

TERROR STOMP 508

Manual Book



Table of Contents

1.	Inspection Items-----	1
2.	Preface-----	2
3.	Specifications-----	5
4.	Component Identificatio-----	7
5.	Optional Parts and Accessories-----	9
6.	Operation Guide-----	12
7.	Operation Procedures-----	19
8.	Attachments-----	26
9.	Maintenance and Repair-----	29

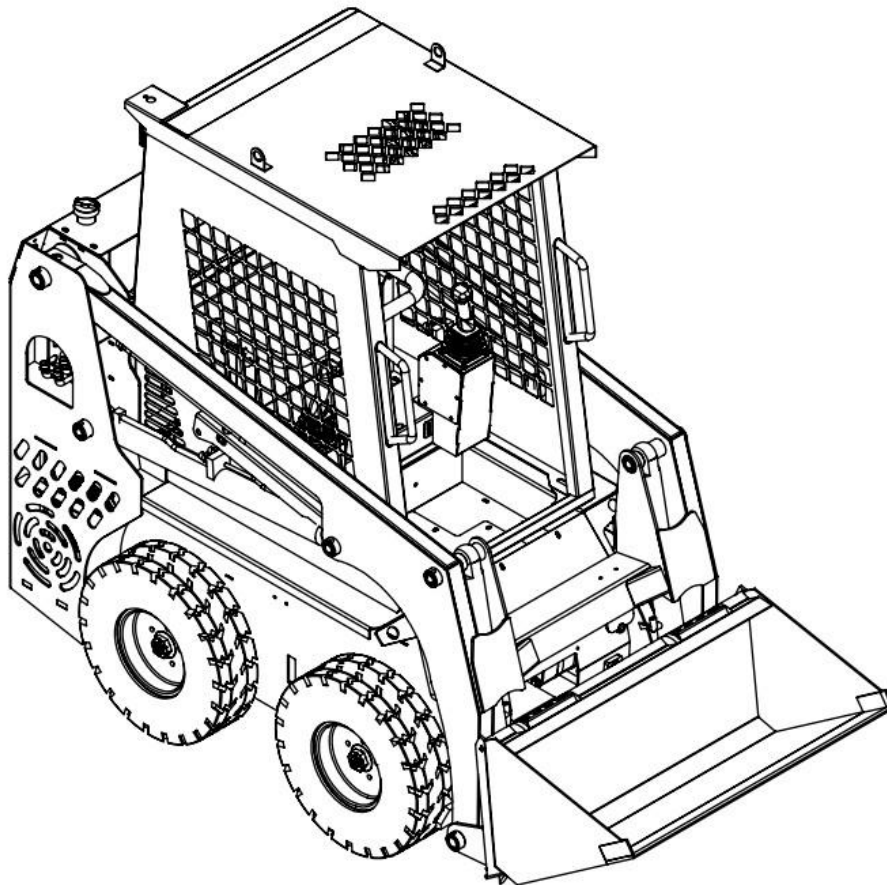
Inspection Items (Before Delivery)

Please check the following important items:

- Check if the equipment is damaged during transportation. Inspect for dents, looseness, or missing parts; repair or replace parts if damaged.
 - The battery is securely installed without cracks. Battery cables are tightly connected, and the electrolyte level is appropriate (electrolyte is pre-filled in the battery for domestic sales).
 - Lift and tilt cylinders, hoses, and joints are free of damage, oil leakage, or looseness.
 - Filters are free of damage, oil leakage, or looseness.
 - Radiator hoses and joints are free of damage, leakage, or loose connections.
 - Wheels are correctly and securely installed, and tires are properly inflated.
 - All joint bearings of the loader are lubricated, and grease lubrication fittings are not missing or damaged.
 - The liquid levels of the hydraulic system oil tank, engine crankcase, and drive sprocket box are filled to the appropriate height.
 - All protective parts, covers, and sleeves are securely and correctly installed.
 - Start the loader engine, test-run the machine, and check if all action controls function correctly.
 - Driving control levers work normally without damage or jamming.
 - The neutral adjustment of the driving control levers is correct, and the loader does not move autonomously when in neutral.
 - The engine cannot be started until the driver is seated and the safety bar is lowered; additionally, the lift arm can only be lowered when the driver is seated, the safety bar is lowered, and the ignition key is in the "Run" position.
-

Preface

Congratulations on owning a STOMP Skid Steer Multi-Function Loader! This manual contains guidance and safety recommendations for the operation, handling, lubrication, maintenance, and adjustment of the STOMP Skid Steer Multi-Function Loader. The purpose of this manual is to ensure the safe maintenance of the machine and enhance its performance. Our company continuously improves the design and manufacturing of this machine. Subsequent design improvements may result in minor changes that are not reflected in this manual. For information about your specific machine or questions regarding this manual, please contact TYPHON or consult after-sales service. Wish the STOMP Skid Steer Multi-Function Loader brings you good luck!



Serial Number Table

Item	Details
Complete Machine Serial Number	
Engine Serial Number	
Production Year	
Manufacturer's Address	
Sales Address	

Serial Number

Use the loader serial number when ordering parts or seeking technical support. Previous or subsequent models (distinguished by serial numbers) may use different parts and require different maintenance procedures.

1. Loader Serial Number

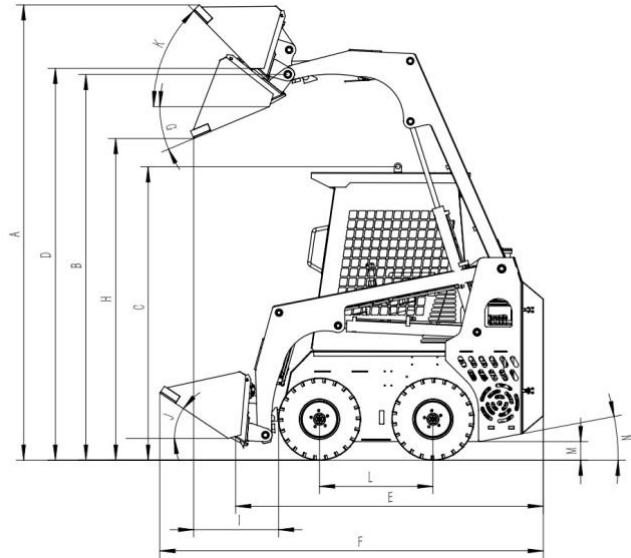


2. Engine Serial Number

Specifications (STOMP)

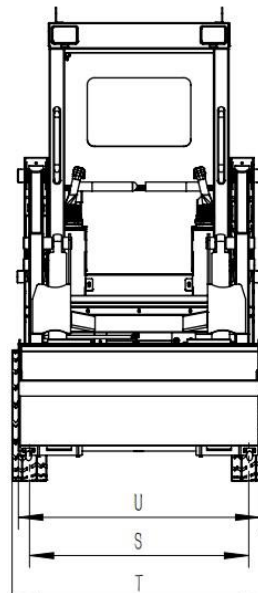
STOMP Multi-Function Loader (Side View) (Unit: mm)

Item	STOMP
Total Length (F)	2570
Total Width (T)	1065
Total Height (C)	1940
Wheelbase (L)	760
Ground Clearance (M)	120
Total Operating Height (A)	3050
Hitch Pin Height (B)	2580
Dump Height (H)	2150
Dump Reach (I)	560
Forward Tilt Angle (J)	33°
Rear Tilt Angle (K+G)	68°
Bucket Dump Angle (G)	23°
Departure Angle (M)	10°



STOMP Multi-Function Loader (Top View) (Unit: mm)

Item	STOMP
Total Length (A)	2570
Total Width (B)	1065
Bucket Width (C)	1010



Note: The dimensions provided are for the machine equipped with standard tires and a bucket. Dimensions may vary when equipped with other types of buckets. All dimensions are in millimeters. Specifications are subject to change without notice.

Specifications (Continued) (Main Components)

1. Engine

Item	Specification
Model	Rato R999
Type	Inline 2-cylinder naturally aspirated
Rated Power	36HP
Fuel Type	Gas
Starter Motor	12V - 2kW
Generator	12V - 65A
Emission Standard	

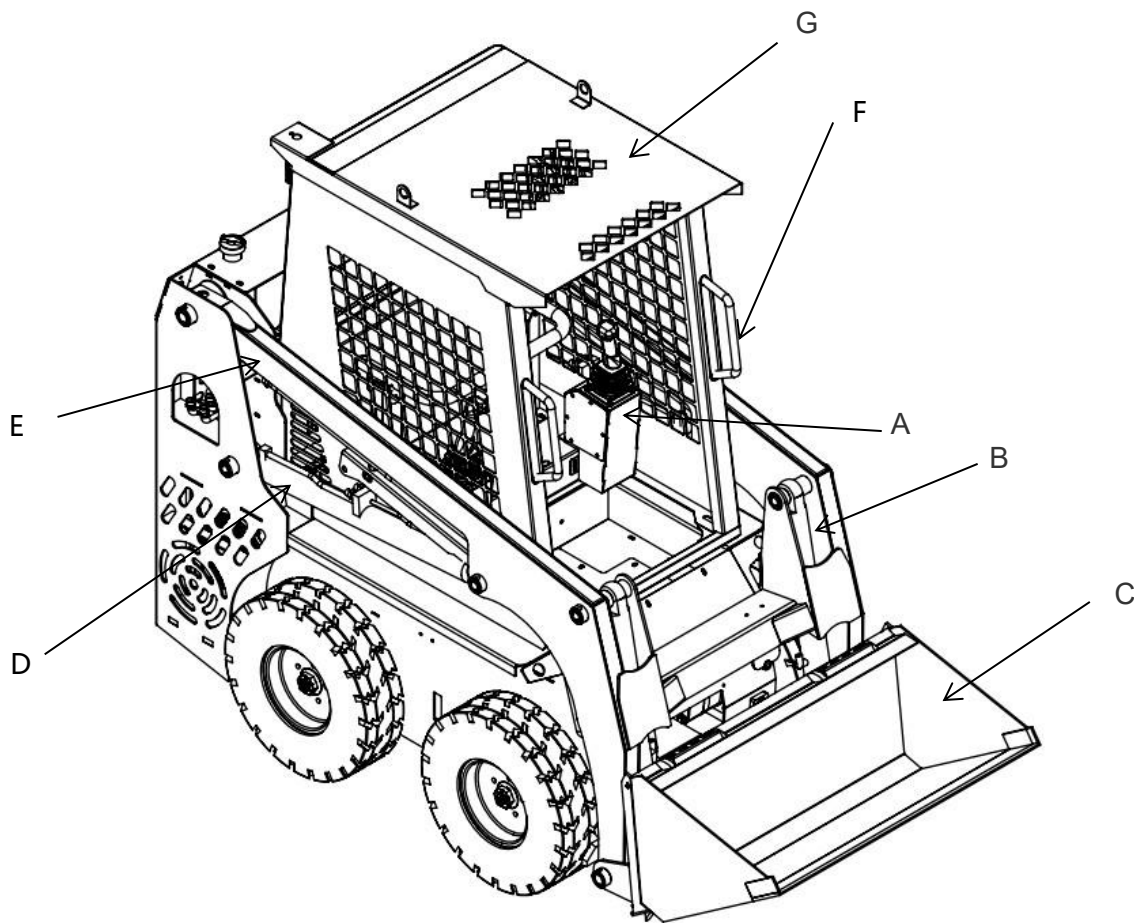
2. Main Pump

Item	Specification
Type	Axial piston pump
Displacement	50 cc/rpm
Maximum Working Pressure	28 MPa
Flow Rate/Rated Speed	28 L/min (at 2200 rpm)

Component Identification

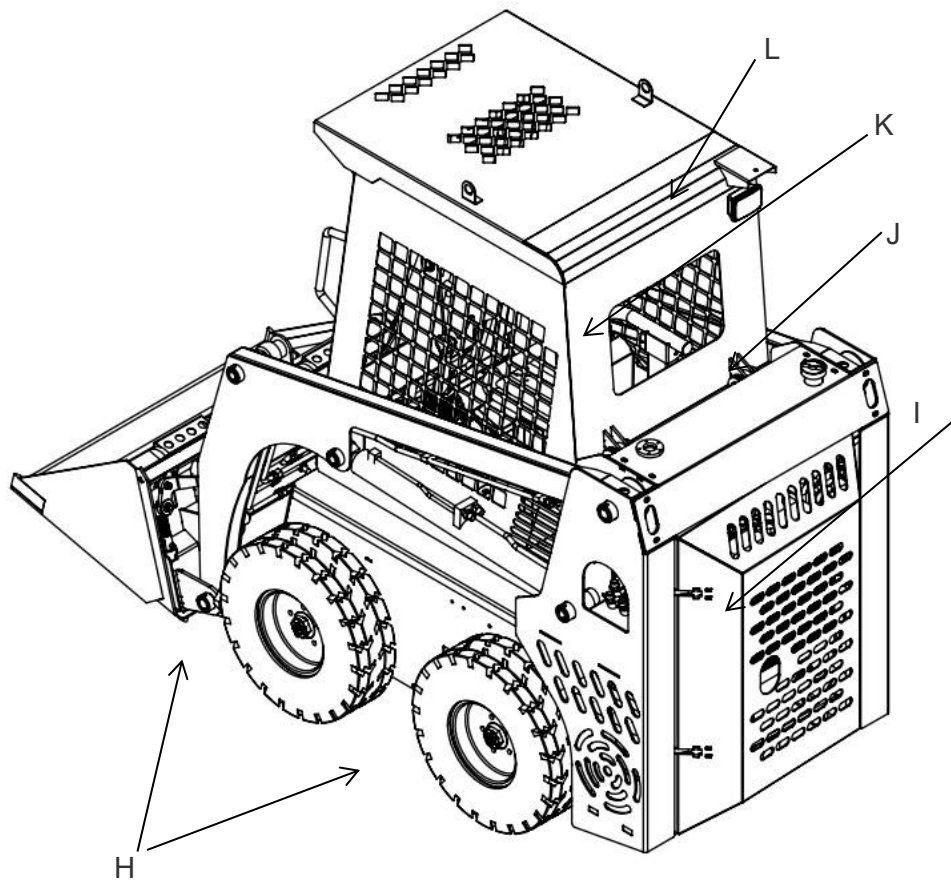
Front Part

- A---Control Handle
- B---Tilt Cylinder
- C---Bucket
- D---Lift Cylinder
- E---Lift Arm
- F---Grapple
- G---Cab



Rear Part

- H---Tire
 - I---Engine Hood
 - J---Fuel Tank Cap
 - K---Safety Bar
 - L---Rear Light
 -
-



Optional Parts and Accessories

All STOMP loaders are standard-equipped with the following items:

- Quick coupling device
- Cab
- Safety belt
- Safety bar
- Lift arm support

The following parts vary by model:

Tires

- Standard tire

Cab

- Black seat cushion (standard)
- Front/rear lights (standard)
- Sunroof (standard)
- Rear window (standard)
- Front window (standard)
- Horn (optional)

Instrument Panel

- Instruments and indicator lights (standard)

Hydraulics

- Automatic leveling system (optional)
- Auxiliary hydraulic components (optional)

Specifications are subject to change without notice. Notes: 1. "Standard" refers to standard equipment. 2. "Optional" refers to factory-installed optional parts.

Safe Operation Instructions



Warning

These operating instructions must be followed before using and maintaining the machine. Read the Operation and Maintenance Manual and the warning labels (stickers) on the machine. Follow the warnings and operating guidelines in the manual during repair, adjustment, and maintenance. After adjustment, repair, or maintenance, verify that the machine functions correctly. Failure to comply with these instructions may result in personal injury.

Safety is the Driver's Responsibility

Most accidents occur due to the driver's failure to follow safe operation instructions. Accidents can be avoided if you exercise sufficient caution and recognize hazardous situations before they occur. Read the safe operation instructions before maintaining, operating, or refueling this skid steer loader. Basic preventive measures and operations for hazardous situations are outlined in these instructions.



This symbol indicates caution; pay attention to your safety before operating the skid steer loader.

Especially before operating the skid steer loader!



Warning

The driver must understand all the following operating guidelines.

It is your responsibility to understand the equipment operation and maintenance guidelines in the user manual and comply with relevant rules.



Warning

All loader warnings are for your safety.

Improper refueling operations when operating the loader may sometimes lead to hazards or even fatal injuries. Do not perform operation, maintenance, or refueling (gasoline or lubricating oil) until you fully understand this procedure.



This symbol indicates that you must exercise caution; otherwise, it will pose a fatal hazard to the driver and bystanders. It is affixed to the loader to alert you to hazardous situations. All warnings on the loader panel and in the operation manual are marked with this symbol. We urge you to be fully aware of all potential hazards and avoid accidents.

Safe Operation Instructions (Continued)

Each piece of equipment undergoes careful testing and inspection before delivery to the user. To ensure all components operate properly, special care must be taken during the first 100 hours of operation after purchase. Rough or improper operation will reduce the machine's service life and efficiency. For new equipment, pay special attention to the following:

- Allow the engine to warm up properly for 5 minutes after starting.
- Avoid operating the loader at full speed.
- Avoid sudden starts, acceleration, unnecessary sudden stops, and sharp turns.
- When replacing the oil filter element, clean dust and debris from the filter housing.
- If the operating environment is harsh (e.g., dusty, muddy), check for potential hazards before starting the loader.
- Check the operating hours on the hour meter regularly.

 *Danger*,  *Warning*,  *Important*.

These symbols are closely related to the safety of the loader and the operator.

 Warning
The warnings on the machine and in the manual are for your safety; failure to comply may result in personal injury or death.
 Warning
The danger symbols on the machine indicate an immediate hazardous situation near the operator or equipment. Failure to comply with danger-related operating instructions may result in serious injury or death.
 Warning
This notice indicates that specific steps must be followed to prevent machine damage.

Operation Guide

1. For New Loaders

Working Environment and Conditions

The loader requires approximately 100 hours of running-in to fully achieve its designed performance. New loaders should be used in three phases as shown in the table below, and overloading or overuse must be avoided within the first 100 hours.

 Warning	
Overusing the machine will degrade its performance and shorten its service life.	
Operating Hours	Load Capacity
Within 10 hours	Approximately 60% of rated capacity
Within 100 hours	Approximately 80% of rated capacity
After 100 hours	Approximately 100% of rated capacity

Use the loader with caution within the first 100 hours.

2. Preparation Before Starting the Loader

- Read the Operation and Maintenance Manual thoroughly before using the loader.
- Use the bucket or attached steps and hold the grab handles when entering or exiting the loader.
- Use the non-slip pedals installed on the loader to prevent slipping during entry/exit. Keep the non-slip pedals clean and replace them immediately if damaged.
- Pull the seat adjustment lever to position the seat for comfortable operation (ensure easy access to pedals and control levers).
- Fasten the safety belt and adjust the buckle to sit between your hips (not too loose or too tight).
- Lower the safety bar to the locked position.
- Before starting the engine, ensure all control levers are in their neutral (rest) positions.

 Warning	
Operators must receive proper training and guidance before operating the loader. Untrained operators may cause injury or death.	

 Warning	
To avoid injury or death during loader operation:- The safety bar must be lowered.- The seatbelt must be securely fastened.- Keep your feet on the pedals at all times.	

3. Daily Inspection

The engine must be in good operating condition. Perform the following inspections daily:

- Engine cooling system (check for leaks, coolant level).

- Cab, safety belt, safety bar, and lift arm (check for damage, loose parts).
- Tires and tire pressure (check for cuts, bulges, and proper inflation).
- Loose or damaged components (e.g., bolts, hoses, guards).
- Safety labels (check for legibility, damage, or missing labels).
- Instrument panel (check for cracked glass, functional indicators).
- Check the fluid levels (coolant, engine oil, hydraulic oil, fuel) and inspect for leaks.
- Check and replenish lubricating oil at regular intervals.
- During operation, monitor the instruments and lights for abnormal readings.
- During operation, check for unusual noises, vibrations, or malfunctions.
- Apply grease to all grease-lubricated points daily.
- Tighten loose bolts and fasteners.

4. Instrument Panel



1. Ignition Switch



OFF: Normal position when the engine is shut down. Remove the key when the engine is not in use.

ON: Normal position when the engine is running.

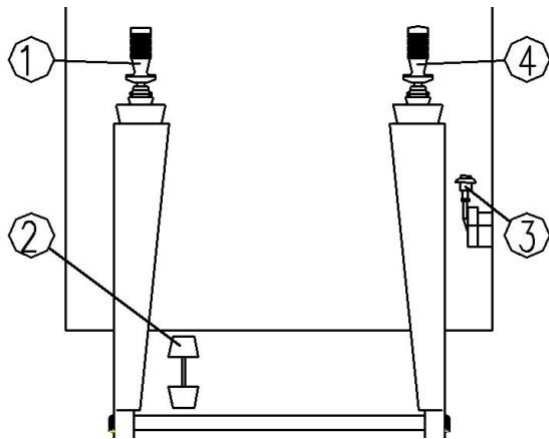
START: Turn the key to this position to start the engine. *Note: The control levers must be in neutral before starting the engine.*

2. Headlight Switch

3. **Warning Light Switch**

4. **LCD Instrument**

5. **Control System**



1. Left Control Lever
2. Right Attachment Pedal
3. Left Attachment Pedal
4. Right Control Lever
5. Accelerator (Hand Throttle)

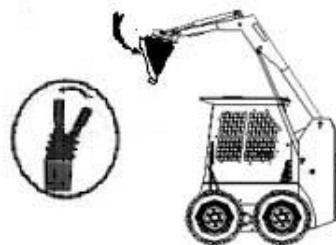
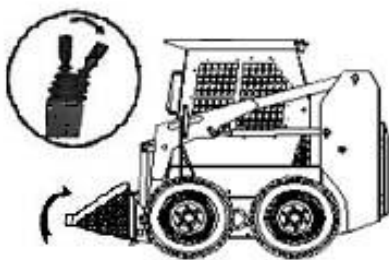
Control Lever Configuration: Standard Configuration

Bucket Operation



Warning

The movement speed of the bucket and lift arm is controlled by the force applied to the control lever.



- Push down the left control lever to tilt the bucket backward (used for loading materials into the bucket).
- Pull up the left control lever to tilt the bucket forward (used for unloading materials).

Lift Arm Operation

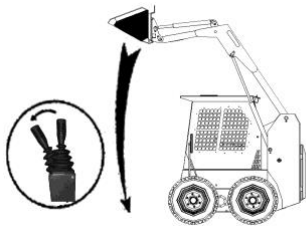


- Push down the right control lever to raise the lift arm (used for loading materials from the bucket into trucks or other vehicles).

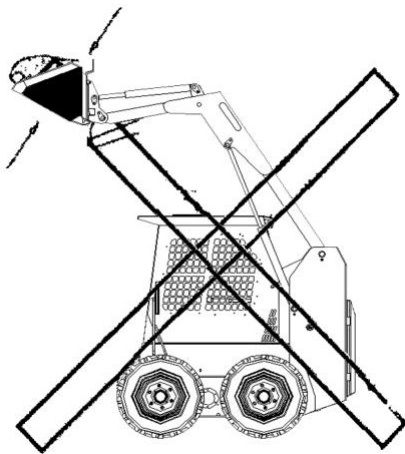


Warning

Operate the hydraulic control levers slowly when loading or unloading materials. Sudden operation may cause the loader to tip forward or overturn.



- Pull up the right control lever to lower the lift arm (used for lowering the loaded bucket and dumping materials).



●

Automatic Leveling System (Optional)

When the lift arm is raised or lowered, the bucket moves up/down simultaneously to maintain a horizontal position automatically. This prevents material spillage and reduces machine vibration.



Danger

Do not travel or turn with the lift arm raised. This may cause the loaded material to spill or the machine to overturn, resulting in injury or death.



Warning

Do not dump materials onto obstacles. This may cause materials to enter the cab or the machine to tip backward, resulting in injury or death.

6. Travel Operation

- When traveling, lower the lift arm completely and raise the bucket to a height sufficient to clear obstacles.



Danger

Rapid travel or turning with the lift arm raised may cause the machine to overturn, resulting in injury or death. Operate slowly and carefully.



Warning

When traveling with the loader, lower the bumper and operate the control levers smoothly. Sudden operation of the control levers is dangerous. The machine cannot move if the bumper is not lowered.



Warning

When parking the loader, shut down the engine and raise the bumper.



Warning

Avoid sudden movement of the control levers when operating them; always operate slowly.

Basic Travel Operations

- Push both control levers forward by the same distance to travel straight forward.
- Pull both control levers backward by the same distance to travel straight backward.



Warning

Before reversing, ensure there are no obstacles behind the machine.

- Keep the left control lever in the neutral position and push the right control lever forward to turn left. The loader will also turn left if you pull the left control lever back to neutral while traveling forward.

**Warning**

Turning with the lift arm raised may cause the loader to overturn, resulting in injury or death.

- Keep the right control lever in the neutral position and push the left control lever forward to turn right. The loader will also turn right if you pull the right control lever back to neutral while traveling forward.
- Keep the right control lever in the neutral position and pull the left control lever backward to turn left while reversing. The loader will also turn left while reversing if you pull the right control lever back to neutral.
- Keep the left control lever in the neutral position and pull the right control lever backward to turn right while reversing. The loader will also turn right while reversing if you pull the left control lever back to neutral.
- Pull the left control lever fully backward and push the right control lever fully forward to perform a 360° left turn.

**Warning**

Sudden turning or stopping with the lift arm raised may cause the loader to overturn, resulting in injury or death.

- Push the left control lever forward and pull the right control lever backward to perform a 360° right turn.

**Warning**

Sudden travel or turning with the lift arm raised and a heavy load in the bucket may cause the loader to overturn.

- Whenever possible, operate and travel on level ground. Exercise extreme caution when working on slopes.

**Warning**

When the engine operates in an enclosed space, ensure adequate fresh air ventilation and avoid excessive exhaust concentration. Engine exhaust contains odorless, colorless toxic gases that can cause unconsciousness and death.

**Warning**

Do not use the starter motor for more than 15 seconds at a time. Prolonged use will overheat and damage the starter motor. Allow a 1-minute cooling period between consecutive starter motor uses.

**Warning**

Do not start the engine unless you are seated with the seatbelt fastened and the safety bar lowered. Failure to fasten the seatbelt may result in serious injury or death.

Operation Procedures

1. Starting the Engine

Starting in Normal Temperature Conditions

1. Adjust the seat position to ensure comfortable operation of pedals and control levers.
2. Fasten the seatbelt and adjust the buckle to sit between your hips.
3. Lower the safety bar.
4. Place the attachment pedals in the "Off" position.
5. Ensure the travel control levers are in the neutral position.
6. Turn the ignition switch to the "ON" position; the rear warning light will illuminate. *Note: If the warning light does not turn off after the engine starts, shut down the engine immediately.*
7. Turn the key to the "START" position and release it once the engine starts.
8. After the engine starts, the key switch will automatically return to the "RUN" position.
9. Allow the engine to warm up for 5 minutes. *Note: Do not use alternative preheating systems; this may cause explosions and result in injury or death.*

Starting in Low-Temperature Conditions

1. Follow the steps for starting in normal temperature conditions.
2. In low-temperature environments, do not turn the ignition switch directly to the "START" position to start the loader.
3. If the temperature is below 0 ° C, use the following methods to facilitate engine starting: Replace the engine oil with a grade and viscosity suitable for the starting temperature (refer to Page 58).

- a. Ensure the battery is fully charged. *Note: If starting fails, wait at least 3 seconds before turning the switch back to the "ON" position (after switching it to "OFF").*



Warning

Warming up the loader at medium engine speed with light load can extend its service life.

2. Jump-Starting



Warning

To avoid personal injury when jump-starting with another vehicle, ensure the vehicles do not come into contact. Keep sparks, flames, and lit cigarettes away from the battery. Lead-acid batteries release explosive gases when charging or when the engine is running. Wear safety glasses when working near the battery.

- When the battery is discharged and cannot power the starter motor, jump-starting or battery replacement is required.
- Follow these steps for jump-starting: Check that the battery electrolyte level is correct and the vent caps are tightly secured.

- Place a damp cloth over the vent caps.
- The assisting battery must be 12V.
- The vehicle used for jump-starting must have a negative ground system.
- Connect one end of the positive jump cable to the positive terminal of the discharged battery.
- Connect the other end of the same cable to the positive terminal of the assisting battery.
- Connect one end of the second jump cable to the negative terminal of the assisting battery, and the other end to the engine block or a grounding point farthest from the discharged battery.
- Start the engine following the normal starting procedure.
- After starting, disconnect the cables in the reverse order of connection.

3. Stopping the Loader

1. Park the vehicle on level ground. *Note: Avoid parking on slopes. If parking on a slope is unavoidable, lower the bucket to the ground, engage the handbrake, and block the tires (see Figure A).*
2. Move the gear lever and travel control levers to the neutral position.
3. Lower the lift arm completely and place the bucket edge on the ground.
4. Allow the engine to idle for approximately 5 minutes.
5. Set the throttle to the idle position.
6. Turn off the main power switch.
7. Turn the key to the "OFF" position and remove it.

Throttle Device

- The STOMP loader is equipped with a hand throttle (see Figure A).
- Use the hand throttle to adjust the engine speed.



Warning

Suddenly stopping the engine without allowing it to cool down will significantly reduce the engine's service life. Do not shut down the engine suddenly except in emergency situations.

4. Storing the Loader

Short-Term Storage (After Completing Work)

To prepare the loader for the next use after work, follow these steps:

1. Remove mud and water from the machine body.
2. Park the loader on a concrete or hard surface; if not available, park it on a wooden floor.
3. Drain any accumulated water from the fuel system.
4. Battery capacity decreases in low-temperature environments; cover the battery at night or remove it and store it in a warm area.

Long-Term Storage

If the loader will be stored for an extended period, take the following preventive measures:

1. Thoroughly clean all components.
2. Lubricate all lubrication points without omission and replace the engine oil.
3. Apply a thin layer of grease to the exposed parts of the cylinder piston rods.
4. Drain the cooling water from the gasoline engine block and radiator.
5. Fully charge the battery, then remove it and store it in a cool, dry place.
6. Store the loader indoors. If outdoor storage is unavoidable, place wheel chocks and cover the machine with a waterproof tarpaulin.



Warning

During long-term storage:- Start the engine.- Move the loader forward and backward.- Operate each pedal.Perform the above operations at least once a month to lubricate all components.



Warning

After long-term storage:- Remove the drain plugs from the fuel tank and oil tank to drain accumulated water.- After starting the engine, allow it to warm up sufficiently and inspect all components carefully.

- When the bucket is fully loaded, travel up and down slopes with the heavier end facing the higher side of the slope.

Bucket fully loaded

5. Traveling

1. Always warm up the loader before operation.
2. New loader operators should practice driving in an open area with no bystanders until they can operate the machine skillfully and efficiently in any working environment.
3. Raise the bucket only to a height sufficient to clear obstacles on uneven roads.
4. Working on slopes is dangerous; avoid working on slopes with an angle exceeding 10°.



Warning

The center of gravity shifts significantly when working on slopes. Do not force the machine to work on slopes; whenever possible, work on level ground.



Warning

Operating the vehicle at medium engine speed with light load during warm-up can extend its service life.

- When the bucket is empty, travel up and down slopes with the heavier end facing the higher side of the slope.

Bucket empty



Warning

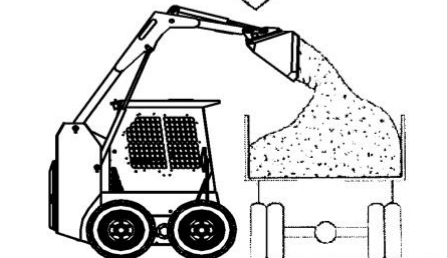
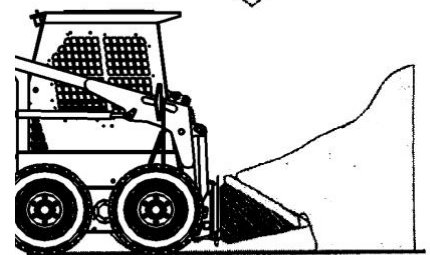
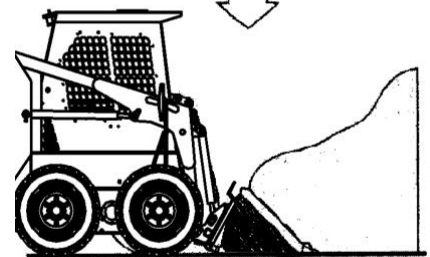
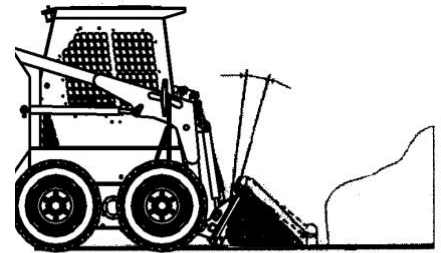
Do not allow other personnel to enter the work area during operation.

6. Loading the Bucket

1. Drive slowly toward the material, lower the lift arm completely, and place the sharp edge of the bucket on the ground.
2. Push the travel control lever forward. After the material enters the bucket, raise the front edge of the bucket. Operate the lift arm and bucket control levers to fill the bucket with material.
3. Reverse to move away from the material pile. *Notes:- Place the bottom of the bucket flat on the ground; do not exceed the rated load capacity.- Do not use the loader for work exceeding its rated load capacity.*

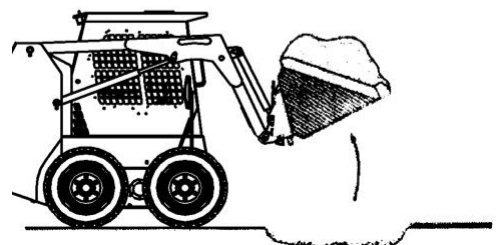
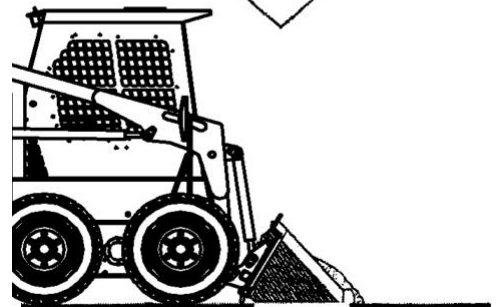
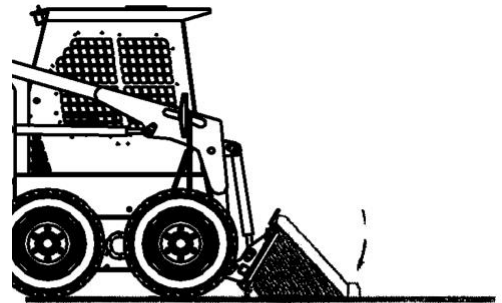
7. Emptying the Bucket

1. Raise the bucket to a height above the truck bed.
 2. Drive slowly forward until the bucket is positioned above the truck bed.
 3. After raising the lift arm to a sufficient height, tilt the bucket to empty the material.
- Notes:- Do not allow the machine body or bucket to collide with obstacles during loading/unloading. - Do not allow material in the bucket to spill.*
-



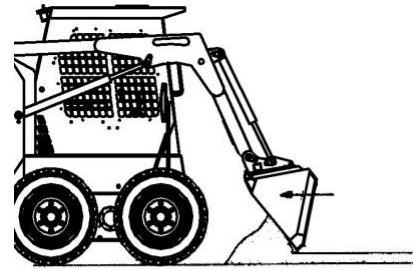
8. Digging

1. Lower the lift arm completely and place the sharp edge of the bucket on the ground.
2. Drive forward slowly. Continue tilting the bucket backward until it penetrates the ground.
3. Continue digging with the bucket at an angle of 10-15° relative to the ground.
4. After filling the bucket, drive forward slowly, raise the lift arm, and tilt the bucket backward. *Note: Do not use an excessively large digging angle between the bucket and the ground.*



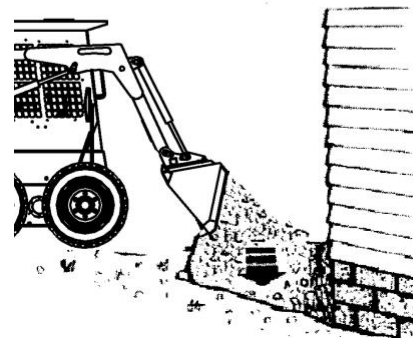
9. Leveling the Ground

1. Lower the bucket to maintain a small distance from the ground, then drive forward to spread the material.
2. The farther the bucket is tilted forward, the greater the force on the bucket edge.
3. Adjust the lift arm height according to the on-site conditions to level the ground.
4. If you need to raise the lift arm, keep the bucket edge as parallel to the ground as possible. *Note: Do not drive forward when the lift arm is raised.*



10. Backfilling

1. Lower the lift arm and place the bucket edge close to the ground.
2. Drive forward to the edge of the pit and push the material into the pit.
3. Immediately tilt the bucket after passing the edge of the pit; if necessary, raise the lift arm and empty the bucket.



Warning

To avoid injury or death:- Keep the lift arm as low as possible.- Do not travel or turn with the lift arm raised.- Turn only on level ground.- Do not traverse slopes when traveling up or down.- Keep the heavier end of the vehicle facing the higher side of the slope.- Do not overload the machine. Failure to comply with the above warnings may cause the vehicle to tip or overturn, resulting in injury or death.

11. Transporting the Loader

Steps

1. Ensure the vehicle used to transport and tow the loader has sufficient size and power.
2. When loading/unloading the loader, the rear of the trailer must be fixed or supported to prevent the front of the trailer from lifting (see Figure B).
3. Place left and right ramps that can support the weight of the loader. The left and right ramps must be at the same height (no height difference). Secure the ramps to the vehicle using appropriate fasteners, and limit the ramp slope to within 15°.

4. Adjust the vehicle direction before ascending the ramps. For loaders without attachments or with empty buckets, reverse onto the transport vehicle (see Figure B).
5. Secure the loader to the transport vehicle following these steps to prevent the loader from shifting when the transport vehicle ascends/descends slopes or brakes suddenly (see Figure C): Lower the bucket or attachment to the ground.
 - a. Shut down the engine.
 - b. Install ropes at the front and rear of the loader.
 - c. Secure the ropes to the transport vehicle.



Warning

When loading the loader onto a transport vehicle, use ramps designed with sufficient strength to support the engine weight. A broken wooden ramp may cause personal injury.

12. Lifting the Loader

Steps

1. Before preparing to lift the loader, verify its weight, length, width, and height.
2. Use appropriate chains or ropes.
3. Attach the chains or ropes to the lifting eyes.
4. Place rubber pads between the chains/ropes and the loader contact surfaces to prevent damage to the loader. *Note: To prevent damage to the loader's gear mechanism, the loader must be lifted slowly and for short distances (e.g., moving the loader onto a transport vehicle).*
5. Ensure the chains or ropes used are of the appropriate size.
6. Incorrect lifting methods or improper installation of chains/ropes may cause damage to the loader.
7. Do not lift suddenly.
8. No one is allowed to stand under the loader after it is lifted.



Attachments

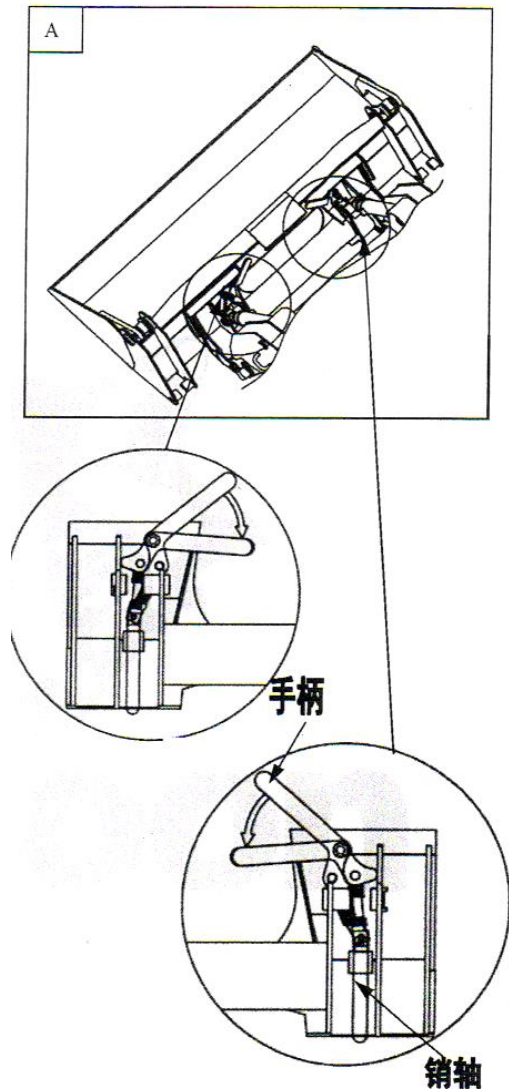
1. Installation and Removal

Installation

The quick-coupler allows for rapid replacement of different attachments to suit various work needs. The quick-coupler handle must remain in the locked position during operation.

1. Drive the loader directly behind the bucket.
2. Tilt the quick-coupler forward and drive the loader forward until the top surface of the quick-coupler is fully inside the connecting flange of the bucket or other attachment.
3. Do not use hammering on the handle to insert the attachment connecting pin into the attachment locking sleeve.
4. Retract the quick-coupler backward until the bucket is off the ground, then shut down the engine.
5. Lower the quick-coupler handle slowly until the attachment connecting pin enters the attachment locking sleeve. The attachment connecting pin must be fully inserted into the locking sleeve of the bucket or other attachment.

- a. The attachment connecting pin must contact the lower edge of the locking sleeve of the bucket or other attachment. *Note: If the attachment connecting pin cannot contact the lower edge of the locking sleeve, the bucket or other attachment may be unstable or disengage from the quick-coupler.*





Warning

When replacing attachments, hold the quick-coupler handles at both ends and lower them slowly; otherwise, the operator may be injured.

Warning

The attachment connecting pin must be fully inserted into the locking sleeve of the bucket or other attachment, and the handle must be fully lowered and locked. If the attachment connecting pin cannot securely fix the bucket or other attachment, the bucket or attachment may loosen or disengage, causing personal injury or death.

Removal

1. Park the loader on level ground.
2. Lower the bucket to the ground and tilt it forward until the quick-coupler handle can be lifted.
3. Grasp the handle and lift it until the attachment connecting pin is completely disengaged from the locking sleeve.
4. Tilt the quick-coupler backward until the top surface of the quick-coupler is completely outside the connecting flange of the bucket.
5. Drive the loader backward to move away from the bucket.

2. Hydraulic Connections for Attachments

1. Connect the hydraulic hoses of the attachment to the hydraulic system on the machine via a pair of quick couplers, and tighten the couplers on the hydraulic system.

Hydraulic Attachment Switch

- Press Pedal 1 to extend the attachment cylinder. When the attachment cylinder extends, the bucket (combination bucket) closes.

- Conversely, press Pedal 2 to retract the attachment cylinder. When the cylinder retracts, the bucket (combination bucket) opens (applicable to attachments such as fork buckets, combination buckets, and log grapples).

**Warning**

Tighten bolts and nuts; the attachment will not move once tightened. Failure to tighten may cause the attachment to fall, resulting in serious injury or death.

**Warning**

Keep the hydraulic system connections of the attachment clean and free of debris during operation.

Maintenance and Repair

1. Safe Maintenance-----	30
2. Maintenance Schedule-----	30
3. Cab Description-----	32
4. Safety Bar-----	34
5. Safety Belt-----	34
6. Air Filter-----	35
7. Fuel System-----	35
8. Engine Lubrication System-----	37
9. Engine Cooling System-----	39
10. Fan Belt-----	41
11. Hydraulic Oil-----	42
12. Sprocket Box-----	44
13. Loader Lubrication-----	46
14. Quick Coupling Device-----	46
15. Electrical System-----	46
16. Muffler-----	47
17. Tires-----	48
18. Loader Oil Specification Table-----	49
19. Troubleshooting-----	49

Safe Maintenance



Warning

Read the Operation and Maintenance Manual before operating or repairing the machine. Pay attention to the labels on the machine and follow the warnings or instructions in the manual during maintenance or adjustment; otherwise, injury or death may occur.

- **Safety Warning Symbols:** These symbols with warning statements mean "Warning, Caution! Your safety is involved." Please read this information carefully.
- Do not repair the machine without the manual.
- Follow the correct procedures to lift and lower the cab.
- Clean and maintain the machine daily as required.
- Ensure good ventilation when welding, cutting, or painting components. Wear a mask when cutting painted components to avoid exposure to exhaust fumes, which can cause harm. The exhaust system must be complete and unobstructed.
- Disconnecting any hydraulic lines, hose components, or failure of any parts may cause the lift arm to fall. Do not stand under the lift arm when it is raised unless a support device is installed. Replace the lift arm support device immediately if it is damaged.
- Never modify the support device or add additional support devices without the permission of Haotai Company.
- Before inspecting the oil circuit, stop the engine, allow it to cool, and clean the area. Do not repair or adjust the machine while the engine is running unless specified in the manual. Avoid contact with hydraulic oil or gasoline leaking under pressure, as it may injure the skin or eyes. Do not refuel while the engine is running, and do not refuel near open flames or smoking areas.
- Keep your body, jewelry, and clothing away from moving parts, electrical components, hot parts, and exhaust components of the machine. Wear eye protection when the engine is running or when using tools to protect your eyes from battery acid and pressurized fluids. Wear specified eye protection when welding. Keep the engine hood closed unless maintenance is being performed.
- Battery acid produces flammable and explosive gases; keep sparks, flames, or other ignition sources away. Battery acid can burn the eyes and skin. If acid comes into contact with the skin, rinse immediately with water and seek medical treatment.

Maintenance Schedule

Maintenance must be performed regularly; otherwise, excessive component wear or even component failure may occur. The maintenance schedule serves as a guide for the proper maintenance of the HT skid steer loader.

Item	Maintenance Requirement	Maintenance Interval (Hours)						
		8-10	50	100	250	500	500	1000
Engine Oil	Check oil level and add oil if necessary							
Air Filter and Intake System	Maintain only when necessary; check for air leaks and damaged components	√						
Engine Cooling System	Clean debris from the cooler, water radiator, and water tank; check water level and add coolant if necessary							
Tires	Check for tire wear and inflate to the appropriate pressure	√						
Safety Belt, Safety Bar, Foot Pedals	Check the condition of the safety belt; check the safety bar and wipe dust from components	√						
Gauges and Lights	Check the operation of indicators and lights	√						
Cab	Check tightening bolts, washers, and nuts; check the condition of the cab	√						
Lift Arm, Cylinders, Pivot Pins	Lubricate with grease	√						
gasoline Filter	Drain accumulated water	√						
Foot Pedals, Hand Controls, and Steering	Check for proper operation and adjust if necessary	√						
Wheel Hub Nuts	Check for loose hub nuts and tighten to 28-30 kgf-m	√						
Control Levers	Apply grease							
Hydraulic Oil, Hoses, and Pipes	Check hydraulic oil level and add if necessary; check for damage and leaks and repair or replace if necessary	√						
Drive Box	Check oil level		√					
Battery	Check cables, connections, and electrolyte level; add distilled water if necessary		√					

Item	Maintenance Requirement	Maintenance Interval (Hours)						
Exhaust Pipe	Clean the inner wall of the exhaust pipe		√					
Fan Belt	Check belt tension and adjust if necessary			√				
Engine Oil and Filter	Replace engine oil and filter element; use filters and oil with maximum centrifugal performance			√				
gasoline Filter	Replace filter element assembly				√			
Engine Drive Belt	Check for wear and damage				√			
Transmission Box	Check gear oil level and add lubricating oil if necessary				√			
Hydraulic Oil Tank	Replace hydraulic oil				√			
Drive Box	Replace lubricating oil							√
 Warning It is essential to read and understand the Operation and Maintenance Manual before operating or repairing the machine. Follow the warnings and instructions in the manual during maintenance and adjustment. After maintenance and adjustment, test the machine correctly. Failure to comply may result in injury or death.								

Cab

Description

The HT loader is equipped with a standard cab that protects the operator from rollovers and falling objects. The cab is a protective structure that shields the operator from falling bricks, small concrete blocks, and hand tools encountered during operations such as highway maintenance or other construction site work. It also protects the operator from potential hazards such as falling trees and rocks when the loader is used to clear cluttered areas, work at height, or operate in forests.



Warning

To avoid injury or death: When the cab is a fully enclosed type (with a front door and rear/top windows), do not leave the cab in a fully raised position. Use a hinge to secure the cab in the fully raised position, or lower the cab until it locks into the rear cab lock. Before raising or lowering the cab, ensure the lift control lever is in the correct position; otherwise, the loader, attachments, or lift arm may move suddenly. Place the control link in the highest hole to



Warning

prevent the cab from hitting the lever when raising or lowering.

Lifting the Cab

1. Park the loader on level ground.
2. Lower the lift arm to the lowest position.
3. Shut down the engine.
4. Raise the lift arm when the cab is raised, and install the lift arm support device.
5. Remove the cab fixing bolts as shown in the figure.
6. Lift the cab upward from the front.



Warning

Do not modify the cab structure by welding, drilling, or adding attachments without the permission of the company's technical department. Unauthorized modifications may disable the cab's rollover protection system (ROPS) and falling object protection system (FOPS), potentially causing injury to the operator.

Lowering the Cab

- **Note:** Before lowering the cab, ensure the engine is shut down and the safety bar is fully raised. Use the grab handles to lower the cab.
- Lower the cab slowly until its bottom contacts the loader frame.
- **Note:** Place the travel control levers in the vertical position to prevent the cab from hitting the control levers when raising or lowering.
- Install the left and right bolts and tighten them to a torque of 12-14.5 kgf·m.

Emergency Exit

The front door window and rear window of the cab can be used as emergency exits. To exit through the rear window, follow these steps:

1. Remove the rubber seal from the rear window.
 2. Kick the rear window out with your foot (see Figure C).
 3. Exit through the rear of the cab (see Figure D).
- **Note:** You can also exit through the front door of the cab.

Safety Bar

Purpose of the Safety Bar

The safety bar has a crossbar that rotates around the center. When the safety bar is in the lowered position, it protects the seated operator from rollovers and external impacts. Therefore, you must lower and secure the safety bar. The safety bar protects you in the event of a loader rollover.

Maintenance of the Safety Bar

1. Clean dust from moving components.
2. Check the tightness of bolt and nut connections.
3. If the safety bar does not function correctly, check component connections and wear.
4. Replace worn or damaged components only with parts supplied by the company.



Safety Belt

When fastening the safety belt, ensure it is not twisted. Insert the right metal plate into the left buckle until a "click" sound is heard. If the safety belt is too short, adjust it to a longer length; if it is too loose, tighten it to remove excess slack. To unfasten the safety belt, press the button on the front of the buckle.



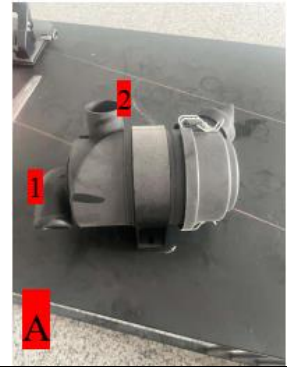
Warning

Before leaving the seat:- Lower the lift arm and place the attachment on the ground.- Shut down the engine.- Raise and secure the safety bar.- Place the bucket and lift arm control levers in neutral.If both control levers fail to function, repair the system.



WarningWarning

The safety belt must be fastened when operating the loader. Ensure the safety belt buckle is



unfastened when leaving the operating position.

Air Filter

Description (See Figure A)

1. Air Inlet
2. Air Outlet

Cleaning the Air Filter (or Element)

A dirty air filter will reduce engine output power, increase fuel consumption, increase harmful emissions, and produce black smoke. Therefore, clean the air filter regularly:

- Clean the air filter every 250 hours.

Replacing the Air Filter

- Replace the air filter every 1000 hours or after 4 cleanings.
- **Note:** Shorten the cleaning interval if the engine operates in a dusty environment. Do not tap the air filter to clean it.

Steps to Clean the Air Filter

1. Open the wire clip on the air filter dust cover (see Figure B).
2. Remove the dust cover (see Figure B).
3. Remove the filter element (see Figure C).
4. Replace the filter element.



Fuel System

Refueling

1. Add clean, high-quality gasoline fuel (Grade 1 or Grade 2 gasoline).
2. It is recommended that the loader operator contact the local supplier to obtain the appropriate gasoline fuel.
3. Open the fuel tank cap.
4. Use a clean, approved container to add gasoline fuel in accordance with correct specifications. Refuel only in a well-ventilated area with no open flames or sparks nearby. **Note: Smoking is prohibited during refueling.**
5. After refueling, ensure the fuel tank cap is tightly closed.

Replacing the gasoline Filter Element

1. Clean the end of the filter.
2. Remove the filter element and clean the surface of the seal.
3. Replace the O-ring.
4. Fill the new filter with fuel.
5. Apply a layer of engine oil to the seal when installing it.



Warning

After starting the engine, check for fuel leaks. If air enters the fuel system, the engine will not start. Bleed the air from the system using the correct method before starting the engine.



Warning

Add gasoline fuel only when the engine is shut down and cooled. Smoking is prohibited during refueling to prevent fire.

Bleeding Air (This method is only applicable to imported engines)

- For the air bleeding method of domestic engines, refer to the engine user manual.

Note

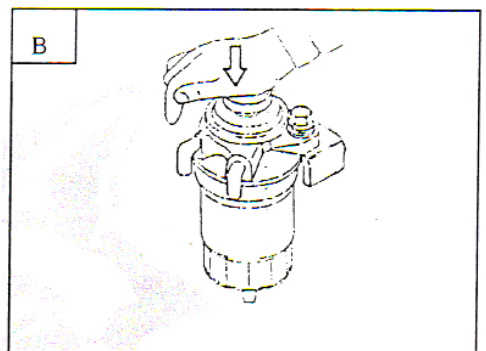
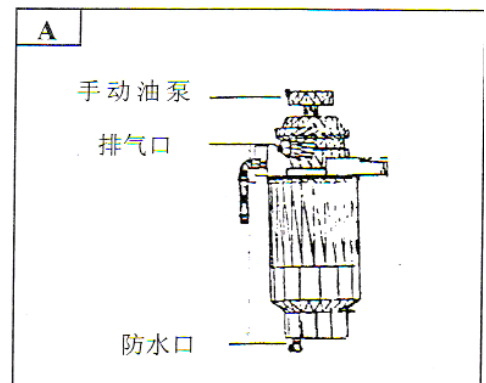
- Figures A and B show the fuel pump supplied with the engine (installed in the middle of the engine).

Steps to Bleed Air from the Fuel System

1. If the filter fails to filter gasoline fuel during operation, replace it immediately; otherwise, the engine's service life will be affected.
2. Loosen the plug on the filter.
3. Press the manual fuel pump downward until no air bubbles emerge from the air bleed port.
4. During operation, cover the air bleed port with a cloth to prevent fuel from splashing out.
5. Tighten the air bleed port after bleeding all air from the fuel.
6. Continue pressing the pump until significant resistance is felt.
7. Finally, check for fuel leaks.
8. Consult after-sales service if you are unsure.

Note

- Do not smoke or work near open flames when bleeding air from the fuel system.
- Thoroughly wipe up any gasoline fuel spilled during air bleeding to prevent fire.





Warning

gasoline fuel and hydraulic oil under pressure can penetrate the skin and eyes, causing serious injury or death. Leaking oil under pressure may not be visible; use a piece of cardboard or wood to check for leaks. Do not use bare hands—always wear safety gloves. If oil accidentally splashes into the eyes, seek immediate medical attention.

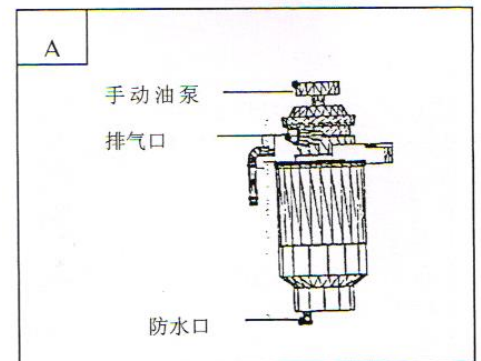


Warning

Wipe up any spilled oil and keep it away from heat sources, open flames, sparks, and smoking areas. Improper handling of flammable materials may cause explosions or fires, resulting in injury or death.

Draining Water

- If the filter indicator flashes frequently during operation, this indicates water accumulation in the filter. In this case, drain the water following these steps:
 1. Loosen the drain plug at the bottom of the filter.
 2. Press the top of the filter slowly 6-7 times until water flows out of the plug.
 3. Tighten the bottom drain plug after all water has drained.
 4. Loosen the air bleed port plug (refer to the air bleeding method to bleed air).
 5. Check and ensure the filter indicator no longer flashes when the engine is starting or running.
 6. Consult the nearest after-sales service personnel if you have any questions.



Note

- Do not smoke or work near open flames during the entire water draining process of the filter.
- Ensure any water splashed on other components is wiped clean, as this water may contain oil and easily cause a fire.

Engine Lubrication System

Checking Engine Oil

1. Check the oil level once before starting the engine.
2. Open the engine hood and remove the dipstick (see Figure A).
3. Maintain the oil level between the maximum and minimum marks on the dipstick.
4. Add oil of the required quality.

5.

Oil Specifications for All Applications

Type	Capacity	Ambient Temperature (°C) -20 -10 0 10 20 30 40
Engine Oil	5.4 L	Regular: 10W-40 Low Temperature: 5W-40 High Temperature: 15W-50
Hydraulic Oil	45 L	ISO VG32ISO VG46ISO VG68
Fuel	50 L	87 AKI
Coolant	50:50 mixture of antifreeze and water	Ethylene glycol base permanent type
Grease	As required	NLGI No.1NLGI No.1
Gear Oil	33 L	Castrol ASP150

Use only the specifications listed above or equivalent. Do not mix oils of different brands.

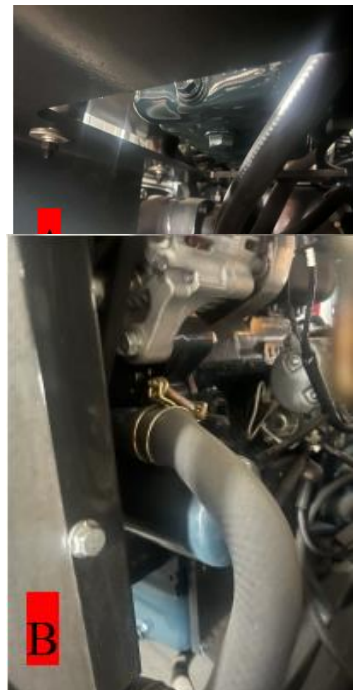


Warning

Allow the engine to shut down for 15 minutes before adding or replacing oil. If the oil is contaminated or diluted, the oil change interval may need to be adjusted.

Replacing Engine Oil and Oil Filter

1. Shut down the engine and open the engine hood to allow it to cool.
2. Remove the oil drain plug as shown in Figure A.
3. Collect the drained oil to avoid environmental pollution.
4. Use a filter wrench to remove the filter and clean the surface of the seal.
5. Apply a layer of oil to the seal of the new filter before installation.
6. Install the new filter and tighten it. *Note: Over-tightening may damage the threads or the filter element.*
7. Install and tighten the oil drain plug.



8. Remove the oil filler cap from the top of the engine (see Figure C).
9. After adding oil, allow the engine to run for a few minutes.
10. Shut down the engine after running it for a few minutes.
11. Check for oil leaks from the oil filter and verify the oil level.
12. Pull out the oil dipstick, wipe it clean with a cloth, reinsert it fully, and then pull it out again to check the oil level.
13. The oil level should be between the maximum and minimum marks on the dipstick.

Engine Cooling System

1. Check the engine cooling system daily to prevent engine damage due to overheating.



Warning

If the radiator needs to be replaced due to overheating caused by distortion or damaged fins, the replacement must be performed in accordance with the manufacturer's approved procedures.

Components of the Cooling System

The cooling system consists of two parts: an oil cooler and a water cooler.

- Oil Cooler
- Water Cooler

Description

- Thermostat and Water Pump
- Overflow Pipe
- Radiator Cap
- Inlet Pipe
- Outlet Pipe



Cleaning the Water Cooler and Oil Cooler

1. Check the outer surfaces of the water and oil radiators. If necessary, clean and wipe the surfaces of the radiators. Clean the water and oil radiators more frequently if the loader operates in a dirty environment.
2. Steps:
 - a. Open the engine rear hood.
 - b. Inspect the water radiator and oil radiator.
 - c. Use high-pressure air to blow dust and debris from the spaces between the radiator fins. Direct the air flow opposite to the direction of the fan to prevent debris from entering the interior.
 - d. Check for distorted or broken fins.
 - e. Check for leaks in the cooling system.

Replacing Coolant



Warning

Do not open the radiator cap when the engine is hot to avoid scalding.

1. Open the engine hood.
2. Unscrew the filler cap.
3. Open the drain valve and drain the coolant into a container.
4. Tighten the drain valve after all coolant has been drained.
5. Mix the coolant in a separate container.

Note

- The loader is factory-filled with a monoethylene glycol coolant before delivery in winter. Do not mix propylene glycol with monoethylene glycol.
 - If the coolant level is too low, add the mixed coolant at a ratio of 50% water to 50% monoethylene glycol.
 - The correct mixing ratio is 1 gallon of monoethylene glycol mixed with 1 gallon of water, which provides freeze protection down to -37.3°C.
 - Check the mixing ratio of monoethylene glycol and water in the cooling system by measuring the refractive index of the mixture with a refractometer.
6. Add the mixed coolant to the water and oil radiators.
 7. Do not fill the water and oil radiators with coolant to more than 1/3 of their capacity.
 8. Tighten the caps of the water and oil radiators.
 9. Start the engine and run it until the engine reaches the appropriate operating temperature, then shut down the engine.
 10. Check the coolant level and add more coolant to the water and oil radiators if necessary.

Typical Coolant Specifications

- Color: Green
- Freezing Temperature (°C): -37.3 (50% V/V), -16.5 (30% V/V)
- pH: 9.5
- Density: 1.123
- Water Content (%): 3.0

Important Notes

- To avoid engine damage, use the correct ratio of antifreeze.
- Excessive antifreeze impairs the cooling system's efficiency and may cause premature engine damage.



- Insufficient antifreeze fails to protect engine components adequately and reduces the boiling point, damaging the entire system.
 - Continuously using highly concentrated coolant may also cause corrosion of engine internal components and blockage of the cooling circuit.
 - Replace the coolant annually or every 2000 operating hours, whichever comes first.
 - When adding coolant, ensure the engine is cool to prevent scalding from hot coolant spray.
 - Use only high-quality ethylene glycol-based coolant that meets the engine manufacturer's specifications. Do not mix different types or brands of coolant.
 - Dispose of used coolant in accordance with local environmental regulations. Do not discharge it directly into soil, water sources, or sewage systems.
-

Fan Belt

Checking and Tensioning the Fan Belt

A loose or damaged fan belt will affect the operation of the water pump and generator, leading to engine overheating or insufficient charging. Regular inspection and maintenance are required:



1. Inspection

- Visually check the fan belt for cracks, fraying, glazing, or signs of wear. Replace the belt immediately if any damage is found.
- Check the belt tension: Press the middle of the belt with a force of 10-15 kgf; the normal deflection should be 10-15 mm. If the deflection exceeds 15 mm, the belt is too loose and needs tensioning.

2. Tensioning Steps

1. Park the loader on level ground, shut down the engine, and allow it to cool completely.
2. Locate the fan belt tension adjustment bolt (on the generator bracket or belt tensioner).
3. Loosen the fixed bolt of the generator or tensioner.
4. Turn the adjustment bolt clockwise to tighten the belt until the required tension is achieved.
5. Retighten the fixed bolt to secure the generator or tensioner in position.
6. Recheck the belt tension to ensure it meets the specification.

3. Replacement

- Replace the fan belt every 1000 operating hours or if significant wear, cracks, or stretching is detected.
 - When replacing, use a belt of the same model and specification as the original (refer to the "Oil Specifications" table for details).
-



Warning

Do not operate the engine with a damaged or excessively loose fan belt. This may cause engine overheating, generator failure, or belt detachment, leading to serious equipment damage or safety hazards.

Hydraulic Oil

Checking Hydraulic Oil Level

1. Park the loader on level ground, lower the lift arm and bucket to the ground, and shut down the engine.
2. Wait for 5-10 minutes to allow hydraulic oil to flow back into the oil tank.
3. Locate the hydraulic oil level gauge (dipstick) on the side of the hydraulic oil tank.
4. Pull out the dipstick, wipe it clean with a lint-free cloth, reinsert it fully, and then pull it out again to check the oil level.
5. The oil level should be between the "MAX" and "MIN" marks on the dipstick. Add hydraulic oil of the specified grade if the level is below the "MIN" mark.



Cleaning the Hydraulic Oil Filter Element

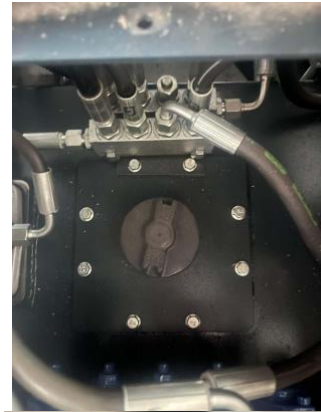
1. The hydraulic system is equipped with a return oil filter and a suction filter to remove impurities. Clean or replace the filter elements regularly:
 - a. Clean the return oil filter element every 250 operating hours.
 - b. Replace the return oil filter element every 1000 operating hours.
 - c. Replace the suction filter element every 2000 operating hours.
2. Cleaning Steps:
 - a. Shut down the engine and relieve the hydraulic system pressure (operate the control levers several times to release residual pressure).
 - b. Locate the filter housing (on the hydraulic oil tank or return oil pipeline).
 - c. Loosen the filter housing cover and remove the filter element.
 - d. Clean the filter element with fuel or hydraulic oil, and blow it dry with compressed air (blow from the inside out to avoid pushing impurities deeper).
 - e. Inspect the filter element for damage; replace it if there are cracks or excessive wear.
 - f. Reinstall the filter element and tighten the housing cover to the specified torque.

Replacing Hydraulic Oil

1. Replace the hydraulic oil every 2000 operating hours or if the oil becomes contaminated (discolored, contains sediment, or has a burnt odor).

2. Replacement Steps:

- a. Park the loader on level ground, lower the lift arm and bucket to the ground, and shut down the engine.
- b. Relieve the hydraulic system pressure by operating all control levers multiple times.
- c. Remove the drain plug at the bottom of the hydraulic oil tank and drain the old oil into a clean container.
- d. Clean the drain plug and the oil tank interior with a lint-free cloth (remove sediment and impurities).
- e. Reinstall and tighten the drain plug.
- f. Remove the hydraulic oil filter element and replace it with a new one (apply a thin layer of hydraulic oil to the filter seal before installation).
- g. Add new hydraulic oil of the specified grade (ISO VG32/VG46/VG68) through the oil filler port, filling to the "MAX" mark on the dipstick.
- h. Start the engine and run it at idle speed for 3-5 minutes. Operate all hydraulic control levers (lift arm, bucket, attachments) several times to circulate the oil and release air.
- i. Shut down the engine, wait for 5 minutes, and recheck the oil level. Add more oil if necessary.



Warning

- Use only hydraulic oil that meets the specified grade. Mixing different types of oil will cause chemical reactions, reducing lubrication performance and damaging hydraulic components.- Do not allow dirt, water, or other contaminants to enter the hydraulic system during oil replacement or filter maintenance.- Dispose of used hydraulic oil in accordance with environmental regulations.

Sprocket Box

Checking Gear Oil Level

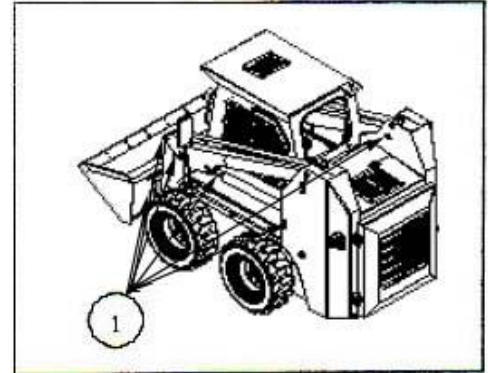
1. Park the loader on level ground and shut down the engine.
2. Locate the gear oil level check plug on the side of the sprocket box (usually at the mid-height of the box).

3. Remove the check plug; if gear oil flows out slowly, the level is normal. If no oil flows out, add the specified gear oil (Castrol ASP150) until oil overflows from the check hole.
4. Reinstall and tighten the check plug.

Replacing Gear Oil

1. Replace the gear oil every 1000 operating hours or annually (whichever comes first).
2. Replacement Steps:

- a. Park the loader on level ground, shut down the engine, and allow the gear oil to cool (to avoid scalding and ensure complete drainage).
- b. Remove the drain plug at the bottom of the sprocket box and drain the old oil into a container.
- c. Clean the drain plug and reinstall it after all oil has drained.
- d. Remove the fill plug on the top of the sprocket box and add new gear oil (Castrol ASP150) until oil overflows from the level check hole.
- e. Reinstall and tighten the fill plug and level check plug.



Warning

Insufficient gear oil will cause excessive wear of gears and bearings, leading to sprocket box failure. Do not mix gear oils of different specifications.

Loader Lubrication

Lubrication Principles

- Proper lubrication reduces friction between moving parts, prevents wear, and extends component service life.
- Use NLGI No.1 or No.2 grease for all lubrication points.
- Lubricate daily before operation (or every 8-10 operating hours) under normal working conditions. Shorten the interval in dusty, humid, or high-load environments.

Lubrication Points and Steps

Lubrication Point	Location	Lubrication Frequency
Lift Arm Pivot Pins	Connections between lift arm and frame, lift arm and bucket	Daily
Tilt Cylinder Rod Ends	Connections between tilt cylinder and frame/bucket	Daily
Lift Cylinder Rod Ends	Connections between lift cylinder and	Daily

Lubrication Point	Location	Lubrication Frequency
	frame/lift arm	
Quick Coupler Pivot Points	Pins and bushings of the quick coupler	Daily
Wheel Hub Bearings	Wheel hub assembly	Every 500 operating hours

Lubrication Steps:

1. Clean the grease fitting (zerk fitting) with a cloth to remove dust and debris before lubrication.
2. Attach the grease gun nozzle to the grease fitting and pump grease until fresh grease overflows from the gap around the pivot point (indicating old grease is pushed out).
3. Wipe off excess grease with a clean cloth to prevent dust accumulation.
4. Check for damaged or missing grease fittings; replace them immediately if found.



Warning

Do not mix greases of different types or brands. Excessive grease may cause seal damage or overheating of components; pump only until fresh grease overflows.

Quick Coupling Device

Inspection and Maintenance

1. Daily Inspection:

- a. Check the quick couplers for damage, leakage, or loose connections.
- b. Ensure the coupling sleeves lock securely when connected (pull the hose gently to verify it does not disengage).
- c. Clean the coupler surfaces to remove dirt, debris, or hydraulic oil residues.

2. Regular Maintenance:

- a. Lubricate the coupler locking sleeves and O-rings with a thin layer of grease every 50 operating hours.
- b. Inspect the O-rings for wear, cracking, or deformation; replace them if damaged.
- c. Tighten the mounting bolts of the coupler bracket every 250 operating hours to prevent loosening.

3. Connection/Disconnection Steps:

- a. Before connecting, clean the coupler ports with a cloth to avoid contaminating the hydraulic system.
- b. Align the male and female couplers, push them together firmly until a "click" is heard (indicating the locking sleeve is engaged).
- c. To disconnect, pull back the locking sleeve and separate the couplers. Cap the disconnected ports immediately to prevent contamination.



Warning

Do not connect or disconnect hydraulic couplers while the system is under pressure. Relieve pressure by operating the control levers first to avoid high-pressure oil spray, which may cause severe injury.

Electrical System

Wires and Instruments

1. Daily Inspection:

- a. Check the wiring harness for damage, wear, or loose connections. Repair or replace damaged wires immediately.
- b. Ensure electrical connectors are clean and tightly plugged in (especially battery terminals, sensor connectors, and instrument panel connectors).
- c. Inspect the instrument panel for functional indicators: turn on the ignition switch and verify that all warning lights, gauges, and displays work normally.

2. Regular Maintenance:

- a. Tighten loose terminal screws every 250 operating hours.
- b. Clean the instrument panel glass with a soft cloth (avoid using abrasive cleaners).
- c. Check the wiring harness for proper routing (not pinched, kinked, or in contact with hot components like the muffler).

Battery

1. Daily Inspection:

- a. Check the battery for cracks, leaks, or bulging. Replace the battery if damaged.
- b. Ensure the battery terminals are clean and tightly connected (no corrosion or loose cables).
- c. For non-sealed batteries, check the electrolyte level (should be 10-15 mm above the battery plates). Add distilled water if the level is low (do not add tap water or electrolyte).

2. Charging and Maintenance:

- a. Charge the battery with a 12V trickle charger if the loader is not used for more than 7 days (prevents self-discharge).
- b. Clean corrosion from battery terminals with a mixture of baking soda and water (rinse with clean water afterward and dry with a cloth).
- c. Apply a thin layer of petroleum jelly to the terminals to prevent corrosion.
- d. Replace the battery every 2-3 years (or when it fails to hold a charge).



Warning

- Batteries produce explosive hydrogen gas; keep sparks, flames, and smoking materials away.- Wear safety glasses and gloves when handling the battery to avoid contact with electrolyte (battery acid), which can cause burns.- Disconnect the negative (-) terminal first when removing the battery, and reconnect it last when installing.

Muffler

Maintenance of the Muffler

1. Daily Inspection:

- a. Check the muffler for cracks, holes, or loose connections. A damaged muffler will cause excessive noise and may leak exhaust gases.
- b. Ensure the muffler mounting brackets and bolts are tight (looseness can cause vibration and further damage).

2. Regular Maintenance:

- a. Clean the muffler exterior with a wire brush every 500 operating hours to remove carbon deposits and debris.
- b. Inspect the exhaust pipe for blockages (e.g., carbon buildup); use a pipe cleaner or compressed air to clear if necessary.
- c. Replace the muffler if it is severely corroded, cracked, or cannot be repaired.



Warning

The muffler and exhaust pipe become extremely hot during engine operation. Do not touch them until they have cooled completely to avoid severe burns. Ensure the muffler is properly installed to prevent exhaust gas leakage into the cab, which can cause carbon monoxide poisoning.

Tires

Tire Pressure

1. Check tire pressure daily before operation:

- a. Standard tire pressure: 0.35-0.4 MPa (50-58 psi).
- b. Use a reliable tire pressure gauge to measure pressure (check when tires are cool, not after operation).
- c. Inflate underinflated tires to the specified pressure; release air from overinflated tires.

2. Adjustments for Special Conditions:

- a. Increase pressure by 0.05 MPa when operating on hard, smooth surfaces (e.g., concrete).
- b. Decrease pressure by 0.05 MPa when operating on soft terrain (e.g., mud, sand) to improve traction.

Tire Rotation

- Rotate the tires every 500 operating hours to ensure uniform wear: Jack up the loader and secure it with supports (do not rely solely on the jack).

- Remove the wheel nuts and swap the front and rear tires (or left and right tires, depending on wear patterns).
- Torque the wheel nuts to 28-30 kgf·m after reinstallation.

Tire Inspection and Maintenance

1. Daily Inspection:

- a. Check tires for cuts, punctures, bulges, or embedded debris (remove nails, stones, etc., immediately).
- b. Inspect the tire tread depth; replace tires when tread depth is less than 6 mm (or when wear indicators are visible).

2. Wheel Maintenance:

- a. Tighten wheel nuts every 100 operating hours to prevent loosening.
- b. Check the wheel rim for cracks or deformation; replace damaged rims.

3. Storage:

- a. If the loader is stored for more than 30 days, place blocks under the frame to relieve pressure on the tires.
- b. Store tires in a cool, dry, and shaded area (avoid direct sunlight or high temperatures, which accelerate rubber aging).



Warning

Do not operate the loader with damaged, underinflated, or overinflated tires. This may cause tire blowouts, loss of control, or rollover accidents. Replace worn or damaged tires immediately.

Loader Oil Specification Table

Oil Type	Application	Specification	Capacity
Engine Oil	Engine lubrication	Regular: 10W-40 Low Temperature: 5W-40 High Temperature: 15W-50	5.4 L
Hydraulic Oil	Hydraulic system	ISO VG32 / ISO VG46 / ISO VG68	45 L
Fuel	Engine fuel	87 AKI	50 L
Coolant	Engine cooling system	Ethylene glycol-based permanent type (50%)	15 L

Oil Type	Application	Specification	Capacity
		coolant + 50% water)	
Grease	Pivot points, bearings, couplers	NLGI No.1 / NLGI No.2	As required
Gear Oil	Sprocket box	Castrol ASP150	33 L

Note: Use only oils and greases that meet the specified standards. Do not mix products from different manufacturers. Adjust specifications according to ambient temperature (e.g., use lower-viscosity oil in cold climates).

Troubleshooting

Engine Troubleshooting

Symptom	Possible Cause	Troubleshooting Method
Engine fails to start	1. Insufficient fuel 2. Battery discharged 3. Air in fuel system 4. Faulty ignition switch 5. Clogged fuel filter	1. Refuel with clean fuel 2. Charge or replace the battery 3. Bleed air from the fuel system (refer to Section "Fuel System - Bleeding Air") 4. Inspect and replace the ignition switch if necessary 5. Clean or replace the fuel filter element
Engine stalls during operation	1. Fuel supply interruption 2. Clogged air filter 3. Overheating 4. Faulty sensor (e.g., oil pressure sensor)	1. Check fuel level and fuel line for blockages 2. Clean or replace the air filter 3. Check coolant level and radiator for blockages; shut down the engine to cool 4. Inspect sensor connections and replace if faulty
Excessive exhaust smoke (black)	1. Overloading 2. Clogged air filter 3. Incorrect fuel injection timing 4. Dirty fuel injectors	1. Reduce load to rated capacity 2. Clean or replace the air filter 3. Adjust injection timing (contact after-sales service) 4. Clean or replace fuel injectors
Excessive exhaust smoke (white)	1. Water in fuel 2. Coolant leaking into combustion chamber 3. Low engine temperature	1. Drain water from fuel filter and tank 2. Check for coolant leaks in the cylinder head gasket; repair if necessary 3. Allow the engine to warm up properly before operation
Engine overheats	1. Insufficient coolant 2. Clogged radiator 3. Faulty fan belt 4. Malfunctioning thermostat	1. Add coolant to the specified level 2. Clean the radiator fins with compressed air 3. Tighten or replace the fan belt 4. Inspect and replace the thermostat if stuck closed

Electrical System Troubleshooting

Symptom	Possible Cause	Troubleshooting Method
Instrument panel does not work	1. Battery discharged 2. Loose or corroded battery terminals 3. Faulty ignition switch	1. Charge the battery 2. Clean and tighten battery terminals 3. Replace the ignition switch if necessary
Warning lights stay on	1. Low oil pressure 2. Low coolant level 3. Faulty sensor	1. Check engine oil level and add if necessary 2. Check coolant level and add if necessary 3. Inspect sensor wiring and replace the sensor if faulty
Headlights not working	1. Burned-out bulb 2. Loose wiring connection 3. Faulty light switch	1. Replace the bulb 2. Check and tighten wiring connections 3. Replace the light switch if necessary

Hydraulic System Troubleshooting

Symptom	Possible Cause	Troubleshooting Method
Lift arm/bucket moves slowly	1. Low hydraulic oil level 2. Clogged hydraulic filter 3. Leaking hydraulic lines or cylinders 4. Low engine speed	1. Add hydraulic oil to the specified level 2. Clean or replace the hydraulic filter 3. Inspect for leaks and repair/replace damaged components 4. Adjust the throttle to increase engine speed
Hydraulic system leaks	1. Damaged O-rings or seals 2. Loose fittings or bolts 3. Cracked hoses or cylinders	1. Replace damaged O-rings/seals 2. Tighten loose fittings/bolts 3. Replace cracked hoses or cylinders
Lift arm cannot be raised	1. Hydraulic pressure loss 2. Jammed control valve 3. Faulty lift cylinder	1. Check for leaks and repair 2. Clean or replace the control valve 3. Inspect the lift cylinder for damage and repair/replace
Quick coupler fails to lock	1. Dirty or worn coupler components 2. Lack of lubrication 3. Damaged locking sleeve	1. Clean the coupler ports and components 2. Lubricate the locking sleeve with grease 3. Replace the damaged locking sleeve

Note: For complex faults (e.g., engine internal damage, hydraulic pump failure), contact TYPHON after-sales service for professional inspection and repair. Do not disassemble key components without authorization.

Conclusion

Proper operation, regular maintenance, and compliance with safety guidelines are essential to ensure the STOMP Skid Steer Loader operates safely, efficiently, and reliably. This manual provides comprehensive instructions for operation, maintenance, and troubleshooting—keep it accessible

near the loader for quick reference.

For technical support, parts ordering, or warranty service, contact: **TYPHON**

- Manufacturer' s Address:
- After-Sales Service Hotline:
- Email:

We strive to continuously improve our products and services. Your feedback on the loader' s performance and this manual is highly appreciated.

Wish you safe and productive operations!
