M-Tec Single Rail Above Floor Slide-Out

OEM INSTALLATION MANUAL

TABLE OF CONTENTS

Introduction

The M-Tec Slide-out System is a rack and pinion style slide system. Utilizing a bi-directional electric motor to actuate the drive shaft, the slide-out room is extended and retracted from the same source. The actuator has a built-in automatic clutching feature. There are no serviceable parts within the electric motor. If the motor fails, it must be replaced. Disassembly of the motor voids the warranty.

Mechanical portions of the slide-out system are replaceable. Contact Lippert to obtain replacement parts. The M-Tec Slide-out System is intended for the sole purpose of extending and retracting the slide-out room.

For information on the assembly or individual components of this product, please visit: https://support.lci1.com/above-floor-m-tec-slide-outs.

NOTE: Images used in this document are for reference only when assembling, installing and/or operating this product. Actual appearance of provided and/or purchased parts and assemblies may differ.

Safety

Read and understand all instructions before installing or operating this product. Adhere to all safety labels.

This manual provides general instructions. Many variables can change the circumstances of the instructions, i.e., the degree of difficulty, operation and ability of the individual performing the instructions. This manual cannot begin to plot out instructions for every possibility, but provides the general instructions, as necessary, for effectively interfacing with the device, product or system. Failure to correctly follow the provided instructions may result in death, serious personal injury, severe product and/or property damage, including voiding of the Lippert limited warranty.

The M-Tec Slide-out system is intended for the sole purpose of extending and retracting the slide-out room. Its function should not be used for any other purpose or reason than to actuate the slide-out room. To use the system for any reason other than for which it is designed may result in severe product or property damage and/or serious personal injury or death.

⚠WARNING

The "WARNING" symbol above is a sign that a procedure has a safety risk involved and may cause death or serious personal injury and/or severe product or property damage, including voiding of the component warranty, if not performed safely and within the parameters set forth in this manual.

⚠WARNING

The unit MUST be supported per manufacturer's recommendations before working underneath. Failure to do so may result in death, serious personal injury, severe product or property damage.

⚠CAUTION

The "CAUTION" symbol above is a sign that a safety risk is involved and may cause personal injury and/or product or property damage if not safely adhered to and within the parameters set forth in this manual.

⚠CAUTION

Depending on the nature of the task, always wear appropriate personal protection equipment (PPE) when performing the procedures set forth in this manual.

⚠CAUTION

Always disconnect the battery from the system prior to installation. Failure to disconnect the battery can cause electrical feedback through the motor, causing serious damage to the system as well as voiding the warranty.

⚠CAUTION

Moving parts can pinch, crush or cut. Keep clear and use caution.

⚠ NOTICE

All electrical wiring harnesses shall be loomed and secured to prevent possible damage and installed in accordance with RVIA electrical standards.

Resources Required

- Cordless or electric drill or screw gun
- Appropriate drive bits
- Heat gun (electrical connections)
- 3/4" wrench (stop bracket and vertical brace nuts)
- Appropriate fasteners (OEM-supplied)
- Crimp butt connectors

Preparation

Prior to slide-out installation and operation:

- Make sure the unit is appropriately supported on solid, level ground.
- If applicable, make sure the unit's parking brake is engaged.

⚠WARNING

Do not work on the slide-out system unless the battery is disconnected. Failure to disconnect the battery may result in death or serious personal injury.

- Make sure electrical power to the unit is off.
- Make sure all persons and obstructions are clear of the unit prior to slide-out room actuation.
- Keep hands and other body parts away from slide-out mechanisms during actuation.

Installation

Prior to installation, inspect the slide-out assembly to ensure there are no missing or damaged parts.

Slide-out Assembly

1. Locate the slide-out assembly per the OEM design.
2. Center the slide-out assembly (Fig. 1A) in the slide-out opening (Fig. 1B).
3. Using the six slots in the wall mounting plate (Fig. 2A) and the pre-drilled holes in the floor mounting bracket (Fig. 3A), fasten the plate to the wall and the bracket to the floor using OEM-supplied fasteners.
4. Make sure the slide-out assembly is level before installing the slide room.

Fig. 1

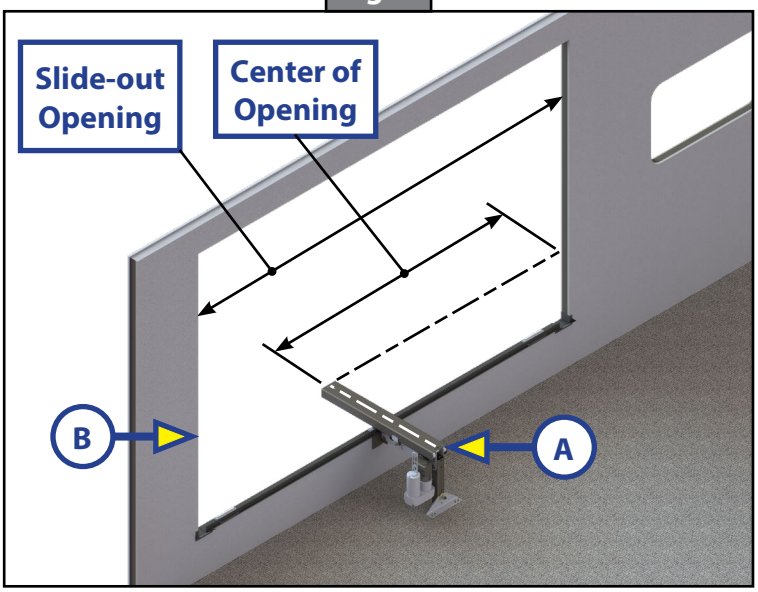


Fig. 2

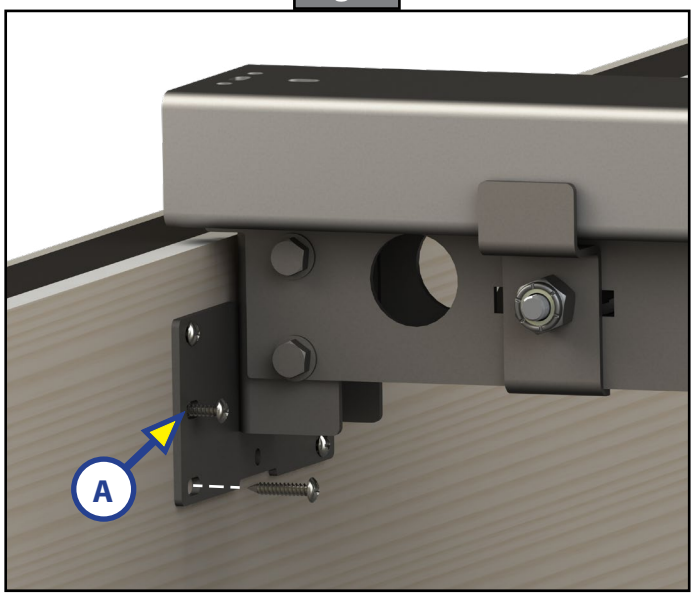
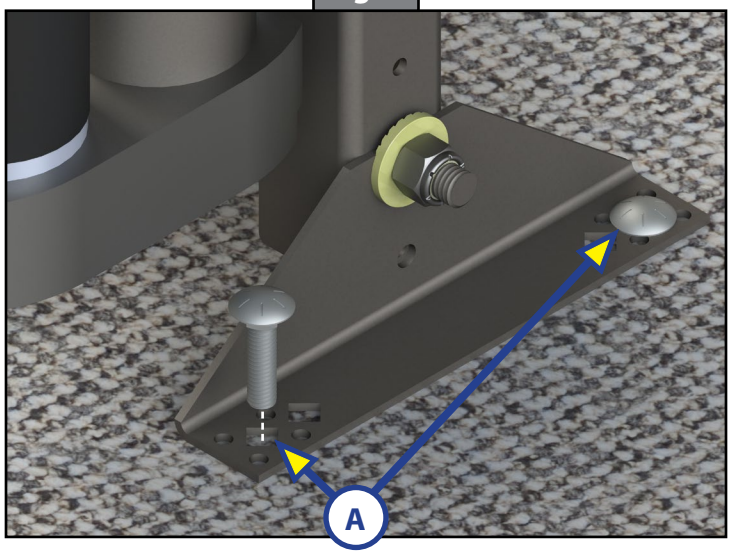


Fig. 3



Slide-out

Install the slide-out as follows:

1. Place the slide rail in its fully retracted position (Fig. 4).
2. Place the slide-out room onto the slide rail assembly (Fig. 5) then center the room within the slide opening (Fig. 1).
3. If the T-molding (Fig. 5A) is installed onto the slide-out, position the slide-out so that the T-molding is flat against the outside wall (Fig. 5B).

Fig. 4

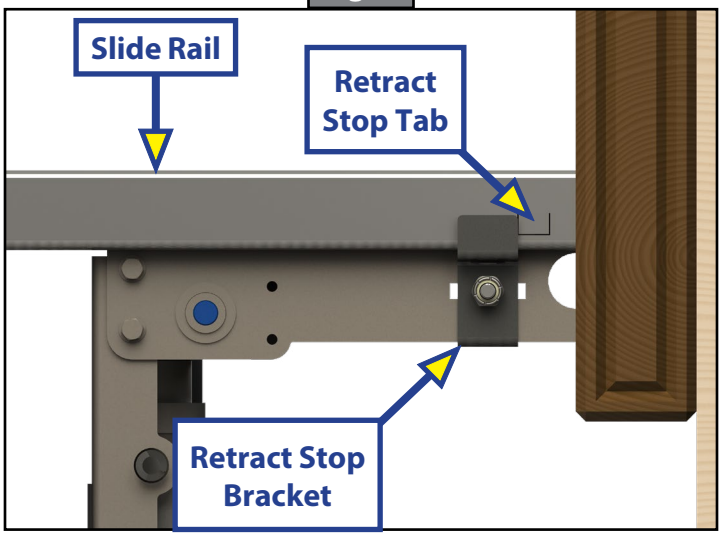
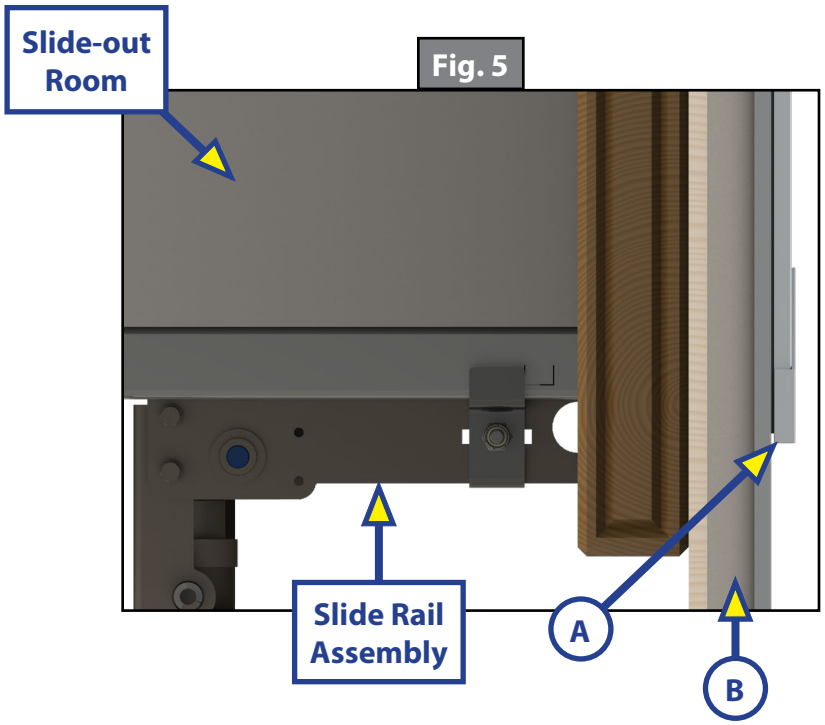
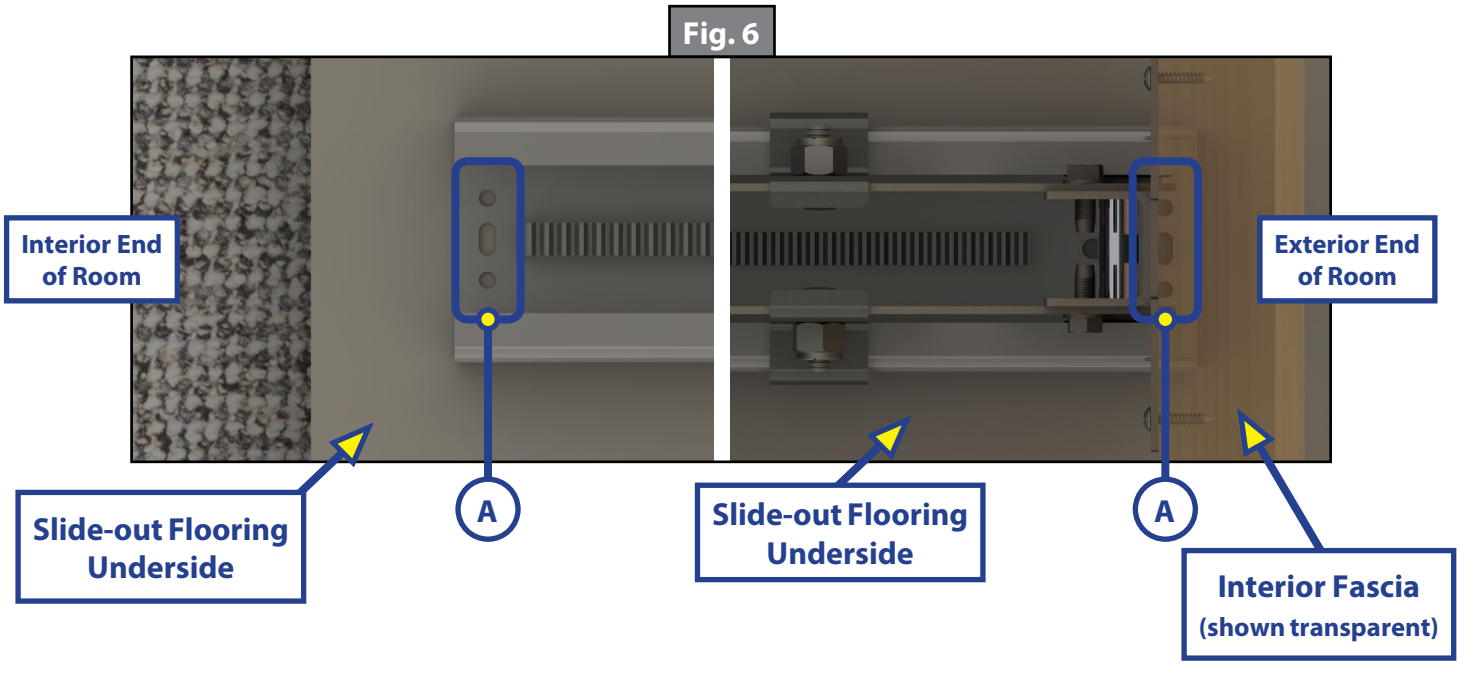


Fig. 5



4. Make sure the slide-out room is centered within the opening before fully securing the room to the rail assembly.
   A. If necessary, adjust the slide rail to make sure the front and rear mounting holes have enough mating surface with the underside of the slide-out (Fig. 6).
   B. Locate the mounting holes at each end of the rail (Fig. 6A).

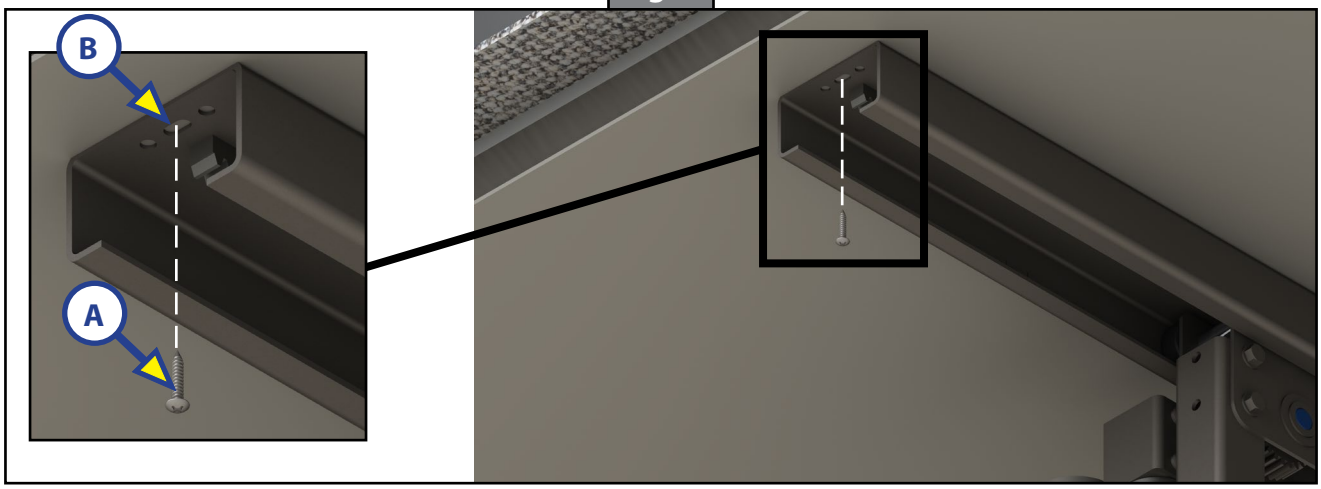
Fig. 6



C. With OEM-supplied fasteners (Fig. 7A), use the slot openings at each end of the rail (Fig. 7B) to secure the slide-out room to the slide rail. Do **NOT** fully tighten the fasteners.

NOTE: Securing the slide-out room first through the slots will allow for later adjustment to make sure the slide-out room side walls are parallel to the opening.

Fig. 7

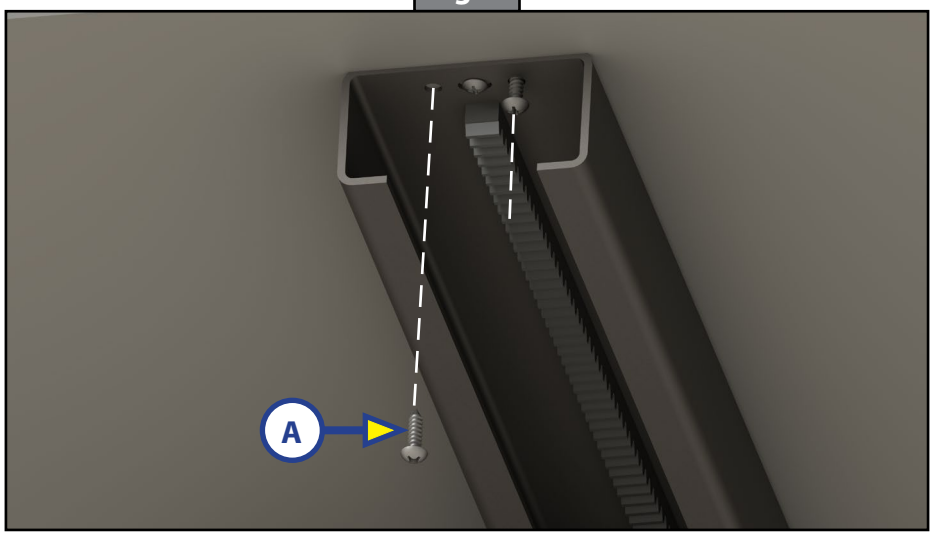


D. If necessary, adjust the slide-out room using the slide rail mounting slots (step C) to maintain parallelism between the outsides of the room and the insides of the slide-out opening.

E. After the slide-out room is properly positioned on the slide rail within the slide-out opening, fully tighten the previously installed fasteners (step C and Fig. 7).

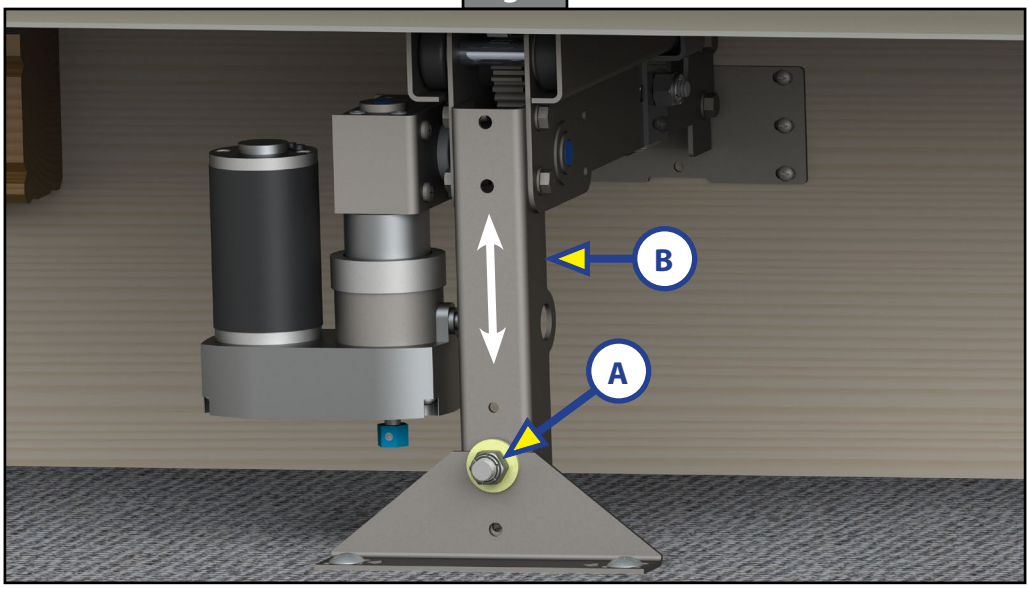
F. Complete the securing of the slide-out room to the slide rail using OEM-supplied fasteners (Fig. 8A) at each end of the slide rail.

Fig. 8



5. Make sure the slide-out room is level.
   A. Loosen the carriage bolt (Fig. 9A) on the vertical brace (Fig. 9B) just enough to release tension on the wall mounting plate.
   B. Vertically adjust the slide-out room to level.
   C. Tighten the carriage bolt before operating the slide-out.

Fig. 9



Mounting and Wiring the Switch

⚠WARNING

Do not work on the slide-out system unless the battery is disconnected. Failure to disconnect the battery may result in death or serious personal injury.

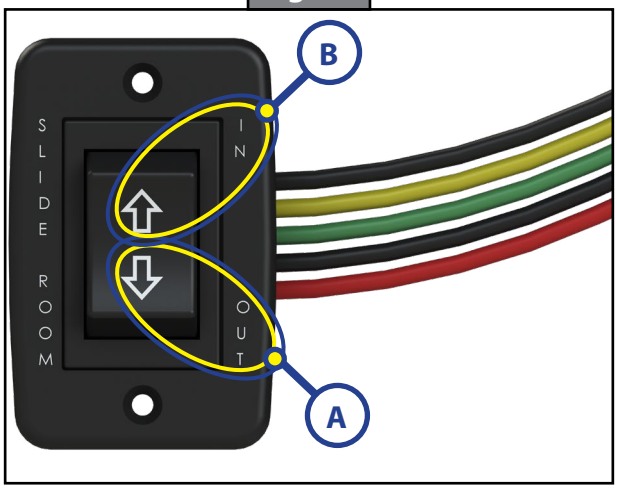
⚠CAUTION

Always disconnect the battery from the system prior to installation. Failure to disconnect the battery can cause electrical feedback through the motor, causing serious damage to the system as well as voiding the warranty.

Depending on OEM requirements, the slide-out room may be operated by a rocker switch (Fig. 10).

1. Determine where to mount the user switch. It can be mounted anywhere inside the unit. The mounting location **MUST** be watertight.
2. Install the switch per OEM recommendations using OEM-supplied fasteners.
3. See Wiring Diagram for wiring instructions.

Fig. 10



Post-Installation Check

Before operating the above floor slide-out, make sure the T-molding and fascia are installed. Follow directions below.

1. Make sure the unit is level, adjust as necessary (Slide-Out section, step 5).
2. If operating a motorized coach (Class A and C; Gas and Diesel):
   A. Make sure the PARKING BRAKE is engaged.
   B. Make sure the transmission is in PARK.
   C. Make sure the ignition is off.
3. Make sure the slide-out's path is clear of people and objects before and during operation of the slide-out.

⚠ CAUTION

Moving parts can pinch, crush or cut. Keep clear and use caution.

4. Always keep away from the slide rails when the slide-out is being operated. The gear assembly may pinch or catch on loose clothing causing personal injury.
5. Keep items in compartment clear of the slide-out motor mechanisms and wiring to prevent interference of operation.
6. The 12V DC battery disconnect should be in the ON position.

NOTE: Batteries **MUST** be tested under a load to get an accurate reading. Use a multi-meter to ensure the battery is fully charged. The multimeter must read 12.5V - 13.7V DC for a full charge.

Slide-out Adjustment

1. Make sure the battery is fully charged and connected to the electrical system.
2. Press and hold the OUT switch (Fig. 10A) until the slide-out is fully extended and stops moving.

NOTE: Only hold the OUT switch until the slide-out stops.

3. Release the switch to lock the slide-out into position.
4. Inspect all internal sides of the fascia (interior molding) and all exterior sides of the slide-out for indications of rubbing and scrape marks. If such interference marks are present, adjust the slide-out using the following steps.
   A. Loosen appropriate fasteners.
   B. Set the slide-out's sides parallel to the fascia's sides.
   C. Tighten all loose fasteners.
   D. Make sure the slide-out is level (step 5 of Slide-Out instructions in the Installation section).
   E. Alternate between pressing and holding the IN (Fig. 10B) and OUT (Fig. 10A) switches to run the slide-out in and out while inspecting for interference.
      I. If interference still exists, repeat slide-out adjustment steps until there is no more interference.
      II. When the slide-out moves freely (no interference), retract the slide-out.
         a. Press and hold the IN switch (Fig. 10B) position until the slide-out is fully retracted and stops moving.

NOTE: Only hold the IN switch until the slide-out stops.

         b. Release the switch to lock the slide-out into position.

5. Inspect the exterior T-molding on the slide-out. If the fully retracted travel of the slide-out appears to be putting pressure on the T-molding, the retract (in) stop needs to be adjusted (Fig. 11).

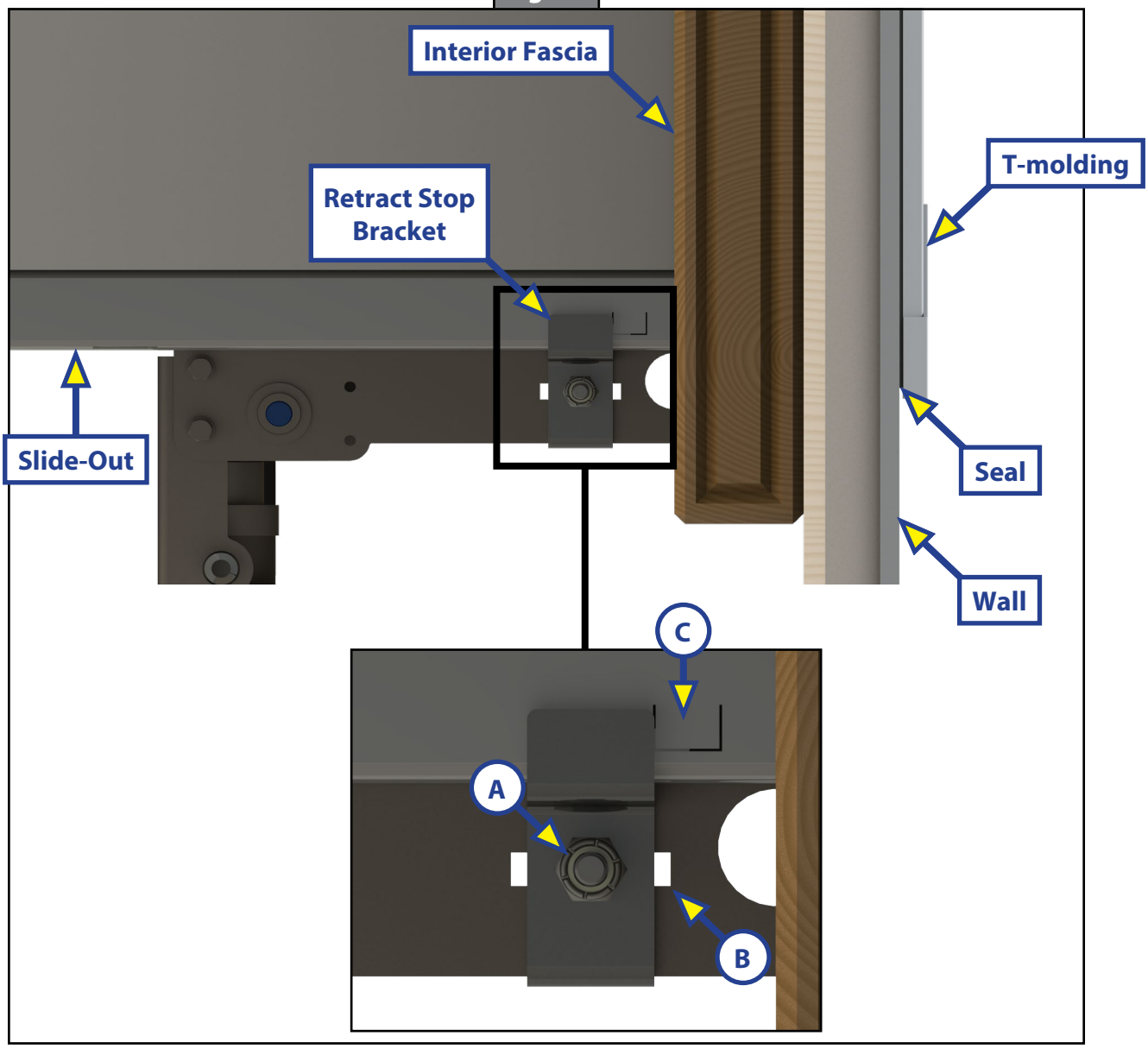
NOTE: The stops shut down the slide-out system, protecting the drive shaft, gears and shaft bolt.

A. Move the slide-out (Fig. 11) to relieve the pressure while still maintaining a good seal.
B. Loosen the retract stop bracket nut (Fig. 11A).
C. Slide the retract stop bracket along the slot (Fig. 11B) in the gearbox bracket assembly's side plate until it touches against the stop tab (Fig. 11C).
D. Fully tighten the retract stop bracket's nut.
E. Run the slide-out in and out a couple of times to ensure the retract stop bracket is working properly. If necessary, repeat retract stop adjustment procedure.

NOTE: Without properly setting the stops, the fascia and T-molding become "soft" stops, which can be damaged when the motor clutch is unable to shut the system off. Additional damage to the slide mechanism may also occur.

After all slide-out adjustments have been properly made, the slide-out should move freely and create a water-tight seal when the slide-out is fully retracted (in).

Fig. 11



Switch Related Concerns

If the slide-out room moves opposite from what the switch plate indicates (Fig. 10), reverse the wires from the motor on the back of the switch. Wire size **MUST** be 10 AWG minimum. See Wiring Diagram.

- Black wire is ground.
- Yellow wire is "out" or extend.
- Green wire is "in" or retract.
- Red wire is power.

Motor Unit Concerns

Make sure an adequate power source is available. The unit batteries should be fully charged or the unit should be plugged into an AC service with batteries installed. Batteries **MUST** be tested under a load to get an accurate reading.

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

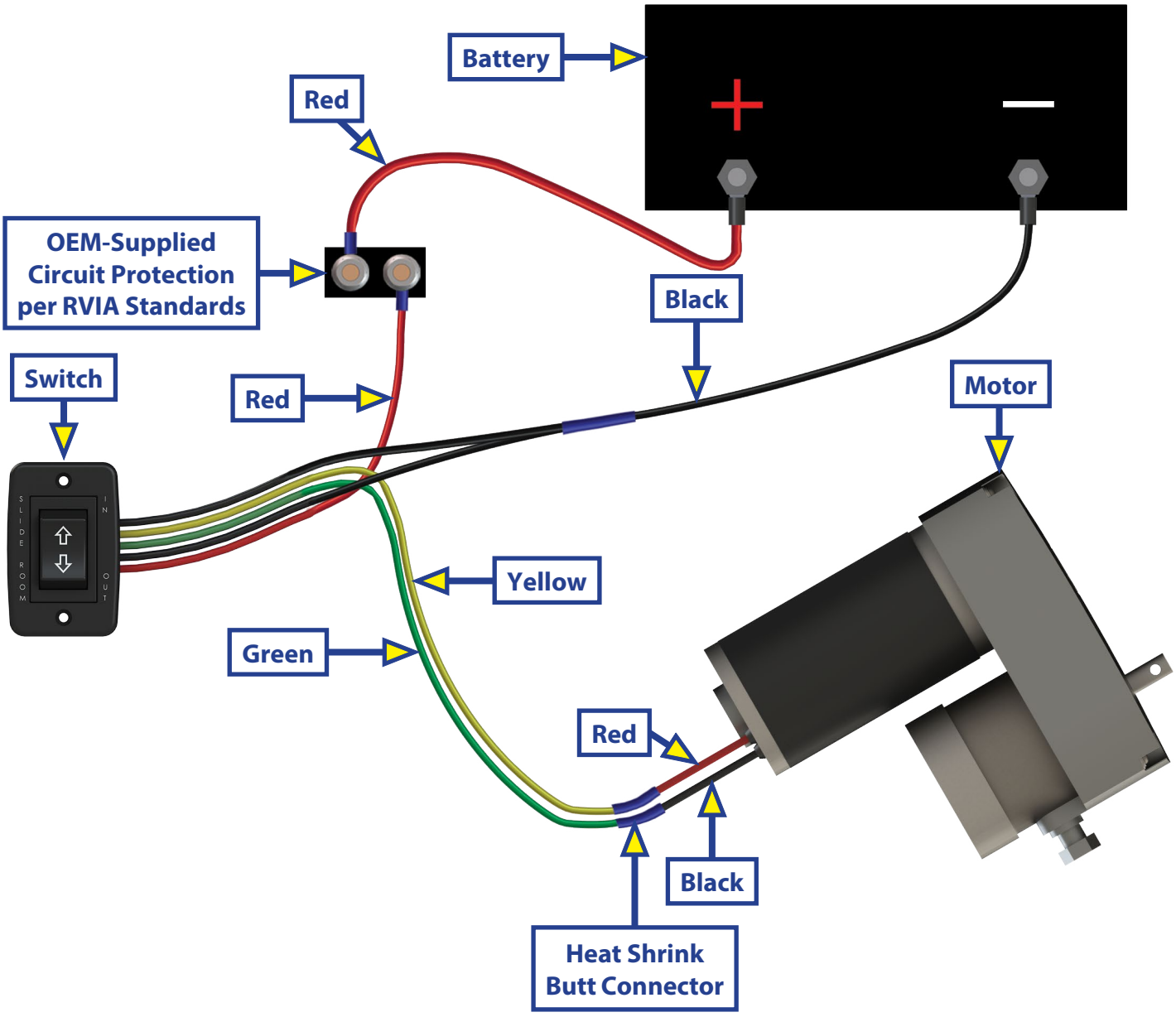
1. Attach voltmeter (or test light) leads to the negative and positive switch terminals located on the back of the wall switch.
    A. Does the meter indicate 12V DC?
    B. If no, then inspect all connections between battery and switch.
        I. Inspect any and all breakers, relays and fuses.
        II. Recheck switch terminals.
    C. If yes, at the motor, check the incoming leads to 12V DC. If necessary, disconnect leads at wire splices.
        I. Does meter indicate 12V DC?
        II. If yes, the power unit needs to be replaced. The motor is **NOT** field serviceable. DO **NOT** ATTEMPT TO REPAIR.

NOTE: Since there are no field serviceable parts in the12V DC motor, electrical troubleshooting and service is limited to replacing only those components. Thorough inspection of wiring and connections is the only other electrical service that can be performed.

Wiring Diagram

10 AWG Minimum

NOTE: Make sure the OEM-supplied heat shrink butt connectors are appropriate for the gauge of wire used.



NOTE: If slide-out moves opposite from what the switch plate indicates, reverse the wires from the motor on the back of the switch. Wire size **MUST** be 10 AWG minimum, see the Wiring Diagram.

- Black wire is ground.
- Yellow wire is "out" or extend.
- Green wire is "in" or retract.
- Red wire is power.

Please recycle all obsolete materials.

For all concerns or questions, please contact Lippert
Ph: 432-LIPPERT (432-547-7378) | Web: lippert.com | Email: customerservice@lci1.com

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