



C O N V E Y O R S

A DURAVANT COMPANY

# BestReach Rigid Belt Drive-Out Conveyor System with Discharge Pullout

## Operator's Manual



FMH Conveyors LLC  
107 Flint Street  
Jonesboro, AR 72401

p. 800.327.9209  
t. 844.FMH.SERVICE  
f. 870.935.3661

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[www.fmhconveyors.com](http://www.fmhconveyors.com)

FMH Conveyors Operator's Manual  
BestReach Rigid Belt Conveyor

Dear Operator,

We at FMH Conveyors would like to thank you for selecting our BestReach® power conveyor system as the solution to your conveying needs.

Your BestReach® system is supported by a group of factory trained customer service representatives. They can be reached via our toll free number **1-800-327-9209**. Whether your needs require assistance from the factory or in the field, please do not hesitate to call. Our team is eager to help.

Thank you once again for purchasing our BestReach conveyor system. We look forward to fulfilling your future requirements.

Sincerely,  
FMH Conveyors



**Underwriter's Laboratories Certification Statement**

FMH Conveyors has been thoroughly tested by Underwriter's Laboratories, and have been found to meet their strict standards for Factory Automation Equipment. Our conveyors are certified to UL508 Standards when shipped from our plant. Our UL file number is E230497. All standards can be found on-line at [www.ul.com](http://www.ul.com).

**ANY MODIFICATION FROM ORIGINAL FACTORY CONDITION OR REPAIRS NOT PERFORMED BY FMH CONVEYORS TECHNICIANS OR CERTIFIED CONTRACTORS MAY VOID UL CERTIFICATION.**

For specific assistance regarding any UL issues, please contact your FMH Conveyors sales representative at 1-800-327-9209.

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## **WARRANTY STATEMENT**

Your FMH conveyor is protected by our premier warranty. FMH Conveyors will replace, free of charge, parts that are damaged during the course of normal operation due to material or workmanship defects. This warranty extends for a period of two (2) years on all mechanical components and one (1) year on all electrical components, as measured from the date you take possession of your conveyor.

This warranty does not cover damage due to accident, misuse, abuse, and negligence. This warranty does not cover damage due to improper operation or maintenance, connection to improper voltage supply, or attempted repair/modification by anyone other than an authorized FMH Conveyors service personnel.

For specific warranty information or assistance, please contact your FMH Conveyors sales representative at 1-800-327-9209.

## **SAFETY INFORMATION**

- Avoid wearing excessively loose clothing or hanging jewelry when working with moving machinery.
- Keep long hair pulled up to prevent it from becoming caught in moving parts.
- Remove any obstructions from the path of the conveyor.
- Make sure others move away from the conveyor before moving the unit or starting the conveyor bed.
- Best Diversified Products, Inc. conveyors and their electrical systems must only be serviced by properly trained and qualified technicians.
- Never service the conveyor with power applied. Always disconnect power before servicing equipment.
- Never operate conveyor with any electrical enclosure open.
- Never operate conveyor with any guards removed.

## SPECIFICATIONS

Overall Length w/10' Pullout Extension (Shortest Standard Unit)	28' to 38'
Overall Length w/10' Pullout Extension (Longest Standard Unit)	52' to 62'
Minimum Bed Height	32 Inches
Overall Width	35 Inches (Approx)
Belt Width	24 Inches
In and Out Travel Speed	60 ft/min
Steering	8 to 10 degrees left & right
Solid Rubber Tires	17 Inch Diameter
Conveyor Bed Speed Standard	60 ft/min
Conveyor Bed Speed Optional	60-135 ft/min
230VAC 3 phase Std. Speed	
Full Load Current	11.5 Amp
Roller Full Load Amps	4.4 Amp
460VAC 3 phase Std. Speed	
Full Load Current	6 Amp
1 ½ H.P. Motor Full Load Amps	2.5 Amp
230VAC 3 phase Optional Speed	
Full Load Current	15.5 Amp
Roller Full Load Amps	8.6 Amp
460VAC 3 phase Optional Speed	
Full Load Current	8 Amp
Roller Full Load Amps	4.3 Amp

# Installation

## Unloading Units

- 1) Upon arrival all conveyors will be secured with wood blocks mounted to the trailer floor. All wood blocks must be removed prior to moving the conveyors.
- 2) **Warning:** Conveyors must not be picked up utilizing forks on the rear of the unit. Failure to adhere to this warning may cause damage to the main electrical panel on the back of the unit, or the electrical connections coming into this panel. This damage will not be covered under warranty.
- 3) To unload, the unit may be either manually pushed from the front of the conveyor, or by utilizing a lifting strap placed around the rear frame of the conveyor and attached to a forklift. If using the strap method, make sure that the strap does not come in contact with any electrical wiring under the conveyor.
- 4) The steering actuator on the front axle of the conveyor has been disconnected for ease of movement. When using either unloading method, someone must manually steer the front of the unit to prevent damage to the front control panel.

## Installation

Installation should only be performed by Best Diversified Installers or qualified personnel, and must be completed in accordance with all applicable codes and regulations.

- 1) Locate and mark the center of the spur. Chalk a line from the dock leveler back approximately 50 feet. Measure 2 inches off each side of the centerline, this will give you your inside dimension on track placement location, 5 inches off the center will give you your outside line placement. NOTE: It might be helpful to cut 2, 4-inch blocks. Center these blocks on your chalk line at the front and back of each piece of track, so that you have 2 inches on either side of the line. Then assemble the track as instructed below.
- 2) Mark location for the front of floor track as shown on supplied application specific drawing (if you do not have this drawing contact factory.)
- 3) Locate and position the individual pieces of floor track as shown on drawing A.
- 4) Assemble the rear sections of floor track as shown in drawing B.
- 5) Position and anchor floor track starting with the front and aligning the inside edge with your 2-inch measure out or utilize your cut blocks for this placement.
- 6) Pull 2 lengths of SO cable provided (16/8 and 14/4) thru flexible wire carrier.
- 7) Attach the included connection brackets to each end of the flexible wire carrier. These parts and hardware are shown in Drawing C on page 13.
- 8) Feed both lengths of SO cable under rear wire cover (C channel illustrated in Drawing B, #7) exposing approximately 10" at the rear of the floor track. Attach the flexible carrier to the wire cover (C channel).
- 9) Install 2 cord grips (not included) in 7/8 holes of 8x6x5 junction box that is provided.
- 10) Feed Approximately 10" of the SO cables thru the cord grips and install junction box on floor toward the rear of the floor track. Box should be held off the ground utilizing Uni-strut or some other suitable material. This material is not included and will need to be provided by the installer.
- 11) Pull slack cable thru the opposite end of the flexible wire carrier.
- 12) Lay flexible wire carrier flat in the floor track.

## Installation, Cont.

- 13) If the conveyor is going to be installed from the dock end of the floor track the stop bar must be removed from the conveyor. If the conveyor is to be installed from the rear of the floor track the stop bar and the UHMW guide roller must be removed from the conveyor.
- 14) Roll the conveyor into position on guide track and re-install stop bar and guide roller.
- 15) Connect Flexible wire carrier to the underside of the conveyor.
- 16) Route and secure 14/4 SO cable into main electrical enclosure box and terminate as shown in Diagram on page 52, connecting to the L1, L2, L3 and ground contacts.

**NOTE: Torque terminal blocks to a maximum of 7 inch/lbs.**

**NOTE: Terminal blocks are rated for 10-20 Gauge wire only per UL File E188984**

- 17) Terminate wires from both SO cables in the floor junction box as shown on page 67. Supply line voltage, as shown on the nameplate to 14/4 SO cable junction in floor track junction box. This line voltage must be connected to a separate fused disconnect. This connection is shown as an option on page 69, or may be provided by the installer. Conduit, straps, wire, hardware, etc. that are used to connect the floor track box to the disconnect must be provide by the installer. All wires that are pulled must be labeled to correspond to those in the floor track box. The remaining 16/8 SO cable wires are interlock connections and should be connected as shown in the optional disconnect stand drawing on page 69. Connect applicable interlock wires to 16/8 SO cable in 8x6x4 junction box.

**NOTE: Torque barrier strips to a maximum of 9.6 inch/lbs.**

**NOTE: Barrier Strips are rated for 12-22 Gauge wire only per UL file E47811**

- 18) Remove chain guard and install chain.
- 19) Installed the Herringbone transition to the end of the fixed feeder conveyor.



# Belt Installation

## **BELT INSTALLATION AND TRACKING:**

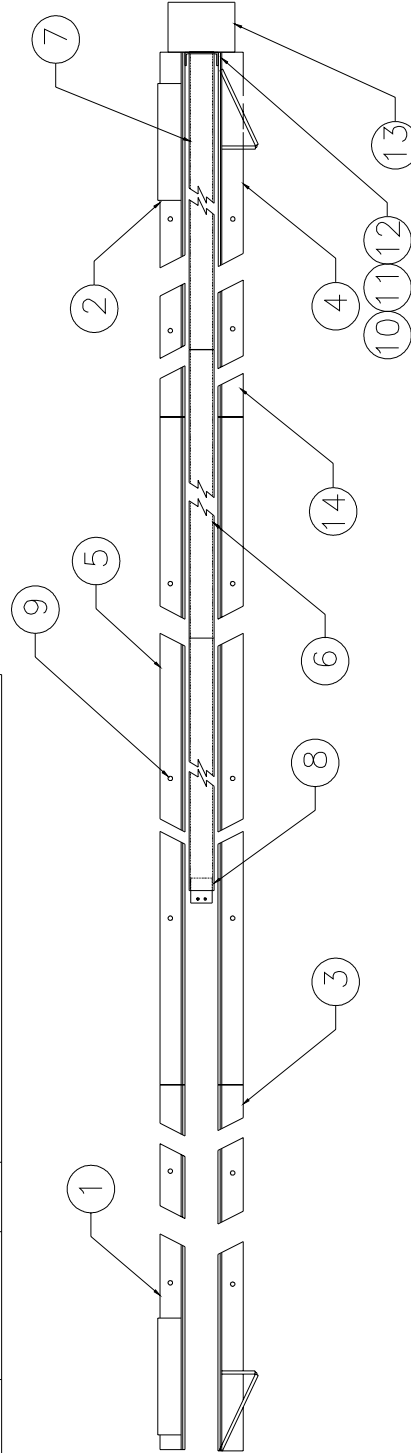
Unroll the belt, PVC coating side up, around the head pulley and over the idler rollers. Run belt over the snub roller, around the drive roller, and back over the other snub roller. Then run the belt around the tail pulley and align the seam near the center of the conveyor frame. Pull the belt together to engage the lacing and install the pin. There are two permanent marks in the center of the belt width approximately 20 feet back from the lacing and 10 feet apart. Find these marks and take an exact measurement between them. Add  $.375''$  ( $3/8''$ ) to the measurement. Example (measured  $119\ 9/16'' + 3/8'' = 119\ 15/16$ ). For proper tension, adjust the tail pulley so the distance between the two marks is equal to the sum of the measured dimension and  $3/8''$ . To insure the tail pulley is square, be sure both tail pulley blocks are equal distance from the rear of the conveyor frame. After tracking the belt, check the dimension between the marks to make sure proper tension is still in the belt. If the dimension has changed, adjust accordingly and recheck for proper tracking.

With the belt installed, begin the tracking procedure. The drive roll should be parallel to the snub rollers. The snub rollers should be locked into place. All idler rollers are square to the frame. Start the belt. Watch to see which side the belt wants to run to and also how quickly it does so. Shut off the conveyor. Begin belt tracking by adjusting the first idler from the front. Loosen the bolts on the idler bracket and angle the roller to correct the belt travel. The roller will steer the belt toward the uphill side of the roller (Uphill refers to the belt travel direction). If further correction is necessary, proceed to adjust the next idler from the front and so on toward the rear of the conveyor. If adjusting the idlers cannot solve the tracking problem, the head and tail pulleys may have to be adjusted slightly.

Adjusting the idler rollers will solve most all of the belt tracking problems. The belt should run straight and on the center of the slider bed. Practice and experience will speed up the belt tracking process.

# Floor Track Assy, Rigid Belt, 48' Pullout Drawing A

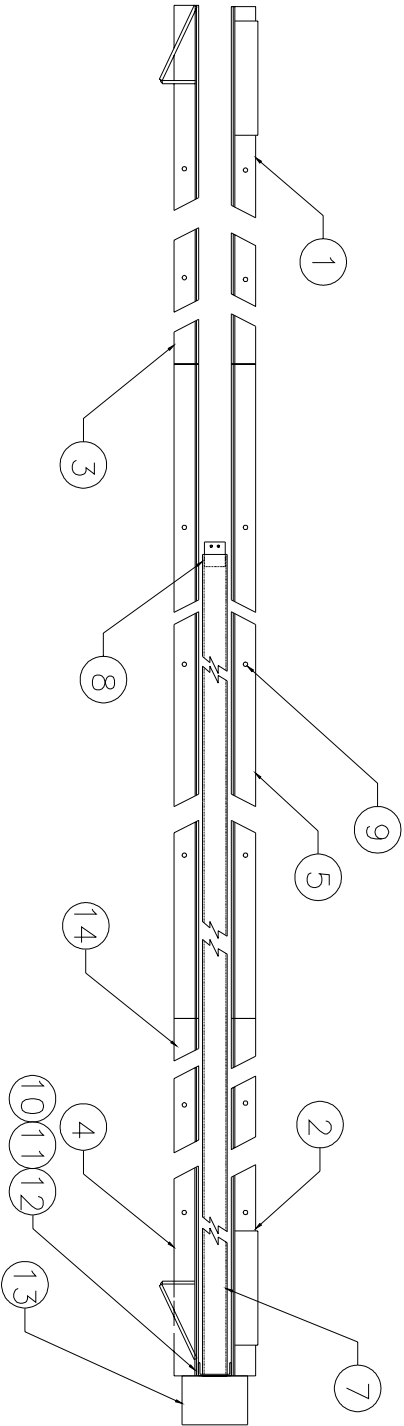
NO.	PART NUMBER	REQ'D	DESCRIPTION
1	750023	1	WT. FRONT RIGHT, FLOOR TRACK
2	750024	1	WT. REAR RIGHT, FLOOR TRACK
3	750020	1	WT. FRONT LEFT, FLOOR TRACK
4	750022	1	WT. REAR LEFT, FLOOR TRACK
5	350166	8	FLOOR TRACK, 86" SECTION
6	350204	2	CHANNEL, WIRE CABLES
7	750025	1	WT. REAR CHANNEL, WIRE CABLES
8	750026	1	WT. FRONT CHANNEL, WIRE CABLES
9	10565	36	BOLT ANCHOR 3/8-16 X 3 3/4"
10	12020	4	FLAT WASHER 3/8"
11	11140	4	LOCKNUT 3/8-16 NYLON
12	10042	4	SCREW, HHC, 3/8-16 X 1"
13	802016	1	Electrical Assy, Floor Track, 48' Pullout
14	402009	2	FLOOR TRACK, 64" SECTION



# Floor Track Assy, Rigid Belt, 24' Pullout

## Drawing A

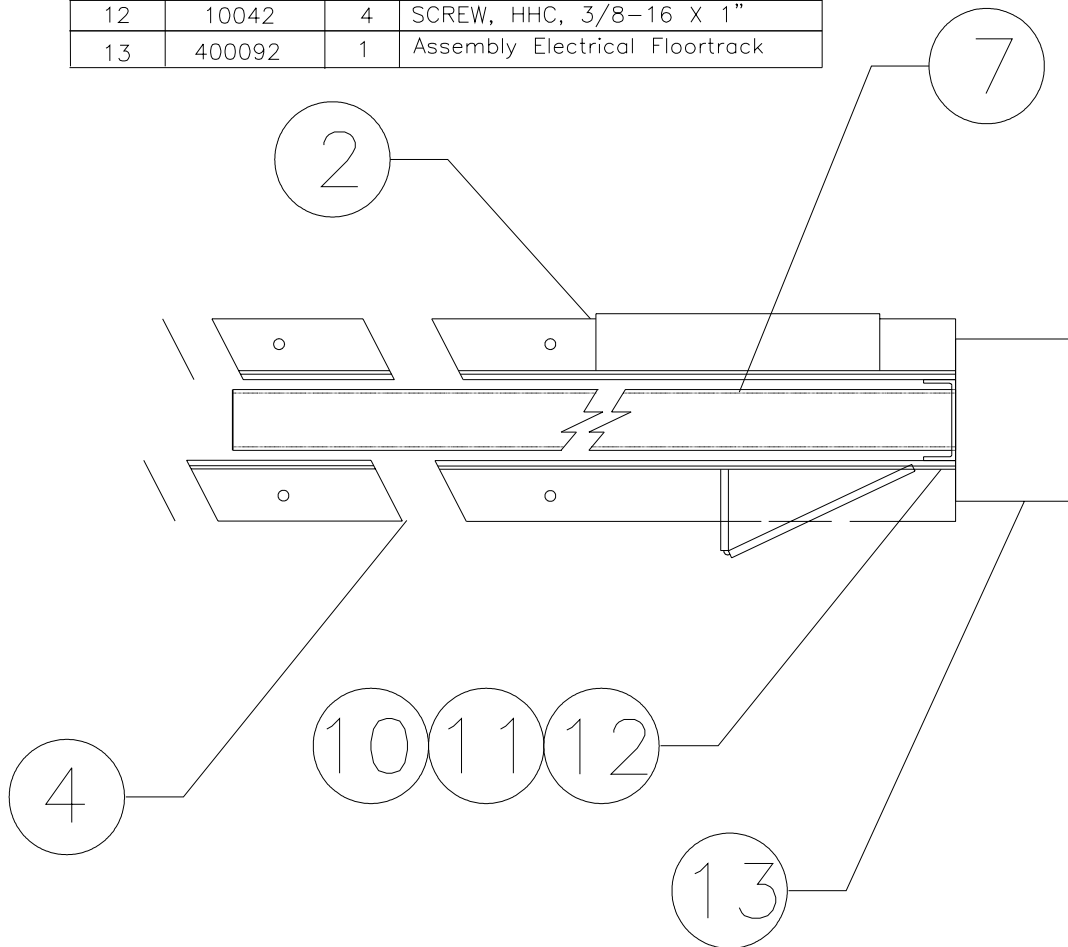
NO.	PART NUMBER	REQ'D	DESCRIPTION
1	750023	1	WT. FRONT RIGHT, FLOOR TRACK
2	750024	1	WT. REAR RIGHT, FLOOR TRACK
3	750020	1	WT. FRONT LEFT, FLOOR TRACK
4	750022	1	WT. REAR LEFT, FLOOR TRACK
5	350166	2	FLOOR TRACK, 86" SECTION
7	750025	1	WT. REAR CHANNEL, WIRE CABLES
8	750026	1	WT. FRONT CHANNEL, WIRE CABLES
9	10565	18	BOLT ANCHOR 3/8-16 X 3 3/4"
10	12020	4	FLAT WASHER 3/8"
11	11140	4	LOCKNUT 3/8-16 NYLON
12	10042	4	SCREW, HHC, 3/8-16 X 1"
13	802017	1	Electrical Assy, Floor Track, 24' Pullout
14	402010	2	FLOOR TRACK, 34" SECTION



# Floor Track Assembly, Rear

## Drawing B

NO.	PART NUMBER	REQ'D	DESCRIPTION
2	750024	1	WT. REAR RIGHT, FLOOR TRACK
4	750022	1	WT. REAR LEFT, FLOOR TRACK
7	750025	1	WT. REAR CHANNEL, WIRE CABLES
10	12020	4	FLAT WASHER 3/8"
11	11140	4	LOCKNUT 3/8-16 NYLON
12	10042	4	SCREW, HHC, 3/8-16 X 1"
13	400092	1	Assembly Electrical Floortrack

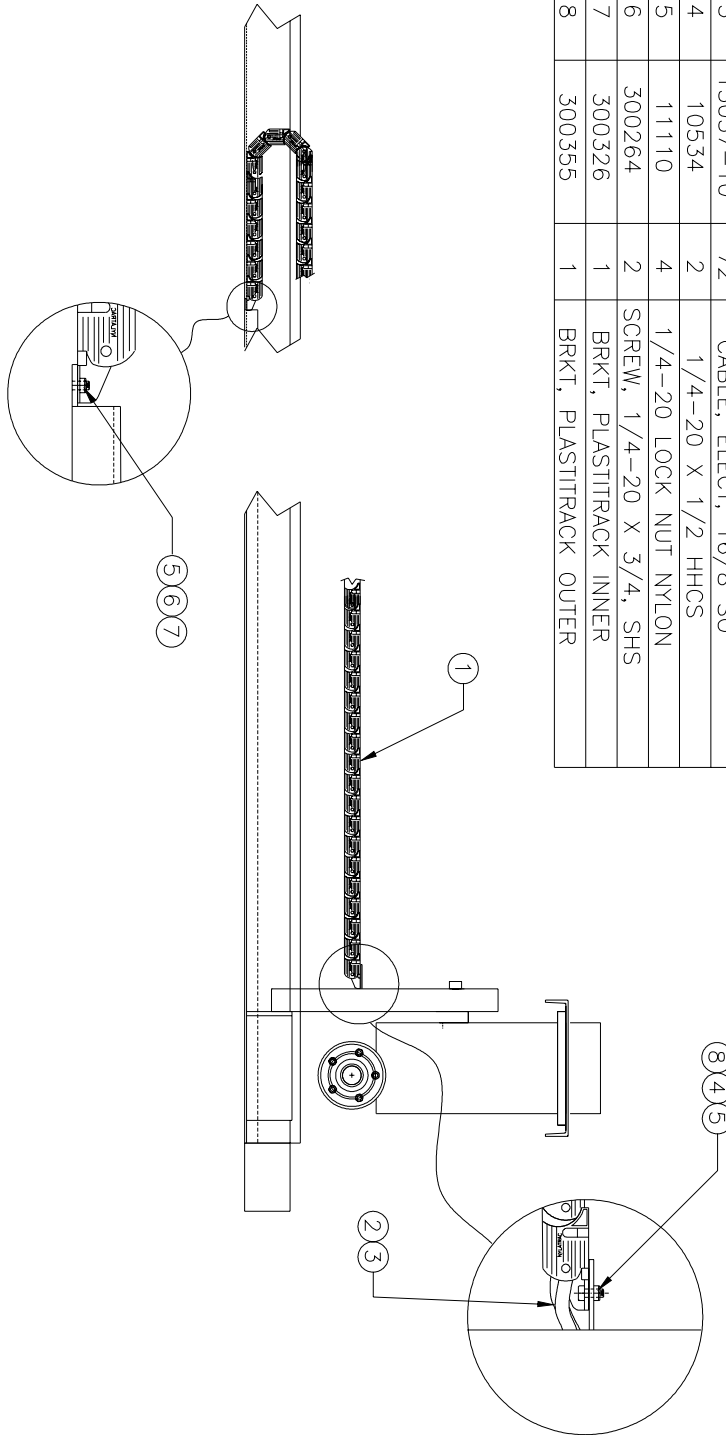


Refer to Drawings  
 C and D

# Electrical Assy, Floor Track, 48' Pullout

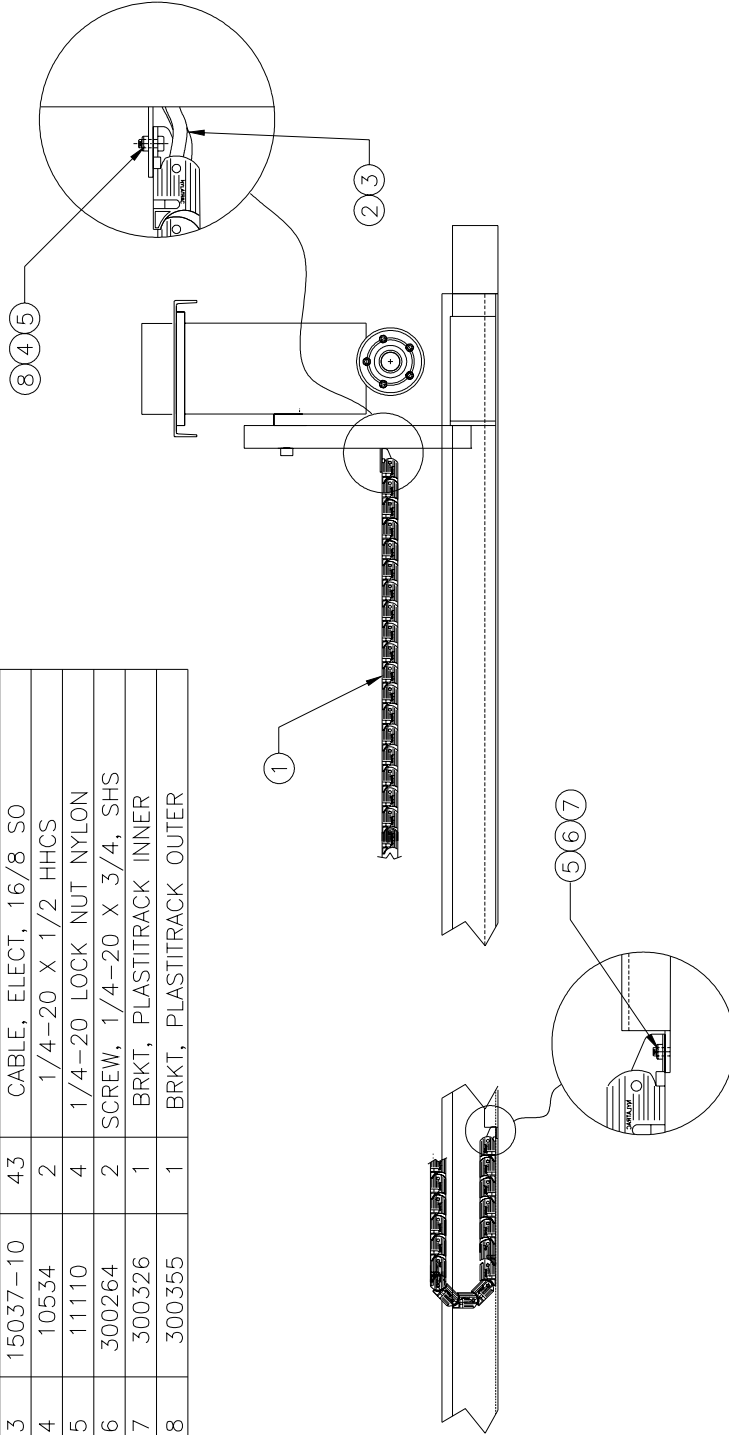
## Drawing C

NO.	PART NUMBER	REQ'D	DESCRIPTION
1	302101	1	Rigid Belt, Cable Carrier, 48' Frame
2	15037-13	72	CABLE, ELECT, 14/4 SO
3	15037-10	72	CABLE, ELECT, 16/8 SO
4	10534	2	1/4-20 X 1/2 HHCS
5	11110	4	1/4-20 LOCK NUT NYLON
6	300264	2	SCREW, 1/4-20 X 3/4, SHS
7	300326	1	BRKT, PLASTITRACK INNER
8	300355	1	BRKT, PLASTITRACK OUTER



# Electrical Assy, Floor Track, 24' Pullout Drawing C

NO.	PART NUMBER	REQ'D	DESCRIPTION
1	302102	1	Rigid Belt, Cable Carrier, 24' Frame
2	15037-13	43	CABLE, ELECT, 14/4 SO
3	15037-10	43	CABLE, ELECT, 16/8 SO
4	10534	2	1/4-20 X 1/2 HHCS
5	11110	4	1/4-20 LOCK NUT NYLON
6	300264	2	SCREW, 1/4-20 X 3/4, SHS
7	300326	1	BRKT, PLASTITRACK INNER
8	300355	1	BRKT, PLASTITRACK OUTER

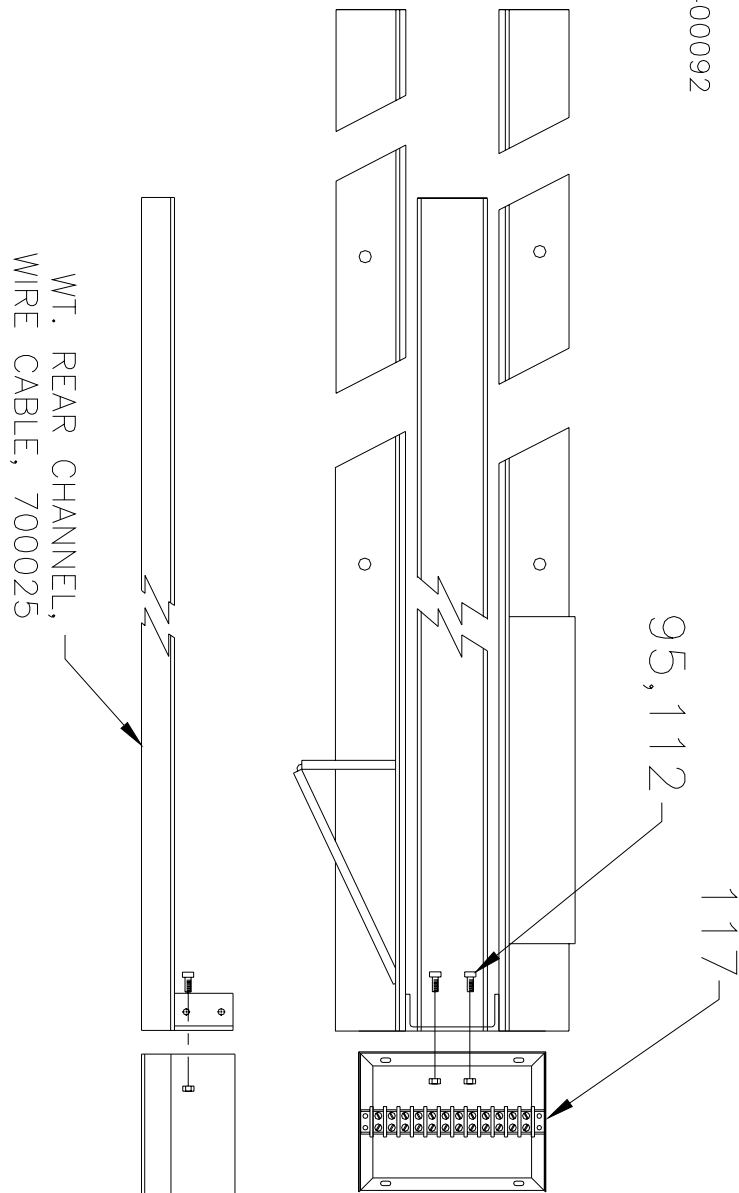


# Enclosure Mount, Floor Track, Rear

## Drawing D

NO.	REQ'D	PART #	DESCRIPTION
95	2	11110	LOCKNUT, 1/4-20 NYLON
112	2	300142	BOLT, HHC 1/4-20 1/2"
117	1	400007	8 X 6 X 4 ENCLOSURE, RWKD

PART OF 800007  
 DETAIL OF ASSY. 400092



# OPERATING INSTRUCTIONS

An emergency stop circuit controls electrical power to all parts of the conveyor. When any one emergency stop switch is activated, power is removed from all motors and actuators stopping all movement of the conveyor frame and bed. All electrical power is also removed from the motors and actuators when the DOOR DISCONNECT HANDLE is in the OFF or OPEN positions.

- A. With interlocking door disconnect in the ON position and all Emergency Stop buttons out and optional Cable Pull switches in the run position, the operator pushes either RESET button. The MASTER CONTACTOR is energized and the machine is ready to respond to the operator's inputs.
- B. Moving the joystick in the DOWN direction starts the traversing motor in the forward direction after the beeper is sounded for approximately 1.5 seconds, moving the unit toward the dock door. Releasing the joystick will return it to its centered position, stopping the motor. Moving the joystick UP starts the traversing motor in the opposite direction after the beeper is sounded.
- C. The LEFT and RIGHT positions of the joystick cause the steering actuator to steer the unit. The unit will steer in the same direction as the joystick movement when the unit is moving forward.
- D. The conveyor bed is controlled by the OFF ON pushbutton. Pressing it once will start the bed after the beeper is sounded continuously for approximately 1 second. When the bed is running, pressing this pushbutton turns off the bed.
- E. At any time either EMERGENCY STOP switch may be pushed to de-energize the MASTER contactor. This will remove power from all motors and actuators. To restart the machine, the EMERGENCY STOP that was activated must be deactivated by twisting on the button. The switch should pop out. Either RESET pushbutton can then be momentarily depressed and the conveyor will be reset. Any motor that was running prior to the Emergency Stop will have to be restarted through the Operator's Control Panel.
- F. A feeder control switch provides dry contacts for a customer connection to control the feeder for the spur or any other function the customer requires.

## **PROGRAMMING PACKAGE STOP PHOTOEYES:**

- Switch on 12" x 12" enclosure on the extension should be in the down position for normal operation.
- To program, flip switch to up position. Cover photoeye for the desired shut off delay time required on the conveyor belt. There should be a continuous beep for the time the photoeye is covered during programming.



# OPERATING INSTRUCTIONS (CONT)

## **PROGRAMMING PACKAGE STOP PHOTOEYES (continued)**

- Return switch to the down position for operation.
- To return to default settings of 3 seconds delay, flip switch up and down three times in 2 sec. The default settings will be reinstated and the switch is in down position for operation.

## **INDEXING OPTION AND PHOTOEYE PROGRAMMING:**

- This conveyor can be equipped with an electronic package indexing option.
- The indexing option is switched on and off using a selector switch on the operator control panel. In the on position, the conveyor is in normal operating mode. When the switch is off, the conveyor will index packages a programmable distance after they pass through the indexing photoeye located on the transition.
- Programming this distance follows the same procedure as the package stop photoeye except you will cover the indexing photoeye for the desired conveyor belt run time after a package is detected on the transition.

# MAINTENANCE SCHEDULE

The BESTREACH Conveyor is virtually maintenance free. However, we do recommend the following:

Keep the conveyor clean and free of debris, dirt and grease accumulation.

Inspect belt for wear and proper tracking.

Make sure photoeyes are clean and unobstructed.

Inspect all bearings for leaking seals or other early signs of failure. (Conveyor belt rollers and Rear axle pillow blocks)

Check chain tension on the rear axle drive.

Visually inspect floortrack and flexible cable carrier and cables to ensure proper working order.

Test all EMERGENCY STOP switches to verify proper operation.

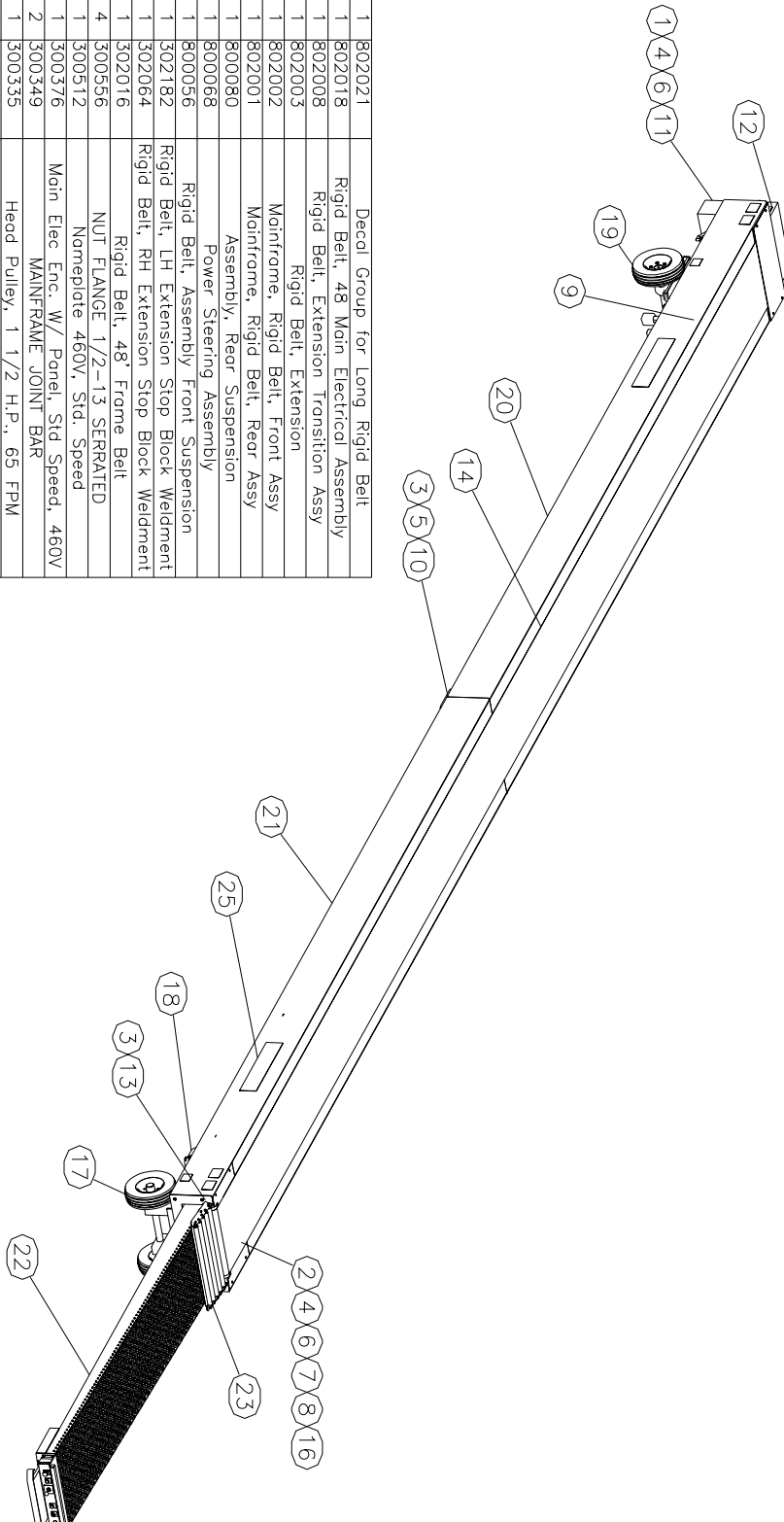
Oil in the Motorized Head Pulley is to be monitored and changed per owner's manual specification.

**All of the above maintenance inspections should be conducted daily.**

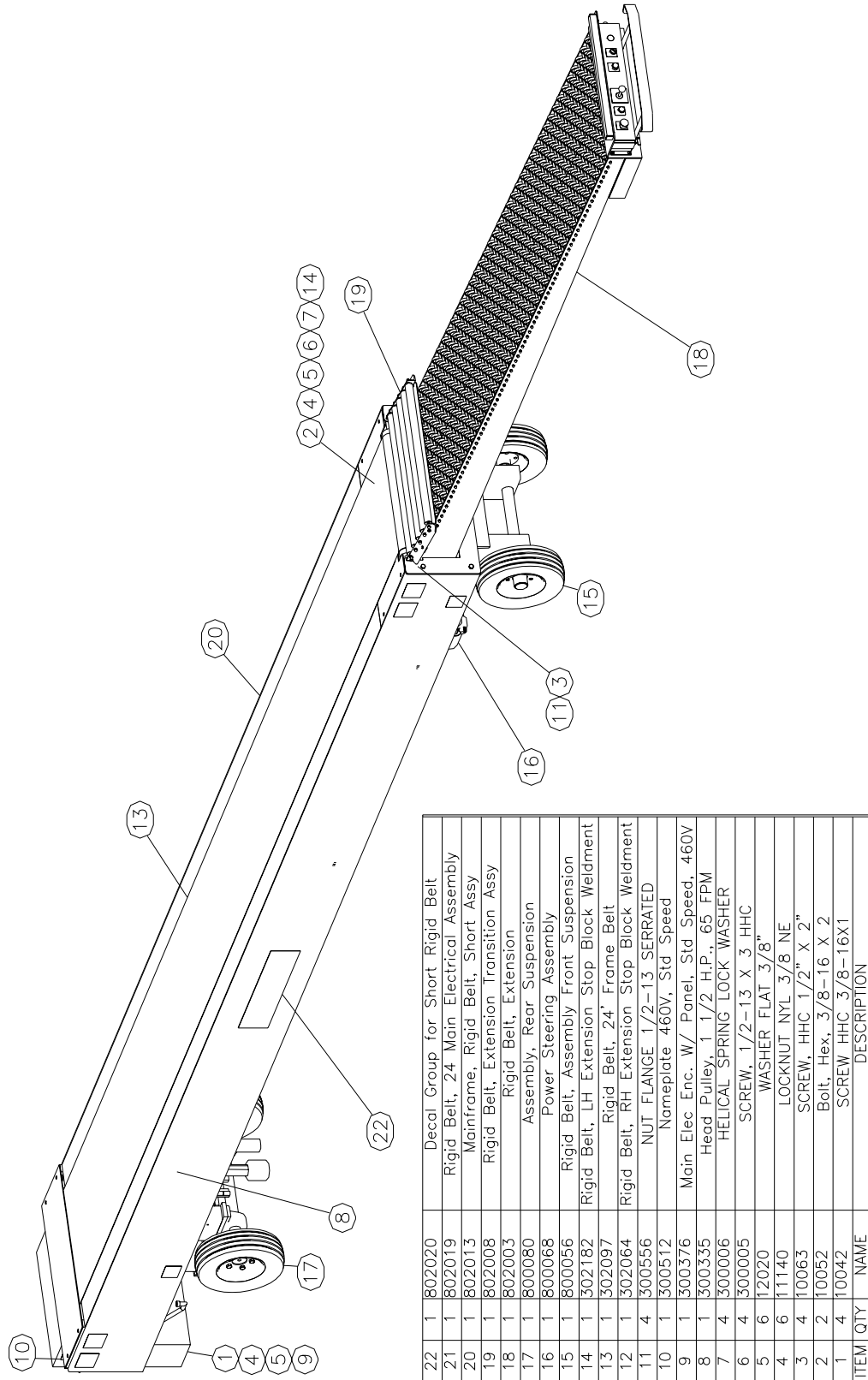
## Assembly Diagrams of Components and Parts List of BestReach Rigid Belt Conveyor.

# BestReach Belt 460V, Standard Speed, 52'-62'

ITEM	QTY	NAME	DESCRIPTION
25	1	802021	Decal Group for Long Rigid Belt
24	1	802018	Rigid Belt, 48' Main Electrical Assembly
23	1	802008	Rigid Belt, Extension Transition Assy
22	1	802003	Rigid Belt, Extension
21	1	802002	Mainframe, Rigid Belt, Extension
20	1	802001	Mainframe, Rigid Belt, Front Assy
19	1	800080	Assembly, Rear Suspension
18	1	800068	Power Steering Assembly
17	1	800056	Rigid Belt, Assembly Front Suspension
16	1	302182	Rigid Belt, LH Extension Stop Block Weldment
15	1	302064	Rigid Belt, RH Extension Stop Block Weldment
14	1	302016	Rigid Belt, 48' Frame Belt
13	4	300556	NUT FLANGE 1/2-13 SERRATED
12	1	300512	Nameplate 460V, Std. Speed
11	1	300376	Main Elec Enc. w/ Panel, Std Speed, 460V
10	2	300349	MAINFRAME JOINT BAR
9	1	300335	Head Pulley, 1 1/2 H.P., 65 FPM
8	4	300006	HELICAL SPRING LOCK WASHER
7	4	300005	SCREW, 1/2-13 X 3 HHC
6	6	12020	WASHER FLAT 3/8"
5	16	11142	LOCKNUT 1/2
4	6	11140	LOCKNUT NYL 3/8 NE
3	20	10063	SCREW, HHC 1/2" X 2"
2	2	10052	Bolt, Hex, 3/8-16 X 2
1	4	10042	SCREW HHC 3/8-16 X 1

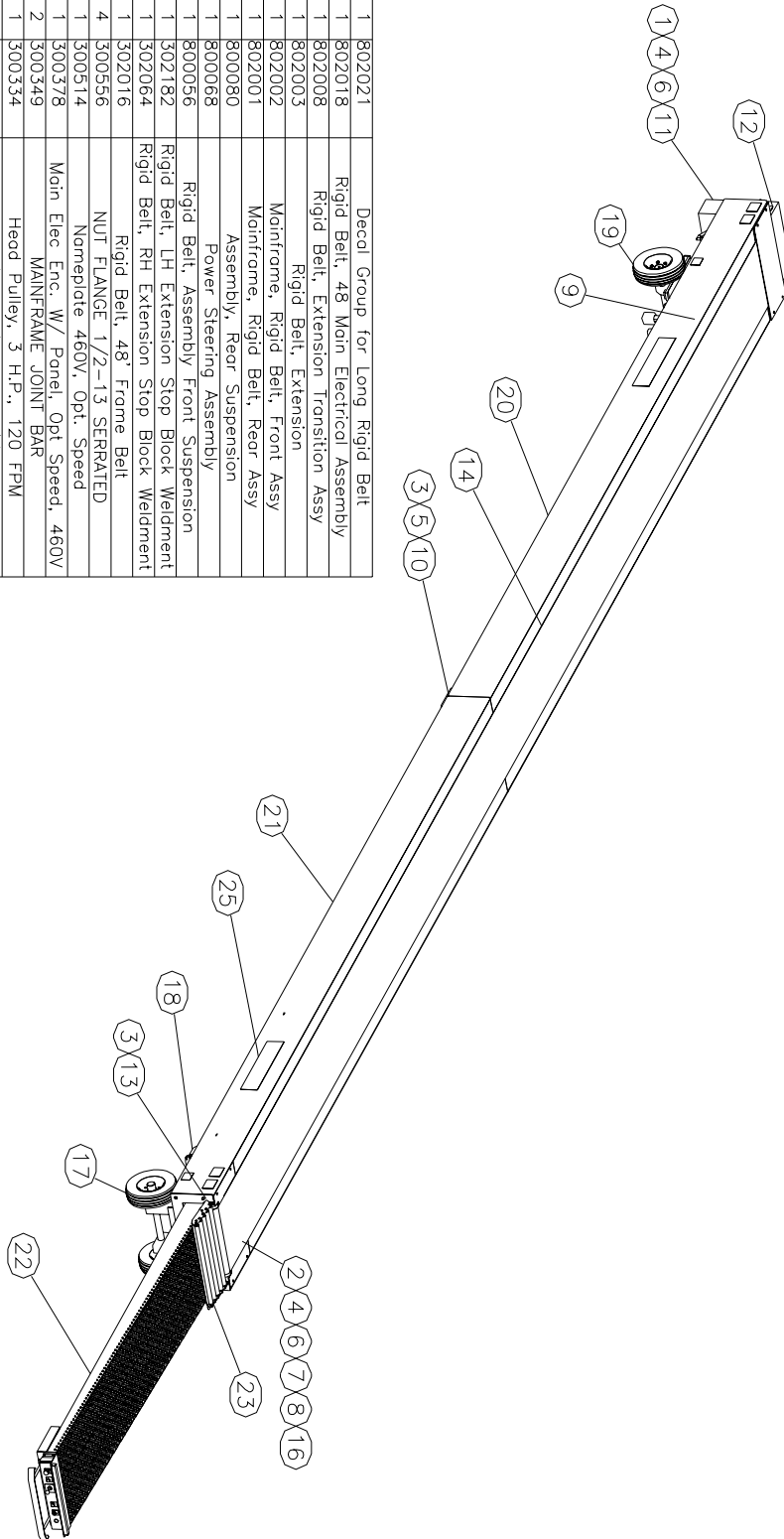


# BestReach Belt 460V, Standard Speed, 28'-38'

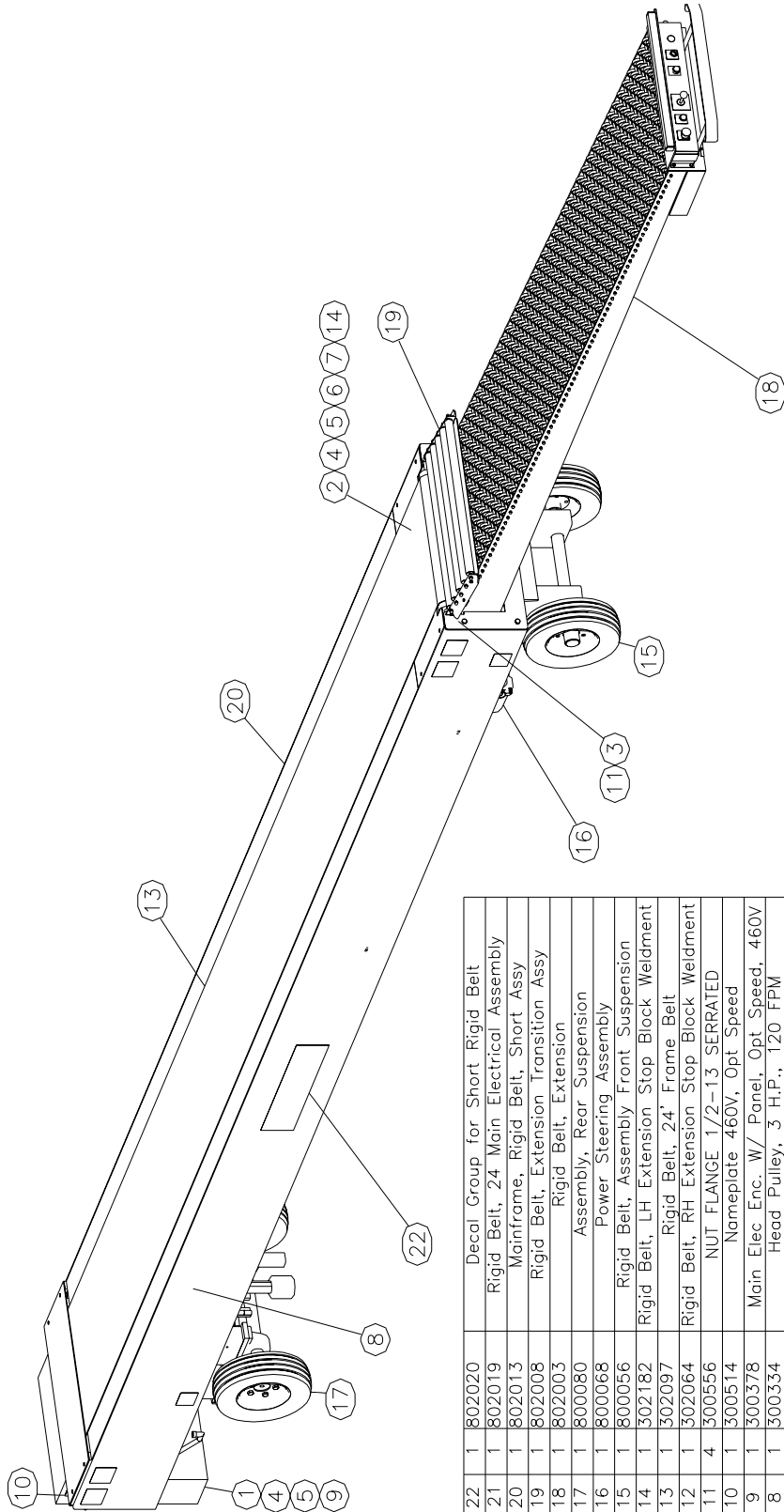


# BestReach Belt 460V, Optional Speed, 52'-62'

ITEM	QTY	NAME	DESCRIPTION
25	1	802021	Decal Group for Long Rigid Belt
24	1	802018	Rigid Belt, 48' Main Electrical Assembly
23	1	802008	Rigid Belt, Extension Transition Assy
22	1	802003	Rigid Belt, Extension
21	1	802002	Mainframe, Rigid Belt, Front Assy
20	1	802001	Mainframe, Rigid Belt, Rear Assy
19	1	800080	Assembly, Rear Suspension
18	1	800068	Power Steering Assembly
17	1	800056	Rigid Belt, Assembly Front Suspension
16	1	302182	Rigid Belt, LH Extension Stop Block Weldment
15	1	302064	Rigid Belt, RH Extension Stop Block Weldment
14	1	302016	Rigid Belt, 48' Frame Belt
13	4	300556	NUT FLANGE 1/2-13 SERRATED
12	1	300514	Nomplate 460V, Opt. Speed
11	1	300378	Main Elec Enc. W/ Panel, Opt Speed, 460V
10	2	300349	MAINFRAME JOINT BAR
9	1	300334	Head Pulley, 3 HP., 120 FPM
8	4	300006	HELICAL SPRING LOCK WASHER
7	4	300005	SCREW, 1/2-13 X 3 HHC
6	6	12020	WASHER FLAT 3/8"
5	16	11142	LOCKNUT 1/2"
4	6	11140	LOCKNUT NYL 3/8 NE
3	20	10063	SCREW, HHC 1/2" X 2"
2	2	10052	Bolt, Hex, 3/8-16 X 2
1	4	10042	SCREW HHC 3/8-16 X 1



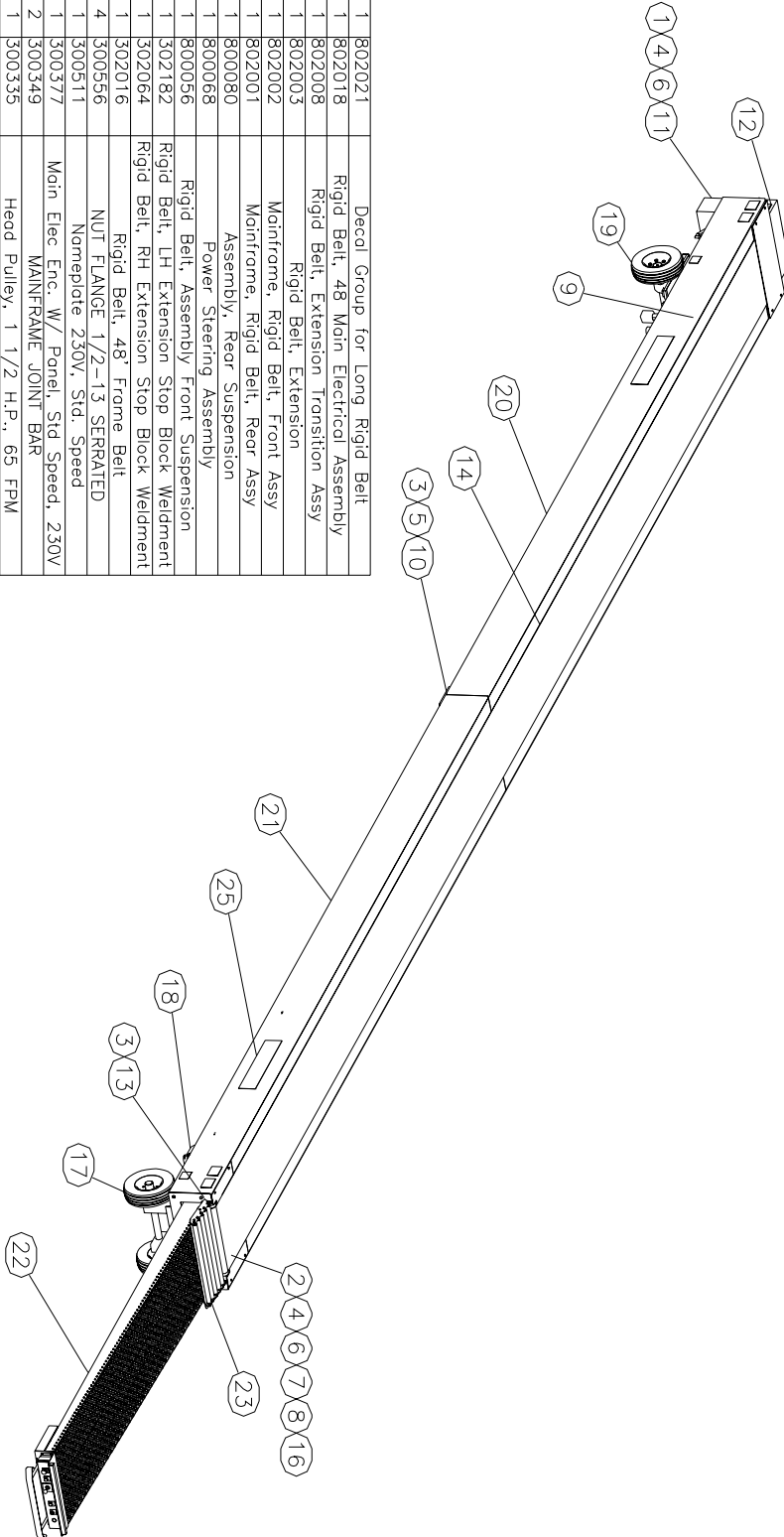
# BestReach Belt 460V, Optional Speed, 28'-38'



ITEM	QTY	NAME	DESCRIPTION	
22	1	802020	Decal Group for Short Rigid Belt	
21	1	802019	Rigid Belt, 24' Main Electrical Assembly	
20	1	802013	Mainframe, Rigid Belt, Short Assy	
19	1	802008	Rigid Belt, Extension Transition Assy	
18	1	802003	Rigid Belt, Extension	
17	1	800080	Assembly, Rear Suspension	
16	1	800068	Power Steering Assembly	
15	1	800056	Rigid Belt, Assembly Front Suspension	
14	1	502182	Rigid Belt, LH Extension Stop Block Weldment	
13	1	502097	Rigid Belt, 24' Frame Belt	
12	1	502064	Rigid Belt, RH Extension Stop Block Weldment	
11	4	300556	NUT FLANGE 1/2-13 SERRATED	
10	1	300514	Nameplate 460V, Opt Speed	
9	1	300378	Main Elec Enc. W/ Panel, Opt Speed, 460V	
8	1	300334	Head Pulley, 3 H.P., 120 FPM	
7	4	300006	HELICAL SPRING LOCK WASHER	
6	4	300005	SCREW, 1/2-13 X 3 HHC	
5	6	12020	WASHER FLAT 3/8"	
4	6	11140	LOCKNUT NYL 3/8 NE	
3	4	10063	SCREW, HHC 1/2" X 2"	
2	2	10052	Bolt, Hex, 3/8-16 X 2	
1	4	10042	SCREW HHC 3/8-16X1	

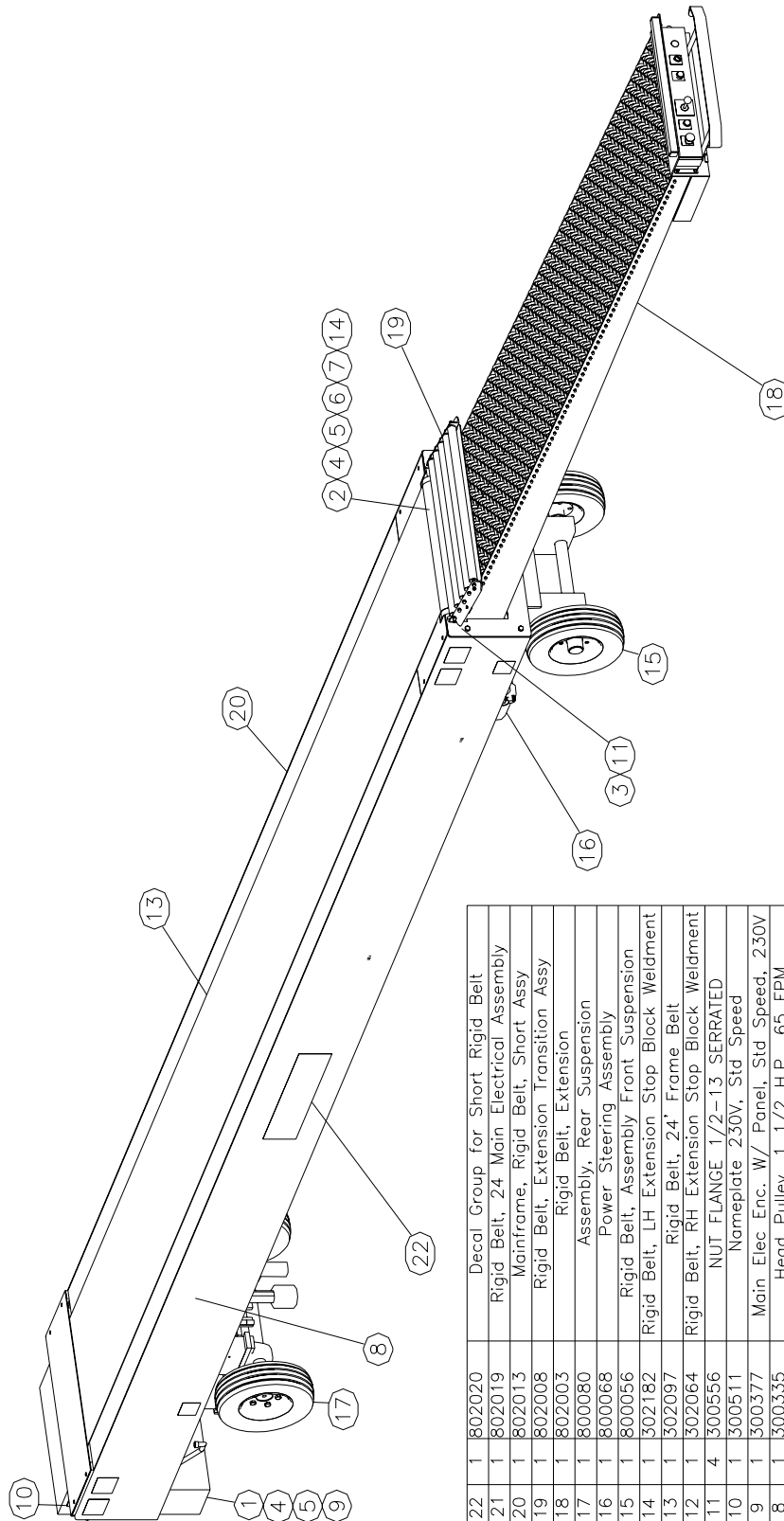
# BestReach Belt 230V, Standard Speed, 52'-62'

ITEM	QTY	NAME	DESCRIPTION
25	1	802021	Decol Group for Long Rigid Belt
24	1	802018	Rigid Belt, 48' Main Electrical Assembly
23	1	802008	Rigid Belt, Extension Transition Assy
22	1	802003	Rigid Belt, Extension
21	1	802002	Mainframe, Rigid Belt, Front Assy
20	1	802001	Mainframe, Rigid Belt, Rear Assy
19	1	800080	Assembly, Rear Suspension
18	1	800068	Power Steering Assembly
17	1	800056	Rigid Belt, Assembly Front Suspension
16	1	302182	Rigid Belt, LH Extension Stop Block Weldment
15	1	302064	Rigid Belt, RH Extension Stop Block Weldment
14	1	302016	Rigid Belt, 48' Frame Belt
13	4	300556	NUT FLANGE 1/2-13 SERRATED
12	1	300511	Nameplate 230V, Std. Speed
11	1	300377	Main Elec Enc. w/ Panel, Std Speed, 230V
10	2	300349	MAINFRAME JOINT BAR
9	1	300335	Head Pulley, 1 1/2 H.P., 65 FPM
8	4	300006	HELICAL SPRING LOCK WASHER
7	4	300005	SCREW, 1/2-13 X 3 HHC
6	6	12020	WASHER FLAT 3/8"
5	16	11142	LOCKNUT 1/2"
4	6	11140	LOCKNUT NYL 3/8 NE
3	20	10063	SCREW, HHC 1/2" X 2"
2	2	10052	Bolt, Hex, 3/8-16 X 2"
1	4	10042	SCREW HHC 3/8-16 X 1"





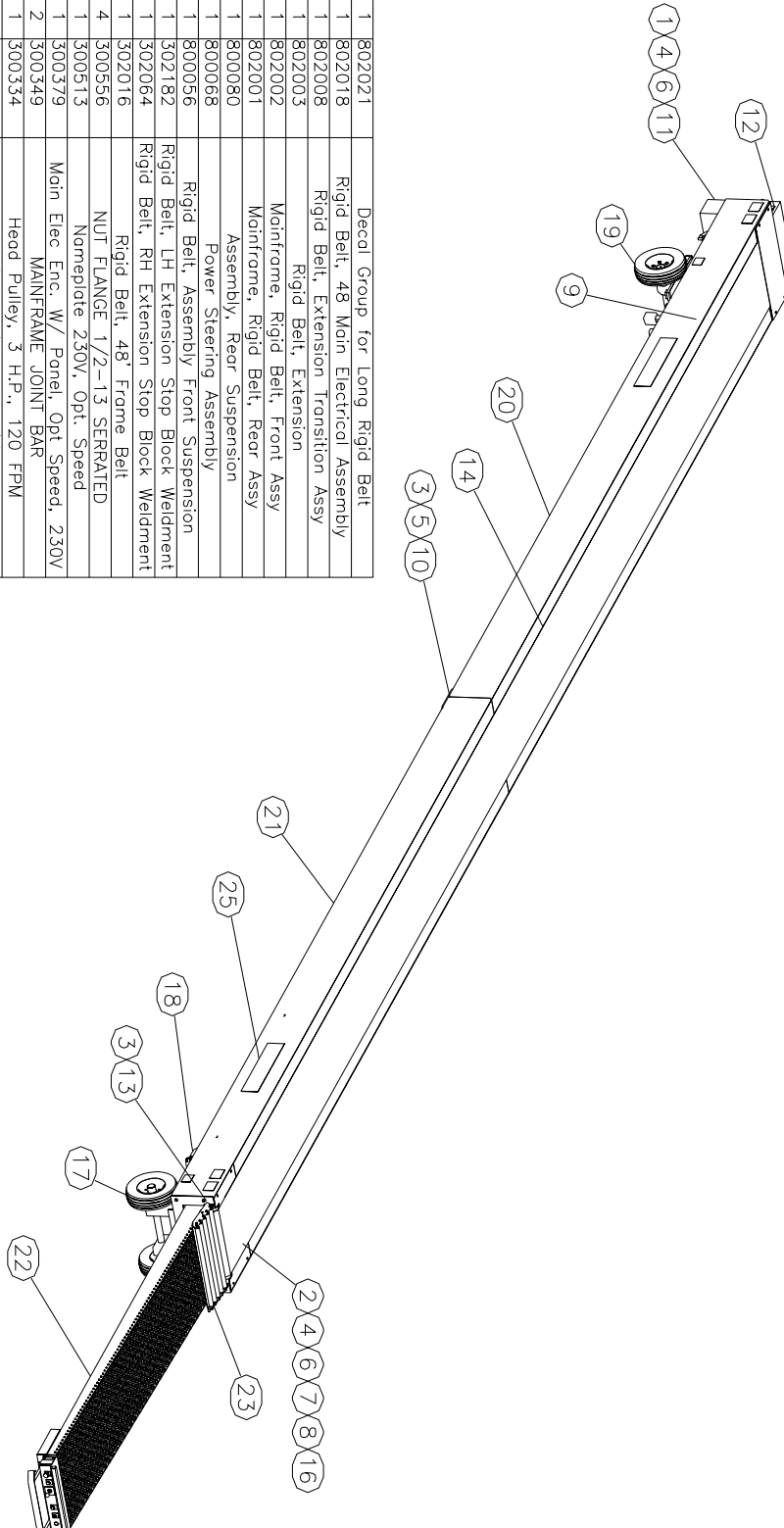
# BestReach Belt 230V, Standard Speed, 28'-38'



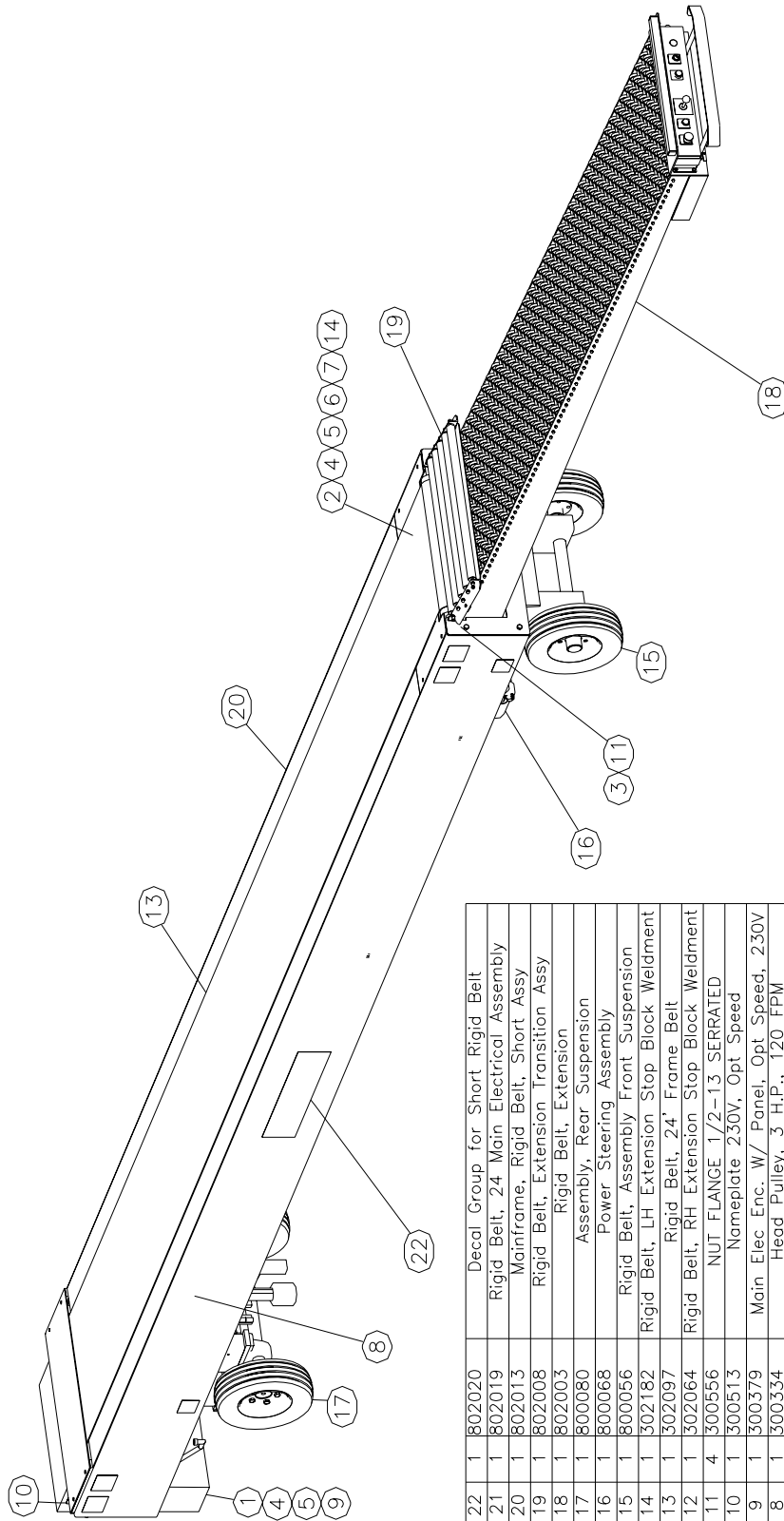
ITEM	QTY	NAME	DESCRIPTION
22	1	802020	Decal Group for Short Rigid Belt
21	1	802019	Rigid Belt, 24' Main Electrical Assembly
20	1	802013	Mainframe, Rigid Belt, Short Assy
19	1	802008	Rigid Belt, Extension Transition Assy
18	1	802003	Rigid Belt, Extension
17	1	800080	Assembly, Rear Suspension
16	1	800068	Power Steering Assembly
15	1	800056	Rigid Belt, Assembly Front Suspension
14	1	302182	Rigid Belt, LH Extension Stop Block Weldment
13	1	302097	Rigid Belt, 24' Frame Belt
12	1	302064	Rigid Belt, RH Extension Stop Block Weldment
11	4	300556	NUT FLANGE 1/2-13 SERRATED
10	1	300511	Nameplate 230V, Std Speed
9	1	300377	Main Elec Enc. W/ Panel, Std Speed, 230V
8	1	300335	Head Pulley, 1 1/2 H.P., 65 FPM
7	4	300006	HELICAL SPRING LOCK WASHER
6	4	300005	SCREW, 1/2-13 X 3 HHC
5	6	12020	WASHER FLAT 3/8"
4	6	11140	LOCKNUT NYL 3/8 NE
3	4	10063	SCREW HHC 1/2-13 X 2
2	2	10052	Bolt, Hex, 3/8-16 X 2
1	4	10042	SCREW HHC 3/8-16X1

# BestReach Belt 230V, Optional Speed, 52'-62'

ITEM	QTY	NAME	DESCRIPTION
25	1	802021	Decal Group for Long Rigid Belt
24	1	802018	Rigid Belt, 48' Main Electrical Assembly
23	1	802008	Rigid Belt, Extension Transition Assy
22	1	802003	Rigid Belt, Extension
21	1	802002	Mainframe, Rigid Belt, Front Assy
20	1	802001	Mainframe, Rigid Belt, Rear Assy
19	1	800080	Assembly, Rear Suspension
18	1	800068	Power Steering Assembly
17	1	800056	Rigid Belt, Assembly Front Suspension
16	1	302182	Rigid Belt, LH Extension Stop Block Weldment
15	1	302064	Rigid Belt, RH Extension Stop Block Weldment
14	1	302016	Rigid Belt, 48' Frame Belt
13	4	300556	NUT FLANGE 1/2-13 SERRATED
12	1	300513	Nomeplate 230V, Opt. Speed
11	1	300379	Main Elec Enc. w/ Panel, Opt Speed, 230V
10	2	300349	MAINFRAME JOINT BAR
9	1	300334	Head Pulley, 3 H.P., 120 FPM
8	4	300006	HELICAL SPRING LOCK WASHER
7	4	300005	SCREW, 1/2-13 X 3 HHHC
6	6	12020	WASHER FLAT 3/8"
5	16	11142	LOCKNUT 1/2
4	6	11140	LOCKNUT NYL 3/8 NE
3	20	10063	SCREW, HHHC 1/2" X 2"
2	2	10052	Bolt, Hex. 3/8-16 X 2
1	4	10042	SCREW HHHC 3/8-16 X 1



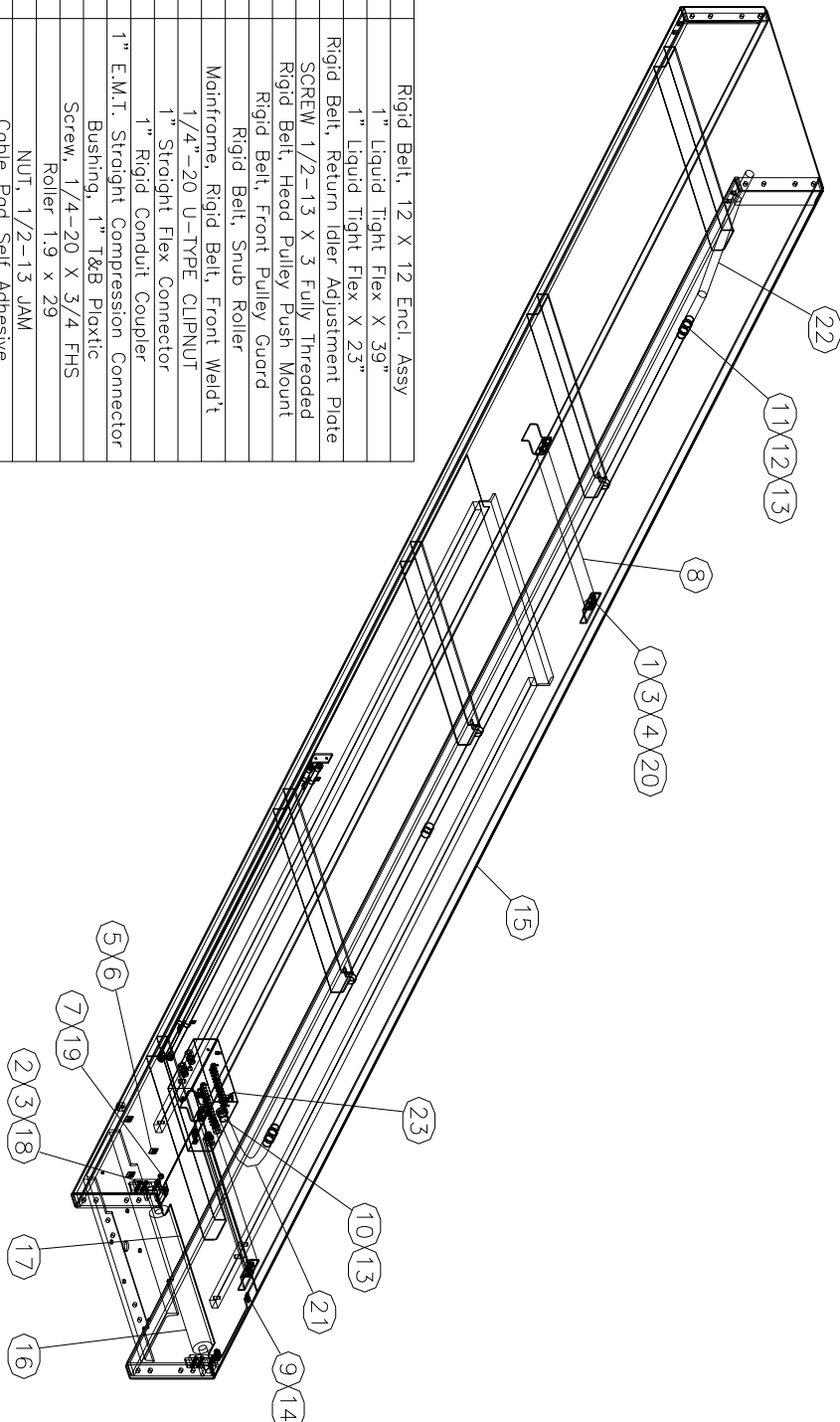
# BestReach Belt 230V, Optional Speed, 28'-38'



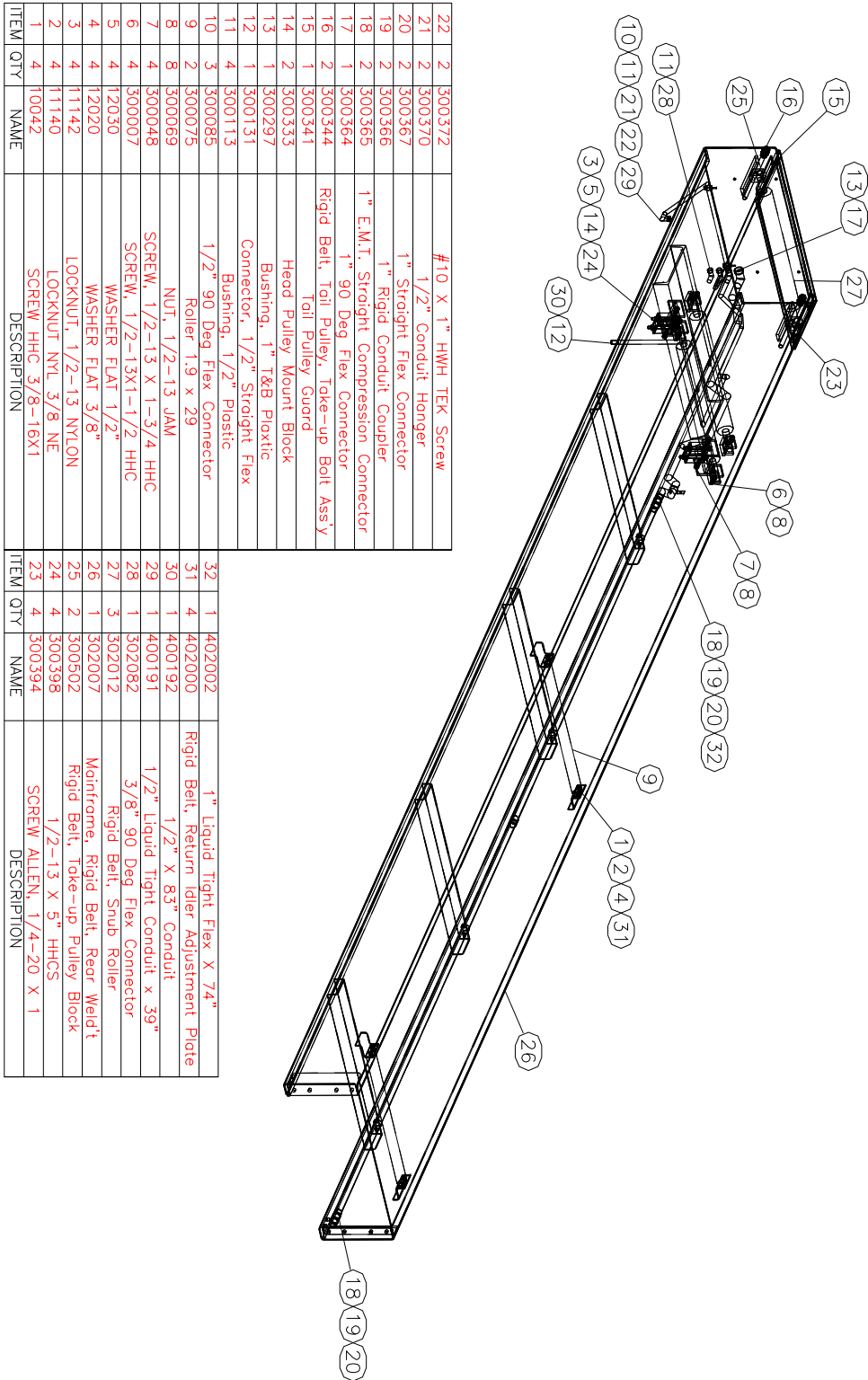
ITEM	QTY	NAME	DESCRIPTION
22	1	802020	Decal Group for Short Rigid Belt
21	1	802019	Rigid Belt, 24' Main Electrical Assembly
20	1	802013	Mainframe, Rigid Belt, Short Assy
19	1	802008	Rigid Belt, Extension Transition Assy
18	1	802003	Rigid Belt, Extension
17	1	800080	Assembly, Rear Suspension
16	1	800068	Power Steering Assembly
15	1	800056	Rigid Belt, Assembly Front Suspension
14	1	302182	Rigid Belt, LH Extension Stop Block Weldment
13	1	302097	Rigid Belt, 24' Frame Belt
12	1	302064	Rigid Belt, RH Extension Stop Block Weldment
11	4	300556	NUT FLANGE 1/2-13 SERRATED
10	1	300513	Nameplate 230V, Opt Speed
9	1	300379	Main Elec Enc. W/ Panel, Opt Speed, 230V
8	1	300334	Head Pulley, 3 H.P., 120 FPM
7	4	300006	HELICAL SPRING LOCK WASHER
6	4	300005	SCREW, 1/2-13 X 3 HHC
5	6	12020	WASHER FLAT 3/8"
4	6	11140	LOCKNUT NYL 3/8 NE
3	4	10063	SCREW HHC 1/2-13 x 2
2	2	10052	Bolt, Hex, 3/8-16 X 2
1	4	10042	SCREW HHC 3/8-16X1

# Rigid Belt, Front Half, Frame Assembly

ITEM	QTY	NAME	DESCRIPTION
23	1	802010	Rigid Belt, 12 X 12 Encl. Assy
22	1	402004	1" Liquid Tight Flex X 39"
21	1	402003	1" Liquid Tight Flex X 23"
20	4	402000	Rigid Belt, Return Idler Adjustment Plate
19	2	302039	SCREW 1/2-13 X 3 Fully Threaded
18	2	302035	Rigid Belt, Head Pulley Push Mount
17	1	302029	Rigid Belt, Front Pulley Guard
16	1	302012	Rigid Belt, Snub Roller
15	1	302006	Mainframe, Rigid Belt, Front Weld't
14	4	300371	1/4"-20 U-TYPE CLPNUT
13	3	300367	1" Straight Flex Connector
12	2	300366	1" Straight Conduit Coupler
11	2	300365	1" E.M.T. Straight Compression Connector
10	1	300297	Bushing, 1" T&B Plaxtic
9	4	300264	Screw, 1/4-20 X 3/4 FHS
8	2	300075	Roller 1.9 x 29
7	2	300069	NUT, 1/2-13 JAM
6	3	15099	Cable Pod Self Adhesive
5	3	15025	Cable Tie 7 3/8 L, 3/16 W
4	4	12020	WASHER FLAT 3/8"
3	8	11140	LOCKNUT NYL 3/8 NE
2	4	10052	SCREW HHC 3/8-16 X 2
1	4	10042	SCREW HHC 3/8-16X1
			DESCRIPTION



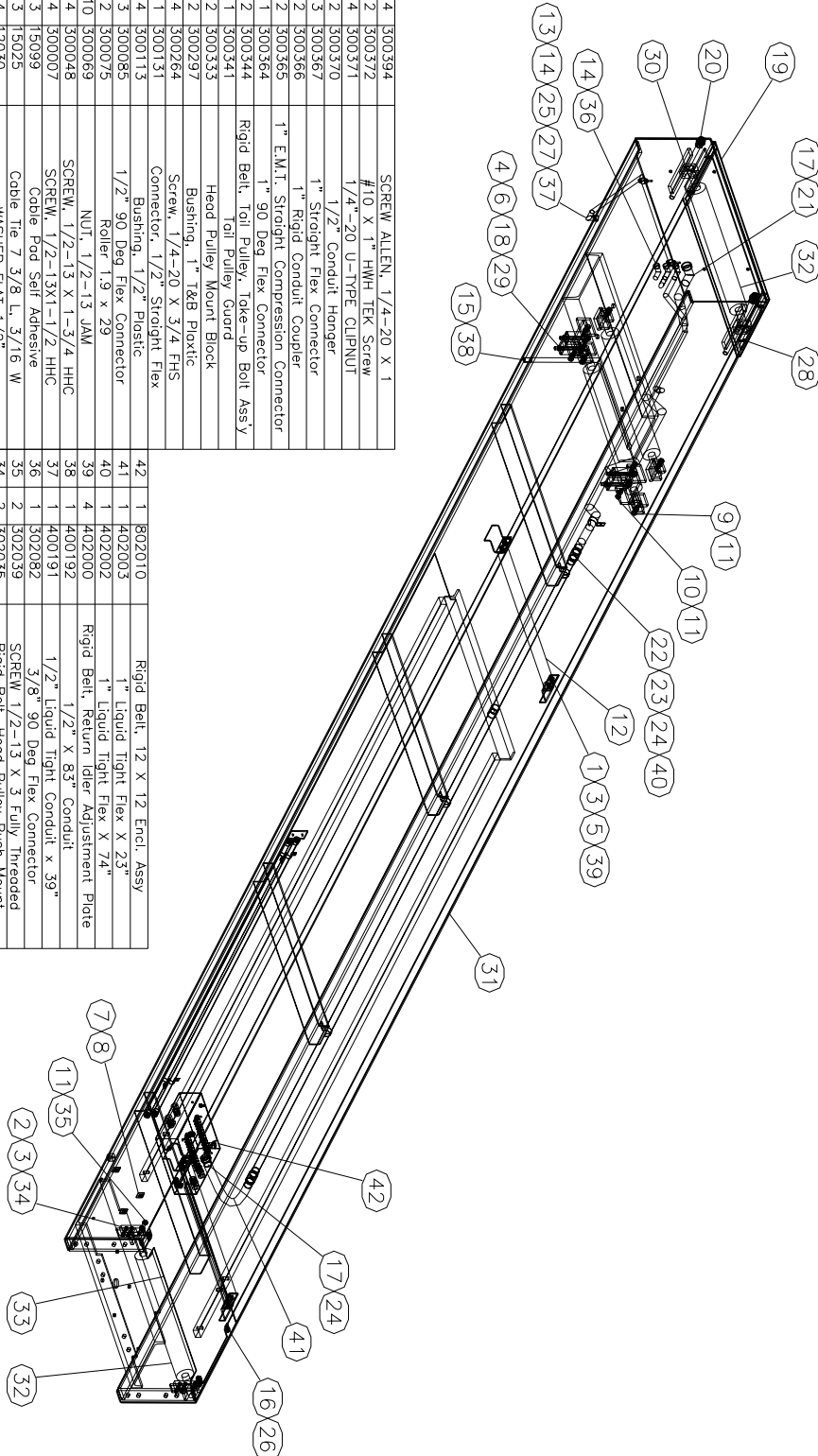
# Rigid Belt, Rear Half, Frame Assembly



ITEM	QTY	NAME	DESCRIPTION	ITEM	QTY	NAME	DESCRIPTION
22	2	300372	#10 X 1" HMH TEK Screw	32	1	402002	1" Liquid Tight Flex X 74"
21	2	300370	1/2" Conduit Hanger	31	4	402000	Rigid Belt, Return Idler Adjustment Plate
20	2	300367	1" Stroight Flex Connector	30	1	400192	1/2" X 83" Conduit
19	2	300366	1" Rigid Conduit Coupler	29	1	400191	1/2" Liquid Tight Conduit x 39"
18	2	300365	1" E.M.T. Stroight Compression Connector	28	1	302082	3/8" 90 Deg Flex Connector
17	1	300364	1" 90 Deg Flex Connector	27	3	302012	Rigid Belt, Snub Roller
16	2	300344	Rigid Belt, Tail Pully, Take-up Belt Ass'y	26	1	302007	Mainframe, Rigid Belt, Rear Weld't
15	1	300341	Tail Pully Guard	25	2	300502	Rigid Belt, Take-up Pully Block
14	2	300333	Head Pully Mount Block	24	4	300398	1/2-13 X 5" HHCS
13	1	300297	Bushing, 1" T&B Plaxtic	23	4	300394	SCREW ALLEN, 1/4-20 X 1
12	1	300131	Connector, 1/2" Stroight Flex				
11	4	300113	Bushing, 1/2" Plastic				
10	3	300085	1/2" 90 Deg Flex Connector				
9	2	300075	Roller 1.9 x 29				
8	8	300069	NUT, 1/2-13 JAM				
7	4	300048	SCREW, 1/2-13 X 1-3/4 HHC				
6	4	300007	SCREW, 1/2-13X1-1/2 HHC				
5	4	12030	WASHER FLAT 1/2"				
4	4	12020	WASHER FLAT 3/8"				
3	4	11142	LOCKNUT, 1/2-13 NYLON				
2	4	11140	LOCKNUT NYL 3/8 NE				
1	4	10042	SCREW HHC 3/8-16X1				

# Mainframe, Rigid Belt, Short

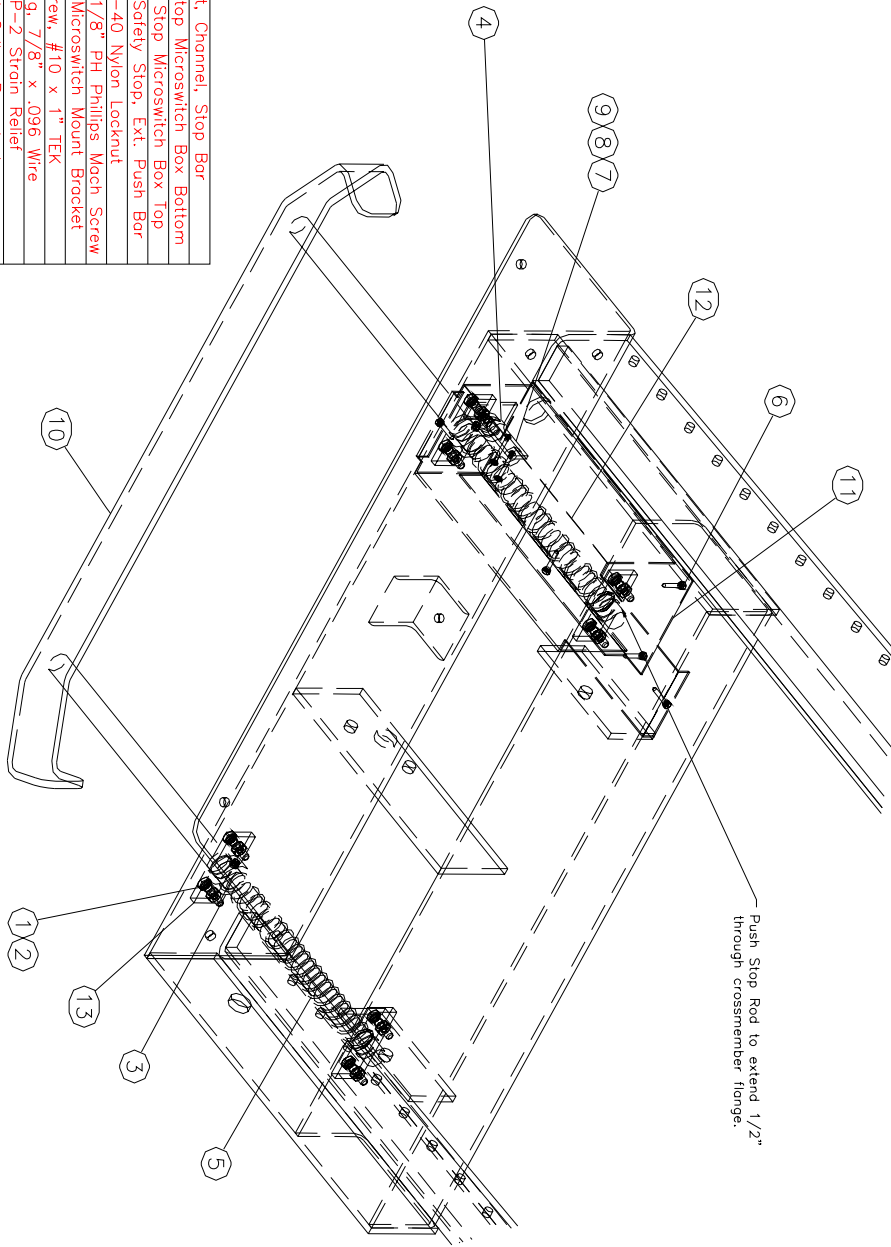
ITEM QTY	NAME	ITEM QTY	NAME
28	4 300394 SCREW ALLEN, 1/4-20 X 1	42	1 802010 Rigid Belt, 12 X 12 Encl. Assy
27	2 300372 #10 X 1 HHM TEK Screw	41	1 402003 1" Liquid Tight Flex X 23"
26	4 300371 1/4-20 U-TYPE CLIPNUT	40	1 402002 1" Liquid Tight Flex X 74"
25	2 300370 1/2" Conduit Hanger	39	4 402000 Rigid Belt, Return Idler Adjustment Plate
24	3 300367 1" Straight Flex Connector	38	1 400192 1/2" Liquid Tight Conduit x 39"
23	2 300366 1" Rigid Conduit Coupler	37	1 400191 1/2" Liquid Tight Conduit x 39"
22	2 300365 1" E.M.T. Straight Compressor Connector	36	1 302082 3/8" 90 Deg Flex Connector
21	1 300364 1" 90 Deg Flex Connector	35	2 302039 SCREW 1/2-13 X 3 Fully Threaded
20	2 300344 Rigid Belt, Tail Pulley, Take-up Bolt Assy	34	2 302035 Rigid Belt, Head Pulley Push Mount
19	1 300341 Tail Pulley Guard	33	1 302029 Rigid Belt, Front Pulley Guard
18	2 300333 Head Pulley Mount Block	32	4 302012 Rigid Belt, Snub Roller
17	2 300297 Bushing, 1" T&B Plovitic	31	1 302005 Mainframe, Rigid Belt, Short Weldment
16	4 300264 Screw, 1/4-20 X 3/4 FHS	30	2 300502 Rigid Belt, Take-up Pulley Block
15	1 300131 Connector, 1/2" Straight Flex	29	4 300398 1/2-13 X 5" HHCS
14	4 300113 Bushing, 1/2" Plastic		
13	3 300085 1/2" 90 Deg Flex Connector		
12	2 300075 Roller 1.9 x 29		
11	10 300069 NUT, 1/2-13 IAM		
10	4 300048 SCREW, 1/2-13 X 1-3/4 HHC		
9	4 300007 SCREW, 1/2-13X1-1/2 HHC		
8	3 15099 Cable Pod Self Adhesive		
7	3 15025 Cable Tie 7 3/8 L, 3/16 W		
6	4 12030 WASHER FLAT 1/2"		
5	4 12020 WASHER FLAT 3/8"		
4	4 11142 LOCKNUT, 1/2-13 NYLON		
3	8 11140 LOCKNUT NYL 3/8 NE		
2	4 10052 SCREW HHC 3/8-16 X 2		
1	4 10042 SCREW HHC 3/8-16X1		





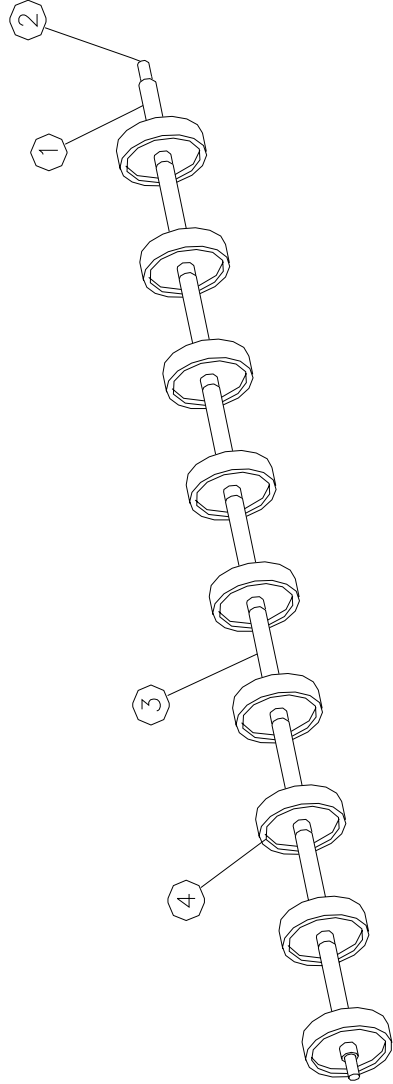
# Rigid Belt, Extension, Push Bar Sub-Assy

ITEM	QTY	NAME	DESCRIPTION
13	4	400047	Insert, Channel, Stop Bar
12	1	302072	Ext. Push Stop Microswitch Box Bottom
11	1	302041	Ext. Push Stop Microswitch Box Top
10	1	302036	Rigid Belt, Safety Stop, Ext. Push Bar
9	2	300776	#4-40 Nylon Locknut
8	2	300774	#4-40 X 1 1/8" PH Phillips Moch Screw
7	1	300388	Push Bar Microswitch Mount Bracket
6	5	300372	Screw, #10 x 1" TEK
5	2	300062	Spring, 7/8" x .096 Wire
4	1	1-90070	7P-2 Strain Relief
3	2	12767	Set Collar, Reworked
2	8	11110	1/4" Nylon Lock Nut
1	8	10012	1/4" - 20 X 1" HHCS





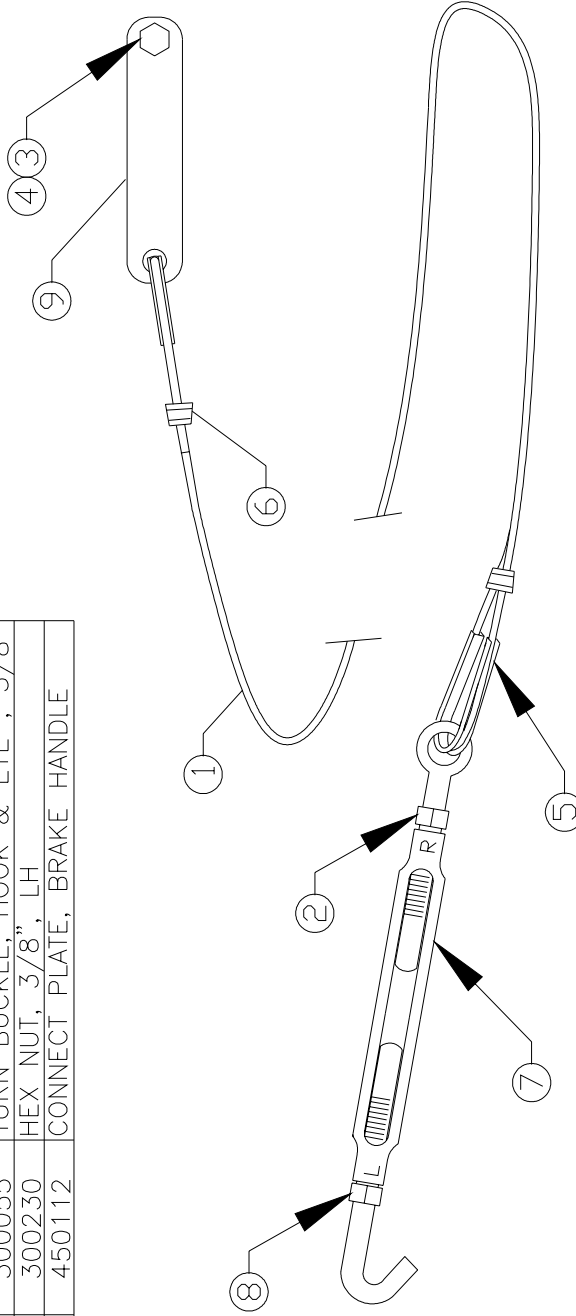
# Rigid Belt, Extension, SW Sub-Assy



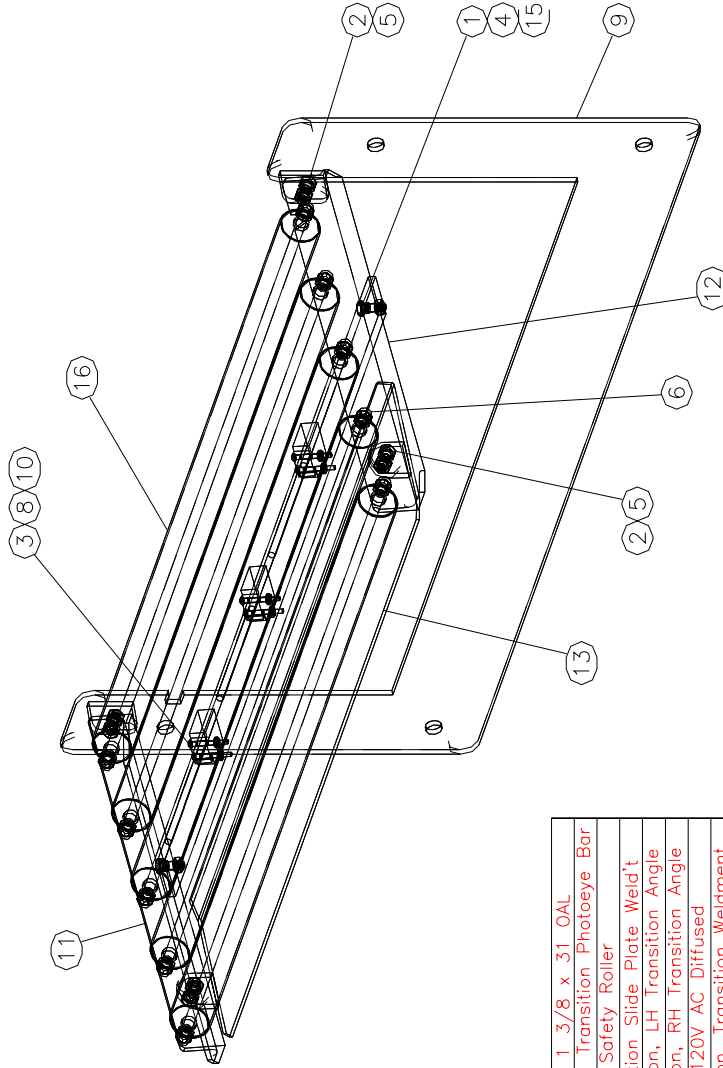
4	9	50080	Skatewheel, ST, 1 15/16 O.D. x 13/16
3	8	302091	Spacer, 3/8 O.D. x .26 I.D. x 2.224 Lg.
2	1	302090	Axle, 1/4 X 27-5/8
1	1	12496	Spacer, 3/8 O.D. x .26 I.D. x 1.4375
ITEM	QTY	NAME	DESCRIPTION

# Rigid Belt, Extension, Brake Cable Assy

ITEM	QTY	PART NO	DESCRIPTION
1	14.25'	100034	CABLE, 7-7 3/32" DIA.
2	1	10528	HEX NUT, 3/8"
3	1	11142	LOCKNUT, 1/2-13, NYLON
4	1	300007	BOLT, HHC, 1/2-13 X 1 1/2"
5	2	300053	CABLE THIMBLE, 1/8"
6	2	300054	SLEEVE, ALUM 3/32"
7	1	300055	TURN BUCKLE, HOOK & EYE , 3/8"
8	1	300230	HEX NUT, 3/8", LH
9	1	450112	CONNECT PLATE, BRAKE HANDLE



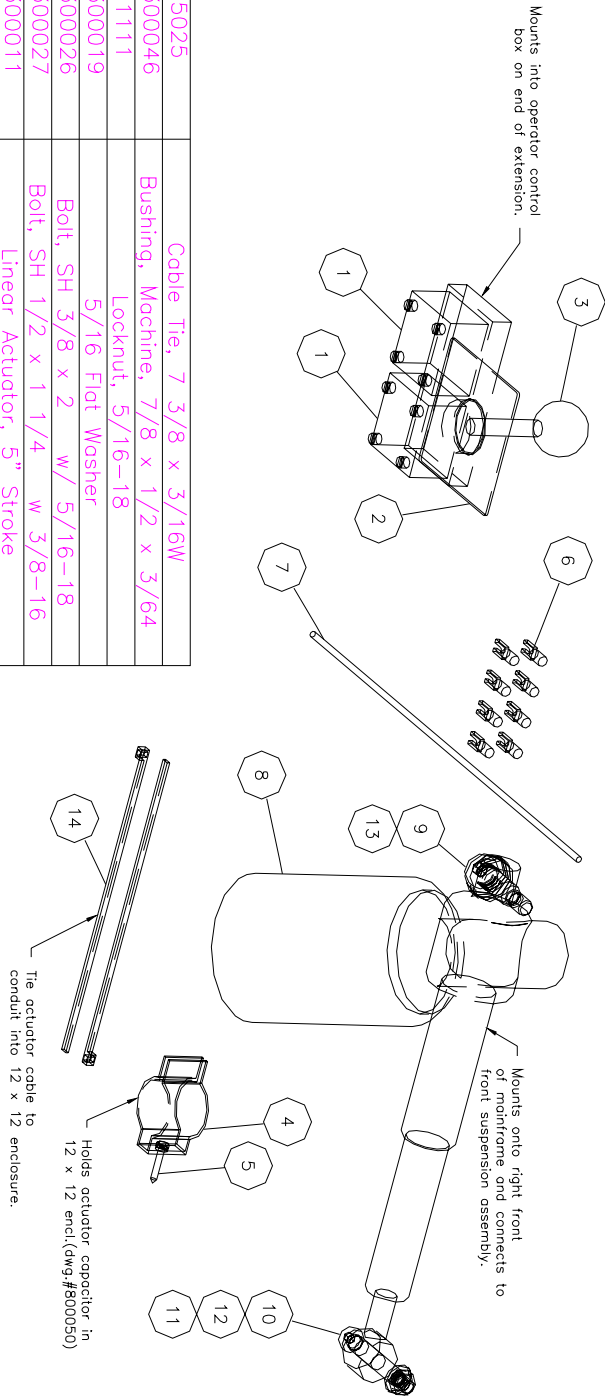
# Rigid Belt, Extension Transition Assy



16	5	50087-30	Roller, Gravity 1 3/8 x 31 OAL
15	1	402007	Rigid Belt, Extension, Transition Photoeye Bar
14	1	400187	Lanyard, Safety Roller
13	1	302085	Rigid Belt, Transition Slide Plate Weld't
12	1	302084	Rigid Belt, Extension, LH Transition Angle
11	1	302083	Rigid Belt, Extension, RH Transition Angle
10	3	302080	Photo-eye, 120V AC Diffused
9	1	302077	Rigid Belt, Extension, Transition Weldment
8	6	300095	Screw, #6-32 X 1-1/4
7	3	15025	Cable Tie, 7 3/8 x 3/16W
6	10	11121	5/16-18 Cap Nut
5	4	11111	5/16-18 NYLON LOCKNUT
4	2	11110	1/4-20 NYLON LOCKNUT
3	6	11092	Locknut, #6-32 Std Nylon
2	4	10552	BOLT, 5/16-18 X 7/8
1	2	10010	SCREW HHC 1/4-20X3/4
	ITEM	QTY	NAME
			DESCRIPTION

# Power Steering Assembly, Rigid Belt

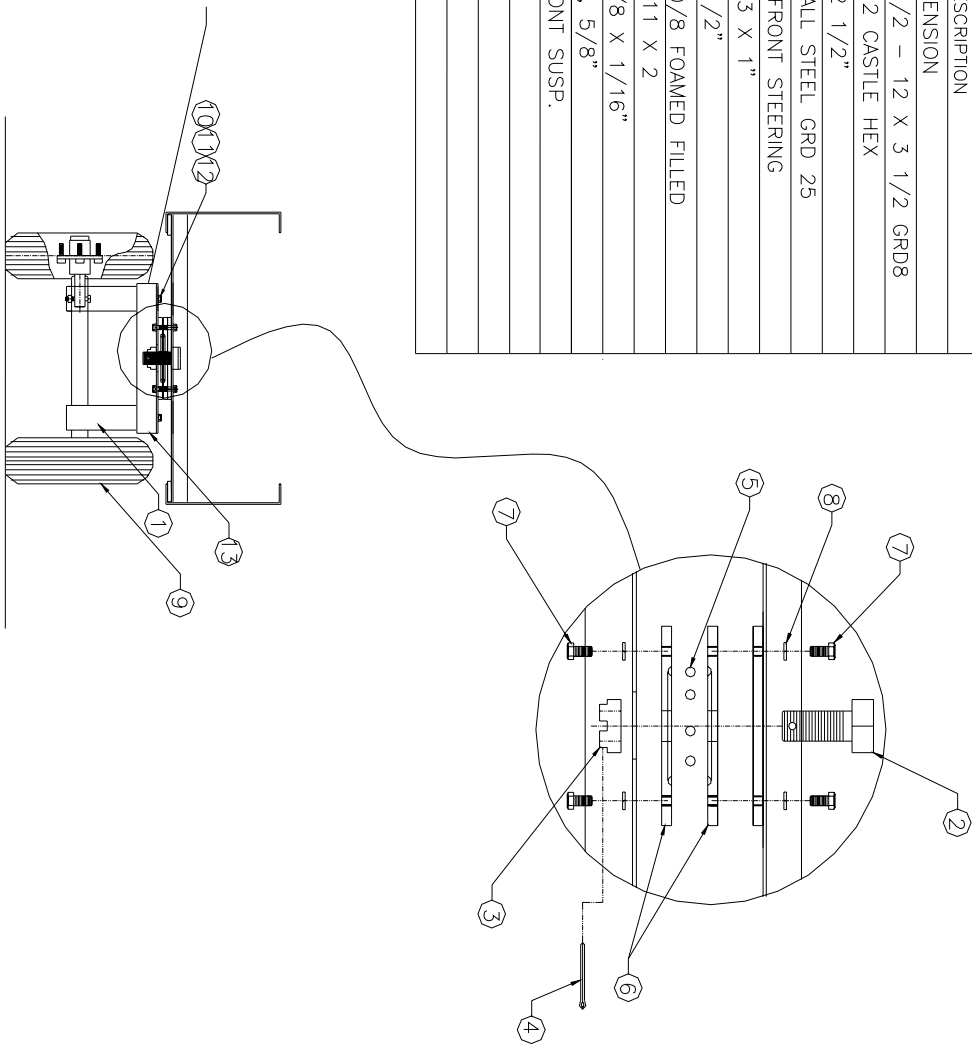
14	2	15025	Cable Tie, 7 3/8 x 3/16W
13	4	300046	Bushing, Machine, 7/8 x 1/2 x 3/64
12	1	11111	Locknut, 5/16-18
11	1	300019	5/16 Flat Washer
10	1	300026	Bolt, SH 3/8 x 2 w/ 5/16-18
9	1	300027	Bolt, SH 1/2 x 1 1/4 w 3/8-16
8	1	300011	Linear Actuator, 5" Stroke
7	22	100042	Wire, 16 ga., TFFN, Red, Ft.
6	8	15015-2	Terminal, Fork, #8 stud, 12-14 ga
5	1	300372	#10 x 1 HWH Self Drilling Tek Screw
4	1	300124	1 1/4 Single Bolt EMT Clamp
3	1	300145	Joystick
2	1	300147	Nameplate, Arrows
1	2	300146	Double Contacts
Item	Qty	Name	Description
			800068



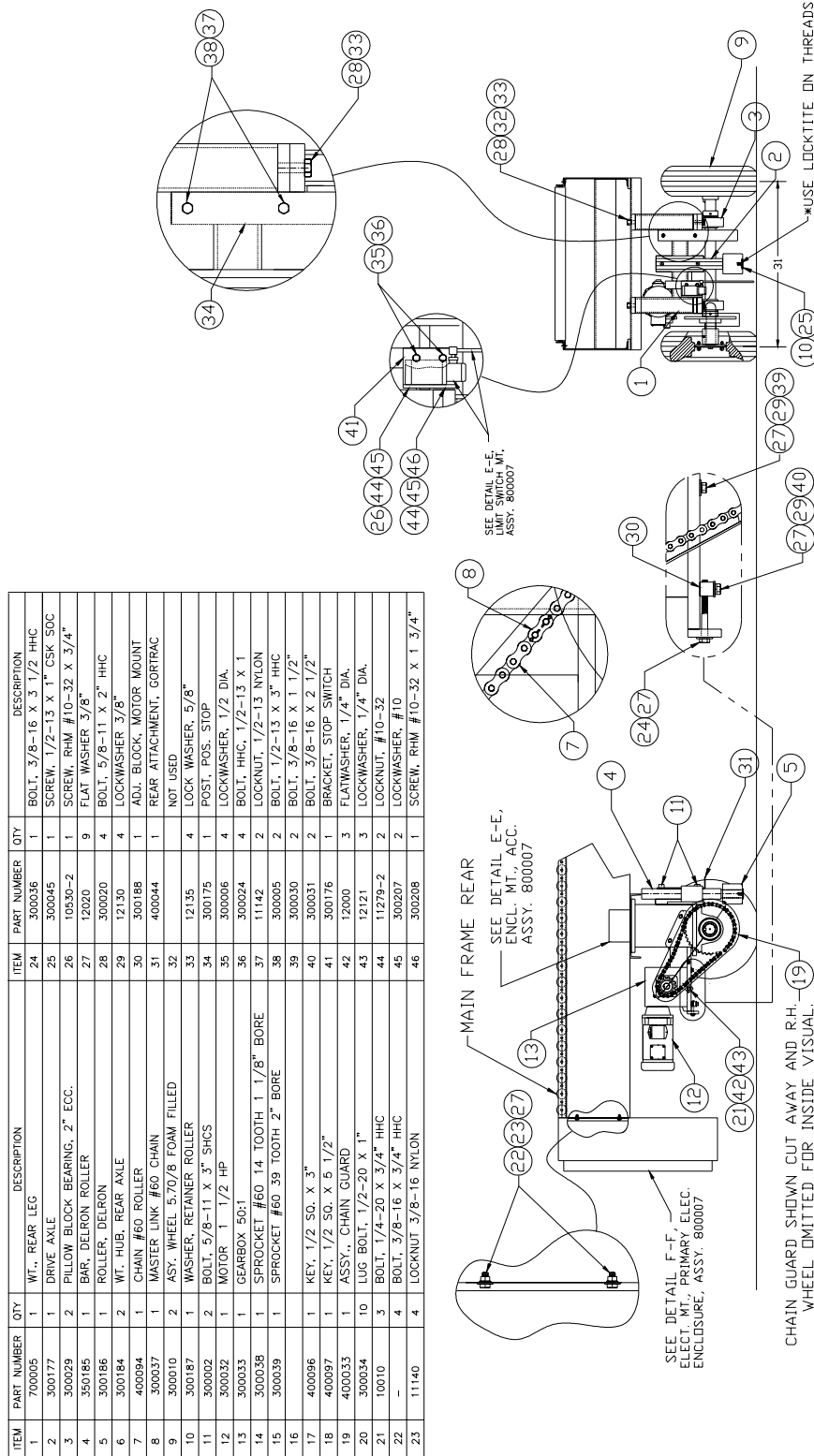
# Assembly, Front Suspension

ITEM	PART NUMBER	QTY	DESCRIPTION
800056			
1	300325	1	WT. FRONT SUSPENSION
2	300013	1	BOLT, HHCS 1 1/2" - 12 X 3 1/2 GRD8
3	300014	1	NUT, 1 1/2 X 12 CASTLE HEX
4	300015	1	PIN, 3/8"Ø X 2 1/2"
5	300012	34	BEARING, 1/2 BALL STEEL GRD 25
6	350169	2	BEARING PLATE, FRONT STEERING
7	300024	8	BOLT, 1/2" - 13 X 1"
8	300006	8	LOCK WASHER, 1/2"
9	300010	2	ASY. WHEEL 570/8 FOAMED FILLED
10	300020	4	BOLT, HHCS, 5/8-11 X 2
11	300021	4	WASHER, FLAT, 5/8 X 1/16"
12	12135	4	WASHER, LOCKING, 5/8"
13	750002	1	WT. CHANNEL, FRONT SUSP.

NOTE: Use existing hardware along with kit to install leg extensions.



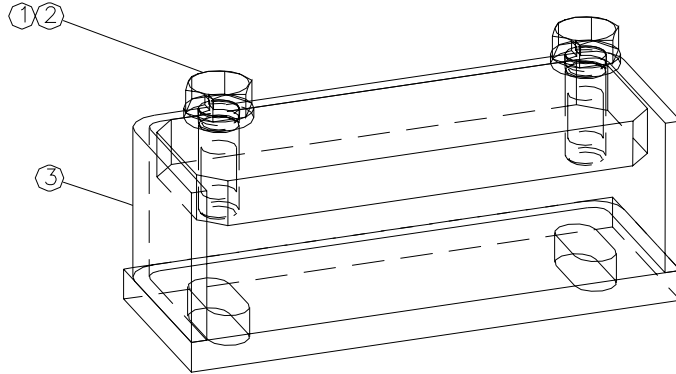
# Assembly Rear Suspension



ITEM	PART NUMBER	QTY	DESCRIPTION	ITEM	PART NUMBER	QTY	DESCRIPTION
1	700005	1	WT., REAR LEG	24	300036	1	BOLT, 3/8-16 X 3 1/2 HHC
2	300177	1	DRIVE AXLE	25	300045	1	SCREW, 1/2-13 X 1", CSK, SOC
3	300029	1	PILLOW BLOCK BEARING, 2" ECC.	26	10550-2	1	SCREW, RHM #10-32 X 3/4"
4	350185	1	BAR, DELRON ROLLER	27	12020	9	FLAT WASHER 3/8"
5	300186	1	ROLLER, DELRON	28	300020	4	BOLT, 5/8-11 X 2" HHC
6	300184	2	WT. HUB, REAR AXLE	29	12130	4	LOCKWASHER 3/8"
7	400094	1	CHAIN #60 ROLLER	30	300186	1	ADJ. BLOCK, MOTOR MOUNT
8	300037	1	MASTER LINK #60 CHAIN	31	400044	1	REAR ATTACHMENT, GORTRAC
9	300010	2	AST. WHEEL 5/70/6 FOAM FILLED	32			NOT USED
10	300187	1	WASHER, RETAINER ROLLER	33	12135	4	LOCK WASHER, 5/8"
11	300002	2	BOLT, 5/8-11 X 3" SHCS	34	300175	1	POST, POS. STOP
12	300032	1	MOTOR 1 1/2 HP	35	300006	4	LOCKWASHER, 1/2 DIA.
13	300033	1	GEARBOX 50:1	36	300024	4	BOLT, HHC, 1/2-13 X 1"
14	300038	1	SPROCKET #60, 1.4 TOOTH, 1 1/8" BORE	37	11142	2	LOCKNUT, 1/2-13 NYLON
15	300039	1	SPROCKET #60, 39 TOOTH, 2" BORE	38	300065	2	BOLT, 1/2-13 X 3" HHC
16				39	300030	2	BOLT, 3/8-16 X 1 1/2"
17	400096	1	KEY, 1/2 SQ. X 3"	40	300031	2	BOLT, 3/8-16 X 2 1/2"
18	400097	1	KEY, 1/2 SQ. X 5 1/2"	41	300176	1	BRACKET, STOP SWITCH
19	400033	1	ASSY., CHAIN GUARD	42	12000	3	FLATWASHER, 1/4" DIA.
20	300034	10	LUG BOLT, 1/2-20 X 1"	43	12121	3	LOCKWASHER, 1/4" DIA.
21	10010	3	BOLT, 1/4-20 X 3/4" HHC	44	11279-2	2	LOCKNUT, #10-32
22		4	BOLT, 3/8-16 X 3/4" HHC	45	300207	2	LOCKWASHER, #10
23	11140	4	LOCKNUT 3/8-16 NYLON	46	300208	1	SCREW, RHM #10-32 X 1 3/4"

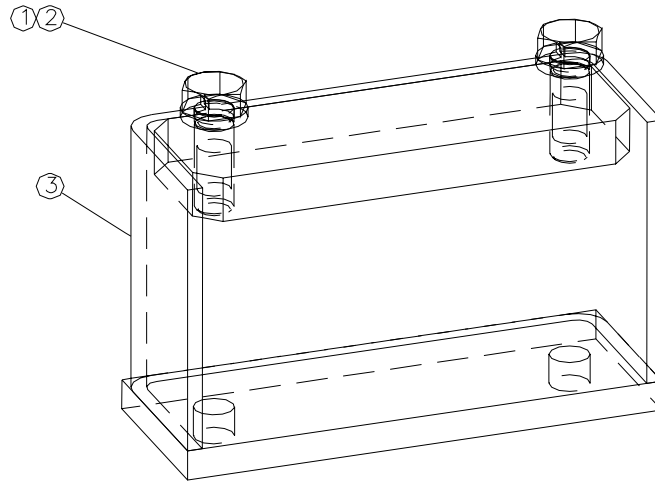
# Spacer Kits for Front Legs Optional

3" Spacer Kit



3	1	402013	Rigid Belt, Front Leg 3" Spacer Weld't
2	2	300220	5/8-11 X 1-3/4 Lg HHCS
1	2	12135	5/8 Lock Washer
ITEM	QTY	NAME	DESCRIPTION

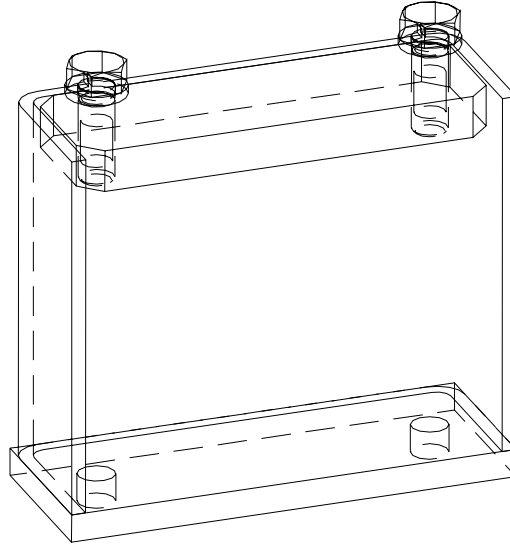
5" Spacer Kit



3	1	402014	Rigid Belt, Front Leg 5" Spacer Weld't
2	2	300220	5/8-11 X 1-3/4 Lg HHCS
1	2	12135	5/8 Lock Washer
ITEM	QTY	NAME	DESCRIPTION

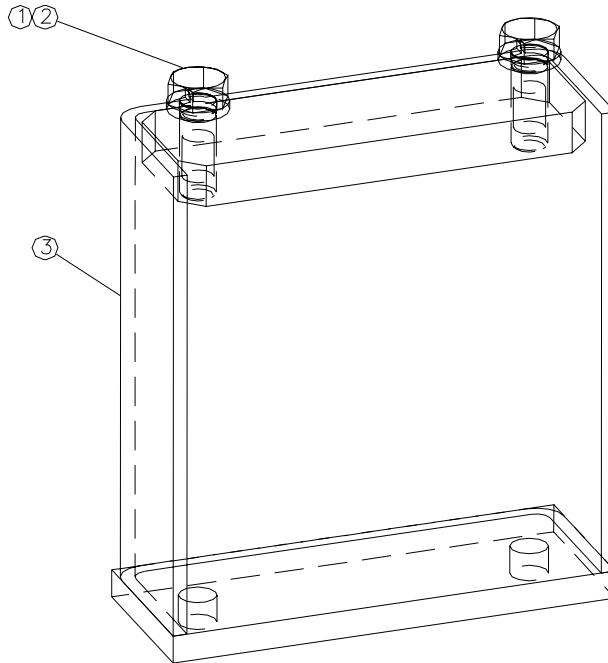
# Spacer Kits for Front Legs Optional

7" Spacer Kit



3	1	402015	Rigid Belt, Front Leg 7" Spacer Weld't
2	2	300220	5/8-11 X 1-3/4 Lg HHCS
1	2	12135	5/8 Lock Washer
ITEM	QTY	NAME	DESCRIPTION

9" Spacer Kit

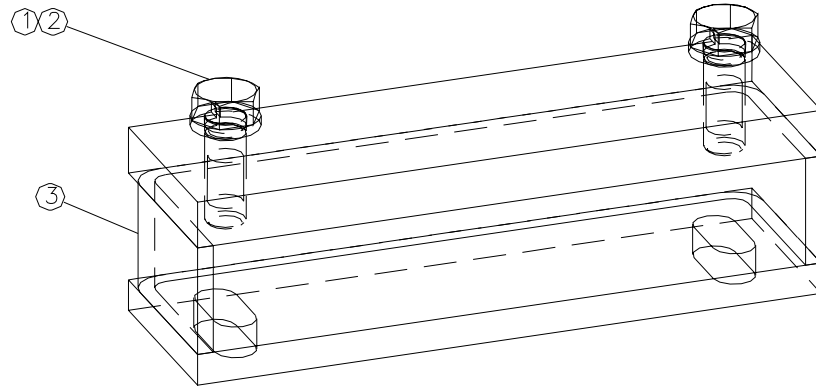


3	1	402016	Rigid Belt, Front Leg 9" Spacer Weld't
2	2	300220	5/8-11 X 1-3/4 Lg HHCS
1	2	12135	5/8 Lock Washer
ITEM	QTY	NAME	DESCRIPTION



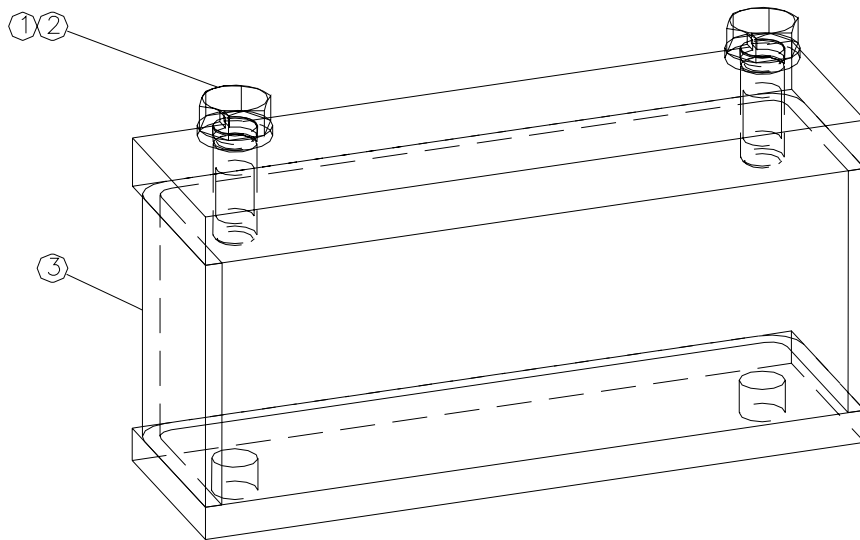
# Spacer Kits for Rear Legs Optional

## 3" Spacer Kit



3	1	402020	Rigid Belt, Rear Leg 3" Spacer Weld't
2	2	300220	5/8-11 X 1-3/4 Lg HHCS
1	2	12135	5/8 Lock Washer
ITEM	QTY	NAME	DESCRIPTION

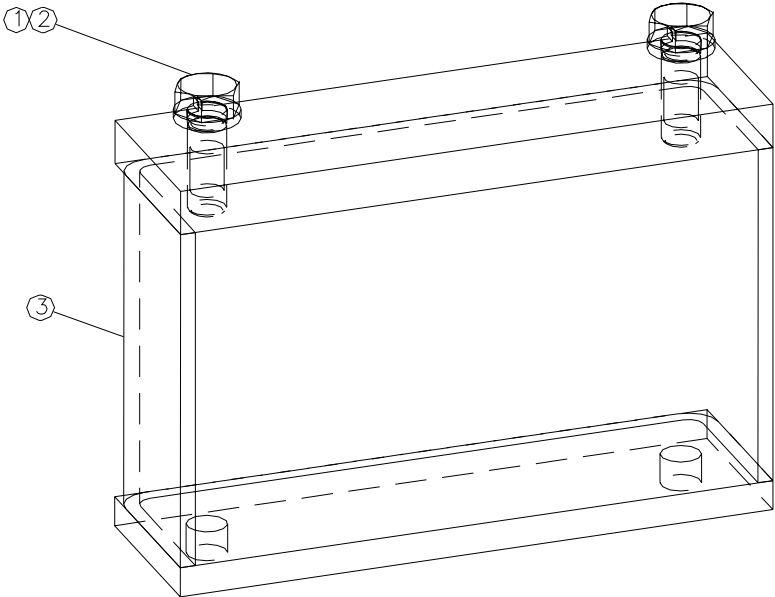
## 5" Spacer Kit



3	1	402021	Rigid Belt, Rear Leg 5" Spacer Weld't
2	2	300220	5/8-11 X 1-3/4 Lg HHCS
1	2	12135	5/8 Lock Washer
ITEM	QTY	NAME	DESCRIPTION

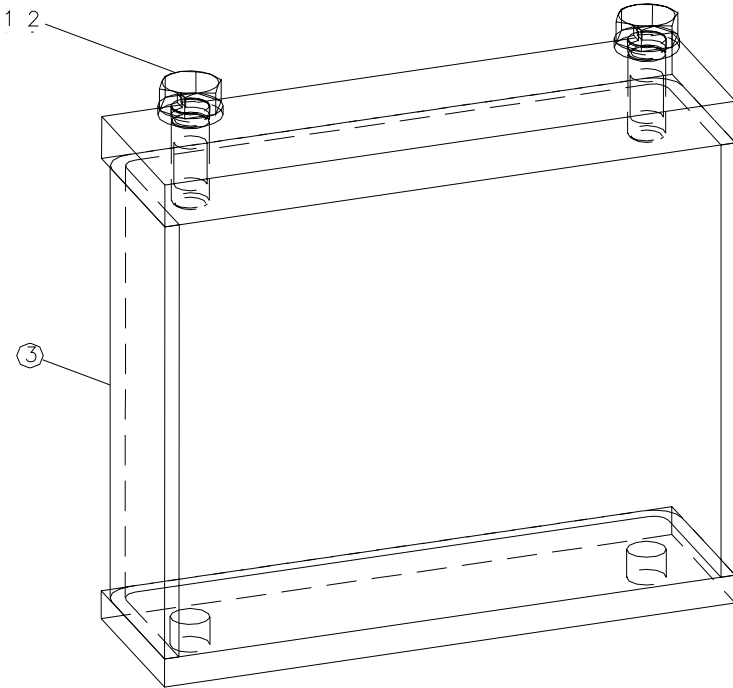
# Spacer Kits for Rear Legs Optional

7" Spacer Kit



3	1	402022	Rigid Belt, Rear Leg 7" Spacer Weld't
2	2	300220	5/8-11 X 1-3/4 Lg HHCS
1	2	12135	5/8 Lock Washer
ITEM	QTY	NAME	DESCRIPTION

9" Spacer Kit

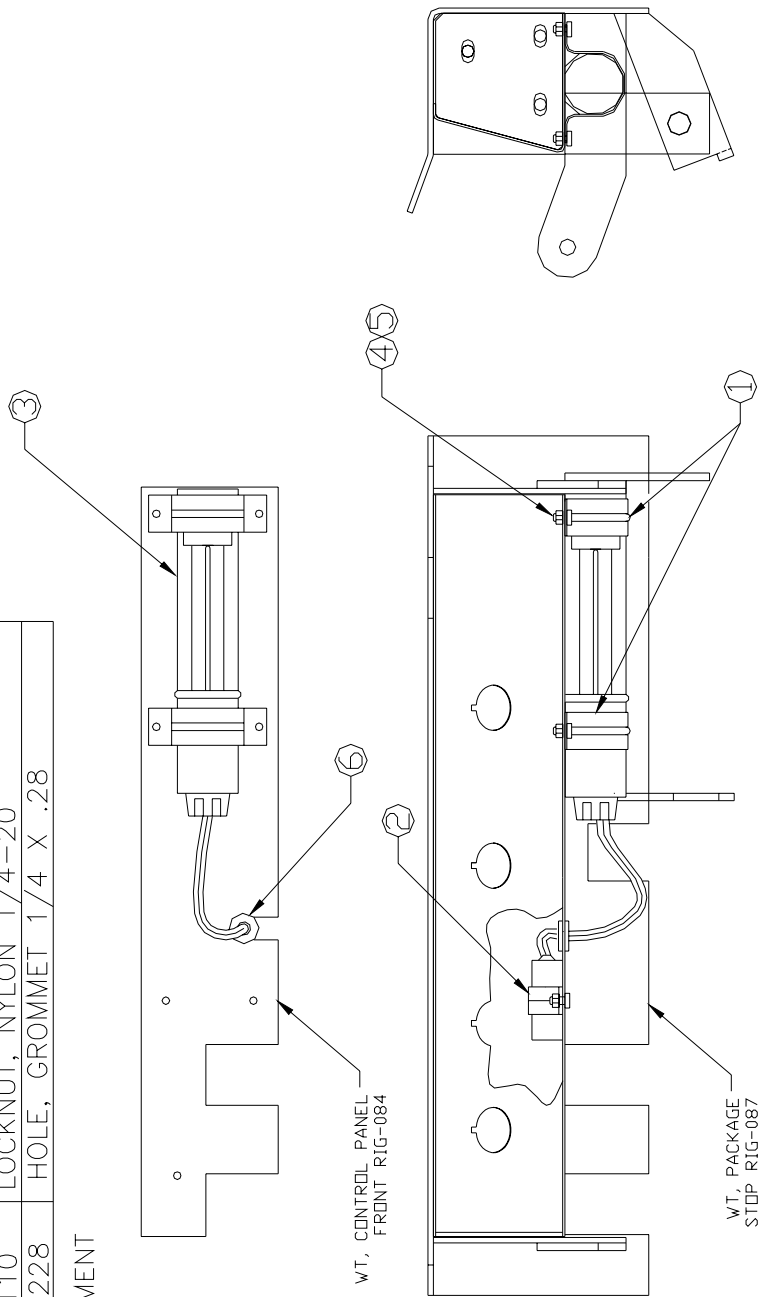


3	1	402023	Rigid Belt, Rear Leg 9" Spacer Weld't
2	2	300220	5/8-11 X 1-3/4 Lg HHCS
1	2	12135	5/8 Lock Washer
ITEM	QTY	NAME	DESCRIPTION

# Light, Optional

ITEM	QTY	PART NO	DESCRIPTION
1	2	300226	CONDUIT HANGER, 1 1/2" 2 HOLE
2	1	450014	BRACKET, BALLAST
3	1	300227	LIGHT, FLORESCENT
4	6	300142	BOLT, HHC 1/4-20 X 1/2"
5	6	11110	LOCKNUT, NYLON 1/4-20
6	1	300228	HOLE, GROMMET 1/4 X .28

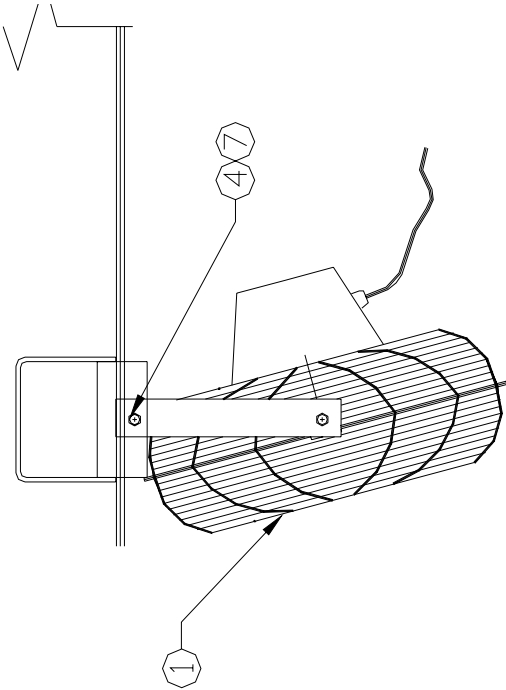
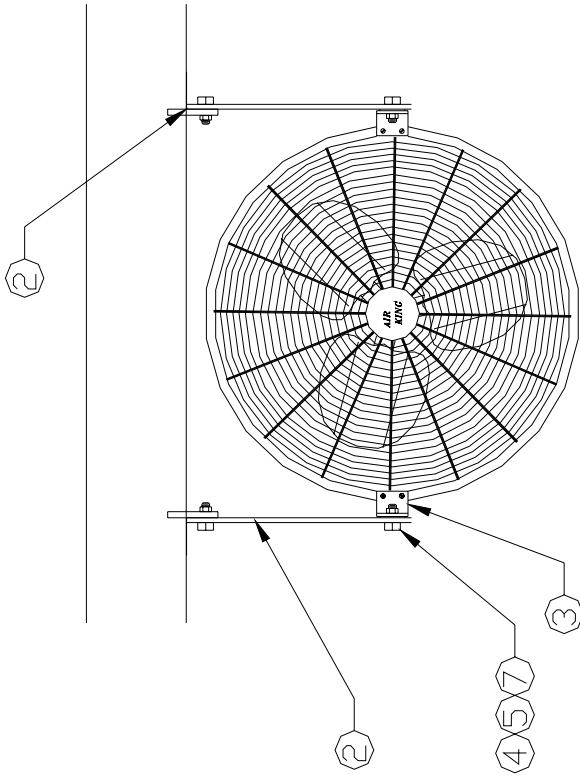
OPTIONAL EQUIPMENT



# Fan, Optional

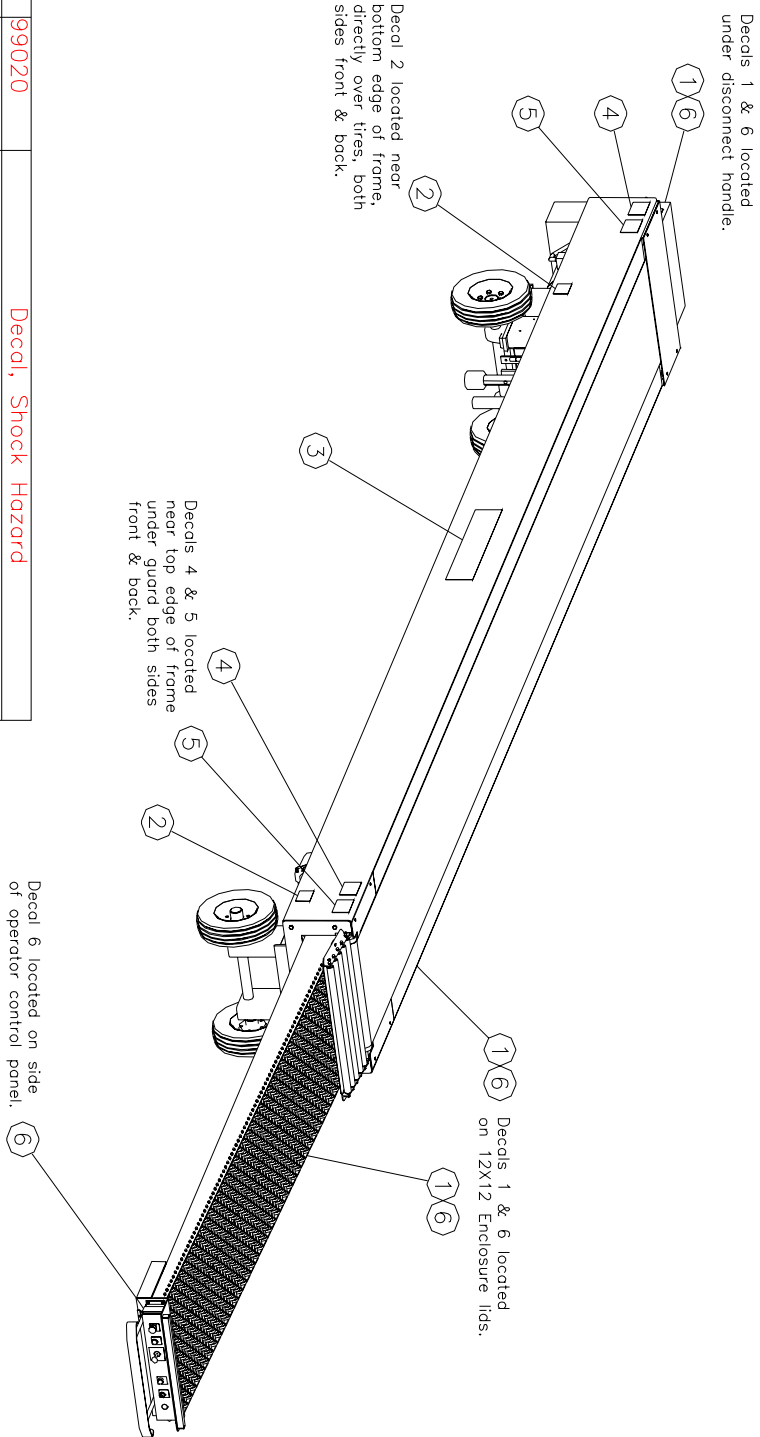
ITEM	PART NUMBER	QTY.	DESCRIPTION
1	300229	1	12" ELECTRIC FAN
2	300553	2	Rigid Belt, Mounting Leg, Fan
3	450017	2	SWIVEL BRACKETS, FAN
4	11140	4	LOCKNUT, 3/8-16, NYLON
5	12187	2	WASHER, NYL. 1" O.D. X 15/32" I.D. X 1/16
6	15016	1	RING CONNECTOR, CRIMP-ON
7	10042	4	BOLT, HHC 3/8-16 X 1"
8	15026	2	NUT, WIRE, YELLOW
9			

OPTIONAL EQUIPMENT



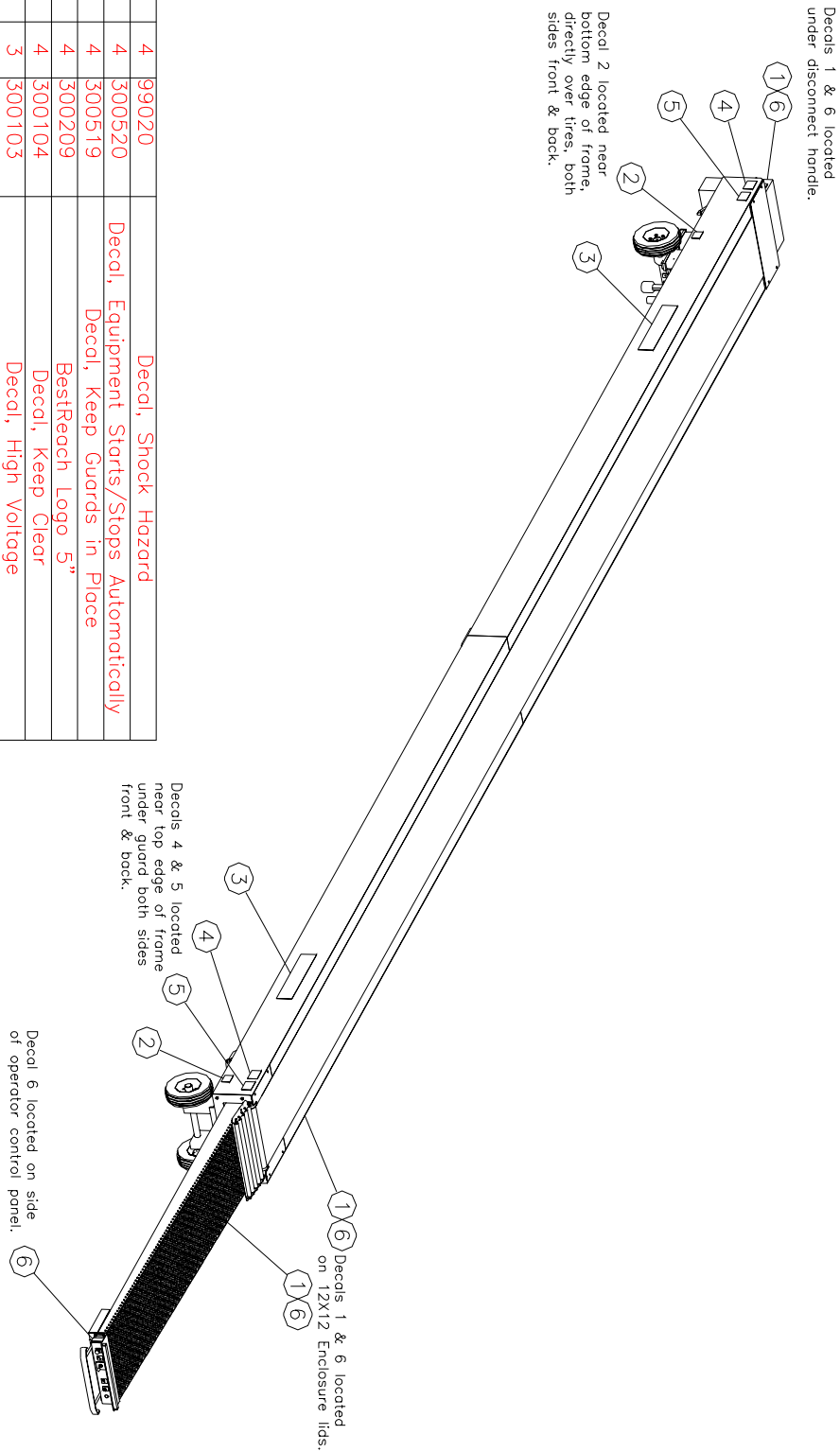
# Decal Group for Short Rigid Belt

ITEM	QTY	NAME	DESCRIPTION
6	4	99020	Decal, Shock Hazard
5	4	300520	Decal, Equipment Starts/Stops Automatically
4	4	300519	Decal, Keep Guards in Place
3	2	300209	BestReach Logo 5"
2	4	300104	Decal, Keep Clear
1	3	300103	Decal, High Voltage

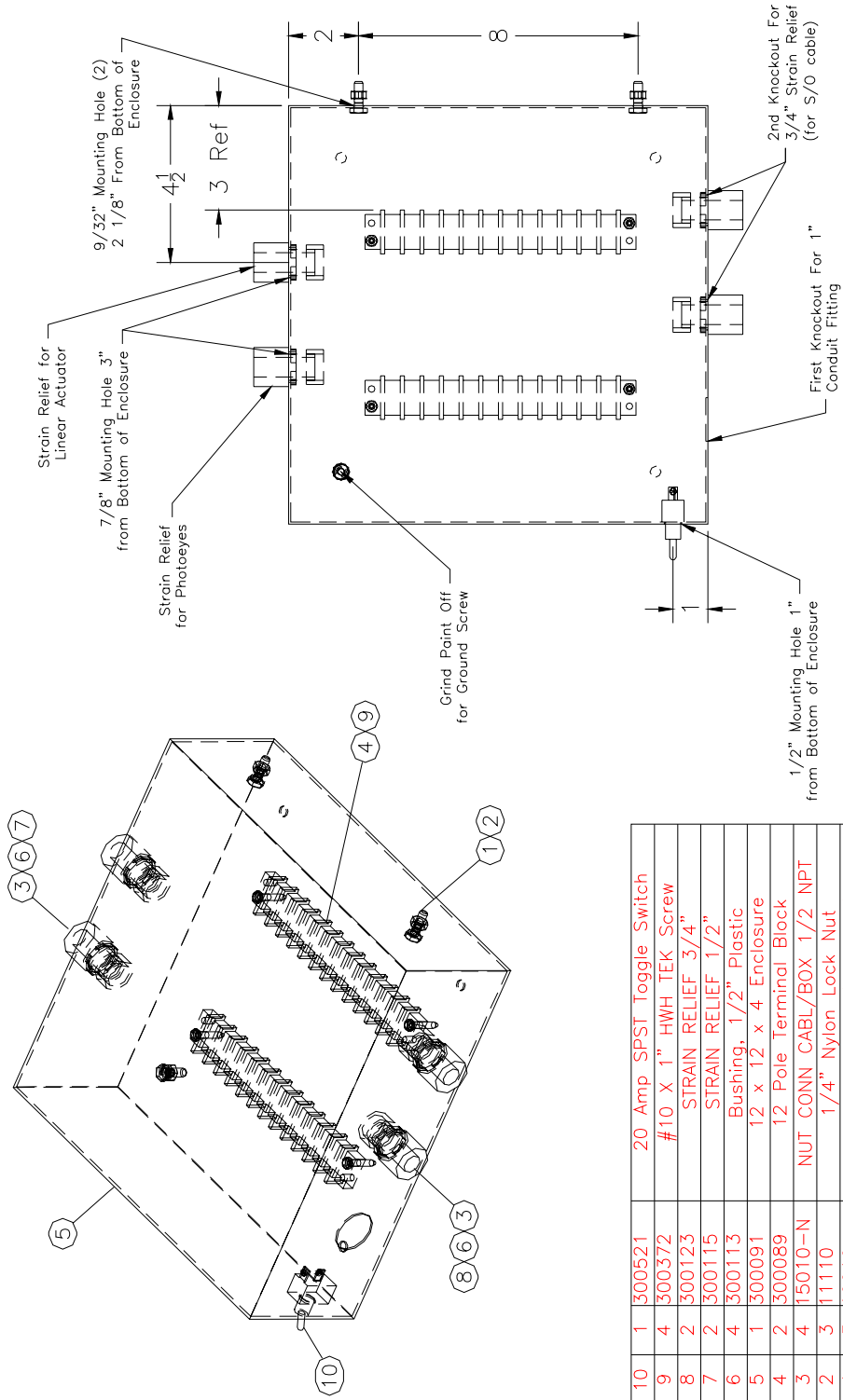


# Decal Group for Long Rigid Belt

ITEM	QTY	NAME	DESCRIPTION
6	4	99020	Decal, Shock Hazard
5	4	300520	Decal, Equipment Starts/Stops Automatically
4	4	300519	Decal, Keep Guards in Place
3	4	300209	BestReach Logo 5"
2	4	300104	Decal, Keep Clear
1	3	300103	Decal, High Voltage

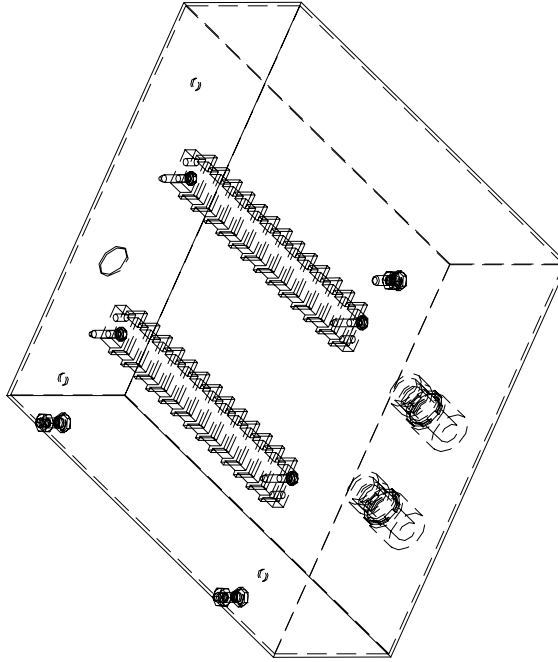


# Rigid Belt, 12 X 12 Encl. Assy

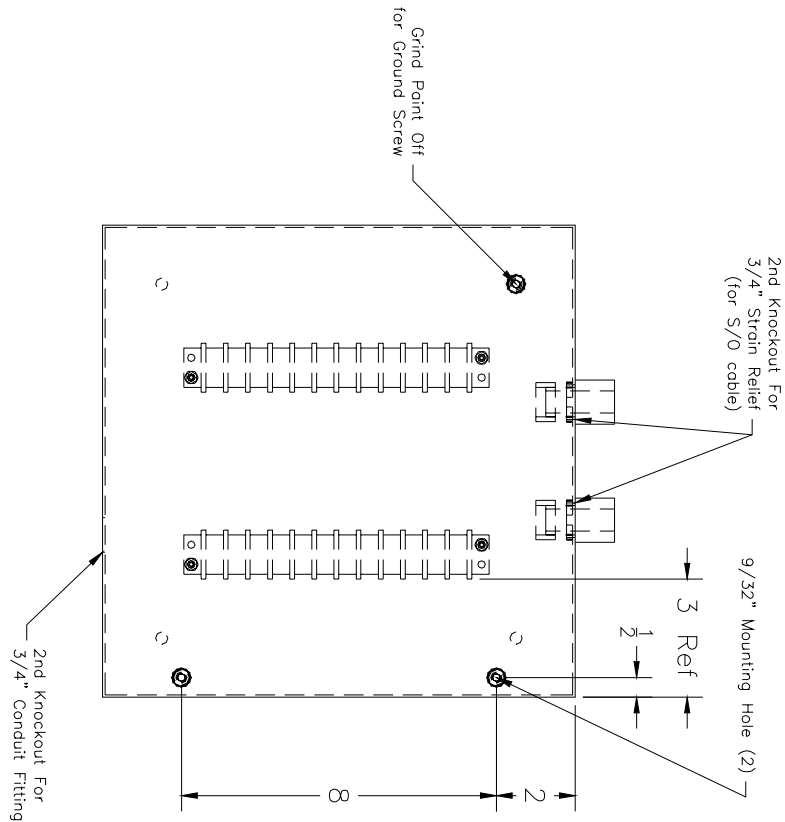


ITEM	QTY	NAME	DESCRIPTION
10	1	300521	20 Amp SPST Toggle Switch
9	4	300372	#10 X 1" HWH TEK Screw
8	2	300123	STRAIN RELIEF 3/4"
7	2	300115	STRAIN RELIEF 1/2"
6	4	300113	Bushing, 1/2" Plastic
5	1	300091	12 x 12 x 4 Enclosure
4	2	300089	12 Pole Terminal Block
3	4	15010-N	NUT CONN CABL/BOX 1/2 NPT
2	3	11110	1/4" Nylon Lock Nut
1	3	10010	SCREW HHC 1/4-20X3/4

# Rigid Belt Extension, 12 X 12 Encl. Assy



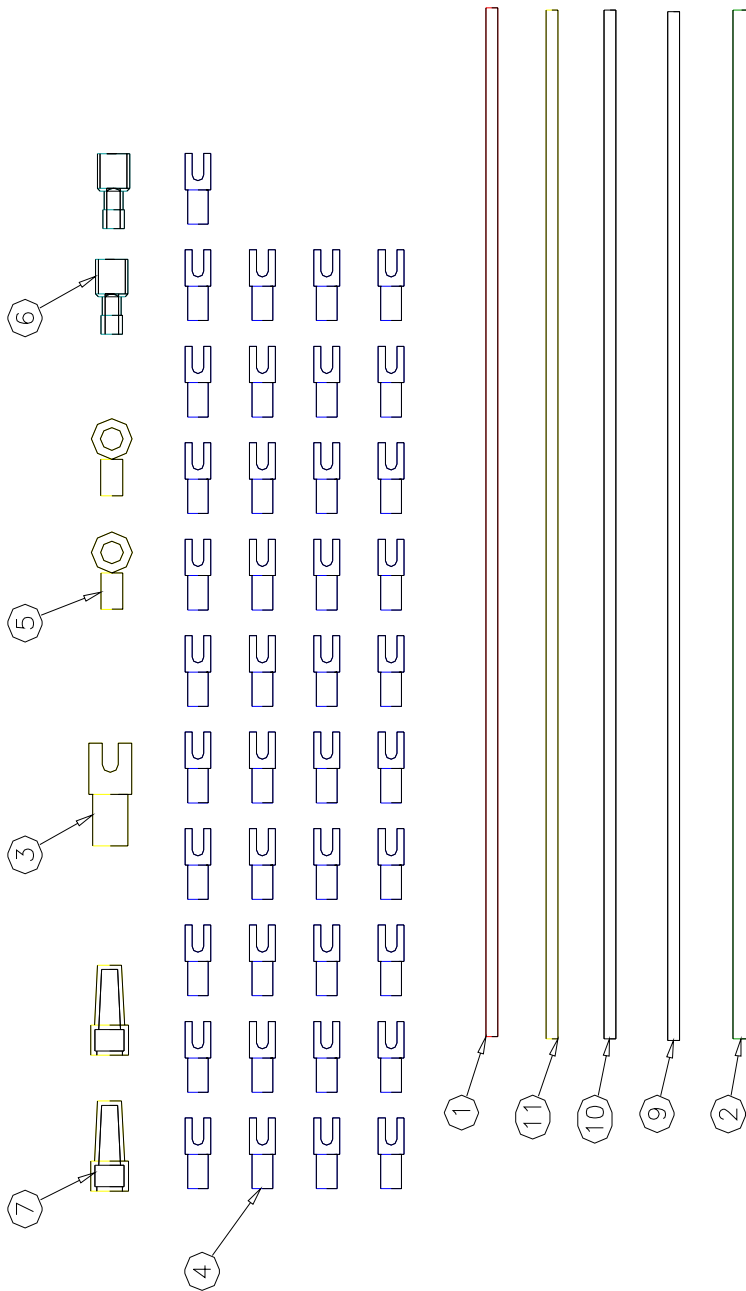
ITEM	QTY	NAME	DESCRIPTION
8	4	300372	#10 X 1" HWH TEK Screw
7	2	300115	STRAIN RELIEF 1/2"
6	2	300113	Bushing, 1/2" Plastic
5	1	300091	12 x 12 x 4 Enclosure
4	2	300089	12 Pole Terminal Block
3	2	15010-N	NUT CONN CABL/BOX 1/2 NPT
2	3	111110	1/4" Nylon Lock Nut
1	3	10010	SCREW HHC 1/4-20X3/4





## Assembly Diagrams of Electrical Components and Parts List of BestReach Rigid Belt Conveyor.

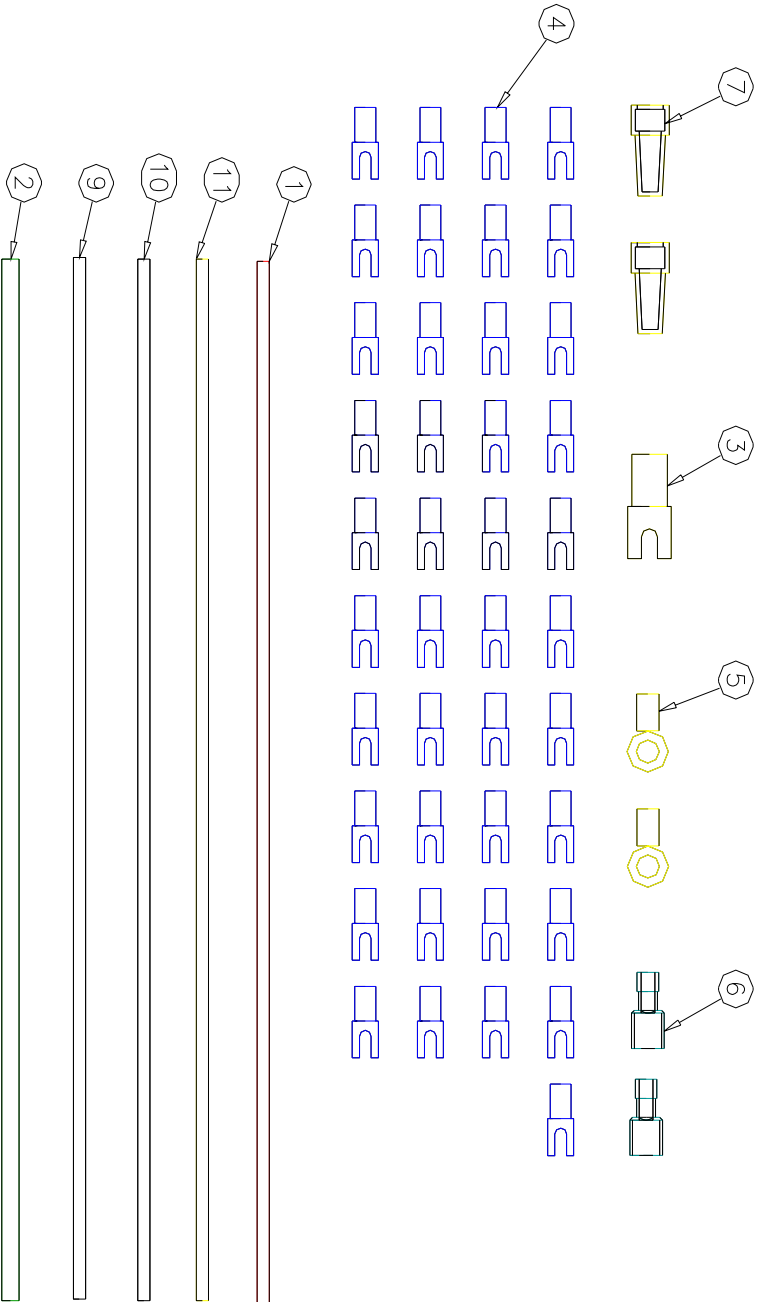
# Rigid Belt, 48 Main Electrical Assembly



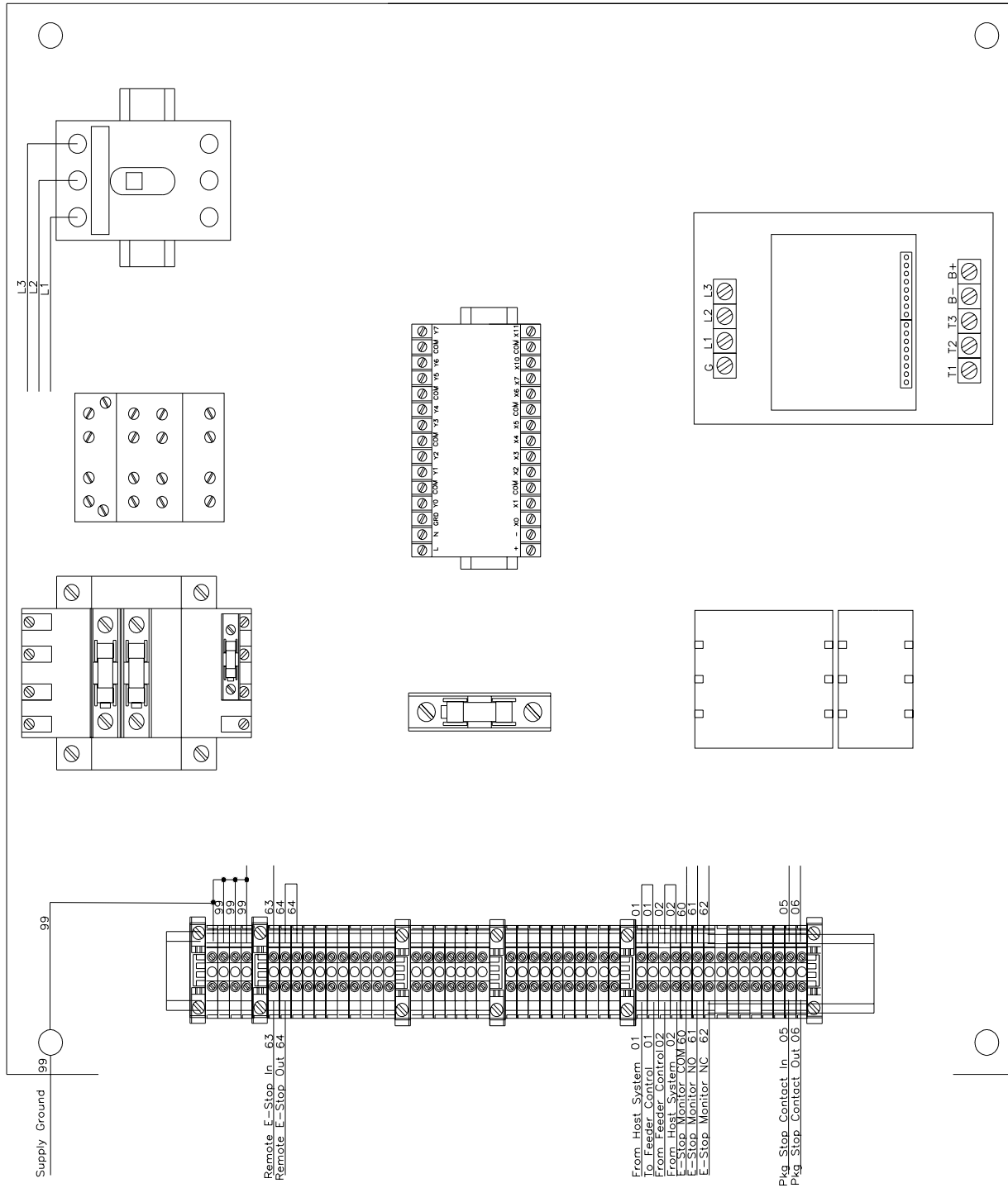
Item	Qty	Name	Description
12	1	302099	Rigid Belt, Extension, Cable Carrier
11	52	300303	Wire, 16 ga. TFFN, Yellow (feet)
10	52	15280-W	Wire, 16 ga. TFFN, White (feet)
9	52	15280-B	Wire, 16 ga. TFFN, Black (feet)
8	37	15037-10	Cord Elec 16/8 SO (feet)
7	2	15026	Wire Nut, Yellow
6	2	15017	Term Fem Disc 16-14 .25TA
5	2	15016	Terminal, Ring .25 stud, 12-14 ga.
4	41	15015-2	Terminal, Fork, #8 stud, 12-14 ga.
3	1	15015	Terminal, Fork, #10 stud, 12-14 ga.
2	52	100049	Wire, 14 ga. THHN, Green (feet)
1	52	100042	Wire, 16 ga. TFFN, Red (feet)

# Rigid Belt, 24 Main Electrical Assembly

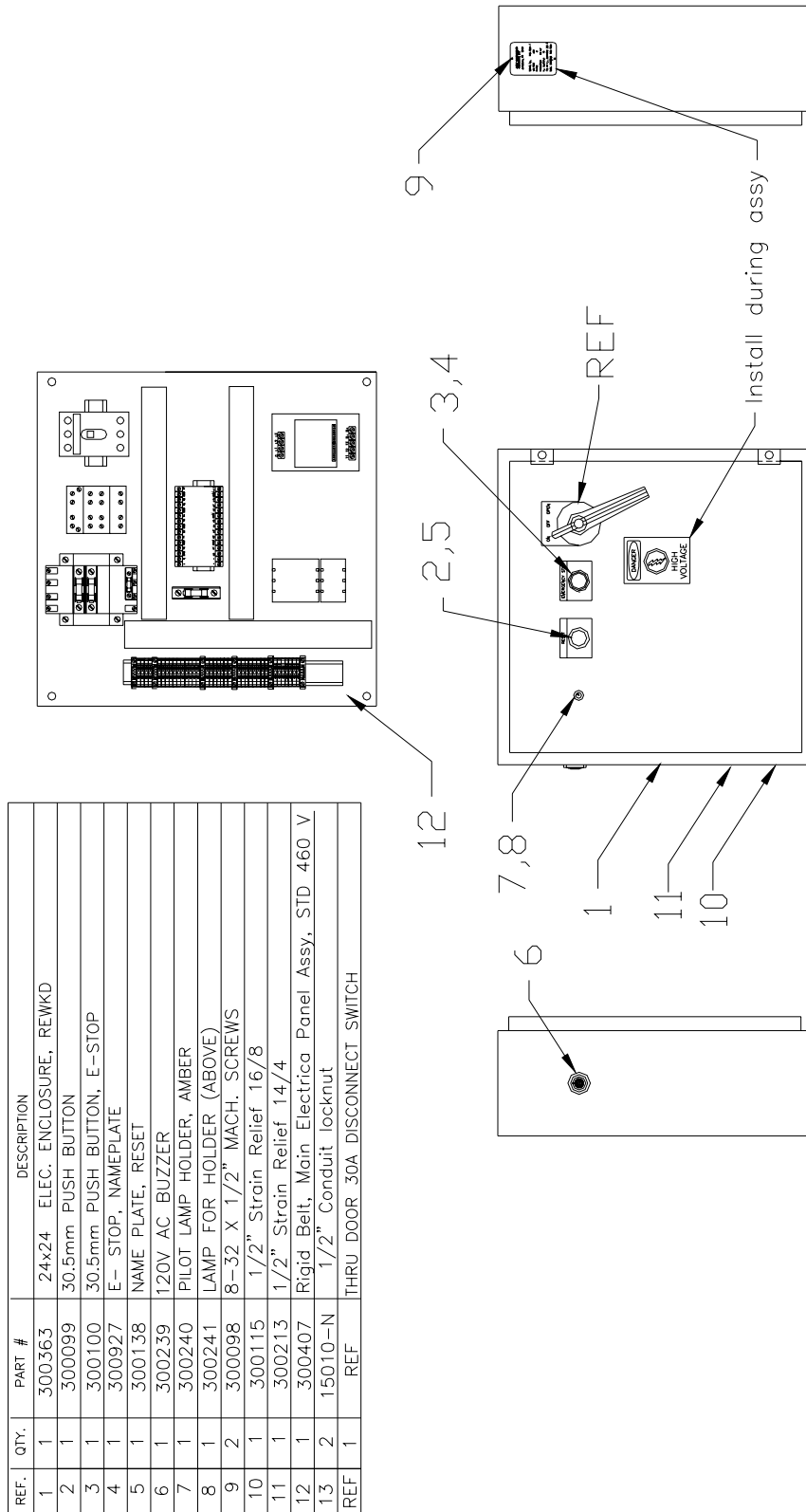
Item	Qty	Name	Description
12	1	302099	Rigid Belt, Extension, Cable Carrier
11	28	300303	Wire, 16 ga. TFFN, Yellow (feet)
10	28	15280-W	Wire, 16 ga. TFFN, White (feet)
9	28	15280-B	Wire, 16 ga. TFFN, Black (feet)
8	37	15037-10	Cord Elec 16/8 SO (feet)
7	2	15026	Wire Nut, Yellow
6	2	15017	Term Fem Disc 16-14 .251A
5	2	15016	Terminal, Ring .25 stud, 12-14 ga.
4	41	15015-2	Terminal, Fork, #8 stud, 12-14 ga.
3	1	15015	Terminal, Fork, #10 stud, 12-14 ga.
2	28	100049	Wire, 14 ga. THHN, Green (feet)
1	28	100042	Wire, 16 ga. TFFN, Red (feet)



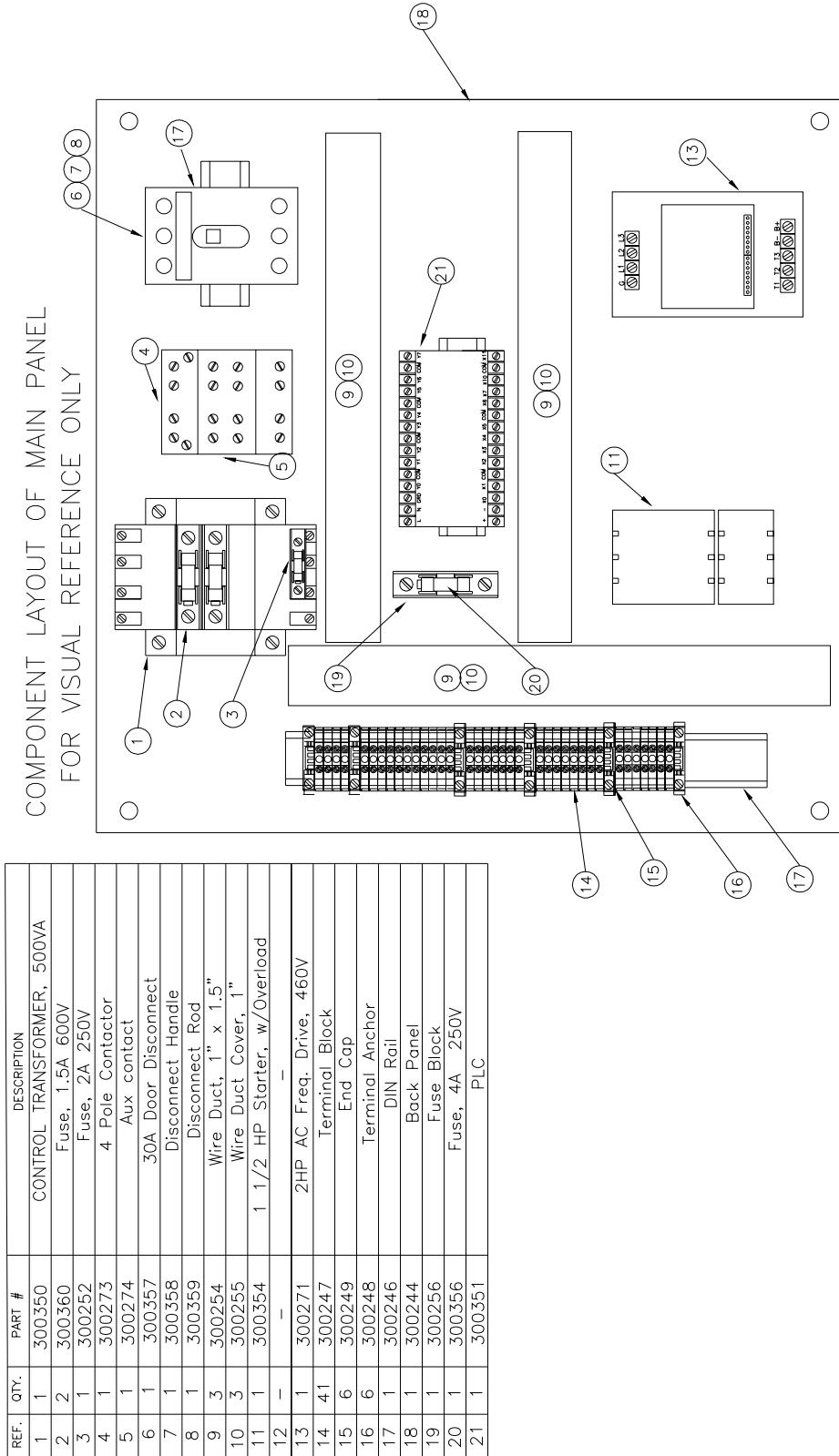
# Main Electrical Hook-Up



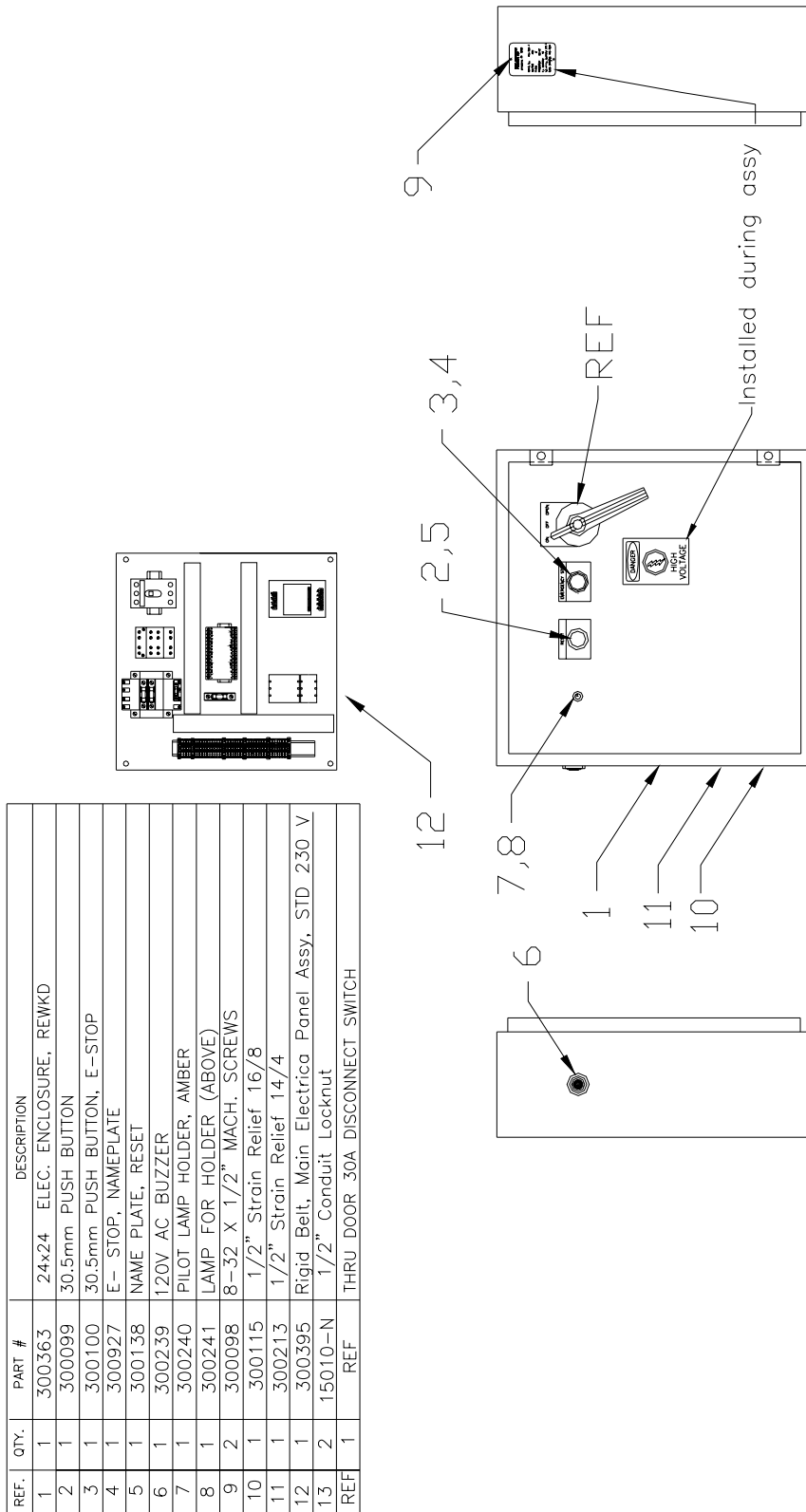
# Rigid Belt, Main Elec. Enc. w/ Panel, STD 460V



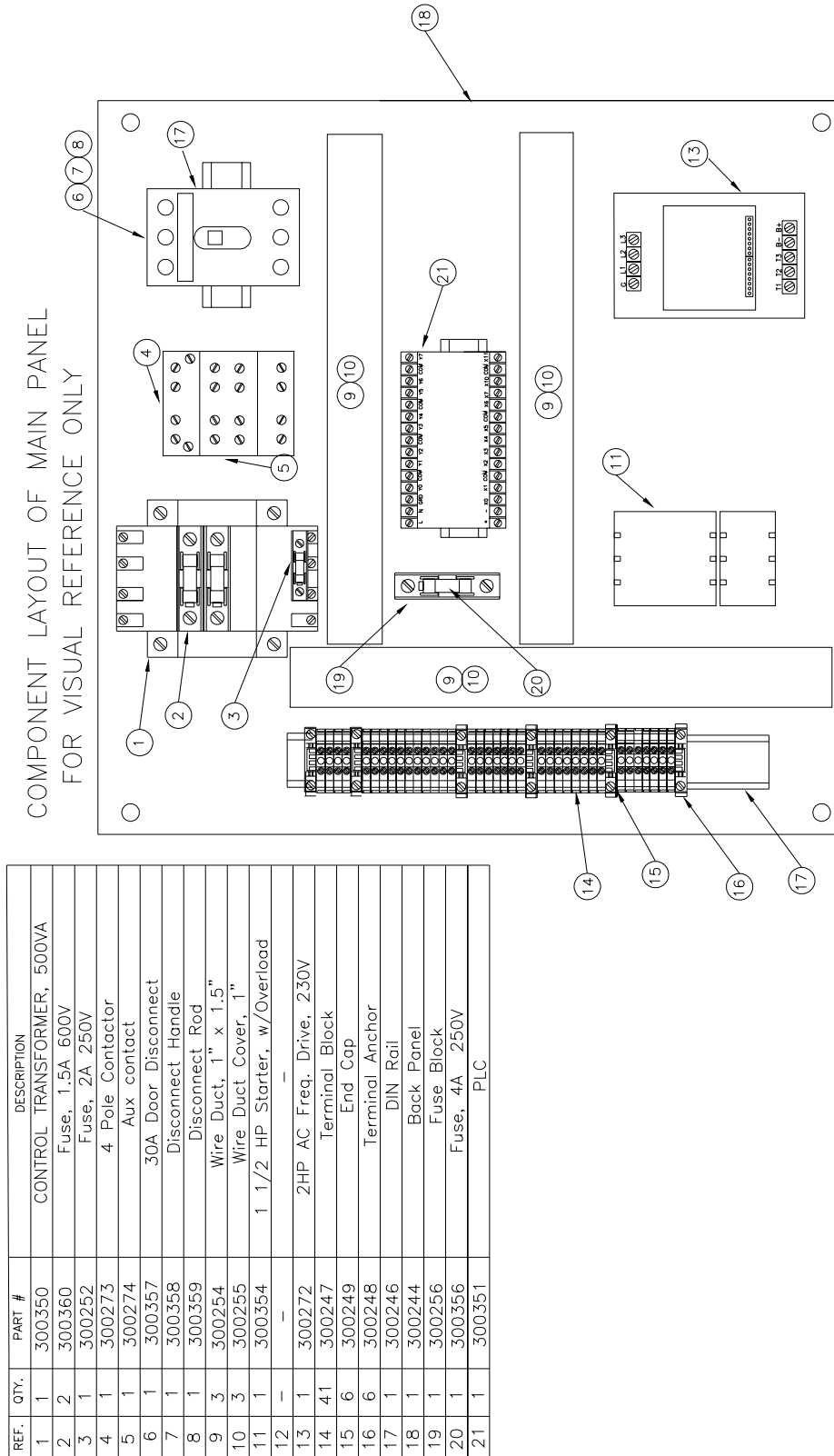
# Main Electrical Panel Layout, 460V, Std Speed



# Rigid Belt, Main Elec. Enc. w/ Panel, STD 230V



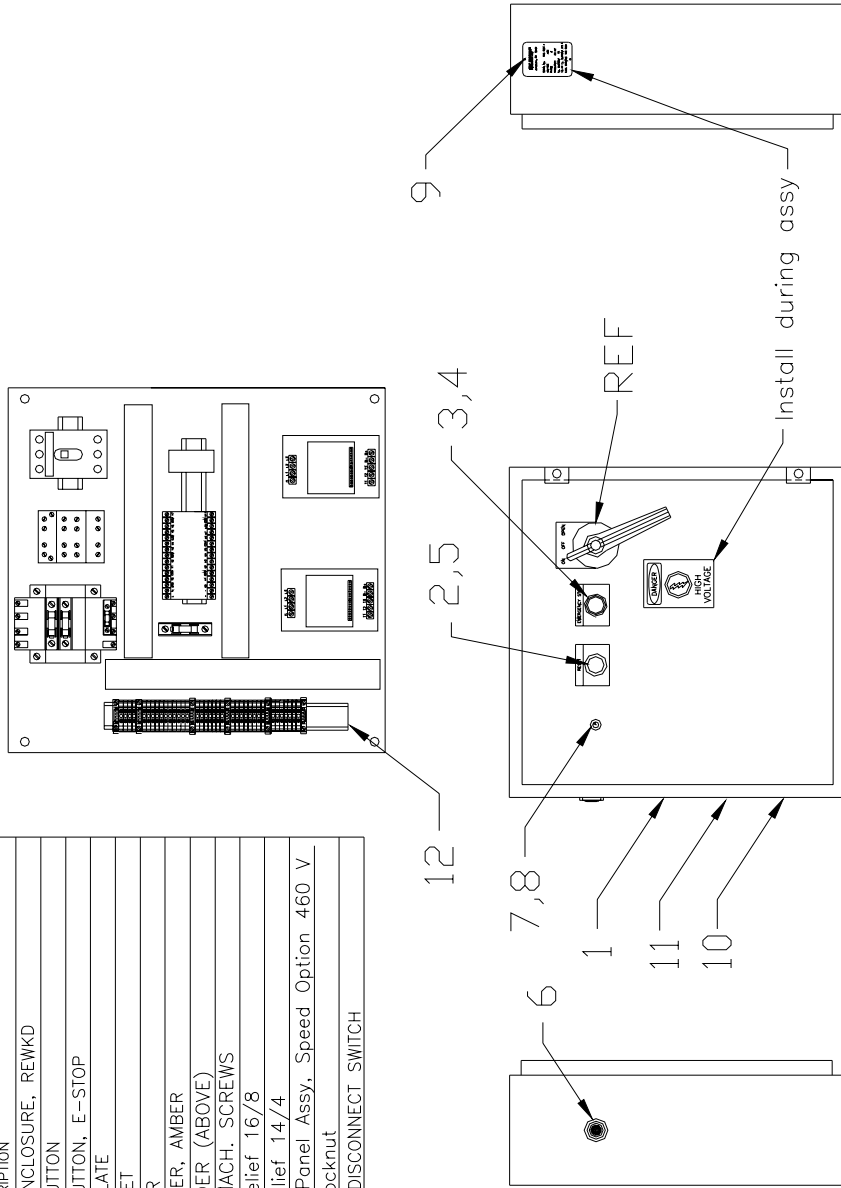
# Main Electrical Panel Layout, 230V, Std Speed



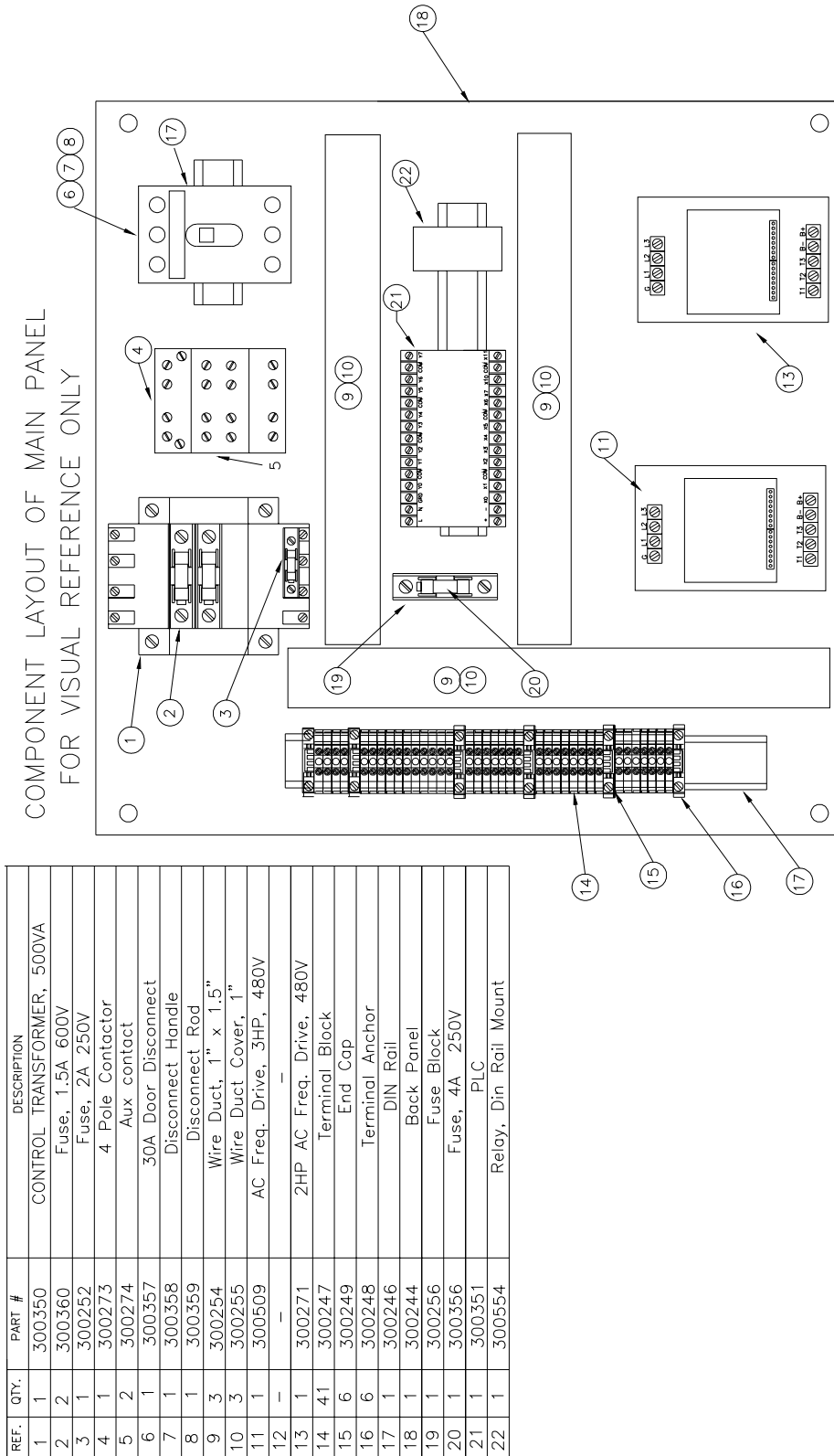


# Rigid Belt, Main Elec. Enc. w/Panel, Speed Option 460V

REF.	QTY.	PART #	DESCRIPTION
1	1	300363	24x24 ELEC. ENCLOSURE, REWKD
2	1	300099	30.5mm PUSH BUTTON
3	1	300100	30.5mm PUSH BUTTON, E-STOP
4	1	300927	E- STOP, NAMEPLATE
5	1	300138	NAME PLATE, RESET
6	1	300239	120V AC BUZZER
7	1	300240	PILOT LAMP HOLDER, AMBER
8	1	300241	LAMP FOR HOLDER (ABOVE)
9	2	300098	8-32 X 1/2" MACH. SCREWS
10	1	300115	1/2" Strain Relief 16/8
11	1	300213	1/2" Strain Relief 14/4
12	1	300396	Main Electrica Panel Assy, Speed Option 460 V
13	2	15010-N	1/2" Conduit Locknut
REF	1	REF	THRU DOOR 30A DISCONNECT SWITCH

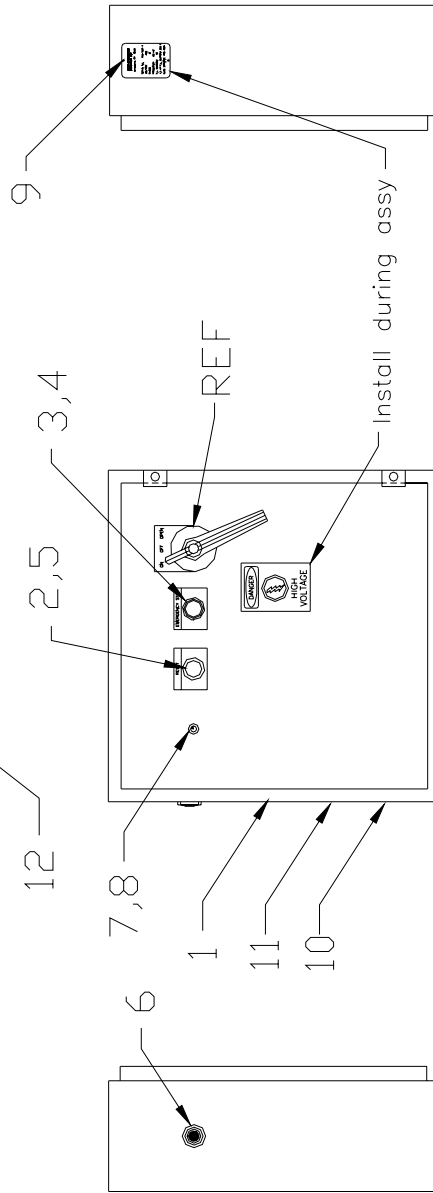
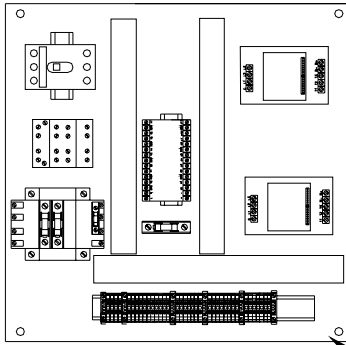


# Main Electrical Panel Layout, 480V, Optional Speed

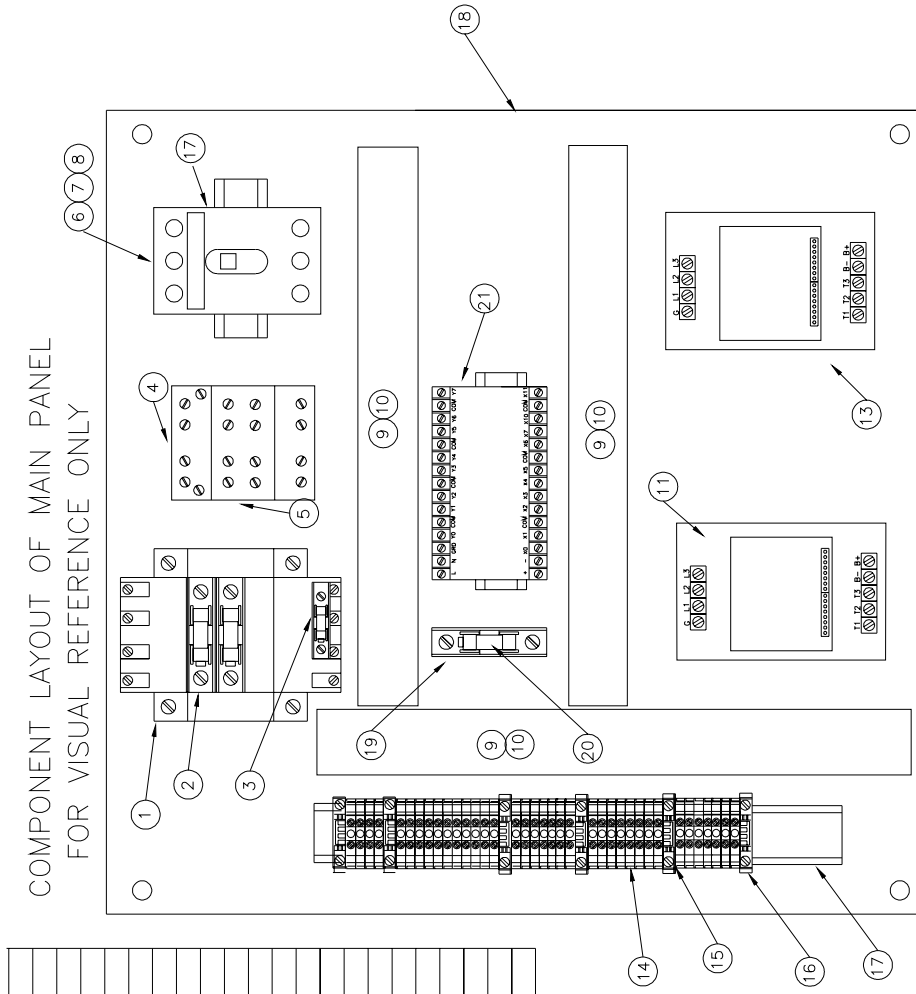


# Rigid Belt, Main Elec. Enc. w/Panel, Speed Option 230V

REF.	QTY.	PART #	DESCRIPTION
1	1	300363	24x24 ELEC. ENCLOSURE, REWKD
2	1	300099	30.5mm PUSH BUTTON
3	1	300100	30.5mm PUSH BUTTON, E-STOP
4	1	300927	E-STOP, NAMEPLATE
5	1	300138	NAME PLATE, RESET
6	1	300239	120V AC BUZZER
7	1	300240	PILOT LAMP HOLDER, AMBER
8	1	300241	LAMP FOR HOLDER (ABOVE)
9	2	300098	8-32 X 1/2" MACH. SCREWS
10	1	300115	1/2" Strain Relief 16/8
11	1	300213	1/2" Strain Relief 14/4
12	1	300397	Main Electrical Panel Assy, Speed Option 230 V
13	2	15010-N	1/2" Conduit Locknut
REF	1	REF	THRU DOOR 30A DISCONNECT SWITCH

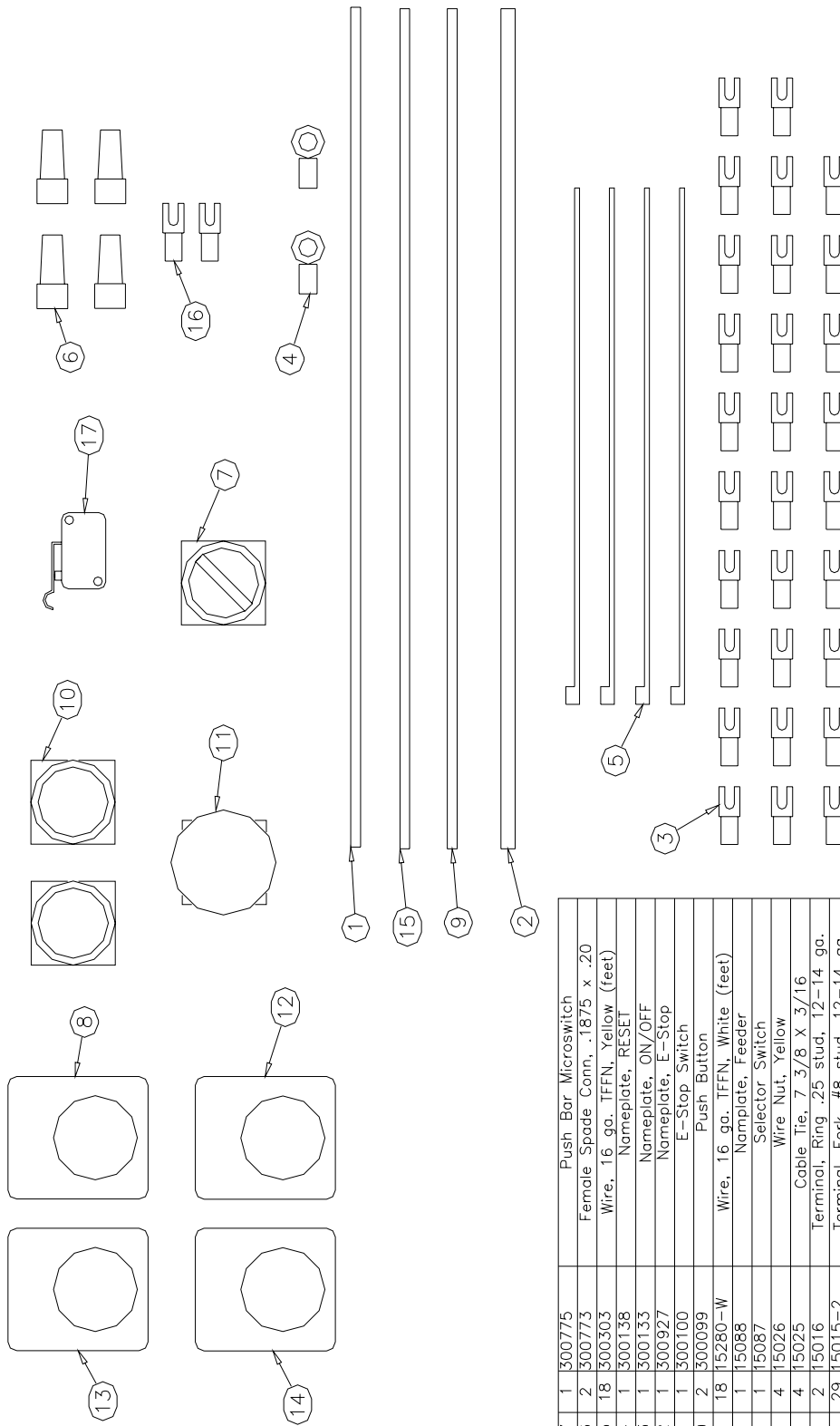


# Main Electrical Panel Layout, 230V, Optional Speed



REF.	QTY.	PART #	DESCRIPTION
1	1	300350	CONTROL TRANSFORMER, 500VA
2	2	300360	Fuse, 1.5A 600V
3	1	300252	Fuse, 2A 250V
4	1	300273	4 Pole Contactor
5	1	300274	Aux contact
6	1	300357	30A Door Disconnect
7	1	300358	Disconnect Handle
8	1	300359	Disconnect Rod
9	3	300254	Wire Duct, 1" x 1.5"
10	3	300255	Wire Duct Cover, 1"
11	1	300510	AC Freq. Drive, 3HP, 240V
12	-	-	-
13	1	300272	2HP AC Freq. Drive, 240V
14	41	300247	Terminal Block
15	6	300249	End Cap
16	6	300248	Terminal Anchor
17	1	300246	DIN Rail
18	1	300244	Back Panel
19	1	300256	Fuse Block
20	1	300356	Fuse, 4A 250V
21	1	300351	PLC

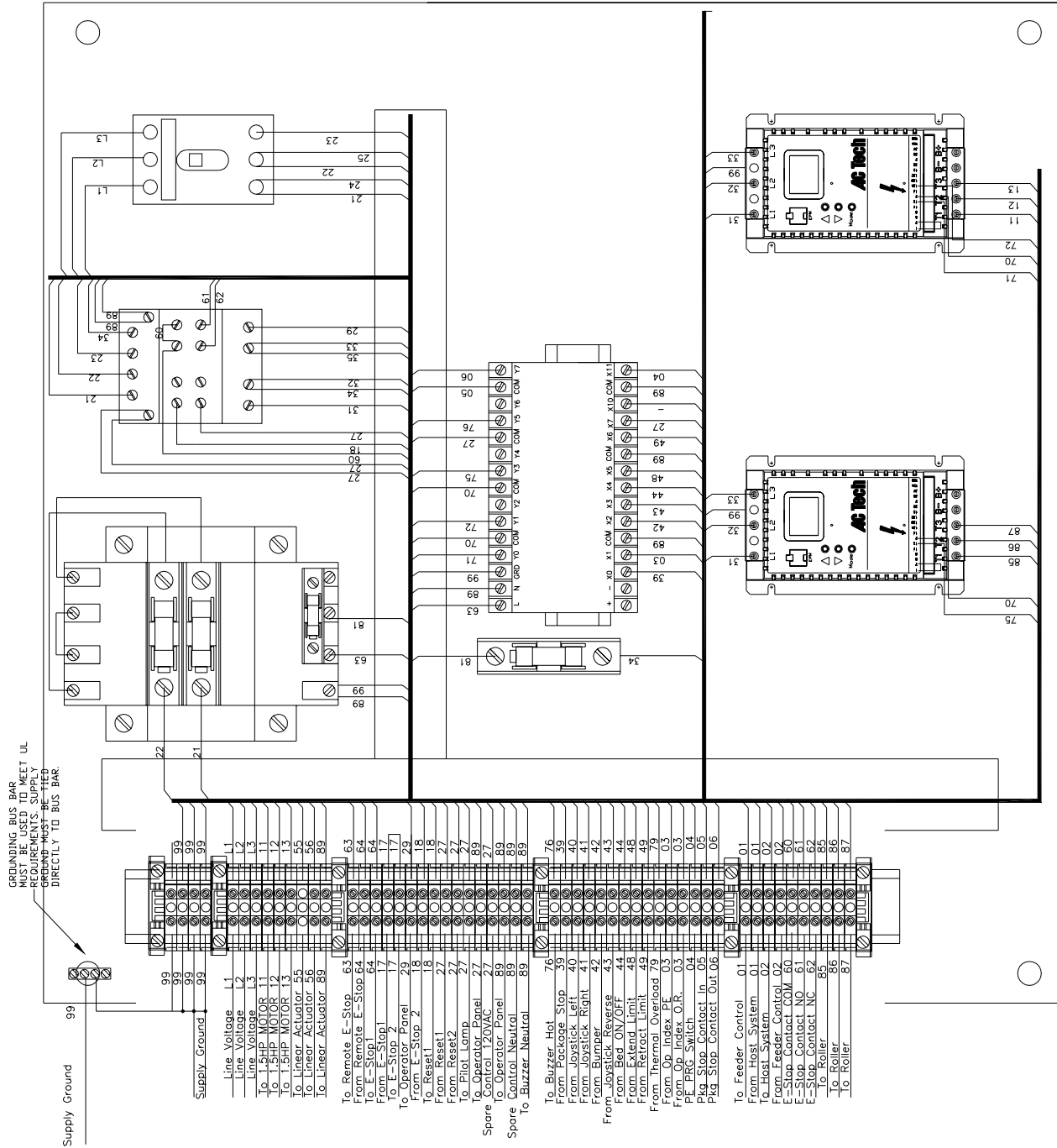
# Rigid Belt, Extension, Electrical



17	1	300775	Push Bar Microswitch
16	2	300773	Female Spade Conn. .1875 x .20
15	18	300303	Wire, 16 ga. TFFN, Yellow (feet)
14	1	300138	Nameplate, RESET
13	1	300133	Nameplate, ON/OFF
12	1	300927	Nameplate, E-Stop
11	1	300100	E-Stop Switch
10	2	300099	Push Button
9	18	15280-W	Wire, 16 ga. TFFN, White (feet)
8	1	15088	Nameplate, Feeder
7	1	15087	Selector Switch
6	4	15026	Wire Nut, Yellow
5	4	15025	Cable Tie, 7 3/8 X 3/16
4	2	15016	Terminal, Ring .25 stud, 12-14 ga.
3	29	15015-2	Terminal, Fork, #8 stud, 12-14 ga.
2	18	100049	Wire, 14 ga. THHN, Green (feet)
1	18	100042	Wire, 16 ga. TFFN, Red (feet)
Item Qty	Name	Description	

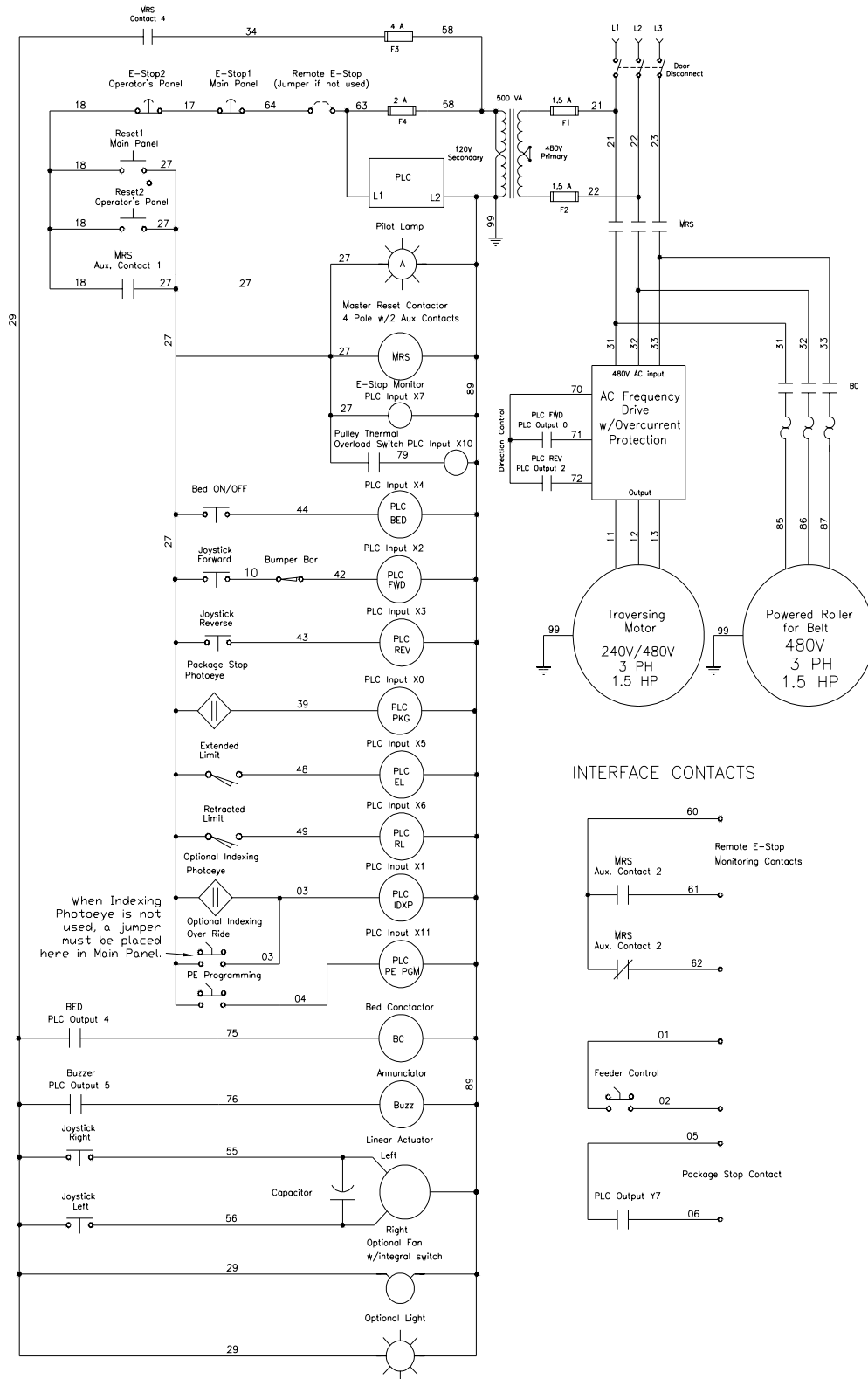
# BestReach™ Rigid Belt Schematics and Wiring Diagrams

# Main Electrical Panel Diagram



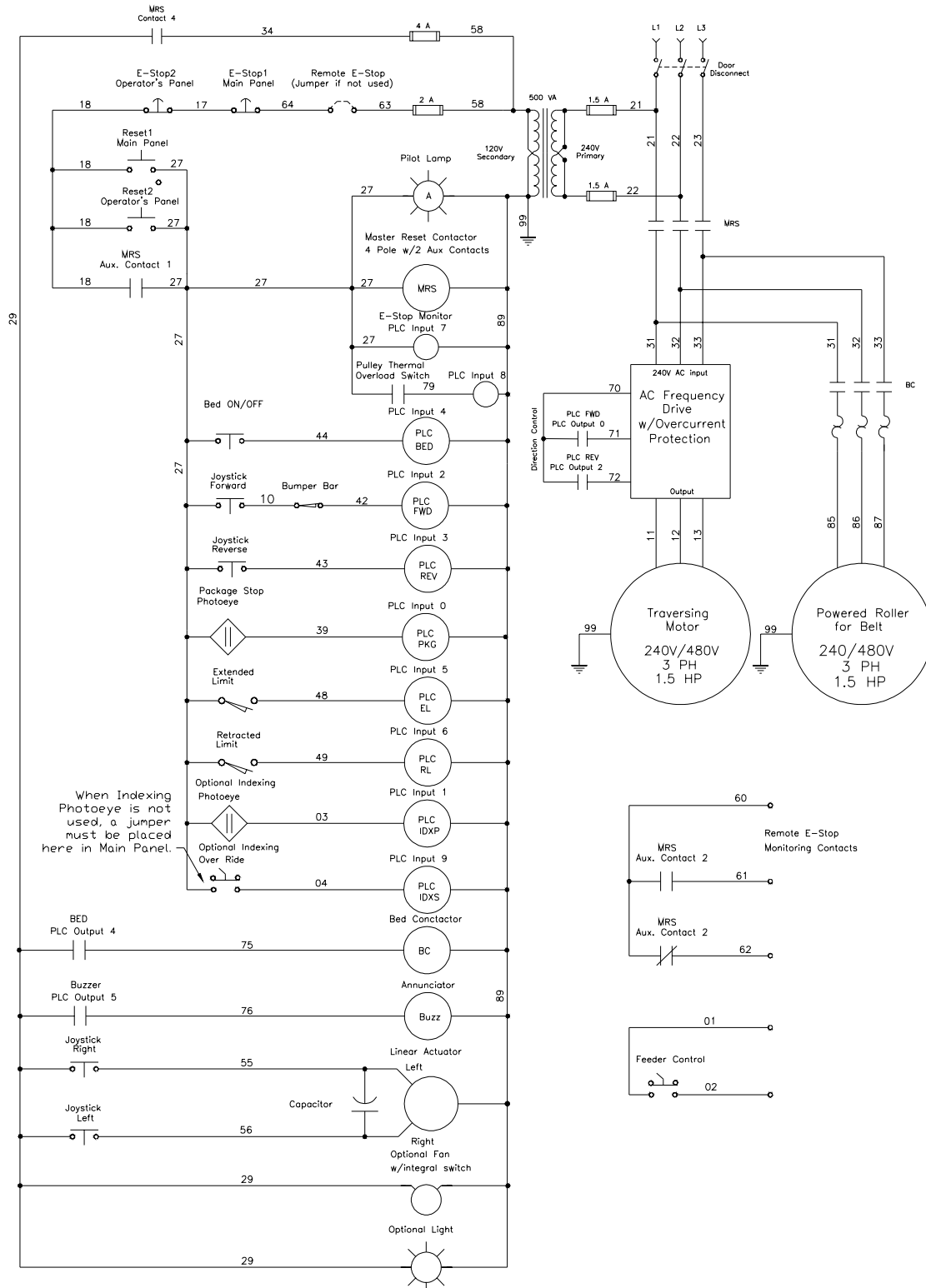
FMH Conveyors Operator's Manual  
BestReach Rigid Belt Conveyor

# Rigid Belt Schematic, STD. 460V

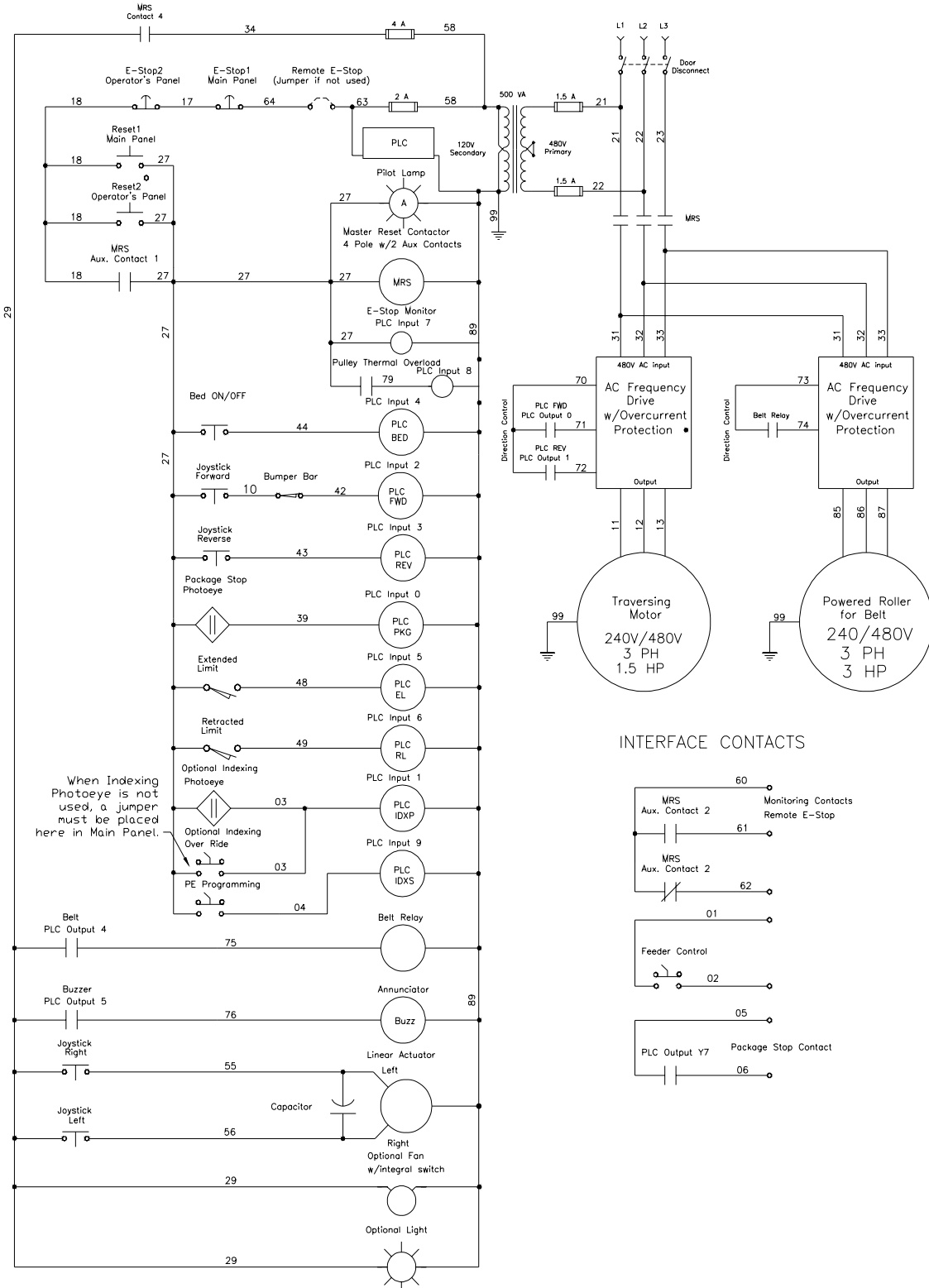




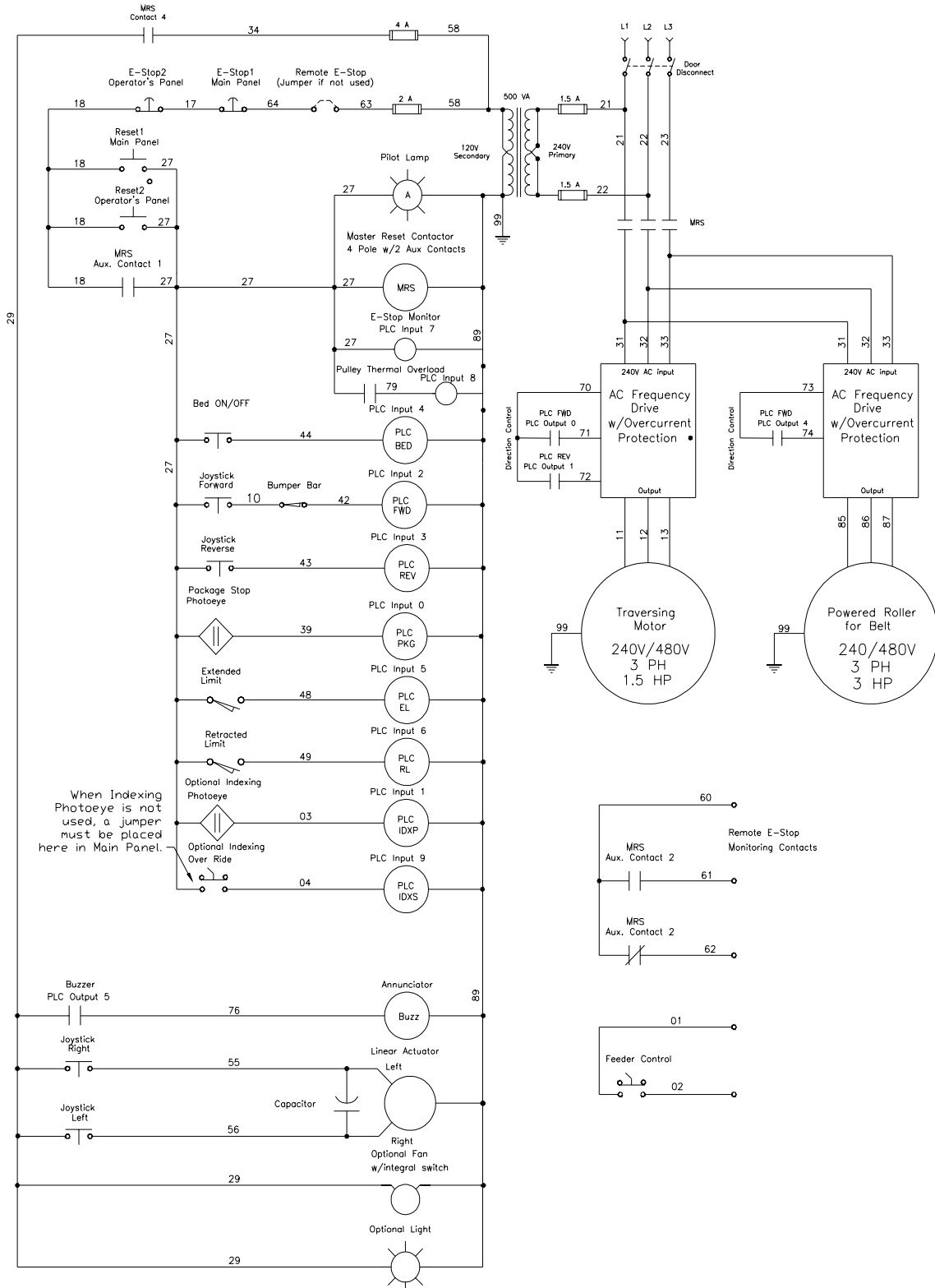
# Rigid Belt Schematic, STD. 230V



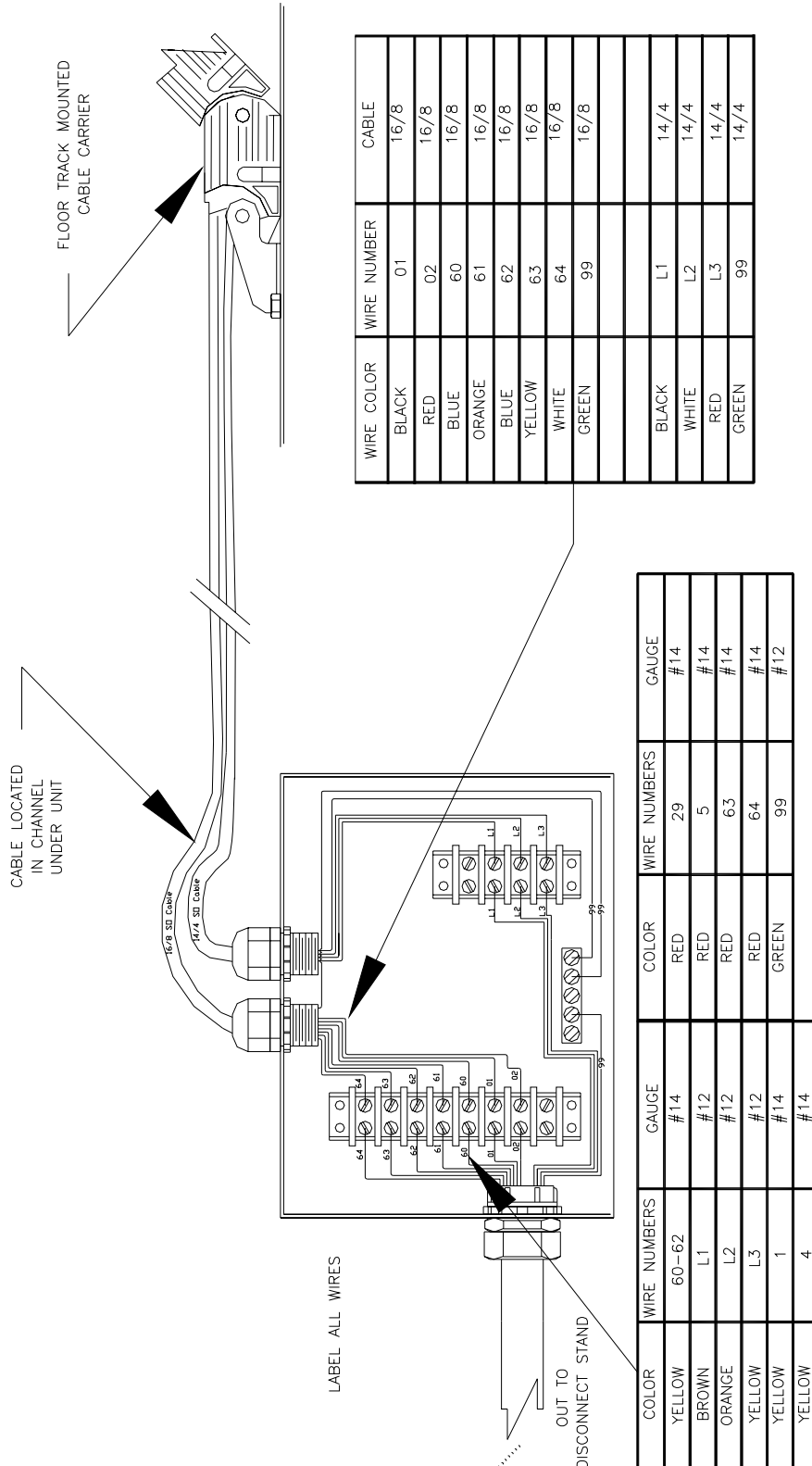
# Rigid Belt Schematic, Opt. Speed, 460V



# Rigid Belt Schematic, Opt. Speed, 230V

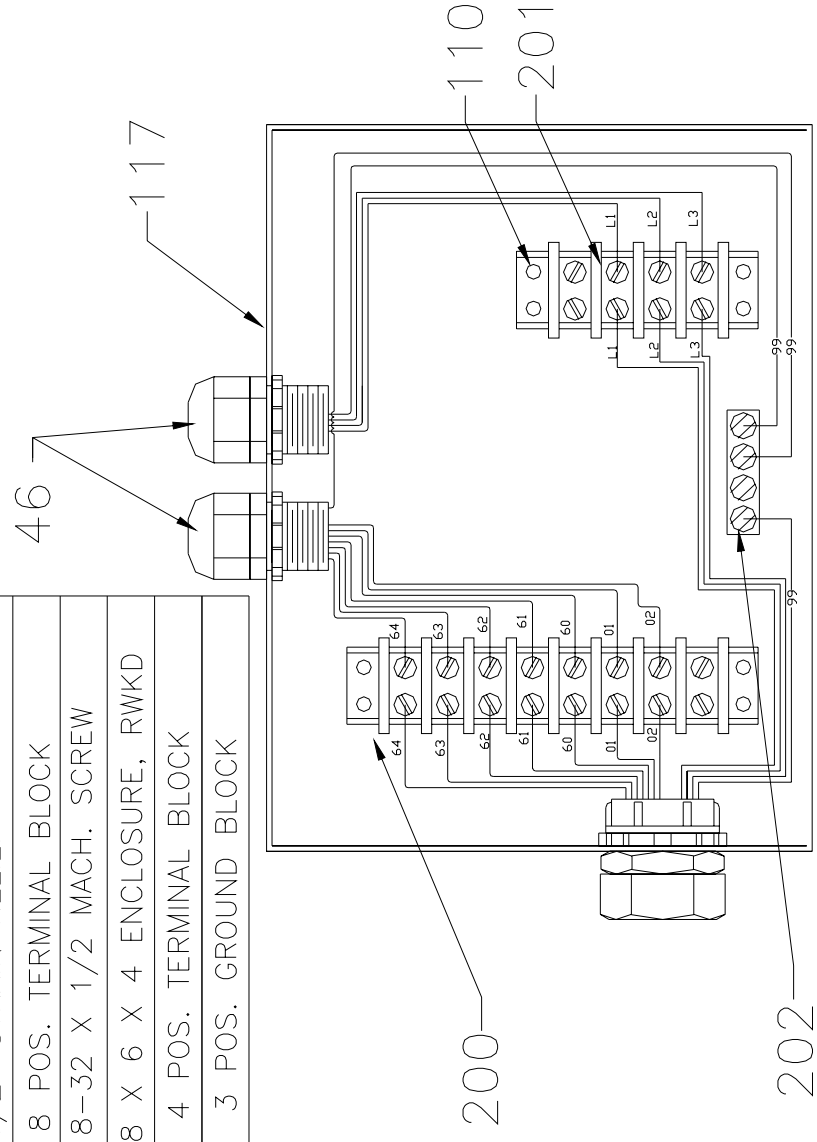


# DETAIL, FLOOR TRACK J-BOX. FRONT



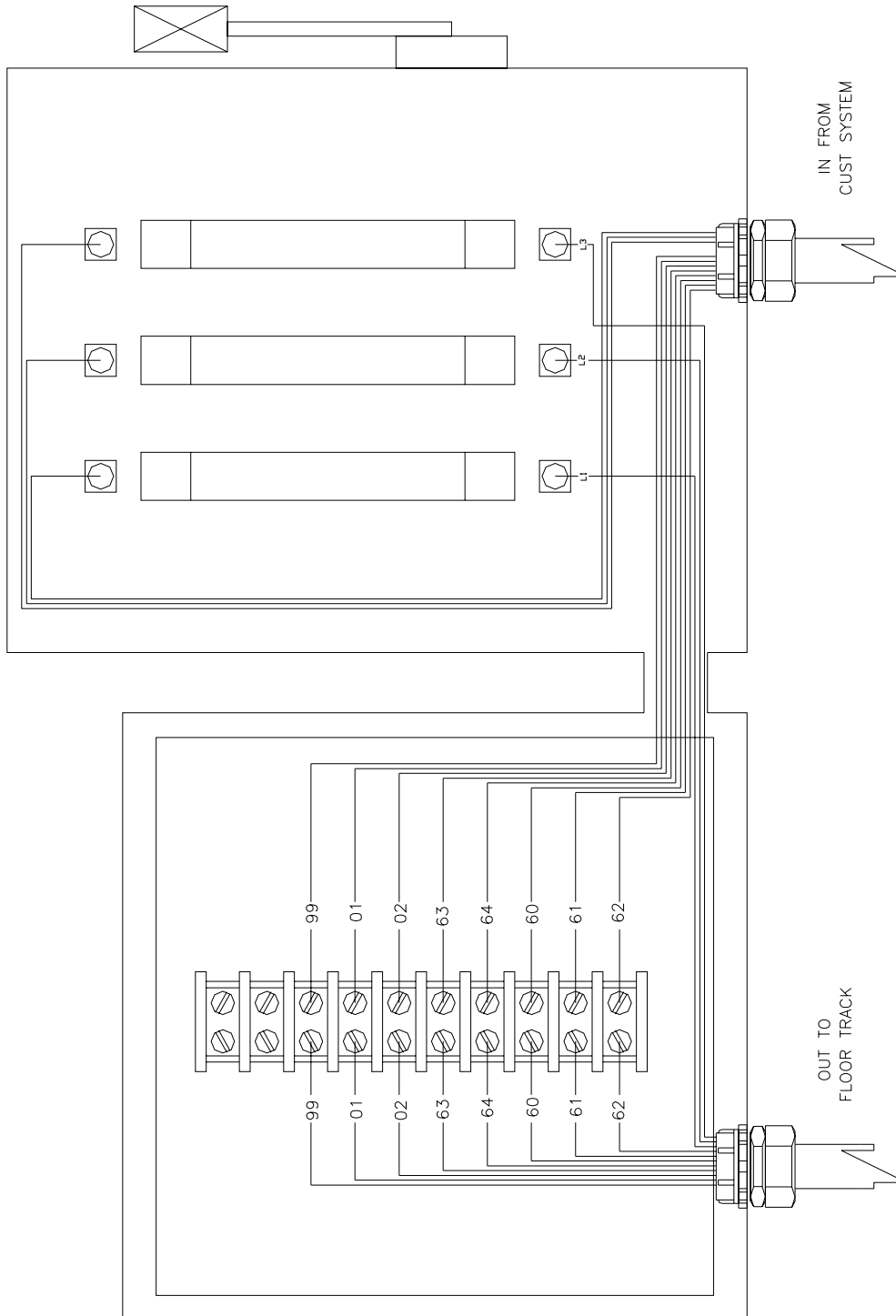
# DETAIL, COMPONENTS, ELEC., FLOOR TRACK

NO.	REQ'D	PART #	DESCRIPTION
46	2	300115	1/2" STRAIN RELIEF
200	1	400802	8 POS. TERMINAL BLOCK
110	5	300098	8-32 X 1/2 MACH. SCREW
117	1	400007	8 X 6 X 4 ENCLOSURE, RWKD
201	1	400801	4 POS. TERMINAL BLOCK
202	1	400800	3 POS. GROUND BLOCK



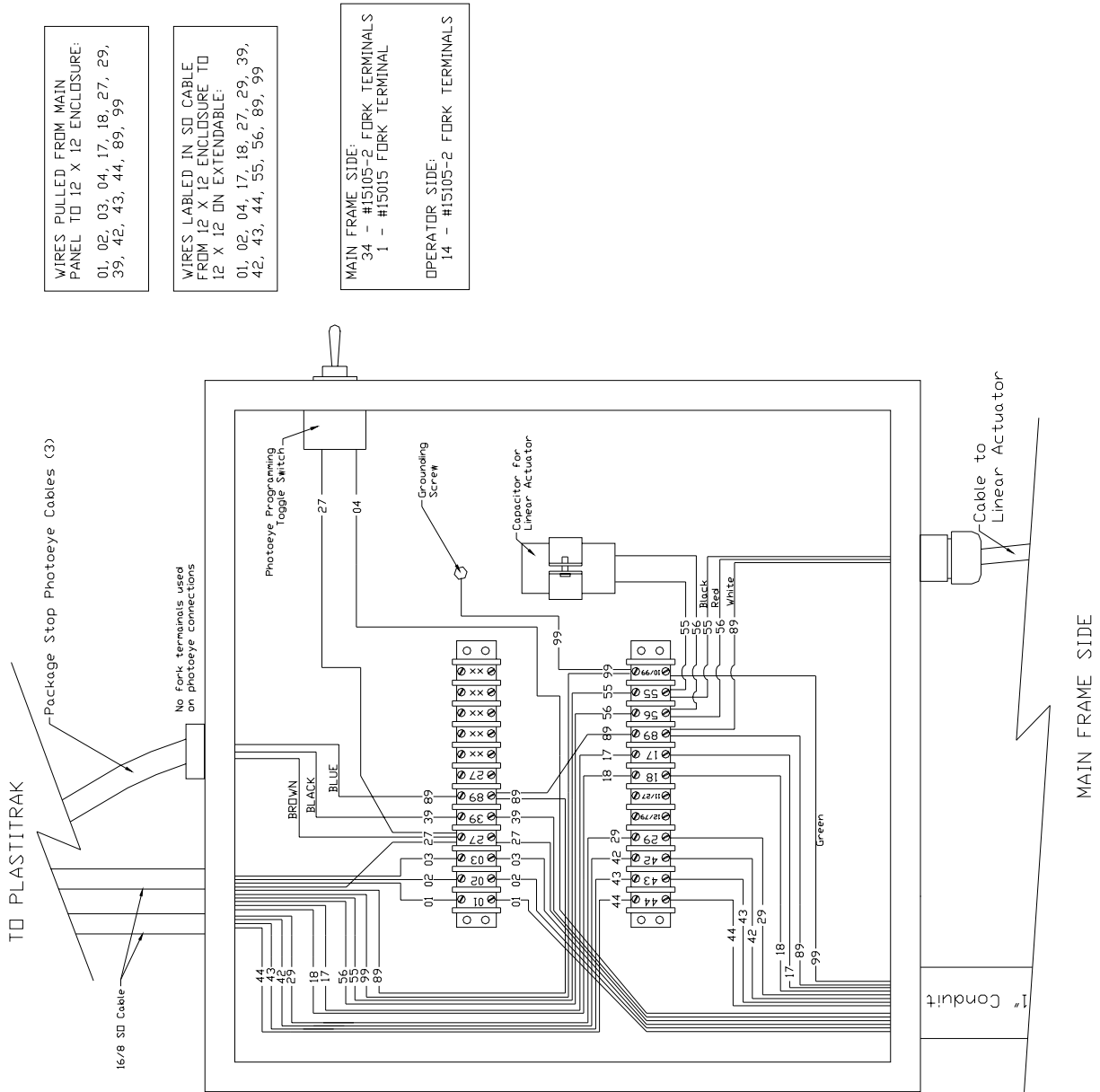
PART OF 800007  
 DETAIL OF ASSY. 400092

# DETAIL, DISCONNECT STAND



FMH Conveyors Operator's Manual  
BestReach Rigid Belt Conveyor

# 12 x 12 Enclosure Main Frame



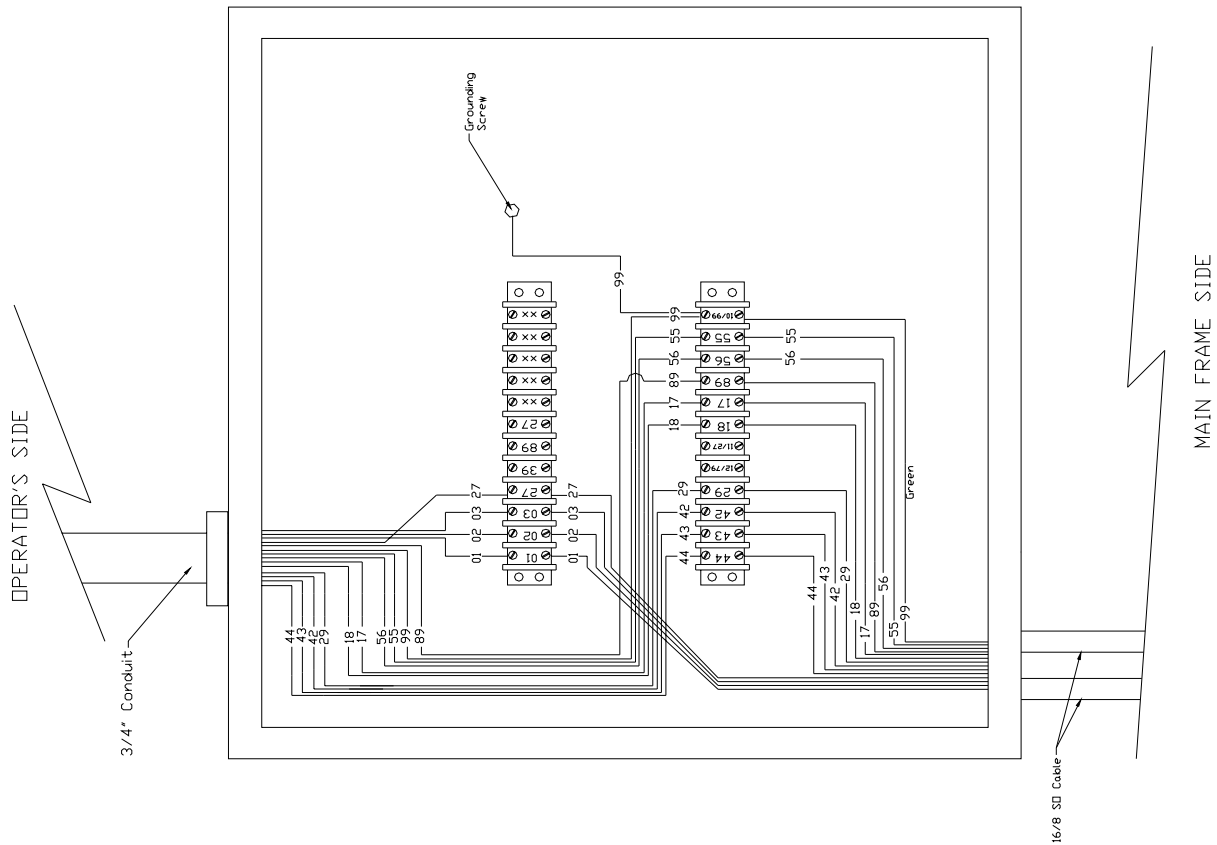
FMH Conveyors Operator's Manual  
 BestReach Rigid Belt Conveyor

# 12 x 12 Enclosure Extension

WIRES LABELED IN SD CABLE FROM 12 X 12 MAINFRAME PANEL TO 12 X 12 EXTENDABLE ENCLOSURE:  
 01, 02, 03, 17, 18, 27, 29, 39, 42, 43, 44, 55, 56, 89, 99

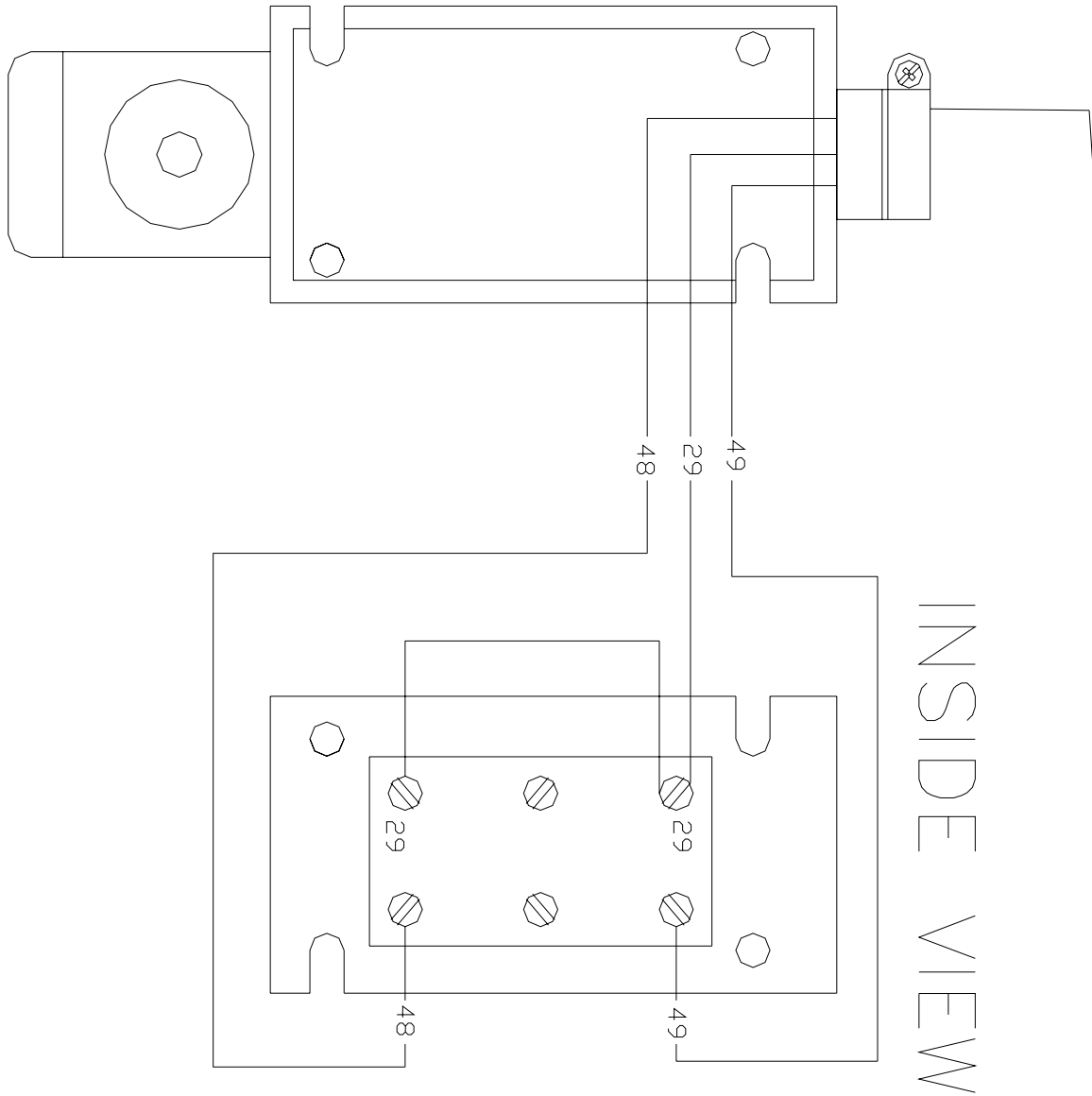
WIRES PULLED FROM 12 X 12 ENCLOSURE TO OPER'S PANEL:  
 01, 02, 03, 17, 18, 27, 29, 39, 42, 43, 44, 55, 56, 89, 99

MAIN FRAME SIDE:  
 34 - #15105-2 FORK TERMINALS  
 1 - #15015 FORK TERMINAL  
 6 - #15026 WIRE NUT, Yellow  
 OPERATOR SIDE:  
 14 - #15105-2 FORK TERMINALS





## Wiring Diagram Limit Switch

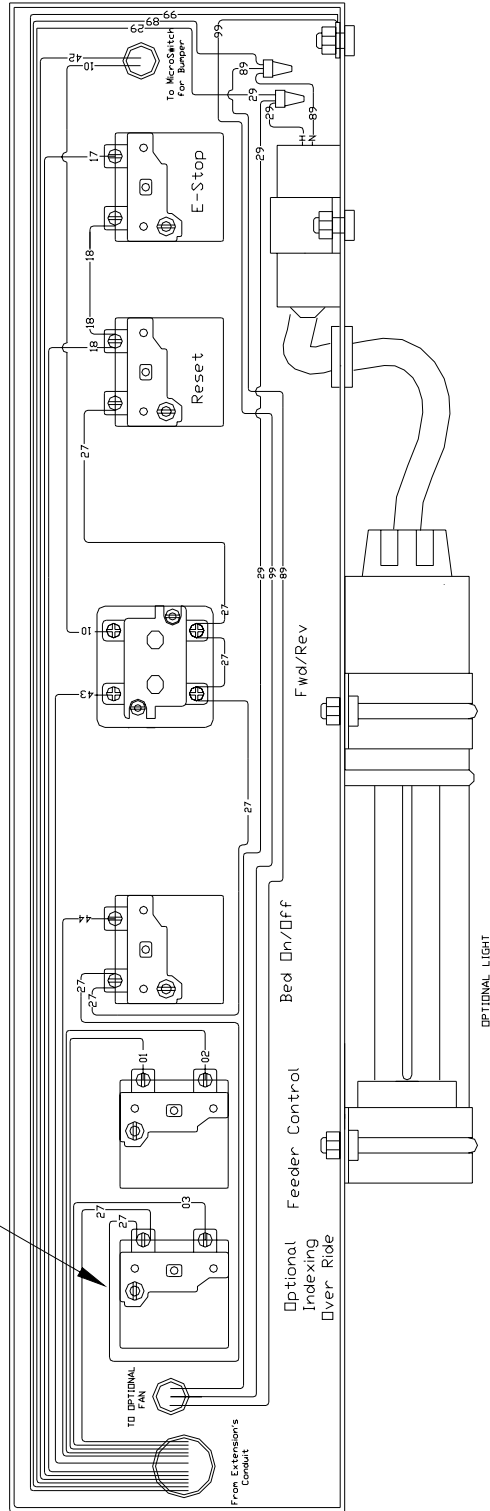


# Wiring Diagram, Operators Panel, Manual Steering

## OPERATOR'S PANEL (viewed from rear) Manual Steering

Requires:  
 2 - #15026 wire nuts  
 3 - #15016 ring terminal

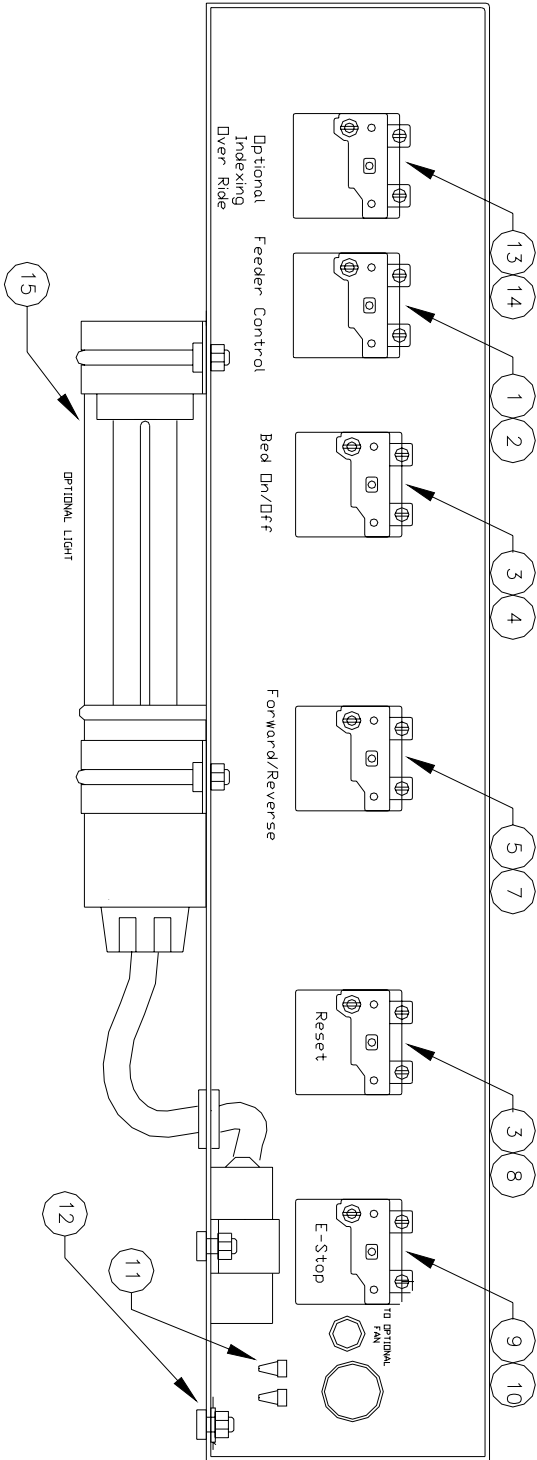
If optional indexing is not used, switch is omitted and wire #03 is terminated with a wire nut.



# Operators Panel, Parts List, Manual Steering

ITEM	QTY	PART NO	DESCRIPTION
1	1	15087	Selector Switch
2	1	15088	Nameplate, Feeder
3	2	300099	Push Button
4	1	300133	Nameplate, ON/OFF
5	1	300400	3 Position Selector Switch
6	2	300401	Contacts, N.O.
7	1	300402	Nameplate, Forward/Reverse
8	1	300138	Nameplate, Reset
9	1	300100	E-Stop Switch
10	1	300927	Nameplate, E-Stop
11	2	15026	Wire Nut, Yellow
12	3	15016	Ring Terminal
13	(1)	15087	Selector Switch (optional)
14	(1)	300399	Nameplate, Index over ride (optional)
15	(1)	800013	Light Kit (optional)

This B.O.M. is for all voltage and speed options that use the MANUAL STEERING option. This B.O.M. does NOT apply to any unit with the standard power steering option.

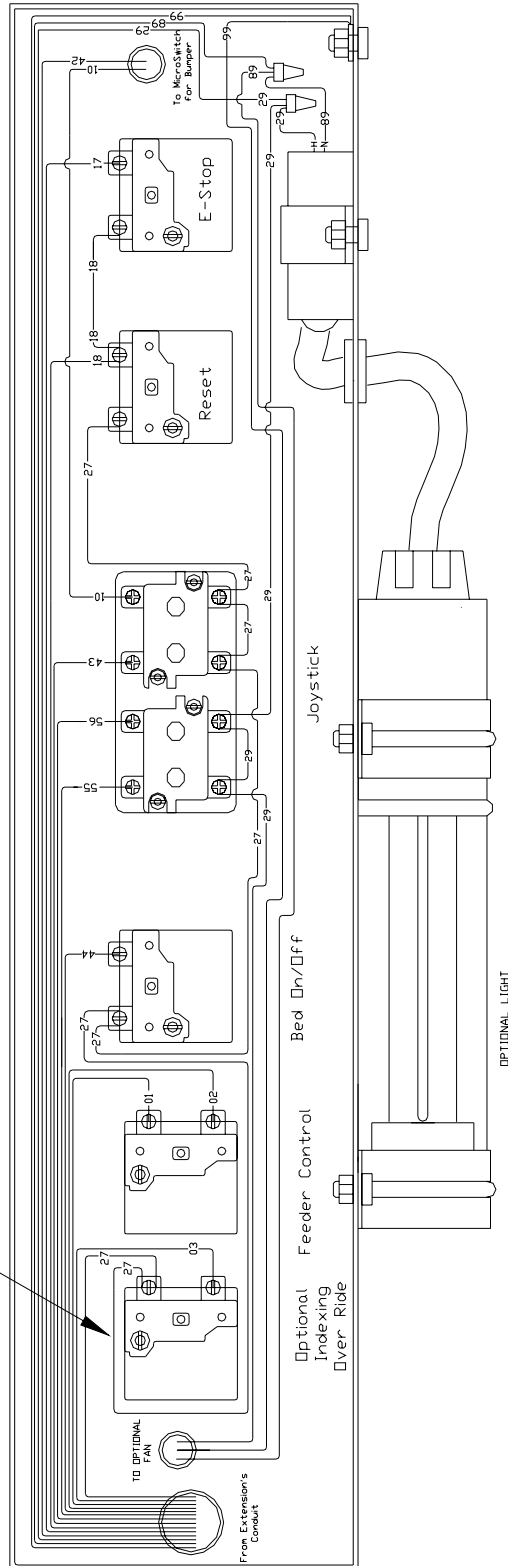


# Operators Panel, Wiring Diagram, Power Steer

## OPERATOR'S PANEL (viewed from rear) Power Steering

- Requires:
- 2 - #15026 wire nuts
  - 3 - #15016 ring terminal

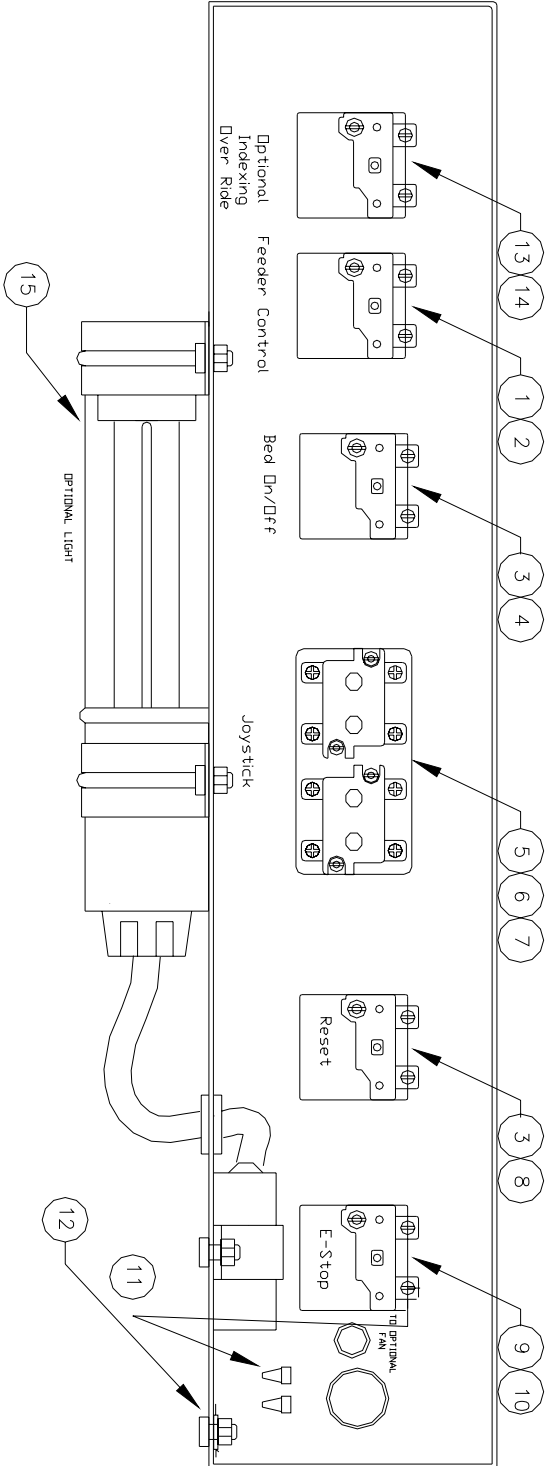
If optional indexing is not used, switch is omitted and wire #03 is terminated with a wire nut.



# Operators Panel, Parts List, Power Steering

ITEM	QTY	PART NO	DESCRIPTION
1	1	15087	Selector Switch
2	1	15088	Nameplate, Feeder
3	2	300099	Push Button
4	1	300133	Nameplate, ON/OFF
5	1	300145	Joystick
6	2	300146	Double Contacts
7	1	300147	Nameplate, Arrows
8	1	300138	Nameplate, Reset
9	1	300100	E-Stop Switch
10	1	300927	Nameplate, E-Stop
11	2	15026	Wire Nut, Yellow
12	3	15016	Ring Terminal
13	(1)	15087	Selector Switch (optional)
14	(1)	300399	Nameplate, Index over ride (optional)
15	(1)	800013	Light Kit (optional)

This B.O.M. is for all voltage and speed options that use the STANDARD POWER STEERING. This B.O.M. does NOT apply to any unit with the manual steering option.



# AC TECH FREQUENCY DRIVES

## Frequency Drive for Traversing Motor

The Best Reach Telescopic Belt's traversing motor uses a 2 HP AC Tech frequency drive, model SF420 for 480V systems and model SF220 for 230V systems, to provide a soft start, programmable accel and decel times and braking.

Control wiring used for this drive is the ALTERNATE TWO-WIRE START/STOP CONTROL found on page 20 of AC Tech's SCF Series manual. In order for the drive to function properly in this mode, **a jumper must be in place between the drive's TB-2 terminals 1 and 2.** Forward and Reverse is controlled by the Best Reach's PLC relay outputs wired to the drive's TB-2 terminals 2 (common), 12 (forward) and 13A (reverse).

The AC Tech drive is field programmable. The following list shows the parameters that are programmed before being shipped with the Best Reach unit. All parameters not shown in this list remain set to the factory defaults.

### Parameter List for Traversing Motor

Parameter	Value
04	03
10	05
17	02
19	1.0
20	0.5
26	75
28	4.4
29	4.4

Frequency Setting: 60 HZ

This frequency drive has built-in over current protection. If an over current fault occurs, the drive will shut off current to the motor and will display PF. While this error code is displayed, the conveyor cannot be driven. The frequency drive will reset itself after approximately 30 seconds. The conveyor can be drive after this reset time if the conditions that caused the fault have been removed.

## Frequency Drive for Optional Belt Speed

The frequency drive used to power the motorized head pulley for this option is the same as the drive used for the traversing motor except that it has a 3 HP rating instead of the traversing's 2 HP.

Control wiring for this drive is the Two-Wire Start/Stop Control wiring found on page 19 of the AC Tech SCF Series Manual. Reversing is not used for the conveyor belt. Therefore, a jumper is used to select Forward only.

The parameters are different for this drive from the traversing drive's parameters. All parameters not listed here remain at the factory's default values.

### Parameter List for Optional Speed Belt Drive

Parameter	Value
04	03
10	05
17	02
19	1.0
20	0.5
26	75

With these parameters, the belt speed in feet per minute will be displayed on the frequency drive's LED display when the belt is running. Belt speed may be adjusted by the up and down buttons on the frequency drive. For more information on the drive consult the AC Tech Manual supplied with you conveyor.

**WARNING:** *Voltage in the main electrical panel can cause injury or death. Viewing the frequency drive's display and adjusting the belt speed requires the main electrical panel door be open while power is applied. This should only be done by trained and qualified personnel with approval to work with live voltage. Follow all OSHA and other pertinent safety guidelines when servicing this conveyor.*

# Troubleshooting the Electrical System

## WHEN NOTHING WILL RUN

### Check:

- Remote disconnect fuses and disconnect is turned on
- Conveyor's door disconnect is turned on
- E-Stops mushroom heads are out
- Master reset circuit is on (amber pilot light on main electrical panel should be on)
- Primary and secondary fuses for control transformer
- Supply power wiring

## CONVEYOR BELT WILL NOT RUN

### Check:

- Master reset circuit is on (amber pilot light on main electrical panel should be on)
- Bed On/Off contacts are making
- Wiring from Bed On/Off contacts to PLC input
- PLC output is making
- Wiring between PLC output and bed contactor coil
- Bed contactor's overload has tripped
- Bed contactor is making (check contacts and coil)
- Motorized pulley thermal overload. The motorized pulley has a normally closed internal thermal overload switch. This switch is wired as an input to the PLC. If the pulley overheats and the switch opens, the belt will shut off. If the Bed On/Off button is pushed while the thermal overload switch is open (or the wiring to the switch is broken or not connected) the belt will not start and the beeper will sound an error code of three beeps 2 seconds each separated by .5 seconds.
- Wiring between bed contactor and motorized pulley.
- Motorized pulley motor



## Troubleshooting the Electrical System (cont)

### CONVEYOR WILL NOT DRIVE FORWARD, BUT WILL DRIVE IN REVERSE

**Check:**

- Bumper is not returning fully forward
- Bumper switch is not making while bumper is fully forward
- Extend limit switch is not returning to neutral position (center position)
- Extend limit contacts in limit switch are closed (operator rod is on something or contacts are stuck)
- Wiring between Forward contact (joystick or selector switch) and bumper switch
- Wiring between bumper switch and PLC input

### CONVEYOR WILL NOT DRIVE FORWARD OR REVERSE

**Check:**

- Jumper on AC frequency drive's terminals 1 and 2 (must be in place)
- AC frequency drive's common control wiring to Forward/Reverse contacts (joystick or selector switch)
- AC frequency drive has faulted out (overload faults, shown as PF, will reset themselves in approximately 30 seconds after no input to forward or reverse controls)
- Three phase power to AC frequency drive
- Output from AC frequency drive
- Traversing Motor
- Wiring from AC frequency drive to motor
- Parameters in AC frequency drive have changed from values shown in list

### CONVEYOR WILL NOT STEER LEFT OR RIGHT (power steering models only)

**Check:**

- Power to joystick steering contacts, fuse in main electrical panel
- Power through joystick contacts when steering
- Power to linear actuator
- Linear actuator capacitor

