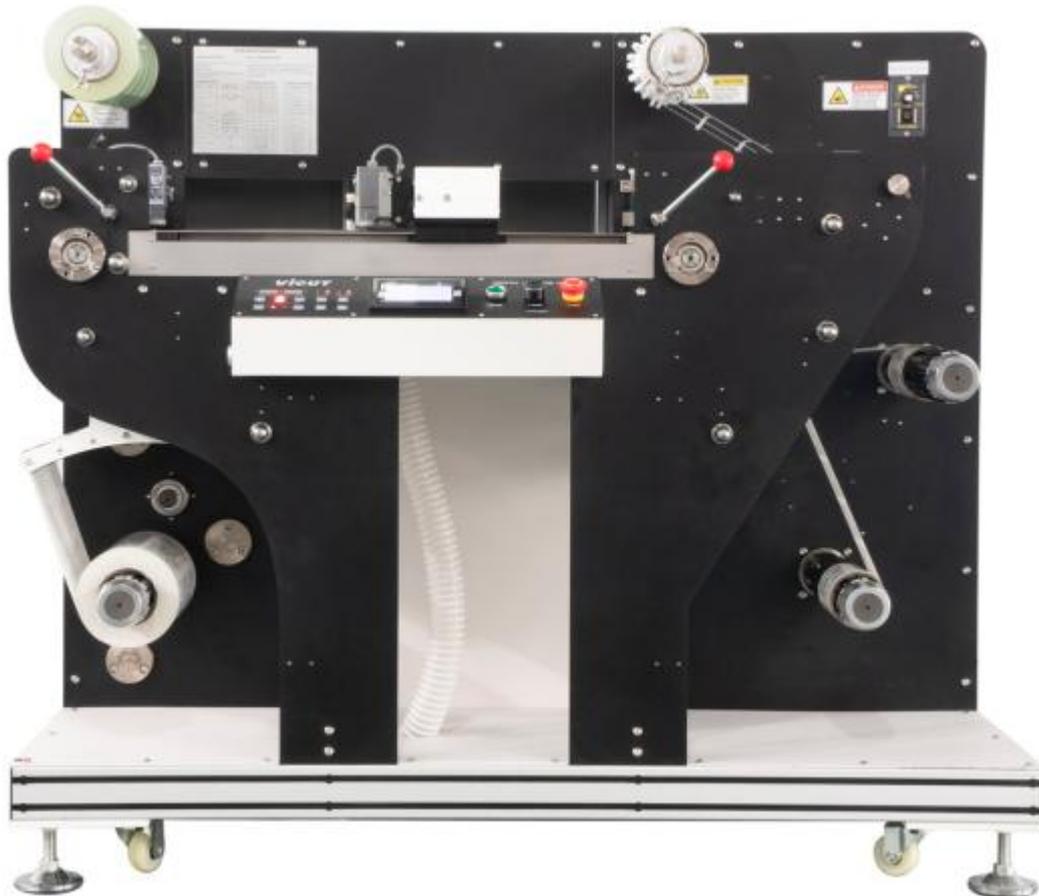


# Maintenance Manual/Troubleshooting

## Digital Label Die Cutter VR320

2022/5/18



## Content

<b>I.Failure</b> .....	1
1.1. Label cut closed, but interface dislocation.....	1
1.2. Die-cutting path is not closed.....	1
1.3. Label Cut is not closed.....	2
1.4. corner cutting with burrs.....	3
1.5. Arc R problem.....	3
1.6. The second knife is not parallel to the first.....	5
1.7. Label cutting is not complete: the beginning or end of the cutting line is not in accordance with the dies.....	5
1.8. The black label is cut back and forth.....	6
1.9. The label form is too long to be cut in the right area.....	6
1.10. The cutting head system can not work continuously.....	7
1.11. Pointing out"feeding, stop cutting"after sending file.....	7
1.12. Skip distance setting while blank cutting.....	7
1.13. Track failure.....	8
1.14. No track.....	8
1.15. Feeding motor error.....	9
1.17. Track sensor is not on.....	10
1.18. The machine does not reset and the cutting system moves in the opposite direction	11
1.19. The belt is broken due to Press the emergency stop during work and restore it after a period of time.....	12
1.20. The computer is connected but the software says it's not online.....	12
1.21. The web guide is not working.....	13
1.22. Can't suck media while cutting.....	13
1.23. Y shaft driver shows error 630 after starting up.....	14
1.24. Die cutting zooming issues.....	14
1.25. Stop cutting and display error during running.....	15
1.26. Flat table is uneven.....	15
1.27. Unwinder motor error.....	16
<b>II. Replace parts</b> .....	17
2.1. Replace the feed synchronous belt.....	17
2.2. Bending deformation damage of rewinder roller.....	19
2.3. Replace the synchronizing wheel's base and shaft of the Y shaft.....	20

## Part I: Failure

### 1.1. Label cut closed, but interface dislocation

**Fault:** Label cut closed, but interface dislocation

**Solution :**

1. Clean the blade holder. Clean up the scraps and other dirty things in the blade holder and drop some lubricant to the upper bearing of the holder.
- 2: Check the strap: Slow down the cutting speed, send files to have try cut. Adjust the tension of the corresponding belt if the interface is correct.

**Reason:** There will be scraps etc in the blade holder after a long-time working which affect the smooth rotation of the blade .



### 1.2. Die-cutting path is not closed

**Fault:** Die-cutting path is not closed

**Solution:**

1. Slow down the speed and check the die cutting path. If it's closed, it means the belt is loosing
2. According to the graph 18 showed , check the tension of the belt, If the problem still remains after the belt tighten ,Please check the wear of the belt and replace it.

**Reason:** There is a clearance between the teeth and the pulleys due to the belt wear and cause the path can't close.



**1.3.The cut label is not closed .**

**Fault:** The cut label interface is not closed

**Solution:** 1: Refer to the manual and cutting software in turn [[setting]] -- [[Trajectory optimization]] ---

[[ Blade lifts adjustment ]] Measure the unclosed length and input the adjusted length as showed picture following

2. Check if the input blade pressure is too small.

3. Blade dropping delay. The blade dropping delay value is too small. (Especially for thick media)

**Reason:**

1.There is time difference between blade lifting and blade dropping due to the quick cutting speed. Set the trajectory optimization in the software

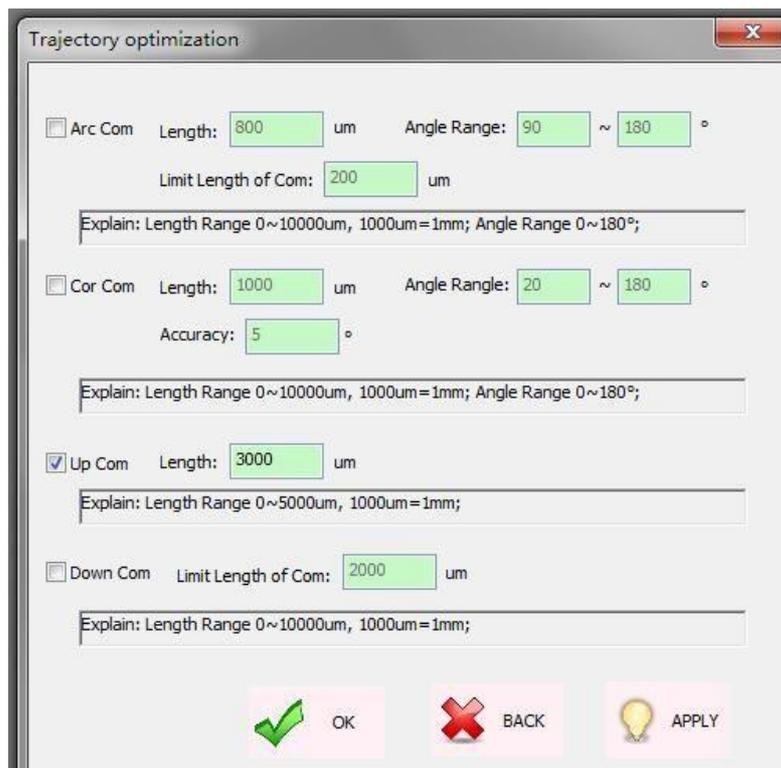
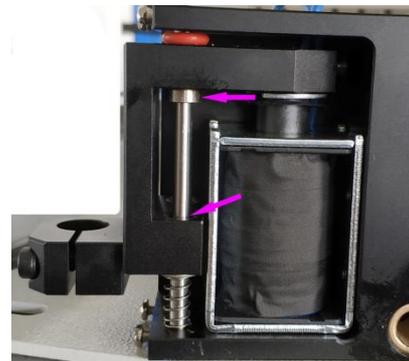
2: Blade pressure is too small

①The input value is too small

②Head bearing is not smooth. Add lubrication oil.

Please check the right picture.

**Note:** After setting the parameters in the software, reset the machine, stop the machine, and send the cutting file again, then machine can continue to work.



### 1.4.The corner cutting with burr

**Fault:** There are burrs in the corner while cutting.  
Check the picture on the right..

**Solution:**

- 1.Check die line.Set the drop point on a straight line.
2. Check whether the die-cutting file is closed.
3. Open cutting software setting:  
Set the blade dropping adjustment in Trajectory optimization
4. Clean the blade holder:  
Clean up the scrapes inside the blade holder and drop lubrication oil to it .



**Reason:**

1. Set the dropping point in the middle of the line, not on the corner.
2. Cutting software: Optimize the parameter in the trajectory optimization setting.

### 1.5. Arc R problem

**Fault:** The label is closed but Arc R has problem

**Solution:**

1. Clean the scraps in the blade holder and drop lubrication oil to it as showed as right picture .
- 2.Check the machine in steps: [[Set]] - [[Speed set]] - [[bend speed]] :20-30.



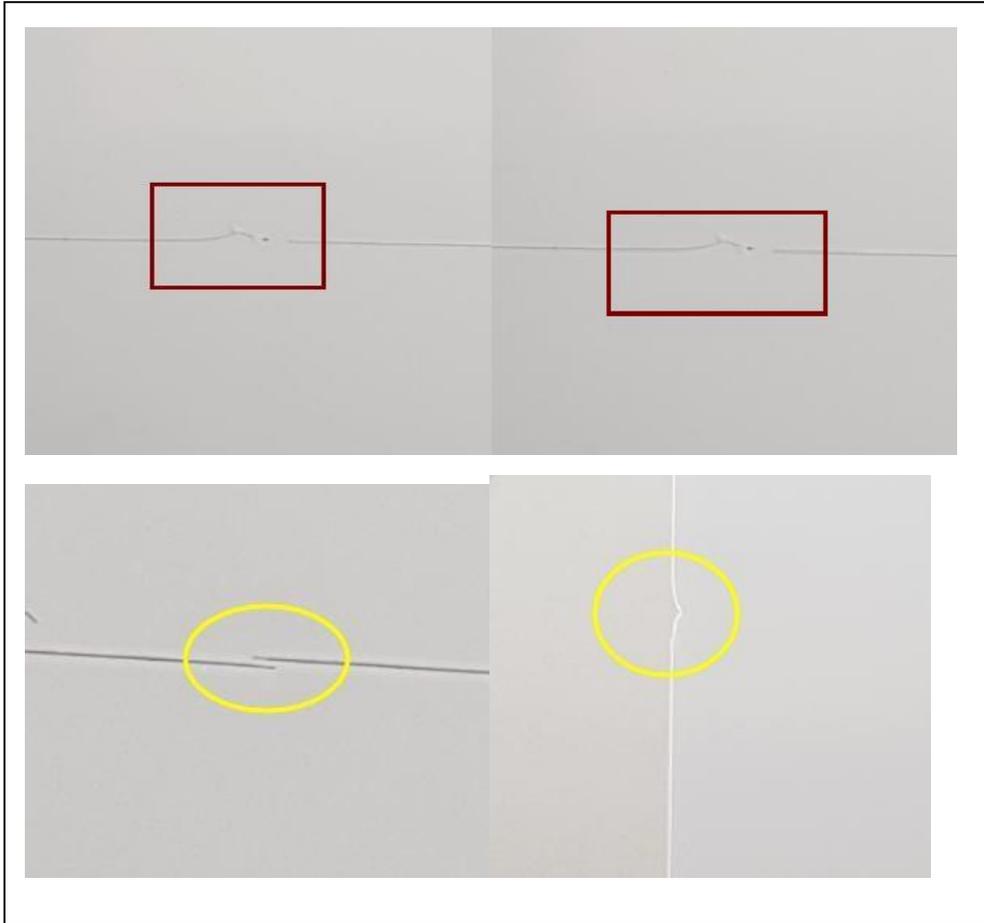
- 3.Set in cutting software in turns: [[Set]] - [[set trajectory optimization]] - [[corner cut adjustment]]
4. Check die cut file:Arc R is broken or not. The die cut line will be disconnected while input to the CDR software. Need to be reconnected to form a closure

**Reason:** There will be scraps inside the blade holder after long time using which will affect the rotation of the blade and cause low quality cutting.



### 1.6 The solution for malposition of starting point and ending point

The wrong cutting as following:



Please find following solutions:

1. Check the blade holder if there is something inside.
2. Check the X and Y belt if they are loosen.
3. Check the file if it is problem.
4. Turn on the vacuum system and check the result
5. Reduce cutting speed and check the result
6. Reduce the rewinder speed and reduce the pressure then check the result.

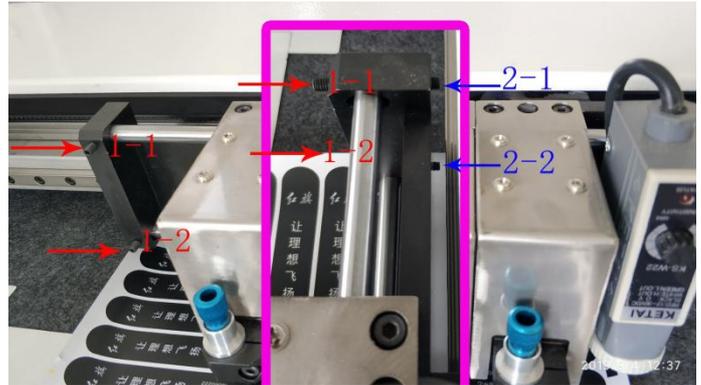
**1.7 The second blade is not parallel to the first blade.**

**Fault:** As showed in the picture on the right .There is offset between the second blade and the first head X shaft.

**Solution:**

- 1.Adjust the concentricity of the blade holder. Adjust the position of the blade or replace it.
- 2.Please just do small adjustment. Loose two screws at the same time for 1/4 circle. Loose the top and bottom screws on the offset side first. Then loose the screws showed as picture 2-1 and 2-2, for 1/4 circle at the same time. Tight 1-1 and 1-2 screws. Adjust slowly and smoothly till they are leveled.

**Reason:** Screws are loosen after long time using .

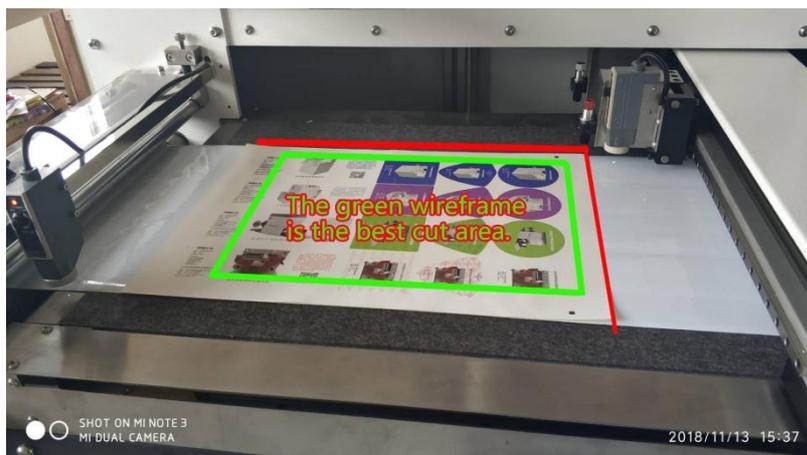


**1.8 The label is cut improperly: The beginning or end is not cut in accordance with the die-cutting line.**

**Fault:** The label cut is proper in the middle, but improper at the beginning or end.

**Solution:** The cutting must be done in the green area(see following photo).

Note: the effective cut area is: X shaft 400mm. Y shaft 320mm.



**Reason:** Since the effective cut area is X shaft 400mm , Y shaft 320mm, adjust the tracking area to ensure the cutting system is in the best cutting area.

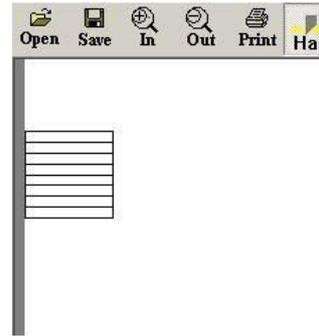
### 1.9 The black mark is cut back and forth

**Fault:** The black mark is cut back and forth

**Solution:**

1. Don't let the black mark fill the line segment while drawing.  
Only 4mmx4mm space requested while output PLT file
2. Do not choose two black marks while using cutting software to cut file .

**Reason:** Only fill the two black marks with black color while drawing. Be sure **not** to choose black mark in cutting software.



### 1.10 The label is too long to be cut in the effective area.

**Fault:** The black mark read by the fixed length sensor cannot be completely cut.

**Solution:** Adjust the length of the label to allow the cutting to be done within the valid area. (ideal cutting area pls refer to above fault 1.8) Measure the distance from the black mark to the fixed length sensor and input the parameter to the machine with following steps: `[[Set]] - [[tools set]] - [[feed adjustment]]` .



**1.11 The cutting head system can not work continuously, just cut once, then reset automatically.**

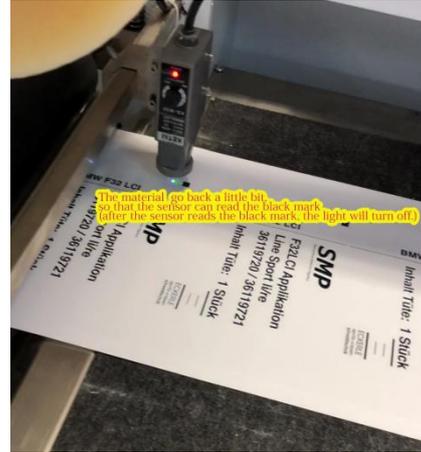
**Fault:** The blade reset to origin after one time cut only.

**Solution:**

1. check the cut sheet number is 1.
2. Check the die line is correct.
3. Check that the fixed-length sensor reads the black mark correctly.

The sensor's light is off when the sensor reads the mark, and the light is on when the sensor leaves.

**Reason:** It has one cut which shows that the machine is in proper condition. It stops work because the fixed length sensor(feeding sensor) cannot read the black mark.



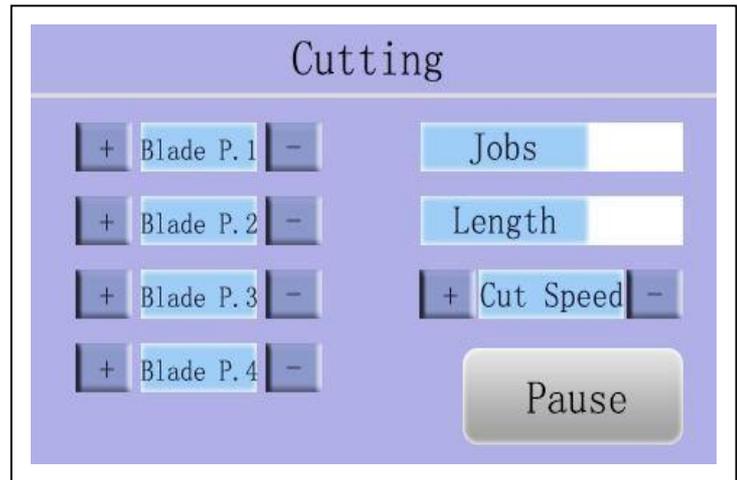
**1.12 It Says“material feeding, stop cutting” after send the file**

**Fault:** After sending the file, the machine cuts one sheet and it shows “material feeding” and the interface is not working.

**Solution:** Close **Multi. Cut.** on the panel.

**Reason:** The program error because Multi cut function is on.

Be sure to shut off the Multi.cut function after using, or there will be program error.

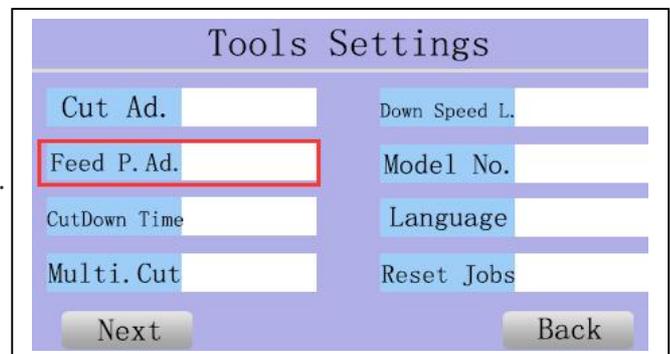


**1.13 Set the hop distance while cut the blank mark**

**Solution:**

The hop distance while cut blank labels refers to the feeding compensation. Follow the steps.

Machine: [[Set]] - [[tool set]] - [[Feed P.Add]]



### 1.14 Failure track

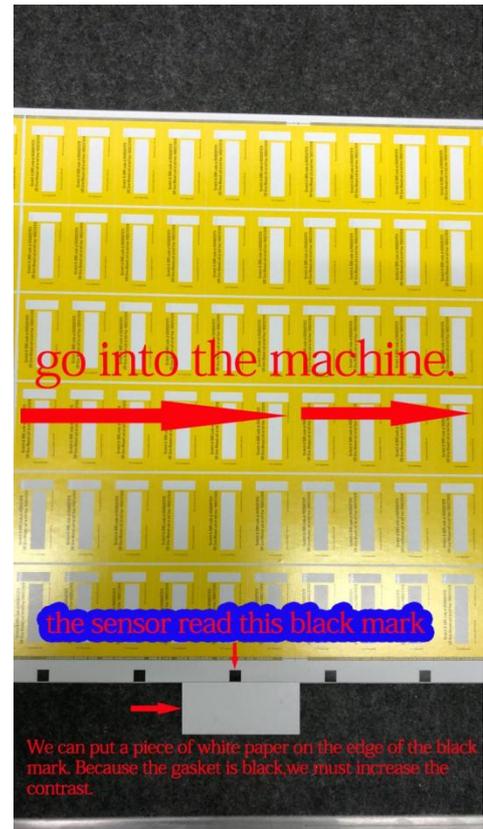
**Fault:** Failure track. The machine resets but does not cut after tracking.

**Solution:**

1. Adjust the sensitivity of the sensor.
2. Stick white sticker at the edge of the black mark as showed.

**Reason:**

1. Different materials reflect different light
2. The black mark is interfered by stained color blocks while track. The suggested blank is at least 2mm at the edge of the black mark.



### 1.15 No track

**Fault:** The sensor stops at the black mark and does not work after tracking .

**Solution:**

1. Check the die cut file
  - ① Whether there are black marks on the file.
  - ② Whether the black marks are overlap.
2. Check cutting software:
  - ① Check if the black mark is selected.
  - ② Check if the file to be cut is selected.

### 1.16 Feed motor error/Machine stop cutting, display error.

**Fault:** The machine stop feeding suddenly after cutting for a period of time and shows error.

**Solution:**

1. Check the tension of the media. If the feed tension is too large, then the media cannot move while being pulled. How to judge: the feed shaft should be in the middle of the tension which is the best position.

2. Re-enter the tension value each time the media is changed (Please note that the input value must be changed.)

3. Check whether the valve pressure is too low to result in the suction system keeping contentiously working and cause a lot of resistance, then with a false alarm

4. Shut off the power, check as picture showed below:

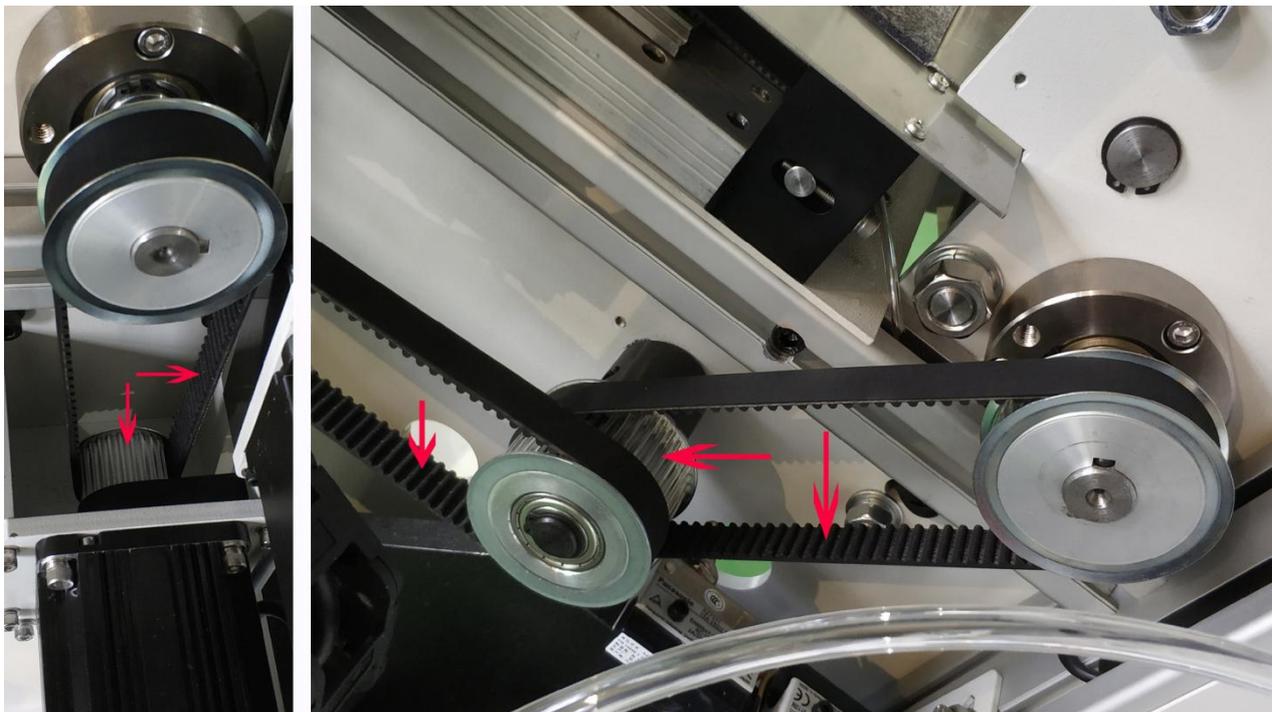
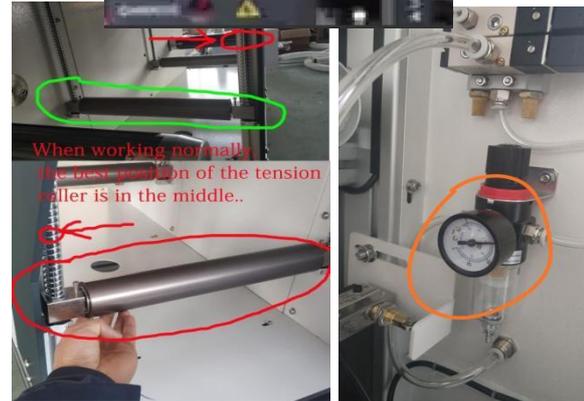
① check whether there is foreign bodies on the belt and synchronous wheel.

② Check that the four rollers on the synchronous wheel and platform are rotating smoothly, drop lubricated on the bearing at the same time.

**Reason:**

1. The tension value is too big which cause the feeding media cannot be pulled and reports error. Feeding and rewinding tension depend on whether the tension shaft is in the middle of the tension system. It is the best for the shaft in the middle of the system.

2. Valve pressure is too low resulting in sunking the media all the time. The resistance is too heavy and the media cannot be pulled.



**1.17 The sensor light is not on Fault :** The track sensor light is not on.

**Solution:**

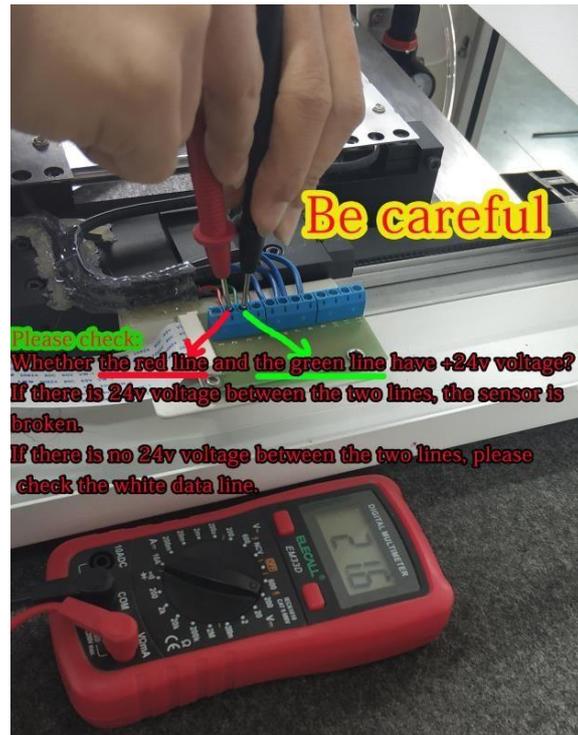
1. Adjust the sensitivity of the sensor
2. Check whether the sensor's voltage is 24v.

① If the voltage is 24v, and the sensor's light is not on after adjustment, pls contact VICUT to replace a new one .

② If there is no 24v voltage, Please check whether the 20-core wiring is disconnected. If not, please check whether the driving board has 24voltage.



**Reason:** Because the sensitivity of the sensor is adjustable, the sensor light is not on sometimes while replaces new media. Re-adjust the sensitivity of the sensor to ensure the light is off while read the black mark and on while leave the black mark.

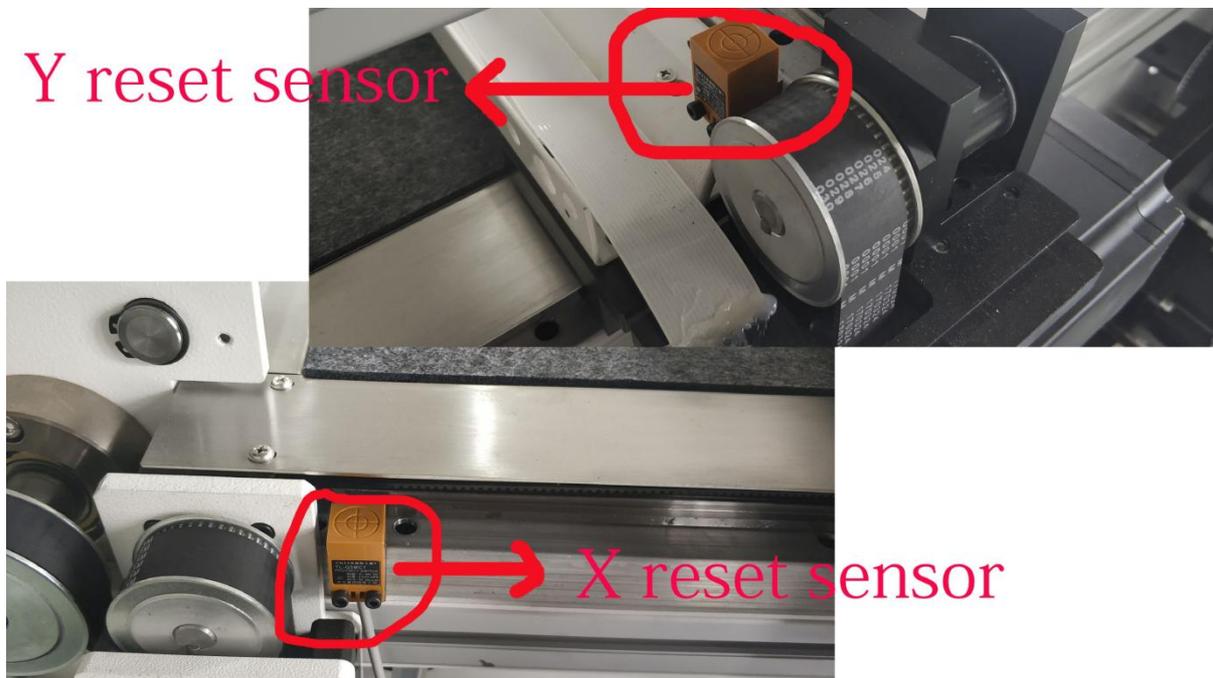
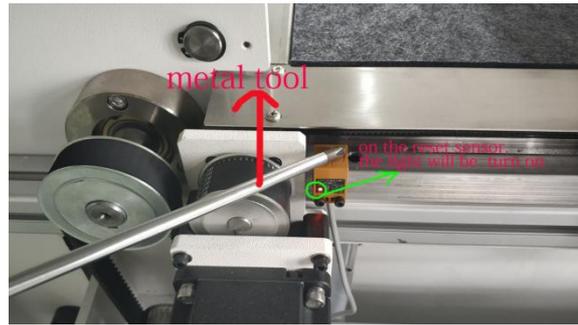


**1.18 The machine does not reset and the cutting system moves in the opposite direction**

**Fault:** The machine does not reset and the cutting system moves in the opposite direction

**Solution:** Check the XY reset sensor is damaged or not. How to check: Put the metal checking tool on the sensor. If the light is on , the reset sensor is in good condition , the light is off when the tool is off.

**Reason:** The reset sensor is damaged and can not reset. Refer to X reset sensor and Y reset sensor as picture following.



**1.19 Hit the emergency stop during working and restore it after a period of time which causes the belt breaking.**

**Reason:** Hit the emergency stop during work and restore it soon which causes the belt breaking.

**Solution:** Contact VICUT to replace the belt.

**Reason:** The program keeps running inside the main board although hit the emergency stop. It's out of control when it is renewed and damage the belt. Only press “pause” to get things done, not “emergency stop”.



**1.20 The computer screen is connected, but the software says it's not online**

**Fault:** The computer screen is connected, but the software says it's not online

**Solution:** Disable virus detection software, re-install cutting software.

**Reason:** Network failure as a result of anti-virus software firewall.

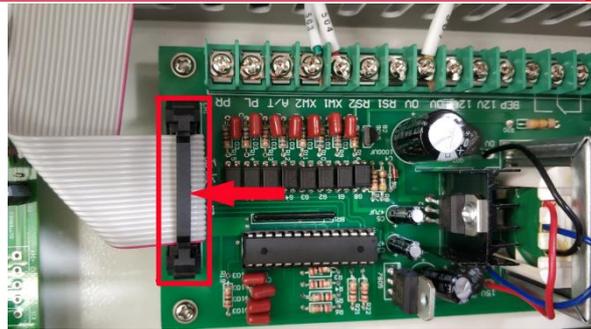
### 1.21 The web guide system is not working **Fault:**

The web guide system is not working **Solution:**

1. Shut off the main power. Re-plug the 24-core cable terminal

2. If the problem is not solved, please click the right and left arrow of the manual correction mode on the panel to see whether the deviation shaft can rotate. Check carefully whether the deviation shaft is stuck to the limit spacing. If it is stuck, re-install it. Please make sure the limit sensor is working properly, or it will be stuck again. Click the correction panel to see whether the motor can rotate. If it's moving, it means the shaft is stuck. If not, please check whether the correction panel has 300v output voltage. If not available, please replace the panel.

**Reason:** The correction panel has fault due to long time working because of deviation limit spacing. When the deviation correcting system is working, the deviation correcting stroke should be in the middle.



### 1.22 Do not suck media while cutting

**Fault:** The platform does not absorb media when cutting

**Solution:**

1. When the file is sent successfully, different sound of the fan sucking up the media can be heard, as well as the cylinder's. If no sound, please check the electromagnetic valve.

2. Check the electromagnetic valve. Press with hands as showed in picture to see if there is sound from the cylinder. If no sound, please replace the electromagnetic valve.

3. Check if the working voltage of the electromagnetic valve is 24v. If it is, please change the electromagnetic valve.

**Reason:** There is moisture in the windpipe and rust in the electromagnetic valve caused by the compressor filtering.



### 1.23 The Y shaft driver shows error 630

**Fault:** The Y shaft driver shows error 630

**Solution:**

1. Check that the reset sensor is working properly (refer to problem 1.18)
2. Shut off the power to check if the Y shaft motor is rotating properly. If it does not rotate, please replace Y shaft motor. If it can rotate, please follow step 3 to check.
3. Check which place Y shaft motor system is stuck: is the reset sensor stuck? Or the Synchronous wheels of the Y belt are stuck?

**Reason:** The driver shows error 630 due to the motor overheating protection and it means the motor can not run, then please check the Y shaft motor system.



### 1.24 Die cutting zooming problem.

1. Check whether the cutting dies line is correct
2. Check the machine belt, timing wheels
3. Reinstall the cutting software
4. Change another computer to try.

### 1.25 Stop cutting and display error during running.

**Fault:** Machine running some time, stop cut suddenly, and display Error.

**Solution:**

1. Check feeding tension: the tension is strong or not, media can't be fed. The judgment: The dancing bar is in the middle position, please refer the green circle picture.
2. Check air valve: the suction system is very strong, media is sucked on the table can't be moved, then error display.

**Reason:**

1. Tension is strong, dancing bar in the too up and too down position, media can't be fed, the dancing is always in the middle of position.
2. Pressure of air valve is small, media sucked on the table fixed, it can't be fed.



### 1.26 Flat table is uneven

**Fault:** The flat table is uneven

**Problem:**

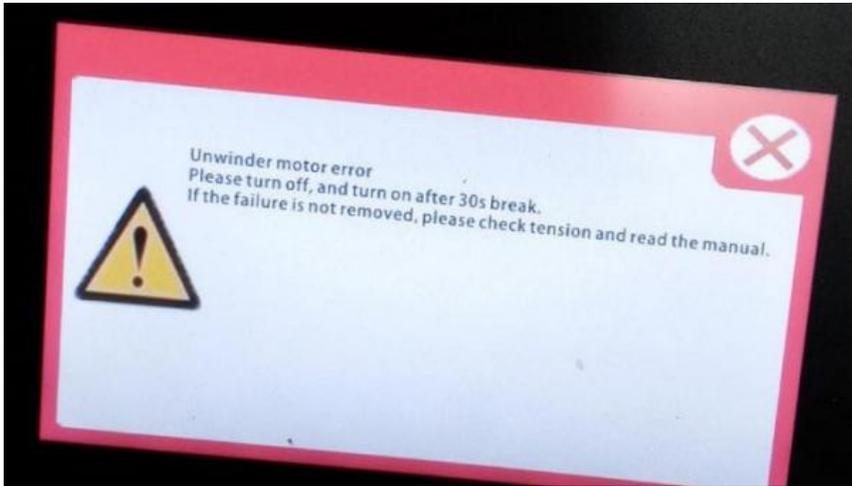
- 1) Cut line is not connected well.
- 2) Label shape can't cut completely.

**Solution:**

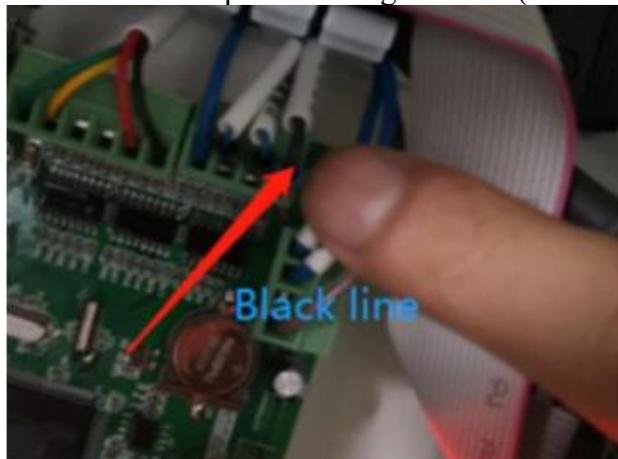
Adjust the screw under the table , there is four Black screws, there is flexible material on the top of screws, when we rotate up, the flat table will be a little up, when we rotate down, the flat table rotate down.



### 1.27 Unwinder motor error.



1. Please set lower tension for SEND.
2. Please check belt was block or not. Turn off machine, and rotate the belt and feeding roll manually to check .
3. Please check if the motor driver error or not.
4. there is interrupted from signal wire. (see below photo black line.)

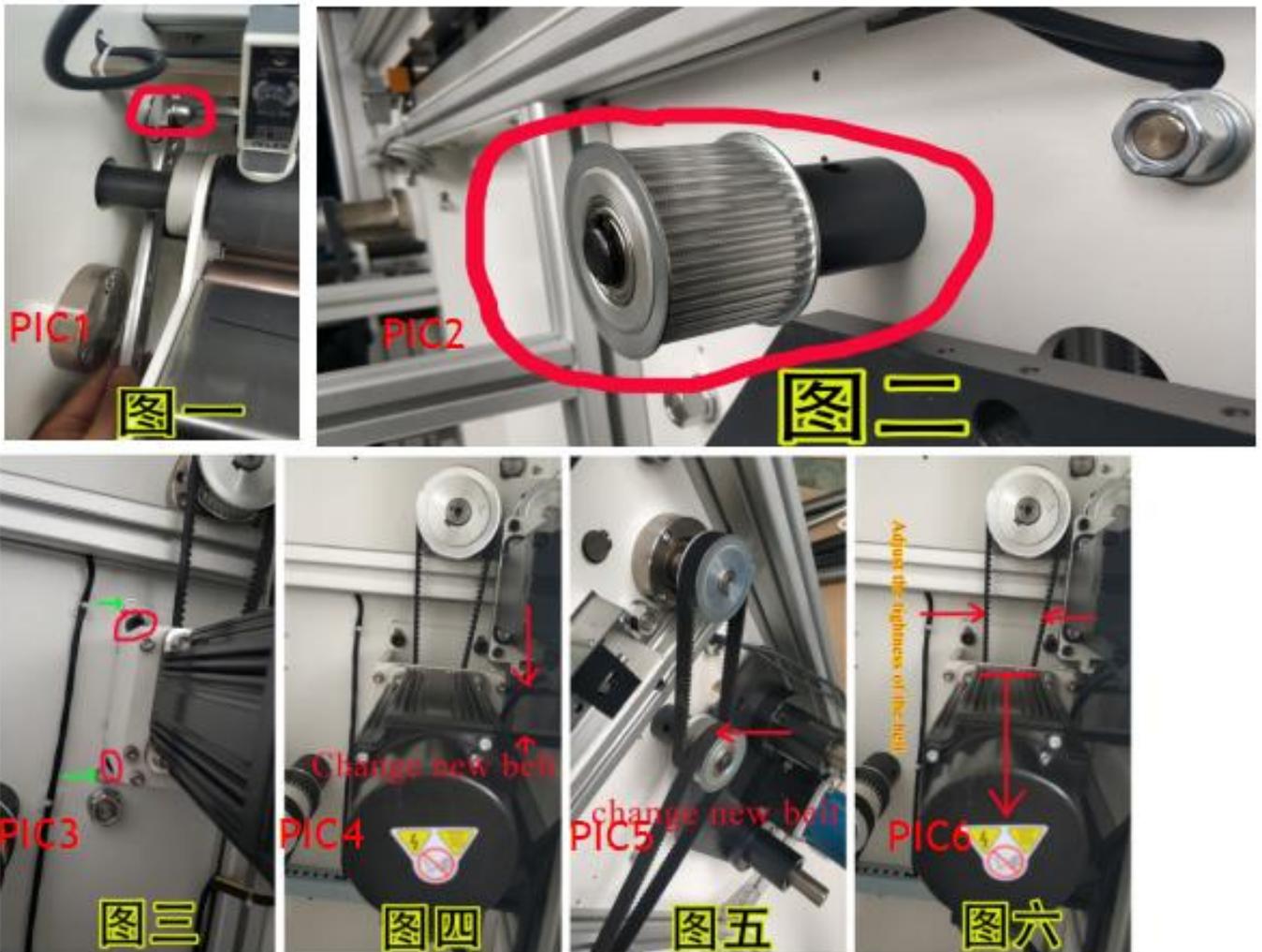


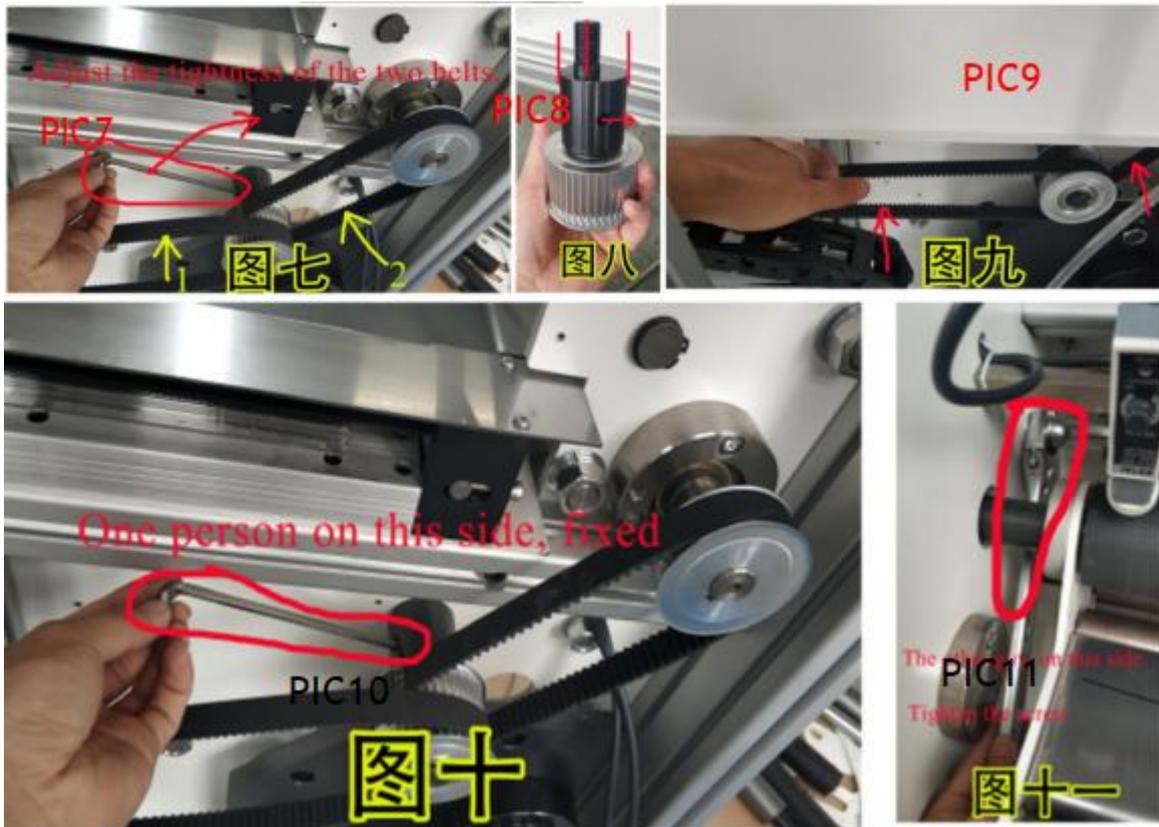
## Part II Replace parts

### 2.1 Replace the feeding synchronous belt

Please follow the steps to replace the feeding synchronous belt.

- 1.Unscrew the eccentric as showed PIC1 following. ( no need to take it off)
- 2.Release the eccentric wheel, as showed PIC2 following. (no need to take it off)
- If only needs to replace 545 short belts, then skip following steps 3, 5.6,7
- 3.Following PIC3.Loosen the four screws of the motor (Please note that there are two gaskets)
- 4.Follow picture 4 and 5: Replace new belt.
- 5.Follow picture 6: adjust the belt tension
- 6.Follow PIC3: Fix 4 screws of the motor (Please note that there are two gaskets.)
- 7.Follow PIC7: Adjust the direction of the synchronous wheel to adjust the tension of the two belts.
- 8.Ask a colleague for help. One holds still as shown in PIC10. Another tighten the screw as PIC11. Please check that the synchronous wheel is installed in place. Picture 12 shows the correct installation, picture 13 is wrong.



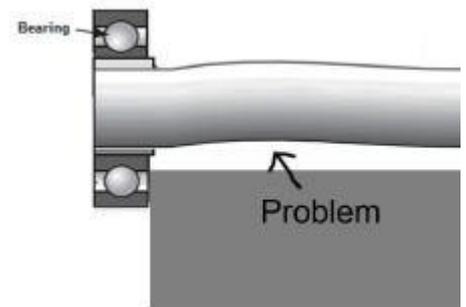


## 2.2 Bending deformation damage of feeding rubber roller.

**Fault:** Bending deformation damage of feed rubber roller.

**Solution:**

1. Contact after sales-service to replace feed rubber roller .
2. Since the upper and lower shafts are one-way bearings, please make a mark when unload it so as to avoid install in wrong direction as picture shows below.



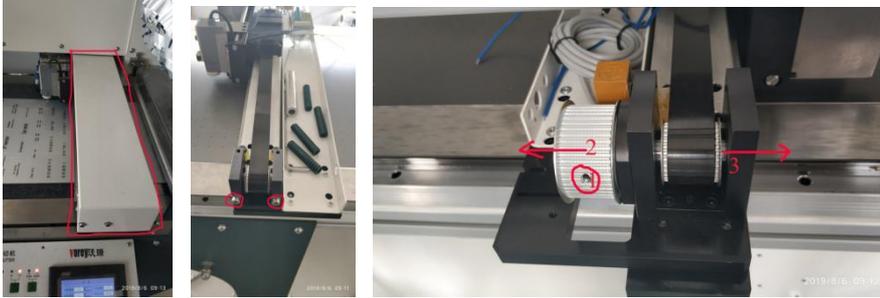
3. Unload the fixed parts on both side .put the rubber roller into the slot. Put in the fixed part again and fix the screws.



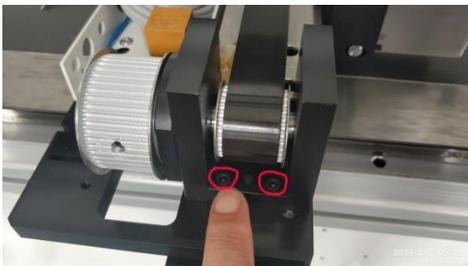
## 2.3 Replace the base and shaft of the Synchronous wheel of the Y shaft

1. Uncover the white cover. Loosen two screws of the Y shaft.

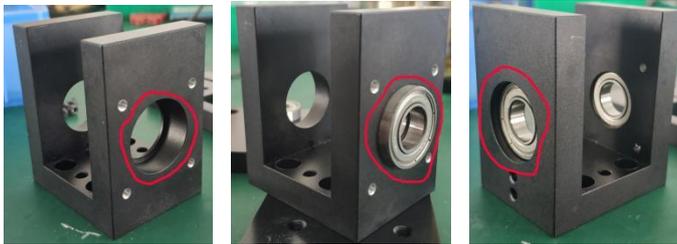
Take out two screws of the synchronous wheel, and then take out the synchronous wheel and shaft.



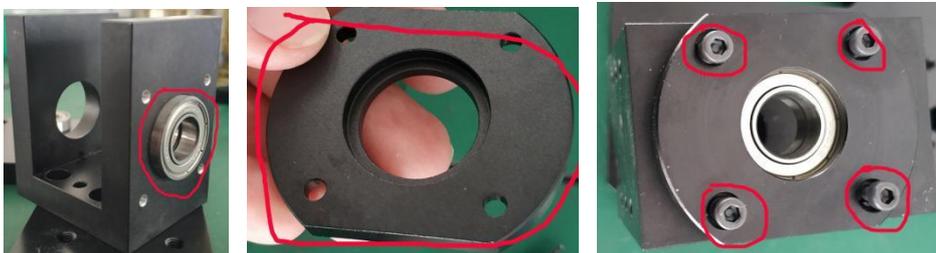
2. Unload four screws, then take out the black base .



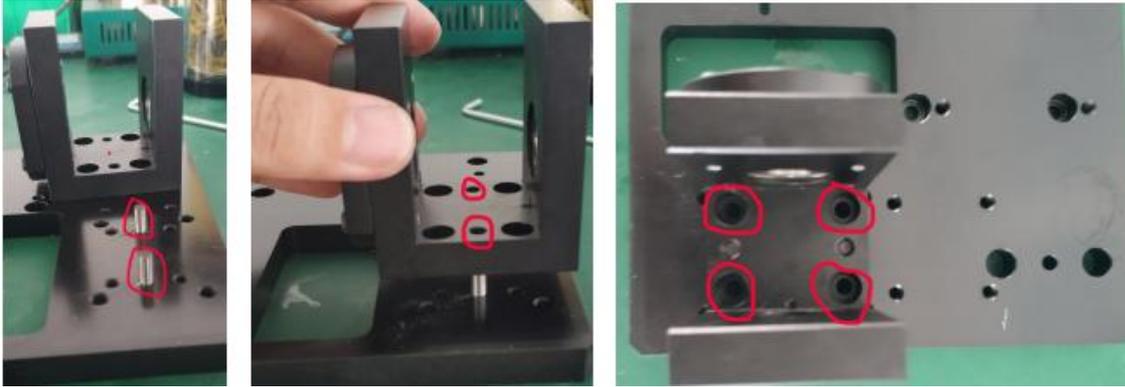
3. Replace the new base: first install two bearings of the base.



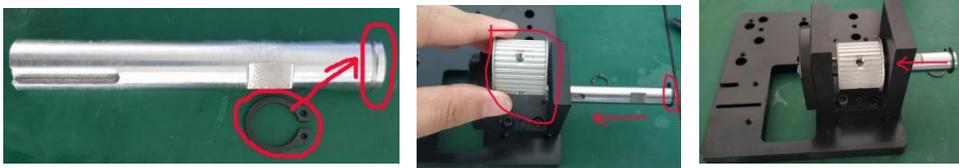
4. Install the bearing guard: tighten four screws



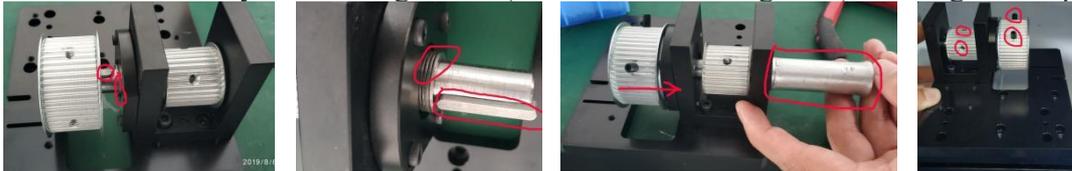
5. Install the black connector base: Install two locating pins and tight four screws.



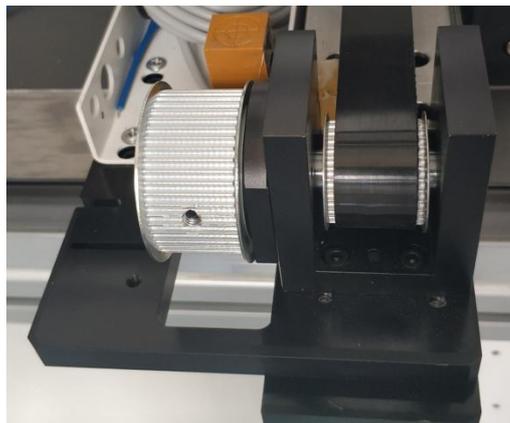
6. Install the snap spring and the middle synchronizing wheel



7. Install the outside synchronizing wheel (Please care for the gasket), then tight the upper screws



8. Install the belt and adjust the tension of the belt . as picture below



Any issues please contact VICUT service center.  
Tel: +86 551 65774134 [www.cncvicut.com](http://www.cncvicut.com)