

P/N 290147 Lift Motor

Automated Equipment, LLC

5140 Moundview Drive
Red Wing, Minnesota 55066
Phone: 1-800-248-2724
1-651-385-2273
Fax: 1-651-385-2172
<http://www.autoequiplc.com>



Lift Drive Motor P/N 290147 Replacement

Tools Required

- Phillips screwdriver
- 3/16" Allen wrench
- 7/64" Allen wrench
- 9/16" wrench or small adjustable wrench
- 5/16" wrench or small adjustable wrench

Identification

Before beginning the replacement of the lift motor, take time to determine the lift assembly type. The assembly type is determined by the color of the encoder block (*Item 3&26*).

- **Gold Encoder Block – optical encoders (Diagram C)**
- **Black Encoder Block – inductive encoders (Diagram D)**

There are slight differences in the motor replacement procedures of which you will need to be aware. Those differences will be noted throughout these instructions.

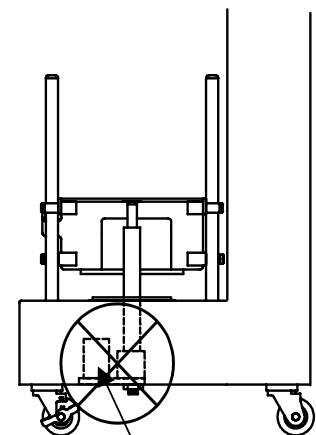
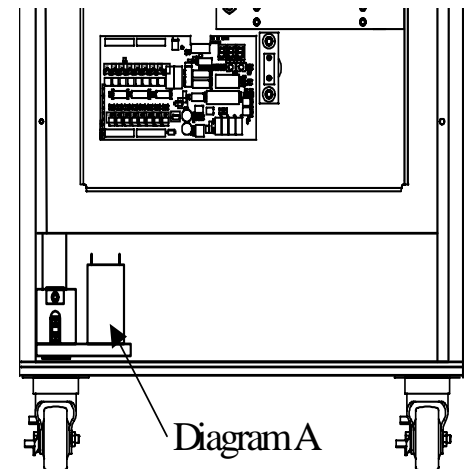
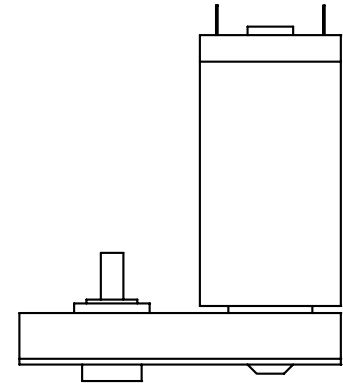
Removal

- Turn the power off and unplug the power cord.
- Remove the lift saddle from the front of the dispenser.
- Remove the back panel from the dispenser.
- Remove the lift lock bracket, screw and washer (*Item 15, 16 & 17*).
- Remove the lift tube (*Item 19*) by pulling it up and out from the front.
- Remove the flange nut (*Item 18*) from underneath the dispenser.
- Lift the drive assembly out the back of the dispenser with the wiring intact.
- Disconnect the motor wires and ground wire noting the location. White wire on the + terminal.
- Disconnect the encoder wiring from the controller board noting their location. *See part descriptions, items 12 & 13 for the gold encoder block, and items 20 & 21 for the black encoder block.*
- Remove the nut, screw and ground stud (*Items 6, 4 & 7*).
- Remove the four remaining screws (*Item 4*) and separate the lift motor (*Item 1*) from the mounting plate (*Item 2*) and encoder block (*Item 3* or *item 26*).
 - (**Gold Encoder Block**) The drive coupler (*Item 10*) should remain in the encoder block (*Item 3*) for the optical encoder assembly with the encoder disk between the encoders.
 - (**Black Encoder Block**) The drive coupler, vane and white nylon washer (*Items 23, 24 & 25*) will be loose on the assembly. Be careful to retain them.

Installation

Install the new lift motor in the reverse order.

(Black Encoder Block) For the inductive encoder assemblies, the white plastic washer (*Item 25*), encoder vane (*Item 24*) and the coupler (*Item 23*) must be installed in the proper order. Place these on the motor shaft before installing the encoder block. (See *Diagram D*)



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(Gold Encoder Block) For the optical encoder assemblies, to prevent damage when reinstalling the lift motor (Item 1) ensure the encoder disk (Item 10) is between the encoders (Item 12 & 13) then line up the drive coupler (Item 10) and motor shaft. (See Diagram C)

Note: To prevent damage when reinstalling the lift tube (Item 19) into the drive coupler (Item 10), be sure the lift tube fork aligns with the drive coupler.

Note: The lift motor assembly should be installed as shown in back view (diagram A) not as shown in the side view (diagram B). This will allow the lift tube and lift drive to align.

- Plug the power cord in and turn the power on.
- Cycle a few baskets to see if the lift height is correct.
- If the lift is too high select F30 and press the enter button, the lift height will be displayed. Pressing the enter button again will lower the lift one point (1/12"). Pressing the select button again will save the change. *The next time the lift returns to the up position it will be at the new setting.*
- If the lift is too low select F31 and press the enter button, the lift height will be displayed. Pressing the enter button again will raise the lift one point (1/12"). Pressing the select button again will save the change.

Gold Encoder Block

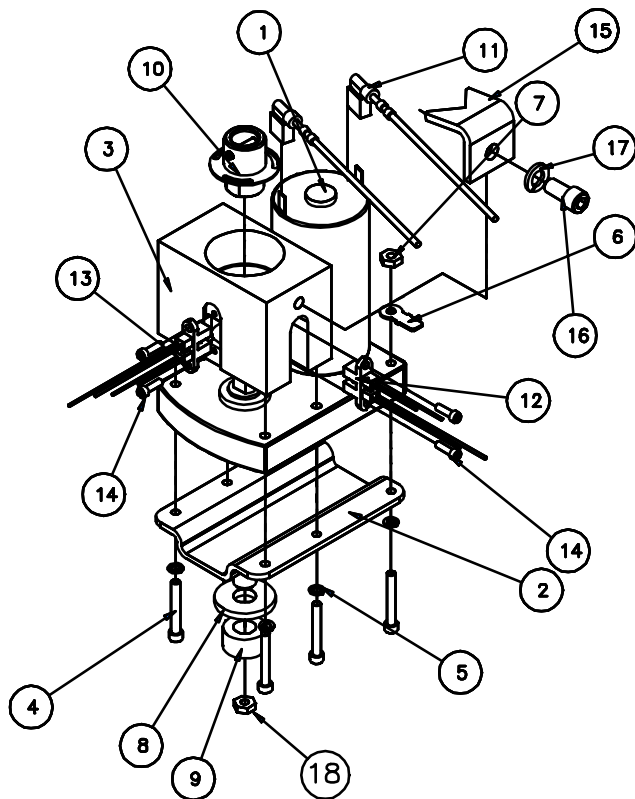


Diagram C

Black Encoder Block

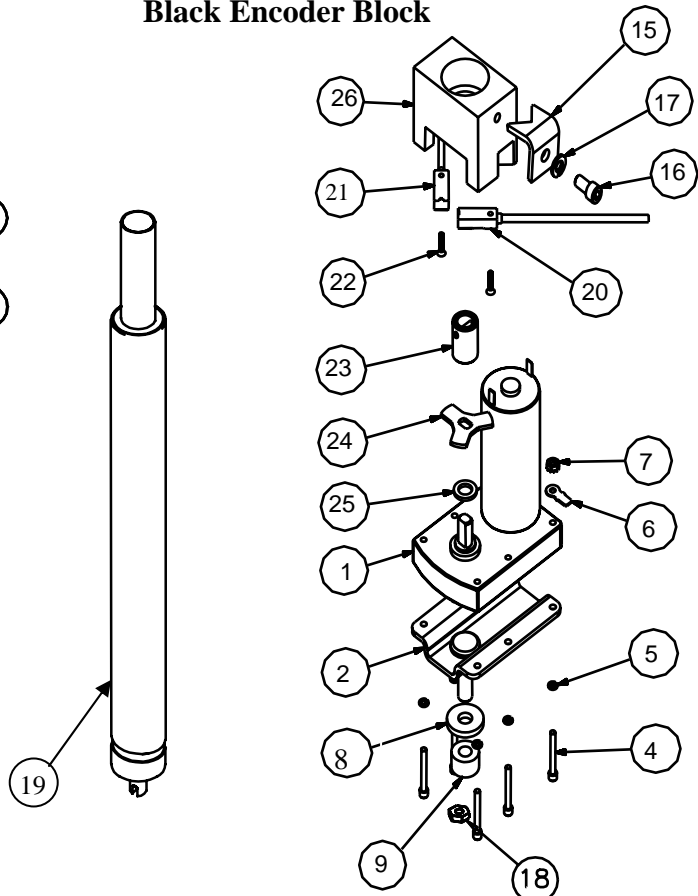


Diagram D

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Item	Qty	Description	Part Number
1	1	Lift Motor	290147
2	1	Mounting Plate	290141
3	1	Encoder Block	290140
4	5	Screw #6-32UNC	290612
5	5	Lock Washer #6	213528
6	1	Ground Stud (Green Wire)	290423
7	1	Nut #6-32UNC	202874
8	1	Rubber Washer	290171
9	1	Rubber Bushing	292197
10	1	Drive Coupler with Encoder Disk	290292
		Encoder Disk Only	290145
11	1	Lift Motor Wiring Harness White on + terminal	290175
12	1	Optical Encoder Phase 1 J1 Blue	290690
13	1	Optical Encoder Phase 2 J3 Green	290690
14	4	Screw #4-40UNC	290372
15	1	Lift Lock Bracket	290146
16	1	Screw 1/4-20UNC	213143
17	1	Lock Washer 1/4"	213142
18	1	Flange Nut 3/8-16UNC	290394
19	1	Lift Tube	290115
20	1	Inductive Encoder Phase 1 J1 Blue	292560
21	1	Inductive Encoder Phase 2 J3 Green	292560
22	2	4-40 X 1/2 Screw	292165
23	1	Drive Coupler	292156
24	1	Encoder Vane	292157
25	1	.38 ID X .063 THK Nylon Washer	292158
26	1	Encoder Block (Black)	292155