

 **PEINEMANN**
EQUIPMENT

BUILT FOR THE TOUGHEST JOBS

PEINEMANN TLX

MANUAL MAY 2023

[PEINEMANNEQUIPMENT.COM](https://www.peinannequipment.com)

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1. GENERAL INFORMATION

1.1 Intended audience

This manual is intended for use by field engineering, installation, operation, and repair personnel. Every effort has been made to ensure the accuracy of the information. Peinemann Equipment, will not be held liable for errors in this manual, or for consequences arising from the misuse of this manual.

1.2 Special information

Detailed descriptions of standard procedures, safety principles and service operations are not included. Please note that this manual contains warnings about procedures which could damage equipment, make it unsafe, or cause PERSONAL INJURY. Anyone using service procedures or tools, whether or not recommended by Peinemann Equipment, must be thoroughly satisfied that neither personal safety nor equipment safety will be jeopardized.

All information contained in this manual is based upon the latest product information available at any time of printing. We reserve the right to make changes at any time without notice.

1.3 Illustrations

Illustrations (figures) represent a graphical representation of equipment components for use in identifying parts or establishing nomenclature. These figures may or may not be drawn to scale.

1.4 Safety requirements

The TLX is installed and operated in a controlled environment involving hazardous situations. Proper maintenance is important for safe and reliable operation. Procedures outlined in Peinemann Equipment manuals are the recommended methods for performing operations and maintenance.

1.5 Personnel training

All personnel performing installation, operations, repair, or maintenance procedures on the equipment, or those in the vicinity of the equipment, should be trained to ensure their safety.

! Personnel should wear protective gear during installation, maintenance, and operations.

1.6 Recommend tools

Service operations may require the use of tools designed specifically for the purpose described. Peinemann Equipment recommends that only those tools specified to be used when stated. Ensure that personnel and equipment safety is not jeopardized when following service procedures.

1. GENERAL INFORMATION

1.7 General system safety practices

The equipment discussed in this manual may require or contains one or more utilities, such as electrical, hydraulic, pneumatic, or oil.

- Isolate energy sources before beginning work.
- Avoid performing maintenance or repairs while the equipment is in operation.
- Wear proper protective equipment during equipment installation, maintenance, or repair.

! Read and follow the guidelines below before installing equipment or performing maintenance.

1.8 Replacing components

- Verify that all components, such as cables and hoses, are tagged and labelled during assembly and disassembly of equipment to ensure correct installation.
- Replace failed or damaged components with Peinemann Equipment certified parts. Failure to do so could result in equipment damage or injury to personnel.
- Only use parts that are suitable for high pressure and that carry a valid test certificate.

1.9 Routine maintenance

Equipment must be maintained on a routine basis. See Ch.6 for maintenance guidelines.

! Failure to conduct routine maintenance could result in equipment damage or injury to personnel.

1.10 Limited warranty

Warranty provided will be void if the TLX or parts were either:

- Unauthorized modified repaired or serviced
- Not properly maintained
- Replacement parts not manufactured by Peinemann Equipment were utilized

1.11 Hose sizes and pressures

The TLX is suitable for use with various hose sizes and pressures. However, the maximum throughput of the TLX is Ø52 millimeter (2.05"). The most common hose sizes (4/2, 5/2, 6/2, 6/4, 8/ and 8/4), hose catchers, nozzles and end stops are available from stock. Difference lengths and shapes for the front lances are also available.

1.12 SIR Regulations

The TLX is a semi-automatic high-pressure flex lance transit machine, and current SIR regulations regarding high-pressure cleaning apply (or the applicable rules in the country where you are currently working). It is recommend to comply with SIR regulations. The general safety regulations also apply, just as for other high-pressure cleaning activities. The nozzles to be used must be in accordance with the nature of the cleaning activity. It is advised to not use nozzles that exert a major push or pull force.

1. GENERAL INFORMATION

1.13 Accountability

Peinemann Equipment B.V. cannot be held accountable for any material and non-material damage caused during installation and operation of the TLX. Users are obliged to carefully read this manual and handle the machine with care.

1.14 General terms and conditions

“All offers, orders, assignments and agreements for the lease, sale and/or delivery of services by Peinemann Equipment B.V. are subject to Peinemann’s General Terms and Conditions as lastly filed with the Chamber of Commerce and Industry in Rotterdam under number 24175469. The General Terms and Conditions can also be found on Peinemann.nl. Any other general terms and conditions are expressly rejected.”

2. SAFETY INSTRUCTIONS

2.1 General

- Use this machine only for the purpose for which it was developed and as instructed in the manual.
- This machine may only be used by qualified and trained personnel.
- The area immediately around the work should be cordoned off to exclude untrained individuals.
- All personnel in the vicinity must wear appropriate protective clothing as well as eye and ear protection, in accordance with the specific requirements.
- Inspect the equipment for obvious damage or incorrect assembly. Do not use the machine until this has been fixed.
- Rinse out the hoses before the nozzles are fitted in order to avoid any blockages.
- Check that all threaded connections are assembled tightly and are leak-proof. Use stainless steel thread grease to avoid thread galling.
- Check that there are no blockages in the nozzles. If the nozzles are blocked, they must be cleaned or replaced.
- This machine must always be used with a foot pedal and/or dump valve that has been checked by an inspector and that automatically releases any water pressure when released.
- Water spray nozzles create a strong reactive force and these forces can become unbalanced if a nozzle gets stuck. Use the equipment correctly to resist these forces.
- Check that all operating functions are working properly before commencing high-pressure activities.
- Increase the pressure gradually when starting up the machine to ensure that everything is working properly and that the equipment is properly balanced and positioned.
- Use fittings marked with the maximum working pressure and covered by a valid certificate. Do not exceed the maximum working pressure for each component in the system.

2.2 Steel lance and/or flex lance

- The farthest end of the bundle to be cleaned should be cordoned off with a 6 meter (19.69") radius. If there are other workers nearby, a screen should be used.
- The person closest to the nozzles must be in control of the high pressure.
- The lance machine should be safeguarded against both the reactive force of the water spray and the possibility of hydraulicking.
- The operator must take a position where he can see the pipe plate, but is far enough away so that he is not troubled by rebounding water spray during cleaning.
- Mechanical end stops must be fitted to ensure that the flex lance does not escape from the heat exchanger.
- The length of a nozzle, including the end stop, on a high-pressure hose must be the same or larger than the internal diameter of the pipe to be cleaned, in order to prevent the lance from turning. If not, then a lead pipe must be installed between the end of the holes and the lance.
- It is recommend to use an anti-withdrawal device so that the machine cannot be pushed from the tube plate.
- When cleaning blocked pipes with small diameters, use a lance and hose diameter that is less than 2/3 of the pipe diameter, so that the waste water has a chance to escape. It is recommend to use an anti-withdrawal device to protect the operator against the hose being pushed back out of the pipe.
- High-pressure cleaning can damage pipes if the nozzles are not moved under pressure. Always ensure that there is a cleaning protocol in place, stating maximum water pressure.

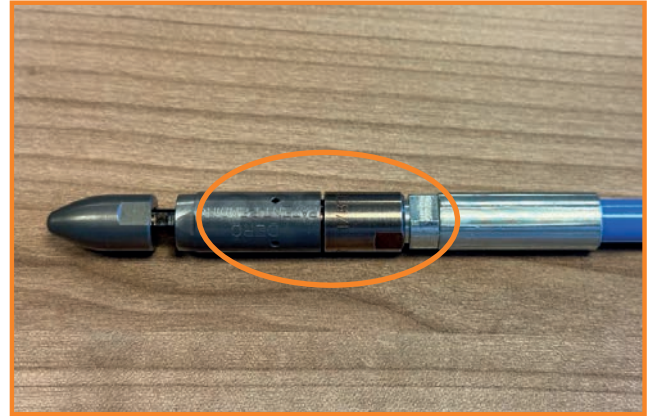
3. CRIMP FITTING, NOZZLE, STOP SLEEVE, AND HOSE CATCHER CONFIGURATION

All Peinemann flex lance feeders such as the TLE, (X)LTC, TLX and Xs series must be operated with a correct nozzle, crimp fitting, stop sleeve and hose catcher configuration. Therefore, before starting operations, review the steps below to ensure a correct and safe operating configuration.

First, always use a nozzle with the same or larger diameter than the crimp fitting on the hose. When the nozzle has a smaller diameter than the crimp fitting, the risk of hydraulicking arises.



Nozzle diameter smaller than crimp fitting diameter = **incorrect**



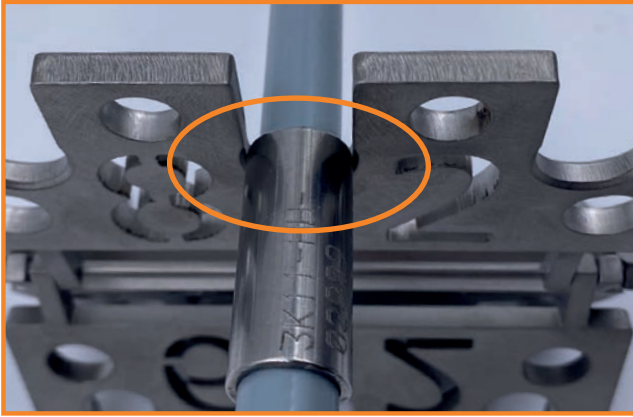
Nozzle diameter the same or larger than crimp fitting diameter = **correct**

Second, always use a hose with a stop sleeve (safety sleeve) at 5 centimeter (2 in) before the crimp fitting on the hose. Check that the stop sleeve has a large enough diameter to be safely stopped by the hose catcher. If a stop sleeve cannot be used (not recommended), then make sure that the crimp fitting has a large enough diameter to be safely stopped by the hose catcher. There is a risk of the hose coming through the hose catcher or getting stuck in the hose catcher when the stop sleeve and/or crimp fitting diameter is not significantly larger than the hose catcher diameter. The stop sleeve and/or crimp fitting is highly recommended to have at least a 3 millimeter (0.12 in) larger diameter than the hose catcher (=+1.5 mm around). If this is not the case, we recommend using a different configuration.

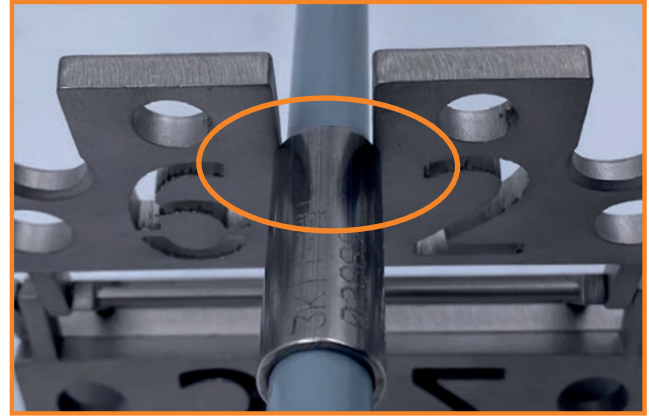


3. CRIMP FITTING, NOZZLE, STOP SLEEVE, AND HOSE CATCHER CONFIGURATION

Third, always physically check that the hose catcher stops the stop sleeve and/or crimp fitting (not recommended) on the hose. Do not only rely on the size engraved onto the crimp fitting, stop sleeve, and hose catcher. It is also recommended to measure if the crimp fitting and/or stop sleeve has a 3 millimeter (0.12 in) or larger diameter than the hose catcher (=+1.5 mm around).



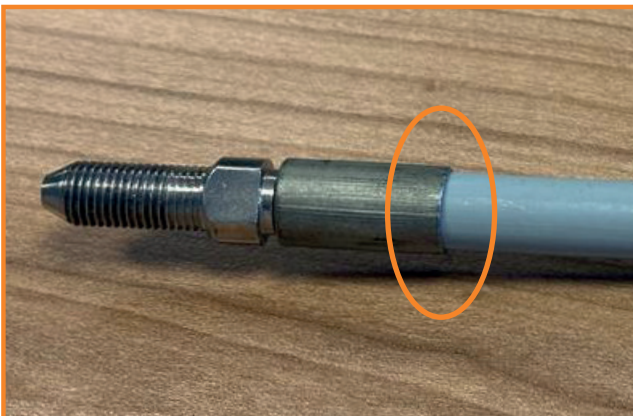
Stop sleeve diameter too small for the hose catcher = **incorrect**



Stop sleeve diameter large enough for the hose catcher (stop sleeve diameter is min. 3mm larger then hose diameter (=+1.5mm around)) = **correct**

Special warning

Peinemann Equipment B.V. especially advises not to work with so called “Blast-Pro” or “Pro-lance” crimp fittings without the previously described stop sleeves fitted on the hose. These special crimp fittings are known to have a small diameter crimp fitting which could get stuck in the hose catcher and in worst case scenarios could pass the hose catcher if it returns in the flex lance cleaner at high speeds. Always add a correct stop sleeve to the hose if working with a “Blast-Pro” or “Pro-lance” coupling. Double-check that the stop sleeve diameter is minimally 3 millimeter (0.12 in) larger than the hose catcher after clamping the stop sleeve to the hose (=+1.5 mm around). The diameter of the stop sleeve might have decreased in the clamping process.



Typical “Blast-Pro” crimp fitting that could pass through the hose catcher



Always use a stop sleeve when using “Blast-Pro” or “Pro-Lance” crimp fitting

4. GENERAL SPECIFICATIONS

4.1 Technical specifications (approx.)

Type of hose possibility: dependent on 2/3/4/5 lance configuration

Maximum OD hose coupling: dependent on 2/3/4/5 lance configuration

Maximum capacity air motor: 0.62 kW (0.83 hp)

Minimum air pressure: 3.0 bar (45 psi)

Operating air pressure: 6.3 bar (120 psi)

Max. air consumption: 14 l/s at max RPM (29.7CFM)

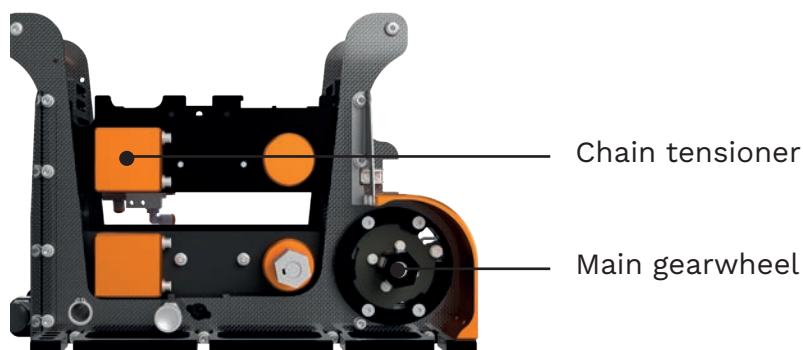
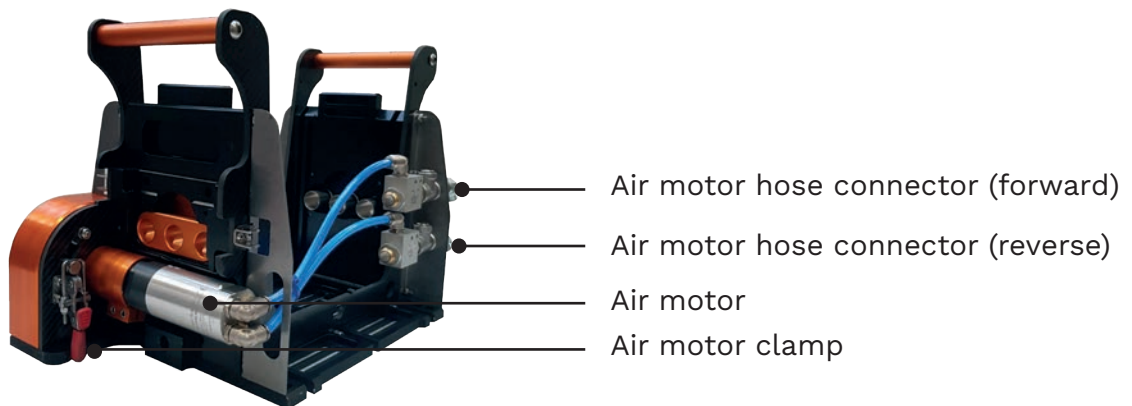
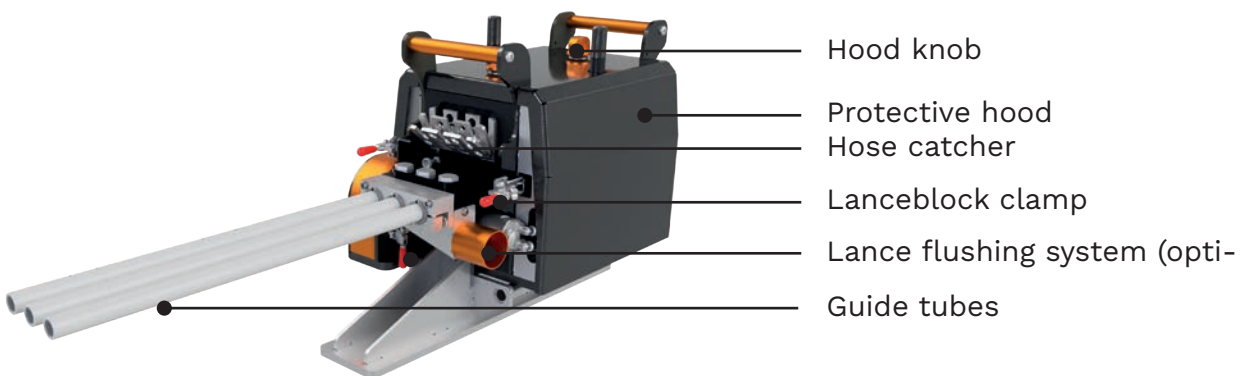
Hose feed rate: 0.4 – 0.7 m/sec (adjustable with the air pressure)

Recommend flow: 114 l/min (30 lbs/min)

Recommend pressure: 1,000 - 1,400 bar (14,500 - 20,300 psi)

Max. pull/push strength: 130 kg (287 lbs)

4.2 Components



5. INSTALLATION

5.1 Check items

Check whether all required items are present. The following items should be present.

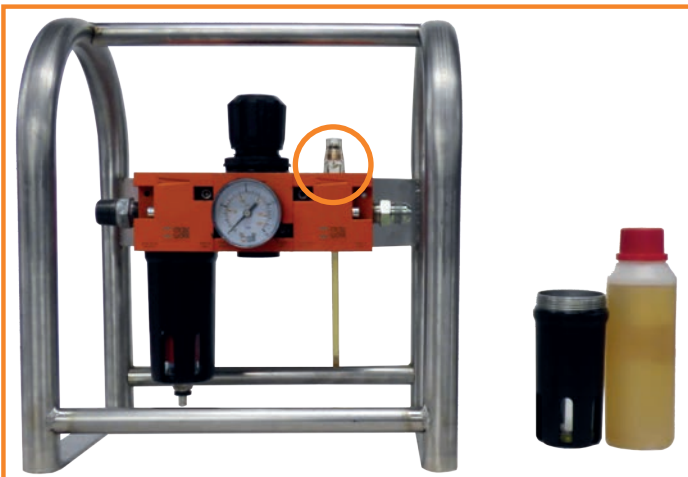
- TLX heart
- Oil lubricator
- Lubricator oil
- Special chain grease
- Optional products

5.2 Filling the oil lubricator

Fill the drum of the oil lubricator with the supplied oil. The oil drum is located on the exit side of the oil lubricator. Unscrew the drum by turning it counter clockwise, after which it can be filled along the open side. Screw the drum back into the block and tighten it firmly without additional tools. Always use the supplied oil for initial usage. For refilling, please use oil that is specifically intended for pneumatic tools.

5.3 Adjusting the oil lubricator

The oil lubricator can be adjusted using a screwdriver. Unscrewing the screw will cause drops to be released more frequently. Unscrew the regulating screw to such an extent that 1 drop per 5 seconds is released.



5.4 Connecting the air hose

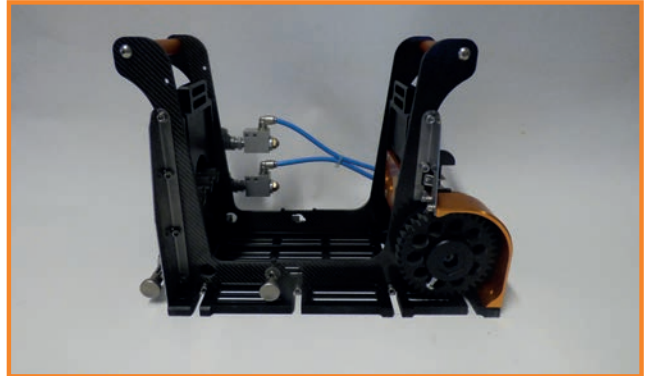
Blow through the input air hose and connect it to the air supply unit and oil lubricator. Connect the output hose to the oil lubricator and remote controller. Then, set the air pressure between a minimum of 3 bar (45 psi) and a maximum of 6.3 bar (120 psi).



5. INSTALLATION

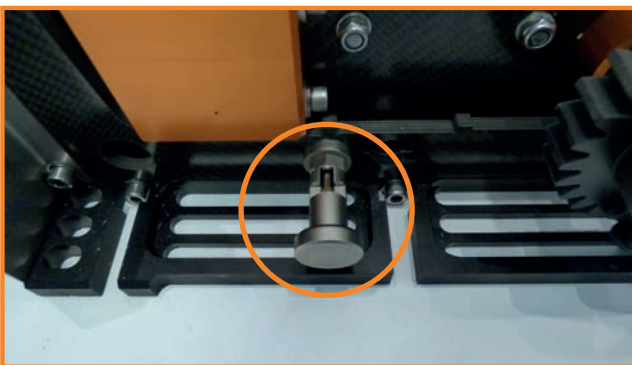
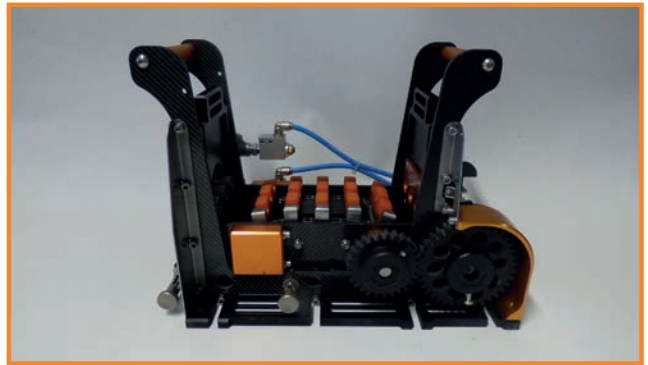
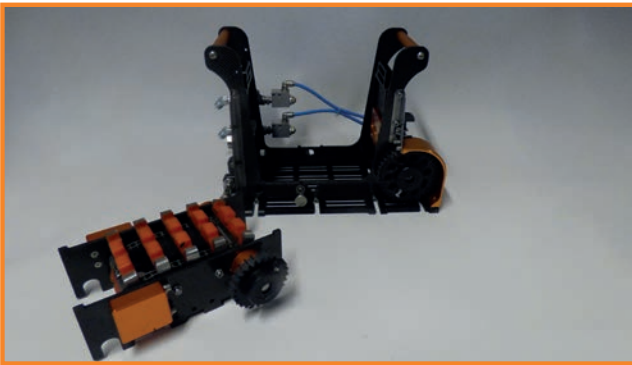
5.5 Remove the protective hood

Remove the protective hood of the TLX by turning the protective hood knobs counter clockwise. Then lift the hood upwards.

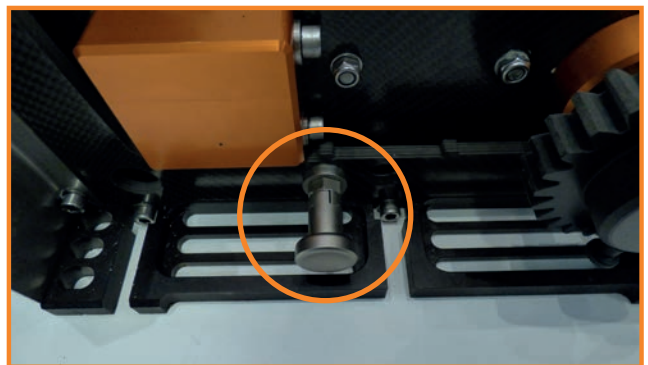


5.6 installing the lower cartridge

First, install the lower cartridge by sliding it into the TLX heart. Lock the lower cartridge into position.



Unlocked

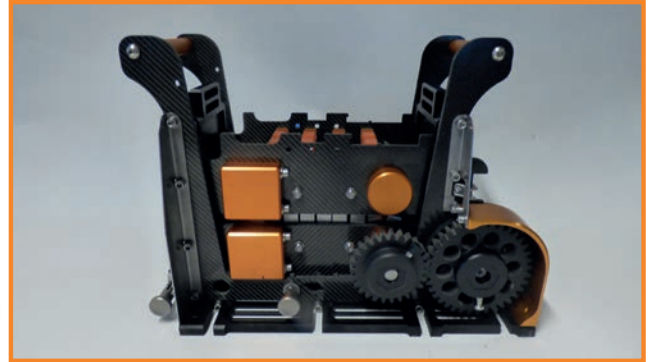
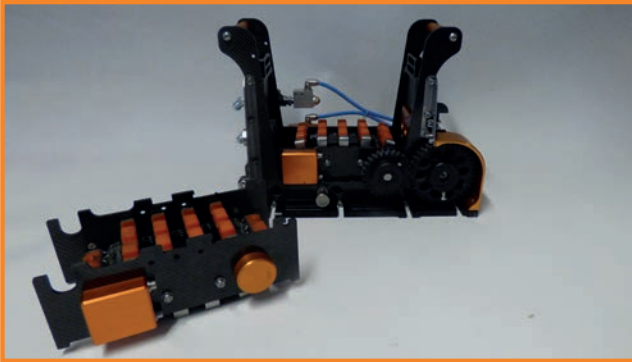


Locked

5. INSTALLATION

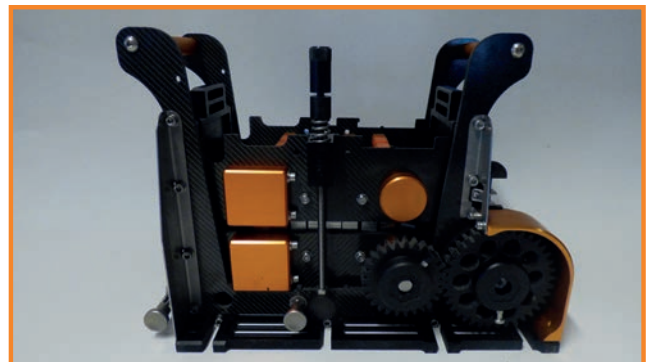
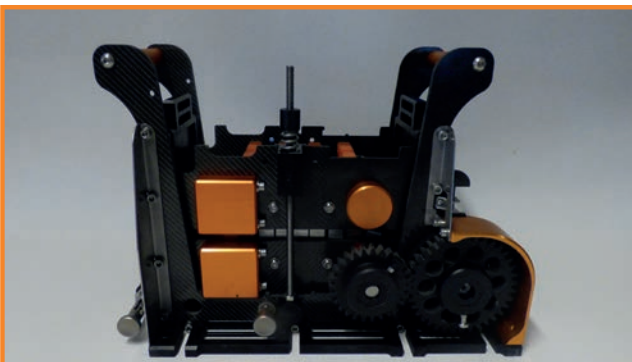
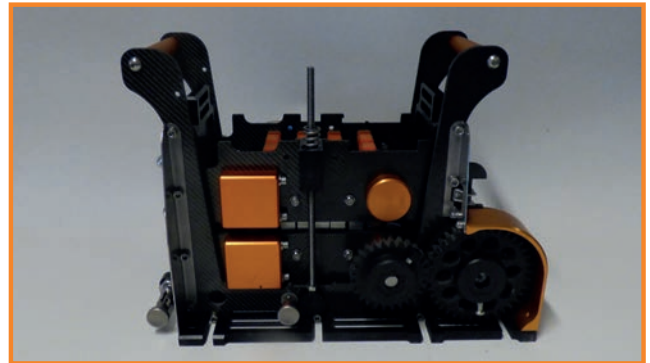
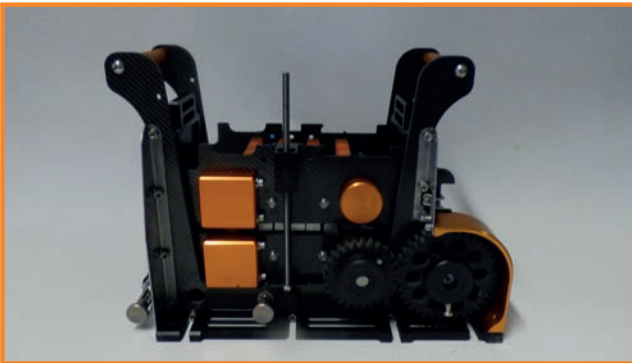
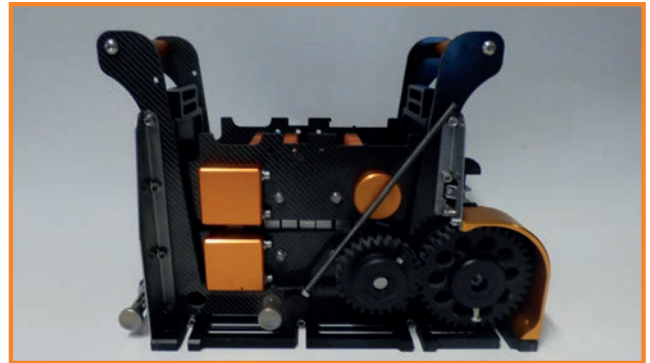
5.7 Installing the upper cartridge

Lower the upper cartridge in the TLX heart. Make sure the chain tensioners of the two cartridges are aligned. The chains of the two cartridges must interlink for the cartridges to be positioned correctly.



5.8 Installing the friction tensioners

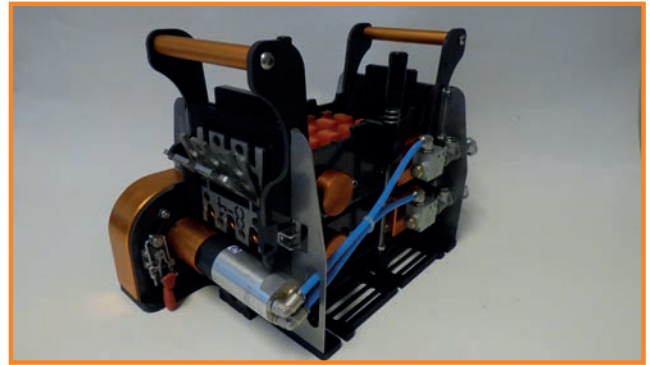
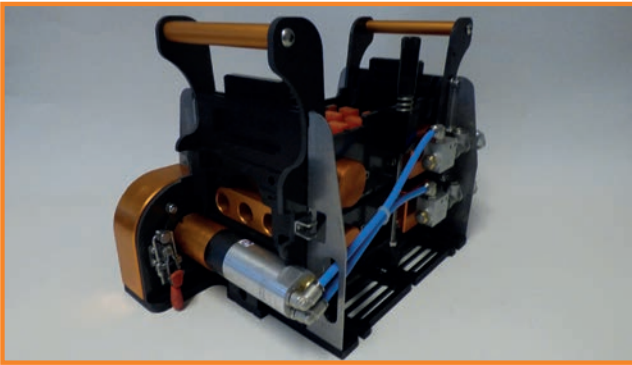
Install the friction tensioners accordingly. The friction tensioners consist of a friction adjustment knob, spring end stop, spring, spring support, studbolt, nut and mounting block. Do not put any tension on the friction tensioners at this stage.



5. INSTALLATION

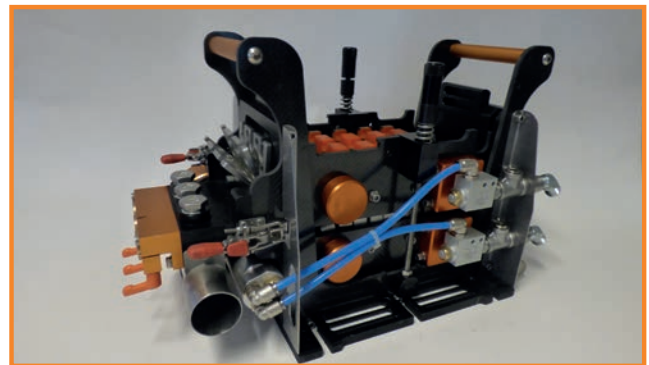
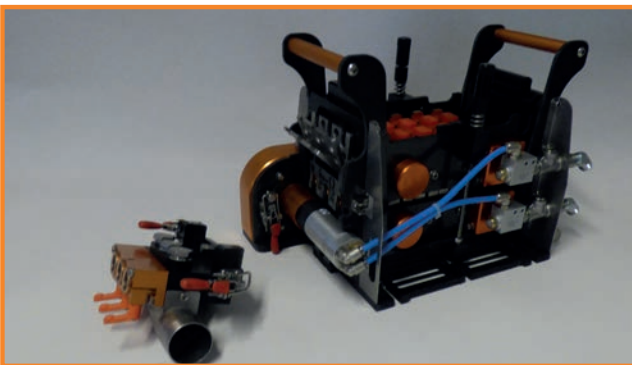
5.9 Installing the hose catcher

Slide the hose catcher into the front of the TLX heart. Make sure to slide the correct hose catcher size for the lances being used.



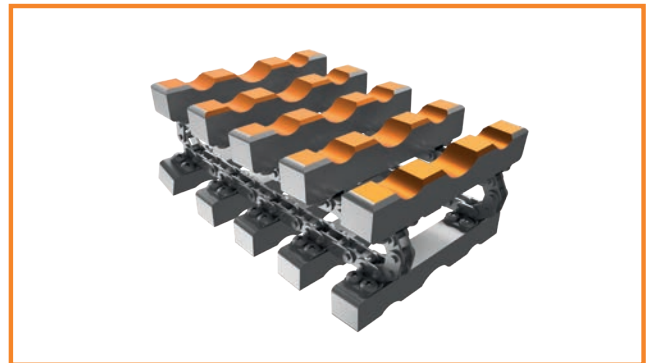
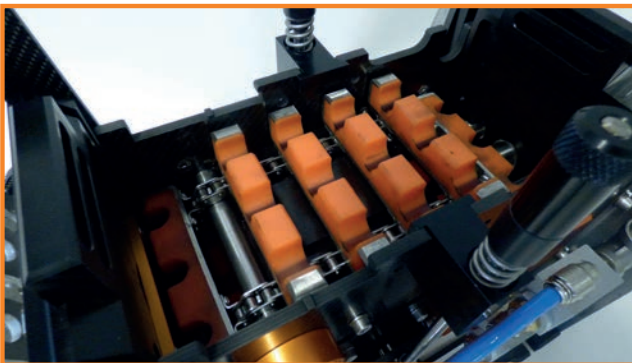
5.10 Installing the lanceblock

Mount the lanceblock to the TLX heart by sliding it into the frame and locking the two clamps. Make sure the clamps are tensioned sufficiently. Otherwise, the lanceblock will move during operations.



5.11 Greasing the chains

Connect an air hose between the remote controller and TLX air motor. Lubricate the chains with the supplied chain grease and let the machine run by operating the forward/outward lever on the remote carefully. This allow for the grease to spread around the chains evenly. Close the protective hood after greasing the chains. Secure the protective hood with the two knobs on top of the protective hood.



6. OPERATIONS

6.1 Operating the TLX

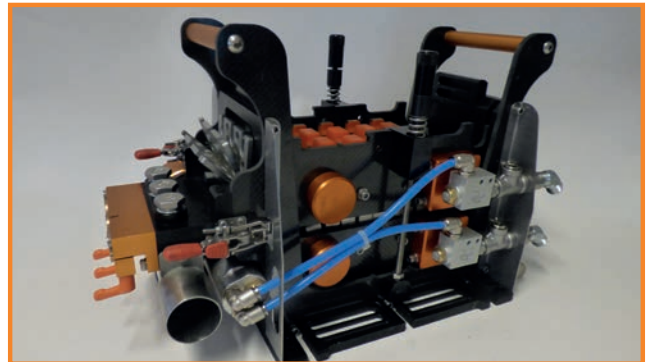
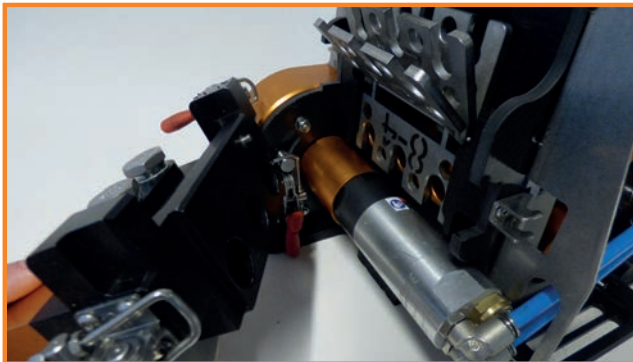
6.1.1 Installing the flex lance

Push the flex lances through the rear guiding tubes until the lances are approx. 30 centimeter (1.81") out of the guide tubes. Then, mount the nozzle and stinger to the flex lances.



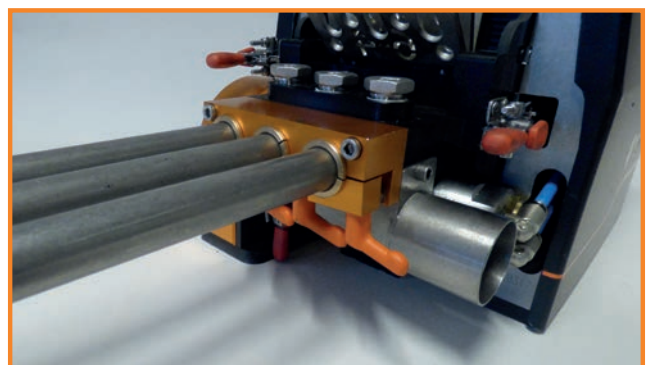
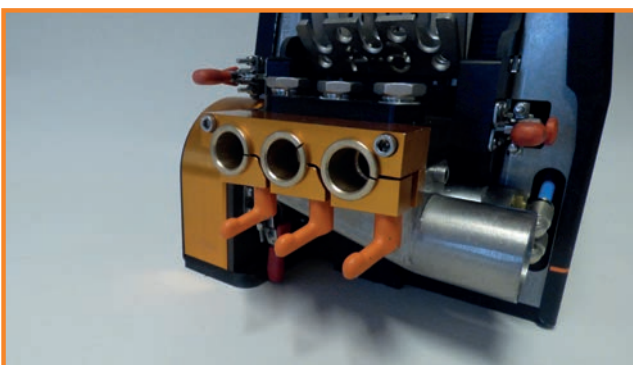
6.1.2 Installing the hose catcher

Install the correct hose catcher for the required operations. Changing the hose catcher is possible by untensioning the two clamps which hold the lanceblock in position. Place the correct hose catcher and secure it by using the two clamps to mount the lanceblock back into place.



6.1.3 Installing the guide tubes

Install the correct guide tubes. Use the 1/2" guide tubes for small hoses till 5/2 and the 3/4" guide tubes for larger hoses. Secure the guide tubes with the clamps underneath the lanceblock.



6. OPERATIONS

6.1.4 Installing the pitch adjuster

Use allen keys to install and configure the pitch adjuster.

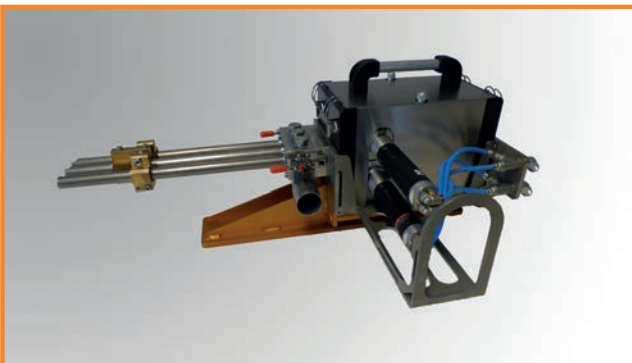
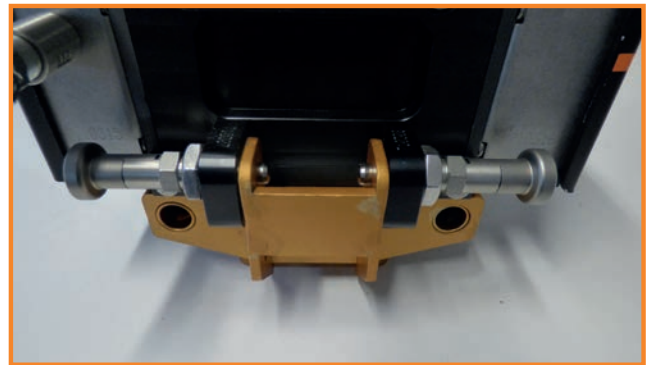
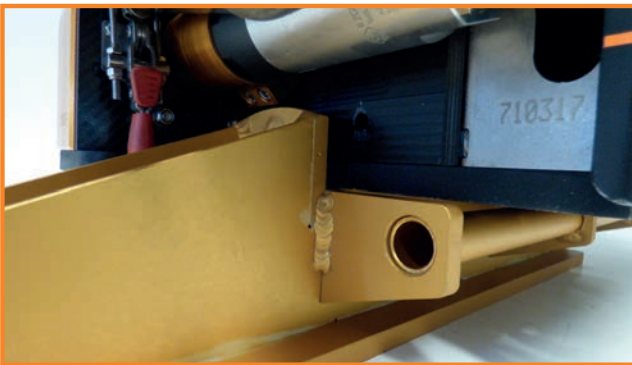


6.1.5 Configuring the friction tensioners

The friction can be set with the two friction tensioners on top of the TLX. The friction tensioners must be turned clockwise until they come into contact with the spring end stop. Then tighten the friction tensioners one and a half turns clockwise. If the flex lances slip to much during operations, than adjust the friction tensioners accordingly.

6.1.6 Mounting the connection frame

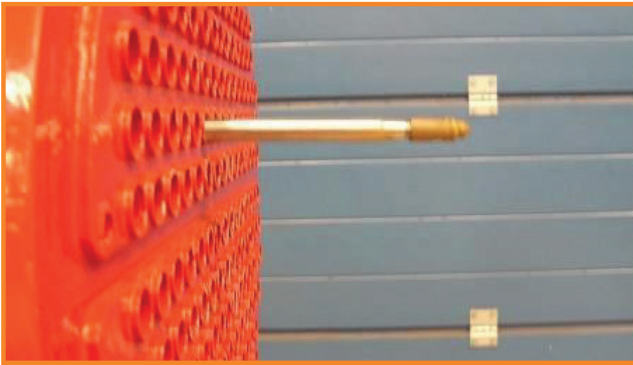
The connection frame, which is required for using the TLX on an indexing frame, can be easily mounted to the TLX. Slide the front of the TLX into the pin of the connection frame. Then use the two locks at the end of the TLX to lock the connection frame into position.



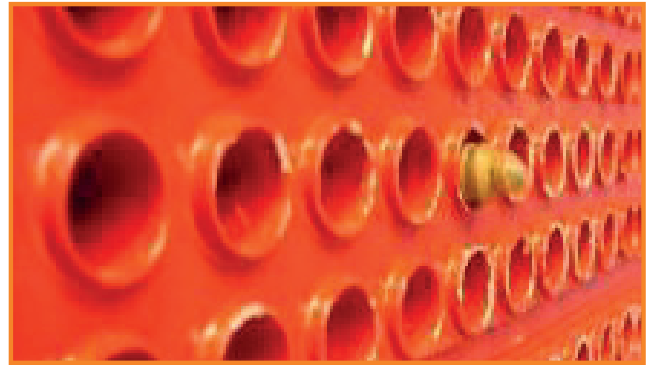
6. OPERATIONS

6.1.7 Mounting the end cap

The maximum reach of the flex lances can be set by screwing the end cap onto the flex lances. The correct position for the end cap can be determined by manoeuvring the hose in one of the bundle pipes until the nozzle extends beyond the tube plate. By screwing the end cap against the rear hose input on the flex lance, the length of the flex lance will never be too long, meaning that the nozzle will never protrude too far out of the pipe and create a potentially hazardous situation.



Incorrect



Correct

If the end cap touches the back of the machine during cleaning, the machine will start to slip and the reverse movement can be started (check whether the end cap is actually touching the back of the machine). The reverse movement can be stopped when the reducer sleeve on the flex lance touches the hose catcher in the machine and the TLX starts to slip. When working with the TLX, it is advised to use a stinger.

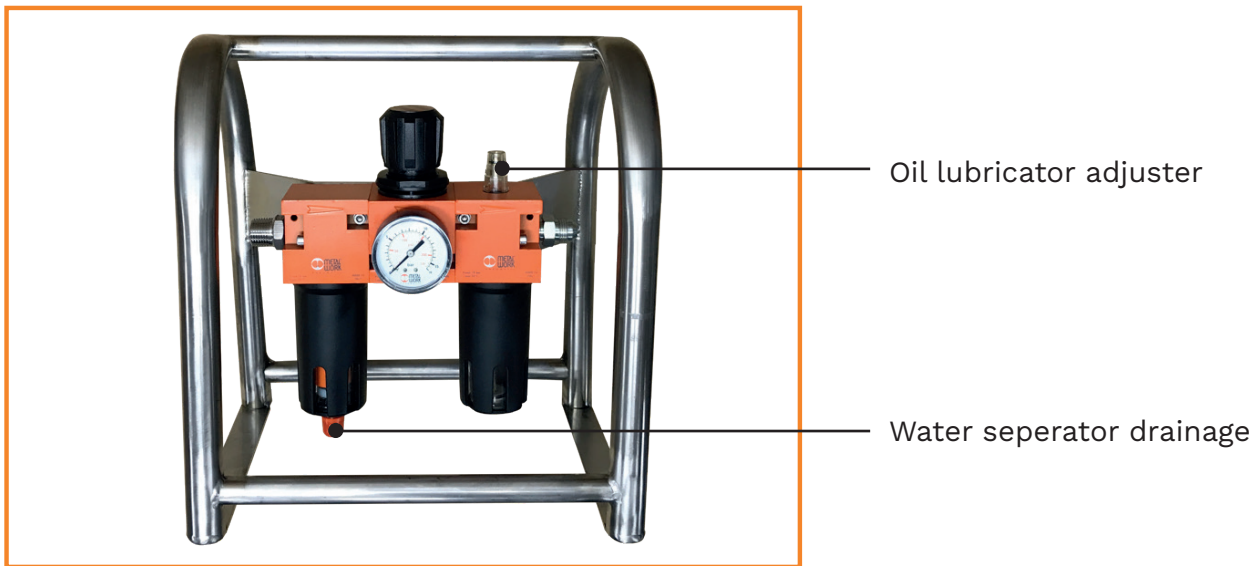


! When cleaning a “U bundle” using a small hose with no stinger, this must be adjusted so that it cannot leave the pipe.

7. MAINTENANCE

7.1 Daily maintenance

- Before use, check if the water separator in the oil lubricator is empty and that there is enough oil in the oil drum. The water separator is fitted with an automatic water drainage, but it is important to check that no water is present in the water reservoir.
- After operating, clean the machine with water and/or cleaning agents.
- Grease the chains after operating.
- The motor must be filled with the supplied oil through the air inlet, after which the motor should briefly run with air. This allows the oil to spread throughout the rotor, which prevents the blades from sticking.
- Check the condition of the friction blocks. Replace if needed.
- Clean the quick release valves regularly. During operations, oil builds up in the quick release valves. This causes the TLX's reaction time to decrease.



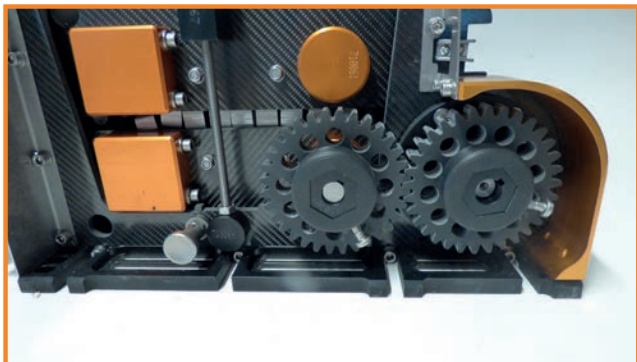
7.2 Major maintenance

Check the TLX by a qualified engineer every 500 service hours. If there is no record of service hours, then check the machine after one year. Contact Peinemann Equipment or one of our dealers for major maintenance and/or replacement of parts.

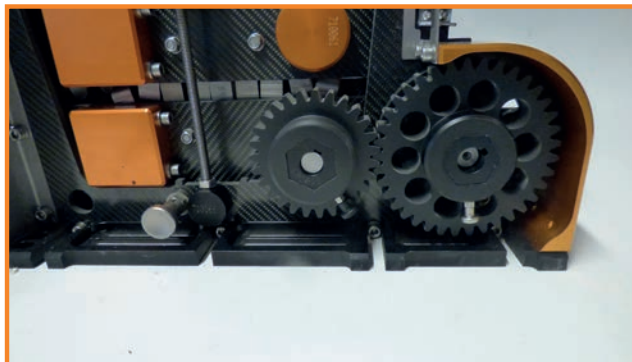
7. MAINTENANCE

7.3 Replacing gears

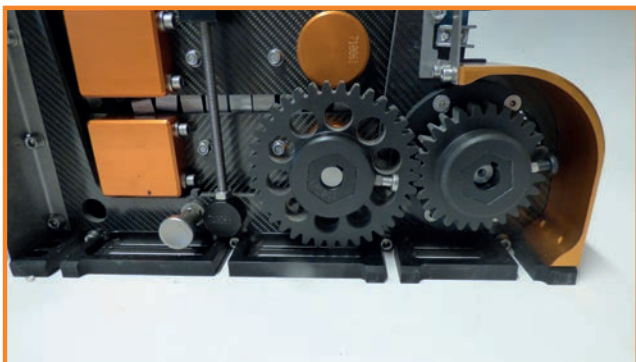
The TLX allows the operator to change the speed and force of the machine not only by adjusting the pressure, but also by changing gear sets. These gear sets are available as options. The gears can be easily removed by pulling the locking pin and then sliding the gear off. The new gear can be mounted by sliding the gear onto the axle and dropping the locking pin.



Standard



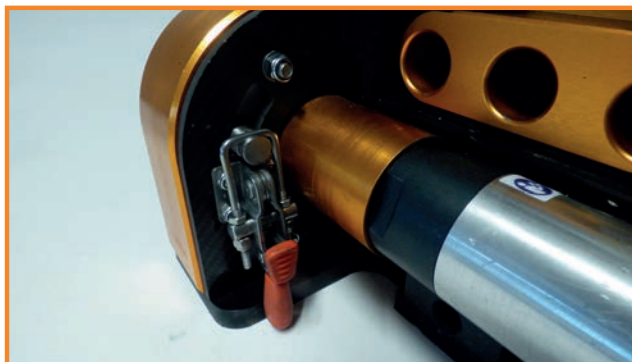
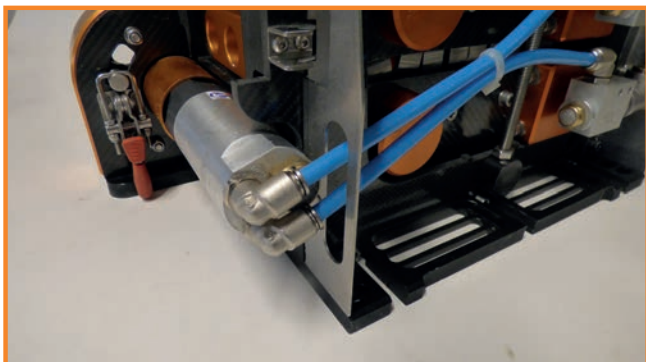
Fast



Slow

7.4 Replacing the air motor

The air motor can be removed by disconnecting the air connections, opening the clamp and sliding out the motor. A motor can be installed by following the above mentioned steps in reverse.



8. DECISION TREE

Decision tree

An analysis of the reported high-pressure accidents over a period of many years has shown that most high-pressure accidents occur during manual cleaning with a flex lance or lance. It has therefore been decided to switch to a different method of decision-making before proceeding with manual high-pressure cleaning using a flex lance or lance. The purpose of the method described below is to drastically reduce this type of accident. This decision-making method has been the acceptable approach for this type of high-pressure cleaning work since 2008. The risks must be assessed before starting any cleaning work using a flex lance or lance. The cleaning method can be chosen on the basis of the following decision tree. Follow the steps in the decision tree from the point when the contract is secured until the work can be safely undertaken. The decision tree distinguishes six levels, with level 1 being the safest working method and level 6 representing a forbidden zone.

Level 1

The aim here is to use automatic equipment as far as possible, so that people need not be present in the immediate vicinity of the high-pressure spray cleaning work.

Level 2

If it is not possible to use automatic equipment, then the choice may be made to use semi-automatic equipment.

Level 3

If work with semi-automatic equipment is not possible, then a choice may be made to work manually with a flex lance. This must be fitted with a reducer sleeve where the flex lance is held in place by a hose collar. The hose collar must be attached to the item to be cleaned. The reducer sleeve must absorb the shock if the hose reverses out of control. This reducer sleeve must be clamped between 5 centimeter (1.97”) and 20 (7.87”) centimeter behind the pressure sleeve on the flex lance. The marking ring is not used in these situations. The certificate for this type of flex lance must state that it is fitted with a reducer sleeve and that the flex lance in question is only suitable to be used for cleaning with a hose collar. This means that the reducer sleeve is not a replacement for the marking ring, or vice versa. Check whether the flex lance with reducer sleeve is suitable for the hose collar being used. The spray operator must be aware of the risks associated with this working method and must wear personal protective equipment designed for the risks of working in this way.

Before proceeding to level 4 or 5: If it is not possible to work according to one of the three methods outlined above, then there must first be a consultation between the client and the cleaning company about the working method, including an assessment of the associated risks. Both parties must agree on the chosen working method. This agreement must be demonstrable by means of a document signed by both parties.

The following working methods for a flex lance are still permitted but are strongly discouraged because of the considerable risk.

8. DECISION TREE

Level 4

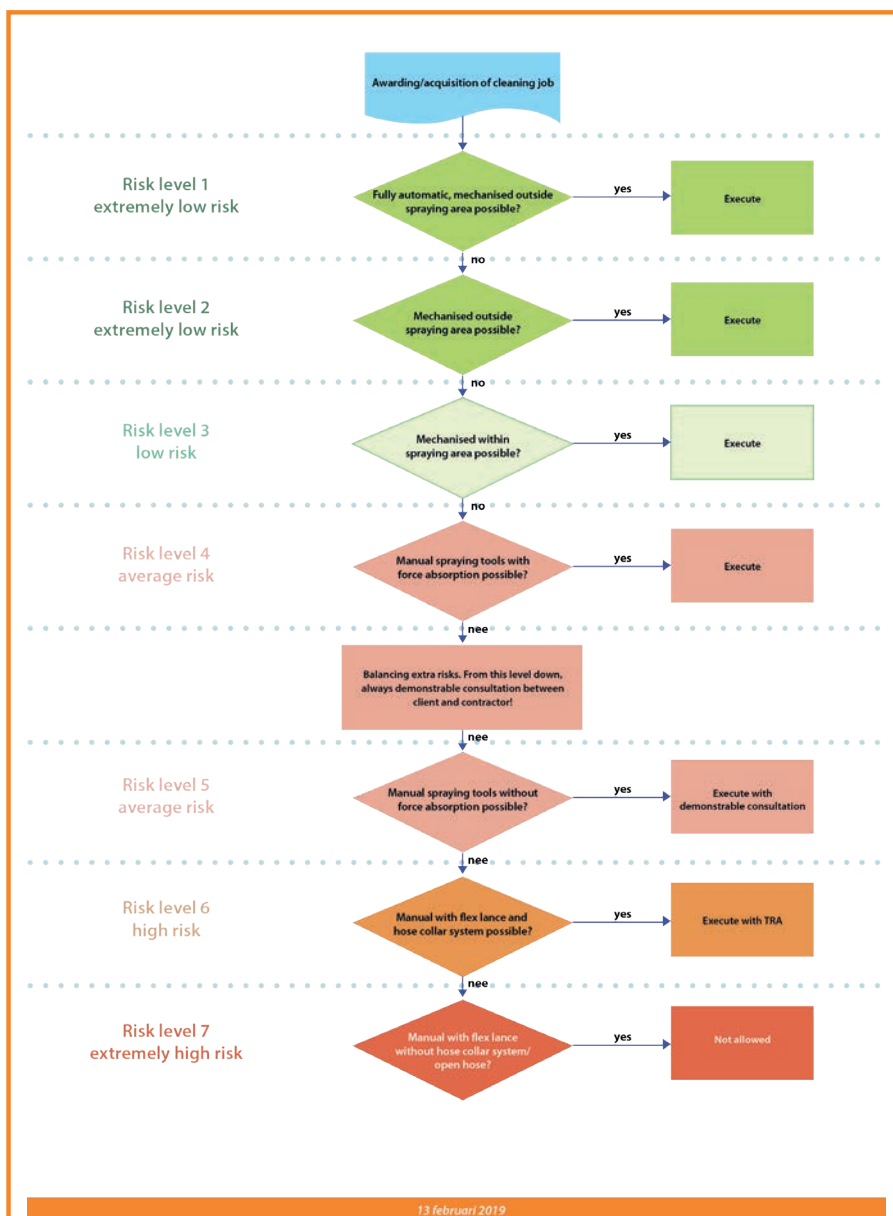
If using one of the previous three methods is not possible, then the choice can be made to work manually with a flex lance that has been fitted with a lead pipe. The flex lance must be fitted with a marking ring. Note that a lead pipe should be used that is longer than the diameter of the pipe or tube in order to prevent any boomerang effect. The spray operator must wear comprehensive personal protective equipment designed to withstand the risks of this working method.

Level 5

If working with a flex lance and lead pipe is not possible, then it is possible to work manually with a flex lance, which must be fitted with a marking ring. Note that the nozzle should be longer than the diameter of the pipe or tube in order to prevent any boomerang effect. Manual cleaning with a lance also comes under level 5. The spray operator must wear comprehensive personal protective equipment designed to withstand the risks of this working method.

Level 6

Stop! Manual cleaning using a flex lance without a marking ring is prohibited.



9. WARRANTY

Warranty

1. Peinemann will provide warranties only if and insofar as this has been agreed explicitly in writing.

2. If and to the extent that a warranty has been agreed, Peinemann in respect of the Other Party warrants the soundness of the equipment and/or goods delivered by Peinemann, in the sense that if any shortcomings in the spare parts become clear during the warranty period and a complaint is submitted in good time, Peinemann will re-deliver spare parts at no cost by sending the spare parts to the Other Party. Peinemann will in principle not assemble the spare parts, unless parties explicitly agree otherwise in which case Peinemann will be compensated for all costs related to the assembly, travel costs included.

3. If and to the extent that a warranty has been agreed, this warranty will never exceed the warranty obligation which Peinemann's supplier has in respect of Peinemann and the opportunity for recovery which this supplier provides to Peinemann. Peinemann will be discharged in this respect if it assigns its claim to this third party to the Other Party. Warranty claims will not cause the Other Party's payment obligation to be suspended.

4. Peinemann does not warrant that equipment, spare parts, goods and/or services delivered by Peinemann are or will be fit for a particular purpose for which they are or will be used.

5. Agreed warranty on equipment, goods, spare parts and/or services delivered by Peinemann does not apply if defects are the result of:

- non-compliance with instructions given by Peinemann, including instructions regarding storage, placement, testing, installing, check and maintenance;
- improper use of the equipment, spare parts or goods or use not in accordance with the agreed or customary designated use;
- use of the equipment, spare parts or goods not in accordance with the corresponding manual;
- work performed to the equipment, spare parts, goods or services (within the warranty period) by the Other Party or third parties which have not been engaged by Peinemann, without Peinemann's permission;
- equipment, spare parts and/or goods being affected as a consequence of external causes, such as rain, water, heating, fire etc.;
- the Other Party not properly meeting one of its obligations under the agreement, or does not do so in good time;
- installation, assembly, modification or repair by the Other party or by third parties;
- defects in or unsuitability of spare parts or goods originating from or prescribed by the Other Party;
- defects in or unsuitability of materials or tools used by the Other Party;
- normal wear and tear.

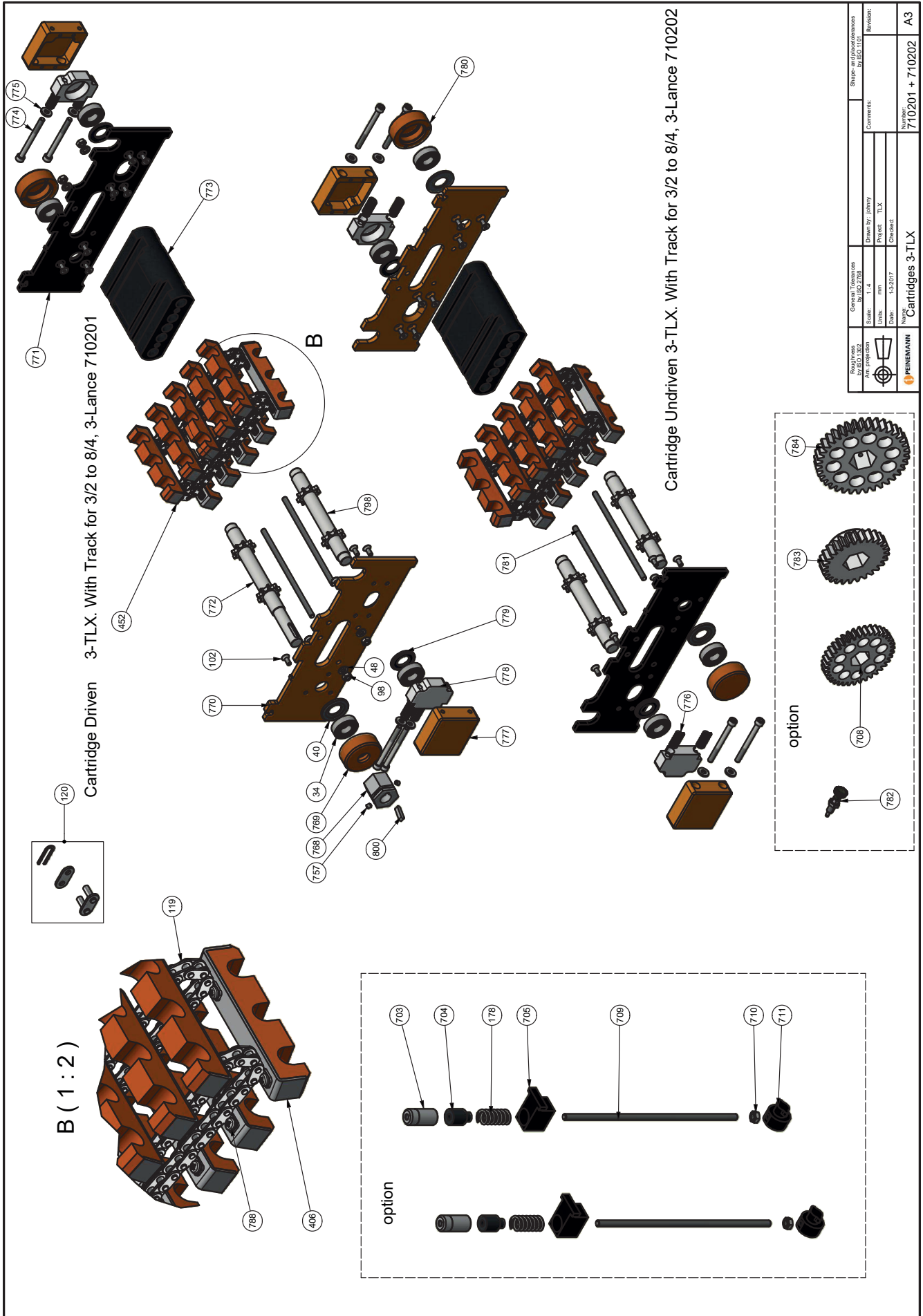
9. WARRANTY

6. No warranty is given on:

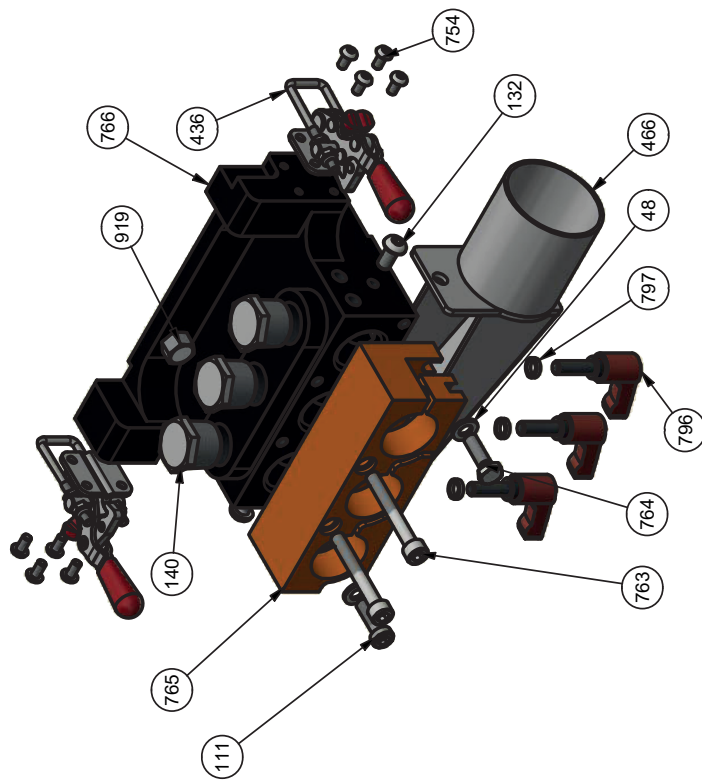
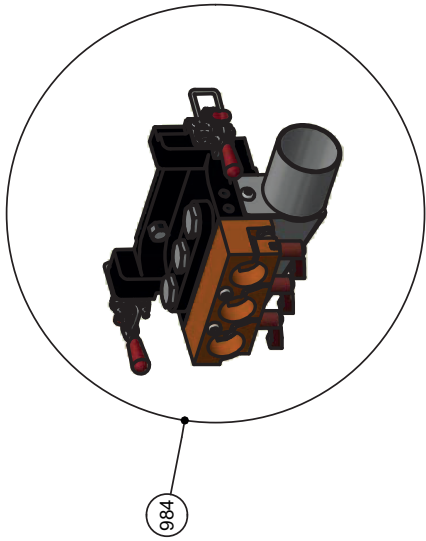
- equipment, spare parts and/or goods delivered that were not new at the time of delivery;
- the inspection and repair of equipment, spare parts or other goods of the Other Party;
- parts for which a manufacturer's warranty has been given.

Complaints

1. The Other Party must inspect the delivered equipment, spare parts, goods and/or services on delivery and must submit any visible shortcomings to Peinemann in writing no later than seven days after the delivery, failing which any claim against Peinemann will lapse.
2. Complaints regarding other shortcomings must be submitted in writing within seven days after they have become manifest, subject to lapsing of any claim against Peinemann.
3. Complaints regarding insignificant deviations in terms of quality, quantity, size, finishing etc. and/or deviations on the aforementioned terms that are permissible on the market or technically unavoidable, as well as complaints regarding the circumstance that certain equipment or goods have been removed from the assortment, will not be deemed founded by Peinemann.

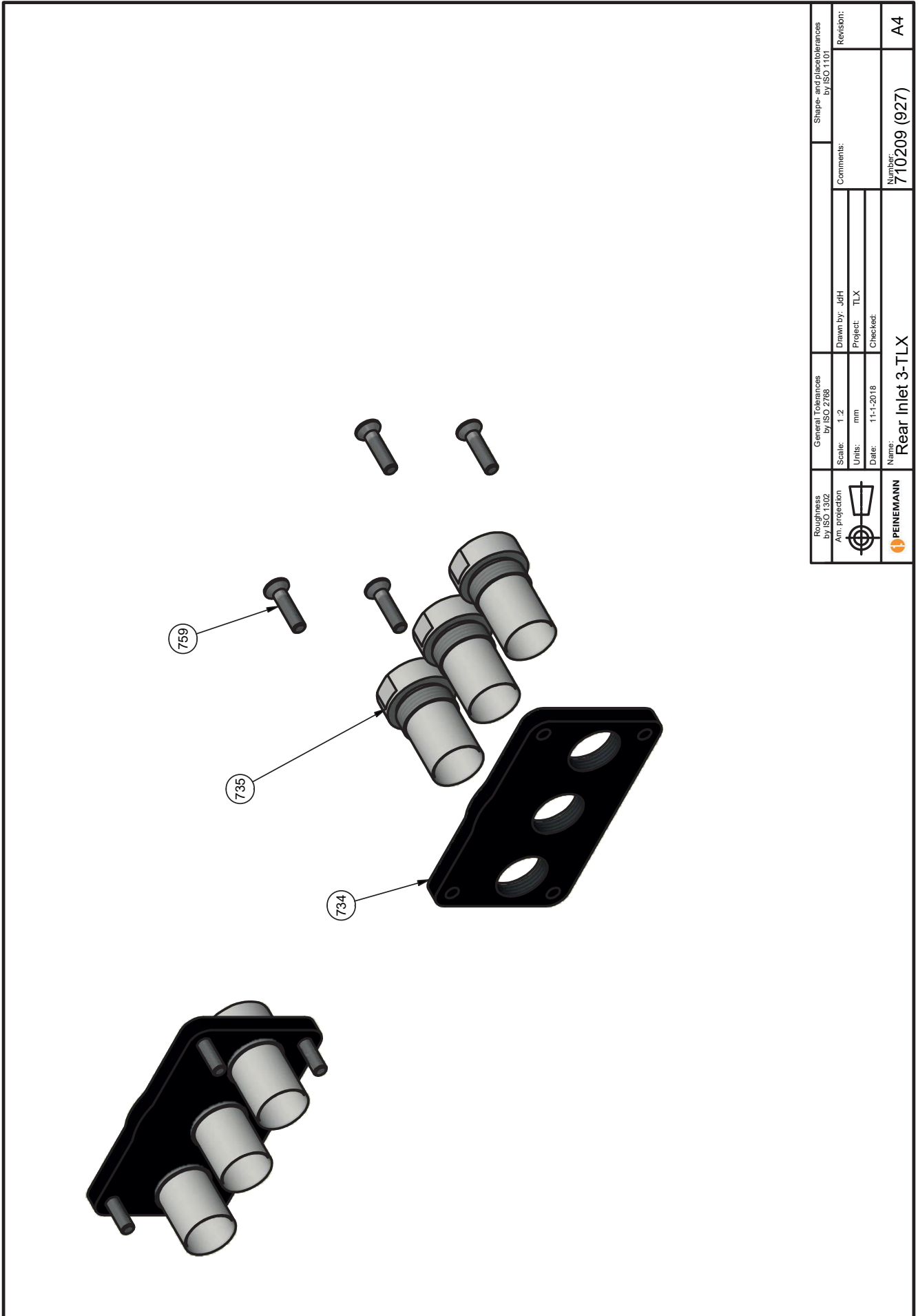




10. APPENDIX



Roughness by ISO 1302 An projection	General Tolerances by ISO 2768	Shape- and place tolerances by ISO 1101	
		Scale: 1:3	Revision: -
	Drawn by: RC Project: TLX	Comments:	
PEINEMANN	Date: 1-3-2017 Name: TLX lanceblock 3x1 complete 3/4" excl. Pitch & lances	Checked:	Number: 710204C/984
			A4

10. APPENDIX



Roughness by ISO 1302  Am. projection	General Tolerances by ISO 2768		Shape- and place tolerances by ISO 1101	
	Scale: 1:2	Drawn by: JDH	Comments:	
	Units: mm	Project: TLX		
	Date: 11-1-2018	Checked:		
 PEINEMANN		Name: Rear Inlet 3-TLX		Number: 710209 (927)
				Revision: A4

10. APPENDIX

10.2 Parts list

PARTS		Item #	Qty TLX
DESCRIPTION	PART NUMBER		
End stop 4/2 Ø8MM small	110021S	16	3
End stop 3/2 Ø7MM small	110021SA	16	3
End stop 5/2 Ø9,5MM small	110022S	16	3
End stop 6/2 Ø11,5MM small	110023S	16	3
Allen key set	110028	19	1
Air lubricator oil 0,2 L	110030	21	1
Special chain grease fluid 0,2 L	110031	22	1
Air supply unit complete for automatic use with automatic drain	110034	8	1
Set of bearings (9pcs.)sealed	110038A	34	1
Stinger 1000Bar 200MM M7	110040	218	3
Stinger 1000Bar 200MM 1/8" BSP	110041	218	3
Stinger 1000Bar 200MM 1/4" BSP	110042	218	3
Stinger 1000Bar 200MM 1/16" NPT	110043	218	3
Stinger 1000Bar 200MM 1/8" NPT	110044	218	3
Stinger 1000Bar 200MM 1/4" NPT	110045	218	3
Seal ring bearinghouse	110064	40	4
Bearing for axle Ø15MM sealed	110065A	34	8
Screw A2 M4x8 tork	110073A	788	160
Bolt A2 M5x12 countersunk sockethead	110074	102	28
Bolt A2 M6x20 sockethead	110077	111	15
Locking nut M6	110084A	98	16
Washer M5	110088	68	4
Washer M6	110089	48	36
Screw Ø3,9x13	110092	95	4
Chain for 10 friction blocks Stainless steel	110102SS	119	4
Chain link stainless steel	110103SS	120	4
Nipple elbow 1/4" BSPx8mm	110154	438	4
Coupling JIC8 (3/4") x 3/8" BSP 45°	110157	463	2
End stop 6/4 Ø12,5MM	210021	16	3
End stop 8/2 Ø13,5MM	210022	16	3
End stop 8/4 Ø14,5MM	210023	16	3
Spring XL	210068	178	2
Connection plate XL	210149	243	1
Lockingnut M4	310083	83	4
Washer M4	310088	136	4
Plug 1/2" BSP	310100	140	3
Sleeve 3/4" - 1/2" complete for pitch adjuster incl circlip	310162	762	3
Sleeve 3/4" - 1/2" complete for pitch adjuster incl O-ring	310162A		3

10. APPENDIX

Handwheel for Pitch adjuster complete	310163	581	1
Plug 3/8" BSP	520100	476	2
Megalife chainset 4/2 - 8/4 blocks 3XL (set)	610036M	452	1
SS Chain with 4/2 - 8/4 blocks 3XL (set)	610036SS	452	1
SS Chain with 4/2 - 6/2 blocks 3XL (set)	610036SSA	452	1
Treaded axle TLE pitch L+R handed	610064A		1
Clamp middle block TLE pitch	610064C		1
Outer block TLE pitch left handed	610064L		1
Middle block TLE pitch	610064M		1
Outer block TLE pitch right handed	610064R		1
Bolt A2 M6x12 sockethead	610077	132	2
Bolt A2 M6x16 sockethead	610080	523	7
Returnwater exhaust 3XL	610098	466	1
SS Friction block 4/2 till 8/4 3XL	610104SS	406	20
SS Friction block 4/2 till 6/2 3XL	610104SSA	406	20
Pulling clamp 323-RSS	610150	436	3
Pulling Latch	610150B	xxx	3
AC 46 air motor replacement slow	710002AC	871	1
AC 46 air motor replacement	710003AC	733	1
AC 46 air motor complete	710009AC	713	1
AC 46 air motor complete slow	710010AC	872	1
Pitch adjustment TLE complete 1" 2-TLX	710012	915	1
guide tube 1/2" SS 40S L=400mm	710013	593	3
guide tube 3/4" SS 40S L=400mm	710013A	593	3
guide tube 1" SS 40S L=400mm	710013B	920	2
guide tube 1/2" SS 40S L=1200mm	710013C	593	3
guide tube 3/4" SS 40S L=1200mm	710013D	593	3
guide tube 1" SS 40S L=1200mm	710013E	920	2
Hose catcher rolo 4/2-5/2-6/2-8/2	710018	717	1
Hose catcher rolo 4/4-5/4-6/4-8/4	710018A	717	1
Hose catcher TLX 3/2 Ø7,5	710018B	928	1
Hose catcher 2-TLX 10-2 / 10-4	710019	911	1
End stop 2-TLX aluminium 10-2	710021	912	1
End stop 2-TLX aluminium 10-4	710021A	912	1
users manual TLX	710035	701	1
SS Chain with DN12-DN20 blocks TLX (single)	710036SS	906	2
Chain guide block POM TLX	710037	773	2
Bottomplate TLX	710046	718	1
Headblock front TLX	710047	715	1
Headblock rear TLX	710048	716	1
Sideplate cassette left TLX	710049	771	2
Sideplate cassette right TLX	710050	770	2

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Sideplate cassette holder left	710051	720	1
Sideplate cassette holder right	710052	719	1
Aluminium safety cover TLX	710053	790	1
Aluminium safety cover TLX assembly	710053A	702	1
Handle	710055	728	2
Axle with chain wheel and gear connection TLX	710058	772	1
Axle with chain wheel TLX	710059	798	3
Aluminium bearinghouse	710061	780	3
Aluminium bearinghouse open	710062	769	1
Aluminium bearinghouse chain tensioner	710063	777	4
Seal ring bearinghouse chain tensioner	710064	779	4
Mounting block friction setting	710066	711	2
Spring support friction setting	710067	705	2
Spring end stop M8	710069	704	2
Friction adjustmentknob M8	710070	703	2
retainer washer Ø20mm	710090	729	2
Lance block machine side TLX	710095	766	1
Lance block lance side TLX	710097	765	1
Rear endplate	710101	734	1
Pipe for rear endplate	710102	735	3
SS Friction block DN12-DN20 TLX	710104SS	907	10
Motor support AC 46 motor	710121	731	1
Cassette holder complete	710200	712	1
Cassette driven TLX standard complete 4/2 - 8/4	710201	707	1
Cassette undriven TLX standard complete 4/2 - 8/4	710202	706	1
TLX lanceblock 3xl complete 1/2" excl. Pitch	710203	855	1
TLX lanceblock 3xl complete 3/4" excl. Pitch	710204	856	1
1-TLX lanceblock complete DN12 - DN20	710204A	888	1
2-TLX lanceblock complete 1" excl. Pitch	710204B	913	1
Cassette driven TLX standard complete 10/2-DN20	710205	887	1
Cassette undriven TLX complete 1 + 2 TLX	710205A	886	1
Edit kit TLX - 1-TLX complete	710206	885	1
Edit kit TLX - 2-TLX complete	710206A	916	1
Edit kit TLX - 3-TLX complete	710206B	916	1
Edit kit TLX - 1-TLX basic	710206C	945	1
Edit kit TLX - 2-TLX basic	710206D	944	1
Rear lance inlet complete 1-TLX	710207	889	1
Rear lance inlet complete 2-TLX	710208	914	1
Rear lance inlet complete 3-TLX	710209	927	1
POM bearing holder chain tensioner	710301	778	4
Aluminium hose guide front	710302	721	1
Mounting hub center pin conn, frame	710303	732	1

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Mounting hub gear motor side	710304	744	1
mounting hub gear machine side	710305	768	1
Spring end stop chain tensioner	710306	775	8
Fixing support conn. Frame rear left	710307	737	1
Fixing support conn. Frame rear right	710308	736	1
First locking plate motor	710309	723	1
Second locking plate motor	710310	722	1
Locking axle motor	710311	742	1
Flange motor	710312	724	1
Knob lock cover	710313	792	2
Safety cover gear	710314	795	1
Stainless rear cover left	710315	739	1
Stainless rear cover right	710316	727	1
Stainless front cover left	710317	740	1
Stainless front cover right	710318	725	1
Spur gear M=3 Z=32 (standard)	710319	708	2
Spur gear M=3 Z=27 (small)	710320	783	1
Spur gear M=3 Z=37 (large)	710321	784	1
Bronze sleeve 3/4" - 1/2" for lance block	710322	761	3
airhose guide pipe	710323	730	1
Index plunger Ø6 M12 stainless	710324	726	1
Index plunger Ø10 M16 stainless	710325	738	2
ridged plunger Ø4 M8 Stainless	710326	919	1
Index plunger Ø3 M6 stainless	710327	782	2
Adjustable handle M6x20	710328	796	3
Brass ring Ø9xØ6x2	710329	797	3
Lipseal 17x28x6R	710330	743	1
Spring plunjer M6	710331	747	2
Quick air exhaust 1/4"	710332	741	2
Reducer nipple 3/8"x1/4"	710333	748	2
Tee 3/8" BSP	710334	749	2
Stainless coupling 3/8" female	710335	750	2
Stainless coupling 3/8" male	710336	751	2
Stainless coupling 1/4" male	710337	752	1
Socket head screw M4x16 A2	710338	753	4
Socket head screw M4x12 A2	710339	754	8
Bolt A2 M5x16 sockethead	710340	756	2
Bolt A2 M5x20 countersunk sockethead	710341	793	2
Studbolt A2 M5x6	710342	757	4
Flange button head socket screw M8x12	710343	758	4
Bolt A2 M6x10 sockethead	710344	755	1
Bolt A2 M6x20 hex head	710345	764	1
Bolt A2 M6x20 countersunk sockethead	710346	760	4

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Bolt A2 M6x25 countersunk sockethead	710347	759	12
Bolt A2 M6x45 sockethead	710348	763	2
Bolt A2 M6x65 sockethead	710349	774	8
Bolt A2 M6x150 sockethead	710350	781	4
Bolt A2 M6x180 sockethead	710351	746	7
Nut A2 M8	710352	710	2
Studbolt A2 M8x260	710353	709	2
spring chain tensioner	710354	776	8
Stainless number plate	710355	791	1
Stainless cover lock	710356	794	2
Flange button head socket screw M5x12	710357	799	2
Parallel key 5x25	710358	800	1
Distance ring plunger M12	710359	843	1
Bolt A2 M6x30 sockethead	710360	890	6
Circlip 10x1 A2	710361	891	4
Sideplate ALU cassette undriven TLX DN12-DN20	710362	892	2
Assembly rollerset undriven TLX DN12-DN20	710363	893	2
distance axle undriven DN12-DN20	710364	894	3
Bearing ring Ø10 brass	710365	895	4
Aluminium sideplate rollerset DN12-DN20	710366	896	4
stainless axle rollers DN12-DN20	710367	897	4
distance ring rollerset DN12-DN20	710368	898	16
Bearing 6000 2RSH	710369	899	24
Roll groove Ø19mm	710370	900	8
Roll groove Ø30mm	710371	901	4
Lanceblock support 1-TLX	710372	902	1
Lanceblock 1-TLX	710373	903	1
Stainless lance guide 1-TLX	710374	904	1
Bolt A2 M8x45 sockethead	710375	905	4
Rear lance inlet plate 1-TLX	710376	908	1
Rear lance inlet pipe 1-TLX	710377	909	1
stainless axle rollerset DN12-DN20	710378	910	2
Rear lance inlet plate 2-TLX	710379	917	1
Rear lance inlet pipe 2-TLX	710380	918	2
Lanceblock machineside 2-TLX	710381	922	1
Lanceblock lanceside 2-TLX	710382	921	1
Aluminium hose guide front 2-TLX complete	710383	924	1
Aluminium hose guide front 3-TLX complete	710384	925	1
Aluminium hose guide front 2-TLX	710385	926	1
Distance rod headblocks	710386	955	7
Reel connection TLX complete	R100001	929	1
Reel connection TLX rear inlet	R100002	931	1
male camlock 3/4" female BSP	R100003	930	3

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Female camlock 3/4" female BSP	R100015	943	3
Silencer 1/2"	X100021	305	1
Silencer 1/4"	X100067	197	2
Bolt M5x12	X100081	367	4
Bolt A2 M6x12 countersunk sockethead	X100123	554	4
stainless coupling 1/4" female	X100136	745	2

10. APPENDIX

10.3 Certifications

10.4 Declaration of Conformity

