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## Operation & Maintenance Manual

For Commercial Use Only



## GLAZER 1500™

MODEL NO.  
98445

## NOTES

**TABLE 1**

<b>CATALOG NO.</b>	<b>98445</b>
<b>SERIES</b>	G
<b>VOLTS</b>	115V
<b>H.P.</b>	1-1/2
<b>CERTIFICATION</b>	*

\*



\*This product conforms to ANSI/UL Standard 561 and is certified to CAN/CSA Standard C22.2 No. 10.

**ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.**

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<b>Tornado® Standard Warranty Program*</b>	
Warranties do not cover components subject to normal wear or abuse and misuse, and have other limitations not specified here. For full details, contact your Authorized Tornado Distributor, Service Center, or the Tornado Technical Service Department.	<b>10 Years:</b> <i>All plastic tanks and rotationally-molded bodies</i>
	<b>2 Years:</b> <i>Parts on all Tornado and Tornado/Karcher cleaning equipment<sup>1) 2)</sup></i>
	<b>1 Year:</b> <i>Labor on all Tornado and Tornado/Karcher cleaning equipment<sup>1) 2)</sup></i>
	<b>1 Year:</b> <i>Warranty on batteries, one full year, Not pro-rated.</i>

\* Effective January 1<sup>st</sup>, 2001. Terms subject to change without notice.

1) Windshear™ Blower-Dryer, Insulation Blowers, CW 50, CW 100, and Duo-Upright Carpetkeepers™ are warranted for 1 (one) year for parts and labor.

2) Warranties on the ICC1, KMR 1200, KMR 1250, and KMR 1700 are 24 months parts/6 months labor OR 1000 hours of operation, whichever comes first. Warranties on the BR and BD 1000 are 24 months parts/12 months labor OR 1000 hours of operation, whichever comes first.

BEFORE OPERATING MACHINE:



**WARNING:** Failure to adhere to these instructions could result in serious bodily injury or property damage.

Read this manual completely before attempting to operate machine. This manual has important information for the use and safe operation of the machine. Keep this manual on file and handy. If additional information is needed, please contact your local distributor or write to:

**BREUER/TORNADO CORPORATION** (708) 867-5100  
7401 W. LAWRENCE AVE. Fax: (708) 867-6968  
CHICAGO, IL 60656-3489 Service E-mail: [service@breuertornado.com](mailto:service@breuertornado.com)

Grounding Instructions

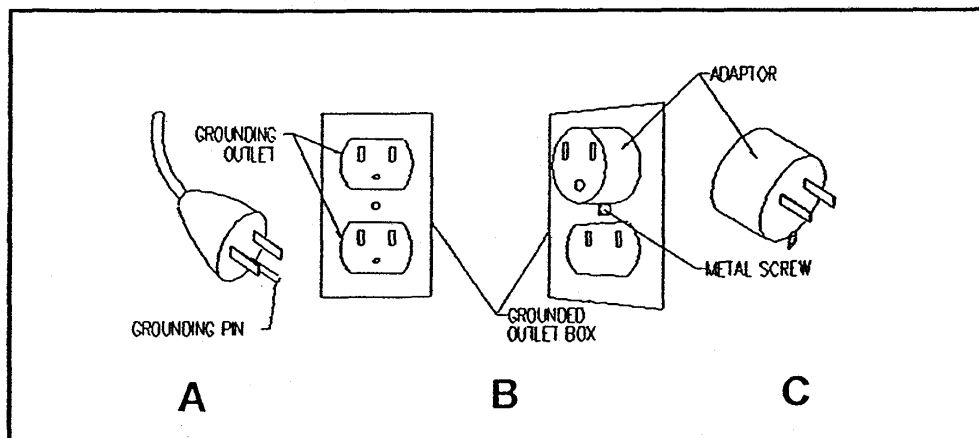


**WARNING:** Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the appliance - if it will not fit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

This appliance must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This machine 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.

This appliance is for use on a nominal 120-volt circuit, and has a grounding plug that looks like the plug illustrated in sketch A. A temporary adapter that looks like the adapter illustrated in sketches B and C may be used to connect this plug to a 2-pole receptacle (sketch B) if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet (sketch A) can be installed by a qualified electrician. The green-colored rigid ear, lug, or tab extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box cover. Whenever the adapter is used, it must be held in place by a metal screw.

**NOTE:** In Canada, the use of a temporary adapter is not permitted by the Canadian Electrical Code.



**IMPORTANT SAFETY INSTRUCTIONS FOR  
COMMERCIAL USE ONLY**  
**WHEN USING AN ELECTRICAL APPLIANCE BASIC PRECAUTIONS SHOULD ALWAYS BE  
FOLLOWED INCLUDING THE FOLLOWING:**

**READ ALL INSTRUCTIONS BEFORE USING THE MACHINE**



**WARNING: To reduce the risk of fire, electric shock or injury:**

Do not leave machine unattended when plugged in. Unplug from outlet when not in use and before changing pads or attempting any maintenance or adjustment. If handle switch lever is activated accidentally, high starting torque will cause machine to move and may cause damage or injury.

To avoid electrical shock, Use indoors only. Do not use outdoors and do not expose to rain.

Do not allow to be used as a toy. Close attention is necessary when used by or near children.

Use only as described in this manual. Use only manufacturer's recommended attachments.

Do not use with damaged cord or plug. If machine is not working as it should, has been dropped, damaged, left outdoors, or dropped into water, return it to a service center.

Do not pull or carry by cord, use cord as a handle, close a door on cord, or pull cord around sharp edges or corners. Do not run machine over cord. Keep cord away from heated surfaces. Do not unplug by pulling n cord. To unplug, grasp the plug not the cord. Do not handle plug or machine with wet hands.

Keep hair, loose clothing, fingers, and all parts of body away from openings and moving parts.

Turn off all controls before unplugging.

Connect to a properly grounded outlet only. See Grounding Instructions.

Do not put hands under base - rotating parts could cause injury. Always keep hands feet and loose fitting clothing away from moving parts to prevent possible injuries. Use care to keep electrical supply cable from contacting moving parts, such as floor brushes or pads.

**Risk of explosion:** Floor sanding can result in explosive mixture of fine dust and air. Use this machine only in a well ventilated area, free from any flame or match. Do not use machine in areas where flammable and/or explosive vapors or dust are present. To avoid fire do not use with a flammable or combustible liquid to clean a floor.

Make sure voltage and frequency at the wall power receptacle correspond with that indicated on name plate before plugging in machine. A 20 amp circuit is recommended. Right or left switch levers will independently operate the motor.

Never use a device to lock the switch lever in the ON position.

Use only a 12 Ga. three-wire extension cable which have 3-prong grounding type plugs and 3-prong receptacles that accept the machine's plug.

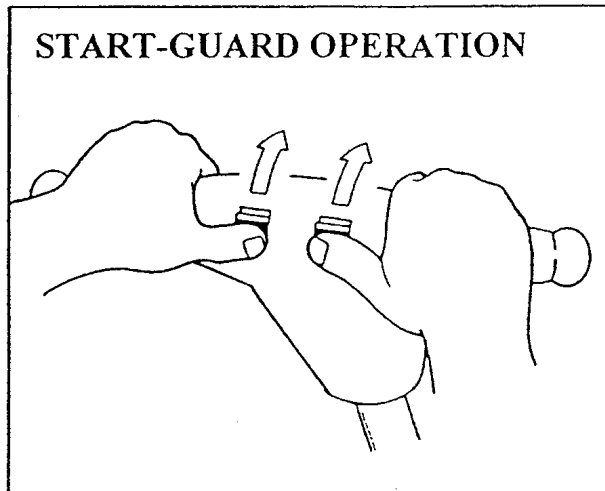
Do not add weight to this machine - this will upset the balance and may cause motor overload. Always operate machine with all of cable removed from handle.

Do not hop the brush or pad holder onto the machine. Do not store with pad holder or pad on floor.

**Save These Instructions**

## GENERAL INFORMATION

Your Glazer™ 1500 is shipped with the handle intact. Before using machine please refer to Form L2077 for instructions on proper handle setup.



### **OPERATION**

When starting the machine, tilt back on rear wheels so the pad is not resting on the floor surface. Grasp handles tightly to counter act the high starting torque. With thumbs push Start-Guard switches forward while simultaneously squeezing handle levers. Once the machine has started, press downward on floor surface. After initial start, machine is easy to control. A circuit breaker is located on the base of the machine. Should an overload occur; attempt to locate the cause and reset the breaker by pressing the black button (located on the circuit breaker housing).

### **POLISHING**

Use 3/4" to 1" thick high speed burnishing pads. Floors should be dry mopped to remove grit. Start at point nearest electrical outlet and walk in a straight line as far as cable will allow. Then turn 180 degree-saway from the cable and machine in a path parallel to to, and slightly overlapping the first pass.

### **SPRAY BUFFING**

Use 3/4" to 1" thick burnishing pad. The spray buff solution should be applied to the floor ahead of the machine. Do not run the machine into the spray or mist of the spray buff solution. Use the same straight line technique described in the Polishing section.

### **DAMP BUFFING**

Use 3/4" to 1" thick burnishing pad. Use a well wrung out mop to apply a damp buffing solution. Go over dampened surface with machine until surface is dry and has a high glaze.

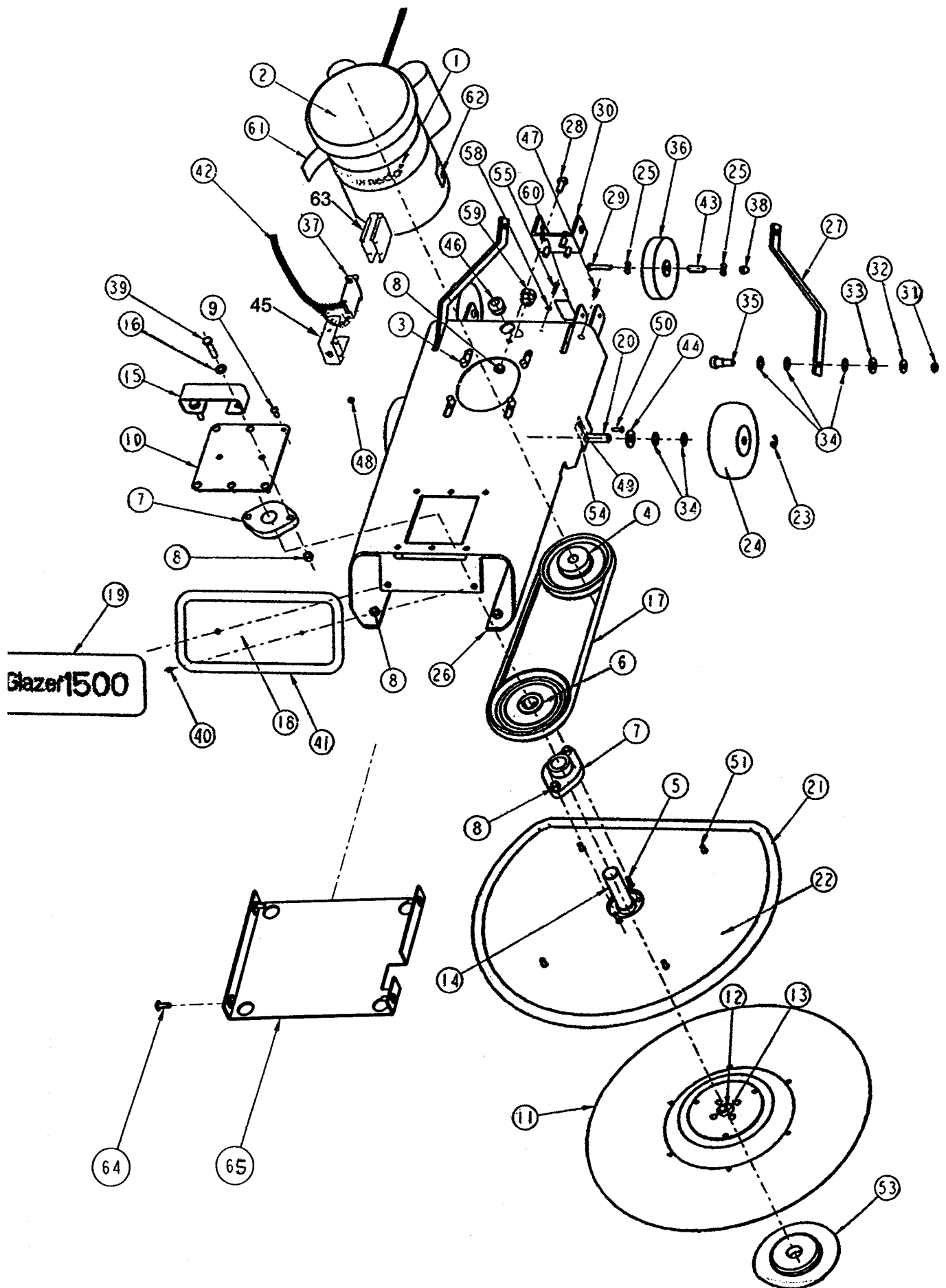
### **STORING**

Store with the pad off of the floor by tilting machine back on the support wheels.

## BELT MAINTENANCE

To change a broken or worn belt, first unplug the power cable. Turn machine over, loosen (4) hex bolts so that motor can be moved forward in slots in base. Remove (6) screws around base handle and (2) screws holding base handle. This will expose access hole. Slip belt off pulleys and out through access hole. Slip new belt in access hole and over pulleys. Re-assemble (6) screws holding access panel and (2) screws holding handle (be certain holes in bearing ring are located under holes in base handle). Pull motor back to tension the belt. (.16 inch belt deflection when force of 2 pounds is applied against outside of belt). Re-tighten hex bolts. Turn machine upright.

To tighten belt, unplug cord. Turn machine over, loosen (4) hex bolts and pull motor back to tension the belt per the above paragraph.

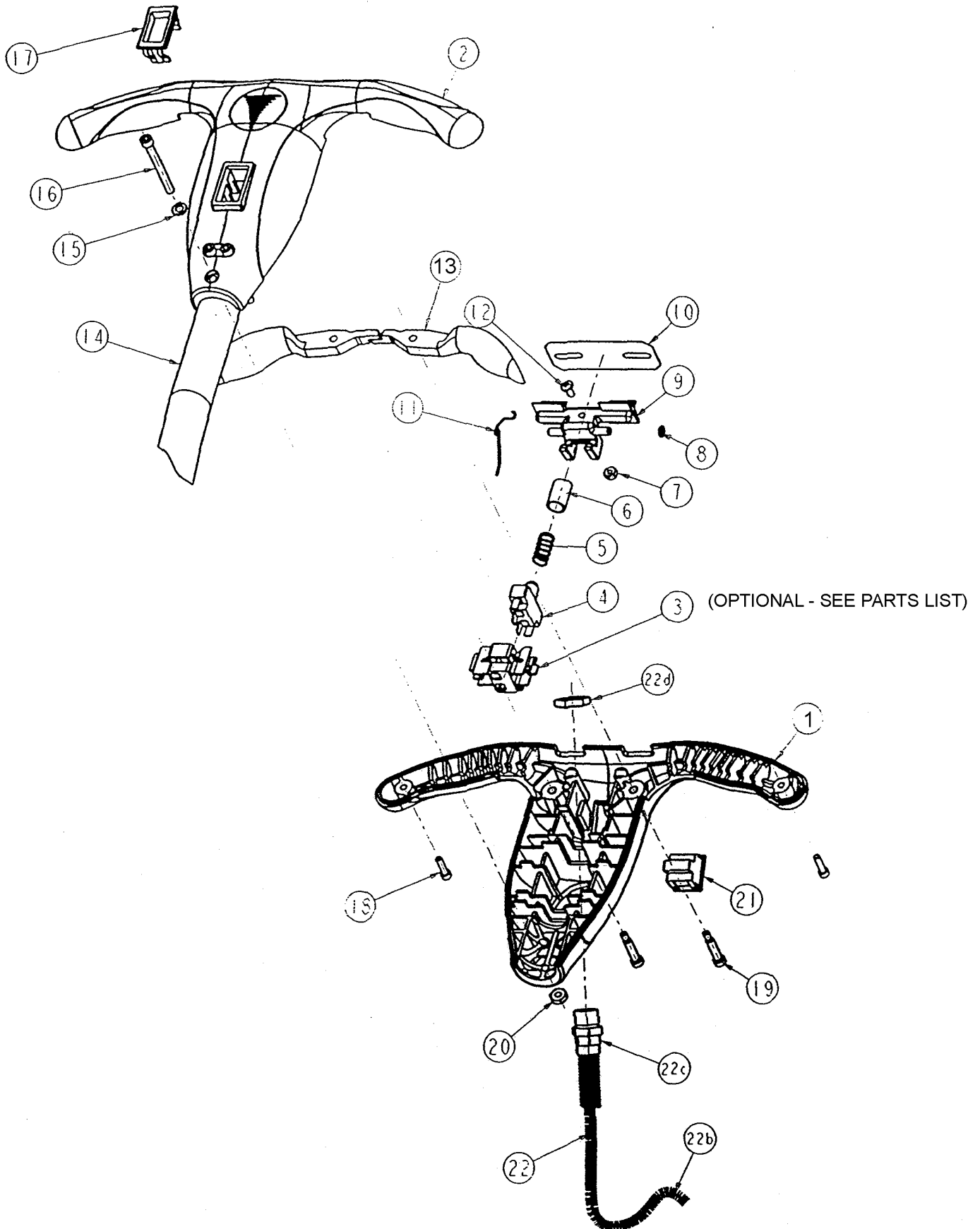




**GLAZER 1500**  
**98445 (115V)**  
**BASE ASSEMBLY**

ITEM NO	PART NO	DESCRIPTION	QTY
1	11898	DECAL	1
2	19978	MOTOR-BRUSH (1.5 HP)115V/230V 60HZ 4-POLES	1
3	13731	SCREW-HEX. FLANGED	4
4	14574	PULLEY, MOTOR	1
5	12918	SCREW-BUTTON HEAD CAP	2
6	14539	PULLEY, DRIVE	1
7	14742	BEARING	2
8	00067	NUT-HEX LOCK (KEPS) 5/16,18	12
9	05427	SCREW-ROUND HEAD	6
10	17304	MOUNTING PLATE	1
11	14546	PADHOLDER ASSEMBLY	1
12	03536	WASHER-LOCK (H/S) 3/8"	4
13	17559	SCREW-SOCK HEAD CAP	4
14	14753	DRIVE SHAFT	1
15	13064	HANDLE	1
16	03301	WASHER-PLAIN	2
17	17595	BELT-V	1
18	15479	FRONT PLATE	1
19	15975	DECAL	1
20	14022	WHEEL SHAFT	1
21	12895	BUMPER-PADHOLDER DECK	1
22	16574	LOWER BUMPER PLATE	1
23	03470	RING-RETAINING EXT. "E"	2
24	19447	WHEEL-5" DIA (GREY W/ 1/2" BORE)	2
25	07132	WASHER-SPRING 3/8"	4
26	30661	BASE	1
27	13374	YOKE STRAP	2
28	02109	SCREW-HEX. HEAD CAP 5/16-18 x 3/4"	4
29	01978	SCREW-ROUND HEAD	2
30	12889	HANDLE MOUNTING BRACKET	1
31	03868	NUT-HEX. LOCK (NYL. INS.)	2
32	02568	WASHER-PLAIN (5/16)	2
33	12554	WASHER-PLAIN (PLASTIC)	2
34	03658	WASHER, PLAIN 1/2" ID-7/8" OD	10
35	12922	SCREW-SHOULDER	2
36	11053	WHEEL-4" DIA. (3/8" BORE)	2
37	15195	CIRCUIT BREAKER	1
38	00685	NUT-ACORN1/4-20	2
39	16031	SCREW-HEX. HEAD CAP	2
40	04747	SCREW-FLATHEAD #10-24 x 1/2"	2
41	12902	BUMPER-NAMEPLATE PANEL	1
42	14030	CABLE ASSEMBLY	1
43	11077	BUSHING-WHEEL SHAFT	2
44	12957	WASHER-PLAIN 1/2" ID-1-3/8" OD	2
45	16384	RELAY, CIRCUIT BREAKER HOUSING	1
46	30460	STRAIN RELIEF BUSHING	1
47	03660	SCREW-PAN HEAD	4
48	10892	NUT-HEX LOCK (KEPS) 5/16,18	4
49	02625	NUT-HEX LOCK (KEPS)	2
50	12896	SCREW-ROUND HEAD	2
51	13773	SCREW-BUTTON HEAD CAP	4
(52)	10677	SCREW-TFT	3
53	15887	RETAINER-PAD	1
54	14490	BRACKET (BASE)	1
55	16924	SCREW-PAN HEAD (PHILLIPS)	2
56	02958	NUT-HEX LOCK (KEPS)	2
(57)	06824	TERMINAL CLOSED END	4
58	11850	WASHER-LOCK	2
59	12047	STRAIN RELIEF BUSHING	1
60	14143	DECAL - RESET	1
61	19346	LABEL - IF CONNECTED...	1
62	19347	LABEL - CAUTION - TO...	1
63	19966	COVER CIRCUIT BREAKER	1
64	16619	SCREW-PHIL. 1/4-20 X 3/4	4
65	31221	PROTECTIVE UNDERPLATE	1

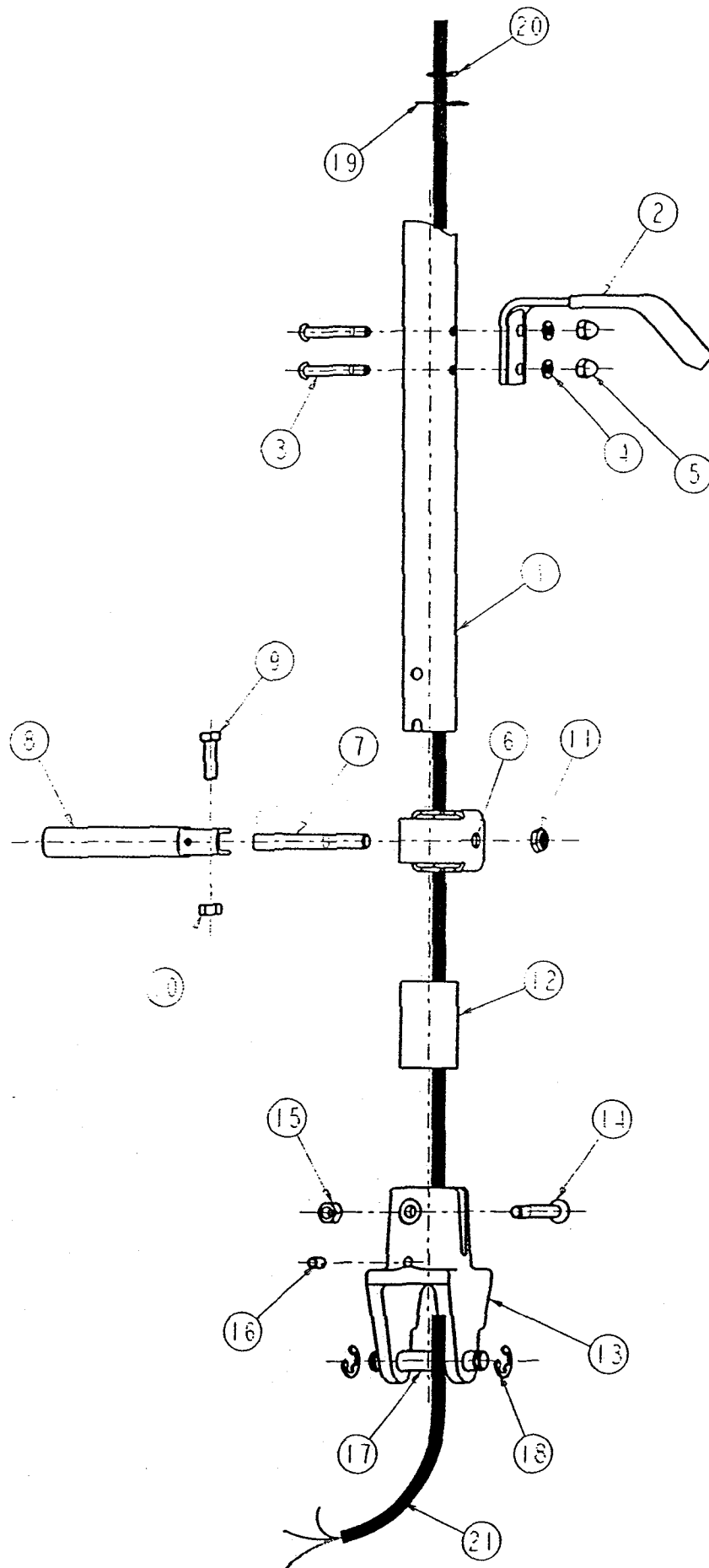
( ) ITEM NOT SHOWN



GLAZER 1500  
98445 (115V)  
UPPER HANDLE ASSEMBLY

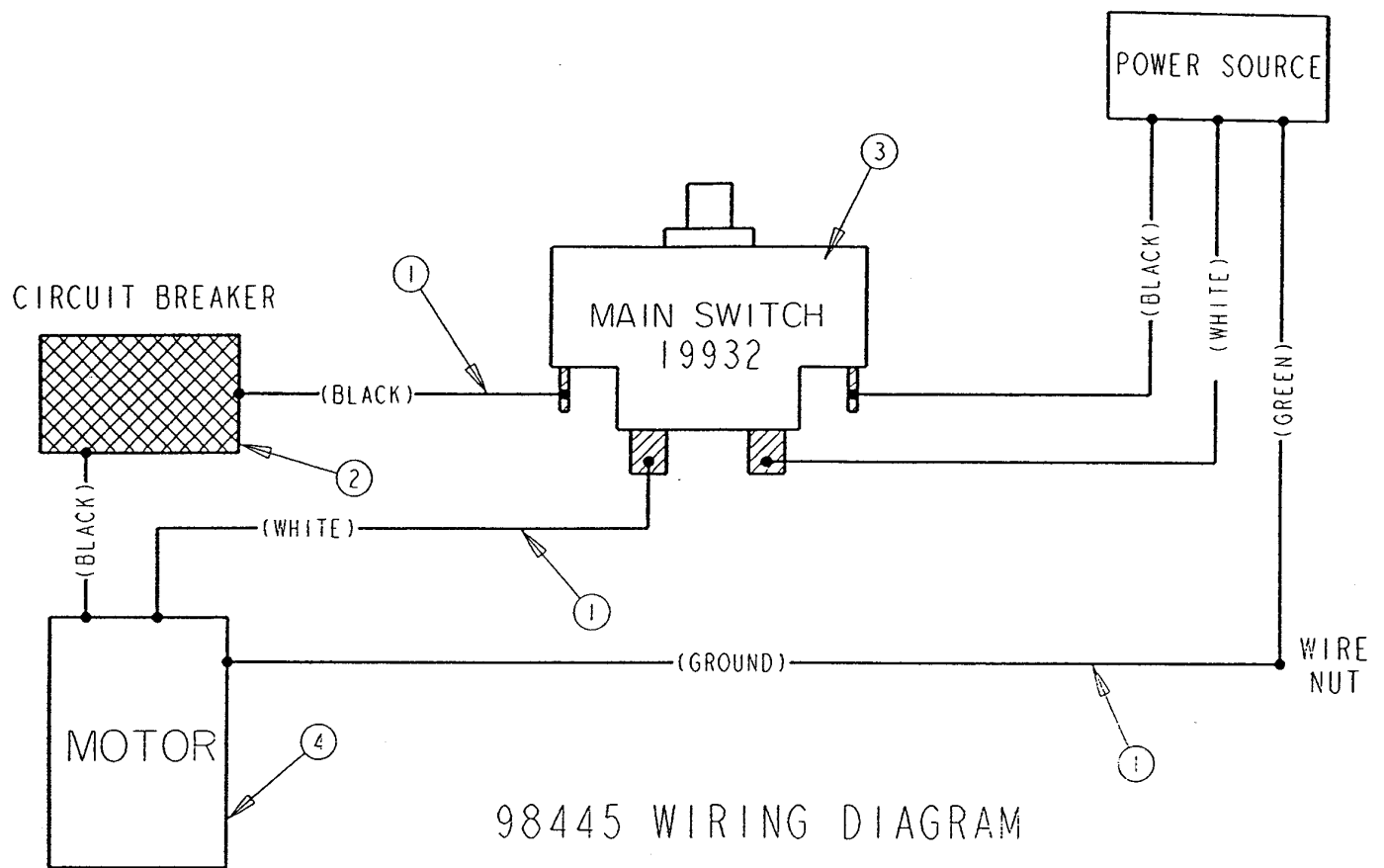
ITEM NO	PART NO	DESCRIPTION	QTY
1	19359	HANDLE - REAR HALF	1
2	19360	HANDLE - FRONT HALF	1
3	19926	CARRIER	1
4	19932	SWITCH, PUSHBUTTON	1
5	19922	SPRING, COMPRESSION STEEL MUSIC WIRE	1
6	19924	CAP - PLASTIC (ABS)	1
7	10894	NUT - HEX LOCK (P/T)	1
8	19211	WASHER - PLAIN 1/4"	1
9	19651	LEVER LOCK	1
10	19615	ESCUTCHEON - LOCK LEVER	1
11	17157	SPRING - LEVER LOCK RETURN	1
12	03660	SCREW - PAN HEAD #10-24 x 7/16"	1
13	19358	LEVER - HANDLE SWITCH	2
14	19471	HANDLE TUBE	1
15	01574	WASHER - LOCK (H/S) 1/4"	3
16	19619	SCREW - SOCKET HEAD CAP 1/4-20 x 2-1/2"	3
17	30214	LARGE PLUG	1
18	19351	SCREW - SOCKET HEAD CAP #10-24 x 3/4"	2
19	18991	SCREW - SHOULDER 1/4"D x 1"	2
20	19618	NUT - HEX JAM (HVY) 1/4-20	3
21	19350	COVER - HANDLE AUX. SWITCH OPENING	1
22	30536	ASSEMBLY - POWER CORD	1
(22a)	15139	TERMINAL - Q.D. FEMALE	2
22b	19378	CORD - POWER	1
22c	19929	STRAIN RELIEF, #121 BRASS	1
22d	19927	NUT - METAL ZINC/CLEAR	1

( ) ITEM NOT SHOWN



**GLAZER 1500  
98445 (115V)  
LOWER HANDLE ASSEMBLY**

ITEM NO	PART NO	DESCRIPTION	QTY
1	19471	HANDLE TUBE	1
2	10407	ASSY- CABLE HOOK	1
3	10398	SCREW-ROUND HEAD	2
4	01574	WASHER-LOCK	2
5	00685	NUT-ACORN	2
6	07526	BRACKET-HANDLE TUBE CLAMP	1
7	07547	PIVOT-HANDLE	1
8	07883	ASSY-HANDLE TUBE CLAMP LEVER	1
9	03361	SCREW-HEX HEAD CAP	1
10	01589	NUT-HEX. LOCK (P/T NYLOCK)	1
11	03868	NUT-HEX. LOCK (NYL INS)	1
12	14037	SPACER	1
13	10019	YOKE-HANDLE	1
14	04349	SCREW-OVAL HEAD	1
15	00067	NUT-HEX LOCK	1
16	00058	PIN-GROOVED	1
17	07551	PIN-HANDLE YOKE PIVOT	1
18	03470	RING-RETAINING EXT. "E"	2
19	15226	STRAIN RELIEF WASHER	1
20	01608	HOG RING	1
21	17470	CABLE ASSEMBLY, 52"	1



GLAZER 1500  
98445 (115V)  
WIRING DIAGRAM

ITEM NO	PART NO	DESCRIPTION	QTY
1	19472	ASSEMBLY - CABLE (HANDLE TUBE)	1
2	15195	CIRCUIT BREAKER	1
3	19932	SWITCH - PUSHBUTTON	1
4	19978	MOTOR - BRUSH	1