

## ***Rear Switch for Tailgate Window - Discussion***

Contributed By: Bill Kelsey

[*Ed. Note: in response to an earlier message on the FSJ-List, Bill Kelsey wrote:*]

Bruce, you're right and I was mistaken. However, we're both right and wrong on this. I was wrong in writing that the dash and tailgate switches share a common power line to the tailgate electric motor. My error was based on my thinking of the tailgate switch as similar to the defroster switch, in which the dash switch has its own power source but only controls the relay/timer in the tailgate, while the power for the defroster grid itself is supplied by the main power line to the tailgate (which also powers the tailgate window switch). In the case of the electric motor, although it is only connected to the tailgate switch (via the safety switch, on one wire) and so looks like the defroster circuit, the tailgate switch actually handles two discrete circuits -- one for the dash switch, which essentially passes through it, and has, as you point out, its own power source (and circuit breaker), and the other for the window functions controlled by the tailgate key, which uses the main power line to the tailgate. My error was also, I am sure, related to my electric window lift having been replaced with a manual window lift, and so while I still have the electric motor wiring in place I don't have to deal with it anymore (other than the main power line, since it also feeds the defroster).

In the case of the electric window, then, you are correct. Since the dash and tailgate switches are essentially two separate circuits which share the same wiring, it is possible for the dash switch controlled circuit to operate while the tailgate switch will not because of a failure in the main power line to the tailgate, as you experienced.

However, you are nonetheless incorrect in suggesting that one should first check the fuse (presumably to the main power line).

First, there are no fuses for this circuit, but two self-resetting circuit breakers in the fuse block. This means one cannot visually check these to determine if they are intact. Rather, one would have to test the circuit breaker (or replace it with another) to check its function.

Second, the circuit breaker is unlikely to fail. Unlike a fuse, a short in the circuit will not blow the circuit breaker, but only cause it to open until the short is eliminated.

Third, there are much quicker and easier ways to see if power is getting from the fuse block (and so through the circuit breaker) to the line to the tailgate. The easiest, for those who have functioning rear defroster circuits (that is, the dash light still comes on, regardless of what happens to the grid), is simply to turn on the rear defroster.

Since the defroster dash light draws its power from the relay/timer in the tailgate (which draws its power from the same power line as powers the tailgate switch), if the defroster light comes on then the tailgate has power, and if it fails to light then the most likely culprit is the main power line to the tailgate. There may be a problem where the power line actually connects with the tailgate switch, or in the few inches of wiring between the defroster relay/timer and the tailgate switch, but the power line is intact into the tailgate. (In your case, if it was the power line connector that was corroded, then you lost both the tailgate motor and the defroster.)

For those without a rear defroster, or whose defroster circuit is bad, the next easiest place to check the power line is under the hood, at the connector on the engine side of the firewall, behind the fuse block. (It's by itself on the left side of the firewall, with a round grommet surrounding two connectors, one with three wires, the other with five.) Simply pull the three-wire connector, identify which blade in the firewall connects to the power line (the large red wire with the trace), and see if it has power (it should have 20+ amps). If it does, then the problem is either in the wiring from the fuse block connector to the tailgate switch or in the tailgate switch (it cannot be in the wiring from the tailgate switch to the tailgate motor, because that is common to both the dash switch and the tailgate switch, and in this instance the dash switch still functions). If there is no power at the firewall connector, then crawl up under the dash to get the circuit breaker from the fuse block, and hope that it has failed (the alternatives are worse).

At this point, if there is power, one goes through the usual efforts to pinpoint where the problem (somewhere between the connector and tailgate switch), either by checking the connection under the rear of the FSJ (which will reveal whether the power line is intact to that point) or in the tailgate, depending on whether one would rather crawl under the FSJ or remove the tailgate carpetting and access panel and raise the window to get to the tailgate wiring and switch. If the red power line to the tailgate switch is intact, then the problem is in the switch. If there is no power at the tailgate switch, then there is a fault in the main power line between the tailgate switch and the fuseblock connector (or the connector under the rear of the FSJ, if that was tested and had power).

FWIW, Jeep's own recommendation is to first check the dash switch (especially the black grounding wire, which grounds the electric motor, according to Jeep), which we know works in this case, then the tailgate switch, then the safety switch, then the motor itself.

Bill Kelsey Aberdeen, South Dakota '79 widetrack Cherokee "S"