VANSE

Manual for Operation, Maintenance and Parts

YZS2-4

VANSE

Daily pre-start check of YZS2-4

Before starting the machine, check the following items:

- ☐ Visually inspect the leveling machine head to confirm whether the hose is worn or rubbed and whether there is hydraulic fluid leakage
- ☐ Check whether the agitator can rotate manually (is the bearing of the agitator stuck?)
- ☐ Check all rod bolts on vibrator components (may get loosened due to high frequency)
- ☐ Replace/re-tighten any loose or missing bolts (use screw fixer on all bolts)
- ☐ Check the oil level
- ☐ Check the fuel level
- ☐ Check the air filter
- ☐ Check the hydraulic oil level
- ☐ Check the battery condition
- ☐ Check the condition of hydraulic cooler fins
- ☐ Check engine cooling intake and exhaust ports for any obstructions
- ☐ Check the hydraulic pump and associated hoses/fittings for leakage
- ☐ Check the hydraulic oil filter and associated hoses/fittings for leakage
- ☐ Check tire conditions and tire pressure
- ☐ Check the circuit breaker
- ☐ Make sure all protective and safety stickers are in the right place
- ☐ Check that the laser/electronic equipment functions properly.

Content

Statement

For the performance of machines and the benefit of customers, our company's machines will be continuously iteratively updated, and some contents in the instructions may be different from the latest products without prior notice.

Because different countries have different language habits, it is inevitable that there will be mistakes in the translated words. Please understand! If you have any questions, please consult Vanse.

The operator shall use the machine subject to local laws and regulations.

Vanse reserves the right of the final interpretation of this specification.

YZS2-4 specifications

Complete machine parameters	
Leveling width	3 m/9.84 ft
Telescopic boom length	Length 5.5 m/18 ft
Leveling head swing	No
Net weight	2340KG
Complete machine size	4600*3430*1970
Shipping dimensions	Body 4400 * 1880 * 1970 Workhead 3430 * 815 * 530
Control method	Remote control, standard seats
Walking speed	4.5 kM/H (MAX)

Power unit	
Engine type	Diesel engine
Engine model	YANMAR3TNV80F (meets Euro V)
Category	4-stroke, inline, water-cooled diesel engine
Horsepower	17.8kW/3000RPM
Fuel	Diesel oil
Fuel tank	70L
Startup	Electric start
Batteries/Appliances	12VDC65AH
Control	Manual throttle opening and closing
Engine oil	1.6-3.4 liters (the best position in the middle of the scale)

Powertrain – drive system	
Propulsion system	Hydraulic drive
Propulsion control	Proportional control lever and valve-driven hydraulic motor
Tyres – standard	26 x 12-12NHS skid tires
Brake	Front wheel motor with wet brake, spring brake, hydraulic release

YZS2-4 specifications

Hydraulic System	
Hydraulic pump	Load sensitive plunger pump
Rated flow rate	30cc * 3000rpm (MAX)
Valve block	Load sensitive valve block
System pressure	21MPa (3045psi)
Filtration system	10 μm box top loop filter
Hydraulic oil/	46# wear-resistant hydraulic oil
Hydraulic tank volume	60L
Valve block type	Pressure compensated flow control cartridge valve
Hydraulic oil cooler	Radiator with DC fan 12V80A

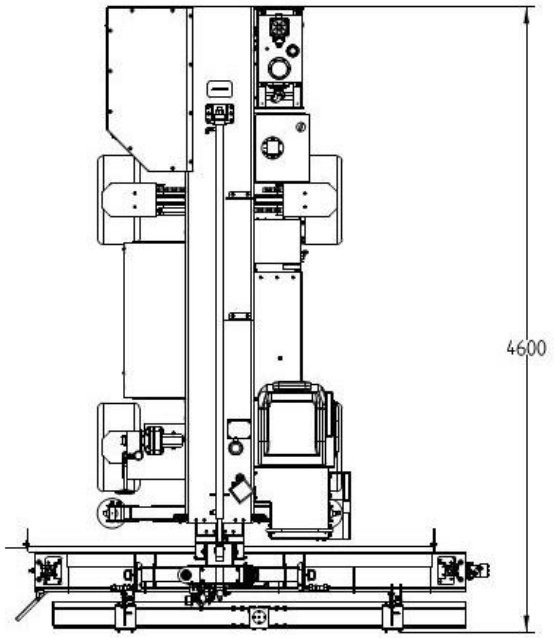
Main functions	
Walking	Hydraulic motor, anti-slip system
Steering	Steering hydraulic cylinder, displacement sensor, which can automatically find intermediate position
Steering mode	Front wheel steering, rear wheel steering, crab walking
Outrigger system	3 outrigger cylinders, tilt sensor, self-leveling
Lifting control	The front lifting hydraulic cylinder approaches or moves away from the paving surface, while the laser system controls the leg cylinders for leveling operations
Extension arm	Hydraulic cylinder, stroke 5.5 m
Auger feeder	Hydraulic motor driven, double-blade auger
Vibrator	Hydraulic motor, adjustable eccentric block
Excitation force	200-900N
Driver's seat	PU seat with adjustable armrests
Trunk volume	280L
Cleaning system	Hydraulic motor drive, water pump, spray gun, suction pipe kit

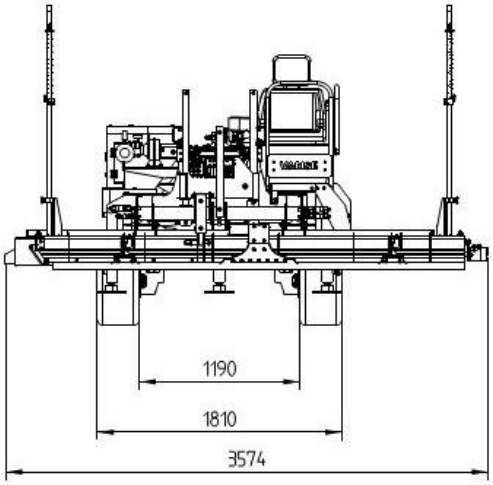
Paint details

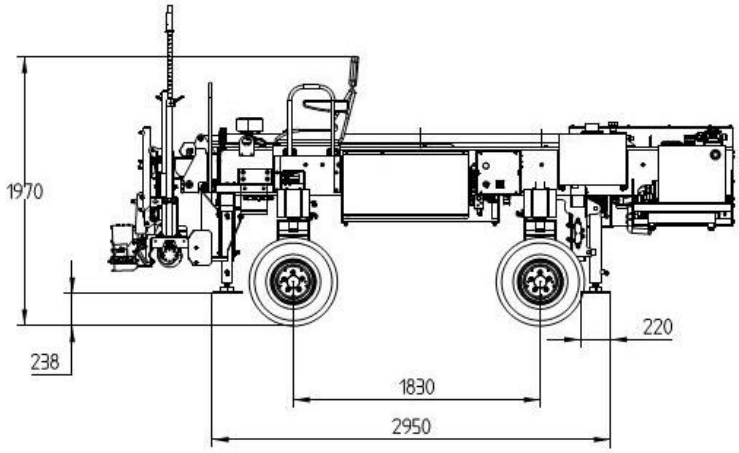
Paint

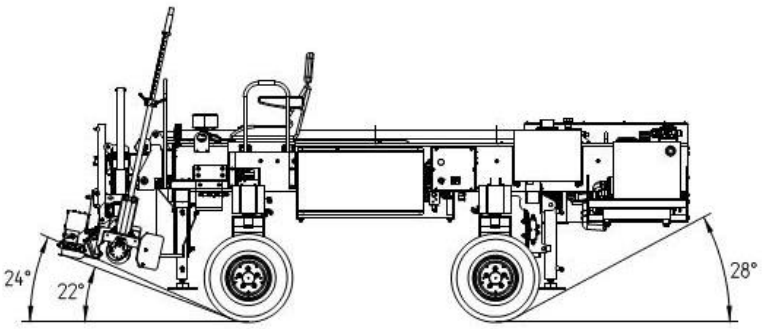
Color	Paint color number	Material	Remark
Signal white	RAL9003	Paint or plastic powder	
Anthracite gray	RAL7016	Paint or plastic powder	
Black	RALK59005	Paint or plastic powder	

Overall dimensions of the whole machine (walking mode)

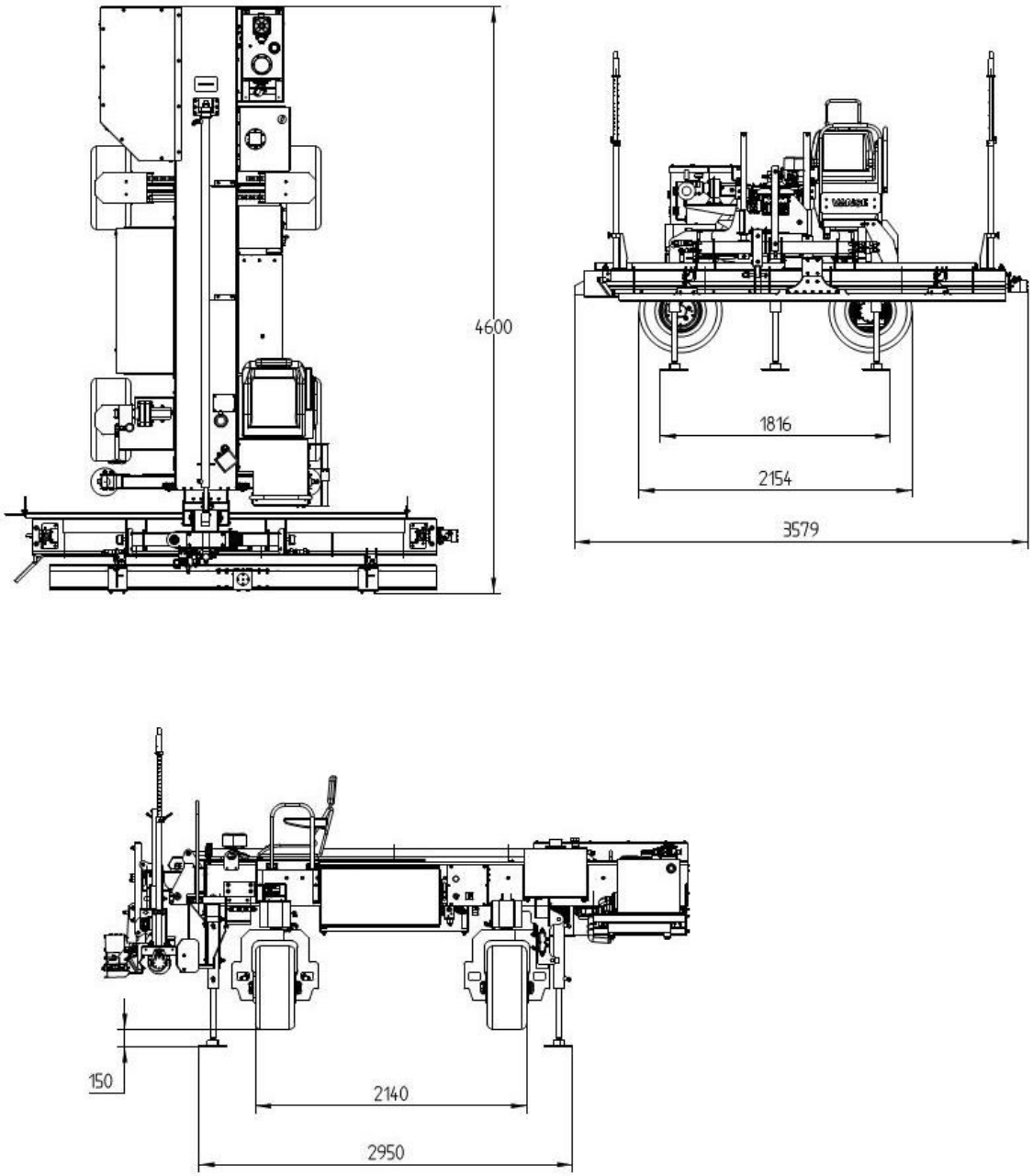




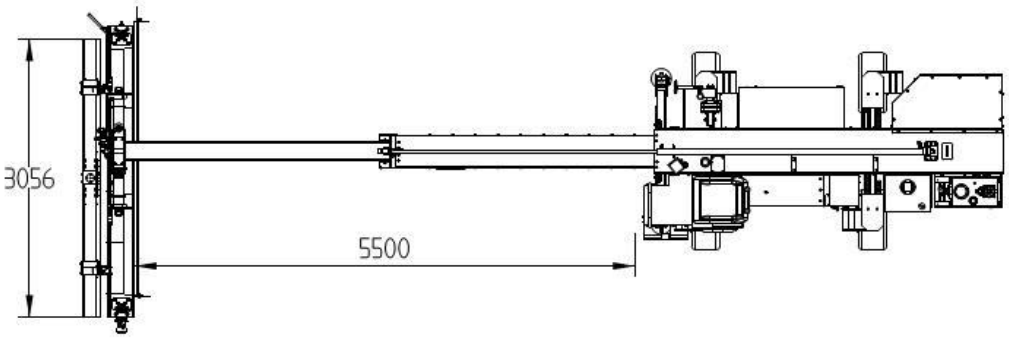


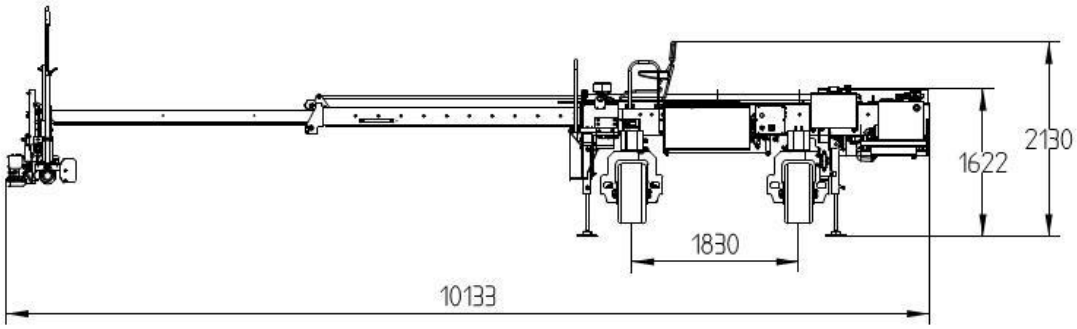


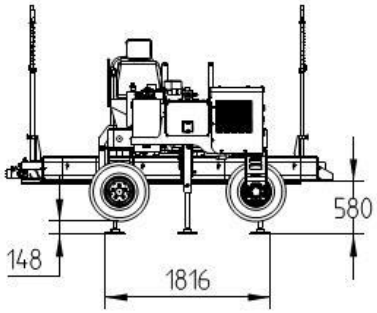
Overall dimensions of the whole machine (working mode)



Overall dimensions of the whole machine (working mode)

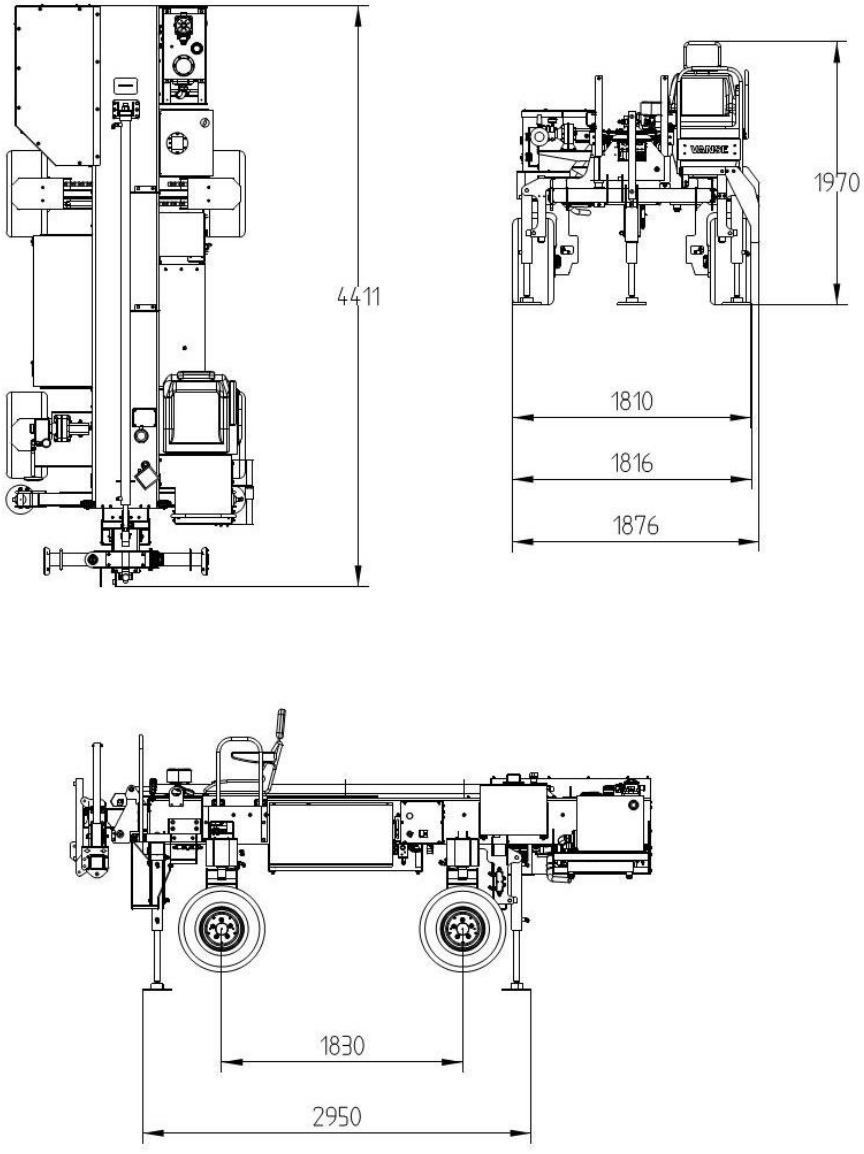






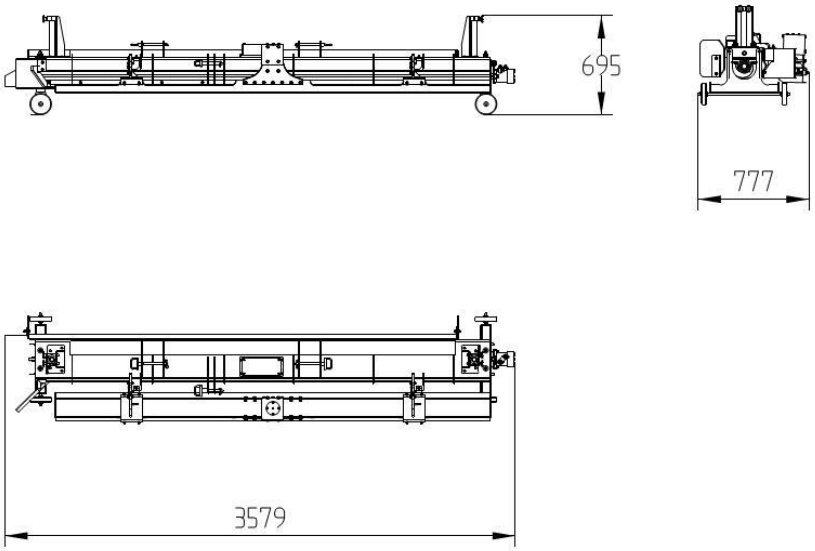
Overall dimensions of the whole machine (transport mode)

Body

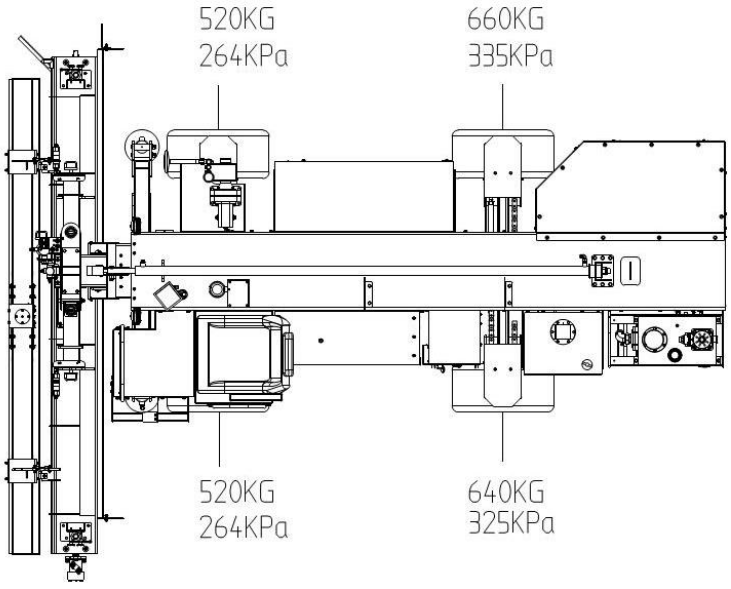


Overall dimensions of the whole machine (transport mode)

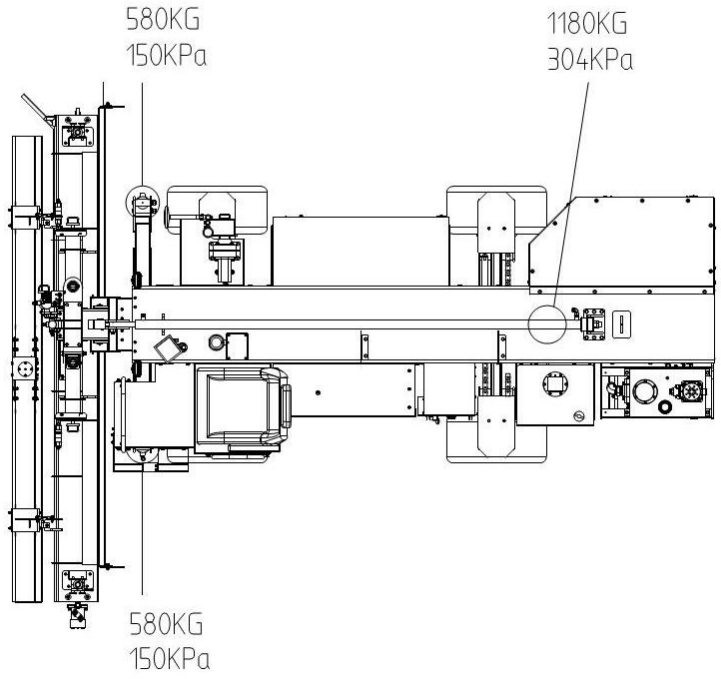
Workhead



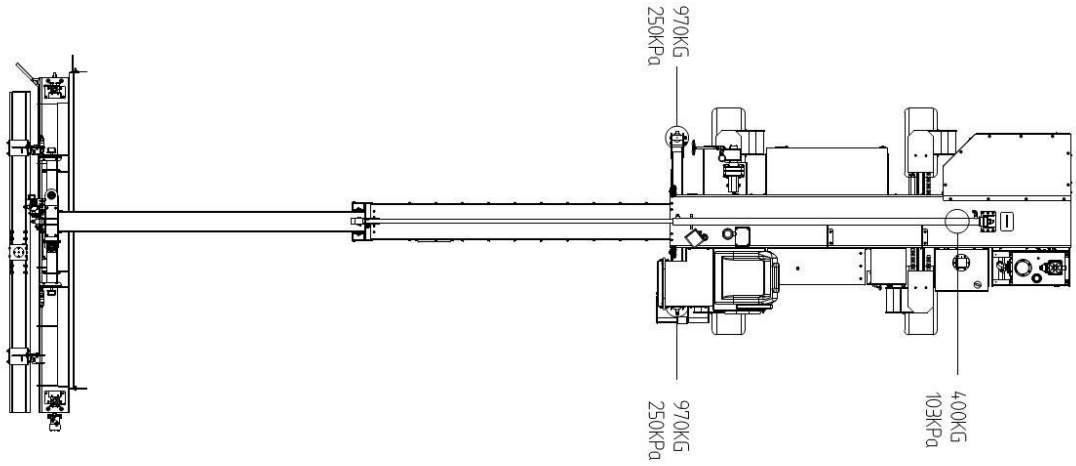
Tire weight distribution



Outrigger weight distribution

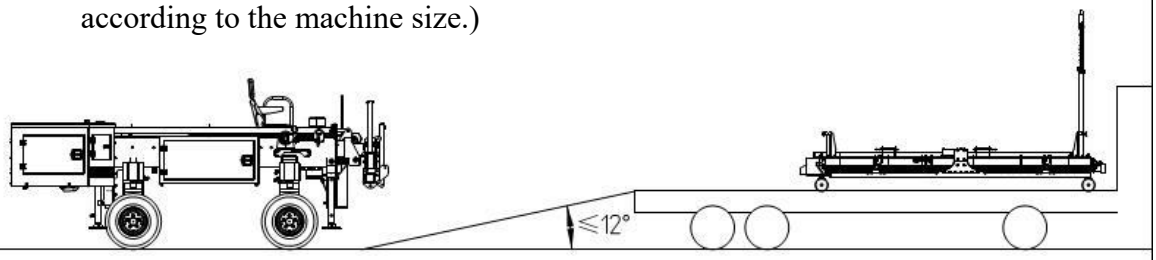


Outrigger weight distribution with workhead extended

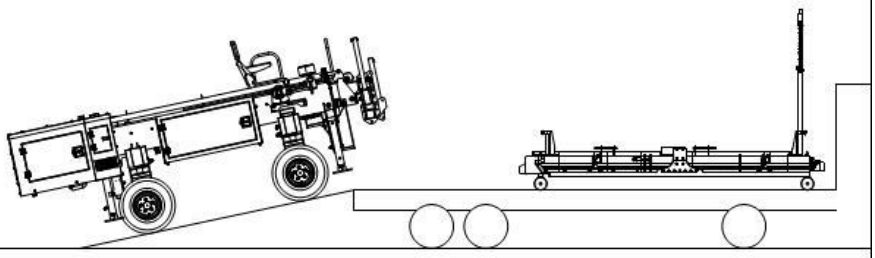


Loading and transportation

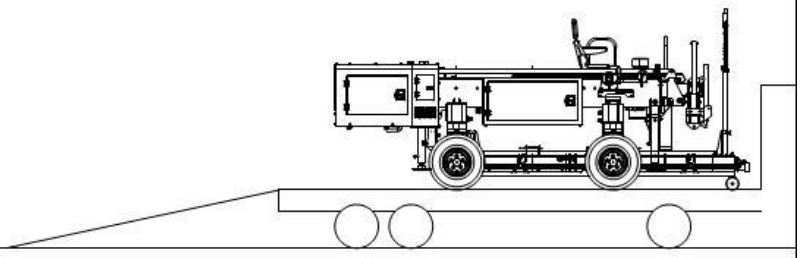
A Remove the workhead and place it on the flatbed truck as shown
(The trailer is only for illustration, and the specific size can be selected according to the machine size.)



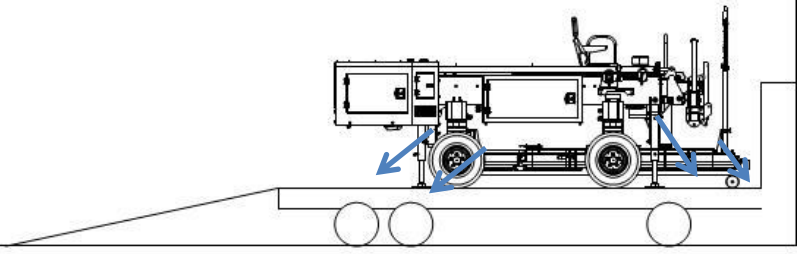
B The machine drives slowly to the flatbed truck, and the operator pays attention to keeping a safe distance. Pay attention to the sag distance of the tilt cylinder.



C Drive the machine to the position shown in the figure, and keep a certain distance to prevent friction damage.



D Drop the three outrigger s to jointly contact the underside of the trailer with the tires.
Attach the body and workhead to the trailer anchor as shown.



To the Operator

This manual provides a comprehensive and detailed explanation of the structure, performance, operation, maintenance, transportation, and storage of the YZS2-4 Laser Screed Machine. It serves as a fundamental guide for operators and management personnel to efficiently, economically, and safely use the equipment.

The rules and guidelines contained in this manual will help you operate the machine safely and effectively. Before performing any operation or maintenance tasks, please read and follow the instructions and precautions provided in this manual to prevent accidents and serious injuries that may result from improper use or maintenance.

Please note that due to continuous product improvements, there may be slight discrepancies between the contents of this manual and the actual equipment. We apologize for any inconvenience this may cause and appreciate your understanding.

Warning

Before starting operation and maintenance, operators and maintenance personnel must pay attention to the following matters:

- Always read and understand this instruction manual thoroughly before performing operation or maintenance.
- Read and fully understand the safety notice in this instruction manual and the safety label attached to the machine.
- Store this manual in the designated storage location and read it regularly.
- If this instruction manual is lost or defaced and cannot be read, please contact us immediately.

If you want to sell or lease the machine, please pass this manual along with the machine to the new user.

Safety signs and terms

To help you safely operate the laser screed machine, this manual and safety warning labels affixed on the machine itself provide instructions on identifying potential hazardous situations and methods to avoid them.

The following sign language indicates potential hazardous situations that may lead to personal injury or damage. The following sign language is used in this manual and on the machine labels to indicate the potential severity of hazards.

Danger	Indicates that if not avoided, exposure to this hazard will result in death or serious injury.
Warning	Indicates that if not avoided, exposure to this hazard could result in death or serious injury.
Caution	Indicates that if not avoided, exposure to this hazard could result in minor or moderate injury.

Safety

Emergency preparedness conditions

Prepare first aid kits and fire extinguishers at the construction site. Ensure that emergency assistance from hospitals, firefighting units, and other relevant organizations can be promptly accessed.

Wear protective clothing

Wear well-fitted clothing and appropriate safety equipment for the job. Prolonged exposure to noise can cause hearing damage or loss. Operators and individuals using rakes must wear suitable hearing protection, such as earmuffs or earplugs, and focus on safely operating the machine.

Handle fuel safely

The fuel is very flammable. Do not smoke, be near open flames or sparks when refueling your machine. Turn off the engine and allow it to cool for at least 10 minutes before refueling. Refuel outdoors and prevent fires by ensuring there is no spilled fuel on your machine. Use a funnel when refueling.

Work in a well-ventilated area

Engine exhaust can cause illness or death. If you must operate your machine in an enclosed area, use an extended exhaust pipe to vent the fumes out of the area. Do not run the engine for long periods in closed buildings.

Battery charging precautions

(Please refer to the battery charging instructions page)

Avoid high pressure fluids

Fluids under pressure can penetrate the skin and cause injury. Lower the pressure before disconnecting hydraulic or other lines. Secure all connections before pressurizing. Seek medical attention immediately if an accident occurs. Any fluid injected into the skin must be surgically removed within hours to avoid bodily harm.

Never look directly at the laser beam

Set laser emitters above a benchmark height of 2.2 m (7 feet).

Proper waste disposal

Use leak-proof containers when disposing of fluids like oil, fuel, coolant, filters, and batteries. Do not use food or drink containers which might mislead people into drinking them. Do not pour waste on the ground, into sewers, or any water sources.

Precautions when welding

If welding is necessary on assembled machinery:

1) Disconnect battery cables from the battery.

2) Move the battery to a safe place if welding near it.

3) Connect the welder's ground clamp as close to the welding area as possible.

To prevent electrical short circuits, turn off the engine stop switch when the machinery is unattended.

Do not bypass safety devices

Repair or replace any damaged or malfunctioning safety devices, such as engine stop buttons or operator presence switches, before operating the machinery.

Do not place machinery on any platform until you consult a professional!

Consult professionals to ensure platforms are capable of supporting the machinery before placing this machine on any platform.

Machine cleaning instructions

Do not spray areas marked with "no water" signs or the machine control station with water or high-pressure washers.

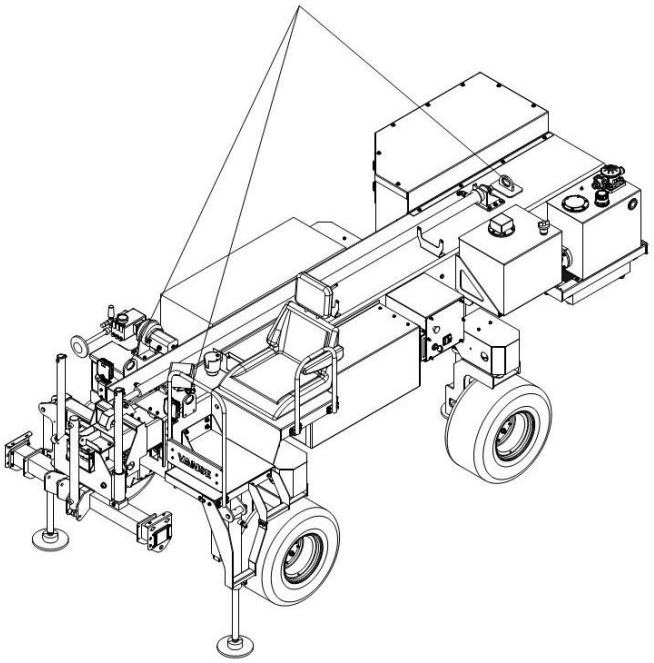
Turn off the engine stop switch

Always turn off the engine stop switch when working on electronic systems.

Use the appropriate tools

Always use the correct tools when repairing machinery. Handle precision parts with extra care during replacements.

Lifting and moving machinery



The machine can be moved via provided lifting points.

Warning: Before using the machine at any construction site, consult professionals.

1.) Turn off the machinery.

2.) Turn off all power.

3.) Use lifting equipment rated for over 3000 kg.

-Hooked lifting rings

-Hooked slings

-Hooked cable loops

4.) Attach to the lifting points on the machine frame.

5.) Lift the machine slowly and monitor the lifting process; no one should stand under the lifted machine.

Volume

In typical leveling conditions, noise levels at the operation site do not exceed 107 dBa.

Note: Environmental conditions, traffic, nearby obstacles, or ambient temperatures may affect noise levels.

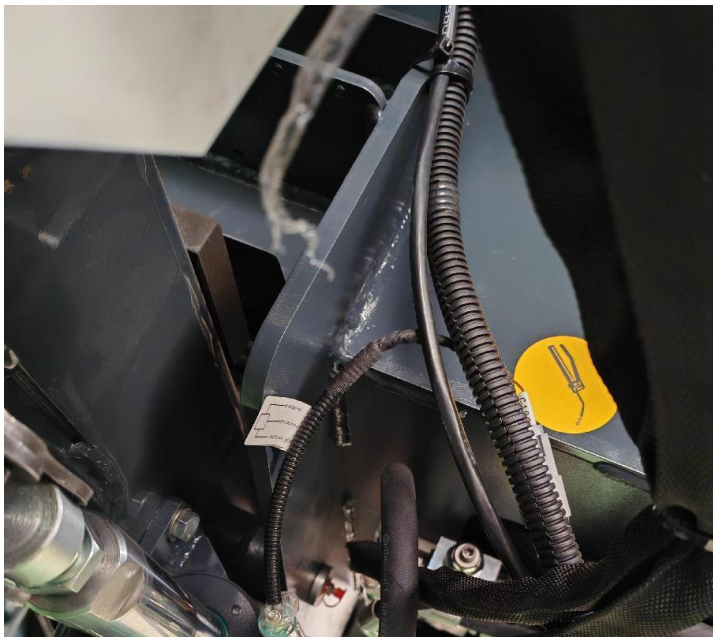
Vibration level

1. Vibration levels in the operator's hands will not exceed 2.5m/s^2.

2. Vibration levels felt by the operator's feet will not exceed 0.5 m/s^2.

Note: This vibration data was measured under normal temperature conditions and with compliant fuel; actual conditions may vary.

Safety sign location




水泵


YZS2-4

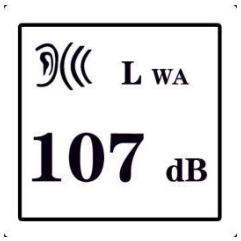

VANSE
山东万世机械科技有限公司
VANSE machinery technology co.,ltd

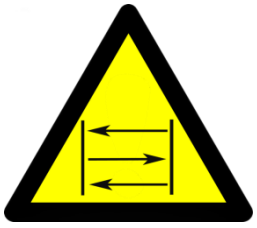

107 dB

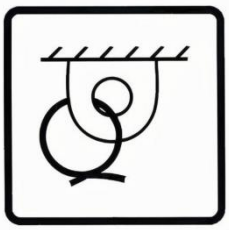

VANSE
www.vansemac.com
YZS2-4

YZS2-4 identification list

Items	Part code	Description	Quantity
1		No Smoking	1
2		Read the instructions	1
3		Hoisting position	3
4		Remind labor protection supplies to be dressed neatly	1
5		Throttle level mark	1
6		Door opening and closing sign	1
7		Be careful of hurting hands	5
8		Beware of splashing	2

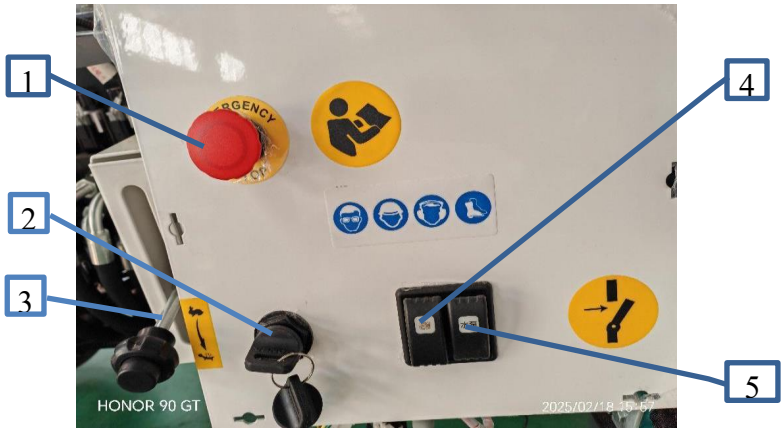
9		Noise identification	1
10		Be careful of hurting hands	7
11		Caution: risk of injury from auger	2
12		Diesel fuel only	1
13		General hazard warning	2
14		Caution: trip hazard	2
15		Caution: risk of collision with people	2

16		Hazard of high temperature	3
17		Moving chain	2
18		Crushing danger	3
19		Fill with grease	16
20		Linear motion	2
21		Be careful of rotating gears	1
22		Be careful of hand injury from roller	3

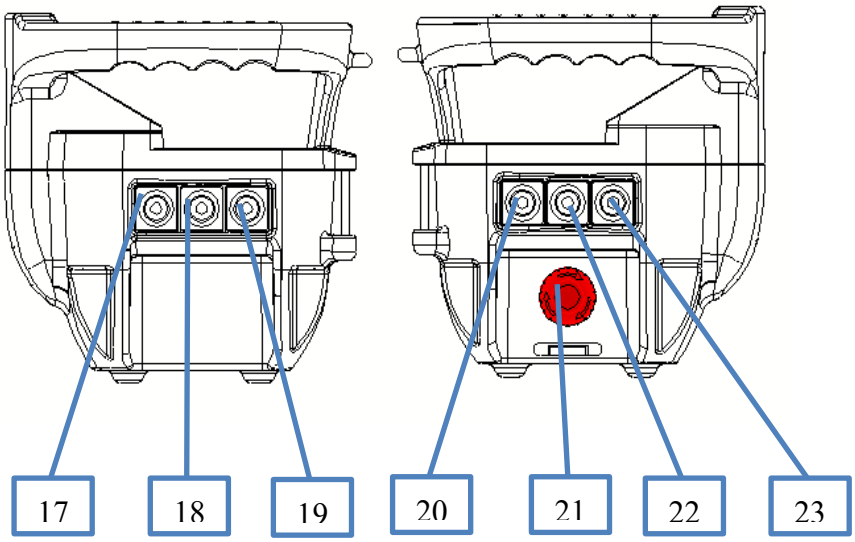
23		Be careful of pinching hands	2
24		Tying point	3
26		Appearance label	1

YZS2-4 operation control

1. Startup panel



2. Remote control



Operation control

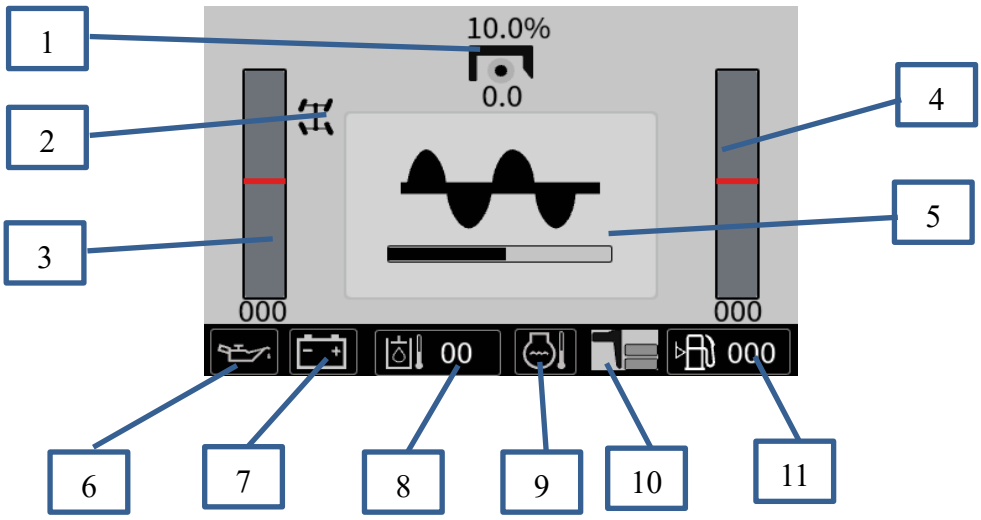
Items	Control name	Functions
1	Engine emergency stop switch	Twist/pull directly clockwise to start the machine or start the engine operation. Pressing this control button will shut down the engine and electrical appliances, and it can be used as an "emergency cut switch" during operation. This switch is emergency braking and cannot be used for long-term power outage. If long-term power outage is needed, the engine compartment is equipped with a power switch. Press this switch. Before operating the machine, please ensure that the power switch is unplugged.
2	Ignition	Engine ignition key switch.

Items	Control name	Functions
		After the engine stop switch is pushed up, rotate the ignition key clockwise in the sequence OFF-ON-START, which is to turn off-power on-start the engine.
3	Engine throttle control	Pushing down the engine throttle control button will slow down the engine speed. Pulling it up will increase the speed of the engine. During leveling operations, the throttle is usually pushed to the front, allowing the engine to run at the fastest speed.
4	Engine warm-up	Press and hold the warm-up button to preheat. Please refer to the engine manual for details.
5	Water pump	Click to turn on. Click again to turn off. Before turning on the water pump, make sure that the inlet and outlet pipes are securely installed, and that the inlet pipe is submerged in a bucket filled with clean water.
6	Laser automatic/manual	Switch to automatic or manual mode. In manual mode, neither the lift nor the SLS will make any corrections. In automatic mode, the lift will be adjusted to the correct lift according to the determination of the laser receiver and the height of the laser beam.
7	Automatic pull-back paving	In automatic mode, click this key, the workhead automatically lowers, and paving is carried out at the set speed of the arm. After paving is completed, the working head automatically rises.
8	Outrigger rising/lowering	Three outriggers go up/down simultaneously. In automatic mode, after the three outriggers rise and stop, the machine will automatically adjust the posture of the fuselage, so that the machine can automatically enter the forward tilt state, and the arm can be extended without adjusting the front outrigger.
9	Left joystick	Front/Rear: Arm extended/retracted Left/Right: Machine left steering/right steering This joystick controls the speed and direction of the steering. Pushing the joystick to the right will push the machine to the right. Pushing the joystick to the left will push the machine to the left. The farther the joystick moves, the faster the mechanical steering. Red button: the workhead rises in the set time. The workhead rises according to the set time (see the instructions of the red button on the right joystick for details).

Items	Control name	Functions
10	Right joystick	Front/Rear: Machine forward/backward Left/Right: Machine left steering/right steering This joystick controls the speed and direction of the steering. Pushing the joystick to the right will push the machine to the right. Pushing the joystick to the left will push the machine to the left. The farther the joystick moves, the faster the mechanical steering. Red button: The workhead lowers in the set time. Press the switch and release it: ● The lift will lower either for a preset time duration or until the receiver detects the laser signal. The duration can be adjusted on the display. ● The lifting control automatically switches from inactive auto mode to active auto mode: In auto screeding mode, the workhead will remain in the "soft landing – hold above grade" position until the operator initiates arm retraction. ● If in auto screeding mode, the tilt system will move to the soft landing position. These settings can be adjusted via the display screen. ● During a timed raise/lower operation, the action can be stopped by pressing either the timed raise or timed lower button. ● In inactive auto mode, even if the receiver detects the laser, the machine head will not engage in automatic control. Press and hold the timed lower button for more than 2 seconds to enter the rough grading mode. ● If in screeding mode, disable Quick Pass (fast screeding/rough grading), the auger, and the vibrator. ● Rough grading height can be adjusted using the remote controller display or the machine display.
11	Multi-function switching knob	When the following functions are switched, the display screen shows corresponding icons: Tilt flip, rear leg lowering, telescopic arm speed adjustment, workhead lifting speed adjustment, auger speed adjustment, vibration speed adjustment, tilt offset angle adjustment, rough grading gear adjustment, auger/vibration activation, left leg, right leg (refer to the remote controller display page for details).
12	Multi-function adjustment button	Adjust the functions switched by the multi-function switching knob
13	Lateral mode	When the machine's tire direction is perpendicular to the body

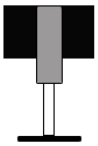
Items	Control name	Functions
	switching	direction, the machine can move laterally. In lateral mode, the machine's forward/reverse movement and left/right steering are controlled in the original manner.
14	Blank	
15	Steering mode switching	Cycle to switch among the two-wheel mode, four-wheel mode and crab mode.
16	Display screen	Refer to the remote control display description section of this manual.
17	Horn	As a warning device.
18	Light	Work lights on the frame to allow operators to see areas in front and behind the machinery while driving on the construction site.
19	Blank	
20	Remote control to power on/start engine	1. First, ensure that the emergency stop switch on the remote control is in the pulled-out position. Press the button briefly to turn on the remote control. 2. When the remote control is powered on, make sure the machine's emergency stop switch is pulled out and the key switch is in the ON position, with the engine not started. At this time, press and hold the button to start the engine. Note: Release the button immediately after the engine starts. 3. When the remote control is powered on, the machine's emergency stop switch is pulled out, the key switch is in the ON position, and the engine is running at low speed, press the button briefly to turn off the engine. Note: Before performing the engine shutdown operation, make sure the throttle is at a low RPM, to avoid carbon buildup in the engine.
21	Remote control for emergency stop switch/remote control shutdown	Twist clockwise/Pull out directly to start the remote control; Pressing this control button will turn off the power of the remote control. Be sure to press this switch every time you shut down the machine. It also acts as an "emergency cut-off switch" during operation.
22	Three-outrigger drop	Same as No. 8
23	Three-outrigger rise	Same as No. 8

Function description of remote control display screen

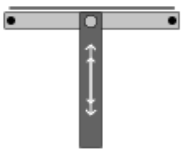


1. Tilt offset and real-time inclination angle;
2. Real-time steering mode display;
3. Left laser data;
4. Right laser data;
5. Multi-function switching icon display area. The specific functions are as follows:

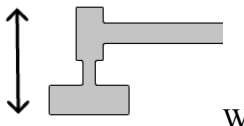
Tilt flip: Manually move the SLS in a positive or negative direction.



Rear outrigger lowering: rear outrigger lowering separately.



Telescopic arm speed adjustment.



Workhead lifting speed adjustment.

Auger speed adjustment.

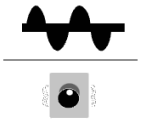
Vibration speed adjustment.

Tilt angle offset angle adjustment.

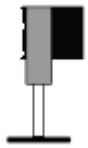
Rough grading gear adjustment:

- Press and hold the timed drop switch for one second to start the rough grading.
- **Rough grading gear adjustment**: This switch adjusts the lift setpoint, effectively raising or lowering the screed head quickly for operation, through the QuickPass (fast scraping) rough leveling height gear deviation setting.
- The height settings of the three switch positions are adjustable from the display screen.
- The icon will be displayed on the display when the rough grading is performed.
- If in leveling mode, the leveling machine head is tilted to the QP tilt offset angle. (**Note**: In order to make the concrete have better flatness and compactness, the rough grading height and QP inclination may need to be adjusted according to the concrete ratio, slump and other factors.)

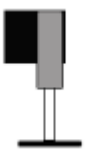
Press the timer up switch to turn off QuickPass (quick scraping/rough grading)



Auger/Vibration on,



Left outrigger rises and falls;



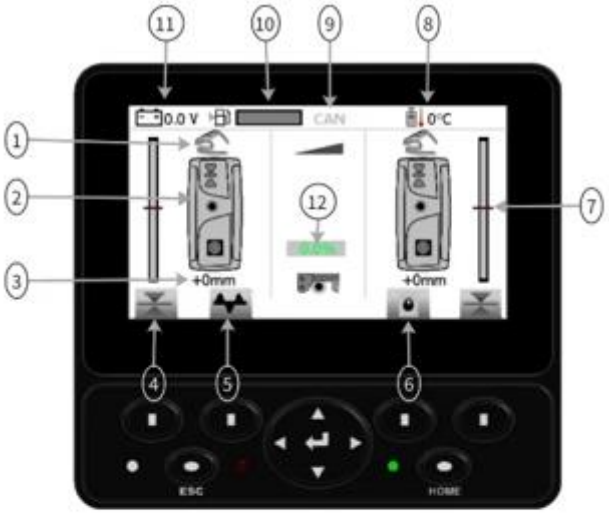
Right outrigger rises and falls;

6. Oil pressure;
7. Battery power;

8. Hydraulic oil temperature;
9. Engine water temperature;
10. Coarse gear position display;
11. Fuel tank fuel level display.

Machine display function description

Home page



Laser working state

1. Work manual/automatic display
2. Laser receiver alarm display
3. Laser operating reference offset parameter
4. Laser reference offset adjustment enable button (press and hold the key while pressing the up and down arrow keys to adjust the laser offset reference)
5. Auger control button
6. Vibration control button
7. Laser position indicator
8. Hydraulic oil alarm indication
9. Communication alarm indication
10. Fuel level display
11. System voltage display
12. Tilt reference offset display (adjusted by controlling the remote control)

Diagnostic page: Press the HOME button on the HOME page to enter

1. Laser real-time data
2. Laser state
3. Hydraulic oil temperature
5. System voltage
4. Working hours
6. Real-time angle of machine head tilt
7. Real-time cross slope angle of machine head
8. Enter the input monitoring page
9. Enter the output monitoring page
10. Rear steering angle sensor data

11. Front steering angle sensor data

Press ESC to return to the HOME page and enter the settings page

Settings page:

1. Adjustment of large arm retraction speed

2. Automatic switch for machine head tilt angle

3. One-button rise time for workhead

4. One-button lowering time for workhead

5. Start/Stop obstruction prevention for laser receiver

6. Third-level rough grading height setting

7. second-level rough grading height setting

8. First-level rough grading height setting

9. Switch between metric and imperial units

10. Adjustment of display brightness

11. Adjustment of auger speed

12. Adjustment of vibration speed

After each adjustment, press the middle of the directional key to store the parameters. If not pressed, restore the previous parameters after powering on again

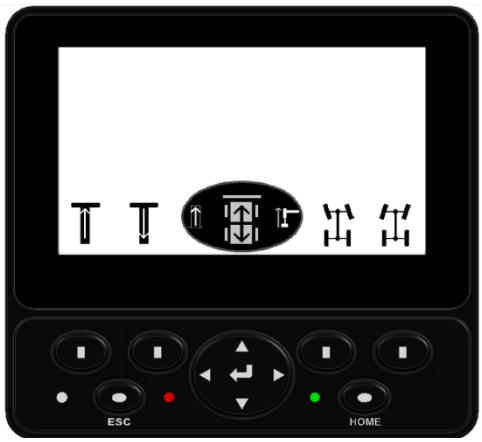
Input monitoring page: Press the button 2 on the monitoring page

Emergency walk page Press the HOME key on the input monitoring page

1. Arm extension
2. Arm retraction
3. Turn left
4. Turn right

Arrow keys: forward, backward, outrigger up, down

ESC: Exit



Output monitoring page: Press the button 3 on the monitoring page

The green display frame indicates normal output, while a red frame indicates an output fault.

Password page: Press buttons 1 and 4 at the same time on the diagnostic page to enter the password page. The entry password is 981

Steering angle center calibration page

1. Front wheel straight-travel center calibration
2. Front wheel lateral movement center calibration
3. Rear wheel straight-travel center calibration
4. Rear wheel lateral movement center calibration
5. Steering calibration

Turn to the calibration page: Select 5 and press the OK key

1. Front steering calibration start
2. Front calibration data storage
3. Rear steering calibration start
4. Rear calibration data saving
5. Calibration progress
6. Sensor status

ESC return

HOME Next page

Note: Use the functions on the password page with caution. The Auto Calibration (solenoid valve calibration) function requires specific conditions such as proper temperature, battery level, and engine speed. For details, please consult Vanse.

Secondary settings menu:

1. Left laser threshold adjustment
2. Right laser threshold adjustment
3. Tilt threshold adjustment
4. Laser tilt angle calibration
5. Left and right laser rise balance
6. Left and right laser descent balance
7. Cross slope zero calibration of machine head
8. Tilt angle zero calibration of machine head
9. Setting of rough grading tilt angle and slope
10. Soft landing height setting
11. Soft landing tilt angle and slope setting
12. Time for soft landing tilt angle to return to zero

ESC return
HOME Next page

Cross slope zero calibration of machine head sensor:

1. Return
2. Zeroing – manual adjustment of left and right leg heights: Use a level to manually adjust the heights of the left and right legs until the equipment is level. Once leveled, press the button to save the current position as the reference zero point.

Tilt angle zero calibration of machine head sensor:

1. Return
2. Zeroing – manual adjustment of left and right leg heights: Use a level to manually adjust the heights of the left and right legs until the equipment is level. Once leveled, press the button to save the current position as the reference zero point.

Machine Startup

Pre-start inspection

Before starting the machine, check the following items:

1. Check the engine oil level.

2. Check the fuel level.

3. Check the air filter.

4. Check the hydraulic oil level.

5. Check the battery states.

6. Inspect the hydraulic cooler fins. If dirt accumulates on the fins, it will block airflow and reduce cooling efficiency.

7. Check the engine fan cooling intake and exhaust ports for any obstructions.

8. Inspect the hydraulic tank, pump, motor, valve group, hoses, and related fittings for any signs of leakage.

9. Check the hydraulic oil filter and related hoses and fittings for any signs of leakage.

10. Check tire condition and air pressure.

11. Check the fuse.

12. Ensure all protective guards and safety labels are in their correct positions.

13. Verify that the laser/electronic equipment is functioning properly.

For instructions regarding engine starting and stopping, operation, safety, and maintenance, please refer to the engine manual.

CAUTION! If the hydraulic oil temperature is below -13°F (-25°C), do not start the machine. This may cause damage to the hydraulic pump.

1. Rotate or pull out the engine emergency stop switch (#1) clockwise.

2. If the ambient temperature is low and the engine is cold, hold the preheating switch (#4) to preheat the engine. (Refer to the engine manual for details.)

3. Move the throttle control lever (#3) from the slow position to approximately 1/4 of the fast position.

4. Turn the key (#3) clockwise to start the engine, then release it. Do not operate the electric starter button for more than 5 seconds. Allow the engine to run at low RPM until it warms up.

5. The ideal operating temperature for hydraulic oil is 80°F (27°C), but before beginning leveling operations, the oil should be warmed to at least 50°F (10°C). To bring the hydraulic oil up to operating temperature, warm up the machine prior to starting work.

Machine used at high altitude

If our laser screed machine is used at an altitude exceeding 1,000 meters, it should be operated under the guidance of local professionals, and care should be taken to use high-grade gasoline and engine oil. Please consult Vanse or engine manufacturers for details.

Loading/unloading machine process

Trailer transport/ramp specifications

The minimum load rating is 3000 kg.

Loading the whole machine

Slowly drive the machine onto the trailer according to the loading and transportation instruction diagram.

Secure the machine to the anchoring points using nylon straps, and tighten the straps firmly.

In most cases, it is necessary to remove the screed head before loading. To remove the machine head, use the lift-down switch to lower the head until it is just above the ground. Remove the snap pin and pin that connect the machine head to the lifting cylinder. Then, use the lift-up switch to raise the lifting cylinder. Disconnect the quick coupler between the screed head and the machine’s hydraulic system.

Once the screed head has been removed, it should also be secured to the trailer using nylon straps. Note: Over-tightening the straps may damage the screed head.

Lifting & Moving Machinery

Lifting point

All lifting points must be used when lifting the machine.

To lift the machine:

1. Turn off the engine.

2. Turn off all power.

3. Vanse recommends the use of the optional lifting device, or a lifting equipment with a rated capacity of more than 2,000 pounds.

- 1 chain link

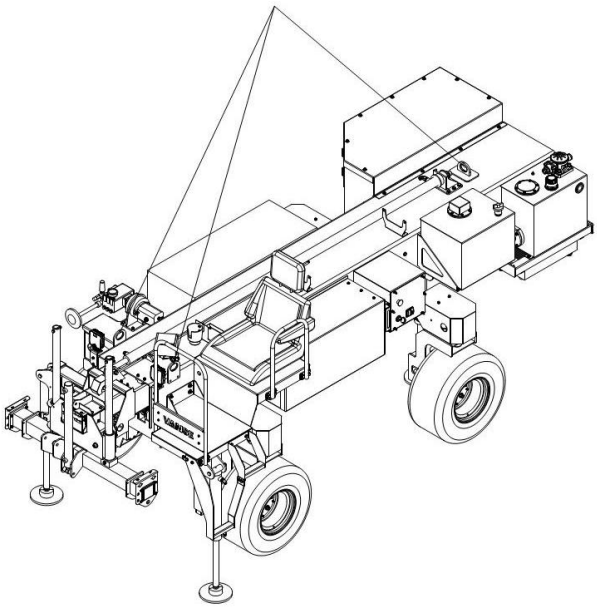
- 3 lifting slings

- 3 hooked cable loops

4. Hook the front and rear hoisting holes.

5. Slowly lift the machine, and before raising it above head height, check the locking mechanisms first.

Indication diagram of hoisting machine:



Operation theory of laser control system

The Vanse laser control system includes a display screen, controller, two laser receivers, and a dual-axis angle sensor. A laser emitter is also necessary.

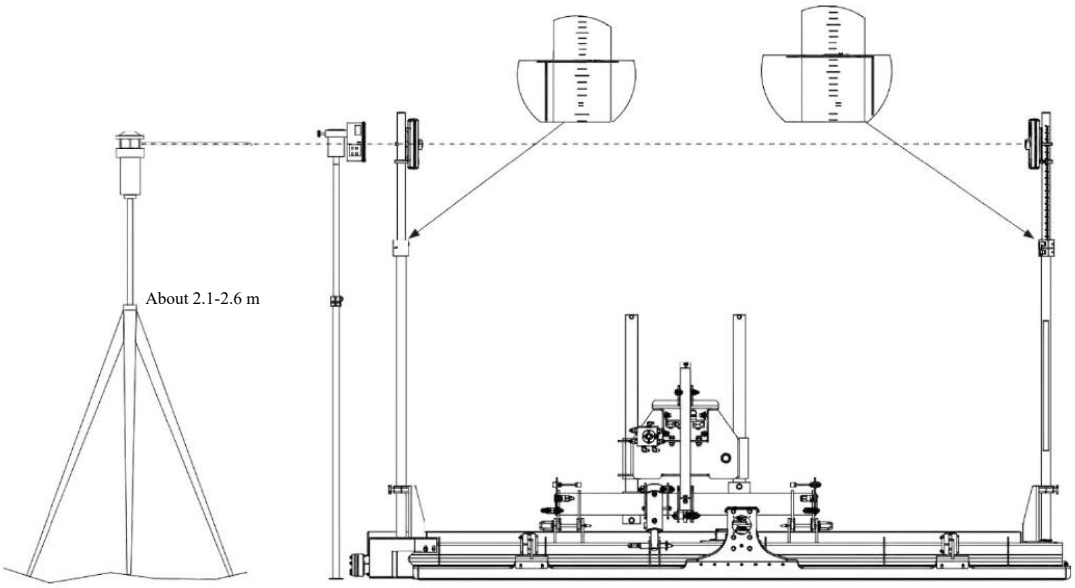
The controller is the core of the laser control system. They receive information from the sensor (laser receiver) to make level and angle decisions. Based on this elevation and slope data, it drives the hydraulic lifting and the automatic leveling system (SIS) valves.

The laser emitter emits a rotating beam of 360°, establishing a fixed horizontal reference plane across the job site. The laser receivers are mounted on the leveling cylinder rods at both ends of the machine's screed head. The fixed distance between the screed head and the laser beam establishes the surface elevation for the job site. The laser receiver detects changes in the laser beam's height and continuously sends elevation information back to the controller.

If the laser beam is above the set point on the laser receiver, the screed head is below the desired grade, and a correction signal to raise the screed head will be sent to the hydraulic valve. Conversely, if the laser beam is below the set point on the laser receiver, the screed head is above the target grade, and a correction signal to lower the screed head will be sent to the hydraulic valve.

The tilt sensor provides slope data to the controller for SLS and cross-slope control. The SLS slope data is used to automatically maintain the relationship between the lift cylinders and the tilt cylinders. When either laser receiver fails to detect the laser beam, cross-slope data is used to control the raising and lowering of the screed head.

Quick elevation setting of laser system



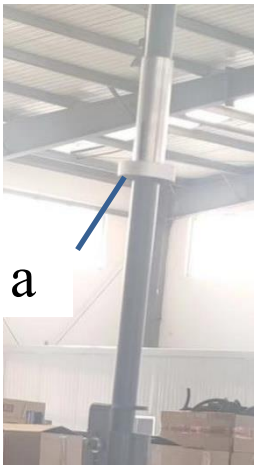
1. Set the emitter at the desired elevation.

2. Mount the handheld receiver on the handheld rod.

3. Place the handheld rod on the pre-cast concrete floor reference point, making sure to keep the rod vertical.

4. Extend or lower the handheld rod until the handheld receiver detects the laser beam from the emitter. Confirm that the laser signal is level, then lock the receiver at this position.

5. Record the elevation indicated by the handheld rod.



Note: The height of the receiver adjustment sleeve (Figure A on the right) should be adjusted regularly to ensure that the scale matches the actual elevation. This compensates for any height loss due to workhead wear.

6. Install the laser receivers on the receiver rods located on the lifting cylinders at both ends of the screed head, and connect the spiral signal cables.

7. Start the machine and adjust the height of the screed head so that the bottom of the auger is level with the pre-cast concrete floor reference point.

8. Adjust the height of the laser receivers until a solid horizontal line is displayed on the receiver.

9. Screed a short section and check the elevation on both sides.

10. If needed, slowly adjust the set point on the level display screen to fine-tune the elevation.

YZS2-4 leveling operation

1. With the lifting control set to automatic mode, move the material from the front of the screed surface to the rear.

2. To lower the workhead, press the timed lowering button. To raise the workhead, press the timed raising button. Refer to the display screen introduction page to adjust the duration of the raising or lowering action.

3. The new screed pass should overlap the previous one by approximately 0.3 meters.

4. When you reach the starting position for the next screed pass, press the timed lowering switch. The screed head will lower according to the preset time, or until the receiver detects the laser beam. Once the receiver captures the laser signal, the workhead will automatically lower and stop at the soft-landing height.

5. Move backward to fully lower the workhead to the set height. The soft landing function will automatically rotate the workhead to reduce the marks left by the vibrator on the concrete surface.

6. If there is too much material to move effectively, use the Quick Pass (fast screeding/rough grading) function to automatically raise the elevation set point. Scrape off excess concrete. Then, turn off the Quick Pass (fast screeding/rough grading) function and resume normal elevation screeding.

Setup instructions for laser leveling head

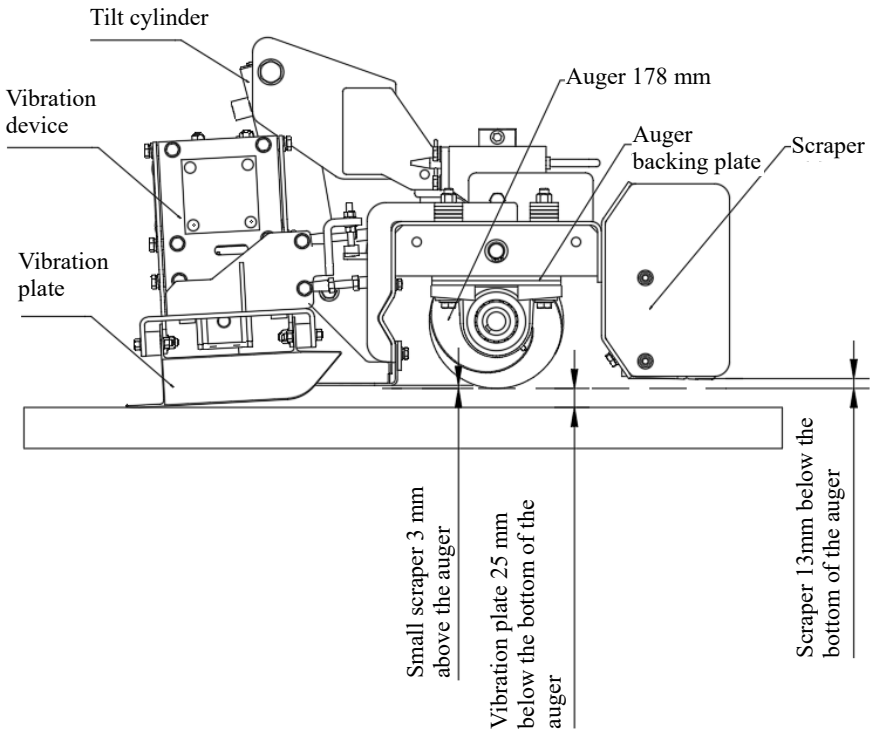
1. Proper setup of the screed head is very important, as it significantly affects the machine's performance, as well as the quality and finish of the concrete. Daily inspection and adjustment of the screed head are essential. Before using the machine, perform any necessary adjustments in the following order: Before inspecting or adjusting the screed head, always check/adjust the automatic leveling system first. After adjusting the automatic leveling system, recheck and readjust the screed head if necessary.

When the work head is properly set up, it will remove excess concrete to within 13–38 mm (1/2 inch – 1-1/2 inches) of the finished grade (depending on the aggregate size in the concrete). The screw conveyor auger will then strike off the remaining material to the final grade, and the vibrator will compact the concrete effectively.

Required tools:

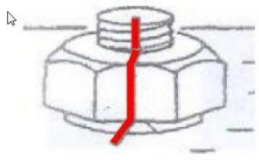
Level (1 meter long)	Measuring tape
Auger shims	Combination wrench set and sockets

Adjustment schematic diagram:

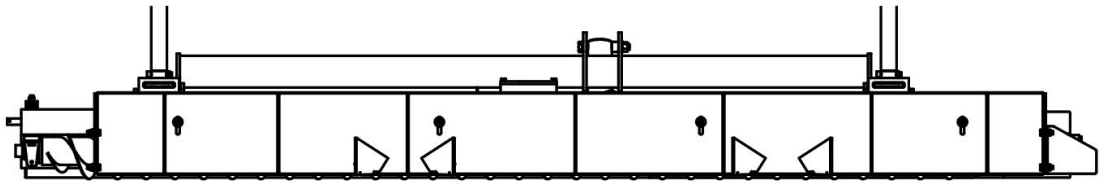


Setup instructions for laser leveling head

2. After the bolts are tightened, mark them with a paint pen.



When tightening the bolts connecting the scraper to the hinge support, the sequence should start from the center and proceed symmetrically. After tightening, ensure that the scraper remains parallel to the ground.



3. After installation, the auger must rotate flexibly and smoothly; it should not be tight on one half and loose on the other. It must have good static balance.

4. When installing bearings, the mating surfaces should be thoroughly cleaned with clean gasoline, kerosene, toluene, or xylene, and then dried with a clean cloth.

5. Press the left and right leveling buttons to check whether the leveling hydraulic cylinders move up and down smoothly and reach the correct position.

6. Press the workhead angle adjustment cylinder button to check whether the front and rear tilting of the workhead is smooth and reaches the correct position.

7. Turn on the auger switch; the rotation should be smooth and free of abnormal noise. Adjust the auger speed to 200 ±10 r/min (when the hydraulic oil temperature is around 30°C).

Setup instructions for laser leveling head

1. Preparation

1.1 Start the machine and allow the hydraulic oil to reach an operating temperature of 20°C. Allow the machine to continue running during the headstock setup process.

1.2 Place the machine on a flat, stable surface.

1.3 If necessary, bleed air from the self-leveling cylinder. The process is as follows.

1.3.1 Remove the screws and brass bushings of the tilt leveling cylinder (SLS cylinder) from the headstock (Figure 1).

1.3.2 Rotate the cylinder and place it horizontally; manually rotate the cylinder to expel any trapped air bubbles (Figures 2 and 3).

1.3.3 Reinstall the tilt leveling cylinder onto the headstock.

Note: Turn the plug counterclockwise 1–2 turns only. Do not over-rotate. Start the machine and manually operate the leveling button to extend and retract the cylinder 5 times. A small amount of oil may seep out, which will help expel gas more quickly from the cylinder (use a container to collect any overflowed hydraulic oil, and dispose of it in accordance with local environmental regulations).

Figure 1

Figure 2

Figure 1

Figure 2

Setup instructions for laser leveling head

2. Angle sensor setup process

2.1 Angle sensor calibration

(This must be completed before SLS and cross-slope calibration compensation.) Angle sensor calibration is crucial for proper performance of both SLS and cross-slope control. If the angle sensor is not properly calibrated, vertical movement will affect SLS, and changes in SLS angle will affect vertical positioning. This step must be repeated whenever adjustments are made to the angle sensor.

2.1.1 Lower the left lift as much as possible and raise the right lift as much as possible.

2.1.2 Go to the diagnostic display screen and record the SLS value (do not lean on or stand on the machine while recording values).

2.1.3 Raise the left lift as much as possible and lower the right lift as much as possible.

2.1.4 Return to the diagnostic display screen and compare this SLS value with the previous one (again, do not lean on or stand on the machine while recording values). If the difference between the two values exceeds 0.2 degrees, adjust/rotate the angle sensor bracket to evenly distribute the difference between the two readings. Repeat the process until the difference is within 0.2 degrees.

Setup instructions for laser leveling head

2.2 SLS zero compensation

Note: Perform angle sensor calibration first; if already correct, no compensation is needed.

SLS zero compensation allows the control system to compensate for mechanical deviations between the angle sensor reading and the workhead. Accurate compensation ensures precise control of the angle between the screed plate, screw conveyor auger, and vibration plate.

Note: This step must be repeated whenever adjustments are made to the angle sensor.

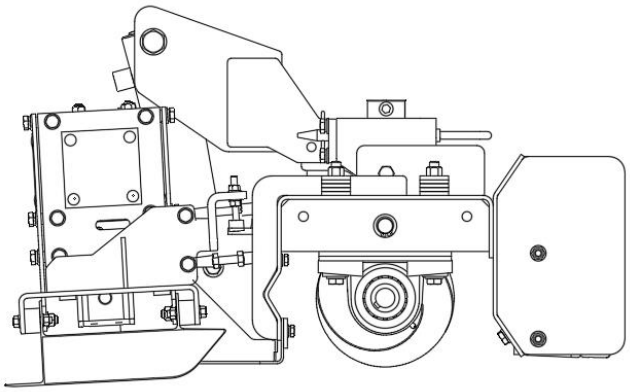
2.2.1 Set SLS and the left/right lifts to manual mode.

2.2.2 Place a spirit level along the front-to-back direction on top of the screw conveyor housing, and manually adjust the SLS toggle switch until the screw conveyor support beam is perfectly vertical. Record the SLS tilt angle displayed on the screen at this point.

2.2.3 Access the secondary menu on the display screen (see Display Screen section), and set the SLS zero compensation value to the recorded SLS tilt angle. Press Enter to confirm.

2.2.4 Exit the secondary menu and verify the SLS setting using the spirit level again.

Note: When performing "zero compensation" for both SLS and cross-slope, after completing the compensation procedure, the displayed angle in the secondary menu will change to reflect the compensation value.



Setup instructions for laser leveling head

2.3 Cross-slope zero compensation (perform after completing the tilt sensor calibration)

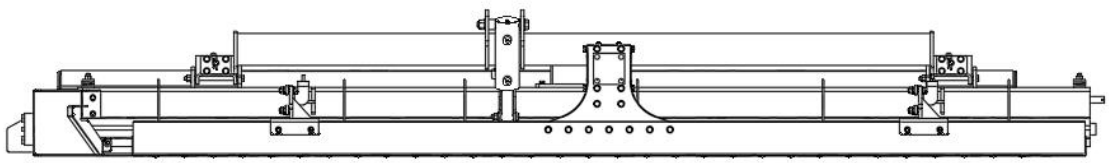
Cross-slope zero compensation allows the control system to account for mechanical deviations between the workhead's horizontal orientation and the angle sensor. Proper compensation improves the accuracy of column obstruction protection and 3-D cross-slope control. This step must be repeated whenever adjustments are made to the angle sensor or screw conveyor auger shims.

2.3.1 Place a spirit level under the screw conveyor auger and adjust the lifts until the auger is level.

2.3.2 Observe and record the tilt value displayed on the screen.

2.3.3 In the secondary menu of the display screen, enter the corresponding value for cross-slope zero compensation (refer to the Machine Display Function Description for details).

Note: When performing zero compensation for both SLS and cross-slope, after completing the compensation procedure, the displayed cross-slope angle in the secondary menu will change to reflect the compensation value.



Setup instructions for laser leveling head

3. Screw conveyor auger

3.1 Screw conveyor auger inspection

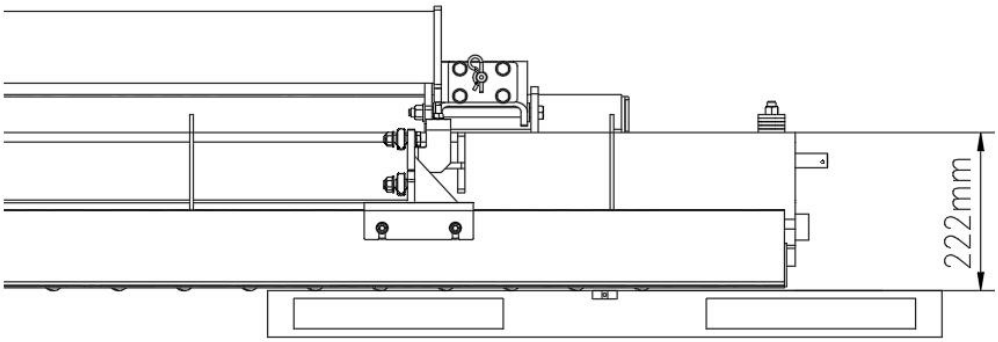
3.1.1 Visually inspect the screw conveyor auger. Look for damaged blades or accumulated concrete. Clean, repair, or replace the auger as needed.

3.1.2 Check the height of the screw conveyor auger blades. Replace the auger if the blade height is less than 28 mm.

3.1.3 Use a string or thin rope to check the straightness of the auger. Stretch the rope straight beneath the auger so that it just touches the edge of the blades. Rotate the auger by hand and ensure that the distance between all blades and the rope does not exceed 2 mm. Repair or replace the auger if it is bent.

3.1.4 Measure the wear on the side plates of the screw conveyor auger. If the wear on the right side exceeds 3 mm, remove the auger, reverse the end, and reassemble it.

3.2 All headstock setup dimensions are based on the bottom of the screw conveyor auger. It is critical to maintain a distance of 222 mm between the bottom of the screw conveyor auger and the top of the screw conveyor support beam.



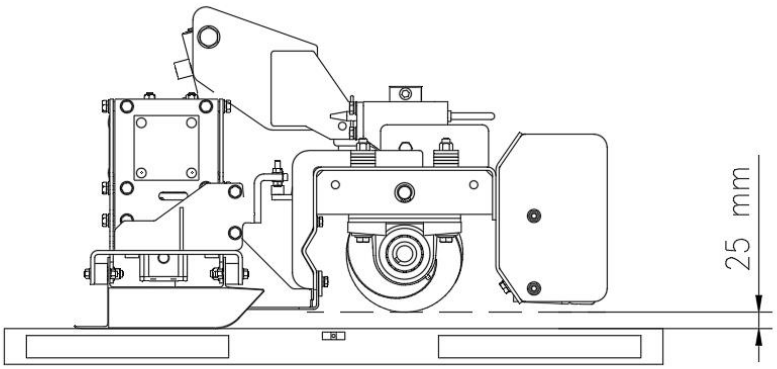
3.2.1 Place a spirit level along the bottom edge of the auger side plate, aligning it with the auger shaft, and extend it beyond the end of the workhead. Ensure most of the spirit level remains within the area of the auger blades.

3.2.2 Measure the distance from the top of the screw conveyor support beam to the spirit level. This height should be 222 mm (with a tolerance of ±3 mm). If not, add or remove auger shims from the auger bearings until the height is within 222 mm (±3 mm). Repeat the process on the other side of the auger.

Note: If auger shims are added or removed, the cross-slope must be recalibrated (zeroed).

Setup instructions for laser leveling head

4. Vibrator slide adjustment



4.1 Place the SLS in manual control mode.

Use the SLS ± controls to manually adjust the headstock to be level.

Visually confirm that the lift cylinders are perpendicular to the screw conveyor auger support beam and ensure that the cross-slope direction of the headstock is level.

Note: The bubble in the level must be centered to minimize errors.

4.2 The vibrator is equipped with rubber anti-slip pads, which prevent the vibrator from sliding down too much when the headstock is lifted.

4.3 Place a 1-meter level on the rear edge of the 4 rods and the vibrator.

4.4 The lowest point of the vibrator should be 25 mm ± 3 mm below the bottom of the screw conveyor auger.

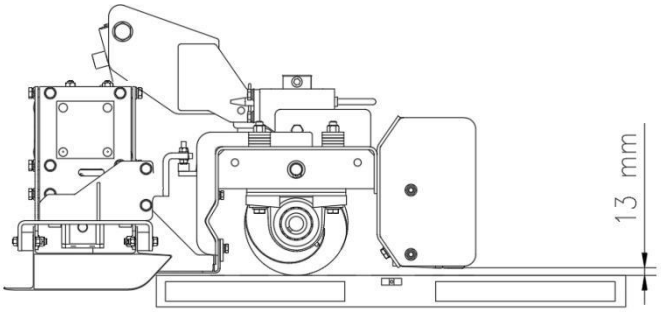
4.5 Adjust the vertical anti-slip pads if necessary.

4.5.1 Loosen the lock nut on the rubber anti-slip pad, adjust the pad, tighten the lock nut, and recheck the amount of slip for the vibrator.

4.6 Repeat the above steps on the opposite side of the workhead.

Setup instructions for laser leveling head

5. Scraper height adjustment



5.1 Place the SLS in manual control mode. Use the SLS ± controls to manually adjust the headstock to be level. Visually confirm that the lift cylinders are perpendicular to the auger support beam to ensure the headstock is level.

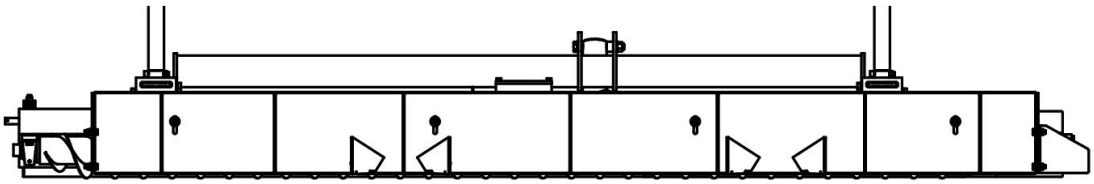
Note: The bubble in the level must be centered to minimize errors.

5.2 Place a long spirit level directly under the auger, beneath the bolt points at the end of the screw conveyor housing on the workhead.

5.3 Check that the distance between the bottom edge of the scraper plate and the bottom of the screw conveyor auger is 13 mm ± 2 mm.

5.4 If the dimension is not correct, adjust the height of the scraper plate.

5.4.1 Loosen or tighten the bolts securing the auger support beam as needed.



5.4.2 Adjust the scraper plate so that its bottom is 13 mm above the auger, then retighten the scraper bolts.

Note: The scraper should be set higher when working with low-slump or coarse concrete, compared to high-slump or fine-grained concrete. Adjust appropriately based on actual conditions.

Setup instructions for laser leveling head

6. Spiral speed setting

6.1 Attach a reflective strip to the end of the auger tube.

6.2 Start the auger and the vibrator.

6.3 Use a tachometer to measure the auger speed. The speed should be 200 rpm (±10 rpm).

6.4 The speed can be adjusted using the multi-function selector knob on the remote control.

7. Vibrator drive speed setting

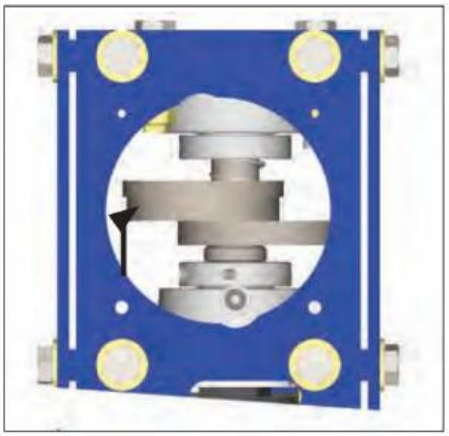
7.1 Attach a reflective strip to the eccentric weight or shaft of the vibrator.

7.2 Start the auger and the vibrator.

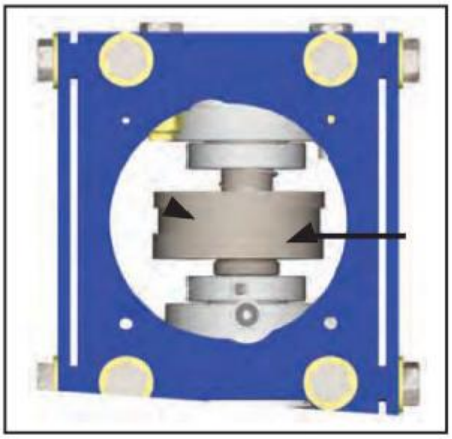
7.3 Use a tachometer to measure the auger speed. The speed should be between 2700 and 3600 rpm.

7.4 The speed can be adjusted using the multi-function selector knob on the remote control.

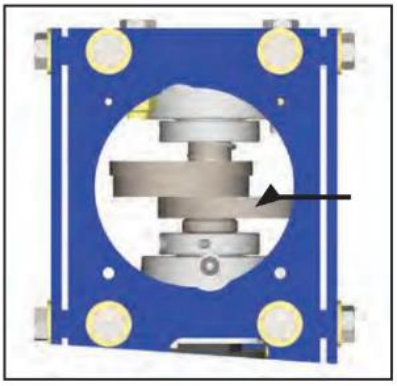
7.5 The vibration force has 5 levels, ranging from minimum to maximum: Level 1, 2, 3, 4, and 5.



Minimum vibration force (Level 1)



Maximum vibration force (Level 5)



The factory setting is at Level 2 for vibration force.

Setup instructions for laser leveling head

8. Receiver pole and handheld pole height adjustment

8.1 Receiver pole height adjustment
8.1.1 First, check the value displayed on the scale ring.
8.1.2 Adjust the front/back tilt angle to 0°, then measure the height from the bottom of the screw conveyor to the midpoint of the receiver (the laser zero line). Loosen the hex bolt on the receiver sleeve and adjust the height of the receiver sleeve so that it matches the height shown on the scale ring.
8.1.3 Raise or lower the receiver pole to the new height, and verify that the height displayed on the scale ring matches the actual height from the bottom of the screw conveyor to the midpoint of the receiver (laser zero line). When they match, the adjustment is complete.

8.2 Handheld pole height adjustment
8.2.1 Install the handheld pole and fully retract it to its shortest position.
8.2.2 Check the value displayed on the section 3 of the handheld pole.
8.2.2 Measure the height from the bottom of the handheld pole to the midpoint of the small digital receiver (laser zero line). Loosen the hex bolt on the mounting bracket and adjust the height of the small digital receiver so that it matches the height shown on the scale ring.
8.2.3 Raise or lower the third section of the handheld pole to the new height, and verify that the height displayed on the scale ring matches the actual height from the bottom of the handheld pole to the midpoint of the receiver (laser zero line). When they match, the adjustment is complete.

Cylinder protection

What is cylinder protection?

Cylinder protection is a function that automatically helps maintain the correct slope when the laser receiver is blocked and unable to receive the laser beam—such as by a column or other cylindrical obstacle.

How does it work?

When the laser receiver is blocked (no data available), the controller uses data from the cross-slope angle sensor. If the workhead's angle is correct, and an adjustment is made on the unobstructed side, the same adjustment will be applied to the obstructed side. If the workhead's angle is incorrect, the controller will adjust the slope on the obstructed side until the correct angle is restored.

What is the difference between flat bottom mode and slope mode?

In flat bottom mode, cylinder protection continuously maintains the cross-slope zero angle (0°).

In bevel mode, cylinder protection maintains the cross-slope zero angle (0°) during timed descent. However, during the leveling pass, it attempts to maintain the current angle of the workhead at the moment the laser receiver was blocked.

What should the operator be aware of to use cylinder protection effectively?

Avoid turning as much as possible. If turning is necessary, do so slowly and avoid sudden lateral movements. Lateral movement affects the cross-slope angle sensor data and can cause errors in slope control. This is especially important in the slope mode, where cylinder protection tries to maintain the current workhead angle when the column blocks the signal. Turning may result in capturing an incorrect angle (too high or too low), leading to an incorrect workhead position.

Perform cross-slope zero compensation During cylinder protection, the angle sensor controls the workhead to maintain the cross-slope zero angle. If the zero compensation value is incorrect, the slope will also be incorrect. When leveling a flat surface, checking whether the cross-slope zero compensation value is 0° is a good way to verify if the calibration is correct. When the concrete slope meets the required specifications, and you are ready to begin the leveling operation, perform a test while tilting the work head. When both laser receivers are within the laser beam, allow the workhead to auto-adjust the slope. Access the diagnostic screen on the display. While the machine is on a stable slope, the cross-slope value should read 0° (+1°/-0.1°). The closer the value is to 0°, the more accurate the cylinder protection will be. If the value is outside the range of +1°/-0.1°, perform the cross-slope zero compensation procedure again.

Cleaning process

1、Switch the automatic leveling mode to manual mode, and fully raise both sides of the work head.

2、Turn off the engine and switch off all function controls.

3、Remove the laser receiver and its cable.

4、Use pressure washing to clean off any concrete buildup. Do not wash the control panel with high pressure. Be cautious when cleaning the control panel and electronic components — direct high-pressure washing may cause mechanical damage or malfunctions.

5、For machine lubrication, refer to the maintenance instructions section in this manual.

Receiver LED indicator

LED indicators for different receiver models:

Trimble receiver height LED indicator:

No signal received	Receiver high position	Receiver zero position	Receiver low position
Flashing slow	Flashing fast	Always on	Flashing fast

MOBA receiver height LED indicator:

No signal received	Receiver high position	Receiver zero position	Receiver low position
No indication	Arrow pointing down	Horizontal line	Arrow pointing up

Leica receiver height LED indicator:

MLS720	MLS820	LED	Description
		Top flashing very slowly	Laser lost
		Top flashing quickly	Far above reference height
		Top flashing moderately fast	Above reference height
		Middle flashing quickly	Reference height
		Bottom and middle flashing quickly	Below reference height
		Bottom flashing quickly	Far below reference height
		Bottom flashing very slowly	Laser lost

Troubleshooting – Conditions that may affect the laser leveling system's operation

1) The laser control system is designed to operate at distances between 1.5-90 meters. The receiver may not receive the laser beam if it is less than 1.5 meters away. Accuracy decreases beyond 90 meters.

2) The following information may interfere with the laser emitter and receiver:

a) Fog.

b) Dust.

c) Diesel exhaust.

d) Uneven heated air.

e) Wind or other factors interfering with the building when using column clamps may cause vibration in the receiver. Use a tripod device for the emitter.

f) Heavy equipment can cause ground vibrations sufficient to affect the transmitter. Stop using heavy equipment or move the emitter.

g) Wind may cause vibration in the emitter. Hang weight from the center of the tripod or implement wind protection measures to block the wind.

3) Fluorescent lights may cause solid red signals. Possible solutions:

a) Turn off the light source.

b) Install a protective barrier above the receiver.

4) Low battery power in the emitter may cause:

a) Weak and unstable signal.

b) Inability to transmit the signal over long distances.

5) Surfaces such as glass or galvanized steel plates at the same height as the emitter may produce reflections, resulting in unstable high or low signals.

Solution:

a) Place non-reflective material on reflective surfaces at the height of the emitter.

b) Cover the side of the receiver that receives the reflected signal with tape.

c) Place a non-reflective barrier between the emitter and the reflection source.

d) Cover the windows on the side of the emitter facing the reflection source with tape.

6) Strobe/rotating lights may cause unstable signals. Turn off or cover the light source.

Construction process

1. Inspection before ignition

Note: Develop the habit of performing pre-start inspections carefully and thoroughly, as this contributes to the safety of both personnel and equipment. Please inspect the machine according to the daily pre-start inspection checklist for YZS2-4 models.

Key inspection offices:

1.1.1 Check the oil circuit: Walk around the vehicle and check for any oil leaks or abnormalities. Pay special attention to the high-pressure hose joints, hydraulic cylinders, working valves, steering gear, and oil cooler seals. If any leakage is found, repair it immediately.

1.1.2 Check bolts and nuts: Inspect bolts and nuts at locations prone to loosening, and tighten them if necessary. Particular attention should be given to the air filter, wheel rim bolts, and workhead bolts.

1.1.3 Check the circuit: Check wires for damage, short circuits, or loose terminals.

1.1.4 Check the engine oil level: With the engine off, pull out the dipstick and check the oil level. When the engine is idling, first confirm that the oil pressure gauge is within the normal range before checking the oil level with the dipstick. If oil needs to be added, open the filler cap and add accordingly. The type of oil used depends on ambient temperature—refer to the attached table “Fuel and Lubricant Consumption.” When checking the oil level, ensure the vehicle is parked on a level surface. Do not fill above the “H” mark when adding oil.

1.1.5 Add fuel: Turn on the ignition switch to power up and check the fuel gauge. Add an appropriate amount of fuel based on the fuel level indicator.

Note: Avoid spilling fuel during refueling to prevent fire hazards.

2. Preparations before start-up

2.1 Laser emitter placement:

Select a relatively flat area with minimal obstacles in the plane. Place the tripod on a firm and stable location, and adjust the height of the platform (≥1.8m). Ensure that the spirit bubble on the top platform is centered within the black ring of the leveling mirror. Secure the emitter on the tripod platform and turn it on using the power button. (Note: After powering on (approximately 30 seconds), the emitter will automatically level itself and activate the laser beam.). Set the zero point of the handheld receiver according to the required elevation of the concrete surface.

2.2 Digital receiver installation:

Mount the digital receiver on the brackets at the upper ends of the two lifting cylinders. Adjust to the proper height and tighten the bolts securely.

2.3 Work head preparation:

Before construction, apply waste engine oil to the workhead to prevent concrete from sticking, making it easier to clean afterward.

3. Startup methods and steps

3.1 Check toggle switches:

Visually inspect all operation buttons and toggle switches to ensure they are in their initial positions.

3.2 Ignition and startup:

Turn the ignition key clockwise to the start position. Once the engine starts, release the key—it will automatically return to the "ON" position. If the engine does not start, wait at least 2 minutes before attempting again. The key must not remain in the "START" position for more than 15 seconds. If the fuel tank is empty, refill it completely before starting. Fill the fuel filter element with fuel, bleed the fuel system of air, and then attempt to start the engine.

3.3 Inspection after engine starting:

After starting the engine, perform the following checks: Pull the throttle switch and let the engine idle at medium speed for approximately 5 minutes.

Avoid running the engine at idle or high speeds for more than 20 minutes. If prolonged idling is necessary, occasionally apply some load or increase the engine speed to the medium range. Check whether the exhaust color is normal, and listen for unusual noises or vibrations. Avoid sudden acceleration until the engine has warmed up.

4. Vehicle driving construction

4.1 Vehicle driving:

Vehicle walking: After starting the engine, push the left joystick forward or backward to move the vehicle forward or backward.

Vehicle turning: Push the right thumb joystick to the left or right to steer the vehicle in the respective direction. The greater the joystick deflection, the faster the turning speed.

➢ **Caution: Always keep the handles clean. Repair or replace them if damaged.**

4.2 Vehicle construction operation:

● After setting the laser elevation and completing the overall machine adjustment, drive the machine slowly into the concrete construction site.

● Upon reaching the designated site, proceed with the leveling operation according to the *Leveling Operation*, maintaining a slow and uniform speed.

4.3 Precautions for vehicle construction and operation

● Laser emitter setup: The laser transmitter should be placed in the optimal position, ensuring no objects block the beam. The tripod must be sturdy and secure—tighten all screws and clamps. There should be no significant vibration sources nearby. Reasonably plan the concrete paving and leveling directions, and determine the appropriate travel path for the leveling machine to avoid

blind spots.

● During the laser screed machine operation, the leveling process of one section (the effective leveling width currently being worked) must not be interrupted.

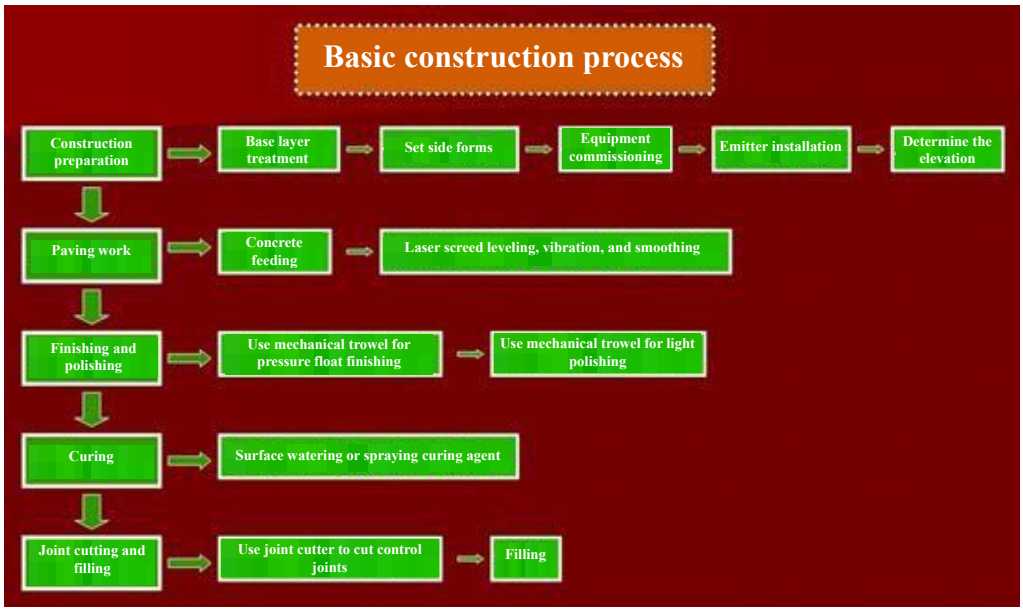
● If temporarily pausing the leveling process, turn off the vibration motor first — do not leave the vibration motor running while the machine remains on the concrete surface.

● When leveling the next section of concrete, ensure that the vibration plate overlaps the previously leveled section by 300–400 mm in length.

● Avoid pouring excessively thick layers of concrete, as this may reduce the effectiveness of the leveling process.

● If there are interfering objects (such as reflective materials like factory glass) at the construction site, operators should use paper or other light-blocking materials to shield the signal area of the emitted light source — see *Troubleshooting – Conditions that may affect laser control system operations*.

4.4 Basic construction process



● Preparation

1. After the base layer treatment is completed, perform equipment debugging on the laser screed machine. Establish fixed benchmark levels based on the original level points; lay down plastic film, bind the steel mesh (as required by design), and set up side forms. Install the laser transmitter and introduce the floor elevation into the laser screed machine based on the original level point.

2. Concrete delivery: Use ready-mixed concrete delivered to the site by concrete trucks.

3. Elevation verification: Use a handheld receiver to verify the floor elevation and introduce it into the laser screed machine. Adjust the reference point on the screed machine (±0.00).

● Concrete paving: Within the effective working range of the laser screed machine's leveling

head, initially level the concrete manually to be 1-2 cm higher than the floor elevation (specific height depends on concrete slump). Then, let the concrete laser screed machine complete the vibration, compaction, and leveling in one go.

● Polishing and finishing: Once the poured concrete reaches its initial setting, use a troweling machine for finishing, followed by manual troweling and smoothing.

● Curing: After concrete troweling, no heavy objects should be moved on the floor for at least 7 days, maintaining a moist curing condition. Apply curing agents as needed. To achieve good curing results, cover the surface to isolate it from the external environment. During the curing period, do not allow people onto the surface until the concrete strength meets requirements.

● Cutting joints: Perform joint cutting according to design requirements after surface treatment, ensuring this is done before the concrete fully sets. The spacing, width, and depth of joints must meet design and construction standards.

● Others: Fill joints, protect the surface until the concrete reaches sufficient strength before use.

4.5. Construction

Based on regional planning, pour concrete sequentially using ready-mix or pump trucks, spreading it evenly over the foundation with a spread width about half a meter beyond the vibrating plate and within 25 meters in length. Initial spreading is done manually.

Measurement personnel use a handheld receiver to take preliminary measurements, aiming for +5 mm height, leaving an even thickness for final adjustments (adjustments are made based on concrete slump).

After starting the machine, raise the vibrating plate, adjust walking speed and direction, enter work mode. Lower the vibrating plate upon reaching the designated location, switch to automatic mode, and adjust speed when the receiver shows green light, then reverse if necessary. (Pay attention to the construction direction and adjust it in time);

● During machine operation, promptly add or remove concrete as needed.

● Post-leveling, have measurement personnel check to ensure precision. (Check every 3–10 meters and make selective adjustments.)

● Implement protective measures (caution tape, felt cloth) for newly constructed floors to prevent damage.

● After completion, place the machine in a suitable position, keep the body balanced, ensure the scraper is above the vibrating plate, and clean the machine (avoid water entering the power output plug, pay attention to safety).

Slope adjustment

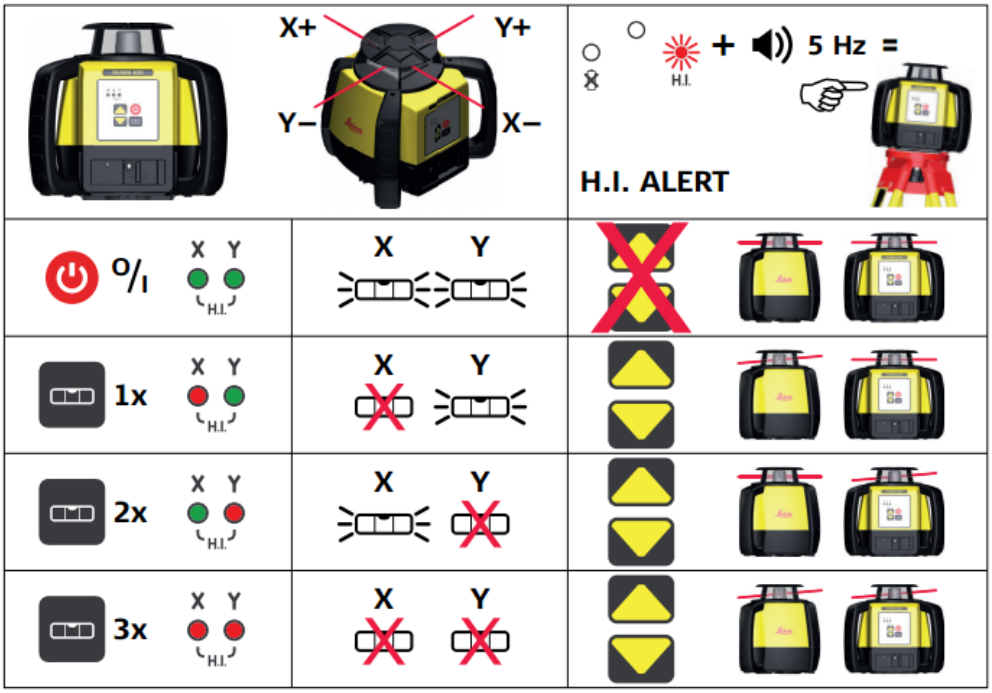
Upon switching to manual mode, manual control is activated. In manual mode, automatic leveling is disabled. Options include:

● Changing the X-axis to manual mode;

● Changing the Y-axis to manual mode;

● Switching all axes to manual mode.

After restarting the laser system, it will default to automatic mode.



Schematic diagram of laser component installation and debugging 01

After turning on the device, press the Auto/Manual Mode button to switch the X-axis to manual mode. The labeled X-axis and Y-axis are located on top of the laser transmitter.

1. The X-axis cannot auto-level and its slope must be adjusted using the up/down arrow buttons on the laser transmitter;

2. The X-axis LED light turns red;

3. The Y-axis continues to auto-level, and the Y-axis LED green light will keep flashing until leveling is completed;

When the X-axis is in manual mode, the slope of the X-axis can be adjusted;

4. Steps

● 1. Place the laser transmitter aligned with the highest (or lowest) horizontal line side, ensuring it is in line with the central axis of the laser transmitter.

● 2. Ensure the laser transmitter is placed correctly, with the keypad facing toward the low point (or high point). Then turn on the transmitter.

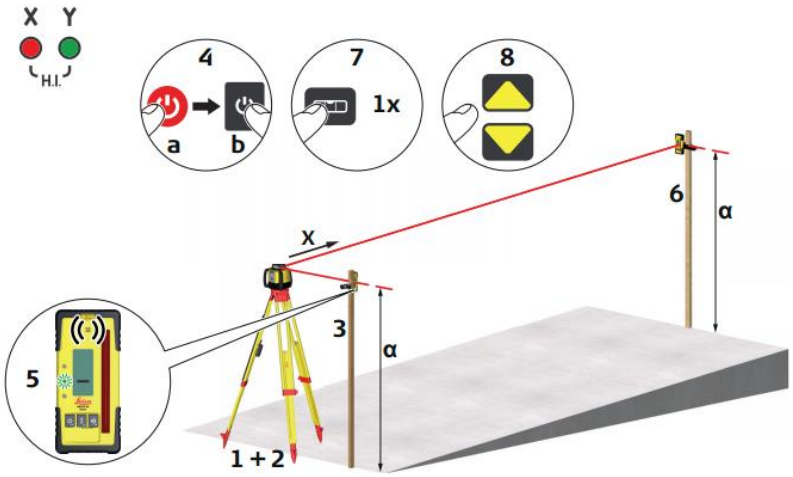
● 3. Install the small receiver and place it at a high point (or low point), close to the transmitter. Adjust the receiver to zero.

● 4. Use the small receiver to calibrate the screed machine.

● 5. Then place the small receiver at the low point. Adjust the laser transmitter by pressing the

angle key — the X-axis LED will turn red, and the Y-axis LED will turn green. Press the up arrow key to adjust the level [either hold continuously or tap for fine adjustment]. Adjust the small receiver back to zero.

● 6. Then measure all four corners of the site — they should all read zero. If there are discrepancies due to improper placement of the transmitter, slightly adjust the laser transmitter again for correction.



Schematic diagram of laser component installation and debugging 02

4.6 Quality control and precautions during construction

● Wall (column) edge layout and leveling: Since the laser screed machine cannot reach close to walls, a 40 cm area along the wall (formwork) must be manually leveled. Therefore, layout lines should be marked as a reference for manual leveling.

● Formwork installation along the pouring area of the day: It is recommended to use steel formwork. Reserve holes for load transfer bars, and carefully control the elevation of the formwork to avoid significant deviation in flatness at the joints between different sections.

● Formwork or thin plates around walls, equipment foundations, columns, etc.: Set up formwork or thin plates (thickness and location determined by design requirements) around these areas to leave expansion joints, preventing cracks in the concrete floor.

● Feeding: The concrete delivery speed should ensure sufficient volume and maintain a uniform rate, minimizing interruptions to prevent cold joints and delays in construction progress. The slump and initial setting time of each batch of concrete delivered to the site must remain consistent. Concrete slump should be controlled between 14–16 cm, and the initial setting time should be approximately 3 hours.

Note: Some content in this quality control section is for reference only. Actual construction should be based on the specific design requirements of the floor and the characteristics of the construction site.

5. Parking

Use the following steps to park

5.1 Inspection items during parking

● Park the laser screed machine on a level surface.

● Firmly engage the parking brake to ensure the machine does not move.

● Align the machine straight.

● Lower the screed head to the ground, using old tires or soft pads underneath if necessary.

● Turn the key switch to the OFF position.

● Remove the ignition key and leave the machine.

5.2 Park the laser screed machine in a safe location

● Park the machine in the designated area.

● Ensure the ground is solid and stable.

● Do not park near emergency exits, stairways, fire extinguishers, or other safety equipment. Avoid obstructing pedestrian walkways or vehicle traffic.

● Do not park near flammable materials.

● If parking on a slope is unavoidable, in addition to following normal parking procedures, place blocks under the wheels to prevent movement of the machine.

5.3 Do not use a faulty screed machine

● Remove the key from any faulty machine and hang a warning sign on the operator's seat to prevent unauthorized use.

If the machine breaks down during operation, release the parking brake and tow the machine out of the concrete area, parking it where it will not interfere with pedestrians or vehicles.

Lubrication and maintenance planning

Maintenance items Perform maintenance when either the specified number of months or the designated operating hours is reached, whichever comes first.	**Maintenance interval**	**Reference page**	**Lubrication**
Check the fuel level	Each use		
Check the engine oil level	Each use	Engine manual	EO
Check the hydraulic oil level	Each use	Maintenance instructions	HYDO
Check the coolant level	Display alarm indication		
Check the air filter	Each use	Engine manual	

Maintenance items Perform maintenance when either the specified number of months or the designated operating hours is reached, whichever comes first.	**Maintenance interval**	**Reference page**	**Lubrication**
Check the tightness of wheel nuts	Each use		
Check the auger (laser screed head)	Each use	Laser screed head setup	
Lubricant after high pressure flushing	Each use	See lubrication points	MPG
Lubricate the drive motor	Each use	Maintenance instructions	MPG
Inspect the drive hub	Monthly		MPG
Lubricate the front axle oscillating structure	Every 3 months		
Lubricate 4 steering articulations	Every 3 months		
Clean hydraulic oil cooler fins	Every 3 months	Maintenance instructions	
Check the electrical wiring	Every 6 months		
Check the hydraulic hose	Annually		
Check the hydraulic oil cooler hose	Annually	Maintenance instructions	
Replace hydraulic oil filters (return lines)	Annually	Alarm indication	
Change the hydraulic oil in the tank	Every 2 years	Maintenance instructions	HYDO

Lubrication and maintenance planning

Diesel engine

Maintenance items Perform maintenance when either the specified number of months or the designated operating hours is reached, whichever comes first.	**Maintenance interval**	**Reference page**	**Lubrication**
Clean the air filter	Every 50 hours	Engine manual	
Change engine oil	Every 250 hours	Engine manual	EO
Replace the fuel filter	Every 400 hours	Engine manual	
Replace the oil filter	Every 250 hours	Engine manual	
Replace the air filter	Annually / Adjust according to local environmental conditions	Engine manual	
Change coolant	Every 1000 hours or annually	Engine manual	
Check the engine base (oil pan)	Every 500 hours	Engine manual	
Check/Replace fuel lines	Every 2000 hours or every 2 years	Engine manual	
Check the fan belt	Every 250 hours	Engine manual	

Note:

EO-Engine crankcase oil

HYDO-Hydraulic oil

MPG-Multi-purpose lubricant

OGL-Open gear lubricant

Maintenance instructions

Clean the outer fins of the hydraulic oil cooler core

If airflow through the hydraulic oil cooler is obstructed, the hydraulic oil temperature may rise, which can shorten the service life of the hydraulic pump. Clean the hydraulic oil cooler daily to prevent the accumulation and hardening of concrete dust. If the hydraulic oil cooler becomes clogged due to lack of cleaning, it will eventually need to be replaced. Use compressed air or high-pressure washing to clean the dust before it hardens on the radiator.

Check the hydraulic oil cooler hose

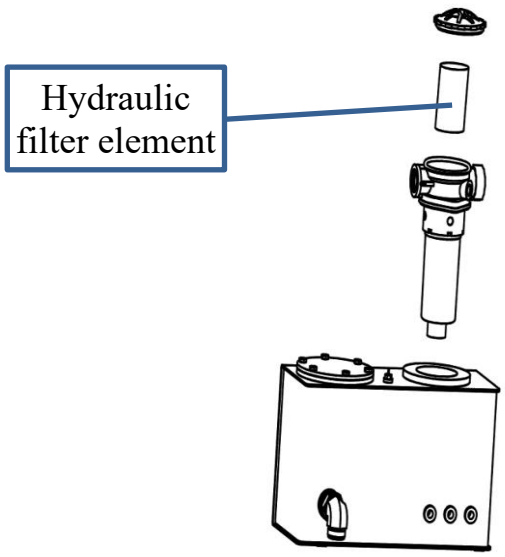
Regularly inspect the hoses in the cooling system for any signs of leakage or damage. Replace old hoses with new ones as needed.

Check the hydraulic oil level

Check the hydraulic oil level through the transparent hydraulic tank. Compare the oil level with the "FULL" line marked at the front of the tank. Check the oil level when the machine is parked on a level surface and the oil is at normal operating temperature. Add hydraulic oil as needed to maintain the correct oil level.

Hydraulic oil filter element

Replace the hydraulic oil filter element in the return line according to the following instructions: With the machine turned off, remove the top cover of the filter housing and replace the filter element. Make sure no dust or debris enters the hydraulic oil tank during this process.



Maintenance instructions

Change hydraulic oil

Refer to the diagram on the previous page.

Hydraulic oil should be replaced at regular intervals to avoid damaging system components. As the oil ages and due to the presence of special chemical additives, it can become less effective at preventing corrosion, oxidation, and performance degradation. Therefore, it is important to replace the oil with new oil as regularly as possible. However, it is not practical to replace all the oil in the system, as some oil will remain trapped within various components of the system.

To change the hydraulic oil:

1) Wash the machine with water pressure. Pay special attention to cleaning the area on top of the hydraulic oil tank that is accessible. The top of the tank must be cleaned thoroughly to ensure no dirt falls into the tank when the hydraulic oil filter assembly is removed.

2) Drain the hydraulic oil from the tank by opening the return port at the bottom of the tank. Collect the old oil in an oil drain pan, which must have a capacity of at least the same as the tank volume (12.5 liters).

3) Once all the oil has been drained from the tank, it is recommended to remove the hydraulic oil filter assembly for inspection and clean the inside of the tank.

4) Remove the hex bolts on the base plate of the hydraulic oil filter assembly in order to take off the entire filter assembly.

5) The filter element is located beneath the hydraulic oil filter assembly.

6) After removing the filter assembly, inspect and clean the inside of the hydraulic oil tank. After cleaning, install a new hydraulic oil filter assembly and replace the cover gasket in the proper position.

7) Replace the fitting on the return port, and refill the hydraulic oil tank with new hydraulic oil up to the correct oil level.

Lubrication points

Drive motor cover lubrication point

After each use, apply grease to the grease nipple on each drive motor cover until grease overflows from the gap.

Steering hinge lubrication point

Grease 4 places every 3 months

Lubrication point of hinge shaft on cylinder

Grease 3 places every 3 months

One-section arm roller

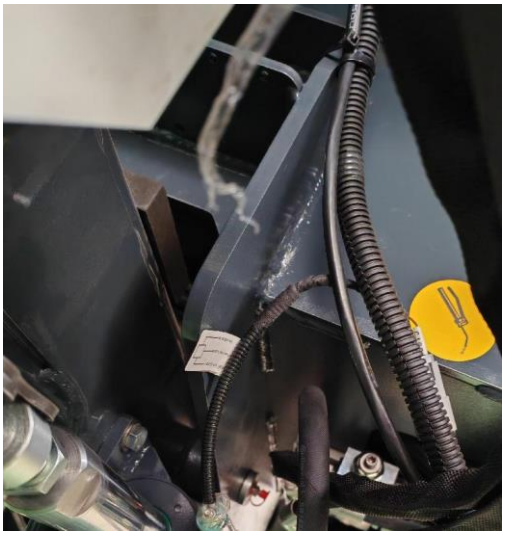
Fill grease every 1 week

Two-section arm roller lubrication point

Fill grease every 1 week

Lubrication point of front axle oscillating structure

Filling grease every 3 months



Bearing lubrication point of auger

There is one bearing on each side of the auger at the laser screed head. Apply grease each time after pressure washing.

Vibrator bearing

There are 2 vibrator bearings. Apply lubricant each time after pressure washing.

Bulk grease filling instructions for handheld grease gun

1. Lock the plunger by pulling it out completely to the side slot.

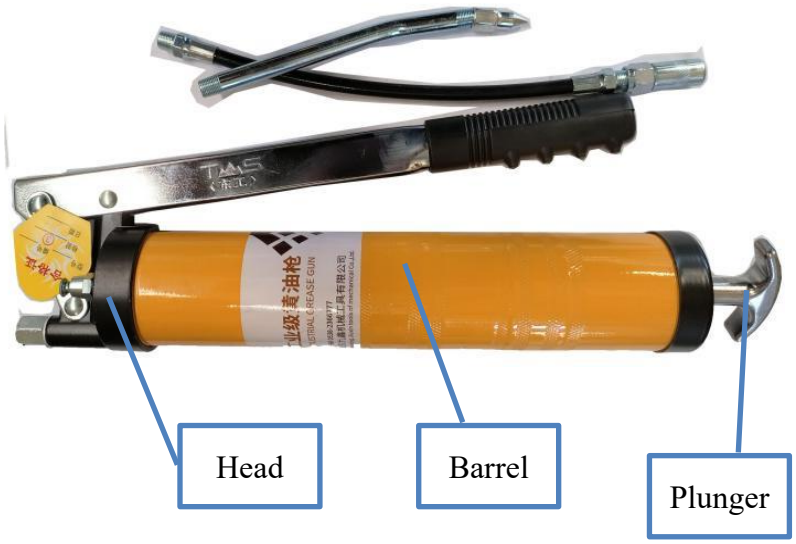
2. Loosen the barrel from the head.

Note: If the cap between the head and barrel comes off, please reinsert it properly.

3. Release the plunger and push it fully into the barrel.

4. Apply lubricant to the open section of the barrel.

5. Pull the plunger out completely and lubricate the inside of the barrel.



6. Lock the barrel back into the head.

Note: For instructions on the use of electric grease guns, please refer to the user manual provided on the packaging box.

Battery charging recommendations

Cyclic application: Limit the initial current to 8.4 Amperes. Charge the battery until (under charging condition) the battery voltage reaches 14.7 Volts at 6800°F (200°C). Maintain at 14.7 Volts until the current drops to approximately 280 mA. The battery is fully charged under these conditions and should be disconnected from the charger, or switched to a "float" voltage.

"Floating" or "Standby" maintenance: The battery should be continuously maintained within a voltage range of 13.5 to 13.8 Volts. When kept at this voltage, the battery will draw its own appropriate current level and maintain itself in a fully charged state.

Note: Batteries that have been stored for a long period require recharging. If exposed to higher temperatures, the required recharge intervals will be shorter.

Jump-starting the engine with a dead battery

Place a fully charged battery next to the machine, open the engine compartment door, and locate the random battery terminals.

1. Connect the positive (red) cable to the positive terminal of the random battery.

2. Connect the other end of the positive cable to the positive terminal of the charged battery.

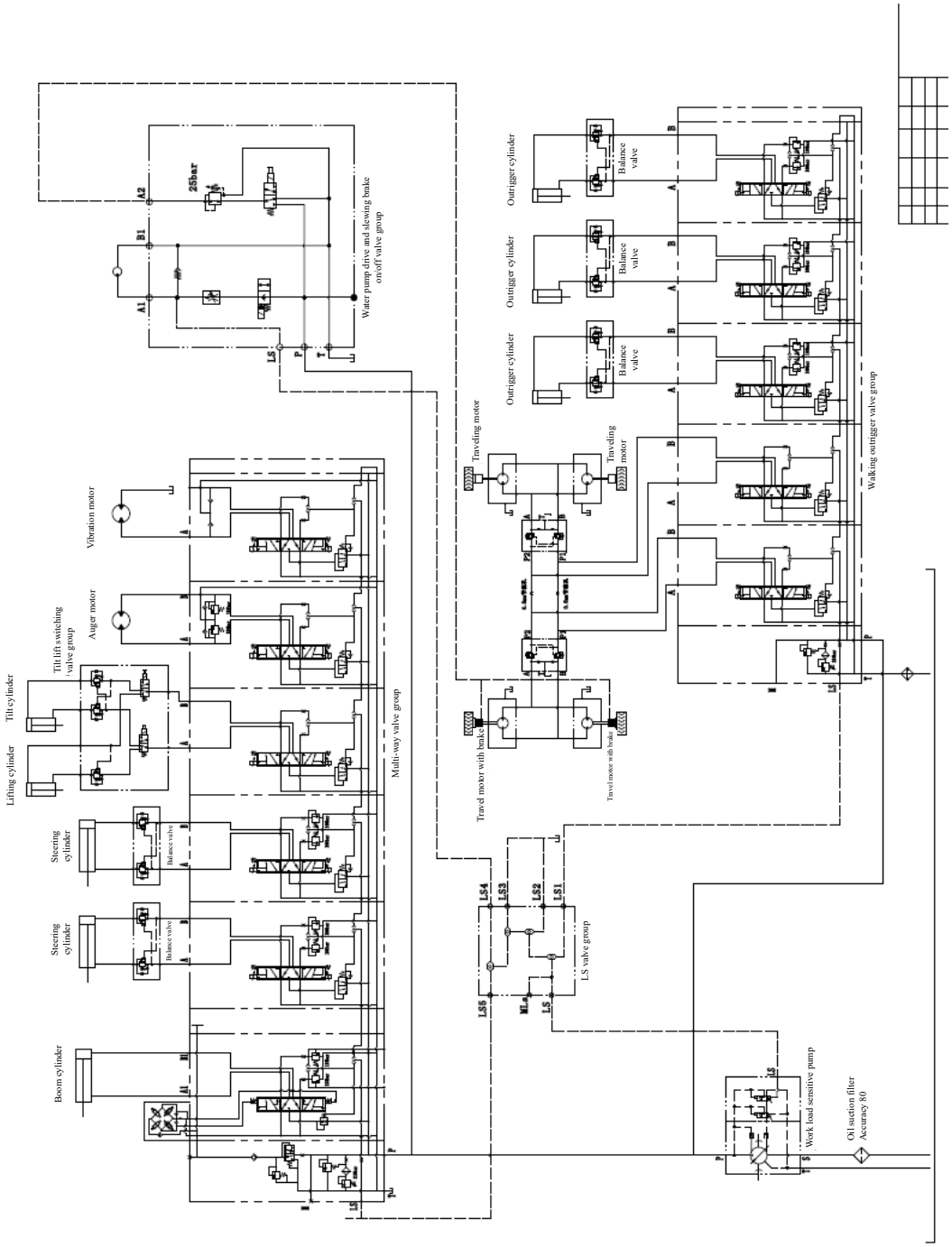
3. Connect the negative (black) cable to the negative terminal of the charged battery.

4. Connect the other end of the negative cable to the engine cylinder block.

5. Start the engine using the key switch.

6. Remove the jump-start cables in the reverse order of connection.

Hydraulic diagram



Hydraulic system troubleshooting

The most common problems in hydraulic systems are caused by dirt and debris entering the system. Maintaining a clean hydraulic system is crucial. Following these simple maintenance practices can help avoid unnecessary downtime:

1) Replace hydraulic system filter elements using appropriate replacement parts, as instructed in the Maintenance section of this manual.

2) If work needs to be performed on the hydraulic system, such as replacing a damaged hose or other components, take special care to cover damaged connection ports with caps or plugs to prevent dust from entering the system. It is recommended to use caps and plugs made of plastic or stainless steel. Before removing a hose, clean the area around the hose fitting (spray with cleaner and then wipe dry).

3) Before installing new hoses, thoroughly clean the new hose components. Blowing through with compressed air works well. After cleaning, insert the ends of the new hose and keep them sealed until installation is complete.

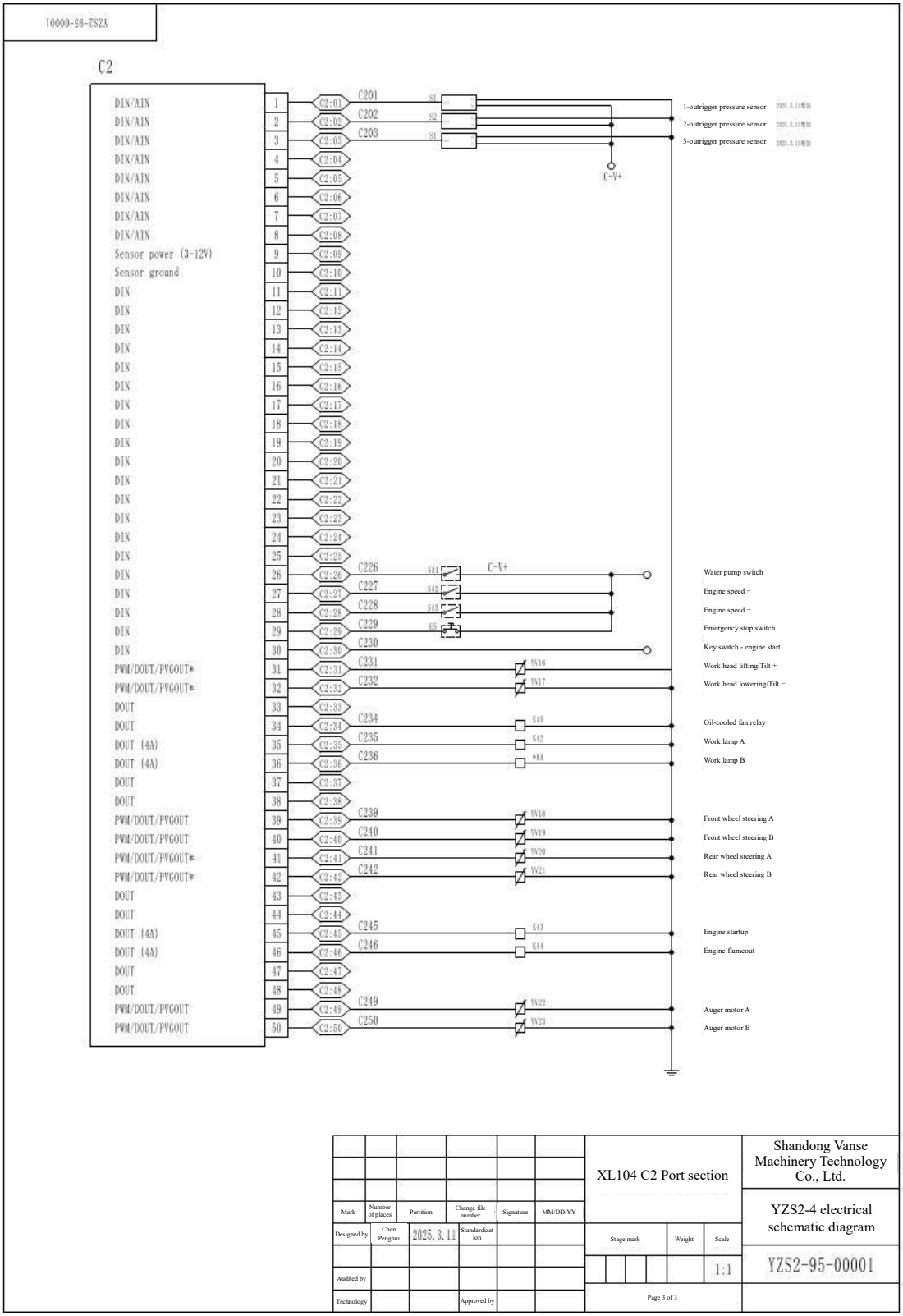
4) Ensure that any oil added to the system is clean. Ideally, all oil added to the system should be filtered before being poured into the hydraulic tank. Make sure that any funnels or containers used to handle the fluid are thoroughly cleaned before use.

Notes:

In general, hydraulic system issues caused by dirt can be identified through the following symptoms:

A function does not operate in one or both directions. In such cases, it is highly likely that dirt has affected the solenoid valve circuit of the function, or else the actuator (cylinder or motor) allows hydraulic oil to bypass. If, after disconnecting and capping the actuator's wiring, system pressure increases when you release the control valve, the problem is likely within the solenoid valve. If, after disconnecting and capping the actuator's wiring, system pressure still cannot be achieved, the issue may involve dirt affecting the load-sensing hydraulic system. The most likely location for this type of problem is the spool valve inside each hydraulic divider.

Electrical schematic diagram



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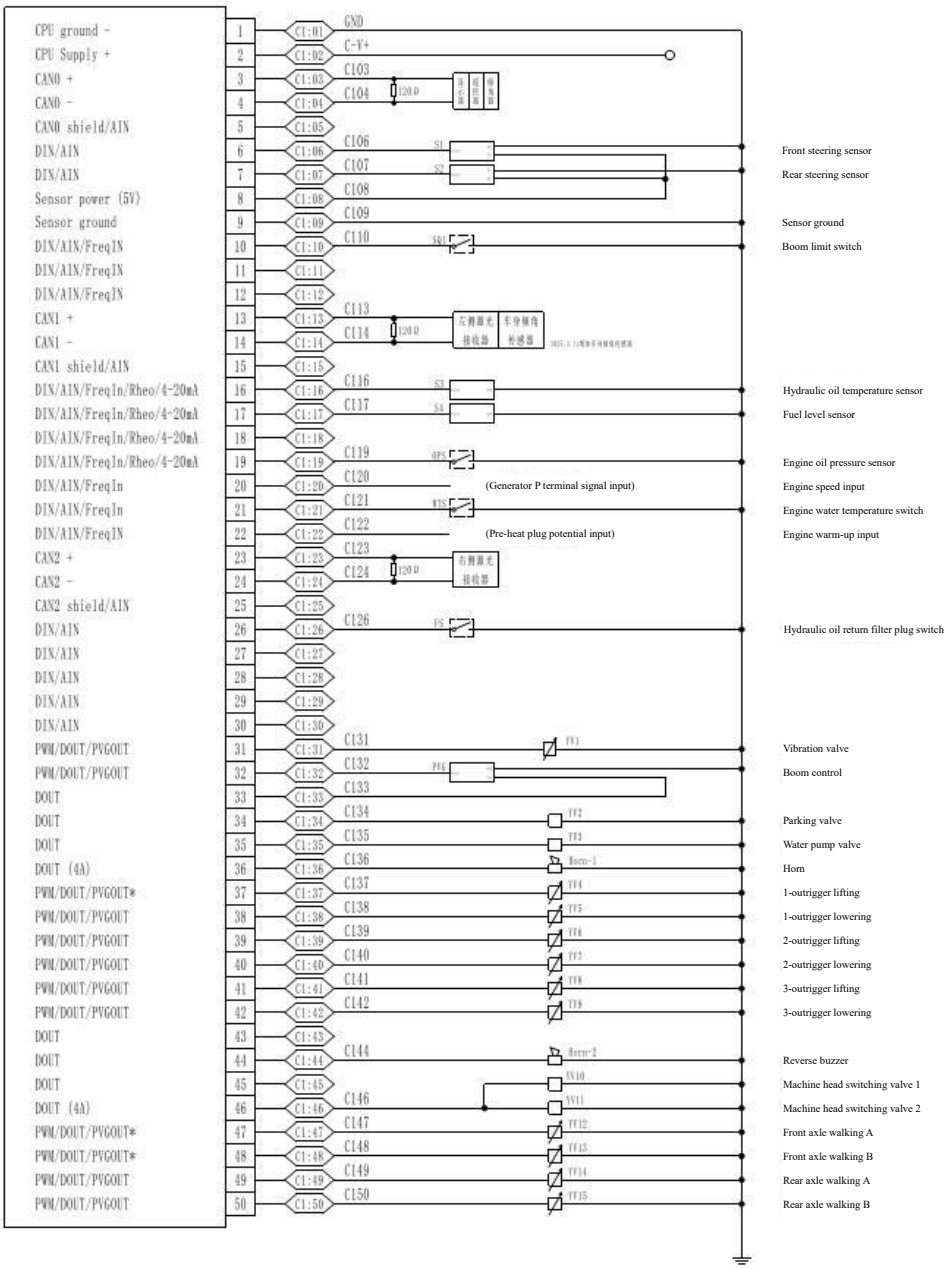
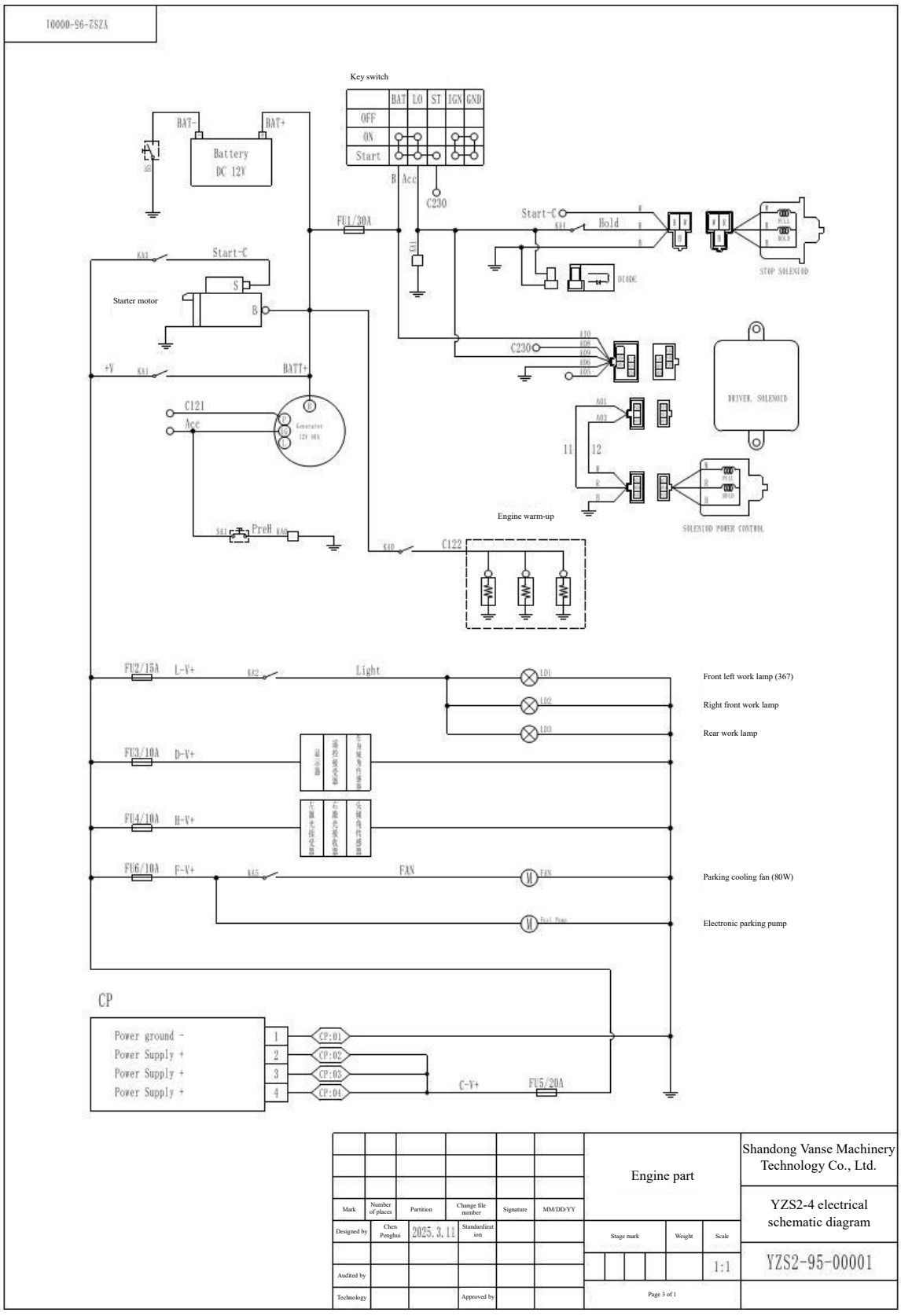


						XL104 C1 Port section	Shandong Vanse Machinery Technology Co., Ltd.
Mark	Number of places	Partition	Change file number	Signature	MM/DD/YY		
Designed by	Chen Penghui	2025.3.11	Standardization			Stage mark / Weight / Scale	YZS2-4 electrical schematic diagram
						1:1	YZS2-95-00001
Audited by							
Technology			Approved by			Page 3 of 2	



						Engine part	Shandong Vanse Machinery Technology Co., Ltd.
Mark	Number of places	Partition	Change file number	Signature	MM/DD/YY		
Designed by	Chen Penghui	2025.3.11	Standardization			Stage mark / Weight / Scale	YZS2-4 electrical schematic diagram
Audited by						1:1	YZS2-95-00001
Technology			Approved by			Page 3 of 1	

YZS2-4 attached accessories

S/N	Material Code	Material Name	Specification and Model	Quantity	Units
1	021204000001	Tripod	HT-02	1	Pc(s)
2	9999030009	Toolbox	17 inches	1	Pc(s)
3	9905140025	Allen wrench	GB/T5356 (1 set of 9 kinds of metric system)	1	Pc(s)
4	9905140011	Adjustable wrench	GB/T4393-(300mm)	1	Pc(s)
5	9905020008	Hand vice	GB6295 (8")	1	Pc(s)
6	9905150001	Rubber handle screwdriver	GB/T10639 (250 cross-head)	1	Pc(s)
7	9905150002	Rubber handle screwdriver	GB/T10640 (250 flat-head)	1	Pc(s)
8	9905020019	Small crowbar (length 1m, diameter 2.25 cm)	S22E-91-00004	1	Pc(s)
9	0288990001	Receiver black box	AX15B9	1	Pc(s)
10	9999030007	Hand-held single lever	3.15 meters	1	Pc(s)
11	ZP0212040006	Connecting shaft	360MINI-91-01001	1	Pcs
12	ZP0212040007	Pipe clamp	360MINI-91-01002	1	Pcs
13	030103010008	Hex socket head screw	M6×25	2	Pc(s)
14	030101010012	Hex head bolt full thread	M6×30	1	Pc(s)
15	9905140030	Adjustable wrench	GB/T4393-(450mm)	1	Pc(s)
16	9999030003	Backpack electric sprayer	3WBD-18-20B	1	Pc(s)
17	9905140020	Socket wrench	32PCS	1	Pc(s)
18	9905140026	Allen wrench	Imperial (HQ-61889)	1	Pc(s)
19	020806000003	Bearing with vertical block	UCP204	2	Pc(s)
20	0404100004	Fuse sheet	10A	2	Pc(s)
21	0404100005	Fuse sheet	15A	2	Pc(s)
22	0404100006	Fuse sheet	20A	2	Pc(s)
23	0404100008	Fuse sheet	30A	2	Pc(s)
24	9905080014	Horizontal ruler	1M	1	Pc(s)

S/N	Material Code	Material Name	Specification and Model	Quantity	Units
25	030901010002	Straight-through pressure oil cup 8	M8×1	5	Pc(s)
26	9905010014	Lithium-battery grease gun	Lithium-battery grease gun	1	Pc(s)
27	020915000004	Shock absorber pad	VV80*80*M16	4	Pc(s)
28	9905020018	Iron shovel (head width 7.4 cm length 25cm)	S22E-91-00010	2	Pc(s)
29	9902020021	Spring tube grease		2	Bottle
30	9999010011	Reflective waistcoat		2	Pc(s)
31	9905020011	Hand hammer	1500g	1	Pc(s)
32	030901010003	Straight-through pressure filling cup 10	M10×1	5	Pc(s)
33	030901010001	Straight-through pressure filling cup 6	M6x1	5	Pc(s)
34	030901010002	Straight-through pressure oil cup 8	M8×1	5	Pc(s)
35	9904010018	Sling	3T * 3m	3	Strip
36	9904020001	Shackle	WLL6T	3	Pc(s)
37	9905140032	Open spanner	GB/T4393-(30 * 32)	1	Pc(s)
38	9905140002	Fork wrench	8--24	1	Pc(s)
39	9905140031	Open spanner	GB/T4393-(24 * 27)	1	Pc(s)
40	09S22E8000016C	Handheld lever base	S22E-80-00016C	1	Pc(s)
41	9905080046	Multimeter		1	Pc(s)
42	9905990103	Greener grease gun nozzle	Locking clamp type high pressure oil filler nozzle	1	Pc(s)
43	03199990034	Bakelite handle bolt	M8×25	1	Pc(s)
44	6625D293B00000	Transmitter bracket combination	25D2-93B-00000	1	Pc(s)
45	0401990013	Non-contact tachometer	DT-2234C	1	Pc(s)
46	9905020010	Chain pliers	25Y4-91-00001	1	Pc(s)
47	09WS940C9001100	Auger boxing bracket welding	WS940C-90-01100	2	Pc(s)
48	0215020011	Rubber single wheel for	150x15x52	4	Pc(s)

S/N	Material Code	Material Name	Specification and Model	Quantity	Units
		6-inch caster replacement			
49	035050001	Steel ball quick release pin with rope	12x90	4	Pc(s)
50	03302010008	Flat washer	GB/T97.1-16	4	Pc(s)
51	030708000004	Snap pin	3.75 x75	4	Pc(s)
52	ZP0203030065	Auger gaskets (T6-14 T2-6)	WS940C-80-05011	20	Pc(s)
53	020915000027	M8 double-ended stud shock absorber	30*20-M8*23	8	Pc(s)
54	020915000026	Rubber shock absorber	HuZhuo VE25 * 15 * M8 * 50	2	Pc(s)
55	020806000014	sealmaster bearings	s-5205-m23	1	Pc(s)
56	9905020116	High pressure pump	160PSI high voltage	1	Pc(s)
57	9905020088	Extended midhole Allen wrench T27	SATA 84509	1	Pc(s)

The list is subject to change at any time without prior notice. The actual delivered parts will prevail.

Wearing parts detailed list of YZS2-4 laser leveling machine

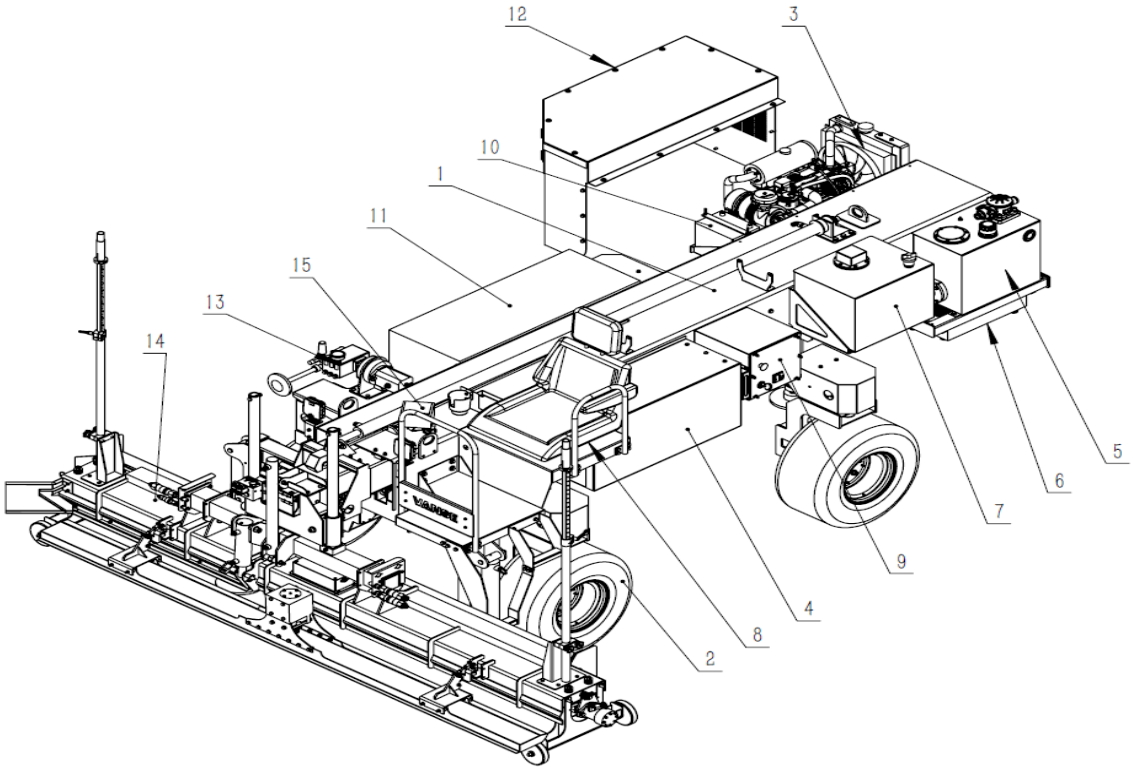
S/N	Material No.	Code	Name	Quantity	Replacement cycle	Remark
1	020806000014	s-5205-m23	sealmaster bearings	2	After damage or more than 5 years	Auger bearing
2	020801000018	6304-2RZ	Deep groove ball bearing	2	After damage or more than 5 years	Vibration bearing
3	020915000027	WS550-80-02008	M8X15 double-ended stud shock absorber	8	After damage or more than 3 years	
4	020915000026	WS550-80-02007	Rubber shock absorber M8X60	2	After damage or more than 3 years	

S/N	Material No.	Code	Name	Quantity	Replacement cycle	Remark
5	ZP0203020021	WS940C-80-053 00	Auger welding assembly	1	According to wear	
6	ZP0203020023	WS940C-80-061 00B	Small vibration plate welding	1	According to wear	
7	020104000044	80cc	Auger motor with slurry seal	1	Replace after damage	
8	020104000028	X1M1861BBBF	Hydraulic motor	1	After damage	
9	020807000008	PHS8	Internally threaded insert rod end joint bearing	8	After damage	
10	ZP0203040042	WS940C-80-090 01	M8 Stud	4	After damage	
11	020104000028	vivoil vibration motor	XV-1M-1.7	1	After damage	
12	ZP0203020020	WS940C-80-052 00	Scraper welding assembly	1	According to wear	
13	ZP0203040033	WS940C-80-060 05B	Vibration device protective cover	1	According to wear	
14	Order according to receiver brand and model	(Crimp according to receiver brand connector)	Spiral line	2	Replace after damage	
15	040106030006	Chint ZTV4/012-1Z	Relay	5	Replace after damage	
16	040102060001	KPM-300	Tie rod sensor	2	Replace after damage	
17	020105000029		Outrigger cylinder assembly	1	Replace after damage	
19	020915000034	70x30x30	Rubber sleeve	2	After damage or more than 3 years	For arm extension cylinder
20	040106030006	Changde CWLCA12-2-Q	Limit switch	1	Replace after damage	
21	021304000001	14X22	Side UO sealing strip	4 m	Replace after damage	Used for travel

S/N	Material No.	Code	Name	Quantity	Replacement cycle	Remark
						motor protection
18	0214990115	RFA-250X10F-YL filter element	Oil return filter RFA-250X10F-YL filter element	1	Replacement after alarm	
22	0214990116	Yanmar 3tnv80f-SDWM dedicated	Fuel filter element	1	Refer to the Engine Manual	
24	0214990117	Yanmar 3tnv80f-SDWM dedicated	Air filter	1	Refer to the Engine Manual	
25	0214990118	Yanmar 3tnv80f-SDWM dedicated	Oil filter element	1	Refer to the Engine Manual	
26	0404100008	30A	Fuse (fuse)	1	Replace after damage	
27	0404100006	20A	Fuse (fuse)	1	Replace after damage	
28	0404100005	15A	Fuse (fuse)	1	Replace after damage	
29	0404100004	10A	Fuse (fuse)	3	Replace after damage	

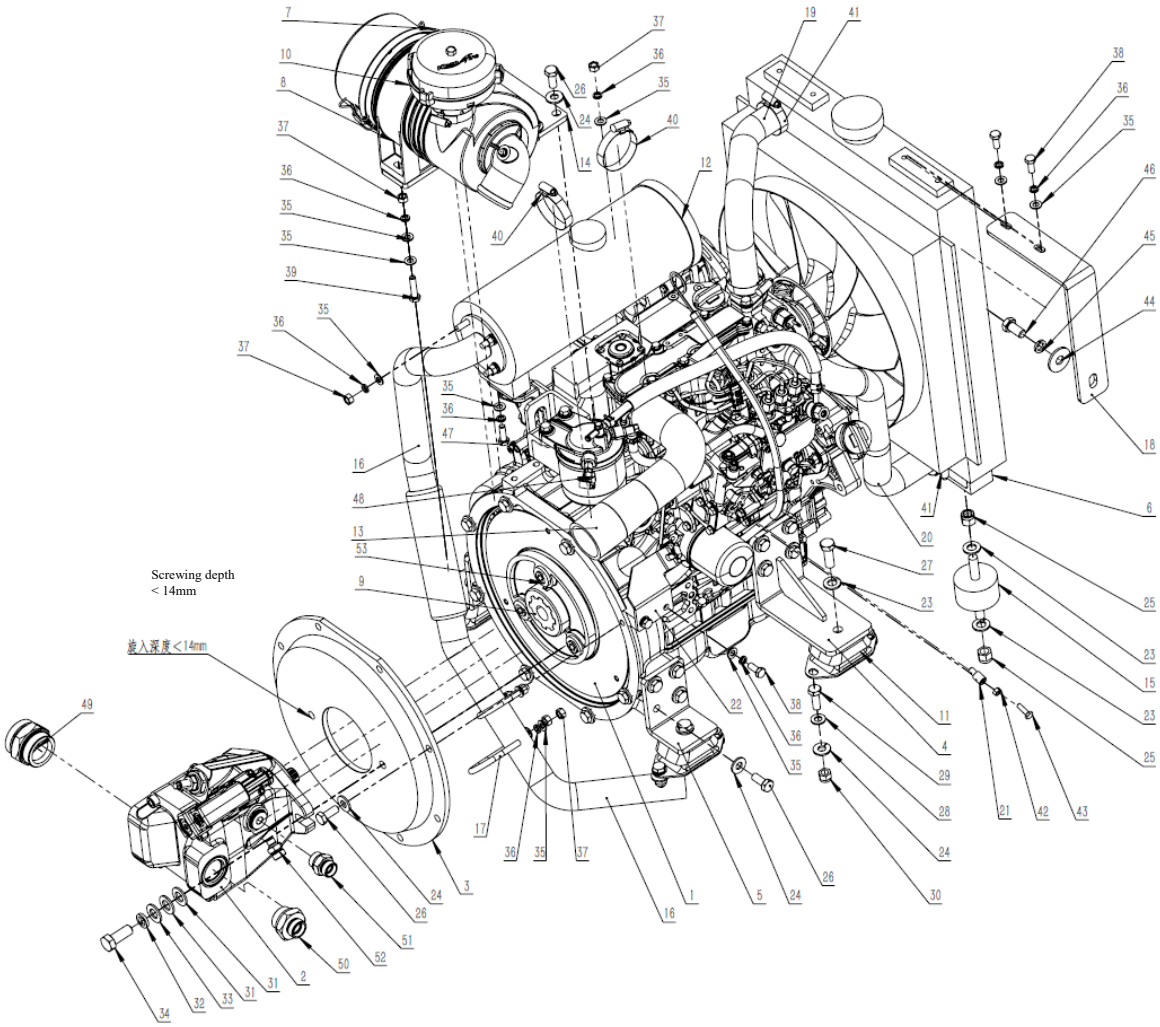
The list is subject to change at any time without prior notice. The actual delivered parts will prevail.

YZS2-4 Parts Manual

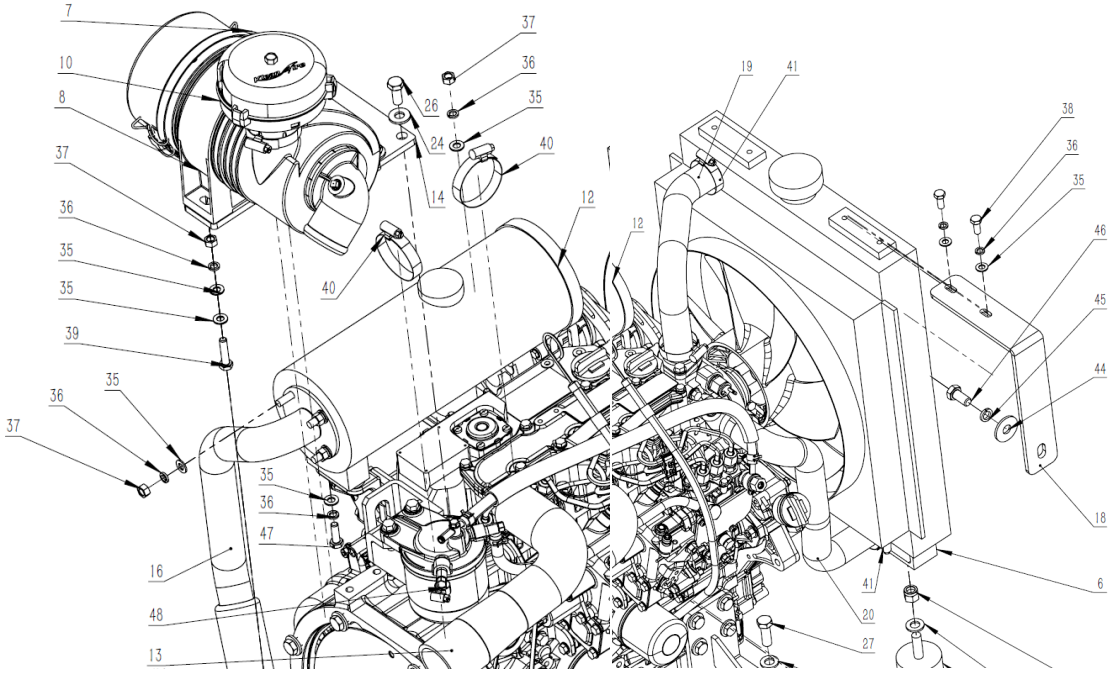


S/N	Material Code	Code	Name	Specifications	Quantity
1	ZP0206010014	YZS2-81-00000	Telescopic arm assembly	Assembly	1
2	ZP0207010011	YZS2-18-00000	Front axle assembly	Assembly	1
3	ZP0204010038	YZS2-01-00000	Engine assembly	Assembly	1
4	ZP0204010040	YZS2-62-01000	Hydraulic valve group assembly	Assembly	1
5	ZP0204010043	YZS2-62-02000	Hydraulic tank assembly	Assembly	1
6	ZP0204010042	YZS2-62-03000	Hydraulic radiator assembly	Assembly	1
7	ZP0204010039	YZS2-04-00000	Fuel tank assembly	Assembly	1
8	ZP0213010003	YZS2-44-00000	Seat assembly	Assembly	1
9	ZP0211010005	YZS2-07-01000	Electrical box assembly	Assembly	1
10	ZP0211010006	YZS2-07-02000	Cell assembly	Assembly	1
11	ZP0210010017	YZS2-50-01000	Boot assembly	Assembly	1
12	ZP0210010018	YZS2-50-02000	Engine guard assembly	Assembly	1
13	ZP0204010041	YZS2-75-00000	Cleaning system assembly	Assembly	1
14	ZP0203010040	YZS2-80-00000	Working device assembly	Assembly	1

S/N	Material Code	Code	Name	Specifications	Quantity
15	ZP0210010016	YZS2-25-00000	Console assembly	Assembly	1



The following is a partial enlarged view: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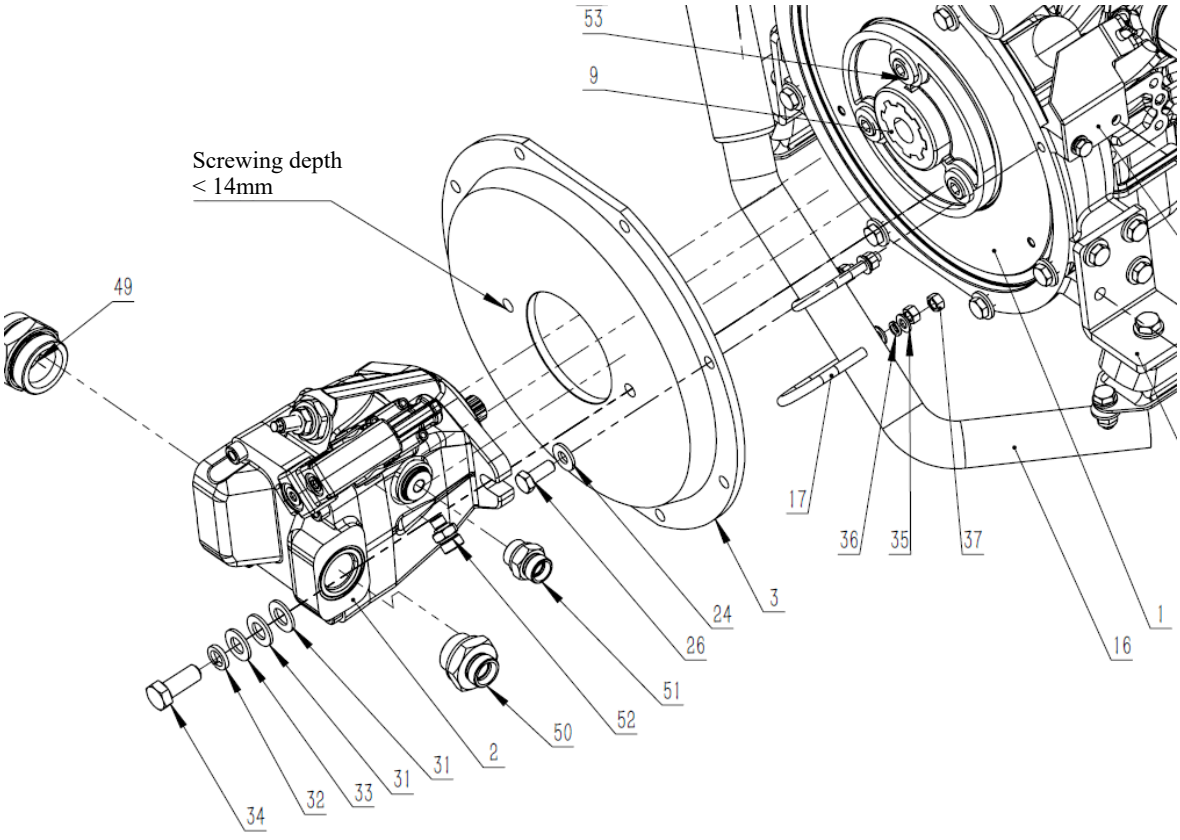
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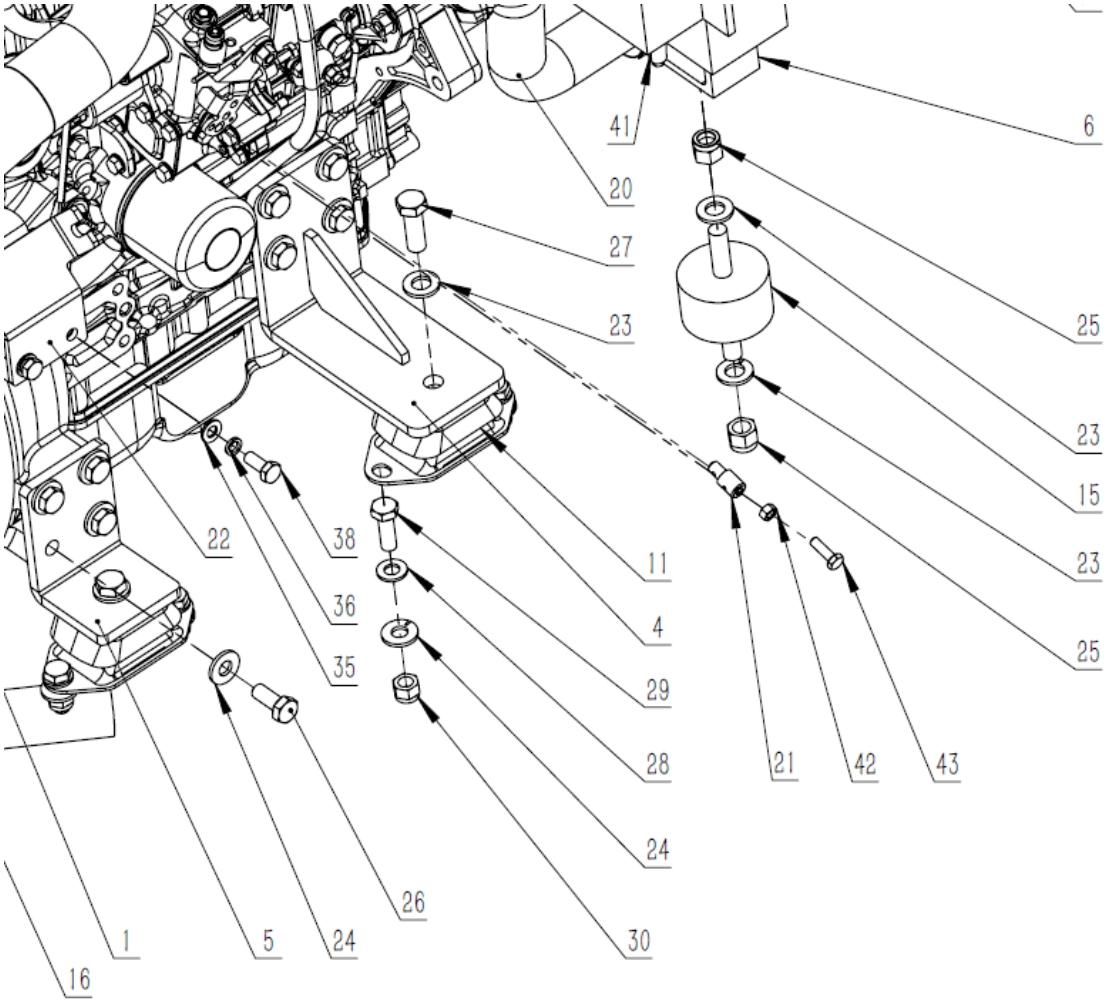
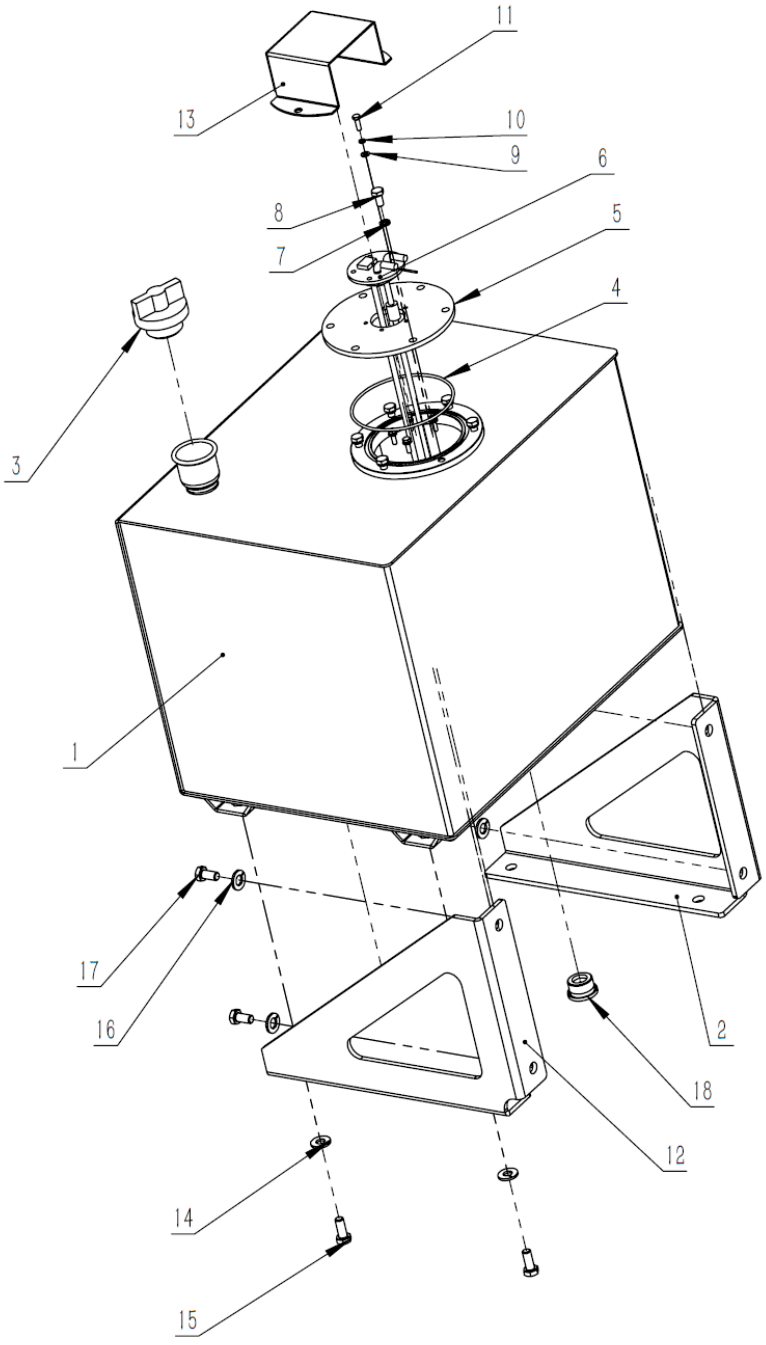


S/N	Material Code	Name	Code	Specifications	Quantity
1	20201000019	Yanmar engine	20201000019	3tnv80f-SDWM	1
2	20102000028	danfoss load-sensitive pump	20102000028	83132868	1
3	ZP0204040016	Pump connector	YZS2-01-01000		1
4	ZP0204020031	Engine rear outrigger	YZS2-01-02000	Assembly weldment	2
5	ZP0204030055	Front outrigger of engine	YZS2-01-00002	t=8	2
6	20602000006	Radiator assembly	20602000006	CB10065	1
7		Curved air	G052809	G052809	1

S/N	Material Code	Name	Code	Specifications	Quantity
		filter			
8	20905000005	Air filter hoop	20905000005	P777730	1
9	20508000011	Integrated nylon disc coupling	20508000011	125-M12-SAE16-32-13T	1
10	21804000009	Pre-filter	21804000009	KA10-20-0000I (45-51mm) attached with engines	1
11	20915000033	Engine shock absorber	20915000033	I520145-02 (Kange)	4
12	20202000002	Yanmar engine silencers	20202000002	3TNV80F accessories	1
13	ZP0204060005	Air filter connecting pipe	YZS2-01-00003	Ø 51 to Ø 44	1
14	ZP0204030056	Air filter mounting plate	YZS2-01-00004	t=8	1
15	20915000017	Shock absorber	20915000017	VV60*35M12*37	2
16	ZP0204020032	Exhaust pipe welding	YZS2-01-04000	Round tube 38x2	1
17	20909000009	U-bolt	JB/ZQ4321-2006	M8x38x70	2
18	ZP0204030057	Radiator upper bracket	YZS2-01-00005	t=6	1
19	ZP0204060006	Water supply pipe	YZS2-01-00006	Rubber tube 38x5	1
20	ZP0204060007	Sewer pipe	YZS2-01-00007	Rubber tube 38x5	1
21	ZP0204010012	Throttle connecting shaft	360MINI-01-00016A	Round steel 12	1
22	ZP0204030058	Throttle fixing plate	YZS2-01-00008	t=4	1
23	30507000001	French loosening	NFE-25511	M12	9

S/N	Material Code	Name	Code	Specifications	Quantity
		washer			
24	30507000008	French loosening washer	NFE-25511	M10	37
25	30302010006	Type 1 non-metallic insert hex lock nut	GB/T889.1-2000	M12	4
26	30101010041	Hex head bolt full thread	GB/T5783-2000	M10×25	28
27	30101010062	Hex head bolt full thread	GB/T5783-2000	M12×35	4
28	30514010006	Flat washer Class C	GB/T95-2002	10×2	8
29	30101010042	Hex head bolt full thread	GB/T5783-2000	M10×30	8
30	30302010005	Type 1 non-metallic insert hex lock nut	GB/T889.1-2000	M10	8
31	30514010008	Flat washer Class C	GB/T95-2002	14×2.5	4
32	30501010007	Standard elastic washer	GB/T93-1987	14×3.6	2
33	30507000002	French loosening washer	NFE-25511	M14	1
34	30101030058	Hex head bolt full thread	GB/T5783-2000	(M14)×35	2
35	30514010005	Flat washer Class C	GB/T95-2002	8×1.6	22
36	30501010004	Standard elastic washer	GB/T93-1987	8×2.1	20
37	30301010005	Type 1 hex nut	GB/T6170-2000	M8	14

S/N	Material Code	Name	Code	Specifications	Quantity
38	30101010024	Hex head bolt full thread	GB/T5783-2000	M8×20	4
39	30101010027	Hex head bolt full thread	GB/T5783-2000	M8×35	2
40	20904000009	Hose clamp	JB/T8870	d46-70	3
41	20904000008	Hose clamp	JB/T8870	d32-50	4
42	30301010004	Type 1 hex nut	GB/T6170-2000	M6	1
43	30101010010	Hex head bolt full thread	GB/T5783-2000	M6×20	1
44	30512000001	Large washer Class C	GB/T96.2-2002	12×3	1
45	30501010006	Standard elastic washer	GB/T93-1987	12×3.1	1
46	30101010060	Hex head bolt full thread	GB/T5783-2000	M12×25	1
47	30101010025	Hex head bolt full thread	GB/T5783-2000	M8×25	2
48	20904000003	Hose clamp	JB/T8870	d10-16	1
49	21001070027	Metric male threaded post end	ISO6149	1CH-52-48	1
50	21001070018	Metric male threaded post end	ISO6149	1CH-26-33	1
51	21001070013	Metric male threaded post end	ISO6149	1CH-22	1
52	21001100004	American threaded O-ring seal post end	21001100004	1CO-18-04	1
53	30103030047	Hex socket head screw	GB/T70.1-2000	M12×35	3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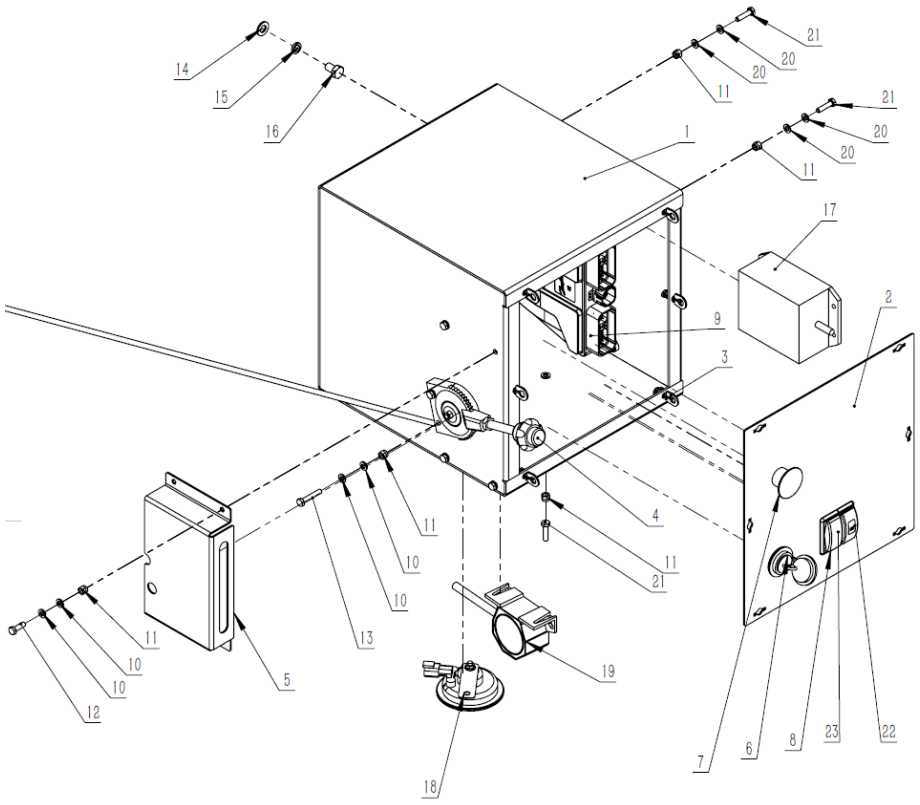
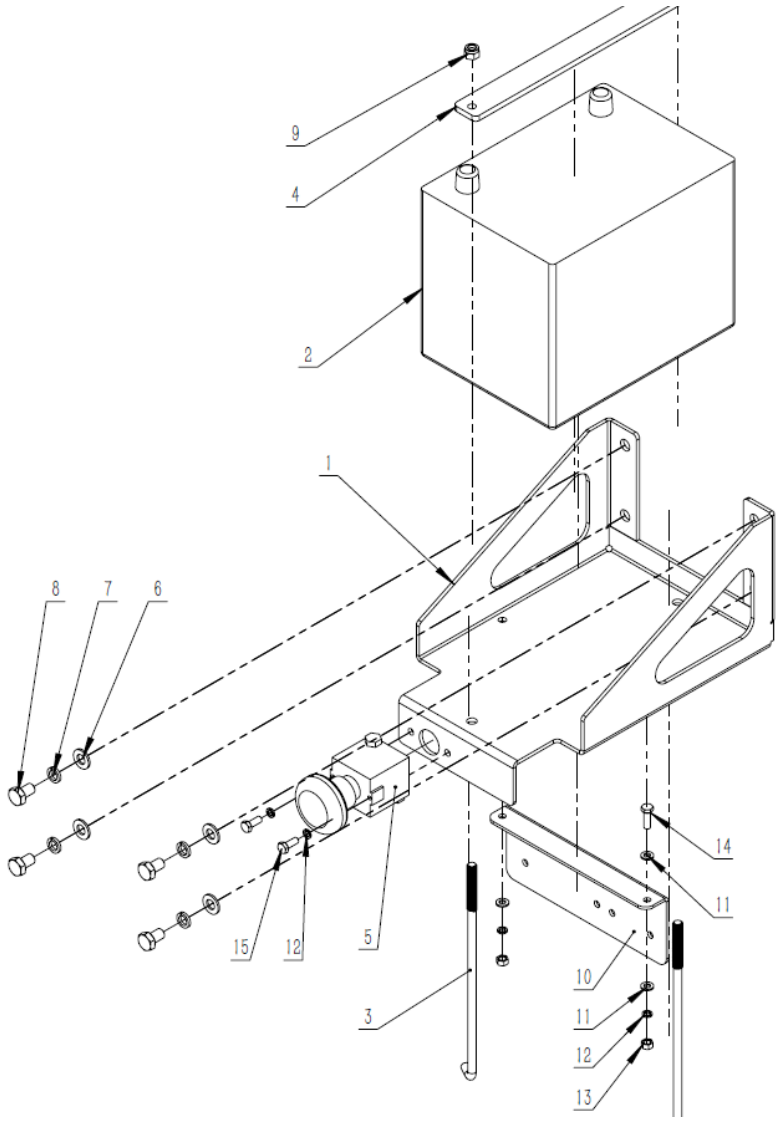
S/N	Material Code	Code	Name	Specifications	Quantity
1	ZP0204020028	YZS2-04-03100	Fuel tank welding assembly	Assembly weldment	1
2	ZP0204030062	YZS2-04-00001	Left fuel tank bracket	t=6	1
3	21905000001	21905000001	Fuel tank cap	M44 with lock and sealing cap	1
4	21301000024	GB/T3452.1-2005	O-ring	120×3.1	1
5	ZP0202030155	WS550-04-03004	Fuel tank cleaning port cover	t=6	1
6	20109000009	20109000009	Fuel level gauge (fuel sensor)	Long 380 Voltage 0.5-4.5	1
7	30501010004	GB/T93-1987	Standard elastic washer	8×2.1	6
8	30101010023	GB/T5783-2000	Hex head bolt full thread	M8×16	6
9	30514010003	GB/T95-2002	Flat washer Class C	5×1	5
10	30501010002	GB/T93-1987	Standard elastic washer	5×1.3	5
11	30101010004	GB/T5783-2000	Hex head bolt full thread	M5×16	5
12	ZP0204030063	YZS2-04-00002	Right fuel tank bracket	t=6	1
13	ZP0204030064	YZS2-04-00003	Level gauge shield	t=2	1
14	30507000008	NFE-25511	French loosening washer	M10	4
15	30101010041	GB/T5783-2000	Hex head bolt full thread	M10×25	4
16	30507000001	NFE-25511	French loosening washer	M12	4
17	30101010040	GB/T5783-2000	Hex head bolt full thread	M10×20	4
18	21001170022	21001170022	Metric external thread rubber gasket sealed with socket hexagon plug	4MN-30WD	1



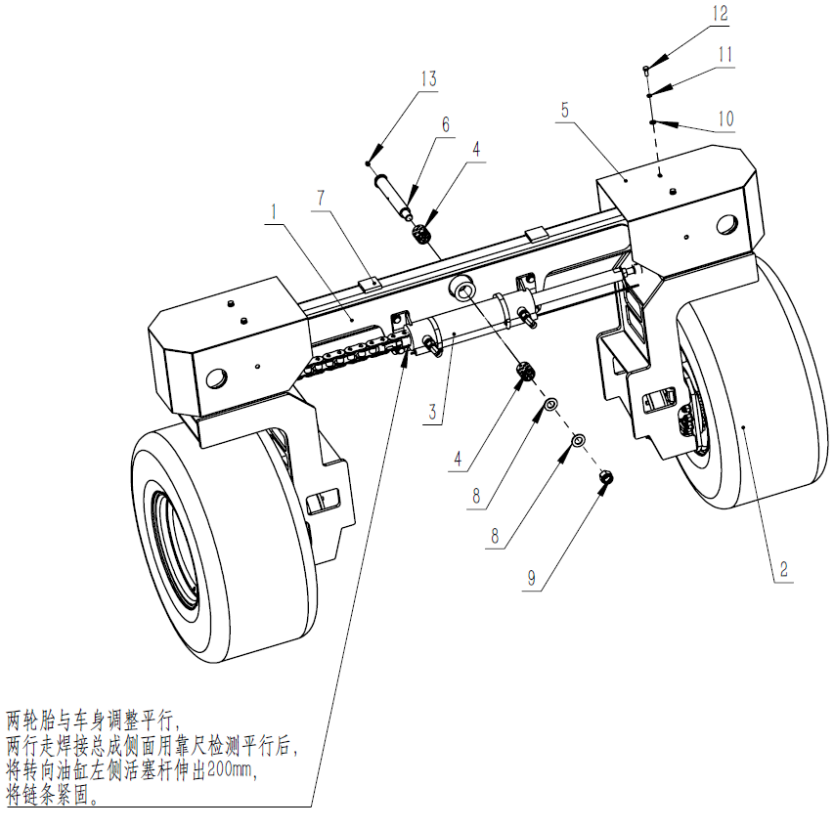
S/N	Material Code	Code	Name	Specifications	Quantity
1	ZP0211020008	YZS2-07-01100	Electrical box welding	Assembly weldment	1
2	ZP0211030028	YZS2-07-01001	Electrical box cover	t=2	1
3	ZP0211010003	WS940C-07-06000	Spring tongue lock assembly	Assembly	6
4	20517000023	20517000023	Hand throttle assembly	2.36 m	1
5	ZP0211030029	YZS2-07-01002	Throttle cover	t=2	1
6	40106060005	40106060005	Key switch	Honda GX690	1
7	40106010002	40106010002	Emergency stop switch	CE4P-10R-02	1
8	40106020039	VME-01	Frame 4	VME-01	2
9	40101020012	40101020012	Controller	XL104	1

S/N	Material Code	Code	Name	Specifications	Quantity
10	30514010004	GB/T95-2002	Flat washer Class C	6×1.6	12
11	30302010003	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M6	16
12	30101010010	GB/T5783-2000	Hex head bolt full thread	M6×20	4
13	30101010014	GB/T5783-2000	Hex head bolt full thread	M6×35	2
14	30514010006	GB/T95-2002	Flat washer Class C	10×2	4
15	30501010005	GB/T93-1987	Standard elastic washer	10×2.6	4
16	30101010039	GB/T5783-2000	Hex head bolt full thread	M10×16	4
17	40112000001	40112000001	YZS2-4 remote control	DCH-4P-10D-DS35-VOT	1
18	40304000002	DL-124	Horn	12V	1
19	40304000009	AD16-22SM	12V buzzer	AD16-22SM	1
20	30502010004	GB/T97.1-2002	Flat washer Class A	6×1.6	22
21	30101010011	GB/T5783-2000	Hex head bolt full thread	M6×25	11
22	40106020014	CV1D2S00B-GZC0000-WSLZ32	Water pump switch/two-speed self-locking rocker switch	20A 12V	1
23	40106020029	CV8B2S00B-00000-000	Three-speed self-resetting rocker switch-base	15A 24V	1



S/N	Material Code	Code	Name	Specifications	Quantity
1	ZP0211030033	YZS2-07-02001	Battery holder	t=4	1
2	40305000004	12V-60AH	Battery	12V-60AH	1
3	ZP0202040001	WS940C-02-01002	Battery hook		2
4	ZP0202030176	S940B-08Q-00003	Battery pressure plate	t=6	1
5	40106060008	40106060008	Power switch	ED125A	1
6	30514010006	GB/T95-2002	Flat washer Class C	10×2	4
7	30501010005	GB/T93-1987	Standard elastic washer	10×2.6	4
8	30101010039	GB/T5783-2000	Hex head bolt full thread	M10×16	4

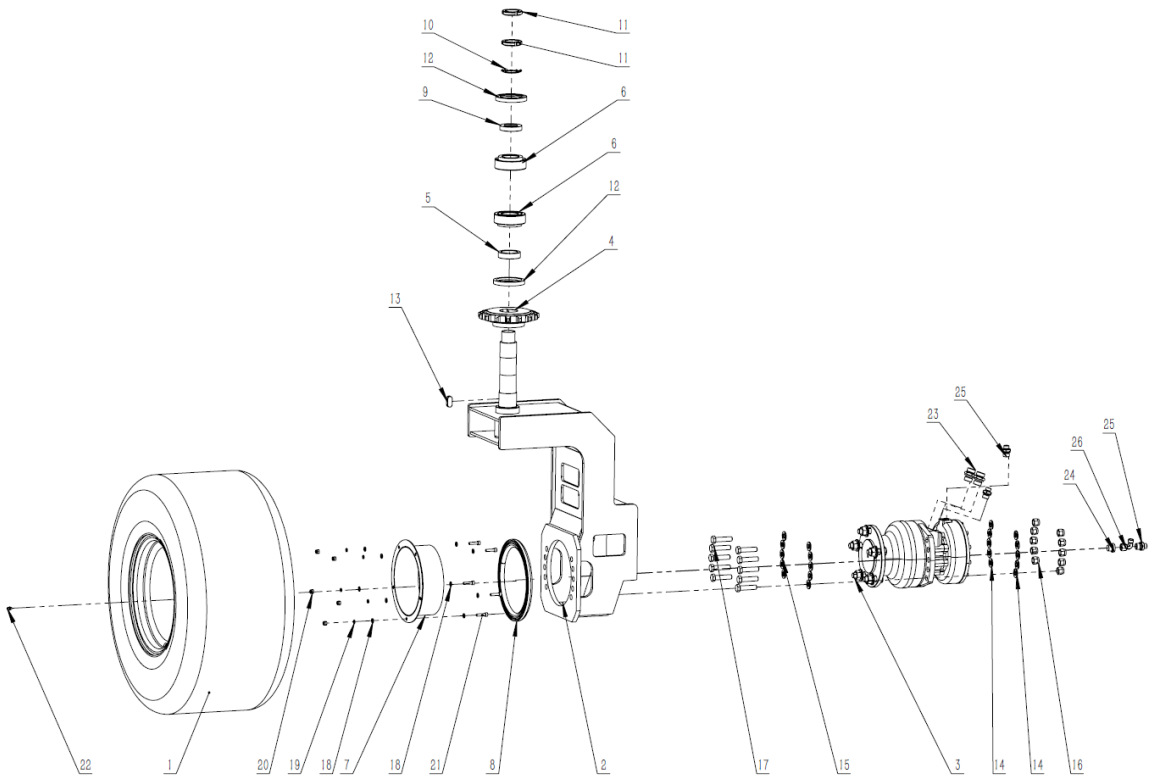
S/N	Material Code	Code	Name	Specifications	Quantity
9	30302010004	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M8	2
10	ZP0211030035	YZS2-07-02002	Engine relay bracket	t=3	1
11	30502010004	GB/T97.1-2002	Flat washer Class A	6×1.6	4
12	30501010003	GB/T93-1987	Standard elastic washer	6×1.6	4
13	30301010004	GB/T6170-2000	Type 1 hex nut	M6	2
14	30101010010	GB/T5783-2000	Hex head bolt full thread	M6×20	2
15	30101010008	GB/T5783-2000	Hex head bolt full thread	M6×16	2



S/N	Material Code	Code	Name	Specifications	Quantity
1	ZP0207020014	YZS2-18-02100	Front axle welding	Assembly weldment	1
		18-01000	Travel assembly	Assembly	2

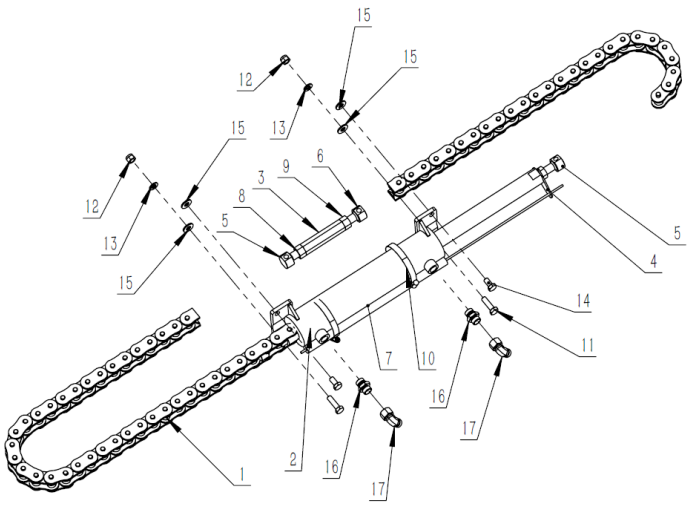
Adjust the two tires to be parallel with the vehicle body. Use a straightedge to check the parallelism on the side of the travel welding assembly. Then extend the piston rod of the left steering cylinder by 200mm and tighten the chain.

S/N	Material Code	Code	Name	Specifications	Quantity
3	ZP0207010013	YZS2-18-04000	Steering assembly	Assembly	1
4	20910000022	20910000022	Self-lubricating copper sleeve	d30/D38/L40	2
5	ZP0207020015	YZS2-18-03100	Sprocket shroud	Assembly weldment	2
6	ZP0207040022	YZS2-18-00001	Front axle pin	Round steel	1
7	ZP0207060001	YZS2-18-00002	Rubber sheet	t=10	2
8	30514010011	GB/T95-2002	Flat washer Class C	20×3	2
9	30302010010	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M20	1
10	30514010005	GB/T95-2002	Flat washer Class C	8×1.6	4
11	30501010004	GB/T93-1987	Standard elastic washer	8×2.1	4
12	30101010024	GB/T5783-2000	Hex head bolt full thread	M8×20	4
13	30901010002	JBT-7940.1	Straight-through pressure filling cup	M8×1	5

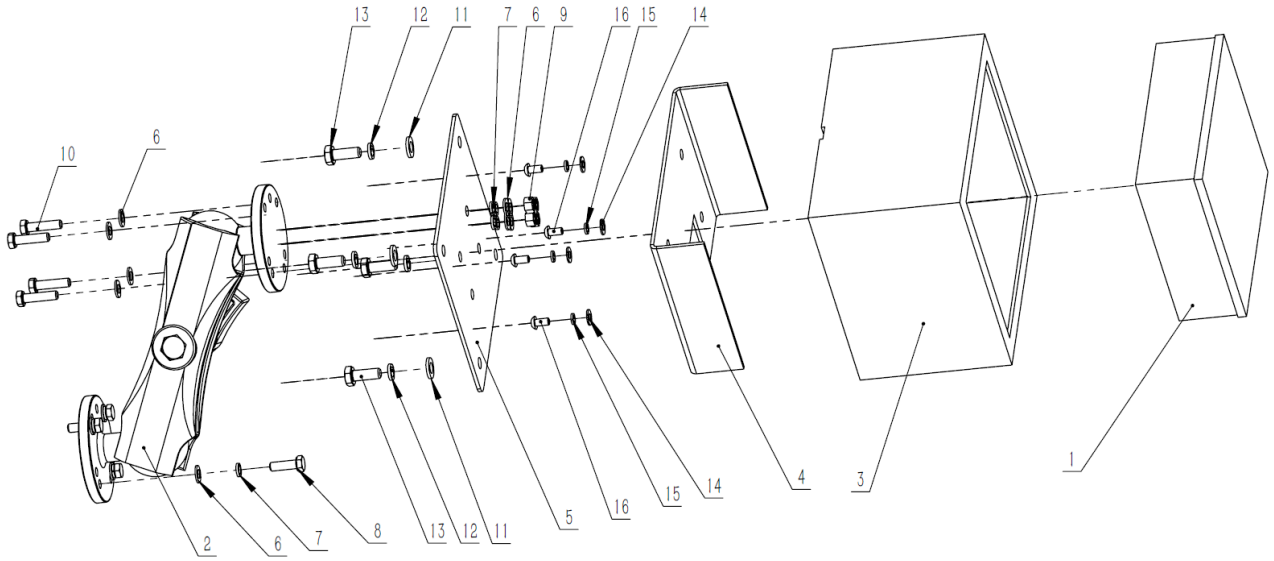


S/N	Material Code	Code	Name	Specifications	Quantity
1	20701000005	20701000005	Hub-tire assembly	36x12.00-12NHS-M927 7-6PR+10.5X12	1
2	ZP0207020013	YZS2-18-01300	Walking welding assembly	Assembly weldment	1
3	20104000036	20104000036	Travel motor with brake	TMS03-360-L12-M-Y-Z 05	1
4	ZP0207040023	YZS2-18-01001	Sprocket 20A-15T	20A-15T	1
5	ZP0207040024	YZS2-18-01002	Retaining sleeve	Round steel	1
6	20803000017	GB/T297-2015	Tapered roller bearing	33209	2
7	ZP0207020012	YZS2-18-01200	Travel motor guard welding	Assembly weldment	1
8	21304000001	21304000001	Side UO sealing strip	14X22 Long 700	1
9	ZP0207040025	YZS2-18-01003	Upper stop sleeve	Round steel	1
10	30504000012	GB858-1988	Stop washer for round nut	36×1.5	1
11	30306010006	GB/T812-1988	Round nut	M36 × 1.5	2
12	21310000004	JB1091-1991	Skeleton type vacuum rubber seal ring	60x85x10	2
13	30401010042	GB/T1096-2003	Ordinary flat key type A	14×9×30	1
14	30507000001	NFE-25511	French loosening washer	M12	10
15	30514010007	GB/T95-2002	Flat washer Class C	12×2.5	10
16	30302010006	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M12	10
17	30101030017	GB/T5783-2000	Hex head bolt full thread	M12×50	10
18	30514010004	GB/T95-2002	Flat washer Class C	6×1.6	10

S/N	Material Code	Code	Name	Specifications	Quantity
19	30501010003	GB/T93-1987	Standard elastic washer	6×1.6	5
20	30302010003	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M6	5
21	30103010008	GB/T70.1-2008	Hex socket head screw	M6×25	5
22	30901010001	JBT-7940.1	Straight-through pressure filling cup	M6×1	2
23	21001040017	21001040017	British thread seal column end with rubber gasket	1CB-22-08WD	2
24	21001170001	21001170001	British thread seal with rubber gasket hexagon plug	4BN-06WD	1
25	21001040005	21001040005	British thread seal column end with rubber gasket	1CB-14-06WD	3
26	21001150008	21001150008	90° elbow adapter for male to female thread to compression fitting	2C9-14W	1

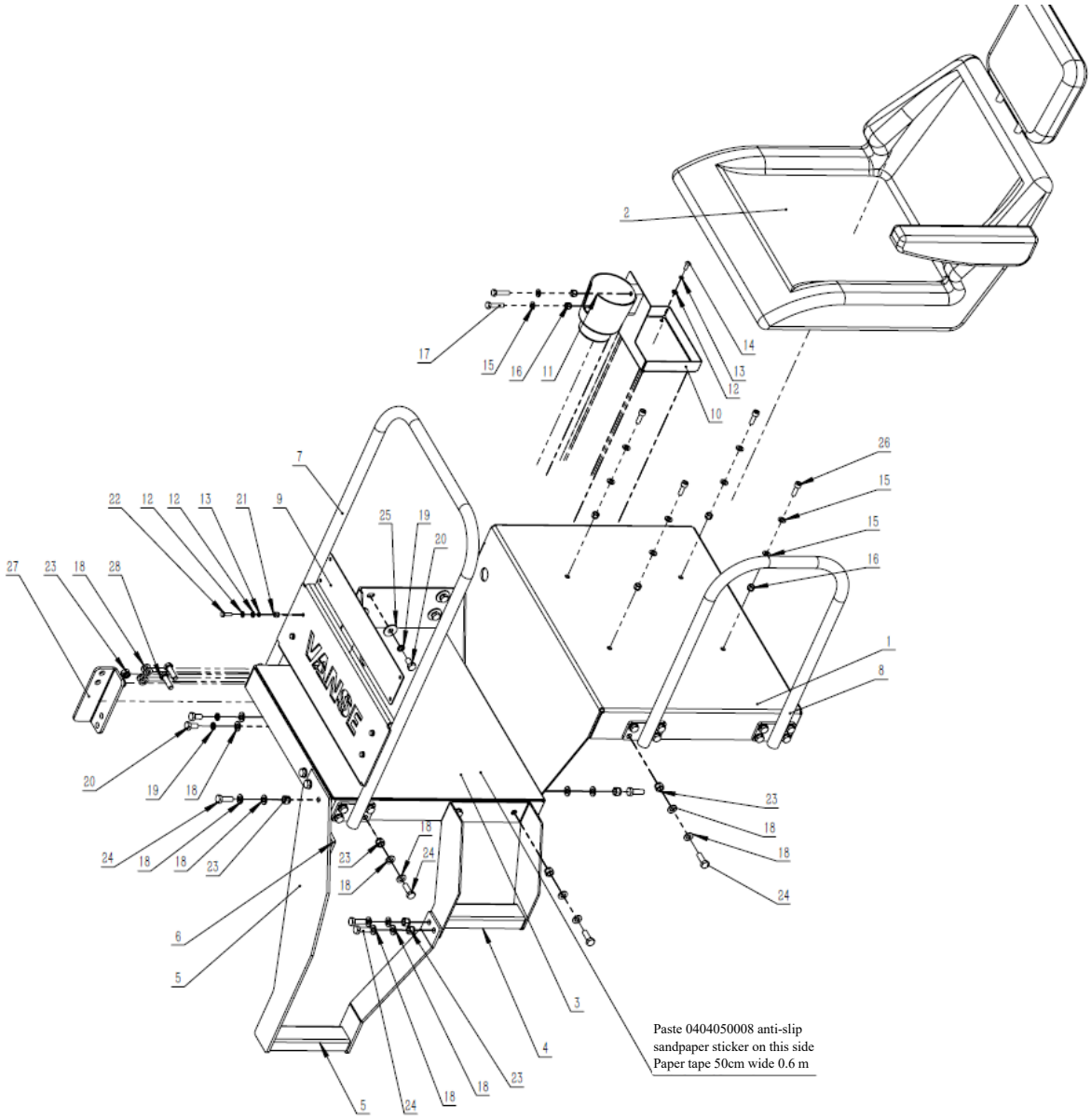


S/N	Material Code	Code	Name	Specifications	Quantity
1	20504000005	20504000005	20A-1 chain	20A18 section 2 pieces +19 section 2 pieces	1
2	20105000034	YZS2-62-06000	Steering cylinder	63/35-240	1
3	3209070016	GB/T56-1988	Reverse thread nut (304)	M16*2-100	1
4		BL360-09-00014	Sensor pull plate	t=3	1
5	ZP0207040029	YZS2-18-04002	Chain 20A Tensioning bolt	Round steel	3
6	ZP0207040030	YZS2-18-04003	Chain 20A tensioning reverse thread nut	Round steel	1
7	40102060001	KPM-300	Tie rod sensor	Stroke 300/Resistance 5kOhm/10kOhm/Universal joint	1
8	30301010009	GB/T6170-2000	Type 1 hex nut	M16	3
9	30301010016	GB/T6170-2000	Type 1 hex nut	M16	1
10	20904000012	JB/T8870	Hose clamp	d72-95	2
11	30101010043	GB/T5783-2000	Hex head bolt full thread	M10×35	2
12	30302010005	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M10	2
13	30502010006	GB/T97.1-2002	Flat washer Class A	10×2	2
14	30101010040	GB/T5783-2000	Hex head bolt full thread	M10×20	2
15	30507000008	NFE-25511	French loosening washer	M10	4
16	21001080010	21001080010	Metric thread seal column end with rubber gasket	1CM-18WD	2
17	21001150010	21001150010	90° elbow adapter for male to female thread to compression fitting	2C9-18W	2

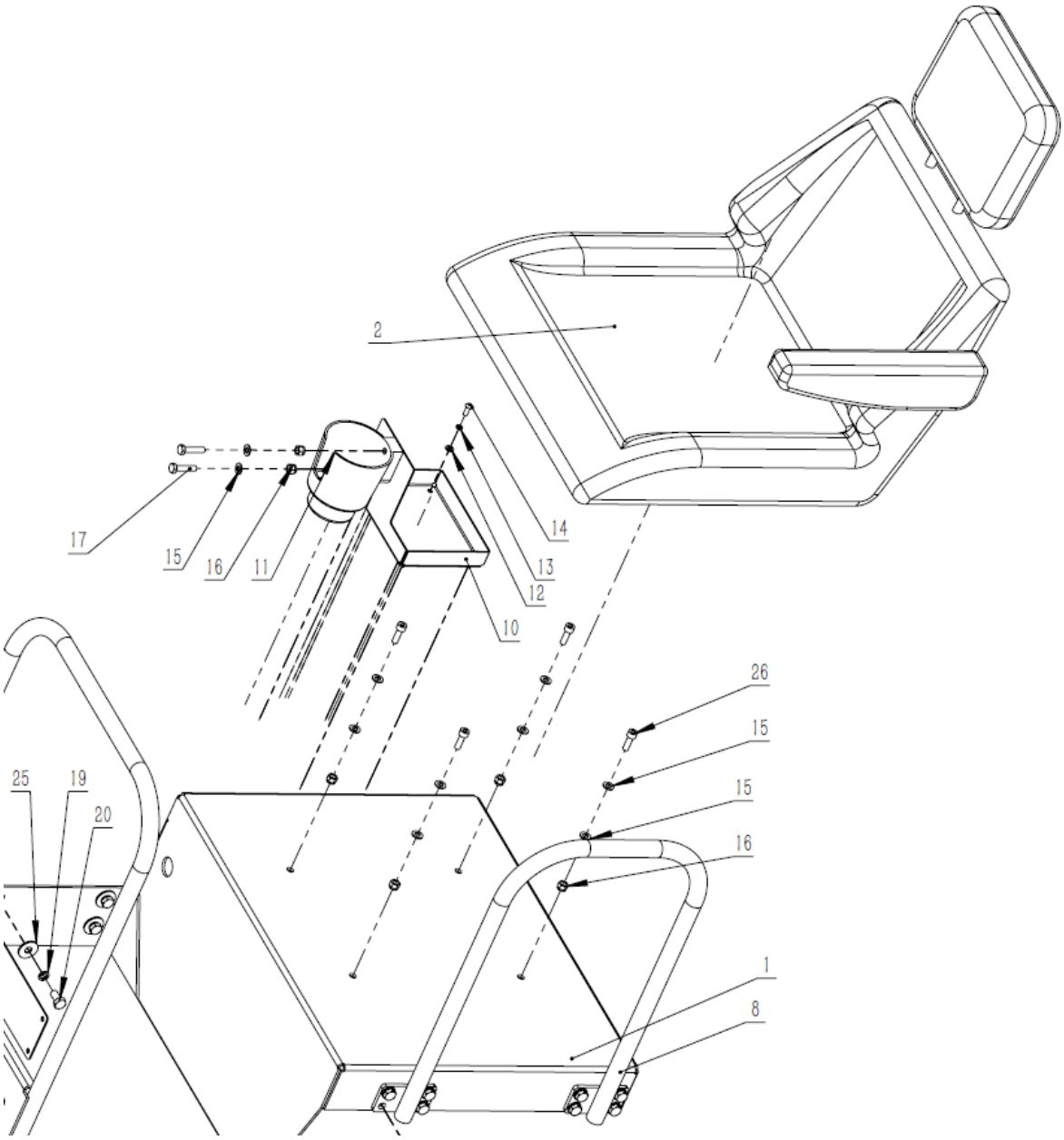


S/N	Material Code	Code	Name	Specifications	Quantity
1	40306000010	40306000010	4.3-inch display	11197975	1
2	21605000002	21605000002	Display support	Ordinary knob-circle φ62 + circle φ62	1
3	ZP0210020020	YZS2-25-01100	Display screen cover	t=2	1
4	ZP0202030109	WS940C-02-03012	DANFOSS Display support	t=2	1
5	ZP0210030068	YZS2-25-01001	Display cover mounting plate	t=2	1
6	30514010003	GB/T95-2002	Flat washer Class C	5×1	12
7	30501010002	GB/T93-1987	Standard elastic washer	5×1.3	8
8	30101010004	GB/T5783-2000	Hex head bolt full thread	M5×16	4
9	30301010003	GB/T6170-2000	Type 1 hex nut	M5	4
10	30101010005	GB/T5783-2000	Hex head bolt full thread	M5×20	4
11	30514010004	GB/T95-2002	Flat washer Class C	6×1.6	4
12	30501010003	GB/T93-1987	Standard elastic washer	6×1.6	4
13	30101010008	GB/T5783-2000	Hex head bolt full	M6×16	4

S/N	Material Code	Code	Name	Specifications	Quantity
			thread		
14	30514010002	GB/T95-2002	Flat washer Class C	4×0.8	4
15	30501010001	GB/T93-1987	Standard elastic washer	4×1.1	4
16	30104010001	GB/T70.2-2000	Hex socket flat round head screw	M4×8	4



The following is a partial enlarged view: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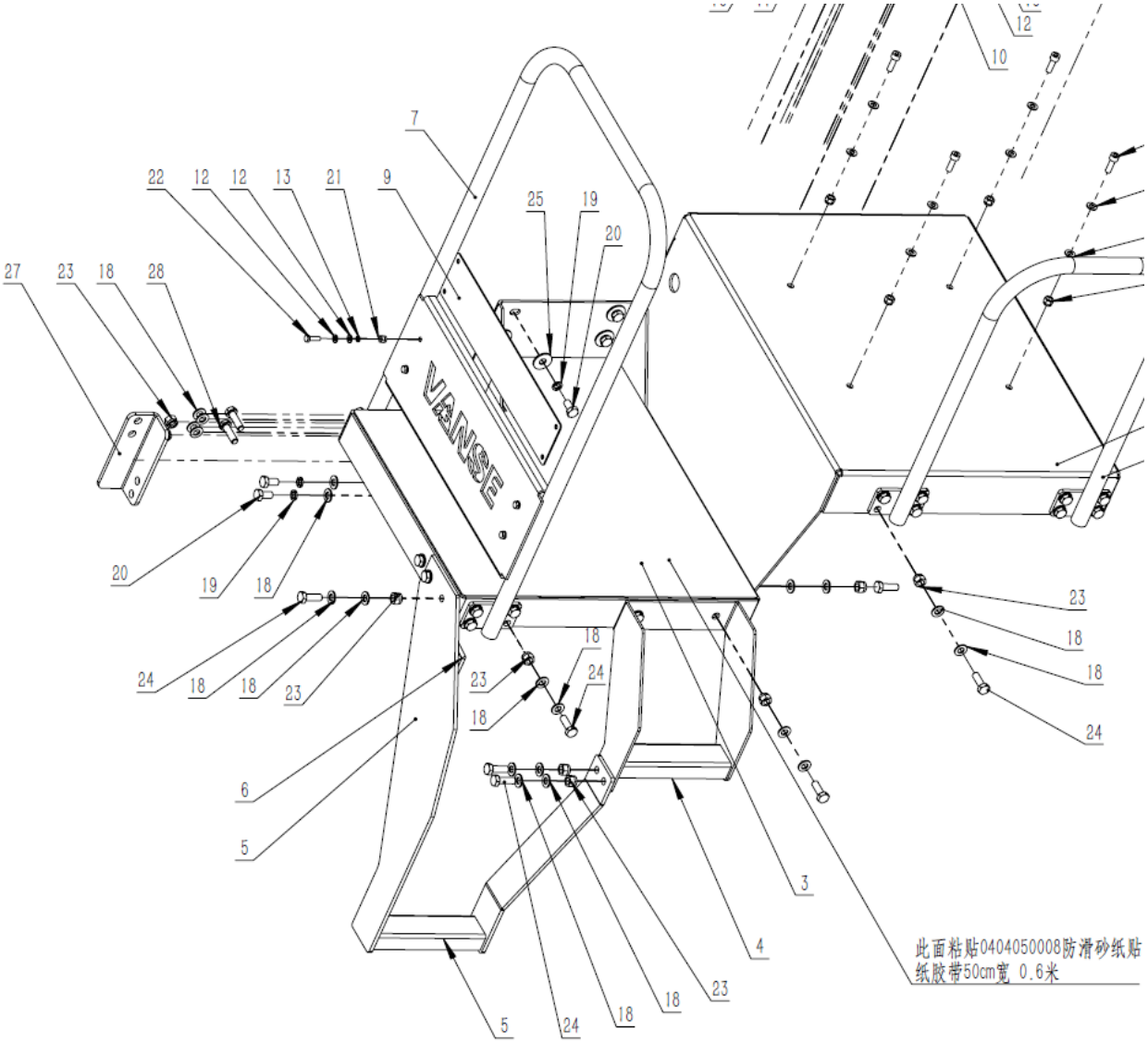
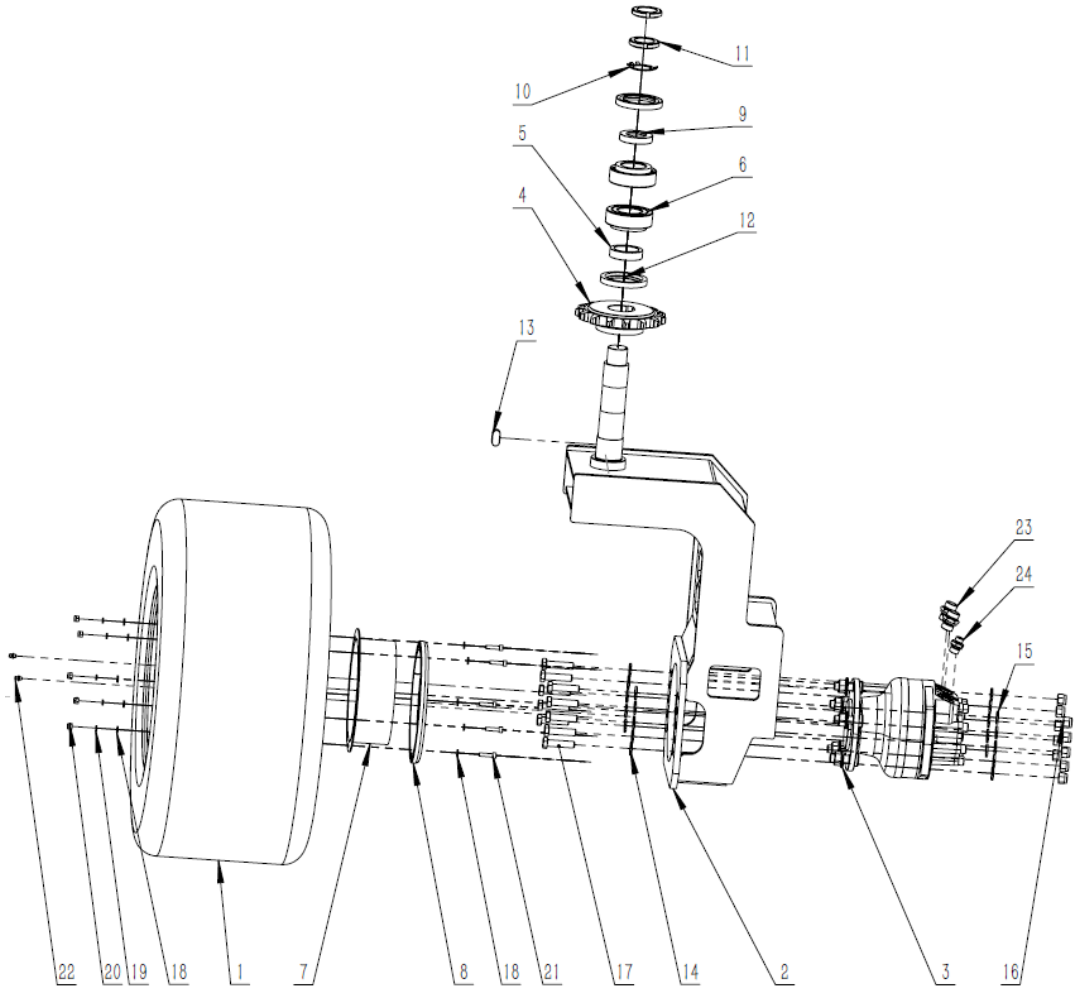


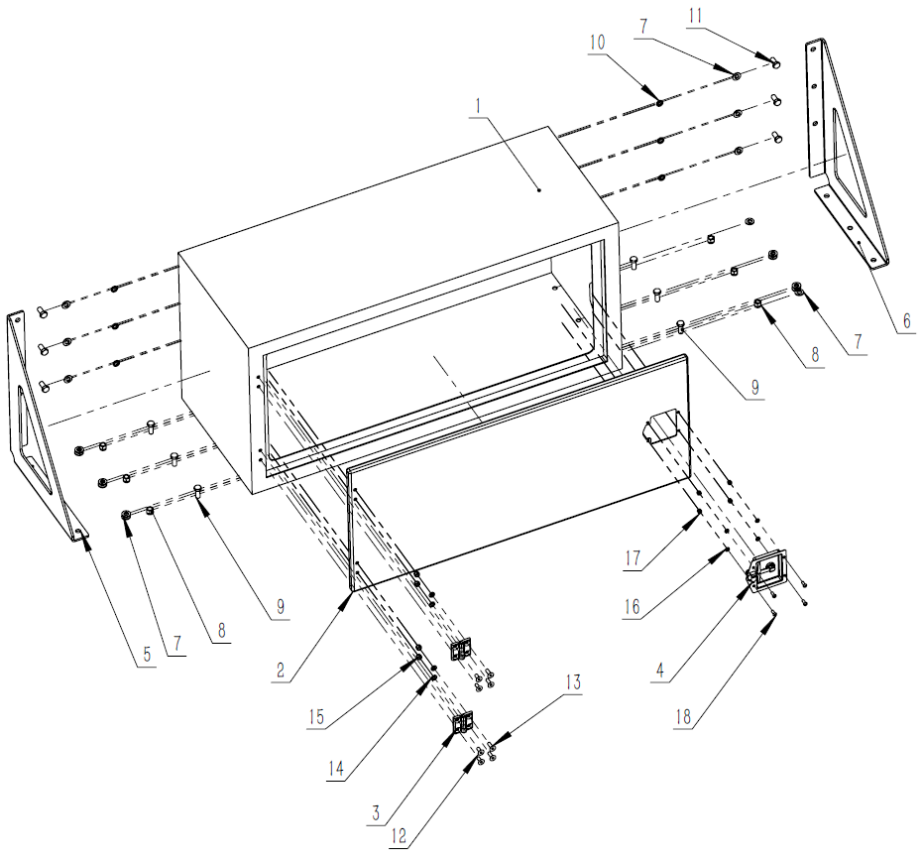
S/N	Material Code	Code	Name	Specifications	Quantity
1	ZP0213030007	YZS2-44-00001	Seat bracket	t=4	1
2	21602000001	21602000001	Seat with armrest	FC41	1
3	ZP0213020006	YZS2-44-01000	Foot pedal welding	Assembly weldment	1
4	ZP0213020007	YZS2-44-02000	Secondary step welding	Assembly weldment	1
5	ZP0213020008	YZS2-44-03000	First step welding	Assembly weldment	1
6	ZP0213030008	YZS2-44-00002	Foot pedal fixing plate	t=6	1
7	ZP0213020009	YZS2-44-04000	Front armrest welding	Assembly weldment	1
8	ZP0213020010	YZS2-44-05000	Left armrest welding	Assembly	1

S/N	Material Code	Code	Name	Specifications	Quantity
				weldment	
9	ZP0213030021	360MINI-52-00002	Front armrest liner		1
10	ZP0210030115	360MINI-50-00020	Phone holder cup stand bracket	t=2	1
11	22001000010	22001000010	Water cup holder	Φ104*121	1
12	30514010004	GB/T95-2002	Flat washer Class C	6×1.6	12
13	30501010003	GB/T93-1987	Standard elastic washer	6×1.6	8
14	30104010005	GB/T70.2-2000	Hex socket flat round head screw	M6×16	4
15	30514010005	GB/T95-2002	Flat washer Class C	8×1.6	10
16	30302010004	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M8	6
17	30101010027	GB/T5783-2000	Hex head bolt full thread	M8×35	2
18	30514010006	GB/T95-2002	Flat washer Class C	10×2	62
19	30501010005	GB/T93-1987	Standard elastic washer	10×2.6	14
20	30101010040	GB/T5783-2000	Hex head bolt full thread	M10×20	14
21	30302010003	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M6	4
22	30101010010	GB/T5783-2000	Hex head bolt full thread	M6×20	4
23	30302010005	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M10	26
24	30101010042	GB/T5783-2000	Hex head bolt full thread	M10×30	24
25	30512000002	GB/T96.2-2002	Large washer Class C	10×2.5	4
26	30103010017	GB/T70.1-2000	Hex socket head screw	M8×25	4
27	ZP0213030018	YZS2-44-00003	Foot pedal inner fixing plate	t=6	1
28	30101010043	GB/T5783-2000	Hex head bolt full thread	M10×35	2



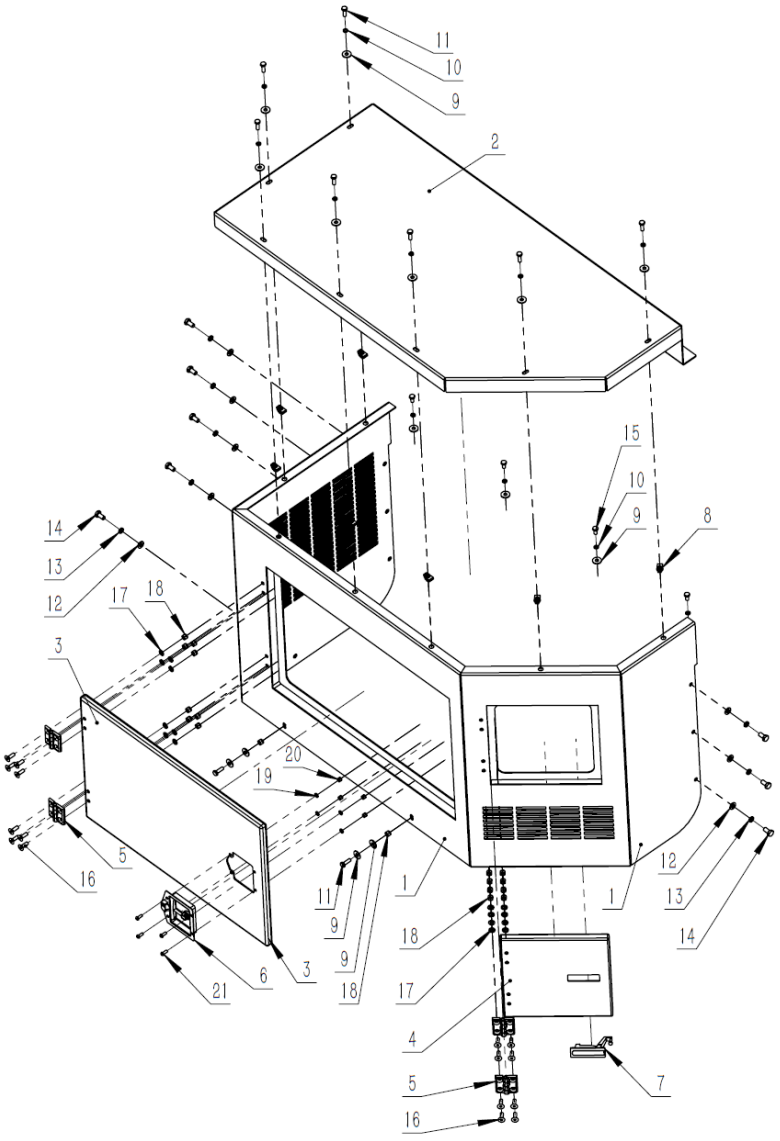
S/N	Material Code	Code	Name	Specifications	Quantity
1	20701000005	20701000005	Hub-tire assembly	36x12.00-12NHS-M9 277-6PR+10.5X12	1
2	ZP0207020013	YZS2-18-01300	Walking welding assembly	Assembly weldment	1
3	20104000034	20104000034	Traveling motor	TMS03-360-L12-M-Y	1
4	ZP0207040023	YZS2-18-01001	Sprocket 20A-15T	20A-15T	1
5	ZP0207040024	YZS2-18-01002	Retaining sleeve	Round steel	1
6	20803000017	GB/T297-2015	Tapered roller bearing	33209	2

S/N	Material Code	Code	Name	Specifications	Quantity
7	ZP0207020012	YZS2-18-01200	Travel motor guard welding	Assembly weldment	1
8	21304000001	21304000001	Side UO sealing strip	14X22 Long 700	1
9	ZP0207040025	YZS2-18-01003	Upper stop sleeve	Round steel	1
10	30504000012	GB858-1988	Stop washer for round nut	36×1.5	1
11	30306010006	GB/T812-1988	Round nut	M36 × 1.5	2
12	21310000004	JB1091-1991	Skeleton type vacuum rubber seal ring	60x85x10	2
13	30401010042	GB/T1096-2003	Ordinary flat key type A	14×9×30	1
14	30502010007	GB/T97.1-2002	Flat washer Class A	12×2.5	10
15	30507000001	NFE-25511	French loosening washer	M12	10
16	30302010006	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M12	10
17	30101030017	GB/T5783-2000	Hex head bolt full thread	M12×50	10
18	30502010004	GB/T97.1-2002	Flat washer Class A	6×1.6	10
19	30501010003	GB/T93-1987	Standard elastic washer	6×1.6	5
20	30302010003	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M6	5
21	30103010008	GB/T70.1-2008	Hex socket head screw	M6×25	5
22	30901010001	JBT-7940.1	Straight-through pressure filling cup	M6×1	2
23	21001040017	21001040017	British thread seal column end with rubber gasket	1CB-22-08WD	2
24	21001040005	21001040005	British thread seal column end with rubber gasket	1CB-14-06WD	1

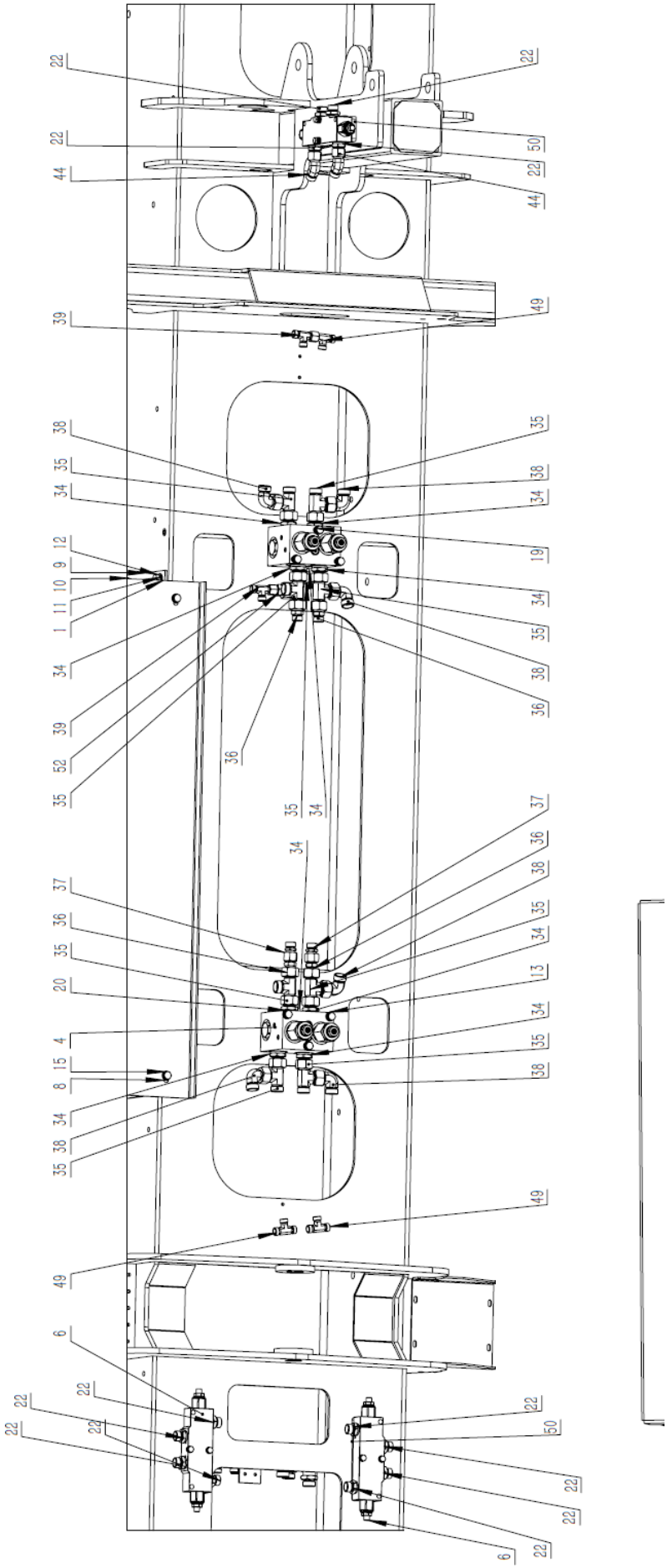


S/N	Material Code	Code	Name	Specifications	Quantity
1	ZP0210020021	YZS2-50-01100	Trunk welding	T=2	1
2	ZP0210030069	YZS2-50-01001	Trunk door panel	t=3	1
3	20901000002	20901000002	Hinge (black)	ZH2158-60	2
4	20913000005	MS857	Rotary tongue box lock	MS857	1
5	ZP0210030070	YZS2-50-01003	Left trunk bracket	t=6	1
6	ZP0210030071	YZS2-50-01004	Right trunk bracket	t=6	1
7	30514010007	GB/T95-2002	Flat washer Class C	12×2.5	18
8	30302010006	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M12	6
9	30101010061	GB/T5783-2000	Hex head bolt full thread	M12×30	6
10	30501010006	GB/T93-1987	Standard elastic washer	12×3.1	6
11	30101010060	GB/T5783-2000	Hex head bolt full thread	M12×25	6

S/N	Material Code	Code	Name	Specifications	Quantity
12	30105010006	GB/T70.3-2000	Hex socket countersunk head screw	M8×20	4
13	30105010018	GB/T70.3-2000	Hex socket countersunk head screw	M8×25	4
14	30514010005	GB/T95-2002	Flat washer Class C	8×1.6	4
15	30302010004	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M8	4
16	30514010004	GB/T95-2002	Flat washer Class C	6×1.6	4
17	30302010003	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M6	4
18	30104010005	GB/T70.2-2000	Hex socket flat round head screw	M6×16	4



S/N	Material Code	Code	Name	Specifications	Quantity
1	ZP0210020022	YZS2-50-02100	Engine shroud welding	Assembly weldment	1
2	ZP0210030075	YZS2-50-02001	Upper engine shroud	t=3	1
3	ZP0210030076	YZS2-50-02003	Engine side door panel	t=3	1
4	ZP0210030077	YZS2-50-02004	Engine front door panel	t=3	1
5	20901000002	20901000002	Hinge (black)	ZH2158-60	4
6	20913000005	MS857	Rotary tongue box lock	MS857	1
7	20913000002	20913000002	Plane lock	MS606-1-2P	1
8	30321020001	DIN34818-2002	Spring-sheet nut	M8	7
9	30512000004	GB/T96.2-2002	Large washer Class C	8×2	15
10	30501010004	GB/T93-1987	Standard elastic washer	8×2.1	11
11	30101010025	GB/T5783-2000	Hex head bolt full thread	M8×25	9
12	30514010006	GB/T95-2002	Flat washer Class C	10×2	8
13	30501010005	GB/T93-1987	Standard elastic washer	10×2.6	8
14	30101010040	GB/T5783-2000	Hex head bolt full thread	M10×20	8
15	30101010023	GB/T5783-2000	Hex head bolt full thread	M8×16	4
16	30105010018	GB/T70.3-2000	Hex socket countersunk head screw	M8×25	16
17	30514010005	GB/T95-2002	Flat washer Class C	8×1.6	16
18	30302010004	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M8	18
19	30514010004	GB/T95-2002	Flat washer Class C	6×1.6	4
20	30302010003	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M6	4
21	30104010005	GB/T70.2-2000	Hex socket flat round head screw	M6×16	4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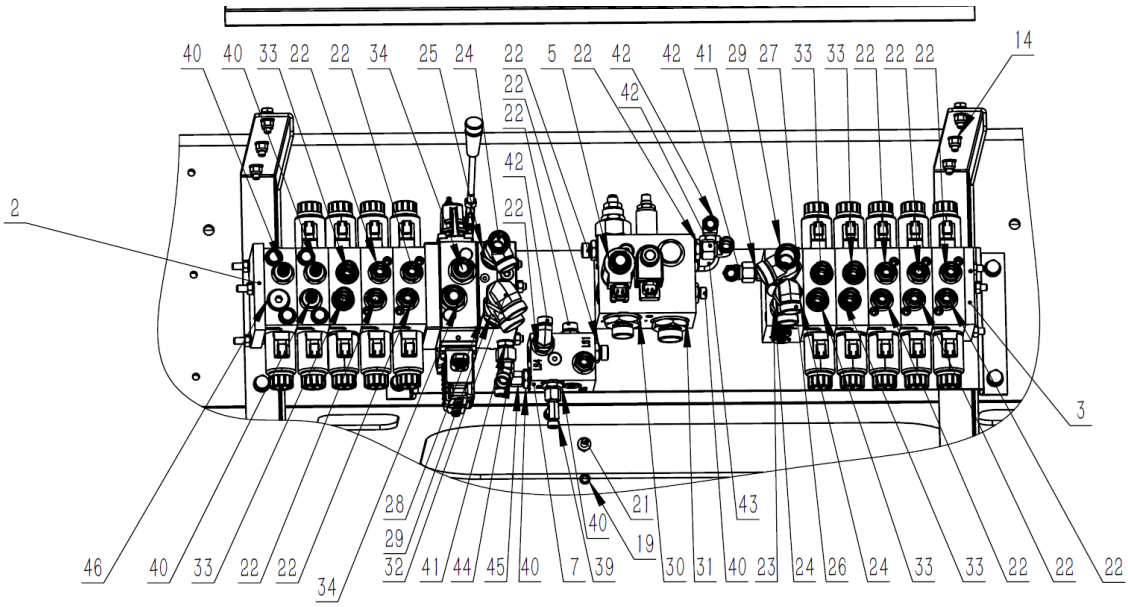
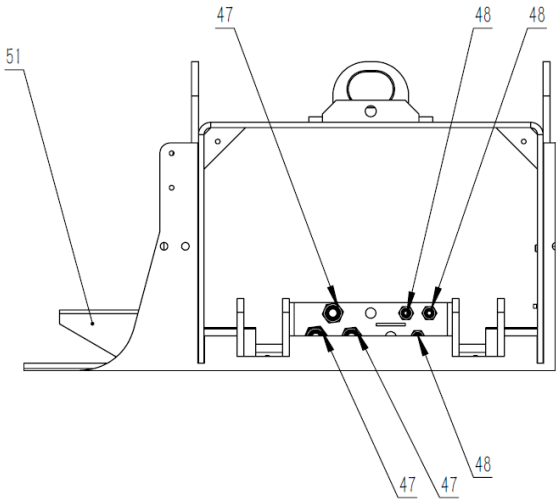


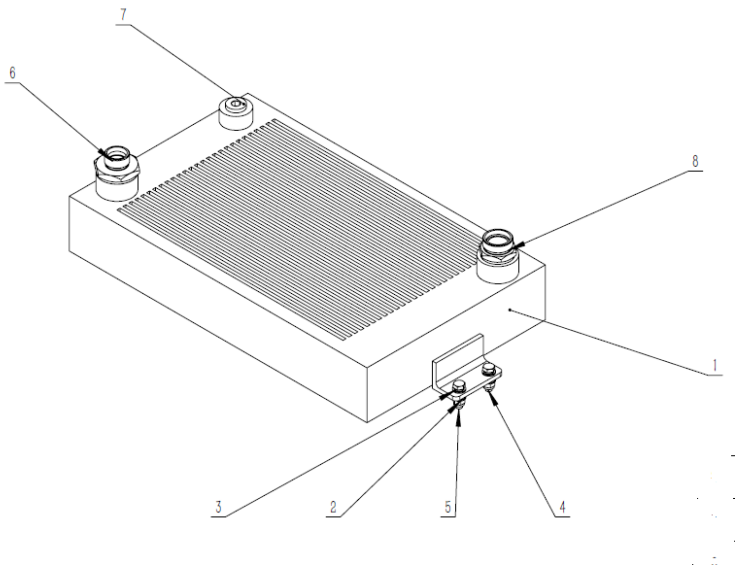


S/N	Material Code	Code	Name	Specifications	Quantity
1	ZP0204030065	YZS2-62-01001	Hydraulic shield	t=3	1
2	20103000099	20103000099	Multi-way valve block	11342772	1
3	20103000100	20103000100	Walking outrigger valve group	11342710	1
4	20103000101	20103000101	Balance valve group with oil replenishment	11342898	2
5	20103000020	20103000020	Water pump swing brake valve block	11261808	1
6	20103000048	20103000048	Swing balance valve	VBCD380-2	3
7	20103000103	20103000103	LS valve block	11261810	1

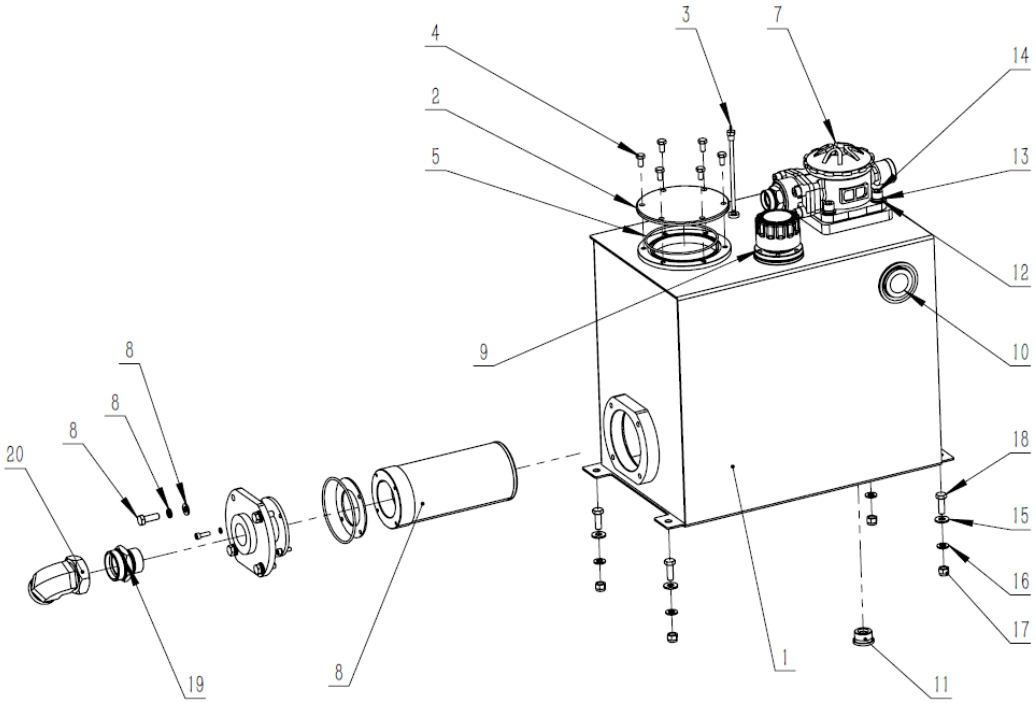
S/N	Material Code	Code	Name	Specifications	Quantity
8	ZP0204030066	YZS2-62-01002	Hydraulic shroud fixing plate	t=4	2
9	ZP0204030067	YZS2-62-01003	Valve block fixing plate	t=4	1
10	30514010006	GB/T95-2002	Flat washer Class C	10×2	8
11	30501010005	GB/T93-1987	Standard elastic washer	10×2.6	8
12	30101010040	GB/T5783-2000	Hex head bolt full thread	M10×20	8
13	30514010005	GB/T95-2002	Flat washer Class C	8×1.6	39
14	30302010004	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M8	10
15	30101010025	GB/T5783-2000	Hex head bolt full thread	M8×25	10
16	30514010004	GB/T95-2002	Flat washer Class C	6×1.6	10
17	30501010003	GB/T93-1987	Standard elastic washer	6×1.6	6
18	30112010039	GB/T5782-2016	Hex head bolts Class A and B	M6×50	6
19	30501010004	GB/T93-1987	Standard elastic washer	8×2.1	19
20	30112010007	GB/T5782-2000	Hex head bolts Class A and B	M8×110	6
21	30101010024	GB/T5783-2000	Hex head bolt full thread	M8×20	13
22	21001040012	21001040012	British thread seal end with rubber gasket	1CB-18-06WD	28
23	21001040021	21001040021	British thread seal end with rubber gasket	1CB-26-08WD	1
24	21001190023	21001190023	Right end female thread tee clip connector	CC-26W	2
25	21001040022	21001040022	British thread seal end with rubber gasket	1CB-26-12WD	1
26	21001150012	21001150012	90° elbow adapter for male to female thread to compression fitting	2C9-26W	1

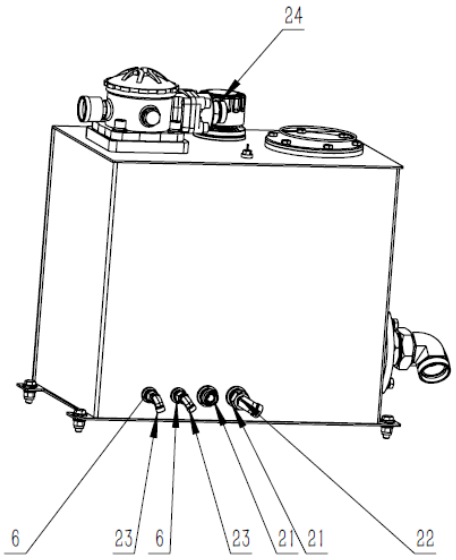
S/N	Material Code	Code	Name	Specifications	Quantity
27	21001040025	21001040025	British thread seal end with rubber gasket	1CB-30-08WD	1
28	21001040026	21001040026	British thread seal end with rubber gasket	1CB-30-12WD	1
29	21001190024	21001190024	Right end female thread tee ferrule joint	CC-30W	2
30	21001040023	21001040023	British thread seal end with rubber gasket	1CB-26-16WD	1
31	21001040027	21001040027	British thread seal end with rubber gasket	1CB-30-16WD	1
32	21001150013	21001150013	90° elbow adapter for male to female thread to compression fitting	2C9-30W	1
33	21001040016	21001040016	British thread seal end with rubber gasket	1CB-22-06WD	6
34	21001040017	21001040017	British thread seal end with rubber gasket	1CB-22-08WD	12
35	21001190022	21001190022	Right end female thread tee ferrule joint	CC-22W	9
36	21001150020	21001150020	Male thread female thread conversion ferrule joint	2C-18-22W	4
37	21001150023	21001150023	Male thread female thread conversion ferrule joint	2C-18W	2
38	21001150011	21001150011	90° elbow adapter for male to female thread to compression fitting	2C9-22W	6
39	21001190001	21001190001	Tee joint	AC-14	3
40	21001040005	21001040005	British thread seal end with rubber gasket	1CB-14-06WD	6
41	21001040011	21001040011	British thread seal end with rubber gasket	1CB-18-04WD	2
42	21001150010	21001150010	90° elbow adapter for male to female thread to compression fitting	2C9-18W	4
43	21001060002	21001060002	90° elbow British thread adjustable	1CG9-18-06OG	1

S/N	Material Code	Code	Name	Specifications	Quantity
			o-ring seal column end		
44	21001150003	21001150003	45° elbow adapter for male to female thread to compression fitting	2C4-18W	3
45	21001190019	21001190019	Right end female thread tee ferrule joint	CC-14W	3
46	21001150008	21001150008	90° elbow adapter for male to female thread to compression fitting	2C9-14W	1
47	21001170001	21001170001	British thread seal with rubber gasket hexagon plug	4BN-06WD	1
48	21001180008	21001180008	Straight through bulkhead compression fitting	6C-22-LN/RN	3
49	21001180006	21001180006	Straight through bulkhead compression fitting	6C-14-LN/RN	3
50	ZP0204030016	360MINI-62-00045	Slewing balance valve shim plate	t=8	3
51	ZP0204030089	YZS2-62-01004	Rubber hose fixing plate	t=3	1
52	21001150019	21001150019	Male thread female thread conversion ferrule joint	2C-14-22W	1



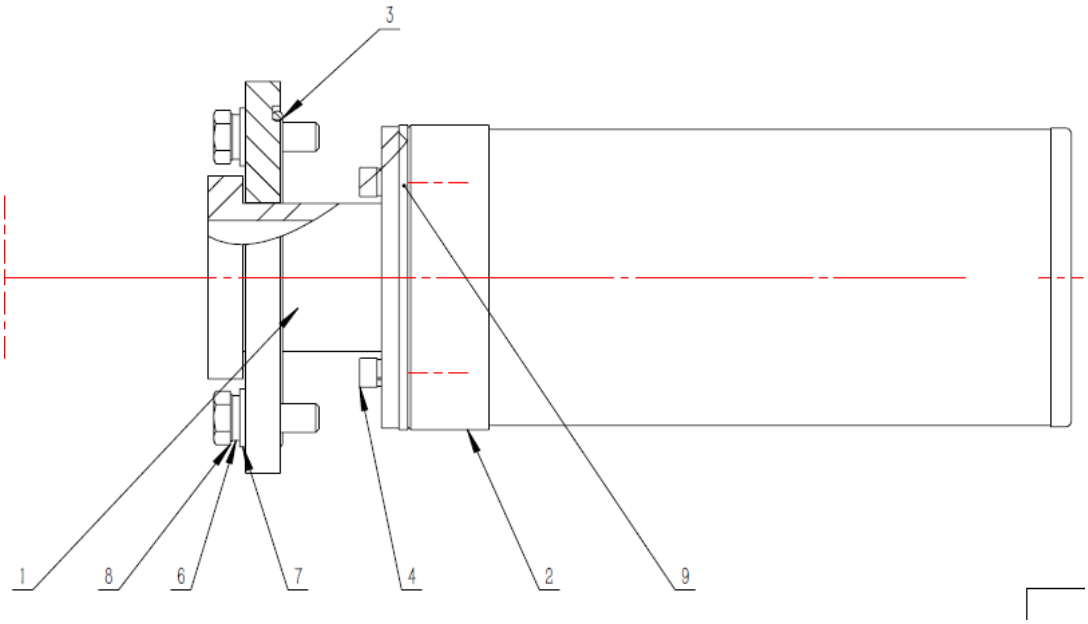
S/N	Material Code	Code	Name	Specifications	Quantity
1	20602000007	20602000007	Hydraulic oil bulk assembly		1
2	30514010005	GB/T95-2002	Flat washer Class C	8×1.6	8
3	30501010004	GB/T93-1987	Standard elastic washer	8×2.1	4
4	30302010004	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M8	4
5	30101010026	GB/T5783-2000	Hex head bolt full thread	M8×30	4
6	21001040028	21001040028	British thread seal column end with rubber gasket	1CB-30-20WD	1
7	21001170036	21001170036	Metric external thread rubber gasket sealed with socket hexagon plug	4MN-22WD	1
8	21001040041	21001040041	British thread seal column end with rubber gasket	1CB-36-20WD	1



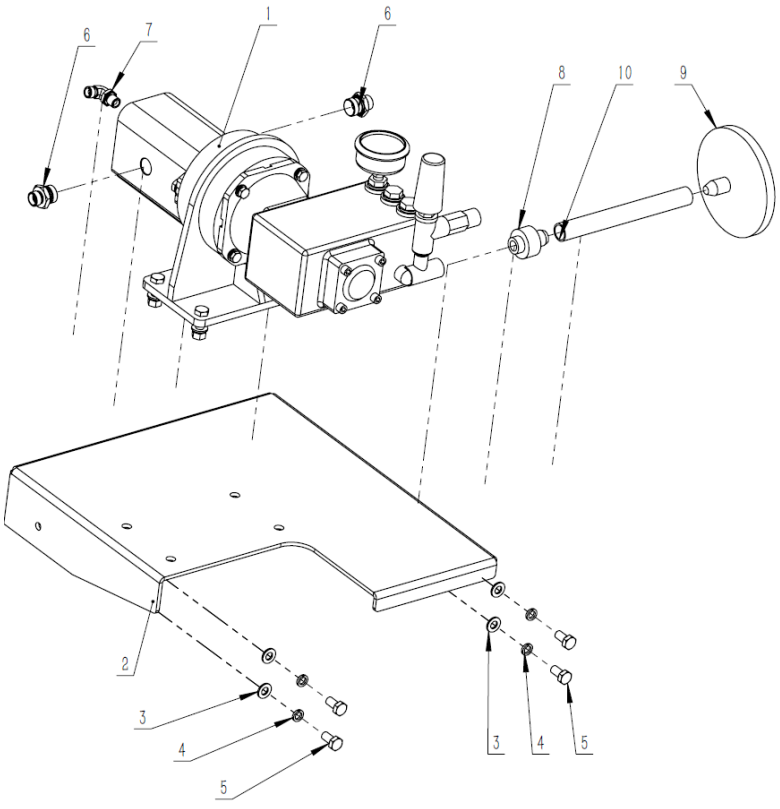


S/N	Material Code	Code	Name	Specifications	Quantity
1	ZP0204020029	YZS2-62-02100	Hydraulic tank welding	Assembly weldment	1
2	ZP0204030051	YZS2-62-02001	Cleaning port cap		1
3	40102040004	402990004	Oil temperature sensor	30°C 7.5 K ohms 80°C 2K ohms 0-10K ohms (150mm)	1
4	30101010023	GB/T5783-2000	Hex head bolt full thread	M8×16	6
5	21301000024	GB/T3452.1-2005	O-ring	120×3.1	1
6	21001050001	21001050001	British threaded O-ring seal post end	1CG-14-04	2
7	21801020004	21801020004	Mini direct return oil filter	RFA-250X10F-Y	1
8		YZS2-62-02200	Working pump suction pipe assembly	Assembly	1
9	21804000002	21804000002	Air cleaner	QUQ2-10X1.0	1
10	20109000004	20109000004	Leemin round oil mark	YB-M42X1.5	1
11	21001170022	21001170022	Metric external thread rubber gasket sealed with socket hexagon plug	4MN-30WD	1
12	30514010007	GB/T95-2002	Flat washer Class C	12×2.5	4

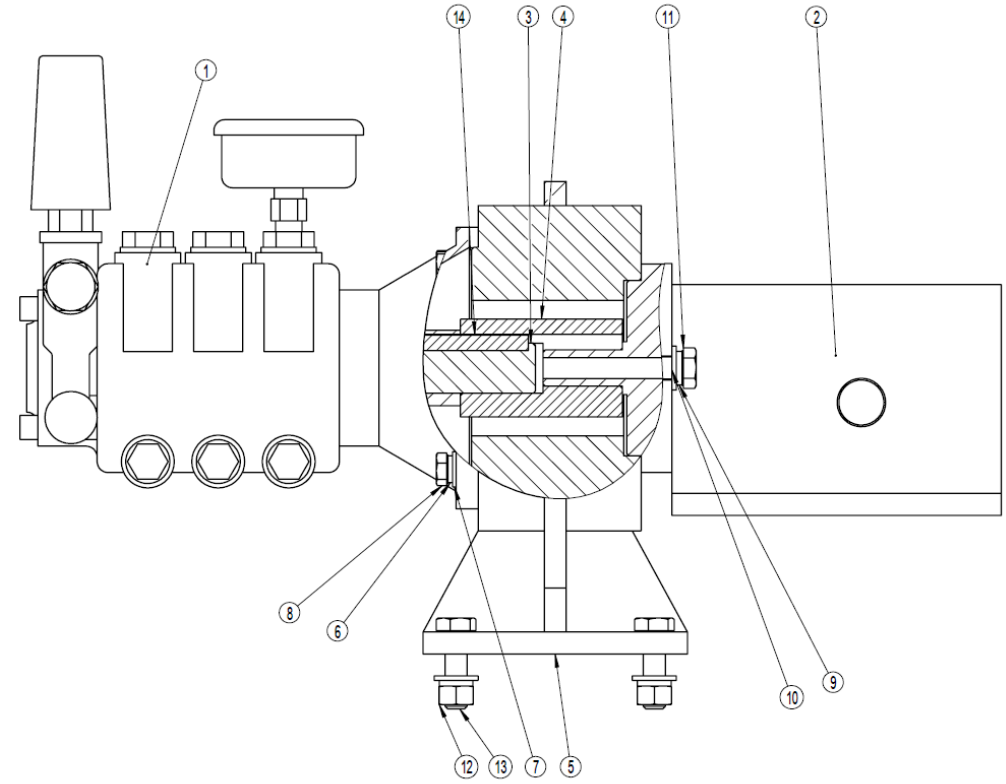
S/N	Material Code	Code	Name	Specifications	Quantity
13	30501010006	GB/T93-1987	Standard elastic washer	12×3.1	4
14	30103010035	GB/T70.1-2000	Hex socket head screw	M12×25	4
15	30507000008	NFE-25511	French loosening washer	M10	4
16	30514010006	GB/T95-2002	Flat washer Class C	10×2	4
17	30302010005	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M10	4
18	30101010042	GB/T5783-2000	Hex head bolt full thread	M10×30	4
19	21001040032	21001040032	British thread seal column end with rubber gasket	1CB-52-20WD	1
20	21001150016	21001150016	90° elbow adapter for male to female thread to compression fitting	2C9-52W	1
21	21001040017	21001040017	British thread seal column end with rubber gasket	1CB-22-08WD	2
22	21001150011	21001150011	90° elbow adapter for male to female thread to compression fitting	2C9-22W	1
23	21001150008	21001150008	90° elbow adapter for male to female thread to compression fitting	2C9-14W	2
24	21001140006	21001140006	Welding ferrule joint	1CW-36-28	1



S/N	Material Code	Code	Name	Specifications	Quantity
1	ZP0204020030	YZS2-62-02210	Working pump suction pipe welding	Assembly weldment	1
2	21801010006	21801010006	Mesh suction filter	WU-400x100F-J	1
3	21301000028	GB/T3452.1-2005	O-ring	109×3.55	1
4	30103010007	GB/T70.1-2008	Hex socket head screw	M6×20	4
5	30501010003	GB/T93-1987	Standard elastic washer	6×1.6	4
6	30501010005	GB/T93-1987	Standard elastic washer	10×2.6	4
7	30502010006	GB/T97.1-2002	Flat washer Class A	10×2	4
8	30101010042	GB/T5783-2000	Hex head bolt full thread	M10×30	4
9	21309000003	21309000003	Sealing gasket of oil suction filter element	WU-400x100F-J	1

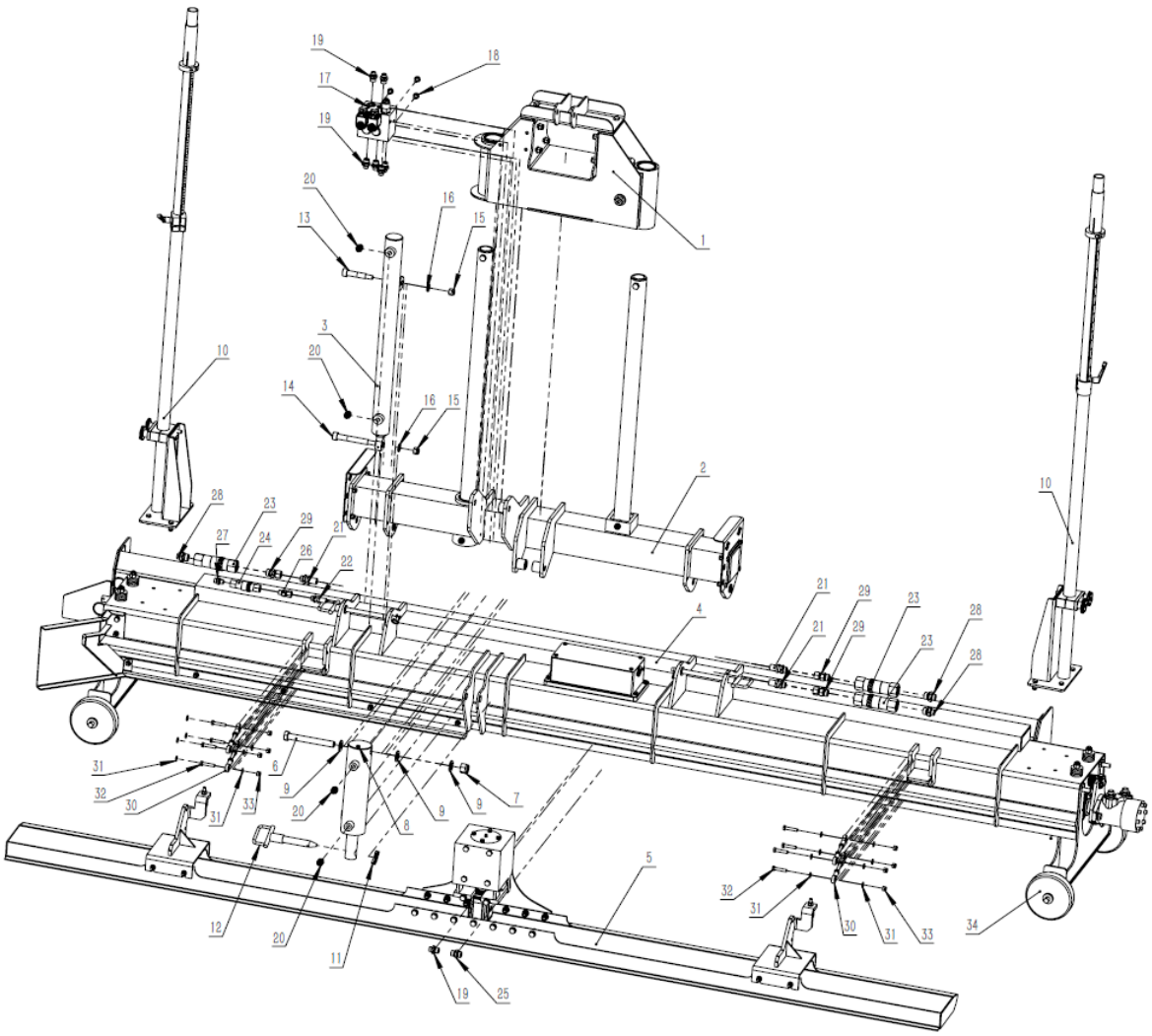


S/N	Material Code	Code	Name	Specifications	Quantity
1	ZP0214010001	360B-75-02000	Water pump combination	Assembly	1
2	ZP0204030068	YZS2-75-00001	Water pump mounting plate	t=5	1
3	30514010006	GB/T95-2002	Flat washer Class C	10×2	4
4	30501010005	GB/T93-1987	Standard elastic washer	10×2.6	4
5	30101010040	GB/T5783-2000	Hex head bolt full thread	M10×20	4
6	21001080008	21001080008	Metric thread seal column end with rubber gasket	1CM-18-22WD	2
7	21001060001	21001060001	90° elbow British thread adjustable o-ring seal column end	1CG9-14-04OG	1
8	21502000001	21502000001	Brass DIN Geka quick coupling	3/4 inch 20mm pagoda head + 3/4 inch outer wire	1
9	21502000002	21502000002	Self-priming water pipe over-large filter type 55-58	Mounting 19mm	1
10	21102000005	21102000005	Transparent steel wire tube	d19	1



S/N	Material Code	Code	Name	Specifications	Quantity
1	21503000002	21503000002	Water pump head	360B-75-02003	1
2	20104000017	20104000017	Water pump motor	CMFDA-F325-ALPS	1
3	ZP0214040001	360B-75-02001	Water pump connecting shaft	Round steel 24	1
4	ZP0214040002	360B-75-02002	Water pump connecting sleeve	Round steel 45	1
5	ZP0214020001	360B-75-02100	Water pump mounting frame welding	Welded parts	1
6	30501010004	GB/T93-1987	Standard elastic washer	8×2.1	4
7	30502010005	GB/T97.1-2002	Flat washer Class A	8×1.6	4
8	30101010025	GB/T5783-2000	Hex head bolt full thread	M8×25	4
9	30501010005	GB/T93-1987	Standard elastic washer	10×2.6	6
10	30502010006	GB/T97.1-2002	Flat washer Class A	10×2	6

S/N	Material Code	Code	Name	Specifications	Quantity
11	30101010042	GB/T5783-2000	Hex head bolt full thread	M10×30	2
12	30301010006	GB/T6170-2000	Type 1 hex nut	M10	4
13	30101010043	GB/T5783-2000	Hex head bolt full thread	M10×35	4
14	30401010028	GB/T1096-2003	Ordinary flat key type A	8×7×80	1



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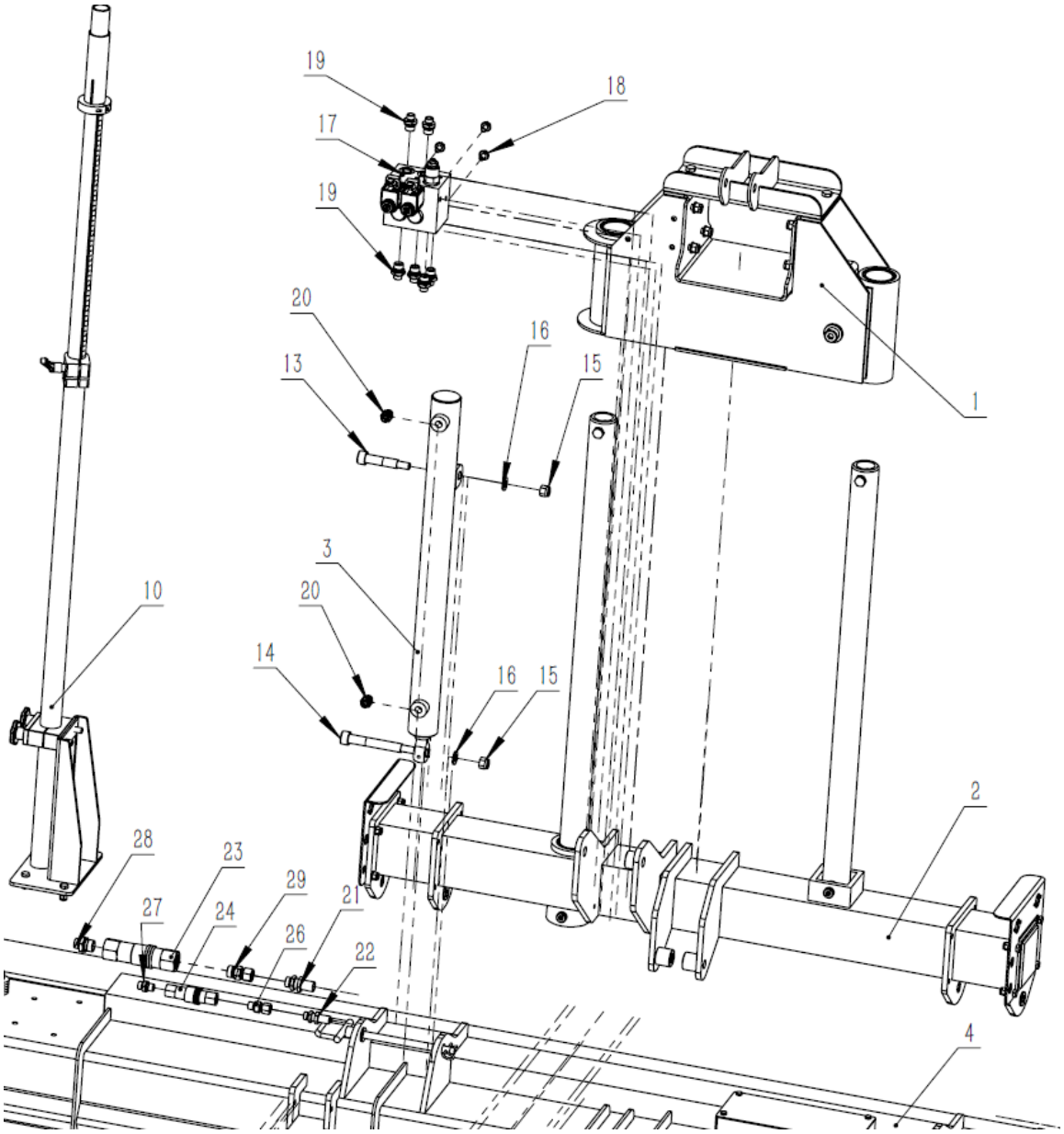
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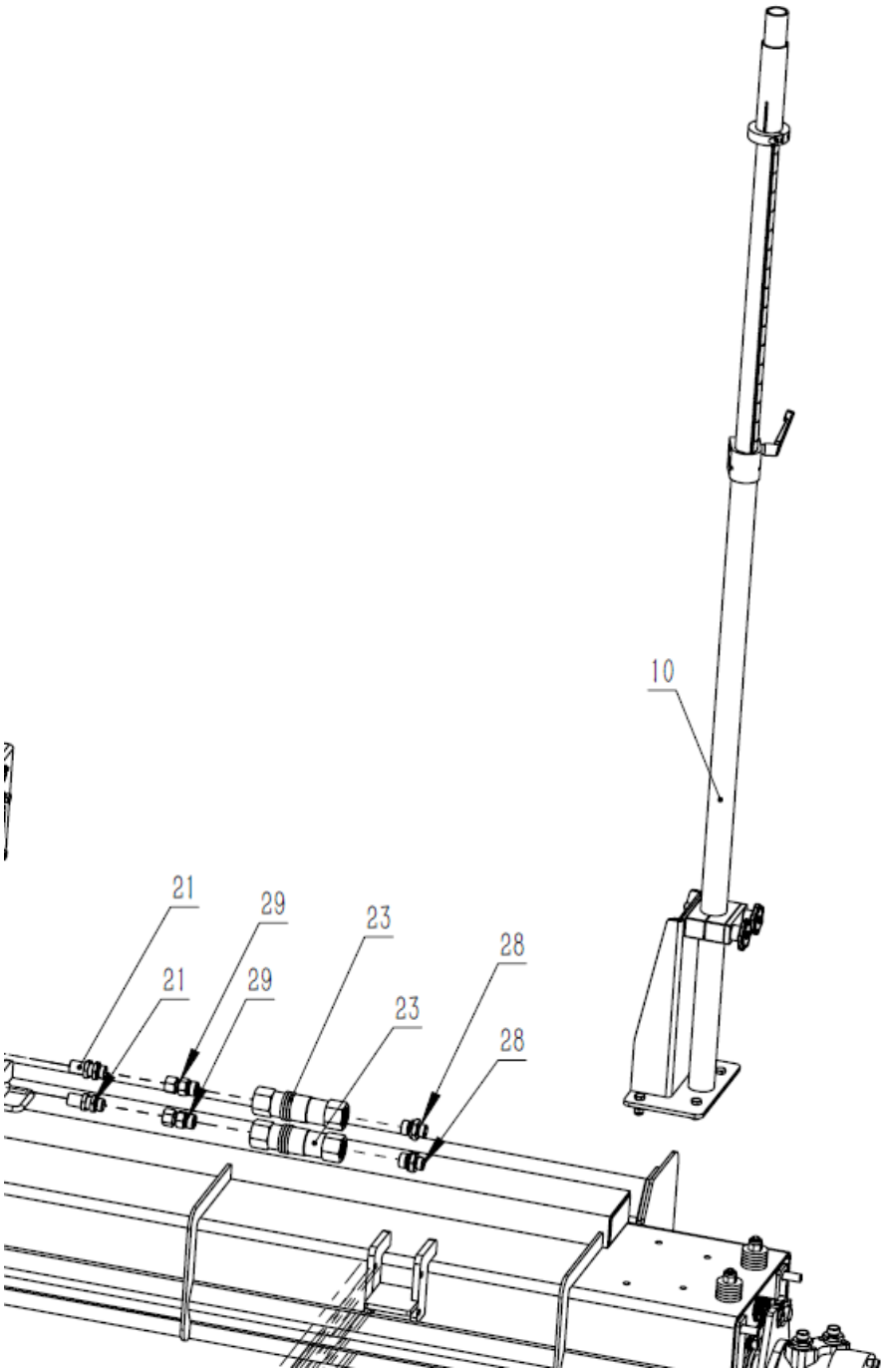
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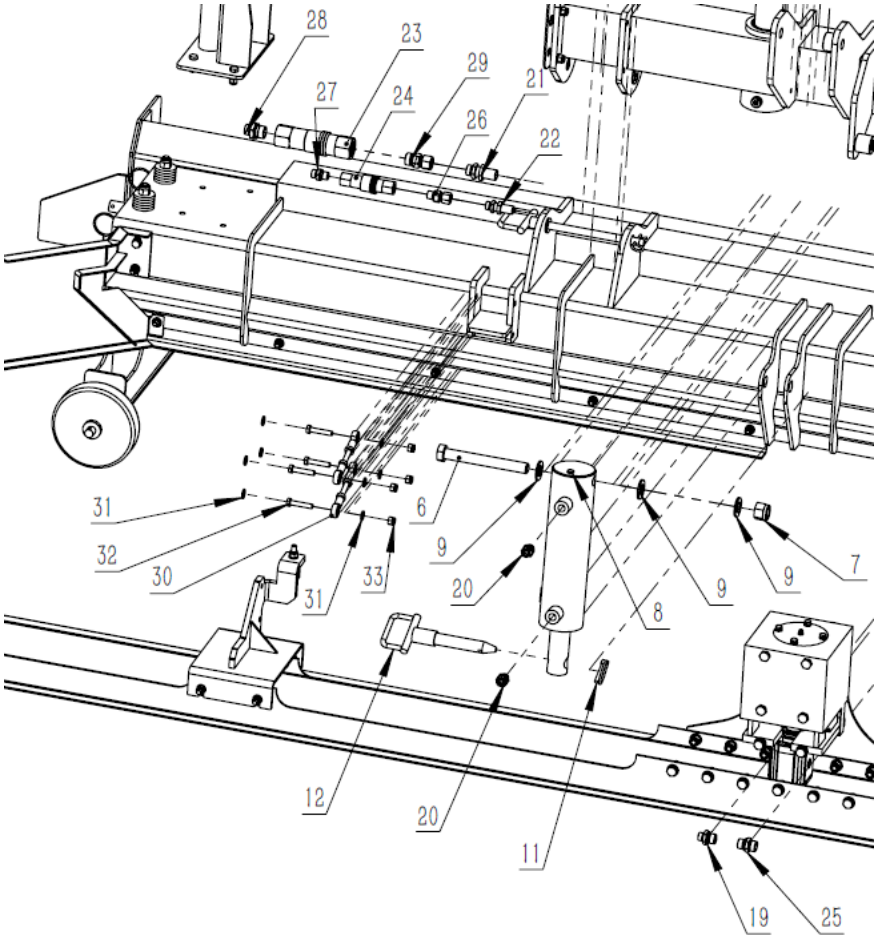
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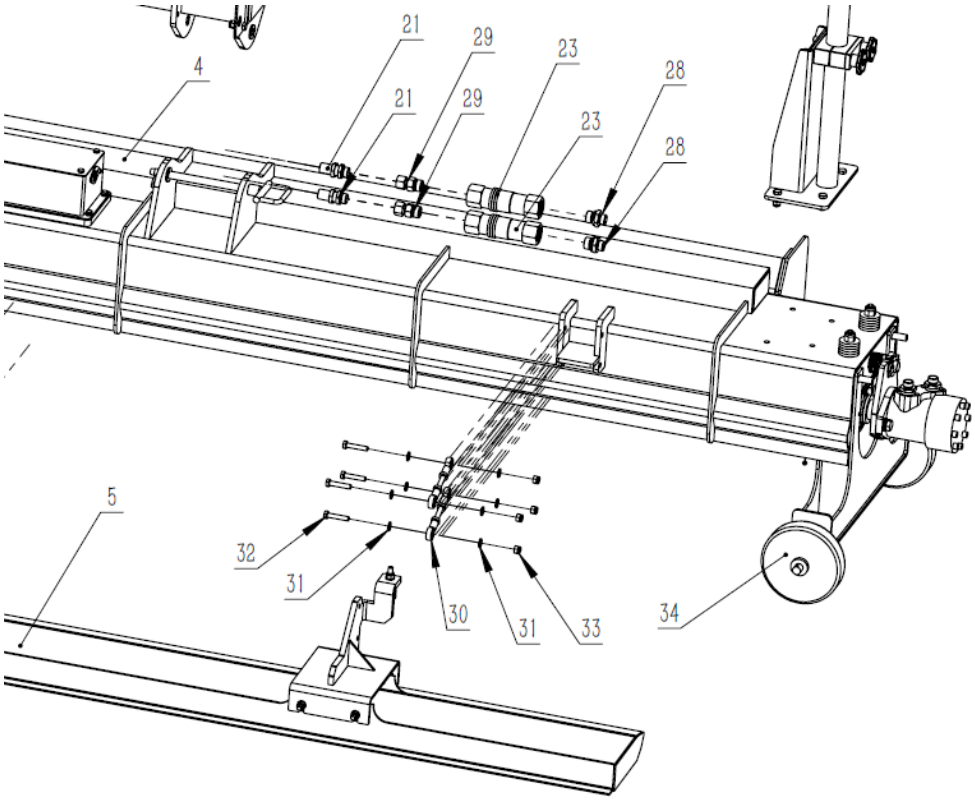
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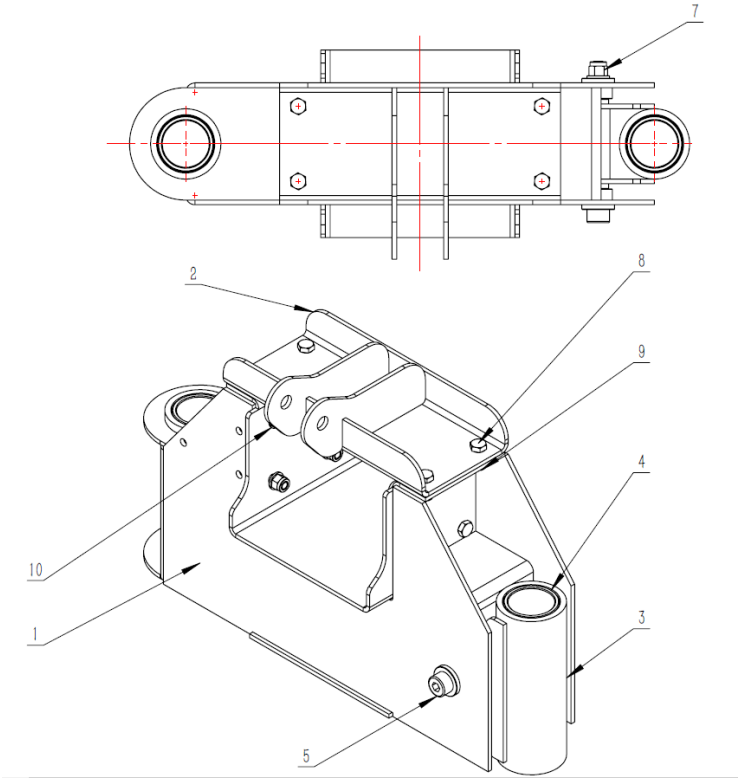
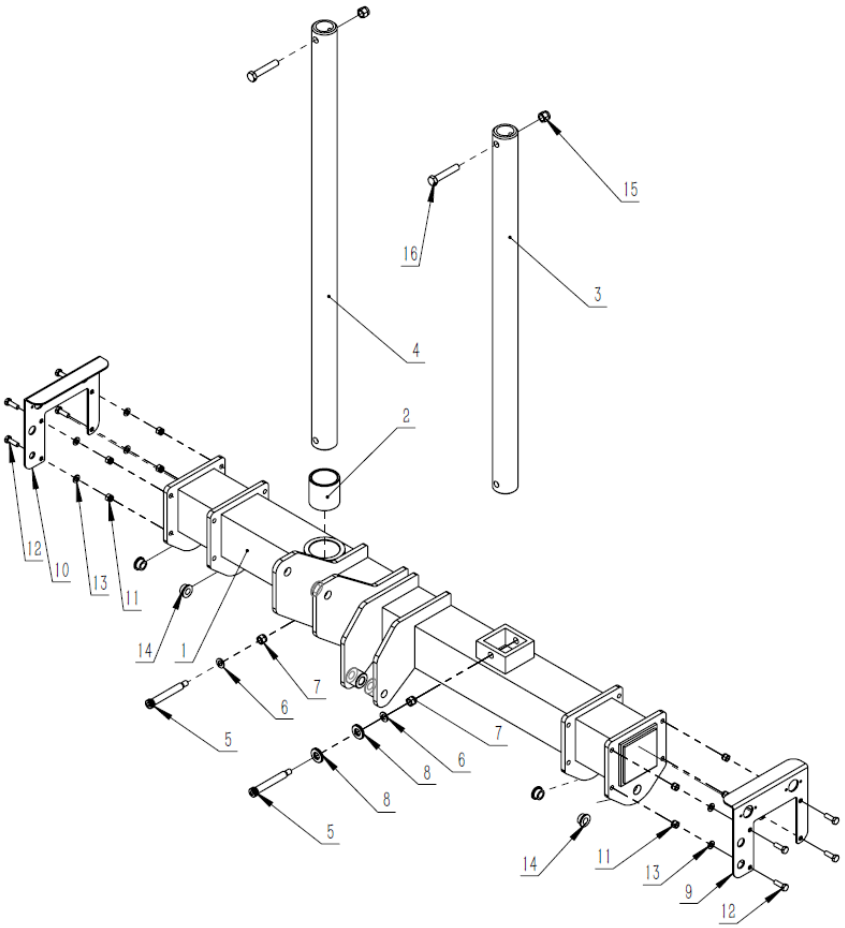
S/N	Material Code	Code	Name	Specifications	Quantity
1	ZP0203010041	YZS2-80-02000	Work head fixture assembly	Assembly	1
2	ZP0203010042	YZS2-80-03000	Cross beam assembly	Assembly	1
3	20105000033	YZS2-62-05000	Lifting cylinder assembly	45/28-540/550	1
4	ZP0203010044	YZS2-80-05000	Auger shield assembly	Assembly	1
5	ZP0203010022	WS940C-80-06000 B	Vibration plate assembly	Assembly	1
6	30112050015	GB/T5782-2016	Hex head bolts Class A and B	(M18)×150	1
7	30302010009	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M18	1
8	ZP0203060015	YZS2-80-08000	Tilt cylinder	63/35-302/160	1
9	30502010010	GB/T97.1-2002	Flat washer Class A	18×3	3
10	ZP0203010043	YZS2-80-04000	Receiver rod assembly	Assembly	2
11	20919000001	φ6x40	O-type locking pin	φ6x40	1
12	ZP0203020039	WS550-80-01300	Pin welding	Assembly weldment	1
13	30113000019	GB/T5281-1985	Hex socket head shoulder screw	φ16x60-M12	1
14	30113000020	GB/T5281-1985	Hex socket head shoulder screw	φ16x100-M12	1
15	30302010006	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M12	2
16	30502010007	GB/T97.1-2002	Flat washer Class A	12×2.5	2
17	20103000102	20103000102	Tilt lift switching valve	11342628	1
18	30102010005	GB/T5789-1986	Hex head flange face bolt (enlarged series)	M8×16	3
19	21001040005	21001040005	British thread seal column end with rubber gasket	1CB-14-06WD	7
20	21001070002	ISO6149	Metric male threaded post end	1CH-14	4
21	21001180007	21001180007	Straight through bulkhead compression fitting	6C-18-LN/RN	3
22	21001180006	21001180006	Straight through bulkhead	6C-14-LN/RN	1

S/N	Material Code	Code	Name	Specifications	Quantity
			compression fitting		
23	21002000005	BSP1/2	DNP flat head hydraulic quick coupling	BSP1/2	3
24	21002000004	BSP1/4	DNP flat head hydraulic quick coupling	BSP1/4	1
25	21001040012	21001040012	British thread seal column end with rubber gasket	1CB-18-06WD	1
26	21001040042	21001040042	British thread seal column end with rubber gasket	2BC-04-14WD-RN	1
27	21001040004	21001040004	British thread seal column end with rubber gasket	1CB-14-04WD	1
28	21001040013	21001040013	British thread seal column end with rubber gasket	1CB-18-08WD	3
29	21001040043	21001040043	British thread seal column end with rubber gasket	2BC-08-18WD-RN	3
30	ZP0203010026	WS940C-80-09000 B	Vibration beam connecting rod assembly	Assembly	4
31	30502010005	GB/T97.1-2002	Flat washer Class A	8×1.6	16
32	30101010028	GB/T5783-2000	Hex head bolt full thread	M8×40	8
33	30302010004	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M8	8
34	ZP0212010002	WS940C-90-01000	Auger packing pulley bracket assembly	(For parts, see the shipped accessories section, Serial No. 47/48/49/50/51)	2

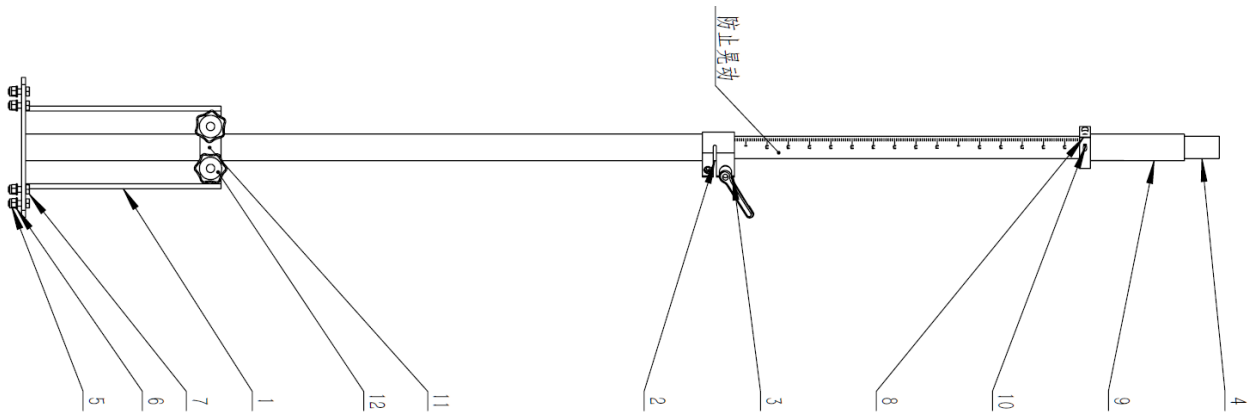


S/N	Material Code	Code	Name	Specifications	Quantity
1	ZP0203020045	YZS2-80-02100	Working head fixing device welding	Assembly weldment	1
2	ZP0203020047	YZS2-80-02300	Upper fixing plate welding	Assembly weldment	1
3	ZP0203020046	YZS2-80-02200	Left sliding sleeve welding	Assembly weldment	1
4	20910000023	20910000023	Self-lubricating copper sleeve	d50/D60/L60	4
5	30113000023	GB/T5281-1985	Hex socket head shoulder screw	φ16x140-M12	1
6	30502010007	GB/T97.1-2002	Flat washer Class A	12×2.5	1
7	30302010006	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M12	1
8	30101010041	GB/T5783-2000	Hex head bolt full thread	M10×25	12
9	30302010005	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M10	12
10	30502010006	GB/T97.1-2002	Flat washer Class A	10×2	12



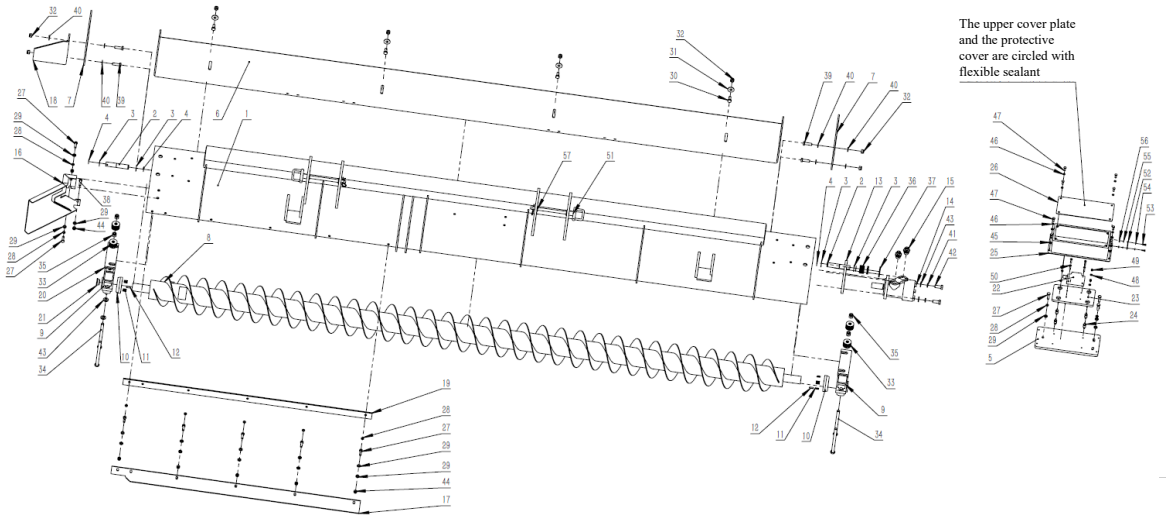
S/N	Material Code	Code	Name	Specifications	Quantity
1	ZP0203020048	YZS2-80-03100	Crossbeam welding assembly	Assembly weldment	1
2	20910000023	20910000023	Self-lubricating copper sleeve	d50/D60/L60	1
3	ZP0203040088	YZS2-80-03002	Left lift slide bar	Round tube 50x8	1
4	ZP0203040087	YZS2-80-03001	Right lift slide bar	Round tube 50x8	1
5	30113000022	GB/T5281-1985	Hex socket head shoulder screw	φ13x80-M10	2
6	30502010006	GB/T97.1-2002	Flat washer Class A	10×2	2
7	30302010005	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M10	2
8	ZP0203040089	YZS2-80-03003	Pin spacer	Round aluminum 30	2
9	ZP0203030157	YZS2-80-03004	Left joint fixing plate	t=3	1
10	ZP0203030158	YZS2-80-03005	Right joint fixing plate	t=3	1
11	30302010004	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M8	8
12	30101010025	GB/T5783-2000	Hex head bolt full thread	M8×25	8

S/N	Material Code	Code	Name	Specifications	Quantity
13	30502010005	GB/T97.1-2002	Flat washer Class A	8×1.6	8
14	20910000019	20910000019	Copper sleeve with edge	d13/D20/L12/H26/t3	4
15	30302010006	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M12	2
16	30101010068	GB/T5783-2000	Hex head bolt full thread	M12×65	2



S/N	Material Code	Code	Name	Specifications	Quantity
1	ZP0203020049	YZS2-80-04100	Receiver rod mounting bracket welding	Assembly weldment	1
2	ZP0203040082	WS550-80-06002	Aluminum rod	Round tube 38x2	1
3	ZP0203010037	WS550-80-05000	Pipe rack assembly	Assembly parts	1
4	ZP0203060004	YZS2-80-04001	Receiver rod	Custom aluminum tube	1
5	30302010004	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M8	4
6	30502010005	GB/T97.1-2002	Flat washer Class A	8×1.6	4
7	30101010025	GB/T5783-2000	Hex head bolt full thread	M8×25	4

S/N	Material Code	Code	Name	Specifications	Quantity
8	20905000002	20905000002	Stainless steel 304 separated fixing ring	Inner diameter 38 Outer diameter 60 Height 15	1
9	ZP0203050015	WS940C-80-07004A	Sliding sleeve	Stainless steel pipe outer 38X inner diameter 32.5 (can be reworked with 38X32 inner hole)	1
10	30103010006	GB/T70.1-2008	Hex socket head screw	M6×16	2
11	20903000037	20903000037	Single-hole pipe clamp	φ38	1
12	20908000015	20908000015	Torx handle bolt	HLK-D60-M10-L90	2



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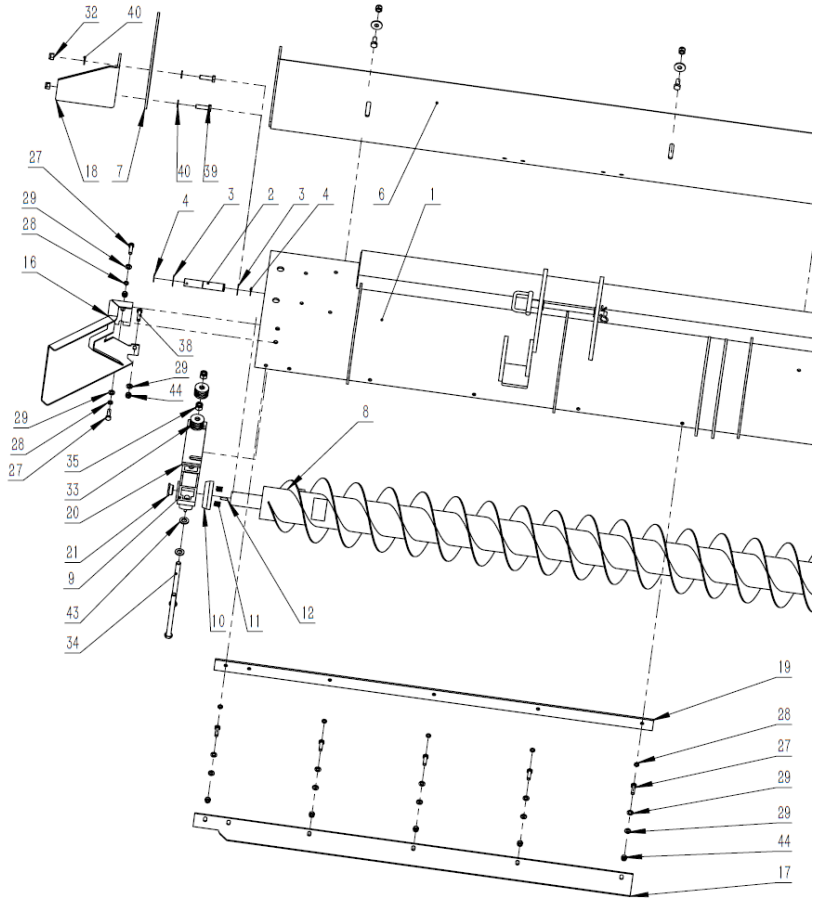
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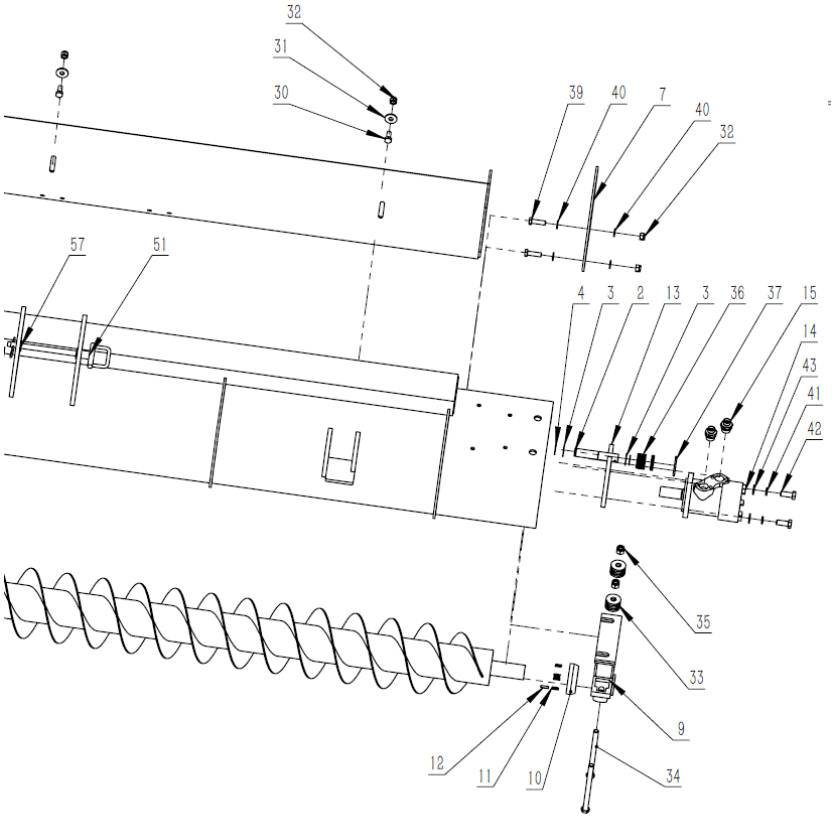
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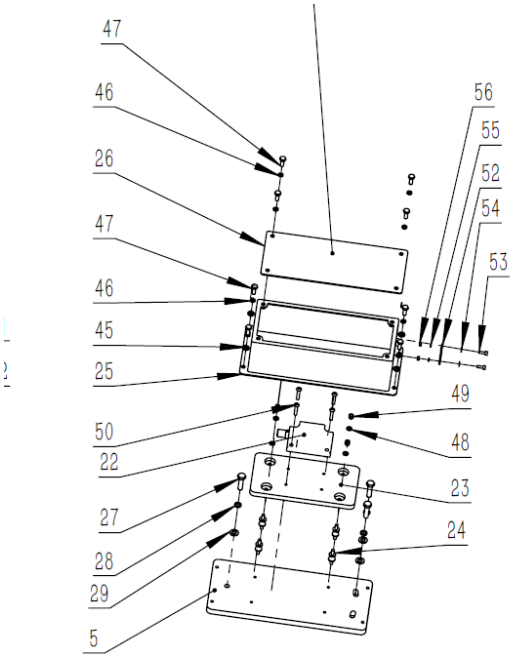
The upper cover plate and the protective cover are circled with flexible sealant

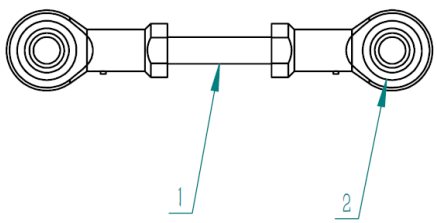


S/N	Material Code	Code	Name	Specifications	Quantity
1	ZP0203020050	YZS2-80-05100	Auger guard welding assembly	Assembly weldment	1
2	ZP0203040029	WS940C-80-05001	Motor fixed shaft	Round steel 40	2
3	ZP0203030054	WS940C-80-05002	Retaining ring gasket	t=1	4
4	30603000014	GB894.2-86	Elastic retaining ring for shaft type B	20	4
5	ZP0203030055	WS940C-80-05003B	Tilt fixing plate	t=12	1
6	ZP0203020020	WS940C-80-05200	Scraper welding assembly	Assembly weldment	1
7	ZP0203030056	WS940C-80-05004	Scraper side plate	t=5	2
8	ZP0203020021	WS940C-80-05300	Auger welding assembly		1
9	20806000014	20806000014	sealmaster bearings	s-5205-m32	2
10	ZP0203040030	WS940C-80-05005	Sealing sleeve	Black	2
11	20907000005	GB2089-80	Compression spring	0.5 x5.6x16	8
12	30702010001	GB/T879.2-2000	Elastic cylindrical	5×20	2

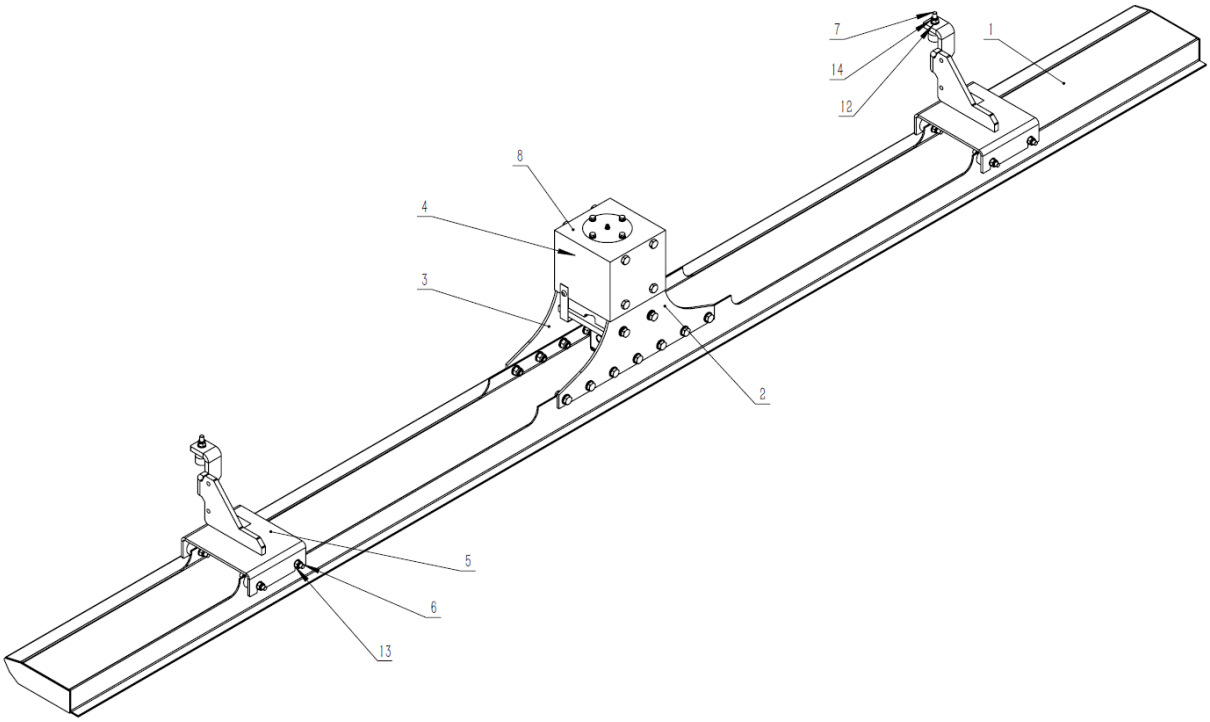
S/N	Material Code	Code	Name	Specifications	Quantity
			pin straight groove lightweight		
13	ZP0203030057	WS940C-80-05006	Auger motor mounting plate	t=10	1
14	20104000035	20104000035	Auger motor with slurry seal	12025400	1
15	21001050003	21001050003	British threaded O-ring seal post end	1CG-18-08	2
16	ZP0203020022	WS940C-80-05400	Front baffle plate welding of auger motor	Assembly weldment	1
17	ZP0203030058	WS940C-80-05007	Small side scraper of motor	t=3	1
18	ZP0203030059	WS940C-80-05008	Right side bend of scraper	t=5	1
19	ZP0203030064	WS940C-80-05010	Small scraper backing plate	t=5	1
20	ZP0203030065	WS940C-80-05011	Auger backing plate	t=6	4
21	21303000001	T-27	T-shaped plug	Φ26mm	1
22	40102030001	40102030001	Work head tilt sensor	AKS-090-2-C901 -HK2-PV	1
23	ZP0203030067	WS940C-80-05015	Tilt shock absorber	t=10	1
24	20915000022	Kange 521300	Tilt shock absorber	12.5-14-M5	4
25	ZP0203020018	WS940C-80-05012B	Tilt sensor protective shell		1
26	ZP0203030066	WS940C-80-05013B	Tilt sensor protective upper cover	t=2	1
27	30101010026	GB/T5783-2000	Hex head bolt full thread	M8×30	10
28	30501010004	GB/T93-1987	Standard elastic washer	8×2.1	10
29	30514010005	GB/T95-2002	Flat washer Class C	8×1.6	17

S/N	Material Code	Code	Name	Specifications	Quantity
30	30101010041	GB/T5783-2000	Hex head bolt full thread	M10×25	4
31	30512000002	GB/T96.2-2002	Large washer Class C	10×2.5	4
32	30302010005	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M10	8
33	30508000004	12×35×5	Enlarged gasket	12×35×5	20
34	30112030015	GB/T5782-2016	Hex head bolts Class A and B	M12×150	4
35	30302010006	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M12	4
36	30514010011	GB/T95-2002	Flat washer Class C	20×3	8
37	30708000001	30708000001	Snap pin	3.5 x60	3
38	30101010027	GB/T5783-2000	Hex head bolt full thread	M8×35	1
39	30101010043	GB/T5783-2000	Hex head bolt full thread	M10×35	4
40	30514010006	GB/T95-2002	Flat washer Class C	10×2	8
41	30501010006	GB/T93-1987	Standard elastic washer	12×3.1	2
42	30101010061	GB/T5783-2000	Hex head bolt full thread	M12×30	2
43	30514010007	GB/T95-2002	Flat washer Class C	12×2.5	4
44	30302010004	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M8	7
45	30514010004	GB/T95-2002	Flat washer Class C	6×1.6	8
46	30501010003	GB/T93-1987	Standard elastic washer	6×1.6	8
47	30101010008	GB/T5783-2000	Hex head bolt full thread	M6×16	8
48	30514010003	GB/T95-2002	Flat washer Class C	5×1	4
49	30302010002	GB/T889.1-2000	Type 1	M5	4

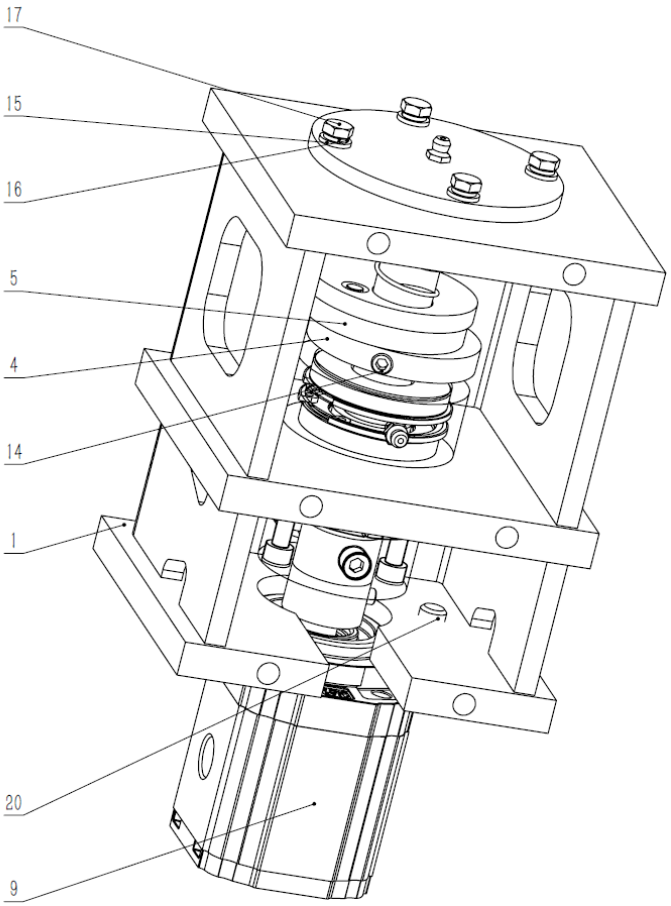
S/N	Material Code	Code	Name	Specifications	Quantity
			non-metallic insert hex lock nut		
50	30104030003	GB/T70.2-2000	Hex socket flat round head screw	M5×25	4
51	ZP0203020051	YZS2-80-05200	Handle pin assembly	Assembly weldment	2
52	ZP0203030269	YZS2-80-05001	Tilt shield passing board	t=2	1
53	30103010001	GB/T70.1-2000	Hex socket head screw	M4×12	2
54	30502010002	GB/T97.1-2002	Flat washer Class A	4×0.8	3
55	30501010001	GB/T93-1987	Standard elastic washer	4×1.1	2
56	30301010002	GB/T6170-2000	Type 1 hex nut	M4	2
57	20910000019	20910000019	Copper sleeve with edge	d13/D20/L12/H26/t3	4



S/N	Material Code	Code	Name	Specifications	Quantity
1	ZP0203040042	WS940C-80-09001	M8 Stud	M8	1
2	20807000008	20807000008	Internally threaded insert rod end joint bearing	PHS8	2



S/N	Material Code	Code	Name	Specifications	Quantity
1	ZP0203020023	WS940C-80-06100B	Small vibration plate welding	Assembly weldment	1
2	ZP0203030086	WS940C-80-06004B	Vibration motor front vertical plate	t=5	1
3	ZP0203030087	WS940C-80-06006B	Vibration motor rear vertical plate	t=5	1
4	ZP0203010023	WS940C-80-06000B-01	Vibration device assembly	Assembly	1
5	ZP0203020024	WS940C-80-06200B	Vibration plate connection welding	Assembly weldment	2
6	20915000027	20915000027	M8 double-ended stud shock absorber	30*20-M8*23	8
7	20915000026	20915000026	Rubber shock absorber	VE25*15*M8*50	2
8	ZP0203040033	WS940C-80-06005B	Vibration device protective cover	Abrasion-resistant cloth	1
9	30101010041	GB/T5783-2000	Hex head bolt full thread	M10×25	26
10	30514010006	GB/T95-2002	Flat washer Class C	10×2	40
11	30501010005	GB/T93-1987	Standard elastic washer	10×2.6	12
12	30502010005	GB/T97.1-2002	Flat washer Class A	8×1.6	4
13	30514010005	GB/T95-2002	Flat washer Class C	8×1.6	16
14	30302010004	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M8	20
15	30302010005	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M10	14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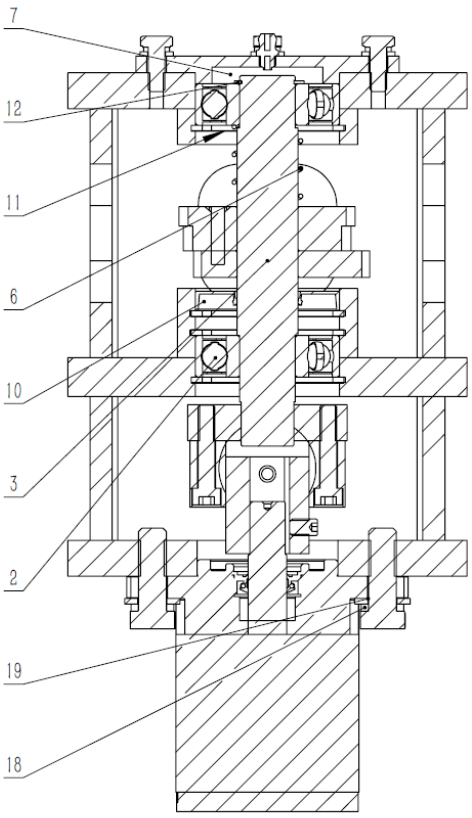
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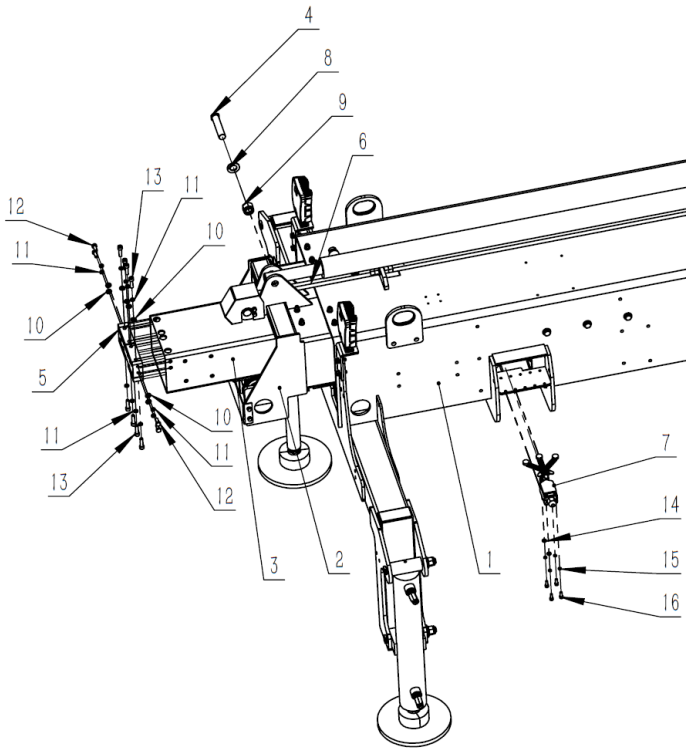
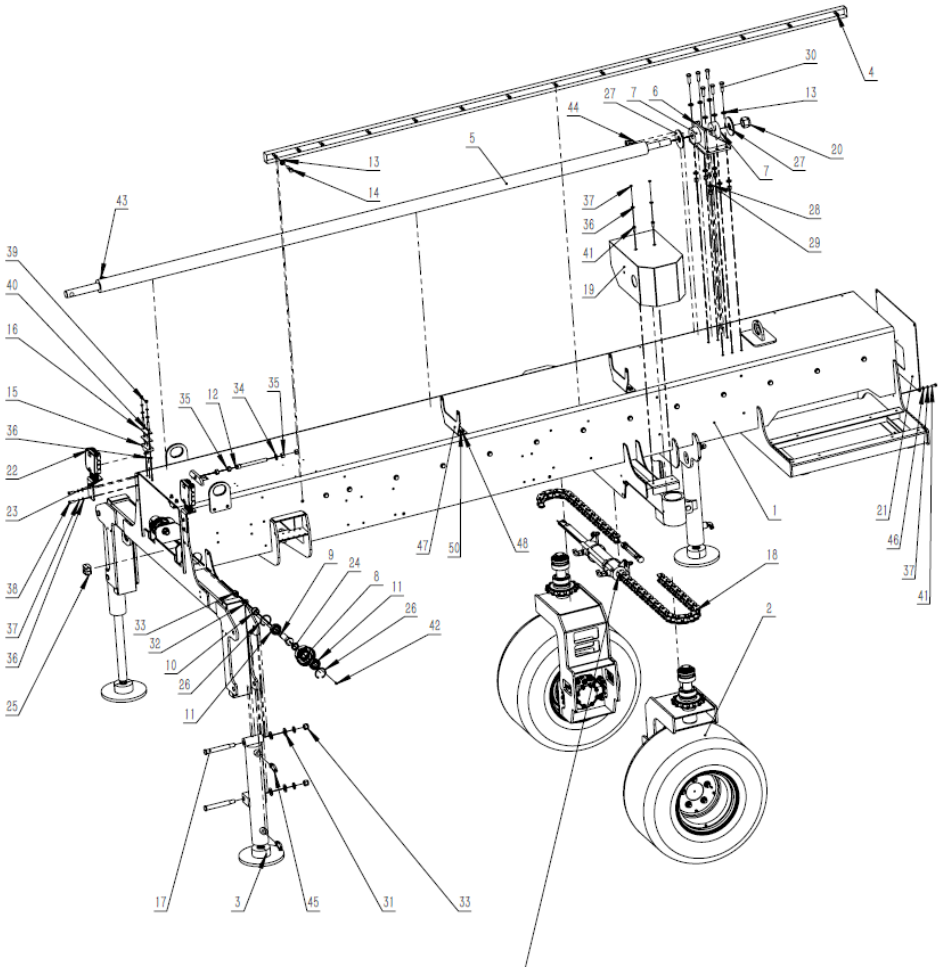
S/N	Material Code	Code	Name	Specifications	Quantity
1	ZP0203020026	WS940C-80-06600	Vibration device welding assembly	Post-welding processing	1
2	20801000018	GB/T276-2013	Deep groove ball bearing	6304-2RZ	2
3	ZP0203040034	WS940C-80-06011	Vibration shaft		1
4	ZP0203030088	WS940C-80-06012	Fixed eccentric block		1
5	ZP0203020025	WS940C-80-06400C	Movable eccentric block welding	Assembly weldment	1
6	20907000004	GB2089-80	Compression spring	2x26x30/n3/p10	1
7		WS980-80-02004	Plug plate		1
8	ZP0203010024	WS940C-80-06500	SIZE1 rubber elastic coupling	Assembly	1
9	20104000028	20104000028	Hydraulic motor	X1M1861BBBF	1
10	21302000013	GB/T13871.1-2007	Lip ring seal type B	22×52×7	1
11	30601010005	GB/T893-2017	Elastic retaining ring for hole type A	52	4
12	30602010006	GB894.1-86	Elastic retaining ring for shaft type A	20	1
13	30901010001	JBT-7940.1	Straight-through pressure filling cup	M6×1	2
14	30108000006	GB/T77-2000	Hexagon socket plain end set screw	M8×12	1
15	30502010004	GB/T97.1-2002	Flat washer Class A	6×1.6	4
16	30501010003	GB/T93-1987	Standard elastic washer	6×1.6	4
17	30101010008	GB/T5783-2000	Hex head bolt full thread	M6×16	4
18	30501010005	GB/T93-1987	Standard elastic washer	10×2.6	2
19	30502010006	GB/T97.1-2002	Flat washer Class A	10×2	2
20	30101010042	GB/T5783-2000	Hex head bolt full thread	M10×30	2



S/N	Material Code	Code	Name	Specifications	Quantity
1	ZP0206010015	YZS2-81-01000	First section arm assembly	Assembly	1
2	ZP0206010016	YZS2-81-02000	Second section telescopic arm assembly	Assembly	1
3	ZP0206010017	YZS2-81-03000	Third section telescopic arm assembly	Assembly	1
4	ZP0206040023	YZS2-81-00001	Boom telescopic cylinder rod pin shaft	Round steel	1
5	ZP0206040024	YZS2-81-00002	Rubber hose clamp	t=30	1
6	20504000004	20504000004	LH1023 plate chain	LH1023-3.63m 1 piece +3.5 m 1 piece (4 sets with chain buckle)	1
7	40106030006	CWLCA12-2-Q	Limit switch	CWLCA12-2-Q	1
8	30514010011	GB/T95-2002	Flat washer Class C	20×3	1
9	30302010010	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M20	1
10	30514010005	GB/T95-2002	Flat washer Class C	8×1.6	8

S/N	Material Code	Code	Name	Specifications	Quantity
11	30501010004	GB/T93-1987	Standard elastic washer	8×2.1	12
12	30101010024	GB/T5783-2000	Hex head bolt full thread	M8×20	4
13	30103010018	GB/T70.1-2000	Hex socket head screw	M8×30	8
14	30502010004	GB/T97.1-2002	Flat washer Class A	6×1.6	4
15	30501010003	GB/T93-1987	Standard elastic washer	6×1.6	4
16	30103010006	GB/T70.1-2008	Hex socket head screw	M6×16	4



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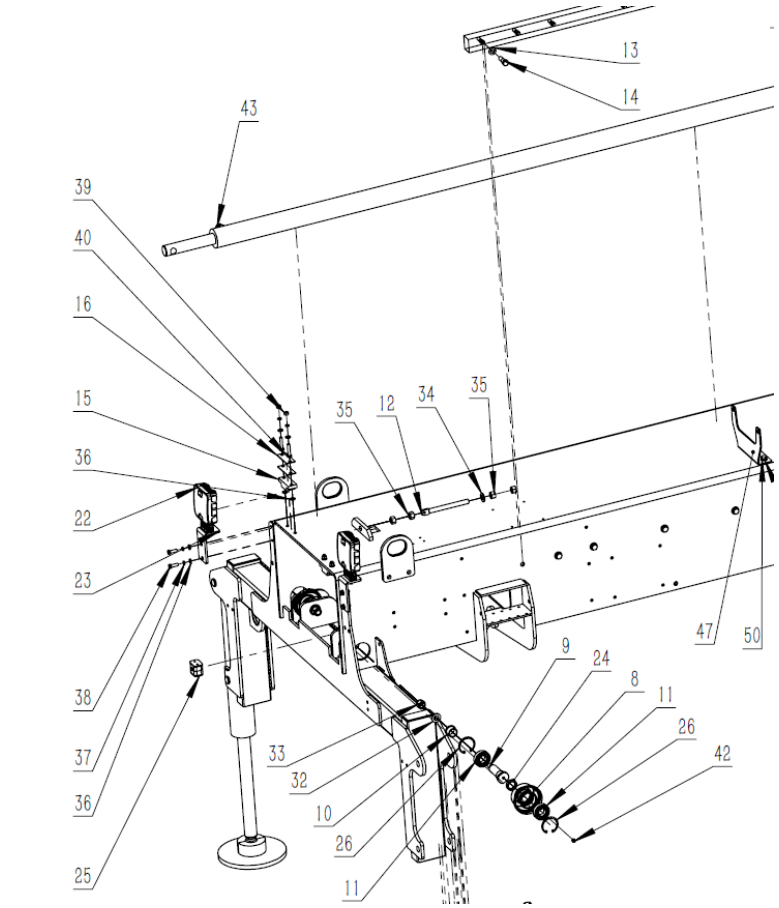
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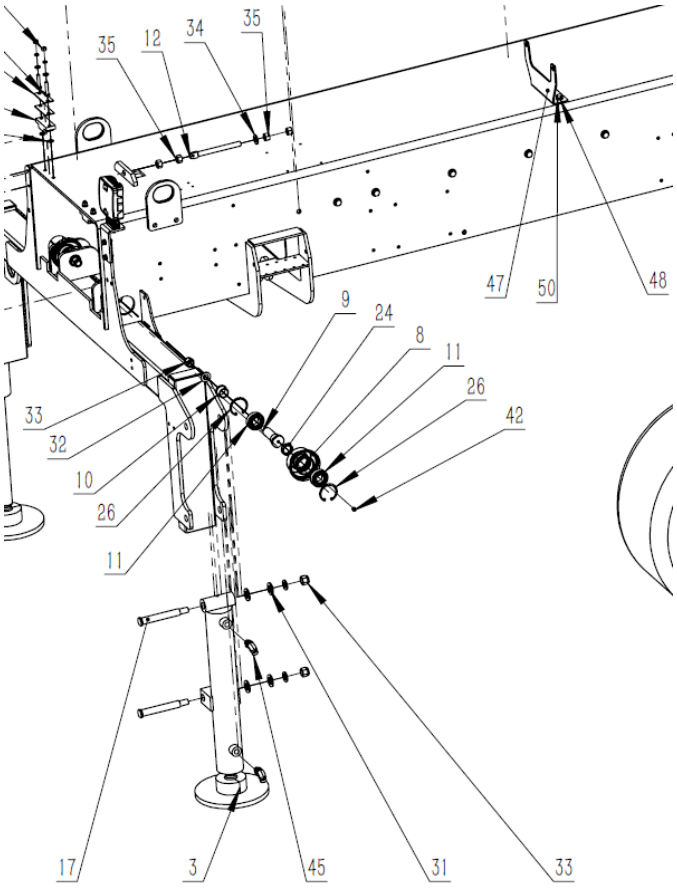
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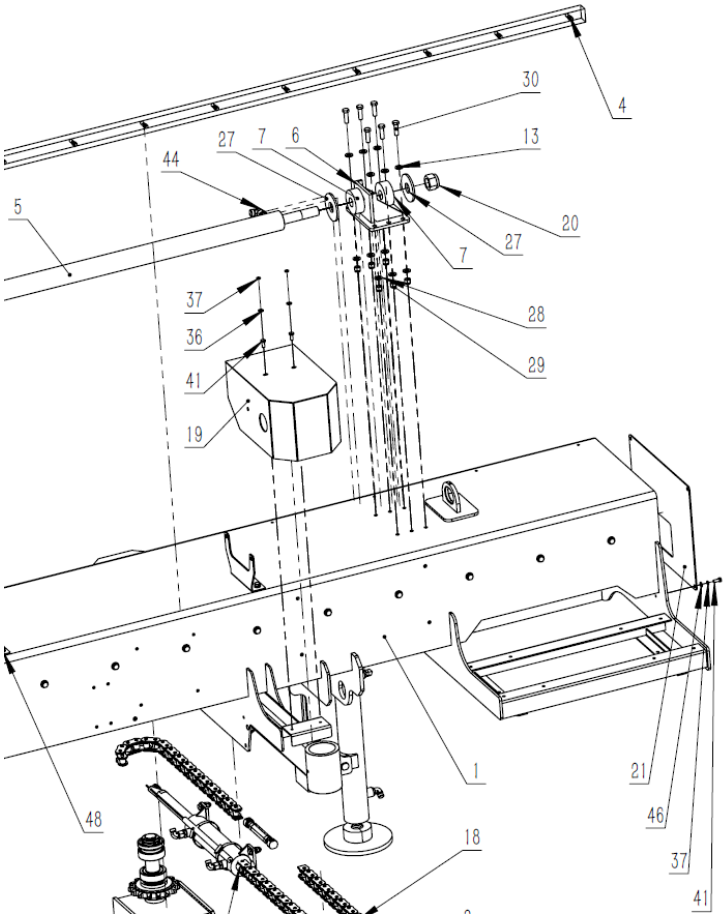
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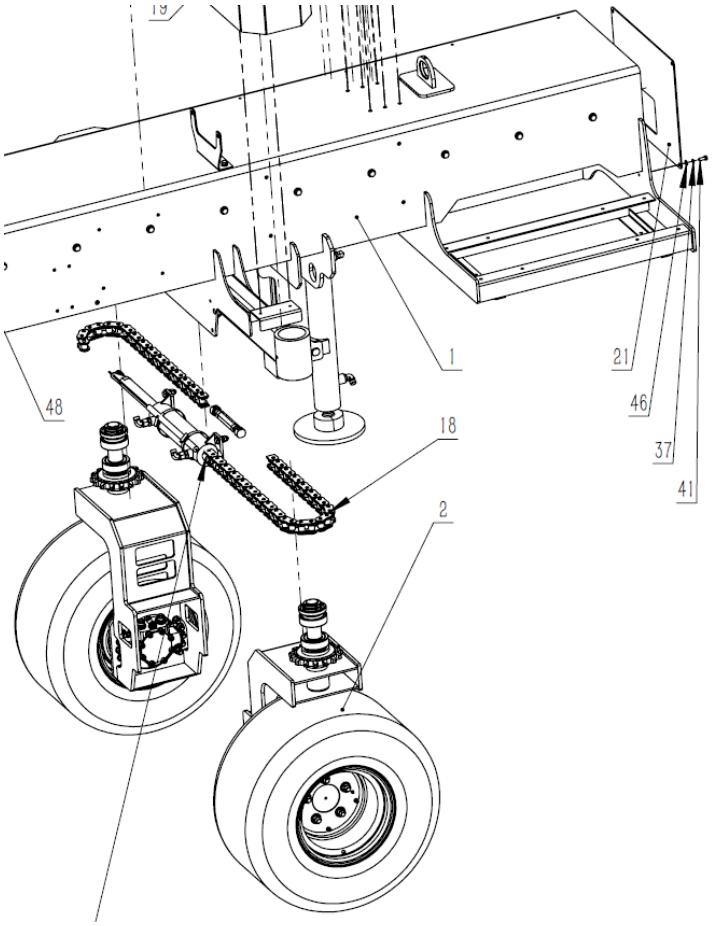
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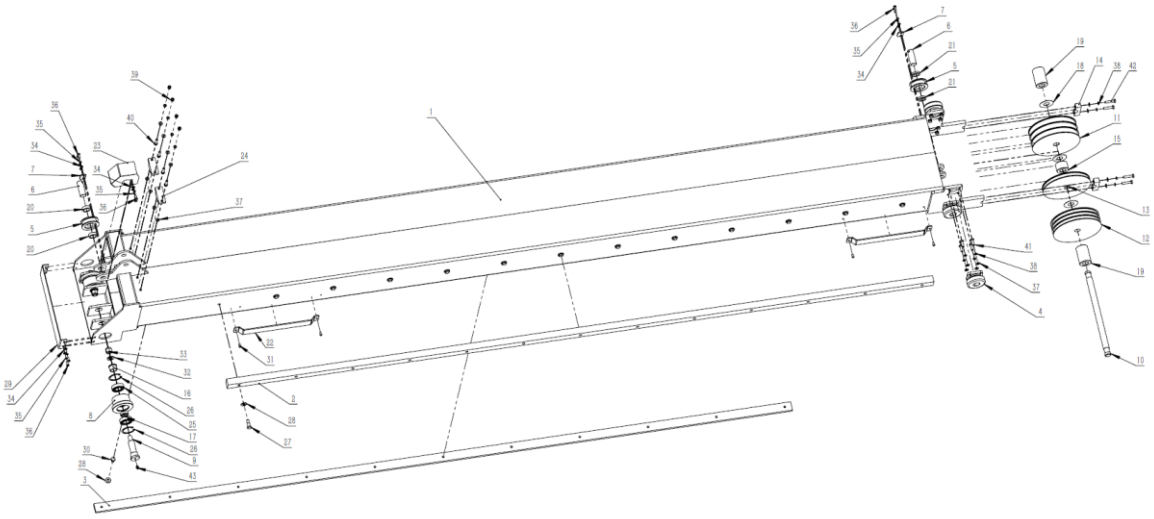
S/N	Material Code	Code	Name	Specifications	Quantity
1	ZP0206020013	YZS2-81-01100	First section arm welding	Assembly weldment	1
2	ZP0208010002	YZS2-46-01000	Rear wheel travel assembly	Assembly	2
3	20105000029	YZS2-62-03000	Outrigger cylinder assembly	63/40-630/380	3
4	ZP0206040020	YZS2-81-01001	Track		2
5	20105000028	YZS2-62-04000	Boom telescopic cylinder assembly	50/35-3075/2750	1
6	ZP0206020014	YZS2-81-01200	Boom telescopic cylinder mounting base	Assembly weldment	1
7	20915000034	70x30x30	Rubber sleeve	Outer diameter 70x Inner diameter 30x Thickness 30 Hardness 60	2
8	ZP0206040025	YZS2-81-01002	Front roller	Round steel	2
9	ZP0206040009	360MINI-81-02004	Second section arm front roller pin shaft		2
10	ZP0206040014	360MINI-81-02012	Second section arm front roller backing ring		2
11	20802000002	GB/T283-94	Cylindrical roller bearing	NUP205E	4
12	ZP0206040026	YZS2-81-01003	Chain tie rod	Round steel	2
13	30507000001	NFE-25511	French loosening washer	M12	34
14	30106030011	GB27-88	Bolt for reaming hole with hex head	M12×40	28
15	ZP0206040027	YZS2-81-01004	Upper slider	t=30	2
16	ZP0206030066	YZS2-81-01005	Slider spacer	t=2	4
17	ZP0206040028	YZS2-81-01006	Outrigger cylinder pin	Round steel	6
18	ZP0207010013	YZS2-18-04000	Steering assembly	Assembly	1
19	ZP0207020015	YZS2-18-03100	Sprocket shroud	Assembly weldment	2
20	30302010013	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M30	1
21	ZP0206030067	YZS2-81-01007	Rear block plate	t=3	1
22	40303000024	40303000024	Illumination lamp	wk-115	3

S/N	Material Code	Code	Name	Specifications	Quantity
23	ZP0206030068	YZS2-81-01008	Headlamp frame	t=6	2
24	ZP0206040015	360MINI-81-02013	Second section arm front roller bearing spacer		2
25	20903000013	20903000013	Single pipe clamp	TLPG3-112	2
26	30601010005	GB/T893-2017	Elastic retaining ring for hole type A	52	4
27	30512000003	GB/T96.2-2002	Large washer Class C	30×6	2
28	30502010007	GB/T97.1-2002	Flat washer Class A	12×2.5	6
29	30302010006	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M12	6
30	30101030016	GB/T5783-2000	Hex head bolt full thread	M12×40	6
31	30514010011	GB/T95-2002	Flat washer Class C	20×3	12
32	30502010009	GB/T97.1-2002	Flat washer Class A	16×3	8
33	30302010008	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M16	8
34	30502010008	GB/T97.1-2002	Flat washer Class A	14×2.5	4
35	30301010008	GB/T6170-2000	Type 1 hex nut	M14	8
36	30514010005	GB/T95-2002	Flat washer Class C	8×1.6	16
37	30501010004	GB/T93-1987	Standard elastic washer	8×2.1	16
38	30101010025	GB/T5783-2000	Hex head bolt full thread	M8×25	4
39	30301010005	GB/T6170-2000	Type 1 hex nut	M8	4
40	30101010028	GB/T5783-2000	Hex head bolt full thread	M8×40	4
41	30101010024	GB/T5783-2000	Hex head bolt full thread	M8×20	8
42	30901010002	JBT-7940.1	Straight-through pressure filling cup	M8×1	2
43	21001080011	21001080011	Metric thread seal column end with rubber gasket	1CM-22-18WD	2
44	21001150011	21001150011	90° elbow adapter for male to female thread to compression fitting	2C9-22W	1
45	21001070044	ISO6149	90° elbow metric male thread adjustable column end	1CH9-18-16OG	4
46	30502010005	GB/T97.1-2002	Flat washer Class A	8×1.6	4

S/N	Material Code	Code	Name	Specifications	Quantity
47	ZP0206030139	YZS2-81-01009	Tripod handheld rod bracket	t=4	2
48	30502010006	GB/T97.1-2002	Flat washer Class A	10×2	4
49	30501010005	GB/T93-1987	Standard elastic washer	10×2.6	4
50	30101010039	GB/T5783-2000	Hex head bolt full thread	M10×16	4



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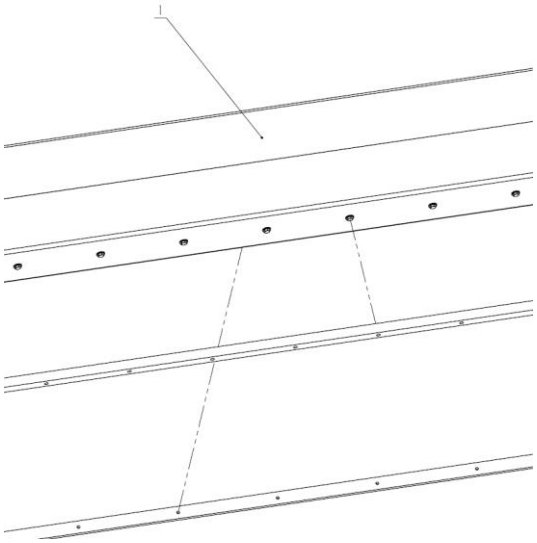

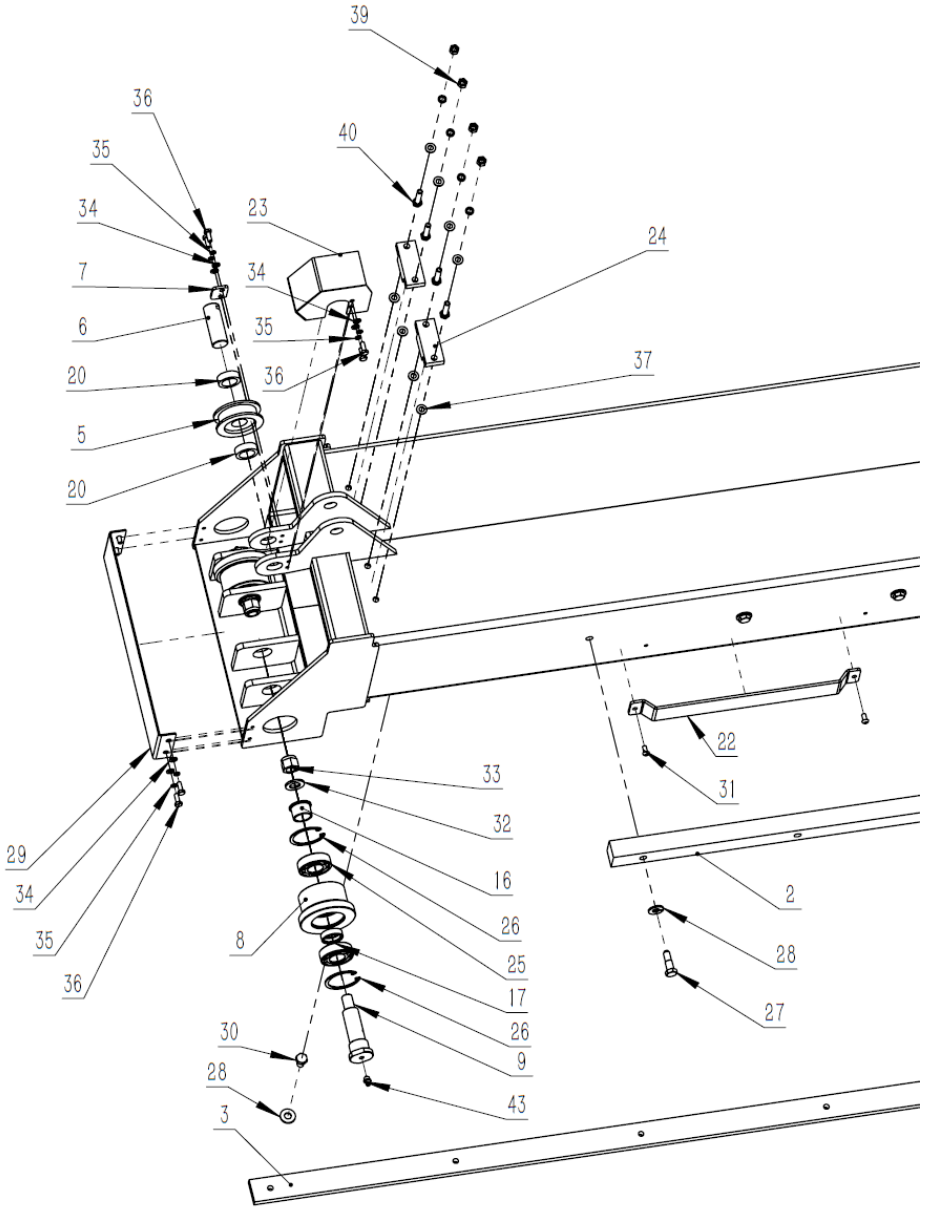
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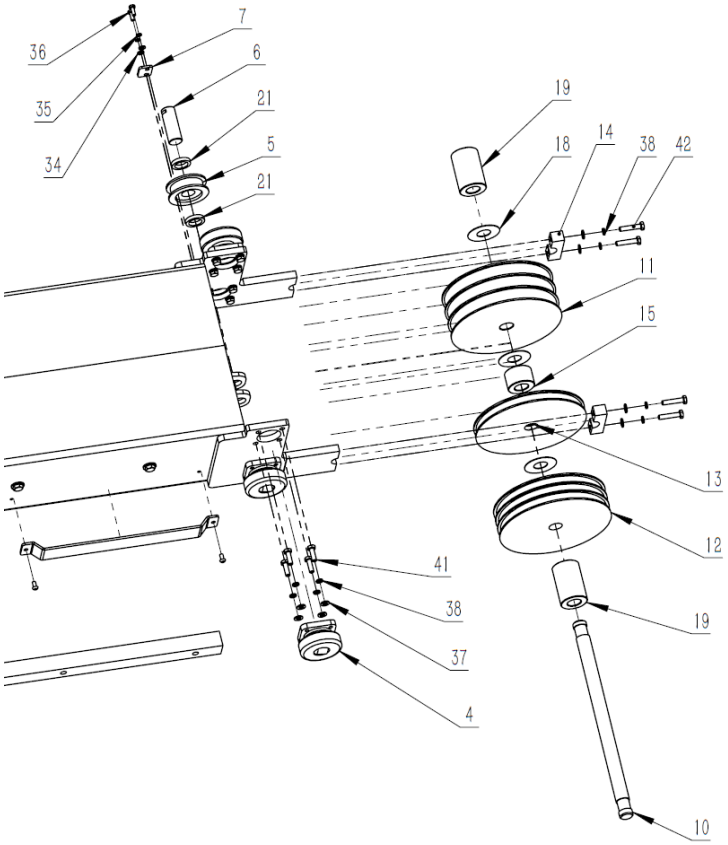
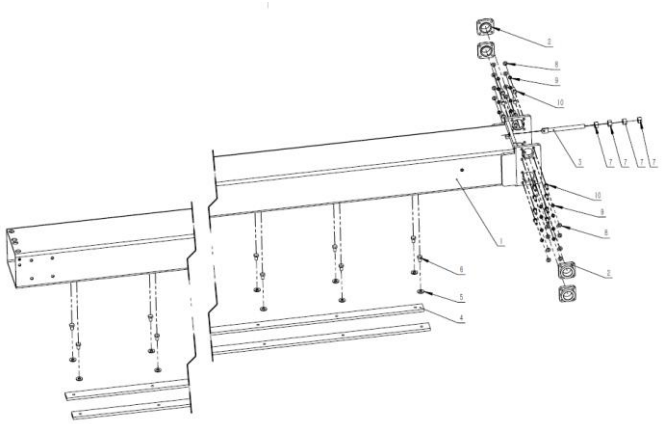


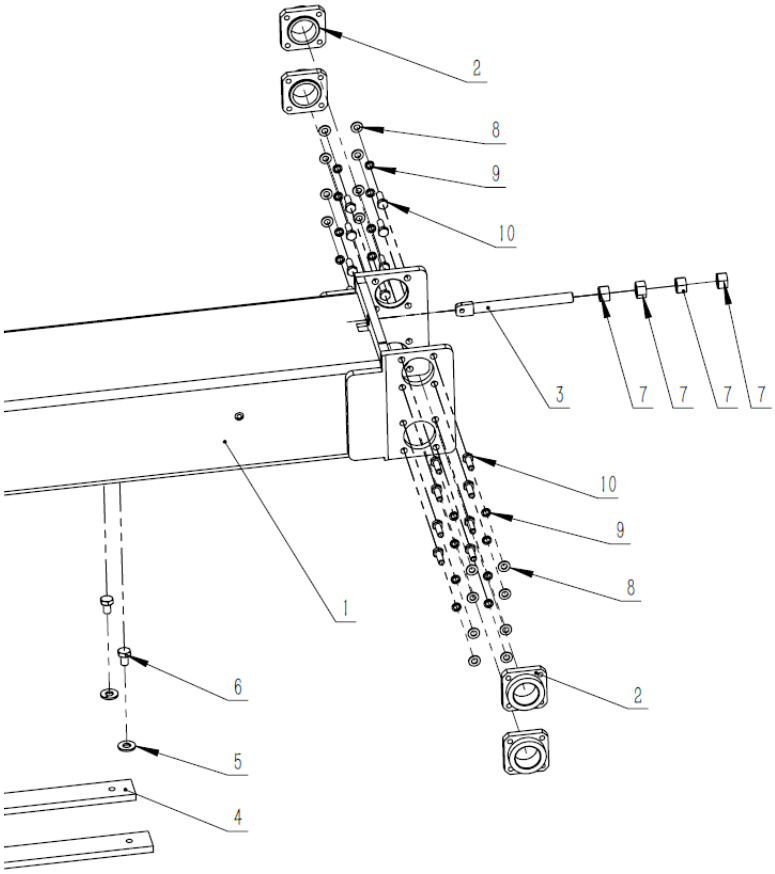
S/N	Material Code	Code	Name	Specifications	Quantity
1	ZP0206020015	YZS2-81-02100	Second section telescopic arm welding	Assembly weldment	1
2	ZP0206040021	YZS2-81-02001	Track		2
3	ZP0206040022	YZS2-81-02002	Bottom rail		2
4	ZP0206020016	YZS2-81-02200	Second section arm rear roller	Assembly weldment	4
5	20505000001	20505000001	Sprocket	780205K	2
6	ZP0206040029	YZS2-81-02003	Sprocket pin shaft	Round steel	2
7	ZP0206030034	360MINI-81-02002	Sprocket pin clamping plate	t=4	2
8	ZP0206040030	YZS2-81-02004	Second section arm front roller	Round steel	2
9	ZP0206040009	360MINI-81-02004	Second section arm front roller pin shaft		2
10	ZP0206040031	YZS2-81-02005	Nylon wheel pin shaft	Round steel	1

S/N	Material Code	Code	Name	Specifications	Quantity
11	ZP0206040032	YZS2-81-02006	Right nylon wheel	Nylon column	1
12	ZP0206040033	YZS2-81-02007	Left nylon wheel	Nylon column	1
13	ZP0206040034	YZS2-81-02008	Cable nylon wheel	Nylon column	1
14	ZP0206030035	360MINI-81-02007	Nylon wheel fixed bearing bush	t=20	2
15	ZP0206040035	YZS2-81-02009	Spacer		1
16	ZP0206040014	360MINI-81-02012	Second section arm front roller backing ring		2
17	ZP0206040015	360MINI-81-02013	Second section arm front roller bearing spacer		2
18	ZP0206030107	YZS2-81-02010	Adjustment pad	t=1	3
19	ZP0206040036	YZS2-81-02011	Left septal sleeve	Nylon column	2
20	ZP0206040037	YZS2-81-02012	Front sprocket retaining ring	Round tube 35x5	2
21	ZP0206040038	YZS2-81-02013	Rear sprocket retaining ring	Round tube 35x5	2
22	ZP0206030036	360MINI-81-02010	Telescopic arm limit plate	t=4	2
23	ZP0206020017	YZS2-81-02300	Sprocket cover	Assembly weldment	1
24	ZP0206040027	YZS2-81-01004	Upper slider	t=30	2
25	20802000002	GB/T283-94	Cylindrical roller bearing	NUP205E	4
26	30601010005	GB/T893-2017	Elastic retaining ring for hole type A	52	4
27	30106030010	GB27-88	Bolt for reaming hole with hex head	M10×35	26
28	30507000008	NFE-25511	French loosening washer	M10	48
29	ZP0206030108	YZS2-81-02015	Two-section arm shield	t=2	1
30	30101010039	GB/T5783-2000	Hex head bolt full thread	M10×16	22
31	30104010004	GB/T70.2-2000	Hex socket flat round	M6×12	4

S/N	Material Code	Code	Name	Specifications	Quantity
			head screw		
32	30502010009	GB/T97.1-2002	Flat washer Class A	16×3	2
33	30302010008	GB/T889.1-2000	Type 1 non-metallic insert hex lock nut	M16	2
34	30502010004	GB/T97.1-2002	Flat washer Class A	6×1.6	10
35	30501010003	GB/T93-1987	Standard elastic washer	6×1.6	10
36	30101010008	GB/T5783-2000	Hex head bolt full thread	M6×16	10
37	30514010005	GB/T95-2002	Flat washer Class C	8×1.6	28
38	30501010004	GB/T93-1987	Standard elastic washer	8×2.1	24
39	30301010005	GB/T6170-2000	Type 1 hex nut	M8	4
40	30101010027	GB/T5783-2000	Hex head bolt full thread	M8×35	4
41	30101030003	GB/T5783-2000	Hex head bolt full thread	M8×25	16
42	30101010028	GB/T5783-2000	Hex head bolt full thread	M8×40	4
43	30901010002	JBT-7940.1	Straight-through pressure filling cup	M8×1	2



The following is a partial enlarged view:



S/N	Material Code	Code	Name	Specifications	Quantity
1	ZP0206020018	YZS2-81-03100	Third section telescopic arm welding	Assembly weldment	1
2	ZP0206020019	YZS2-81-03200	Third section arm rear roller	Assembly weldment	4
3	ZP0206040026	YZS2-81-01003	Chain tie rod	Round steel	1
4	ZP0206040022	YZS2-81-02002	Bottom rail		2
5	30507000008	NFE-25511	French loosening washer	M10	22
6	30101010039	GB/T5783-2000	Hex head bolt full thread	M10×16	22
7	30301010008	GB/T6170-2000	Type 1 hex nut	M14	4
8	30514010005	GB/T95-2002	Flat washer Class C	8×1.6	16
9	30501010004	GB/T93-1987	Standard elastic washer	8×2.1	16
10	30101030003	GB/T5783-2000	Hex head bolt full thread	M8×25	16