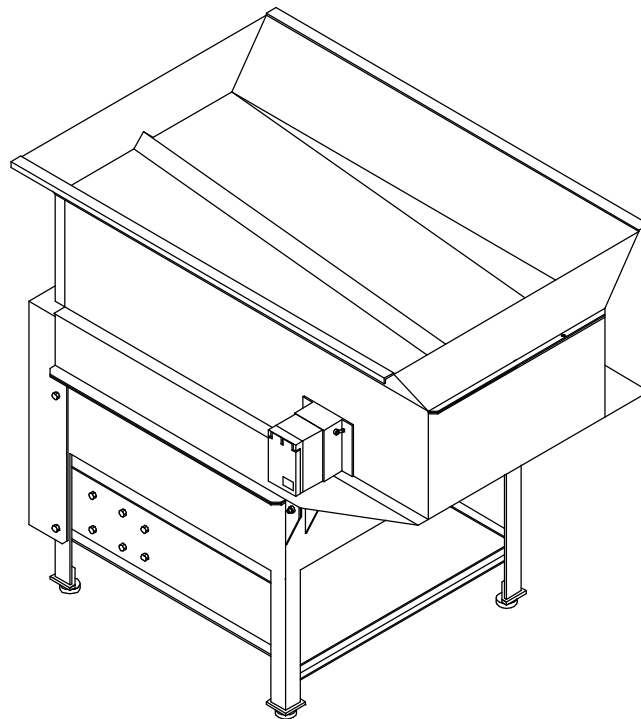




Easy Picker Golf Products, Inc.
415 LEONARD BLVD. N., LEHIGH ACRES, FL 33971
PH: 239-368-6600 FAX: 239-369-1579
Service: 800-982-4653 SALES: 800-641-4653
www.easypicker.com salesdept@easypicker.com

INSTALLATION and OPERATION
BALL WASHER, HIGH CAPACITY
MODEL NO: BW-022



KEEP THIS DOCUMENT WITH MACHINE FOR FUTURE REFERENCE

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Introduction

Welcome to the Easy Picker family. We know you'll find our equipment to be of the highest quality so you will enjoy many seasons of reliable use. Easy Picker's high capacity ball washer is designed for low-maintenance and is manufactured at our own facility to ensure the utmost quality.

The Easy Picker high capacity ball washer is constructed of heavy duty steel. All exterior panels are treated to resist rust and corrosion, then sealed with an epoxy coating to ensure long life. Our ball washer's interior ball cleaning system has a motor driven feed design. All interior ball washing and delivery components are made of stainless steel and aluminum.

This manual contains instructions for operation, maintenance and troubleshooting for the heavy duty ball washer, designed and manufactured by Easy Picker Golf Products, Inc., 415 Leonard Blvd. N., Lehigh Acres, FL 33971

Specifications

Easy Picker offers two sizes for ball washing and will build custom orders to meet almost any customer situation. In addition, Easy Picker can design with you custom ball handling systems for connections to Easy Picker ball washers, elevating/conveying systems and ball washers.

Cleaning Rate:	45,000 Golf Balls Per Hour
Hopper Capacity:	1,350 Golf Balls
Std. Dimensions:	42½" H x 40½" L x 30" D
Weight:	147 lbs.
Power Requirement:	110 VAC, 1 PH, 60 Hz, 13.2 FLA

Warranty

Easy Picker Golf Products, Inc., warrants this product against defects in materials and workmanship for a period of ONE YEAR from the date of purchase. This warranty EXCLUDES any malfunction or damage due to customization and/or abnormal use of the product or product operation not in compliance with the OPERATING INSTRUCTIONS section of this manual.

Inspection

Within one (1) business day of delivery, remove outer protective packaging from ball washer and inspect for any damage which may have occurred during transit . If damage has occurred, **DO NOT** remove ball washer from shipping pallet or discard any packaging materials removed during inspection. Notify the freight carrier immediately to arrange a claim and inspection. Also, notify Easy Picker Golf Products, Inc. of damage. Failure to perform any of the above procedures in a timely fashion may compromise any warranty coverage by either the freight carrier and/or Easy Picker Golf Products, Inc.

Installation

- Install leveling feet on each tank leg using two hex nuts and washers provided on each foot.
- Place ball washer on a sheltered, level concrete surface or equivalent. Be sure to allow adequate access clearance on all sides and overhead for loading balls into hopper.
- Level ball washer, if required, by adjusting mounting feet using 9/16" open-end box wrench until cabinet is level, both side-to-side and front-to-back. Allow adequate side clearance for range ball pails.
- Connect facility power to ball washer via input power cord.

Operating Instructions

- Open tower/hopper assembly to expose tank assembly.
- Close tank drain valve.
- Fill tank with water until fill line is reached.
- Connect water hose to top wash inlet, if needed.
- Turn on water to top wash to desired spray, depending on ball dirt condition.
- Close tower/hopper assembly to tank assembly and install fasteners.
- Turn on ball washer by actuating toggle switch to the "ON" position, located on GFI assembly.
- Fill hopper with golf balls.

- Place a ball storage bin next to the ball washer outlet for clean balls.
- Observe balls exiting ball washer for proper cleaning and flow rate. If ball flow is too slow, then the ball washer will need to be tipped slightly towards the brush pulley end of the machine. If no balls are exiting from the outlet, then open tower door to observe if balls are jamming in feeder track. If this is the case, then the ball washer will need to be tipped slightly towards the pivot end of the machine. Balls should flow at a smooth, steady pace for normal operation.
- Turn off ball washer when all balls have exited the machine by actuating toggle switch to the "OFF" position, located on GFI assembly.

Periodic Inspection and Maintenance

Periodic inspection and maintenance of the ball washer is necessary to discover any indications of malfunction or failure and to prevent breakdown of the equipment.

These procedures must be performed regularly and thoroughly. Through proper inspection and maintenance, equipment that is not in continuous use is kept ready for operation when necessary and the ball washer is maintained for peak performance and maximum service life of the machine.

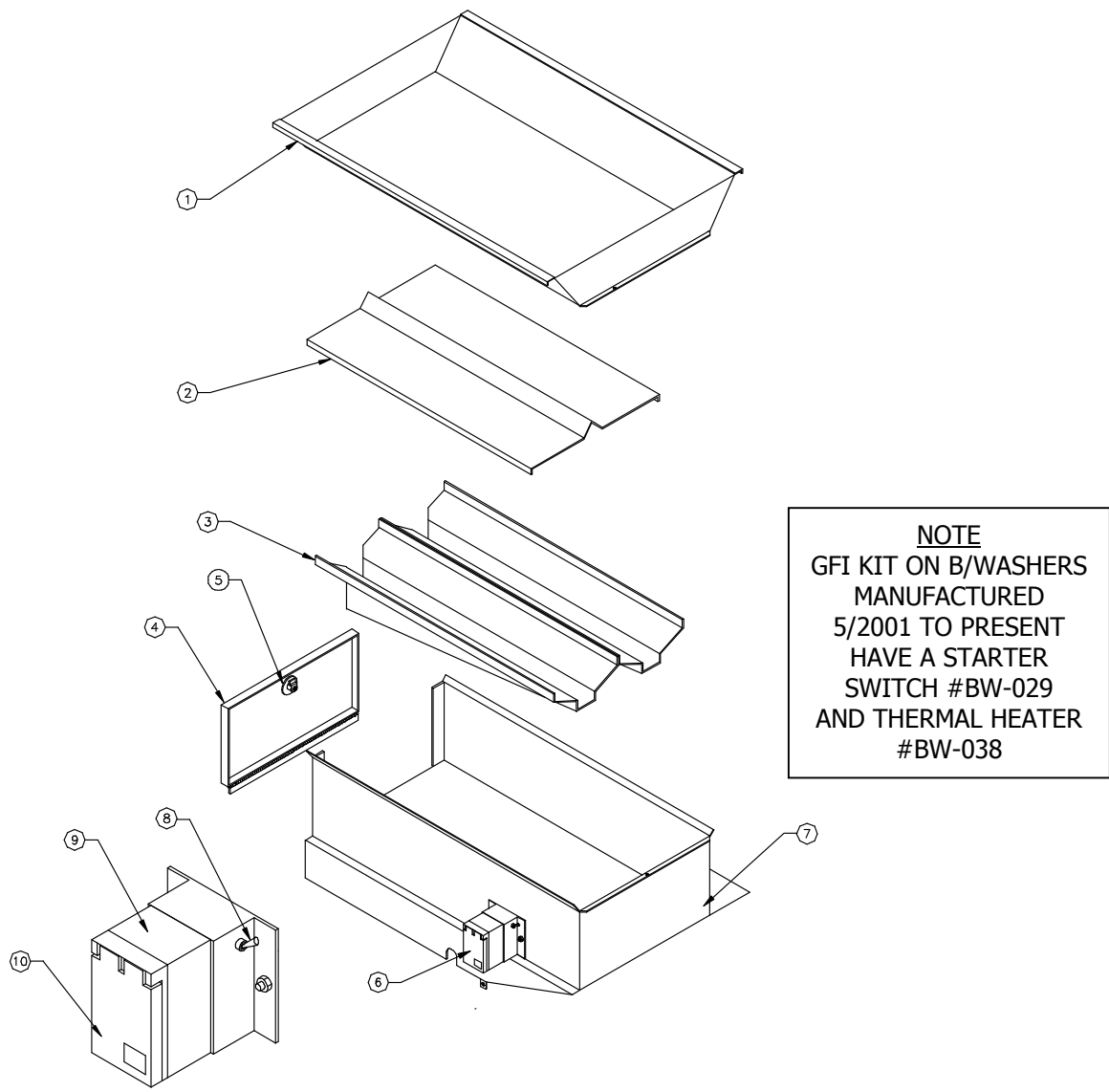
Inspection and maintenance for the various components of the ball washer are listed in the following table. This table gives the inspection interval, inspection point, inspection procedure and service for remedy of defects revealed during inspection. All defects revealed during inspection should be corrected before further operation of the ball washer is attempted.

WARNING

ENSURE ELECTRICAL POWER HAS BEEN DISCONNECTED BEFORE PERFORMING ANY REPAIR PROCEDURES OR CONTINUITY CHECKS TO AVOID PERSONAL INJURY. USE CARE WHEN PERFORMING VOLTAGE MEASUREMENTS TO AVOID PHYSICAL CONTACT WITH PARTS OR SURROUNDING CIRCUITS.

Table 1: Inspection Guide

Inspection Interval	Inspection Point	Inspection Procedure and Service
Daily	Machine Exterior	Check exterior for evidence of physical damage, loose hardware or input power connection. Tighten and/or repair as necessary.
	Machine Interior	Check electrical wiring for frays, obstructions or deterioration. Replace as necessary. Open tower door and inspect for any foreign debris. Remove. Check tank water level. Fill, if required.
Monthly	Cabinet Interior and Exterior.	Inspect for scratched paint areas. Apply touch-up paint as necessary. Open GFI housing cover and depress test button. Verify electrical power shutdown by cycling ON/OFF toggle switch. Reset GFI by depressing reset button and verify electrical power has been restored by cycling ON/OFF toggle switch. If GFI will not reset, inspect electrical wiring for shorts or component failure (see Troubleshooting). Inspect tower/hopper assembly and tank assembly for loose or missing fasteners. Tighten or replace as necessary.
	Brush Spiral Cages	Inspect brushes for wear. Replace, if required. Inspect spiral cages for wear . Replace, if required.
	Tank	Drain tank by opening drain valve. Clean tank bottom of all debris and wipe clean. Close drain valve.
	Top Wash	With water running, inspect delivery tube slots for clogging. Remove clogs using knife, if required.
	Drive Belt	Remove pulley cover and inspect drive belt for fraying. Belt tension should be 1/2" deflection. Belt tension adjustment is accomplished by loosening drive motor mounting bolts. Tighten motor mounting bolts after adjustment.



NOTE
 GFI KIT ON B/WASHERS
 MANUFACTURED
 5/2001 TO PRESENT
 HAVE A STARTER
 SWITCH #BW-029
 AND THERMAL HEATER
 #BW-038

FIGURE 1: TOWER / HOPPER ASSEMBLY

Item	Qty	Part No.	Description
1	1	BW-039	Hopper
2	1	BW-044	Floor
3	1	BW-041	Feeder Track
4	1	BW-047	Door, Tower w/ Hinge
5	1	BD-042	Lock, NO Key
6	1	BW-037N	Ground Fault Circuit Kit /Specify year (89-4/2001) or (5/2001-Present.) See Figure 3, page 9
7	1	BW-040	Tower
8	1	BW-015 BW-029	Switch, Toggle (1989 through 3/2001) Starter, switch (4/2001 To Present.)
9	1	HA-49	Ground Fault Circuit Interrupter (only) All Models.
10	1	HA-48 BW-023	Cover, GFI (1989 through 3/2001) Cover, GFI w/lever (4/2001 To Present)

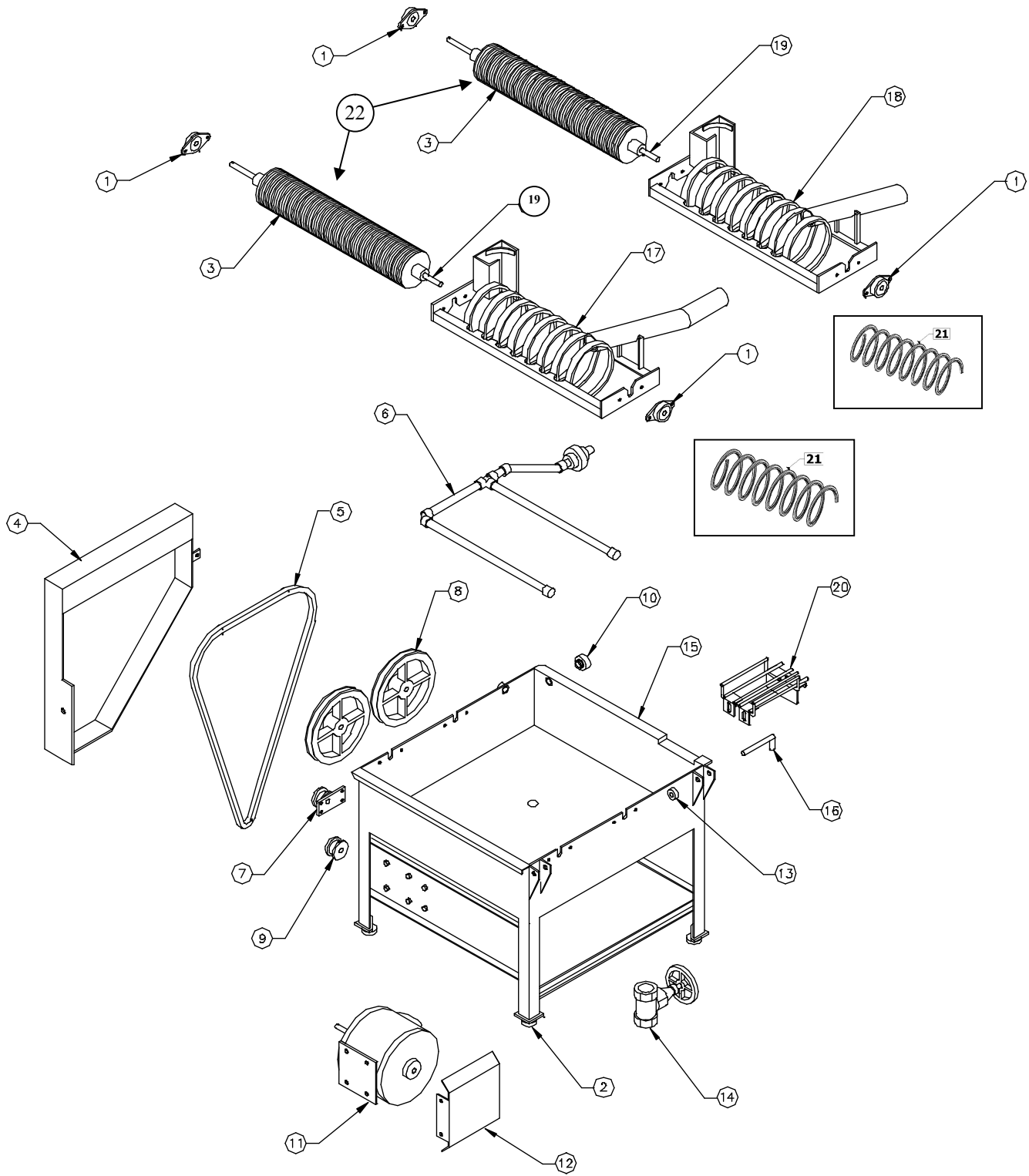


FIGURE 2: TANK ASSEMBLY

TANK ASSEMBLY PARTS LIST

Item	Qty	Part No.	Description
1	4	BW-008	Bearing, Shaft
2	4	HA-43	Foot, Adjustable
3	2	BW-003	Brush w/ J-Bolt and Nut
4	1	BW-045	Cover, Pulley
5	1	HA-73	Belt, Drive
6	1	BW-046	Top Wash Assembly
7	1	HA-24/HA-22	Pulley, Idler/Shaft, Idler
8	2	BW-004	Pulley, Brush (8")
9	1	BW-082	Pulley, Motor (1-1/2")
10	1	BW-032	Connector, Hose, 3/4"
11	1	BW-025	Motor, Drive
13	2	HA-145	Collar, Shaft
14	1	HA-376	Valve, Gate, Brass, 1 1/4"
15	1	BW-043P	Tank Assembly
16	2	CALL	Shaft, Pivot
17	1	BW-010XLN	Spiral Assembly, Long Exit Pipe – includes Item 21 qty 1
18	1	BW-010XSN	Spiral Assembly, Short Exit Pipe – includes Item 21 qty 1
19	2	BW-009	Shaft, Stainless Steel for Inner Brush
20	1	BW-049	Rack, Exit
21	2	BW-003A	Brush, Coil, Black
22	2	BW-036	Brush w/ Shaft-includes Item 3 and 19

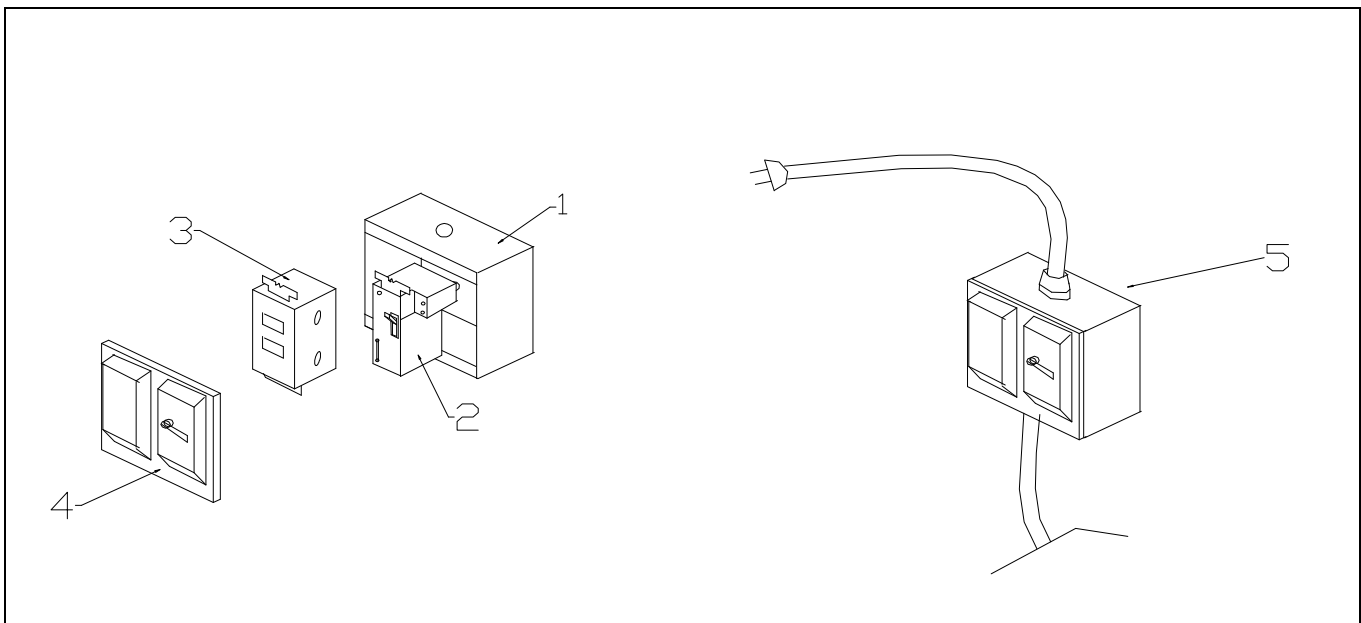


FIGURE 3: SWITCH ASSEMBLY

SWITCH ASSEMBLY PARTS LIST

Item	Qty	Part #	Description
1	1	BW-014	Box, Junction Electrical 4x4
2	1	BW-029	Switch, Starter 2 Pole
3	1	HA-49	Switch, GFI
4	1	BW-023	Cover, GFI
5	1	BW-037N	GFI Kit Assembly.

Troubleshooting

Any evidence of malfunction, however minor in character, should be investigated and corrected before it develops into a major fault which may disable the Ball Washer for lengthy and costly repairs. Troubles most likely to be encountered, their probable cause and remedy are listed in the following Table.

WARNING

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Table 2: Troubleshooting Guide

Trouble	Probable Cause	Remedy
<p>Ball Washer will not run when toggle switch is in the "ON" position.</p>	<p>Power Cord</p> <p>GFI tripped.</p> <p>Toggle Switch</p>	<p>Verify facility power is turned on.</p> <p>Verify Power Cord is plugged into facility power.</p> <p>Depress GFI reset button.</p> <p>If GFI will not reset, inspect wiring for possible shorting or electrical motor failure. Replace wiring or component. Remove gray plastic cover to gain access to GFI and toggle.</p> <p>Using multimeter, or equivalent, check for power at GFI "LOAD" terminals. If power is not present, then GFI is defective and must be replaced.</p> <p>If power is present, remove gray GFI cover and reset toggle by pressing down on the toggle switch.</p> <p>If power is present, then check for power on each terminal on toggle switch, with toggle switch in the "ON" position. If power is not present on both terminals, then toggle switch is defective and must be replaced.</p> <p>If toggle switch is not defective, then check motor wiring and/or perform continuity check on motor. Replace as required.</p>
<p>No Balls Exiting From Washer</p>	<p>Feeder Track Blocked</p> <p>Spiral Assembly Blocked</p>	<p>Open tower door and inspect for debris and/or broken golf ball(s).</p>

Trouble	Probable Cause	Remedy
Balls Exiting at a Slow Rate	Machine Not Leveled Properly	See Installation Procedure.
Balls Not Cleaning Properly	Machine Not Leveled Properly	See Installation Procedure.
	No Top Wash	Connect Water Supply and/or Adjust.
	Low Tank Water Level and/or Dirty Water	Fill Tank with Clean Water.
	Worn Brush Assembly.	Replace. See Brush Assembly Replacement Procedure.

Brush Assembly Replacement Procedure

- Open tower/hopper assembly, to expose tank assembly, by removing fasteners on pulley end of tower.
- Remove belt cover to expose 8" pulleys.
- Remove belt and pulleys.
- Remove shaft bearings from each end of spiral cage and remove spiral cage from tank assembly.
- Pull out brush and shaft assembly from end of spiral cage.
- Install replacement brush/shaft assembly. If replacing brush only, then remove J-bolt from brush end and remove brush from shaft. Install new brush onto shaft and install new J-bolt, supplied with brush.
- Reinstall brush into spiral cage and position spiral cage back onto tank assembly, using fasteners.
- Replace 8" pulleys and drive belt.
- Replace shaft bearing on each end of spiral cage

INPUT POWER CORD
110VAC-1PH-60HZ, 6.4 FLA

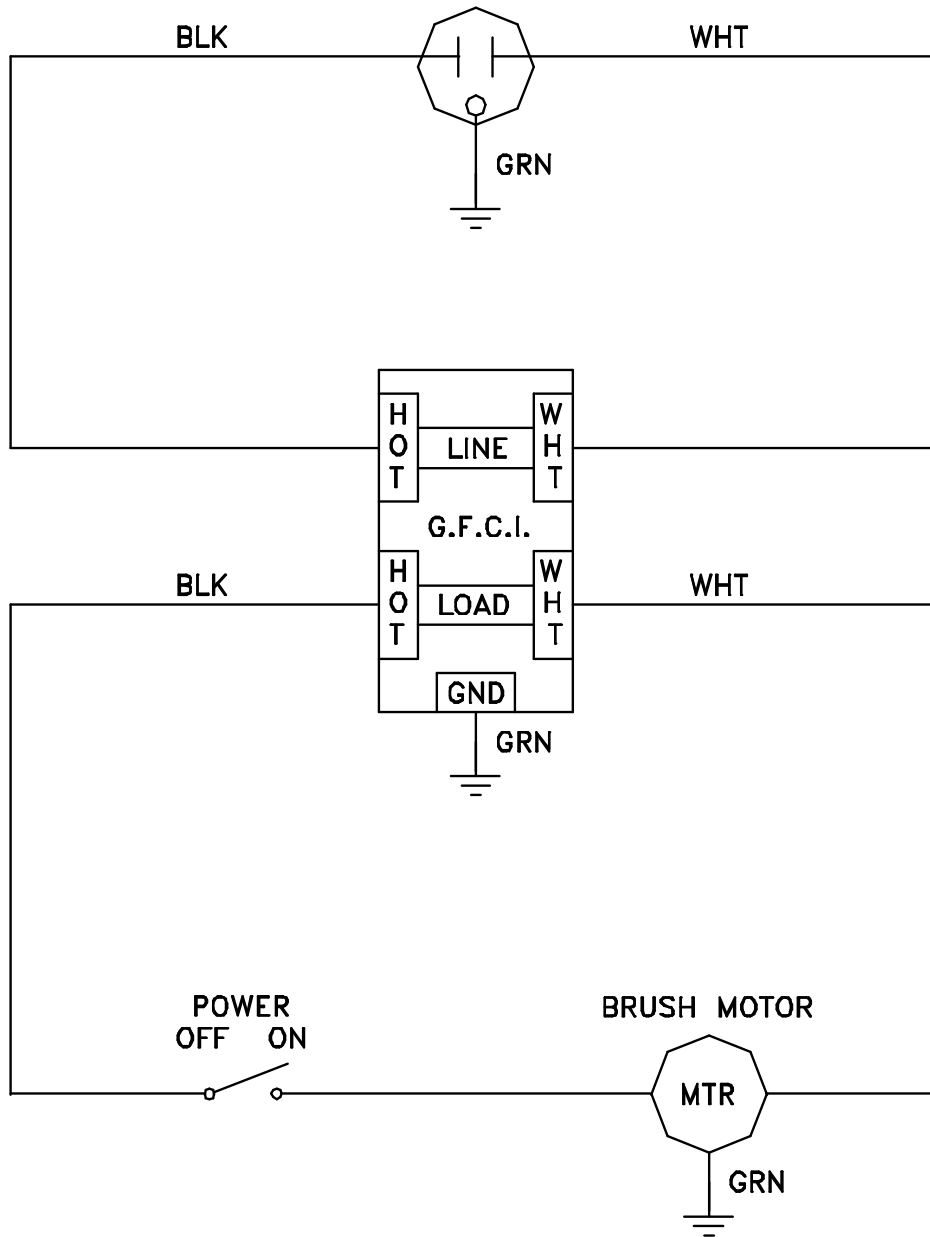


FIGURE 4: WIRING DIAGRAM 4-2001 AND PRIOR

WIRING SCHEMATIC FOR 45K B/WASHER DOMESTIC
4/2001 TO PRESENT

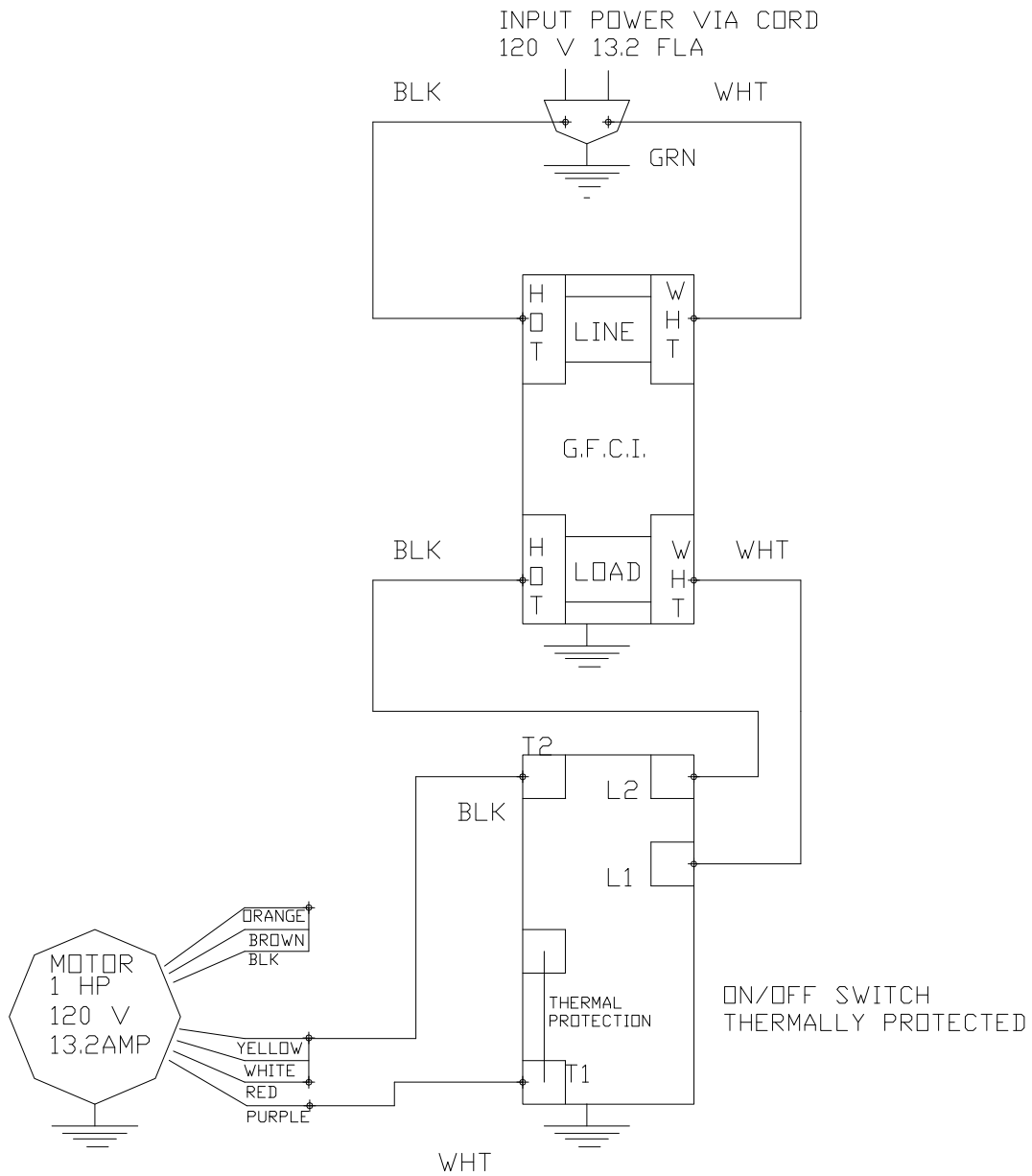


Figure 5: WIRING SCHEMATIC 4/2001 TO PRESENT