



BY  **LIPPERT™**

HAPPIJAC® BED LIFT

OWNER'S MANUAL

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Introduction

The HappiJac® Bed Lift System is a chain-driven two trolley lift system operated by a 12V DC motor, which can be installed in most toy hauler trailers. It can accommodate one or two beds, or an alternate of a bed and a dinette/sofa configuration.

Voltage = 12V DC

Nominal Current Draw = 8 to 10 amps (1 bed going up)

12 to 14 amps (2 beds or 1 bed and 1 sofa/dinette configuration going up)

Load Limit = 450 pounds dynamic (moving) load

600 pounds static (stationary) load

NOTE: These ratings are for the lifting mechanism only. HappiJac does not manufacture and therefore does not rate any attachments, such as bed platforms, sofas, etc. Load ratings for these items would be the responsibility of the manufacturer.

This product is designed and intended to be used only as a bed/sofa lift mechanism. Any other use of this system will void any and all written or expressed warranties.

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.

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

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For information on the assembly or individual components of this product, please visit:

<https://support.lci1.com/beds-support-happijac-beds>

Safety

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.

CAUTION

The "CAUTION" symbol above is a sign that a procedure has a safety risk involved that may cause personal injury and/or product damage, including voiding of warranty, if not performed safely and in accordance with the safety procedures stated herein.

CAUTION

Always wear eye protection when performing service, maintenance 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.

Product Component Descriptions

Frame

The lift system frame has four vertical c-channel rails (Fig. 1A). Each c-channel rail encases a chain drive and trolleys (Fig. 2) with attached brackets that travel between upper and lower limit switches.

Fig. 1

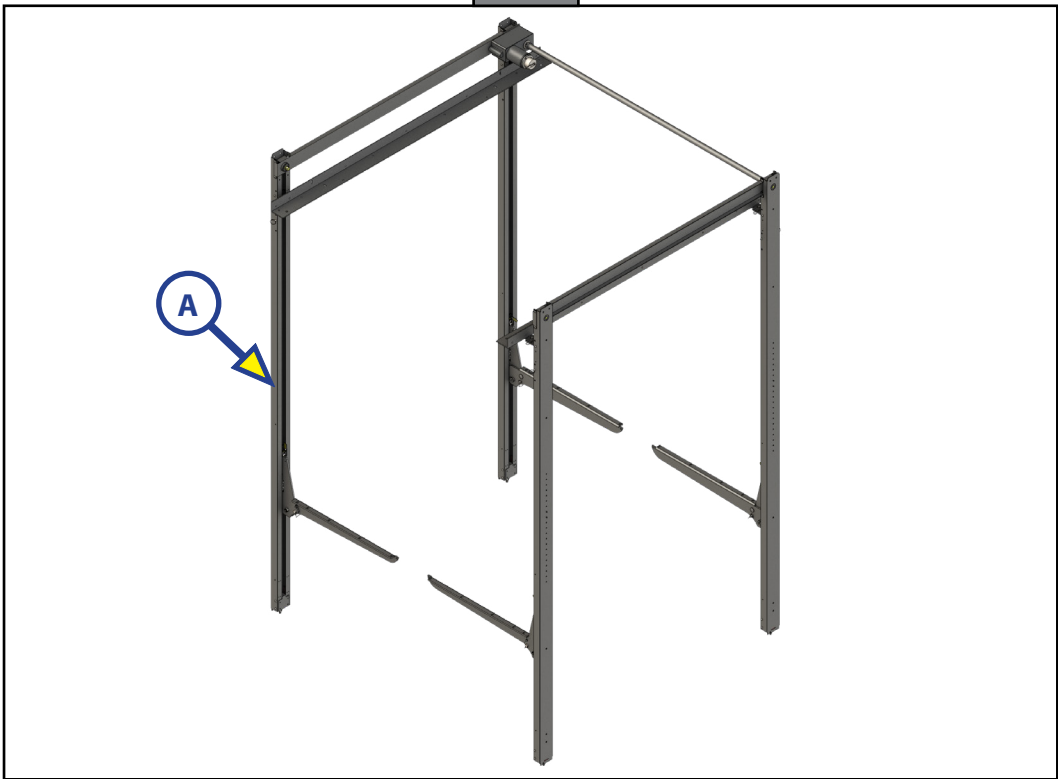
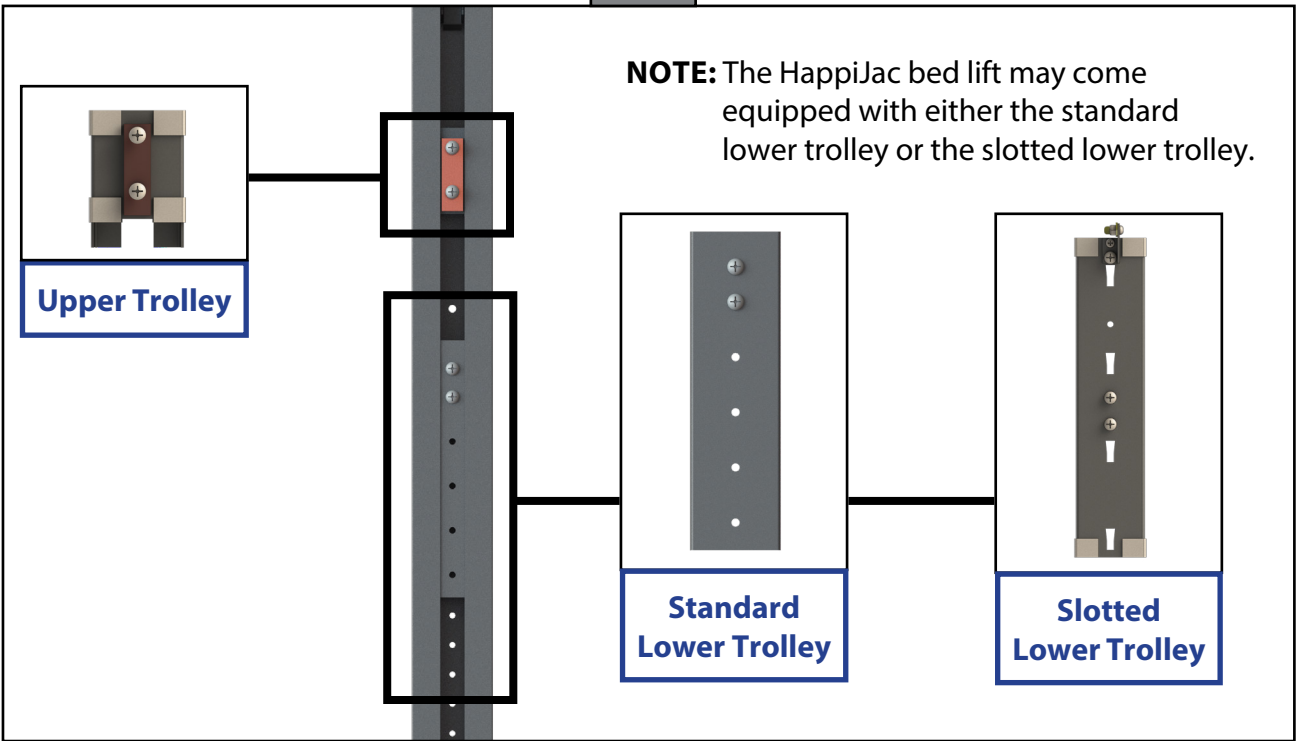


Fig. 2



Brackets

The lift system comes installed with screw-in tab brackets (Fig. 3) affixed to the upper trolleys and/or the lower trolleys. The slotted lower trolleys can be fitted with hooked tab brackets (Fig. 4) for a lower bed platform, or hooked brackets with movable arms (Fig. 5) that can accommodate a sofa/dinette configuration.

Fig. 3



Fig. 4



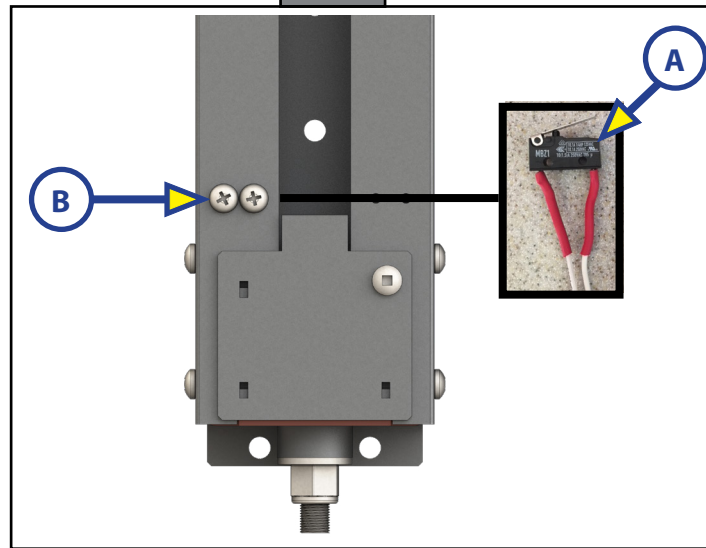
Fig. 5



Limit Switches

Upper and lower limit switches (Fig. 6A) are located behind the C-channel and secured by two small screws (Fig. 6B). The limit switches are used to stop the bed(s) at their maximum travel range. However, the lower bed platform can be stopped and used at any desired height. After the control switch is released, the electric brake is set — securing the bed(s) in the current position.

Fig. 6



For the sofa/dinette configuration, sofas should be run to the lower limit switch stop and the sofa support legs extended before using the sofas.

⚠ CAUTION

Sofa support legs should not contact the floor prior to the bed lift reaching its lower travel limit.

⚠ WARNING

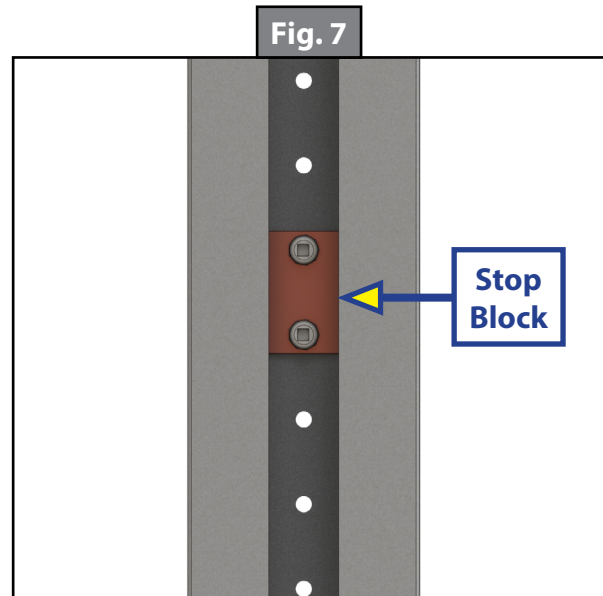
NEVER sit on or use sofas without sofa support legs extended. Failure to do so may result in personal injury and/or damage to the bed lift mechanism.

Bunk Stop Settings

The upper bunk trolley is free-floating and is carried by the lower trolley. The height at which this trolley stops is set by "stop blocks" which sit inside the trolley rails below the bunk trolleys. To change this stop, remove the two screws holding the bed in place, and move it to the desired height (Fig. 7). Repeat for all four corners.

CAUTION

NEVER place the stop block above the bunk trolley.



Operating Precautions

- **ALWAYS** raise the bed(s) to the full up position when the trailer is being towed to avoid damage to the bed lift system as a result of bouncing.
- **ALWAYS** make sure that the areas above, below and adjacent to the bed(s) are free from obstructions before operating the bed(s).
- **ALWAYS** check before operating bed(s) to ensure that there is nothing interfering with the travel of the chain mechanism inside the c-channel.
- **ALWAYS** use care when loading cargo/vehicles in the bed area. This is to avoid damage to the bed mechanism.
- **ALWAYS** properly secure loads in the bed area to avoid damage to the bed mechanism from shifting or falling loads.
- **NEVER** operate the bed(s) with any items other than bedding on the bed platform(s).
- **NEVER** travel with any items other than bedding on the bed(s). Loose items can become projectiles.
- **NEVER** operate the bed(s) when persons or pets are on the bed platform.
- **NEVER** hang from, or hang more than 20 pounds, on the cross-connecting shaft.

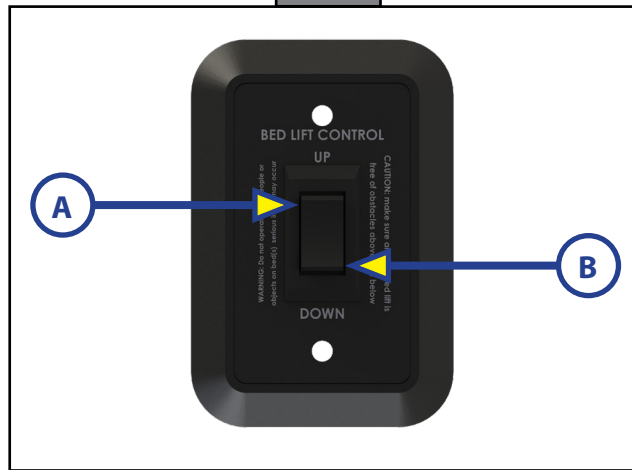
Operation

Control Switch

NOTE: Upper and lower trolleys move together, unless bunk platform trolleys are stowed.

The upper and lower trolleys are operated from the control switch (Fig 8). Pressing and holding the switch in the UP position (Fig. 8A) moves the trolleys upward. Pressing and holding the switch in the DOWN position (Fig. 8B) moves the trolleys downward.

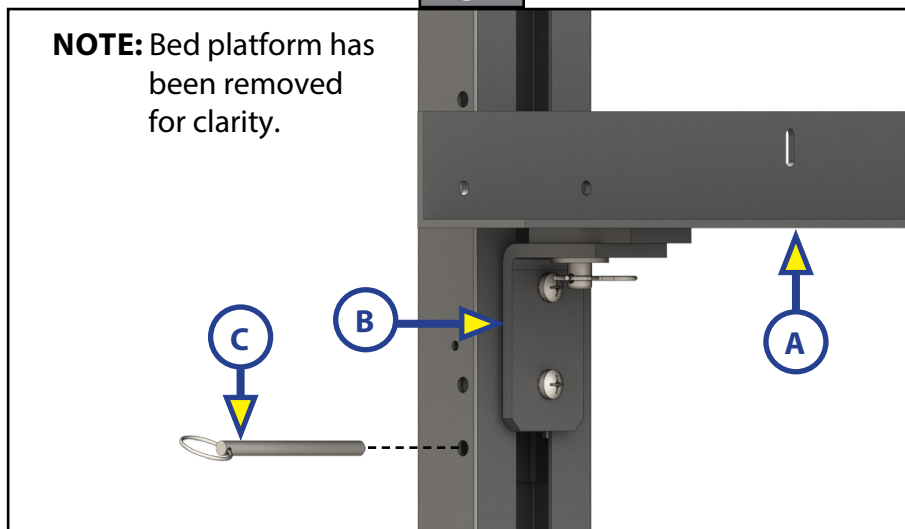
Fig. 8



Upper Trolleys

The upper trolleys are only used to support a bed platform. Bed platform rails (Fig. 9A) are secured to the tab brackets (Fig 9B) and the bed platform rests on the platform rails.

Fig. 9



The upper trolleys can be locked into place with bunk pins (Fig.9C) or the Automatic Bunk Lock-up System Option on the next page.

To stow with bunk pins:

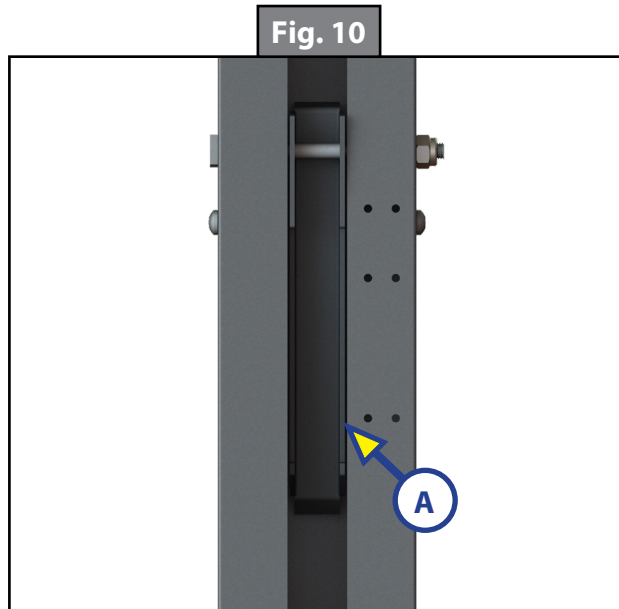
1. Run the beds up to the FULL UP stop.
2. Insert the locking pins through the trolley rails.
3. Lower the bottom bunk to the desired height.

To un-stow with bunk pins:

1. Run the beds up to the FULL UP stop.
2. Remove the locking pins from the trolley rails.
3. Lower both bunks until top bunk rests on the bunk stop and the lower bunk is at the desired height.

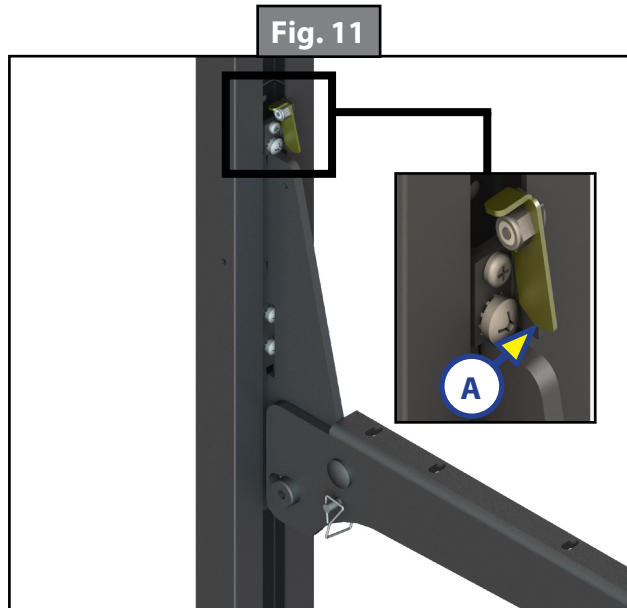
Automatic Upper Bunk Lock-Up System Option

Each of the lower trolleys has a lock-up mechanism attached. This mechanism pushes the upper bunk trolleys into spring-backed bunk lock assembly (Fig. 10A) bolted into the C-channels. This prevents the upper trolleys from lowering when the lower trolleys are lowered.



Locking the Upper Bunk Trolleys

1. If the lower trolleys have a sofa or dinette attached, rotate the seatback(s) to the horizontal position.
2. Flip the locking mechanism tab (Fig. 11A) so the long portion of the tab is outside of the C-channel. Repeat for the other locking mechanisms.



3. Press UP on the control switch until the upper bunk is in the full up position where the bed lift shuts off automatically. This will push the upper trolleys into the locking brackets.

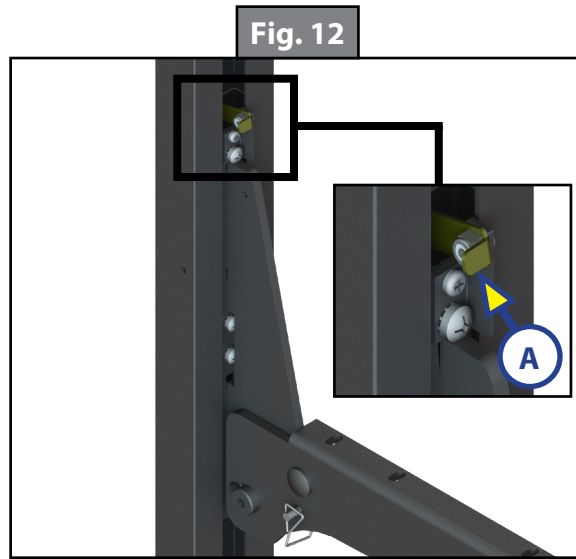
NOTE: There is an audible click when the locking mechanism engages. If the mechanism fails to latch up, check to make sure the bunk lock assembly bolt is not too tight and that the bunk lock assembly mechanism springs back freely within the C-channel..

4. Press DOWN on the control switch to lower the lower trolleys and make sure that the upper bunk trolleys are locked into place.

NOTE: If one or more of the trolleys is not locked into place, check all alignments and component installations. See Timing in the Adjustments section (pg. 10) for checking and correcting alignment.

Releasing the Upper Bunk Trolleys

1. Flip the locking mechanism tab (Fig. 12A) to the release position, where the long portion of the tab is inside the C-channel. Repeat for the other locking mechanisms.



2. Press the UP switch until the lower trolley disengages the upper bunk from the locking mechanism.
3. Press the DOWN switch to bring down the upper bunk trolleys along with the lower trolleys.

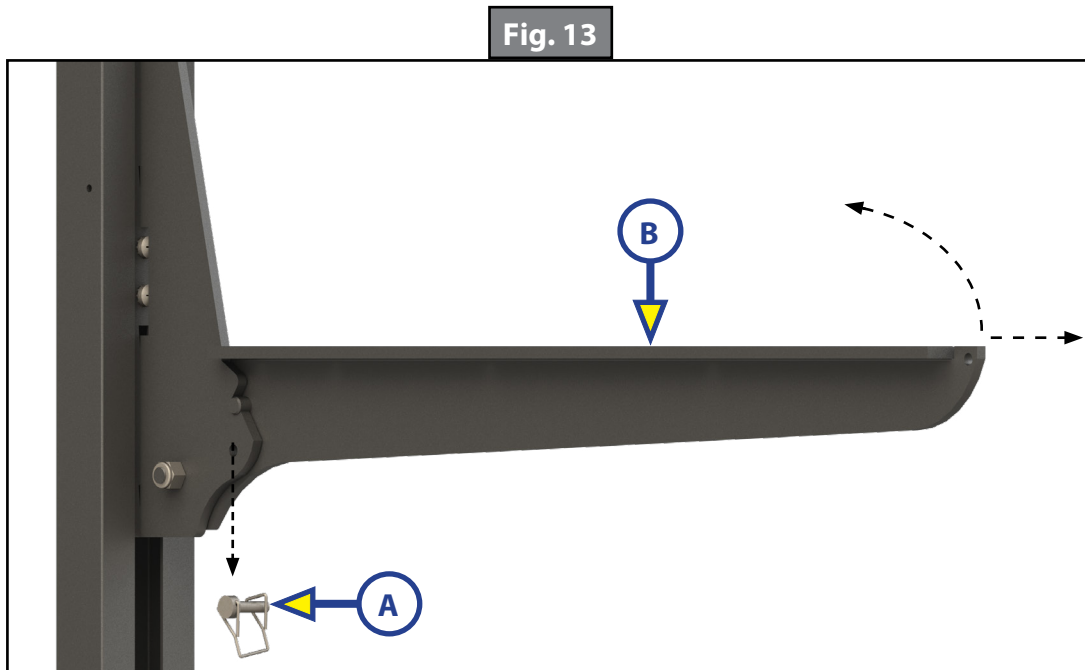
Lower Trolley: Sofa or Dinette Configuration

The lift system can be configured to accommodate a bed on the upper trolley and a sofa or dinette on the lower trolleys. The sofa or dinette will need extra brackets that will lock into the lower trolleys.

NOTE: Bracket shown without sofa or dinette attached. Consult the manufacturer's instructions for bracket installation on sofa or dinette units.

Lowering the Arm

1. Remove the lockpins securing both bracket arms (Fig. 13A).
2. Pull up slightly on the bracket arm (sofa or dinette seat base) (Fig. 13B), then pull out.



3. Gently lower the arm (sofa or dinette seat base).
4. Re-insert lockpins.

Adjustments

Timing

Resources Required

- Tape measure
- 1/2" Socket wrench
- 1/8" Allen wrench
- Minimum of 2 people

To make sure all four corners of the HappiJac bed lift upper bunk will latch and unlatch properly the main trolleys on the off-motor side (Fig. 14A) must be set to 1/4" to 1/2" higher than the motor side. This applies to bed lifts with the Automatic Bunk Lock-up System installed, or bed lifts that can be pinned up properly if pinning option is installed.

This compensates for slack in the system and ensures that all four corners pull up tight. This can be measured at the bottom of the c-channel (Fig. 15A). If adjustment is required, follow the steps below:

1. Press the down switch and lower the beds to the lower stop.

Fig. 14

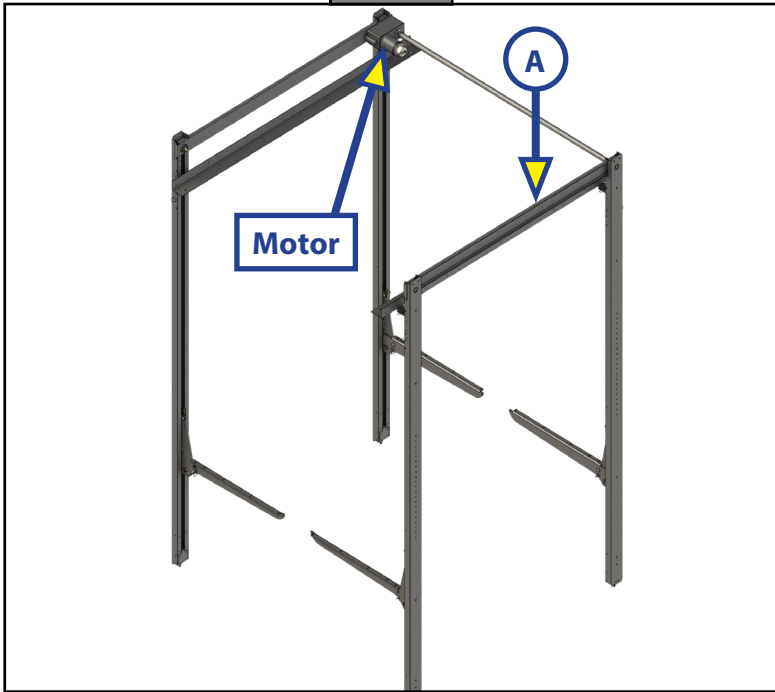
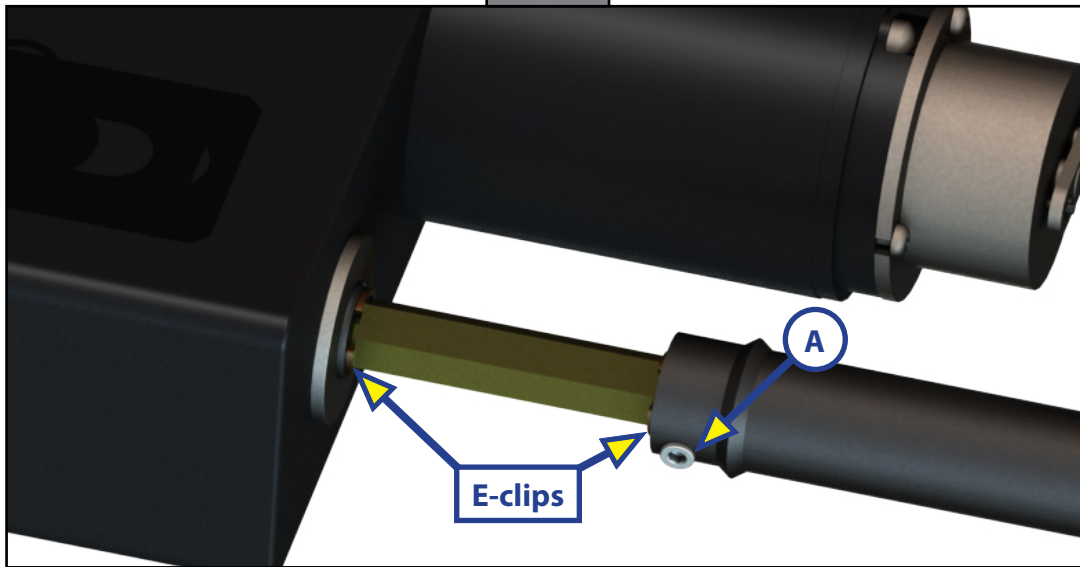


Fig. 15



2. Disconnect the non-motor end of the cross-connecting shaft as follows:
 - A. Loosen the 1/8" allen set screw at the motor end of the shaft (Fig. 16A).

Fig. 16

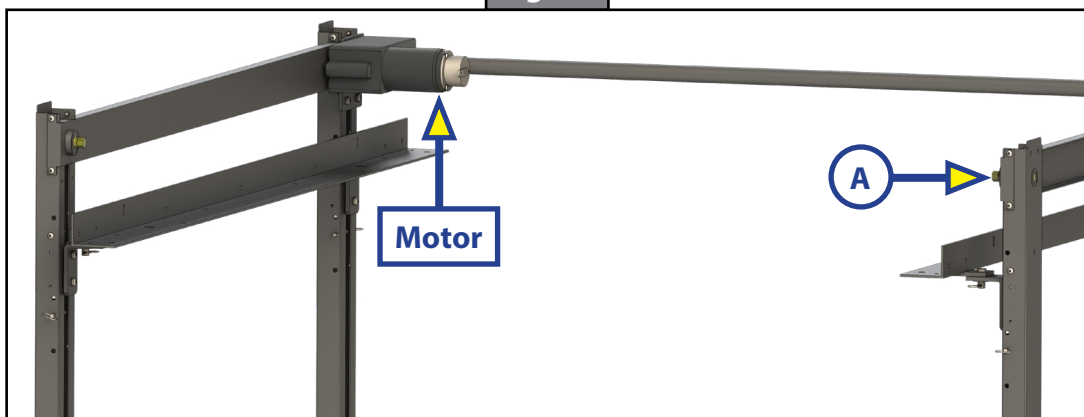


- B. If the hex shaft connecting the motor to the cross-connecting shaft has two e-clips on it (Fig. 16), remove the one closest to the cross-connecting shaft. If only one e-clip is installed against the motor, proceed to step C.
- C. Working from the non-motor end, push the cross-connecting shaft towards the motor until it releases completely.

NOTE: Lifting on the bottom bed/sofa to relieve torque on the shaft will help.

- D. Once released, remove the cap from the cranking point (Fig. 17A) on the non-motor side of the bed lift and place a 1/2" socket wrench over the hex shaft.

Fig. 17



- E. Using a socket wrench, move the non-motor side to the desired height (1/4" to 1/2" higher than the motor side) and hold at that position while the cross-connecting shaft is reinstalled.

NOTE: It may be necessary to rotate slightly one way or the other to align the hex shaft with the cross-connecting shaft.

- F. Be sure both the non-motor end of the cross-connecting shaft is fully seated (no hex showing) and the hex shaft at the motor end is fully seated (e-clip flush against the motor), then retighten the 1/8" allen set screw. If an e-clip was removed, reinstall it.
3. Run the beds to the full-up position and test that all four corners latch properly, or that all four pins can be easily installed if using the pinning system.
4. Replace the cap removed in Step 2D.

Upper Trolley Tab Rotation

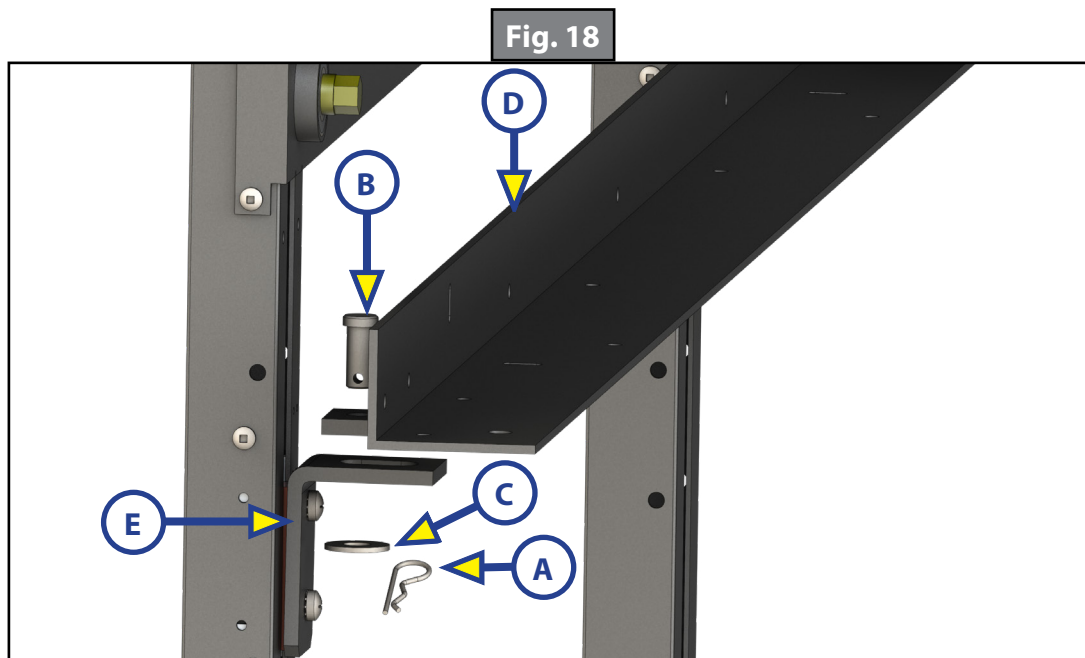
Resources Required

- Phillips head screwdriver

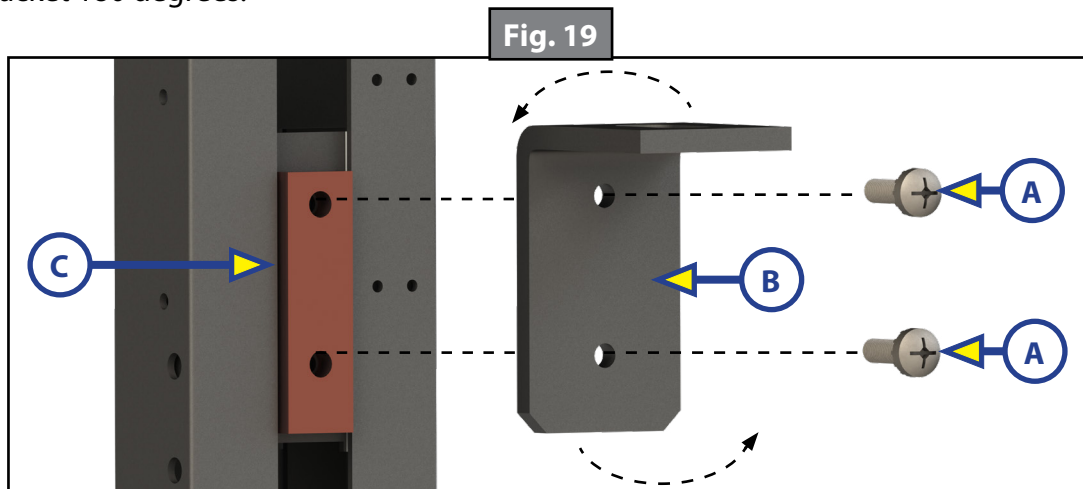
The upper trolley tabs can be rotated to change the amount of space between the bed platform and the upper bunk stop.

NOTE: If the upper bunk is in a locked position, see Automatic Upper Bunk Lock System for instructions on releasing the bunk lock.

1. Press the DOWN switch to lower the upper bunk.
2. Remove the bunk platform by following the steps below:
 - A. Remove the hairpin (Fig. 18A) securing the clevis pin (Fig. 18B) and washer (Fig. 18C).
 - B. Remove the clevis pin holding the bed lift rail (Fig. 18D) to the tab bracket (Fig. 18E).
 - C. Repeat for the other side.
3. Carefully remove the bed platform (two people required).



4. Remove the screws (Fig. 19A) securing the tab bracket (Fig. 19B) to travel block (Fig. 19C), then flip the tab bracket 180 degrees.



5. Re-attach the tab to the travel block.
6. Repeat for the other tab brackets.
7. Place the bunk platform on the trolley tabs.
8. Secure the bunk platform to the trolley tabs with the clevis pins and cotter (hair) pins.
9. Reattach bunk hardware pins.

Lower Trolley Sofa/Dinette Bracket Removal

Resources Required

- Phillips head screwdriver

The sofa/dinette brackets can be removed from the lower trolleys and trolley tabs can be added to accommodate a second bed platform. See Lower Bunk Trolley Tab Installation for instructions on adding trolley tabs.

1. Remove the sofa/dinette configuration or bed platform from the support brackets.
2. Remove the stop screw (Fig. 20A) securing the support bracket, then remove the screw (Fig 20B) securing the upper bunk lock mechanism bracket (Fig. 20C) and remove the bracket.
3. Grasp the base of the sofa bracket (Fig. 21A) and pull up until the hooks are even with travel trolley slots (Fig. 21B), then pull the sofa bracket away from the travel trolley.
4. Repeat for other brackets.

Fig. 20

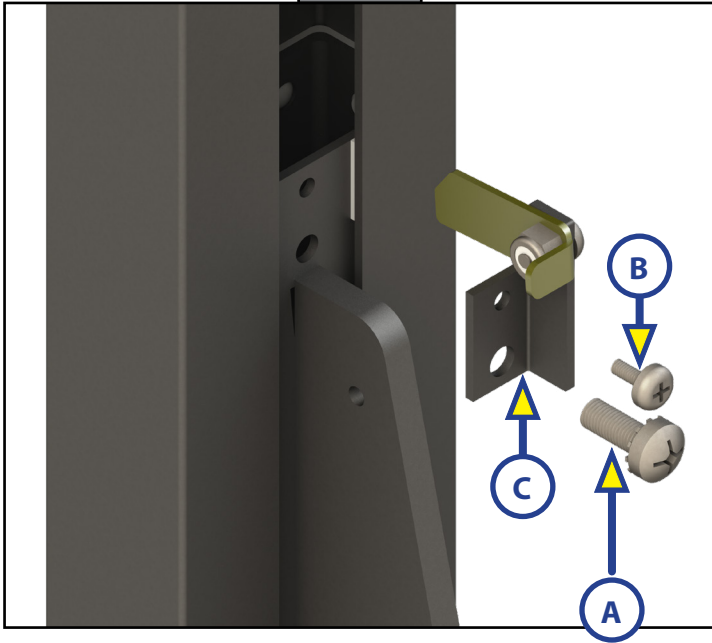
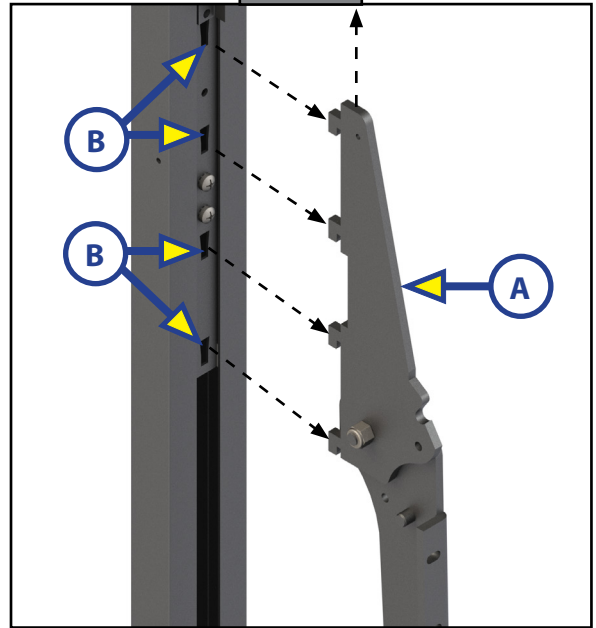


Fig. 21

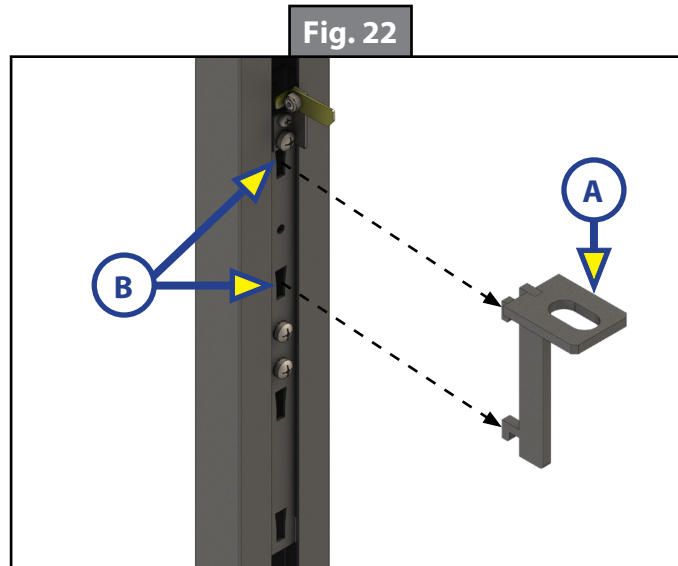


Lower Bunk Trolley Tab Installation

Trolley tabs can be added to the lower trolleys to accommodate a bed platform, after the sofa/dinette brackets have been removed.

NOTE: There are four slots in the lower trolley. This trolley tab can only be installed into the top two slots. The bracket can only be installed with the trolley tab at the top.

1. Remove the sofa brackets from the lower travel trolley. See Lower Trolley Sofa/Dinette Bracket Removal.
2. Line up the hooks on the edge of the trolley tab bracket (Fig. 22A) with the channels (Fig. 22B) in the travel trolley, then push the brackets into the channels.
3. Push the bracket down so it locks into the trolley tab channels.
4. Insert the stop screw, or lock-up mechanism (if so equipped), above the slotted trolley tab.
5. Repeat for other trolley tabs.



Maintenance

The bed lift system requires very little maintenance. The chains are pre-lubricated and nickel-plated to prevent corrosion. All bearings are sealed and all parts are either plated or finished with a durable powder-coat finish.

The only required maintenance involves keeping the mechanisms clean and free of debris. When cleaning the trailer after use, inspect the vertical trolley channels for dirt or debris and clean as necessary. After cleaning, a light application of dry silicone spray on the inner sides of the trolley channels will improve performance and reduce noise and required amperage draw.

Troubleshooting

What Is Happening?	Why?	What Should Be Done?
Bed(s) will not move either up or down when switch is pressed.	No or insufficient power to operate the bed(s).	Make certain trailer batteries are adequately charged, connect to shore power or a generator.
	Faulty control module.	Replace module.
	Faulty UP/DOWN switch.	Replace switch.
	Defective motor.	Contact Lippert Customer Service.
Bed travels in only one direction.	Defective limit switch.	Replace limit switch.
	Faulty control module.	Replace module.
	Faulty UP/DOWN switch.	Replace switch.
	Faulty brake.	Set manual brake release lever on motor to the "OFF" position. If the bed(s) move, replace the faulty brake.
Bed lowers, but stops part way going up.	Insufficient power to bed.	Make certain trailer batteries are adequately charged, connect to shore power or a generator.
	Defective motor/brake assembly.	Contact Lippert Customer Service.
Bed does not stay level; side-to-side or front-to-back.	Broken or loose timing shaft.	Contact Lippert Customer Service.
	Broken chain sprocket.	Contact Lippert Customer Service.
When lowered, bed fails to stop at preset stop point.	Motor brake not engaging.	Contact Lippert Customer Service.
	Defective limit switch.	Replace limit switch.
When raised, bed fails to stop at preset stop point.	Defect or damaged limit switch.	Replace limit switch.
Upper bunk (two-bed system) does not lower smoothly.	Sticky bed carrier.	Spray a small amount of dry silicone lubricant into the rails.
Bed(s) are drifting down.	Brake lever is off	Reset the brake lever.

Motor failures are extremely rare and motors are expensive. If uncertain of failure, contact Lippert customer service at customerservice@lci1.com or 432-LIPPERT (432) 547-7378 before replacing the motor.

Emergency Manual Operation

⚠ WARNING

Before releasing the brake in manual mode, make sure there are no obstacles below the bed(s), sofa or dinette. Be prepared to apply the brake, if necessary, and make sure to move the brake back into the ON position once the desired height is reached.

⚠ CAUTION

When bed(s)/are not being manually raised or lowered, the brake **MUST** be set or the bed(s) will drift down, causing possible personal injury, product or property damage.

Manually Raise the Bed(s)/Sofa or Dinettes

Resources Required

- 1/2" Socket and ratchet

1. Unplug the motor harness from the motor port (Fig. 23A) on the PnP control module.

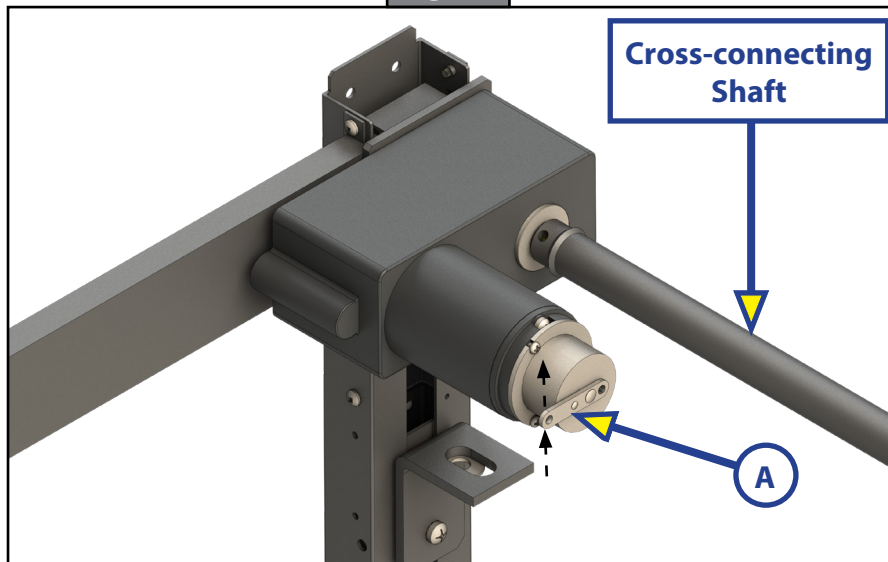
NOTE: The PnP control module could be mounted in other locations close to the motor.

Fig. 23



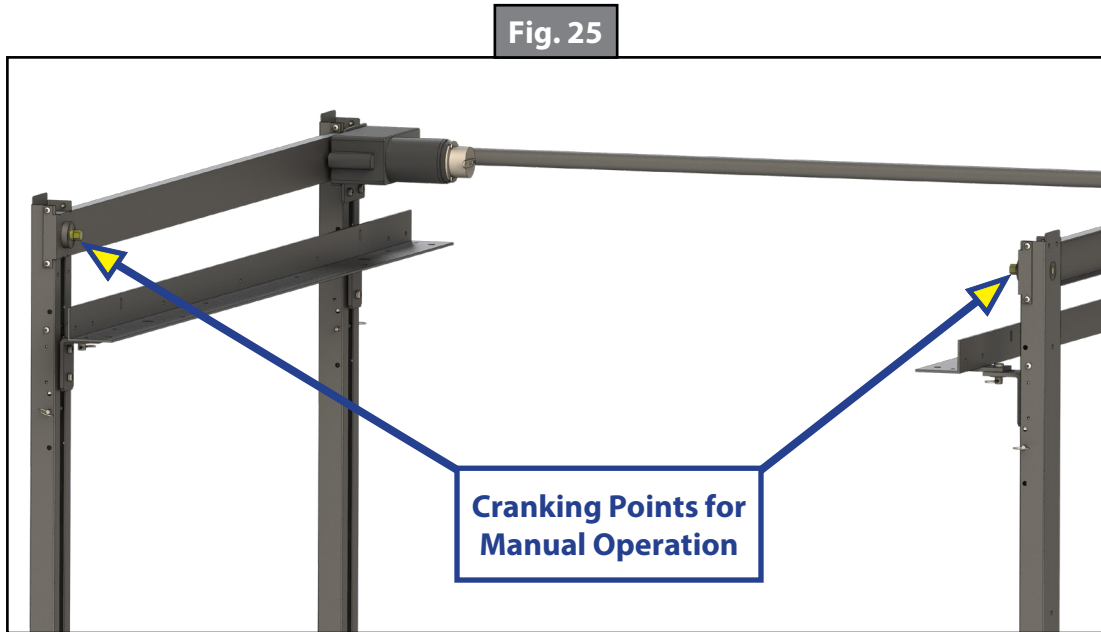
2. Release the brake by moving the release level to the "OFF" position (Fig. 24A).

Fig. 24



3. Remove the caps from the cranking points, which are located at the top of the front c-channels (opposite of the c-channels where the motor and cross-connecting shaft are installed).
4. Using a 1/2" socket and ratchet, manually crank the bed lift (Fig. 25).

NOTE: Cranking is easier if two people crank simultaneously, one on each side of the bed lift.



5. Apply brake at the desired bed height, then raise the brake release handle.
6. Reconnect the motor harness.

Manually Lowering the Bed(s)

1. Unplug the motor harness from the PnP control module (Fig. 23).

⚠ CAUTION

Before releasing the brake in manual mode, make sure there are no people, pets or obstacles below the bed platforms. Keep hold of the brake lever as the bed(s) lowers. Be prepared to apply the brake if necessary.

2. Move brake release lever to "OFF" position to release. (Fig. 24A). Bed will drift downward.
3. Re-apply the brake when the desired bed height is reached.
4. Reconnect the motor harness.



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