



Jema Autolifte A/S
we are here to surprise!

JA6001S

Scissor lift – In-ground installation – Lifting capacity: 3800 KG

ORIGINAL INSTALLATION, OPERATION AND MAINTENANCE MANUAL



Read this entire manual carefully and completely before installation or operation of the lift. Jema Autolifte reserves the right to make any typing errors

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1. Important safety instructions

1.1 Important notices

Jema Autolifte A/S will offer one-year's quality warranty of the lift, during which any quality problem will be properly solved to the user's satisfaction. However, we will not take any responsibility for whatever bad consequence that may result from improper installation and operation, overload running or improper ground conditions.

This model is specially designed for lifting motor vehicles that weighs within its outmost lifting capacity. Users are not allowed to use it for any other purposes. Otherwise, we, as well as our sales agency, will not bear any responsibility for accidents or damages of the lift.

Make sure to pay careful attention to the label showing the lifting capacity, attached on the lift, and never try to lift cars weighing more than the specified lifting capacity. Read this manual carefully before operating the machine so as to avoid economic loss or personnel casualty incurred by wrong operation.

Without our professional advice, users are not permitted to make any modifications of the control unit or any other mechanical unit.

1.2 Qualified personnel

1.2.1 Only qualified staff, which has been properly trained, can operate the lift.

1.2.2 Electrical connection must be carried out by a certified electrician.

1.2.3 No unauthorized entry is allowed in the lifting area.

1.3 Danger notices

1.3.1 Do not install the lift on an asphalt surface.

1.3.2 Read and understand all safety warnings before operating the lift.

1.3.3 Calibration of the lift must be done after reading calibration instructions.

1.3.4 Do not leave the controls while the lift is still in motion.

1.3.5 Keep hands and feet away from any moving parts. Keep feet clear of the lift when lowering.

1.3.6 Only properly trained personnel can operate the lift.

1.3.7 Do not wear unfit clothes such as large clothes with flounces, tires, etc, which could be caught by moving parts of the lift.

1.3.8 To prevent accidents, surrounding areas of the lift must be tidy and free from irrelevant matters.

1.3.9 The lift is simply designed to lift the entire body of vehicles, with its maximum weight within the lifting capacity.

1.3.10 Always insure the safety latches are engaged before any attempt to work near or under the vehicle. Never remove safety related components from the lift. Do not use the lift if safety related components are damaged or missing.

1.3.11 Do not rock the vehicle while on the lift or remove any heavy component from vehicle that may cause excessive weight shift.

1.3.12 Check at any time the parts of the lift to ensure the agility of moving parts and the performance of synchronization. Ensure regular maintenance and if anything abnormal occurs, stop using the lift immediately and contact our dealers for help.

1.3.13 Lower the lift to its lowest position and do remember to cut off the power source when service finishes.

1.3.14 Do not modify any parts of the lift without manufacturer's advice.

1.3.15 If the lift is going to be left unused for a long time, users are required to:

- a. Disconnect the power source;
- b. Empty the oil tank;
- c. Lubricate the moving parts with hydraulic oil.

Attention: For environment protection, please dispose the disused oil in a proper way.

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1.4 Warning signs

All safety warning labels are clearly depicted on the lift to ensure that the operator is aware of and avoids the dangers of using the lift in an incorrect manner. The labels must be kept clean and they have to be replaced if detached or damaged. Please read carefully the meaning of each label and memorise them for future operation.

CAUTION		WARNING		
				
Never stand, work or be under the lift while it is being operated.	The operator should not stand too close to the lift but in a safe position away from moving parts.	When the lift is lowered, no auxiliary stand or other blocking objects should be near the lift.	Do not shake or push the vehicle whilst it is on the lift.	Only trained technicians are permitted to operate this lift.
				
Ensure feet and other parts of your body are well clear of the lift when it is being lowered or when lifting.	Never try to lift or lower only 1 platform.	Do not change, tamper or interfere with the safety mechanisms of this lift.	Ensure that the lifting weight of the vehicle is balanced on both platforms to avoid tilting or sliding.	
				
Always keep the lifts pit clean and clear of any objects or contaminants.	Please read and study the operation manual carefully before operating this lift.	Keep the vehicle parallel with the platform lifts at all times.	High voltage in control box, take extreme caution here.	

1.5 Sound Level

The sound emitted from the lift should not exceed 75DB. For the sake of your health, we suggest that you install a noise detector in your working area.

1.6 Training

Only qualified staff, which has been properly trained, can operate the lift. We are quite willing to provide professional training for the users when necessary.

2. Overview of the lift

2.1 General descriptions

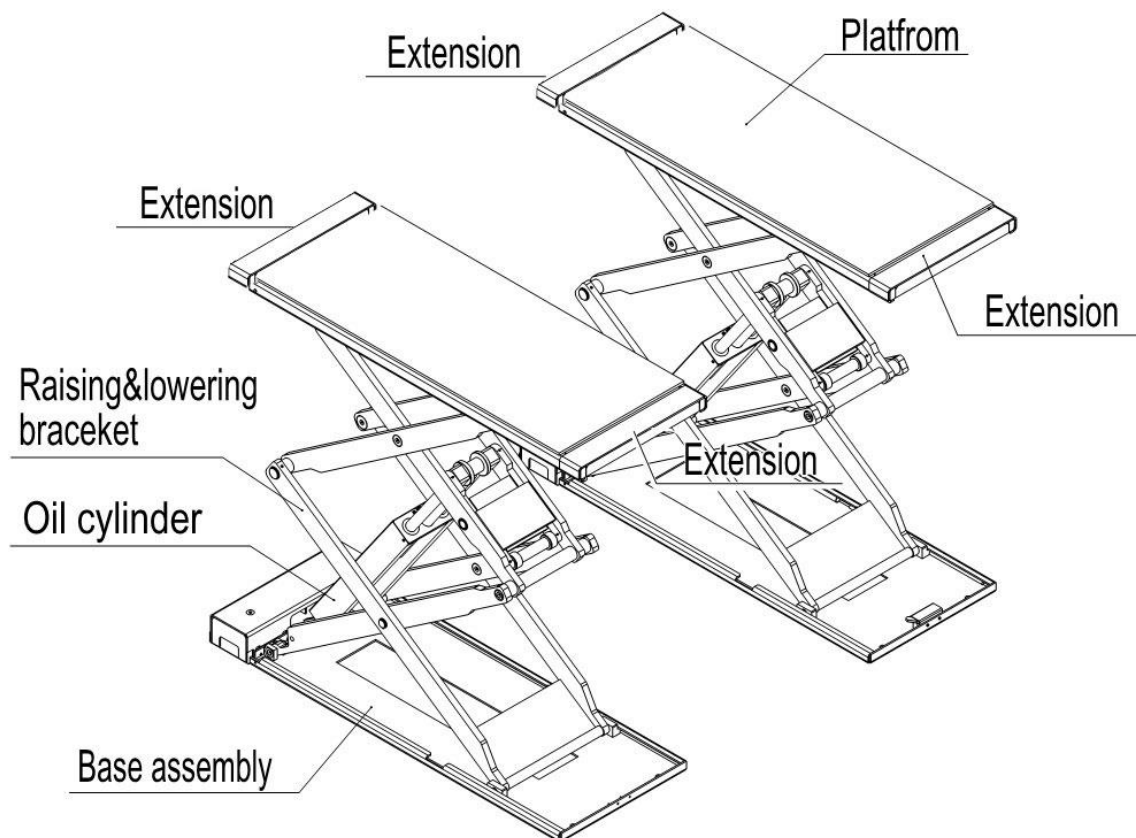
This full rise scissor lift has a quite low profile when at its lowest position. Its four cylinder structure makes the low 110mm clearance from ground come true. This model is designed with auto leveling system. Because it is specially designed for in-ground installation, the users should make sure the holes within the lift should be placed has the correct dimentions and and comply with the specified requirements for the substrate. Its platform extension can serve as an extended part of the platform for much longer vehicles. Besides this, designs like 24V working voltage of control box and limit switch, alarming buzzer, hydraulic safety system, anti-surge valves, etc. emphasizes your personal security greatly.

2.2 Technical data

Model	Lifting capacity	Lifting time	Lifting height	Electrical requirement
JA6001S	3800kg	50 Sec	1835mm	220V, Single Phrase

Weight of JA6001S = 900 KG

2.3 Construction of the lift



3. Installation instructions

3.1 Preparations before installation

3.1.1 Tools and equipments needed

- √ Electrical drill
- √ Open wrenches
- √ Screw drivers
- √ Adjustable spanner

3.1.2 List for checking of parts ---Annex 1 (Packing list)

Unfold the package and check if any parts missed as per Annex 1. Do not hesitate to contact us in case any parts are missing, but if you do not contact us and insist on installing the lift lacking of some parts, Jema Autolifte A/S as well as our dealers will not bear any responsibility for this and will charge for any parts subsequently demanded by the buyer.

3.1.3 Ground conditions

The lift should be fixed on a smooth and solid concrete ground with strength of more than 3000psi, tolerance of flatness less than 5mm and minimum thickness of 150mm. In addition, newly built concrete ground must undergo more than 28days' cure and reinforcement.

3.2 Precautions for installation

- 3.2.1 Joints of oil hose must be firmly connected in order to avoid leakage.
- 3.2.2 All bolts should be firmly screwed up.
- 3.2.3 Do not place any vehicle on the lift in the case of trial running.

3.3 Installation

Step1, Connect oil hose (This step is extremely important, so do refer to the diagram for of oil hose connection in **Annex 5** and understand the following instructions before proceeding)

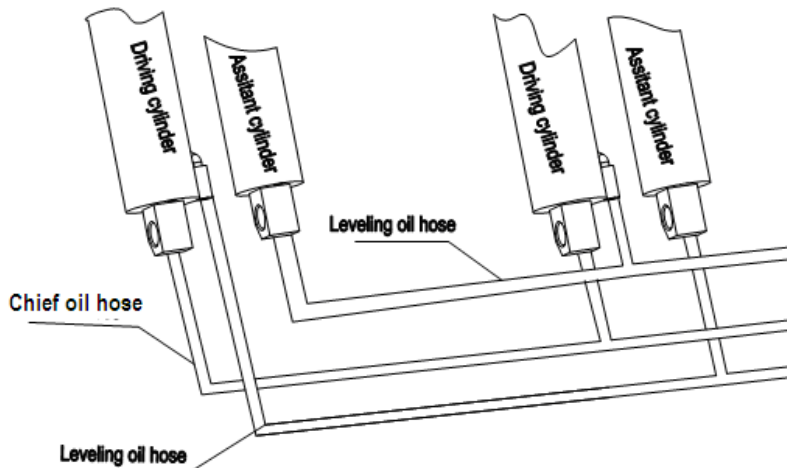
First make sure that the hose is not blocked or dirty.

Secondly installers have to indentify where the chief oil hose is to be connected, by referring to the below two pictures, and then connect the chief hose.

There are four main oilhoses in total, marked with four ribbons of different colours. Oil hoses with same colour should be connected to each other. Please follow the pictures below:

Finally, check if all connections are tightened.





Step2, Connect the wiring

Connect exterior wires as per the wiring diagram, with the black for phase wire, the blue for null wire, and the green-yellow for grounded conductor.

Step3, Fill with hydraulic oil

Pour 16 liters of anti-grinding oil into the oil tank. The level of the oil must be 10mm to 40mm measured from the top of the tank.(users can measure it by the probe attached on the lid)

Step4, Calibrating

Attention: Before calibrating, make sure that the oil hoses are correctly connected. Otherwise, oil cylinders may not work synchronously or could be damaged.

Electric leveling

1. Turn on the power switch.
2. Press the UP button and see if the two valves with the ribbons are working. Push UP until one of the platforms goes up to around 1.5 meter high.
3. Press DOWN button until the two platforms are all the way down to bottom.
4. Press and hold button of "Platform Calibration", press UP button and release immediately when the one platform moves (Only 2-3cm) if the platform goes to high, then lower and start again. When step 4 for is performed the lift is ready and should be calibrated.

(Attention: Please do it carefully and stop inching UP button immediately when you see one of the platform is moving, otherwise it will damage the lift)

Use the lift as normal and see if the two platforms are calibrated. Otherwise please do step 4 again until it's calibrated.

Attention: The button for "platform calibration" is only used for leveling, and not for daily use.

Step 5, Mount the expansion bolt

1. Drill holes for expansion bolt (The bolts are not incl. with the lift). Make sure the drill is going straight down to the ground.
2. Hammer expansion bolt into the hole and tighten the nut afterwards.

Step 6, Mount the oil hose covers.

3.4 Items to be checked after installation.

S/N	Check items	YES	NO
1	Are the two platforms adjusted at the same level?		
2	Are the oil hose tightly connected?		
3	Are all electric connections correct?		
4	Are the valves of the pump unit tight?		

4. Operation instructions

4.1 Precautions

4.1.1 Check all the joints of the oil hose. Only when there is no leakage, the lift can start working.

4.1.2 The lift must not be used if its safety devices malfunction.

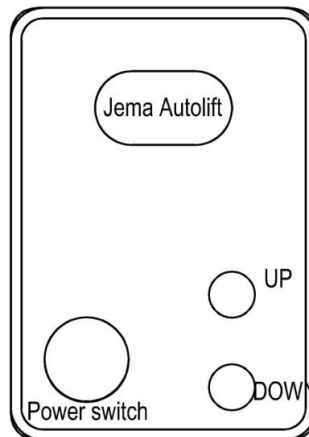
4.1.3 The machine must not lift or lower an automobile if its center of gravity is not positioned midway of the rising platforms Jema Autolifte A/S as well as our dealers will not bear any responsibility for any consequence as a result of operating the lift in unbalance conditions.

4.1.4 Operators and other authorized personnel should stand in a safety area during lifting and lowering process.

4.1.5 When platforms are being raised to the desired height, switch off the power at once to prevent any wrong operation performed by unauthorized people.

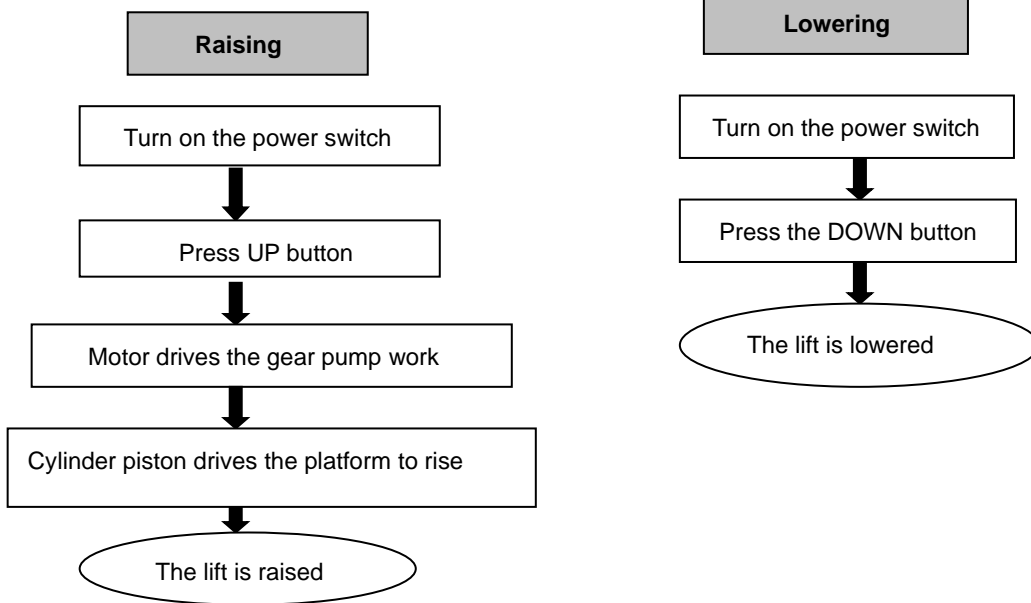
4.1.6. Make sure there is no kind of oil leakage of the lift before starting work under the vehicle and that nobody stays under the vehicle during the lifting and lowering process.

4.2 Descriptions of control box



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4.3 Operation flow chart



4.4 Operation instructions

To raise the lift

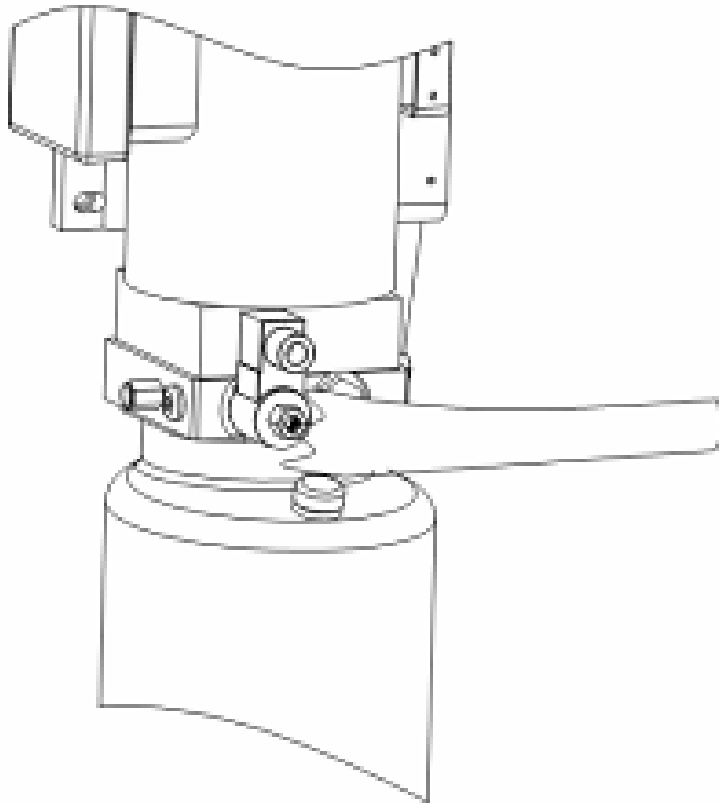
1. Make sure that you have read and understood the operation manual before operation.
2. Drive and park the vehicle midway between two platforms.
3. Place the four rubber pads under the prop-points of the vehicle and ensure that the car's gravity have fallen on the rubber pads.
4. Press the UP button on the control box until rubber pads have touched the prop-points of vehicle.
5. Keep on pressing the UP button to lift the vehicle a bit higher from the ground and check again if the vehicle is in a safe position.
6. Having raised the vehicle to the required height, operators must press the "Emergency stop" button until the power indicator is off and check the stability of the vehicle again before performing maintenance or repair work.

To lower the lift

1. Switch on.
2. Press the DOWN button to lower the lift. It will stop lowering when clearance between the platforms and the ground reaches 200mm.
3. Press DOWN button again to continue lowering the platforms. Alarming buzz will be heard during this process.
4. Drive the vehicle away

4.5 Emergency lowering in case of power failure

1. Screw loose the core of the solenoid unloading valve fixed on the hydraulic block.



5. Trouble Shooting

ATTENTION: If the trouble could not be fixed by yourself, please do not hesitate to contact us for help .We will offer our service at the earliest possible time. By the way, your troubles will be judged and solved much faster if you could provide us more details or pictures of the trouble.

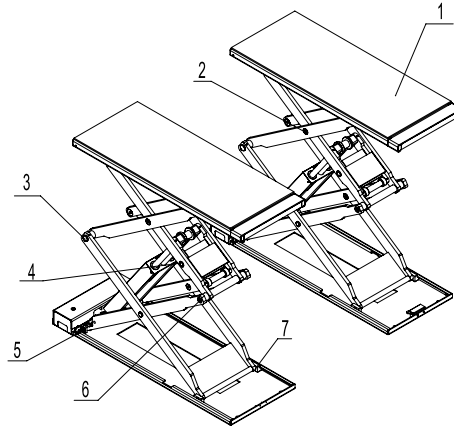
TROUBLES	CAUSE	SOLUTION
Motor does not run and will not raise	The wire connection is loose.	Check and make sure, that the connection is tight.
	The motor is burnt	Replace it.
	The limit switch is damaged or the wire connection is loose.	Connect it or adjust or replace the limit switch.
Motor runs but will not raise	The motor run reversely.	Check the wire connection.
	Overflow valve is loose or jammed.	Clean or adjust it.
	The gear pump is damaged.	Replace it.
	Oil level is too low.	Add oil.
	The oil hose became loose or dropped off.	Tighten it.
	The cushion valve became loose or jammed.	Clean or adjusts it.
Platforms go down slowly after being raised	The oil hose leaks.	Check or replace it.
	The oil cylinder is not tightened.	Replace the seal.
	The single valve leaks.	Clean or replace it.
	The overflow valve leaks.	Clean or replace it.
	Electrical unloading valve leaks.	Clean or replace it.
Raising too slow	The oil filter is jammed.	Clean or replace it.
	Oil level is too low.	Add oil.
	The overflow valve is not adjusted to the right	Adjust it.
	The hydraulic oil is too hot (above 45°).	Change the oil.
	The seal of the cylinder is abraded.	Replace the seal.
Lowering too slow	The throttle valve jammed.	Clean or replace.
	The hydraulic oil is dirty.	Change the oil.
	The anti-surge valve is jammed.	Clean it.
	The oil hose is jammed.	Replace it.

6. Maintenance

Easy and low cost routine maintenance can ensure the lift works normally and safely. The following are requirements for routine maintenance. You may choose the frequency of routine maintenance by consulting your lift's working conditions and time.

The following parts need to be lubricated.

S/N	DESC
1	Platform slider
2	Joint shaft C
3	Joint shaft B
4	Driving rotor shaft
5	Rotor shaft of base plate
6	Joint shaft D
7	Base plate slider
8	Rotor shaft



6.1. Daily checking of items before operation

The user must perform daily checks. Daily checks of the safety system are very important – the discovery of device failure before action could save your time and prevent you from great loss, injury or casualty.

- Check whether oil hose well connected. No leakage is allowed.
- Check the electric connections. Make sure that all connections are in good condition.
- Check whether the expansion bolts are well anchored.

6.2. Weekly checking of items

- Check the flexibility of moving parts.
- Check the working conditions of safety parts.
- Check the amount of oil left in the oil tank. Oil is sufficient if the carriage can be raised to highest position. Otherwise, oil is insufficient.
- Check whether the expansion bolts are well anchored.

6.3. Monthly checking of items

- Check whether the expansion bolts are well anchored.
- Check the tightness of the hydraulic system and screw the joints firmly if it leaks.
- Check the lubrication and abrasion circumstances of moving parts.

6.4. Yearly checking of items

- Empty the oil tank and check the quality of the hydraulic oil.
- Wash and clean the oil filter.

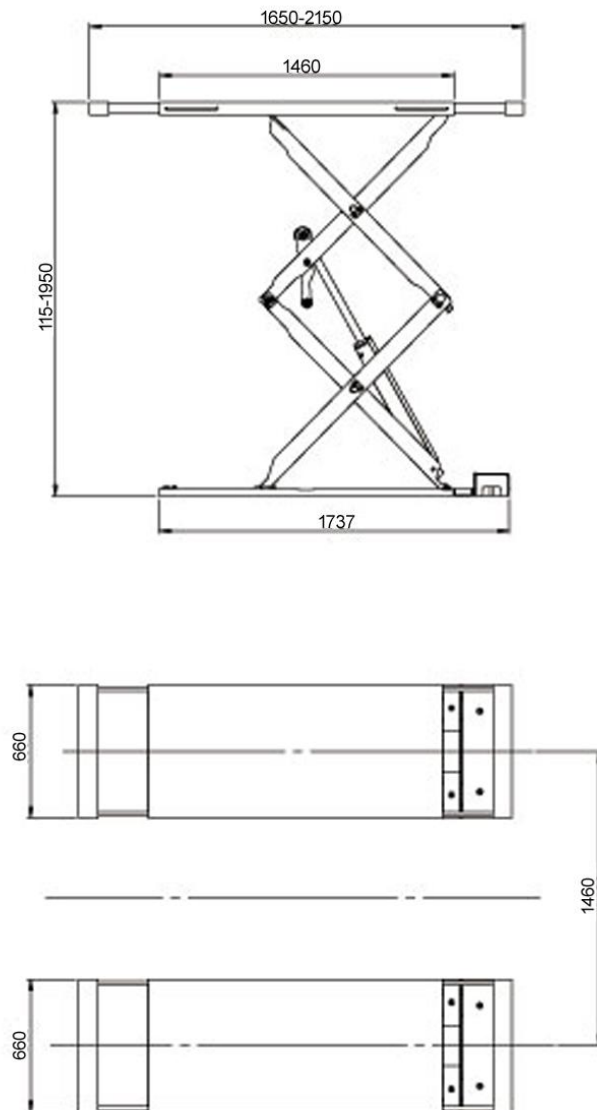
If users follow the above maintenance requirements strictly, the lift will be kept in a good working condition and accidents could be avoided to a large extent.

7. ANNEX

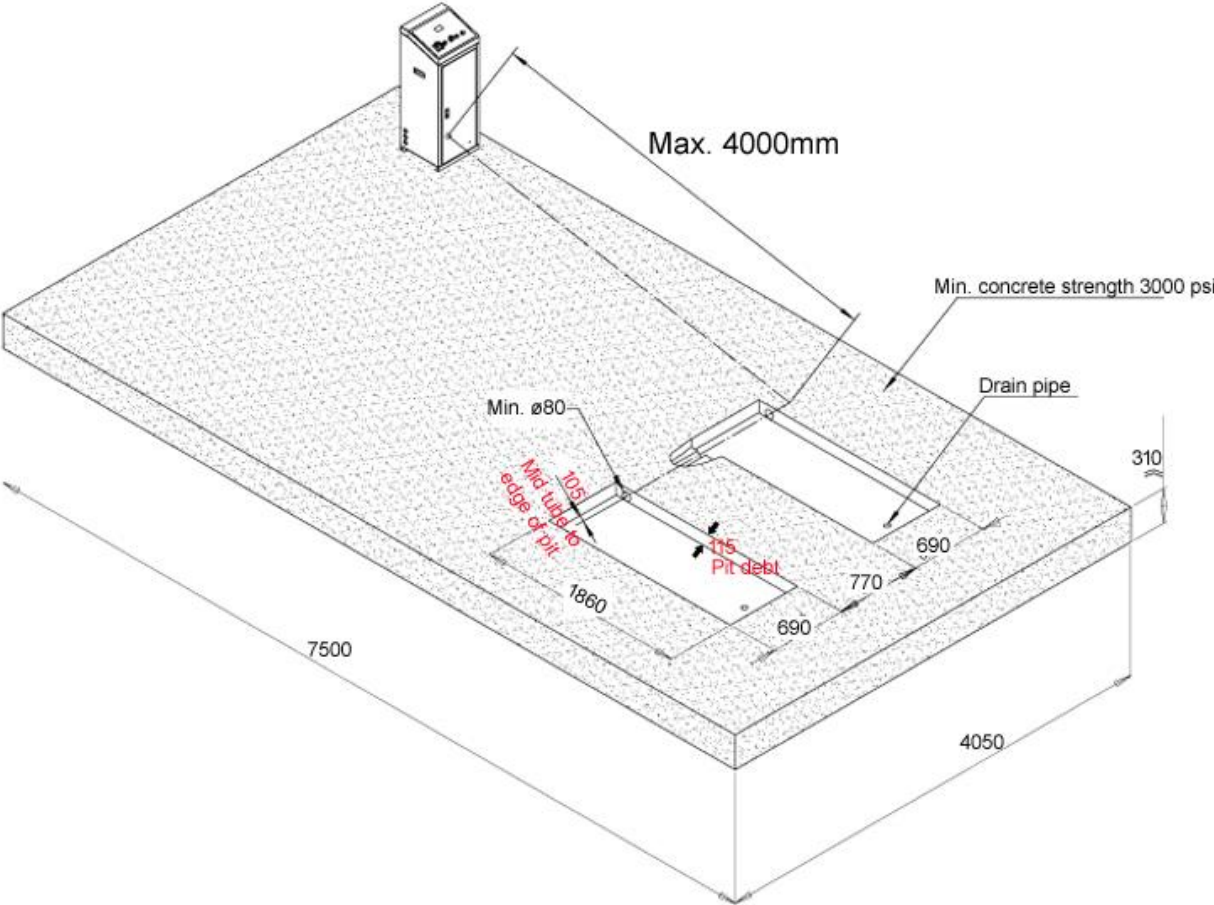
Annex 1, Packing List of the whole lift

S/N	Name	Drawing#/Size	Description	Qty
1	Lift	6001-01	Component	1
2	Protection cover assembly	6001-A06-B02	Component	1
3	Cover plate A	6001-A9	Q235A	1
4	Cover plate B	6001-A10	Q235A	1
5	Cover plate C	6001-A11	Q235A	1
6	Control box	6001-A12	Assembly	1

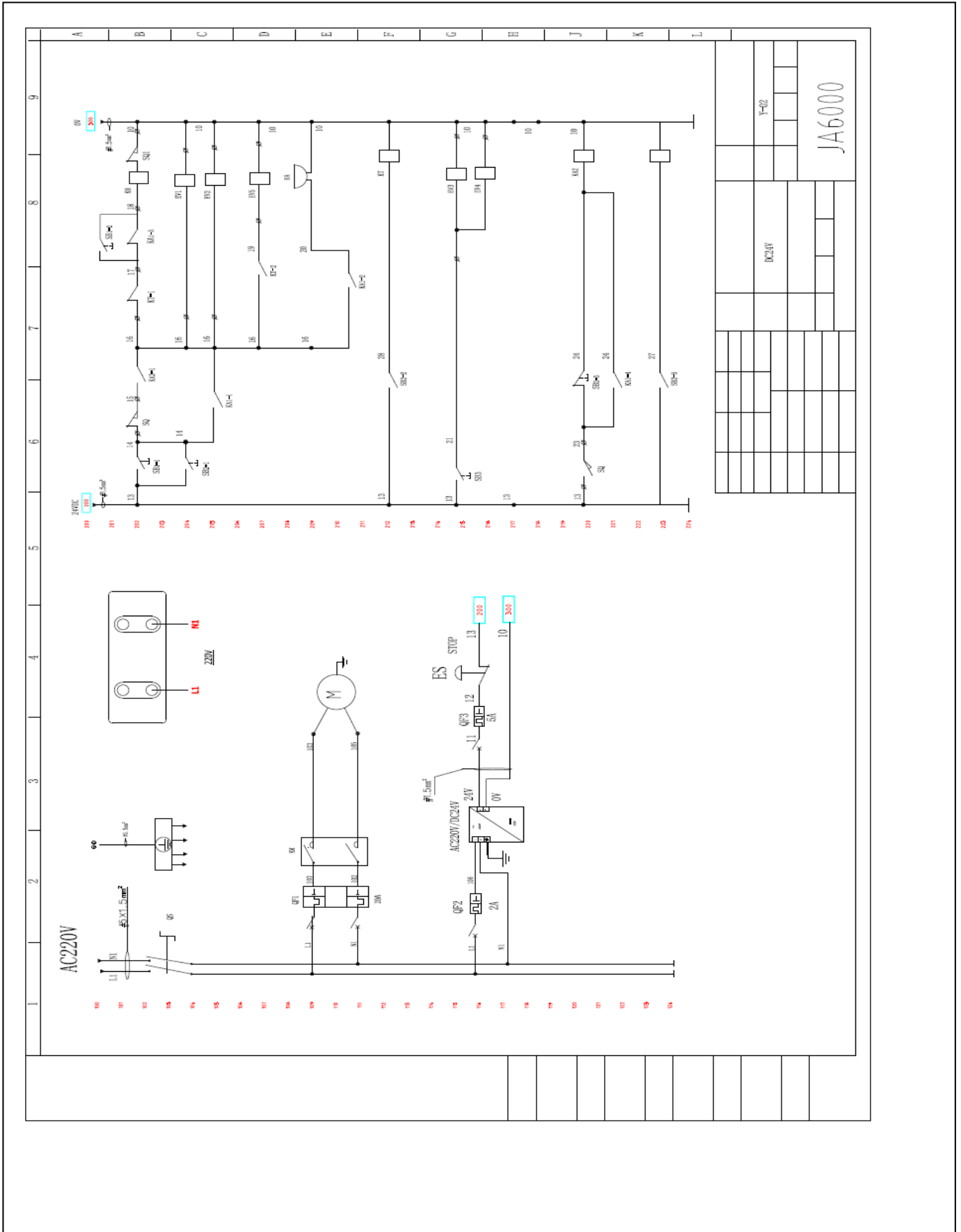
Annex2, Overall diagram



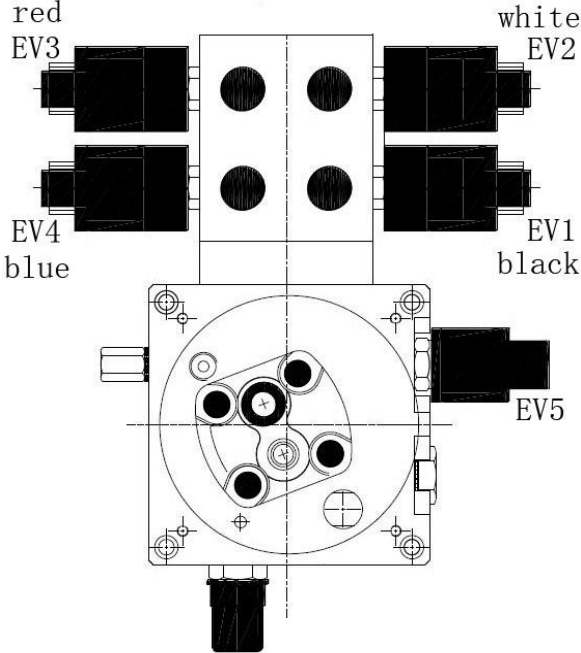
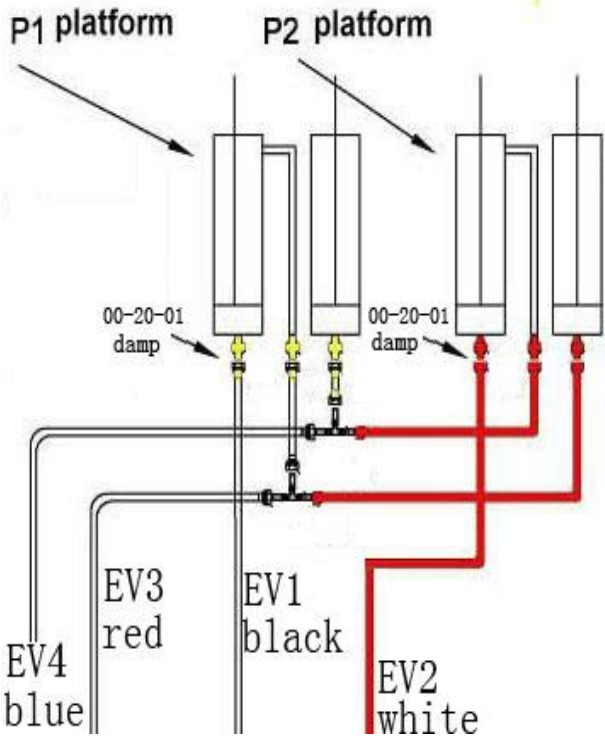
Annex3, Diagram for ground fixing



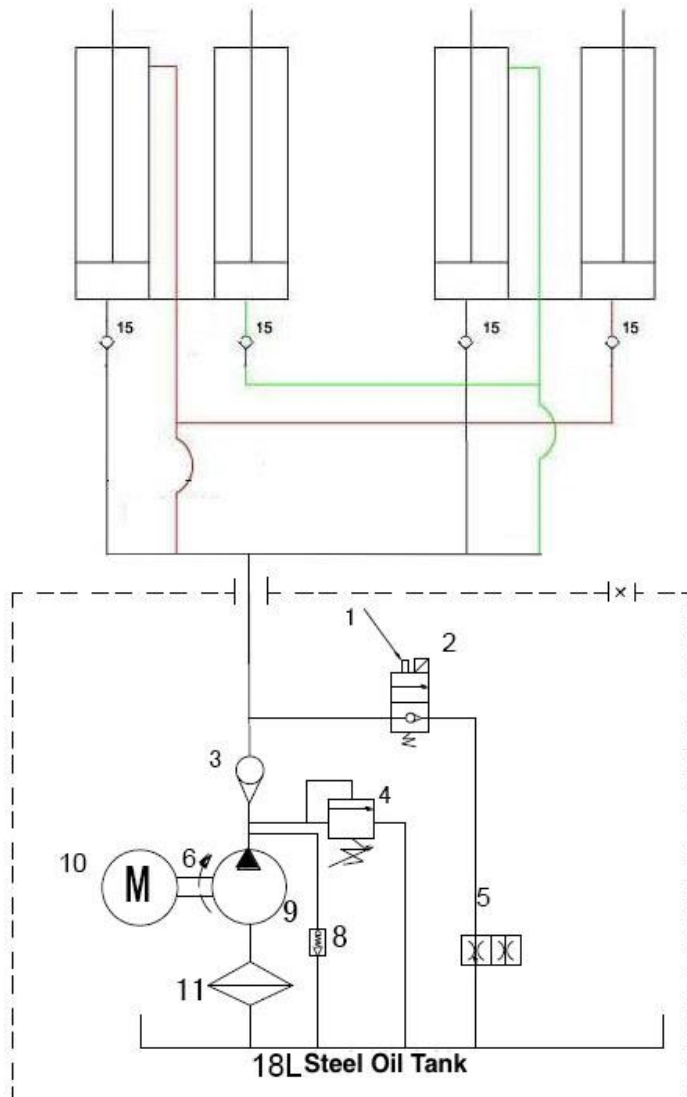
Annex 4, Electric wire diagram.



Annex 5, Diagram for oil hose connection



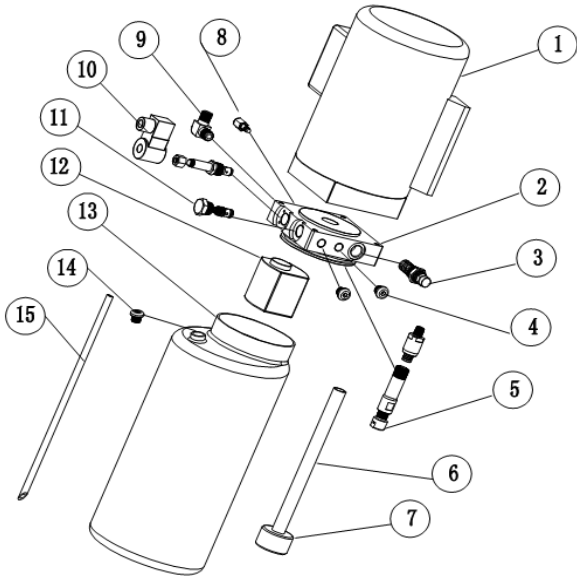
Annex 6, Hydraulic working system



- 1 .Emergency unloading valve
- 2. Electrical unloading valve
- 3. One-way valve
- 4. Overflow valve
- 5. Lowering throttle valve
- 6. Electrical unloading valve
- 7. Electrical unloading valve
- 8. Cushion valve
- 9. Gear pump
- 10. Oil pump motor
- 11. Oil filter
- 12. Driving cylinder
- 13. Assistant cylinder
- 14. Coupling
- 15. Anti-surge valve

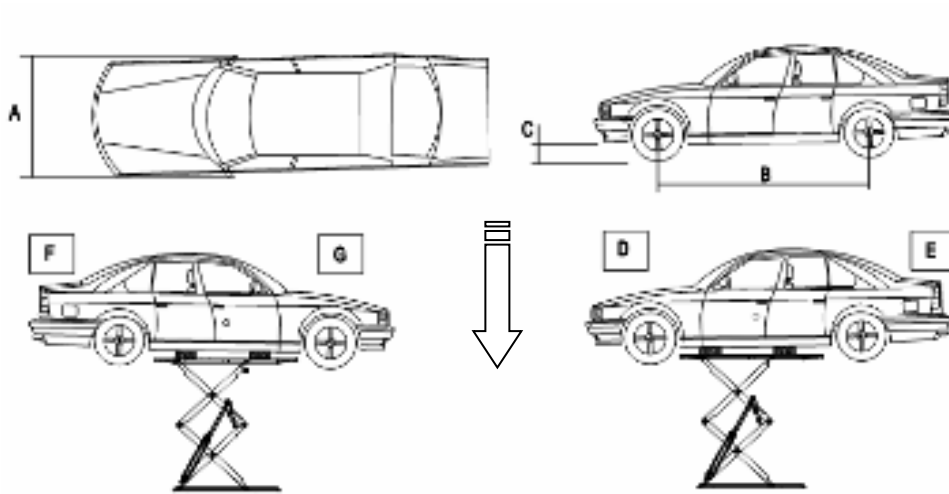
Annex 7, Separate diagrams for the lift

For the pump:



S/N	DESCRIPTION	QTY
1	Motor	1
2	Hydraulic block	1
3	Overflow valve	1
4	Fitting	2
5	Cushion valve	1
6	Absorbing oil hose	1
7	Oil filter	1
8	Throttle valve	1
9	Oil hose tie-in	1
10	Electrical unloading valve	1
11	One-way valve	1
12	Gear pump	1
13	Oil tank	1
14	Oil tank cover	1
15	Oil back hose	1

Annex 8, Size and weight requirements on vehicles



Model No.	A (mm)	B (mm)	C (mm)	D (T)	E (T)	F (T)	G (T)
JA6001S	2120	2000	110	2.2	1.6	1.6	2.2

EC Declaration of Conformity (informative)

We (name of applicant) Jema Autolifte A/S
of (address of applicant) Industrihegnet 2, 4030 Tune, Denmark

hereby declare that the equipment submitted for Type Approval is in conformity with the requirements of following EU Directives:

2006/42/EC The Machinery Directive
2014/30/EU Electromagnetic Compatibility Directive

We hereby declare that:

Equipment Scissor Lift
Model number JA6000S JA6001S

is in conformity with the applicable requirements of the following documents

Ref. No.	Title	Edition/date
2006/42/EC	Essential health and safety requirements relating to the design and construction of machinery	Annex I
EN 60204-1	Safety of machinery - Electrical equipment of machines -- Part 1: General requirements	2018
EN 1493	Vehicle lifts	2010
EN 61000-6-4	Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments	2019
EN 61000-6-2	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments	2019

I hereby declare that the equipment named above has been designed to comply with the relevant sections of the above referenced specifications and is in accordance with the requirements of the above Directive(s):

Signed by:

Full Name: Kasper
Title: Director
Location: Tune, Denmark
Date: 26, Sep 2022



The technical documentation only for the machinery certified to the Test Standards as required by the Machinery Directive, is available from:

Name: CEM International Ltd
Address: Westmead House Westmead Farnborough Hampshire GU14 7LP UK