

**STRATUS 2 Post Lift Installation/Operation & Maintenance Instructions**

**Model No. : SAE-F10S**

**Two Post Lift**

**Manual Single Point Lock Release**

**Lifting Capacity : 10000 LBS**

**Installation & Operation**

**Maintenance & Instructions**

# STRATUS<sup>®</sup>

auto equipment



**Important Note**

1. This equipment cannot be installed, operated or repaired without reading instructions.
2. Electricity must be hooked up by certified electrician.
3. Do not use this equipment beyond its rated capacity.

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## 1-The main features of the equipment

### 1.1-Product description

This product is a hydraulic lift. The product is manual single point lock release, easy to operate. It is suitable for inspection, repair and maintenance of a vehicles below 10000LBS.

### 1.2-Features of the product

When the power unit of the hydraulic lift is connected to the power supply ,press the switch, the gear pump works, and the hydraulic oil pushes the piston rod up, which is brought to the pulley and the pulley and the safety lock tooth will blink and bite each other during each ascent. At the same time, to ensure that the hydraulic system will not cause slippage.

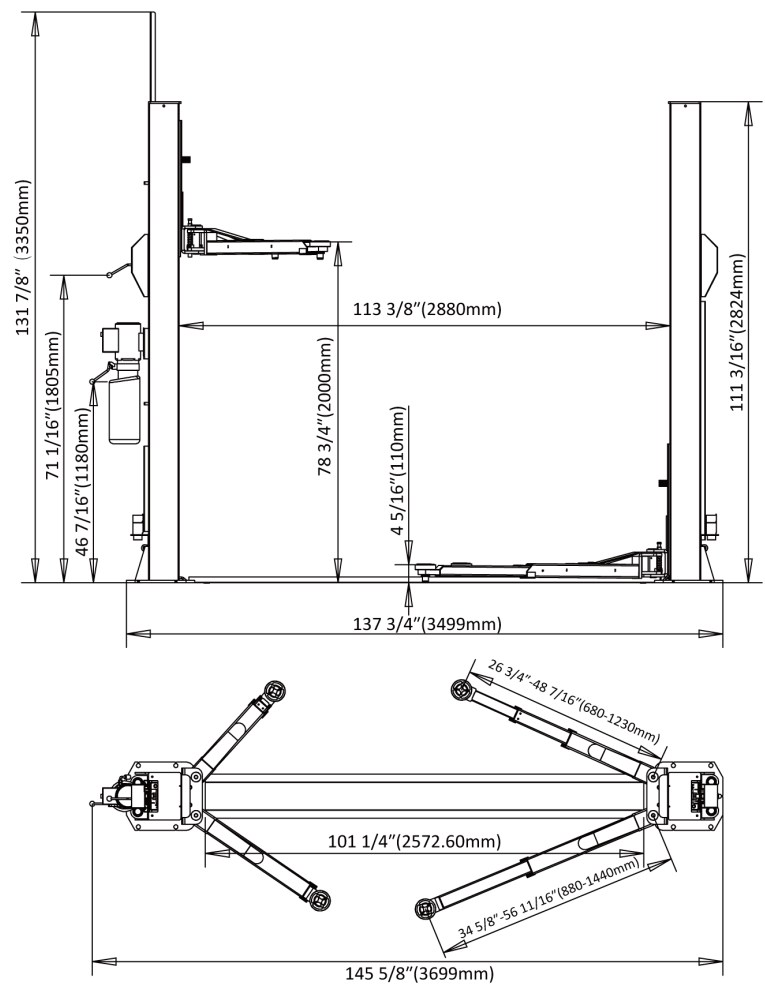
### 1.3-Safety mark of the product

|                                                                                     |                                                                                                    |                                                                                     |                                                                                                     |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
|    | Do not come under the vehicle during operation. This can cause injury and death.                   |    | Evacuate to a safe place instantly the event that the vehicle tips. This can cause injury or death. |
|    | Before lowering the lift, check that there are no obstructions under the vehicle or the lift arms. |    | Do not operate damaged equipment.                                                                   |
|  | When the vehicle is lifted, do not rock it as this may dislodge it.                                |  | Only trained person may operate the equipment. Inexperience can cause accidents.                    |
|  | Do not lift a vehicle using on pair of arms only.                                                  |  | Do not operate the push button except the worker.                                                   |
|  | Do not rock the vehicle when lifted. Do not use a high pressure cleaner to the vehicle lower part. |  | To avoid being electrocuted, disconnected the main power before opening the control panel.          |
|  | To avoid injury, keep your feet clear of the arms and carriages.                                   |  | Read and fully understand the manual before using the lift.                                         |
|  | Not allowed unauthorized persons in the work area.                                                 |  | Before going under the lift. Make sure that the safety pawls are engaged.                           |
|  | Position vehicle with center of gravity midway between adapters.                                   |  | Make sure that the front and back balance when placing the car, otherwise the car will fall.        |
|  | Do not modify the control panel or the safety functions as this may impair their function.         |                                                                                     |                                                                                                     |

## 2-Technical Date of the equipment

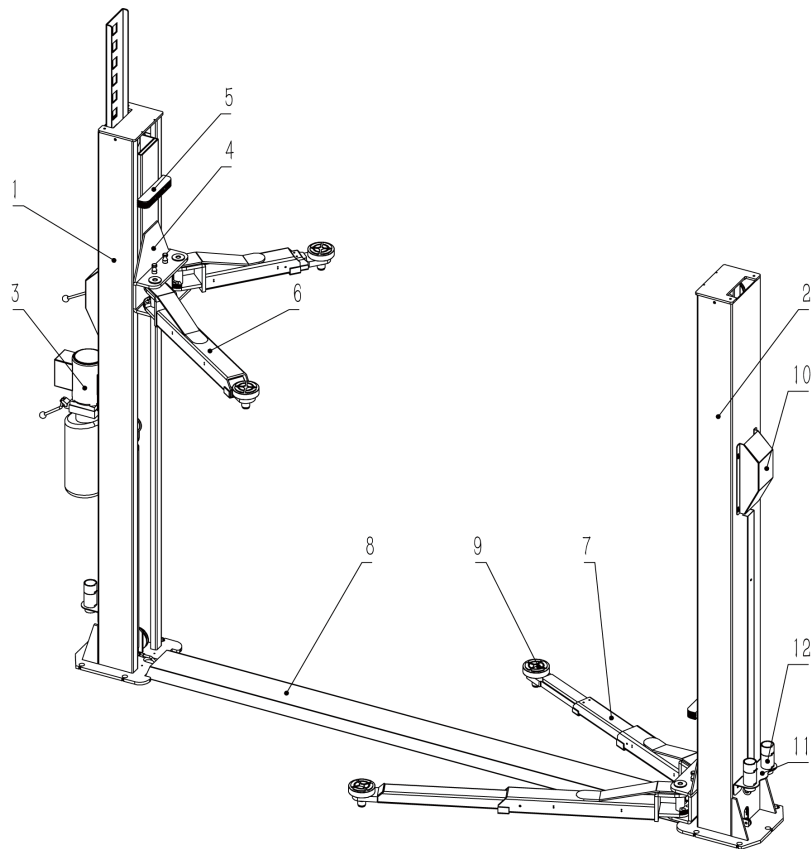
|                                          |                       |
|------------------------------------------|-----------------------|
| Model                                    | SAE-F10S              |
| Lifting capacity                         | 4500KG/1000lbs        |
| Lifting height                           | 2000mm/78 3/4"        |
| Min height                               | 110mm/4 5/16"         |
| Width between columns                    | 2880mm/113 3/8"       |
| Drive through                            | 2572.6mm/101 1/4"     |
| Lifting time                             | About 40 Sec.         |
| Lowering time                            | About 30 Sec.         |
| Column thickness                         | 5.5mm / 1/4"          |
| Carriage thickness                       | 5.5mm / 1/4"          |
| The thickness of the square pipe for arm | 6mm / 1/4"            |
| arm range                                | 680-1230mm/880-1440mm |
| Diameter of steel wire rope              | Φ9mm / 3/8"           |
| Voltage                                  | 220V                  |
| Power                                    | 2.2kW                 |
| Frequency                                | 60Hz                  |
| Circuit Breaker                          | 1ph                   |
| Hydraulic oil                            | 30A                   |
| Equipment Weight                         | AW46/AW32             |
| Packing Dimensions                       | 2880×740×810mm        |
| Equipment Weight                         | 610KG/1343lbs         |

2.1- Product Dimensions



3-Equipment appearance and dimensions

3.1-Structure Composition



| POS. | Name                       |
|------|----------------------------|
| 1    | Main column assembly       |
| 2    | Sub-column assembly        |
| 3    | Power unit                 |
| 4    | Carriage                   |
| 5    | Anti-collision tape        |
| 6    | Two-section arm assembly   |
| 7    | Three-section arm assembly |
| 8    | Floor plate                |
| 9    | Single layer spiral tray   |
| 10   | Plastic buckle cover       |
| 11   | Heightening bracket        |
| 12   | Increase the set           |

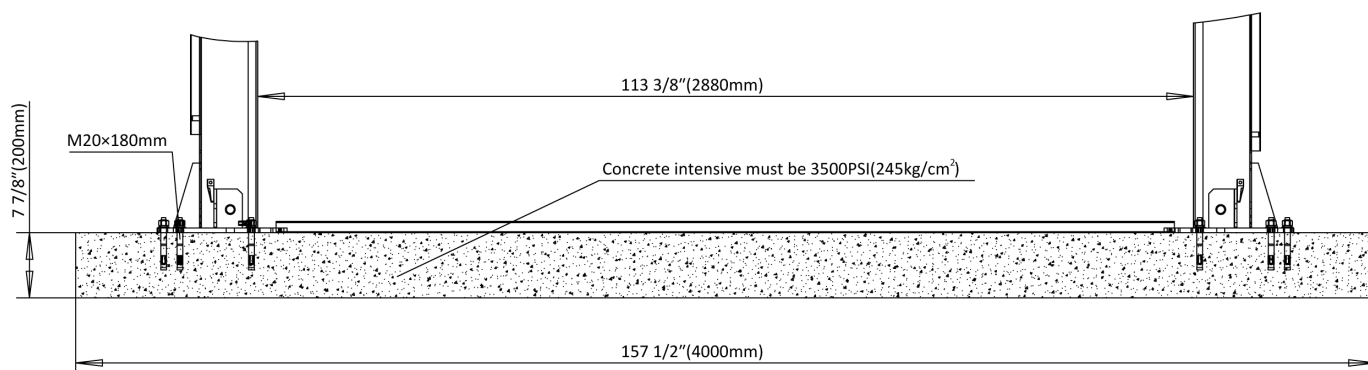
### 3.2- Installation requirement

Tools required: electric hand drill (drill bits D16 and D18),open spanner (D17-19),movable spanner, Phillips screw-driver, slotted screwdriver, horizontal instrument, hammer, band tape, etc.

| Name                                           | Picture                                                                               |
|------------------------------------------------|---------------------------------------------------------------------------------------|
| Rotary hammer drill (Φ19)                      |     |
| carpenter's chalk                              |    |
| Hammer                                         |     |
| Screw Sets                                     |    |
| Level bar                                      |    |
| Tap measure                                    |  |
| English spanner(12")                           |  |
| Pliers                                         |   |
| Ratchet spanner with socket(28#)               |  |
| Socket head wrench(3#,5#,8#)                   |   |
| Lock wrench                                    |  |
| Wrench set(10#,13#,14#,15#,17#,19,24#,27#,30#) |   |

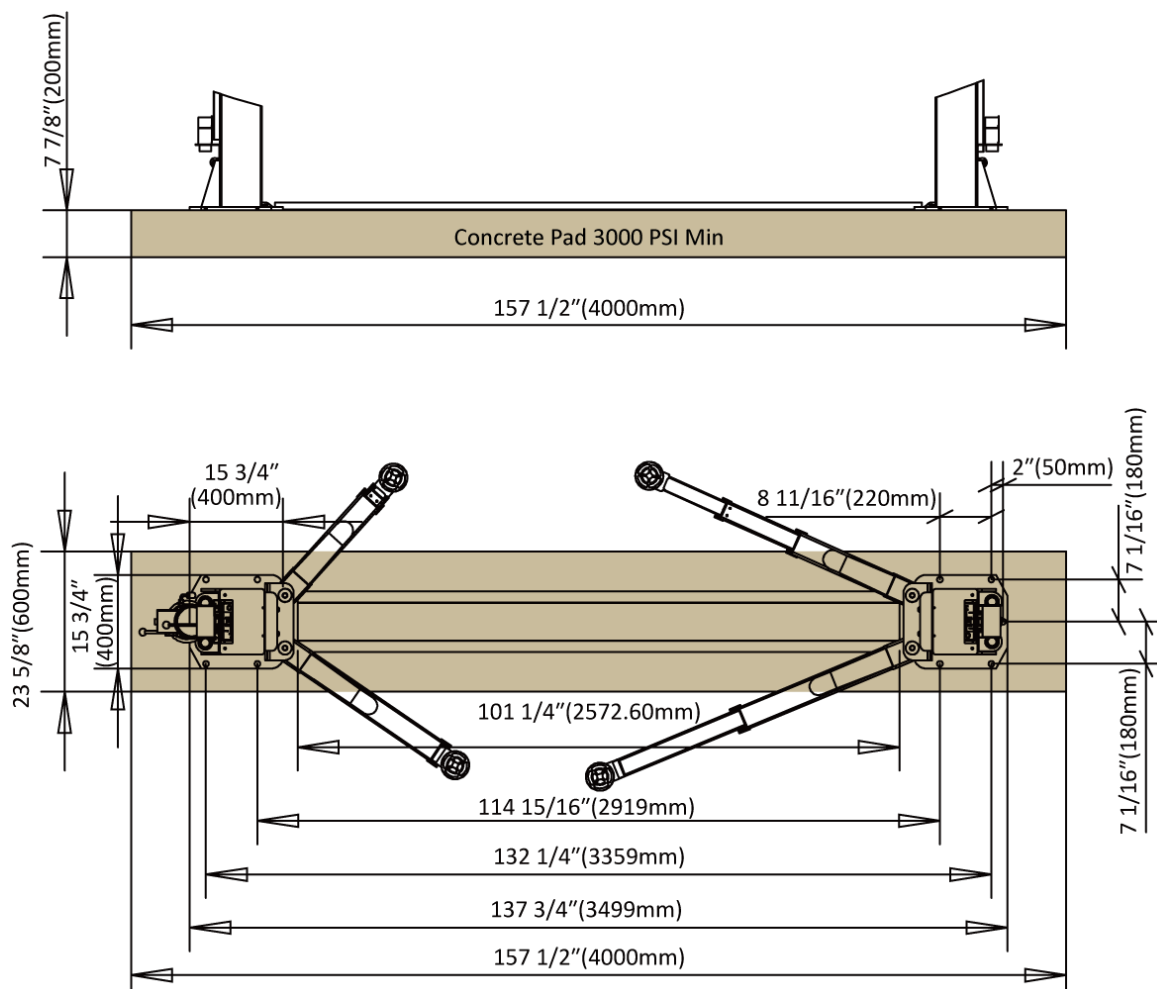
#### 4.1-Foundation requirements

- ◇ Concrete must be thickness 200mm minimum and without reinforcing steel bars, and must be completely dry before lift installation.
- ◇ Concrete must be in good condition and must be of test strength 3500PSI(245kg/cm<sup>2</sup>)minimum.
- ◇ Floor must be level with no cracks or holes.



◇ **Location of installation**

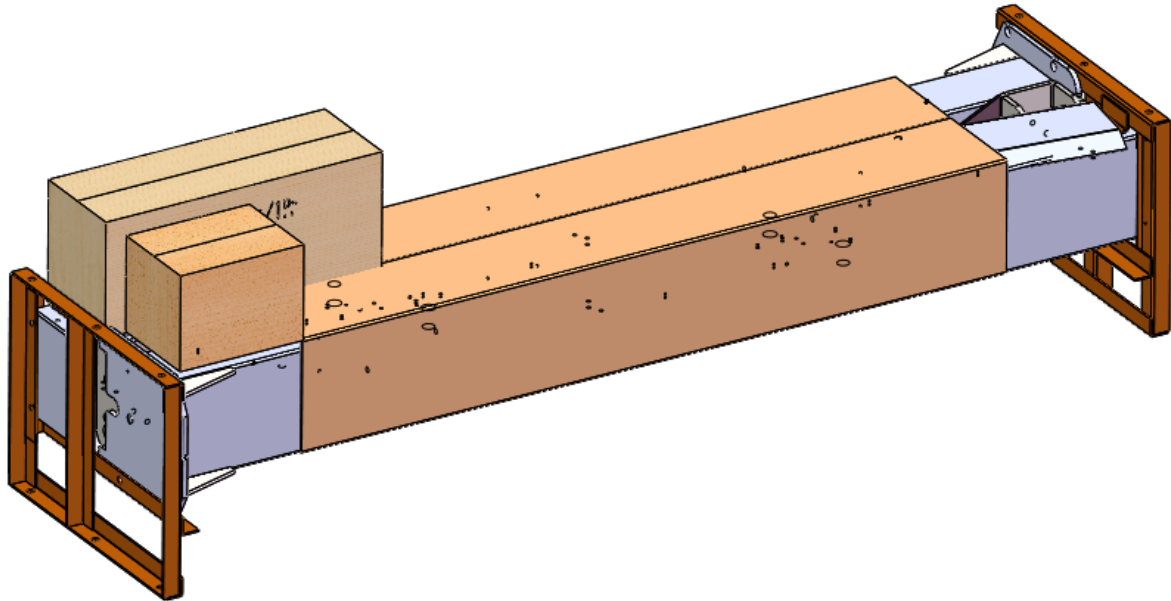
◆ **Use a carpenter's chalk line to establish installation layout of baseplate.**



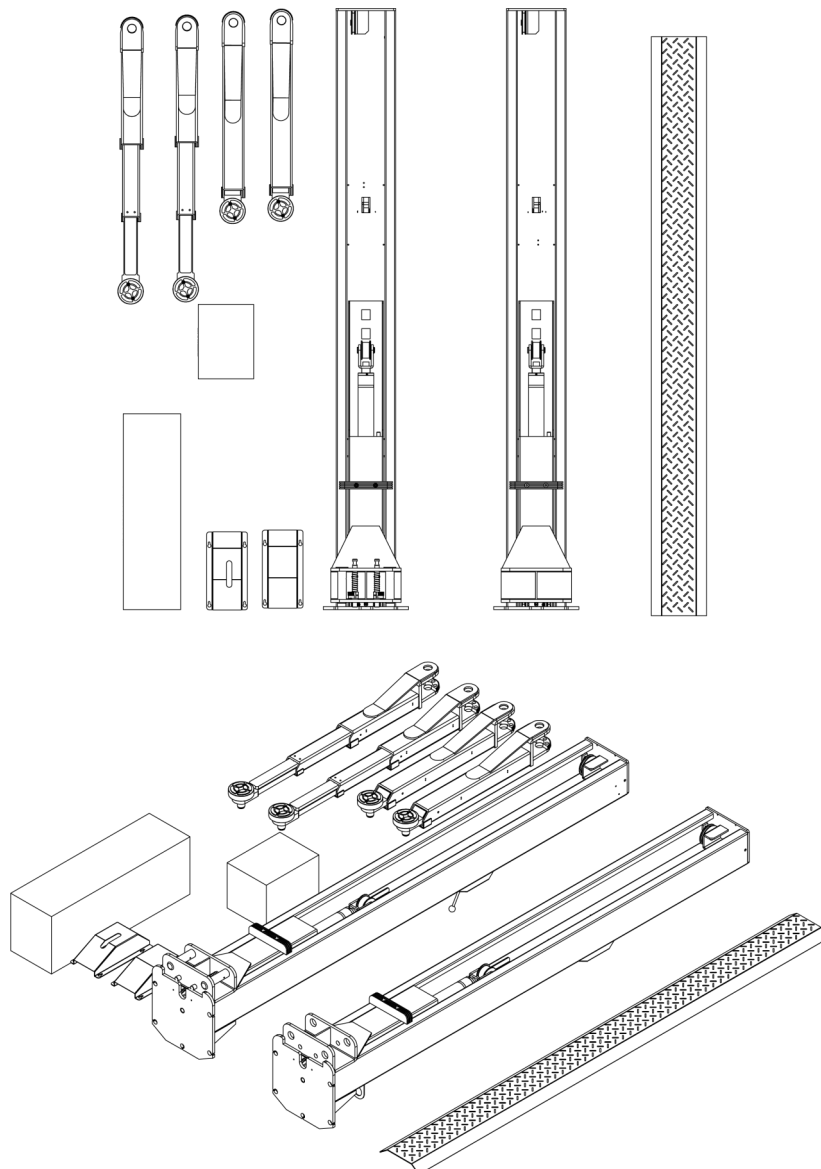
## 4.2- Installation steps

### Step 1:Check the parts before assembly

Packaged lift and hydraulic power unit.

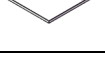


### Step 2:Move aside the parts and check the parts according to the shipment parts list .



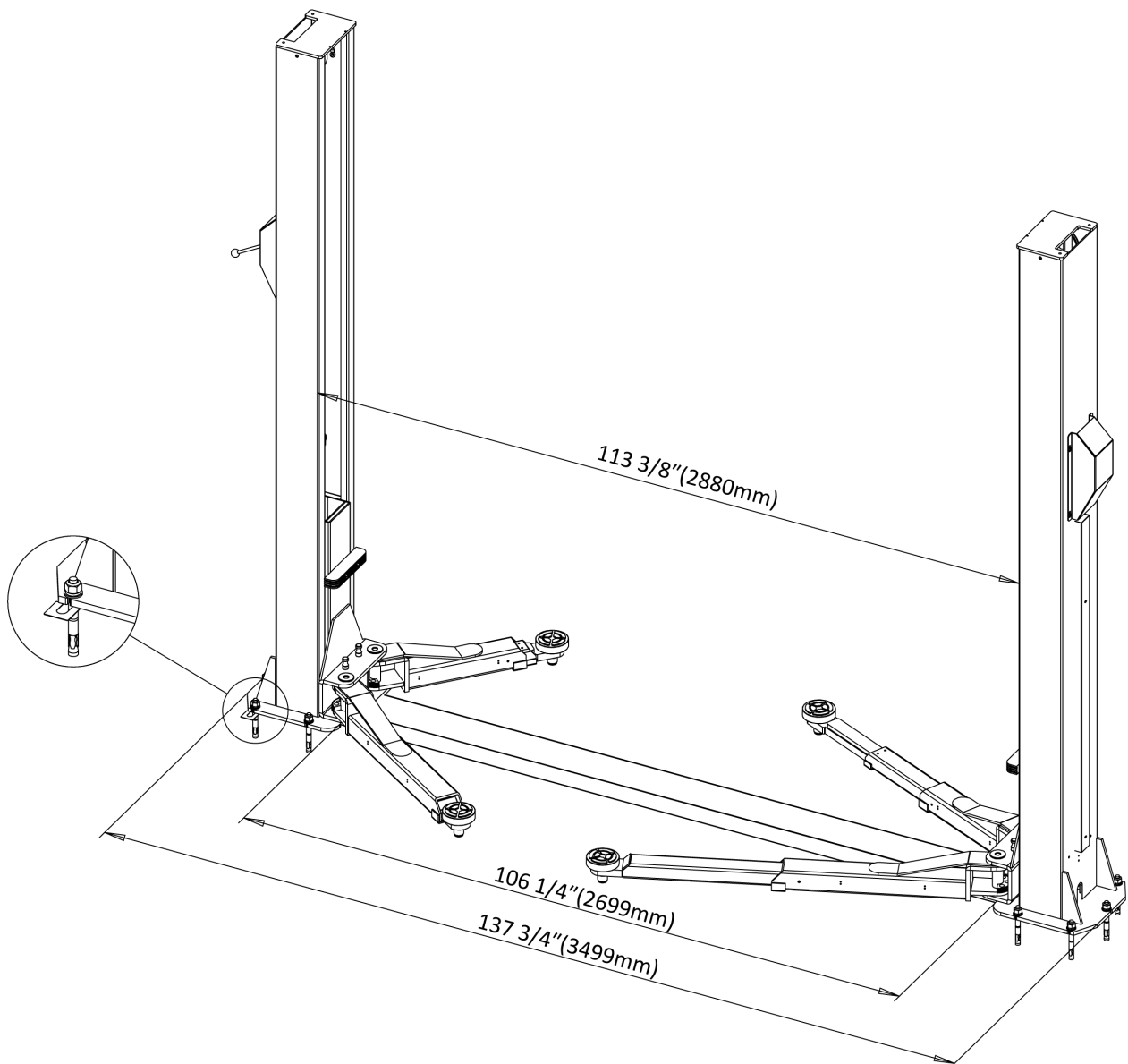


**Step 3: Spare parts in the accessories box.**

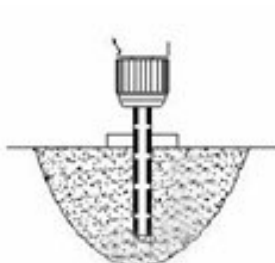
| Serial number | Name                                                 | Photo                                                                               | Parameter                            | Quantity |
|---------------|------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------|----------|
| 1             | Arm shaft                                            |    | Φ40×168mm                            | 4        |
| 2             | Arm shaft elastic cylindrical pin                    |    | Φ6×50mm                              | 4        |
| 3             | Increased set 1                                      |    | Φ50×45L                              | 4        |
| 4             | Increased set 2                                      |    | Φ50×70L                              | 4        |
| 5             | Anti-collision tape                                  |    |                                      | 2        |
| 6             | Anti-collision tape strip fixing screws              |    | Hexagon socket screws<br>M8×30       | 4        |
| 7             | Expansion screw                                      |    | M20×160L                             | 10       |
| 8             | Plastic gasket                                       |  |                                      | 15       |
| 9             | Power unit fixing screws                             |  | Hexagon Screw M8×25L                 | Each 4   |
| 10            | Manual unlocking lever                               |  | M10                                  | Each 1   |
| 11            | Unlock the wire rope                                 |  |                                      | 1        |
| 12            | Wire rope U-shaped chuck                             |  | M3                                   | 1        |
| 13            | Plastic cable tie                                    |  |                                      | 15       |
| 14            | Main column upper limit switch                       |  |                                      | 1        |
| 15            | Main column upper limit switch fixing screw          |  | Phillips round head screws<br>M5×10L | Each 2   |
| 16            | Locking and unlocking rope seat assembly accessories |  |                                      | Each 6   |
| 17            | User's manual                                        |  |                                      | 1        |

#### **Step 4: Install anchor bolts**

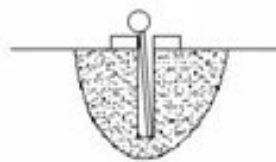
Position the columns on the installation layout of baseplate. Install the anchor bolts. Check the columns plumbness with level bar, and adjusting with the shims if the columns are not vertical. Do not tighten the anchor bolts .



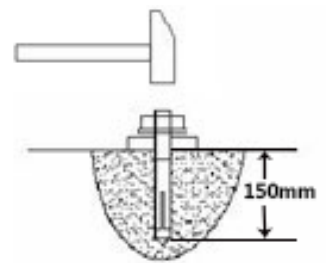
**Note:** Anchor bolts driven into the ground at least 150mm.



**Drilling**



**Cleaning**



**Bolting**

### 4.3-Column Installation

4.3.1- Lift the carriage to the first lock position to ensure that the mechanical lock is locked in place to facilitate the installation of expansion bolts.

4.3.2- According to the dimensions of foundation, measure the position of the main and auxiliary columns, check the position and dimensions of the bottom plate, and drill the expansion screw fixing holes, clean up the drilling dust.

4.3.3 -Check the vertical calibration of the column by using the horizontal instrument. If necessary adjust the gasket under the bottom plate, and the length of the gasket should be same as the side length of the bottom plate pressed on it.

4.3.4 -Use expansion bolts to secure the base plate of the column to the foundation.

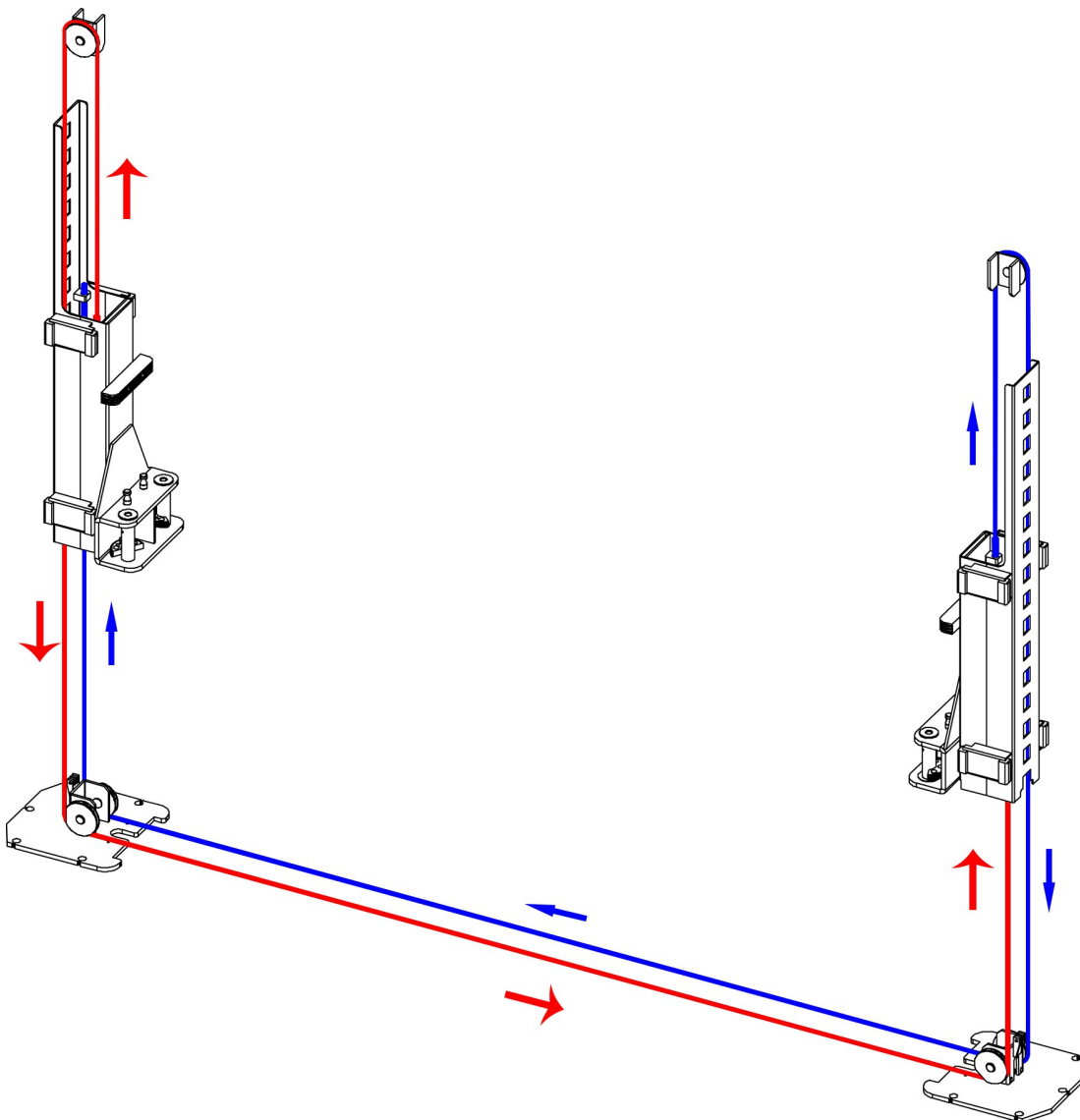
### 4.4- Installation of balanced wire rope

4.4.1- Firstly adjust the two sides of the carriage to the same height.

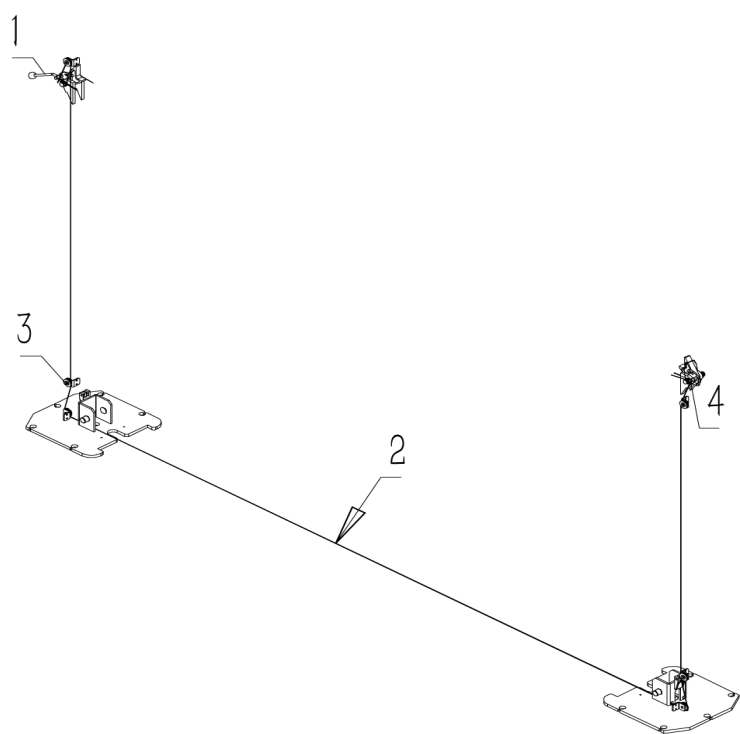
4.4.2 -As the below pictures, connect the wire rope.

4.4.3 -After installing the wire rope, adjust the tightness of the wire rope by adjusting the crew cap of the rope head, and judge by the sound of the safety on both sides when rising , such as the same sound, indicating that the debugging has been completed, or through the rising process, the height of the carriage on both sides is the same. In the process of falling, the carriage drops to the lowest point, and the arm safety lock is completed.

4.4.4 -Use No.1 lithium grease to lubricate the wire rope.( this step cannot be omitted).

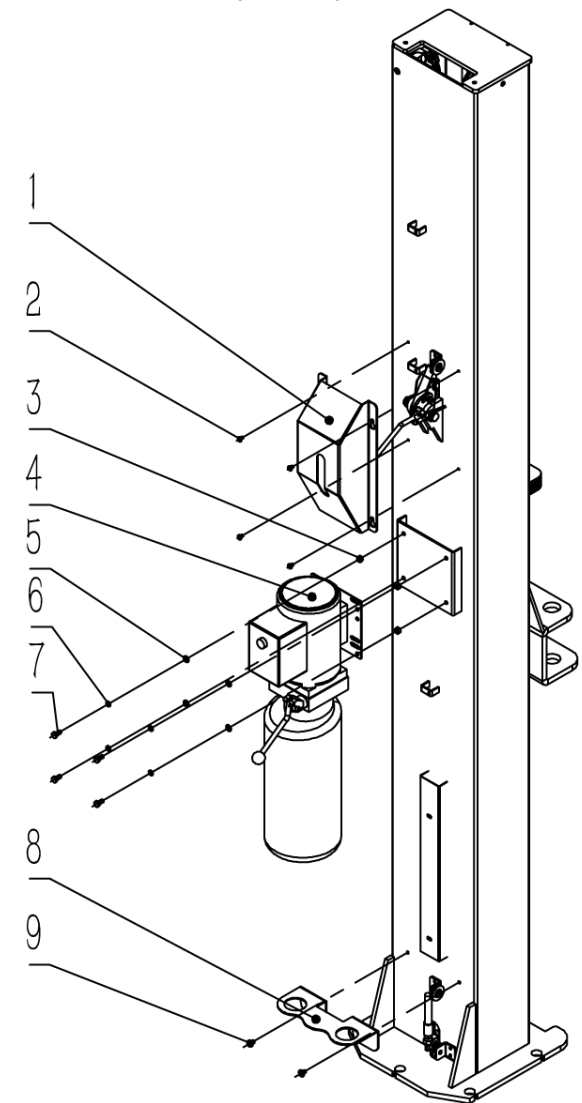


4.5-Connect and unlock the thin wire rope



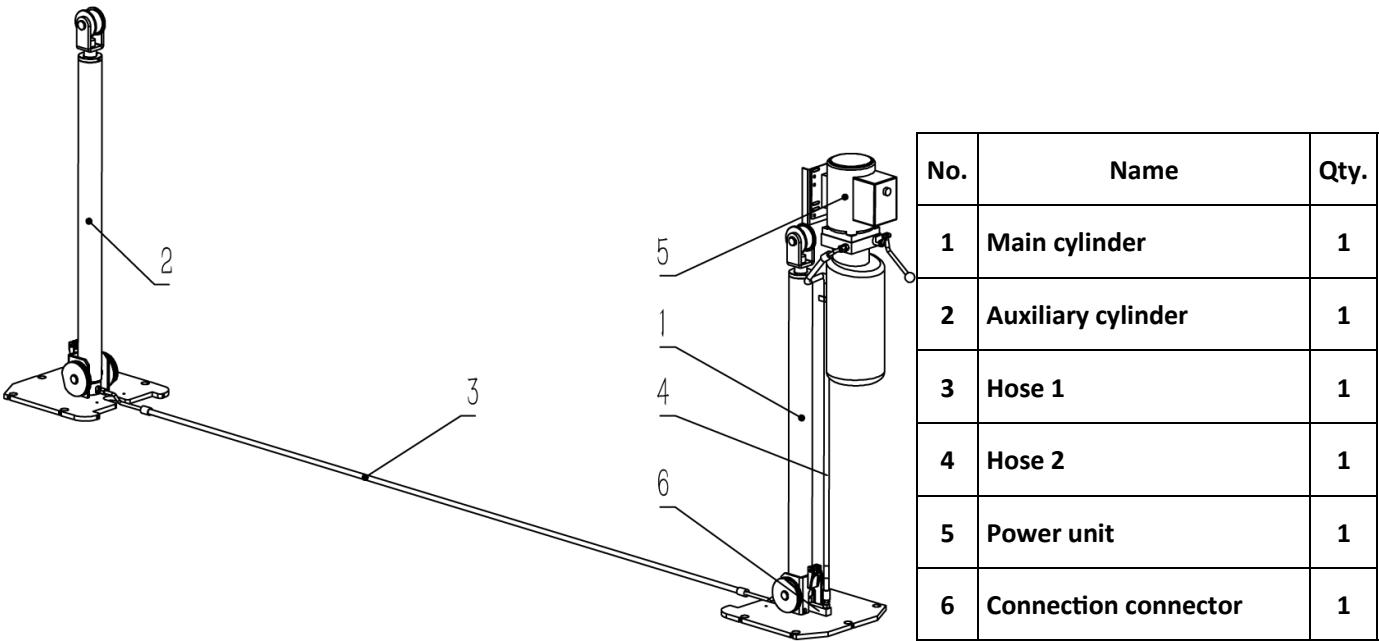
| No. | Name                                                 | Qty. |
|-----|------------------------------------------------------|------|
| 1   | Manual unlocking lever                               | 1    |
| 2   | Unlock the wire rope                                 | 1    |
| 3   | Locking and unlocking rope seat assembly accessories | 6    |
| 4   | Unlock the rope seat                                 | 2    |

4.6-Installation of hydraulic power unit, lock cover, height adapter bracket

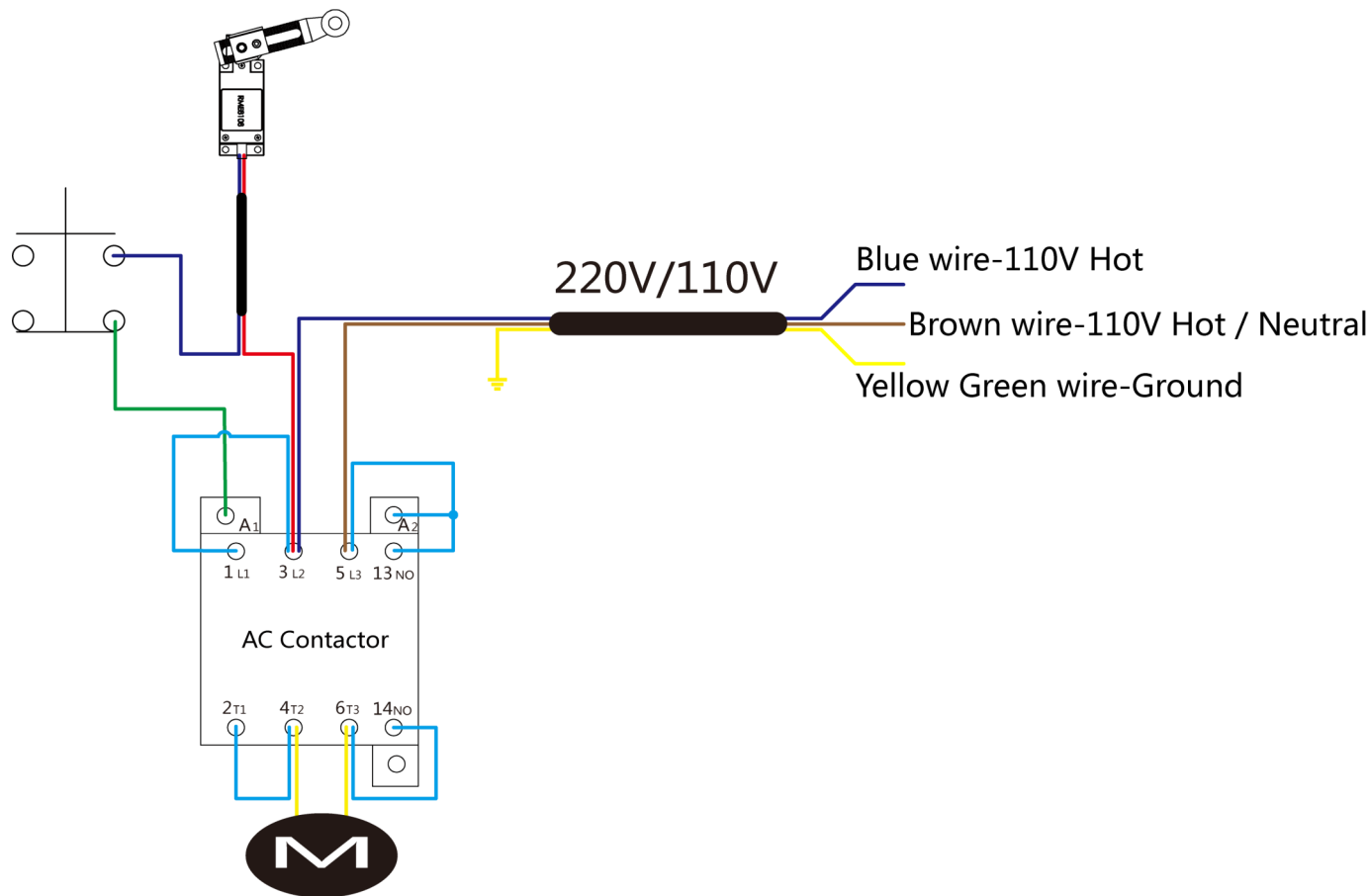


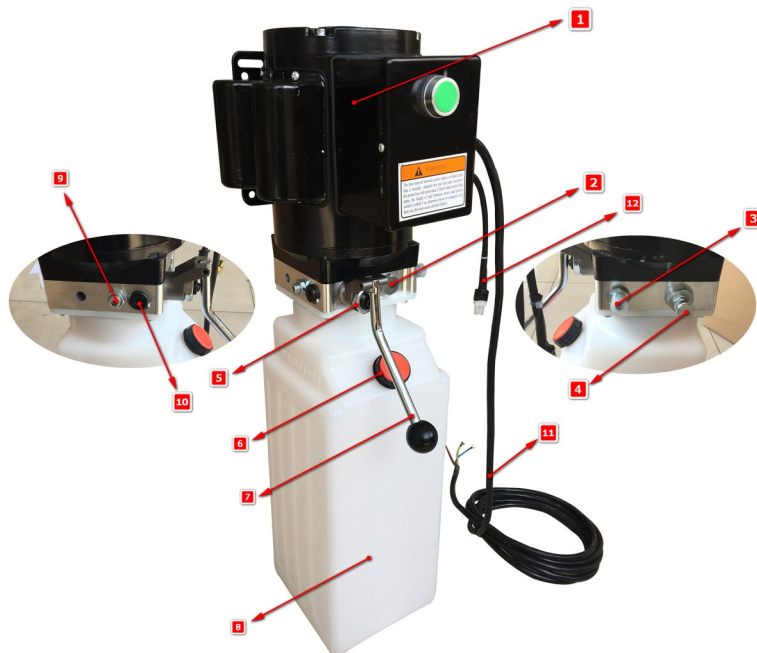
| NO. | Name                            | Qty. |
|-----|---------------------------------|------|
| 1   | Safety lock cover               | 1    |
| 2   | Phillips round head screws M6×8 | 4    |
| 3   | Hex nuts M8                     | 4    |
| 4   | Power unit                      | 1    |
| 5   | Flat pad Φ8                     | 4    |
| 6   | Spring cushion Φ8               | 4    |
| 7   | Hex bolts M8×25                 | 4    |
| 8   | Heightening bracket             | 1    |
| 9   | Socket head cap screws M8×10    | 2    |

4.7-The connection of the hoses



4.8-The connection of the lines





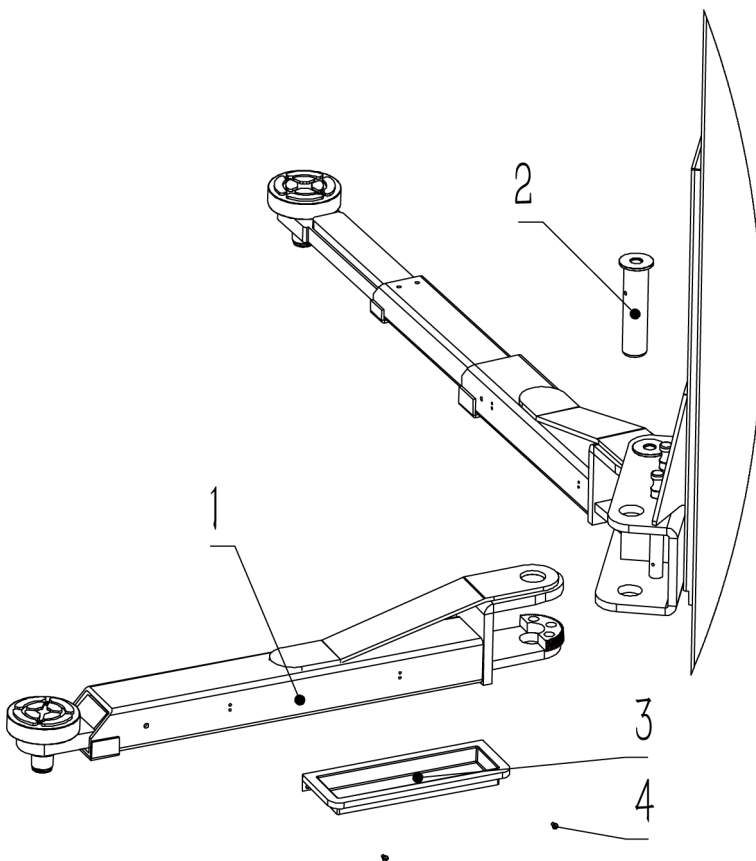
| Pos. | Name                                    |
|------|-----------------------------------------|
| 1    | Motor                                   |
| 2    | Check Valve                             |
| 3    | Connect to Hydraulic Hose               |
| 4    | Pressure Valve                          |
| 5    | Dump Valve                              |
| 6    | Hydraulic Oil Filling Port              |
| 7    | Unloading Valve Stem                    |
| 8    | Oil Drum                                |
| 9    | Hydraulic Oil Flow Valve                |
| 10   | Optional Hydraulic Hose Connection Hole |
| 11   | Power line                              |
| 12   | Limit Switch Wire                       |

### **\*\*Important Information\*\***

**Pressure Valve:** Clockwise adjustment increases pressure to make the power unit to have more power, counterclockwise adjustment decreases pressure to make the power unit to have less power.

**Hydraulic Oil flow valve:** Clockwise adjustment to speed up, counterclockwise adjustment to slow down.

### **4.9-Installation of the arm**



| Pos. | Name                            | Qty. |
|------|---------------------------------|------|
| 1    | Arm combination                 | 1    |
| 2    | Arm shaft                       | 1    |
| 3    | Tool box (Optional)             | 1    |
| 4    | Phillips round head screws M5×8 | 2    |

#### **4.10-Filling the hydraulic oil**

**Attention: Please use the new hydraulic oil.**

**The capacity of the oil tank is 10L. Do not fill the oil tank completely. The hydraulic oil must be 4/5 or more of the capacity of the oil tank to work normally.**

**Use 32# in winter and 46# anti-wear hydraulic oil in summer.**

**Suggestion: Replace the hydraulic after six months, one time once year.**

#### **5. The operation & debugging of the equipment**

##### **5.1-Instructions for operation**

**5.1.1 Check all hoses connections, the equipment can only be used if there is no oil leakage.**

**5.1.2 The lift can not be used if the safety device is not working.**

**5.1.3 The lift can not be used if the center of gravity for the vehicle is not in the center of the lifting range, otherwise manufacturers and distributors will not bear any consequences.**

**5.1.4 When the lift is ascending and descending, the operator and other staffs must stand in a safe area.**

**5.1.5 When the lifting arm rises to the required height, the power must be turned off to avoid misoperation.**

**5.1.6 If you want to work under the vehicle, make sure that the safety lock is in the occlusion state. When the lift is ascending and descending, no one is allowed to stand under the vehicle.**

##### **5.2-Operating Process**

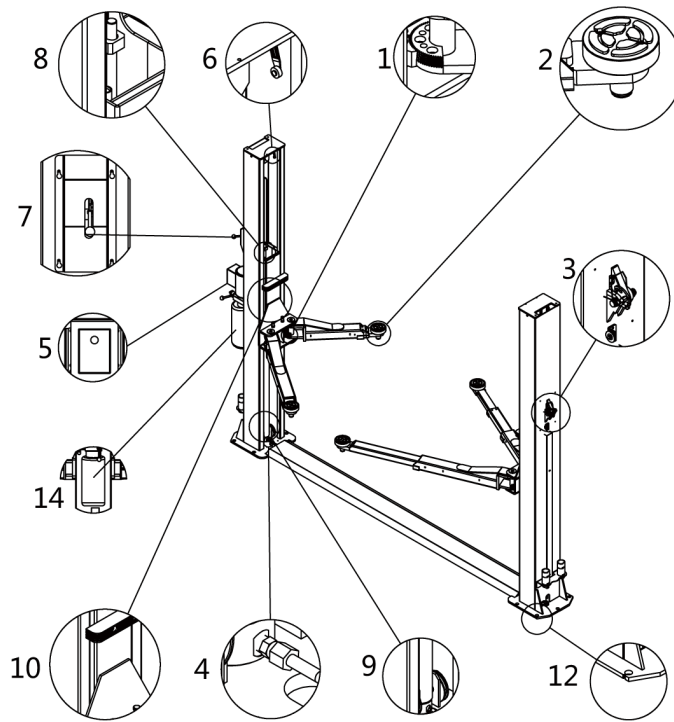
###### **5.2.1 Ascending**

- 1. Drive the vehicle, park it within the range of the lifting arm, swing the lifting arm to the vehicle support point, and ensure that the center of gravity of the vehicle is in the center of the four lifting arms.**
- 2. Turn on the power switch, press the button on the hydraulic power until the pad of the lifting arm touches the support point of the vehicle.**
- 3. Keep ascending, make sure that the vehicle has left the ground, then check the vehicle position again.**
- 4. When it ascends to the required height, check again whether the vehicle is safe; check whether the safety lock of the lifting arm is occlusion, and whether the carriage also falls on the safety lock. Turn off the power and work under the vehicle only after checking.**

###### **5.2.2 Descending**

- 1. Before ascending, make sure that there is no people or other obstacles under the vehicle.**
- 2. Turn on the power, press the button on the hydraulic power unit to rise, the carriage rises from the safety lock, manually pull the unlocking lever down, and then press the valve stem, the lift begins to descend.**
- 3. When descending to the lowest point, the lifting arms will open automatically, then drive away after moving or retracting all the arms.**

## 6-The maintenance and inspection of the equipment



| Pos. | Name                                  | Methods                                                                                                                         | Period             |
|------|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|--------------------|
| 1    | Arm Safety lock tooth                 | Manually check the occlusion of the arm safety lock tooth and whether they can be completely locked.                            | Every day          |
| 2    | Spiral pad combination                | Check the rubber pad, clean and replace also.                                                                                   | Every day          |
| 3    | Column safety lock combination        | Check the cooperative relationship between the safety lock and the carriage.                                                    | Every day          |
| 4    | Cylinder and hose connectors          | Before using the lift, check for oil leakage.                                                                                   | Every day          |
| 5    | Control button                        | Check whether the button "press to run, hand off and stop".                                                                     | Every day          |
| 6    | Limit Switch                          | Press the hydraulic power unit's button, the lift rises, and when the carriage hits the limit switch, it stops rising.          | Every day          |
| 7    | Unlock the thin wire rope             | Check the synchronization and tightness of the safety lock of the main and auxiliary columns connected with the thin wire rope. | Every day          |
| 8    | Wire rope                             | Check the synchronization and tightness of the wire rope, use No. 1 lithium base grease for lubrication.                        | Every day          |
| 9    | Steel wire rope wheel and chain wheel | Check if the rope & chain wheel lubricated and the circlip is in the groove.                                                    | Every three months |
| 10   | Slider platform running track         | The sliding table running track is lubricated with No.1 lithium -based grease, and there is no obstacle on the running track.   | Every three months |
| 11   | Chains and chain pins                 | Chains and chain pins are condition of the expansion bolts and the ground. If there is a crack, replace it.                     | Every three months |
| 12   | Anchor bolts                          | Check the condition of the expansion bolts and the ground, If there is any looseness, deal with it urgently.                    | Every three months |
| 13   | Overall                               | The rated load or no-load lift lifts several rounds, the lift should operate stably without abnormal noise.                     | Every three months |
| 14   | Hydraulic Oil                         | Replace the hydraulic oil within 6 months of first use, and then once a year.                                                   | Every year         |

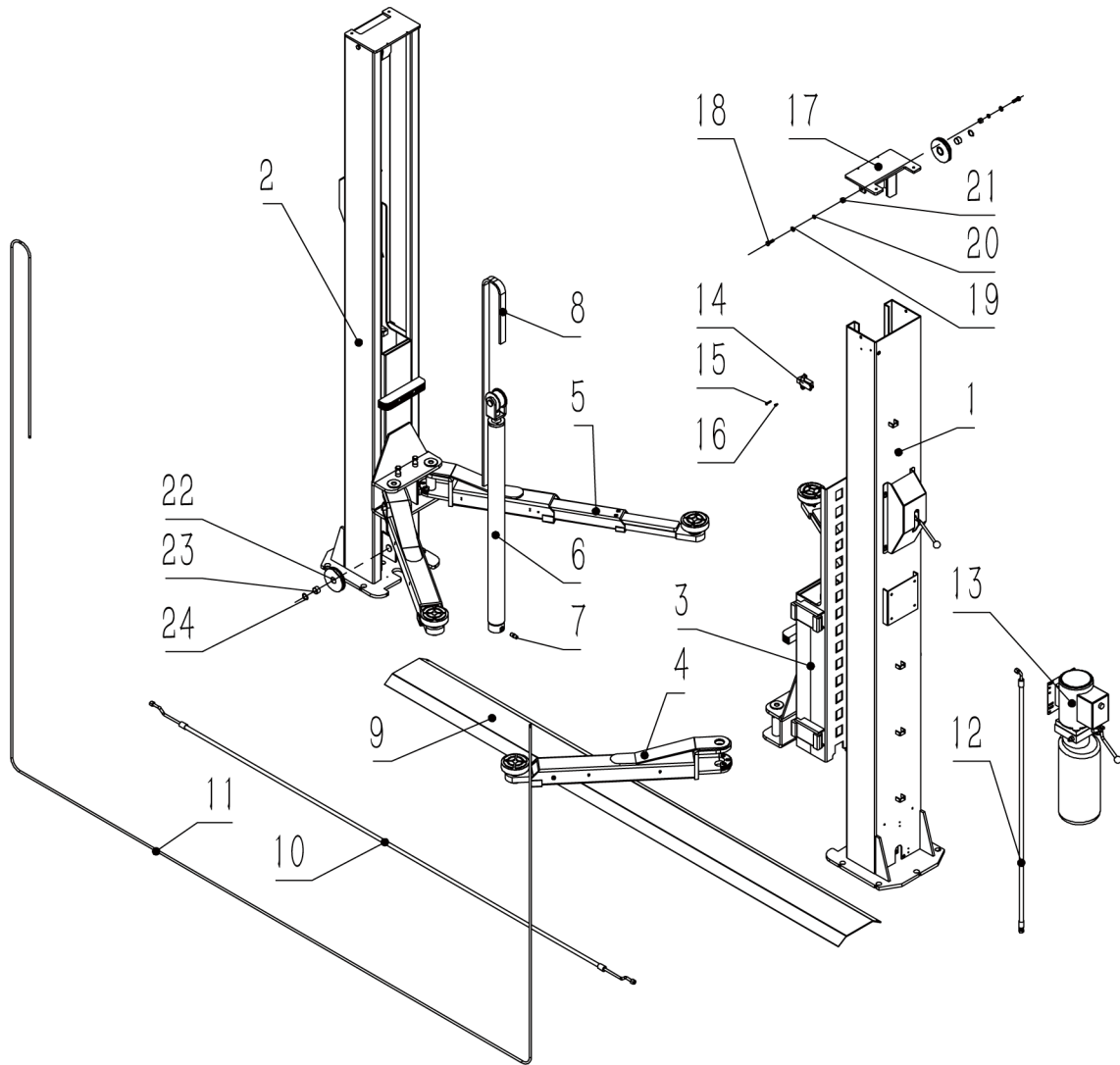


## 7. Troubleshooting of common faults

| Fault                               | Reason                                                           | Methods                                 |
|-------------------------------------|------------------------------------------------------------------|-----------------------------------------|
| Abnormal sound is found.            | Are there any abrasion marks inside the column?                  | Add some lubricant oil into the column. |
|                                     | Are there any obstacles in the column?                           | Chin up the obstacles.                  |
| The motor does not rotate or rise.  | The cables connection is not good.                               | Check and connect the lines.            |
|                                     | Motor is damaged.                                                | Replace the motor.                      |
|                                     | Limit switch is damaged.                                         | Replace the limit switch.               |
| Motor rotated, but does not rising. | Motor reversal.                                                  | Correction of cables connection.        |
|                                     | The overflow valve is loose or there are obstacles.              | Adjust and clean.                       |
|                                     | Gear pump is damaged.                                            | Replace the gear pump.                  |
|                                     | The oil suction pipe is loose and falls of.                      | Tighten the oil suction pipe.           |
|                                     | The suction pipe filter is clogged.                              | Clean.                                  |
| Unload slowly after rising.         | Check if the hose is leaking.                                    | Replace the hose.                       |
|                                     | Cylinder is not sealed.                                          | Replace the cylinder.                   |
|                                     | Retaining valve is not sealed.                                   | Clean or replace.                       |
|                                     | The overflow valve is not good.                                  | Clean or replace.                       |
|                                     | The unloading valve of the descending is not good.               | Clean or replace.                       |
| Rising speed is low.                | Oil filter is clogged.                                           | Clean or replace.                       |
|                                     | Oil pressure mixed with air.                                     | Replenish the hydraulic oil.            |
|                                     | The adjustment of the overflow valve is not good.                | Adjust.                                 |
|                                     | Hydraulic oil is hotter (above 45 degrees).                      | Replace.                                |
|                                     | The seal components of the cylinder is damaged.                  | Replace.                                |
| Descending speed is slow.           | The throttle valve of the descending is tucked by the obstacles. | Clean or replace.                       |
|                                     | Hydraulic oil is not clean.                                      | Replace.                                |
|                                     | There is some obstacles in the hose.                             | Clean or replace.                       |
|                                     | The hose connectors are struck by the obstacles.                 | Clean or replace.                       |

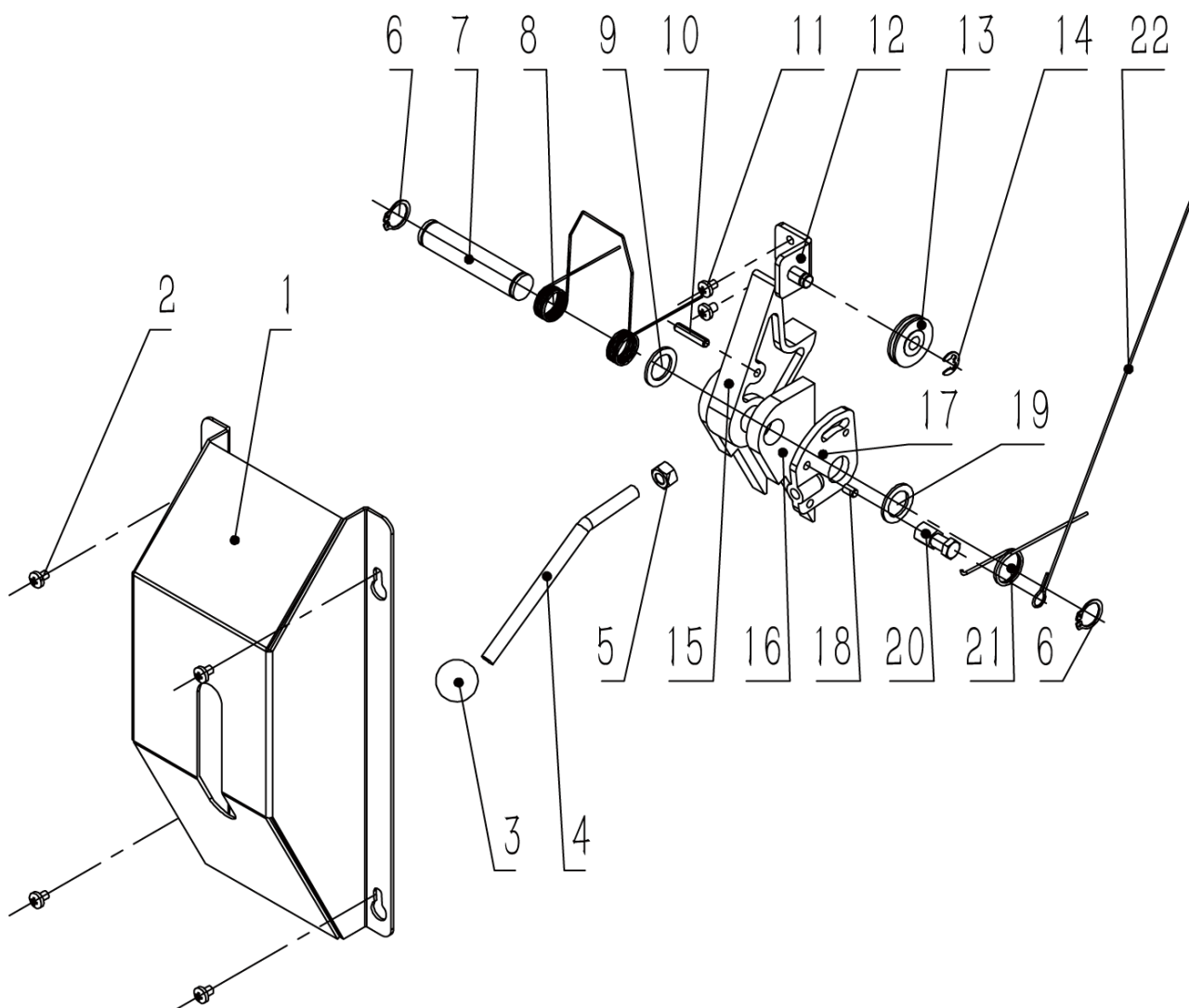
## 8. Explosion picture of the product

### 8.1 Appearance explosion picture



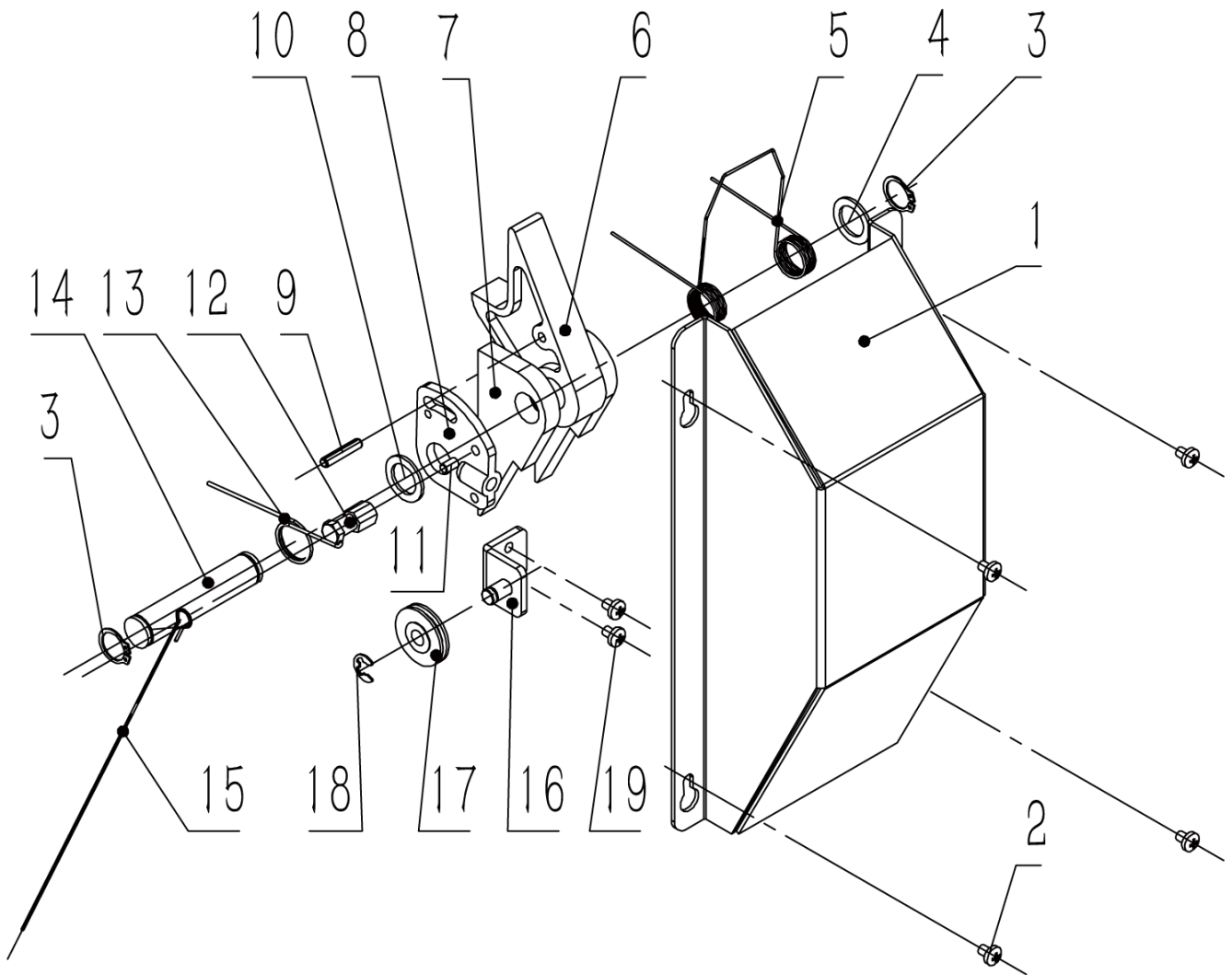
| Pos. | Name                                | Qty. | Pos. | Name                             | Qty. |
|------|-------------------------------------|------|------|----------------------------------|------|
| 1    | Main column assembly                | 1    | 13   | Power unit                       | 1    |
| 2    | Sub-column assembly                 | 1    | 14   | Limit switch                     | 1    |
| 3    | Block assembly                      | 2    | 15   | Phillips round head screws M5×10 | 1    |
| 4    | Two-section support arm combination | 2    | 16   | Phillips round head screws M5×25 | 2    |
| 5    | Three-section arm combination       | 2    | 17   | Upper cover welding              | 4    |
| 6    | Cylinder                            | 2    | 18   | Hex bolts M10×30                 | 4    |
| 7    | Cylinder connector                  | 2    | 19   | Flat pad Φ10                     | 4    |
| 8    | Chain                               | 2    | 20   | Spring cushion Φ10               | 4    |
| 9    | Approach board                      | 1    | 21   | Hex nuts M10                     | 6    |
| 10   | Hose 2                              | 1    | 22   | Wire rope                        | 6    |
| 11   | Wire rope                           | 2    | 23   | Oil-free bearing 2528            | 6    |
| 12   | Hose 1                              | 1    | 24   | Circlip Φ25                      | 6    |

## 8.2 Assembling of the safety lock for the main column



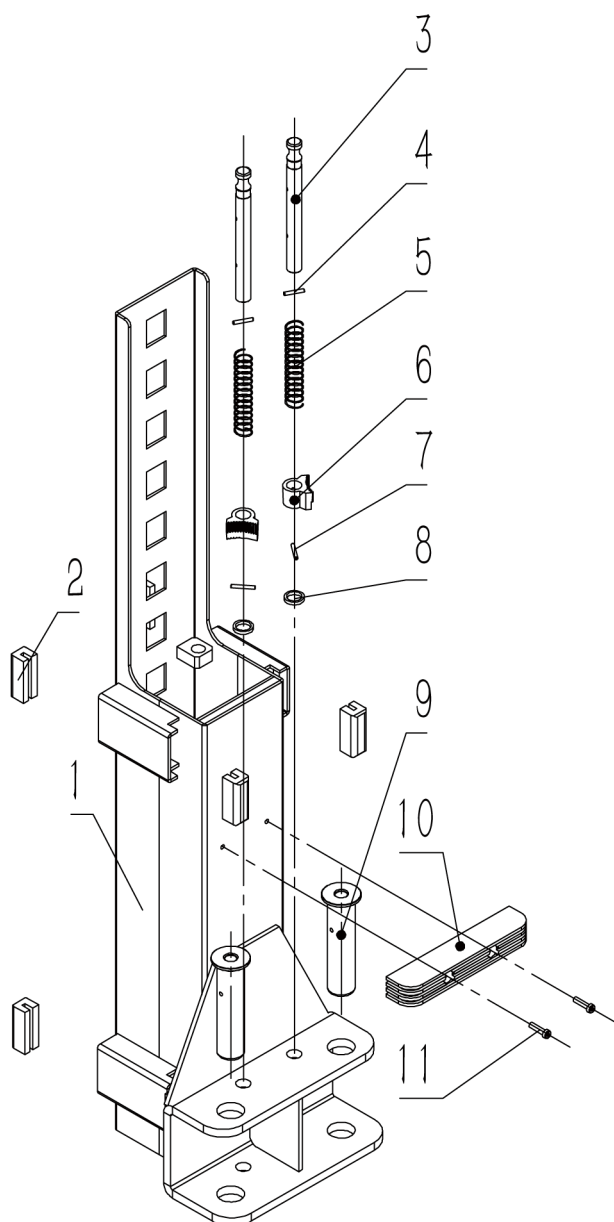
| Pos. | Name                            | Qty. | Pos. | Name                         | Qty. |
|------|---------------------------------|------|------|------------------------------|------|
| 1    | Main column safety lock cover   | 1    | 12   | Unlock the rope seat welding | 1    |
| 2    | Phillips round head screws M6×8 | 4    | 13   | Small nylon wheel            | 1    |
| 3    | Handball                        | 1    | 14   | Circlip Φ9                   | 1    |
| 4    | Unlock lever                    | 1    | 15   | Safety tip lock              | 1    |
| 5    | Hex nuts M10                    | 1    | 16   | Bolt seat                    | 2    |
| 6    | Circlip Φ20                     | 2    | 17   | Unlock the handle seat       | 1    |
| 7    | Safety lock shaft               | 1    | 18   | Top wire M6×10               | 1    |
| 8    | Door spring                     | 1    | 19   | Washer Φ20                   | 1    |
| 9    | Washer Φ20                      | 1    | 20   | Unlock the rope seat         | 1    |
| 10   | Hollow pin Φ6×30                | 1    | 21   | Torsion spring               | 1    |
| 11   | Phillips round head screws M6×8 | 2    | 22   | Unlock the thin wire rope    | 1    |

### 8.3 Assembling of the safety lock for the auxiliary column



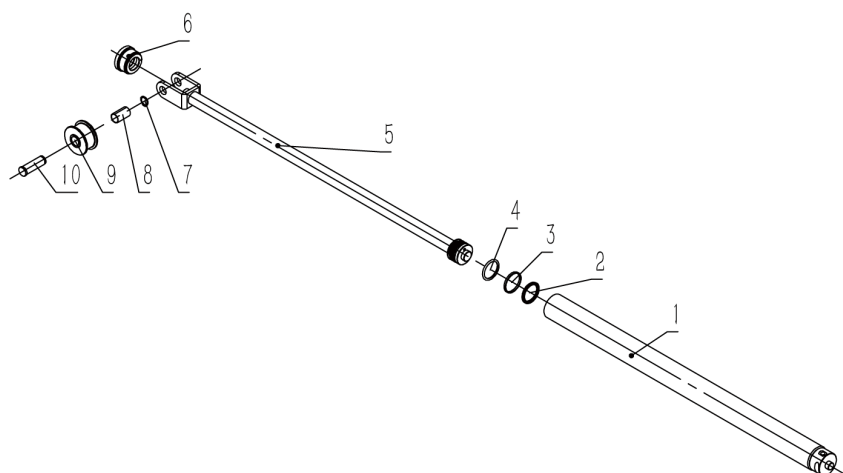
| Pos. | Name                               | Qty. | Pos. | Name                            | Qty. |
|------|------------------------------------|------|------|---------------------------------|------|
| 1    | Secondary column safety lock cover | 1    | 11   | Top wire M6×10                  | 1    |
| 2    | Phillips round head screws M6×8    | 4    | 12   | Unlock the rope seat            | 1    |
| 3    | Circlip Φ20                        | 2    | 13   | Torsion spring                  | 1    |
| 4    | Flat pad Φ20                       | 1    | 14   | Safety lock shaft               | 1    |
| 5    | Door spring                        | 1    | 15   | Unlock the thin wire rope       | 1    |
| 6    | Safety tip lock                    | 1    | 16   | Unlock the rope seat welding    | 1    |
| 7    | Bolt seat                          | 2    | 17   | Small nylon wheel               | 1    |
| 8    | Unlock the handle seat             | 1    | 18   | Circlip Φ9                      | 1    |
| 9    | Hollow pin Φ6×30                   | 1    | 19   | Phillips round head screws M6×8 | 2    |
| 10   | Washer Φ20                         | 1    |      |                                 |      |

## 8.4 Carriage Assembling



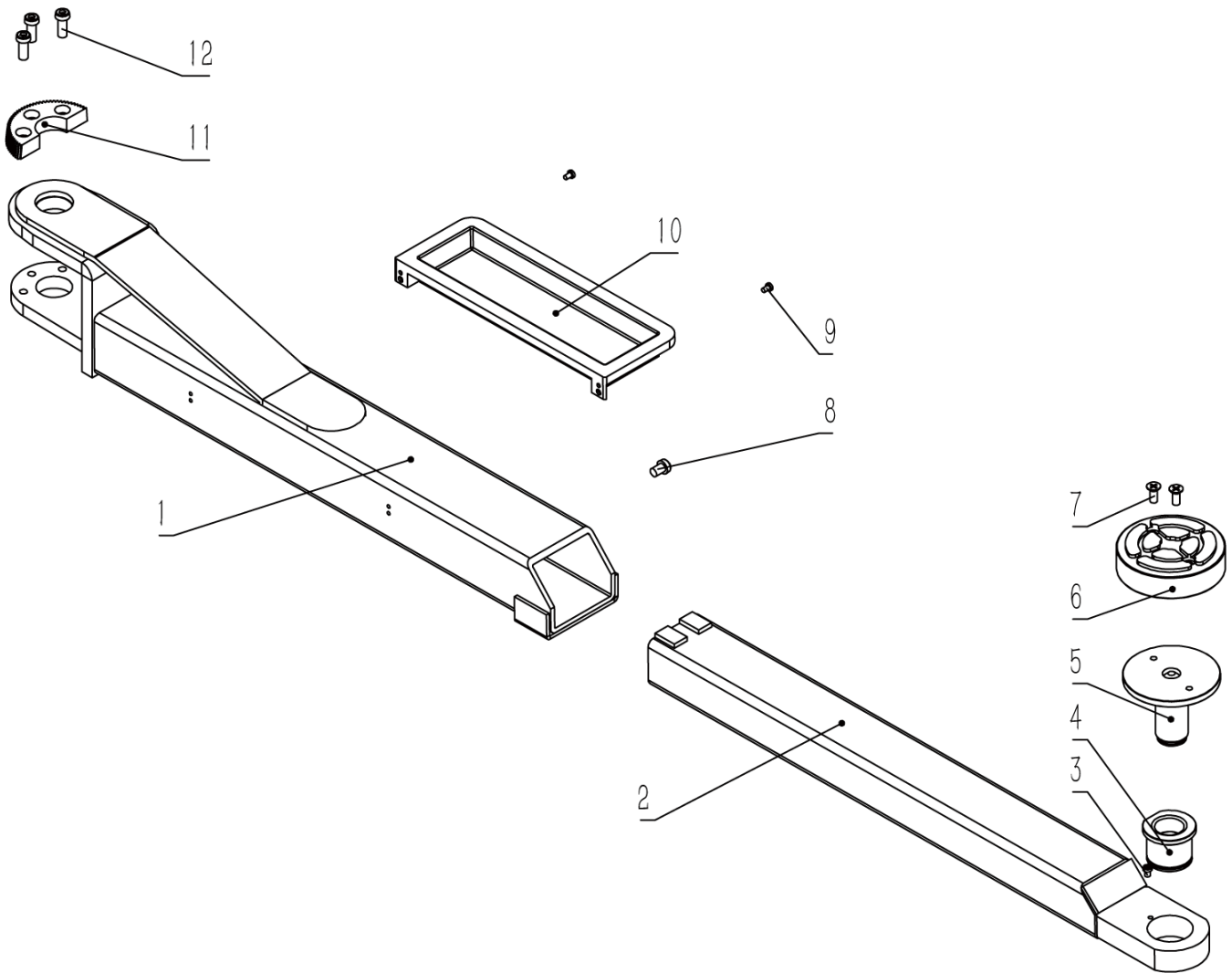
| Pos. | Name                                  | Qty. |
|------|---------------------------------------|------|
| 1    | Block welding                         | 1    |
| 2    | Slider                                | 8    |
| 3    | Half round gear shaft                 | 2    |
| 4    | Hollow pin $\Phi 5 \times 30$         | 2    |
| 5    | Half round gear shaft spring          | 2    |
| 6    | Half round tooth                      | 2    |
| 7    | Small lock washer                     | 2    |
| 8    | Hollow pin $\Phi 5 \times 35$         | 2    |
| 9    | Arm shaft                             | 2    |
| 10   | Anti-collision rubber block           | 1    |
| 11   | Socket head cap screws M8 $\times$ 30 | 2    |

## 8.5 Oil cylinder assembly



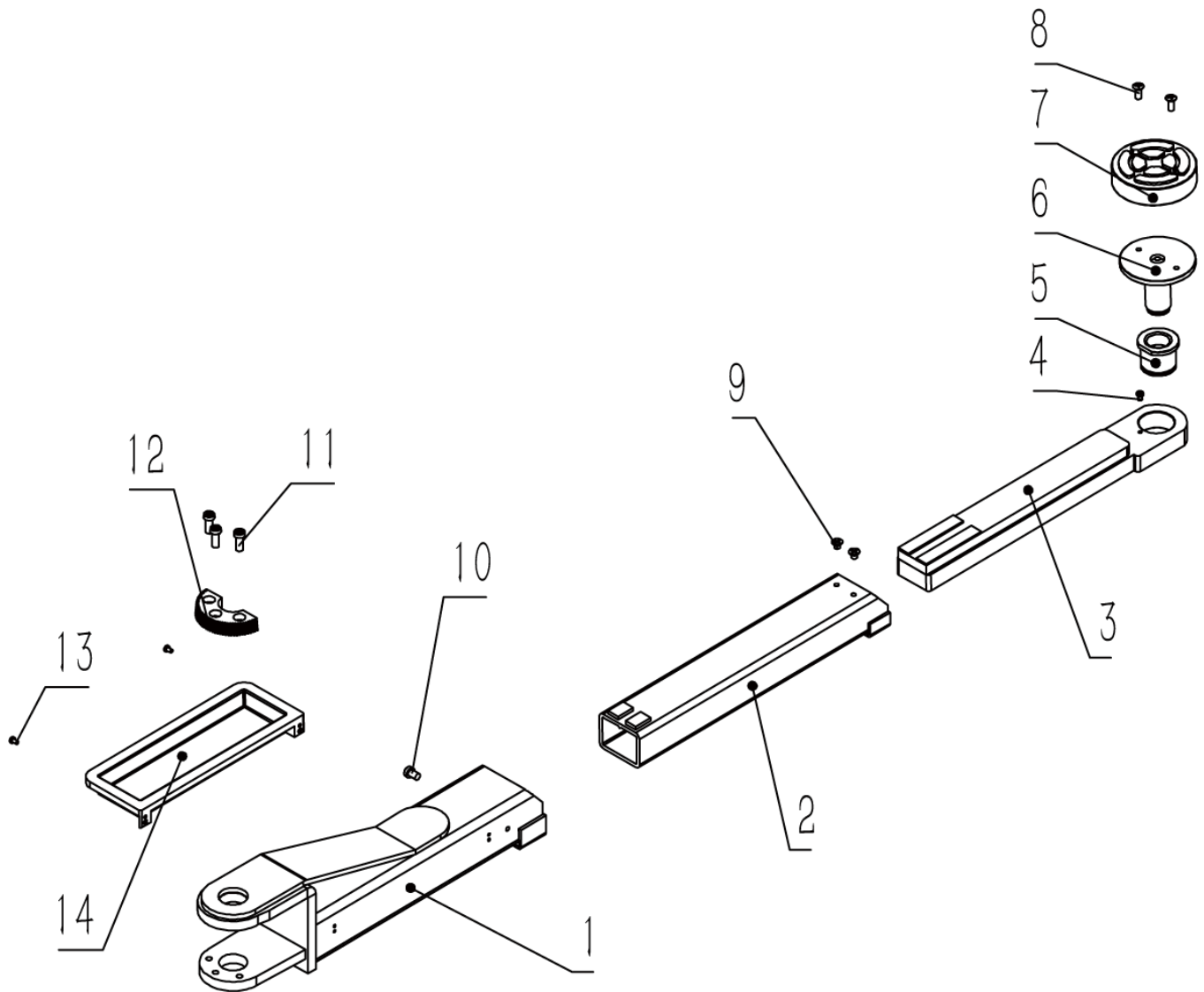
| Pos. | Name                             | Qty. |
|------|----------------------------------|------|
| 1    | Cylinder welding                 | 1    |
| 2    | Sealing ring UN53-62-5           | 1    |
| 3    | Guide belt D625-25-204           | 1    |
| 4    | O type rubber ring 63-5.5        | 1    |
| 5    | Cylinder rod assembly            | 1    |
| 6    | Cylinder head                    | 1    |
| 7    | Circlip $\Phi 25$                | 2    |
| 8    | Oil-free bearing $\Phi 28-25-48$ | 1    |
| 9    | Sprocket wheel                   | 1    |
| 10   | Chain wheel shaft                | 1    |

## 8.6 Two-stage arm assembling



| Pos. | Name                                 | Qty. | Pos. | Name                             | Qty. |
|------|--------------------------------------|------|------|----------------------------------|------|
| 1    | Two-section long boom welding        | 1    | 7    | Phillips round head screws M8×20 | 2    |
| 2    | Two-section long two-arm welding     | 1    | 8    | Socket head cap screws M10×14    | 1    |
| 3    | Socket head cap screws M6×8          | 1    | 9    | Phillips round head screws M5×8  | 2    |
| 4    | Two-section spiral sleeve            | 1    | 10   | Tool box (Optional)              | 1    |
| 5    | Two-section pallet welding           | 1    | 11   | Moon teeth                       | 1    |
| 6    | Two-section spiral tray rubber block | 1    | 12   | Hex bolts M10×35                 | 3    |

## 8.7 Three-sections arm assembling



| Pos. | Name                                 | Qty. | Pos. | Name                             | Qty. |
|------|--------------------------------------|------|------|----------------------------------|------|
| 1    | Three-section boom welding           | 1    | 8    | Phillips round head screws M8×20 | 2    |
| 2    | Three-section arm welding            | 1    | 9    | Phillips round head screws M8×10 | 2    |
| 3    | Three-section arm forearm welding    | 1    | 10   | Socket head cap screws M10×14    | 1    |
| 4    | Socket head cap screws M6×8          | 1    | 11   | Hex bolts M10×35                 | 3    |
| 5    | Two-section spiral sleeve            | 1    | 12   | Moob teeth                       | 1    |
| 6    | Two-section pallet welding           | 1    | 13   | Phillips round head screws M5×8  | 2    |
| 7    | Two-section spiral tray rubber block | 1    | 14   | Tool box (Optional)              | 1    |

