Important
Read, understand and obey the safety rules and operating instructions in the GTJZ03/04/06/08/10/12/14 Operator’s Manual before attempting any maintenance or repair procedure.

This service manual covers the GTJZ03/04/06/08/10/12/14 models.

This manual provides detailed scheduled maintenance information for the machine owner and user. It also provides troubleshooting and repair procedures for qualified service professionals.

Basic mechanical, hydraulic and electrical skills are required to perform most procedures. However, several procedures require specialized skills, tools, lifting equipment and a suitable workshop. In these instances, we strongly recommend that
maintenance and repair be performed at the service center which Niuli appointed.

Niuli has endeavored to deliver the highest degree of accuracy possible. However, continuous improvement of our products is a Niuli policy. Therefore product specifications are subject to change without notice.

Readers are encouraged to notify Niuli of errors and send in suggestions for improvement. All communications will be carefully considered for future printings of this and other manuals.

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Operation Of Safety Rules

Danger

Failure to obey the instructions and safety rules in this manual will result in death or serious injury.

Do Not Operate Unless:

You learn and practice the principles of safe machine operation contained in this operator's manual.
1 Avoid hazardous situations.
Know and understand the above principle before going on to the next section.
2 Always perform a pre-operation inspection.
3 Always perform function tests prior to use.
4 Inspect the workplace.
5 Only use the machine as it was intended. You read, understand and obey the manufacturer's instructions and safety rules—safety and operator's manuals and machine decals.
You read, understand and obey employer's safety rules and worksite regulations.
You read, understand and obey all applicable governmental regulations.
You are properly trained to safely operate the machine.

Electrocution Hazards

This machine is not electrically insulated and will not provide protection from contact with or proximity to electrical current.

Maintain safe distances from electrical power lines and apparatus in accordance with applicable governmental regulations and the following chart.

<table>
<thead>
<tr>
<th>Voltage Phase to Phase</th>
<th>Minimum Safe Approach Distance Meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 300V</td>
<td>Avoid Contacting</td>
</tr>
<tr>
<td>300V to 50KV</td>
<td>3.05</td>
</tr>
<tr>
<td>50KV to 200 KV</td>
<td>4.60</td>
</tr>
<tr>
<td>200KV to 350 KV</td>
<td>6.10</td>
</tr>
<tr>
<td>350 KV to 500 KV</td>
<td>7.62</td>
</tr>
<tr>
<td>500 KV to 750 KV</td>
<td>10.67</td>
</tr>
<tr>
<td>750 KV to 1000 KV</td>
<td>13.72</td>
</tr>
</tbody>
</table>

Allow for platform movement, electrical line sway or sag and beware of strong or gusty winds.

Keep away from the machine if it contacts energized power lines. Personnel on the ground or in the platform must not touch or operate the machine until energized power lines are shut off.

Do not operate the machine during lightning or storms.

Do not use the machine as a ground for welding.
**Tip-over Hazards**

Occupants and equipment must not exceed the maximum platform capacity or the maximum capacity of the platform extension.

<table>
<thead>
<tr>
<th>Maximum capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platform retracted</td>
</tr>
<tr>
<td>GTJZ06</td>
</tr>
<tr>
<td>GTJZ08</td>
</tr>
<tr>
<td>GTJZ10</td>
</tr>
<tr>
<td>GTJZ12</td>
</tr>
<tr>
<td>GTJZ14</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Maximum occupants - ANSI and CSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Maximum occupants - CE and Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outdoor use</td>
</tr>
<tr>
<td>Indoor use only</td>
</tr>
</tbody>
</table>

GTJZ06/GTJZ08/GTJZ14

<table>
<thead>
<tr>
<th>230kg</th>
<th>Extension only</th>
<th>Platform only</th>
</tr>
</thead>
<tbody>
<tr>
<td>115kg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

GTJZ10/GTJZ12

<table>
<thead>
<tr>
<th>320kg</th>
<th>Extension only</th>
<th>Platform only</th>
</tr>
</thead>
<tbody>
<tr>
<td>115kg</td>
<td></td>
<td>205kg</td>
</tr>
</tbody>
</table>

Do not alter or disable the limit switches.
Do not drive over 0.8km/h with the platform raised.
Do not operate the machine in strong or gusty winds.
Do not increase the surface area of the platform or the load. Increasing the area exposed to the wind will decrease machine stability.

Do not drive the machine on or near uneven terrain unstable surfaces or other hazardous conditions with the platform raised.
Use extreme care and slow speeds while driving the machine in a stowed position across uneven terrain, debris, unstable or slippery surfaces and near holes and drop-offs.

Do not push off or pull toward any object outside of the platform.

Maximum allowable manual force

<table>
<thead>
<tr>
<th>ANSI &amp; CSA – 2 person</th>
<th>500 N</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE – Indoor use only – 2 person</td>
<td>500 N</td>
</tr>
<tr>
<td>CE – Outdoor use – 1 person</td>
<td>200 N</td>
</tr>
</tbody>
</table>

Do not alter or disable machine components that in any way affect safety and stability.
Do not place or attach fixed or overhanging loads to any part of this machine.

Do not raise the platform unless the machine is on a firm, level surface.
Do not depend on the tilt alarm as a level indicator. The tilt alarm sounds on the chassis only when the machine is on a slope.

If the tilt alarm sounds:
Lower the platform. Move the machine to a firm, level surface.
If the tilt alarm sounds when the platform is raised, use extreme caution to lower the platform.
Do not place ladders or scaffolds in the platform or against any part of this machine.

Do not modify or alter an aerial work platform. Mounting attachments for holding tools or other materials onto the platform, toe boards or guard rail system can increase the weight in the platform and the surface area of the platform or the load.

Do not replace items critical to machine stability with items of different weight or specification.

Do not use the machine on a moving or mobile surface or vehicle.

Be sure all tires are in good condition, castle nuts are properly tightened and cotter pins are properly installed.

Do not use batteries that weigh less than the original equipment. Batteries are used as counterweight and are critical to machine stability. Each battery must weigh 62 pounds / 28kg.

Do not use the machine as a crane.

Do not push the machine or other objects with the platform.

Do not contact adjacent structures with the platform.

Do not tie the platform to adjacent structures.

Do not place loads outside the platform perimeter.

Do not operate the machine with the chassis trays open.

Do not use the platform controls to free a platform that is caught, snagged or otherwise prevented from normal motion by an adjacent structure. All personnel must be removed from the platform before attempting to free the platform using the ground controls.

Fall Hazards

Occupants should wear a safety belt or harness and comply with applicable governmental regulations. Attach the lanyard to the anchor provided in the platform. Do not sit, stand or climb on the Platform guard rails. Maintain a firm footing on the platform floor at all times.

Do not climb down from the platform when raised.

Keep the platform floor clear of debris.

Attach the platform entry chain or close the entry gate before operating.

Do not operate the machine unless the guard rails are properly installed and the entry is secured for operation.

Collision Hazards

Be aware of limited sight distance and blind spots when driving or operating.

Be aware of the extended platform position when moving the machine.

The machine must be on a level surface or secured before releasing the brakes.

It is recommended that operators wear an approved hard hat when operating the machine.

Check the work area for overhead obstructions or other possible hazards.
Be aware of crushing hazards when grasping the platform guard rail.

Observe and use the color-coded direction arrows on the platform controls and platform decal plate for drive and steer functions.

No stunt driving or horseplay while operating a machine. Do not lower the platform unless the area below is clear of personnel and obstructions.

Limit travel speed according to the condition of the ground surface, congestion, slope, location of personnel, and any other factors which may cause collision.

Do not operate a machine in the path of any crane or moving overhead machinery unless the controls of the crane have been locked out and/or precautions have been taken to prevent any potential collision.

Crushing Hazards
Keep hands and limbs out of scissors. Use common sense and planning when operating the machine with the controller from the ground. Maintain safe distances between the operator, the machine and fixed objects.

Component Damage Hazard
Do not use the machine as a ground for welding.

Explosion and Fire Hazard
Do not operate the machine in hazardous locations or locations where potentially flammable or explosive gases or particles may be present.

Damaged Machine Hazards
Do not use a damaged or malfunctioning machine.

Conduct a thorough per-operation inspection of the machine and test all functions before each work shift. Immediately tag and remove from service a damaged or malfunctioning machine.

Be sure all maintenance has been performed as specified in this manual and the appropriate service manual.

Be sure all decals are in place and legible.

Be sure the operation, safety, and responsibilities' manuals are complete, legible and in the storage container located on the platform.

Bodily Injury Hazard
Do not operate the machine with a hydraulic oil or air leak. An air leak or hydraulic leak can penetrate and/or burn skin.

Decal Legend
Niuli product decals use symbols, color coding and signal words to identify the following:

Safety alert symbol! Used to alert personnel to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

Red! Used to indicate the presence of an imminently hazardous situation which, if not avoided, will result in death or serious injury.

Orange! Used to indicate the presence of a potentially hazardous situation which, if not avoided, could result in death or serious injury.
**CAUTION** Yellow with safety alert symbol! used to indicate the presence of a potentially hazardous situation which, if not avoided, may cause minor or moderate injury.

**CAUTION** Yellow without safety alert symbol used to indicate the presence of a potentially hazardous situation which, if not avoided, may result in property damage.

**NOTICE** Green used to indicate operation or maintenance information.

### Battery Safety Burn Hazards

Batteries contain acid. Always wear protective clothing and eyewear when working with batteries.

Avoid spilling or contacting battery acid. Neutralize battery acid spills with baking soda and water. Do not expose the batteries or the charger to water or rain during charging.

### Explosion Hazards

Keep sparks, flames and lighted tobacco away from batteries. Batteries emit an explosive gas.

The battery tray should remain open during the entire charging cycle.

Do not contact the battery terminals or the cable clamps with tools that may cause sparks.

**Component Damage Hazard**

Do not use any battery charger greater than 24V to charge the batteries.

### Electrocrution Hazards

Connect the battery charger to a grounded, AC 3-wire electrical outlet only. Inspect daily for damaged cord, cables and wires. Replace damaged items before operating.

Avoid electrical shock from contact with battery terminals. Remove all rings, watches and other jewelry.

### Tip-over Hazard

Do not use batteries that weigh less than the original equipment. Batteries are used as counterweight and are critical to machine stability. Each battery must weigh 65 pounds / 28 kg.

### Lifting Hazard

Use the appropriate number of people and proper lifting techniques when lifting batteries.

### Maintenance of Safety Rules

**Danger**

Failure to obey the instructions and safety rules in this manual, will result in death or serious injury.

Many of the hazards identified in the operator's manual are also safety hazards when maintenance and repair procedures are performed.

**Do Not Perform Maintenance Unless:**

- You are trained and qualified to perform maintenance on this machine.
- You read, understand and obey:
You have the appropriate tools, lifting equipment and a suitable workshop.

Personal Safety

Any person working on or around a machine must be aware of all known safety hazards. Personal safety and the continued safe operation of the machine should be your top priority.

Read each procedure thoroughly. This manual and the decals, on the machine, use signal words to identify the following:

This product decals use symbols, color coding and signal words to identify the following:

Safety alert symbol! used to alert personnel to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER Red! Used to indicate the presence of an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING Orange! Used to indicate the presence of a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION Yellow with safety alert symbol! Used to indicate the presence of a potentially hazardous situation which, if not avoided, may cause minor or moderate injury.

CAUTION Yellow without safety alert symbol! Used to indicate the presence of a potentially hazardous situation which, if not avoided, may result in property damage.

NOTICE Green! Used to indicate operation or maintenance information.

Be sure to wear protective eye wear and other protective clothing if the situation warrants it.

Be aware of potential crushing hazards such as moving parts, free swinging or unsecured components, and lifting or placing loads. Always wear approved steel-toed shoes.

Workplace Safety

Be sure to keep sparks, flames and lighted tobacco away from flammable and combustible materials like battery gases and engine fuels. Always have an approved fire extinguisher within easy reach.

Be sure that all tools and working areas are properly maintained and ready for use. Keep work surfaces clean and free of debris that could get into machine components and cause damage.

Be sure that your workshop or work area is properly ventilated and well lit.

Be sure any forklift, overhead crane or other lifting or supporting device is fully capable of supporting and stabilizing the weight to be lifted. Use only chains or straps that are in good condition and of ample capacity.

Be sure that fasteners intended for one time use (i.e., cotter pins and self-locking nuts) are not reused. These components may fail if they are used a second time.

Be sure to properly dispose of old oil or other fluids. Use an approved container. Please be environmentally safe.
1. Platform entrance door
2. Platform entrance bar
3. Platform of fence
4. Safety belt anchorage
5. Platform extension part
6. Platform extension part release the pedal
7. Steering wheel
8. The ground operation panel
9. Power unit box
10. Fixed the brake wheel
11. Entrance to the stairs
12. Scissor stack
1. Emergency stop button  
2. 10A insurance  
3. Lifting switch  
4. Change switch

**Platform control box**

1. Emergency stop button  
2. Fast and low speed conversion  
3. Switch to walk  
4. Refer to manuals  
5. Display screen  
6. Tilt instructions marked  
7. Manipulation of the handle  
8. Turn Right switch  
9. Turn left to the switch  
10. Overweight instructions marked  
11. Power indicator label  
12. Lifting switch  
13. The horn switch
Pre-operation Inspection

Do Not Operate Unless:

You learn and practice the principles of safe machine operation contained in this operator's manual.

1. Avoid hazardous situations.
2. Always perform a pre-operation inspection.
3. Always perform function tests prior to use.
4. Inspect the workplace.
5. Only use the machine as it was intended.

Fundamentals

It is the responsibility of the operator to perform a pre-operation inspection and routine maintenance.

The pre-operation inspection is a visual inspection performed by the operator prior to each work shift.

The inspection is designed to discover if anything is apparently wrong with a machine before the operator performs the function tests.

The pre-operation inspection also serves to determine if routine maintenance procedures are required. Only routine maintenance items specified in this manual may be performed by the operator.

Refer to the list on the next page and check each of the items and locations for modifications, damage or loose or missing parts.

A damaged or modified machine must never be used. If damage or any variation from factory delivered condition is discovered, the machine must be tagged and removed from service.

Repairs to the machine may only be made by a qualified service technician, according to the manufacturer's specifications. After repairs are completed, the operator must perform a pre-operation inspection again before going on to the function tests.

Second Edition

Scheduled maintenance inspections shall be performed by qualified service technicians, according to the manufacturer's specifications and the requirements listed in the responsibilities manual.

Pre-operation Inspection

Be sure that the operator's, safety and responsibilities manuals are complete, legible and in the storage container located on the platform.

Be sure that all decals are legible and in place. See Decals section.

Check for hydraulic oil leaks and proper oil level. Add oil if needed. See Maintenance section.

Check for battery fluid leaks and proper fluid level. Add distilled water if needed. See Maintenance section.

Check the following components or areas for damage, modifications and improperly installed or missing parts:

- Electrical components, wiring and electrical cables
- Hydraulic power unit, tank, hoses, fittings, cylinders and manifolds
- Battery pack and connections
- Drive motors
- Wear pads
- Tires and wheels
- Limit switches, alarms and horn
- Nuts, bolts and other fasteners
- Platform entry chain (if equipped)
- Platform entry gate (if equipped)
- Beacon and alarms (if equipped)
- Brake release components
- Safety arm
- Pothole guards
- Platform extension
- Scissor pins and retaining fasteners
Check entire machine for:

- Cracks in welds or structural components
- Dents or damage to machine
- Be sure that all structural and other critical components are present and all associated fasteners and pins are in place and properly tightened.
- Side rails are installed and bolts are fastened
- Be sure that the chassis trays are in place, latched and properly connected.

**Maintenance**

![Notice Icon]

**Observe and Obey:**
Only routine maintenance items specified in this manual shall be performed by the operator.

Scheduled maintenance inspections shall be completed by qualified service technicians, according to the manufacturer's specifications and the requirements specified in the responsibilities manual.

**Maintenance Symbols Legend**

- **Notice** The following symbols have been used in this manual to help communicate the intent of the instructions. When one or more of the symbols appear at the beginning of a maintenance procedure, it conveys the meaning below.
  - Indicates that tools will be required to perform this procedure.
  - Indicates that new parts will be required to perform this procedure.

**Check the Hydraulic Oil Level**

Maintaining the hydraulic oil at the proper levels is essential to machine operation. Improper hydraulic oil levels can damage hydraulic components. Daily checks allow the inspector to identify changes in oil level that might indicate the presence of hydraulic system problems.

Perform this procedure with the platform in the stowed position.

1. Visually inspect the oil level in the hydraulic tank through the sight gauge in the side of the power unit module.
   - Result: The hydraulic oil level should be within the full and add marks on the oil level indicator decal.

2. Add oil if necessary. Do not overfill.

<table>
<thead>
<tr>
<th>Hydraulic oil specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydraulic oil type: L—HV46</td>
</tr>
</tbody>
</table>

**Check the Batteries**

Proper battery condition is essential to good engine performance and operational safety. Improper fluid levels or damaged cables and connections can result in engine component damage and hazardous conditions.

- **Notice** This procedure does not need to be performed on machines with sealed or maintenance-free batteries.

- **Warning** Electrocutation hazard. Contact with hot or live circuits may result in death or serious injury. Remove all rings, watches and other jewelry.

- **Warning** Bodily injury hazard. Batteries contain acid. Avoid spilling or contacting battery acid. Neutralize battery acid spills with baking soda and water.
Perform this test after fully charging the batteries.

1. Put on protective clothing and eye wear.
2. Be sure that the battery cable connections are tight and free of corrosion.
3. Be sure that the battery retaining fasteners are in place and secure.
4. Remove the battery vent caps.
5. Check the battery acid level of each battery. If needed, replenish with distilled water to the bottom of the battery fill tube. Do not overfill.
6. Install the vent caps.

Scheduled Maintenance
Maintenance performed quarterly, annually and every two years must be completed by a person trained and qualified to perform maintenance on this machine according to the procedures found in the service manual for this machine.

Machines that have been out of service for more than three months must receive the quarterly inspection before they are put back into service.

Function Tests

Do Not Operate Unless:
You learn and practice the principles of safe machine operation contained in this operator's manual.
1. Avoid hazardous situations.
2. Always perform a pre-operation inspection.
3. Always perform function tests prior to use. Know and understand the function tests before going on to the next section.
4. Inspect the workplace.
5. Only use the machine as it was intended.

Fundamentals
The function tests are designed to discover any malfunctions before the machine is put into service. The operator must follow the step-by-step instructions to test all machine functions.

A malfunctioning machine must never be used. If malfunctions are discovered, the machine must be tagged and removed from service. Repairs to the machine may only be made by a qualified service technician, according to the manufacturer's specifications.

11. Activate the auxiliary lowering/manual lowering function. Move the toggle switch OR pull the knob OR push the button.
Result: The platform should lower. The descent alarm will not sound.
12 Turn the key switch to platform control.

At the Platform Controls

Test Emergency Stop
13 Push in the platform red Emergency Stop button to the off position. Result: No functions should operate.

Test the Horn
14 Pull the red Emergency Stop button out to the on position.

15 Push the horn button.
Result: The horn should sound.

Test the Function Enable Switch
16 Do not hold the function enable switch.

17 Slowly move the control handle in the direction indicated by the yellow arrow, then in the direction indicated by the red arrow. Result: No functions should operate.

Test the Up/Down Functions
18 Press the lift function select button.
Press and hold the lift function enable button. Move the lift/drive selector switch to the lift position (if equipped).

19 Press and hold the function enable switch on the control handle.

20 Slowly move the control handle in the direction indicated by the blue arrow.
Result: The platform should raise. The pothole guards should deploy.

21 Release the control handle.
Result: The platform should stop raising.

22 Press and hold the function enable switch. Slowly move the control handle in the direction indicated by the yellow arrow.
Result: The platform should lower. The descent alarm should sound while the platform is lowering.

Test the Steering
Note: When performing the steer and drive function tests, stand in the platform facing the steer end of the machine.

23 Press the drive function select switch. Move the lift/drive selector switch to the drive position (if equipped).

24 Press and hold the function enable switch on the control handle.

25 Depress the thumb rocker switch on top of the control handle in the direction identified by the yellow triangle on the control panel. Result: The steer wheels should turn in the direction that the yellow triangle points on the control panel.

26 Depress the thumb rocker switch in the direction identified by the red triangle on the control panel. Result: The steer wheels should turn in the direction that the yellow triangle points on the control panel.

Test Drive and Braking
27 Press and hold the function enable switch on the control handle.

28 Slowly move the control handle in the direction indicated by the yellow arrow on the control panel until the machine begins to move, then return the handle to the center position.
Result: The machine should move in the direction that the yellow arrow points on the control panel, then come to an abrupt stop.

29 Slowly move the control handle in the direction indicated by the red arrow on the control panel until the machine begins to move, then return the handle to the center position.
Result: The machine should move in the direction that the red arrow points on the control panel, then come to an abrupt stop. Note: The brakes must be able to hold the machine on any slope it is able to climb.

Test Limited Drive Speed
30 Press the lift function select button.
Press and hold the lift function enable button. Move the lift/drive selector switch to the lift position (if equipped).

31 Press and hold the function enable switch on the control handle. Raise the platform approximately 3.5 m from the ground. Result: The pothole guards should deploy.

32 Press the drive function select switch. Move the lift/drive selector switch to the drive position (if equipped).

33 Press and hold the function enable switch on the control handle. Slowly move the control handle to the full drive position.
Result: The maximum achievable drive speed with the platform raised should not exceed 0.8km/h per second.
If the drive speed with the platform raised exceeds 0.8km/h, immediately tag and remove the machine from service.

Test the Tilt Sensor Operation
Note: Perform this test from the ground with the platform controller. Do not stand in the platform.

34 Fully lower the platform.

35 Place a 2x4 or similar piece of wood under both wheels on one side and drive the machine up onto them.

36 Raise the platform approximately 3.5 m from the ground.

37 Lower the platform and remove both pieces of wood.

Test the Pothole Guards
Note: The pothole guards should automatically deploy when the platform is raised. The pothole guards activate two limit switches which control the machine drive speed. If the pothole guards do not deploy and the platform is raised above 3.5 m, an alarm sounds and the machine will not drive.

38 Raise the platform.
Result: When the platform is raised 3.5 m from the ground, the pothole guards should deploy.

39 Press on the pothole guards on one side, and then the other.
Result: The pothole guards should not move.

40 Lower the platform.
Result: The pothole guards should return to the stowed position.

41 Place a 2x4 or similar piece of wood under a pothole guard. Raise the platform.
Result: Before the platform is raised 3.5 m from the ground, an alarm should sound and the drive function should not work.

42 Lower the platform and remove the 2x4.

Workplace Place Inspection

Do Not Operate Unless:
You learn and practice the principles of safe machine operation contained in this operator's manual.
1. Avoid hazardous situations.
2. Always perform a pre-operation inspection.
3. Always perform function tests prior to use.
4. Inspect the workplace.
Know and understand the workplace inspection before going on to the next section.
5. Only use the machine as it was intended.

Fundamentals
The workplace inspection helps the operator determine if the workplace is suitable for safe machine operation. It should be performed by the operator prior to moving the machine to the workplace.

It is the operator's responsibility to read and remember the workplace hazards, then watch for and avoid them while moving, setting up and operating the machine.

Workplace Inspection
Be aware of and avoid the following hazardous situations:
- drop-offs or hole bumps, floor obstructions or debris
- overhead obstructions and high voltage conductors
- hazardous location
- inadequate surface support to withstand all load forces imposed by the machine
- weather condition the presence of unauthorized personnel
- other possible unsafe condition

Operating Instructions

Do Not Operate Unless:
You learn and practice the principles of safe machine operation contained in this operator's manual.
1. Avoid hazardous situations.
2. Always perform a pre-operation inspection.
3. Always perform function tests prior to use.
4. Inspect the workplace.
5. Only use the machine as it was intended.

Fundamentals
The Operating Instructions section provides instructions for each aspect of machine operation. It is the operator's responsibility to follow all the safety rules and instructions in the operator's, safety, and responsibilities manuals.

Using the machine for anything other than lifting personnel and tools to an aerial work site is unsafe and dangerous.

Only trained and authorized personnel should be permitted to operate a machine. If more than one operator is expected to use a machine at different times in the same work shift, they must all be qualified operators and are all expected to follow all safety rules and instructions in the operator's, safety, and responsibilities manuals. That means every new operator should perform a pre-operation inspection, function tests, and a workplace inspection before using the machine.

Emergency Stop
Push in the red Emergency Stop button to the off position at the ground controls or the platform controls to stop all functions.

Repair any function that operates when either red Emergency Stop button is pushed in.

Auxiliary Lowering/Manual Lowering
1. Activate the auxiliary lowering/manual lowering function. Move the toggle switch OR pull the knob OR push the button.

Operation From Ground
1. Turn the key switch to ground control.
2. Pull out both ground and platform red Emergency Stop buttons to the on position.
3. Be sure the battery pack is connected before operating the machine.

To Position Platform
1. Move the up/down toggle switch according to the markings on the control panel.

Drive and steer functions are not available from the ground controls.

Operation From Platform
1. Turn the key switch to platform control.
2. Pull out the ground and platform red Emergency Stop buttons to the on position.
3. Be sure the battery pack is connected before operating the machine.

To Position Platform
1. Press the lift function select button. Press and hold the lift function enable button. Move the lift/drive selector switch to the lift position (if equipped).
2. Press and hold the function enable switch on the control handle.
3. Move the control handle according to the markings on the control panel.

CE models: When lowering the platform, the platform should stop when it is 7 feet / 2.1 m from the ground. Be sure the area below the platform is clear of personnel and obstructions before continuing. To continue lowering, release the control handle, wait 5 seconds, then move the control handle again.

To Steer
1. Press the drive function select button. Move the lift/drive selector switch to the drive position.
2. Press and hold the function enable switch on the control handle.
3. Turn the steer wheels with the thumb rocker switch located on the top of the control handle.

To Drive
1. Press the drive function select button. Move the lift/drive selector switch to the drive position.
2. Press and hold the function enable switch on the control handle.
3. Increase speed: Slowly move the control handle off center.
   Decrease speed: Slowly move the control handle toward center.

Stop: Return the control handle to center or release the function enable switch.
Use the color-coded direction arrows on the platform controls and on the platform to identify the direction the machine will travel.

Machine travel speed is restricted when the platform is raised.

Battery condition will affect machine performance. Machine drive speed and function speed will drop when the low battery indicator light is on or when the last light on the battery level indicator is flashing.

**Error Indicator Light On**
If the error indicator light is on, push in and pull out the red Emergency Stop button to reset the system.

If the light stays on, tag and remove the machine from service.

**Drive Select Switch**
Machine on incline symbol: Low range operation for inclines

Move the toggle switch down for normal drive operation.

**To Extend and Retract Platform**
1. Step on the platform extension release pedal on the platform toe-board.
2. Grasp the platform guard rails and carefully push to extend the platform to the mid-position stop.
3. Step on the release pedal again and push to fully extend the platform.

Do not stand on the platform extension while trying to extend it.

4. Step on the platform extension release pedal and pull to retract the platform to the mid-position stop. Step again to fully retract the platform.

Models without chassis counterweight: The platform extension limit switch will disable the drive function when the platform is extended and the platform is raised above 26 ft / 7.9 m. Lower the platform or retract the platform extension to drive the machine.

**Operation From Ground with Controller**
Maintain safe distances between the operator, machine and fixed objects.

Be aware of the direction the machine will travel when using the controller.

---

**After Each Use**
1. Select a safe parking location! A firm leve surface, clear of obstruction and traffic.
2. Lower the platform.
3. Turn the key switch to the off position and remove the key to secure from unauthorized use.
4. Chock the wheels.
5. Charge the batteries.

**Battery and Charger Instructions**

---

**Observe and Obey:**
Do not use an external charger or booster battery.

Charge the battery in a well-ventilated area.

Use proper AC input voltage for charging as indicated on the charger.

Use only Niuli authorized battery and charger.

**To Charge Battery**
1. Be sure the batteries are connected before charging the batteries.
2. Open the battery compartment. The compartment should remain open for the entire charging cycle.
3. Remove the battery vent caps and check the battery acid level. If necessary, add only enough distilled water to cover the plates. Do not overfill prior to the charge cycle.
4. Replace the battery vent caps.
5. Connect the battery charger to a grounded AC circuit.
6. Turn the battery charger on.
7. The charger will indicate when the battery is fully charged.

---
8 Check the battery acid level when the charging cycle is complete. Replenish with distilled water to the bottom of the fill tube. Do not overfill.

Dry Battery Filling and Charging Instructions
1 Remove the battery vent caps and permanently remove the plastic seal from the battery vent openings.
2 Fill each cell with battery acid (electrolyte) until the level is sufficient to cover the plates.

Do not fill to maximum level until the battery charge cycle is complete. Overfilling can cause the battery acid to overflow during charging. Neutralize battery acid spills with baking soda and water.

3 Install the battery vent caps.
4 Charge the battery.
5 Check the battery acid level when the charging cycle is complete. Replenish with distilled water to the bottom of the fill tube. Do not overfill.

Transport Instructions

Observe and Obey:
Common sense and planning must be applied to control the movement of the machine when lifting it with a crane or forklift. The transport vehicle must be parked on a level surface. The transport vehicle must be secured to prevent rolling while the machine is being loaded. Be sure the vehicle capacity, loading surfaces and chains or straps are sufficient to withstand the machine weight. See the serial plate for the machine weight. The machine must be on a level surface or secured before releasing the brakes.

Securing to Truck or Trailer for Transit
Always chock the machine wheels in preparation for transport.

Use the tie-down points on the chassis for anchoring down to the transport surface.

Use chains or straps of ample load capacity.

Turn the key switch to the off position and remove the key before transporting.

Inspect the entire machine for loose or unsecured items.

Brake Release Operation
1 Chock the wheels to prevent the machine from rolling.
2 Be sure the winch line is properly secured to the drive chassis tie points and the path is clear of all obstructions.
3 Turn the brake release knob counterclockwise to open the brake valve.
4 Pump the brake release pump knob.

After the machine is loaded:
1 Chock the wheels to prevent the machine from rolling.
2 Turn the brake release knob clockwise to reset the brakes.

Repair Procedures

Observe and Obey:
➢ Repair procedures shall be completed by a person trained and qualified on the repair of this machine.
➢ Immediately tag and remove from service a damaged or malfunctioning machine. ☑ Repair any
Before Repairs Start:
➢ Read, understand and obey the safety rules and operating instructions in the GTJZ06/08/10 /12/14 Operator’s Manual.
➢ Be sure that all necessary tools and parts are available and ready for use.
➢ Read each procedure completely and adhere to the instructions. Attempting shortcuts may produce hazardous conditions. Unless otherwise specified, perform each repair procedure with the machine in the following configuration:
   · Machine parked on a flat, level surface
   · Boom in the stowed position
   · Turntable rotated with the boom between the circle-end wheels
   · Turntable secured with the turntable rotation lock pin
   · Key switch in the OFF position with the key removed
   · Welder disconnected from the machine
   · Wheels chocked

Repair Procedures
Most of the procedures in this section should only be performed by a trained service professional in a suitably equipped workshop. Select the appropriate repair procedure after troubleshooting the problem. Perform the disassembly procedures to the point where repairs can be completed. Then to reassemble, perform the disassembly steps in reverse order.

Symbols Legend

Safety alert symbol used to alert personnel to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER Red! Used to indicate the presence of an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING Orange! used to indicate the presence of a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION Yellow with safety alert symbol! used to indicate the presence of a potentially hazardous situation which, if not avoided, may cause minor or moderate injury.

CAUTION Yellow without safety alert symbol! used to indicate the presence of a potentially hazardous situation which, if not avoided, may result in property damage.

NOTICE Green! used to indicate operation or maintenance information.

Platform Components 1-1 Platform How to Remove the Platform

1 Find the link to the ministry of tank bottom, control cables. Recognize that the number of the cable and position.
2 From the control of the tank bottom off cable.
3 Remove the bolt platform control box. Move machine control box and kaiping aside.
4 Remove platform base and arm the axid of a connection, and remove the slider.
5 Remove the whole work platform.
Electrocution hazard. Contact with electrically charged circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

1-2 Extensions platform

1. On the platform level
2. Remove the shaft on both sides in the roller, remove the roller.
3. Removed extensions platform.

1-3 Platform Guardrail

1. On the platform level
2. Remove the guardrail and respectively chassis connected pin shaft, put up good.
3. In turn off the fence respectively

Boom Components 2-1

How to Remove the Boom
When remove hose and tube fittings, must remove hose or at the end of the pipe joints of the O-rings.

NOTICE In the arm in position when the plane contract execution of the process.

3. Remove and lifting cylinder pipe and connect the join, move the pipe joints, and all the wires.
4. Arms frame in the whole discharge level
5. Dismantling the lifting oil cylinder, then moved away
6. From up to down in each arm between frame removed connecting shaft, according to the order put them in order.
7. Remove the arm of the frame on the last shock the slider.

Chassis parts 3-1 Drive Pump

Drive pump is a long working power unit. The output of the pump by the pump the points on the displacement control.

How to Remove the Drive Pumps

1. Disconnect the electric drive pump in the displacement controller circuit connection.
2. Shut down two at hydraulic oil tank on the hydraulic oil tank globe valve.
3. From the drive pump mark, disconnect and fort hydraulic hose.
4. With proper support equipment support drive pump and remove two drive pump installation bolt.
5. Be careful to pull out until the pump shaft drive pump spline from flexible coupling.
6. Move up the drive pump from the machine.

3-2 Hydraulic oil tank

How to Remove the Hydraulic oil tank

1. Open at the side of the hydraulic oil tank
2 Shut down two at hydraulic oil tank on the hydraulic oil tank globe valve.
3 From the hydraulic oil tank remove plug and so all the oil into the appropriate containers
4 Disconnect and plugged power unit for tubing.Plug the pipe joint hydraulic oil tank
5 Disconnect and plugged in to pick up on the oil filter the two root hose T pipe joints.Plug the pipe joint hydraulic oil tank.
6 Remove the hydraulic oil tank and between the bolt of the chassis

4 In the direction of the steel placed at the end of a machine.
5 Jacked up machine about 15 cm. Will put below support at the steel.
6 Remove tires nut. Remove tires
7. Place the second jack under the support of the drive speed reducer. Remove the drive speed reducer and the turning knuckle’s mounting bolts. Remove the drive speed reducer.

3-3 Drive motor

How to Remove the Drive motor

<table>
<thead>
<tr>
<th>NOTICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>When remove hose and tube fittings, must remove hose or at the end of the pipe joints of the O-rings.</td>
</tr>
</tbody>
</table>

1 Labeling. Disconnect and plug in the drive motors of the hydraulic hose, and stop the motor drive the pipe joints.
2 Remove the drive motors installation bolt
3 From the brake and reducer slip out of the drive motors.

3-4 Drive speed reducer How to Remove the Drive speed reducer

<table>
<thead>
<tr>
<th>NOTICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>When remove hose and tube fittings, must remove hose or at the end of the pipe joints of the O-rings.</td>
</tr>
</tbody>
</table>

1 Labeling. Disconnect and plug for hydraulic hoses hose clips fittings hydraulic braking device.
2 Loosen tire nut
3 The drive speed reducer telescopic shaft placed below a enough ability of jack.. Don’t jacked up machine.

For illustrative purposes only. Specifications may vary and are subject to change without notice or obligation.

<table>
<thead>
<tr>
<th>Torque</th>
<th>Nm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor Rotation bolt</td>
<td>M12×80-10.9</td>
</tr>
</tbody>
</table>

Hydraulic Specifications

<table>
<thead>
<tr>
<th>Hydraulic fluid</th>
<th>L-HM46</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive pump Type: Long time work-power unit</td>
<td></td>
</tr>
<tr>
<td>Displacement @ 2600 rpm: 15L per minute</td>
<td></td>
</tr>
<tr>
<td>Maximum drive pressure: 210 bar</td>
<td></td>
</tr>
<tr>
<td>Function manifold Function relief valve Pressure: 200 bar</td>
<td></td>
</tr>
<tr>
<td>Extend boom relief valve pressure: 200 bar</td>
<td></td>
</tr>
<tr>
<td>Drive manifold Brake pressure: 1.72MPa</td>
<td></td>
</tr>
<tr>
<td>Drive motors Displacement per revolution: 260 cc</td>
<td></td>
</tr>
<tr>
<td>Hydraulic filter Hydraulic tank return line filter: SP-06×10</td>
<td></td>
</tr>
<tr>
<td>Bypass pressure: 4 bar</td>
<td></td>
</tr>
</tbody>
</table>
Hydraulic Hose and Fitting Torque Specifications

Your machine is equipped with EMB Seal-Lok® O-ring face seal fittings and hose ends. Machines that utilize EMB Seal-Lok® O-ring face seal hoses and fittings require that the fittings and hose ends be torqued to specification when they are removed and installed or when new hoses or fittings are installed.

<table>
<thead>
<tr>
<th>Install Size</th>
<th>Installing into...</th>
<th>Nm</th>
</tr>
</thead>
<tbody>
<tr>
<td>-4</td>
<td>Aluminum</td>
<td>14.9</td>
</tr>
<tr>
<td></td>
<td>Steel</td>
<td>21.7</td>
</tr>
<tr>
<td>-6</td>
<td>Aluminum</td>
<td>31.2</td>
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<tr>
<td></td>
<td>Steel</td>
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<tr>
<td>-8</td>
<td>Aluminum</td>
<td>54.2</td>
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<tr>
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<td>Steel</td>
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<td>93.6</td>
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<tr>
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<td>Steel</td>
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<td></td>
<td>Steel</td>
<td>190</td>
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<tr>
<td>-16</td>
<td>Aluminum</td>
<td>188.5</td>
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<tr>
<td></td>
<td>Steel</td>
<td>284.7</td>
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<tr>
<td>-20</td>
<td>Aluminum</td>
<td>233.2</td>
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<tr>
<td></td>
<td>Steel</td>
<td>352.5</td>
</tr>
<tr>
<td>-24</td>
<td>Aluminum</td>
<td>282</td>
</tr>
<tr>
<td></td>
<td>Steel</td>
<td>427.1</td>
</tr>
</tbody>
</table>

Torque Procedure

1. Replace the O-ring. The O-ring must be replaced anytime the seal has been broken. The O-ring cannot be re-used if the fitting or hose end has been tightened beyond finger tight.

2. Lubricate the O-ring before installation.

3. Be sure that the face seal O-ring is seated and retained properly.

4. Position the tube and nut squarely on the face seal end of the fitting and tighten the nut finger tight.

5. Tighten the nut or fitting to the appropriate torque per given size as shown in the table above.

6. Operate all machine functions and inspect the hoses and fittings and related components to be sure that there are no leaks.

Hydraulic System

All machine functions are performed by the hydraulic system. The hydraulic system can be divided into two groups: Steer functions and Drive functions.
Workbench extensions by manual operation

Drive functions are powered by a Long time work power unit. Flow is 15L/min.

Electrical System

24V batteries are used for this system. Battery is used to start the motor and drive the controllers. By external storage battery charging alternating current.

Scheduled Maintenance Procedures

Observe and Obey:

➢ Maintenance inspections shall be completed by a person trained and qualified on the maintenance of this machine.
➢ Scheduled maintenance inspections shall be completed daily, quarterly, semi-annually, annually and every 2 years as specified on the Maintenance Inspection Report.

WARNING: Failure to perform each procedure as presented and scheduled could result in death, serious injury or substantial damage.

➢ Immediately tag and remove from service a damaged or malfunctioning machine.
➢ Repair any machine damage or malfunction before operating the machine.
➢ Keep records on all inspections for three years.
➢ Machines that have been out of service for a period longer than 3 months must complete the quarterly inspection.
➢ Unless otherwise specified, perform each maintenance procedure with the machine in the following configuration:

1. Machine parked on a flat, level surface
2. Boom in stowed position
3. Extended platform specified position in the back.
4. Turntable secured with the turntable rotation lock
5. Key switch in the “OFF” position with the key removed
6. Wheels chocked

Machine Controls

Two controller is used to control the machine function. One is installed in chassis, and one is installed on the platform.

Safety precautions

A series of proximity switches and mechanical limit switches provide information to the controllers. These proximity and mechanical switches maintain and define the safe operating parameters of the machine. Sensor status can not be changed.

➢ Before remove the lifter cylinder, oil hose or any part of body put in the boom, please place the boom protection board as shown below:

About This Section

This section contains detailed procedures for each scheduled maintenance inspection. Each procedure includes a description, safety warnings and step-by-step instructions.

Symbols Legend

Safety alert symbol—used to alert personnel to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

Danger: Red! Used to indicate the presence of an imminently hazardous situation which, if not avoided, will result in death or serious injury.

Warning: Orange! used to indicate the presence of a potentially hazardous situation which, if not avoided, could result in death or serious injury.

Caution: Yellow with safety alert symbol! used to indicate the presence of a potentially hazardous situation which, if not avoided, may cause minor or moderate injury.
Yellow without safety alert symbol! used to indicate the presence of a potentially hazardous situation which, if not avoided, may result in property damage.

Green! used to indicate operation or maintenance information.

Maintenance Symbols Legend

**NOTICE**: The following symbols have been used in this manual to help communicate the intent of the instructions. When one or more of the symbols appear at the beginning of a maintenance procedure, it conveys the meaning below.

- Indicates that tools will be required to perform this procedure.
- Indicates that new parts will be required to perform this procedure.
- Indicates that a cold engine will be required to perform this procedure.
- Indicates that a warm engine will be required to perform this procedure.
- Indicates that dealer service will be required to perform this procedure.

Delivery Prepare Report
The delivery prepare report contains checklists for each type of scheduled inspection. Make copies of the delivery prepare report to use for each inspection. Store completed forms as requested.

Maintenance Schedule
There are five types of maintenance inspections that must be performed according to a schedule—daily, quarterly, six months, annual, and two year. The Scheduled Maintenance Procedures Section and the Maintenance Inspection Report have been divided into five subsections—A, B, C, D and E. Use the following chart to determine which group(s) of procedures are required to perform a scheduled inspection.

<table>
<thead>
<tr>
<th>Inspection</th>
<th>Table or Checklist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily or every 8 hours</td>
<td>A</td>
</tr>
<tr>
<td>Quarterly or every 250 hours</td>
<td>A + B</td>
</tr>
<tr>
<td>Semi-annually or every 500 hours</td>
<td>A + B + C</td>
</tr>
<tr>
<td>Annual or every 1000 hours</td>
<td>A + B + C + D</td>
</tr>
<tr>
<td>Two year or every 2000 hours</td>
<td>A + B + C + D + E</td>
</tr>
</tbody>
</table>

Maintenance Inspection Report
The maintenance inspection report contains checklists for each type of scheduled inspection. Make copies of the Maintenance Inspection Report to use for each inspection. Store completed forms for three years.

Delivery Prepare
**Fundamentals**
It is the responsibility of the Niuli Machiner to perform delivery prepare.

The inspection is designed to discover before deliver the machine.

If damage or any unauthorized variation from factory delivered condition is discovered, the machine must be tagged and removed from service. Scheduled maintenance inspections shall be completed by qualified service technicians, according to the manufacturer’s specifications and the requirements specified in the responsibilities manual.

**Enchiridion**
Use the operator manual when operate the machine.

Delivery prepare contain Pre-operation Inspection, Maintenance Procedures, Function Tests.

Use the following chart to note result.

Place a check in the appropriate box after each inspection procedure is completed.

If any inspection receives an “N”, tag and remove the machine from service, repair and re-inspect it. After repair, place a check in the “R” box.

**Legend**
- Y = yes, acceptable
- N = no, remove from service
- R = repaired

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Y</th>
<th>N</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-operation Inspection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance Procedures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Function Tests</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Maintenance Inspection Report

Model
Serial number
Date
Hour meter
Machine owner
Inspected by (print)
Inspector signature
Inspector title
Inspector company

Instructions
− Make copies of this report to use for each inspection.
− Select the appropriate checklist(s) for the type of inspection to be performed.

Daily or 8 hour Inspection: A
Quarterly or 250 hour A+B
Inspection:
Semi-annual or 500 hour A+B+C
Annual or 1000 hour Inspection: A+B+C+D
2 Year or 2000 hour Inspection: A+B+C+D+ E

− Place a check in the appropriate box after each inspection procedure is completed.
− Use the step-by-step procedures in this section to learn how to perform these inspections.
− If any inspection receives an "N", tag and remove the machine from service, repair and re-inspect it. After repair, place a check in the "R" box.

Legend
Y = yes, acceptable
N = no, remove from service
R = repaired

Checklist A

A-1 Manuals

Checklist B

A-7 Platform and ground controls
A-8 Tilt sensor and alarm
A-9 Operating envelope
A-10 Perform 30 day service
A-11 Batteries

A-2 Decals and placards
A-3 Damage and loose or missing parts
A-4 Hydraulic oil level
A-5 Hydraulic leaks
A-6 Hydraulic filter condition indicators
B-1 Hydraulic tank return filters
B-2 Hydraulic tank intake filters
B-3 Electrical wiring
B-4 Brake configuration
B-5 Tires and wheels
B-6 Driving motor oil level
B-7 Key switches
B-8 Emergency Stop
B-9 Ground control override
B-10 Test the Safety Envelope
B-11 Horn
B-12 Foot switch
B-13 Drive start
B-14 Drive brake
Table A Procedures

A-1 Inspect the Manuals

Maintaining the operator's and safety manuals in good condition is essential to safe machine operation. Manuals are included with each machine and should be stored in the container provided in the platform. An illegible or missing manual will not provide safety and operational information necessary for a safe operating condition.

1 Check to be sure that the storage container is present and in good condition.

A-2 Inspect the Decals and Placards

Maintaining all of the safety and instructional decals and placards in good condition is mandatory for safe machine operation. Decals alert operators and personnel to the many possible hazards associated with using this machine. They also provide users with operation and maintenance information. An illegible decal will fail to alert personnel of a procedure or hazard and could result in unsafe operating conditions.

1 Refer to the Decals section in the GTJZ06/08/10/12/14 Operator's Manual and use the decal list and illustrations to determine that all decals and placards are in place.

2 Inspect all decals for legibility and damage.

Replace any damaged or illegible decal immediately.

A-3 Inspect for Damage and Loose or Missing Parts

Daily machine condition inspections are essential to safe machine operation and good machine performance. Failure to locate and repair damage,
and discover loose or missing parts may result in an unsafe operating condition. 1 Visually inspect the entire machine for damage and improperly installed or missing parts including:

- Electrical components, wiring and electrical cables
- Hydraulic hoses, fittings, cylinders and manifolds
- Hydraulic tanks
- Walk motors and reducer
- Slider
- Dents or damage to machine
- Tires and wheels
- Limit switches and horn
- Alarms and beacon (if equipped)
- Nuts, bolts and other fasteners
- Platform guardrail
- Cracks in welds or structural components
- Compartment covers and latches

A-4 Check the Hydraulic Oil Level
Maintaining the hydraulic oil at the proper level is essential to machine operation. Improper hydraulic oil levels can damage hydraulic components. Daily checks allow the inspector to identify changes in oil level that might indicate the presence of hydraulic system problems.

**NOTICE** Perform this procedure with the boom in the stowed position and the axles extended.

1 Visually inspect the sight gauge located on the side of the hydraulic oil tank.
Result: The hydraulic oil level should be on the same level of returning oil inlet.

A-5 Check for Hydraulic Leaks
Detecting hydraulic fluid leaks is essential to operational safety and good machine performance. Undiscovered leaks can develop into hazardous situations, impair machine functions and damage machine components.

1 Inspect for hydraulic oil puddles, dripping or residue on or around the following areas:
- Hydraulic tank—filter, fittings, hoses, auxiliary power unit and turntable surface
- All hydraulic cylinders
- All hydraulic manifolds
- Boom
- The underside of the drive chassis
- Axles
- Ground area under the machine

A-6 Check the Hydraulic Filter Condition Indicators
Maintaining the hydraulic filters in good condition is essential to good system performance and safe machine operation. The filter condition indicators will show when the hydraulic flow is bypassing a clogged filter. If the filters are not frequently checked and replaced, impurities will remain in the hydraulic system and cause component damage.

**NOTICE** There are two hydraulic filters located on the machine. One medium pressure filter and two high pressure filters.

1 Start the machine from the platform controls.
2 Change the machine idle to high rpm (rabbit symbol).
3 Inspect the filter condition indicator gauge. Result: The needle on the gauge should be operating in the
green area. If the needle is in the red area, this indicates that the hydraulic filter is being bypassed and the filter should be replaced.

A-7 Test the Platform and Ground Controls
Testing the machine functions and the Emergency Stop buttons for malfunctions is essential for safe machine operation. An unsafe working condition exists if any function fails to operate properly or either Emergency Stop button fails to stop all the machine functions and shut off the machine. Each function should activate, operate smoothly and be free of hesitation, jerking and unusual noise.

1. Turn the toggle switch to ground controls and pull out the Emergency Stop button to the ON position.
Result: all functions can be operated smoothly.
2. Pull out the red Emergency Stop button to the 'OFF' position.
Result: all functions can not be operated.

A-8 Test the Tilt Sensor and Alarm
The tilt sensor sounds an alarm located in the platform when the incline of the turntable exceeds 3 degree.

NOTICE Taking the test at the ground by platform control. Do not stand on the platform.
1. Lower the platform completely.
2. Place a 2"x4 or similar sized wood block at the side of two wheels and drive the machine on it.
3. Raise the platform.
Result: Platform will stop raising when arrived the height of 3 meters.
4. Lower the platform and remove the wood block.
5. As a security feature, please give priority to ground control for operation.

A-9 Test the Operating Envelope
Testing the machine operating envelope is critical to safe machine operation.

1. In the ground controller operate the machine, the machine working normally.
2. In the platform controller operate the machine, the machine working normally.

A-10 Perform 30 Day Service
The 30 day maintenance procedure is a one-time sequence of procedures to be performed after the first 30 days or 40 hours of usage.
Perform the following maintenance procedures:
·1 Perform the following maintenance procedures:
· A-3 Inspect for Damage and Loose or Missing Parts
· A-5 Check the hydraulic leaks
· B-2 Replace hydraulic oil tank back to oil filter
· B-5 Check the tires

A-11 Check the Batteries

24 hours required to perform a

Proper battery condition is essential to good machine performance and operational safety. Improper fluid levels or damaged cables and connections can result in machine component damage and hazardous conditions.

Electrocution hazard. Contact with hot or live circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

Bodily injury hazard. Batteries contain acid. Avoid spilling or contacting battery acid. Neutralize battery acid spills with baking soda and water.
1 Put on protective clothing and eye wear.
2 Be sure that the battery cable connections are free of corrosion.
3 Be sure that the battery hold downs and cable connections are tight.
4 Be sure that the battery separator wire connections are tight.
5 Remove the battery vent caps from both batteries and check the specific gravity of each battery with a hydrometer.
Result: If any battery cell displays a specific gravity of less than 1.086, the battery must be replaced.

6 Check the battery acid level. If needed, replenish with distilled water to the bottom of the battery fill tube. Do not overfill.
7 Install the vent caps.

Table B Procedures

B-1 Replace the Hydraulic Tank Return Filters

Replacement of the hydraulic tank return filter is essential for good machine performance and service life. A dirty or clogged filter may cause the machine to perform poorly and continued use may cause component damage. Extremely dirty conditions may require that the filter be replaced more often.

Burn hazard. Beware of hot oil. Contact with hot oil may cause severe burns.

Perform this procedure with the machine off.

The system return filter is located near the top of the hydraulic tank

1 Open the ground controls side turntable side cover and locate the tank return filters.
2 Place a suitable container under the hydraulic tank return filters.
3 Remove each filter with an oil filter wrench.
4 Apply a thin layer of clean oil to the new oil filter gaskets.
5 Install the new system return filter and tighten it securely by hand.
6 Clean up any oil that may have spilled during the procedure.
7 Use a permanent ink marker to write the date and number of hours from the hour meter on the filters.
8 Start the engine from the ground controls.
9 Inspect the filters and related components to be sure that there are no leaks.

**B-2 Replace the Hydraulic Tank Intake Filters**

Replacement of the hydraulic tank intake filter is essential for good machine performance and service life. A dirty or clogged filter may cause the machine to perform poorly and continued use may cause component damage. Extremely dirty conditions may require that the filter be replaced more often.

**CAUTION**

Burn hazard. Beware of hot oil. Contact with hot oil may cause severe burns.

**NOTICE**

Perform this procedure with the machine off.
1 Open the ground box.
2 Remove each filter with an oil filter wrench.
3 Install the new system intake filter and tighten it securely by hand.
4 Inspect the filters and related components to be sure that there are no leaks.

**B-3 Inspect the Electrical Wiring**

Maintaining electrical wiring in good condition is essential to safe operation and good machine performance. Failure to find and replace burnt, chafed, corroded or pinched wires could result in unsafe operating conditions and may cause component damage.

**WARNING**

Contact with hot or live circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

1 Inspect the following areas for burnt, chafed, corroded and loose wires:
   - motor wiring harness
   - Ground control box harness connectors
   - manifold wiring
2 Start the machine from the platform controls.
3 Turn the key switch to ground control and raise the boom above the turntable covers.

**WARNING**

Crushing hazard. Keep hands away from the cylinder and all moving parts when lowering the boom.

4 Turn the machine off.
5 Inspect the boom area for burnt, chafed and pinched cables.
6 Remove the safety chock and lower the boom to the stowed position.
7 Turn the machine off.
8 Inspect the following areas for burnt, chafed, corroded, pinched and loose wires:
   - Platform control box harness connectors
   - manifold wiring

**B-4 Confirm the Proper Brake Configuration**
Proper brake configuration is essential to safe operation and good machine performance. The drive gears of machine comes with hydraulic brakes and the braking device is enabled by default. Check the drive gear clutch to be sure it is in the engaged position. The walking brake distance is less than 0.5m.

B-5 Inspect the Tires and Wheels (including lug nut torque)

Maintaining the tires and wheels in good condition is essential to safe operation and good performance. Tire and/or wheel failure could result in a machine tip-over. Component damage may also result if problems are not discovered and repaired in a timely fashion.

**NOTICE**
The tires on these machines are solid and do not need air added to them.
1. Check all tire treads and sidewalls for cuts, cracks, punctures and unusual wear.
2. Check each wheel for damage, bends and cracked welds.
3. Check each lug nut for proper torque.

B-6 Test the Optional(shift) Switches

Proper optional switch action and response is essential to safe machine operation. Failure of optional key switch to function properly could cause a hazardous operating situation.

The optional key switch controls machine operation from the ground or platform controls.

1. Pull out the Emergency Stop button to the ON position at both the ground and platform controls.
2. At the ground controls, turn the optional switch to the **ground** position.
3. Check any machine function from the **ground** controls.
   - Result: The machine functions should operate.
4. Check any machine function from the **platform** controls.
   - Result: The machine functions should **not** operate.
5. At the ground controls, turn the optional switch to the **platform** position.
6. Check any machine function from the **platform** controls.
   - Result: The machine functions should operate.
7. Check any machine function from the **ground** controls.
   - Result: The machine functions should **not** operate.

B-7 Test the Emergency Stop Buttons

Properly functioning Emergency Stop buttons are essential for safe machine operation. An improperly operating Emergency Stop button will fail to shut off power and stop all machine functions, resulting in a hazardous situation for ground and platform personnel.

**NOTICE**
As a safety feature, selecting and operating the ground controls will override the platform controls, including the Emergency Stop button.

1. Start the machine from the ground controls.
2. Push in the Emergency Stop button to the OFF position.
   - Result: The machine should shut off and no machine functions should operate.
3. Start the machine from the platform controls.
4. Push down the Emergency Stop button to the OFF position.
Result: The machine should shut off and no machine functions should operate.

**NOTICE**
The ground Emergency Stop button will stop all machine operation, even if the

**B-8 Test the Ground Control Override**
A properly functioning ground control override is essential to safe machine operation. The ground control override function is intended to allow ground personnel to operate the machine from the ground controls whether or not the Emergency Stop button on the platform controls is in the ON or OFF position. This function is particularly useful if the operator at the platform controls cannot return the boom to the stowed position.

1. Push in the platform Emergency Stop button to the OFF position.
2. Start the machine from the ground controls.
3. Operate each boom function through a partial cycle.

Result: All boom functions should operate.

**B-9 Test the Safety Envelope**
Testing the machine safety envelope is critical to safe machine operation. If the boom is allowed to operate when a safety switch is not functioning correctly, the machine stability is compromised and may tip over.

1. Machine not Level sensor
   - Machine not Level exceed 3°, the alarm sound and the boom is not raise.
2. Machine can’t into uneven ground when it is working. Not before the ground into arms frame to pack up.

**B-10 Test the Horn**
A functional horn is essential to safe machine operation. The horn is activated at the platform controls and sounds at the ground as a warning to ground personnel. An improperly functioning horn will prevent the operator from alerting ground personnel of hazards or unsafe conditions.

1. Turn the key switch to platform control and pull out the Emergency Stop button to the ON position at both the ground and platform controls.
2. Push down the horn button at the platform controls.

Result: The horn should sound.

**NOTICE**
If necessary, the horn can be adjusted to obtain the loudest volume by turning the adjustment screw near the wire terminals on the horn.

**B-12 Test machine high and low speed’s options**
Proper execution of the high and low speed’s options is critical for proper and safe operation. Low speed (turtle sign) option allows the operator to operate the boom and/or drive functions at the same time. This button remains at the low speed option.

High speed (rabbit symbol) option should be used when the machine is operating normally. This selection button activates high speed option.

1. Rotate the selector switch to the ground controller.
2. Let the emergency stop switches to the “ON” position of the ground and the platform controllers.
3. Start the machine from the ground controller.
4. Pull the selection button

Result: The machine becomes high speed condition

5. Pull the selection button again
Result: The machine returns to low speed condition

6. Rotate the selector switch to the platform controller.
7. Press the machine high and low speed selection button until the low speed (turtle symbol) is selected.

Result: The machine should become low speed condition

8. Press the machine high and low speed selection button until the high speed (rabbit symbol) is selected.

Result: The machine becomes high speed condition.

B-13 Test driving start the system

A suitable driving start system is essential for the safe operation. Improperly driving start may make the machine unsafe to move. When the boom rotates beyond the end of the tire, the indicator will light and the drive function will continue until the joystick returns to the neutral position.

1. Start the machine from the platform controller.
2. Lower the boom to the loading position.

Result: The boom is illuminated at any position in the area.

3. Move the drive joystick away from the center.

Result: The machine cannot drive.

5. Press the driving start button and slowly move the joystick away from the center.

Result: The drive function is executed.

B-14 Test the drive brake

Proper brake function is essential to safe machine operation. The drive function should respond quickly and smoothly to operator control. Drive performance should also be free of hesitation, jerking and unusual noise over the entire proportionally controlled speed range. The drive gears of machine comes with hydraulic brakes.

NOTICE Select a test area that is firm, level and free of obstructions.

1. Create a line on the ground as reference.
2. Start the machine from the platform controls.
3. 
4. Choose a point on the machine; i.e., contact patch of a tire, as a visual reference for use when crossing the start and finish lines.
5. Bring the machine to top drive speed before reaching the test line. Release the joystick when the reference point on the machine crosses the test line.
6. Measuring the distance between reference point to test line after stop the machine.

Result: the brake distance should be between 0.3 and 0.5m.

B-15 Test the Drive Speed - Stowed Position

Proper drive function movement is essential to safe machine operation. The drive function should respond quickly and smoothly to operator control. Drive performance should also be free of hesitation, jerking
and unusual noise over the entire proportionally controlled speed range.

**NOTICE**

Select a test area that is firm, level and free of obstructions.

1. Create start and finish lines by marking two lines on the ground 40 feet (12.2 m) apart.
2. Start the machine from the platform controls.
3. Press the machine rpm select button until the foot switch activated high idle (rabbit and foot switch symbol) is selected, then lower the boom into the stowed position.
4. Choose a point on the machine; i.e., contact patch of a tire, as a visual reference for use when crossing the start and finish lines.
5. Bring the machine to top drive speed before reaching the start line. Begin timing when your reference point on the machine crosses the start line.
6. Continue at full speed and note the time when the machine reference point crosses the finish line.

**B-16 Test the Drive Speed - Raised Position**

Proper drive function movement is essential to safe machine operation. The drive function should respond quickly and smoothly to operator control. Drive performance should also be free of hesitation, jerking and unusual noise over the entire proportionally controlled speed range.

**NOTICE**

Select a test area that is firm, level and free of obstructions.

1. Create start and finish lines by marking two lines on the ground 40 feet (12.2 m) apart and two lines on the ground 10 feet (3 m) apart.
2. Start the machine from the platform controls.
3. Press the machine idle select button until the foot switch activated high idle (rabbit and foot switch symbol) is selected.
4. Raise the boom until the engine rpm switches to low speed.
5. Choose a point on the machine; i.e., contact patch of a tire, as a visual reference for use when crossing the start and finish lines.
6. Bring the machine to top drive speed before reaching the start line. Begin timing when your reference point on the machine crosses the start line.
7. Continue at full speed and note the time when the machine reference point crosses the finish line.

<table>
<thead>
<tr>
<th>Drive speed:</th>
<th>8.9m/10s</th>
</tr>
</thead>
</table>

**B-13 Test the Alarm Package (if equipped)**

The alarm package includes:
- Travel alarm
- Flashing beacon

Alarms and a beacon are installed to alert operators and ground personnel of machine proximity and motion.

**NOTICE**

The alarms and beacon will operate with the engine running or not running.

1. Start the engine from the platform controls and steer the machine.
Result: The travel alarm sound. 2. If the platform overload or machine no level or platform no level.
Result: the alarm sounds.
Result: The alarm keep shining and all movement should be stopped.
B-14 Perform Hydraulic Oil Analysis

Table C Procedures C-1 Replace hydraulic hose

Maintain good hydraulic hose to normal and security work machine is very important. If not found in using the old, broken or leakage of hose may cause mot safe operation conditions.

**NOTICE** Clean the execution of the program in any process of the hydraulic oil spill.

**NOTICE** In the case that close machine execution of the situation.

Table D Procedures D-1 Check the Wear Pads and sliders

Maintaining the wear pads in good condition is essential to safe machine operation. Don’t properly use the slider gaskets or continuous use of old slider may cause components and not safe operation of the case.

1. Lift up the platform, ensure the safety.
2. Measure each wear pad.
3. Replace any wear pad if it is less than specification. If a wear pad is not less than specification, shim as necessary to obtain zero clearance.
4. Extending the work platform over the entire range of motion and check the key parts that may lead to the extended platform jammed.

Table E Procedures E-1 Test or Replace the Hydraulic Oil

Replacement or testing of the hydraulic oil is essential for good machine performance and service life. Dirty oil and suction strainers may cause the machine to perform poorly and continued use may cause component damage. Extremely dirty conditions may require oil changes to be performed more frequently.

Perform this procedure with the boom in the stowed position. When remove the hose and pipe fittings, the O-rings on it must be replaced.

1. Open the ground control box at the bottom.
2. Remove the cover of hydraulic oil-tank and drain hydraulic oil into suitable container.
3. Disconnect and plug the suction tube.
4. Disconnect and plug the oil-return tube beside the oil-return filter.
5. Disassemble the hydraulic oil-tank and oil-return filter, then fasten the bolts.
6. Remove the hydraulic oil-tank from the machine.
7. Remove the oil-return filter.
8. Replace filter screen of oil-return filter.
9. Clean the inside of the tank using a mild Solvent.
10. Install oil-return filter.
11. Install the hydraulic oil-tank onto the machine.
12. Install the hydraulic oil-tank and oil-return filter and then fasten bolts.

See E-1, Test or Replace the Hydraulic Oil.
13 Install the oil-return tube onto the oil-return filter
14 Install the succion tube onto the hydraulic oil-tank
   15 Fuel to the hydraulic tank to the level of 1/4, every movement of the machine for a cycle, then drain the hydraulic oil
16 Fuel to hydraulic tank to the level of 3/4, then cove the cap of the oil-tank
17 Close the ground control box at the bottom.
DECALS

Decal Inspection

Use the pictures on the next pages to verify that all decals are legible and in place. Below is a numerical list with quantities and descriptions.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Warning</td>
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<td>2</td>
<td>Model</td>
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<td>3</td>
<td>Company logo</td>
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<td>4</td>
<td>Rated load</td>
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<td>5</td>
<td>Notice-be careful foot</td>
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<td>6</td>
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<td>7</td>
<td>Maintenance schedule</td>
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<td>Warning-banned climb</td>
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<td>9</td>
<td>Maximum pressure heavy</td>
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<td>10</td>
<td>Notice-prevent slipping</td>
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<td>11</td>
<td>Battery weight</td>
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<td>12</td>
<td>Notice-lock door lock</td>
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<td>13</td>
<td>Warning-no smoking</td>
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<tr>
<td>14</td>
<td>Notice-handling</td>
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<td>15</td>
<td>Warning-be careful electricity</td>
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<td>16</td>
<td>Notice-pay attention to close to the personnel</td>
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<tr>
<td>17</td>
<td>Warning-ban people standing</td>
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## Specifications

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<tr>
<th>MODEL</th>
<th>GTJZ03</th>
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<th>GTJZ06</th>
<th>GTJZ08</th>
<th>GTJZ10</th>
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<td>5800mm</td>
<td>8100mm</td>
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<td>13750mm</td>
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<td>Platform height minimum</td>
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<td>Platform(L*W)</td>
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<td>2260*800mm</td>
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<td>2260*1130mm</td>
<td>2260*1130mm</td>
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<td>100/20mm</td>
<td>100/20mm</td>
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<td>100/20mm</td>
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<td>Tires size</td>
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<td>24/3 V/kW</td>
<td>24/3 V/kW</td>
<td>24/3 V/kW</td>
<td>24/3 V/kW</td>
<td>48/5 V/kW</td>
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<td>Battery</td>
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<td>2×12/80 V/A</td>
<td>4×6/225 V/Ah</td>
<td>4×6/225 V/Ah</td>
<td>4×6/240 V/Ah</td>
<td>4×12/300V/Ah</td>
<td>8×12/300V/Ah</td>
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<td>Stowed, maximum</td>
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<td>3.2 km/h</td>
<td>3.2 km/h</td>
<td>3.2 km/h</td>
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<td>Platform raised, maximum</td>
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Hydraulic and electric layout
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