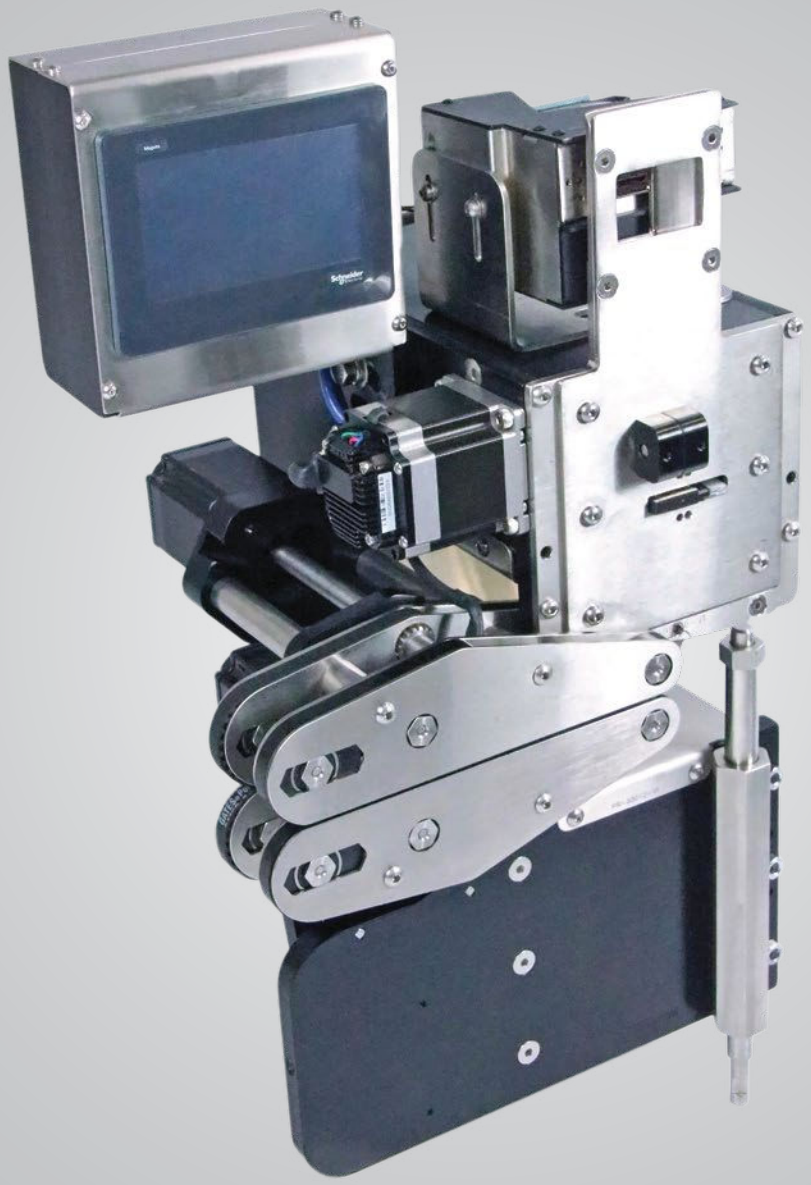
KLR **950**



944, Des Hérons
Saint-Pie, (Qc) Canada
J0H 1W0

T : (450) 388-0404
T : 1-800-918-8777

info@klrsystems.com
www.klrsystems.com

MADE IN CANADA

DEPUIS/SINCE
1977

Contents

0.0: REVISIONS NOTICES

2022-08-30:

1. Correction of the Electrical plan 14.0
2. Lower drives belts assembly updated version (angle) 11.10
3. Upper drives belts assembly updated version (angle with M8 connector) 11.11

2022-08-26: Correction of the interlock wiring (from KLR.950 to bagger) 5.7.2

1.0: SAFETY PRECAUTIONS

CAUTION

- The equipment described in this manual is covered with fix panel (only opened with a tool) that provide protection from electrical components and most of mechanical motions. However, there is four (4) belts that can be exposed to the user. ALWAYS turn OFF the machine before approaching hands from every motion part to remove a jam, service or clean the machine. Go against this notice can result in a severe injury or death;

- Special attention made to ensure that the operation of the machine is safe and convenient without compromising the efficiency. Keeps hands away from the mechanism that break the clips apart. Keeps hands and clothes away from the working area of the machine;

- Keep hands away from the working machine. Do not force through remaining gaps;

- If the system is linked to another machine or install onto another machine. Lock the electrical box of the other machines before performing any maintenance on this equipment. Please refer to the local regulations and laws on locking out machinery. Go against this notice can result in a severe injury or death;

- When working on the electrical components. Disconnect the equipment at the source and use a lockout device to avoid any risk of danger. Make sure you also have the space required to complete the work to avoid any risk of danger.

- Any modifications with any aspect of the mechanical, safety, electrical design, design, or any parts connected with the equipment will void the warranty and liability of KLR Systems. If a change is required, contact KLR Systems for approval. All technical handling must be done by a qualified technician or by KLR Systems;

- KLR is not responsible for any abuse, mishandling, misuse, improper maintenance and repair by owners and users;

- Equipment must be supervised when operating;

Continue the next page…

⚠ CAUTION

- Safety switches: DO NOT bypass any safety components for any reason. Violation will void all warranties and responsibility from KLR Systems. If a safety component is broken, it must be replaced before starting the machine;

- Safety panel (fix panel) or safety doors: As a safety, component does not try to remove or unscrew them unless it is necessary for a maintenance operation. If it is the only option, use a lockout device during this procedure and reassemble every single piece as it was when finished;

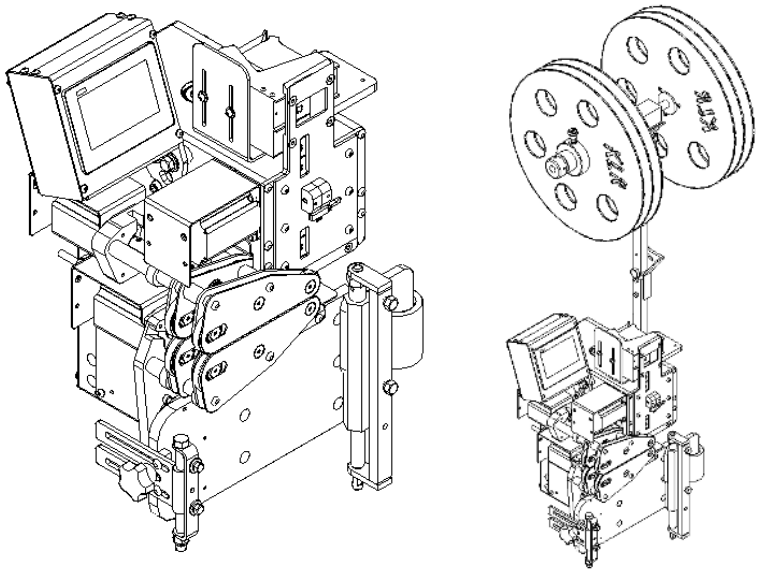
- When the machine is set to interlock mod, that means the KLR.950 run command and speed is controlled by another equipment. Careful when handling the equipment because it may start when you do not expect it. ALWAYS keep hand away from belts and mechanisms even when the machine is stopped.

2.0: IDENTIFICATION

2.1: The product brand and type designation

KLR.950

Bag closer



*The machine in the picture is a left version

2.2: Version of product

Serial number: located on underneath the power supply plug.

2.3: Manufacturer contact

KLR SYSTEMS INC. Packaging equipment manufacturer

Address: 944 rue des Hérons,

City, province, country: Saint-Pie, Québec, Canada

Zip code: J0H 1W0

Phone number: 450-388-0404

Web site: http://klrsystems.com/

3.0: PRODUCT SPECIFICATION

3.1: Range of applications intended use and general functions

The bag closer KLR.950 is designed to close bag tail with plastic clip. The machine tells the user whenever clip is running out. These following values are in the prototype version and are subject to change:

- Speed in between 50 and 60 package a minute.
- Uses a convenient touch screen (HMI).
- Uses a recipe and ingredient method, can be finetuned according to the product easily.
- A KLR 930 Air printer or an ink jet printer can be installed on the equipment.
- Made of stainless steel 304 and anodize aluminum.
- Equipped with an Ethernet communication device.
- Easy clip loading and does print automatically when loading (if set in the parameters).
- Ambidextrous machine (left or right).

3.2: Dimensions (for transport)

The clips holder can be disassembled from the body of the machine to save space.

Height: 24 inches; Length: 16 inches; Width: 15 inches

3.3: Specification for electricity and air

This machine is intended to use these 4 possible specifications:

Electrical need: Access within 5 feet from the machine

- 120 Volts – 5 Amps – 1 Phase – 50 / 60 Hertz
- 220 Volts – 5 Amps – 1 Phase – 50 / 60 Hertz

Need a 3 pins female jack power cord adapter 18AWG. Provided in the packaging with the machine:

120v = PE-01531-15-5P-6 220v = Contact service for part number

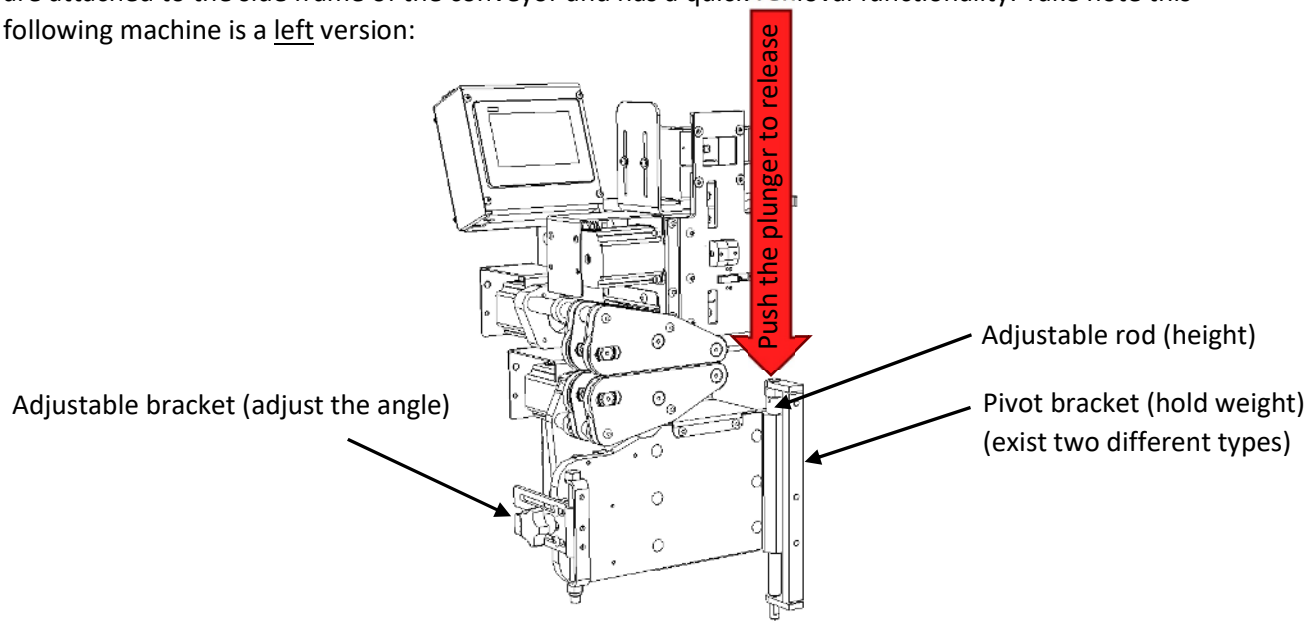
In case of loss, order from KLR to get a new one and be sure to have the cord as per requirement for your machine.

Pneumatic need: None. Air printer is sold separately (see air printer manual if needed)

4.0: INSTALLATION

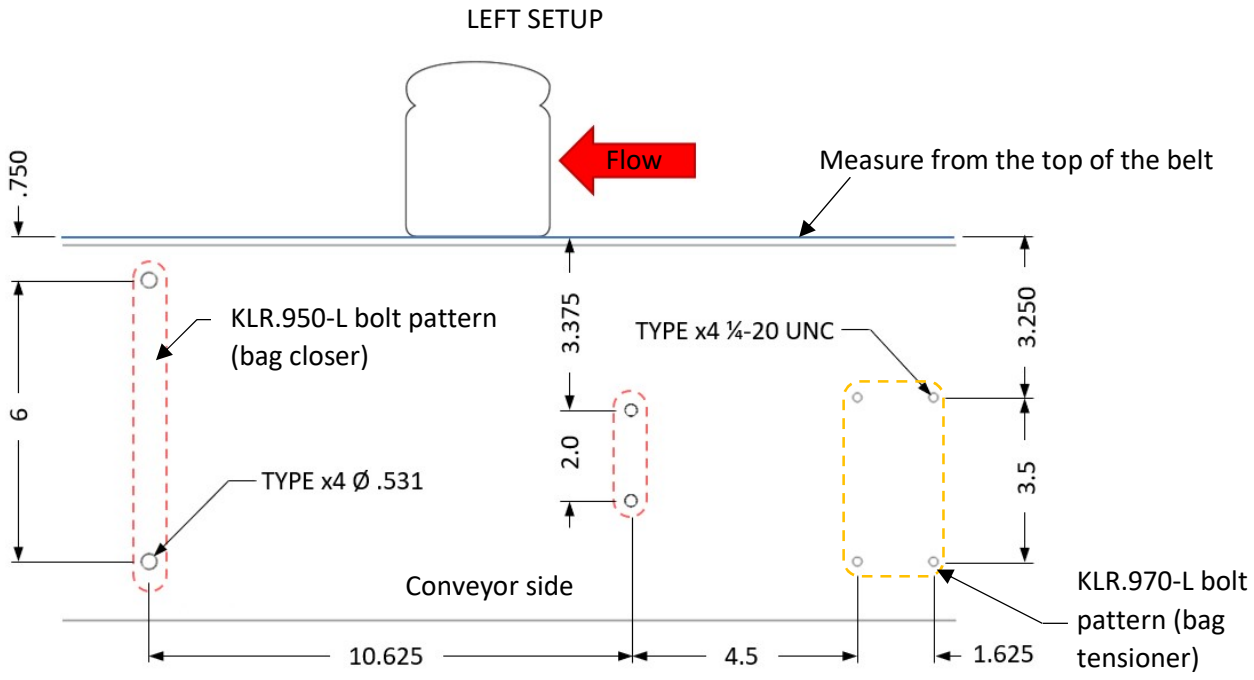
4.1: Mounted directly on a conveyor

Of course, the KLR.950 is designed to be installed on KLR equipments, such as conveyors. The brackets are attached to the side frame of the conveyor and has a quick removal functionality. Take note this following machine is a left version:



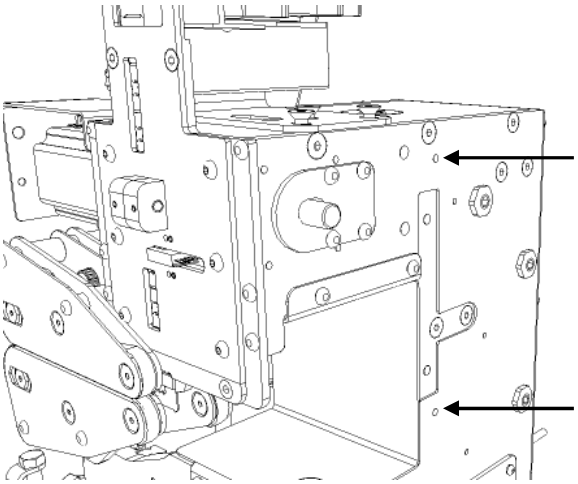
4.2: Bolt pattern

Follow these instructions in case of preparation before the arrival of the machine. This is for a left setup. Right setup would be mirror of this picture. See **Flow diagram (right or left)** to know what side is to be prepared



4.3: Assembling the clips holder

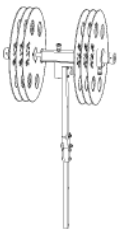
The clips holder is attached with these threaded 1/4-20 holes:



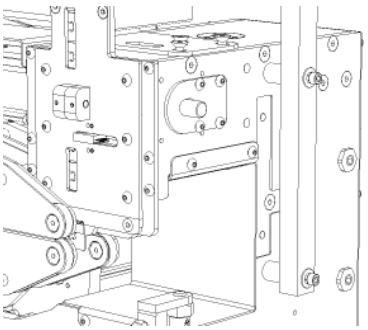
To install it, it is needed:

- Two (2) PM-00278;

- Two (2) 1/4-20 socket head 2 ¼ inches long;
- Two (2) 1/4 washer;
- Two (2) 1/4 lock washer;
- Clips holder.



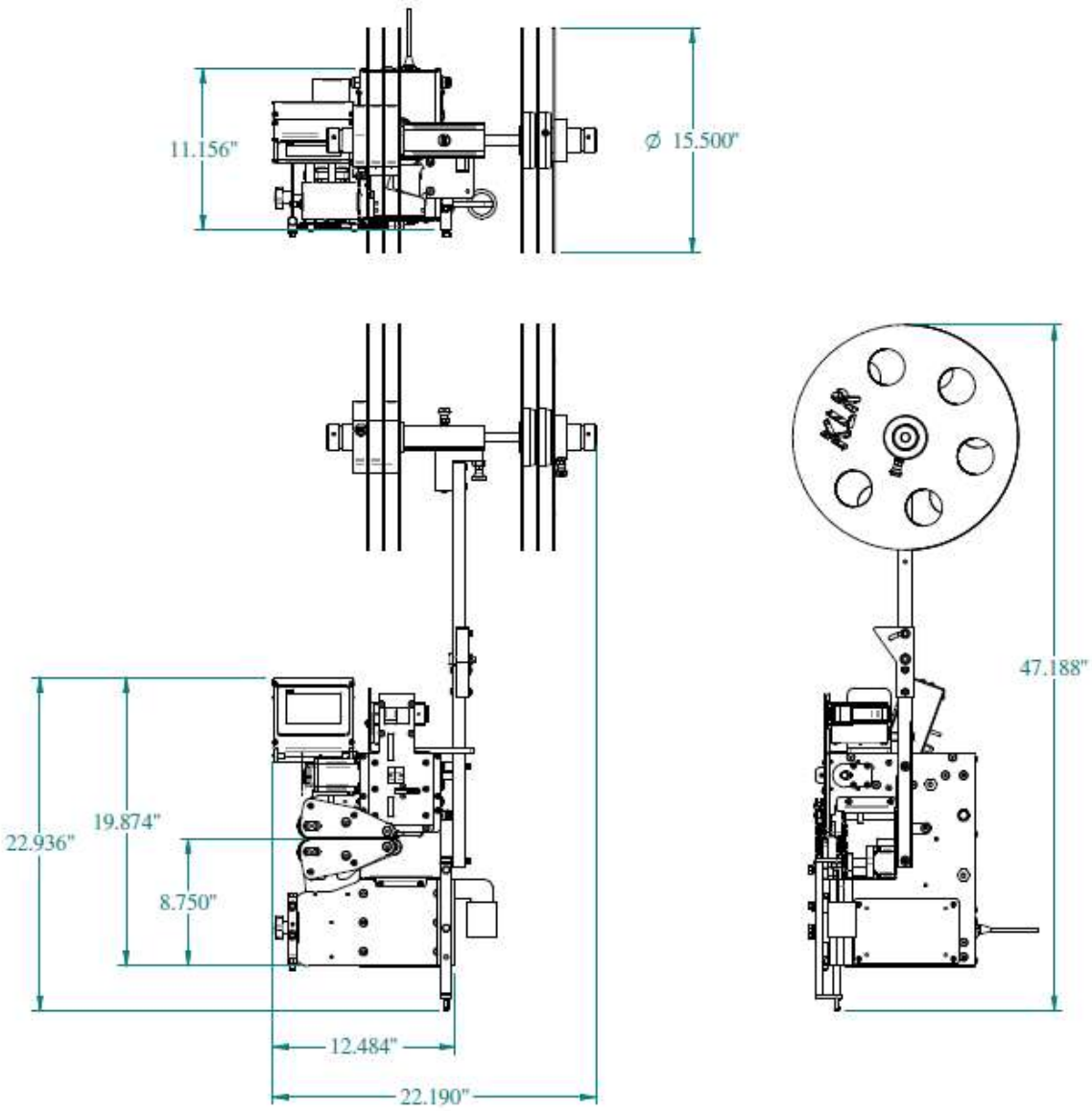
Final result:



4.4: Minimal space required

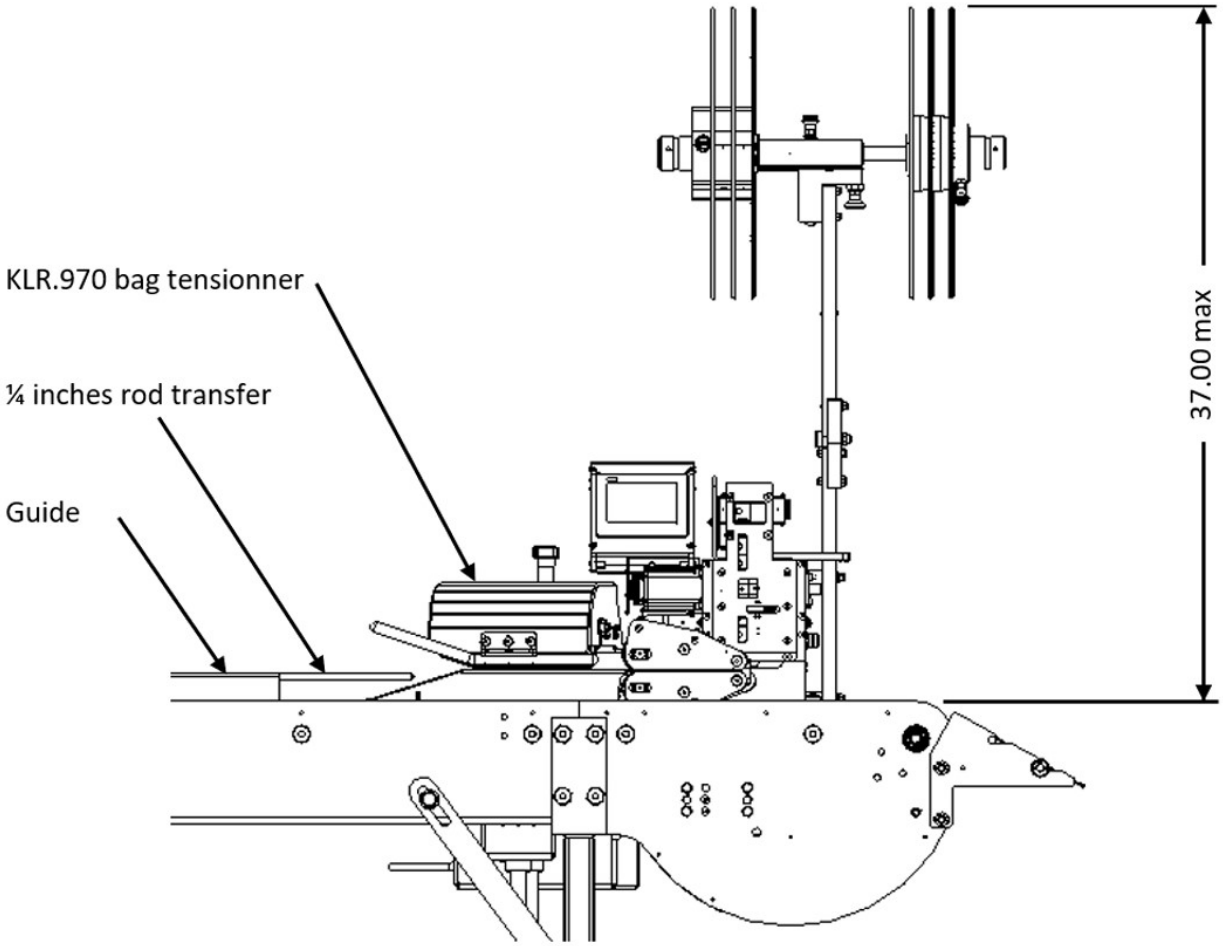
4.4.1: Stand alone

Minimal space required to install this equipment. Here are the overall dimensions of the KLR.950 alone:



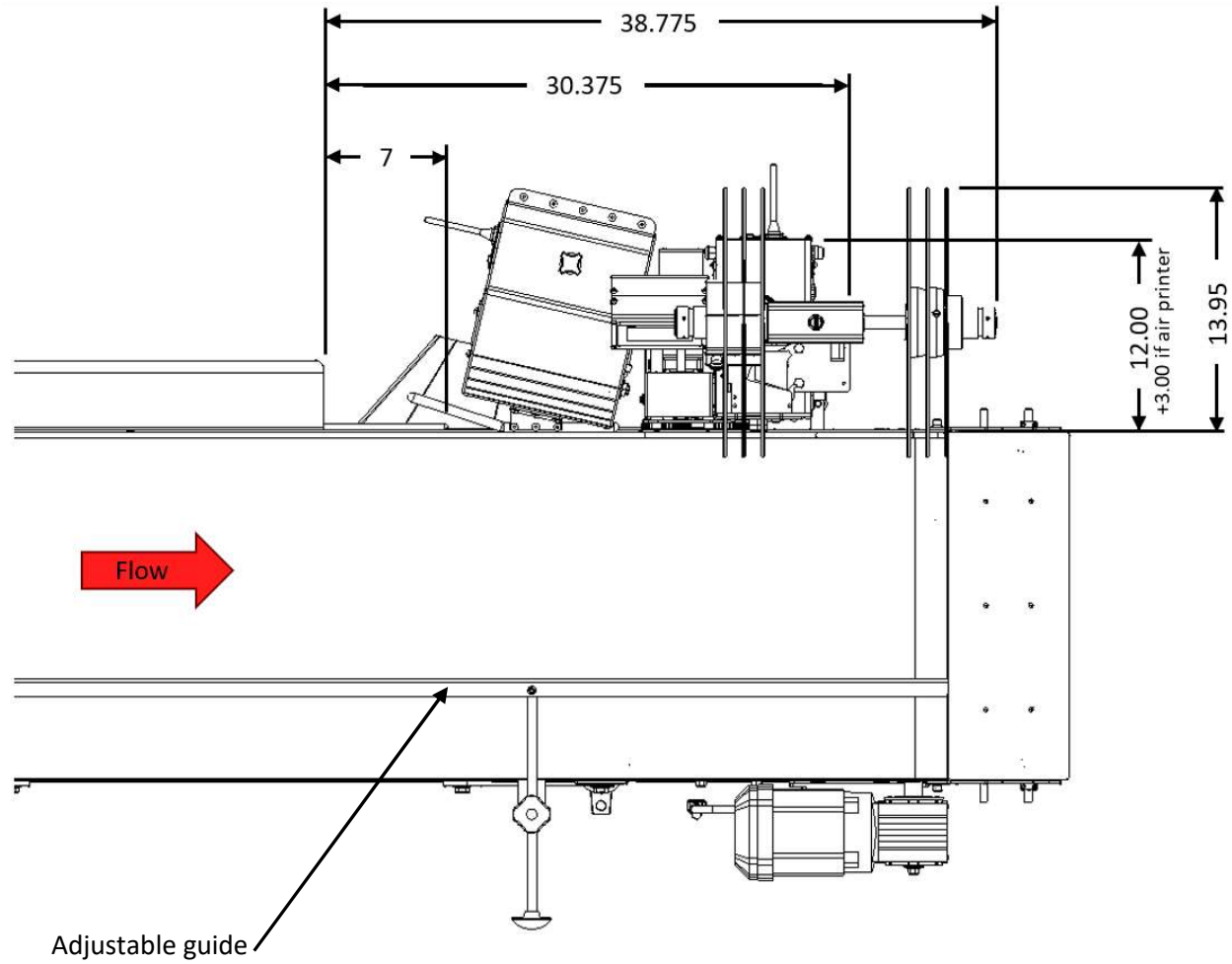
4.4.2: Minimum space required when installed on a conveyor

Refer to measuring for a standard setup with a KLR.950 and KLR.970. Products must be contrained by guides on both sides to prevent product going into the system. Those guides should at least be present until the bag tail is engaged into the KLR.950 bag closer machine. These is another view on the next page. Dimensions are in inches



Note: Multiple pieces have been removed to clarify the image

View from top

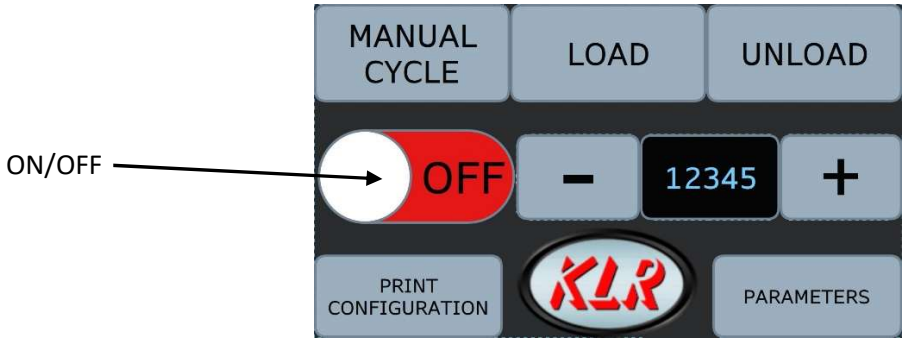


5.0: OPERATION

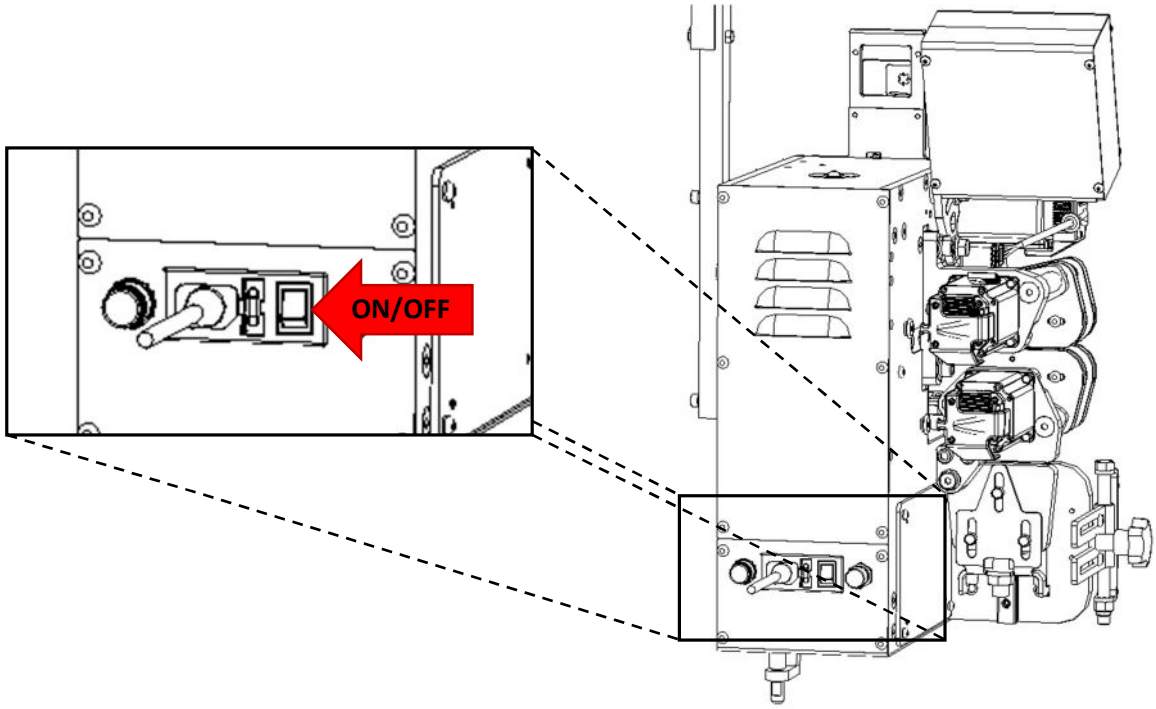
	➢ Before using the machine, it is important that every operator of the machine and maintenance personnel take part in a training session given by KLR systems technicians.
⚠ CAUTION	➢ ALWAYS turn OFF and UNPLUG the equipment before any maintenance procedures, cleaning, removing a jam or any other tasks that could hurt the user if the machine start promptly.

5.1: ON/OFF and emergency stop

Turn ON and OFF the machine is done on the display.

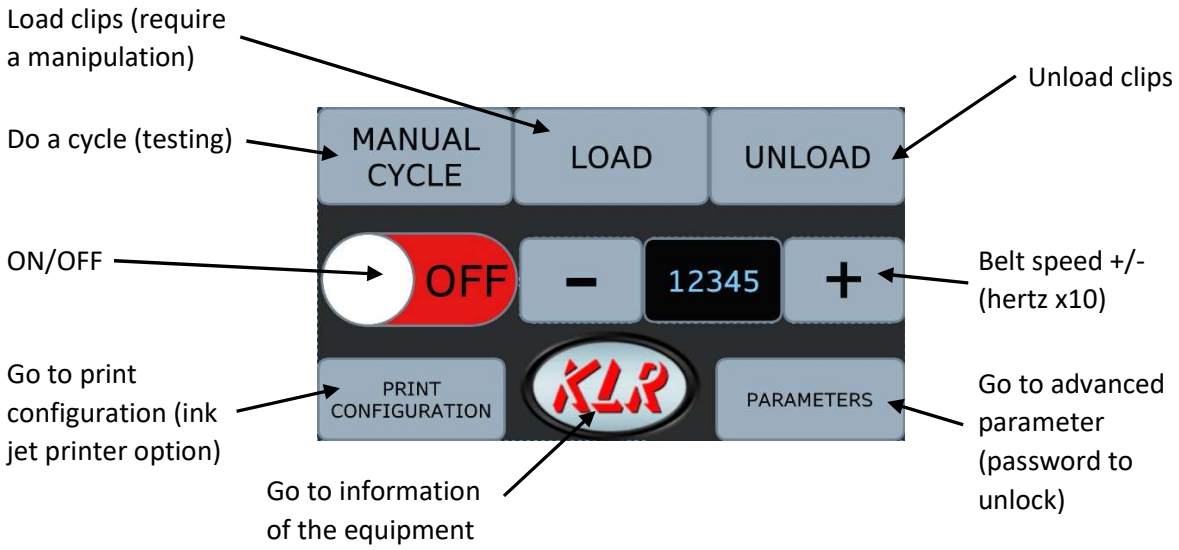


In the back off the machine, there is the main power switch. Turn OFF to remove any energy in the machine.



5.2: Main screen

This screen has most function the user would need on a daily tasks.

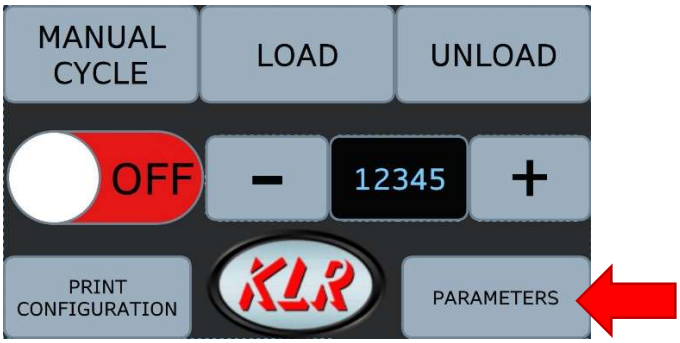


5.2.1: Unlock advanced parameters

Advanced parameter is locked when turning ON the machine. "Parameters" button can be relock manually. Locked parameters is shown by a pad lock icon.

Follow these steps to reach the advanced parameters such as delays, speed, timing, etc. Unlocking the advanced parameters is also changing permission in the printer configuration to do major changes.

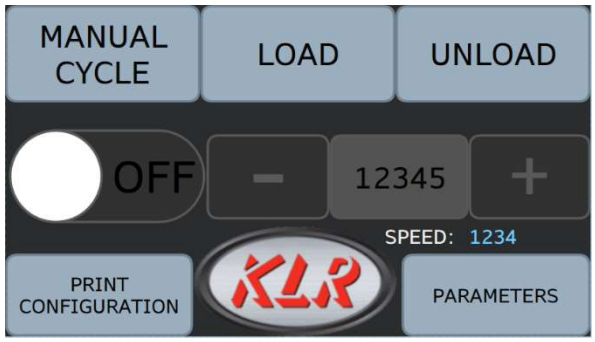
1. Press PARAMETERS.



2. Enter "user name", "password" by pressing their blank space and press LOGIN.

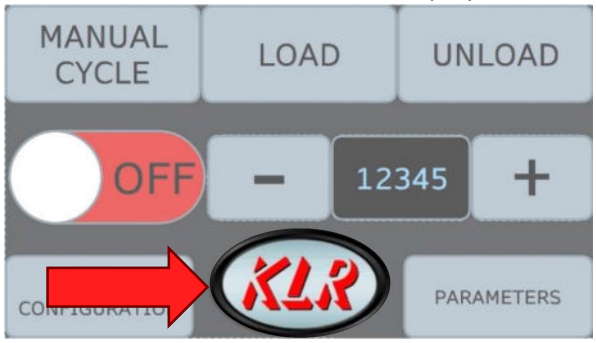
5.2.2: Interlock mod

The interlock mod would be activated when the bag closer is slave of another piece of equipment. That means the bag closer receive from the other machine a signal when to run with at what speed. See "**Configure interlock**" for more info. In this mod, speed and ON/OFF button would not be active.



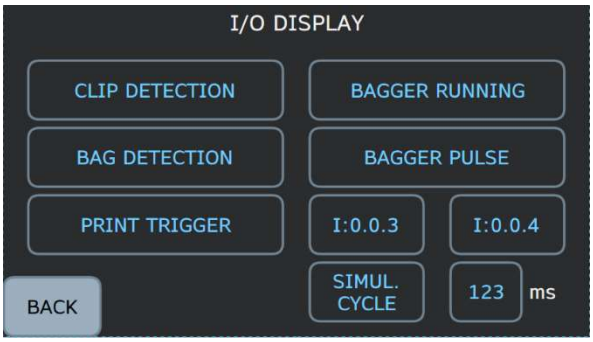
5.2.3: Information screen

Here where more information is displayed. To Reach this page, press the KLR logo.

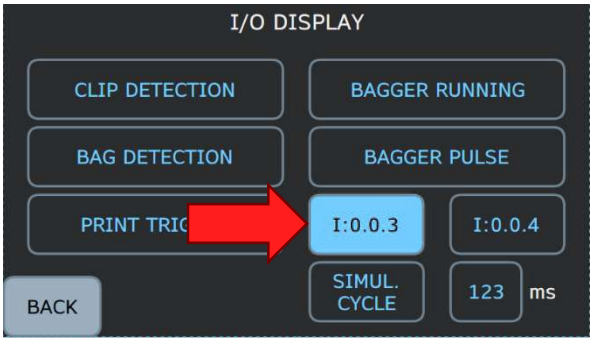


5.2.4: Troubleshooting page

To reach the troubleshooting page, click anywhere on the display on the information screen (**see 5.1.3**)

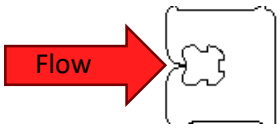


Now in this screen, user can test multiple things. For example, testing input 3 (I:0.0.3) will turn blue the icon if the PLC read succesfully the sensor.



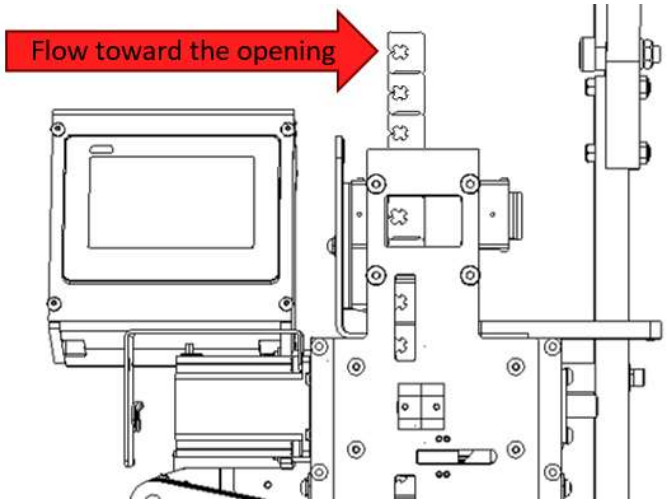
5.3: Load and unload clips

1. Turn ON the switch in the back of the equipment.
2. Add a clip roll onto the clip holder. Clips opening must be oriented toward the belt carriages. See installation procedures to know how to correctly position the clip holder according if it is a left or a right version.



3. Secure the clips with the back end inserting until it goes into the plunger clearance.
4. Remove the date sticker off the roll and keep the clip in the hand.

5. Make sure the first couple of clips are straight, then delicately insert the clip band into the rail until a restriction is felt. It should be free inside.



6. Press LOAD on the screen. It should automatically reach the receiving position.

7. If needed, test few cycles by pressing MANUAL CYCLE.

8. If needed, remove the clip by pressing UNLOAD.

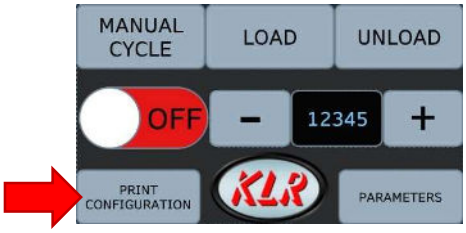
5.3.1: Clips run out

In case the bag closer run out of clips, a pop-up message will show up saying "Bag trigger jam". If the machine is in the interlock mod, it will send a signal to the bagger a stop request.

5.4: Ink jet printer configuration

Note: This section is only for the machine that has the KLR.937 "ink jet printer" option (**see KLR.937 manual**). Moreover, "air printer" is another option available on this equipment. To have more information regarding to air printer, (**see KLR.930 manual**).

Press PRINT CONFIGURATION button.



5.4: Turn ON the machine

- Turn power ON;
- Change the speed of the belts according to the speed of the conveyor;
- Press ON/OFF button;
- **Important**: Stay close by and inspect the first couple products.

5.4.1: Adjustment

During running, you may notice some irregularity or unproper closing, here is what to do to fix these problems quickly:

1. Clip is too close to the product: unscrew the angle bracket and rotate the machine slightly toward the exterior of the conveyor;

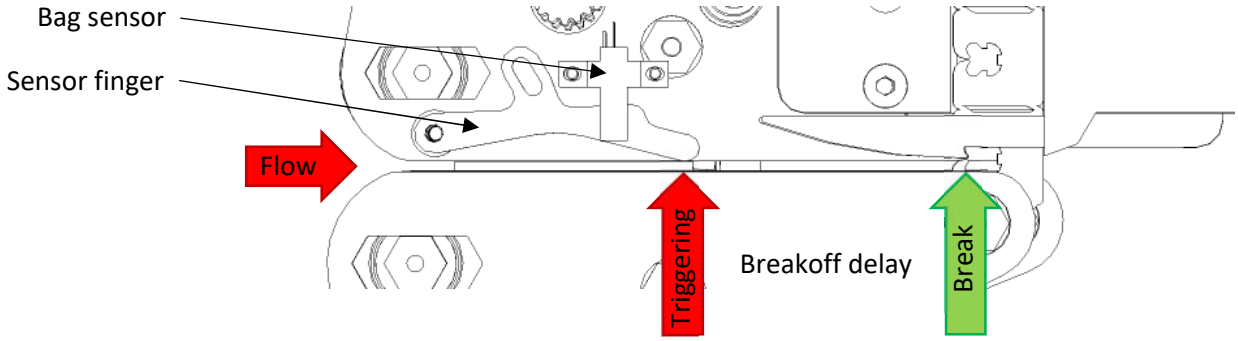
5.5: Advanced parameters

See "**Unlock advanced parameters**" to know how to reach this section. There is some configuration available on the first page. To change one of them, press the number itself. When finished, press LOGOUT to relock the parameters.

5.5.1 Breakoff delay

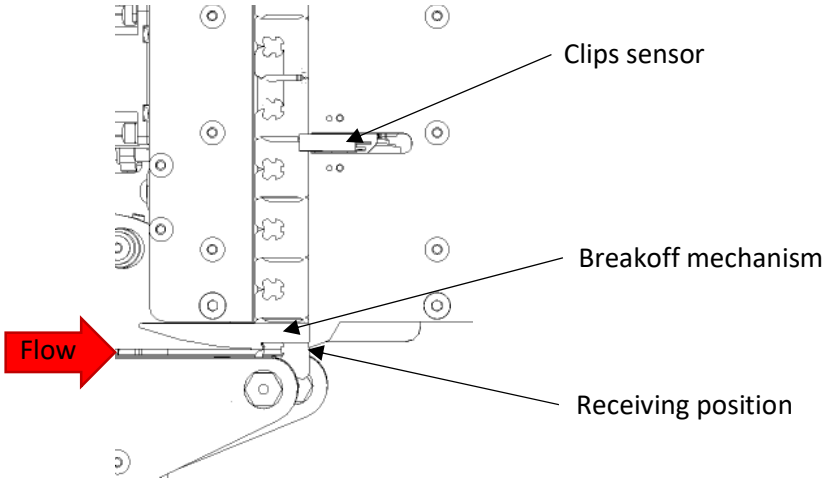
Time the machine is waiting before breaking the clip after the bag sensor as been triggered. However, the machine is only starting this delay when the sensor is triggered back off (at the end of the bag). When the bag is lifting the sensor finger, the sensor is sending the signal. A too short value will result in a bag not completely fitted in the clip. On the other hand, a too long value will retain the product and leave it sideways.

Note: Multiple pieces have been removed to clarify the image



5.5.2 Feed after lead qty

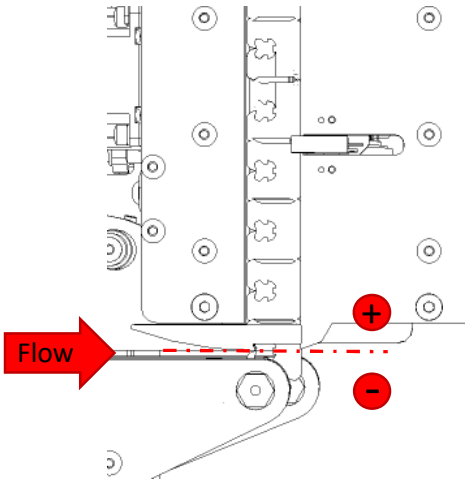
When the user is loading clips into the machine ("load" button), it will count this number to present one clip in the receiving position. 4 is the factory setting. If the machine is equipped with a printer (ink jet or air printer), the value will affect how many clips it needs to print as well.



Note: Multiple pieces have been removed to clarify the image

5.5.3 Position correction distance

This parameter tells the height the receiving clip needs to be. Basically, the clip's opening needs to be aligned in the middle of both upper and lower belts.



Note: Multiple pieces have been removed to clarify the image

5.6.4 Printing overtravel

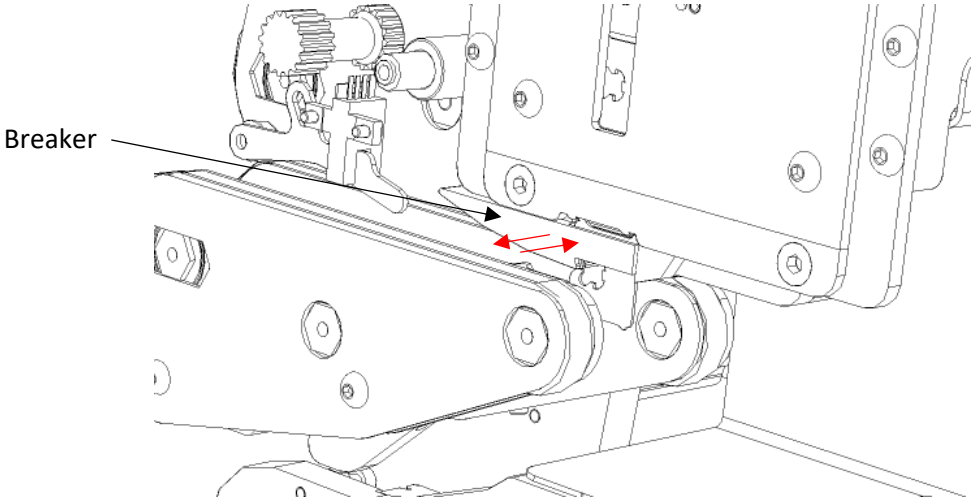
When needed, the machine can use the printing overtravel to extend a certain number of pulses of the feeder motor to make sure to print the full length of the clip. Usually set to 0 because it can be fix simply by adjusting the ink jet head.

5.6 Configurations

Press CONFIGURATIONS

5.6.1 Breaker stroke

A step motor is dedicated to the breaking mechanism. The motion is given to a cam. That cam does not allow a full rotation. Therefore, the "breaker stroke" tells how far the breaker needs to go to detach the clip before rotating back to complete the cycle.



Note: Multiple pieces have been removed to clarify the image

5.6.2 Start feeder position

At what position of the breaker on return the machine will start to feed the next clip.

5.6.3 Pause belt time

See "**pause belt option**" and check the box to allow the machine to use this function. When products are really close each other, it is the time the machine stop temporarily the belts until the machine is ready to receive the next product.

5.6.4 Bag sensor ON filter

Time in milliseconds the PLC acknowledge the bag sensor went ON.

5.6.5 Bag sensor OFF filter

Time in milliseconds the PLC acknowledge the bag sensor went OFF.

Breaker prep stroke

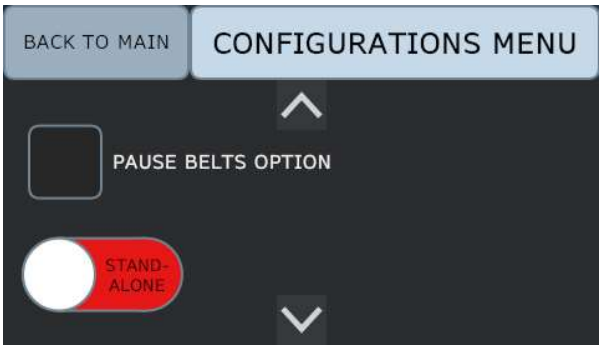
This parameter is only relevant on the machine set to **shear**. The machine set the shear against the clip without cutting it prior to receive the bag. Usually set to 2600 and it will help to get a 90° cut.

5.6.7 Air printer time

This parameter is only relevant when a air printer is installed on the machine. This is how many time the machine close the relay of the printer for compensate the travel of the air piston.

5.6.8 Pause belt option

Check the pause belt option box to utilise the "**pause belt time**".



5.7 Interlock

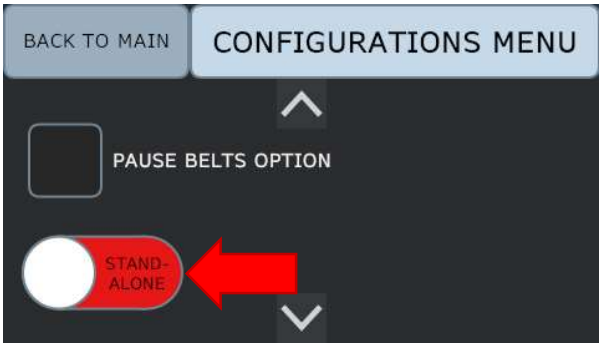
When the bag closer is slave of a bagger related to speed and automatic start and stop.

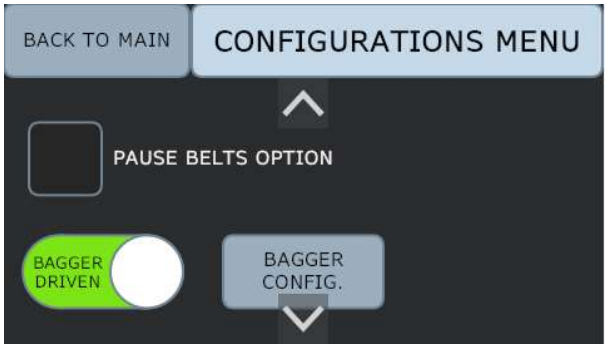
5.7.1 Interlock configuration

Follow these steps to configure the interlock:

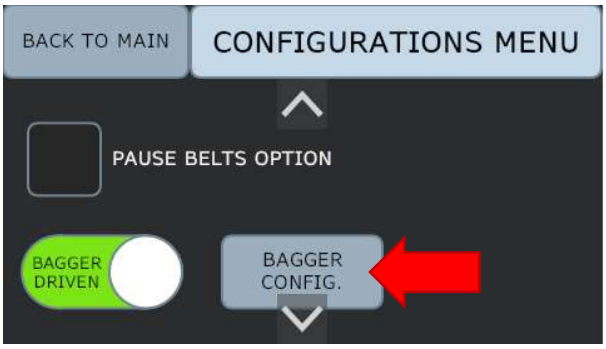
1. Press the down arrow to scroll down until you reach the interlock switch (which is written "stand alone" by default)

2. Press the interlock switch. The bagger configuration button will appear.





3. Press the bagger configuration button



Now on this page, the interlock can be configure.

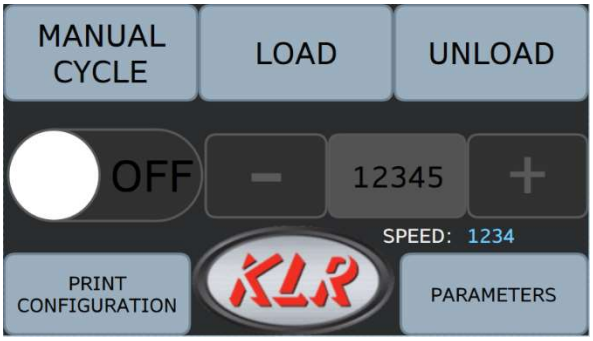
Check to use interlock

Ratio forced in decimal (must be greater to 0)

Enter in the black fields the desired ratio to be applied. Press CALC.

Reel number of pulses the bagger is currently sending to the KLR.950

By now, the ON/OFF and speed adjustment is no more accessible.

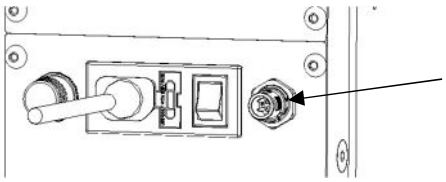


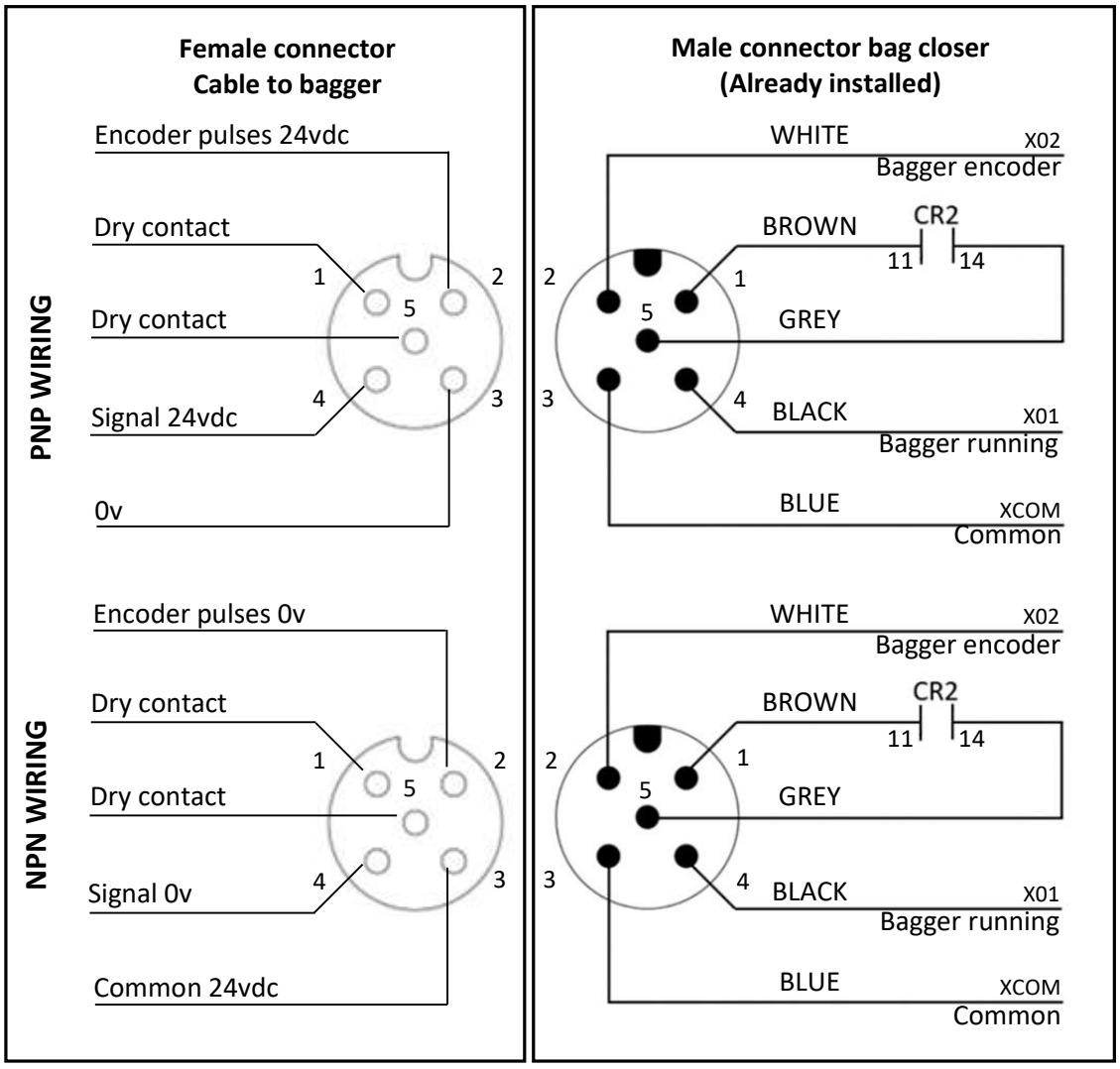
5.7.2 Interlock to bagger wiring

⚠	➢ ONLY qualified technician can perform this kind of task. A wrong wiring can result in a breakage of the bagger controller or other components. For any questions, call KLR for advices.

Pin out of the bag closing machine

The bag closer KLR.950 has a built in 5 pins plug intended to communicate to the bagger. This feature allows the bagger to constantly communicate a certain speed to the bag closer to follow. The following picture show the wiring of the connector. See "**Configure interlock**" for more info.





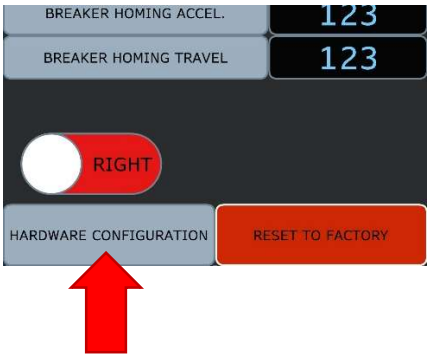
5.8: Miscellaneous configuration

Left/right button

Only relevant in the factory setting. Leave as is.

5.9: Hardware configuration

To reach the hardware configuration, press the button at the end of the parameters



6.0: MAINTENANCE AND CLEANING

6.1: Preventive maintenance schedule

Here is a quick way to take care of your machine by a preventive maintenance schedule. Due to the complexity of our machine, take note that these procedures are only advices and are subject to change. These time intervals will change according to the usage of the machine:

PREVENTIVE MAINTENANCE SCHEDULE			
Location	**Procedure**	**Time interval**	**Remarks**
Front and rear belt guide	Check tension and wear on four (4) toothed belts, Change belts	Weekly, vary according to the working time.	Look for frayed sides, wire exposed, missing tooth or splitting.
	Inspect the sprockets and idle	When belt changing	Sprocket must be slide fit into the spline shaft
	Grease the linear bearing	3 months	1 or 2 push of grease is enough
	Test the pressure applied to the bag when engaged	3 months	When a bag in engaged, you should not be able to pull off the bag with a moderate effort
Rear	Remove rear panel. Look the gears wear and lubricate	3 months	Look for little metal chips. Lubricate the gearing and cycles
	Verify the die spring is right in place	3 months	None
Cleaning	Air blow all the dust, wipe excess grease.	daily	Turn OFF the power supply

6.2: Maintenance steps

6.2.1: Changing belts

Changing belts in the most common task to do on the bag closer machine. Follow these following steps to change them:

Bottom belts

1. Turn OFF the equipment and remove completely the power cord from the machine;
2. Securely put the machine on the flat side on a workbench;

3. With a pair of nose pliers, dislodge the two (2) springs from the bottom belt holder assembly;

4. Lift the machine back up;
5. With an Allen key 5/32, remove the two (2) front bottom head screws and remove the front plate;

6. Remove the front belt;

7. Remove the sprocket from the spline shaft.

8. Inspect each bearing to see if they are rolling freely and nothing is stuck in them;

9. Remove the remaining to the first assembly;

10. Loosen both set screws (2) using an Allen key 5/64 and remove that part;

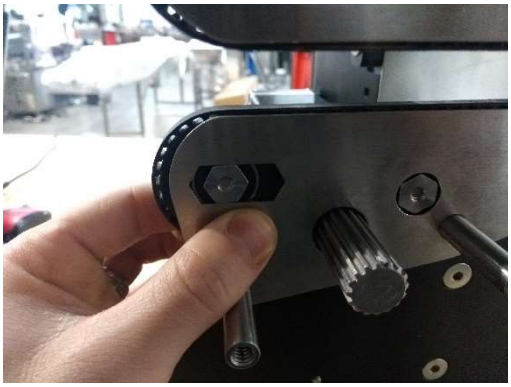

11. Remove both spacers and the second plate as well;


12. Remove the rear belt;

13. As the first holder, inspect the sprocket and the three (3) bearings for any damage, looseness, no plastic from bags or product are stuck on them. Replace if needed;


14. Replace the belt. Tensioning will be done at the end if needed. Careful, there are two size of belts

15. Put back the plate by making sure the bearing nut is well engaged into it



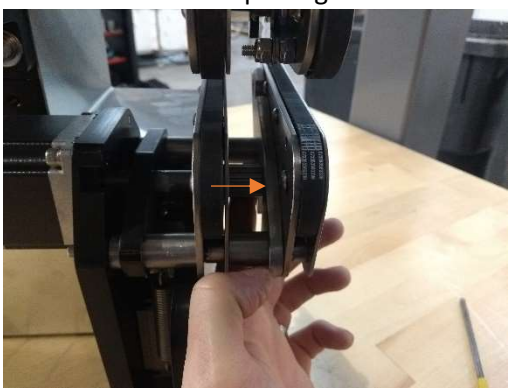
16. Insert the spacers and the bevel part, but leave the set screws for later;

17. Continue with the next assembly. Like the other one, inspect the sprocket and the bearings. Replace if needed;


18. Replace the front belt. Tensioning will be done later. Careful, there is two size of belt;

19. Put back the front plate, make sure the bearing nut is well engaged into the plate and tight it with the screws;


20. Now slide the bevel part against the front assembly and tight the set screws;



21. Now, check the tension of the new belts. If needed, tension it by the bottom head screws behind each holder. An Allen key 1/8 90 degrees is required;

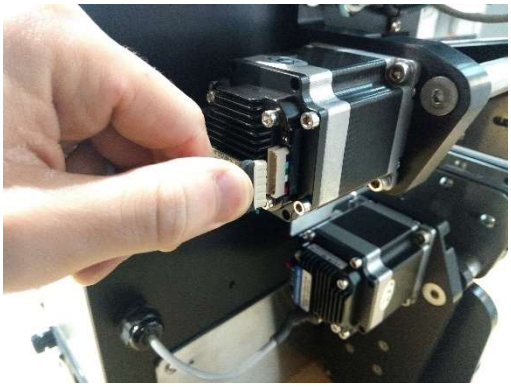
Top belts

The procedure is different from the bottom assembly:

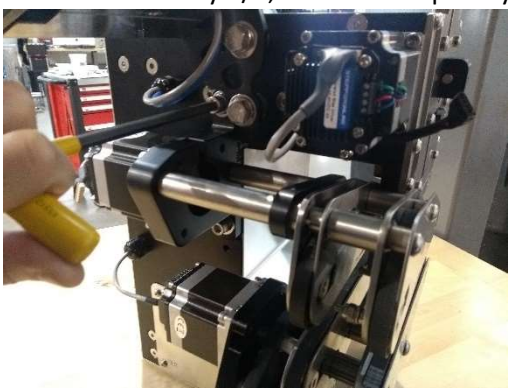
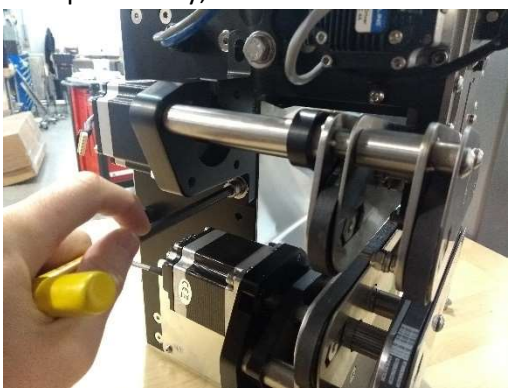
1. Turn OFF the equipment and remove completely the power cord from the machine;
2. Remove carefully the connector from the finger sensor;

3. Remove carefully the connector from the top driving stepper motor;

⚠	➢ NEVER remove a motor connector when power is ON. ALWAYS turn OFF the equipment before. Go against this notice can result in material damage.



4. With an Allen key 1/4, remove completely the top assembly;

5. From now on, the procedure is close to the bottom assembly. Dissemble as shown:



6. When the sprocket is fairly new, it might be relatively tight onto the spline shaft. In that case, use gently a flat screwdriver or a small crowbar as shown;

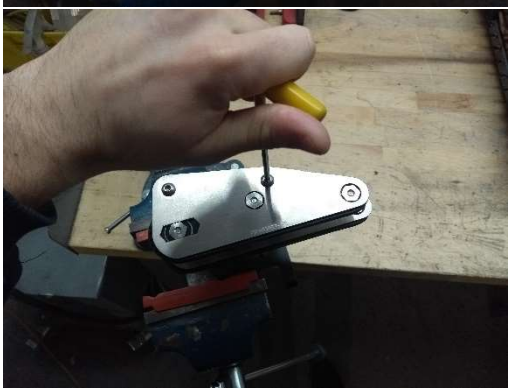
7. Continue to disassemble as shown:

8. Inspect both brass sprockets and all six (6) bearings for any damage, looseness or things stuck on them. Replace when needed;

9. Reassemble with the new belts by following the reverse order, but by following these tips. Careful, there is two size of belts;







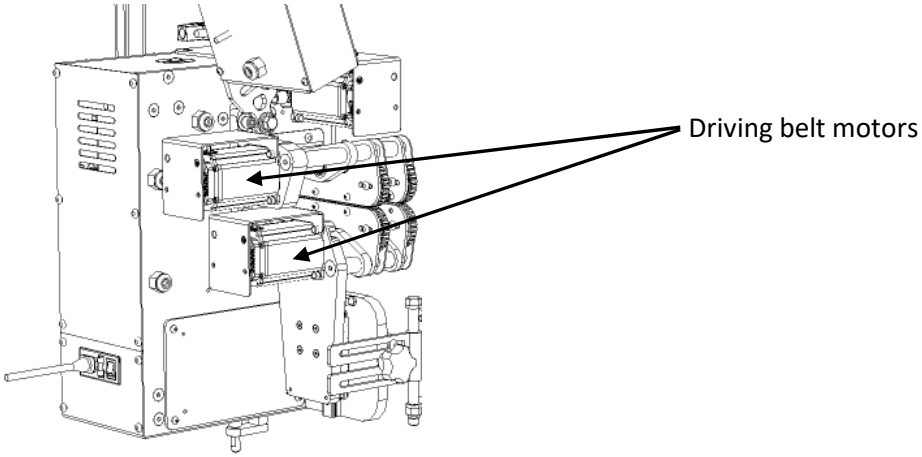
10. Now, check the tension of the new belts. If needed, tension it by the bottom head screws behind each holder. An Allen key 1/8 90 degrees is required;

6.2.2: Stepper motor drive

⚠ WARNING	➢ NEVER remove a motor connector when power is ON. ALWAYS turn OFF the equipment before. Go against this notice can result in material damage.

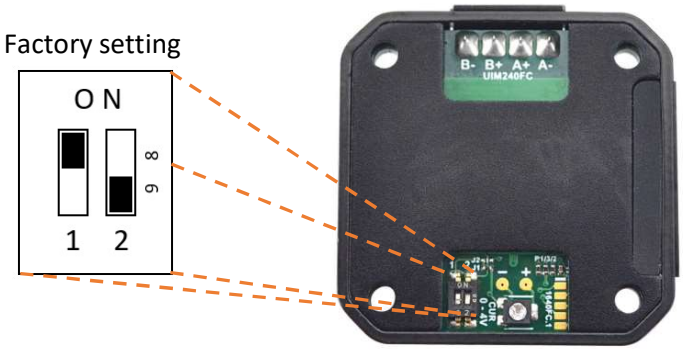
Deep switches setting

Only for the **driving belt motor**, this procedure needs to be taken into consideration when replacing the drive.



Part number: PE-01533

On the back of the stepper drive, the switch should be already set properly by default:

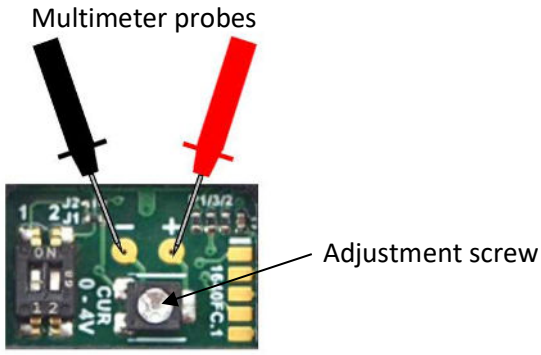


CUR adjustment

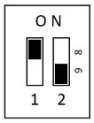
The voltage must be adjusted to 4 volts:

1. Wire the new stepper drive to the power supply and leave it detached from the motor;
2. Make sure both switches are OFF;

3. Use a multimeter set to **voltage** to probe negative and positive as shown and adjust to 4 volts with a small screwdriver;

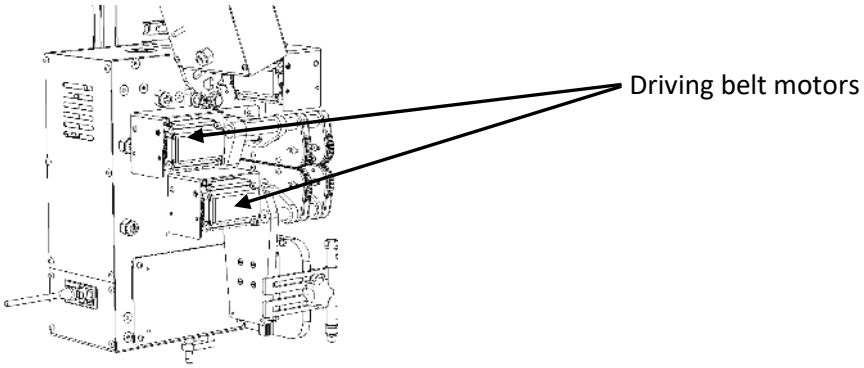


4. Flick the switch 1 to ON.



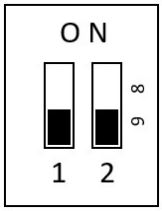
Driving belt motor setting

Every stepper motor is the same type. However, the integrated step drive on the belt motors must be set differently than factory setting. The other two stepper motors remain factory setting:



When replacing the drive, locate onto the integrated drive the setting switches, flick the switch 2 to position ON:

Other stepper motors



Driving belt motors setting

Troubleshooting

Problem: One of the driving stepper motor is turning the wrong way.

Most of the time, it is the relay CR-1 is defect or it does not receive the signal.

6.2.3: Disassemble half of top belt holder

That way, there is no need to readjust the height afterward:

1. Unplug gently the finger sensor;

2. Disassemble half of the top belt holder. That way, no need to readjust afterward;

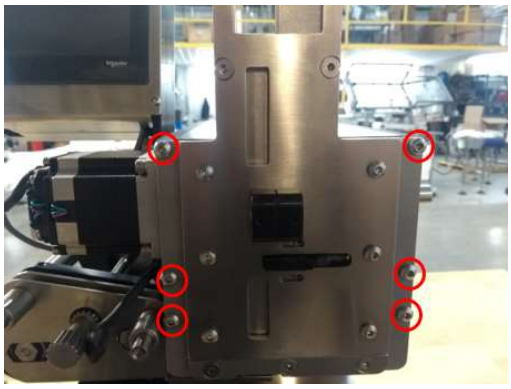




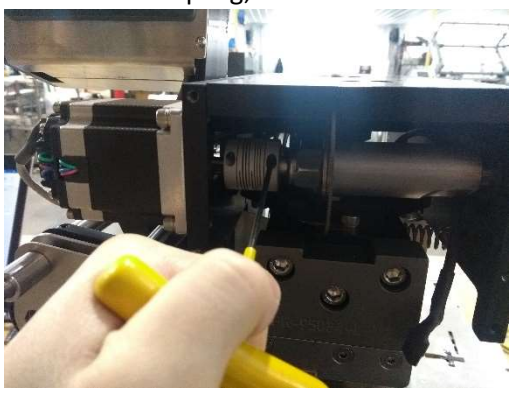

6.2.4: Feeder motors

If it is needed to replace the motor, follow these steps:

1. Follow the "**disassemble half of top belt holder**" procedures before continuing;
2. Remove all six (6) bottom head screws. **Careful**, do NOT pull hard on the assembly after removing those screws because there is a wire connected;

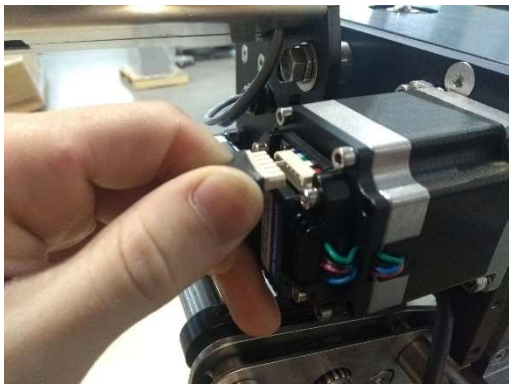



3. Either unplug the connector or remove the two (2) screws (make sure to reassemble the same way later);
4. Loosen the coupling;

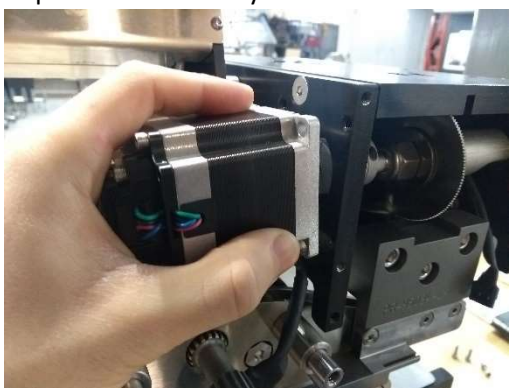


5. Unplug gently the feeder motor connector and unscrew the four (4) screws of the motor **Careful:** These motors are fragile to impact, avoid dropping them.

⚠	➢ NEVER remove a motor connector when power is ON. ALWAYS turn OFF the equipment before. Go against this notice can result in material damage.



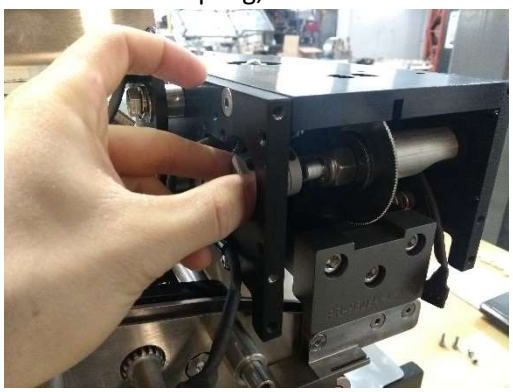

6. Replace the motor by reassemble in the reverse order.



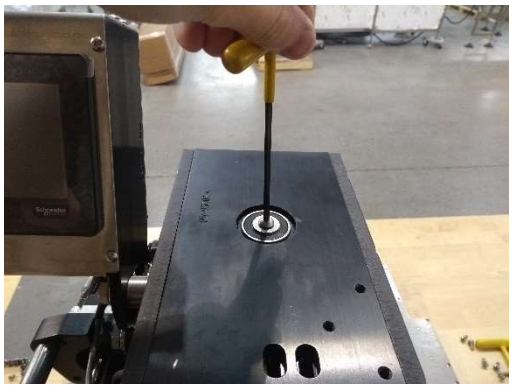
6.2.5: Replacing the jewelry saw

The jewelry saw may need to be replaced at some point over a long period of working time. Usually to fix feeding problem: saw is not biting into the clips but slip. However, it might only be the plunger on the side that does not apply enough pressure on the clips.

1. Follow the procedure "**feeder motors**" step 1 to 5 before continuing;
2. Remove the coupling;

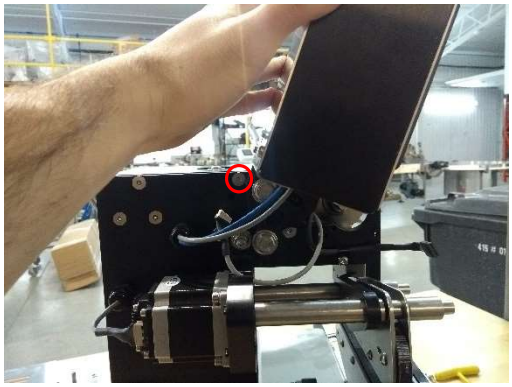


3. Remove the top screw;
   Note: you may need to remove the back panel in order to hold one of the gears by hand to be able to loosen that screw.

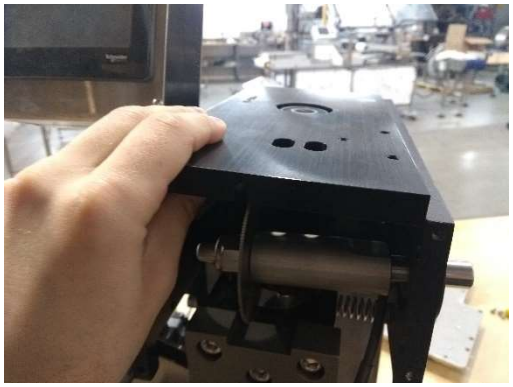
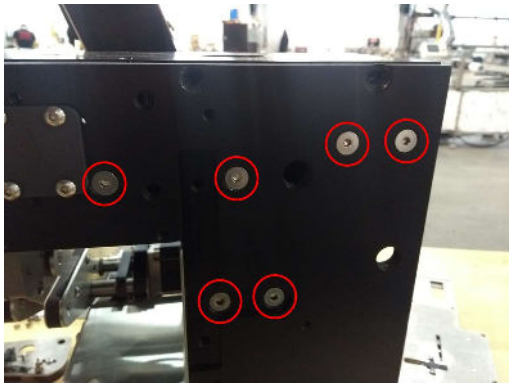


4. Remove all six (6) flat head screws using a 5/32 Allen key;

5. For the last screw, the two (2) hexagonal screws of the screen bracket need to be loosen with a 9/16 wrench;

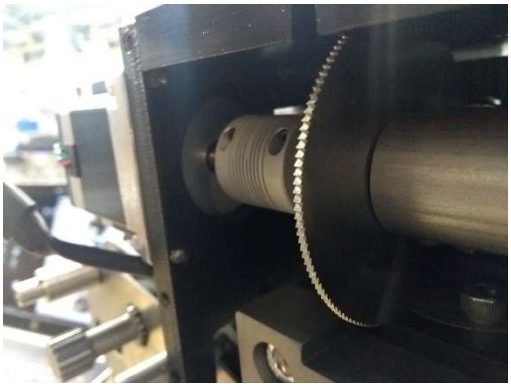



6. Take off the top frame. If it is too tight to remove, loosen a quarter turn or these flat head screws (remember to retighten them);

7. Dislodge the feeder shaft;

8. Remove the jewelry saw with a 3/4 wrench. Make sure the teeth will be oriented down as shown;

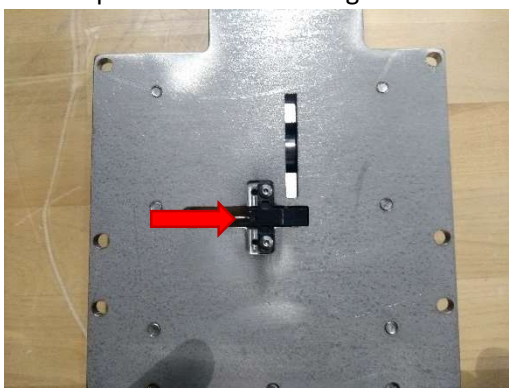


9. Replace the saw and reassemble by following the reverse order.

6.2.6: Replacing the feeding sensor

Follow these steps:

1. Follow the procedure "**feeder motors**" step 1 to 3 before continuing;
2. Then replace the sensor using the same screw pattern;



3. Reassemble by following the reverse order, do not forget the reconnect the sensor.

6.2.7: Replacing the finger sensor

1. Follow the "**disassemble half of top belt holder**" procedures before continuing;
2. Then replace the sensor;

3. Reassemble by following the reverse order.

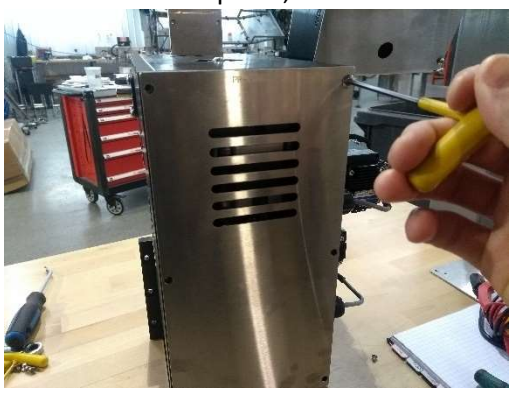
6.2.8: 24 volts power supply

CAUTION	➢ Electrification or electrocution hazard, only qualified technician can perform these tasks.

When changing the power supply, or to troubleshoot a not functioning ink printer. The power supply must be set to 28 volts rather than 24 volts. In order to do set it:

Note: From KLR, the power supply setting will always be 28 volts regardless of what options on the machine. But in fact, only the machine that uses an ink jet printer must be cranked to 28 volts

1. Remove the back panel;



2. Turn ON the machine;
3. With a multimeter set to DC, probe the + and – from the output and use a terminal screwdriver on the ADJUST screw;

4. Adjust the voltage until you reach 28 volts;

6.2.9: Cleaning

Cleaning must be done daily.

- Use air blowers to get rid of the dust;
- Wipe all excess grease;
- Sanitize parts that can be in contact with food;

7.0: MAINTENANCE AND REPARATIONS BY TECHNICIANS FROM KLR SYSTEMS INC.

7.1: Contact information for service technicians

KLR SYSTEMS INC.

944 Herons street

SAINT-PIE, QUÉBEC, CANADA

J0H 1L0

450-388-0404

Info@klrsystems.com

www.klrsystems.com

7.2: Contact information for technical support

KLR SYSTEMS INC.

944 Herons street

SAINT-PIE, QUÉBEC, CANADA

J0H 1L0

450-388-0404

support@klrsystems.com

www.klrsystems.com

8.0: LISTS OF SPARE PARTS AND CONSUMABLES

There are multiple options available for your machine. If you need to order a piece, make sure to look in the right list. If you need assistance, see contact information right above.

8.1: Spare parts list KLR.950 BREAKER LEFT

Suggested spare part list per machine for KLR.950-L

Numbers	Part numbers	Quantity	Descriptions
1	OS-054S	2	SPRING, OD 3/8'', WIRE 0.041'', 3 3/4'' LG.
2	OS-045	2	SPRING
3	PE-00216	5	FUSE GLASS 3 AMPS
4	PE-00223	5	FUSE GLASS 2 AMPS
5	PE-01514-ASS	1	SINGLE AXIS MOTOR WITH DRIVE 2.8A
6	PM-00275	1	JEWELERS HSS SLOTING SAW, OD 2 1/2'', BORE 1/2'', .057'' THICKNESS
7	PM-01520	4	BEARING
8	P02-00095	8	BEARING
9	PR-95091	2	DRIVE PULLEY
10	PR-95059	2	IDLE WHEEL
11	PR-95116	2	PULLEY NUT
12	PR-95090	1	UPPER SPLINE DRIVE SHAFT
13	PE-01517	2	SENSOR OPTICAL 5MM MOD SLOT TYPE
14	PR-95095	1	BAG FINGER
15	PM-00269	1	PLASTIC RETRACT. PIN 1/2"
16	P02-00133	1	BEARING
17	PM-00350-16	6	FRONT TIMING BELT XL
18	PM-00350-18	6	REAR TIMING BELT XL
19	P02-00018	1	CAM FOLLOWER BEARING
20	PM-00277	1	FLEX SHAFT COUPLER
21	PR-95156	1	PIN
22	OS-130	1	SPRING
23	PE-95001	1	STEPPER MOTOR WIRE
24	PR-95145	1	BELT BASE FOR SPRING STEEL
25	PR-95146	1	BELT BASE
26	PR-95147	1	BELT BASE
27	PR-95148	1	BELT BASE FOR SPRING STEEL
28	PE-95002-1	1	ENCODER WIRE
29	PR-95002-2	1	BAG SENSOR WIRE
30	PR-95143-L-BREAK	1	LEFT BREAKER
31	PR-95016-BREAK	1	BREAK PLATE

8.2: Spare parts list KLR.950 BREAKER RIGHT

Suggested spare part list per machine for KLR.950-R

Numbers	Part numbers	Quantity	Descriptions
1	OS-054S	2	SPRING, OD 3/8'', WIRE 0.041'', 3 3/4'' LG.
2	OS-045	2	SPRING
3	PE-00216	5	FUSE GLASS 3 AMPS
4	PE-00223	5	FUSE GLASS 2 AMPS
5	PE-01514-ASS	1	SINGLE AXIS MOTOR WITH DRIVE 2.8A
6	PM-00275	1	JEWELERS HSS SLOTING SAW, OD 2 1/2'', BORE 1/2'', .057'' THICKNESS
7	PM-01520	4	BEARING
8	P02-00095	8	BEARING
9	PR-95091	2	DRIVE PULLEY
10	PR-95059	2	IDLE WHEEL
11	PR-95116	2	PULLEY NUT
12	PR-95090	1	UPPER SPLINE DRIVE SHAFT
13	PE-01517	2	SENSOR OPTICAL 5MM MOD SLOT TYPE
14	PR-95095	1	BAG FINGER
15	PM-00269	1	PLASTIC RETRACT. PIN 1/2"
16	P02-00133	1	BEARING
17	PM-00350-16	6	FRONT TIMING BELT XL
18	PM-00350-18	6	REAR TIMING BELT XL
19	P02-00018	1	CAM FOLLOWER BEARING
20	PM-00277	1	FLEX SHAFT COUPLER
21	PR-95156	1	PIN
22	OS-130	1	SPRING
23	PE-95001	1	STEPPER MOTOR WIRE
24	PR-95145	1	BELT BASE FOR SPRING STEEL
25	PR-95146	1	BELT BASE
26	PR-95147	1	BELT BASE
27	PR-95148	1	BELT BASE FOR SPRING STEEL
28	PE-95002-1	1	ENCODER WIRE
29	PR-95002-2	1	BAG SENSOR WIRE
30	PR-95143-R-BREAK	1	RIGHT BREAKER
31	PR-95016 -BREAK	1	BREAK PLATE

8.3: Spare parts list KLR.950 LEFT SHEAR

Suggested spare part list per machine for KLR.950-S-L

Numbers	Part numbers	Quantity	Descriptions
1	OS-054S	2	SPRING, OD 3/8'', WIRE 0.041'', 3 3/4'' LG.
2	OS-045	2	SPRING
3	PE-00216	5	FUSE GLASS 3 AMPS
4	PE-00223	5	FUSE GLASS 2 AMPS
5	PE-01514-ASS	1	SINGLE AXIS MOTOR WITH DRIVE 2.8A
6	PM-00275	1	JEWELERS HSS SLOTING SAW, OD 2 1/2'', BORE 1/2'', .057'' THICKNESS
7	PM-01520	4	BEARING
8	P02-00095	8	BEARING
9	PR-95091	2	DRIVE PULLEY
10	PR-95059	2	IDLE WHEEL
11	PR-95116	2	PULLEY NUT
12	PR-95090	1	UPPER SPLINE DRIVE SHAFT
13	PE-01517	2	SENSOR OPTICAL 5MM MOD SLOT TYPE
14	PR-95095	1	BAG FINGER
15	PM-00269	1	PLASTIC RETRACT. PIN 1/2"
16	P02-00133	1	BEARING
17	PM-00350-16	6	FRONT TIMING BELT XL
18	PM-00350-18	6	REAR TIMING BELT XL
19	P02-00018	1	CAM FOLLOWER BEARING
20	PM-00277	1	FLEX SHAFT COUPLER
21	PR-95156	1	PIN
22	OS-130	1	SPRING
23	PE-95001	1	STEPPER MOTOR WIRE
24	PR-95145	1	BELT BASE FOR SPRING STEEL
25	PR-95146	1	BELT BASE
26	PR-95147	1	BELT BASE
27	PR-95148	1	BELT BASE FOR SPRING STEEL
28	PE-95002-1	1	ENCODER WIRE
29	PR-95002-2	1	BAG SENSOR WIRE
30	PR-95143-L-SHEAR	1	SHEAR LEFT
31	PR-95016-SHEAR	1	SHEAR PLATE

8.4: Spare parts list KLR.950 RIGHT SHEAR

Suggested spare part list per machine for KLR.950-S-R

Numbers	Part numbers	Quantity	Descriptions
1	OS-054S	2	SPRING, OD 3/8'', WIRE 0.041'', 3 3/4'' LG.
2	OS-045	2	SPRING
3	PE-00216	5	FUSE GLASS 3 AMPS
4	PE-00223	5	FUSE GLASS 2 AMPS
5	PE-01514-ASS	1	SINGLE AXIS MOTOR WITH DRIVE 2.8A
6	PM-00275	1	JEWELERS HSS SLOTING SAW, OD 2 1/2'', BORE 1/2'', .057'' THICKNESS
7	PM-01520	4	BEARING
8	P02-00095	8	BEARING
9	PR-95091	2	DRIVE PULLEY
10	PR-95059	2	IDLE WHEEL
11	PR-95116	2	PULLEY NUT
12	PR-95090	1	UPPER SPLINE DRIVE SHAFT
13	PE-01517	2	SENSOR OPTICAL 5MM MOD SLOT TYPE
14	PR-95095	1	BAG FINGER
15	PM-00269	1	PLASTIC RETRACT. PIN 1/2”
16	P02-00133	1	BEARING
17	PM-00350-16	6	FRONT TIMING BELT XL
18	PM-00350-18	6	REAR TIMING BELT XL
19	P02-00018	1	CAM FOLLOWER BEARING
20	PM-00277	1	FLEX SHAFT COUPLER
21	PR-95156	1	PIN
22	OS-130	1	SPRING
23	PE-95001	1	STEPPER MOTOR WIRE
24	PR-95145	1	BELT BASE FOR SPRING STEEL
25	PR-95146	1	BELT BASE
26	PR-95147	1	BELT BASE
27	PR-95148	1	BELT BASE FOR SPRING STEEL
28	PE-95002-1	1	ENCODER WIRE
29	PR-95002-2	1	BAG SENSOR WIRE
30	PR-95143-R-SHEAR	1	SHEAR RIGHT
31	PR-95016-SHEAR	1	SHEAR PLATE

9.0: CHECK LIST

When assembled in our facility, we do have a standard applied on each machine we produce to ensure quality. To be transparent to our customer and prove that important steps have not been forgotten. Keep in mind that most of the steps aren't in this list because of the complexity of the machine, but the steps that are specific to this assembly.

START UP CHECK LIST FOR BAG CLOSER KLR.950

General		
Where	**Tasks**	**Check**
Opposite side of the touch screen, on the body.	Make sure the nameplate is installed and filled with the correct values: -Type: -Model: -Serial: -Voltage: -Hz: -Amps: Phases:	☐N/A ☐
N/A	Verify that all the options are installed and functional	☐N/A ☐

Mechanic		
Where	**Tasks**	**Check**
Breaker part	Do a cycle and make sure the correct option is installed according the customer needs (break or shear option):	Break ☐ Shear ☐
Belts	Check the tension of each belt.	☐N/A ☐
Carriage (belt holder)	Make sure top holder is well adjusted in height to lined up with the clips opening.	☐N/A ☐
	Check the top and bottom holder are parallel	☐N/A ☐
	Check both springs are installed, and the tension applied to the bag is enough	☐N/A ☐

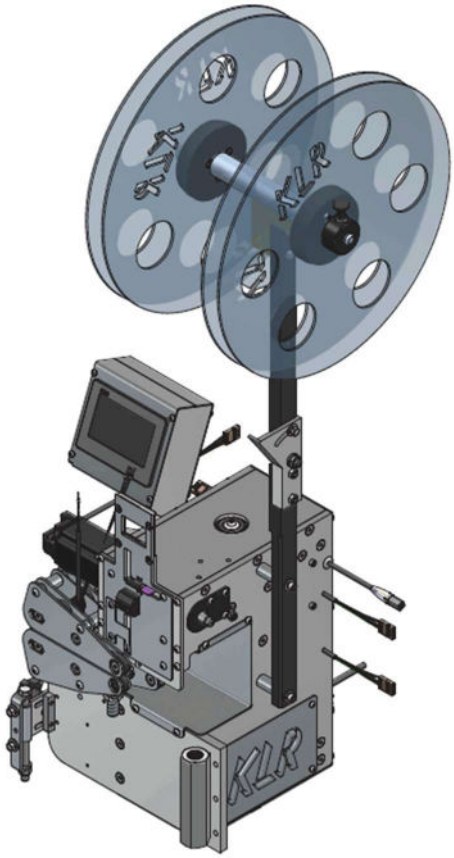
Electric		
Where	**Tasks**	**Check**
Driving belt motors	Make sure the switch number 1 on the driving belt stepper motors are set to ON	☐N/A ☐
Power supply	Power supply must be set to 28 volts factory	☐N/A ☐

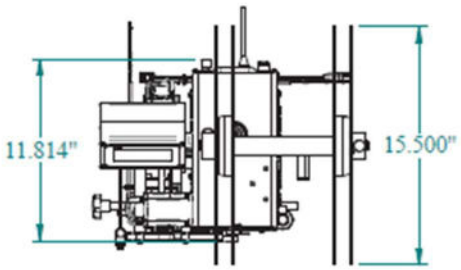
DATE: _____ TECHNICIAN SIGNATURE: _____

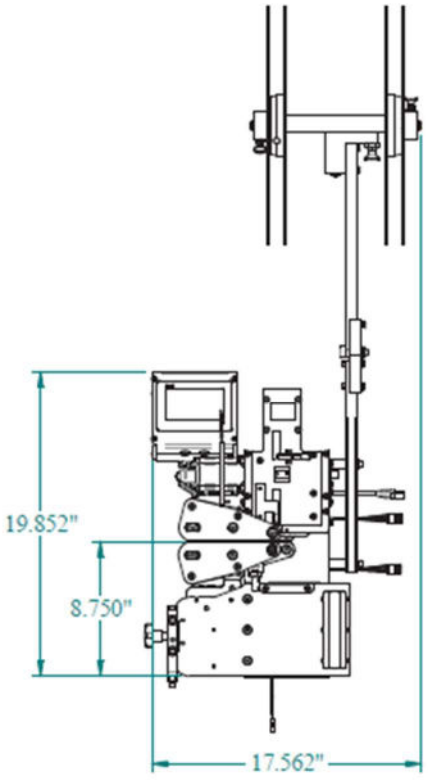
10.0: DECOMMISSIONING OF THE PRODUCT

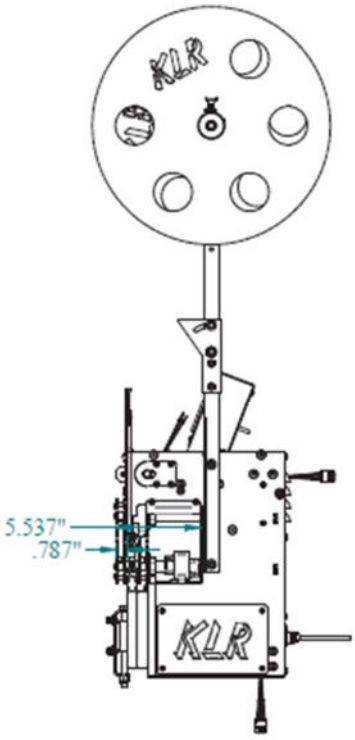
It is advisable to plan a tour of KLR to reinstall the equipment after a prolonged deactivation or a move, destruction, recycling, disposal.

11.0: EXPLODED VIEWS

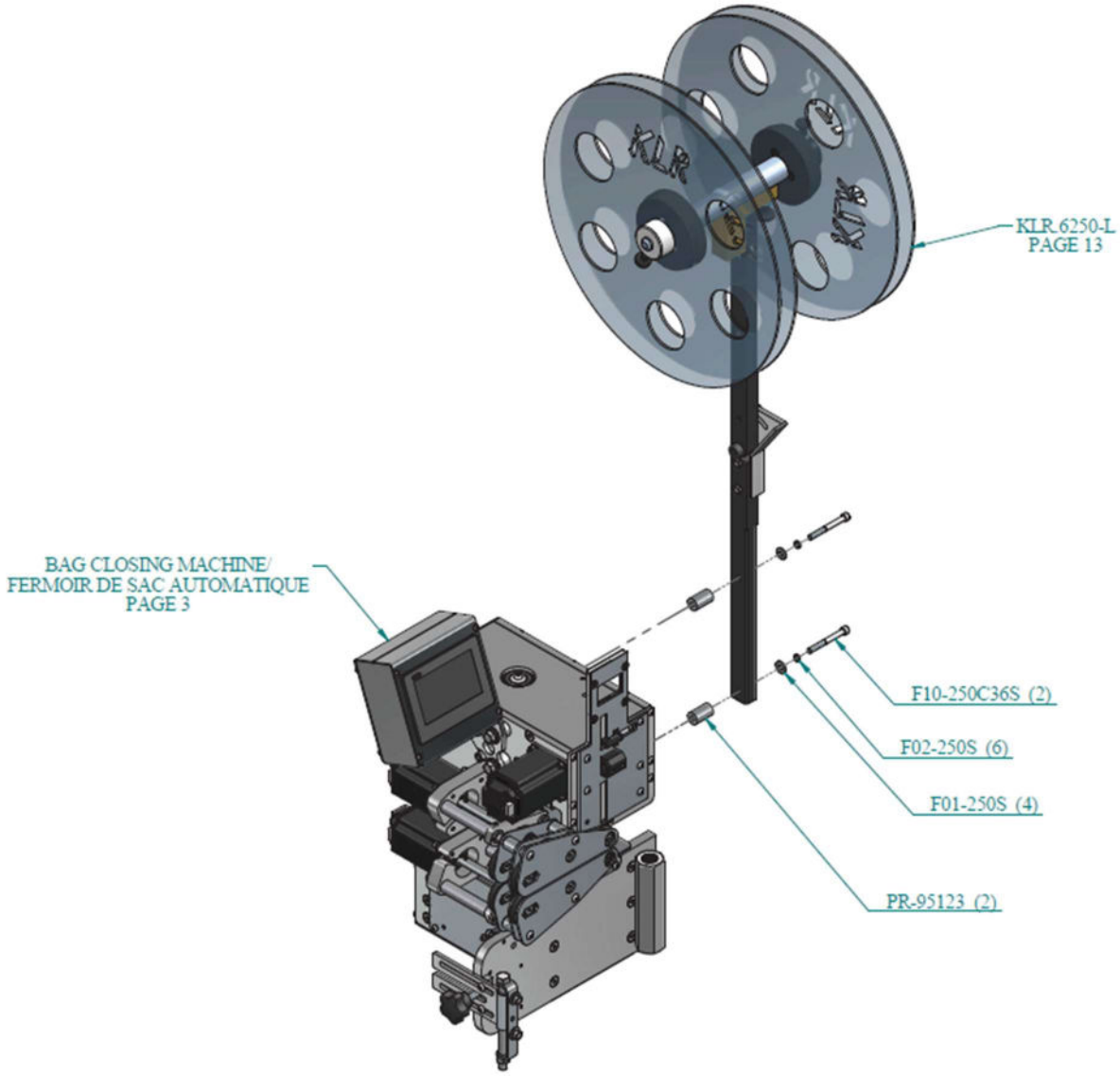




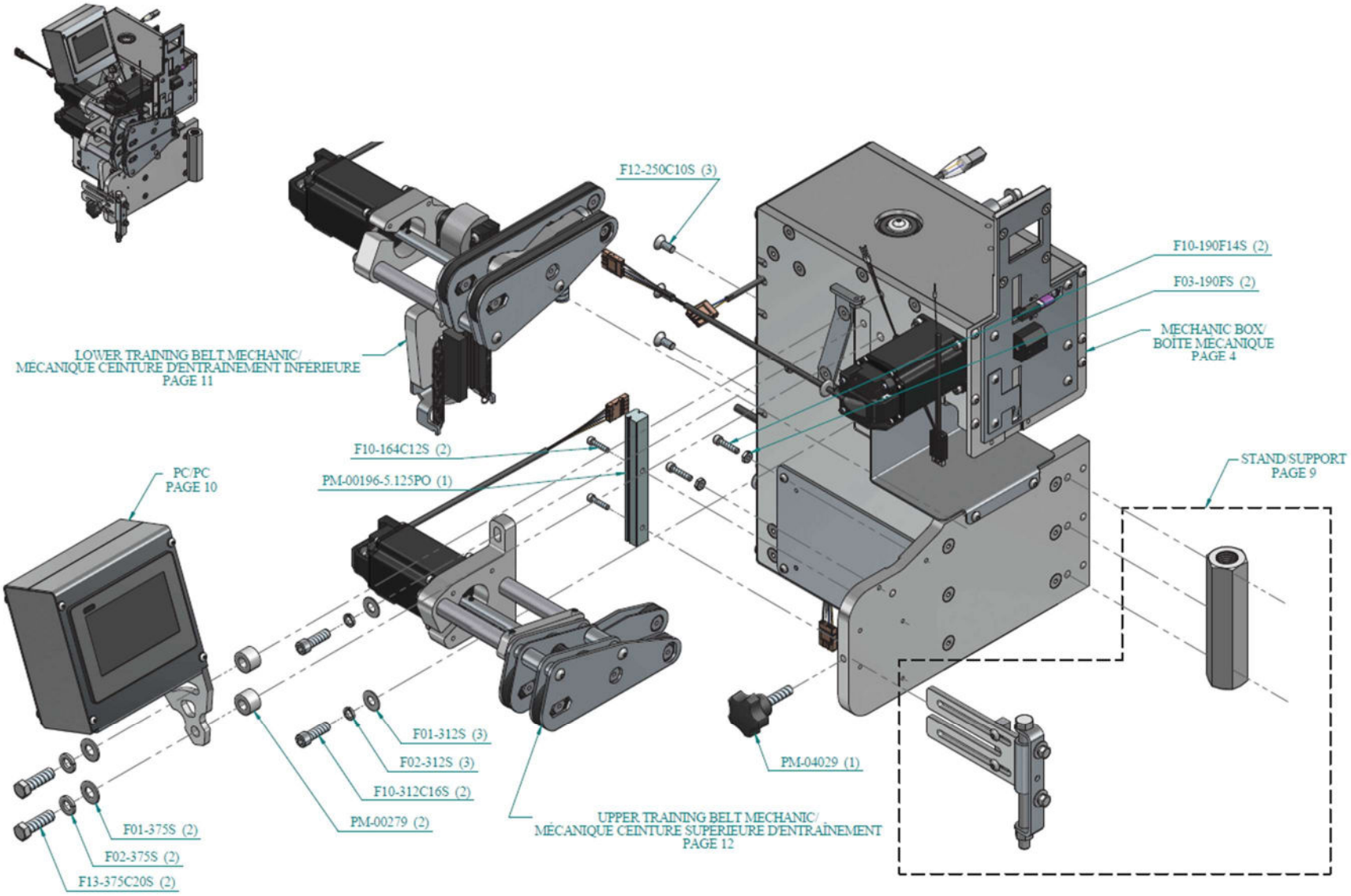




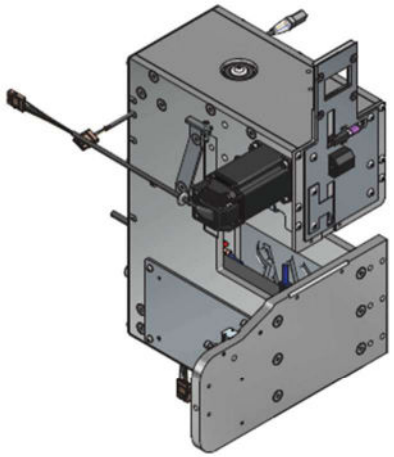
11.1: Clip spool installation

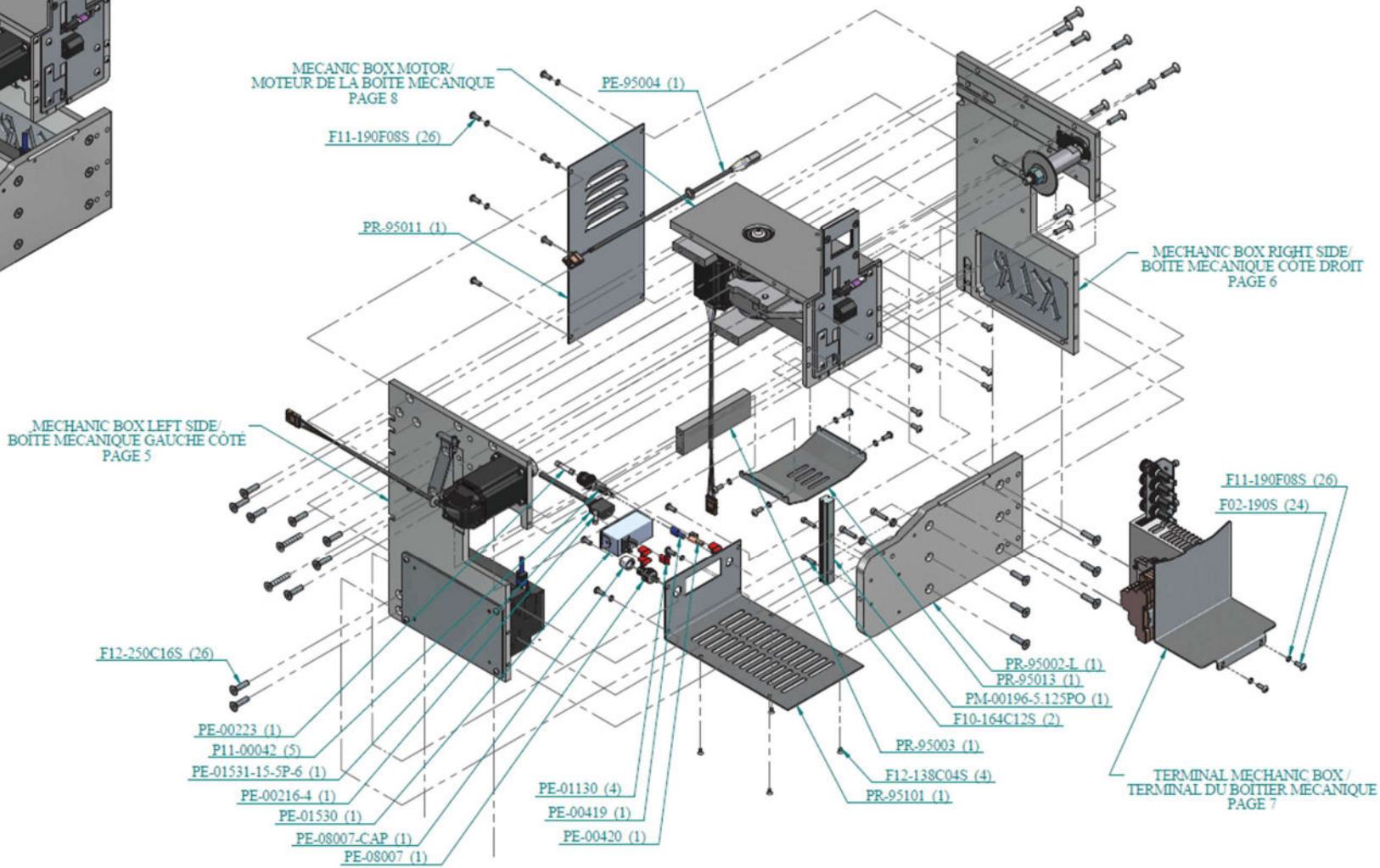


11.2: Main blocks assembly

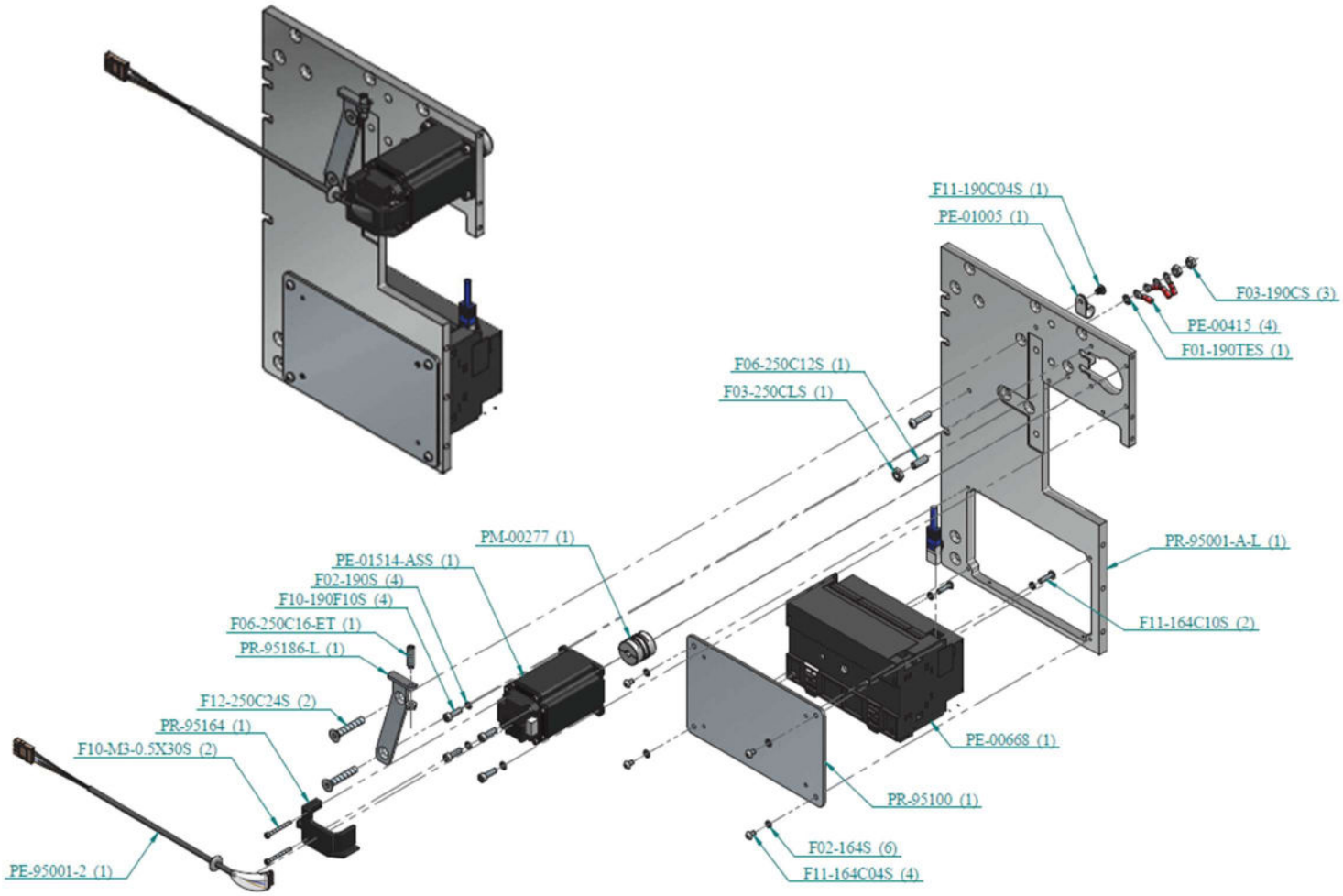


11.3: Frame assembly

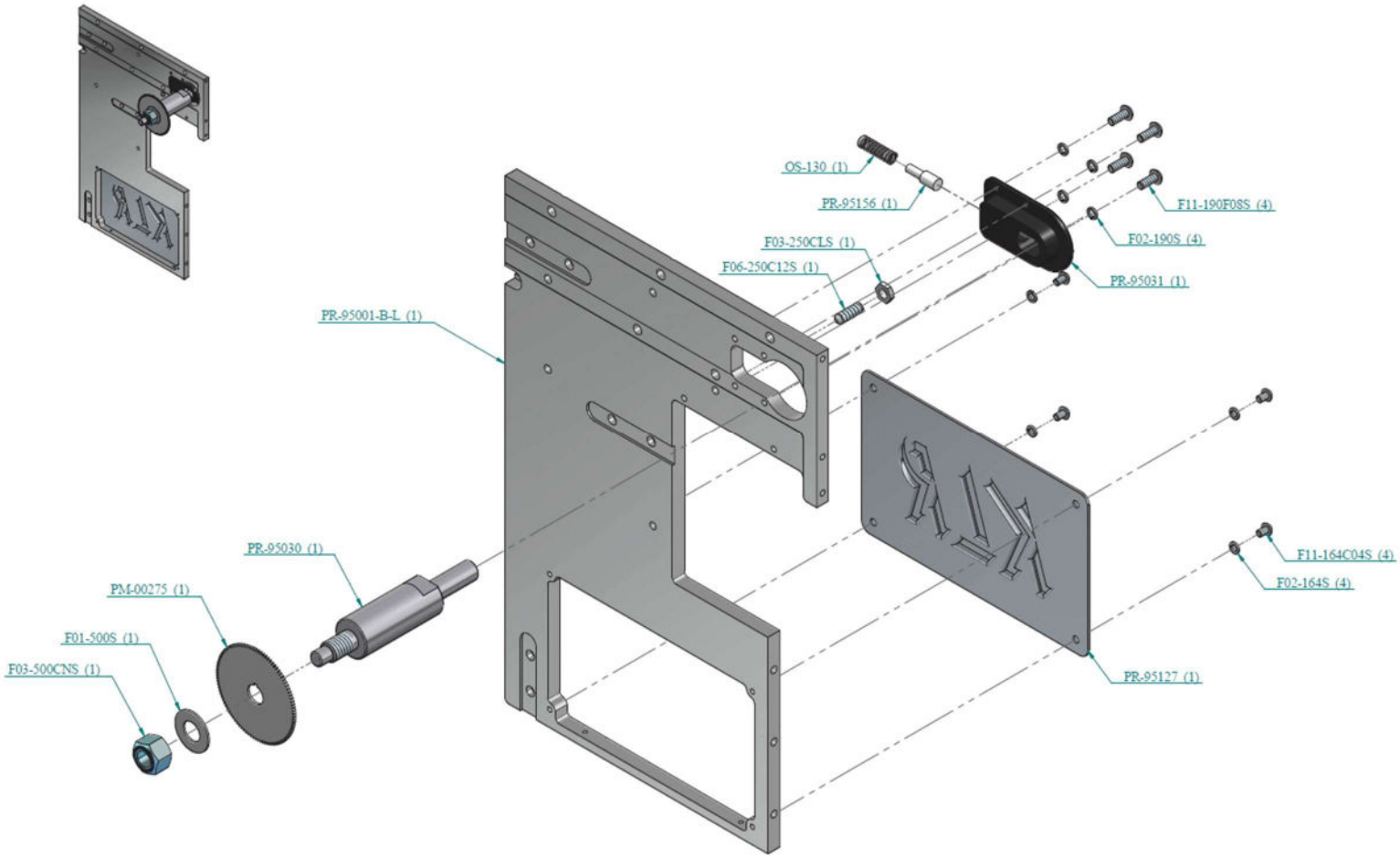




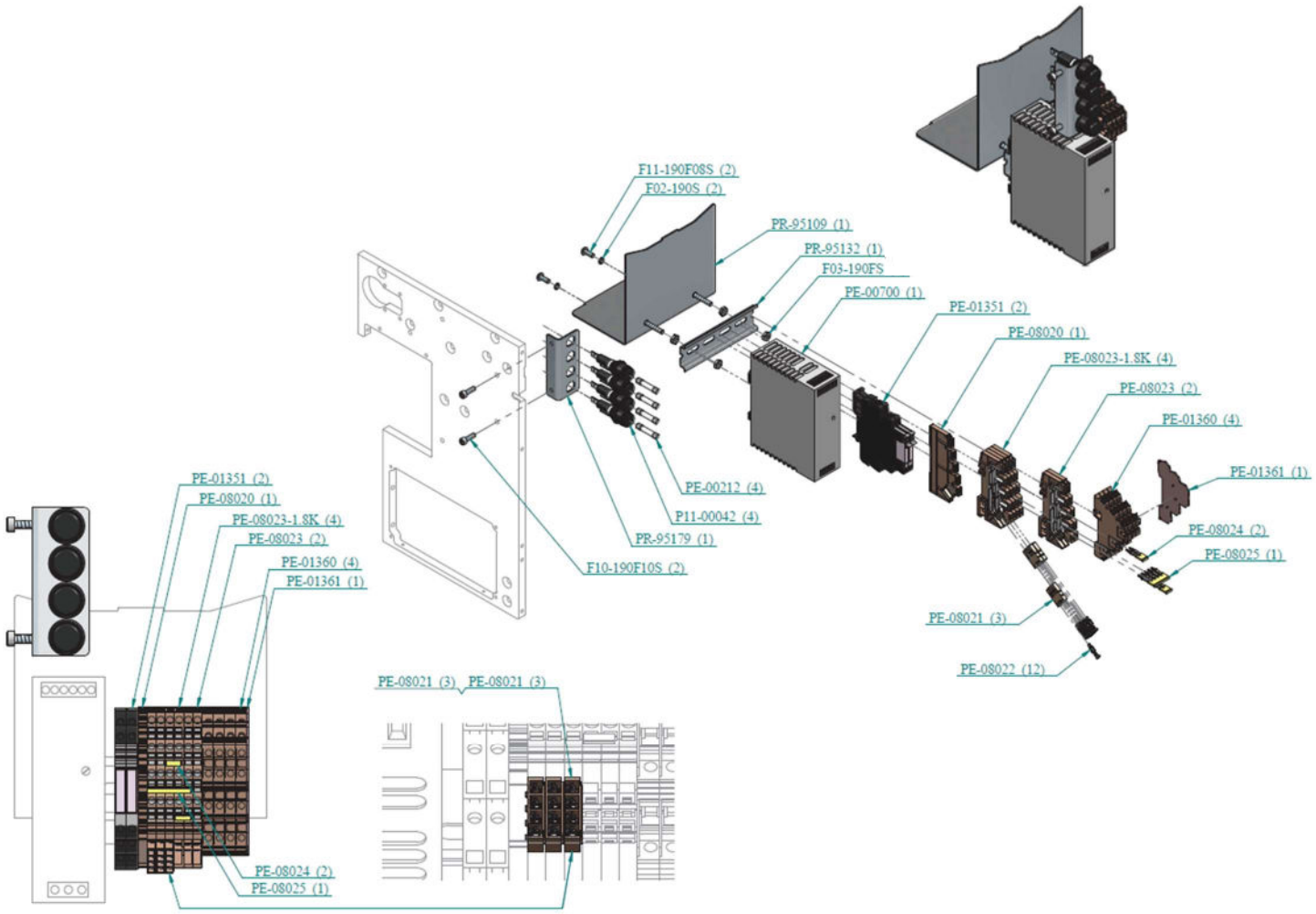
11.4: Mechanic box left side



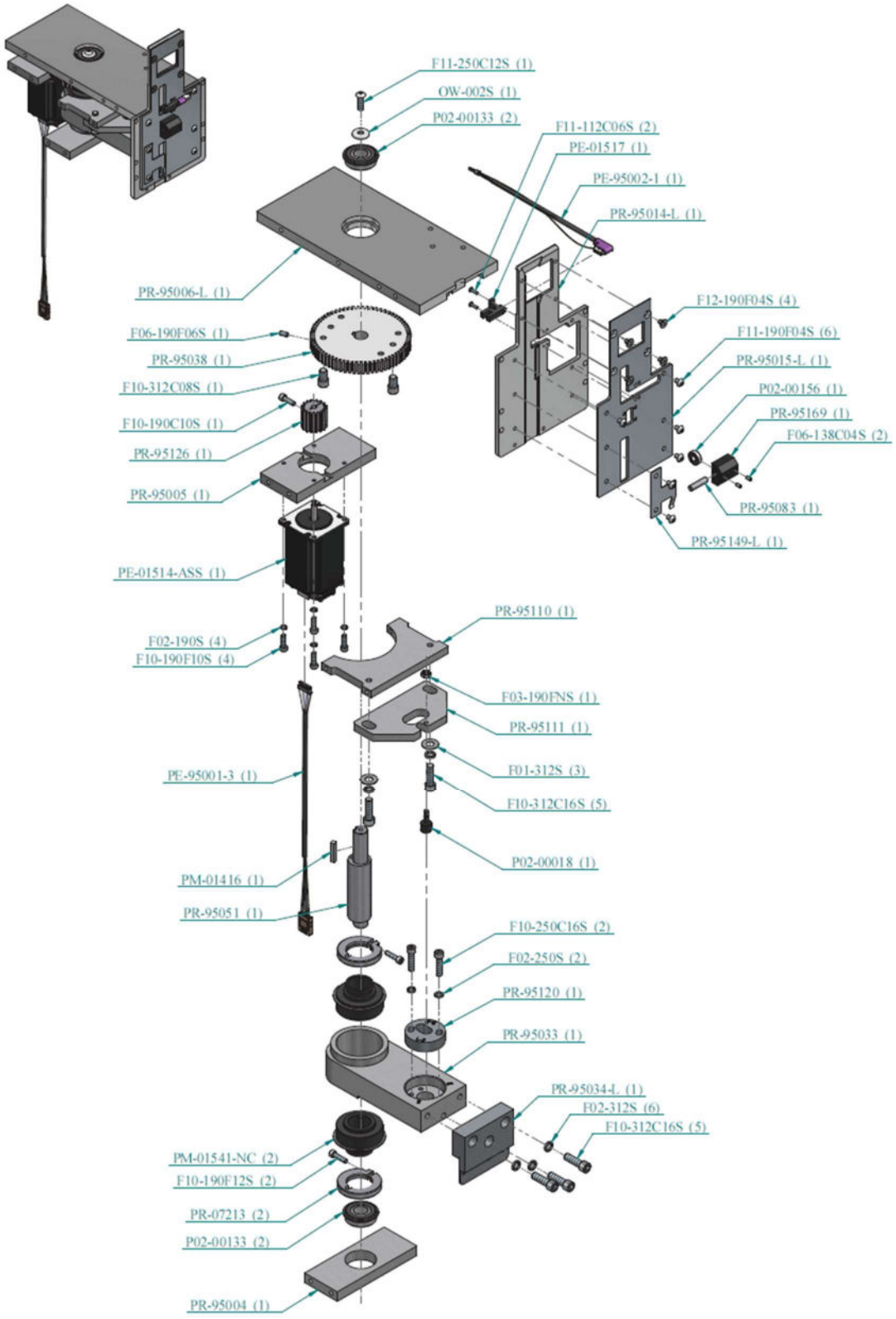
11.5: Mechanic box left side



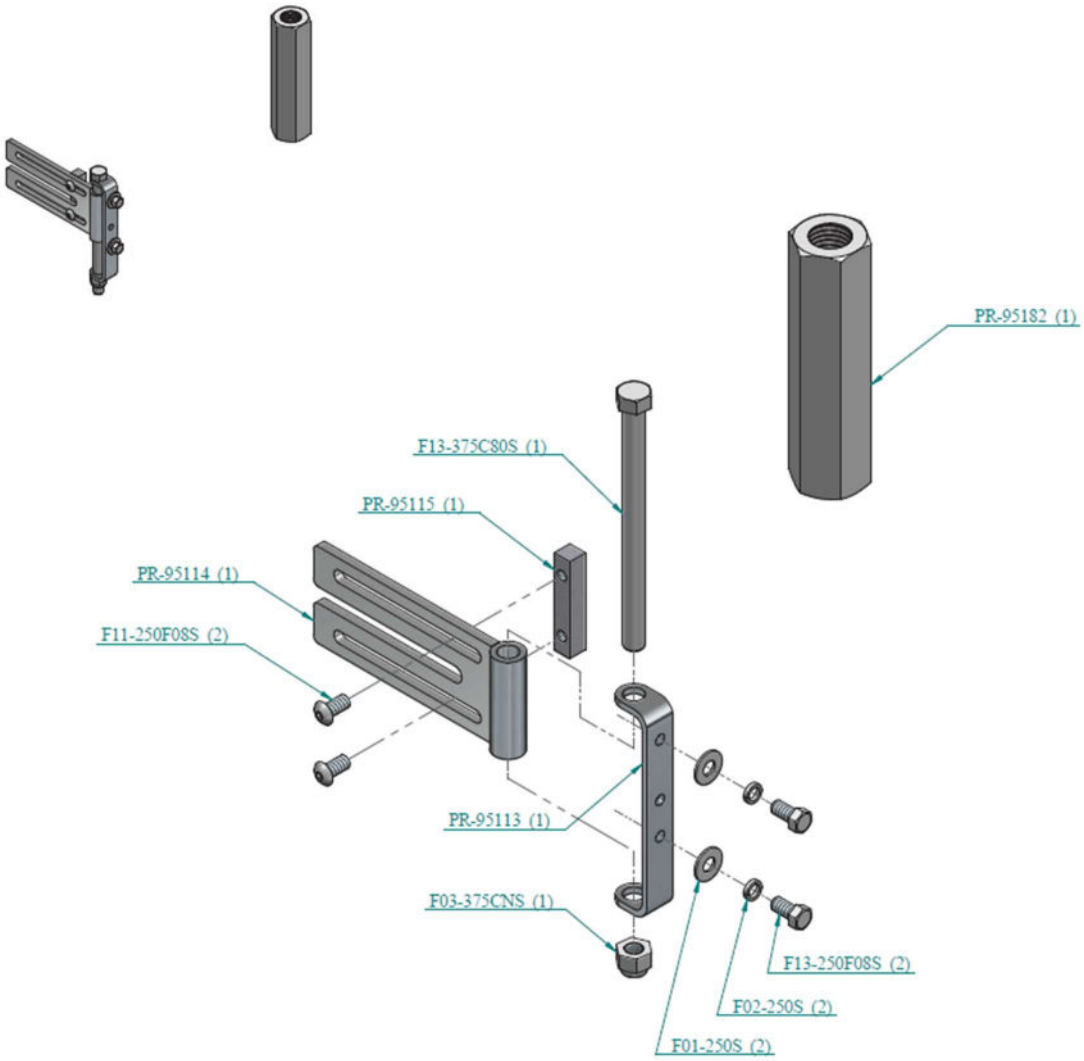
11.6: Electric terminal assembly



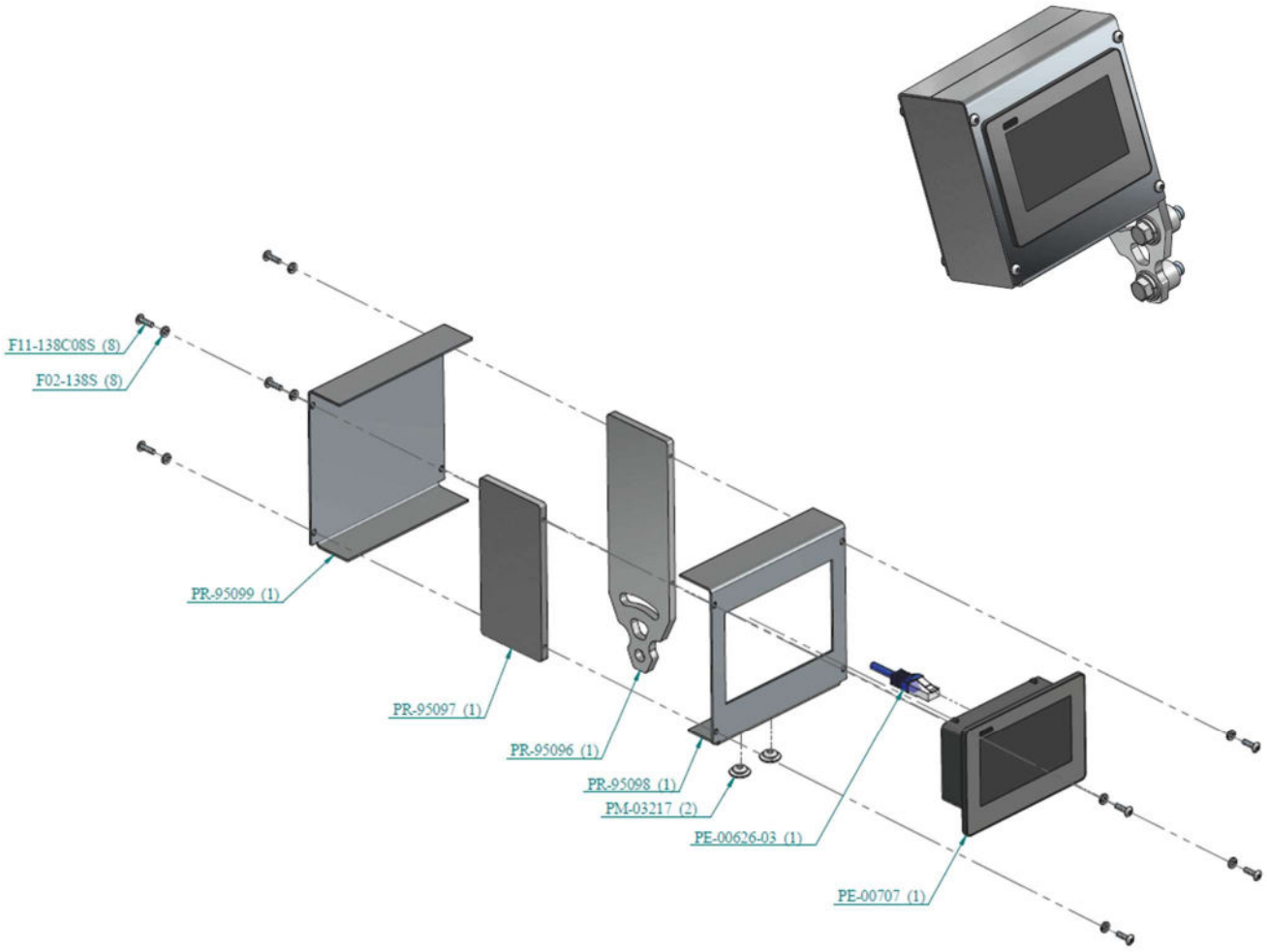
11.7: Clip Breaking system



11.8: Support brackets

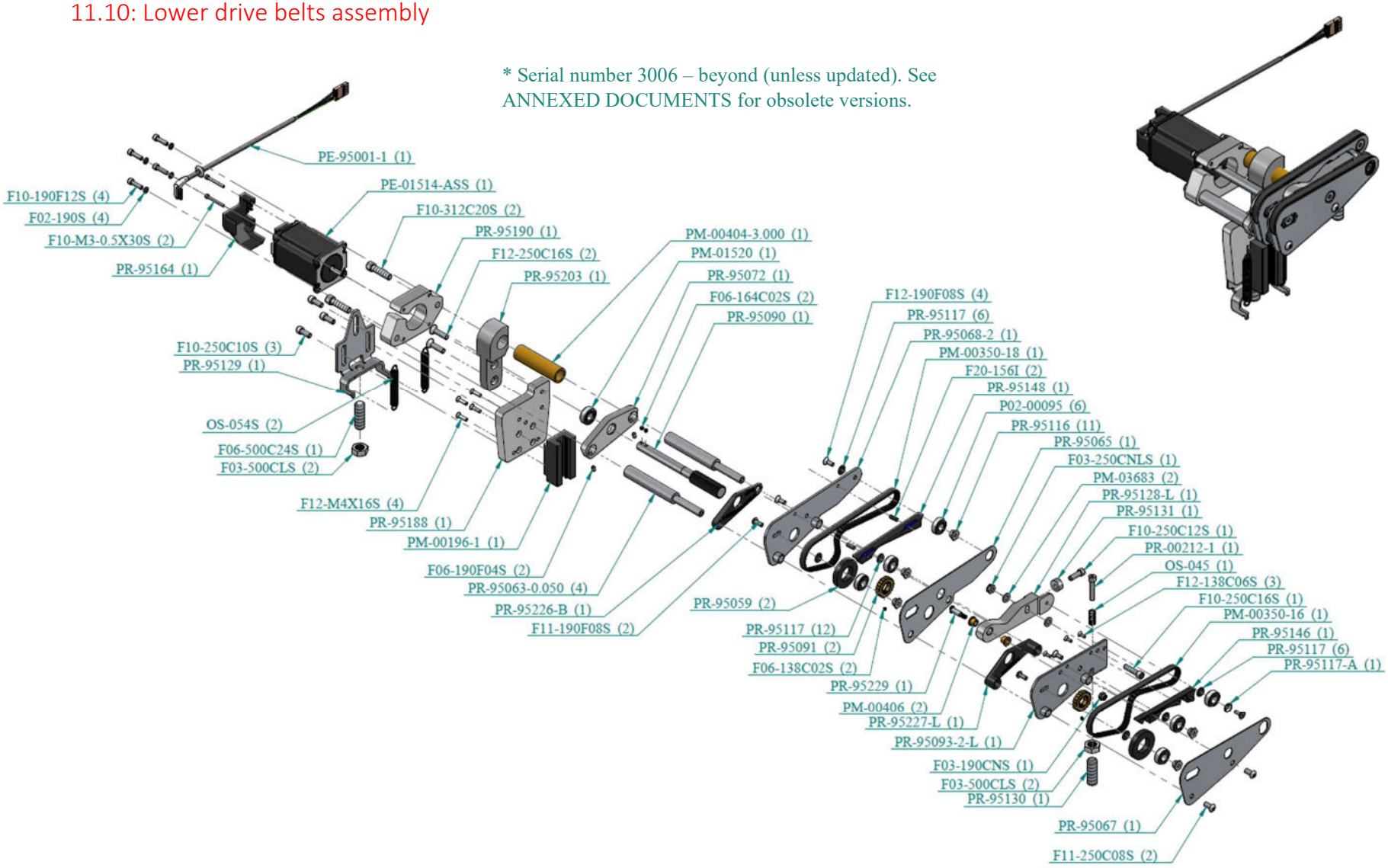


11.9: HMI assembly



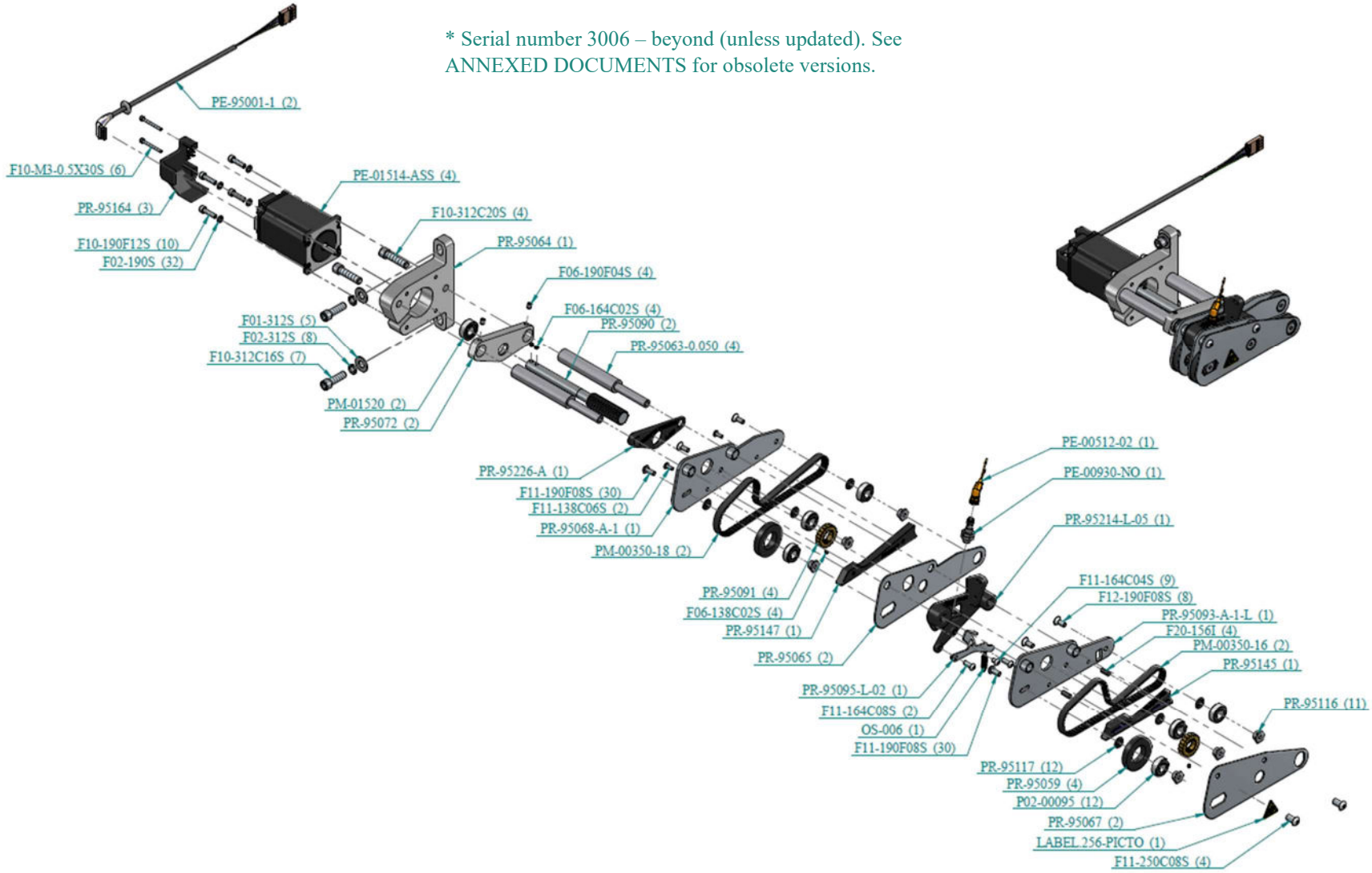
11.10: Lower drive belts assembly

* Serial number 3006 – beyond (unless updated). See ANNEXED DOCUMENTS for obsolete versions.

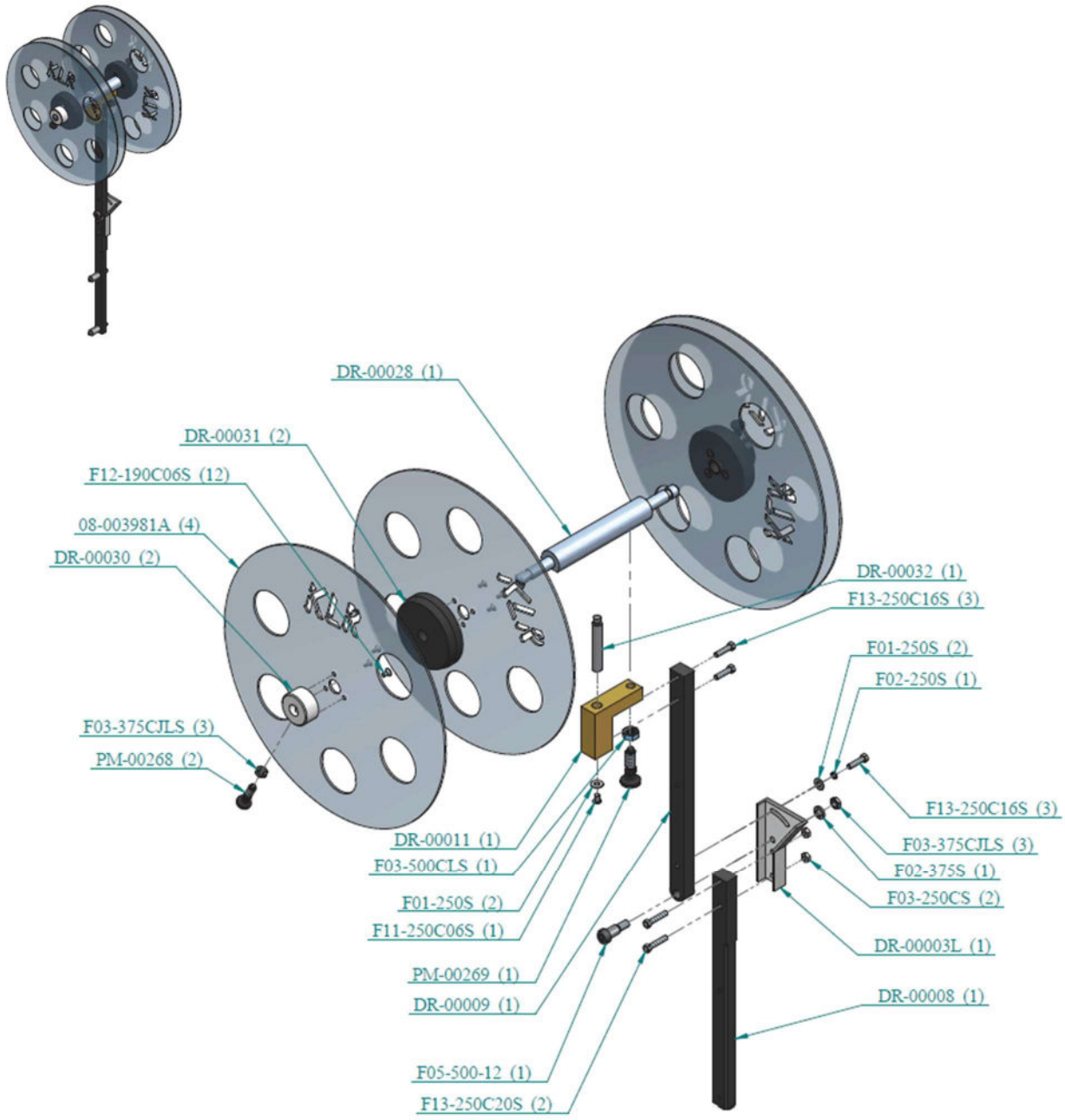


11.11: Upper drive belts assembly

* Serial number 3006 – beyond (unless updated). See ANNEXED DOCUMENTS for obsolete versions.

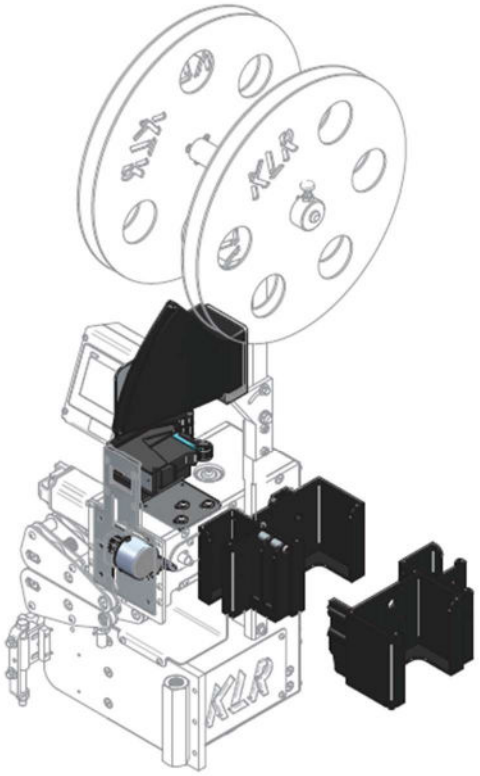


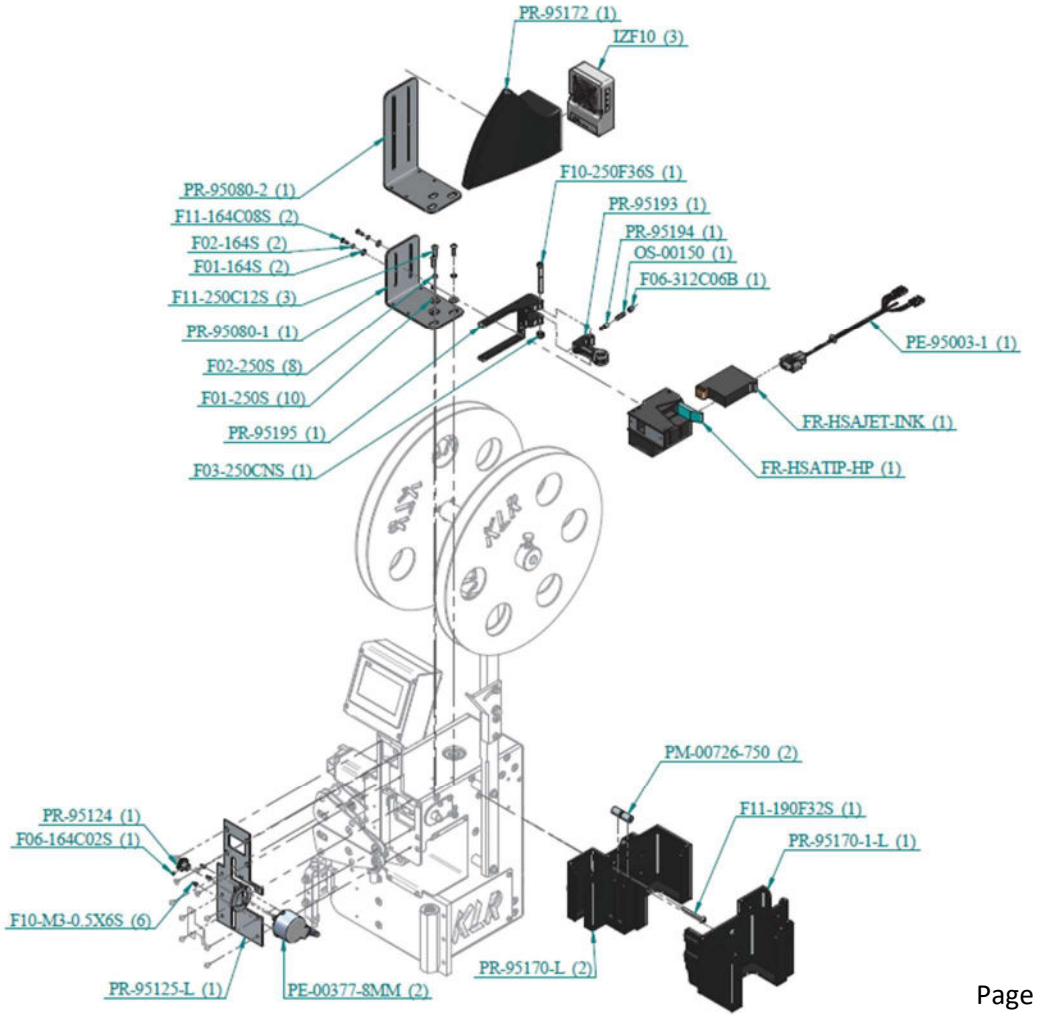
11.12: Clip spool assembly



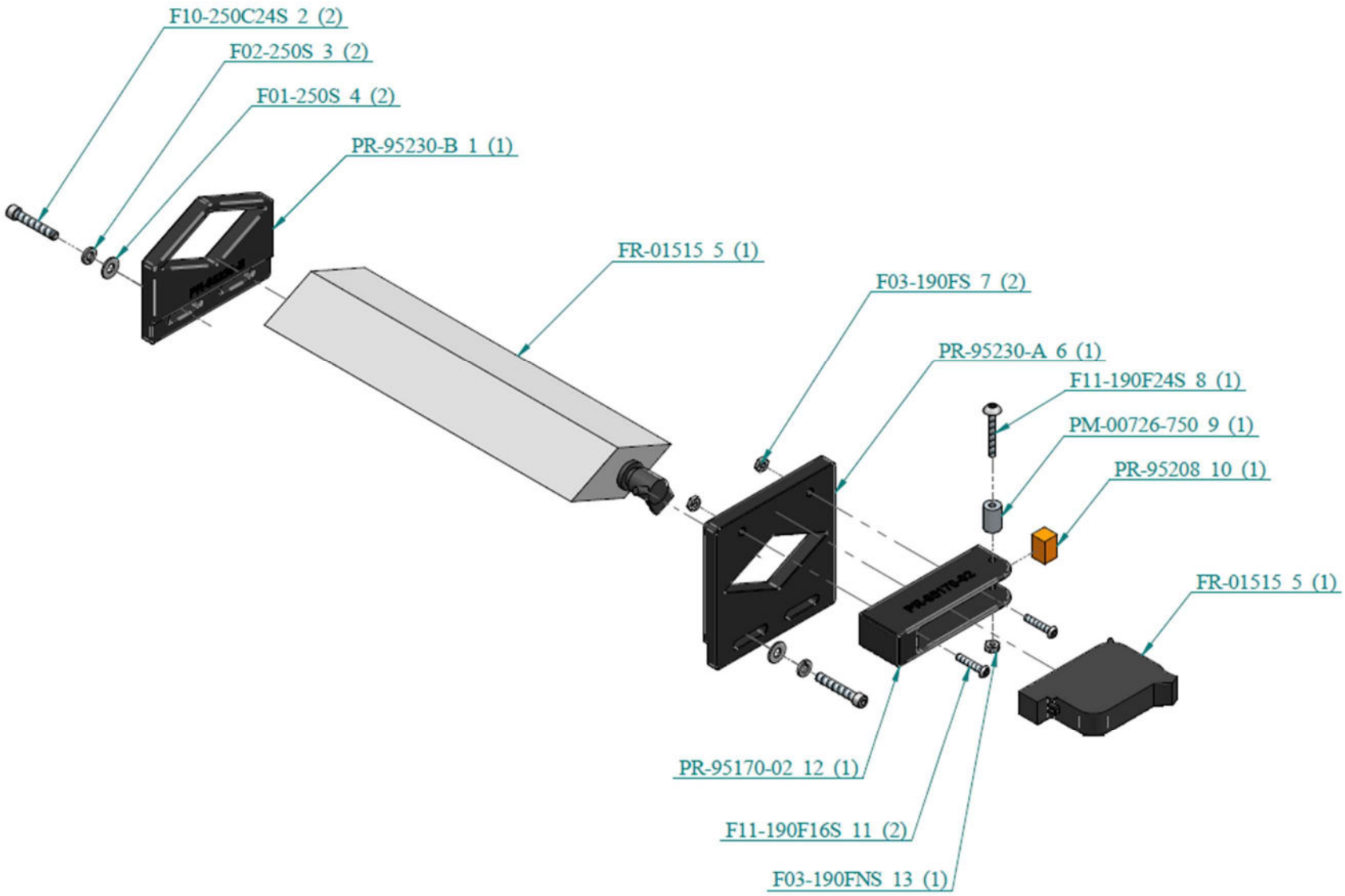
12.0: OPTION FOR KLR.950

12.1: KLR.937 ink jet printer

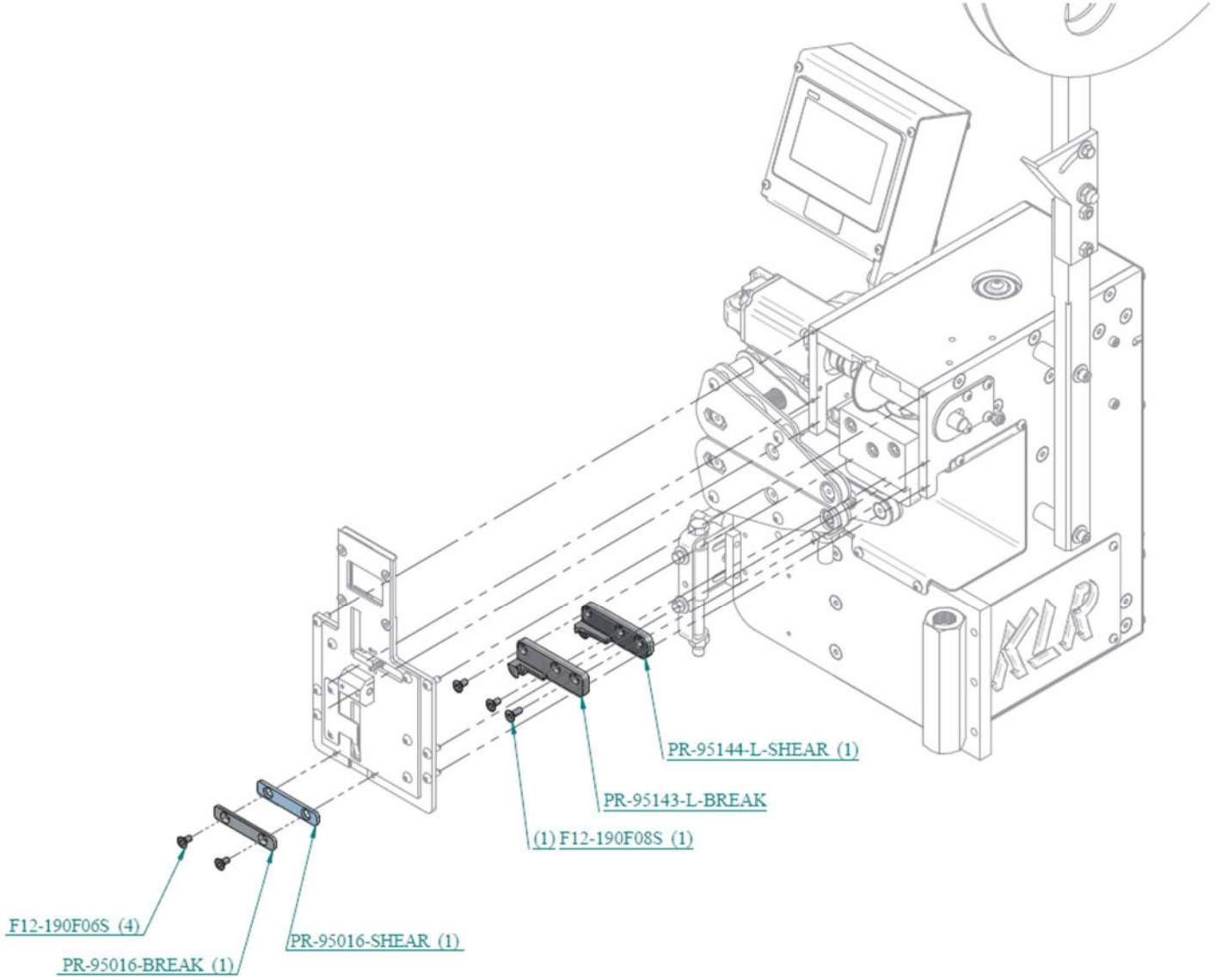




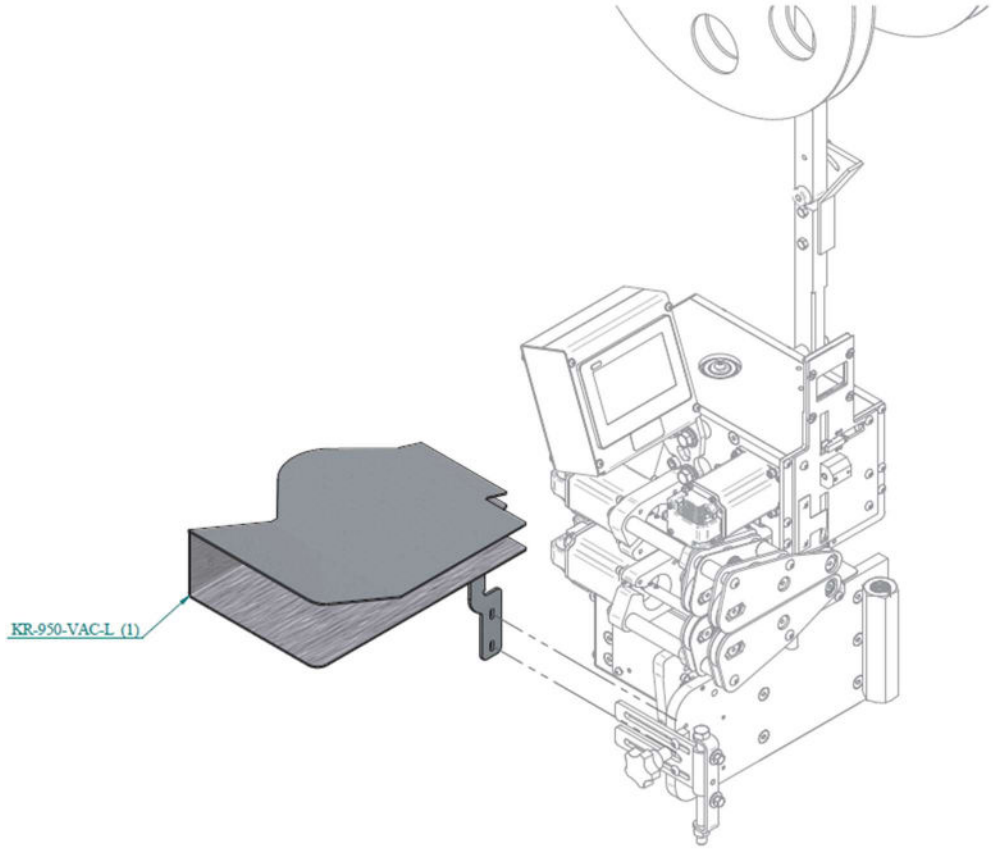
12.2: KLR.937 ink jet printer bulk option



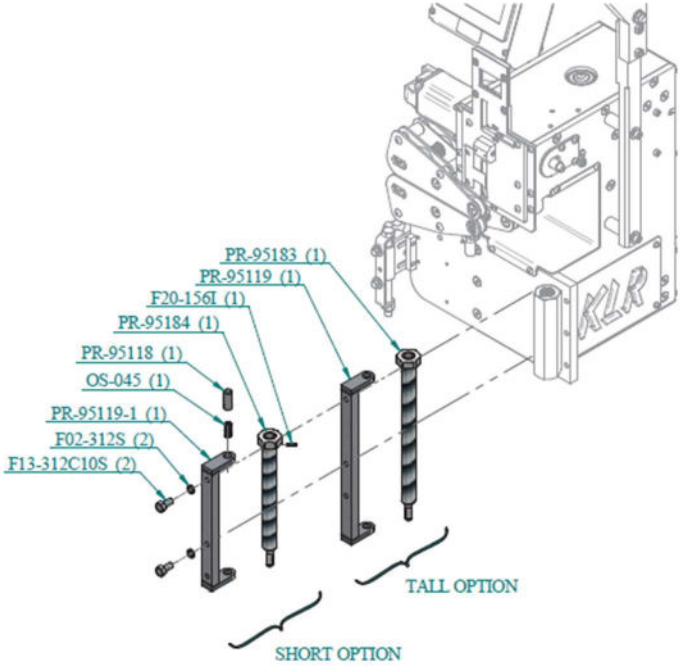
12.3: Shear and break option



12.4: KR-950-VAC



12.5: SUPPORT OPTION

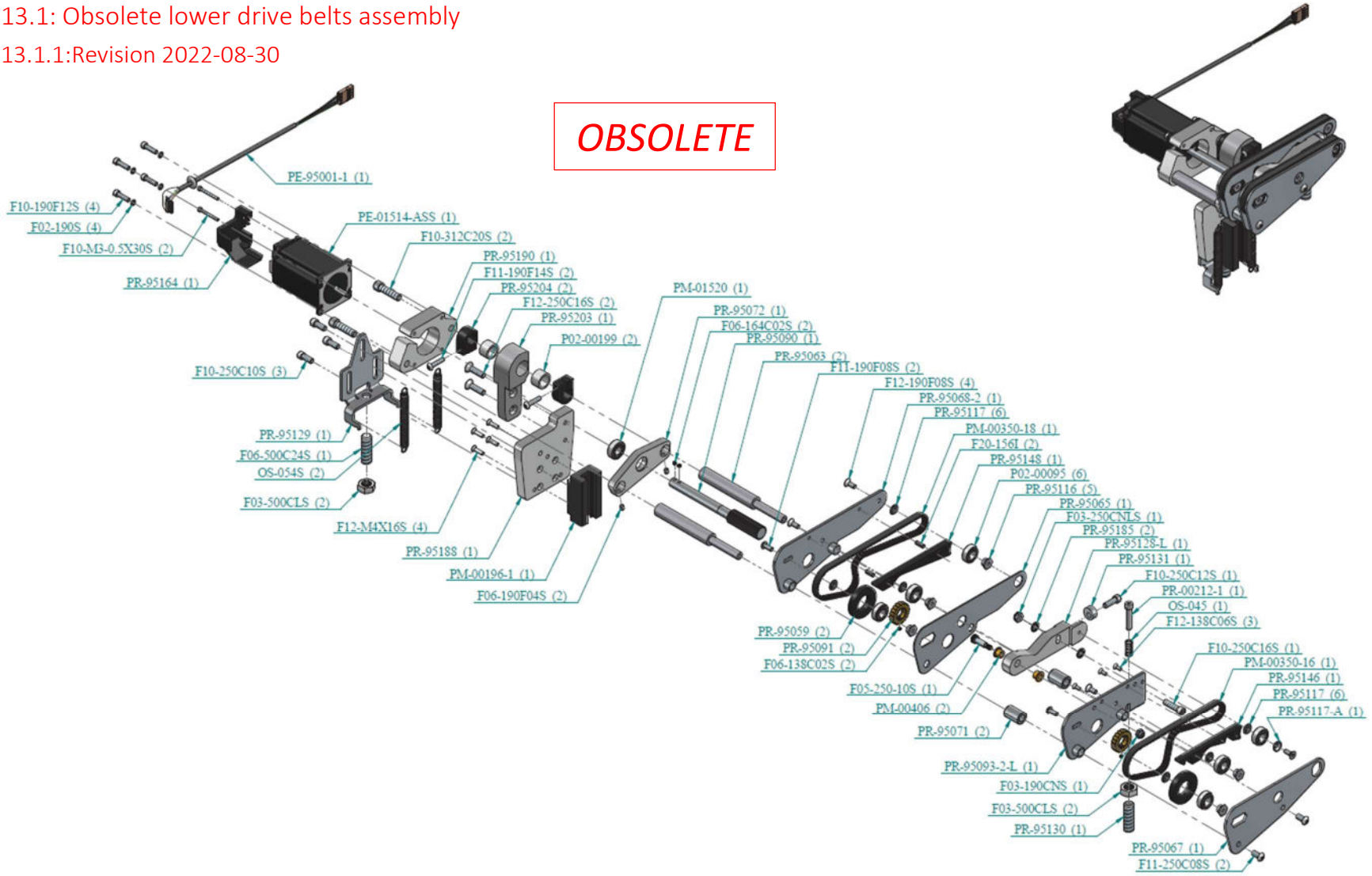


13.0: ANNEXES DOCUMENTS

13.1: Obsolete lower drive belts assembly

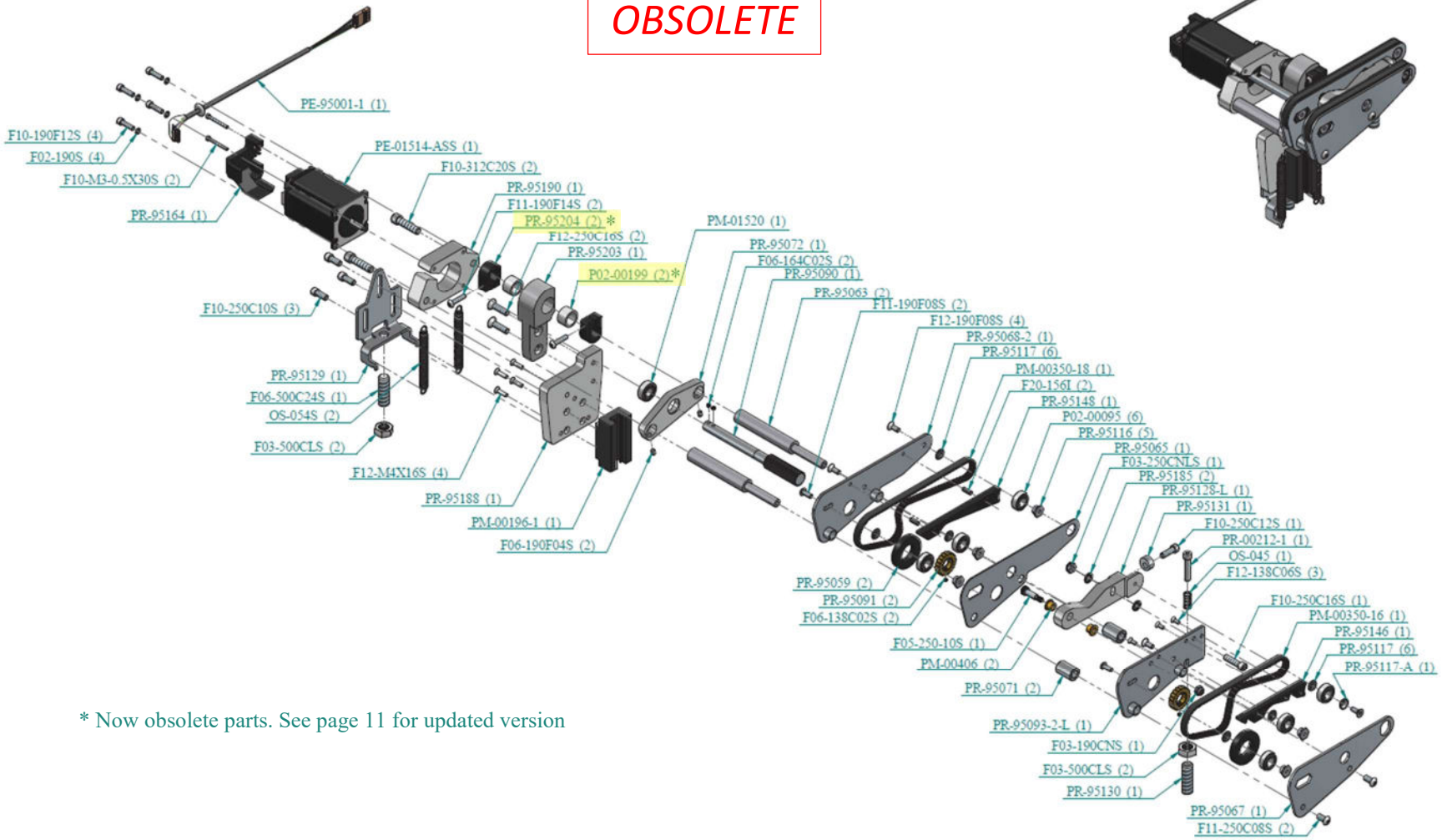
13.1.1:Revision 2022-08-30

OBSOLETE



13.1.2: Revision 2021-04-19

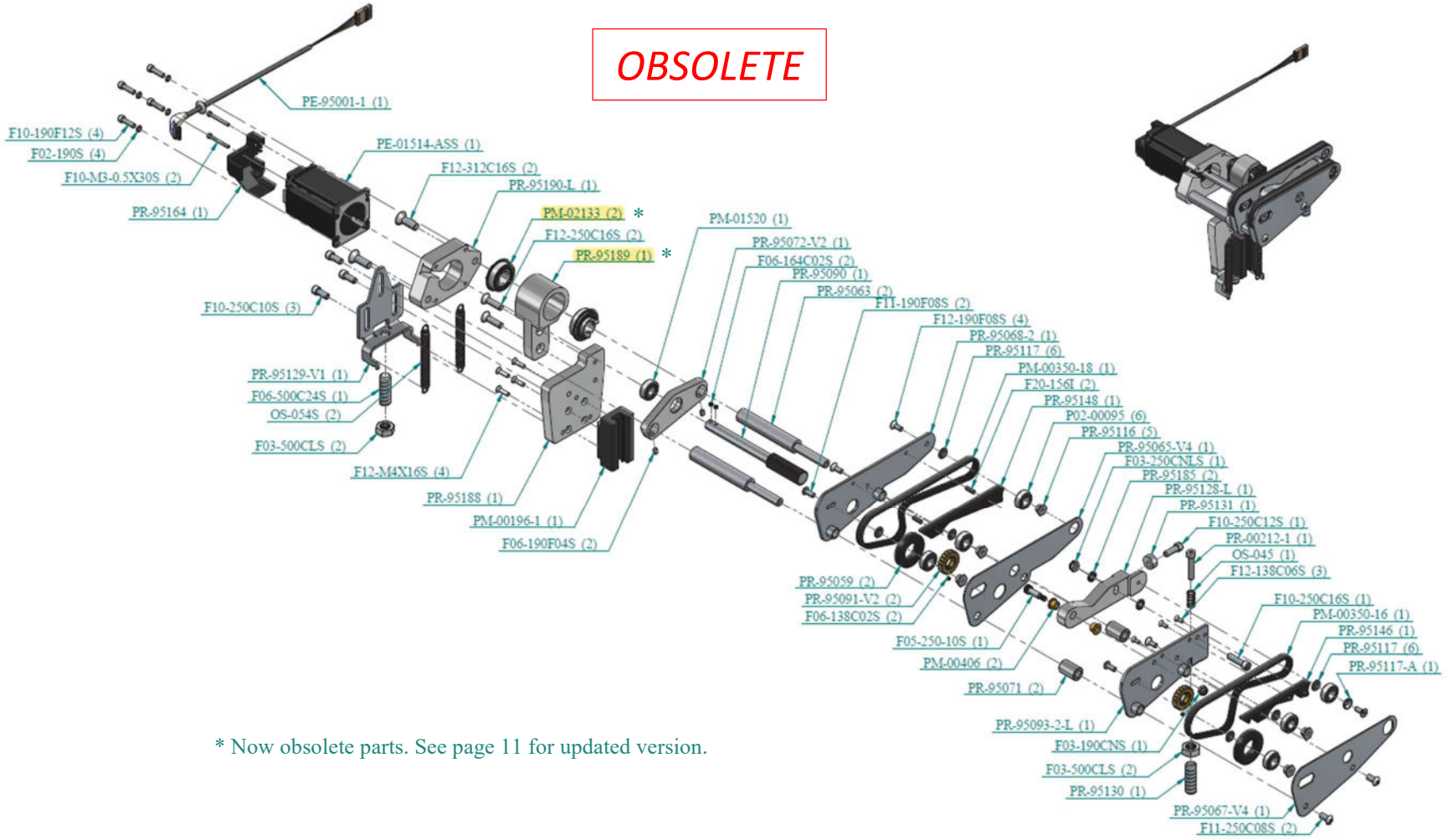
OBSOLETE



* Now obsolete parts. See page 11 for updated version

13.1.3: Revision before 2021-04-19

OBSOLETE

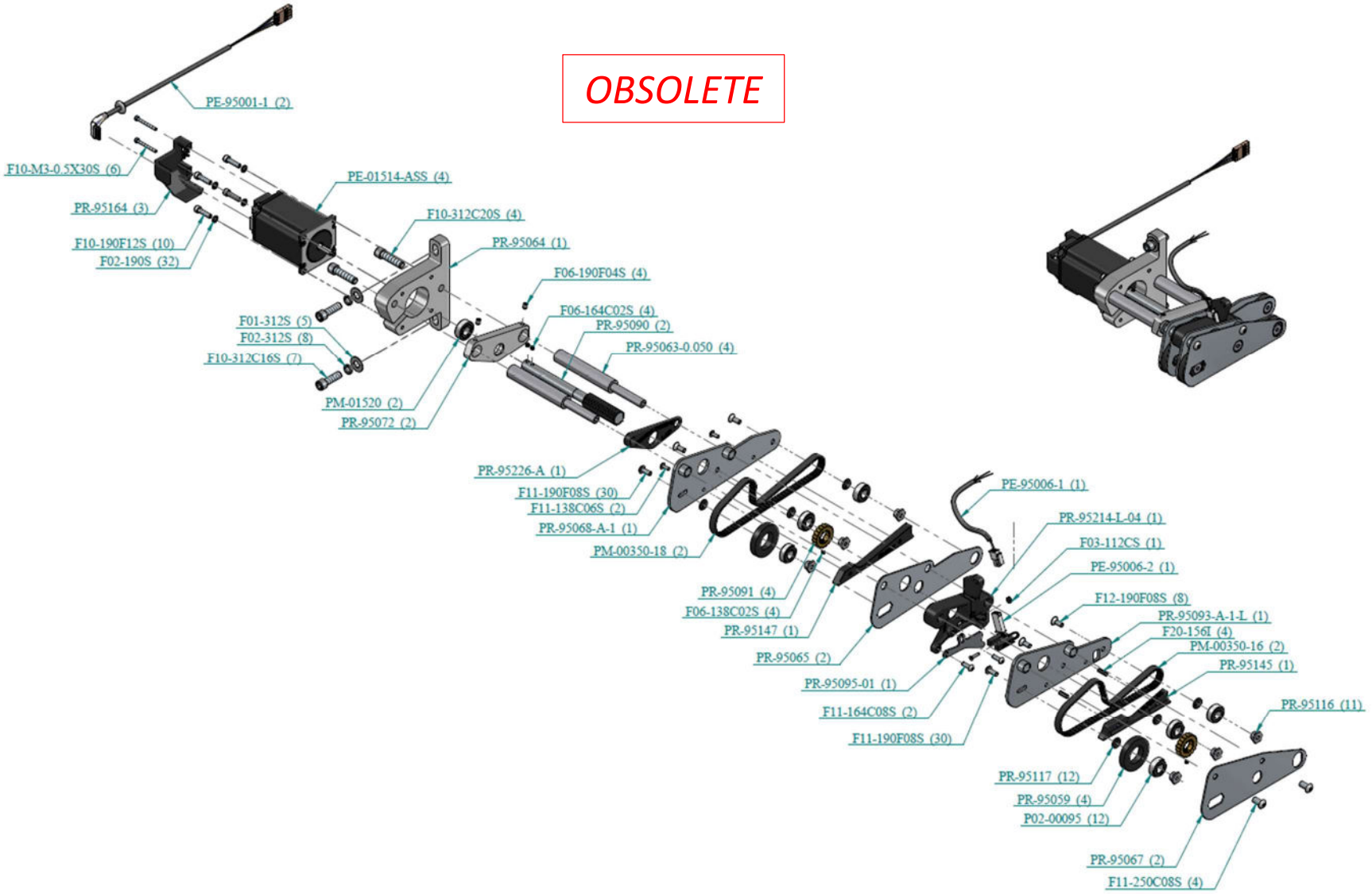


* Now obsolete parts. See page 11 for updated version.

13.2: Obsolete upper drives belt assembly

13.2.1: Revision 2022-08-30

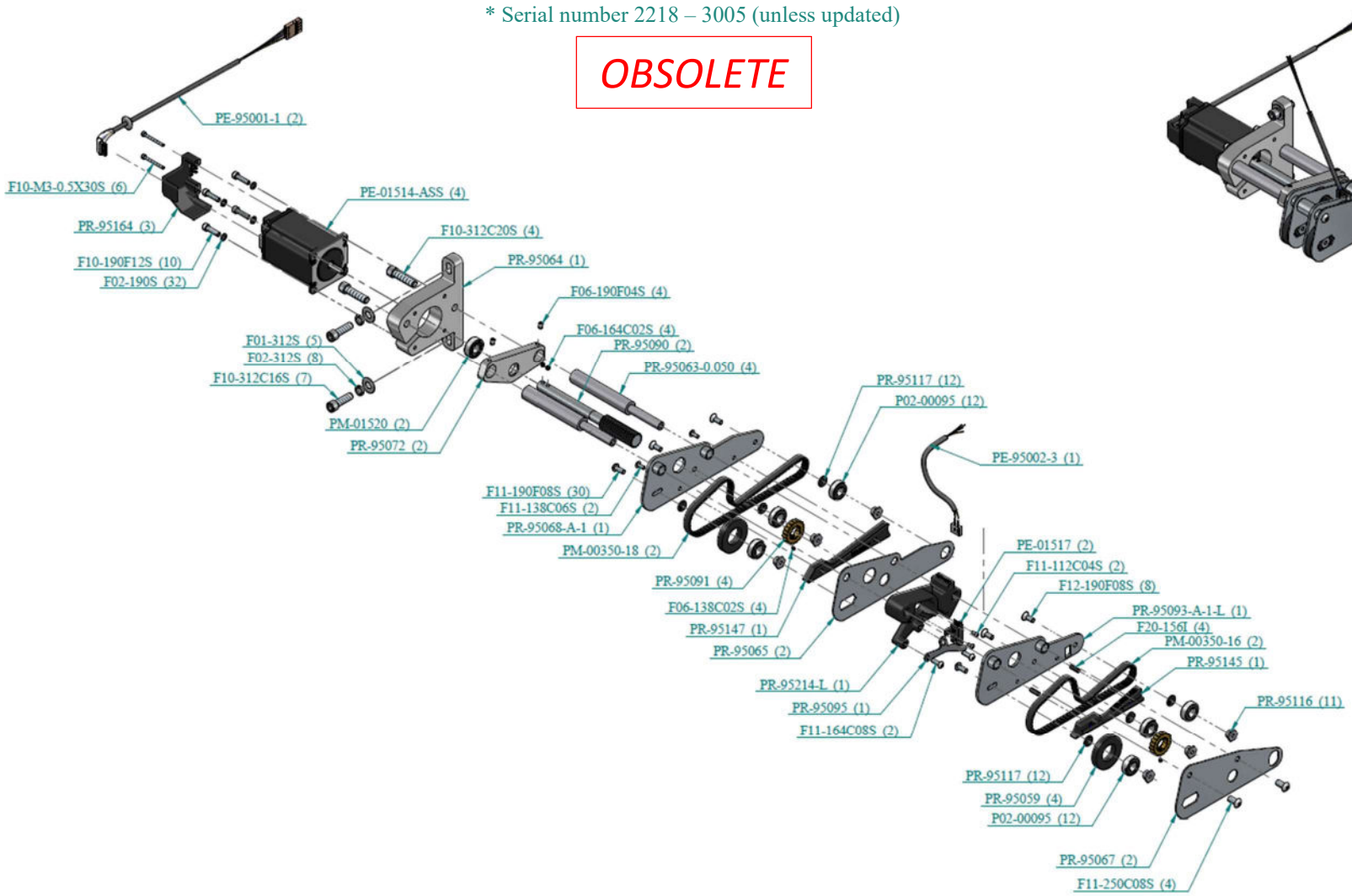
OBSOLETE



13.2.2: Revision before 2022-08-30

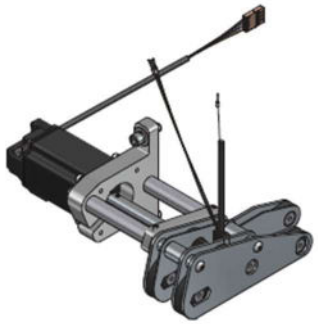
* Serial number 2218 – 3005 (unless updated)

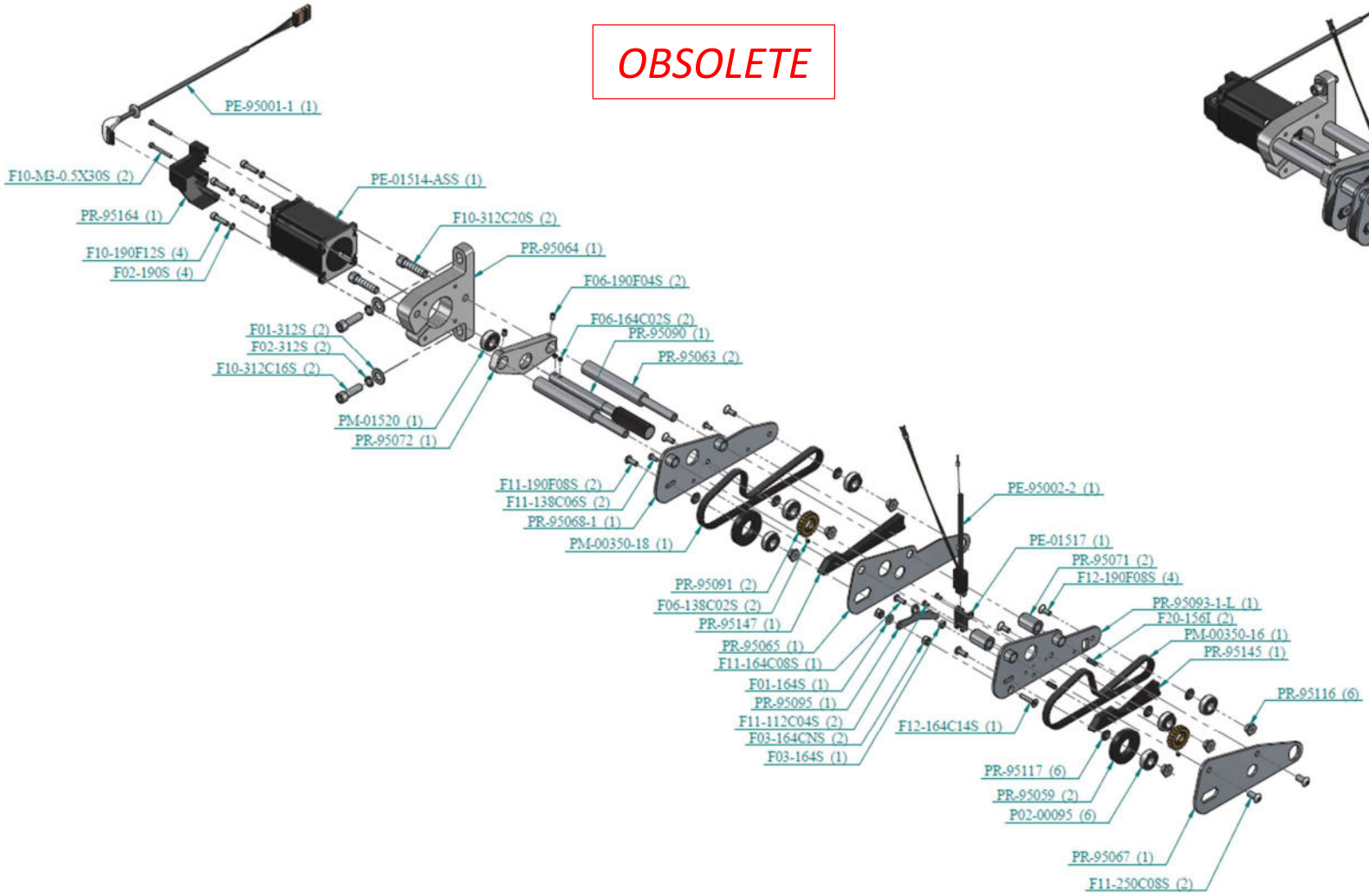
OBSOLETE



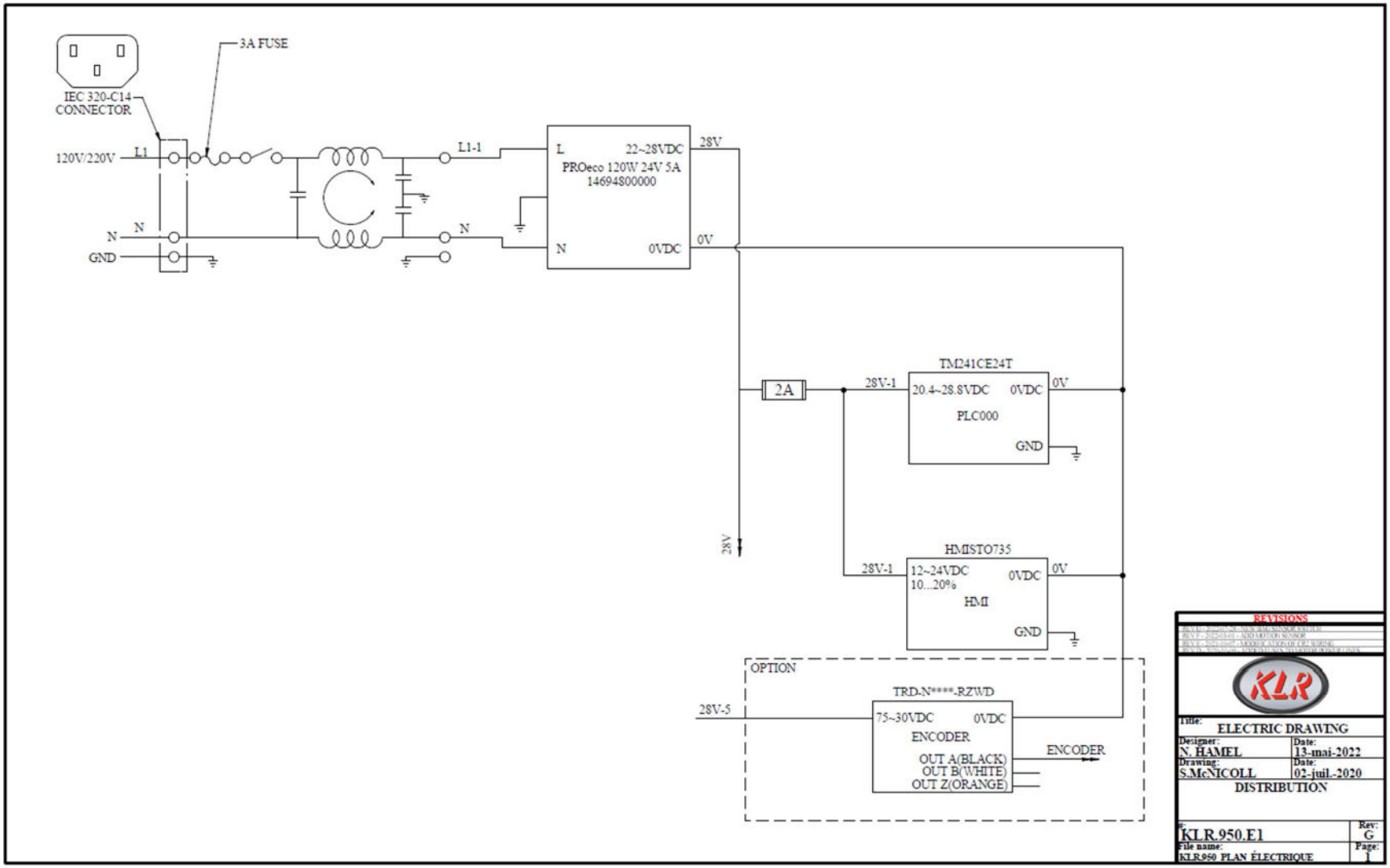
13.2.2: Revision 2022-08-30

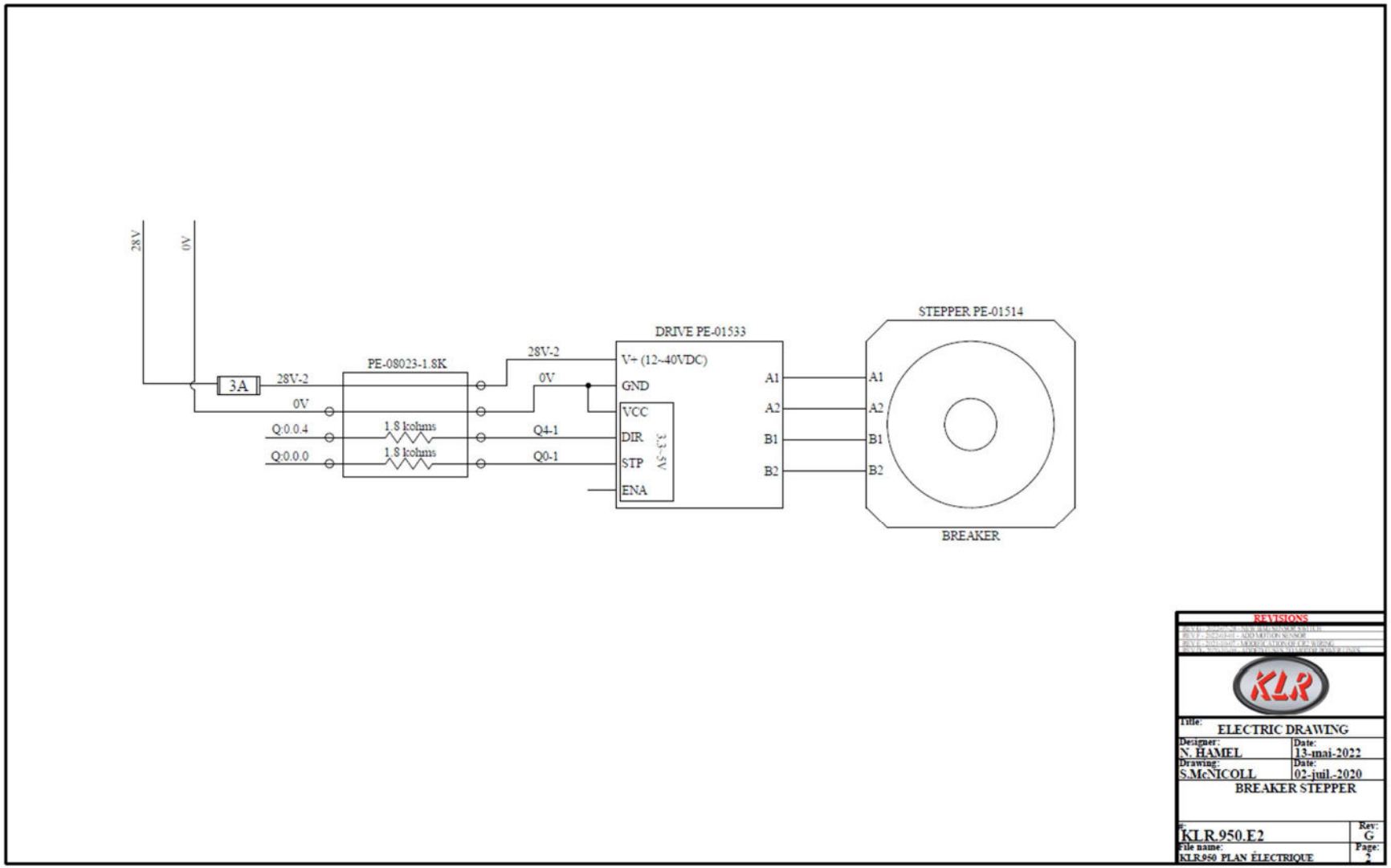
OBSOLETE

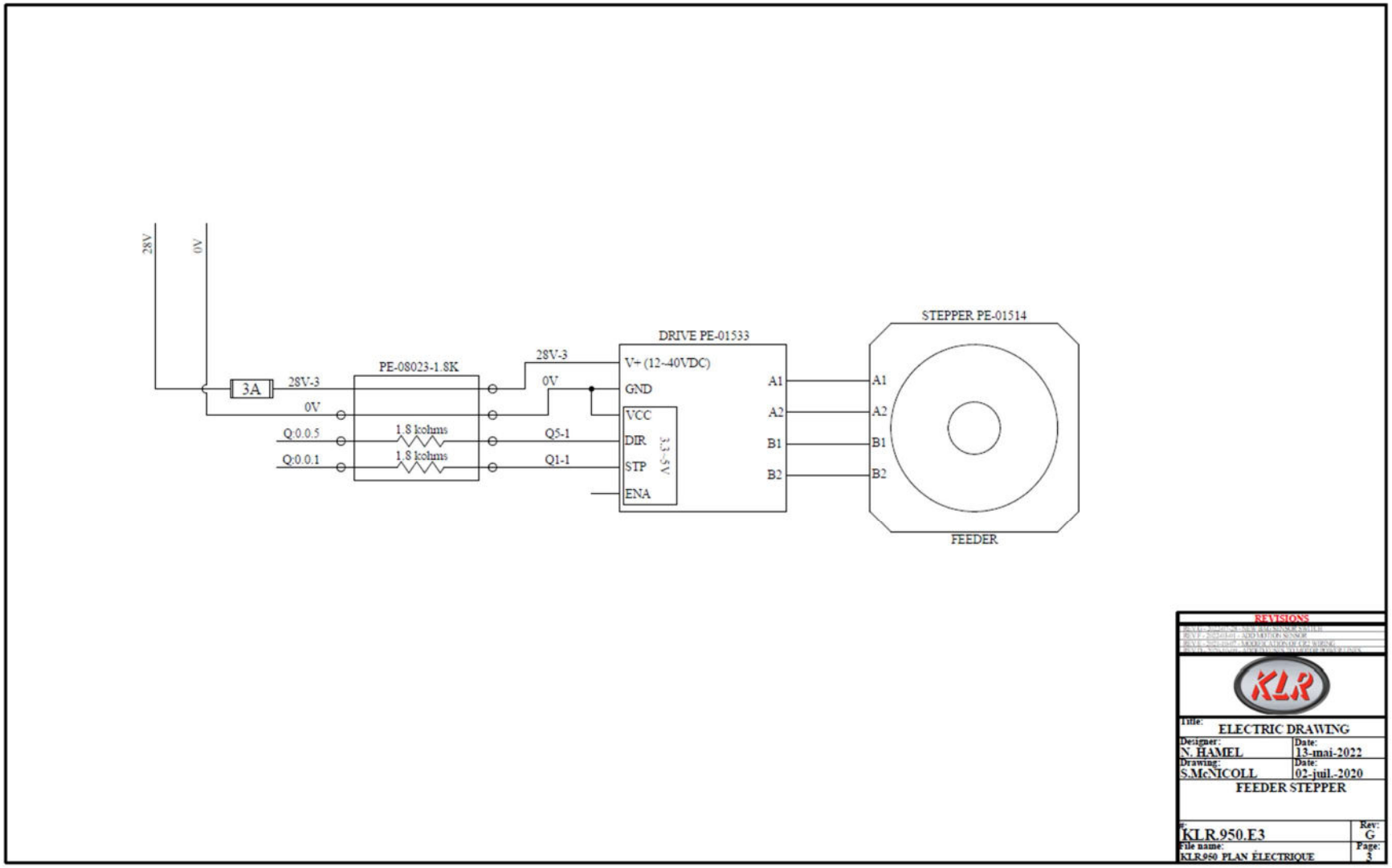


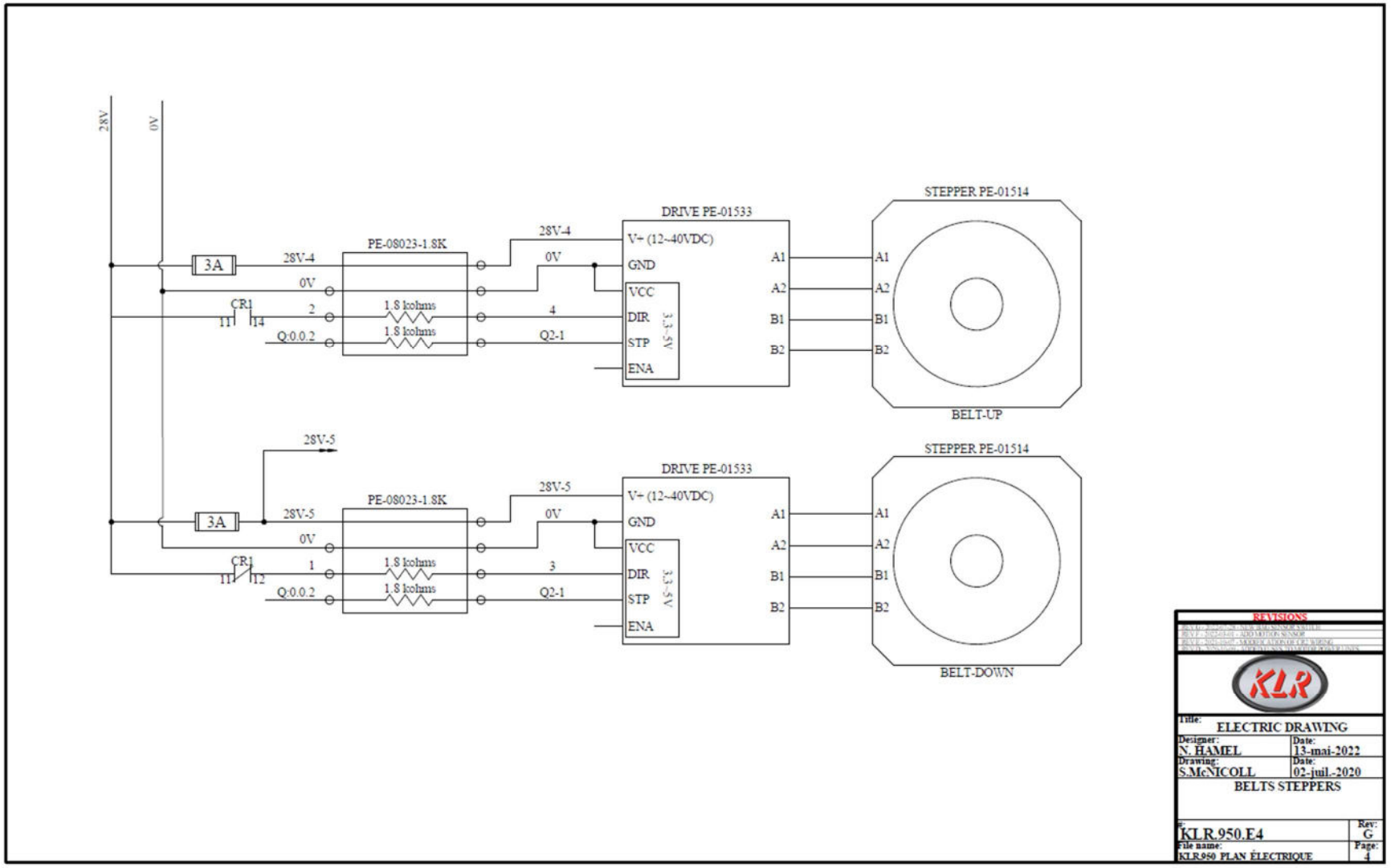


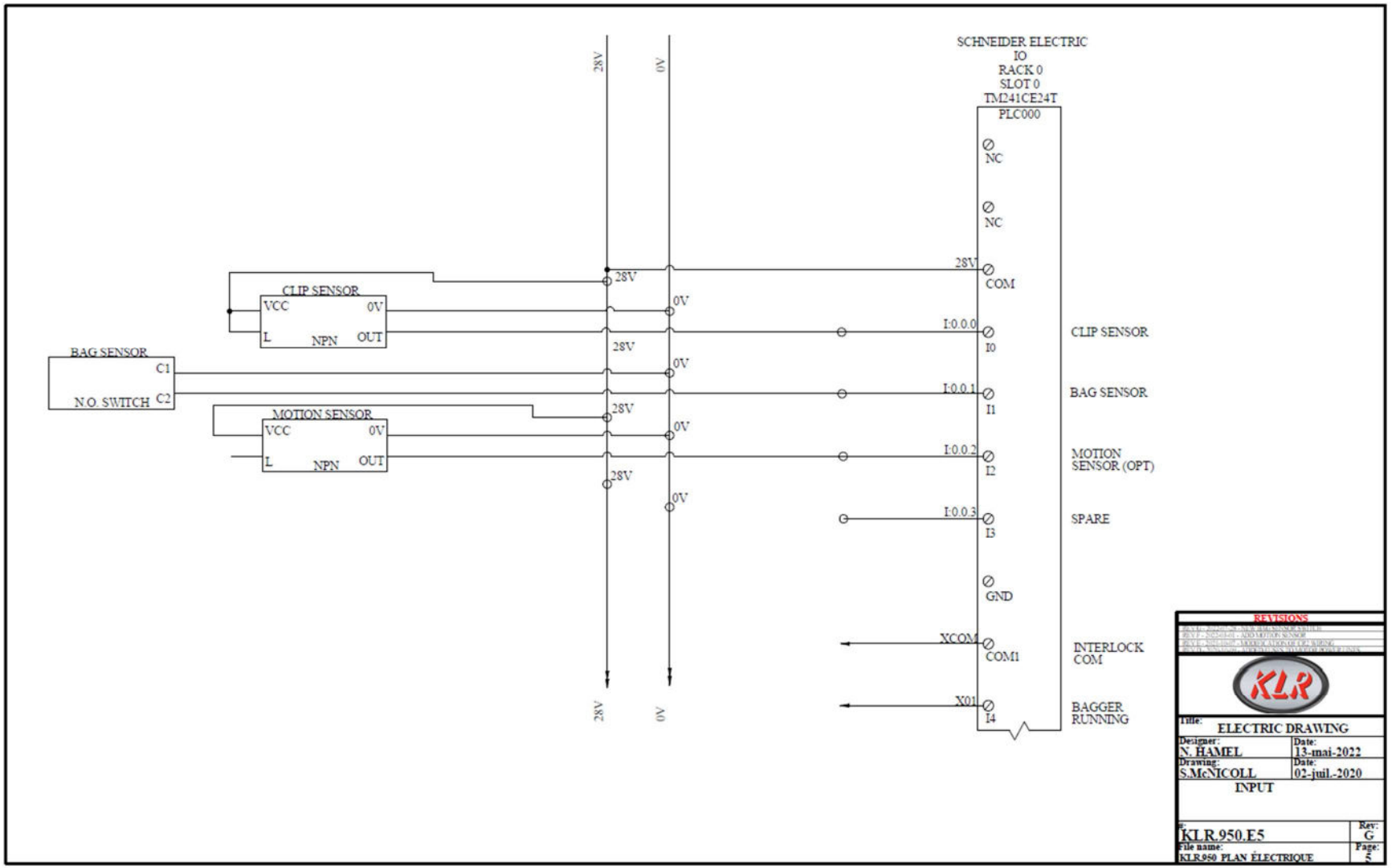
14:0 ELECTRICAL PLAN

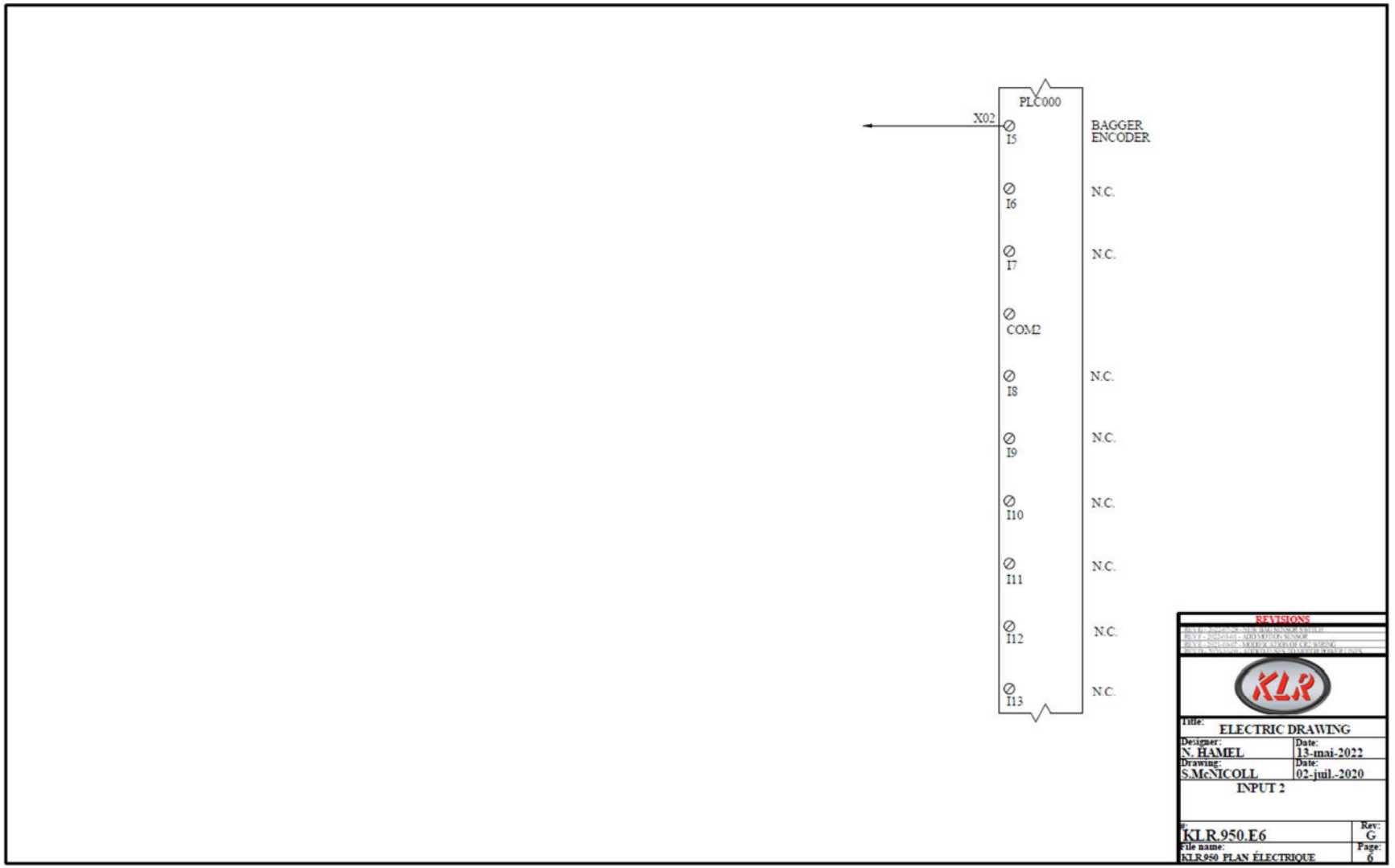


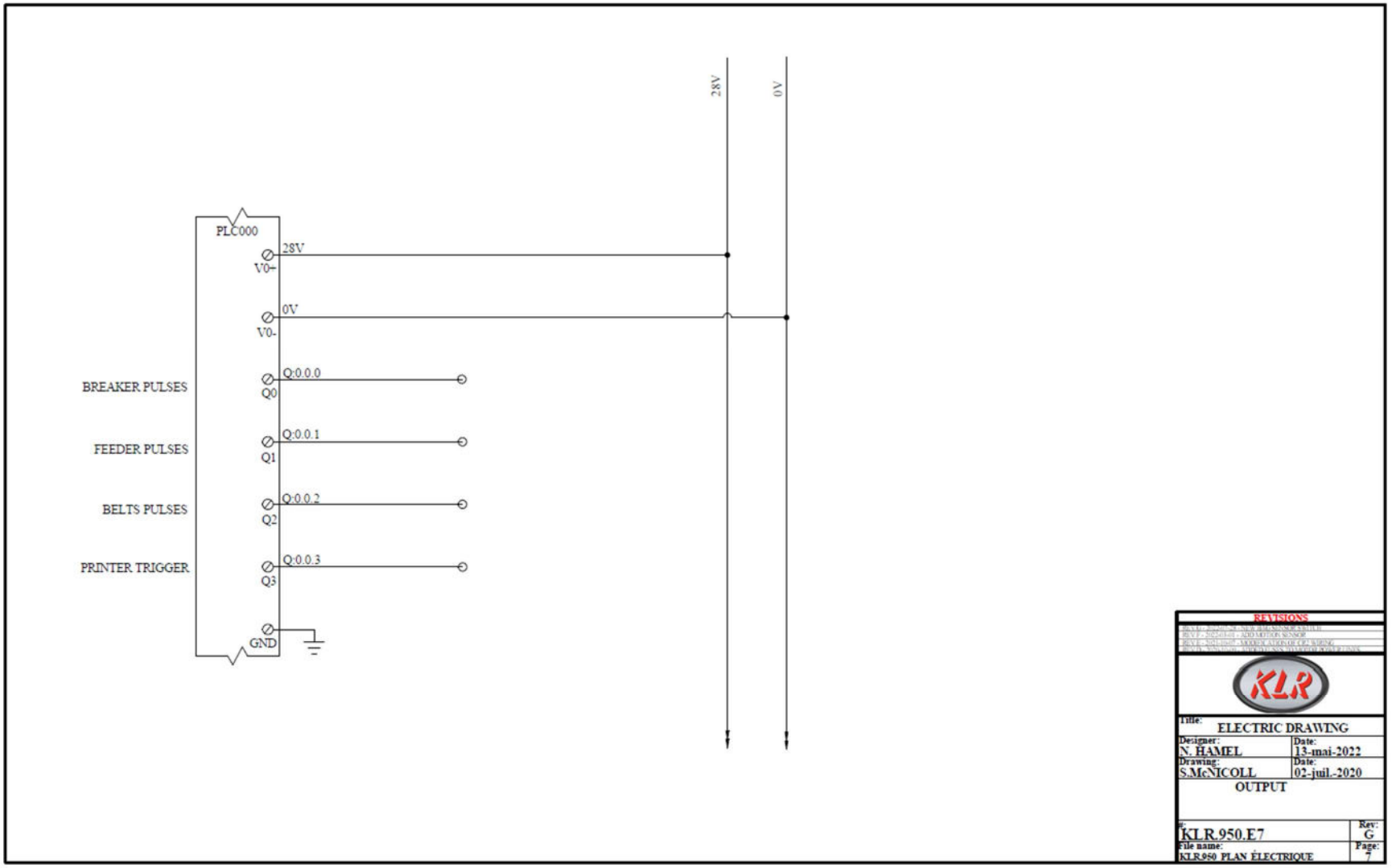

28V
0V
3A
28V-2
0V
Q:0.0.4
Q:0.0.0
PE-08023-1.8K
1.8 kohms
1.8 kohms
28V-2
0V
Q4-1
Q0-1
DRIVE PE-01533
V+ (12-40VDC)
GND
VCC
DIR
STP
ENA
3.3-5V
A1
A2
B1
B2
STEPPER PE-01514
A1
A2
B1
B2
BREAKER
REVISIONS
Title:
ELECTRIC DRAWING
Designer:
N. HAMEL
Date:
13-mai-2022
Drawing:
S.McNICOLL
Date:
02-juil.-2020
BREAKER STEPPER
KLR.950.E2
Rev:
G
File name:
KLR950 PLAN ÉLECTRIQUE
Page:
2

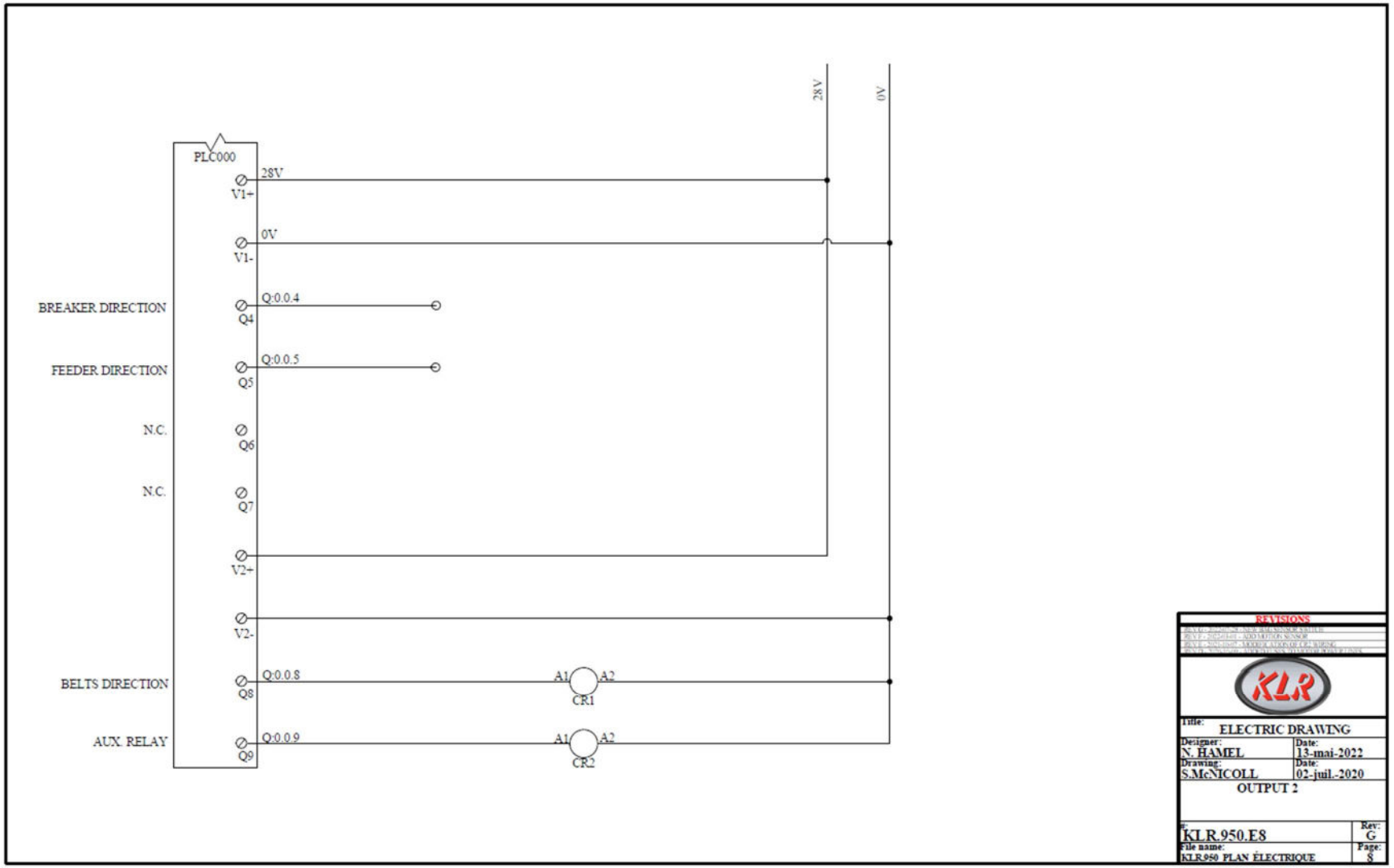

28V
0V
3A
28V-3
0V
Q:0.0.5
Q:0.0.1
PE-08023-1.8K
1.8 kohms
1.8 kohms
28V-3
0V
Q5-1
Q1-1
DRIVE PE-01533
V+ (12~40VDC)
GND
VCC
DIR
STP
ENA
3.3~5V
A1
A2
B1
B2
STEPPER PE-01514
A1
A2
B1
B2
FEEDER
REVISIONS
Title:
ELECTRIC DRAWING
Designer:
N. HAMEL
Date:
13-mai-2022
Drawing:
S.McNICOLL
Date:
02-juil.-2020
FEEDER STEPPER
KLR.950.E3
Rev:
G
File name:
KLR.950 PLAN ÉLECTRIQUE
Page:
3

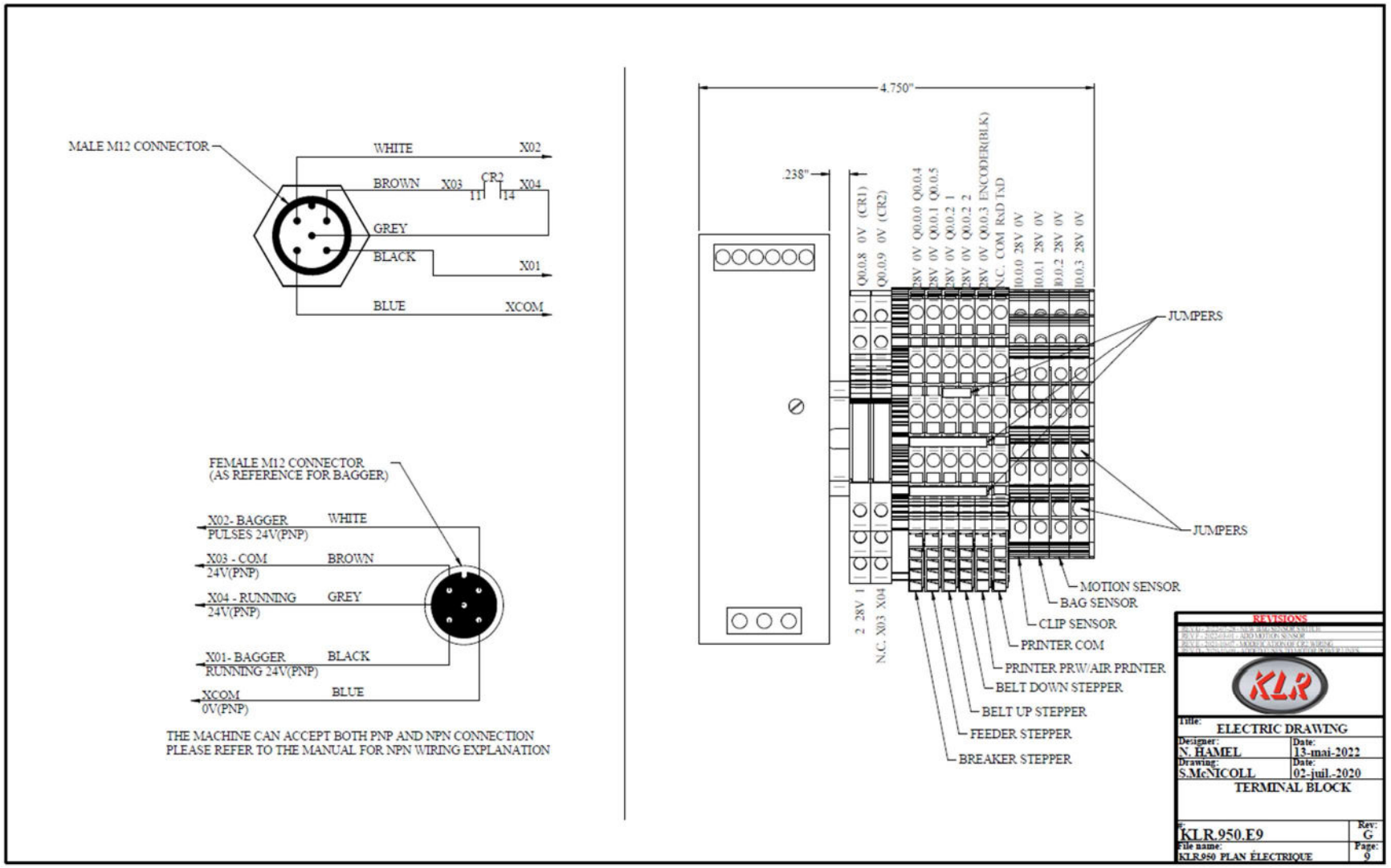

28V
0V
3A
28V-4
0V
CR1
11
14
2
Q:0.0.2
PE-08023-1.8K
1.8 kohms
1.8 kohms
28V-4
0V
4
Q2-1
DRIVE PE-01533
V+ (12~40VDC)
GND
VCC
DIR
STP
ENA
3.3-5V
A1
A2
B1
B2
STEPPER PE-01514
A1
A2
B1
B2
BELT-UP
28V-5
3A
28V-5
0V
CR1
11
12
1
Q:0.0.2
PE-08023-1.8K
1.8 kohms
1.8 kohms
28V-5
0V
3
Q2-1
DRIVE PE-01533
V+ (12~40VDC)
GND
VCC
DIR
STP
ENA
3.3-5V
A1
A2
B1
B2
STEPPER PE-01514
A1
A2
B1
B2
BELT-DOWN
REVISIONS
KLR
Title:
ELECTRIC DRAWING
Designer:
N. HAMEL
Date:
13-mai-2022
Drawing:
S.McNICOLL
Date:
02-juil.-2020
BELTS STEPPERS
KLR.950.E4
Rev:
G
File name:
KLR.950 PLAN ÉLECTRIQUE
Page:
4


SCHNEIDER ELECTRIC
IO
RACK 0
SLOT 0
TM241CE24T
PLC000
NC
NC
COM
I0
I1
I2
I3
GND
COM1
I4
28V
0V
CLIP SENSOR
VCC
0V
L
NPN
OUT
BAG SENSOR
C1
C2
N.O. SWITCH
MOTION SENSOR
I:0.0.0
I:0.0.1
I:0.0.2
I:0.0.3
XCOM
X01
CLIP SENSOR
BAG SENSOR
MOTION SENSOR (OPT)
SPARE
INTERLOCK COM
BAGGER RUNNING
REVISIONS
Title:
ELECTRIC DRAWING
Designer:
N. HAMEL
Date:
13-mai-2022
Drawing:
S.McNICOLL
Date:
02-juil.-2020
INPUT
KLR.950.E5
Rev:
G
File name:
KLR.950 PLAN ÉLECTRIQUE
Page:
5


PLC000
X02
I5
BAGGER ENCODER
I6
N.C.
I7
N.C.
COM2
I8
N.C.
I9
N.C.
I10
N.C.
I11
N.C.
I12
N.C.
I13
N.C.
REVISIONS
KLR
Title:
ELECTRIC DRAWING
Designer:
N. HAMEL
Date:
13-mai-2022
Drawing:
S.McNICOLL
Date:
02-juil.-2020
INPUT 2
KLR.950.E6
Rev:
G
File name:
KLR.950 PLAN ÉLECTRIQUE
Page:
6


28V
0V
PLC000
28V
V0+
0V
V0-
Q:0.0.0
Q0
BREAKER PULSES
Q:0.0.1
Q1
FEEDER PULSES
Q:0.0.2
Q2
BELTS PULSES
Q:0.0.3
Q3
PRINTER TRIGGER
GND
REVISIONS
Title:
ELECTRIC DRAWING
Designer:
N. HAMEL
Date:
13-mai-2022
Drawing:
S.McNICOLL
Date:
02-juil.-2020
OUTPUT
KLR.950.E7
Rev:
G
File name:
KLR.950 PLAN ÉLECTRIQUE
Page:
7


28V
0V
PLC000
28V
V1+
0V
V1-
BREAKER DIRECTION
Q:0.0.4
Q4
FEEDER DIRECTION
Q:0.0.5
Q5
N.C.
Q6
N.C.
Q7
V2+
V2-
BELTS DIRECTION
Q:0.0.8
Q8
A1
A2
CR1
AUX. RELAY
Q:0.0.9
Q9
A1
A2
CR2
REVISIONS
KLR
Title:
ELECTRIC DRAWING
Designer:
N. HAMEL
Date:
13-mai-2022
Drawing:
S.McNICOLL
Date:
02-juil.-2020
OUTPUT 2
KLR.950.E8
Rev:
G
File name:
KLR.950 PLAN ÉLECTRIQUE
Page:
8


MALE M12 CONNECTOR
WHITE
X02
BROWN
X03
CR2
11
14
X04
GREY
BLACK
X01
BLUE
XCOM
FEMALE M12 CONNECTOR
(AS REFERENCE FOR BAGGER)
X02- BAGGER
PULSES 24V(PNP)
WHITE
X03 - COM
24V(PNP)
BROWN
X04 - RUNNING
24V(PNP)
GREY
X01- BAGGER
RUNNING 24V(PNP)
BLACK
XCOM
0V(PNP)
BLUE
THE MACHINE CAN ACCEPT BOTH PNP AND NPN CONNECTION
PLEASE REFER TO THE MANUAL FOR NPN WIRING EXPLANATION
4.750"
.238"
Q0.0.8 0V (CR1)
Q0.0.9 0V (CR2)
28V 0V Q0.0.0 Q0.0.4
28V 0V Q0.0.1 Q0.0.5
28V 0V Q0.0.2 1
28V 0V Q0.0.2 2
28V 0V Q0.0.3 ENCODER(BLK)
N.C. COM RxD TxD
I0.0.0 28V 0V
I0.0.1 28V 0V
I0.0.2 28V 0V
I0.0.3 28V 0V
2 28V 1
N.C. X03 X04
JUMPERS
JUMPERS
MOTION SENSOR
BAG SENSOR
CLIP SENSOR
PRINTER COM
PRINTER PRW/AIR PRINTER
BELT DOWN STEPPER
BELT UP STEPPER
FEEDER STEPPER
BREAKER STEPPER
REVISIONS
Title:
ELECTRIC DRAWING
Designer:
N. HAMEL
Date:
13-mai-2022
Drawing:
S.McNICOLL
Date:
02-juil.-2020
TERMINAL BLOCK
KLR.950.E9
Rev:
G
File name:
KLR.950 PLAN ÉLECTRIQUE
Page:
9