



Field Service Manual

PP 80x

Field Service Manual PP 80x

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.

A Publication of Psi Matrix GmbH

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Pub. No. 5112 991 18364

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Great care has been taken to ensure that the information in this handbook is accurate and complete. Should any errors or omissions be discovered, however, or should any user wish to make suggestions for improving this handbook, he is invited to send us the relevant details.

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Condition

The manual is divided into the following chapters:

Introduction

- This chapter gives an overview about the manual and some basic information's

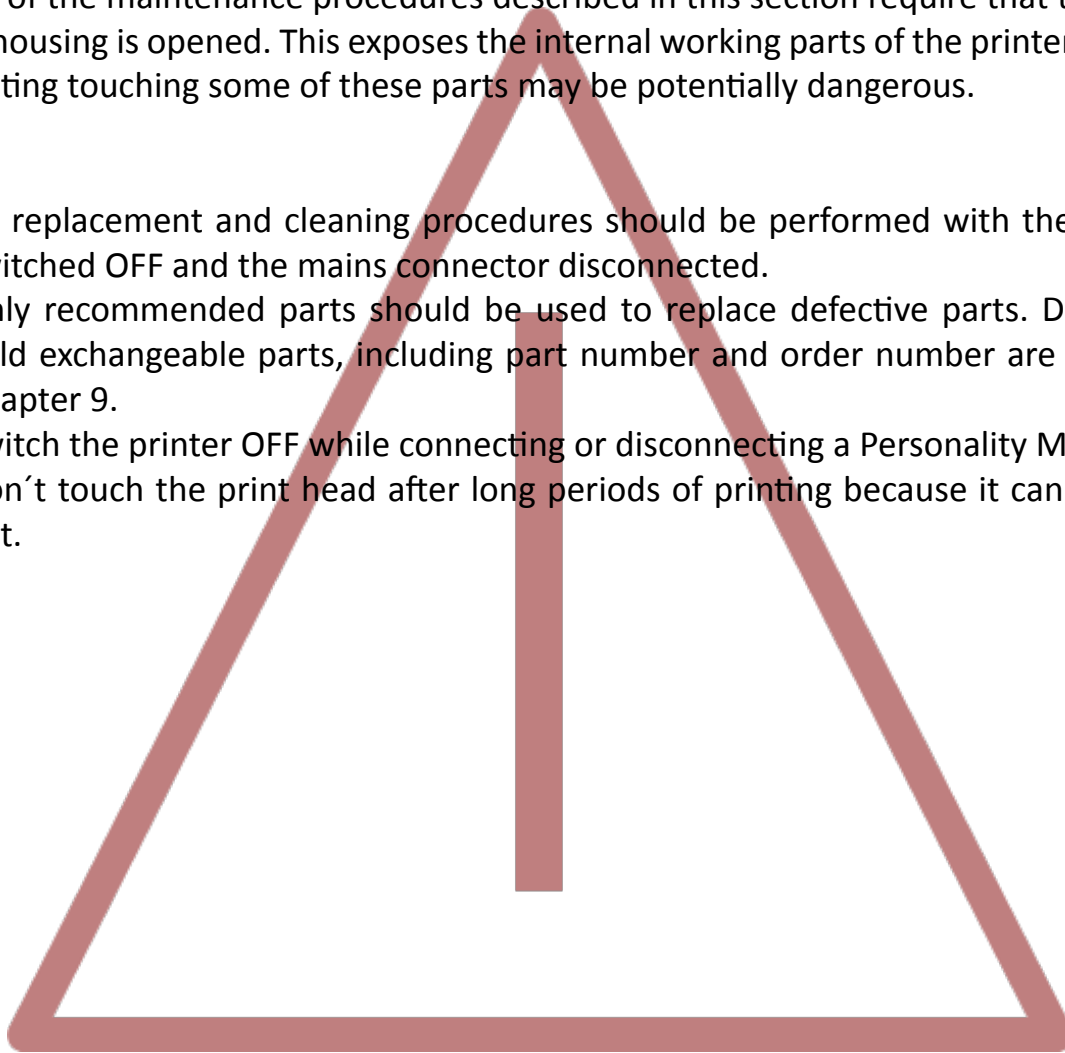
Safety Precautions

- This chapter contains all important instructions a service technician should obey during a service action.
1. **Keeping the Printer Running**
This chapter instructs the user about preventive measures for trouble-free operation of the printer.
 2. **Specific Printer Functions**
This chapter describes some basic functions of the printer which should be known by persons who are performing the technical support for this product.
 3. **Printer Subassemblies**
This chapter comprises diagrams, depicting the printer's subassemblies, the internal wiring scheme, and arrangement of the collective connectors. **Built In Diagnostics and Trouble Shooting**
This chapter gives a description of some problem symptoms and how to isolate the failures with regard to spare parts and field replaceable units concerned.
 4. **Procedures for Removal and Reassembly of Subassemblies and Spare Parts** This chapter contains all removal and resembly procedures for an on- site or workshop repair of the printer.
 5. **Wearing Parts**
This chapter describes the removal procedures for wearing parts of the printer.
 6. **Appendix**
Structure of the OFFLINE Menu.

Safety Precautions

Some of the maintenance procedures described in this section require that the printer's housing is opened. This exposes the internal working parts of the printer. During operating touching some of these parts may be potentially dangerous.

- All replacement and cleaning procedures should be performed with the printer switched OFF and the mains connector disconnected.
- Only recommended parts should be used to replace defective parts. Details of field exchangeable parts, including part number and order number are listed in Chapter 9.
- Switch the printer OFF while connecting or disconnecting a Personality Module.
- Don't touch the print head after long periods of printing because it can be very hot.




Keeping the Printer Running

Basic Rules

- Never print into the area of pin holes nor the edges of the fanfold paper. Otherwise the print head can be damaged.
- Never print without paper loaded or no ribbon cassette is installed in the printer.
- Put the printer in LOCAL mode immediately after a paper jam occurs, using the [START/STOP] key at the operator panel.

The following points should additionally be checked in case of a service call.

Problem	Item to be checked	Remedial action
Paper feeding problems 	Print Bar	Clean surface thoroughly.
Paper feeding problems	Paper input transport rollers	Disconnect mains cable, remove the ribbon, and Remove covers (see chapter 5, Part: Covers). Clean all transport rollers using platen cleaner S/CP 09.
Paper feeding Problems	Paper Detection and Paper In Sensor	Open the Front Roller Unit and clean the Sensors (glass fibres) see page1-6.
Paper feeding problems	Paper Move Sensor	Open the Front Roller Unit and clean the Paper Move Sensor.
Paper insertion problems	ASF (Option)	Remove ASF cassette. Clean pick-up rollers using platen cleaner S/CP 09, and check the paper handling of the ASF cassette using a few sheets of paper which have to be transported properly by manually rotating the pick-up wheel of the ASF-cassette.

Cleaning

Preferred Materials

The following materials and cleaning lubricants are recommended for use in the maintenance purposes:

- Lint-free cloth
- Platen Cleaner C/CP09, PIN: 8709 004 10931
- Vacuum cleaner
- Silicon Oil for resolving of glue from labels.

Cleaning the Platen and Surrounding Areas

PRINT OUT FW-VERSION 20xxxxxx HW-VERSION 29xxxxxx FPGA 5.0 PAGE COUNT 213856

INTERFACE

I/F TYP PARALL./ RS232
 WORD LENGTH 8 BIT
 BAUD RATE 9600 BIT/S
 PARITY BIT EVEN
 PROTOCOL DTR
 DSR/CTS MODE IGNOR. DSR+CTS
 I/O BUFFER 8 KBYTE

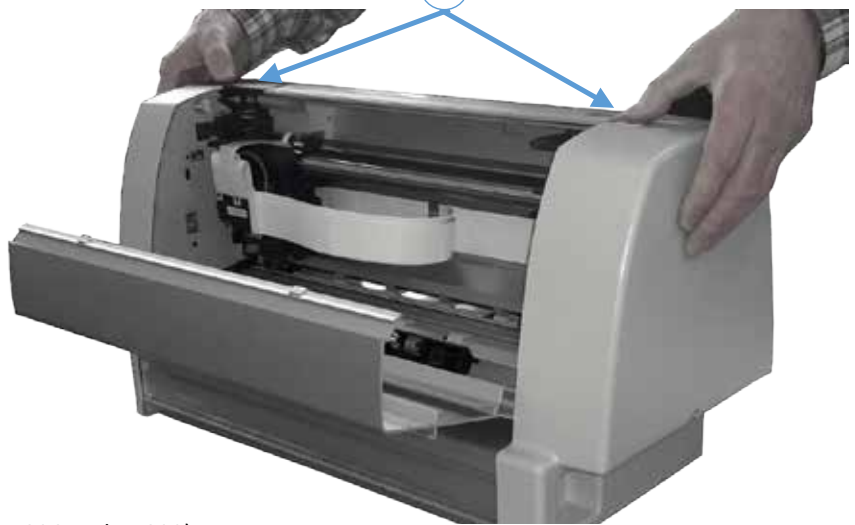
MENU ACCESS FULL ACCESS

	CURRENT SETTINGS	MACRO 1*	MACRO 2	MACRO 3	MACRO 4
PAPER SOURCE	TRACTOR LOWER	TRACTOR LOWER	TRACTOR LOWER	TRACTOR LOWER	TRACTOR LOWER
PAPER EXIT PATH	BATCH	BATCH	BATCH	BATCH	BATCH
STACK. CAPACITY	-	-	-	-	-
BATCH CAPACITY	-	-	-	-	-
PRINT POS. ADJ.					
TRACT. L. V-POS	0.0	0.0	0.0	0.0	0.0
TRACT. L. H-POS	0.0	0.0	0.0	0.0	0.0
TRACT. U. V-POS	0.0	0.0	0.0	0.0	0.0
TRACT. U. H-POS	0.0	0.0	0.0	0.0	0.0
MANUAL V-POS	0.0	0.0	0.0	0.0	0.0
MANUAL H-POS	0.0	0.0	0.0	0.0	0.0
BIN 1 V-POS	0.0	0.0	0.0	0.0	0.0
BIN 1 H-POS	0.0	0.0	0.0	0.0	0.0
BIN 2 V-POS	0.0	0.0	0.0	0.0	0.0
BIN 2 H-POS	0.0	0.0	0.0	0.0	0.0
BIN 3 V-POS	0.0	0.0	0.0	0.0	0.0
BIN 3 H-POS	0.0	0.0	0.0	0.0	0.0
PAGE LENGHT	72 LINES	72 LINES	72 LINES	72 LINES	72 LINES
PRINT QUALITY	LQ	LQ	LQ	LQ	LQ
FONT	DATA	DATA	DATA	DATA	DATA
PITCH	10 CPI	10 CPI	10 CPI	10 CPI	10 CPI
LINE	6 LPI	6 LPI	6 LPI	6 LPI	6 LPI
EMULATION	EPSON LQ	EPSON LQ	IBM PROPR.	IBM PROPR. AGM	EPSON LQ
CHARACTER SET	EPSON EXT. GCT	EPSON EXT. GCT	IBM SET 2	IBM SET 2	EPSON EXT. GCT
	1: U.S.A.	1: U.S.A.	1: U.S.A.	1: U.S.A.	1: U.S.A.
LEFT MARGIN	1. COLUMNS	1. COLUMNS	1. COLUMNS	1. COLUMNS	1. COLUMNS
RIGHT MARGIN	165. COLUMNS	165. COLUMNS	165. COLUMNS	165. COLUMNS	165. COLUMNS
LINE MODE	LF=LF, CR=CR	LF=LF, CR=CR	LF=LF, CR=CR	LF=LF, CR=CR	LF=LF, CR=CR
PERF. SPRUNG	YES	YES	YES	YES	YES
TEAR-OFF-MODE	NO	NO	NO	NO	NO

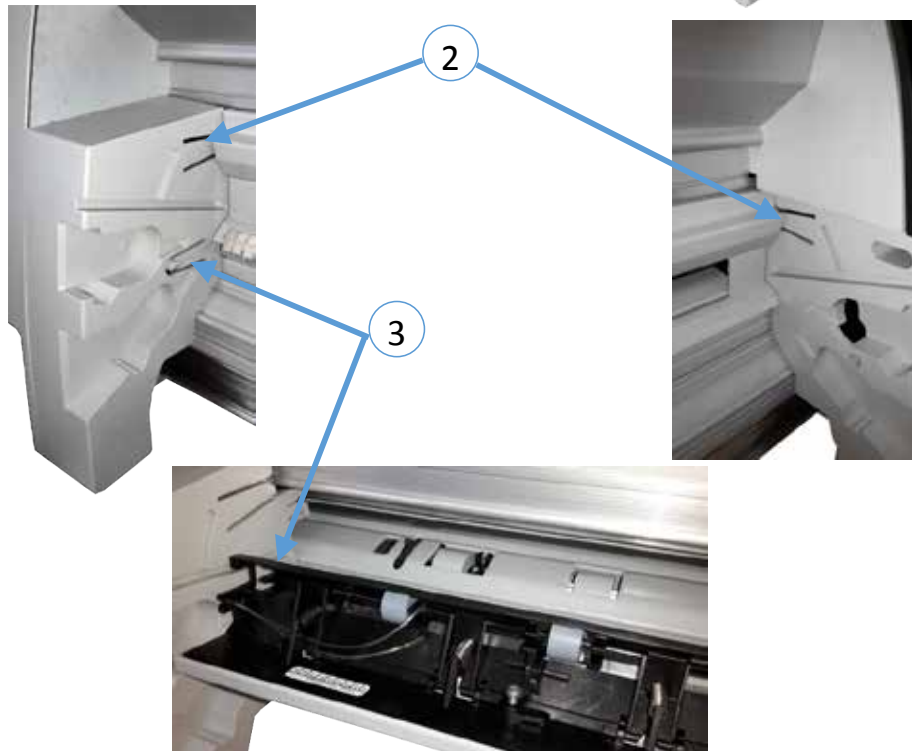
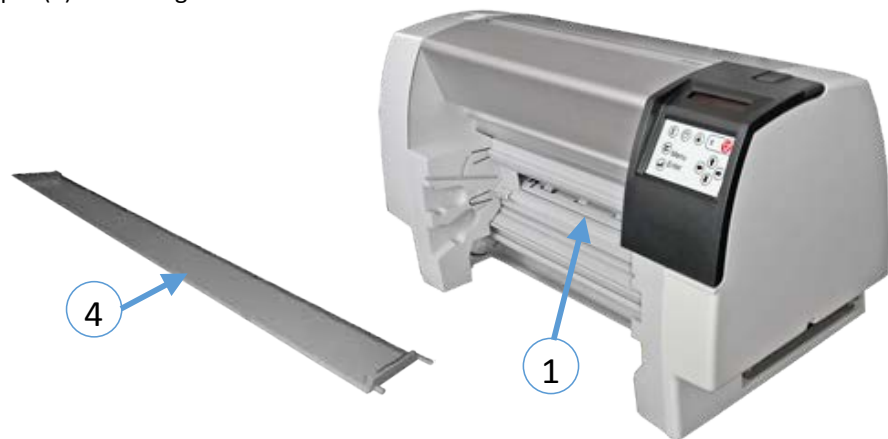
Cleaning Procedure

Power on the printer. Open the rear cover (2) by pressing simultaneously the two buttons (1) and swivel the rear cover backwards.

- Remove Ribbon Cassette.
- Switch off the print



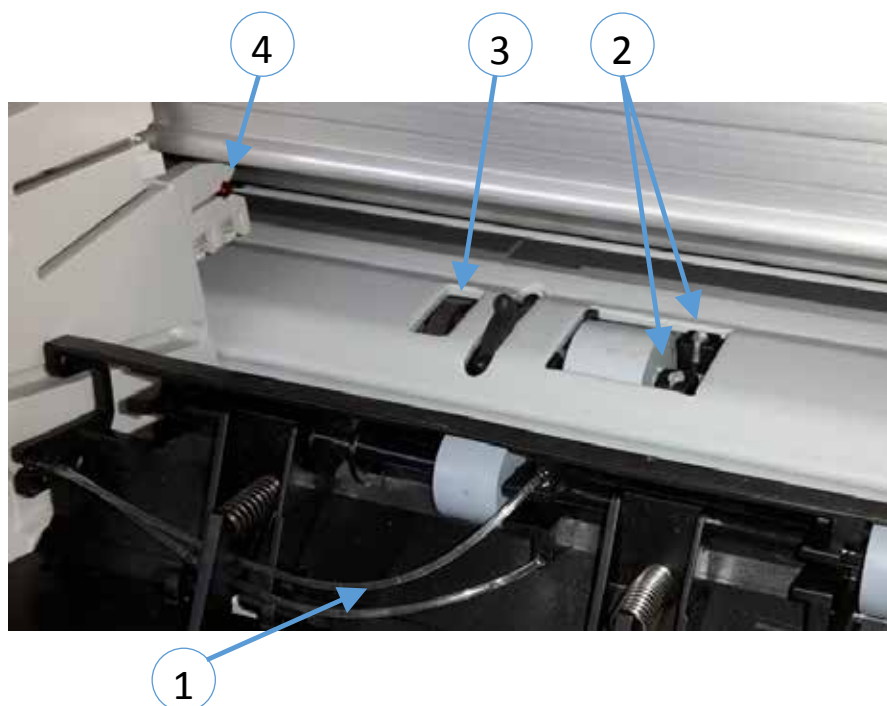
- Remove the paper guide (4), (only PP806 and PP809).
- Remove the tractor cassettes.
- Press the left and right plastic leads (2) and open the front roller unit (1).
- Press the plastic stopper (3) and swing the front roller unit downwards and remove it.



Thoroughly brush and vacuum all accessible areas to remove any paper flock and dust. Clean the print bar surface, the paper pressure rollers, and the transport rollers using the platen cleaner for the rollers.

- Clean the Paper Detection and Paper-In Sensors (2) (not the glass fibers (1)).
- Clean the Paper Move Sensor (3).
- Clean the Infrared LED (4).
- Clean the covers and the operator panel with a damp, lint-free cloth.

Do not use cleaning solvents or excessive amounts of water.



- Close front roller unit.
- Insert the tractor cassettes and the paper guide.
- Insert the ribbon cassette.
- Close the rear cover the printer locks automatically.

Specific Printer Functions

Print Gap Adjustment

Principle

The print head carriage is mounted on two parallel guide rails which provide for a precise movement over the whole print range in horizontal direction. The function gap adjustment is built up with the following elements:

- Two AGC motors as tandem drive
- AGC encoder
- AGC gear and shaft
- Print head carriage with piezo sensor and a touch- lever to detect clearance between upper guide and print head carriage
- AGC gear in the carriage

Gap adjustment and gap control is used for:

- Calibration of the print gap adjustment mechanics, called Automatic Gap Control Adjustment
- Automatic print gap adjustment, called Automatic Gap Control (AGC)
- Programmed print gap adjustment, called Programmed Copy Control (PCC)
- Print gap adjustment to compensate temperature influences while printing
- Gap control while paper movement, paper insert, ribbon change
- Opening the gap to a maximum to remove / install the print head

AGC Adjust and AGC are performed by means of the AGC Procedure.

AGC Adjust is performed after power-on and while printing to compensate temperature effects.

AGC is automatically performed after changing from online – offline – online, and after changing the paper source and after insertion from manual paper feed.

PCC is performed if the command PCC is sent to the printer. For reference see Quick-Reference of the printer control commands in the appendix of the manual.

AGC Procedure

AGC Adjust:

The AGC Adjust procedure starts with a horizontal positioning at the AGC- Adjust Position close to the right end of the print bar – beyond the maximum paper width.

The gap is closed by moving the print head towards the print bar.

When the print head touches the print bar a piezo sensor located in the print head carriage is activated through a touch – lever detecting a loss of clearance between the upper guide rail and the print head carriage. The gap positioning counter is set to its initial value after this procedure has been repeated twice to eliminate wrong values from being used in the calculation.

To compensate gap changes due to temperature influences the AGC Adjust procedure is also used. The saved gap positions for the paper sources are recalculated based upon the newly measured AGC adjust values.

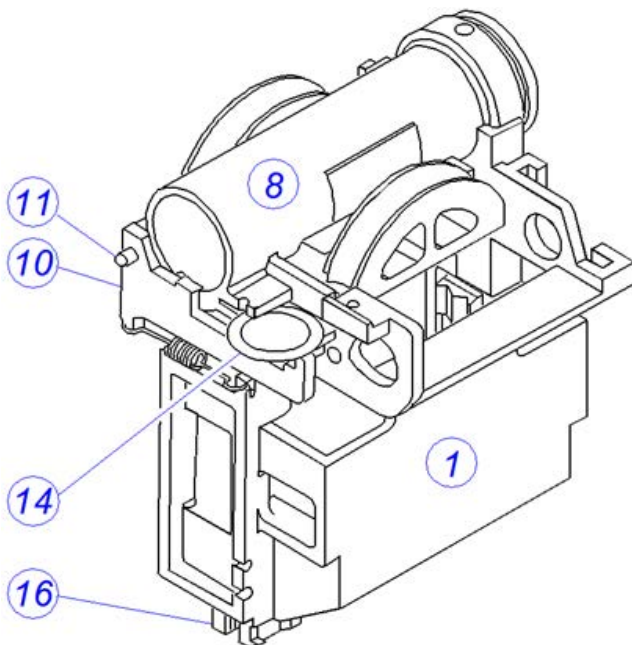
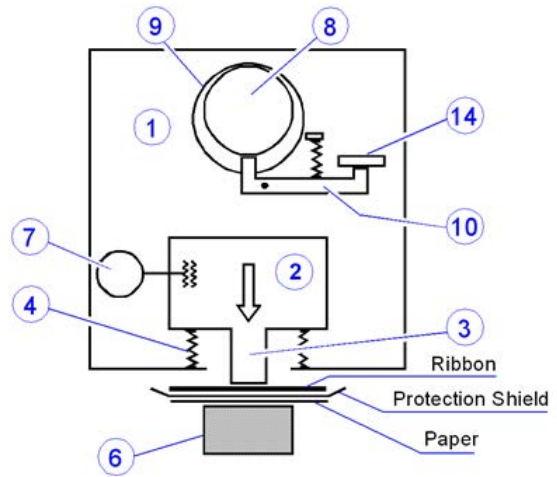
AGC:

The AGC procedure is performed close to the active print position. If the top of the paper is not hold by the “feed FF2” the paper is moved into FF2 before the AGC procedure is started. When the print head touches the paper surface while the print head is moved towards the print bar the piezo sensor generates a signal and the AGC-counter value corresponds to the thickness of the paper. The print head is moved back to provide a certain clearance between print head and paper and then the paper is moved back into the print position.

Principle of operation

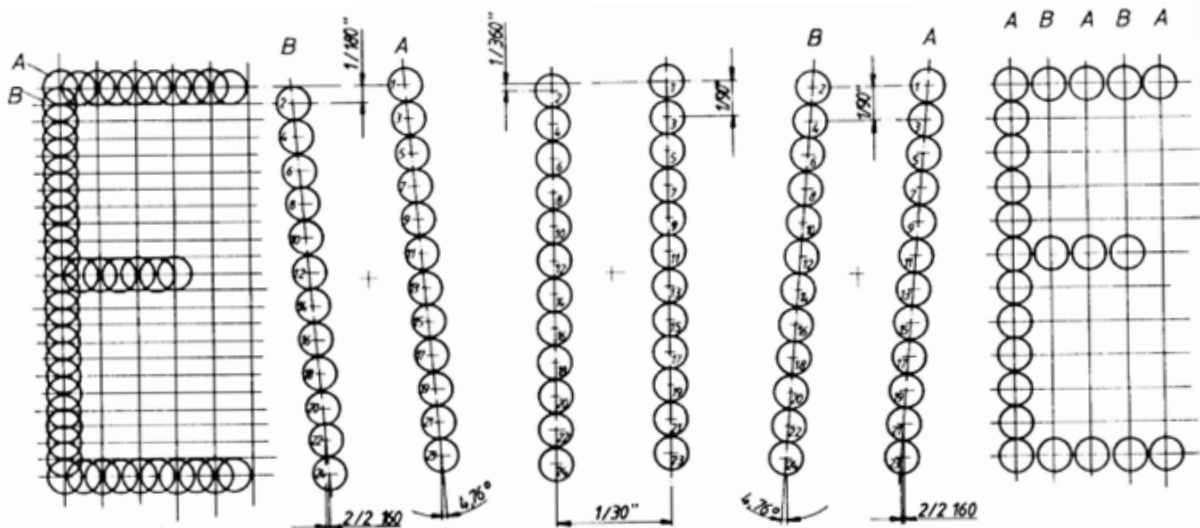
- Gap between print head (3) and print bar (6) is opened.
- Drive (7) moves the print head (3) towards the print bar (6).
- The print head (3) touches the print bar (3) (ribbon, protection shield, paper) and the response force lowers the clearance between carriage (1) and the upper guide (8).
- The touch - lever (10) presses on the piezo sensor (14) and generates a signal drive (7) is stopped and the AGC- counter value is processed for AGC or AGC- Adjust.
- Drive (7) opens the gap for the next operation (gap for horizontal positioning, printing, paper movement).

- 1 Print head carriage
- 2 print head
- 3 Print head nose
- 4 Holder springs
- 6 Print bar
- 7 Drive
- 8 Guiding shaft
- 9 Guiding tube
- 10 Touch lever
- 14 Piezo sensor



- 1 Print head carriage
- 8 Guiding shaft
- 10 Touch lever
- 11 Shaft
- 14 Piezo sensor
- 15 Spring
- 16 Guiding profile

Print head – Tilting Principle and related Print Speed



**Inclination Position
For LQ mode**

**Inclination Position for
DATA or NLQ mode**

No print position

- The nose of the print head can be tilted according to the scheme above. The different tilting positions are used for realizing the different print speeds and print resolutions
- Switching between both print head tilting positions is accomplished by positioning the carriage to its most right position.

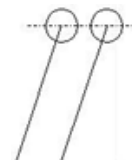
Printing Speed in HIGH SPEED DRAFT mode

Needle frequency **1.800 Hz**

Inclination Position of
the Print Head Lug

Number of columns per character: 10 x 12 needles in use

Number of needles per character: 2.5, each other needle activated



● = needle activated

○ = needle not activated

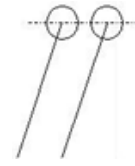
1	2	3	4	5	6	7	8	9	10
●	○	●	○	●	○	●	○	●	○

$$\text{Print Speed} = \frac{\text{Needle Strokes per Second}}{\text{Number of Needles per Character}} = \frac{1800}{2,5} = 720 \text{ cps}$$

Printing Speed in DRAFT (DATA) mode

Needle frequency **1.800 Hz**

Inclination Position of the Print Head Lug



Number of columns per character:

12, 2x 12 needles in use

Number of needles per character:

3, each other needle activated

● = needle activated

○ = needle not activated

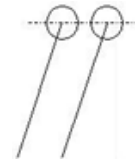
1	2	3	4	5	6	7	8	9	10	11	12
●	○	●	○	●	○	●	○	●	○	●	○

$$\text{Print Speed} = \frac{\text{Needle Strokes per Second}}{\text{Number of Needles per Character}} \cdot \frac{1800}{3} = 600 \text{ cps}$$

Printing Speed in NLQ mode

Needle frequency **1.800 Hz**

Inclination Position of the Print Head Lug



Number of columns per character:

36, 2x 12 needles in use

Number of needles per character:

6, every 3rd needle activated

● = needle activated

○ = needle not activated

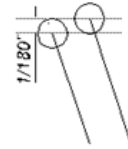
1	2	3	4	5	6	...	...	...	34	35	36
●	○	○	●	○	○	●	○	○	●	○	○

$$\text{Print Speed} = \frac{\text{Needle Strokes per Second}}{\text{Number of Needles per Character}} \cdot \frac{1800}{6} = 300 \text{ cps}$$

Printing Speed in LQ mode 1

Needle frequency **1.800 Hz**

Inclination Position of
the Print Head Lug



Number of columns per character: 36 needles in use

Number of needles per character: 12, every 3rd needle activated

● = needle activated

○ = needle not activated

1	2	3	4	5	6	...	...	...	34	35	36
●	○	○	●	○	○	●	○	○	●	○	○

$$\text{Print Speed} = \frac{\text{Needle Strokes per Second}}{\text{Number of Needles per Character}} = \frac{1800}{12} = 150 \text{ cps}$$

Printing Speed in LQ mode 2

Needle frequency **1.800 Hz**

Inclination Position of
the Print Head Lug

Number of columns per character: 36 needles in use

Number of needles per character: 18, each other needle activated

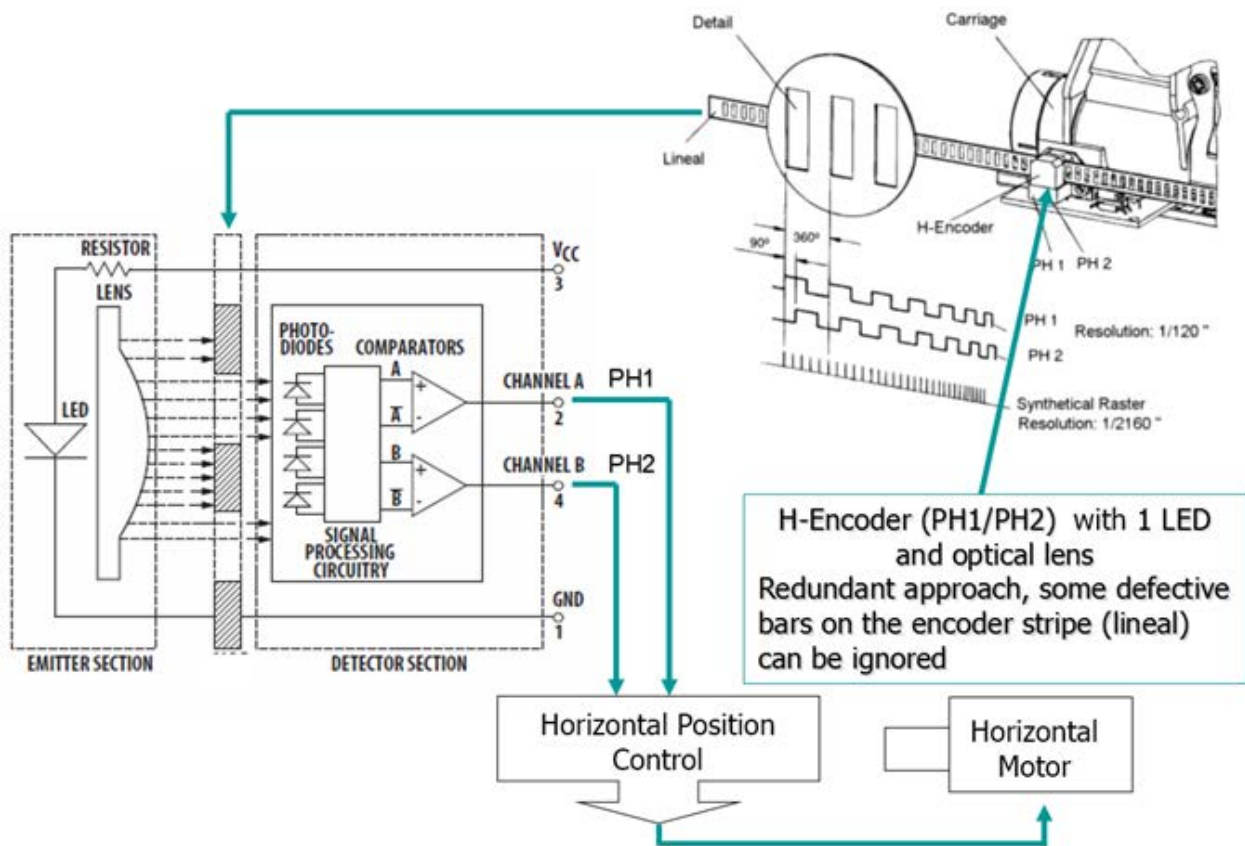
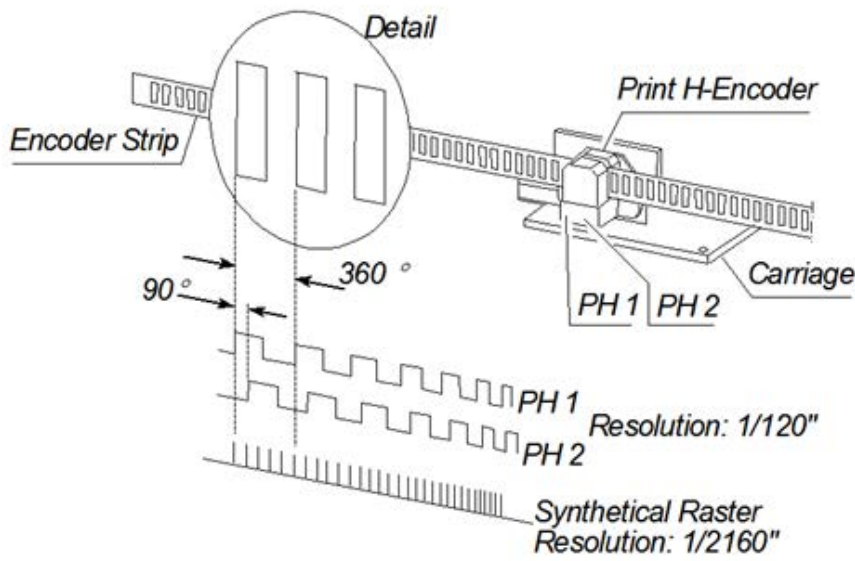
● = needle activated

○ = needle not activated

1	2	3	4	5	6	...	...	...	34	35	36
●	○	●	○	●	○	●	○	●	○	●	○

$$\text{Print Speed} = \frac{\text{Needle Strokes per Second}}{\text{Number of Needles per Character}} = \frac{1800}{18} = 100 \text{ cps}$$

Positioning System – Horizontal Encoding



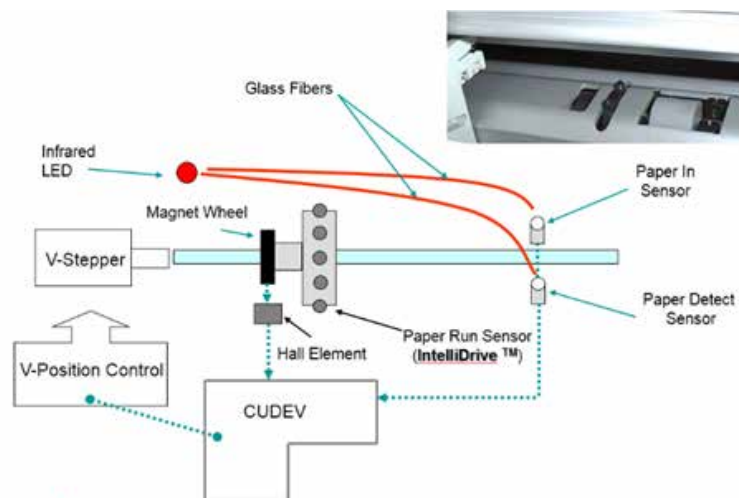
Paper Move / Paper In Control

The paper feed is based on a unique PSI- patented principle:

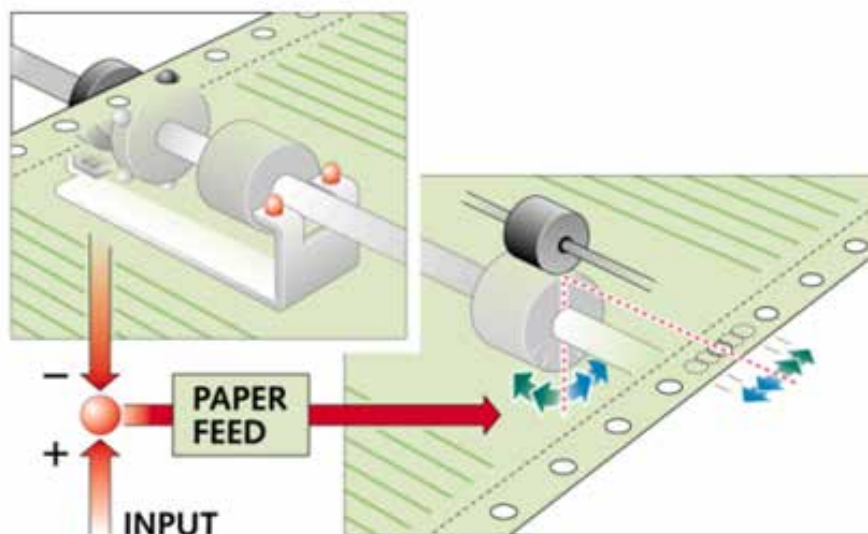
- Friction feed controlled by a paper move sensor. In general a friction feed incorporates some tolerances in paper feed which may become visible after paper feed of several pages, e.g. due to tolerances of the friction rollers, or paper may slip. A calculated compensation based on the signals of paper move is used to control the paper feed drive to keep tolerances small. Cut sheet paper is fed without compensation because tolerances within a form length are small. The feed tolerances for continuous paper is specified +/-0.2%

The left transport holes of continuous paper drive a paper move sensor which generates a signal every ½ inch. The printer control unit counts the signals and compares continuously the result with

the calculated paper feed. Deviations are compensated smoothly by control of the vertical drive. If the deviation exceeds +/- 0.5 mm the correction of vertical paper movement starts in steps of 1 or 2 * 1/360 inch per paper move signal. In case of printing graphics (48 or 40 * 1/360 inch line feed) the compensation value is 1/360 inch after the deviation exceeds 20 * 1/360 inch.



Paper Jam is reported if the accumulated deviation of paper feed exceeds ½ inch or if the paper move signal deviates more than 1 line (4.2 mm) The tractor cassettes are disengaged while normal paper feed. They are engaged to transport continuous paper from park position into FF1 shaft and in case of reverse paper feed if the paper feed exceeds one line distance. Paper move control is switched off while paper feed in reverse direction. When paper feed into normal direction is resumed a step-back is performed to synchronise paper movement with the vertical paper position and to eliminate tolerances from the paper position.



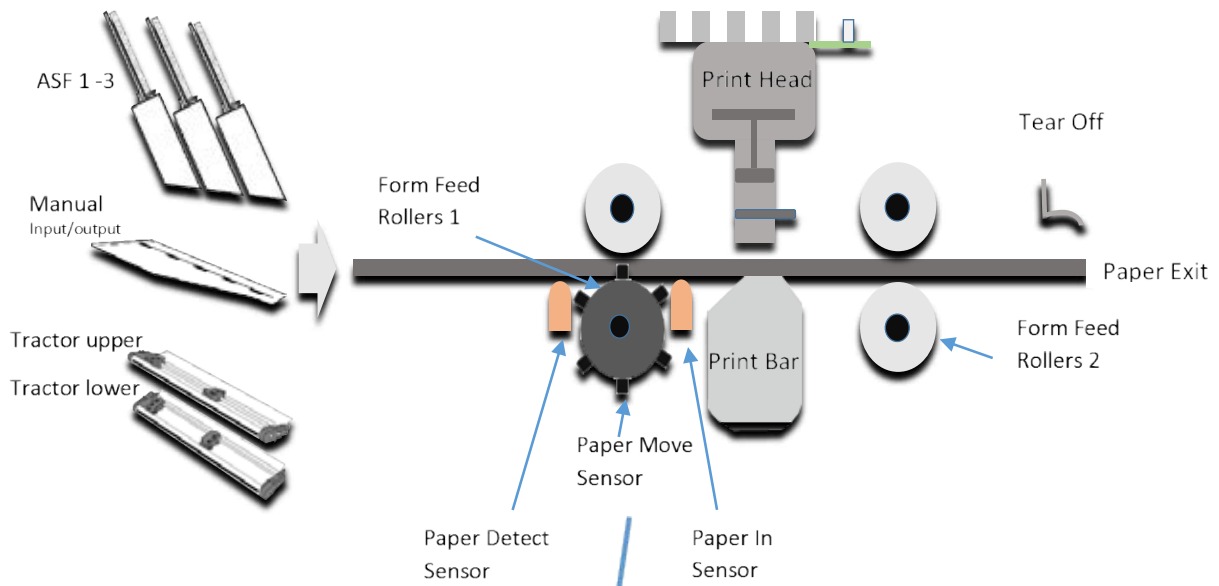
Used elements are:

- Vertical drive
 - bi-directional friction feed
- Paper move sensor
 - feed control of continuous paper in
 - forward direction for compensation of paper feed
 - detection of paper jam
- Paper in sensor
 - continuous paper and cut sheet, controls top edge and bottom edge
- paper detect sensor
 - Controls continuous paper and cut sheet, while paper is inserted as well as recognition of paper end.
 - Controls the clearance of paper path close to the sensor (paper removed from manual paper exit).
 - Top edge of continuous paper must not be close to the paper path and would obstruct paper insertion from the other tractor cassette.

Following functions are realized:

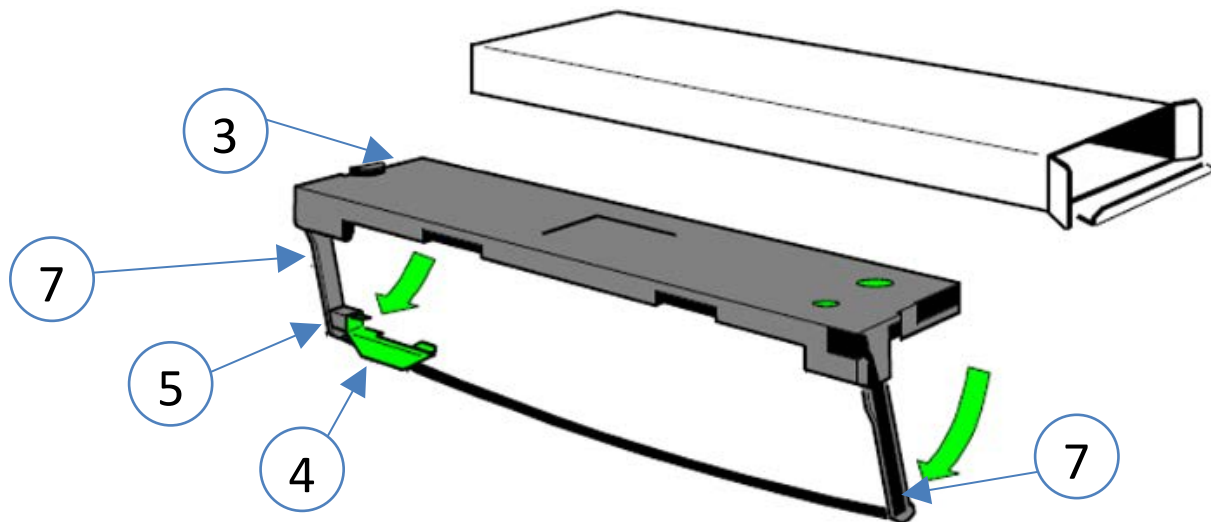
- Dual Continuous Forms Processing (two tractor cassettes)
 - Paper detect / Paper In Detection
 - Detection of the top edge of continuous forms by means of paper in sensor and paper move sensor
 - clearance of paper path close to paper detect sensor
 - paper end detection
 - paper jam derived from paper move sensor
- Manual feed cut sheet or
 - Cut sheet from ASF 1, 2, 3
 - Paper detect / Paper In detection
 - Detection of upper and lower edge (paper end)
 - Manual Paper Exit: paper removed (paper detect sensor)
 - Stacker (option) : stacker full (paper jam)

Paper Transportation Principle



Installation of Ribbon-Cassette

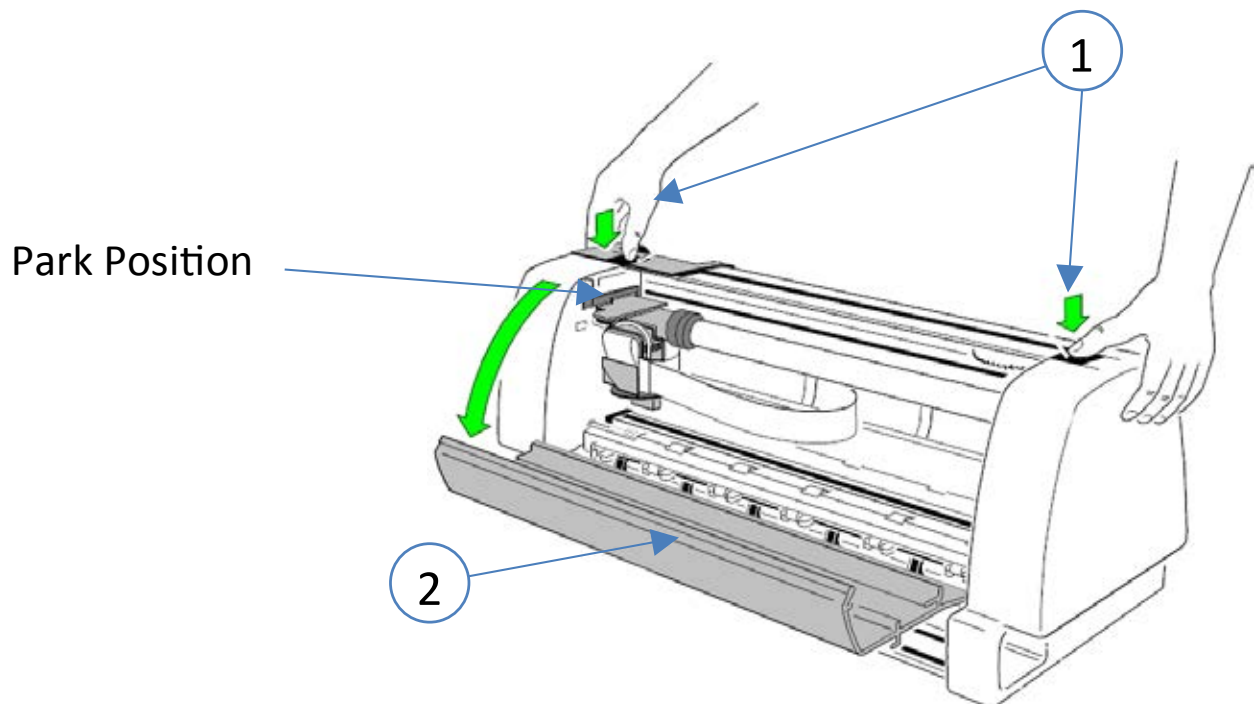
Open the ribbon box Pull the right and left arm (7) of the ribbon cassette (3) to the bottom and move the ribbon feed guide (4) into the fixing device (5) at the side.



Note: It is recommended to use only original ribbon cassettes supplied by the printer manufacturer. Using other ribbons will void your warranty.

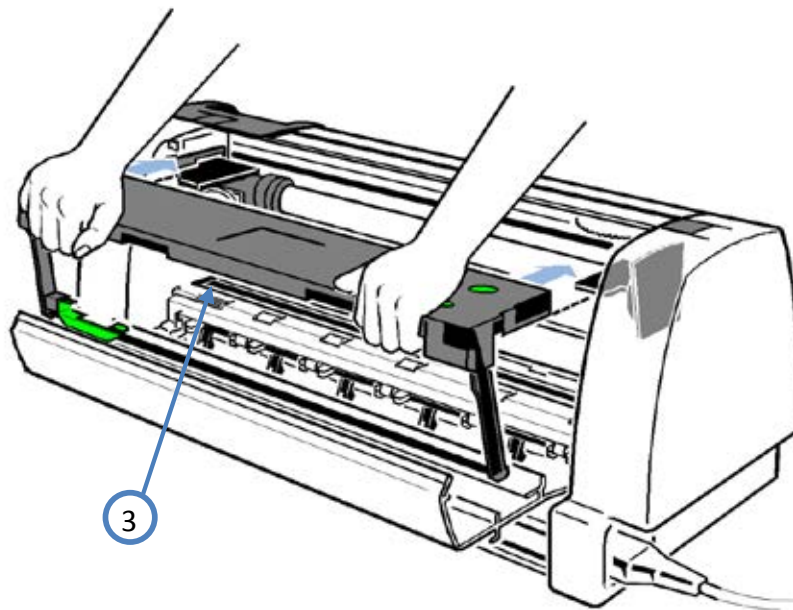
The printer must be switched on for the ribbon-change and be ready for operation.

- Open the rear cover (2) of the printer by pressing simultaneously the two locking buttons (1) and open the rear cover backwards.



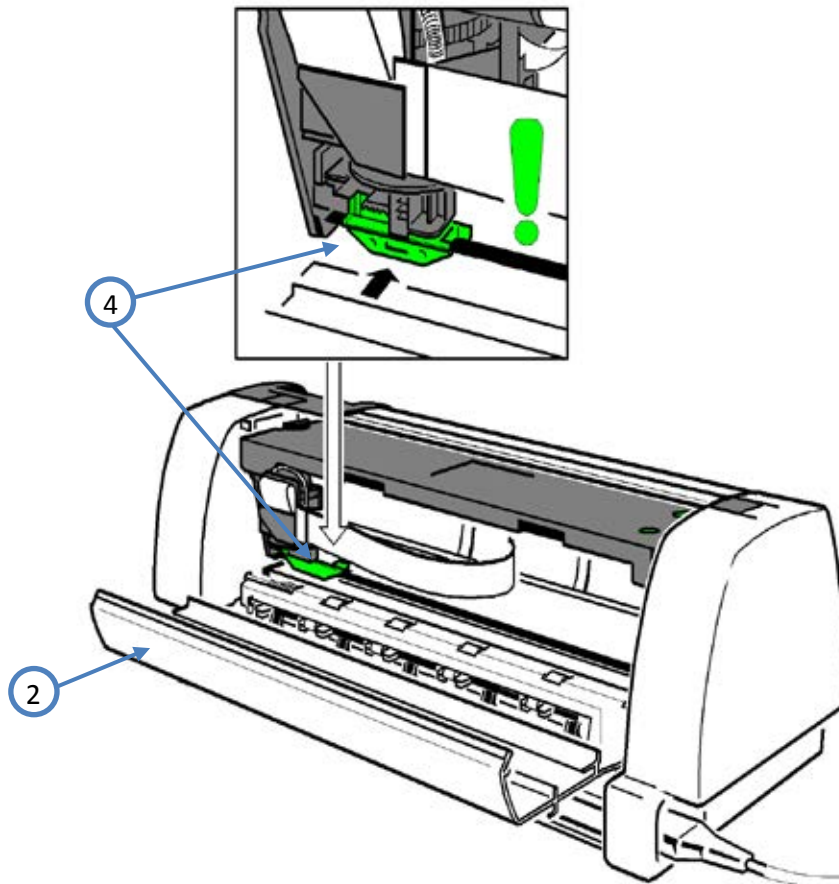
Wait for the message "COVER OPEN RIBBON UNLOCKED" on the display. The carriage is moving into park position (right side)

The ribbon cassette (3) will be removed with both hands to the rear or installed with both hands from the rear.



Attention:

For a printer with cutter be careful that the ribbon guide (4) under the cutter is pulled out.



Close the rear cover (2). The printer locks automatically the ribbon.

Cover Unlock / Lock

The printer cover is locked by an electromechanical lock. To open the cover the printer has to be powered on and unlocked by depressing the UNLOCK- key at the operator panel in LOCAL mode.

Unlock procedure

The print head is moved into the home position at the right most carriage position, the gap is opened such that the ribbon feed guide is detached from the print head and held by the fixing device of the ribbon cassette arm. The print head itself is hold by a print head bracket in order to keep it save in the home position. The display indicates the UNLOCKED status of the printer. After opening the cover the ribbon can be removed or installed easily.

If the normal unlock procedure failed because the print head could not reach the home position (e.g. massive paper jam) or the ribbon run control failed (ribbon defective) the printer unlocks with a shortened procedure. The cover lock is released, the gap is opened such that the ribbon feed guide can be removed from the print head manually, the horizontal position remains unchanged. After the obstructions are removed the print head must be moved into its home position manually before a new ribbon cassette is installed. The ribbon feed guide must be hold by the ribbon cassettes arm before the ribbon is inserted. This is very important because the ribbon feed guide can be picked up by the print head only if it is straight under the print head nose while the cover lock procedure is performed.

Unlock Cover for print head change

If the print head must be removed the UNLOCK COVER/PH procedure has to be performed. Open the rear cover and Press the UNLOCK – key in LOCAL MODE and wait until the message UNLOCK COVER/PH appears; then release the key and the normal unlock procedure will be performed but the gap is opened to a maximum and releases the print head from the carriage.

Print Head Incline for NLQ /Draft or LQ -mode

If the inserted paper is not already hold by the FF2- shaft the paper is moved into FF2 before the LQ - incline procedure starts. This is necessary to avoid the risk of paper jam when the carriage passes the left paper edge. The gap is opened to an “incline gap position” (+/- 4.5 mm). Then the print head is moved to the incline start position +/- 1 inch from the left. The ribbon motors are driven in reverse direction to activate the incline lever which will switch the print head into the incline position while the print head carriage passes. For switching the print head to NLQ position the carriage is moved to the right (1.9 inch) or for LQ position to the left (0.18 inch). Then the gap is lowered to the “incline fix position” (+/- 3mm) to engage the print head with the carriage - the two guide pins of the carriage are engaged with the holes of the print head. To retract the incline lever the ribbon motors are driven in normal direction and the ribbon drive becomes active again. Then the carriage is moved to paper insert horizontal position (2.4 inch).

If the horizontal move of the carriage does not reach the target horizontal position or if the ribbon run signals are missing after the incline procedure the message **“PRINT HEAD ERR.”** is reported.

Printer Subassamblies

Main Subassambiies

- Mechanical subassembly

Rear Side



Front Side



Electrical subassembly

- Electrical subassembly
 - Power supply unit (PSU-80x)
 - Control unit / device electronics (CU-DEV 80x)

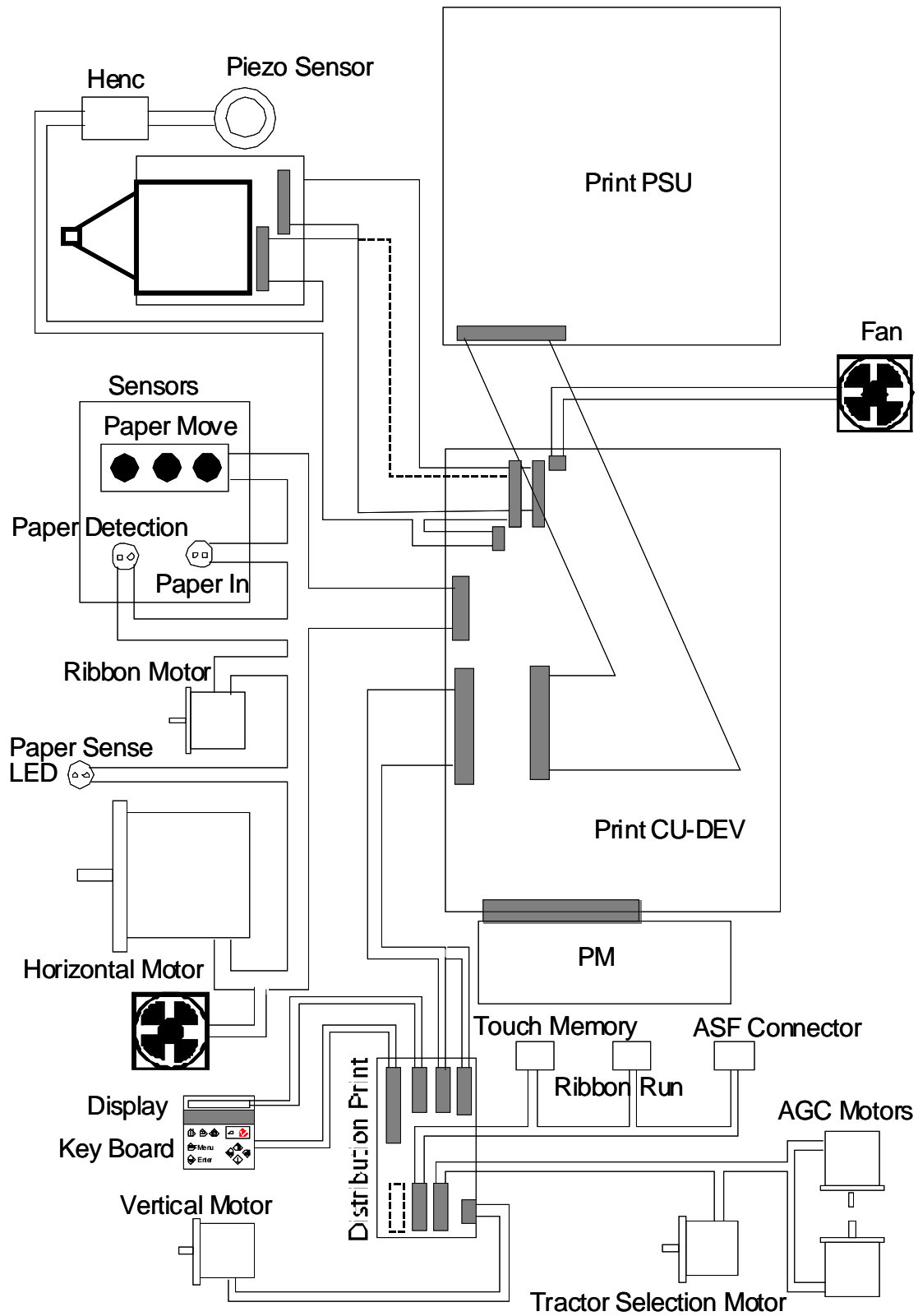


CUDEV 80x Device / Control Unit

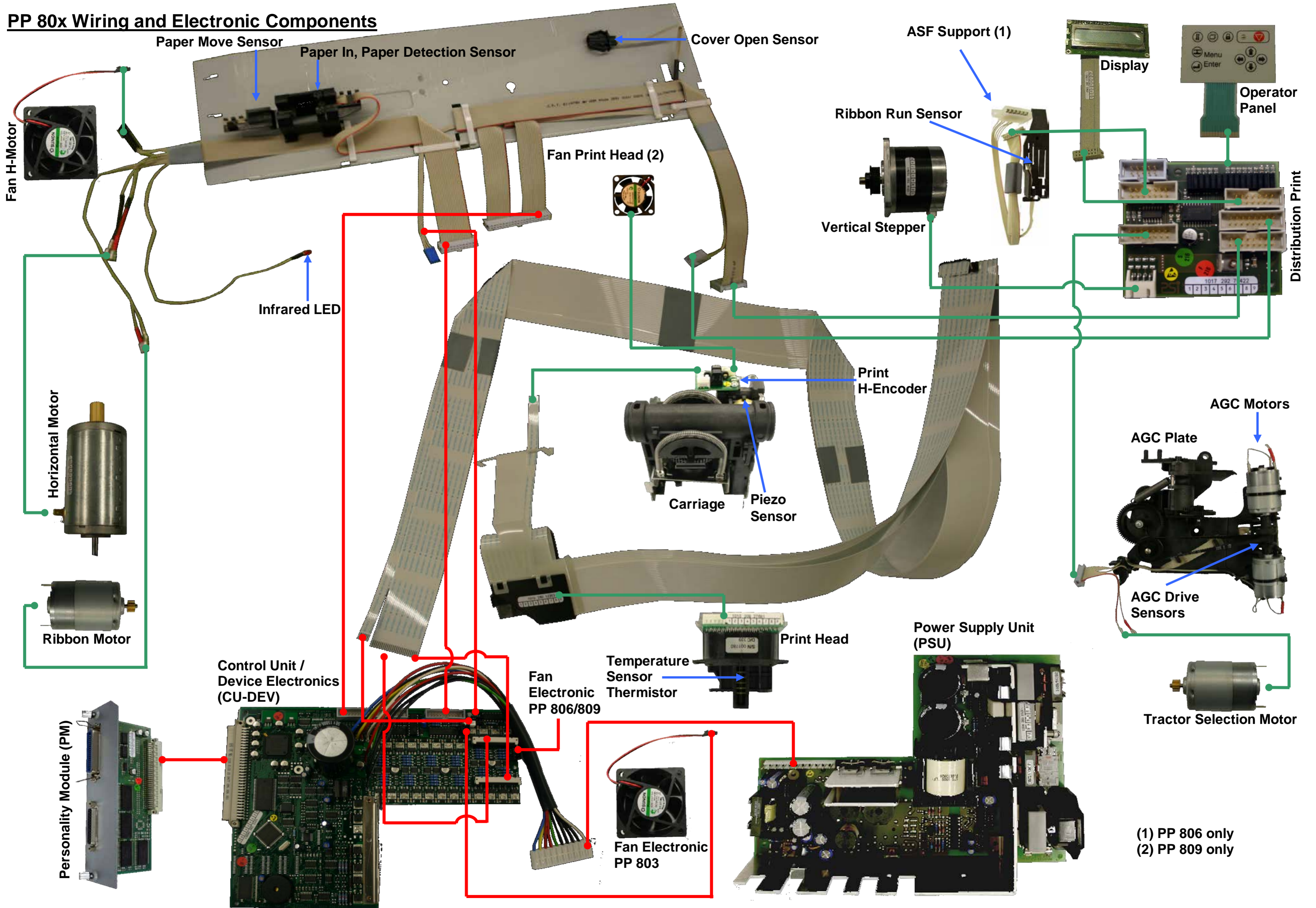


PSU 80x (Power Supply)

Internal Wiring Scheme



PP 80x Wiring and Electronic Components



(1) PP 806 only
(2) PP 809 only

Troubleshooting and Diagnostics

How to Use This Section

- Find the category to which your problem belongs. The problem categories are:
- Power-related Problems
- Error Messages
- No Printout
- Operation-related Problems
- Print-related Problems
- Ribbon or Carriage-related Problems

For example, if the print appears very light on the paper, look into Section 4.5 Print- related Problems.

- Find the symptom description that most closely matches the printer symptom. In this example you would look at the symptom Print faint or of poor quality.
- Try the first suggestion under that head line.
- If the suggestion does not cure the problem try the next suggestion.

Every time the printer is switched ON the display indicates TEST while the internal self-tests are run. If the test is completed successfully "READY X YYY" *) will be displayed. If an error message is displayed please refer to the following section.

*) X = Selected Macro, YYY = Emulation

Power-related Problems

- Power indicator does not light when power is switched "On".
- Check that the power cord and plug are securely fitted to the printer and to an electrical outlet.
- Ask for the power connector connections (and fuse if fitted) to be verified.
- Ask for the building electrical supply to be verified.
- PM correct installed?

Error Message

After switching the power ON the printer runs a self-test. During the test the following messages may be shown on the display:


Display	That means ...	Cause / Action
No information, POWER ON LED not lit	No power	<ul style="list-style-type: none"> • Mains cable not connected. • Print PSU defective • PM not inserted • <u>PM not correctly inserted</u>
LED lit but no reaction	Hang up in reset after <u>power on</u>	<ul style="list-style-type: none"> • Print PSU defective • <u>Print CU-DEV defective</u>
PROGRAM UPDATE	New firmware initializes <u>the printer</u>	<ul style="list-style-type: none"> • Check setup and modify as required by <u>the application</u>
TEST... (flashing)	Firmware does not work	<ul style="list-style-type: none"> • Download the Firmware again


When all tests have been passed successfully the following message will be displayed:


READY	"XXXX"	Online, Idle	<ul style="list-style-type: none"> • printer ready for operation
BUSY	"XXXX"	Online, Busy	<ul style="list-style-type: none"> • printer is Busy
LOCAL	"XXXX"	Online, Busy	<ul style="list-style-type: none"> • printer is in stop mode

During normal operation the following error messages may occur:

Note: In an error situation the printer switches from the READY (BUSY) mode into the STOP mode and displays one of the following messages:

Display	That means...	Cause / Action
BUFFER OVERFLOW	handshake protocol error	<ul style="list-style-type: none"> • check CTR - CTS or XON - XOFF protocol • check connector • repeat data transfer
CARRIAGE ERROR	horizontal drive without function	<ul style="list-style-type: none"> • Paper jam • Print gap incorrect • PCC-value too low • Ribbon feed guide isn't aligned with print head • Horizontal drive blocked • Encoder strip not in correct position • Encoder strip is dusty • Encoder strip missing • Horizontal motor fault • Print CU-DEV defective • H-drive in wrong direction • AGC procedure on not workable position • No AGC ADJUST after print head replacement
CHECK TOF POS.	Perforation may not adjusted with the tear off ledge.	<ul style="list-style-type: none"> • adjust the perforation of the form with the tear off ledge by pulling the paper forwards or backwards • Check if print head is in its park position • Ribbon cassette correct installed? see also diagram (Paper Jam TRF)
ELECTR-FAN ERROR or MOTOR-FAN ERROR	fan error	<p>press  key again</p> <ul style="list-style-type: none"> • check fan connector • hardware error, exchange fan
FRAMING ERROR	protocol error serial interface	<ul style="list-style-type: none"> • check protocol setting of printer and host • repeat data transfer • test the interface (see Interface Test)
GAP ERROR	print gap incorrect	<ul style="list-style-type: none"> • printer not locked • wrong distance between print head and print bar • CU-DEV defective • GAP value out of range • no piezo sensor (PTS) signal or time out • pins of the green ribbon support broken • check if print head is in its park position • see also diagram (Gap Error)
PAPER JAM ASF	there are obstructions in the paper path	<ul style="list-style-type: none"> • remove any obstacles • see also diagram Paper Jam ASF
PAPER JAM MANUAL	there are obstructions in the paper path	<ul style="list-style-type: none"> • remove any obstacles • close front cover • see also diagram (Paper Jam Manual)

Display	That means...	Cause / Action
PAPER JAM TRF	tractor cassette: <ul style="list-style-type: none"> • feeding incorrect • no paper feeding • not enough feeding • too much feeding by tearing off after power on: <ul style="list-style-type: none"> • no paper inserted 	<ul style="list-style-type: none"> • check paper path correct paper position? • paper movement wrong • close front cover insert paper • see also diagram Paper Jam TRF
PARITY ERROR	protocol error serial interface	<ul style="list-style-type: none"> • check protocol setting of printer and host • repeat data transfer • test the interface (see 6.7.1 Interface Test)
PRINT HEAD ERROR	problems with the print head incline	<ul style="list-style-type: none"> • no ribbon run • pins on print head carriage defective • unlock print head and lock it again (see diagram Locking Procedure)
PRINTHEAD ERR 17 PRINTHEAD ERR 18	Carriage error (17) or Ribbon transport error (18) occurred when switching the print head from high speed position to normal position or v.v.	<ul style="list-style-type: none"> • Check LQ/DQ gear and carriage
PROCESS TIMEOUT	firmware error	press  key again <ul style="list-style-type: none"> • switch printer off and on download firmware update
REMOVE PAPER	Paper detection sensor detects paper	<ul style="list-style-type: none"> • remove paper • close front cover
RIBBON ERROR	ribbon problems	<ul style="list-style-type: none"> • unlock printer • open printer • check ribbon cassette
SYSTEM ERROR	problems with the system or the firmware	<ul style="list-style-type: none"> • switch printer off and on • download firmware update
UNLOCKED - CARRIAGE ERROR	horizontal drive without function printer locking procedure faulty	<ul style="list-style-type: none"> • open printer • check ribbon • check if print head is in its park position • lock printer (see diagram Locking Procedure)
UNLOCKED - CHECK RIBBON ...	no ribbon cassette detected printer unlocked	<ul style="list-style-type: none"> • check ribbon cassette • move print head into park position • lock printer
UNLOCKED - RIBBON ERROR	ribbon problems	<ul style="list-style-type: none"> • open printer • check ribbon cassette (see diagram Locking Procedure) or (Ribbon Error)
RIBBON UNLOCKED - GAP ERROR	Ribbon is unlocked because of problems with gap drive	<ul style="list-style-type: none"> • open printer check carriage (see diagram Locking Procedure)

Display	That means...	Cause / Action
UNLOCKING PRINTHEAD	Print head is moved to changing position	acting by cover open and  press by Lock/ Unlock key
PRINTHEAD UNLOCKED	Print head is in changing position	open printer to change the or remove the print head
LOCKING PRINTHEAD	Print head is moved to locked position	Started if print head was unlocked and cover will closing
CU NVM ERROR	Checksum of non volatile memory on CUDEV not ok.	Load factory defaults. If not ok! Flash on CUDEV defect.
CU-FLASH ERROR	Problems with non volatile memory on CUDEV when trying to save parameters	Flash on CUDEV defect
VD TIMER ERROR	Problems with paper transport control	switch printer off and on download firmware update

No printout

- Self-test printout does not start
 - Make sure that you have closed the cover.
 - Check if paper is loaded in the printer.
- Printing does not start
 - Check if the READY or BUSY message is displayed. If there is a different message displayed please look into the above error message table.
 - Make sure that the printer is connected to the host computer.
 - Make sure that connectors are properly fixed at both ends.
 - Make sure that the printer is receiving data from the host computer.
 - Make sure that the correct protocol is enabled.
 - Make sure that you have selected the correct port (if shared mode has not been selected).
 - Make sure that paper is loaded.
 - Make sure that the ribbon is installed.
 - Examine the ribbon path. Adjust the ribbon if necessary.





Fanfold paper does not advance

- Make sure that the right paper tractor is selected.


- Single sheet paper does not advance

- Make sure that the paper source MANUAL or BIN x (x = 1 up to 3) is selected.

Operation related Problem

- Paper is not positioned at perforation for tear-off feature
 - Select the correct form length using the Set-up feature.
 - Reset top of form by moving the paper into park position.
- Paper tears or jams
 - Examine the paper path; remove any obstacles
 - Is the paper too loose or too tight between the tractors?
 - If the transport holes are deformed at their outer edges, the paper is too taut.
 - If the paper rises between the tractors it is too loose.
 - Readjust the tractor spacing so that the paper lies smoothly but without any tension.
 - Ensure that the paper is horizontally aligned on the pins.
 - Paper moves out of one tractor.
- Parking paper and resetting top of form
 - Tear off the paper at the perforation.
 - Press 
 - Press  until the paper is in the park position.
 - Press  Printing will resume at the top of the next form.
- Print head carriage does not move smoothly / does not move at all
- Examine the paper path. Remove any obstacles.
- Examine the carriage area for obstacles. Remove where necessary. Press the  when the paper path is cleared.
- Make sure that the transport lock has been removed.
- Single sheets are skewed
 - Adjust ASF cassette paper guides.

Printing related Problem

- Print faint or of poor quality
- Do you use the correct paper? See Chapter 8 Technical Data in the User's Manual which contains the paper specification. Replace the paper if not comply with the specification.
- Did you use the right paper? See chapter Technical Data in the User's Manual which specifies the paper properties. Change the paper if it does not comply.
- Does the ribbon need to be changed? Replace it by a new one if necessary.
- Is the ribbon cassette properly installed? Adjust it if necessary.
- Ribbon path not o.k.?
- Print gap incorrect. Press  twice.
- Copies not dark enough. Don't use old action paper!
- Characters are not printed evenly or are not uniform in pitch
 - Examine the paper path for dirt or other obstacles that may cause the gap between print head and platen to vary. Remove the obstacles.

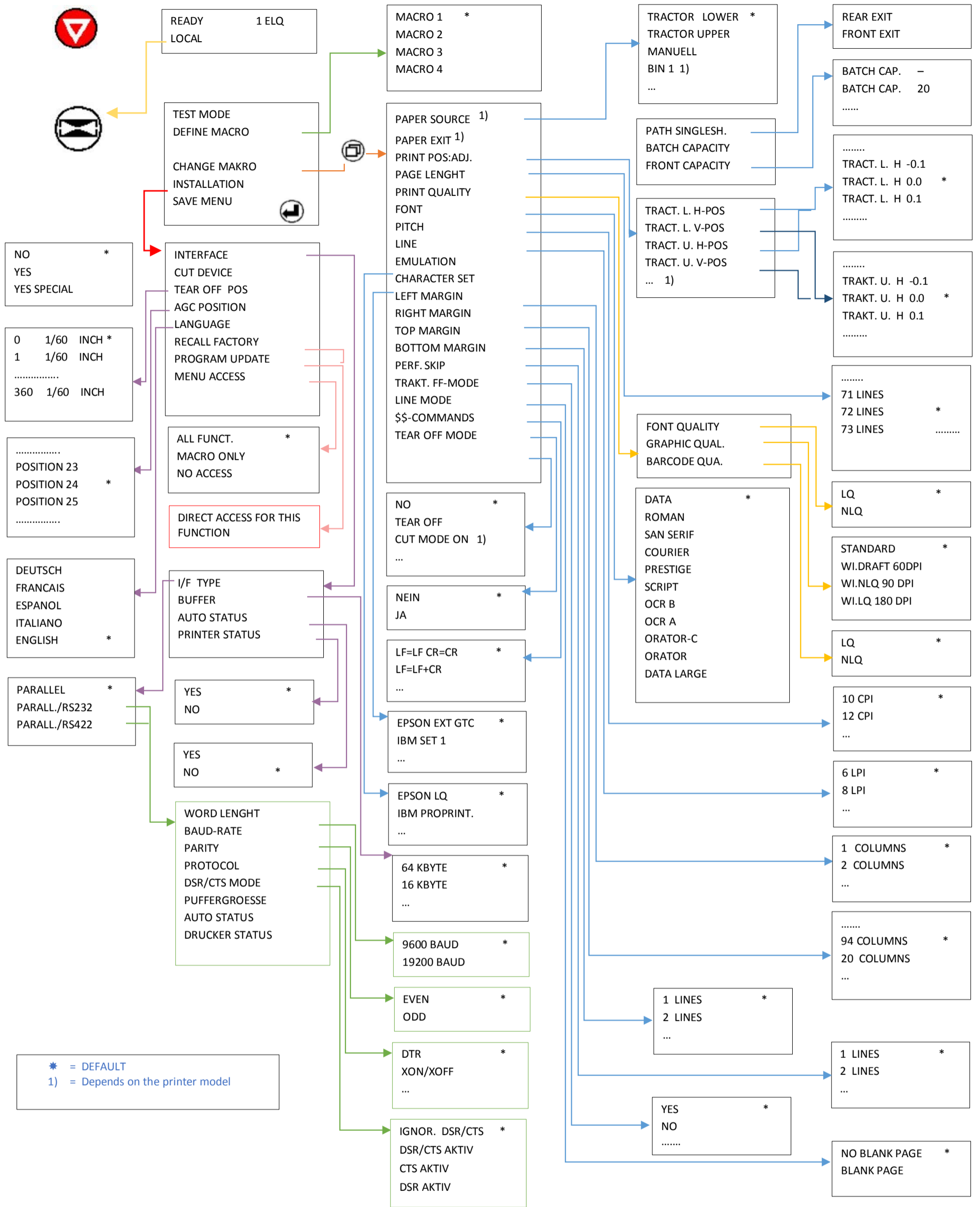
- Print lines overlap
 - Examine the paper path for dirt or other obstacles. Remove the obstacles.
- Part of printed text is missing (loss of data)
 - If you are using Serial communication channel check the buffer control setting in Set-up.
 - Check the data flow control setting on the host computer.
 - Test the interface (see 6.7.1 Interface Test)

Action	Result	Check
Select and start PRINT TEST 1	Print not OK?	<ul style="list-style-type: none"> • PAPER SOURCE selection • ribbon condition • print head condition
Stop SELF TEST and start external printing	no printing starts	<ul style="list-style-type: none"> • Printer ONLINE READY? • interface cable for proper connection • interface selection • test the interface (see 6.7.1 Interface Test)
	some characters not correct	<ul style="list-style-type: none"> • Emulation • Character set • National version • Word length • Baud rate • Parity bit • Protocol
	font and/or pitch quality faulty	<ul style="list-style-type: none"> • Font • Pitch • Line Space

Ribbon or Carriage-related Problems

- Ribbon Problems
 - Make sure that the ribbon is:
 - Not worn out or dry
 - Not torn or damaged in any other way
 - Not jammed
 - Ribbon turned over?
- Carriage does not move smoothly
 - Examine the paper path. Remove any obstacles. Check that all packing material is removed.
 - Examine the carriage area for obstacles. Remove where necessary.

Menu Structure PP 80x










Internal Printer Tests

There are four test printouts available.

- **PRINT MENU** shows the current settings of all parameters and the contents of the macros.
- **CONFIGURATION** lists all available fonts and indicates the page counter value.
- **PRINT LETTER** produces a standard letter (ECMA-132) which can be used for measuring the printer's throughput.
- **PRINT LINES** shows a pattern of all printable characters. Use this to check the print quality as well as the top and left margin.

The following steps show which keys to use to start a test Print Menu. The printer feeds paper from the defined paper source (default **TRACTOR LOWER**).

KEY	DISPLAY
 [OFFLINE]	LOCAL 1 ELQ
 [MENU]	DRUCKER TESTS ⇨
 [RIGHT]	PRINT MENU *
 [ENTER]	PRINT MENU *
 [ONLINE]	(starts printing) ⇨ PRINT MENU
 [FORM FEED] (short displayed)	TEAR OFF PAPER ⇨ LOCAL
 [ONLINE]	READY 1 ELQ

PRINT OUT FW-VERSION 20xxxxxx HW-VERSION 29xxxxxx FPGA 5.0 PAGE COUNT 213856

INTERFACE

I/F TYP PARALL./ RS232
 WORD LENGTH 8 BIT
 BAUD RATE 9600 BIT/S
 PARITY BIT EVEN
 PROTOCOL DTR
 DSR/CTS MODE IGNOR. DSR+CTS
 I/O BUFFER 8 KBYTE

MENU ACCESS FULL ACCESS

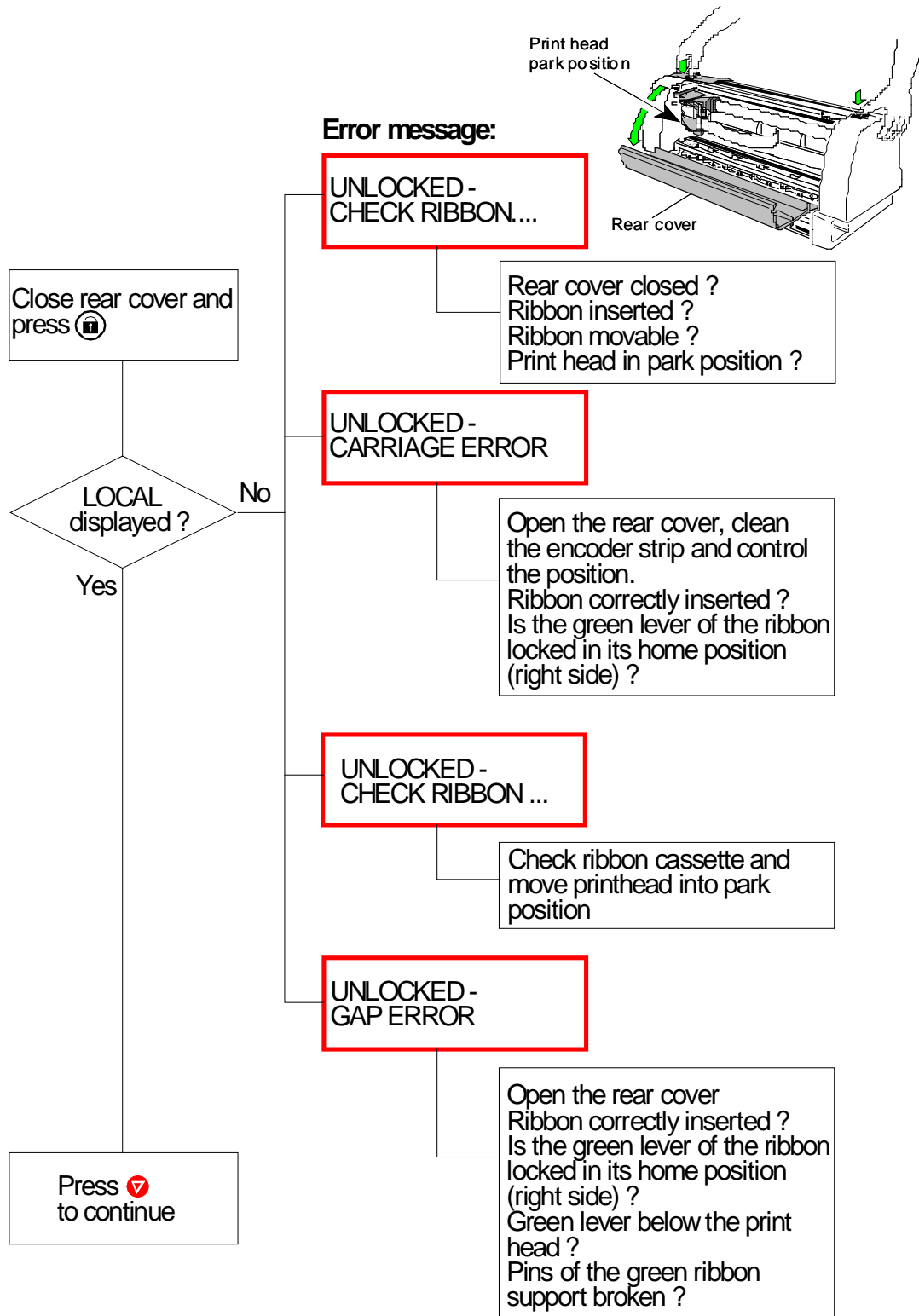
	CURRENT SETTINGS	MACRO 1*	MACRO 2	MACRO 3	MACRO 4
PAPER SOURCE	TRACTOR LOWER	TRACTOR LOWER	TRACTOR LOWER	TRACTOR LOWER	TRACTOR LOWER
PAPER EXIT PATH	BATCH	BATCH	BATCH	BATCH	BATCH
STACK. CAPACITY	-	-	-	-	-
BATCH CAPACITY	-	-	-	-	-
PRINT POS. ADJ.					

and so on.....

Note: An asterisk (*) after MACRO 1 indicates the actual macro. The values behind FW- and HW-VERSION indicates the actual release.

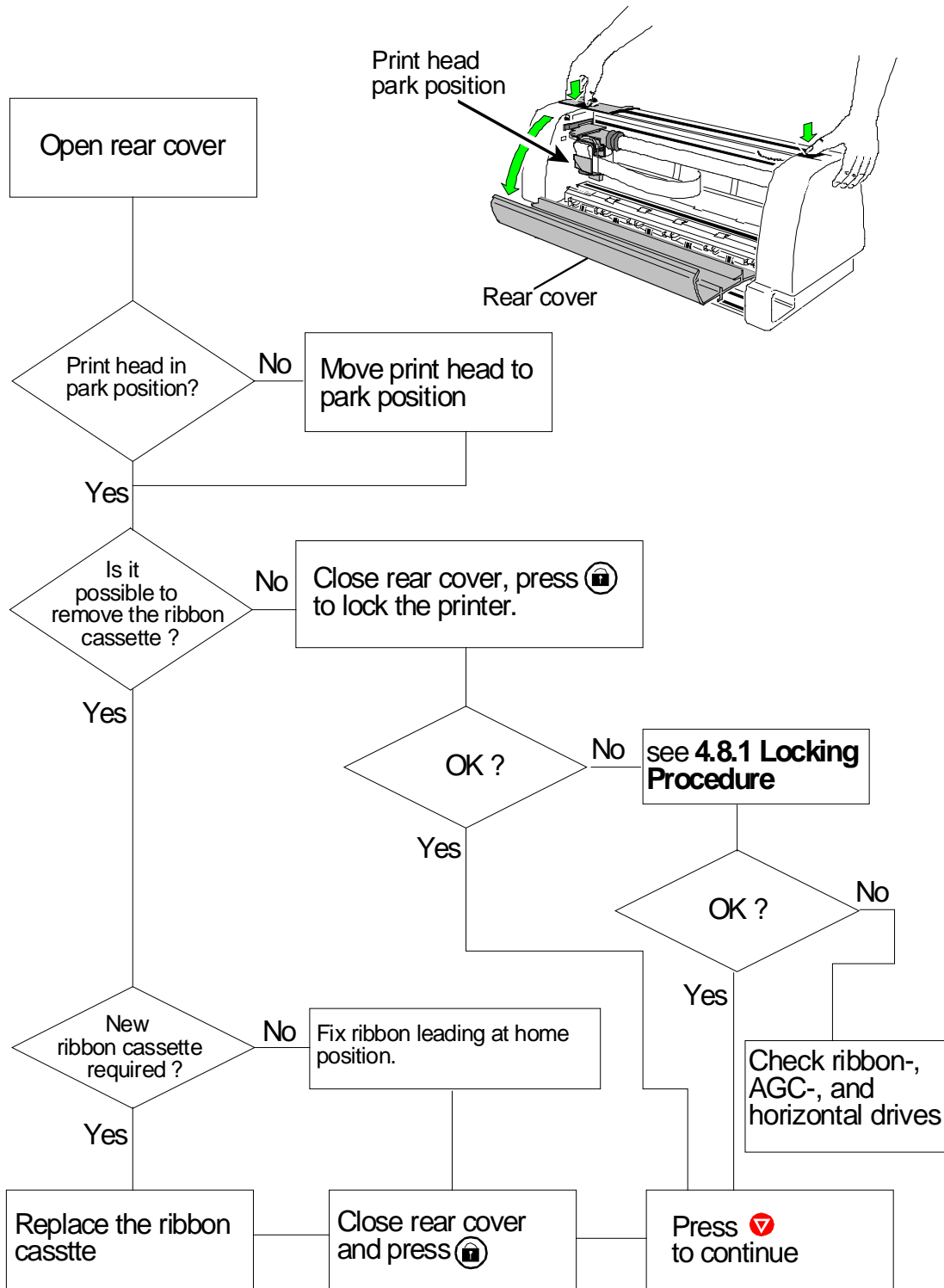
All standard settings of the firmware will be restored with the menu function **RECALL FACTORY**.

Locking Procedure



Note: Remove the ribbon cassette only, if the print head is in park position.

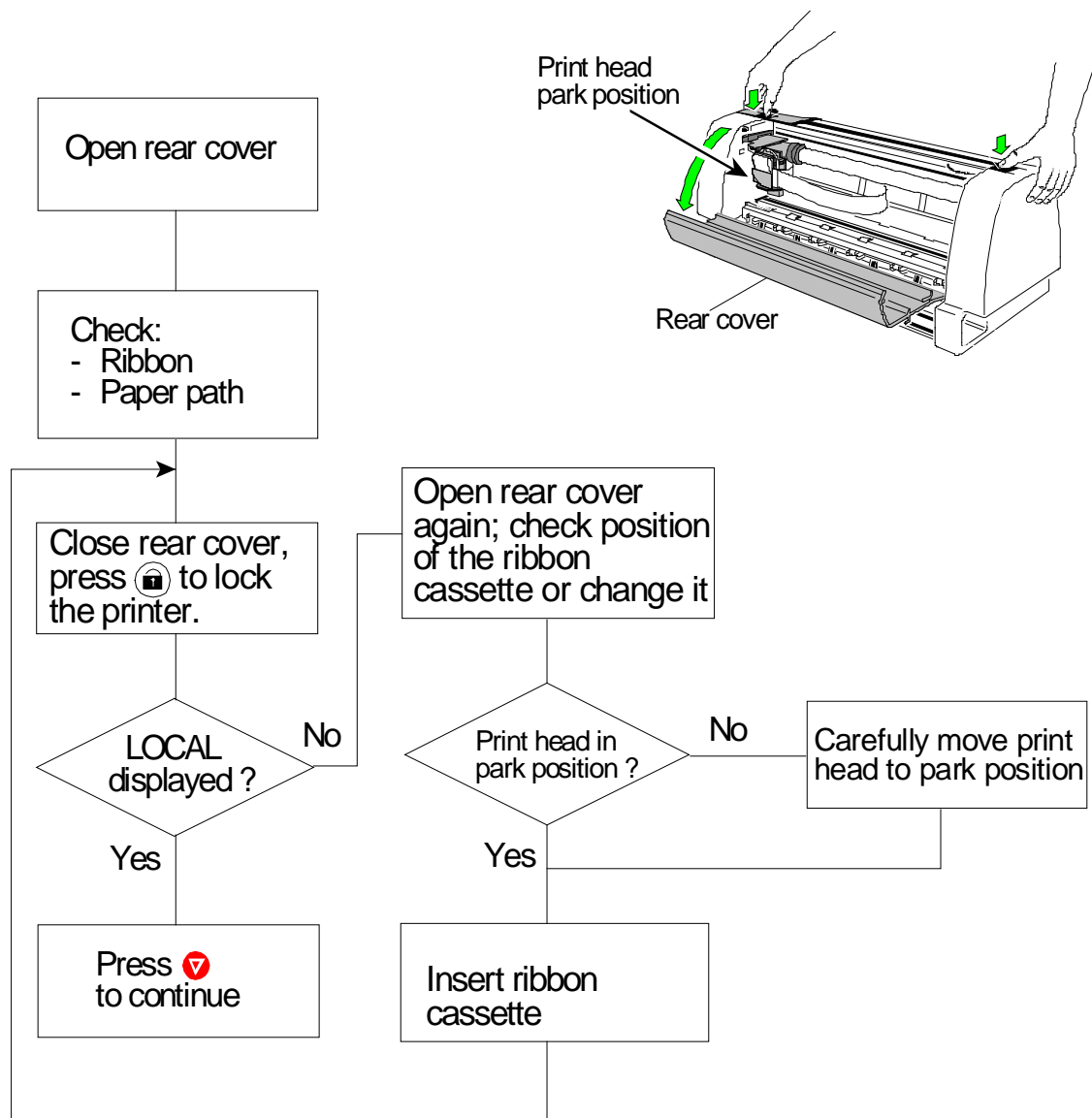
Ribbon unfasten Procedure



Ribbon Error

That means, that the printer has tried to tense the ribbon and to fix the ribbon feed guide into the fixing device. But there are still problems with the ribbon.

Note: Remove the ribbon cassette only, if the print head is in park position



1. Park-Position:

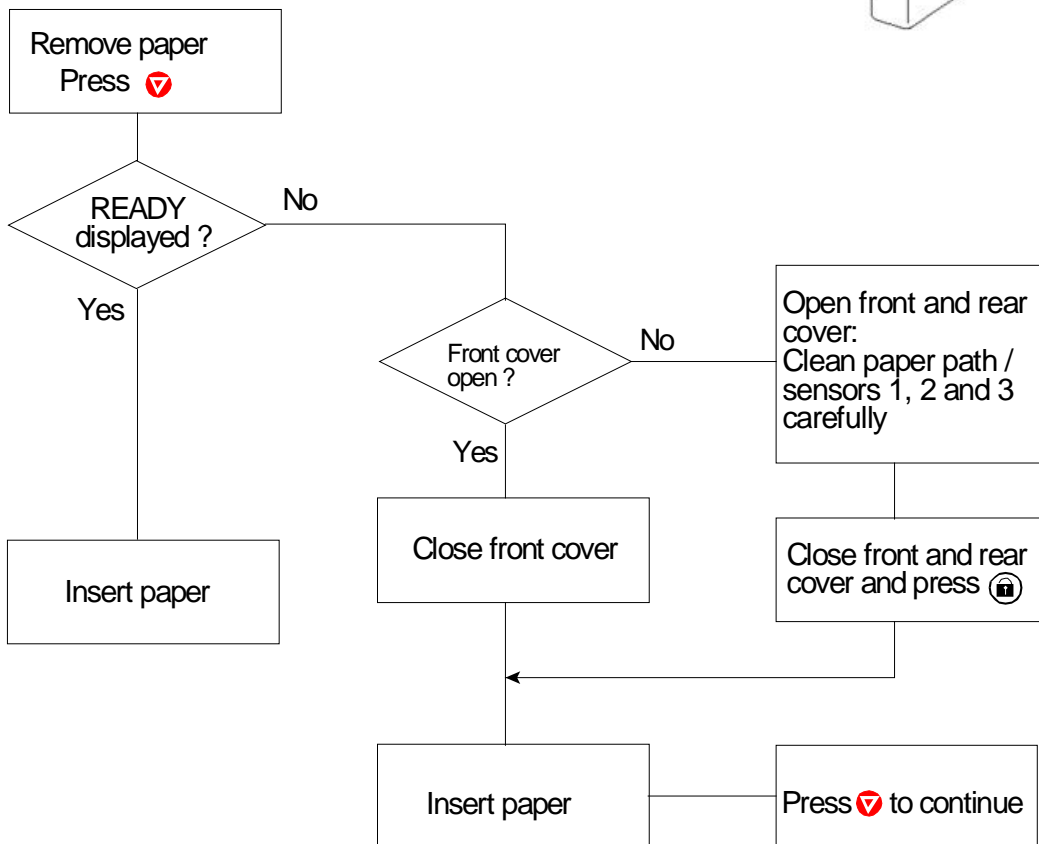
Print Head is on the most right side of the printer. (The view is from the front of the printer.)

Remove Paper

That means, that a sensor isn't free from any obstructions:

- Paper remains are in the paper path.
- Sunlight shines directly to a sensor.
- Front cover isn't closed entirely.

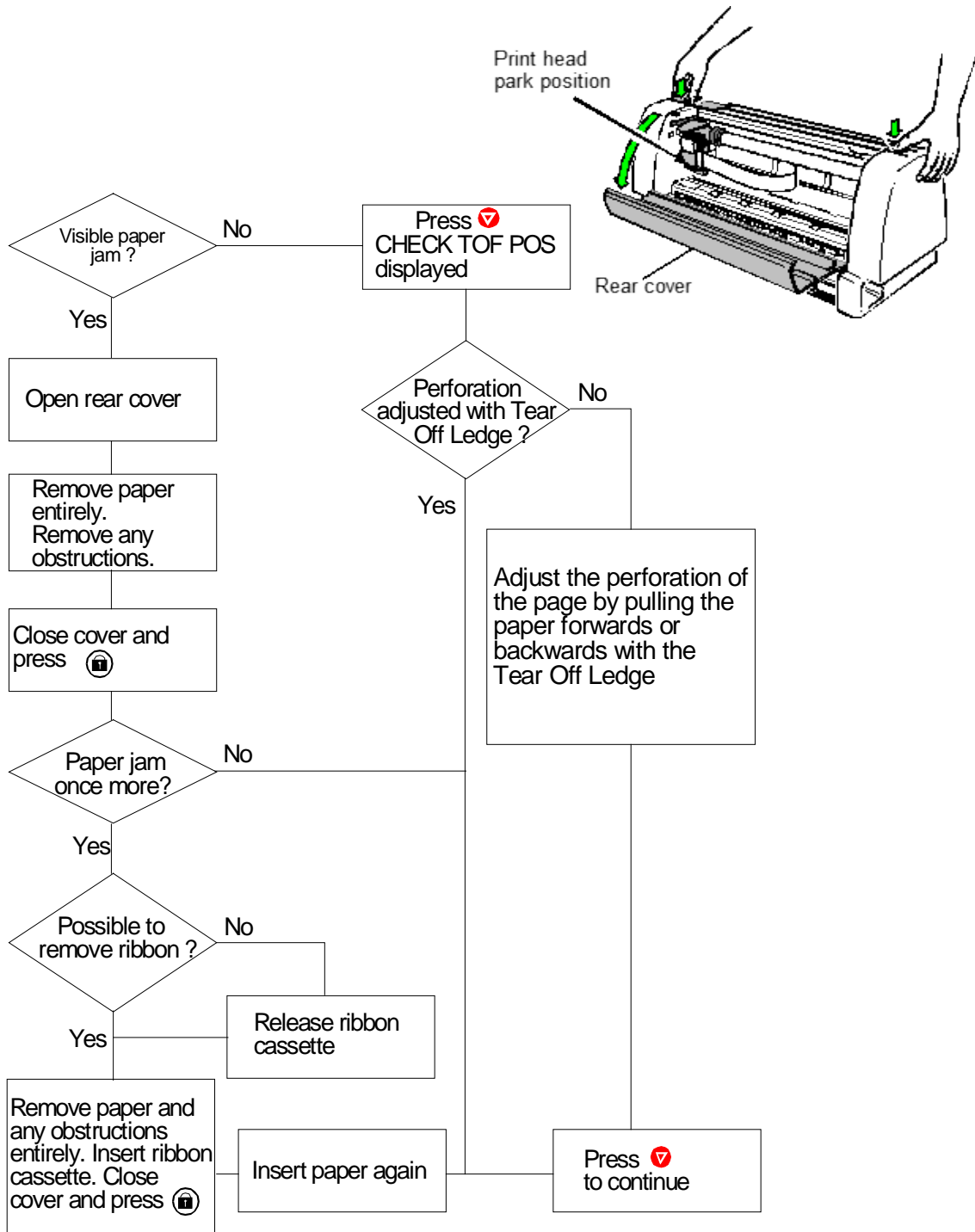
Clean the sensors 1, 2 and 3 carefully.



Paper Jam TRF (Tractor Feed)

That means, that there are obstructions in the paper path.

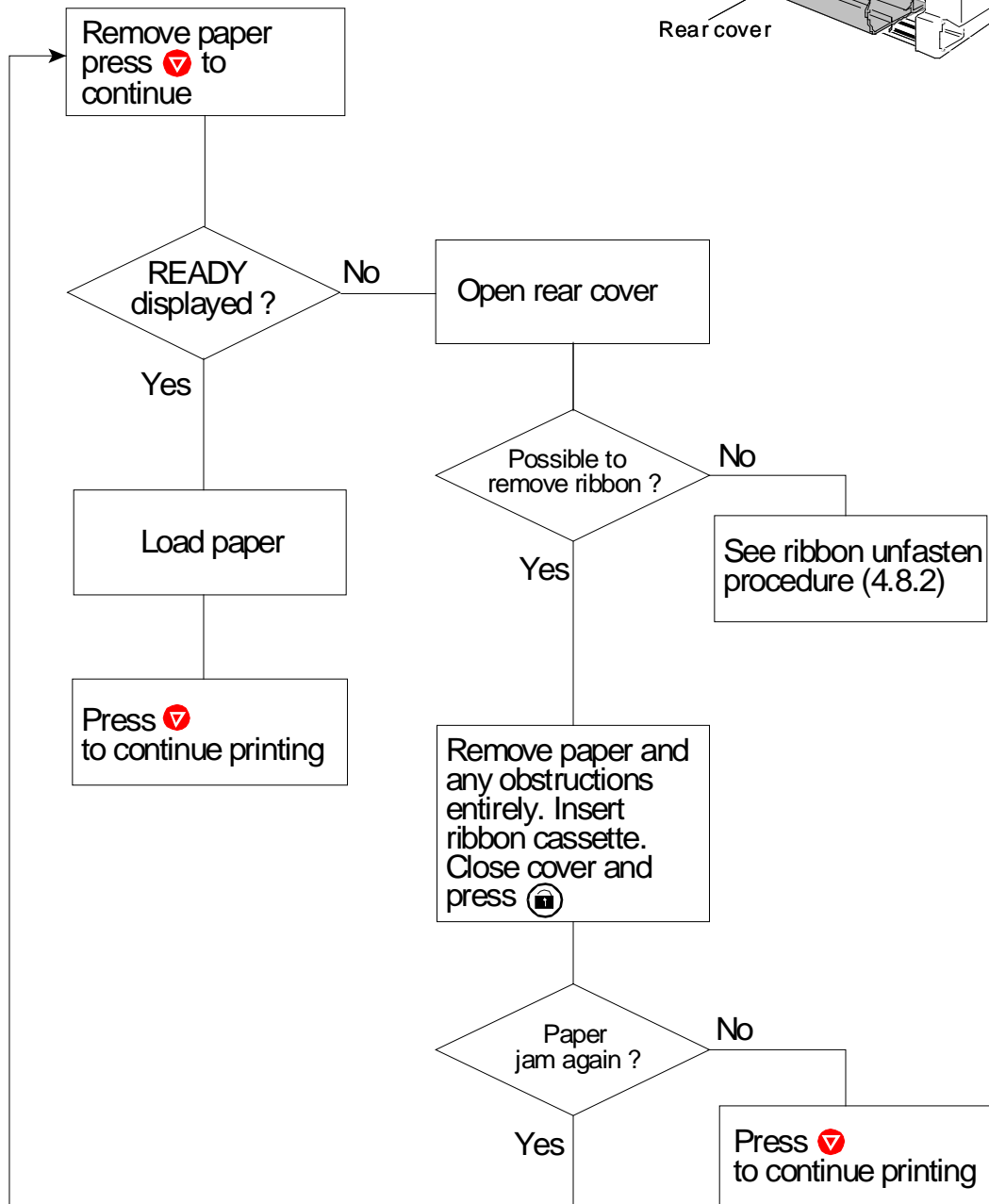
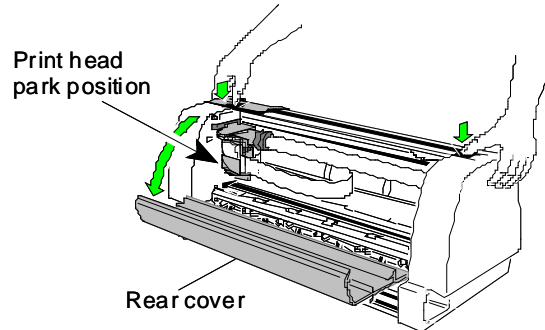
Note: Remove the ribbon cassette only, if the print head is in park position.



Paper Jam ASF (Automatic Sheet Feeder) or manual insert

That means, that there are obstructions in the paper path.

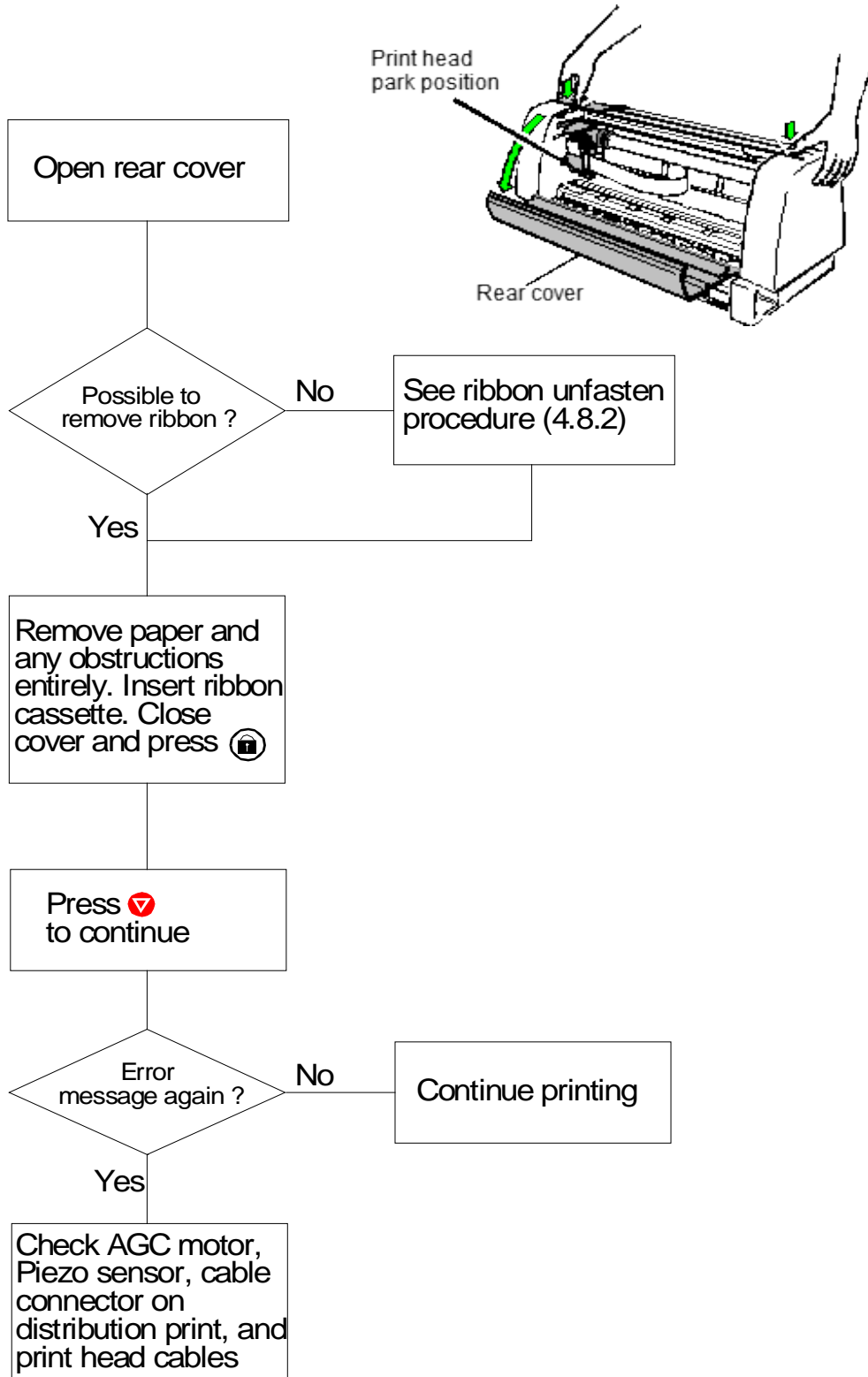
Note: Remove the ribbon cassette only, if the print head is in park position.



GAP-Error

That means, that there are obstructions in the paper path.

Note: Remove the ribbon cassette only, if the print head is in park position.



Procedures for Removal and Reassembly

This chapter describes the removal procedures for spare parts and subunits of the printer.

For detailed order information and description of the spare parts please refer to the Spare Parts Catalogue.

Conventions

This chapter is covering the **PP 80x** printers and its customer specific variants.

The operation, functionality, subassemblies, and parts are mostly alike. In most illustrations, the printer PP 806 is used. In case there are differences in the handling you will find the note or the printer name.

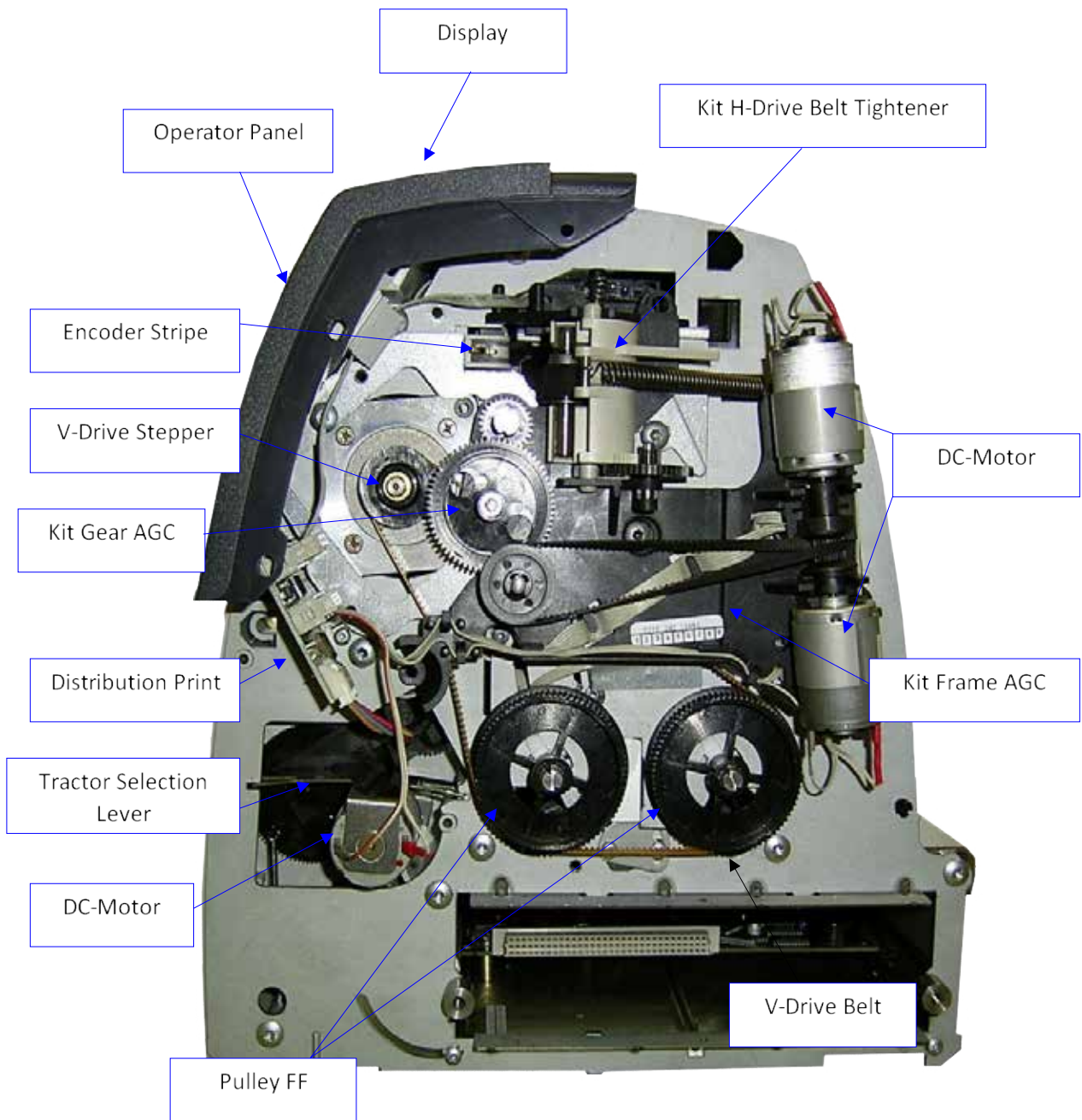
The use of **FRONT**, **REAR**, **LEFT**, and **RIGHT** always assumes you are viewing to front of the printer. For instance, the **control panel** and **paper input** is at the **FRONT** side of the printer.

The typical screw used in the printer are Torx screws. If there is a special screw you will get a hint.

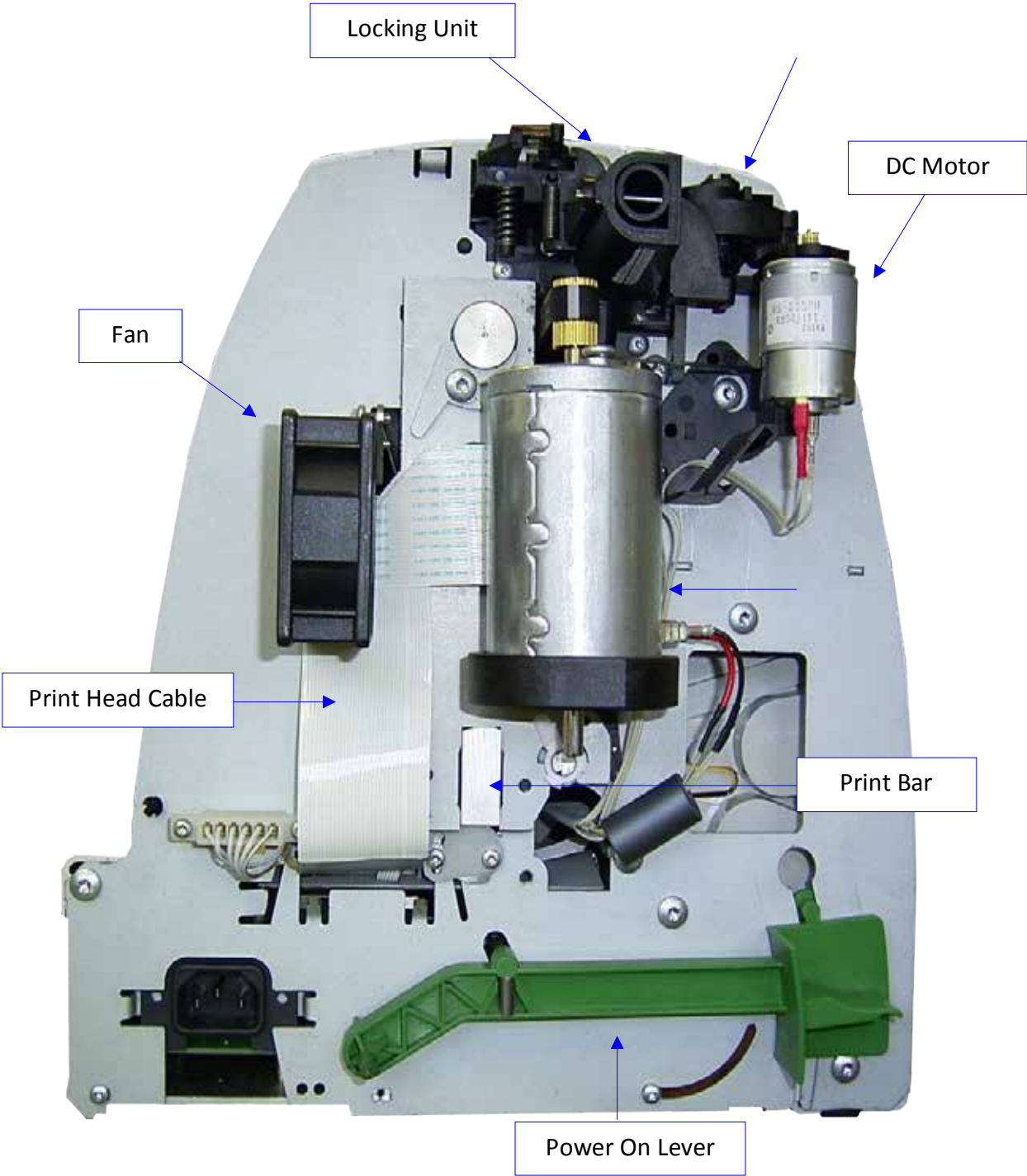
Information that you need to pay special attention to is presented in the following way:

- Note:** Extra information for you to consider.
- Caution:** Possible equipment damage or Lost of data may occur.
- Warning:** Possible danger to you or the user.

Printer right side view for part location



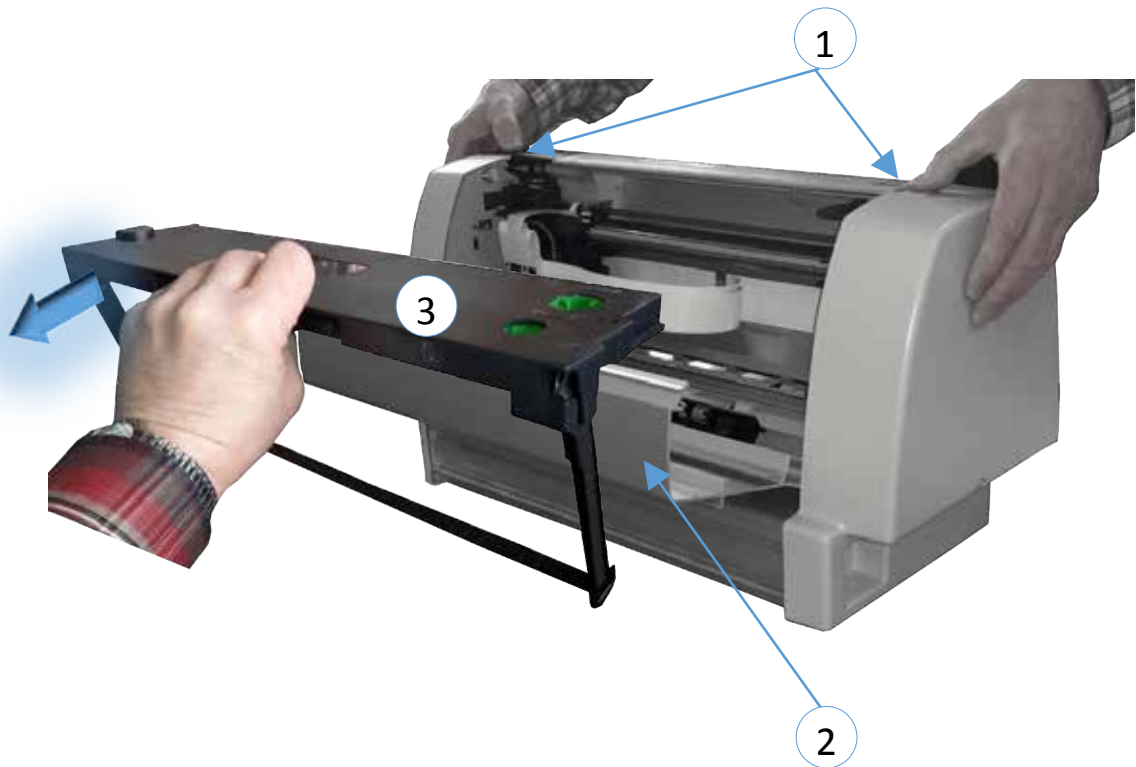
Printer left side view for part location



Unlock Procedure

Unlock procedure Printer under Power

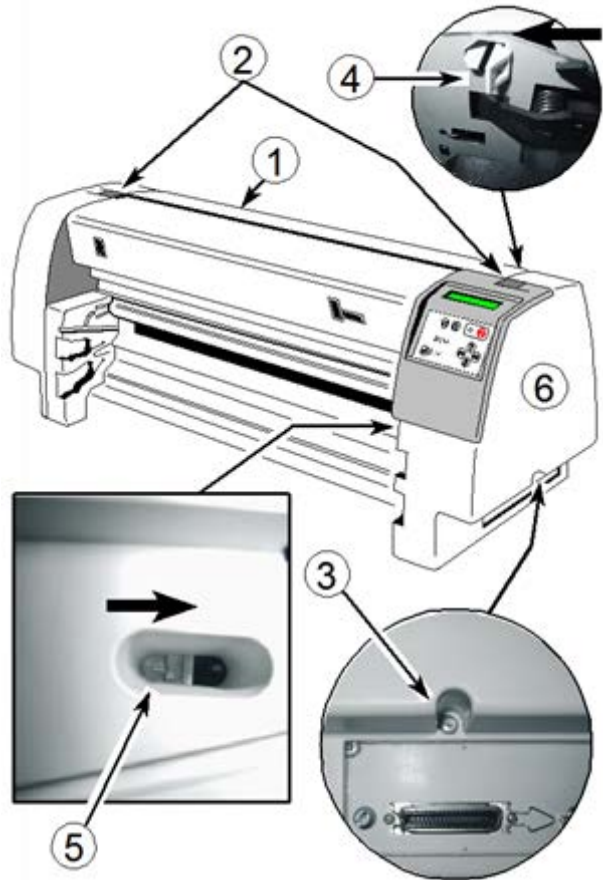
- Switch printer on.
- Open the rear cover (2) of the printer by pressing simultaneously the two Buttons (1) and swivel the rear cover backwards. The Carriage goes automatically in the home position (right side).
- Remove Ribbon Cassette (3).



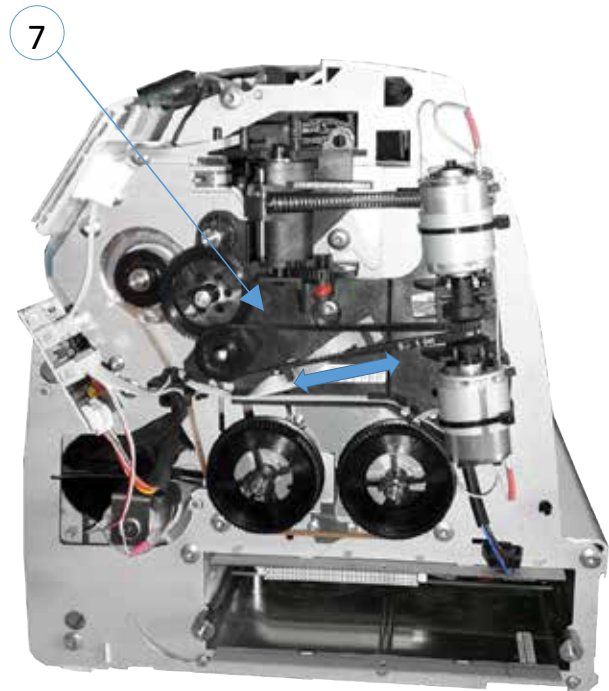
Unlock Procedure

Unlock procedure without Power on

- Open the rear cover
- Remove the right cover.
- remove the right cover retaining screw (3)
- release of the holding tab (4) and (5)
- remove the right cover
- turn AGC Belt by hand for lift up Carriage in most Upper position.



By pulling the belt (7) to the right or left, the head moves up and down. Turn up the belt to position that the ribbon and print head is free for remove. It may need some revolutions since the translation is very high



Part Change

This Chapter describes all Procedure for part change.

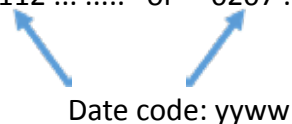
The individual chapters consist of individual field service information. These are also enclosed with the delivered spare part. However, they refer to the appropriate spare part. All previous measures are described here. The service manual contains all information.

The corresponding spare part can be identified in the spare parts catalog.

Each component that is defined as a replacement part has a 12NC (part number). However, this is not the order number. For this one uses the number key from the spare parts catalog.

If a component is installed in the printer, the first 4 numbers (5112) are replaced by a datecode. From this, the production date can be recognized for warranty. So notice: Date code = 5112.

The Part numbers have 12 digits and begins with
either 5112 or 0207



To order a spare part it is mandatory to use the order number which is given in the spare parts catalogue and begins with
either 5322 or 8707

sample:

PAPER SENSOR PP803

Number on part:(yyww)	1822-280-12192
Partnumber:	5112-280-12192
Ordernumber:	8707-902-00063

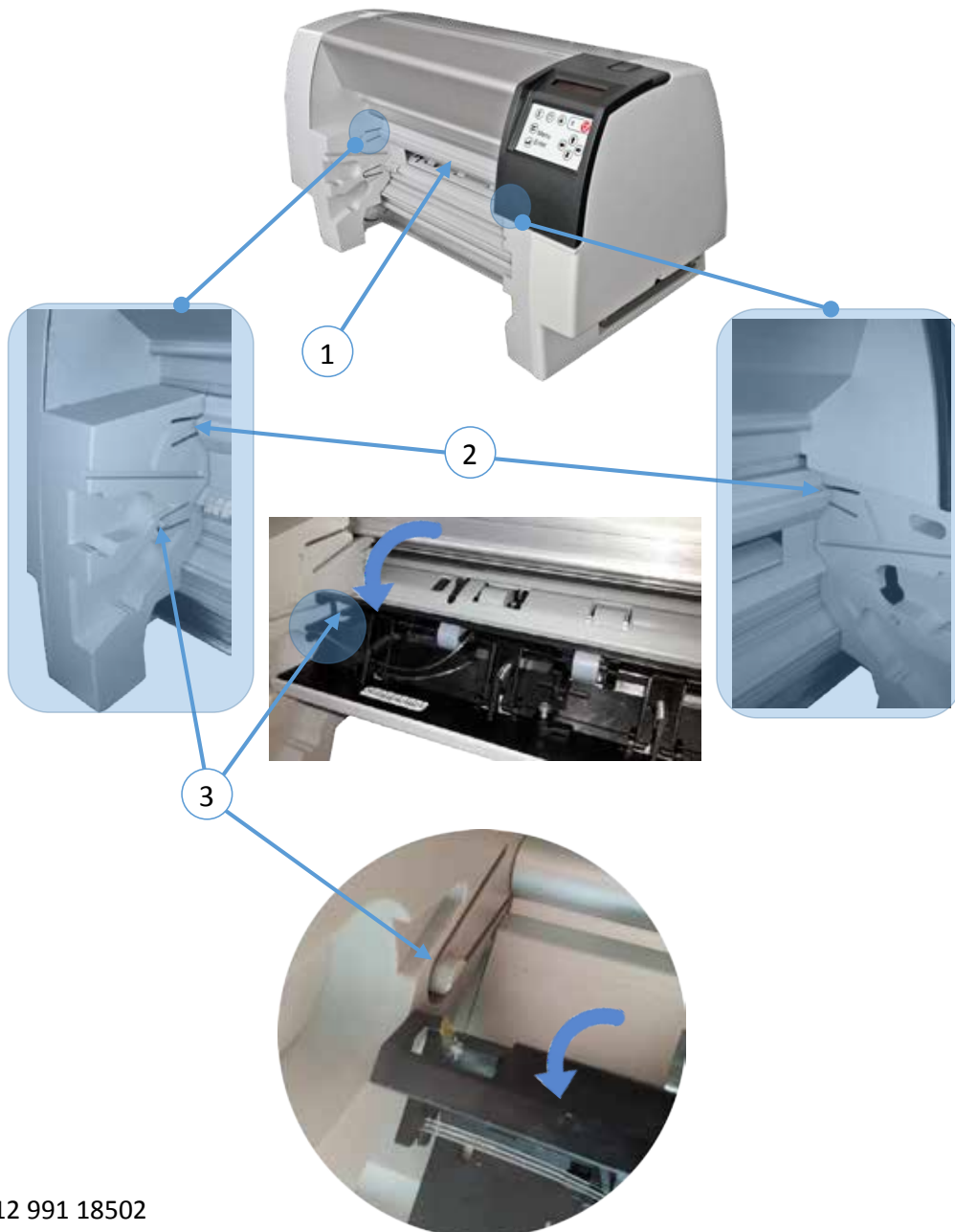
Steps: Remove Part

Removal Front Roller Unit

- Remove the paper guide.
- Remove the tractor cassettes.
- Press the left and right plastic leads (2) and open the front roller Unit (1).
- Press the plastic stopper (3) and turn in the joint the front roller unit downwards and remove it
-

REASSEMBLING

- Execute the REMOVAL procedure in reverse sequence



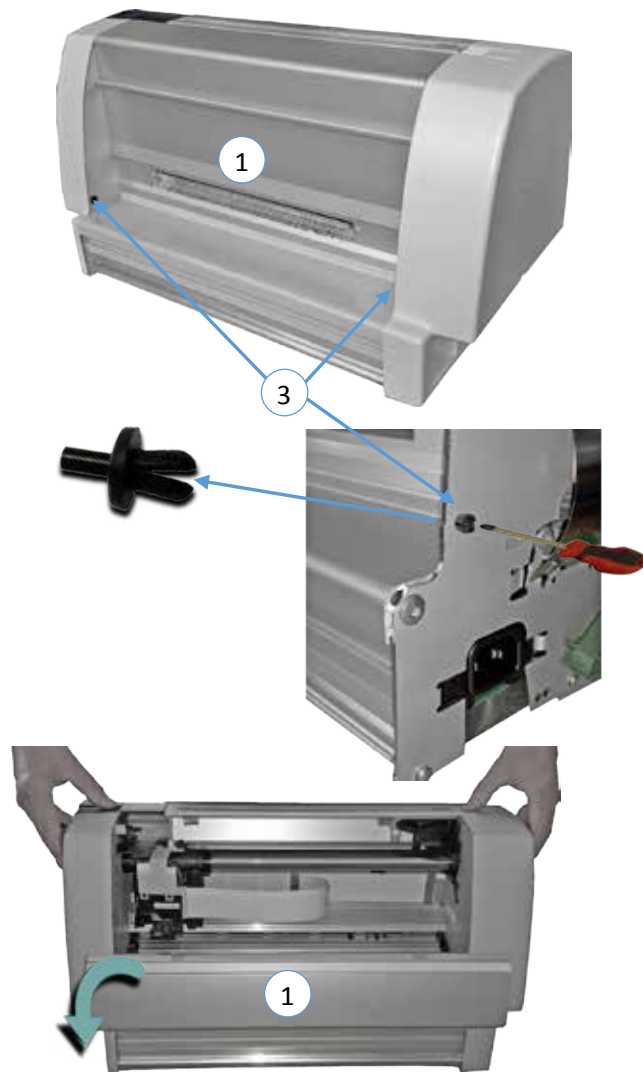
Steps: Remove Part

Removal Front Roller Unit

- Perform the unlock procedure.
- Disconnect mains cable
- Remove Paper Guide and tractor cassettes.
- Remove right cover (see Part: Cover Right).
- Remove left cover (see Part: Cover Left)...
- Remove both plastic stopper (3). Use a screw driver and press the pin in Direction of the Arrow and put it out as shown in the graph.
- Open the rear cover (1) by pressing the two locking Bottom's (2) and turn in the joint the Rear cover backwards.

REASSEMBLING

- Execute the REMOVAL procedure in reverse sequence



Steps: Remove Part

Removal Cutter Gear Wheel PP 408

- Perform „Unlock“ procedure
- Disconnect mains cable
- Remove paper guide and tractor cassettes.
- Remove the Torx screw (2) [TX20].
- Loosen the plastic clip (3) underneath the printer.
- Remove the left cover.

REASSEMBLING

- Execute the REMOVAL procedure in reverse sequence



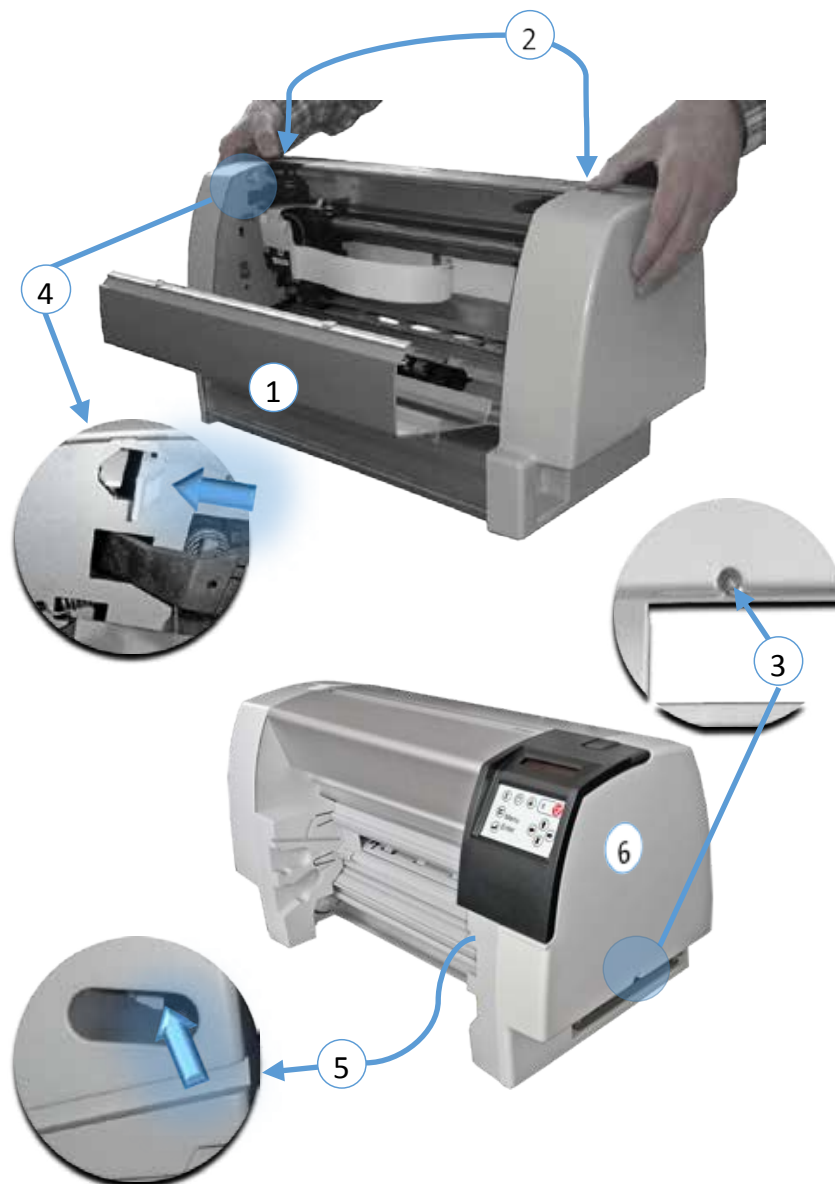
Steps: Remove Part

Removal Cover Right

- Perform „Unlock“ procedure
- Disconnect mains cable
- Remove paper guide and tractor cassettes.
- Open the rear cover (1) by pressing the two locking buttons (2) and turn in the joint the rear cover backwards.
- Remove the Torx screw (3) [TX20].
- Loosen the plastic clip (4) by pushing in the direction of the arrow.
- Loosen the plastic clip (5) by shifting in the direction of the arrow; the black frame of the operator panel gets free.
- Remove the right cover (6)

REASSEMBLING

- Execute the REMOVAL procedure in reverse sequence



Steps: Remove Part

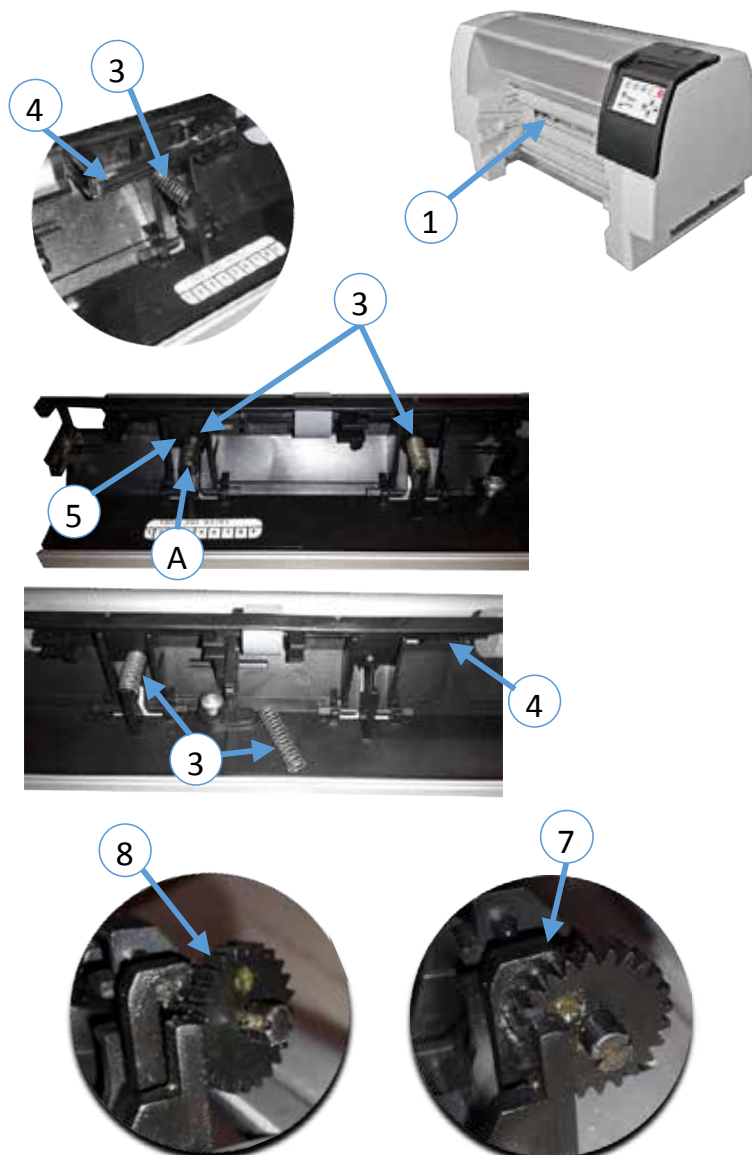
Removal Transport Roller Front

- Remove paper guide and tractor cassettes.
- Remove the front roller unit (1) (see Part: Front Roller Unit).
- Remove the Silver Spring (3) in position (A) and the seven yellow springs (3).
- Remove the black plastic guide (5) in position (A).
- Remove step by step the shaft (4) out of the holders from left to right side.
- Swivel the shaft end with the Gear (8) out of the Holder (7).
- Insert the new shaft (4).

REASSEMBLING

- Execute the REMOVAL procedure in reverse sequence

Note: Remember that the Silver Spring must be mounted in position (A). Be careful with the glass fibers



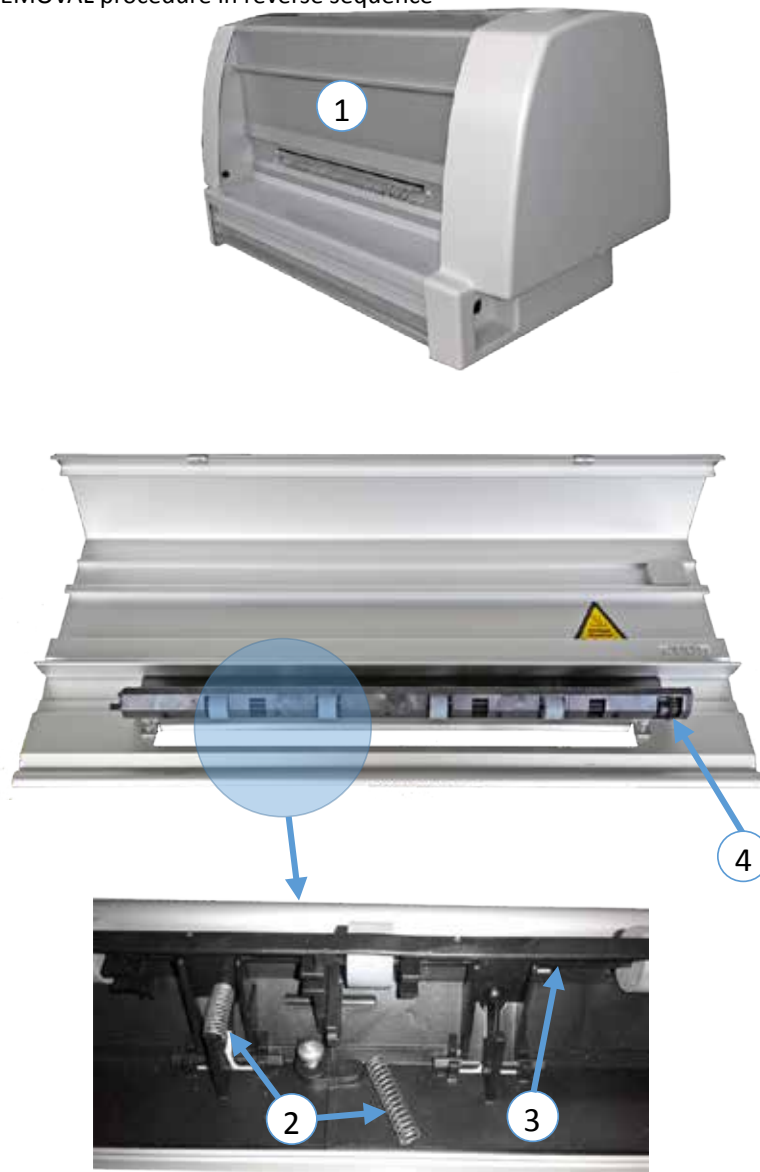
Steps: Remove Part

Removal Transport Roller Rear

- Perform the unlock procedure.
- Disconnect mains cable.
- Remove paper guide and tractor cassettes.
- Remove rear cover (1) (see Part: Rear Cover).
- Remove eight springs (2).
- Remove step by step the shaft (3) out of the holders from left to right side.
- Swivel the shaft end with the Gear (4) out of the Holder.
- Insert the new shaft (3).

REASSEMBLING

- Execute the REMOVAL procedure in reverse sequence



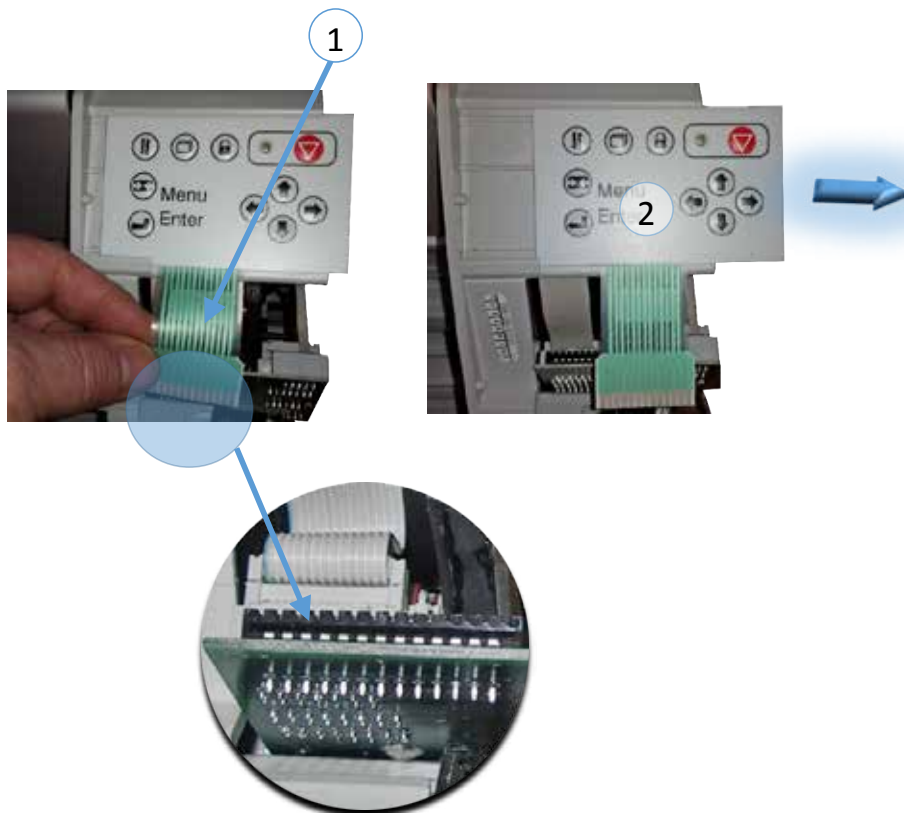
Steps: Remove Part

Removal Operator Panel

- Perform „Unlock“ procedure
- Disconnect mains cable
- Remove paper guide and tractor cassettes.
- Remove right cover (see Part: Cover Right).
- Disconnect cable (1) by lifting.
- Shift the operator panel (2) to the right and remove it.

REASSEMBLING

- Execute the REMOVAL procedure in reverse sequence



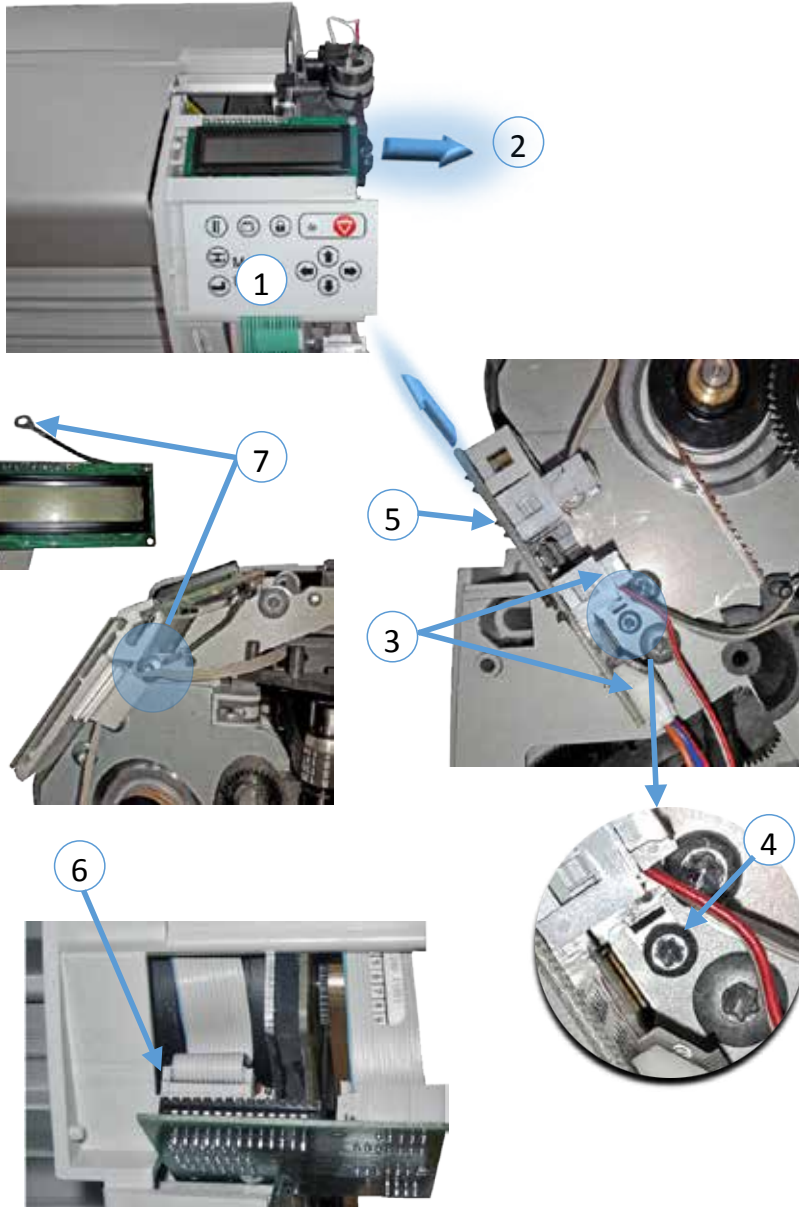
Steps: Remove Part

Removal Display

- Perform „Unlock“ procedure
- Disconnect mains cable
- Remove paper guide and tractor cassettes
- Remove right cover (see Part: Cover Right)
- Remove operator panel (1) (see Part: Operator Panel)
- Remove the Torx screw (7) [TX20]
- Disconnect the two connectors (3)
- Remove the Torx screw (4) [TX10]
- Lift the board (5)
- Disconnect connector (6)
- Shift the display (2) to the right and remove it.

REASSEMBLING

- Execute the REMOVAL procedure in reverse sequence



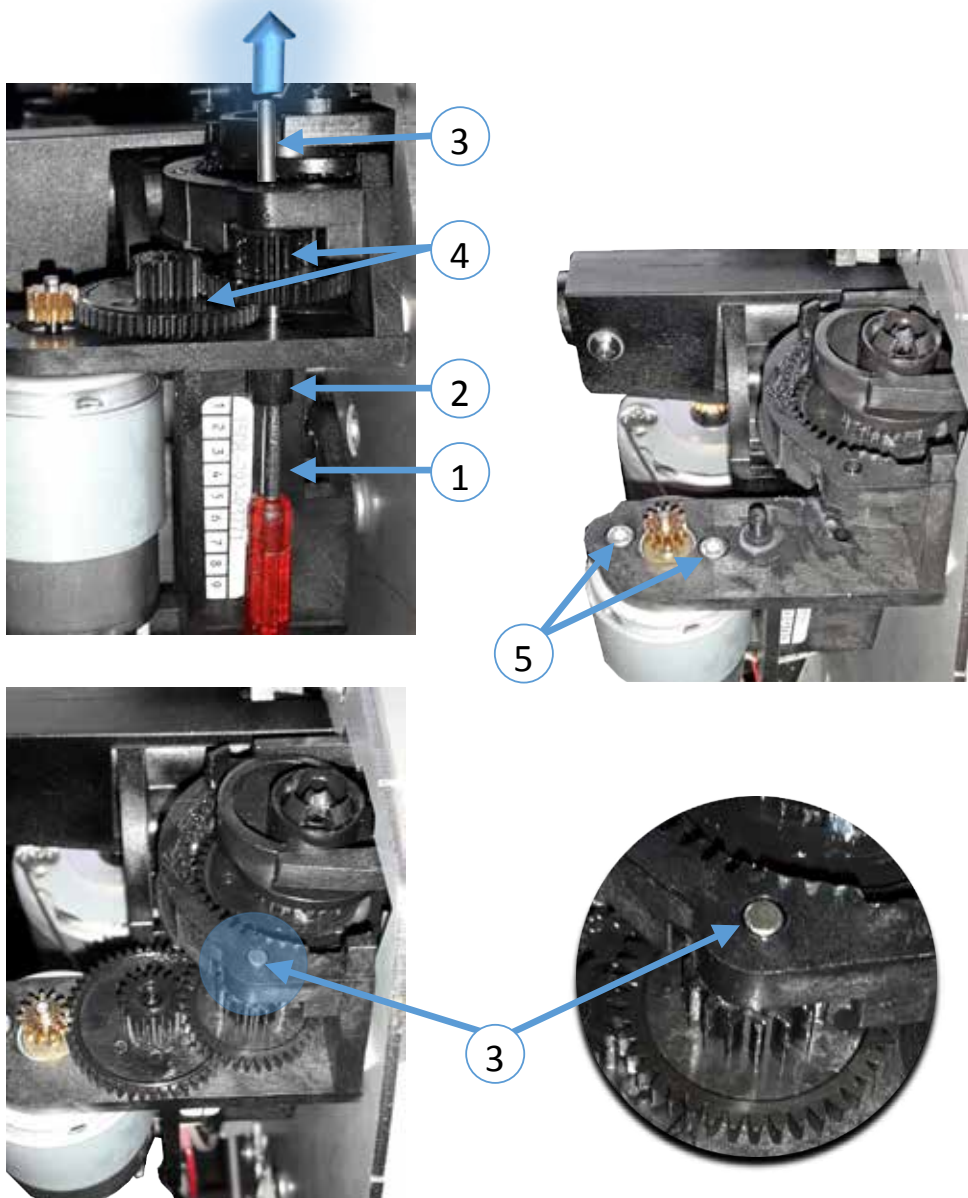
Steps: Remove Part

Removal DC-Motor (used for shifting gear LQ/DQ)

- Perform „Unlock“ procedure
- Disconnect mains cable
- Remove paper guide and tractor cassettes
- Remove left cover (see Part: Cover Left).
- Insert a small screw driver (1) into the housing (2).
- Press the shaft (3) to the top and remove it.
- Remove the two gears (4).
- Disconnect the cables.
- Remove the two screws (5).
- Remove the DC-motor (6).

REASSEMBLING

- Execute the REMOVAL procedure in reverse sequence



Steps: Remove Part

Removal DC-Motor (used for AGC)

- Perform „Unlock“ procedure
- Disconnect mains cable
- Remove paper guide and tractor cassettes
- Remove left cover (see Part: Cover Left).
- Disconnect the motor cables.
- Push the plastic guide (1) down until the pin is released.
- Turn the DC-motor (2) to the right side.
- Push the plastic guide (3) up until the pin is released.
- Turn the DC-motor (4) to the left side.

Caution: Control during the next step that the pins (1 and 3) don't snap in again!

- Drag AGC-gear (5) to the front and lift up the center guide (7) at the top and bottom to become the DC-motors (2 and 4) free.
- Exchange the defective DC-motor (2 or 4).

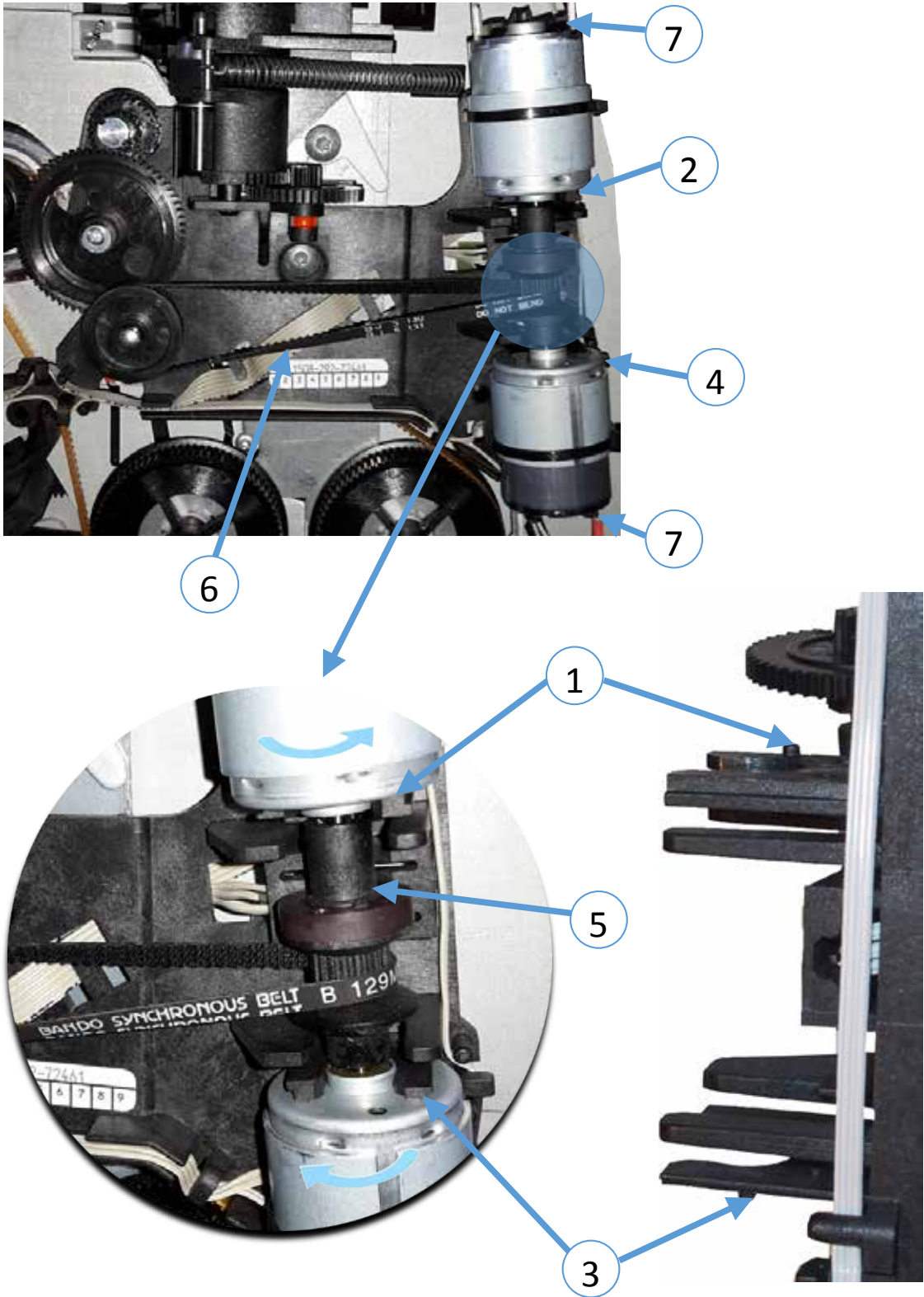
REASSEMBLING

- Execute the REMOVAL procedure in reverse sequence

Note: Pay attention that the pins (1 and 3) will not be damaged.

- Cable connectors with the red point to the right.
- Mount the belt (6) from the rear to the front.
- Connect the gear with the big part (5) to the top.

Pictures see next page!



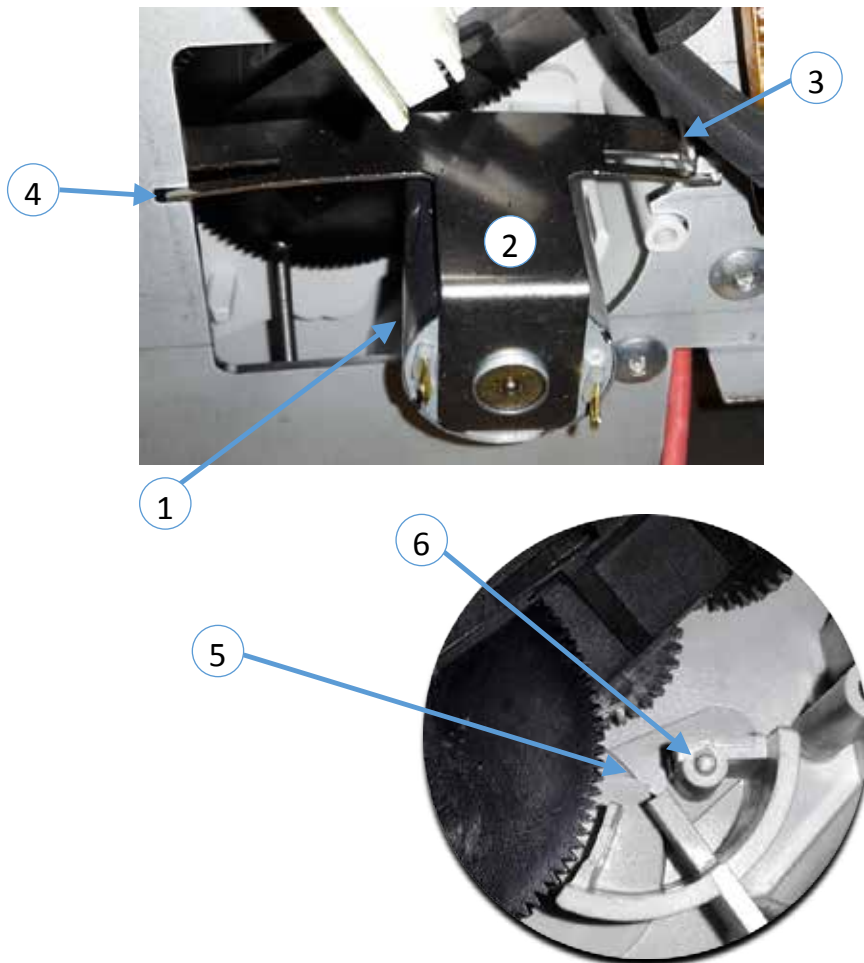
Steps: Remove Part

Removal DC-Motor (Used for tractor selection)

- Perform „Unlock“ procedure
- Disconnect mains cable
- Remove paper guide and tractor cassettes
- Remove left cover (see Part: Cover Left).
- Disconnect the cables.
- Press the metal frame (2) down at position (3) and slide it to the front.
- Remove the motor (1).

REASSEMBLING

- Insert the motor (1) with the red point to the right into the plastic
- Guide (5) and fix the motor at the pin (6).
- Fix the metal frame at position (4).
- Slide in the metal frame by pressing down at position (3).
- Connect the cables (read cable to pin with read point).
- Execute the REMOVAL procedure in reverse sequence



Steps: Remove Part

Removal Kit Frame AGC

- Perform „Unlock“ procedure
- Disconnect mains cable
- Remove paper guide and tractor cassettes
- Remove left cover (see Part: Cover Left).
- Remove the shaft AGC (5) (see Part: Shaft AGC).
- Remove the H.-drive Belt Tightener (see Part: Kit H.-Drive Belt Tightener).
- Remove the DC-motors (6) (see Part: DC-Motor [used for AGC]).

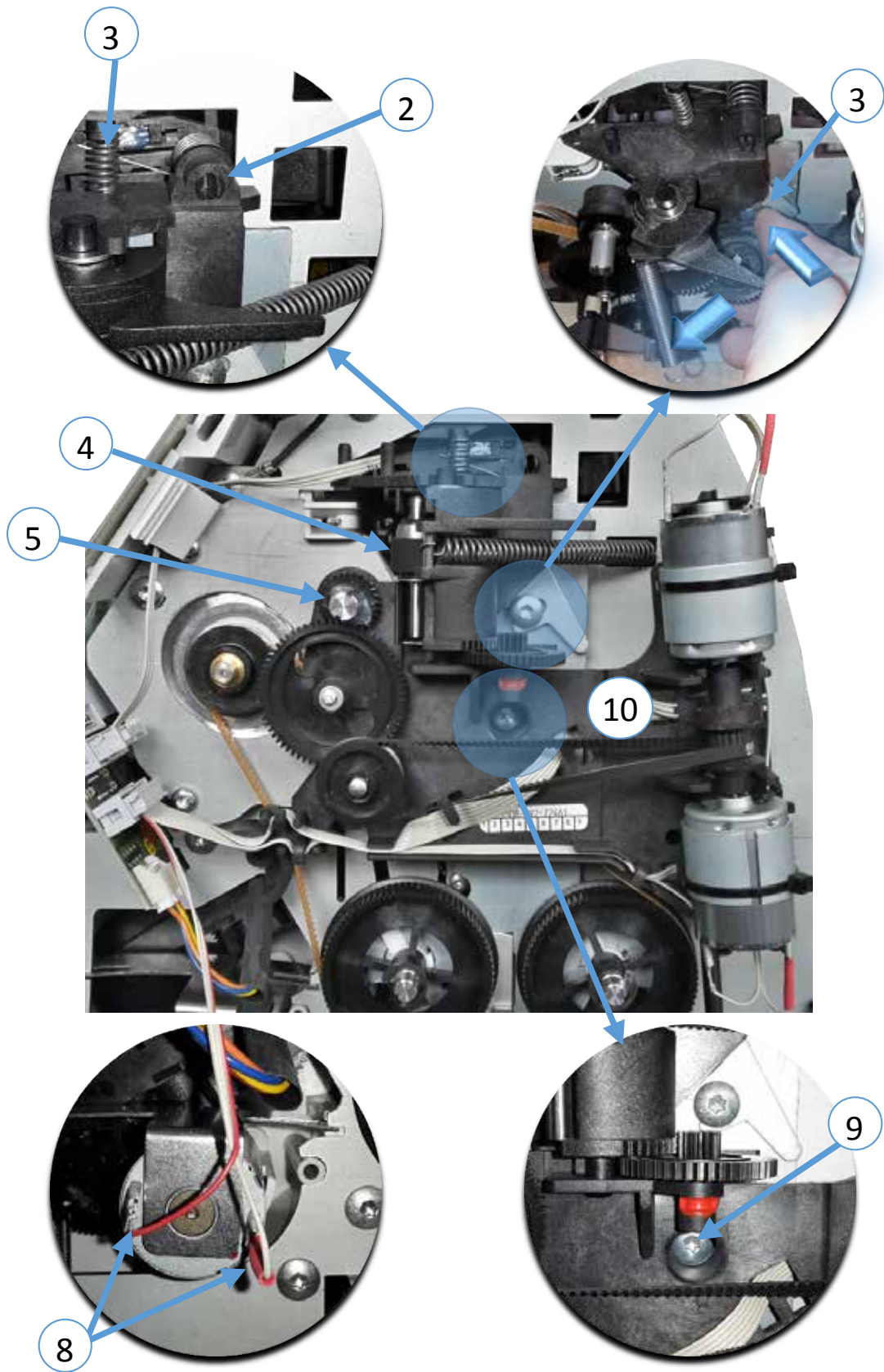
Note: Don't forget to press the lever (3) to loosen the tension of the belt (4)!

- Press the shaft (2) together and remove the shaft.
- Remove the spring (1).
- Disconnect the connector (7) from the distribution print 2).
- Disconnect the DC-motor connectors (8).
- Remove the Torx screw (9) [TX20].
- Remove the frame AGC (10).

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence

Pictures see next page!



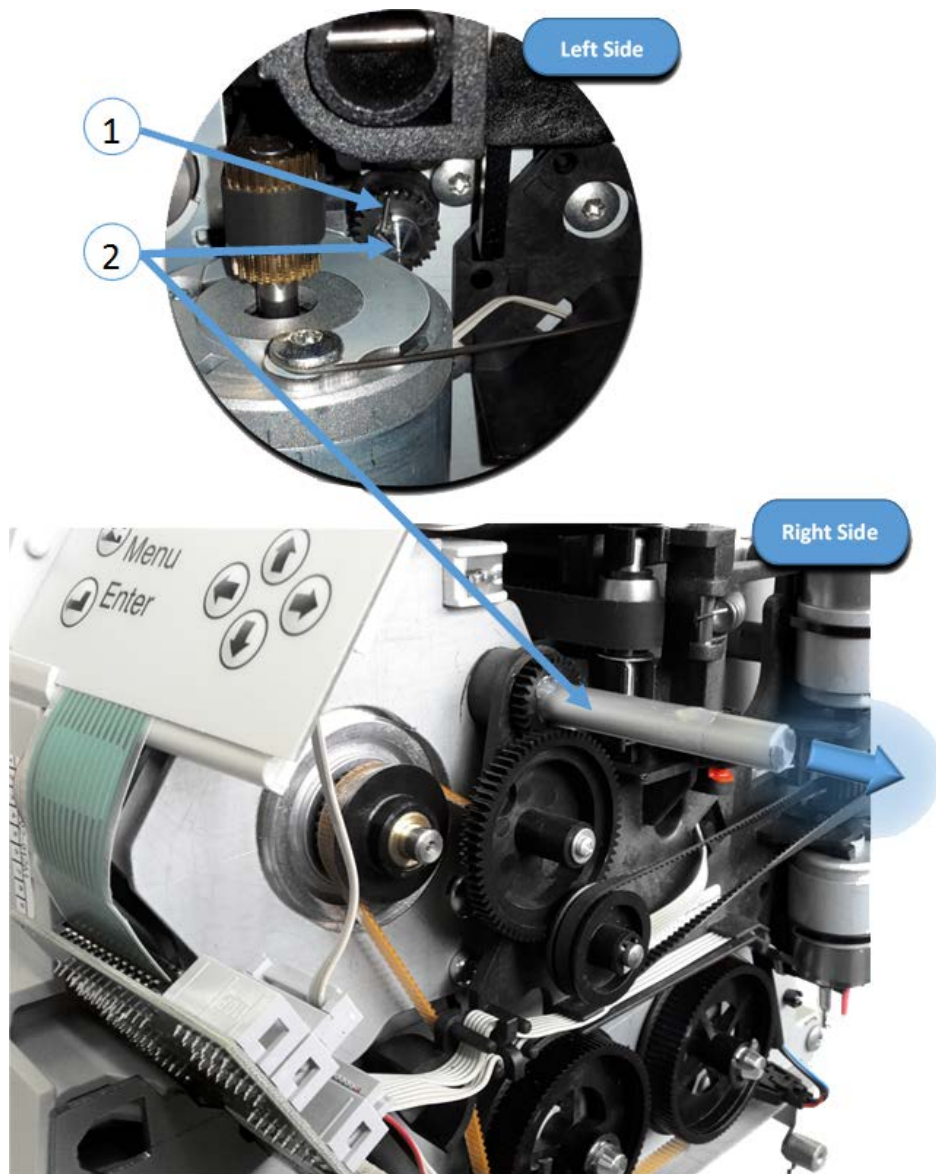
Steps: Remove Part

Removal Shaft AGC

- Perform the unlock procedure.
- Disconnect mains cable.
- Remove paper guide and tractor cassettes.
- Remove right cover (see Part: Cover Right).
- Remove left cover (see Part: Cover Left).
- Press the spring (1) in direction of the arrow.
- Push the shaft AGC (2) into the gear.
- Remove the shaft AGC (2) at the right side

REASSEMBLING

- Execute the REMOVAL procedure in reverse sequence



Steps: Remove Part

Removal H.-Drive Belt Tightener

- Perform the unlock procedure.
- Disconnect mains cable.
- Remove paper guide and tractor cassettes.
- Remove right cover (see Part: Cover Right).
- Remove left cover (see Part: Cover Left).
- Remove the spring (1) at the metal frame side.
- Only for PP 809! Remove screw (6).
- Press lever (2) to loosen the tension of the H-drive belt.
- Remove the H-drive (7) belt from the gear of the H-motor (left side).
- Move the Tightener (3) in direction of the arrow and lift it up.
- Remove the shaft (4) to release the H-drive belt (5).
- Remove the Tightener (3).

REASSEMBLING

- Execute the REMOVAL procedure in reverse sequence

Note: Pay attention that the washer (4) is in the lower position!

Note only for PP809: Tighten the H-drive belt with screw (6) and use a spring-balance to test the tighten. The value should be 420 + 30.

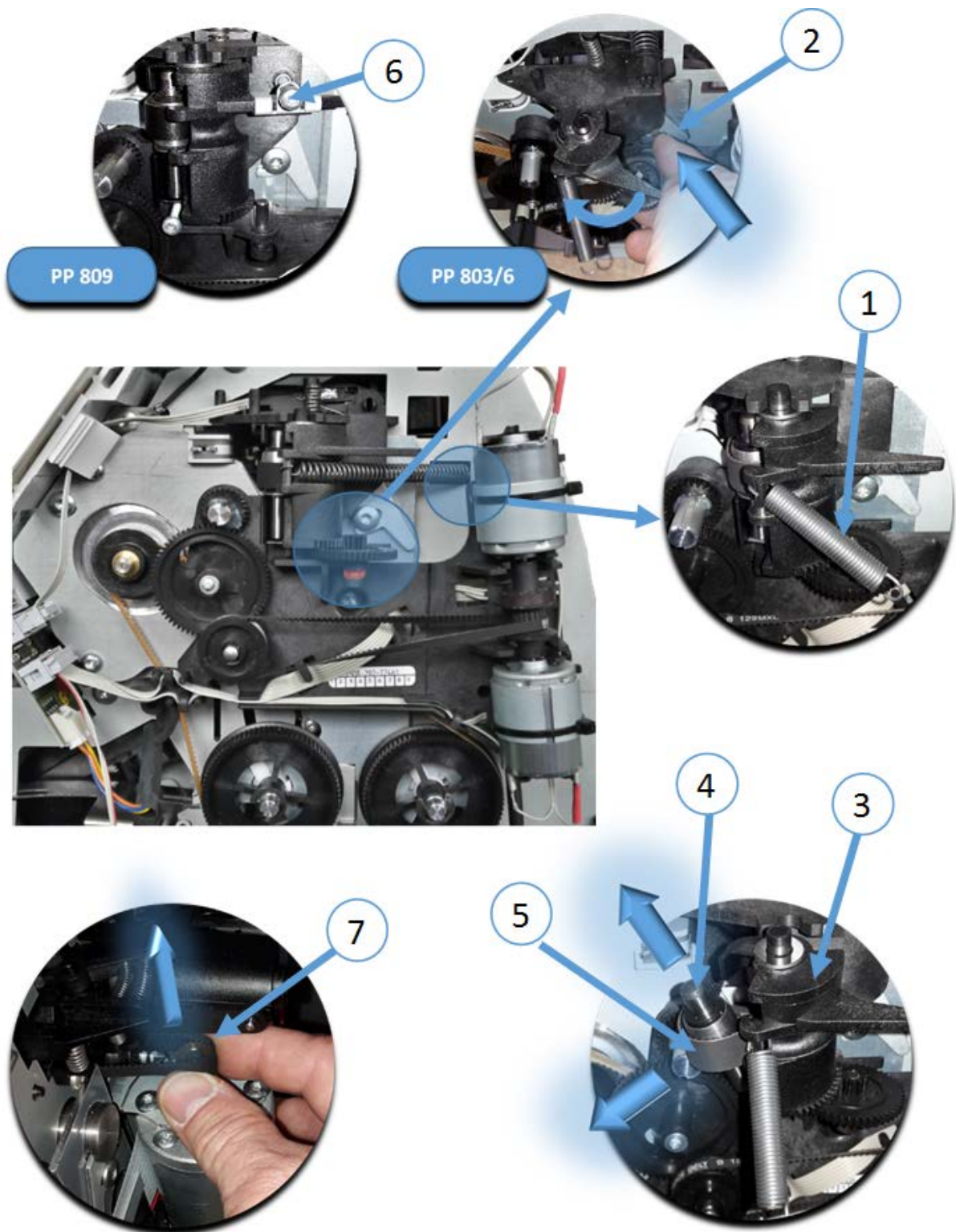
Pictures see next page!

PP 803/PP 806



PP 809





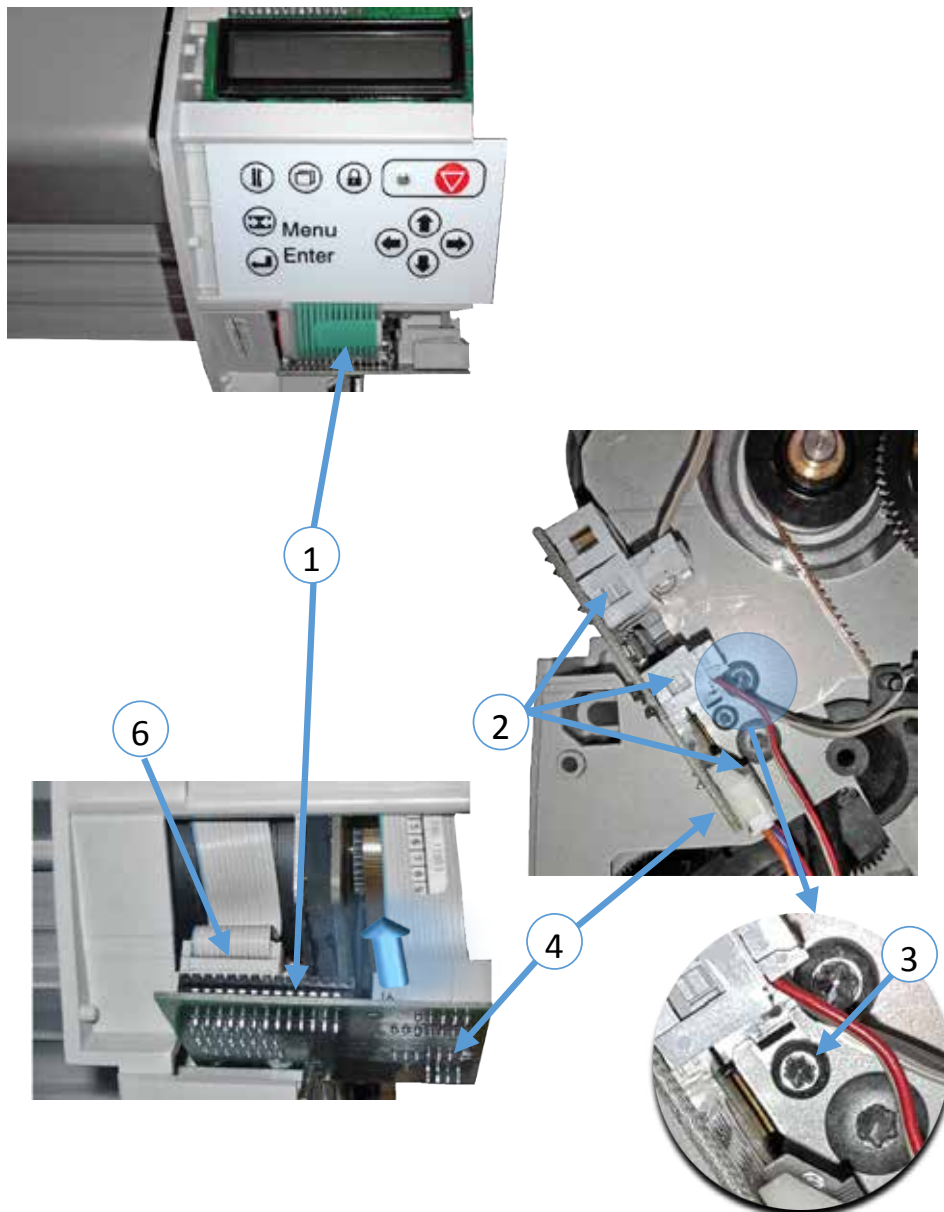
Steps: Remove Part

Removal Distribution Print

- Perform „Unlock“ procedure
- Disconnect mains cable
- Remove paper guide and tractor cassettes
- Remove right cover (see Part: Cover right).
- Disconnect the connector (1) of the operator panel.
- Disconnect three connectors (2).
- Remove the Torx screw (3) [TX10].
- Lift the distribution print (4).
- Disconnect the connector (5).
- Remove the distribution *print* (4).

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence



Steps: Remove Part

Removal V-Drive Belt

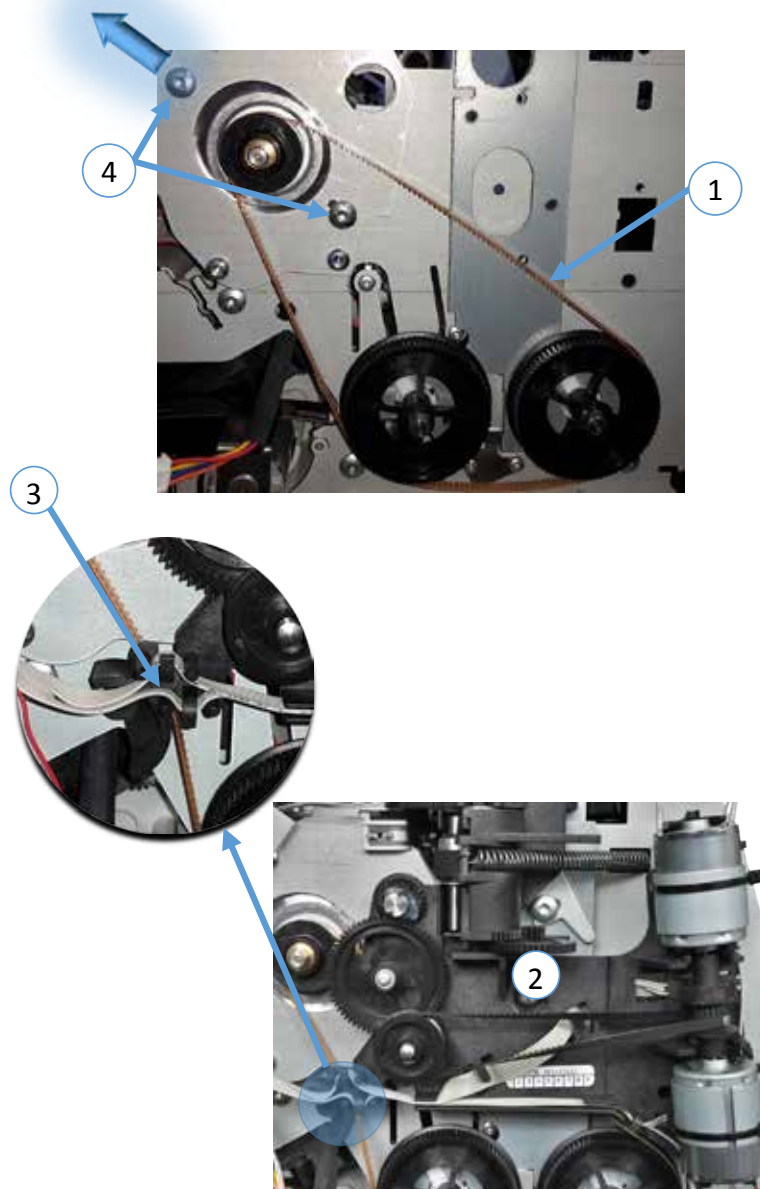
- Perform „Unlock“ procedure
- **Remove ribbon cassette.**
- Remove right cover (see Part: Cover Right).
- Remove left cover (see Part: Cover Left).
- Remove frame AGC (2) (see Part: Kit Frame AGC).
- Remove the V-drive belt (1).

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence

Note: Tighten the V-drive belt (1) in two steps:

- First by losing the two Torx screws (4) [TX20] and moving the V-drive stepper.
- And thereafter with the plastic guide (3) of the frame AGC (2).



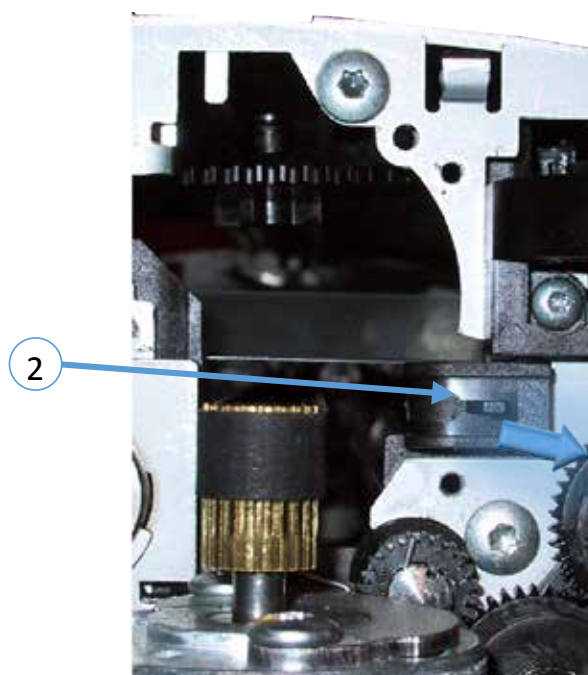
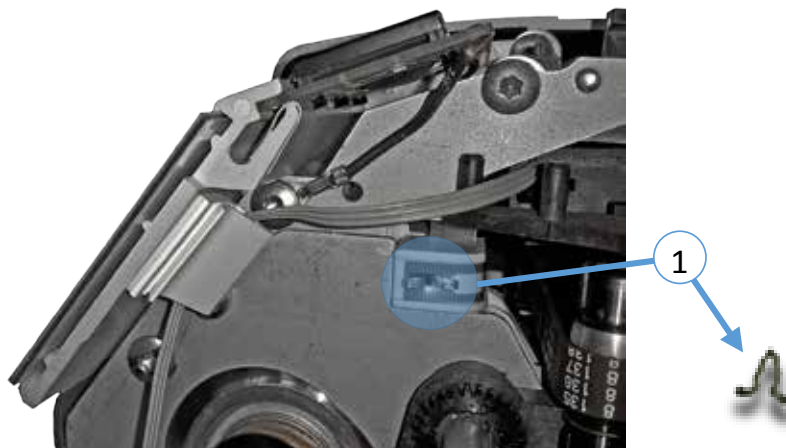
Steps: Remove Part

Removal Encoder Strip

- Perform the unlock procedure.
- Disconnect mains cable.
- Remove paper guide and tractor cassettes.
- Remove ribbon cassette.
- Remove right cover (see Part: Cover Right).
- Remove left cover (see Part: Cover Left).
- Remove locking unit (see Part: Locking Unit).
- Remove the spring (1).
- Remove the encoder strip to the left side (2).

REASSEMBLING

- Execute the REMOVAL procedure in reverse sequence



Part: H-Motor PP803 / PP806

Part No.: 5112 292 7249x
Order No.: 8707 902 00017

Part: H-Motor PP809

Part No.: 5112 292 9419x
Order No.: 8707 902 00045

Steps: Remove Part

Removal H-Motor

- Perform the unlock procedure.
- Disconnect mains cable.
- Remove paper guide and tractor cassettes.
- Remove right and left cover (see Part: Cover Right and Cover Left).
- Release Torx screws (2) [TX20] at the right and left side.
- Remove the metal guides (3) by moving up.
- Slide the shaft carriage guide (1) to the left and remove it

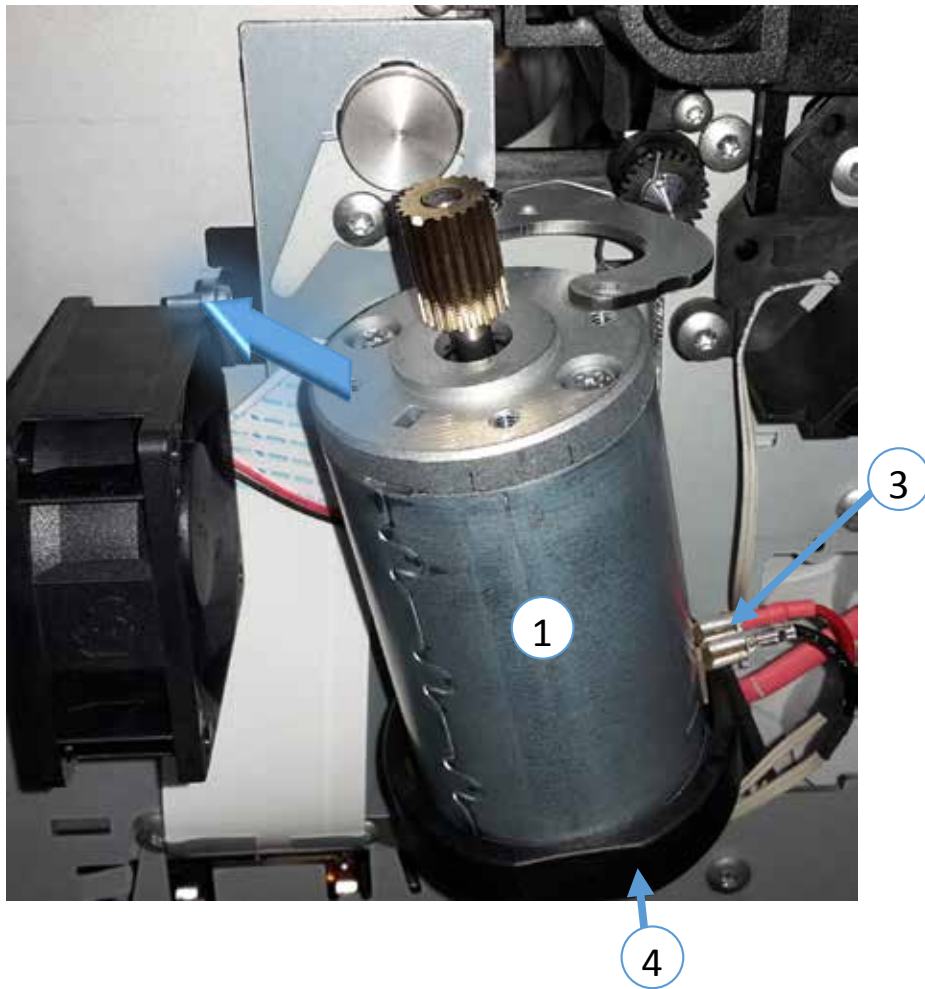
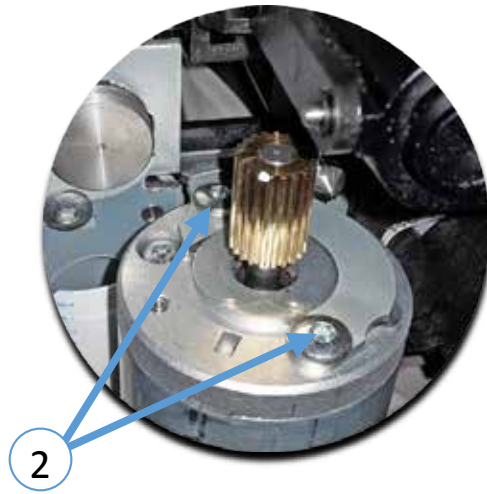
Note: Exchange the right (3) for the left (3) guide and fix the shaft carriage guide by pressing down the guides (3).

REASSEMBLING

- Execute the REMOVAL procedure in reverse sequence

Pictures see next page!





Steps: Remove Part

Removal V-Drive Stepper 1,8 DEG

- Perform „Unlock“ procedure
- Disconnect mains cable.
- Remove paper guide and tractor cassettes.
- Remove right and left cover (see Part: Cover Right and Cover Left).
- Remove the shaft AGC (see Part: Shaft AGC).
- Remove the frame AGC (see Part: Kit Frame AGC).
- Remove the V-drive belt (see Part: H-Belt).
- Disconnect the V-motor connector (4).
- Remove the two Torx screws (2) [TX20].
- Remove the three Torx screws (3) [TX20].
- Remove the motor plate (5) from the motor
- Remove the V-drive stepper motor (1).

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence

Note: Tighten the V-drive belt (see Part: H-Belt)

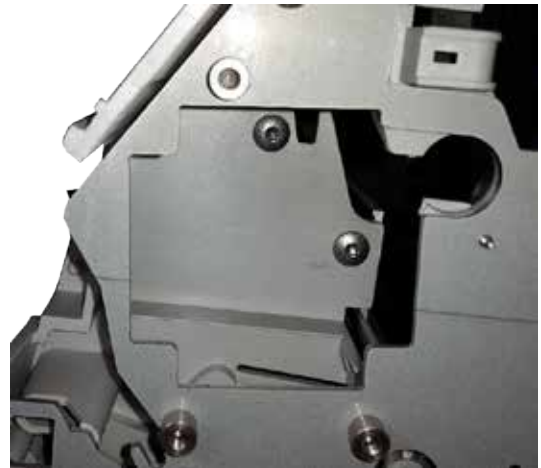
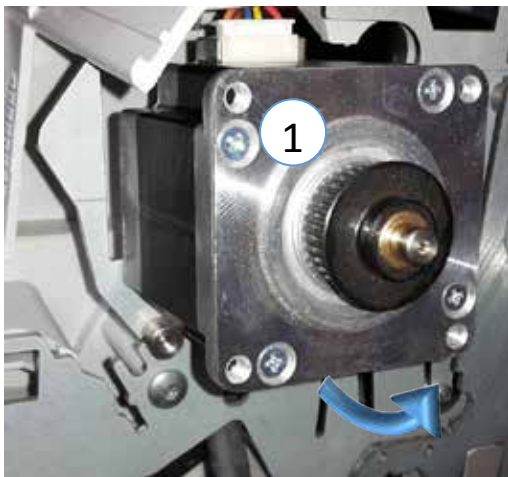
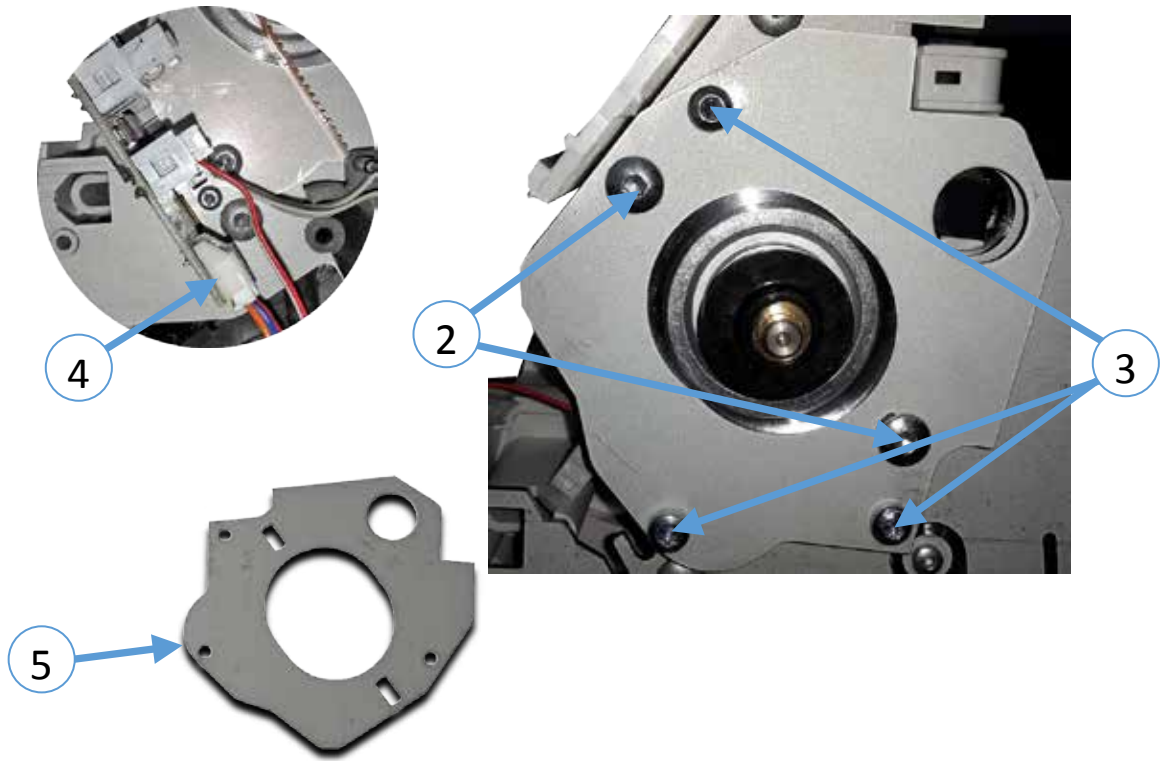
Pictures see next page!

V-Stepper alt < year 2013



V-Stepper new > year 2013





Part: H-Drive Belt PP803

Part No.: 5112 200 1182x
Order No.: 8707 902 00046

Part: H-Drive Belt PP806

Part No.: 5112 200 1073x
Order No.: 8707 902 00019

Part: H-Drive Belt PP809

Part No.: 5112 200 1207x
Order No.: 8707 902 00047

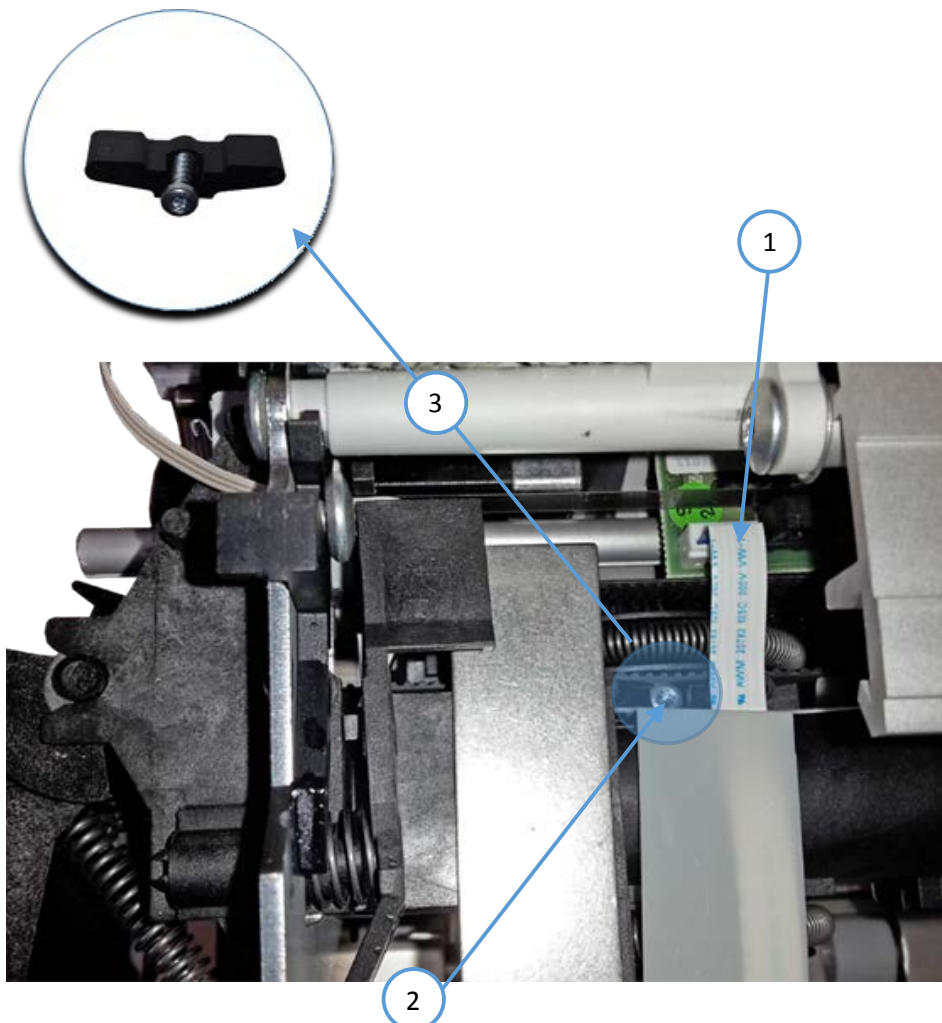
Steps: Remove Part

Removal H-Drive Belt

- Perform the unlock procedure.
- Disconnect mains cable.
- Remove the print head cable (see Part: Print Head Cable)
- Fix the print head cable (2) at the frame (3).
- Remove the print head (see Part: Print Head)
- Remove paper guide and tractor cassettes.
- Remove right and left cover (see Part: Cover Right and Cover Left).
- Remove the clamping piece of the H-drive belt (4).
-
- Remove the H.-drive belt.

REASSEMBLING

- Execute the REMOVAL procedure in reverse sequence



Print Bar PP806/809

Part No.: 5112 212 6526x
Order No.: 8707 902 00020

Print Bar PP803

Part No.: 5112 212 9202x
Order No.: 8707 902 00048

Steps: Remove Part

Removal H.-Print Bar

- Perform the unlock procedure.
- Disconnect mains cable.
- Remove paper guide and tractor cassettes.
- Remove right cover (see Part: Cover Right).
- Remove left cover (see Part: Cover Left).

Both versions

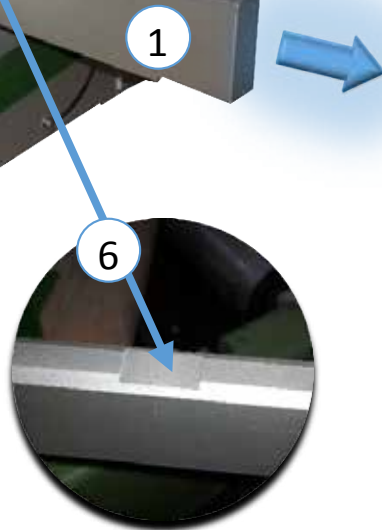
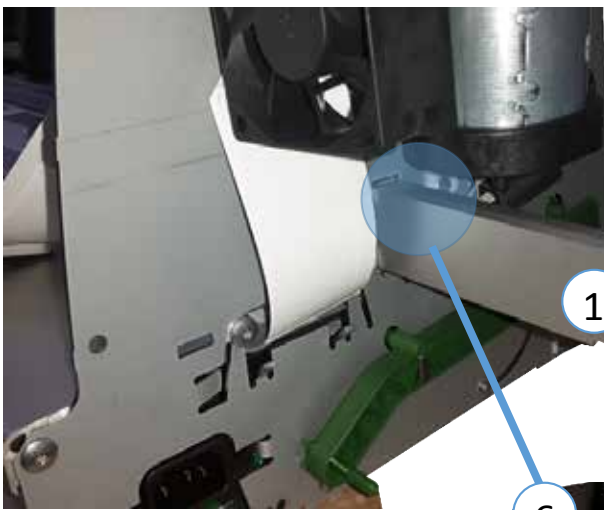
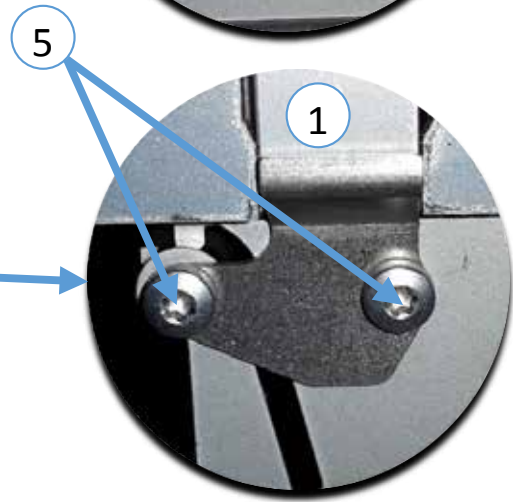
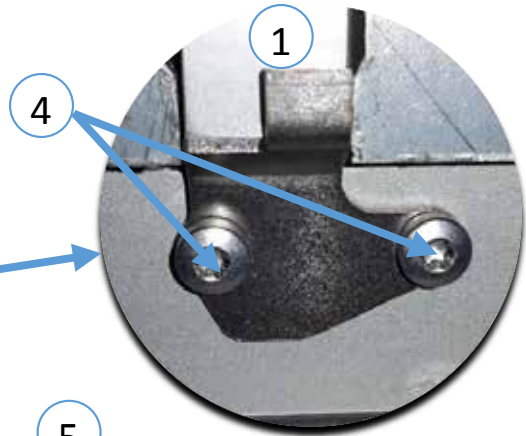
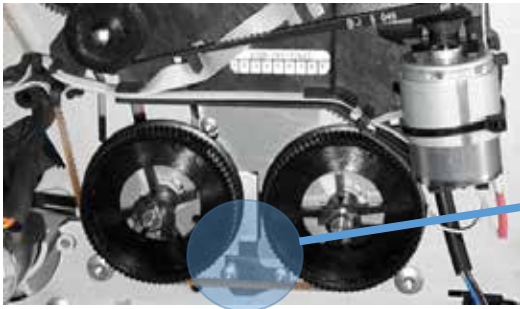
- Loosen both Torx screw (4) [TX20] at the right side.
- Loosen both Torx screw (5) [TX20] at the left side.
- Slide the print bar (1) out to the left side.

REASSEMBLING

- Execute the REMOVAL procedure in reverse sequence

Note: Be sure that the Notch (6) in the print bar is on the right side. Fix the screws (4) and (5) in the hole first. Press the guide up to the Print Bar and then fix the screws (4) and (5) in the slot.

Pictures see next page!



Steps: Remove Part

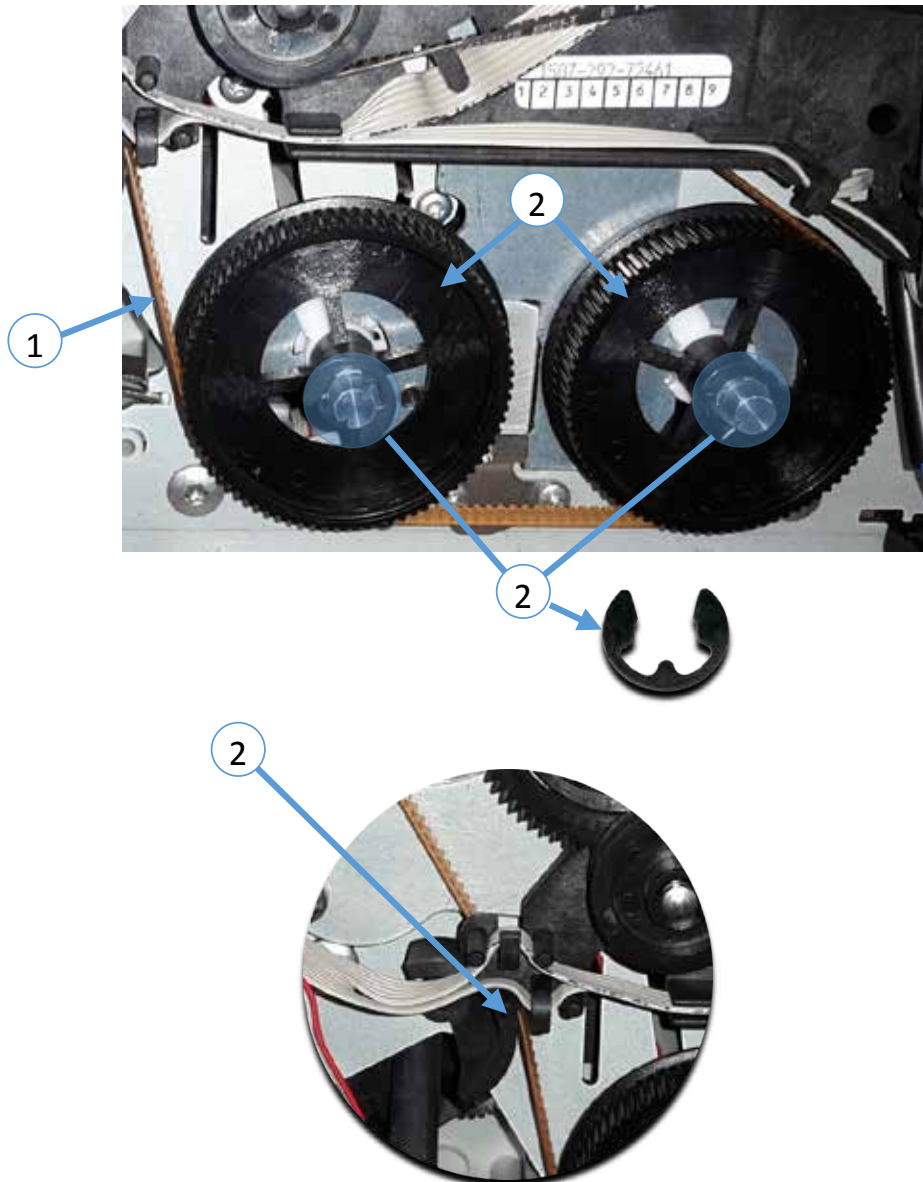
Removal Pulley FF

- Perform „Unlock“ procedure
- Remove ribbon cassette.
- Remove right cover (see Part: Cover Right).
- Remove left cover (see Part: Cover Left).
- Remove the V-drive belt (1).
- Remove both E-rings (2).
- Remove both pulleys FF (3).

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence

Note: Tighten the V-drive belt (1) with the plastic guide (4) of the frame AGC. If the tension is not sufficient move the V-drive stepper (see Part: V-Drive Stepper 1,8 DEG).



Steps: Remove Part

Removal Tractor Selection Lever

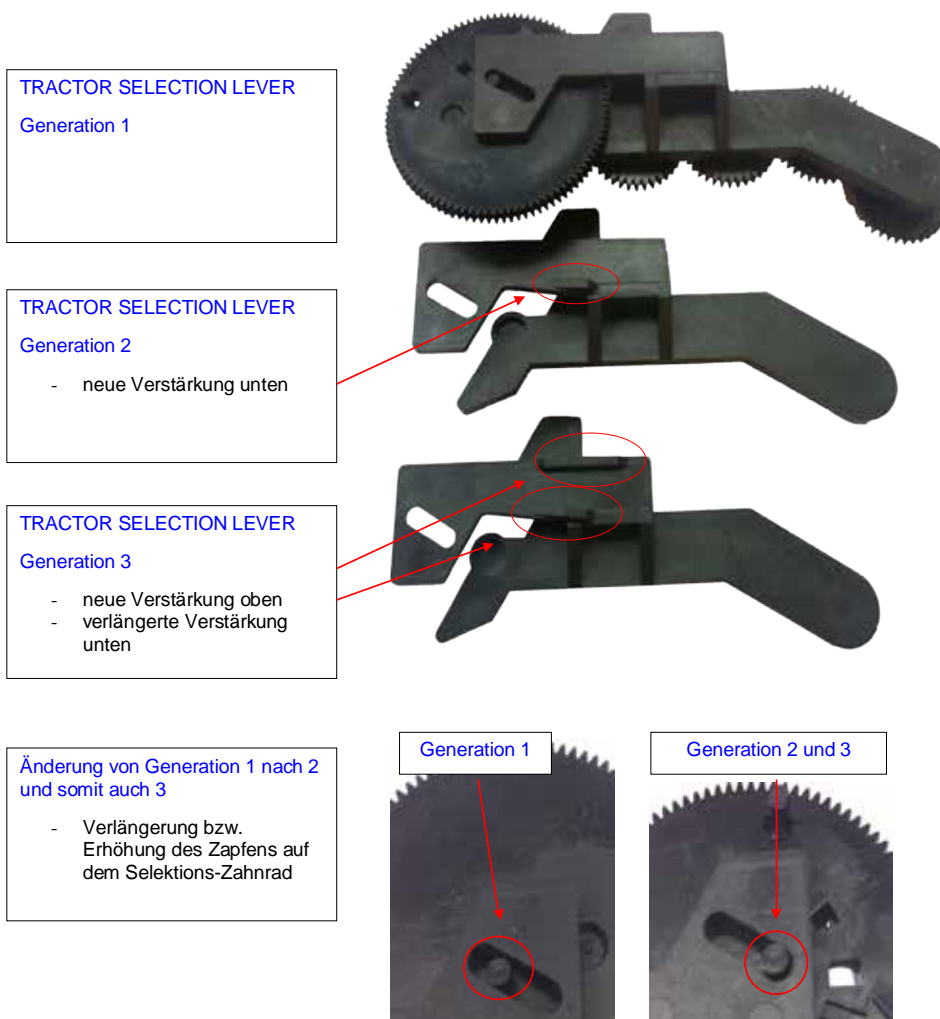
- Perform „Unlock“ procedure
- Remove ribbon cassette.
- Remove right cover (see Part: Cover Right).
- Remove DC-motor (see Part: DC-Motor used for tractor selection).
- Remove the spring (2) of the tractor selection lever (1).
- Press the end of the shaft (3) and slide it into the frame.
- Open the front roller unit (4).
- Press the end of the shaft (5) and slide it into the frame.
- Remove the tractor selection lever (1).

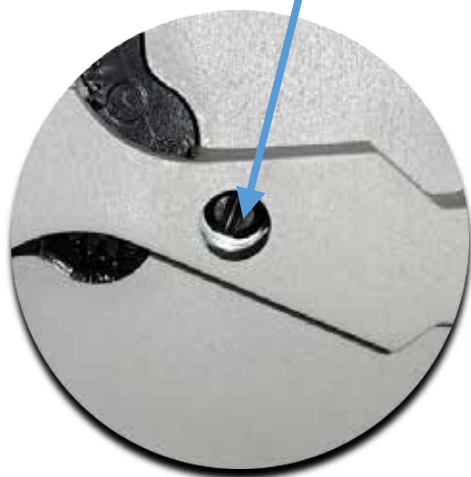
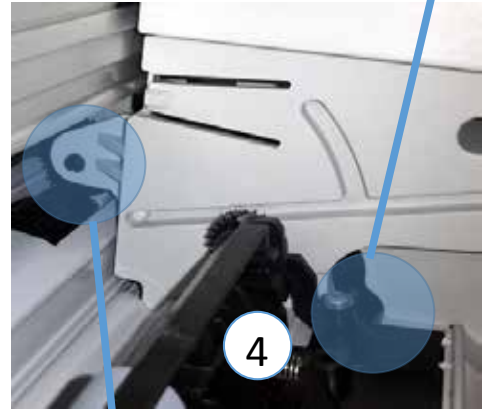
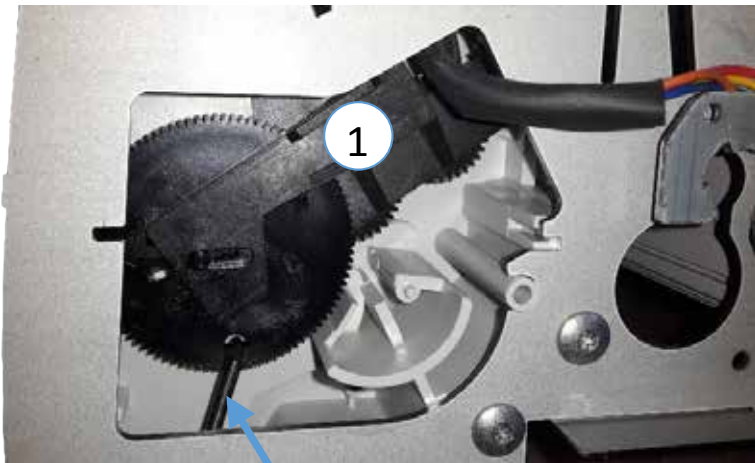
Note: Pay attention that the gear (6) don't slide out of its fixation!

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence

Pictures see next page!





Steps: Remove Part

Removal Carriage Assy

- Open the rear cover for unlock procedure. If unlocked press the key unlock the print head also until the text "UNLOCK PRINTHEAD" will displayed.
- Power the printer off.
- Disconnect mains cable.
- Remove the print head cable (see Part: Print Head Cable)
- Fix the print head cable (2) at the frame (3).
- Remove the print head (see Part: Print Head)
- Remove paper guide and tractor cassettes.
- Remove right and left cover (see Part: Cover Right and Cover Left).
- Remove the clamping piece of the H-drive belt (4).
- Remove the shaft AGC (see Part: Shaft AGC).
- Remove the shaft carriage guide (see Part: Shaft Carriage Guide).

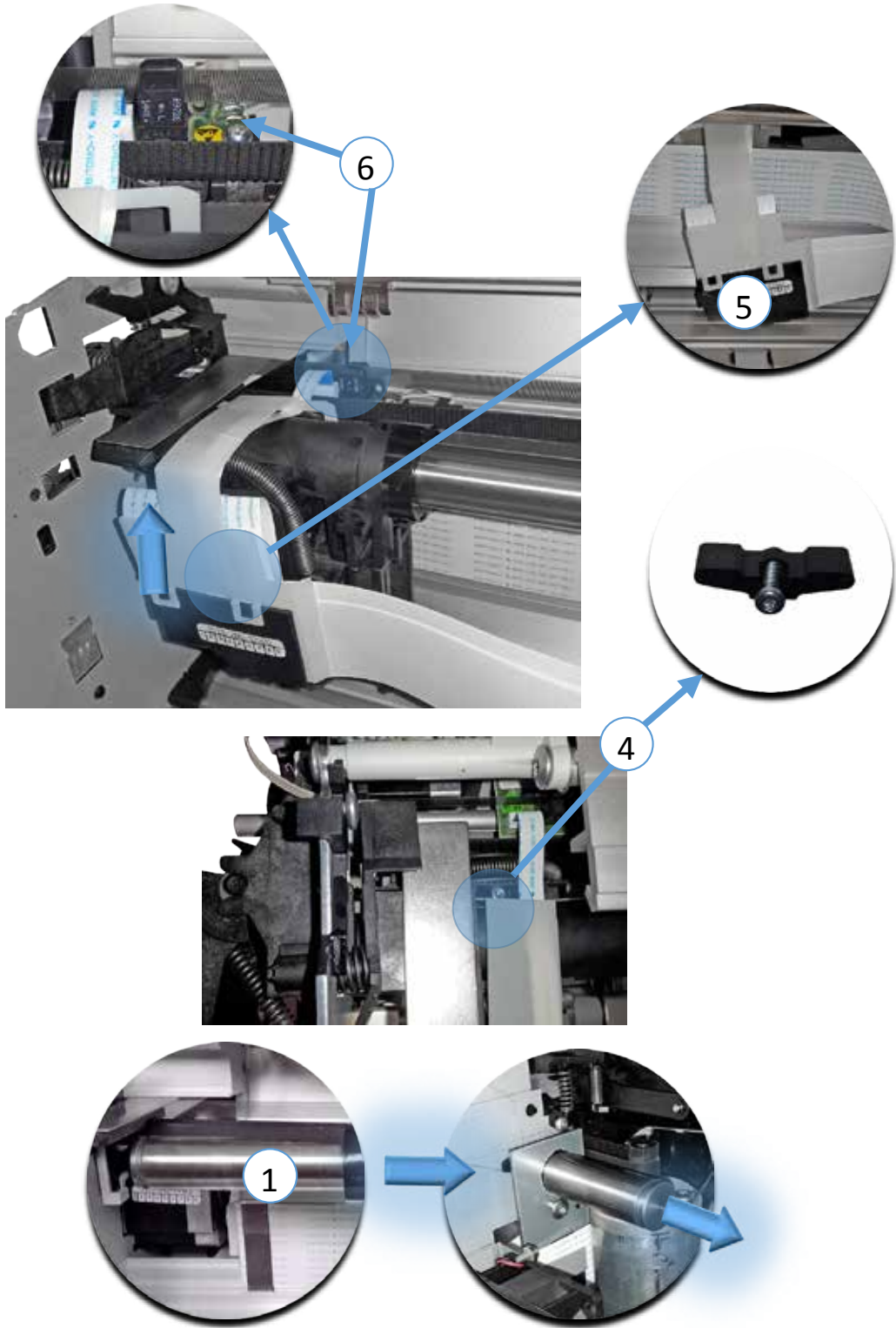
Note: Pay attention to the encoder strip (6).

- Remove the Carriage Assy (1).

REASSEMBLING

- Execute the REMOVAL procedure in reverse sequence

Pictures see next page!



Steps: Remove Part

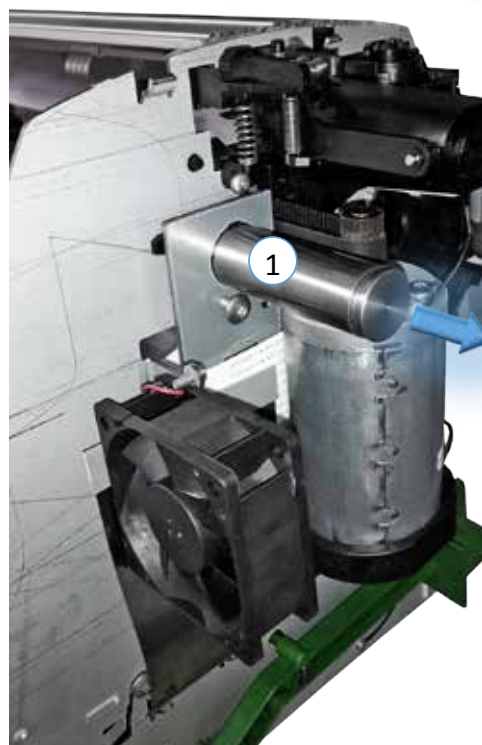
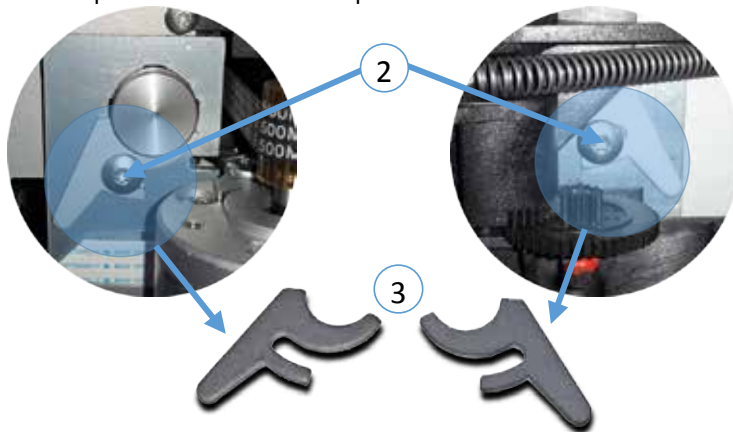
Removal Shaft Carriage Guide

- Perform the unlock procedure.
- Disconnect mains cable.
- Remove paper guide and tractor cassettes.
- Remove right and left cover (see Part: Cover Right and Cover Left).
- Release Torx screws (2) [TX20] at the right and left side.
- Remove the metal guides (3) by moving up.
- Slide the shaft carriage guide (1) to the left and remove it

Note: Exchange the right (3) for the left (3) guide and fix the shaft carriage guide by pressing down the guides (3).

REASSEMBLING

- Execute the REMOVAL procedure in reverse sequence



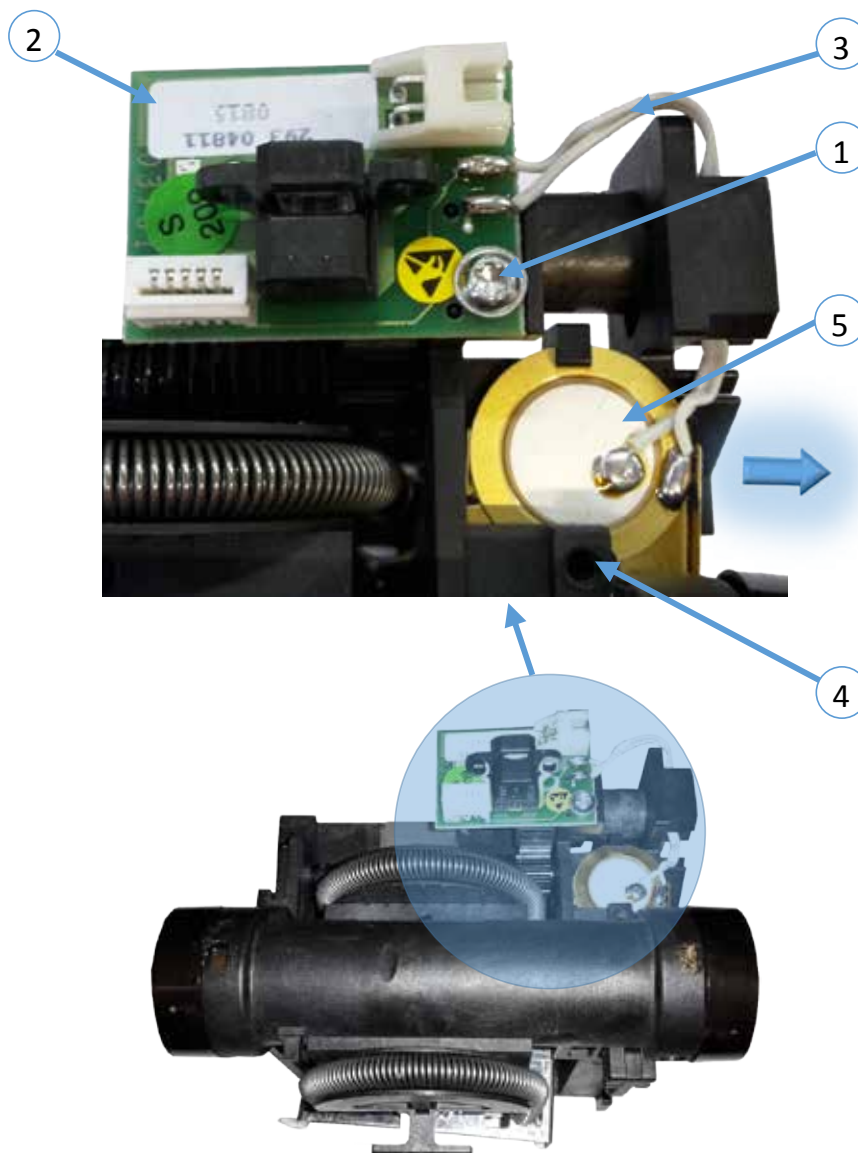
Steps: Remove Part

Removal Print H-Encoder 80x

- Perform „Unlock“ procedure
- Disconnect mains cable.
- Disconnect mains cable.
- Remove paper guide and tractor cassettes.
- Remove right and left cover (see Part: Cover Right and Cover Left).
- Remove carriage assembly (see Part Carriage Assy 80x).
- Remove screw (1) [TX8] and the H-Encoder Board (1).
- Take the cable (3) out of the cable channel.
- Release screw (4) [TX8].
- Slide out the sensor (5).

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence



Steps: Remove Part

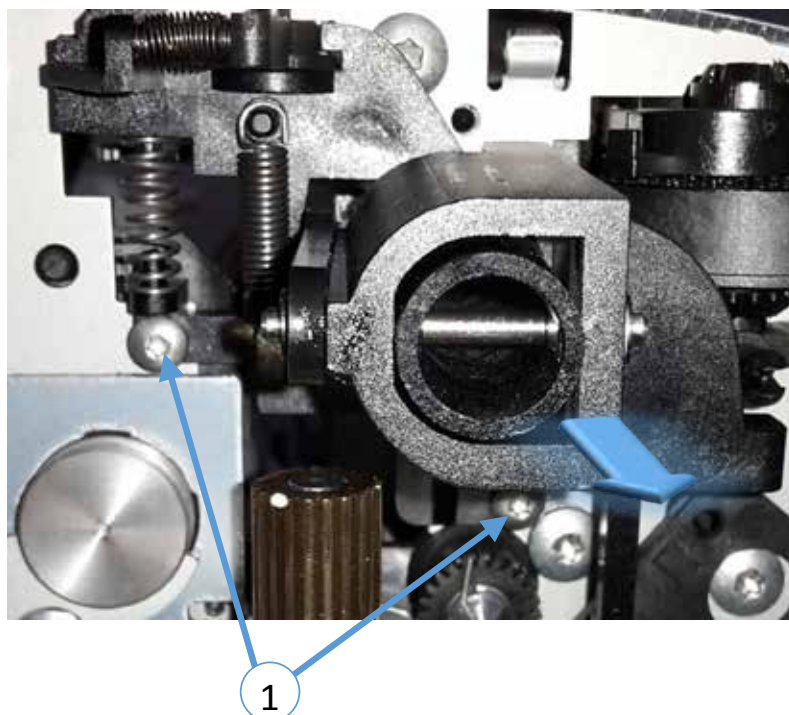
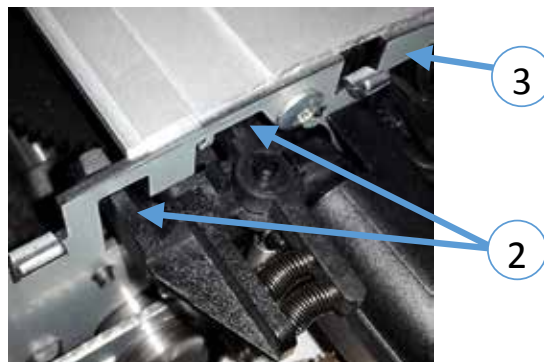
Removal Locking Unit

- Perform „Unlock“ procedure
- Disconnect mains cable.
- Remove paper guide and tractor cassettes.
- Remove left cover (see Part: Cover Left).
- Remove two Torx screws (1) [TX10].
- Swivel the locking unit (2) slightly to the top and remove it off the frame (3).

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence

Note: See detail to put the locking unit into the right position.



Steps: Remove Part

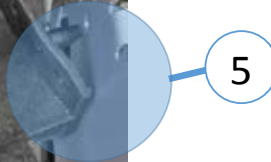
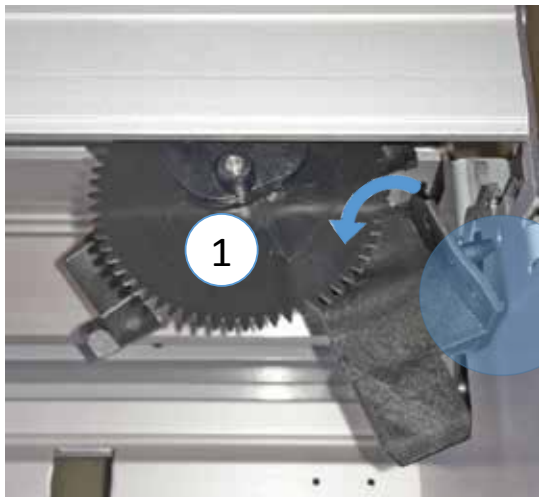
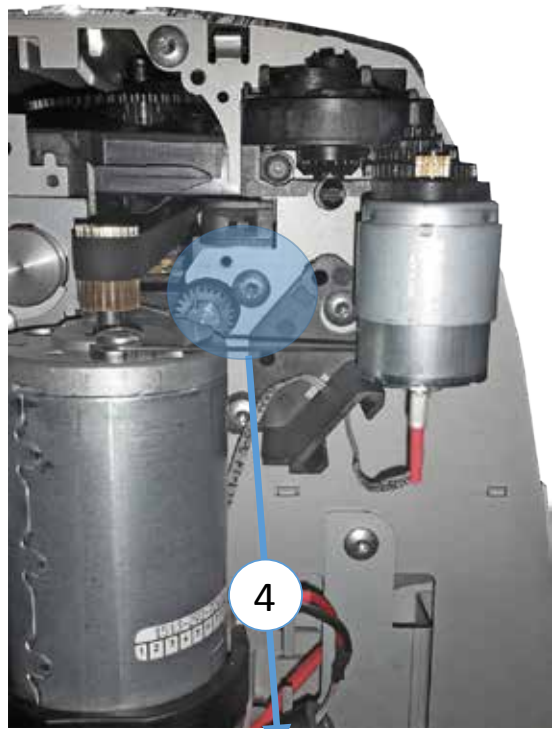
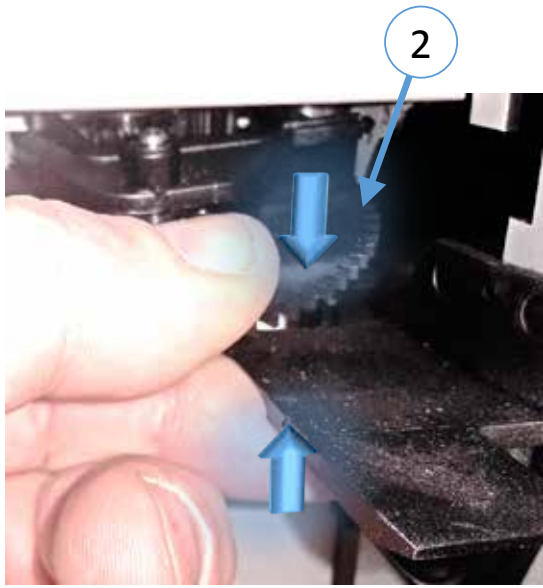
Removal Ribbon Gear

- Perform „Unlock“ procedure
- Disconnect mains cable.
- Remove paper guide and tractor cassettes.
- Remove right and left cover (see Part: Cover Right and Cover Left).
- Remove locking unit (see Part: Locking Unit).
- Remove shifting gear LQ/DQ (see Part: Shifting Gear LQ/DQ).
- Remove encoder strip (see Part: Encoder Strip).
- Remove shaft AGC (see Part: Shaft AGC).
- Remove shaft carriage guide (see Part: Shaft Carriage Guide).
- Remove ribbon gear
- Remove Torx screw (4) [TX20] with 3 washers.
- press the ribbon wheel (2) down out of the upper aluminum
- contour (3) and ASF carrier (6) then swivel the ribbon gear (1) slightly to remove the plastic guide (5) out of the frame.
- Remove the ribbon gear (1).

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence

Pictures see next page!



Part: Print Head Cable PP806/PP809

Part No.: 5112 280 1170x

Order No.: 8707 902 00029

Part: Print Head Cable PP803

Part No.: 5112 280 1220x

Order No.: 8707 902 00053

Steps: Remove Part

Removal Print Head Cable

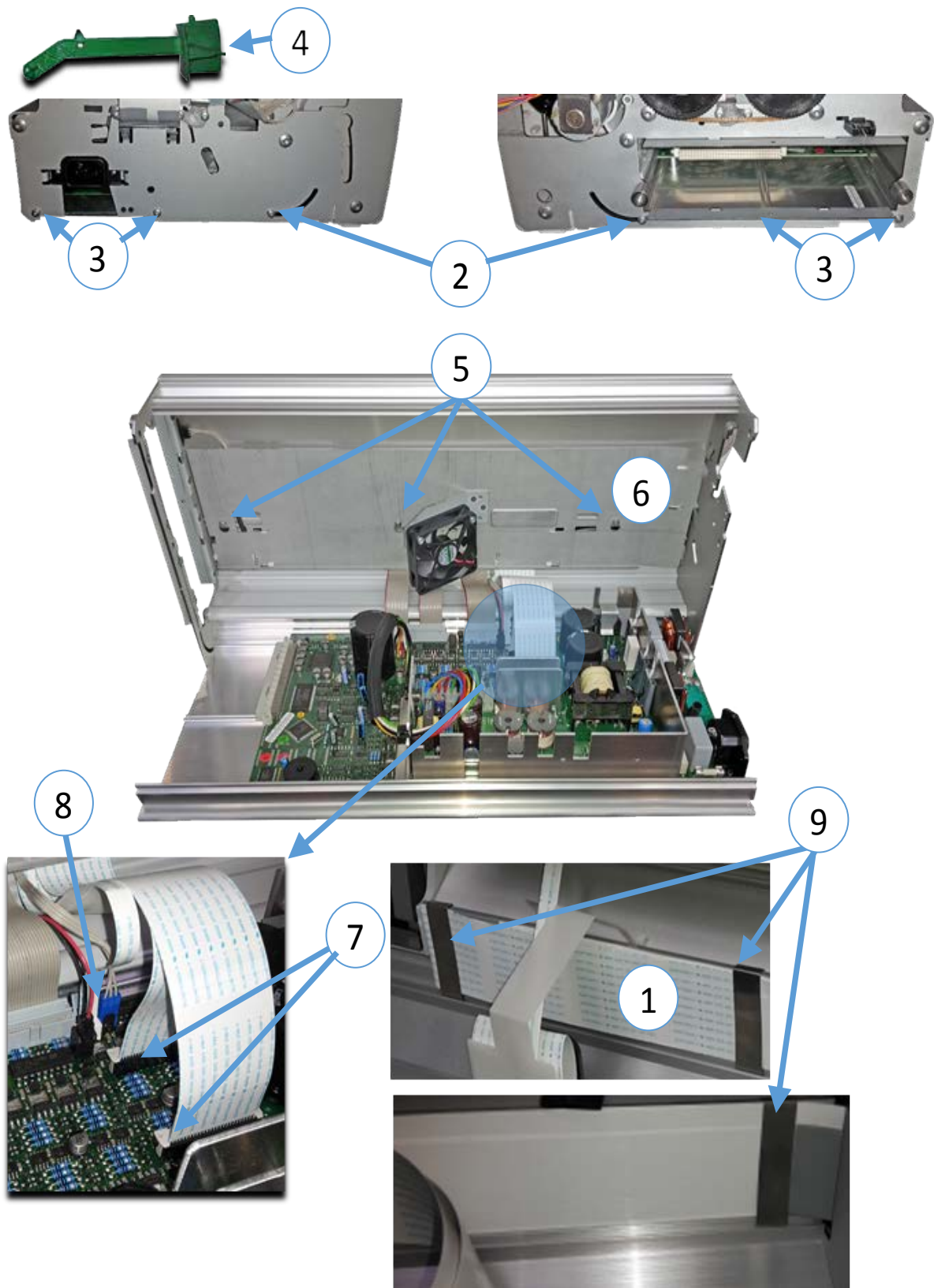
- Perform the unlock procedure.
- Disconnect mains cable.
- Remove paper guide and tractor cassettes.
- Remove right and left cover (see Part: Cover Right and Cover Left).
- Remove H-motor (see Part: H-Motor).
- Remove Personality Module.
- Remove the green power lever (4).
- Release two torx screws (2) [TX10] at left and right side.
- Remove four torx screws (3) [TX10] at left and right side.
- Position the printer with the front side down onto the table and swivel the electronics down.
- Release the three torx screws (5) [T10]
- Swivel the VDE plate (6) carefully down.
- Lift the connectors (7) up and disconnect the print head cable (1).
- Disconnect the encoder cable (8).
- Slide the print head cable through the left frame.
- Remove the metal clamps (13) to disconnect the print head cable (1) from the carriage and remove it (see Part: 6.1 Print head).

REASSEMBLING

- Execute the REMOVAL procedure in reverse sequence

Note: Fix the Print Head Cable at lowest position (9) with 1 metal clips very close to the Cable break 1 in the middle and 1 on the right end.

Pictures see next page!



Part: Paper Sensor PP803

Part No.: 5112 280 1219x
Order No.: 8707 902 00063

Part: Paper Sensor PP806

Part No.: 5112 280 1169x
Order No.: 8707 902 00062

Part: Paper Sensor PP809

Part No.: 5112 280 1215x
Order No.: 8707 902 00064

Steps: Remove Part

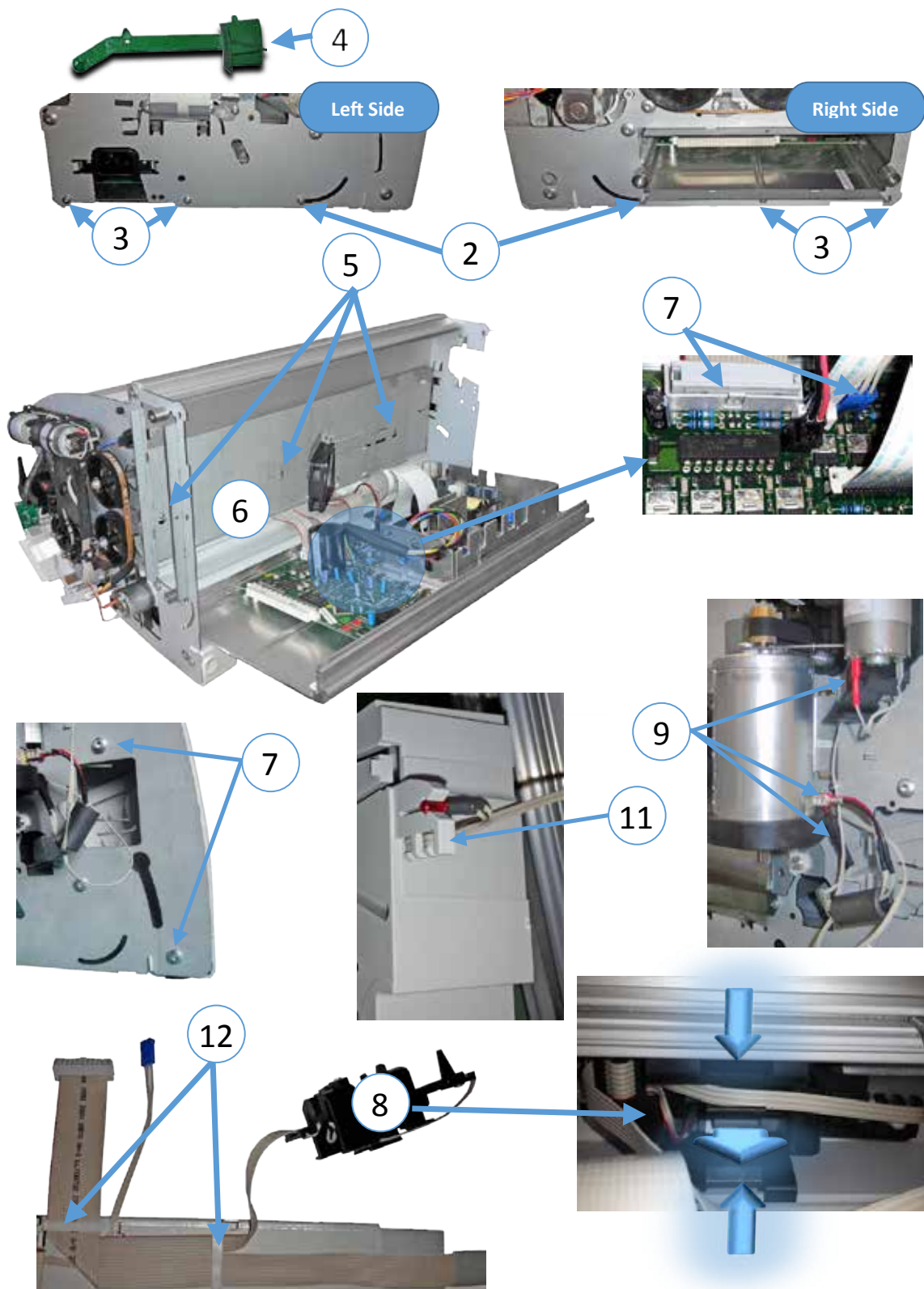
Removal Paper Sensor

- Perform the unlock procedure.
- Disconnect mains cable.
- Remove paper guide and tractor cassettes.
- Remove right and left cover (see Part: Cover Right and Cover Left).
- Remove H-motor (see Part: H-Motor).
- Remove Personality Module.
- Remove the green power lever (4).
- Release two torx screws (2) [TX10] at left and right side.
- Remove four torx screws (3) [TX10] at left and right side.
- Position the printer with the front side down onto the table and swivel the electronics down.
- Remove two cables (7)
- Release the three torx screws (5) [TX10]
- Swivel the VDE plate (6) carefully down.
- Remove three cables (9).
- Remove two Torx screws (10) [TX20] to remove the inner cover left.
- Feed out of the infrared LED (11)
- Press the black plastic guide and remove the paper run sensor (8).
- Remove two white plastic clips (12)

REASSEMBLING

- Execute the REMOVAL procedure in reverse sequence

Pictures see next page!



Steps: Remove Part

Removal Shaft FF

- Perform the unlock procedure.
- Disconnect mains cable.
- Remove paper guide and tractor cassettes.
- Remove right and left cover (see Part: Cover Right and Cover Left).
- Remove H-motor (see Part: H-Motor).
- Remove Personality Module.
- Remove the green power lever (4).
- Release two torx screws (2) [TX10] at left and right side.
- Remove four torx screws (3) [TX10] at left and right side.
- Position the printer with the front side down onto the table and swivel the electronics down.
- Release the three torx screws (5) [T10]
- Swivel the VDE plate (6) carefully down.
- Press every plastic guide (7) together and remove it.
- Remove the black paper run sensor (8).
- Remove the E-ring (9) and the pulley (12).
- Lift the plastic guide (10) and slide it from the shaft.
- Slide the shaft (1) through the hole (11) to the right side.

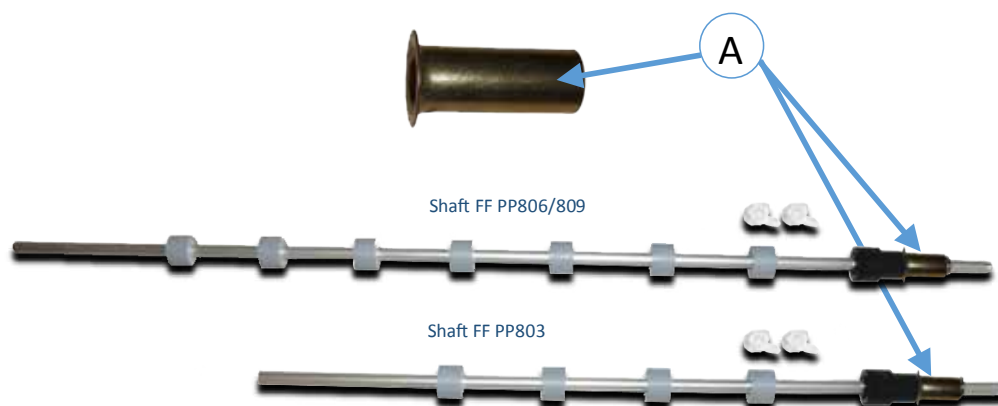
REASSEMBLING

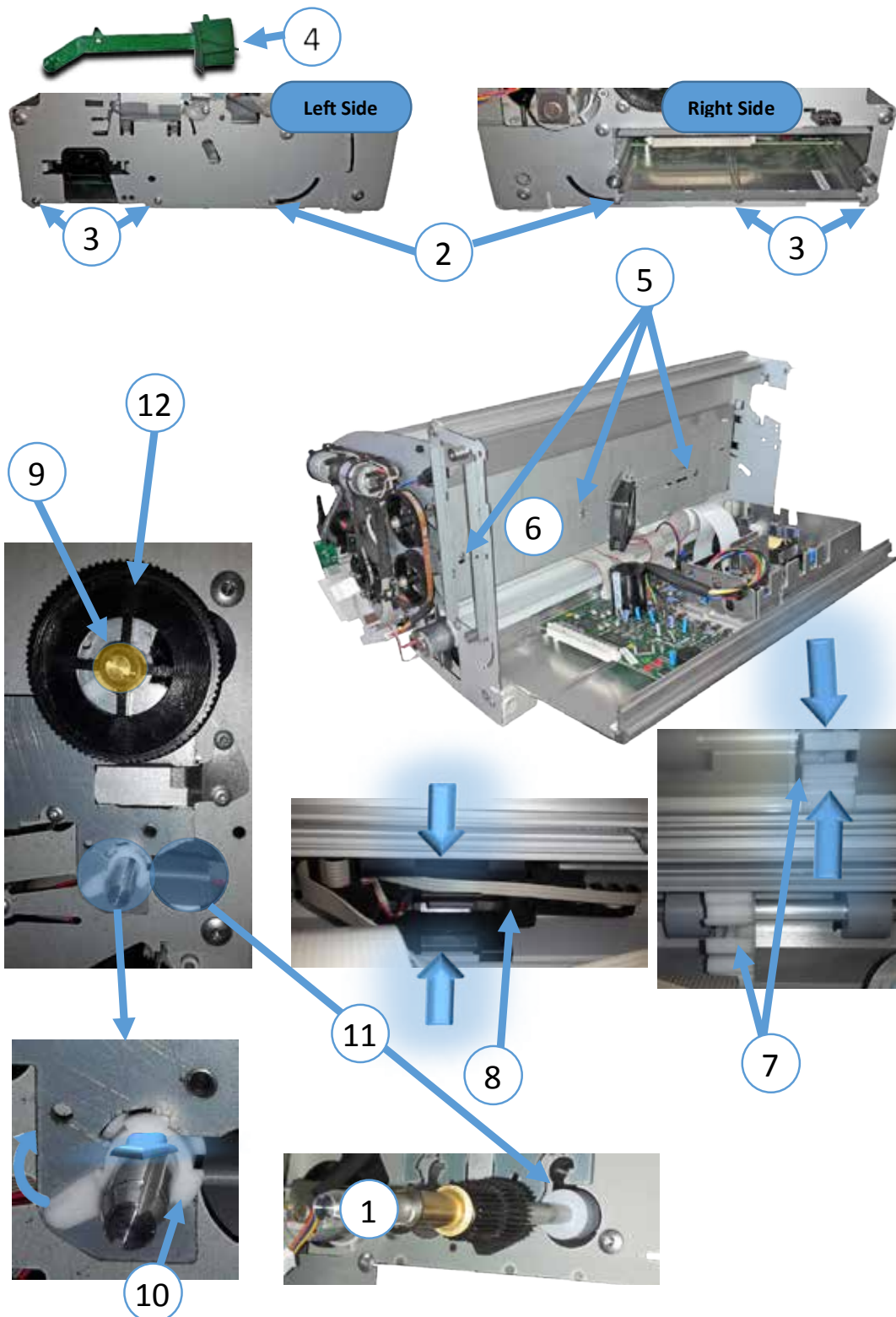
- Execute the REMOVAL procedure in reverse sequence

Note: The flat part (F) of the guides (11) must point to the top for the upper shaft and to the bottom for the lower shaft. Shift the guide close beside the rollers that the pins are inserted into the rollers cut out.

Attention: The spare part is always supplied with brass rivet (A). The shaft can then be installed with rivets in both positions (front, rear).

Pictures see next page!





Steps: Remove Part

Removal Fan (used for left motor side)

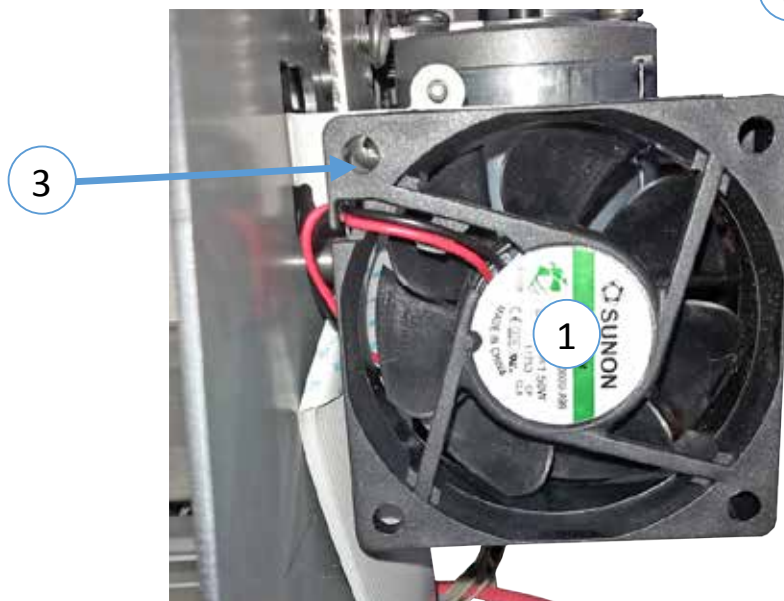
- Perform „Unlock“ procedure
- Disconnect mains cable.
- Remove paper guide and tractor cassettes.
- Remove left cover (see Part: Cover Left).
- Disconnect cable (1).
- Remove screw (2) [TX8].
- Remove fan (3).

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence



1



3

1

Steps: Remove Part

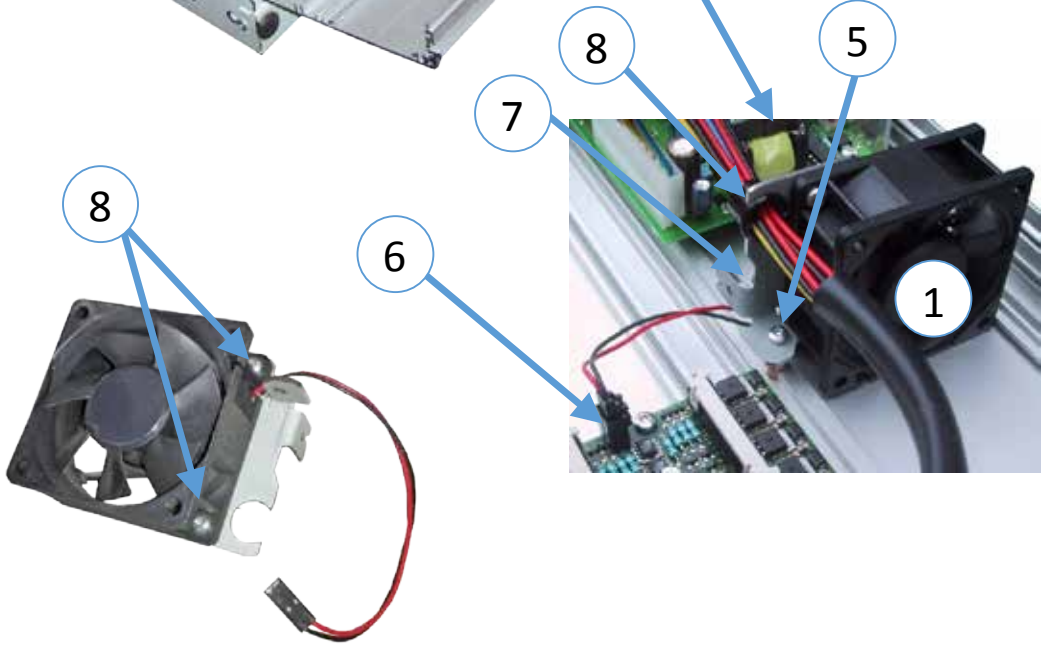
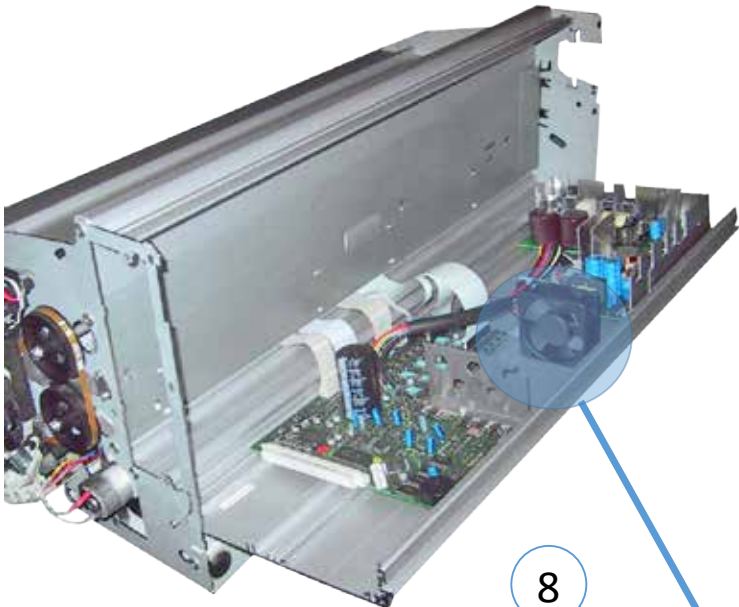
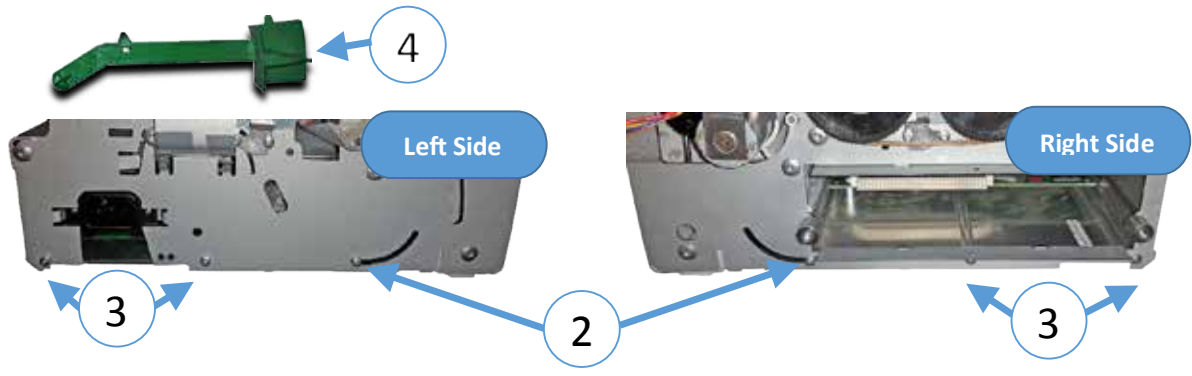
Removal Fan Electronics PP806/PP809

- Perform „Unlock“ procedure
- Disconnect mains cable.
- Remove right and left cover (see Part: Cover Right and Cover Left).
- Remove Personality Module (1).
- Remove the green power lever (4).
- Release two torx screws (2) [TX10] at left and right side.
- Remove four torx screws (3) [TX10] at left and right side.
- Position the printer with the front side down onto the table and swivel the electronics down.
- Disconnect the cable (6).
- Remove torx screws (5) [TX10].
- Remove electronic cable (8).
- Remove the fan (1) including the metal angle (7).
- Remove the two screws (9) [TX10] and the fan (1) from the metal angle (7).

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence

Pictures see next page!



Steps: Remove Part

Removal Rep Kit ASF-Cassette

- Remove the ASF-Cassette from the printer. Remove any paper loaded and the paper support (if mounted).
- Remove the cover (1) of the ASF-Cassette by releasing the snaplocks (2). Use a flat screw driver to do so.
- Release the connector (3) out of the cover (1).
- Pull back the retaining parts (5) and remove the shaft (4).
- Remove the belt from the pulley (6) and remove the pulley.
- Cut the rest of the broken shaft (7) as well as the second (non broken)shaft. Use a side nippers to do so. The remaining rest of both shafts must not exceed 0.7 mm.
- Remove the female screw (13) and the washer (12) from the screw (11).
- Mount the metal part of the Rep. Kit ASF-Cassette (8) by inserting the screw (11) including the safety washer (17) into the hole (9).

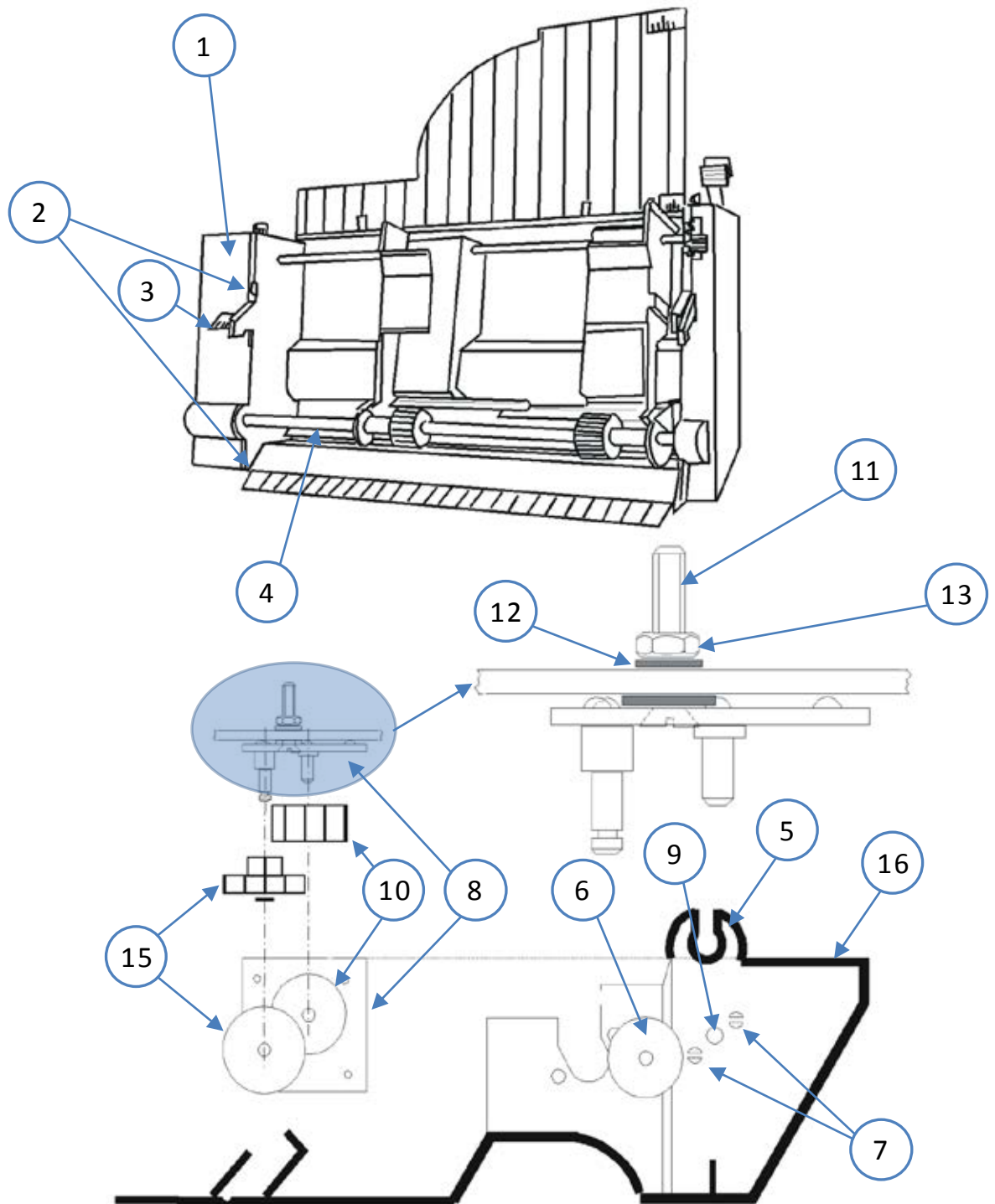
Note: Mount the Rep. Kit ASF-Cassette (8) in the same orientation as shown in the figure. Lift the metal part (8) up to the highest position, nearly to the edge (16).

- Put the washer (12) on the screw (11) and tighten the female screw (13).
- Mount the gears (10) and (15) as shown in the figure and fix the gear (15) with the snap-ring (14)

REASSEMBLING

- Assemble the pulley (6) and the belt.
- Execute the REMOVAL procedure in reverse sequence

Pictures see next page!



Steps: Remove Part

REMOVAL of the Force Adjustment Levers (Figure 2)

- Remove the ASF-Cassette from the printer and Remove any paper loaded, and the paper support (if mounted).
- Remove the lever-side cover of the ASF Cassette by releasing of the four snap locks (No. 1 - 4 in figure 1). Use a flat screw driver to do so and keep the sequence of figure 1.
- Remove the circlip (No. 4 in figure 2) of the lever bar.
- Slide out the bar to the direction of the connector and snap the lever out of the encasing.

REASSEMBLING of the Force Adjustment Levers (Figure 2)

- Assemble the three levers together (figure 3). Lever 2 (upper paper release) onto lever 1 (paper pressure lever), and lever 3 (lower paper release) onto lever 2. Observe that the little plug of lever 2 is fitted in the hole provided in lever 3.

REMOVAL of the Locking Levers (Figure 5)

- Remove the ASF-Cassette from the printer and Remove any paper loaded, and the paper support (if mounted).
- Remove both side covers of the ASF Cassette by releasing of each snap locks (No. 1 - 4 in figure 1).
- Slide out the bar to the direction of the connector and release both paper guides to exchange the locking levers.

REASSEMBLING of the Locking Lever (Figure 5)

- Insert the left and right locking lever into the paper guides.
- Push the bar through the locking levers, the paper guides, and the support springs underneath the paper guides. Take care, that all parts are properly adjusted.

REASSEMBLING

- Execute the REMOVAL procedure in reverse sequence

Pictures see next page!

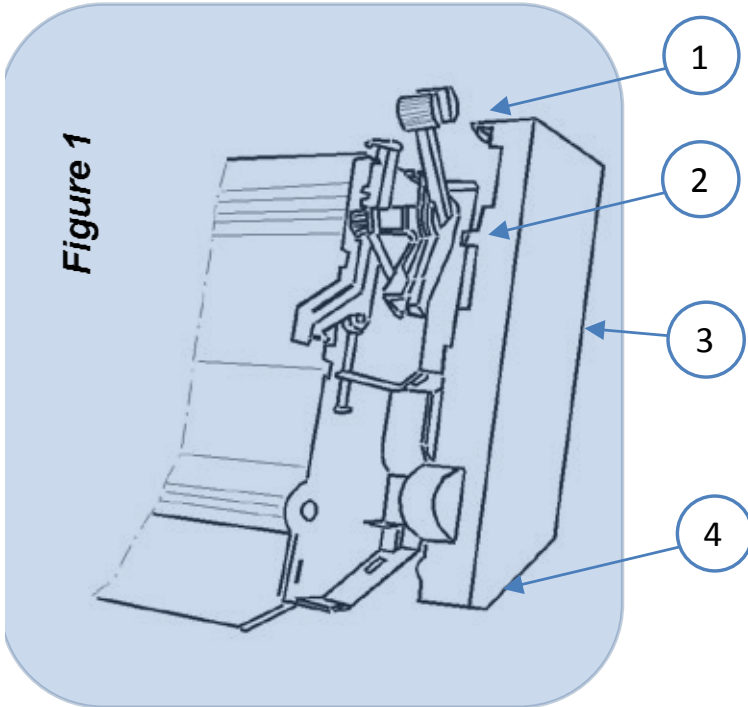


Figure 1

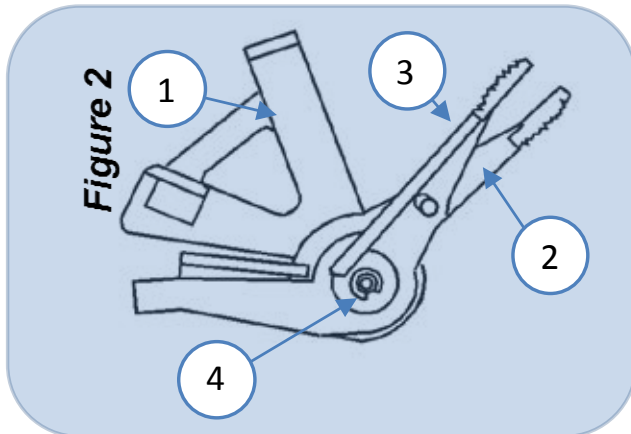


Figure 2

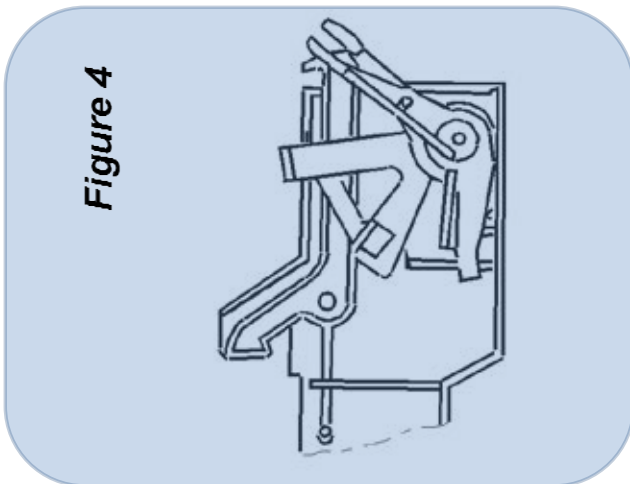


Figure 4

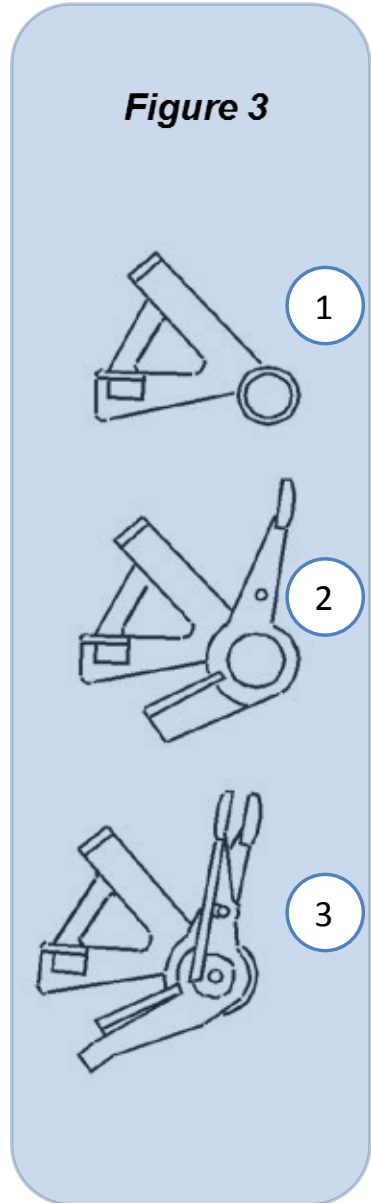
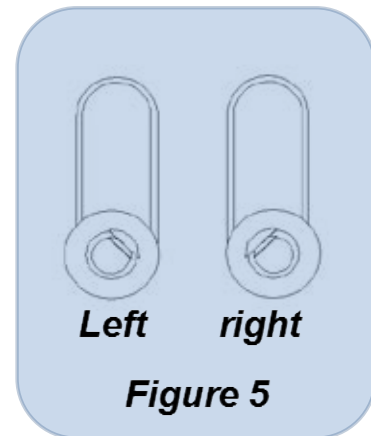


Figure 3



Left right

Figure 5

Steps: Remove Part

Removal Fan Carriage PP809

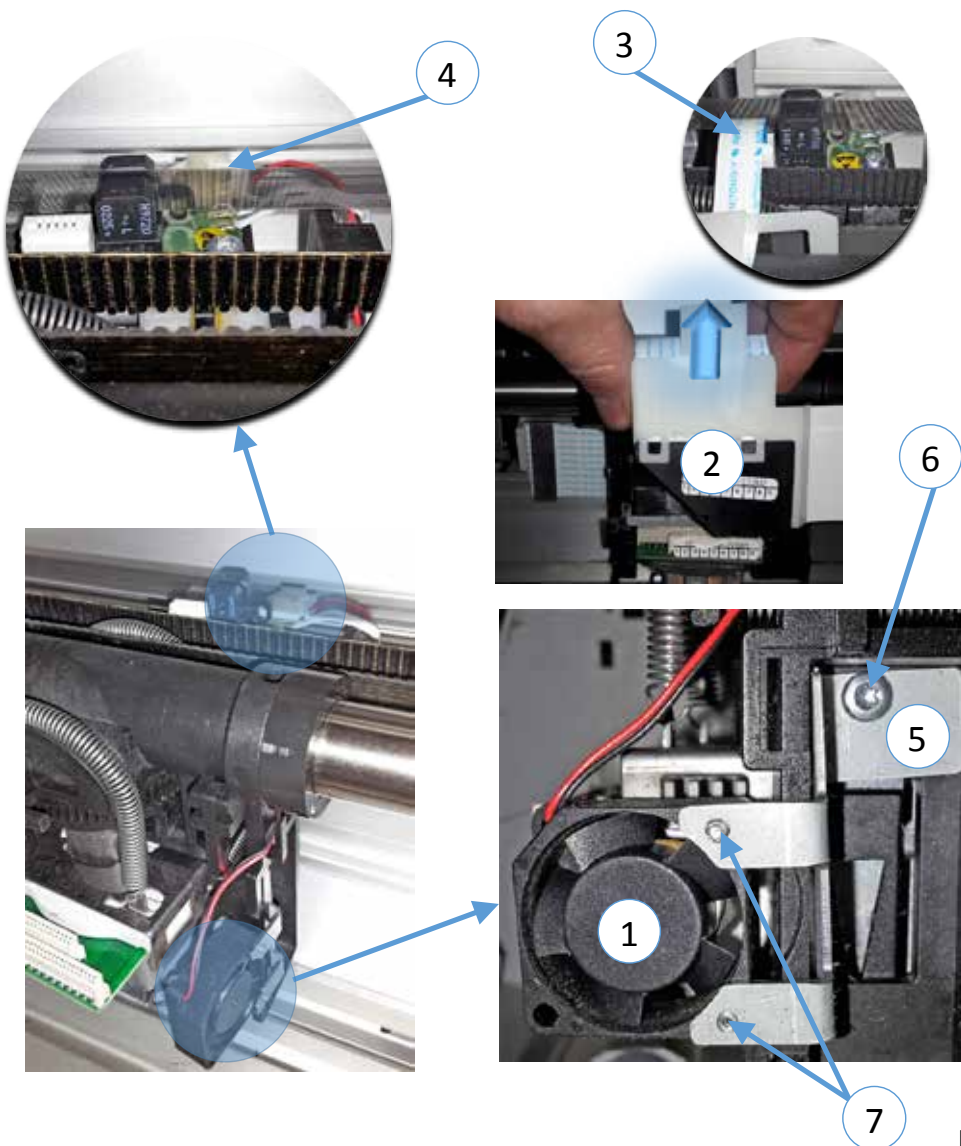
- Perform „Unlock“ procedure
- Disconnect mains cable.
- Open the rear cover.
- Power the printer off.
- Disconnect mains cable.
- Disconnect the H-Encoder cable (3).
- Disconnect the print head cable (2) carefully by pulling the plastic device upwards.
- Disconnect connector (4).

Note: Be careful with the Encoder Strip!

- Remove the torx screws (6) [10TX].
- Remove the Fan Carriage PP 809 incl. the metal plate (5).
- Remove Fan Carriage PP 809 (1) from the metal plate by remove two Torx screws (7) [TX20].

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence



Steps: Remove Part

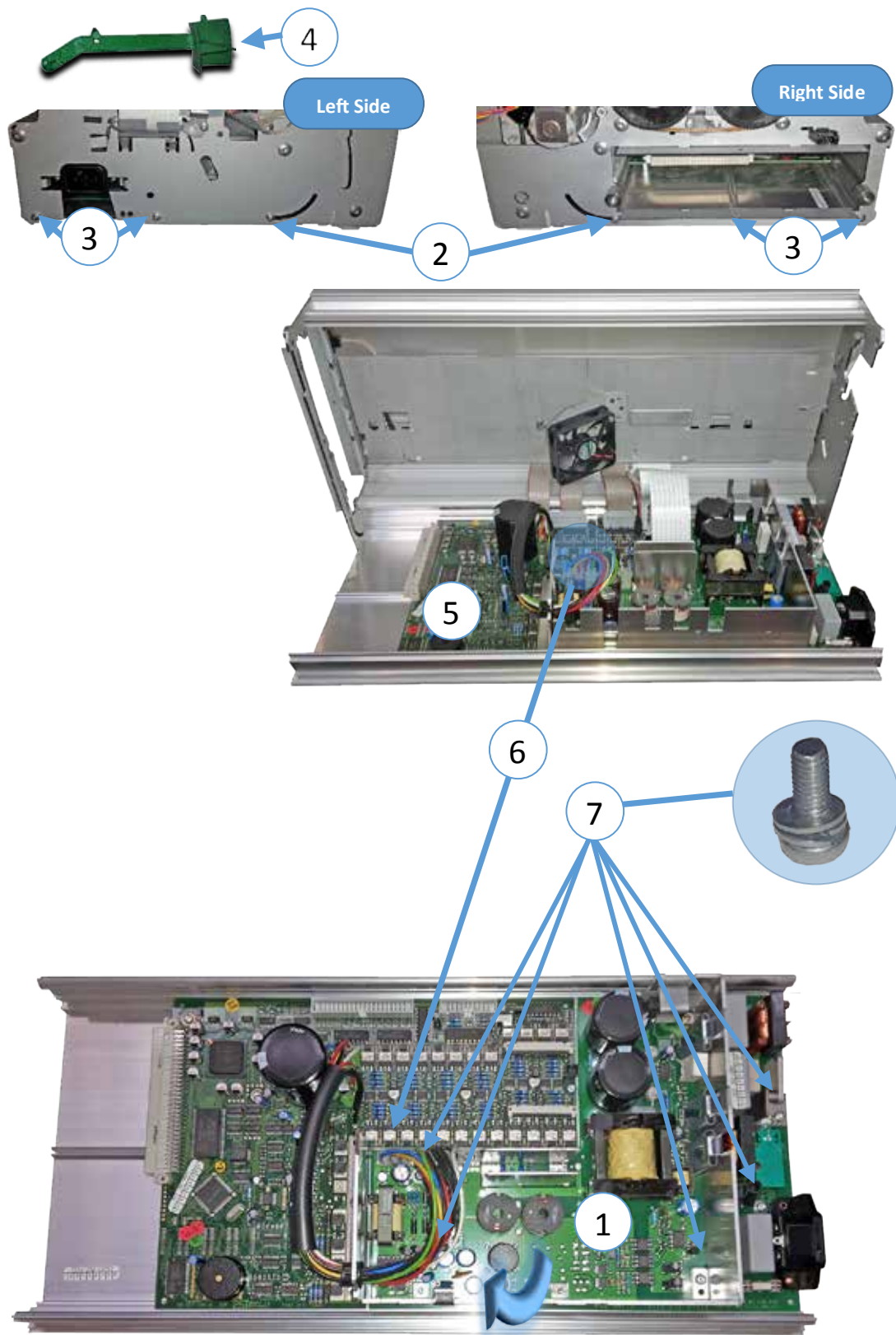
Removal PSU-PP803/806-2 used in PP803)

- Perform „Unlock“ procedure
- Disconnect mains cable.
- Remove Personality Module
- Remove the green power lever (4).
- Release two torx screws (2) [TX10] at left and right side.
- Remove four torx screws (3) [TX10] at left and right side.
- Position the printer with the front side down onto the table and swivel the electronics down.
- Disconnect cable (6).
- Remove five torx screws (7) [TX10] each with two washers.
- Slide out the PSU PP803/806-2 (1).

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence

Pictures see next page!



Steps: Remove Part

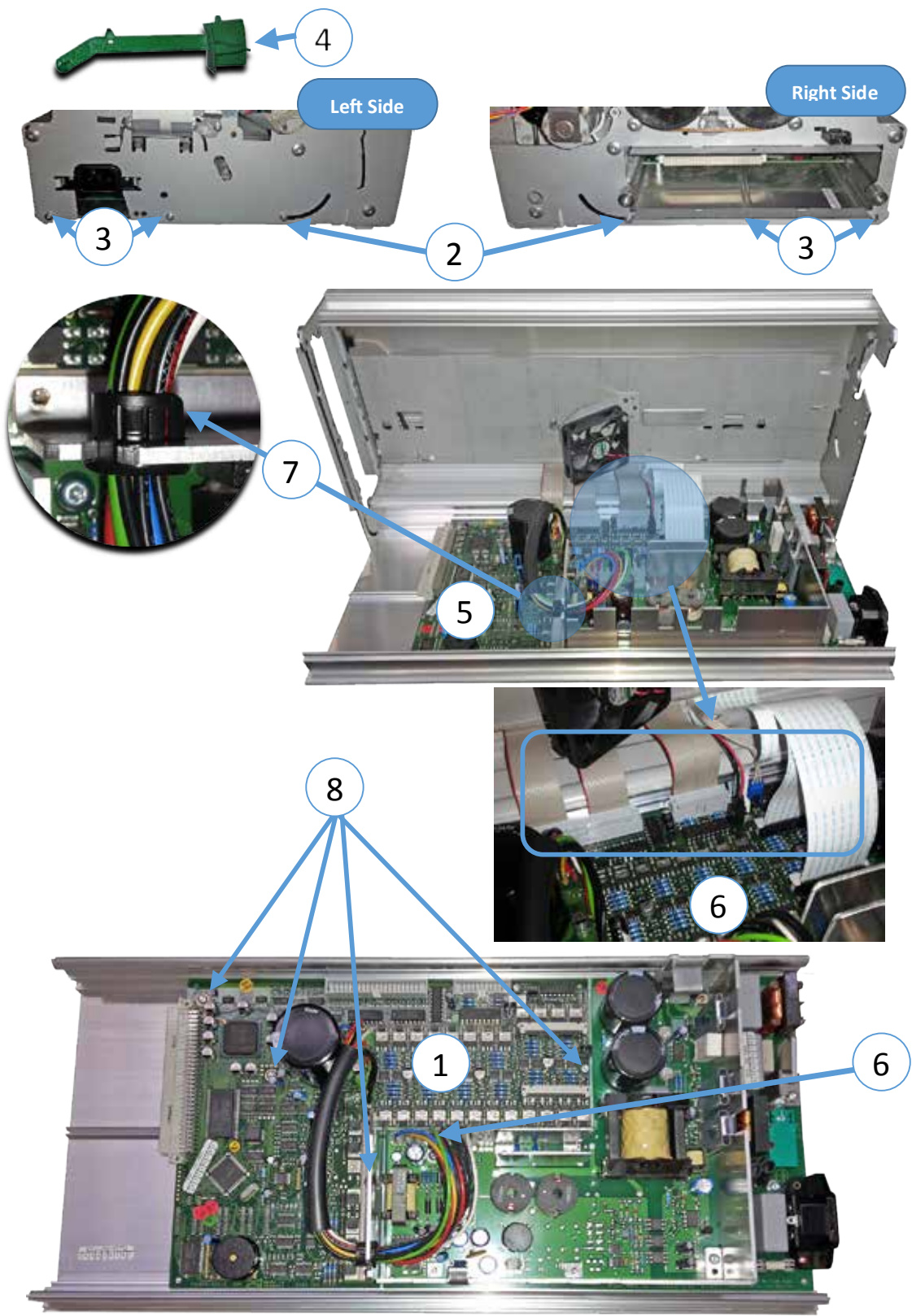
Removal CU-DEV PP803/806-2 (used in PP803)

- Perform „Unlock“ procedure
- Disconnect mains cable.
- Remove the green power lever (4).
- Release two torx screws (2) [TX10] at left and right side.
- Remove four torx screws (3) [TX10] at left and right side.
- Position the printer with the front side down onto the table and swivel the electronics down.
- Disconnect all cable (6).
- Feed out cable bundle (7) with nozzle
- Remove the torx screws (8) [TX10]
- Slide out the CU-DEV PP803/806 (5).

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence

Pictures see next page!



Part: Print Head PP 803/806

Part No.: 5112 209 27681

Order No.: 8707 340 90519

Part: Print Head PP 809


Part No.: 5112 293 05831

Order No.: 8707 340 90504

Steps: Remove Part

Removal Paper Sensor

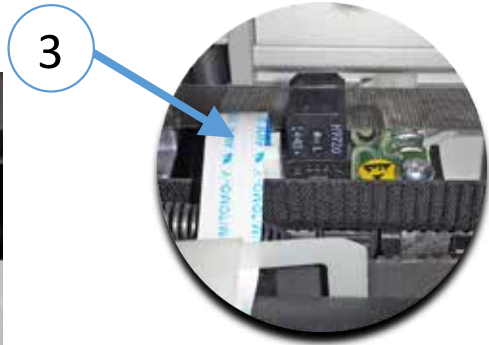
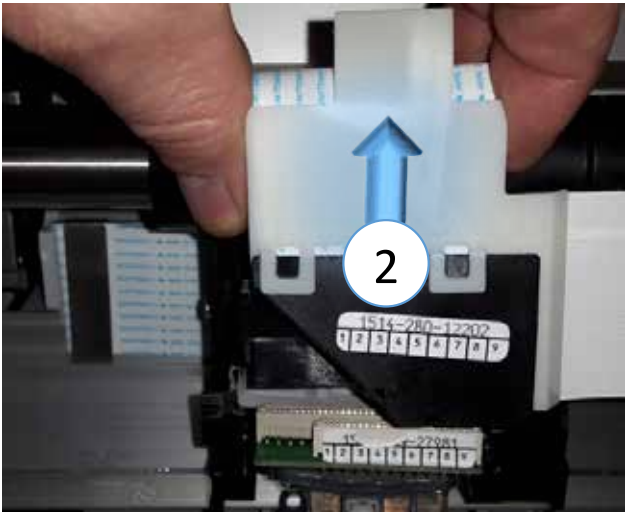
Info: Do not switch the printer off

- Open the rear cover for unlock procedure. If unlocked, press the  key to unlock the print head also until the text "UNLOCK PRINthead" will displayed.
- Disconnect the encoder cable (3).
- Disconnect the print head cable (2) carefully by pulling the plastic device upwards.
- Put the print head cable to the side (4) and fix on the aluminum frame
- Pull out the print head (1) out of its holder

REASSEMBLING

- Execute the REMOVAL procedure in reverse sequence and close rear cover. The print head will automatically locked

Pictures see next page!



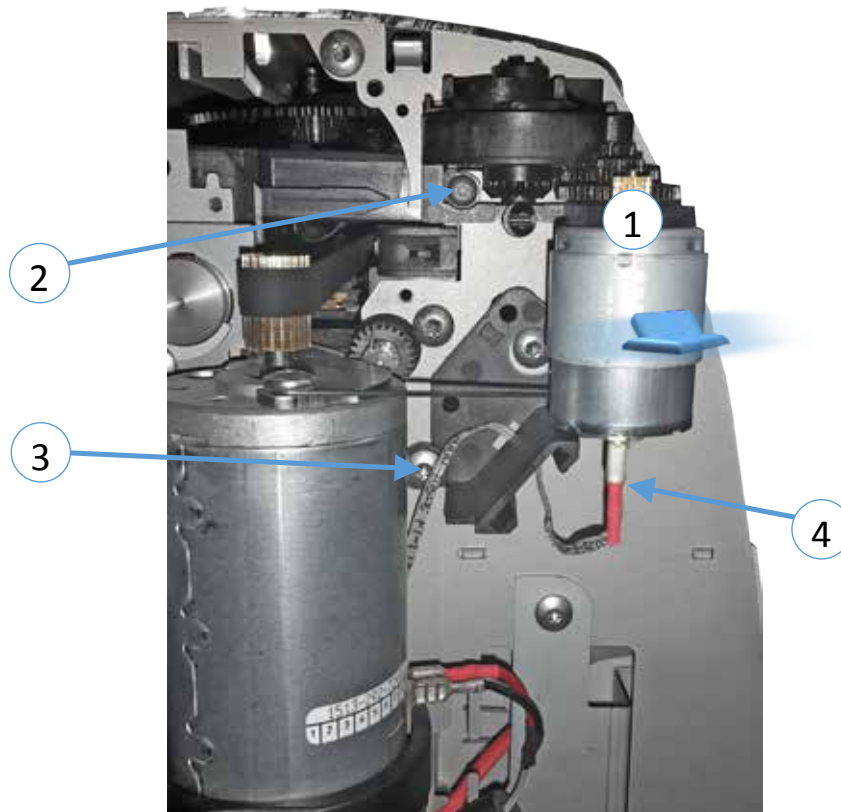
Steps: Remove Part

Removal Shifting Gear LQ/DQG

- Perform „Unlock“ procedure
- Disconnect mains cable.
- Remove paper guide and tractor cassettes.
- Remove left cover (see Part: Cover Left).
- Remove the locking unit (see Part: Locking Unit).
- Disconnect the motor cables (4).
- Remove Torx screw (3) [TX20].
- Remove Torx screw (2) [TX10].
- Remove shifting gear (1) LQ/DQ.

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence



Steps: Remove Part

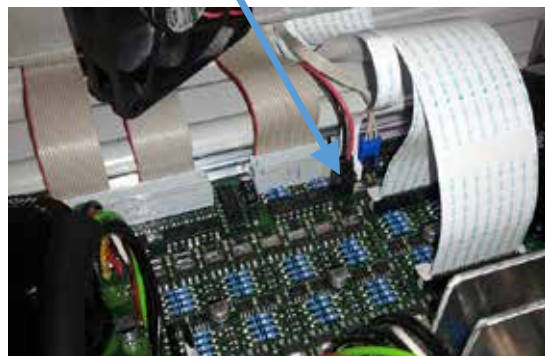
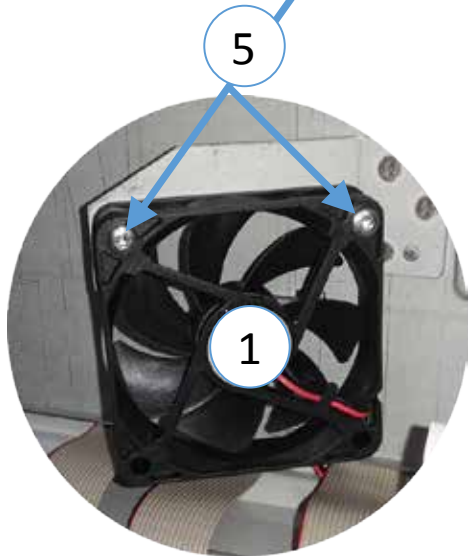
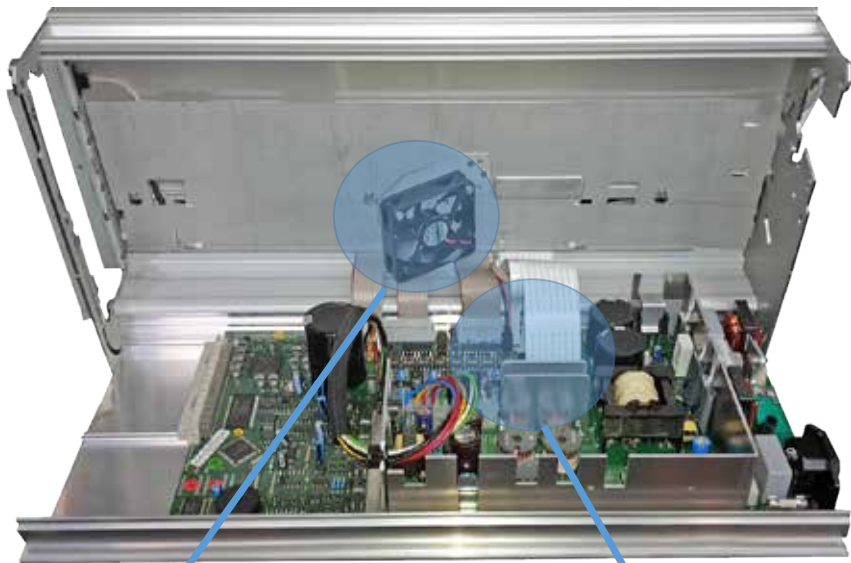
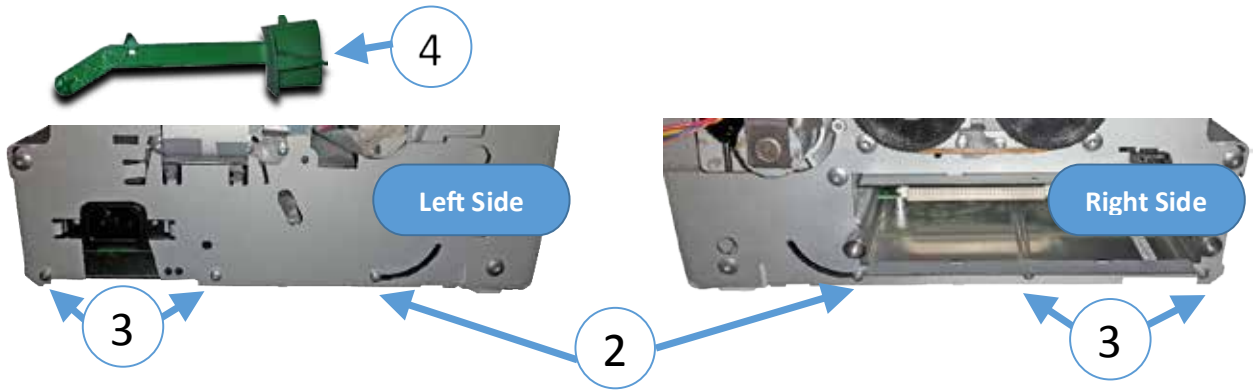
Removal Fan Electronics PP803

- Perform „Unlock“ procedure
- Disconnect mains cable.
- Remove right and left cover (see Part: Cover Right and Cover Left).
- Remove Personality Module (1).
- Remove the green power lever (4).
- Release two torx screws (2) [TX10] at left and right side.
- Remove four torx screws (3) [TX10] at left and right side.
- Position the printer with the front side down onto the table and swivel the electronics down.
- Disconnect the cable (6).
- Remove two torx screws (5) [TX10].
- Remove the fan (1).

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence

Pictures see next page!



Part: CU-DEV PP803/806-2 (used in PP806)

Part No.: 5112 292 0465X

Order No.: 8707 902 00082

Part: CU-DEV PP809-2

Part No.: 5112 292 0465X

Order No.: 8707 902 00083

Steps: Remove Part

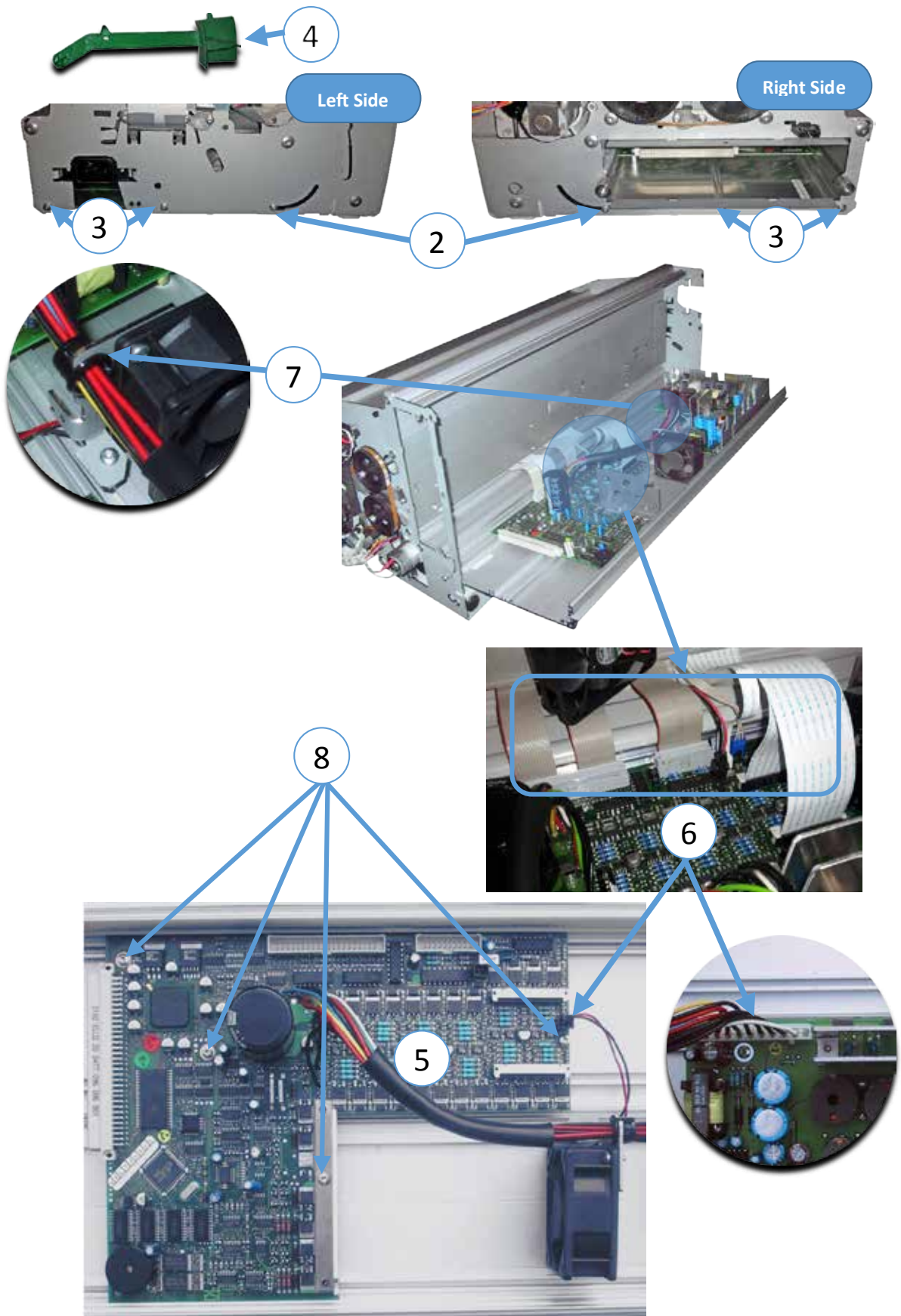
Removal CU-DEV PP803/806-2 (used in PP806)

- Perform „Unlock“ procedure
- Disconnect mains cable.
- Remove the green power lever (4).
- Release two torx screws (2) [TX10] at left and right side.
- Remove four torx screws (3) [TX10] at left and right side.
- Position the printer with the front side down onto the table and swivel the electronics down.
- Disconnect all cable (6).
- Feed out cable bundle (7) with nozzle
- Remove the torx screws (8) [TX10]
- Slide out the CU-DEV PP803/806 (5).

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence

Pictures see next page!



Part: PSU PP803/806-2 (used in PP806)

Part No.: 5112-293-05001

Order No.: 8707 902 00080

Part: PSU PP809-2

Part No.: 5112 292-92651

Order No.: 8707 902 00081

Steps: Remove Part

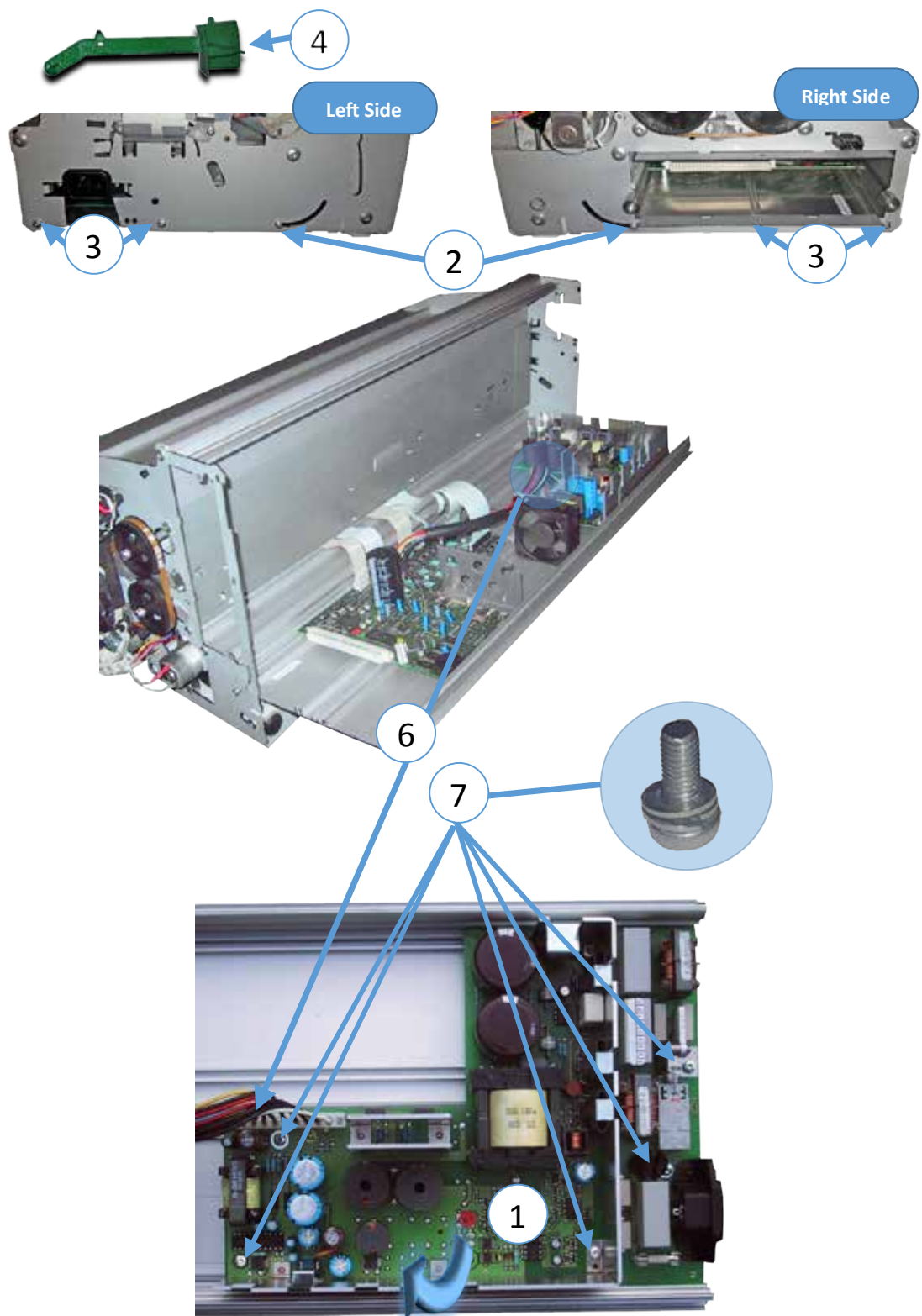
Removal PSU PP803/806-2 (used in PP806)

- Perform „Unlock“ procedure
- Disconnect mains cable.
- Remove Personality Module
- Remove the green power lever (4).
- Release two torx screws (2) [TX10] at left and right side.
- Remove four torx screws (3) [TX10] at left and right side.
- Position the printer with the front side down onto the table and swivel the electronics down.
- Disconnect cable (6).
- Remove five torx screws (7) [TX10] each with two washers.
- Slide out the PSU PP803/806-2 (1).

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence

Pictures see next page!



Steps: Remove Part**Removal H-Drive Belt PP809**

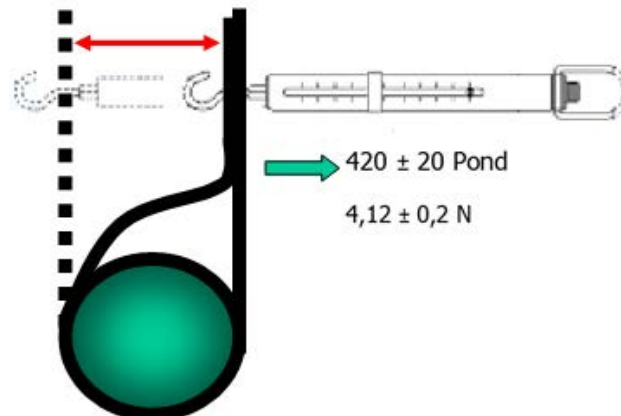
- Perform „Unlock“ procedure
- Disconnect mains cable.
- Remove paper guide and tractor cassettes.
- Remove right and left cover (see Part: Cover Right and Cover Left).
- Remove H.-drive belt Tightener (see Part: Kit H.-Drive Belt Tightener).
- Remove the H.-drive belt from the gear at the left side.
- Remove the connector (1).
- Remove the torx screw (2) [TX10].
- Remove screw (4).
- Remove the plastic guide (3).
- Remove the H.-drive belt from H-Motor (6).
- Remove the H.-drive belt

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence
- After assembly, the horizontal belt can be tared by screw (5). Move the carriage on the right / left, turn the screw until the belt runs centrally on the roller.

Attantion: The tension of the Belt has to adjust.

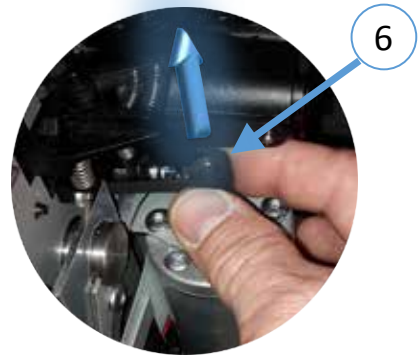
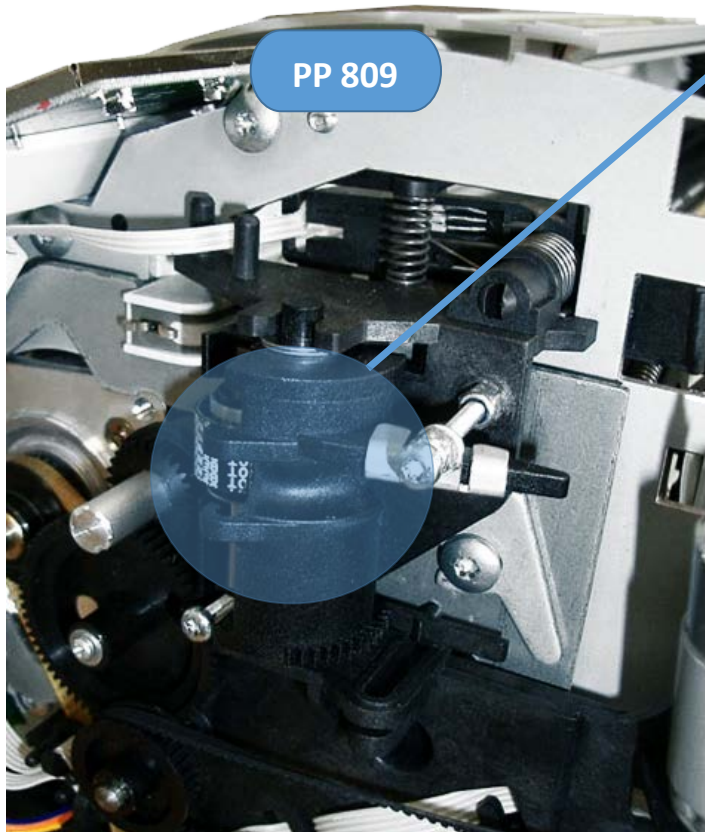
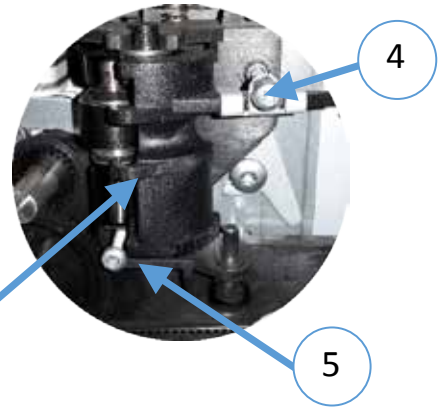
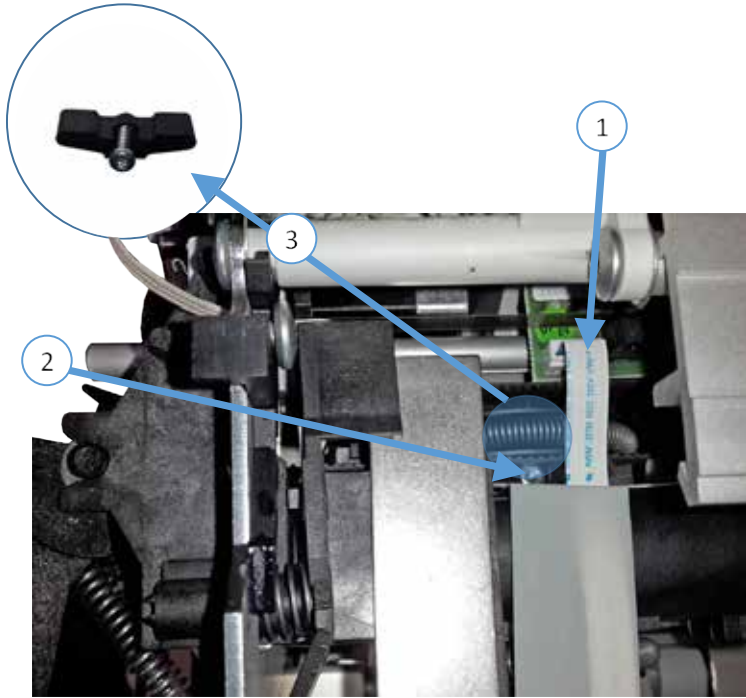
- The print head shall be placed in the Home Position
- By means of a spring-balance the tension is measured in the center of the H- Drive Belt.
- Adjust the tension to (420 ± 20 pond = $4,12 \pm 0,2$ Newton) by loosen the Lock nut (2) and set by screw (1).
- Lock the nut (2)

Pictures see next page!

“line test” to adjust the belt during the printing by turning carefully the screw (5)

- turn the screw (5) right: the belt comes up left: the belt goes down

note: check the tension of the Belt again

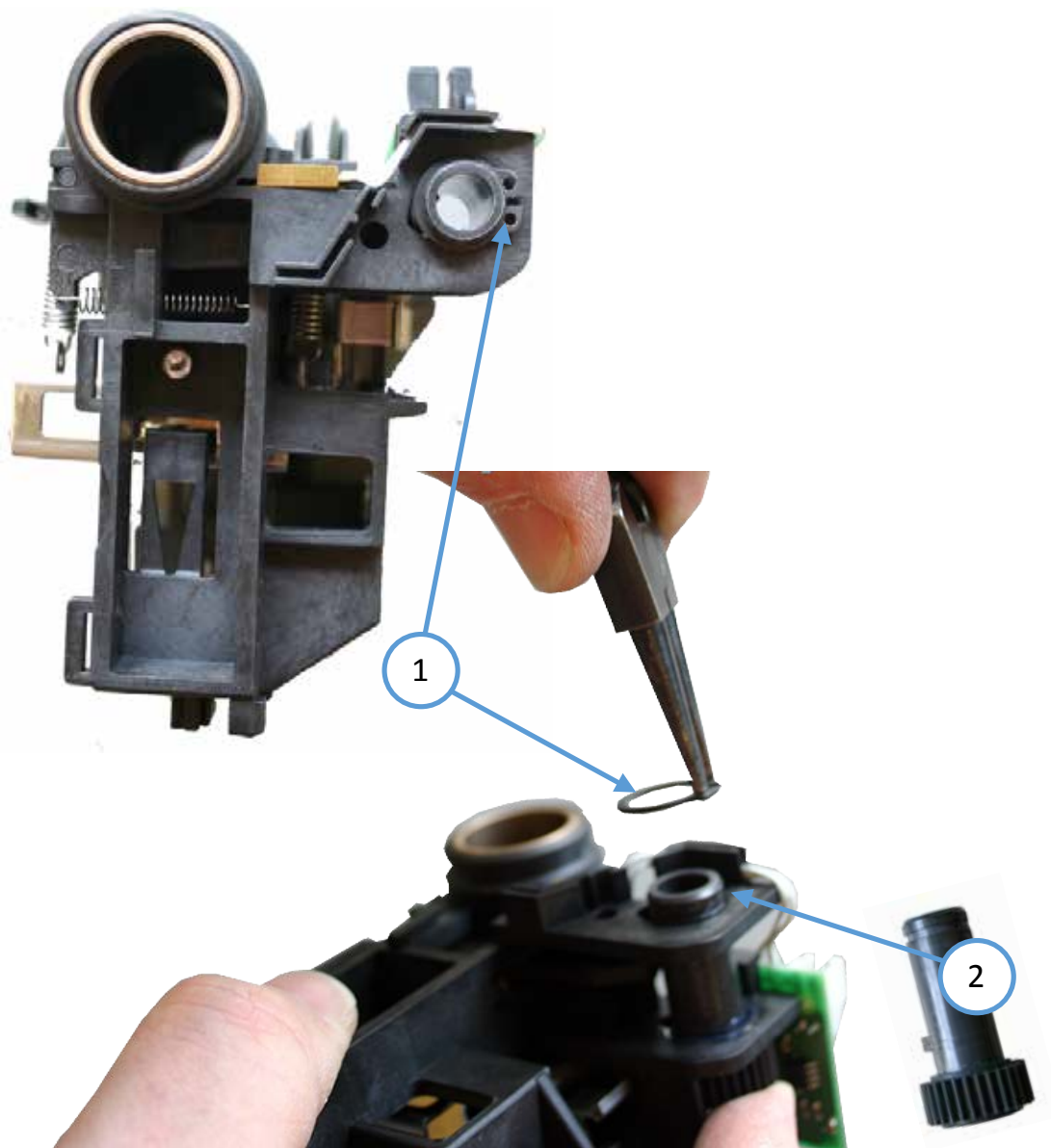


Removal AGC Gear Wheel

- Perform „Unlock“ procedure
- Disconnect mains cable.
- Remove paper guides and tractors
- Remove Cover Left and right (see. FSM)
- Remove the carriage (see. FSM)
- Open the snap ring (1) and pull out the gearwheel (2)
- Change the gearwheel and remount the carriage

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence



Removal Flat Cable Clip

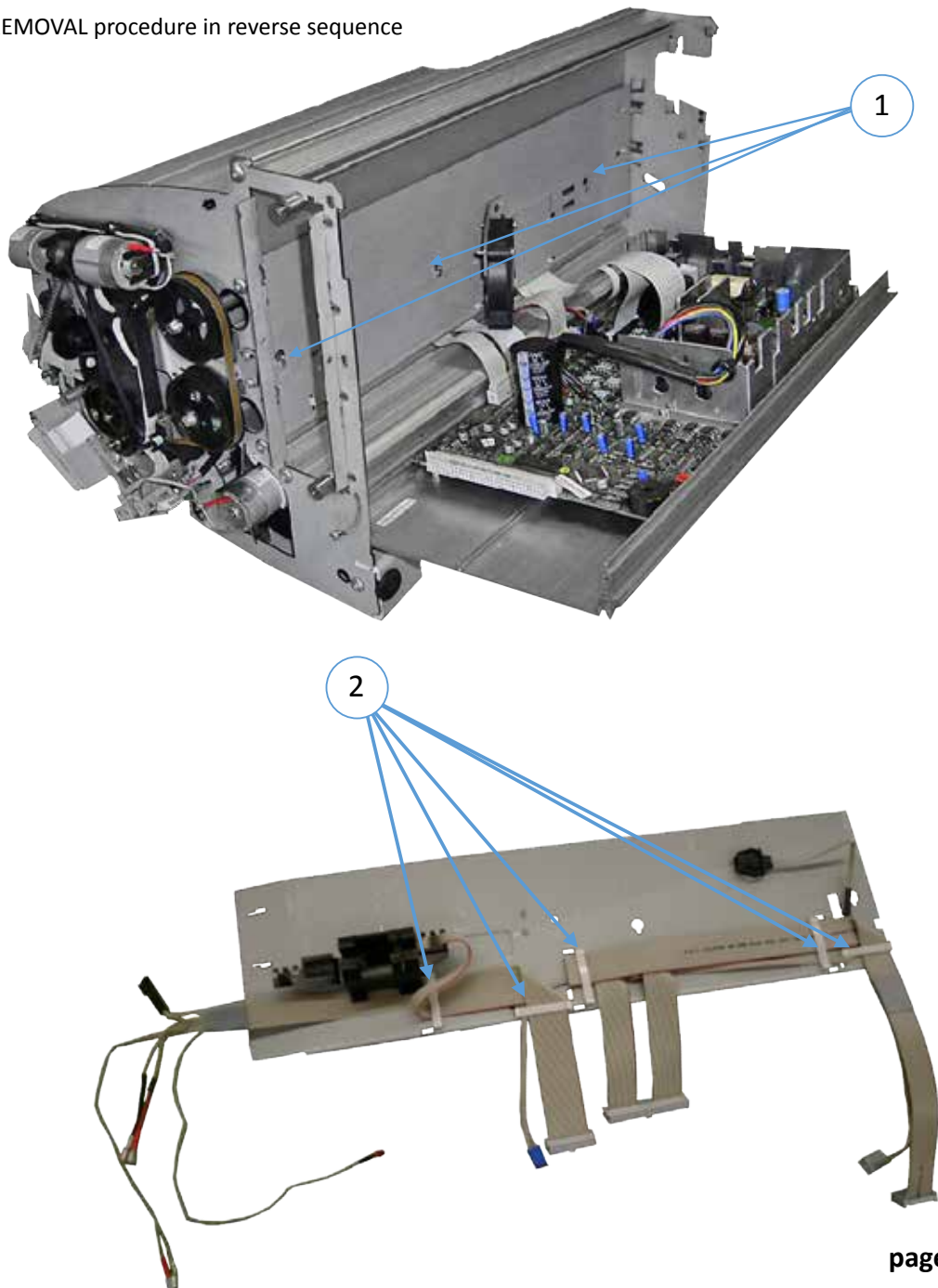
Contents:

- 50 pcs Flat Cable Clip 5112 212 7155x

- Perform Unlock procedure.
- Disconnect main cable.
- Remove paper guides and tractors
- Remove Cover Left and right (see. FSM)
- Open Electronic box (see. FSM)
- Open the VDE plate by loosen 3 screws (1)
- Remove clips (2) and replace it

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence



Removal Rear Cover Bolt

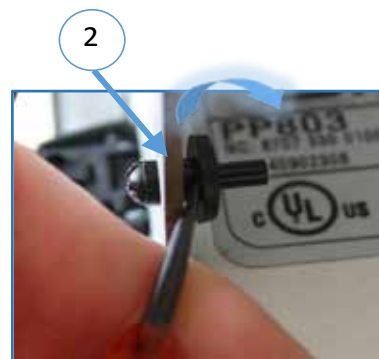
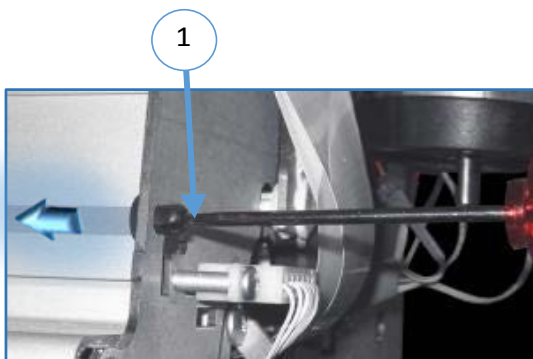
Contents:

- 50 pcs Rear Cover Bolt 5112 200 1174x

- Perform Unlock procedure.
- Disconnect main cable.
- Remove paper guides and tractors
- Remove Cover Left and or Right Cover (FSM)
- Press the pin out of the bolt (1) and pull out the bolt (2)

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence
- put in the bolt (3) in the hole of the side panel and sink the pin (4) into, so that it is flat to the bolt surface



Steps: Remove Part

Removal Power on lever

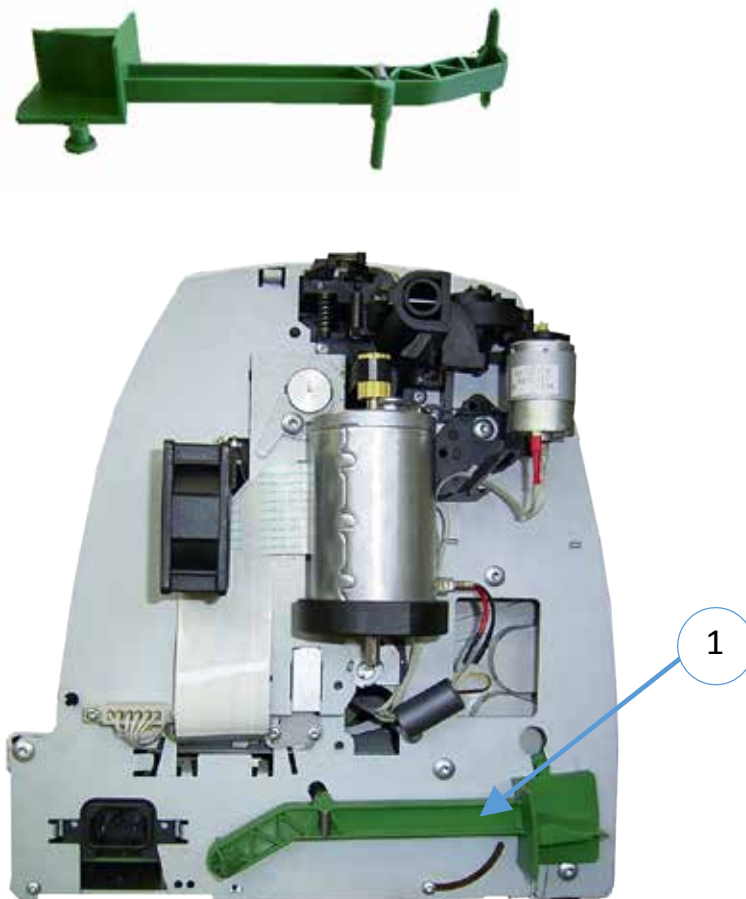
Contents:

- 50 pcs Rear Cover Bolt 5112 200 1174x

- Perform Unlock procedure.
- Disconnect main cable.
- Remove paper guides and tractors
- Remove paper guides and tractors
- Remove Cover Left (FSM)
- Remove power on lever (1) and replace it

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence



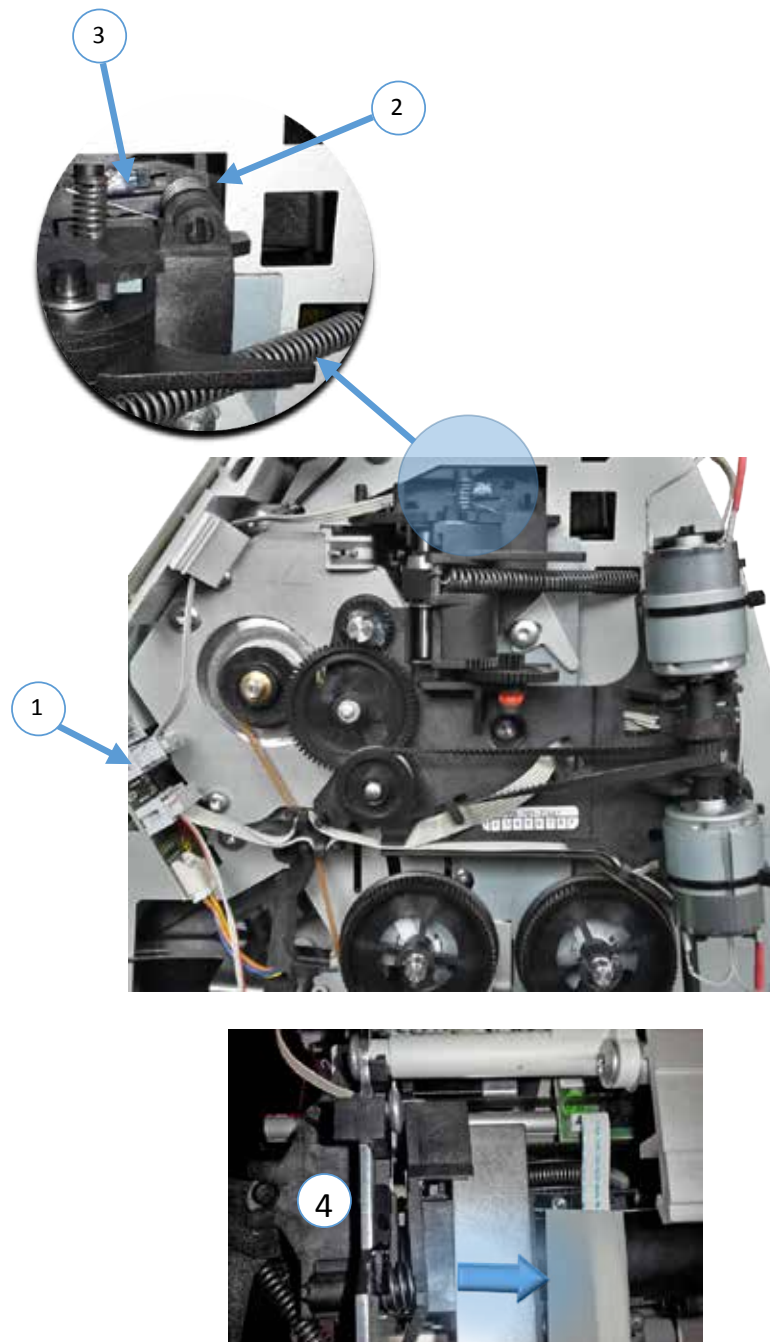
Steps: Remove Part

Removal Ribbon Run Assy PP803 / 809

- Perform „Unlock“ procedure
- Disconnect mains cable.
- Remove paper guides and tractors
- Remove the ribbon cassette.
- Remove Cover Right (FSM)
- Disconnect Ribbon Run Assy Cable (1) (from Distribution print and pull out (4) the plastic holder (2) and spring (3)
- Remove Ribbon Run Assy

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence



Steps: Remove Part

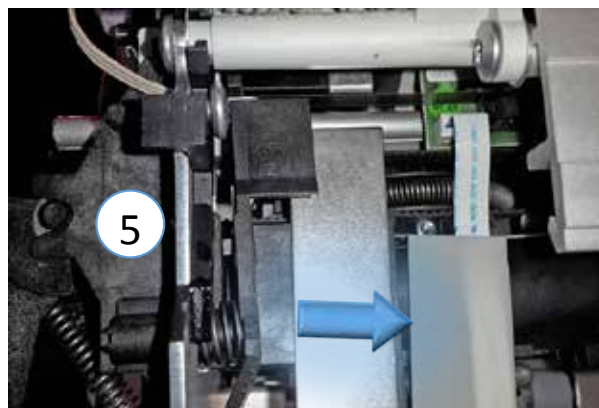
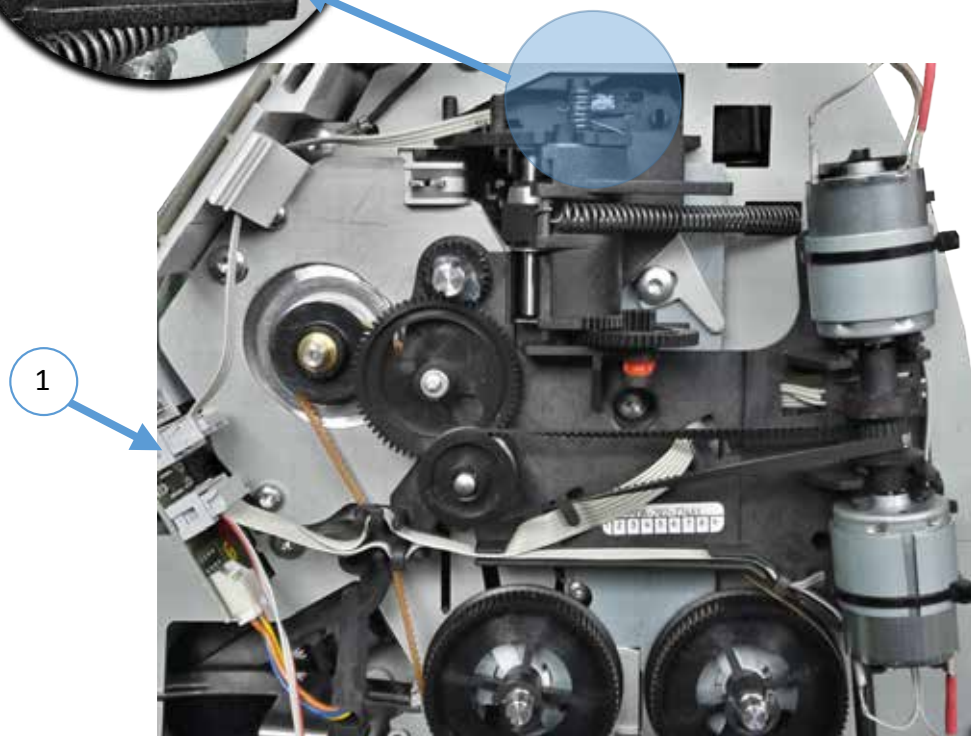
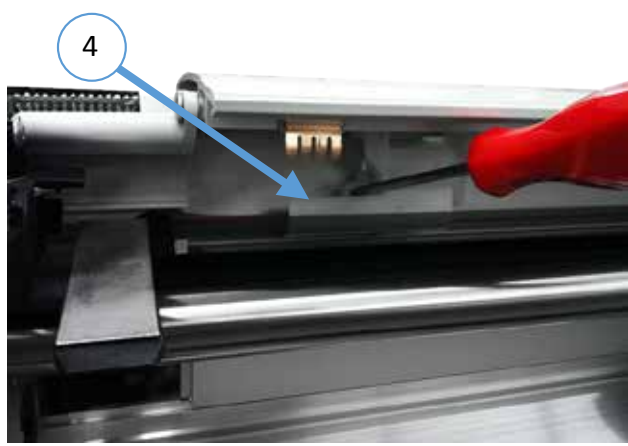
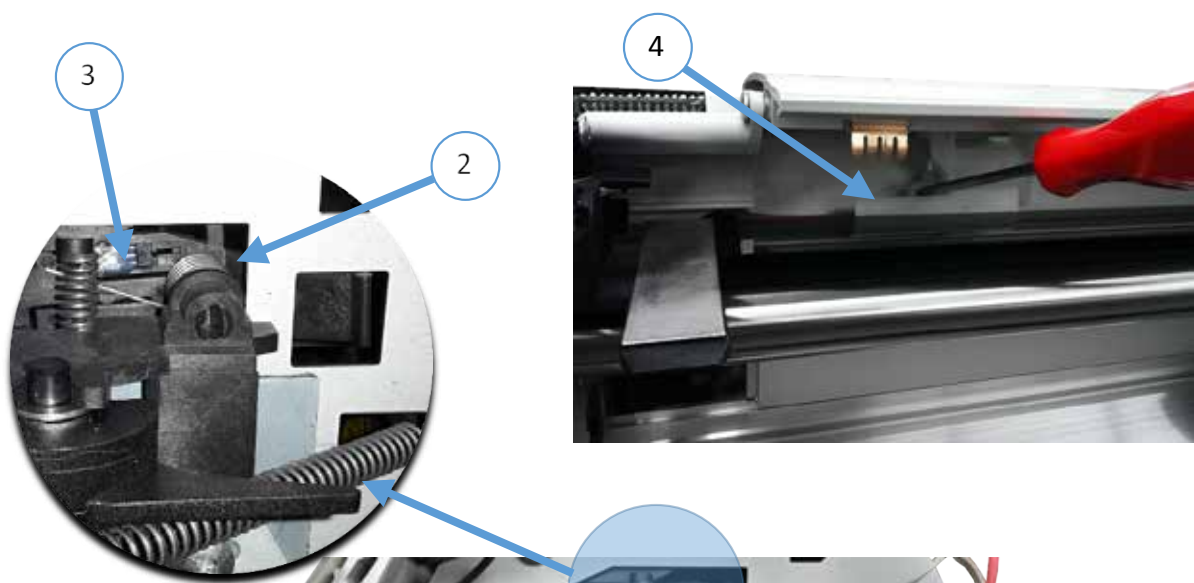
Removal Ribbon Run Assy PP 806

- Perform Unlock procedure.
- Disconnect main cable.
- Remove paper guides and tractors
- Remove the ribbon cassette.
- Remove Cover Right (FSM)
- Slide the ASF Connector out of the holder (4) by using a small screw driver to the left side.
- Disconnect Ribbon Run Assy Cable (1) (from Distribution print and pull out (5) the plastic holder (2) and spring (3)
- Remove Ribbon Run Assy

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence

Pictures see next page!



Steps: Remove Part

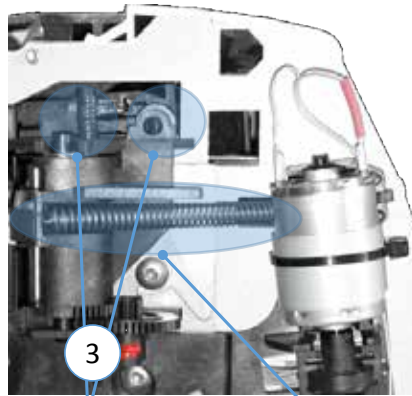
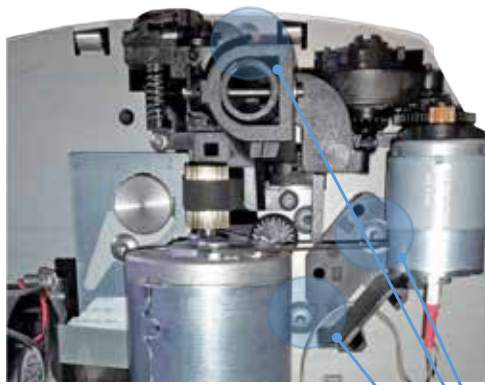
Removal Inner Cover Right

- Perform Unlock procedure.
- Disconnect main cable.
- Remove Front roller unit (FSM)
- Remove the ribbon cassette.
- Remove Cover Left and Cover right (FSM)
- Remove rear cover (5)
- Remove operator panel (FSM).
- Tear out the display a little bit to the right.
- Remove Shaft AGC (FSM)
- Remove clamps from Print Head Cable (FSM)
- Remove the clamp which hold the Encoder Strip at its right end (FSM).
- Remove 3 screws on left side (1)
- Remove DC motor for tractor selection lever (FSM)
- Remove right 3 springs and remove the ribbon run sensor lever (3)
- Remove 5 screws at the right side (2)
- Lift the front aluminium cover while pressing down the left cover open lever.
- Tear this aluminium cover (4) at the left side carefully to the front until it reaches out of the metal frame. Be attentive with the right end of the encoder strip guide.
- Then tear it carefully to the left.

(FSM = see respective chapter in Field Service Manual)REASSEMBLING).

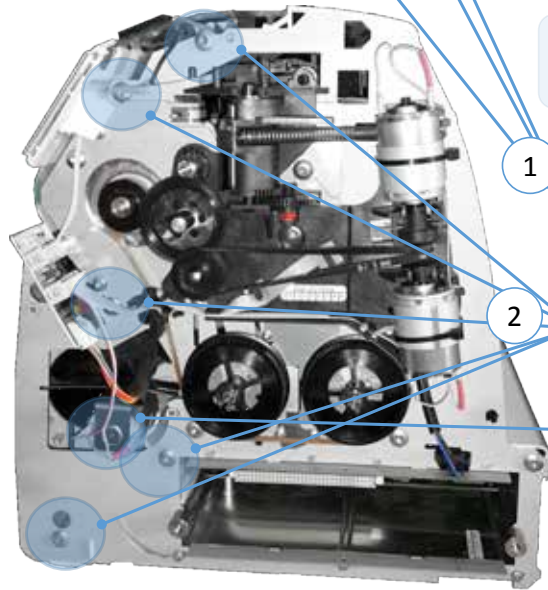
- Execute the REMOVAL procedure in reverse sequence

Pictures see next page!



Remove ribbon sensor and springs

Remove spring



1

Remove 3 screws on the left side of the printer

2

Remove 5 screws on the right side of the printer

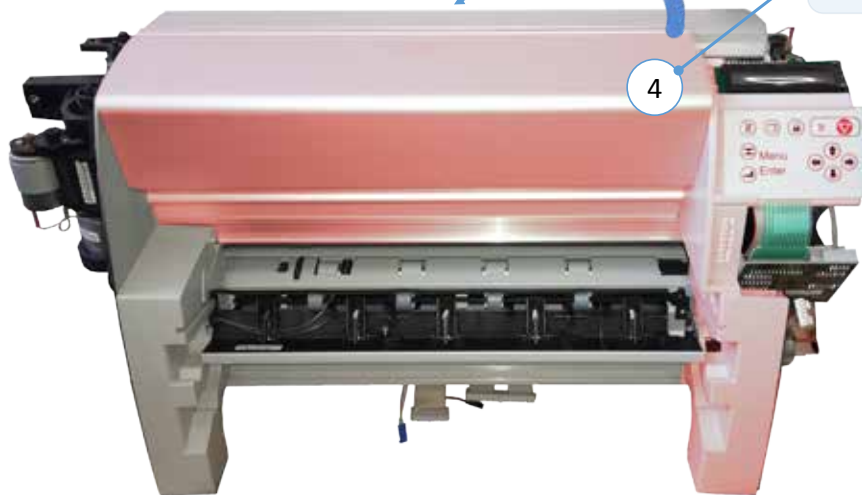
Remove tractor motor

Remove rear cover

5

Carefully lift the aluminum frame incl. The complete side wall out of the printer.

4



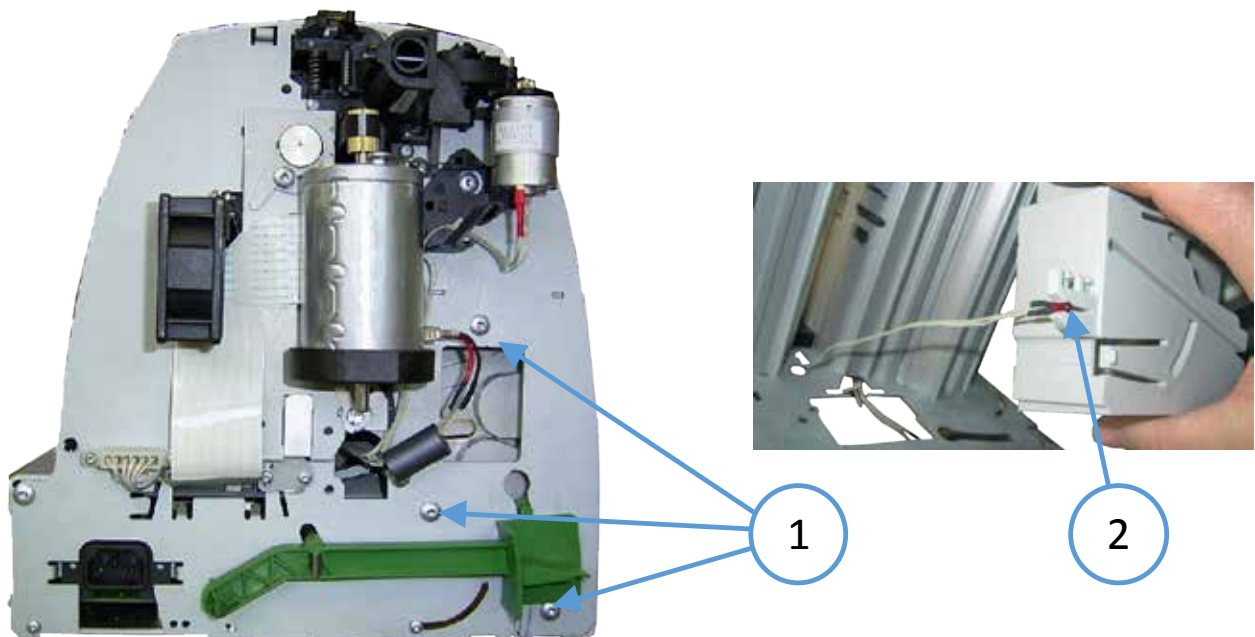
Steps: Remove Part

Removal Inner Cover left

- Perform Unlock procedure.
- Disconnect main cable.
- Remove paper guides and tractors
- Remove Front roller unit (FSM)
- Remove the ribbon cassette.
- Remove Cover Left (FSM)
- Remove 3 screws (1) on left side to get free the Cover Inner Left
- Loosen the cable out of the fixation and remove the IR-Led (2)

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence



Steps: Remove Part

Removal Kit Grounding Springs

Contents:

- 10 pcs Grounding Springsl 5112-200-1132x

- Perform Unlock procedure.
- Disconnect main cable.
- Remove paper guides and tractors
- Remove Front Roller Unit (see. FSM)
- Mount new Grounding Spring (see. FSM)
- Remove Grounding Spring (1)
- Mount new Grounding Spring

REASSEMBLING).

- Execute the REMOVAL procedure in reverse sequence

