



Manual

STRAIGHTENING BENCHES

1 PREFACE

We at UnoLiner Systems are happy you have selected the UnoLiner Straightening System for your workshop. You have made the right choice and we are convinced that you will be, and remain, completely satisfied.

UnoLiner Systems is based in the Netherlands.

UnoLiner collision repair systems are designed and built to comply with the ever increasing demands in safety and reliability, gained from many years of practical experience in body shops around the world.

This instruction manual will help you with and inform you about the different possibilities and applications. Before using and operating UnoLiner equipment, we obligate you to carefully study and implement the safety instructions included in this manual. The English version of this manual is the primary version. UnoLiner does not bear responsibility for any translation errors in our manuals in other languages.

We wish you a productive time and good business with your UnoLiner Collision Repair System.

Yours faithfully
The UnoLiner Systems team

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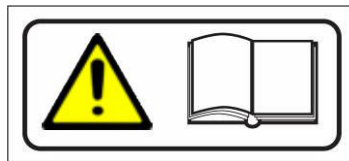
2 INTRODUCTION

Before operating, carefully read this manual and its safety instructions.

Carefully read the chapters for function and operation, and observe and apply all safety information to minimize risk of accidents/injury or death and damage to equipment.

IMPORTANT!

- Read and apply all instructions in the instruction manual
- Get to know the equipment
- Keep safety equipment and a well-stocked first aid kit readily available and in good condition
- Only use UnoLiner Systems original spare parts and accessories



It is strongly recommended to carefully read the safety instructions first.

Safety signs



WARNING! Denotes the possibility of serious injury or death



CAUTION! Denotes the possibility of injury or damage to equipment

3 SAFETY

The machinery is to be operated according to this instruction manual. UnoLiner Systems BV can, in no way whatsoever, be held responsible for the consequences of any actual use as implemented by any user of UnoLiner Systems BV products. The drawings and images in the instruction manual are illustrative only and do not always correspond with the actual image or shape of the products as delivered.

As UnoLiner Systems is continuously developing and improving its products, delivered machines could have been modified, without change to the images in the instruction manual. If any questions arise because of an apparent difference between the images and the actual product, contact us or your UnoLiner representative before proceeding.

When using any straightening bench and ancillary equipment it is important to be aware of the substantial power and forces applied and required to repair vehicle chassis, body and panels. The operator must be suitably experienced and at all times take user and safety guidelines into account and consideration to ensure safe use of the equipment. Regular inspection of all equipment is important. Check regularly for hairline cracks in all parts, that there is no air in the hydraulic pump hoses and piping, and that the chassis clamp teeth and the clamps themselves are clean. A clamp or part covered in any dirt, grease, underseal or bituminous products will not function or clamp securely.

Always use correct and suitable tools and accessories, clamps and chains. Never use chains that are too light and always use a safety cable attached to, and a safety blanket over, the chains when pulling.

When using any straightening bench or ancillary equipment, always warn any people who are near or in the working area. Ensure that all persons are at a safe distance from the working area. Watching is safer and better from a distance!

In the center of each side of the Bench Frame there is a warning sticker to keep feet and equipment away from the bench: Danger of crushing the object. (See picture 3.1)

There are 2 labels at each end of the bench on the inner side of the Bench Frame end cross beams, with information giving the maximum weight the bench is permitted to lift. The maximum weight specified on the label is dependent on the specific bench type concerned. (See picture 3.2 / 3.3 / 3.4 for label examples)

On each pulling tower there is a sticker (See picture 3.5) stating that you may never loosen the Quick Lock locking system when the bench is in raised position.



3.1

MAX
2500 kg
(5500 lb)

3.2

MAX
3000 kg
(6600 lb)

3.3

MAX
5000 kg
(11000 lb)

3.4

ATTENTION!
DO NOT RELEASE THE
DRAWALIGNER WHEN
BENCH FRAME IS IN
RAISED POSITION.

3.5

3.1 Safety and precautions

1. The UnoLiner Systems equipment is designed for the straightening and repair of automobile chassis and body panels.
2. Never use the bench to lift persons. (See picture 3.1.1)
3. Never use the bench when someone or any obstacle is inside, under, or in the vicinity of any UnoLiner Systems equipment.
4. It is not permitted to make any changes to UnoLiner System equipment without prior written permission by and from UnoLiner Systems BV.
5. Ensure you and all personnel intending to use UnoLiner Systems equipment are sufficiently qualified for the operating and use of UnoLiner Systems equipment. Only personnel that have read and understood this manual are permitted to operate the UnoLiner systems equipment.
6. (Optional) Assemble the feet protection in the appropriated places on the bench sides. (See picture 3.1.2)
7. Always place a vehicle with its heavy side (normally the engine side) above the hydraulic cylinders of the scissor lift. (See picture 3.1.3)
8. Place the vehicle in a central position on the bench. (See picture 3.1.3 for the maximum permissible out-of-center placement position.)
9. All scissor lift ground holes must be attached and fixed to the floor with the Fischer FIS V Injection Resin System chemical anchor bolt system using Fischer threaded rod FIS A M16 x 175 galvanic zined, or an equivalent suitable floor anchoring bolt type system. Floor must be a horizontal, suitably flat, level and solid concrete floor surface equivalent to C35/45 according to the European norm NEN-EN 206-1.
10. When relocating the scissor lift, the hydraulic and pneumatic hoses connected to, respectively, the hydraulic and pneumatic cylinders, must be disconnected. The hydraulic and pneumatic hoses must always be protected from damage, for example from sharp objects, jamming, and sharp bending.
11. Check that the area around the bench is free of obstacles when raising and lowering it.
12. Make sure that the hydraulic and pneumatic hoses and tubes, which should be connected in that order (see chapter 6), the hydraulic pump, and the safety lock plate to the respective cylinders are lying level on the floor and are suitably protected (via cable protector for example) to avoid damage to the hydraulic and pneumatic hoses.
13. Scissor lift use is not permitted without the hose break safety valve (See chapter 6) connected to the hydraulic cylinder. (UnoLiner Systems delivers hydraulic cylinder sets with this hose break safety valve connected as standard)



3.1.1



3.1.2 Optional



3.1.3

14. Remove waste oil or oil from leakages immediately to avoid the risk of accidents caused by slippery surfaces.
15. Any old, removed and/or excess hydraulic oil is to be returned to a

suitable local service or authority for recycling.

16. Only reinforced forged chains are permitted to be used for pulling. You can buy those from UnoLiner Systems BV or our distributor in your territory. *(See Chapter 3.2)*
17. Always use a safety wire and safety cover blanket and maintain a minimum distance of 2 meters when pulling and/or applying tension to chains
18. You must wear individual protective equipment (safety boots and gloves) during both the installation and use of the equipment.



19. Do not wear loose-hanging clothing or jewellery or long loose-hanging hair.
20. Ensure that the space around UnoLiner Systems equipment is free of obstacles to avoid tripping, stumbling and falling.
21. Ensure that work space is well lit with sufficient lighting to ensure good visibility.

3.2 Draw Aligner / Pulling Tower and Pulling Chains Safety



WARNING! TO AVOID INJURY:

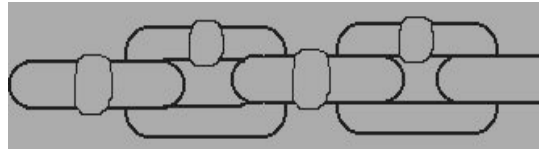
- Read the instruction manual
- Get to know the equipment
- Keep safety equipment readily available and in good condition
- Ensure that no-one is in the way when you operate the draw aligner or lift
- Do not leave the draw aligner, foot pump, and cylinder under pressure when left unattended
- Always secure the designated safety line to the pulling chain when the draw aligner is used
- Never stand within 2 meters of the draw aligner when in use
- Make sure the draw aligner is in good condition and correctly and securely attached to the bench
- Only use UnoLiner Systems original spare parts
- Check that the chain to be used is undamaged and that it is intended for a 10 ton pulling force

Important information regarding pulling chains

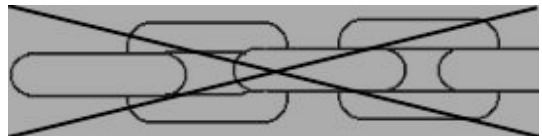
There are two different kinds of chains: the welded, reinforced, forged type and the normal chain. You can see the difference by looking at the link weld. When using a chain for pulling, the reinforced forged chain with welded links **MUST** be used when pulling and placing tension on the chain.

This is important for safety. When the reinforced chain breaks, it falls down and releases without tension. A piece of chain might still fly off, so using a safety blanket remains necessary!

When the normal chain breaks under tension, it will flay and be thrown around violently. Do **NOT** use this normal type of chain for any pulling work.



Reinforced chain



Normal chain



WARNING!

Always use a reinforced chain with welded links and a securely attached safety wire! Cover the chain and the connections subjected to tension with a safety blanket!



3.3 Safety lock

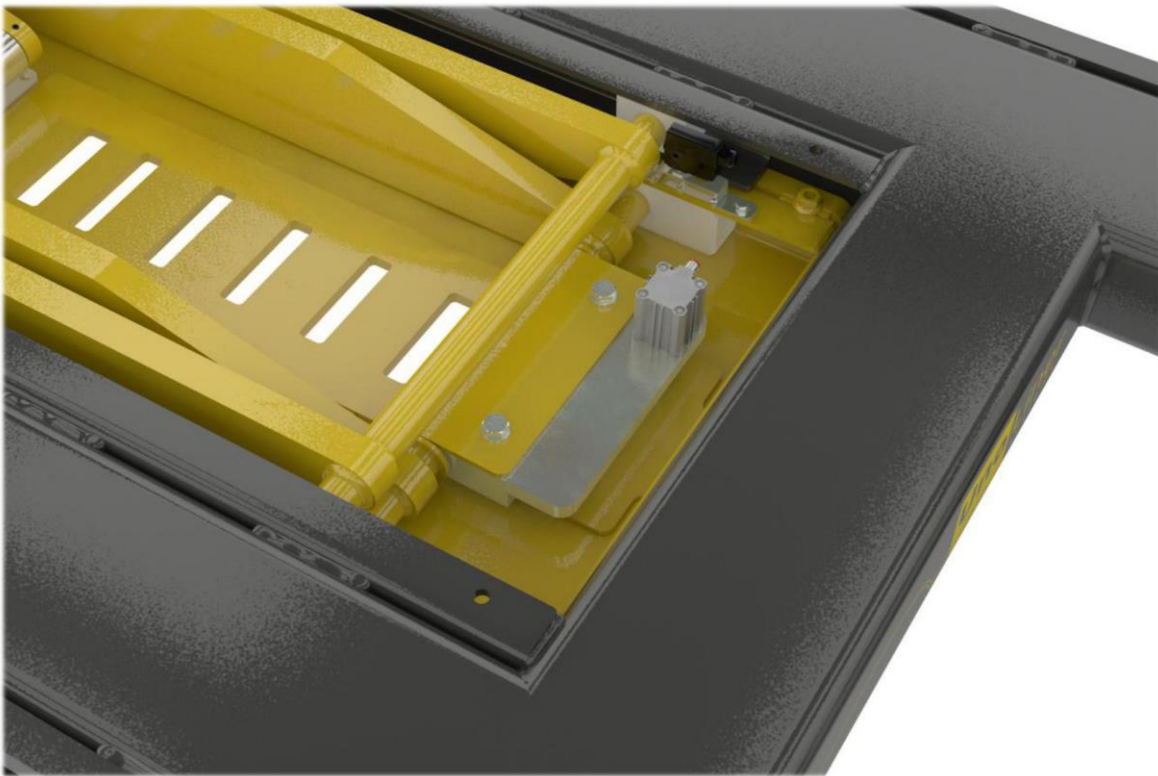


WARNING!

Never use the bench without the safety foot or with the safety foot not working correctly. Always check that the safety foot is working properly before using the bench. Always put the safety foot in a notch when the bench is in raised position.

Each bench frame equipped with a Scissor Lift has a safety lock to secure the scissor lift from falling down in case of a hydraulic cylinder failure. Do not remove this safety lock, for your own safety and to protect equipment from damage. Before using the scissor lift check the following items:

1. Can the safety lock move without obstruction?
2. Are the bolts tightened?
3. Is there a pneumatic cylinder and is it working correctly?
4. Is the de-locking slide block fastened to the pneumatic cylinder?



4 GENERAL INFORMATION

4.1 Warranty

UnoLiner Systems BV undertakes to remedy any defects, lack of quality, or non-conformity of the products for which it is liable, occurring within the warranty terms. UnoLiner Systems BV has the right, at its own discretion, to repair or replace the products or reimburse wholly or partially the price of the products which have been proven to be defective.

The warranty time period will start on the date of purchase indicated on the attached Warranty Card.

Warranty time periods

1 Year	90 Days
● UnoLiner Bench frames ● UnoLiner Scissor lifts ● UnoLiner Hydraulic pump ● UnoLiner Accessories, for instance P10 Pulling Tower, R20 Drive-On Ramps, C10 Chassis Clamps, etc.	● Hydraulic couplings ● Pneumatic couplings

Not covered under this warranty

- Hydraulic hoses, pneumatic hoses and electrical cables
- Parts that fail due to normal wear
- Parts failed due to transport damages, abnormal working conditions, failure to follow UnoLiner Systems' instructions, negligence, poor or lack of maintenance, abnormal or unsuitable supply of electricity, misuse, tampering, alteration and/or repair of products without UnoLiner Systems BV's authorization.

Return authorization

The buyer shall apply to the retailer where the product was purchased and delivered, along with the following documentation:

- Warranty Card, correctly completed (See attachment)
- Readable invoice copy or receipt
- Clearly recorded photo of the situation

Failing this documentation the warranty shall be void.

In case that the retailer is not available, the buyer can forward the warranty claim directly to:

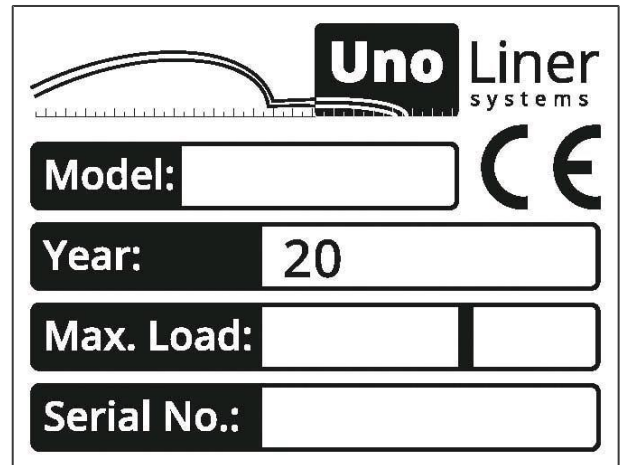
Company	UnoLiner Systems BV
Street	De Veken 104
Zip Code/Postal Code	1716 KG
City & country	Opmeer NH, The Netherlands
E-Mail	Info@unoliner.com

Warranty Card

Name/Company:		Product name:	
Name and surname:		Serial number:	
Street:		Date of purchase:	
Zip Code/Postal Code:		Where purchased:	
Province:		Description of complaint:	
Country:			
Phone:			
Mobile:			
E-Mail:			

4.2 Unoliner serial number plate

You will find a label as pictured on the inside Bench Frame crossbeam between the Scissor Lift support arm hinge points. The Pulling Tower also has its own label. Model and Serial No. must be specified in orders placed for accessories and spare parts, or in case of a warranty claim. Do not remove this label. If the label is removed or unreadable, any warranty is void and lost.



The diagram shows a rectangular label with a black border. At the top left is a line drawing of a scissor lift arm. To its right is the 'UnoLiner systems' logo, with 'Uno' in a black box and 'Liner systems' in black text. Below the logo is a CE mark. The label contains four rows of information, each with a black header and a white input field:

Model:	
Year:	20
Max. Load:	
Serial No.:	

4.3 Personal data and warranty

We shall not sell your personal data to any third party and this information shall only be available to those connected to UnoLiner Systems BV. Our employees and third parties engaged by UnoLiner Systems are obliged to respect the confidentiality of your data. For more information regarding our privacy policy, read the "Privacy Policy" page on our website www.unoliner.com.

This factory warranty and all consequential and subsequent actions shall be governed solely by the laws of The Netherlands. UnoLiner Systems BV adheres to laws from the Netherlands concerning all legal matters.

Any dispute arising out of or in connection with warranty, insofar no amicable solution can be found between parties, shall be settled by the Dutch Court having jurisdiction over UnoLiner Systems BV's place of business.

5 HANDLING AND INSTALLATION INSTRUCTIONS



CAUTION!

Any action involving the operation, transportation, or unpacking of the equipment must **ONLY** be performed by trained personnel with proper knowledge of the lift and the contents of this operating manual.

5.1 Transport safety lock

Each bench frame equipped with a Scissor Lift has Transport Safety Lock Plates to secure the Scissor Lift in position during transport. Do not remove these Transport Safety Lock Plates before the Bench Frame with Scissor Lift has been placed into the final location or the manual instructs you to do so. (See picture 5.5.2 / 5.5.3)



WARNING!

Without the Safety Lock plates in place when moving and positioning the Scissor Lift, it is possible for the nylon scissor lift slide blocks to slide out of their guides on the bench frame. The Transport Safety Lock plates must be kept secured in place to minimize risk of injury to people or damage to the equipment when moving the Scissor Lift and Bench Frame.

5.2 Unloading by fork truck

All UnoLiner Systems BV deliveries are delivered ex works UnoLiner Systems BV, place of business, according to Incoterms. UnoLiner is in no way responsible and cannot be held accountable in any way whatsoever for any damages resulting from transport or the unloading, handling, moving, positioning or repositioning of goods.

Important:

- Use only trained and skilled staff for the required task, for example an experienced and licensed fork truck operator.
- Place the fork truck forks in their widest possible position between the wooden transport beams, which you will find screwed to the bottom of the Bench with Scissor Lift. Fit the lift forks in the center of the long side of the Bench Frame.
- Lift it carefully with the fork truck while checking and ensuring that the load is in proper balance. Maintaining the balance is vitally important, also when other goods have been placed on the bench and are being unloaded together with the bench.

5.3 Unloading with slings or ropes

Position a suitably strong sling / rope around the bench frame on the outer sides of the wooden transport beams attached to the bottom of the Scissor Lift. Place the sling / rope in such a way that the sling / rope cannot slide or move and that the load remains in balance.

Unloading must always be carried out by experienced, suitably trained, and licensed personnel. See above, item "Unloading by fork truck." (Chapter 5.2)

5.4 Removing the transport beams

Before placing the Bench Lift in its final position, remove the wooden transport beams as follows:

- Remove the Transport Safety plates, which are secured with bolts. (see Chapter 5.5, Step 3)
- Temporarily connect the hydraulic hose to the Electro/Hydraulic pump and the hydraulic cylinder. This connection prevents injury or equipment damage during the next few steps! (See chapters 6.2).
- Raise the bench, then lower it (See chapter 6.3) until the Lift safety lock securely rests in the selected notch of the Scissor Lift. This is vital to create a safe working space. Make sure you are at least 3 meters (9 feet) away from the bench at all times when raising and lowering the bench. Check that the safety lock is inside a notch before getting within 3 meters of the bench.
- Unscrew and remove the bolts securing the wooden beams to the bottom of the lift.
- Lower the bench back to its flat position and screw the Transport Safety Plates back into place so that the bench frame and lift are secured together.
- Using slings or ropes placed around the bench frame only, lift the combination of bench frame and lift so that the wooden beams are free and can be removed from the underside of the lift.

5.5 Placing the Bench (11 STEPS)



CAUTION!

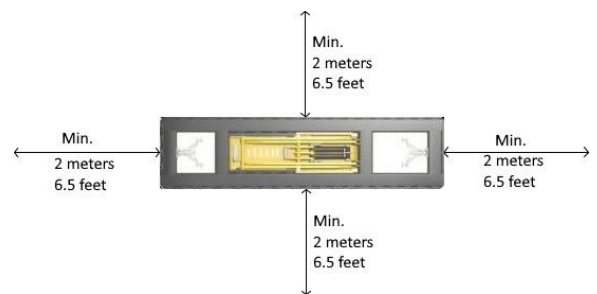
The following actions should be carried out by authorized personnel only.

1. Prepare location where the Straightening Bench is to be placed. Ensure the floor is level and sufficiently strong (equivalent to C35/45 according European norm NEN-EN 206-1). Ensure the floor is suited to carry the loads that the straightening bench and the to-be-repaired vehicles place on the floor. (2000 kg / 4410 lbs pm2)
2. Place assembled bench with scissor lift in the chosen position and leave enough free space around the bench. (Min. 2 meters {6.5 feet} on all sides. Take into account the total calculated space for the safety area.) (See picture 5.5.1)
3. Remove the transport safety bolts and plates from the lift. (See Picture 5.5.2 & 5.5.3)
4. Temporarily connect the hydraulic hose to the Electro/Hydraulic pump and the hydraulic cylinder. Use the hose break safety valve. (See chapter 6.2)



WARNING!

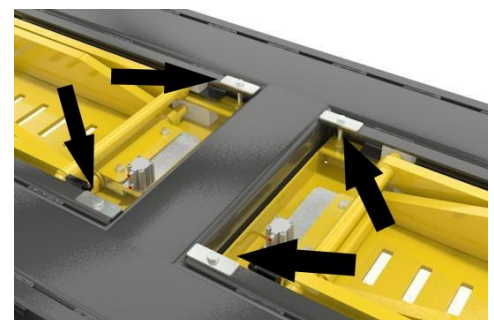
Make the connection in such a way that no one can get injured and no equipment damage is possible. (See chapter 6.2)



5.5.1



Single-lift bench 5.5.2



Double-lift bench 5.5.3

5. Raise the bench, then lower it (*See chapter 6.3*) until the Lift safety lock (*See chapter 3.3*) securely rests in the selected notch of the Scissor Lift. This helps create a safe working space for installing the chemical anchor bolts.



WARNING!

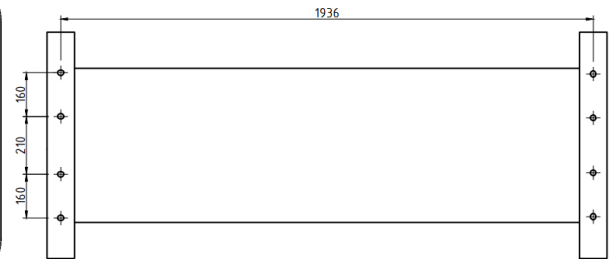
Make sure that you are 3 meters (10 feet) away from the bench at all times when raising and lowering the bench. Check that the Safety foot is in a notch or the bench is flat before moving towards the bench.

6. Install 8x (16x for dual lift) M16 Chemical Anchor bolts by which the Scissor Lift is to be secured to the floor. Chemical anchor bolts type: Fischer FIS V Injection Resin System with Fischer threaded rod FIS A M16 x 175 galvanic zinc or an equivalent suitable floor anchoring bolt type system. Holes made for installation of chemical anchor bolts must be dust free before installing chemical anchor bolts. Screw and secure the M16 nuts onto the installed M16 chemical anchor bolts.

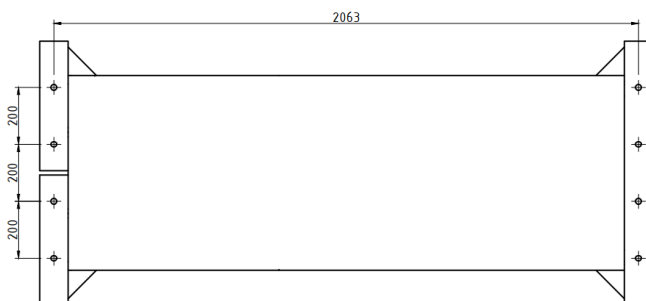


WARNING!

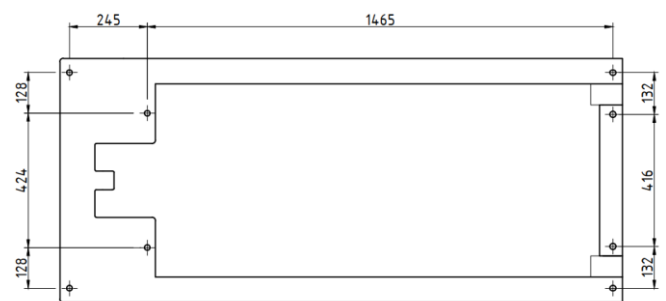
It is not permitted to use the chassis straightening bench & lift set without the lift being securely fastened to a horizontal suitably flat, level and solid floor surface.



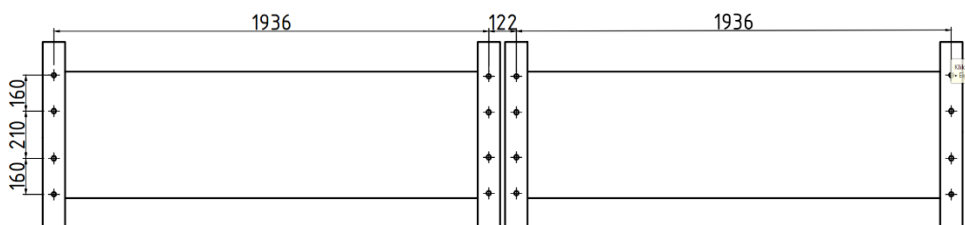
5.5.4 L30 dimensions in mm



5.5.5 L36 dimensions in mm



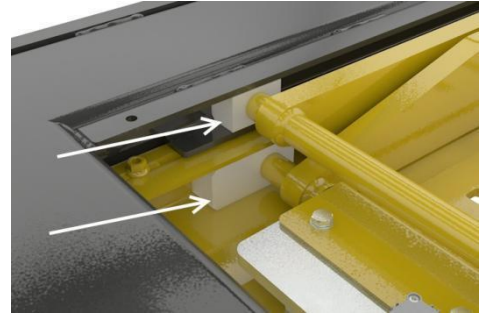
5.5.6 L300 dimensions in mm



5.5.7 2x L30 dimensions in mm

7. Ensure that the safety lock (*See chapter 3.3*) securely rests in a notch. Ensure there is no pressure at the temporarily connected hydraulic hose. This can be done by pressing the down button. Uncouple the temporarily connected hose and make a permanent connection from the Electro/Hydraulic pump to the hydraulic cylinder and pneumatic cylinder. (*See chapter 6.2*)

8. Ensure that all the hoses and cables cannot get trapped in moving parts and that their placement does not in any way deviate from the instructions in this manual.
9. Ensure that slide track profiles, for the plastic Slider Blocks connecting the Scissor Lift on the bench frame, are lubricated with a No-Ox-Id grease or PTFE / Teflon lubricant spray. (See picture 5.5.8)
10. Raise and lower the lift 10 – 15 times without any load. (see Chapter 6.3). This allows the air to escape from the hydraulic system. There might be a small leakage of hydraulic oil from the cylinders as the cylinder seals bed in.
11. Check that the mechanism of the pneumatically operated safety lock functions correctly. Check that all lock screws in the shafts, all bolts, and all connections are correctly and securely fastened. Check that the bench is firmly secured to the floor with anchoring bolts.



The bench is ready to operate.

6 SYSTEM INSTALLATION AND INFORMATION

6.1 Components & oil information

Technical data

1. Electro Hydraulic pump L2830 (L4530 for double lift)

Height	75 cm
Width	ca. 30 cm
Length	ca. 30 cm
Motor Power	1.8 kW
Amperage	220V 3PH 9.2A 400 3PH 5.3A
Number of wires	3 + earth
Speed	[star] 1400 rpm [triangle] 1690 rpm
Hydraulic oil	Viscosity < 23 ISO 3448 ISO 32 BP Bartran 22 Shell Tellus S2
Pump tank volume	6 liters (8 liters)
Pneumatic pressure	8 - 10 bar



L2830

2. Hydraulic Cylinders

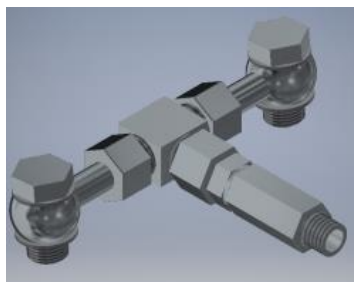
Lift type	Cylinder art. number	Quantity per lift
L300	L300-80	2 welded cylinders
L30	L3080	Set of 2
L36	L3681	Set of 2

3. Hydraulic coupling set

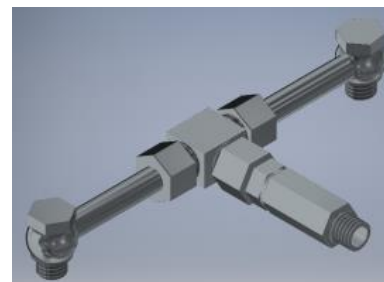
	for L300 lift	for L30 lift	for L36 lift
Part name	L30081	L3079	L3679
T Coupling Double		1	1
Banjo Coupling	1	2	2
Banjo Bolt	1	2	2
Transition Piece 3.8 to 1.4		1	1
Hose Breakage safety valve (adjustable)	1	1	1
Bonded Seal		4	4
Press Coupling Cap	1		
Press Coupling Straight	1		



L300 Hydraulic set



L30 Hydraulic set



L36 Hydraulic Set

4. Pneumatic cylinder:
One pneumatic cylinder for L300, L30, or L36 lift. Two for a double lift.
5. Pneumatic 4 mm hose and quick connectors.
6. The hydraulic system is supplied with a hose break safety valve, which will block the oil output as soon as possible in case the hydraulic hose breaks.

6.2 Connecting electro/hydraulic pump with bench

Connecting Hydraulic hose to the Electro/Hydraulic Pump

1. Open the pump by removing the front panel
2. Remove the **small, red** screw cap. (See picture 6.2.1)



6.2.1

3. Install the supplied Thread Adapter. (See picture 6.2.2)



6.2.2

4. Lead the hydraulic hose through the side panel and screw the hydraulic hose onto the pump. (See picture 6.2.3)



6.2.3

5. Check that all connections are clean and securely tightened.

Connecting hydraulic and pneumatic hoses to the L series lift

1. Pass the hydraulic and the pneumatic hose through the opening in the scissor lift bottom plate. (See picture 6.2.7)
2. Guide the hoses through the yellow 25x25 square tube. (See picture 6.2.4)
3. Guide the hydraulic hose under the arm of the lift. (See picture 6.2.5 and 6.2.6)
4. Attach the hose clamp on the hydraulic hose. Leave enough room for the hydraulic hose to move up and down when the lift is raising or lowering. (See picture 6.2.5 and 6.2.6)
5. Connect the hydraulic hose to the hose break safety valve, which is connected to the hydraulic coupling set. (See picture 6.2.5 and 6.2.6)
6. Tighten all the fittings with the correct spanner.
7. Guide the pneumatic hose through the 10x10 square tubes on the lift arms. (See pictures 6.2.7 and 6.2.8)
8. Leave enough room for the pneumatic hose to move over the hinge of the arms. Make sure the pneumatic hose cannot get trapped between moving parts. (See pictures 6.2.7 and 6.2.8)
9. Connect the pneumatic hose to the pneumatic cylinder. (See picture 6.2.9)
10. Check that all connections are clean, cannot get caught between moving parts, and are securely tightened.

Connecting hydraulic hose to the lift temporarily

1. Pass the hydraulic hose over the bench and make the connection with the hydraulic cylinder(s). (See picture 6.2.10)



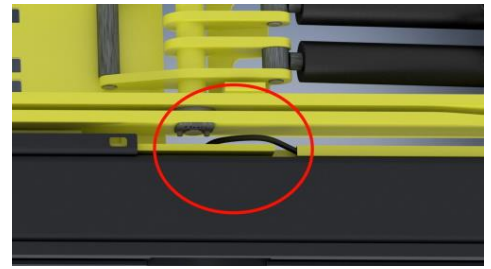
WARNING!

Ensure the hose cannot get trapped or damaged in any way by the moving parts of the lift. Also check that all the connections are tightened. Make sure you are at least 3m (10 feet) away from the bench at all times when raising and lowering the bench. Check that the Safety foot is in a notch or the bench is in its lowest position before moving towards the bench.



WARNING!

It is strictly forbidden to use the lift before it is securely fixed to the ground. (Risk of tipping over)



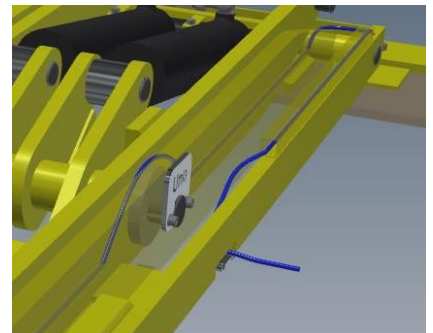
6.2.4



6.2.5



6.2.6



6.2.7



6.2.8



6.2.9

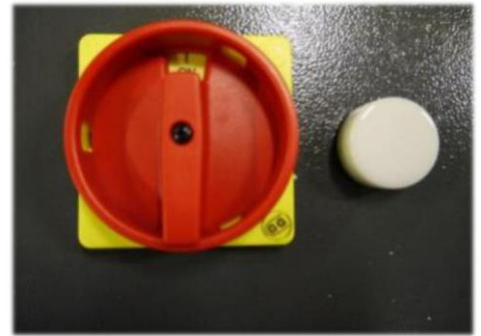


6.2.10

BUTTONS and FUNCTIONS

Switch and light on pump

1. Red ON/OFF switch
2. White ON/OFF light



Wired controller



WARNING!

Before raising:

1. Check if the vehicle on the bench is mounted properly
2. Check if there is no personnel or equipment in a radius of 3 meters (10 feet) around the bench

Before lowering:

1. Check if there is no personnel or equipment in a radius of 3 meters (10 feet) around the bench

From top to bottom:

1. Red emergency stop button
2. White up button
3. Two-phase down button
 - 1) Normal down - without pneumatic cylinder (with this function the safety lock goes into the nearest notch)
 - 2) Down - with pneumatic cylinder (with this function the lift raises slightly first for the safety lock to get out of the notch)



WARNING!

Be careful when operating the lift with personnel in the vicinity. Risk of crushing injuries or death.



6.3 Extra information

Changing the voltage on the Electro/Hydraulic pump



WARNING!

Always disconnect the pump power supply before opening the case or performing maintenance.



CAUTION!

All work on the electrical equipment must be carried out by authorized personnel.

The voltage to which the Electric Hydraulic Pump has been set is according to the standard voltage value used in the customer's country to which UnoLiner has supplied. The voltage of the Electric Hydraulic Pump can be changed between two possible voltages, namely 230V 3 Phase and 400V 3 Phase.

You can change the voltage by following these steps:

1. Open the pump by removing the front plate
2. Open the electric cabinet in the top of the pump
3. Find the Electric transformer (See picture 6.3.1)
4. Switch the cable into the desired voltage labelled on the Electric transformer
5. Open the back cover on the pump (See picture 6.3.2)
6. Change the connection of the plates in the following way (See picture 6.3.3)

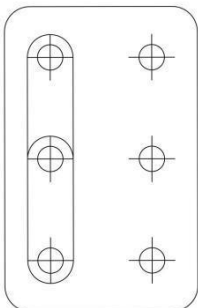


6.3.1



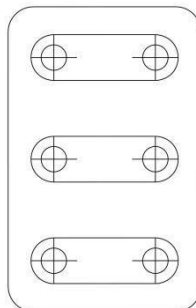
6.3.2

3 phase 400V



Star connection

3 phase 220V



Delta connection

6.3.3

How to adjust the pressure of the Electro/Hydraulic pump



CAUTION!

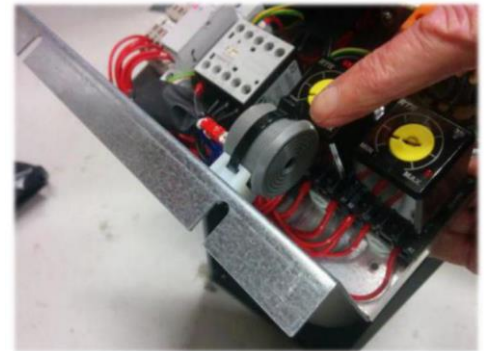
All work on the electrical equipment must be carried out by authorized personnel.

The pump pressure can be adjusted by following the next steps:

1. Make sure the bench is in its flat position
2. Unhook the hydraulic hose coupled to the electro/hydraulic pump
3. Fit a hydraulic pressure gauge to the hose and reconnect the hose to the pump. The Hydraulic pressure gauge must be able to hold 350 bar / 5000 psi
4. Raise the lift to its maximum height
5. Locate the hole in the side panel of the pump casing (See picture 6.3.4)
6. Peek straight through the hole and locate the socket bolt and counter nut
7. Unscrew the counter nut halfway so you can adjust the socket bolt
8. Adjust the pump pressure with the socket bolt to 200 bar / 2900 psi for the L30 lift, 250 bar / 3625 psi for the L36 lift. Test this by pushing the up button on the remote. **Never exceed these pressures!**
9. Tighten the counter nut
10. Lower the bench to its flat position
11. Unhook the pressure gauge and reconnect the hydraulic hose to the pump
12. Check for leaks in the system



6.3.4



6.3.5

How to replace the buzzer on the Electro/Hydraulic pump



CAUTION!

All work on the electrical equipment must be carried out by authorized personnel.

The buzzer can be replaced by following the next steps:

1. Open the pump by removing the front plate
2. Open the electric cabinet in the top of the pump casing
3. Find the buzzer and replace it (See picture 6.3.5)

How to replace the fuse on the Electro/Hydraulic pump



CAUTION!

All work on the electrical equipment must be carried out by authorized personnel.



6.3.6

The fuse can be replaced by following the next steps:

1. Open the pump by removing the front plate
2. Open the electric cabinet in the top of the pump casing
3. Find the fuse for the pump and replace it (*See picture 6.3.6*)

How to replace the solenoid valves on the Electro/Hydraulic pump



CAUTION!

All work on the electrical equipment must be carried out by authorized personnel.



6.3.7

Replacing the hydraulic solenoid valve:

1. Open the pump by removing the front plate
2. Find the hydraulic solenoid valve (*See picture 6.3.7*) and unscrew the hydraulic hose
3. Unscrew the solenoid valve and replace it

Replacing the pneumatic solenoid valve:

1. Open the pump by removing the front plate
2. Find the pneumatic solenoid valve (*See picture 6.3.8*) and unscrew the pneumatic hose
3. Unscrew the solenoid valve and replace it



6.3.8

6.4 Foot pump

General information

UnoLiner air-powered hydraulic pumps are designed for use with single-acting cylinders and tools. The pump pedal can be operated by hand or foot. This chapter provides basic information about the pump. For more detailed information, please refer to the pump manual.

Preparation for first use

1. Remove the transport plug on the pump, located on the top side of the pump.
2. Screw the included fluid level stick (See picture 6.4.1) into the filling hole and finger tighten it.



6.4.1



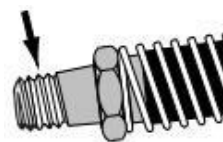
WARNING!

Attempting to overfill the reservoir will cause the reservoir to become pressurized. If the reservoir is subjected to high pressure, the casing may rupture, causing personal injury and/or equipment damage.



CAUTION!

DO NOT use a wrench on the fluid level stick. Over-tightening will damage the plastic reservoir.



6.4.2

Connect hydraulic hose:

1. Prepare the threaded end of the hose with a pipe thread sealant, such as Teflon tape. Use 1 1/2 wraps of Teflon tape, leaving the first thread bare to prevent tape from shedding into the hydraulic system and causing damage. (Note: hose in pictures 6.4.3 – 6.4.7 and 6.5.3 has not been equipped with pipe thread sealant yet)
2. Tighten pipe connections securely, but DO NOT OVERTIGHTEN!



6.4.3

Connect air supply:

Advised inlet pressure: 8 bar (116psi)

1. Unscrew the red transport plug (See picture 6.4.4)
2. Prepare the threaded end of the included pneumatic connection with a high-grade pipe thread sealant, such as Teflon tape.
3. Tighten pipe connections securely, but DO NOT OVERTIGHTEN!



6.4.4

Operation of foot pump

The foot pump is operated flat on the floor with the foot of the operator.

1. Stationary position of the foot pump. In this position the pump does not build or release pressure. (See picture 6.4.5)
2. Working position of the foot pump. Press the pedal of the foot pump as shown in the picture to build cylinder pressure. (See picture 6.4.6)
3. Release position of the foot pump. Tilt the pedal as shown in the picture. The foot pump will then release the cylinder pressure. (See picture 6.4.7)



6.4.5



6.4.6



6.4.7

Maintenance

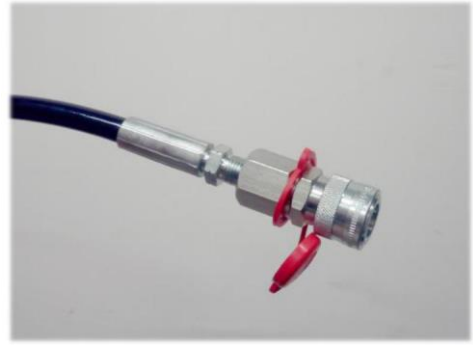
(refer to pump manual for more detailed instructions)

1. At least once every 10 days, check all hydraulic and air connections to be sure they are tight. Loose or leaking connections may cause erratic and/or total loss of operation. Check the connections, links, hoses, and piping for wear, loosening, and damage. There should also not be any cuts or cracks in the pipes and hoses.
2. Check the hydraulic oil level at least once every 10 days.
3. Replace the air filter after every two months of work with an original part. Every 10 days, unscrew the filter, blow the filter clean with compressed air, and carefully screw it back in.
4. Change hydraulic oil at least every 12 months. It may be necessary to change the oil more frequently in dusty or dirty environments. See pump manual for more information.

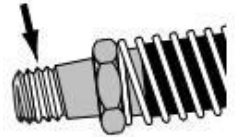
6.5 Connecting foot pump with draw aligner

Connect the foot pump by following these steps:

1. Screw the hydraulic coupling (female) onto the high-pressure hydraulic hose (See picture 6.5.1)
2. Screw the other end of the hydraulic hose into the foot pump (See picture 6.5.2 & 6.5.3)
3. Screw the hydraulic coupling (male) on the high pressure cylinder (See picture 6.5.4)
4. Connect the quick-connect coupling of the hose and the cylinder together
5. Connect a pneumatic hose onto the foot pump and a compressor
6. The connection with the draw aligner is ready



6.5.1



6.5.2



6.5.3



6.5.4

7 QUICKSTART GUIDE DRIVE-ON BENCHES

BEFORE USING UNOLINER EQUIPMENT READ CHAPTER 3: SAFETY!



WARNING!

During setup of the vehicle on the bench, care must be exercised so the vehicle does not roll or slide from the bench, supports, or mountings. Risk of injuries or death.



7.1

1. Drive the vehicle onto the R-series drive-on ramp set
(See picture 7.1)



WARNING!

Before placing any vehicle, make sure you know the bench's maximum vehicle weight as listed on the serial number plate. You will find this plate on the inside of the bench frame crossbeam between the scissor lift support arm hinge points (see chapter 4.2).



WARNING!

R20/R25 max. load per ramp section: 1000kg (2200lbs)
R30 max. load per ramp section: 1500kg (3300lbs)

The safety stop bracket on the last ramp and the safety blocks should always be correctly fitted before driving onto the bench

TIP

The R15 set provides an in-ground solution

2. Raise the bench (See picture 7.2)



WARNING!

Before raising:

1. Check if the vehicle on the bench is mounted properly
2. Check if there is no personnel or equipment in a radius of 3 meters (10 feet) around the bench

Before lowering:

1. Check if there is no personnel or equipment in a radius of 3 meters (10 feet) around the bench



7.2

3. Place the 4x H20 Wheel Stand under the vehicle's tires
(See picture 7.3)

4. Lower the bench. Now the vehicle rests on the H20 Wheel Stands

5. Remove the middle section of the drive-on ramps to enable placement of the bench adapters

6. Place the B10 Bench Adapters on the bench where the vehicle must be clamped with chassis clamps. Use the one-bolt locking system to keep the adapters in place (See picture 7.4)

TIP

Other variants of the standard B10 adapter are also available: the B10-55, B10Q, B10S, B30 and B70.



7.3



7.4

7. Place the C10 Chassis Clamp on the B10. Place them where the vehicle must be clamped and supported
(See picture 7.5)



CAUTION!

Ensure that the chassis clamps' toothed segments are clean and fitted correctly.



7.5

8. Raise the bench until the sill edges are in the jaws of the C10 chassis clamp

9. Fasten the C10 chassis clamp onto the car's sill edges using the one-bolt locking system (See picture 7.6)

TIP

The C30/C31 Chassis Clamp Set is ideal for pickup trucks, 4x4s, vans and other larger vehicles.



7.6

10. Raise the bench so the Support Legs (F1030 Bench Height Set) can be lowered into position. There are two support legs on each side of the bench (See picture 7.7)



7.7

11. Lower the bench until the support legs rest on ground

12. Roll the Draw Aligner against the bench (See picture 7.8)



7.8

13. Lock the draw aligner with the one-bolt locking system (See picture 7.9)

14. You are ready to straighten the vehicle (see chapter 6.4, header: operation of foot pump)

TIP

Check out the full catalogue on the UnoLiner Systems website for more accessories and pulling solutions:
www.unoliner.com



7.9

8 MAINTENANCE

The information in this chapter serves as guide and must be adhered to for all adjustments of the equipment, replacement of parts, and carrying out maintenance work on UnoLiner Systems equipment.

- Keep all accessories and tools in their fixed storage places **Daily**
- Keep all parts clean. Be especially attentive to keeping hydraulic connections and hoses clean at all times **Daily**
- Check that the pneumatic safety slide lock plate mechanism on the scissor lift is free from any dirt or other material that may hamper its function. Make sure that the safety lock moves freely and does not have any resistance **Once a week**
- Lubricate the shafts and the lift slide blocks regularly **Once a week**
- Check and ensure that the lock screws of the shafts and axles are correctly tightened **Once a week**
- The scissor lift should be raised and lowered a number of times without any load, to remove any possible air in the hydraulic system **After oil level check of hydraulics**
- Clean the frame and all accessories after each use **Recommended**



WARNING!

During all service and fitting work, the lift must be locked and blocked up (with pallets for example) if in the raised position to prevent accidental lowering. Risk of crushing injuries and death.



WARNING!

Do not repair any defective part of the lift or straightening system yourself.



CAUTION!

Waste oil should be disposed of according to local legislation and in an environmental-friendly manner.



CAUTION!

Any repairs on UnoLiner equipment must be performed by a **UnoLiner Systems** representative.

9 FAULT DETECTION

Fault	Possible Cause	Action
The pump does not run	Phase error, blown fuse	Check for tension on the phases. Check the fuse. (see chapter 6.3 Extra information)
	Voltage drop or wrong voltage	Check the voltage and make sure that the motor and electrical component box are connected for the correct voltage. (see chapter 6.3 Extra information)
	Defective pump	Replace the pump unit
Fault	Possible Cause	Action
The scissor lift does not work. Hydraulic pump works.	Transport safety	Remove the transport safety bolts and plates. (see chapter 5.5 Placing the bench)
	Lift is jammed by obstacle	Look closely for objects jamming the lift. Maybe the nylon slider blocks are jamming. Remove the objects causing the jam.
	Excess load on the lift	Maximum load on the lift has been exceeded. Check max. load label on bench to see how much it can handle. (see chapter 3 Safety and chapter 4.3 for label)
	Motor rotating in wrong direction	Change the phase order on the electrical connection and check the direction of rotation.
	Low oil level	Check oil level. For more oil information see chapter 6.1 Components & oil information
	Oil leakage	Check the hoses, couplings, and cylinder seals for leakage. Tighten components correctly or replace defective components.
	Dirt in the hydraulic system.	Disconnect, check, and clean hoses and connections.
	Hose breakage safety valve blockage	Disconnect the hose breakage safety valve and blow it through with compressed air. Check that oil flow through the hose breakage safety valve is set to the correct flow.
	Defective remote control	Check remote control connections. If problem still occurs, replace the remote control.
	Defective pump	Replace the pump unit

Fault	Possible Cause	Action
The scissor lift works but has no strength.	Excess load on the lift or improper weight distribution	Maximum load on the lift has been exceeded. Check max. load label on bench to see how much it can handle. (see chapter 3 Safety and chapter 4.3 for label)
	Too low pressure generation by the hydraulic pump	Contact the UnoLiner Systems technical service provider to have the pressure adjustment valve screw on the side of the pump adjusted to a maximum pressure of 280 atmosphere. (see chapter 6.3 Extra information)
	Dirt in the hydraulic system. Leakage in the interior of the hydraulic system	Disconnect and clean hoses and connections. Replace the hydraulic oil. Check and change the seals and gaskets. Change oil.
Fault	Possible Cause	Action
The scissor lift raises and lowers irregularly.	Air in the hydraulic system	Raise and lower the scissor lift a few times without a weight load on the bench and lift.
	Jam between the nylon slide blocks and the tracks	Lubricate the slide block tracks with light grease.
	Weight distribution Lift anchors	Vehicle must be placed with engine on correct side Check the anchors are clear and in good shape
Fault	Possible Cause	Action
The scissor lift lowers slowly	Dirt in the hydraulic system	Disconnect and clean hoses and connections. Replace the hydraulic oil.
	Oil leakage from hose, coupling or gasket	Check hoses, couplings and cylinder gaskets. Replace components if failure has occurred. Replace the hydraulic oil.
	Non-return valve in the pump defective or leaking	Replace component or replace the pump unit.
Fault	Possible Cause	Action
The scissor lift cannot be lowered	The safety lock is jammed	Raise the bench and place supports ¹ under the bench frame in case the lift collapses. Remove the cause of the jam or replace defective component. DO NOT USE THE SCISSOR LIFT WHEN SAFETY LOCK IS DEFECTIVE! (¹ Supports need to be strong enough to hold the bench system and all the components resting on it!)
	The pneumatic cylinder does not lift the safety lock up	Check the air supply and the reducer valve in the pump. Make sure the air supply is not crushed, blocked or leaking out of connections.

