

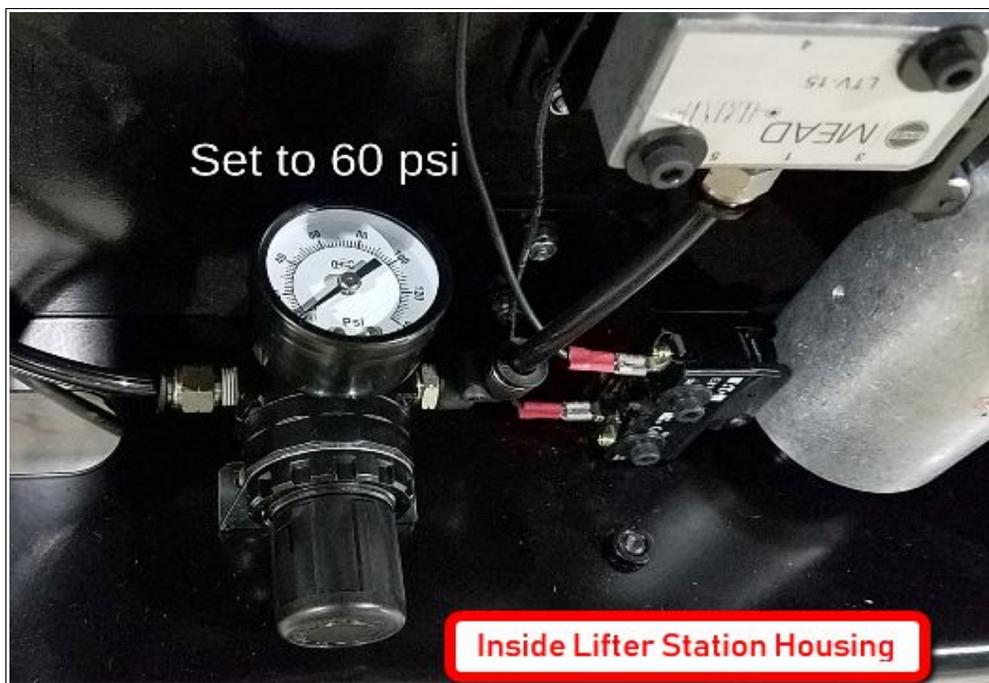


**BEND-TECH, LLC.**

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## Lifter Station Adjustment Guide

This troubleshooting guide will address issues with the material lifter station on the Dragon A400 machine. In some cases, the PSI set for the lifter station is insufficient and simply must be adjusted, or the lifter station leg is not level vertically, but in all other cases, refer to this guide.



### Scenario #1

- In the case that your chuck trolley is making contact with your lifter arm when your lifter is in its home position, it's likely that your lifter homing trigger switch is not set properly, or your collar sleeve inside the lifter station has become loose and has dropped downward. In either case, refer to the steps starting on page 2 of this guide.

### Scenario #2

- In the case that your lifter arm isn't swinging out of the way of the chuck trolley as it's moving **DOWNWARD** causing the arm to hang up on the top side of the rail, it's likely that the air pressure output from the air cylinder needs adjustment. For this, see the steps on page 5 and 6 of this guide.

## **Scenario #1: My Chuck Trolley is Colliding with my Lifter Arm.**

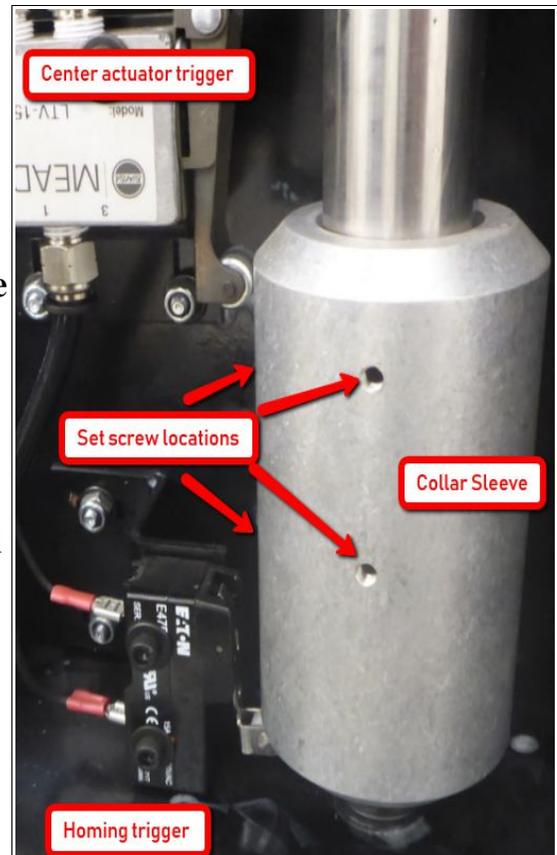
1. With your Dragon machine powered ON, remove the Lifter Station's back panel by first removing the 1/8" allen head bolts (x17) securing it. Set aside.

Inside the Lifter Station, the collar sleeve is the adjustable cylindrical component that determines when the lifter arm is home by making contact with the Home trigger switch. The location of this collar sleeve (if set too low) can cause the lifter arm to be set too high when it's in its home position. The locations for the set screws on the collar sleeve are shown to the right.

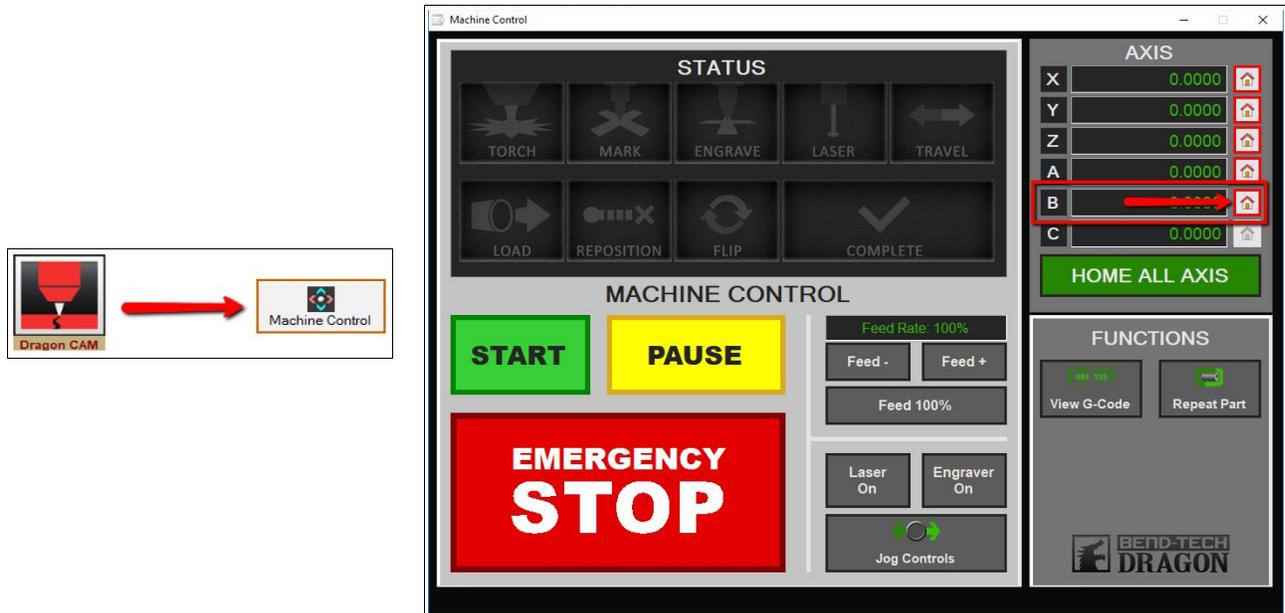
2. Before checking the collar sleeve set screws, first ensure that your homing trigger switch is set. It should be bottomed out (or very close to) on the base of the lifter station housing. If it isn't set in this fashion, loosen the allen head bolts securing it, then lower it and re-secure the switch.

In the case that your homing trigger switch was loose and only needed adjustment you will be finished with this guide and can re-attach the lifter housing panel...

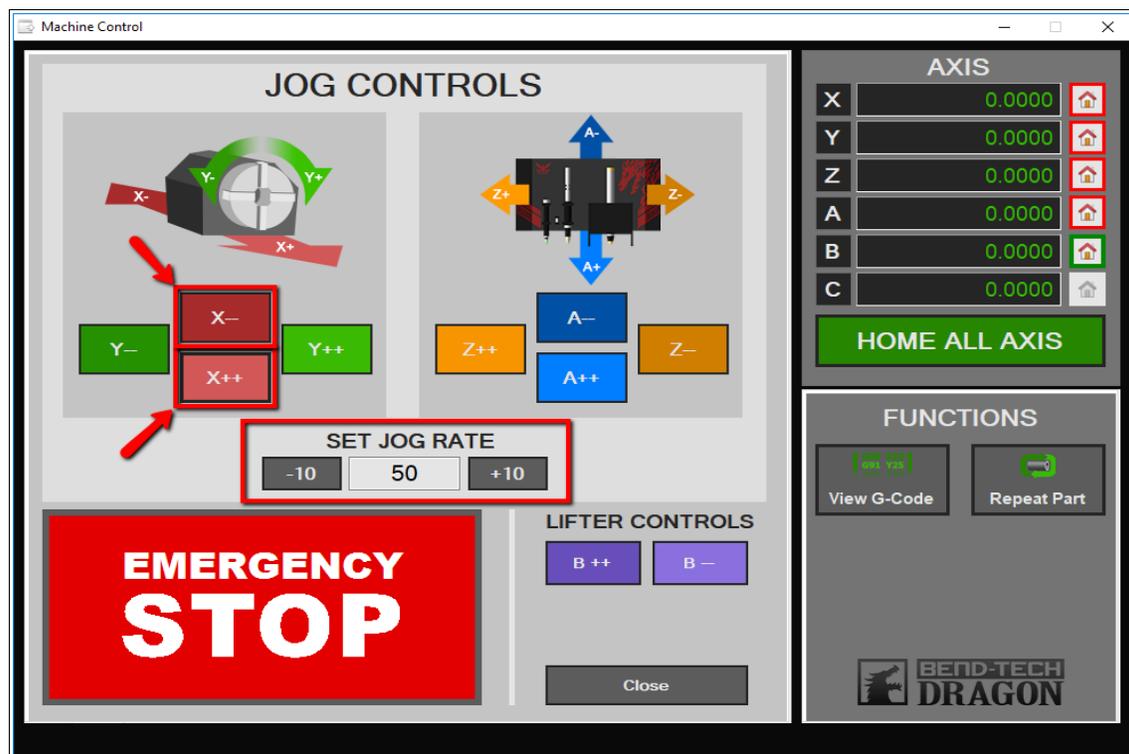
...To check, follow through with step 3 and 4 on the next page.



3. At your computer, open the Machine Control screen in the Dragon CAM software, then click on the Home button for the lifter station (the house icon for the B-axis to the far right) so that the collar sleeve lowers to touch the limit switch and then raises off of it.

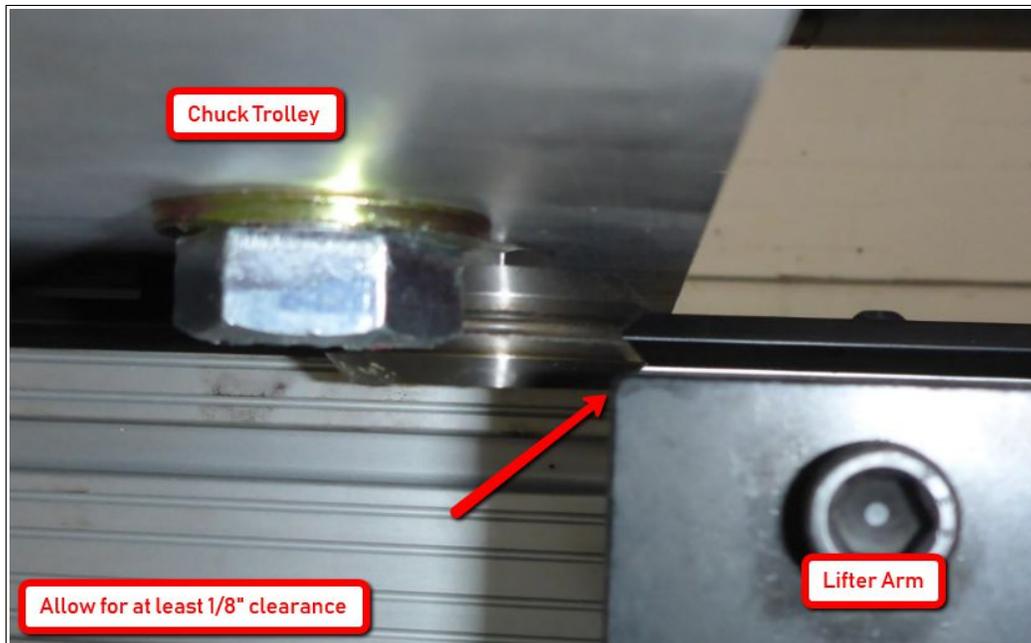


4. Once the lifter is home, click on the Jog Controls in the Machine Control screen and use the X-- and X++ buttons to jog the chuck trolley close to the lifter arm to better judge the distance (if any) needed to lift the collar sleeve.



5. If additional clearance is needed, using an allen/hex wrench loosen the 4 set screws on the collar sleeve and raise it to provide at least 1/8" of clearance from the chuck trolley bearings to the top surface of the lifter arm. See picture below.

**Disconnecting the air line from the lifter station will help you in rotating the lifter arm to access the 2 hard-to-get-at set screws.**



6. Once the collar sleeve has been mounted in its new position, home the lifter once more by clicking the B-axis home icon on your computer and slowly jog the X-axis close to the lifter station once again to ensure that the chuck trolley will clear the lifter arm.

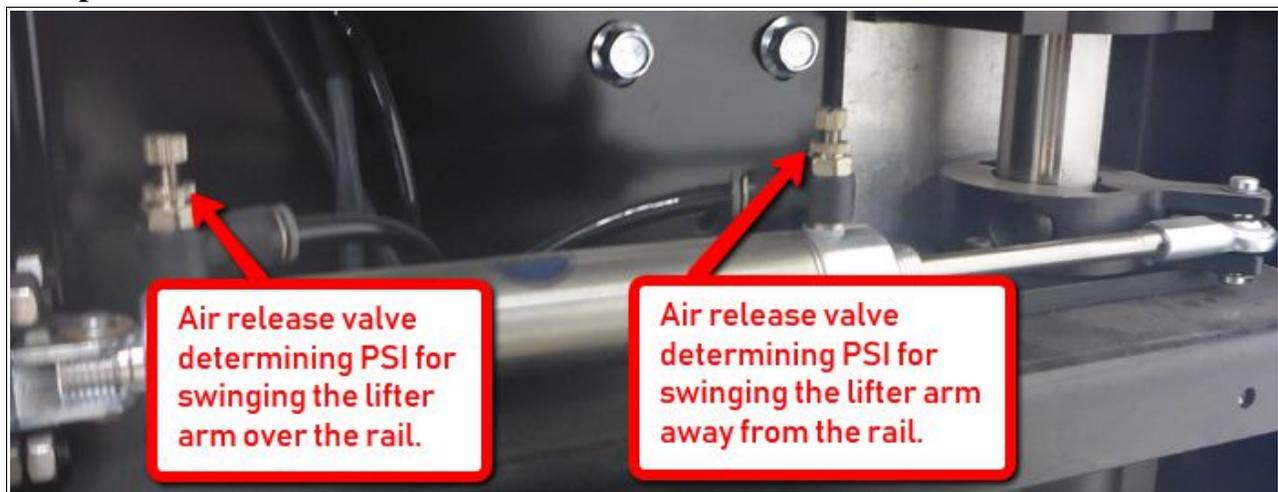
**If the collar sleeve was the issue in this case, then you are finished with this guide, you can re-attach the lifter housing panel and take out the time to re-calibrate your lifter station located in CAM – Machine Library – Wizard. THIS IS MANDATORY IN THIS CASE.**

**Then, you will be able to continue running operations on your machine as before.**

## **Scenario #2: My Lifer Arm is Hanging Up on the Top Side of the Rail.**

1. With your Dragon machine powered ON, remove the Lifter Station's back panel by first removing the 1/8" allen head bolts (x17) securing it. Set aside.
2. Inside the Lifter Station, ensure that the PSI is set to 60 on the air regulator.

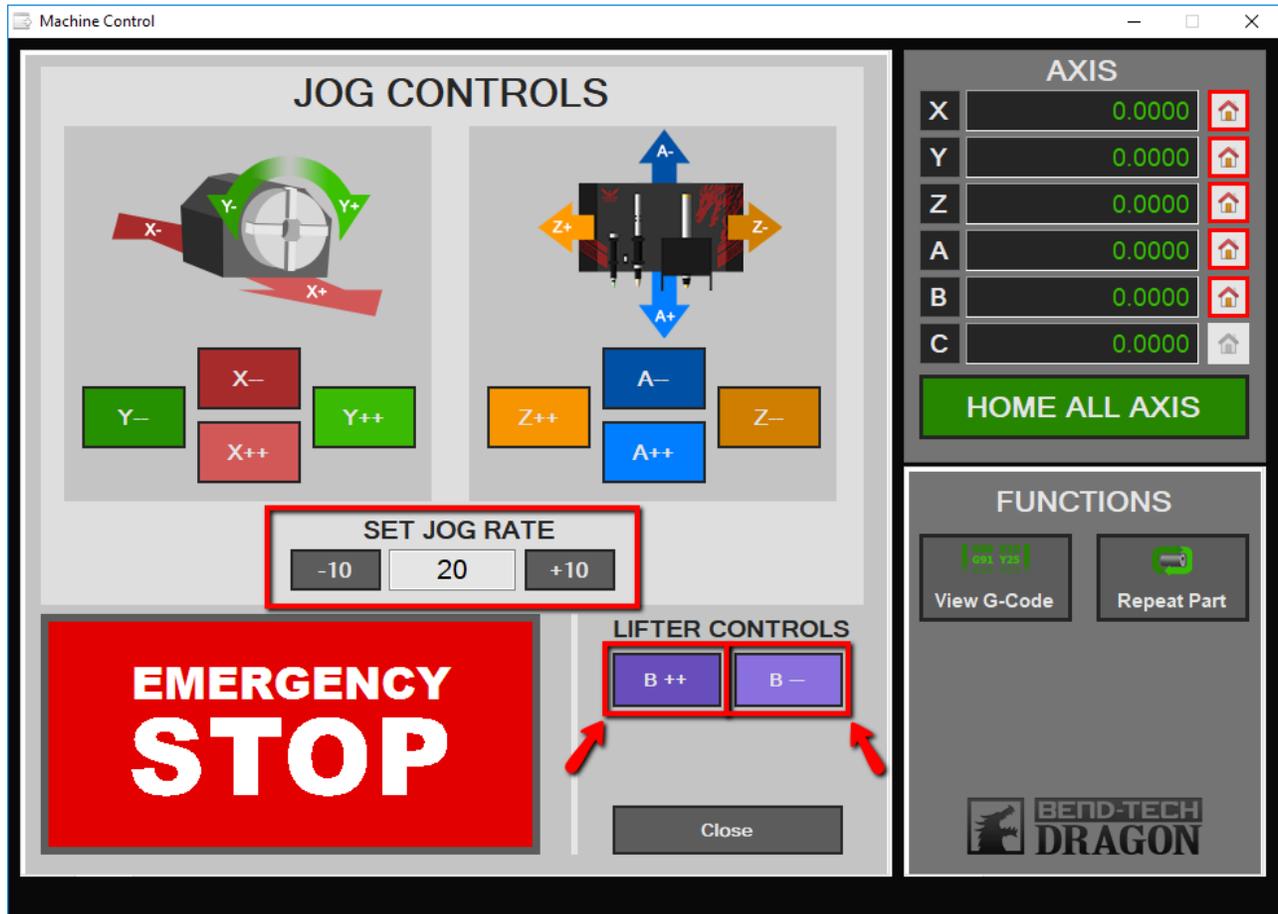
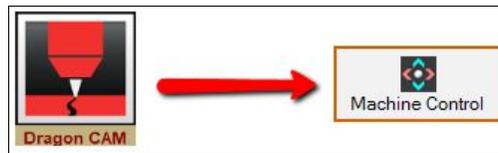
The air cylinder located at the top section of the housing will control how much air is administered to the lifter arm in order to actuate it. See the picture below.



3. Turning the dial COUNTER-CLOCKWISE on the RIGHT-MOST air valve will increase the airflow for swinging the arm away from the rail. We advise small adjustments of about a quarter turn and then administering a test.

**It is important not to open this valve TOO MUCH. If the valve is too open, then the lifter arm will slam out of the way and the vibrations from that can cause a sensor trigger to activate during operation.**

4. To test, open the Machine Control screen in the Dragon CAM software. Click on the Jog Controls button, change the Jog Rate to 20 (homing speed) and jog the lifter station upward using the B+ button until the arm swings over the rail. Then, likewise, use the B- button to cause the lifter arm to move down and see if your adjustment fix has changed the speed at which the arm moves out of the way.



5. If the arm continues to hang up on the rail, repeat steps 3 and 4 until the speed of the lifter arm is quick enough to avoid making contact with the rail and does not activate a limit sensor accidentally.

If the lifter release valve was the issue in this case, then you are finished with this guide, You will not need to re-calibrate your lifter station and can continue running operations on your machine as before.

**Thank you for reading this helpful guide.**

**If you have questions or concerns please contact a Bend-Tech representative using  
the information provided below.**



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