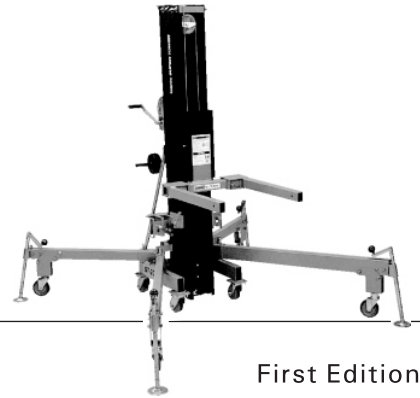


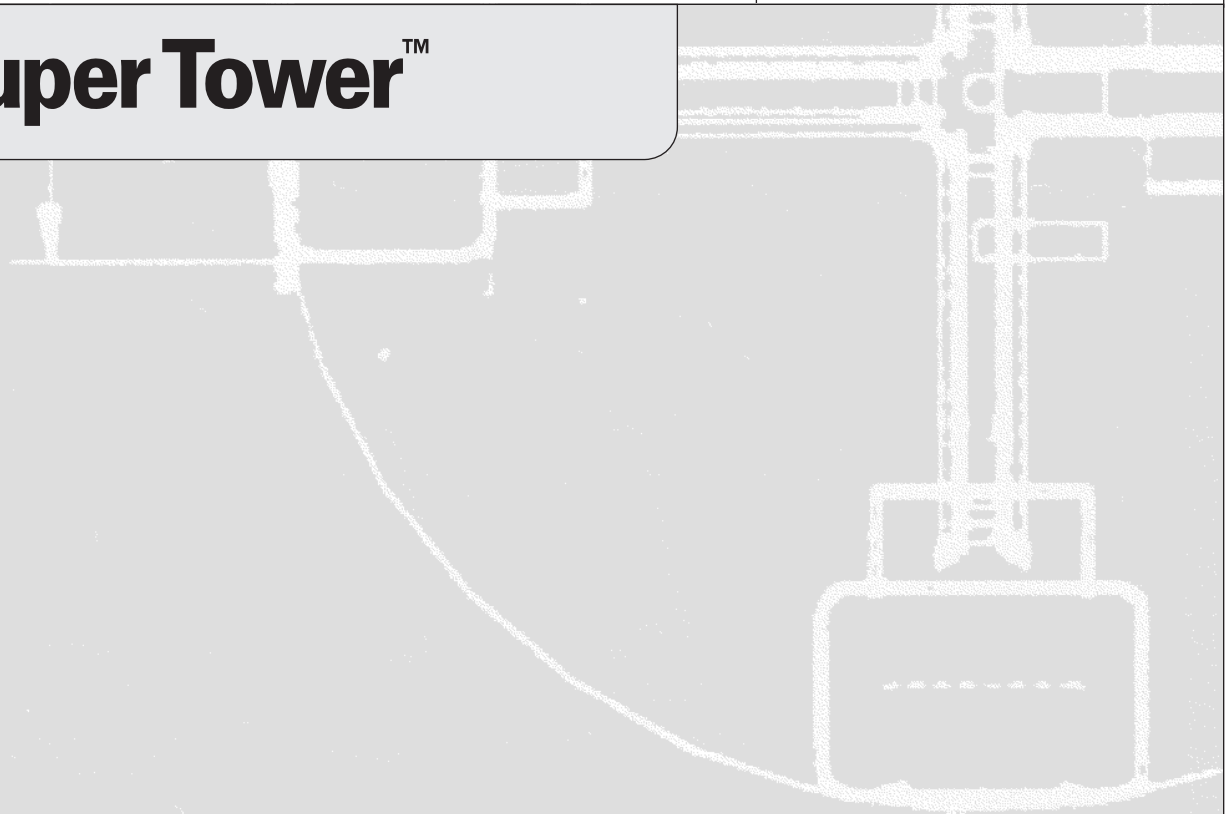
# Genie®



## Operator's Manual

First Edition  
Seventh Printing  
Part No. 32950

## Super Tower™



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## Important

Read, understand and obey these safety rules and operating instructions before operating this machine. Only trained and authorized personnel shall be permitted to operate this 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, call Genie Industries.

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# Safety Rules



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## Warning

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

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## 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 the 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.

## SAFETY RULES

**Fall Hazards**

Do not use as a personnel lifting platform or step.

Do not stand on the forks.

Do not climb on the mast.

**Tip-over Hazards**

Do not operate a Genie Super Tower unless all four outriggers are properly installed in the base sockets, the screw jack pads are in firm contact with the ground and the base is level.

Do not operate the machine unless all outrigger lock pins are in place and properly inserted into each outrigger.

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

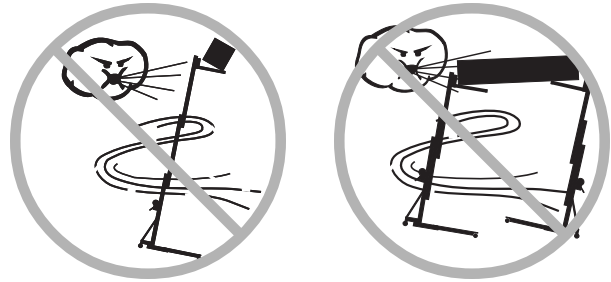
Do not move the machine with a raised load, except for minor positioning.

Do not leave the load raised with the outrigger casters contacting the ground.

Do not adjust or remove the outriggers while the load is raised.

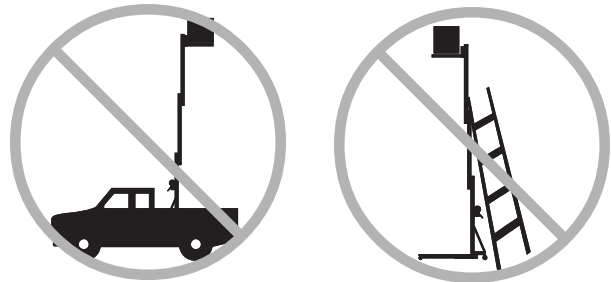


Do not operate the machine in strong or gusty winds. Increasing the load surface area will decrease machine stability in windy conditions.



Do not leave a load raised when windy conditions may occur unless the machine(s) are properly guy-wired.

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



Do not place ladders or scaffolding against any part of the machine.

Do not exceed the rated load capacity. See Load Capacity Charts section.

Do not raise unless the load center (balance point) is properly positioned between the carriage and the end of the load handling attachment. See Load Capacity Charts section.

Prior to use, check the work area for drop-offs, holes, bumps, debris, unstable or slippery surfaces or other possible hazardous conditions.

**SAFETY RULES**

Avoid debris and uneven surfaces while rolling the machine with the legs folded up.

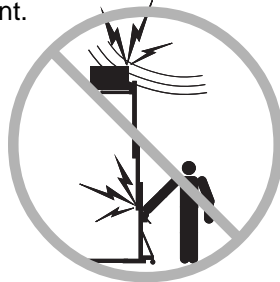
Do not replace machine parts critical to stability or structure with items of different weight or specification.

Do not cause a horizontal force or side load to the machine by raising or lowering a fixed or overhanging load.

**Electrocution Hazards**

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

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



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

Voltage	Minimum Safe Approach Distance	
	Feet	Meters
Phase to Phase		
0 to 300V	Avoid Contact	
300V to 50KV	10	3.1
50KV to 200KV	15	4.6
200KV to 350KV	20	6.1
350KV to 500KV	25	7.6
500KV to 750KV	35	10.7
750KV to 1000KV	45	13.7

Allow for mast movement and electrical line sway or sag, and be aware of strong or gusty winds.

Do not use the machine as a ground for welding.

**Crushing Hazards**

Do not release the winch handles until the brake is locked. The brake is locked when the load will not cause the winch handles to turn.

Do not raise unless the load center (balance point) is properly positioned between the carriage and the end of the adjustable forks.

Do not stand under or allow personnel under the machine when the load is raised.

Do not stand under the load. The safety brake system will allow the load to drop 1 to 3 feet before locking the columns.

Do not raise unless the load is properly secured to the forks.

Do not lower the load unless the area below is clear of personnel and obstructions.

Keep hands and fingers away from any potential pinch points.

Do not raise the load unless the snap pins are properly inserted in the forks.



## SAFETY RULES

**Collision Hazards**

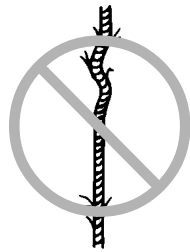
Do not tilt the machine back unless the area is clear of personnel and obstructions.

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

Use common sense and planning when transporting the machine on an incline or slope.



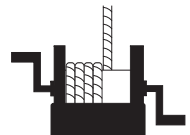
Do not load for transport unless the machine and vehicle are on a level surface. Use proper lifting techniques to load the machine.

**Damaged Machine Hazards**

Do not use a damaged or malfunctioning machine.

Do not use a machine with a worn, frayed, kinked or damaged cable.

Do not use a machine with less than 4 wraps of cable on the winch drum in the stowed position.



Conduct a thorough pre-operation inspection prior to each use.

Be sure that the operator's manual is complete, legible and in the storage container located on the machine.

Be sure all decals are in place and legible.

Maintain proper lubrication on the winch. See *Genie Super Tower Parts and Service Manual*. Do not allow oil or grease on braking surfaces.

Do not use any type of lubrication on the column surfaces.

**Bodily Injury Hazard**

Do not grasp the cable.

**Lifting Hazards**

Use proper lifting techniques to load or tilt the machine.

**Improper Use Hazard**

When leaving a Genie Super Tower unattended with a load, secure from unauthorized use. Unauthorized personnel may attempt to operate the machine without proper instruction, creating an unsafe condition.

## SAFETY RULES

## Decal Legend

Genie 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.

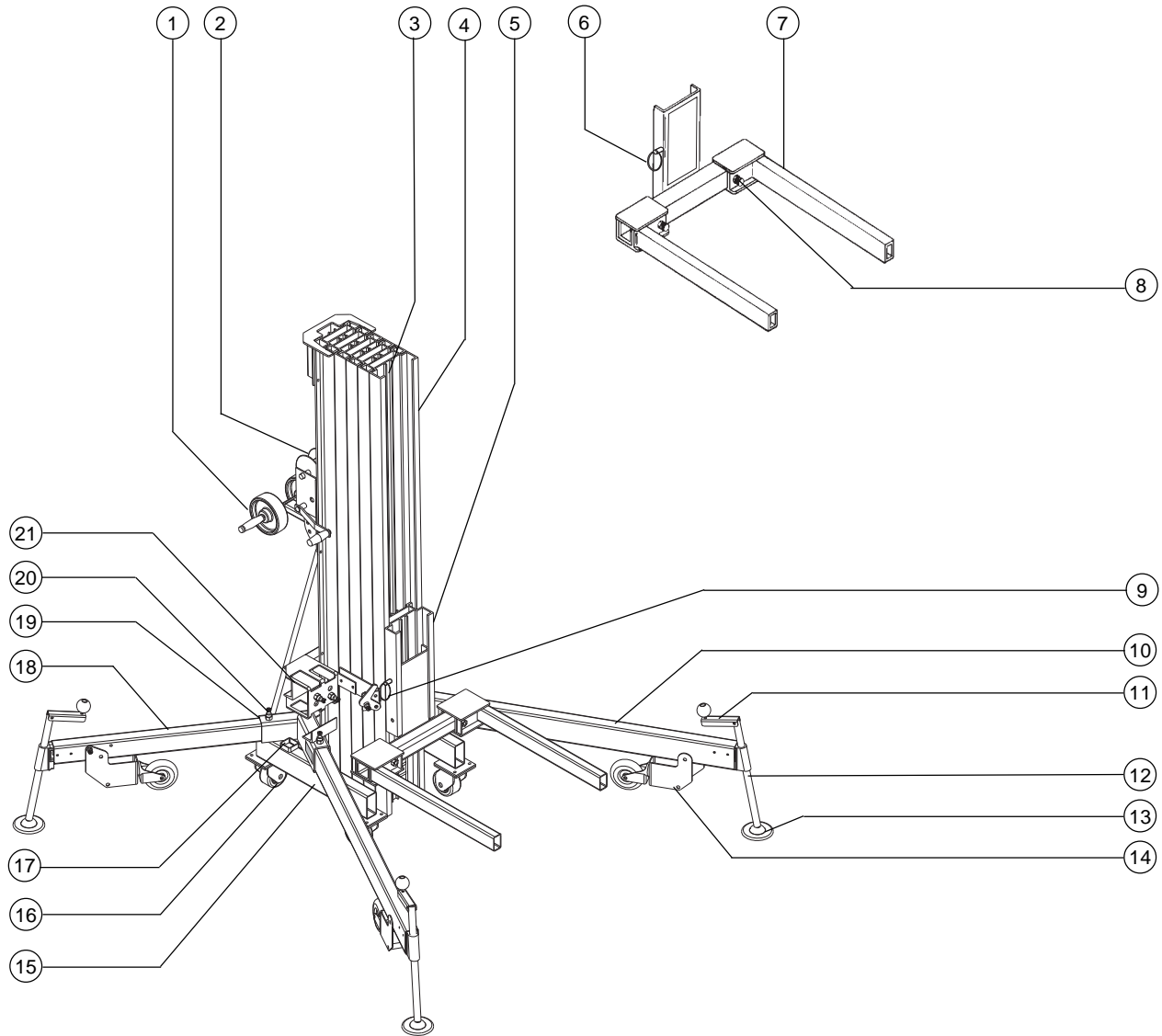


Yellow without safety alert symbol—used to indicate the presence of a potentially hazardous situation which, if not avoided, may result in property damage.



Green—used to indicate operation or maintenance information.

# Legend



- |  |                                |                              |
|--|--------------------------------|------------------------------|
| 1 Loading wheels/steer handles           | 8 Snap pin                     | 16 Base caster               |
| 2 Winch                                  | 9 Carriage hold-down latch     | 17 Bubble level              |
| 3 Cable                                  | 10 Front outrigger (long)      | 18 Rear outrigger (short)    |
| 4 Mast                                   | 11 Outrigger screw jack handle | 19 Loading guide blocks      |
| 5 Carriage                               | 12 Outrigger screw jack        | 20 Outrigger lock pin        |
| 6 Load handling attachment retaining pin | 13 Outrigger screw jack pads   | 21 Outrigger storage sockets |
| 7 Adjustable fork                        | 14 Outrigger caster            |                              |
|  | 15 Base                        |                              |



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# Pre-operation Inspection



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## 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 the function tests prior to use.
  - 4 Inspect the workplace.
  - 5 Only use the machine as it was intended.

## Fundamentals

The pre-operation inspection is a visual inspection performed by the operator prior to each work shift. This inspection is designed to discover if anything is apparently wrong with a machine before the operator performs the function tests.

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.

## PRE-OPERATION INSPECTION

## Pre-operation Inspection

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- Be sure that the operator's manual is complete, legible and in the storage container located on the machine.
- Be sure that all decals are legible and in place. See Decals section.

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

- Winch and related components
- Base components
- Outriggers, outrigger screw jacks, outrigger foot pads and outrigger casters
- Mast columns
- Exterior plastic shim for safety brake
- Cable anchor
- Cables and pulleys
- Carriage hold-down latch
- Wheels and casters
- Adjustable forks
- Nuts, bolts and other fasteners
- Cable (kinks, frays, abrasions)

Check the entire machine for:

- Dents or damage
- Corrosion or oxidation
- Cracks in welds or structural components
- Be sure that all structural and other critical components are present and all associated fasteners and pins are in place and properly tightened.
- Be sure that there is a minimum of 4 wraps of cable around the winch drum when the carriage is fully lowered.

# Function Tests



## Do Not Operate Unless:

---

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

## Fundamentals

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

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

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

## Symbols Legend

- ⊙ Indicates that a specific result is expected after performing a series of steps.

## FUNCTION TESTS

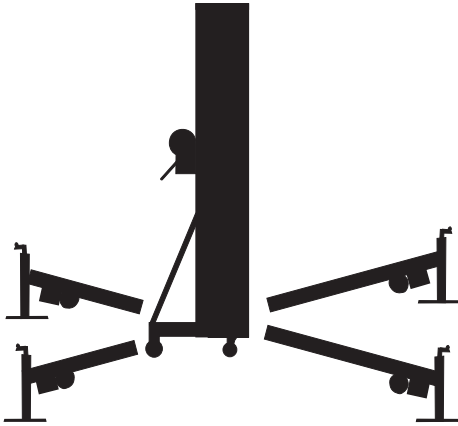
## Function Tests

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- 1 Position the machine at the desired work site.

### Setup

- 1 Remove the outriggers from the outrigger storage sockets.
- 2 Lay each outrigger near the base where it is to be installed. The two long outriggers will be installed into the two front base sockets. The two short outriggers will be installed into the two rear base sockets.



- 3 Select any outrigger. Slide the outrigger all the way into the base socket until the outrigger lock pin snaps into the outrigger, locking it in place. Repeat for each remaining outrigger.
- 4 Adjust the outrigger screw jacks until the base casters are slightly off the ground.
- 5 Level the machine with the outrigger screw jacks by referencing the bubble level located on the base. Level the machine using only the outriggers.

### Load Handling Attachment

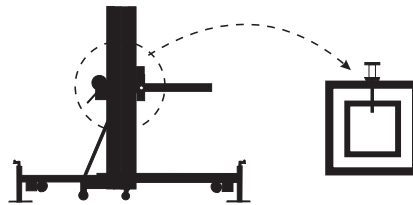
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#### Adjustable Forks

- 1 Place the forks inside the carriage.
- 2 Insert the retaining pin.



- 3 Adjust the forks to the desired width and be sure the snap pins are properly inserted in each fork.

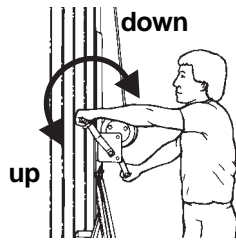


## FUNCTION TESTS

**Test One-Speed Winch Operation**

1 Install the adjustable forks.

2 Raise the carriage by firmly grasping the winch handles and rotating them towards the mast.



⊙ Result: The winch should operate smoothly, free of hesitation or binding.

3 Lower the carriage by firmly grasping the winch handles and rotating them away from the mast. After lowering to the desired position, turn the winch handles toward the mast (raise the load)  $\frac{1}{4}$  turn to set the brakes.

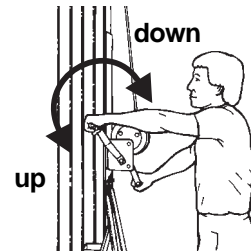
⊙ Result: The winch should operate smoothly, free of hesitation or binding.

**Test Two-Speed Winch Operation**

1 Install the adjustable forks.

2 Shift the winch to the slow speed.

3 Raise the carriage by firmly grasping the winch handles and rotating them towards the mast.



⊙ Result: The winch should operate smoothly, free of hesitation or binding.

4 Lower the carriage by firmly grasping the winch handles and rotating them away from the mast. After lowering to the desired position, turn the winch handles toward the mast (raise the load)  $\frac{1}{4}$  turn to set the brakes.

⊙ Result: The winch should operate smoothly, free of hesitation or binding.

5 Shift the winch to the fast speed and repeat steps 3 and 4.

**Test Mast Sequencing**

1 Install the adjustable forks.

2 Raise the carriage to full height by firmly grasping the winch handles and rotating them towards the mast.

⊙ Result: The carriage should rise to the top of the front mast section, followed in consecutive order by each mast section.

3 Fully lower the carriage. After lowering to the desired position, turn the winch handles toward the mast (raise the load)  $\frac{1}{4}$  turn to set the brakes.

# Workplace Inspection



## Do Not Operate Unless:

---

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

Be aware of and avoid the following hazardous situations:

- drop-offs or holes
- bumps, floor obstructions or debris
- slopes that exceed the machine's leveling capability
- 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

## 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.

# 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 manual.

Using the machine for anything other than lifting material is unsafe.

If more than one operator is expected to use a machine at different times in the same work shift, each operator is expected to follow all safety rules and instructions in the operator's manual. That means every new operator should perform a pre-operation inspection, function tests and a work place inspection before using the machine.

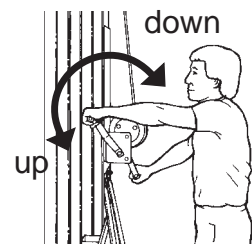
## Setup

Position the machine at the desired work site.

Follow the Setup procedures in the Function Tests section.

## Raising and Lowering Load

- 1 Center the load on the forks. See Load Capacity Charts section.
- 2 Make sure the load is properly secured to the forks.
- 3 Raise the load by firmly grasping the winch handles and rotating them toward the mast. Do not allow the cable to wind unevenly onto the drum.
- 4 Lower the load by firmly grasping the winch handles and rotating them away from the mast. After lowering to the desired position, turn the winch handles toward the mast (raise the load)  $\frac{1}{4}$  turn to set the brakes.



---

## OPERATING INSTRUCTIONS

### Moving Machine with a Load

It is best to move the machine on the worksite with no load. Moving a raised load should be restricted to positioning only. If it is necessary to move the machine with a raised load, understand and obey the following safety rules:

- Make sure the area is level and clear of obstructions
- Make sure the load is centered on the load handling attachment
- Make sure the load is properly secured to the load handling attachment
- Avoid sudden starts and stops
- Travel with the load in the lowest possible position
- Keep personnel away from the machine and load

### Machine Setup for Moving Machine with a Load

- 1 Lower the load to the lowest possible position.
- 2 Raise the end of the outrigger with the outrigger screw jack.
- 3 Pull the snap pin and rotate the caster to the down position. Be sure the pull pin is properly inserted.
- 4 Lower the outrigger until the caster contacts the ground.
- 5 Repeat for each outrigger.
- 6 After positioning the load, return the casters to the stowed position. Level the machine with the outrigger screw jacks by referencing the bubble level on the base.

### After Each Use

To prepare the Genie Super Tower for storage, follow the Setup procedure in reverse order.

Select a safe storage location - firm level surface, weather protected, clear of obstruction and traffic.



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# Load Capacity Charts



## Observe and Obey:

- ☑ Failure to properly position the load may result in death or serious injury.
- ☑ Verify that the load you wish to raise does not exceed the maximum load for your load center. See the Load Capacity Chart on the next page.

**▲WARNING** Tip-over hazard. Raising a load that exceeds the machine capacity may result in death or serious injury.

- ☑ A load center is defined as the balancing point (center of gravity) of a load and must be positioned within the load center zone.

**▲WARNING** Tip-over hazard. Failure to position the load center within the load center zone may result in death or serious injury.

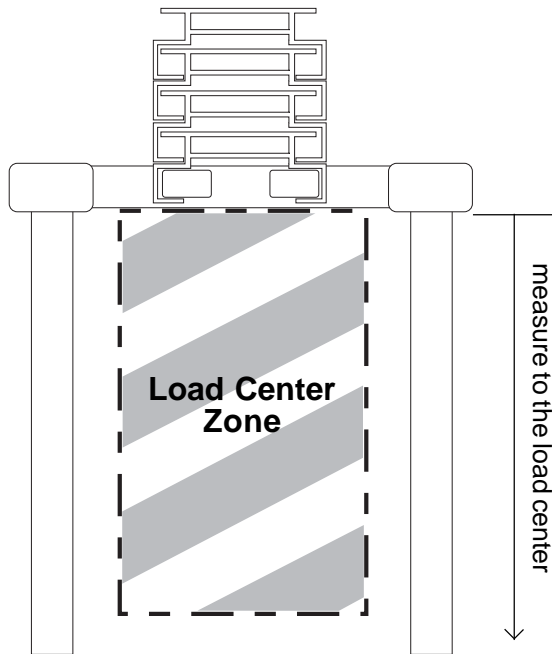
## Forks

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### Load Positioning Instructions

- 1 Determine the weight of the load and the location of its load center.
- 2 Measure to the load center from the side of the load that will be closest to the carriage.
- 3 Refer to the chart on the next page to determine if the machine is capable of lifting the weight at the location on the forks.
- 4 Place the load so that it rests on the forks, as close to the carriage as possible.
- 5 Position the load so that the load center is within the load center zone.
- 6 Secure the load to the forks.

LOAD CAPACITY CHARTS



**Maximum Load Center**

(measure from the front of the carriage)

Adjustable Forks: 24 in 61 cm

Load Capacity Chart					
Load Center					
		18	20	22	24
inches		18	20	22	24
cm		46	51	56	61
Model					
ST-20	lbs	800	733	667	600
	kg	363	332	303	272
ST-25	lbs	650	583	517	450
	kg	295	264	235	204

See Load Capacity Chart for maximum load centers for adjustable forks.

# Transport Instructions



## Transport Instructions

### Observe and Obey:

- The transport vehicle must be parked on a level surface.
- The transport vehicle must be secured to prevent rolling while the machine is being loaded.
- Be sure the vehicle capacity, loading surfaces and chains or straps are sufficient to withstand the machine weight. See the serial plate for machine weight.
- The machine must be secured to the transport vehicle with chains or straps of ample load capacity.

## Loading the Machine

- 1 Fully lower the carriage.
- 2 Lock the carriage hold-down latch over the carriage.
- 3 Raise the carriage until it contacts the carriage hold-down latch.
- 4 Remove the outriggers from the base and place them in the outrigger storage sockets. Be sure the snap pins are properly inserted.
- 5 Adjust the loading wheels to the desired height. Be sure the pull pin is properly inserted.
- 6 Place the machine against the vehicle. Use proper lifting techniques to load the machine into the transport vehicle. Be sure to check that the carriage is locked in the lowered position.



## Loading the Machine with a Crane

Be sure to place the outriggers in the outrigger storage sockets. Be sure the snap pins are properly inserted.

Be sure to inspect the machine and remove any loose or unsecured items.

Use the lifting bracket on the top of the rear mast column.

Always place the lifting hook through the lifting bracket so that it points away from the machine.



# Decals

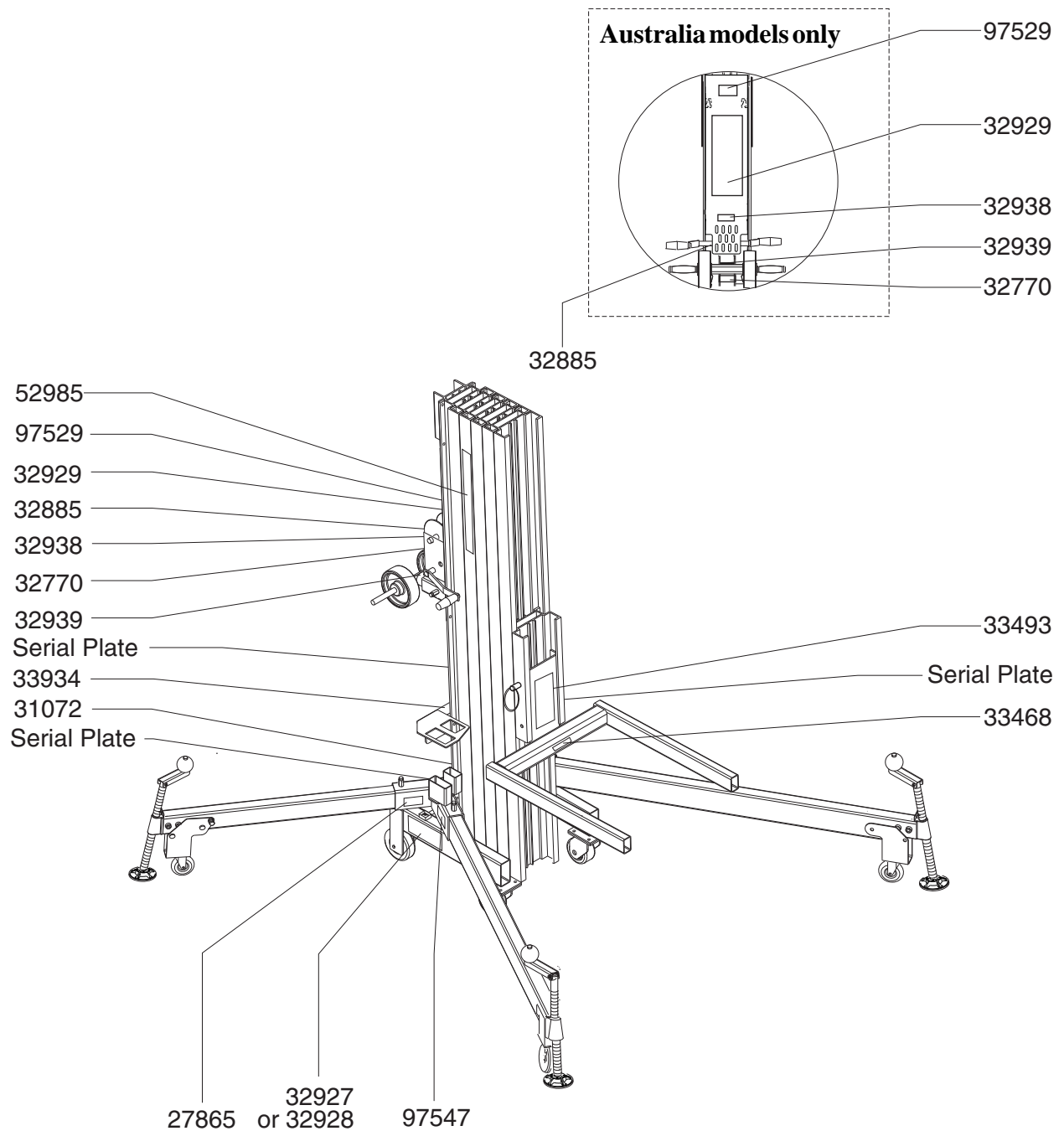
## Inspection for Decals with Words

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.

Part No.	Description	Quantity
27865	Label - Bubble Level	1
31072	Label - Operator's Manual Container	1
32770	Notice - Two Speed Shift Instructions	1
32885	Warning - Silent Winch	1
32927	Cosmetic - ST-20	2
32928	Cosmetic - ST-25	2
32929	Warning - Machine Safety & Setup	1
32934	Label - Outrigger Storage Socket	1
32938	Label - Use This Winch	1
32939	Warning - Brake Lock	1
33468	Warning - No Riders	1
33493	Warning - Adjustable Forks Safety/Setup	1
52985	Cosmetic - Genie Super Tower	2
97547	Danger - Electrocution Hazard	2
97529	Caution - Bodily Injury Hazard	1

Note: The serial plate will be found in one of three locations.

DECALS



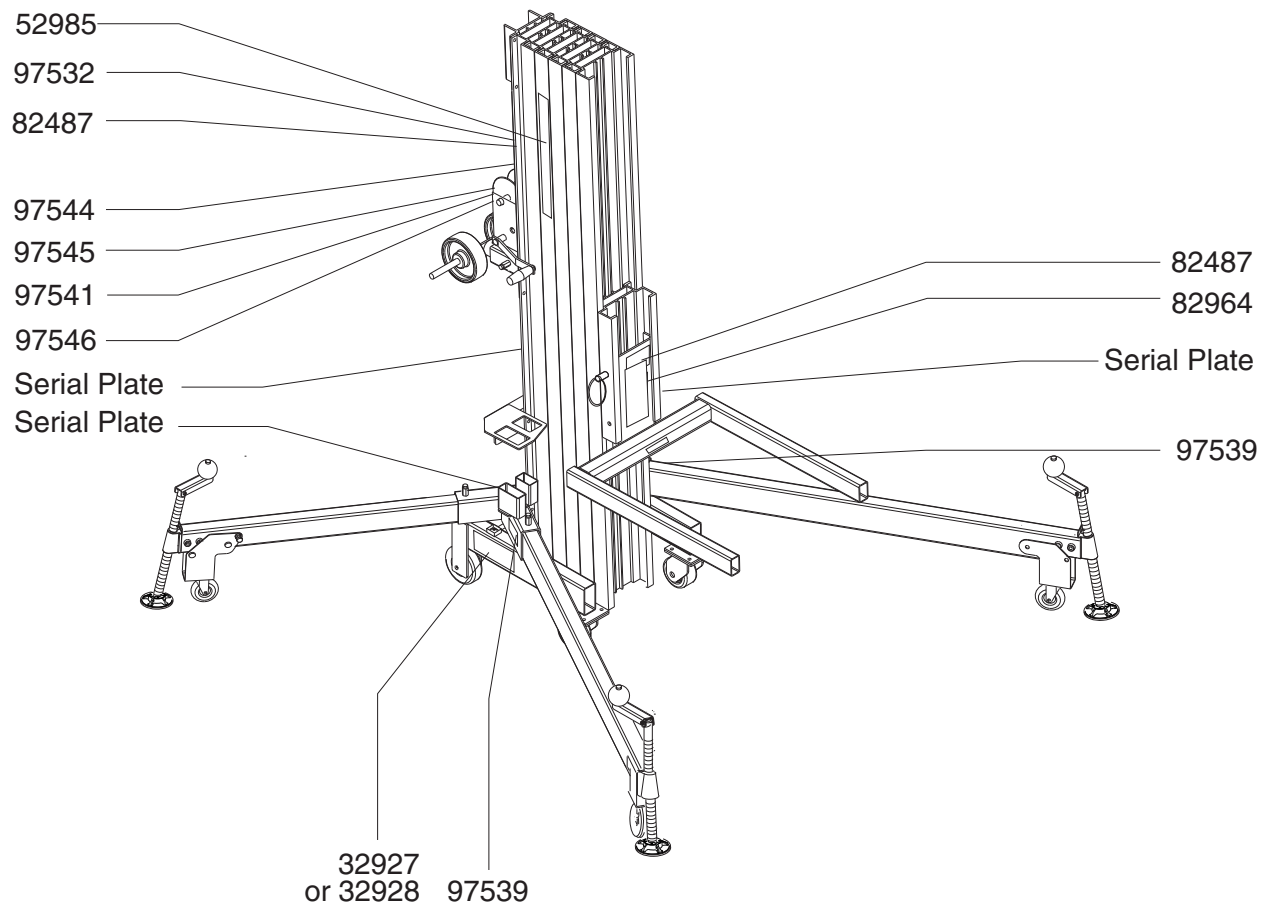
## Inspection for Decals with Symbols

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.

Part No.	Description	Quantity
32927	Cosmetic - ST-20	2
32928	Cosmetic - ST-25	2
52985	Cosmetic - Genie Super Tower	2
82487	Label - Read the Manual	2
82964	Warning - No Riders	1
97532	Caution - Bodily Injury Hazard	1

Part No.	Description	Quantity
97539	Danger - Electrocutation Hazard	2
97541	Label - Use this Winch	1
97544	Warning - Load Center Chart	1
97545	Warning - Lock Brake	1
97546	Label - Two Speed Shift	1

Note: The serial plate will be found in one of three locations.



# Specifications

<b>Model</b>	<b>ST-20</b>	<b>ST-25</b>
<b>Height-Stowed</b>	78 <sup>3</sup> / <sub>4</sub> in 2 m	78 <sup>3</sup> / <sub>4</sub> in 2 m
<b>Width-Stowed</b>	22 in 56 cm	22 in 56 cm
<b>Length-Stowed</b>	25 <sup>1</sup> / <sub>4</sub> in 64 cm	25 <sup>1</sup> / <sub>4</sub> in 64 cm
<b>Ground Clearance</b>	2 in 5.1 cm	2 in 5.1 cm
<b>Outrigger Footprint</b>	73 <sup>1</sup> / <sub>2</sub> x 79 <sup>1</sup> / <sub>2</sub> in 1.9 x 2 m	73 <sup>1</sup> / <sub>2</sub> x 79 <sup>1</sup> / <sub>2</sub> in 1.9 x 2 m
<b>Load Capacity</b> at 18 in / 46 cm load center Note: see Load Capacity Chart section for load capacities at other load centers.	800 lbs 363 kg	650 lbs 295 kg
<b>Net Weight</b>	446 lbs 203 kg	490 lbs 223 kg
<b>Load Handling</b>		
<b>Attachment</b>	<b>L x W x D</b>	<b>Net Weight</b>
Adjustable Forks		
	27 <sup>1</sup> / <sub>2</sub> x 11 <sup>1</sup> / <sub>2</sub> to 30 x 2 <sup>1</sup> / <sub>2</sub> in	52.5 lbs
	70 x 29 to 76 x 6.5 cm	23.8 kg
<b>Dimensions</b>		
	<b>ST-20</b>	<b>ST-25</b>
Adjustable Forks forks down	19 ft 6 in 5.9 m	24 ft 4 in 7.4 m
forks up	21 ft 2 <sup>1</sup> / <sub>2</sub> in 6.5 m	26 ft 1 <sup>1</sup> / <sub>2</sub> in 7.9 m
<b>Airborne Noise Emissions by Machinery</b> Maximum sound level at normal operating workstations (A-weighted)	85 dB	85 dB

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