp	1
4	49310A	Wire	1
5	32369A	Cover (gray)	1
6	32369B	Cover (black)	1
	44201A	Light (rectangular)	1
	34259A*	Light (round)	1
7	85517A	Screw	2
8	77371A	Label, ALTO	1
9	41403A	Circuit Breaker	1
10	699202	Cable Tie	1
11	45025A	Motor (includes one #12)	1
12	915044	Key (one included w/#11)	(3)
13	57262A	Pulley	1
14	60193A	Axle	1
15	20006A	Frame	1
16	30035A	Bumper	1
17	170820	Screw	4
18	57714A	Retaining Ring	2
19	51185A	Bearing	2
20	980638	Lockwasher	8
21	85703A	Screw	4
22	69047A	Spindle	1
23	50921A	Belt	1
24	57261A	Pulley	1
25	56925A	Pad Driver (Includes 27, 31)	1
26	962714	Screw	1
27	57369A	Retainer Pad (incl. w/25)	(1)

Ref #	Part No.	Description	Qty
28	50836A	Retainer	1
29	962968	Screw	4
30	63930A	Belt Guard	1
31	57370A	Base, Retainer (incl. w#25)	(1)
32	980681	Washer, Wave	2
33	39857A	Wheel	2
34	920346	Palnut	2
35	85383A	Screw, 10-32 x 3/4	7
36	50779A	Handle, Front	1
37	50820A	Spring, Extension	2
38	50798A	Lever, Switch	2
39	50780A	Handle, Rear	1
40	920722	Nut, 10-32 ESNA	7
41	962957	Screw	2
42	50821A	Spring, Compression	1
43	50799A	Interlock, Main	1
44	50806A	Button, Interlock	1
45	40109A	Switch	2
46	41956A	Cord	1
47	747553	Strain Relief	1
48	66542A	Pin	1
49	69124B	Handle Tube	1
50	64325A	Cord Hook	1
51	930005	Rivet	2
52	10083A	Cord, Power Supply	1
53	85381A	Screw	1
54	35703A	Bumper	1
55	170686	Locknut	1
56	77378A	Label, Clarke Technology	2
57◆	30185A	Baffle	1

\*(NOTE: Part Number 34259A requires retainer 80201A)

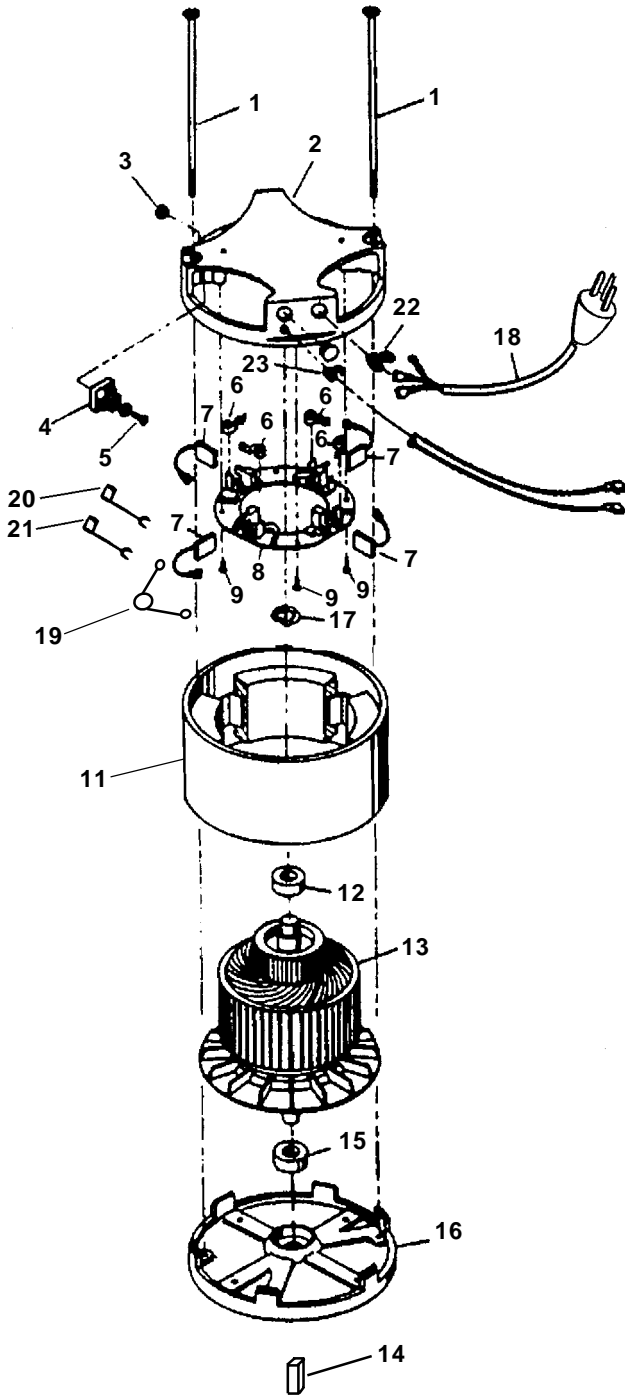
**NOTE:** ◆ indicates a change has taken place since last publication of this manual

**CLARKE TECHNOLOGY Ultra Speed Burnisher 1700**  
**Electrical Schematic 120Volts 11/00**



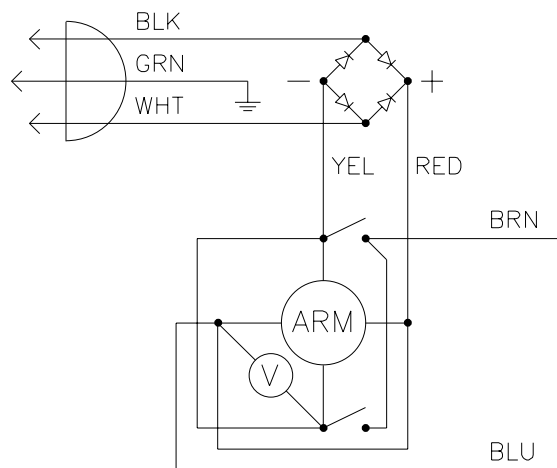


**CLARKE TECHNOLOGY Ultra Speed Burnisher 1700  
Motor (45025A) Drawing and Parts List 4/01**



**NOTE:** ◆ indicates a change has taken place since last publication of this manual

Ref	Part No.	Description	Qty
1	50717A	Thru-Bolt	2
2	52045A	Commutator Bracket	1
3	56282A	Hex Nut	1
4	912287	Rectifier	1
5	962054	Screw	1
6	448396	Spring (w/8)	4
7	51405A	Brush Assembly (w/8)	4
8	51435A	Brush Board Asm. (incl. 6,7,19,20 &21)	(1)
9	962310◆	Screw - Brush Board	4
11	58057A	Stator Frame	1
12	902547	Bearing - Upper	1
13	50136A	Armature 120V	1
14	915044	Key	1
15	902550	Bearing - Lower	1
16	40405A◆	Bottom End Plate	1
17	980076	Wave Washer	1
18	55646A	Cord Assembly	1
19	59606A	Varistor (120V) (w/8)	1
20	55647A	Yellow Lead (w/8)	1
21	55648A	Red Lead(w/8)	1
22	627580◆	Strain Relief	1
23	58056A	Strain Relief	1





# ALTO® PRODUCT SUPPORT BRANCHES

## U. S. A. Locations

### HEAD OFFICE

ALTO U.S. Inc., St. Louis, Missouri  
16253 Swingley Ridge Road, Suite 200  
Chesterfield, Missouri 63017-1725

### PRODUCTION FACILITIES

ALTO U.S. Inc., Springdale, Arkansas  
2100 Highway 265  
Springdale, Arkansas 72764  
(501) 750-1000  
**Customer Service - 1-800-253-0367**  
**Technical Service - 1-800-356-7274**

ALTO U.S. Inc., Bowling Green, Ohio 43402  
1100 Haskins

ALTO U.S. Inc., Clearwater, Florida 33765  
1500 N. Belcher Road

### SERVICE FACILITIES

ALTO U.S. Inc., Carlstadt, New Jersey 07072  
150 Commerce Road  
(201) 460-4774

ALTO U.S. Inc., Elk Grove, Illinois 60007  
2280 Elmhurst Road  
(847) 956-7900

ALTO U.S. Inc., Denver, Colorado 80204  
1955 West 13th Ave.  
(303) 623-4367

ALTO U.S. Inc., Houston, Texas 77040  
7215 North Gessner Road

### SALES AND SERVICE FACILITIES

ALTO U.S. Inc., Madison Heights, Michigan 48071-0158  
29815 John R.  
(810) 544-6300

ALTO U.S. Inc., Marietta, Georgia 30062  
1355 West Oak Common Lane  
(770) 973-5225

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**CLARKE TECHNOLOGY**  
**AMERICAN SANDERS TECHNOLOGY**  
**A.L. COOK TECHNOLOGY**  
**Customer Service Headquarters and**  
**Factory**  
2100 Highway 265  
Springdale, Arkansas 72764  
(501) 750-1000

**Technical Service**  
1-800-356-7274

## European Locations

### PRODUCTION FACILITIES

ALTO Danmark A/S, Aalborg  
Blytaekkervej 2  
DK-9000 Aalborg  
+45 72 18 21 00

ALTO Danmark A/S, Hadsund  
Industrikvarteret  
DK-9560 Hadsund  
+45 72 18 21 00

### SALES SUBSIDIARIES

ALTO Canada Ltd., Rexdale Ontario  
24 Constellation Ct.  
(416) 675-5830

ALTO Overseas Inc., Sydney (Australia)  
1B/8 Resolution Drive  
Caringbah NSW 2229  
+61 2 9524 6122

ALTO Cleaning Systems Asia Pte Ltd., Singapore  
No. 17 Link Road  
Singapore 619034  
+65 268 1006

ALTO Deutschland GmbH, Fronenberg (Germany)  
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+49 2373 754 200

ALTO Cleaning Systems (UK) Ltd., Penrith  
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ALTO Sverige AB, Molndal (Sweden)  
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Box 4029  
S-431 04 Molndal  
+46 31 706 73 00

ALTO Norge A/S, Oslo (Norway)  
Bjornerudveien 24  
N-1266  
+47 2275 1770

## **CLARKE TECHNOLOGY U.S. WARRANTY**

This Clarke Technology Industrial/Commercial Product is warranted to be free from defects in materials and workmanship under normal use and service for a period of one year from the date of purchase, when operated and maintained in accordance with Clarke Technology's Maintenance and Operations Instructions. All handle components are warranted for 5 years to be free from defects in materials or workmanship under normal use and service.

This warranty is extended only to the original purchaser for use of the product. It does not cover normal wear parts such as electrical cable, rubber parts, hoses and motor brushes.

If difficulty develops with the product, you should:

- (a). Contact the nearest authorized Clarke Technology repair location or contact the Clarke Technology Service Operations Department, 2100 Highway 265, Springdale, Arkansas 72764, for the nearest authorized Clarke Technology repair location. Only these locations are authorized to make repairs to the product under this warranty.
- (b). Return the product to the nearest Clarke Technology repair location. Transportation charges to and from the repair location must be prepaid by the purchaser.
- (c). Clarke Technology will repair the product and or replace any defective parts without charge within a reasonable time after receipt of the product.

Clarke Technology's liability under this warranty is limited to repair of the product and/or replacement of parts and is given to purchaser in lieu of all other remedies, including INCIDENTAL AND CONSEQUENTIAL DAMAGES.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE SPECIFIED HEREIN. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION OF THE FACE HEREOF. NO WARRANTIES, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY, SHALL BE IMPLIED. A warranty registration card is provided with your Clarke Technology product. Return the card to assist Clarke Technology in providing the performance you expect from your new floor machine.

ALTO U.S. INC., 2100 Highway 265, Springdale, Arkansas 72764.

**CLARKE TECHNOLOGY reserves the right to make changes or improvements to its machine without notice.**

**Always use genuine Clarke Technology Parts for repair.**



**CLARKE TECHNOLOGY  
2100 Highway 265  
Springdale, Arkansas, 72764**