



**M-TEC SINGLE RAIL ABOVE
FLOOR SLIDE-OUT
OWNER'S MANUAL**

TABLE OF CONTENTS

Introduction	2
Safety	3
Preparation	4
Operation	4
Extending Slide-Out	4
Retracting Slide-Out	5
Maintenance	5
Electric	5
Mechanical Maintenance	6
Troubleshooting	7
Resources Required	7
Slide-out Adjustment	7
Switch Related Concerns	9
Motor Unit	10
Electrical	10
Manual Override	12
Wiring Diagram	14
Notes	15

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.

Additional information about this product can be obtained from [lci1.com/support](https://support.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.

Apple App Store®, iPhone®, and iPad® are registered trademarks of Apple Inc.

Google Play™ and Android™ are trademarks of Google Inc.

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 service. 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.

Preparation

Prior to slide-out operation:

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

⚠ CAUTION

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

3. Make sure all persons, pets and obstructions are clear of the unit prior to slide-out room actuation.
4. Keep hands and other body parts away from slide-out mechanisms during actuation.

Operation

Depending on unit configuration, the slide-out room may be operated by a rocker switch (Fig. 1) mounted on the unit's wall located close to the entry door.

If operating a motorized coach (Class A and C; Gas and Diesel):

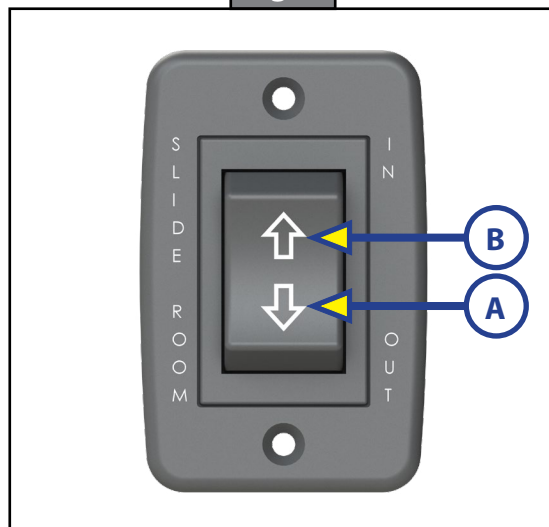
1. Make sure the PARKING BRAKE is engaged.
2. Make sure the transmission is in PARK.
3. Make sure the ignition is off.
4. Make sure the battery is fully charged and connected to the electrical system.
5. Make sure the slide-out's path is clear of people, pets and objects before and during operation of the slide-out.
6. Keep clear of the slide rails when the slide-out is being operated. The gear assembly may pinch or catch on loose clothing causing personal injury.
7. Keep items in compartment clear of the slide-out motor mechanisms and wiring to prevent interference of operation.

Extending Slide-Out

1. Level the unit.
2. If equipped, remove transit bars.
3. Press and hold the IN/OUT switch in the OUT position (Fig. 1A) until the slide-out is fully extended and the motor clutches.
4. Release the switch, which will lock the slide-out into position.

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

Fig. 1



Retracting Slide-Out

1. Verify the battery is fully charged and hooked up to the electrical system.
2. Press and hold the IN/OUT switch in the IN position (Fig. 1B) until the slide-out is fully retracted, stops moving and the motor clutches.
3. Release the switch, which will lock the slide-out into position.

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

4. If equipped, install the transit bars.

NOTE: Transit bars should only be used during storage and transportation.

Maintenance

The M-Tec Above Floor Slide-out system has been designed to require very little maintenance.

The system has been extensively tested without any noticeable wear to rotating or sliding parts. No grease or lubrication is necessary and, in some situations, may be detrimental to the environment and long term dependability of the system.

To ensure the long life of the slide-out system, read and follow these few simple procedures.

Electric

For optimum performance:

1. The slide-out system requires full battery current and voltage. The battery must be maintained at full capacity.
2. Other than good battery maintenance, check the terminals and other connections at the battery, the control switch, and the electric motor for corrosion and loose or damaged terminals.

NOTE: A 12V DC system must maintain good wire connections. It is important that the electrical components have good ground connection. Over 90% of unit electrical concerns are due to bad ground connections.

3. If applicable, check motor leads under the unit's chassis and make sure they are in good condition.

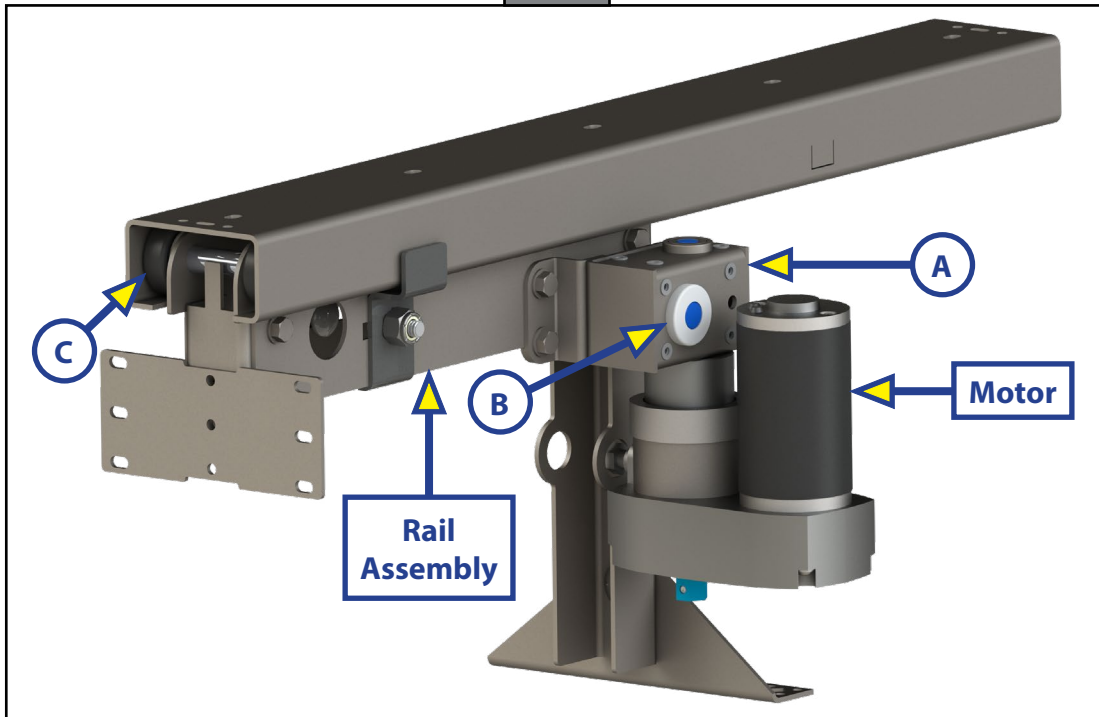
NOTE: These connections are subject to damage from road debris.

Mechanical Maintenance

Although the M-Tec Above Floor Slide-out system is designed to be almost maintenance free, inspect the slide-out for:

1. Any visible signs of external damage before and after movement of the slide-out.
2. Inspect the inside and outside of the slide-out and the unit.
3. For long-term storage, it is recommended that the slide-out be closed (retracted).
4. Visually inspect the slide floor and drive box assembly (Fig. 2A).
5. Check for excess build-up of dirt or other foreign material—remove any debris that may be present.
6. If the system squeaks or makes any noise, it is permissible to apply a coat of dry lubricant to the drive shaft (Fig. 2B) and roller areas (Fig. 2C). Remove any excess oil so dirt and debris do not build-up. Do **NOT** use grease.

Fig. 2



Troubleshooting

Resources Required

- 3/4" wrench (stop bracket and vertical brace nuts)
- Voltmeter
- Screwdriver

Slide-out Adjustment

If a major adjustment to the slide-out is required, contact the Lippert Care Center.

If a minor alignment to the slide-out is required, do as follows:

1. Make sure the battery is fully charged and connected to the electrical system.

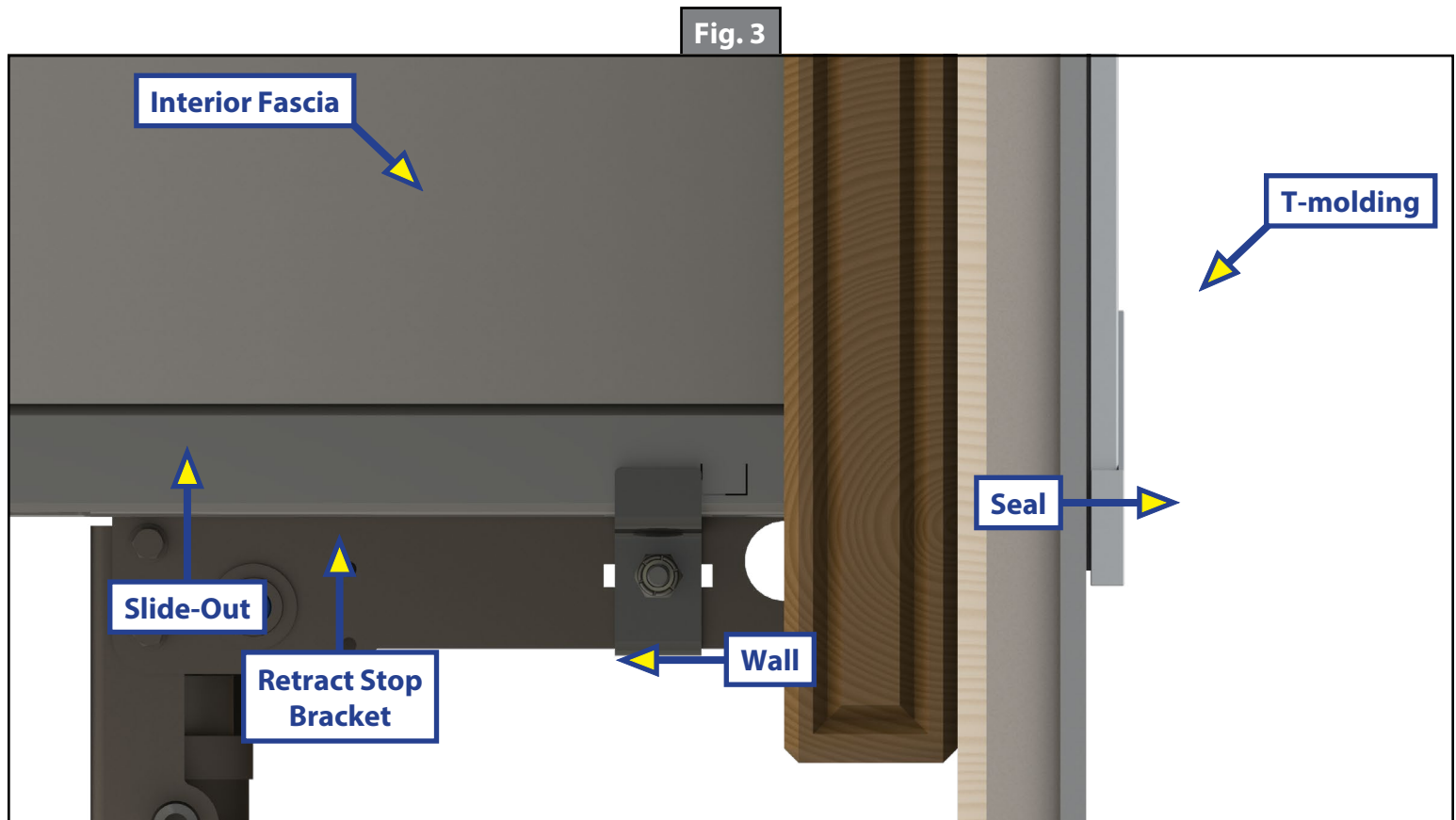
⚠ CAUTION

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

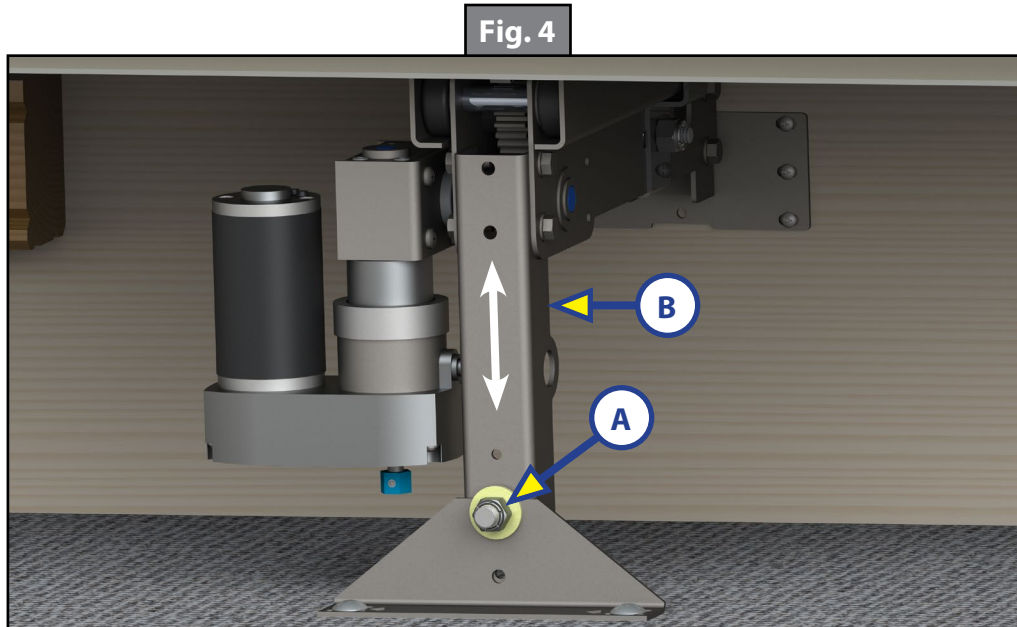
2. Press and hold the OUT switch (Fig. 1A) until the slide-out is fully extended, stops moving and the motor clutches.

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 (Fig. 3). 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.
- I. Using a 3/4" wrench, loosen the carriage bolt (Fig. 4A) on the vertical brace (Fig. 4B) just enough to release tension on the wall mounting plate.
 - II. Vertically adjust the slide-out room to level.
 - III. Tighten the carriage bolt before operating the slide-out.



⚠ CAUTION

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

- E. Alternate between pressing and holding the IN (Fig. 1B) and OUT (Fig. 1A) 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. 1B) position until the slide-out is fully retracted, stops moving and the motor clutches.

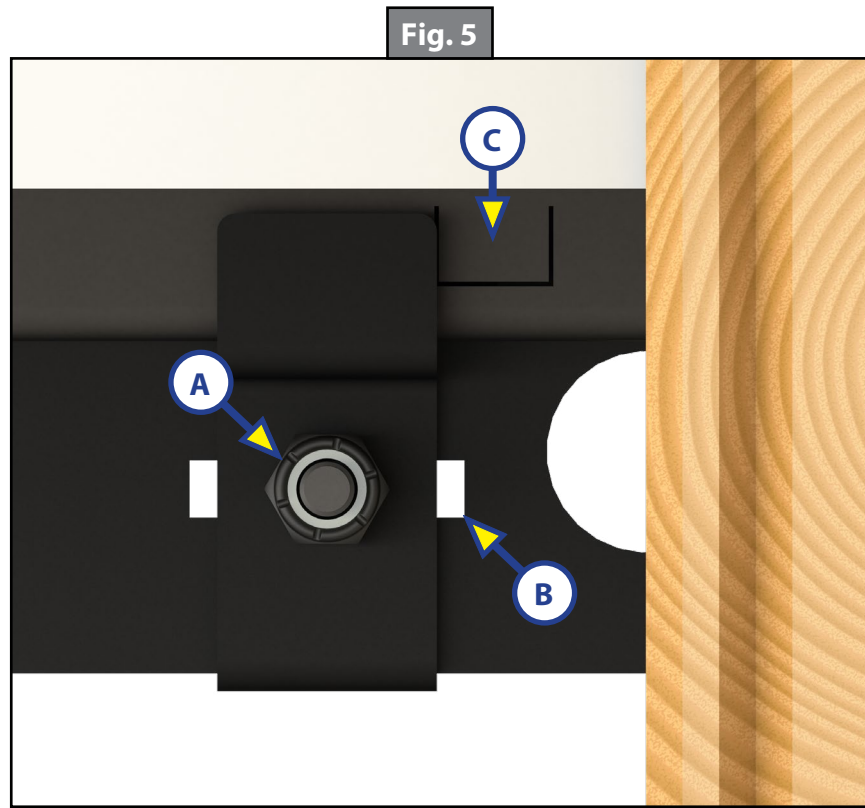
NOTE: Only hold the IN switch until the slide-out stops.

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

5. Inspect the exterior T-molding on the slide-out (Fig. 3). If the fully retracted travel of the slide-out appears to be putting pressure on the T-molding, the retract (in) stop bracket needs to be adjusted (Figs. 3 and 5).

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

- A. Move the slide-out (Fig. 3) to relieve the pressure while still maintaining a good seal.
- B. Using a 3/4" wrench, loosen the retract stop bracket nut (Fig. 5A).
- C. Slide the retract stop bracket along the slot (Fig. 5B) in the gearbox bracket assembly's side plate until it touches against the stop tab (Fig. 5C).
- D. Fully tighten the retract stop bracket's nut.



⚠ CAUTION

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

- 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).

Switch Related Concerns

- 1. If the slide-out moves opposite from what the switch plate indicates, reverse the red and black motor wires at the splice junction (see Wiring Diagram). Additional wiring **MUST** use 10 AWG minimum and conform to current RVIA electrical standards.
- 2. If a gear is stripped, the entire gearbox **MUST** be replaced.

Motor Unit

Before attempting to troubleshoot the motor, make sure an adequate power source is available. The unit's batteries should be fully charged or the unit should be plugged into 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 and a jumper lead. Refer to the testing diagram figure 6.

1. Attach voltmeter to the negative (black wire) and positive (red wire) switch terminals on back of the wall switch (Fig. 6). Does the meter indicate 12V DC?

- A. If yes, go to step 2.
- B. If no, go to step 3.

2. Check the incoming leads to 12V DC (Fig. 6). Does meter indicate 12V DC?

NOTE: If necessary, disconnect leads at wire splices.

- A. If yes, the motor needs to be replaced.

NOTE: The motor is not field serviceable. Do **NOT** attempt to repair.

- B. If no, inspect all wires and connections between the wall switch and the motor.
 - I. Repair connections as necessary.
 - II. Re-check voltage per step 1.

3. If meter still does not register 12V DC, then:

- A. Inspect all connections between battery and switch.
- B. Inspect any and all breakers, relays and fuses (circuit protection).
- C. Re-check voltage per step 1.

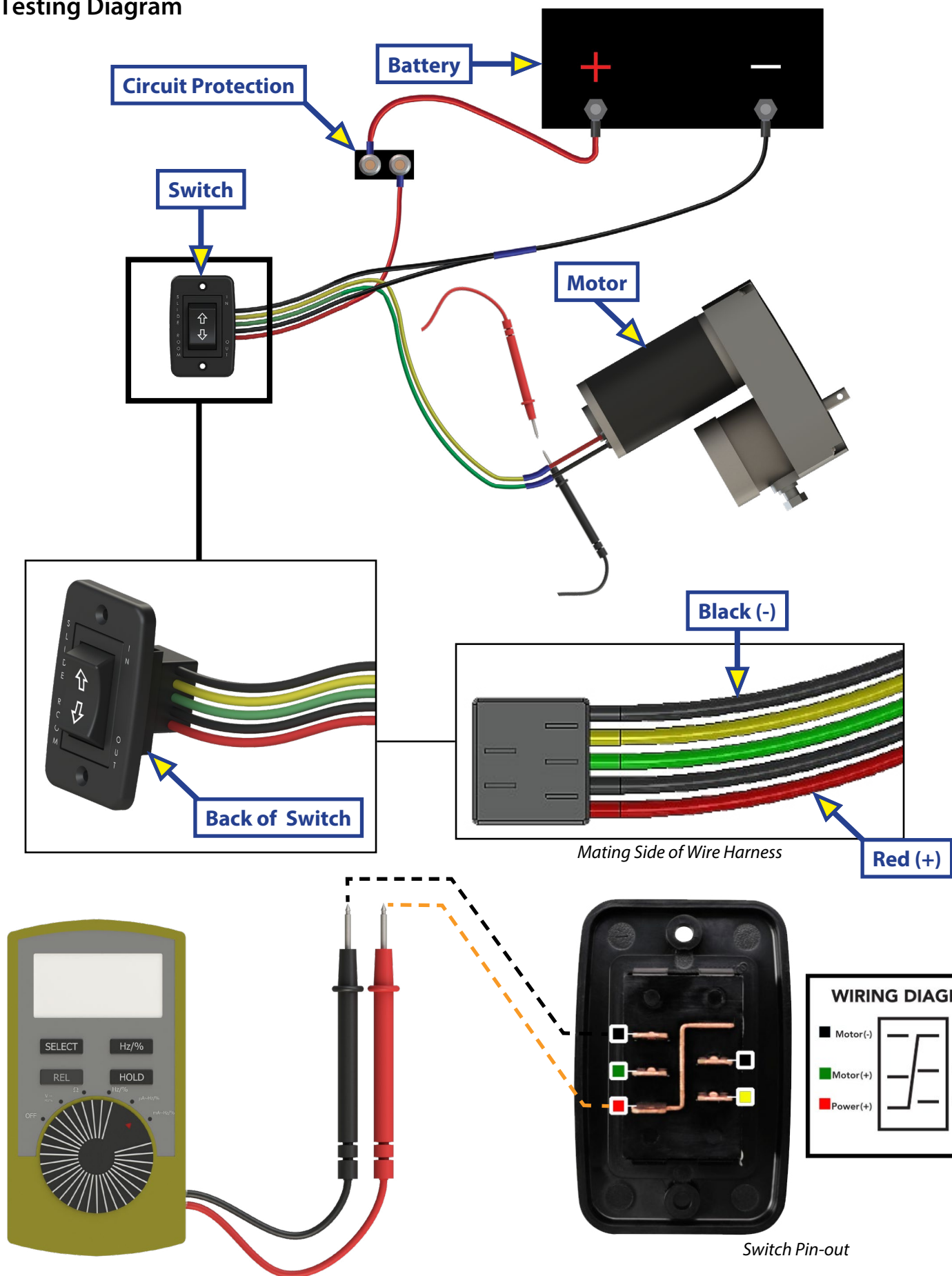
Electrical

Since there are no field-serviceable parts in the motor of the 12V DC motor, electrical troubleshooting and service is limited to replacing only those components as previously outlined.

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

Fig. 6

Testing Diagram



Manual Override

In the event of loss of power, the M-Tec Above Floor Slide-out system can be manually operated as follows:

⚠ CAUTION

Always disconnect battery from system prior to manually operating system. Failure to disconnect battery can cause electricity to back feed through the motor and cause serious damage to the system as well as voiding the warranty.

1. Before accessing the motor, make sure power to the system has been disconnected.
2. The retract stop bracket and tab (Fig. 7A) are located on the outer edge of the slide-out rail.

NOTE: The retract stop bracket, stop tab, slide-out motor and mechanism will be accessible from the inside of the unit.

3. Using a wrench or socket/ratchet combination, rotate the 5/8" hex head manual override nut (Fig. 7B) to manually extend (out) or retract (in) the slide-out.

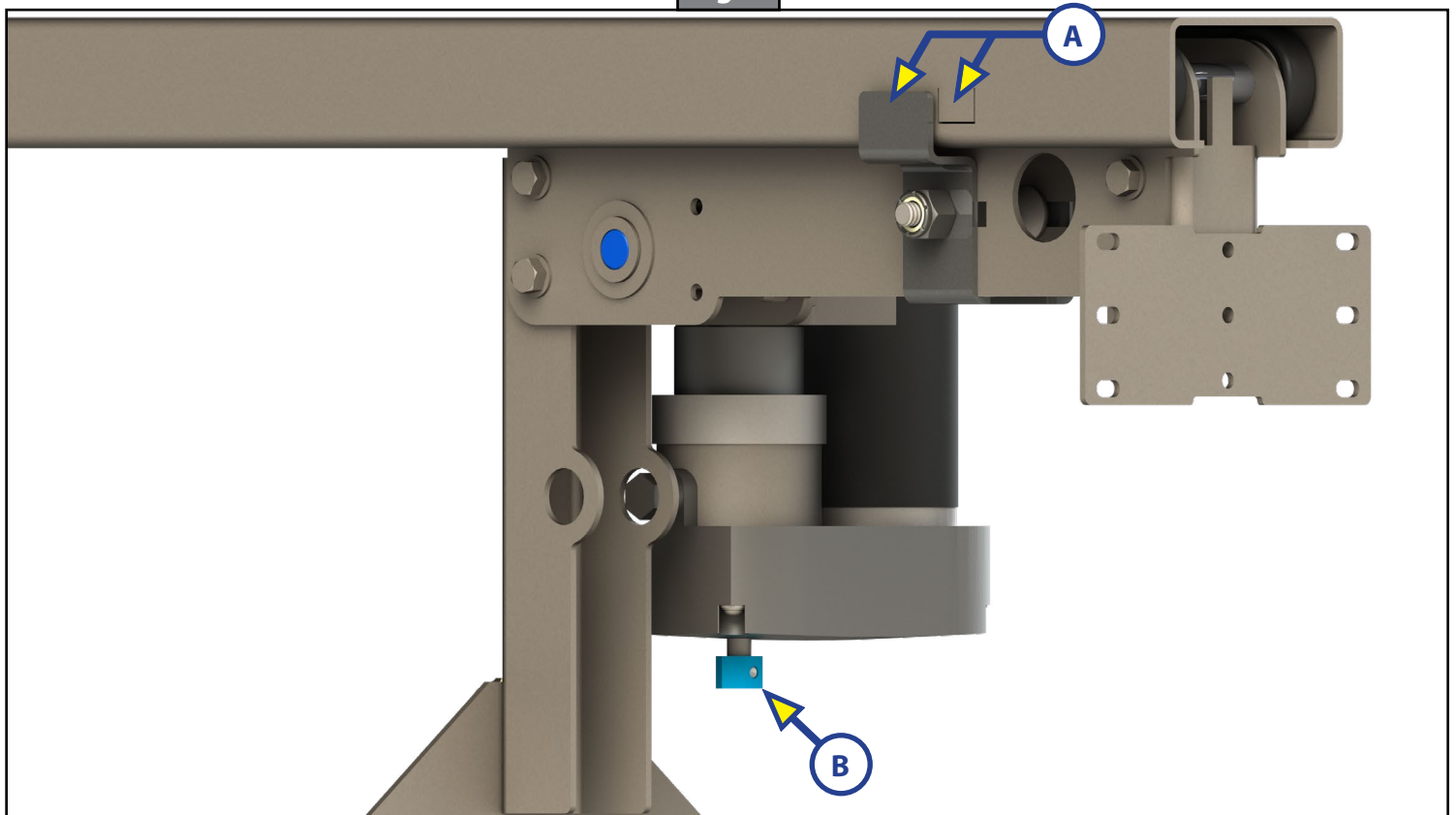
⚠ CAUTION

The gears can be stripped out if the slide-out is manually retracted/extended to its fullest extent and the operator continues to rotate manual override. Do NOT over-extend/-retract the slide-out when manually overriding the system. Damage may occur when over-extending/-retracting the slide-out, causing the system to fail and void the limited warranty.

4. If the retracted slide-out does not fully seal, then an adjustment to the stops may be required. Refer to the Slide-out Adjustment section or contact the Lippert Care Center for additional adjustment information.

NOTE: Stops are factory-set to optimize slide-out extension/retraction. No additional adjustment to the stops should be needed.

Fig. 7

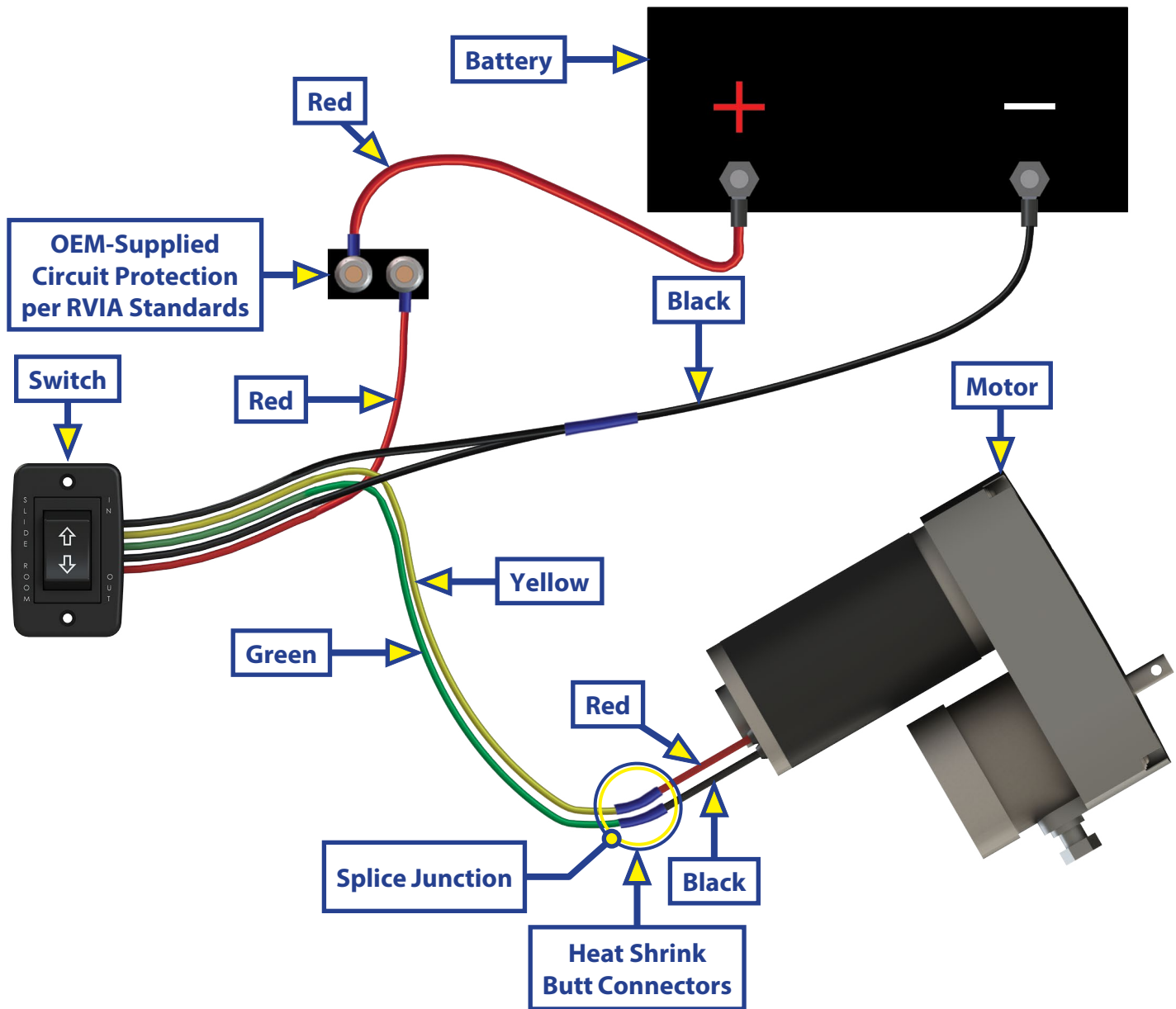


Troubleshooting Guide		
What Is Happening?	Why?	What Should Be Done?
Slide-out doesn't move when switch is pressed.	Restriction or obstruction inside or outside of unit.	Check for and clear obstruction.
	Low battery voltage, blown fuse, defective wiring.	Check battery voltage and charge if needed. Find and check fuse, replace if blown. Check battery terminals and wiring. Look for loose, disconnected or corroded connectors.
	Excessive slide-out drag.	Check that transit bars are removed.
Motor runs, but slide-out does not move.	Motor turns, slide-out does not move.	Gear key is broken or lost. Replace gear drive 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.
Slide-out 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 slide-out inside or outside.	Check for and clear obstruction.
Slide-out chatters during operation.	Teeth on gear drive broken or worn.	Replace gear drive assembly.
	Teeth on inner rail broken and worn.	Replace inner rail assembly.

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.

Notes



The contents of this manual are proprietary and copyright protected by Lippert. Lippert prohibits the copying or dissemination of portions of this manual unless prior written consent from an authorized Lippert representative has been provided. Any unauthorized use shall void any applicable warranty. The information contained in this manual is subject to change without notice and at the sole discretion of Lippert. Revised editions are available for free download from lippert.com.

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



This manual is provided courtesy of **RV Tech Cheat Sheet**



Professional resources for the whole RV industry — free.

We put manuals, wiring diagrams and hard-won tech knowledge in every technician's hands, so repairs get done right the first time, techs work faster, and RV owners everywhere get better service.



rvtechcheatsheet.com/manuals

Find thousands more RV manuals, wiring diagrams and parts lists

RV techs: share fixes, ask questions and learn from each other.

Join our free Facebook group →



Follow proper safety practices. If in doubt, consult a professional RV technician.