

## Reverse Lockout Troubleshooting

The way that the backup solenoid works is: When the backup lights are lit on your tow vehicle, 12 volt power should come down the blue wire through the trailer connector to the energize the electric solenoid on the back of the A-60. The ground path is from the solenoid brass body back to the trailer frame, back to the white ground wire back to the tow vehicle. If you no longer can back up, it is almost always (90% plus) a wiring problem either with the tow vehicle or trailer. The solenoids are normally very reliable.

Things to Check:

1. Make sure trailer wiring is connected to tow vehicle. The trailer will not backup without the backup light circuit powered in reverse. If wiring is connected:
2. Set parking brake, make sure truck/trailer won't roll. Turn ignition on, but don't start tow vehicle. Shift transmission in reverse. Check for reverse lights working on tow vehicle. If trailer has backup lights built in, see if they work too. If no reverse lights on tow vehicle, check shift linkage for proper adjustment, you may wiggle shifter and lights come on. Still if no reverse lights on tow vehicle, check for blown fuse. If fuse blown, figure out what happened to the wiring (probably a short) prior to replacing fuse. If trailer has backup lights itself, and they are working, then the issue is limited to the solenoid, skip to step 5.

Wiring checks below assume the vehicle is in reverse, secured so it won't roll, and key is on so backup lights are illuminated:

3. If backup lights are working on tow vehicle, check the tow vehicle connector by using a volt meter, or preferably a test light between the blue backup positive wire and the white ground wire. The light should clearly light or you should see a full 12 volts between the blue and white wire. The lack of a working blue wire AND ground wire on the tow vehicle are the most common problem. Often, people will not pay attention to the ground on the tow vehicle, and lights/backup solenoid will intermittently still work ok, because the trailer frame grounds through the tow ball. However, when you back up, sometimes the actuator lifts off the ball slightly, breaking that ground path, and the solenoid will stop working. Make sure the tow vehicle blue and white wires are correctly wired and working before proceeding.
4. One other tow vehicle test, if you have a five wire flat connector, and are not sure the backup light (blue wire) circuit is working on the tow vehicle: Turn on the tow vehicle headlights. This will send 12v power down the brown wire of the tow vehicle connector. See that the taillights on the trailer are working. Then, disconnect the trailer/tow vehicle connector and temporarily reconnect in the following "incorrect" manner: the blue wire post on the trailer connector into the brown wire socket on the tow vehicle. This will send 12v power down the blue solenoid wire on the trailer, effectively "fooling" the trailer solenoid into working. If the solenoid works, and the trailer backs up, then the problem is again with the tow vehicle wiring.
5. Once you are satisfied that the tow vehicle wiring and connectors are clearly good, then visually inspect the trailer wiring for loose connections. If the trailer wiring has Scotch Block type wiring tap connectors, make sure they are securely installed. Next, check the voltage at the trailer solenoid by using either a volt meter or test light between the blue wire at the solenoid and the brass body of the solenoid. If you have a test light with a probe point, you can pierce the insulation of the blue wire to check for voltage without removing the wire. If you clearly get 12 volts or better, a lighted test light between the blue wire on the solenoid and the brass solenoid body, then the solenoid itself is possibly bad (rare). Before giving up on the solenoid, we recommend that a ground wire be run from a 8-32 screw inserted one of the threaded holes in the bottom of solenoid brass body to the trailer frame for a secure ground. If a trailer has a folding tongue, or a rubber/flexible brake line coming from the actuator, sometimes this ground wire to the trailer frame is required for a good ground path from the solenoid.

All this wire troubleshooting is very worthwhile, as the overwhelming majority of solenoids returned work perfectly...and it is much easier to fix the wiring than change the solenoid. If, after checking the wiring out, the solenoid is still suspected, please contact UFP at 931-967-5101 x16 or [warrantytn@ufpnet.com](mailto:warrantytn@ufpnet.com) for assistance.

