

## Service Support Spirit

### How to solve the Tube-MINI Lifter does not move

➔ Problem: The Tube-MINI Lifter does not move when pressing UP and DOWN

- Solution overview:
1. The [COLLISION] indicator light is on;
  2. Output signal cable problem;
  3. The Limit switch of the lifter is damaged;
  4. THC output signal problem;
  5. Lifter driving motor problem;

#### Problem analysis:

- ✦ 1. The [COLLISION] indicator light is on;

**Solution:** When the [COLLISION] indicator light is on, means the outside has a collision signal input to the THC, The lifter is moving up, Lifter does not move when pressing UP and DOWN



Error report [light is on]

Pic 1

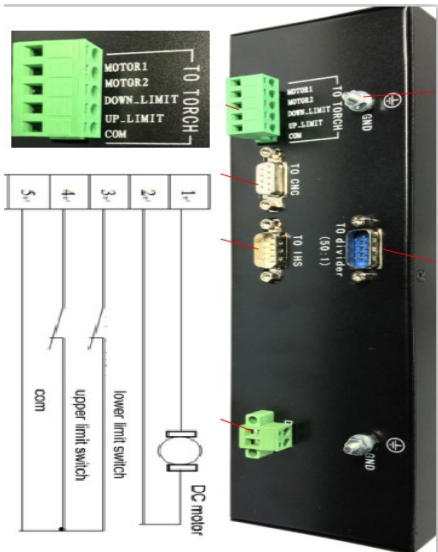
Please: Take off the consumables and check if there is any slag shorted the nozzle and protective cap, clean it or change consumables.

#### Problem analysis:

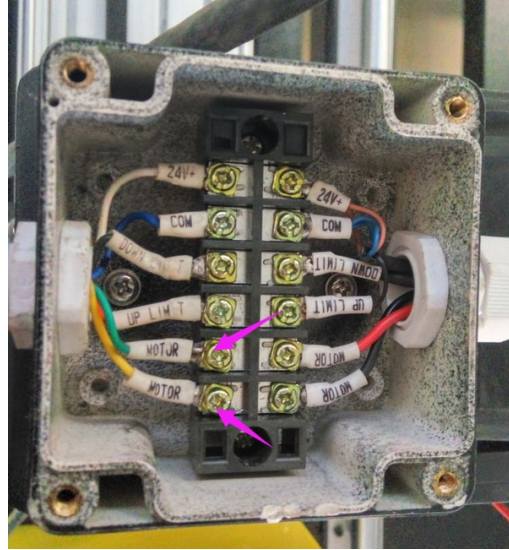
- ✦ 2. Output signal cable problem: lifter cable or lifter limit cable is disconnected;

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**Solution:** Check if there is open circuit between THC and the lifter terminal box, connect the cable if disconnected.



Pic2



Pic3

### Problem analysis:

- ✱ 3. The Limit switch of the lifter is damaged;

**Solution:** The limit switch indicator light (shown in Pic 4) is on, means the limit switch is not open;

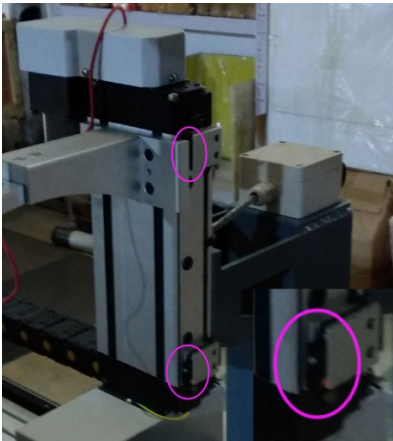
When the limit switch indicator light is off, could be 2 reasons: firstly, the limit switch opens when receive the signal from the sensor of the block;

Secondly, the limit switch indicator light is off when no signal from the sensor of the block sent, possibly because the limit switch is damaged.

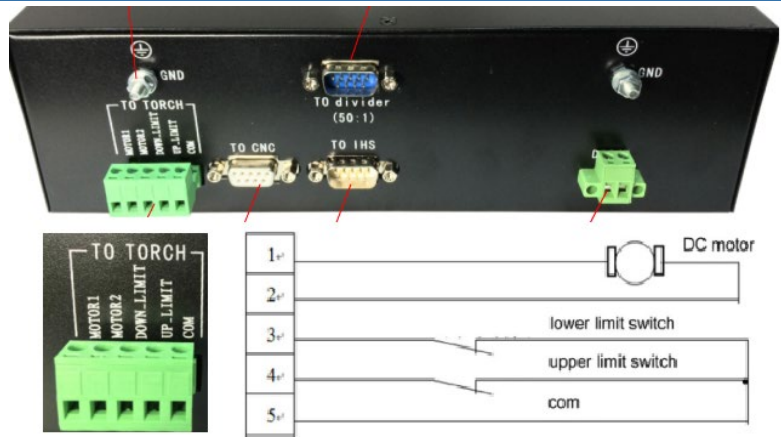
The voltage between **【MOTOR1】** and **【MOTOR2】** is 0, when pressing **【UP】**、**【DOWN】** . Short 3 and 4 to interface 5 (shown in Pic5), Press **【UP】**、**【DOWN】**, the voltage between **【MOTOR1】** and **【MOTOR2】** is about 24V;

Please: Change the limit switch

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Pic4



Pic5

## Problem analysis:

- ✦ 4. THC output signal problem;

**Solution:** Short 3 and 4 to interface 5 (shown in Pic5), disconnect cable of **MOTOR1** and **MOTOR2**; Press **UP**, **DOWN**, the voltage between **MOTOR1** and **MOTOR2** is about 10V, if no voltage, means THC is damaged;

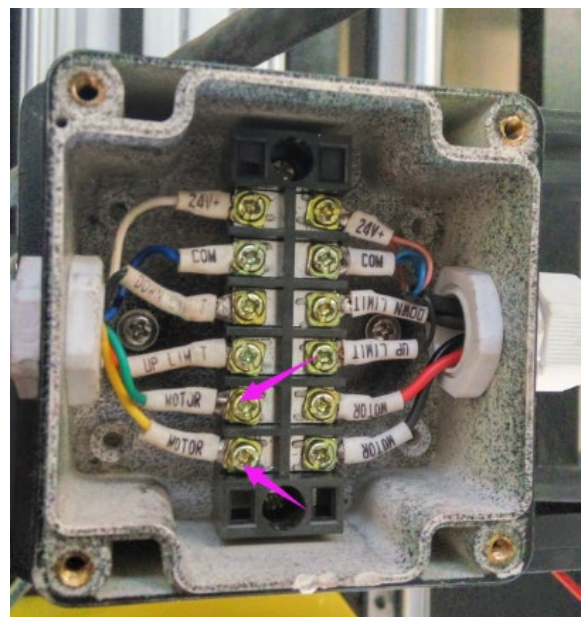
Please: Check the voltage of THC, if it is DC24V, change THC; otherwise, please check the power box

## Problem analysis:

- ✦ 5. Lifter driving motor problem;

**Solution:** Connect the motor cable (shown in Pic6) directly to DC24V power source, if the driving motor don't work, means that the driving motor need to be changed.

Please: Change the driving motor.



Pic6