Operating instructions

CSL 3500 XO

Mobile mid-rise scissor lift



English

Revised edition with electrical circuit diagram

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About this manual

This manual is based on the supplied English document JH202610.1.0 YLV for the HAMMER TOOLS CSL 3500 XO with electric lock release and a 230 V single-phase supply. It contains the revised chapters, warnings, maintenance tables and illustrations. Dimensions and additional product specifications follow the HAMMER TOOLS shop. Instructions for the inapplicable pneumatic version have been excluded. Figure numbering follows the source; Figure 12 is omitted.

Confirmed specifications for this version: HLP 32 hydraulic oil; at least 300 mm lift height before taking the load; operating temperature −10 °C to +40 °C.

Revision dated 15 October 2026 as specified by Hammer Tools: 4 litres of HLP 32, lubrication of the lower sliding blocks, interchangeable left/right hose connections and an added bleeding procedure.

This edition includes the subsequently supplied electrical circuit diagram in Appendix B.

• Electrical connection and repairs must be carried out exclusively by a qualified electrician and only using documentation that matches the machine actually supplied. The pneumatic diagram in the original document does not apply to this electrical version.

Contents

Information for users 4

1.0 Introduction 5

1.0 Introduction continued / 2.0 General information 6

3.0 Packing, transport and storage 8

4.0 Product description 9

5.0 Technical data 11

6.0 Safety 15

6.5–6.10 Additional hazards 16

6.11 Unauthorised use / 7.0 Installation and commissioning 18

7.4 Electrical connection / 7.6 Initial start-up 21

7.6 Initial start-up continued / Functional checks 22

8.0 Operation and use 24

8.3 Lowering / 8.4 Moving the lift 26

9.0 Maintenance 28

10.0 Troubleshooting 29

Appendix A — Special notes 30

Appendix B - Electrical circuit diagram 31

Appendix C — Hydraulic circuit diagram 32

Information for users

Thank you for purchasing this product. Read this manual carefully to ensure safe and proper use of the vehicle lift. Keep it readily available for future reference.

• This manual applies to the HAMMER TOOLS CSL 3500 XO.

• Read this manual first to understand the safety provisions incorporated into the design and construction of the lift.

• Make sure this manual is supplied to the end users so that they can implement its safety requirements.

• Do not use the lift in a potentially explosive atmosphere.

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1.0 Introduction

Read this manual thoroughly before operating the lift and follow all instructions. Keep the manual in a clearly visible location.

The source manual states that personal injury and property damage caused by failure to follow its safety instructions are not covered by product liability provisions. Applicable statutory requirements and agreed terms remain authoritative.

This mid-rise scissor lift is the result of many years of experience. High quality standards and a carefully developed design are intended to provide reliable service, a long working life and economical operation. Read this manual carefully and follow its instructions to prevent avoidable damage and hazards.

WARNING: Any use other than the intended use, or beyond its specified limits, is improper use. According to the source manual, the manufacturer accepts no liability for resulting damage; the operator bears the risk.

Intended use also requires:

• Following every instruction in this operating manual.

• Carrying out the specified inspections, maintenance work and safety checks.

Everyone working on the equipment must follow this manual, particularly Chapter 6, Safety. In addition to the safety information in this manual, observe the rules and regulations applicable at the place of use. Handle the equipment correctly.

Operator responsibilities

The operator must allow work on the equipment only by personnel who understand the basic rules of occupational safety and accident prevention and have been trained to work on the lift. They must have read and understood the safety chapter and warnings in this manual and must confirm this by signing.

Hazards when working with the equipment

The products have been designed and built using established technology and recognised safety principles. Nevertheless, improper use can endanger life and health or cause property damage. Operate the equipment only for its intended purpose and when it is in technically sound condition.

Organisational measures

• Keep the operating manual readily available at the place where the equipment is used.

• In addition to this manual, observe generally applicable statutory and other binding requirements for accident prevention and environmental protection.

• Periodically check that personnel work safely, remain aware of hazards and follow the operating manual.

• Use personal protective equipment whenever necessary or required by regulations.

• Keep all safety instructions and hazard warnings on the equipment legible.

• Replacement parts must meet the manufacturer’s technical specifications. The source manual states that this is assured only for original parts.

• Observe all prescribed intervals for repeated tests and inspections, including those specified in this manual.

Maintenance and fault correction

Carry out the specified adjustment, maintenance and inspection work at the stated intervals. Observe the instructions for replacing parts and assemblies. These tasks may be performed only by specialists who have attended the required factory training.

Warranty and liability

The source manual refers to the general sales and delivery terms. It lists the following grounds for excluding warranty and liability claims relating to personal injury or property damage. This translation does not create an additional warranty:

• Improper use of the equipment.

• Incorrect assembly, commissioning, operation or maintenance.

1.0 Introduction continued / 2.0 General information

• Operating the equipment with defective safety devices, or with safety and protective devices that are incorrectly fitted or do not function.

• Failure to follow the manual’s instructions on transport, storage, assembly, commissioning, operation, maintenance or equipment installation.

• Unauthorised structural changes to the equipment.

• Unauthorised changes to equipment settings, such as drive ratios, power or rotational speed.

• Incorrectly performed repairs.

• Catastrophic events caused by external influences or force majeure.

2.0 General information

The technical documentation contains important information for safe operation and for maintaining the equipment’s functional safety.

To confirm installation, the installation record must be signed and sent to the manufacturer.

The source manual refers to forms in an inspection log for initial, periodic and exceptional safety inspections. Use these forms to document the inspections and retain the completed forms in the log. The supplied source PDF does not include these forms.

Record structural modifications and changes of installation location in the equipment’s master record.

2.1 Installation and testing

Safety-related work and safety inspections may be carried out only by personnel specifically trained for these tasks. This documentation refers to these personnel as technical experts and specialists.

Technical experts are people, such as independent inspection engineers or technical inspectors, whose training and experience with lifting equipment enable them to inspect and assess the system. They must be familiar with the relevant occupational safety and accident-prevention requirements.

Specialists or competent persons have sufficient knowledge and experience of lifting equipment and have attended the equipment manufacturer’s specific factory training.

2.2 Hazard information

The following three levels of notice identify hazards and important information. Pay particular attention to text marked with these notices.

NOTE: Identifies information about an important function or a point requiring particular attention.

CAUTION: Warns of possible damage to the equipment or other property if the specified procedure is not performed correctly.

DANGER: Identifies a danger to life or health. Incorrectly performing the specified procedure may be fatal.

3.0 Packing, transport and storage

Only skilled personnel familiar with the lift and this manual may pack, lift, handle, transport or unpack the equipment.

3.1 Packing

The lift is supplied in the following packaging units:

• One base assembly in a plywood crate, protected with waterproof material that prevents scratching. It includes four similarly protected drive-on ramps and four rubber pads.

• One hydraulic power unit in a plywood crate.

Optional accessories are available on request to meet individual customer requirements.

The source manual gives an average packed delivery weight of 600 kg.

3.2 Lifting and handling

Use suitable loading and lifting equipment, such as cranes or transport vehicles, when loading, unloading or transporting the equipment to the installation site. Lift and transport the components securely so that they cannot fall. Consider the size, weight, centre of gravity and fragile parts of each package.

WARNING: Lift and handle only one package at a time.

3.3 Storage and stacking

Store packages under cover, away from direct sunlight and in low humidity. The storage temperature must remain between −10 °C and +40 °C. Stacking is not recommended: the narrow package base, combined with its weight and dimensions, makes stacking difficult and hazardous.

3.4 Delivery inspection

On delivery, inspect the lift for damage caused during transport or storage. Check that all items listed in the order confirmation are included. The customer must immediately notify the carrier of any transport damage.

Open the packages carefully to avoid injury or damage to lift components. Keep a safe distance when releasing tensioned packing straps, and prevent objects from falling out when the package is opened.

4.0 Product description

The mid-rise scissor lift is designed to raise vehicles weighing up to 3500 kg in normal workshop use. The maximum permitted load distribution is 3:2, either in or against the drive-on direction. Differences between front-wheel-drive and rear-wheel-drive vehicles must be taken into account.

The lift is not intended for standing on the lifting platforms or for carrying people.

The lift can be used flexibly. A firm, level surface with sufficient load-bearing capacity is required. The lift may also be fastened to the floor. Observe the installation-site requirements in Section 7.2.

The standard lift must not be installed in workshops with an explosion hazard.

Following assembly work or significant maintenance modifications to load-bearing components, the lift must be inspected by a specialist who approves the changes.

The lift is operated from a control unit positioned directly beside it.

The following description identifies the main components. As shown in Figure 1, the lift has two platforms (1). Each platform has two ramps (2) that can be locked horizontally to form platform extensions. The platforms rest on the ground through base frames (3).

A scissor lifting mechanism connects each platform to its base frame. Each lifting mechanism consists of scissor arms (4) and a hydraulic cylinder (5). The cylinders transmit movement to the lever arm (6) through a linkage.

Raising and lowering are controlled from the movable control unit (7). Each base frame has a mechanical safety lock with electrical release, operated from the control panel. This version does not require a compressed-air supply.

A front connecting beam keeps the two platforms level with each other during raising and lowering.

Two wheels (8) can be fitted to the lift. Together with the hook on the hydraulic power-unit trolley, they allow the unloaded lift to be moved as described in Section 8.4.

Figure 1 — Main components of the HAMMER TOOLS CSL 3500 XO. The reference numbers correspond to the illustration.

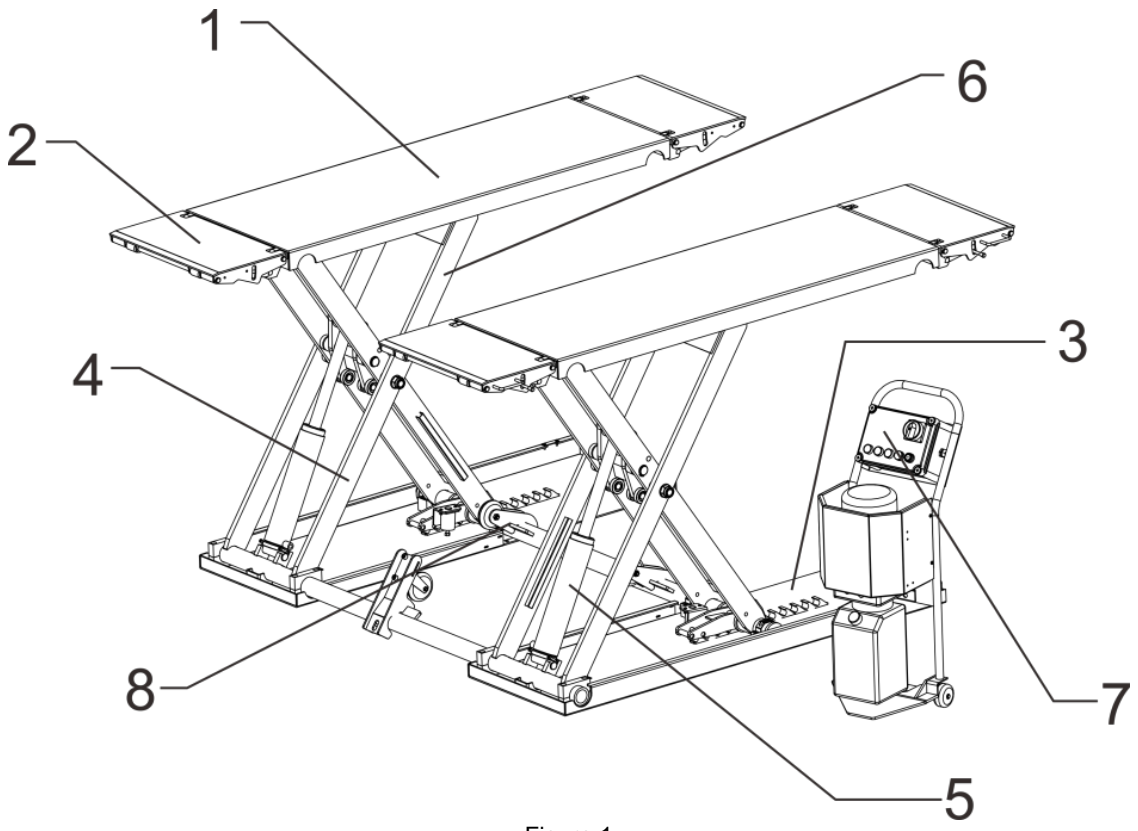


Figure 1

5.0 Technical data

5.1 Specifications

The product data below incorporate the confirmed HAMMER TOOLS shop specifications for the CSL 3500 XO. Unresolved source values are explicitly identified.

Parameter	Value
Lifting capacity	3500 kg
Minimum height	110 mm
Maximum lifting height	1000 mm
Platform length without / with ramp extensions	1440 / 2030 mm
Platform width	500 mm
Distance between platforms	850 mm
Power supply	230 V / 50 Hz / single phase
Motor power	2.2 kW
Safety-lock release	Electrical; no compressed-air supply required
Hydraulic oil	HLP 32
Hydraulic pressure	25 MPa
Raising time	30 s
Lowering time	25 s
Noise level	≤ 70 dB
Operating temperature	−10 °C to +40 °C

Table 1 — Technical specifications.

5.2 Dimensions

Figure 2 — Layout and dimensions according to the shop drawing: height 110–1000 mm, platform length 1440–2030 mm, platform width 500 mm and distance between platforms 850 mm.

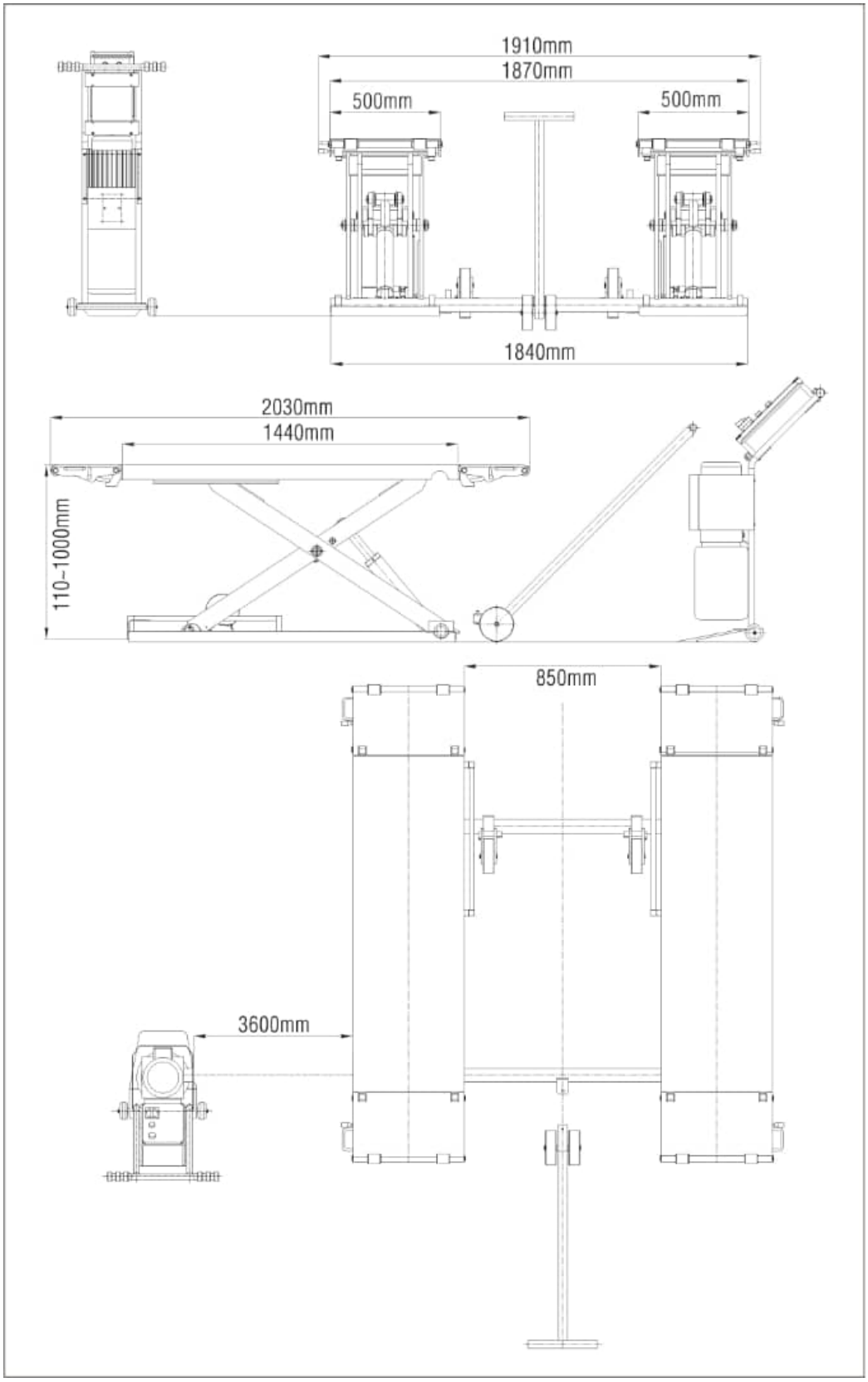


Figure 2

5.3 Hydraulic power unit

Figure 3 — Hydraulic power unit.

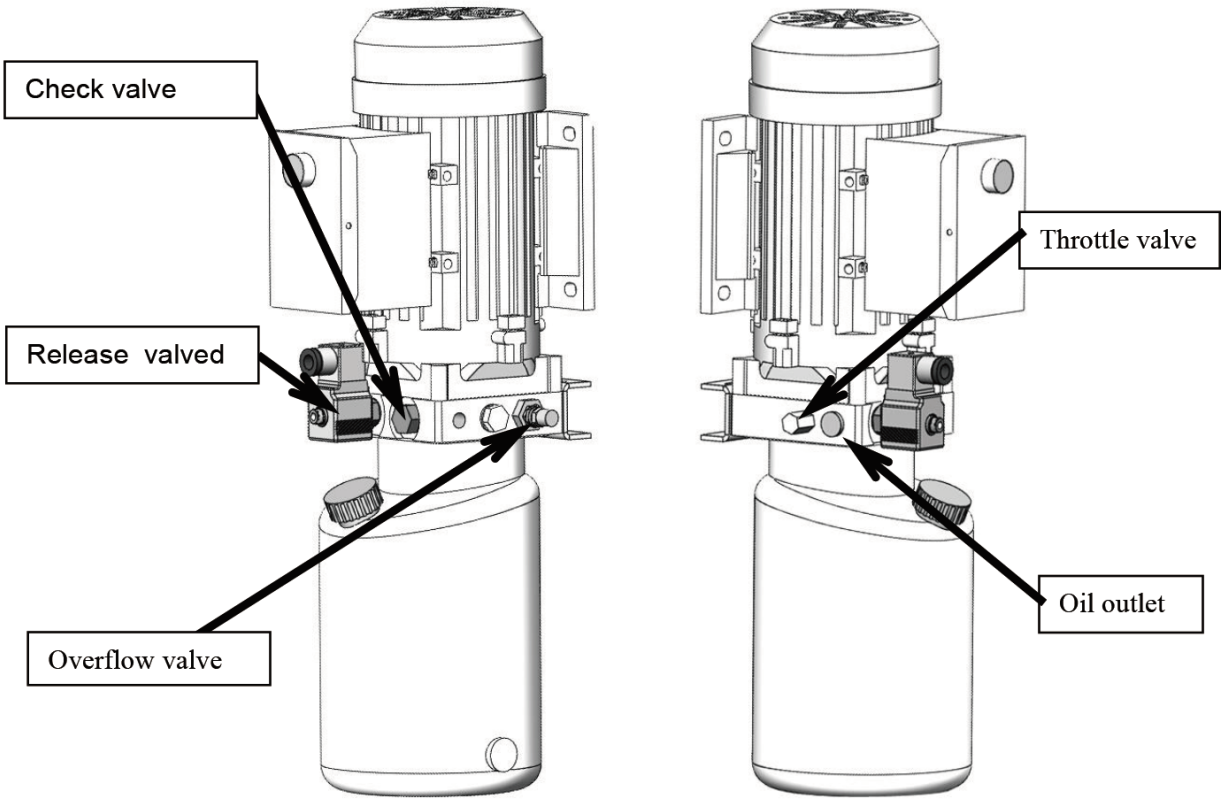


Figure 3

Original figure label	Meaning
Check valve	Non-return valve
Release valved	Lowering valve
Overflow valve	Pressure-relief valve
Throttle valve	Flow-control valve
Oil outlet	Hydraulic oil outlet

5.4 Hydraulic oil

Use HLP 32 hydraulic oil. This oil specification has been confirmed for the HAMMER TOOLS CSL 3500 XO. The following table preserves the properties listed in the source for reference; these are not universal properties of all HLP 32 oils. Refer to the product data sheet of the HLP 32 oil actually used for its specific properties. The source pour point of +30 °C is not an approved operating value.

Test standard	Property	Unverified source value
ASTM D 1298	Density at 20 °C	0.8 kg/l
ASTM D 445	Viscosity at 40 °C	32 cSt
ASTM D 445	Viscosity at 100 °C	5.43 cSt
ASTM D 2270	Viscosity index	104
ASTM D 97	Pour point	30 °C; value and sign unresolved
ASTM D 92	Flash point	215 °C
ASTM D 644	Neutralisation number	0.5 mg KOH/g

Table 2 — Unapproved reference oil properties from the source manual.

NOTE: Change the hydraulic oil annually.

6.0 Safety

Read this chapter carefully and completely. It contains important information for the safety of the operator and maintenance personnel.

WARNING: The lift has been designed and built to raise vehicles and hold them above floor level inside enclosed premises. Any other use is prohibited.

The source manual excludes manufacturer liability for possible injury or damage to vehicles or other property resulting from improper or unauthorised use.

For the safety of the operator and others, keep a safety area extending at least 1 m around the lift clear during raising and lowering. Operate the lift only from the designated control position in this safety area.

Personnel may work underneath the vehicle only when it is raised and the platforms are stationary. Also observe the requirement in Section 8.2 to rest the lift on its safety locks.

WARNING: Never use the lift with safety devices disabled. Failure to follow this instruction can cause serious injury and severe damage to the lift and raised vehicles.

6.1 General warnings

Operators and maintenance personnel must comply with the accident-prevention laws and regulations applicable at the installation site. They must also observe the following requirements:

• Do not remove or disconnect hydraulic, electrical or other safety devices.

• Carefully follow the safety instructions on the machine and in this manual.

• Keep the safety area clear during lifting.

• Make sure the vehicle engine is switched off, a gear is engaged and the parking brake is applied.

• Lift only suitable vehicles and never exceed the maximum lifting capacity.

• Make sure no one is on the platforms during lifting or while the lift is raised.

6.2 Risks during vehicle lifting

The following safety features are provided to prevent overloading and possible component failure:

• A pressure-relief valve inside the hydraulic power unit protects against overload.

• The hydraulic system is specifically designed to prevent sudden lowering if a line fails.

NOTE: The pressure-relief valve has been factory-set to the required pressure. DO NOT attempt to adjust it to exceed the rated lifting capacity.

6.3 Risks to people

The following sections describe hazards to personnel that can result from improper use of the lift.

6.4 Crushing hazards

While the platforms and vehicle are lowering, no one may remain in the path of the moving components. Before operating the lift, the operator must make sure that no one is at risk.

Figure 4 — Crushing hazard during lowering.



Figure 4

6.5–6.10 Additional hazards

6.5 Collision hazards

When the lift is stopped at a relatively low working height, people may strike projecting components.

Figure 5 — Risk of striking projecting parts.

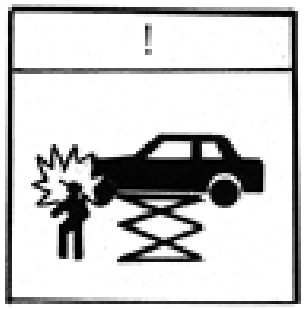


Figure 5

6.6 Risk of the vehicle falling

A vehicle may fall from the lift if it is incorrectly positioned on the platforms, its dimensions are incompatible with the lift, or it is moved excessively. If this danger arises, leave the working area immediately.

Figure 6 — Risk of the vehicle falling from the lift.

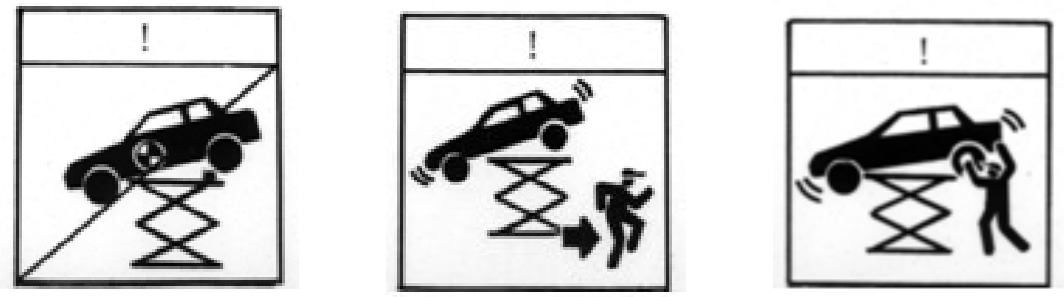


Figure 6

6.7 Slipping hazards

Oil or dirt on the floor near the lift can create a slipping hazard.

Figure 7 — Slipping hazard caused by oil or dirt.

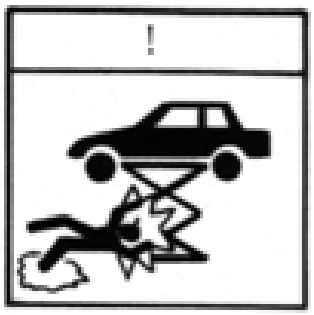


Figure 7

CAUTION: Keep the area underneath and around the lift clean. Remove all spilled oil.

6.8 Electric shock hazards

Do not use water, steam, solvent or paint sprays where the lift's electrical cables are located, especially near the electrical control panel.

6.9 Hazards caused by inadequate lighting

Make sure all areas around the lift are well and uniformly lit in accordance with local requirements.

6.10 Component failure during operation

The materials and manufacturing methods were selected for the lift's design parameters to provide a safe and reliable product. Use the lift only for its intended purpose and follow the maintenance schedule in the Maintenance chapter.

Figure 8 — Hazards caused by improper use and component failure.

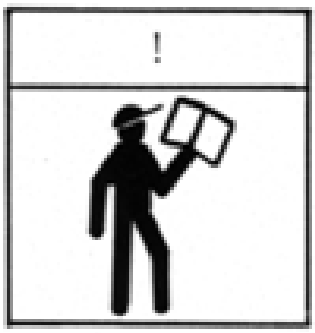


Figure 8

6.11 Unauthorised use / 7.0 Installation and commissioning

6.11 Hazards from unauthorised use

Unauthorised people are strictly prohibited from approaching the lift or entering the platforms, both while the lift is moving and while the vehicle is raised.

Figure 9 — Keep unauthorised people out of the danger area.

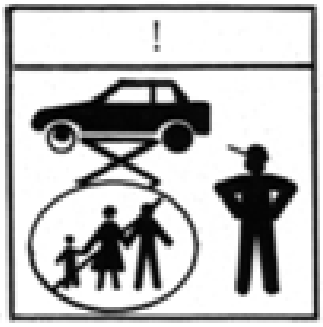


Figure 9

WARNING: Using the lift in any way other than specified in this manual can cause serious accidents to people near the equipment.

7.0 Installation and commissioning

CAUTION: Installation may be carried out only by skilled technicians appointed by the manufacturer or an authorised dealer. Installation by unqualified personnel may cause serious injury and severe damage to the lift.

7.1 Check the suitability of the installation site

The lift is intended for use in covered, sheltered locations with no overhead obstructions. The working area must not be immediately beside washing areas, paint workstations or stores of solvents or paint.

Observe the applicable local occupational health and safety requirements, including minimum distances from walls and other equipment and requirements for escape routes. All areas around the lift must be well and uniformly lit.

7.2 Concrete surface

Place the lift on a concrete surface with sufficient load-bearing capacity. The surface must withstand the maximum loads, including those arising under unfavourable operating conditions. It must be completely level.

7.3 Connect the hydraulic system

• Connect the hydraulic hoses as shown in Figure 10.

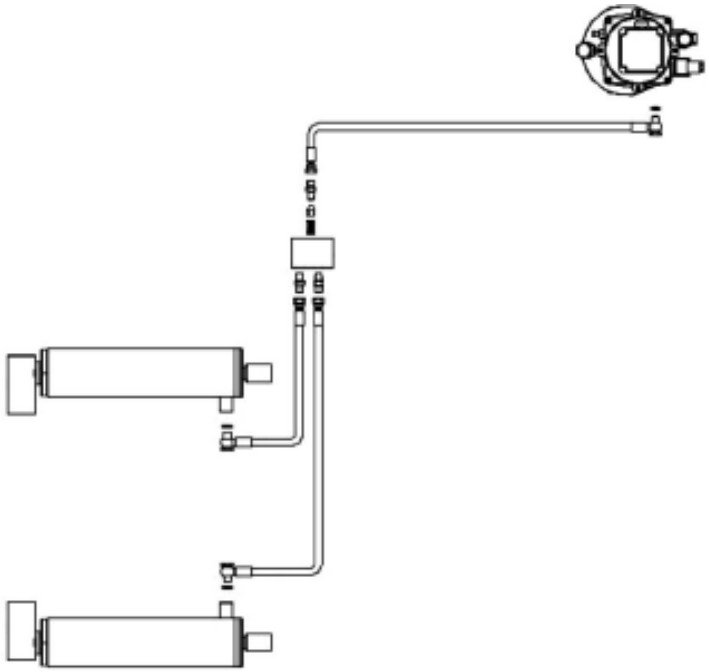


Figure 10

• Tighten all connections thoroughly.

Figure 10 — Hydraulic connections.

Figure 10a – Hydraulic block: left and right connections



Left and right refer to the viewing direction shown in the photograph.

Connect one of the two hydraulic hoses to each of the left and right ports. The hoses are interchangeable between these two ports; no fixed left/right assignment is required. “Left” and “right” indicate only the positions of the ports in the photograph.

7.4 Electrical connection / 7.6 Initial start-up

7.4 Connect the hydraulic power unit — electrical lock release

CAUTION: A qualified electrician must make the electrical connections. Verify that the power supply is suitable and that the connection matches the 230 V single-phase version and its rating plate. Incorrect wiring can damage the motor; the source manual excludes such damage from warranty coverage.

DO NOT operate the hydraulic power unit without oil. This may damage the pump. Keep the power unit dry.

Connect the unit using the supplied cable as shown in Figure 11. The electrician must verify the wiring and protective earth connection. This connection illustration does not replace the required electrical circuit diagram.

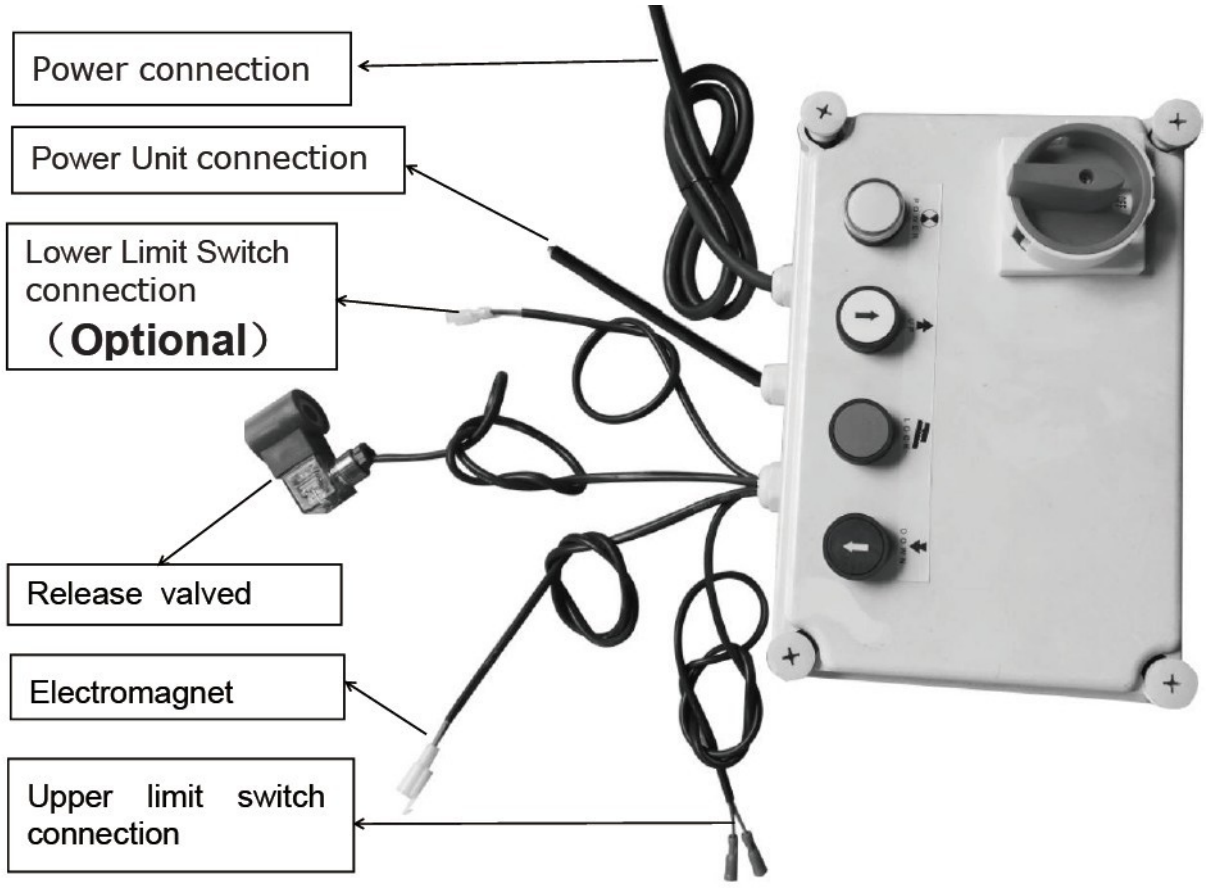


Figure 11

Figure 11 — Connections for the electrical lock-release version.

Original figure label	Meaning
Power connection	Mains supply connection
Power Unit connection	Hydraulic power-unit connection
Lower Limit Switch connection (Optional)	Lower limit-switch connection (optional)
Release valved	Lowering valve

Original figure label	Meaning
Electromagnet	Lock-release electromagnet
Upper limit switch connection	Upper limit-switch connection

7.5 Non-applicable reference version

The source section on electrical and pneumatic connections, including Figure 12 and the pneumatic maintenance instructions, concerns a different version with pneumatic lock release. It does not apply to the HAMMER TOOLS CSL 3500 XO with electrical lock release and has been excluded from the operating instructions. No compressed-air connection is required.

7.6 Initial start-up

NOTE: Do NOT raise any load during this procedure.

• Check all pins and bolts for correct assembly.

• Verify that the supply voltage matches the motor rating plate.

• Verify that the electrical connections match the circuit diagram for the supplied single-phase version.

7.6 Initial start-up continued / Functional checks

• Check the hydraulic lines for leaks and damage.

• Make sure the working area is clear of people and objects.

• Before first commissioning, grease the lower sliding blocks and their sliding surfaces on both base frames.

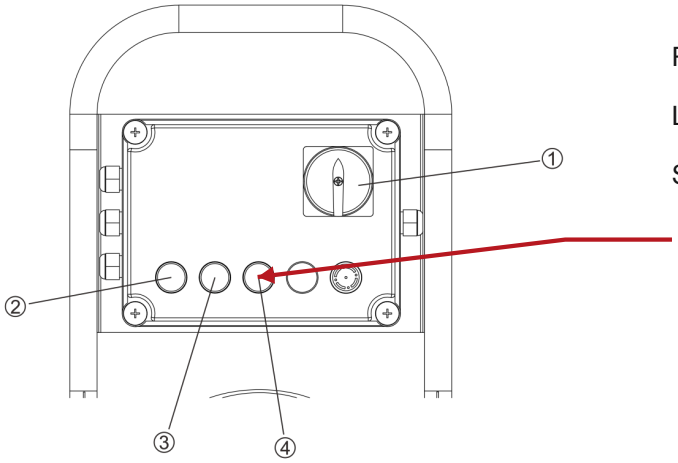
• Specified filling quantity: 4 litres of HLP 32 hydraulic oil. Fill the tank in stages and check the oil level while filling. Check the oil level again after completing the full lifting and lowering cycles.

• Verify that the control unit is receiving power.

• Briefly press the lifting button and check that the motor rotates in the direction indicated on its label. IF THE MOTOR BECOMES HOT OR MAKES UNUSUAL NOISES, STOP IMMEDIATELY AND HAVE A QUALIFIED ELECTRICIAN CHECK THE CONNECTIONS.

• DO NOT continue pressing the lifting button after the lift reaches full height. Doing so may damage the motor.

7.6 - Bleeding the hydraulic system



Raise / UP (2)

Lower / DOWN (3)

Safety-latch/LOCK (4)

1. Position the hydraulic power unit, including the pump, higher than the lift so that air can escape upwards.

2. Bleed the system with no load on the lift. Ensure that there is sufficient oil to prevent the pump from drawing in air. Raise the lift fully using the UP button. Release UP immediately when the upper end position is reached; do not keep the UP button pressed at the top.

3. Lower the lift with the DOWN button to the CE safety stop, then release DOWN. Next, press and continuously hold the SAME safety-latch/LOCK button until the lift is fully lowered to the floor AND for a further 60 seconds after it reaches the floor. Do not release LOCK when the lift reaches the floor. Release it only after these additional 60 seconds, then check the oil level again.

• Fully raise and lower the lift at least three times to equalise the hydraulic pressure in the two cylinders.

7.7 Checks without a load

NOTE: Observe all operating and moving components during this procedure and check that they are correctly installed and adjusted. Do NOT raise a vehicle until a complete functional check has been performed.

Carry out two or three complete raising and lowering cycles and check:

• Correct operation of all safety devices.

• Correct oil level in the tank.

• Hydraulic lines for leaks or unintended oil escape.

• Correct operation of the cylinders.

• That the lift reaches its maximum lifting height.

• Correct operation of the audible warning and signal light during the final stage of travel.

7.8 Checks with a load

NOTE: The lift must be raised at least 300 mm above the ground before taking the load.

CAUTION: Never load a vehicle onto the lift while the mobility wheels are fitted. Doing so may severely damage the lift.

Carry out two or three complete raising and lowering cycles and check:

• All the items listed in Section 7.7 again.

• That there are no unusual noises during raising and lowering.

8.0 Operation and use

Operating safety instructions

• Keep the lift and its working area clear of tools, parts, debris and other objects. The vehicle must be supported level and securely on the platforms.

• Do not allow anyone in the lift’s danger area or on the platforms during raising and lowering.

• Do not overload the lift.

• Apply the vehicle’s parking brake and position the non-slip pads when the vehicle is on the lift.

• Both platforms must rise and lower evenly and synchronously. Do not operate the lift when it behaves abnormally.

• When the lift is resting on its safety locks, both platforms must be at the same height.

• Fully lower the platforms when the work is complete.

Before operating the lift for the first time, carefully read the instructions for the electrical controls.

8.1 Controls

Figure 13 — Control panel.

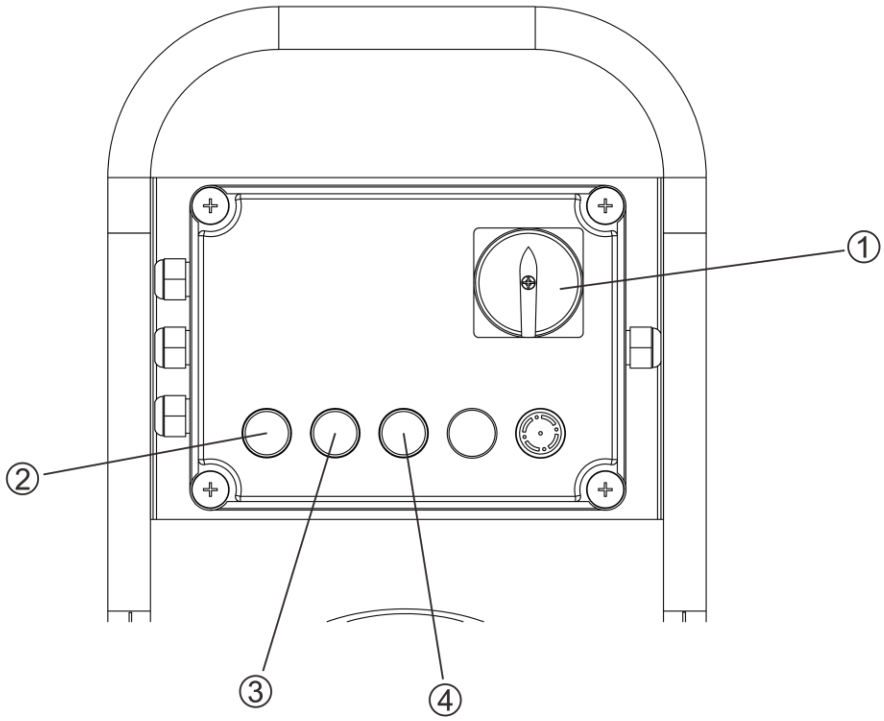


Figure 13

The lift is operated with the following controls:

Power switch (1)

The switch has two positions. Position 0: the lift's electrical circuit is switched off. The switch can be padlocked to prevent unauthorised use. Position 1: the main electrical circuit is switched on.

Lifting button (2)

Pressing the lifting button activates the motor and hydraulic system through the electrical control circuit to raise the lift.

Lowering button (3)

Pressing DOWN releases the safety lock. The lift descends under its own weight and the weight of the load until it reaches the CE safety stop. Hold the safety-latch/LOCK button (4) to continue lowering; see section 8.3.

LOCK button (4)

At the required height, release the UP button and press LOCK. The platforms lower until the safety racks engage the locking catches and the lift is secured.

From the CE safety stop, the same safety-latch/LOCK button is used to lower the lift fully to the floor. The additional continuous 60-second hold at floor level is part of the bleeding procedure in section 7.6.

8.2 Raising the lift

WARNING: Never load a vehicle onto the lift while the mobility wheels are fitted. Doing so may severely damage the lift.

NOTE: The lift must be raised at least 300 mm above the ground before taking the load.

• Position the vehicle centrally on the platforms and make sure it is secured.

• Place the rubber pads at the designated lifting points.

• Set the power switch to position 1.

• Press the lifting button to raise the vehicle.

• At the required height, release the lifting button and press LOCK to rest the lift on its safety locks.

Before any work on or near the vehicle, always make sure the lift is securely resting on the safety locks.

8.3 Lowering / 8.4 Moving the lift

• Make sure the safety area is clear of people and objects.

• Briefly press the lifting button to raise the lift slightly and take the load off the safety locks.

• Press DOWN until the lift reaches the CE safety stop. Release DOWN, then hold the safety-latch/LOCK button (4) until the lift is fully lowered to the floor. For bleeding, follow section 7.6 and keep the same button pressed continuously for a further 60 seconds at floor level.

8.4 Moving the lift

Use the following procedure to reposition the lift. Observe the prohibition on loading a vehicle onto the lift while the mobility wheels are fitted.

• Raise the unloaded lift to a suitable height for fitting the wheels.

• As shown in Figure 14, slide the two fixed-wheel assemblies and the swivel-wheel assembly onto their supports.

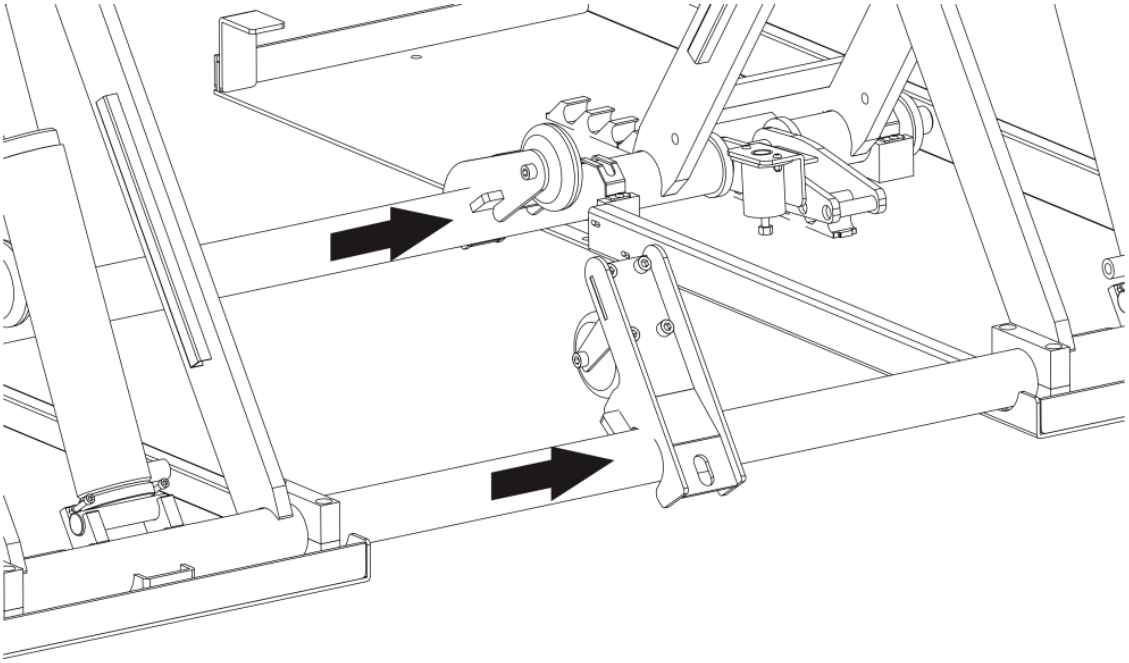


Figure 14

Figure 14 — Fitting the mobility wheels.

• Lower the lift completely using the sequence in section 8.3: DOWN to the CE stop, then LOCK to the fully lowered position. This raises the rear of the base frame slightly off the floor.

• Engage the trolley hook in the hole in the front beam, as shown in Figure 15.

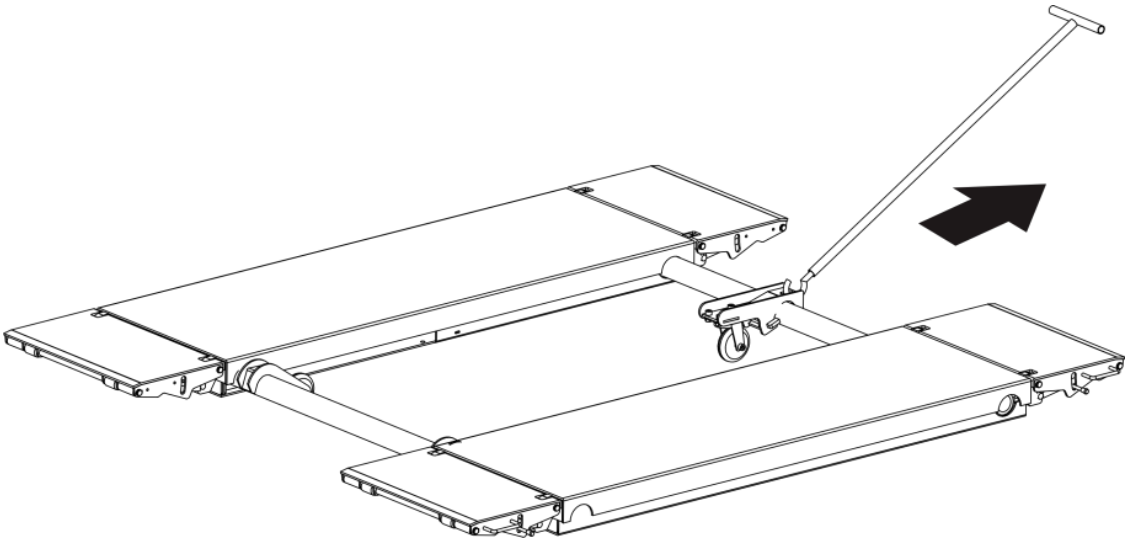


Figure 15

• Pull the trolley to move the lift.

Figure 15 — Attaching the trolley to the front beam.

9.0 Maintenance

• 1. Keep all moving parts clean and lubricate them regularly.

• 2. Refill or lubricate all lubrication points once a week.

• 3. Change the hydraulic oil annually. Clean the oil tank and filter at the same time. Keep the oil level at the specified upper mark.

Pneumatic maintenance item 4 in the source does not apply to this electrical version; see Section 7.5.

5. Routine cleaning and lubrication

Thoroughly clean the lift at least once a month using suitable cleaning cloths. Lubricate all pivot pins at least once a week.

Interval	Component / system	Inspection or task
Every 3 months	Hydraulic system	Check the tank oil level and top up if necessary. Check the system for oil leaks. Inspect seals and replace them if necessary.
Every 3 months	Floor anchor bolts	Where fitted, check that the bolts are secure and correctly tightened.
Every 3 months	Hydraulic pump	Check for changes in operating noise. Check the mounting bolts for secure tightening.
Every 3 months	Safety system	Check all safety devices for correct operation.
Every 6 months	Hydraulic oil	Check for contamination and ageing. Contaminated oil is a major cause of valve failures and reduced gear-pump service life.
Every 12 months	General inspection	Check all components and mechanisms for damage.
Every 12 months	Electrical system	A qualified electrician must check that the motor, limit switch and control panel operate correctly.
Every 12 months	Hydraulic oil	Drain the oil tank and replace the hydraulic oil.

Table 3 — Maintenance schedule.

10.0 Troubleshooting

Only qualified electricians may perform electrical work. Follow the safety instructions and the requirements for the 230 V single-phase version.

Problem	Possible cause	Remedy
Motor does not run	1. Button does not work. 2. Wiring connections are faulty or disconnected. 3. AC contactor has burnt out. 4. Motor has burnt out.	1. Replace the button. 2. Repair the wiring connections. 3. Replace the AC contactor. 4. Repair or replace the motor.
Motor runs but the lift does not rise	1. Incorrect motor rotation. 2. Low oil level. 3. Gear pump is not working. 4. Pressure-relief valve or check valve is damaged. 5. Shaft coupling is damaged.	1. Have a qualified electrician check motor wiring and rotation against the correct single-phase circuit diagram. Do not interchange line and neutral to reverse rotation. 2. Fill the tank to the required oil level. 3. Repair or replace the pump. 4. Repair or replace the affected valve. 5. Replace the shaft coupling.
Lift rises slowly	1. Oil line is blocked. 2. Gear pump is leaking. 3. Lift is overloaded. 4. Supply voltage is low. 5. Air is mixed with the oil.	1. Clean the oil line. 2. Replace the pump. 3. Check the load and remain within the rated lifting capacity. 4. Have the electrical system checked. 5. Correct the oil level and bleed the hydraulic system.
Lift will not lower	Hydraulic solenoid valve is not working.	Have a specialist check the solenoid valve.

Table 4 — Problems, causes and remedies.

Appendix A — Special notes

A.1 Disposal of used oil

Used oil drained from the power unit and hydraulic system during an oil change is environmentally hazardous. Handle and dispose of it in accordance with the legal requirements applicable at the installation site.

A.2 Dismantling and disposal of the machine

OBSERVE ALL SAFETY PRECAUTIONS IN THIS MANUAL WHEN DISMANTLING THE MACHINE. The source refers here to Chapter 2; also observe Chapter 6, Safety, in particular. The safety precautions apply to assembly as well.

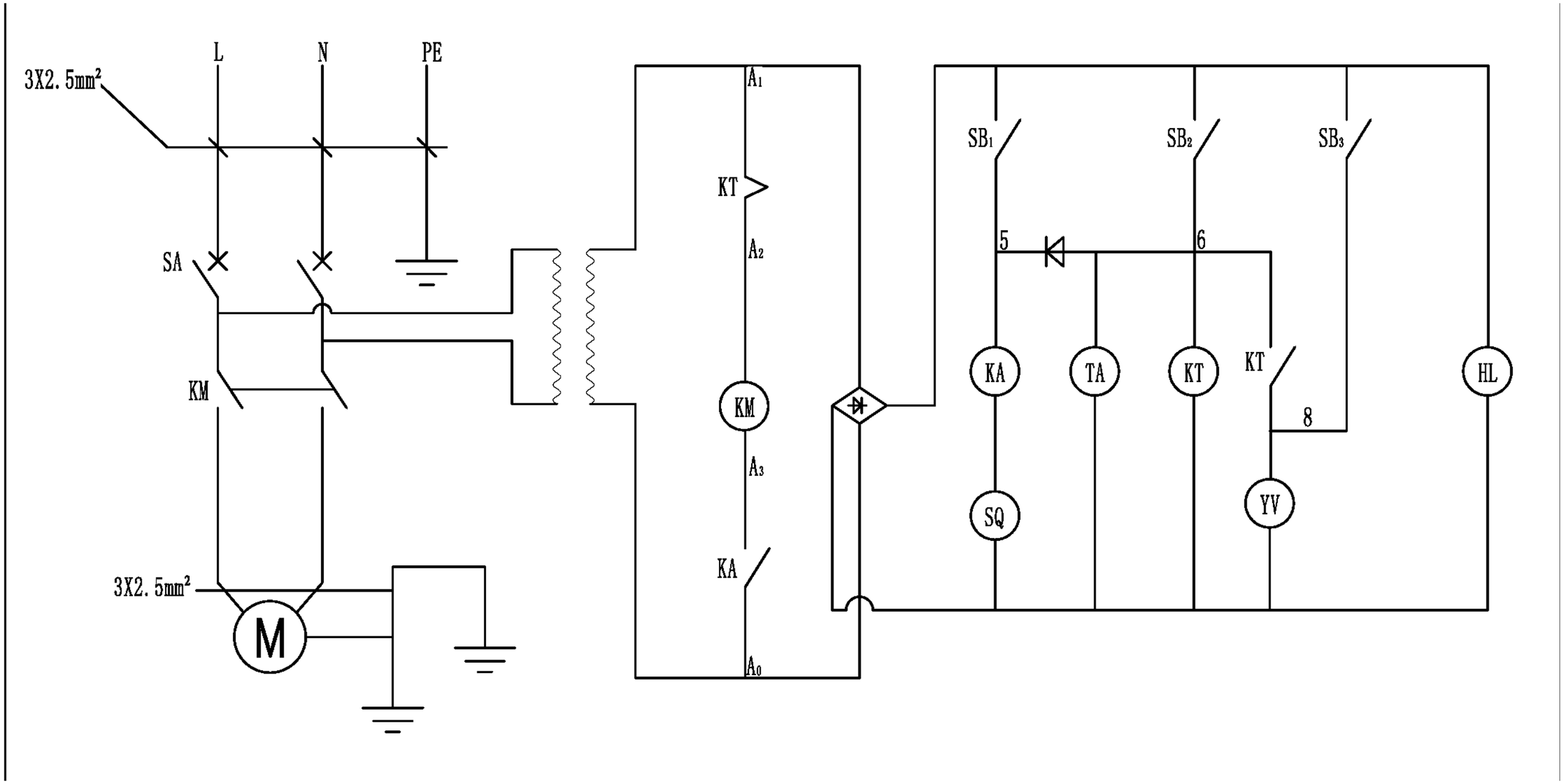
Like assembly, dismantling must be performed by authorised technicians. Metal parts may be sent to the appropriate scrap-recycling facility. Dispose of every material resulting from dismantling in accordance with the requirements applicable at the installation site.

The source manual also notes that dismantling may need to be documented for tax purposes. Submit any declarations and supporting documents required by the local rules in force at the time the machine is dismantled.

Appendix B - Electrical circuit diagram

The following electrical circuit diagram was supplied subsequently for HAMMER TOOLS CSL 3500 XO. The circuit and its reference markings are reproduced from the supplied original. The pneumatic diagram in the original manual does not apply to this version.

Electrical connection and repairs must be carried out exclusively by a qualified electrician. Before any work, check that the diagram corresponds to the machine actually supplied.



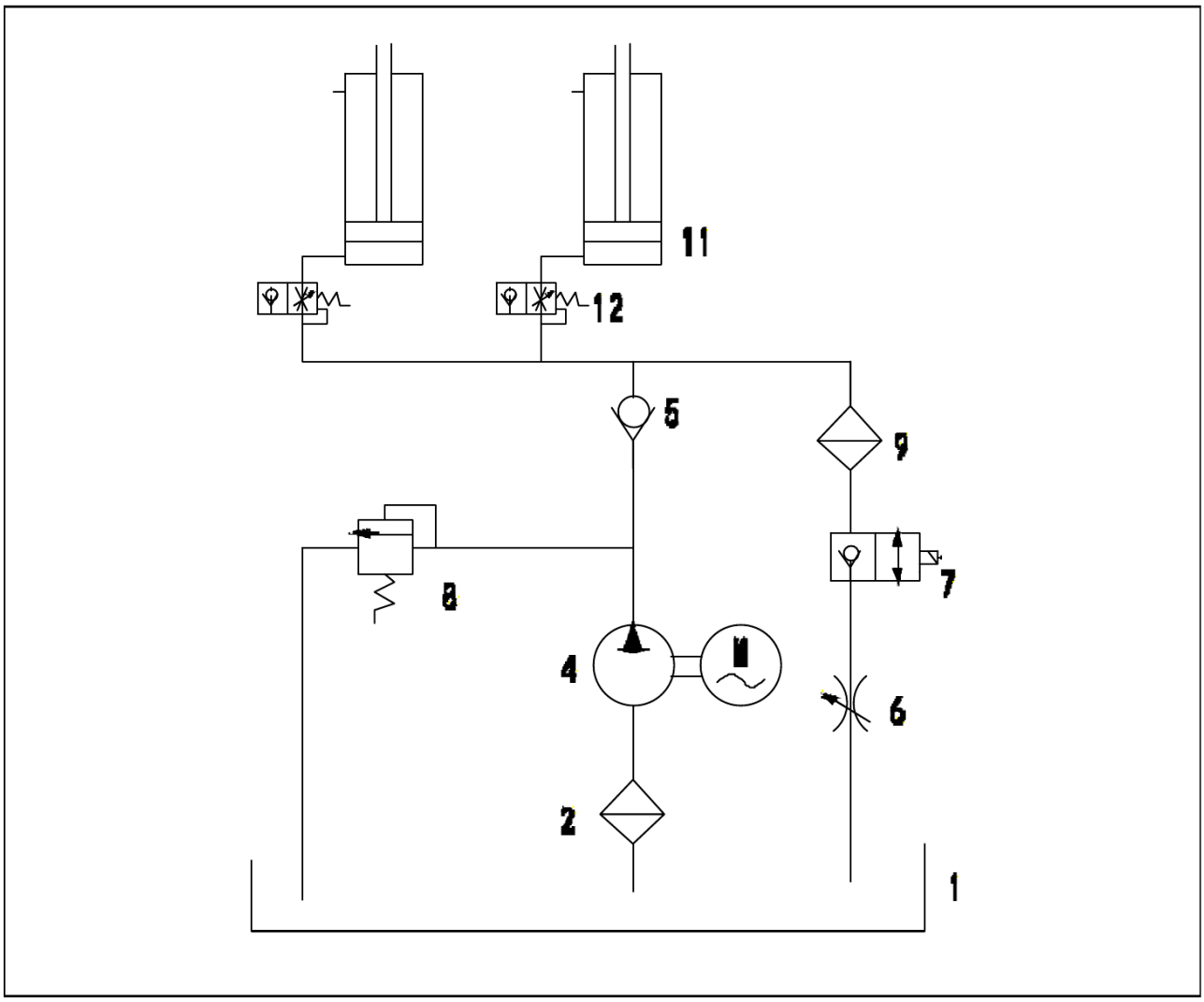
Reference markings and numbers match the supplied original. No additional component legend was supplied. The blank administrative title block is omitted.

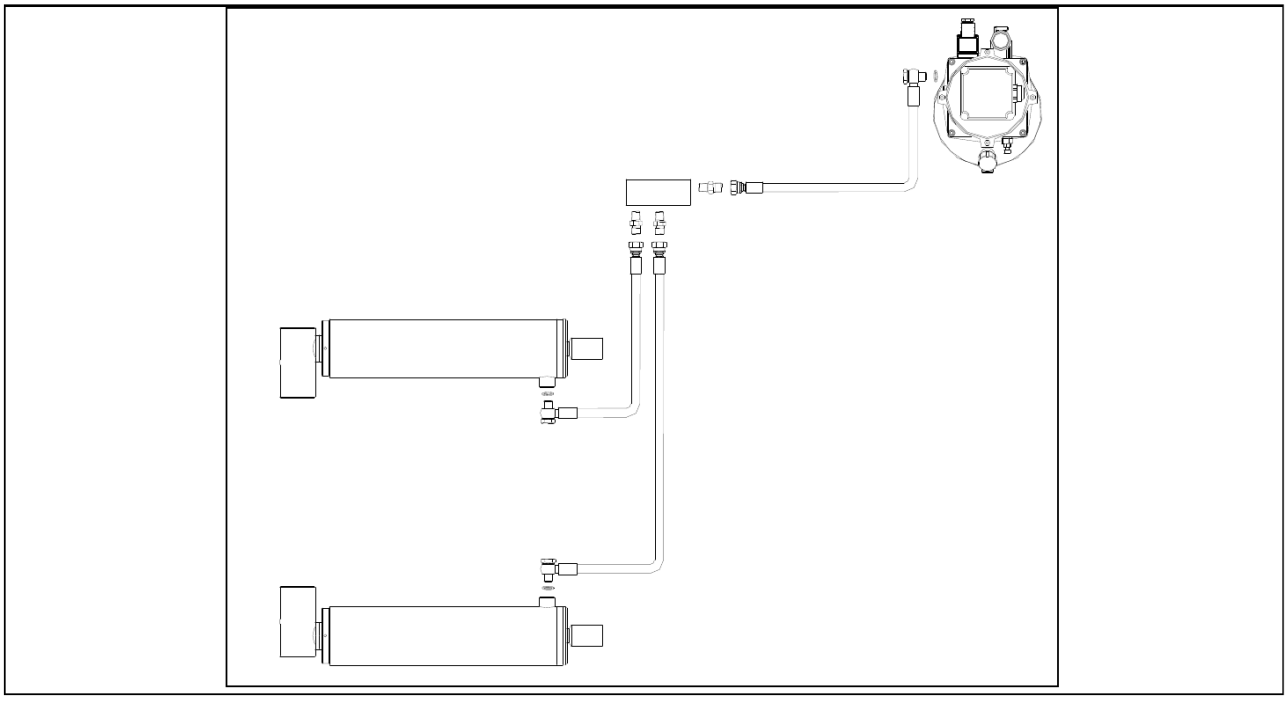
Appendix C — Hydraulic circuit diagram

The illustrations show the hydraulic circuit and the hose connections between the hydraulic power unit and the cylinders.

Reference numbers 1, 2, 4, 5, 6, 7, 8, 9, 11 and 12, and motor symbol M, are retained from the source. The supplied source does not include a corresponding parts legend.

Top: hydraulic circuit diagram. Bottom: arrangement of hydraulic hoses and connections.





Appendix C – Hydraulic circuit diagram