



Easy Picker Golf Products, Inc.

415 Leonard Blvd. N., Lehigh Acres, FL 33971

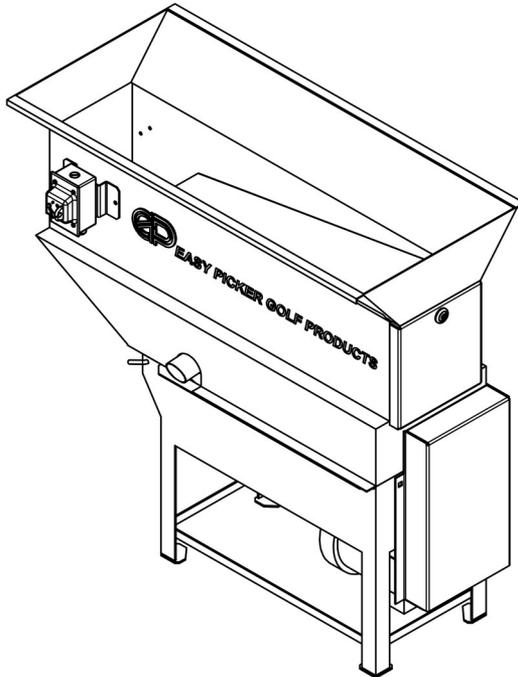
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INSTALLATION and OPERATION

BALL WASHER MODEL NO: BW-001N



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. We are sure you will enjoy many seasons of reliable use. Easy Picker's ball washer is designed to be low maintenance and is manufactured at our own facility to ensure utmost quality.

The Easy Picker ball washer is constructed of heavy-duty aluminum. 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/delivery components are made of stainless steel and aluminum.

This manual contains instructions for operation, maintenance and troubleshooting for the 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, for or with you, custom ball handling systems for connections between Easy Picker ball washers, elevator/conveyor systems and ball dispensers.

Cleaning Rate:	22,500 Golf Balls per Hour
Hopper Capacity:	1,000 Golf Balls
Std. Dimensions:	39"H x 41"L x 19"D
Weight:	90 Pounds
Power Requirement:	110 VAC, 1 PH, 60 Hz, 8.0 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 tow hex nuts and washers provided on each foot.
- Place ball washer on a sheltered, level concrete surface door 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 vis input power cord.

Operating Instructions

- Open tower/hopper assembly to expose tank assembly.
- Close tank ball valve.
- Fill tank with water until fill line is reached.
- Connect water hope to top wash inlet if needed.
- Turn on water to top wash to desired spray, depending on ball dirt condition.
- Adjust tank drain valve to maintain constant tank fill line level, if required. Don't not allow water to overflow tank.
- Close tower/hopper assembly to tank assembly and install opposite end fasteners.
- Place a ball storage bin next to the ball washer outlet for clean balls.

- Turn on ball washer by actuating toggle switch to the "ON" position, located on GFI assembly.
- Fill hopper with golf balls.
- Observe balls exiting ball washer for proper cleaning and flow rate. If ball flow is too slow, then tip the ball washer slightly towards the brush pulley end of the machine. If no balls are exiting from the outlet, open tower door to observe if balls are jamming in feeder track. If so, tip the ball washer 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 for the maximum service life of the machine.

The periodic 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 ball washer is attempted.

WARNING

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

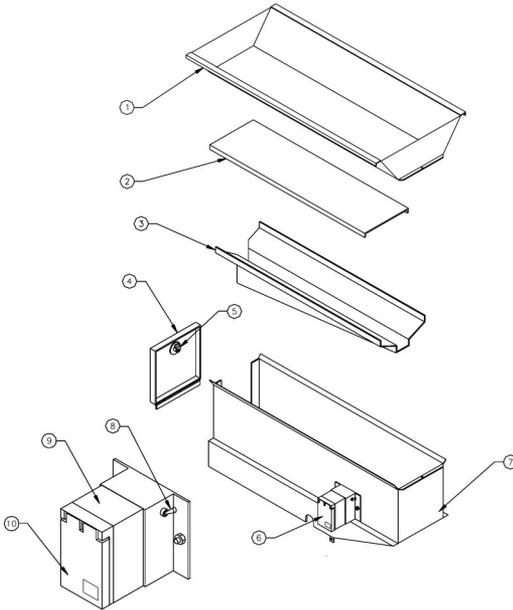
Table 1: Inspection Guide

Inspection Interval	Inspection Point	Inspection Procedure and Service
Daily	Machine Exterior	<p>Check exterior for evidence of physical damage, loose hardware or input power connection. Tighten and/or repair as necessary.</p> <p>Check electrical wiring for frays, obstructions or deterioration. Replace as necessary.</p>
	Machine Interior	<p>Open tower door and inspect for any foreign debris. Remove.</p> <p>Check tank water level. Fill, if required.</p>
Monthly	Cabinet Interior and Exterior	<p>Inspect for scratched paint areas. Apply touch-up paint as necessary.</p> <p>Open GFI housing cover and depress test button. Verify electrical power shutdown by cycling ON/OFF switch. Reset GFI by depressing reset button and verify electrical power has been restored by cycling ON/OFF switch. If GFI will not reset, inspect electrical wiring for shorts or component failure (see Troubleshooting).</p>
	Ground Fault Interrupt	
	Cabinet Interior and Exterior	<p>Inspect tower/hopper assembly and tank assembly for loose or missing fasteners. Tighten or replace as necessary.</p>

Table 1: Inspection Guide (continued)

Inspection Interval	Inspection Point	Inspection Procedure and Service
Monthly	Brush Spiral Cage	<p>Inspect brush for wear. Replace, if required.</p> <p>Inspect spiral cage for wear . Replace, if required.</p>
	Tank	<p>Drain tank by removing stopper from drain and fully opening hose bib.</p> <p>Clean tank bottom of all debris and wipe clean.</p> <p>Replace drain stopper and close hose bib. Fill tank with clean water to fill line. Hose bib will require readjustment, if top wash is used.</p>
	Top Wash	<p>With water running, inspect delivery tube slots for clogging. Remove clogs using knife, if required.</p>
	Drive Belt	<p>Remove pulley cover, inspect belt tension. Tension belt for approximately 1/2" deflection. Belt tension adjustment is accomplished by loosening drive motor mounting bolts. Tighten motor mounting bolts after adjustment.</p>

FIGURE 1: TOWER / HOPPER ASSEMBLY



Item	Qty	Part No.	Description
1	1	BW-028	Hopper
2	1	BW-101	Floor
3	1	BW-027	Feeder Track
4	1	BW-102	Door, Tower w/ Hinge
5	1	BW-042	Lock, No Key
6	1	BW-037N	Ground Fault Circuit Interrupter Kit-2001-2015
7	1	BW-026	Tower
8	1	BW-015	Switch, Toggle (1989 through 3/2001)
		BW-029	Switch, Starter (4/2001 through 2015)
9	1	HA-49	Ground Fault Interrupter (only) 2001-2015
10	1	HA-48	Cover, GFI (1989 through 3/2001)
		BW-023	Cover, w/lever (4/2001 through 2015)

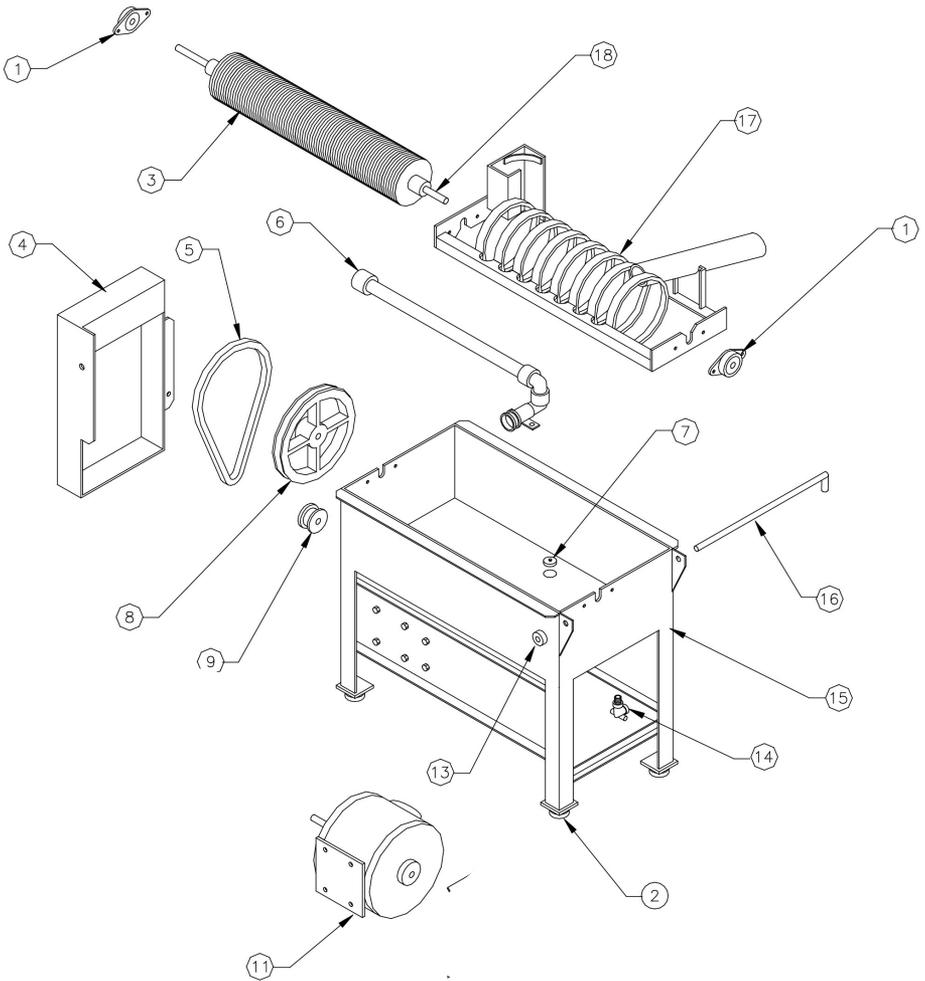


FIGURE 2: TANK ASSEMBLY

TANK ASSEMBLY PARTS LIST

Item	Qty	Part No.	Description
1	2	BW-008	Bearing, Shaft
2	4	/HA-43	Foot, Adjustable
3	1	BW-003	Brush w/ J-Bolt and Nut
4	1	BW-020N	Cover, Pulley
5	1	BW-007 BW-018	Belt, Drive 37" (1989 through 3/2001) Belt, Drive 38" (4/2001 through present)
6	1	BW-033	Top Wash Assembly
7	1	CALL EP	Stopper, 1 ¼" (1989 - 1998)
8	1	BW-004	Pulley, Brush (8")
9	1	BW-011	Pulley, Motor (1½")
11	1	BW-002 BW-002W	Motor, Drive (1989 through 3/2001) Motor, Drive, completely enclosed (4/2001 through present)
13	1	/HA-145	Collar, Shaft 5/16"
14	1	BW-021 HA-376	Hose Bib, ¾" (1989 - 1997) Valve, gate, brass 1¼" (1999 - present)
15	1	BW-019N	Tank Assembly
16	1	CALL EP	Shaft, Pivot
17	1	BW-010N	Spiral Assembly w/ Inner Brush
18	1	BW-036	Brush w/ Shaft

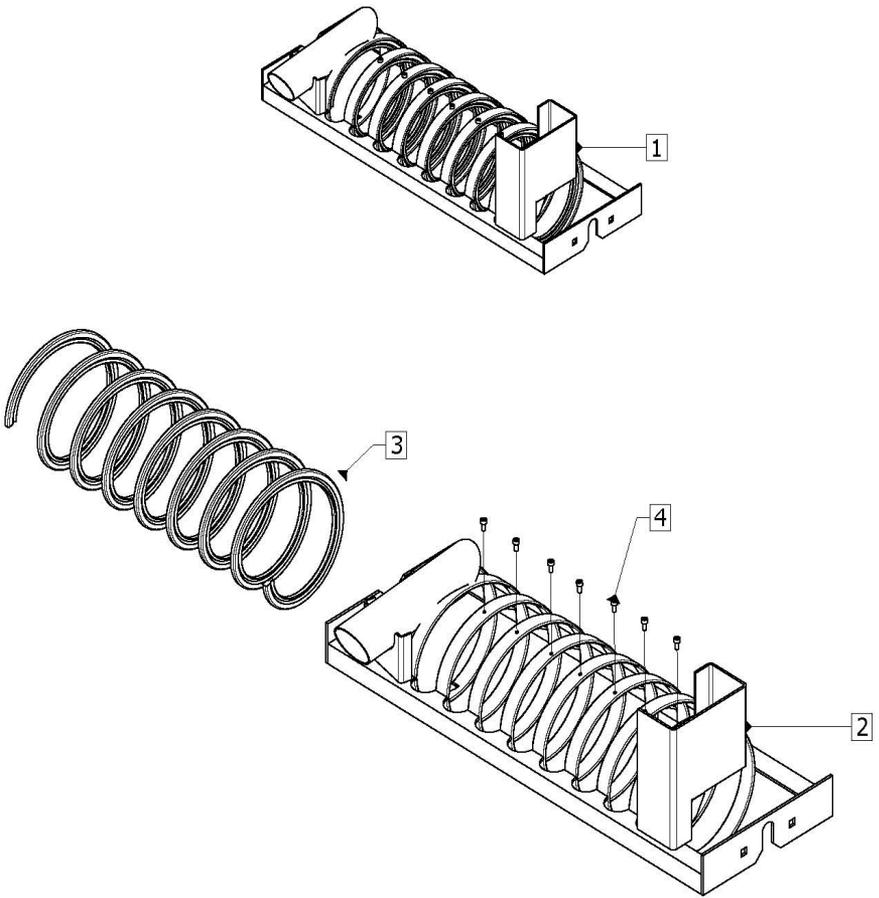
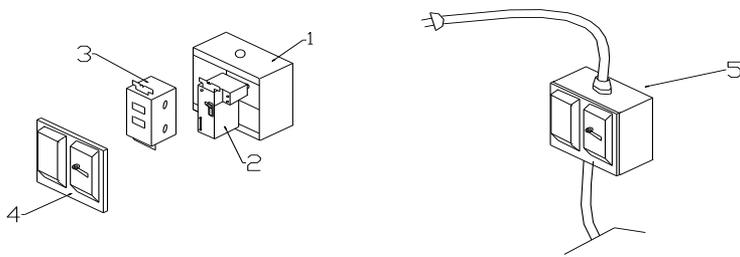


FIGURE 3: SPIRAL ASSEMBLY

Item	Qty	Part No.	Description
1	1	BW-010N	Spiral Assembly (includes items 2 – 4)
2	1	Call	Spiral Assembly w/out Inner brush
3	1	BW-003A	Brush, Inner, Black
4	18	Call	Screw, Self-tapping #6 x ³ / ₈



**FIGURE 4: SWITCH ASSEMBLY
2001-2015**

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:

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Table 2: Troubleshooting Guide

Trouble	Probable Cause	Remedy
Ball Washer will not run when toggle switch is in the "ON" position.	Power Cord	Verify facility power is turned on. Verify Power Cord is plugged into facility power.
	GFI tripped	Depress GFI reset button. Green LED on GFI when power is present If GFI will not reset, inspect wiring for possible shorting or electrical motor failure. Replace wiring or component. Using multimeter, or equivalent, check for power at GFI "LOAD" terminals. If power is not present, then GFI is defective and must be replaced.
No Balls Exiting From Washer	Toggle Switch	If power is present, 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.
Balls Exiting at a Slow Rate		
Balls Not Cleaning Properly	Feeder Track Blocked Spiral Assembly Blocked	If toggle switch is not defective, then check motor wiring and/or perform continuity check on motor. Replace as required. Open tower door and inspect for debris and/or broken golf ball(s).
	Machine Not Leveled Properly	See Installation Procedure.
	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. Replace. See Brush Assembly Replacement Procedure.
	Worn Brush Assembly.	

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" pulley.
- Remove 8" pulley.
- Remove shaft bearing 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, remove J-bolt from brush end and remove brush from shaft. Install new brush onto shaft and install new J-bolt supplied with brush.
- Install brush back into spiral cage and position spiral cage back onto tank assembly, using fasteners.
- Replace shaft bearing on each end of spiral cage. Center brush/shaft assembly in the spiral cage by aligning shaft bearings in mounting slots and tightening fasteners.
- Replace 8" pulley.
- Replace drive belt and belt cover.
- Close tower/hopper assembly and install pulley end fasteners.

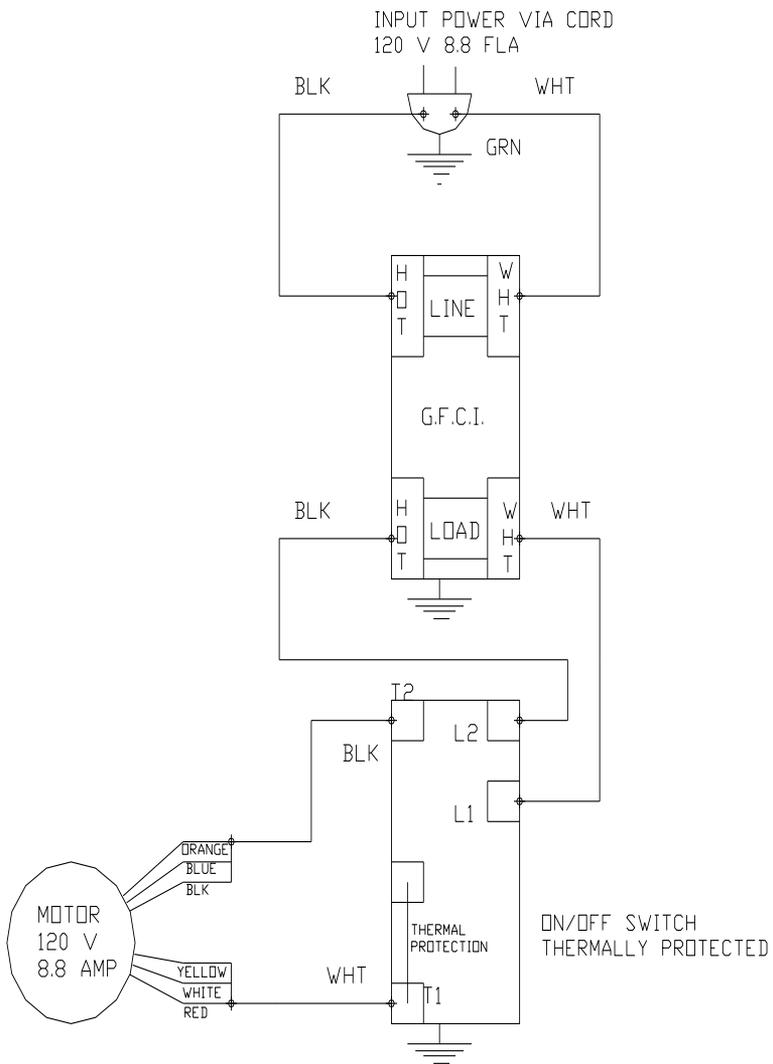


FIGURE 5: WIRING DIAGRAM 2001 TO 2015

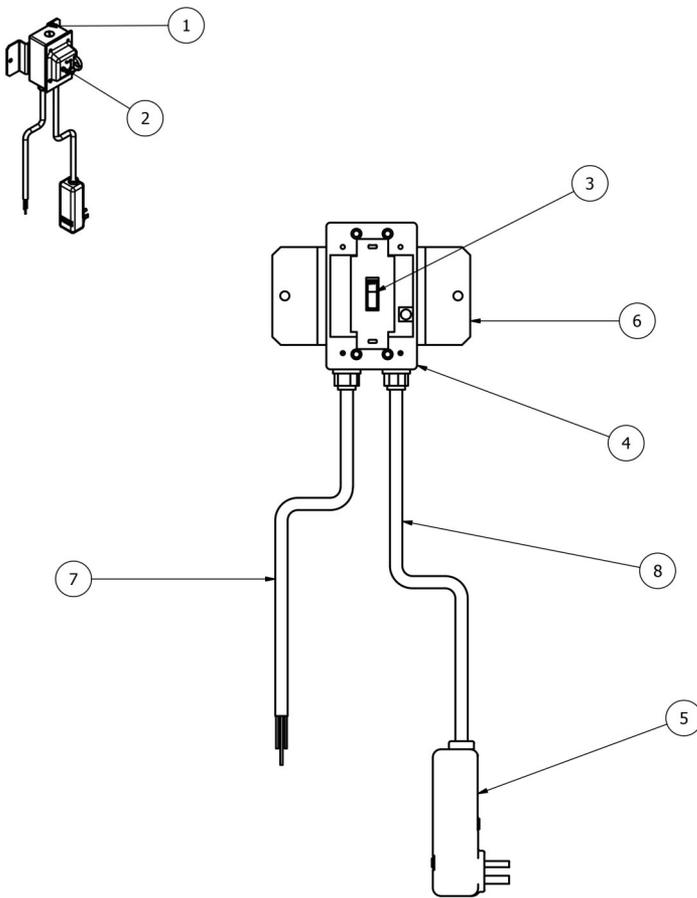


FIGURE 6: SWITCH GFI ASSEMBLY 2016 TO PRESENT

Item	Qty	Part #	Description
1	1	BW-356	GFI Kit Assembly
2	1	BW-352	Switch, Leviton 2-pole
3	1	BW-353	Cover, 4x2 Red Toggle
4	1	BW-354	Switch, GFI Plug
5	1	BW-051	Bracket, GFI, Ball washer
6	1	Call	Cord, Only 6 foot
7	1	Call	Cord, Only 8 foot

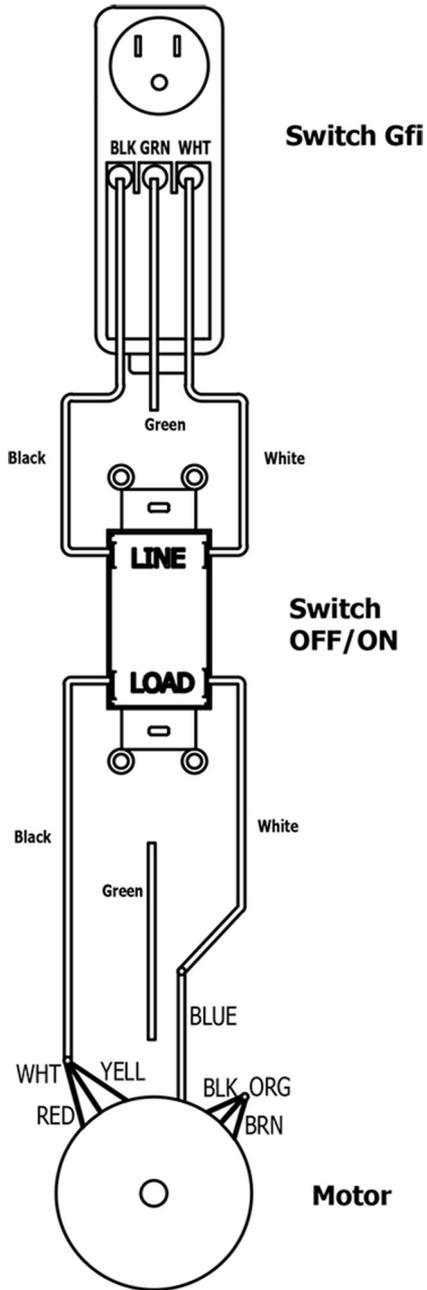
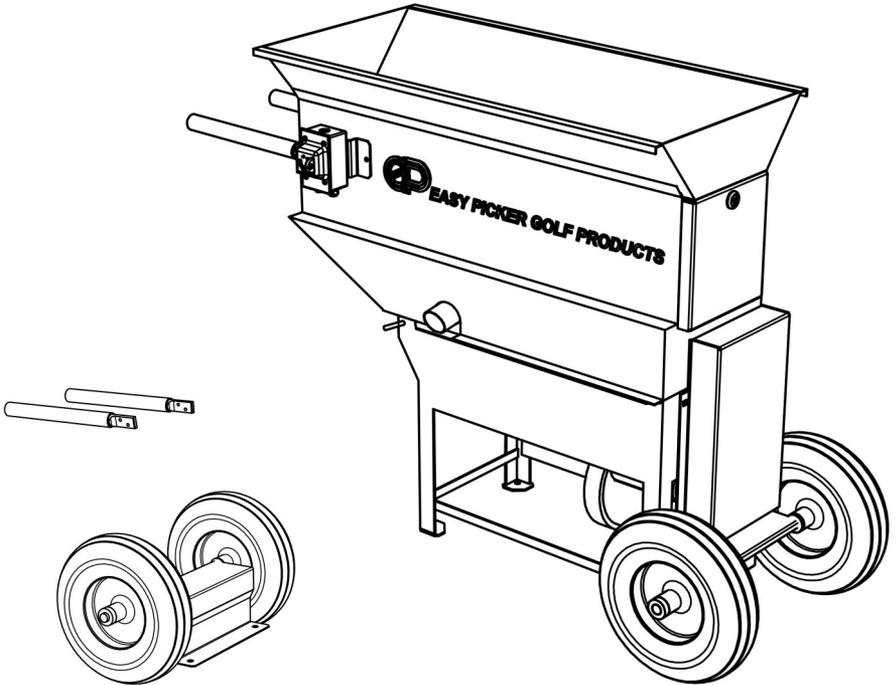


FIGURE 7: WIRING DIAGRAM 2016 TO PRESENT

Installation Instructions

Wheel Assembly 22k Ball Washer

- 1- Install wheel assembly underneath ball washer feet , then install bolts and nuts. Tighten down nuts using 9/16 wrench.
- 2- If ball washer does not have existing holes for handles, drill two 1/4" holes on each side of ball washer using handles as template then install handles to ball washer using hardware supplied. Make sure screw heads are on the inside of ball washer.
- 3- Tighten down nuts using 7/16 wrench and phillips head screwdriver.



BW-005 Optional Wheel Kit

NOTES:



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