

Motor & Brake Test

The motor and brake assembly is best tested by jumpering 12-14 vdc directly to the motor. This is done as follows:

1. Position the bed well out of the upper & lower limit switches.
2. Remove the cover plate from the wall or ceiling where the motor wires are attached. This will reveal a small circuit board on which is a terminal block into which the motor leads are connected.
3. Unscrew the terminals securing the motor leads.
4. Jumper the motor leads directly to a good 12-14 vdc supply. (This can be a full size battery, or simply a well charged battery from a cordless drill , etc). Run the bed only long enough to check performance. **CAUTION - Do not run the bed into the limit switches!** They are no longer active in the circuit and will not stop the bed. Damage to the switches, mechanism or coach could occur, Reversing the leads will reverse the motor direction.
5. If the bed does not operate will in this test mode, the problem may still be unrelated to the motor. **Motor failures are extremely rare.** Before replacing the motor, contact Happijac technical support at **1.800.231.7440**

System Specifications:

Voltage = 12 VDC.

Nominal current draw = 8 amps (1 bed going up)
12 amps (2 beds going up)

Load limit = 450 pounds dynamic (moving) load.
600 pounds static (stationary) load.



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HAPPIJAC

**CHAIN DRIVE BED-LIFT
USERS MANUAL**

Product Usage:

This product is designed and intended **ONLY** to be used as a Bed-Lift mechanism. Any other use of this system will void any and all written or expressed warranties and indemnify **Happijac Company** from any harm which may occur as a result of any other use or misuse of this product.

Operating Precautions:

CHECK...to be sure the locking pins are securely fastened in all 4 attaching points on the bed platform before towing the trailer or using the bed(s).

ALWAYS.Raise the bed(s) to the **FULL UP** position when the trailer is being towed **TO AVOID DAMAGING THE BED(S).**

NEVER...Operate the bed(s) with any items other than bedding on the bed platform.

NEVER...Travel with any items other than bedding on the beds.

NEVER...Operate the bed(s) when persons are on the bed platform.

NEVER...Hang from, or hang more than 20 pounds from the cross-connecting shaft.

ALWAYS.Ensure that the areas above, below and adjacent to the bed(s) are free from obstructions before operating the bed(s).

ALWAYS.Check before operating the bed(s) to ensure bedding is not over-hanging the ends of the bed(s) where it could become entrapped.

ALWAYS.Exercise care when loading cargo/vehicles in the bed area to avoid damaging the bed mechanism.

ALWAYS.Properly secure loads in the bed area to avoid damaging the bed mechanism from shifting or falling loads.

Operation Instructions:

The bed(s) is/are operated from the control switch. Pressing and holding the switch in the UP position moves the bed(s) upward. Pressing and holding the switch in the DOWN position, moves the bed(s) downward.

Limit switches are used to stop the bed(s) at their maximum travel range. However, the bed(s) can be stopped and used at any desired height. Once the control switch is released, the brake sets, securing the bed(s) in that position.



User configuration options:

The following user configuration options are possible.

Trolley Tab Settings

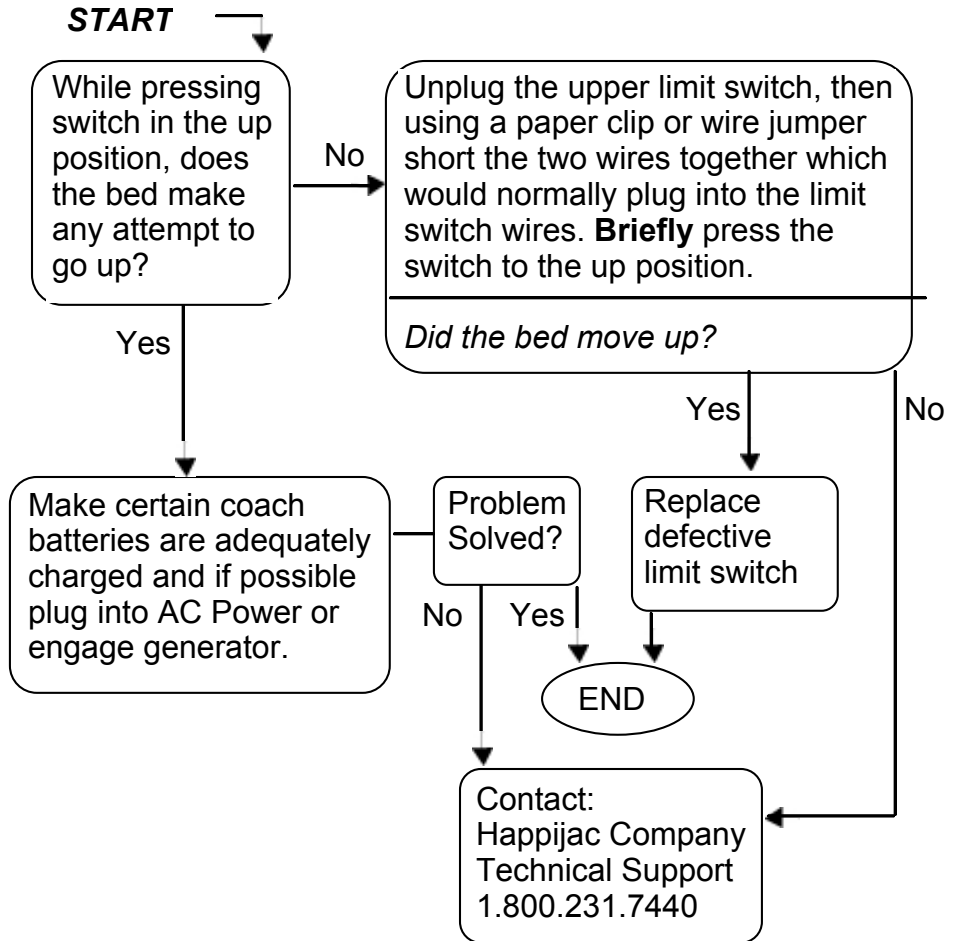
The "Trolley Tabs" are the angular pieces which support the bed platform. These can be adjusted upward, downward or flipped 180 degrees. The purpose for this adjustment option is to provide greater flexibility in configuring the system for users specific needs. Examples would include: Creating more headroom when the beds are up or creating more spacing between the beds in a " bunk bed" (2 bed) system . See the following illustrations.

Examples of optional Trolley Tab configurations.



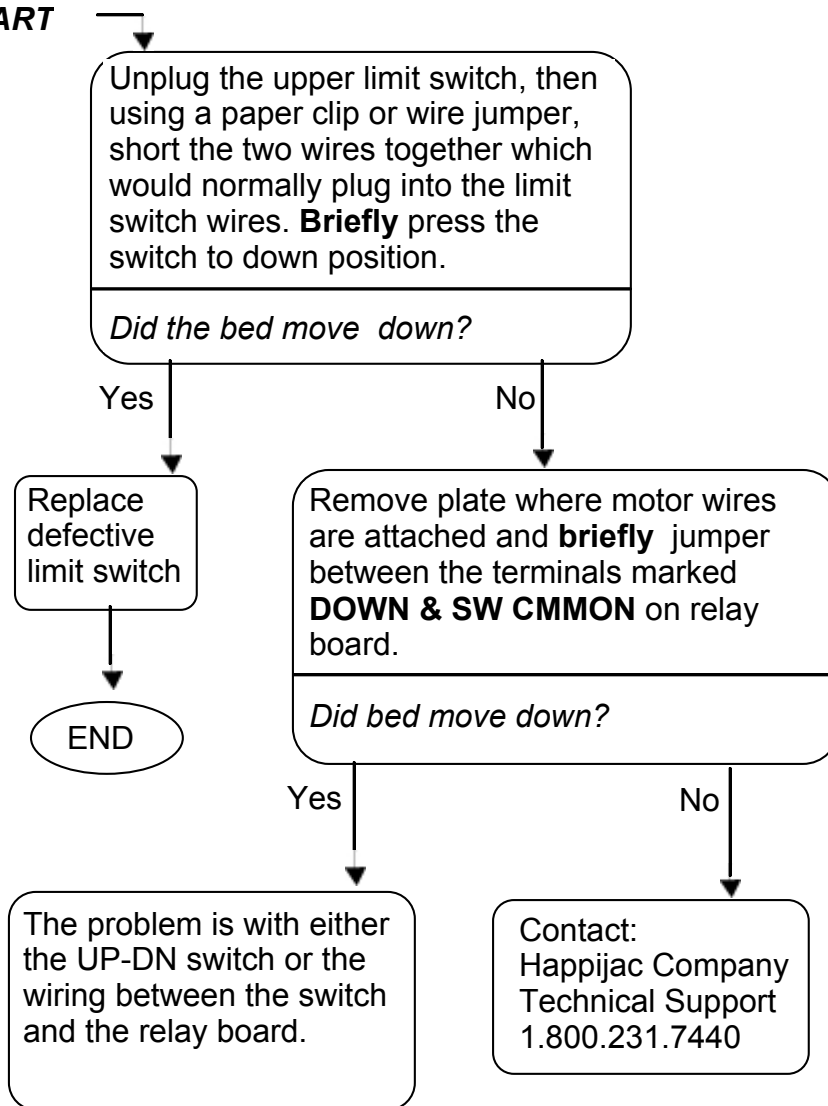
Single bed units can be easily upgraded to bunk bed (2 bed) units by installing the trolley tabs to the existing second trolley and adding a bed platform and mattress.

Problem: Bed will go down but will not go up.



Problem: Bed will go up but will not go down.

START



Bunk Stop Settings (Upper trolley stop):

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. To change this stop, remove the 2 screws which hold it in place and move it to the desired height. (All 4 corners)



Stowing The Top Bunk: (2 BED CONFIGURATION)

The bed lift system has a stow feature for the top bunk which leaves it in the travel position at the ceiling while allowing the lower bunk to be set at a usable height.

To Stow

1. Run the beds to the FULL UP stop.
2. Insert the locking pins through the trolley rails as shown in the photo below.
3. Lower bottom bunk to desired height.

NOTE: The bunk platforms removed for photo clarity only. Platform removal not necessary to stow



To Release From Stow Position

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

Maintenance:

The HAPPIJAC 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 mechanism 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 silicone spray on the inner sides of the trolley channels will improve performance and reduce noise and amperage draw.

(Silicone spray can be purchased at hardware & auto parts stores. Look specifically for the brands which provide a small spray tube. This makes application much easier.)

Troubleshooting & Repair:

Symptom	Possible Cause
Bed will not move either up or down when switch is pressed. See diagnostic flow chart page 5	<ol style="list-style-type: none"> No or insufficient power to operate bed. Faulty relay board. Faulty switch. Defective motor.
Bed will go one direction but does nothing when switch is pressed for the other direction. See diagnostic flow charts pages 6 & 7.	<ol style="list-style-type: none"> Defective limit switch. Faulty relay board. Faulty key switch.
Bed operates going down but stops part way going up.	<ol style="list-style-type: none"> Insufficient power to bed, Defective motor/brake assembly. <p>See test on page 8.</p>
Bed will not stay level side to side or front to back.	<ol style="list-style-type: none"> Broken timing shaft. Broken chain sprocket.
Bed fails to stop at the preset stop point when coming down.	<ol style="list-style-type: none"> Motor brake is not engaging. Defective limit switch. <p>See test on page 8.</p>
Bed fails to stop at the preset stop point when going up.	<ol style="list-style-type: none"> Defective or damaged limit switch.
Upper bunk (2 bed system) Does not come down smoothly.	<ol style="list-style-type: none"> Sticky bed carrier. Spray a small amount of silicone lubricant up both inner sides of all 4 rails. <p>(See maintenance section.)</p>

Troubleshooting Flow Chart:

Problem: Bed will not move either up or down when switch is pressed.

