



NXT5000 Service Manual



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The BadgePass printer is designed to

Liability Statement

This product has been built to the high standards of BadgePass. Please do not attempt to operate or repair this equipment without adequate training. Any use, operation, or repair in contravention of this document is at your own risk. By acceptance of this system you hereby assume all liability consequent to your use or misuse of this equipment. BadgePass assumes no liability for incidental, special, or consequential damage of any kind. Equipment specifications, applications, and options are subject to change at the sole discretion of BadgePass without notice.

Proprietary Notice

All drawings and information herein are the property of BadgePass. All unauthorized use and reproduction is prohibited.

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Atom ® is a registered trademark of Intel Inc.

TrueType is a registered trademark of Apple Inc.

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Environmental information – recycling of end-of-life products

The manufacture of the equipment that you have purchased required the extraction and use of natural resources. It may contain materials that are hazardous to health and the environment. To prevent the dispersal of such materials into our environment and reduce the pressure on our natural resources, we recommend that you use existing collection systems.



Note:

The crossed-out dustbin symbol on your device is a reminder to use these systems.

If you need further information on collection, re-use and recycling systems, contact your local or regional waste management body.



This manual describes the disassembly operation and trouble shooting of BadgePass NXT5000 printer. The manual has been prepared in conformance with subsequent modifications and integrations and is composed of:

- Safety regulations for use and maintenance
- General machine specifications
- Machine installation
- Operating modes
- Repairs and adjustments
- Electrical diagrams

Personnel assigned to operating the machine, in addition to being professionally trained for their specific job must read the manuals, pay careful attention to safety regulations and the sections pertinent to their job. Individuals assigned to operating the machine are broken down as follows:

Operator:

Assigned to loading the elements to process, visual inspection of the work cycle, unloading of finished product and cleaning of the machine.

Mechanical Maintenance Personnel:

Assigned to mechanical maintenance of the machine.

Electrical Maintenance Personnel:

Assigned to electrical maintenance of the machine.



Note:

BadgePass shall not be held responsible for any non-conforming use of equipment of its manufacture.

If you need further information on collection, re-use and recycling systems, contact your local or regional waste management body.



The symbols used in this manual along with their meaning are shown below. The symbols are repeated within the chapters and/or sections and have the following meaning:



Generic Warning:

This symbol indicates the need to read the manual carefully or the necessity of an important maneuver or maintenance operation.



Electricity Warning:

This symbol indicates dangerous voltage associated with the powerful enough to constitute an electrical risk. This symbol may also appear on the machine at the risk area.



Temperature Warning:

This symbol indicates high temperature associated to some components. Wait the module to cool down completely before removing some component. This symbol may also appear on the machine at the risk area.



The following basic safety tips are given to ensure safe installation, operation, and maintenance of BadgePass equipment and are not to be considered as comprehensive on matters of safety. The tests performed demonstrate the safety and reliability of heating components when used correctly. It is necessary that the operator be informed of precautionary regulations aimed at avoiding injury or damage to the equipment.

Safe Environment

- Connect equipment to a grounded facility power source. Do not defeat or bypass the ground lead.
- Place the equipment on a stable surface, and ensure that the floors in the work area are dry and non-slip. Insulated rubber floor mats are preferred.
- Know the location of equipment branch circuit interrupters or circuit breakers and how to turn them on and off in case of emergency.
- Know the location of fire extinguishers and how to use them. Use only ABC type extinguishers on electrical fires.
- Know local procedures for first aid and emergency assistance at the customer facility.
- Use adequate lighting at the equipment.
- Maintain the recommended range of temperature and humidity in equipment area.
- Do not use this product in an environment containing volatile or flammable compounds.

Safe Human Interface

- Use proper lifting techniques when moving or installing the equipment.
- Use standard electrostatic discharge (ESD) precautions when working on or near electrical circuits.
- Do not defeat or disconnect safety interlocks on covers.



General Safety Regulations

The User must comply with the regulations and work in the best possible safety conditions to prevent decreasing the degree of machine safety. Therefore it is necessary to develop a Standard Operating Procedure (S.O.P.) related to maneuvers to effect for turning on and off the equipment. This procedure, which shall be prepared around the time of installation, shall serve as a reference for the Operator and shall be written in his/her language. Training is essential and must include:

Familiarization with system operating procedures. Understanding of the necessity for Individual Protection Devices (I.P.D.)



Note:

It is advisable **not to change the intended use** without previously contacting the Manufacturer.

An additional risk may be represented by fire caused by processing materials other than those the equipment is designed for.



Note:

Do not subject materials other than those the equipment was designed for.

The most serious collateral risk associated, which may be fatal, is electricity. This may occur when the manufacturer's warning and procedures are not followed. Unauthorized and untrained personnel must never do any work on the electrical part. The safety devices must never be removed and their operation must be periodically checked.



Note:

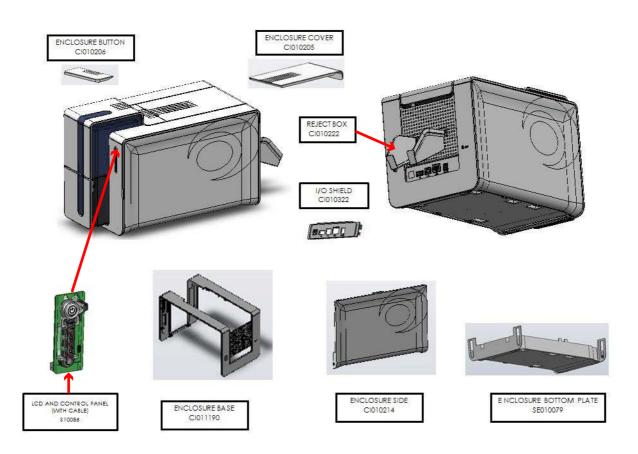
Do not work on the electrical part if you are not trained to do so. **Do not remove protection devices.**

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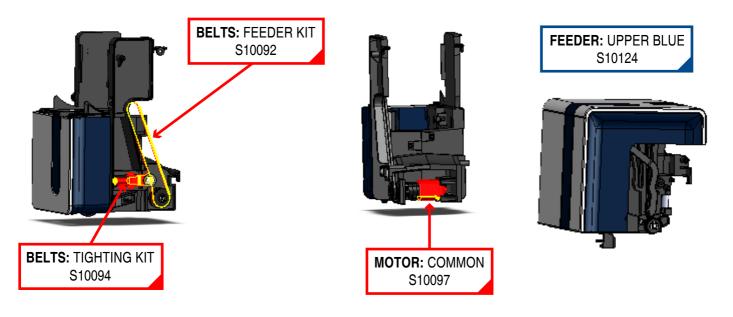


Picture 1: BadgePass NXT5000 Printer

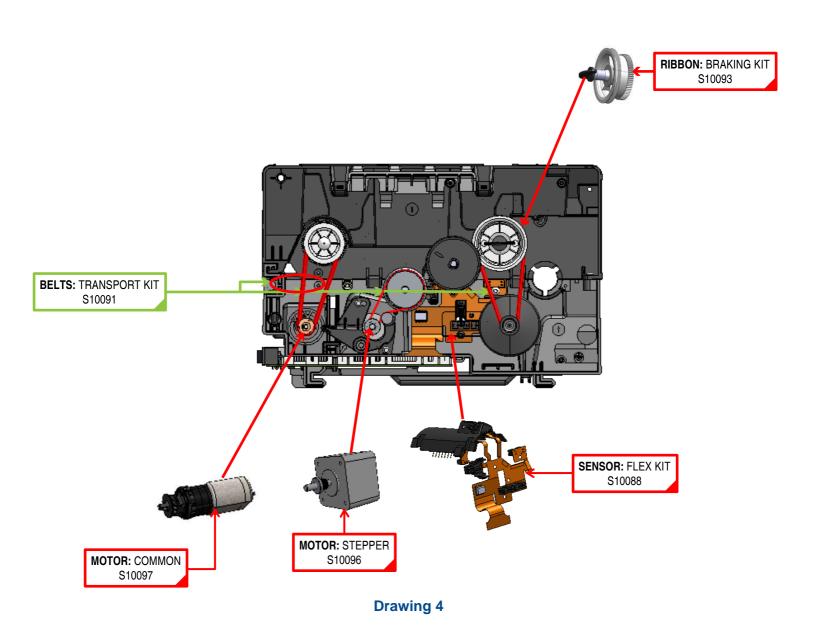


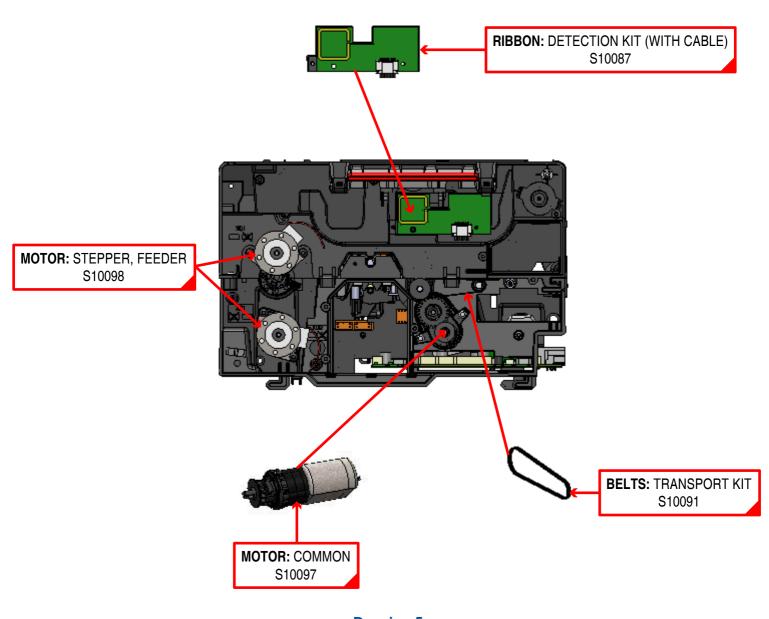
Drawing 1

FEEDER: EXIT HOPPER BLUE \$10126



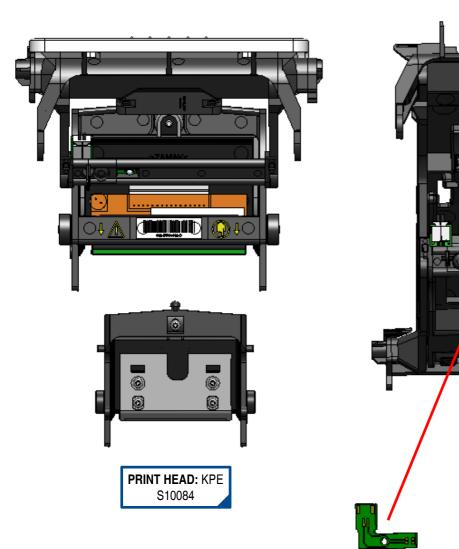
Drawing 3

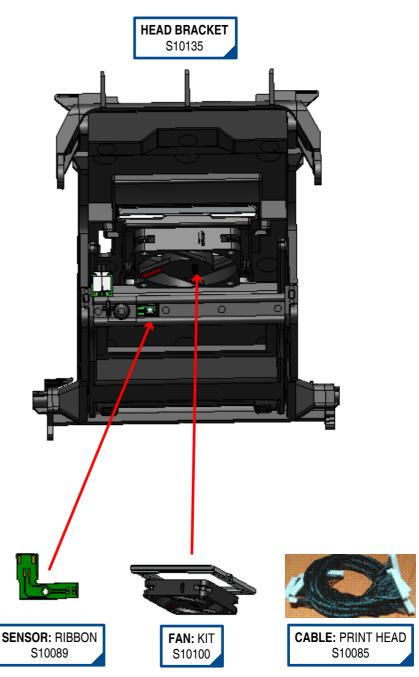




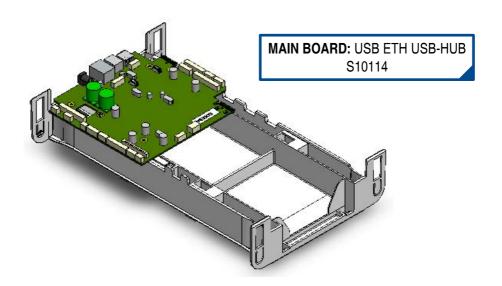
Drawing 5



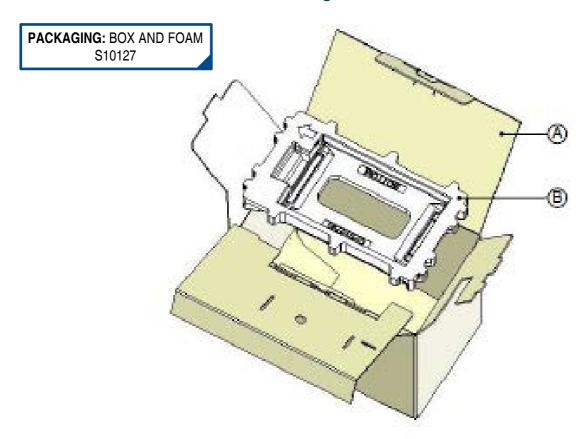




Drawing 7

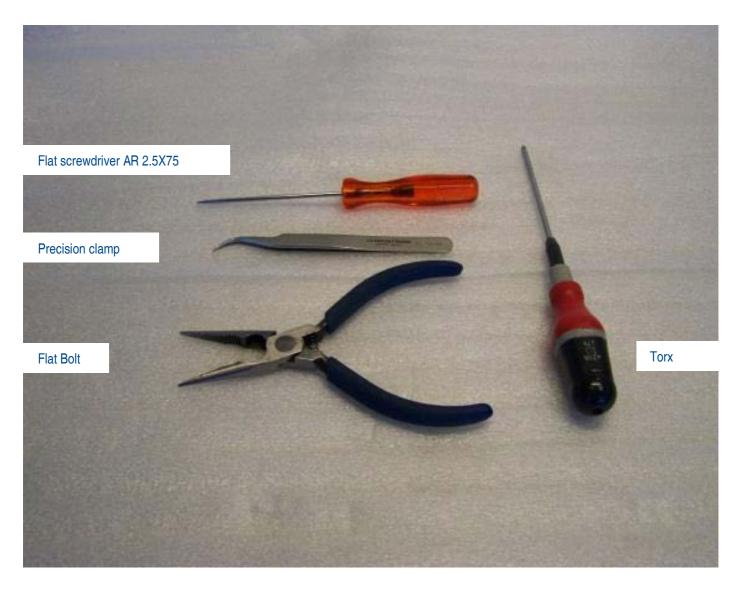


Drawing 8



Drawing 9

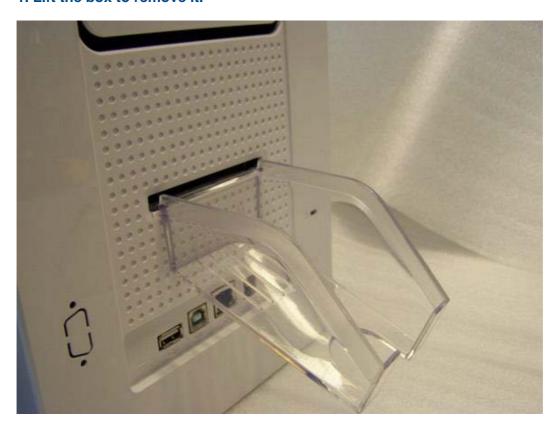
Product Code	Name	Description	Step
CI010222	Reject Box		1
Cl010214	Enclosure Side		2
S10086	LCD and Control Panel with Cable		3
S10124	Upper Blue Feeder		4
S10126	Exit Hopper Blue Feeder		4
S10092	Feeder Belts Kit		5
S10094	Tighting Belts Kit		6
S10097	Common Motor		7-19-20
Cl011190	Enclosure Base		8
S10121	Flip Over Sensor		9
S10093	Ribbon Braking Kit		10
S10091	Transport Belts Kit		11
S10087	Ribbon Detection Kit		12
S10098	Stepper/Feeder Motor		13
S10128	Flip Over Module		14
S10122	Cleaning Roller		15
Cl010322	I/O Shield		16
SE010079	Enclosure Bottom Plate		17
S10114	Main Board: USB ETH USB HUB		18
S10096	Stepper Motor		21
S10099	Head Roller Kit		22
S10088	Flex Sensor Kit		23
S10084	Print Head (KPE)		24
S10089	Ribbon Sensor		25
CI010205	Enclosure Cover		26
Cl010206	Enclosure Buttom		27
S10100	Fan Kit		28
S10085	Print Head Cable		29
S10138	Head Bracket		30
S10136	Universal Rivet Kit		
S10134	Primacy WiFi Card		
A5008	Power Supply	Without Power Cord	
A5017	Data USB Cable	USB-1.80M Length	
A5010	Power Cord Cable	US Plug	
S10127	Packaging: Box and Foam		



Picture 2: Tools

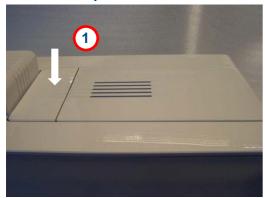


1. Lift the box to remove it.



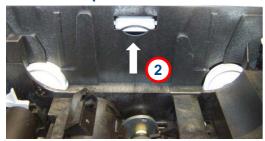
Picture 3: Reject Box

1. Press and open the cover.



Picture 4: Top Cover

2. Press and open the side.



Picture 5: Side Bolt

3. Push and unplug the enclosure side. (side by side)



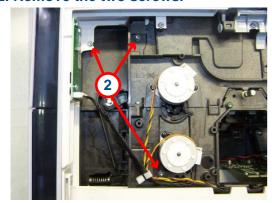
Picture 6: Enclosure Side

- 1. Disconnect the LCD cable.
- 2. Remove the two screws.



Picture 7: Control Panel

- 1. First, be sure to have completely performed Step 2.
- 2. Remove the two screws.



Picture 8: Feeder inside Right Side

3. Remove the three screws and the feeder cable.



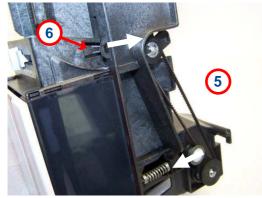
Picture 9: Feeder inside Left Side

4. Lift the feeder and remove it.



Picture 10: Feeder Front Side

- 5. Push the belt idler and remove the belt in the same time.
- 6. Unclip and push the upper feeder a little in the same time.



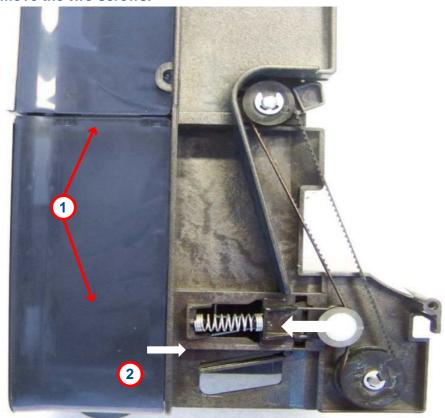
Picture 11: Feeder Right Side

4. Lift the feeder and remove it.



Picture 12: Feeder Left Side

- 1. Disconnect the LCD cable.
- 2. Remove the two screws.



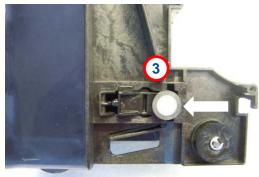
Picture 13: Feeder Belt

- 1. First, be sure to have completely performed from Step 4-1 to Step 4-5.
- 2. Remove the spring.



Picture 14: Feeder Tighting Belt

3. Push and remove the belt idler.



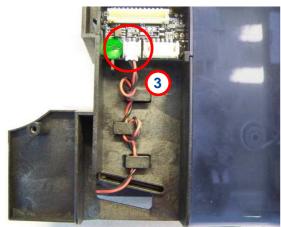
Picture 15: Feeder Tighting Belt-1

- 1. First, be sure to have completely performed Step 5.
- 2. Remove the E-Ring and the pulley.



Picture 16: Feeder E-ring & pulley

3. Push and remove the belt idler.



Picture 17: Feeder Motor Cable

- 1. First, be sure to have completely performed Step 5.
- 2. Remove the E-Ring and the pulley.



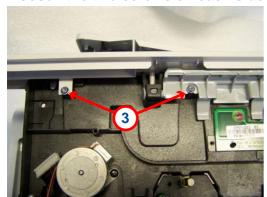
Picture 18: Feeder Motor-1

5. Remove the motor.



Picture 19: Feeder Motor-2

- 1. First, be sure to have completely performed from Step 4-1 to Step 4-4.
- 2. Be sure to have completely performed Step 3-1.
- 3. Loosen the two screws on each side.



Picture 20: Enclosure Base side

- 4. Separate the two parts from each other
 - (a) and unplug them
 - (b): repeat this step for each corner, remove the base.



Picture 21: Enclosure Base clip-1

4. Lift the feeder and remove it.



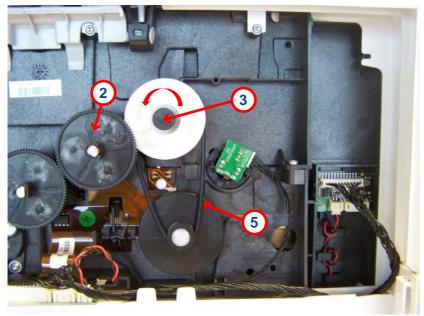
Picture 22: Enclosure Base clip-2

- 1. First, be sure to have performed Step 2 without Step 2 -3.
- 2. Remove the flip sensor and disconnect its cable.



Picture 23: Flip Sensor

- 1. First, be sure to have performed Step 2 without Step 2 -3.
- 2. Remove the option roller gear.
- 3. Push and turn left the lock and remove it.



Picture 24: Ribbon lock

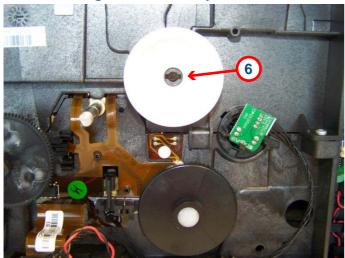
4. Notice the order of each part from the lock key. (springs & washers)



Picture 25: Ribbon lock details

5. Remove the Black Ribbon belt.

6. Remove the gear if necessary.

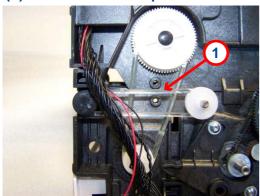


Picture 26: Ribbon lock gear

^{*}Be careful, when you put back the black gears put the gears like on the picture 48 Step21.

1. Transport belt

- (a) First, be sure to have completely performed Step 8.
- (b) Remove the transport belt.



Picture 27: Transport Belt

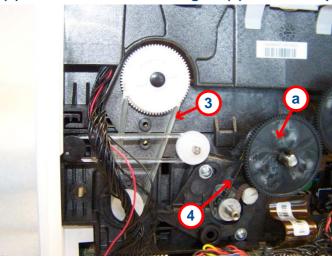
2. Black Ribbon belt

- (a) First, be sure to have performed Step 2 without Step 2 -3.
- (b) Remove the Black Ribbon Belt, for more details refer to Step 10-5.



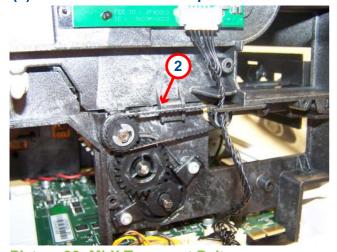
Picture 28: Black Ribbon Belt

- 3. Ribbon belt
- 4. Stepper belt
 - (a) First, be sure to have performed Step 2 without Step 2 -3.
 - (b) Remove the ribbon belt.
 - (c) Remove the head roller gear (a) and the stepper belt.



Picture 29: Tansport Belts

- **5. MXL Transport belt**
 - (a) First, be sure to have performed Step 2 without Step 2 -3.
 - (b) Remove the MXL Transport belt.



Picture 30: MLX Transport Belt

- 1. First, be sure to have completely performed Step 2.
- 2. Disconnect the cable on the main board.
- 3. Remove the rivet.



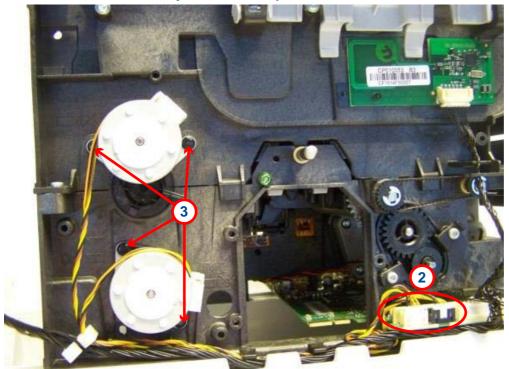
Picture 31: Ribbon Detection

4. To Put back the rivet, push it from the inside printer.



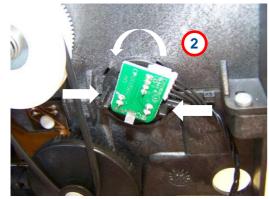
Picture 32: Ribbon Detection Rivet

- 1. First, be sure to have completely performed Step 2.
- 2. Disconnect the motor cable you want.
- 3. Remove the motor rivet you want to replace.



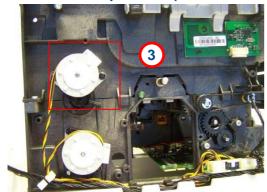
Picture 33: Motor Flip

- 1. First, be sure to have completely performed Step 8.
- 2. Press and turn at the same time the flip sensor support.



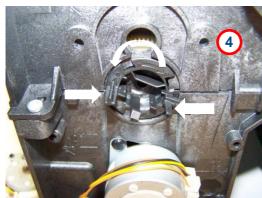
Picture 34: Flip Sensor

3. Remove the flip motor. (For more details, refer to Step 13)



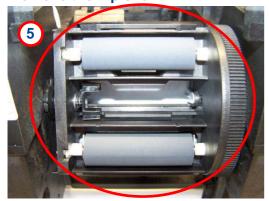
Picture 35: Flip Motor

4. Press and turn at the same time the flip support.



Picture 36: Flip Support

5. Remove the flip over.



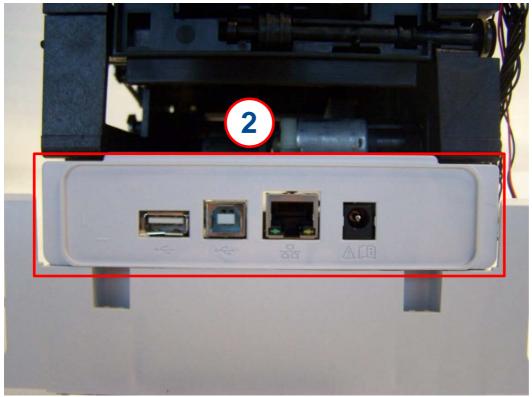
Picture 37: Flip Over

- 1. First, be sure to have completely performed Step 2-1.
- 2. Press on the plastic latch and remove the cleaning roller.



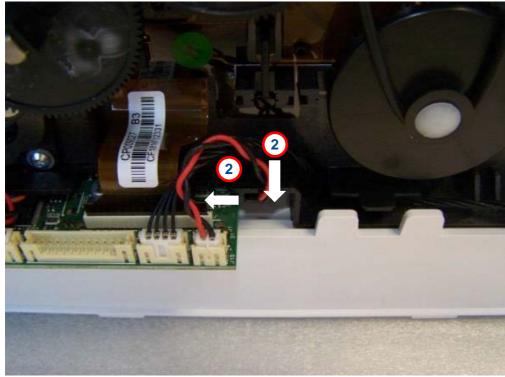
Picture 38: Cleaning Roller

- 1. First, be sure to have completely performed Step 8.
- 2. Remove the I/O Shield.



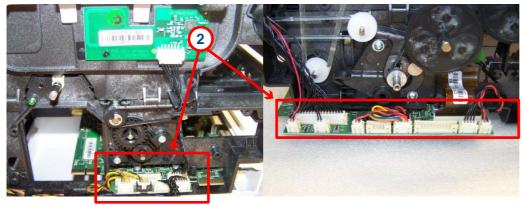
Picture 39: I/O Shield

- 1. First, be sure to have completely performed Step 8.
- 2. Press on the bottom plate clip
 - (a) and push on the left
 - (b) in the same time to remove the module.



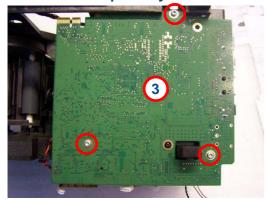
Picture 40: Bottom Plate

- 1. First, be sure to have completely performed Step 17.
- 2. Remove all the connectors and the flex connector.



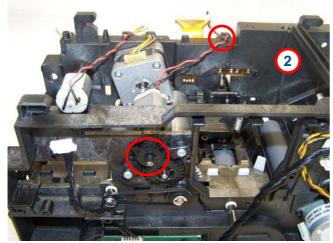
Picture 41: MainBoard Connections

3. Turn back the primacy chassis and remove the three screws.



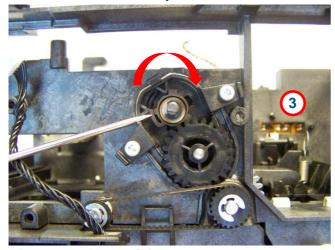
Picture 42: Fixing MainBoard

- 1. First, be sure to have completely performed Step 18.
- 2. Unclip the gear motor and cable.



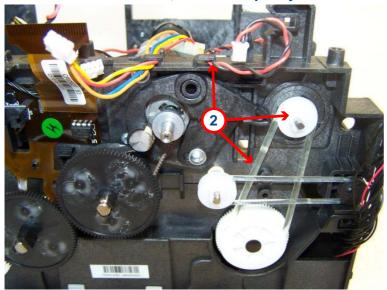
Picture 43: Gear Motor

3. Press on the motor clip with a flat screwdriver and turn the motor at the same time.



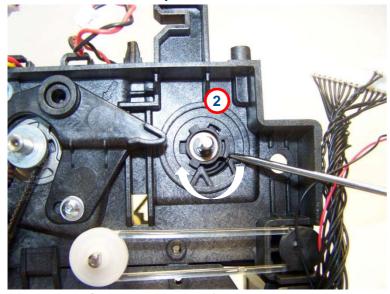
Picture 44: Motor Clip

- 1. First, be sure to have completely performed Step 18.
- 2. Remove the ribbon belt, the ribbon pulley and the motor cable.



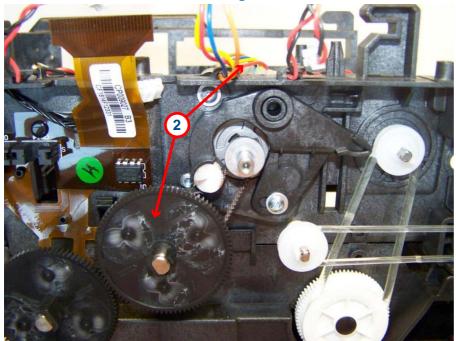
Picture 45: Common Motor Left Side

3. Press on the motor clip with a flat screwdriver and turn the motor at the same time.



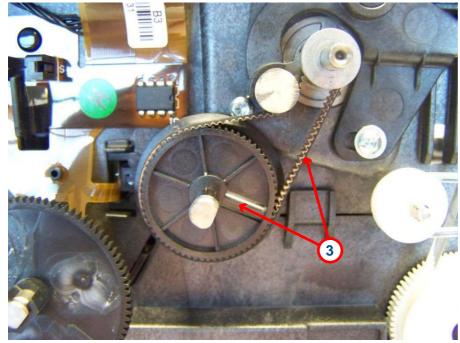
Picture 46: Common Motor clip

- 1. First, be sure to have completely performed Step 18.
- 2. Remove the motor cable and the gear.



Picture 47: Stepper Motor

3. Remove the MXL belt and the gear.



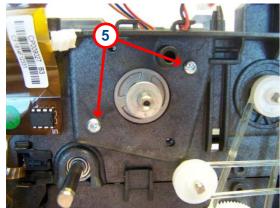
Picture 48: Transport Belt

4. Remove the two screws of the belt idler.



Picture 49: Belt Idler screws

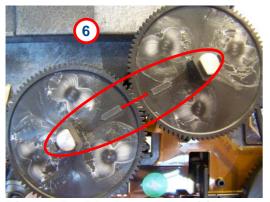
5. Remove the two screws of the Stepper motor.



Picture 50: Stepper Motor

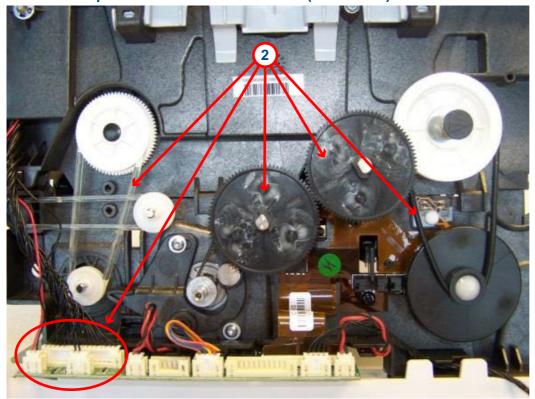


6. When you will re-assembly components; Be carreful, when you put back the black gears, to align the markers together.



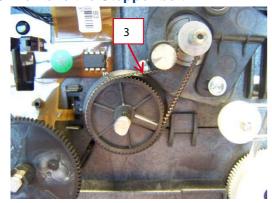
Picture 51: Black gears position

- 1. First, be sure to have completely performed Step 14.
- 2. Remove the parts indicated on the bellow. (Picture 52)



Picture 34: Flip Sensor

3. Remove the Stepper belt.



Picture 53: Stepper Belt

4. Press and turn at the same time the flip support.



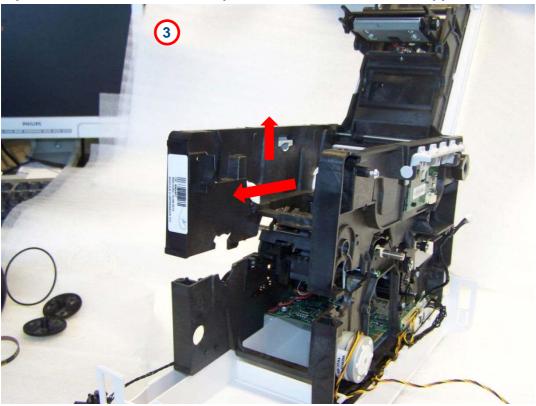
Picture 54: Transport Belt

5. Remove the two screws on each side of the module.



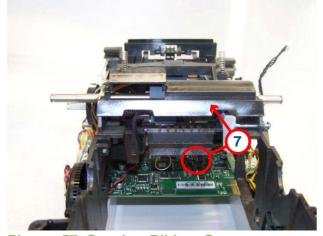
Picture 55: Disassembly Chassis screws

6. Open the head bracket, lift and pull forward and remove the upper chassis.



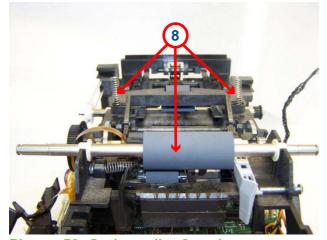
Picture 56: Separation of Chassis

7. Remove the synchro ribbon support and the spring of the pressure roller.



Picture 57: Synchro Ribbon Support

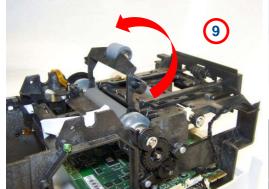
8. Remove the option roller and the two springs.

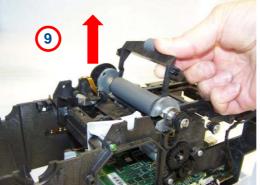




Picture 58: Option roller & springs

9. Tilt forward the head roller kit and lift up it





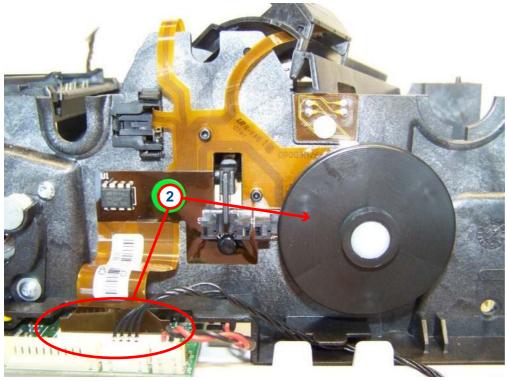
Picture 59: Heat Roller -1

Picture 60: Heat Roller - 2



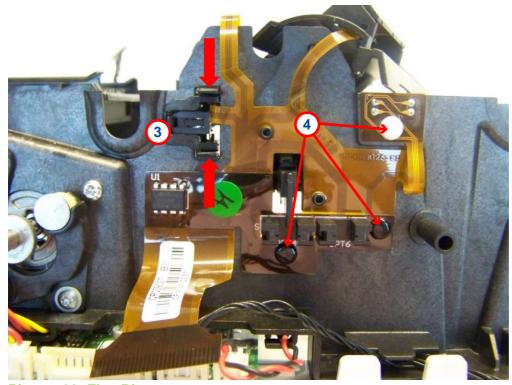
When you will re-assembly all components;
Be carreful, when you'll put back the black gears put the gears like the picture 51 Step 21-6.

- 1. First, be sure to have completely performed Step 22.
- 2. Remove the flag and disconnect the flex.



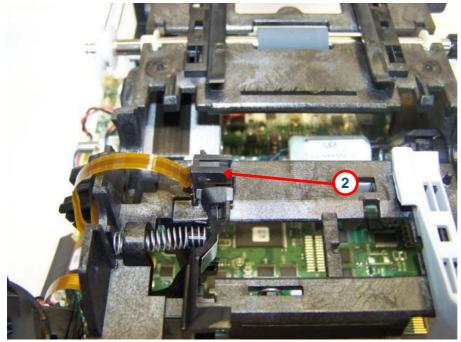
Picture 61: Flex connector

- 3. Press on the two sides of the up and down sensor and remove it.
- 4. Remove the three rivets.



Picture 62: Flex Rivets

5. Remove the card sensor.



Picture 63: Flex Card Sensor

Be carreful, when you'll put back the black gears put the gears like the picture 51 Step 21-6.

- 1. First, be sure to have completely performed Step 2-1.
- 2. Press on the plastic part behind the head (pressure plate) and pull on the head with the other hand to free the lugs from the holding fork, and then remove the lugs from their slots.

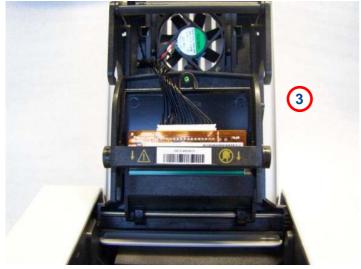




Picture 64: Print Head - 1

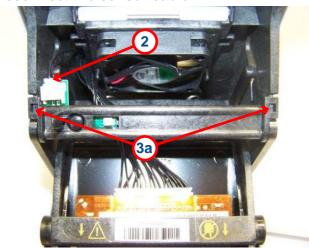
Picture 65: Print Head - 2

3. Tilt the head carefully downwards and disconnect the connector linked to the cable without using force on the mechanism.



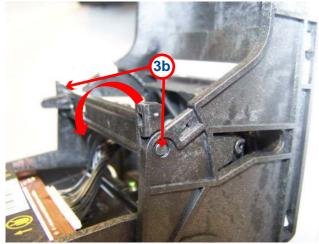
Picture 66: Print Head - 3

- 1. First, be sure to have completely performed Step 2-1.
- 2. Disconnect the sensor cable.



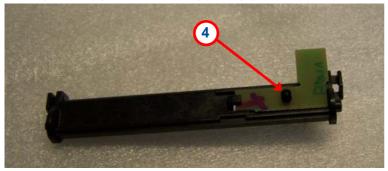
Picture 67: Ribbon Sensor - 1

3. Unclip the upper sensor support (a), unclip the lower sensor support and remove it (b).



Picture 68: Ribbon Sensor - 2

3. Unclip the upper sensor support (a), unclip the lower sensor support and remove it (b).



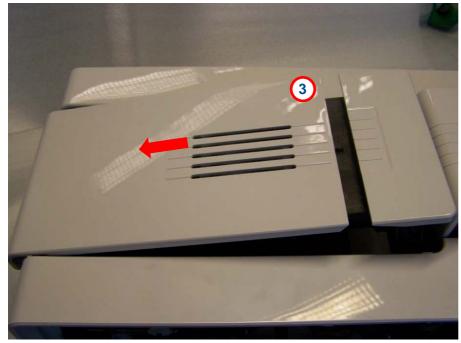
Picture 69: Ribbon Sensor - 3

- 1. First, be sure to have completely performed Step 2-1.
- 2. With a screwdriver push on the cover clip and move it in the same time on each side.



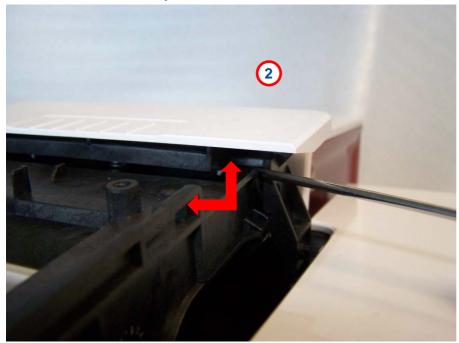
Picture 70: Enclosure Cover - 1

3. Push backward the cover.



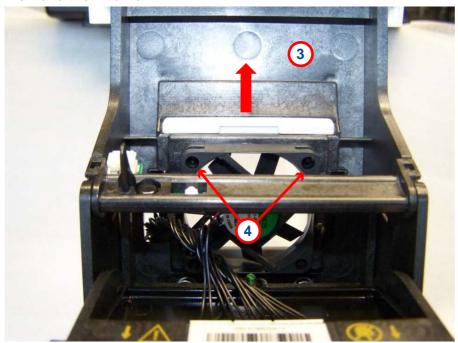
Picture 71: Enclosure Cover - 2

- 1. First, be sure to have completely performed Step 2-1.
- 2. Push on the button clip.



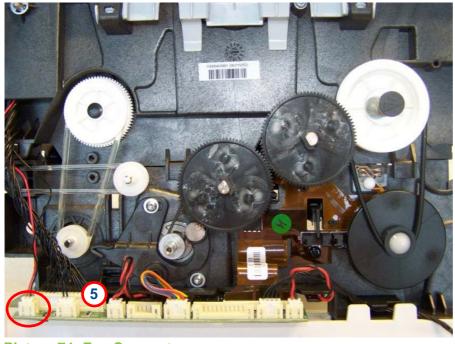
Picture 72: Enclosure Button

- 1. First, be sure to have completely performed Step 8 and Step 26.
- 2. Remove the filter fan.



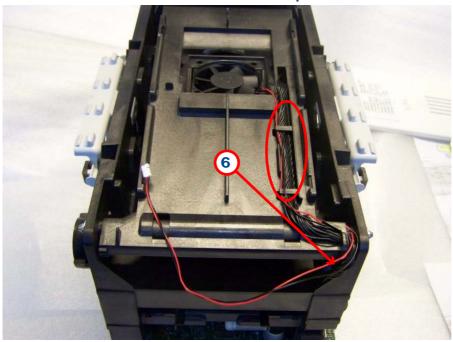
Picture 73: Fan - 1

- 3. Remove the two rivets.
- 4. Disconnect the fan cable.



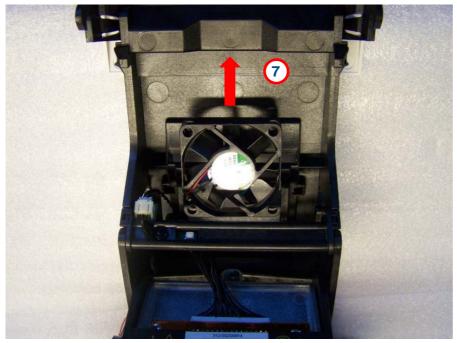
Picture 74: Fan Connector

5. Pass the fan cable thru the chassis cable path.



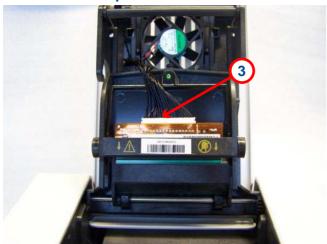
Picture 75: Fan Cable Path

5. Remove the two screws on each side of the module.



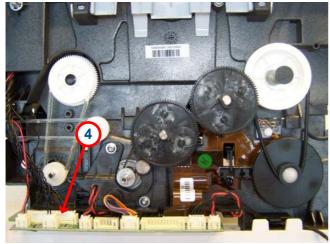
Picture 76: Fan - 2

- 1. First, be sure to have completely performed Step 8 and Step 26.
- 2. Disconnect the print head cable.



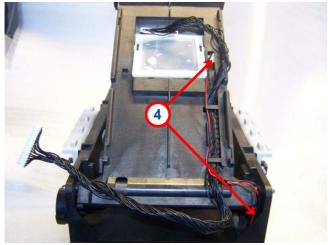
Picture 77: Print Head Cable - Print Head Connector

3. Disconnect the print head cable.



Picture 78: Print Head Cable - Mainboard Connector

4. Pass the print head cable thru the chassis and the head bracket cable path.



Picture 79: Print Head Cable Path

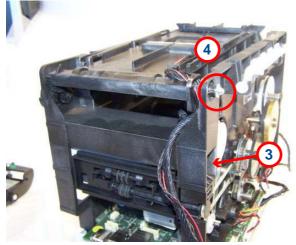
- 1. First, be sure to have completely performed Step 8, Step 24, Step 26 and Step 27.
- 2. Disconnect the three cables.





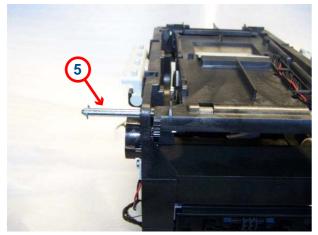
Picture 80: Head Bracket Connectors

- 3. Pass the cables thru the chassis.
- 4. Remove the E-ring.



Picture 81: Head Bracket Cables Path

5. Remove the head bracket axis.



Picture 82: Head Bracket Axis