

SWIFT EQUIPMENT

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SWIFT RT0814

Elevating Work Platform OPERATOR'S MANUAL

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Proud Member of:

EWPA
Elevating Work Platform Association

Manufacturer:

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About this manual

SWIFT EQUIPMENT PTY LTD appreciates your choice of our machine for your application. Our number one priority is user safety, which is best achieved by our joint efforts. This book is an operation and daily maintenance manual for the user or operator of a SWIFT EQUIPMENT PTY LTD machine.

This manual should be considered a permanent part of your machine and should remain with the machine at all times. If you have any questions, contact SWIFT EQUIPMENT PTY LTD.

Introduction

Intended Use and Familiarization Guide

The intended use of this machine is to lift personnel, including tools, and materials to an aerial work site.

Before operating the machine, it's the operator's responsibility to read and understand this familiarization guide.

- ☑ Each person must be trained to operate a Mobile Elevating Work Platform (MEWP).
- ☑ Familiarization with the MEWP must be given to each person who is authorized, competent and trained.
- ☑ Only trained and authorized personnel should be permitted to operate the machine.
- ☑ The operator is responsible to read, understand, and obey the manufacturer's instructions and safety rules provided in the Operator's Manual.
- ☑ The Operator's Manual is located in the manual storage container, at the platform.
- ☑ For specific product applications, see

Contacting The Manufacturer.

Introduction



Danger

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

Do Not Operate Unless:

- ☒ You learn and practiced the principles of safe machine operation contained in this operator's manual.
 - 1 Avoid hazardous situations. Know and understand the safety rules 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, understood 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.
- ☒ Use the machine below the altitude of 1000 meters.
- ☒ Be careful with the hands of persons not

operating the controls. Always hold the part of

handrail designated for the holding. Those parts are marked as "handhold position".

Safety Sign Maintenance

Replace any missing or damaged safety signs. Keep operator safety in mind at all times. Use mild soap and water to clean safety signs. Do not use solvent-based cleaners because they may damage the safety sign material.

Introduction

Hazard Classification

SWIFT EQUIPMENT PTY LTD product decals use symbols, color coding and signal words to identify the following:



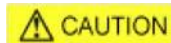
Safety alert symbol-used to alert personnel to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



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.



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.



Green-used to indicate operation or maintenance information.

Explosion and Fire Hazard

Do not operate the machine or charge the battery 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 pre-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.

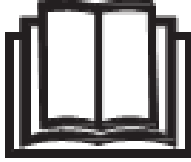
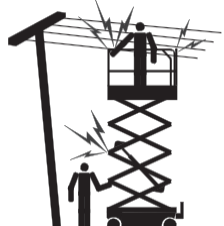
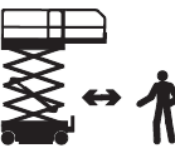
Be sure the operator's, safety, and responsibilities manuals are complete, legible and in the storage container located on the platform.

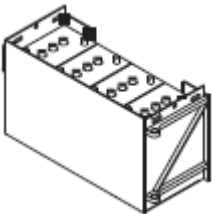
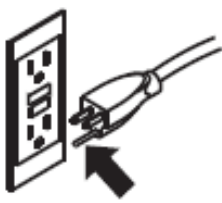
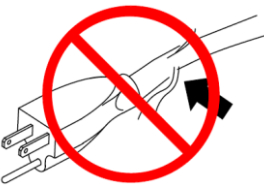
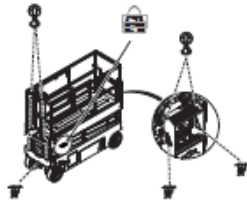
Bodily Injury Hazard

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

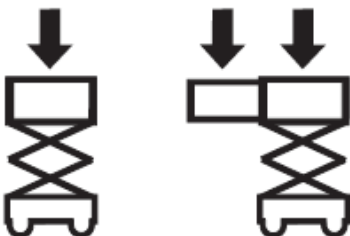
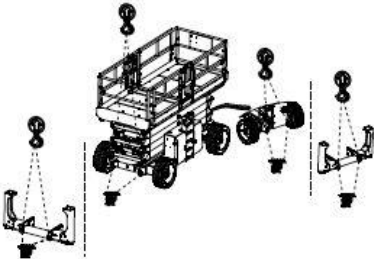
Improper contact with components under any cover will cause serious injury. Only trained maintenance personnel should access compartments. Access by the operator is only advised when performing a pre-operation inspection. All compartments must remain closed and secured during operation.

Symbol and Hazard Pictorials Definitions

			
Read the Operator's	Read the service	Crush Hazards	Crush Hazards
			
Runaway Hazard	Tip-over hazard	Tip-over hazard	Tip-over hazard
			
Tip-over hazard	Electrocution Hazard	Electrocution Hazard	Explosion hazard
			
Fire hazard	Burn Hazard	Skin injection hazard	Engage safety arm
		Move machine to level ground 	
Keep away from moving parts	Keep clear of outriggers and tires		Close chassis tray

 Lower the platform.	 Do not set up where it cannot be leveled with outriggers	 Maintain required clearance	 Access by trained and authorized personnel only
 Use a piece of cardboard or paper to search for leaks	 Batteries used as counterweights	 Chock the wheels	 No smoking
 Grounded AC 3-wire only	Replace damaged wires and cords 	 Wheel load	 Lifting & tie down instructions
 Lifting point	 Lanyard anchorage points	 Wind speed	 Tiedown

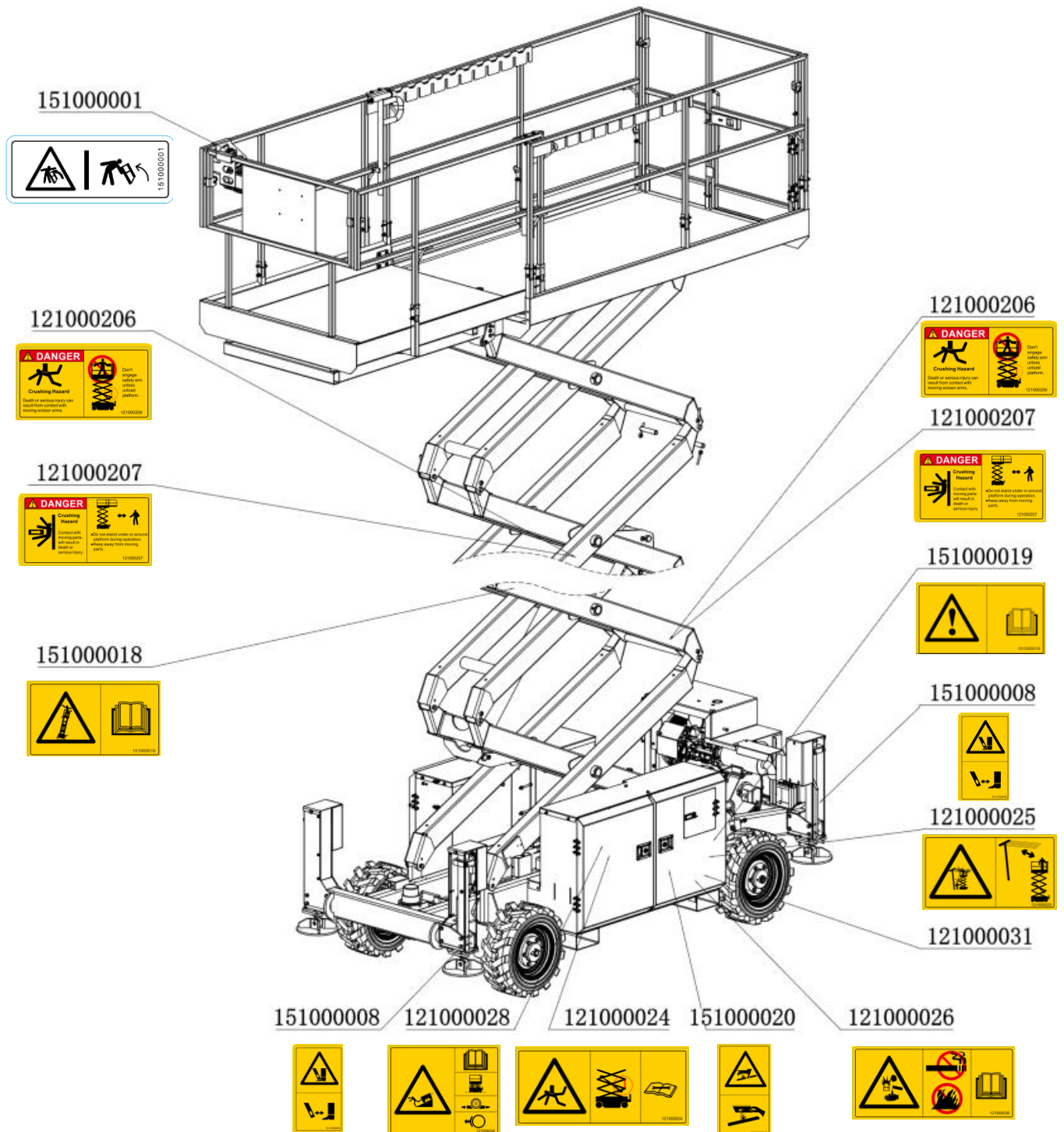
Symbol and Hazard Pictorials Definitions

 Release brakes	 Engage brake	 Pressure rating for air line to platform	 Voltage rating for power to platform
 Maximum capacity	 Indoor	 Outdoor	
 Transport diagram	 Crushing hazard	 Hold rail while lowering	
 Manual force	 Platform overloaded	 Collision hazard	 Chock the wheels

Symbol and Hazard Pictorials Definitions

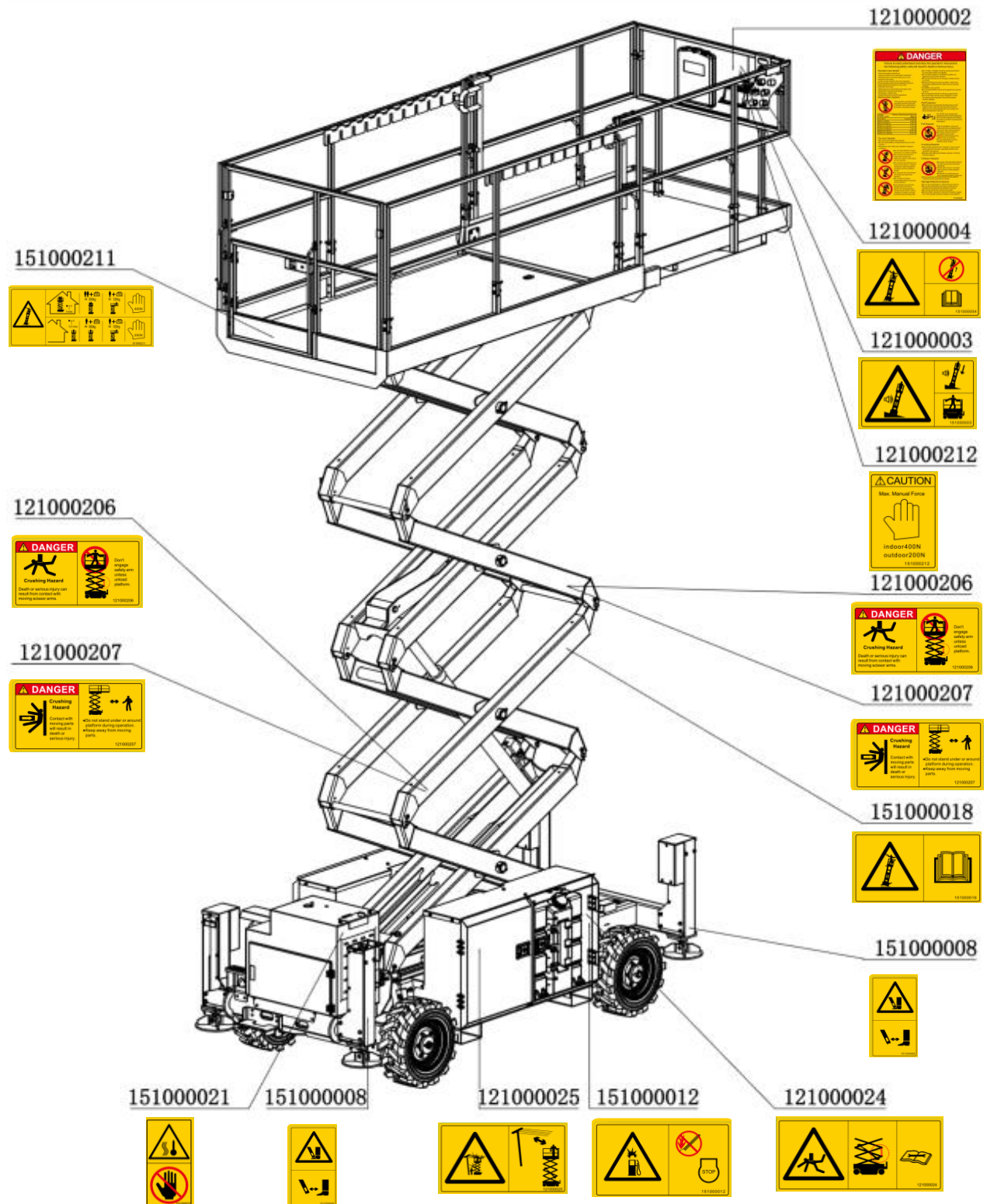
General Safety

RT0814



General Safety

RT0814



Personal Fall Protection

Personal fall protection equipment (PFPE) is not required when operating this machine. If PFPE is required by job site or employer rules, the following shall apply:

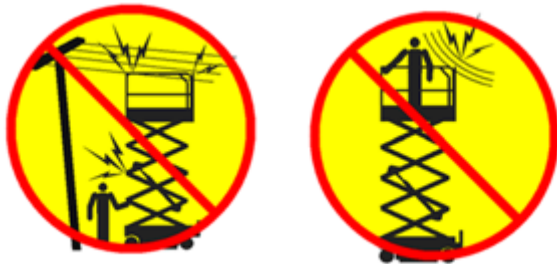
All PFPE must comply with applicable governmental regulations and must be inspected and used in accordance with the manufacturer's instructions.

Personal Safety

Work Area Safety

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.

Voltage Phase to Phase	Minimum Safe Approach Distance Meters
0 to 300V	Avoid Contact
300V to 50KV	3.05 m
50KV to 200KV	4.60 m
200KV to 350KV	6.10m
350KV to 500KV	7.62m
500KV to 750KV	10.67m
750KV to 1000KV	13.72m

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

Maximum capacity

RT0814	300kg (Platform retracted)
	120kg (extension only)

Work Area Safety



Do not raise the platform unless the machine is on a firm, level surface.

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.



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.



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

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 alter or disable the limit switches or angle sensor.

Do not drive over 0.7 mph / 1.1 km/h with the platform raised.

Model	Maximum allowable side force
RT0814	90lbs/400N indoor 45lbs/200N outdoor

Do not alter or disable the limit switches.

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.

Work Area Safety

Do not raise the platform when wind speeds may exceed 28 mph / 12.5 m/s. If wind speeds exceed 28 mph / 12.5 m/s when the platform is raised, lower the platform and do not continue to operate the machine.



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 modify or alter a mobile elevating work platform without prior written permission from the manufacturer. Mounting attachments for holding tools or other materials onto the platform, toeboards, or guard rail system can increase the weight in the platform and the surface area of the platform or the load.



Do not place or attach fixed or overhanging loads to any part of this machine.



Do not drive the machine on or near uneven terrain, unstable surfaces or other hazardous conditions with the platform raised.



Do not place ladders or scaffolds in the platform or against any part of this machine.

Use extreme care and slow speeds while driving the machine in the stowed position across uneven terrain, debris, unstable or slippery surfaces and near holes and drop-offs.

Do not alter or disable machine components that in any way affect safety and stability.

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

Do not transport tools and materials unless they are evenly distributed and can be safely handled by person(s) in the platform.

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

Do not use the machine as a crane.

Follow your national traffic regulations.

Be sure all tires are in good condition, air-filled tires are properly inflated and lug nuts are properly tightened.

Work Area Safety

Operation on Slopes Hazards

Do not drive the machine on a slope that exceeds the slope and side slope rating of the machine. Slope rating applies to machines in the stowed position.

Model	Maximum slope rating, stowed position	Maximum side slope rating, stowed position
RT0814	35% (19.3°)	35% (19.3°)

Note: Slope rating is subject to ground conditions with one person in the platform and adequate traction. Additional platform weight may reduce slope rating. See Driving on a Slope in the Operating Instructions section.

Fall Hazards

The guard rail system provides fall protection. If occupant(s) of the platform are required to wear personal fall protection equipment (PFPE) due to job site or employer rules, PFPE and its use shall be in accordance with the PFPE manufacturer's instructions and applicable governmental requirements. 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.

Close the entry gate before operating.

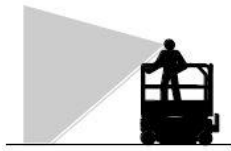
Do not operate the machine unless the guard rails are properly installed and the entry is secured for operation.

Do not enter or exit the platform unless the machine is in the stowed position.

Hazards related with the specific product application of exiting at height have been considered in the design of the machine, for further information contact Genie (see section Contacting the Manufacturer).

Work Area Safety

Collision Hazards



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

Be aware of extended platform position when moving the machine.

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

Operators must comply with employer, job site, and governmental rules regarding use of personal protective equipment.



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



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.

Do not get on and off the work platform when elevated.

No stunt driving or horseplay while operating a machine.

Never use the machine after accident or breakdown.

Never use in the conditions outside design without approval of the manufacturer.

Work Area Safety

Bodily Injury Hazard

Always operate the machine in a well-ventilated area to avoid carbon monoxide poisoning.

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

Improper contact with components under any cover will cause serious injury. Only trained maintenance personnel should access compartments. Access by the operator is only advised when performing a pre-operation inspection. All compartments must remain closed and secured during operation.

Component Damage Hazards

Do not use any battery or charger greater than 12V to jump-start the engine.

Do not use the machine as a ground for welding.

Do not operate the machine in locations where extremely high magnetic fields may be present.

Explosion and Fire Hazards

Do not start the engine if you smell or detect liquid petroleum gas (LPG), gasoline, diesel fuel or other explosive substances.

Do not refuel the machine with the engine running.

Refuel the machine and charge the battery only in an open, well-ventilated area away from sparks, flames and lighted tobacco.

Do not operate the machine or charge the battery in hazardous locations or locations where potentially flammable or explosive gases or particles may be present.

Do not spray ether into engines equipped with glow plugs.

Work Area Safety

Damaged Machine Hazards

Do not use a damaged or malfunctioning machine.

Conduct a thorough pre-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 Genie service manual.

Be sure all decals are in place and legible.

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

Crushing Hazard

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.

Maintain a firm grasp on the platform rail when pulling the rail pins. Do not allow the platform guard rails to fall.

Outrigger Safety

Tip-over Hazards

Do not lower the outriggers unless the machine is on a firm surface. Avoid drop-offs, holes, unstable or slippery surfaces and other possible hazardous conditions.

When the auto level function is not being used and the outriggers are being lowered individually, the steer-end outriggers must be lowered first.

Do not raise the platform unless the machine is level. Do not set the machine up on a surface where it cannot be leveled using only the outriggers.

Do not raise the platform unless all four outriggers are properly lowered, the footpads are in firm contact with the ground and the machine is level.

Do not adjust the outriggers while the platform is raised.

Do not drive while the outriggers are lowered.

Work Area Safety

Battery Safety

Burn Hazards



Batteries contain acid. Always wear protective clothing and eye wear 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 explosive gas.

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



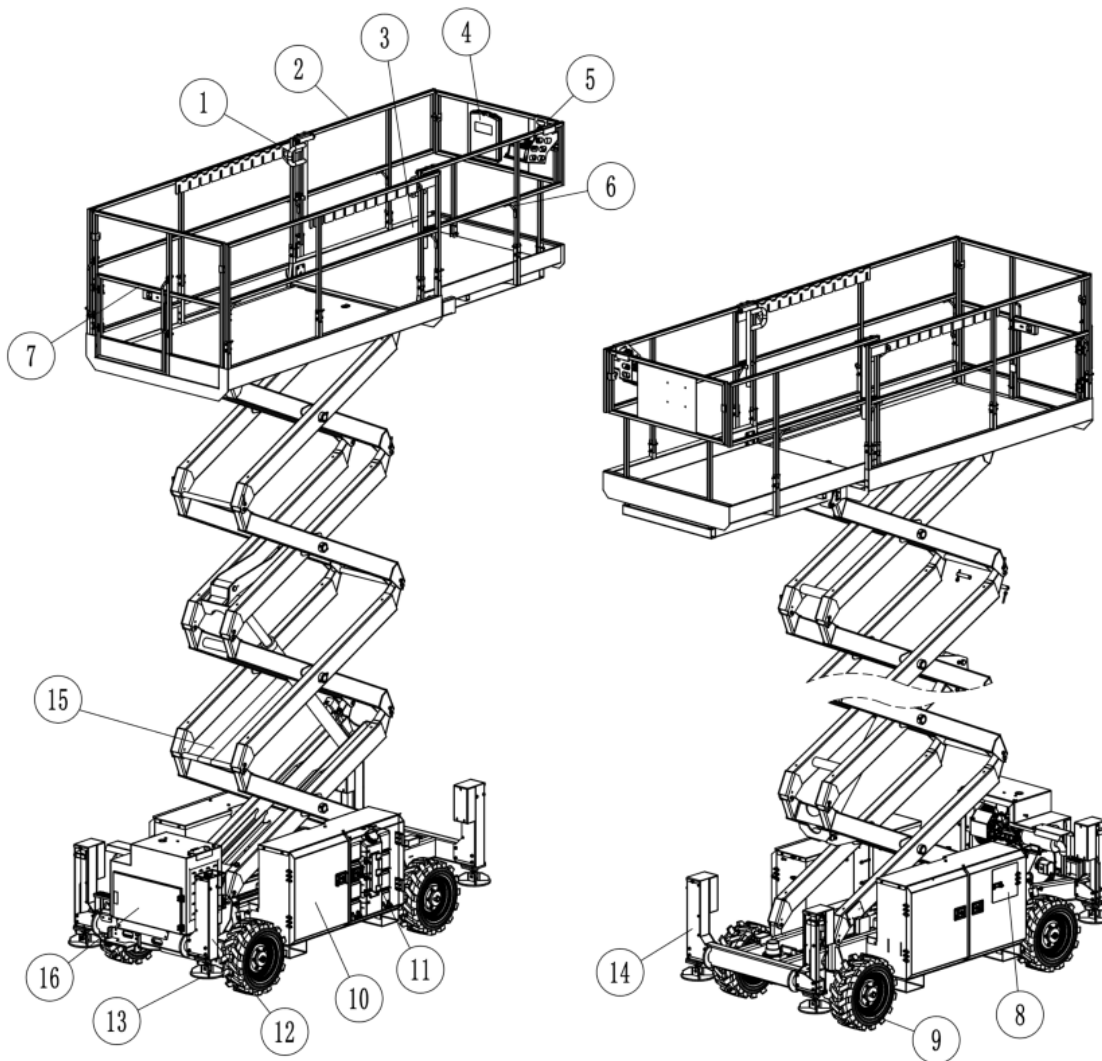
Do not contact the battery terminals or the cable clamps with tools that may cause sparks.



Lockout After Each Use

- 1 Select a safe parking location—firm level 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.

Legend

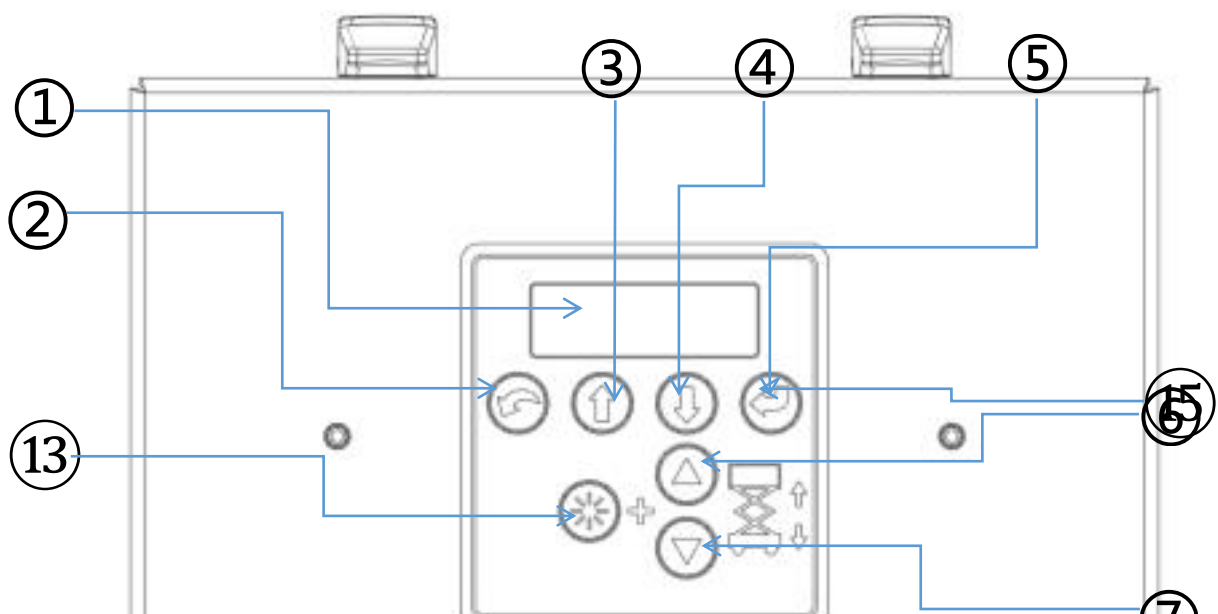


- 1 Platform extension locking handle
- 2 Platform guard rails
- 3 Extension platform
- 4 Document box
- 5 PCU
- 6 Lanyard anchorage points
- 7 Platform entrance door
- 8 ECU

- 9 Steering wheel
- 10 Hydraulic oil tank
- 11 Fuel tank
- 12 Non-steering wheel
- 13 Outrigger foot pad(If equipped)
- 14 Outrigger bracket(If equipped)
- 15 Scissor stack arm
- 16 Engine compartment

Controls

Ground Control Panel



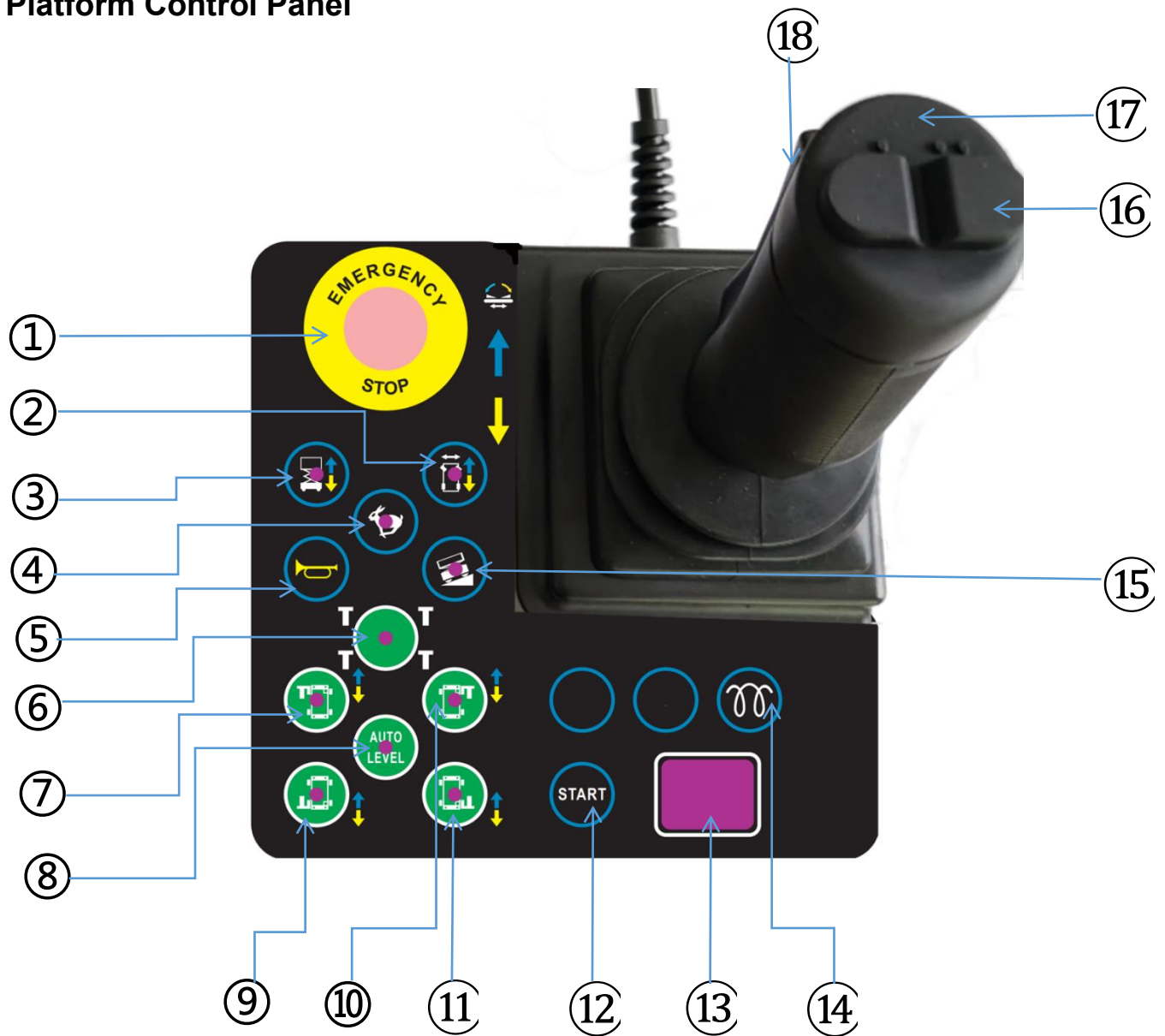
Controls

No	Name	Operation function description
1	LCD reading display	
2	Return button	Back to the previous directory
3	Page up	Page up and raise
4	Page down	Page down and decrease
5	Enter button	Access and confirmation
6	Ascending button of platform	Press this button to rise up the platform.
7	Descending button of platform	Press this button to activate the emergency descending function.
8	Startup button of engine	Press this button to start up the engine.
9	Pre-heat button	Pre-heat the engine for cold start
10	Breaker	Cut off and switch on the load circuit and cut off the fault circuit to prevent the expansion of the accident and ensure safe operation
11	Emergency shutdown button	Push the red emergency shutdown button inward to Off position to stop all functions and shut down the engine. Pull the red emergency shutdown button out to On

		position to operate the machine.
12	Key switch	Start the machine, Choose the platform or chassis
13	Enabling switch	Use this key when ascending or descending
14	Breaker	Cut off and switch on the load circuit and cut off the fault circuit to prevent the expansion of the accident and ensure safe operation
15	Overload LED	ECU will alarm when the platform load exceeds the rated load

Controls

Platform Control Panel



No	Name	Operation function description
1	Red emergency shutdown button	Push the red emergency shutdown button inward to Off position to stop all functions and shut down the engine. Pull the red emergency shutdown button out to On position to operate the machine.
2	Functional enabling button of driving with indicator	Press this button to activate the driving functions and the indicator is on.
3	Functional enabling button of lifting with indicator	Press this button to activate the lifting functions and the indicator is on.

Controls

No	Name	Operation function description
4	Idling selection button of engine with indicator	Press this button to select the idling setting of engine. The indicator is on, indicating that the idling has been selected. The indicator is off, indicating that the intermediate and low idling has been selected.
5	Horn button	Press this button, and the horn will sound.
6	Outrigger enable key	Press this button to change to outrigger cylinder model.high speed of engine,
7	Functional enabling button of outrigger with indicator	Press this button to activate the ascending/descending functions of single outrigger.
8	Automatic leveling button of outrigger	Press this button to activate the automatic leveling function.
9	Functional enabling button of outrigger with indicator	Press this button to activate the ascending/descending functions of single outrigger.
10	Functional enabling button of outrigger with indicator	Press this button to activate the ascending/descending functions of single outrigger.
11	Functional enabling button of outrigger with indicator	Press this button to activate the ascending/descending functions of single outrigger.
12	Startup button of engine	Press this button to start up the engine.
13	LCD reading display	
14	Pre-heat button	Pre-heat the engine for cold start
15	Machine inclination button with indicator: Please operate it at a low speed during inclination.	Press this button to perform operation at a low speed during inclination.
16	Thumb rocker switch for turning function	Press the left side of the thumb rocker, and then the machine will turn to the left. Press the right side of the thumb rocker, and then the machine will turn to the right.
17	Proportional control handle of drive function	Move the control handle in the direction indicated by the blue arrow on control panel, and then the machine will move in the direction indicated by the blue arrow. Move the control handle in the direction indicated by the yellow arrow on control panel, and then the machine will move in the direction indicated by the yellow arrow.
18	Enabling switch	Press the enabling switch to start up the drive function.



Do Not Operate Unless:

- ☑ You learn and practice the principles of safe machine operation contained in this operator's manual.
 - 1 Avoiding dangerous situations
 - 2 **Always perform a pre-operation inspection.**
Know and understand the pre-operation inspection before going on to the next section.
 - 3 Always perform function tests prior to use.
 - 4 Inspect the workplace.
 - 5 Only use the machine as it was intended.

Pre-operation Inspection

Inspections

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.

If damage or any unauthorized 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.

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

Inspections

Pre-operation Inspection

- ☐ Be sure that the operator's, safety, and responsibilities manuals are complete, legible and in the storage container located in the platform.
- ☐ Be sure that all decals are legible and in place. See Inspections 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, improperly installed or missing parts and unauthorized modifications:

- ☐ Electrical components, wiring and electrical cables
- ☐ Hydraulic hoses, fittings, cylinders and manifolds
- ☐ Drive motors
- ☐ Wear pads
- ☐ Tires and wheels
- ☐ Limit switches, alarms and horn
- ☐ Nuts, bolts and other fasteners
- ☐ Brake release components

- ☐ Safety arm
- ☐ Platform extension
- ☐ Scissor Pins and retaining fasteners
- ☐ Platform control joystick
- ☐ Battery pack and connections
- ☐ Ground strap
- ☐ Platform entry gate
- ☐ Pothole guards
- ☐ Lanyard anchorage points
- ☐ Platform overload components
- ☐ Outrigger housing and footpads (if equipped)

Check entire machine for:

- ☐ Cracks in welds or structural components
- ☐ Dents or damage to machine
- ☐ Excessive rust, corrosion or oxidation
- ☐ Verify that all structural and other critical components are present and all associated fasteners and pins are in place and properly tightened.
- ☐ Be sure side rails are installed and bolts are fastened.
- ☐ Be sure that the chassis trays are closed and latched and the batteries are properly connected.

Note: If the platform must be raised to inspect the machine, make sure the safety arm is in place. See Operating Instructions section.



Inspections

Function Test 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.

After repairs are completed, the operator must perform a pre-operation inspection and function tests again before putting the machine into service.

Do Not Operate Unless:

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

Inspections

At the Ground Controls

1. Select a test area that is firm, level and free of hazards.
2. Pull out the platform and ground red Emergency Stop button to the on position.
3. Turn the key switch to ground control.
- Result: The LCD screen will come on and display SYSTEM READY.

Note: In cold climates, the LCD readout screen will need to warm up before the display appears.

4. Start the engine. See Operating Instructions section.

Test Emergency Stop

5. Push in the red Emergency Stop button to the off position.
 - Result: The engine should shut off and no functions should operate.
6. Pull out the red Emergency Stop button to the on position and restart the engine.

Test the Up/Down Functions

The audible warnings on this machine and the standard horn all come from the same central alarm. The horn is a constant tone. The descent alarm sounds at 60 beeps per minute. The alarm that goes off when the machine is not level sounds at 180 beeps per minute.

7. Do not press the lift function enable button. Press and hold the platform up button.



- Result: The platform should not raise.
8. Press and hold the lift function enable button. Press and hold the platform up button.
 - Result: The platform should raise.
 9. Press and hold the lift function enable button. Press and hold the platform down button.
 - Result: The platform should lower. The descent alarm should sound while the platform is lowering.
10. Turn the key switch to platform control.

At the Platform Controls

Test Emergency Stop

11. Push in the platform red Emergency Stop button to the off position.
 - Result: The engine should shut off and no functions should operate.
12. Pull out the red Emergency Stop button to the on position and restart the engine.
 - Result: The indicator light should be green.

Test the Horn

13. Press the horn button.
 - Result: The horn should sound.

Inspections

Test Up/Down Functions and Function Enable

14. Start the engine.
15. Activate the up/down rocker switch in the direction indicated by the blue arrow.
 - Result: The platform should not raise.
16. Press and hold the lift function enable button.
17. Activate the up/down rocker switch in the direction indicated by the blue arrow.
 - Result: The platform should raise.
18. Press and hold the lift function enable button.
19. Activate the up/down rocker switch in the direction indicated by the yellow arrow.
 - Result: The platform should lower. The descent alarm should sound while the platform is lowering.



Inspections

Test the steering

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

20. Press and hold the function enable switch on the control handle.
21. Press the thumb rocker switch on top of the control handle in the direction indicated by the blue triangle on the control panel.
 - Result: The steer wheels should turn in the direction indicated by the blue triangle.
22. Press the thumb rocker switch in the direction indicated by the yellow triangle on the control panel.
 - Result: The steer wheels should turn in the direction indicated by the yellow triangle.

Test Drive and Braking

23. Press and hold the function enable switch on the control handle.
24. Slowly move the drive control handle in the direction indicated by the blue 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 blue arrow points on the control panel, then come to an abrupt stop.
25. Press and hold the function enable switch on the control handle.
26. 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.

Note: The brakes must be able to hold the machine on any slope it is able to climb.

Test Limited Drive Speed

27. Press and hold the lift function enable button. Raise the platform at least 7.87ft / 2.4m.
28. Press and hold the function enable switch on the control handle.
29. Slowly move the control handle to full drive position.
 - Result: The maximum achievable drive speed with the platform raised should not exceed 0.61km/h.

If the drive speed with the platform raised exceeds 0.61km/h, immediately tag and remove the machine from service.

Inspections

Test the Outrigger Deployment Height (RT0814)

30. Push and hold the lift function enable button. Raise the platform.
 - Result: The platform should raise to 25.92ft / 7.9 m and then stop. The platform should not raise above 25.92 ft / 7.9 m unless the outriggers are lowered.
31. Drive the machine forward.
 - Result: The drive function should not operate.
32. Push and hold the auto level button.
33. Activate the up/down rocker switch in the down direction.
 - Result: The outriggers should extend and level the machine. A beep will sound when the machine is level.
34. Raise the platform.
 - Result: The platform should raise to full height.
35. Lower the platform.
36. Push and hold the auto level button and raise the outriggers.

Inspections

Test Auxiliary Lowering (If

Equipped)

37. Push and hold the lift function enable button and raise the platform approximately 2 ft / 60 cm.
38. Push in the red Emergency Stop button to shut off the engine.
39. Pull out the red Emergency Stop button to the on position.
40. Press and hold the lift function enable button. Activate the up/down rocker switch in the direction indicated by the yellow arrow.
- Result: The platform should lower.

Test Drive Tilt Cutout

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

41. Fully lower the platform.
42. Drive the machine onto a slope where the chassis angle is greater than 2.5° side to side.
43. Raise the platform to approximately 3.94 ft / 1.2 m.
- Result: The platform should stop and the tilt alarm will sound at 180 beeps per minute. The indicator light on the lift function enable button will be red.
44. Press and hold the function enable switch on the control handle.
45. Move the control handle in the direction indicated by the blue arrow, then move the control handle in the direction indicated by the yellow arrow.
- Result: The drive function should not work in either direction.
46. Fully lower the platform.
47. Drive the machine.

- Result: The machine should drive.
48. Return to level ground and raise the platform in excess of approximately 3.94 ft / 1.2 m.
 49. Drive the machine onto a slope where the chassis angle is greater than 2.5° side to side.
 - Result: The machine should stop at or before the machine reaches 2.5° of chassis tilt and the tilt alarm will sound at 180 beeps per minute. The indicator light on the lift function enable button will be red.
 50. Fully lower the platform.
 51. Drive the machine onto a slope where the angle is greater than 4.5° front to back.
 52. Raise the platform to approximately 3.94 ft / 1.2m.
 - Result: The platform should stop and the tilt alarm will sound at 180 beeps per minute. The indicator light on the lift function enable button will be red.
 53. Press and hold the function enable switch on the control handle.
 54. Move the control handle in the direction indicated by the blue arrow, then move the control handle in the direction indicated by the yellow arrow.
 - Result: The drive function should not work in either direction.
 55. Fully lower the platform.
 56. Drive the machine.
 - Result: The machine should drive.
 57. Return to level ground and raise the platform in excess of approximately 3.94 ft / 1.2 m.
 58. Drive the machine onto a slope where the slope angle is greater than 4.5° front to back.
 - Result: The platform should stop and the tilt alarm will sound at 180 beeps per minute. The indicator light on the lift function enable

button will be red.

59. Fully lower the platform and return to level ground.



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.

Workplace Inspection 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.

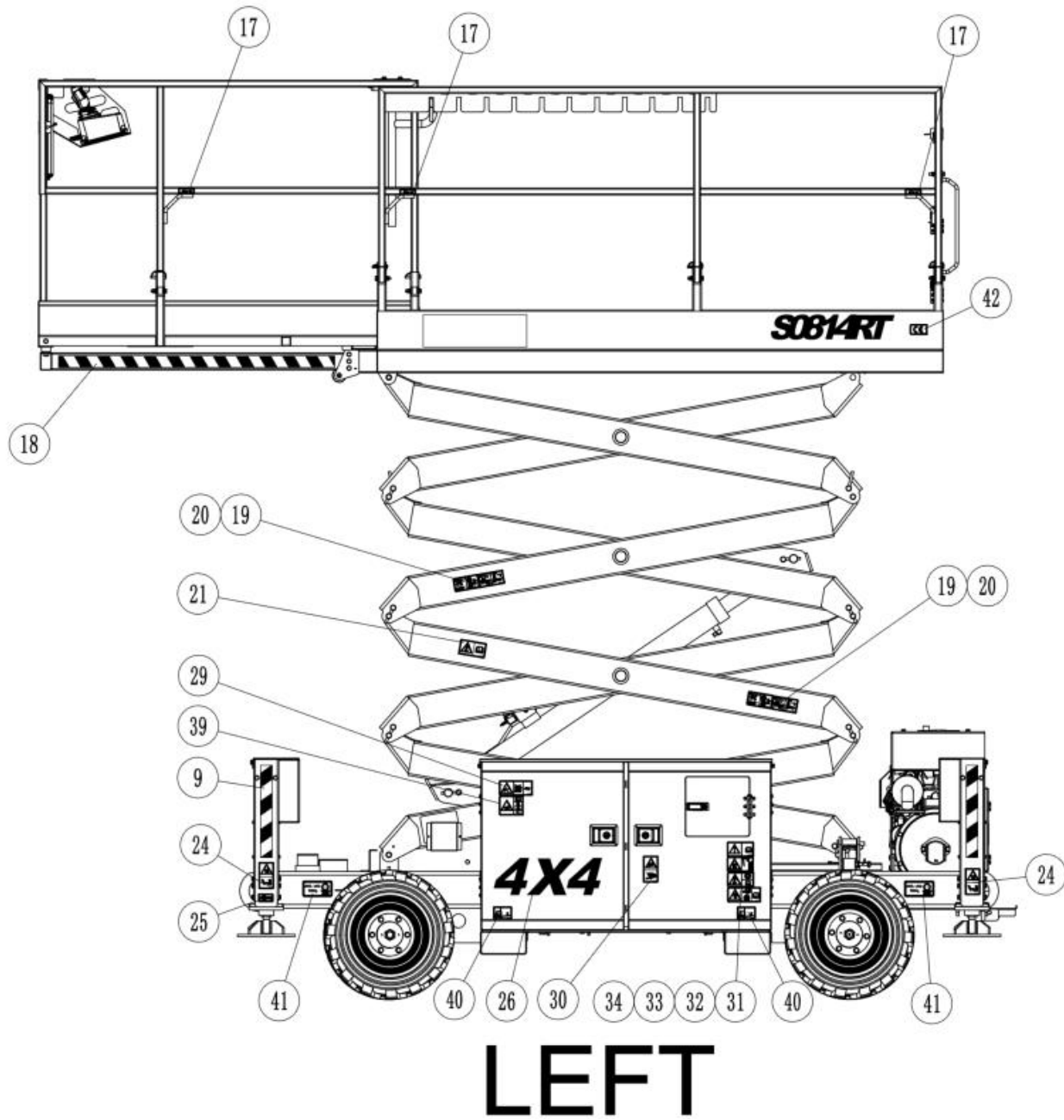
It is the operator's responsibility to read and remember the workplace hazards, then watch for and avoid them while moving, setting up, and operating the machine.

Inspections

Workplace Inspection Checklist

Be aware of and avoid the following hazardous situations:

- ☐ Drop-offs or holes
- ☐ Bumps, floor obstructions, or debris
- ☐ Sloped surfaces
- ☐ unstable or slippery surfaces
- ☐ overhead obstructions and high voltage conductors
- ☐ hazardous locations
- ☐ inadequate surface support to withstand all load forces imposed by the machine
- ☐ wind and weather conditions
- ☐ the presence of unauthorized personnel
- ☐ other possible unsafe conditions

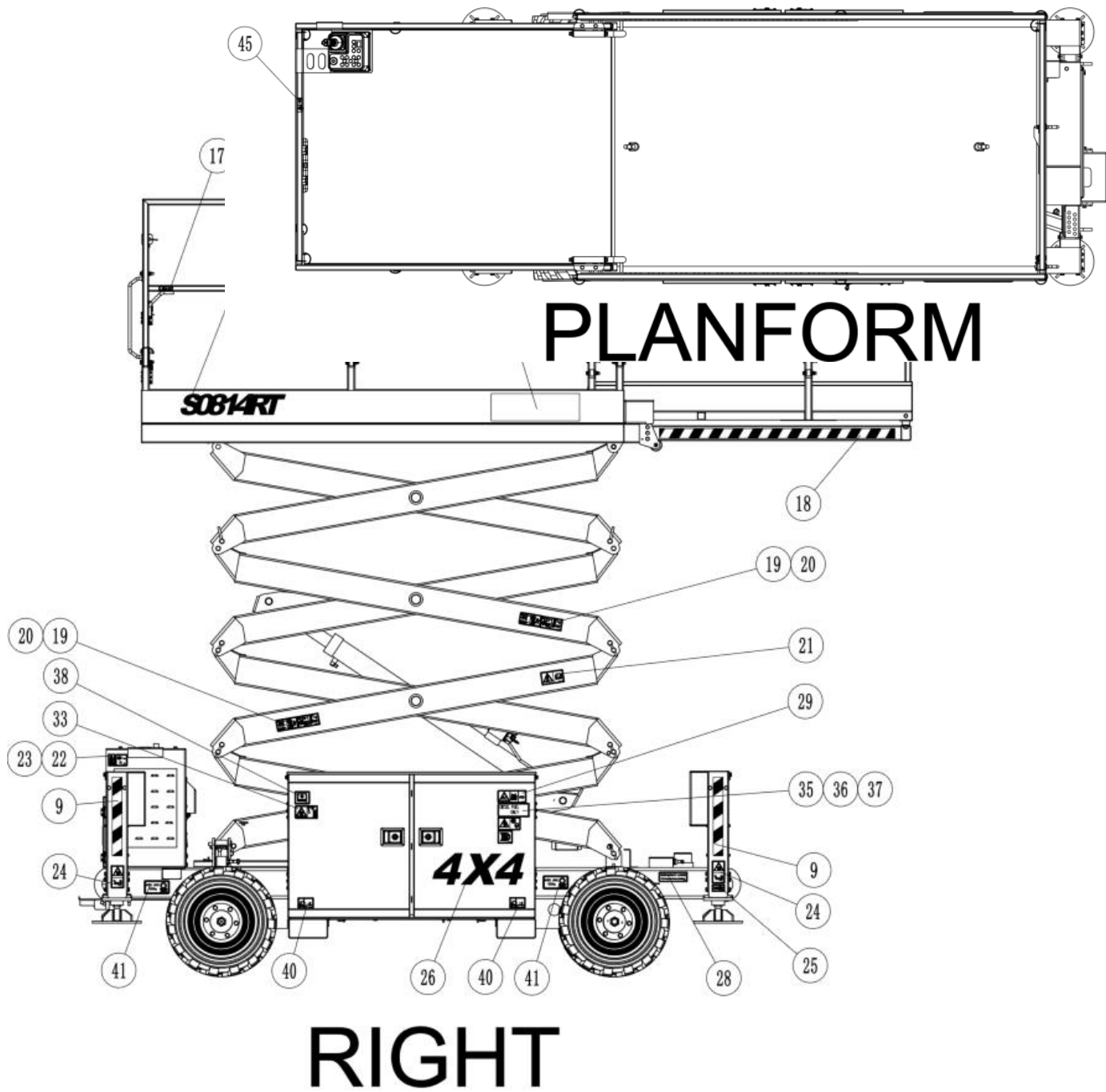


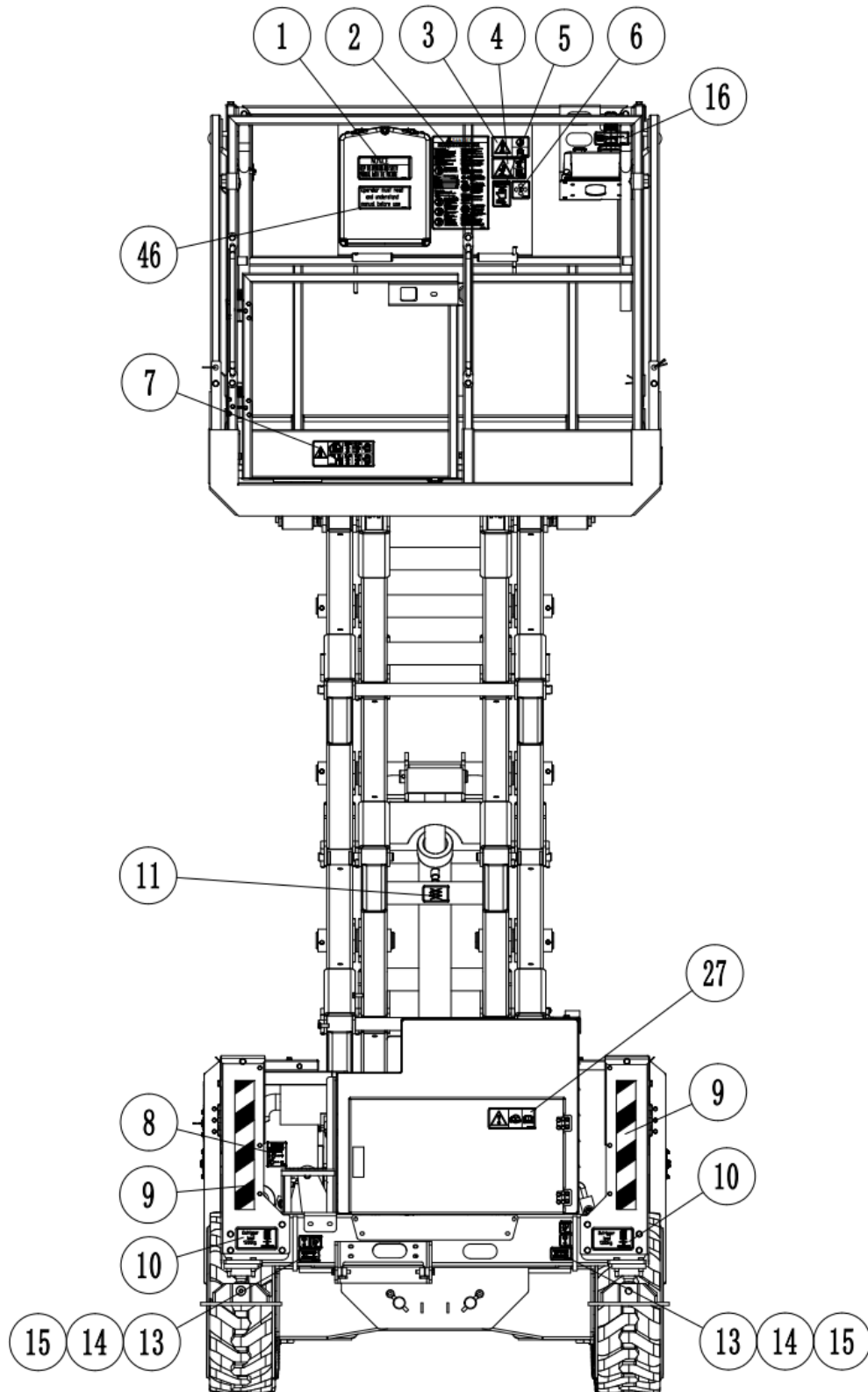
Inspections

Inspection for Decals with Symbols

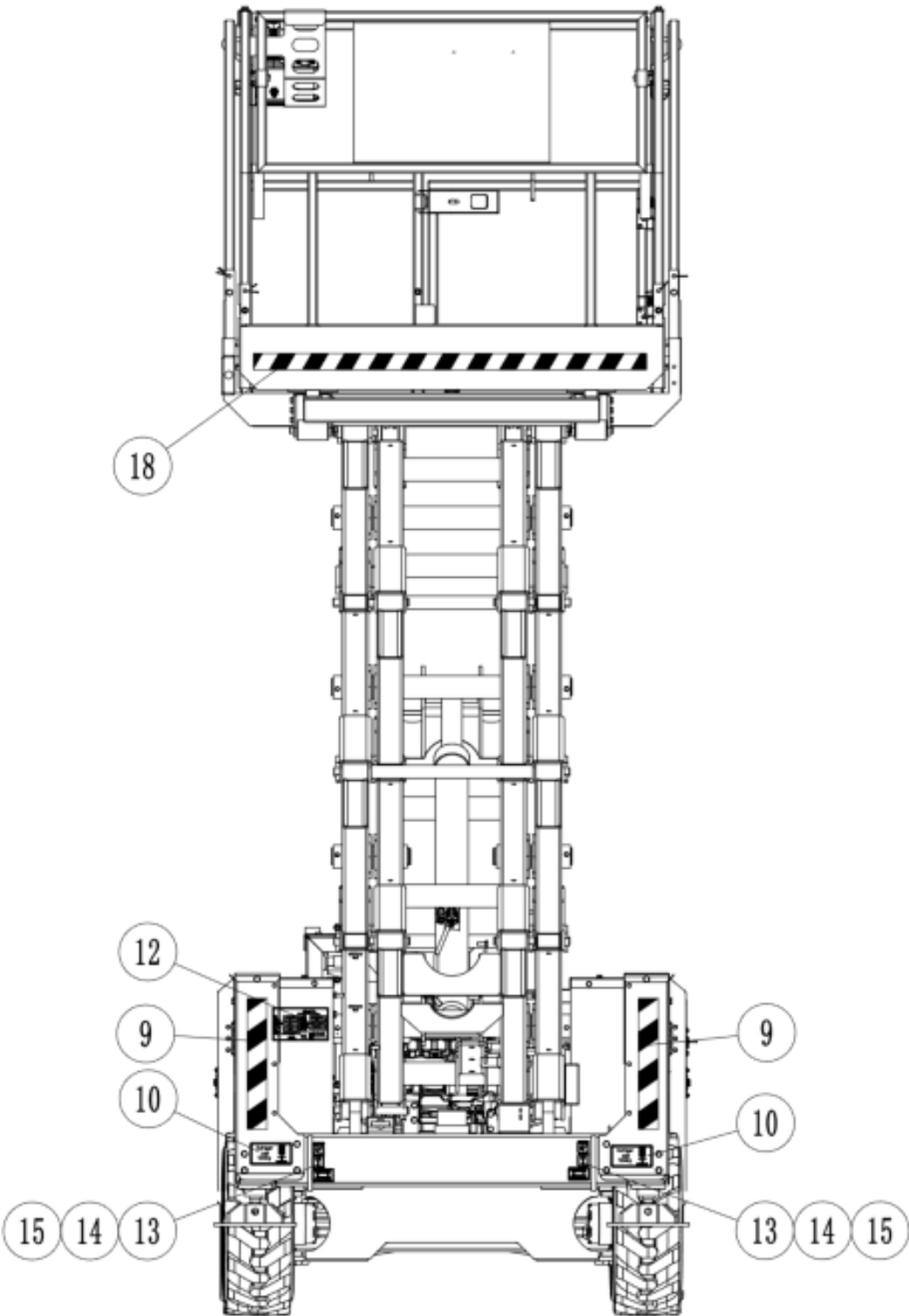
RT0814

Determine whether the decals on your machine have words or symbols. Use the appropriate inspection to verify that all decals are legible and in place.





REAR

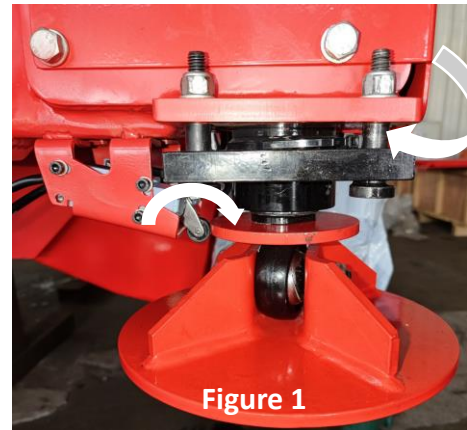


FRONT

No	Part No	Req	Decal Description
1	121000001	1	Manual box
2	121000002	1	Brief operating instruction
3	151000004	1	Read manual
4	151000003	1	Tip-over hazard
5	151000212	1	Maximum allowable manual force
6	151000002	1	Direction
7	151000211	1	Maximum capacity
8	151000216	1	Main Power
9	151000221	8	warning stripes yellow/black 50*400
10	151000213	4	Outrigger load
11	121000029	1	Safety prop
12	121000012	1	Nameplate
13	121000033	4	Transport diagram
14	121000020	4	Tie down lugs
15	121000021	4	Lifting point
16	121000004	1	Read manual
17	121000005	6	Lanyard attachment points
18	151000222	3	warning stripes yellow/black 50*1200
19	121000206	4	Crush Hazard
20	121000207	4	Squeeze hazards
21	151000018	2	Tip-over hazard (Scissor links limit switch)
22	151000217	1	85dB
23	151000021	1	High temperature hazard
24	151000008	1	Keep safety clearance of outriggers and tires
25	121000017	2	Forward direction
26	151000220	2	4drive
27	121000023	1	Maintenance safety attention
28	121000027	1	Emergency lowering
29	121000024	2	Use safety prop
30	151000020	1	Skin burn hazard
31	121000031	1	Tip-over hazard
32	151000019	1	Read operation manual
33	121000025	2	Electrical hazard
34	121000026	1	Explosive fumes
35	151000012	1	Explosive fumes, (outside cabinet door & fuel tank)
36	151000013	1	Diesel
37	151000219	1	Diesel fuel only
38	151000014	1	Hydraulic oil
39	121000028	1	Brake Release Safety and Operating Instructions

No	Part No	Req	Decal Description
40	151000218	4	Forklift
41	151000214	4	Wheel load
42	121000010	1	CE mark
43	151000215	2	LOGO
44	151000024	2	Model
45	151000001	1	Crush Hazards (guardrail)
46	151000221	1	Must understand manual
47	151000222	1	Max.Diesel fill level 45L(Taped to the inside of the door)
48	151000223	1	Max.Hydraulic fill level 50L (Taped to the inside of the door)

cylinder (Figure1).



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.**
- 6 Before operation, check the outrigger limit switches, there cannot be stucked by anything on mounting base of outrigger

Operating Instructions

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, along with their tools and materials, 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.

Operating Instructions

Emergency Stop

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

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

Starting the Engine

- 1 At the ground controls, turn the key switch to the desired position.
- 2 Be sure both ground and platform control red Emergency Stop buttons are pulled out to the on position.

Note: In cold conditions, 20°F / -6°C and below, the machine should be started on gasoline and warmed for 2 minutes, then switched to LPG. Warm engines can be started on LPG.

Diesel models

- 1 Press the engine start button.

Note: In cold condition, 50°F / 10°C and below, push and hold the glow plug button for 5 to 10 seconds before starting the engine. Limit continuous use of the glow plug button to 20 seconds.

All models

If the engine fails to start after 15 seconds of cranking, determine the cause and repair any malfunction. Wait 60 seconds before trying to start again.

In cold conditions, 20°F/-6°C and below, warm the engine for 5 minutes before operating to prevent hydraulic system damage.

In extreme cold conditions, 0°F/-18°C and below, machines should be equipped with optional cold start kits. Attempting to start the engine when temperatures are below 0°F/-18°C may require the use of a booster battery.

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 Start the engine.

Operation from Ground

1 Push and hold the lift function enable button.

2 Activate the up function or the down function.

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

Engine Idle Select

Select the engine idle (rpm) by pressing the idle select button. There are three settings for engine idle:

- Indicator light off: low idle
- Indicator light blinking: high idle activated by any function enable button
- Indicator light on: high idle

Operation from Platform

- 1 Turn the key switch to platform control.
- 2 Pull out both ground and platform red Emergency Stop buttons to the on position.
- 3 Start the engine.

To Position Platform

- 1 Push and hold the lift function enable button.
- 2 Activate the up/down rocker switch in the desired direction.

Operating Instructions

To Steer

- 1 Press and hold the function enable switch on the control handle.
- 2 Turn the steer wheels with the thumb rocker switch located on the top of the control handle.

To Drive

- 1 Press and hold the function enable switch on the control handle.
- 2 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 the drive chassis to identify

the direction the machine will travel.

Machine travel speed is restricted when the platform is raised.



platform controls.

Remove weight from the platform.

Push in and pull out the red Emergency Stop button to reset the system.

If the platform is still overloaded, the light will continue to flash.

Operating



Instructions

Drive Select Button

Machine on incline symbol: Low range operation for inclines.

Overload Recovery

If the ground controls LCD screen displays OVERLOAD RECOVERY, the emergency lowering system has been used while the platform was overloaded. For information on how to reset this message, please consult the appropriate SWIFT EQUIPMENT PTY LTD Service Manual

Indicator Light On Red

If the indicator light is on red, push in and pull out the red Emergency Stop button to reset the system.

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

Indicator Light Flashing Red

If the indicator light is flashing red, the platform is overloaded and no functions will operate. An alarm will sound at the

Driving on a slope

Determine the slope and side slope ratings for the machine and determine the slope grade.

Maximum slope rating, stowed position:



RT0814 35% 19.3°

Maximum side slope rating, stowed position:



RT0814 35% 19.3°

Note: Slope rating is subject to ground conditions with one person in the platform and adequate traction. Additional platform weight may reduce slope rating.

Operating Instructions

To determine the slope grade:

Measure the slope with a digital inclinometer OR use the following procedure.

You will need:

- Carpenter's level
- Straight piece of wood, at least 3 feet/1 m long
- Tape measure

Lay the piece of wood on the slope.

At the downhill end, lay the level on the top edge of the piece of wood and lift the end until the piece of wood is level.

While holding the piece of wood level, measure the vertical distance from the bottom of the piece of wood to the ground.

Divide the tape measure distance (rise) by the length of the piece of wood (run) and multiply by

100.

Example:



Piece of wood = 144 inches (3.6m)

Run = 144 inches (3.6m)

Rise = 12 inches (0.3m)

 $12 \text{ in} \div 144 \text{ in} = 0.083 \times 100 = 8.3\% \text{ grade}$ $0.3 \text{ m} \div 3.6 \text{ m} = 0.083 \times 100 = 8.3\% \text{ grade}$ If the slope exceeds the maximum
slope or side

slope rating, then the machine

must be winched or transported up or down the
slope. See Transport and Lifting section.

Operating Instructions

To Extend and Retract Platform

- 1 Lift the platform extension lock handles to the horizontal position.
- 2 Push the platform extension lock handles to extend the platform to the desired position.
Do not stand on the platform extension while trying to extend it.
- 3 Lower the platform extension lock handles.

Auxiliary Lowering (if equipped)

At the Ground Controls

Push and hold the lift function enable button and activate the down function.

In the event of a power failure, use the auxiliary lowering function.

At the Platform Controls

Push and hold the lift function enable button and activate the up/down rocker switch in the down direction.

Tilt Sensor Activation Settings

Tilt Sensor Activation Settings	
Chassis Angle on Wheels	
Chassis Angle (side to side)	2°
Chassis Angle (front to back)	4°
Chassis Angle on Outriggers	
Chassis Angle (side to side)	0.5°
Chassis Angle (front to back)	0.5°

When the machine is On Incline and elevated above the down limit height, the tilt alarm sounds and the drive and lift functions are disabled.



Lower the machine below the down limit height to restore drive and lift functionality.



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.

Operating Instructions

Outrigger Operation (if equipped)

- 1 Position the machine below the desired work area.

Note: The engine must be running for the outriggers to operate.

- 2 Push and hold the auto level button.
- 3 Activate the up/down rocker switch in the down direction. The outriggers will extend and level the machine. A beep will sound when the machine is level.

The indicator light on the lift function enable button will turn red when one but not all

outriggers are down. All drive and lift functions are disabled.

The light turns green on the lift function enable button and on the individual outrigger buttons when all the outriggers are in firm contact with the ground.

The drive function is disabled while the outriggers are down.

To control individual outriggers

- 1 Push and hold one or more outrigger buttons.
- 2 Active the outrigger up/down rocker switch in the desired direction to level the machine.

The outrigger foot plates must be lowered only onto a firm surface that can support the load of the BS0814RT and its rated capacity.

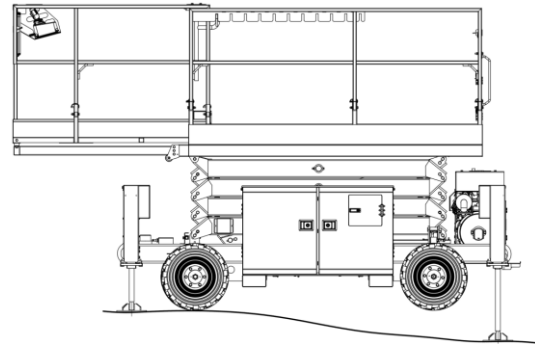


Figure 1

The positioning of outrigger footplates on stepped level surfaces (capable of supporting the BS0814RT) is acceptable (see figure 1 & 2)

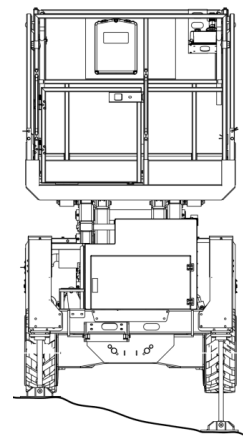


Figure 2

The Risks of Operating Scissor Lifts on Outriggers on Ramps and Slopes

There is a risk of scissor lifts with outriggers sliding down ramps, driveways, underground car park entry ramps and outdoor slopes. The contributing factors include newly painted ramps, icy, wet oil and sand covered ramps, grassy and loose surface slopes.

This can occur when the platform is fully lowered or when elevated.

Do not attempt to pack wheel chocks or timber under the outrigger footplates or the tyres.

The positioning of outrigger footplates on ramps and slopes creates the risk of the machine sliding down the ramp or slope (see figure 3 & 4).

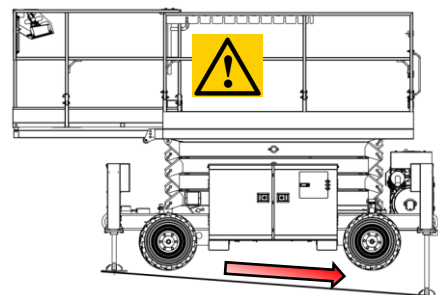
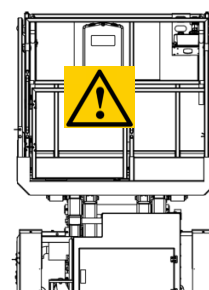


Figure 3



A competent person shall assess slope and surface conditions before setting up the machine on a slope.

Operating Instructions

After Each Use

- 1 Select a safe parking location—firm level 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

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.

Maintenance-free batteries

- 1 Connect the battery charger to a grounded AC circuit.
- 2 The charger will indicate when the battery is fully charged.



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 a Genie authorized battery and charger.

Operating Instructions

Standard Batteries

- 1 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.
- 2 Replace the battery vent caps.
- 3 Connect the battery charger to a grounded AC circuit.
- 4 The charger will indicate when the battery is fully charged.
- 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.

After Each Use

- 1 Select a safe parking location—firm level 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 Charge the batteries.

Operating Instructions

Fault code

Code	Description	Code	Description
01	System Initialization Fault	46	Platform Enable Button ON
02	System Communication Fault	47	Joystick Not In Neutral
03	Invalid Option Setting Fault	52	Drive Forward Coil Fault
07	Leg Out Coil Fault	53	Drive Reverse Coil Fault
08	Leg In Coil Fault	54	Lift Up Coil Fault
10	Level Collision	55	Lift Down Coil Fault
12	Chassis Up or Dn Switch ON	56	Steer Right Coil Fault
14	Engine Hi-Temp Fault	57	Steer Left Coil Fault
15	Oil Press or Alternator Fault	58	General Brake Coil Fault
16	Height limit not Cali	59	Parallel Coil Fault
30	FL Leg Coil Fault	80	Platform Load is over 80%
31	Pressure Sensor Fault	90	Platform Load is over 90%
32	Angle Sensor Fault	94	Main Proportional Coil Fault
35	Pressure Sensor2 Fault	95	Engine Controller Missing
38	Calibration Incomplete	96	Leg En Coil Fault
42	Platform Left Button ON	98	Oil Low
43	Platform Right Button ON	99	Platform Load is over 99%
44	FR Leg Coil Fault	OL	Platform Overloaded

45	RL Leg Coil Fault	LL	Machine Inclined
17	Low limit switch fault		

The codes displayed on the LED display indicate the operation status and related faults of the machine. The fault codes listed in the table below describe the fault condition of the machine, which is helpful to accurately find the fault parts or areas, so as to smoothly remove the fault.

construction and lifting equipment for international shipment.

- ☑ Only qualified mobile elevating work platform operators should move the machine on or off the truck.
- ☑ 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. SWIFT EQUIPMENT PTY LTD lifts are very heavy relative to their size. See the serial label for the machine weight.

Transport and Lifting Instructions

Observe and Obey:

- ☑ SWIFT EQUIPMENT PTY LTD provides this securement information as a recommendation. Drivers are solely responsible for making sure machines are properly secured and the correct trailer is selected pursuant to US Department of Transportation regulations, other localized regulations, and their company policy..
- ☑ SWIFT EQUIPMENT PTY LTD customers needing to containerize any lift or SWIFT EQUIPMENT PTY LTD product should source a qualified freight forwarder with expertise in preparing, loading and securing
- ☑ If the slope of the transport vehicle bed exceeds the uphill or downhill maximum slope rating, the machine must be loaded and unloaded using a winch or forklift as

described in the brake release operation.
See the Specifications section for the slope ratings.

3 Press the black button to release the pump.

4. Push and pull the red brake to release the pump knob.



Brake release operation

1 Cushion the wheel with a wedge to prevent the machine from rolling.

2 It is important to ensure that the winch cable is properly secured to the fastening point of the drive chassis and that there are no obstacles on the channel.



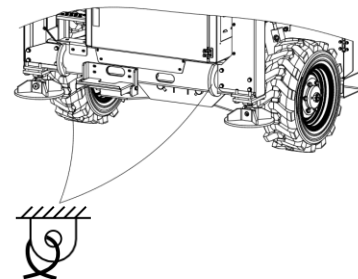
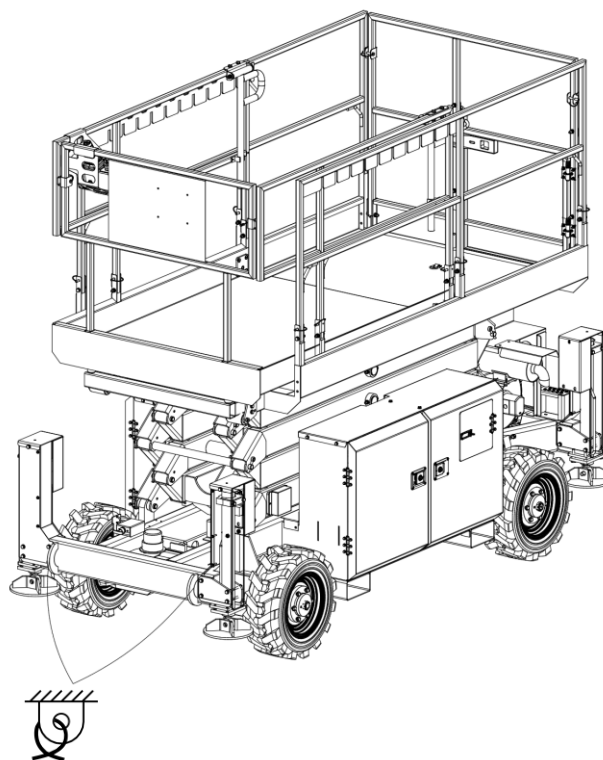
Transport and Lifting Instructions

Securing to Truck or Trailer for Transit

Always chock the machine wheels in preparation for transport.

Retract and secure the extension deck(s).

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



Use a minimum of 4 chains or straps.

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.

If the railings have been folded down, secure them with straps before transporting.



Transport and Lifting Instructions



Observe and Obey:

- ☑ Only qualified riggers should rig and lift the machine.
- ☑ Be sure the crane capacity, loading surfaces and straps or lines are sufficient to

withstand the machine weight. See the serial label for the machine weight.

Lifting Instructions

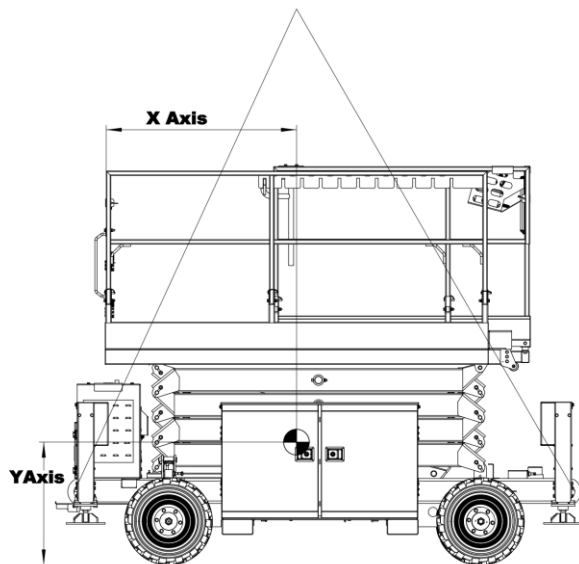
Fully lower the platform. Be sure the extension deck, controls and component trays are secure. Remove all loose items on the machine.

Determine the center of gravity of your machine using the table and the picture on this page.

Attach the rigging only to the designated lifting points on the machine.

Adjust the rigging to prevent damage to the machine and to keep the machine level.

Always carry out pre-operative inspection after storage before use.



BS0814RT

Height, working maximum (wheel)	9.9m
---------------------------------	------

Height, platform maximum (wheel)	7.9m
----------------------------------	------

Height, stowed maximum	
------------------------	--

Railing raised	2.5m
----------------	------

Center of gravity	X Axis	Y Axis
RT0814	1222.26mm	788.85mm

Height, stowed maximum	
------------------------	--

Railing lowered	2.13m
-----------------	-------

Width	1.45m
-------	-------

Length	3.315m
--------	--------

Extension Platform length	1.2m
---------------------------	------

Platform dimensions	2.73x1.4m
---------------------	-----------

Maximum load capacity	300kg
-----------------------	-------

Max load capacity-extension deck	120kg
----------------------------------	-------

Maximum wind speed	12.5m/s
--------------------	---------

Wheelbase	2m
-----------	----

Turning radius (outside)	4.75 m
--------------------------	--------

Turning radius (inside)	2.5 m
-------------------------	-------

Ground clearance	minimum 0.2m
------------------	--------------

	Mid cabinet 0.28m
--	-------------------

Lifting speed-raise/lower	20/35.5s
---------------------------	----------

Weight	2800kg
--------	--------

(Machine weights vary with option)

configurations. See serial label for specific machine weight.)

Power source	3TNV80F 18.4kw
System voltage	12V
AC outlet in platform	Standard
Maximum hydraulic pressure (functions)	220Bar
Tire size	23*8.5-12-6PR

Drive speed

Stowed, maximum	3.89km/h
Platform raised, maximum	0.61km/h

Floor loading information

Tire load maximum	1220kg
Outrigger load maximum	1220kg
Occupied floor pressure	6.1kPa

Note: Ground hosting information is approximate and does not include different optional configuration factors. This information can only be used if there is a sufficiently high safety factor.

Specifications

Airborne noise radiation

Sound pressure levels in ground workspaces
<85dBA

Sound pressure level of the Platform
workspace <85dBA

Vibration acceleration 2.5m/s²

Max slope rating, stowed position 35%(19.3°)

Max side slope rating,
stowed position 35%(19.3°)

Note: Slope ratings are limited by ground conditions and sufficient traction.

Maximum working slope 2° / 4°



Observe and Obey:

- ☒ Only routine maintenance items specified in this manual shall be performed by the operator.

Maintenance

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



Indicates that dealer service will be required to perform this procedure.

Maintenance

Check for Safety Manual

It is required to keep the operator in a good state and the safety manual in proper condition for safe operation. The manual and each device shall be stored in a container provided in the work platform. An unrecognized or lost manual shall be unable to provide necessary safety and operation information for safe operation.

- 1 Confirm that the storage container is on site and in a good condition.
 - 2 Confirm both the responsibility manual and safety manual are in the storage container within the
 - 3 work platform by the operator.
 - 4 Put the manual into the file storage box after use.
- ▲ If the manual needs to be replaced, please contact the service staff of SWIFT EQUIPMENT PTY LTD .

Check for Labels and Signs

It is required to keep all safety and description labels and signs in a good condition for safe operation of the platform. Labels warn operators and staff of many possible hazards in using the platform. They also provide users with operation and maintenance information. Illegible labels cannot warn staff of steps or hazards and may lead to unsafe operating conditions.

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

Check the clarity and damage of all the labels and immediately replace any damaged or illegible label.

- ▲ If the labels need to be replaced, please contact the service staff of **SWIFT EQUIPMENT PTY LTD**

Check for Damaged, Loose or Missing Parts

This step is performed every 8 hours or every day.

Carrying out daily equipment status check is necessary for ensuring safe equipment operation and maintaining good equipment performance. Incorrect positioning, repairing damaged equipment, and loose or missing parts may result in unsafe operating conditions.

- 1 Check for damaged parts for the whole platform, and check for incorrect installation or missing parts and components, including:
 - Electrical components, wirings and cables
 - Hydraulic hoses, connectors, valve blocks and hydraulic cylinders
 - Fuel and hydraulic tanks
 - Wear-resistant pads
 - Tires and wheels
 - Engine and related components
 - Limit switch and horn
 - Nuts, bolts and other fasteners

- Platform extension components
- Platform entrance door
- Indicators and alarms
- Safety arm
- Scissors arms pin and fastener
- Platform control handle
- Outrigger cover and foot pad

Maintenance

2 Check the entire machine for:

- Cracks in welds or structural components
 - Whether the platform, fork frame and chassis are deformed or have cracked weld joints.
 - Indentation or damage to the machine
 - Ensure that all structural components and other key components are complete and all relevant fasteners and pins are in the correct position and tightened.
 - Ensure that the guardrail has been installed, and guardrail bolts have been properly installed and tightened.
- ▲ **Note:** If the platform must be raised to check the machine, ensure that the safety arm is in the correct position.

Maintenance

Check for PCU and ECU

This step is performed every 8 hours or every day.

The functions of the test equipment and the red emergency shutdown switch are required for safe operation of the platform. If there is an unsafe working condition or any normal operation failure, the red emergency shutdown switch will disable all functions and shut down the engine. Each function shall be enabled for smooth operation without any pause, jitter or abnormal noise.

- 1 Pull out the red emergency shutdown switches on the ECU and PCU.
 - 2 Turn the key switch to ECU. Start the engine.
 - 3 It is strictly forbidden to press the lift enabling switch and try to turn on each function switch.
- ⊙ Result: Operation of all functions shall be forbidden.
- 4 Press and hold the lift enabling switch to turn on each function switch.
- ⊙ Result: All functions shall be performed for a full cycle. The buzzer shall sound when the platform falls down.

- 5 Push the red emergency shutdown switch button on the ECU to the "Off" position.
 - ⊙ Result: The engine shall be shut down and all functions shall be disabled.
 - 6 Turn the key switch to the operation platform control unit, and pull out the red emergency shutdown switch to the "On" position on the ECU.
-
- 7 Start the engine through the work platform.
 - 8 It is strictly forbidden to press the function enabling switch and try to perform all platform functions.
 - ⊙ Result: Operation of all platform functions shall be forbidden.
 - 9 Press and hold the function enabling switch. Try to perform all platform functions.
 - ⊙ Result: All platform functions shall be performed for a full cycle.
 - 10 Push the red emergency shutdown switch button on the PCU to the "Off" position.
 - ⊙ Result: The engine shall be shut down and all functions shall be disabled.

Check for Tilt Sensors and Buzzers

This step is performed every 8 hours or every day.

- 1 Start up the engine on the ECU.
- 2 Open the left box cover and press one side of the tilt sensor.
- ⊙ Result: The buzzer will sound to give an alarm.

Check for Wires

- 1 This check item shall be conducted every 8 hours or once a day, whichever comes first.
- 2 Keeping wires in a good condition is critical for safe operation and good performance of the platform. Failure to find and replace wires burned, scratched, corroded or bent will result in unsafe operating. Failure to find and replace wires burned, scratched, corroded or bent will result in unsafe operating.

Electric Shock/Explosion Hazards

Thermal contact or live conductors may lead to serious casualty accidents. Do not wear rings, watches or other jewelry.



- 1 Check if the ground wires under the chassis are missing or damaged.
- 2 Check the following areas for wires burned, scratched, corroded, bent or loosened:
 - Interior of ECU box
 - Hydraulic valve group wires
 - Wires in battery area inside the battery tray
 - Interior of PCU box
- 3 Turn the key switch to the PCU and pull out the red emergency shutdown switches on the ECU and PCU.
- 4 Raise the platform to a height which is about 3.2 m away from the ground.

Maintenance

- 5 Lift the safety arm and move it to the middle of scissors axle sleeve, revolve it upward until it is vertical.
- 6 Lower the platform height until the safety arm contacts the axle sleeve completely.

Smashing and Pressing Hazards

When the platform is lowered, make sure the operator's hand is in the correct position of the safety arm.

- 7 Check the chassis and scissors area for wires burned, scratched, corroded, bent or loosened:
- 8 Check the following areas for wires burned, scratched, corroded, bent or loosened:
 - Scissors arm wire
 - ECU to platform
 - Harness connectors connected to the platform
- 9 Check the free coating of insulating oil in the following locations:
 - Harness connectors connecting the ECU with PCU

- All harness connectors connecting level sensors
- 10 Ascend the platform and restore the safety arm to the installation position.
 - 11 Shut down the machine after descending the platform to the folding position.

Maintenance

Check for Batteries

A sound battery condition is critical to good engine performance and safe operation. Improper electrolyte levels or damaged cables or wires may cause damage to engine components and bring hazardous conditions.

- ▲ Note: This check item is not required for machines with sealed or maintenance-free batteries.
- ▲ Warning: danger of electric shock. Contact with an electrical circuit may result in death or serious personal injury. Take off all rings, watches and other accessories.
- ▲ Warning: danger of bodily injury. The battery contains acidic substances. Avoid overflow of acidic substance or contact with it in the battery. Use soda and water to neutralize the overflowing acidic substances in the battery.

- 1 Wear protective clothing and protective glasses.
 - 2 Make sure that the battery cables are firmly wired and not corroded.
 - 3 Make sure the battery locking bracket is stable.
 - 4 Remove the battery vent cover.
 - 5 Check the acid liquid level of the battery. If necessary, replenish distilled water through a filling pipeline at the bottom of the battery. Never add excessive distilled water.
 - 6 Install the vent cover.
- ▲ Note: Adding a terminal protector and an anti-corrosion sealant will help remove corrosion caused to battery terminals and cables.

Check for Tires and Hubs

This check item is conducted every 250 hours or once per quarter, whichever comes first.

Keeping tires and hubs in a good condition is critical for safe operation and good performance. Failure of the tires and hubs may cause the platform to tilt. If such failure is not found and repaired in time, it will also cause damage to platform parts.

- 1 Check treads and sides of tires for scratches, cracks, punctures, and other abnormal wear.
- 2 Check if the hubs are damaged, bent or cracked.

Check for Exhaust Cover of Hydraulic Oil Tank

- 1 This check item shall be conducted every 8 hours or once a day, whichever comes first.
 - 2 An unobstructed hydraulic oil tank cap is essential for good mechanical performance and long service life of the platform. A dirty or clogged exhaust cover may result in poor platform performance. Given harsh working environment, more frequent check is required.
 - 1) Remove the exhaust cover from the hydraulic oil tank cap.
 - 2) Check for ventilation.
- ⊙ Result: Air can pass through the exhaust cover.
- ⊙ Result: If air does not pass through the exhaust cover, clean or replace the exhaust cover. Continue with Step 3.

Note: Air is supposed to pass freely while checking ventilation of the oil tank cap.

- 3) Carefully clean the tank exhaust cover with mild solvent and dry it with low pressure compressed air. Repeat Step 2.
- 4) Install the exhaust cover of the hydraulic oil tank.

Maintenance

Check for Hydraulic Oil Leakage

Check leakage every 8 hours or once a day.

- ▲ Danger of personal injury. Sputtered hydraulic oil may penetrate and burn the skin.
- ☑ Check for residues of hydraulic oil, oil droplets or oil in the following areas.
 - All hydraulic cylinders.
 - Each valve element
 - Each oil pipe and connector
 - Walking motor
 - Reducer
 - Filter
 - Hydraulic oil tank
 - Hydraulic pump
 - Under the chassis
 - Shaft
 - Ground area under the platform.

Maintenance

Check for the Hydraulic Filter

Check or replace it every 500 hours or a quarter.

- ▲ If the work environment is dusty, increase the number of times that perform this step. It is necessary to replace the hydraulic filter to maintain good machine performance and service life. Dirty or blocked filters may cause a decrease in machine performance and continuous use may result in damage to components. An increase in the number of replacement filters is required for the extremely dirty working condition.
- ▲ Danger of personal injury. Be careful with hot oil, and contact with them will lead to severe burn.
- ▲ Perform this step when the engine is turned off.

Replacement of the Return Oil Filter Element of Hydraulic Oil Tank

- 1 This step shall be performed every 500 hours or every year, whichever comes first.
- 2 It is crucial to replace the return oil filter element for the good performance and service life of the machine. Dirty or blocked filters may affect machine performance and continuous use shall result in damage to components. The filter elements should be replaced more frequently under the poor working condition.

Be careful: danger of scald

Watch out for hot oil. Contact with hot oil may cause severe burn.

- a) Open the cover above the oil tank.
 - b) Remove the filter element flange above the oil tank.
 - c) Put the filter element out and replace the new filter element.
 - d) Install flange and cover plate.
-
- e) Note down the replacement time and date on the filter element replacement table using a marker.
 - f) Turn the key switch to the ECU, and pull out the red emergency shutdown button on the ECU and PCU.
 - g) Press the lifting function button.
 - h) Check the filter components for oil leakage.

Replacement of High-Pressure Filter Element

- 1 Place an appropriate container under the filter.
- 2 Remove the nuts at the bottom of the filter cover with a wrench and remove the filter cover.
- 3 Remove the filter element from the filter cover.
- 4 Check the seal of filter cover and replace it if necessary.
- 5 Install the new high-pressure filter element and tighten it.

- 6 Scrub out any oil droplet that is splashed out during installation.
- 7 Check the filter cover and the associated elements to ensure no leakage.

Replacement of the Air Filter of the Hydraulic Oil Tank

Replace it every 500 hours or a quarter, and increase the number of times that perform this step if the work environment is too dusty.

- ▲ Perform this step when the engine is turned off.
- 1 Remove the filter element.
 - 2 Scrub out the inside and tail cover of the tank with a piece of damp cloth.
 - 3 Install a new air filter element.

meter(45-50L), and fill the hydraulic oil if necessary.

Hydraulic oil specifications	
Hydraulic oil type	#46 #32(cold region)

Maintenance

Check Hydraulic Oil Level

Check it every 8 hours or every day.

It is crucial for the machine to keep the hydraulic oil at a suitable oil level. The hydraulic oil at an inappropriate level will damage the hydraulic components. Through routine inspection, the inspector can determine the change of hydraulic oil level, which can indicate the problems of hydraulic system.

- ▲ Note: Perform this procedure when the platform is in a folding state and the engine is closed.
- 1 Park the vehicle on a flat ground. The platform is in a folding state.
- 2 Check the oil pointer on the hydraulic oil tank. When the fork frame is in the folding state, the hydraulic oil level shall be between 1/3 - 2/3 of the liquid level

Maintenance

Test or Replacement of Hydraulic Oil

Replace the hydraulic oil every 500 hours or a quarter.

- ▲ If the hydraulic oil is not replaced during the two-year inspection, check the hydraulic oil quarterly. Replace it when the test is not qualified.
- ▲ Perform this step when the arm lever is in the folding state.
- ▲ When removing the hose assembly or couplers, the O-rings or hose ends on the coupler must be replaced and tightened to the specified torque during installation.
- 1 Close two ball valves located on the hydraulic oil tank (if the ball valve has been equipped).

- ⚠ Hazard of damage to components. The engine cannot be started when the ball valve of the hydraulic oil tank is closed, otherwise the components will be damaged. If the ball valve is closed, remove the key from the key switch and hang a warning sign on the equipment.

- 1 Remove oil drain plug, ring magnet, and oil drain flange from the hydraulic oil tank.
- 2 Drain the hydraulic oil from the hydraulic oil tank completely into a suitable container.
- 3 Disconnect the hose connected to the oil tank and protect the hose coupler to prevent foreign matter from entering.
- 4 Remove the fixed fasteners from hydraulic oil tank.
- 5 Remove the hydraulic oil tank from the equipment.
- 6 Remove the adsorption filter screen from the hydraulic oil tank and clean it with a mild volume.

- 7 Flush the inside of hydraulic oil tank with mild solvent.
- 8 Clean the foreign matters adsorbed by ring magnets.
- 9 Install adsorption filter screen.
- 10 Install oil drain plug. Ring magnet and oil drain flange.
- 11 Install the hydraulic oil tank on the equipment.
- 12 Install hose.
- 13 Fill the hydraulic oil to the hydraulic oil tank until the liquid level is between 1/3 - 2/3 of the sight gauge, and it is forbidden to overflow.
- 14 Scrub off the hydraulic oil that may be sprayed out.
- 15 Open the ball valve on the hydraulic oil tank.

- ⚠ Danger of damage to components, after installing the hydraulic oil tank, make sure to open two ball valves of the hydraulic oil tank and fill the pump with oil.
- 16 Check the functions of all machines through an entire cycle and check for oil leakage.
 - 17 Recheck the liquid level of oil tank and refill oil to 1/3 - 2/3 after an operating cycle.

The drain plug (Fig. 2 & Fig. 3) is located at the bottom of the hydraulic oil tank on the left side of Fig. 1.





Figure2



Figure4



Figure3



Figure5

During maintenance, you can close the valve shown in Figure 4 (as shown in Figure 5)

Fill the hydraulic oil by removing the cover on the upper part of the oil tank and opening the hydraulic oil tank filling cap, then add the hydraulic oil . After that, secure the upper cover with bolts.

Check for the Oil Level in the Reducer (if equipped)

Check this step every 250 hours or a quarter.

The incorrect oil level in the reducer shall lead to the reduction of equipment performance and continuous use will result in damage to components.

- 1 Drive the equipment rotating until a plug is at the highest point, and the other is 90 degrees from this one.
- 2 Remove the plug at 90 degrees and check the oil level.
- ⊙ Result: The oil level shall be the same as the bottom of the side plug hole.
- 3 When required, remove the upper plug and refill 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	0.68 L (each reducer)

Maintenance

Replacement of the Gear Oil of Reducer (if equipped)

It is available in the first 50 hours, and it will be replaced every 1,000 hours or a year.

It is necessary to replace the gear oil of reducer to maintain good equipment performance and service life. Failure to replace the reducer engine oil every year may result in reduced equipment performance, and continuous use may result in damage to components.

- 1 Select the reducer to be maintained, and drive the equipment until one plug is at the lowest point.
- 2 Remove the two plugs and drain the oil (note to be drained) into the proper container.
- 3 Drive the equipment rotating until a plug is at the highest point, and the other is 90 degrees from this one.
- 4 Refill oil from the hole of reducer at the high point until the liquid level is the same as the side hole at the bottom. Install a plug.
- 5 Repeat this procedure for each reducer to refuel.

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

Maintenance

Check for Engine Oil Level



▲ Do not operate on running engines!

No smoking and open fires!

Be careful when contacting with high temperature engine oil. Danger of scalding!

- ▲ When operating on the oil system, pay attention to the surface cleaning. Carefully clean all areas involved. Blow wet parts with compressed air.
- ▲ Please observe the safety regulations for engine oil and relevant local regulations. Dispose of spilled engine oil and filter elements as required. Waste oil cannot penetrate into the ground.
- ▲ Test run shall be carried out after each operation. At the same time, pay attention to the sealing and lubricating oil pressure, and then check the engine oil level.

Check the engine oil level every 8 hours or every day.

Insufficient or excessive engine oil may cause damage to the engine. The engine oil level can only be checked when the engine is placed horizontally and closed. If the engine is hot, close the engine and check the engine oil level 5 minutes later. Check it immediately if the engine is cooled.

- 1 Insert the oil measuring rod and clean it with a piece of clean and fiber-free cloth.
- 2 Insert the oil measuring rod into the bottom.
- 3 Pull out the oil measuring rod and read the value of engine oil level.
- 4 The engine oil level shall always be between MIN and MAX!

Fill up to the maximum liquid level if necessary.

Replacement of Engine Oil and Filter

▲ Do not operate on running engines!

No smoking and open fires!

Be careful when contacting with high temperature engine oil. Danger of scalding!

- ▲ When operating on the oil system, pay attention to the surface cleaning. Carefully clean all areas involved.

Blow wet parts with compressed air.

- ▲ Please observe the safety regulations for engine oil and relevant local regulations. Dispose of spilled engine oil and filter elements as required. Waste oil cannot penetrate into the ground.
- ▲ Test run shall be carried out after each operation. At the same time, pay attention to the sealing and lubrication oil pressure, and then check the engine oil level.

It is available in the first 50 hours, and the engine oil and filter shall be replaced every 250 hours or a quarter. (If the ambient temperature continues to be below -10°C.(14 ° F) or the temperature of engine oil is below 60°C (84 ° F) , or the sulphur content in the diesel fuel is 0.5 - 1%, the oil change period is reduced by a half; if the engine oil does not reach the replacement interval period within a year, the oil shall be replaced at least once a year.)

- ▲ Danger of burn, be careful of high-temperature engine parts and oil, contacting with high temperature engine oil and/or engine parts will cause severe burns.
- ▲ Perform the function after engine warmup to normal operation temperature.

Replace the engine oil -YANMAR engine

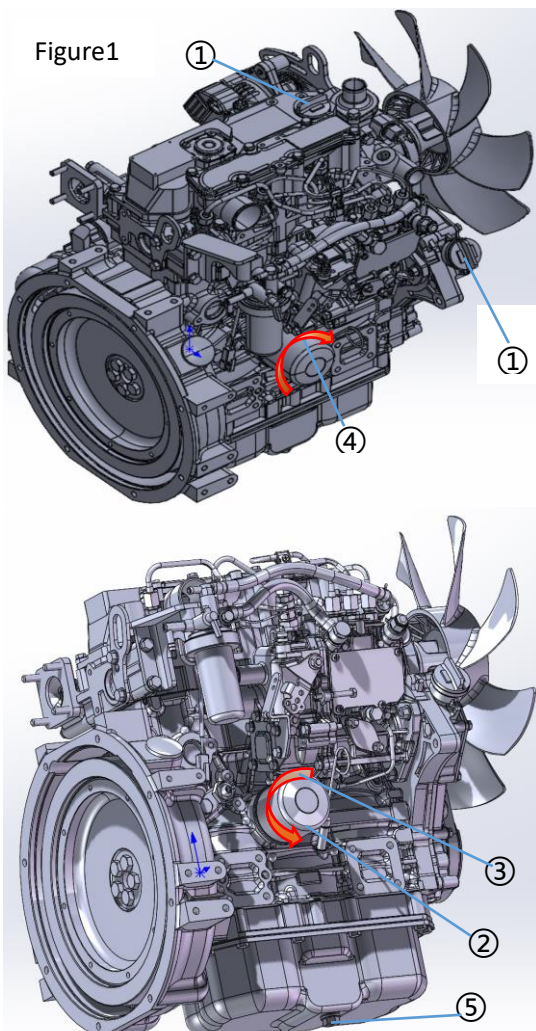
- 1) Mark sure the engine is level.
- 2) Start the engine and bring it up to operating temperature .
- 3) Stop the engine.
- 4) Remove one of the oil filler

caps(①,Figure1) to vent the engine

crankcase and allow the engine oil to drain more easily.

- 5) Position a container under the engine to collect waste oil.
- 6) Remove the oil drain plug(⑤,Figure1) from the engine oil pan. Allow oil to drain.
- 7) After all oil has been drained from the engine ,reinstall the oil drain plug(⑤,Figure1) and tighten to 53.9-63.7Nm
- 8) Dispose of used oil properly.

Figure1



Note: The oil drain plug may be in another location if an optional oil pan is used.

Maintenance

Replace the Engine Oil Filter

The engine oil filter element must also be replaced every time the engine oil is replaced.

- ▲ To refuel the engine oil, refuel slowly after removing the dipstick and both caps. If you refuel rapidly ,the oil intrusion to the intake occurs through the PCV valve cover. It will result in an oil hammer at engine start, which may cause damage to the engine.

- 1 Turn the engine oil filter(②,Figure1) counterclockwise(③,Figure1) using an oil filter wrench.
 - 2 Clean the engine oil filter mounting face.
 - 3 Lightly coat the gasket on the new oil filter with engine oil. Install the new engine oil filter manually by turning it clockwise (④,Figure1) until it contacts the mounting surface. Tighten to 19.6-23.5Nm or one additional turn using the oil filter wrench.
 - 4 Add new engine oil to the engine through either of the oil filler ports as specified in Adding Engine Oil .
- Note:** Never overfill the engine with engine oil . Always keep the oil level between the upper and lower lines on the oil cap/dipstick.
- 5 Warm up the engine by running it for 5 minutes and check for any engine oil leaks.
 - 6 After engine is warm ,shut it off and let it sit for 10 minutes.

- 7 Recheck the engine oil level.
- 8 Add engine oil to engine oil filler port (⑤, Figure 2) as needed until the level is between the upper (②, Figure 2) and lower lines (③, Figure 2) shown on the dipstick (①, Figure 2).
- 9 Reinstall the oil filler cap (④, Figure 2). If any engine oil is spilled, wipe it away with a clean cloth.

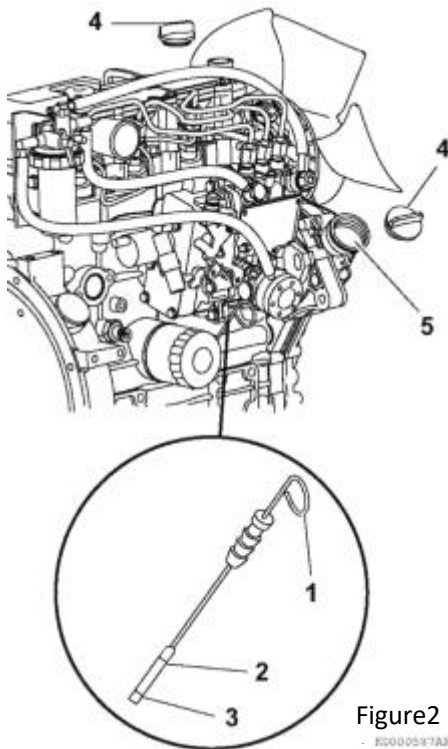


Figure2
K0000587AK

Maintenance

Check for Fuel Leakage

▲ The engine must be shut down!

No smoking and open fires!

Be careful when contacting high temperature fuel!

Please observe the safety regulations for fuel and relevant local regulations. Dispose of spilled fuel and filter elements in accordance with national regulations. The fuel cannot seep into the ground.

Visually check for fuel leakage every 8 hours or every day.

- ▲ There is danger of explosion and fire. The fuel of the engine is combustible. Check the position of the machine. When this step is performed, the machine shall be away from the heater, spark, flame, and open and well-ventilated areas with burning tobacco. A qualified fire extinguisher shall be placed in an easily accessible place.
- ▲ There is danger of explosion and fire. If fuel leaks, prevent any additional person from entering the area or operating the equipment. Repair the leakage immediately.

Replacement of the Fuel Filter Element

▲ The engine must be shut down!

No smoking and open fires!

Be careful when contacting high temperature fuel!

▲ Do not release the injection pipeline or the high-pressure oil pipeline when the engine is running.

▲ Carefully clean all areas involved in cleaning. Blow wet parts with compressed air.

▲ Please observe the safety regulations for fuel and relevant local regulations. Dispose of spilled fuel and filter elements in accordance with national regulations. The fuel cannot seep into the ground.

▲ After completing the operation on the fuel system, exhaust the system, perform the trial operation and check the seal performance.

It is available in the first 50 hours, and it will be replaced every 250 hours, or quarters, but an increase in the number of replacement filters is required for the extremely dirty work environment.

▲ There is danger of explosion and fire. The fuel of the engine is combustible. Check the position of the machine. Execution

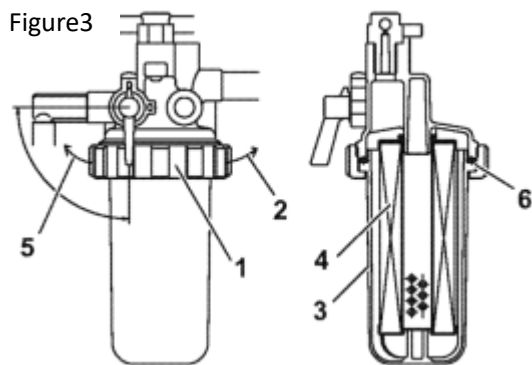
When this step is performed, the machine shall be away from the heater, spark, flame, and open and well-ventilated areas with burning tobacco.

A qualified fire extinguisher shall be placed in an easily accessible place.

▲ Never fill the filter in advance. There is risk of contamination.

- 1 Stop the engine and allow it to cool.
- 2 Close the fuel valve of the water separator.
- 3 Turn the retaining ring(1,Figure3) to the left(5,Figure3).
- 4 Carefully remove the cup(3,Figure3).Pour the fuel into an approved container and dispose of waste properly. Hold the bottom of the cup with a shop towel to prevent the fuel from dripping. Wipe up any spills immediately.
- 5 Remove the fuel filter element(4,Figure3) by pulling it down.
- 6 Replace the fuel filter element with a new one.
- 7 Wash the inside of the cup.
- 8 Check the condition of the O-ring (6,Figure3).Replace if necessary.
- 9 Install the cup to the mounting flange and turn the retaining ring (1,Figure3) to the right(2,Figure3).Hand-tighten only.
- 10 Open the fuel valve of the water separator.
- 11 Prime the fuel system. See Priming the Fuel System .
- 12 Check for fuel leaks.

Figure3



Maintenance

Check for Engine Air Filter

Check the maintenance indicator for the air filter every 8 hours or every day.

- ▲ Perform this step when the engine is turned off.

Check the maintenance indicator of the air filter. When the transparency of the indicator turns red, filter element needs to be maintained and cleaned or replaced.

Maintenance

Cleaning or Replacement of Air Filter

Clean it every 250 hours or a quarter.

- ▲ Do not operate on running engines!
- ▲ Be sure to pay attention to the cleanliness of the external surface when operating on the engine suction system, and close the suction inlet when necessary. The old filter elements are handled in an environmentally friendly manner.

Cleaning of air filter

▲ Flying Object Hazard!

- Always wear eye protection when servicing the engine and when using compressed air or high-pressure water. Dust, flying debris, compressed air, pressurized water or steam may injure your eyes.

- Failure to comply may result in minor or moderate injury.

Note that a typical air cleaner is shown in Figure 4 and Figure 5 for illustrative purposes only.

The engine performance is adversely affected when the air cleaner element is clogged with dust. Be sure to clean the air filter element periodically.

1. Unlatch and remove the air cleaner cover (1, Figure 4).
2. Remove the element (2, Figure 4) (outer element if equipped with two elements).
3. Blow air (3, Figure 4) through the element from the inside out using 0.29-0.49MPa compressed air to remove the particulates. Use the lowest possible air pressure to

remove the dust without damaging the element.

4. If the air cleaner is equipped with a double element, only remove and replace the inner element (1, Figure 5) if the engine lacks power or the dust indicator actuates (if equipped).

Note: The inner element should not be removed when cleaning or replacing the outer element. The inner element is used to prevent dust from entering the engine while servicing the outer element.

5. Replace the element with a new one if the element is damaged, excessively dirty or oily.
6. Clean inside of the air cleaner cover.
7. Reinstall the element into the air cleaner case (4, Figure 4).

Note: If there is a red line (2, Figure 5) in the outer element, reinsert the element until the overlap position of red line and end face of the air cleaner case.

8. Reinstall the air cleaner cover making sure you match the arrow (5, Figure 4) on the cover with the arrow on the case (6, Figure 4).
9. Latch the air cleaner cover to the case.

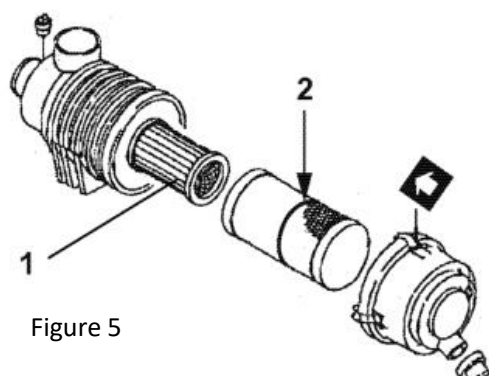
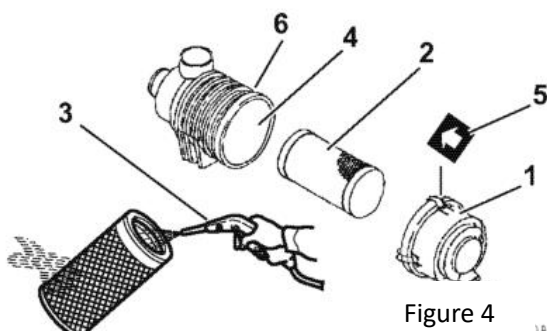


Figure 5

Replacement of the Safety Filter Tube of the Air Filter

- ▲ Never clean the safety filter tube (4).

1. Screw off the hexagon bolt (5) and the safety filter tube (4).
2. Install the new safety filter tube and screw on the hexagon bolt.
3. Install the filter element (3), place the outer cover (2) and fix it with the positioning plate (1).

Check for Coolant Liquid Level

Check the coolant liquid level every 8 hours or every day.

- ▲ The coolant at high temperature has the risk of scald.

The cooling system is under pressure! The cover can only be opened in the cooling state.

Coolant must have a specified concentration of cooling system protectant!

Please observe the safety regulations for coolant and relevant local regulations.

Dispose of the spilled coolant as specified, without leaving it on the ground.

Never run the engine without coolant, even if it's a very short time.

1. Carefully open the cover for the cooling system.
2. The coolant liquid level shall always be between min and max! Fill up to the maximum liquid level if necessary.

Filling or Replacement of Engine Coolant

Replace it every 2,000 hours or two years.

- ▲ The coolant at high temperature has the risk of scald.

The cooling system is under pressure! The cover can only be opened in the cooling state.

Coolant must have a specified concentration of cooling system protectant!

Please observe the safety regulations for coolant and relevant local regulations.

Dispose of the spilled coolant as specified, without leaving it on the ground.

Never run the engine without coolant, even if it's a very short time.

Draining of the Cooling System

- 1 Carefully open the cooler cover.
- 2 Place the receiving container under the coolant interface.
- 3 Drain the coolant.
- 4 Reconnect and tighten the coolant interface.
- 5 Close the cooler cover.

Filling of the Coolant

- 1 Carefully open the cover for the cooling system.
- 2 Fill the coolant to max or the filling limit position.
- 3 Open the possible heater and switch to the maximum gear, to fill the heating circuit and exhaust.
- 4 Close the cooler cover.
- 5 Run the engine to the running temperature.
- 6 Shut down the engine.
- 7 Check the coolant liquid level when the engine is cooled, and fill it to max if necessary.

Maintenance

Check for Engine Belt

Check it every 250 hours or a quarter.

- ▲ Only when the engine is stationary can the belt drive operation be carried out.
- ▲ There is danger of burn. Be cautious of high-temperature engine components. Contact with them may cause serious burn.

Belt Check

- 1 Visually inspect whether all belt drives for damage.
- 2 Replace damaged components.
- 3 Reinstall the protector if necessary.
- 4 When it is a new belt, check whether the position is correct. After running for 15 minutes, check the tension.

Maintenance

Check or Replacement of Scissors Arms Slider

This step shall be performed every 1,000 hours or every year, whichever comes first.

- 1 The quality of the scissors arms wear-resistant block is crucial to the machine's safe operation. Worn wear-resistant sliders may cause damage to the components and unsafe working hazards.
- 2 Check the wear-resistant pads in the folding state of the platform.
 - Measure the height of the wear-resistant pads on the chassis slide rail and platform slide rail.
 - ⊙ Result: The measurement result is less than 8 mm. Replace the wear-resistant slider.
 - Apply lubricant between the chassis slide rail and wear-resistant slider, the platform slide rail and the wear-resistant slider.

Regular Maintenance

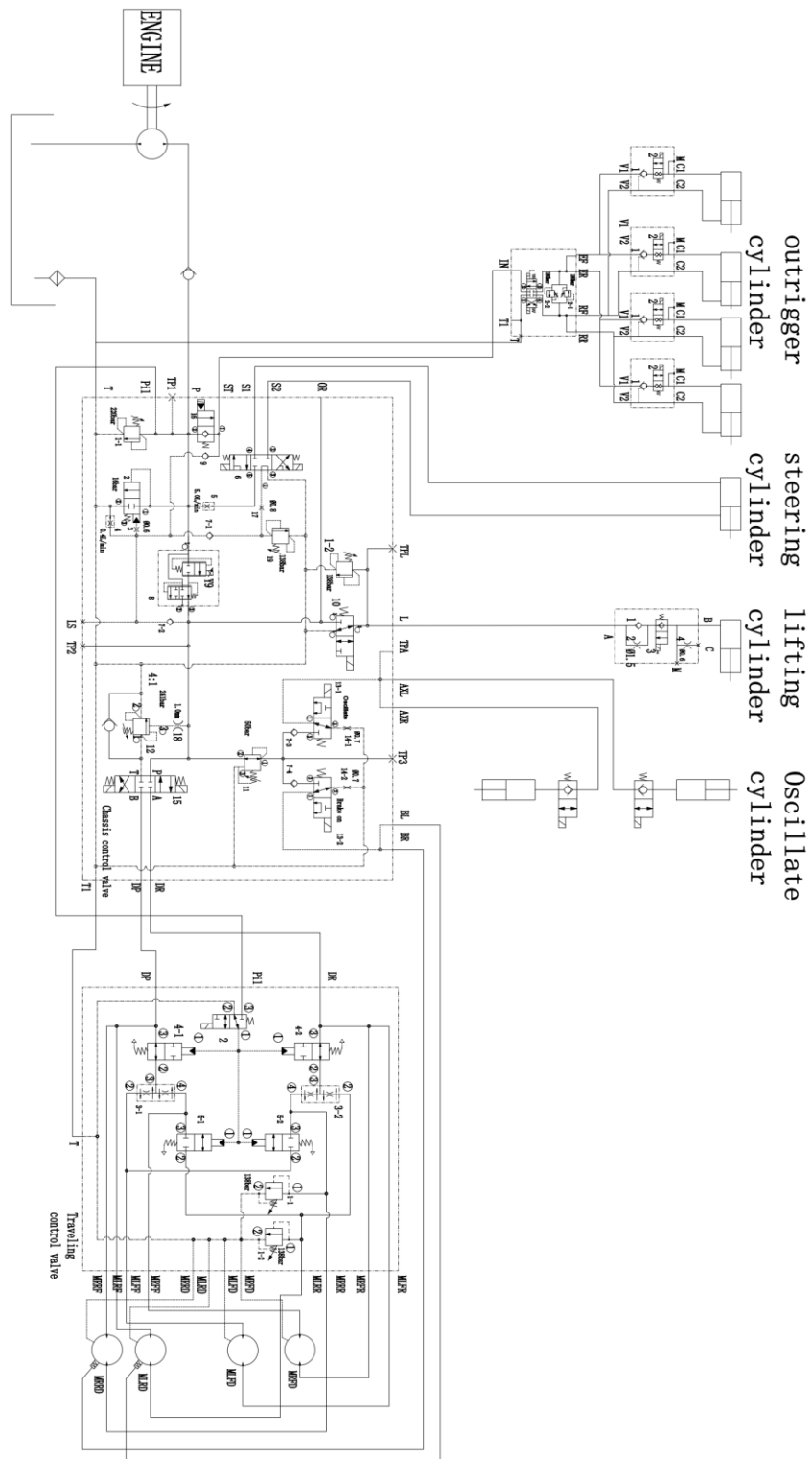
Maintenance items with period of a quarter, a year, and two years must be completed by qualified staff upon training in maintenance of the machine in accordance with procedures in the machine maintenance manual.

For machines that are idle for more than three months, quarterly check must be performed before they can be re-used.

For the life of machine, Always follow your national laws and regulation for disposal.

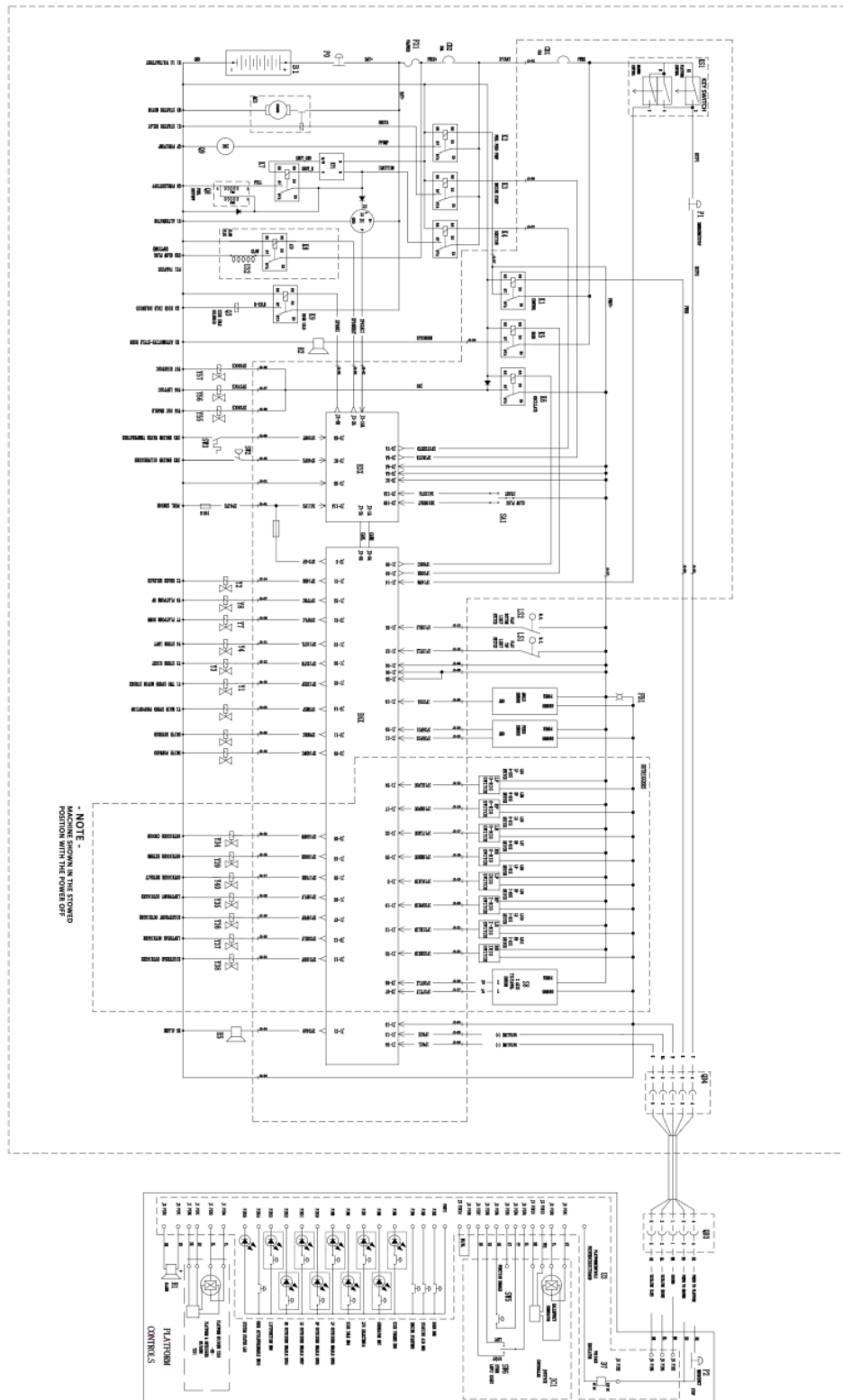
Hydraulic Schematic Diagram

RT0814



Electrical Schematic Diagram

RT0814



Inspection and Repair Log

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