

# **PowerMate®**

## ***Stair Climbing Hand Trucks & LiftGates***



## **PowerMate LV-7 Motor Replacement Instructions**

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# PowerMate® LV-7 Motor Replacement Instructions

*This process should take approximately ½ - 1 hour.*

## Screw Assembly and Motor Removal

### **Step A: Remove the Screw Guard**

**PROCEDURE:** Swing the Lift Gate unit out of the vehicle and engage the Base Main Arm Lock Pin.

Extend the unit until the toeplate is just touching the ground. This is to make disengaging the outer frame from the screw assembly easier.

Move the circuit breaker switch to the OFF position and depress the red heavy duty switch to OFF.

Remove the two (2) Phillips screws from the top of the screw guard and the remove guard.



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## Step B: Remove the Drive Screw Assembly

**PROCEDURE:** Remove the four (4) top ¼" countersunk screws holding the bearing retainer (7/16" wrench and 5/32" Allen key).

Remove the shim from between the bearing retainer and the inner frame.



Remove the four (4) button head cap screws (3/16" Allen key) holding the outer frame to the screw assembly ballnut bracket.

Grip the screw assembly and remove up and out, disengaging the drive screw from the motor.



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## Step C: Raise the Outer Frame

**PROCEDURE:** Raise the outer frame by hand (assistance may be necessary) high enough to expose the motor.

Clamp a pair of vise grips (jaws covered so as not to damage the aluminum) onto the inner frame to keep the outer frame in the raised position while servicing.

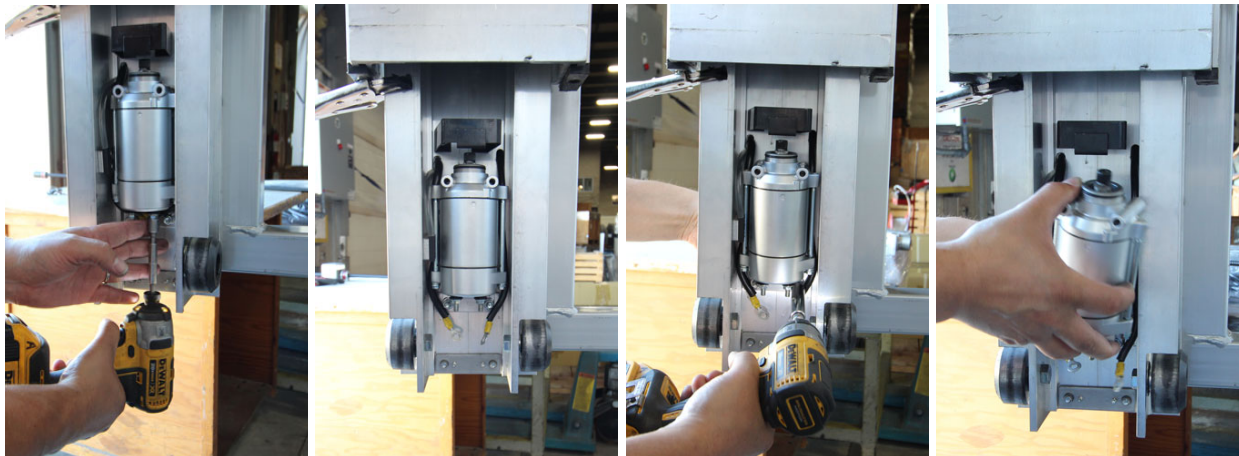


## Step D: Remove the Motor

**PROCEDURE:** Disconnect the motor electrical wires by removing the two (2) 10mm nuts and lock washers.

Remove the two (2) ¼-20NC nuts from bolts attaching the motor to the frame. Keep the two (2) ¼" bolts and spacer in place.

Remove the motor from the machine for service or replacement.



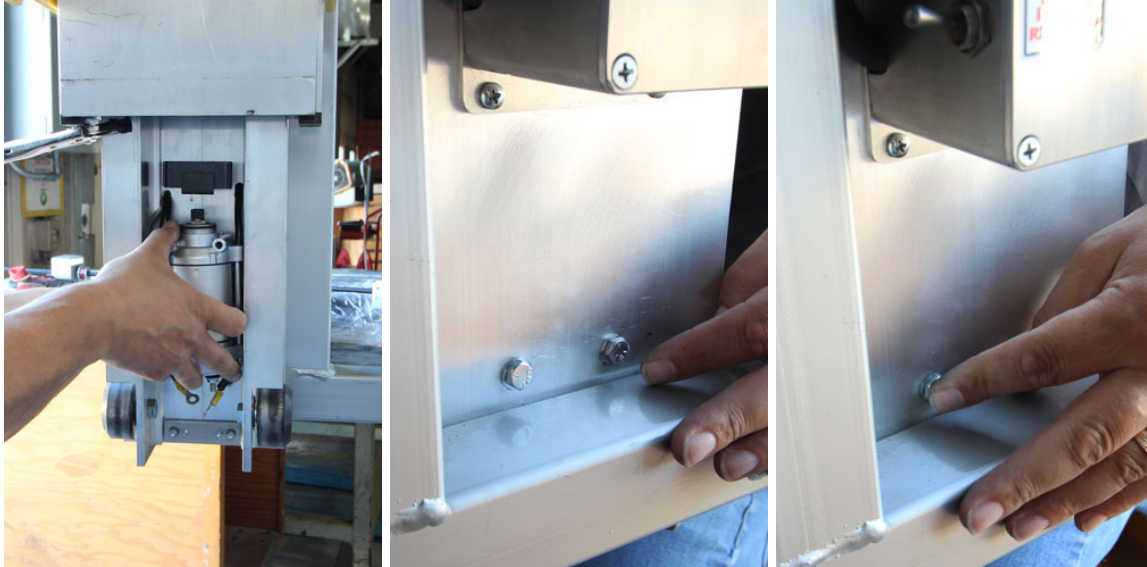
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## Screw Assembly and Motor Installation

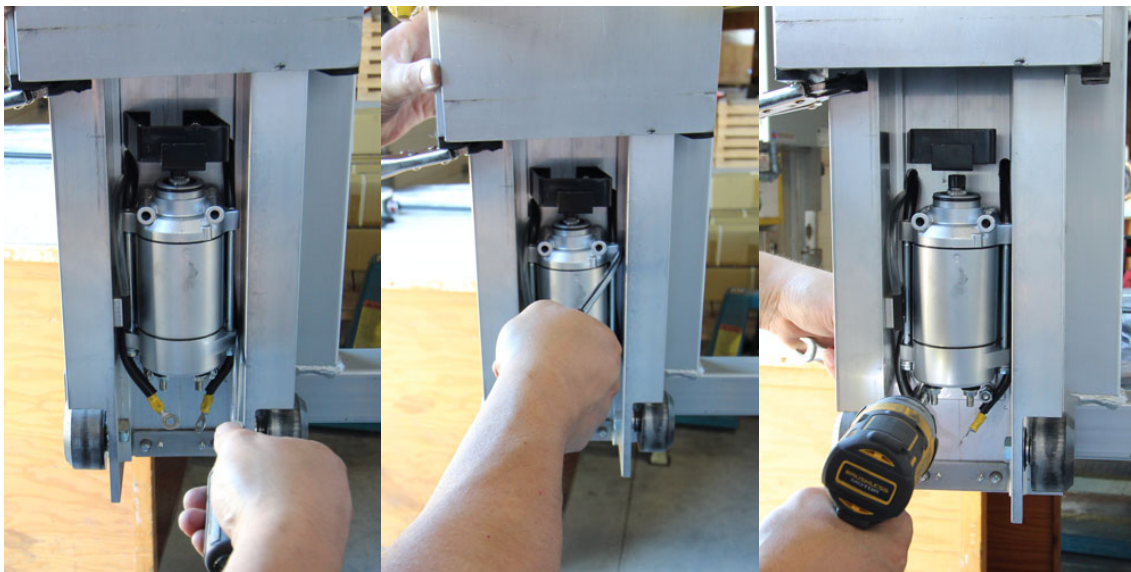
### Step E: Install the Motor

**PROCEDURE:** Holding the two (2) ¼" mounting bolts, slide the motor back in place. Make sure the spacer is in place as well. If the drive screw was not removed, insert spline of Motor into connector coupling.

Install the two (2) ¼" Nuts until snug.

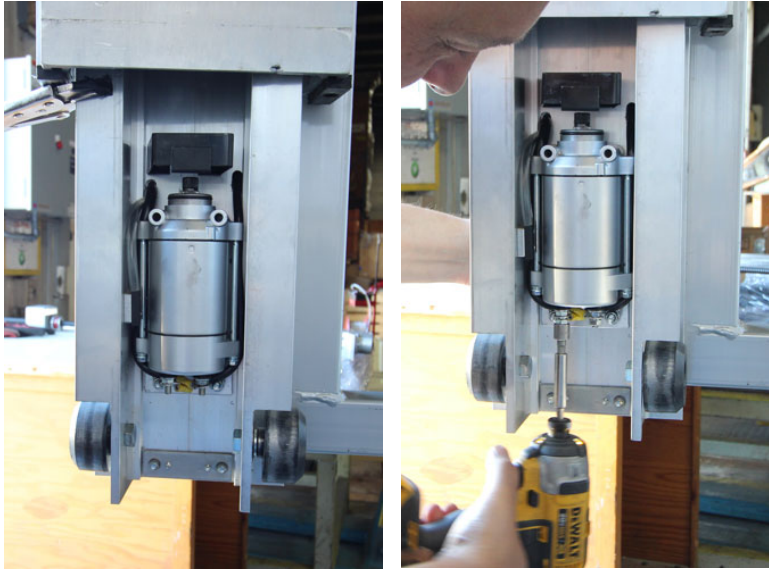


Make sure motor is parallel to frame and then finish tightening the two (2) Nuts.



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Re-connect the motor electrical wires with the two (2) 10mm nuts and lock washers.



Slightly lift the outer frame (assistance may be necessary), remove the vise grips from inner frame, and lower the outer frame to the ground.

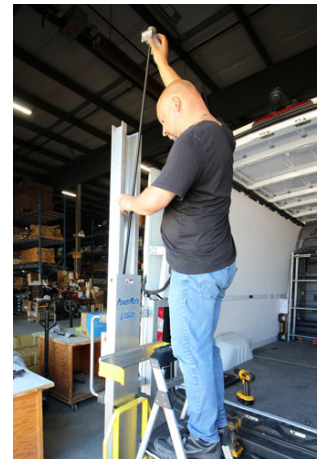
## Step F: Install the Screw Assembly

**PROCEDURE:** Guide the drive screw assembly back into the inner frame, making sure the bearing retainer and ballnut bracket are oriented properly for installation.

Attach the drive screw to the motor.

Insert the shim between the bearing retainer and inner frame, making sure orientation is correct.

Install the four (4) top ¼" countersink screws.



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## Step G: Attach the Ballnut Bracket

**PROCEDURE:** Power on the machine and raise or lower the ballnut bracket so that the holes in the outer frame are aligned.

Install the four (4) button head cap screws to attach the outer frame to the ballnut bracket.

Run machine up and down to check that machine operates properly.



## Step H: Install the Screw Guard

**PROCEDURE:** With the Toeplate on the ground, insert the screw guard into position through the ballnut bracket. Guard will stop about 1" from proper fit.

Gently push the guard inwards and allow it to drop into the screw guard bracket.

Continue to push the guard down until screw holes are aligned at top of Guard.

Install the two (2) Phillips Screws.

