

Step Cover Problem

Duff Norton Mod. #LM100-1-150 on mine.

The cover is actuated by a motor extending a rod. If you hear the motor running but the step cover is not raising, the motor gearbox probably came apart. In some cases it can be clamped back together or the motor has to be replaced. It is a Duff Norton linear motor and fairly expensive.

Back in November of last year my step well cover was demonstrating exact symptoms. While at Newmar already for another repair, I bought a new motor with rod. (I believe was \$276.00). Other than the amount paid for motor kit, the rest was pretty easy, repair was less than 30 minutes. While I was at Newmar a tech walked me through the repair. I believe if you can do a search however, a fellow OP'r stated he found a duplicate motor for under half the cost what I paid that works.

Entry steps and step cover

Interior step did same thing to me. The machine screws that hold the rear cap/mount eye are not very strong. Mine loosened, stripped out and pulled loose. My solution was to drill thru the blind, threaded hole they went in, get a longer bolt and nut and reassemble. Clearances are a little tight, but it is still holding after three years. Just a suggestion. Total cost \$5.34 in parts 1hr labor

Thank you all for your responses. 🙏

My next question is how do I access the step cover mechanism? Cover is down (which forms the steps). Steps are secure in place. Is there a way to release or lift the steps to get to the motor and extending rod?

I was able to get my step cover apart today. 2 of 3 screws holding gearbox together striped out. 🤖 Drilled out the striped threads through the case and replaced original screws with longer bolts and nuts (size 6). Unfortunately damage to gears was bad enough so as not to engage. New [actuator](#) ordered. Not exact replacement so will see if it works.

I received my new step cover [actuator](#) Friday and was able to install. Seems to work fine.

Interior Step Cover Actuator

I have a 2004 Kountry Star. Had the step cover [actuator](#) replaced once under warranty, it broke again so never bothered replacing it. Just today I decided it would be nice to have it operational and had read here several years ago about a beefed up replacement for the weak one that came with the coach. The current one is a Duff-Norton Model #LM100-1-150. Any help locating a newer model one would be appreciated.

Thanks for the help. I found it.

Mine came apart and stripped threads out. Newmar has them (pricey) tried salvage yards with no luck. a salvage yard man told me to get the extended and retracted measurements. do an internet search for 12 volt actuator, he said that the import work as good as the Newmar. I did this last year and it worked for me. Can't remember the cost, it was less than a \$100.00 w/freight. Not that tuff to install, a little frustrating but not bad.



Phoggberg

Duff - Norton does not sell to public, newmar sells for 300.00 plus shipping go to www.firgelliauto.com 129.00 plus shipping. same moter just better.

I ordered lock arm motors from them 119.00 each newmar was 275.00 each motor model from firgelliauto for lock arms FA - 150 - S12 - 4"

Accessing the step cover

Simply lift the Bottom stair get your hand under the bottom edge and pull towards you. The stair will raise to the up position unless the screw drive is still engaged. Mine is totally loose. If yours is still intact and no power, check the fuse for it.

I have ordered a new Dunn Norton LT150, and after talking with Newmar's VP of Engineering at the Phoenix Rally, Have a solution in mind that will allow one of moderate weight (I am 170 Lbs and already trill tested it) to stand on it.

Installed the LT150. installation was easy. Works perfectly and I can stand on it (170 lbs). The secret is to raise the step until the side braces (under the step) go over center which provides the locking function. Hold the button, until the step raises up slightly above floor level and settles backdown. the side mechanism is in full lock. The Dunn Norton LT100-1-150 seems to have the right amount of throw to do this. I think the LT100-1-100 mentioned in other posts will be too short and bend/break the push rod.

The believe the difference between these and the Newmar product is Newmar's has a custom Stroke Length of 121mm (4.764 in.).

Quote:

Originally Posted by **mikelm48** ➡

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I got the impression also. I believe the original was an LS100-1-125 which is a 125mm (4.9 in) and is no longer available from the manufacturer. The LT100-1-100 mentioned as a replacement in other posts only has a stroke of 100mm (3.9 in) which is too short to move the side braces into an over center/lock position. Thus when someone steps on the step cover, they are transferring their weight to an [actuator](#) that can only hold approx 125 lbs. and thus will break the linear [actuator](#). This is how Newmar is getting a bum rap on their step covers.

Even the Newmar installed ones you have to move the step cover until it raises above the floor level and settles down, so operator error can come into play. Since the new [actuators](#) were only available in 100mm and 150mm (5.9in) stroke I opted for the 150mm, figuring I would have to stop it manually. Actually 150mm is at the maximum travel of the lift mechanism, so I can rely on the internal limit switches to stop the lift. So I lucked out there, however because there isn't even 1mm wiggle room you do not want to extend the actuator to its full extent, or you won't be able to put the bolts through the clevises. 🚫 If mostly extended (i.e. 90%) it is much easier bringing the step lift mechanism to the [actuator](#) rod and leaving enough slack to easily slide the bolts through. It took me 10 minutes of fighting with it fully extended to figure that out! 🤦‍♂️

I wouldn't blow the deal if they won't fix it, if the rest of the coach is what you want. just get the \$210 from the owner to replace the motor and fix it yourself. You will need, a socket wrench, and open end wrench to remove the bolts acting as clevis pins, a new motor, some in-line crimp connectors and a crimper (available in small kits which you should probably

have if you don't already have them, available from various tool companies, [auto parts stores](#), and electronic supply companies) and about an hour of your time. It really is easy.

A Photo of the step linear actuator installed

Here is a photo of the installed step [actuator](#) with the step in the full "upright and locked"

position 😊 You can see most of the detail of the install which is trivial. Cost at drillspot was about \$200.00. Sorry it took so long to load the picture.... but my honey do list is about as long

as I am tall 🤖
Attached Thumbnails



I tried pulling on the stair and it would only raise 2 inches. When I push the dash "step cover" toggle either way I can hear the step cover motor running but the stairs do not move at all. so....the motor appears to be working, but not engaging the lift mechanism. Any suggestions will be appreciated.

This is difficult without seeing. The linear [actuator](#) raises the step by pushing on a lever that drives a mechanism that I can best describe like my mother's wooden drying rack that she used for her lingerie. Each side is like two sticks, crossed in the center to make an X and held by a rivet. As the lower ends of the X are drawn together the structure gets taller, and as they are spread apart it gets lower. Its these two X structures that actually raises the step and when the spreading mechanism gets over center locks the mechanism.

From your description, I am guessing, this mechanism jammed because it was bent, or if you are lucky something is stopping the X's from moving. This might be the cause of why the [actuator](#) broke. If you hear the motor running, either the [actuator](#) arm is not connected to the raising mechanism (The X's) lever or it is and the shaft is broken, or the nylon gear inside is stripped.

Another alternative is the [actuator](#) is fine, and the motor disconnected from it, thus you can only raise the step 2 inches because the linear [actuator](#) is still in good shape but with the motor disconnected but the mechanism intact you can't pull the arm out to raise the step cover. If this is the case look at the photo in my 06-11-2012 @ 7:19 AM post. Maybe with only 2" you can get to the bolt or pin that is connected to the lever. It probably will be frustrating and maybe a waste of time, but worth a try. If you can pull that pin, if the mechanism isn't jammed, you can just pull the step right up and see the problem.

Can't pull the pin, or the mechanism is jammed, you are not going to like the next part, but once into it, it's not as bad as it sounds. In fact, I am doing the first part today, for different reasons. The carpeting covering the step is glued and stapled on. With a small 1/4" tip flat blade screw driver you can start on the tread of the middle step. The edges at the back corner have multiple stapes in them, but you can use the screw driver to pry them out enough to get your fingers in the edge and pull it back. These [staples](#) are sharp and some will break off with sharps still in the wood, so work carefully, and slowly. The glue is contact cement which will pull up with some resistance, but its not bad. When you hit resistance it is most likely another staple so grab your screwdriver and pry that one up. This is one piece of carpeting that covers the tread and the riser below it. Work slowly and carefully and you will still have the carpet to put back down, if you want to. You will see that the step is made from about 3/4 plywood. After 12 years mine was still sticky, so if you plan to put the carpet down, try and keep the step and backside of the carpet clean and free from dirt. Use a [needle nose pliers](#) to pull out the remaining [staples](#). With the carpeting off and a saber saw

you can cut the riser board (stay 1 or 2 inches away from the edges to protect the mechanism. That should give you plenty access to the mechanism. When you free up the step, the riser board can be replaced with a cut ready panel of plywood the same thickness from your favorite home store. If you don't have a table saw/radial arm saw and can't cut straight, like me, they will cut the ready panel for you for a couple of bucks more. Most likely you will only need a 2x2 ready panel, but bring a chunk of the board you cut to help them size it for you, and the dimensions of the board before you cut it. You can get some spray on contact cement (3M makes a good one) to respray the carpet and the new installed riser, and glue the carpeting back in, and then use a stapler to drive some 1/4"x1/2" [staples](#) back into the carpeting. Hope this helps....

Just in case you are curious, why am I pulling the carpet, we had the Grandkids one week-end last month, and it was a bit rainy just before we arrived. The ground at the RV Park stayed damp all week-end, and with the kids running in and out the steps collected more sand and gravel than a beach. It is way too much work for either the DW or me to keep vacuuming, and the carpet doesn't sweep very clean. I saw some removable industrial material cut for [RV steps](#) at camping world, but I didn't want to put it on carpeting. My home store had a good black rubber mat for about \$3 a foot, so I am pulling the carpeting from the steps, and gluing down the rubber mat. Then we will get the industrial mat that matches the mat on the area around the driver and passenger chair, and with a combination Velcro and snaps voila' removable, washable steps!

Amazon Sells: Duff Norton Actuator LT100-1-S002

It has a 125MM throw at 112lb load. It was \$220. I'll try it and let you guys know how it works. . . I know this is an old thread, but all of them seem to have been posted in 2012. So I thought I would energize the whole step cover [actuator](#) discussion. Now I just need to get the step up high enough to get the bolt out of the end of the actuator connected to the crank arm.

I replaced mine when it failed with this:

<https://www.amazon.com/gp/product/B0...?ie=UTF8&psc=1>

Works fine. I do use caution when reaching full extended or retracted position to not allow motor to labor too hard at full travel.

\$64.00 including shipping as I recall.

Hey Rick / sue.

I just bought the same one hoping it would fit without too many mods. I originally eyeballed it and got the 8 inch one and that was way too big. I measured it and it really wants a 5" stroke. But those are expensive to come by (the Duff model). So you just bolt it in original holes and wire and rock and roll? It never hits the internal limit switch? I guess you could fashion one.

What I was kinda surprised was the "original" part was fashioned from some PVC plumbing fittings....is that the OE parts? Or did someone DIY a fix before me?

Sounds like maybe there was a DIY fix. No plumbing fittings on mine. Mine attached with no mods. Haven't operated it in a while but if I recall it hits the limit switch in one of the positions but doesn't for the other. It moves slower than original. When the motor starts to labor I get off the switch. Seems to work and is rated at a higher weight. Not sure I trust the higher weight much as I don't recall it looking much beefier than the original. Also I made no changes to beef up the mounting hardware that is attached to the coach or step/cover. I only replaced the [actuator](#).

Try this, it's pretty simple. You may want to source better material but when I repaired mine, I went with some odds and ends I have kicking around. Just put a "brace" around the motor and gear box.

Attached Thumbnails



I also had the same issue and as a temporary fix I used a metal hose clamp. I had to replace mine and I located the company in the southern states which manufactures them. I also found that they had a unit that was stronger, 150 ft/lbs as opposed to 100 ft/lbs with the same stroke length. They said it would be slower, but that is not an issue. It has been running for 4 years now with no issues. The invoice that I have lists the part no. as LT 150-12V-LT 150-1-150 Linear [Actuator](#). Just food for thought.

External Steps Quit Working While Extended

When I returned from my last trip, my Coach Step external steps quit working while extended. My first stop was iRV2, with a search for threads about external steps and found these threads: [Delayed step extension/retraction Electric Entrance Steps](#), [Coach Step Problem](#), and [scs/frigette stair control module](#).

With this information, I started testing the steps and narrowed down the issue to either the module or motor. I found the following website for Stromberg Carlson Products, which sells the Coach Step (now made by Lippert Components) parts. [Stromberg Carlson - RV Steps &](#)

Step Accessories -

The components and prices listed on the site are:

SP-164889 Control box \$128.10

SP-1636669 Motor \$195.99

So, being a frugal shopper, I searched the internet for prices and found [Amazon.com](https://www.amazon.com) has the lowest prices, with free shipping and no sales taxes.

The prices are:

SP-164889 Control box \$112.26

SP-1636669 Motor \$143.61

and, if you want to purchase the whole setup:

Stromberg Carlson SP-24-200 24" Tread Electric Double Step \$442.79.

So, it looks like I will be ordering some step parts from Amazon.

This is just one of the issues I experienced on this trip! I also had to replace the florescent light above the kitchen sink - ballast fried (replaced the Thin-Lite 742 Fluorescent Light for \$48.11 from [Amazon.com](https://www.amazon.com)) and, the most expensive, the East Entrance to the Ohio Turnpike collected my PS mirror - that mistake requires a trip to [the body shop](#) to replace the mirror head (Ramco 1750CCHR Series) and some body work, where the arm was ripped out of the fiberglass. But, the trip to West Virginia to watch OU beat WVU was fun and probably worth the issues 😊.

LT100-1-150

Rated Load	112 lbs
Stroke Length	5.9 in. (150 mm)
Retracted Length	10 in. (255 mm)
Voltage	12V
Current Draw at Rated Load	3.5 amps @ 12V
Lifting Speed at Rated Load	0.5 in/sec
Limit Switch	Yes
Duty Cycle at Rated Load	20%