HAPPIJAC SLIDE-OUT

LIPPERT
TECHNICAL INSTITUTE

1

OPERATION

It is best to operate the room slide with a well charged deep cycle battery installed in the RV unit. While the operating current for the slide room is relatively low, the motor startup current, although lasting only a few milliseconds, can be higher than the inverter is capable of supplying. This can be especially true if other devices such as air conditioning, appliances, lights, etc. are turned on.

To operate the slide room, locate the slide room control switch. This will either be a rocker style switch marked IN & OUT or may be a key switch with similar markings.

NOTE: Some RV manufacturers employ the use of a "Kill" (ON-OFF) switch to remove power from the room slide circuit when not in use. If such is installed, it must first be set to the on position before the slide will operate.

⚠CAUTION

If slide locks are installed, remove slide locks before operating slide. Ensure that there are no internal or external obstructions.

Always fully retract the slide room when RV is being towed or moved. If Slide Locks are provided, install slide locks.

2

TROUBLESHOOTING

NOTE: Most slider electrical problems are caused by either loose wires (not properly secured connectors). Poor wiring splices or shorts due to screws, staples, etc.

- There should be an audible click heard at the relay control module when the In/Out Switch is depressed. The absence of a click would indicate one of the following conditions:
  - A. + 12VDC or Ground missing from relay board.
  - B. An open line on the In/Out Switch.
  - C. A Micro-switch wired incorrectly or defective.
- If there is an audible click but the motor does not engage:
  - A. Loose motor connector or Defective motor

Problem	Possible Cause
Slide will not move when In/Out switch is pressed No audible click at the relay control module.	Missing 12 VDC or Ground at relay control module Faulty wiring or defective relay control module Faulty IN/Out switch
Slide will not move when IN/OUT switch is pressed Audible clicking sound at relay control module.	Insufficient power at relay control module Faulty ground on relay control module Defective motor Defective brake (if unit utilizes brake)
Slide will go one direction but does not move when switch is pressed for the other direction.	Faulty or loose wiring Faulty micro limit switch
Slide stops or stalls before reaching the fully extended or fully retracted position.	External obstruction interfering with slide Faulty relay control module
Motor turns but slide room will not move.	Roll pin sheered in drive sprocket (Single drive rail only)
Slide room will not stay straight side to side when moved in and out.	Broken connecting shaft between slide rails (double rail only) Broken roll pin in drive sprocket (double rail only) Slide room mechanism not secured properly to floor or Slide room not secured properly to mechanism
Slide room moves out while traveling.	Rail tension setting to loose.

3

MANUAL OVERRIDE

In the event that it becomes necessary to manually operate the slide room. The following procedure should be followed.

1. Locate the relay control module and unplug the motor connector. Also unplug the brake connector if a brake connector is present. This is necessary to electrically disconnect the motor (and brake) from the circuit. If this is not done the motor will not turn freely and the slide room will be very difficult to move.
2. Locate the ½" gold colored hex shaped shaft protruding from one or both sides of the slide mechanism. (Depending on model configuration).
3. Place a ½" socket wrench over either end of this shaft (a socket wrench extension may be needed) then rotate the shaft in the desired direction.
4. As the slide room nears full extension or retraction, be careful not to crank the micro limit switch stop block beyond the limit switch.
5. Once the desired position is reached, plug in the motor (and brake) unplugged in step 1. Failure to reattach the motor lead will allow the slide room to drift.

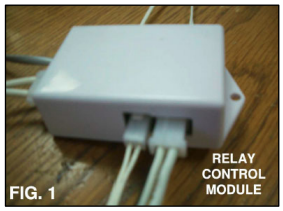

FIG. 1

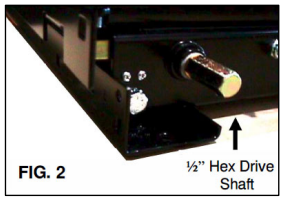

FIG. 2

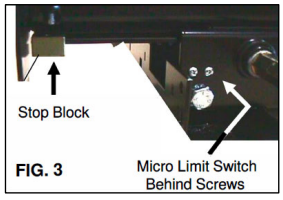

FIG. 3

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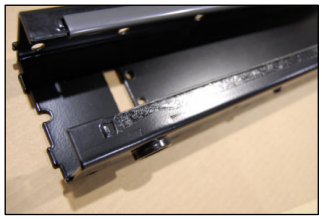
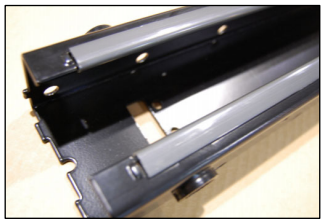
REPLACING DAMAGED GLIDE STRIP

- Remove damaged glide strip and clean off any remaining adhesive or debris with acetone.
- Place adhesive strip along c-channel with strip half on and half off the channel as shown below.
- Peel the backing from the adhesive strip as you do the adhesive will fold under the edge of the c-channel.
- Press the plastic glide strip into place between the raised stops at each end of the c-channel and allow the adhesive to “cure” for 24 Hrs. before reassembling the slide mechanism.





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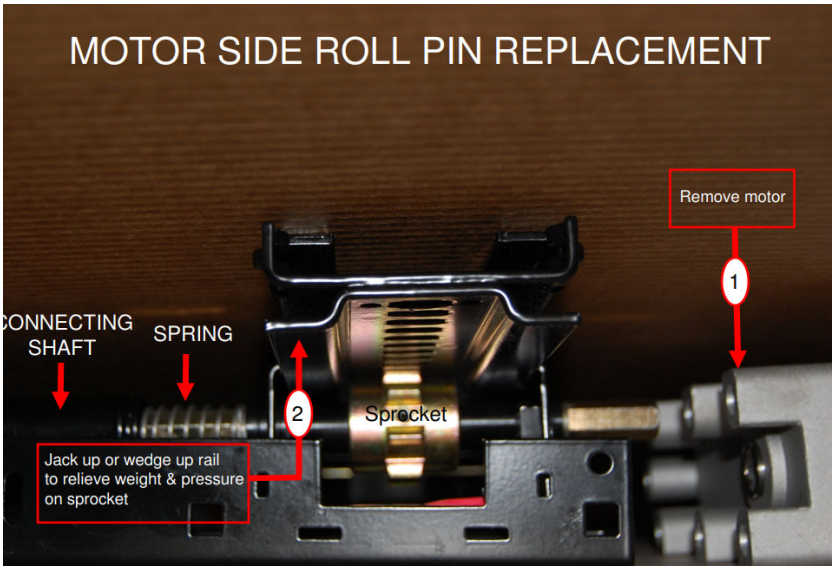
MOTOR SIDE ROLL PIN REPLACEMENT



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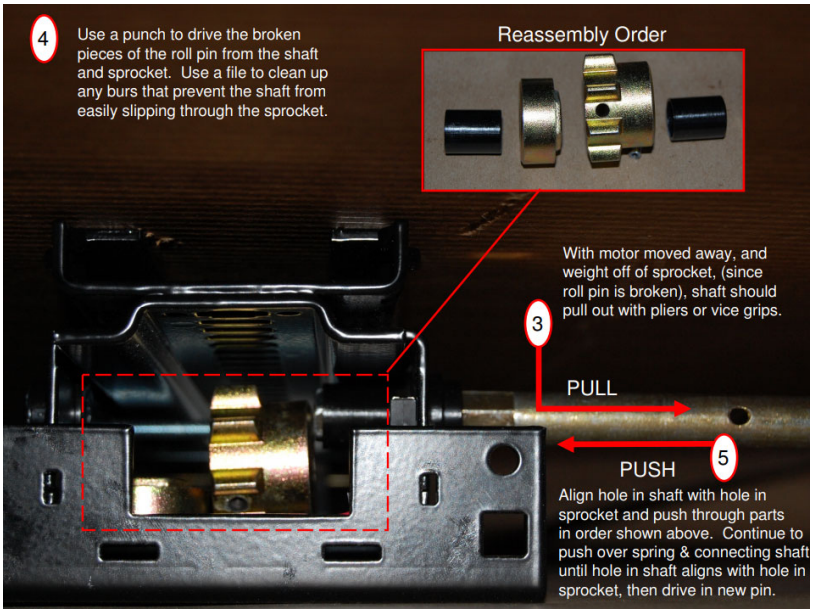
MOTOR SIDE ROLL PIN REPLACEMENT



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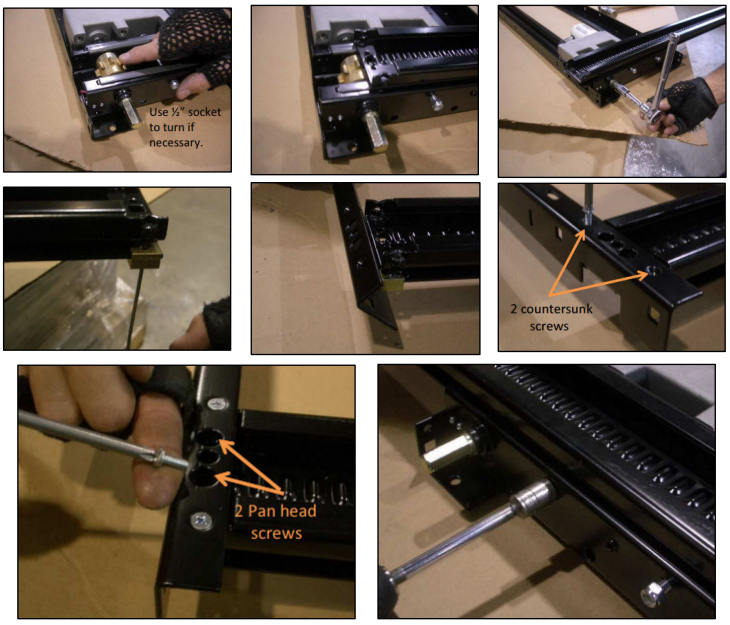
INSTALLING DRIVE RAILS

- Align a tooth straight up on each sprocket. Use ½" socket to turn if necessary.
- Slide both rails on until they are against the sprocket tooth.
- Use a ½" socket to rotate drive shaft and pull rails through a few inches.
- Install stop blocks on outside edge at each end of motor side drive rail.
- Set end angle in place by starting at an angle then turning up into place.
- Install countersunk screws (2 locations each end).
- Install 2 pan head screws at each end of angle rail. 2 Pan head screws.
- Using 7/16 wrench or socket. tighten tensioning bolts until slack is gone, then 1 full turn.



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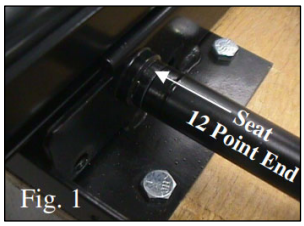
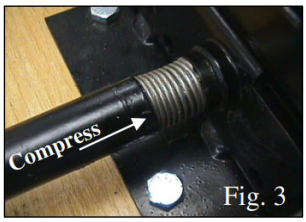
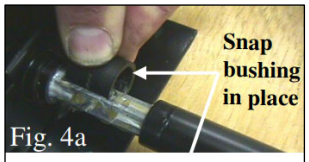
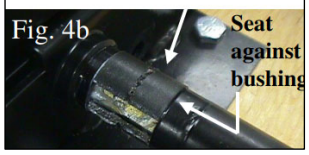
INSTALLING TIMING SHAFT

- Lightly grease both drive shafts.
- Slide 12 point end of Timing Shaft over the "rounded" drive shaft.
- Slip spring over other (full hex) drive shaft.
- Draw Timing shaft back against spring.
  NOTE: It will probably be necessary to turn one or the other drive shafts slightly to allow the hex shaft to engage the hex opening in the Timing Shaft.
- Install split spacer at the opposite end of the Timing Shaft.
- Draw Timing shaft back against split spacer.
  NOTE: It is very important that the spring be over the full hex shaft and the split spacer be on the "rounded" shaft to ensure proper and equal overlap of the Timing Shaft and the drive shafts.









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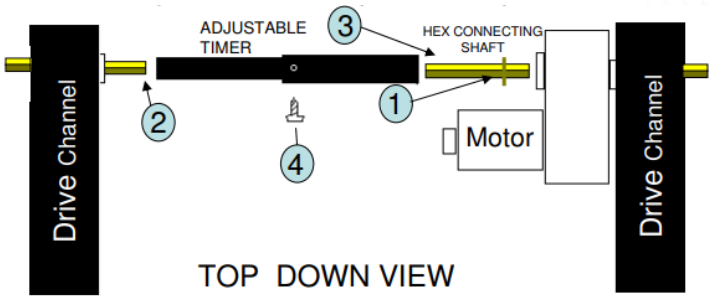
ADJUSTABLE TIMER

After attaching motor to slide mechanism and setting the spacing between the drive rails:

- Insert the Hex Connecting Shaft (with E-clip) into the motor with the short end toward the motor.
- Slide the end of Timing Shaft over the hex shaft in the drive channel on the opposite side from the motor. Seat it completely.
- Slide the motor end of the Adjustable Timer over the Hex Connecting Shaft and extend the Adjustable Timer until it seats against the E-clip which is seated against the motor. Recheck that the non-motor end has remained seated against the drive channel.
- Install self drilling screws in the pilot holes provided to lock the shaft.



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PLUG AND PLAY SLIDER TENSIONING

To minimize slider "creep". These tensioning nuts can be tightened. Tighten these nuts in small increments until you just begin to hear a change in the motor pitch, indicating that the moving tension of the rails has been slightly increased.

⚠CAUTION

Over tightening can result in excessive motor current, shortened motor life or damage to the slide system. Since this setting can vary from slide to slide depending on weight of slide room, seal pressure and other factors, it is sometimes necessary to make this adjustment after a period of wear in. If proper tensioning fails to eliminate slider creep, an optional solenoid brake can also be added to the slide motor to lock the slide in and out . This brake is available from Happijac.

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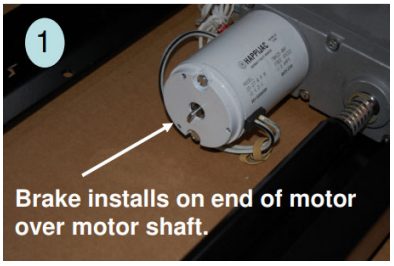
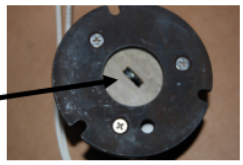
ADDING OR REPLACING SOLENOID BRAKE



2 **Shaft fits into slot in brake disc.**



Install the 3 mounting screws & reset brake lever.

5 **The brake wires are wired in parallel with the motor wires. There is no polarity therefore it does not mater which brake wire goes to which motor wire. Crimp on automotive style connectors can be used, or electrical wire nuts.**

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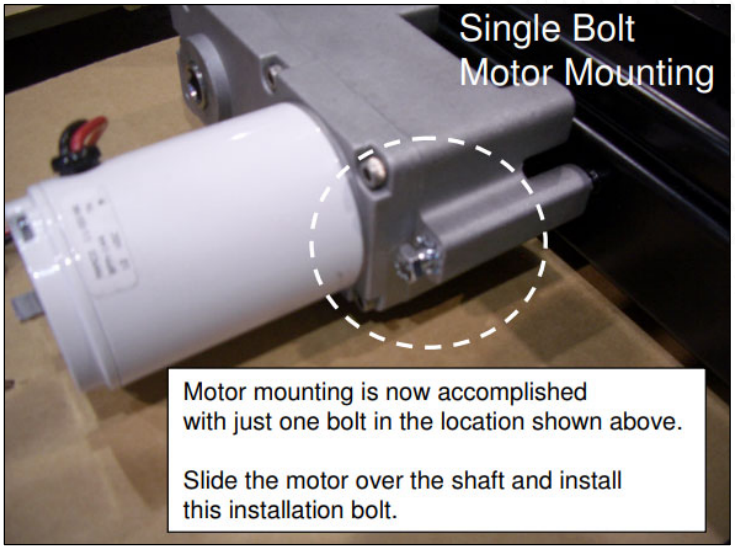
INSTALLING MOTOR

Once the slide unit is installed, the motor can be attached to either sides outside drive shaft.



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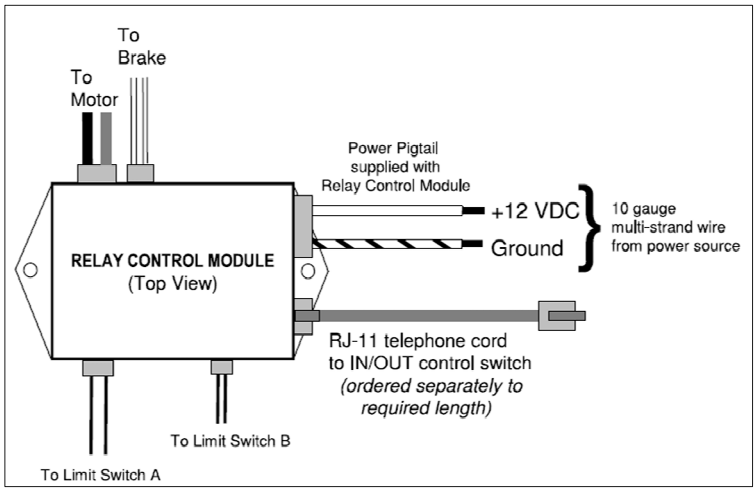
WIRING

Relay Control Module location ... RVIA wiring requirements restrict the length of exposed motor leads to a maximum of ten (10) inches. Therefore, the Relay Control Module must be placed above the motor or on the wall of the coach in close enough proximity to the motor that the 1 O" motor lead will reach.



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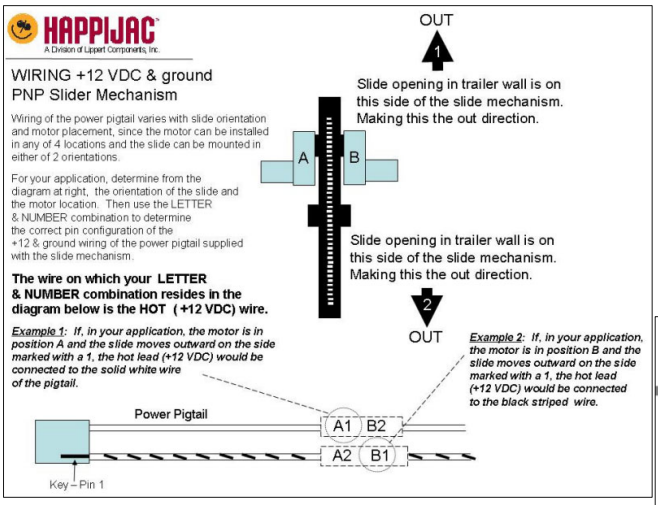
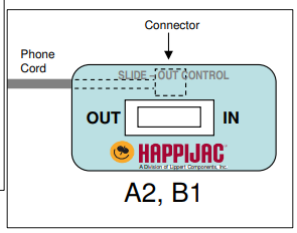
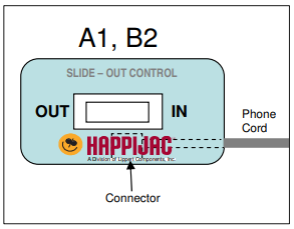
SINGLE RAIL WIRING



IN – OUT SWITCH CONFIGURATION

Depending again upon the orientation of the slider and motor location, it may be necessary to rotate the printed circuit board on the IN-OUT control switch to match the slide movement. The switch is shipped to match the following configurations: A2, B1 If your configuration is one of the following: A1, B2 it will be necessary to rotate the printed circuit board plugged to the back of the switch. Carefully pull the switch from the connectors on this board then rotate it 180 degrees. The phone cord will now come below rather than above the switch.





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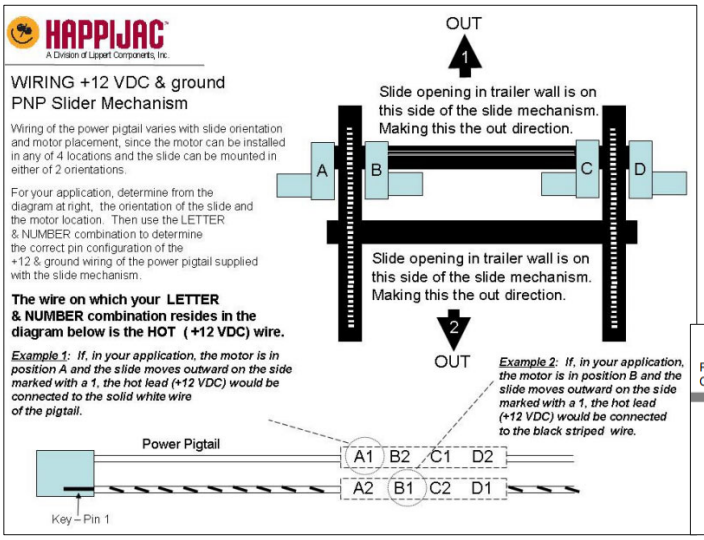
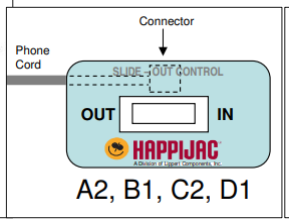
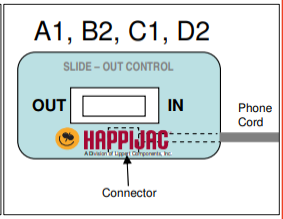
DOUBLE RAIL WIRING



IN – OUT SWITCH CONFIGURATION

Depending again upon the orientation of the slider and motor location, it may be necessary to rotate the printed circuit board on the IN-OUT control switch to match the slide movement. The switch is shipped to match the following configurations: A2, B1, C2, D1 If your configuration is one of the following: A1, B2, C1, D2 it will be necessary to rotate the printed circuit board plugged to the back of the switch. Carefully pull the switch from the connectors on this board then rotate it 180 degrees. The phone cord will now come below rather than above the switch.





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MAINTENANCE

There is no routine maintenance required on the room slide drive mechanism. However, for smooth reliable operation and proper sealing, the rubber & foam sealing wipers around the slide room should be frequently cleaned and all dirt and debris removed. Commercial products are available which clean, recondition and protect these rubber seals.

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Question and Answer

If you have questions, please feel free to ask us now. Otherwise, we are available and happy to discuss anything presented with you.

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