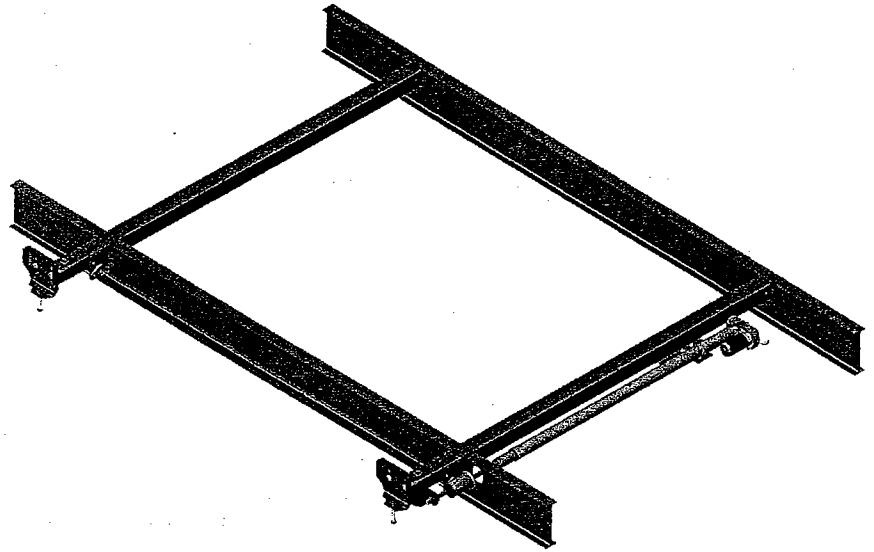
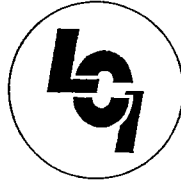


# *Lippert Electric Slideout System*

## Instruction Manual



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# *Lippert Electric Slideout System*

## Instruction Manual

### System Description

The *Lippert Electric Slideout System* is a rack & pinion guide system, utilizing an electric ball screw actuator to move the room assembly. The motor drives the ball screw in a forward and backward motion to drive the slide room in and out. The actuator comes equipped with an automatic clutching system. The *Lippert Electric Slideout System* is designed to operate as a negative ground system.

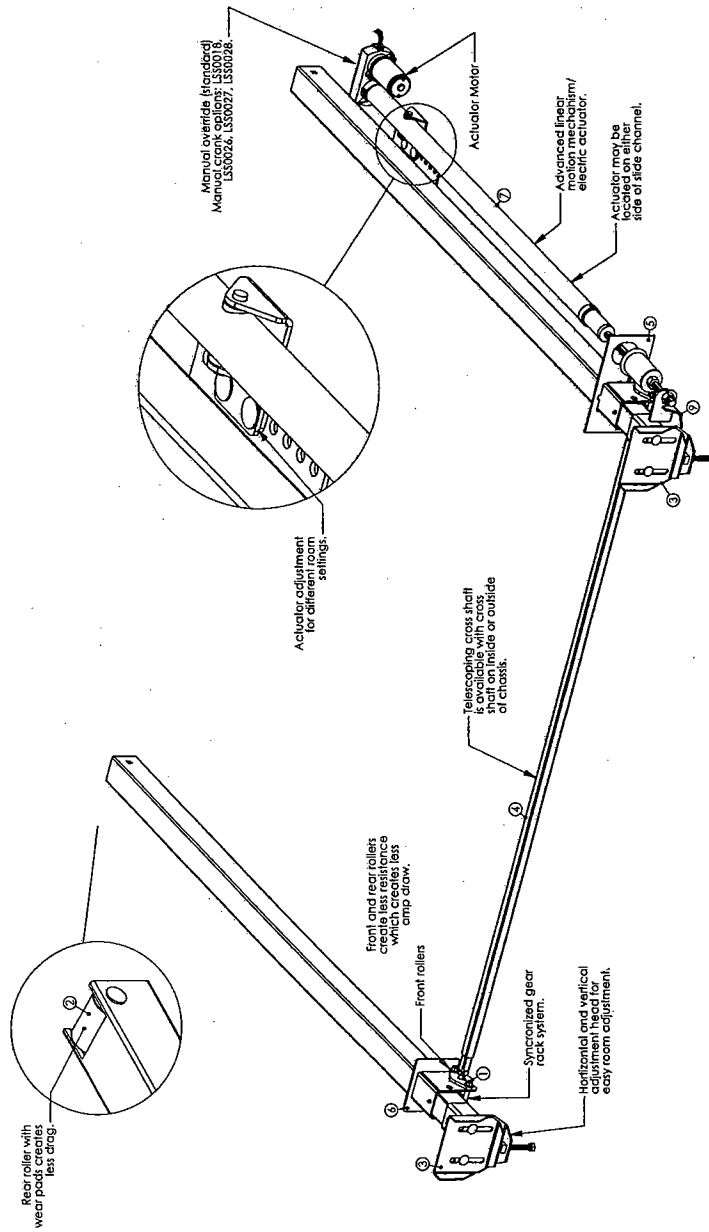
### System Operation

#### Normal Operation

To extend or retract the slideout room, press the wall-mounted switch located inside the coach.

#### Manual Override Operation

The slideout room can be overridden to retract or extend the room in cases where electrical power is interrupted or unavailable. To move the room manually, see page 8 / 9 of this instruction manual for details on how to retract and extend the room with a hand crank.



ITEM NO.	QTY	PART NO.	DESCRIPTION
1	1	LSA0001	Outboard Roller Pack
2	2	LSA0002	Rear Roller & Gear Rack Assembly
3	2	LSA0007	Head Assembly
4	1	LSA0017	Cross Shaft Assembly
5	1	LS00002	Double S/O Plate
6	1	LS00001	Single S/O Plate
7	1	LSA0004	40" Actuator Mount Assembly
8	1	LSA0003	Drive & Top Screw Assembly
9	1	LSA0005	Drive Bracket Assembly - Fixed
10	1	LSA0006	Head Mounting Hardware Assembly - Fixed
11	1	LS00003	Head Mounting Hardware Assembly - Adjustable
12	1	LS00045	1 1/4" Manual Crank Nut

**LIPPERT ELECTRIC SLIDEOUT OVERVIEW  
OF MAJOR COMPONENTS / DESIGN**

**LIPPERT COMPONENTS, INC.**  
A Lippert Components Subsidiary

65781 Sourwood Dr.  
Goshen, IN 46526  
(574) 642-4088 Phone  
(574) 642-4390 Fax

# *Lippert Electric Slideout System*

## Instruction Manual Electric System Troubleshooting

The Lippert Electric system is only one of four interrelated slideout room system components. These four components are: chassis, room, coach, and Lippert Electric system. Each one needs to function correctly with the others or misalignment problems will occur.

Every travel trailer has its own personality and what may work to fix one trailer may not work on another even if the symptoms appear to be the same.

When something restricts room travel, system performance will be unpredictable. It is very important that slide tubes be free of contamination and allowed to travel full distance (Stroke). Ice or mud build-up during travel is an example of some types of contamination that can occur.

When you begin to troubleshoot the system, make sure the battery is fully charged, there are no visible signs of external damage to the actuator or motor and that the motor is wired correctly and all connections are secure.

You can adjust the room extension with the jam nuts on the end of the actuator threaded rod (see page 12).

During troubleshooting, remember that if you change something, that change may affect something else. Be sure any changes you make will not create a new problem.

**You can obtain additional information on the Lippert Electric system by calling 866-524-7821 and asking for slide-room technical support.**

# Lippert Electric Slideout System

## Instruction Manual System Troubleshooting Chart

The following troubleshooting chart outlines some common problems, their causes and possible corrective actions. When reference is made to "Powerunit" it is referring to the motor and actuator as a complete assembly. All Powerunits are shipped from the factory with a serial number and date code, which should be given to the service technician when asking for assistance.

### Room doesn't move when switch is pressed

#### Probable cause

Restrictions both inside and out side unit.  
Low battery voltage, blown fuse, defective wiring.

#### Corrective action

Check for and clear restriction.  
Check battery. Charge battery or add auxiliary power source. Check battery terminals, and all other wiring. Look for loose/corroded connectors.

Powerunit not functioning.

See "Troubleshooting" on pages 3-5.

### Powerunit runs, but room does not move

Actuator not attached to front mounting drive bracket.

Check jam nuts/nylock nuts. Be sure that they are properly tightened and adjusted.

Bad motor or gear housing.

Replace motor.

### Powerunit runs, but room moves slowly

Low battery, poor ground, extremely low outdoor temperature.

Charge battery, and check ground wire.

Room is in a bind.

Check to see that room is properly adjusted.

### Room stalls in mid travel

Actuator in a bind.

Crank manual override and move room a short distance then retry electric switch to move room.

Bad actuator.

Replace actuator if above instructions do not work.

#### NOTES:

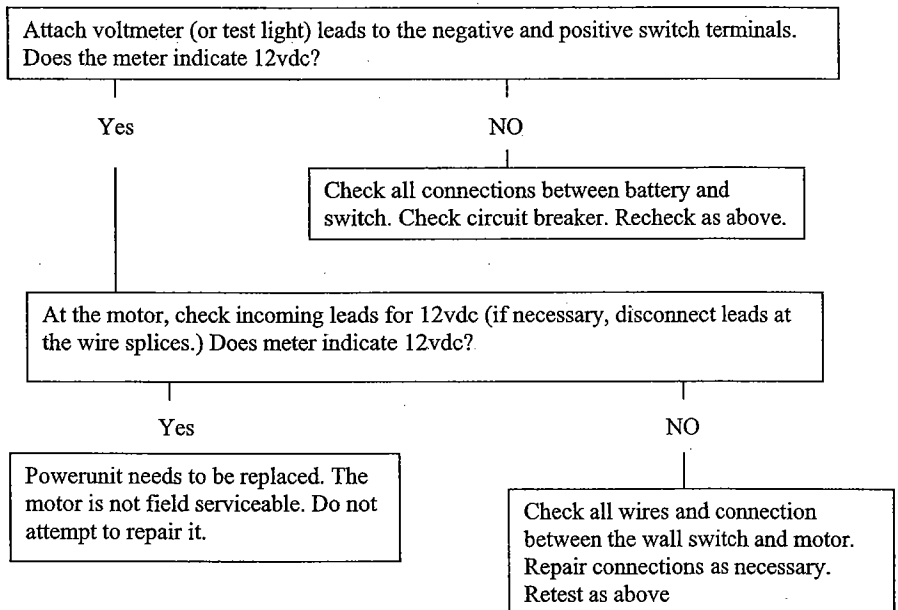
- If the slideout room will not retract there is a manual override that is located on the opposite side of the slideout room. A crank handle is provided with your unit. Once you have the room in the closed position take you unit to the closest dealer. See pages 8 & 9.
- Switch related problems
  - If room moves opposite from what the switch plate indicates, reverse the motor wires on back of switch (refer to the wiring diagram). Wire size must be 10 GA. Minimum.
  - If you find that you have a stripped gear, replace the gear pack.
  - If the room is out of time / synchronization, refer to pages 10 & 13.

# *Lippert Electric Slideout System*

## Instruction Manual Powerunit Troubleshooting

Before attempting to troubleshoot the Powerunit make sure an adequate power source is available. The unit batteries should be fully charged or the unit should be plugged into A/C service with batteries installed. Do not attempt to troubleshoot the Powerunit without assuring full electrical system capacity.

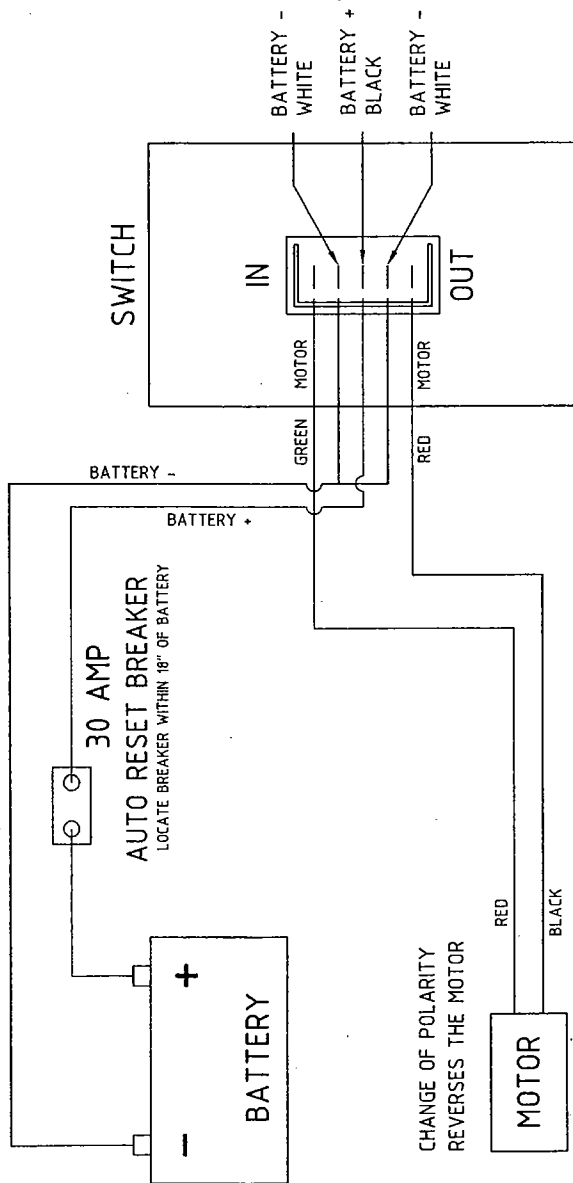
The following tests require only a DC voltmeter (or a 12vdc test light) and a jumper lead.



### Electrical Troubleshooting

Since there are no field serviceable parts in the motor or Powerunit, electrical troubleshooting and service is limited to replacing only those components as previously outlined.

Thorough checking of wiring and connections is the only other electrical service that can be performed.



# *Lippert Electric Slideout System*

## Instruction Manual System Maintenance

The *Lippert Electric Slideout System* has been static tested to over 2,500 continuous cycles with out any noticeable wear to rotating or sliding parts. It is recommended that when operating in harsh environments (road salt, ice build up, etc.) the moving parts be kept clean and can be washed with mild soap and water. No grease or lubrication is necessary and in some situations may be detrimental to the environment and long term dependability of the system.

### Electrical System Maintenance

For optimum performance, the slide-out system requires full battery current and voltage. The battery must be maintained at full capacity. Other than good battery maintenance, check the terminals and other connections at the battery, the control switch, and the electric actuator motor for corrosion, and loose or damaged terminals. Check motor leads under the trailer chassis. Since these connections are subject to damage from road debris, be sure they are in good condition.

Note: The *Lippert Electric Slideout System* is designed to operate as a negative ground system. A negative ground system utilizes the chassis frame as a ground and an independent ground wire back to battery is necessary (see page 6 for wiring diagram). It is important that the electrical components have good wire to chassis contact. Over 90% of unit electrical problems are due to bad ground connections.

### Mechanical Maintenance

Although the system is designed to be almost maintenance free, actuate the room once or twice a month to keep the seals and internal moving parts lubricated.

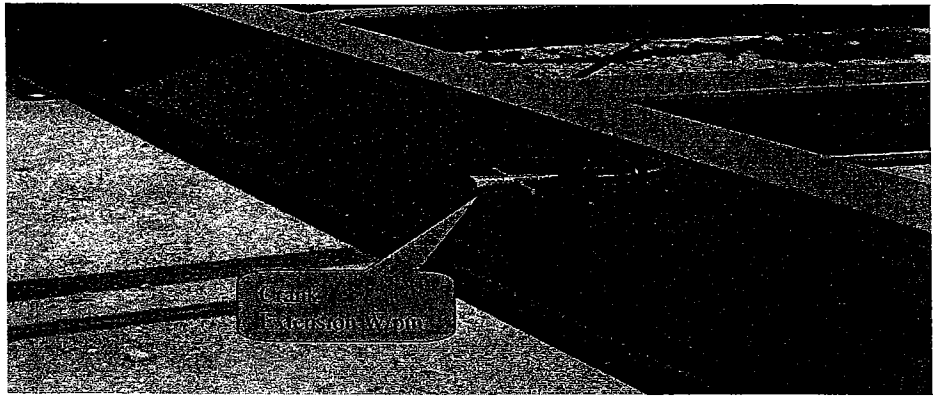
Check for any visible signs of external damage after and before movement of the travel trailer.

Note:

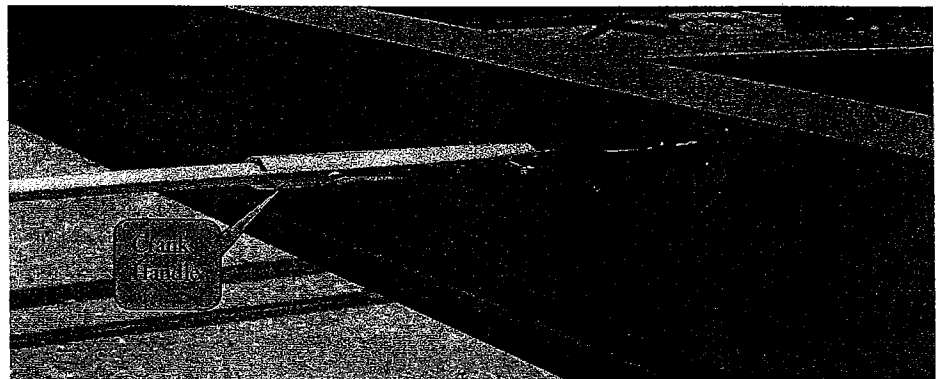
*For long-term storage: It is recommend that the room be closed (retracted).*

# *Lippert Electric Slideout System*

## Instruction Manual Manual Crank Option (Through Frame)



(Figure A)

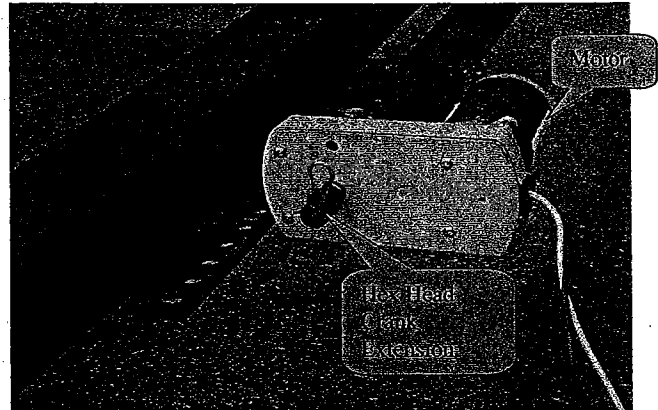


(Figure B)

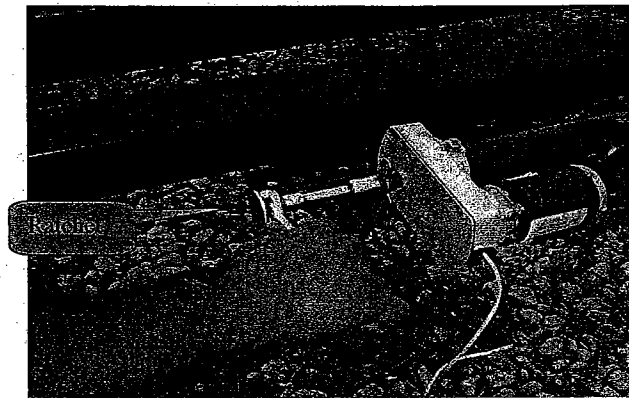
The Lippert Electric slide comes with a manual over ride system. Locate the crank extension with pin outside of the chassis main rail as the above figure (A) shows. You will find this crank extension outside the frame. (If your crank extension is under the inside of the frame, please refer to page 9). This is where the crank handle (standard fifth wheel landing gear crank handle figure (B)) fits on to allow the manual extension / retraction of the room. Simply take the crank handle and turn to manually open / close the room. It is important to note that you DO NOT need to attempt to disengage the motor as the actuator is "manual ready" Just hook up and crank.

# *Lippert Electric Slideout System*

## Instruction Manual Manual Crank Option (In Frame)



(Figure A)



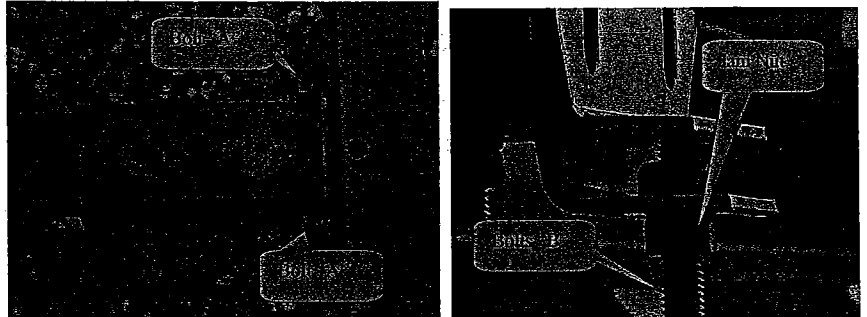
(Figure B)

The Lippert Electric Slide comes with a manual over ride system. Locate the hex head at the rear of the motor as the above figure (A) shows. You will find this crank extension under the frame. (If your crank sticks through the frame, please refer to page 8). This is where the ratchet fits on figure (B) to allow the manual extension / retraction of the room. Simply take the ratchet with a 5/8" hex overdrive shaft and turn to manually open / close the room. It is important to note that you DO NOT need to attempt to disengage the motor, as the actuator is "manual ready". Just hook up and crank.

# *Lippert Electric Slideout System*

## Instruction Manual Mechanical Room Adjustment

### Vertical & Horizontal Room Adjustment



### Horizontal adjustment

- ◇ Loosen 2 carriage bolts “A” on each bracket located at the end of each guide tube.
- ◇ Room is ready to be positioned horizontally by pushing on the outside, sidewall or by using a prying devise inserted into the opening between the room and coach.

*Note: Use caution when using prying devise so seals do not become damaged*

### Vertical adjustment

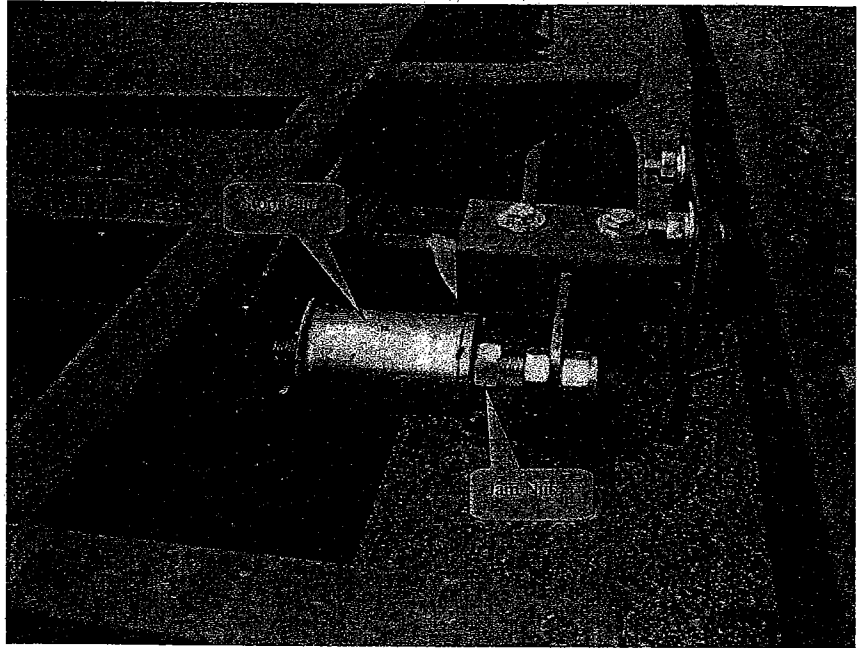
- ◇ Loosen 2 carriage bolts “A” on each bracket located at the end of each guide tube
- ◇ Loosen jam nut
- ◇ For vertical adjustment turn vertical adjustment bolt “B” up or down to locate room height.

Once room is located, tighten “A” and Jam Nut bolts.

# *Lippert Electric Slideout System*

## Instruction Manual Mechanical Room Adjustment

Adjusting room so it seals in the IN position

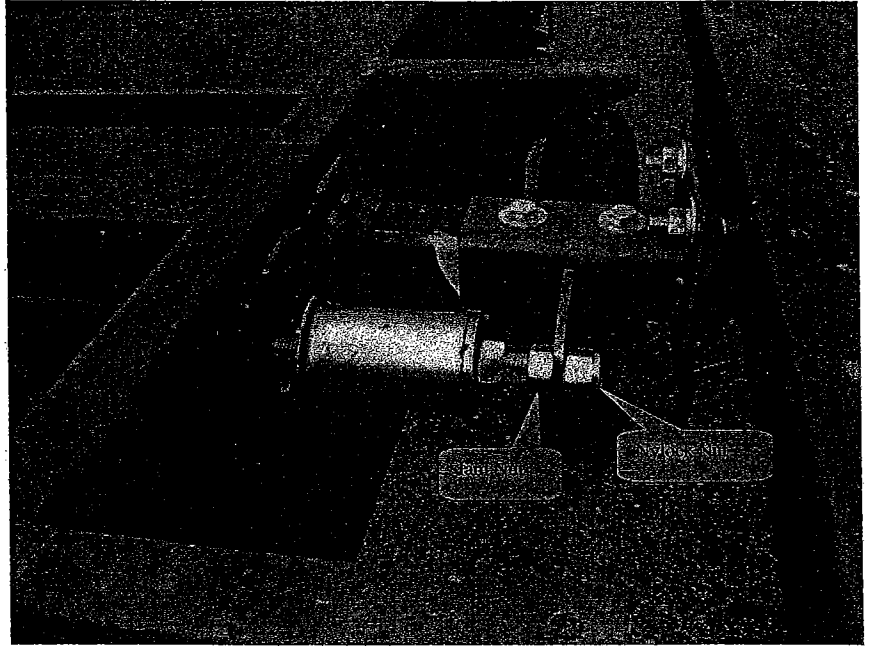


- Adjusting room so it seals in the IN position
  - Locate actuator coming through the frame
  - On the end of the actuator there is a threaded shaft mounted to the drive bracket with 3 nuts and a stop can.
  - Loosen the 3/4" nut on the backside of the stop can.
  - Screw the can out or in, and then tighten down the nut – this will change the location of your seal going to the "in position".

# *Lippert Electric Slideout System*

## Instruction Manual Mechanical Room Adjustment

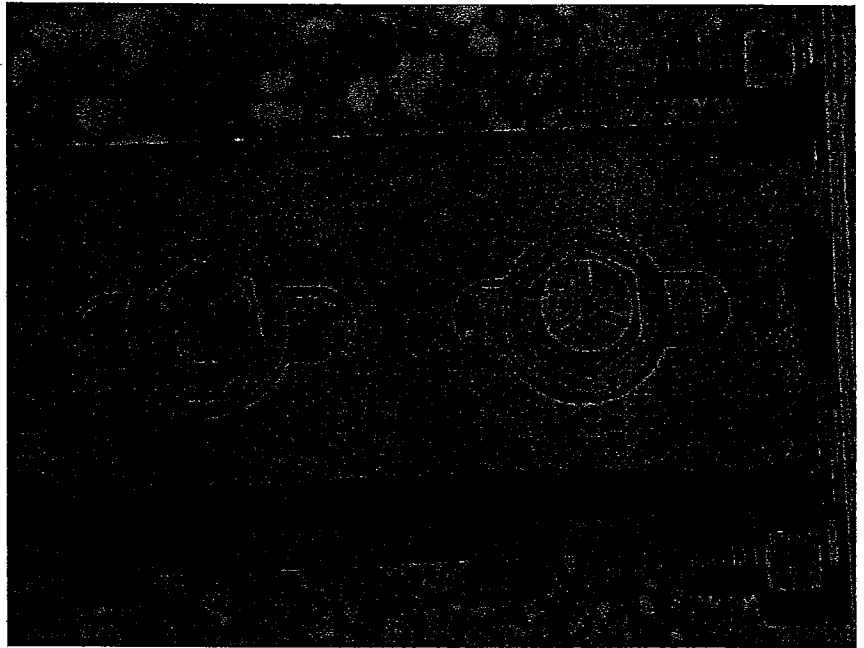
Adjusting room so it seals in the OUT position



- Adjusting room so it seals in the OUT position
  - Locate actuator coming through the frame.
  - On the end of the actuator there is a threaded shaft mounted to the bracket with 3 nuts and a stop can.
  - Move one of the  $\frac{3}{4}$ " nuts one way or the other which are on each side of the drive bracket located on the threaded shaft – this will change the location of your seal going to the “out position”.
  - Make sure all  $\frac{3}{4}$ " nuts are tight.

# *Lippert Electric Slideout System*

## Instruction Manual Synchronizing Room Travel

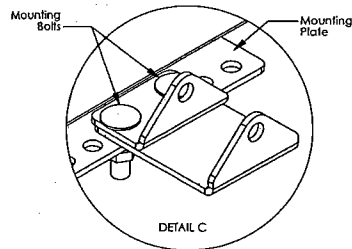
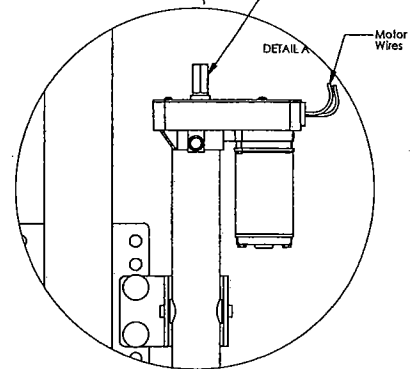
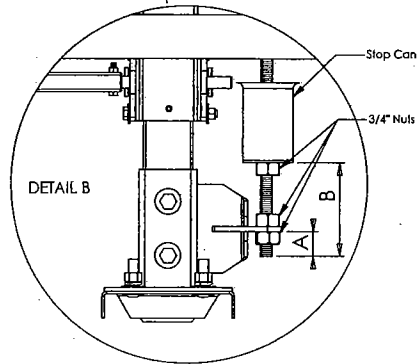
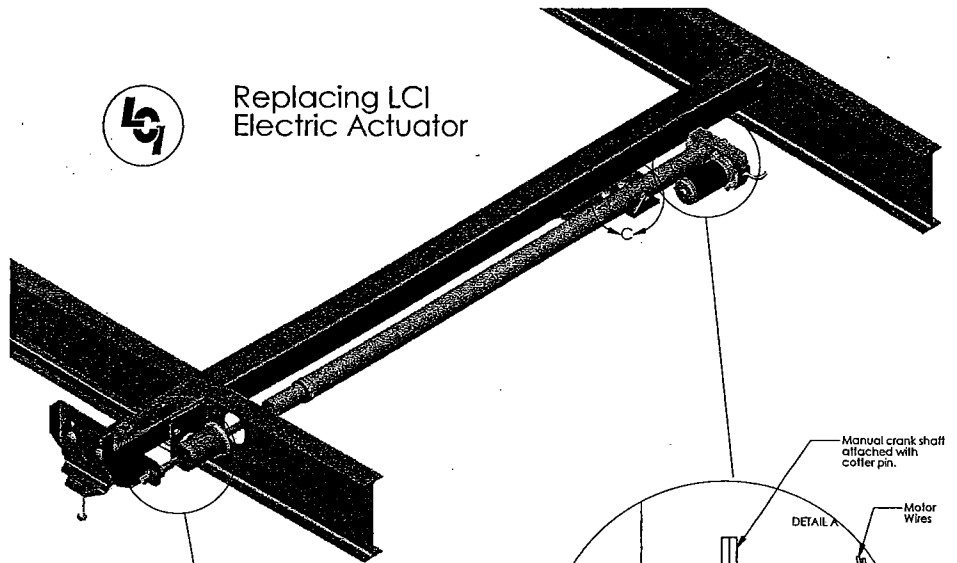


The Lippert Electric Slideout room travel (both sides of the room traveling the same distance) can be adjusted with specially designed synchronizing bracket mounted on the passive slide tube. The passive slide tube is the one that is not powered. The active slide tube is the one that has the cylinder attached. If one side of the room fails to seal adjust as follows:

- ◇ Loosen bolts on top of the passive slide tube
- ◇ Push or pull room (on the passive side) to align with the active side.
- ◇ Tighten bolts. Run room in and out to make sure both side are sealing in the in and out position.



## Replacing LCI Electric Actuator

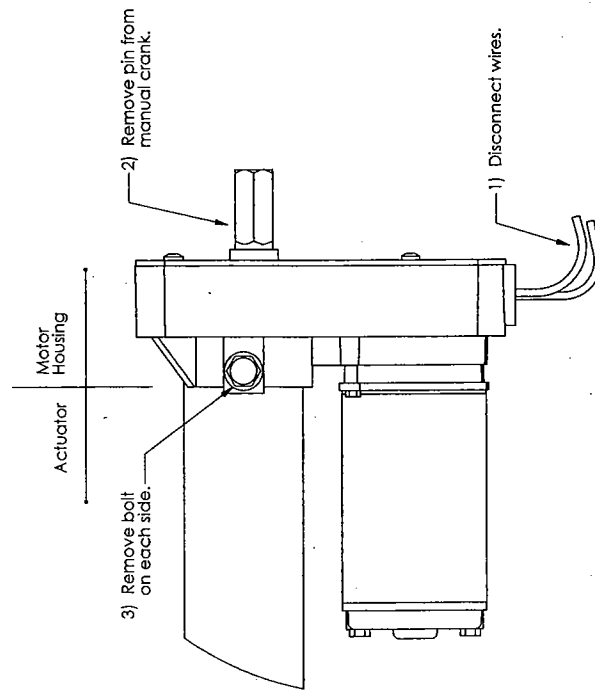


### To replace actuator

- Disconnect manual crank shaft (attach with cotter pin) at end of motor. (See Detail A)
- Disconnect motor wires from source (See Detail A)
- Take measurements A & B (See Detail B)
- Remove all 3/4" nuts (3 total) and stop can from threaded shaft on actuator.
- Remove mounting bolts and note locations of which holes were used on mounting plate. (See Detail C)
- After everything is disconnected, slide the actuator out of the frame. To attach new actuator follow previous step in reverse order.



## Replacing Electric Motor on actuator



### **To remove motor/transmission:**

- 1) Disconnect wires to motor.
- 2) Remove manual crank pin.
- 3) Remove bolts on both sides.

### **To install new motor/transmission:**

Reverse order of directions to remove motor/transmission.  
Note: Pin in transmission must be aligned with notch in actuator.  
Note: Bolt hole in transmission must be in line with hole in actuator.

# *Lippert Electric Slideout System*

## Instruction Manual

### LIMITED WARRANTY

THIS WARRANTY EXTENDS ONLY TO THE MERCHANT/ORIGINAL PURCHASER ("Purchaser") ACQUIRING THE PRODUCT, AS DEFINED HEREIN, DIRECTLY FROM A LIPPERT COMPONENTS FACILITY AND SHALL NOT BE CONSTRUED TO EXTEND TO ANY THIRD PARTY, INCLUDING BUT NOT LIMITED TO THE CONSUMER OR ULTIMATE PURCHASER OF THE END PRODUCT. IN PART, THE PURPOSE OF THIS PROVISION IS TO REQUIRE THAT ANY AND ALL WARRANTY CLAIMS BE MADE BY THE MERCHANT/ORIGINAL PURCHASER, AND NOT BY A CONSUMER. THIS WARRANTY SUPERCEDES ANY AND ALL PRIOR WARRANTIES.

LIPPERT COMPONENTS warrants the components of it's Recreational Vehicle Slide-Out System ("Product") against defects in materials and workmanship for the following time periods, beginning on the date of Retail Sale, so long as Retail Sale occurs within six (6) months of the date Purchaser acquires the Product directly from a Lippert Components facility:

- Three (3) Years – Any ball screw actuator, inner and outer tube assembly, rack and gear assembly, electric motor and cross shaft.
- Five (5) Years – Any fluid power components, limited to any hydraulic cylinder and hydraulic pump.

If a LIPPERT COMPONENTS Product is inspected by an authorized LIPPERT COMPONENTS representative and is determined to be defective in materials and workmanship within the aforementioned time period and pursuant to the requirements set forth herein, LIPPERT COMPONENTS will, in its sole and absolute discretion, do one of the following:

- Repair or replace without charge FOB it's factory;
- Send a service team to the then current location of the Product to repair or replace it on site; or
- Allow credit for the Product.

All warranty claims MUST involve an inspection of the Product and be approved by an authorized LIPPERT COMPONENTS representative, and all repair procedures must be pre-approved by LIPPERT COMPONENTS before any repair work can begin. There are no exceptions to this procedure, so please contact your LIPPERT COMPONENTS division immediately before attempting any repairs or modifications on your LIPPERT COMPONENTS Product. No claim for Products alleged to be defective will be allowed until LCI has had a reasonable opportunity to investigate each claim.

This warranty does not cover customer instruction, installation or set up adjustments. Unless otherwise indicated by tangible evidence, LIPPERT COMPONENTS relies upon the engineering professionals of those that purchase its Products to design and specify a Product of sufficient size, dimension, strength and durability to support the structure the Purchaser intends to place upon the Product, and to design and specify a Product that is sufficient and adequate to function in the role the Purchaser intends to use and/or actually uses the Product. LIPPERT COMPONENTS relies upon the design specifications supplied and/or produced by its Purchasers and builds Products pursuant to those design specifications.

This warranty does not cover abuse, misuse or neglect which includes, but is not limited to, improper usage, overloading, accident related damage, improper loading or incorrect weight bias loading, damage resulting from improper operation or maintenance, connection to improper towing unit or attempted repair by anyone other than an authorized representative of LIPPERT COMPONENTS. This warranty does not cover cosmetic damage, damage due to acts of God, commercial use or modification of the Product, or Products sold AS IS and/or WITH ALL FAULTS. This warranty is valid only in the United States and Canada.

**EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. REPAIR, REPLACEMENT OR CREDIT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE PURCHASER. IN NO EVENT WILL LIPPERT COMPONENTS BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

Claims – All claims are barred unless reported in writing by Purchaser to LIPPERT COMPONENTS, with full particulars, promptly after the damage was or reasonably should have been discovered and full facilities are offered LIPPERT COMPONENTS for inspection and investigation. LIPPERT COMPONENTS will not consider any claims for material that is not in the original form.

All written notices required by this warranty shall be sent to: Lippert Components, Inc.  
Attn: Risk Management Department  
2375 Tamiami Trail N., Suite 1101  
Naples, Florida 34103

This warranty is invalid if factory applied identification criteria have been altered or removed from the Product.

Work performed by others must have the prior authorization of LIPPERT COMPONENTS to be honored.

Third-Party Events – In the event of any accident, injury to person, damage to property, loss or other occurrence involving a LIPPERT COMPONENTS Product, Purchaser shall notify LIPPERT COMPONENTS of such event within thirty (30) days of the event or within ten (10) days of notification to Purchaser, whichever is earlier. Notwithstanding the foregoing, Purchaser shall notify LIPPERT COMPONENTS immediately upon learning that a survey, test or inspection is to be made with respect to the LIPPERT COMPONENTS Product and provide LIPPERT COMPONENTS with the opportunity to participate in any such survey, test or inspection, or to permit LIPPERT COMPONENTS to conduct its own survey, test or inspection. Failure to comply with each of the foregoing shall bar any claim by the Purchaser against LIPPERT COMPONENTS concerning any such event and shall require Purchaser to defend, indemnify and hold LIPPERT COMPONENTS harmless from all claims asserted against LIPPERT COMPONENTS concerning any liability of LIPPERT COMPONENTS arising out of such event.

Waiver of or failure to enforce any provision hereof, by LIPPERT COMPONENTS, shall not constitute a waiver as to any other provision, and shall not affect the right of LIPPERT COMPONENTS to exercise thereafter any right or remedy.

Severability – Any legally or otherwise invalid provision hereof shall be considered severable.

Any conditions or exceptions which may be stated in any communication or document received by LIPPERT COMPONENTS from any entity or individual, including but not limited to the Purchaser, shall be of no effect unless specifically agreed to in writing by LIPPERT COMPONENTS.

The current warranties and terms outlined on LIPPERT COMPONENTS' website ([www.lippertcomponents.com](http://www.lippertcomponents.com)) on the date of purchase shall take precedence over any other warranties whether verbal or written. LIPPERT COMPONENTS reserves the right to alter its warranties from time to time, as the laws and the company's business needs and industry change.

TO THE GREATEST EXTENT PERMITTED BY LAW, ANY CONTROVERSY OR CLAIM ARISING OUT OF OR IN RELATIONS TO THIS WARRANTY SHALL BE DETERMINED BY BINDING ARBITRATION IN NAPLES, FLORIDA (COLLIER COUNTY) IN ACCORDANCE WITH THE COMMERCIAL ARBITRATION RULES OF THE AMERICAN ARBITRATION ASSOCIATION. PURCHASE OF THE PRODUCT CONSTITUTES PURCHASER'S AGREEMENT TO THIS PROVISION.