TEREX®
HYDRA PLATFORMS

Operator's Manual

HPT-60
HPT-66

with
Maintenance
Information

Second Edition
Second Printing
Part No. 219602

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These machines comply with ANSI/SIA A92.8

Introduction

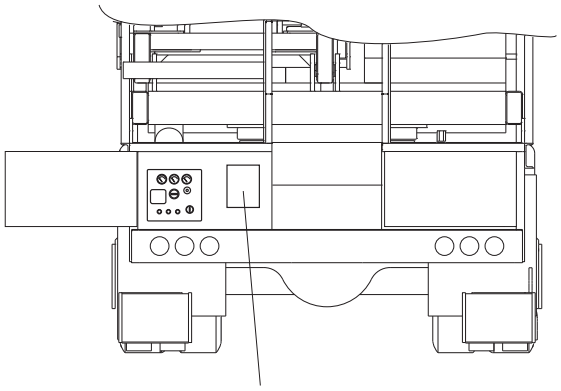
About this manual

Terex 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 Terex 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 Terex.

Product Identification

The machine serial number is located on the serial label.



Intended Use

This machine is intended to be used only to support personnel, along with their tools and materials, for the purpose of inspecting or maintaining a bridge.

Bulletin Distribution and Compliance

Safety of product users is of paramount importance to Terex. Various bulletins are used by Terex to communicate important safety and product information to dealers and machine owners.

The information contained in the bulletins is tied to specific machines using the machine model and serial number.

Distribution of bulletins is based on the most current owner on record along with their associated dealer, so it is important to register your machine and keep your contact information up to date.

To ensure safety of personnel and the reliable continued operation of your machine, be sure to comply with the action indicated in a respective bulletin.

Introduction

Contacting the Manufacturer

At times it may be necessary to contact Terex. When you do, be ready to supply the model number and serial number of your machine, along with your name and contact information. At minimum, Terex should be contacted for:

Accident reporting

Questions regarding product applications and safety

Standards and regulatory compliance information

Current owner updates, such as changes in machine ownership or changes in your contact information. See Transfer of Ownership, below.

Transfer of Machine Ownership

Taking a few minutes to update owner information will ensure that you receive important safety, maintenance and operating information that applies to your machine.

Please register your machine by visiting us on the web at www.genielift.com or by calling us toll free at 1-800-536-1800.

Introduction



Danger

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

Do Not Operate Unless:

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

1 Avoid hazardous situations.

Know and understand the 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, understand and obey the manufacturer's instructions and safety rules—safety and operator's manuals and machine decals.

☑ You read, understand and obey employer's safety rules and worksite regulations.

☑ You read, understand and obey all applicable governmental regulations.

☑ You are properly trained to safely operate the machine.

Introduction

Hazard Classification

Decals on this machine use symbols, color coding and signal words to identify the following:



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

⚠ DANGER Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

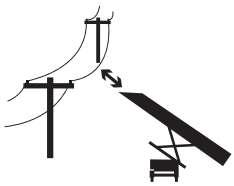
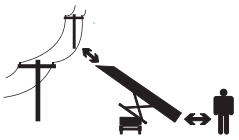
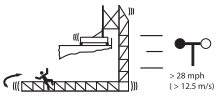
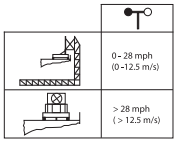
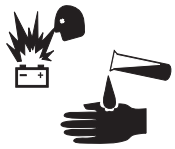
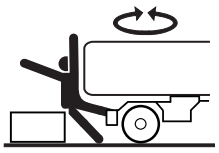
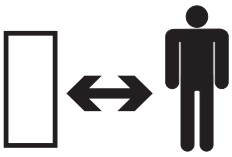
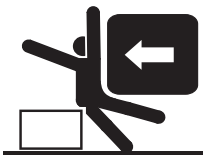
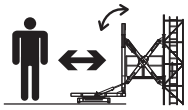
⚠ CAUTION Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE Indicates a property damage message.

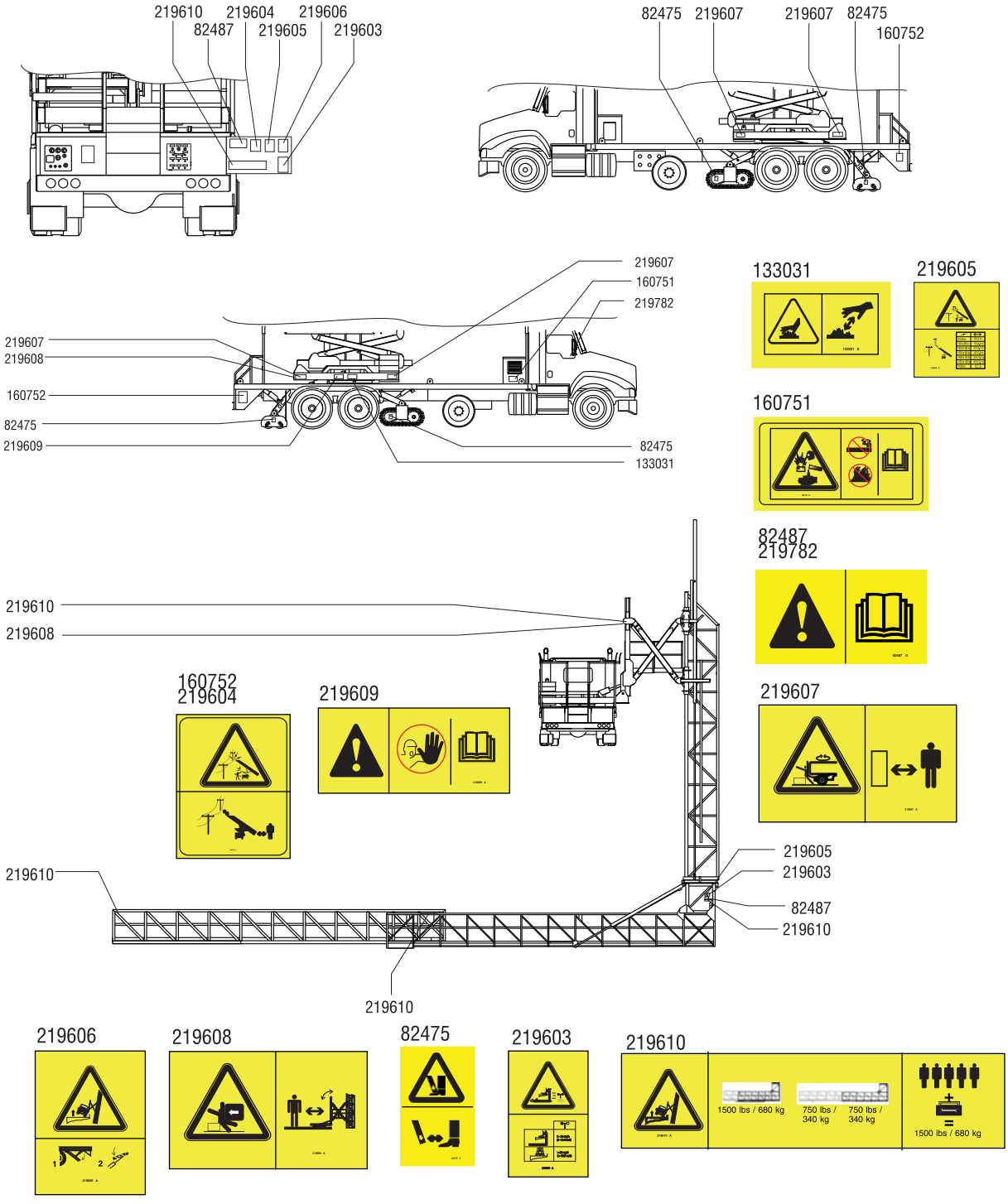
Safety Sign Maintenance

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.

Symbol and Hazard Pictorials Definitions

 Electrocution hazard	 Maintain required clearance	 Maintain required clearance	 Read the operator's manual	 Lanyard attachment point
 Crush hazard	 Keep clear of moving stabilizers	 Tip-over hazard	 Wind speed	 Only trained maintenance personnel should access compartments
 Burn hazard	 Allow surfaces to cool	 Explosion / Burn hazard	 No smoking. No open flame.	
 Crush hazard	 Keep away from rotating parts	 Crush hazard	 Keep away from moving parts	

General Safety



Personal Safety

Personal Fall Protection

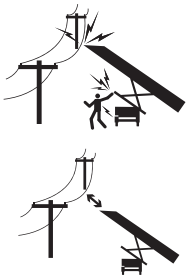
Personal fall protection equipment (PFPE) is not required when operating this machine. If PFPE is required by job site or employer rules, the following shall apply:

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

Work Area Safety

⚠ Electrocution Hazards

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



Obey all local and governmental regulations regarding required clearance from electrical power lines. At a minimum, the required clearance contained in the chart below must be followed.

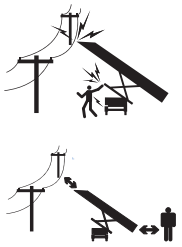
Line Voltage	Required Clearance	
0 to 50KV	10 ft	3.05 m
>50 to 200KV	15 ft	4.60 m
>200 to 350KV	20 ft	6.10 m
>350 to 500KV	25 ft	7.62 m
>500 to 750KV	35 ft	10.67 m
>750 to 1000KV	45 ft	13.72 m
over 1000kV		see below

For power lines over 1000kV, the minimum clearance distance must be established by the utility owner or operator or by a registered professional engineer who is a qualified person with respect to electrical power transmission and distribution.

Do not use the machine as a ground for welding.

Always contact the electrical power line owner. The electrical power shall be disconnected or the power lines moved or insulated before machine operations begin.

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.

⚠ Tip-over Hazards

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

Maximum platform capacity, platform retracted	1500 lbs	680 kg
Maximum platform capacity, platform extended, platform only	750 lbs	340 kg
Maximum platform capacity, platform extended, extension only	750 lbs	340 kg
Maximum occupants		5



1500 lbs / 680 kg



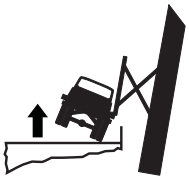
750 lbs / 340 kg

750 lbs / 340 kg

Work Area Safety

The weight of options and accessories will reduce the rated platform capacity and must be factored into the total platform load. See the decals with the options and accessories.

If using accessories, read, understand and obey the decals, instructions and manuals with the accessory.



Do not deploy the platform unless all stabilizers are fully extended and lowered, and the stabilizer wheels are in firm contact with the bridge deck.

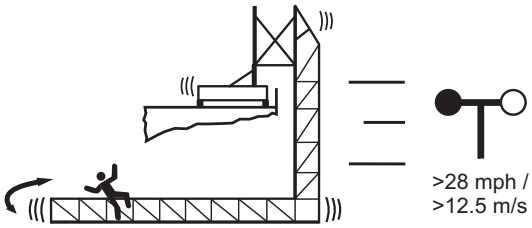


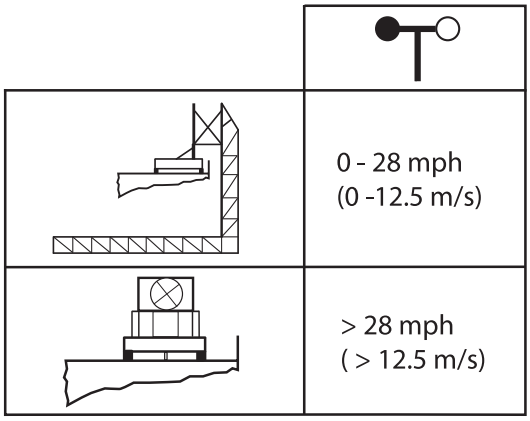
Do not deploy the platform unless the machine is on a firm bridge deck that does not exceed the maximum grade or super elevation slope ratings.

Do not alter or disable the limit switches.

Do not deploy 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 deployed, exit the platform and fully stow the platform until wind speed fall below the allowable limit.

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.





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.

Work Area Safety

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

Do not use the machine as a crane.

Do not push other objects with any part of the machine.

Do not contact adjacent structures with any part of the machine.

Do not tie the platform or any other part of the machine to adjacent structures.

Do not place loads outside the platform perimeter.

Do not modify or alter any component or structure of the machine, including welding, 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 place ladders or unauthorized scaffolds in the platform or against any part of this machine.

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

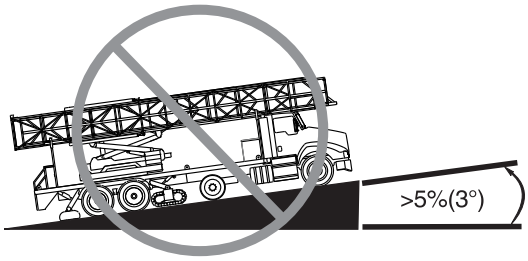
Do not use the machine on a moving or mobile surface.

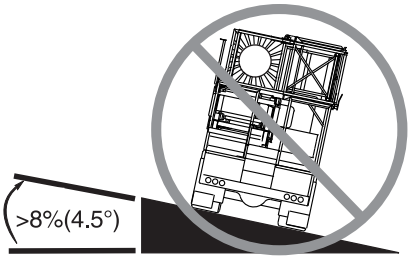
Do not use the platform controls to free a platform that is caught, snagged or otherwise prevented from normal motion by an adjacent structure. All personnel must be removed from the platform before attempting to free the platform using the ground controls.

⚠ Operation on Slopes Hazards

Do not deploy the machine on a slope that exceeds the maximum grade or super elevation slope rating of the machine.

Slope ratings, maximum	
Grade (front to back)	5% (3°)
Super elevation (side to side)	8% (4.5°)





Work Area Safety

⚠ 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. Use approved lanyard attachment point provided.

Always wear approved PFPE when occupying an elevated scaffold.



Do not sit, stand or climb on the platform guard rails. Maintain a firm footing on the platform floor at all times.

Always use the cross-over platform to enter or exit the main platform. Do not climb over the bridge deck wall to access the main platform.

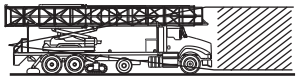
Keep the platform floor clear of debris.

Do not enter or exit the platform unless the platform has been fully deployed and is stationary.

Use three-point contact at all times when entering or exiting the platform or the elevated scaffold.

Do not drive the machine while personnel are anywhere on the machine except in the platform.

⚠ Collision Hazards



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

When visibility is obscured, use the pendant controls to improve visibility. Do not maneuver the machine if visibility is obstructed in the path of travel.

Be aware of platform position before rotating the turntable.

Do not maneuver the platform unless all occupants, bystanders, equipment and vehicles are clear of moving platform components.

When there are personnel in the platform, do not maneuver the platform from the base controls without communicating and coordinating with personnel in the platform. Use the intercom system to communicate and coordinate with platform personnel.

Do not drive the machine unless all personnel are located on the platform or the machine is fully stowed.

Work Area Safety



Check the work area for overhead obstructions or other possible hazards.



Be aware of crushing hazards when grasping the platform guard rail.

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

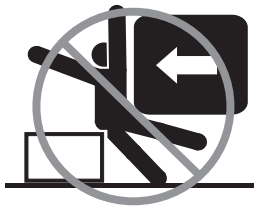
Use common sense and planning when operating the drive system from the ground. Remove the remote pendant controls from the cabinet and step away from the machine before driving. Maintain safe distances between the operator, the machine and fixed objects.

⚠ Crushing Hazards

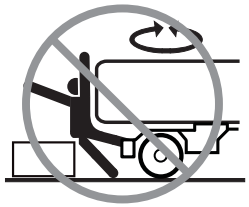
Do not operate the controls when personnel are anywhere on the machine other than in the platform, and then only at their request.

Keep away of moving machine parts.

Do not enter or exit the platform until the machine has stopped moving and all operators have been notified of your intent.



Stay clear of all rotating and moving parts, such as wheels, turntable, scissor stack and platform.



Do not deploy the platform unless the area of deployment 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.

No stunt driving or horseplay while operating a machine.

Work Area Safety

⚠ 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.

Do not allow any personnel to come near moving parts.

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

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.

Be sure to maintain a safe distance with the platform, railing and flooring when retracting the platform.

Do not allow operators to maneuver the machine while operators are entering or exiting the main platform.

⚠ 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.

⚠ 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 Terex service manual.

Be sure all decals are in place and legible.

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

Work Area Safety

⚠ 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.

Maintain the cleanliness of the machine to ensure proper and safe operation.

Be sure that the travel path of the deployed stabilizer wheels and tracks is smooth and free of debris, holes and bumps.

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

⚠ Battery Safety

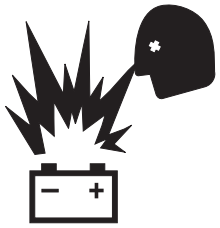
Burn Hazards



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.

Explosion Hazards



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





⚠ Electrocution Hazard

Avoid contact with electrical terminals.

Lockout After Each Use

1 Retract and secure the platform in the stowed position. Retract the stabilizers.

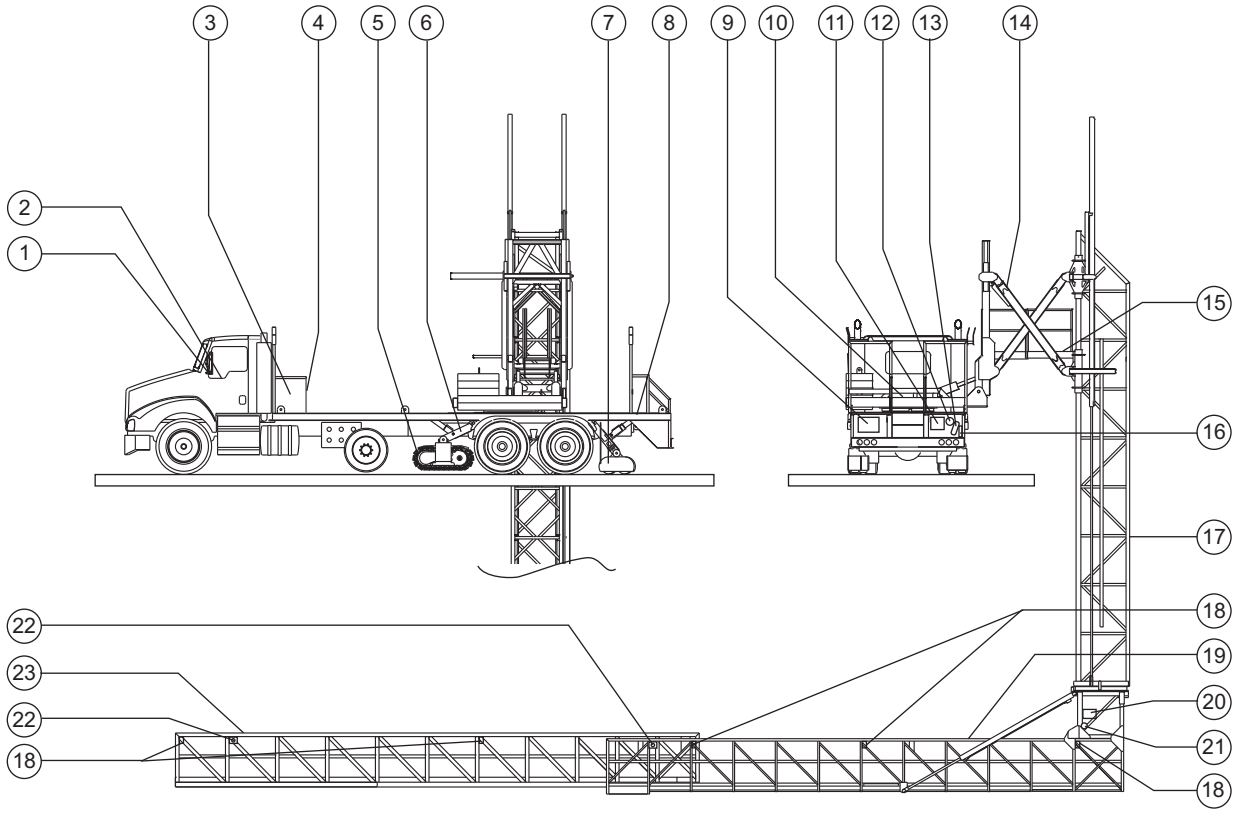
2 Select a safe parking location—firm level surface, clear of obstruction and traffic.

3 Set the parking brake and put the transmission in park.

4 Turn the key switch to the off position, remove the key and lock the controls and engine cabinets to secure from unauthorized use.

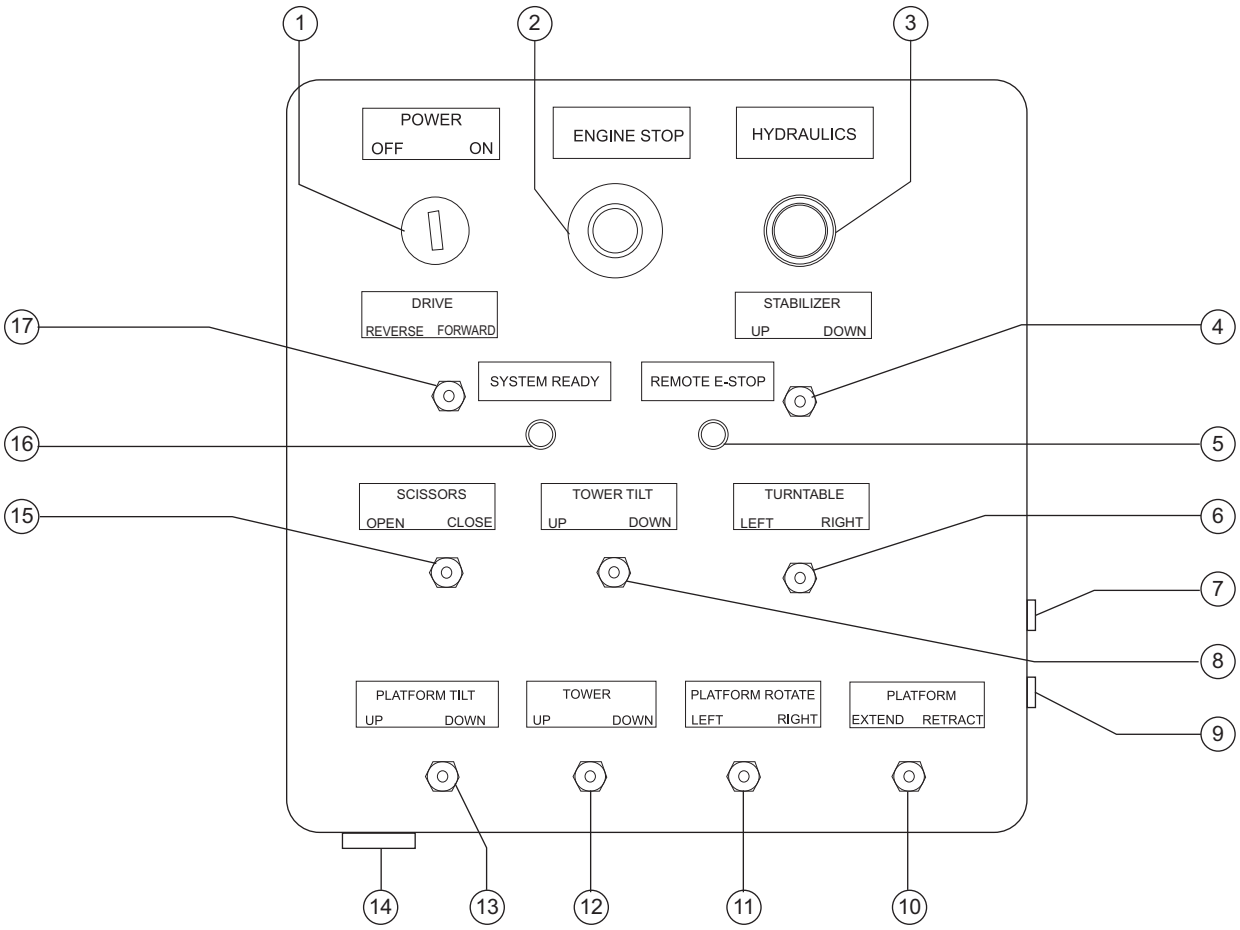
5 Chock the wheels if parked on a slope.

Legend



1 Intercom in cab
2 Drive controls in cab
3 Power pack cabinet
4 Battery switch (on opposite side of machine)
5 Stabilizer with drive tracks
6 Stabilizer lock
7 Stabilizer
8 Bubble levels
9 Engine controls
10 Turntable
11 Base controls
12 Intercom at base controls
13 Pendant controls
14 Scissor stack
15 Cross-over platform
16 Manual storage container
17 Tower
18 Lanyard anchorage point (number of lanyard anchorage points may vary by model)
19 Platform
20 Platform controls
21 Intercom at platform controls
22 Platform red Emergency Stop button
23 Platform extension

Controls



Base Controls

1 Key switch

Turn the key switch to the on position and the base controls will operate. Turn the key switch to the off position and the machine will be off.

2 Red Emergency Stop button

Push in the red Emergency Stop button to the off position to stop all functions and turn the engine off. Twist to pull the red Emergency Stop button out to the on position to operate the machine.

3 Function enable button

Push and hold the function enable button to enable the base control functions to operate.

4 Stabilizer up/down switch

Move the switch to the right and the stabilizers will lower. Move the switch to the left and the stabilizers will raise.

Controls

5 Platform Emergency Stop button indicator light

Light on indicates that one or more of the platform Emergency Stop buttons is pushed in to the off position. To operate the machine, twist to pull out all platform Emergency Stop buttons to the on position.

6 Turntable rotate left/right switch

Move the switch to the left to rotate the turntable to the left. Move the switch to the right to rotate the turntable to the right.

7 Fuse for intercom speaker

8 Tower tilt up/down switch

Move the switch to the left to tilt the tower up. Move the switch to the right to tilt the tower down.

9 Fuse for control panel

10 Platform extend/retract switch

Move the switch to the left to extend the platform. Move the switch to the right to retract the platform.

11 Platform rotate left/right switch

Move the switch to the left to rotate the platform to the left. Move the switch to the right to rotate the platform to the right.

12 Tower up/down switch

Move the switch to the left to move the tower up. Move the switch to the right to move the tower down.

13 Platform tilt up/down switch

Move the switch to the left to tilt the platform up. Move the switch to the right to tilt the platform down.

14 Platform controls override switch

Use the platform controls override switch if the platform controls fail. Push and hold the platform controls override switch and the activate the platform extend/retract switch from the base controls.

15 Scissor stack extend/retract switch

Move the switch to the left and the scissor stack will extend to open. Move the switch to the right and the scissor stack will retract to close.

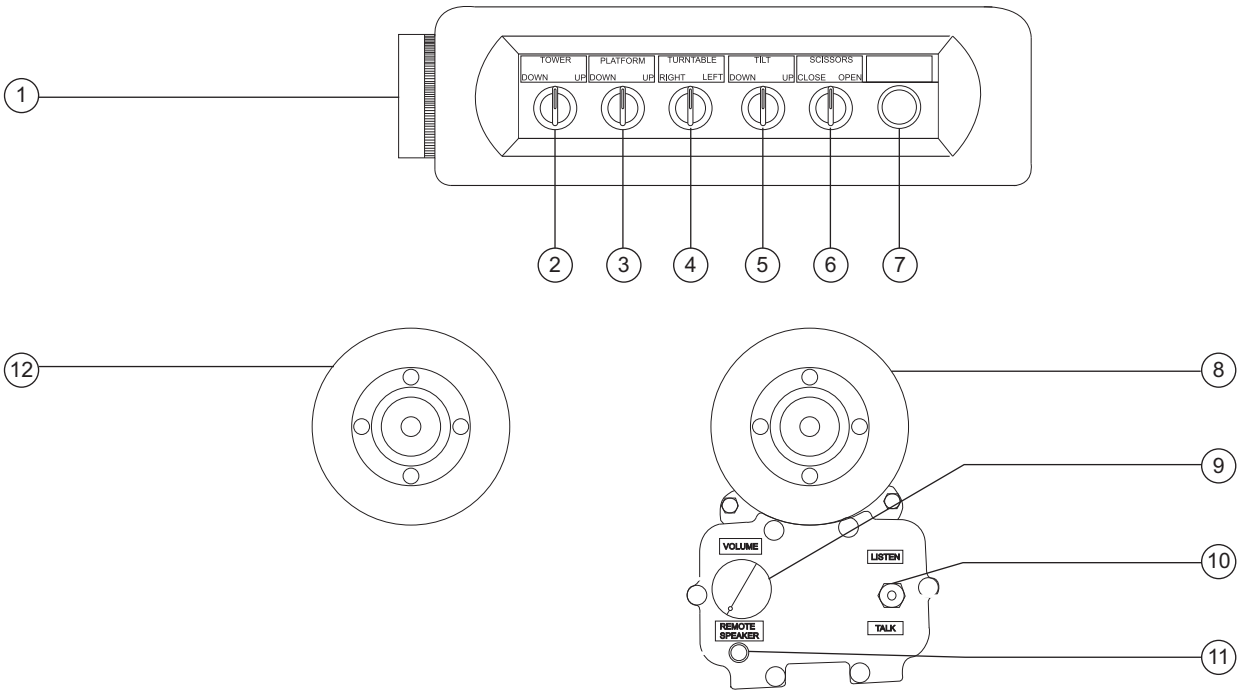
16 System ready indicator light

Light on indicates that all Emergency Stop buttons are pulled out to the on position and the batteries are in working condition.

17 Drive forward/reverse switch

Move the switch to the left and the machine will drive in reverse. Move the switch to the right and the machine will drive forward.

Controls



Pendant controls and intercom system

1 Function enable button

Push and hold the function enable button to enable the pendant control functions to operate.

2 Tower up/down switch

Move the switch to the left to move the tower down. Move the switch to the right to move the tower up.

3 Platform tilt up/down switch

Move the switch to the left to tilt the platform down. Move the switch to the right to tilt the platform up.

4 Turntable rotate left/right switch

Move the switch to the left to rotate the turntable to the right. Move the switch to the right to rotate the turntable to the left.

5 Tower tilt up/down switch

Move the switch to the left to tilt the tower down. Move the switch to the right to tilt the tower up.

6 Scissor stack extend/retract switch

Move the switch to the left and the scissor stack will retract to close. Move the switch to the right and the scissor stack will extend to open.

7 Not used

8 Intercom system at base controls

9 Intercom system volume control switch

Turn the volume switch to the right to turn the intercom system on and to increase the volume at all intercom system stations. Turn the volume switch to the left to decrease the volume at all intercom system stations. Turn the switch all the way to the left to turn the intercom system off.

10 Intercom system listen/talk switch

Move the intercom system listen/talk switch to the talk setting to talk to the cab or platform controls intercom stations. Release the switch to return the intercom system to the listen setting.

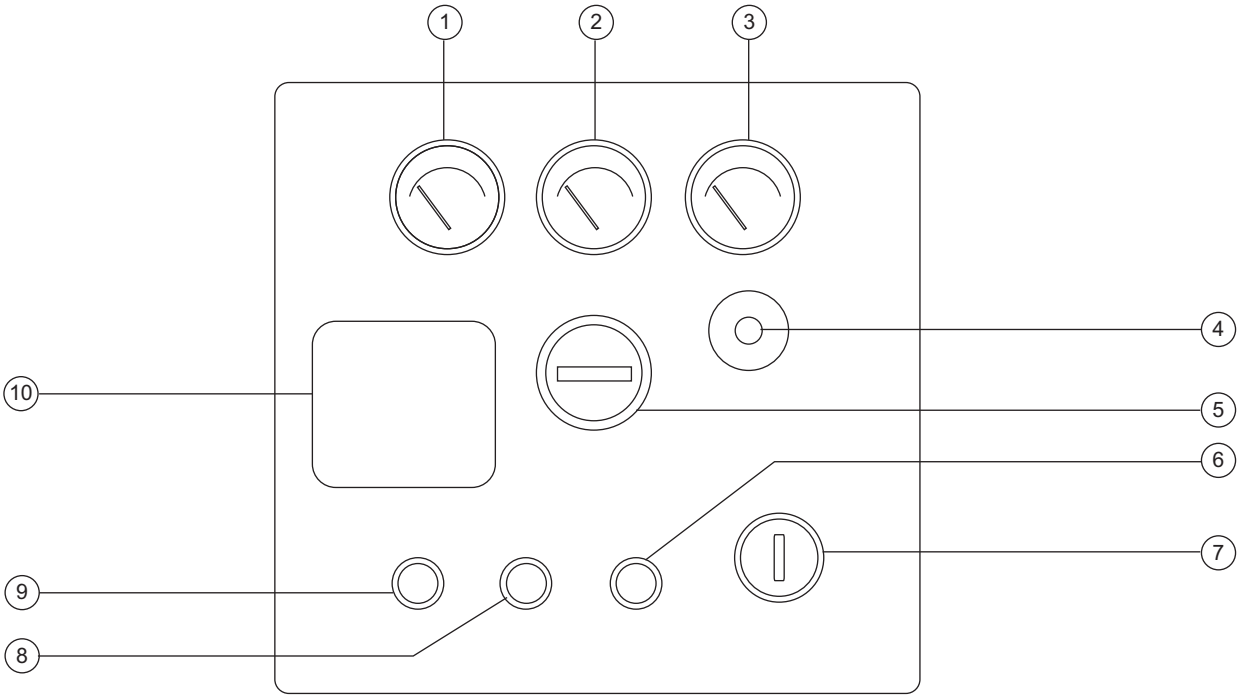
11 Remote speaker on/off switch

Turn the remote speaker switch to the right to increase the squelch and decrease the speaker noise. Turn the switch to the left to decrease the squelch and increase the speaker noise.

12 Intercom speaker

Intercom speakers are located near the platform controls and in the cab of the truck. When the intercom system is on, the cab and platform intercom stations are in the talk setting at all times.

Controls



Engine controls

1 Oil pressure gauge

2 Voltage gauge

3 Engine temperature gauge

4 Tattletail switch

If the oil pressure indicator light is on for a specific period of time, the tattletail switch will pop out and the engine will turn off. Push in the tattletail switch to reset.

5 Hour meter

6 High temperature indicator light

7 Starter key switch

Turn the starter key switch to the run position until the glow plug indicator light is off. Turn the starter key switch to the on position to start the engine.

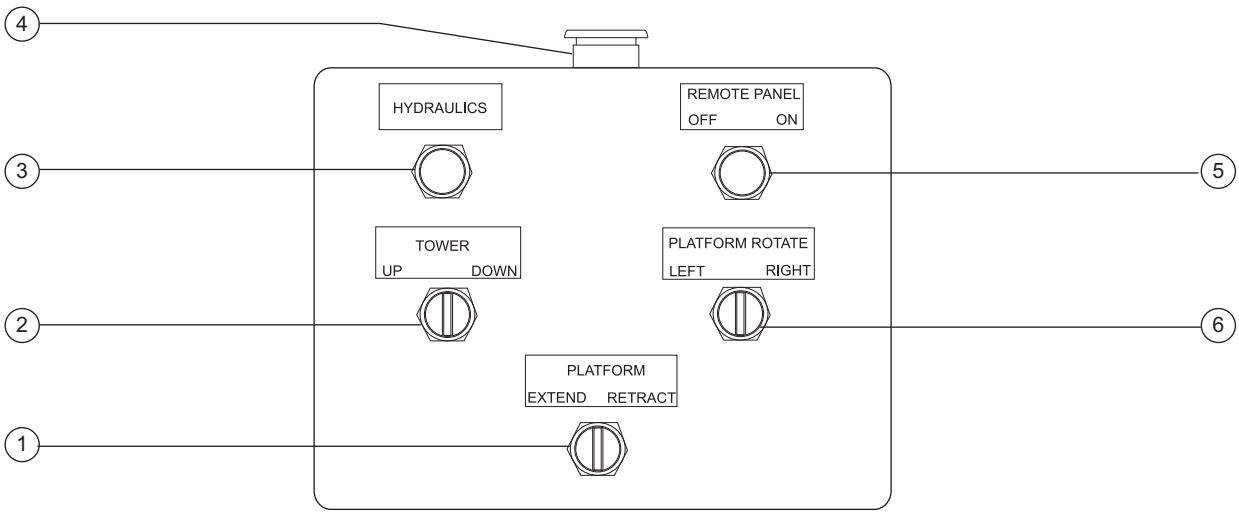
8 Oil pressure indicator light

Light indicates the engine is running but the oil pressure is not high enough yet. Light off indicates that the oil pressure is high enough to release the starter key switch.

9 Glow plug indicator light

10 AC voltage gauge

Controls



Platform controls

1 Platform rotate left/right switch

Turn the switch to the left to rotate the platform to the left. Turn the switch to the right to rotate the platform to the right.

2 Tower up/down switch

Turn the switch to the left to move the tower up. Turn the switch to the right to move the tower down.

3 Function enable button

Push and hold the function enable button to enable the platform controls to operate.

4 Red Emergency Stop button

Push in the red Emergency Stop button to the off position to stop all functions and turn the engine off. Pull out the red Emergency Stop button out to the on position to operate the machine.

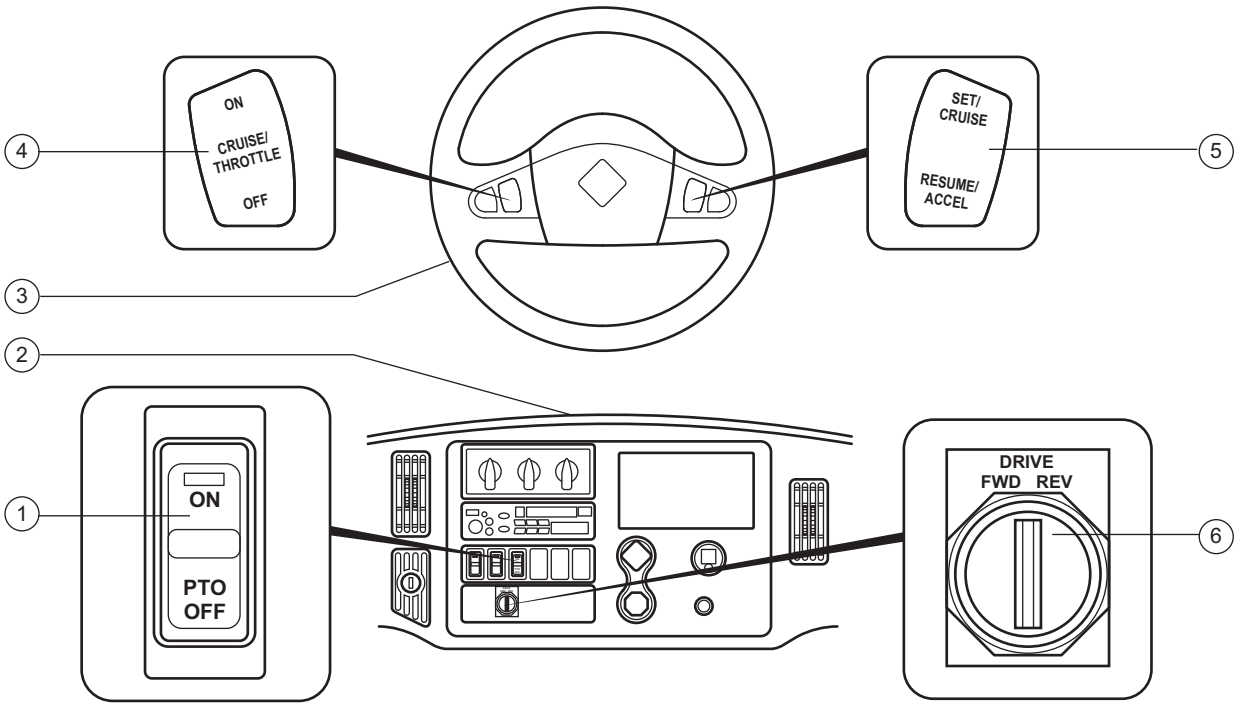
5 Platform controls on/off switch

Turn the switch to the off position and the base controls will operate. Turn the switch to the on position and the platform controls will operate.

6 Platform extend/retract switch

Turn the switch to the left to extend the platform. Turn the switch to the right to retract the platform.

Controls



Truck controls

1 Emergency system switch (PTO ON/OFF switch)

Push the top of the switch to turn the emergency system on. Push the bottom of the switch to turn the emergency system off.

2 Dashboard in truck cab

3 Steering wheel in truck cab

4 Cruise/throttle on/off button

When using the emergency system, push the top of the button to start setting the engine speed.

5 Set/cruise and resume/accel button

When using the emergency system, use this button to raise and hold the engine speed. Push and hold the bottom of the button to raise the engine speed. Push the top of the button to maintain the engine speed.

6 Drive forward/reverse switch

Move the switch to the left to drive forward. Move the switch to the right to drive in reverse.

Inspections



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.

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 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 responsibilities manuals are complete, legible and in the storage containers located in the platform and near the base controls.
- ❑ 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 power unit, reservoir, hoses, fittings, cylinders and manifolds
- ❑ Platform, tower, turntable, scissor stack, components and wear pads
- ❑ Tires and wheels
- ❑ Lights and reflectors
- ❑ Limit switches
- ❑ Stabilizers and wheels
- ❑ Pins, nuts, bolts and other fasteners
- ❑ Intercom system
- ❑ Engine and related components

Check entire machine for:

- ❑ Cracks in welds or structural components
- ❑ Dents or damage to machine
- ❑ Excessive rust, corrosion or oxidation

- ❑ Be sure that all structural and other critical components are present and all associated fasteners and pins are in place and properly tightened.
- ❑ After you complete your inspection, be sure that all compartment covers are in place and latched.

Inspections



Do Not Operate Unless:

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

1 Avoid hazardous situations.

2 Always perform a pre-operation inspection.

3 Always perform function tests prior to use.

Know and understand the function tests before going on to the next section.

4 Inspect the workplace.

5 Only use the machine as it was intended.

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.

1 Position the machine on a firm, level bridge deck surface. Function tests cannot be performed unless machine is on a bridge.

2 Set the parking brake of the truck, and put the transmission in park.

Inspections

Test the Base Controls Emergency Stop Button

3 At the base controls, pull out the red Emergency Stop button to the on position.

4 Insert the key and turn it to the on position.

5 At the engine controls, turn the starter key switch to the run position. When the glow plug indicator light is off, turn the starter key switch to the on position.

⊙ Result: The engine should start. The system ready light should be on at the base controls and the platform red Emergency Stop indicator light should be off.

6 Push in the red Emergency Stop button to the off position. Activate any of the base control functions, and then press and hold the function enable button.

⊙ Result: The engine should stop. The system ready light should turn off and the platform red Emergency Stop indicator light should be on. All base and pendant control functions should not operate.

7 Restart the engine.

Test the Drive Controls

8 At the platform controls, push in the red Emergency Stop button to the off position.

9 Lower the stabilizers. Activate the stabilizer lower function, and then push and hold the function enable button.

10 Lower the stabilizer locks on each stabilizer.

11 Raise the stabilizers until the machine is resting on the locks.

12 Release the parking brake on the truck, and put the transmission in neutral.

13 At the base controls, activate the drive forward function, and then push and hold the function enable button. Activate the drive reverse function, and then push and hold the function enable button.

When driving, an additional operator in the cab must use the brake pedals of the truck to stop the drive motion.

⊙ Result: Drive forward and drive reverse should operate in the expected direction, and at walking speed.

14 In the cab of the truck, activate the drive forward function. Activate the drive reverse function.

⊙ Result: Drive forward and drive reverse should operate in the expected direction, and at walking speed.

15 Set the parking brake on the truck, and put the transmission in park.

Inspections

Test the Machine Functions from the Base Controls

16 Activate all of the functions from the base controls and from the pendant controls. Do not press and hold the function enable button.

⊙ Result: No functions should operate.

17 From the base controls, activate the scissor extend function, and then press and hold the function enable button. Activate the scissor retract function, and then press and hold the function enable button.

⊙ Result: The scissor extend and retract functions should operate.

18 From the pendant controls, activate the scissor extend function, and then press and hold the function enable button. Activate the scissor retract function, and then press and hold the function enable button.

⊙ Result: The scissor extend and retract functions should operate.

19 Activate the tower tilt function, the turntable rotate function, the platform tilt function, the tower up function and the platform rotate function from the base and pendant controls. Press and hold the function enable button.

⊙ Result: No functions should operate.

20 Fully extend the scissor stack.

21 Activate the tower tilt up function and the tower tilt down function from the base and pendant controls.

⊙ Result: The tower tilt up and down functions should operate.

22 Activate the turntable rotate function, the platform tilt function, the tower up function and the platform rotate function from the base and pendant controls.

⊙ Result: None of the functions should operate.

23 Tilt the tower up to about 30 degrees.

24 Activate the turntable rotate function from the base and pendant controls.

⊙ Result: The turntable rotate functions should operate.

25 Rotate the turntable until the turntable has reached the hard stop (90 degrees from the stowed position).

26 Activate the tower tilt functions from the base and pendant controls.

⊙ Result: The tower tilt function should operate.

27 Tilt the tower until it is parallel with the bridge wall. The tower should be vertical.

28 Activate the platform tilt functions from the base and pendant controls.

⊙ Result: The platform tilt function should operate.

29 Lower the platform until it reaches the hard stop and is horizontal.

30 Activate the tower up and down functions from the base and pendant controls. Activate the platform rotate function from the base controls.

⊙ Result: The tower up and down functions and the platform rotate function should operate.

Inspections

Test the Machine Functions from the Platform Controls

31 Activate the platform rotate functions.

⊙ Result: The platform rotate functions should operate.

32 Activate the tower functions.

⊙ Result: The tower functions should operate.

33 Activate the platform extend function.

⊙ Result: The platform should extend slightly and then stop.

34 Rotate the platform to the left approximately 45 degrees.

35 Activate the platform extend and retract functions.

⊙ Result: The platform extend and retract functions should operate.

36 Fully extend the platform.

37 Continue to rotate the platform to the left.

⊙ Result: The platform should rotate to approximately 135 degrees and then stop.

38 Fully retract the platform.

39 Continue to rotate the platform to the left.

⊙ Result: The platform should rotate to 180 degrees and then reach the hard stop.

Test the Intercom System

40 From the base controls intercom, turn the volume switch to the right to turn the intercom on and increase the volume.

41 Adjust the squelch with the remote speaker knob. Turn the knob to the right to increase the squelch. Turn the knob to the left to decrease the squelch.

42 Position another operator in the cab of the truck. Move the listen/talk switch to the talk setting and talk into the intercom.

⊙ Result: The operator in the cab should be able to clearly hear the words.

43 Have the other operator talk into the intercom in the cab.

44 The operator at the base controls should be able to clearly hear the words.

45 Position the other operator in the platform. Move the listen/talk switch to the talk setting and talk into the intercom.

⊙ Result: The operator in the platform should be able to clearly hear the words.

46 Have the other operator talk into the intercom in the platform.

47 The operator at the base controls should be able to clearly hear the words.

48 Use the emergency system if the primary power source fails.

49 Start the truck engine.

50 Push the emergency system switch (PTO) to the on position.

51 On the left side of the steering wheel, push the top of the button to the on position.

52 On the right side of the steering wheel, push and hold the bottom of the button to increase the engine speed. When the engine speed is at 1100 rpm, push the top of the button to maintain the engine speed.

53 At the base controls, lower the stabilizers.

⊙ The stabilizer should lower.

54 Raise the stabilizers.

55 Push the emergency system switch (PTO) to the off position.

Inspections



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

Check the area for operating and conditions and limitations including potential hazards, such as, but not limited to:

- ❑ Traffic control. Instructions and training received regarding signing requirements and placement of appropriate warning signs and/or the employment of signal/flag personnel on the support structure and shall be followed and in accordance with instructions provided by the owner of the support structure, or federal, state or local ordinances addressing traffic control provisions covering lane closure procedures.
- ❑ Time limits of operation.
- ❑ Traffic both above and beneath the support structure, including trains, water craft and vehicles.
- ❑ High voltage lines both above the support structure and beneath.
- ❑ Gas transmission lines both above the support structure and beneath.
- ❑ Drop-offs, holes or bumps in the support structure surface, including those concealed by water, ice or mud.
- ❑ Obstructions on the support structure surface, such as light poles.
- ❑ Debris.
- ❑ Hazardous location
- ❑ Wind and weather conditions.
- ❑ Presence of unauthorized persons.
- ❑ Overhead obstruction
- ❑ Inadequate surface and support to withstand all loads imposed by the mobile unit in all operating configurations, including loads imposed by the stabilizers.
- ❑ Grade and super elevation of the support structure surface.
- ❑ Other possible unsafe conditions.

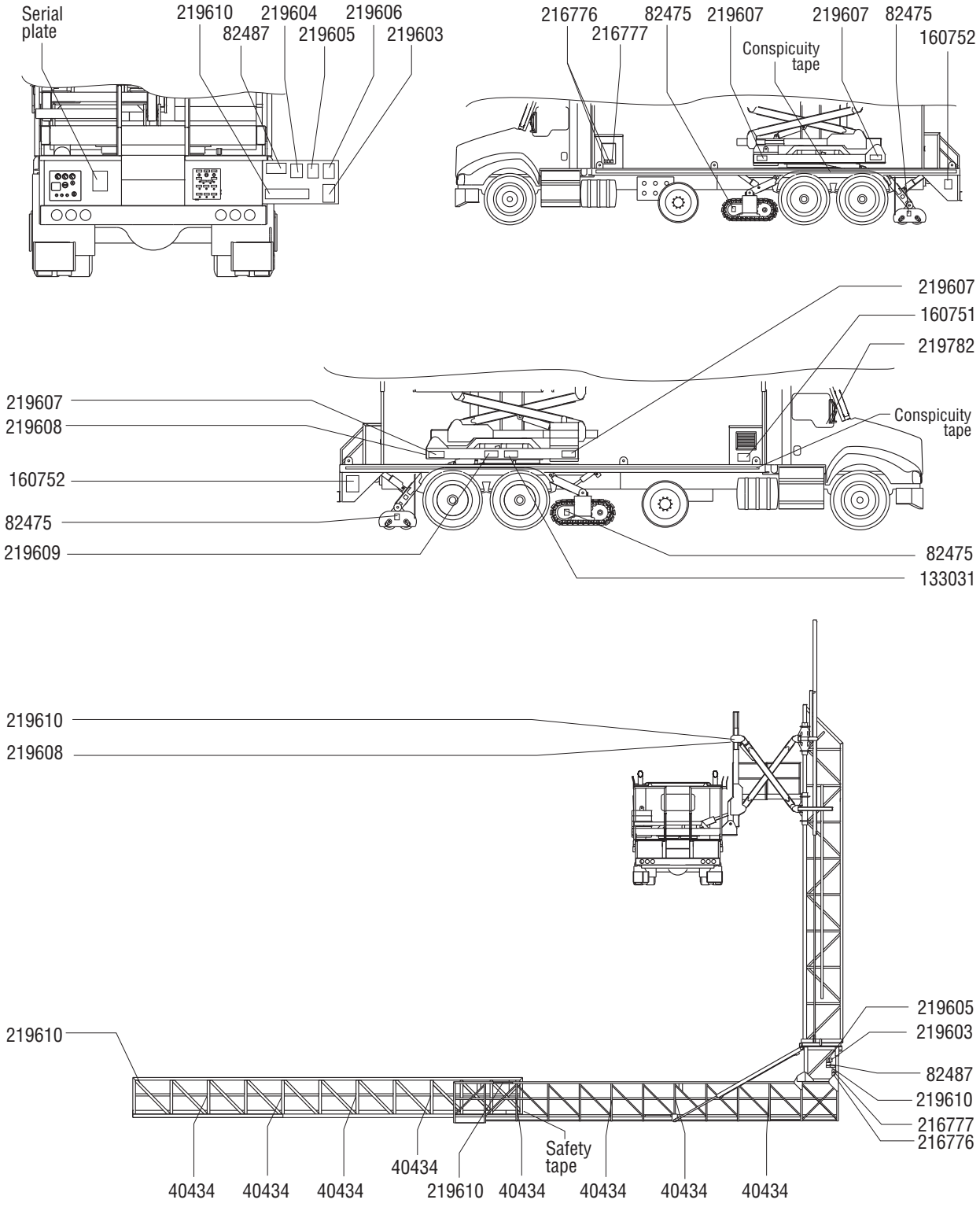
Inspections

Inspection for Decals with Symbols

Use the pictures on the next page to verify that all decals are legible and in place. Use the pictures on the next page to verify that all decals are legible and in place.

Part No.	Decal Description	Qty
40434	Label – Lanyard Anchorage Point	8-10
82475	Label – Crushing Hazard, Outriggers	4
82481	Label – Battery/Charger Safety	1
82487	Label – Read the Manual	3
133031	Label – Burn Hazard	1
160751	Label – Battery/Charger Safety	1
160752	Label – Electrocution Hazard	2
216776	Label – 115V Power	2
216777	Label – 220V Power	3
219603	Label – Wind speed	2
219604	Label – Electrocution Hazard	2
219605	Label – Electrocution Hazard, MSAD	2
219606	Label – Crush Hazard, Stabilizers	2
219607	Label – Crush Hazard, Rotating Parts	4
219608	Label – Crush Hazard, Moving Parts	2
219609	Label – Compartment Access	1
219610	Label – Maximum Capacity	4

Inspections



Operating Instructions



Do Not Operate Unless:

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

1 Avoid hazardous situations.

2 Always perform a pre-operation inspection.

3 Always perform function tests prior to use.

4 Inspect the workplace.

5 Only use the machine as it was intended.

Fundamentals

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

Using the machine for anything other than supporting personnel, along with their tools and materials, can be 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 and and responsibilities manuals. That means every new operator should perform a pre-operation inspection, function tests, and a workplace inspection before using the machine.

A minimum crew shall consist of two qualified operators. When the platform is deployed in an operating position, at least one qualified operator, knowledgeable in procedures for retrieval of personnel and/or the platform, shall be on the support structure at all times. A means of communication with the operator or operators in the platform shall be maintained at all times.

Operating Instructions

Setup for Operation

1 Position the machine above the desired work area.

2 Set the parking brake on the truck, and put the transmission in park.

3 Cordon off the work area in accordance withe local, state and federal regulations.

4 If parked on a slope, chock the wheels.

Starting the Engine

1 Use the battery select switch to select which battery is used to start the engine.

2 Rotate the switch to position 1 to use the generator battery to start the engine. Rotate the switch to position 2 to use the truck engine battery to start the engine. Rotate the switch to position ALL to use both batteries during cold start situations. Rotate the switch to the OFF position for servicing and maintenance of the electrical system, engine or generator.

3 Be sure all red Emergency Stop buttons are pulled out to the on position.

4 At the base controls, turn the key switch to the on position.

5 At the engine controls, turn the starter key switch to the run position and hold it until the glow plug light is off.

6 Turn the starter key switch to the on position, and hold it until the oil pressure indicator light is off.

7 Allow the engine to warm up for at least 2 minutes before using the pump.

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.

If the oil pressure light does not turn off, the tattletale switch will pop and the engine will stop. Push in the tattletale switch to reset. Tag and remove the machine from service if the oil pressure light does not turn off.

Emergency System

Use the emergency system if the primary power source fails.

Start the truck engine.

Push the emergency system switch (PTO) to the on position.

On the left side of the steering wheel, push the top of the button to the on position.

On the right side of the steering wheel, push and hold the bottom of the button to increase the engine speed. When the engine speed is at 1100 rpm, push the top of the button to maintain the engine speed.

Use the base control panel to operate the machine functions.

Operating Instructions

Emergency Stop Buttons

1 Push in any red Emergency Stop button to the off position to stop all functions and turn the engine off.

2 Repair any function that continues to operate when any of the red Emergency Stop buttons are pushed in to the off position.

Operation from Base Controls

1 Check the bubble levels to make sure that the machine is on a slope that does not exceed the maximum grade or super elevation slope ratings.

2 Be sure all red Emergency Stop buttons are pulled out to the on position.

3 At the base controls, turn the key switch to the on position.

4 At the engine controls, start the engine.

5 At the base controls, activate the stabilizer down function, and press and hold the function enable button. Lower the stabilizers.

6 Lower the stabilizer locks.

7 Raise the stabilizers until the machine is resting on the locks.

To Deploy the Platform from the Base Controls

1 From the base controls, activate the scissor extend function, and press and hold the function enable button.

2 Extend the scissor stack.

Use the pendant controls to gain better visibility of tower sections and machine movement. Always keep a safe distance from oncoming traffic during operation.

3 Tilt the tower up to 30 degrees.

4 Rotate the turntable to the left 90 degrees toward the bridge wall. Rotate the turntable until it reaches the hard stop.

5 When the turntable is rotated over the bridge wall, continue to tilt the tower up to the vertical position.

6 Lower the tower to the desired position.

7 When the tower is lowered, lower the platform until it is horizontal. The platform should reach the hard stop.

8 Adjust the scissor stack and the tower height until the platform is in the desired position.

Operating Instructions

Intercom System

The intercom system allows the operators in the platform, at the base controls and in the cab of the truck to communicate with each other. The intercom in the cab and the intercom in the platform are in the talk setting at all times. The intercom at the base controls is in the listen mode.

The volume switch at the base controls turns all of the intercoms on, and also adjusts the volume for all of the intercoms.

The remote speaker knob is used to adjust the squelch. Turn the knob to the right to increase the squelch and decrease the speaker noise. Turn the knob to the left to decrease the squelch and increase the speaker noise.

At the base controls, move the listen/talk switch to the talk setting to talk to the other intercoms. Release the switch to return the intercom to the listen setting.

To position the platform with occupants in the platform

1 Be sure that the intercom system is turned on at both the base controls and at the platform controls. Always maintain communication with the operator in the platform.

2 Be sure the platform controls on/off switch is in the off position.

3 Be sure all occupants are in a safe area and are away from possible hazards.

4 Move the appropriate switches according to the markings on the base controls or on the pendant controls. Push and hold the function enable button.

To drive

The drive system can only move in a straight path. To steer, the platform must be stowed and the stabilizers must be raised. Position the vehicle so that the drive system can move in a straight path.

When driving, an additional operator in the cab must use the brake pedals of the truck to stop the drive motion.

1 Be sure that the intercom system is turned on at both the base controls and at the platform controls. Always maintain communication with the platform operator during travel.

2 Be sure the platform controls on/off switch is in the off position.

3 Be sure all occupants are in a safe area and are away from possible hazards.

4 Release the parking brake on the truck. Put the transmission in neutral.

5 To drive from the base controls, activate the drive function in the desired direction, and push and hold the function enable button.

6 To drive from the cab of the truck, activate the drive function in the desired direction.

7 When the machine is stopped, set the parking brake on the truck and put the transmission in park.

During travel, be sure the stabilizers are in contact with the bridge deck. Be sure that all travel is accomplished within the traffic control and signaling device regulations as specified by the agency or governing body having jurisdiction over the bridge.

Operating Instructions

Accessing the Platform

1 Only enter or exit the platform when it is fully deployed and is no longer in motion.

2 Maintain a three-point contact at all times when entering or exiting the platform or the machine.

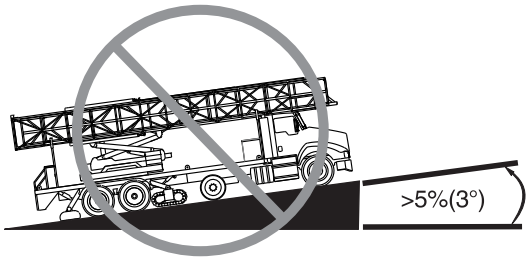
3 Use the provided steps and hand rails to access the cross-over platform.

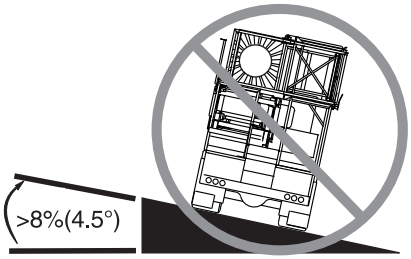
4 Use the cross-over platform and the ladder in the tower to access the platform.

⚠ Driving on a slope

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

Slope ratings, maximum	
Grade (front to back)	5% (3°)
Super elevation (side to side)	8% (4.5°)





Note: Slope rating is subject to ground conditions and adequate traction.

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 1 m long
- tape measure

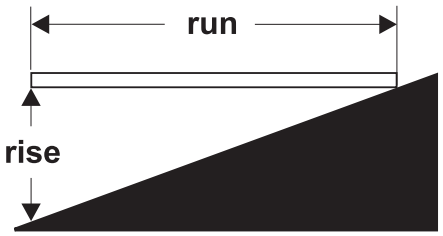
Lay the piece of wood on the slope.

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 = 3.6 m

Run = 3.6 m

Rise = 0.3 m

0.3 m ÷ 3.6 m = 0.083 x 100 = 8.3% grade

If the slope exceeds the maximum uphill, downhill or side slope rating, then the machine must be winched or transported up or down the slope. See Transport and Lifting section.

Operating Instructions

Operation from Platform Controls

1 Be sure all red Emergency Stop buttons are pulled out to the on position.

2 Turn the platform controls on/off switch to the on position.

3 Move the appropriate switches according to the markings on the control panel. Push and hold the function enable button.

4 To extend the platform, rotate the platform more than 45 degrees from parallel with the bridge wall.

To stow the platform

1 Be sure there are no operators in the platform.

2 Fully retract the platform.

3 Rotate the platform toward the front of the truck until it reaches the hard stop.

4 Extend the scissor stack.

5 Raise the tower.

6 Raise the platform until it is vertical.

7 Tilt the platform back down 30 degrees.

8 Rotate the turntable to the stowed position until it reaches the hard stop.

9 Fully lower the platform until it reaches the hard stop.

10 Retract the scissors stack.

11 Set the vehicle parking brake.

12 Lower the stabilizers so that the stabilizer locks can be raised.

13 Raise the stabilizers locks.

14 Raise the stabilizers.

15 Turn the key switch to the off position.

16 Push in the red Emergency Stop button at the base controls.

Maintenance



Observe and Obey:

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

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

Maintenance Symbols Legend

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



Indicates that tools will be required to perform this procedure.



Indicates that new parts will be required to perform this procedure.



Indicates that a cold engine is required before performing this procedure.

Check the Engine Oil Level



Maintaining the proper engine oil level is essential to good engine performance and service life. Operating the machine with an improper oil level can damage engine components.

Note: Check the oil level with the engine off.

1 Check the oil level dipstick. Add oil as needed.

Hatz 2-4L41 Engine	
Oil type	10W-30 or 10W-40
Oil type - cold conditions	5W-30 or 5W-40

Maintenance

Check the Tire Pressure



⚠ Tip-over hazard. An over-inflated tire can explode which may compromise machine stability and cause the machine to tip over.

⚠ Tip-over hazard. The use of temporary flat tire repair products may lead to tire failure which could compromise machine stability and cause the machine to tip over.

⚠ Bodily injury hazard. An over-inflated tire can explode and may cause death or serious injury.

1 Check each tire with an air pressure gauge. Add air as needed.

Tire specifications		ST275/80 R22.5 Load Range H
Tire pressure	120 psi	8.3 bar

Check the Hydraulic Oil Level



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

1 Be sure that the platform and the outriggers are stowed and the hydraulic oil is cool.

2 Visually inspect the sight gauge located on the side of the hydraulic oil tank.

⊙ Result: The hydraulic oil level should be 2/3 full in the sight gauge.

3 Add oil as needed. Do not overfill.

Hydraulic oil specifications	
Hydraulic oil type	Chevron Rando HD equivalent

Maintenance

Check the Batteries



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

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

⚠ Bodily injury hazard. Batteries contain acid. Avoid spilling or contacting battery acid. Neutralize battery acid spills with baking soda and water.

1 Put on protective clothing and eye wear.

2 Be sure that the battery cable connections are tight and free of corrosion.

3 Be sure that the battery hold-down brackets are in place and secure.

Note: Adding terminal protectors and a corrosion preventative sealant will help eliminate the corrosion on the battery terminals and cables.

Scheduled Maintenance

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

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

Specifications

Hydra Platform HPT-60		
Truck transport dimensions		
Length	39 ft	11.9 m
Width	8.5 ft	2.6 m
Height	13 ft	3.9 m
Steel platform width		
Outside dimension	42 in	1.1 m
Inside dimension	37 in	94 cm
Aluminum platform width		
Outside dimension	35 in	90 cm
Inside dimension	31 in	78 cm
Height from platform to road	25.5 in	65 cm
Height from crossover to road	92 in	2.3 m
Width, tilt table to tower	69 in	1.8 m
Width, outrigger to tower	88 in	2.3 m
Tower width	47 in	1.2 m
Maximum platform swing clearance	213 in	5.4 m
Maximum drop depth	261 in	6.6 m
Platform length, retracted	38 ft 9 in	1.19 m
Platform length, extended	60 ft	18.2 m
Slope rating		
Longitudinal (front to back)		5% (3º)
Super elevation (side to side)		8% (4.5º)
Maximum wind speed	28 mph	12.5 m/s
Operating temperature range	-20ºF to 120ºF	-29ºC to 49ºC
Maximum platform capacity	1500 lbs	680 kg
Maximum platform capacity, extension	750 lbs	340 kg
Maximum number of occupants		5
Tower adjustment		±5º
Platform rotation		180º
Power source		Hatz 2-4L41 Diesel
Backup power source		Truck PTO
Maximum hydraulic pressure	2800 psi	193 bar
System voltage		12V DC
AC Power, if equipped		110V/220V
Air hose, if equipped		220 psi
Water hose, if equipped		5000 psi
GVWR		see serial label

Hydra Platform HPT-66		
Truck transport dimensions		
Length	39 ft	11.9 m
Width	8.5 ft	2.6 m
Height	13 ft	3.9 m
Steel platform width		
Outside dimension	42 in	1.1 m
Inside dimension	37 in	94 cm
Aluminum platform width		
Outside dimension	35 in	90 cm
Inside dimension	31 in	78 cm
Height from platform to road	25.5 in	65 cm
Height from crossover to road	92 in	2.3 m
Width, tilt table to tower	69 in	1.8 m
Width, outrigger to tower	88 in	2.3 m
Tower width	47 in	1.2 m
Maximum platform swing clearance	213 in	5.4 m
Maximum drop depth	261 in	6.6 m
Platform length, retracted	39 ft 9 in	11.8 m
Platform length, extended	66 ft	20.1 m
Slope rating		
Longitudinal (front to back)		5% (3º)
Super elevation (side to side)		8% (4.5º)
Maximum wind speed	28 mph	12.5 m/s
Operating temperature range	-20ºF to 120ºF	-29ºC to 49ºC
Maximum platform capacity	1500 lbs	680 kg
Maximum platform capacity, extension	750 lbs	340 kg
Maximum number of occupants		5
Tower adjustment		±5º
Platform rotation		180º
Power source		Hatz 2-4L41 Diesel
Backup power source		Truck PTO
Maximum hydraulic pressure	2800 psi	193 bar
System voltage		12V DC
AC Power, if equipped		110V/220V
Air hose, if equipped		220 psi
Water hose, if equipped		5000 psi
GVWR		see serial label

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