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INSTRUCTIONS FOR HEAVY DUTY AUTOMATIC STOP

COIL WINDING MACHINE

CROWN MODELS 2015 & 2016

The Crown Heavy Duty Coil Winding Machine is self-contained, variable speed, power drive, designed for rapid production of all types of coils. It is designed for use with all Laycock/Crown/S&W Coil Winding Heads, and other similar winding forms.

Driven by a 1/2HP, 1750RPM Motor, and variable speed transmission, the output speed range may be varied from 40 to 400RPM. A maximum rated torque of 210 in-Lbs is developed at high speed and approximately 775 in-Lbs at the slow speed. **CAUTION: DO NOT EXCEED RATED LOADS.**

INSTALLATION

1. Power requirements are 115VAC, 50/60Hz, single phase for Model 2015, and 230VAC, 50/60Hz, single phase for Model 2016.
2. The Machine should be set up allowing clearance for the swing on the winding heads and access to the motor compartment for maintenance.
3. **DANGER:** It is important that the machine be **SECURELY BOLTED TO A FIRM FOUNDATION**. Unless the unit is securely bolted, objectionable vibration will occur and the machine may **PULL OVER** when heavy loads are applied. **Do not operate machine without side panels installed with all mounting screws.**
4. The wire guide bar, for use in guiding the wire to be wound on the Crown Coil Winding Heads, is held in position by a clamp arrangement and two square head cap screws and protrudes from the hole in the upper right hand corner of the stand. It must be adjusted from its position in shipment so that the end-most portion is parallel to the Coil Winding Machine face plate shaft.

CAUTION:

Before using Machine, fill gear housing with three (3) quarts SAE #30 (2.8 liters), non-detergent oil. To fill, remove plug from top of gear housing. Replace plug before operating the unit.

Requires air to operate the clutch and brake of the Unit. Connect air inlet supply line to a filter/regulator for maintenance free operation and long life.

NOTE: DO NOT OPERATE MACHINE WITH MORE THAN 70 PSI (pounds per square inch).

NOTE: MOTOR IS NOT THERMAL PROTECTED. THEREFORE, EXTERNAL OVERLOAD PROTECTION MUST BE PROVIDED BY USER. ALL ADJUSTMENTS HAVE BEEN MADE AT THE FACTORY.

OPERATION:

1. Connect the machine to the proper power and air source (70 PSI).
2. To start machine, the START Button must be depressed and turn knob to BRAKE ON. To operate the machine, foot switch must be depressed. For emergency stop before preset number is reached, release foot switch, machine will stop instantly.
3. Turn the gear shift control on the front of the gear case to "SLOW". (It may be necessary to rock the face Plate slightly when engaging the transmission). The gearshift control **MUST NOT BE SHIFTED WHILE THE DRIVE SHAFT IS TURNING.**

The speed adjust crank on the front of the machine will allow adjusting variable speed ranges. gearshift in "FAST" range is 130-400RPM and Gearshift in "SLOW" range is 40-110RPM. Clockwise rotation of crank increases speed, counterclockwise rotation reduces speed. **TURN ONLY WHILE MOTOR IS RUNNING.**

4. Check the clutch and brake action in both the "FAST" and "SLOW" positions to see that they operate satisfactorily.

OPERATION OF COUNTER:

The front panel pushbuttons are identified by two different sets of references and will cause two different reactions in the course of making a data entry.

To access the Counter Load value for the desired counter; first, press the "DISP" key, so that the display is indicating the counter value which is to be changed. **Note:** Counter need to be on (A) to preset the total turns.

To set the preset values press letter "P" on face of the counter, enter number of turns per group. Changing the digits can be accomplished by repeatedly pressing the key beneath the digit position you wish to change or by holding the key down, allowing the digit to cycle. The new value will be entered when the "E" key is pressed. (Example: For 30 turns press "P" then #2 til it reads (3) and #1 til reads (0) so the winder will turn 30 turns and stop. Press "E" to store the value and start winding.

NOTE: There is a 5 sec delay between groups to move to the next slot.

Press the "DISP" key to change form counter "A" to "B". "B" counter count the number of turn per group and the "A" counter count total turns per coil.

Toggle switch on side of the counter is for counting down if over count occurs. Toggle up for count up and if counting down is needed toggle switch down, turn off brake and manually turn head backwards to remove over turns till correct number is reached. Turn toggle switch back up and continue winding. To start next coil press "R" key and continue repeat till all coil are finished.

Counter has memory, which will hold preset number until changed.

Foot switch may be released at any time before count is reached without disturbing the preset number. Example: Preset set for 15 turns. Foot switch is released at 8 turns, simply repress foot switch and Unit will continue to preset count. When preset count is reached, unit will stop. Reset the counter to zero for the next set of coils. For manual operation, set preset number to zero, unit will count manually. When count is achieved, press RESET Button to reset counter.

Functions set at the factory.

MAINTENANCE:

TO REPLACE BELT

- A. Disconnect power and air to winder machine.
- B. Remove belt guard.
- C. Remove left side panel.
- D. Remove air line to the clutch unit.
- E. Rotate clutch unit so belt will slide out.
- F. Replace belt - Dayton No. 4L-500 or equivalent (1/2" x 50") (Crown 807121).
- G. Rotate clutch unit and connect air Line to clutch unit.
- H. Replace left side panel and belt guard. When replacing panels start all screws before tightening, to property align holes.

DANGER: ALWAYS REPLACE SIDE PANELS BEFORE USING MACHINE TO PREVENT HOUSING COLLAPSE AND ELIMINATE EXCESSIVE VIBRATION.

- I. Reconnect power and air to winder machine.

LUBRICATION:

GEAR CASE

Before draining and flushing gear case, be sure to provide a gutter or other suitable drainage path. Drain and flush gear case after every 1500 hours of operation. Use ONLY SAE #30 (2.8 liters), non-detergent oil. Three (3) quarts of oil are required to fill the case.

WARRANTY

Crown's Motor Repair Equipment is warranted to the original owner against defects in materials and workmanship for ninety (90) days from date of purchase. Any part found to be defective (except by overloading, misuse, neglect, fire, accident, tampering with by unauthorized serviceman, or other cause beyond the manufacturer's control), will be replaced or repaired free of charge.

SPECIFICATIONS FOR COIL WINDING MACHINE

MODELS 2015 and 2016

Primary power:

Model #2015: 115VAC, 60Hz, 1 phase.

Model #2016: 230VAC, 60Hz, 1 phase.

Construction (Packaging): Heavy gauge steel Base, corrosion protected. Cast aluminum gear housing with steel spur gears. Two (2) speed gear in housing for maximum torque.(77 ft-lbs in fast speed, 770 ft-lbs in slow speed)

Controls: All controls are at the operators finger tips. Speed is variable form 40 - 400 RPM. (Slow speed = 40 -110 RPM, Fast speed = 110 - 400 RPM).

Operation: Preset counter to number of turns required, press foot switch, machine runs to preset number and stops instantly when preset number is reached. Release foot switch and press reset to zero.

Unit will be ready for the next coil. (For operator safety, in case of an emergency, the machine stops instantly when the Foot Switch is released).

Machine comes equipped with a 10" face plate. The output shaft is center tapped for 1/2" -3 NC thread to allow attachments.

Spare parts:

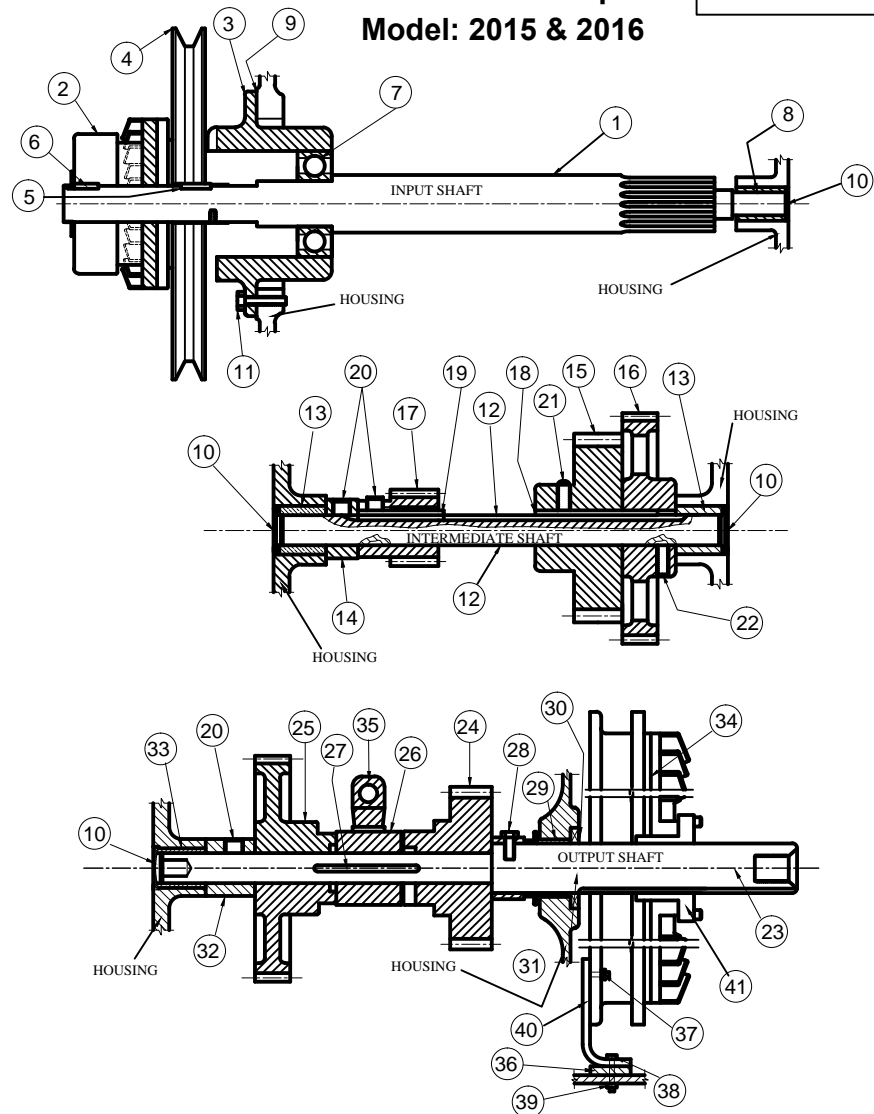
To be recommended on request. Contact Factory.

Enclosures: Operating instructions.

Part List for Figure # 1			
Find No.	Part Number	Part Name	No. Req.
1	807210	INPUT SHAFT	1
2	807205	CLUTCH	1
3	807108	BEARING RETAINER (INPUT SHAFT)	1
4	807211	"V" PULLEY	1
5	807228	KEY, SQUARE 3/16 (ANGLE CUT 1-1/8")	1
6		KEY, SQUARE 3/16 x 1-1/8"	1
7	807123	BALL BEARING (INPUT SHAFT)	1
8	807155	BEARING SLEEVE	1
9	807154	GASKET (RETAINER)	1
10	807102	PLUG (1-1/8" DIA)	1
11	807134	SCREW, HEX. HD CAP (5/16-18NC x 1)	1
12	807090	SHAFT INTERMEDIATE	1
13	807168	BEARING SLEEVE (INTER. SHAFT)	2
14	807159	COLLAR SET (INTER. SHAFT)	1
15	807091	GEAR (INTER. SHAFT) (35T)	1
16	807092	GEAR (INTER. SHAFT) (54T)	1
17	807093	PINION (INTER. SHAFT)(15T)	1
18	807228	KEY, SQUARE(3/16X2-3/4)(INTER. SHAFT)	1
19	807228	KEY, SQUARE(3/16X1-3/4)(INTER. SHAFT)	1
20	807041	SET SCREW CLIP PT (5/16-18X1/4")	2
21	807051	SET SCREW CLIP PT (5/16-18X1/2")	2
22	807158	SET SCREW CLIP PT (1/4-20X5/8")	1
23	807094	SHAFT OUTPUT	1
24	807095	GEAR (OUTPUT. SHAFT) (35T)	1
25	807096	GEAR (OUTPUT. SHAFT) (55T)	1
26	807097	DOG, CLOUTCH (OUTPUT SHAFT)	1
27	807162	KEY (3/19X5/16X1-51/64)(OUTPUT SHAFT)	1
28	807217	SCREW, HEX. HD. CAP.(1/4-20X5/8)	1
29	807164	BEARING SLEEVE (OUTPUT SHAFT)	1
30	807215	SEAL, OIL(VICTOR #62006)(OUTPUT SHAFT)	1
31	809024	SPROCKET, LADDER CHAIN (#1-20T)	1
32	807099	COLLAR. SET (OUTPUT SHAFT)	1
33	807163	BEARING SLEEVE (OUTPUT SHAFT)	1
34	807259	PNEUMATIC FRICTION BRAKES	1
35	807073	SPEED SHIFTING YOKE	1
36	806034	TORQUE BRACKET SPACER	1
37		NUT (3/8-16)	1
38		SCREW (5/16-18 X 1")	2
39		NUT (5/16-18)	2
40		BRAKE TORQUE BRACKET	1
41		QD HUB FOR 1 1/4" DIA. SHAFT	1

**Automatic Stop
Model: 2015 & 2016**

FIGURE 1

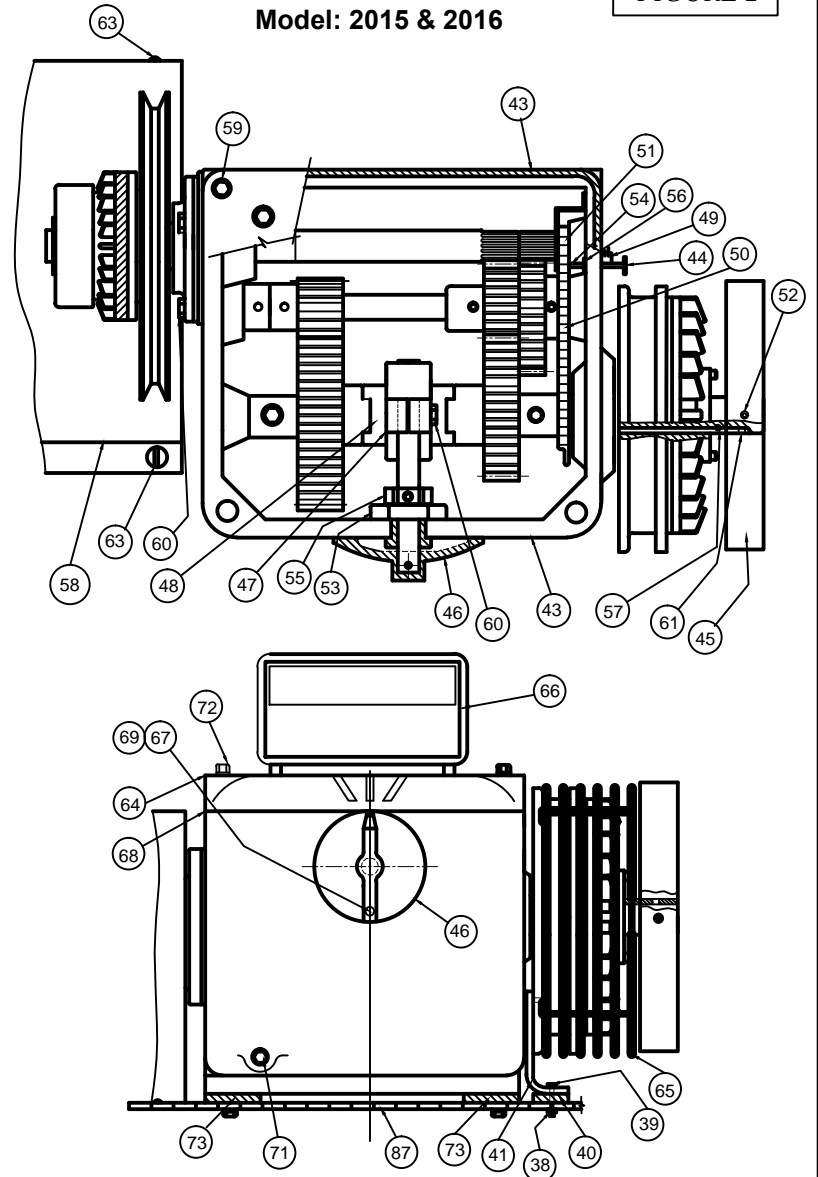


Part List for Figure # 2

Find No.	Part Number	Part Name	No. Req.
38		SCREW (5/16-18 X 1")	2
39		NUT (5/16-18)	2
40	806034	BRAKE TORQUE BRACKET	1
41		TORQUE BRACKET SPACER	1
43	807067	GEAR HOUSING	1
44	809014	KNOB	1
45	807244	FACEPLATE	1
46	500007	INDICATOR KNOB & SHAFT ASSEMBLY	1
47	807073	YOKE SHIFTER	1
48	807074	THROW-OUT COLLAR	1
49	807208	ELECTRONIC PICKUP	1
50	807019	LADDER CHAIN (17")	1
51	807249	SPROCKET (COUNTER SHAFT)	1
52	807051	SET SCREW CUP PT (5/16-18NC x 5/8)	2
53	807135	NUT HEX HD (7/8-14NC)	1
54	806030	SPRING	1
55	807112	COLLAR SET (1/2 DIA)	1
56	807247	PLUNGER	1
57	807227	KEY SQUARE (1/4" SQUARE ENDS) 4 5/16	1
58	806012	BELT GUARD	1
59	807141	SCREW SOC HD CAP (5/16-18NC x 1)	4
60	807134	SCREW HEX HD CAP (3/8-16NC x 1)	3
61	807041	SET SCREW SOC CUP PT (5/16-18NC x 5/16)	2
62	N/A		
63	807223	SCREW RD HD MACH (5/16-18 x 1/2)	4
64	807068	COVER GEAR HOUSING	1
65	807261	BRAKE GUARD	1
66	8072501	ELECTRONIC COUNTER	1
67	807082	DETENT PIN	1
68	807113	COVER GASKET	1
69	807136	DETENT SPRING	1
70	807260	BUSHING	1
71	807024	PIPE PLUG (SOC TYPE) (1/8-27NPT)	1
72	807042	VENT PLUG (SQ HD) (1/8-18NPT)	1
73		GEAR HOUSING SPACER	4
87	807065	BASE	1

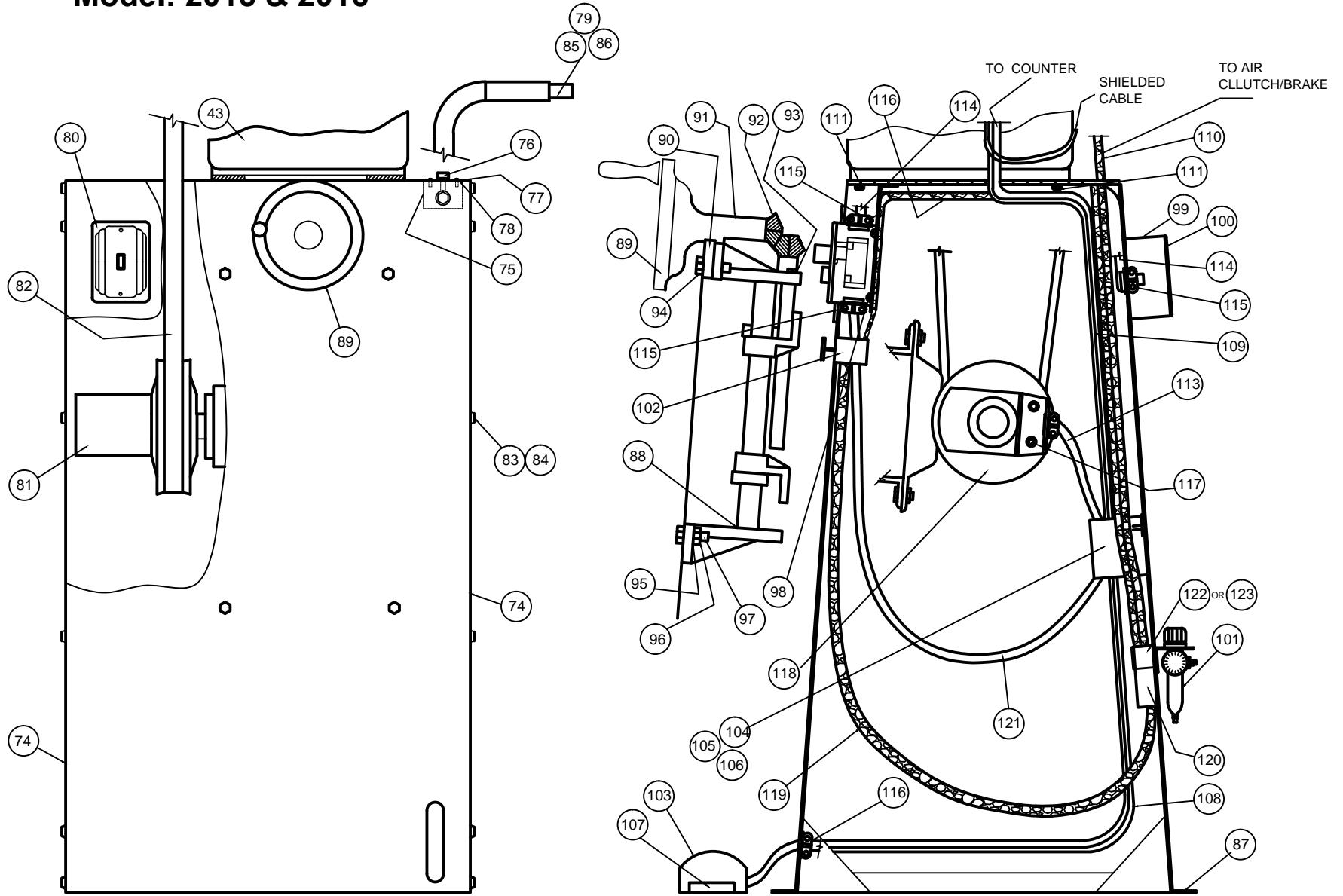
Automatic Stop
Model: 2015 & 2016

FIGURE 2



Automatic Stop Model: 2015 & 2016

FIGURE 3



Part List for Figure # 3

Find No.	Part Number	Part Name	No. Req.
43	807067	GEAR HOUSING	1
74	807066	BASE SIDE COVERS	2
75	807084	BRACKET, GUIDE BAR	1
76	807145	SETScrew SQ. HD. (CLIP PT) (1/4-20NC X 3/4)	2
77	807140	SCREW RD. HD. MACHINE (10-32NF X 5/8)	6
78	807167	WASHER, LOCK (INTERNAL) (10-32 SCREW)	4
79	807085	BAR, GUIDE	1
80	807117	SWITCH, STAR/STOP	1
81	807120	PULLEY, VARIABLE SPEED	1
82	807121	"V" BELT	1
83	807166	SCREW, FLAT HD MACHINE (10-32NC X 1/2)	30
84	807165	WASHER, STOPBEAD (#10 SIZE SCREW)	30
85	807180	ASSEMBLY, LARGE SPINDLE	1
86	807179	ASSEMBLY, SMALL SPINDLE	1
87	807065	BASE	1
88	807083	BASE, MOTOR	1
89	807109	WHEEL, HAND	1
90	807075	YOKE BRACKET, CONTROL SHAFT	1
91	500001	ASSEMBLY, CONTROL SHAFT	1
92	807106	GEAR, MITRE(MOTOR BASE)(16P-16T)	2
93	807126	SETScrew, SOC. CLIP PT (1/4-20NC X 1/4)	1
94	807134	SCREW, HEX, HD CAP (5/16-18NC X 7/8)	4
95	807131	WASHER, FLAT (5/16)	5
96	808030	WASHER, LOCK (5/16)	6
97	808025	NUT, HEX (5/16-18NC)	6
98	800036	SCREW, PAN HD. (TAPPING)(#8-18 T.P.I.)	2
99	807118	BOX, ELECTRICAL ("HANDY" BOX)	1
100	806010	COVER, "HANDY BOX"	1
101	806029	REGULATOR/FILTER W/GUAGE	1
102	806028	ON/OFF AIR VALVE, ROTATORY SELECTOR	1
103	807214	GUARD (FOOT SWICHT COVER)	1
104	500023	ASSEMBLY, CABLE	1
105	807238	JUNCTION BOX	1
106	807239	JUNCTION BOX COVER	1
107	807252	ASSEMBLY, FOOT PEDAL SWITCH	1
108	500021	LEAD WIRE (BOX TO FOOT SWITCH)	1
109	500022	LEAD WIRE (BOX TO COUNTER)	3
110	500018	AIR HOSE ASSEMBLY	4
111	807152	SCREW, HEX. HD CAP (3/8-16NC X 1")	4
112	807127	WASHER, LOCK (3/8)	1
113	500016	LEAD WIRE (SWITCH TO MOTOR)	1
114	500012	LEAD WIRE (HANDY BOX TO SWITCH)	1
115	807132	CORD CLAMP	5
116	807223	AIR HOSE ASSY, AIR VALVE SW TO CLUTCH	1
117		NUT, HEX (8-32)(STD)	2
118	805001	MOTOR, ELECTRIC	1
119	500019	AIR HOSE ASSEMBLY	1
120	806027	SOLENOID AIR VALVE	1
121	500015	LEAD WIRE ASSEMBLY (BOX TO SWITCH)	1
122	807150	COIL 120V SOLENOID ONLY	1
123	806026	COIL 240V SOLENOID ONLY	1