



## Easy Picker Golf Products, Inc.

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

PH: 239-368-6600 FAX: 239-369-1579

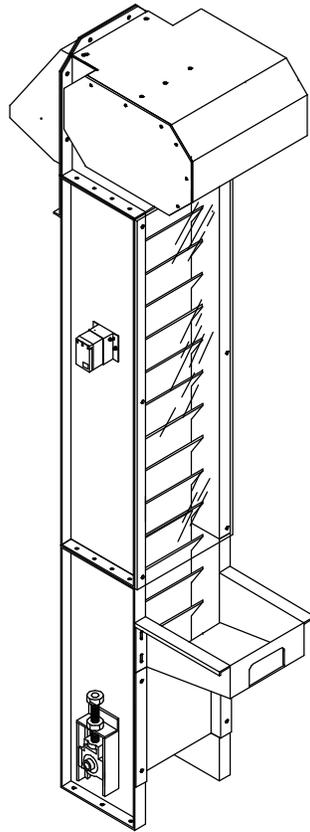
Service: 800-982-4653 SALES: 800-641-4653

www.easypicker.com salesdept@easypicker.com

### INSTALLATION and OPERATION

### RANGE BALL CONVEYOR

MODEL NO: BC-001AN



KEEP THIS DOCUMENT WITH MACHINE FOR FUTURE REFERENCE

## **Table of Contents**

|   |    |
|---|----|
| Introduction. . . . .                         | 3  |
| Specifications. . . . .                       | 3  |
| Warranty Policy . . . . .                     | 3  |
| Inspection . . . . .                          | 4  |
| Installation . . . . .                        | 4  |
| Operating Instructions . . . . .              | 4  |
| Periodic Inspection and Maintenance . . . . . | 5  |
| Troubleshooting. . . . .                      | 8  |
| Conveyor Belt Replacement Procedure . . . . . | 10 |
| Conveyor Motor Replacement Procedure. . . . . | 12 |

## **List of Figures**

|   |    |
|---|----|
| Figure 1: Conveyor Assembly . . . . .                                   | 7  |
| Figure 2: Motor Assembly . . . . .                                      | 7  |
| Figure 3 Starter Switch . . . . .                                       | 13 |
| Figure 4: Wiring Diagram . . . . .                                      | 14 |
| Figure 4: Wiring Diagram – International Conveyor & Pre-soaker. . . . . | 15 |

## **List of Tables**

|   |   |
|---|---|
| Table 1: Inspection Guide. . . . .      | 6 |
| Table 2: Troubleshooting Guide. . . . . | 9 |

## Introduction

Welcome to the Easy Picker family. We know you'll find our equipment to be of the highest quality and will enjoy many seasons of reliable use. Easy Picker's range ball conveyor is designed to eliminate handling of range balls by loading the ball dispenser from your ball washer automatically. Also, Easy Picker's range ball conveyor is designed to be low maintenance and is manufactured at our facility to insure the utmost quality.

The Easy Picker range ball conveyor 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 range ball conveyor's interior belt system is motor driven.

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

## Specifications

Easy Picker offers a standard size range ball conveyor to fit standard size range ball dispenser / range ball washer combinations. Easy Picker will build custom orders to meet almost any customer situation. In addition, Easy Picker can design, with you or for you, custom ball handling systems for connections to Easy Picker range ball washers, elevator/conveyor systems and range ball dispensers.

|                    |                              |
|--------------------|------------------------------|
| Convey Rate:       | 45,000 Golf Balls Per Hour   |
| Weight:            | 81.65 kg                     |
| Std. Dimensions:   | 2.25 m H x .48 m L x .79 m D |
| Power Requirement: | 220 VAC, 50 Hz, 1.5 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 conveyor and inspect for any damage which may have occurred during transit . If damage has occurred, **DO NOT** remove ball conveyor 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

- Place range ball conveyor on a sheltered, level concrete surface or equivalent. Be sure to allow adequate clearance on all sides, and overhead for loading balls into inlet hopper from ball washer, located at bottom, and balls exiting from the conveyor outlet, located at top.
- Level range ball conveyor, if required, by shimming conveyor base, until cabinet is level, both side-to-side and front-to-back.
- Position ball washer outlet ramp to feed balls into conveyor inlet hopper.
- Position ball dispenser hopper opening directly under conveyor outlet opening.
- Connect facility power to range ball conveyor via input power cord.

## Operating Instructions

- Turn on range ball conveyor by actuating toggle switch to the "ON" position.
- Turn on ball washer to feed balls into conveyor.
- Turn off range ball conveyor when all balls have exited the machine by actuating toggle switch to the "OFF".

## Periodic Inspection and Maintenance

Periodic inspection and maintenance of the range ball conveyor 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 range ball conveyor is maintained for peak performance for the maximum service life of the machine.

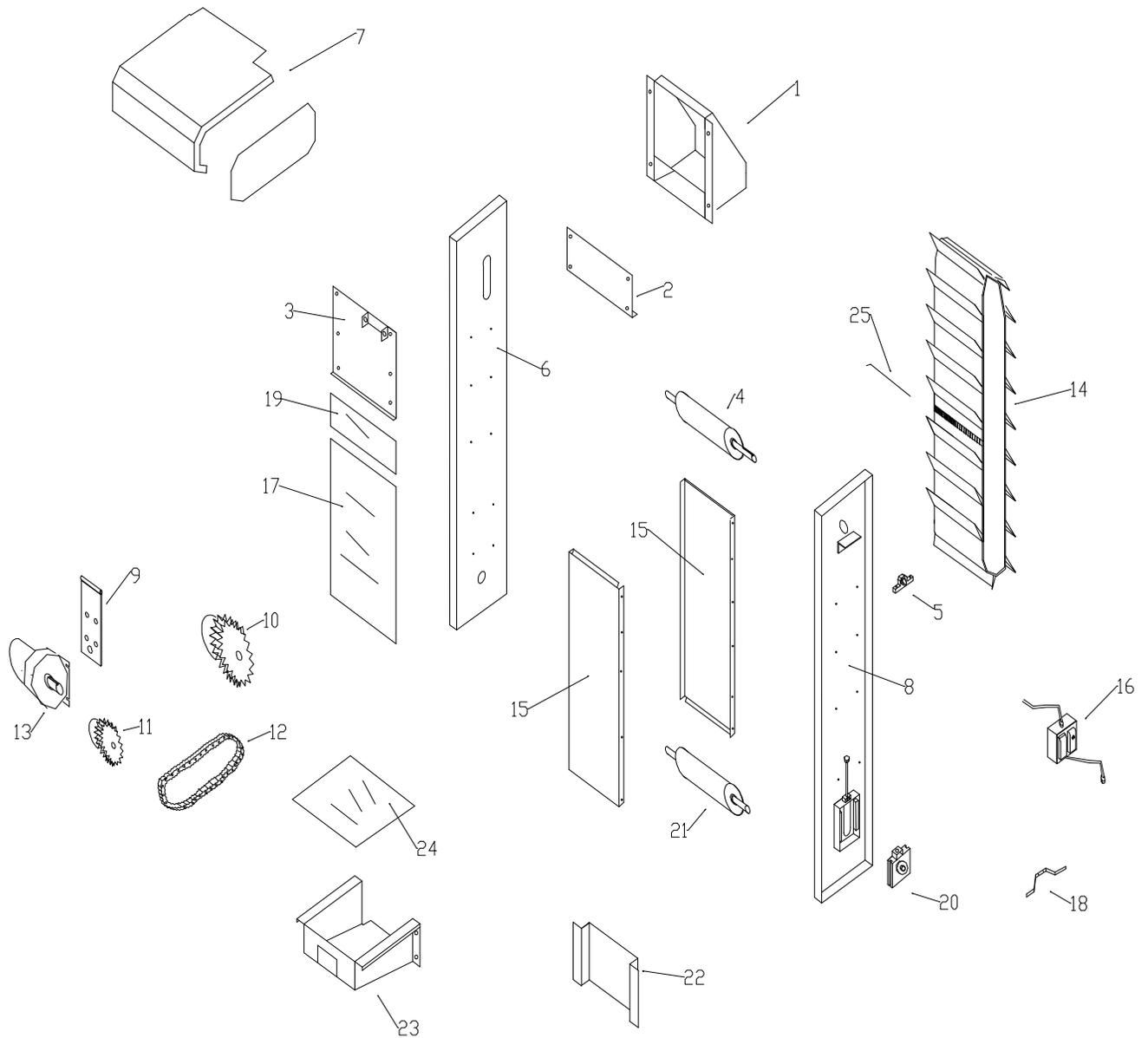
The periodic inspection and maintenance of the various components of the range ball conveyor are listed in the following table. This table gives the inspection interval, inspection point, inspection procedure and service for remedy of defects revealed during inspection. All defects revealed during inspection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

### **WARNING**

**ENSURE ELECTRICAL POWER HAS BEEN DISCONNECTED BEFORE PERFORMING ANY REPAIR PROCEDURES 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  |
|---------------------|---------------------------------------|---|
| <b>Daily</b>        | 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> |
|                     | <b>Monthly</b>                        |   |
|                     | Cabinet Interior and Exterior         | Inspect conveyor assembly for loose or missing fasteners. Tighten or replace as necessary.  |
|                     | Conveyor Belt                         | Inspect Belt for wear. Replace, if required.  |
|                     | Upper and Lower Roller Shaft Bearings | Lubricate bearings with axle grease as required.  |
|                     | Drive Motor Chain and Pulleys         | <p>Lubricate chain with axle grease as required.</p> <p><b>WARNING: REMOVE POWER WHEN GREASING CHAIN.</b></p>   |



**FIGURE 1: CONVEYOR ASSEMBLY 2003 TO PRESENT**

## CONVEYOR ASSEMBLY PARTS LIST

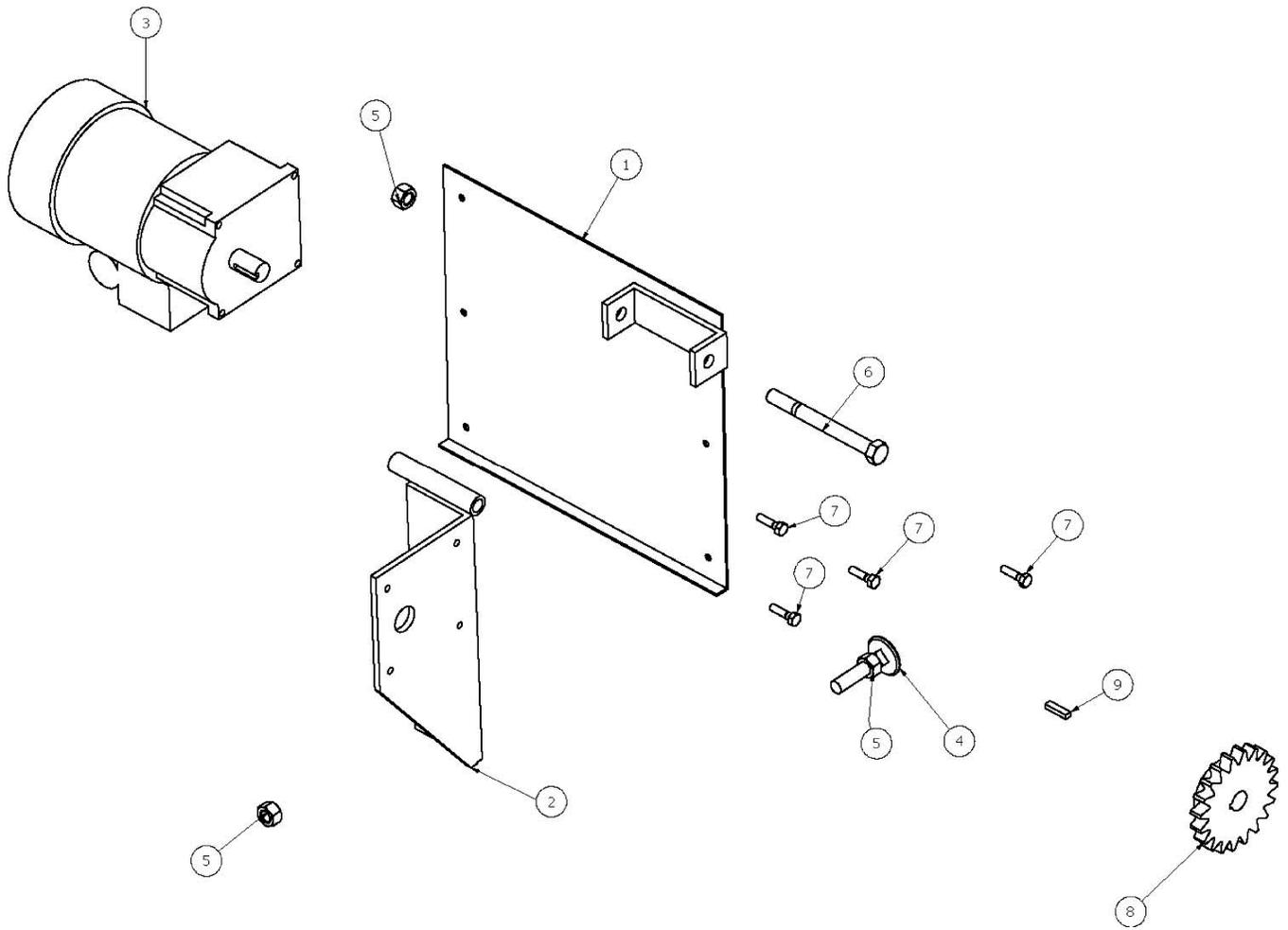
| Item | Qty | Part No.      | Description  |
|------|-----|---------------|--|
| 1    | 1   | EL5           | Exit, chute  |
| 2    | 1   | EL6           | Mounting, plate  |
| 3    | 1   | PS9           | Motor, mounting plate                                    |
| 4    | 1   | PS11          | Roller, top assembly                                     |
| 5    | 2   | HA-114        | Bearing, pillow block                                    |
| 6    | 1   | EL1           | Panel, side left   |
| 7    | 1   | PS8           | Cover, motor, chain                                      |
| 8    | 1   | EL2           | Panel, side right  |
| 9    | 1   | PS10          | Plate, motor   |
| 10   | 1   | HA-127        | Sprocket, roller 24 tooth                                |
| 11   | 1   | HA-138        | Sprocket, gear motor, 1" bore, 14 tooth (2003-2006)      |
| 12   | 1   | Call          | Chain roller #40   |
| 13   | 1   | HA-135/HA-136 | Motor, 1/3 hp/ gear reducer (2006-2006; newer see fig 2) |
| 14   | 1   | EL10          | Belt assembly 164½"                                      |
| 15   | 2   | EL3           | Panel, inner   |
| 16   | 1   | BW-037IN      | Starter, motor kit – international (See Fig 3)           |
| 17   | 1   | EL16          | Guard, lower lexan, 13½" x 48"                           |
| 18   | 1   | EL18          | Cord, holder   |
| 19   | 1   | EL15          | Guard, upper lexan. 13½" x 10"                           |
| 20   | 2   | HA-96         | Bearing, take-up   |
| 21   | 1   | PS12          | Roller, bottom assembly                                  |
| 22   | 1   | EL12          | Plate, kick lower  |
| 23   | 1   | EL13          | Tray, feed inlet   |
| 24   | 1   | EL17          | Guard, feed inlet lexan, 13½" x 12"                      |
| 25   | 1   | EL11          | Connector pin  |

### 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 Range ball conveyor for lengthy and costly repairs. Troubles most likely to be encountered, their probable cause and remedy are listed in the following Table:

#### WARNING

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



**FIGURE 2: MOTOR ASSEMBLY 2007 TO PRESENT**

| ITEM | QTY | PART#  | DESCRIPTION                 |
|------|-----|--------|-----------------------------|
| 1    | 1   | EL100  | Plate, motor mounting       |
| 2    | 1   | EL101  | Plate, motor                |
| 3    | 1   | HA-135 | Motor,1/5 hp 220 volt 50 hz |
| 4    | 1   | CALL   | Bolt 1/2"-13x2 1/2"         |
| 5    | 3   | CALL   | Nut 1/2"-13                 |
| 6    | 1   | CALL   | Bolt 1/2"-13x5 1/2"         |
| 7    | 4   | CALL   | Bolt 1/4"-28x3/4"           |
| 8    | 1   | HA-110 | Sprocket,20 tooth           |

## Table 2: Troubleshooting Guide

| Trouble  | Probable Cause                    | Remedy   |
|--|-----------------------------------|--|
| Range ball conveyor will not run when toggle switch is in the "ON" position. | Power Cord                        | Verify facility power is turned on.<br><br>Verify Power Cord is plugged into facility power.   |
|  | Toggle Switch                     | If power is present, press down on toggle to reset thermal load protection, 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.<br><br>If toggle switch is not defective, then check motor wiring and/or perform continuity check on motor. Replace as required. |
| No Balls Exiting From Conveyor   | Inlet Hopper Blocked              | Inspect hopper for debris and/or broken golf ball(s). Remove.  |
|  | Fiber gear in gear motor worn out | Remove gear motor and replace worn fiber gear inside motor.  |
| Balls Exiting at a Slow Rate   | Conveyor Belt Tension             | Inspect belt for slippage. Adjust lower roller take-up bearings to tighten belt tension.   |
| Belt Drifts to side.   | Lower Roller Tension Uneven.      | Inspect lower roller take-up bearing for equal tension on both sides of the roller. Adjust opposite bearing from belt drift direction.   |

## Conveyor Belt Replacement Procedure

- Remove front Lexan guard from conveyor.
- Remove inlet hopper and lower filler panel from conveyor to expose lower belt roller.
- Remove top motor cover side panel and motor cover to expose upper belt roller.
- Rotate conveyor belt so the seam pin is easily accessible.
- Loosen belt tension by backing off lower belt roller takeup bearings adjustment bolt.
- Remove belt seam pin and remove belt from conveyor.
- Install new belt from topside of conveyor and pull one end of belt from rear of lower roller so both ends of belt meet in front.
- Insert seam pin through belt ends.
- Adjust belt tension by tightening lower belt roller takeup bearings adjustment bolt evenly on both sides of roller.
- Turn on conveyor; belt should travel straight. Inspect belt for travel to one side or the other. If belt drifts to one side, then adjust opposite side roller take-up bearing until straight travel occurs.
- Replace conveyor cabinet components in reverse order as removal.

# Conveyor Motor Replacement Procedure

## **-WARNING- REMOVE POWER BEFORE SERVICING**

### **Tools needed**

**1/4" Nut driver**

**5/16" Nut driver**

**3/4" Open wrench**

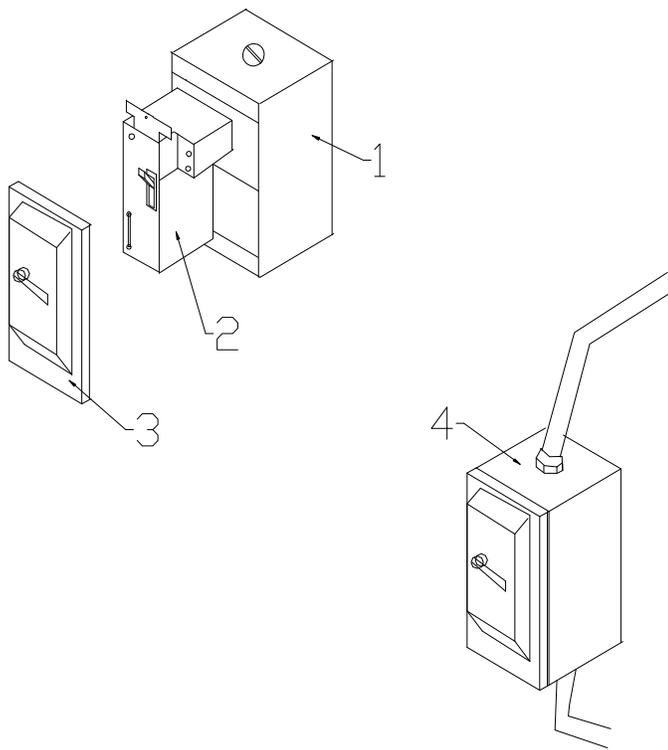
**3/4" Socket**

**Needle nose pliers**

**15/16" open wrench or crescent wrench**

**1/8" Allen wrench.**

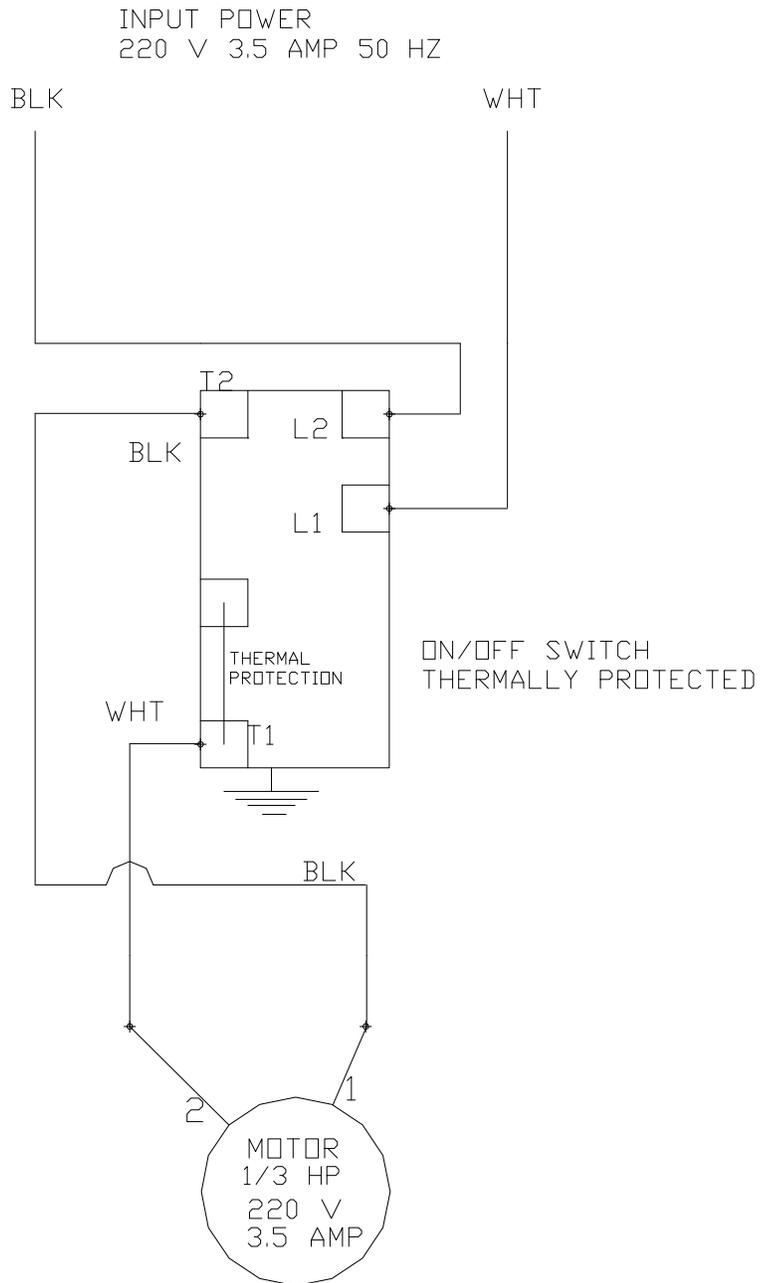
- Remove chain and head cover from conveyor item #7 from conveyor assembly. Tool needed 5/16 driver
- Disconnect wiring from motor
- Note tension on chain
- Loosen 3/4" adjusting nut and loosen chain
- Remove master link from chain and remove chain
- Remove 3/4" main bolt and remove motor w/plate
- Remove sprocket from old motor
- Remove old motor from plate
- Install sprocket on new motor
- Install new motor on plate
- Install new motor w/plate onto conveyor
- Re-install chain and adjust tension to original position
- Re-install electrical
- Re-install covers.



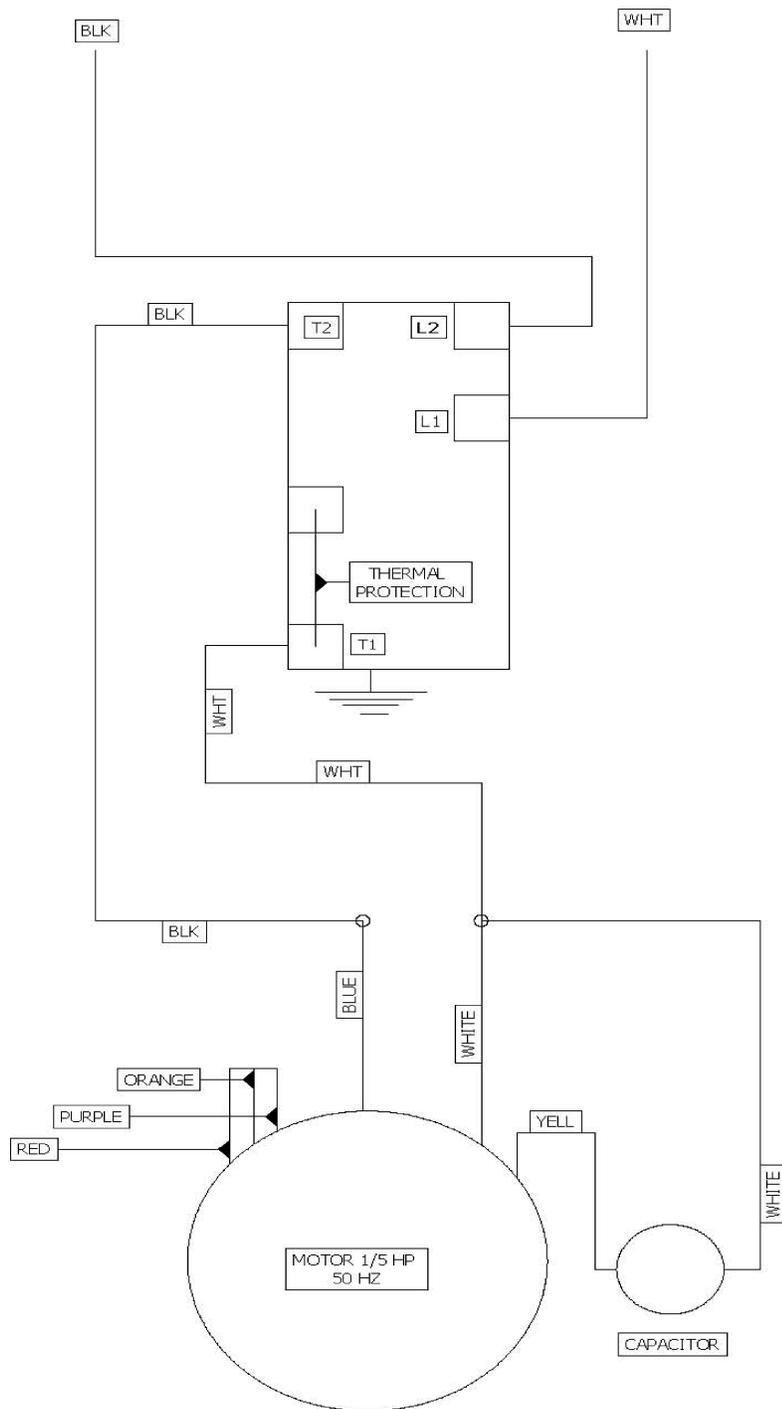
**Figure 3: Starter Switch 220 Volts**

| ITEM | QTY | PART#    | DESCRIPTION                |
|------|-----|----------|----------------------------|
| 1    | 1   | HA-67    | Box, weather proof 4" x 2" |
| 2    | 1   | BW-029   | Switch, starter 2 pole     |
| 3    | 1   | Call     | Cover, switch w/red toggle |
| 4    | 1   | BW-037IN | Starter, switch assembly.  |

WIRING SCHEMATIC FOR 22K B/WASHER INTERNATIONAL  
4/2001 TO PRESENT



**Figure 4: Wiring Diagram 2002 - 2006**



**Figure 5:**  
**Wiring Schematic for Conveyor and Pre-soaker 220 Volt**  
**International 2007 to present**