

Model: SMLSS100X

PADDOCK MINI LOADER

MANUAL

WARNINGS

- Read this manual in its entirety before use.
 - Dress appropriately with substantial footwear, hard hat, gloves and hearing protection.
 - Exercise extreme caution when operating on slopes, inclines or wet conditions.
 - Always park machine on a flat surface and chock wheels when not in use.
 - Be careful when operating around other people. Do not use to transport people or animals.
 - Ensure all safety guards are in place.
 - Isolate electrics and remove key before performing any maintenance activities.
 - Handle fuel with caution and keep away from sources of ignition.
 - Use only recommended lubricants and fuels.
 - No not smoke whilst near petrol.
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- DO NOT: Refuel your engine whilst hot.
 - DO NOT: Run the engine in confined areas or spaces.
 - DO NOT: Pressure wash.
 - Caution: The engine exhaust will become very hot.
 - Operation should be performed by an adult ONLY.

This manual does not cover activities such as Job Safety Analysis, Dig Planning, Risk Assessments. Users are expected to be trained and knowledgeable on such activities before purchasing a loader. This manual will not train you in specialised activities and excavations, therefore professional training and advice should be sort before using this loader.

Dial before you Dig

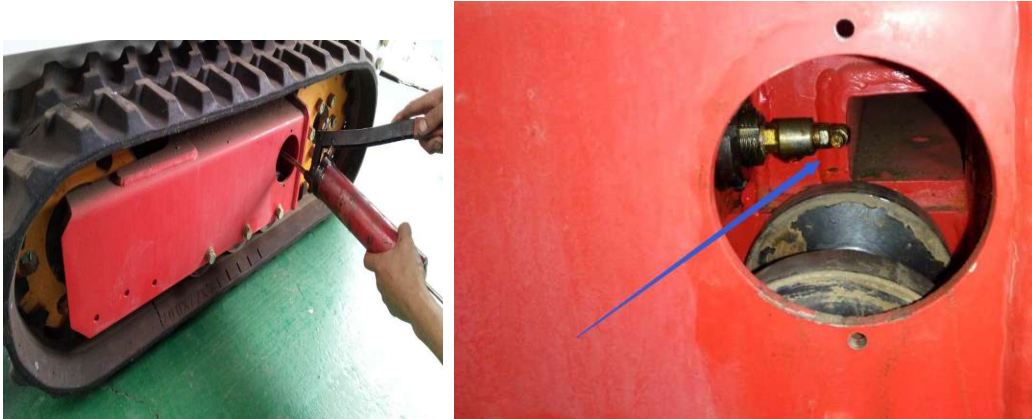
Ph. 1100

www.1100.com.au

GETTING STARTED

- 1) Review the engine manufactures manual in full before first use. This manual does not include any instructions relating to the mini loaders engine.
- 2) Ensure all grease points on the machine have been greased.
Note the importance of this step. Get to know your loader. Spend the time to identify all grease nipples, your machine will have in excess of 20 points requiring grease. Daily greasing is part of normal operation and will ensure your machine operates as intended.

For the tracked loader, it will be supplied with the correct track tension. Please observe this as too much or too little tension can cause the machine to loose drive. Correct tension is when you can stand on the track and feel the metal plate beneath. This corresponds to ~20mm of track deflection. Track tension will slowly be lost with use; a small amount of grease may need to be added daily to maintain the required tension on the belts.



- 3) Fill the tank with unleaded petrol.



- 4) Check Engine Oil Level (ensure machine is on level ground)



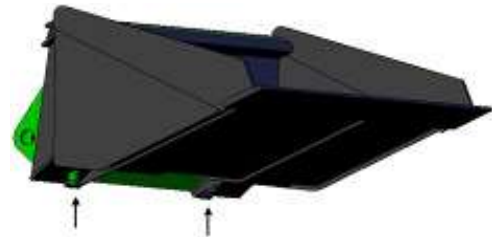
Oil level should be between 1 and 2, if below 2, add synthetic 5W30 oil; if above 1, drain some oil. Check the machine when parked on level ground and when the engine has been stopped for more than 15 minutes.

- 5) Check wheel nuts for tightness.



- 6) Check the air pressure and condition of the tire. The tire should be at 400kPa (58psi).

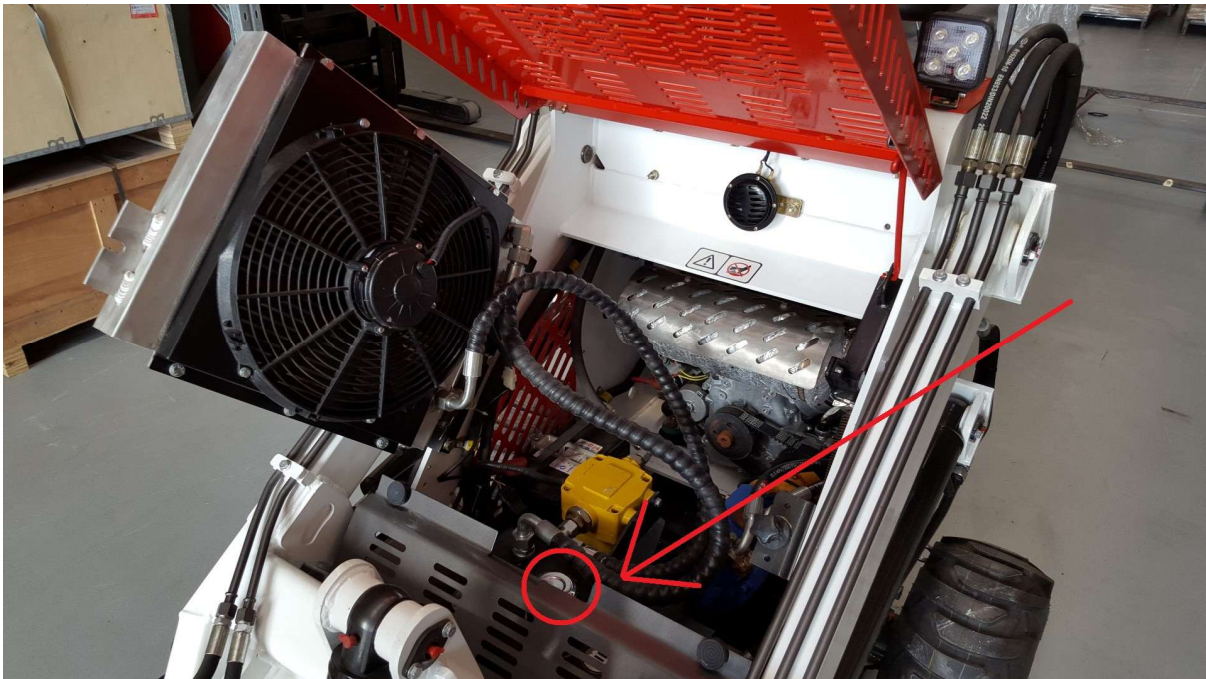
- 7) Check any attachments such as a 4 in 1 bucket are correctly attached. The coupler and latching pins should be fully engaged.



- 8) Check and replace the worn, broken, missing, loose parts before starting the engine.

HYDRAULICS

The machine is supplied with 46 weight hydraulic oil. The machine operates with a normal hydraulic pressure of 17Mpa (maximum pressure 18Mpa). The pump flows 60L/min hydraulic oil under normal operation. The hydraulic oil level can be checked on the Hydraulic Oil Level gauge on the dash. With the machine cool, the hydraulic oil level should read approximately in the middle of the gauge. Operating at this level ensures the tank has capacity for oil expansion as the oil heats.



Hydraulic oil can be added to the tank located at the front of the loader. To access, the front cover must be opened and the oil cooler is to be hinged back out of the way.

The Hydraulic Oil Temperature Gauge shows the hydraulic oil temperature. The loader includes a hydraulic oil cooler and electric fan. The oil cooler fan will automatically activate when the temperature reaches ~55C. The fan can also be manually activated using the A/C switch. Note: The fan should not be run unless oil temperatures exceed ~55C and under most situations operating in Automatic mode will suffice.



CONTROL SYSTEM

The machine includes an electrical isolator to prevent battery discharge when not in use.



Throttle is controlled by rotating the black knob. Turn clockwise to lower the engine speed, turn anti-clockwise to increase speed. Pressing the Red center button will reduce the throttle to minimum rpm.



Turn key one click clockwise to energise gauges. The indicator lamp will display and the hour meter will start recording.

Turn key two clicks clockwise to start engine.

If the engine doesn't start, refer to the engine manufactures user manual.

Note: the engine has a choke lever and this should be activated to facilitate ease of starting a cold engine.





The machine hour meter allows users to monitor machine run time for servicing.



The Fuel Gauge indicates the amount of fuel in fuel tank, "1" denotes full, "0" denotes empty. Avoid running your machine to empty as this can introduce air into the fuel system and make starting and priming difficult.



The Ammeter indicates the engine output amperage.



Head Lights are activated by the labelled button



The oil cooler fan should only be activated when the hydraulic oil temperature reaches 55C

The machine includes a horn.



The machine includes a fuse box and this should be checked if any gauges are not functioning correctly.

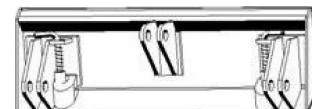
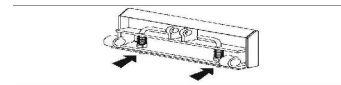
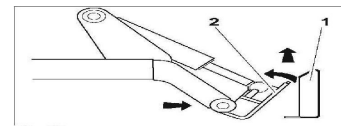
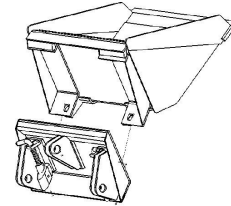


ATTACHMENTS

IMPORTANT: Use only Paddock approved attachments. Attachments can change the stability and operating characteristics of the unit.

IMPORTANT: Before connecting attachment to unit, ensure that mount and receiver plates are free of dirt and debris.

1. Ensure that lock pin handles (shown) on mount plate are turned away from center of attachment.
2. Start engine.
3. Tilt mount forward.
4. Position mounts plate in the upper lip of the receiver plate on attachment.
5. Raise lift arms while tilting back mount plate. **IMPORTANT:** Attachment should be raised enough to clear the ground . Mount plate should be tilted back fully.
6. Ensure that all controls are in neutral position.
7. Turn ignition switch off and remove key.
8. Rotate lock pin handles toward center of mount plate to secure attachment to lift plate



NOTICE: To ensure proper connection, verify that bottoms of lock pins are visible under attachment receiver plate.

HYDRAULIC HOSES

If attachment requires hydraulic power for working, see the following;

NOTICE:

- Escaping pressurised fluid can cause injury or pierce skin and poison.
- Always wear protective clothing including gloves and eye protection when connecting or disconnecting hydraulic hoses.
- Before disconnecting a hydraulic line, turn engine off and operate all controls to relieve pressure. Lower, block, or support any raised component with a hoist. Cover connection with heavy cloth and loosen connector nut slightly to relieve residual pressure. Catch all fluid in a container.
- Before using system, check that all connections are tight and all lines are undamaged.

- Fluid leaks are hard to detect. Use a piece of cardboard or wood, rather than hands, to search for leaks.
- If you are injured, seek immediate medical attention from a doctor familiar with this type of injury.

Hot parts may cause burns, Do not touch until cool. Notice: Hydraulic couplers, hoses and fluid may be hot. Wear gloves when connecting and disconnecting hydraulic hoses and wait until unit has cooled before touching hydraulic components.



1. Cycle attachment drive control to relieve residual pressure at hydraulic couplers.
2. Ensure that all controls are in neutral position.
3. Remove dirt and debris from hydraulic couplers.
4. Connect male coupler on attachment to female coupler on unit.
5. Connect female coupler on attachment to male coupler on unit.
6. Connect female coupler on case drain hose to case drain male coupler on unit, if attachment requires it.
7. Ensure that connections are secure by pulling on hoses.

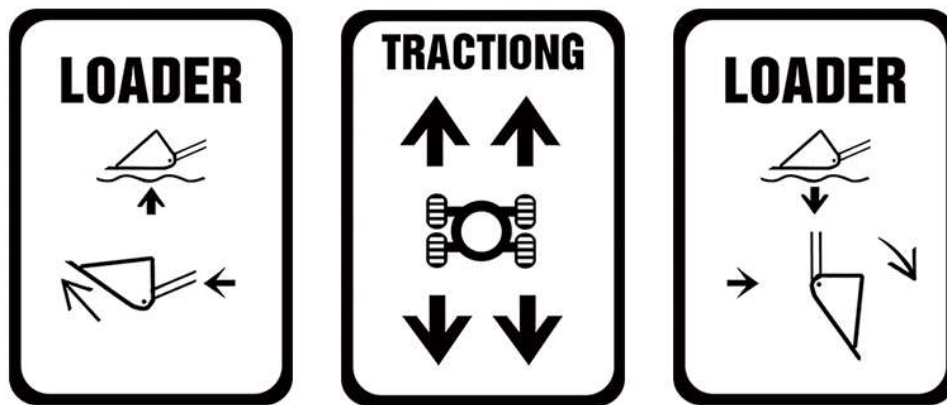
OPERATION

The loader uses the onboard hydraulics to perform all movement operations. Ensure when learning controls you are in an open clear area and all bystanders are a safe distance.

WARNING – Sudden movements of the controls can have dangerous consequences. Learn to control the loader using small movements of your thumbs whilst holding onto the grab bars.

Sudden movements with the bucket raised above 1.2m can cause the machine to tip over. Consider your weight center of gravity when moving loads and always travel slowly.

Left Lever Control



↑Forward : Move the lever forward, the left side tires or tracks will move forward, the machine will turn right.

↓Backward : Move the lever backward, the left side tires or tracks will move backward, the machine will turn left.

→Right side lever movement : .Machine will curl the bucket towards operator

←Left side lever movement : Machine will dump the bucket

↖ 45-degree to the left front: Left side tires or tracks will move forward, the machine will turn right whilst dumping the bucket

↙ 45-degree to the left rear: Left side tires or tracks will move backward, the machine will turn left, whilst dumping the bucket

↗ 45-degree to the right front: Left side tires or tracks will move forward, the machine will turn right, whilst curling the bucket towards the operator.

↘ 45-degree to the right rear: Left side tires or tracks will move backward, the machine will turn left, whilst the bucket curls towards the operator.

Center Handle



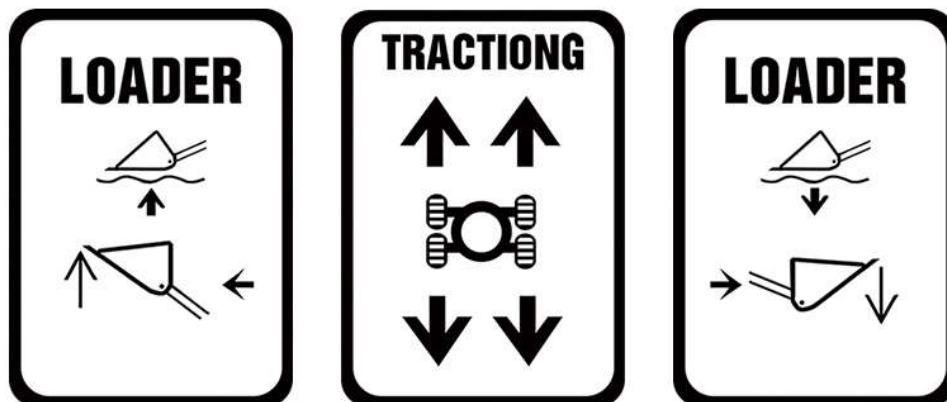
↑Forward : Push the lever forward, the attachment will turn clockwise or the attachment cylinder will extend.

↓Backward : Pull the lever backward, the attachment will turn counter-clockwise or the attachment cylinder will contract.

Middle : Attachment handle is on idle position, hydraulic pressure is relieved.

Warning: Do not attach or remove the hydraulic attachments unless the attachment handle is on idle position and the hydraulic pressure is relieved.

Right Lever Control



↑Forward : Move the lever forward, the right side tires or tracks will move forward, the machine will turn left.

↓Backward : Move the lever backward, the right side tires or tracks will move backward, the machine will turn right.

→Right side of the machine : Lowers the lift arm.

← Left side of the machine : Raises the lift arm.

↙ 45-degree to the left front: Right side tires or tracks will move forward, the machine will turn left and raise the lift arm.

↘ 45-degree to the left rear: Right side tires or tracks will move backward, the machine will turn right and raise the lift arm.

↗ 45-degree to the right front: Right side tires or tracks will move forward, the machine will turn left and lower the lift arm.

↘ 45-degree to the right rear: Right side tires or tracks will move backward, the machine will turn right whilst lowering the lift arm.

TROUBLESHOOTING

Troubleshooting hydraulic system problems

		Fault		Failure remove	
●	Machine won't travel	●		1	Check
●	Machine only travels forward or backward	●		2	Adjust
●	Machine travels slowly with loud noise	●		3	Change
●	No hydraulic power output	●		4	Clean
●	Bucket cylinder does not work	●		5	Add
●	Lift cylinder does not work	●		6	Reduce
●	Machine works slowly	●			
●	Foam in hydraulic system	●			
●	Hydraulic oil temperature is too high	●			
●	Hydraulic oil leak	●			
●	Failure reason and remove	●			
●	Chain loose or foreign material is stopping operation	●		1/2/3	Transmission system
●	Output shaft broken	●		1/3	
●	Big chain wheel broken	●		1/3	
●	Input shaft broken	●		1/3	
●	Bearing broken	●		1/3	
●	Hydraulic oil hose broken or leak	●		1/2/3	
●	Hydraulic joint leak	●		1/2	Hydraulic oil hose
●	Quickly coupler broken or leak	●		1/3	
●	Radiator broken or fan is not working	●		1/2	
●	Clamp loose, air comes into oil input hose	●		1/2	

Machine won't travel		Fault		Failure remove	1 2 3 4 5 6
•	Machine only travels forward or backward				
•	Machine travels slowly with loud noise			Adjust	2
•	No hydraulic power output			Change	3
•	Bucket cylinder does not work			Clean	4
•	Lift cylinder does not work			Add	5
•	Machine works slowly			Reduce	6
•	Foam in hydraulic system				
•	Hydraulic oil temperature is too high				
•	Hydraulic oil leak				
•	Failure reason and remove				
•	Engine power is not enough	•		engine	2
•	Belt loose	•			1/2/3
•	Hydraulic oil quantity is low	•			1/5
•	There is air in hydraulic oil	•			1/2
•	Hydraulic oil is dirty	•			1/6
•	Overflow valve is dirty, no pressure output	•			1/4/2
•	Directional control valve broken	•		Control valve	4/2
•	Control Valve core rod loose or off	•			1/2
•	Oil distribution damaged, internal leak	•			1/3
•	Key or shaft of the motor damaged	•		motor	1/3
•	Gear pump internal leak	•			2/3
•	Gear pump oil intake filter blocked	•			1/2
•	Bolt of gear pump bracket loose	•		Gear pump	1/2
•	Input shaft of gear pump damaged	•			1/3

Fault		Failure remove
Machine won't travel		1 Check 2 Adjust 3 Change 4 Clean 5 Add 6 Reduce
Machine only travels forward or backward		
Machine travels slowly with loud noise		
No hydraulic power output		
Bucket cylinder does not work		
Lift cylinder does not work		
Machine works slowly		cylinder
Foam in hydraulic system		
Hydraulic oil temperature is too high		
Hydraulic oil leak		1/3
Failure reason and remove		1/3
Arm cylinder internal leak, or piston scratched	•	1/3
Bucket cylinder internal leak, or piston scratched	•	
Cylinder pin shaft or joint bearing broken	•	

5.3 Failure for electric system

Fault		Failure remove
Lamp does not work		1 Check 2 Adjust 3 Change 4 Clean 5 Add
All lamps do not work		
Head light does not work		
Starter motor does not work (isolator switch checked).		
Starter motor turns engine slowly		
Radiator fan indicator does not work after turning on the fan		
Radiator fan does not work		
Electric source indicator does not work		

Horn does not work										
	Urgently stop button does not									
	Failure reason and remove									
•	Generator rated power not enough.									1/2/3
•	Wiring terminal loose or bad connection.									1/2
•	Faulty lamp									1/3
	Fuse open circuit.									1/3
	Electric wire open circuit or short circuit.									1/3
	Bad contact of switch									1/2/3
	The bulb was bad contact or burned out.									1/3
	Electric wire open circuit.									1/2
	The relay of head light burned out.									1/2
	Starter motor fault.									1/2
	Relay of starter motor fault									3
	Start switch at fault.									1/2/3
	Battery needs replacement.									1/5
	Fan at fault									1/2/3
	Horn button at fault									1/2/3
	Horn at fault									1/2/3
	Emergency push button at fault									1/2/3

All Paddock equipment must meet the minimum maintenance requirements as set out in this manual to maintain the supplier's warranty. Paddock mini loaders are built to strict quality control requirements meaning if the reasonable maintenance practices set out in this manual are followed, users are highly unlikely to need warranty assistance. Sometimes things do go wrong however and if an item does require repair or replacement under warranty, please contact your place of purchase to discuss.

Engine

Your engine is covered under the engine manufactures warranty. Please refer to the engine manufactures specific requirements set out in the engine manufactures manual supplied with your mini loader. The below maintenance requirements will make no mention to engine specific maintenance to avoid possible conflicts.

Mini Loader (excluding engine) Maintenance Philosophy

A maintenance log book is included below which sets out the minimum requirements for servicing and maintaining your mini loader.

Paddock understands it is unreasonable for owners to be able to visit certified service centers when their machine may operate in remote parts of Australia hundreds of kilometers from registered agents. Therefore Paddock takes a new age approach to who qualifies as a servicing agent. Essentially, owners can have their loader serviced by any suitably qualified person operating a registered business in Australia without voiding their warranty. Businesses should be asked if they feel they are qualified to perform the works set out in the machines logbook and if they have prior experience maintaining similar type equipment.

If owners are unsure if a specific business is suitably qualified to perform the log book servicing, they should seek guidance and approval from their place of purchase. The following are considered examples of suitably qualified service agents;

- Maintenance and repair businesses who work with machinery and hydraulics, tractor and mower repair businesses may qualify.
- Businesses dealing in hydraulic system maintenance and repairs.
- Large machinery maintenance and repair businesses.

Daily Check Sheet – Based on 10hr day

Task	Notes
Guarding	Ensure machine guarding remains in place during all periods of operation.
Battery and Wiring	Visually inspect to ensure wires are not chaffing and in good condition. Ensure battery visually presents in good condition.
Bolts and Nuts	Ensure bolts and nuts are tight. As machines spends extended periods at varying RPM vibration can cause bolts and nuts to come loose and regular checks should be performed.
Grease	Grease nipples are provided on high wear joints. 2-4 pumps of grease is normally adequate to ensure sound lubrication and this should be performed regularly to minimize opportunities for excess wear. Ensure nipple is clean prior to pumping grease.
Drive Belt	Drive belt should be visually inspected daily for signs of wear and foreign matter build up.
Machine Body	Visual inspection of all external machine components to identify possible damage which may escalate to a more serious issue if the machine is continued to be used.
Chains	Chains should be checked, cleaned and greased daily. Dirty chains will increase wear on consumable drivetrain components.
Hydraulic Hoses	Visually inspect for leaks daily. Do not continue to operate a machine with a leaking hydraulic hose.
Hydraulic Oil	Check hydraulic oil level daily.
Hydraulic Oil Cooler	Clean oil cooler with compressed air or fresh water to remove dust and mud which can accumulate.
Hydraulic Rams	Check for dents, scores, marks etc. which may damage ram seals.
Tracks	Check track tension, add grease as necessary. Tracks should have a deflection of ~20mm when correctly tensioned.

Service Logbook

50hr Service

Minimum consumables: 20L Hydraulic oil 46 weight or equivalent, Hydraulic system oil filter, Hydraulic system oil return filter, Grease, Hand tools. Note: Engine to be serviced as per manufactures service instructions.

Task	Action	Notes
Guarding	Check machine guarding is present and in good condition.	
Battery and Wiring	Inspect wiring for signs of damage or chaffing. Check battery for signs of leaking acid. Clean terminals. Check maintenance free battery window is still green. Test battery voltage.	
Bolts and Nuts	A thorough check of all bolts and nuts on the machine or tightness is required.	
Grease	All grease nipples on the machine should be flushed with fresh grease.	
Drive Belt	Drive belt should be checked for tension and replaced if showing signs of cracks, bad wear or damage. A maximum of 5mm deflection on the drive belt should be present.	
Machine Body	Clean machine and inspect for external damage.	
Chains and sprockets	Clean and grease chains and sprockets. Check chain for correct tension, adjust as necessary. The chain deflection should be between 6-12mm for correct tension.	
Hydraulic Hoses and lines.	Visual inspection of all hydraulic hoses and lines. Any leaks to be resolved.	
Hydraulic Oil	Replace hydraulic oil.	
Hydraulic Oil Filters	Replace hydraulic oil filter and hydraulic oil return filter.	
Hydraulic Oil Cooler	Clean with compressed air or low pressure fresh water.	
Hydraulic Rams	Inspect for signs of damage to rams.	
Tires / Tracks	Inspect for wear, replace as necessary. Tracks should have a deflection of ~20mm when correctly tensioned.	

Service Completed by;

Date:

Run Hours;

Company stamp here

250hr Service

Minimum consumables: 20L Hydraulic oil 46 weight or equivalent, Hydraulic system oil filter, Hydraulic system oil return filter, Grease, Hand tools. Note: Engine to be serviced as per manufactures service instructions.

Task	Action	Notes
Guarding	Check machine guarding is present and in good condition.	
Battery and Wiring	Inspect wiring for signs of damage or chaffing. Check battery for signs of leaking acid. Clean terminals. Check maintenance free battery window is still green. Test battery voltage.	
Bolts and Nuts	A thorough check of all bolts and nuts on the machine or tightness is required.	
Grease	All grease nipples on the machine should be flushed with fresh grease.	
Drive Belt	Drive belt should be checked for tension and replaced if showing signs of cracks, bad wear or damage. A maximum of 5mm deflection on the drive belt should be present.	
Machine Body	Clean machine and inspect for external damage.	
Chains and sprockets	Clean and grease chains and sprockets. Check chain for correct tension, adjust as necessary. The chain deflection should be between 6-12mm for correct tension.	
Hydraulic Hoses and lines.	Visual inspection of all hydraulic hoses and lines. Any leaks to be resolved.	
Hydraulic Oil	Replace hydraulic oil.	
Hydraulic Oil Filters	Replace hydraulic oil filter and hydraulic oil return filter.	
Hydraulic Oil Cooler	Clean with compressed air or low pressure fresh water.	
Hydraulic Rams	Inspect for signs of damage to rams.	
Tires / Tracks	Inspect for wear, replace as necessary. Tracks should have a deflection of ~20mm when correctly tensioned.	

Service Completed by;**Date:****Run Hours;***Company stamp here*

500hr Service

Minimum consumables: 20L Hydraulic oil 46 weight or equivalent, Hydraulic system oil filter, Hydraulic system oil return filter, Grease, Hand tools. Note: Engine to be serviced as per manufactures service instructions.

Task	Action	Notes
Guarding	Check machine guarding is present and in good condition.	
Battery and Wiring	Inspect wiring for signs of damage or chaffing. Check battery for signs of leaking acid. Clean terminals. Check maintenance free battery window is still green. Test battery voltage.	
Bolts and Nuts	A thorough check of all bolts and nuts on the machine or tightness is required.	
Grease	All grease nipples on the machine should be flushed with fresh grease.	
Drive Belt	Drive belt should be checked for tension and replaced if showing signs of cracks, bad wear or damage. A maximum of 5mm deflection on the drive belt should be present.	
Machine Body	Clean machine and inspect for external damage.	
Chains and sprockets	Clean and grease chains and sprockets. Check chain for correct tension, adjust as necessary. The chain deflection should be between 6-12mm for correct tension.	
Hydraulic Hoses and lines.	Visual inspection of all hydraulic hoses and lines. Any leaks to be resolved.	
Hydraulic Oil	Replace hydraulic oil.	
Hydraulic Oil Filters	Replace hydraulic oil filter and hydraulic oil return filter.	
Hydraulic Oil Cooler	Clean with compressed air or low pressure fresh water.	
Hydraulic Rams	Inspect for signs of damage to rams.	
Tires / Tracks	Inspect for wear, replace as necessary. Tracks should have a deflection of ~20mm when correctly tensioned.	

Service Completed by;**Date:****Run Hours;***Company stamp here*

750hr Service

Minimum consumables: 20L Hydraulic oil 46 weight or equivalent, Hydraulic system oil filter, Hydraulic system oil return filter, Grease, Hand tools. Note: Engine to be serviced as per manufactures service instructions.

Task	Action	Notes
Guarding	Check machine guarding is present and in good condition.	
Battery and Wiring	Inspect wiring for signs of damage or chaffing. Check battery for signs of leaking acid. Clean terminals. Check maintenance free battery window is still green. Test battery voltage.	
Bolts and Nuts	A thorough check of all bolts and nuts on the machine or tightness is required.	
Grease	All grease nipples on the machine should be flushed with fresh grease.	
Drive Belt	Drive belt should be checked for tension and replaced if showing signs of cracks, bad wear or damage. A maximum of 5mm deflection on the drive belt should be present.	
Machine Body	Clean machine and inspect for external damage.	
Chains and sprockets	Clean and grease chains and sprockets. Check chain for correct tension, adjust as necessary. The chain deflection should be between 6-12mm for correct tension.	
Hydraulic Hoses and lines.	Visual inspection of all hydraulic hoses and lines. Any leaks to be resolved.	
Hydraulic Oil	Replace hydraulic oil.	
Hydraulic Oil Filters	Replace hydraulic oil filter and hydraulic oil return filter.	
Hydraulic Oil Cooler	Clean with compressed air or low pressure fresh water.	
Hydraulic Rams	Inspect for signs of damage to rams.	
Tires / Tracks	Inspect for wear, replace as necessary. Tracks should have a deflection of ~20mm when correctly tensioned.	

Service Completed by;

Date:

Run Hours;

Company stamp here

1000hr Service

Minimum consumables: 20L Hydraulic oil 46 weight or equivalent, Hydraulic system oil filter, Hydraulic system oil return filter, Grease, Hand tools. Note: Engine to be serviced as per manufactures service instructions.

Task	Action	Notes
Guarding	Check machine guarding is present and in good condition.	
Battery and Wiring	Inspect wiring for signs of damage or chaffing. Check battery for signs of leaking acid. Clean terminals. Check maintenance free battery window is still green. Test battery voltage.	
Bolts and Nuts	A thorough check of all bolts and nuts on the machine or tightness is required.	
Grease	All grease nipples on the machine should be flushed with fresh grease.	
Drive Belt	Drive belt should be checked for tension and replaced if showing signs of cracks, bad wear or damage. A maximum of 5mm deflection on the drive belt should be present.	
Machine Body	Clean machine and inspect for external damage.	
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Hydraulic Rams	Inspect for signs of damage to rams.	
Tires / Tracks	Inspect for wear, replace as necessary. Tracks should have a deflection of ~20mm when correctly tensioned.	

Service Completed by;

Date:

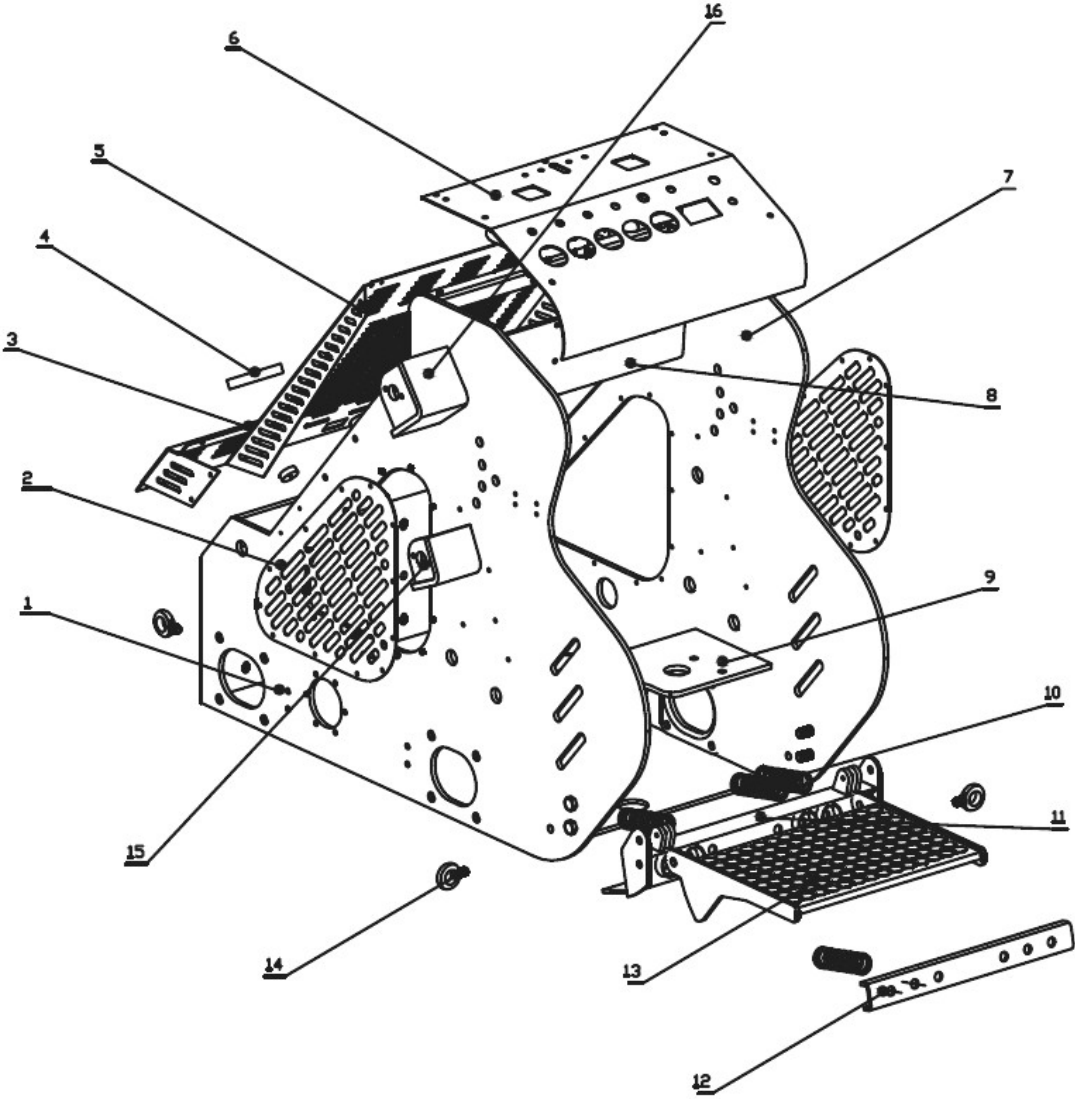
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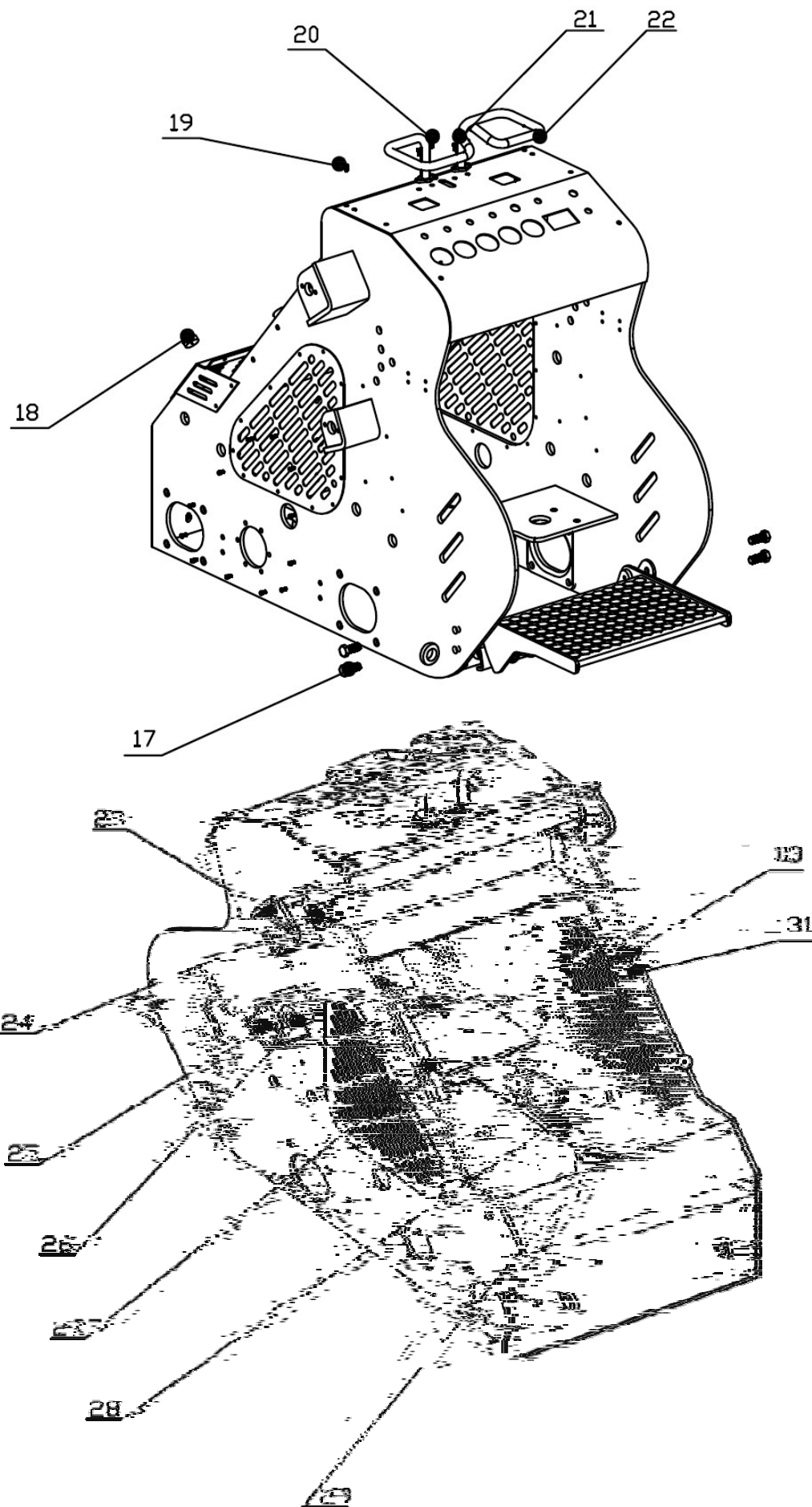
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PARTS

1. Body Assy
2. Transmission Assy
3. Wheel Assy
4. Oil Tank Assy
5. Fuel Tank Assy
6. Radiator Assy
7. Lift Arm Assy
8. Attachment Coupler and Bucket
9. Power System
10. Operation System
11. Electric System
12. Hydraulic System

1. Body Assy

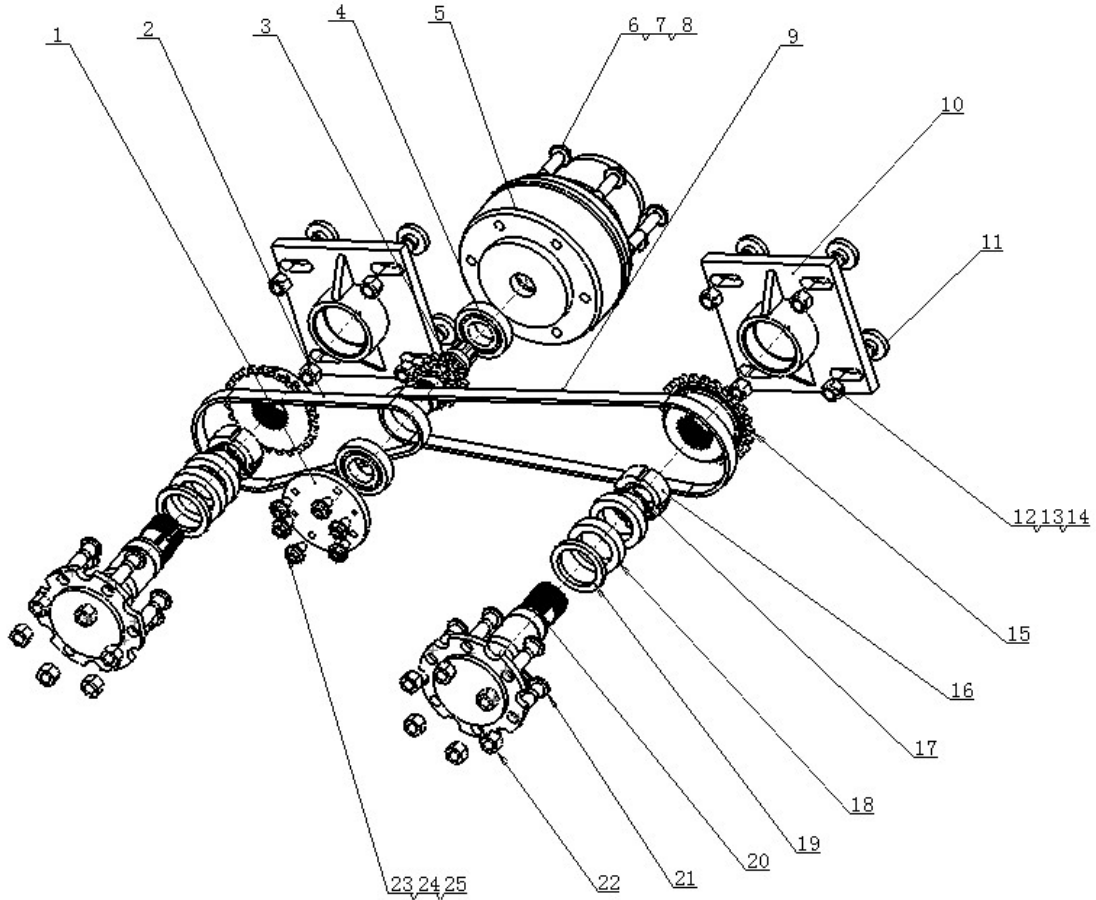




Body Assy

No	Part No	Description	Q'ty	Remark
1/7	SPM323-CJ-3001	Side plate	1	
2	SPM323-02	Side plate cover	2	
3	SPM323-05	Front cover plate	1	
4		Cover lock	1	
5	SPM323-06	Upper cover	1	
6	SPM323-071	Meters board	1	
8	SPM323-CJ-3006	Valve support plate	1	
9	SPM323-CJ-3013	Engine support plate	1	
10		Air Spring	4	
11	SPM323-JT-3600	The pedals	1	
12	SPM323-JT-3609	Pedal cover plate	1	
13	SPM323-JT-3608	Foot plate	1	
14	DIN5480M14	Lift hook	4	
15/25	SPM323-CJ-3017	Cylinder support	2	
16/23	SPM323-CJ-3008	Arm support	2	
17	SPM/T5783-2000	Bolt M16*25	4	
	SPM/93-1987	Spring Washer 16	4	
	SPM/T95-2002	Washer 16	4	
18		Cushioning	2	
19	SPM/T5783-2000	Bolt M6*10	9	
	SPM/93-1987	Spring washer 6	9	
	SPM/T95-2002	Washer 6	9	
20	SPM/T5783-2000	Bolt M6*20	4	
	SPM/93-1987	Spring washer 20	4	
	SPM/T95-2002	Washer 6	4	
21/22	SPM323-073	Left hand fitting	1	
24	SPM323-CJ-3010	Pin shaft sleeve	2	
26	SPM323-CJ-3011	Pin shaft sleeve	2	
27	SPM323-092	Frame support	1	
28	SPM323-CJ-3020	Thread reinforcing plate	4	
29	SPM323-CJ-3015	Motor support	2	
30		Cushioning	1	
31	SPM323-CJ-095	Bracket	1	

2. Transmission Assy

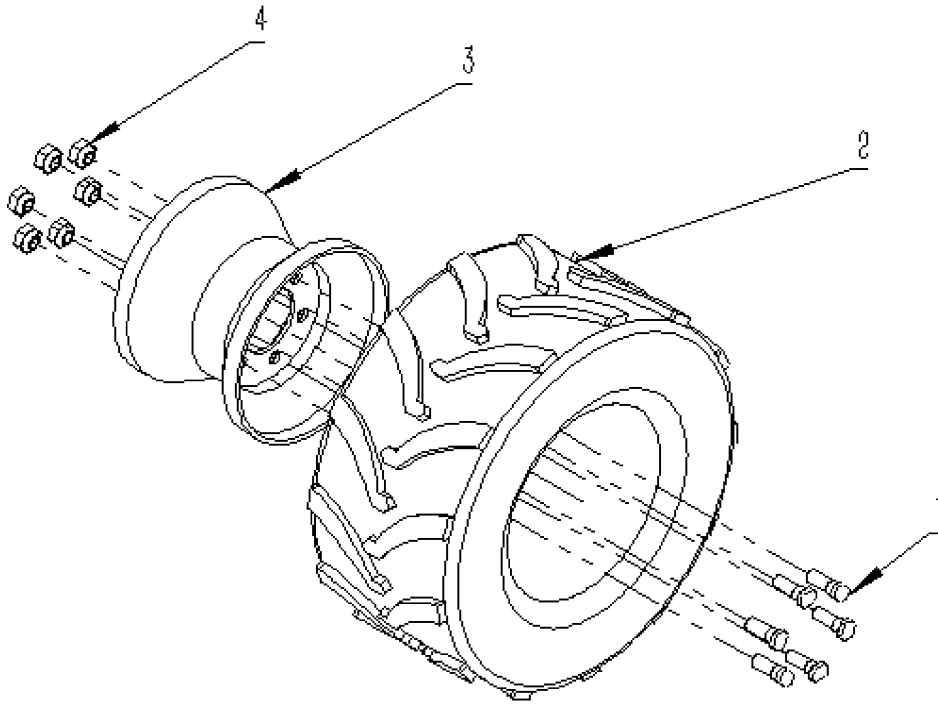


Transmission Assy

No	Part No	Description	Q'ty	Remark
1	SPM323-060006	Bearing support	2	
2	SPM/T1243-97	Chain 12A	2	
3	SPM323-06003	Input shaft	2	
4	SPM/T276-1994	Bearing 62072	4	
5	530230T3831AAAAAA	Motor	2	
6	SPM/T5783-2000	Bolt M12x120	10	
7	SPM/93-1987	Spring washer 12	10	
8	SPM/T95-2002	Washer 12	10	
9	SPM/T1243-97	Chain 12A	2	
10	SPM323-062040	Support bush	4	
11	SPM323-062051	Bolt, support bush	16	

12	SPM/93-1987	Spring washer 16	16	
13	SPM/T95-2002	Washer 16	16	
14	SPM/T6170-2000	Nut M16	16	
15	SPM323-02	Big chain wheel	4	
16	SPM/T810-1988	Nut M45	4	
17	SPM/T858-1988	Thrust Washer 45	4	
18	SPM/T297-1994	Bearing 32910	8	
19	SPM/T13871-90	Oil seal 72x55x8	4	
20	SPM323-03	Output shaft	4	
21	SPM323-060004	Bolt , rim	24	
22	SPM323-060005	Nut, rim	24	
23	SPM/T5783-2000	Bolt M8x25	8	
24	SPM/93-1987	Spring washer 8	8	
25	SPM/T95-2002	Washer 8	8	

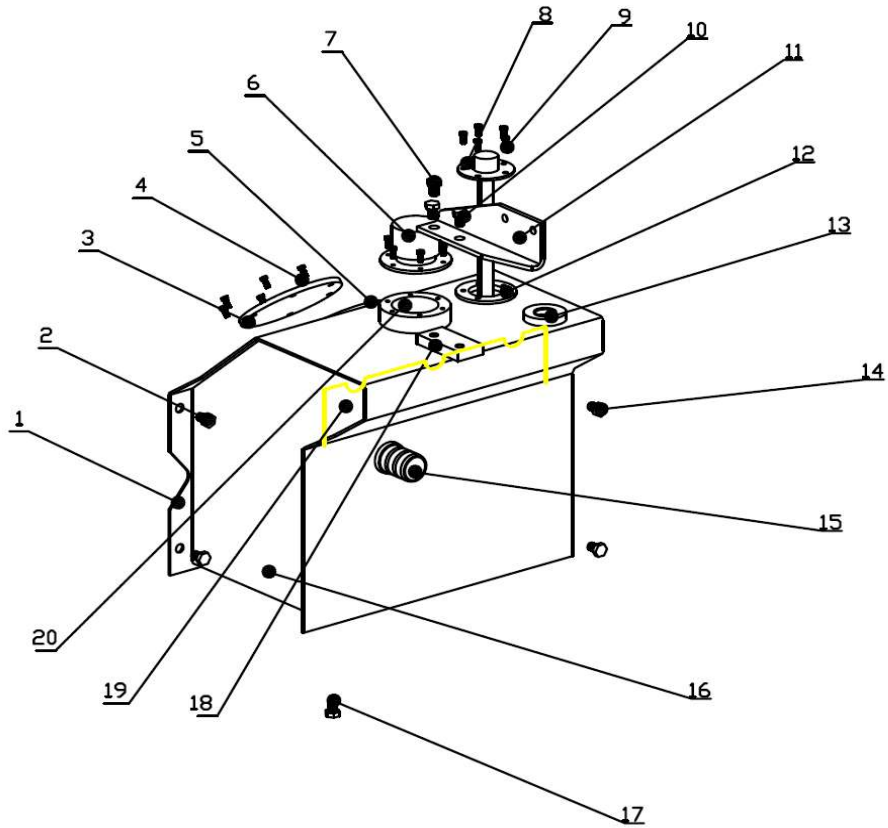
3. Wheel Assy



Wheel Assy

No	Part No	Description	Q'ty	Remark
1	SPM/T5783-2000	Bolt M14x40	24	
2	18*8.5-8	Tyre	4	
3	18*8.5-8	Rim	4	
4	SPM/T95-2002	Nut M14	24	

4. Hydraulic Oil Tank Assy

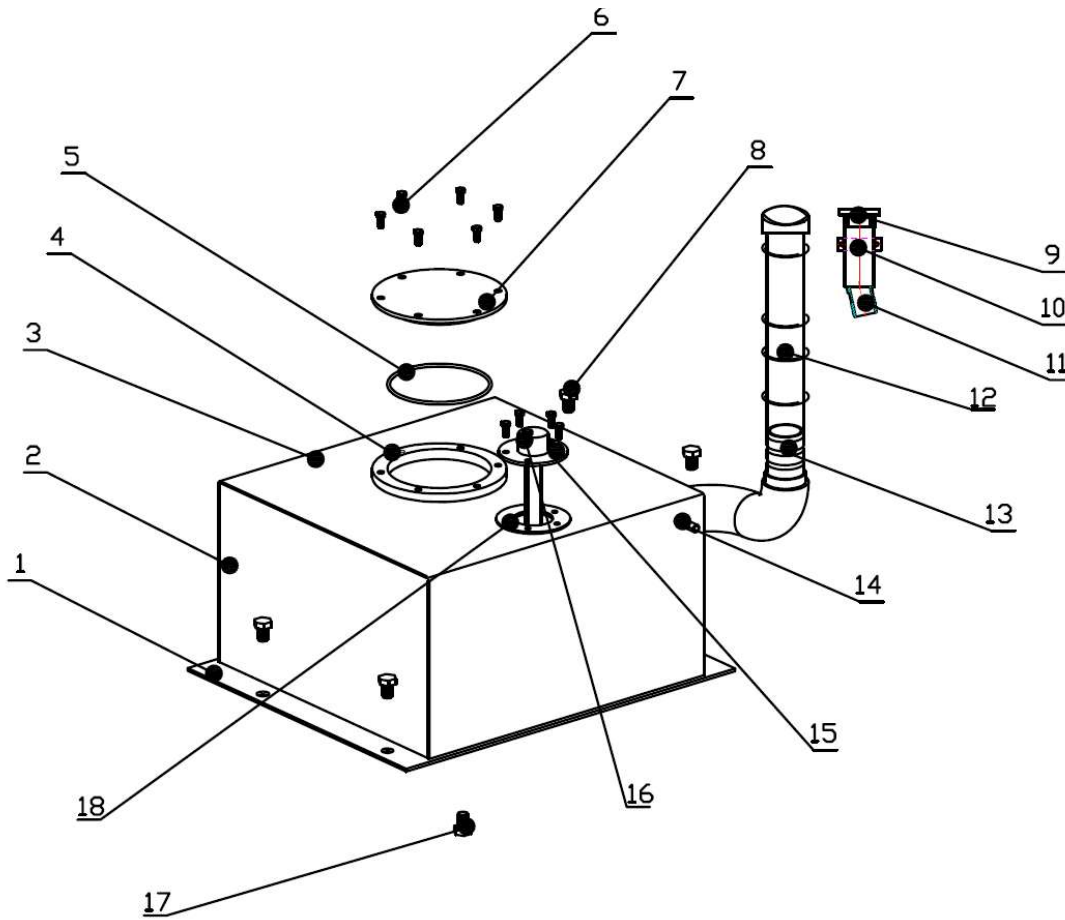


Hydraulic Oil Tank Assy

No	Part No	Description	Q'ty	Remark
1	SPM323-YX-01001	Oil plate	1	
2	SPM/T70.1-2000	Screw M10*35	2	
	SPM/T95-2002	Washer 10	2	
	SPM/T93-1987	Spring Washer 10	2	
3	SPM323-RX-3508	Flange cover	4	
4	SPM/T5783-2000	Bolt M5*10	6	
	SPM/T93-1987	Spring washer 5	6	
5	SPM323-YX-01005	Flange	1	
6		Oil cap & breather	1	
7	SPM/T5783-2000	Bolt M5*10	5	
	SPM/T98-2002	Washer 5	5	
	SPM/T93-1987	Spring Washer 5	5	
8		Oil level sensor	1	
9	SPM/T5783-2000	Bolt M5*10	5	

	SPM/T98-2002	Washer 5	5	
	SPM/T93-1987	Spring Washer 5	5	
10	SPM/T5783-2000	Bolt M10*25	1	
	SPM/T98-2002	Washer 10	1	
	SPM/T93-1987	Spring Washer 10	1	
11	SPM323-02000	Oil filter support plate	1	
12	SPM323-02001	Oil level sensor plate	1	
13	SPM323-YX-01008	Screw support G3/4-14	1	
14	SPM/T70.1-2000	Screw M10*35	2	
	SPM/T95-2002	Washer 10	2	
	SPM/T93-1987	Spring Washer 10	2	
15	SPM323-YX-01003	Suction tubing assembly	1	
16	SPM323-YX-01002	Bottom plate	1	
17	4TN-12	Plug RC3/4	1	
18	SPM323-YX-01010	Fixed plate	1	
19	SPM323-YX-01011	Clapboard	1	
20	SPM323-YX-01007	Oil filler support	1	

5. Fuel Tank Assy

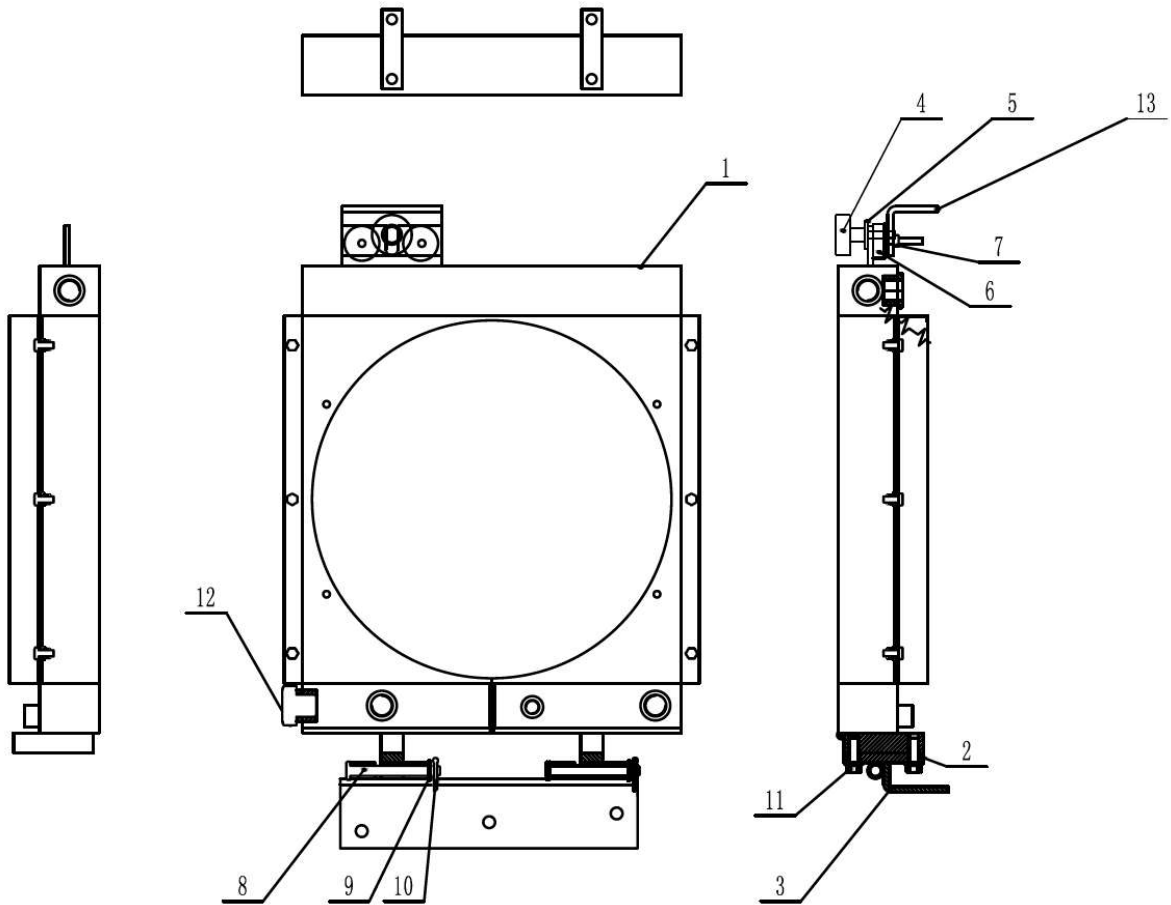


Fuel Tank Assy

No	Part No	Description	Q'ty	Remark
1	SPM323-CJ-3001	Bottom plate	1	
2	SPM323-RX-3503	Side plate	1	
3	SPM323-RX-3502	Upper plae	1	
4	SPM323-YX-01005	Flange	1	
5		O-ring 106*100*3	1	
6	SPM/T1667.4-2004	Bolt M6*10	6	
	SPM/T95-2002	Washer 6	6	
	SPM/T93-1987	Spring washer 6	6	
7	SPM323-RX-3508	Flange cover	1	
8	SPM/T5783-200	Bolt M10*20	4	
9		Fuel cap	1	

10	F4010111X0009-YZ	Fuel filler support	1	
11	SPM323-YX-0100301	38 Pipe	1	
12		Fuel filler pipe	1	
13		48 elbow pipe	1	
14	SPM323-RX-3505	Suction tubing	1	
15		Oil level sensor	1	
16	SPM/T818-2000	Screws	5	
17	4TN-12	Plug RC3/4	1	
18	SPM323-YX-01006	Oil level sensor board	1	

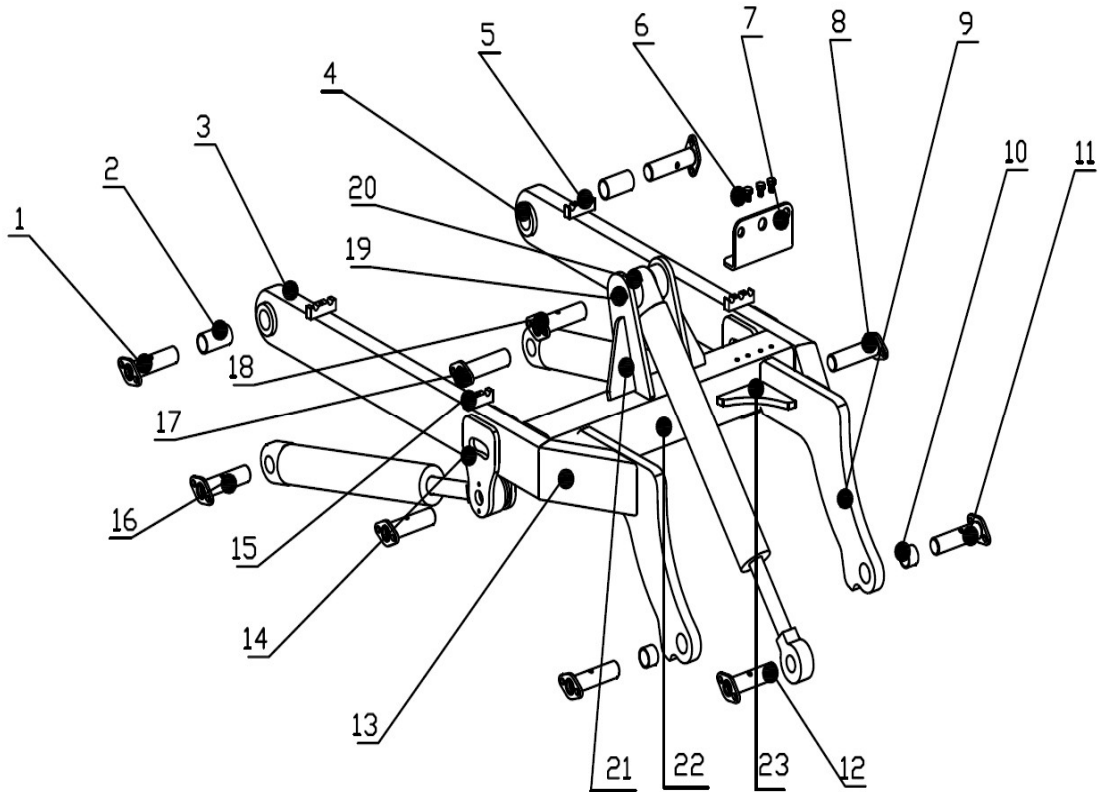
6. Radiator Assy



Radiator Assy

No	Part No	Description	Q'ty	Remark
1	SPM323-YS-01	Radiator assy	1	
2	SPM323-092	Frame support	1	
3	SPM323-093	Support	2	
4	SR5414-491328	Soft plastic bags knob	1	
5	SPM/T5287-2002	Big washer	1	
6	SR5726-499431	Rubber fixing glue	2	
7	SPM/T41-2000	Hexagonal nut M6	1	
8	SPM/T882-2000	Pin 10*90*3.2*85.5	2	
9	SPM/T95-2002	Flat washer 10	2	
10	SPM/T91-2000	Cotter pin 3.2*25	2	
11	SPM/T16674.1-2004	Hex flange M10	2	
12		Oil plug	2	
13	SPM323-095	Bracket	1	
14		Electronic fan	1	

7. Lift Arm Assy

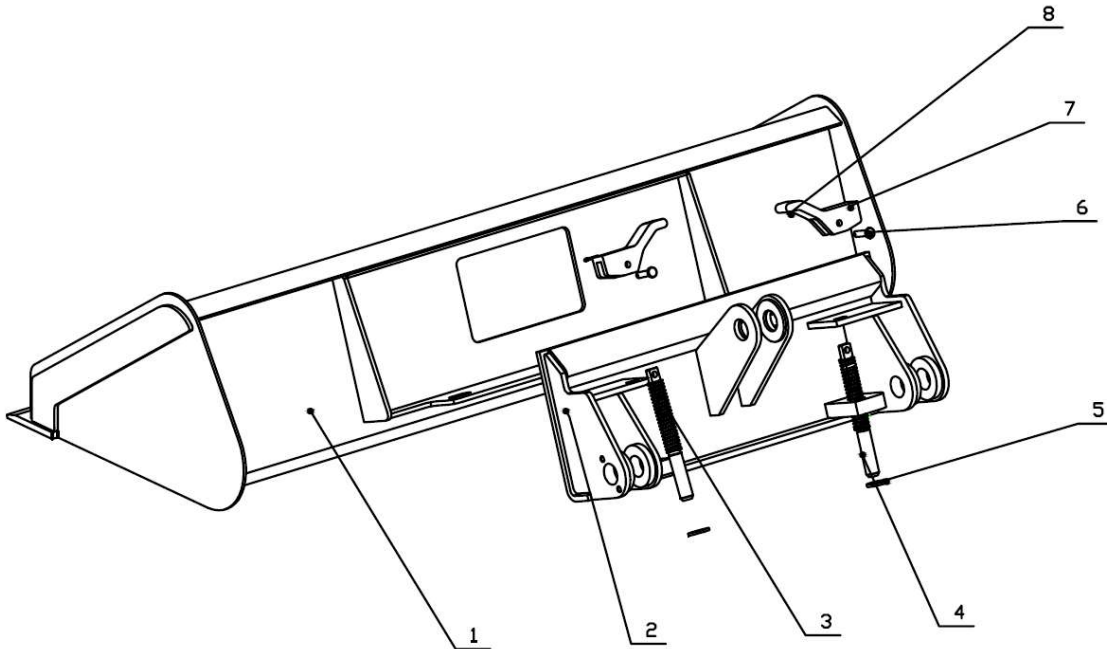


Lift Arm Assy

No	Part No	Description	Q'ty	Remark
1	SPM323-XZ-JS01	Arm pin	2	
2		Bush	2	
3	SPM323-DB-5001	The arm	2	
	SPM/T1152-2000	Oil cup M10*1	4	
5	SPM323-DB-5015	Pipe clamp A	2	
6	SPM/T5782-2000	Bolt M8*25	4	
	SPM/T93-1987	Washer 8	4	
	SPM/T95-2002	Washer 8	4	
7	SPM323-DB-5017	Quick coupler bracket	1	
8	SPM323-XZ-JSYG02	Front pin, lift cylinder	2	

9	SPM323-DB-5009	Arm front plate	2	
10		Arm pin sleeve	2	
11	SPM323-XZ-JS02	Arm pin	2	
12	SPM323-XZ-ZD002	Front pin, bucket cylinder	1	
13	SPM323-DB-5009	Arm front plate	2	
15	SPM323-DB-5016	Pipe clamp C	2	
16	SPM323-XZ-ZD01	Rear pin, bucket cylinder	2	
17	SPM323-XZ-JSYG01	Front pin, lift cylinder	2	
18	SPM323-XZ-DB01	Rear pin, lift cylinder	1	
19	SPM323-DB-5006	Support plate, bucket cylinder	2	
20	SPM323-DB-5012	Pin shaft sleeve	2	
21	SPM323-DB-5011	The triangle plate	2	
22	SPM323-DB-5007	Bending plate	1	
23	SPM323-DB-5010	The triangle plate	2	

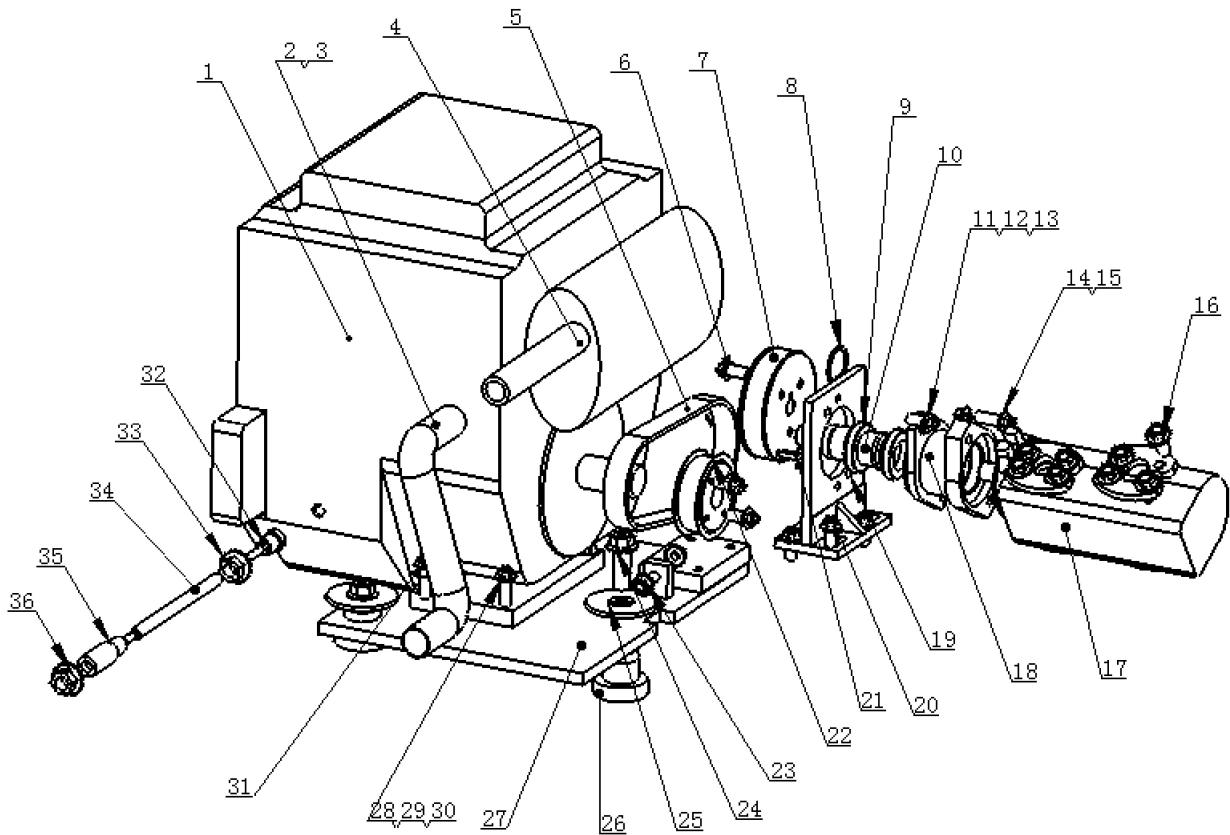
8. Attachment Coupler and Bucket



Attachment Coupler and Bucket

No	Part No	Description	Q'ty	Remark
1	SPM323-CD-3600	Bucket	1	
2	SPM323-GJ-3700	Coupler	1	
3		Spring	2	
4	SPM323-GJ-3312	Pin	2	
5		Connecting seat	2	
6	SPM/T882-2000	pin	2	
7	SPM323-CD-3800	Handle	1	
8	SPM/T91-2000	Cotter pin 2.5*30	2	

9. Power System

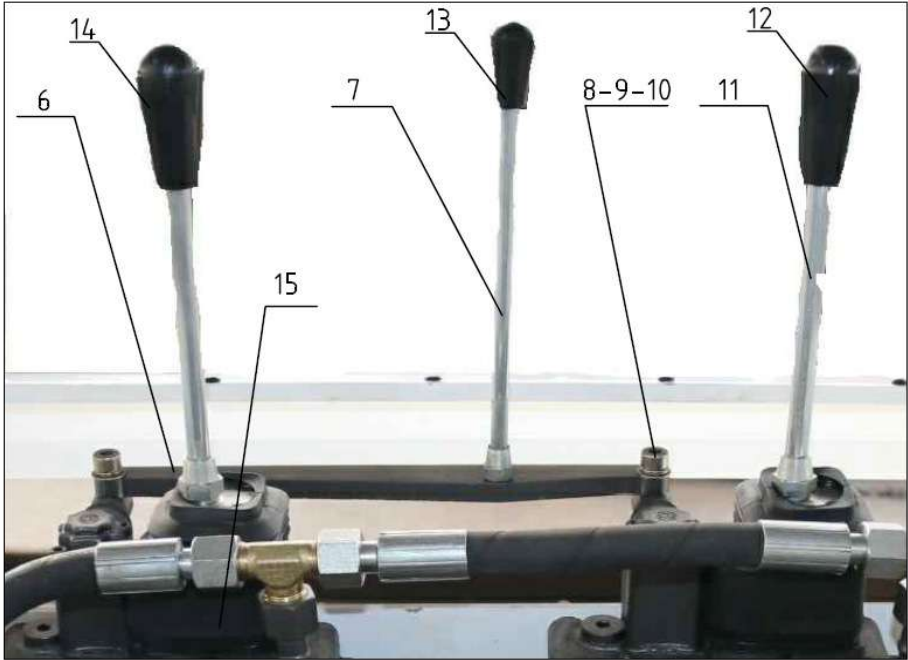
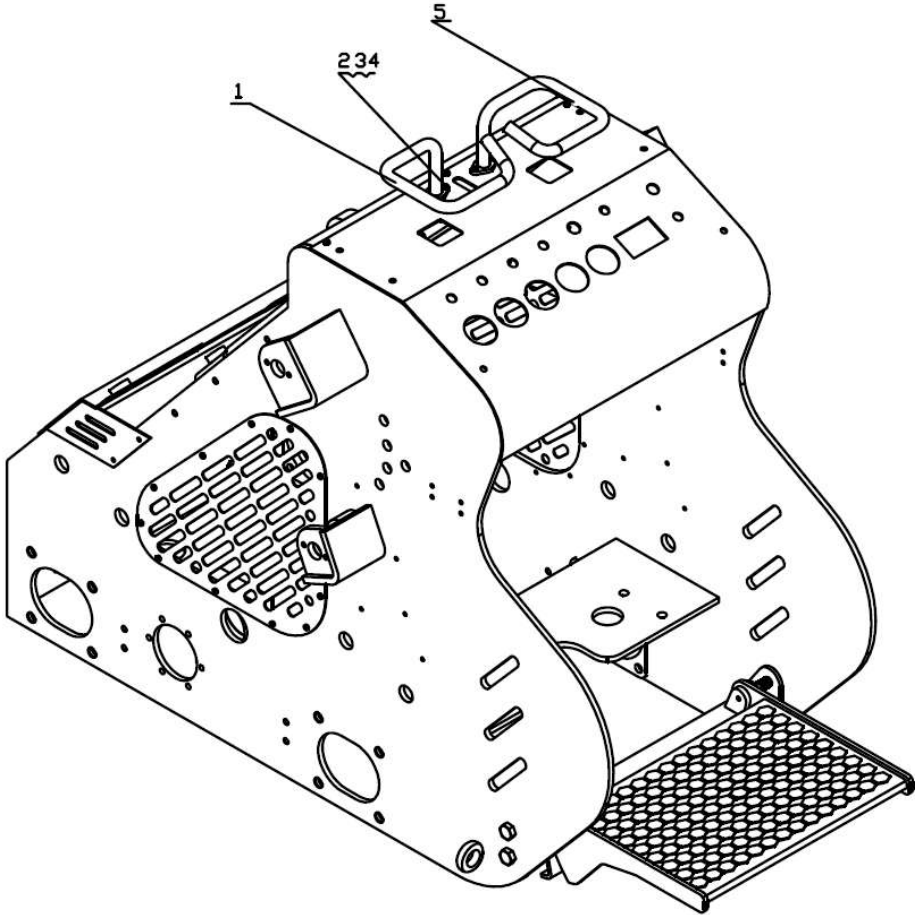


Power System

No	Part No	Description	Q'ty	Remark
1		B&S Engine	1	
2	SPM323-0450001B	Muffler Connector	1	
3	32-35	T type solid Clip	1	
4		Muffler	1	
5	640-8M-25	Belt	1	
6	SPM/T5782-2000	Bolt M10*20	4	
7	SPM323-047000A	Belt wheel, pump	1	
8	SPM/T894.1	Circlip 35	1	
9	SPM/T276-1994	Bearing 61907-Z	2	
10	SPM323-040023	Connect shaft	1	
11	SPM/T5782-2000	Bolt M10*25	2	
12	SPM/T93-1987	Spring Washer 10	24	
13	SPM/T95-2002	Washer 10	24	
14	SPM/T5782-2000	Bolt M10*45	2	

15	SPM/T6170-2000	Nut M10	3	
16	SPM/T5786-2000	Bolt M10*1.25*30	16	
17		Gear pump	1	
18	SPM 323-049000	Connect sleeve	1	
19	SPM 323-043000A	Pump Bracket	1	
20	SPM/5782-2000	Bolt M10*30	4	
21	SPM/T1096-2003	Key A 6*6*28	1	
22	SPM323-046000A	Belt wheel, B&S engine	1	
23	SPM/T5782-2000	Bolt M10*40	1	
24	SPM/T5782-2000	Bolt M16*70	3	
25	SPM/T5782-2000	Big Washer 16-C grade	3	
26	SPM323-040200	Cushion	3	
27	SPM323-044000B	Engine under plate(B&S)	1	
28	SPM/T5782-2000	Bolt M8*50	2	
29	SPM/T93-1987	Spring Washer 8	4	
30	SPM/T95-2002	Washer 8	4	
31	SPM/T5782-2000	Bolt M8*40	2	
32	SPM323-042000X	Joint for oil drain, engine	1	
33		Spring Clamp 12	2	
34	SPM323-040005	Pipe for oil drain	1	
35	SPM323-041000	Joint for oil drain, body	1	
	SPM/T6172.1-2000	Nut M18*1.5	1	
36	SPM323-04004X	Bolt	1	

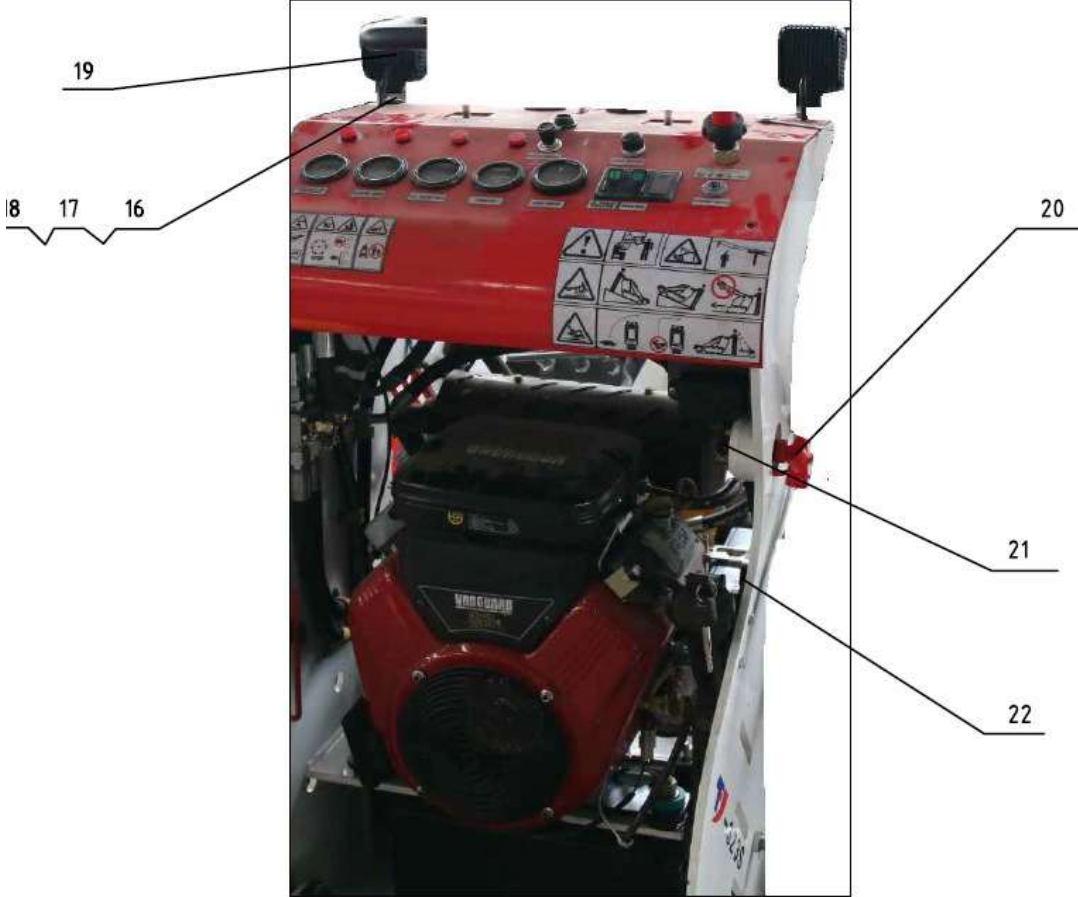
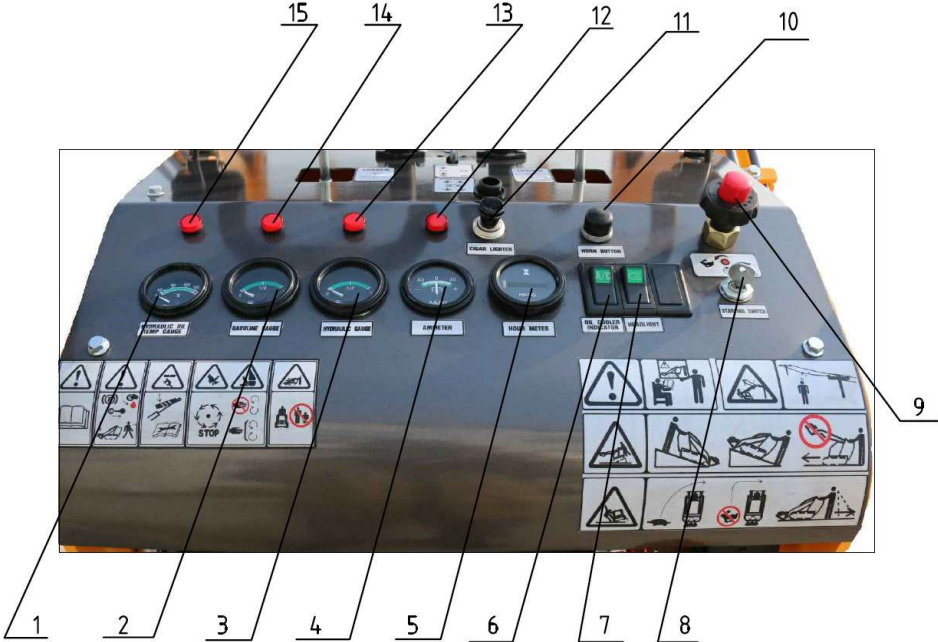
10. Operation System

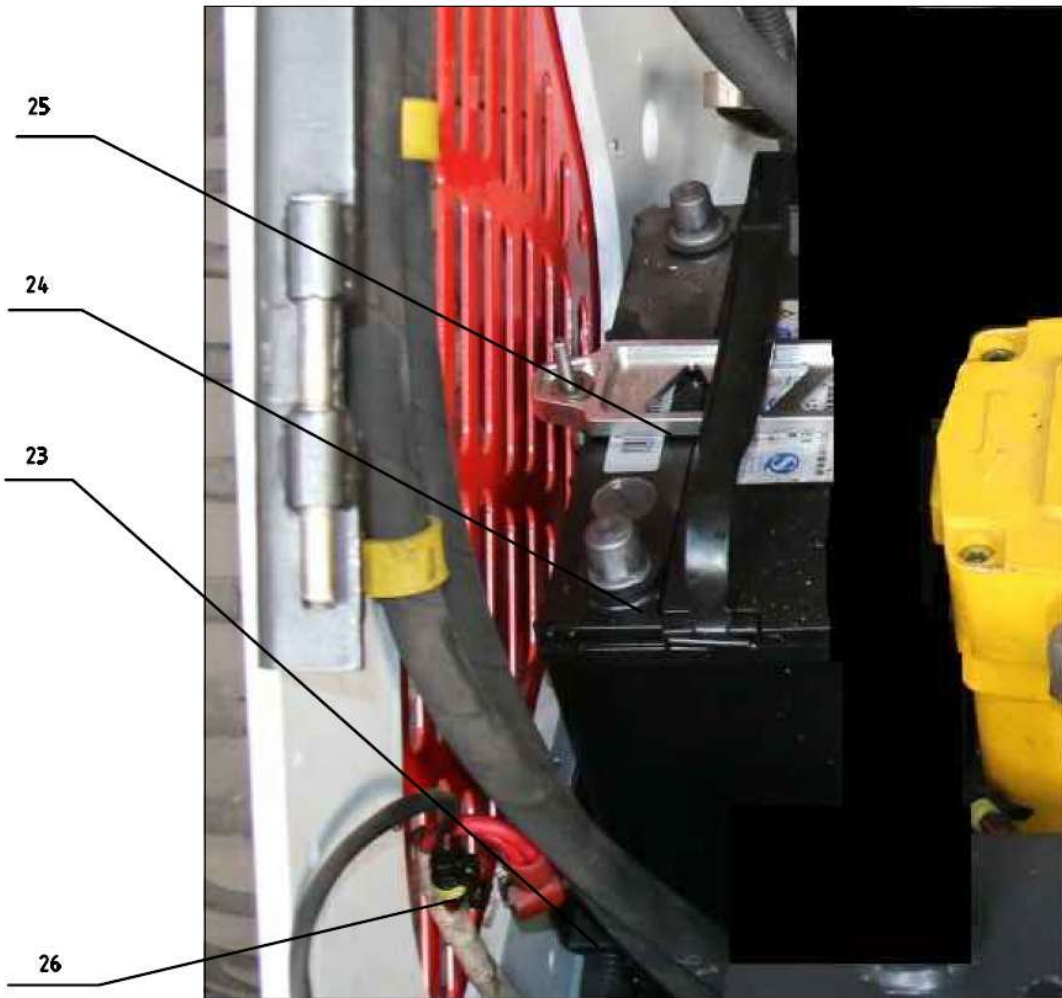


Operation System

No	Part No	Description	Q'ty	Remark
1		Left handle	1	
2	SPM/T5782-2000	Bolt M6*20	4	
3	SPM/T93-1987	Spring Washer 6	4	
4	SPM/T95-2002	Washer 6	4	
5		Right handle	2	
6	SPM323-090006A-1	Support, attachments handle	3	
7		Control rod , attachments	2	
8	SPM/T5782-2000	Bolt M10*25	2	
9	SPM/T93-1987	Spring Washer 10	2	
10	SPM/T95-2002	Washer 10	2	
11		Control rod, traveling	2	
12	SPM323-090002	Sleeve 1, handle	2	
13	SPM323-090003	Sleeve, Aux handle	1	
14	SPM323-090004	Sleeve 2, handle	2	
15		Connecting, control valve	2	

11. Electric System



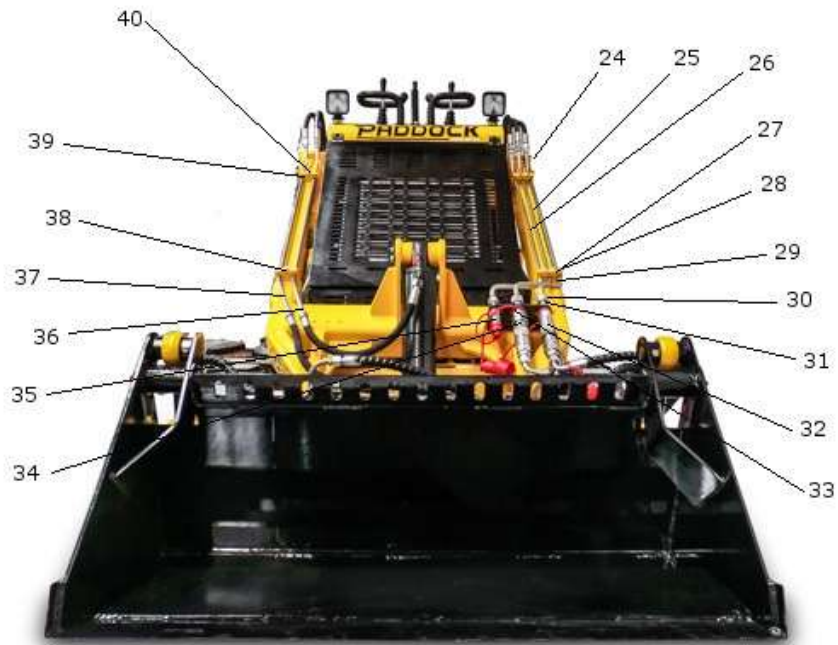
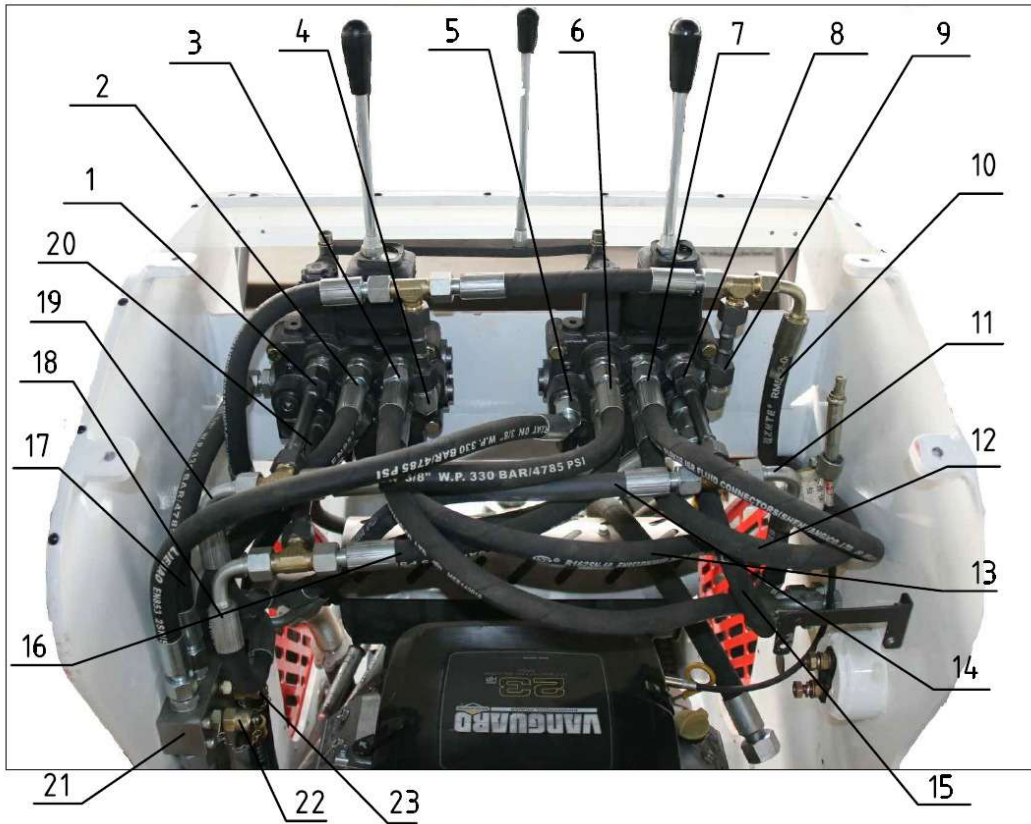


Electric System

No	Part No	Description	Q'ty	Remark
1	SPM142A(12V)	Oil temperature gauge	1	
2		Fuel gauge	2	
3		Hydraulic pressure gauge	1	
4		Ammeter	1	
5	9-30V	Hour meter	1	
6		Oil cooler indicator	1	
7	HY036	Head light	2	
8	4A 12VDC	Starting switch	1	
9	LA39-11ZS	Accelerator lever	1	
10	4A 12VDC	Horn button	1	
11	ZD134	Ignition switch	1	
12		Battery indicator	1	

13		Oil level indicator	2	
14		Fuel level indicator	2	
15		Oil temperature indicator	1	
16	SPM/T5783-2000	Bolt M4*15	2	
17	SPM/T95-2002	Washer 4	2	
18	SPM/T93-1987	Spring Washer 4	2	
19		Headlight	2	
20	SPM323-110200	Power main switch	1	
21	SPM323-110020	Positive wire	1	
22	SPM323-110050	Main Cable	1	
23		The battery holder	1	
24		The battery	1	
25	SPM323-010018	Pressure strip, Battery	1	
26	SPM323-110030A	Battery Ground wire	1	

12. Hydraulic System -1

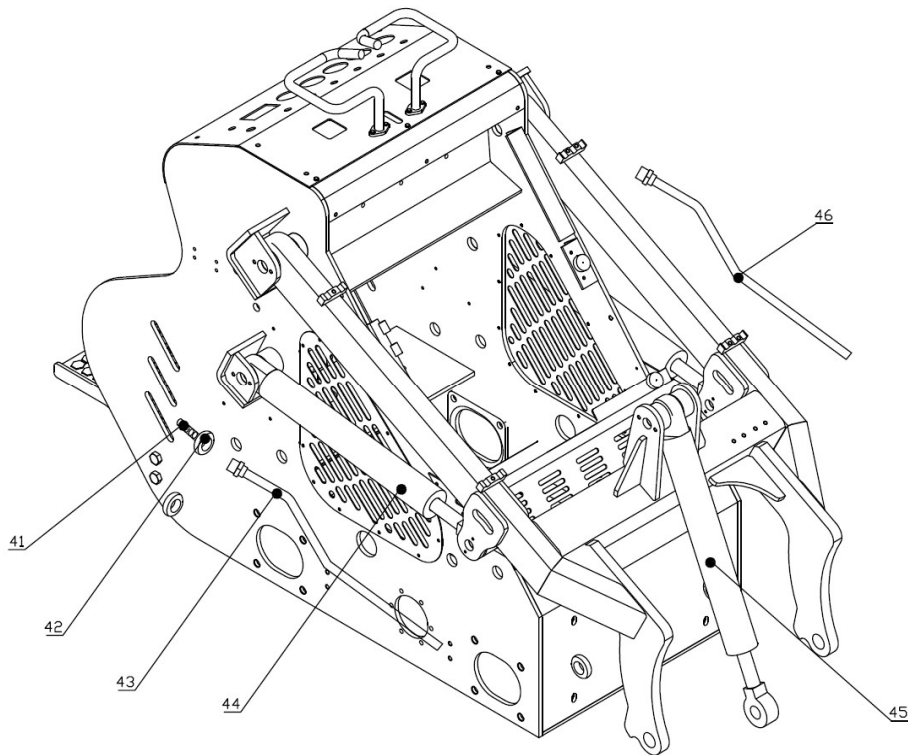


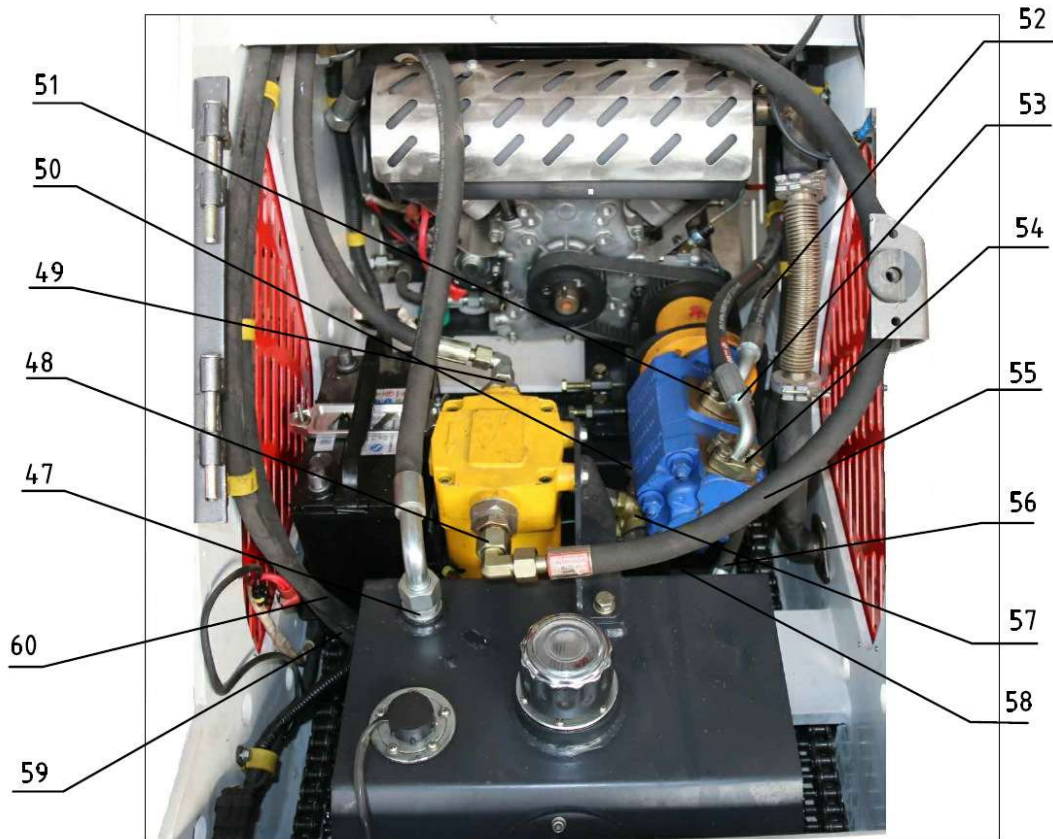
Hydraulic System-1

No	Part No	Description	Q'ty	Remark
1	SPM323-085004	Pipe 4	1	
2	SPM323-085008	Hose 8	1	
3	SPM323-085005	Hose 5	1	
4	SPM323-085031	Upper pipe, left valve for attachment	1	
5	SPM323-085032	Hose 6	1	
6	SPM323-087009	Hose 7	1	
7	SPM323-085013	Hose 8	1	
8	SPM323-085010A	Pipe 10	1	
9	SPM323-085003A	Pipe 3	1	
10		Hose 9	1	
11	SPM323-080005	Hose 10	1	
12	SPM323-085001	Hose 11	1	
13	SPM323-085002	Hose 12	1	
14	SPM323-085019	Hose 13	1	
15	SPM323-085016	Hose 14	1	
16	SPM323-085015	Hose 15	1	
17	SPM323-085020	Hose 16	1	
18	SPM323-085009	Hose 17	1	
19	SPM323-085033	Hose 18	1	
20	SPM323-085034	Hose 19	1	
21	SPM323-085017	The transition piece	1	
22		Pressure joint 1	1	
23		Pressure joint 2	1	
24	SPM323-085025	Pipe II, Attachment	1	
25	SPM323-085026	Pipe III, Attachment	1	
26	SPM323-085024A	Pipe I, Attachment	1	
27	SPM/T5787-1986	Bolt M8*15	2	
28	SPM/T5787-1986	Bolt M8*25	6	
29	SPM323-080007	Oil return pipe clamp for attachment	2	
30	2C9-18	Joint 2-M18*1.5	1	
31	SPM323-087011	Joint (G3/8-M18*1.5H)	1	
32	SPM323-087014	LSQ-PT-03SF Joint 14	1	

33	SPM323-087010	Joint (G1/2-M18*1.5H)	4	
34	SPM323-087013	LSQ-PT-04PF (G1/2 Coupler)	2	
35	SPM323-087012	LSQ-PT-04SF (G1/2 Coupler)	2	
36	SPM323-085029A	Inner Pipe on right work arm for bucket	1	
37	SPM323-085030A	Outer Pipe on right work arm for bucket	1	
38	SPM323-085027	Flange bolt M8*30	1	
39	SPM323-085028	Flange bolt M8*30	1	
40	SPM/T5787-1986	Cover plate	2	

Hydraulic System -2





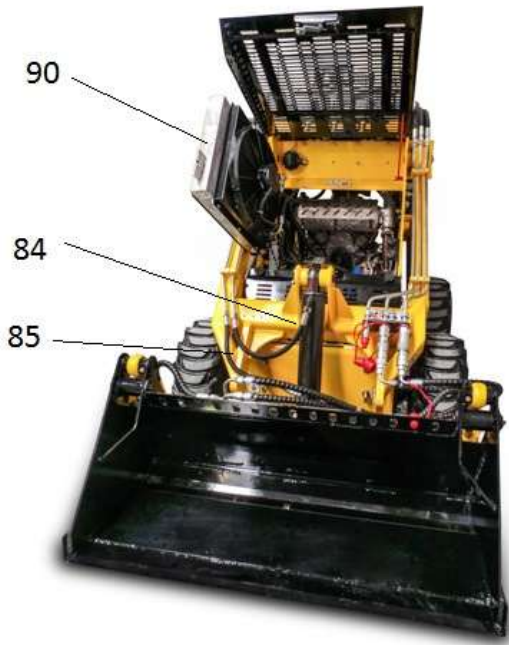
Hydraulic System -2

No	Part No	Description	Q'ty	Remark
41	SPM323-087020	1CI-18 Joint 20	6	
42	SPM323-087019	V700M-18	6	
43	SPM323-087023	Pipe 23	1	
44	SPM323-081000A	Lifting cylinder	2	

45	SPM323-082000A	Bucket cylinder	1	
46	SPM323-087022	Pipe 22	1	
47	SPM323-085035A	Hose	1	
48	SPM323-087001	The right angle connector	1	
49	SPM323-087003	The right angle connector	1	
50	SPM323-087002	Fission of the flange	1	
51	SPM323-087001	Fission of the flange1	1	
52	SPM323-087016	Hose	1	
53	SPM323-087009	Hose	1	
54	SPM323-087006	Fission of the flange2	1	
55		Hose	1	
56		Gear pump	1	
57	SPM323-087017	Fission of the flange3	2	
58	SPM323-087007	Hose	1	
59	SPM323-087004	Hose	1	
60	SPM323-087005	Hose	1	
61	SPM323-086006B	The connector body	1	
62	SPM323-086006A	The motor	1	
63	SPM323-080003	The connector body	1	

12.3 Hydraulic System -3

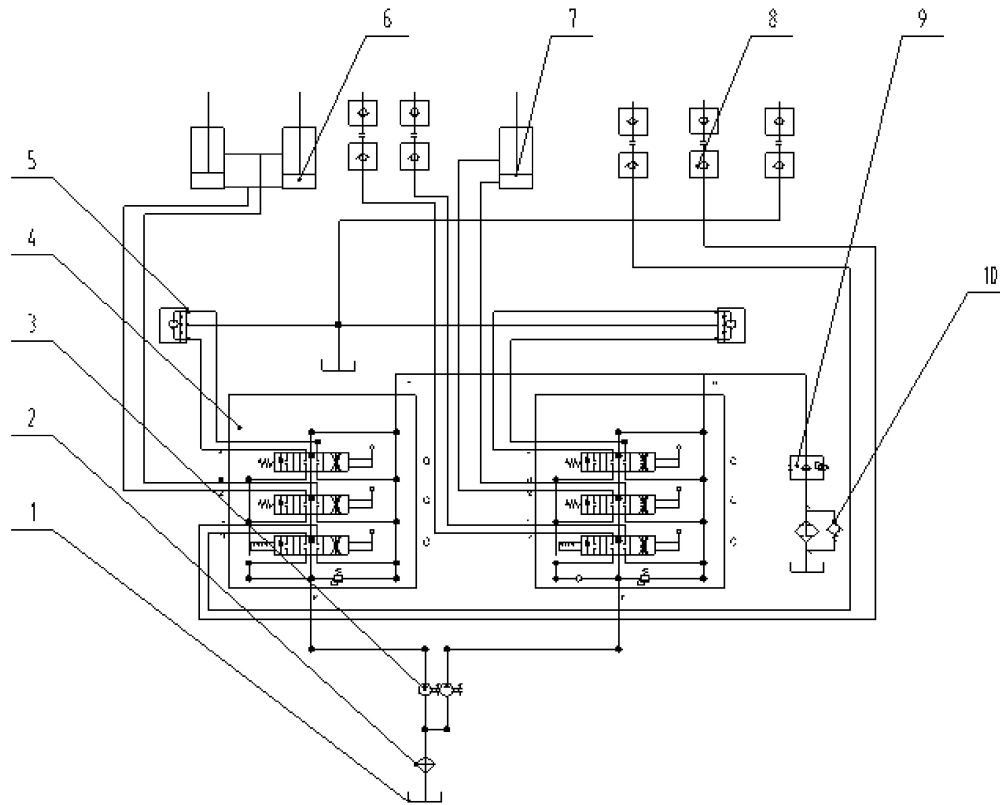




Hydraulic System -3

No	Part No	Description	Q'ty	Remark
78	SPM323-086008B	Hose 8B	1	
79	SPM323-086010B	Hose 10B	1	
80	SPM323-086009B	Hose 9B	1	
81	SPM323-086010B	Hose 10B	1	
82	SPM323-086014	Hose 14	2	
83	SPM323-080001A	Rubber	2	
	70-89	Clip	2	
84	SPM323-086012A	Hose 12A	1	
85	SPM323-086013B	Hose 13B	1	
86	SPM323-086017C	Hose 17	1	
87	SPM323-086009B	Hose 9B	1	
88	SPM323-086010B	Hose 10B	1	
89	SPM323-086014	Hose 14	2	

12.4 Hydraulic System -4



1. Hydraulic Oil Tank
 4. Control Valve
 7. Bucket Cylinder
 10. Oil return filter

2. Oil Filter
 5. Motor
 8. Quickly Coupler

3. Gear Pump
 6. Lift Cylinder
 9. Radiator

WARRANTY INFORMATION

The below information is an addition to information covered under the standard Terms and Conditions of sale at your place of purchase.

Engine – Refer to specific Engine manufactures, typically 3yrs, refer to engine manufactures terms and conditions of warranty.

Machine Parts - 2Yrs or 1,000hrs (whichever comes first) from date of purchase.

Customer is responsible for advising place of purchase of the defective part. Generally, photographic evidence of the defective part will be required, in some situations; customer may be required to return the defective part to place of purchase for inspection. Part will be assessed and either repaired or replaced. Place of sale will cover freight cost for return of item to customer.

Labour costs associated with the repair of the warranted item will only be covered by the seller if the item is returned to the place of purchase.

Accessories and attachments – 12 months or 1,000hrs (whichever comes first) from date of purchase.

Battery – 3 month warranty from date of purchase.

Electrics – Machine electrics are warranted for manufacturing faults and defects for a period of 12 months from date of purchase.

Hoses – Hydraulic hoses are warranted against manufacturing defects for a period of 1yr or 1,000hrs (whichever comes first) from date of purchase.

Exclusions - Normal wearing parts and consumables are not covered by warranty. Examples include; oil filters, oil, muffler, belts, chains, cutting teeth, blades, tires, tracks, sprockets.

Equipment damaged, misused, not maintained, adjusted incorrectly, effected by fire, rain, accident or flood will not be covered by warranty.



ASPINALL TRAILERS
WE CARRY CONFIDENCE

Instructions for Connecting Trailer to Vehicle

1. Position vehicle as close to the trailer as possible;
2. Set the jockey wheel height by winding in a clockwise motion to a height of tow ball;
3. Locate the trailer onto the tow ball on the rear of the vehicle. Lift the lock lever on the coupling so the coupling slides onto the ball;
4. Wind the jockey wheel in an anti-clockwise direction until the trailer has dropped all the way to the base of the ball;
5. Release the lock lever on the coupling and pull up on coupling to make sure it's secure;
6. Plug electrical plug into rear of the vehicle and test all lights to make sure they are in working order;
7. Attach the safety chain to the vehicle using a D shackle. The chain should have enough free movement for cornering;
8. If the trailer is equipped with two safety chains, then these chains should be **crossed** when attached to the vehicle;
9. Make sure the tailgate is secured;
10. Make sure all locks are locked and all extra components are secured, e.g. doors and toolbox.

WHEEL NUTS MUST BE RETIGHTEN AFTER 100Km

Maintenance Schedule for Trailer

Weekly inspections should be made on your trailer. These inspections are to be carried out as follows:

1. Check your tyre pressure;
2. Place a small amount of grease inside your coupling;
3. Check that the lights on your trailer are intact and in working order.

Every 4 months/10,000km the following checks should be made on your trailer:

1. Check that the wheel nuts are tight; **Torque 130 in Nm**
2. Check that the coupling bolts are tight;
3. Repack wheel bearings with high temperature bearing grease;
4. Lubricate all hinged joints with a light weight oil;
5. If fitted, make sure braking system is in good working order;
6. If you have brakes fitted, check brake shoes for wear;

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