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MODEL CPO-315-RFA-BL
BUNDLE LOADER
ATTACHMENT

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MODEL
CPO-315-RFA-BL
BUNDLE LOADER
ATTACHMENT

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1.0 INTRODUCTION

THE BUNDLE LOADING ATTACHMENT IS AN OPTION THAT ALLOWS THE LOADING OF COMPLETE BUNDLES ON THE SCOTCHMAN MODEL CPO-315-RFA COLD SAW. PLEASE READ ALL SECTIONS OF THIS MANUAL BEFORE USING THIS ATTACHMENT.

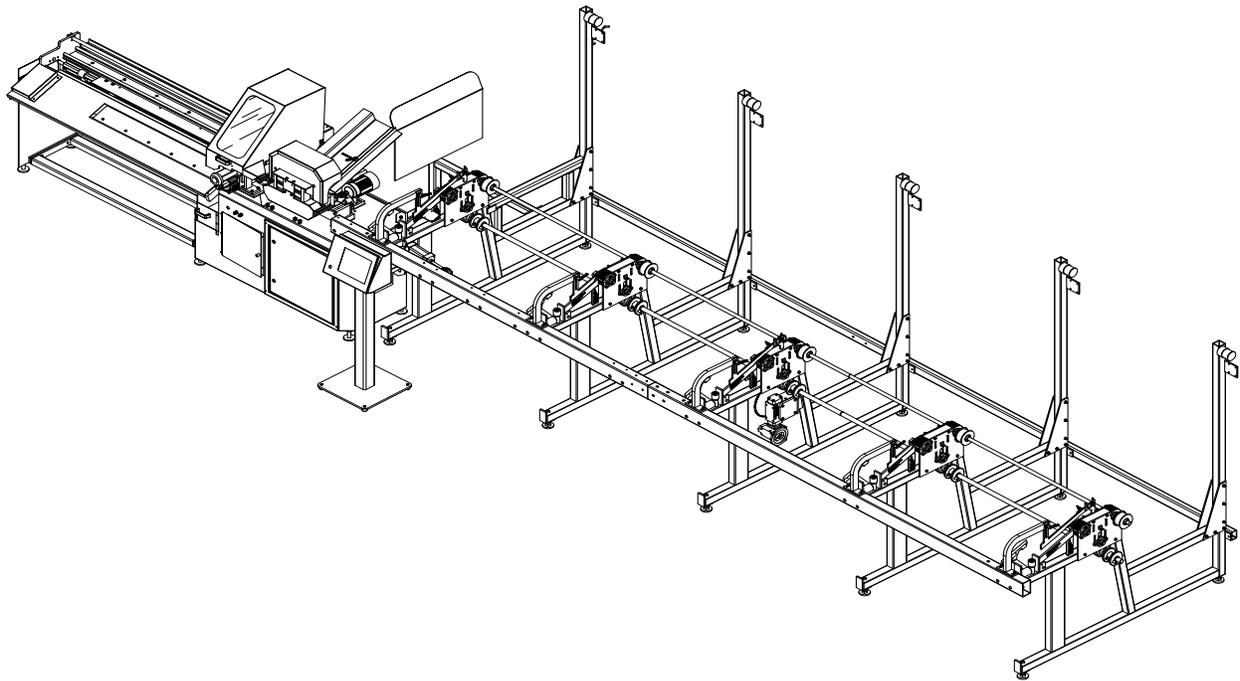


FIGURE 1

2.0 ELECTRICAL

This unit has its own self contained electrical panel.

It does not need to be connected to the saw's power supply to operate.

The motor on this attachment is 3/4 horsepower, 3 phase and draws 1.3 amps when wired for 230 volts and .85 amps when wired for 460 volt.

THE WIRING DIAGRAM IS IN SECTION 7.0 ON PAGE 26.

Connect the incoming power to the main disconnect switch (A) in the control panel.

Upstream protection for the motor must be provided by the user of the machine.

If the machine was not ordered for the right voltage, the attachment can be converted by rewiring the motor and changing the primary leads on the transformer.

3.0 SET-UP

3.1 CONTROL PANEL FUNCTIONS

SEE FIGURE 2 BELOW.

The control panel consists of four switches.

The MAIN DISCONNECT SWITCH (A) turns the power off to the control panel.

The STOP switch (D) stops the bundle loader functions but does not kill the power to the control panel.

This switch is a maintained switch and it must be manually pulled out each time it is depressed.

The START button (C) starts the loader functions.

The panel will not energize unless the selector switch (B) is in the START position.

The selector switch (B) is a three position switch.

It has a START position in the middle and it must be in this position to start the machine.

The FEED DOWN position relaxes the loading straps and the FEED UP position tightens them.

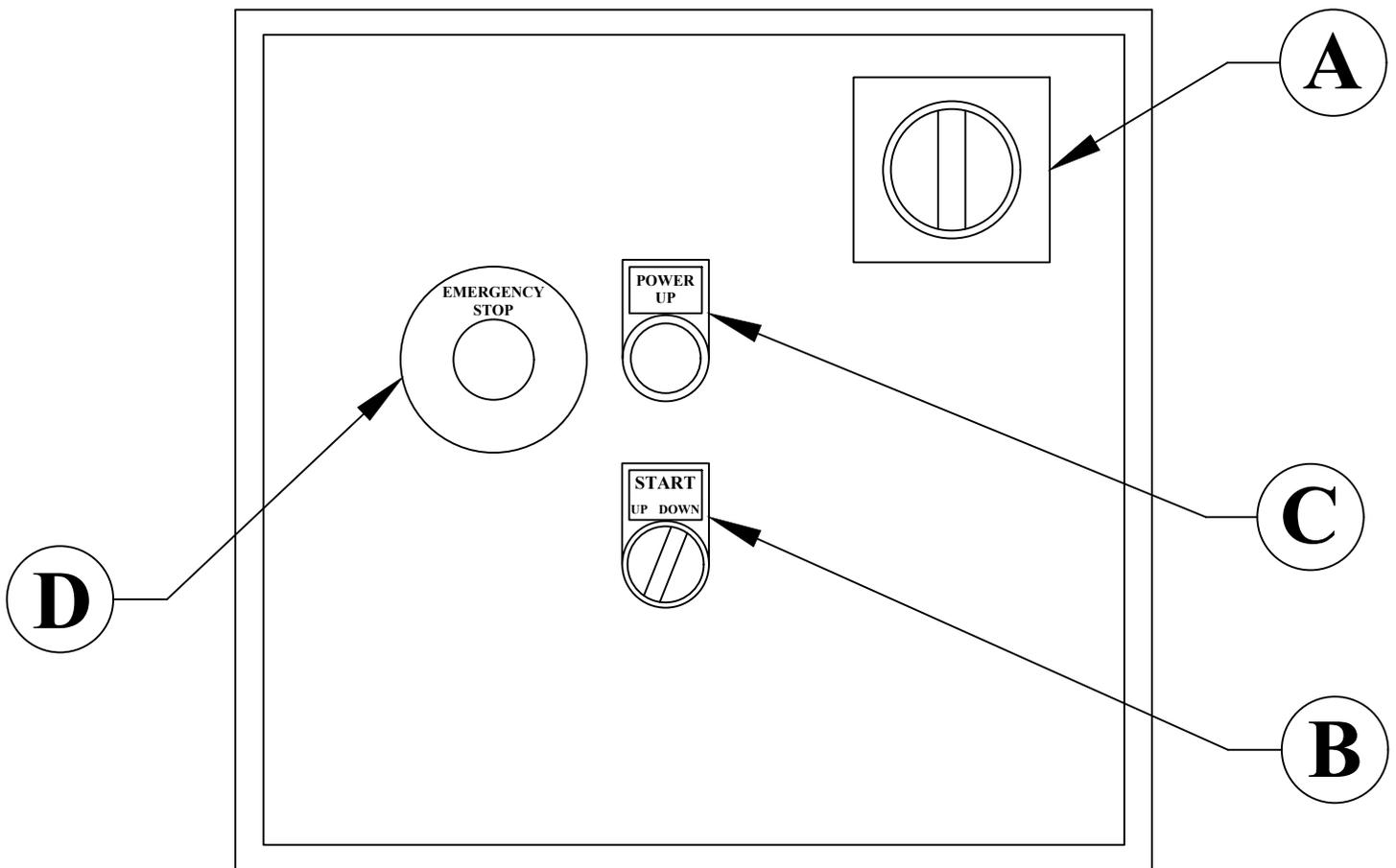


FIGURE 2

3.2 STROKE CONTROL SETTINGS

SEE FIGURE 3 BELOW.

The stroke is preset at the factory. **IF YOU SHOULD NEED TO RESET THE STROKE:**

Set the proximity switch (I) so that the down feed stops at a point where you can load the size of bundle you are using and have it load with a minimum amount of up travel to load the parts.

Set the proximity switch (K) so that the loader will load all of the parts in the bundle, without traveling so far that it draws excessive tension on the loading straps.

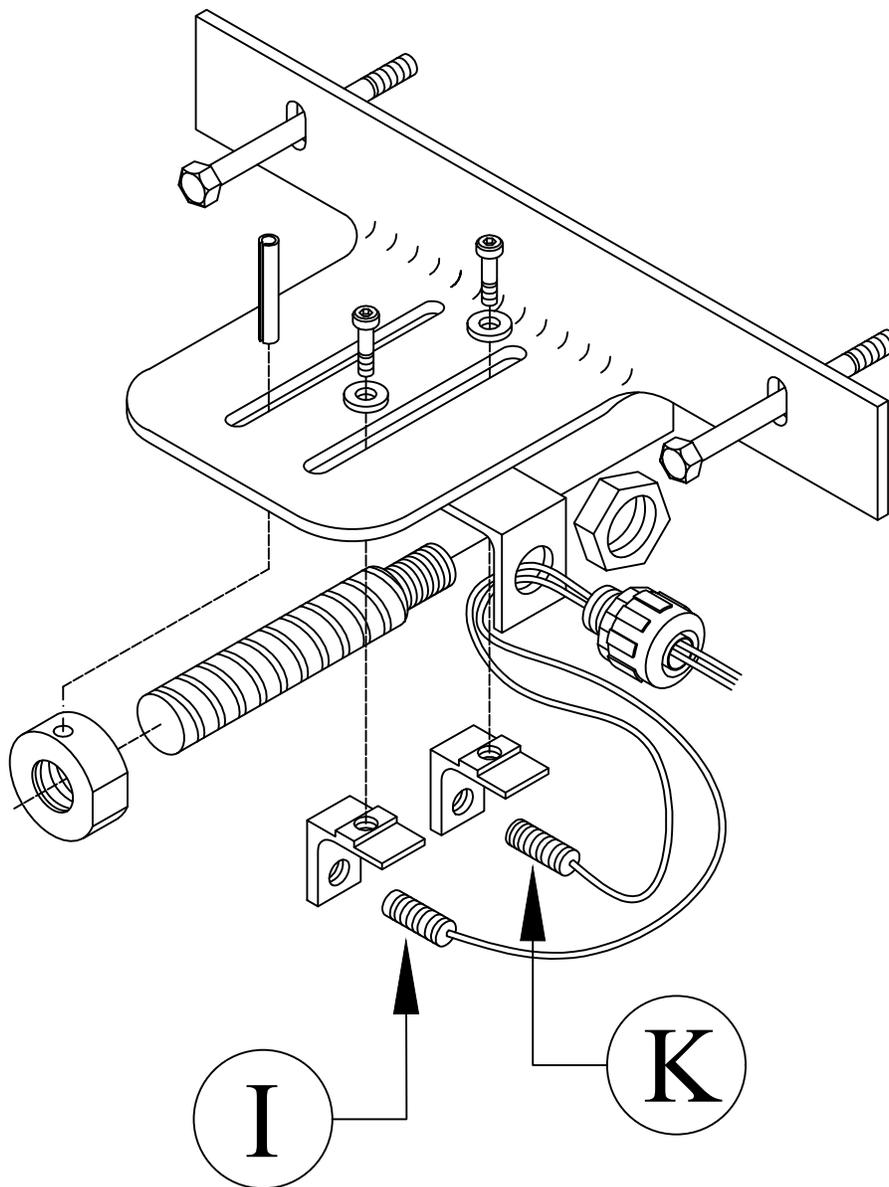


FIGURE 3

3.3 SUPPLY TABLE SET-UP

SEE FIGURE 4 BELOW.

All of the set-ups on the table must be changed each time the size of the material being processed changes.

TO ADJUST THE TABLE:

Adjust the supply table material guides (A). The distance between the bar (A) and the table arm (B) must be just a little larger than the thickness of the material. Failure to adjust this arm will cause the table to feed more than one layer of the material and will cause the machine to jam.

Adjust the guide rollers (C) to the size of the material. Leave a little clearance when adjusting the guide rollers, for variances in the material.

For square materials, there is an optional turn over devise that is used to feed the material in the same position every time.

Three of the material arms have proximity switches on them. Your material must be loaded so that it feeds past the first one of these switches. These switches are designed to prevent the loader from trying to load more than one piece onto the table at a time. When one of these switches is engaged, the feed belts will run in reverse, momentarily, to clear the jam.

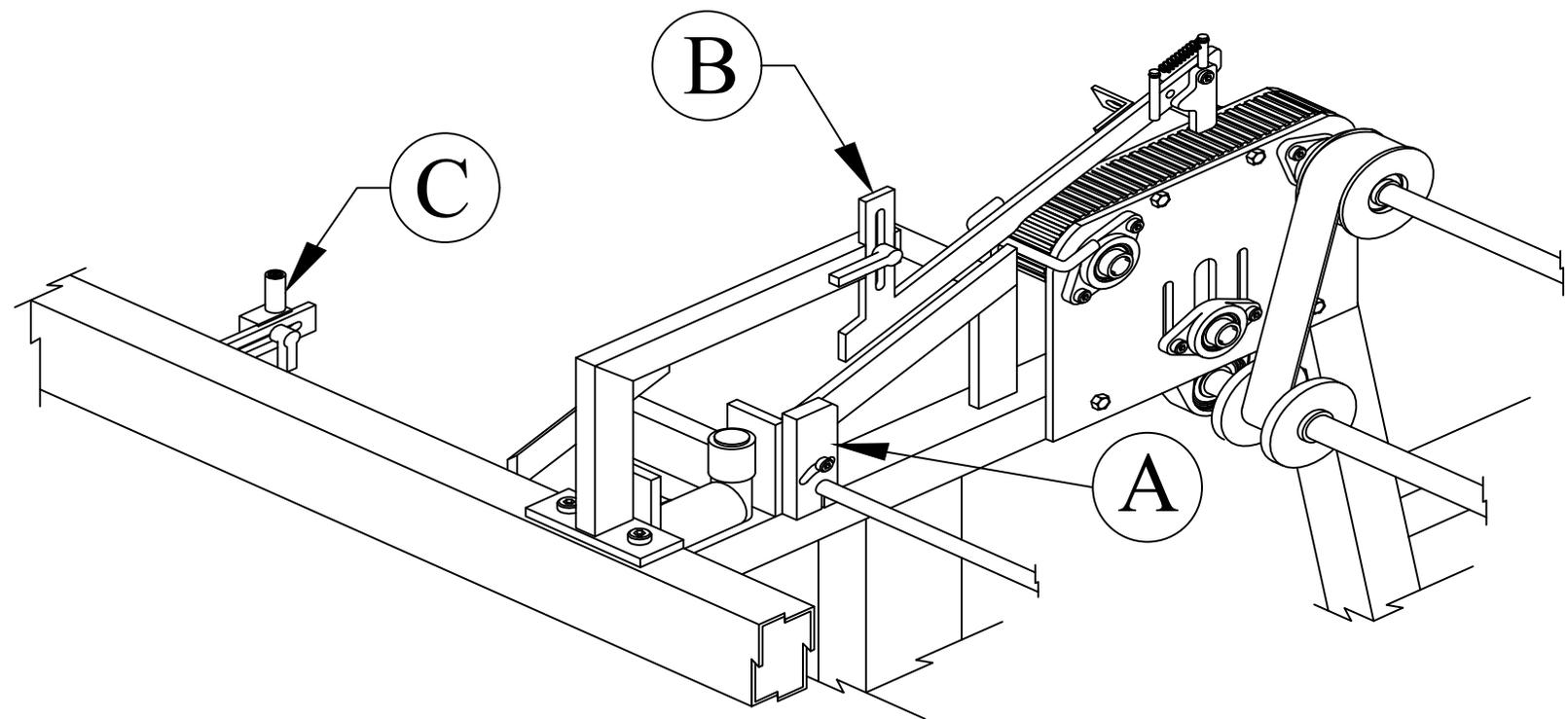


FIGURE 4

3.4 CAPACITIES

The maximum capacity for the bundle loader is 4,000 pounds (1815 Kg). The maximum capacity per strap is 800 pounds (365 Kg). For example, if you have a bundle of material 12 feet long, it will span two straps. Therefore, the most you can load at one time is 1,600 pounds (730 Kg).

4.0 MAINTENANCE

All of the shaft bearings should be greased once per day. The drive chains should be oiled once a week. The condition of the lifting straps should be checked every morning. They should be checked for frayed or broken strands and for oil and grease contamination that may weaken the straps. Any straps found with any of the above conditions should be replaced immediately.

5.0 TROUBLE SHOOTING

There are not many things that can fail on the bundle loader itself. Listed below are some of the possible problems and solutions.

THE LOADER MAY LOAD MORE THAN ONE PIECE ON THE TABLE, CAUSING A JAM.

If this happens, the guide arms are not properly adjusted or one of the proximity switches on the guide arm has failed, allowing the feed rollers to feed more than one piece at a time.

The material, no matter what length, must be loaded so that it feeds through the first guide (the one closest to the saw). The sensor that detects the material is attached to the first leg assembly. If the material is loaded in any other position, the sensor will tell the PLC that there is no material loaded.

THE STRAPS OVER TRAVEL, SHUTTING THE LOADER DOWN.

This is caused by the improper setting of the overall stroke of the loader. Place the selector switch in the START position. Press the START button and turn the selector switch to the FEED DOWN position. This should relax the lifting straps and reset the safety switch.

FOR INSTRUCTIONS ON SETTING THE STROKE, REFER TO SECTION 3.2.

THE LOADER WILL NOT LOAD MATERIAL ONTO THE TABLE.

The three position switch may not be in the right position. The material proximity sensor may have failed. The material proximity sensor has a power indicator light built into it that will tell you if the sensor is working.

5.1 PLC LED LIGHTS

ALL OF THE FUNCTIONS OF THE BUNDLE LOADER CAN BE ANALYZED BY CHECKING THE LED LIGHTS ON THE PLC IN THE MAIN CONTROL BOX.

THE LIGHTS ARE AS FOLLOWS:

#11

This is for the material proximity sensor on the supply table that senses when material is loaded on the table. This light should be lit if there is material loaded on the table.

#'S 12, 13, AND 14

These are the proximity switches on the guide arms that detect a material jam in the loading mechanism. Light 2 is the switch closest to the saw and 3 and 4 are the next two, respectively. These lights will only light if there is a jam and the switch is engaged. If one of these lights is lit and there is not a jam, the proximity switch is bad.

#15

This is the full forward proximity switch. If this light is lit, it tells you that the loader has reached the end of its stroke in the forward position. Also connected to this terminal is the safety switch that stops the loader if the proximity switch fails. This switch is a normally closed switch that is installed on the tool with the plunger depressed in an open position. If the upright is pulled away from the switch, it closes and shuts down the forward operation. If this happens, place the selector switch in the START position, start the loader and place the selector switch in the REVERSE position.

#16

This is the full reverse proximity switch. If this light is lit, the loader has reached its full down position on the loading straps.

#17

This is the up forward indicator. This light should be lit when the selector switch is in the forward position and the straps are loading material onto the feed table.

#18

This is the down reverse indicator. This light should be lit when the selector switch is in the REVERSE position and the straps are relaxing.

6.0 PARTS LISTS

6.1 STROKE CONTROL

ITEM	PART #	DESCRIPTION
A	049143	Stroke Mounting Plate
B	073350	M-10 x 100 HHCS
C	141511	5/16 x 1-3/4 Roll Pin
D	073626	M-10 x 05 SHCS
E	114020	3/8 Hardened Washer
F	049122	Contact Nut
G	049121	Stroke Control Screw
H	049120	Switch Mount
I	077795	Proximity Switch
J	061010	Cord Grip
K	077795	Proximity Switch
L	077121	M-20 Jam Nut

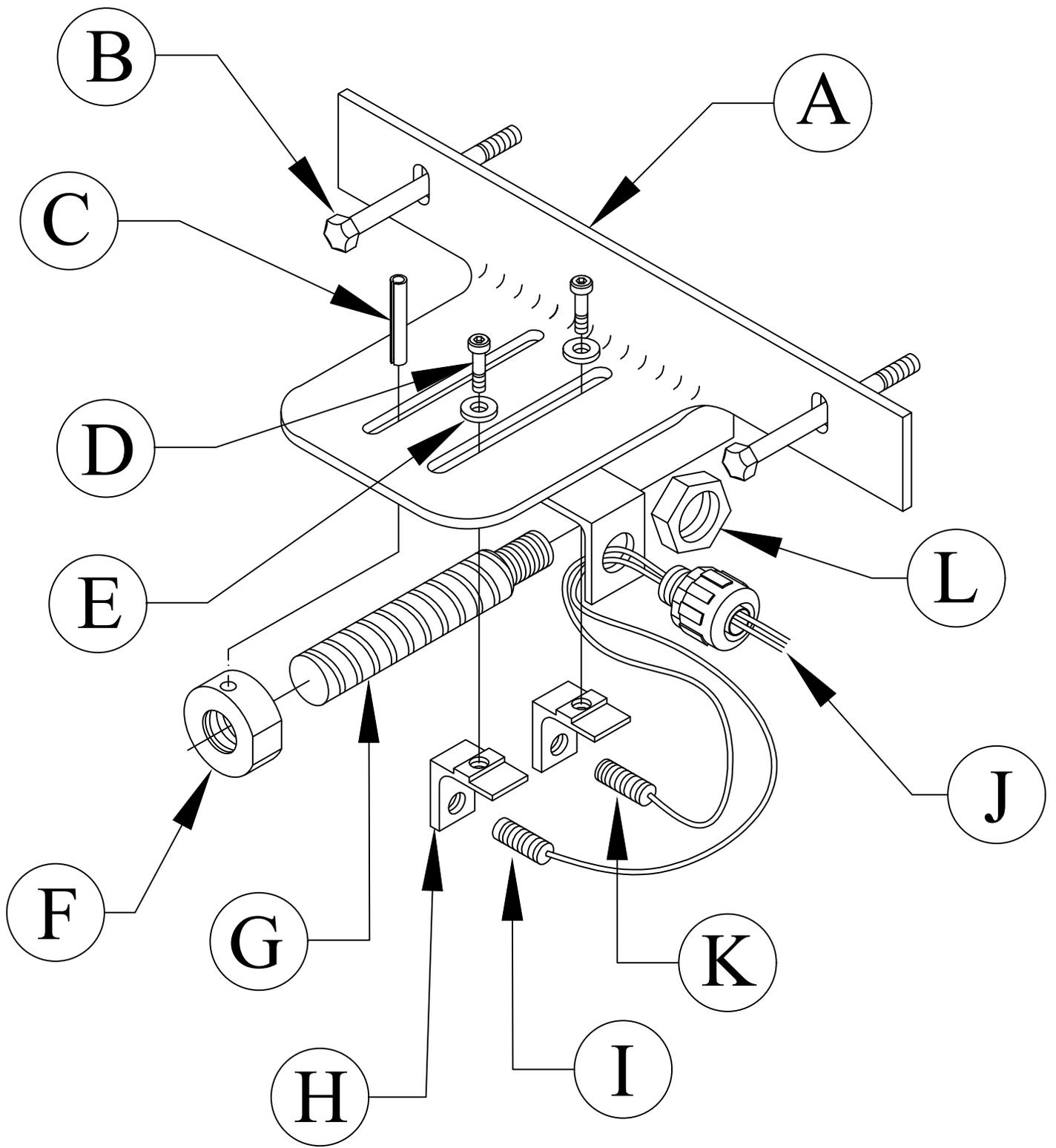


FIGURE 5

6.2 STRAP ROLLERS

ITEM	PART #	DESCRIPTION
A	049327	Bearing and Retainer
B	N/A	Comes With A
C	049115	Strap Reel
D	049200	1/4 x 2 Key
F	049324	Bearing
G	040072	Inductive Sensor
H	044578	Cylinder
H1	045656	Seal Kit
I	045581	Clevis
J	045582	Pivot Pin
K	049201	Leg #1 Stand Weldment - Cylinder Mount
L	201232	M-10 x 80 HHCS
M	114020	3/8 Hard Washer
N	208012	M-10 Hex Nut
O	049123	Roller
P	221001	M-4 x 35 SHCS
Q	061010	Cord Grip
R	061030	Rubber Washer
S	077746	1/4 x 90 Degree Swivel
T	049136	Stop Shield
U	045137	Load Arm

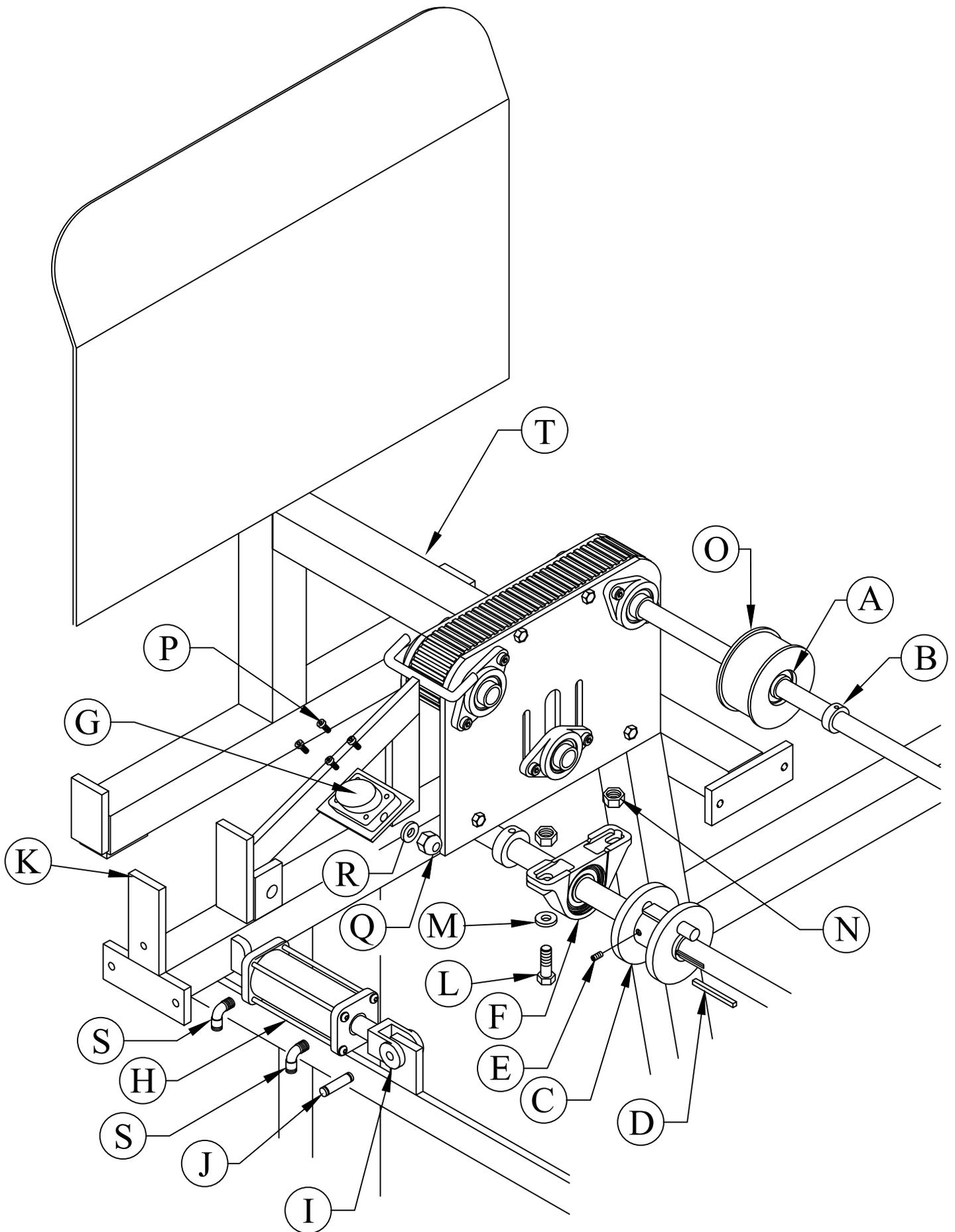


FIGURE 6

6.3 MATERIAL FEED BELTS

ITEM	PART #	DESCRIPTION
A	073626	M-10 x 20 SHCS
B	049321	Bearing SCJT 1 Inch
C	049133	Pulley Shaft (Short)
C1	049132	Pulley Shaft (Long)
D	049244	Side Plate
E	049128	Belt Back Up Plate
F	049125	28 Tooth Sprocket
G	004123	1/4 x 1 Key
I	049318	Feed Belt
J	049127	Short Shaft
K	073350	M-10 x 100 HHCS
L	049126	14 Tooth Sprocket
M	208012	M-10 Hex Nut
N	026623	M-10 Tee Nuts
P	219047	M-10 x 12 Set Screw
Q	221210	M-10 x 25 SHCS
R	201235	M-10 x 80 HHCS

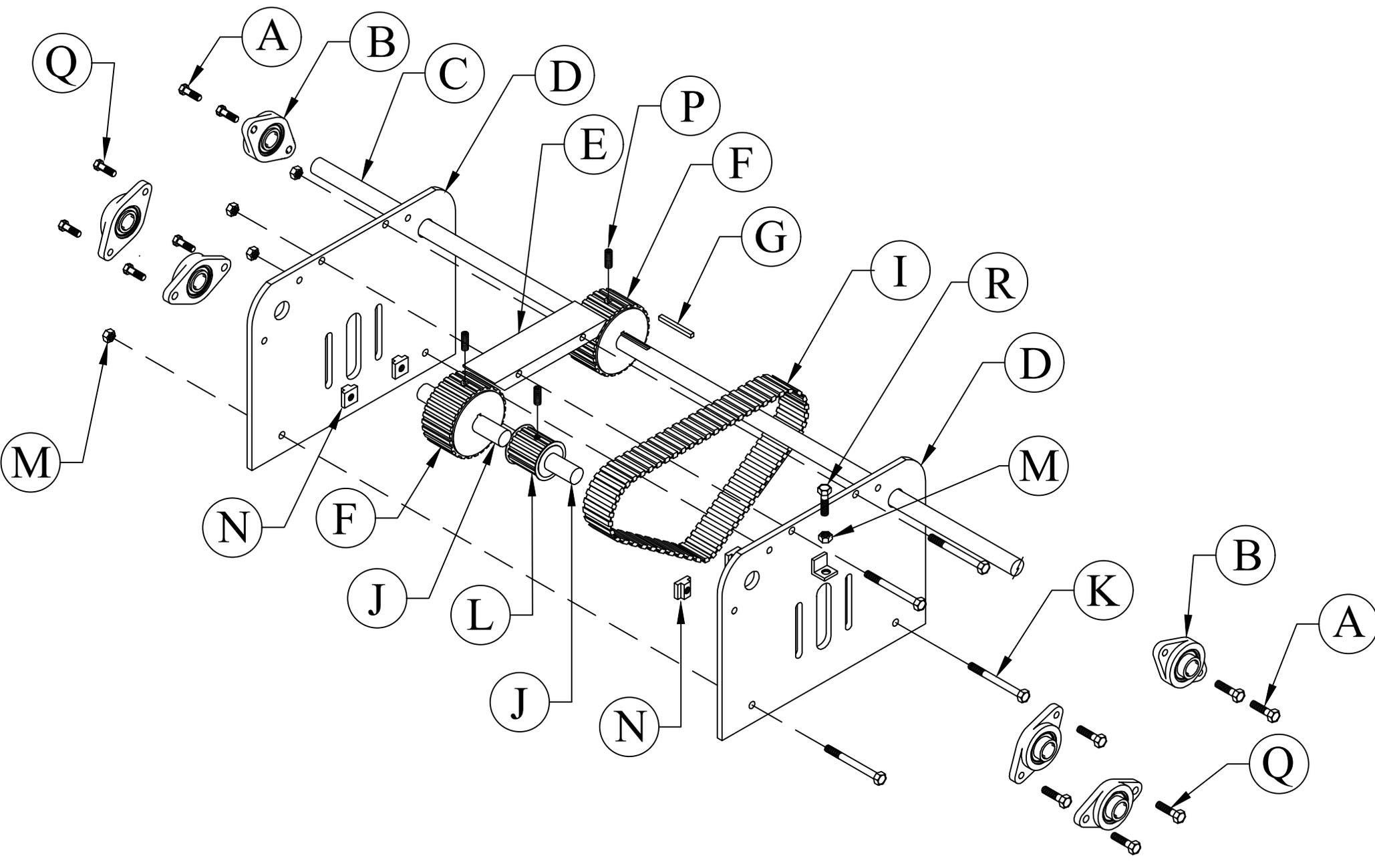


FIGURE 7

6.4 DRIVE ASSEMBLY

ITEM	PART #	DESCRIPTION
A	049133	Pulley Shaft (Short)
A1	049132	Pulley Shaft (Long)
B	049130	Reel Shaft (Long)
B1	049131	Reel Shaft (Short)
C	049358	#40 Chain
D	049200	1/4 x 2 Key
E	049352	70 Tooth Sprocket
F	049360	#60 Chain
G	049356	28 Tooth Sprocket
H	049354	16 Tooth Sprocket
I	049350	18 Tooth Sprocket
J	049312	Gear Box
K	049209	Motor
L	049301	Motor Stand
M	049343	Drive Guard (Not pictured)
N	049303	1-1/4 Coupler (Not Pictured)
O	103212	3/8 x 1-1/2 HHCS
P	114020	Hardened Washer
Q	049142	Support Beam
R	049300	Coupler (Not Pictured)

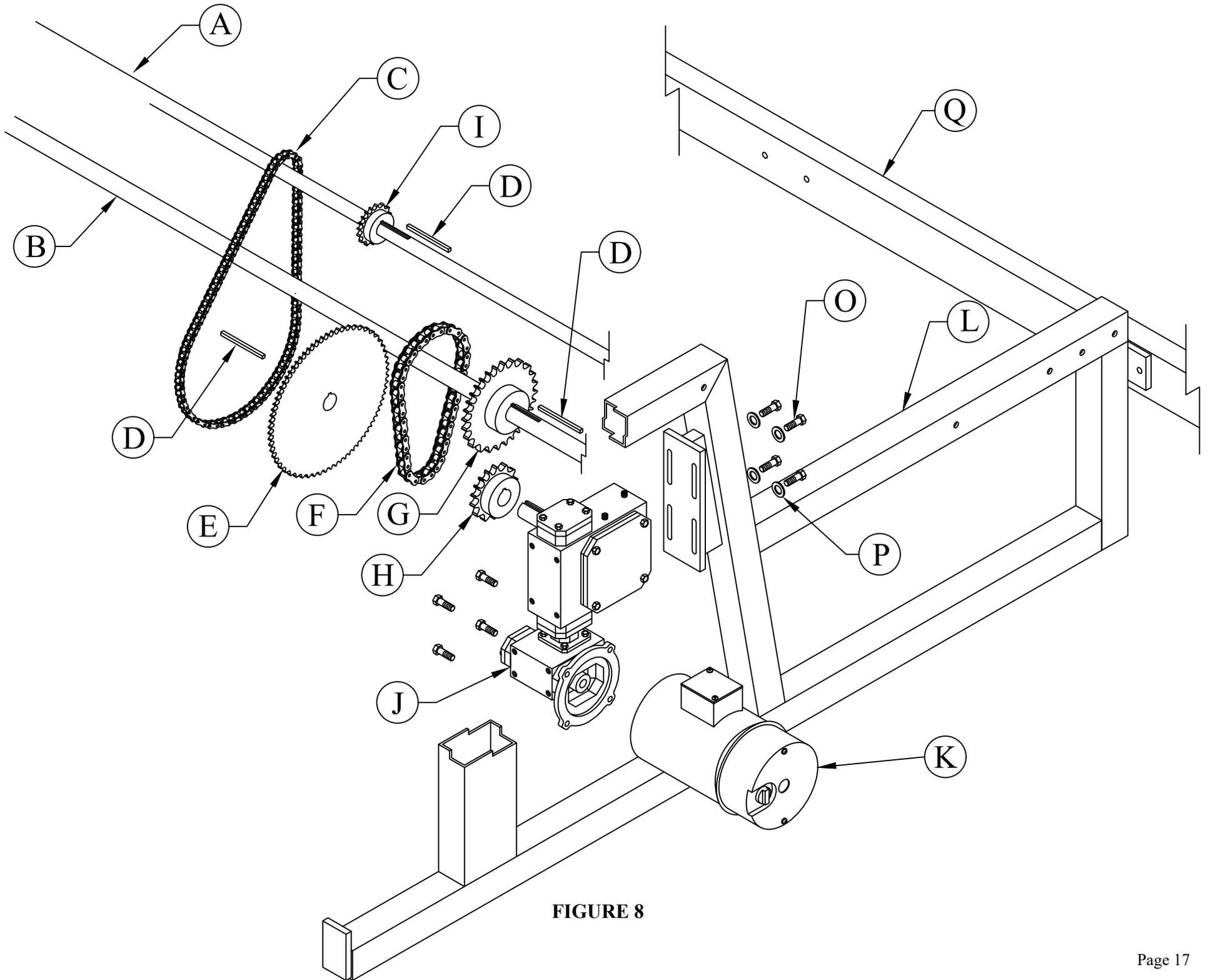


FIGURE 8

6.5 FRAME ASSEMBLY

ITEM	PART #	DESCRIPTION
A	229220	M-10 x 12 x 50 Shoulder Bolt
B	079213	Vertical Roller
C	214016	M-16 Washer
D	079221	Roller Bearing
E	079210	Roller
F	079211	Roller Shaft
G	079221	Bearing
H	214016	M-16 Washer
I	049220	Sensor Bracket
J	201232	M-10 x 80 HHCS
K	114020	Hardened Flat Washer
L	219047	M-10 x 12 Set Screw
M	045296	Guide Roller
N	049217	Foot Assembly
O	208024	M-24 Hex Nut
P	049100	Stand
Q	079212	Roller Stand
R	049306	Straps
S	049344	Clamp Top
T	049111	Strap Clamp Pad
U	221210	M-10 x 25 SHCS
V	049135	Upright
W	049205	Side Plate
X	073350	M-10 x 100 HHCS
Y	208012	M-10 Hex Nut
Z	046093	Limit Switch
AA	229230	M-10 x 12 x 80 Shoulder Bolt
BB	045118	Material Advance Arm
CC	049345	Bottom Clamp
DD	230207	M-10 x 20 FSHCS
EE	049330	Foot Anchor

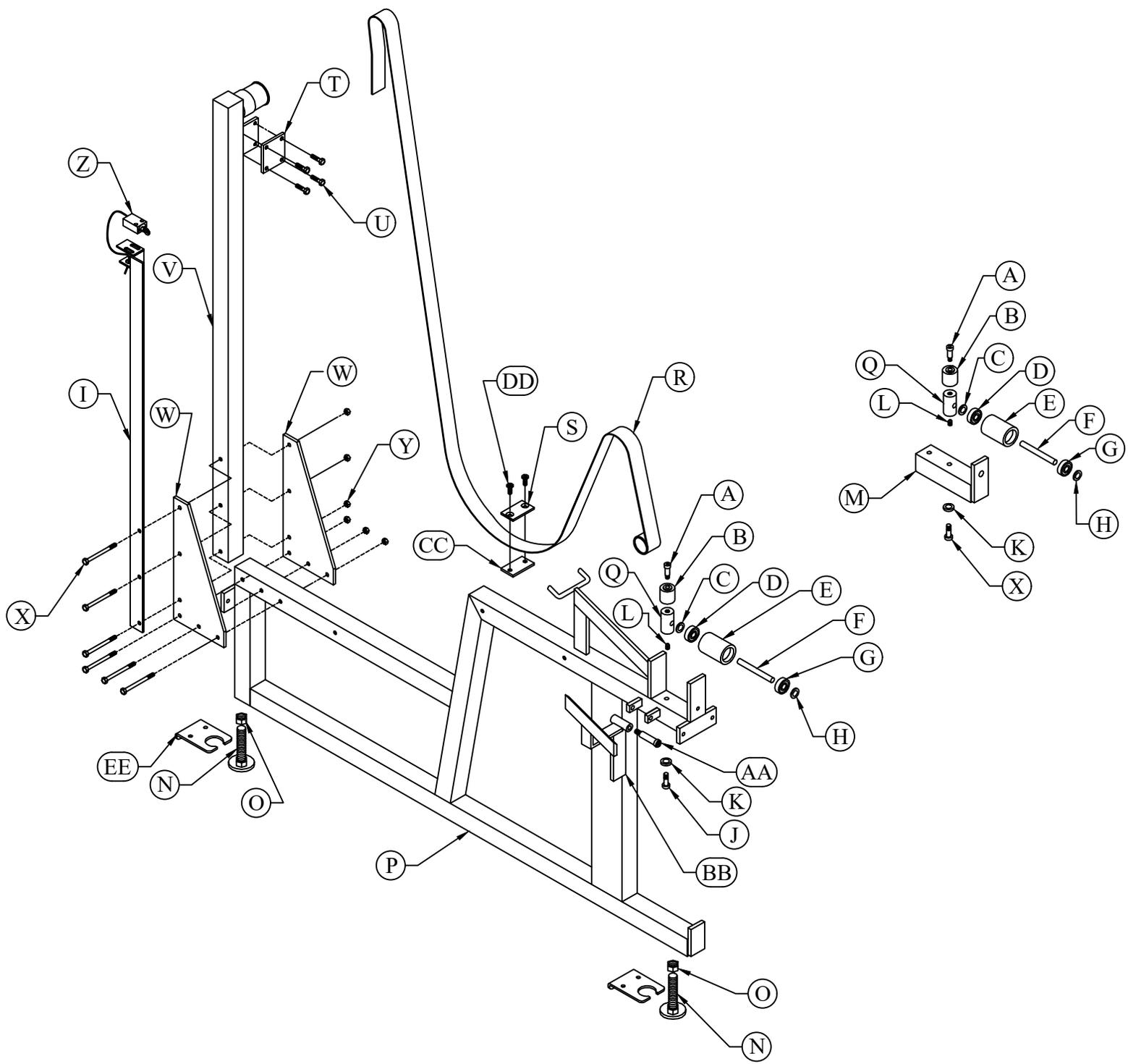


FIGURE 9

6.6 GUIDE ASSEMBLY

ITEM	PART #	DESCRIPTION
A	045101	Guide
B	045126	Material Guide
C	080061	Handle
D	221210	M-10 x 25 SHCS
E	045129	Roller Block
F	043003	Nylon Roller
G	229225	M-10 x 12 x 70 Shoulder Bolt
H	221210	M-10 x 25 SHCS
I	080061	Handle
J	045123	Roller Mount
K	045132	Carrier Beam
L	229210	M-8 x 12 x 16 Shoulder Bolt
M	046027	Spring
N	049129	Contact Plate
O	077795	Proximity Switch
P	049119	Guide (Long)
Q	049255	Nylon Clamp
R	061005	1/2 Inch Conduit
S	061010	Cord Grip
T	121205	3/16 x 1/2 SHCS
U	114020	3/8 Hardened Washer
V	141215	Roll Pin
W	214012	M-10 Flat Washers

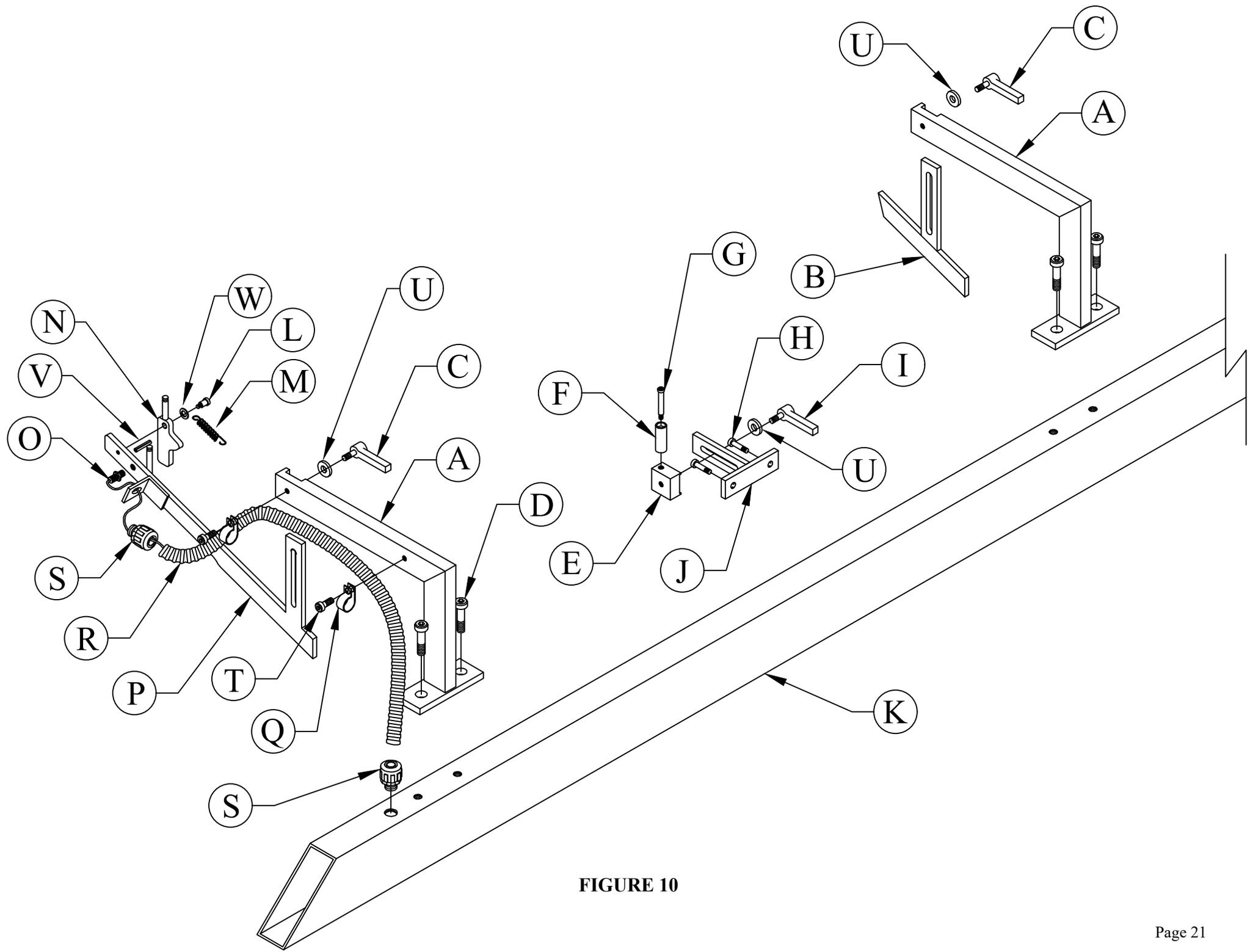


FIGURE 10

6.7 ELECTRICAL UNIT

ITEM	PART #	DESCRIPTION
A	048100	Disconnect Switch
B	011843	3 Position Switch
B1	011844	Knob
C	048100	Start Switch Actuator
C1	048045	24 Volt Lamp
C2	048050	Lamp Cover
D	048125	E-Stop Activator
D1	048130	E-Stop Switch
E	049400	Control Box Assembly
F	049146	Mounting Bracket
G	049147	Mounting Bracket
H	115011	Greer Nut
I	158201	Grommet
J	221210	M-10 x 25 SHCS
K	061010	Cord Grip
L	061030	Rubber Washers
M	049370	460 Volt Overload
M1	049375	208-230 Volt Overload
N	048030	24V Power Supply
O	047405	PLC

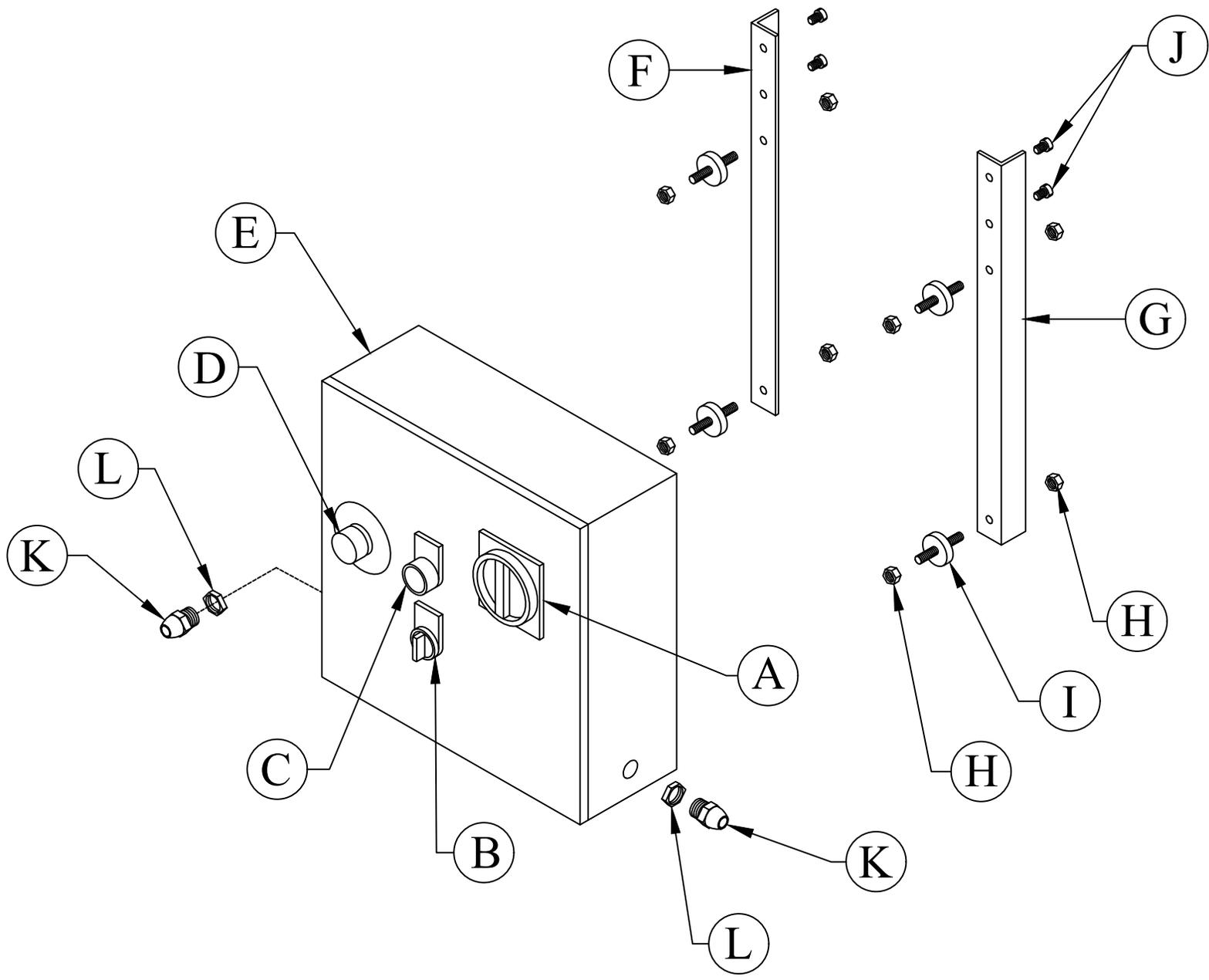


FIGURE 11

7.0 WIRING DIAGRAM

