Warranty and Technical Guidance for

Through-Frame Slide-Out Room Adjustment

Forest River Inc.
Through-Frame Slide-Out Adjustment is Sometimes Necessary…and Warranted

Slide-Out room adjustments are sometimes necessary. When an incorrect Factory Setting or component movement during transit has caused some dysfunction with performance… rework should be performed
Forest River Inc. Warranty and Technical Guidance for Through-Frame Slide-Out Room Adjustment

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Expedite Your Slide Room Adjustment Claim by providing Forest River Inc. with three items:

1. Use Claim Code #
   10-012800

2. Provide Explanation and Photograph of the Nonconformance

3. Provide a Picture of Relevant Pre-Existing Hardware Condition

**IMPORTANT:** Slide Room Adjustment for cosmetic purpose such as alignment of graphics or exterior metal seams will not be reimbursed by Forest River Inc. Adjustment(s) for cosmetic purpose can cause unintended problems with room seals and or function. Slide Room Adjustment(s) are to be made only to correct nonconforming functionality and or room seal.
Determine Which **Through-Frame Slide Room Adjustment** to Make

**10** **Change Slide Room Top Seal Compression or to Fix Slide Floor Rubbing Main Floor Linoleum** – “Vertical Adjustment” (for electric or hydraulic slide room system) – Relocate the slide-out mounting bracket(s) up or down where it is fastened to slide-out head bracket(s)

**11-12** **Change Left / Right Spacing of Slide Room within RV Main Sidewall Opening** – “Horizontal Adjustment” (for electric or hydraulic) – Relocate the slide-out mounting brackets fore or aft (toward front or rear of RV) where fastened to slide-out head brackets or, relocate slide-out room floor where fastened to slide-out mounting brackets

**14** **Equalize Left / Right Seal Compression** – “Slide Room Synchronization” (for electric or hydraulic) – On the passive (non-drive) inner tube, relocate the slide-out head bracket where it is fastened to the inner tube

**CAUTION** Make multiple small changes instead of attempting the full span. Run room fully after each adjustment and observe achieved seal. Damage to slide room structure can easily occur. CAREFULLY WATCH the area being sealed when operating slide room.

**17** *(Electric)* **Change Overall Seal Compression, Particularly at Bottom, with Slide Room Retracted** – “Electric Slide Room IN Adjustment” - Relocate the Stop Can on slide-out actuator

**18** *(Electric)* **Change Overall Seal Compression, Particularly at Bottom, with Slide Room Extended** – “Electric Slide Room OUT Adjustment“ – Relocate two (2) nuts that secure the Inner Tube Bracket

**20** *(Hydraulic)* **Change Overall Seal Compression, Particularly at Bottom, with Slide Room Retracted** – “Hydraulic Slide Room IN Adjustment” Relocate the Ny-lock nut that is located outboard of inner tube bracket

**21** *(Hydraulic)* **Change Overall Seal Compression, Particularly at Bottom, with Slide Room Extended** – “Hydraulic Slide Room OUT Adjustment“ Relocate nuts that are located inboard of inner tube bracket

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Reference: Technician’s Best Practices (Page 1 of 2) (for Electric or Hydraulic Systems)

It’s important that the RV be level:
• When evaluating whether or not to adjust a slide room
• During the adjustment process

Read and try to understand all instruction steps for a particular room adjustment, then begin work with Step 1

Before changing anything, take a reference measurement, notate preexisting Factory Setting Mark(s), or make your own reference mark(s). If making your own reference marks, do not use white or yellow colors that may be confused with Factory Setting Marks

When making adjustment(s) to a through-frame slide room system, it’s important to know that the particular change being made may affect other aspects of room performance including seal compression and slide floor rubbing main floor. Examine and understand how the complete room fits / seals in the IN and OUT positions, both before and after making adjustment(s)
Examine the complete drive system for defects or damage before making any change to slide room settings. Root cause(s) of some slide room function problems may be discovered.

Examples:

- **Top of Outer Tube** should be flat and **Bushing(s) in position**
  (Contact Forest River Warranty Rep. for this solution)

- **Rack and Pinion Gears** are in good condition

- **Inner Tubes** are straight

The **Inner Tube** with attached electric **Actuator** or hydraulic ram is called “**Active**”. The **Inner Tube** with no Actuator or hydraulic ram is called “**Passive**”
Reference
(for Electric or Hydraulic Systems)

Recommended Tools for Adjusting Through-Frame Slide Room

- **Combination Wrenches:**
  - (two) ¾”
  - 1 1/8”
  - 1 1/16”

- **Socket Extensions**
  - 3/8” Drive
  - Various Lengths

- **Socket Wrench**
  - 3/8” Drive

- **Deep Well Socket**
  - ¾”
  - 9/16”

- **Rubber Mallet**
- **Tape Measure**

3/15/2016
Reference

Typical Horizontal / Vertical Factory Setting Mark
(for Electric or Hydraulic Systems)

Original Factory Setting will have a WHITE Mark; if this Original Factory Setting is changed by Forest River manufacturing process, a second Mark YELLOW in color will be evident.

**Factory Mark** for horizontal and vertical Factory Settings – two intersecting perpendicular WHITE LINES affecting the Mounting Bracket and Slide-Out Head Assembly.

**Factory Rework Mark** for horizontal and vertical Factory Settings – two intersecting perpendicular YELLOW LINES affecting the mounting bracket and Slide-Out Head Assembly.

Vertical Adjustment Bolt may also be Marked.

3/4” Wrench.

3/15/2016
Through-Frame Slide Room

- **Vertical (Up / Down) Adjustment** — Page 1 of 1

(for Electric or Hydraulic Systems)

This adjustment will affect primarily the IN and OUT top seal.

It’s also done to relieve slide floor rubbing main floor linoleum

**CAUTION**  Make multiple small changes instead of attempting the full span. Run room fully after each adjustment and observe achieved seal. **Damage to RV main floor or slide room structure can easily occur.** CAREFULLY WATCH these areas when operating slide room.

The vertical position of the slide room is adjusted by relocating the Slide-Out Mounting Brackets where they are fastened to the Slide-Out Head Assemblies. Slide floors may touch main floors, but should not gouge or scratch main floor. To improve one end of a slide room floor rubbing RV main floor linoleum, relocate only the problem (end of room) Mounting Bracket downward at ¼” increments. If adjustment greater than ¼” is required, relocate downward both Mounting Brackets. Relocate both Mounting Brackets to improve the entire slide room rubbing main floor.

*Step 1* Extend slide room completely, then retract it two (2) inches

*Step 2* Measure; Loosen two CARRIAGE BOLTS on each head assembly; only one head assembly if fixing floor rub

*Step 3* Loosen one Jam Nut on each head assembly

*Step 4* Turn ADJUSTMENT BOLT to move / locate room up or down ¼” increments

*Step 5* Tighten all CARRIAGE BOLTS and Jam Nuts

*Step 6* Cycle room in and out; affirm improved condition, floor rub, and all IN and OUT seals

*Step 7* Repeat this procedure as necessary; affirm tight hardware

3/15/2016
This adjustment will affect horizontal spacing of slide room within RV sidewall opening.

The horizontal position of the slide room is adjusted by relocating the Slide-Out Mounting Brackets where they are fastened to the Slide-Out Head Assemblies. This system is most common and represents the majority of Forest River slide room systems.

- **Step 1**: Extend slide room ½ of the way out
- **Step 2**: Measure the gaps between Room End Walls and the opening in RV Main Wall; this difference is the distance the room will be relocated
- **Step 3**: If vertical Factory Mark is not present, make a vertical reference mark affecting each Head Assembly and Mounting Bracket
- **Step 4**: Loosen two CARRIAGE BOLTS on each head assembly
- **Step 5**: Reposition slide room fore (towards front of RV) or aft (towards the rear of RV) by carefully tapping with a rubber mallet both Head Assembly brackets in the opposite direction of room relocation. The room may be carefully pushed or pulled
- **Step 6**: Tighten all CARRIAGE BOLTS
- **Step 7**: Cycle room in and out; affirm improved condition and all IN and OUT seals
- **Step 8**: Repeat this procedure as necessary; affirm tight hardware

**Notes:**
- For Electric or Hydraulic Systems
- Room End Wall
- RV Main Wall
- Measure
- Factory Setting Mark (Two White Lines)
- CARRIAGE BOLT x 2 per Head
- Slide-Out Mounting Bracket
- Slide-Out Head Assembly
- Fore / (Front of RV)
- Aft / (Rear of RV)
For Forest River Inc. dealership use only – not for retail use

Through-Frame Slide Room
- Horizontal (Fore / Aft) Adjustment - Page 2 of 2
(for Electric or Hydraulic Systems)

This adjustment will affect horizontal spacing of slide room within RV sidewall opening

The horizontal position of the slide room is adjusted by relocating the Slide Room where it’s floor is fastened to the Slide-Out Head Assemblies. This page is for V-tech type slide system

Step 1 Partially extend slide room
Step 2 Measure the gaps between Room End Walls and the opening in RV Main Wall; this difference is the distance the room will be relocated
Step 3 Loosen CARRIAGE BOLTS at each Room Mounting Bracket where they attach Room Floor
Step 4 Reposition slide room fore (towards front of RV) or aft (towards the rear of RV) by carefully pushing or prying the room fore or aft
Step 5 After room appears to be at desired position, tighten all CARRIAGE BOLTS
Step 6 Cycle room in and out; affirm improved condition and all IN and OUT seals
Step 7 Repeat this procedure as necessary; affirm hardware is tight

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Reference

Typical Room Synchronization Factory Setting Mark
(for Electric or Hydraulic Systems)

Original Factory Setting will have a WHITE Mark; if this Original Factory Setting is changed by Forest River manufacturing process, a second Mark YELLOW in color will be evident.

Factory Setting Mark
WHITE LINE on the Passive Inner Tube

Room Rear Wall: Reference: Inboard of RV

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This adjustment will affect room IN and OUT equal seal compression on the left and right sides of slide room.

Room synchronization adjustment is achieved by relocating the Slide-Out Head Assembly where it is fastened to the Passive Inner Tube. The Passive Inner Tube is the tube that is not attached to an electric actuator or hydraulic cylinder.

**Step 1** Extend slide room approximately half way.

**Step 2** At the active end of slide room, measure the distance from slide room T-molding to the main unit sidewall (this end of room is not being directly moved).

**Step 3** At the passive end of slide room, measure at the same height in the same manner.

**Step 4** Loosen **ADJUSTMENT HARDWARE** on the Passive (non-drive) Slide-Out Head Assembly.

**Step 5** Move the slide room in or out by carefully pushing, pulling or prying the room. T-moldings should be equidistant from RV sidewall.

**Step 6** Tighten **ADJUSTMENT HARDWARE**.

**Step 7** Cycle room in and out; affirm improved condition and all IN and OUT seals.

**Step 8** Repeat this procedure as necessary; affirm tight hardware.

3/15/2016
Reference

Important Difference about Slide Room IN and OUT Settings
(for Electric or Hydraulic Systems)

Both the electric and hydraulic slide room systems use a **Threaded Rod** attached to a **Bracket** that is welded to a **Tube**

**Electric System**
The **Bracket** is always tightly clamped by hardware. The **Rod** has no free travel through **Bracket**

**Hydraulic System**
The hydraulic cylinder **Rod** normally has some degree of free travel through the **Bracket**

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**Always Tight - Electric**
(Frame of RV)

**Threaded Rod**

**Bracket**

(Inner) **Tube**

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**Room Rear Wall**: Reference: Inboard of RV

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**Typical Hydraulic Rod Free Travel Condition**

(Inner) **Tube**

**Bracket**

**Threaded Rod**

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**Inboard of RV**: Reference: Room Rear Wall

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3/15/2016
Reference

Typical Electric Room IN and Room OUT Factory Setting Marks

Original Factory Setting will have a WHITE Mark; if this Original Factory Setting is changed by Forest River manufacturing process, a second Mark YELLOW in color will be evident.

⚠️ CAUTION ⚠️
Make multiple small changes instead of attempting the full span. Run room fully after each adjustment and observe achieved seal. Damage to slide room structure can easily occur. CAREFULLY WATCH the area being sealed when operating slide room.

Factory Setting Mark or Factory Rework Mark WHITE or YELLOW LINES near Adjustment Hardware

Reference:
Unit frame is to the right as depicted and slide room rear wall is to the left.
View: kneeling under slide room end wall and looking at the Active Tube area.
Through-Frame Slide Room

Electric Slide Room IN Adjustment

This adjustment will affect room IN overall seal compression, particularly at room bottom.

**CAUTION** Make multiple small changes instead of attempting the full span. Run room fully after each adjustment and observe achieved seal. Damage to slide room structure can easily occur. **CAREFULLY WATCH the area being sealed when operating slide room.**

To decrease exterior seal achieved with room retracted - Relocate the STOP CAN toward the frame (to the right as depicted here).

To increase exterior seal achieved with room retracted - Relocate the STOP CAN away from the frame (to the left as depicted here).

**Step 1** Extend slide room approximately 10 inches

**Step 2** Loosen **Lock Nut**

**Step 3** Rotate one (1) turn **STOP CAN ADJUSTMENT**

- **Inward** to decrease IN seal or
- **Outward** to increase IN seal

**Step 4** Tighten **Lock Nut**

**Step 5** Cycle room in and out; affirm improved condition and all IN and OUT seals

**Step 6** Repeat this procedure as necessary; affirm hardware is tight

Note: To tighten Lock Nut, it may be necessary to hold the STOP CAN with a pipe wrench or by fully retracting the slide room so the STOP CAN Flange is tight against RV frame.

Examine all room IN and OUT seals before and after making adjustments.
Through-Frame Slide Room

Electric Slide Room OUT Adjustment - Page 1 of 1

This adjustment will affect room OUT overall seal compression, particularly at room bottom

⚠️ **CAUTION**
Make multiple small changes instead of attempting the full span. Run room fully after each adjustment and observe achieved seal. Damage to slide room structure can easily occur. **CAREFULLY WATCH the area being sealed when operating slide room.**

To **decrease** interior seal achieved with room extended - Relocate two nuts toward the frame (to the right as depicted here)

To **increase** interior seal achieved with room extended - Relocate two nuts away from frame (to the left as depicted here)

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**Step 1** Extend slide room then retract room a few inches

**Step 2** Loosen **Ny-Lock Nut**

**Step 3** **ADJUST NUTS** -

- **Inward** to decrease OUT seal or
- **Outward** to increase OUT seal

**Step 4** Tighten both **ADJUST NUTS**

**Step 5** Cycle room in and out; affirm improved condition and all IN and OUT seals

**Step 6** Repeat this procedure as necessary; affirm tight hardware

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Examine all room IN and OUT seals before and after making adjustments.

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**Reference**

**Typical Hydraulic Room IN and Room OUT Factory Setting Marks**

Original Factory Setting will have a WHITE Mark; if this Original Factory Setting is changed by Forest River manufacturing process, a second Mark YELLOW in color will be evident.

**CAUTION** Make multiple small changes instead of attempting the full span. Run room fully after each adjustment and observe achieved seal. Damage to slide room structure can easily occur. **CAREFULLY WATCH the area being sealed when operating slide room.**

Factory Setting **Mark** or Factory Rework Mark **WHITE** or **YELLOW LINES** near **Adjustment Hardware**

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**Reference:**

Unit frame is to the left as depicted and slide room rear wall is to the right. View: kneeling under slide room end wall and looking at the Active Tube area.

**CAUTION:**

- Make multiple small changes instead of attempting the full span.
- Run room fully after each adjustment and observe achieved seal.
- Damage to slide room structure can easily occur.

**CAREFULLY WATCH the area being sealed when operating slide room.**

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**Adjustment Hardware**

- **1 1/8” x 2 Wrench**
- **1 1/16” Wrench**
- **(Inner Tube)**
- **(Outer Tube)**
- **(Lock Nut)**
- **(Bracket)**

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**Unit frame is to the left as depicted and slide room rear wall is to the right.**

**View:** kneeling under slide room end wall and looking at the Active Tube area.
Hydraulic Slide Room IN Adjustment

This adjustment will affect room IN overall seal compression, particularly at room bottom.

**CAUTION**
Make multiple small changes instead of attempting the full span. Run room fully after each adjustment and observe achieved seal. Damage to slide room structure can easily occur. **CAREFULLY WATCH the area being sealed when operating slide room.**

To **decrease** exterior seal achieved with room retracted - Relocate Ny-Lock nut away from RV frame (to the right as depicted)

To **increase** exterior seal achieved with room retracted - Relocate Ny-Lock nut toward RV frame (to the left as depicted)

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**Step 1** Extend room approximately ten inches

**Step 2** Hold Jam Nut in place with wrench

**Step 3** **ADJUST NY-LOCK NUT** -

- **Outward** to decrease IN seal
- **Inward** to increase IN seal

**Step 4** Ensure Jam Nut is tight

**Step 5** Cycle room in and out; affirm improved condition and all IN and OUT seals

**Step 6** Repeat this procedure as necessary; affirm tight hardware

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Examine all room IN and OUT seals **before and after** making adjustments.
Through-Frame Slide Room

Hydraulic Slide Room OUT Adjustment - Page 1 of 1

This adjustment will affect room OUT overall seal compression, particularly at room bottom.

**CAUTION** Make multiple small changes instead of attempting the full span. Run room fully after each adjustment and observe achieved seal. Damage to slide room structure can easily occur. CAREFULLY WATCH the area being sealed when operating slide room.

To **decrease** interior seal achieved with room extended - Relocate two nuts toward the frame (to the left as depicted here).

To **increase** interior seal achieved with room extended - Relocate two nuts away from the frame (to the right as depicted here).

- **Step 1** Extend room completely, then retract room approximately one inch.
- **Step 2** Loosen and back-off Jam Nut.
- **Step 3** **ADJUST NUT** -
  - *Inward* to decrease OUT seal
  - *Outward* to increase OUT seal.
- **Step 4** Tighten Jam Nut.
- **Step 5** Cycle room in and out; affirm improved condition and all IN and OUT seals.
- **Step 6** Repeat this procedure as necessary; affirm tight hardware.

Examine all room IN and OUT seals **before and after** making adjustments.
Great Sources for More Information

Lippert Components Website

Web Search: “Lippert Components”
Select: WWW.LCI1.com
Select: “Customer Service” located at top right of page
Scroll Down & Select: Slide-Outs
Select: “Through Frame Selections”
Here, information on a variety of systems are offered with pictorial representations. Examine the system on which you are working, then Select it.
Service manuals, descriptive parts lists and other useful information is here.

Lippert Components Application for Mobile Device
Phone APP Search: “myLCI”

Forest River Warranty Department
Your Dealership Service Manager should have contact information.