OPERATION MAINTENANCE SERVICE MANUAL

SLIDE-N-SEAL SLIDE SYSTEM

DEXTER

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Introduction

This manual is designed to provide information for you to understand, use, maintain, and service your Slide-N-Seal slide system. Dexter's experience in the design, testing, and manufacturing of quality products that service the trailer industry.

Two Dexter philosophies are at work to provide you the best product available and have enabled us to maintain our position of leadership. First, we operate on the theory that "there is always a better way" for a product to operate, to be manufactured, and/or to be serviced. We are constantly striving to find that better way.

Secondly, we maintain the highest quality control standards in the industry and adhere to ISO 9001:2015. Dexter has operated with detailed documented processes and procedures long before completing ISO Certification, continually placing quality and customer service as the focus. This ensures that critical components are manufactured to the highest quality standards so that we can provide our customers with dependable products, the most comprehensive product offering and reliable, consistent customer service.

Trusting is hard. Knowing who to trust even harder. Through vertical integration we engineer, design, manufacture and test virtually every part in-house to ensure superior quality. We fuss over details, so you don't have to. **Trust Dexter.**

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Important Safety Notice

Appropriate service methods and repair procedures are essential for the safe, reliable operation of the Slide-N-Seal slide system as well as the personal safety of the individual doing the work. This manual provides general directions for performing service and repair work with tested, effective techniques. Following these guidelines will help assure reliability.

There are numerous variations in procedures, techniques, tools, parts for servicing an Slide-N-Seal slide system, as well as in the skill of the individual doing the work. This manual cannot possibly anticipate all such variations and provide advice or cautions as to each. Anyone who departs from the instructions provided in this manual must first establish that they neither compromise their personal safety nor the vehicle integrity by their choice of methods, tools, or parts.

Refer to your unit manufacturer's owners manual for additional procedures, techniques, and warnings prior to performing any maintenance or repairs.

⚠ CAUTION

This is the safety alert symbol. It is used to alert you to potential injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

Dexter strongly emphasizes that each of the maintenance procedures discussed has a significant safety purpose. Failure to maintain your Slide-N-Seal slide system can result in a malfunction and failure of the system. Further, use of any visibly worn component can result in a malfunction. Safety and long product life are the number one concern at Dexter. We urge you to follow the maintenance procedures set out in these written instructions.

The first maintenance check should be performed after an initial break-in period of 50 cycles. A visual inspection of all components should be performed to reveal any obvious problems, such as cracks or unexpected wear.

Operating the Slide Out Mechanism

The majority of slideout operating malfunctions are due to a poor power supply; a battery not fully charged, many interior lamps and/or appliances turned on or trailer not connected to 110V. Before running any slideout, make sure the trailer is connected to 110V and the battery is fully charged.

Before Operating the Slideout

1. Park the RV and stabilize it for stationary use. **Make sure the RV is level!**
2. Always make sure there is plenty of space for the room to safely extend to the full outward position.
3. Disengage any travel locks that are in place to keep the slideout room from moving during travel.
4. Remove any other potential obstructions to the room movement.
5. Make sure the RV is connected to 110V, or at least that the battery is fully charged.
6. Do not operate the slide in or out while any pet or person occupies the space.

   Check for any obstructions inside or outside the unit before operating.

Extending the Slideout

1. Make sure all conditions of the section "Before operating the slideout" are fulfilled.
2. If the RV is equipped with a slide kill switch, turn it on.
3. Activate the wall switch and move the slideout room to the full outward position, until **both** motors shut off automatically.
4. Check that both sides are moving at the same speed (2" difference of travel between both sides allowed).
5. Release the switch only when both sides have stopped automatically.
6. DO NOT MOVE THE RV WHEN THE ROOM IS EXTENDED.

Retracting the Slideout

1. Make sure all conditions of the section "Before operating the slideout" are fulfilled.
2. If the RV is equipped with a slide kill switch, turn it on.
3. Activate the wall switch and move the slideout room to the full inward position, until both motors shut off automatically.
4. Check that both sides are moving at the same speed (2" difference of travel between both sides allowed).
5. Release the switch only when both sides have stopped automatically.
6. Reinstall any travel locks if needed.

Note: Allow one second before operating the slide in the other direction.

Reminder: The control box protects the user against over travel Once the end of travel is reached for both motors, the user must press the switch the other direction.

Maintenance

Proper slide-out maintenance is required to ensure full life of product. Please routinely inspect and maintain the items listed.

Items	Function Required	3 Months	6 Months
Slide Rail	*Lubricate with approved grease.	•	
Gear Block	*Lubricate with approved grease.	•	
Wiper Seals	Inspect Wipe and Bulb seals for Imperfections		•
Floor Rollers	Inspect for roller contact with room bottom		•

*Silicone lubrication is recommended. Only lubricate slide components. Wall and related components may be adversely affected by foreign substance. Refer to OEM manuals for proper exterior washing if contamination occurs.

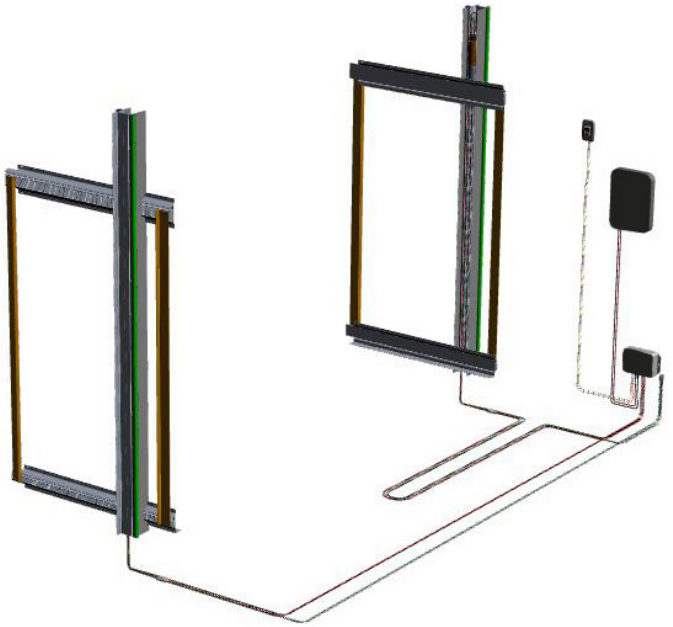
Because the mechanism is driven on both sides, it is critical to keep the drag at a minimal level by:

1. Maintaining the room seal following the manufacturer's instructions.
2. Inspecting floor rollers.
3. Making sure no seal is caught between a moving part and a fixed part: bottom seal between the room floor and the rollers, side seal between the room wall and the slide out motor.
4. Keeping the shaft of the floor rollers lubricated. The rollers must spin when the room is travelling. While inspecting the rollers, check that they are not digging into the room floor. Repair or replace any rollers which are not rolling as the room moves in or out.

NOTE: lubricants that leave residue will attract the dust and create a grinding compound which will significantly reduce the system life.

System Components

Slide Mechanism



The slide mechanism itself is the room actuator. The column houses a motor on each side of the room which drives the room in and out from the wall.

The slide mechanism is specific to the manufacturer and the room. There are no standard dimensions

Control Box: Current Limiting

The control box is the brain of the system. Several options of control boxes are available as standard: current limiting 37% PN 071-834-00 and current limiting 50% PN 071-835-00. The correct current limiting control has already been selected and installed for each particular room at the factory.

Once installed, no adjustment is needed by the installer or the user.

See the "wiring" section.

Operation

When the switch is pressed, it energizes both motors to move the room in the desired direction. While the motors are spinning, the electricity going through each motor is monitored. When the current limiter senses the end of the room travel, each motor will shut off automatically as each motor senses the end of room travel.

Once the end of travel is reached for both motors, the control box will only allow the room to move the opposite direction.

If a motor stops before reaching the end of travel, please refer to the troubleshooting guide to solve the issue.

Main Harness

The main harness connects both motors to the control box. (Current limiter)

Make sure the wires are not damaged, are kept concealed and are not loose.

Do not alter the original harness. The system will not perform

properly and the life of the system will be shortened.

At the end of the main harness is the motor M2 (see control box description) identified with a black tape on the plug. It should be connected to the right column when facing the slide out room from inside.

Wall Switch

071-836-00 (white) or 071-837-00 (black)

The wall switch is the interface between the user and the system.

Multiple solutions exist and each manufacturer may have their own preference. The switch could be a stand-alone version or part of a panel. Above are some examples typically used.

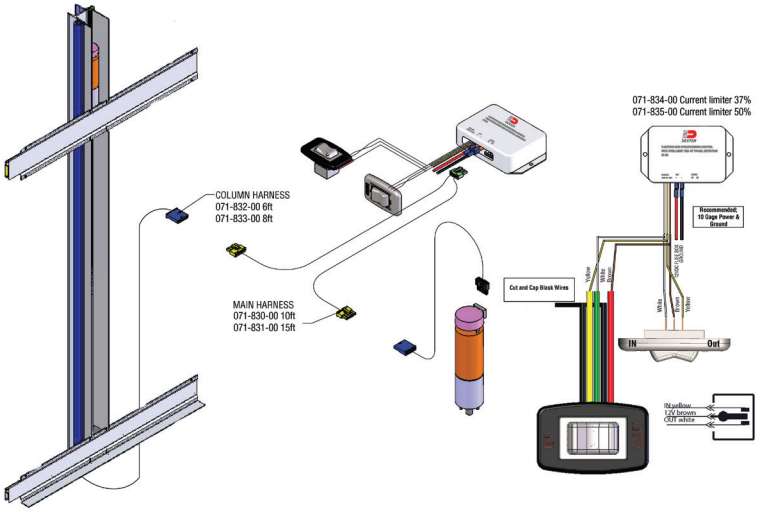
The switch is applying 12VDC to the IN or OUT lead of the control box. The “wiring” section will show in detail several wiring options.

Rollers

The room weight is supported by the rollers under the slide room. The slide out is designed to push the room in/out. The slide out will not carry the load of the room or put the room in motion without the floor rollers.

Wiring Diagram

Wiring



It is critical to have adequate power (at least 12.5V 15A draw) at the slide control box:

- A fully charged battery. At best, the coach should be plugged to 110V.

  Failure of adequate power supply could result in slide out malfunction.

- The control box wiring should not be altered:

  1. The power wires coming from the fuse panel and connected to the control box “Battery” must be at least 10AWG.
  2. Direct wires from the fuse panel to the control box.
  3. No other devices should be connected to this dedicated line (the voltage drop caused by other devices / appliances will most likely increase the current drawn by the slide out. As a consequence, the motor will be shut off before the end of travel).

Switch Wiring

The switch must be powered by a 12VDC wire (18AWG minimum). The power source could be coming from the control box (brown wire) or from another wire (typically a switch panel). See below for details.

12VDC should be measured on the wire connected to the IN lead of the control box when the switch is pressed in the IN direction. Of course, the room should move IN. If the room is moving in the opposite direction, both wires must be reversed at the control box.

Standard SPDT Switch: 071-836-00 (white) or 071-837-00 (black)

This type of switch is very common for other types of slide out applications. They are rated for heavy current.

Used with the in wall slide control box, the wiring is not the same as with the other systems so make sure to follow the wiring diagram below.

Note: Some versions have two black leads. The black leads are not connected to anything and must be capped to avoid a short circuit.

Service

How to check the voltage to the slideout

Before checking the voltage at different points of the electrical circuit:

- Verify all the wires are properly connected.
- Verify wires are not damaged.
- Verify connections are not corroded.

1. Connect a voltmeter at the point of measurement: black is (-) and red is (+).
2. Connect an ammeter on the red wire.
3. Actuate the slide to check the voltage or amp draw.

The troubleshooting guide will guide you as to where to check first based upon the symptom you are experiencing with your system. Follow the steps below to verify the voltage and amp draw is sufficient. Every plug disconnected must be reconnected after measurement.

1. Voltage at the motor end of the harness. Unplug the motor connector (see “motor replacement” section). Because the motor is not connected, only the voltage can be measured (no current drawn).
2. Voltage / current at the column plug.
3. Output voltage / current at the control box.
4. Voltage / current at the control box: power wires.
5. Fuse: check the integrity and the voltage / current.

Control Box Replacement

1. Remove the fuse going to the control box.
2. Refer to the RV manufacturers documentation to locate the control box.
3. Before replacing the box, make sure the problem is not an unplugged wire.
4. Disconnect all plugs.

5. Take a picture of the wiring and cut the power wires separately. DO NOT cut them at the same time, it will create a short.
6. Take a picture of the wiring and cut the switch wires. DO NOT cut them at the same time, it will create a short.
7. Remove the fastener which holds the control box on the floor or the wall.
8. Remove the old box.
9. Wire the new box the same way it was. Refer to the picture you have taken. CONNECT THE (-) GROUND WIRE LAST.
10. Re-install the fuse.
11. Refer to the section “Operating the slide out mechanism” of this manual and operate the slide.

How to disengage / engage motor

In order to move the room manually or to replace a motor, the motors need to be disengaged:

The room will only move manually if the motors are disengaged. Do not try to move the room without disengaging both motors.

The motors can be disengaged when the room is IN or OUT. We DO NOT RECOMMEND REMOVING the room from the coach for this operation.

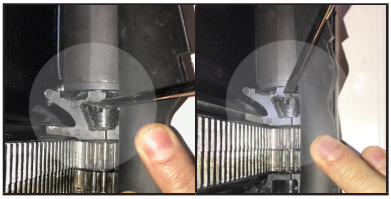
DO NOT MOVE THE RV IF ONE OR BOTH MOTORS ARE DISENGAGED.

Disengage the motor

Note: The space between the side wall and the slide mechanism is large enough for the following operations.

1. Remove the fuse going to the control box.
2. Pull back the seal by hand (do not remove the seal).
3. Engage screw driver between motor and clip below gear holder (step 2).
4. Engage a standard screw driver between the motor and the gear holder (step 3).

5. Twist the screw driver until the motor is completely loose (you must see the end of the motor shaft) (step 4a-5).
6. Make sure the motor will not fall back in the gear holder and will be engaged again. If that happens, you will not be able to move the room or the gear holder may be damaged.
7. Repeat the operation with the other motor.



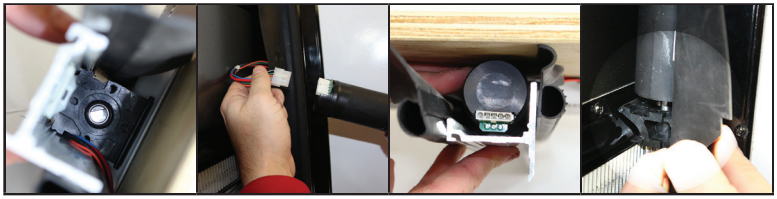
Step 2 *Step 3*

Step 4a *Step 4b* *Step 5*

Engage the motor

This operation requires some skill and patience. Below are three conditions which must be met to engage the motor.

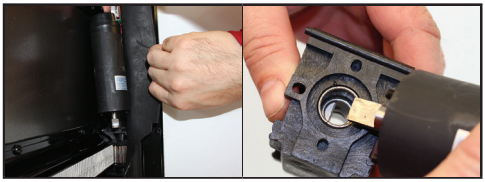
1. The flat of the motor shaft must match with the flat of the gear (step 1).
2. The connector must be against the side (step 3).
3. The set screws must be in the holes (step 4).



Step 1 *Step 2* *Step 3* *Step 4*

Follow the steps below to successfully engage the motors.

1. Push the room manually to have both sides at the same distance from the wall.
2. Plug the harness to the motor (step 2).
3. Slide the motor between the side wall and the slide mechanism (step 3).
4. Drop the motor in the hole. The motor shaft should now be in the gear bore (step 4).
5. Rotate the motor to align both flat spots. When the flats spots match, the motor should drop further (step 5,6).



Step 5 *Step 6*

6. **NOTE: it is very important to keep the set screws ABOVE the surface of the gear holder. Failure to do so will damage the gear holder and the complete slide mechanism would have to be replaced.**

   Hold the motor to have the set screws above the gear holder surface while pushing or pulling the room. It will rotate the motor at the same time. Continue until the connector is approximately against the side of the slide mechanism.
7. When the connector is approximately against the side of the slide, the set screws should be very close to the holes. Continue pushing / pulling the room with small input until the set screws are perfectly in alignment with the holes (step 7-8).
8. Let the motor go down. Make sure there is no gap between the motor and the gear holder. Add push-nut to in-board threaded screw of motor (step 8).
9. Before repeating the operation on the other side, manually adjust the room on the other side to be at the same distance from the wall.
10. Re-install the fuse.

Step 7 *Step 8*

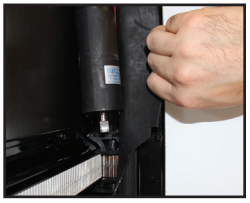
Motor replacement

There is no need to remove the room from the RV to gain access to the motor. The motor may be accessed from the inside of the coach. We DO NOT RECOMMEND removing the room from the RV to replace a motor.

If the room is out, the facia will cover the access to the motor and the room will need to be moved to the in position first.

Follow the steps below to replace a motor.

1. Remove the fuse going to the control box.
2. In order to move the room, the motors must be disengaged (follow the procedure “Disengage the motor in the “How to disengage / engage the motor” section of this manual).



Step 5

3. Once both motors are disengaged, the room can be moved approximately 12” from the wall to have access to the motors from the inside of the RV.
4. Pull the motor out of the slide mechanism.
5. Unplug the harness.
6. Plug harness into new motor.
7. Before moving forward, it is wise to check both motors are operating properly before inserting them in the slide out mechanism. Re-install the fuse, with the motors outside the slide out mechanism, press the wall switch in both directions.
8. Engage both motors by following the procedure “”engage the motor” in the “How to disengage / engage the motor” section of this manual.

9. DO NOT run the room if only one motor is plugged to the harness.

Harness Replacement

Main Harness

NOTE: DO NOT ALTER THE LENGTH OF THE HARNESS.

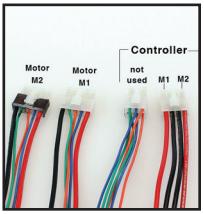
Refer to the RV manufacturer's manual to locate the control box and harness. Most likely, the room must be moved out to access this harness. It is usually fastened on the floor with wire ties.

Part numbers:

- 10ft: 071-830-00
- 15ft: 071-831-00

1. Remove the fuse going to the control box.
2. Locate the control box and the plugs coming from the columns (see the RV manufacturer's manual) Unplug the three connectors: one at each motor M1 and M2 (pay attention which side the black plug is connected) and one at the control box.

   NOTE: One plug at the column end is black. Write down its location (right column or left column).



3. Locate and remove the wire ties.
4. Pull the harness out.
5. Put the new harness in the same location.
6. Fasten the harness with wire ties.

NOTE: It is important to fasten the harness and to make sure it can't be caught by moving parts (especially close to the rollers).

7. Connect the black plug on the same side as step 2.

NOTE: failing to do so will reverse the mechanism. Switch the two column plugs if this happens.

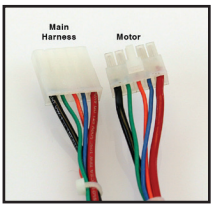
8. Connect the plug at the control box.
9. Re-install the fuse.

Column Harness

NOTE: DO NOT ALTER THE LENGTH OF THE HARNESS.
Part numbers: Use the old harness to get this length.

- 6ft: 071-832-00
- 8ft: 071-833-00

1. Remove the fuse going to the control box.
2. Locate and unplug the connector coming from the column (see the RV manufacturer's manual).
3. Unplug the harness at the motor. There is a clip on the connector that must be pressed while pulling the plug.
   DO NOT PULL THE WIRES. ONLY PULL THE PLUG.
4. Remove the plastic strap holding the wires in place inside the column.
5. Pull the harness out. It will need to be cut and eventually some wire ties will need to be removed.
6. Do not attempt to run the new harness in the original location: it will most likely be damaged during the process. The new harness must be routed outside the column. Use appropriate material to protect the wires from chaffing from vibration.



7. Fasten the harness with wire ties.
8. **NOTE**: Be careful to fasten the harness; making sure it can not be tangled up with moving parts (especially close to the rollers).
9. Connect the plug at the control box.
10. Re-install the fuse.

Slide Out Mechanism Replacement

NOTES:

- There is no need to completely pull the room out of the RV to perform this operation.
- Both sides must be replaced.
- The operation must be performed with the RV on a solid and level surface (concrete).
- The RV must be level, stable and chocked.
- Have equipment ready before beginning to work on the RV: jacks, spacer, tools.
- Room can be heavy so make sure the room is moved and supported safely.

Removing Slide Mechanism

1. Remove both motors: 1 to 5 from the paragraph “Motor replacement”.
2. Move the room out half way of the travel. Make sure there are no screws hidden by the column.
3. Remove all the screws on the rails that are inside the coach.
4. Put the jacks under both ends of the room. Adjust them in order to support the room on both ends.
5. Beginning at the top, remove the column screws (both sides).
6. Once all column screws are removed, gently push the room out so that the facia is 1” or so from the wall. Use a plastic tool between the column and the wall to help, as the room seal will work against you. Be careful to not damage the column or the wall.
7. Repeat with the other side.
8. The room should now be fully supported by the jacks and almost fully extended.
9. Hold the slide mechanism while removing all the rail screws (top and bottom).
10. Lift the front of the TOP and BOTTOM rails then slide the mechanism out. Repeat with the other side.
11. Remove all the butyl tape from the coach wall.

Installing Slide Mechanism

1. Put butyl tape on the column flange of each slideout mechanism. Leave the butyl tape liner in place. **DO NOT REMOVE THE ANGLES YET.**
2. Make sure both columns are about half way of the travel. If not, move them by connecting the motors and actuating the wall switch.
3. Slide the mechanism back in place.
4. Push the bottom rail against the room floor and the notch against the T molding.

   NOTE: fasten the screws straight, not at an angle. Use #10 wood screws. Screw the bottom rail first.
5. Push the top rail against the T molding. Use #10 wood screws. Screw the rail, top and bottom rows.
6. Repeat with the other side.

7. Once both sides are fastened on the room wall, the room is almost ready to be pushed back in place: Remove the shipping angles and discard.

   Put the column harnesses inside the column to protect them during the following operation.

8. Insert one side first in the opening until the column flange is ¾" from the wall (it is important to not have the butyl tape in contact with the wall at this time. The butyl tape liner should still be on which will keep the tape from sticking to the wall).

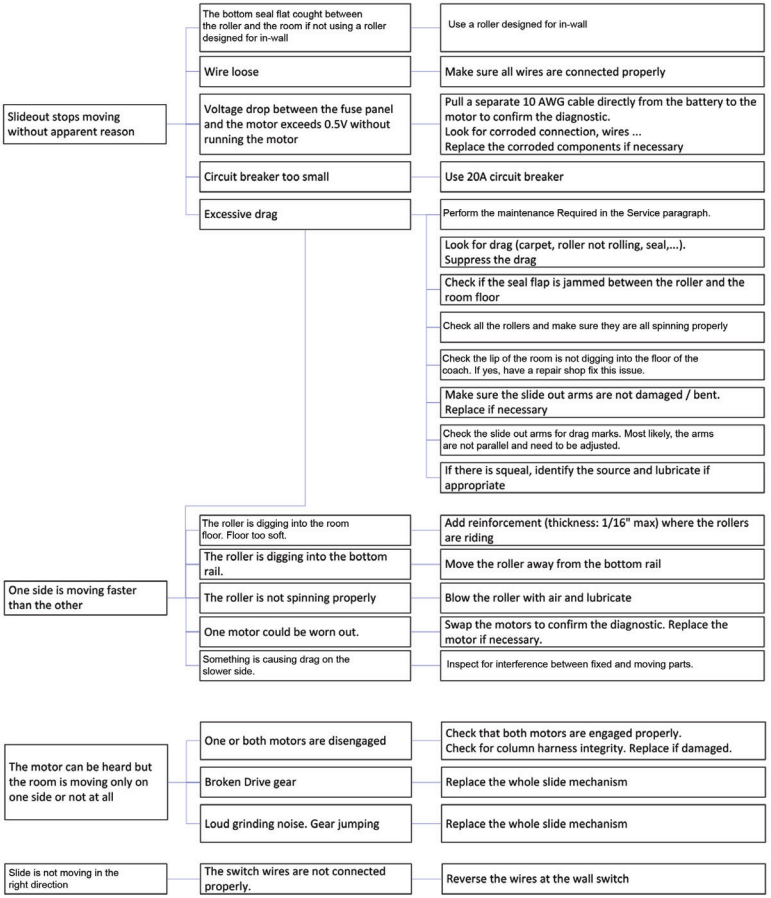
   Push the room against the opening to make room for the other side.

9. Push the other side in the opening. Leave a gap of ¾" between the column and the wall. Make sure there is enough gap between the column and the opening. If no gap exists, it will create stress on the parts and reduce life expectancy.
10. Pull the top flap seal to cover the column seals.
11. Go inside of the coach and check the gap between the column and the opening on both sides. If needed, move the room to have approximately the same gap on both sides.
12. Remove the butyl tape liner and push the room fully in.
13. Fasten top and bottom of the column on both ends.
14. Finish fastening the columns.
15. Pull the column harness from the column and plug in to main harness from control box.
16. Press the switch to move the room in and out.
17. When the room is running properly, glue the column flap seal and the top flap seals together at both top corners.
18. Seal properly with caulk at every location where water leakage may occur.

Troubleshooting Guide

Slideout is not moving and the control box relays **can't** be heard	Some manufacturer mount an ON / OFF switch to kill the slide while driving. It's on OFF position and the slide switch is disactived	Turn the kill switch ON
	Fuse blown	Check fuses. Replace if necessary
	Dead battery (discharge quickly)	Use an auxiliary power supply directly at the motor to confirm the diagnostic. Replace the battery.
	Harnesses not connected properly	Make sure all the plugs are connected The 6 wires plug is not connected on the CURRENT LIMITER but it mist be connected on the velocity controller
	The control box is not powered	Check the power at the controller. If no voltage: - check the fuse - check the charge of the battery - power the controller by a auxilary power supply - if the controller gets 12V or more, check the switch wiring
	Bad ground	Some manufacturers use the frame as ground. Pull a wire from the fuse panel ground to the controller replace the existing ground by one wire coming directly from the fuse panel.
	Open circuit (cut wire, connector unplugged or unlocked...)	Check the connection Check the harness using a ohmmeter: - unplug the harness at the controller - connect the ohmmeter on both end. Should show continuity - if not continuity, search for hte cut wiring, repare or replace the harness.
	Defective controller	Swap the connection at the bottom of the colomn to confirm the diagnostic. If the other side isn't moving, replace the controller.
	Bad motor	Disengage the motor. If the current draw exceeds 3A, the motor need to be replaced.
Slideout is not moving but the control box relays **can** be heard	Bad ground	Some manufacturers use the frame as ground. If it is the case, replace the existing ground by one wire coming directly from the fuse panel.
	Defective components (fuse panel, switch, harness, control box...)	Check all components Replace if necessary
	Slide lock bar still in place	Remove the bars
	Obstruction (carpet, ...) in the path	Remove the obstruction
	Low battery (must be at least 12.8V)	Use an auxiliary power supply directly at the motor to confirm the diagnostic. Charge the battery.

Troubleshooting Guide



Notes

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