# Above Floor Slide-out (Aluminum)

## OWNER'S MANUAL

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## Introduction

The Above Floor Slide-out (Aluminum) is a rack and pinion style slide system. It uses a bi-directional DC motor to extend and retract the slide-out room. 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 components of the slide-out system are replaceable. Contact Lippert to obtain replacement parts. This system is intended for the sole purpose of extending and retracting the slide-out room.

Additional information about this product can be obtained from lci1.com/support or by downloading the free LippertNOW app. The app is available on Apple App Store® for iPhone® and iPad® and also on Google Play™ for Android™ users.


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For additional product support, please visit: https://support.lci1.com/lippert-above-floor-slide-out-aluminum

**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.

**⚠WARNING**

**The "WARNING" symbol above is a sign that a procedure has a safety risk involved and may cause death or serious personal injury if not performed safely and within the parameters set forth in this manual.**

**⚠WARNING**

**Failure to follow instructions provided in this manual may result in death, serious personal injury and/or severe product and property damage, including voiding of the component warranty.**

**⚠WARNING**

**The Above Floor Slide-out (Aluminum) is intended for the sole purpose of extending and retracting the slide-out room. It should not be used for any purpose other than to actuate the slide-out room. To use the system for any other purpose may result in death, serious injury, or damage to the unit.**

**⚠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**

**Always wear eye protection when performing service, maintenance or installation procedures. Other safety equipment to consider would be hearing protection, gloves and possibly a full face shield, depending on the nature of the task.**

**⚠CAUTION**

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

## Operation

**⚠WARNING**

**Failure to act in accordance with the following may result in death, serious personal injury, severe product and/or property damage.**

**⚠CAUTION**

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

### Prior to Operation

Before operating the slide-out, make sure of the following:

1. Unit should be parked on the most level surface available.
2. If operating a motorized coach, the parking brake must be engaged.
3. If operating a motorized coach the transmission must be in PARK.
4. If operating a motorized coach the ignition must be in the off position (Class A and C; Gas and Diesel).
5. Make sure slide-out room path is clear of people and objects before and during operation of the slide-out room.
6. 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.
7. Keep stored items in compartment clear of slide-out motor mechanisms and wiring to prevent interference of slide-out operation.
8. 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.

9. Level the unit.
10. Remove transit bars (if so equipped).

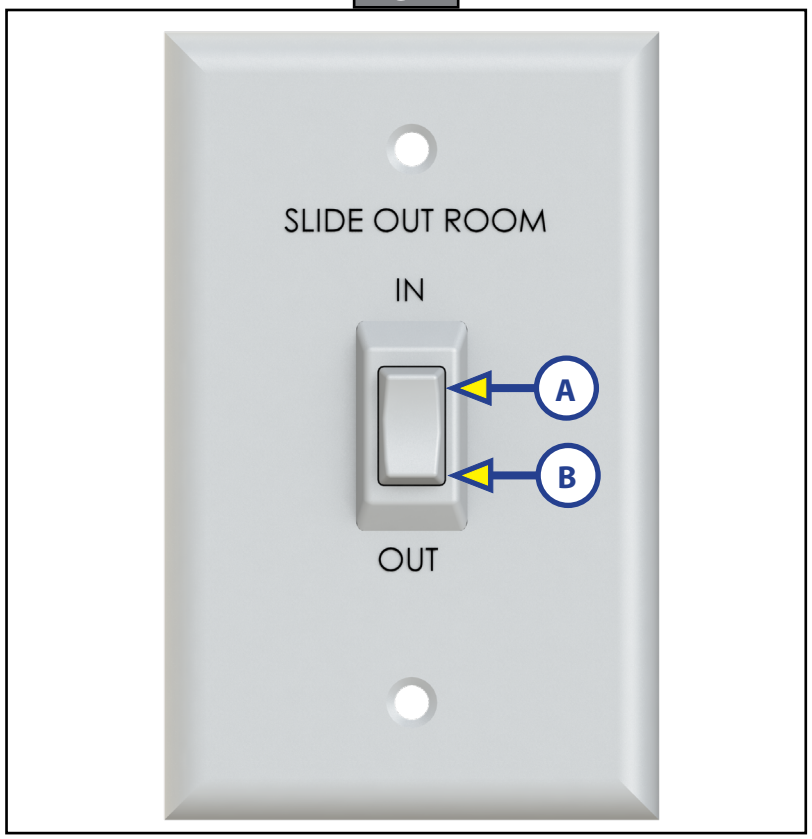
## Extending Slide-out Room

1. Make sure the battery is fully charged and hooked up to the electrical system.
2. If using a switch to activate the slide-out room, press and hold the IN/OUT switch in the OUT (Fig. 1B) position until room is fully extended and stops moving.

**NOTE:** Only hold OUT switch until room stops.

3. Release the switch, which will lock the room into position.

**Fig. 1**




## Retracting Slide-out Room

1. Make sure the battery is fully charged and hooked up to the electrical system.
2. Press and hold IN/OUT switch in the IN position (Fig. 1A) until room is fully retracted and stops moving.

**NOTE:** Only hold IN switch until room stops.

3. Release the switch to lock the room into position.
4. Reinstall the transit bars, if equipped.

## Troubleshooting

When something restricts room travel, system performance will be unpredictable. It is very important that the slide rails, rack, and pinion be free of any form of debris or other type of contamination and allowed to travel freely the full distance or "stroke." Debris build-up during travel is an example of the type of contamination that may occur.

When beginning to troubleshoot the system, make sure the battery is fully charged by testing under a load to get an accurate reading. Make sure there are no visible signs of external damage to the motor or assembly or rails and that the motor is wired properly and all connections are secure.

Room extension adjustments are made by repositioning the stop blocks on both ends of the slide rail. During troubleshooting, changes or adjustments made to one component may affect another. Make sure any changes do not create a new problem.

### Switch related Concerns

If room 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 wires are ground
- Yellow wire is "out" or extend
- Green wire is "in" or retract
- Red wire is power

### Motor Unit Concerns

Before attempting to troubleshoot the power unit, make sure an adequate power source is available. The unit batteries should be fully charged or the unit should be plugged into A/C service with batteries installed. Do not attempt to troubleshoot the power unit without ensuring a full 12V DC charge. 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 red lead to positive switch terminal on back of wall switch and black lead to ground. Does the meter indicate 12V DC? if no, see step 2; if yes, see step 3.
2. If no, inspect all connections between controller and battery and switch. Inspect any and all breakers, relays and fuses. Recheck switch terminals (step 1).
3. 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, 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.

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

## Troubleshooting Chart

Use the Troubleshooting Chart as necessary to assist in the identification and resolution of other possible post-installation concerns.

| What Is Happening? | Why? | What Should Be Done? |
|---|---|---|
| Room doesn't move when switch is pressed. | Restriction or obstruction inside or outside of unit. | Check for and clear obstruction. |
| | Low battery voltage, blown fuse, defective wiring. | Check battery voltage and charge if needed. |
| | | Find and check fuse, replace if blown. |
| | | Check battery terminals and wiring. Look for loose, disconnected or corroded connectors. |
| | Excessive room drag. | Check that transit bars are removed. |
| Motor runs but room does not move. | Motor turns, room does not move. | Gear key is broken or lost. Replace gear drive assembly. |
| | Motor gets power, but brake does not release. | Replace motor/brake assembly. |
| | Broken gear on drive shaft. | Replace gear drive assembly. |
| | Broken gear in gearbox. | Replace motor/gearbox assembly. |
| | Bad motor or gearbox. | Replace motor/gearbox assembly. |
| Motor runs but room moves slowly. | Low battery, poor ground, extremely low outdoor temperature. | Charge battery and check ground wire. |
| | Room is in a bind. | Adjust to proper room setting. |
| Room starts to move then stops. | Low battery voltage, blown fuse, defective wiring. | Check battery voltage and charge if needed. |
| | | Find and check fuse, replace if blown. |
| | | Check battery terminals and wiring. Look for loose, disconnected or corroded connectors. |
| | Obstruction of room inside or outside. | Check for and clear obstruction. |
| Room chatters during operation. | Teeth on gear drive broken or worn. | Gear drive assembly needs replacing. |
| | Teeth on inner rail broken and worn. | Gear drive assembly needs replacing. |
| Room doesn't completely close on one side; or closes unevenly. | Room out of sync | Resync drive shaft |

## Manual Override

**⚠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 battery from system prior to manually operating the system. Failure to disconnect the battery can cause electricity to backfeed through the motor and cause serious damage to the system as well as void the warranty.**

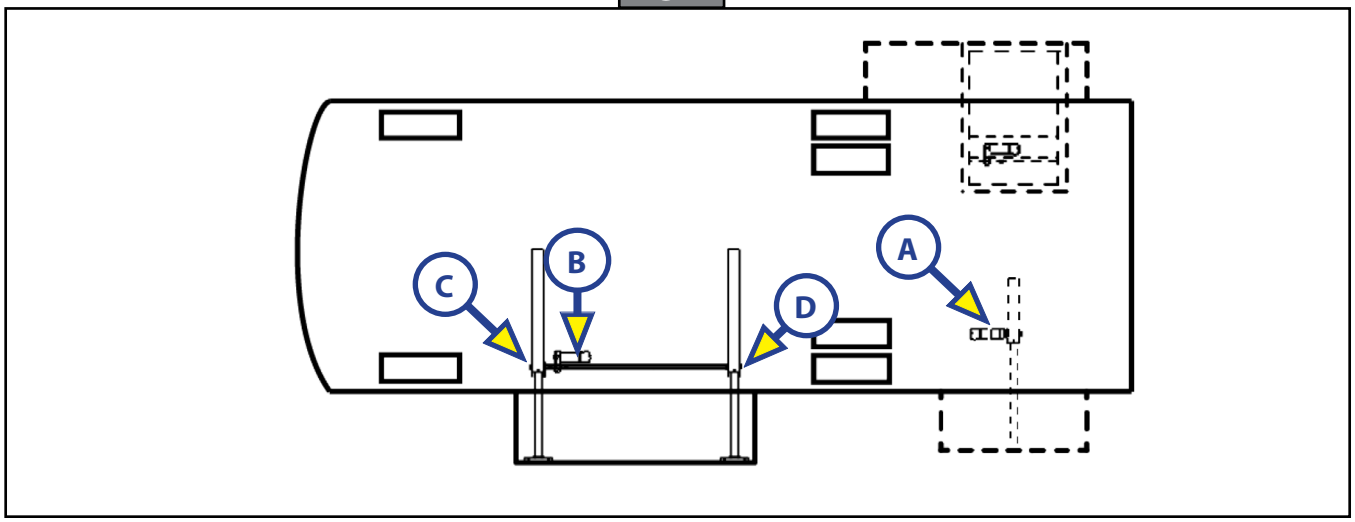
**⚠WARNING**

**When the motor brake is released, the motor output shaft is not locked into place and can be moved by the weight of the slide-out room. If the slide-out room has been manually retracted, be sure to return the motor brake lever to its NORMAL ENGAGED POSITION in order to seal and lock the slide-out room into position. See Figure 8A for the normal engaged position of brake release lever.**

In the event that the slide-out room does not move when the user interface is activated, the slide-out motor is equipped with a manual override that allows extension / retraction of the slide-out room. A 3/4" socket or wrench may be used to move the slide-out room. Check the Troubleshooting section for possible solutions before using the manual override.

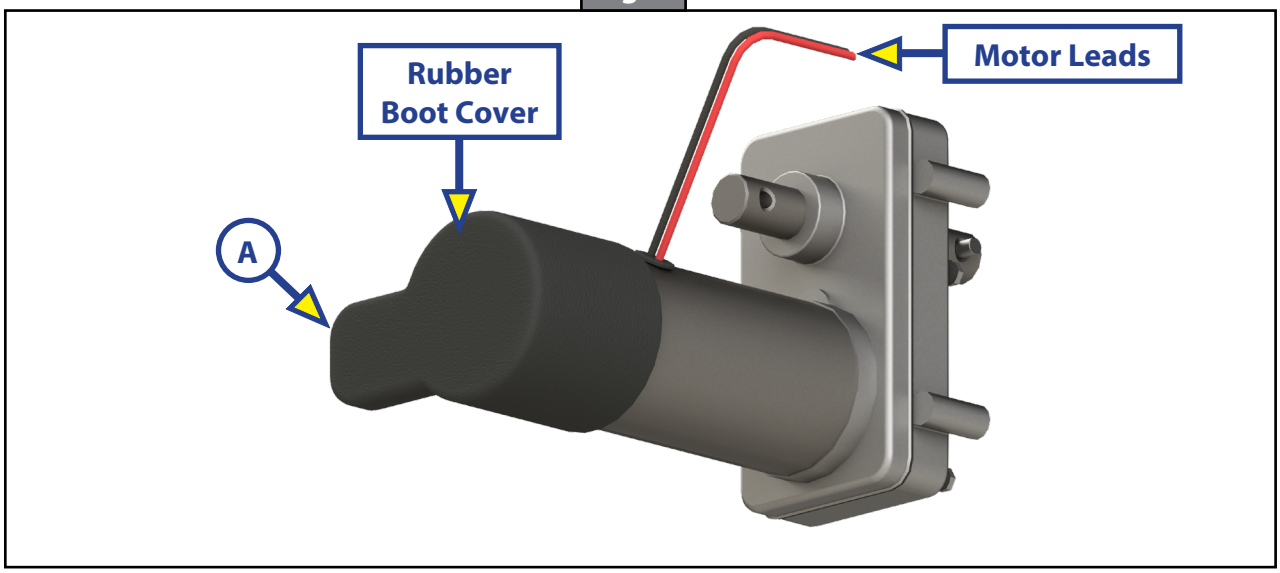
1. Locate the unit's 12V DC battery disconnect and turn the switch to the OFF position.
2. Locate the slide-out motor. The motor will be mounted to the rail assembly (Fig. 2A) or to the cross shaft, in between the slide out rails (Fig. 2B).
3. Disconnect the motor leads.

**Fig. 2**



4. Locate the spring lock lever (Fig 4A) inside of the rubber boot cover by feeling the protruded end of it (Fig. 3A). The spring lock lever is concealed by the rubber boot cover to allow for operation by hand.

Fig. 3




5. Depress and rotate the spring lock lever inside of the rubber boot cover to disengage the motor brake. (Fig. 5).

**NOTE:** Do **NOT** remove rubber boot cover. Removal of rubber boot cover will void manufacturer's warranty. (Fig. 4) and (Fig. 5) show the motor with the rubber boot cover removed for reference ONLY.

Fig. 4

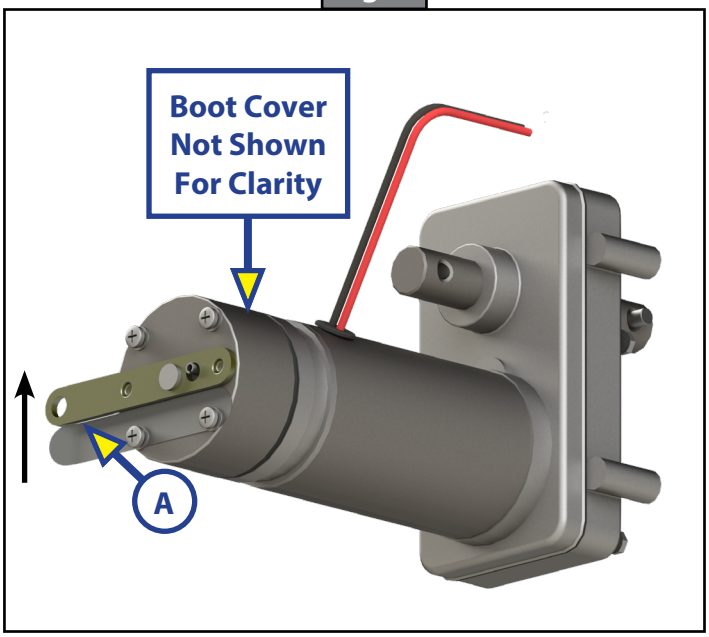
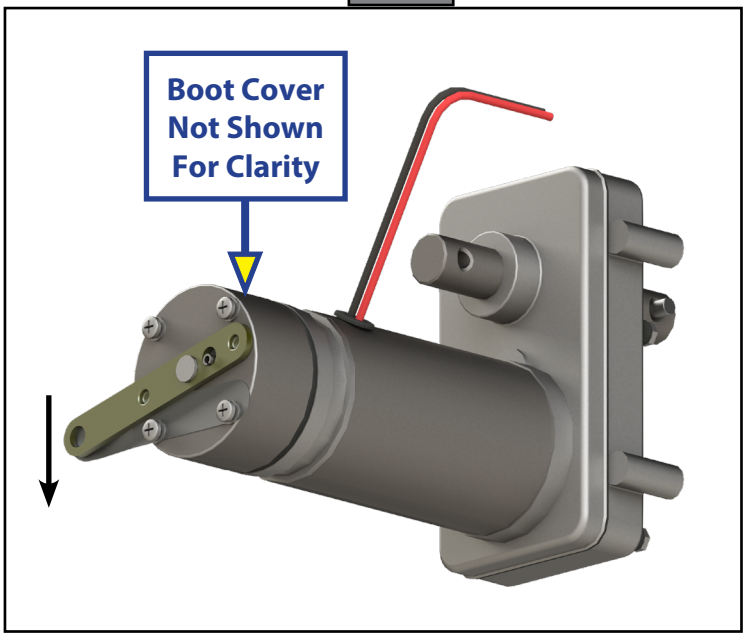



Fig. 5




6. Locate the manual override coupler:
   A. On a single arm slide assembly, the manual 3/4" hex override coupler is on the output shaft of the motor.
   B. On a dual arm assembly (Fig. 2B), the override coupler is on the side of the front arm (Fig. 2C) or rear arm (Fig. 2D) assembly.
7. Using a 3/4" wrench or ratchet, completely crank in the slide-out room. If access to the override coupling is limited, an adjustable wrench can be used to turn the squared drive/cross shaft.
8. Check to make sure that the room has a good seal.
9. Engage the brake lever by rotating clockwise (Fig. 4A).
10. Reconnect the motor leads.

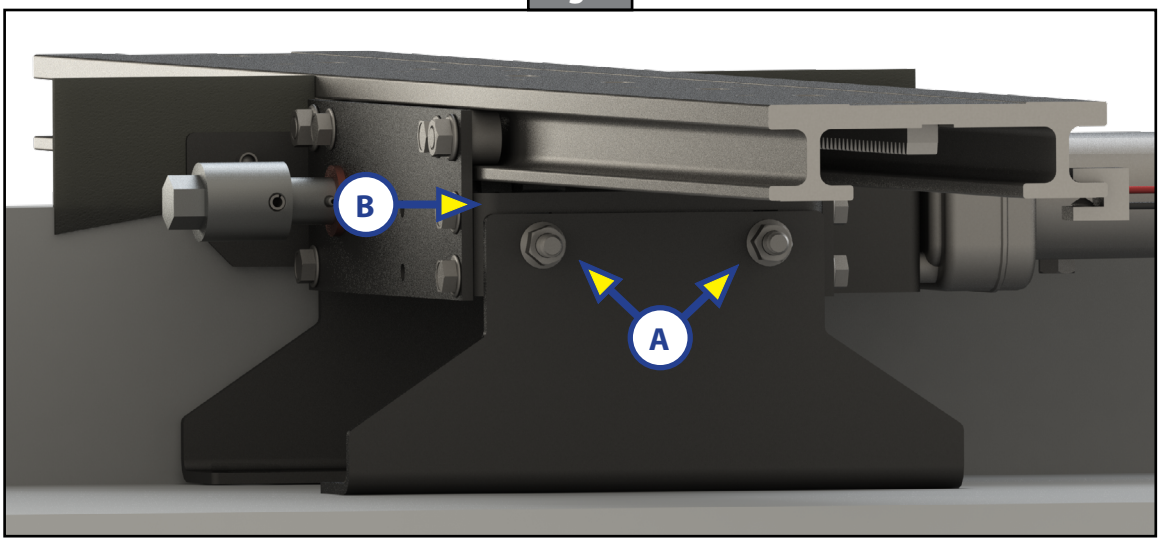
## Adjustments

### Room Adjustment

For vertical adjustment:

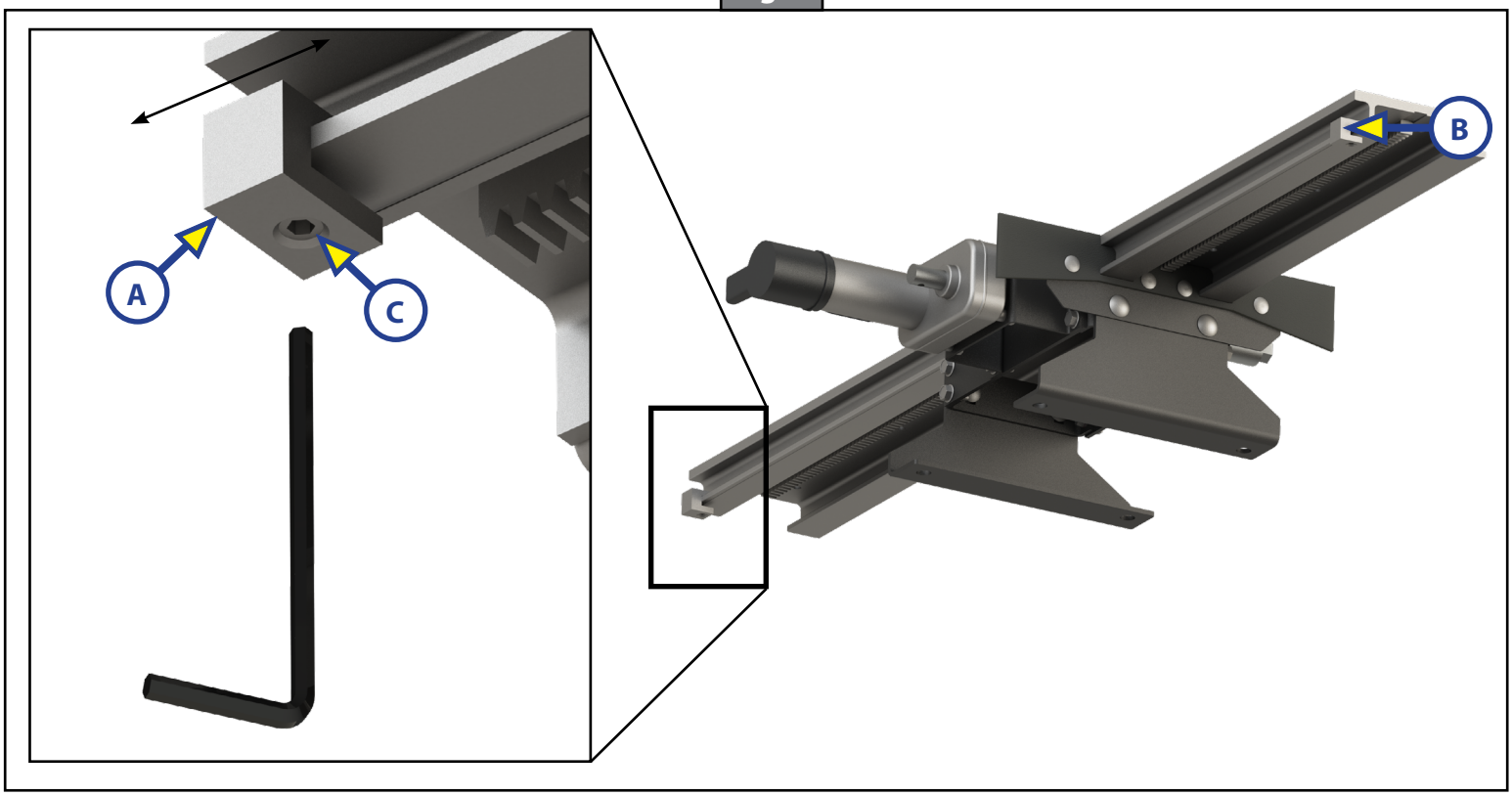
1. Loosen the two carriage bolts (Fig. 6A) just enough to release tension on the interior mounting plate (Fig. 6B).
2. Adjust the room to desired location.
3. Tighten the two carriage bolts before operating room.

Fig. 6




4. For "out" stop (Fig. 7A) or "in" stop (Fig. 7B) adjustment, loosen the set screw (Fig. 7c) on the stop block.
5. Adjust the stop block to desired location.
6. Tighten the set screw.

Fig. 7



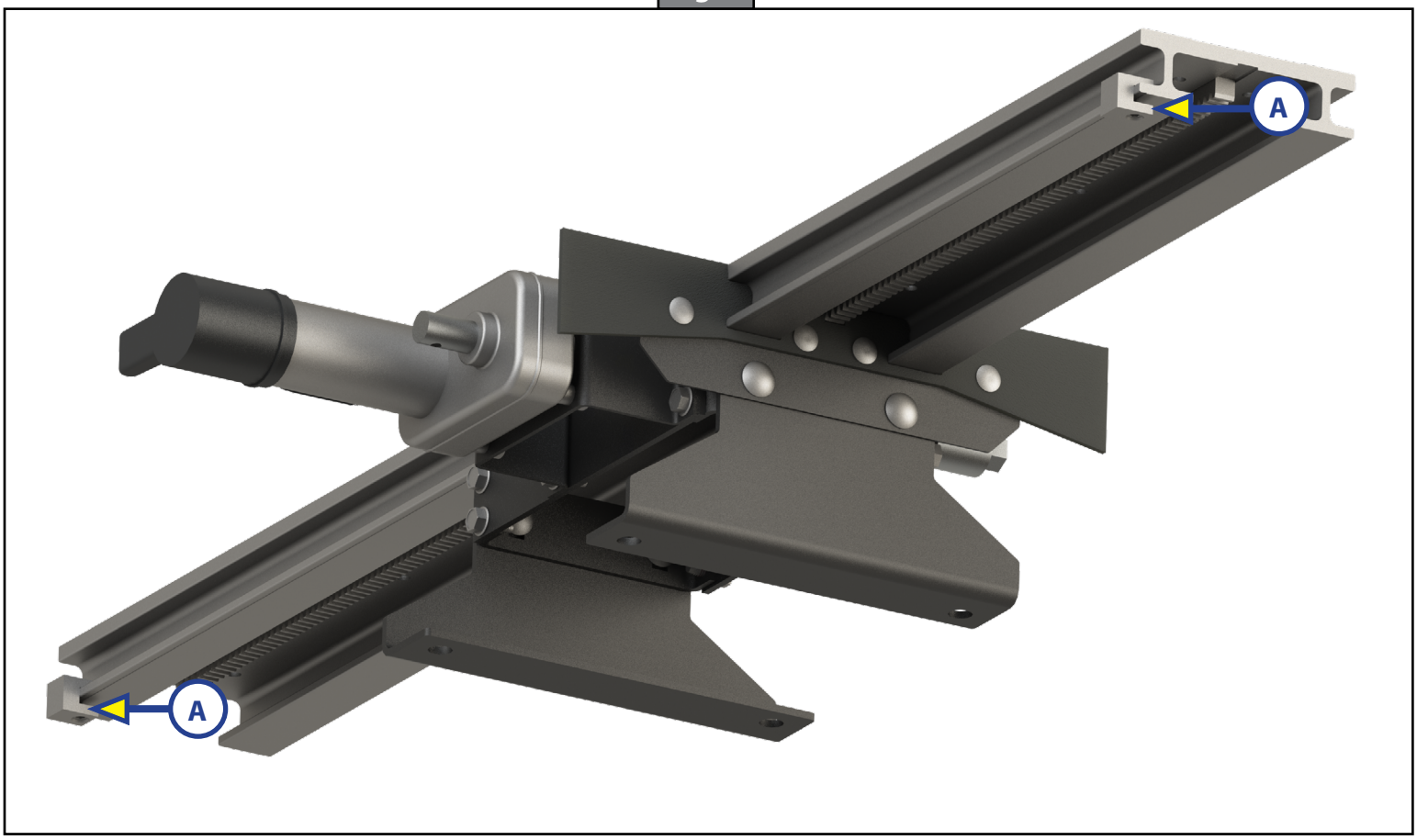
## Hard Stops

The Above Floor Slide-out system is available in many different configurations and applications with varying height, travel, steel or aluminum and single and double arm. Access to these mechanisms is generally from inside the unit, under the floor of the slide-out.

If the fully extended or fully retracted travel of the slide-out appears to be putting pressure on the interior trim or exterior flange, stops may be missing from the mechanism and should be installed to prevent damage to the unit and slide system components.

Hard stops are added to the above floor slide-out systems in the form of stop block assemblies (Fig. 8A). The stop block assemblies are provided as a clamp-on stop, giving the slide-out the hard stops it needs to end the extend and retract travel of the slide out mechanism. The assemblies include an aluminum block notched to fit over the rear of the slide-out hat channel or arm and a set screw.

**Fig. 8**

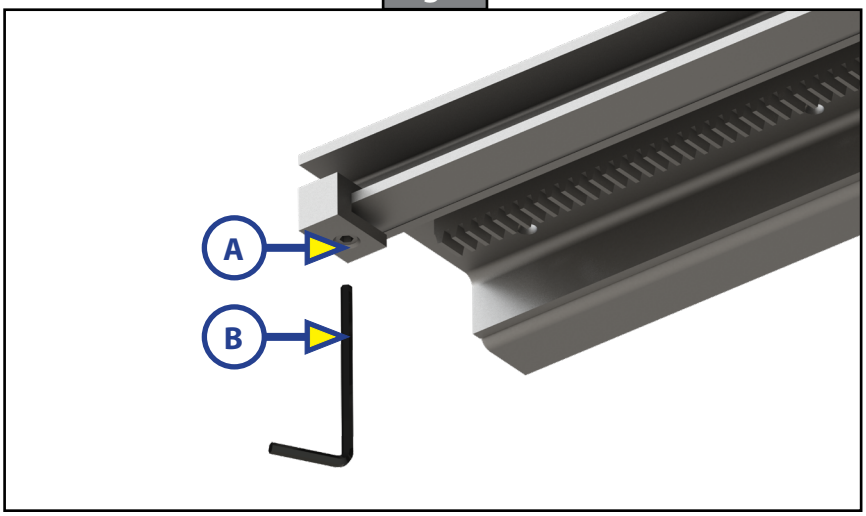


11. Place the stop block on the rear of the hat channel or arm at the extend and retract points of the slide-out.
12. The set screw (Fig. 9A) is then tightened with a hex wrench (Fig. 9B) in order to provide the above floor slide-out with hard stops. Once the set screw is tightened, the stop will make a water-tight seal with the slide-out.

**NOTE:** Without the hard stops, the interior trim and the outside slide flange become soft stops and can be damaged as the slide controller may not be able to shut the system off.

The hard stop will allow the controller to sense the amperage spike when the slide motor is stopped. The stops shut down the slide-out system protecting the drive shaft, shaft bolt and the gear.

Fig. 9



## Re-Syncing A dual arm Slide-out

Some slide-outs come with two slide arm assemblies. When the two slide arm assemblies are misaligned, or out-of-sync, an adjustment can be made to realign, or sync,the system by performing a manual adjustment of the outer drive shaft.

**NOTE:** Before accessing the power unit, make sure power to the system has been disconnected.

To sync the slide-out system:

1. Access the slide-out's drive side assembly.
2. At the drive shaft coupling, use a 7/16" wrench to remove the 1/4" - 20 bolt (Fig. 10A) and nylon locking nut (Fig. 10B) from the outer drive shaft (Fig. 10C).
3. Turn the outer drive shaft to rotate the drive shaft until the follow side assembly syncs with the drive side assembly (Fig. 11A).
4. Align the closest hole on the outer drive shaft with the hole on the drive shaft (Fig. 11B), then reinsert the previously-removed bolt and locking nut to secure the synced sides (Fig. 11C).

Fig. 10

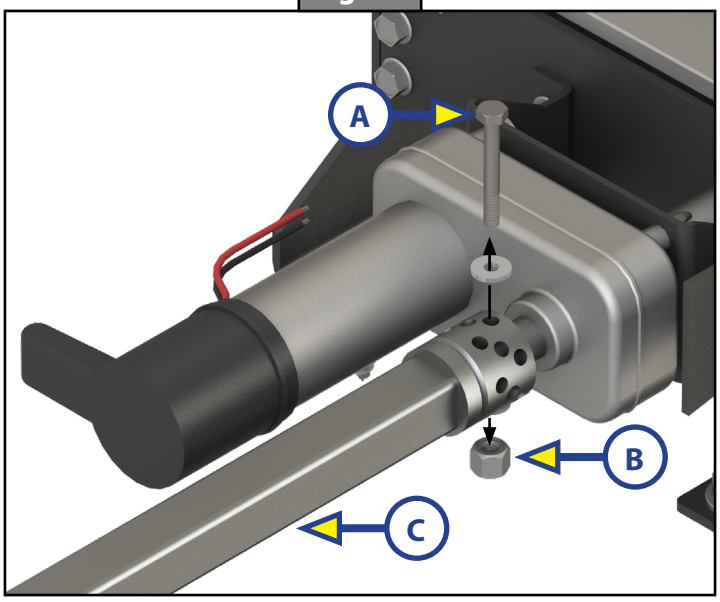
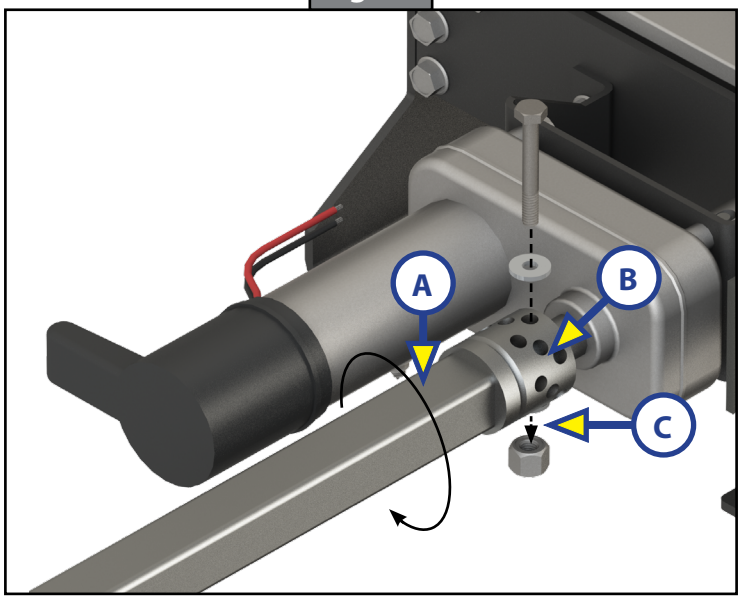
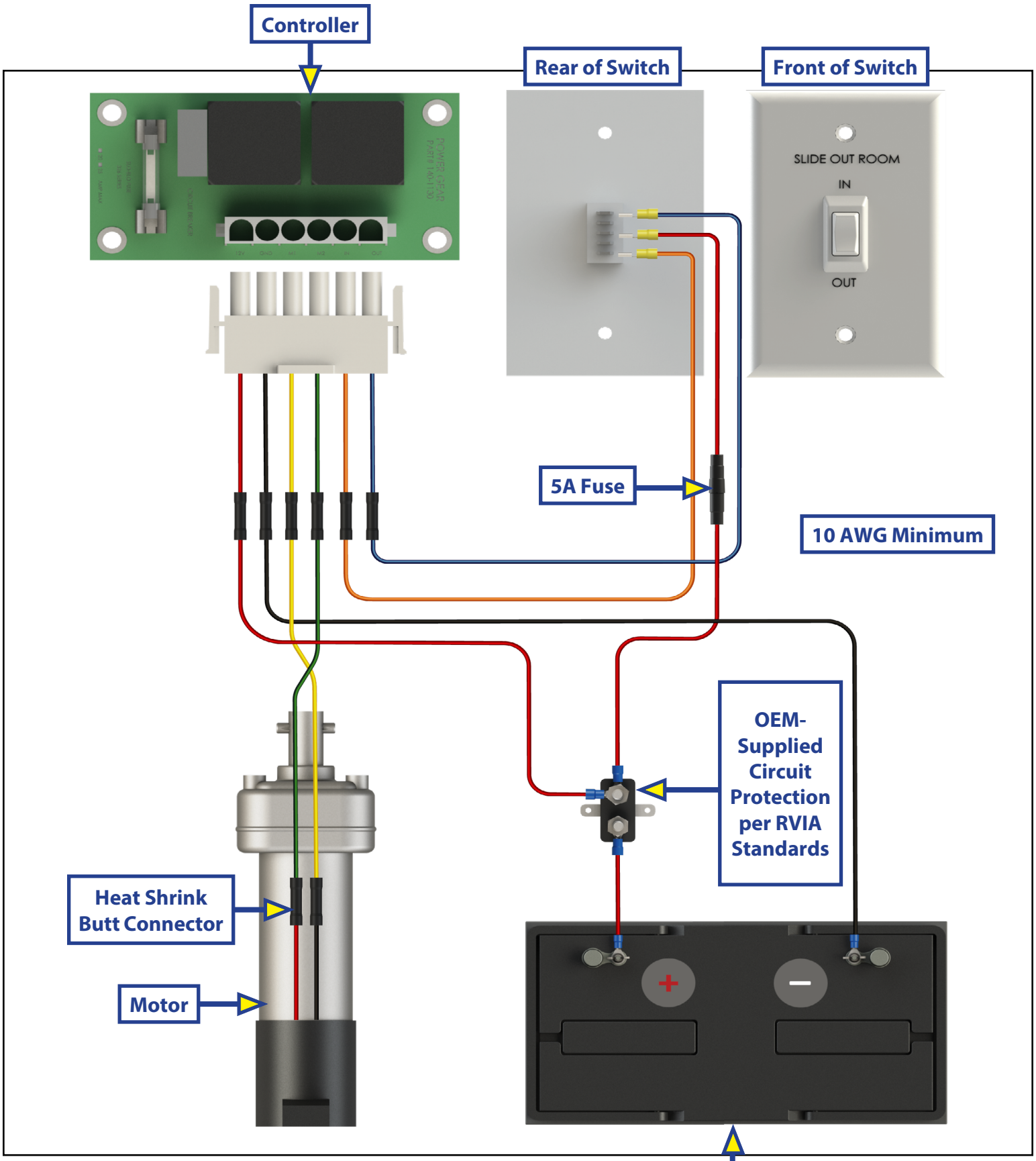



Fig. 11



## Wiring Diagram




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

## Notes

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