

Expert II & Expert II LX Maintenance Manual



Table of Contents

Chapter 1 Overview	3
1.1 Introduction	3
Chapter 2 : Mechanical System	4
2.1 Main Unit Assembly	4
2.2. Left Side Assembly	7
2.3 Right Side Assembly	9
2.4 Carriage Assembly (Expert 24)	11
2.5 Carriage Assembly (Expert 24LX)	13
2.6 Pinch Roller Set	15
2.7 Auxiliary Pinch roller Assembly	16
2.8 Grid roller housing Assembly	17
Chapter 3 : Circuit System	18
3.1 System Diagram	18
3.2 Electrical Component Connections	19
Chapter 4 : Maintenance	21
4.1 How to replace Control Panel	21
4.2 Replace Pinch Roller	25
4.3 Replace Main board	26
4.4 Replace Power Board	28
4.5 Replace X Motor	29
4.6 Replace Y Motor	32
4.7 Limit Switch Disassembly	33
4.8 How to replace Carriage	34
4.9 Belt Tension Adjustments	36
Chapter 5 : Trouble Shootings	37
5.1 LED Indications and Error Message	37
5.2 Main board parameter reset	39

Chapter 1 Overview

1.1 Introduction

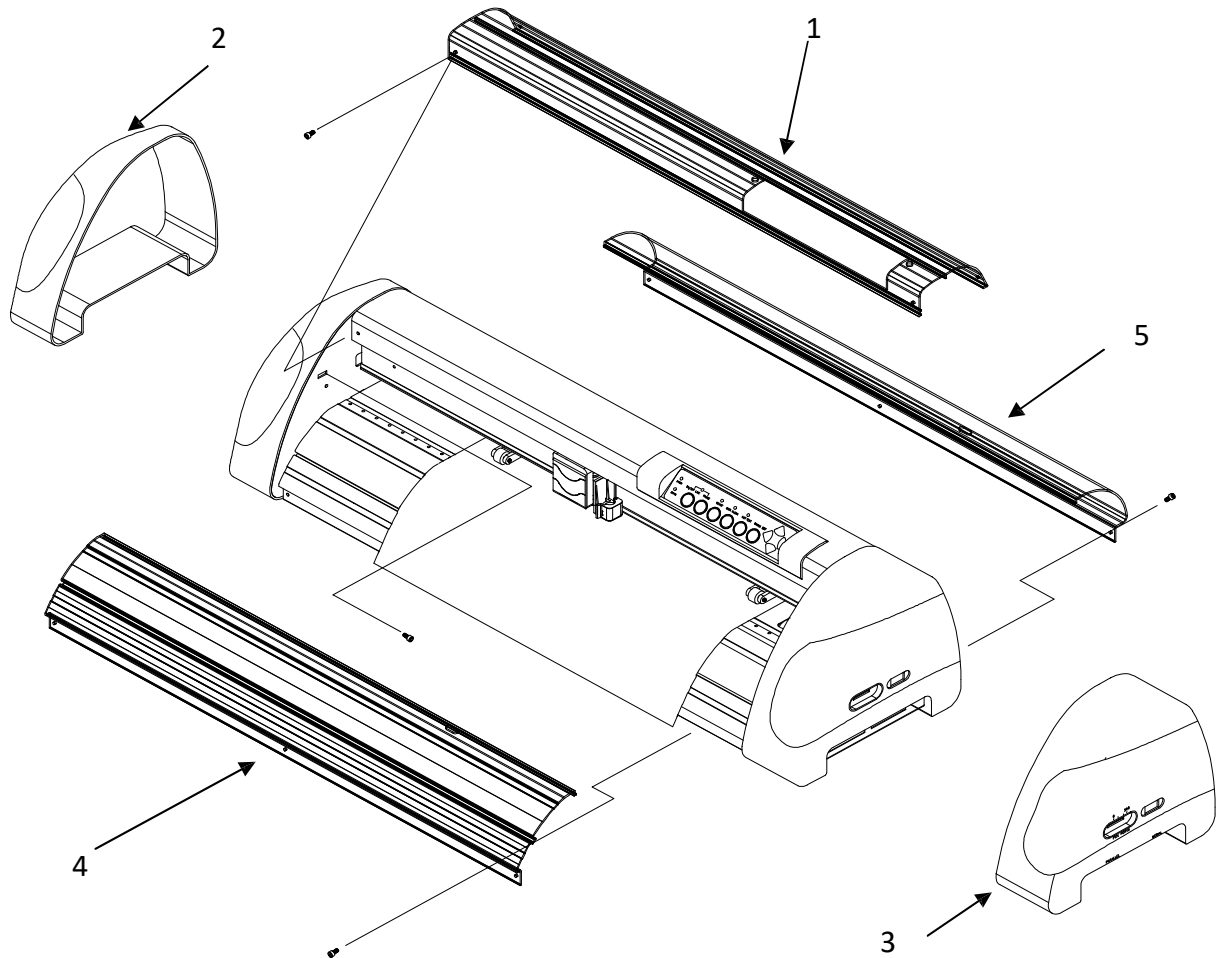
This manual is prepared for distributors to maintain or repair Jaguar V. Briefly,

- Chapter 1
System overview
- Chapter 2
We have diagrams to show the part number for every part in different sections.
- Chapter 3
Circuit System, there is detailed information for the connection circuits.
- Chapter 4
Introduction to show you how to replace parts.
- Chapter 5
Trouble shooting

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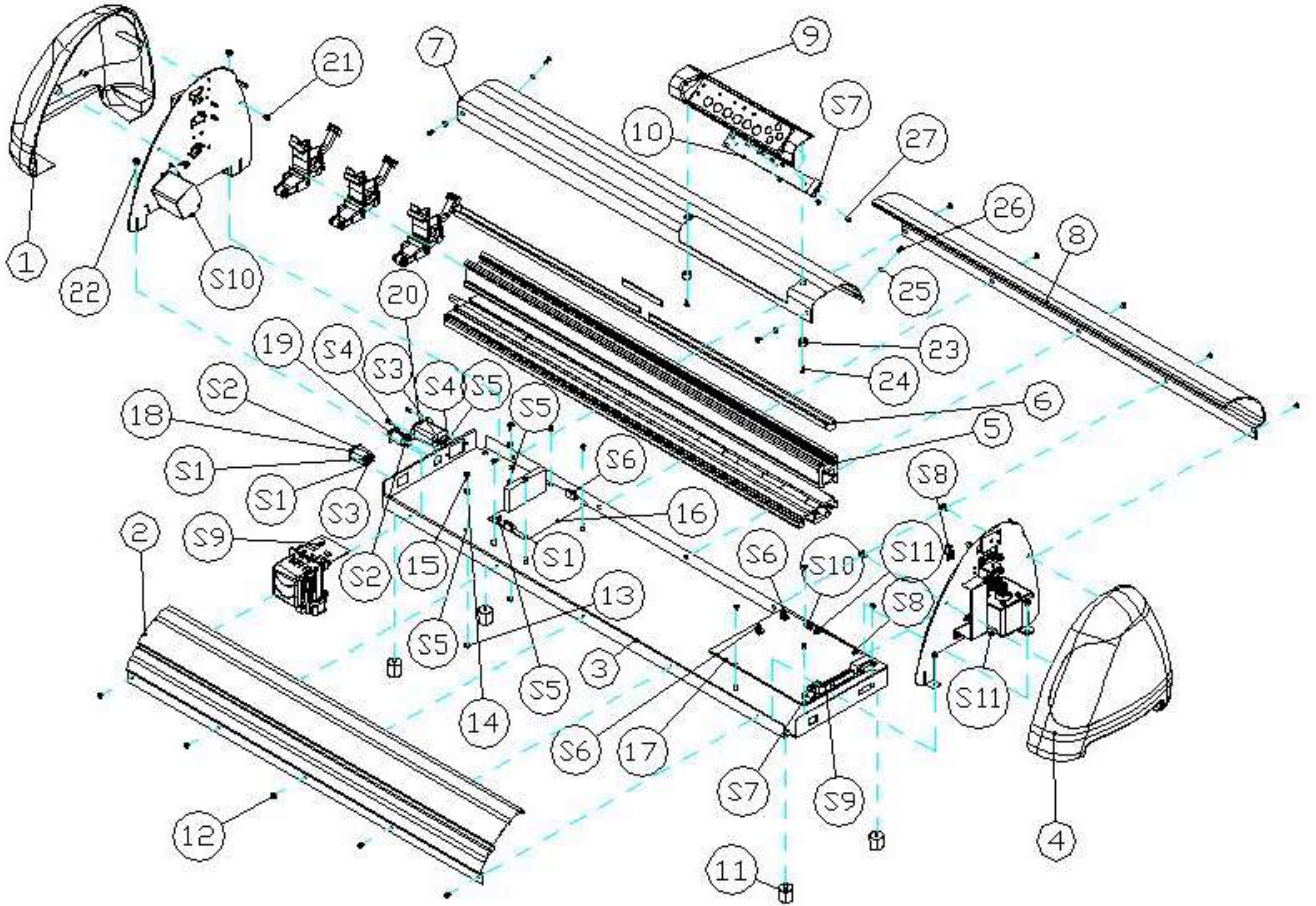
Chapter 2 : Mechanical System

2.1 Main Unit Assembly



Item	Part No.	Description	Qty
1	24403590G	Top cover	1
2	24100542G	Left Cover	1
3	24100543G	Right Cover	1
4	290067810	Front Platen	1
5	290067670G	Rear Platen	1

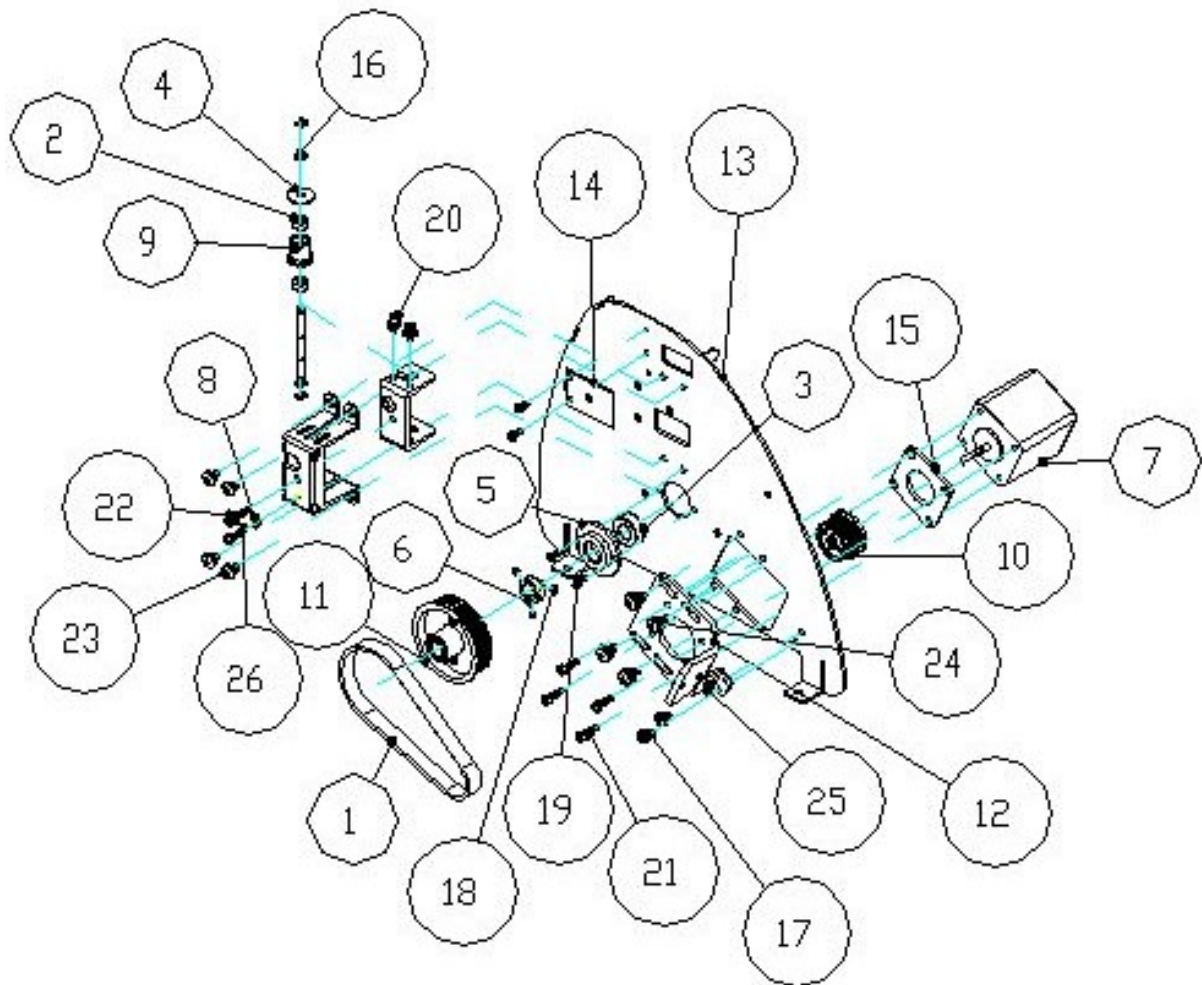
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Parts List :

No.	Part No.	Description	Qty
S1	20901682G	ON/OFF SW TO P/B Cable K/3C	1
S2	20901664G	Fuse&ON/OFF SW Cable (black) (K/3C)	1
S3	20901668G	EMI Filter to ON/OFF cable white. K/3C	1
S4	20901669G	EMI Filter to Fuse cable black. K/3C	1
S5	20901667G	Ground wire of Line filter K/3C	2
S6	20901655G	P/B to M/B Cable	1
S7	20900165G	Cable of M/B to control panel 14Pin/35cm	1
S8	20900456G	Lever SW to M/B Cable 330mm	1
S9	29003401G	Flat Cable Assembly	1
S10	23100039G	X axis step motor 17HD403-22	1
S11	23100039G	Y Axis step motor 17HD403-22	1
1	24100542G	Left Cover	1
2	290067810	Front Platen	1
3	24401471G	Unit Base Box	1
4	24100543G	Right Cover	1
5	22800705G	Top rail	1
6	20600100G	Y-axis belt (S2M-W9-L1548)	1
7	24403590G	Top cover	1
8	290067670G	Rear Platen	1
9	24100323G	Control panel base	1
10	29000871G	Control panel PCB Assembly	1
11	26500342G	Plastic Foot GL-20H-B.	4
12	25200010G	Truss head machine screw(M3*6L)	18
13	23500005G	Nut(M4xt3.2xS7)	2
14	26000026G	External toothed lock washer (M4-Ni)	2
15	25200198G	Truss head machine screw(M4*8L)	2
16	24500068G	65W/2 output switching power supply	1
17	29006024G	Main Board with AAS II function Assembly	1
18	25700075G	ON/OFF Power Switch (K/3C)	1
19	22300021G	Fuse Holder Type3A/250V(K/3C)	1
20	21800034G	AC PLUG (including EMI Filter) (K/3C)	1
21	25200198G	Truss head machine screw(M4*8L)	4
22	25200185G	Truss head screw including external teeth washer	4
23	26000010G	Nylon washer U-7	2
24	25200003G	pan head machine screw(white) M3*8	2
25	26000001G	Plastic washer.WS-1M	4
26	25200130G	Truss head machine screw(M3*8L)	4
27	25200013G	90° dish flat head machine screw M3*8	4

2.2. Left Side Assembly



Parts List :

Item	Part No.	Description	Qty	Assembly set P/N
1	20600101G	X-axis belt (S2M-W10-L260)	1	
2	20700038G	Bearing 684ZZ.	2	29001548G
3	20700039G	Bearing L-1910ZZ.	1	
4	22801465G	White pulley Washer	1	29001548G
5	22801489G	Bearing Support	1	
6	22801620G	bearing stopper	1	
7	23100039G	step motor 17HD403-22	1	29003804G
8	23500004G	Nut(M3xt2.4xS5.5)	1	29001548G
9	24100175G	Idle pulley Lynx.	1	29001548G
10	24100412G	X axis actively belt gear (Sable)	1	29003804G
11	24100416G	X axis actively belt gear-Sable	1	
12	24401427G	X-motor bracket Ultra - Sable	1	
13	24402028G	Side Support Left(Black)	1	
14	24402912G	Plate sensing Carriage	1	
15	24700034G	Rubber Packing - Sable	1	29003804G
16	24900006G	E-shape retaining ring.(D7*d3*t 0.6)	4	29001548G G
17	25200014G	Truss head screw including spring & flat washer(M3*8) white	2	
18	25200090G	Socket headness set screw.(M3*3L)	3	
19	25200106G	Pan head machine screw(M3*6L)	4	
20	25200117G	HexagonalSocketHead including spring&flat washer.	2	29001548G
21	25200149G	Socket head set screw.(M3*12L)	4	
22	25200157G	HexagonalSocketHead including spring&flat washer.	1	29001548G
23	25200182G	Truss head screw including external teeth washer.	4	29001548G
24	25200208G	Truss head screw including spring & flat washer(M4*10)	4	
25	25200245G	Truss head machine screw including spring washer.	1	
26	25200345G	M3*14 Pan Screw Spring	1	29001548G
	29001548G	Y-Axis Idle Pulley Assembly	1	
	29003804G	X Motor Assembly	1	

2.3 Right Side Assembly

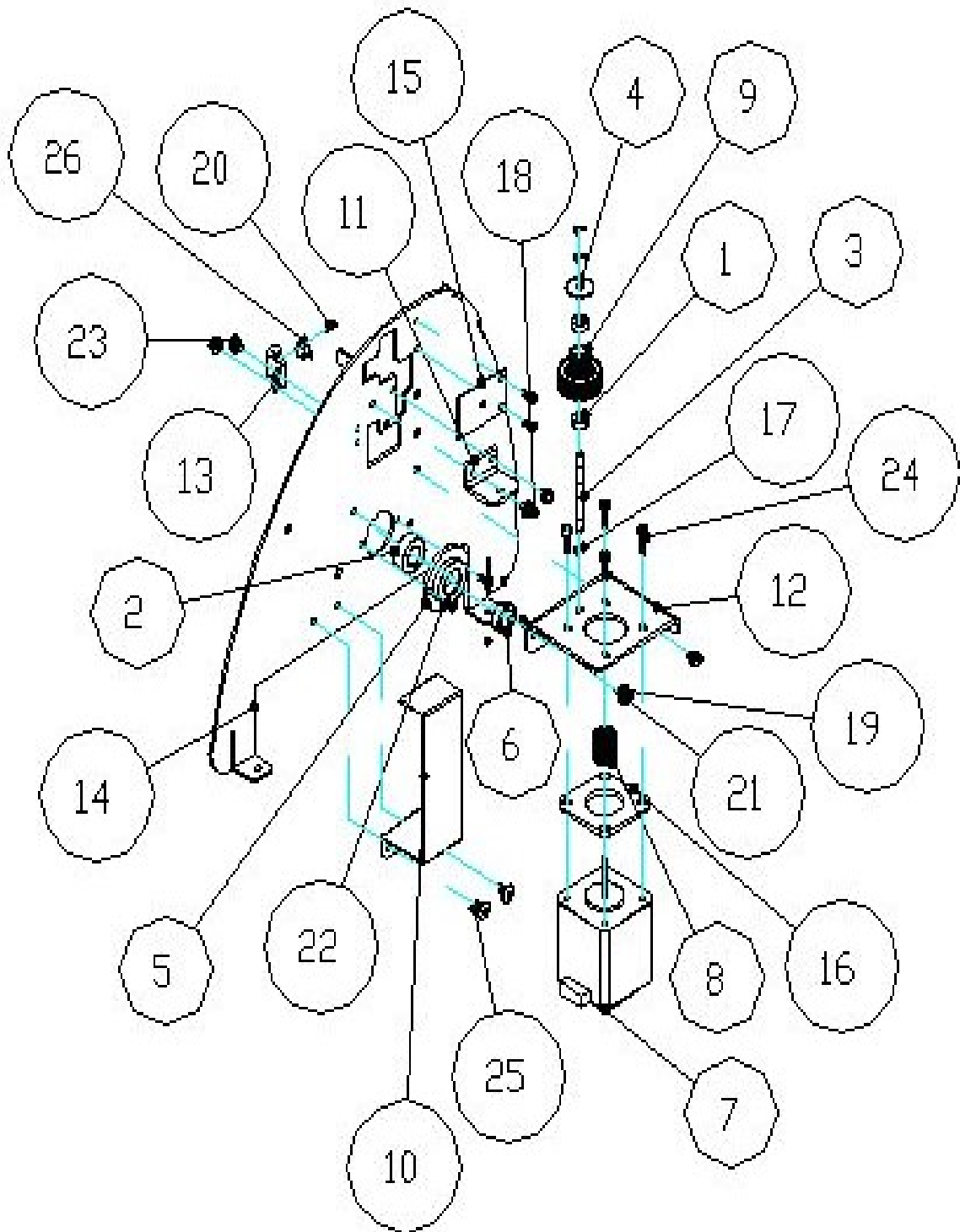
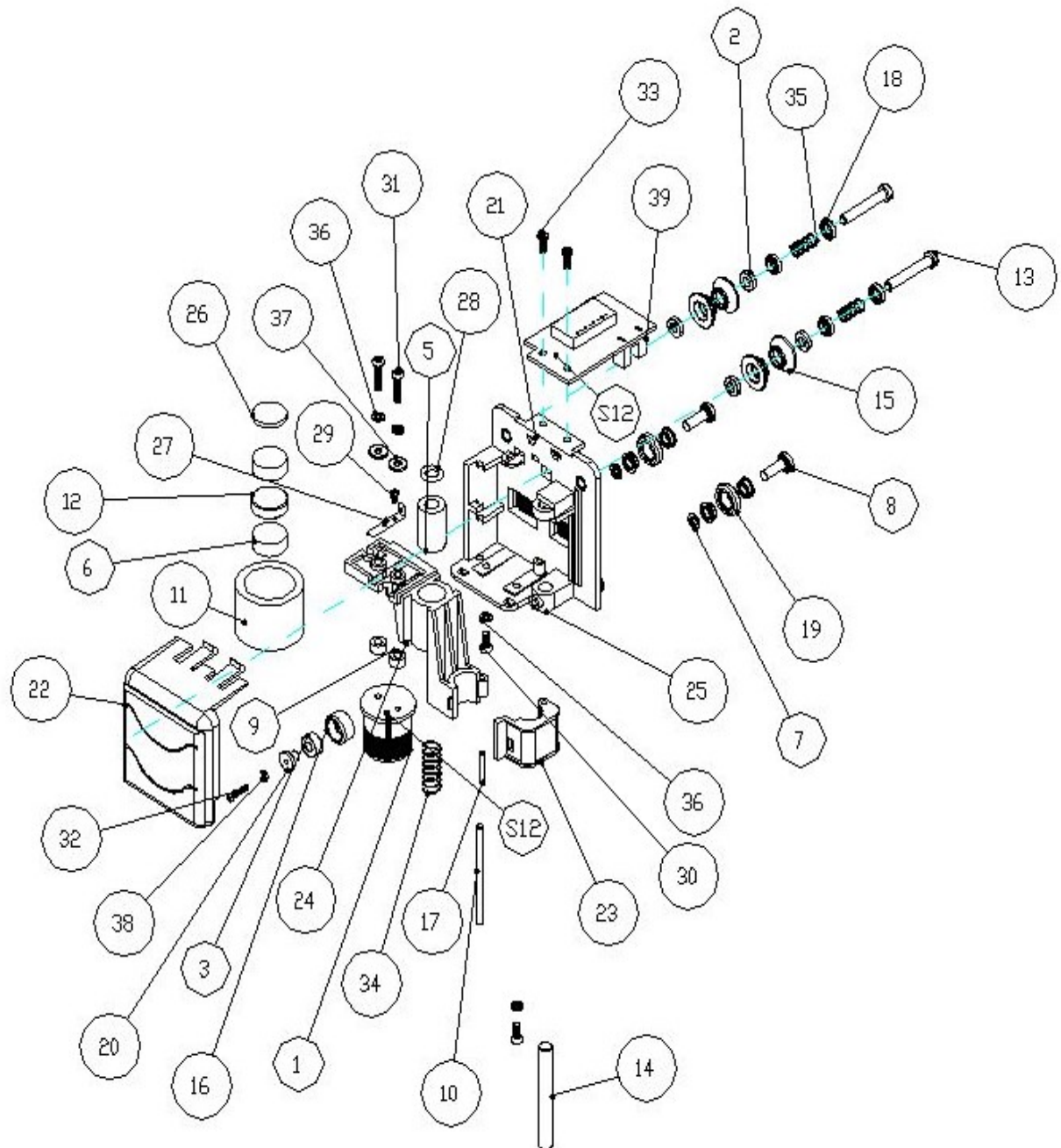


Fig 1-4

Parts List :

Item	Part No.	Description	Qty	Assembly set P/N
1	20700038G	Bearing 684ZZ.	2	29003794G
2	20700039G	Bearing L-1910ZZ.	1	
3	22800288G	Active pulley s shaft	1	29003794G
4	22801465G	White pulley Washer	1	29003794G
5	22801489G	Bearing Support	1	
6	22801620G	bearing stopper	1	
7	23100039G	step motor 17HD403-22	1	29003796G
8	24100411G	Y axis actively Gear - Sable	1	29003796G
9	24100415G	Active Gear	1	29003794G
10	24400066G	Cable basket.	1	
11	24400264G	Active pulley s bracket	1	
12	24401426G	Y-motor bracket Ultra&Sable	1	
13	24401624G	Sensor Bracket - Sable	1	
14	24402029G	Side Support Right(Black)	1	
15	24402912G	Plate sensing Carriage	1	
16	24700034G	Rubber Packing - Sable	1	29003796G
17	24900006G	E-shape retaining ring.(D7*d3*t 0.6)	3	29003794G
18	25200011G	Truss head machine screw (M3*6L) White + Spring & flat washer	2	
19	25200014G	Truss head machine screw (M3*8) White + Spring & flat washer	2	
20	25200064G	Pan head machine screw.(M2*6L while)	1	
21	25200090G	Socket headness set screw.(M3*3L)	3	
22	25200106G	Pan head machine screw(M3*6L)	4	
23	25200108G	Pan head screw including spring&flat washer.	2	
24	25200149G	Socket head set screw.(M3*12L)	4	
25	25200181G	Truss head machine screw(M4*6L).	2	
26	25600029G	Limit switch (TLF1X14/TLF1X9)	1	
	29003794G	Y-Axis Pulley Assembly	1	
	29003796G	Y Motor Assembly	1	

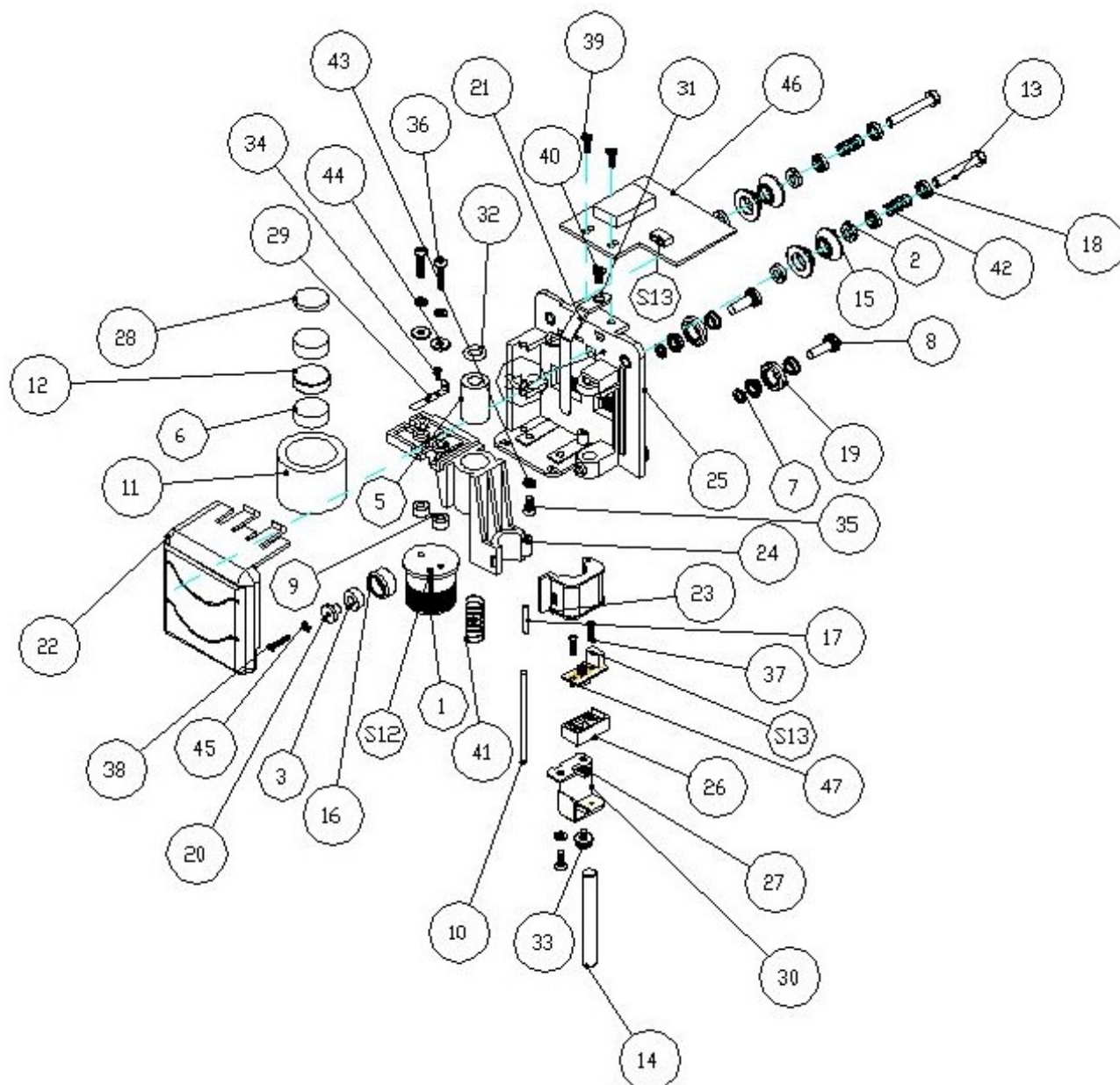
2.4 Carriage Assembly (Expert 24)



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No.	Part No.	Description	Qty	Assembly set P/N
1	20200065G	VCM coil.	1	29002796G
2	20700029G	Bearing L-840ZZ/MR84ZZ	4	29002796G
3	20700038G	Bearing 684ZZ.	1	29002796G
4	20700040G	Flange Bearing MF74ZZ.	4	29002796G
5	20700050G	Slide bush SM-6GP 級	1	29002796G
6	22200004G	VCM magnet.	2	29002796G
7	22800048G	Spacer for carrier guide roller (A Type).	2	29002796G
8	22800049G	Carrier guide roller (A type) shaft.	2	29002796G
9	22800291G	VCM heat-isolation pad	2	29002796G
10	22800295G	Slide shaft in tool carriage	1	29002796G
11	22800556G	VCM Base.	1	29002796G
12	22800557G	VCM Magnet air gap.	1	29002796G
13	22800708G	DU Roller shaft	2	29002796G
14	22800709G	Slide shaft in tool carriage	1	29002796G
15	22800710G	Carrier guide roller flute-DU Type.	4	29002796G
16	22800714G	Wheel - Sable	1	29002796G
17	22801030G	tool carriage s shaft	1	29002796G
18	22801464G	White spring bracket for carrier guide roller	4	29002796G
19	22801680G	Carrier Guide Roller Flute-A Type(White)	2	29002796G
20	22803089G	Carriage Sleeve	1	29002796G
21	23500014G	Nut(M2.6xt2xS5)	2	29002796G
22	24100180G	Tool carriage cover	1	29002796G
23	24100181G	tool carriage s holder	1	29002796G
24	24100370G	tool carriage slider	1	29002796G
25	24100371G	Carriage Base	1	29002796G
26	24400031G	VCM magnet spacer.	1	29002796G
27	24400266G	Electrode (Cu)	1	29002796G
28	24700014G	oil seal	1	29002796G
29	25200037G	Pan head tap screw (white)M1.7*4	1	29002796G
30	25200049G	Pan head screw copper M3x6.	2	29002796G
31	25200050G	Pan head screw M3*12	2	29002796G
32	25200071G	Pan head machine screw.(M2*10L)	1	29002796G
33	25200086G	90° dish flat head machine screw M2.6*8	2	
34	25500025G	Tool carriage spring	1	29002796G
35	25500041G	Spring for carrier guide roller.	2	29002796G
36	26000009G	Spring washer.(d3xD5.3x0.7 Ni)	4	29002796G
37	26000033G	Flat Washer	2	29002796G
38	26000071G	External toothed lock washer (d2.2*D4.8*t0.3)	1	29002796G
39	29001549G	Carriage PCB Assembly	1	
S12	20900445G	VCM to Carpcb Cable 1.5-2Pin (B216)	1	29002796G
	29002796G	Carriage Assembly without PCB	1	

2.5 Carriage Assembly (Expert 24LX)



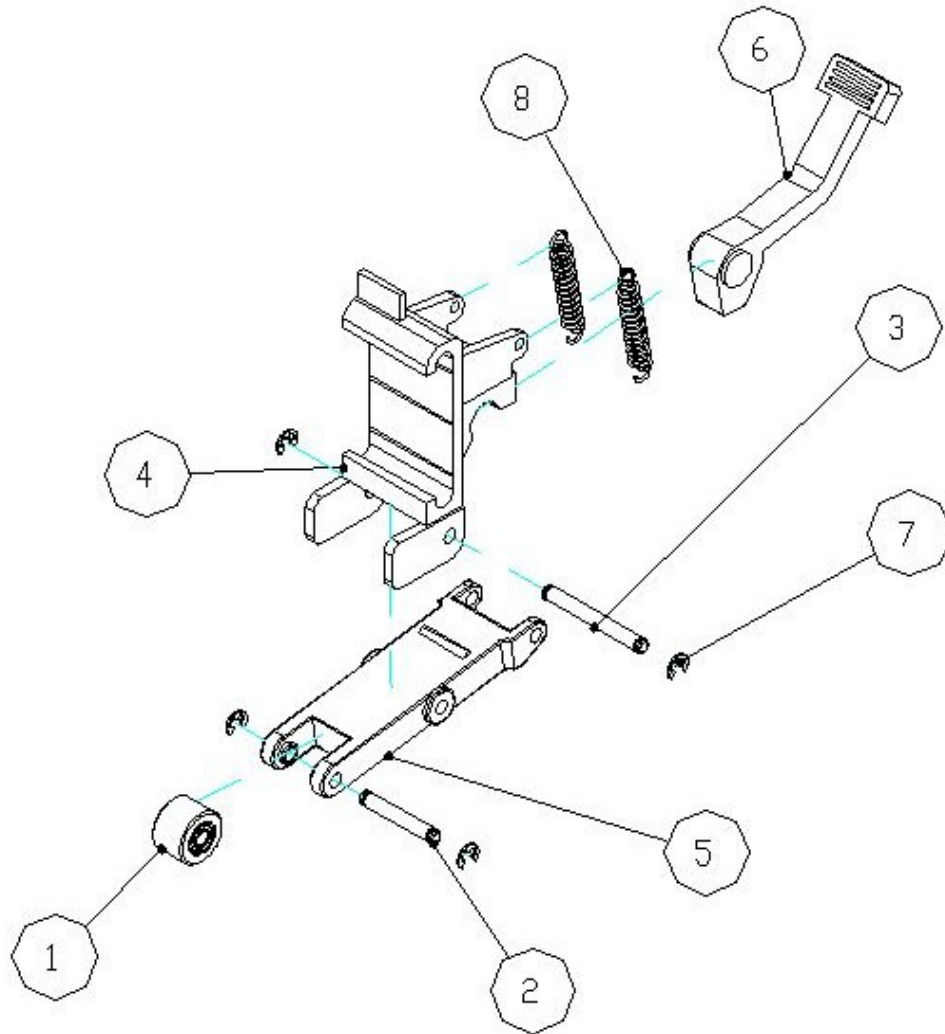
Parts List :

No.	Part No.	Description	Qty	Assembly set P/N
1	20200065G	VCM coil.	1	29006172G
2	20700029G	Bearing L-840ZZ/MR84ZZ	4	29006172G
3	20700038G	Bearing 684ZZ.	1	29006172G
4	20700040G	Flange Bearing MF74ZZ.	4	29006172G
5	20700050G	Slide bush SM-6GP	1	29006172G
6	22200004G	VCM magnet.	2	29006172G
7	22800048G	Spacer for carrier guide roller(A type)	2	29006172G
8	22800049G	Carrier guide roller(A type)shaft.	2	29006172G
9	22800291G	VCM heat-isolation pad	2	29006172G
10	22800295G	Slide shaft in tool carriage	1	29006172G
11	22800556G	VCM Base.	1	29006172G
12	22800557G	VCM Magnet air gap.	1	29006172G

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No.	Part No.	Description	Qty	Assembly set P/N
13	22800708G	DU Roller shaft	2	29006172G
14	22800709G	Slide shaft in tool carriage	1	29006172G
15	22800710G	Carrier guide roller flute-DU type	4	29006172G
16	22800714G	Wheel	1	29006172G
17	22801030G	tool carriage s shaft - Sable	1	29006172G
18	22801464G	White spring bracket for carrier guide roller	4	29006172G
19	22801680G	Carrier Guide Roller Flute-A Type	2	29006172G
20	22803089G	Carriage Sleeve	1	29006172G
21	23500014G	Nut(M2.6xt2xS5)	2	29006172G
22	24100180G	Tool carriage cover	1	29006172G
23	24100181G	tool carriage s holder	1	29006172G
24	24100370G	tool carriage slider	1	29006172G
25	24100371G	Carriage Base	1	29006172G
26	24100503G	SPACE	1	29006172G
27	24100504G	lens	1	29006172G
28	24400031G	VCM magnet spacer.	1	29006172G
29	24400266G	Electrode (Cu)	1	29006172G
30	24403728G	Bracket Sensor	1	29006172G
31	24404022G	Plate	1	29006172G
32	24700014G	oil seal	1	29006172G
33	25200011G	Truss head machine screw (M3*6L)	1	29006172G
34	25200037G	Pan head tap screw (White) M1.7*4	1	29006172G
35	25200049G	Pan head screw copper M3x6.	2	29006172G
36	25200050G	panhead screw M3*12	2	29006172G
37	25200067G	Pan head machine screw(M2*8L while)	2	29006172G
38	25200071G	Pan head machine screw.(M2*10L)	1	29006172G
39	25200086G	90° dish flat head machine screw M2.6*8	2	
40	25200103G	90° dish flat head machine screw 3*6	1	29006172G
41	25500025G	Tool carriage spring	1	29006172G
42	25500041G	Spring for carrier guide roller.	2	29006172G
43	26000009G	Spring washer.(d3xD5.3x0.7 Ni)	4	29006172G
44	26000033G	Flat Washer	2	29006172G
45	26000071G	External toothed lock (d2.2*D4.8*t0.3)	1	29006172G
46	29004514G	AASII carriage board assembly	1	
47	29005052G	AAS II sensor board assembly	1	29006172G
	29006172G	Carriage Assembly without PCB (EXPERT 24 LX)	1	
S12	20900445G	VCM to Carpcb Cable 1.5-2Pin	1	29006172G
S13	20901523G	AAS II Sensor PCB to carriage PCB	1	29006172G

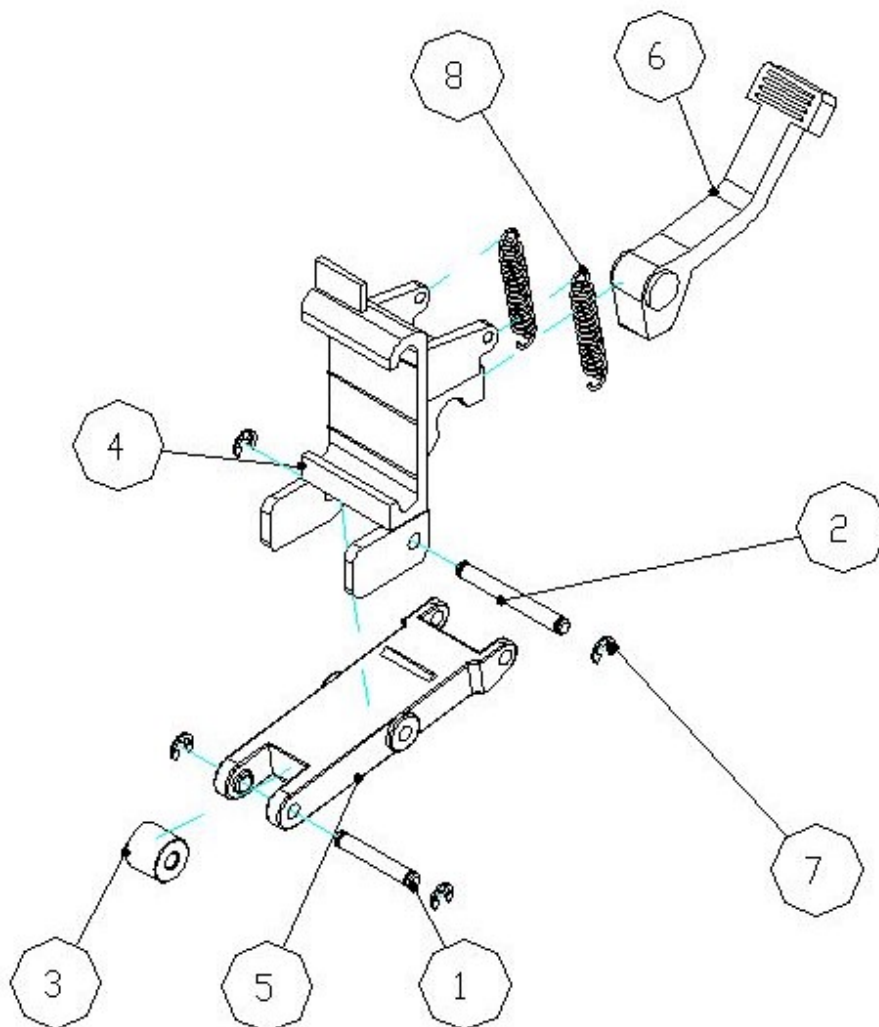
2.6 Pinch Roller Set



Parts List :

No.	Part No.	Description	Qty	Assembly set P/N
1	20200003G	Pinch roller wheel	1	29003832G
2	22800029G	Pinch roller shaft.	1	29003832G
3	22800294G	Pinch roller active arm shaft	1	29003832G
4	24100285G	Pinch roller base	1	29003832G
5	24100286G	Pinch roller arm	1	29003832G
6	24100410G	Handle of CAM roller	1	29003832G
7	24900006G	E-shape retaining ring.(D7*d3*t 0.6)	4	29003832G
8	25500040G	Pinch Roller Spring	2	29003832G

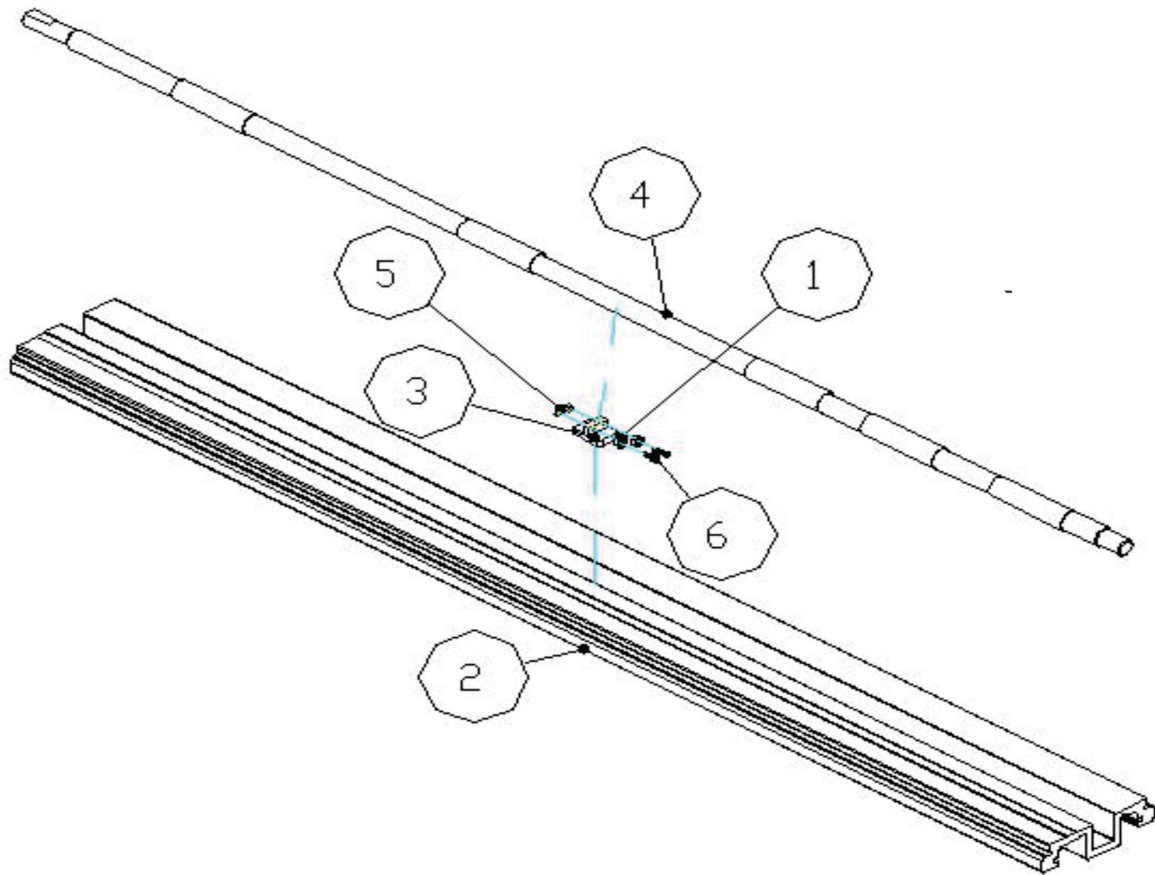
2.7 Auxiliary Pinch roller Assembly



Parts List :

No.	Part No.	Description	Qty	Assembly set P/N
1	22800029G	Pinch roller shaft.	1	29004306G
2	22800294G	Pinch roller active arm shaft	1	29004306G
3	22801897G	Auxiliary Wheel	1	29004306G
4	24100285G	Pinch roller base	1	29004306G
5	24100286G	Pinch roller arm	1	29004306G
6	24100410G	Handle of CAM roller	1	29004306G
7	24900006G	E-shape retaining ring.(D7*d3*t 0.6)	4	29004306G
8	25500040G	Pinch Roller Spring	2	29004306G

2.8 Grid roller housing Assembly

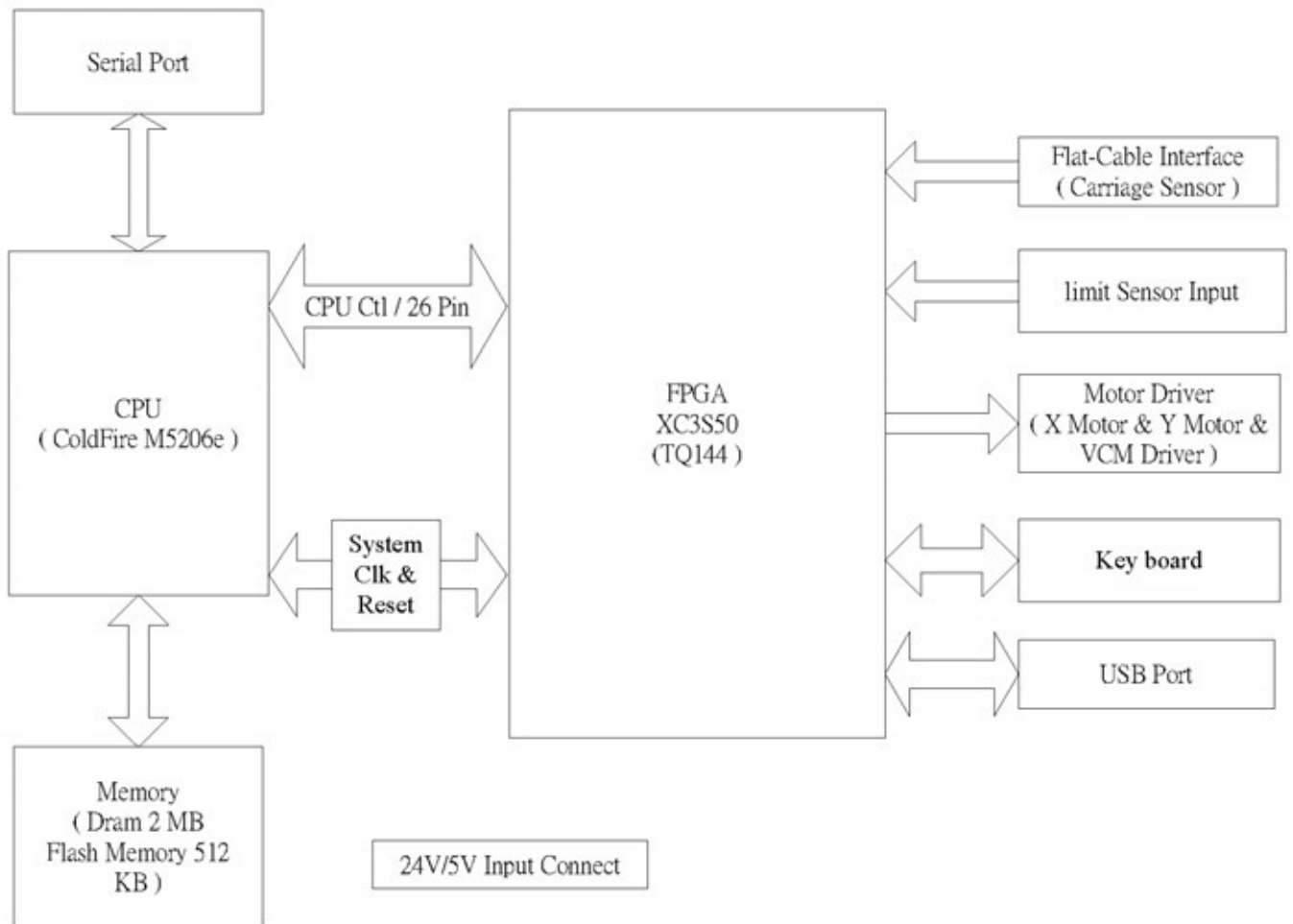


Parts List :

No.	Part No.	Description	Qty
1	20700020G	Bearing 692ZZ	2
2	22801418G	main beam Sable	1
3	23300440G	Support seat	1
4	23301012G	Drum self-made - Sable & Bengal	1
5	23500003G	Nut(2xt1.6xS4)	2
6	25200067G	Pan head machine screw(M2*8L while)	2

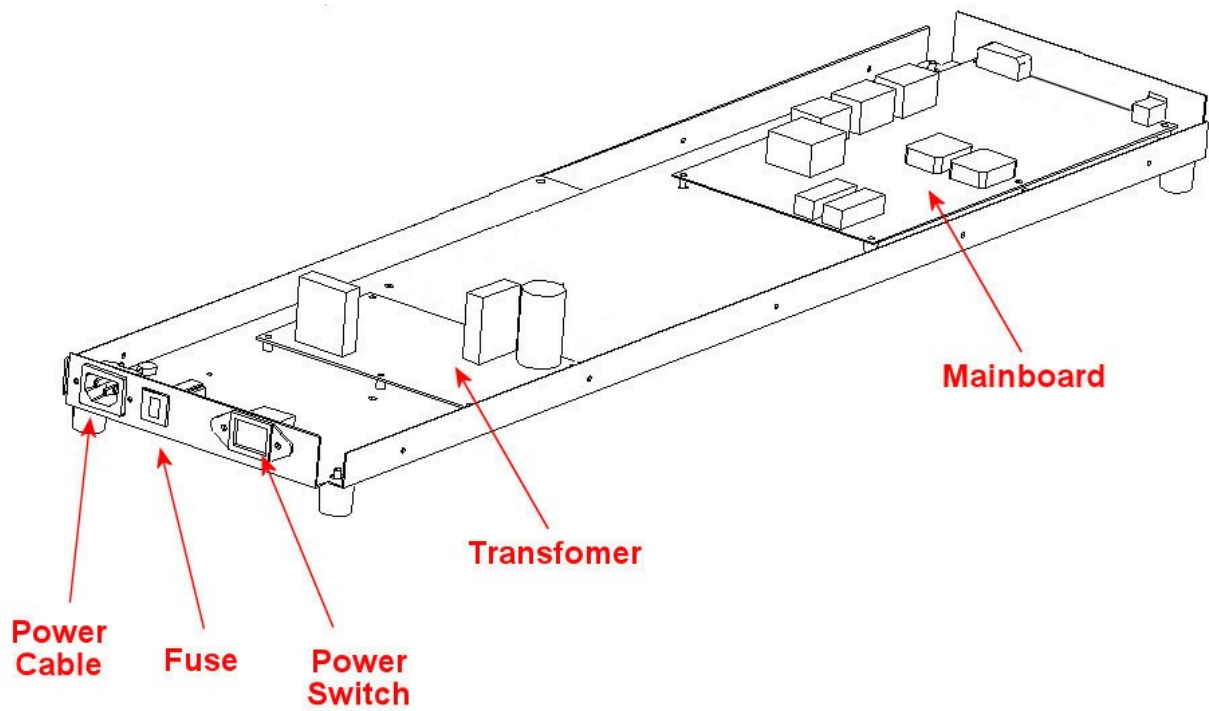
Chapter 3 : Circuit System

3.1 System Diagram

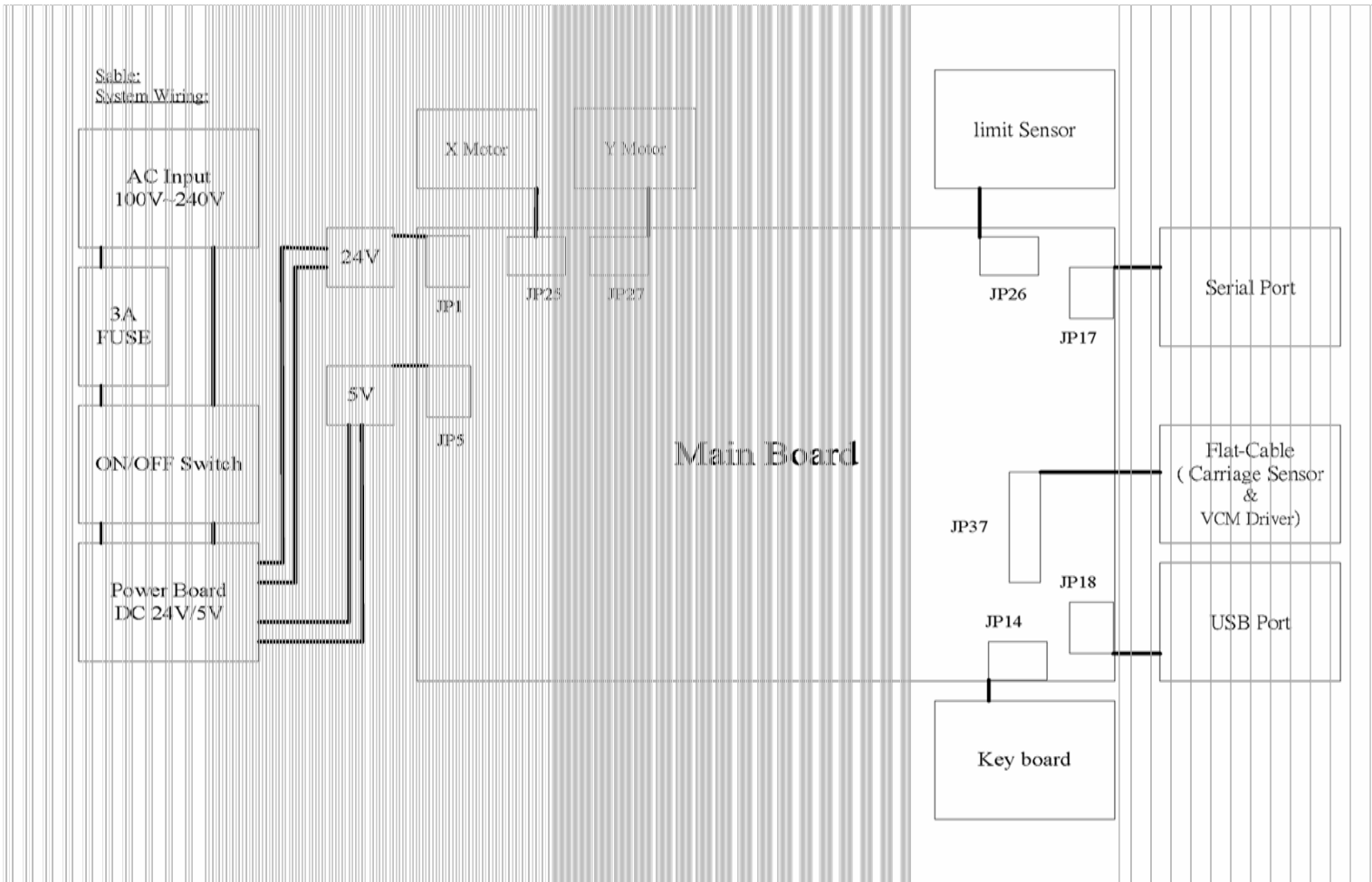


3.2 Electrical Component Connections

- Machine Base and Components



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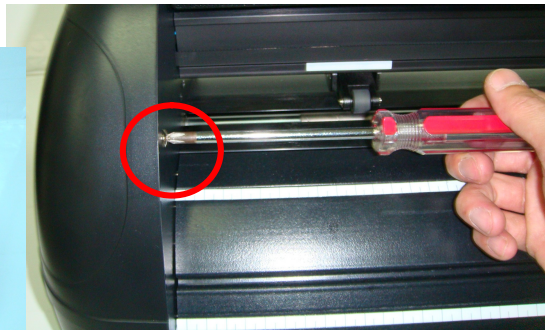
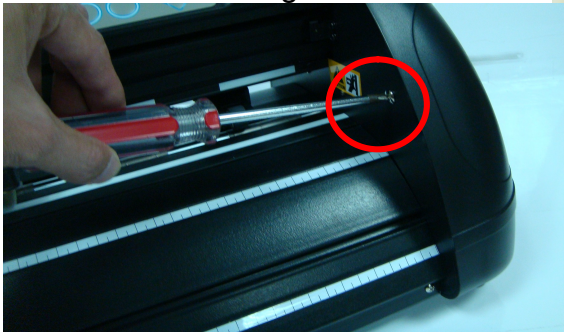
Chapter 4 : Maintenance

4.1 How to replace Control Panel

Tools Required:

- Phillips screwdriver
- Slotted screwdriver
- Allen Wrench

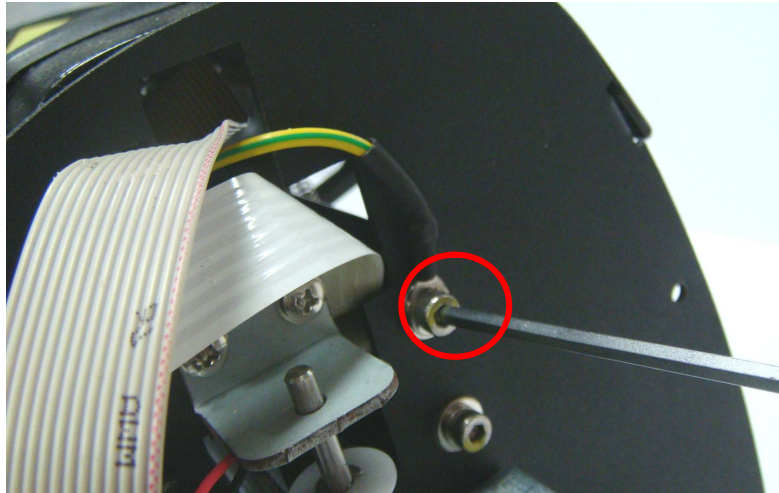
1. Use Phillips screwdriver to lose two screws on right/left cover.



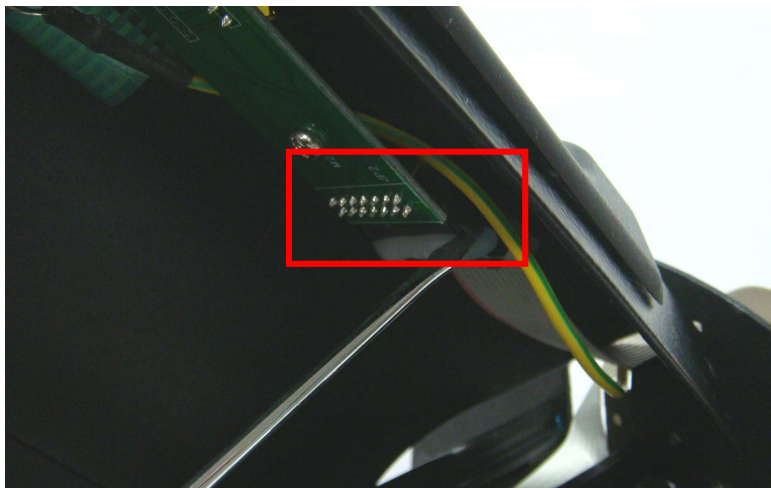
2. Use Phillips screwdriver to loose four screws on top cover.



3. Use Allen Wrench to loose Ground cable screw on right side support.



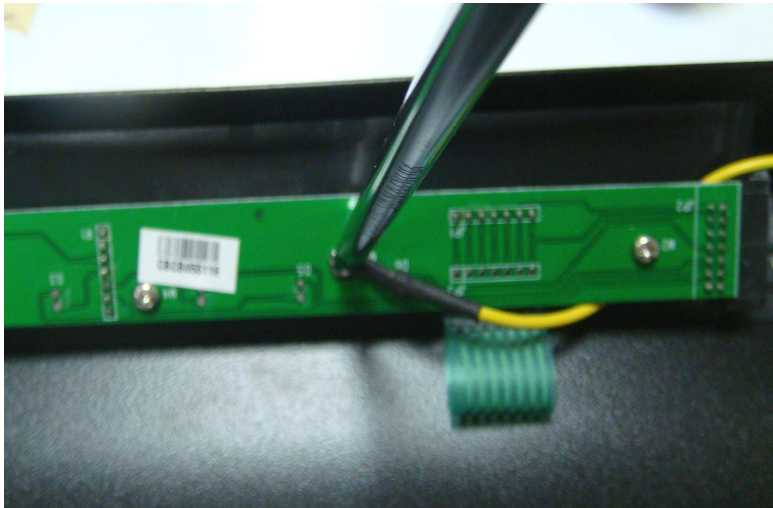
4. Use Slotted screwdriver to scrape off glue on flat cable connector.



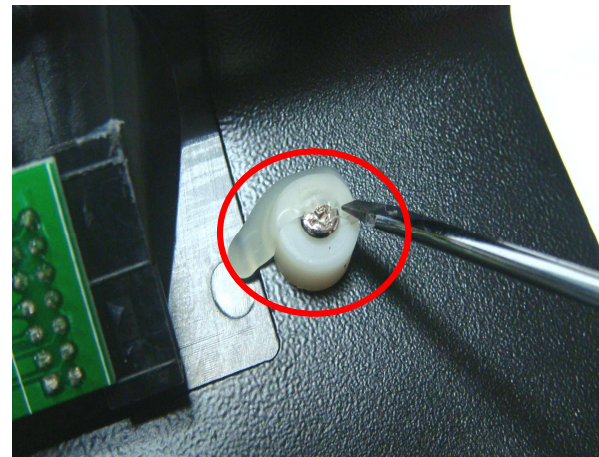
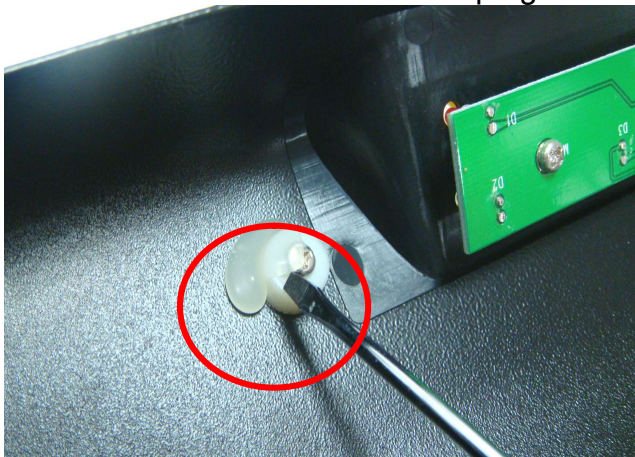
5. Pull out flat cable on control panel, and then remove the top cover.



6. Use Phillips screwdriver to loose screw on control panel board.



7. Use Slotted screwdriver to scrape glue and remove the screws.

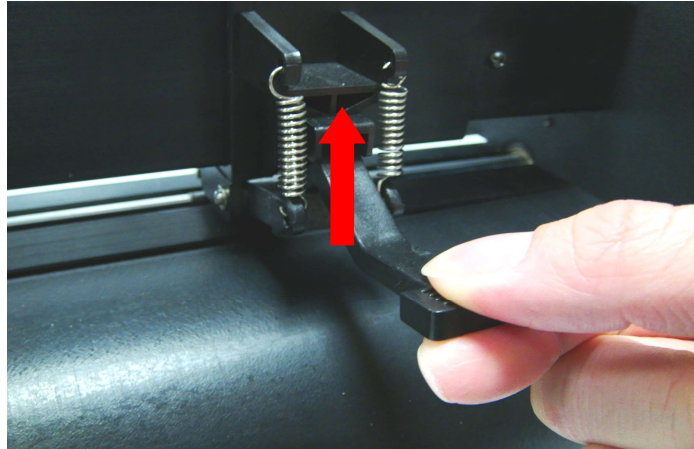


8. Change control panel.

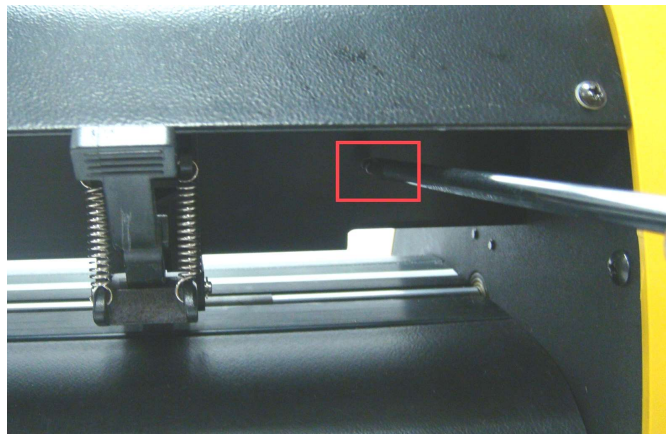


4.2 Replace Pinch Roller

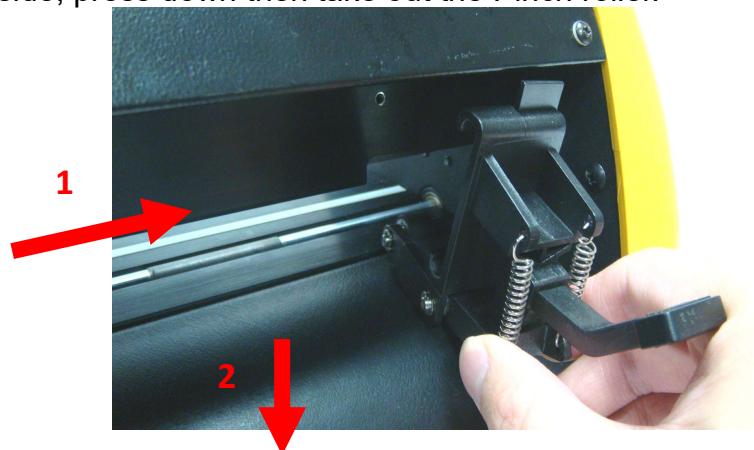
1. Pull up the Pinch Roller lever.



2. Behind of the machine, on right side use Phillips screwdriver to loose the screw shown as below picture.

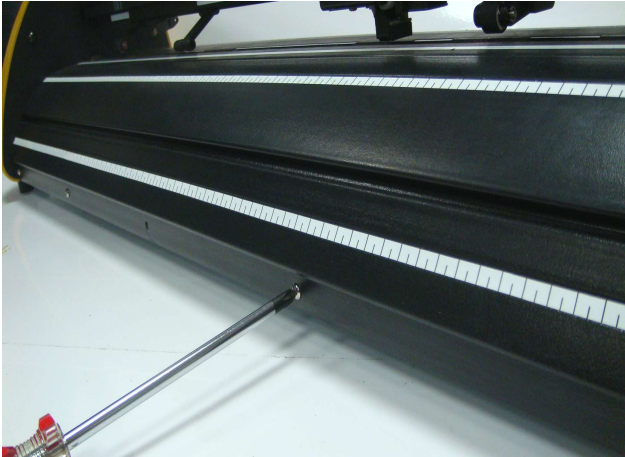


3. Push to right side, press down then take out the Pinch roller.

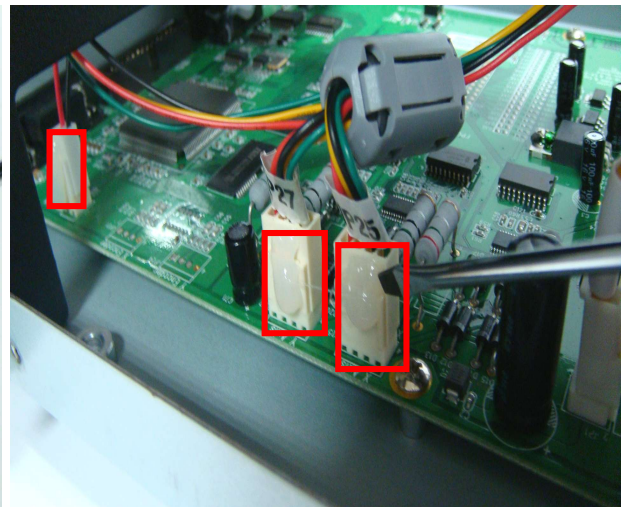
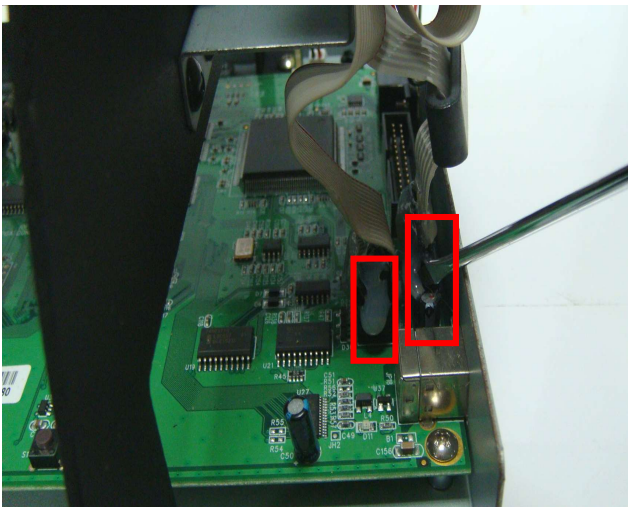


4.3 Replace Main board

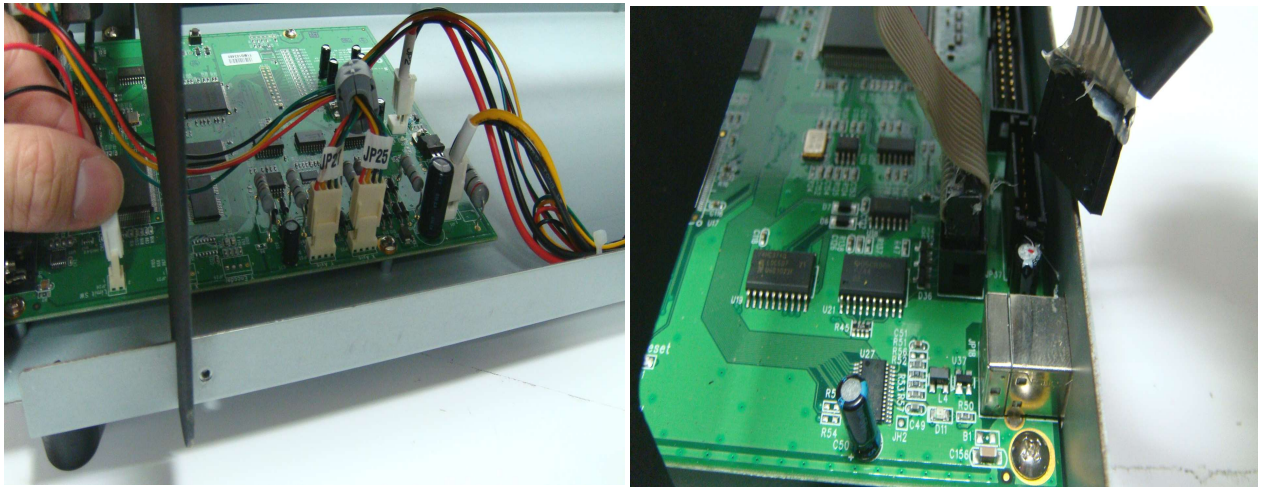
1. Use Phillips screwdriver to loose screws on Front platen extension and Rear platen extension.



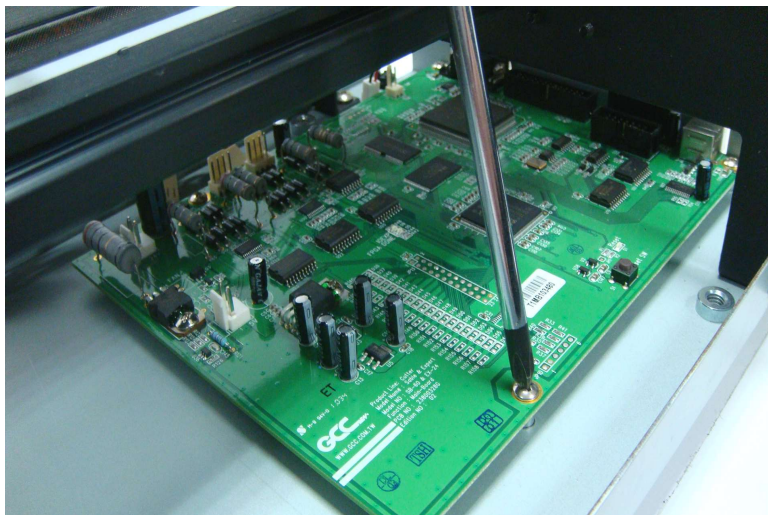
2. Use Slotted screwdriver to scrape off the glue on all connector.



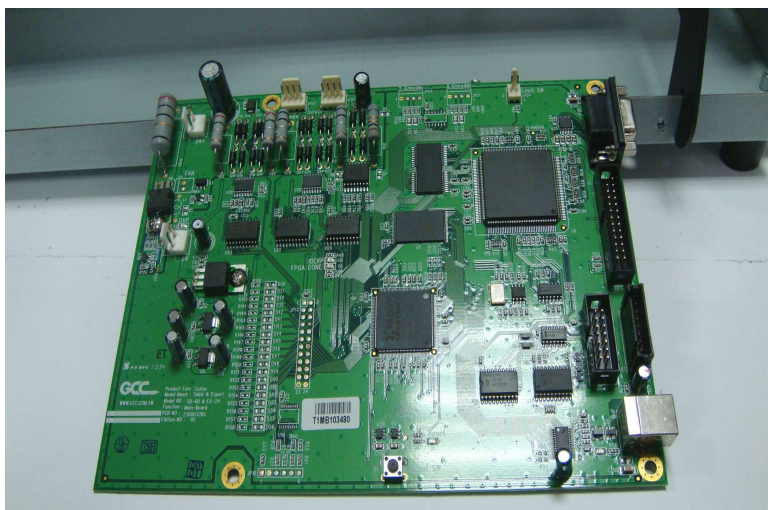
3. Unplug all connectors.



4. Use Phillips screwdriver to loose four screws on main board.

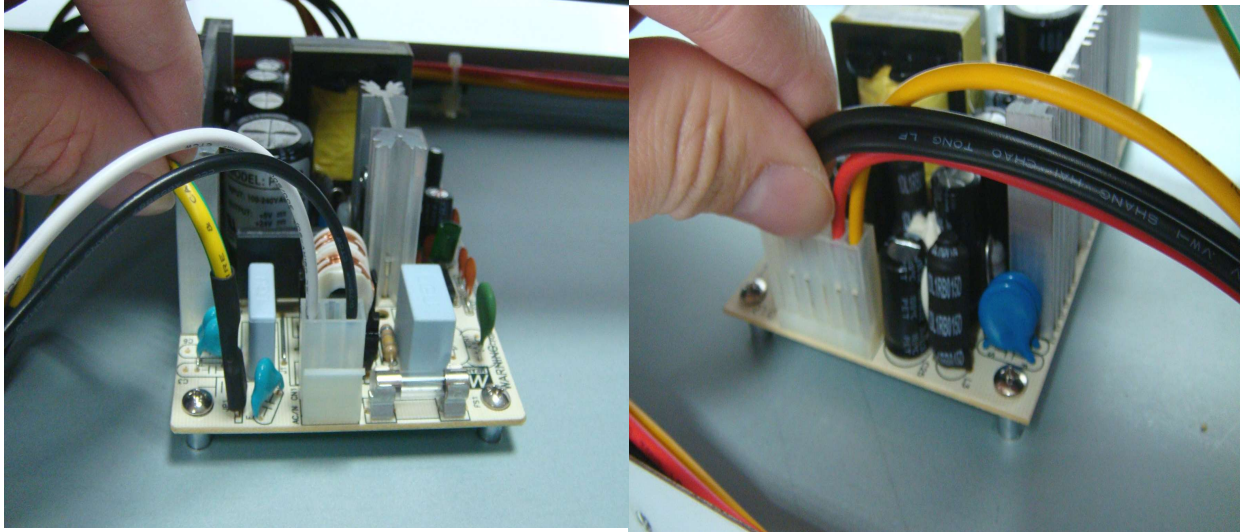


5. Change Main board.

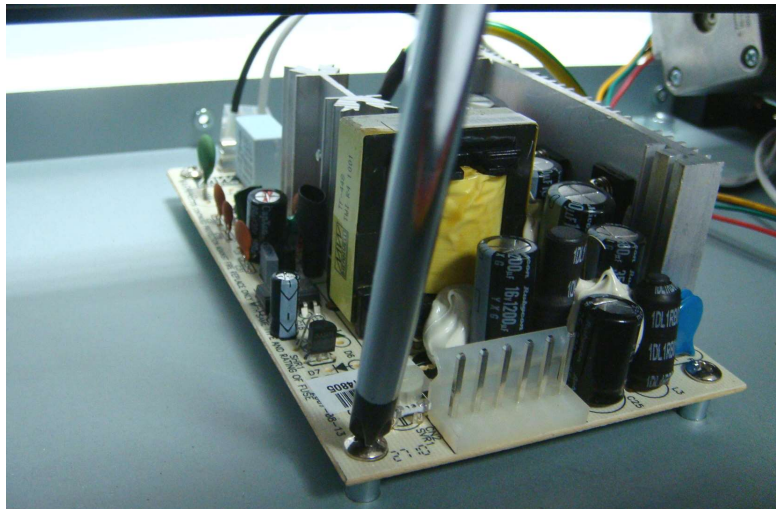


4.4 Replace Power Board

Unplug all connectors



Use Phillips screwdriver to loose four screws on power board.

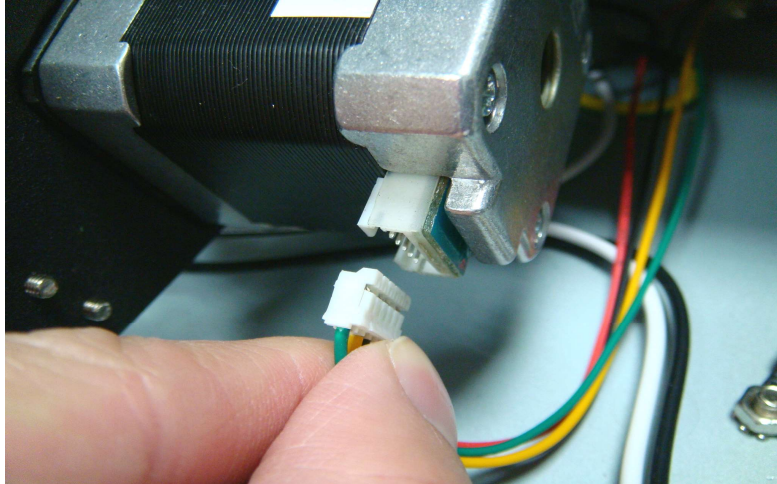


Change Power board.

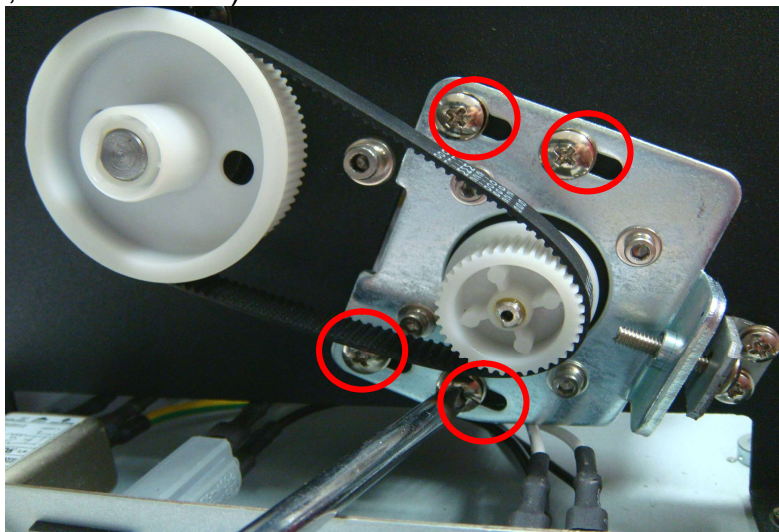


4.5 Replace X Motor

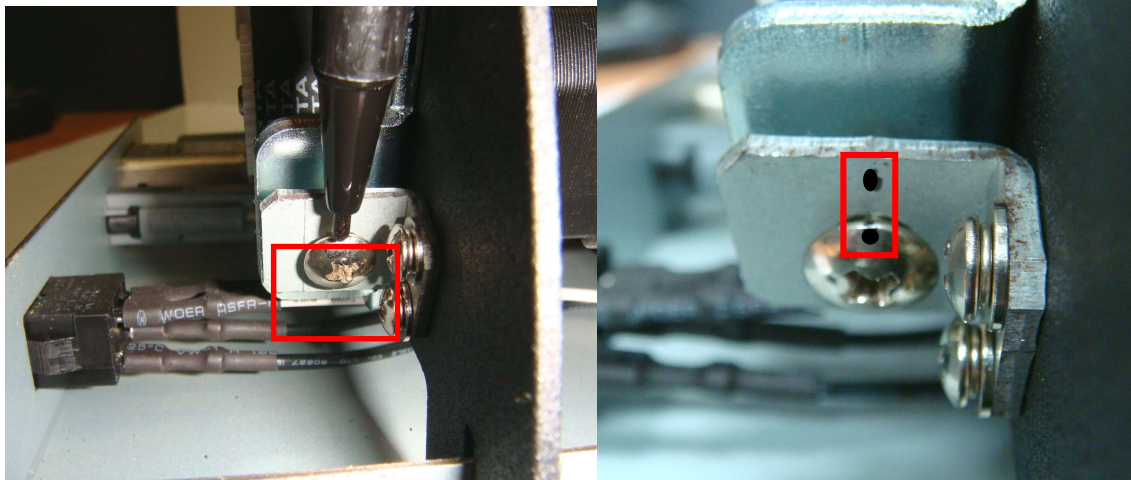
1. Unplug cable on motor.



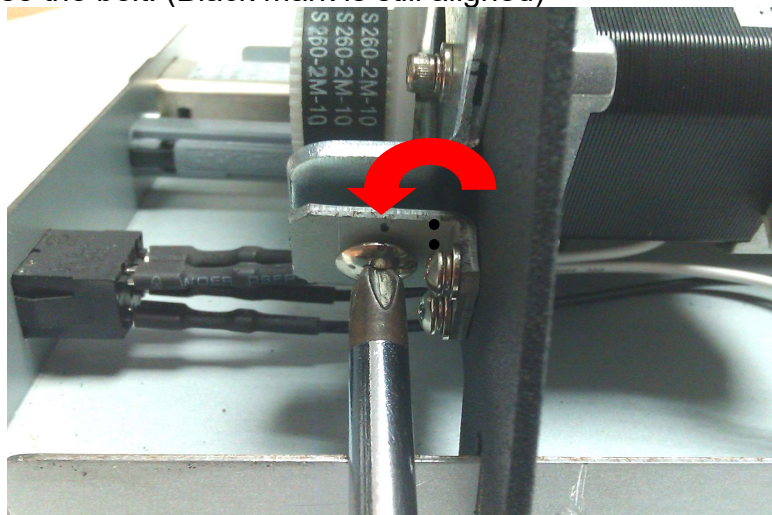
2. Use Phillips screwdriver to loose four screws as below picture. (Only to loose, do not remove)



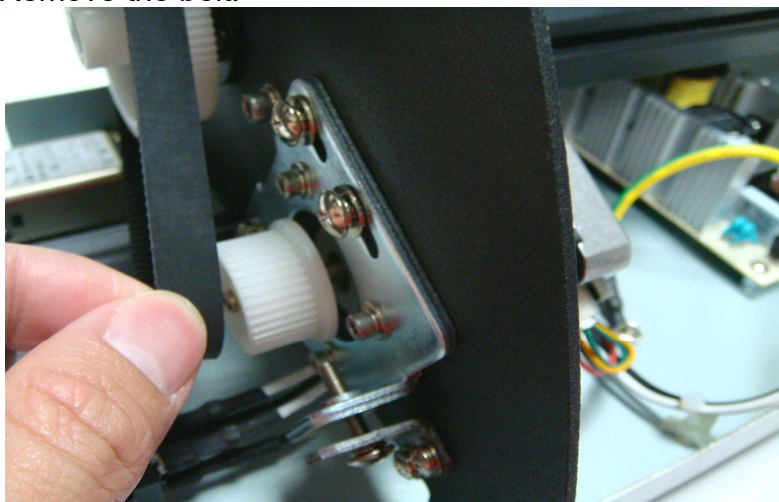
3. Use marker to mark on the tension adjustment screw for realignment.



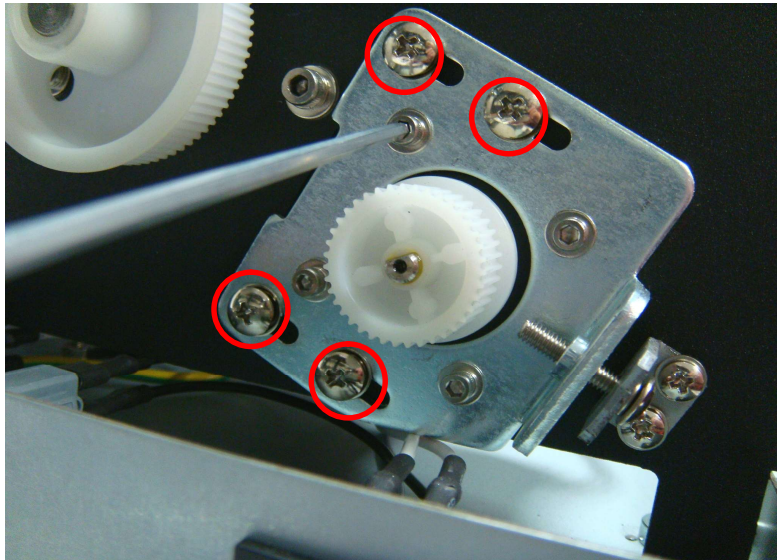
4. Use Phillips screwdriver to counter anticlockwise rotate screw **two** circles, release the belt. (Black mark is still aligned)



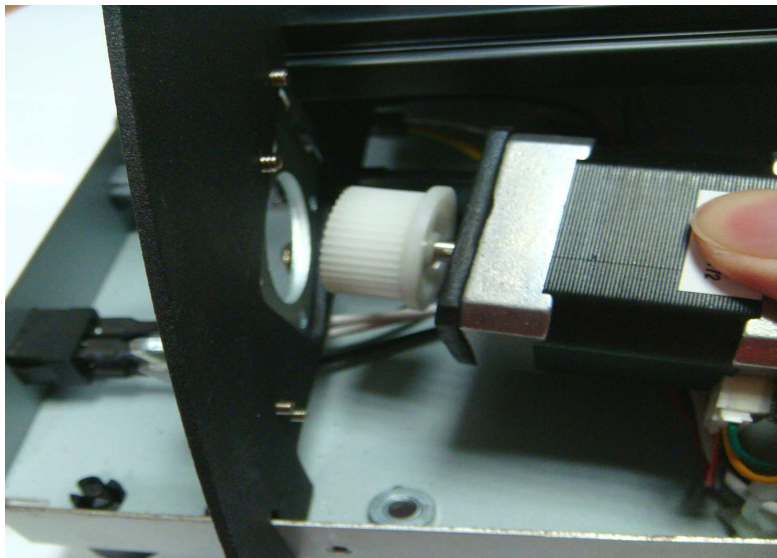
5. Remove the belt.



6. Use Allen Wrench to loose four screws.

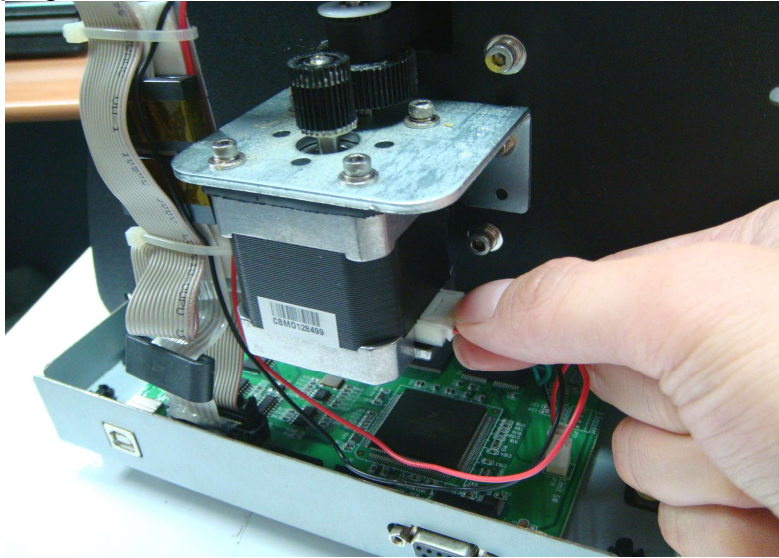


7. Change X motor and tension the belt back to the origin marked position.

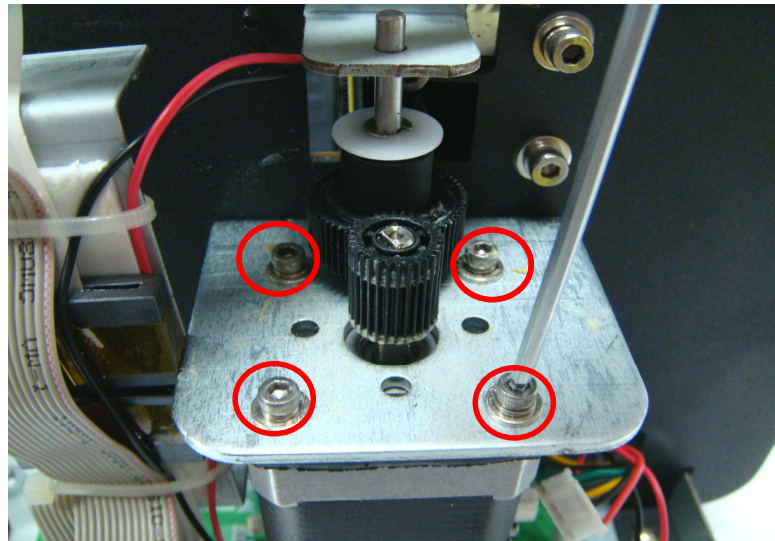


4.6 Replace Y Motor

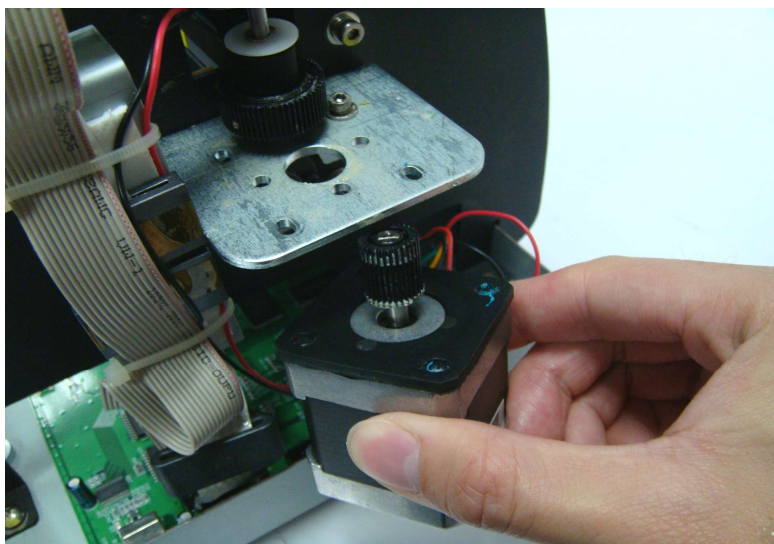
1. Unplug cable from motor.



2. Use Allen Wrench to loose four screws.



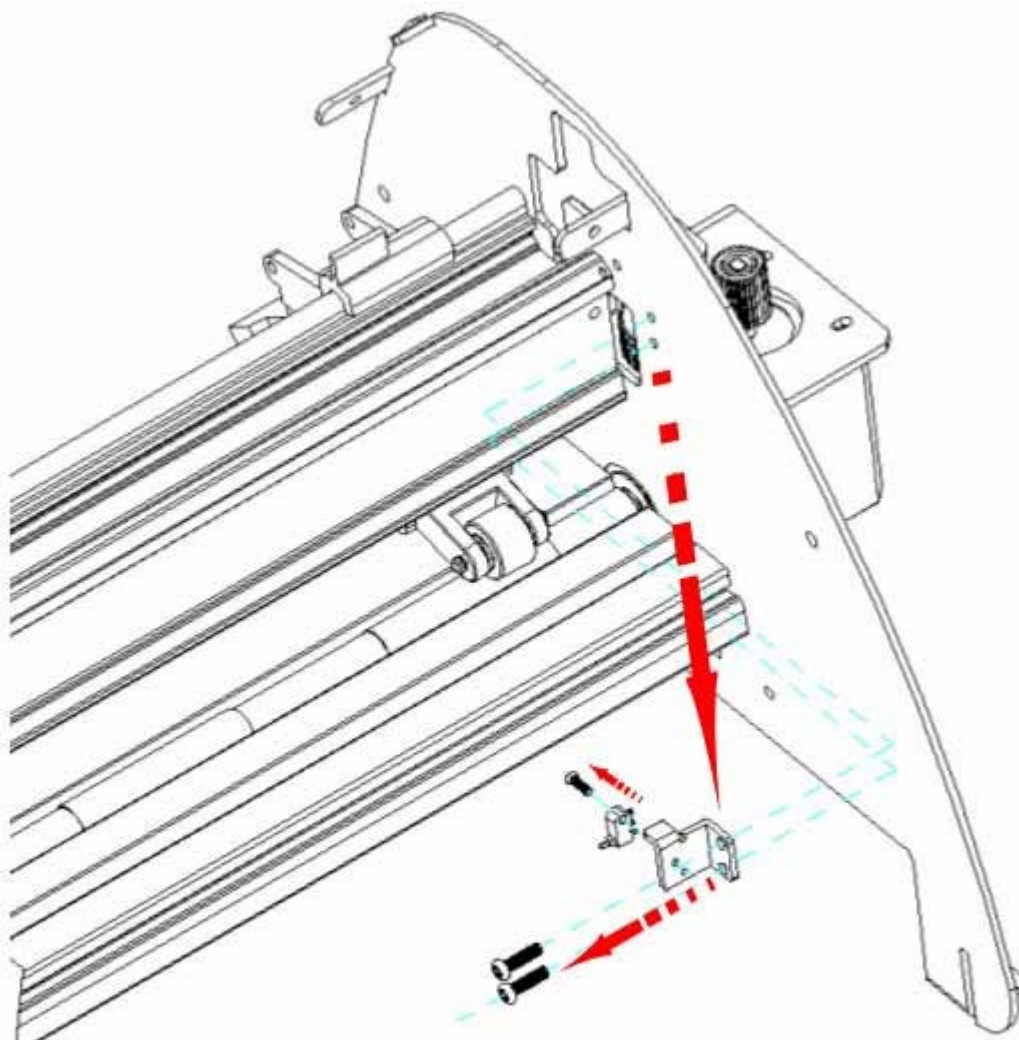
3. Change Y motor.



4.7 Limit Switch Disassembly

Step 1: Take off the holding bracket from the right panel.

Step 2: Loosen the screws from the bracket.

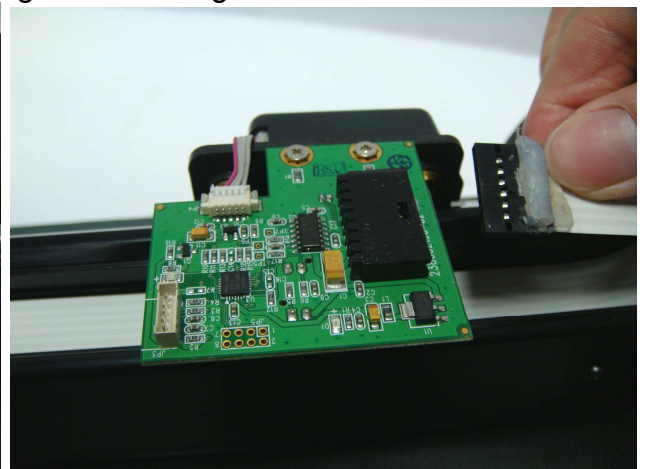
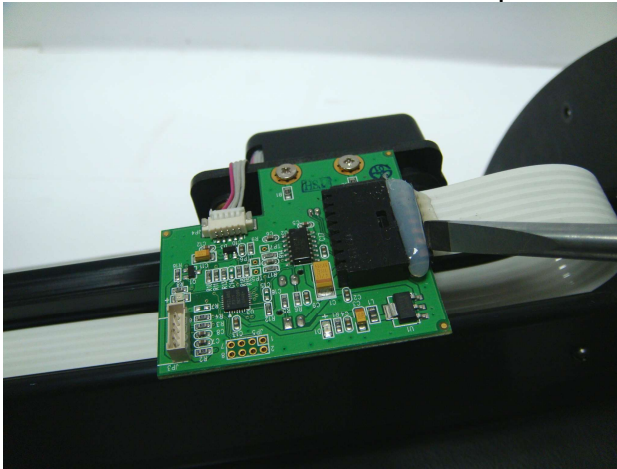


4.8 How to replace Carriage

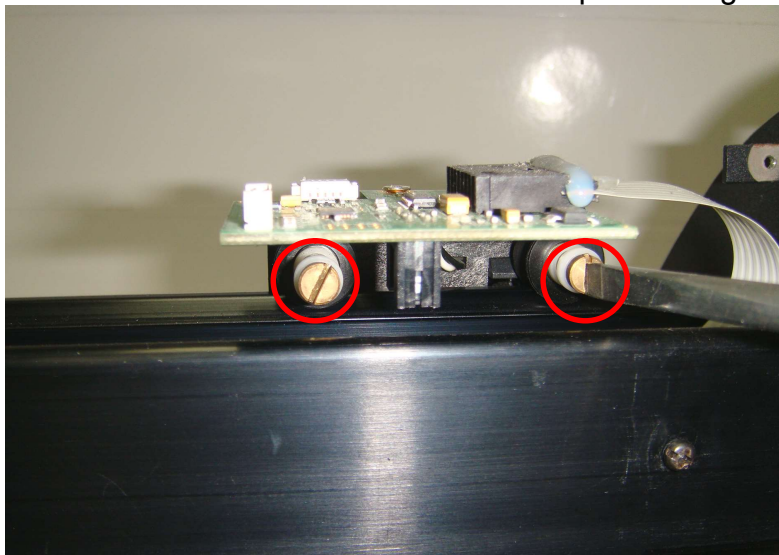
Tools Required:

- Phillips screwdriver
- Slotted screwdriver
- Allen Wrench

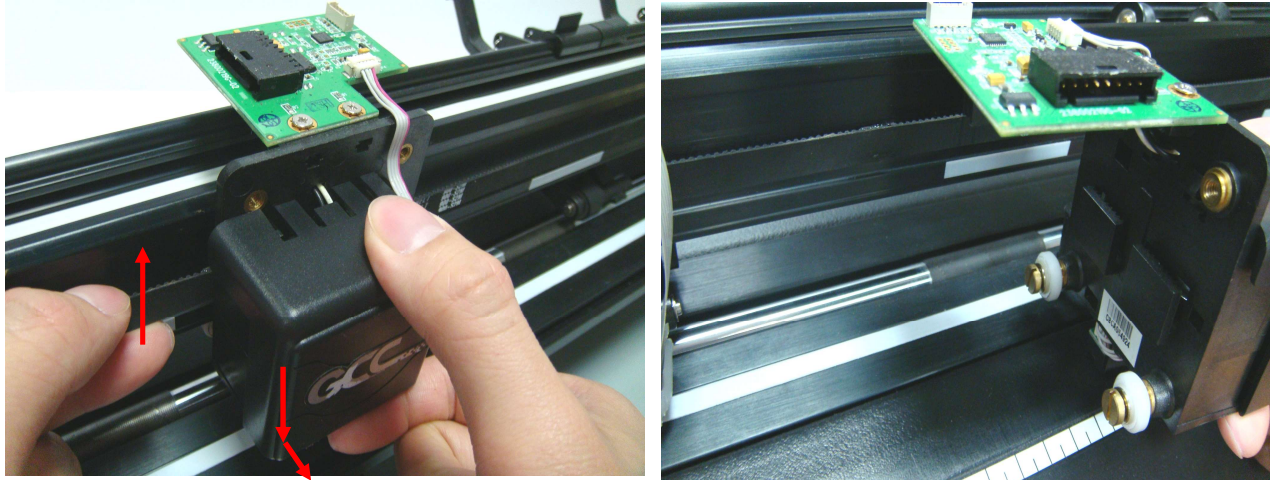
1. Use Slotted screwdriver to scrape off the glue on carriage PCB connector.



2. Use Slotted screwdriver to loose two screws on top of carriage from the back.

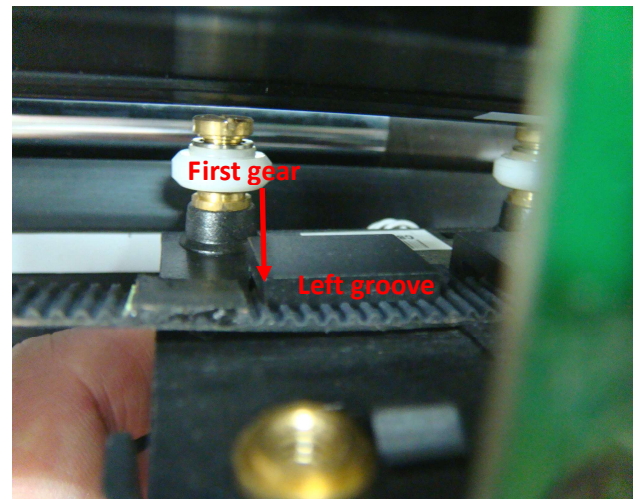
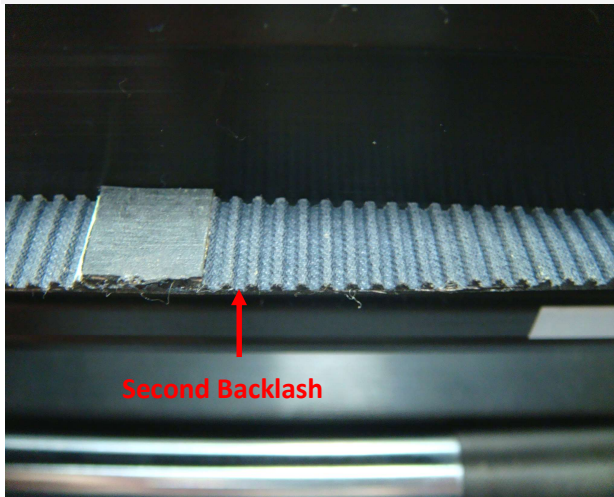


3. Pull up the belt, push carriage forward down to remove the carriage set from the belt.

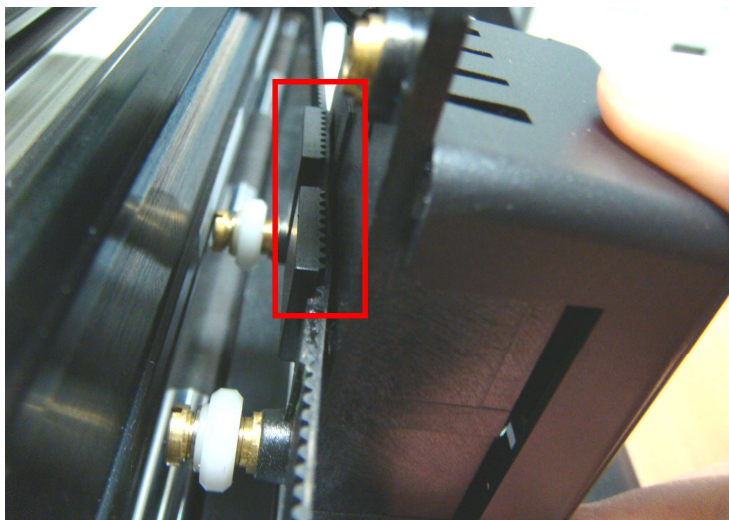


Installation Note

When install carriage, the first gear on left groove of the carriage must be set from onto the second backlash of the belt to set origin.



Belt completely set into groove.



4.9 Belt Tension Adjustments

To replace the tool carriage or belt, the belt tension needs to be adjusted to 4g. Please follow the steps.

Step 1. Move the tool carriage to one end of the guide beam.

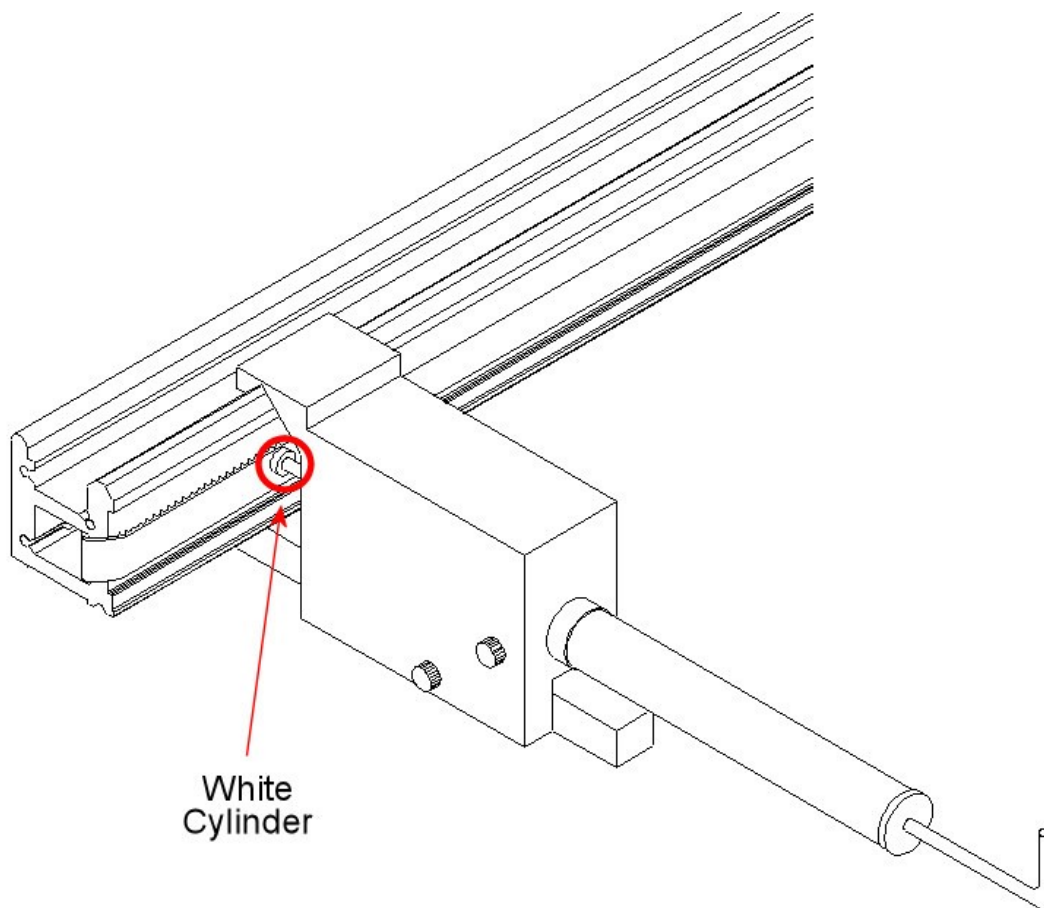
Step 2. Firstly, place the top arm gauge on the top track of the guide beam.

Then the bottom arm will click into the bottom track. (see Fig 1-5)

Step 3. Make the white cylinder flush with the belt surface. Tug on the wire a couple of times to ensure full contact between both surfaces.

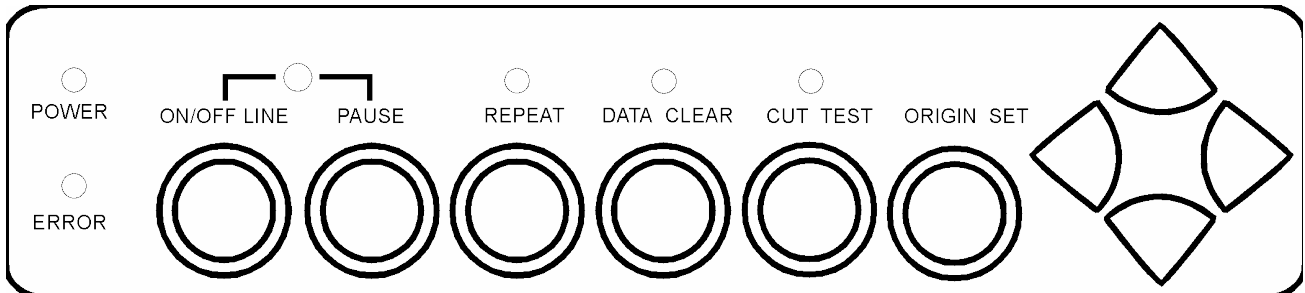
Step 4. Desired tension is 4g. To change belt tension, adjust the screws

Step 5. Fasten the retaining nut.



Chapter 5 : Trouble Shootings

5.1 LED Indications and Error Message



The following table provide a quick reference for system operation

- LED Indications

☀ blink ● on ○ off

	Indication	ERROR	ON/OFF LINE	REPEAT	DATA CLEAR	CUT TEST
1	On-Line State	○	●	○	○	○
2	Pause State	○	☀	○	○	○
3	Off-Line State	○	○	○	○	○
4	Repeat State	○	○	●	○	○
5	Data Clear State	○	○	○	●	○
6	Cut Test State	○	○	○	○	●
7	Origin Set State	○	○	●	●	●

- LED Warnings

	Warning	ERROR	ON/OFF LINE	REPEAT	DATA CLEAR	CUT TEST
1	Graph was clipped	☀	●	●	○	○
2	HPGL/2 command Error	☀	●	○	●	○
3	Lever up or no media	☀	●	○	○	○
4	Cannot repeat	☀	○	●	○	○
5	Communication error	☀	○	○	●	○
6	Width sensor error	☀	○	○	○	●

- LED Commends

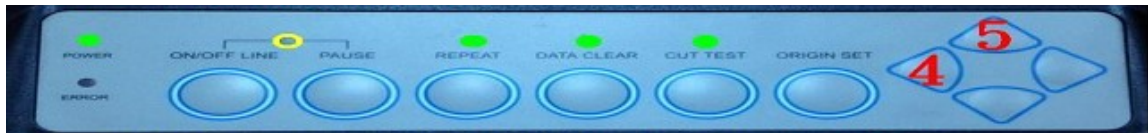
	Commands	ERROR	ON/OFF LINE	REPEAT	DATA CLEAR	CUT TEST
1	Change USB port type: set to "Off line" status, press "Pause" + "Origin Set" together to enter	○	○	●	●	●
	Set to GCC USB mode	○	○	●	☀	●
	Set to Common USB mode	○	○	●	●	☀
2	Re-sizing	☀	○	○	○	●

5.2 Main board parameter reset

Press ON/OFF LINE, set to offline. Press and hold Pause & press Origin Set



Press and hold "left" arrow and press "Up" arrow



Press "Data Clear"



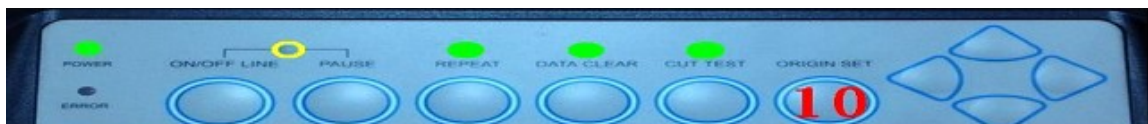
Press and hold "left" arrow and press "Up" arrow



Press "Data Clear"



Press "Origin Set"



Press "Data Clear"



Press "Origin Set"

