INSTRUCTION OF THIS MANUAL

This Manual is for model : GL3500

1. *AS FOR THE ASSURANCE OF SAFETY IN DESIGN AND CONSTRUCTION OF CAR LIFT, READ THIS MANUAL FIRST.*

2. *PLEASE MAKE SURE THAT THIS MANUAL IS DELIVERED TO END USERS FOR THEIR IMPLEMENTATION OF SAFETY.*

3. *DON'T USE THE CAR LIFT IN A POTENTIALLY EXPLOSIVE ATMOSPHERE.*

INDEX

Chaper 1 SAFETY PRECAUTION

1.1 SAFEGUARDS

- *Please read carefully this chapter first for safe and proper use of the car lift. This company will not be held responsibilities for any injuries or accidents which occur due to the car lift being operated without having understood the contents of the instruction manual. Keep the Instruction Manual close to the car lift so that anyone can refer to when necessary. Also, designate a person to take care of the manual.*

- *This document provides the information required for the intended use of car lift. The documentation is written for technically qualified personnel such as engineers or maintenance specialists who have been specially trained and who have the specialized knowledge required in the field of industrial machinery. A knowledge of the safety instruction and warnings contained in this document and their appropriate application are prerequisites for safe installation and commissioning as well as safety in operation and maintenance of the car lift described. Only qualified personnel have the specialized knowledge that is necessary to correctly interpret the general guidelines relating to the safety instructions and warnings and implement them in each particular case.*

- *For the sake of clarity, not all details of all versions of the product are described in this documents, nor can it cover all conceivable cases regarding installation, operation and maintenance. Should you require further information or face special problems that have not been dealt with insufficient detail in this document, please contact the manufacturer specified on cover page.*

- *We would also point out that the contents of this product documentation shall not become a part of or modify any prior or existing agreement, commitment or legal relationship. The purchase agreement contains the complete and exclusive obligations of GUANGZHOU GUANGLI CO.,LTD. Any statements contained in this document do not create new warranties or restrict the existing warranty.*

1.2 Qualified Personnel

- *Persons who are not qualified should not be allowed to handle the car lift. Non-compliance with the warnings contained in this document or appearing on the car lift can result in severe personal injury or damage to property. Only qualified personnel should be allowed to work on this car lift.*

- *Qualified persons as referred to in the safety precautions in this document as well as on the car lift itself are defined as follows:*

  a) Operating personnel who have been trained work with the car lift and are conversant with the contents of the documents in as far as it is connected with the actual operation of the car lift;
- *b) Service personnel who are trained to repair such the car lift and who are authorized to energize, clear, ground and tag circuits, equipment and systems in accordance with established safety practices.*

1.3 Danger Notices

The safety precautions in this manual are classified into the following four levels. Please be particularly careful when performing operations that have a high degree of danger. DANGER : Failure to follow this safety precaution may result in a great physical danger to the operator, or even death.

WARNING	Failure to follow this safety precaution may result in an injury to the operator, or damage to the car lift.
CAUTION	*Failure to follow this safety precaution may result in a great physical danger to the operator, or severe damage to the car lift.*
NOTICE	Failure to follow this safety precaution may result in damage to the car lift.

1.4 Principle safety objective

1.4.1 The principle safety objective is to remove the possibility of any hazard or risk to the health or safety of the car lift's operator or service personnel.

1.4.2 Extreme caution must be exercised while servicing or installing the car lift.

1.4.3 The only safe policy when working or inspecting the car lift is to follow the instructions in this manual. Wherever possible shut off all electrical power and follow the procedures outlined in this manual.

1.4.4 Accident prevention should become part of the standard working, operating and maintenance procedures, and training should be provided to ensure safety standards are understood. Part of safety training should include the instructions detailed in this section.

1.4.5 Always ensure servicing and maintenance tasks are carried out by suitable qualified personnel. The operator should understand the limits of their responsibility, and the training should reinforce the importance of not exceeding them.

1.4.6The essential routine safety checks have an important function in ensuring the car lift continues to work in a safe manner. These checks must be carried out according to the instruction and at the recommended intervals.

1.4.7 If there are any questions or doubts regarding any aspect of car lift safety or operation or maintenance, please contact the company shown on the front of this manual.

1.5 Safety notices

- *To protect the operator or service personnel from any injuries or accidents during operating the car lift, please read this section and carefully for safe and proper use of the car lift.*

- *General Safeguards:*

1) Please read carefully this instruction manual for safe and proper use of the car lift.

2) Only qualified personnel should be allowed to work on this car lift.

3) *Checking before operation and routine inspection should be carried out in accordance with the procedures described in the manual.*
4) *When the abnormal condition not specified at this instruction manual is occurred during operating, stop the operation of car lift and contact the manufacturer specified on cover page or distributor.*
5) *This car lift should be only for repairing the car.*

⚠ DANGER	
	Be away from underside of vehicle while the lift is being operated (Accident will cost you your lift or serious injury)
	Go away quickly if the vehicle is in danger of falling. (Accident will cost you your lift or serious injury)

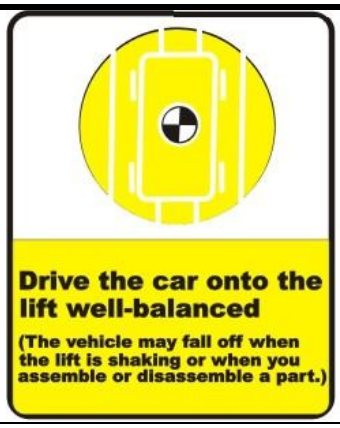
⚠ WARNING

	Operation of this lift is allowed for the one who fully understands how to operate. (Incorrect operation will lead unexpected accidents)
	Do not shake the vehicle of the lift too hard (The vehicle may fall off)
	High voltage Beware of electric shock when you open the operation line or control line. (You may get killed or seriously wounded)
	Authorized personnel only in lift area

	Never change or modify the safety device. (When the safety device doed not function,serious accident may occur.)
	Keep you feet away of the lift while descending. (You can be seriously damaged by the lift or link)

⚠ CAUTION

	*Use the lift after reading carefully the instruction manual and understand the contents of them for safe and proper use of the car lift. If a user does not follow warnings, a serious accident may be happened.*

	Drive the car onto the lift well-balanced. (The vehicle may fall off when the lift is shaking or when you assemble or disassemble a part)

Use the lift after reading carefully the instruction manual and understand the contents of them for safe and proper use of the car lift.

WARNING **< During preparation>**

1 This Lift is only for repairing the car. Do not use for other purpose.
2) do not use the lift whenever any one of safety devices is not normally operated.
3) when the car is entered into the lift or gone out from the lift, please drive a car smoothly without the sudden stop or drive.
4) Be careful to not slide when a tire or arm is wet.

WARNING **< During lifting and lowering the lift >**

1 During moving up or down the lift, you should always watch the car without looking at something else.
2 If several lift are installed, the respective allocation of the switch shall be clear.
3 Do not move up a car exceeding the rated capacity of the lift.
4 Do not lift a car with persons or other load.
5) Check if oil or foreign material is in the arm.

6) Move up the lift after checking if the car is properly positioned.
7) Stop the operation of lift when the lift is reached to the limited height.
8) When the lift moves up or down, wait for 1 ~ 2 seconds before the next operation is carried out.
9) Be careful to not shake the car during lifting and lowering the lift. If the car settling to one side, stop immediately the operation of lift.
10) If the lift is not lowered in spite of pressing a down switch, move up the lift and then press the down switch again.
11) After the lift is completely moved down, the car should be entered into the lift or gone out from the lift.
12) When the lift is moved up and down, prohibit the unauthorized persons from accessing to the lift.
13) Do not operate the lift with which a tool or component puts into the driving parts of the lift. The lift may be broken, or a car may fall down.
14) During lowering the lift, check if the person or an object is around the lift or car.

WARNING **< During repairing the car >**

1 *Check if the safety lock device is properly operated before operation.*
2 *Prohibit the unauthorized persons from accessing to the lift.*
3 *When the operator is not in the lift for a long time, or the lift is not operating, lower completely the lift.*

WARNING **< Other >**

1) Do not change or modify the lift without permission. If the lift is modified or changed, the lift may not fulfil its function, or serious accident may be happened.
2) When you find the fault of lift during using or checking the lift, stop the operation of lift, and request the maintenance to the sales agency. Do not use the lift until the lift is repaired.
3) Please note that this lift is not designed for water-proof. Do not use the lift in the hot place, car-washing use or outdoor use.

1.6 Essential Safety Checks (ESC's)

- *The essential safety checks are the most important part of the operators responsibility. The purpose of the ESC's is to ensure the safety features of the car lift are functioning properly, and thus the car lift is in a safe condition for use.*

- *In addition to the operator it is recommended that regular additional ESC's are carried out by the responsible person and that a record is maintained in accordance with the EU machinery Regulations.*

- *If any of the ESC's are in the "Fail" condition do not operate the car lift, immediately notify the responsible person within the company and contact the manufacturer as soon as possible.*

ESSENTIAL SAFETY CHECKS (ESC'S):

GROUP 1 GENERAL -Visual Inspection

ESC	***Description***	***O.K.***	***Fail***
1A	*Machine guarding*		
1B	*Electrical system including protective earth grounding*		

GROUP 2 Electrical isolator switch

Set the electrical isolator switch to OFF position and check the following conditions.

ESC	Description	O.K.	Fail
2A	All functions have been disabled		

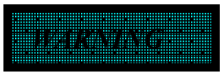
1.7 Safety Signs and Warnings location

1.8 Illumination

This machine is not provided with a local lighting since it is designed for indoor use only. The sufficient illumination of the working area must be fulfilled by the factory in accordance with the appropriate code of practice and factory regulations. Minimum 300 lx is required. Flicker, dazzling, shadows and stroboscopic effects must be avoided to prevent a risk.

1.9 Level of sound pressure

The equivalent continuous A-weighted sound pressure levels of car lift do not exceed 85dB (A).



The factory must provide operator(s) with the appropriate measures including but not limited to an ear protection and a warning sign(s) if the sound pressure of 85dB (A) is exceeded.

1-10 Training

Contact the manufacturer specified on cover page for information on training courses to aid you in becoming familiar with this car lift.

Chapter 2. OVERVIEW OF MACHINE

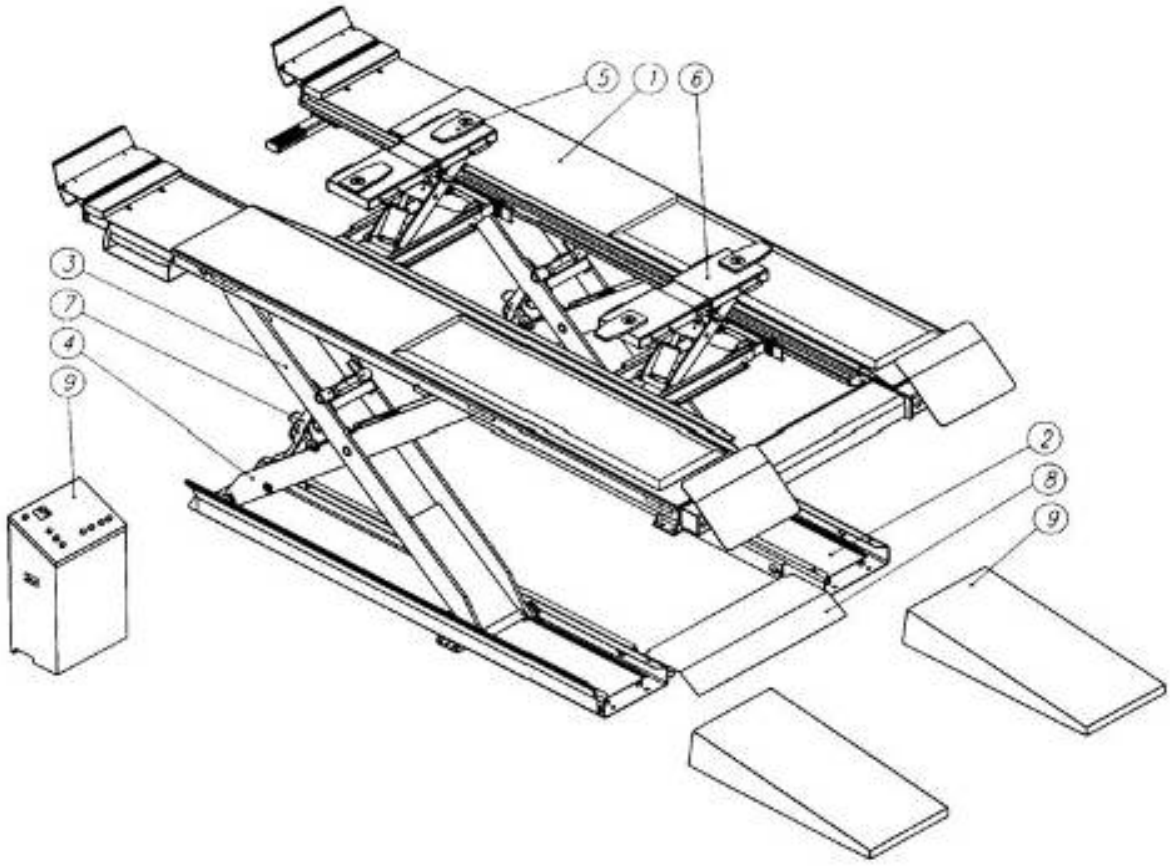
GL3500 is a powerful lift used for the wheel alignment of vehicle with a 3.5 ton rated capacity.

2-1 Specification

Model No.	*GL3500*
Capacity	*Main 3,500 Kg* *Jack 2,000 Kg*
Overall Max. Height	*Main 1,780mm* *Jack 455mm*
Min. Runways Height	*Main 265mm* *Jack 235mm*
Stroke	*Main 1,515mm* *Jack 220mm*
Lifting Time	*Main 58 sec.* *Jack 5 ~15 sec.*
Lowering Time	*Main 35 ~45 sec.* *Jack 10 ~30 sec.*
Standard Motor	*S/P : 2.5HP, 230V/50Hz* *T/P : 2HP, 230V/400V/50Hz*
Net Weight	*2,250 Kg*
Dimensions without load carrying part *Dimension*	*2040 X 830 X 5660mm*
Max. Height *Dimensions with load carrying part*	*345mm* *2020 X 930 X 3980mm*

2-2 Description of Construction

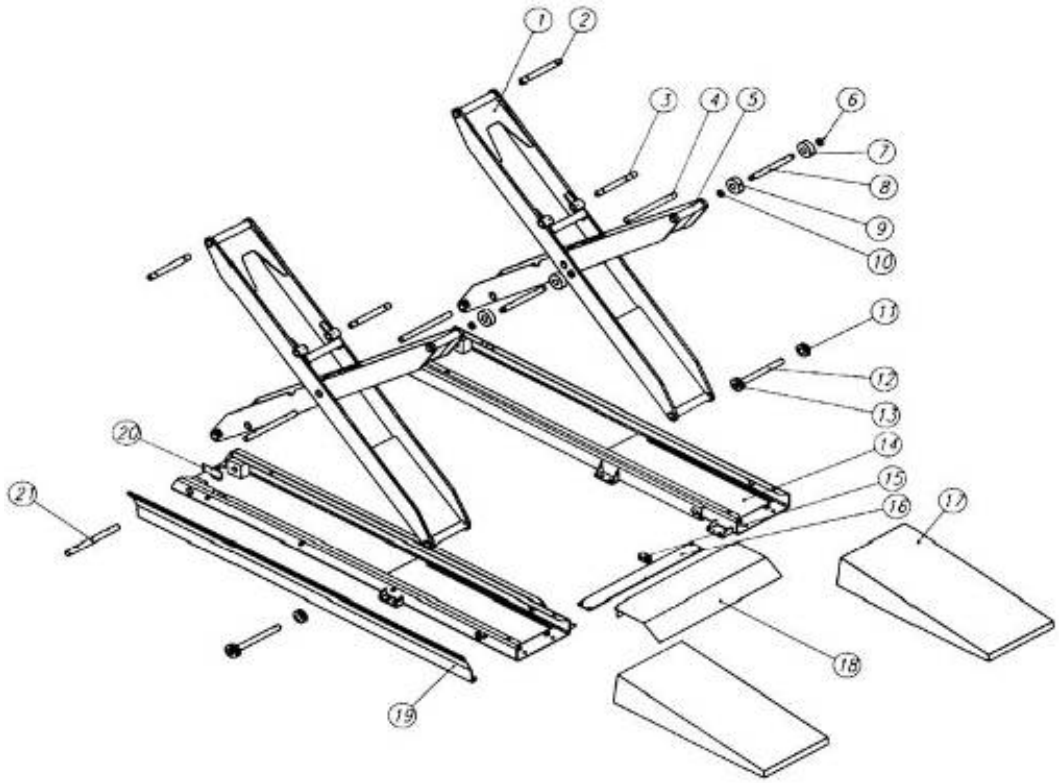
2-2-1 Construction of main frame



OVERVIEW OF MACHINE GL3500

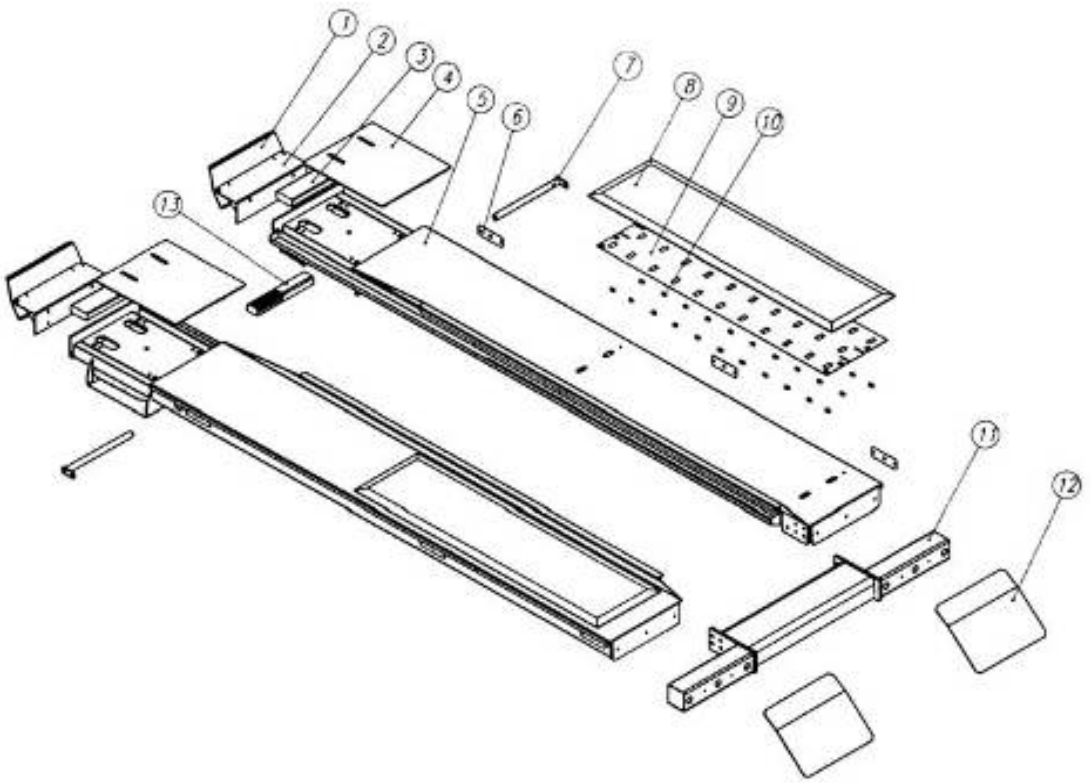
Part No.	*Part Name*	*Part No.*	*Part Name*
1	*Main Board*	*6*	*2 Stage Rear Jack*
2	*Base*	*7*	*Main Cylinder*
3	*Link 1*	*8*	*Hydraulic Line Cover*
4	*Link 2*	*9*	*Control Panel*
5	*2 Stage Front Jack*		

2-2-2 Construction of Link



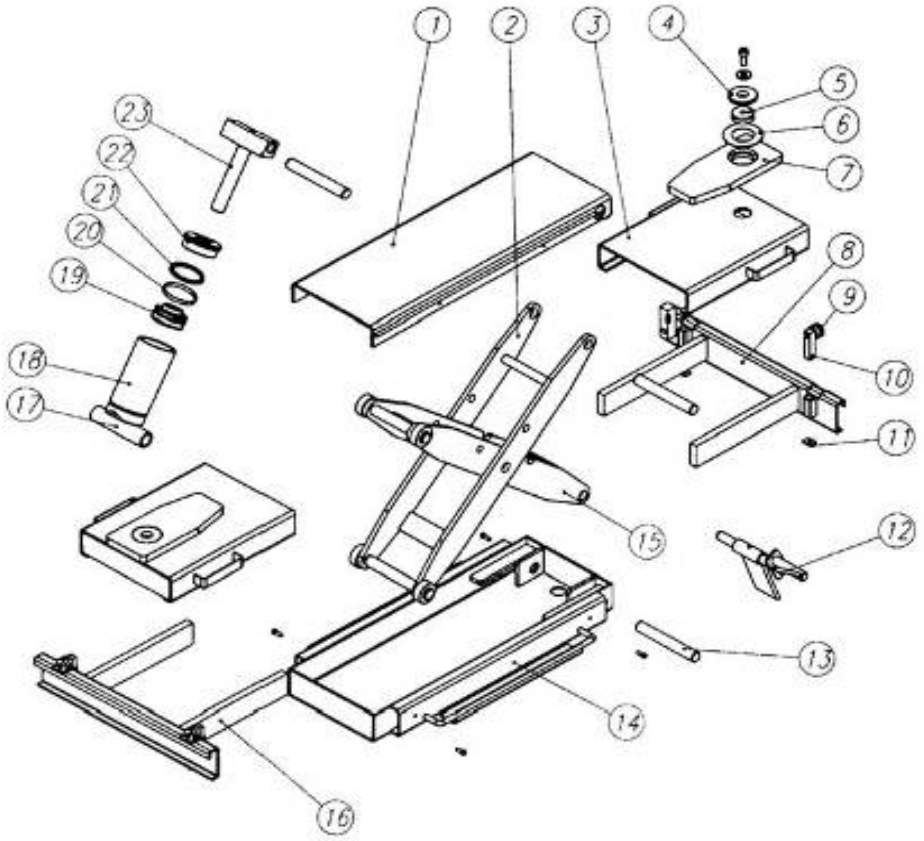
Part No.	***Part Name***	***Part No.***	***Part Name***
1	*Link 1 Body*	*12*	*Roller Pin 2*
2	*Link Pin 1*	*13*	*Lower Roller*
3	*Link Pin 2*	*14*	*Base Body*
4	*Link Pin 3*	*15*	*Pressure Block*
5	*Link 2 Body*	*16*	*Cross Plate*
6	*Assistance Roller*	*17*	*Access Board*
7	*Upper Roller*	*18*	*Pressure Line Cover*
8	*Roller Pin*	*19*	*Feet Safety Tuch Bar*
9	*Upper Roller*	*20*	*Limit Switch Plate*
10	*Assistance Roller*	*21*	*Link Pin 4*
11	*Lower Roller*		

2-2-3 Construction of Base



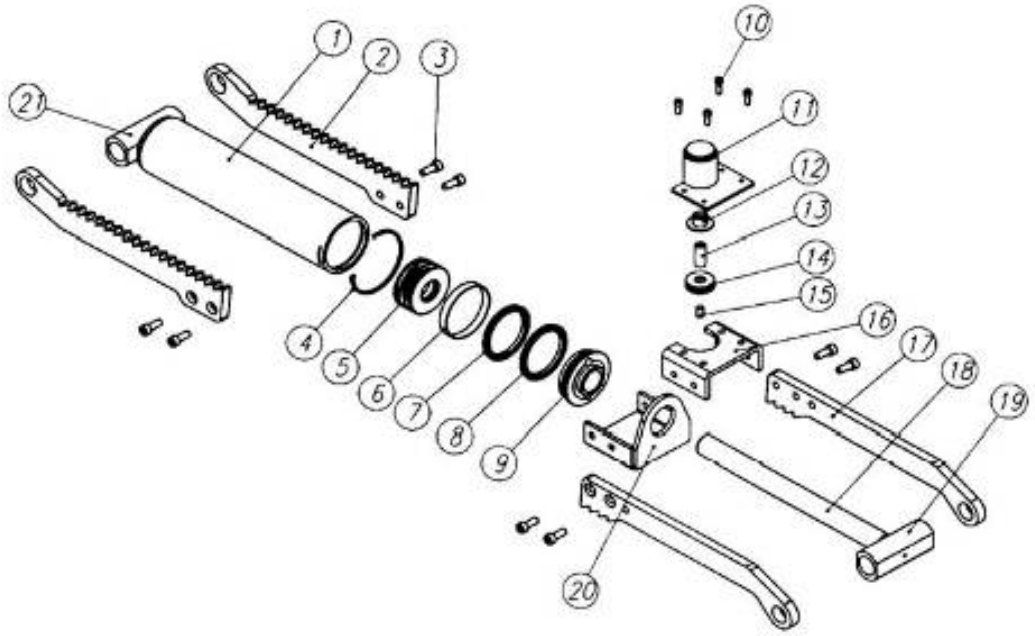
Part No.	***Part Name***	***Part No.***	***Part Name***
1	*Tire Stopper*	*8*	*Side Slip Plate*
2	*Tire Stopper Plate*	*9*	*Side Slip Inside Plate*
3	*Turntable Assistance*	*10*	*Roller*
4	*Turntable Plate*	*11*	*Coupler Beam*
5	*Main Board*	*12*	*Access Plate*
6	*Sensor Line Cover*	*13*	*Light*
7	*Link Pin 1*		

2-2-4 Construction of Jack



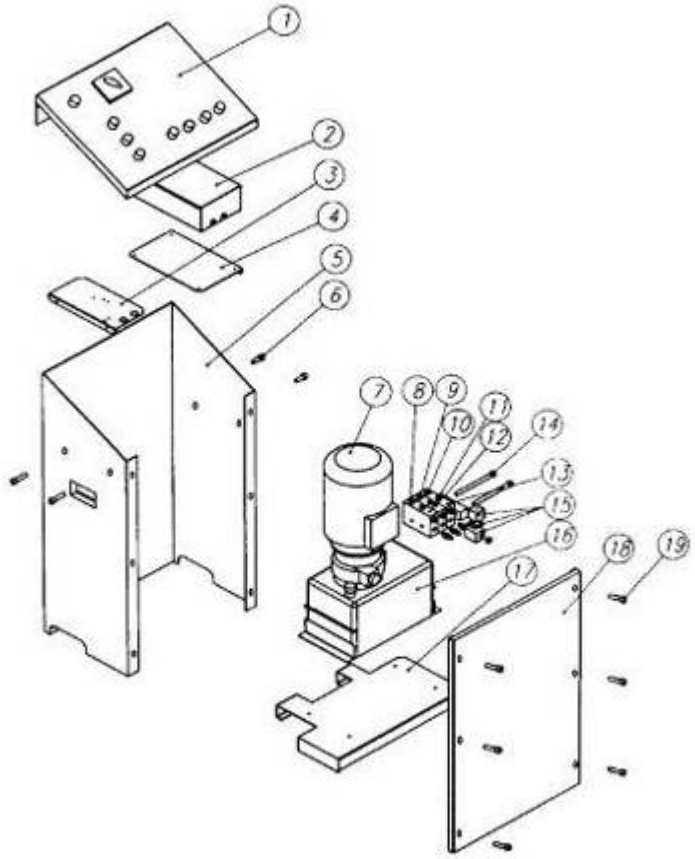
Part No.	***Part Name***	***Part No.***	***Part Name***
1	*Board Body*	*13*	*Lower Shafty*
2	*Jack Link 1*	*14*	*Base Body*
3	*Extension Board*	*15*	*Jack Link 2*
4	*Shaft Cover*	*16*	*Jack Extension*
5	*Shaft*	*17*	*Cylinder Tail Cover*
6	*Rotate Arm Spacer*	*18*	*Cylinder*
7	*Rotate Arm*	*19*	*Piston*
8	*Jack Extension*	*20*	*Wearing*
9	*Roller*	*21*	*Piston Seal*
10	*Roller Body*	*22*	*Head Cover*
11	*Roller Spring Cover*	*23*	*Piston Rod*
12	*Lock Assembly*		

2-2-5 Construction of Lock Cylinder



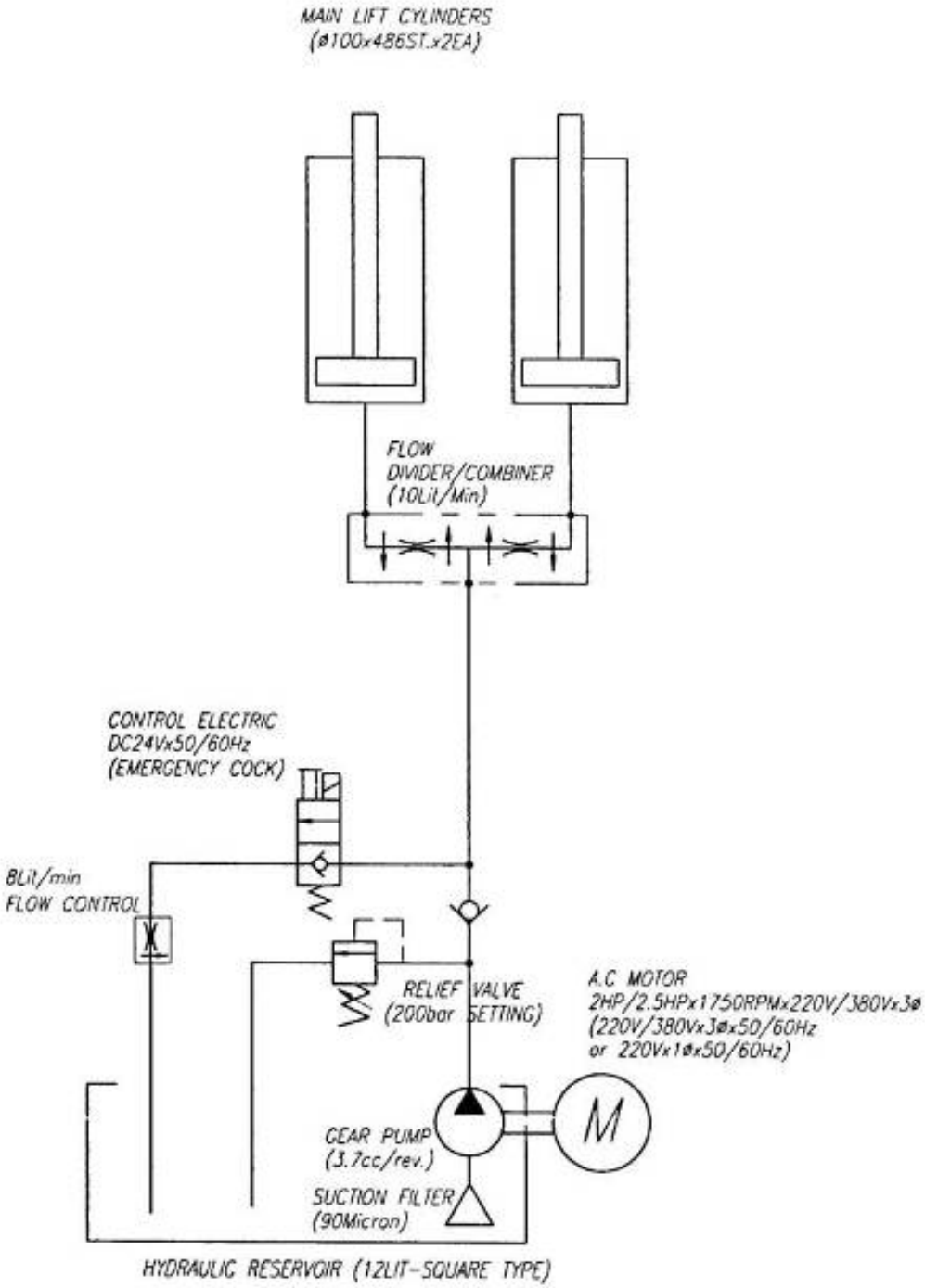
Part No.	***Part Name***	***Part No.***	***Part Name***
1	*Honing Pipe*	*12*	*Lock Cylinder Piston*
2	*Lock Arm 1*	*13*	*Lock Cylinder Rod*
3	*Bolt*	*14*	*Lock Head Cover*
4	*Spring Key*	*15*	*Lock Cylinder Guide*
5	*Piston*	*16*	*Lock Arm Plate 1*
6	*Wearing*	*17*	*Lock Arm 2*
7	*Piston Seal*	*18*	*Piston Rod*
8	*Piston Seal 2*	*19*	*Rod Head*
9	*Head Cover*	*20*	*Lock Arm Plate 2*
10	*Bolt*	*21*	*Tail Cover*
11	*Lock Cylinder*		

2-2-6 Construction of Control Panel

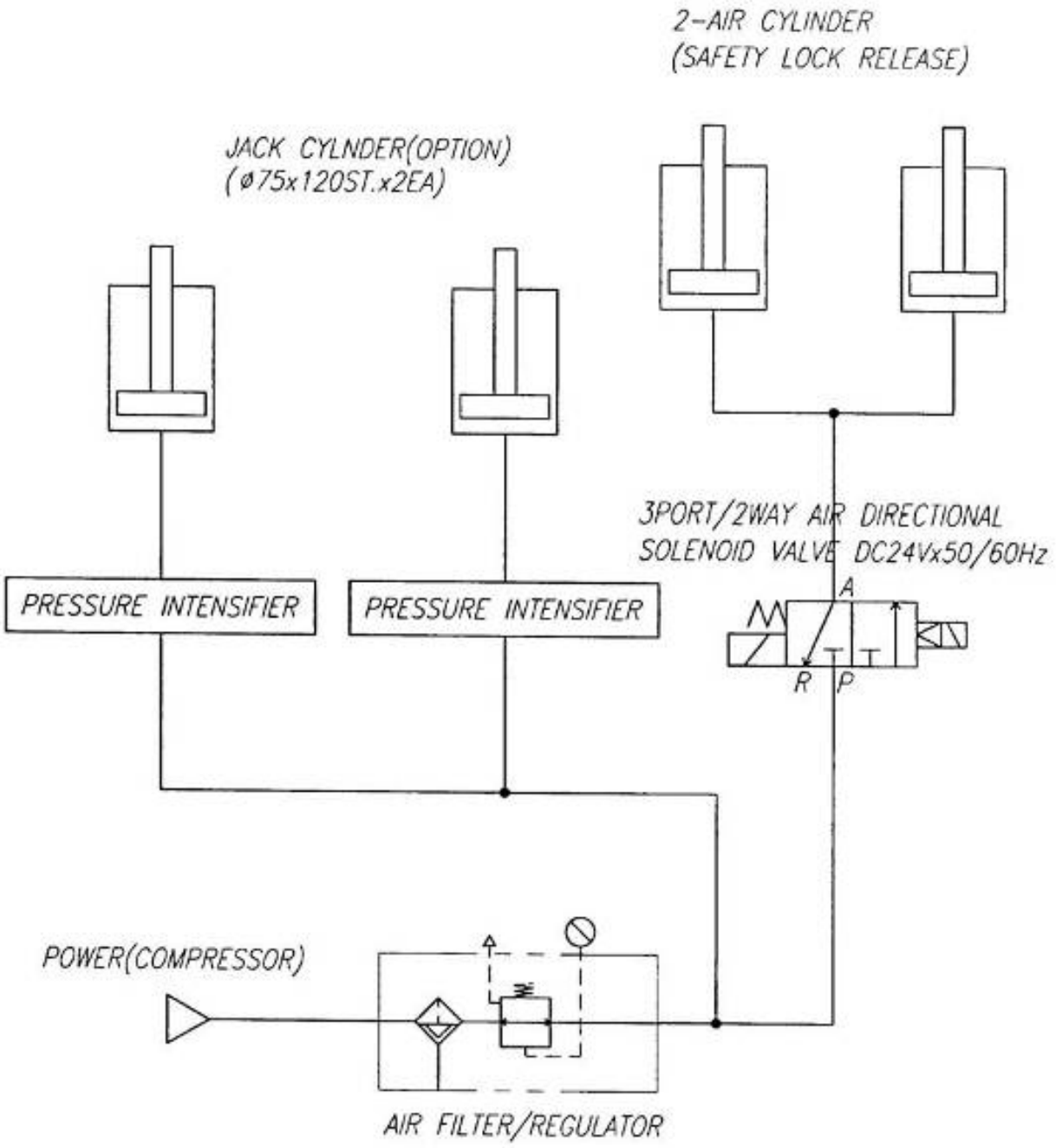


Part No.	***Part Name***	***Part No.***	***Part Name***
1	*Control Panel Upper Plate*	*11*	*Valve Block*
2	*Control Box*	*12*	*Valve Block*
3	*Elec. Plate 1*	*13*	*Valve Block*
4	*Elec. Plate 2*	*14*	*High Tension Bolt*
5	*Control Panel Body*	*15*	*Solenoid Valve Set*
6	*M5 Bolt*	*16*	*Oil Tank*
7	*Power Package*	*17*	*Power Package Plate*
8	*Manual Valve*	*18*	*Control Pannel Cover*
9	*Manual Valve*	*19*	*Bolt*
10	*Manual Valve*		

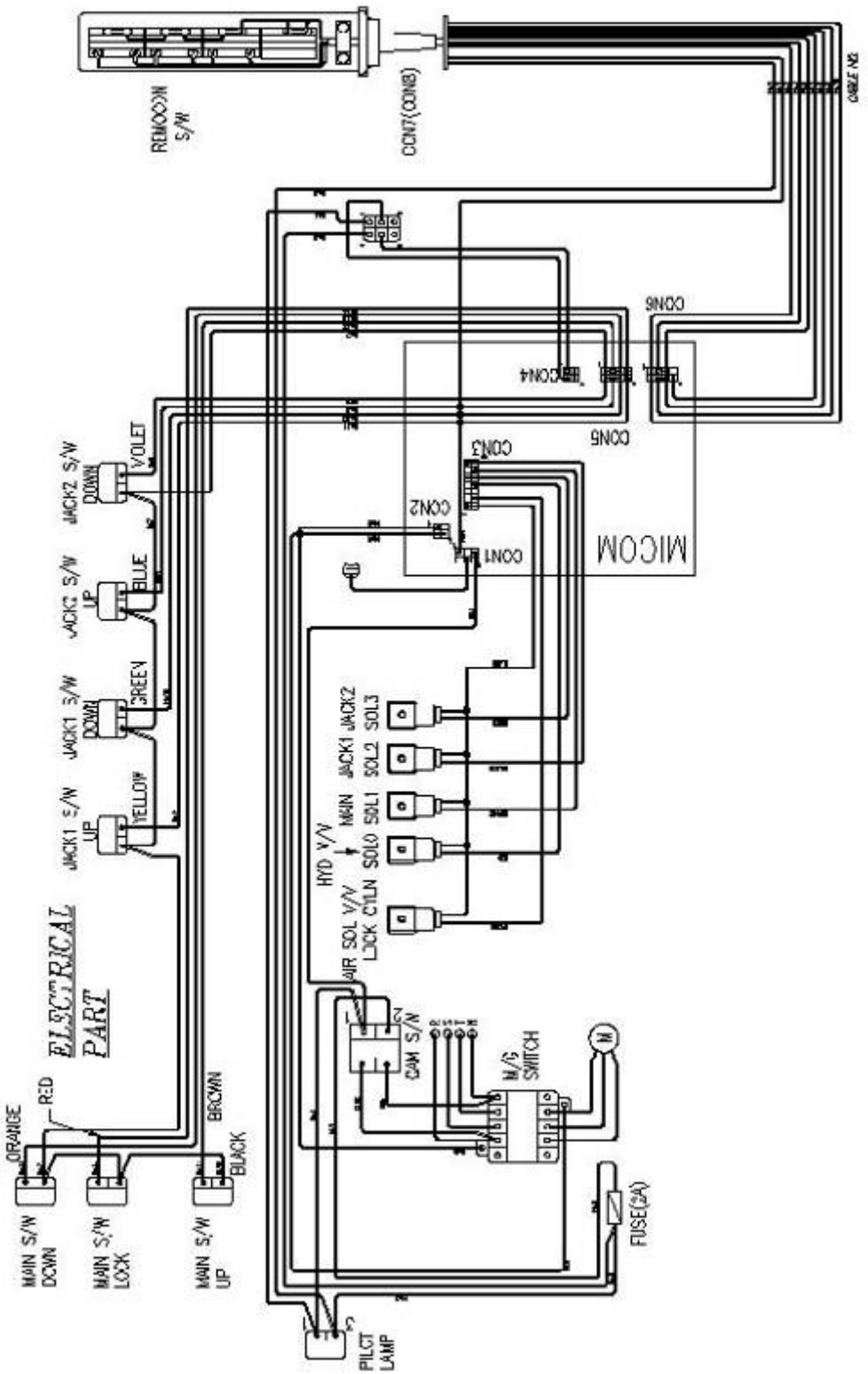
2-2-7 Hydraulic Circuit



2-2-8 Pneumatic Circuit

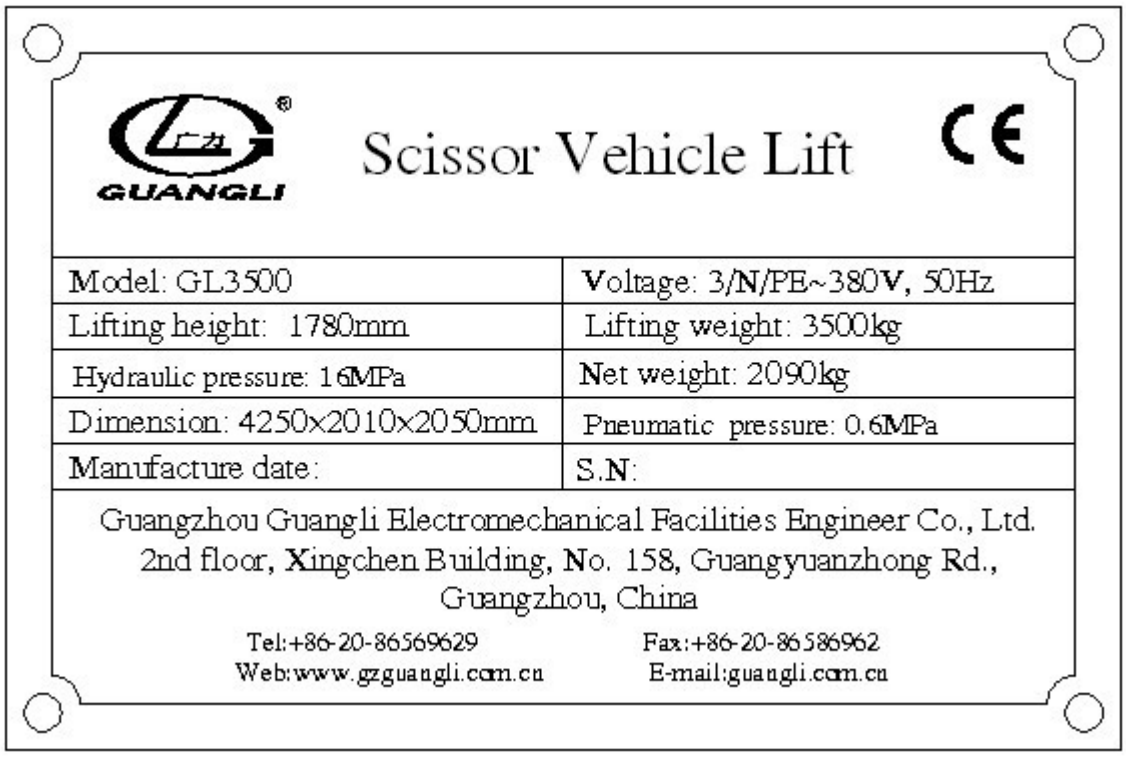


2-2-9 Electric Part



2.3 MARKING

- *On reception of the lift verify the presence of the identification nameplate that has to correspond to that which is shown below. The nameplate is appfied on the generator unit.*
- *the data which is reported, is to be communicated to our technical backup service for the dispatch of spare parts or however for any information on the lift.*



It is forbidden for the user to remove, alter, damage the identification nameplate.

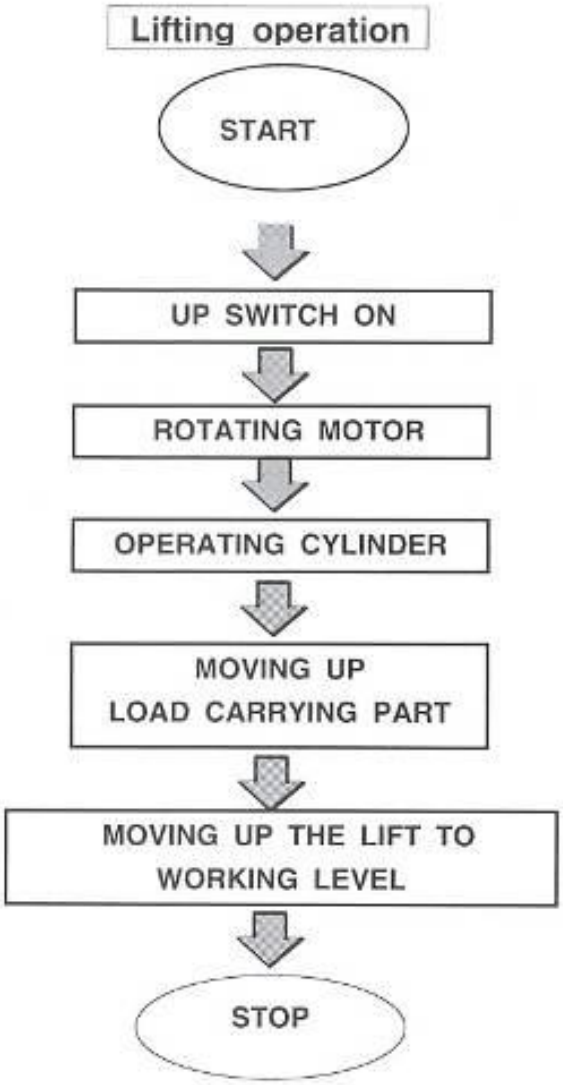
2.4 BUILDER IDENTIFICATION

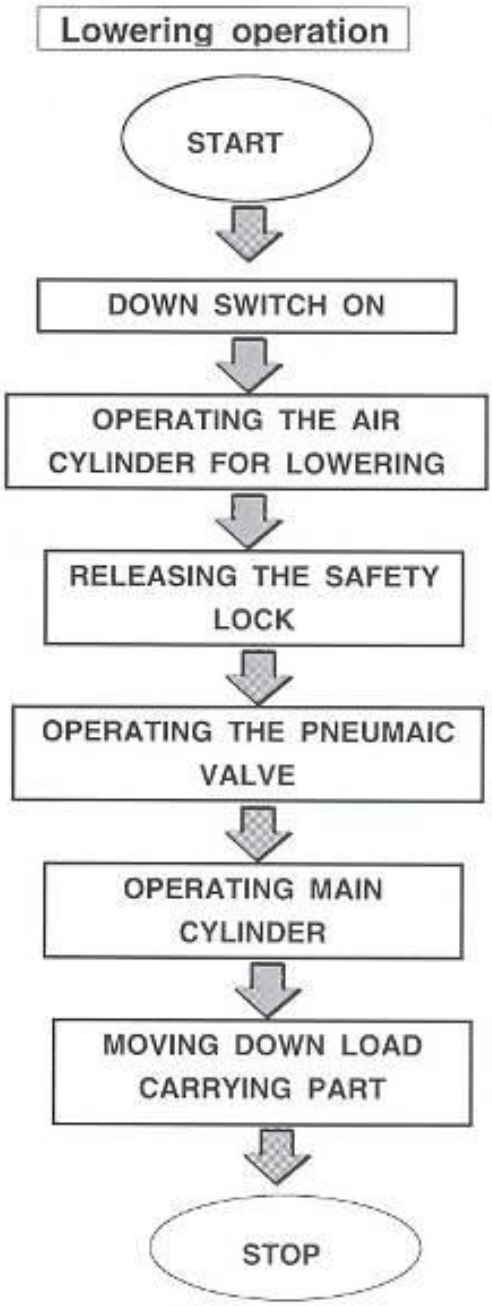
Guangzhou Guangli Electromechanical Faciltes Enineering Co.,Ltd

2nd Floor，Xingchen Building，NO.158 Guangyuan Zhong RD.，Guangzhou，China
Tell:+86-20-86569629 Fax:+86-20-865869
E-mail：glrtgs@163.net Http：//www.gzguangli.com.cn

2-5 Description of operation

The lifting, lowering or stopping of lift is carried out by pressing the switch on the control box. The followings are the flowchart for operation.





2-6 Safety device

The following safety device is installed at this lift.

Device	***Description***
Safety Lock	*The safety lock is attached to the side of cylinder and protects the lowering of lift when an hydraulic oil is leaked or hydraulic circuit is damaged. The safety lock is not operated within low height. (Safety lock is possible to operate at height, more than 200mm)*
Check Valve	*The device for protecting the lowering of lift by maintaining the hydraulic pressure of lift during lifting.*
Safety guide for protecting to be inputted the foot into bottom side	*Safety guide for protecting to input the foot into the bottom side when the lift is moved down.*

Chapter 3 TRANSPORTATION AND INSTALLATION

This chapter explains how to install your lift. Always read it ahead of time, even when the lift is installed by GUANGZHOU GUANGLI CO.,LTD. or the place of purchase. Please refer to this chapter when you re-locate your lift.

3-1 Preparation for installation

< Before Installation >

This is a lift that has been made precisely by the advanced technologies and unique features of GUANGLI not known to other engineers. Therefore, for higher reliability, it must be installed by our engineer or local representative or under the witness of our staffs or local representative to ensure the safe use for a longer time. This is also true when you re-locate your lift.

< Installation Place >

1) *The lift should be installed on a solid concrete and its strength should be at least 15KN/m2 or stronger. And, anchor bolts should withstand a strength of at least 8 KN/m2. (The load strength of surface under the post shall have more than 350KN/m2)*

2) *When a gaps at the post or surface to be installed are made by adjusting the horizontality during installation, be sure to fill the gaps in wet cement and mortar. (This job must be carried out by the user.)*

3-2 Precaution during installation

1) *Maintain the lift about 1m or more away from the wall in order to ensure the sufficient work space.*

2) *Do not change the specifications(lifting or lowering speed, and pressure) that have been pre-set at the factory.*

3) *Do not install the lift at outdoor. When the lift is installed at outdoor under unavoidable circumstances, the cable entrance of control panel should be water-proofed.*

3-3 Transportation

The lift is packaged in a wooden box at the factory. After the lift is arrived at the installation site, transport the product to the installation location in accordance with following procedure.

1) Machine should be transported to installation place by fork lift car.

2) Unloading and unpacking Referring the packages to the packing list and assembly drawing, carry them into the installation site in order. It is to be desired that packages should be unpacked at the final installation place wherever practicable. Reinforced materials are usually fitted with this machine so as to protect parts against damages on the way of transportation. Make sure not to remove them until the installation work starts.

3) Checking accessories and spares Check that all accessories and spares are provided when unpacking the lift. Check all accessories and spares against the provided packing list. When you ordered optional equipment, check the equipment against the accessories and spares against packing list. Contact GUANGZHOU GUANGLI CO.,LTD. immediately if any parts is missing or damag*ed.*

3-4 Installation

The installation should be carried out in accordance with the following procedures.

1) Locate the left and right body assembly to the position to be installed.

(Distance between left and right body : 970mm)

2) Determine the location of control panel to be installed.

3) Connect the hydraulic hose to the hydraulic cylinder at control panel and body.

4) Connect the power supply cable to the control panel.

5) Supply the power to turn on the CAM switch.

6) Raise the lift by pressing UP button. When UP button is pressed, the one side of body assembly raises to the upper limit, first and then, the other side of body assembly moves up to the upper limit because the hydraulic unit is not operated at present time.

7) Press the DOWN button of control panel until the lift is lowered to middle point.

8) Connect the air line to body frame from control panel.

9) Connect the return line of hydraulic unit to the control panel from main cylinder.

10)Connect the sensor to the control panel.

11) Connect the main air line to the regulator attached on control panel.

12) Lower the lift to the bottom by pressing DOWN button.

13)After raising the lift to middle point by pressing UP button, press LOCK button to lock the lift. And then, assembly the alignment bar and adjust a level of the lift using level gauge.

14) Fix the body frame to base with anchor bolt.

15) Arrange the hydraulic line, return line, air line hose and wires and, put the cover on them. And then, fix the cover on the ground with the cement nail.

16) Assembly the access board at the fore and back of main board.

17)After finishing all of the above procedures, start no-load test run. Press the UP and DOWN switch 2 or 3 times at the intervals of about 2 seconds. *Should something wrong be found as the result of the test run, refer to troubleshooting.*

18)If the above no-load test run passes satisfactorily, you can make test run under load. It is convenient to record the test result for future maintenance.

Chapter 4. OPERATION

4-1 Warning for use <Warning>

Only qualified personnel should be allowed to work on this car lift.

4-2 Checking point before operation

- *Check the below items every day before operation. During checking, do not load a car on the lift.*
- *When you find the fault of lift during using or checking the lift, stopthe operation of lift, and request the maintenance to the sales agency. Do not use the lift until the lift is repaired.*

(1) Check if the lift is normally operated during lifting and lowering. And check if an abnormal noise is occurred.
(2) Check if the lift is properly operated when the button is pressed. And check if the lift is stopped when the button is released.
(3) Check if an oil is leaked from the hydraulic line, the hydraulic cylinder, and the hydraulic unit. And check if an abnormal noise is occurred at them.
(4) Check if the safety lock device is normally operated during lifting.
(5) Check if screws are loosened.
(6) Check if the appearance of the lift's body is damaged or twisted.
(7) Check if the electric parts is normally operated.
(8) Check if the lift and working place keeps the clean condition.

4-3 Preparation before operation

Check the following items before loading a car into the lift;
(1) Lower completely the lift to the bottom.
(2) Prohibit the unauthorized persons from accessing to the lift.
(3) When use the lift which has not operated for a long time, check the oil conditions and functions of each part and then, use the lift after lifting and lowering to press the UP and DOWN switch 2 or 3 times at the intervals of about 2 seconds without load.
(4) During the winter season, operate the lift 3 to 5 times without load in temperature 5℃～-20℃. Do not use the lift in the temperate below -20℃.

4-4 Description of control panel

4-4-1 Configuration of control panel The configuration of control panel is as follows.

4-4-2 Description of control panel

Switch and Lamp	Function description
	CAM switch for supplying the power at the car lift. Before the machine is operated, this switch should be turned ON. And also, this switch may use to turn off the power when the emergency situation is occured at the machine.
	KEY switch for supplying the control power. When KEY switch is positioned to ON, Up, DOWN and LOCK switch can be operated.
	Push button switch for moving up the lift. When KEY switch is positioned to ON and UP button is pressed, the lift is moved up.
	Push button switch for lowering the lift. When KEY switch is positioned to ON and DOWN button is pressed, the lift is moved down.
	Push button switch for locking the lift. When KEY switch is positioned to ON and LOCK button is pressed, the lift is locked at locker (4 position).
	Power lamp for indicating that the power is supplying at the lift. When the CAM switch is turned on, the lamp is lighted on.

4-5 Operation

The lift is operated in accordance with the following procedures.

1.How to operate the lift for repairing the car

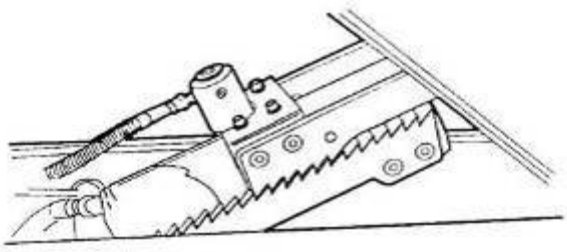
Make sure that the lift is operated by qualified personnel only.

1) After putting the car on the main board by driving the car, you should lock the parking brake and get off at the car.

2) Turn on the power switch on the control panel.

3) Raise the lift to a desired height by pressing UP button of control panel.

4) To ensure the safety, press the locking button of control panel and fix the lift in the locking position.



5) When the DOWN button of control panel is pressed, the lift moves up for 1～1.5 sec and then, starts the lowering operation. When the limit switch for prohibiting the lifting operation is on the operation, it is lowered after staying for 0.3～0.5 seconds without the raising operation if the DOWN button is pressed.

2. How to operate the lift for wheel alignment

1) Raise the lift to a height of about 850 ㎜or higher depending on the wheel pull-in/pull-out order.

2) Press the locking button of control panel in order to fix the lift into the lock position.

3) After raising the vehicle using the two step operated jack depending on the wheel installation and removing order, place the alignment turntable on side slip plate.

4) Lower two step operated jack and then, place the wheel onto the table.

5) The vehicle should be aligned toward the left and right in order to carry out the alignment job.

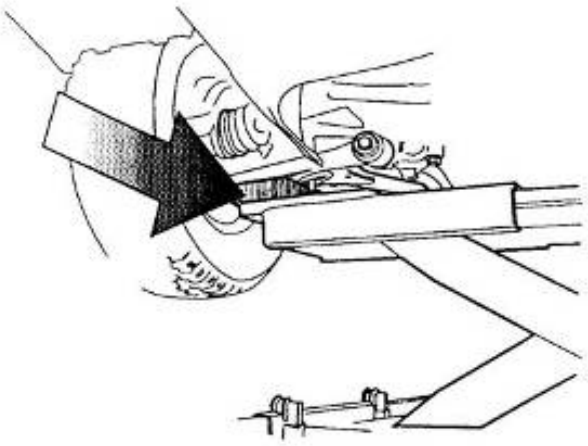
6) Remove the alignment turntable and lower two step operated jack and then, place the wheel on the main board.

7) Press DOWN button to lower the lift.

3. How to pull out and pull in the wheel

1) Raise the platform to a height where wheels can be easily replaced in accordance with the procedures to operate the lift for repairing the vehicle.

2) Move the two step operated jack under the supporting part of the vehicle and then, place a rubber plate on the upper slides that have been widened properly as shown in Fig.



3) Raise the two step operated jack to a wanted position by pressing the jack UP button of the control panel. Do not move up the cylinder to full stroke.
4) For your safety, move down and lock the safety lever of the two step operated jack.
5) Press the LOCKING button at control panel.
6) Once the wheel pull-out/pull-in job is completed, raise the lift slightly by pressing UP button for a short time, and then, release the safety lever.
7) Lwer the vehicle first by pressing the jack down button and then, lower the main board by pressing the DOWN button of control panel.

4-6 How to lower manually the lift during emergency

4-6-1 When the manual operation is needed.

1) When the power supplied at lift is interrupted and hydraulic circuit is damaged.

2) When lowering inevitably the lift at the manual mode because of electrical problems.

4-6-2 Preparation before the manual operation

1) Remove the obstacles under the lift before lowering it.

2) Turn off the power switch.

3) Check if the four locking devices are located at the locked position.

4) If the locking device is in the locked position, use the separate hydraulic jack.

5) Be sure that there are no persons under the lift.

6) Prepare a 17mm spanner and L-wrench (5mm) for adjustment.

4-6-3 Operation Sequence

1) Loosen the round headed cross bolt at the unit panel with + driver and open the cover.

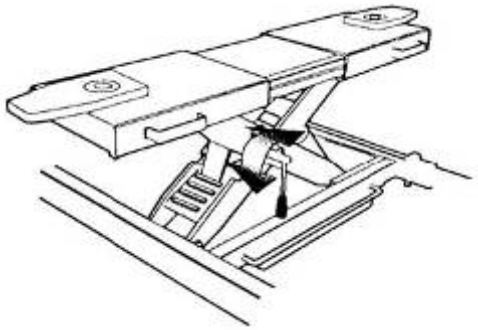
2) When it is needed to lower the two steps operated jack,

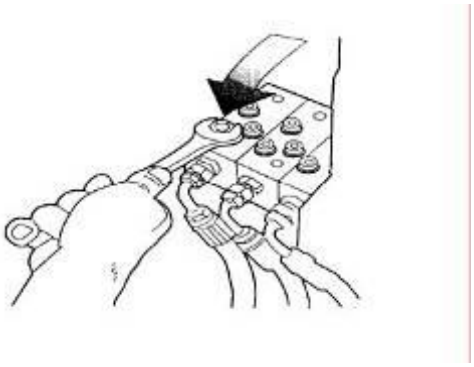
① Release the safety lever of the two steps operated jack.
② Loosen about 1/2 turn the hexagonal headed bolt of the manual lowering valve located on
③Loosen slowly about 1/4 turn the wrench bolt of the manual lowering valve located on the upper part of the solenoid valve by turning it counterclockwise with the 5mm L-Wrench.

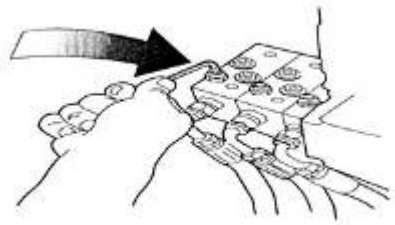
***Caution** : Loosen slowly the bolts to prevent from lowering the lift too fast when the vehicle is on the lift.*

④After loosening jack #1 and jack #2 according to the above procedure, two steps operated jack will be lowered slowly by its own weight. Once it is moved down completely, tighten them in the reverse order (They should be tightened so that two steps operated jack is operated again during the normal operation).

***Caution :** Do not damage the bolts by over-tightening them.*







3) When moving down the main platform that is in the locked position:

① Raise the parts under of the front platform support by using a separate hydraulic jack. (The user should prepare the hydraulic jack).

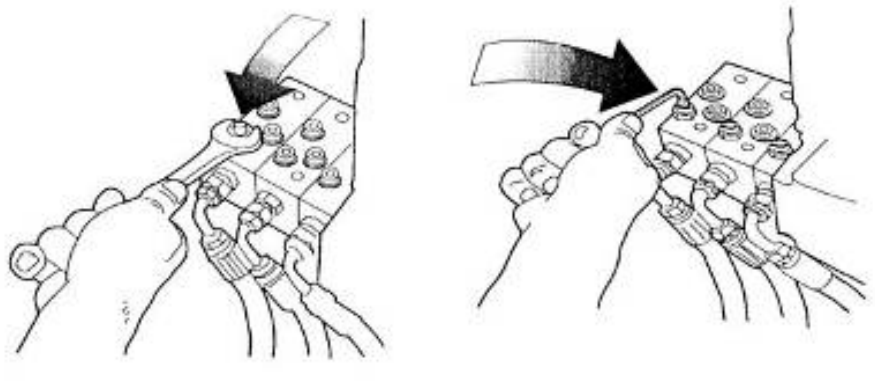
②Change the locking solenoid release device of the both posts into the manual mode after releasing the lock. (Do not enter under the lift).

③Remove the hydraulic jack, and then, change the support of the rear platform according to the above procedures.

④Lower the main platform by using a 17mm spanner and 5mm L-Wrench according to the

⑤ Remove any obstacles under the locker cylinder after the main platform is lowered completely.

procedures for lowering the two steps operated jack.



5) When lowering the main platform that has not been locked.

①Release the locking after placing obstacles under the locker cylinder while the lock is in the unloosened state.
② The lift should be lowered the same method as in case of lowering two steps operated jack.

4-6-4 Action to be taken after lowering completely the main platform in the manual mode

1) Return the manual lowering valve to the origin.

2) Remove any foreign materials under the locker cylinder.

3) Contact our company for A/S when troubles are found as a result of the inspection.

Chpater 5. TROUBLESHOOTING

5-1 Inspection and repair

Symptoms		*Check point*	*Corrective Action to be taken*
Hydraulic Cylinder And its Units	*The abnormal noise at motor is listened.*	*1. Rated capacity is exceeded. 2. Relief pressure is low. 3. Shortage of hydraulic oil.*	*1. Operate within rated capacity. 2. Adjust to 4 ton. 3. Let air out of the hydraulic unit after supplying the oil.*
	Hydraulic Oil is leaked.	*1. Defect in hydraulic hoses. 2. Leakage from connecting parts. 3. Bad cylinder packing.*	*1. Replace the hydraulic hose. 2. Tighten the connection. 3. Request A/S.*
	Oil connections	*1. Influx of water or Foreign substance*	*1. Exchange oil (annually) (Hydraulic oil : 32CST/12litter) Fist oil exchange : 2 months after operation Afterwards regular exchange*
	The lift is not moved up.	*1. Check if the oil is leaked or hydraulic units are damaged. 2. Check if the lift is operated improperly. 3. Check if the carrying load capacity is over. 4. Check if pressure at relief valve is proper.*	*1. Request A/S. 2. Relieve the air in hydraulic hoses 3. Load within the rated capacity. 4. Adjust to 2.5ton.*
	The lift is not lowered.	*1. Check if the safety device is locked. 2. Check if the electric circuit is damaged.*	*1. Re-lowering after lifting slightly. 2. Refer to electric check points.*
		Lower it in accordance with the procedure to lower manually the lift during emergency, and then, request A/S.	
Electric Devices	*Motor is not operated and the abnormal noise at motor is listened.*	*1. Check if the motor is damaged. 2. Check if the fuse is opened. 3. Check if the push button is damaged. 4. Check if the upper limit is operated. 5. Check if wiring gauge is proper. 6. Check if the input power less than 200V is supplied.*	*1. Replace the motor (Request A/S). 2. Replace the fuse after solving trouble. 3. Replace the push button(Request A/S). 4. Re-operate after lowering the lift. 5. Replace to the cable with over 3.5mm2 diameter. 6. Increase the input power capacity.*
	Motor is operating but lift is not moved up.	*1. Check if the rotating direction of motor is correct. 2. Check if hydraulic lines is damaged.*	*1. Re-operate after changing the phase connection. 2. Refer to check points for hydraulic cylinder and unit.*

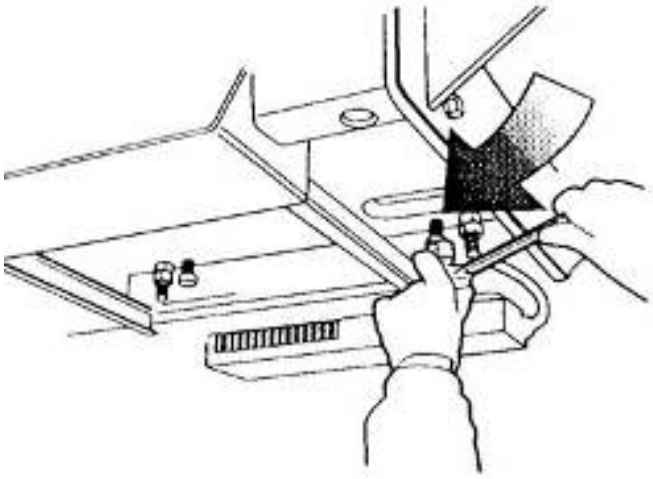
5-2 How to adjust the height of turntable support

1) Prepare 24mm box spanner.

2) Pull out the tool box located at main board.

3) Check four bolts for adjusting the horizontality located at each corner under the main board.

4) Fasten or loosen properly the bolt comparing the height of the other side's main board using the water levelity.



Chapter 6. MAINTENANCE

6-1 General caution during maintenance

1) Maintenance should be performed by more than two persons.

2) Maintenance should be carried out after putting a sign-board of "NO ENTRANCE" at work area.

3) Don't disassemble the system before you are familar with thedisassembling sequence.

4) Record the place or parts where maintenance is needed.

5) Keep the disassembled parts safely.

6) Be sure to fasten bolts and nuts correctly in its position during attaching the parts.

7) During maintenance of control box inside, check whether CAM switch is in "OFF" position.

8) During replacement of electrical component, fasten the terminal bolts of part tightly after checking the wire no. (or color) and parts no.

9) Clean the control box inside by air once a month.

10) heck once a week whether the bolts are loosen, and if the bolts are loosen, fasten the bolts tightly.

11)Don't open the control box without permission of authorized persons during maintenance of control box.

6-2 Check List and periodic maintenance

Inspection Period	Points to be checked	Items to be checked	Inspection method	Action to be taken	Replacement period
1 week	Rubber Support for adjustment	Abrasion and deformation	Visual	Replacement	1 year
	Magnetic contactor	Damage of contact	Measurement	Replacement	2 year
3 months	DU bush	Abrasion	Visual	Replacement	4 year
6 months	Electrical component	Damage of component	Measurement	Replacement	3 year
	Hydraulic Oil	Shortage of oil	Visual	Replacement	1 year
	Shaft	Corrosion and abrasion	Visual	Replacement	4 year
	Regulator	Damage	Visual	Replacement	3 year
1 year	Piston Seal Kit	Oil leak or deformation	Visual	Replacement	3 year
	Load Seal Kit	Oil leak or deformation	Visual	Replacement	3 year

6-1

6-3 Lubricant

The supply of oil or grease on the nipple or friction parts will reduce the loss of power consumption from the friction and minimizes its loss and it increase the efficiency of the machine.

The followings are the oil supplying plan.