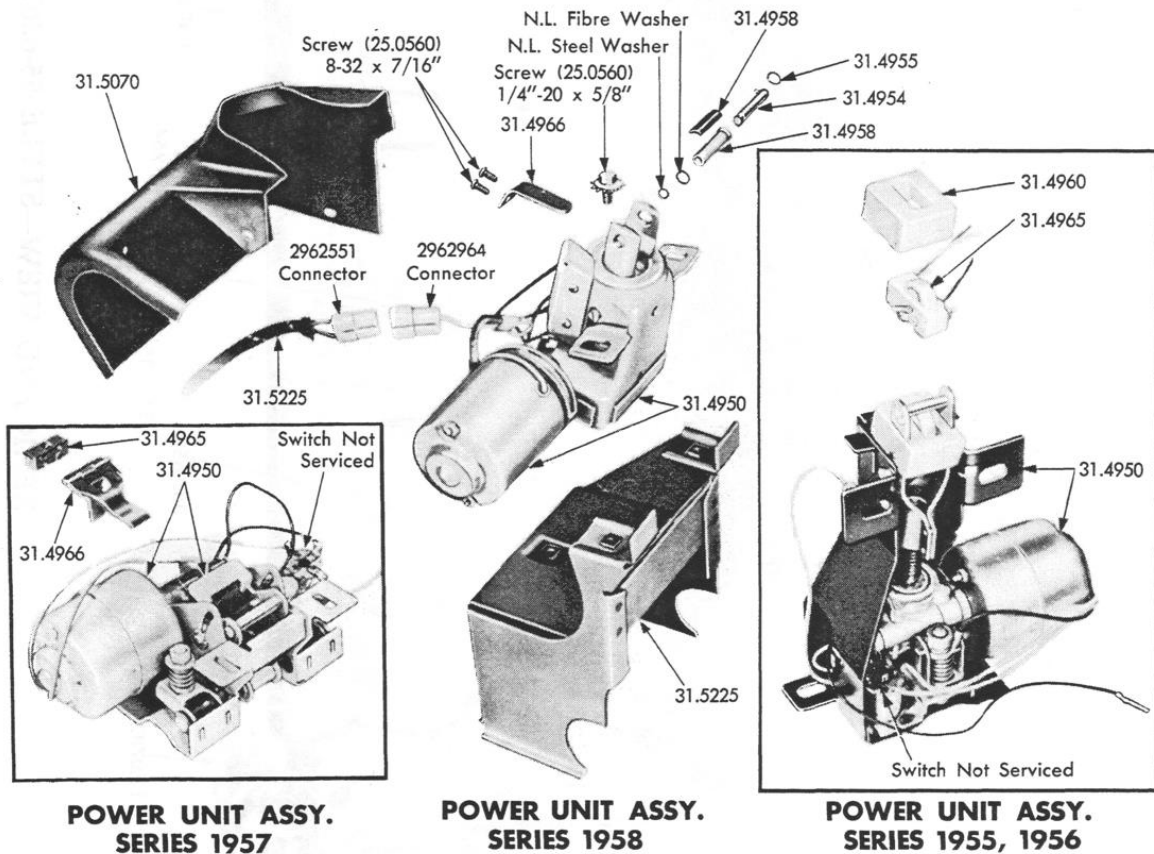


## Cadillac trunk pull-down modification



REAR DECK LID POWER UNIT AND LOCK ASSY.—SERIES 1955 thru 1958

One of the critical items with the function of the trunk-pull down is the striker (aka micro-switch) switch. This switch on the late 1955 and 1956 are extremely weak as they are just brass contacts sliding in a plastic enclosure which are prone to burn-out do to the heavy current loads which the electrical motor will create while in the down mode and when pulling the trunk to a closure.

Fig.1 below shows disassemble striker switch with the slider contacts and the slider spring.

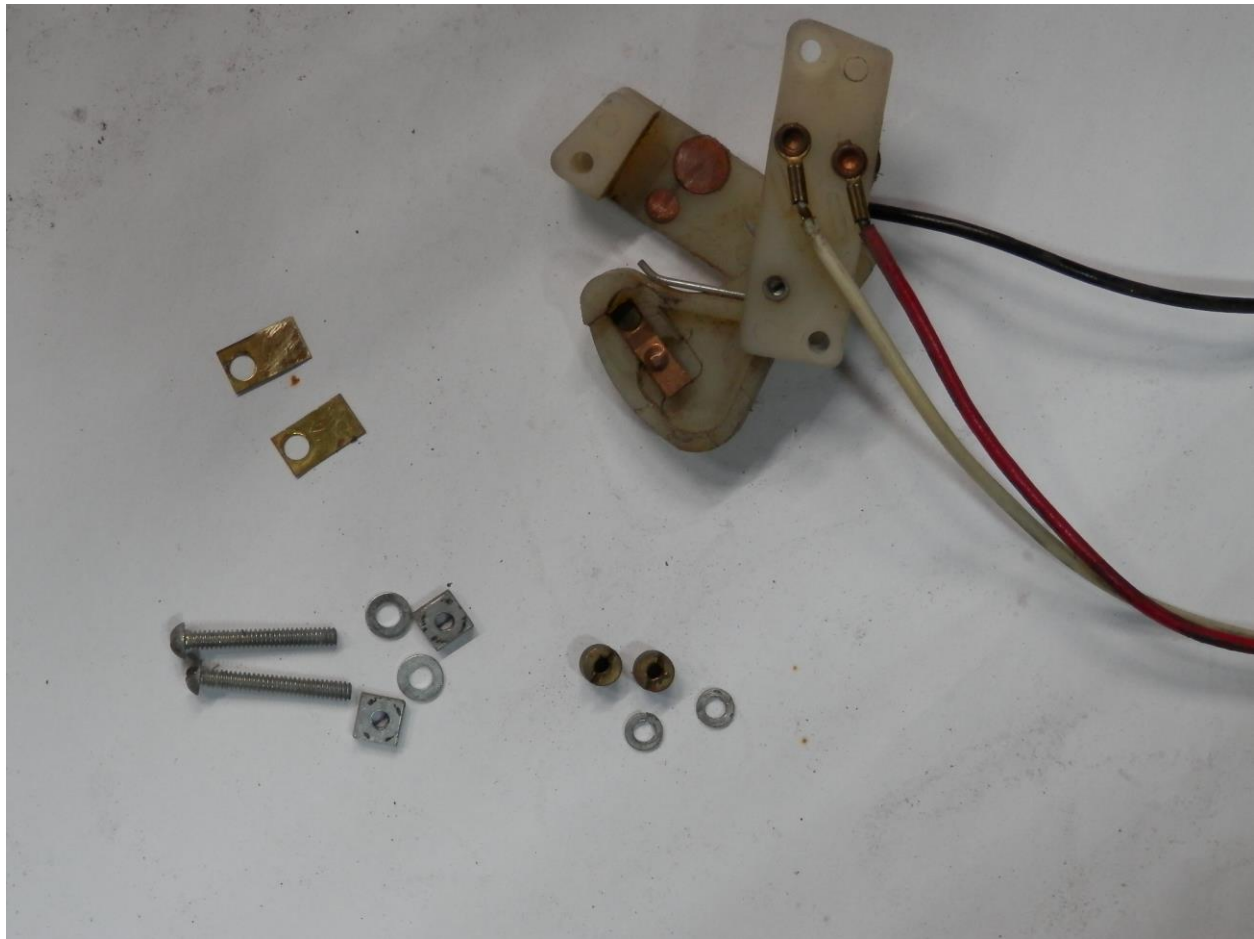


Fig. 1

The main function of the striker/micro-switch is to “*switch*” the main +12V for either the up or down operation of the motor, power is also transfer from it to the plunger switch which changes the direction of the main +12V to the motor and will stop the operation (depending on which position is engage up or down) and switches power to the next operation (again either up or down).

Fig. 2 below shows the plunger switch shaft with the contacts on all four sides, the plunger provides the switching function for the motor to go forward or reverse depending on the plunger position.



Fig. 2

The switching action of the plunger switch is made by the pressure force by the jack-screw armature on either the up or down position.

The main question the topic of this document is how we can protect the striker/micro switch from this heavy loads and to save it from future burn-outs?

The electric motor will draw over 5A (with no load) while going up (trunk open) and may reach in the range of 6A or higher while going down (just the jack screw and striker mechanical pieces load) and close to 6.8A while pulling the trunk to close before it stops. This heavy load must be carry by the striker switch during either operation assuming there is no defect on the mechanical parts and the electrical motor is functioning correctly.

The wiring diagram in Fig. 3 below shows the layout for the 1955-1957 models and as detailed above the main function of the striker switch.

*The main point below will be how we can off-load the striker switch with an addition of a relay and a few minor wiring modifications.*

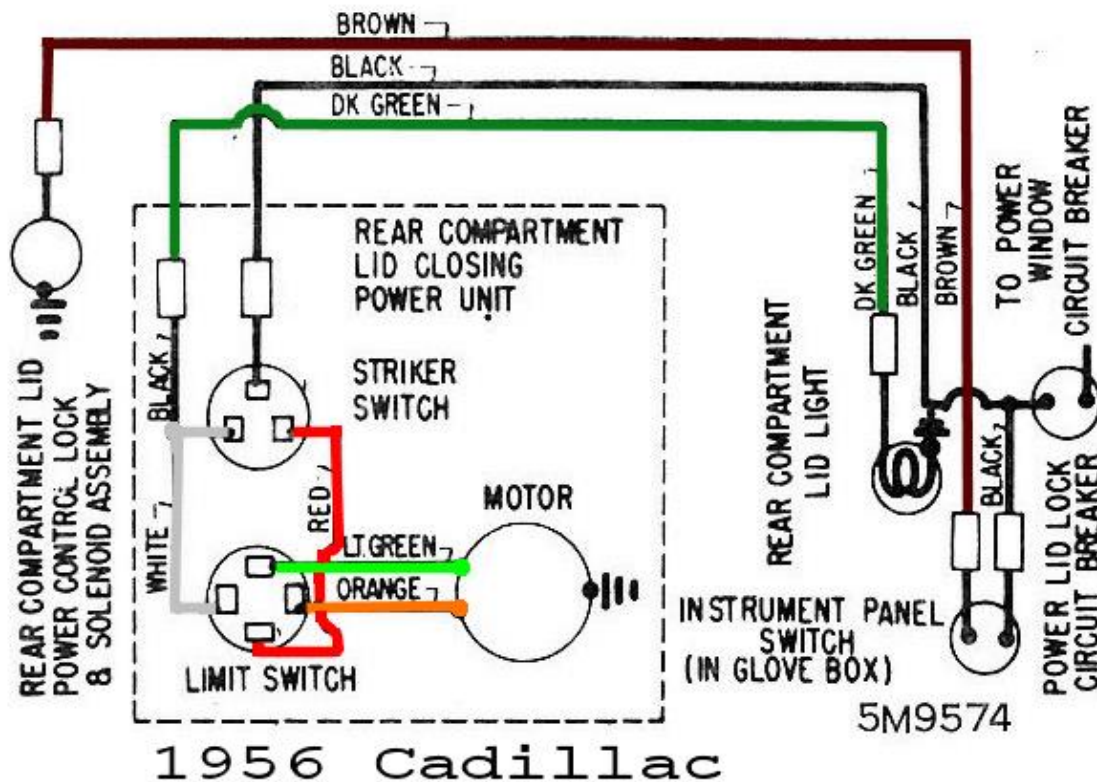


Fig. 3

Below is a picture of a complete rebuilt unit I did a while ago, this unit is currently my spare one and will be the first one to get the modification.



Fig. 4

The first step is to remove the two wires from the plunger switch the “white” and the “red” these are the ones coming from the striker/micro switch. I will still be using the striker switch to drive the new relay and the relay will provide the switching function to the plunger switch

You can leave the green wire with the connector at the plunger switch or remove it for ease of soldering the new relay wires at the plunger switch.

Where to mount the relay would be ones preference it is not critical where it is place, but if you have the trunk pull-down cover it may be a bit tricky finding a large area to place it.

The relay needed for this modification would be a SPDT 12V type any automobile relay rated at 30/40A should be fine, no need for any high spec type of relay just for this application.

Wiring the relay with or without a socket to each of the terminals at the trunk pressure switch will be up to the user discretion depending on the wiring color code Fig. 5 below shows the connections from the relay over to the pressure switch and the wires removed from it.

Note: Since my relay had the pig-tails I just chose to wire those according to the terminals wiring in my case these match the layout for the relay coil and the main +12V with the trunk pull-down wiring.

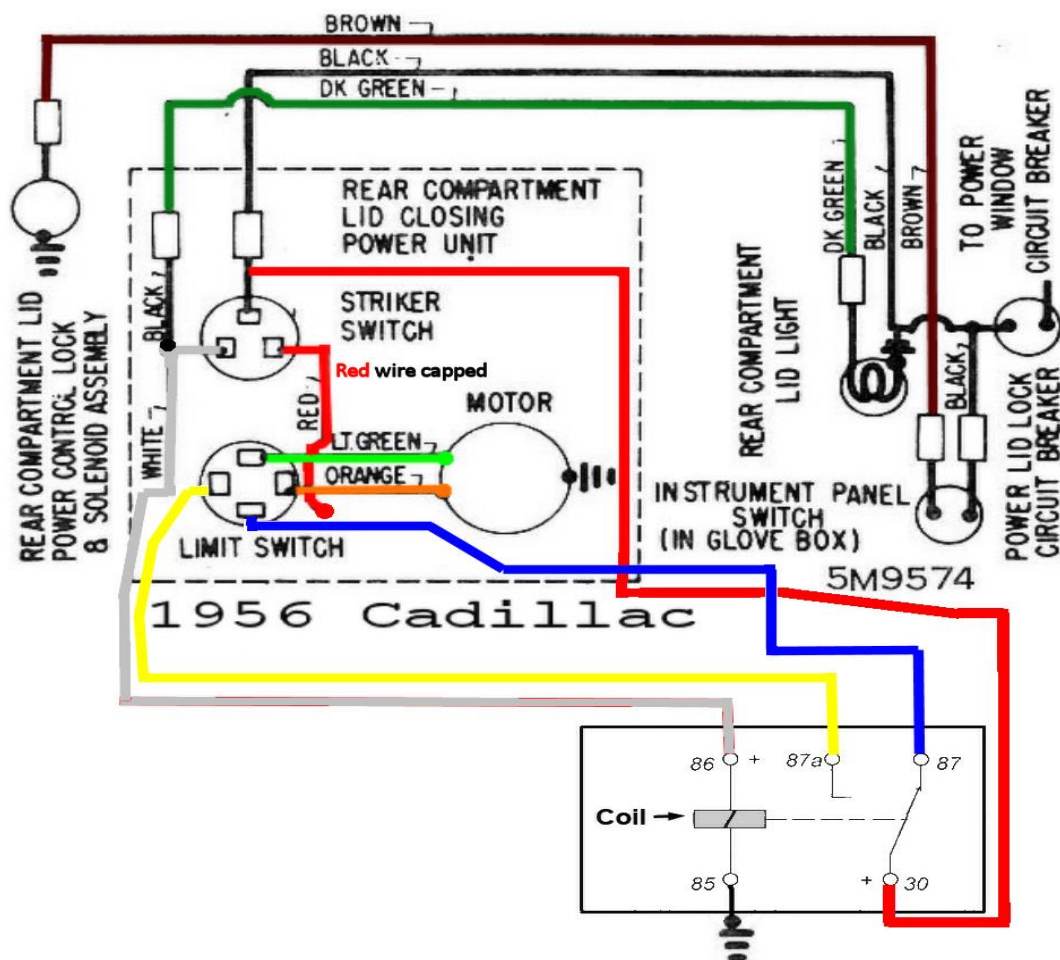
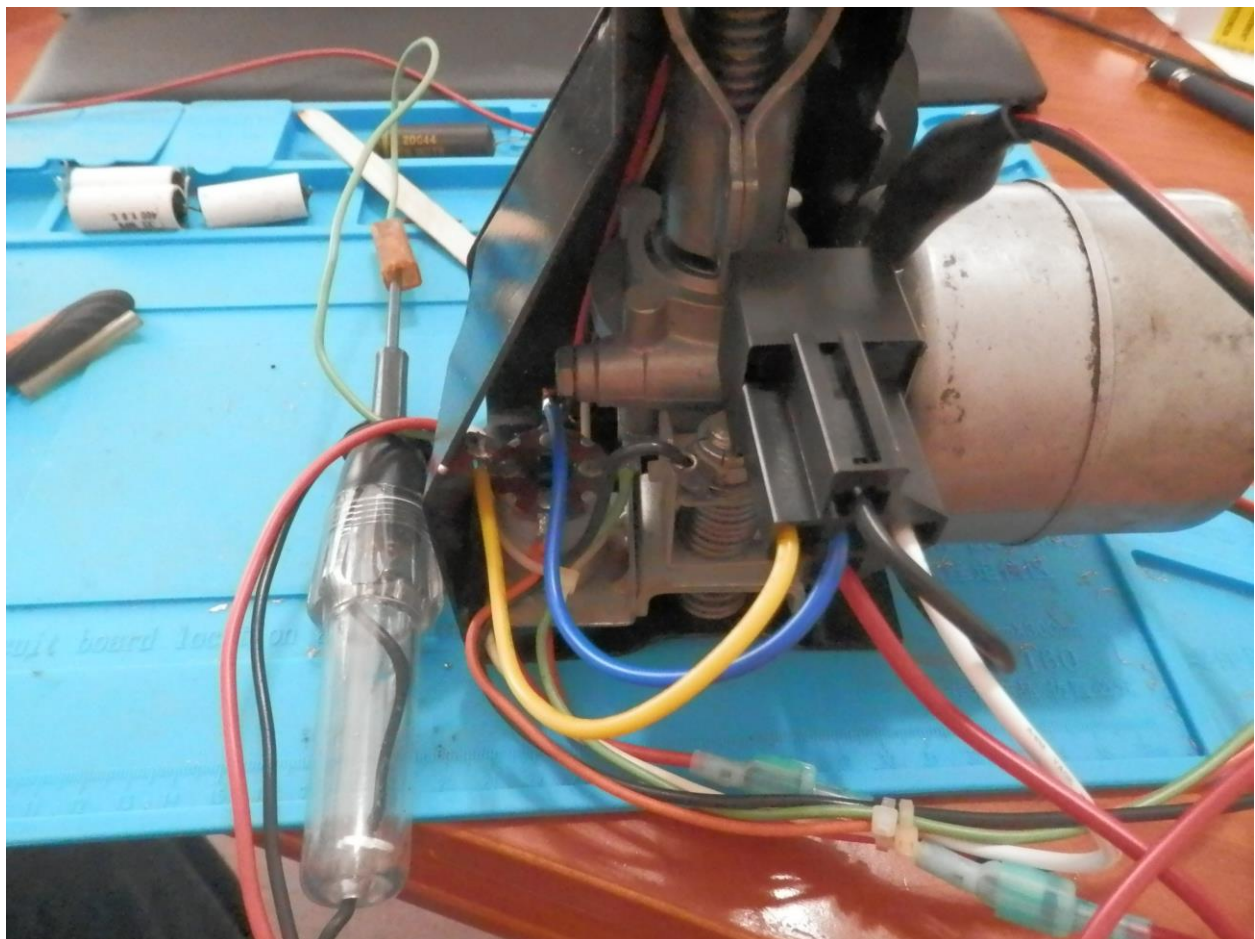


Fig. 5

The “white” wire from the pressure switch will now go to the relay coil, the “red” wire from terminal 30 at the relay will need to be extended over to the main +12V source (black wire connector), terminal 87 will now extend power the pressure switch while the motor is pulling the trunk to the close (jack screw going down) position (relay will be de-energized at this stage), terminal 87a will now extend power to the pressure switch for the motor to move in the open position (jack screw going up) the relay will remain power up while at this position.

**NOTE: THE RED WIRE THAT WAS REMOVE FROM THE STRIKER SWITCH WILL NOT BE NEEDED AND WILL NEED TO BE CAPPED**

Pictures below shows the final relay connections over to the pressure switch and the position of the screw jack at both fully close and fully open positions.

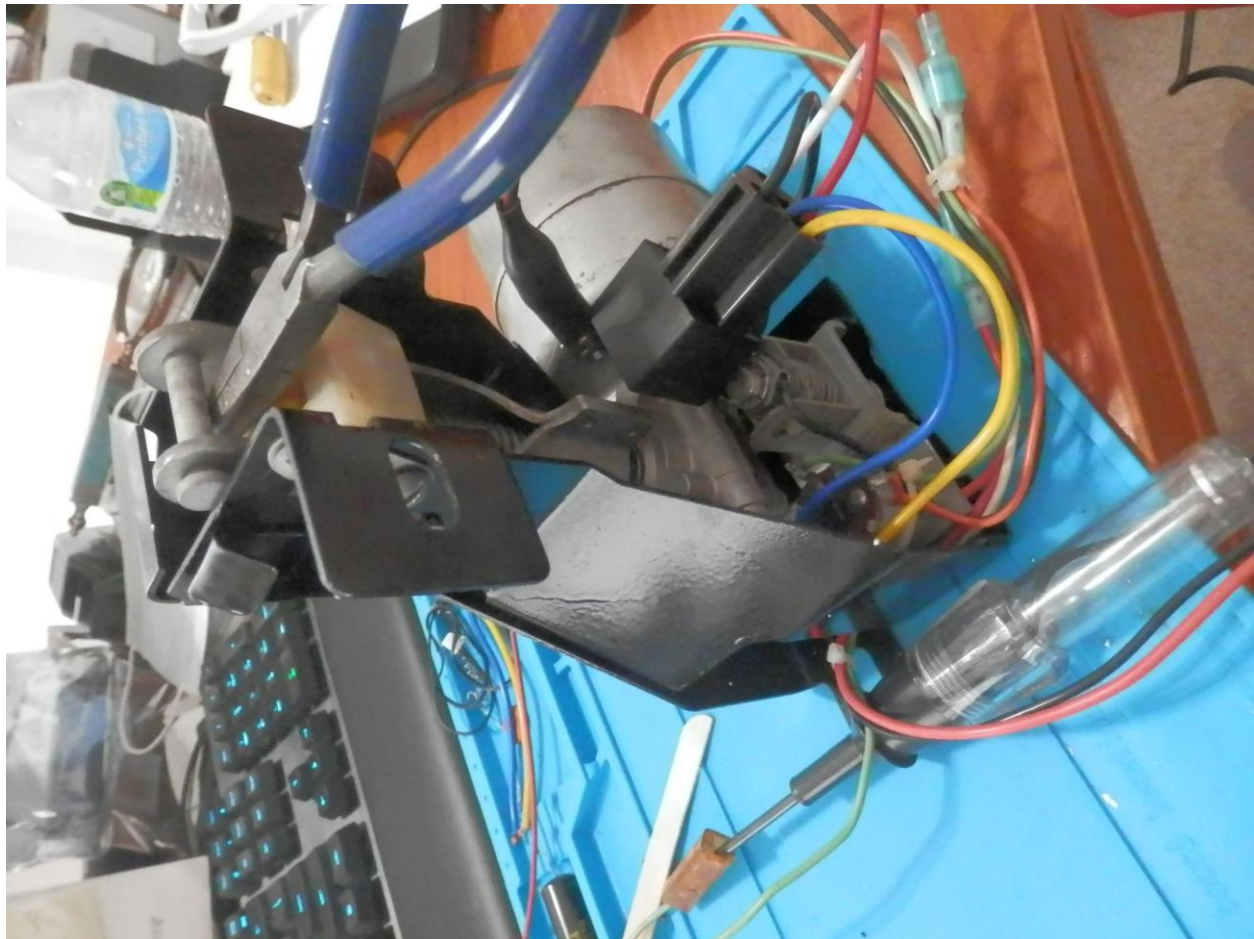


Relay connections to the pressure switch



Fully open position extending the power to the “green” wire for the dash indicator.

*Note: relay stays energized while in this position.*



Fully close position (trunk locked) and dash indicators is off.

**Note: relay is turn-off when the trunk is in the full close position.**

Just one final note the wiring diagrams on this document represents the standard OEM layout for the trunk pull-down, if your unit was somehow re-wire differently you will need to follow your existing layout to connect the relay.

Best luck, hope you will enjoy this document.

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Final product, the relay was placed on the side of the frame with no obstructions for the mechanical pieces and hot glue the base of the relay down on the frame. There was no need to drill any holes just to place and bolt the relay and socket, wiring was re-routed.

