



LAYCOCK SYSTEMS, INC.

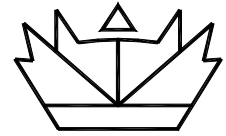
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LAYCOCK
MOTOR
WINDING
TOOLS

CROWN
MOTOR
REPAIR
TOOLS

INSTRUCTIONS FOR HEAVY DUTY COIL WINDING MACHINE CROWN MODELS 2001, 2002, 2003, 2004, 2005, 2006 & 2007

The Crown Heavy Duty Coil Winding Machine is a self-contained, power drive, variable speed unit, 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 ½ HP, 1750 RPM Motor and variable speed transmission, the output speed range may be varied from 40 to 110 RPM for low speed and 150 – 410 RPM for high speed. A rated torque of 775 – 283 inch-pounds is developed at low speed and approximately 210 – 77 inch-pounds at the high speed. **CAUTION: DO NOT EXCEED RATED LOADS.**

INSTALLATION:

1. Connect to the proper power source as specified on the Nametag located under the power input box on rear of unit.
2. The drive 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 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 that protrude from the hole in the upper right hand corner of the stand. It must be adjusted from its position in shipping so that the end-most portion is parallel to the Coil Winder Drive face plate shaft.

CAUTION:

Before using Machine, fill gear housing with three (3) quarts SAE #30, non-detergent oil. To fill, remove plug from top of gear housing. Replace plug before operating the Unit.
ALL ADJUSTMENTS HAVE BEEN MADE AT THE FACTORY.

OPERATION:

1. To start machine, the ON button must be depressed.
2. 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 150-410RPM and gearshift in SLOW range is 40-110RPM. Clockwise

rotation of crank increases speed, counterclockwise rotation reduces speed. **TURN ONLY WHILE MOTOR IS RUNNING.**

3. Check the clutch and brake action in both the "FAST" and "SLOW" positions to see that they operate satisfactorily.
4. Counter counts up. To reset counter to zero, turn the wing nut on the right side of the counter counterclockwise until all zeros appear.
5. When all checks have been completed and the machine 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 to the face plate.

MAINTENANCE:

TO REPLACE BELT

- A. Disconnect power to machine.
- B. Remove belt guard.
- C. Remove left side panel.
- D. Replace Belt - (Crown #807121) or equivalent (1/2" x 50").
- E. Replace belt guard and left side panel. When replacing panels, start all screws before tightening, to properly align holes.

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

TO REPLACE THE CLUTCH AND BRAKE

-CLUTCH ADJUSTMENT:

NOTE: Adjust brakes prior to adjusting Clutch, as this affects the yoke travel. (Disregard if brakes are working satisfactorily).

- A. Disconnect power.
- B. Remove belt Guard.
- C. Remove gear case cover (Clutch is located on left side of the main drive). Use caution so as not to damage the Gasket.
- D. Place gear shift Control in High speed position.
- E. Rotate belt drive until the locking screw (Allen head) is exposed, loosen locking screw.
- F. Turn the knurled nut clockwise until finger tight. Back off the knurled nut until belt drive turns free (approximately .020" - .050" clearance). Foot Pedal should not bottom when depressed.
- G. Tighten locking screw.
- H. Replace gear case cover and belt Guard.
- I. Reconnect power and test at High and Low speeds.
- J. Repeat if required.

-BRAKE ADJUSTMENT:

- A. Disconnect power.
- B. Remove cotter pin at arm on rear of gear box.
- C. Remove pin.
- D. Release locking nut (9/16" wrench) on fork.
- E. Turn fork counterclockwise one or two turns.
- F. Reconnect fork to arm with pin.
- G. Connect power and test at High and Low speeds.
- H. Repeat as required until brakes operate satisfactorily.
- I. Replace cotter pin.

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, 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 2001, 2002, 2003, 2004, 2005, 2006 and 2007

Model #	Description	Quantity	Current Price
2001 thru 2007	Floor Winding Machine, CROWN Model 2001, 2002, 2003, 2004, 2005, 2006 and 2007	1	Contact Factory
N/A	Packaging and Handling	1	

PARTS LIST**CROWN MODEL 2001, 2002, 2003, 2004, 2005, 2006 and 2007**

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

ITEM	P/N	DESCRIPTION	QTY Req'd	FIGURE	CURRENT PRICE (Contact factory if not specified)
1	C807087	Input Shaft	1	2A	-
2	C807107	Clutch Cup	1	2A	-
3	C807108	Retainer, Bearing	1	2A	-
4	C500006	Brake Shoe assy.	1	2A	-
5		Spacer (Output shaft)	1	2A	-
6	C807179	Disc Brake		2A	-
7	C807100	Clutch assembly	1	2A	-
8	C807122	Bearing, Sleeve (Bos FB101311-1/2")	1	2A	-
9		Bearing ball (3206)	1	2A	-
10	C807111	Ball Bearing 29506	2	2A	-
11		Key , Square (3/16" x 5-3/16")	1	2A	-
12	C807089	Pinion Gear 15T	1	2A	-
13	C807155	Bearing, Sleeve	1	2A	-
14	C807154	Gasket, Retainer	1	2A	-
15	C807102	Plug, 1-1/8"dia x 1/8"	4	2A	-
16	C807126	Setscrew, 1/4")20NCx1/4"	1	2A,2B,2C	-
17	C807134	Screw, Soc. Hd. Cap 5/16-18x1"	2	2A	-
18	C807128	Screw, Hex. HD 10-24x1/2"	1	2A	-
19		Lubricant	1	2A	-
20		Shim (0.04) OR	1	2A	-
21		Shim (0.08) OR	1	2A	-
22		Shim (0.12) OR	1	2A	-

ITEM	P/N	DESCRIPTION	QTY Req'd	FIGURE	CURRENT PRICE (Contact factory if not specified)
23		Bearing Ball (6205RS)	1	2A	-
24	C807190	Fiber plate (Clutch)	1	2A	-
25		Clutch bushing	1	2A	-
26	C807196	Clutch / Brake shifting yoke	1	2A	-
27		Clutch adjuster	1	2A	-
28		Clutch Adapter	1	2A	-
29		Clutch inner, outer adjuster	1	2A	-
30	C807090	Shaft, Intermediate	1	2B	-
31	C807168	Bearing, Sleeve (Bost M1216-8)	2	2B	-
32	C807159	Collar	1	2B	-
33	C807091	Gear (35Teeth)	1	2B	-
34	C807092	Gear (54Teeth)	1	2B	-
35	C807093	Pinion (15Teeth)	1	2B	-
36	C807228	Key, Sq. 3/16"x2-3/4"	1	2B	-
37	C807228	Key, Sq. 3/16"x1-3/4"	1	2B	-
38	C807041	Setscrew, 5/16"-18x5/16"	4	2B, 2C	-
39	C807051	Setscrew, 5/16"-18x5/8"	2	2B	-
40	C807158	Setscrew, 1/4"-20x5/8"	2	2B	-
41	C807094	Shaft, Output	1	2C	-
42	C807095	Gear (35Teeth)	1	2C	-
43	C807096	Gear (55Teeth)	1	2C	-
44	C807097	Dog, Clutch	1	2C	-
45	C807162	Key 3/16"x5/16"x1"	1	2C	-
46	C807217	Screw, HH Cap 1/4"-20x1/2"	1	2C	-
47		Pin (.250"Dia. x 9/16" long)	1	2C	-
48	C807164	Bearing, Sleeve	1	2C	-
49	C807215	Seal, Oil, 1.25"x1.687"x.25"	1	2C	-
50	C807079	Ladder Chain Sprokt	1	2C	-
51	C807099	Collar Set	1	2C	-
52	C807163	Bearing, Sleeve	1	2C	-
53	C807073	Speed shifting yoke	-	2C	-
54	C807067	Housing, Gear	1	2D	-
55	C807069	Belt guard	1	2D	-
56	C807070	Wheel, hand	1	2D	-
57	C807071	Faceplate 4 3/4" diameter.	1	2D	-
58	C500007	Indicator Knob & Shaft assy.	1	2D	-
59	C807073	Yoke, Shifter	1	2D	-
60	C807074	Collar, Throw-out	1	2D	-
61	C807195	Assbly, clutch/ brake opr. Arm & yoke	1	2D	-
62		Washer, Flat (5/16")	1	2D	-
63	C806025	Counter, Mechanical	1	2D	-
64	C809027	Ladder chain Sprocket(#1-20T)	1	2D	-
65	C807080	Control shaft bearing	2	2D	-
66	C807051	Setscrew, Clip Pt. 5/16"-18NCx5/8"	1	2D	-
67	C807135	Nut, Hex 7/8"-14NC, Std	2	2D	-
68	C807081	Retainer Ring	1	2D	-
69	C807112	Collar Set .500 dia shaft	1	2D	-
70	C809025	Ladder Chain	1	2D	-

ITEM	P/N	DESCRIPTION	QTY Req'd	FIGURE	CURRENT PRICE (Contact factory if not specified)
71	C807137	Washer, felt	3	2D	-
72	C807227	Key, Sq. 1/4", Square Ends 4-15/16"	1	2D	-
73		Spring (Felt washer seal)	1	2D	-
74		Screw, RD, HD, Mach. (10-32 x 5/8")	3	2D	-
75	C808015	Screw, Soc. Clip. PT 1/4"-20NCx1/4"	1	2D	-
76	C807141	Screw, Soc. Hd. Cap 5/16"-18NCx1"	4	2D	-
77	C807042	Vent Plug, sq. hd., #8-3/8"NPT	1	2D	-
78	C807144	Screw, Hex. Hd. Cap 3/8"-16NCx1"	1	2D	-
79	C807114	"V" Pulley	1	2D	-
80		Key Square (1/4") (Sq. ends)	1	2D	-
81	C807041	Set screw, Soc, Clip PT (5/16"-18 x 5/16")	4	2D	-
82		Tag, instructions (Wire to Item 10)	1	2D	-
83		Wire Tag (12" long)	1	2E	-
84	C807068	Cover, Gear Housing	1	2E	-
85	C807072	Detent pin	1	2E	-
86	C807082	Pin, Detent	1	2E	-
87	C807113	Gasket, Cover	1	2E	-
88	C807136	Spring, Detent 15/64"x5/8"	1	2E	-
89	C807024	Plug, Pipe, Soc. Type 1/8"-27NPT	1	2E	-
90		Screw, RD, HD, Mach. (8-32 x 5/8")	4	2E	-
91	C807036	Screw, Hex. Hd. Cap 1/4"-20NCx3/4"	2	2E	-
92		Sealer (Permanent #2-Non-hardening)	-	2E	-
93	C807066	Panel, Base	2	2F	-
94	C807084	Bracket, Guide Bar	1	2F	-
95	C807145	Setscrew, Sq. Hd. 1/4"-20NCx3/4"	2	2F, 2G	-
96	C807140	Screw, Rd. Hd. Machine 10-32NFx5/8"	6	2F	-
97	C807167	Washer, Lock, Internal f/10-32 Screw	4	2F	-
98	C807085	Bar, Wire Guide	1	2F	-
99	C807117	Switch, Start/Stop DPST	1	2F	-
100	C500009	Foot Pedal assy.	1	2F	-
101	C807120	Pulley, Variable Speed	1	2F	-
102	C807121	"V"-Belt	1	2F	-
103	C807166	Screw, Flat Hd. Machine 10-32NCx1/2"	30	2F	-
104	C807165	Washer, Stopbead #10 Screw Size	30	2F	-
105	C807180	Spindle assy., Large	1	2F	-
106	C807179	Spindle assy., Small	1	2F	-
107		Key, Square (3/16 x 3/16 x 2")	1	2F	-
108	C807065	Base	1	2G	-
109	C807083	Base, Motor	1	2G	-
110	C807109	Crank, Handle (or Handwheel)	1	2G	-
111	C807075	Bracket, Control Shaft	1	2G	-
112	C500011	Shaft assy., Control	1	2G	-
113	C807106	Gear, Mitre, Motor Base, 16P-16T	1	2G	-
114	C807126	Setscrew, Soc. Clip Pt. 1/4"-20NCx1/4"	3	2G	-
115	C807134	Screw, Hex Hd. Cap 5/16"-18NCx1"	4	2G	-
116	C807131	Washer, Flat 5/16"	14	2G	-
117	C808030	Washer, Lock 5/16"	6	2G	-
118	C808025	Nut, Hex 5/16"-18NC	6	2G	-

ITEM	P/N	DESCRIPTION	QTY Req'd	FIGURE	CURRENT PRICE (Contact factory if not specified)
119	C800036	Screw, Pan Hd., S.T. #8-5/8"	4	2G	-
120	C807118	Box, Electrical, "Handy" Box	1	2G	-
121	C806010	Cover, "Handy" Box	1	2G	-
122	C807115	Hose Clamp, 5/8"x11/16"	1	2G	-
123	C807146	Bolt, Wrgt Hook 1/4"-20	1	2G	-
124	C807147	Spring, Tension	1	2G	-
125		Assembly, Control Rod	1	2G	-
126		Pin, Clevis	2	2G	-
127		Pin, Cotter (3/32" Dia. X 5/8" long)	2	2G	-
128	C807076	Foot Pedal	1	2G	-
129	C807151	Screw, Flat Hd. 5/16"-18x1"	4	2G	-
130	C807044	Carriage Bolt, 5/16"-18NCx1-1/2"	4	2G	-
131	C807152	Screw, Hex Hd. Cap 3/8"-16NCx3/4"	4	2G	-
132	C807127	Washer, Lock 3/8"	4	2G	-
133		Diagram, Electrical 115V 50/60Hz, 1 ϕ	1	2G	-
134		Diagram, Electrical 230V 50/60Hz, 1 ϕ	1	2G	-
135		Diagram, Electrical 230V 50/60Hz, 3 ϕ	1	2G	-
136		Diagram, Electrical 460V 50/60Hz, 3 ϕ	1	2G	-
137	C500013	Lead Wire assy., Switch to Motor	1	2G	-
138	C500012	Lead Wire assy., Handy Box to Switch	1	2G	-
139	C807132	Connector, Electrical (or Cord Clamp)	3	2G	-
140		Nameplate, specification	1	2G	-
141		Paint	1	2G	-
142	C800034	Nut, Hex (8-32)(STD)	2	2G	-
143		Motor, 115V 50/60Hz, 1 ϕ	1	2G	-
144		Motor, 230V 50/60Hz, 1 ϕ	1	2G	-
145		Motor, 230V 50/60Hz, 3 ϕ	1	2G	-
146		Motor, 460V 50/60Hz, 3 ϕ	1	2G	-
147	C807134	Screw, Hex HD. Cap (5/16"-18 x 1-1/8")	6	2G	-

**SPECIFICATIONS FOR HEAVY DUTY
COIL WINDING MACHINE
CROWN MODELS 2001, 2002, 2003, 2004, 2005, 2006 and 2007**

Primary power:

Model #2001: 115VAC, 60Hz, 1-phase.
Model #2002: 230VAC, 60Hz, 1-phase.
Model #2003: 115VAC, 50Hz, 1-phase.
Model #2004: 230VAC, 50Hz, 1-phase.
Model #2005: 220VAC, 50/60Hz, 3-phase.
Model #2006: 440VAC, 50/60Hz, 3-phase.
Model #2007: Winding Machine less Motor

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.
(77 ft-lbs in Fast speed, 770 ft-lbs in Slow speed)

Controls:

All controls are at the operators finger tips.
Foot Pedal operates Clutch and Brake, press down to engage Clutch and release to activate Brake.
Speed is variable from 40 - 410RPM.
(Slow speed = 40 -110 RPM, Fast speed = 150 - 410 RPM).
Mechanical Counter.
Heavy Duty Clutch for chatter free operation.
Winding shaft height is 42" to center of face plate.

Operation:

Preset counter to number of turns required, press Foot Pedal, Machine runs to preset number and stops instantly when preset number is reached. Release Foot Pedal and Counter resets to zero (after a 10-second time delay or press RESET Button), and Unit will be ready for the next coil. (For operator safety, in case of an emergency, the Machine stops instantly when the Foot Pedal is released).
Machine comes equipped with a 5" faceplate. The output Shaft is center tapped for 1/2" -3 thread to allow attachments.

Spare parts:

To be recommended on request. Contact Factory.

Enclosures:

Operating instructions.