



LGMG North America Inc.



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Maintenance Manual

SR3369E/SR4069E

Mobile Elevating Work Platform
ANSI

 **WARNING**

Before operation and maintenance, the drivers and service personnel shall always read and thoroughly understand all information in this manual. Failure to do so may result in, fatal accidents or personal injury.

This manual must be kept with this machine at all times.

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Foreword

Thank you for choosing to use this Mobile Elevating Work Platform from LGMG North America. This machine is designed according to A92.20-2018. The information specified in this manual is intended for the safe and proper operation of this machine for its' intended purpose.

For maximum performance and utilization of this machine, thoroughly read and understand all the information in this manual before starting, operating, or performing maintenance on this machine.

Due to continuous product improvements, LGMG North America reserves the right to make specification changes without any prior notifications. For any updated information, contact LGMG North America.

Ensure all preventive maintenance to the machine is performed according to the interval specified in the maintenance schedule.

Keep this manual with this machine for reference at all times. When the ownership of this machine is transferred, this manual shall be transferred with this machine. This manual must be replaced immediately if it is lost, damaged, or becomes illegible.

This manual is copyrighted material. The reproduction or copy of this manual is not allowed without the written approval of LGMG North America.

The information, technical specifications and drawings in this manual are the latest available when this manual is issued. Due to continuous improvement, LGMG North America reserves the right to change the technical specifications and machine design without notice. If any specifications and information in the manual are not consistent with your machine, please contact the service department of LGMG North America.



WARNING

Only personnel who have been properly trained and qualified to operate or maintain this machine can operate, repair and maintain this machine.

Improper operation, maintenance, and repair are dangerous and can cause personal injury and death.

Before any operation or maintenance, the operator shall thoroughly read this manual. Do not operate, perform any maintenance or make any repairs on this machine before reading and understanding this manual.

The user shall load the platform strictly according to the load rating of the platform. Do not overload the platform or make any modifications to the platform without permission from LGMG North America.

The operation regulations and preventions in this manual are only applicable for the specified use of this machine.

Safety Precautions

The operator of this machine shall understand and follow the existing safety regulations of state and local governments. If these are unavailable, the safety instructions in this manual shall be followed.

To help prevent accidents, read and understand all warnings and precautions in this manual before operation or performing maintenance.

It is impossible to foresee every possible hazard and the safety instructions in this manual may not cover all safety prevention measures. Always ensure the safety of all personnel and protect the machine against any damage. If unable to confirm the safety of some operations, contact LGMG North America.

The operation & maintenance prevention measures listed in this manual are only applicable to the specified uses of this machine. LGMG North America assumes no responsibility if this machine is used beyond the range of this manual. The user and the operator shall be responsible for the safety of such operations.

Do not perform any operation forbidden in this manual in any situation.

The following signal words are applicable for identifying the level of safety information in this manual.

 **Danger:**

An imminent situation, that if not avoided, will result in severe injuries or death. This is also applicable to situations that will cause serious machine damage, if not avoided.

 **Warning:**

A potentially dangerous situation, that if not avoided, may result in severe injuries or death. This is also applicable to situations that may cause serious machine damage, if not avoided.

 **Notice:**

A situation, that if not avoided, may result in minor or intermediate injury. This is also applicable to situations that may cause machine damage or shorten machine service life.

Chapter 1 Maintenance

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1.1 Compliance

- 1) The operator can only perform routine maintenance items as specified in this manual.
- 2) Regular maintenance inspections should be performed by trained service technicians as required by the manufacturer

Maintenance symbol legend

The following symbols appear in this manual to indicate the relevant meaning in the operation instructions. When one or more symbols appear in front of the maintenance procedure, the meanings expressed are as follows.



It indicates that a tool is required to perform this procedure.



It indicates that a new part is required to perform this procedure.



It indicates that the engine must be cooled before performing this procedure

1.2 Checking the Safety Manual

It is necessary for safe equipment operation to keep the Operator and Safety Manual in good condition. The manual and each equipment should be stored in a container provided on the work platform. An illegible or missing manual will not provide the necessary safety and operation information for safe operation.

- 1) Check that the storage container is on site and in good condition.
- 2) Check that the Operator, Responsibility, and Safety Manual is complete in the storage container on the work platform.
- 3) Check that each page of the manual is identifiable and in good condition.
- 4) Put the manual in the storage file box after use.



If you need to replace the manual,

please contact the company's service personnel.

1.3 Checking the labels and signs

It is necessary for safe operating equipment to keep all safety and instructions labels and signs in good conditions. Labels are used to remind operators and staff of the possible hazards when operating this equipment. User operation and maintenance information is also provided. An illegible label does not remind the staff of steps or hazards, and may also result in unsafe operating conditions.

Refer to the label section in this manual and use the label menu and instructions to check whether all labels are in place.

Check all the labels for clarity and damage and immediately replace any damaged or illegible ones.



If you want to replace the label, please contact the company's service personnel.

1.4 Checking for damaged, loose or missing parts

This check should be performed every 8 h or every day.

Daily equipment status checks are necessary for safe equipment operation and good equipment performance. Incorrect location and repair damage, and loose or missing parts may result in unsafe operating conditions.

- 1) Check the entire equipment for damage and incorrect installation or loss of parts, including:

- Electrical components, wires and cables

- Hydraulic hoses, joints, valve blocks, hydraulic cylinders
- Hydraulic tank
- Wear pad
- Tire and wheel
- Limit switch, horn
- Nuts, bolts and other fasteners
- Platform extension
- Platform entry port
- Indicators and alarms
- Safety arm
- Scissor arm pins and fasteners
- Platform control handle
- outrigger cover and foot pad

Check the entire machine for:

- Crack in the weld or structural member
- Check the platform, frame and chassis for deformation or open welding
- Dent or damage to the machine
- Make sure all structural members and other critical components are complete, and all associated fasteners and pins are in the right position and tightened
- The platform guide rail has been installed, the platform guide rail bolts are in place and the bolts are properly tightened.



Caution: If the platform must be lifted

to check the machine, make sure the safety arm is in the right position. See the "Operating Instruction" section.

1.5 Checking the wires

- 1) This check should be performed every 250 h or quarterly, whichever comes first.
- 2) It is important for safe operation and good

machine performance to keep the wires in good conditions. Failure to find and replace the burn-out, scratched, corroded or bent wires will result in unsafe operating conditions and damage to the parts.

Risk of electric shock/explosion

Contact with live circuits may cause serious injury or death. Do not wear rings, watches or other jewelry.

1) Check if the ground wire under the chassis is missing or damaged.

2) Check the following areas for burn-out, scratched, corroded, bent or loose wires:

- Rear axle: Drive motor, limit switch
- Tank side: Ground control unit inside, wire harness connection, motor control unit, battery charger
- Battery side: Battery, fuse
- Machine: Platform, platform control unit, wire harness connection

3) Check whether all wire harness connectors are coated with insulating grease:


- Ground control unit
- Platform control unit
- Motor Control unit
- Valve component
- Limit switch
- Sensor


1.6 Checking the battery





Good battery condition is critical to normal

machine performance and safe operation. Improper electrolyte levels or damaged cables and wires may result in component damage and dangerous situations.


 **Caution:** This check is not required for machines that are equipped with sealed or maintenance-free batteries.

 **Warning:** Risk of electric shock. Contact with an electrical circuit may result in death or serious personal injury. Remove all rings, watches or other accessories.

 **Warning:** Risk of body injury. The battery contains acidic substances. Avoid spilling or touching the acid in the battery. Soda and water can be used to neutralize the overflowing battery acid.

 **Caution:** This check should be performed after the battery is fully charged.

- 1) Wear protective clothing and goggles.
- 2) Make sure the battery cable is securely wired and not corroded.
- 3) Make sure the battery lock bracket is stable.
- 4) Remove the battery vent cap.
- 5) Check the battery acid level. If necessary, fill the distilled water through a filling pipe at the bottom of the battery. Do not add excessive distilled water.
- 6) Install the vent cap.

 **Caution:** Adding a terminal protector and an anti-corrosion sealant can help eliminate the corrosion on the battery terminals and cables.

1.7 Checking the electrical contactors

This check should be performed every 250 h or quarterly, whichever comes first.


It is important for safe operation of the machine to keep the electrical contactor in good condition. Failure to find the worn or damaged contactors in a timely manner may endanger the work conditions and cause component damage.


- 1) Open the battery side cover.
- 2) Visually check the following aspects of the contactor:

Transitional burning

Transitional bending

Transitional pitting

 **Warning:** Risk of motor burn-out. Contact with an electrical circuit may result in death or serious personal injury. Remove all rings, watches or other accessories.

 **Caution:** In the event of any damage, the contactor should be replaced.

1.8 Checking the tires and wheels

This check should be performed every 250 h or quarterly, whichever comes first.

It is important for safe operation and good performance to keep the tires and wheels in good conditions. Failure of the tires and wheels may cause the machine to roll over. Failure of finding and repairing the problem in time may cause damage to the machine.

- 1) Check the tire treads and sides for scratches, cracks, punctures or other abnormal wear.
- 2) Check the wheels for damage, bending or cracking.

1.9 Checking the hydraulic tank vent cap

- 1) This check should be performed every 8 h or every day, whichever comes first.
- 2) An unobstructed hydraulic tank cover is essential for good mechanical performance and long service life. A dirty or clogged vent cap may cause poor machine performance. Frequent checks should be performed under the harsh working environment.

- ① Remove the vent cap from the hydraulic tank cover.
- ② Check the ventilation condition.

Result: Air can pass through the vent cap.


Result: If the air fails to pass through the vent cap, clean or replace it. Proceed with step 3.

Note: When checking the tank cover for ventilation, the air should pass freely.

- 3) Carefully clean the tank vent cap with a mild solvent and dry it with low pressure compressed air. Repeat step 2.
- 4) Install the hydraulic tank vent cap.

1.10 Checking the leakage of hydraulic oil

Check for leakage every 8 h or every day.

 **Risk of personal injury. Leaking hydraulic oil under pressure can pierce**


or burn skin.

- 1) Check the hydraulic oil sediments, oil drops or oil residue in the following areas.


- All hydraulic cylinders
- All valve elements
- All pipes and fittings
- Reducer
- Filter
- Hydraulic tank
- Hydraulic pump
- Under the chassis
- Axle
- The ground area under the equipment.


1.11 Checking the hydraulic filter

It should be checked or replaced every 500 h or quarterly.

 **If the working environment is dusty, this check should be performed more frequently.**

Replacing the hydraulic filter is necessary to maintain good machine performance and long service life. A dirty or clogged filter may cause the machine performance degradation, and continuous operation may result in component damage. The filter should be replaced more frequently in extremely dirty working conditions.

 **Risk of personal injury. Be careful of hot oil. Exposure to hot oil may cause severe burns.**

 **This step should be performed when the machine is stopped.**

Replace the hydraulic tank return filter

- 1) This step should be performed every 500 h or annually, whichever comes first.

- 2) Replacing the return filter is essential for good performance and service life of the machine. A dirty or clogged filter may affect the machine performance and continued operation may result in parts damage. The filter element should be replaced more frequently in harsh working conditions.


Caution: Risk of burn

Be careful of hot oil. Exposure to hot oil may cause severe burns.

- ① Remove the filter with a wrench. Clean the area of contact between the hydraulic filter and the filter head.
- ② Apply a thin layer of new oil to the gasket of the new hydraulic filter.
- ③ Install a new filter and tighten it.
- ④ Record the date of replacement on the filter with a marker.
- ⑤ Remove all traces of oil spilled in the replacement process.
- ⑥ Turn the key switch to the ground control unit and pull out the red emergency stop buttons on the ground and platform control units.
- ⑦ Press the lift function button.
- ⑧ Check the filter components for oil leakage.

1.12 Replacing the hydraulic tank air filter

It should be replaced every 500 h or quarterly, and should be replaced more frequently in the dusty working environment.


 **This step should be performed when the machine is stopped.**

- 1) Remove the filter element.
- 2) Clean the inside of the cylinder and the end cap with a wet cloth.
- 3) Install a new air filter element.

1.13 Checking the hydraulic oil level

It should be checked every 8 h or every day.

Maintaining the hydraulic fluid at the proper oil level is essential for machine operation. If the hydraulic oil is at an unsuitable oil level, the hydraulic components may be damaged. Through daily inspections, the inspector can determine changes in the hydraulic oil level which can indicate problems with the hydraulic system.

 **Caution: This step should be performed when the platform is in the retracted state and the machine is stopped.**

- 1) Park the equipment on a flat surface. The platform is in the retracted state.
- 2) Check the oil mark on the hydraulic tank. When the frame is in the retracted state, the hydraulic oil level should be located at 1/3~2/3 of the level gauge. If necessary, fill the hydraulic oil.

Hydraulic oil specification	
Hydraulic oil type	46#

1.14 Checking or changing the hydraulic oil

The hydraulic oil should be changed every 500 h or quarterly.

 **If the hydraulic oil is not changed**

during the two-year inspection, it should be checked quarterly. The hydraulic oil should be changed when it is found unqualified after checking.

 **This step should be performed**

when the frame is in the retracted position.

 **When removing the hose**

assembly or fitting, the O-ring or hose end on the fitting must be replaced and tightened to the specified torque during installation.

- 1) Press the red "Emergency Stop" button to the "OFF" position.
- 2) Place a suitable container under the hydraulic tank.
- 3) Remove the drain plug on the hydraulic tank and drain the tank completely.

 **Warning: Risk of body injury. The**

sprayed hydraulic oil may penetrate and burn the skin. Slowly loosen the hydraulic connections to gradually reduce the oil pressure. Prevent hydraulic oil for spraying.

- 4) Mark, disconnect and plug the suction hose on the hydraulic tank. Cover the pipe fitting.

- 5) Mark, disconnect and plug the return hose on the return filter. Cover the filter connector.
- 6) Remove the return filter and filter head component. Cover and plug the connector.
- 7) Remove the hydraulic tank from the machine.
- 8) Remove the inlet filter and clean it with a neutral solvent or replace it.
- 9) Clean the inner surface of the hydraulic tank with a neutral solvent.
- 10) Install the oil drain plug.
- 11) Install the hydraulic tank to the machine.
- 12) Install the hose.
- 13) Fill the hydraulic oil to the hydraulic tank until the liquid level is 1/3~2/3 of the observation meter. No overflow is allowed.
- 14) Wipe off the hydraulic oil that may have spilled.
- 15) Check all the functions of the machine through a full cycle and check for oil leakage.
- 16) Recheck the tank level after a cycle and refill to 1/3~2/3.

1.15 Checking the oil level in the reducer

This step should be performed every 250 h or quarterly.

Incorrect oil level in the reducer may result in performance degradation and continuous operation may result in component damage.

- 1) Rotate the drive unit until one plug is at the

highest position and has an angle of 90 degrees with the other plug.

- 2) Remove the other plug and check the oil level.

Result: The oil level should be the same as the bottom of the side plug hole.

- 3) When necessary, remove the upper plug and fill the oil until the oil level is the same as the bottom of the side plug hole.
- 4) Apply the pipe thread sealant to the plug and install the plug in the reducer.
- 5) Repeat this step for each reducer.

Oil specification	80-90/W
Capacity	0.68L (each reducer)

1.16 Replacing the reducer gear oil

The first maintenance should be performed after 50 h, and the second maintenance should be performed at an interval of 1000 h or annually.

Changing the gear oil of the under is necessary to maintain good equipment performance and long service life. Failure to change the gear oil each year may result in performance degradation and continuous operation may result in component damage.

- 1) Select the reducer to be serviced and drive the equipment till one of the two plugs is at the lowest point.
- 2) Remove the two plugs and drain the oil completely in a suitable container.
- 3) Rotate the drive unit until one plug is at the

highest position and has an angle of 90 degrees with the other plug.

- 4) Fill the oil from the reducer's filler hole at a high point till the oil level is the same as that in the side hole at the bottom. Install the plug.
- 5) Repeat this step for oil filling of each reducer.

Oil specification	80-90/W
Capacity	0.68L (each reducer)

1.17 Checking or replacing the scissor arm slide block

This step should be performed every 1000 h or annually, whichever comes first.

- 1) The quality of the scissor arm slide block is critical to the safe operation of the machine. A worn slide block may result in component damage and unsafe working problems.
- 2) The wear pad should be performed the platform is retracted.
 - ① Measure the height of the wear pads on the chassis and platform rails.

Result: The measurement result is less than 8 mm. Replace the slide block.

- ② Apply lubricant between the chassis rail and slide block, platform rail and slide block.

1.18 Regular maintenance

Maintenance work on a quarterly, annual and biennial basis must be performed by those who are trained and qualified in the machine

maintenance according to the procedures specified in the maintenance manual.

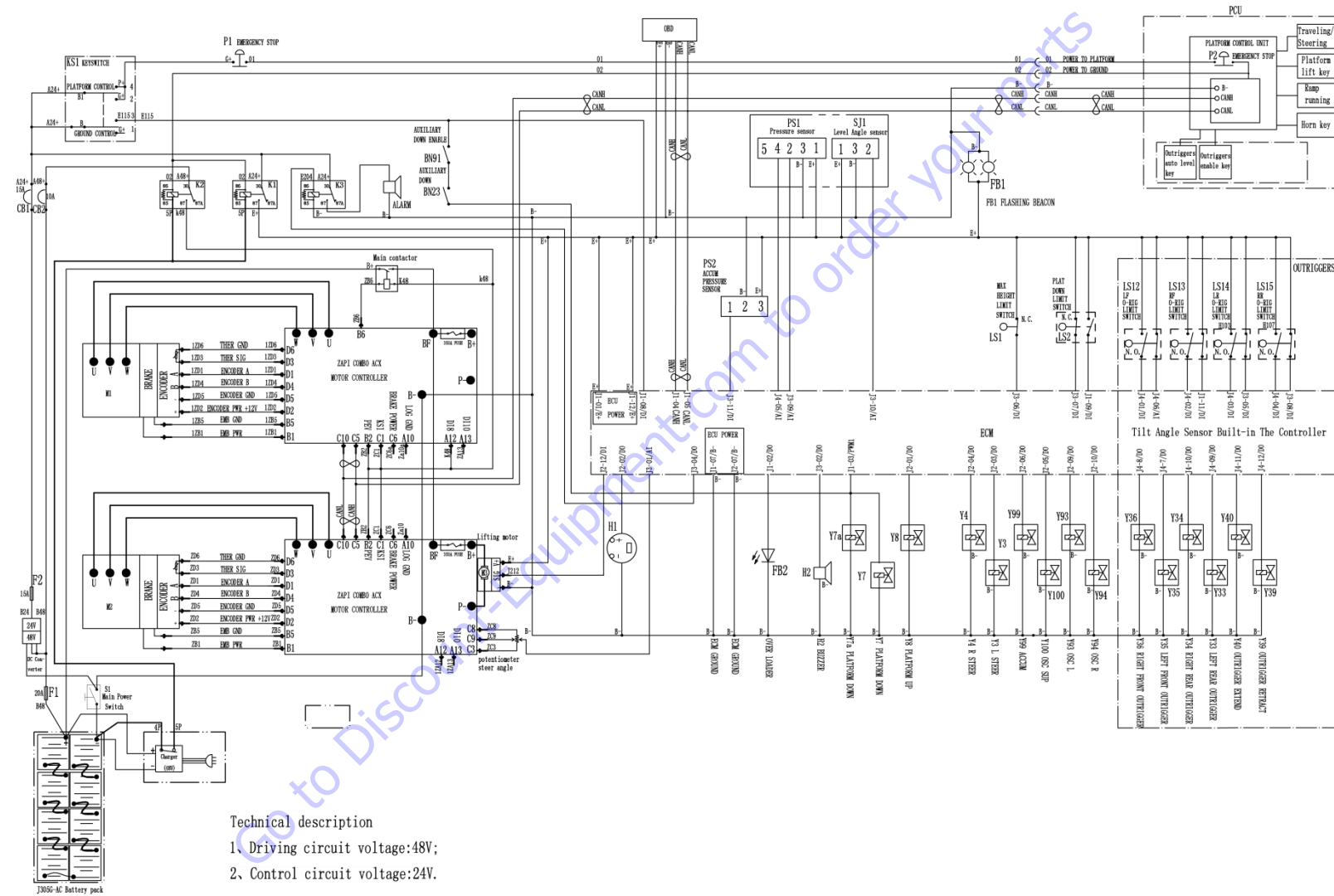
For a machine that has been idle for more than three months, it must be checked quarterly before it is put into operation again.

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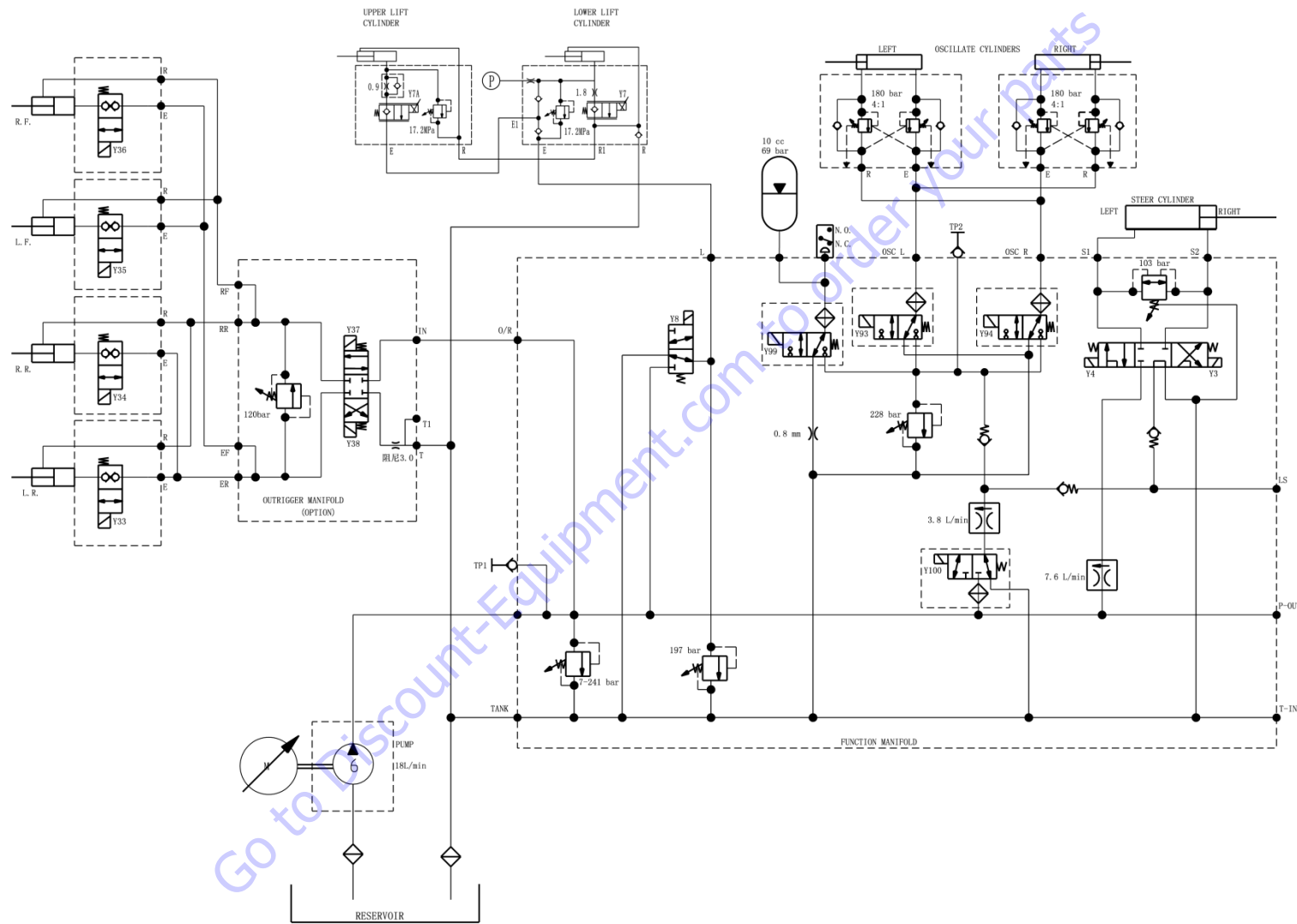
Chapter 2 Schematic Diagram

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Electrical schematic diagram



Hydraulic schematic diagram



California Proposition 65



WARNING

Operating, servicing and maintaining this equipment can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. These chemicals can be emitted from or contained in other various parts and systems, fluids and some component wear by-products. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your equipment and vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your equipment or vehicle and after operation. For more information go to www.P65Warnings.ca.gov/passenger-vehicle.

Breathing diesel engine exhaust exposes you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

- Always start and operate the engine in a well-ventilated area.
- If in an enclosed area, vent the exhaust to the outside.
- Do not modify or tamper with the exhaust system.
- Do not idle the engine except as necessary.

For more information go to www.P65warnings.ca.gov/diesel.



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