



Kansas RTAP Fact Sheet

A Service of The University of Kansas Transportation Center for Rural Transit Providers

What to Do When the Lift Won't Work

A refresher on manual operation of the lift.

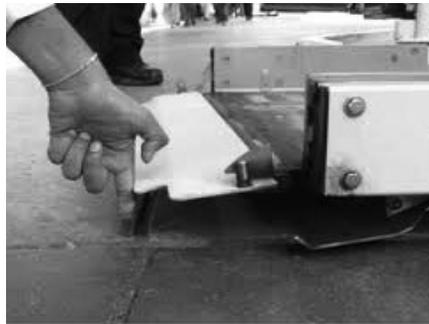
By Anne Lowder

When a lift won't work, it is often because of operator error or lack of preventive maintenance. But sometimes the lift just does not work no matter what precautions you have taken. In those instances, it is important that you already know how to properly operate the lift manually. Learning how to operate the lift manually when someone is on the lift is not safe—nor is it good customer service!

Avoid these common operator errors

One cause of lift malfunction is operator error. An operator who is hurrying to board or de-board passengers might try to skip steps and not operate the lift in a situation for which it is designed. For instance, sometimes a lift won't work because the vehicle is parked on sloped ground. The lift needs to be level to operate. Another common reason a lift won't work is not having the parking brake on before using the lift. The parking brake must be on for the lift to operate; this is a safety feature built into the equipment.

A damaged lift can also stop working. What can damage a lift is not always easily observable by operators. For instance when putting the lift into its stowed position, some operators tend to release the fold switch on the power operator's switch box before the lift is completely stowed because the lift makes a loud grinding noise (like metal rubbing against metal) when stowing. That noise, while unpleasant, is good because it means that the lift is locking-in (stowing properly). This keeps the lift from rattling while driving down the road. Properly locking the lift into its stowed position



A roll stop must be completely down on the ground before putting weight on the lift or the lift will eventually stop working. This one has a few inches to go.

keeps components of the lift from moving and wearing out prematurely.

Another example that can cause damage to the lift involves the roll stop component of the lift. The roll stop (or kick plate) component (see above) is the shield at the front end of the lift that locks up into place to help prevent a wheelchair from rolling off the platform during lift operation. The roll stop is placed back in the "down" position when the passenger in the wheelchair is ready to de-board. Sometimes the operator does not check to see that the roll stop is completely down before putting weight on the lift to enter or exit the lift. This causes stress to the roll stop component and eventually the sensors will not detect when the plate is locked in the "up" position, which will cause the lift not to work. The roll stop needs to be lowered completely before entering or exiting the platform.

If all else fails: Run the lift manually

There will be that time when the

lift just does not work, despite all your precautions. That will not be the time to learn how to operate the manual pump on the lift. My experience during the KS RTAP Advance Mobility Securement class, where each driver is required to operate the lift manually, has been that most drivers, even if experienced, do not know how to manually run the lift. If I were a passenger stuck halfway up or down on the lift in inclement weather, and I was watching the driver try to read the instructions on how to operate the lift manually, I would not be happy.

Manual operation is simple with the right equipment in the vehicle. There is a notched rod to be used as a pump handle that comes with each lift. I have been in vehicles where the rod is missing. You will not be able to operate the lift manually without the rod to insert into the pump. Be sure that the rod is listed on the daily pre-inspection form and is actually in place in the vehicle.

How to manually deploy the platform to de-board a passenger

[Note: These instructions are general. Refer to your lift's operator's manual and the manufacturer's online videos for how to operate your particular lift.]

Insert the notched end of the pump handle into the hole in the hydraulic pump cover and turn the handle ¼ turn counter-clockwise to lower the platform until the rear kick pad is level with the vehicle floor. Turn the handle clockwise ¼ turn to stop the lift from lowering further. Note: do not turn the handle more than ¼ turn, as it may cause the valve to disengage from the pump body, which



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Proper operation and maintenance of a lift help keep lift malfunctions to a minimum.

will disable the pump.

Roll the wheelchair with passenger onto the platform, check that the roll stop is in the “up” position for safety, and turn the valve ¼ turn counterclockwise to continue lowering the platform. The lowering of the platform is done by gravity and no pumping is necessary.

How to manually raise the lift

To return the lift to its stowing position after the passenger de-boards, turn the handle ¼ turn clockwise and begin manually pumping as you would a tire jack until the lift is completely folded inside the vehicle and locked into place. The roll stop will hinge automatically. Stow the pump handle and close the vehicle doors.

If you have a passenger on the lift ready to board the vehicle, turn the handle ¼ turn clockwise and begin manually pumping until a few inches off the ground and then check the roll stop to make sure it is locked into place. Continue pumping the lift manually until the lift is at floor level and the bridge plate is flattened. Stop pumping and assist the passenger off the lift and into the vehicle. Then resume pumping until the lift is folded inside the vehicle and locked into place.

Preventative Maintenance Tips for Lifts

Regular maintenance is your key to lifts that operate well. Here are tips from lift manufacturers Braun and Ricon. Every lift built after 2005 has a cycle counter on it that will tell you the number of times the lift has cycled. The lift should be serviced every six months or 1750 cycles.

Six Month Maintenance:

- Inspect lift mounting brackets and hardware beneath vehicle to verify that they are not loose or damaged.
- Inspect electrical wiring for chafed wire insulation, loose connectors, etc.
- Verify that all lift decals are affixed properly, clearly visible, and legible.
- Verify that all handrail fasteners are properly tightened.
- Verify that all lifting frame pins are installed properly, free from damage and locked in position.
- Verify that platform motions occur smoothly and without obstruction.
- Verify that bridge plate deploys fully when platform stops at vehicle floor level and that it rests evenly across rear edge of platform.
- Be certain that roll stop opens or closes properly when it contacts ground or leaves the ground.
- Add fluid only when platform is at ground level. Adding fluid while platform is raised will cause reservoir to overflow when platform is lowered.
- Hydraulic power unit: Check for visible hydraulic fluid leakage. Inspect hydraulic hoses for damage. Verify that all fittings are tightly secured. Verify that backup pump manual release valve is lightly closed.

Sources: Bruan and Ricon service manuals. See Sources below for complete citations.

Practice is important

Manually operating a lift is a fairly simple process, but it’s easy to forget the steps if you don’t practice them regularly. And while the steps are easy, the act of pumping can be quite strenuous if you are trying to raise the lift with a passenger on the lift. Drivers should practice this at least quarterly.

In sum

A lift is a mechanical piece of equipment with hydraulic and electrical systems that requires regular preventive maintenance. Operator errors can cause damage and create unsafe conditions for both the driver and the passenger. Drivers need to be fully trained to inspect and operate the lift. Finally, even with

good maintenance, the lift still has the potential to fail. Therefore, new drivers should be trained in manual lift operation and experienced drivers should operate the lift manually—with AND without a passenger on the lift—periodically (at least quarterly), as a refresher, during a pre-trip inspection. Remember, if you don’t know how to use your equipment, it won’t be of any use when you need it. ●

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Sources

- National Transit Institute Advance Mobility Device Securement Training Manual. Spring 2010.
- Braun Corporation NL500 Series Service Manual. <http://www.braunlift.com/productinfo/rooft/prodmanuals/n1500.htm>
- Ricon Service Manual. www.riconcorp.com/pdfs/32dss102/32dss102/D.1.pdf