

PE06-005
FLEETWOOD
3/3/2006
ATTACHMENT
3, 3A, & 3B (PART 2 OF 3)

February 20, 2006

Fleetwood Folding Trailers, Inc.
Mr. Ted Harris, P.E.
258 Beacon Street
Somerset, PA 15501

Subject: Slide Out Information

Dear Ted,

I am forwarding an assembly print of our cable driven slide out along with a designer guide and a service manual.

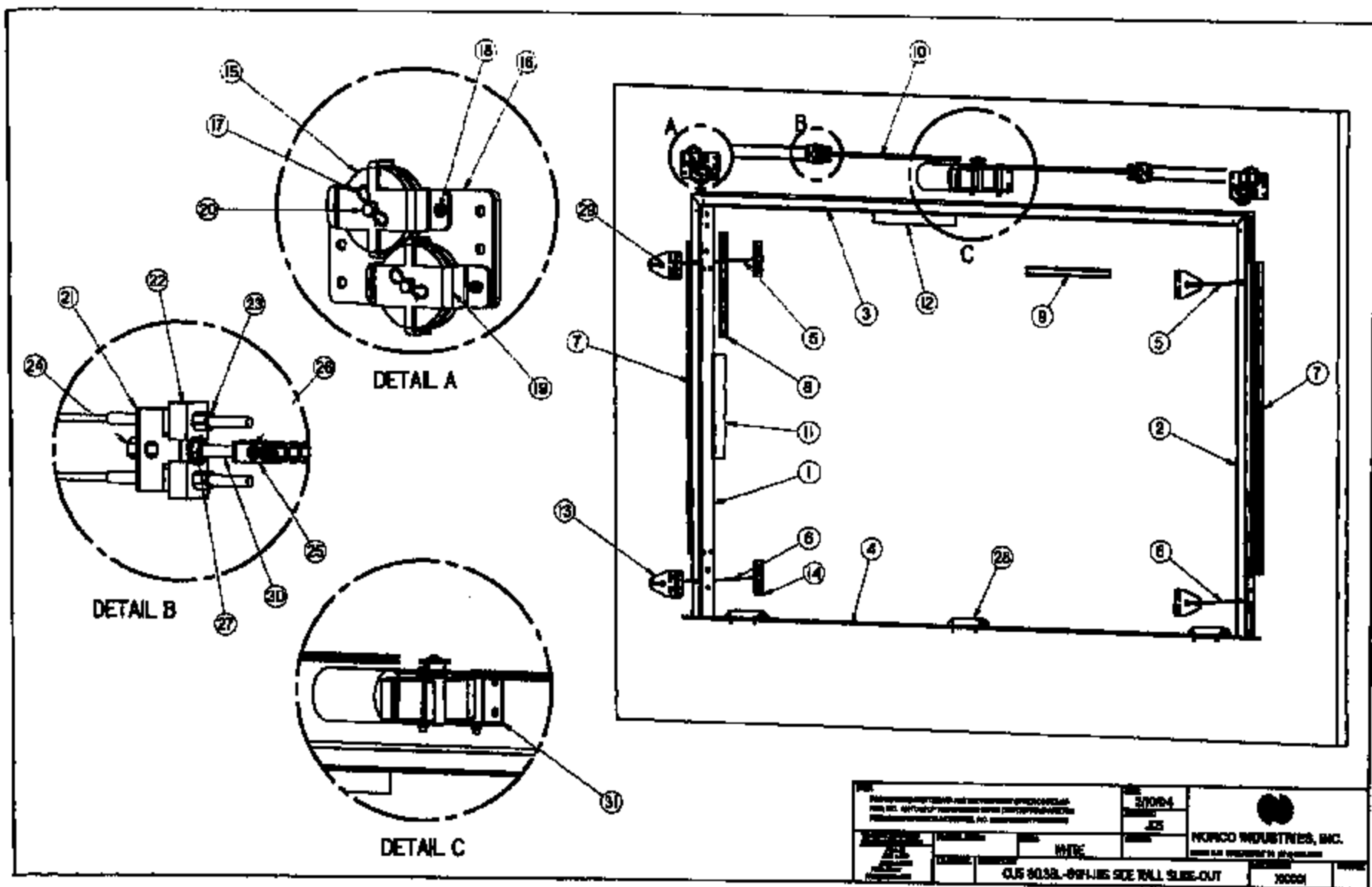
When evaluating the print and design, keep in mind that the drive motor is a single stage worm gear motor with a zero back feed gear design. The use of this type motor insures that our slide out is self-locking. The very nature of our slide out design insures that your room cannot accidentally deploy without powering the motor.

If you have additional questions please notify us.

Best regards,

Bernie Garceau
VP BAL

Document 3



ACCU SLIDE

EXPANDABLE ROOM SYSTEM



SERVICE MANUAL

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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.

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 properly 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 frayed. (Refer to section 3.01)

II. GETTING STARTED

2.01 TOOLS YOU WILL NEED



Power Driver



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



Two 3/8" Wrenches



Two 7/16" Wrenches



Vice Grips



Flex-Shaft (Included)



Cable Cutters

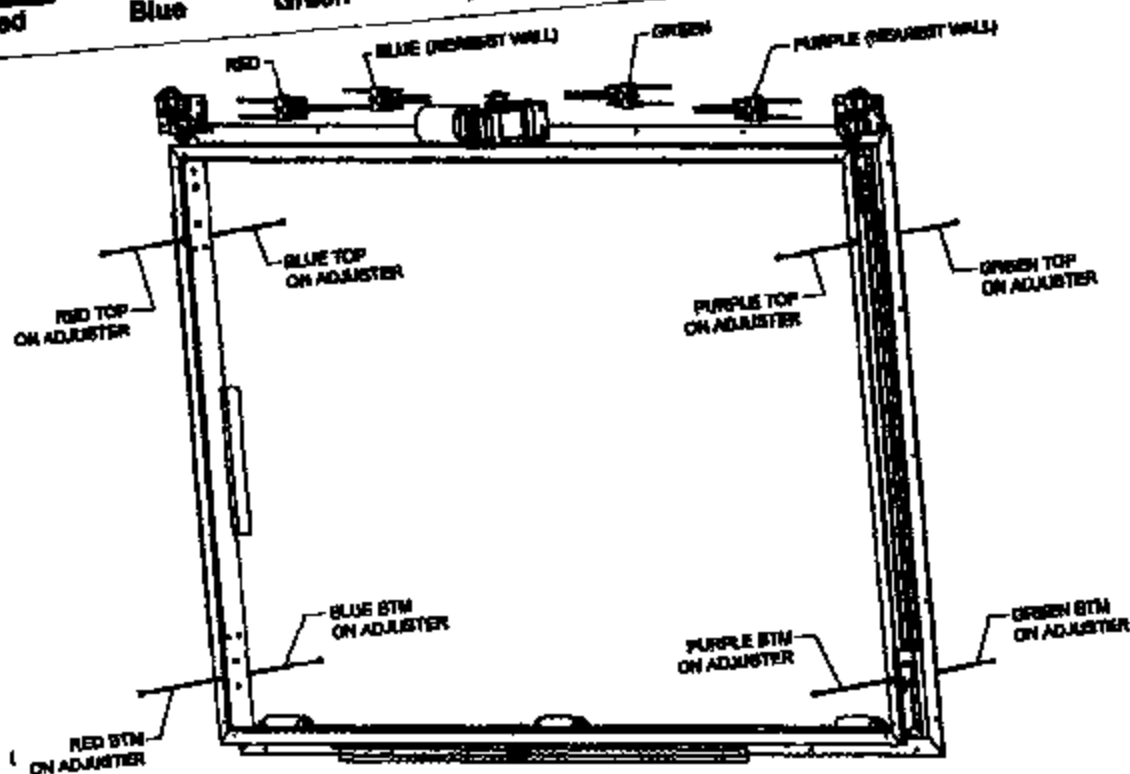
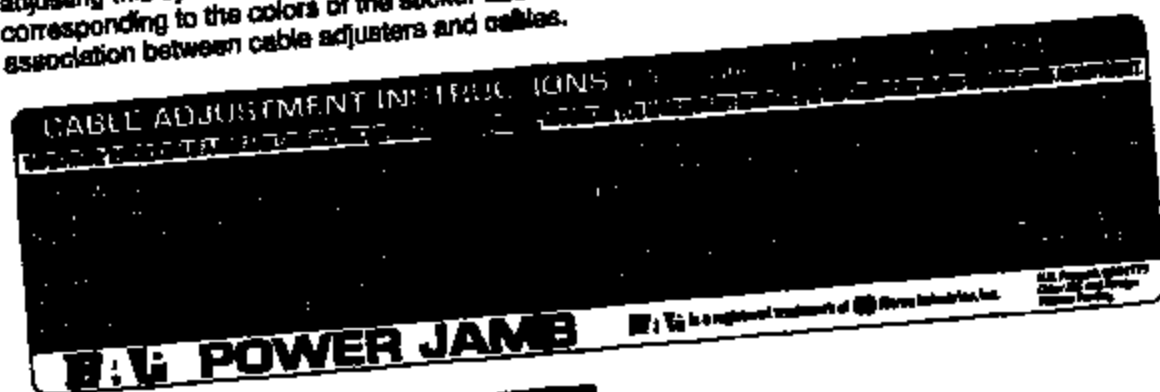


Crimping Tool

II. Getting Started

2.02 CABLE ADJUSTMENT

Shipped with your system is a sticker that should be placed near the slide for instructions 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.



If an ACCU-Slide system is not making the proper seal when it is either open or closed, it needs to be re-adjusted.

The best way to perform an adjustment is to open the room completely in order to have easier access to the cable adjustment brackets. With the room fully extended check top and bottom of both sides to verify all points have sealed. If it is not uniform then an adjustment is necessary.

There are several ways to perform an adjustment depending on room travel and weight. If a room has more than 24 inches of travel it's best to note the distance of adjustment required and then bring the room in 6 to 10 inches before making the adjustment. This will help relieve pressure on the cables making it much easier to turn the adjustment nuts.

1. Before tightening an adjustment nut, make sure the opposing cable has enough slack to allow for the take-up. The opposing cable is the one that has the same corner location but on the opposite side of the wall i.e. (IN Top vs. OUT Top)
2. Tighten the appropriate nut(s) to accomplish the proper seal.
3. Tension the opposing cables until there is enough slack to freely move the cables up and down at least 1 inch overall.
4. When the system is adjusted, tighten all jamb nuts and replace anti-vibration blocks.

In a situation where there are not enough adjustment threads in a cable or chain stud, use the following procedure:

1. Position the room 1 - 2 inches from full outward extension.
2. Turn both chain nuts on the side affected counterclockwise until there is 2 inches of thread showing on both studs.
3. Re-position the cable adjustment nuts to the end of the cable studs.
4. Remove the chain from the sprocket and move the required links to balance the amount of difference in take-up, reconnect chain to sprocket.
5. Take up slack in the chains and cables and re-adjust.

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

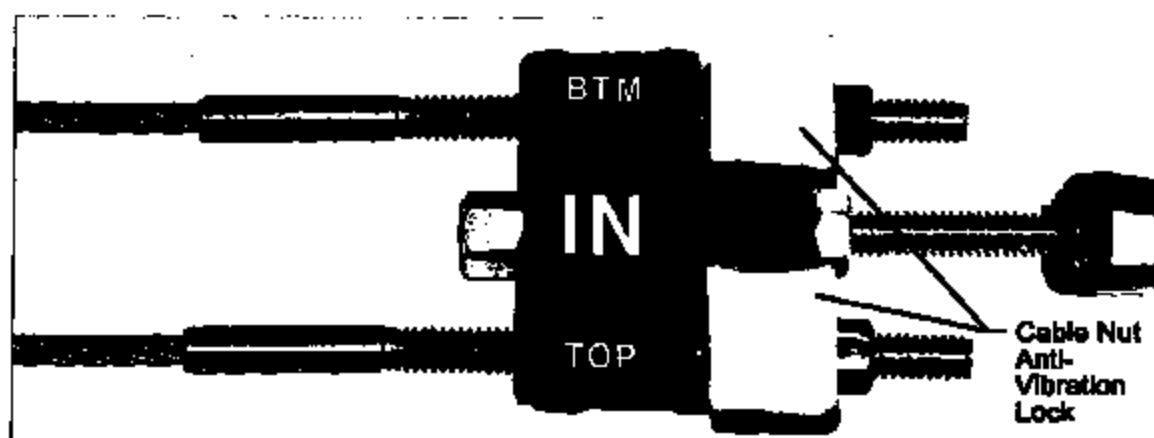
The Accu-Slide is a give and take system between the cables, if the inside and outside opposing cables are too tight you will cause the motor to be over worked leading to trouble later on.

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

When the room is seated full in, the INSIDE cables should be slack enough to move the cable approximately 1/2" up or down (1" total movement) by hand. The holding power is now on the OUTSIDE cables pulling the standoff 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. Remove the adjustment nut from the broken cable and remove the cable from the bracket.
4. Replace the cable stud with the eyebolt supplied in the cable replacement kit, thread the nut approximately 1/2" onto the eyebolt.
5. Remove the damaged cable from the standoff bracket and make a clean cut of the cable saving as much of the old cable as possible.
6. Attach the replacement cable to the standoff bracket and replace the keeper grammet. This will prevent the ball end of the cable from retracting into the extrusion.



7. Insert both the replacement cable and the newly cut broken cable into the braided sleeve. If you have spray adhesive available, spray the adhesive on the first 12" of each cable. If adhesive is not available the braided sleeve will still work properly. Tape both ends of the braided sleeve with electrical tape and wrap tightly. **DO NOT BUILD UP TAPE ON THE BRAIDED SLEEVE, THIS CAN CAUSE THE CABLE TO BECOME LODGED IN A PULLEY.** It only takes about 2 wraps on the sleeve to hold, you can place more wraps on the cable area than the sleeve area due to the diameter of the cable vs. the diameter of the sleeve. The tape also ensures that the sleeve will not come off the cable if it hits a bracket during the threading process.



8. Pull the cable from the adjustment bracket until the splice is fully past the last corner pulley. (It is best to have a person feed the cable from the outside while it is being pulled from the inside.)
9. Remove the braided sleeve from the cable and discard the old cable.
10. Insert the "I" bolt into the cable/chair connector bracket and thread the coupling nut on approximately 1/2".
11. Place the ferrule on the cable and loop the cable end through the "I" bolt and back through the other side of the ferrule.



12. Take as much slack out of the cable as possible and place 3 crimps on the ferrule.



13. Replace jamb clamp.
14. Before finishing the adjustment inspect the cable bracket location for proper alignment. Improperly aligned brackets cause most cable failures. In some cases it may be necessary to place a shim under the outside cable stand-off bracket to achieve proper alignment.
15. Tighten the coupling nut to re-adjust the cable tension. If all cables need to be adjusted, follow the adjustment procedures.

ADJUSTMENT:

Left Front Adjust Bracket (OUT): The left front (furthest from the wall) 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.

Left Rear Adjust Bracket (IN): The left rear (closest to the wall) 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.

Right Rear Adjust Bracket (OUT): The right rear (closest to the wall) cable adjust bracket controls the tension for the right 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.

Right Front Adjust Bracket (IN): The right front (furthest from the wall) cable adjust bracket controls the tension for the right 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.

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

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



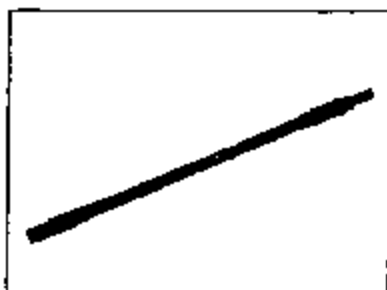
REPLACEMENT

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

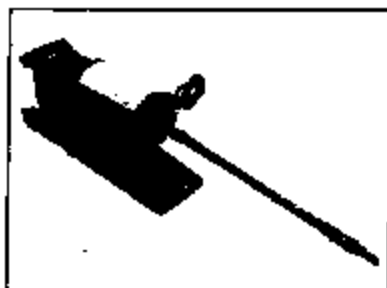


3.04 MANUALLY MOVING THE ROOM

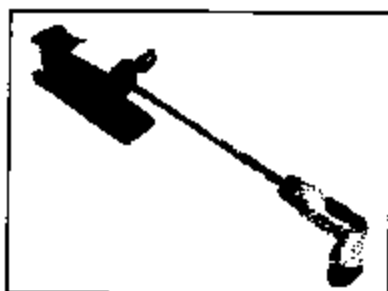
1. Locate the included flexible shaft in your owner's packet.



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.



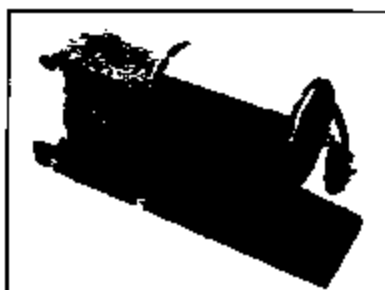
4. If the cables tighten, and the motor is difficult to turn, **REVERSE THE DIRECTION**.
Over-torquing can happen, resulting in severe damage.

4.01 SERVICEABLE ITEMS

REPLACEMENT KITS:



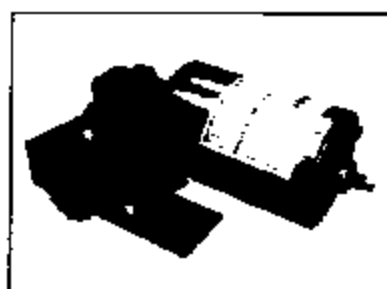
Repair Kit 22306
Cable Repair Kit



Repair Kit 22307
Motor Repair Kit



Repair Kit 22308
Motor Repair Kit



Repair Kit 22311
Motor Repair Kit

ACCU↔SLIDE™

EXPANDABLE ROOM SYSTEM



For More Information...

Norco Industries, Inc.
53236 County Road 13
Elkhart, IN 46514
574-262-3400
www.norcoind.com

BAL

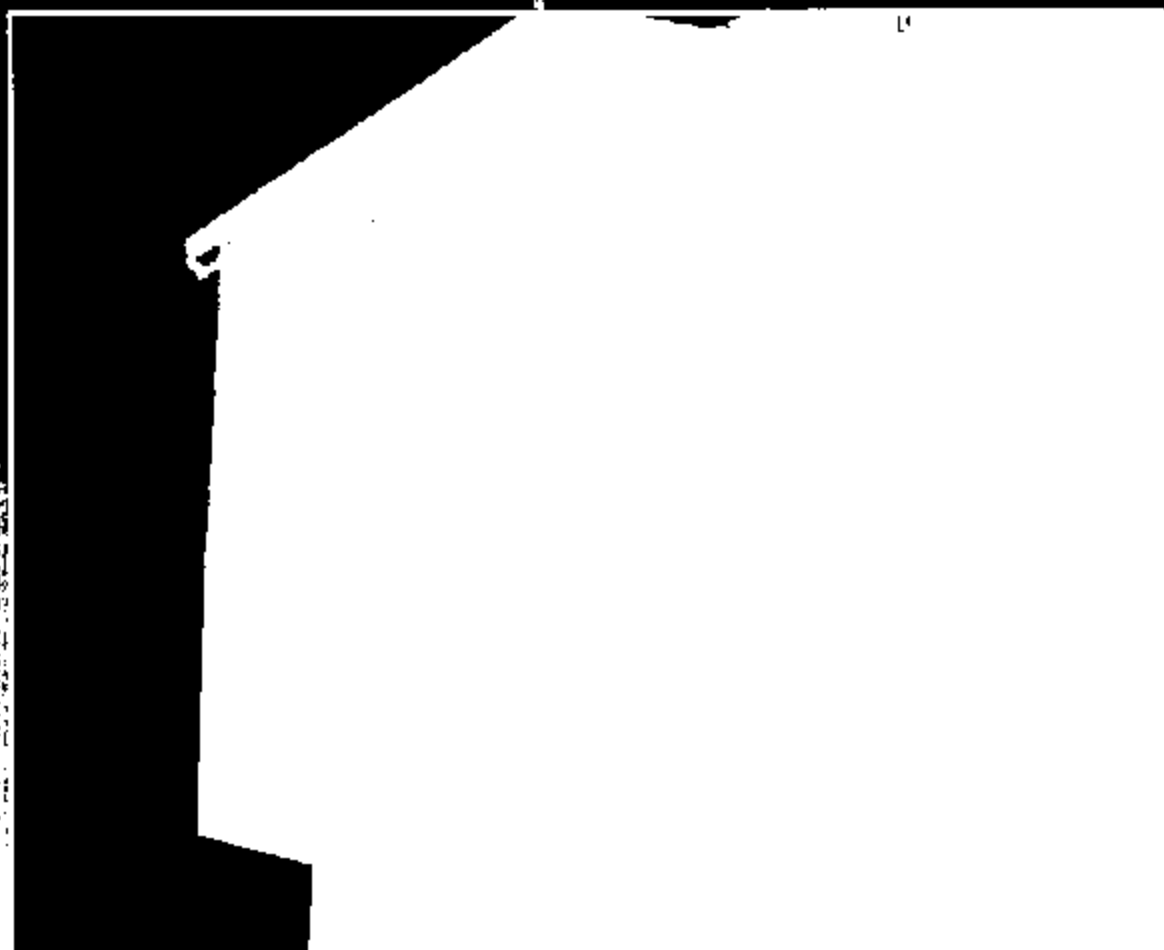
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June 2005

ACCU SLIDE™

EXPANDABLE ROOM SYSTEM



DESIGNER'S GUIDE

CONCEPTS &

YOU'VE GOT TO SEE NOW

TO GET THE MOST OUT OF IT

DESIGN YOUR ACCU-SLIDE SYSTEM IN JUST *TEN* EASY STEPS:

- | | |
|---|----|
| 1. PICK ROUGH OPENING SIZE FROM TABLE | 4 |
| 2. CALCULATE ROOM SIZE FROM DRAWING
& CHOOSE OPTIONS | 5 |
| 3. PREPARE ROUGH OPENING | 14 |
| 4. PREPARE ROOM | 16 |
| 5. MOUNT PULLEYS | 18 |
| 6. MOUNT MOTOR | 19 |
| 7. PLACE ROOM & MOUNT STANDOFFS | 20 |
| 8. MAKE CHAIN & CABLE CONNECTIONS | 21 |
| 9. ADJUST | 22 |
| 10. FINISH | 23 |

GET STARTED ➡

WHY USE NORCO'S

VALVE-LESS FLOW CONTROL?

With Norco's Valveless Flow Control:

Flow is controlled by the pressure drop

across the valveless flow control device. The pressure drop is determined by the flow rate and the resistance of the system.

When the flow rate is increased, the pressure drop

across the valveless flow control device is increased. The pressure drop is increased by the resistance of the system.

As the flow rate is increased, the pressure drop is increased. The pressure drop is increased by the resistance of the system.

When the flow rate is increased, the pressure drop is increased.

Flow is controlled by the pressure drop across the valveless flow control device. The pressure drop is determined by the flow rate and the resistance of the system.

When the flow rate is increased, the pressure drop is increased. The pressure drop is increased by the resistance of the system.

Flow is controlled by the pressure drop across the valveless flow control device. The pressure drop is determined by the flow rate and the resistance of the system.

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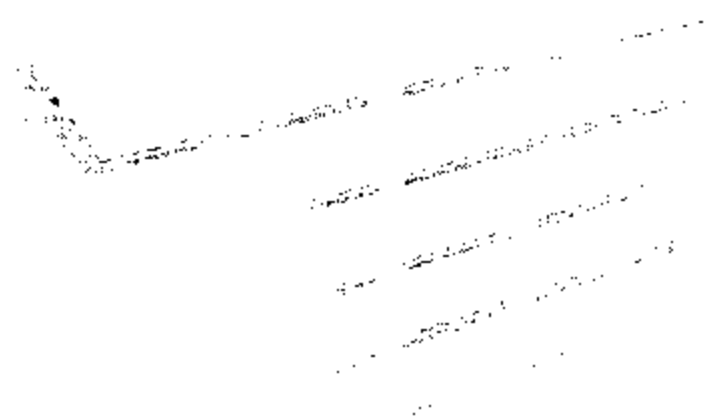
Flow is controlled by the pressure drop across the valveless flow control device. The pressure drop is determined by the flow rate and the resistance of the system.

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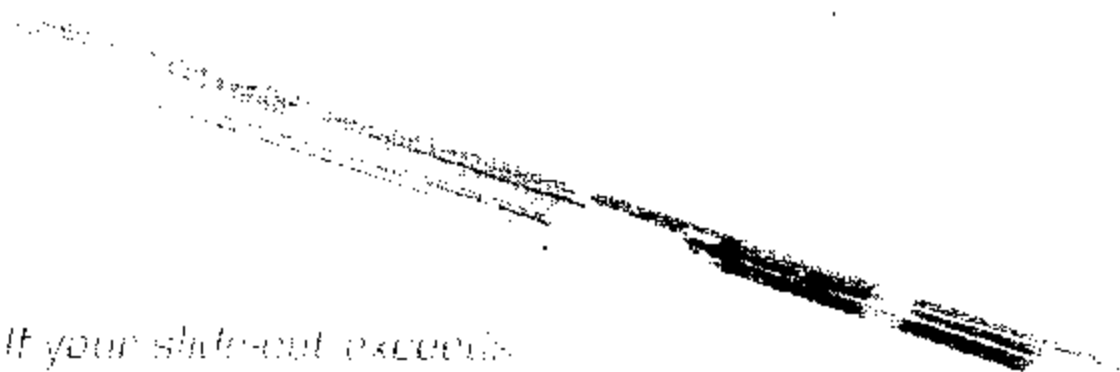
Flow is controlled by the pressure drop across the valveless flow control device. The pressure drop is determined by the flow rate and the resistance of the system.

RECEIVING YOUR ACCU-SLIDE SYSTEM

YOUR ORDER WILL BE SHIPPED IN ONE OF THE FOLLOWING CONFIGURATIONS, DEPENDING ON SIZE, STYLE AND LOCALITY.



If your slide-out is within shipping limits, the product will come assembled & crated.



If your slide-out exceeds shipping limits, the product will come partially assembled.

STEP 1: PICK ROUGH OPENING SIZE FROM TABLE

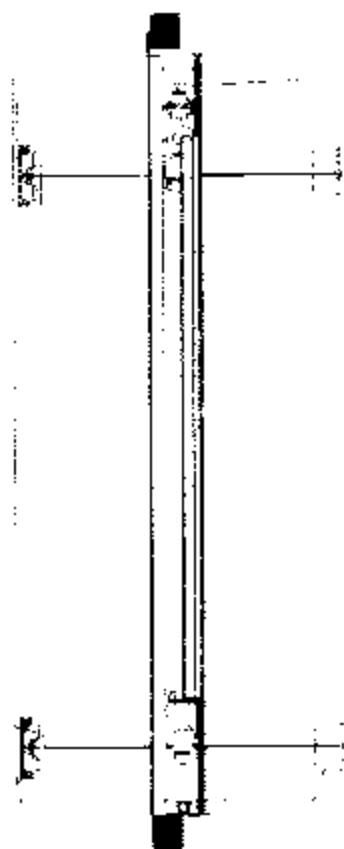
Height	Range of Length	Range of Slide
60-64"	84" - 100"	16" - 24"
70-72"	75" - 100"	16" - 24"
74-76"	84" - 100"	20" - 36"
78-80"	75" - 100"	8" - 24"
82-84"	84" - 100"	20" - 40"
74"	75" - 100"	16" - 24"
76"	84" - 100"	20" - 40"

STEP 2: CALCULATE ROOM SIZE FROM DRAWING & CHOOSE OPTIONS



OUTSIDE

INSIDE



SLIDE STAY-OFF CONFIGURATIONS



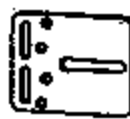
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SLIDE CONTROLS CONFIGURATIONS

- ☐ MECHANICS BELOW OPENING AS SHOWN
- ☐ MECHANICS ABOVE OPENING
- ☐ ELECTRONIC MOTOR CONTROL
- ☐ LIGHT DUTY SWITCH
- ☐ HEAVY DUTY SWITCH
- ☐ OVERRIDE FLEX SHAFT

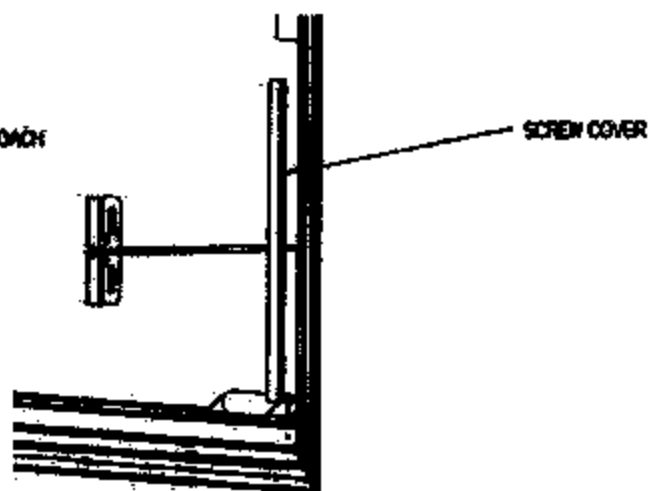
WALL THICKNESS

- ☐ 1-3/8"
- ☐ 1-1/2"
- ☐ 1-3/4"

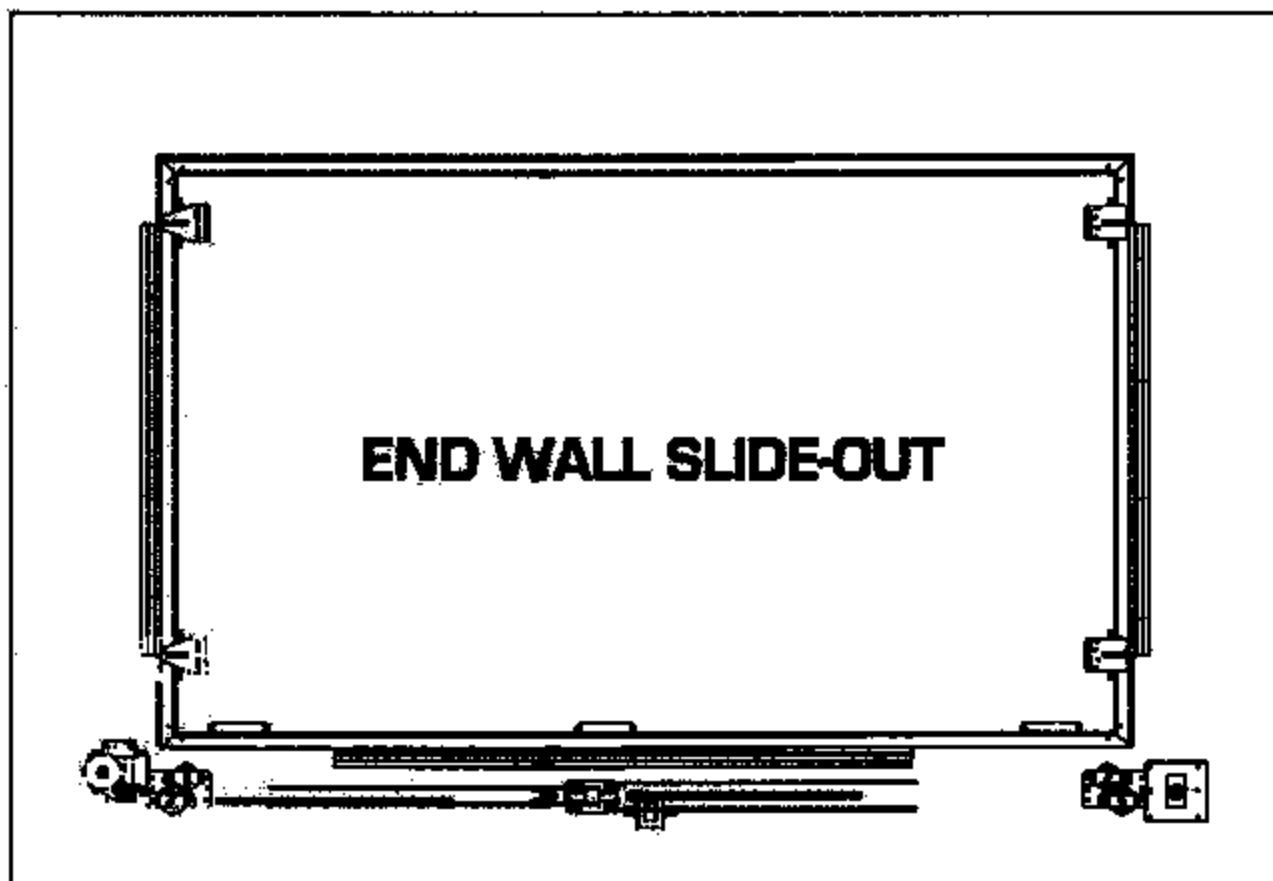
NUMBER OF ROLLERS _____

ALUMINUM SCREEN COVER FOR EXTERIOR
SCREEN COVER SNAPS INTO FRAME OUTSIDE OF COACH

- ☐ 8540110 1" WIDE
- ☐ 8540180 1-1/2" WIDE
- ☐ NONE



SPECIAL INSTRUCTIONS



THIS PART IS MOUNTED ON EACH SIDE WALL AS A TRACK FOR ASSEMBLY BELOW



THE ASSEMBLY IS MOUNTED ON FLOOR OF SLIDE ROOM
AND EACH ROLLER TRAVELS IN TRACK SHOWN ABOVE

THIS DESIGN USES THE SAME EXTRUSION FOR JAMBS, HEADER, SILL
AND IS RECOMMEND FOR END WALL APPLICATIONS

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DESIGNED BY JDE	CHECKED BY JDE	APPROVED BY JDE	
END WALL SLIDE OUT - OPTIONS	PART NUMBER	REVISIONS	

INSIDE STAND-OFF CONFIGURATIONS:



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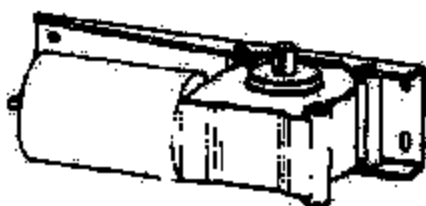
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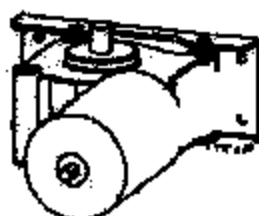
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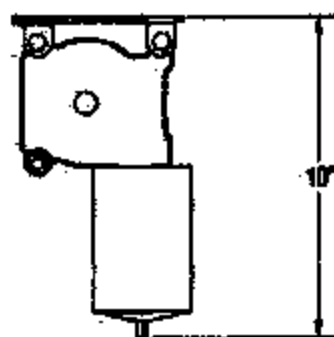
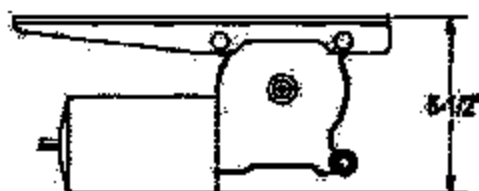
MOTOR MOUNT CONFIGURATIONS:



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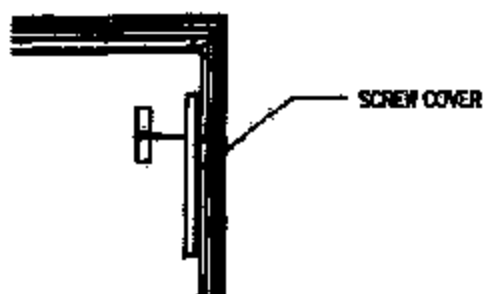


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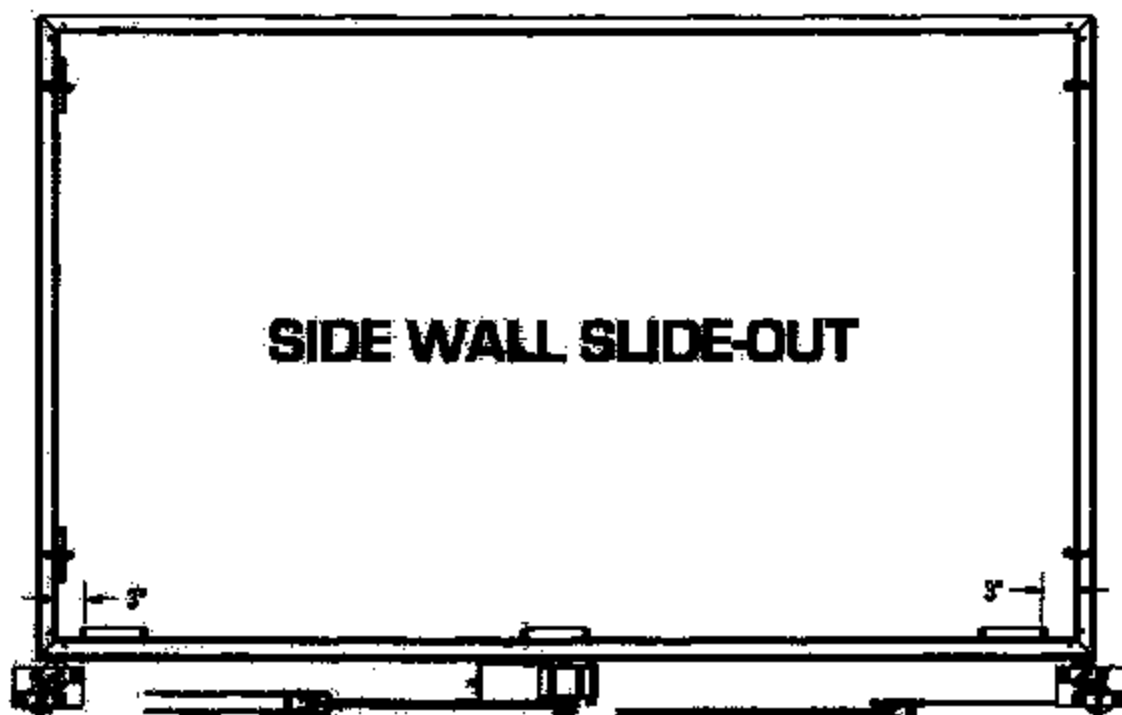
ALUMINUM SCREW COVER FOR EXTERIOR.
SCREW COVER SNAPS INTO FRAME OUTSIDE OF COACH

- ☐ 8540110 1" WIDE
- ☐ 8540380 1-1/2" WIDE
- ☐ NONE



SPECIAL INSTRUCTIONS:

SIDE WALL SLIDE-OUT



SLIDE CONTROLS CONFIGURATIONS

- ☐ MECHANICS BELOW OPENING (AS SHOWN)
- ☐ MECHANICS ABOVE OPENING
- ☐ ELECTRONIC MOTOR CONTROL
- ☐ LIGHT DUTY SWITCH
- ☐ HEAVY DUTY SWITCH
- ☐ OVERIDE FLEX SHFT

WALL THICKNESS

- ☐ 1-3/8"
- ☐ 1-1/2"
- ☐ 1-3/4"

NUMBER OF ROLLERS: _____

THIS DESIGN USES THE SAME EXTENSION FOR JAMBS, HEADER, SILL
AND IS RECOMMEND FOR SIDE WALL APPLICATIONS

MODEL THIS DRAWING AND ITS DATA ARE THE PROPERTY OF NORCO INDUSTRIES, INC. ANY USE OF THIS DRAWING OR ITS DATA WITHOUT WRITTEN PERMISSION OF NORCO INDUSTRIES, INC. IS EXPRESSLY FORBIDDEN.		DATE 8/28/03 DRAWN BY JDS		 NORCO INDUSTRIES, INC. 10000 C.R. 13 BLVD. SUITE 200, JENKINS, MD 21150
PREPARED BY JDS CHECKED BY JDS APPROVED BY JDS	DATE 8/28/03	PROJECT 10000 C.R. 13 BLVD. SUITE 200, JENKINS, MD 21150	PHOTO 10000 C.R. 13 BLVD. SUITE 200, JENKINS, MD 21150	
SIDE WALL SLIDE-OUT - OPTIONS				TWO ROLLERS 10000 C.R. 13 BLVD. SUITE 200, JENKINS, MD 21150

HIDE STAND-OFF CONFIGURATIONS



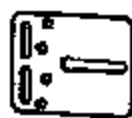
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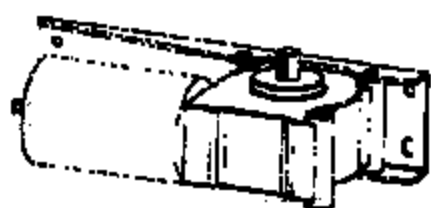
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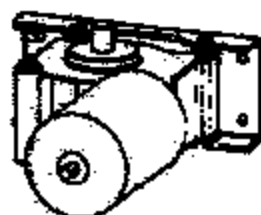
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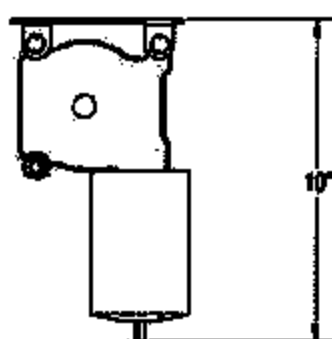
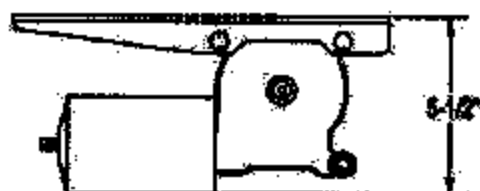
MOTOR MOUNT CONFIGURATIONS



854176

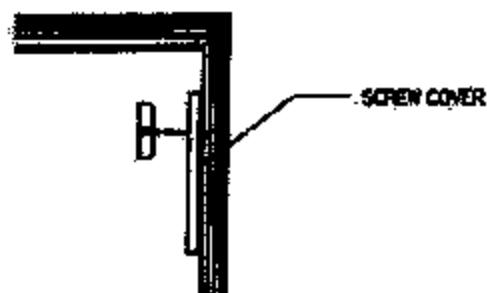


854197



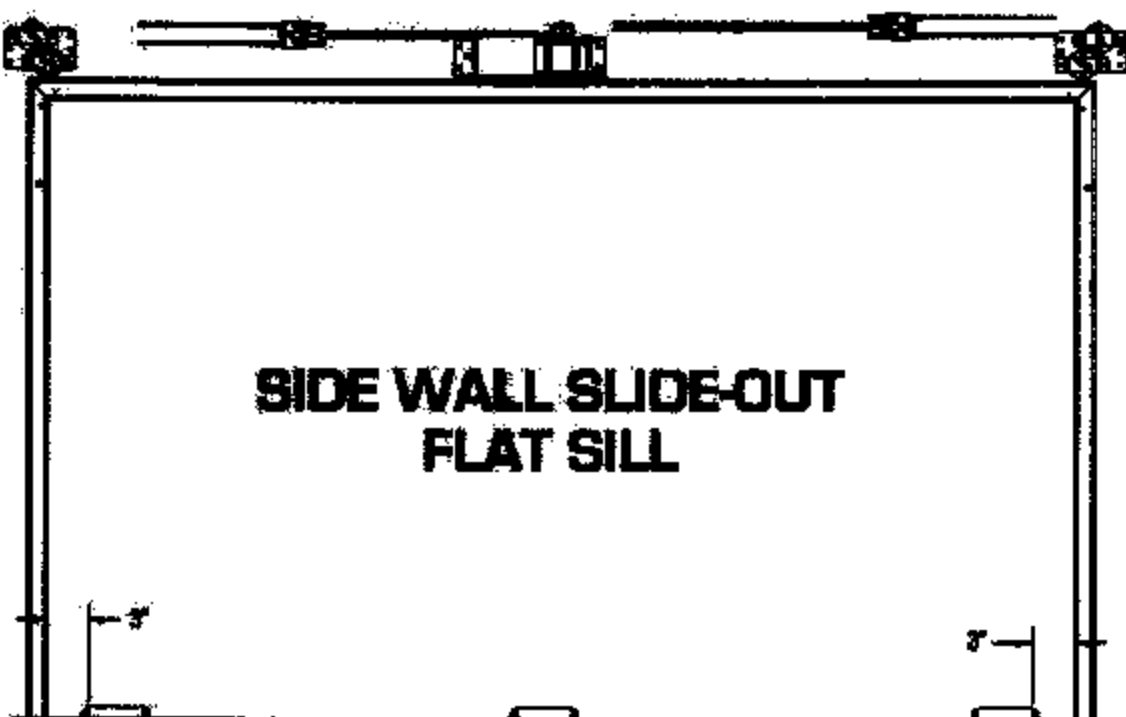
ALUMINUM SCREW COVER FOR EXTERIOR
SCREW COVER SNAPS INTO FRAME OUTSIDE OF COACH

- ☐ 8540110 1" WIDE
- ☐ 8540280 1-1/2" WIDE
- ☐ NONE



SPECIAL INSTRUCTIONS:

SIDE WALL SLIDE-OUT FLAT SILL



SLIDE CONTROLS CONFIGURATIONS:

- ☐ MECHANICS BELOW OPENING
- ☐ MECHANICS ABOVE OPENING AS SHOWN
- ☐ ELECTRONIC MOTOR CONTROL
- ☐ LIGHT DUTY SWITCH
- ☐ HEAVY DUTY SWITCH
- ☐ OVERRIDE FLEX SHAFT

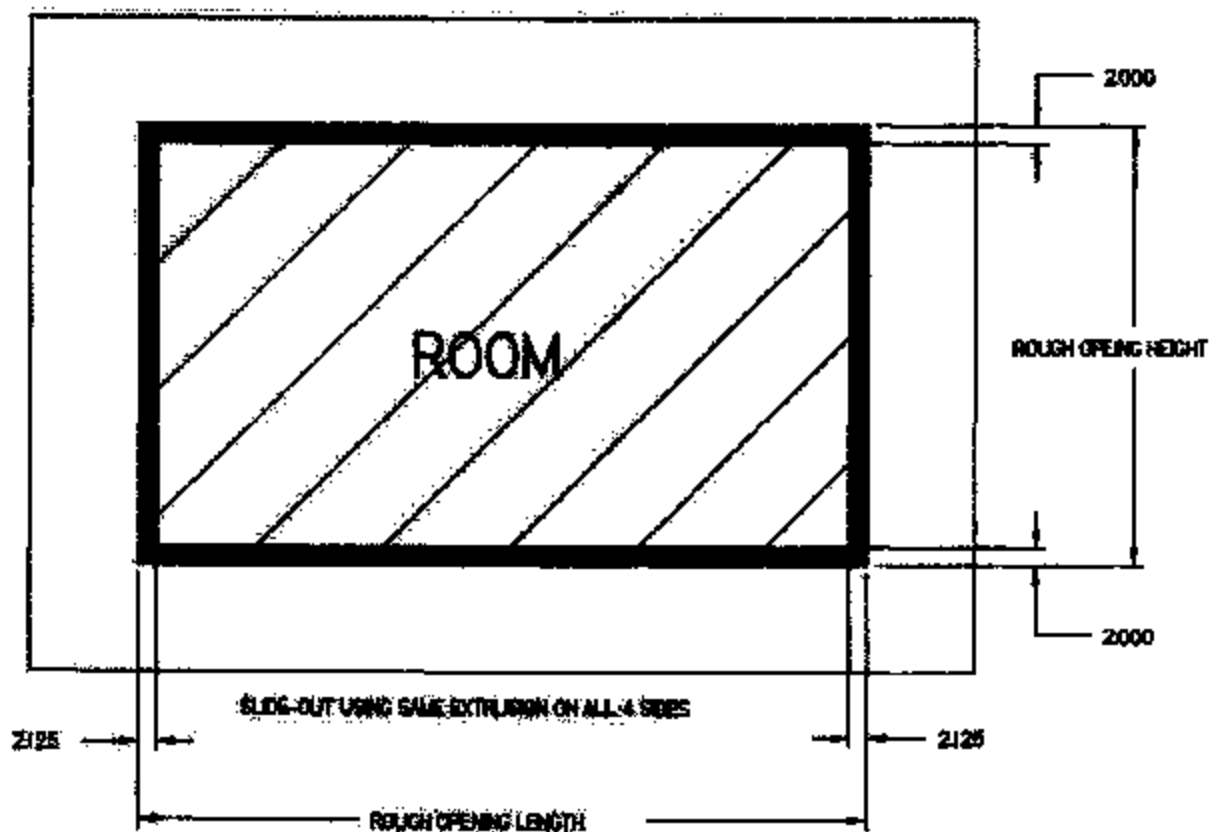
WALL THICKNESS:

- ☐ 1-3/8"
- ☐ 1-1/2"
- ☐ 1-3/4"

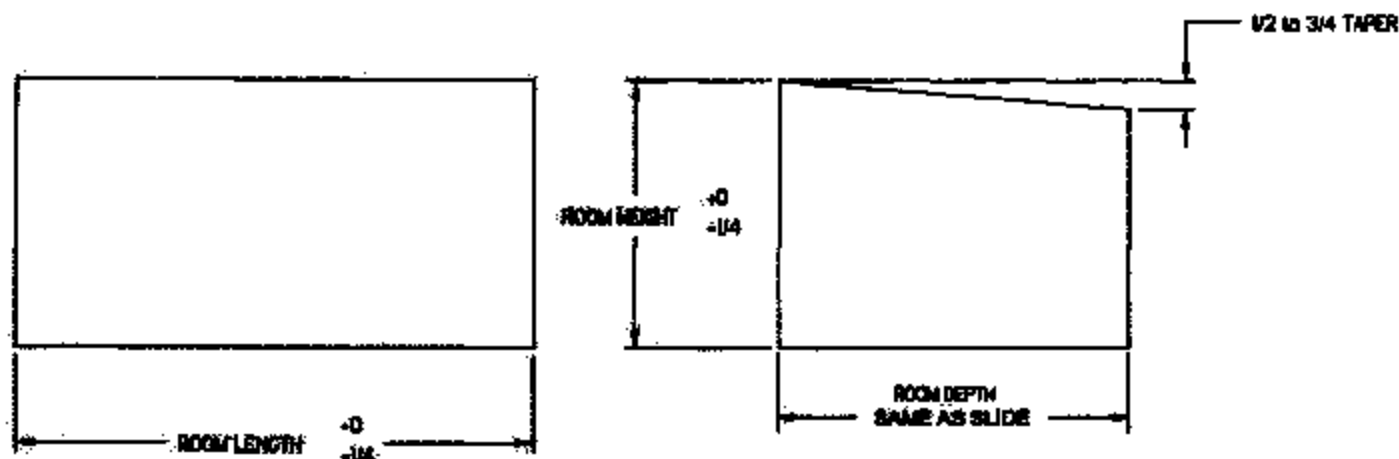
NUMBER OF ROLLERS: _____

THIS DESIGN USES THE SAME EXTRUSION FOR JAMB, HEADER WITH FLAT SILL EXTRUSION
AND IS RECOMMEND FOR SIDE WALL APPLICATIONS

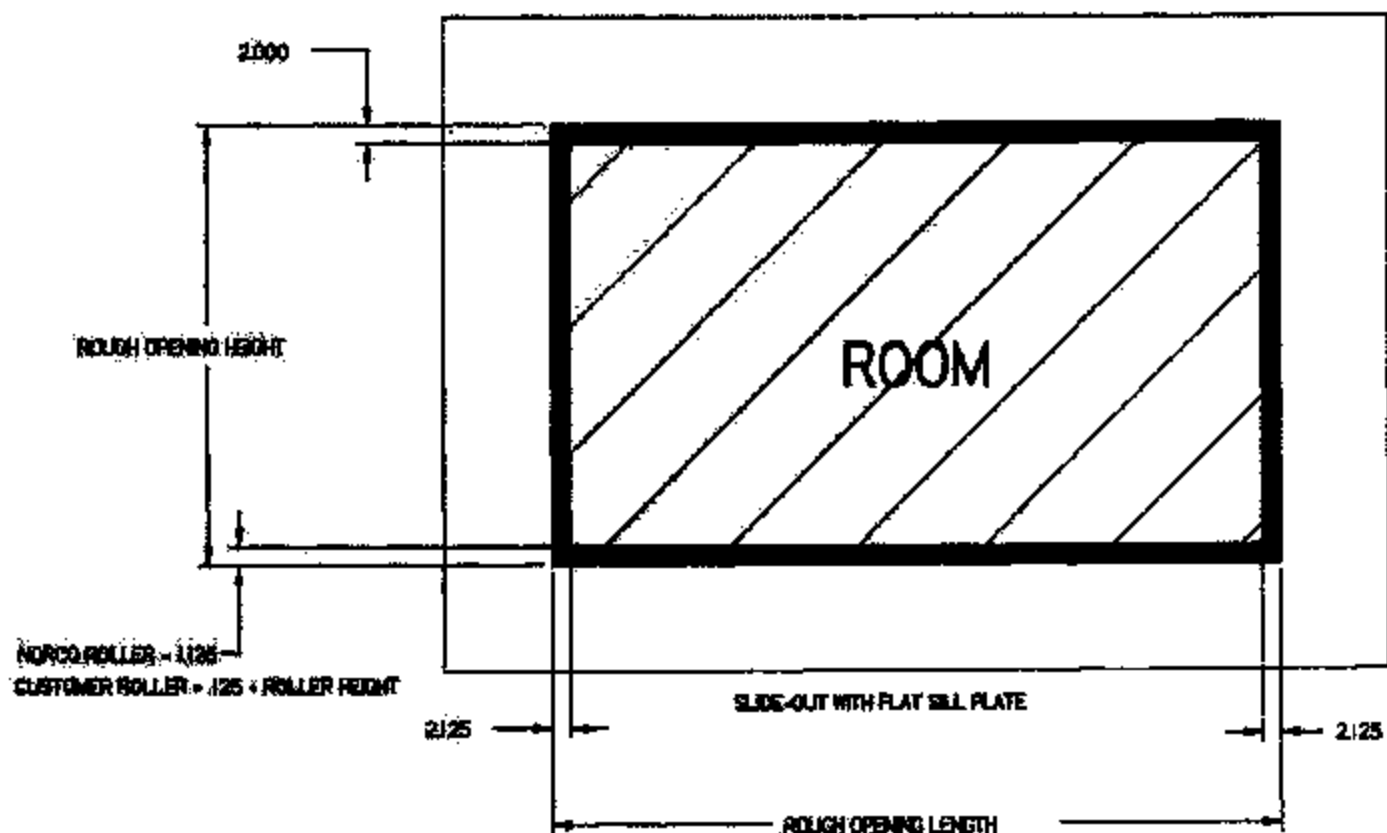
THIS DRAWING AND ITS DATA ARE THE PROPERTY OF NORCO INDUSTRIES, INC. ANY USE OF THIS DRAWING OR ITS DATA WITHOUT WRITTEN PERMISSION OF NORCO INDUSTRIES, INC. IS EXPRESSLY FORBIDDEN.		DATE 8/28/03	
DESIGNED BY THE DESIGNER JES		DATE 8/28/03	
NO. OF WALLS 2	NO. OF WINDOWS 1	NORCO INDUSTRIES, INC. 2000 E. 12th Street, El Paso, TX 79902	
NO. OF DOORS 0	NO. OF SLIDING DOORS 0	SIDE WALL SLIDE-OUT - OPTIONS	



ROOM LENGTH = ROUGH OPENING LENGTH - 4250
 ROOM HEIGHT = ROUGH OPENING HEIGHT - 4000



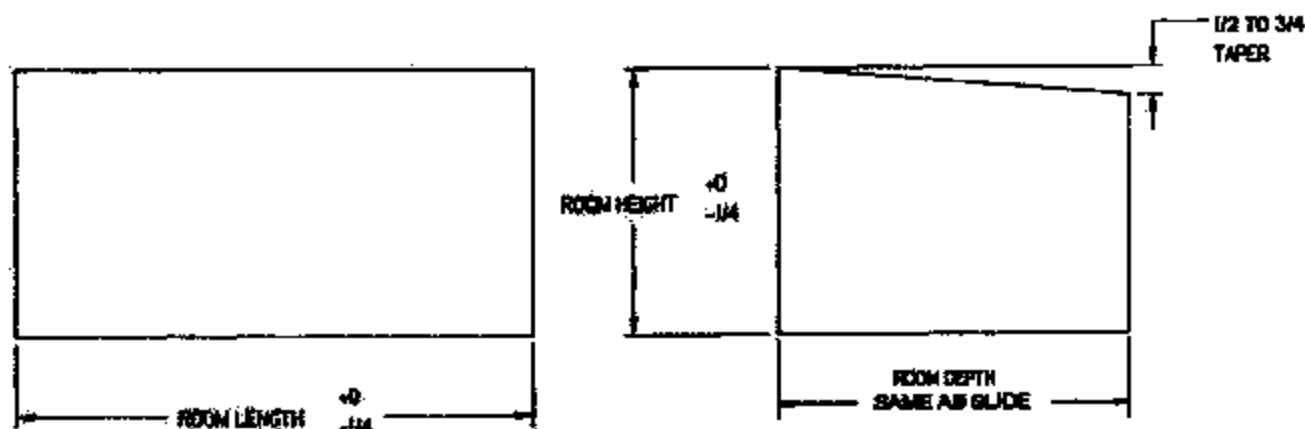
NOTE
 ROOM DIMENSIONS ARE FROM OUTSIDE TO OUTSIDE.
 ROOM DIMENSIONS SHOULD TAKE INTO CONSIDERATION ANY TRIMS OR FACIA THAT MIGHT SLIDE BETWEEN
 OUTSIDE OF ROOM AND THE FRAME WORK OF THE SLIDE MECHANISM.



ROOM LENGTH = ROUGH OPENING LENGTH - 4200

ROOM HEIGHT USING NORCO ROLLERS = ROUGH OPENING HEIGHT - 3 1/25

ROOM HEIGHT USING CUSTOMER ROLLER = ROUGH OPENING HEIGHT - 2000 - ROLLER HEIGHT + 1/25



NOTE: THIS DRAWING AND ITS CONTENTS ARE THE PROPERTY OF NORCO INDUSTRIES, INC. ANY USE OF THIS DRAWING OR ITS CONTENTS WITHOUT WRITTEN PERMISSION OF NORCO INDUSTRIES, INC. IS EXPRESSLY FORBIDDEN.		DATE: 8/26/03 DRAWN BY: J.D.E.		 NORCO INDUSTRIES, INC. 6000 E. 10th Ave. Ste. 100 Denver, CO 80231
CUSTOMER NAME: 1001 10th 1001 10th 1001 10th	ADDRESS: 1001 10th CITY: 1001 10th STATE: 1001 10th	PHONE: 1001 10th FAX: 1001 10th	PROJECT: 1001 10th DRAWING: 1001 10th	
ROOM SIZE FORMULAS				1001 10th 1001 10th

STEP 3: PREPARE ROUGH OPENING

1. Remove the top of the wall.



RECOMMENDED ROUGH OPENING PREPARATIONS

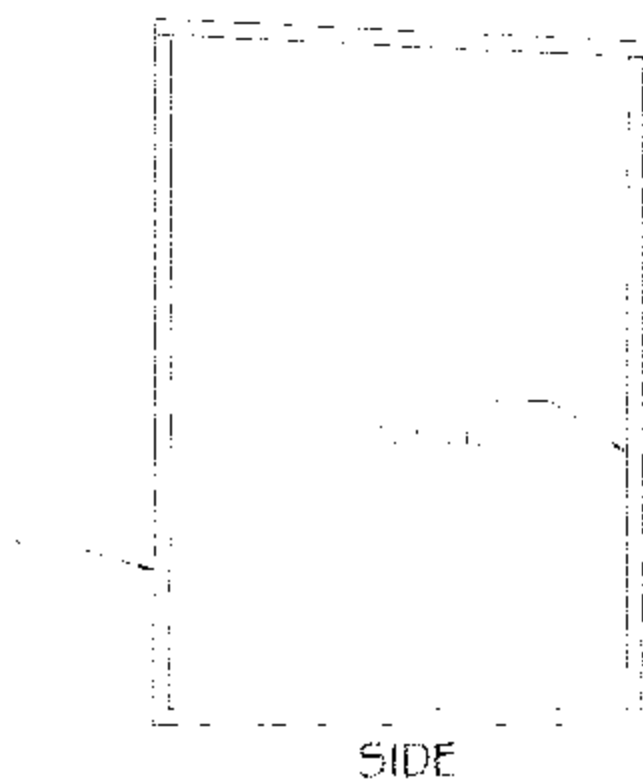
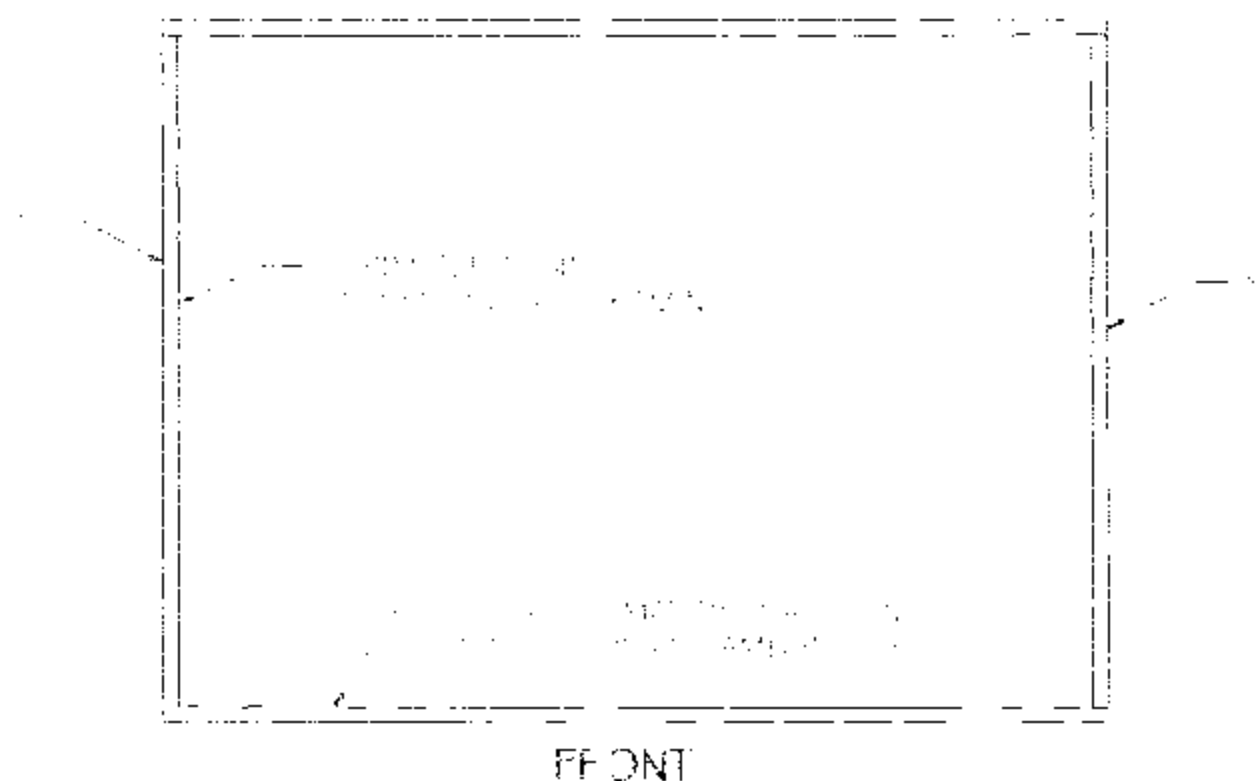
1. Preparation of
rough opening
for rough
opening

2. Preparation of
rough opening
for rough
opening

3. Preparation of
rough opening
for rough
opening

STEP 4: PREPARE ROOM

RECOMMENDED 10 MIN PREPARATION



10 MINUTE VIDEO: www.furniture.com
FURNITURE VIDEO: www.furniture.com
SEE THE VIDEO: www.furniture.com

3D VIEW OF ROOM →

3D VIEW OF ROOM STRUCTURE...

1. The room is a rectangular prism with a length of 10 meters, a width of 5 meters, and a height of 3 meters.

2. The room has a flat roof and four walls. The walls are made of brick and are painted white.

3. The room has a single door on the left wall and a single window on the right wall.

4. The room has a floor made of polished wood and a ceiling made of plaster.

5. The room is empty and has no furniture or decorations.

6. The room is located in a building with a total of 10 rooms.

7. The room is used as a storage room for books and papers.

8. The room is part of a larger complex that includes a library and a study hall.

9. The room is situated on the second floor of the building.

10. The room is accessible via a set of stairs located at the end of the hallway.

11. The room is well-lit and has a bright atmosphere.

12. The room is clean and well-maintained.

13. The room is a good example of a functional storage room.

14. The room is a valuable asset to the building.

15. The room is a testament to the quality of the building's construction.

STEP 5: MOUNT PULLEYS

Now that the pulleys are mounted, you can attach the rope.

1. Attach the rope to the pulley on the left. The rope should be attached to the pulley on the left side of the pulley block.

2. Attach the rope to the pulley on the right. The rope should be attached to the pulley on the right side of the pulley block.

3. Attach the rope to the pulley on the left. The rope should be attached to the pulley on the left side of the pulley block.

4. Attach the rope to the pulley on the right. The rope should be attached to the pulley on the right side of the pulley block.

5. Attach the rope to the pulley on the left. The rope should be attached to the pulley on the left side of the pulley block.

6. Attach the rope to the pulley on the right. The rope should be attached to the pulley on the right side of the pulley block.

7. Attach the rope to the pulley on the left. The rope should be attached to the pulley on the left side of the pulley block.

8. Attach the rope to the pulley on the right. The rope should be attached to the pulley on the right side of the pulley block.

9. Attach the rope to the pulley on the left. The rope should be attached to the pulley on the left side of the pulley block.

10. Attach the rope to the pulley on the right. The rope should be attached to the pulley on the right side of the pulley block.

11. Attach the rope to the pulley on the left. The rope should be attached to the pulley on the left side of the pulley block.

12. Attach the rope to the pulley on the right. The rope should be attached to the pulley on the right side of the pulley block.

Now that the rope is attached, you can pull on it to lift the load.

1. Pull on the rope to lift the load. The load should be lifted by the pulley system.

2. Pull on the rope to lift the load. The load should be lifted by the pulley system.

3. Pull on the rope to lift the load. The load should be lifted by the pulley system.

4. Pull on the rope to lift the load. The load should be lifted by the pulley system.

5. Pull on the rope to lift the load. The load should be lifted by the pulley system.

6. Pull on the rope to lift the load. The load should be lifted by the pulley system.

7. Pull on the rope to lift the load. The load should be lifted by the pulley system.

8. Pull on the rope to lift the load. The load should be lifted by the pulley system.

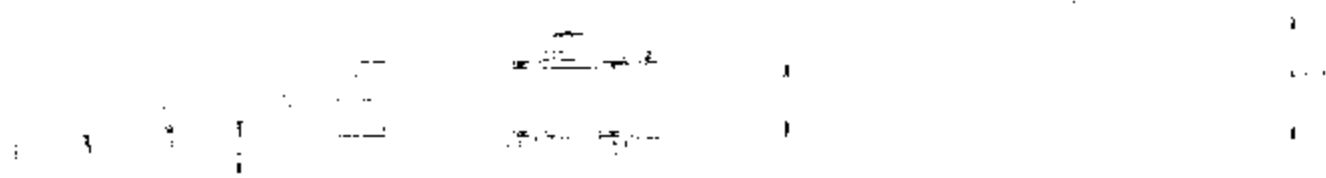
9. Pull on the rope to lift the load. The load should be lifted by the pulley system.

10. Pull on the rope to lift the load. The load should be lifted by the pulley system.

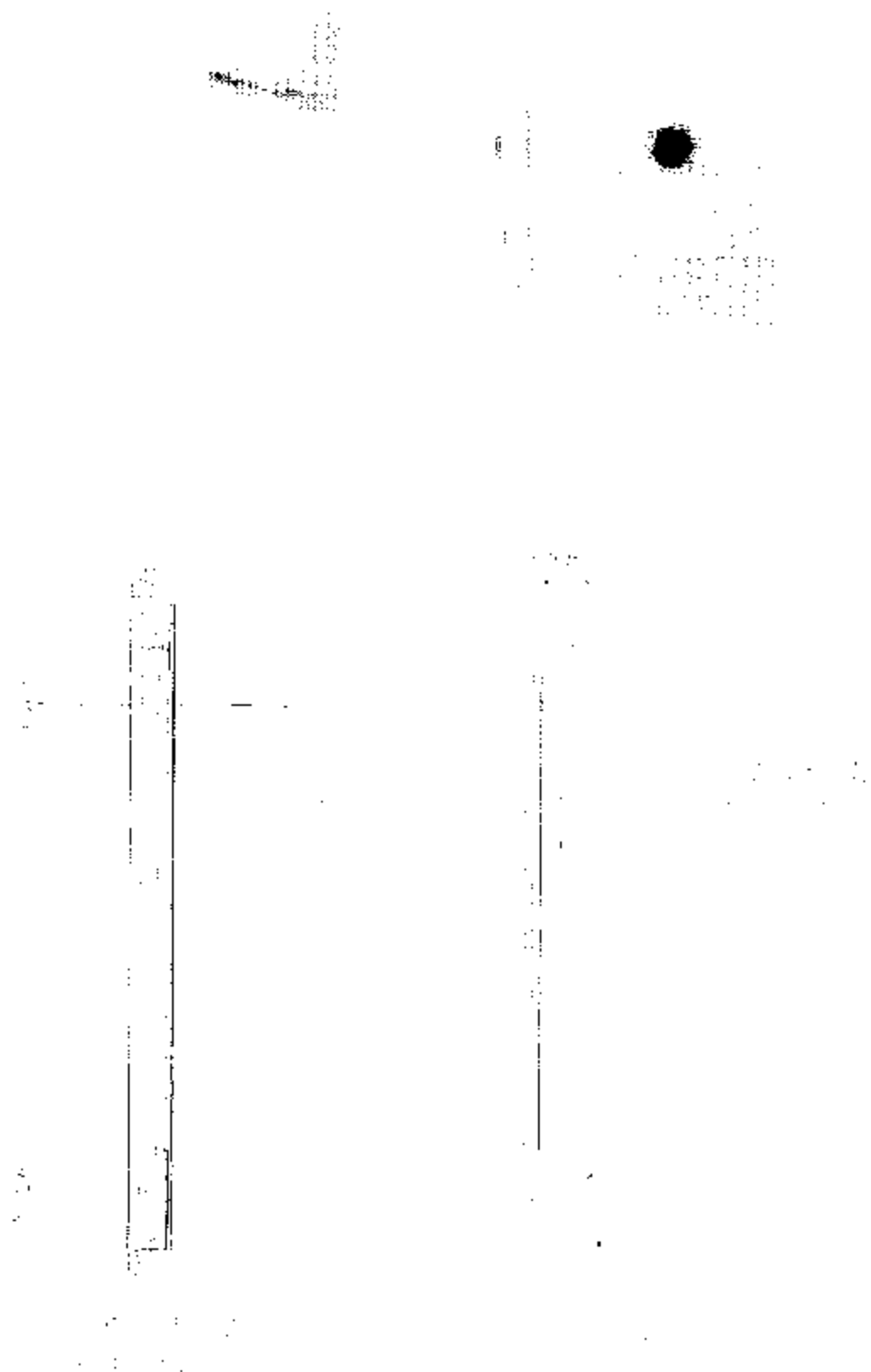
11. Pull on the rope to lift the load. The load should be lifted by the pulley system.

12. Pull on the rope to lift the load. The load should be lifted by the pulley system.

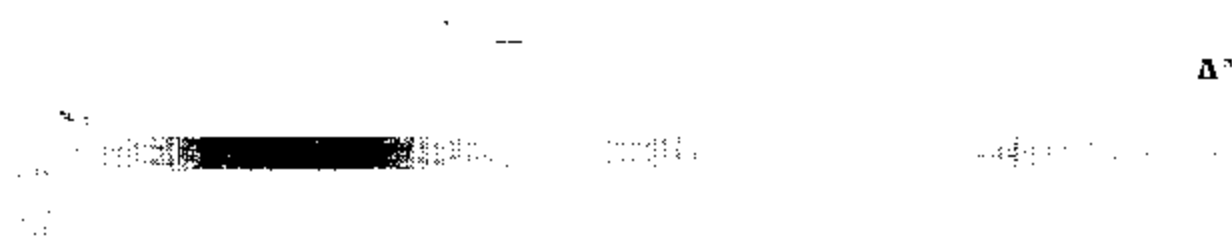
STEP 6: MOUNT MOTOR



STEP 7: PLACE ROOM & MOUNT STANDOFFS



STEP 3. MAKE CHAIN & CABLE CONNECTIONS



CHAIN & CABLE CONNECTORS WILL BE SHIPPED
PRE-ASSEMBLED. ALL THAT IS REQUIRED IS
CHAINS BE PLACED ON SPROCKETS

STEP 9: ADJUST

CABLE ADJUSTMENT INSTRUCTIONS: www.milwaukee.com (under "Tools & Equipment" > "Cable")

1. Turn the cable adjustment screw clockwise until the cable is taut. Do not over-tighten the cable. The cable should be taut, but not so tight that it causes the cable to break or the cable to pull out of the cable housing. The cable should be taut, but not so tight that it causes the cable to break or the cable to pull out of the cable housing.

POWER JAM is a registered trademark of Milwaukee Industries, Inc. U.S. Patent 6,880,000. Milwaukee Industries, Inc. is a registered trademark of Milwaukee Industries, Inc.

RECOMMENDED TOOL:

- 1/2" Drive Torque Wrench
- 7/16" Drive Wrench
- 3/4" Drive Torque Wrench
- Vise Grip

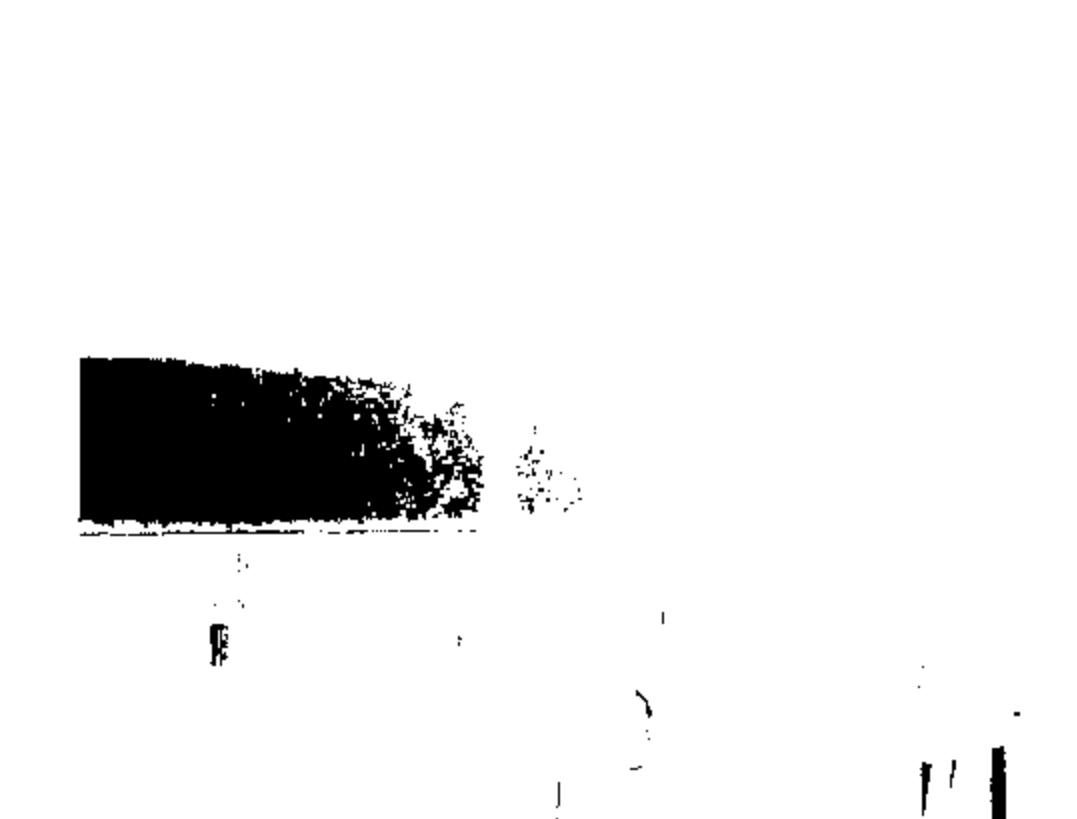
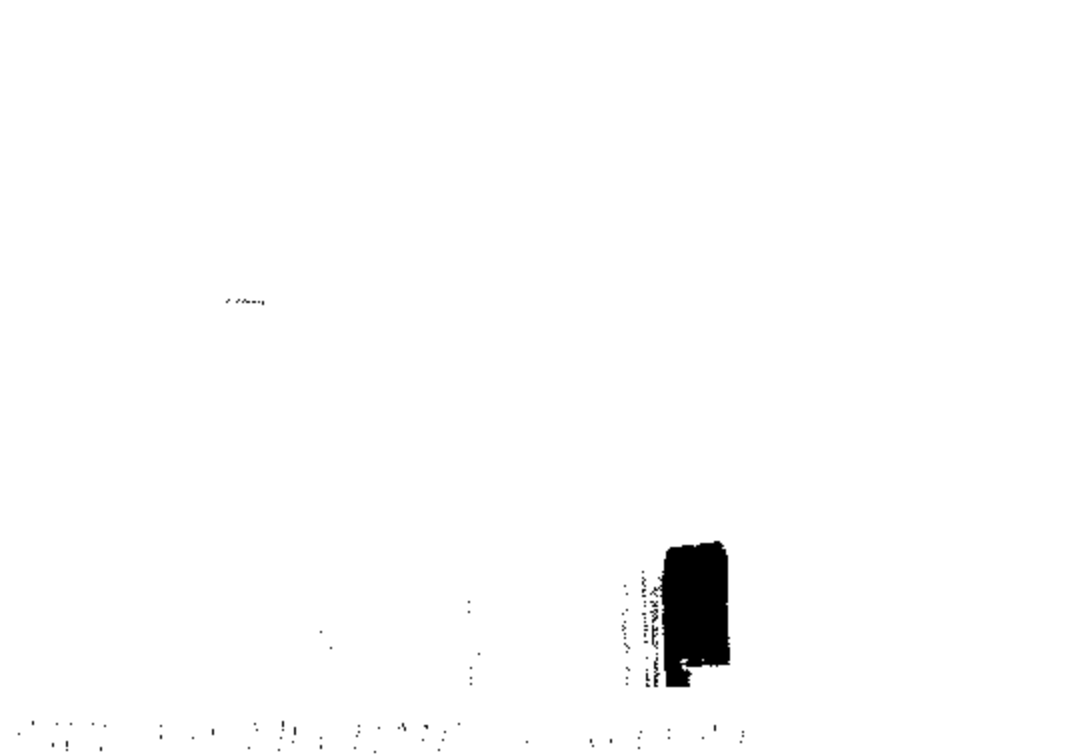
FOR THE POWER JAM

OUT IN IN OUT

FOR THE POWER JAM

100% **POWER JAM** 100%

STEP 10: FINISH



Now, turn the wood over and apply the same material to the other side.

ACCU[↔]SLIDE™

EXPANDABLE ROOM SYSTEM





Driven to Explore

Fleetwood Folding Trailers, Inc.
258 Beacon Street / P.O. Box 111
Somerset, PA 15501-3100
p: 814.445.9661 / f: 814.443.7320
www.worldsbesttrailers.com

1-9-06

Norco Industries, Inc.
53236 Country Road 13
Elkhart, IN 46514
Attn: Mr. Bernie Garceau

Dear Bernie:

Fleetwood Enterprises in Riverside, CA has been served a notice from the Office of Defects Investigation (ODI) of the National Highway Traffic Safety Administration (NHTSA) that it has opened a Preliminary Evaluation (PE06-005) to investigate allegations of inadvertent movement of a "slide-out room" on certain Fleetwood recreational vehicles.

The ODI received four (4) reports of partial extension of one or more of the vehicles slide-out rooms while the vehicle was in motion. ODI has multiple concerns about the inadvertent deployment of a "slide-out room" during normal highway operations. A search of the NHTSA database revealed that the ODI received a safety recall (05V-373) for a similar problem from another RV manufacturer. The subject recreational vehicles under evaluation from the ODI were all manufactured during model year 2002 to 2005.

Our parent company, Fleetwood Enterprises, has also informed us that the four reports were not from trailers manufactured at the folding trailer division at Somerset, PA. Regardless of this, we are required to gather information to be sent to corporate for Fleetwood's response to the ODI Preliminary Evaluation.

From 2002 to 2005, Fleetwood Folding Trailers, Inc. in Somerset manufactured Resort travel trailers using your powered bed and slide-out mechanism. We are asking your company to please gather the following documentation and to send this information to us by **Friday, February 17th**:

1. Complete description of the slide-out assembly and mechanism, including operating instructions, safety features, and design considerations.
2. Explanation of how the subject slide-out assembly remains in the closed position when the vehicle is in motion.
3. Description of the "locking system" which prevents an inadvertent slide-out extension during over the road operations.
4. Complete description and copies of the maintenance and inspection requirements furnished to Fleetwood or for Fleetwood owners.

Please supplement your documentation with any appropriate engineering drawings, schematics, or pictures to fully describe your slide-out mechanism.

Document 3A

We certainly appreciate your assistance in this project and thank you in advance for furnishing us with all of the documentation listed above. If you have any questions, please call me directly at (814) 443-7367.

Sincerely,
FLEETWOOD FOLDING TRAILERS, INC.

A handwritten signature in cursive script that reads "Ted Harris".

Ted Harris, P.E.
Chief Design Engineer



Driven to Explore

Fleetwood Folding Trailers, Inc.
258 Beacon Street / P.O. Box 111
Somerset, PA 15501-3100
p: 814.443.9061 / f: 814.443.7320
www.worldsbesttrailers.com

2-9-06

Lippert Components, Inc.
2766 College Ave.
Goshen, IN 46528
Attn: Mr. Jason Lippert

Dear Jason:

Fleetwood Enterprises in Riverside, CA has been served a notice from the Office of Defects Investigation (ODI) of the National Highway Traffic Safety Administration (NHTSA) that it has opened a Preliminary Evaluation (PE06-005) to investigate allegations of inadvertent movement of a "slide-out room" on certain Fleetwood recreational vehicles.

The ODI received four (4) reports of partial extension of one or more of the vehicles slide-out rooms while the vehicle was in motion. ODI has multiple concerns about the inadvertent deployment of a "slide-out room" during normal highway operations. A search of the NHTSA database revealed that the ODI received a safety recall (05V-373) for a similar problem from another RV manufacturer. The subject recreational vehicles under evaluation from the ODI were all manufactured during model year 2002 to 2005.

Our parent company, Fleetwood Enterprises, has also informed us that the four reports were not from trailers manufactured at the folding trailer division at Somerset, PA. Regardless of this, we are required to gather information to be sent to corporate for Fleetwood's response to the ODI Preliminary Evaluation.

From 2002 to 2005, Fleetwood Folding Trailers, Inc. in Somerset manufactured a Microlite 28FQS travel trailer using your powered super-slideout mechanism. We are asking your company to please gather the following documentation and to send this information to us by **Friday, February 17th**.

1. Complete description of the slide-out assembly and mechanism, including operating instructions, safety features, and design considerations.
2. Explanation of how the subject slide-out assembly remains in the closed position when the vehicle is in motion.
3. Description of the "locking system" which prevents an inadvertent slide-out extension during over the road operations.
4. Complete description and copies of the maintenance and inspection requirements furnished to Fleetwood or for Fleetwood owners.

Please supplement your documentation with any appropriate engineering drawings, schematics, or pictures to fully describe your slide-out mechanism.

We certainly appreciate your assistance in this project and thank you in advance for furnishing us with all of the documentation listed above. If you have any questions, please call me directly at (814) 443-7367.

Sincerely,

FLEETWOOD FOLDING TRAILERS, INC.

A handwritten signature in black ink, appearing to read "Ted Harris". The script is cursive and somewhat stylized.

Ted Harris, P.E.
Chief Design Engineer



"Rob Konopinski"
<konopinski@lci1.com>
02/23/2006 09:59 AM

To <tharris@ft-inc.com>
cc "Todd Driver" <ToddD@lci1.com>
bcc
Subject Response to request for slide-out documentation dated 2-9-06

Ted,
Here's the information requested. Also, please find attached a copy of the Electric Slideout Owner's Manual.

1. See Owner's Manual; see pg. 10 for system diagram.
2. When the slideout is fully extended or completely retracted, the actuator "locks" into place via the mechanical brake housed in the gear box of the electric actuator. See page 10 in the Owner's Manual for system components.
3. The "Locking System" or "Mechanical Brake" prevents the slideout from inadvertently extending during travel. As the system is retracted back into the coach, the "Stop Can" (found in the owner's manual, pg. 9 "Mechanical Room Adjustment") jams against the main rail of the unit's chassis, creating resistance. This resistance forces the clutch in the Mechanical Brake to increasingly tighten and finally come to a stop, holding the slideout in place.
4. See Owner's Manual.

Please let me know if there is anything else we can help with.

Rob

Robert L. Konopinski, General Counsel | Lippert Components, Inc. | 2766 College Avenue Goshen, Indiana 46528 | Phone: 574-535-2085 x1108 | Cell: 574-538-8464 | Fax: 574-535-2091

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Electric Slideout-manual.pdf



LIPPERT COMPONENTS

**ELECTRIC SLIDEOUT SYSTEM
OPERATION AND SERVICE MANUAL**

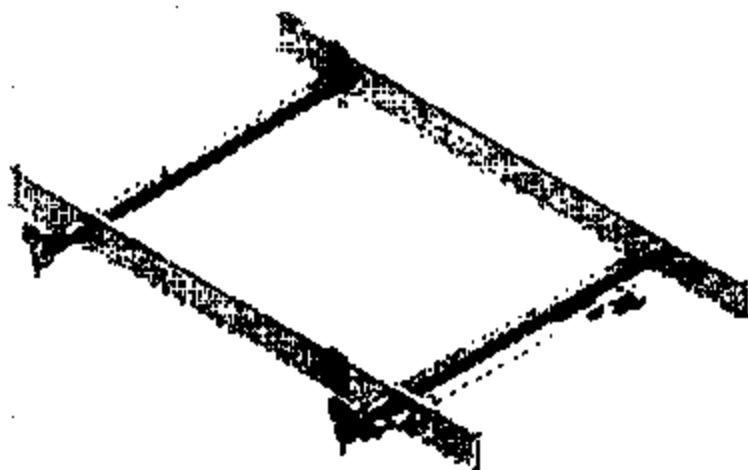




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SYSTEM

WARNING

**FAILURE TO ACT IN ACCORDANCE WITH THE FOLLOWING
MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.**

The Lippert Electric Slideout System is intended for the sole purpose of extending and retracting the slideout room. Its function should not be used for any other purpose or reason than to actuate the slideout room. To use the system for any reason other than what it is designed for may result in damage to the coach and/or cause serious injury or even death.

Before actuating the system, please keep these things in mind:

- 1. Parking locations should be clear of obstructions that may cause damage when the slideout room is actuated.**
- 2. Be sure all persons are clear of the coach prior to the slideout room actuation.**
- 3. Keep hands and other body parts away from slideout mechanisms during actuation. Severe injury or death may result.**
- 4. To optimize slideout actuation, park coach on solid and level ground.**

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.

PRIOR TO OPERATION

Prior to operating the *Lippert Electric Slideout System*, follow these guidelines:

1. Coach should be parked on the most level surface available.
2. Leveling or stabilizing system should be actuated to ensure coach will not move during operation of Slideout System.
3. Be sure battery is fully charged.
4. Be sure to keep all persons and pets clear of Slideout System during operation.

SYSTEM MAINTENANCE

The *Lippert Electric Slideout System* has been static tested to over 4,000 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 19 for wiring diagram). It is important that the electrical components have good wire to chassis contact. To ensure the best possible ground, a star washer should be used. 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).

OPERATION

WARNING

FAILURE TO ACT IN ACCORDANCE WITH THE FOLLOWING MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.

ALWAYS MAKE SURE THAT THE SLIDEOUT ROOM PATH IS CLEAR OF PEOPLE AND OBJECTS BEFORE AND DURING OPERATION OF THE SLIDEOUT ROOM.

ALWAYS KEEP AWAY FROM THE SLIDE RAILS WHEN THE ROOM IS BEING OPERATED. THE GEAR ASSEMBLY MAY PINCH OR CATCH ON LOOSE CLOTHING CAUSING PERSONAL INJURY.

INSTALL TRANSIT BARS (IF SO EQUIPPED) ON THE SLIDEOUT ROOM DURING STORAGE AND TRANSPORTATION.

EXTENDING SLIDEOUT ROOM

1. Level the unit.
2. Verify the battery is fully charged and hooked-up to the electrical system.
3. Remove the transit bars (if so equipped).
4. Press and hold the IN/OUT switch (Fig. 1B) in the OUT position until the room is fully extended and stops moving.
5. Release the switch, which will lock the room into position.

Note: If the slideout switch is held after the room is fully extended, the control will sense that the room has stopped and will shut off the motor after a few seconds.

RETRACTING SLIDEOUT ROOM

1. Verify the battery is fully charged and hooked-up to the electrical system.
 2. Press and hold the IN/OUT switch (Fig. 1C) in the IN position until the room is fully retracted and stops moving.
 3. Release the switch, which will lock the room into position.
- NOTE:** If the slideout switch is held after the room is fully retracted, the control will sense that the room has stopped and will shut off the motor after a few seconds.
4. Install the transit bars (if so equipped).

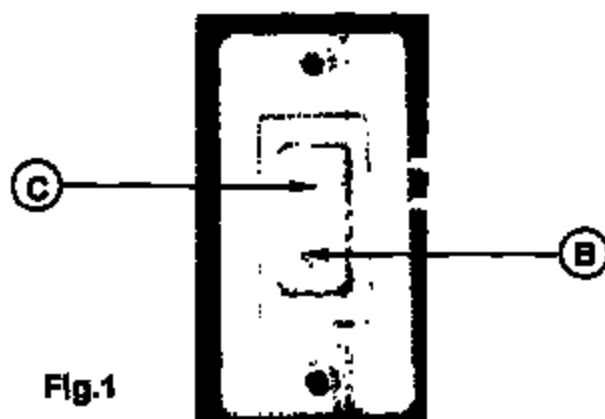


Fig.1

MANUAL OPERATION

The Lippert Electric slide comes with a manual over ride system. Locate the crank extension with pin outside of the chassis main rail as, Fig. 2, page 7, 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 8). This is where the crank handle (standard fifth wheel landing gear crank handle or 3/4" socket and ratchet fits on to allow the manual extension/retraction of the room, Fig. 4-5, page 8. Simply take the crank handle (through-frame models) or wrench, ratchet or drill with a nut driver (in-frame models) and rotate it clockwise to retract and counterclockwise to extend slide-out. 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.

MANUAL OPERATION - THROUGH FRAME



Fig. 2

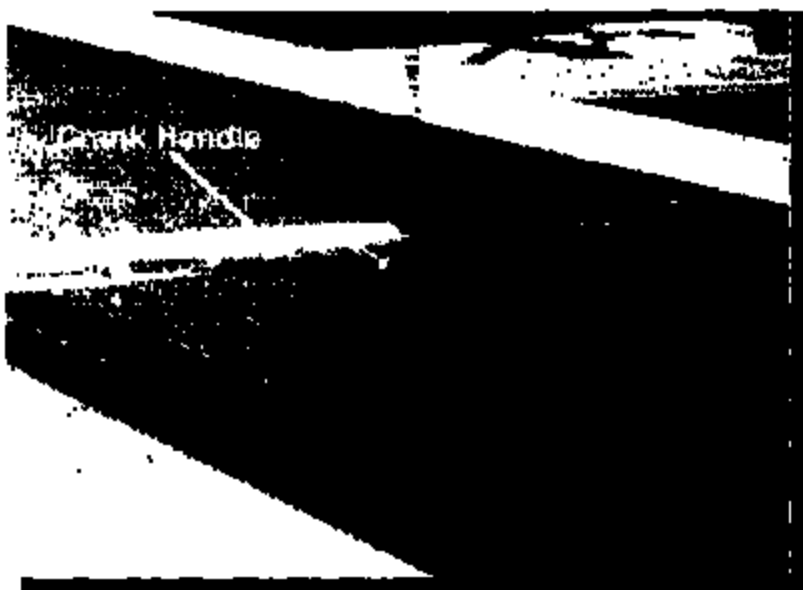


Fig. 3

MANUAL OPERATION - IN FRAME



Fig.4

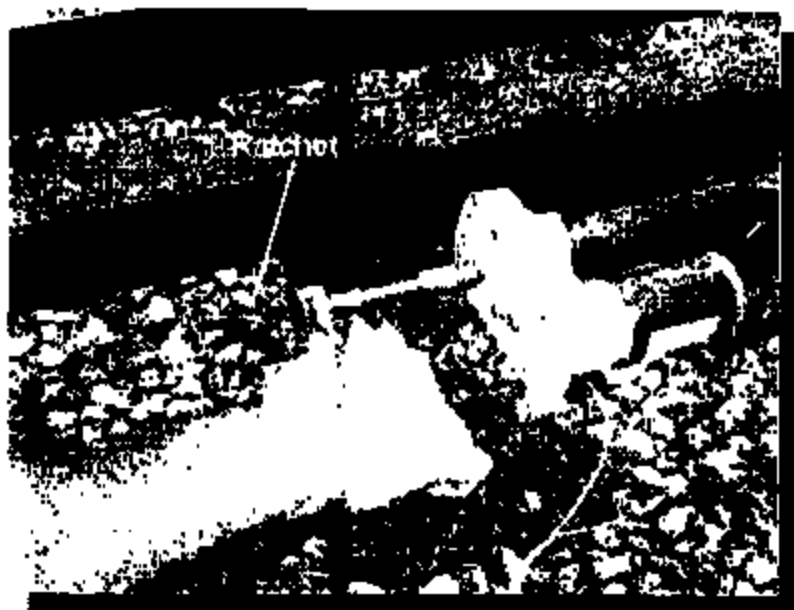


Fig.5

SERVICE

MECHANICAL ROOM ADJUSTMENT

Vertical & Horizontal Room Adjustment

NOTE: All slideout room adjustments must be performed by certified service technicians. Adjustments made by non-certified persons may void any and all warranty claims.

Horizontal adjustment

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

Note: Use caution when using prying device so seals do not become damaged.

Vertical adjustment

1. Loosen 2 carriage bolts "A" on each bracket located at the end of each guide tube
2. Loosen jam nut
3. 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.

MECHANICAL ROOM ADJUSTMENT

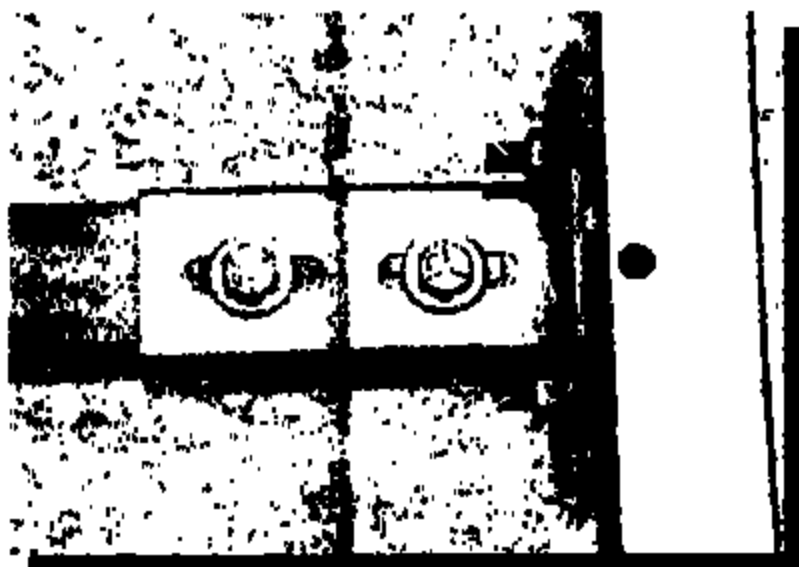
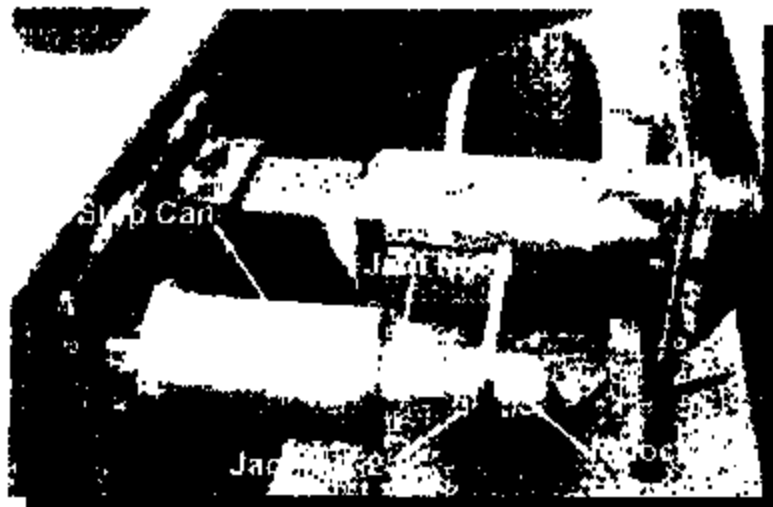


Fig.6



Fig.7

MECHANICAL ROOM ADJUSTMENT-CONT.

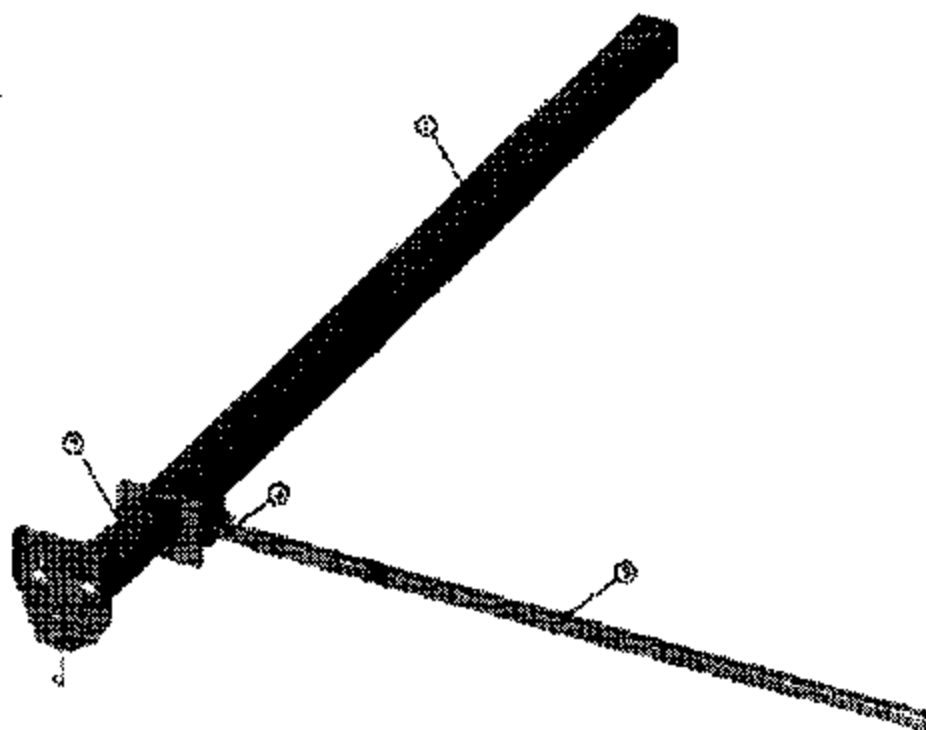


Adjusting room so it seals in the IN position

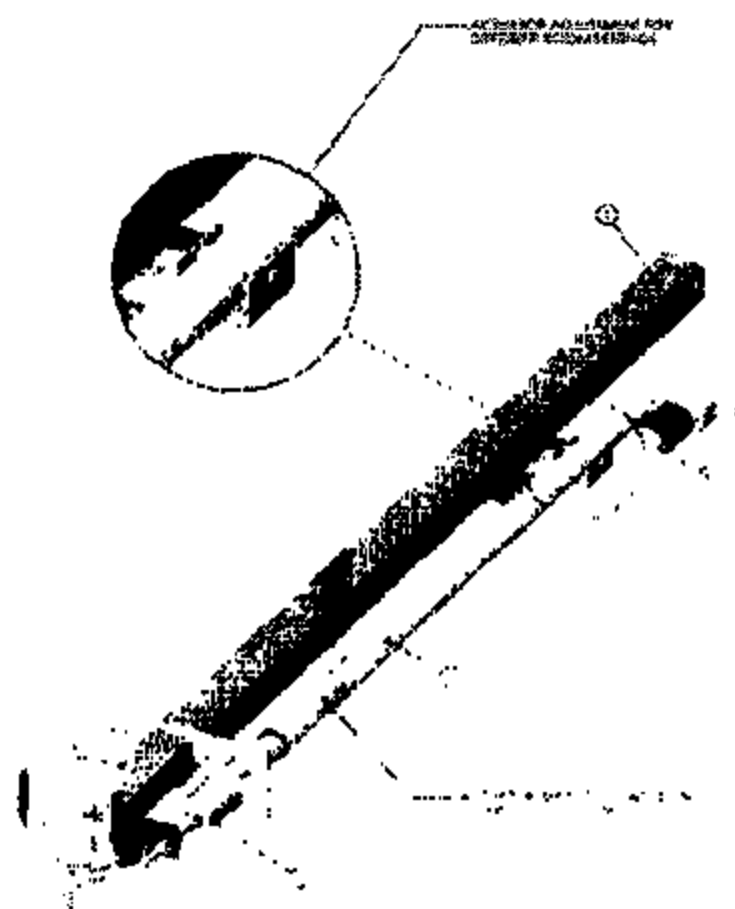
1. Locate actuator coming through the frame
2. On the end of the actuator there is a threaded shaft mounted to the drive bracket with 3 nuts and a stop can.
3. Loosen the $\frac{1}{4}$ " nut (Jam Nut-1) on the outside of the stop can.
4. Screw the can out or in, and then tighten down the nut – this will change the location of your seal going to the "in position".

Adjusting room so it seals in the OUT position

1. Locate actuator coming through the frame.
2. On the end of the actuator there is a threaded shaft mounted to the bracket with 3 nuts and a stop can.
3. Move one of the 1 nuts (Jam Nut-2 or Nylock Nut) one way or the other– this will change the location of your seal going to the "out position".
4. Make sure all nuts are tight.



ITEM NO.	PART NUMBER	QTY
1	OUTER RAIL ASSEMBLY	2
2	INNER RAIL ASSEMBLY	2
3	OUTER DRIVE TUBE	1
4	INNER DRIVE TUBE	1
5	ACTUATOR	1
6	MOTOR ASSEMBLY	1
7	ADJUSTMENT ASSEMBLY	1



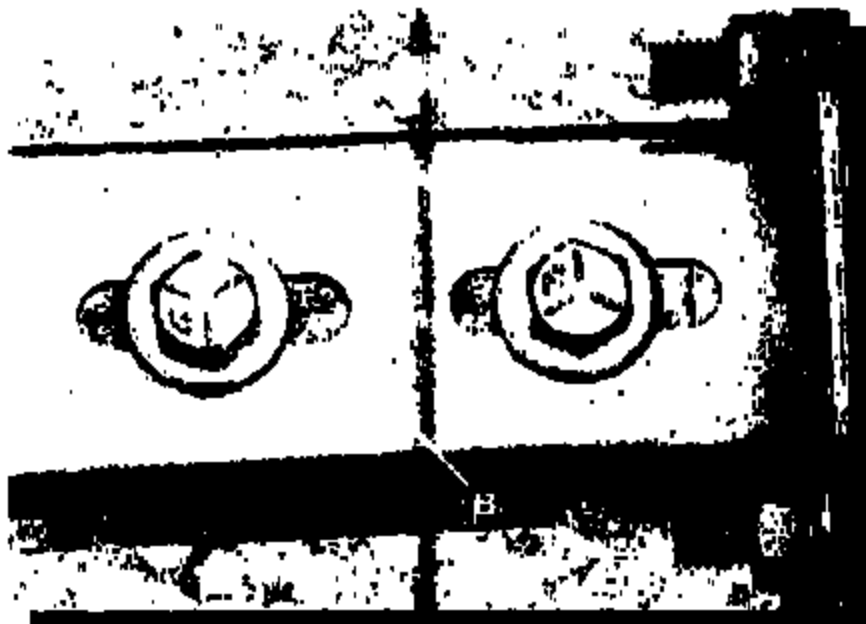
ADJUSTMENT FOR
CONTROL RODS

LIPPERT ELECTRIC SLIDEOUT SYSTEM



LIPPERT COMPONENTS

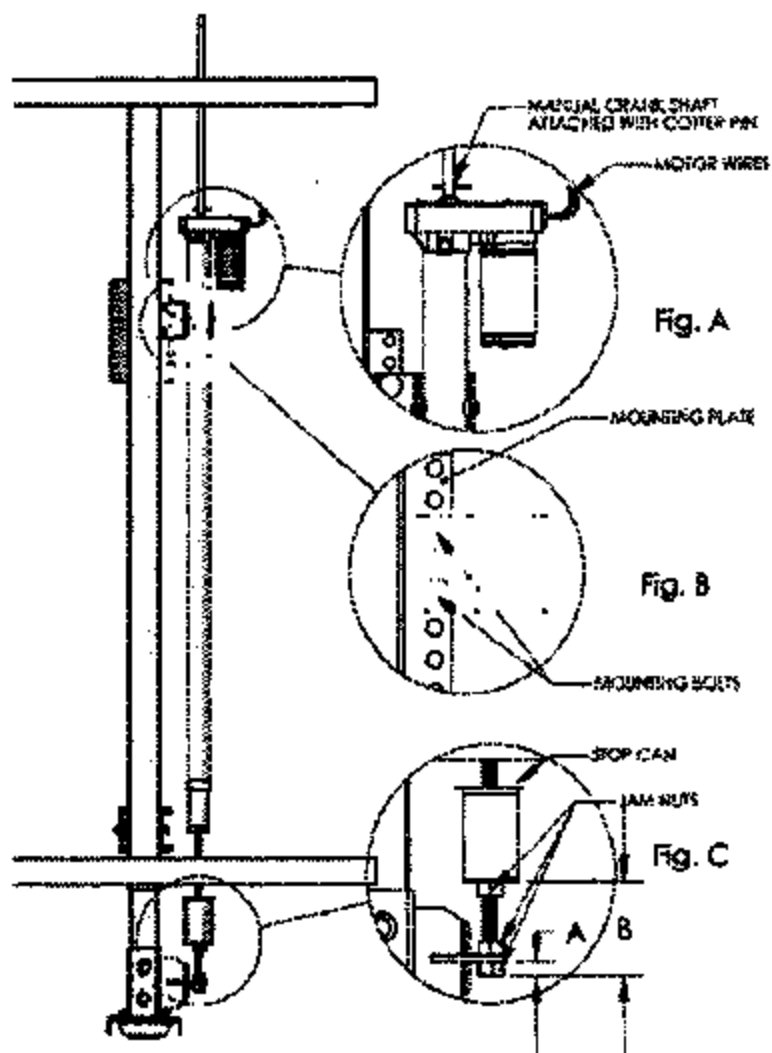
SYNCHRONIZING ROOM TRAVEL



The *Lippert Electric Slideout System* 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:

1. Loosen bolts (Fig. 9 A) on top of the passive slide tube (Fig. 9B)
2. Push or pull room (on the passive side) to align with the active side.

REMOVING AND REPLACING ACTUATOR



To replace actuator:

1. Disconnect manual crank shaft from end of motor assembly (Fig. A).
2. Disconnect motor wires from source. (Fig. A).
3. Take measurements A and B (Fig. B).
4. Remove all jam nuts (3 total) and stop can from threaded shaft on actuator (Fig. B).
5. Take note of mounting bolt locations and remove mounting bolts (Fig. C).
6. After everything is disconnected, slide actuator out of frame. To replace with new actuator, follow previous directions in reverse.

TROUBLESHOOTING

The *Lippert Electric Slideout System* is only one of four interrelated slideout room system components. These four components are: chassis, room, coach, and *Lippert Electric Slideout 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 buildup 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 11).

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 Slideout System
by calling 800-524-7821.**

System Troubleshooting Chart

The following troubleshooting chart outlines some common problems, their causes and possible corrective actions. When reference is made to "Power Unit" it is referring to the motor and actuator as a complete assembly. All Power Units 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

Possible cause

Restrictions both inside and out side unit.

Low battery voltage, blown fuse, defective wiring.

Power unit not functioning.

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/connected connectors.

See "Troubleshooting"
on page 5.

POWER UNIT RUNS, BUT ROOM DOES NOT MOVE

Actuator not attached to front mounting
drive bracket.

Bad motor or gear housing.

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

Replace motor.

POWER UNIT RUNS, BUT ROOM MOVES SLOWLY

Low battery, poor ground, extremely
low outdoor temperature.

Room is in a bind.

Charge battery, and check ground wires.

Check to see that room is properly adjusted.

ROOM STALLS IN MID TRAVEL

Actuator in a bind.

Bad actuator.

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

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 closed dealer. See pages 8 & 9.

Switch related problems

- a If room moves opposite than what the switch plate indicates, reverse the motor wiring on back of switch (refer to wiring diagram). Wire size must be 10 GA. minimum.
- a If you find that you have a stripped gear, replace the gear pack.
- a If the room is out of time / synchronization, refer to pages 10 & 13.

TROUBLESHOOTING – MOTOR

Before attempting to troubleshoot the Motor, make sure an adequate power source is available. The unit batteries should be fully charged or the unit should be plugged into to A/C service with batteries installed. Do not attempt to troubleshoot the Motor without assuring a full 12V DC charge

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

Step 1 - Attach voltmeter (or test light) leads to the negative and positive switch terminals on back of wall switch (See Fig. 10). Does the meter indicate 12V DC?

If YES, see Step 2; if NO see Step 3.

Step 2 - If YES, at the motor, check the incoming leads to 12V DC (if necessary, disconnect leads at wire splices). Does meter indicate 12V DC? **If YES,** Motor needs to be replaced. The motor is not field serviceable. **DO NOT ATTEMPT TO REPAIR.** **If NO,** inspect all wires and connections between the wall switch and the motor. Repair connections as necessary. Recheck as in Step 1.

Step 3 - If NO, inspect all connections between battery and switch. Inspect 30A Auto-reset Circuit Breaker (See Fig. 10 for location). Recheck as above in Step 1.

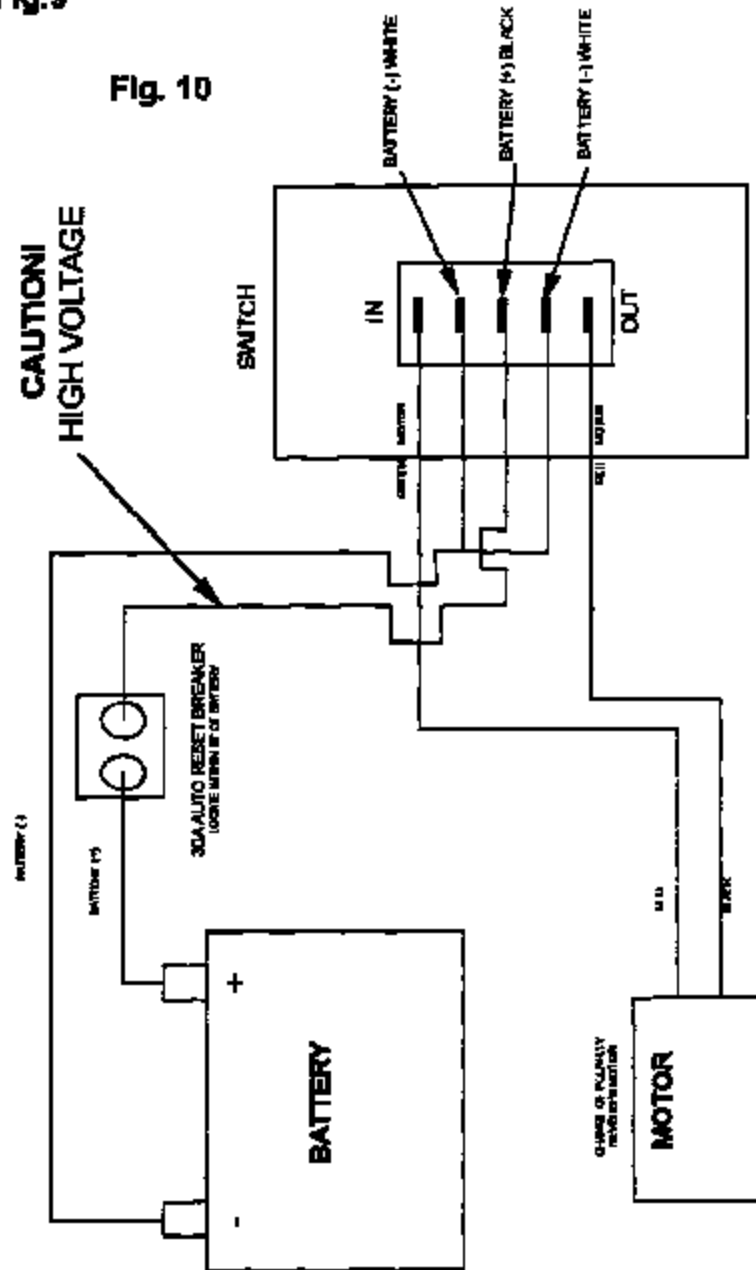
Since there are no field serviceable parts in the motor, electrical troubleshooting and service is limited to replacing only those components as previously outlined.

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

WIRING DIAGRAM

Fig.9

Fig. 10



ORDERING PARTS

To assist the customer service when ordering parts, please provide the following information:

1. Your Name
2. Company Name
3. Phone Number
4. Shipping Address
5. Billing Address
6. Purchase Order Number
7. Coach
 - A. Serial # and/or VIN #
 - B. Make
 - C. Model
8. Part Number
9. Description
10. Quantity

Please take your coach to an authorized service center for repairs. Systems that have been modified, adjusted, repaired or augmented by a party other than an authorized service center may void any warranty claim with Lippert Components, Inc.

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 its 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 the 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 exterior, inner and out 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 or 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 PER its 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 professionalism 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 produced by its Purchasers and builds Products pursuant to those design specifications.

This warranty does not cover abuse, misuse or neglect, 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, FL 34108

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 the 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.

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) on the date of the 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.

Attention Purchaser: Please fill out form as completely as possible, detach at the dashed line above and mail this card to Lippert Components, Inc. at the following address within 30 days of the date of retail purchase of your unit to activate your warranty on this product.

RV Description _____

(Manufacturer)	(Model)	(Year)
(VIN Number)	(Number of Slides)	
☐ Lippert Electric Slide-outs	☐ Lippert Hydraulic Slideouts	☐ Lippert Hydraulic Leveling

Check all that apply:

Owner Name _____

Address _____

Phone _____