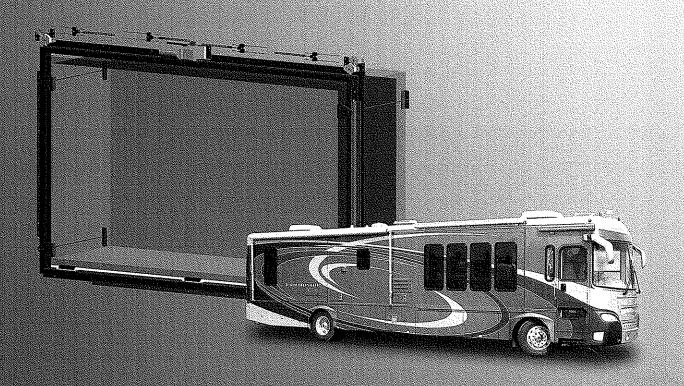


Norco Industries, Inc.

ACCU(L)SLIDE

EXPANDABLE ROOM SYSTEM

Service Manual







Gulf Stream's R&D department is always looking for ways to improve our coaches to make them as problem free as possible. We have studied the dynamics of the Accu-slide system and have determined that the advantages of this slide system heavily outweigh the slide out system we were currently using. The Advantages of the Accu-slide system are as follows.

Accu-Slide System

- Faster slide out times
- Quieter slide mechanism and motor
- Cables are well hidden inside the coach
- Cables are inconspicuous on the outside.
- Even distribution of pulling on all four corners
- Adjustable from the inside of the Motorhome
 - Allows for deeper slide rooms
 - Allows for more storage
 - Easy to access and adjust

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I. TROUBLESHOOTING

1.01 COMMON PROBLEMS / SOLUTIONS

PROBLEM: Motor does not run or make any noise.

Cause 1: Dead battery

Solution: Charge or replace battery.

Cause 2: Open circuit or faulty switch

Solution: Check switch, fuse & circuit breaker.

Cause 3: Bad Motor or Controller

Solution: Replace the Motor or Controller.

PROBLEM: Motor runs, but slide room does not move.

Cause 1: Cable(s) have become detached

Solution: Check tension of all cables. Open access panel and re-adjust. Place grommet or screw in standoff bracket to secure the cable (refer to section 2.02).

Cause 2: Chain is caught on a bracket

Solution: Open access panel to identify the problem. Adjust cable tension. Tighten all 4 jamb nuts. Place nut anti-vibration keeper on cable nuts (8).

Cause 3: Chain is off the sprocket

Solution: Open access panel to identify the problem. Put chain back on sprocket. Re-adjust cable tension, tighten all jamb nuts (4). Place nut anti-vibration keeper on cable nuts (8).

Cause 4: Shaft key is broken

Solution: Inspect damage and replace all damaged parts.

PROBLEM: Loose Cable – Sagging 1 or more inches, or hanging.

Cause 1: Adjustment nut is too loose or off cable

Solution: Open access panel, install all nuts with anti-vibration keeper or Locktite, and adjust.

Cause 2: Cable is loose from connector bracket

Solution: Open access panel, loosen nut on loose cable and attach to bracket, then adjust.

(refer to section 2.02)

Cause 3: Drive chain has too much slack

Solution: Open access panel & tighten adjustment nuts. (refer to section 2.02)

Cause 4: Broken Cable

Solution: Call the service department to replace cable. See instructions included in the kit.

(refer to section 2.02)

Cause 5: Room stand-off bracket is loose or off

Solution: Inspect all inside and outside brackets for secure attachment, and repair as required.

PROBLEM: Squeaks while operating.

Cause 1: Cables are too tight

Solution: Open access panel, and adjust tension.

Cause 2: Brackets are not properly aligned

Solution: Align brackets properly and re-adjust.

Cause 3: Friction between pulleys or brackets

Solution: Lubricate corner pulleys & adjust bracket if pulley is interfering.

PROBLEM: Room wipe is torn or missing.

Cause 1: Room or framework is out of square

Solution: Correct the problem and replace wipe. (refer to section 3.02)

Cause 2: Wipe is torn or weathered

Solution: Replace wipe. (refer to section 3.02)

PROBLEM: Room doesn't close completely.

Cause 1: Improper adjustment

Solution: Open access panel, and adjust tension. Refer to adjustment instructions.

Cause 2: Room is hitting an obstruction

Solution: Check for obstructions and correct.

Cause 3: Improper stand-off bracket alignment (cable is kinked)

Solution: Loosen cable nut to allow slack. Remove screws from stand-off and align cable with

slot. Re-attach standoff. Adjust cable tension.

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PROBLEM: Loud grinding noise when room operates.

Cause 1: Screw or foreign object lodged in jamb pulleys

Solution: Remove jamb clamp and inspect area causing the noise. Remove any loose objects. Inspect pulleys for damage. Replace the cable(s) if any have become frayed due to the problem.

Cause 2: Cable has jumped to wrong pulley

Solution: This can only happen in rare circumstances, if it has happened you will need to determine which set of cables it is (of the two, it will be the cable on top).

- 1. Loosen the appropriate cable adjusting nut to allow slack in the cable.
- 2. Using a flat tip screw driver or a small narrow tool (it may take 2) move the cable back to the proper pulley. You may need to pry the extrusion out a little to make enough room for the cable to pass the pulley. It is helpful if a second person can push the cable from the opposite side to force the cable away from the pulley.
- 3. After the cables are on the proper pulleys, re-adjust the cable tension as described.

PROBLEM: Cable is bent and/or frayed at standoff bracket.

Cause: Standoff bracket was not proper aligned during installation process

Solution:

- 1. Remove the tension from the cable via the cable adjustment nut.
- 2. Remove the screws from the standoff bracket and adjust to the appropriate location.
- 3. Re-attach standoff bracket and adjust cable tension.
- **4.** Replace the cable if it has become fraved. (Refer to section 3.01)

II. GETTING STARTED

2.01 TOOLS YOU WILL NEED



Power Driver



Ratchet & Sockets Size: 3/8", 7/16"



Two 3/8" Wrenches



Two 7/16" Wrenches



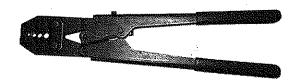
Vice Grips



Flex-Shaft (Included)



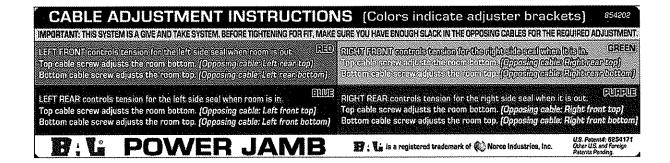
Cable Cutters



Crimping Tool

2.02 CABLE ADJUSTMENT

Shipped with your system is a sticker that should be placed near the slide for instruction on adjusting this system.



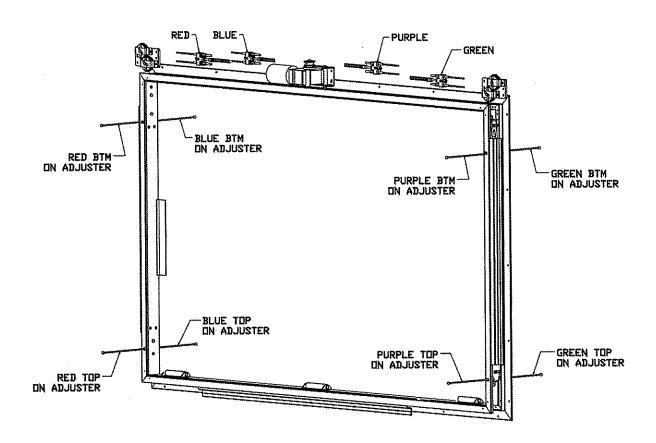
You will notice each cable-chain connector has a colored tag on it corresponding to the colors of the sticker above. The example diagram below is showing the association between cable adjusters and cables.











Before going over final adjustments, there are a few things to note about this system...

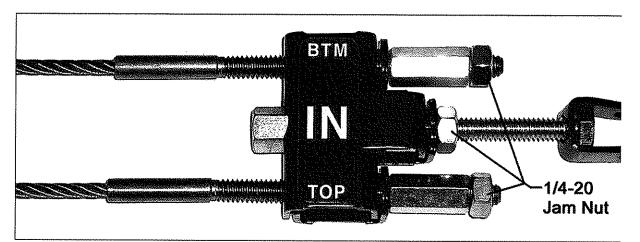
The Accu-Slide is a give and take system between the cables, if the inside and outside opposing cables are too tight you will cause the motor to be over worked leading to trouble later on.

When the room is seated full out, the OUTSIDE cables should be slack enough to move the cable approximately $\frac{1}{2}$ " up or down (1" total movement) by hand. The holding power is actually on the INSIDE cables pulling the stand-off brackets tight against the frame.

When the room is seated full in, the INSIDE cables should be slack enough to move the cable approximately ½" up or down (1" total movement) by hand. The holding power is now on the OUTSIDE cables pulling the stand-off brackets tight against the frame.

The chains work the same way as the cables, when the room is full in or out, half of the chain on each side of the motor will be slightly slack and half of each chain will be tight.

AFTER ALL FINAL ADJUSTMENTS, TIGHTEN 1/4-20 JAM NUT AGAINST CABLE/CHAIN ADJUSTER BRACKET ON ALL CHAIN CONNECTIONS. TIGHTEN THE JAM NUTS ON THE CABLES BY USING A WRENCH ON BOTH THE JAM NUT AND THE COUPLING NUT - FAILURE TO DO SO WILL RESULT IN A MALFUNCTION OF THE SYSTEM!!!



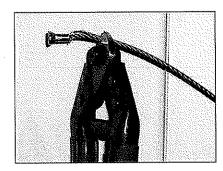
Cable / Chain connector after final adjustment.

1/4 - 20 Jam Nut tight against connector nut keepers are properly located.

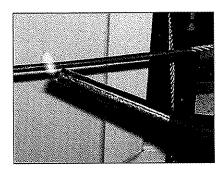
III. SERVICE PROCEDURES

3.01 CABLE REPLACEMENT

- 1. Remove the jamb clamp from the interior wall on the side of the cable to be replaced for better access to the cable.
- 2. Carefully jog the room to approximately half the travel distance. If possible keep tension on the broken cable while the room is moving.
- 3. Make a clean cut of the cable near the outside cable standoff bracket.

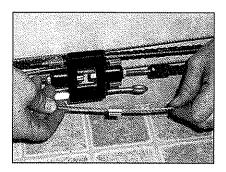


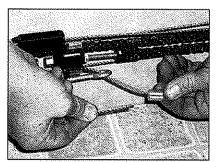
4. Insert both the replacement cable and the newly cut broken cable into the heat shrink tubing and shrink the tube with a heat gun or flame. DO NOT OVERHEAT THE TUBE AND DO NOT HEAT THE TUBE WHERE THE TWO CABLES MEET. DOING SO MAY CAUSE THE TUBE TO BREAK DURING THE THREADING OPERATION!

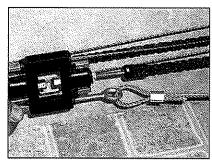


- 5. Slowly pull and feed the cable from the outside in. (Pull gently on the threaded end of the cable inside the coach. It is best to have a person feed the cable from the outside while it is being pulled from the inside.) Keep the ball end of the cable from retracting into the extrusion.
- 6. Connect the cable to the cable standoff bracket and secure it.
- 7. Remove the heat shrink tube from the cable and discard the old cable.
- 8. Insert the I-bolt into the cable/chain connector bracket and thread the coupling nut on approximately ½".

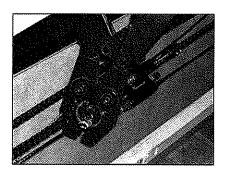
9. Place the ferrule on the cable and loop the cable end through the I-bolt and back through the other side of the ferrule.







10. Take as much slack out of the cable as possible and crimp the ferrule.



- 11. Replace jamb clamp.
- 12. Tighten the coupling nut to re-adjust the cable tension. If all cables need to be adjusted, follow the adjustment procedures.

Left Front Adjust Bracket: The front left cable adjust bracket controls the tension for the left side of the room to seal when it is shut. The top cable screw adjusts the bottom of the room. The bottom cable screw adjusts the top of the room.

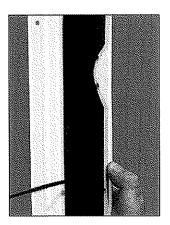
Left Rear Adjust Bracket: The rear left cable adjust bracket controls the tension for the left side of the room to seal when it is open. The top cable screw adjusts the bottom of the room. The bottom cable screw adjusts the top of the room,

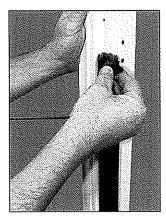
The same goes for the right side of the room.

IMPORTANT: This system is a give and take system. Before tightening for fit, make sure you have enough slack in the opposing cables for the required adjustment

3.02 WIPE INSTALLATION

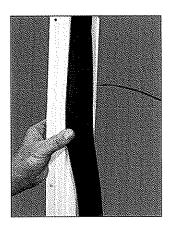
- 1. Remove the old wipe completely, including any old adhesive or rubber. Water may work best for this process.
- 2. Thoroughly clean the surface with alcohol. It is best to use an activator. We recommend 3M brand.

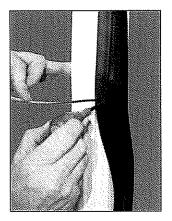




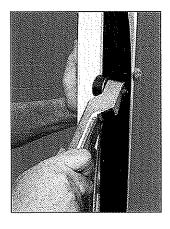


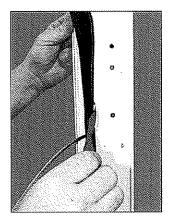
3. Place the new material on the face surface first. Do not stretch the rubber while applying. Punch holes through the rubber at the cable entrance points and attach to the surface.

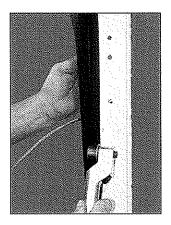




- 4. Use a roller to press the rubber on. Next, apply the rubber to the inner surface.
- 5. Use a smooth, hard object that will fit between the room wall and the jamb to press the rubber on that surface.





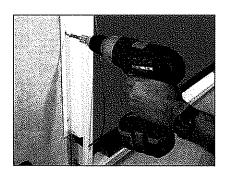


6. Cut in as required for proper fit.

3.03 JAMB CLAMP REPLACEMENT

REMOVAL

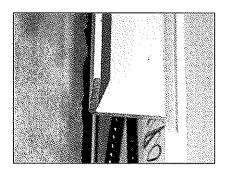
- Remove mounting screws from jamb clamp.
 Pull back edge of clamp, and remove.

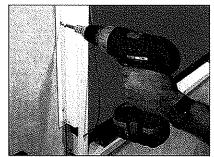




REPLACEMENT

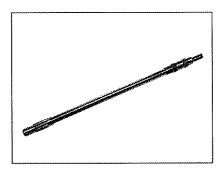
- 1. Insert edge of clamp into slot.
- 2. Replace mounting screws.



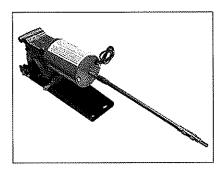


3.04 MANUALLY MOVING THE ROOM

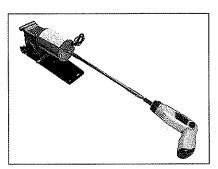
1. Locate the included flexible shaft in your owner's packet.



2. Attach flexible shaft to the 1/4" hex fitting on the end of the motor.



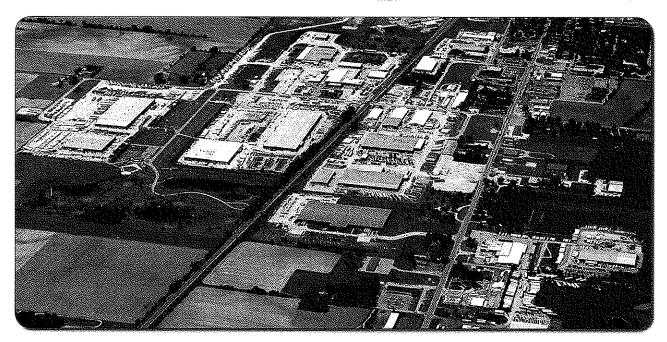
3. Attach 1/4" socket & ratchet, or drill to the other end, and turn in the proper direction to move the room.



4. If the cables tighten, and the motor is difficult to turn, REVERSE THE DIRECTION.

Over-torquing can happen, resulting in severe damage.





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