



# LAYCOCK SYSTEMS, INC.

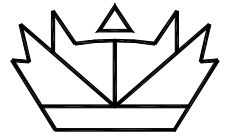
1601 N. 43<sup>rd</sup> Street

Tampa, FL 33605-5937

Phone: 813-248-3555, Fax: 813-242-0514

E-Mail: [laysys@verizon.net](mailto:laysys@verizon.net)

Website: [www.laycocksystems.com](http://www.laycocksystems.com)



LAYCOCK  
MOTOR  
WINDING  
TOOLS

CROWN  
MOTOR  
REPAIR  
TOOLS

## 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 Crown 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 51 to 170RPM. A maximum rated torque of 180 in-pounds is developed at high speed and approximately 600 in-pounds 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.
2. To start machine, the ON Button must be depressed and the (round black knob) air release, located on the right side of the front panel must be pulled OUT. 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. Push IN the air release knob, 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.
5. Counter counts up. Large numbers indicate number of turns.

### **OPERATION OF COUNTER**

Counter has touch contacts, to operate counter press items indicated on Face.

To enter the number of turns required:

1. Press PRESET #1 Button. Light at preset will light.
2. Press the number of turns desired.
3. Press the ENTER button. Display will disappear briefly and return indicating entry.
4. Press the COUNT button. Light at count will light and display will indicate zero.
5. Press the RESET button and unit is ready to operate.

(Note: Counter is fuse protected and fuses are located inside the base on the left hand side. Power to the machine should be removed prior to changing fuses. Left hand cover must be removed to access fuses.) **Always replace side panels before using machine to prevent housing collapse and eliminate excessive vibration.**

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.

**NOTE:** 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.

All functions set at the factory.

Pressing the "FUNCTION" button accidentally will cause the display to disappear. Press the "ENTER" button to resume display.

To insure proper set up of equipment, on both fast and slow speeds, set counter preset to approximately 4 turns, select speed and run through a cycle.

As speeds of the coil winder are varied, the stopping position of the coil winding head may vary.

Although the winder will always stop in the same position, it starts out from at a set speed and will accurately wind the number of turns required, the starting position of the winding head may not be desirable for the operator. To change the starting position of the coil winding head to a position desired, push in the air release knob, pull out the round knob (black) located behind the brake (right side of the gear box). Hold knob out and position the winding head to the desired starting position. Release the round black knob and pull out the air release knob and unit is ready to start winding.

6. When all checks have been completed and the unit appears to be operating satisfactorily, it is ready for use and the desired winding head can be mounted on the face plate. Be certain the winding head is securely fastened and centered on the face plate.
7. To use the guide bar, two extension spindles are also provided. The smaller one threads in the end of the guide bar and is intended for use when the CROWN "Midget" Coil Winder Head is mounted on the machine. The extra sleeve and spools provided with this head are slipped over the spindle and are in position to guide the wire while winding coil. The larger spindle slips over the end of the bar and is for use with the CROWN "Universal" Coil Winder Head. The extra spacers provided with this head are placed in proper position on this spindle to facilitate the winding of coils. The larger spindle can also be used with the CROWN "3-Phase" Coil Winding Head.

**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.

**CROWN MODEL 2015 and 2016**

Model #	Description	Quantity	Current Price
2015 or 2016	Floor Winding Machine, CROWN #2015 (115VAC), or #2016 (230VAC)	1	Contact Factory
N/A	Packaging and Handling	1	

## PARTS LIST

## CROWN MODEL 2015 and 2016

**MINIMUM NET BILLING OF \$75 PLUS PACKAGING AND HANDLING FEE**

Item #	P/N	Description	Quantity Req'd	Assy#	Current Assy Price
1	C807065	Base	1	1	Contact Factory
2	C807066	Panel, Base	2		
3	C807083	Base, Motor	1		
4	C807109	Crank, Handle (or Handwheel)	1		
5	C807075	Bracket, Control Shaft	1		
6	C500011	Shaft assy., Control	1		
7	C807106	Gear, Mitre, Motor Base, 16P-16T	1		
8	C807126	Setscrew, Soc. Hd. 1/4"-20NCx1/4"	2		
10	C807131	Washer, Flat 5/16"	5		
11	C808030	Washer, Lock 5/16"	6		
12	C808025	Nut, Hex 5/16"-18NC	6		
13	C807084	Bracket, Guide Bar	1		

14	C807145	Setscrew, Sq. Hd. 1/4"-20NCx3/4"	2
15	C807140	Screw, Rd. Hd. Machine 10-32NFx5/8"	6
16	C807167	Washer, Lock, Internal for 10-32 Screw	8
17	C807085	Bar, Wire Guide	1
18	C807117	Switch, Start/Stop DPST	1
19	C807134	Capscrew, Hex Hd. 5/16"-18NCx1"	4
20	C807118	Box, Electrical, "Handy" Box	1
21	C806010	Cover, "Handy" Box	1
22	C806029	Regulator/Filter w/gauge, f/Air Hose	1
23	C806028	Air Valve, On/Off/Rel	1
25	C500023	Terminal Block (or Cable assy.)	1
26	C807238	Box, Junction	1
27	C807239	Cover, Junction Box	1
28	C807252	Foot Switch assy., 635-S, DPDT	1
29	C500021	Lead Wire assy., Box to Foot Switch	1
30	C500022	Lead Wire assy., Box to Counter	1
31	C500018	Air Hose assy., Sol. Valve to C/B	3
32	C807152	Capscrew, Hex Hd. 3/8"-16NCx3/4"	4
33	C807127	Washer, Lock 3/8"	5
34	C807120	Pulley, Variable Speed, Lovejoy #160VS	1
35	C807121	V-Belt 1/2"x50 #4L500-FHP22	1
37	C500016	Lead Wire assy., Motor to Box	1
38	C500012	Lead Wire assy., Handy Box to Switch	1
39	C807132	Connector, Electrical (or Cord Clamp)	9
40	C807098	CDW Connector (Elect. Diagram 115vac)	1
41/57	C500019	Air Hose assy., Air Valve SW to Sol. Vlve	1
42	C807166	Screw, Flat Hd. Machine 10-32NCx1/2"	30
43	C807165	Washer, Stopbead #10 Screw Size	30
44	C807180	Spindle assy., Large	1
45	C807179	Spindle assy., Small	1
53	C805001	Motor, Electric 1/2HP 230V (2016 only)	1
54	C805001	Motor, Electric 1/2HP 115V (2015 only)	1
58	C806027	Solenoid Air Valve, 4-way, no coil	1
59	C500015	Lead Wire assy., Box to On/Off Switch	1
N/A	C800029	Hook-up Wire #18, 9"	1
N/A	C800033	Bolt 8-32x3/8"	4
N/A	C800034	Nut, Hex 8-32	4
N/A	C807025	Wire #18-2 (ft)	4
N/A	C807052	Washer, Lock #8 (spring type)	4
N/A	C807054	Nut 10-24	4
N/A	C807055	Screw 10-24x1/2"	8
N/A	C807148	Nut, Hex 3/8"-24	1
N/A	C807219	Washer, Lock #10	6
N/A	C807232	Air Hose Adapter 1/4"x7/16"	3
N/A	C807234	Ring, J/B to Sol.	1
N/A	C807235	Terminal Box, 5-section	4
N/A	C807236	Terminal Block, Barrier	1
N/A	C807237	Mounting Channel	3
N/A	C807240	Nipple 1/4"NPT f/Air Hose	2
N/A	C807241	Elbow 1/4" f/Air Hose	2
N/A	C807242	End Clamp, Terminal Block	2
N/A	C807246	Washer 5/8"x1-5/16"ODx3/32"T f/Hose	3
N/A	C807291	Resistor 150-ohm 1/2w	1

N/A	C807292	Capacitor .22mfd 600V	1		
N/A	C809000	Fuse, time-delay, 1/16A (2016 only)	2		
N/A	C809006	Fuse, time-delay, 1/8A (2015 only)	2		
N/A	C809010	Crown Label	1		
N/A	C809022	Fuse Holder, 2-pole	1		
N/A	N/A	Hose, 24 in (or 32 in)	1		
1	C807067	Housing, Gear	1	2	Contact Factory
1*	C807210	Shaft, Input (*In Shaft)	1		
2	C807068	Cover, Gear Housing	1		
2*/10	C807205	Clutch, Air Operated (*In Shaft)	1		
3	C807259	Brake, Output Shaft	1		
3*	C807090	Shaft, Intermediate (*Int Shaft)	1		
4	C809014	Knob, Red f/sprocket assy.	1		
4*	C807094	Shaft, Output (*Out Shaft)	1		
5	C807244	Faceplate, 10" dia	1		
5*	C807108	Retainer, Bearing (*In Shaft)	1		
6	C500007	Indicator Knob & Shaft assy.	1		
7	C807261	Guard, Brake	1		
7*	C807088	Spacer (*In Shaft)	1		
8	C807073	Yoke, Shifter	1		
8*/35	C807211	V-Pulley (*In Shaft)	1		
9	C807074	Collar, Throw-out	1		
10*	C807228	Key, Sq. 3/16"x4-1/2", Spec. (*In Shaft)	1		
11	C807208	Electronic Pick-up	1		
12	C807250	Counter, Electronic	1		
13	C807019	Chain, Link Ladder 17"	1		
14	C807249	Sprocket, Bost C1-20	1		
15	C807051	Setscrew, C. Pt. 5/16"-18NCx5/8"	2		
15*	C807155	Bearing, Sleeve (*In Shaft)	1		
16	C807255	Counter Cabinet	1		
16*	C807154	Gasket, Retainer (*In Shaft)	1		
17	C807135	Nut, Hex 7/8"-14NC, Std	1		
17*	C807102	Plug, 1-1/8"diax1/8" (*In/Int/Out Shaft)	4		
18	C806030	Spring f/sprocket assy.	1		
18*	N/A	Pin (*Out Shaft)	1		
19	C807082	Pin, Detent	1		
20	C807112	Collar Set .500 dia shaft	1		
20*	C807128	Capscrew, Sc. Hd. 10-24x1/2" (*In Shaft)	1		
21	C807113	Gasket, Cover	1		
21*	C807168	Bearing, Sleeve (*Int Shaft)	2		
22	C807247	Plunger f/sprocket assy.	1		
22*	C807159	Collar Set (*Int Shaft)	1		
23*	C807091	Gear 35T, Bost NF35A (*Int Shaft)	1		
24	C807136	Spring, Detent 15/64"x5/8"	1		
24*	C807092	Gear, Bost ND54 (*Int Shaft)	1		
25	C807260	Bushing, Brake Adapter 1-1/4"	1		
25*	C807093	Pinion 15T, Bost NF15B (*Int Shaft)	1		
26	C807227	Key, Sq. 1/4", Square Ends 4-15/16"	1		
26/27*	C807228	Key, Sq. 3/16"x4-1/2" (*Int Shaft)	2		
27	C806012	Guard, Belt 41212	1		
28*	C807041	Setscrew, C. Pt. 5/16"-18x5/16" (*Int Shft)	3		

29	C807024	Plug, Pipe, Soc. Type 1/8"-27NPT	1		
29*	C807051	Setscrew, C. Pt. 5/16"-18x5/8" (*Int Shaft)	1		
31	N/A	Setscrew 8-32x5/16"	5		
31*	C807158	Setscrew, 1/4"-20x5/8" (*Int Shaft)	2		
32	C807141	Capscrew, Soc. Hd. 5/16"-18NCx1"	4		
32*	C807095	Gear 35T, Bost NF35A (*Out Shaft)	1		
33	C807042	Vent Plug, sq. hd., #8-3/8"NPT	1		
33*	C807096	Gear 55T, Bost NF55 (*Out Shaft)	1		
34	C807134	Screw, Hex Hd. Cap 5/16"-18NCx1"	3		
34*	C807097	Dog, Clutch (*Out Shaft)	1		
35*	C807162	Key 3/16"x5/16"x1" (*Out Shaft)	1		
36*	C807217	Capscrew, Hx Hd. 1/4"-20x1/2" (*Out Sht)	1		
38*	C807164	Bearing, Sleeve (*Out Shaft)	1		
39	C807041	Setscrew, C. Pt. 5/16"-18NCx5/16"	3		
39*	C807215	Seal, Oil, 1.25x1.687x.25 (*Out Shaft)	1		
41*	C807079	Ladder Chain Sprckt (*Out S.), Bos C120	1		
42*	C807099	Collar Set (*Out Shaft)	1		
43	C807223	Screw, Rd. Hd. Machine 5/16"-18x1/2"	4		
43*	C807163	Bearing, Sleeve (*Out Shaft)	1		
55	C807150	Coil, 120V, Solenoid Valve	1		
56	C806026	Coil, 240V, Solenoid Valve	1		
60	C807044	Carriage Bolt, 5/16"-18NCx1-1/2" f/motor	4		
N/A	C800035	Nut 6-32	2		
N/A	C802013	Spring Pin, 3/32"x1/2" f/sprocket assy.	2		
N/A	C807014	Bar Stock Rod 1/4" (.33 ft)	1		
N/A	C807028	Screw 6-32x5/8"	2		
N/A	C807043	Vent Tube, Plastic 1-1/2"	1		
N/A	C807063	Nipple 1/8"NPTx1" f/clutch	1		
N/A	C807080	Clutch assy. Shaft Bearing	1		
N/A	C807107	Clutch Cup	1		
N/A	C807111	Ball Bearing (*In Shaft)	2		
N/A	C807116	Yoke 3/8"-24 f/clutch	1		
N/A	C807137	Washer, Felt 5/16"x5/8"x1/8" f/sprkt assy.	3		
N/A	C807143	Bolt 1/2"-13x1-3/4" f/faceplate	2		
N/A	C807144	Capscrew 3/8"-16x1"	1		
N/A	C807156	Screw 4-40x1" f/sprocket assy.	2		
N/A	C807157	Nut, Hex 4-40 f/sprocket assy.	2		
N/A	C807169	Washer #4 f/sprocket assy.	2		
N/A	C807203	Cover Gear Case	1		
N/A	C807214	Guard, Foot Switch Cover	1		
N/A	C807218	Bracket, Sprocket Mntng f/sprocket assy.	1		
N/A	C807220	Bell Wire, #22, 3-conductor (ft) f/counter	1		
N/A	C807293	Pipe Plug 3/4"	1		
N/A	C807294	Bolt 3/8"-24x1-1/2" f/clutch	1		
N/A	C808042	Drivescrew #2x3/16" f/sprocket assy.	1		
N/A	C808064	Nut, Hex 1/2"-13 f/faceplate	2		
N/A	N/A	Plug, Vent, Sq. Hd. 3/8"-18NPT	1		

**SPECIFICATIONS FOR HEAVY DUTY AUTOMATIC STOP  
COIL WINDING MACHINE  
CROWN 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 aluminium gear housing with steel spur gears.

Two (2) speed gear in housing for maximum torque.

(180 in-lbs in fast speed, 600 in-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.