preamble

Thank you very much for purchasing our products, please read the product manual carefully before using the product. This manual will provide you with an explanation of the product's performance, technical parameters, use and maintenance, and general precautions, which can help you use the equipment smoothly, safely and effectively.

In order to enable the user to correctly grasp the use of the machine, adjustment, maintenance, maintenance and other aspects of knowledge, to give full play to the effectiveness of the machine, please read this operation and maintenance manual carefully, and effectively implement the provisions of this operation and maintenance manual. For use and maintenance of the companion engine, refer to the Engine Instruction Manual prepared by the companion engine factory.

The operating section is a technical reference for the operator to use the machine, during which illustrations are used to guide the operator through the correct procedures for checking, starting, operating and stopping the machine. The operating techniques outlined in the manuals are a basis on which the operator can improve his or her own skills and techniques by acquiring knowledge of the machine and its functions.

The maintenance section is aguide for the user to carry out maintenance of the whole machine. Specific maintenance measures for the machine are detailed in the Skid Steer Loader Maintenance Catalog. Users should follow the requirements in the Skid Steer Loader Maintenance Catalog and perform maintenance items separately according to the different working hours of the machinery.

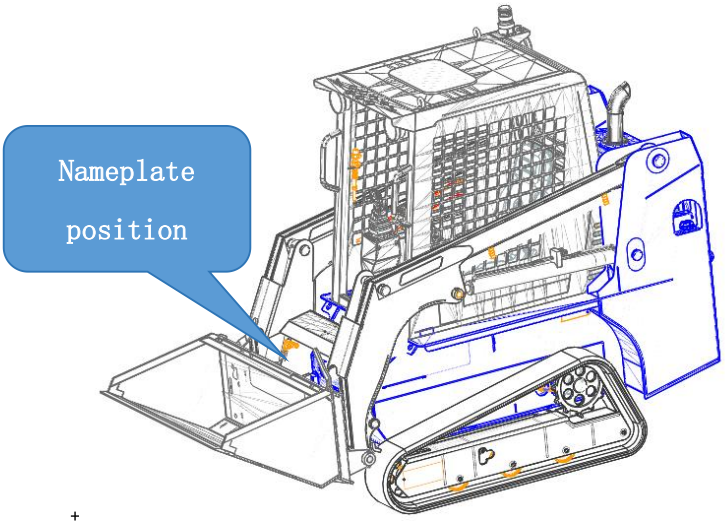
In extremely harsh, dusty or humid working conditions, increase the number of lubrication times as appropriate to the operation of the machine.

If the actual product differs from the pictures in this manual, the actual product shall prevail.

Catalogue

I. Machine number

The machine number is in the lower area, indicated by an arrow. Each machine has its own unique number; please provide its information. to the following form.



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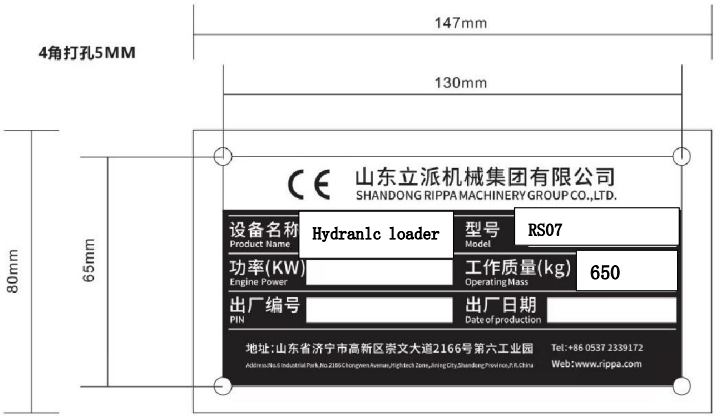


Model:	RS07
Series:	RS Series
Engine:	Kubota Engine
Date of manufacture:	
Date of manufacture:	

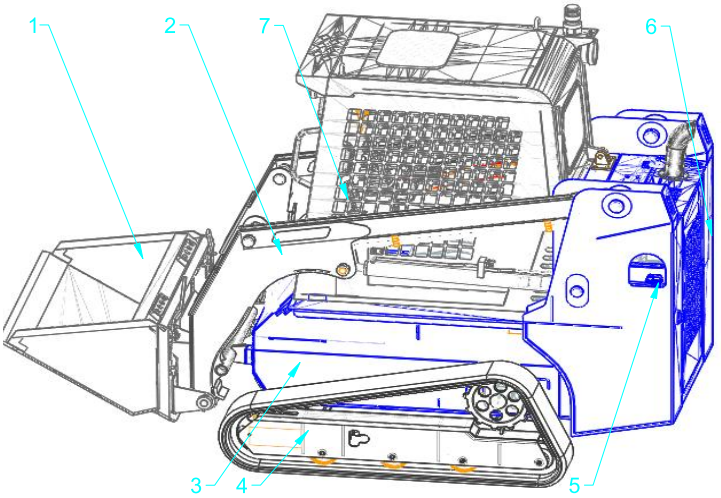
II. Areas of application

The skid steer loader RS07 is designed for compact construction work and is available in a tracked form. Has a powerful gasoline engine with a powerful quick-change connection, which makes it easy to attach a variety of attachments. Under normal circumstances, from small construction projects, home renovations, and landscaping,

Agriculture to small moving works; it is skilled in any compact road or low space work. If necessary, such as working in extreme areas, please contact our company or local distributor, otherwise it will conflict with the application. The RS07 should be operated, serviced and maintained only by trained operators who are familiar with its special characteristics and familiar with safe operation.

III. Mechanical components

The machine is a crawler type walking mode, the crawler type is mainly used in the road surface is relatively muddy road, the crawler type can also be used in the relatively flat road surface, has the characteristics of strong passability and so on.



1. Bucket

2. Boom

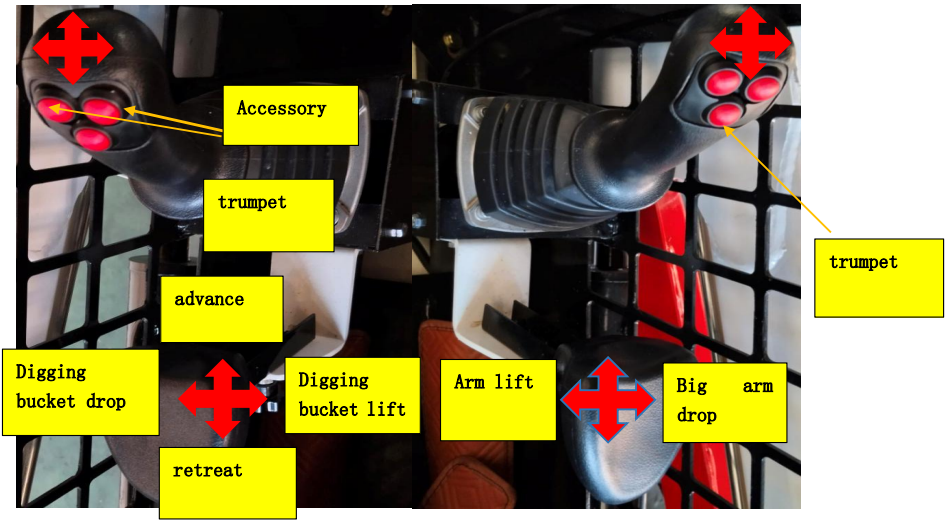
3. Main body

4. Lower caterpillar

5. Hydraulic oil tank

6. Fuel tank

7. Cab

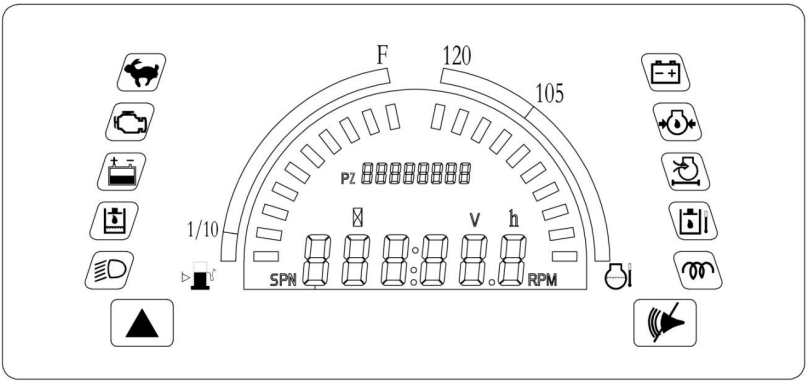


Operation step

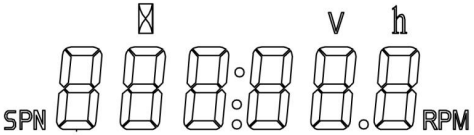
1. The left gear pushes the operating lever forward to walk forward.
2. The left gear pulls the operating lever backwards to walk backwards.
3. The left gear pushes the operating lever to the left to lower the bucket.
4. The left gear pushes the operating lever to the right to raise the bucket.
5. The right gear pushes the operating lever forward to walk forward.
6. The right gear pulls the operating lever backwards to walk backwards.
7. The right gear pushes the operating lever to the left to raise the arm.
8. The right gear pushes the operating lever to the right to make the arm drop.

Control panel operation steps
Digital display screen

Main interface



Graphic analysis



Here, the numbers are displayed as part of the parameter switching display, such as current time, working time, engine speed, and engine fault code (SPN code) for the third engine. The SPN display area is the SPN code currently received by the system; the V display area is the current voltage value of the system; the H display area is the current working time; and the RPM display area is the current rotational speed value.

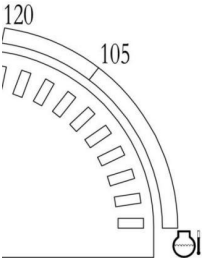
1. Working time (rotating speed) shows 1-1 cumulative working time of

the whole machine, and the timing unit is 0.1 hour (counting once every 6 minutes, less than 6 minutes, not included in the cumulative time).

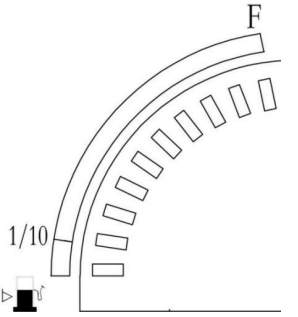
1-2 The speed display part is displayed at the timing position when the engine speed is more than 500 rpm, and the speed and timing are alternately displayed (with an interval of 5s).

1-3 If the ECU of the third EFI engine in the supporting country has a fault, the engine SPN code will always be displayed here to remind the driver to analyze and handle the fault.

2, cooling water temperature display



Displays the current engine operating temperature. The light grid shows that the temperature of cooling water can be understood more intuitively. If the water temperature meter shows that the water temperature is between 40℃ and 102℃, it means that the water temperature is normal during operation; if the water temperature meter shows that the water temperature exceeds 102℃, it means that the water temperature is too high, and the engine water temperature alarm icon shows that the monitor gives an audible alarm. At this time, stop immediately or reduce the engine speed to idle speed to check the condition of cooling water. Water temperature parameters are read through CAN communication!



2. Fuel level display

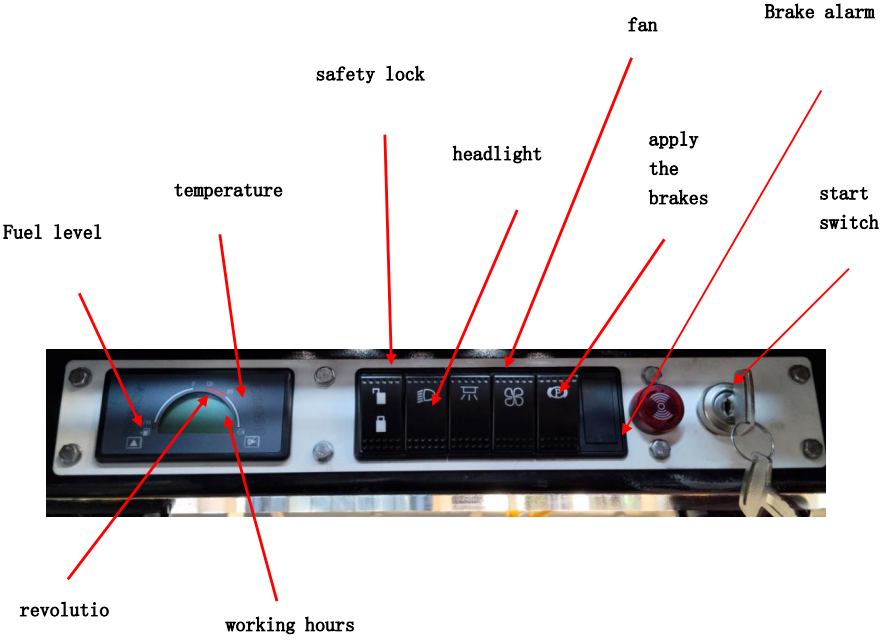
The fuel level display area at the left light grid indicates the amount of fuel in the fuel tank. If the fuel level is normal during operation, the light grid is displayed as more than two grids (including two grids); If there is only one display, the fuel level alarm indicator flashes and the monitor gives an audible alarm during operation, it means that there is not much fuel left in the fuel tank, so it should be checked and refueled in time. 4. The hydraulic oil temperature display shows the current working temperature of hydraulic oil. The acquisition of hydraulic oil temperature parameters by single-chip microcomputer is analog acquisition, and the display part is displayed by switch indicator light. If the water temperature exceeds 85℃ during operation, the hydraulic oil temperature alarm indicator flashes and the monitor gives an audible alarm. At this time, stop immediately or reduce the engine speed to idle speed, and check the shape of hydraulic oil.

5, commonly used switch display instructions

	Instrument alarm mute button
	Engine fault alarm indicator lamp
	Battery undervoltage alarm
	Engine oil-water separation fault alarm indicator lamp
	Headlight indicator lamp
	Air filter alarm indicator lamp
	Hydraulic oil temperature alarm indicator lamp

	Indicates the working state of engine oil pressure. This symbol is not displayed when the engine oil pressure is working normally. When the engine oil pressure is abnormal, it indicates that the oil pressure is too low, the oil pressure alarm icon is displayed, and the monitor gives an audible and visual alarm. Stop the car immediately and check the engine oil condition.
	High and low speed display
	Preheating indication
	Indicates the working state of the generator. When the generator works normally, the symbol is always on. When the generator works abnormally and is not charged, this symbol is not displayed. Check the working condition of the generator at this time.

control panel



1. Safety lock

2. Headlights

3. Start the switch key

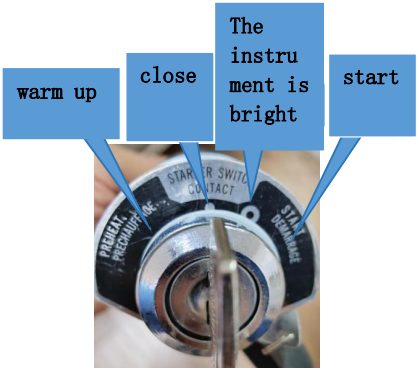
Turn left in closed state, preheat closed state, turn right, turn instrument on, turn right, start left, turn off.

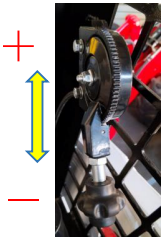
3. Electronic throttle button

Rotate the throttle upward to increase, and rotate the throttle downward to decrease.

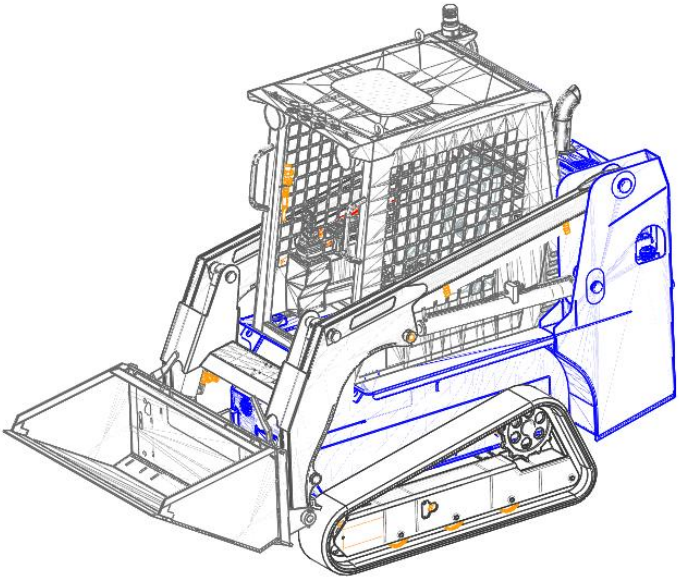
4. Main switch of power supply

Turn the power down and turn the power up and turn the power on.





IV.Safety Precautions and Safety Signs



cautionary

Follow the safety instructions before using and maintaining the machine. Please read the operating manual and mark the machine.

Perform repairs, adjustments and maintenance according to the markings in the manuals and instructions, then check for correctness. Failure to obey orders may result in death or injury.

1. Read the "Instruction Manual" carefully before starting the machine.
2. Wear coveralls, shoes and hats when performing any further operations.
3. When welding repairs are required, they are to be performed by trained welders.
4. Prepare in advance the tools and other aids needed for the job and know how to use them.
5. Prepare a site for tools and parts and keep the work tidy at all times.
6. Before starting work, park the machine on a solid level site, then put the working device on the ground, if the working device is not easy to put down, it should be inserted with a safety lock or locked with a brake.
7. Before disassembling or assembling, hold the machine steady with supports, jacks or stands.
8. When operating in a group, one person in charge should be responsible for directing the operation. The cause of the fault and the method of elimination should form a unified opinion before operation.
9. When operating underneath the vehicle, hang a "Under Repair" sign on the side of the vehicle.

Safety is the responsibility of the operator

Most accidents involving machine operation and maintenance can be avoided by following basic safety rules and precautions. Before operating or servicing the machine, read and understand all safety information, safety practices and safety stickers in this manual.

This symbol indicates to be careful, please pay attention to safety before operating the skid steer loader.

Every guideline and rule for operation and maintenance should be understood and followed.

When operating the machine, make sure to use the amount and type of hydraulic fluid. At the same time, it can cause dangerous or serious injuries.

Please read this manual carefully. Make sure you understand fuel

maintenance and refueling.

 This symbol indicates that you need to be careful; otherwise it could result in the death of the operator or bystanders. Stickers are applied to the machine

 Safety stickers on the machine and warnings in the manual are especially for you to be aware of the dangers in order to avoid accidents.

Each loader is thoroughly tested and inspected before being delivered to the customer. You should operate it carefully for 100 hours so that all parts are in good condition. Rough handling can shorten service life or reduce the efficiency of use. For new equipment, you should be aware of the following:

- Run the machine idle for 5 minutes after startup.
- Avoid operating the loader at full speed.
- Avoid fast starts, rapid acceleration, unnecessary emergency stops or spins.
- Clean dust and impurities when replacing fixtures.
- If working in a hostile environment, check for all potential hazards.
- Please check the working hours of the work timer.
- Hold the handrail firmly with both hands when operating the machine to avoid causing injury when it is first started or during an emergency stop.

When machine abnormality is detected

If any abnormalities (noise, vibration, odor, oil leakage, etc.) are detected in the operation or inspection and maintenance of the machine, immediately notify the sales or service agent and take appropriate measures. Do not operate the machine until the abnormality is removed.

Operating Temperature Range

To maintain machine performance and avoid premature wear, observe the following operating conditions.

Do not operate the machine if the outdoor temperature exceeds +45° C or falls below -15° C.

If operated when the outdoor temperature exceeds +45° C, the engine may overheat, resulting in reduced engine oil performance. Also, the

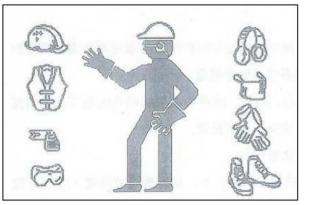
hydraulic fluid may become very hot and cause damage to the hydraulic equipment.

If the machine is operated at outdoor temperatures below -15° C, rubber parts such as gaskets may harden, resulting in premature wear or damage to the machine.

If it is necessary to operate the machine outside the above outdoor temperature range, consult your sales or service agent.

Wear appropriate clothing and protective equipment

Do not wear loose clothing or accessories that could hang up on the control levers or moving parts.

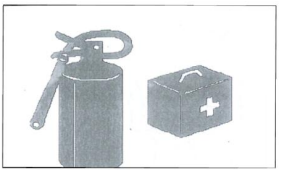


Do not wear clothing with oil or fuel stains that could easily catch fire.

Wear safety shoes, helmets, safety glasses filtering masks, thick gloves, ear protection, and other protective equipment such as safety glasses and filtering masks as required by the work environment, as splashing of metal shavings or other objects may cause serious injury.

Use hearing protection when operating the machine. Prolonged exposure to high levels of noise can result in hearing damage or even complete loss.

Installation of fire extinguishers and first aid kits



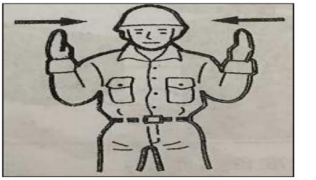
Be prepared for fires and accidents.

Safety fire extinguishers and first aid kits and learn to use them as appropriate.

Learn how to put out fires and deal with accidents.

Know how to contact emergency assistance and make an emergency contact list.

Do not remove safety devices



Make sure that all parts, etc. are in place and secure. Repair or replace damaged parts before operating the machine.

Never remove any safety device except for servicing. Keep all safety devices in good working condition at all times.

Learn how to use the hand signals required for a particular assignment and

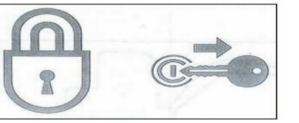
identify the person responsible for signing.

All hand signals must be fully understood by all personnel.

The operator must respond only to gestures from the designated person, but must obey a stop gesture from anyone at any time.

Signalmen must stand in clear view when signaling.

Precautions when leaving the driver's seat



When leaving the driver's seat, lower the work unit to the ground and stop the engine.

Accidentally touching any of the control handles can cause the machine to move and result in serious injury or death.

please note

Bucket, boom and auxiliary hydraulic controls, do not touch these controls. Before leaving the driver's seat, lower the work unit to the ground and turn off the engine. Also turn off the headlights, key switch and main power switch.

Avoiding fire and explosion hazards

- Keep fuel, lubricants, and away to avoid flames. Fuel is particularly flammable and dangerous.
- Keep away from lit cigarettes, matches, lighters, and other sources of flame or ignition while handling these combustibles, and avoid static electricity.
- Do not smoke or expose to open flame when handling fuel or working on the fuel system, and protect against static electricity.
- Do not leave the job site while refilling fuel or lubricating oil.
- Do not remove the gas cap or refuel while the engine is running or has not cooled down. Also, do not splash fuel onto hot surfaces of the machine or electronic system components.
- Clean up any spilled fuel or lubricant immediately.
- Check for fuel and lubricant leaks. Please eliminate leaks and clean the machine before operation.
- Remove flammable materials to a safe place during polishing or welding operations.

- Do not cut or weld on pipes or tubes that contain flammable liquids inside. Clean thoroughly with a non-flammable solvent before cutting or welding.
- Remove all trash or debris from the machine. Ensure that no oily rags or other flammable materials are left on the machine.
- Dispose of various solvents or dry chemicals (foam-type fire extinguishers) according to the procedures on the manufacturer's container. Do this in a well-ventilated area.
- Never use fuel for cleaning purposes. Always use non-flammable solvents.
- Keep all flammable liquids and materials in a safe and well-ventilated place.
- A short circuit in the electronic system may cause a fire. Check for loose or damaged wire connections daily. Retighten loose connectors and cable clamps. Repair or replace damaged wiring.

Pipe-caused fires

Ensure that hose and tube snaps, protectors and cushions are securely fastened. If loose, the hose or tube can be damaged by vibration or contact with other parts during operation. This could cause high-pressure oil to spray out, resulting in fire or injury.

Engine exhaust is toxic.

Do not operate the engine in an enclosed area with poor ventilation.
If natural ventilation is not possible, install ventilation fans, fans, extended exhaust pipes or other ventilation devices.

Handling of asbestos dust

Inhalation of asbestos dust may cause lung cancer. When handling materials that may contain asbestos, take the following safety measures:

- Never use compressed air for sweeping.
- Avoid polishing or sanding parts that contain asbestos.
- When cleaning, use a vacuum setting with a high-efficiency particulate air filter.

- Wear a prescribed respirator if there is no other way to control dust. When working indoors, install a ventilation system with a polymer filter.
- Do not allow unauthorized personnel to enter the work area during operation.
- Please strictly adhere to the rules and environmental standards applicable to the area of operation.

Be careful so you don't get pinched.

Do not place hands, feet or other body parts between the upper and lower frames or between the tracks., between the body and the work unit or between the cylinders and moving parts. When the machine is moved, the size of these voids can change, which could cause serious injury or death.

Use of optional products

Consult for review before installing options. Depending on the type of attachment or their combination, the attachment may come into contact with other parts of the machine. Before use, make sure that the installed option does not come into contact with other parts.

Do not use attachments that have not been reviewed and approved. Doing so may jeopardize safety or adversely affect the operation or service life of the machine.

The company is not responsible for any injuries, accidents or damage to the product caused by the use of unauthorized accessories.

Do not modify the machine

Unauthorized modifications to the machine can cause injury or death. Do not make unauthorized modifications to any part of the machine.

V. Pre-operational inspections

Before operation, you should fully understand the condition of the vehicle and the operation area to ensure safety.

Fuel oil level check

Before operation should check the fuel capacity of the vehicle, fuel should be replenished in a timely manner when fuel is insufficient, to avoid because of fuel depletion pipeline into the air, refueling again after the machine may not be able to start the fire. See the engine instruction manual for details on how to deal with failure to start the fire.

Track tensioning check

Before operation, check the tightening of the track, if the track is loose, it needs to be tightened, otherwise the track will appear jumping teeth phenomenon can not walk. The tracks are too loose and can easily fall off when turning, turning around, or walking one way, and it is difficult to install the tracks once they fall off. When tightening, tighten the tightening bolt first, and then tighten the tightening nut (see the right figure for details of the operation position)

Hydraulic oil level check

Check the hydraulic oil level before operation, hydraulic oil level is too low when the body tilts the hydraulic oil in the tank to one side, which will lead to the oil pump can not suck oil and the whole car does not have any action**(the action should be immediately turn off the engine, the oil pump pump can not pump the oil to continue to work will lead to serious wear and tear or even damage to the hydraulic pump)**need to supplement the hydraulic oil or the body to cushion the body flat, such as no hydraulic oil or can not cushion the body, for some of the mechanical operating systems If there is no hydraulic oil or the body can not be padded, for some models of mechanical operating system, you can try to operate the working device of the machine to adjust the body to a flat state, or drive the car to a flat road surface, and then replenish the hydraulic oil. to ensure sufficient hydraulic fluid in the hydraulic tank.

Oil inspection

The skid steer loader used hydraulic oil for 46 # anti-wear hydraulic oil, due to the use of different regions with different climatic differences is relatively large, the temperature is too low or too high will affect the viscosity of the hydraulic oil, resulting in insufficient

system pressure or noise, and even accelerate the oil pump wear. In special climatic areas (too cold or too hot), hydraulic fluids suitable for the local temperature should be selected according to the local climatic conditions.

Oil level check

Before operation, the engine oil should be checked to see if the oil is sufficient (due to the machine work there are climbing, downhill, tilting, and other situations, so the oil should be close to the upper limit of the oil dipstick position, to prevent the pump pump can not pump oil), insufficient to be timely replenishment, (the oil will be slow with the engine, so it is necessary to regularly check the amount of oil), otherwise it will lead to engine wear or cylinder pulling due to the lack of oil caused by the engine manufacturers do not warranty. Otherwise, it will lead to excessive engine wear or cylinder pulling, and the engine manufacturer will not warranty the cylinder pulling or other problems caused by the lack of oil.
(Note: Add different types of engine oil according to the local temperature and climate, refer to the engine maintenance manual for detailed type and amount)

Lubrication point inspection

Before operation, each lubrication point of the skid steer loader should be inspected, and the lubrication points should be greased once every 8 hours of work. The amount of refueling should be sufficient, and the frequency of refueling should be increased when working conditions are severe.

Tightness check of fixing bolts of important parts

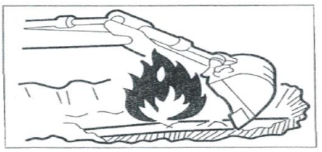
Important components include the travel motor, bell housing, gear pump and engine. The fixing bolts of these parts should be checked for looseness before operation, and if there are any loose bolts, they must be tightened immediately. Check with the manufacturer if necessary, failing to check or tighten loose bolts can cause serious problems such as parts falling off or unscrewing with the engine coming off.

Oil Leakage Inspection

Before operation, you should observe a circle around the vehicle and look at the chassis to check if there is any oil leakage from the skid steer loader, if there is any, it should be tightened or repaired in time.

Inspection of operational areas

Check the topography and ground conditions of the work area, and in the case of indoor work, the building structure, and take safety measures where necessary.



Be sure to avoid hazards and obstacles such as gullies, underground pipelines, trees, cliffs, overhead power lines, or areas where there is a danger of falling rocks or landslides.

Work with the superintendent to check the location of buried gas lines, water mains, and power cables. If necessary, consult with the administrator and identify specific security measures that must be employed to ensure safety.

Always consider the safety of pedestrians and vehicles when working on the road, and use signalmen and/or signals. Isolate the operating area from unauthorized personnel.

When working in water or driving across shallow streams, the depth of the water, the solidity of the ground and the speed of the current should be checked beforehand.

VI. Precautions to be taken during operations

Prohibited behavior:

Step up the throttle quickly when the engine starts.

When the engine is just started, the body temperature is low, the oil viscosity is large, the fluidity is poor, and the oil can not flow smoothly to each lubrication point in a short time. If the throttle is blown at this time, it will lead to an instantaneous increase in engine speed, although the oil pump oil supply and pressure will increase, but instantly can not meet the requirements of the lubricant volume and oil pressure of the moving parts, the moving parts can not establish a good lubricating oil film, resulting in instantaneous dry friction, resulting in severe wear. Poor lubrication of the moving parts, the operating resistance will increase, if the throttle, piston, connecting rod, crankshaft will produce violent impact, accelerate the damage to the machine parts. In addition, for gasoline engines equipped with turbochargers, it is very easy to destroy the oil seal due to poor lubrication, resulting in turbocharger failure and reducing the power of the gasoline engine. Therefore, after the machine starts, it should run smoothly at low speed, and it is strictly forbidden to increase the throttle quickly.

Direct operation without warming up after start-up

Due to the low temperature of the fuselage, the oil viscosity is large, which will make the oil pump supply insufficient oil, resulting in a short period of time the moving parts do not get good lubrication, and the wear is aggravated. At large loads, even accidents such as cylinder pulling and tile holding can occur. In winter, the hydraulic hose is brittle and easy to burst when working directly, which will cause a large amount of hydraulic oil to leak out. Therefore, after the loader is started, it should be idled to warm up, and test run each mechanism, and wait for the oil temperature and oil pressure to reach normal before operation.

Hydraulic oil replenishment directly during operation

Insufficient oil will lead to the risk of engine pulling.

Direct oil replenishment for gasoline engines at high temperatures.

The whole cooling system will instantly produce a large temperature difference, so that the cylinder head, cylinder liner, cylinder block, etc. instantly brittle cracks, resulting in micro-cracks, and gradually leakage, resulting in oil leakage, air leakage. Therefore, when the temperature of the gasoline engine is too high, it should be run at a

slightly higher speed with no load, and then turn off the engine and stop running, which will lead to a shorter service life of the engine's use.

Prolonged idling

Especially in the winter field operation, the weather is cold, not easy to start, many drivers are used to the loader does not work to let it idle for a long time. Prolonged idling oil pump will be insufficient to pump oil, oil pressure is low, the demand for lubrication of the moving parts of the oil volume and oil pressure can not meet the requirements, frictional resistance increases, wear and tear, especially the piston, cylinder liner wear and tear, easy to cause gas; sometimes also lead to the valve and piston ring jamming. In addition, prolonged idling with poor diesel atomization and incomplete combustion will result in prolonged stagnation, serious carbon buildup, and rough work. Therefore, the loader should not be idled for a long period of time, the idling time is usually about 5 minutes.

When the engine is difficult to start, warm the engine with an open flame

When the loader is not easy to start, some drivers use an open flame placed in the air intake or the air intake branch pipe and the air pump air pipe interface to start the gasoline engine, forced combustion gasoline engine. This practice will not only make the air filter burned, but also lead to ignition incorrectly, gasoline ahead of or behind the risk of violent combustion, explosion, rough work, cylinder liner, piston, engine and other stressed parts of the violent impact, uneven force, damage to the machine parts. Therefore, it is strictly forbidden to set fire to the car when it is difficult to start.

Shutdown with load or immediately after operation

When the loader stops with a load or immediately after operation, the cooling system then stops working and the heat dissipation capacity decreases sharply. Work generated by a large amount of heat accumulation in the vicinity of the heat source can not be distributed in a timely manner, so that the cylinder head, cylinder liner, cylinder block and other heated parts parts overheating, high temperature erosion. It also deteriorates the oil that adheres to its surface, making it difficult to start the next time. In addition, if the engine stops suddenly, it will cause the supercharger to heat up to about 600° C, which will easily cause damage to the sealing ring. Therefore, the loader should be unloaded before the flameout and run no-load for 3 to 5min, so that the machine temperature drops to below 40℃ and the water temperature drops to below 50℃ before stopping.

Slam the fuel door before turning off the machine.

Many drivers mistakenly believe that giving throttle hard before stopping allows excess unburned gasoline to remain in the cylinder for the next startup. In fact, this will cause incomplete combustion, black smoke, carbon deposits increase; at the same time, the throttle will make the moving parts of the inertia force suddenly increased, exacerbating the wear and tear of the moving parts; secondly, unburned fuel will flow down the cylinder wall into the oil sump to dilute the oil, shorten the oil use cycle. Therefore, the correct operation is to stop the machine after smooth operation at low and medium speeds under no load.

Sliding into the shovel during travel

In loading operations, many drivers are accustomed to the inertia of the machine at high speeds to the pile of materials, natural deceleration, followed by shoveling materials. Using the driving inertia to rush to the pile will make the whole machine suffer from violent impacts, uneven force on all parts, which is very harmful to the whole body. This will cause deformation of the bucket, moving arm, frame, etc., cracks, due to violent force, torque increase, easy to slip and twisted deformation; transmission components are also very easy to damage. The correct operation is that the loader is driven towards the pile at low speed before shoveling, slowly inserted into the pile at an even speed, and gradually increase the throttle for shoveling

Before and after engine start

Check the fuel level and the oil level in the engine oil pan, and check the wires are for damage.
Before starting the engine, check that the safety locking lever is in the locked position.
Check that there are no people or obstacles above, below or in the area around the machine.

Security rules

Do not start the engine by shorting out the starter motor circuit; this is not only dangerous, but can cause damage to the equipment.

Starting the engine in cold weather

To perform a warm-up operation, if the machine is not thoroughly warmed up before operating the joystick, the machine will be unresponsive and can lead to unexpected accidents.

If the battery electrolyte freezes, do not charge the battery or start the machine on a different power source; doing so will risk the battery catching fire. Allow the battery electrolyte to melt before charging or

starting the engine on a different power source, and check the battery electrolyte's for freezing or leaks before starting.

Before starting the engine, turn on the power switch, add oil in the right amount, twist the start switch, press the decompression switch when the engine speed reaches, release the start key immediately after the engine fires, and make sure the key pops back up at the same time.

※ It is strictly prohibited to turn the key again after the engine has been started. This operation may damage the starter motor and engine flywheel gears, or even destroy the starter housing and burn the starter coil. In addition, over-twisting the starter key will cause the key not to rebound, and the starter gear will not be able to separate from the engine after the engine is started, and in the case of high-speed engine drive, the current in the starter will rise rapidly, leading to coil burnout.

Start the key itself with a dust bubble, can effectively avoid dust water and other substances into the key inside, once water and other impurities into the key inside, will lead to the lock cylinder stuck not back or internal short circuit, damage to the starter, so in the rainy days or more humid, dusty environment to avoid a long time to pull out the key to park, such as the need to park must be done to protect the key port measures.

Special Note: If the gasoline engine still cannot start after the starter motor has been running for 10 seconds, please wait 15 seconds and start it again (long time continuous running of the starter motor will lead to a large amount of consumption of battery power, and may also burn out the starter).

The manufacturer's warranty does not cover starter damage caused by the above.

Winter startup method:

The model comes with start preheating function, when the weather is too cold to start, you have to preheat it first, turn the key clockwise to first gear, save 8~10 seconds (not long time to preheat, otherwise it will lead to battery loss), then start the engine normally.

After starting the machine, make sure that the main power switch and the key 1st gear are turned on, otherwise the battery cannot be charged.

After starting the engine, perform the following operations and checks in an area free of people or obstacles. If any faults are found, shut down the machine as programmed and report the fault.

Check that the gauges are working properly.

Check for noise.

Do not use ether or starting fluid on the engine. Starter fluid can cause explosions and serious injury or death.

Preheat the engine and hydraulic oil. If the lever is operated without warming up, the machine will not respond or move quickly or properly, causing accidents, or wear or damage to the machine and hydraulic components.

Before starting the engine each day, check the following items in this program

- Check work units, cylinders, and hoses for damage, wear, or play.
- Check that there are no cracks, excessive wear, or play in the work unit, cylinders, or hoses. If an abnormality is found, repair it.
- Remove spoils and debris from around the engine, battery and radiator.
- Check to see if any spoils have collected around the engine or radiator. Also check to see if any flammable materials (dead leaves, fine twigs, grass, etc.) have accumulated on the battery or on hot parts, such as around the engine muffler. To remove all stolen and flammable materials.
- Check for oil leaks in hydraulic unit, hydraulic tank, hoses, and fittings.
- Inspection should be free of oil leaks. If an abnormality is found, repair the oil leak.
- Check the lower body (tracks, guide wheels, support wheels) for damage, wear, loose bolts, or oil leaks from the wheels.
- If a problem is found, repair it.
- Check armrests and footrests for damage and loose bolts.
- If problems are found, repair him and tighten loose bolts.
- Check the meter for damage. If abnormalities are found, replace parts. To remove surface spoils.
- Check the bucket for damage. Check whether the hook is damaged, if found damaged, please contact the after-sales personnel for repair.
- Check the oil level in the engine oil pan, refueling
- When the engine is turned off, the parts and oil are still at a high temperature that can cause severe burns. Wait for the oil temperature to drop before starting operation.

Remarks:

When checking the oil level after running the engine, turn off the engine and wait at least 15 minutes before checking.
If the machine is slanted, level the machine before checking.

Check fuel level, add fuel

When adding fuel, do not allow fuel to spill or it will cause a fire. If fuel is spilled, wipe it up thoroughly. Since fuel oil is very flammable and dangerous, fireworks are strictly prohibited in the vicinity of fuel oil.

① Open the filler cap on the fuel tank.
② Check that the fuel tank is full when you open the filler cap, by looking into the tank.
③ If the tank is not full, add fuel through the filler neck and determine the fuel fill level by annotation.
④ Fuel tank capacity: 5 liters
⑤ When the tank is full, the page rises to the maximum
⑥ After refueling, close the gas cap

Check electrical wiring

If the fuse blows frequently or there are signs of a short circuit in the circuit, find out the cause and repair it immediately or contact the after-sales service for repair.

The upper surface of the battery should be kept clean, remove any foreign objects from the battery to keep it clean.
Check for damaged fuses; use of fuses of specified capacity; signs of breaks or shorts in electrical wiring and damage to cladding. Also check for loose terminals. If there's screwing them up.

Also when checking the battery, engine starter motor and AC power generation, special attention should be paid to the electrical wiring.

Be sure to check for any flammable buildup around the battery. If flammable materials have accumulated, remove them as soon as possible.

Heat sink

The radiator fan does not work when you first start the car, after a period of time after starting the car, the fan starts to energize and work, and will automatically cut off when the temperature drops to save electricity.

Check the function of the horn

- Turn the starter switch to the right.
- Confirm that the horn sounds immediately when the horn button is pressed.
- If it doesn't ring check the connectors, or contact an after-sales person.

Inspection after shutting down the engine

Machine inspection after daily work

① Walk through the machine and check the working devices, the exterior of the machine and the lower traveling body, and also check for oil leaks. If any problems are found, they are to be repaired.
② Fill the fuel tank with fuel.
③ Check the engine compartment for paper and debris. To avoid a fire hazard, remove any paper and debris.

④ Remove soil attached to the lower traveling body.

haulage

When transporting the machine observe all relevant laws and regulations and take care to ensure safety.

Lifting machines

The operator performing lifting operations with a crane must be a qualified crane operator.

- Do not lift the machine when it is occupied.
- Be sure that the wire rope has sufficient strength to withstand the weight of the machine.
- When lifting, keep the machine level.
- Do not enter the area under or around the raised machine.
- There are special lifting rings on the machine when lifting, which can be hooked to lift (there are four on each machine to ensure the stability of lifting)

Upon completion of daily assignmen

Track idling is dangerous, so stay away from the tracks.
To prevent mud and water from freezing on the lower body and preventing the machine from being moved the following morning, observe the following precautions.

- Remove mud and water from the machine itself. In particular, the piston rod of the hydraulic cylinder should be wiped clean to prevent damage to the seal caused by dirt, spoils or water droplets on the piston rod entering the inside of the seal.
- Always park the machine on a hard, dry surface. If possible, park the machine on a board. The boards keep the tracks or wheels from freezing to the ground, allowing the machine to be moved the next morning.
- Open the drain plug to drain water that has collected in the fuel system to prevent freezing.

Fill up the fuel tank. This minimizes moisture condensation in the tank as the temperature drops.

Precautions for Driving Operation Essentials

first steps

① Raise the boom and turn the bucket upward so that the lower hinge point of the boom is40to 50 centimetersabove the ground.
② Observe the surroundings of the machine and sound the horn.
③ Graduallypush the forward handle forasmooth start ofthe loader

Skid SteerLoader Operating Essentials

When starting, listen to the sound of the engine. If the RPM drops, increase the engine RPM tofacilitatestarting.
Gradually increase the gas pedal to increase the speed to a certain level.
Skid steerloadersshould be safe wheninterchanging forward and reverseto avoid rapid switching leading to operator injury.
After starting the machine, pay attention to the front and the surroundings.

make a turn

Grab the handrail with both hands and use your thumbs or other fingers as appropriate.

essentials

- Before steering, reduce the driving speed depending on the road conditions, reduce the operating handleif necessary, and reduce the driving speed.
- In a straight line driving to correct the direction of travel, to slightly hit a little back, timely hit timely back, do not hit hard back, resulting in the loader"dragon"driving. When turning, operatethe leveraccording to the curvature of the roadtosteer the vehicle in the direction you want to drive. Whenthe body directionis close to the new direction, start tooperate the lever back to the right direction.

detent

Braking methods can be categorized into anticipatory braking and emergency braking. The operator should use the correct choice to ensure the safety of driving.
Predictive braking
Loader traveling, the operator has found the terrain, pedestrians, vehicles and other changes in traffic conditions, or anticipate the possibility of complexity, purposeful deceleration or stopping measures, known as anticipatory braking. Anticipatory braking not only ensures safe

driving, but also preventsdamage tothe tires(tracks) of themachine. Therefore, this is one of the best braking methods and should be utilized on a regular basis.

Emergency braking
Machine braking is based on the hydraulic unit's center position for self-locking with oil cutoff, i.e., the lever stops operation to restore the center function.

pull up (stop one's vehicle)

1.Slowly slow down the operating handletodeceleratethe machine.
2、Push the operation handleaccording to the stopping distanceto make the loader stop at the designated place.
3. Lower the arm so that the bucket is placed on the ground.

Fixed machine

cautious
In order to prevent damage to the quick change cylinder during transportation, please pad the quick change end with a wooden gasket to prevent the quick change end from touching the bottom plate.
1. Lower the bucket
2. Fully extend the bucket and rod cylinder, then slowly lower it.
3. Turn off the engine and remove the key from the start switch.
4. Turn off the main power switch
5. Tie the machine firmly with a chain or wire rope of appropriate strength. Special care should be taken to secure the machine firmly so that it does not slide to one side.

reverse (a vehicle)

Reversing should be carried out after the loader has come to a complete stop, and the starting, steering and braking methods of reversing are the same as those of forwarding.
Note: The operating position of the operator during reversing and forwarding is determined according to the actual environment (standing on the foot pedal or standing on the road with the foot pedal retracted for operation).

Foot pedal precautions

Caveats:

When the foot pedal is retracted. Pay attention to the spring pin of the pedal fixing part, which must be retracted from the inside of the pedal, and note that after the spring pin is retracted, there is a margin for the pedal to fall back, so pay attention to the pedal to fall back to avoid knocking the leg. Scratched fingers.

Working condition precautions

Caveats:

- Note that when the vehicle is running empty uphill, the front bucket unit, which must raise the big arm, which must be raised above the height of the incline, is required to raise the front bucket to avoid a collision, as shown in the figure above.
- Note that when the vehicle is running heavy, the front bucket, as in the above picture, needs to be operated, and the movable arm needs to be lifted to prevent the front bucket device from working when the vehicle's center of gravity is unstable, leading to serious consequences of rollover.
- When the vehicle is in the uphill parking state, it prevents the vehicle from skidding and avoids danger.
- When the vehicle is working uphill, pay attention to the maximum shoveling weight of the front bucket, when working, must ensure that the parameters of the vehicle limit, to ensure that the vehicle is working in a controllable range, prohibit overloading overweight, resulting in the occurrence of serious consequences.
- When the vehicle has finished its work. When going downhill, the front bucket is retracted and the front boom is lifted and retracted, pay attention to the length of the rear bucket of the vehicle body to avoid collision, which will lead to serious consequences of overturning.
- When the vehicle is in a downhill condition. Pay attention to the length of the vehicle to avoid a collision that could lead to serious consequences of a rollover. Vehicles run slowly downward, it is prohibited to increase the gas pedal, resulting in excessive speed, resulting in the phenomenon of rollover.
- Stopping distance is within one meter when the vehicle is traveling on a smooth surface. The vehicle starts with a buffer distance and passes within one meter of the parking brake. When the vehicle is traveling on a smooth road surface to stop, gradually slow down the operating speed of the handle when stopping sharply to prevent skidding and causing serious consequences.

long term storage

pre-storage

When storing the machine (for a month or more), hold the machine in the position shown in the diagram below to protect the cylinder piston rod. When placing the machine in storage for a long period of time (more than one month), do the following.

- To clean and rinse all parts, then put the machine inside. If you have to store the machine outside, choose a flat surface and cover the machine with a cover cloth.
- Fill up the fuel tank so you can place moisture buildup.

Lubricate and change the oil before storage.

- Apply a layer of grease to the metal surface of the hydraulic cylinder piston rod.
- Disconnect the negative terminal of the battery and cover the battery or remove the battery from the machine and store it separately.

depository period

When the machine is indoors, if rustproofing operations must be performed, open windows and doors to promote air circulation to prevent gas poisoning.

During storage, the machine should be operated and moved a short distance once a month to attach a fresh film of oil to the surfaces of the moving parts. Also, charge the battery.

after storage

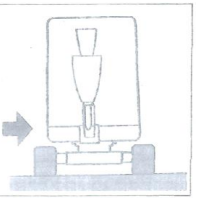
Notes.

If the machine has been stored without the monthly rust prevention operation, please contact the after-sales personnel before using the machine.

When using a machine that has been stored for a long period of time, follow these steps before using it:

- Wipe some grease applied to the surface of the cylinder piston rod.
- Fill all parts with oil and grease.
- When the machine is stored for a long period of time, moisture from the atmosphere can get into the oil. Before starting the engine or after starting the engine, check the oil in all parts and change all the oil if there is water in it.

Starting the engine after long-term storage



When storing a started engine for an extended period of time, perform a warm-up preheat operation.

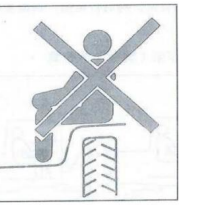
Ensure good visibility

When working in dark areas, turn on the machine's headlights and install additional lighting if necessary.

When visibility is poor due to inclement weather (fog, snow, rain or haze), stop

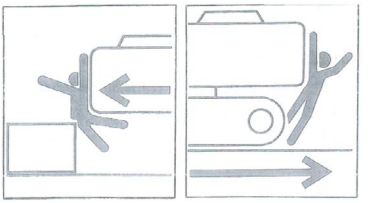
operating the machine until visibility improves.

Do not carry people on the machine



No person shall be permitted to ride on any part of the machine at any time while the machine is in motion or in operation.

Check that the work area is safe and secure before operation

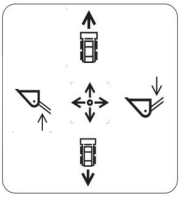


Confirm the performance limits of the machine.
Signalmen are used on road shoulders in narrow places or where vision is obstructed.
Never allow anyone to enter the machine's swing radius and path.
Indicate your intention to move by sounding the horn.
There is a viewpoint blind spot at the rear of the machine. Before walking backwards, check the safety of your rear and make sure no one is behind you.

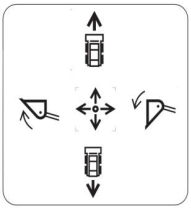
（1）Type identification

（2）Add grease mark

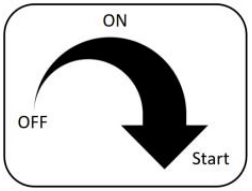
（3）Left handle operation sign



（4）Right handle operation sign



（5）Start switch identification

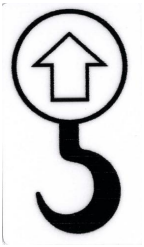


（6）Pay attention to the crowd sign

（7）Throttle function indication

（8）Safe operation identification

（9）Hoisting position identification



（10）Fixed location signage

（11）Pay attention to scald marks

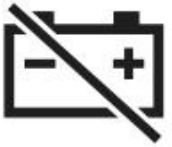
Note: Pay attention to burns at high temperature here

（12）Noise sign

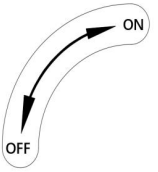
（13）Keep a safe distance when loading jib and bucket. Avoid squeezing your whole body

（14）Fuel tank filling port mark

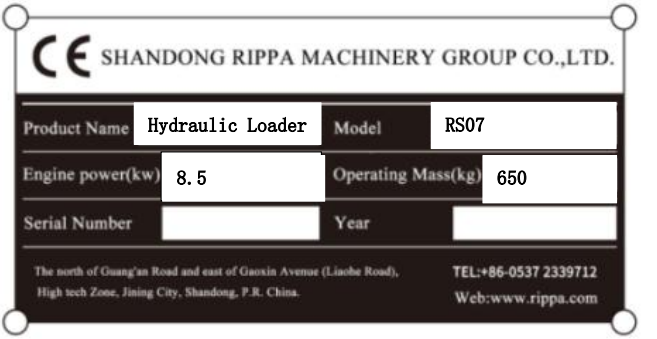
（15）Power switch identification



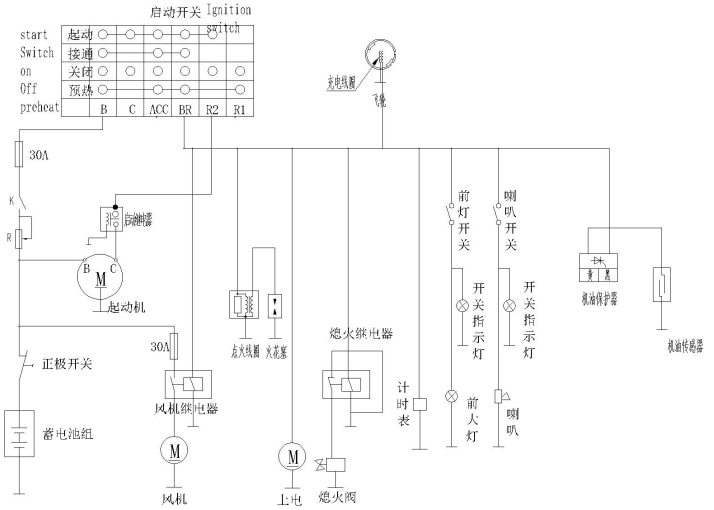
（16）Power switch indication



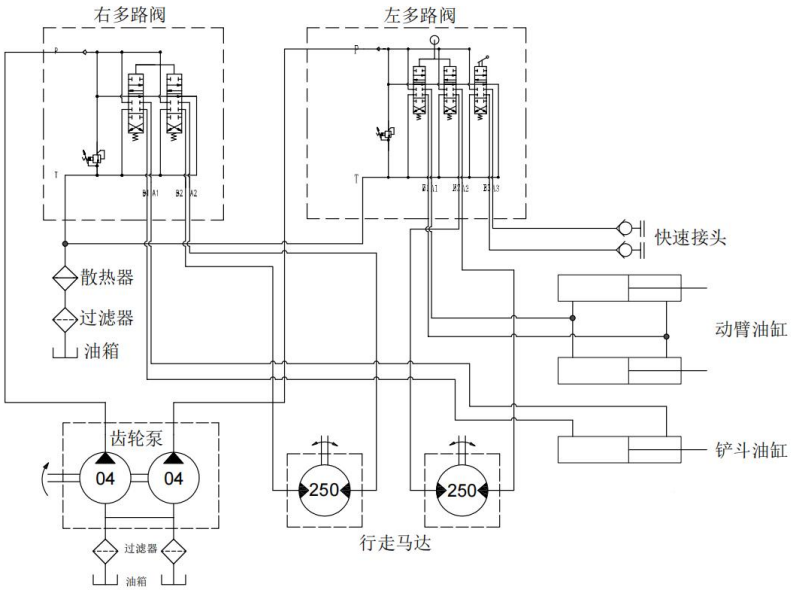
（17）Name plate



（18）Electrical schematic diagram



（19）Hydraulic schematic diagram



VII. Technical specification parameters

Basic performance parameters	Working weight of the whole machine (kg)	1230	engine	Engine brand	Kubota
	Bucket capacity (m)	0.16		Engine model	D1105
	Rated loading mass (kg) (safe load)	300		Maximum horsepower (ps)	25
	Maximum loading mass (kg)	670		Maximum power (Kw)	18.4
	Low/high walking speed (km/h)	0-8		Maximum speed (rpm)	3000
	Climbing ability (%)	30%		Displacement (l)	1.123

	Grounding specific pressure (Kpa)	95.87		Cylinder number	3
	Maximum unloading height (mm)	1725		Cooling mode	water-cooling
	Maximum loading height (mm)	2260		Engine oil change (L)	4
	Maximum discharge distance (mm)	508		Fuel form	diesel
	Minimum clearance from the ground (mm)	176		Fuel label	No.0/-No.10

deploy	cab	●		Theoretical fuel consumption (1/h)	1.3-1.5
	armrest	●	Car body	Transport length-belt bucket (mm)	2655
	Quick change	●		Transport length-without bucket (mm)	1985
	Hydraulic quick change	-		Transport width (mm)	1000
	Four-in-one bucket	○		Transport height (mm)	1810
	fork	○		Bucket width (mm)	1000

	Sweeper	○	fuel tank	Fuel tank (1)	32
	breaking hammer	○		Hydraulic oil tank (1)	32
	balance weight	-	wheel	●	570*160
	Tension form	-	Delivery reference	Size of wooden cases	2900*1100*1900
	air conditioner	-		The whole machine is loaded with 40 high cabinets	10
hydraulic pressu	Main pump type/model	Closed pump V90C23HT1/RNB2S12KA1-LP0		The whole machine is loaded with 20 small cabinets	4

re sys tem		1			
	Main pump brand	Hengli			
	Maximum flow of main pump (L/min)	48			
	Gear pump model	316			
	Gear pump brand	Walking in Tianjin			
	Maximum flow of gear pump	48			
	multiple unit valve	Pilot multi-way valve			
	Rated set pressure	16MPa			

	(Mpa)	
	Type of walking hydraulic motor	Hengli BMER-600
	Walking motor brand	Hengli
	Motor displacement	600

VIII.Fault and solution

Skid Steer Loader Common Failures and Solutions

common breakdown	Reason for failure	prescription
Weakness and slow movement of the machine	Clogged or loose relief valve	Disassemble to clean or tighten relief valve
	pump damage	Replacement of hydraulic pump
	Clogged oil pump inlet pipe	Clean or replace the oil feed tube
	engine trouble	Contact the factory to have the engine serviced
The machine does not move.	pump damage	Replacement of hydraulic pump
	Damaged shaft coupling splines	Replacement of coupling splines
	Hydraulic oil bias due to tilting of the fuselage to one side	Add hydraulic fluid or level the machine
The machine will not rotate	Walking motor off	fit into place
	Damaged travel motor	Replacement of travel motor
Blue smoke from the engine and no power	Overfilling of oil	Adjust the oil level according to the upper and lower limits of the oil dipstick
	engine trouble	Contact the factory to have the engine serviced
The engine smokes and is weak.	Clogged air filter	Clean or replace the air filter
	engine trouble	Contact the factory to have the engine serviced
white smoke from the engine (idiom); fig. suffering from a lack of motivation	Water in gasoline	Drain the oil and refill
Engine Holding	Stuck relief valve	Remove the relief valve and clean it with gasoline, then reinstall it.
	Relief valve adjustment too tight	Trimming relief valves

The engine won't fire.	Insufficient battery voltage	Charging or charging with an external battery fire
	Gasoline with dry talent refueling leads to the tube There's air in the road.	Unplug the gas hose from the engine and drain the air before installing it.
	Not enough gasoline.	Fill with gasoline as appropriate
	engine trouble	Contact the factory to have the engine serviced
	Clogged injector nozzles	Replacement of fuel injectors
	Clogged air filter element	Replacement of air filter element
	Damage to the high pressure oil pump	Replacement of high pressure oil pump
	Fuse broken	Check and replace fuses
	Clogged fuel filter element	Replacement of fuel filter element
	Damage to high pressure oil pump	Replacement of high pressure oil pump
	Low temperatures cause the oil to thicken	Change to the right grade of oil
Engine Throttle Up and Down	Folded gasoline leads to fuel supply unruly	Check the gasoline fuel line and adjust the direction to ensure a smooth fuel supply
Throttle continues to increase	Engine throttle retainer locks up	Release the engine throttle retainer
Can't get the throttle up.	Throttle cable ferrule is loose	Tighten the throttle cable ferrule

common breakdown	**Reason for failure**	**prescription**
Headlights don't come on, odometer or display doesn't work	Line plug disconnected	Check the wiring plugs for dislodged or loose
	component damage	Replacement parts

Battery not charging	Generator wire breakage	Check engine wiring and reconnect
	Damaged fuses	Replacement of fuses
	Damaged regulator	Replacing the regulator
	battery damage	Replacement of battery
High engine temperatures	Highland climate impacts	Replacement of high-pressure water tank cover
	engine trouble	Contact the factory to have the engine serviced
Oil pressure alarm	Lack of oil	Add oil
	overheating of the engine	Check coolant
	Damaged sensors	Replacement of sensors
	line fault	Line checking

IX. Maintenance and upkeep

Maintenance Considerations

Engine Maintenance

As the excavator's most important power system - the engine needs to be maintained in accordance with the "engine instruction manual" carried with the vehicle, in strict accordance with the engine instruction manual for the maintenance of the content can effectively improve engine life, reduce the occurrence of failures.

The main maintenance consists of the following components:

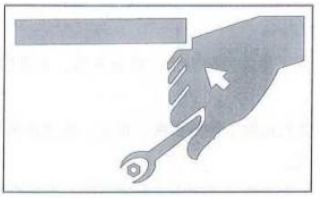
- Engine break-in care.
- Oil change intervals, and refills. (Oil will be used with the machine, slow consumption, so you need to regularly check the amount of oil, not a refill and wait until the next time to replace the refill, the oil is insufficient need to be supplemented in a timely manner, otherwise it will lead to serious consequences such as pulling the cylinder, due to the lack of oil caused by the engine damage manufacturers do not warranty)
- Oil Filter, Fuel Filter Replacement Intervals
- Air Filter Replacement Intervals

Labeled "Do Not Operate" warning message

Inspection or maintenance of the machine could result in serious injury if an unauthorized person starts the engine or touches the control handle.
Before performing maintenance, turn off the engine, remove the key and keep it with you.
Mark the "Do Not Operate" warning message in a conspicuous place such as the starter switch or lever.

Use the right tools

Do not use damaged or deteriorated tools or tools designed for other uses. Use tools appropriate to the operation in question.



Regular replacement of safety-critical components

To ensure that the machine can be used safely for a longer period of time, it should be regularly refueled and inspected and maintained. To enhance safety, replace safety-critical parts such as hoses and seat belts regularly.

"Periodically replaced safety-critical components" means components that age, wear and deteriorate in function through repeated use and whose performance changes over time. These characteristics of such parts make them capable of causing serious mechanical damage or personal injury, and it is difficult to judge their remaining useful life based on visual inspection or operating feel alone.

Replace the "Periodic Replacement of Safety Critical Parts" if any damage is found during visual inspection, even if the specified replacement interval has not yet been reached.

Replace fuel hoses regularly. Fuel hoses can become increasingly worn over time, even if they do not yet show any symptoms of wear.

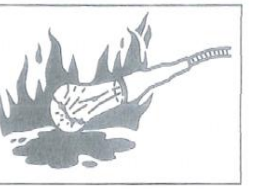
Replace at the first sign of wear, regardless of the replacement schedule.

To use the machine safely, perform regular inspections and maintenance. The following safety-critical components must be replaced periodically to enhance safety. Damage to these parts can cause serious injury or fire.

<table>
<tr><th>human body</th><th colspan="2">Safety-critical components that are regularly replaced</th><th>replacement time</th></tr>
<tr><td rowspan="2">Fuel system</td><td colspan="2">fuel pipe</td><td rowspan="2">Every 2 years</td></tr>
<tr><td colspan="2">Packing on fuel cap</td></tr>
<tr><td rowspan="5">Hydraulics Systems</td><td rowspan="3">hosts</td><td>Hydraulic hose (pump outlet)</td><td rowspan="5">Every 3 years</td></tr>
<tr><td>Hydraulic hose (pump suction port)</td></tr>
<tr><td>Hydraulic hose (travel motor)</td></tr>
<tr><td rowspan="2">working device (e.g. for gasoline,</td><td>Hydraulic hose (boom cylinder line)</td></tr>
<tr><td>Hydraulic hose (bucket cylinder</td></tr>
</table>

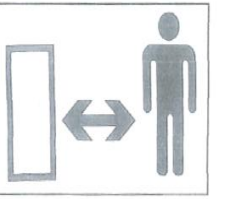
	diesel engine)	line)	
		Hydraulic hose (pilot valve line)	
		Hydraulic hose (handle line)	
		Hydraulic hoses (tank lines)	
		Hydraulic hoses (auxiliary lines)	

explosion-proof lighting



When checking fuel, lubricating oil, coolant or battery electrolyte, use an explosion-proof lamp to prevent fire or explosion. Otherwise, an explosion may occur, causing serious injury or death.

Access by unauthorized persons is strictly prohibited



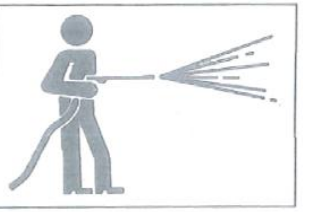
Do not allow unauthorized personnel to enter the work area during operation. Be careful when sanding, welding or using a hammer as you may be injured by flying debris from the machine.

Preparation of the working area

Select a firm and level working area. Ensure proper lighting conditions and ventilation if working indoors.
Remove obstacles and hazardous materials. Exclude slippery areas.

Always keep the machine clean

Before maintenance, the machine should be cleaned



Turn the engine off before cleaning the machine. Cover electrical parts to prevent water ingress. Water ingress into electrical components can lead to Causes a short circuit or malfunction. Do not clean the battery, electronic control components, sensors, connectors or cab with water or steam.

Turn off the engine before maintenance

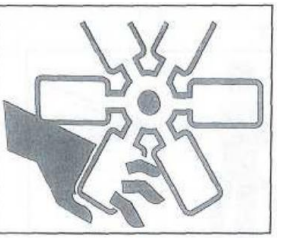
Avoid lubricating or mechanically adjusting the machine when it is running, or when the machine is not running but the engine is running.

If maintenance must be performed while the engine is running, two people should work as a team and stay in communication with each other.

A person must be seated in the driver's seat so that the engine can be turned off immediately if necessary. This person must take special care not to touch the control levers and pedals, except when required.

The other person performing the maintenance shall ensure that his/her body or clothing is kept away from the moving parts of the machine.

Keep away from moving parts



Keep away from all rotating and moving parts If a hand or tool gets caught in a rotating or moving part, it could result in serious injury or even death.
If tools or other objects are thrown or inserted into the fan or fan belt, they will be blown or shredded. Do not drop or insert anything into the fan or fan belt.

Securely fasten the machine or any part that may fall out of place

Before performing maintenance or repairs under the machine, all movable work devices should be lowered to the ground or in the lowest position.

Fixed tracks

If work must be done under lifted machinery or equipment, it must be secured with wooden pads, jacks, or other strong, stable supports. Do not get under a machine or work device without supporting it securely. This procedure is particularly important when working with hydraulic cylinders.

Stabilized working devices

When repairing or replacing cylinders or tubes, the working device should be fixed to prevent accidental movement of the machine.

Hold it steady when opening the hood or cover.

Be sure to secure the hood or cover before working inside the machine. Keep the hood or cover closed in windy weather or when the machine is parked on a slope .

Place the weight in a stable position

When temporarily placing heavy objects or accessories on the floor during disassembly or installation, be sure to place them in a stable position. Keep unauthorized persons away from areas where such items are stored.

Fueling Precautions

There shall be no smoking or open flames while refueling or in the vicinity of the refueling point.
Do not remove the gas cap or refuel while the engine is running or has not cooled down
Do not spread fuel on hot surfaces of the machine.
Fill the fuel tank in a well-ventilated area.
Do not fill the fuel tank. There should be room for oil expansion.
Spilled fuel should be wiped up immediately.
Securely tighten the fuel tank. If the gas cap is missing, replace it with the original. Use of an unauthorized, poorly vented fuel cap can create internal pressure in the fuel tank.

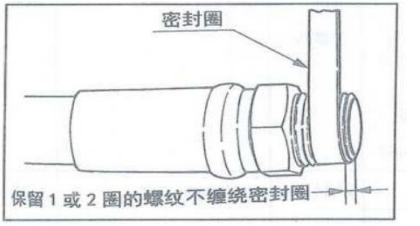
Keeps dust out

When installing and removing parts, do so in a dust-free area, sweeping the work area and cleaning the parts to prevent the ingress of dust.

Cleaning the mounting surface

When installing or removing parts, make sure that the contact surfaces of the parts are clean. If the sealing groove on the contact surface is damaged, contact your sales or service agent for repair or replacement.

Seals and Cotter Pins



Always replace all removed seals and cotter pins with new parts.

When installing, be careful not to damage or distort the seal.

When wrapping a screw plug with sealing tape, clean the threads from the old sealing tape and clean the threads. Fuel oil shall not be used for cleaning.

Wrap the threads tightly with a sealing ring, taking care to leave one or two turns at the end of the plug unwound.

Fuel and lubricants use the correct fuel grade for the season .

Please select the appropriate fuel, lubricant and grease according to the temperature. regardless of whether or not they have reached the designated

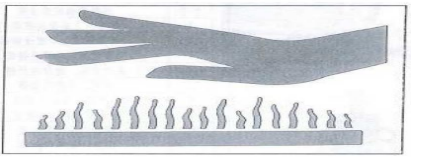
If the oil becomes too dirty or deteriorated, change it.

When refueling, do not mix different brands of oil. If you are changing brands, replace all fuel/lubricants.

Handling of hoses

Lubricant or fuel leaks can cause fires.
Do not twist, bend or strike the hose.
Do not use twisted, bent or cracked pipes, metal tubes or hoses as they may burst.
Retighten the loose fitting.

Be careful when handling hot and pressurized parts

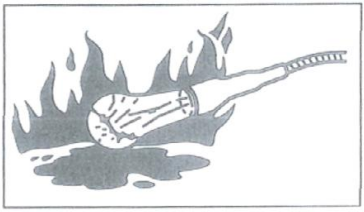


Turn off the engine and wait for the machine to cool down before performing maintenance.

The engine, exhaust, radiator, hydraulic hoses, sliding parts and many other parts of the machine are hot when the engine is first turned off. Touching these parts can cause burns.

Be careful not to touch the hydraulic fluid when loosening the cover or plug. Operating the machine in this condition can result in burns or injuries due to hot oil spray.

Beware of internal oil pressure



The pressure in the hydraulic fluid lines will be maintained for a long time after the engine is turned off.

Internal pressure should be completely relieved before performing maintenance work.

The high pressure of hydraulic fluid can puncture the skin or eyes, causing serious injuries ranging from blindness to death. Keep in mind that hydraulic fluid seeping out of small holes is virtually invisible to the naked eye. When checking for leaks, wear sunglasses and heavy gloves, and protect your skin with cardboard or plywood to prevent injury from hydraulic fluid spray.

If hydraulic fluid penetrates the skin, it should be removed surgically within a few hours by a physician familiar with such injuries.

Before working on the hydraulic system, it should be relieved of pressure.

Hydraulic fluid may spray out if the cap or filter is removed or piping is disconnected before the hydraulic system is pressurized.

Slowly loosen the bleeder plug to relieve tank pressure.

When removing plugs or screws or disconnecting hoses, stand to one side and slowly loosen them to gradually relieve internal pressure before removing them.

Oil or oil plugs may spray out due to pressure in the travel motor oil tank . Slowly release the oil plug to relieve the internal pressure.

Be careful of flying debris when using the hammer!

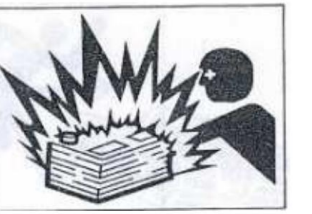
When using a hammer, pins or metal shavings may be splashed around. This can cause serious injuries.

Wear protective equipment such as goggles and gloves when striking hard metal parts such as pins, bucket teeth, side teeth or bearings with a hammer.

Make sure no one is around when tapping pins or teeth.

Disconnect the battery cable.

- Disconnect the battery cable before working on the electronic system or welding. First disconnect the negative battery cable. When reconnecting, connect the negative battery cable last.
- Please be careful when handling the battery
- The battery contains sulfuric acid which can damage eyes or skin if touched inadvertently.
- If inadvertent eye contact occurs, flush immediately with water and seek medical attention promptly.



- If accidentally swallowed, drink plenty of water or milk and seek immediate medical attention.
- If sulfuric acid touches skin or clothing, wash it off immediately with plenty of water.
- Goggles and gloves should be worn when handling the battery.
- The battery can generate flammable hydrogen gas, which may cause an explosion. Keep away from sources of ignition such as open flames, sparks or lit cigarettes.
- Use a flashlight when checking the electrolyte level.
- Before checking or disposing of the battery, be sure to turn the starter switch off to turn the engine off.
- Be careful not to allow metal tools or any metal objects to touch the electrodes and cause a short circuit.
- Electrical sparks are generated when the electrodes are loose. Be sure to tighten it.
- Make sure the battery cap is securely fastened.
- Do not charge or cross start the engine when the battery is frozen or it may explode. Warm frozen batteries to 15° C before use.
- Do not use the battery when the level is below the lower limit. Otherwise, it will accelerate the internal deterioration of the battery and shorten its life. It can also lead to rupture (explosion).
- Do not refill distilled water above the upper limit. Otherwise the electrolyte will leak out. Contact with this liquid can damage skin or corrode machine parts.
- Clean the area around the electrolyte level line with a damp cloth and check the level. Do not clean with a dry cloth, as this can lead to static buildup and combustion or explosion.

Using the battery charging cable across the start

- When starting the engine using the battery charging cable, be sure to connect the cable following the correct procedure below.

Incorrectly connected cables can cause discharge and battery explosion.

- Don't let the "problem machine" and the "rescue machine" run into each other.
- Do not touch the positive (+) and negative (-) clips of the battery charging cable to each other or to the machine.
- To connect, first connect the positive terminal of the battery charging cable to the positive (+) terminal. To disconnect, first disconnect the negative cable from the negative (-) terminal (ground terminal).
- Be sure to securely connect the cable clamps.
- Connect the last wire clip of the battery charging cable to as far away from the battery as possible.
- Goggles and gloves should always be worn when starting the engine with the battery charging cable.
- Use battery charging cables and clips sized for the battery capacity. Do not use damaged or corroded battery charging cables and clips.
- Make sure that the battery of the "rescue machine" is of the same capacity as the battery of the "problem machine".

Please appoint our service agent for welding repair

- When welding must be performed, it must be done by qualified personnel in a fully equipped workplace. To prevent damage to any part of the machine caused by excessive current or electrical sparks, observe the following.
- Disconnect the battery wiring before performing welding.
- Do not apply 200V or more continuously.
- The grounding point shall be connected within 1 meter of the welded part. Do not connect the ground terminal near the electrical controls/meter or connector.
- Ensure that there are no seals or bearings between the welded part and the grounding end.
- Do not connect the grounding end to the pin of the work unit or around the hydraulic cylinder.
- To perform welding work on the body, disconnect the connector of the electronic control unit before working.

waste treatment

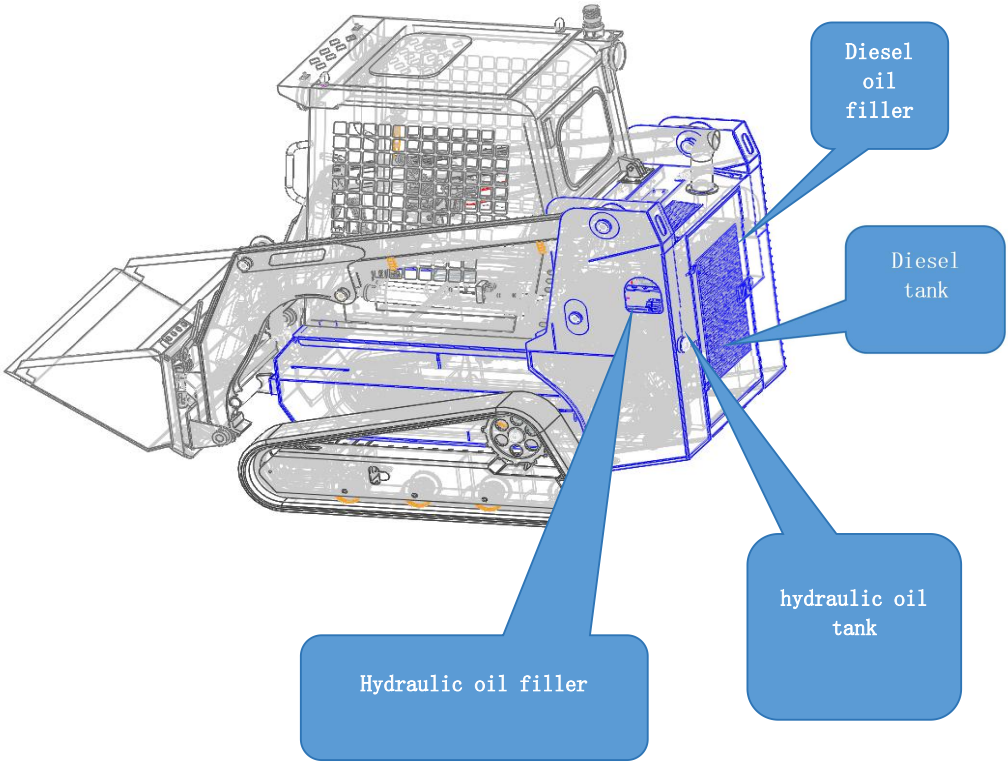
Ensure that waste oil from the machine is collected in a container. Improper disposal of waste oil can be harmful to the environment.

Follow applicable laws and regulations when handling hazardous materials such as lubricants, fuel, filters and batteries.

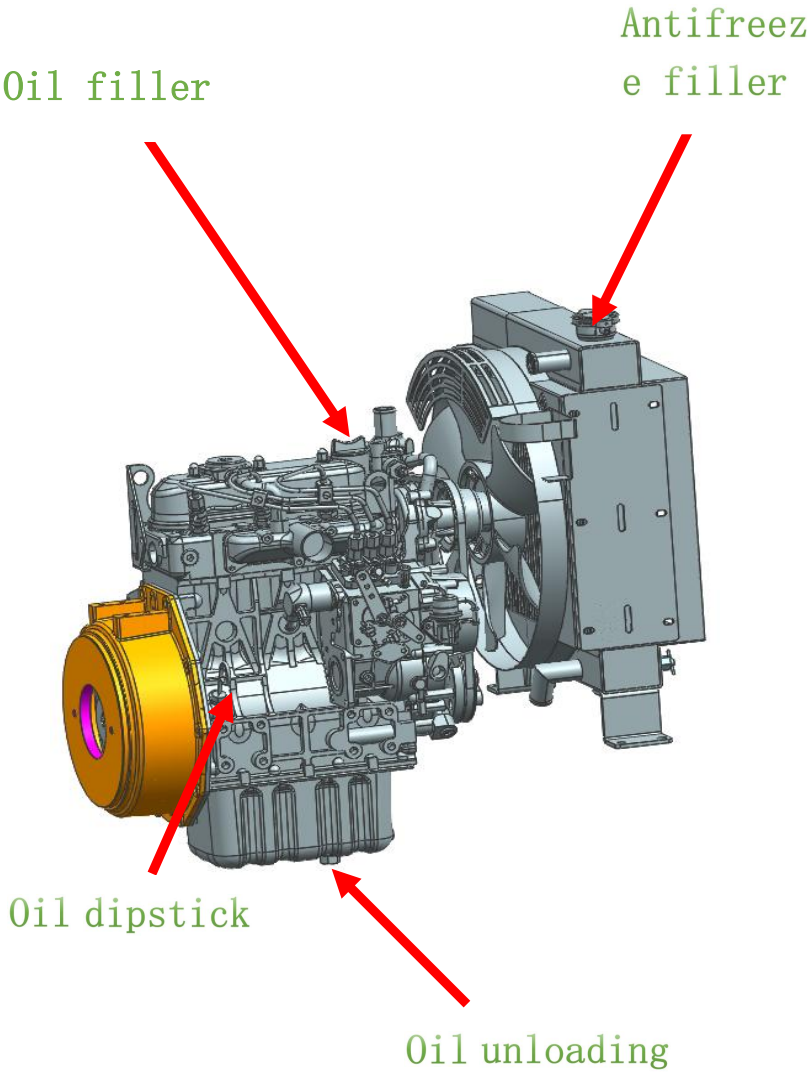
Disposal of hazardous chemicals

Direct exposure to harmful chemicals can cause serious injury.
Hazardous chemicals used in this machine include grease, battery electrolyte, coolants, paints and adhesives.
Please handle hazardous chemicals carefully and properly.

Maintenance Catalog



Cartridge Name	inaugural		routine		model number	note
	timing	Maintenance	timing	Maintenance		
Oil Filter	50H	change (one's address etc)	200H	change (one's address etc)	/	For severe conditions, cleaning and replacement intervals will be shortened (air blowing, not water washing).
Oil return filter	300H	change (one's address etc)	600H	change (one's address etc)	/	
Hydraulic oil outlet filter element	300H	change (one's address etc)	600H	change (one's address etc)	/	
slick						
Oil Name	inaugural		conventional (weapons)		model number	note
	timing	Maintenance	timing	Maintenance		
oil	50H	change (one's address etc)	200H		CD 15W-40 CF-4 15W-40	Choose the right oil for your local temperature
diesel	everyday	replenishment	/	/	92	Use gasoline from regular gas stations
hydraulic oil	300H	change (one's address etc)	600H	change (one's address etc)		
grease	new airport	raise the stakes	8H	raise the stakes		



oil change

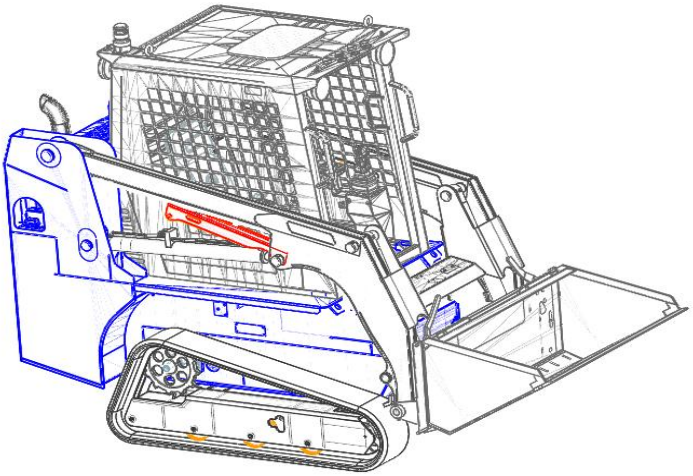
Oil Change Precautions

- Oil changes must be done with the engine hot.
- Do not start the engine during an oil change or until the oil has been drained and new oil has been added.

- An oil fill level close to but not exceeding the upper limit of the dipstick is optimal.
- The oil filter must be changed at the same time as the oil change.

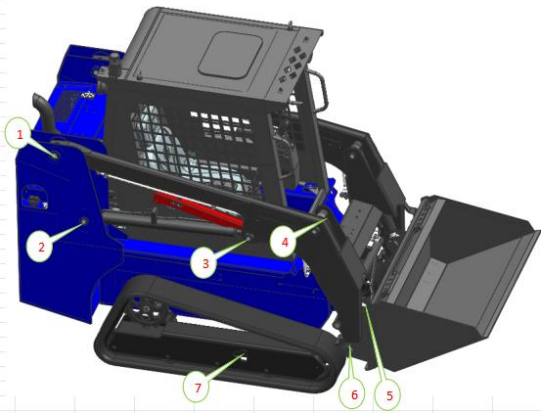
Gasoline should meet the following standards, and this table lists several fuel specifications in force in the world.

World Fuel Code gasoline key indicators				
	category I	Category II	Category III	Category IV
Lead, g/L Not more than	0.013	not detected	not detected	not detected
Sulfur content, % (m/m) Not more than	0.10	0.02	0.003	not have
Oxygen content, % (m/m) Not more than	2.7	2.7	2.7	2.7
Aromatic content, % (v/v) Not more than	50.0	40	35.0	35.0
Olefin content, % (v/v) Not more than	____	20.0	10.0	10.0
Benzene content, % (v/v) Not more than	5.0	2.5	1.0	1.0

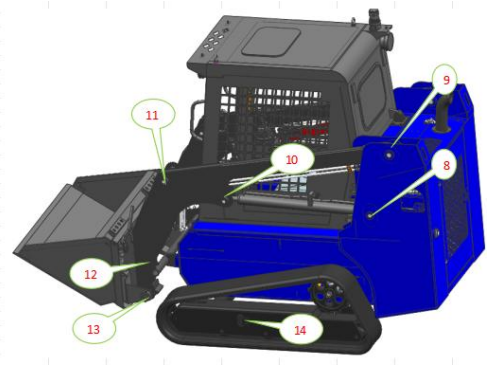


Butter

right side



Lubrication Location Diagram (RS07 Model)



Left side

Caveats:

Gasoline tank filling port, filling gasoline, pay attention to the rear of the body of the engine vapor gas tank cover unscrewed first, using a funnel connected to the tank filling port, and then use the tank bucket to fill gasoline, pay attention to the filling position of the tank, to prevent overfilling, resulting in the tank cover can not be covered, resulting in serious consequences.

- **Fuel tank capacity: 5 liters.**

After refueling, tighten the fuel tank cap clockwise
Hydraulic oil tank filling port, filling hydraulic oil, pay attention to the front of the car body first hydraulic oil tank cover unscrewed, the use of funnels and oil tank filling port connection, and then use the oil tank bucket filling hydraulic oil, pay attention to observe the hydraulic oil window, pay attention to the oil window of the filling position, when the hydraulic oilmore than the oil window red dot marked one-half ofthe time, the hydraulic oil to immediately stop filling, prohibit overfilling, resulting in the oil tank cover can not be covered, resulting in serious consequences.

- **Hydraulic oil tank capacity: 18 liters**
- **Hydraulic oil filling**can be stopped**after completion of filling according to the specified amount.**
- When**the hydraulic oil window**is filled, tighten the tank cap clockwise to prevent oil leakage. The hydraulic fluid can be stopped filling.

Caveats:

Pay attention to filling the grease when filling the grease in bad wind and sandy weather, pay attention to gently press the grease gun a few times first to prevent the wind and sand from blocking the grease

nipple, and avoid the pipe from entering the wind and sand, which will lead to the damage of the machine when you use it.
Pay attention to refill the grease in a good weather environment, pay attention to first gently press the grease gun twice to prevent the dust will grease nozzle blocking, use to avoid the grease pipe into the wind and sand, resulting in wear and damage to the machine parts.

Oil change method

Oil Change Precautions

- Oil changes must be done with the engine stopped.
- During the oil change process and after draining the oil before adding new oil, it is prohibited to start the standby machine and stop the machine when the temperature reaches 80 degrees.
- An oil fill level close to but not exceeding the upper limit of the dipstick is optimal.
- Put the oil catch pan under the oil drain of the gasoline engine and unscrew the oil drain bolt to protect the environment.
- WARNING: Be careful of hot oil burns and dispose of old oil properly.
- Pay attention to the type of oil used.
- Replace with new oil, taking care to check the dipstick level.
- NOTE: The added oil must wait five minutes before checking the level of the oil.
- If the diesel engine is ready to stop using for a long time, it should be drained while it is still hot, coolant, fuel, clean the engine oil sump and oil filter.

EC DECLARATION OF CONFORMITY

Original Declaration

MANUFACTURER.	
Name.	SHANDONG RIPPA MACHINERY GROUP CO., LTD.
Name: SHANDONG RIPPA MACHINERY GROUP CO.	36 meters north of Guang'an Jiayuan,Guang'an Road Jining City, Shandong Province, China

AUTHORIZED REPRESENTATIVE.
Irmin Garbers
WALDERSEESTRASSE 9, 23566 LUBECK, GERMANY
authored to hold technical file on behalf of manufacurer above

herby declares that the below mentioned machine.

description of machinery	
PRODUCT NAME:	HYDRAULIC LOADER Excavator
MODEL/TYPE.	RS07
SERIAL NO.	_____
PRODUCTION YEAR.	_____

IN ACCORDANCE WITH.

machine directive	2006/42/EC en 4741:2022; en 4745:2022
EMC DIRECTIVE	2014/30/EU en iso 137661:2018; en iso 137662:2018

AS WELL AS TO THE FOLLOWING OTHER DIRECTIVES AND THE CORRESPONDING NATIONAL REGULATIONS.

NOISE DIRECTIVE	2000/14/ec & 2005/88/ec, dlgs 262/02

equipment accounting to the definition government by annex i, item 20 of noise directive.
CONFORMITY ASSESSMENT PROCEDURE FOLLOWED.ANNEX VII of 2000/14/EC
NOTIFIED BODY: EUROPEAN CERTIFYINGeuropean certifying organization s.p.a.NB 0714, VIA MENGOLINA 33, FAENZA(RA), ITALY
holder of the technical documentation.MANUFACTURER
MEASURED SOUND POWER LEVEL.92 dB(A)
guaranteed sound power level: 93 dB(A)93 dB(A)
signed on behalf of shandong rippa machinery group co.
stamp&signature : name : shandong rippa machinery group co. _____
NAME : _____
POSITION . _____
PLACE . _____
DATE . _____

Additional list mat Supporting

1. accessories random file An operation

2. and maintenance manual One

3. three-package document of the service

4. certificate qualification

5. certificate Engine manual Engine

6. three guarantees certificate List of

7. market service networks