

Lincoln Mark VII Power Window Motor Repair

Is your door no longer going up and down? Does the window motor make a horrible sound when in use? Does your window no longer work at all? You may need to replace or repair the window motor.

You will need:



#2 Phillips screwdriver.

Auto Trim and Molding tools (see appendix for picture).

Panel clip pliers (see appendix for picture).

Power drill.

1/4" drill bit.

5/8" drill bit.

8mm socket.

Socket wrench.

Socket extension.

Ford door fastener clips (see appendix for picture).

Glue gun.

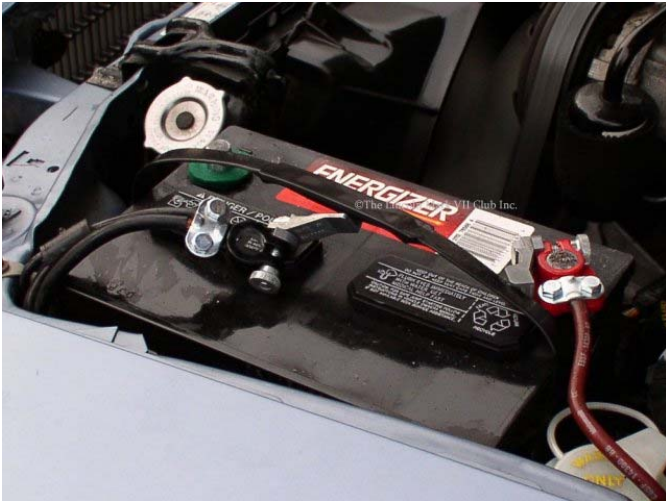
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Grease. (regular gear grease, synthetic grease or lithium grease will work).

Telescoping Magnetic Pickup Tool (see appendix for picture).

Let's get started.

- 1) Raise the window to full up position, if possible. If the glass cannot be raised and is in a partially raised position, it must be supported so that it will not fall into the door well during motor removal.
- 2) Disconnect the battery ground cable.



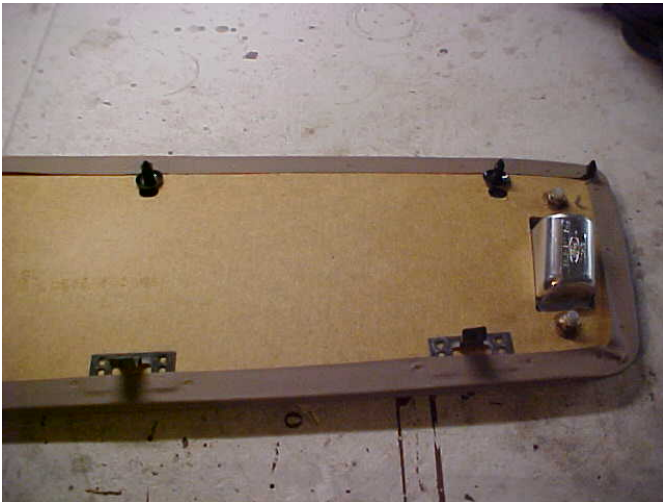
Remove door trim panel.

- 1) Using the auto trim tool, pop the speaker cover off and remove a Phillips screw.

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- 2) Using the auto trim molding pry bar, gently pop off the lower panel on the door where the light is. There are 4 metal clips at the top and 5 plastic clips on the bottom. While holding the panel in your hands, remove the light bulb from its housing by twisting $\frac{1}{4}$ of a turn and pull.



- 3) Remove two Phillips screws that hold the main panel to the door.

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- 4) Using the auto trim tool, gently pop off the trim piece around the controls. Some of the clips may stay stuck in the door.



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- 5) Remove the control panel away from the door.
- 6) While holding the control panel, disconnect two wire harnesses.
The larger one is rather hard to disconnect, so you may need to use channel lock pliers to disconnect it.
- 7) Remove two Phillips screws behind the control panel.
- 8) Remove the screw from the end of the door panel at the top of the corner.



- 9) Once all three panels are removed from the main door panel and all screws are removed (double check, sometimes people will use an extra screw to hold the door panel to the door) use the Panel pliers to pop the door panel away from the metal door where the clips

are. There are 18 door clips around the door. Start with the bottom of the door at the hinge and move around and up to the end of the door. Lift the door up and off and maneuver the door panel away from the door latch by turning the door panel slightly as you remove it away from the handle.

- 10) Remove four Phillips screws holding the speaker on, disconnect the wires and remove the speaker.
- 11) Remove two Phillips screws holding the metal bracket for the door panel next to the speaker and remove it.



- 12) Using the Panel pliers, remove any clips that may be holding the water shield to the door as well as any clips that were left from the door panel.
- 13) Carefully remove the water shield trying not to tear any of the material.

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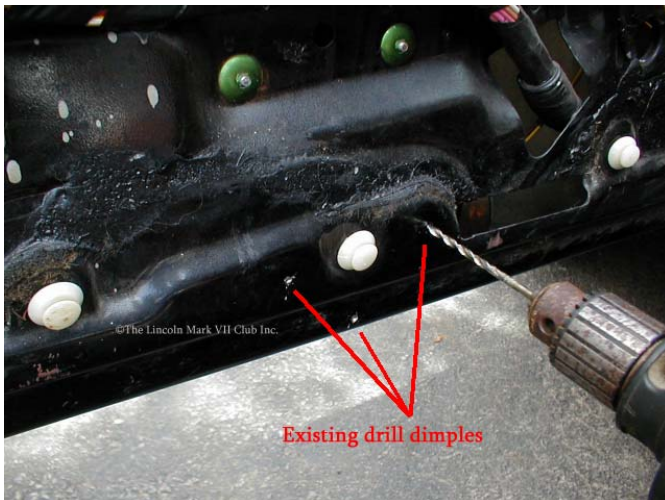


- 14) Disconnect window motor harness from the door and disconnect the wire connector.

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- 15) Position the motor wiring harness out of the way. Assure that the regulator arm is in a fixed position to prevent counterbalance spring to unwind.²
- 16) Using 1/4" drill bit, drill three holes at the **existing drill dimples** located on the door inner panel adjacent to the motor.



- 17) Drill 5/8" hole where the pilot holes are.
- 18) Remove the three window motor mounting screws with the 8mm socket.

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- 19) Disengage the motor, and drive assembly from the regulator quadrant gear.



Depending on the extent of the damage, there are four ways to repair the motor:

- 1) Replace just the window regulator gear plugs with screws.
- 2) Replace the existing window regulator gear plugs.
- 3) Replace the whole window gear assembly.
- 4) Replace the motor and gear assembly.

SUGGESTION 1)

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- 1) Gather six ¼-20 hex head screws. These will replace the three clutches inside of the gear assembly.



- 2) Remove the gear assembly cover.



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- 3) Due to the damage, particles of plastic and metal are imbedded in the grease and the grease will need to be replaced. Remove everything that is not a gear or a casing.
- 4) The gear housing and parts should be clean, free from any previous grease.





- 5) Grease the bottom of the gear housing, place the 45 tooth nylon gear into the gear housing, flat side down.
- 6) Grease the inside of the 45 tooth gear and place the greased nuts in pairs into the corners of the triangle. The flat edges of the nuts should face the shaft and the outward edges of the plastic retainer.
- 7) Grease the triangle side of the 9 pin metal gear and insert it into the 45 pin gear assembly.



- 8) The bottom half of the pinion gear has three flat sides that should rest against the nuts. The same lower half has three rounded sides that should rest between the nuts and facing the plastic housing. This will look and feel impossible but :

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SUGGESTION 2)

- 1) Using the suggested Dorman #74410 Window Regulator Gear Plugs, follow the procedure for **SUGGESTION 1)** starting at step 5) and use the plugs shown below instead of the metal nuts.



NOTE* When using the nylon plugs, you will need to have the plugs partially inserted into the 45 pin gear housing while pressing the 9 pin metal gear into the assembly. It is rather tricky and it seems like the gear is not going to fit, but with some practice, it will go in. The trick is to NOT put the plus all the way in first. Leave the slightly out of the assembly as you insert the 9 pin metal gear. The grease will act like a glue and hold the plugs in suspension while you try to insert the 9 pin metal gear.

SUGGESTION 3)

If the teeth on the 45 tooth nylon gear are damage in anyway, purchase Dorman #74409 which has the gear and plugs. Follow the steps from **SUGGESTION 1)** and just grease the gear and plugs and insert the 9 tooth metal gear starting at step 6).

See Note* for **Suggestion 2)** on inserting the 9 pin metal gear into the assembly.



Suggestion 4)

- 1) Purchase Dorman #74426 which includes the plugs, 45 pin nylon gear, 9 pin metal gear, cover plate and washer.
- 2) Grease all parts liberally and assemble.

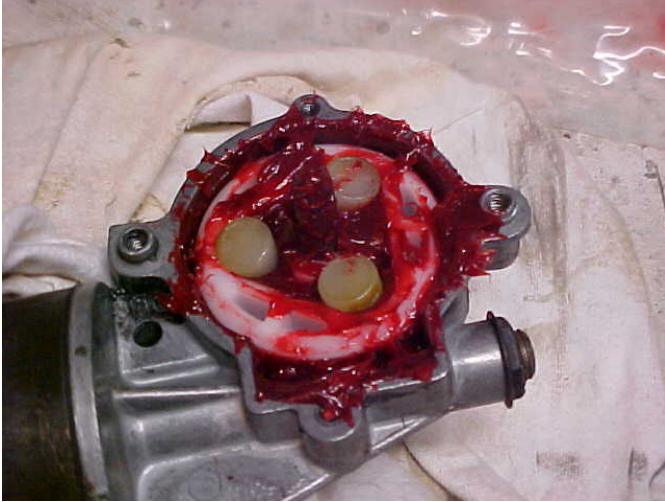
See Note* for **Suggestion 2)** on inserting the 9 pin metal gear into the assembly.



Assembly

- 1) Make sure you have ample grease inside and outside of the parts of the assembly, place the cover plate on and put the Phillips screw back into the top of the assembly.

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Test the operation of the motor before installation!

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- 2) Installation of the replacement motor is in reverse.
- 3) Lubricate the head of the bolt and inside the 8mm socket hold them in place while moving them to the motor through the 5/8" holes. If you drop a screw, use a magnetic pick up tool to recover the screw.



- 4) To install the door panel, place the clips in the sockets of the door panel first.
- 5) If the socket holes are damaged, you can glue them back together (make sure to let the slots dry before inserting a clip).
- 6) Remember to turn the door panel at an angle to put the slide it over the door handle.
- 7) Align the clips up as you gingerly place the partially in the hole. Once the

Appendix

Pictures of suggested tools:

- 1) Auto Trim and Molding tools.



- 2) Panel clip pliers.



- 3) Telescoping Magnetic Pickup Tool (you will drop a screw inside the door!).

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4) Ford door fastener clips (#TR142 - TheFastenerWarehouse.com).

