June 2021

UNIVERSAL 4500KG ELECTRO-HYDRAULIC ALIGNMENT FOUR POST HOIST

OPERATION AND MAINTENANCE MANUAL

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Description

The Alemlube Automotive AA454PAN electro-hydraulic four post hoist is designed for precise Wheel Alignment procedures and general under vehicle service operations. The AA454PAN four post 4500kg has an overall 5,360mm platform with a width between column of 2,868mm and a platform width of between 870mm-2,080mm.

With a maxim lift of 1,820mm. Pneumatic safety locks ensure operator protection and an aluminum motor provides improved cooling capacity during high work demands and low voltage controls additional operator safety.

Quality components throughout, compliant with both Australian standards and manufactured to European CE standards.

Occupational Health and Safety Act 2004, OHS Regulations 2017
Equipment (Public Safety) Act 2004, Equipment (Public Safety) Regulations 2017

WorkSafe VICTORIA

NOTICE OF PLANT DESIGN REGISTRATION

Registration Holder	Alemlube Pty Ltd
Plant Type	Vehicle Hoist
Representational Drawing(s)	AA454PAN-DWG-1 Rev. A
Design Description and Extent	Model No. AA454PAN
Technical Information	Type: 4 Post Vehicle Hoist Max rated Capacity: 4500 kg Max Working Height: 1.825 m
Manufacturer	Hefei Wei Jia Machinery Science & Technology Company Ltd
Registration Number	**WSV-0150490247**
Date of Registration	31July 2020
Published technical standards or engineering principles (as listed by designer and confirmed by design verifier)	EN 1493:2010 - Vehicle lifts

Product Specifications, Features and Benefits

- High lifting capacity of 4,500kg
- Fast lifting time of 50 seconds
- Fast lowering time between 30 to 40 seconds
- Maximum lifting height of 1,820mm
- Minimum lowered height of 175mm
- hydraulic cylinder and cable for lifting
- 3 phase power pack
- Aluminum motor for improved cooling capacity during high work demands
- Motor size, 2.2 kw
- Mutable point safety lock positioning
- Top limit switch
- Adjustable platforms
- Min platform width 870mm
- Max platform width 2,080mm
- Working pressure,145 bar
- Compliant with Australian Standards
- Plant design registration No **WSV-0150490247**
- Manufactured too stringent European CE Standards
- Total weight 800kg
- Noise Level. ≤70dB.
- Min concrete thickness 150mm

Safety Warning and Precautions

WARNING: Thoroughly read this manual before operating the lift and comply with the instructions.
Personal injury and property damage incurred due to noncompliance with these safety instructions are not covered by the product liability regulations.

Symbols

Below is a short legend indicating the symbols used in this manual.

DANGER: Failure to comply with instructions could result in personal injury.

CAUTION: Failure to comply with instructions could result in property damage.

IMPORTANT: Important information

Hazard and Forbidden Operation Warnings

Keep clear area when operasting hoist.

Position vehicle with center of gravity midway between adapters.

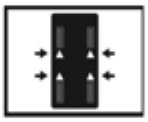
Remain clear of lift when raising or lowering vehicle.

Avoid excessive rocking of vehicle. while on lift.

Do not overide self-closing controls.

Keep feet clear while lowering.

Olny aurtherized personnel to operate hoist.


Use vehicle manufacturer's lift points.

Authorized personnel only in lift area.

Always use safety stands when removing or installing heavy components.

Safety Instructions

- Always lift the vehicle using the ramps with load towards the post.
- Closely watch the vehicle and the lift during raising and lowering cycles.
- Do not allow anyone to stay in lift area during raising and lowering cycles.
- Do not allow anyone on lift or on the raised vehicle.
- Only use the lift for its intended purpose.
- Do not overload the lift. The rated load capacity is indicated on the lift nameplate.
- After positioning the vehicle apply the parking brake and chock the wheels.
- The main switch serves as emergency switch. In case of emergency turn to position 0.
- Protect all parts of the electrical equipment from humidity and moisture.
- Protect the lift against unauthorized usage by padlocking the main switch.

Safety Instructions for Servicing

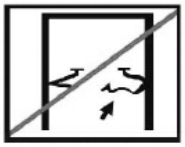
- Maintenance or repair work by authorized service personnel only.
- Turn off and padlock the main switch before doing any maintenance, or repair work.
- Work on the electrical equipment by certified electricians only.
- Ensure that ecologically harmful substances are disposed of only in accordance with the appropriate regulations.
- Do not use high pressure/steam jet cleaners or caustic cleaning agents. Risk of damage!
- Do not replace or override the safety devices.

Safety Features

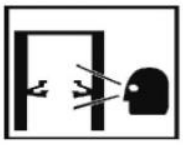
- **Dead Man's Type Control**
  The operator is required to hold the controls in the engaged position to raise or lower the lift.
- **Pressure Relief Valve**
  A pressure relief valve is used to limit the hydraulic working pressure to a maximum of 200 bar 2900psi

Maintenance & Inspection

Read operating and safety manuals before using lift.



Do not operate a damaged lift.



Proper maintenance and inspection is necessary for safe.

The company is not liable for possible problems, damage, accidents, etc. resulting from failure to follow the instructions contained in this manual.

Only skilled technicians should be allowed to carry out lifting, transport, assembling, installation, adjustment, calibration, settings, extraordinary maintenance, repairs, overhauling and dismantling of the lift.

THE MANUFACTURER IS NOT RESPONSIBLE FOR POSSIBLE DAMAGE TO PEOPLE, VEHICLES OR OBJECTS IF SAID OPERATIONS ARE CARRIED OUT BY UNAUTHORIZED PERSONNEL OR THE LIFT IS IMPROPERLY USED.

Any use of the machine made by operators who are not familiar with the instructions and procedures contained herein shall be forbidden.

Manual Keeping

For a proper use of this manual, the following is recommended:

- Keep the manual near the lift, in an easily accessible place. Protected from getting damp.
- Use this manual properly without damaging it.

This manual is an integral part of lift: it shall be given to the owner when the lift is installed.

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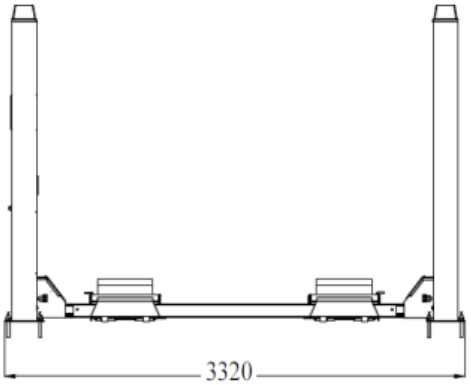
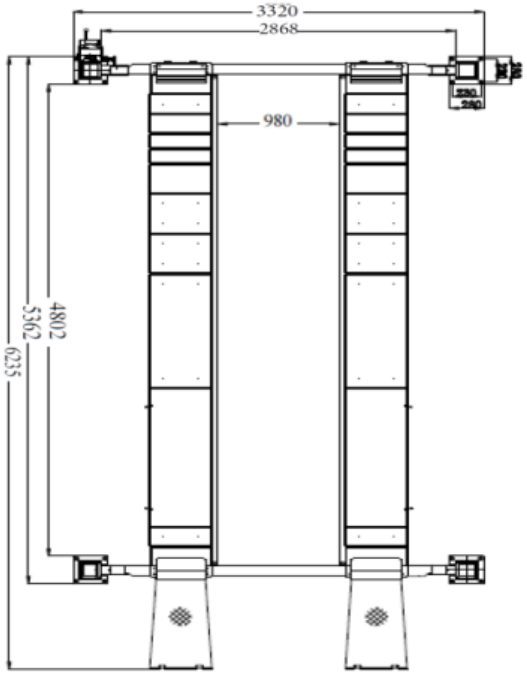
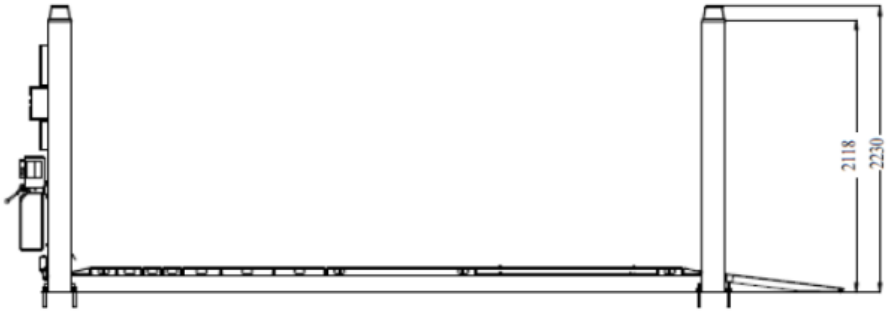
AA454PAN Four Post Hoist	
Copacity	4,500kg
Maximumn lift hight	1,820mm
Overall Hight	2,230mm
Width	3,320mm
Length	3,362mm
Voltage	415v
Motor	2.2kw



FRONT VIEW



TOP VIEW



SIDE VIEW

INSTALLATION

CONCRETE AND ANCHORING INFORMATION

Concrete shall have compression strength of at least 30 MPa and a minimum thickness of 125mm for Domestic applications to achieve a minimum anchor embedment of 100mm. When using the supplied MI6 x 160 mm long anchors, if the top of the anchor exceeds 45mm above the floor grade, you **DO NOT** have enough embedment.

CAUTION: DO NOT Install on asphalt or another similar unstable surface.
Columns are supported only by anchoring into the floor.

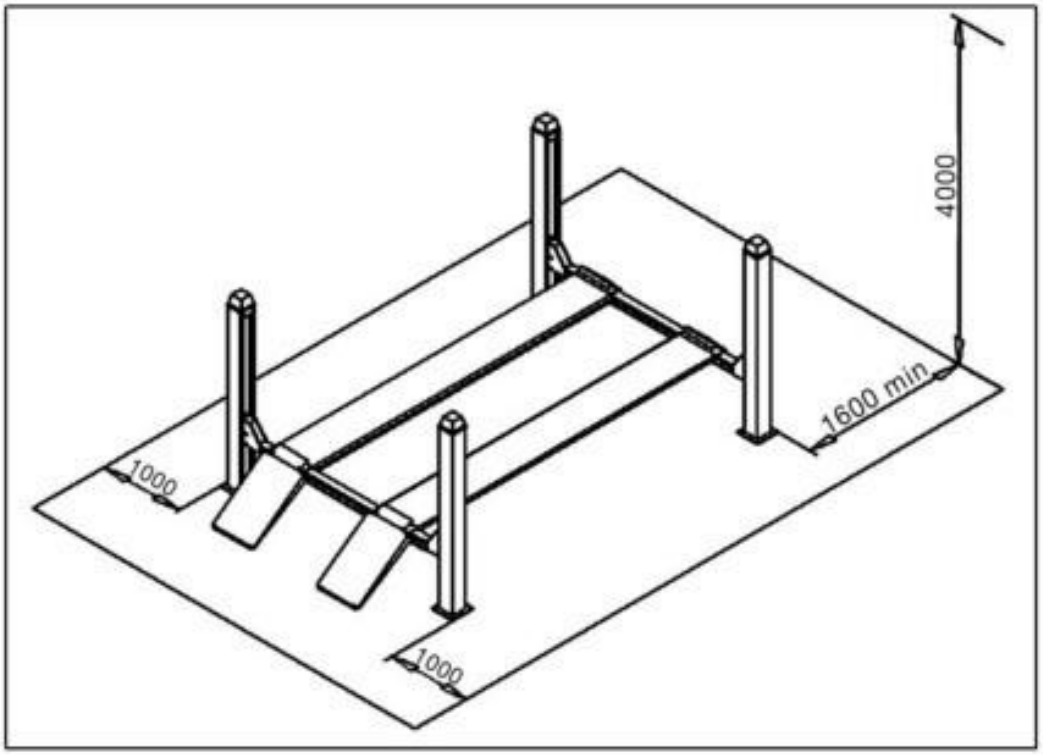
Safety Instructions for Commissioning

The lift may be installed and commissioned by authorized service personnel only.

The AA454PAN lift may not be installed and commissioned in the vicinity of explosives or flammable liquids, outdoors or in Wash bays.

Pre- INSTALLATION

The installation of the hoist must respect the indicated safety locations.



Checks before installation.

- The concrete floor must be level and capable of supporting a load of 6000 Kgs/ M².
- Electrical connection to the control box.
- Reserve sufficient space to maneuver vehicles.
- Ceiling height sufficient to lift vehicles to the maximum height.

ANCHORING TIP SHEET

- Anchors must be at least 100mm from the edge of the slab, any seam or Hole to hole in the concreate slab.
- Use a hammer drill with a carbide tip, 16mm drill bit the same diameter as the anchor bolt. Do not use excessively worn drill bits.
- Keep the drill in a perpendicular line while drilling. Let the drill do the work. Do not apply excessive pressure. Lift the drill do all the work, lift the drill up and down occasionally to remove dust to reduce the drill binding.
- Drill the hole to depth of 140mm.

You must suck or blow dust from the hole once drilled.

Place a flat washer and hex nut over threaded end of anchor, leaving approximately 15 of thread exposed carefully tap anchor. Do not damage the threads.

Tap anchor into the concrete until nut and flat washer are against base plate. Tighten the nut, two or three turns.

On average a new concrete slab needs 28-day cure. Check each anchor bolt with torque wrench set to 150foot pounds.

- Using a spirit level, check column for side-to-side plumb and front-to-back plumb. Use washers or shim, placing shim as close as possible to the bolt locations. This will prevent bending the column base plates. Tighten 16mm anchor bolts to 150lbs.

INSTALLATION PROCEDURE

1. **Mounting the cross beams**

It is recommended the use of mechanical lifting devices or a crane.

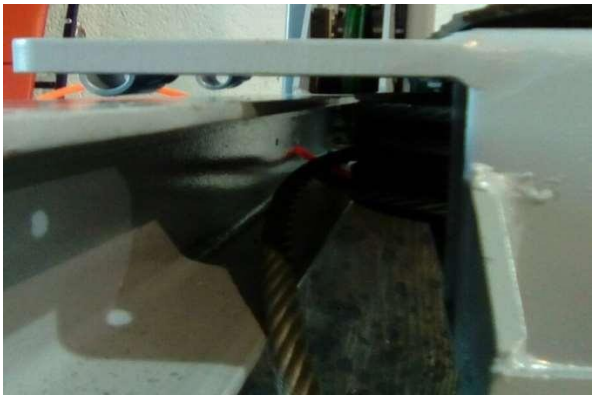
1/ Draw on the ground the location of the cross beam and the lines representing the position of the runway ramps.

Locate the main cross member (the one with the holes used to pass the hydraulic hoses) and position it so that these holes are located where the main column will be installed.

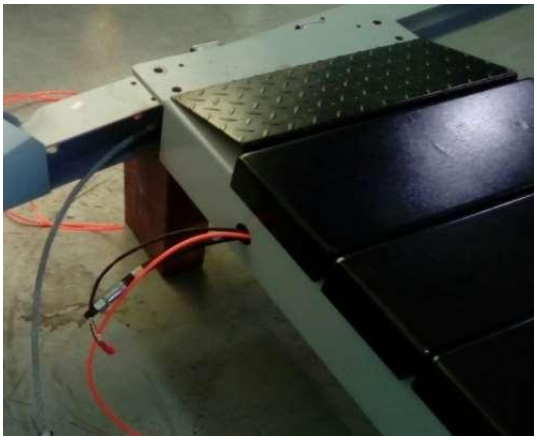
Locate the runway (main and secondary) on the drawn lines and raise them by about 20-30 cm using 4 timbers or trestles.

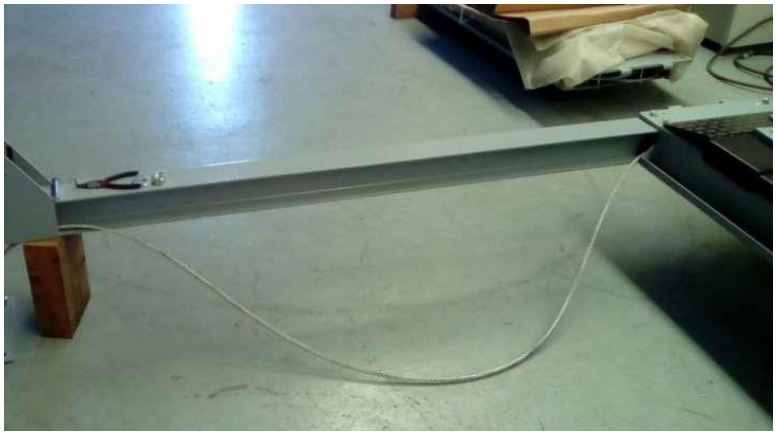
2. **Locate the main platform and approach it to the runway platforms on the side of the main cross beam.**

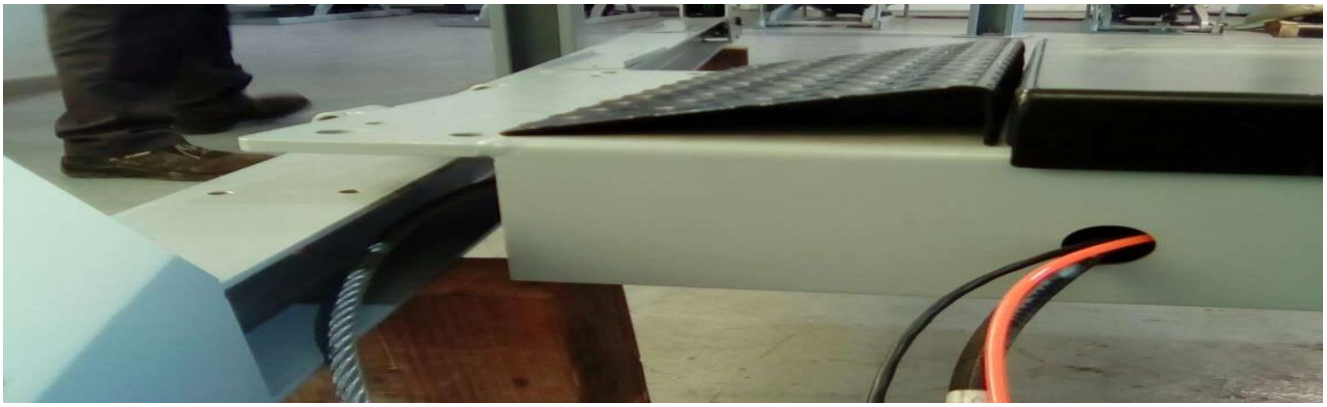
Place the platform facing the cross member and move it to place the pulley and cables in the inner hollow of the cross beam.



NOTE: Remove steel cables and electrical connections and hydraulic hoses before placing the platform. Orient each cable to its installation column, being careful not to damage them.







3. **Carry out the hydraulic connection of the cylinder which is under the main platform with the hydraulic group (see hydraulic diagram).**

Once this connection is made, attach the platform to the crossbar using the M10 screws.

4. **Locate the secondary platform and position it parallel to the main platform**.

The secondary platform is movable; the space between the 2 platforms can therefore vary between 1.35 and 1.55 m.

5. **Adjust the location of the runway platforms so that they are perfectly parallel and the distance between their ends is the same. Also check that the lengths of the 2 diagonals are identical.**

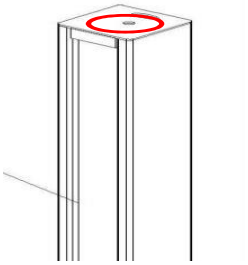
6. **Remove the ladder bars placed inside each column. Be careful not to mix racks and columns so that they can be reassembled in the same way afterwards.**

7. **Locate the main column (the one bearing the Identification plate) and place it at the end of the main cross-member so that the holes allowing the attachment of the hydraulic and power unit are oriented outwards from the deck.**

Place the corresponding column at the other end:

Choose a column with the upper hole (allowing the attachment of cables) eccentric outside of the deck.

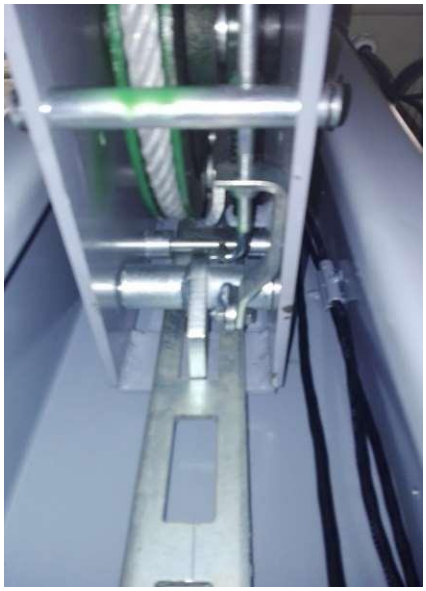
Place the remaining 2 columns at the ends of the secondary cross member always by orienting the upper hole towards the outside of the cross beam.



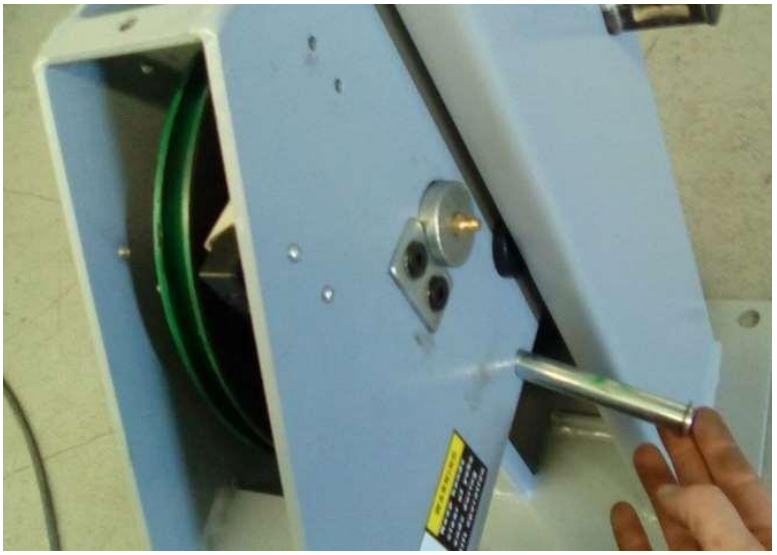
8. **Replace the racks inside the columns by inserting them by the slot at the top of them.**

Pass the ladder bars through the reserved space at the end of each cross member thus allowing the operation of the safety device.

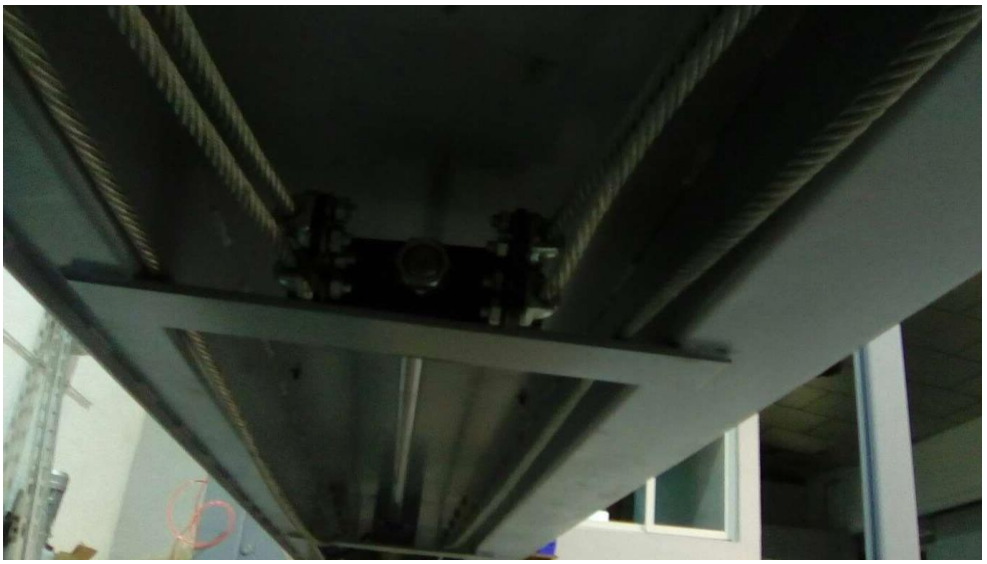
Fix them at the top and bottom of each column.



9. **Pass the steel cables around the pulleys of the cross beams. Remove the stud and then put it back to facilitate this operation.**



Remove the cap from Hydraulic hose. Pull on the cables as to extend the hydraulic cylinder below the main platform until a sufficient length of cable is obtained to allow them to be introduced into the upper hole of each column. (You might have to walk around and pull on all 4 cables to stop damage under the platform)

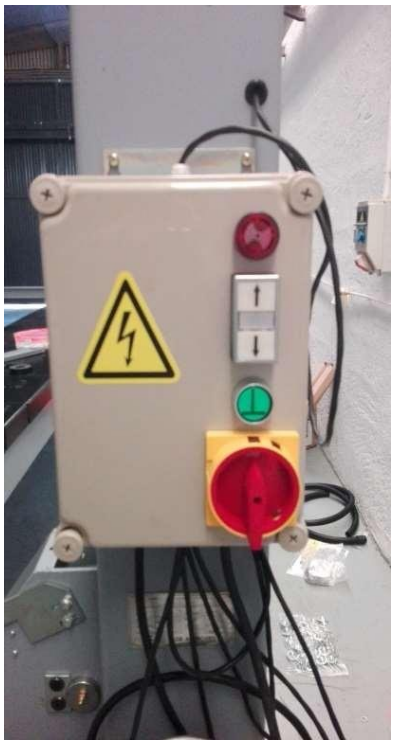


10. **Measure the length of each cable going to each of the columns and ensure that this length is similar**.

Attach the cables using the nuts above the columns.

11. **Measure the lengths between the columns and ensure that they are perfectly identical. Make a final adjustment if necessary.**

12. Place the hydraulic power pack with motor, the control panel, the electromagnetic air valve, and the air filter on the main column and then proceed to the electrical connections.



Electrical connections as follows.

Air circuit, Electro valve: cable numbers 0 - 41

Hydraulic circuit, Electro valve: cable numbers 0 - 24

Upper end limit switch (SQ1); 1 connection: cable numbers 9-10

Normally Closed (N.C), connection on the numbers 1 and 2 of the limit switches.

Lower limit of switch (SQ2) with 2 connections: one on Normally Closed (N.C), cable numbers 12-21; connection on numbers 1 and 2.

Lower limit switch of cables (x4). There is a tab on them with (N.O.) or (N.C), Just connect accordingly in the limit switch.

13. **Bolt the main post down Level and run the hoist up and down about 500mm in the air then check to see if square then level the columns perfectly by means of thin packers supplied with the deck and by means of a bubble level.**

Once the 4 columns are perfectly plumbed, fix them to the ground by means of the M16 anchors provided with the Hoist.

On final adjustment it is recommended to use a laser level as per below

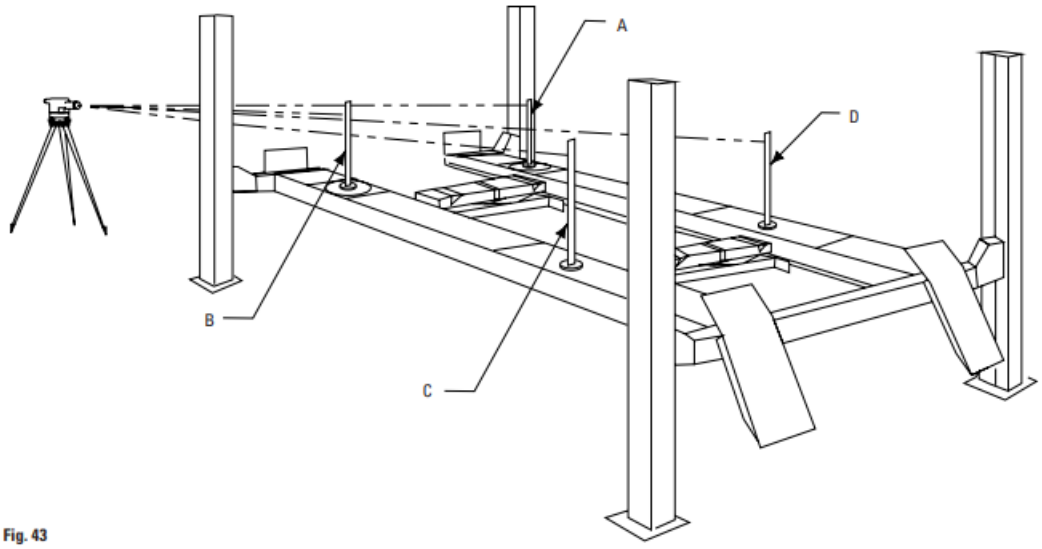


Fig. 43

Safety Instructions for Operation

- The lift should only be operated by authorized personnel only.
- Always keep the lift and lift area clean and free of tools, parts, debris etc.
- Once the Lift pads contact the lift points of the vehicle, check arm locks are engaged.

After raising the vehicle briefly, stop and check the lift pads for secure contact and the car is stable.

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After raising the vehicle briefly, stop and check the lift pads for secure contact and the car is stable.

TESTING AND CHECKS TO PERFORM BEFORE START-UP

- Check all bolts, fittings, and connections.
- Free sliding of moving parts
- Clean state of various parts of the machine
- Position of the protection device
- Safety locking device work
- Test all the limit switches.
- Manual lowering valve.

HYDRAULIC OIL TEST

- Check to see if there is enough oil in the tank.
- Check there is no leaks.
- Check the Cylinder operation.

NOTE: If oil is not enough oil present, fill the reservoir of the power unit with the necessary amount of oil and look for leaks

POSITIONING THE VEHICLE ON THE HOIST

- Fully lower the hoist.
- Confirm the platforms are parallel and wide enough for the vehicle being loaded onto them.
- Slowly position vehicle midway between posts.
- Apply the parking brake or chock the wheels to stop the vehicle from moving.
- You can now raise the hoist and use.

OPERATION

- Lift is to be operated by authorized personnel only.
- Apply the parking brake after positioning the vehicle or chock the wheels to stop any movement.
- Do not allow anyone to stay in vehicle or in the lift area during raising and lowering cycles.
- Closely watch the vehicle and the lift during raising and lowering cycles.
- Observe the rated load capacity and load distribution of the lift.
- Do not allow anyone to climb on lift or stay inside vehicle.
- Make sure the vehicle doors are closed during raising and lowering cycles.
- Once you have reached the desired height. Park the hoist on the locks before you walk under the hoist.
- In case of an accident or malfunctions such as jerky lift movement or deformation of the structure. Stop and evaluate the problem.
- Do not operate the lift till it is safe to do so.
- Turn off and padlock the main switch. Contact qualified service agent.

RAISING

- During raising and lowering cycles: Always watch the vehicle and the lift,
- Do not allow anyone to stay in lift area and make sure the vehicle doors are closed.
- After raising the vehicle slightly, stop and check the vehicle.

When raising a vehicle

- Fully lower the hoist.
- Confirm the platforms are parallel and wide enough for the vehicle being loaded onto them.
- Slowly position vehicle midway between posts.
- Apply the parking brake or chock the wheels to stop the vehicle from moving.
- You can now raise the hoist and use.
- Always put the hoist onto the lock the lift before going under the vehicle.

Never allow anyone to go under the lift when raising or lowering the hoist.

Note: it is normal for the hoist to lower slower with no vehicle on it as it needs weight to come down

LOWERING

- During raising and lowering cycles closely watch the vehicle and the lift,
- do not allow anyone to stay in lift area and make sure the vehicle doors are closed.
- Raise the lift until you see the lift rise slightly.
- Then you can press the down button and the hoist will rise slightly before it lowers down

WARNING: Always make sure safety locks on both sides clear the rack at same time when pulling down the release handle by adjusting the cable.

MAINTENANCE SCHEDULE

- The following periodic maintenance is the minimum requirement.
- The intervals daily, monthly, and yearly inspections,
- If you hear a noise or see any ordinary cease operation immediately. Inspect and contact an authorized service agent.

WARNING

THE OPORATOR SHOULD ALWAYS INSPECT LIFTING EQUIPMENT AT THE START OF EVERY SHIFT. THESE AND OTHER PERIODIC INSPECTIONS ARE THE RESPONSIBILITY OF THE USER

DAILY PRE-OPERATION CHECK

- The user should perform daily checks. Checking the safety of the hoist is very important.
- The pre-operational checks are important to determine any foreseeable problems.
- Discovery of device failure before it happens could save you from expensive property damage, lost production time, serious personal injury and even death.

VISUAL INSPECTION

- Access and clearance
- Work area clean and tidy
- Structure
- Loose or damaged parts
- Decals & control markings
- Hydraulic fluid levels
- Pick up parts.

FUNCTINAL INSPECTION

- Operating controls
- Safety mechanism
- Unusual noise or vibration
- Hydraulic system leaks
- Accessories
- Check all safety mechanisms for operation.

WEEKLY MAINTENANCE

- Check floor for stress cracks near anchor bolts.
- Check anchor bolts torque to 150ft-lbs for the 16mm anchor bolts.
- Check hydraulic oil level.
- Check and tighten bolts and nuts, and screws.
- Check to make shore carriage sits on park locks.
- Check arm locks work correctly.
- Check cable and pulley for free movement and excessive wear.

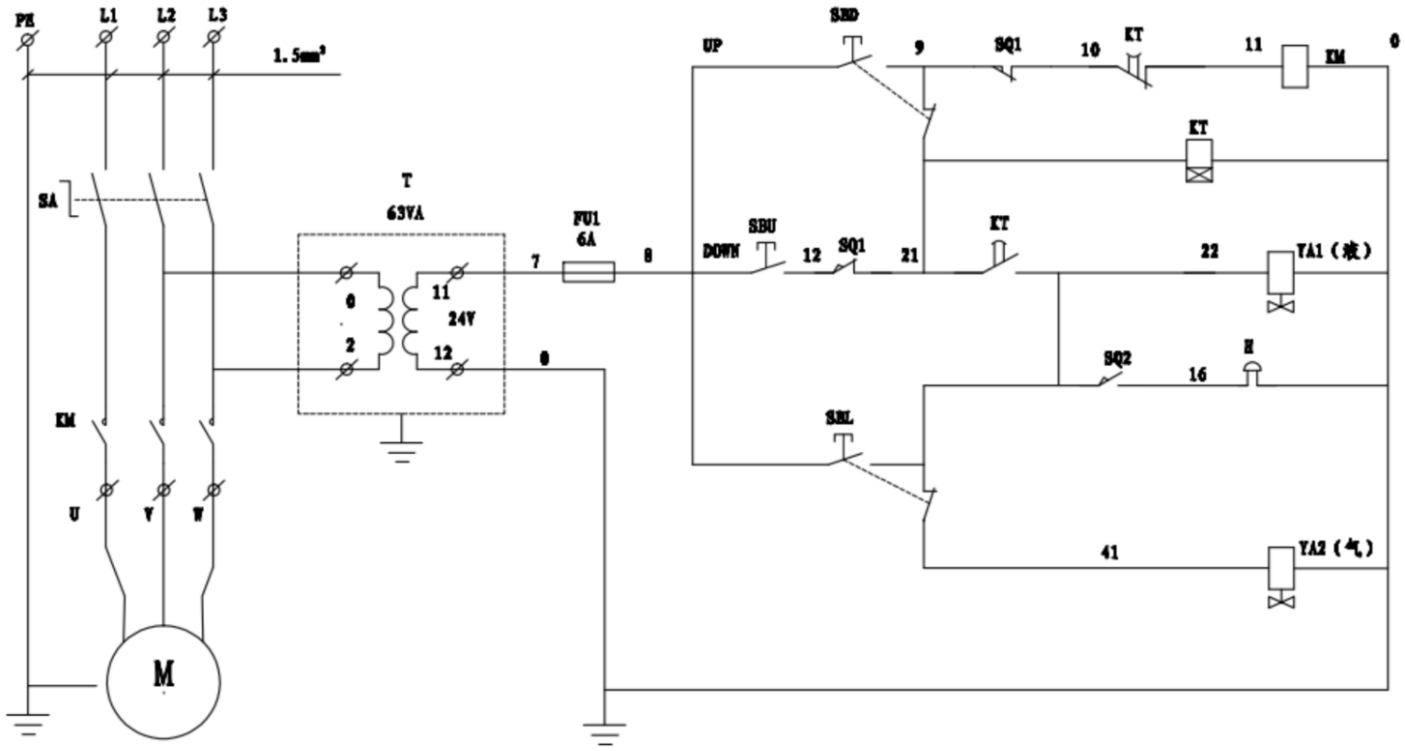
YEARLY MAINTENANCE

- Check all your daily and Weekly maintenance.
- Check anchor bolts torque to 150ft-lbs for the 16mm anchor bolts.
- Check floor for stress cracks near anchor bolts.
- Check posts.
- Check guides.
- Grease slide blocks (applying grease to the inside of the posts).
- Check cables.
- Check all pulleys and rollers.
- Check safety cable.
- Check safety locks for operation.
- Check air locks.
- Check electrical parts of the hoist.
- Check hydraulic circuit.
- Replace hydraulic oil.

TROUBLE SHOOTING

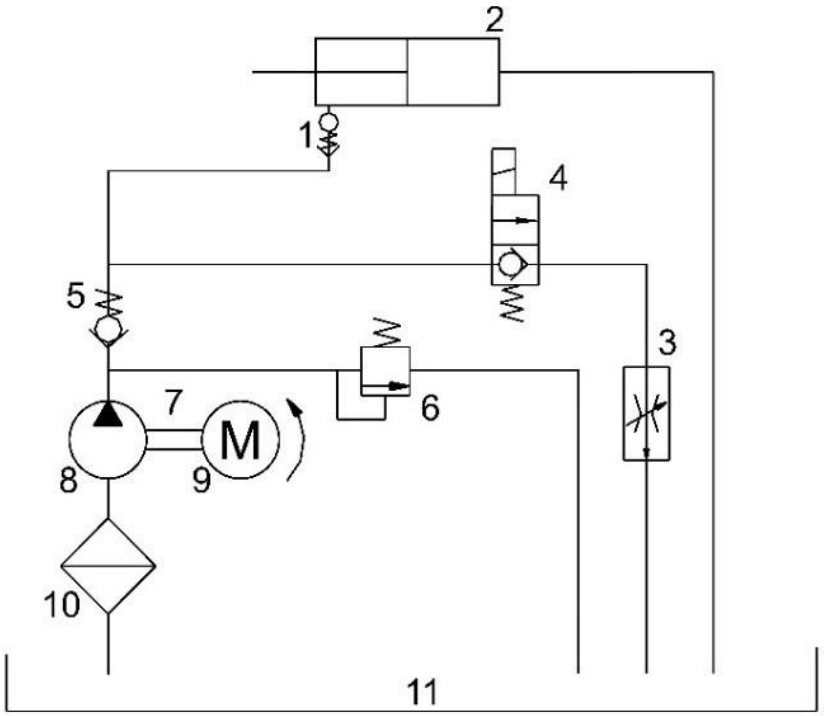
Trouble	Cause & Problem	Resolution
Motor not running	Blown fuse	Call electrician
	Motor thermal overload tripped	Wait to cool down
	Faulty wiring connection	Call electrician
Motor runs but hoist does not lift	Debry in hydraulic system	Open down stem and run pump for 10-15 seconds
	The authorized load has been exceeded; overload bridge	The pressure relief valve prevents the lifting of the load. If necessary, adjust and do not seal. If necessary, disassemble / clean / replace
	Dirt on the ball and seat of the check valve.	Remove the check valve cover and clean ball and seat.
	Low oil level	Top up hydraulic oil
Oil blows out breathe of power unit	Lift lowered too quickly while under a heavy load.	Remove excessive weight from lift
	Oil reservoir overfilled.	Reduce the oil to the oil level.
Motor hums and does not run	Impeller fan cover is dented.	Take off and straighten.
	Faulty wiring.	Call electrician.
	Bad capacitor.	Call electrician.
	Low voltage.	Call electrician.
	Lift overloaded.	Remove excessive weight from lift.
Lift bounces on the way up	Air in the hydraulic system.	Raise lift all the way to top and return to the floor. Repeat 4 to 6 times. Do not let this overheat the power unit
Oil leaks	Oil leaks around the tank-mounting flange. Oil reservoir overfilled	Check the oil level in the tank. The level should be two inches below the flange of the tank. Check with a screwdriver.
	Oil leaks around the rod end of the cylinder. The rod seal of the cylinder is out.	Rebuild or replace the cylinder.
	Oil leaks around the breather end of the cylinder. The piston seal of the cylinder is out	Rebuild or replace the cylinder.

1. Electrical diagram



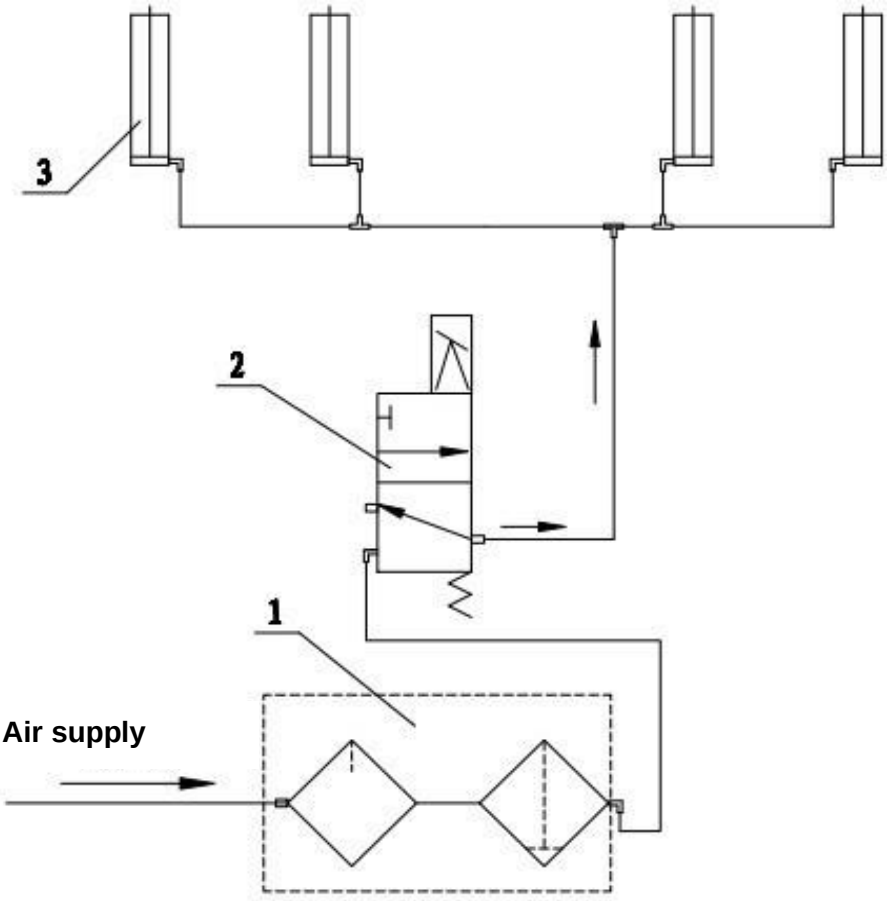
his	Electrical switch
KM	AC Contactor
M	engine
T	transformer
FU1	fuse
SBD	Bottom push button
Sbu	Push button up
SQ1	Upper limit switch
SQ2	Bottom limit switch
H	Beep
SBL	Lock
Others	Timed relay

2. Hydraulic diagram



1	Safety valve.
2	Hydraulic cylinder
3	Regulating valve
4	Solenoid valve.
5	Valve not returned.
6	Safety valve.
7	Motor pump torque.
8	Oil pump.
9	Electric motor.
10	Oil filter at the pump.
11	Oil tank.

3. Pneumatic diagram



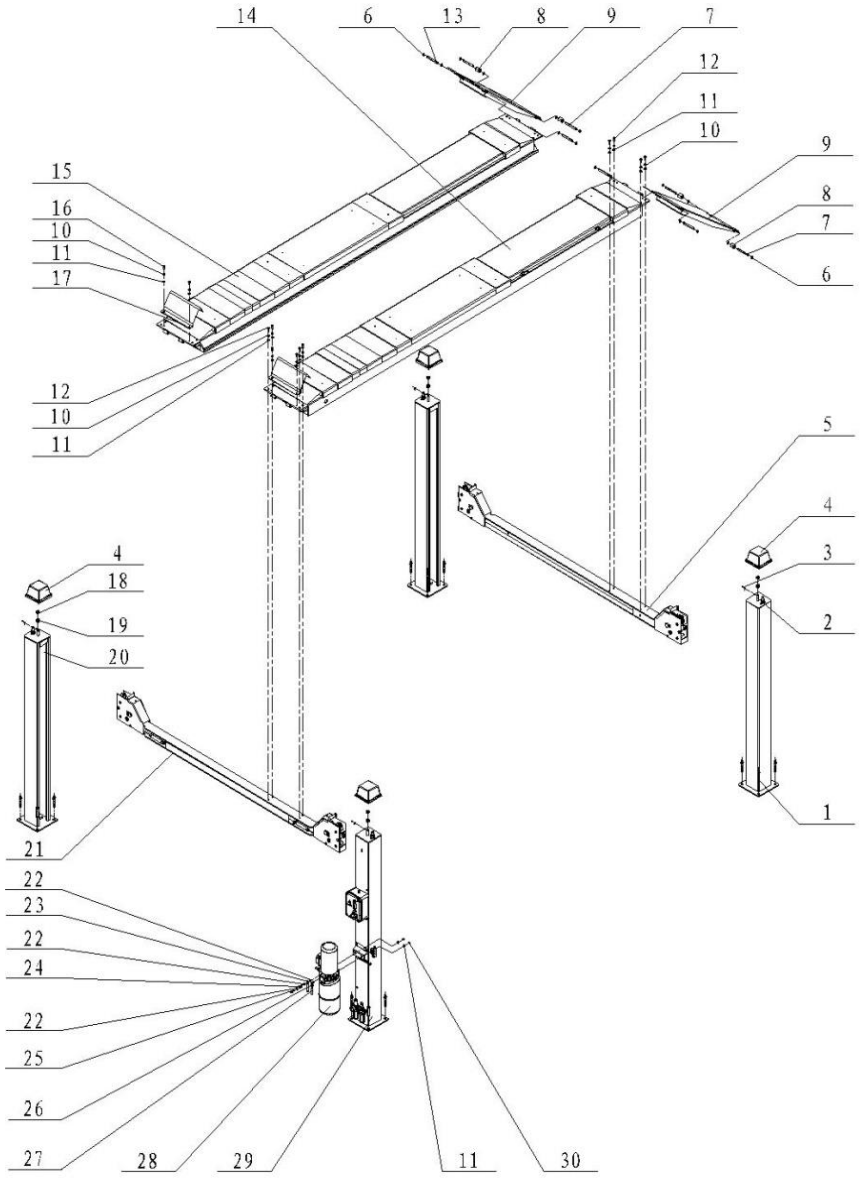
1. Air filter/ regulator

2. Electromagnetic Valve

3. Pneumatic cylinder

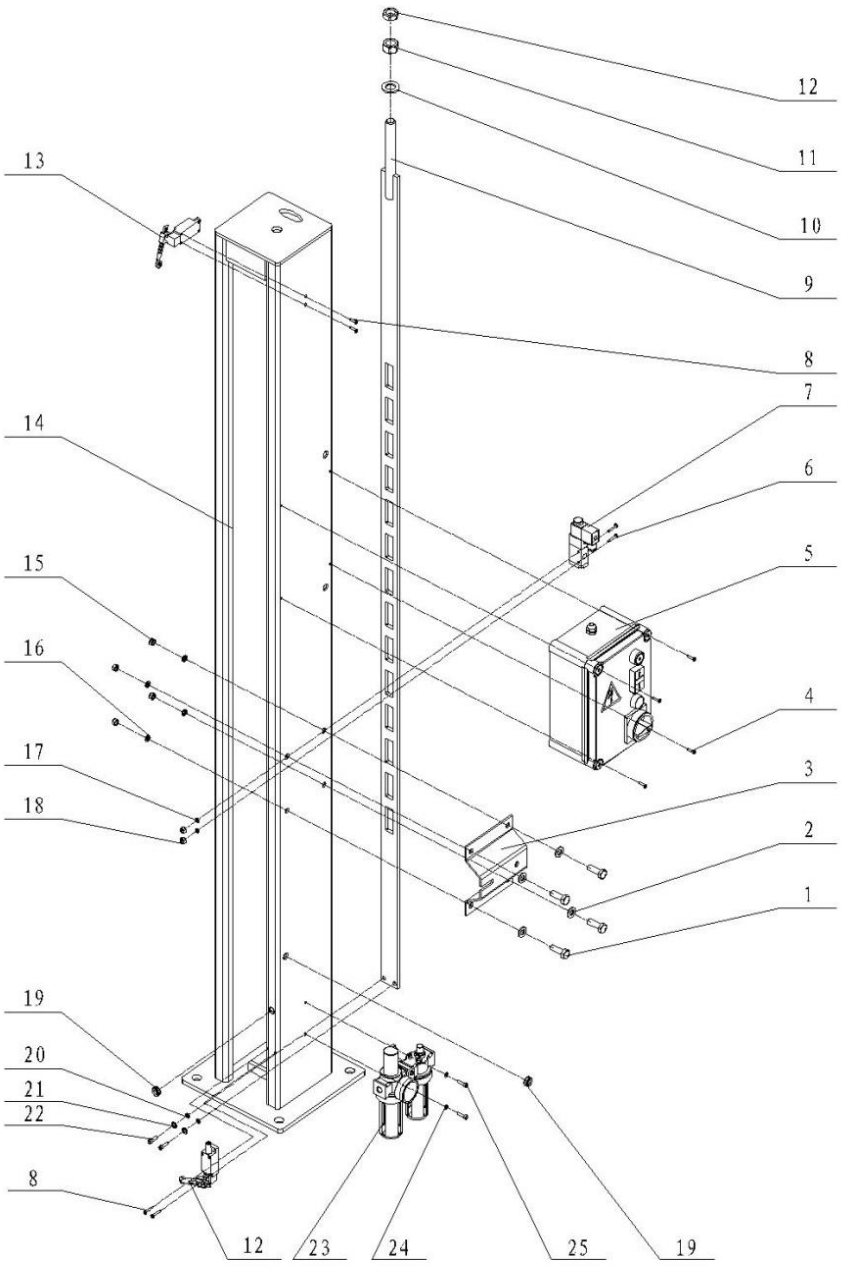
Spare Parts Breakdown

Main Structure



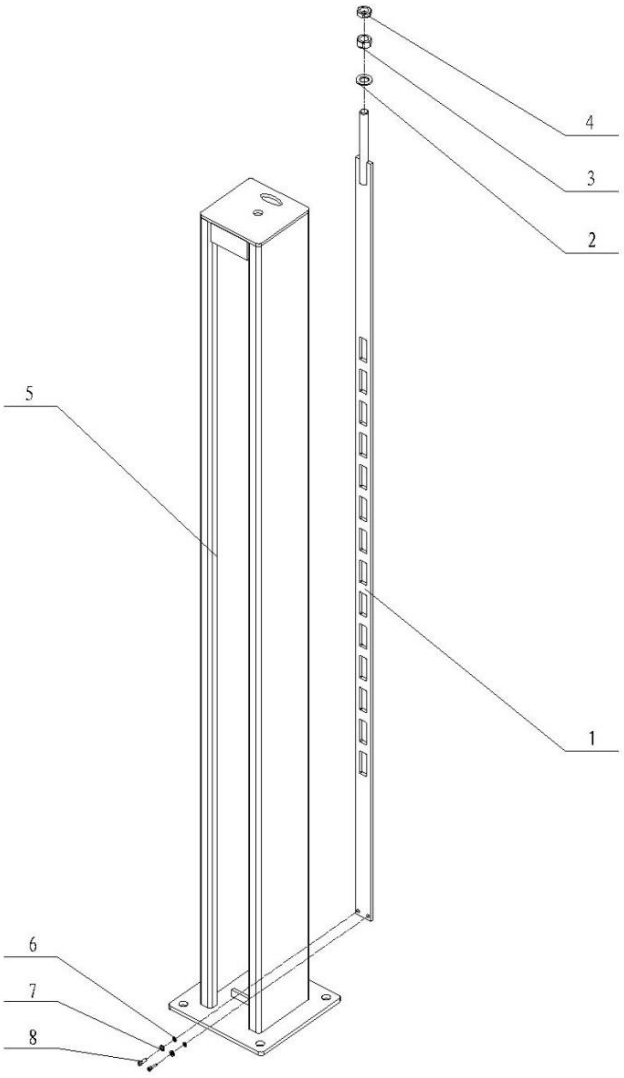
No.	Part No.	Description.
1.	AA454PAN-WS4220	Expansion Bolt
2.	AA454PAN-WS4223	Wire Rope
3.	AA454PAN-WS4222	Split Pin
4.	AA454PAN-WS4206	Column Cover
5.	AA454PAN-WS4300	Sub Crossbeam
6.	AA454PAN-WS4301	Shield Ring
7.	AA454PAN-WS4302	Shaft
8.	AA454PAN-WS4303	Nylon Wheel
9.	AA454PAN-WS4304	Rear Ramp
10.	AA454PAN-WS4059	Spring Washer
11.	AA454PAN-WS4067	Plain Washer 10
12.	AA454PAN-WS4209	Bolt
13.	AA454PAN-WS4305	Shaft
14.	AA454PAN-WS4306	Main Runway
15.	AA454PAN-WS4307	Sub Runway
16.	AA454PAN-WS4080	Bolt
17.	AA454PAN-WS4308	Front baffle
18.	AA454PAN-WS4054	Nut
19.	AA454PAN-WS4055	Nut
20.	AA454PAN-WS4205Z	Sub Column
21.	AA454PAN-WS4309	Main Crossbeam
22.	AA454PAN-WS4201	Composite Washer
23.	AA454PAN-WS4202	High-Pressure Hose
24.	AA454PAN-WS4203	Joint
25.	AA454PAN-WS4200	Short Pressing Bolt
26.	AA454PAN-WS4310	Joint Of Oil Recovery Hose
27.	AA454PAN-WS4311	Oil Recovery Hose
28.	AA454PAN-WS4312	Pump
29.	AA454PAN-WS4313	Main Column
30.	AA454PAN-WS4217	Bolt

Main Column



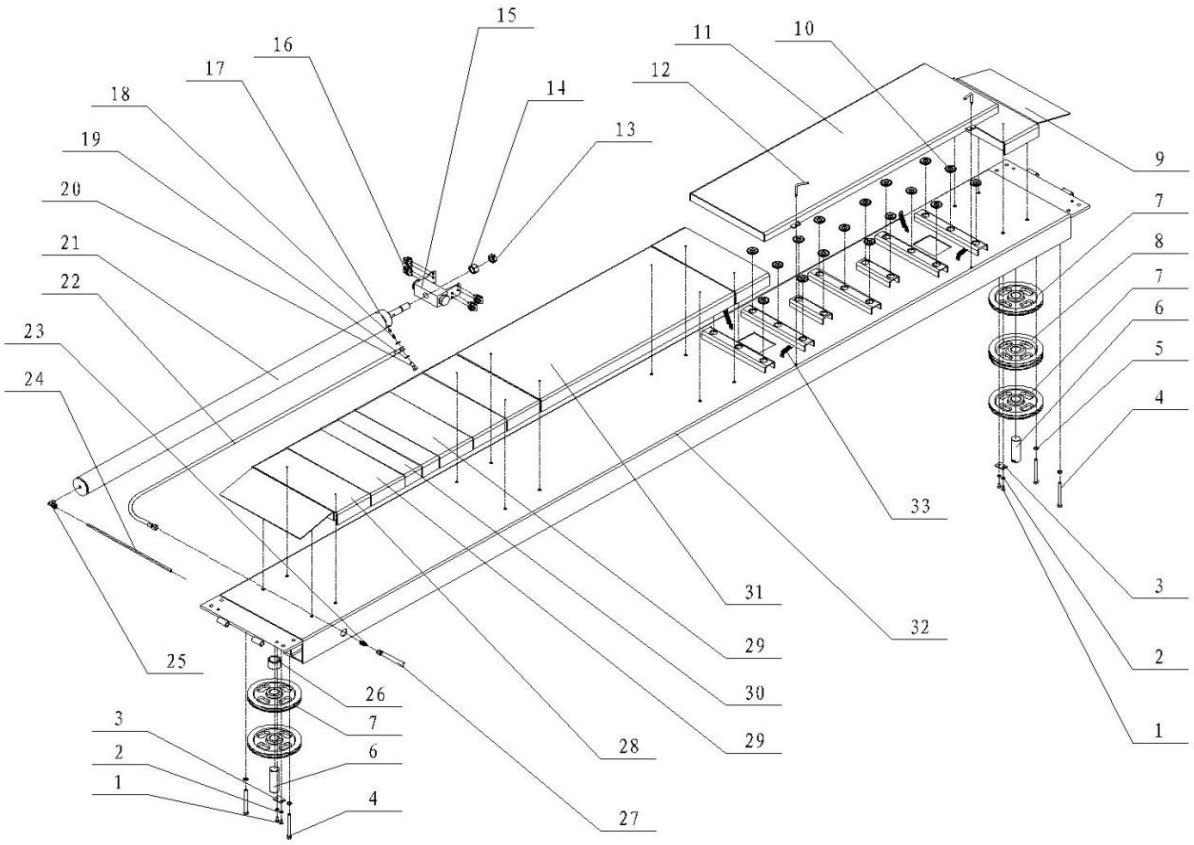
No.	Part No.	Description.
1.	AA454PAN-WS4217	Bolt
2.	AA454PAN-WS4067	Plain Washer
3.	AA454PAN-WS4066	Pump Base
4.	AA454PAN-WS4314	Screw
5.	AA454PAN-WS4315	Control Box
6.	AA454PAN-WS4316	Screw
7.	AA454PAN-WS4317	Solenoid Valve
8.	AA454PAN-WS4070	Screw
9.	AA454PAN-WS4057	Locking Lever
10.	AA454PAN-WS4056	Plain Washer
11.	AA454PAN-WS4055	Nut
12.	AA454PAN-WS4054	Nut
13.	AA454PAN-WS4069	Limit Switch
14.	AA454PAN-WS4318	Main Column Weldment
15.	AA454PAN-WS4058	Nut
16.	AA454PAN-WS4059	Spring Washer
17.	AA454PAN-WS4319	Plain Washer
18.	AA454PAN-WS4320	Nut
19.	AA454PAN-WS4061	Wire Protective Sleeve
20.	AA454PAN-WS4050	Bolt
21.	AA454PAN-WS4051	Spring Washer
22.	AA454PAN-WS4052	Plain Washer
23.	AA454PAN-WS4321	Air Treatment
24.	AA454PAN-WS4322	Bolt
25.	AA454PAN-WS4323	Plain Washer

Sub Column



No.	Part No.	Description.
1.	AA454PAN-WS4057	Locking Lever
2.	AA454PAN-WS4056	Plain Washer
3.	AA454PAN-WS4055	Nut
4.	AA454PAN-WS4054	Nut
5.	AA454PAN-WS4053H	Sub Column Weldment
6.	AA454PAN-WS4050	Bolt
7.	AA454PAN-WS4051	Spring Washer
8.	AA454PAN-WS4052	Plain Washer

Main Runway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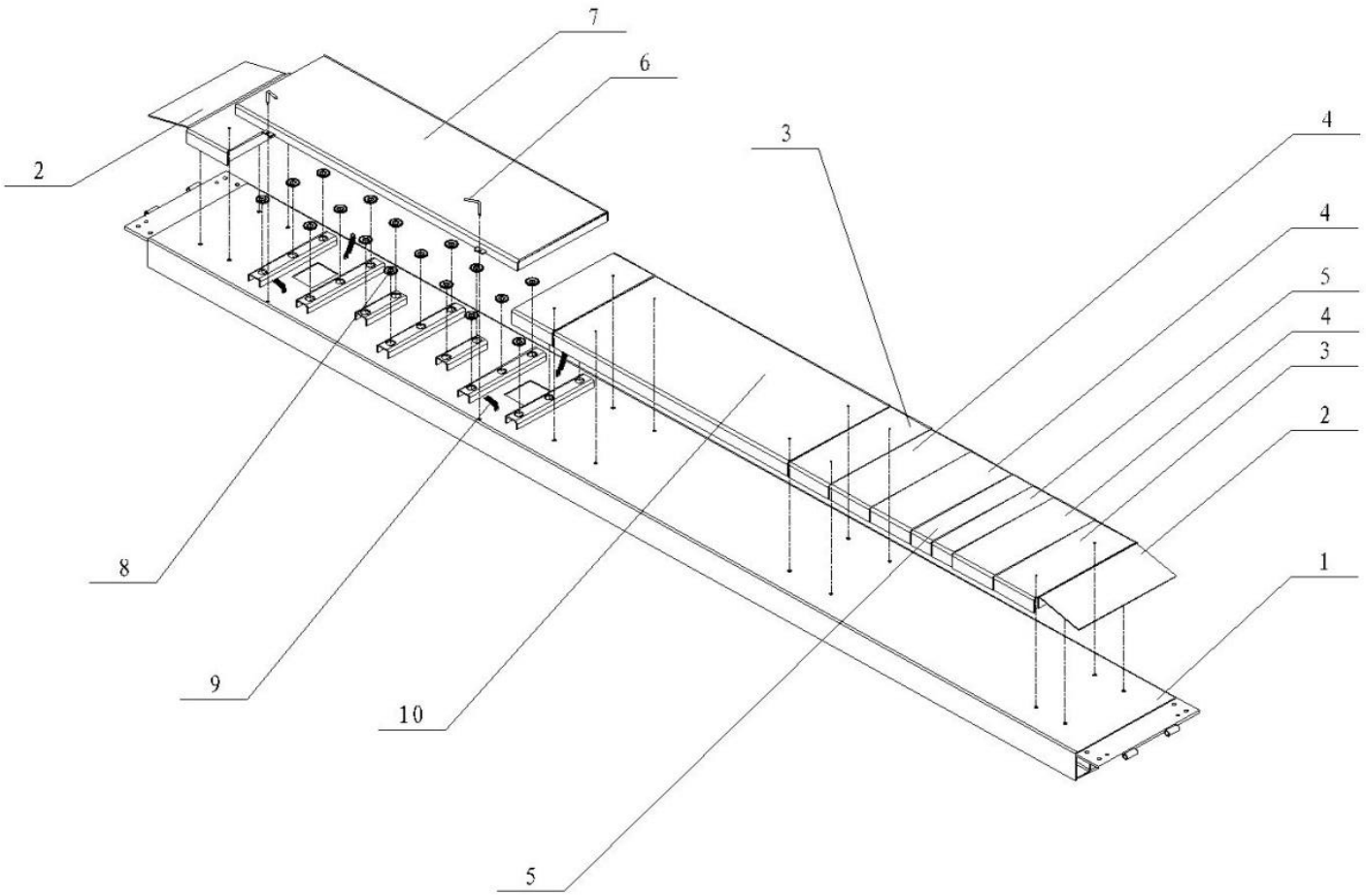
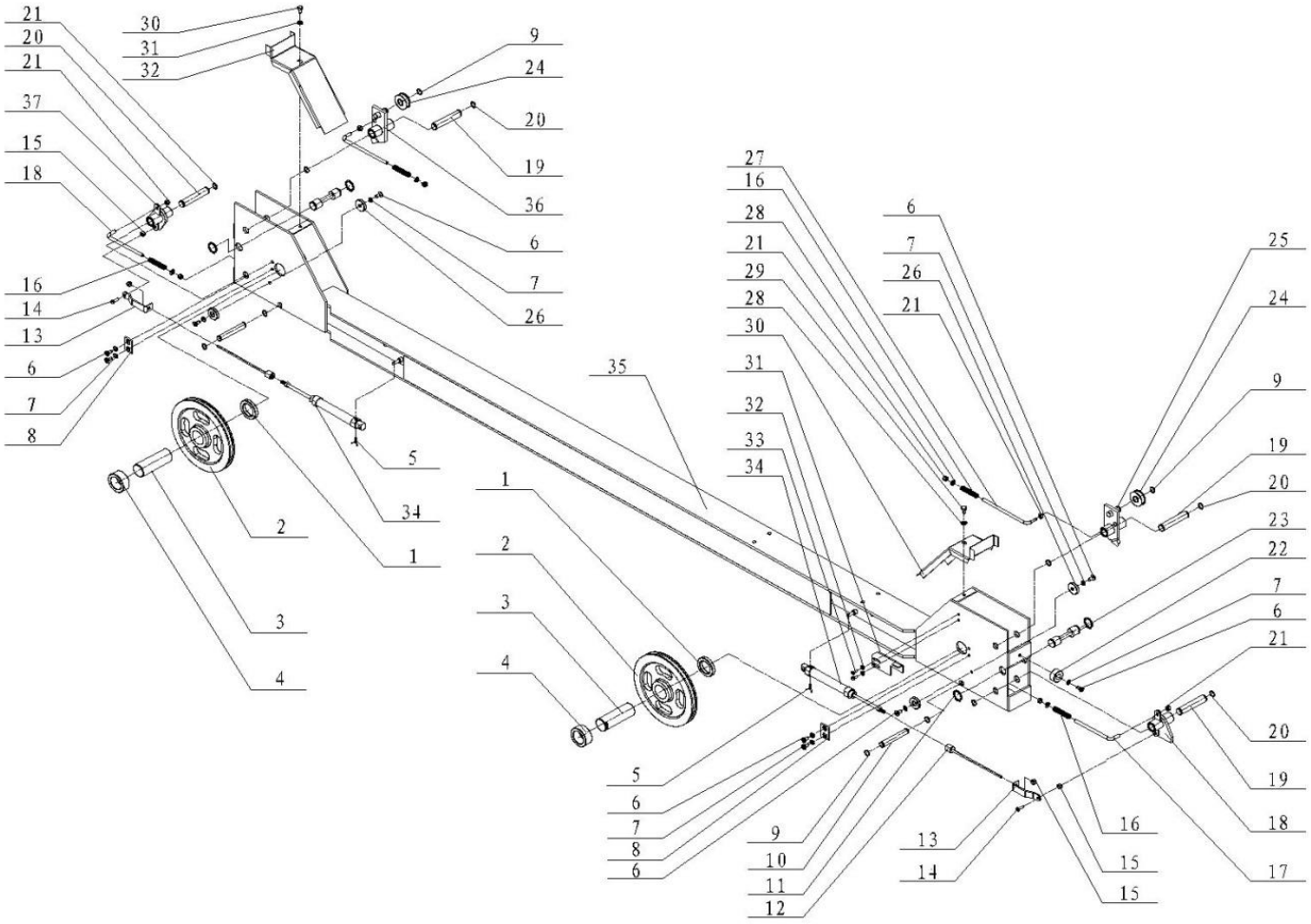
No.	Part No.	Description.
1.	AA454PAN-WS4008	Screw
2.	AA454PAN-WS4007	Conic Locking Washer
3.	AA454PAN-WS4011	Baffle
4.	AA454PAN-WS4082	Bolt
5.	AA454PAN-WS4084	Locking Washer
6.	AA454PAN-WS4083	Shaft
7.	AA454PAN-WS4085	Wire Rope Pully
8.	AA454PAN-WS4098	Wire Rope Pully
9.	AA454PAN-WS4324	Ramp Plate
10.	AA454PAN-WS4233Z	Bearing
11.	AA454PAN-WS4325	Sliding Plate
12.	AA454PAN-WS4232	Sliding Plate Lock
13.	AA454PAN-WS4054	Nut
14.	AA454PAN-WS4055	Nut
15.	AA454PAN-WS4093	Ropes Pull Block
16.	AA454PAN-WS4094	Ropes Clip
17.	AA454PAN-WS4326	Steel Ball
18.	AA454PAN-WS4327	Spring
19.	AA454PAN-WS4092	Composite Washer
20.	AA454PAN-WS4099	Pressing Bolt
21.	AA454PAN-WS4090Z	Cylinder
22.	AA454PAN-WS4091	High-Pressure Hose
23.	AA454PAN-WS4087	Straight Joint
24.	AA454PAN-WS4088	Oil Return Pipe
25.	AA454PAN-WS4089	Joint
26.	AA454PAN-WS4086	Bush
27.	AA454PAN-WS4202	High-Pressure Hose
28.	AA454PAN-WS4328	Fixed Cover Plate
29.	AA454PAN-WS4329	Removable Cover Plate
30.	AA454PAN-WS4330	Removable Cover Plate
31.	AA454PAN-WS4331	Middle Cover Plate
32.	AA454PAN-WS4332	Main Runway Platform
33.	AA454PAN-WS4333	Spring
34.	AA454PAN-WS4008	Screw

Sub Runway



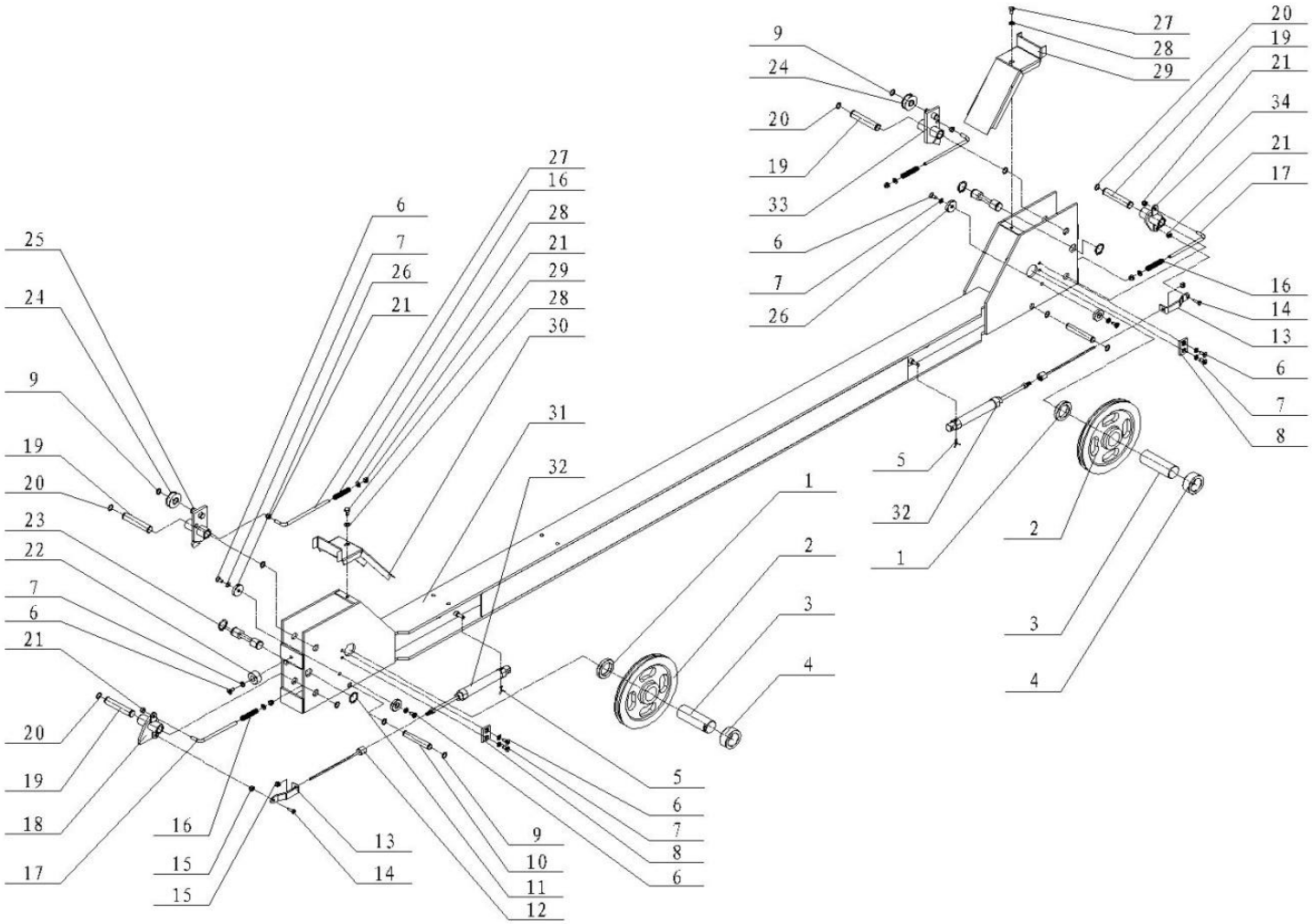
No.	Part No.	Description.
1.	AA454PAN-WS4332S	Sub Runway Platform
2.	AA454PAN-WS4324	Ramp Plate
3.	AA454PAN-WS4328	Fixed Cover Plate
4.	AA454PAN-WS4329	Removable Cover Plate
5.	AA454PAN-WS4330	Removable Cover Plate
6.	AA454PAN-WS4232	Sliding Plate Lock
7.	AA454PAN-WS4325	Sliding Plate
8.	AA454PAN-WS4233Z	Bearing
9.	AA454PAN-WS4333	Spring
10.	AA454PAN-WS4331	Middle Cover Plate

Main Crossbeam



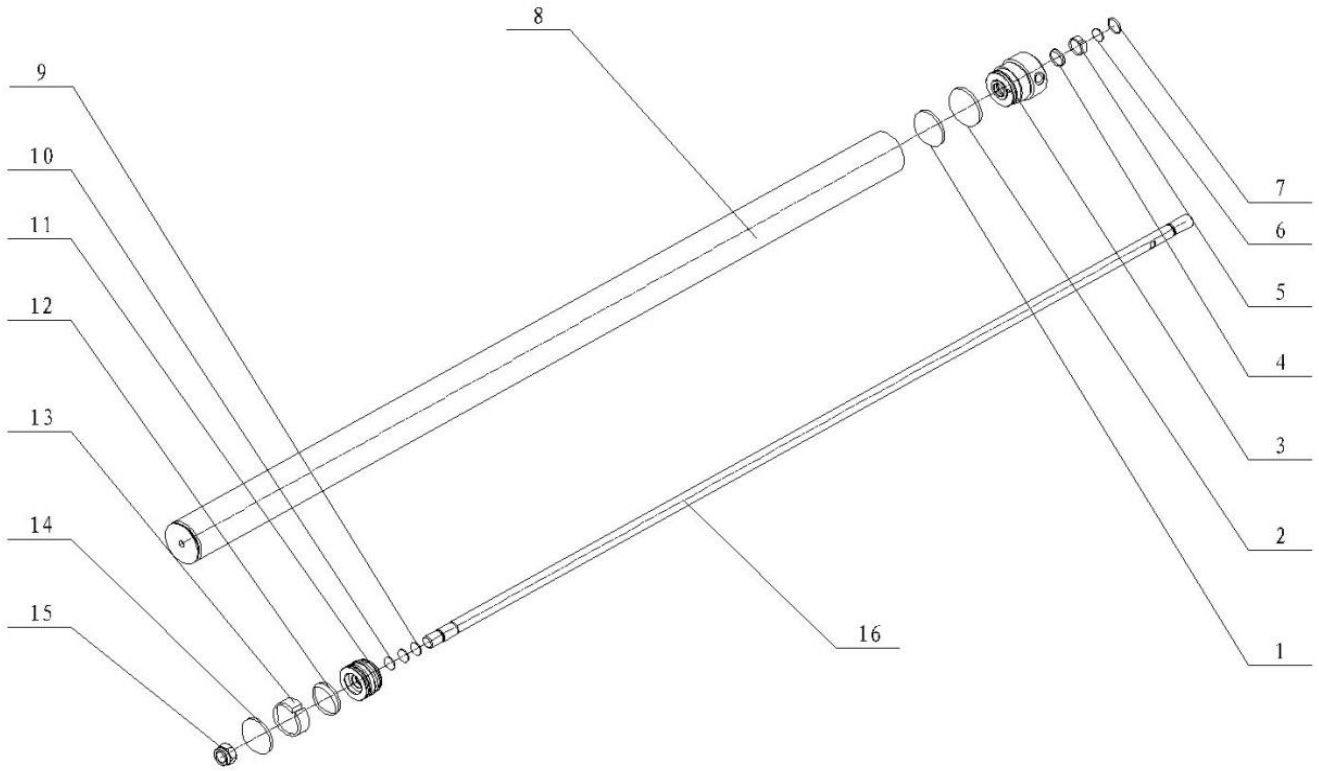
No.	Part No.	Description.
1.	AA454PAN-WS4005	Nylon Washer
2.	AA454PAN-WS4003	Wire Rope Pully
3.	AA454PAN-WS4004	Shaft
4.	AA454PAN-WS4002	Nylon Washer
5.	AA454PAN-WS4222	Split Pin
6.	AA454PAN-WS4008	Screw
7.	AA454PAN-WS4007	Conic Washer
8.	AA454PAN-WS4011	Baffle
9.	AA454PAN-WS4010	Shield Ring
10.	AA454PAN-WS4009	Shaft
11.	AA454PAN-WS4013	Shield Ring
12.	AA454PAN-WS4334	Pneumatic Pull Rod
13.	AA454PAN-WS4019	Pull Block
14.	AA454PAN-WS4020	Bolt
15.	AA454PAN-WS4014	Nyloc Nut
16.	AA454PAN-WS4021	Spring
17.	AA454PAN-WS4018	Pull Handle
18.	AA454PAN-WS4017R	Safety Hook
19.	AA454PAN-WS4016	Shaft
20.	AA454PAN-WS4015	Shield Ring
21.	AA454PAN-WS4014	Nyloc Nut
22.	AA454PAN-WS4022	Nylon Washer
23.	AA454PAN-WS4012	Baffle Shaft
24.	AA454PAN-WS4025	Hook Pully
25.	AA454PAN-WS4023L	Top Safety Hook
26.	AA454PAN-WS4006	Nylon Washer
27.	AA454PAN-WS4024	Pull Handle
28.	AA454PAN-WS4052	Plain Washer 8
29.	AA454PAN-WS4032	Bolt
30.	AA454PAN-WS4033	Dustproof Cover
31.	AA454PAN-WS4035	Limit Baffle
32.	AA454PAN-WS4037	Plain Washer
33.	AA454PAN-WS4036	Bolt
34.	AA454PAN-WS4335	Unlocking Cylinder
35.	AA454PAN-WS4336	Main Crossbeam Weldment
36.	AA454PAN-WS4023R	Top Safety Hook
37.	AA454PAN-WS4017L	Safety Hook

Sub Crossbeam



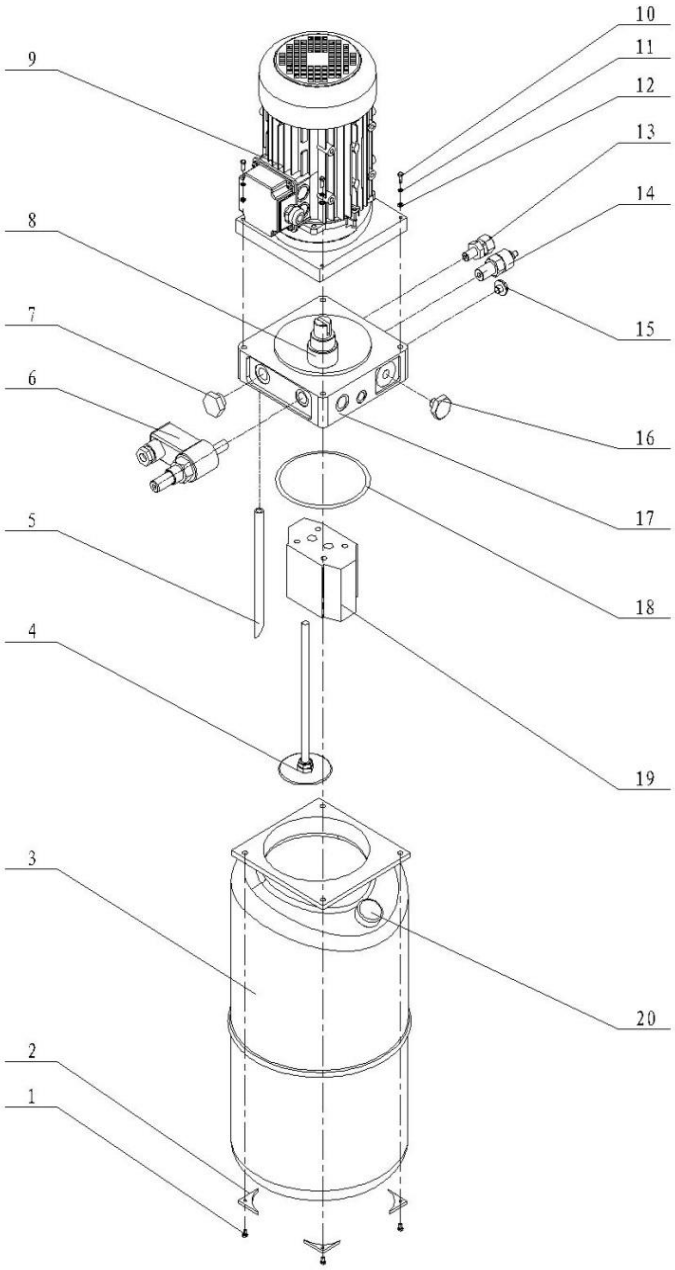
No.	Part No.	Description.
1.	AA454PAN-WS4005	Nylon Washer
2.	AA454PAN-WS4003	Wire Rope Pully
3.	AA454PAN-WS4004	Shaft
4.	AA454PAN-WS4002	Nylon Washer
5.	AA454PAN-WS4222	Split Pin
6.	AA454PAN-WS4008	Screw
7.	AA454PAN-WS4007	Conic Washer
8.	AA454PAN-WS4011	Baffle
9.	AA454PAN-WS4010	Shield Ring
10.	AA454PAN-WS4009	Shaft
11.	AA454PAN-WS4013	Shield Ring
12.	AA454PAN-WS4334	Pneumatic Pull Rod
13.	AA454PAN-WS4019	Pull Block
14.	AA454PAN-WS4020	Bolt
15.	AA454PAN-WS4014	Nyloc Nut
16.	AA454PAN-WS4021	Spring
17.	AA454PAN-WS4018	Pull Handle
18.	AA454PAN-WS4017R	Safety Hook
19.	AA454PAN-WS4016	Shaft
20.	AA454PAN-WS4015	Shield Ring
21.	AA454PAN-WS4014	Nyloc Nut
22.	AA454PAN-WS4022	Nylon Washer
23.	AA454PAN-WS4012	Baffle Shaft
24.	AA454PAN-WS4025	Hook Pully
25.	AA454PAN-WS4023L	Top Safety Hook
26.	AA454PAN-WS4006	Nylon Washer
27.	AA454PAN-WS4024	Pull Handle
28.	AA454PAN-WS4052	Plain Washer 8
29.	AA454PAN-WS4032	Bolt
30.	AA454PAN-WS4033	Dustproof Cover
31.	AA454PAN-WS4336S	Sub Crossbeam Weldment
32.	AA454PAN-WS4335	Unlocking Cylinder
33.	AA454PAN-WS4023R	Top Safety Hook
34.	AA454PAN-WS4017L	Safety Hook

Hydraulic Cylinder



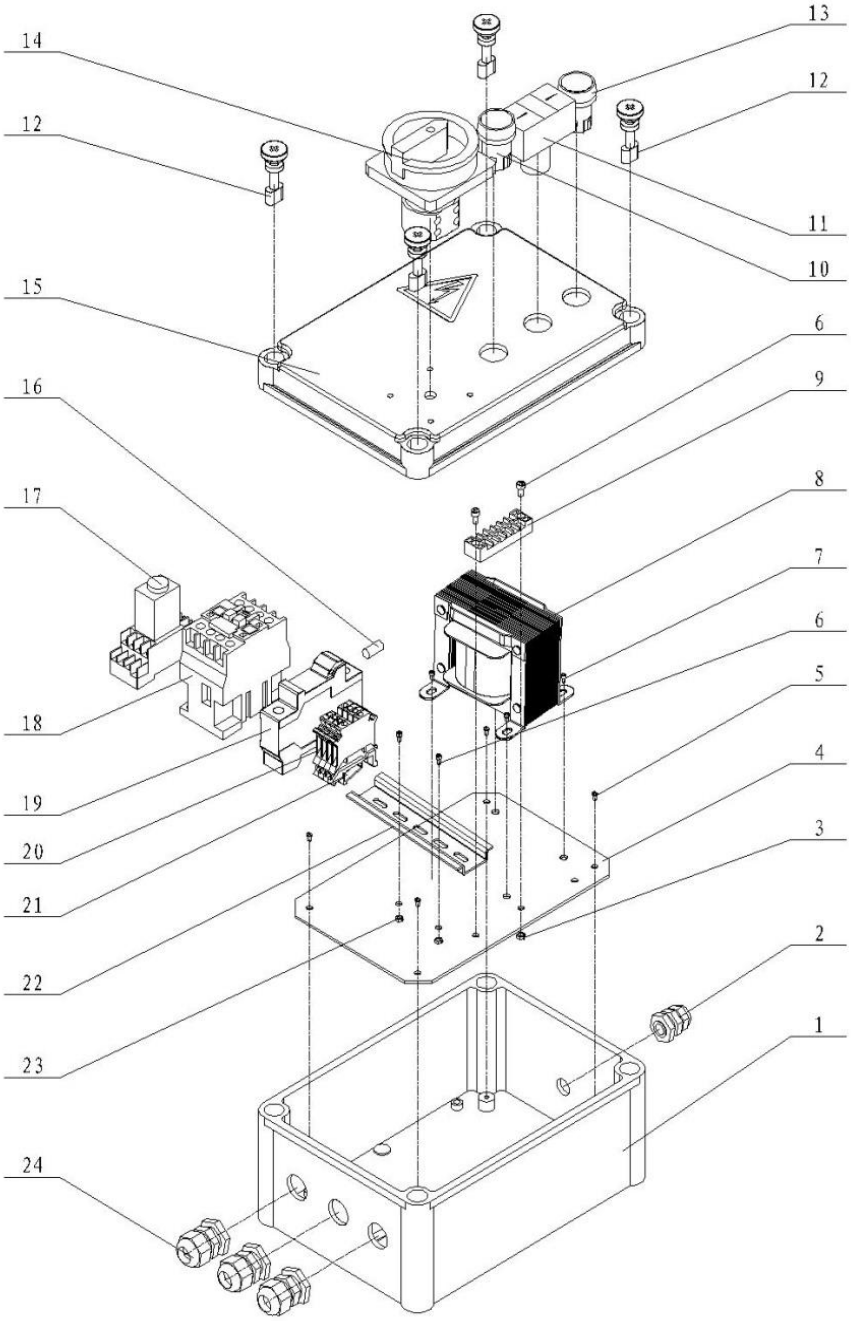
No.	Part No.	Description.
1.	AA454PAN-WS4106	O-Ring
2.	AA454PAN-WS4105	O-Ring
3.	AA454PAN-WS4104	Guide Sleeve
4.	AA454PAN-WS4100	Oil Seal
5.	AA454PAN-WS4101	Wear Ring
6.	AA454PAN-WS4102	O-Ring
7.	AA454PAN-WS4103	Dustproof Ring
8.	AA454PAN-WS4107H	Cylinder Case
9.	AA454PAN-WS4114	Shield Ring
10.	AA454PAN-WS4113	O-Ring
11.	AA454PAN-WS4112	Piston
12.	AA454PAN-WS4111	Oil Seal
13.	AA454PAN-WS4110	Wear Ring
14.	AA454PAN-WS4108	O-Ring
15.	AA454PAN-WS4109	Nyloc Nut

Power Unit



No.	Part No.	Description.
1.	AA454PAN-WS4140	Bolt
2.	AA454PAN-WS4141	Gear Pump
3.	AA454PAN-WS4157	Oil Tank
4.	AA454PAN-WS4156	Oil Absorbing Pipe
5.	AA454PAN-WS4311	Oil Back Pipe
6.	AA454PAN-WS4143	Solenoid Valve
7.	AA454PAN-WS4142	Check Valve
8.	AA454PAN-WS4147	Coupling
9.	AA454PAN-WS4148	Motor
10.	AA454PAN-WS4146	Bolt
11.	AA454PAN-WS4051	Spring Washer
12.	AA454PAN-WS4052	Plain Washer
13.	AA454PAN-WS4153	Throttle Valve
14.	AA454PAN-WS4152	Pressure Valve
15.	AA454PAN-WS4337	Plug
16.	AA454PAN-WS4338	Pressure Plug
17.	AA454PAN-WS4151	Valve Seat
18.	AA454PAN-WS4154	O-Ring
19.	AA454PAN-WS4155	Gear Pump
20.	AA454PAN-WS4158	Blocking Cap

Control Box



No.	Part No.	Description.
1.	AA454PAN-WS4187	Box Body
2.	AA454PAN-B6766	Wiring Bundle
3.	AA454PAN-WS4186	Nut 5
4.	AA454PAN-WS4172	Installation Board
5.	AA454PAN-WS4185	Screw
6.	AA454PAN-WS4173	Screw
7.	AA454PAN-WS4179	Screw
8.	AA454PAN-WS4180	Transformer
9.	AA454PAN-WS4184	Terminal For Wires
10.	AA454PAN-B2753	Lock Pushbutton
11.	AA454PAN-WS4182	Button
12.	AA454PAN-WS4339	Plastic Screw
13.	AA454PAN-WS4340	Buzzer
14.	AA454PAN-WS4183	Main Switch
15.	AA454PAN-WS4181	Cover
16.	AA454PAN-WS4178	Fuse
17.	AA454PAN-B2766	Time Relay
18.	AA454PAN-WS4177	AC Contactor
19.	AA454PAN-WS4176	Breaker
20.	AA454PAN-WS4175	Grey Terminal
21.	AA454PAN-WS4175H	Yellow-Green Terminal
22.	AA454PAN-WS4174	Rail
23.	AA454PAN-WS4171	Screw
24.	AA454PAN-WS4170	Wiring Bundle