

# TYPHON

MINI SKID STEER LOADER OPERATION & MAINTENANCE MANUAL (TYPH-0505)



## Product Serial Number

Write your machine model and product serial number on the line provided below. If necessary, provide these numbers to your dealer when you need machine parts or information.

Record these numbers; Keep these records in a safe place. If the machine is stolen, please report the phone number to your local law enforcement agency.



Machine Serial Number	
Engine Serial Number	
Manufacturing Date	
Manufacturer Address	
Dealer Address	

## Intended Usage

Crawler type small sliding loader, designed for compact construction work. The machine is equipped with a quick connect mounting plate, which makes it easy for operators to connect different accessories. This loader is designed to operate at temperatures commonly encountered in earthwork transportation and construction work environments. You may need to provide regulations for operating in extreme temperatures and contact your dealer. Any other use is considered contrary to the intended use.

Only those who are familiar with its uniqueness and relevant safety procedures can operate, maintain, and repair it.

### **Machine Feature - Right Front View**

1. Walking track
2. Machine body
3. Front hood
4. Side protection cover plate
5. Lighting
6. Operation panel
7. Lift arm
8. Front hanger



### **Machine Feature - Left Rear View**

1. Operating platform
2. Track tensioning bolt
3. Engine compartment
4. Exhaust pipe
5. Fuel tank filling port
6. Operating panel
7. Operating the armrest
8. Operating the gear lever



## Operational Control



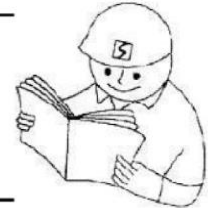
1. Combination of left travel motor and bucket tilt control (push the handle forward, the left track wheel rotates forward, the vehicle turns right, pull the handle backward, and vice versa; push the handle left, the bucket flips up, push the handle right, the bucket flips down).
2. Right travel motor and loader arm lifting control combination (push the handle forward, the right track wheel rotates forward, the vehicle turns left, pull the handle backward, and vice versa; push the handle left, the boom lowers, push the handle right, the boom lifts).
3. Accessory control handle;
4. Air door control rod;
5. Throttle control valve
6. Operate the armrest;
7. Start switch lock;
8. Combination switch of lighting and horn;

9. Indicator light;
10. Work hour counter.
11. Fuel indicator;
12. Main power switch;

## **Safety Rules**



Warning: This safety alert symbol represents important safety information in this manual. When you see this symbol, please carefully read the information below and be alert to the possibility of death or serious injury.



**Safe operation is the responsibility of the operator.**

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**Most accidents are caused by operators not following safety rules. If you are aware of the danger and pay sufficient attention before an accident occurs, you can avoid it.**

**Please carefully read the safety regulations during maintenance, operation, and refueling. Please refer to the basic precautions and operations under hazardous conditions below.**



**: This means being careful when operating the mini slide**

**Make your safety**

Before delivering to the user, each loader has undergone thorough testing and inspection. You should carefully operate within the first 100 hours to keep all components in good condition. Rough operation can shorten service life or reduce efficiency.

For new equipment, you should pay attention to the following:

After starting, idle the machine for 5 minutes.

Avoid operating the loader at full speed.

Avoid quick starts, rapid acceleration, unnecessary emergency stops, or turns.

When you replace the filter element, clean the dust and scrape it. If working in harsh environments, please check for all potential hazards.

Please check the working hours on the schedule.



Hazard warnings are important as these symbols are closely related to the safety of the operator.



warn

The warning on the machine is for your safety, contrary to the warning, it can cause personal injury or death.



dangerous

The danger symbol indicates that the operator or equipment is in danger. Contrary to the danger indication, it can cause serious and fatal injury.



important

This symbol indicates that the operator must follow this step to avoid damaging the machine.

### Safety warning symbols

Safety warning signs refer to "**warning**", "**danger**", and "**safety**", representing many important safety information of the machine. When you see these symbols, you should be aware of the possibility of serious injury or death. Please follow the following safety instructions.

#### Operating Instructions

The loader needs to run for 100 hours in order to fully utilize its capabilities.

The new loader should perform the following three steps when in use, which are:

Hours	load
Within 10 hours	About 60%
Within 100 hours	About 80%
100小时后	After 100 hours



warn

*Excessive use of machines can worsen their condition and reduce their lifespan.*

- Before the first 100 hours, you should use it with caution.
- Before starting the loader
- Before using the machine, please read this manual first.
- Keep the steps clean and replace them promptly when injured.

Before starting the engine, all controlled accessories should be placed in their primary position.



*Warning: To avoid accidents and fatal injuries, operators must carefully read and study this manual before operation. When operating the loader, step on the steps.*

#### Daily inspection

To maintain the machine in good working condition, the following checks should be carried out:

- Engine cooling system
- Tire
- Loose or damaged components
- Safety signs
- Control panel
- Check the liquid level of coolant, engine oil, hydraulic oil, and fuel for leaks
- Regularly check and add lubricating oil.
- Check instruments and indicator lights. Check if the machine is functioning properly.
- Add lubricating grease to the lubricating oil point every day.
- Tighten the screws

#### Safe driving

Attention: Try to keep the machine in a low load state to ensure its stability. When the operating arm loads, the weight core of the loader will be changed. So don't make quick turns or walk on slopes. When walking and making quick turns, be sure to lower your big arms. Keep loading and turning on level ground.

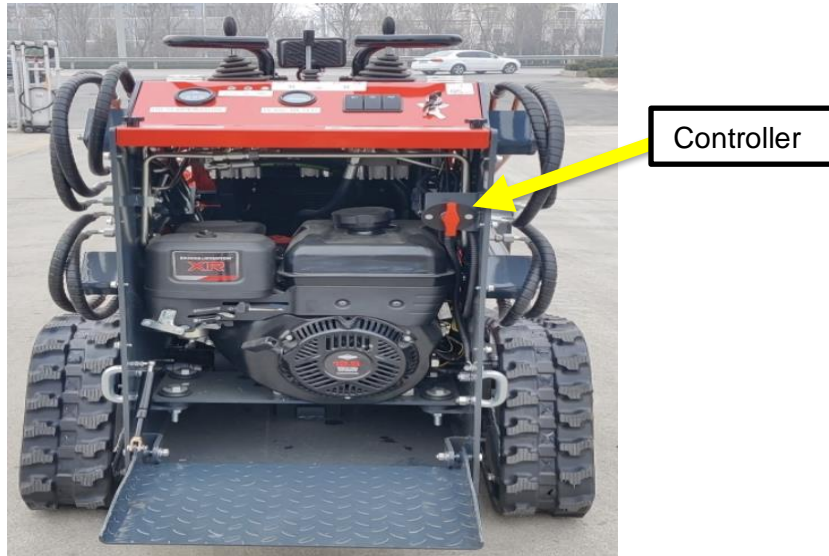
When the machine is walking, lower the boom to keep the bucket at a certain distance from the ground to avoid obstacles.



**dangerous**

Do not start or rotate the upper arm quickly, as it may cause the machine to flip and cause serious fatal injury. Please operate carefully at low speed.

## Control System



### 1. Electrical system protector

Turn the main power switch handle clockwise to turn on the power supply

Turn the main power switch handle counterclockwise to disconnect the power supply

### 2. Engine start

Preparation before starting the engine: Turn on the main power switch, wait for the panel indicator light to light up, open the engine air volume regulator, push up a little hand throttle, and turn the key clockwise. After the engine starts, the engine air volume regulator needs to be turned off.

Note: If the engine cannot start, turn the key counterclockwise, wait for a while (approximately 10-15 seconds), and then restart.

### 3. Engine shutdown

When turning off the engine, it is necessary to push the hand throttle down to the minimum speed state, turn the key counterclockwise, the engine will stop working, and turn off the main power switch.

### 4. Hand throttle

Move the hand throttle (rabbit) up to increase the engine speed,

Move the hand throttle (turtle) down to reduce the engine speed.



Warning: When the hydraulic oil temperature reaches 65 degrees Celsius, the radiator fan will automatically be activated.



## Engine Compartment Maintenance



## HT-360 Indicator Instruments

Hydraulic oil temperature gauge



OIL TEMPERATURE

It displays the hydraulic oil temperature, and when the temperature reaches 65 degrees Celsius, the radiator fan is activated to cool the hydraulic oil.

Hour Count



It is used to record the working time of the engine.

## Combination switch



Headlight and horn switch, which is used to provide work lighting and warning

## **Preparation before work**

### Collect Information

A successful job starts before you start working. The first step in planning is to review the work and workplace

### Existing Information

All assignments

Review work plan

Review blueprints or other plans. Check information about existing or planned structures, elevations, or potential simultaneous proposed work.

Arrange traffic control

If working near roads or other traffic areas, please contact local authorities for safety procedures and regulations.

### Emergency Service Plan

Have local emergency and medical facility phone numbers at hand.

Check if you have the right to use a phone.

Ground penetration work

### Notification Call Service

Call regional One Call or similar services to locate and label existing lines. Call a public utility department in your area that has not joined One Call.

### Ground work

Positioning overhead lines

Pay attention to the position and height of all overhead lines at the work site, ensuring that fully lifted accessories and/or loads do not touch the lines.

### Inspect the site

Before transporting equipment, the work site should be inspected.

Check the following:

Changes in altitude, such as hills or other open ditches  
Obstacles, such as buildings, railway crossings, or streams

### Signs for public facilities

Traffic conditions

Passageway

Soil Type and Condition

### Identify hazards

If the equipment penetrates the ground, please identify safety hazards and classify the construction site.

Hazards on the construction site may lead to death or serious injury.

Use the correct equipment and working methods. Use and maintain appropriate safety

### **Notification:**

Wear personal protective equipment, including safety helmets, safety eyes, and hearing protection.

Do not wear jewelry or loose clothing.

*Notify One Call and companies that do not subscribe to One Call. Before excavation or drilling, all utility notification regulations should be followed.*

### Confirm the location of previously marked underground hazards

Clearly mark the construction site and keep the audience away from the site. Remember, the workplace is classified according to hazards, not according to the lines being installed.

### **Classification work site**

Inspect the work site

Inspect the construction site and surrounding areas for underground hazards, such as:

- Notice of 'Buried Public Facilities'
- Utility facilities without overhead lines
- Gas or water meters
- Junction box
- Floor box
- Lamppost
- Manhole cover
- Comply with the regulations of the United States Department of Labor regarding excavation and trenching (Part 1926, Subpart P) and other similar regulations
- Sunken ground

- Contact One Call (888-258-0808) and any utility companies that do not subscribe to One Call.
- Have experienced positioning equipment operators clean within a range of 20 feet (6) meters) on both sides of the work path. Verify the previously marked lines and cable locations.
- Mark the location of all buried public facilities and obstacles.
- Classify the work site.

## **Category**

The construction site is classified based on the existing underground hazards.

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<b>If working</b>	<b>Then classify the construction site as</b>
Within 10 feet (3 meters) of buried electrical wires	electric
Within 10 feet (3 meters) of the natural gas pipeline	natural gas
Sand, granite, or mixture that can produce crystalline silicon (quartz) dust In concrete	Crystalline silica (quartz) dust
Other hazards within 10 inches (3 meters)	Other

**\*\*Note:** If you have any questions about the classification of the construction site, or if the construction site may contain unmarked hazards, please take the steps outlined earlier to identify the hazards and classify the construction site before starting work. Application precautions

Once classified, preventive measures suitable for the construction must be taken.

**Precautions for electric operation site**

- Use one or both methods.
- Expose the line through careful manual or soft excavation.
- Turn off services while work is in progress. Have the power company test the circuit before resuming service.

**Precautions for natural gas operation site**

Please use one or both methods except for locating the equipment against the wind from the gas pipeline.

### Expose lines through careful manual or soft excavation

Turn off gas during work. Test the line before the natural gas company resumes service

### Preventive measures for crystalline silica (quartz) dust

When excavating, sawing, or drilling through materials that may contain crystalline silica (quartz) dust, please follow OSHA or other guidelines for contact with crystalline silica.

### Other construction site precautions

You may need to use different methods to safely avoid other underground hazards. Talk to those who understand the hazards present at each site to determine what preventive measures should be taken or whether work should be attempted.

## **Inspect supplies and prepare equipment**

### Supplies

Fuel

Key

Lubricant

Personal protective equipment, such as helmets and safety glasses

Fluid level

Hydraulic oil

Battery charging

Engine oil

### Conditions and functions

Air filter, oil filter, hydraulic oil filter

Tire

Pump and motor

Hoses and valves

Signs, Warnings, and Protective Covers  
attachment

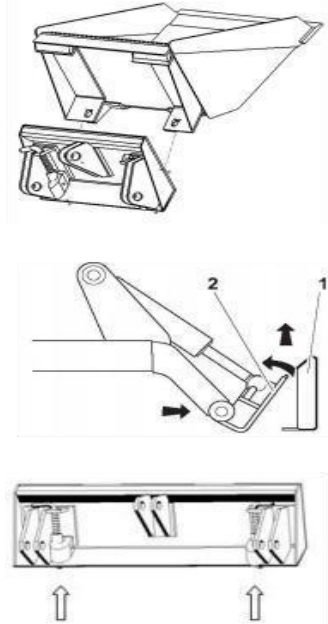
If necessary, install a fire extinguisher near the power unit, but away from possible ignition points. Fire extinguishers for fuel fires and electrical fires should always be classified. It should comply with legal and regulatory requirements.

### Connecting accessories

Important: Only use attachments approved by TYPHON. Attachments can affect the stability and operational characteristics of the unit.

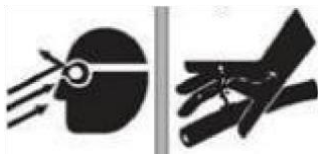
Important: Before connecting the device, ensure that the installation board and receiver board are free of dirt and debris.

1. Ensure that the locking handle on the mounting plate (as shown in the figure) is away from the center of the accessory.
2. Start the engine.
3. Install with a forward tilt.
4. Place the installation plate on the upper lip of the receiving plate on the attachment.
5. Lift the lifting arm when tilting the rear mounting plate. Important note: Sufficient attachments should be Provided To clean the ground. The installation plate should be completely tilted backwards.
6. Ensure that all control devices are in the neutral position.
7. Turn off the ignition and remove the key.
8. Rotate the locking pin handle towards the center of the mounting plate to secure the attachment to the lifting plate upper



Note: To ensure correct connection, verify its bottom

## hydraulic hose



The locking pin can be seen under the accessory receiver board. If the attachment requires hydraulic power to operate, please connect the hydraulic hose.

Liquid or air pressure can penetrate the skin, causing serious injury or death. Stay away.

## Notification:

1. Escaping pressurized fluids can cause damage or puncture of the skin and toxins.
2. Before disconnecting the hydraulic lines, please turn off the engine and operate all control devices to release pressure. Lower, block, or support any raised components.
3. Cover the joint with a thick cloth and slightly loosen the joint nut to release residual pressure. Capture all liquids in a container.
4. Before using the system, please check that all connections are tight and all wiring is undamaged.
5. Liquid leaks are difficult to detect. Use a piece of cardboard or wood instead of using your hands to search for leaks.
6. Wear protective clothing, including gloves and eye protection.
7. If you are injured, seek medical attention immediately from a doctor familiar with such injuries.
8. Hot areas may cause burns, so do not touch them after cooling. Attention: Hydraulic couplings, hoses, and fluids may become hot. When connecting and disconnecting hydraulic hoses, please wear gloves and wait for the unit to cool before touching the hydraulic components.





1. Cycle the accessory drive control to release residual pressure on the hydraulic coupling.
2. Ensure that all control devices are in the neutralisation.
3. Remove dirt and debris from the hydraulic coupling.
4. Connect the male connector on the accessory to the female connector on the unit.
5. Connect the connector on the accessory to the male connector on the unit.
6. Connect the female connector on the box drain hose to the box drain connector on the device.
7. Ensure that the connection is secure by pulling on the hose.

#### Drive – Start the engine

1. Ensure that all control devices are in neutral.
2. If necessary, suffocate the cold engine.
3. Move the throttle to the half open position.
4. Turn the ignition switch to the start position and release it when the engine starts.
5. Push in the throttle ring after the engine warms up.

#### Emergency stop: Turn the ignition switch to stop.

#### General operation of the drive.

1. Pull the lift arm control device to lift the mounting plate (and accessories) off the ground.
2. Move both wheel drive controllers forward or backward.
3. Adjust the throttle valve as needed.

### Guidelines for Slope Operations

Attention: When working on slopes, maintain attachments/loads. Drive slowly and always be cautious.


Working up and down, the heavy end of the equipment is on an uphill. The weight distribution varies depending on the attachment and load. For example, an empty bucket makes the rear of the unit a heavy end, while a complete bucket makes the front of the unit a heavy end. Most of the attachments approved by TYPHON make the front end of the unit a heavy end. Avoid starting, stopping, or turning on slopes. If you must turn, keep the heavy end of the unit uphill.

Do not place the parking device on the ground, return all control switches to the neutral position, turn the ignition switch to the stop position, and use the parking brake.

### Shutting Off the Machine

1. Lower the lifting arm to the ground.
2. Move all controls to the neutral position.
3. Run the engine at low idle and let it cool for three minutes.
4. Turn the ignition switch to the stop state.
5. Remove the key.

**Attention: When using the parking brake, the crew must not park on a slope. When stopped, move all control devices to the neutral position.**

 warn
When the fuel tank is tilted, the angle of the fuel tank should not exceed 12°, otherwise the oil will overflow.

### 11. Machine memory

Flushing equipment



Spray water on the equipment to remove dirt and mud, especially at the landing gear.

Attention: Do not spray water onto the operator's console. Electrical components may be damaged. Wipe it off.

Open the engine hood and remove any debris from the inside of the device. Remove mud from the track or tires.

- Lower the connector to the ground.
- Ensure that all control devices are in neutral.



- Turn off the engine.
- Loosen the locking pin by turning the handle away from the center of the accessory.
- If used, please cycle the accessory drive control and disconnect the hydraulic hose.
- Move the brake to its natural position.
- Start the engine.
- Tilt the front and rear units of the installation plate away from the accessories.
- Ensure that all tools and accessories are loaded onto the trailer.

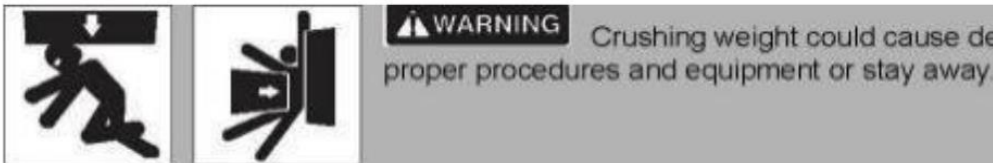
### **Servicing**

Service Precaution Warning: Incorrect procedures may result in death, injury, or property damage. Learn to use equipment correctly.

Note: Unless otherwise instructed, all services should be performed with the engine turned off. Before opening the engine hood for inspection or repair, stop the engine and apply the parking brake.

Before performing any service, the engine should be allowed to cool down. For engine maintenance instructions, refer to the engine manufacturer's manual. Before repairing the equipment, please lower the accessories to the ground.

### **Working under the lifting arm**



**Attention: Before working under the lifting arms, both lifting arms should be supported. Or stay away from the raised lifting arm.**

Warning: Explosion may occur. Serious personal injury or equipment damage may occur. Follow the instructions carefully.



**Notification:**

1. Sparks can cause the battery to explode
2. Electronics components are easily damaged



Proper lubrication and maintenance can protect equipment from damage and malfunctions. The service intervals listed are for minimum requirements. In extreme cases, machine maintenance is more frequent. Use only recommended lubricants.

**Notification:**

Only use genuine components, filters, and approved lubricants to maintain warranty. Use 'Service Record' to record all required services to your machine.

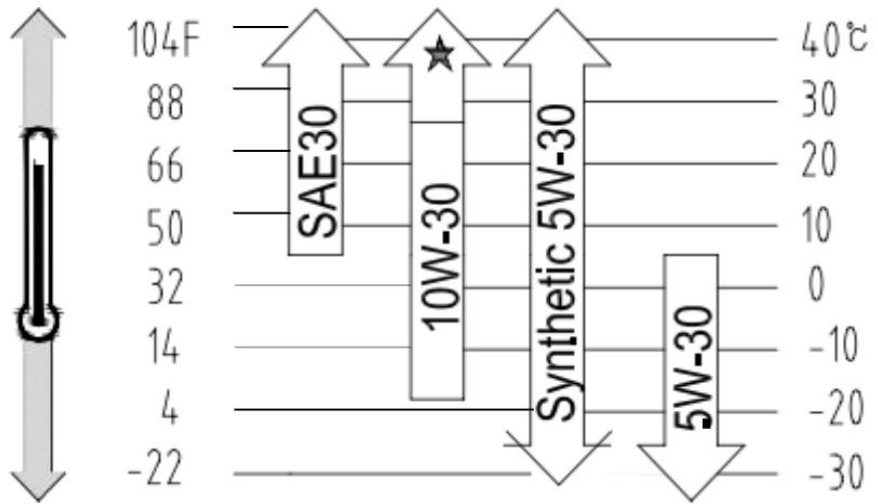


**Lubricate position**

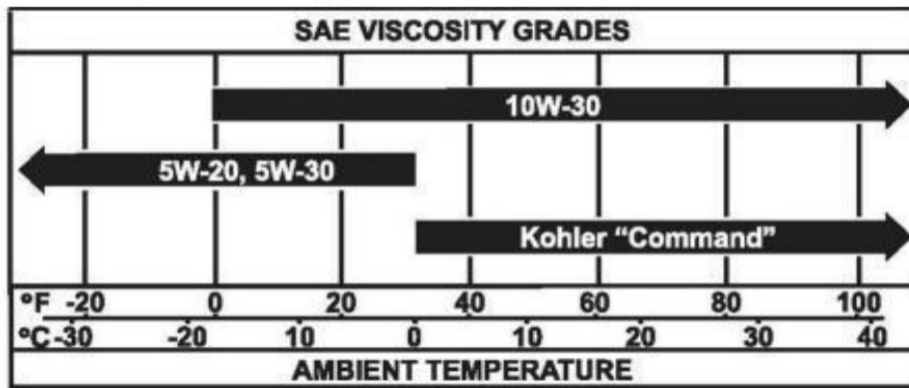
Before starting work, please lubricate the position marked by the blue arrow in the figure with lubricant (as the visible position is not comprehensive, all positions with oil injection holes need to be lubricated except for those marked by the arrow).

To avoid dirt, please clean the dirt on the connecting parts before lubrication. If the parts are damaged or lost, please replace them promptly. To avoid losing control of lubrication, please try to reduce dirty fluid as much as possible.

Briggs and Stratton engine oil temperature map



Kohler engine oil temperature map



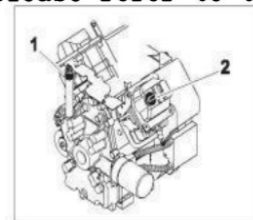
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Temperature range anticipated before next oil change

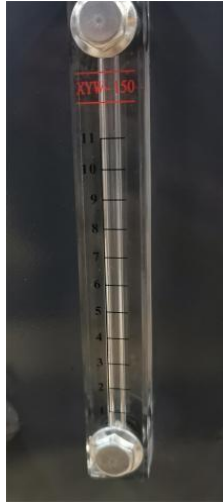
For more information on engine lubrication and maintenance, please refer to the engine manufacturer's manual.

10 hours

Check the engine oil level



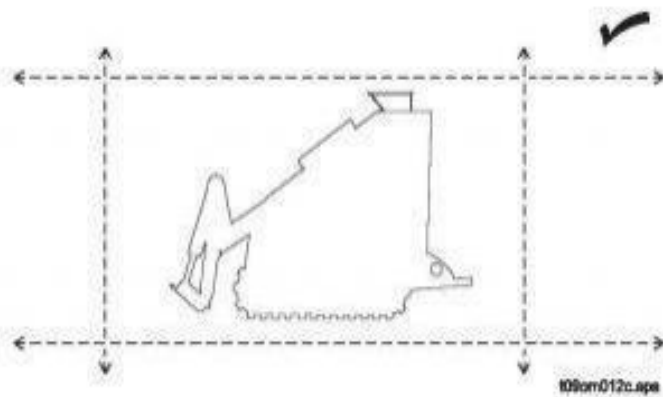
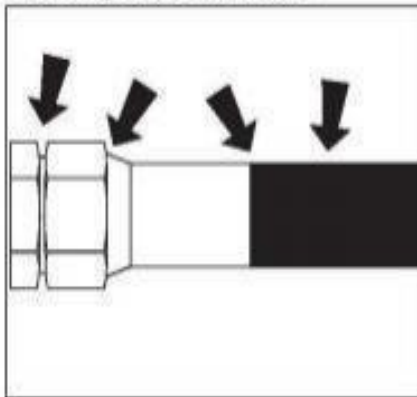
- Check the oil level at the opening of the dipstick every 10 hours. oil
- The level should be at the top of the mark, and if it is lower, add 10W30. inspect
- On a horizontal surface with the unit and at least 15 minutes later Stop the engine.
- Important: Use the oil specified in "Engine Oil Temperature"



- Check hydraulic fluid level
1. Liquid level gauge
  2. Oil temperature sensor
  3. Breather
  4. Return oil filter element

Check the hydraulic fluid level every 10 hours. After the engine is turned off and the liquid cools down, maintain the liquid level between marks 9 and 11 (as shown in the above figure).

### Check Hydraulic Hoses



Check hydraulic hoses for leaks every 10 hours

Warning: Liquid or air pressure may puncture the skin, causing personal injury or death. Stay away.

### Precautions:

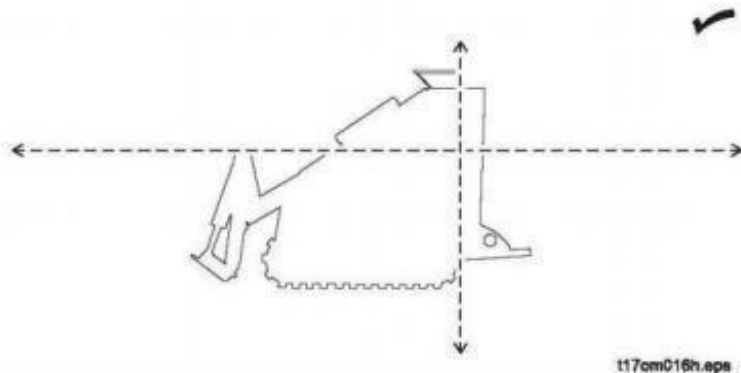
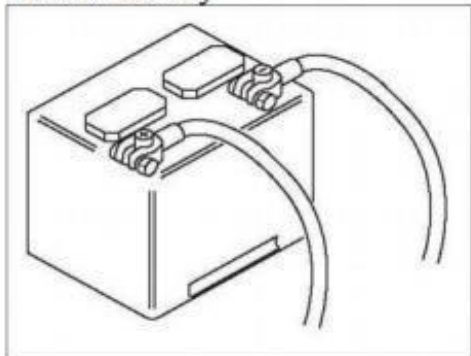
- 1 Escaping pressurized liquid can cause damage or puncture of the skin, leading to poisoning.
- 2 Before disconnecting the hydraulic pipeline, please turn off the engine and operate all control devices to release pressure.
- 3 Lower, block, or support any raised components. Cover the joint with a thick cloth and slightly loosen the joint nut to release residual pressure. 3.
- 4 Capture all liquids in the container. Before using the system, please check if all connections are tight and all wiring is undamaged.

- 5 Liquid leaks may be difficult to detect. Use a piece of cardboard or wood instead of using your hands to search for leaks.
- 6 Wear protective clothing, including gloves and eye protection.
- 7 If you are injured, seek medical attention immediately from a doctor familiar with such injuries.

50 hours

position	task	write down
<b>Traction device</b>	check the battery	
	Check the drive belt	
	Check the oil filter	
	Clean the oil cooler	
	Replace the hydraulic oil filter	

**Check Battery**



Normal battery: It can be used for 10-15 days in winter and 5-6 days in summer, Then you should check the electrolyte by disconnecting the circuit on the battery, releasing the ventilation plug, and checking the electrolyte in each unit. If the liquid level is below the minimum limit, please add distilled water.

Maintenance-free battery: Check the battery every 50 hours to keep the battery and terminals clean and free from corrosion. Regularly check the hydrometer of the pore shaped liquid, whose colour will vary with the specific weight of the electrolyte, and can display the battery power status and electrolyte level. When the hydrometer displays green, it indicates that the battery level is normal; When a small amount of green or black is displayed, it indicates that the battery needs to be charged; When displayed in light yellow, it indicates that the battery is faulty and needs to be repaired or replaced.

**Battery storage:** Store the battery in a cool and well-ventilated place, avoid direct exposure to sunlight and avoid dampness.

Do not use metal tools to impact or place them on the battery during installation. Install and remove the battery: Stop the engine and remove the key.

First remove the negative cable, then remove the positive cable.

Loosen the installation bolts and remove the battery.

Confirm the electrodes on the battery.

When installing the battery, the installation method is the opposite to the disassembly method.

**Note: Make sure not to reverse positive and negative.**

**Operation notice:** During operation, take care of safety equipment such as glasses and rubber gloves according to your work situation.

Be careful when handling, as there is acid in the battery. If acid comes into contact with your skin or cloth, please wash immediately, otherwise it may cause serious injury or death. Keep the battery away from fire and heat.

The battery can only be used to start the engine, otherwise it may cause battery damage or fire.

Please note when using batteries in winter: In winter, due to the lower temperature, the electrolyte will loosen and the battery power will decrease, making it more difficult to start than in summer.

Please pay attention to the leakage of the battery. Once the engine is started but a malfunction occurs, do not immediately restart. Wait for approximately one minute, let the battery store voltage again, and then restart

**Attention: Please pay special attention to checking the battery and circuits during winter.**



**WARNING**

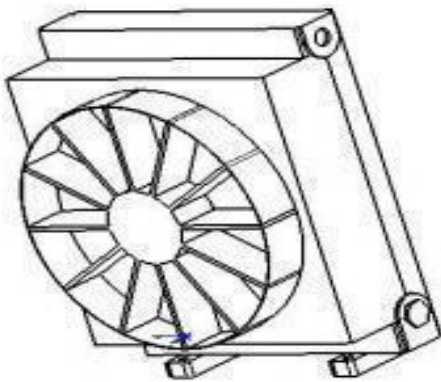
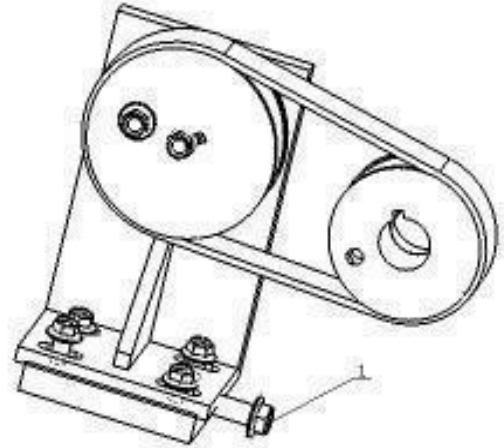
Explosion possible. Serious injury or equipment damage could occur.  
Follow directions carefully.

**NOTICE:**

- Battery gas can explode. Keep sparks and flames away from battery.
- Always remove negative (-) battery cable first and replace it last.
- Battery electrolyte is sulfuric acid and poisonous. Will burn skin and cause blindness if splashed into eyes. Wash hands after working around battery.
- Never disconnect battery terminals with engine running. Voltage spike may occur and ruin electronic control modules or other components.

### Check the drive belt

Check the drive belt every 50 hours. Look at the picture on the right, if necessary, adjust the belt tension using mark 1. If Cracking, stretching, or severe wear.



### Clean the oil cooler

Clean the oil cooler every 50 hours. Clean more frequently Operate under dusty conditions. Clean with compressed air or Low-pressure water.

Attention: Be careful not to damage the cooling fins of the cooler.

### Replace hydraulic oil

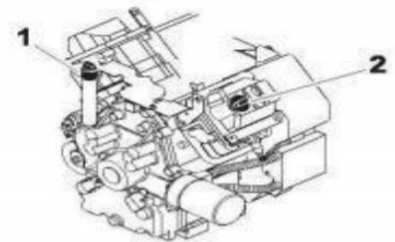
Replace the hydraulic oil after 50 hours for use, and then Replace every 250 hours.

### **100 hours**

#### **CHANGE ENGINE OIL**

Change the engine oil every 100 hours. Oil discharge at the drain plug (1)

Add GEO 10W30 to the packing (2) until the oil level is visible  
Sign Important: Use the oil specified in "Engine Oil Temperature"



### **200 hours**

#### **Check spark plugs and gaps**

Note: For operating instructions, please refer to the engine operator manual.

#### **CHANGE OIL FILTER**

Replace the oil filter every 200 hours.

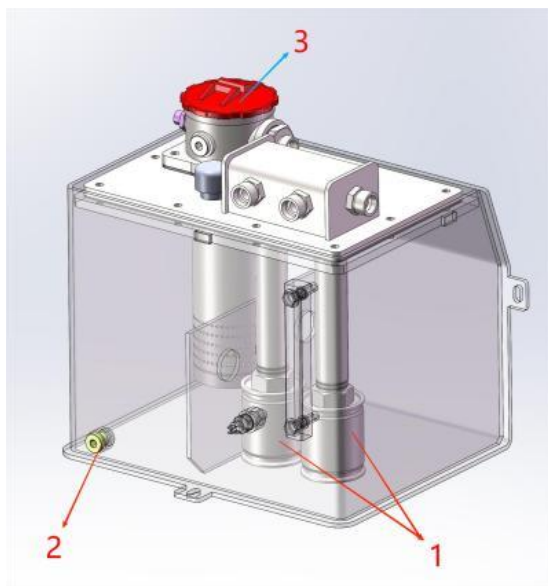


250 hours

position	task	write down
Traction device	Replace the hydraulic oil filter	
	Replace the air filter and check the internal components	

### Replace the hydraulic oil filter

Replace the hydraulic oil filter every 250 hours (see the figure on the right).

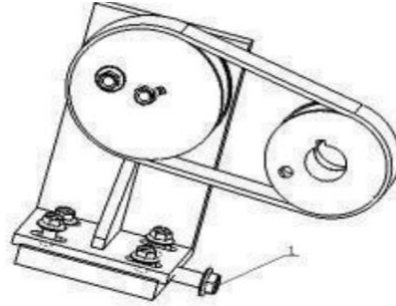


Oil suction filter element 2. Oil drain bolt 3. Oil return filter element  
 Change hydraulic oil within 500 hours  
 Change the hydraulic fluid every 500 hours.  
 Discharge fluid  
 Drain port 2 and add hydraulic oil from port 3 until fluid is added  
 The oil level is between marks 9 and 11 on the oil gauge.

### Replace the drive belt as needed

position	task	write down
traction	Replacing the drive belt	
	Jump Start	





When worn or damaged, replace the drive belt as needed.



**Attention: Hot areas may cause burns.**

Do not touch it after cooling.

Attention: Before touching components or performing any services, please wait for the engine to cool down.  
Wait for cooling.

1. Remove the key from the ignition switch.
2. Adjust the belt tension.

**Warning: Moving parts may cut off hands or feet.**



Attention: When the engine is running, the hood should be opened for inspection or maintenance.



Warning: Warning: Possible loss of control. The machine may crush you or others. Learn how to use all controllers. It can only be started and operated from the operator's position.

Attention: Do not leave the operator station while the engine is running.

1. Start the engine and check its operation.
2. Stop the engine, open the hood, and recheck the belt alignment.

## Jump Start Unit



**Warning: Incorrect procedures may result in death, injury, or property damage. Use the equipment correctly.**

### **Precautions:**

1. The park is in a flat area.
2. Place all drive controls in neutral 3. Lower all cleared attachments.
3. Turn off all electrical loads.
4. Turn off the engine and remove the key from the ignition switch.6. Block the wheels or tracks.



Warning: Explosion may occur. Serious personal injury or equipment damage may occur.  
Handle with caution.

### Precautions

1. Lead acid batteries discharge explosive hydrogen gas during charging.
2. Do not smoke, generate sparks, or use flames around the battery.
3. Do not lean against the battery when connecting.
4. Do not allow vehicles to come into contact during jump start.
5. Wear eye protection and remove metal jewellery and watch.
6. Do not attempt to jump start batteries that are leaking, bulging, severely corroded, frozen, or otherwise damaged.
7. Never short circuit battery terminals for any reason.
8. Do not hammer the battery column or cable terminals.

### Before starting the machine

Electronic components are easily damaged by surges. Jump starting may damage electronic devices and electrical systems, and is not recommended unless in extreme situations. Use high-quality large diameter jumper cables that can carry large currents (400 amperes or more). Cheap cables may not allow sufficient current to start dead/discharged batteries.

Before executing the program, please carefully read all steps and review the instructions.

## Stickers



**⚠ DANGER**

Moving to dig teeth can kill you or cut your arms or legs. Stay away.



**⚠ DANGER**

Rotating the axis will kill you or crush your arms or legs. Stay away.



**⚠ DANGER**

Electric shock. Contact with electrical wires can cause death or serious injury. Know the location of the route and stay away from it.



**⚠ DANGER**

Deadly gas. Lack of oxygen or the presence of gases can lead to disease or death, providing ventilation.



**⚠ WARNING**

Hazards on the construction site may lead to death or serious injury. Use the correct equipment and working methods. Use and maintain appropriate safety equipment



**⚠ WARNING**

Squeezing the weight can cause death or serious injury. Use appropriate programs and equipment, or stay away from the equipment. Moving parts can cut off hands or feet. Stay away.



**⚠ WARNING**

Explosion possible. Serious personal injury or equipment damage may occur. Carefully follow the instructions



**⚠ WARNING**

Incorrect procedures may result in death, injury, or property damage. Learn to use equipment correctly



**⚠ WARNING**

Incorrect control functions may lead to death or serious injury. If the control device cannot operate according to the instructions, please stop the machine and carry out repairs.



Checking fiber optic cables may cause permanent visual damage. Do not check the end of optical fibers or unknown cables.



Liquid or air pressure may penetrate the skin, causing injury or death.  
Stay away.



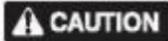
Possible escape. The machine may run over you or others. Learn how to use all controls. Start and operate only from the operator's position.



There may be a fire or explosion. Smoke may ignite and cause burns. Don' smoke, no flames, no sparks.



Mobile traffic hazards. May cause death or serious injury. Avoid moving vehicles and wear high visibility clothing, Post appropriate warning signs.



Flying objects may cause harm. Wear a safety helmet and safety glasses.



Hot areas may cause burns. Do not touch it after cooling.



Exposure to high noise levels may lead to hearing loss. Hearing protection.



Possible decline. Sliding or tripping may cause injury. Keep the area clean.  
Battery acid may cause burns. Avoid contact.



Improper handling or use of chemicals can lead to illness, injury, or equipment damage. Follow the instructions in the label and Material Safety Data Sheet (MSDS).



Emergency procedures

Before operating any equipment, please check the emergency procedures and ensure that all safety precautions have been taken.

Emergency Stop – Press the emergency switch to stop

Before operating any equipment, please check the emergency procedures and ensure that all safety precautions have been taken.

When working near cables, please remember the following:

Electricity follows all grounding paths, not just the path with the least resistance.

Pipes, hoses, and cables will lead electricity back to all equipment.

Low voltage current may cause injury or death. Almost one-third of work-related electric shocks are caused by contacts below 440 volts. Most electric shock strikes are not obvious, but the signs of strikes include:

- power failure
- smoke
- blast
- Popup noise
- electric arc

If wire is damaged

If you suspect that the wires are damaged, do not move them while on the tractor. Stay on the tractor and take the following actions. The order and degree of action depend on the situation. Warn people nearby that an electric shock has occurred. Instruct them to leave the area and contact the public utility department. Lift the attachment and drive away from the nearby area.

Contact the power company and turn off the power

Before obtaining permission from the power company, do not return to the work site or allow anyone to enter the area.

If you suspect that the wires are damaged and you are not on the tractor, do not touch the tractor.

Take the following actions. The order and degree of action will depend on the situation. Leave the area. The ground may be electrified, so take small steps and keep your feet together to reduce the risk of electric shock from one foot to the other.

Contact the power company and turn off the power.

Before obtaining permission from the power company, do not return to the work site or allow anyone to enter the area.

If a natural gas pipeline is damaged

If you suspect that the natural gas pipeline has been damaged, please take the following actions. The order and degree of action will depend on the situation.

If it can be completed safely and quickly, please immediately turn off the engine. If it can be completed safely and quickly, please remove any ignition sources. Warn others that a natural gas pipeline has been cut off and they should leave the area. Leave the construction site as soon as possible.

Immediately call your local emergency phone number and utility company. If the construction site is on the street, traffic is prohibited from driving near the construction site. Do not return to the construction site after approval from emergency personnel and public authorities company

If the optical cable is damaged

Do not inspect the cut ends of optical fibres or unknown cables. Vision may be impaired.  
If the machine catches fire

Perform the emergency shutdown procedure and then take the following actions. The order and degree of action will depend on the situation.

Immediately move the battery disconnect switch (if equipped) to disconnect the connection position. If the fire is small and there is a fire extinguisher, try extinguishing it.

If the fire cannot be extinguished, leave the area as soon as possible and contact emergency personnel.

### Main dimensions and parameters

Item	Metric	Inch		
Max working height (A)	2490 mm	98 inch		
Max pin height (B)	1670 mm	65.7 inch		
Max dump height (C)	1600 mm	63 inch		
The highest point discharge distance (D)	388 mm	15.3 inch		
Bucket swing angle ( $\beta$ )	55°	55°		
Bucket unloading angle ( $\gamma$ )	30°	30°		
Opening-closing angle ( $\theta$ )	25°	25°		
Angle of departure ( $\alpha$ )	8°	8°		
Total height (H)	1390 mm	54.7 inch		
The height from the ground (F)	90 mm	3.5 inch		
Wheelbase (G)	636 mm	25.0 inch		
No bucket length (J)	1540 mm	60.6 inch		
Total width (W)	1033 mm	40.7 inch		
Bucket width (K)	980 mm	38.6 inch		
Total length (L) (with bucket)	1800 mm	70.8 inch		
Turning radius (R)	1307 mm	51.5 inch		
Engine	Rated power	Briggs& Stratton 13.5HP		
	Rotating speed (rpm)	3000		
Noise (Db)		≤95		
Hydraulic System	Hydraulic pressure (Mpa)	17		
	Cycle time (s)	Raise	Dump	Lower
		4.27	1.34	3.31
Performance parameters		Metric	inch	
	Load weight (kg)	300 Kg	660 Lb	
	Bucket capacity	0.2 m <sup>3</sup>	7 ft <sup>3</sup>	
	Speed	0-5.5 Km/h	0-3.4 mlie/h	
	Operating weight	1000kg	2200lb	

## **Support**

1. Please notify the dealer immediately of any equipment malfunction or malfunction
2. Please be sure to provide the model, serial number, and approximate date of the equipment you purchased. This information should be recorded and archived at the time of purchase.
3. If the damaged parts are returned to the dealer for inspection and warranty consideration during the warranty period.
4. Order genuine replacement or repair parts from your authorized dealer. The use of components from other manufacturers may invalidate warranty considerations.
5. Please contact your dealer for publications and videos related to the safety, operation, service, and repair of your equipment.

For information on on-site and personalized training, please contact your dealer.  
If the device is replaced, there will be no notification.