

INTENDED FOR USE BY PROFESSIONAL EQUIPMENT OPERATORS

# OPERATING INSTRUCTIONS



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 **READ AND UNDERSTAND BEFORE  
OPERATING THIS EQUIPMENT**



## LADDER LIFT

*(ladder not included)*

Model numbers:

**LL185:** Hand cups not included

**LL185WC:** Includes 2 hand cups (N4000 or N4950)

Original Instructions © Wood's Powr-Grip Co., Inc.



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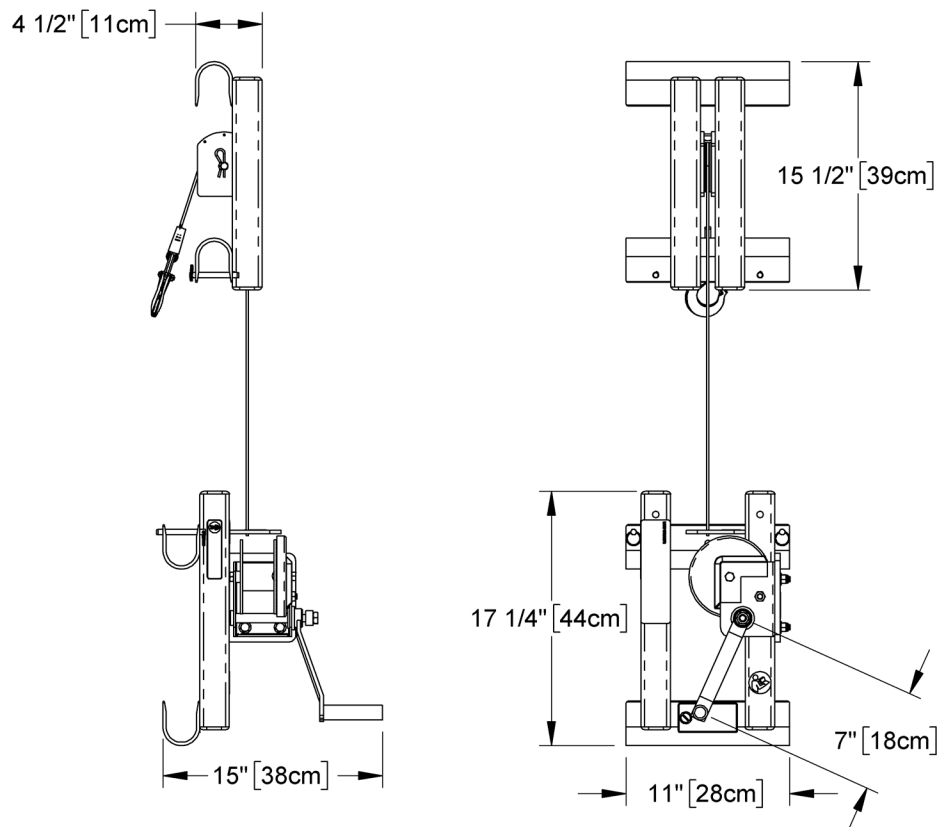
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# SPECIFICATIONS





## LADDER WINCH SPECIFICATIONS

<b>Product Description</b>	The Ladder Lift's ladder winch attaches to a ladder, with its pulley assembly positioned on the ladder's upper rungs and its winch assembly positioned on the ladder's lower rungs, to enable window installations above ground level.
<b>Model Number</b>	LW185
 <b>Maximum Load Capacity</b>	185 lbs [85 kg]
<b>Maximum Lift Height</b>	30' [9.1 m]
<b>Product Weight</b>	35 lbs [16 kg]
<b>Winch Unit Dimensions</b>	15" x 17 1/4" x 11" [38 cm x 44 cm x 28 cm]
<b>Pulley Unit Dimensions</b>	4 1/2" x 15 1/2" x 11" [11 cm x 39 cm x 28 cm]
<b>Ladder Requirements</b>	ANSI Type IAA, rated to 375 lbs [170 kg] capacity



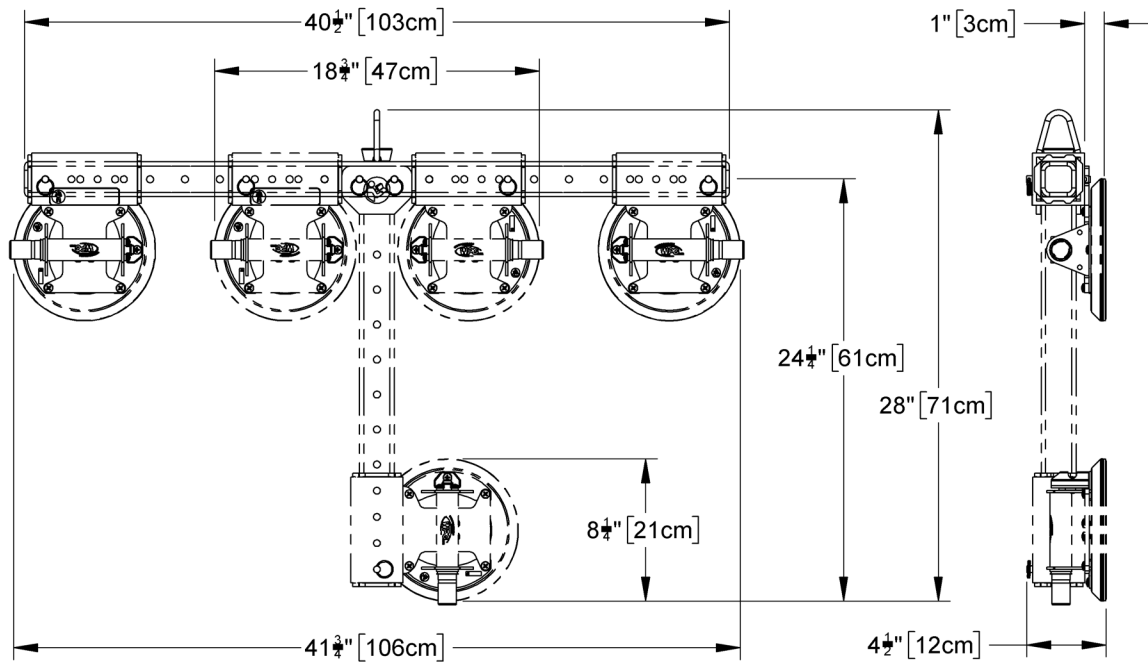
# SPECIFICATIONS

## VERTICAL LIFTER SPECIFICATIONS

<b>Product Description</b>	The Ladder Lift's vertical lifter supports loads using vacuum for lifting in the upright orientation.	
<b>Model Number</b>	VL2MAN	VL2MAN with optional Adjustable Center Arm
<b>Pad Spread<sup>1</sup></b> (to outer edges)		
<b>Height—Maximum</b>	8¼" [21 cm]	24¼" [61 cm]
<b>Minimum</b>	8¼" [21 cm]	10¾" [27 cm]
<b>Width—Maximum</b>	41¾" [106 cm]	41¾" [106 cm]
<b>Minimum</b>	16¾" [42 cm]	18¾" [47 cm]
 <b>Maximum Load Capacity<sup>2</sup></b>		
<b>Per-Pad<sup>3</sup></b>	93 lbs [42.5 kg]	93 lbs [42.5 kg]
<b>Total <sup>4</sup></b>	185 lbs [85 kg]	185 lbs [85 kg]
 <b>Lifter Weight</b>		
<b>without Hand Cups</b>	15 lbs [7 kg]	25 lbs [12 kg]
<b>with Hand Cups</b>	25 lbs [12 kg]	40 lbs [19 kg]
<b>Product Options</b>	Available with Adjustable Center Arm. See separate instructions about other options.	
 <b>Operating Elevation</b>	Up to 5,000' [1,524 m]	
 <b>Operating Temperatures</b>	10° — 120° F [-12° — 49° C]	
<b>Service Life</b>	16,000 lifting cycles, when used and maintained as intended <sup>5</sup>	
<b>ASME Standard BTH-1</b>	Design Category "B", Service Class "0"	
<b>Troubleshooting Guide</b>	<a href="#">1LTS</a> (for N4000 hand cups) <a href="#">1MTS</a> (for N4950 hand cups)	

- ..... Specifications apply to lifters using WPG 8" [20 cm] hand cups. If another model of hand cup is used, consult the manufacturer for specifications. The maximum structural capacity of this lifter is 185 lbs [85 kg], regardless of capacity ratings for any hand cups that may be installed.
- ..... The Maximum Load Capacity is rated at a vacuum of 16" Hg [-54 kPa] on clean, smooth, nonporous flat surfaces with a friction coefficient of 1. Pad compound, load rigidity, strength, surface conditions, overhang, angle, center of gravity and temperature can also affect the lifting capacity. A "qualified person" should evaluate the effective lifting capacity for each use (see definition under "[Load Tests](#)").
- ..... The Adjustable Center Arm and additional vacuum pad do not contribute to the VL2MAN's lifting capacity.
- ..... The Maximum Load Capacity of any VL2MAN lifter used as part of a Ladder Lift is 185 lbs [85 kg], regardless of the rating shown on the lifter's capacity label.
- ..... Vacuum pads and other wear-out items are excluded.

# SPECIFICATIONS



*Note: VL2MAN is shown with hand cups and optional Adjustable Center Arm.*

# SAFETY



Wear personal protective equipment that is appropriate for the load material. Follow trade association guidelines.



Do not remove or obscure safety labels.



Make sure the Ladder Lift components (i.e., ladder winch, hand cups, vertical lifter and optional Adjustable Center Arm) are assembled correctly.



Do not make any modifications to the any component of a Ladder Lift (see “LIMITED WARRANTY”).



Use a Ladder Lift only in an approved “OPERATING ENVIRONMENT” (see “INTENDED USE”).



Do not use a Ladder Lift that is damaged, malfunctioning, or missing parts.



Do not use a Ladder Lift if the sealing edge of any vacuum pad is cut or otherwise damaged.



Do not use a Ladder Lift to lift cracked or broken glass.



Do not exceed the Maximum Load Capacity or lift loads the Ladder Lift is not designed for (see “INTENDED USE”).



Do not use a Ladder Lift if the Maximum Load Capacity or any safety label appears to be missing or obscured.



Make sure the contact surfaces of the load and vacuum pads are clean before attaching the pads to the load (see “MAINTENANCE”).



Position the vacuum pads correctly on the load before lifting (see “OPERATION”).



Do not lift a load if any vacuum indicator shows inadequate vacuum.



Keep unauthorized personnel away from the Ladder Lift, to avoid injury in case of an unintended load release.



Make sure the winch’s automatic brake is functioning correctly when lifting a load.



Do not allow anyone to sit or stand on any components of a Ladder Lift, the ladder, or the load being lifted.



Do not lift a load higher than necessary or leave suspended loads unattended.



Do not position a loaded or unloaded lifter over people.



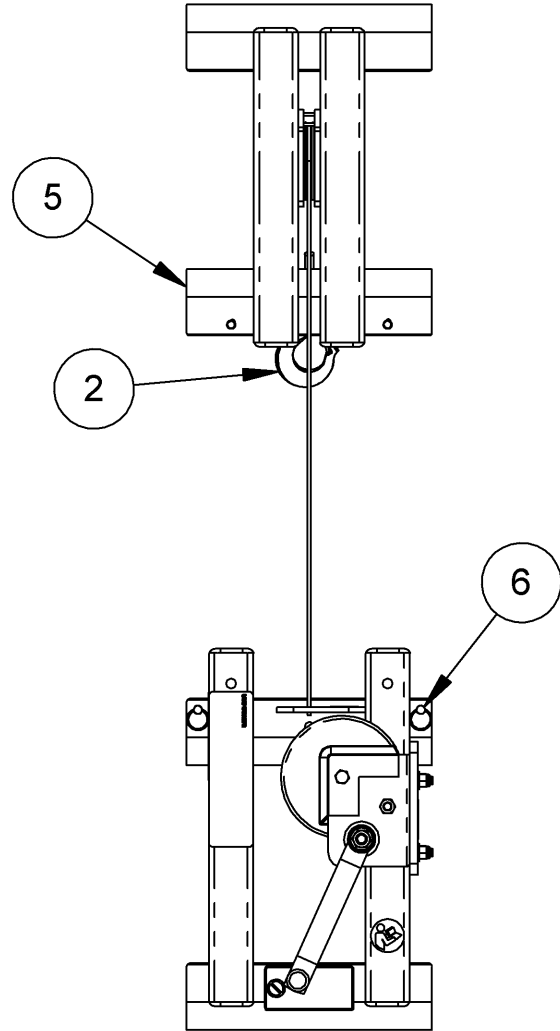
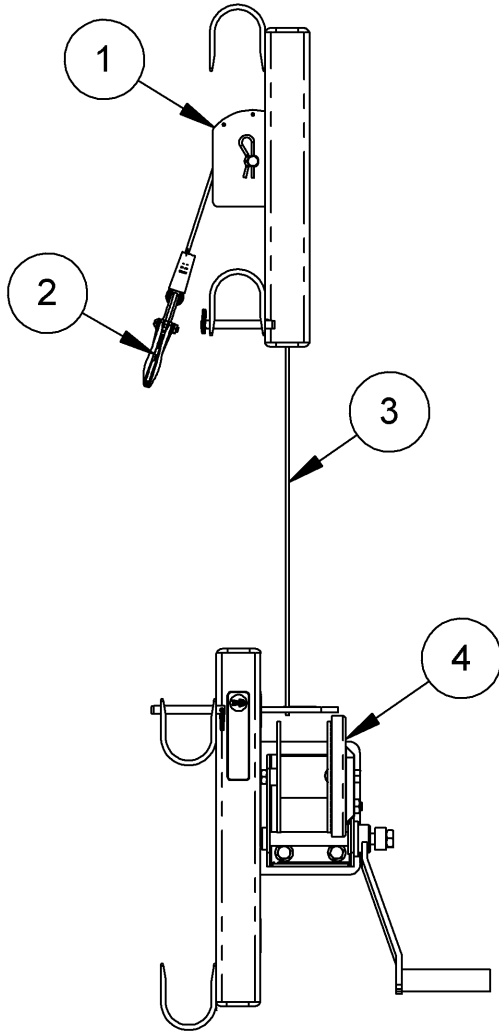
Do not touch the vacuum release controls during a lift.



# OPERATING FEATURES

## LADDER WINCH FEATURES

Features shown here are underlined> on their first appearance in each section following.



1 PULLEY

3 WIRE ROPE

5 PULLEY ASSEMBLY

2 LIFTING HOOK

4 HAND WINCH

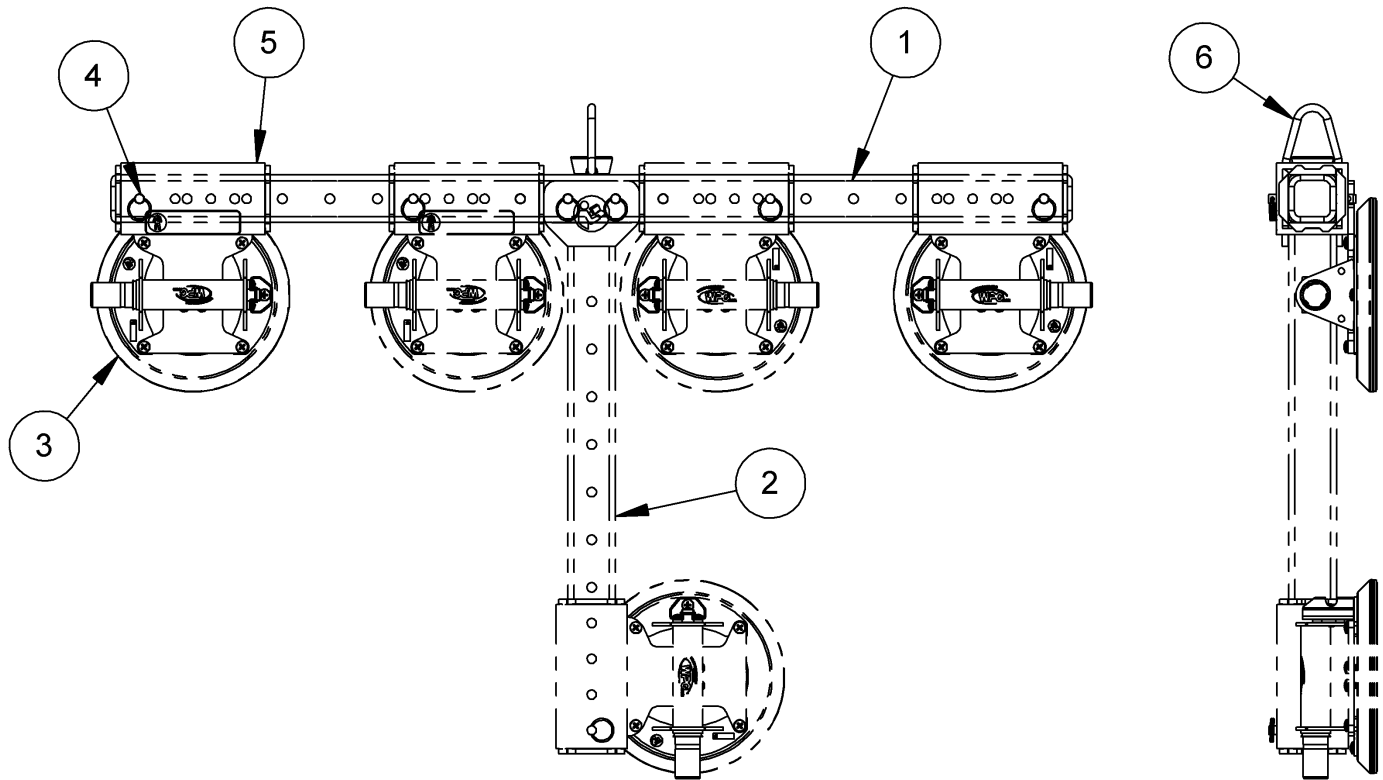
6 WINCH ASSEMBLY

For information about specific parts, see [“LADDER WINCH PARTS”](#).

# OPERATING FEATURES

## VERTICAL LIFTER FEATURES

Features shown here are underlined> on their first appearance in each section following.



- |   |                      |   |                                |   |                        |
|---|----------------------|---|--------------------------------|---|------------------------|
| 1 | PAD FRAME            | 2 | ADJUSTABLE CENTER ARM (option) | 3 | HAND CUP w/ VACUUM PAD |
| 4 | COTTERLESS HITCH PIN | 5 | SLIDING HAND CUP MOUNT         | 6 | LIFT POINT             |

For information about specific parts, see [“VERTICAL LIFTER PARTS”](#) and/or any separate instructions for Product Options.

# ASSEMBLY

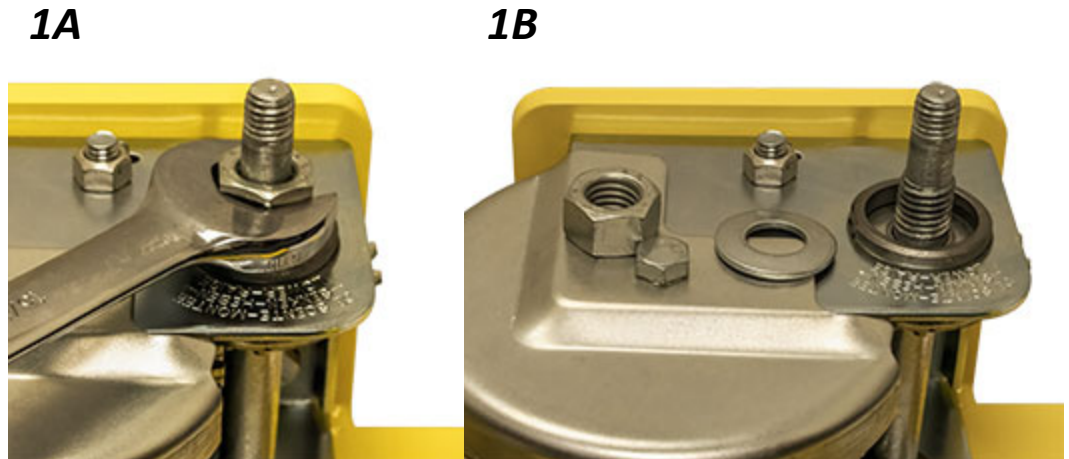
Remove all the shipping materials and save them with the shipping container for future use.

Then select a ladder that meets all Ladder Requirements (see “SPECIFICATIONS”) and set it on the ground before proceeding.

## TO ASSEMBLE THE LADDER WINCH

### 1) Install the handle on the hand winch:

- 1.1) Remove the hex nut and flat washer that were installed in place of the handle during shipping (figs. 1A-B).



- 1.2) Mount the winch handle on the winch and secure with the supplied hardware (fig. 1C).

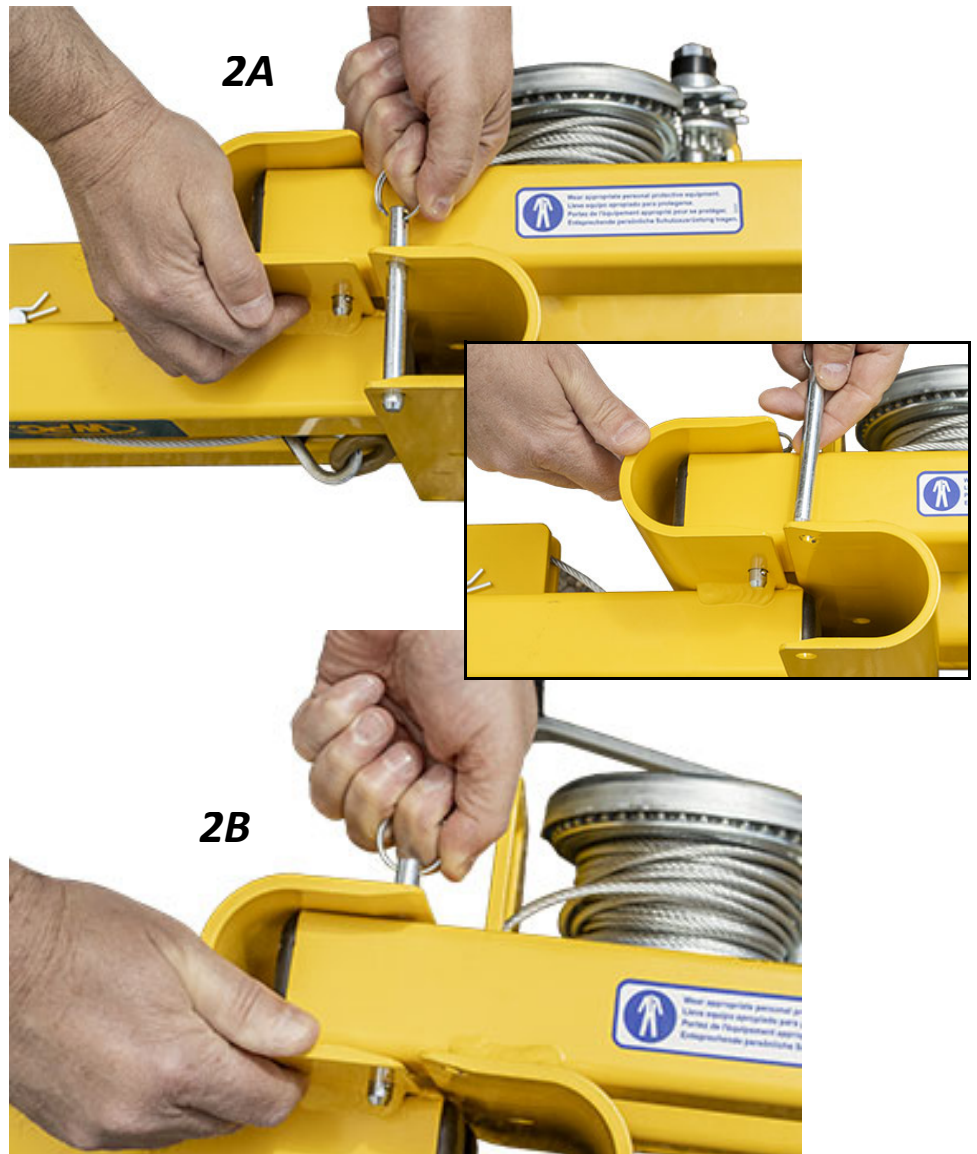


*Note: The winch handle assembly includes a spacer (arrow in fig. 1D) instead of the spring designated as item E in the manufacturer’s provided illustration (see “[WINCH MANUFACTURER’S INFORMATION](#)”).*

# ASSEMBLY

2) Attach the winch assembly and pulley assembly to the ladder:

2.1) Make sure the combined assemblies are resting on a stable surface. Then remove all cotterless hitch pins from the rung supports (figs. 2A and inset, and 2B).



2.2) Crank the hand winch counterclockwise (fig. 2C), to slacken the wire rope until the winch unit can be positioned on the ladder.





# ASSEMBLY

- 2.3) Hook the winch assembly on the rungs above the base of the ladder.

*Note: Position the winch assembly at a height that allows comfortable use of the winch when the ladder is upright.*

Then reinsert the hitch pins on its rung support, to secure (fig. 2D).



- 2.4) Continue to slacken the wire rope until the pulley assembly can be positioned on the desired ladder rungs. Then hook the pulley assembly on the rungs and reinsert the hitch pins on its rung support, to secure (fig. 2E).



- 2.5) Remove the cotterless hitch pin that secures the lifting hook (fig. 2F), so the hook can be lowered to attach the vertical lifter.



# ASSEMBLY



**Never allow anyone to scale any ladder equipped with a Ladder Lift.**

- 3) Lean the ladder against the building where you intend to use the Ladder Lift (fig. 3A).



**Never place base of ladder more than 1/4 of its length from building.**

When the Ladder Lift is in position, the distance from the base of the ladder to the building should be 1/4 the length of the extended ladder.<sup>1</sup> For maximum stability, the operator should locate the base of the ladder out as far as possible without exceeding this relationship. If the ladder were positioned past 1/4 of its extended length from the building, this could cause the ladder to slide out, possibly resulting in injury or damage to the Ladder Lift or the load.

*Note: For extension ladders, slacken the wire rope as needed to allow extension of the ladder to the desired length. Whenever the extension length is subsequently reduced, remove the slack accordingly.*

*Note: Do not attempt to lift or lower a load unless the hand winch's brake is functioning correctly (see "TO LIFT AND MOVE THE LOAD").*



**Make sure brake works correctly before lifting or lowering load.**

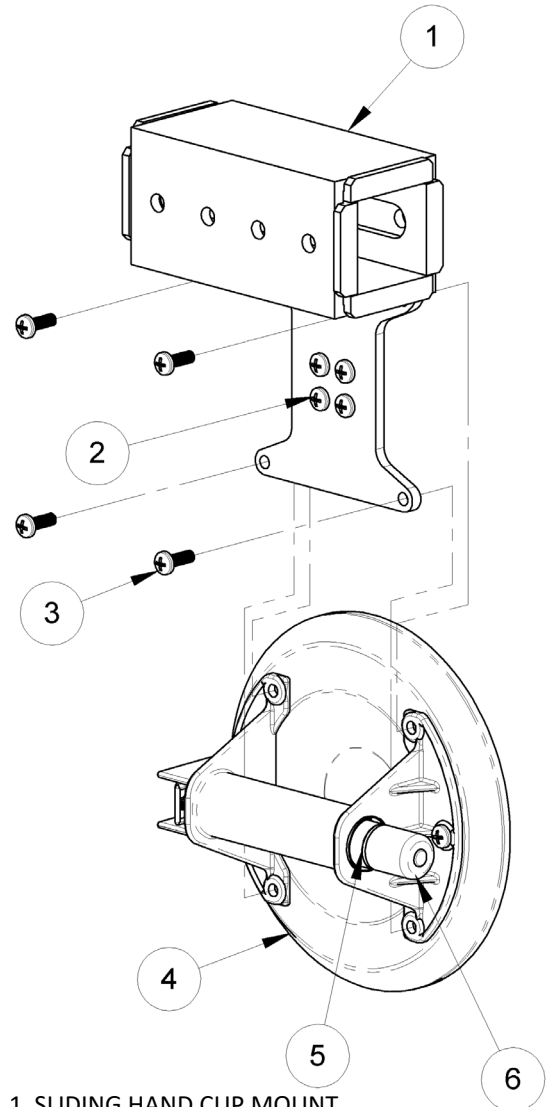
1..... For example, the base of a 24-foot [731-centimeter] extended length ladder should be 6' [182 cm] from the building.

## TO ASSEMBLE THE VERTICAL LIFTER

- 1) If the lifter has the adjustable center arm, install or remove this option as needed to support anticipated load dimensions (see [“Installing/Removing the Optional Adjustable Center Arm”](#)).
- 2) Attach a WPG hand cup (N4000 or N4950) to each sliding hand cup mount:<sup>1</sup>

- 2.1) Remove the 4 hand cup screws from the corners of the cup handle's base.
- 2.2) Remove the 4 longer screws from the center of the cup mount. Insert the 4 hand cup screws into the center of the cup mount and tighten them, to secure.
- 2.3) Position the hand cup onto the cup mount and align the screw holes.
- 2.4) Insert the longer screws through the cup mount and into the hand cup. Then tighten the screws, to secure.
- 2.5) Repeat these steps for all cup mounts in use.

*Note: Make sure all vacuum pads will face the same direction when attached.*



- 1 SLIDING HAND CUP MOUNT
- 2 HAND CUP SCREWS
- 3 LONGER SCREWS
- 4 VACUUM PAD
- 5 RED-LINE VACUUM INDICATOR
- 6 PLUNGER

Once assembly of all components is completed, perform tests as required under [“TESTING”](#).

1..... Other manufacturers' hand cups may reduce load capacity or be incompatible. Use the same model of hand cups in all cup mounts.

# ASSEMBLY

## Installing/Removing the Optional Adjustable Center Arm



***Center arm does NOT increase lifting capacity.***

If the lifter has an adjustable center arm, install this option as needed to support the load's dimensions before attaching the lifter to a load (see "[VERTICAL LIFTER SPECIFICATIONS](#)" and "[TO ATTACH THE PADS TO A LOAD](#)"): <sup>1</sup>

- 1) Remove the cotterless hitch pins (circled in fig. 1A) from the mount of the center arm.
- 2) Slide the pad frame into the mount, so that the holes below the lift point align for the hitch pins.



***Use BOTH hitch pins to secure center arm on the pad frame.***

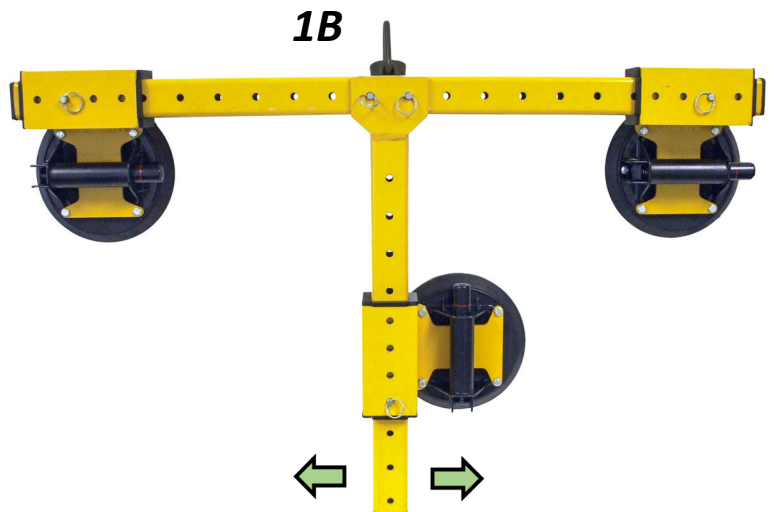
- 3) Reinstall the hitch pins through the holes, to secure the center arm on the pad frame.



To remove the center arm, reverse these steps. Store the center arm in a clean, dry location.

If the load has an asymmetrical shape (eg, L-shaped loads), you can move the adjustable center arm along the lifter's pad frame to provide better support (fig. 1B):

- 1) Remove the cotterless hitch pins from the center arm's mount.
- 2) Slide the center arm to the desired location on the pad frame and align the holes for the hitch pins.
- 3) Reinstall the hitch pins, to secure the center arm.



1..... To support the maximum load dimensions, the center arm must be installed on the lifter. To support smaller dimensions, the center arm may be removed, provided that load overhang can be minimized sufficiently (see "[LOAD CHARACTERISTICS](#)").



## LOAD CHARACTERISTICS

Make sure the Ladder Lift is intended to handle each load, given these restrictions:



**Do NOT lift explosives, radioactive substances or other hazardous materials.**



- The load weight must not exceed the Maximum Load Capacity.
- The load must not contact the ladder while being lifted.

*Note: If a load would contact the ladder by rotating while suspended from the wire rope, it should be restrained using a guide rope or other appropriate means.*

- The load must be a single piece of nonporous material with a flat and relatively smooth



**Do NOT lift rough or porous materials, such as unfinished wood or rough-cut stone.**

contact surface.<sup>1</sup> To determine whether the load is too porous or rough, perform the “[Lifter/Load Compatibility Test](#)”.

- The load's contact surface must be able to obtain a friction coefficient of 1 with the lifter's vacuum pads (see “[Pad-to-Load Friction Coefficient](#)”). Otherwise, the capacity should be derated appropriately.
- The load's surface temperature must not exceed the Operating Temperatures.<sup>2</sup>
- The load's *minimum* length and width are determined by the current Pad Spread (see “SPECIFICATIONS”).
- The load's *maximum* length and width are determined by its allowable overhang.<sup>3</sup>
- 1" [2.5 cm] is the allowable thickness at Maximum Load Capacity.<sup>4</sup>



*Note: Standard vacuum pads can stain or deform load surfaces with light colors or soft coatings. Test such surfaces for damaging effects before using the lifter on them.<sup>5</sup>*

1..... A “single piece” of material includes curtainwall assemblies, unitized glazing systems and similar construction units.

2..... Vacuum pads made from a heat-resistant rubber compound can enable you to lift loads with higher surface temperatures. Contact WPG or an authorized dealer for more information.

3..... The allowable overhang is the amount of load material that can extend sideways beyond the vacuum pad without breaking or otherwise being damaged. This depends on the load material, its thickness, and the angle of handling (if any). Since every material has different physical properties, the allowable overhang must be evaluated separately for each load type. Contact WPG or an authorized dealer for more information.

4..... However, the allowable thickness increases as load weight decreases. Contact WPG for more information.

5..... Alternative rubber compounds are available for these purposes. Contact WPG or an authorized dealer for more information.

## INADVERTENT LOADING

Make sure to account for any inadvertent loading that may negatively affect lifting capacity, such as external force that effectively increases load weight (eg, when a load of sheet material reacts to wind gusts).

## OPERATING ENVIRONMENT

Make sure the Ladder Lift is intended for use in each work environment, given these restrictions:

- The Ladder Lift is not intended for any environment that is dangerous to the operator or damaging to the Ladder Lift. Avoid environments containing explosives, caustic chemicals and other dangerous substances.

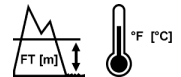


**Never use Ladder Lift in dangerous environments.**



**Never use Ladder Lift near power transmission lines, because this could result in electrocution.**

- The work environment is limited by the Operating Elevation and Operating Temperatures.
- The Ladder Lift is not designed to be waterproof. Do not use it in rain or other unsuitable conditions.



**Moisture can reduce lifting capacity.**

*Note: Moisture on the ground diminishes the ladder's slip resistance and, in the absence of adequate reinforcement of the ladder's feet, constitutes an unacceptably dangerous condition. Refer to the ladder manufacturer's instructions about safe working conditions.*



**Moisture reduces slip resistance of ladder feet.**

**CE/UKCA** — A secondary positive holding device is required to lift loads on construction sites or in other “high risk zones” (see EN 13155).

## DISPOSAL OF THE LADDER LIFT

Dispose of the ladder winch and vertical lifter in compliance with all local codes and applicable regulatory standard (see Service Life in “[VERTICAL LIFTER SPECIFICATIONS](#)”).<sup>1</sup>

1..... N4950 hand cups are eligible for our [Hand Cup Exchange Program](#). However, N4000 hand cups are not eligible.

## BEFORE USING THE LADDER LIFT

Determine whether the Ladder Lift is capable of each intended task (see “SPECIFICATIONS” and “[INTENDED USE](#)”). Then complete the following preparations:

### Taking Safety Precautions

- Be trained in all industry and regulatory standards for vacuum lifter and winch operation in your region.
- Follow trade association guidelines about precautions needed for each load material.



***Read all directions and safety rules, including those provided by the ladder manufacturer, before using Ladder Lift.***



***Always wear appropriate personal protective equipment.***

### Performing Inspections and Tests

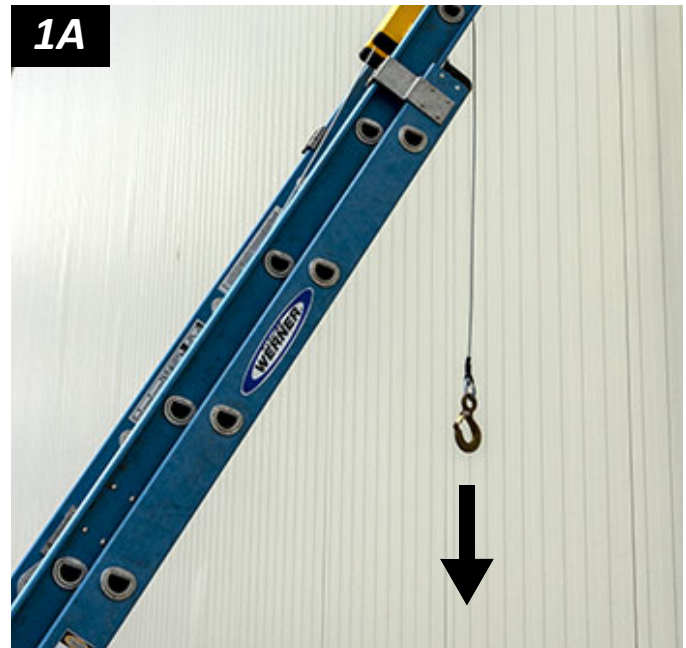
Follow the “[INSPECTION SCHEDULE](#)” and “[TESTING](#)”.

## TO ATTACH THE LIFTING HOOK TO A LIFTER

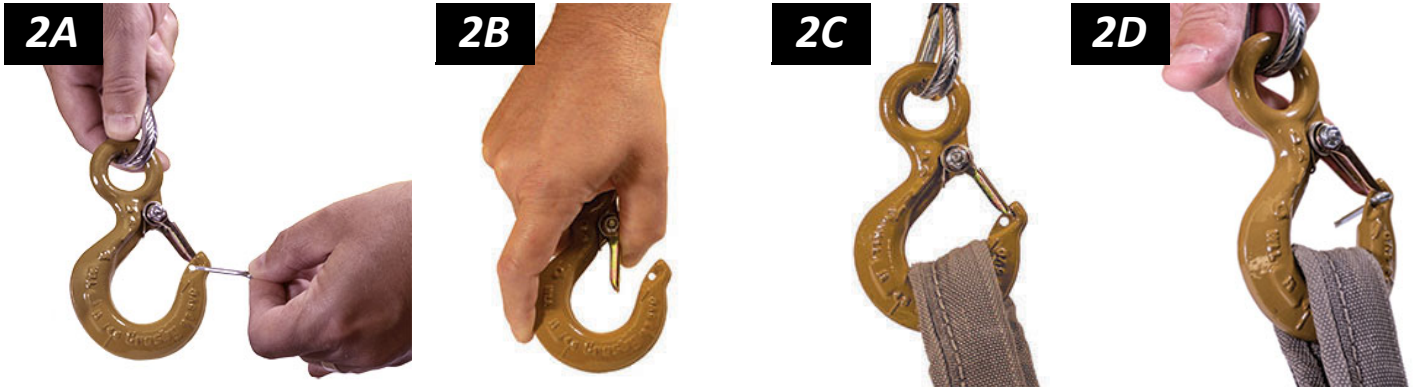


***Never use Ladder Lift to pull or drag load sideways.***

- 1) Position the lifting hook just above the loaded vertical lifter. Then center the lifter beneath the hook (fig. 1A).



# OPERATION



2) Remove the locking pin from the restraining latch on the lifting hook (fig. 2A).

Clip the lifting hook onto the lifter's lift point or rigging, making sure the restraining latch flips back into place (figs. 2B-C).

Secure the restraining latch with the locking pin (fig. 2D), to keep the lifter from accidentally slipping off the lifting hook.



**Always use locking pin to secure restraining latch on lifting hook before lifting load.**

## TO ATTACH THE PADS TO A LOAD

**Caution:** Attach this lifter only to vertically oriented loads.

1) Make sure the contact surfaces of the load and vacuum pads are clean (fig. 1A — see “[Pad Cleaning](#)”).

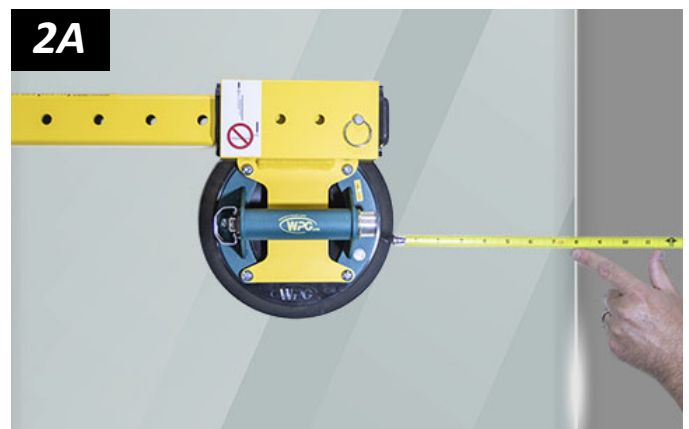
1A



2) Center the pad frame from left to right on the load and position the (uppermost) pads near the top edge, to maximize stability. Make sure all pads will fit on the load and will be loaded evenly (fig. 2A).



Consult the Per-Pad Load Capacity.

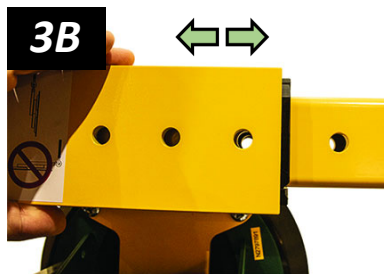
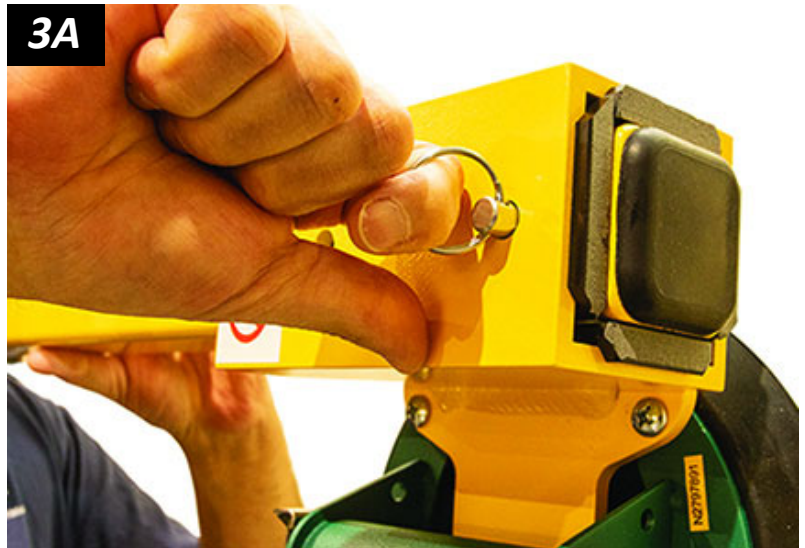


# OPERATION

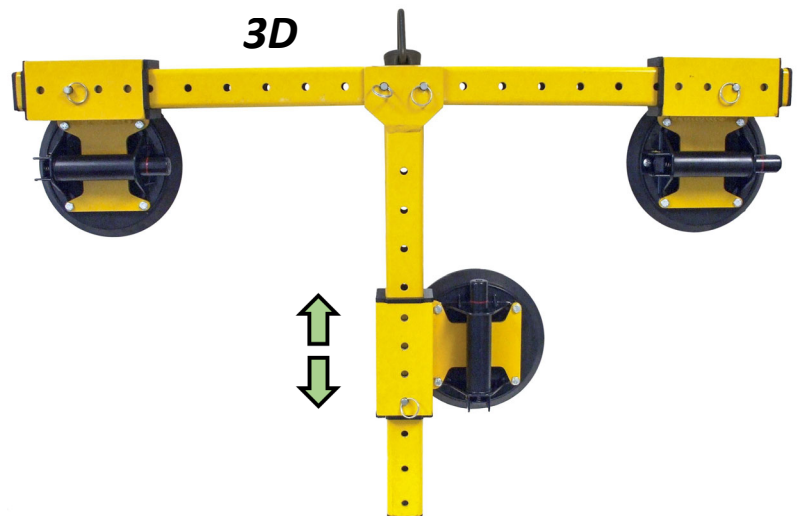
3) Position the sliding hand cup mounts to optimize load support and minimize load overhang:

- 3.1) Remove the cotterless hitch pin from one cup mount (fig. 3A).
- 3.2) Slide the cup mount to the desired position and align the holes for the hitch pin (fig. 3B).
- 3.3) Reinstall the hitch pin to secure the cup mount (fig. 3C).
- 3.4) Repeat these steps for the other cup mount.

*Note: Both cup mounts must be positioned an equal distance from the lift point.*



If the lifter has an adjustable center arm, position its cup mount as needed for optimal effect, too (fig. 3D).

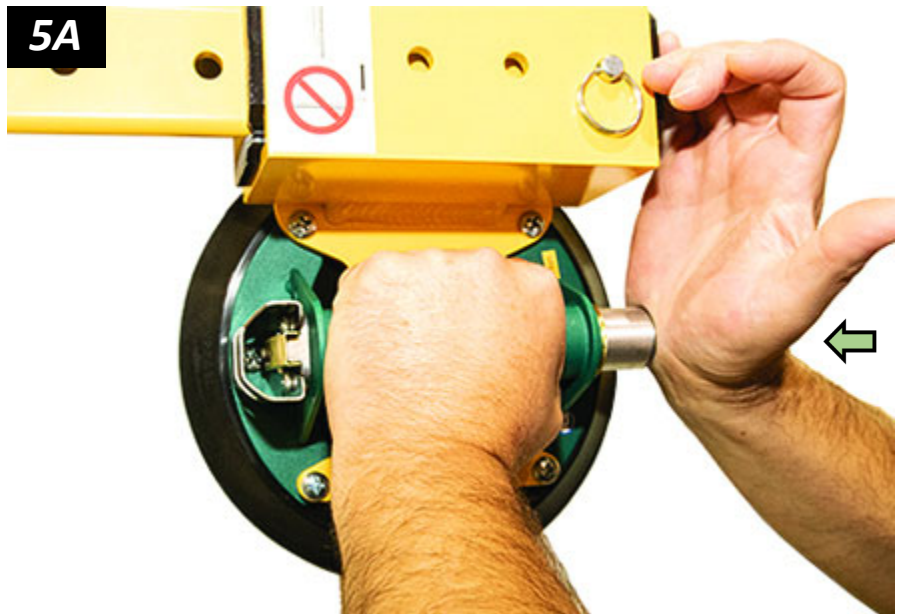


**Caution:** Do not position mounts in a way that vacuum pads contact one another.



# OPERATION

- 4) Place the vacuum pads on the load surface. Make sure the entire sealing edge of each pad is in contact with the surface.<sup>1</sup>
- 5) Pump the plunger of each hand cup (figs. 5A-B) until the red-line vacuum indicator stays hidden (see [“Watching Red-Line Indicators”](#)). Repeat this with all hand cups in use.



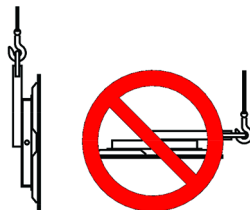
1..... Although a vacuum pad may become distorted during shipping or storage, this condition should correct itself with continued use.

# OPERATION

## TO LIFT AND MOVE THE LOAD



**Never lift load when lifter is in horizontal orientation.**



## Interpreting Red-Line Indicators

A red line on the plunger of each hand cup serves as a vacuum indicator. When the red line is hidden on all hand cups in use, vacuum is sufficient for lifting.

If air leaks back into any hand cup, its red-line indicator will become visible, to signal the reduction in vacuum.



**Never lift load when any red-line indicator is visible (see arrow in fig. 1A), because this action could result in load release and personal injury.**



## Lifting and Controlling a Load



**Never allow anyone to scale any ladder equipped with Ladder Lift.**

**Caution:** Make sure the loaded lifter is ready for lifting and will not slide or swing once tension is applied to the rope. Make sure the lifter and load will not encounter any obstructions on their way up to the installation point.

Use the ladder winch to raise the loaded lifter as needed:

- 1) Crank the hand winch clockwise (fig. 1B) as needed to remove slack in the wire rope, making sure the rope does not become tangled. Then continue cranking until the winch gradually lifts the loaded lifter; you should hear “clicks” that indicate the automatic brake is properly engaged.<sup>1</sup>

**1B**



1..... The winch requires a minimum load of 50 lbs [23 kg] for the automatic braking feature to work correctly (see [“WINCH MANUFACTURER’S INFORMATION”](#)).

# OPERATION


- 2) When the load is only a few inches off the ground, stop cranking the winch and verify that the brake will hold the loaded lifter in place.

 **Never leave suspended load unattended.**

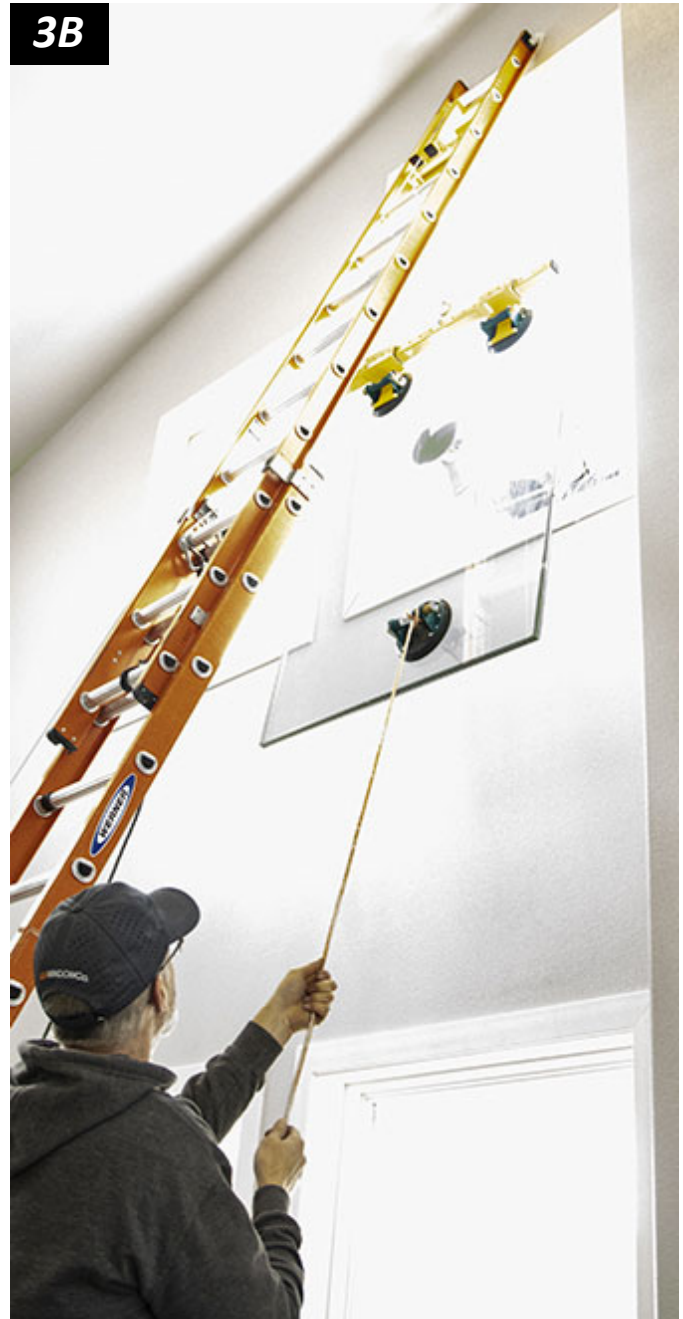
- 3) Resume cranking the winch until the load has reached the desired height, making sure not to exceed the Maximum Lift Height (see “SPECIFICATIONS”).

**Caution:** If necessary, use a guide rope (fig. 3B) or other appropriate means to prevent the lifter and load from rotating.

**Caution:** Avoid cranking the winch too aggressively, which could result in shaking the Ladder Lift.

 **Never force winch to overcome obstacles or snagged rope.**

**Caution:** If cranking the winch becomes significantly more difficult at any time during the lift, discontinue cranking. Forcing the winch could result in injury or damage to the Ladder Lift or the load. Identify the source of the resistance and resolve it before continuing.





# OPERATION

## Watching Red-Line Indicators

The plungers on all hand cups must remain completely visible to the operator throughout the entire lift.



***Always monitor red-line indicators; never leave suspended loads unattended.***

Check all red-line vacuum indicators frequently to make sure the vacuum pads remain securely attached. If a red line appears while lifting:

- 1) Set down the load immediately, making sure to keep everyone away from a suspended load until it can be safely lowered to a stable support.
- 2) Pump the plunger until the red line is hidden again.

If the red line appears frequently, discontinue use and see the “Service” section of the hand cup’s [INSTRUCTIONS](#).



***Stay clear of suspended load while any red-line indicator is visible.***



***Make sure to observe all warnings described in the hand cup’s INSTRUCTIONS.***

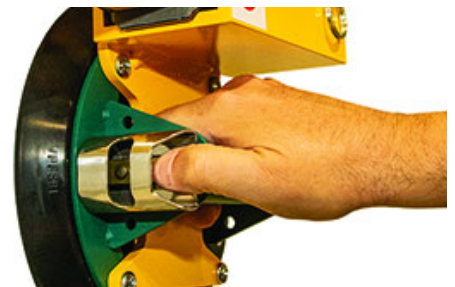
## Releasing a Load



***Make sure load is at rest and fully supported before releasing vacuum pads.***

- 1) Press the valve release lever (fig. 1A) on each hand cup until all the vacuum pads disengage completely from the load.
- 2) Before you lift another load, perform the Every-Lift Inspection (see “[INSPECTION SCHEDULE](#)”).

1A



## Lowering a Lifter

*Note: Follow the same safety guidelines as when raising a load (see “[Lifting and Controlling a Load](#)”).*

Crank the hand winch counterclockwise (fig. 1B) to lower the lifter. ***Make sure to lower an unloaded lifting hook the same way.***

1B



# OPERATION

## AFTER USING THE LADDER LIFT

- 1) Lower the lifter onto a stable support. Then detach the lifting hook from the lift point.

**Caution:** Do not set the lifter on surfaces that could soil or damage vacuum pads. Use optional pad covers (#29353) (fig. 1A), when available, to keep them clean.

1A



**CE/UKCA** — To prevent the lifter from tipping over on relatively horizontal surfaces, place the vacuum pads facedown on a clean, smooth, flat surface.

- 2) Secure the hook to a ladder rung (fig. 2A). Then take up any slack in the wire rope, to prevent the hook from swinging.

2A



**Do not allow hook to swing freely. Otherwise, damage or personal injury could result.**

*Note: Generally, the following steps are reversals of steps found in “[TO ASSEMBLE THE LADDER WINCH](#)”.*

- 3) Move the ladder away from the wall.<sup>1</sup> Then set the ladder on the ground, making sure the winch assembly and pulley assembly are facing upward.
- 4) Remove the cotterless hitch pins from the rung supports of each assembly. Then remove both assemblies from the ladder.
- 5) Reinstall the pins in the rung supports on both assemblies. Then remove the hook from the ladder rung and secure it on the ladder winch.
- 6) Retract the wire rope until the assemblies contact each other (fig. 6A).

6A



**Caution:** Prevent the wire rope from contacting the ground during this step.

<sup>1</sup>..... For extension ladders, it is acceptable to use the ladder winch to retract the extension beforehand.

## Storing the Ladder Lift

**To store the ladder winch:** Place it in a clean, dry location. If necessary, cover it to prevent contamination, corrosion or deterioration of the wire rope.

**To store the vertical lifter:** Place it in a clean, dry location. If desired, disassemble it before storing.

**To store the hand cups:** If you remove them from the lifter, place each of them in its original carrying case (fig. 1A) and store them in a clean, dry location.

**1A**



## Transporting the Ladder Lift

Secure all Ladder Lift components in their original shipping containers with the original shipping materials or equivalent.

# INSPECTIONS AND TESTS

## INSPECTION SCHEDULE

Perform inspections according to the following frequency schedule. If any fault is found, correct it and perform the next most frequent inspection before using the Ladder Lift.

*Note: If a Ladder Lift is used less than 1 day in a 2-week period, perform the Periodic Inspection before using it.*

Action	Every Lift	Daily	Frequent <sup>1</sup> (every 20-40 hrs)	Periodic <sup>2</sup> (every 250-400 hrs)
Examine <u>wire rope</u> , <u>pulley</u> and <u>hand winch</u> for damage, rust or debris. <sup>3</sup>	✓	✓	✓	✓
Examine ladder and weldments of <u>winch assembly</u> and <u>pulley assembly</u> for visual damage. <sup>4</sup>	✓	✓	✓	✓
Check for unusual vibrations, noises or winch resistance during use.	✓	✓	✓	✓
Examine <u>vacuum pads</u> for contaminants or damage (see “ <a href="#">Pad Inspection</a> ”).	✓	✓	✓	✓
Examine load surface for contaminants or debris.	✓	✓	✓	✓
Inspect <u>wire rope</u> as directed in “ <a href="#">Daily Inspection</a> ”.		✓	✓	✓
Examine <u>hand winch</u> for conditions requiring service (see “ <a href="#">WINCH MANUFACTURER’S INFORMATION</a> ”).			✓	✓
Examine lifter’s structure for damage.			✓	✓
Examine <u>hand cups</u> for damage.			✓	✓
Perform “ <a href="#">Vacuum Test</a> ”.			✓	✓
Examine entire Ladder Lift for evidence of: <ul style="list-style-type: none"> <li>looseness, excessive wear or excessive corrosion</li> <li>deformation, cracks, dents to structural or functional components</li> <li>any other hazardous conditions</li> </ul>				✓

1..... The Frequent Inspection is also required whenever the Ladder Lift has been out of service for 1 month or more.

2..... The Periodic Inspection is also required whenever the Ladder Lift has been out of service for 1 year or more. Keep a written record of all Periodic Inspections. If necessary, return the device to WPG or an authorized dealer for repair (see “[REGISTRATION AND LIMITED WARRANTY](#)”).

3..... See “[WIRE ROPE MAINTENANCE](#)” for more information.

4..... Additionally, see the ladder manufacturer’s instructions about inspecting the ladder and evaluating possible damage.

Consult the hand cup's [INSTRUCTIONS](#) for additional inspection requirements.

## TESTING

### Lifter/Load Compatibility Test<sup>1</sup>

- 1) Make sure the hand cups are functioning correctly (see “Vacuum Test” below).
- 2) Thoroughly clean the load surface and the vacuum pads (see “[Pad Cleaning](#)”).
- 3) Place the load in the upright position on a stable support.
- 4) Attach the vacuum pads to the load as previously directed.
- 5) Raise the load a minimal distance, to make sure it is supported by the lifter.
- 6) Watch the red-line vacuum indicators: ***All of them must remain hidden for 5 minutes.*** If not, the load is not compatible with this lifter. Contact WPG for more information.
- 7) Lower the load *after* 5 minutes or *whenever* any red-line indicator begins to appear.



***Take precautions in case load should fall during test.***

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1..... The “[Pad-to-Load Friction Coefficient](#)” can affect the outcome of this test.

# INSPECTIONS AND TESTS


Perform the following tests before placing the Ladder Lift in service *initially, following any repair*, when directed in the “*INSPECTION SCHEDULE*”, or *whenever necessary*:

## Operational Tests

Test all features and functions of the Ladder Lift (see “OPERATING FEATURES” and “OPERATION”).

## Vacuum Test


- 1) Clean the face of each vacuum pad (see “*Pad Cleaning*”).
- 2) Attach the vacuum pads as previously directed to a clean, smooth, scratch-free piece of glass or metal.<sup>1</sup> ***Do not lift the test material during the test.***
- 3) Monitor the hand cups’ red-line vacuum indicators: ***All red-line indicators must remain hidden for 2 hours.*** If not, service the hand cup(s) as directed in their *INSTRUCTIONS* and repeat the test.


 ***Never use lifter with hand cup that has failed test.***
- 4) Correct any fault before resuming normal operation of the lifter.

## Load Tests<sup>2</sup>

To verify that the Ladder Lift can lift at least 100% of its Maximum Load Capacity, a qualified person must perform or supervise the following steps ...<sup>3</sup>

- **For the ladder winch:**

- 1) Place a test load that weighs between 100% and 110% of the Ladder Lift’s Maximum Load Capacity and has the appropriate “*LOAD CHARACTERISTICS*” on a stable support.
- 2) Attach the load to the Ladder Lift as previously directed.
- 3) Raise the load to a minimal distance as previously directed.

 ***Take precautions in case load should fall during test.***
- 4) Release the handle of the hand winch, to make sure the load is supported by the Ladder Lift.

1..... The material should have either a flat surface or no more curvature than the lifter is designed for, if any.

2..... An equivalent simulation may also be used. Contact WPG for more information.

3..... A “qualified person” has successfully demonstrated the ability to solve problems relating to the subject matter and work, either by possessing a recognized degree in an applicable field or a certificate of professional standing, or by possessing extensive knowledge, training and experience.

# INSPECTIONS AND TESTS

5) Lower the load a minimal distance. Then repeat step 4.

6) Allow the Ladder Lift to hold the load for 5 minutes. The load must not slip or fall during this time period. If it does, perform a Periodic Inspection of the Ladder Lift.



***Never use winch that has failed test.***

Make sure to inspect the winch as indicated under “**WINCH MANUFACTURER’S INFORMATION**”. Correct any deficiency that is found and retest the Ladder Lift.

7) Prepare a written report of the test and keep it on file.

- **For the vertical lifter:**

1) Use a test load that weighs 125% ( $\pm 5\%$ ) of the Maximum Load Capacity and has the appropriate “**LOAD CHARACTERISTICS**”.



2) Attach the vacuum pads to the load as previously directed.

3) Position the load to produce the greatest stress on the lifter consistent with “**INTENDED USE**”.

4) Raise the load a minimal distance and leave it suspended for 2 minutes.



***Take precautions in case load should fall during test.***

5) Once the test is completed, lower the load for release as previously directed.

6) Inspect the lifter and hand cups for any stress damage, and repair or replace components as necessary to successfully pass the test.



***Never use lifter with hand cup that has failed test.***

7) Prepare a written report of the test and keep it on file.



# MAINTENANCE

Notes: Maintenance must be performed whenever a deficiency is indicated by “**INSPECTIONS AND TESTS**” and completed before resuming normal operation of the lifter. Consult the hand cup INSTRUCTIONS for additional maintenance information.

## VACUUM PAD MAINTENANCE

### Pad-to-Load Friction Coefficient

The friction coefficient represents the lifter's ability to resist load slippage. The Maximum Load Capacity is based on a friction coefficient of 1, as determined by testing of clean, new, standard rubber vacuum pads on clean, dry, regular glass. ***If the lifter is used under any other conditions, a qualified person must first determine the effective lifting capacity.***<sup>1</sup>

Long-term exposure to heat, chemicals or UV light can reduce the friction coefficient of vacuum pads. Replace pads every 2 years or more often, when necessary.

### Pad Inspection

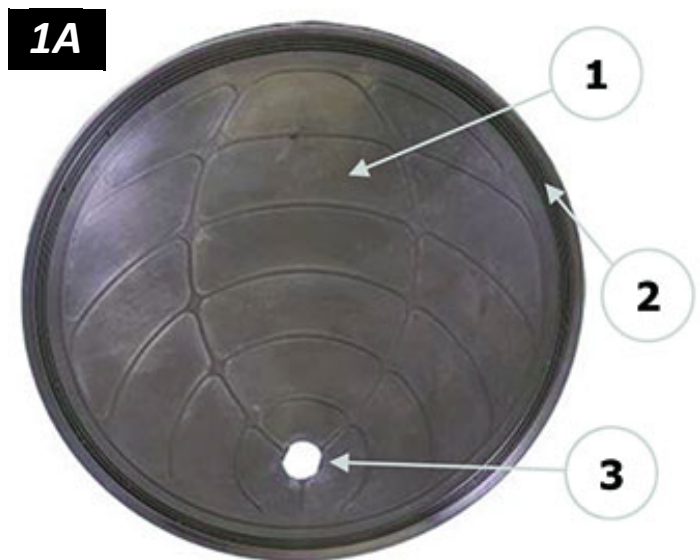
Inspect each vacuum pad (fig. 1A) according to the “**INSPECTION SCHEDULE**” and correct the following faults before using the hand cups (see hand cup **INSTRUCTIONS**, when applicable):

- Contaminants on the face (item 1 in fig. 1A) or sealing edges (item 2 in fig. 1A).
- Felt filter (item 3 in fig. 1A) missing from face.



**Replace any pad that has damaged sealing edges.**

- Nicks, cuts, deformation or abrasions in sealing edges.
- Wear, stiffness or glaze.



1..... A “qualified person” has successfully demonstrated the ability to solve problems relating to the subject matter and work, either by possessing a recognized degree in an applicable field or a certificate of professional standing, or by possessing extensive knowledge, training and experience.



# MAINTENANCE

## Pad Cleaning

- 1) Regularly clean the face of each vacuum pad (fig. 1A), using soapy water or other mild cleansers to remove oil, dust and other contaminants.

1A



***Never use harsh chemicals on vacuum pad.***

Solvents, petroleum-based products (including kerosene, gasoline and diesel fuel) or other harsh chemicals can damage vacuum pads.

Many rubber conditioners can leave a hazardous film on vacuum pads.



***Never use rubber conditioners on vacuum pad.***

- 2) Prevent liquid from entering the vacuum pump through the suction hole on the pad face.
- 3) Remove the felt filter and wipe the pad face clean, using a clean sponge or lint-free cloth to apply the cleanser.<sup>1</sup>
- 4) Allow the pad to dry completely and reinstall the felt filter.
- 5) Repeat steps 1-4 for all vacuum pads before using the hand cups.

## WIRE ROPE MAINTENANCE

### Correct Use and Care

Lubricate the wire rope on a regular basis, to reduce internal friction and prevent corrosion. When the rope is in use, prevent the ground or other objects from scraping, nicking, crushing or inducing sharp bends in the rope. Do not drag rope, especially through dirt, mud or water.

1..... A brush with bristles *that do not harm rubber* can help remove contaminants clinging to sealing edges. If these cleaning methods are not successful, contact WPG or an authorized dealer for assistance.

## Daily Inspection

Examine the *portion of wire rope used in daily service* and replace the rope immediately upon finding any of the following forms of obvious visual damage:

- Kinking, crushing, unstranding, birdcaging, or core protrusion
- Rust or other corrosion
- Displacement of the main strand, or cuts or breaks in any strand

If there is concern that the rope could be too worn or unsafe for any reason, a more thorough Periodic Inspection should be performed.

## Periodic Inspection

The *entire length of wire rope* (including lifting hook, thimble and wire clamp) must be inspected by a qualified person.<sup>1</sup> This person must note any wear indicating a loss in strength, and judge whether further use of the rope constitutes a hazard. Such wear may include, but is not limited to. ...

- Damage outlined in the Daily Inspection.
- Reduction of rope diameter below nominal (5/32" [4 mm]) from loss of core support, internal or external corrosion, or wear of the outside wires.
- Severely corroded or broken wires at the end connections.
- Severely corroded, cracked, bent, worn or improperly applied end connections.

If a wire rope exhibits any of the following criteria, it should be removed from service and replaced with another suitably rated rope:

- Broken or cut strands/wires
- Wear of 1/3 the original diameter of the outside individual wires
- Kinking, crushing, birdcaging, main strand displacement or core protrusion
- Evidence of heat damage from any cause
- Reduction from nominal diameter 5/32" [4 mm] of more than 1/64" [0.4 mm]

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1..... A "qualified person" has successfully demonstrated the ability to solve problems relating to the subject matter and work, either by possessing a recognized degree in an applicable field or a certificate of professional standing, or by possessing extensive knowledge, training and experience. The qualified person must keep a written of the Periodic Inspection.

## HAND WINCH MAINTENANCE

See “[WINCH MANUFACTURER’S INFORMATION](#)” about hand winch maintenance.

## PULLEY MAINTENANCE

Keep the pulley lubricated. If at any time the pulley becomes cracked, chipped, dented or otherwise damaged, replace it immediately. Operating with a damaged pulley puts it at risk of failing, causing a jam that cannot be cleared or damaging the wire rope.

## LADDER MAINTENANCE

Refer to the ladder manufacturer’s instructions about ladder maintenance.

# REPLACEMENT PARTS

## LADDER WINCH PARTS

Stock No.	Description	Qty.
66472MM	Hand Winch w/ Automatic Brake <i>Note: See "WINCH MANUFACTURER'S INFORMATION" for specific parts.</i>	1
66413	Sheave w/ Hub (for 5/32" Wire Rope)	1
59660AM	5/32" Wire Rope Assembly (includes lifting hook and locking pin)	1
49110	End Plug – 2" x 2" x 3/16" Tubing Size	8
13520	Cotterless Hitch Pin – 3/8" x 3"	4
13220	Hairpin Cotter Pin	1

## VERTICAL LIFTER PARTS

Stock No.	Description	Qty.
97933	Adjustable Center Arm (option)	1
91500CRL	Hand Cup – Model N4950 / 8" [20 cm] Diameter — CRL Version	2 / 3
91500	Hand Cup – Model N4950 / 8" [20 cm] Diameter	2 / 3
91400CRL	Hand Cup – Model N4000 / 8" [20 cm] Diameter — CRL Version	2 / 3
91400	Hand Cup – Model N4000 / 8" [20 cm] Diameter	2 / 3
65334	Hoist Ring – 180° Pivot	1
49110	End Plug – 2" x 2" x 3/16" Tubing Size	2 / 3
29353	Pad Cover (option)	2 / 3
29353CRL	Pad Cover (option)	2 / 3
13522	Cotterless Hitch Pin – 3/8" x 3-1/2"	2
13520	Cotterless Hitch Pin – 3/8" x 3" (for Center Arm option)	2
10003	Machine Screw – 1/4-20 x 3/4" (for Sliding Hand Cup Mounts)	8 / 12

**SERVICE ONLY WITH IDENTICAL REPLACEMENT PARTS,  
AVAILABLE AT [WPG.COM](http://WPG.COM) OR THROUGH AN AUTHORIZED WPG DEALER**

# REGISTRATION AND LIMITED WARRANTY

## TO REGISTER THIS WPG PRODUCT

Go to the [PRODUCT REGISTRATION](#) page at [wpg.com](#) and complete the form. Registration keeps you advised of important updates and notifications, and simplifies inquiries to WPG regarding your product. Registration is **not** required to activate your Limited Warranty (see next section).

## ABOUT THE LIMITED WARRANTY

*Note: Read the [WARRANTY RETURN FORM](#) at [wpg.com](#) for important details about the Limited Warranty.*

Wood's Powr-Grip® (WPG) products are warranted to be free from defects in manufacturing and materials for 1 year from the date of purchase.

If a problem develops during the warranty period, follow the instructions below to obtain warranty service. If inspection shows that the product has a defect, WPG will repair or replace the product without charge.



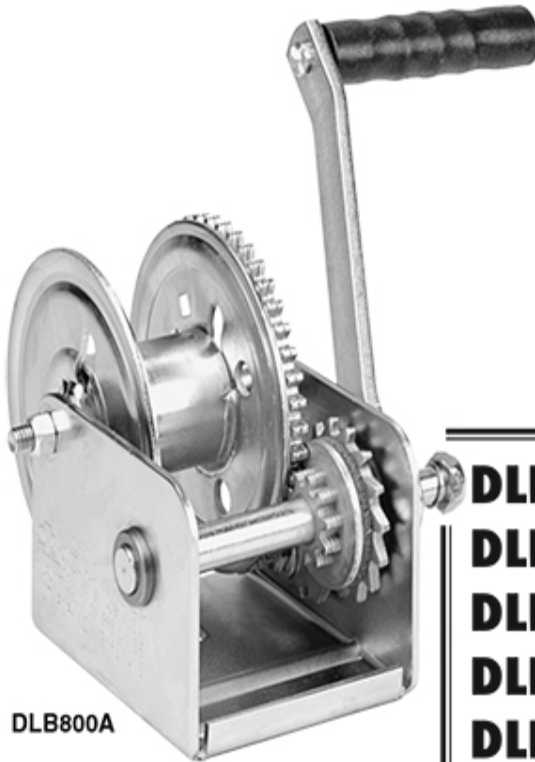
## Obtaining Warranty Service or Repair Service

**For customers in the U.S. and Canada:** Go to the [EXCHANGES, REPAIRS, & WARRANTIES](#) page at [wpg.com](#) and click the applicable link. Alternatively, you may contact the WPG Technical Service Department (see contact information below).

**For customers in all other localities:** Contact the WPG Technical Service Department (see contact information below) or your dealer for assistance.

ADDRESS	EMAIL	PHONE
Wood's Powr-Grip Co., Inc. 908 West Main St. Laurel, MT USA 59044	<a href="mailto:contactus@wpg.com">contactus@wpg.com</a>	(1) 800-548-7341 (1) 406-628-8231

# WINCH MANUFACTURER'S INFORMATION



**DLB350A**  
**DLB350AG**  
**DLB800A**  
**DLB800AG**  
**DLB1200A**  
**DLB1200AG**  
**DLB1500A**  
**DLB1500AG**  
**DLB2000AG**  
**DLB2500A**

MANUFACTURED BY

MADE IN U.S.A.



**DUTTON-LAINSON**  
**COMPANY** *SINCE 1886*

451 West 2nd St. • Hastings, NE 68902-0729 • TEL: 402-462-4141 • FAX: 402-460-4612  
Web Site [www.dutton-lainson.com](http://www.dutton-lainson.com)

Dwg. No. 206306EE 6/20

**ISO 9001 Certified Q.M.S.**

# WINCH MANUFACTURER'S INFORMATION

Original Instructions

ENGLISH



**WARNING** READ INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING TO INSTALL, OPERATE OR SERVICE THIS WINCH. FAILURE TO COMPLY WITH INSTRUCTIONS COULD RESULT IN SERIOUS OR FATAL INJURY. RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE.



## IMPORTANT SAFETY INFORMATION

- This brake winch is built for multi-purpose hauling and lifting operations. It is not to be used as a hoist for lifting, supporting or transporting people, or for loads over areas where people could be present.
- Respect this winch. High forces are created when using a winch, creating potential safety hazards. It should be operated and maintained in accordance with instructions. Never allow children or anyone who is not familiar with the operation of the winch to use it. A winch accident could result in personal injury.
- Check winch for proper operation on each use. Do not use if damaged. Seek immediate repairs.
- Never exceed rated capacity. Excess load may cause premature failure and could result in serious personal injury. This winch is rated on first layer of cable on the hub. Using more layers of cable increases the load on the winch.
- Never apply load on winch with cable fully extended. Keep at least three full turns of cable on the reel. Check cable on every use. Replace at the first sign of kinks, broken wires, deformation or any other damage.
- Secure load properly. When winching operation is complete, do not depend on winch to support load.
- Operate with hand power only. This winch must not be operated with a motor of any kind. If the winch cannot be cranked easily with one hand, it is probably over-loaded.
- If winch will be used in freezing, icy conditions, apply silicone spray to ratchet pawl and spacer items, V, W, X, or Y. Do not spray other brake mechanism parts.

**ASSEMBLY** – Thread the handle onto the winch drive shaft and be certain that a clicking noise is produced when the handle is turned clockwise. Install the spring and locknut (Items E and G) on the end of the drive shaft as shown on parts drawing. These parts may appear to serve no function, but they provide several important fail-safe features, and must not be altered or removed.

## WINCH MOUNTING AND CABLE

**ATTACHMENT** – For maximum strength and safety, this winch must be mounted with three 3/8" bolts (M10), washers and lock washers. Use Grade 8 for 1500 lb/680 kg or greater capacity. (See parts drawing). Using fewer bolts or alternate locations will result in damage to the winch base and the winch may malfunction.

Attach cable or rope by method shown in sketch.

**OPERATING INSTRUCTIONS** – Wind cable on winch reel by turning winch handle in clockwise direction. This should produce a loud, sharp, clicking noise. The load will remain in position when the handle is released. Wind cable off the winch reel by turning winch handle counterclockwise (no noise will be produced). The load will remain in position when the handle is released, but for extra security it is recommended that the handle be turned clockwise until at least two clicks are heard. This will add extra tightness to the brake mechanism. Always satisfy yourself that the winch is holding the load before releasing the winch handle.

**IMPORTANT:** Sufficient load must be applied to the cable to overcome internal resistance and operate the brake properly, otherwise turning the crank handle counterclockwise will only remove the han-

dle from the shaft – the reel will not turn. The minimum operating load requirement is 50 lb (23 kg) for Models DLB350A, DLB350AG, DLB800A, DLB800AG, DLB1200A and DLB1200AG, 75 lb (34 kg) for DLB1500A and DLB1500AG, 175 lb (80 kg) for DLB2000AG and DLB2500A.

A lockout lever for the purpose of 'freewheeling' cable out when there is no load on the winch can be added to all DLB winches except the 350 lb (160 kg) models. To 'freewheel' cable out, simply turn the handle counterclockwise until lockout lever can be engaged behind handle hub. In this condition cable can be easily pulled from the winch drum.

**WARNING:** Never put winch in freewheel mode if any potential for a load on the cable exists. Engaging the lockout lever keeps the winch from stopping in the event that a load is accidentally applied.

**WINCH MAINTENANCE** – In order to insure maximum performance, a periodic inspection for any necessary preventive maintenance must be made. Check at least once annually and more frequently when the winch is exposed to an environment which is particularly dirty or wet. For continued smooth performance and increased life, occasionally grease gears, reel shaft and handle threads. An

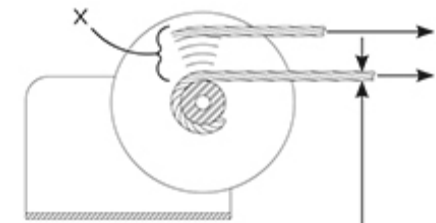
occasional drop of oil on the drive shaft bearings is also recommended. If winch will be used in freezing, icy conditions, apply silicone spray to ratchet pawl and spacer items V, W, X or Y. **Note: Do not oil or grease brake mechanism items H and J.**

Keep winch in good working order. Damaged or severely-worn parts create unnecessary dangers and could result in personal injury or property damage.



**NOT FOR THE MOVEMENT OF HUMAN BEINGS**

# WINCH MANUFACTURER'S INFORMATION



DLB350A DLB350AG	3.2:1
DLB800A DLB800AG	4.4:1
DLB1200A DLB1200AG	5.4:1
DLB1500A DLB1500AG	5.4:1
DLB2000AG DLB2500A	17.3:1



	X	
DLB350A, DLB350AG	10 1	110 lb/50kg 350 lb/159kg
DLB800A, DLB800AG	9 1	330 lb/150kg 800 lb/363kg
DLB1200A, DLB1200AG	8 1	551 lb/250kg 1200 lb/544kg
DLB1500A, DLB1500AG	6 1	728 lb/330kg 1500 lb/680kg
DLB2000AG	5 1	959 lb/435kg 2000 lb/905kg
DLB2500A	5 1	1308 lb/593kg 2500 lb/1134kg

DLB350A	1/8" (2000 lb) x 84'
DLB350AG	3mm (480kg) x 24.9m
DLB800A	3/16" (4200 lb) x 68'
DLB800AG	4mm (1080kg) x 23.0m
DLB1200A	7/32" (5600 lb) x 69'
DLB1200AG	5mm (1640kg) x 19.7m
DLB1500A	1/4" (7000 lb) x 60'
DLB1500AG	6mm (2040kg) x 15.1m
DLB2000AG	7mm (2720kg) x 8.9m
DLB2500A	5/16" (9800 lb) x 34'

**ENGLISH – DECLARATION OF CONFORMITY** - Dutton-Lainson Company, Hastings, NE 68902-0729 U.S.A. manufactures and declares that the winch identified above fulfills all relevant provisions of the Directive 2006/42/EC. 'G' models also conform to harmonized standards EN 13157 and EN ISO 12100. The technical file may be obtained from the persons listed below.

**DEUTSCH – KONFORMITÄTSERKLÄRUNG** - Dutton-Lainson Company, Hastings, NE 68902-0729, USA, der Hersteller der Winde, erklärt, dass die oben angegebene Winde alle relevanten Bestimmungen der Richtlinie 2006/42/EG erfüllt. Die „G“-Modelle entsprechen außerdem den harmonisierten Normen EN 13157 und EN ISO 12100. Die technischen Unterlagen sind bei den nachfolgend aufgeführten Personen erhältlich.

**ITALIANO – DICHIARAZIONE DI CONFORMITÀ** - Il fabbricante, Dutton-Lainson Company, Hastings, NE 68902-0729 USA, dichiara che il verricello di cui sopra è conforme alle disposizioni della direttiva 2006/42/CE e che i modelli "G" sono inoltre conformi alle norme armonizzate EN 13157 e EN ISO 12100. Il fascicolo tecnico può essere richiesto agli individui indicati qui di seguito.

**NORSK – SAMSVARERKLÆRING** - Dutton-Lainson Company, Hastings, NE 68902-0729 U.S.A. produserer og erklærer at vinsjen angitt ovenfor oppfyller alle relevante krav i direktivet 2006/42/EC. "G"-modellene samsvarer også med de harmoniserte standardene EN 13157 og EN ISO 12100. Den tekniske filen kan skaffes fra personene som er opplistet nedenfor.

**PORTUGUÊS – DECLARAÇÃO DE CONFORMIDADE** - A empresa Dutton-Lainson Company, Hastings, NE 68902-0729, nos E.U.A., fabrica o guincho acima identificado e declara que este cumpre todas as provisões relevantes da Directiva 2006/42/CE. Os modelos "G" cumprem também as normas harmonizadas EN 13157 e EN ISO 12100. Poderá obter o processo técnico junto das pessoas indicadas abaixo.

**ESPAÑOL – DECLARACION DE HOMOLOGACION** - Dutton-Lainson Company, de Hastings, NE 68902-0729 EE.UU., fabrica y declara que el cabrestante arriba identificado satisface todas las provisiones pertinentes de la directriz 2006/42/EC. Los modelos "G" también satisfacen las normas armonizadas EN 13157 y EN ISO 12100. El archivo técnico puede obtenerse de las personas mencionadas a continuación.

**SVENSKA – FÖRSÄKRAN OM ÖVERENSSTÄMMELSE** - Dutton-Lainson Company, Hastings, Nebraska 68902-0729 U.S.A. tillverkar och försäkrar att denna vinsch överensstämmer med alla tillämpliga bestämmelser i Direktiv 2006/42/EC. "G"-modeller är också förenliga med samordnade normer EN 13157 och EN ISO 12100. Den tekniska filen kan erhållas från de personer, som upptas nedan.

**ΕΛΛΗΝΙΚΑ – ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ** - H Dutton-Lainson Company, Hastings, NE 68902-0729 U.S.A. κατασκευάζει και δηλώνει ότι το βαρούλκο που καθορίζεται παραπάνω πληροί όλες τις σχετικές διατάξεις της Οδηγίας 2006/42/ΕΚ. Τα μοντέλα "G" επίσης συμμορφώνονται με τα εναρμονισμένα πρότυπα EN 13157 και EN ISO 12100. Ο τεχνικός φάκελος είναι διαθέσιμος από τα άτομα τα οποία αναγράφονται παρακάτω.

**DANSK – OVERENSSTEMMELSEERKLÆRING** - Dutton-Lainson Company, Hastings, NE 68902-0729 USA fremstiller og erklærer, at skraldespillet identificeret ovenfor er i overensstemmelse med alle relevante krav i direktiv 2006/42/EU. "G"-modeller er ligeledes i overensstemmelse med de harmoniserede standarder EN 13157 og EN ISO 12100. Den tekniske fil kan rekvireres gennem de nedennævnte personer.

**SUOMI – VAATIMUSTENMUKAISUUSVAKUUTUS** - Dutton-Lainson Company, osolite Hastings, NE 68902-0729 U.S.A., vakuuttaa tämän vintturin valmistajana, että tämä vintturi noudattaa direktiivin 2006/42/EY olennaisia määräyksiä. G-mallit ovat myös harmonisoitujen standardien EN 13157:n ja EN ISO 12100 mukaisia. Tekniset tiedot on saatavissa alla ilmoitetuilta henkilöiltä.

**NETHERLANDS – VERKLARING VAN OVEREENSTEMMING** - Dutton-Lainson Company, Hastings, NE 68902-0729 VS, fabrikant, verklaart dat de bovengenoemde lier voldoet aan alle betreffende bepalingen van richtlijn 2006/42/EC. "G" modellen voldoen ook aan de geharmoniseerde normen EN 13157 en EN ISO 12100. Het technische bestand kan bij de hierna vermelde personen worden aangevraagd.

**FRANÇAIS – DÉCLARATION DE CONFORMITÉ** - Dutton-Lainson Company, Hastings, NE 68902-0729 U.S.A. construit le treuil mentionné ci-dessus et déclare qu'il répond à toutes les dispositions applicables de la Directive 2006/42/CE. Les modèles "G" sont également conformes aux normes harmonisées EN 13157 et EN ISO 12100. Le dossier technique peut être obtenu auprès des personnes indiquées ci-dessous.

Hastings, NE USA  
June 16, 2020

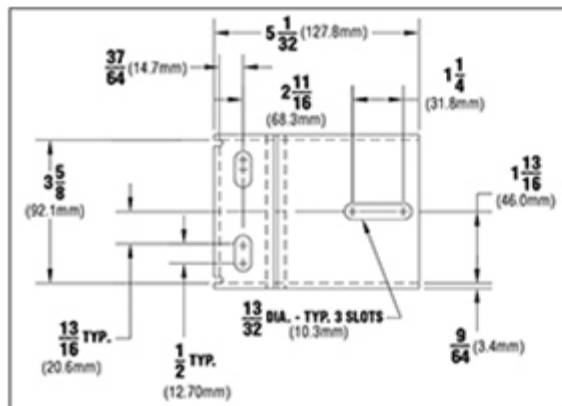
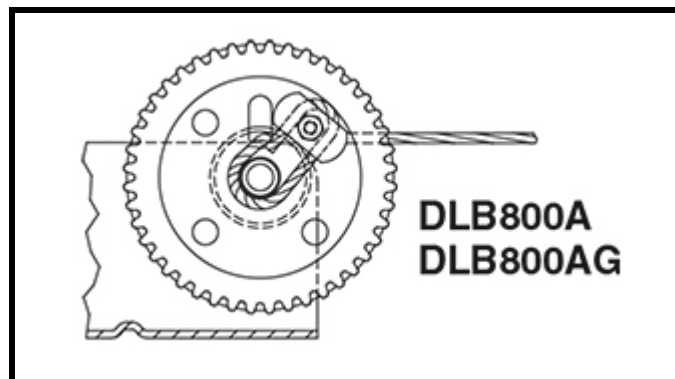
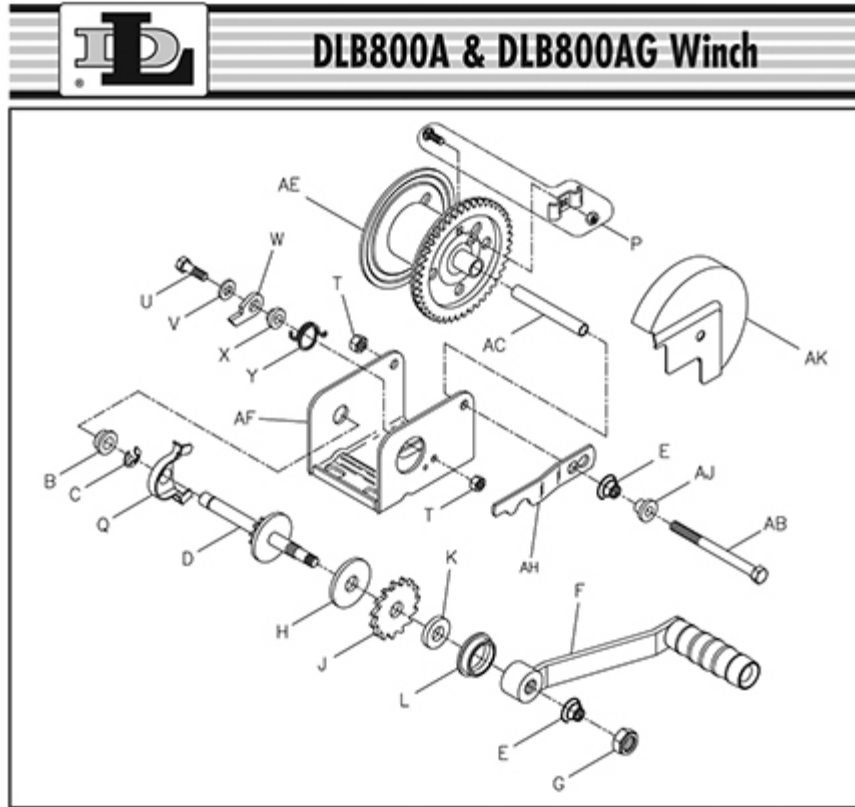
*Jeff Dutton*

Director of Engineering  
Dutton-Lainson Company

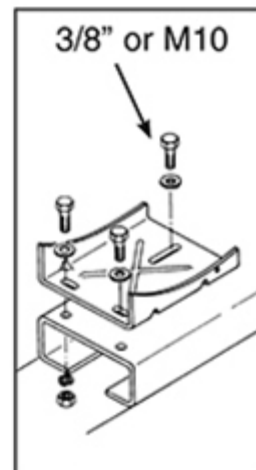
Jack Singleton  
Eurowarehouse BV  
De Amstel 11  
8253PC Dronten  
The Netherlands



# WINCH MANUFACTURER'S INFORMATION



DLB800A, DLB800AG



# WINCH MANUFACTURER'S INFORMATION

## PARTS LIST

Ref	Description	Part No.	Ref	Description	Part No.
A	Base	404900*	AH	Lockout Lever (optional)	404579
A	Base – DLB 350AG	404945*	AJ	Spacer (optional)	406160
B	Bushing	204012	AK	Gear Cover (optional)	
C	"E" Ring	205116		Painted Bronze	5240346
D	Drive Shaft	306061		Plated	5240361
E	Spring	204364	AL	Base	404896*
F	Handle – 7" (DLB350AG)	5703061		Base – DLB 1200AG	404897*
	(DLB800AG)		AM	Bushing	204009
	Handle – 9-3/8" (DLB1200AG)	5703103	AN	Gear Cover – "G" Series	406115
G	Nut	205033	AQ	Gear Cover (optional)	
H	Pressure Plate	204362		Painted Bronze	5240122
H	Pressure Plate "G" Series	206620		Plated	5240221
J	Ratchet Wheel	404164	AR	Spacer Washer	205120
K	Pressure Washer	404163	AS	Reel (DLB1200AG)	304754*
L	Bushing	206328	AS	Reel – 1-7/8" (optional)	304768*
M	Nut	205316	AT	Base	404891*
N	Bolt	205332		Base – DLB 1500AG	404892*
P	Rope Clamp Kit	5243506	AU	Drive Shaft	304760
Q	Gear Cover – "G" Series	406114	AV	Handle – 9-3/8" (DLB2000AG)	5703103
S	Reel	306075*		Handle – 12" (DLB1500AG)	5703111
	Reel - DLB350AG	306167	AW	Bolt	204804
T	Locknut	204803	AX	Reel Spacer	204808
U	Bolt	205167	AY	Gear Cover (optional)	
V	Flat Washer	205055		Painted Bronze	5240387
W	Pawl	404409		Plated	5240403
	Pawl – "G" Series	404190	AZ	Reel	304755*
X	Spacer	404166	BA	Base – DLB2500A	406047*
	Spacer – "G" Series	404191		Base – DLB 2000AG	404899*
Y	Spring	204363	BB	Spacer	404434
	Spring – "G" Series	204460	BC	Bolt	205006
Z	Reel Spacer	207183	BD	Flat Washer	205139
AB	Bolt	203161	BE	Intermed. Drive Shaft	306035
AC	Reel Spacer	204807	BF	Nut	205014
AE	Reel	306062*	BH	Reel	304756*
AF	Base	404893*	BJ	Drive Hub (Optional)	304562
	Base – DLB 800AG	404895*	BM	Handle w/Lock Pin (Opt)	5703426
			BN	Handle Hub (Optional)	304630
			BP	Special Nut (Optional)	404970
			BQ	"E" Ring	206162
			BR	Bushing	206163
			BS	Bolt	205335

To order replacement parts contact:

### Dutton-Lainson Company

www.dlco.com

Tel: 800-569-6577

Fax: 402-460-4612

e-mail: DLsales@dutton-lainson.com

### In Europe Contact

Eurowarehouse BV

De Amstel 11

8253PC Dronten

The Netherlands

Tel: +31(0) 321-337349

Email:

info@eurowarehouse.nl

\*Specify Color When Ordering

# WINCH MANUFACTURER'S INFORMATION

-  **WARNING** Component parts should not be interchanged with the component parts of any other Dutton-Lainson model or other manufacturer's winches.
-  **ACHTUNG:** Die Komponenten dürfen nicht gegen andere Komponenten anderer Modelle der Dutton-Lainson Company oder der Winden anderer Hersteller ausgetauscht werden.
-  **ATTENZIONE:** Questi componenti non devono essere utilizzati in modo intercambiabile con i componenti di qualsiasi altro modello della Dutton-Lainson Company o con i verricelli di un altro fabbricante.
-  **ADVARSEL:** Disse komponentdelene skal ikke byttes om med komponentdeler for noen annen vinsj verken fra Dutton-Lainson Company eller noen annen produsent.
-  **ADVERTENCIA:** No se debe intercambiar estas piezas con las de algún otro modelo de cabrestante de la Dutton-Lainson Company o de otro fabricante.
-  **VARNING:** Byt inte ut komponentdelarna mot komponentdeler från andra vinschar tillverkade av Dutton-Lainson Company eller från andra tillverkares vinschar (eller tvärtom).
-  **ΠΡΟΕΙΔΟΠΟΙΗΣΗ** Αυτά τα συνθετικά μέρη να μην αντικατασταθούν με συνθετικά μέρη άλλου μοντέλου της εταιρίας Δυττον-Λαινσον ή βαρούλκα άλλου εργοστασίου.
-  **ADVARSEL:** Disse komponentdele må ikke blive udskiftet med komponentdele, der hører til andre modeller fra Dutton-Lainson Company eller til spil af andre fabrikater.
-  **VAROITUS:** Tämän mallin ja muiden Dutton-Lainson Companyn tai muiden valmistajien vintturien osia ei saa vaihtaa keskenään.
-  **WAARSCHUWING:** Deze onderdelen mogen niet verwisseld worden met de onderdelen van andere liermodellen van Dutton-Lainson Company of van lieren van andere fabrikanten.
-  **MISE EN GARDE:** Ces composants ne doivent pas être utilisés de manière interchangeable avec les composants d'aucun autre modèle de Dutton-Lainson Company ou avec les treuils d'un autre fabricant.
-  **ADVERTÊNCIA:** Esses componentes não devem ser intercambiados com componentes de nenhum outro modelo da Dutton-Lainson Company nem de guinchos de outros fabricantes.

**ENGLISH**-To obtain a copy of the warranty in English, send a self-addressed envelope to: Dutton-Lainson Company; P.O. Box 729; Hastings NE 68902-0729; U.S.A.

**DEUTSCH**-Wenn Sie eine deutsche Kopie der Garantibestimmungen erhalten möchten, senden Sie bitte einen adressierten Rückumschlag an: Dutton-Lainson Company; P.O.Box 729; Hastings NE 68902-0729; USA

**ITALIANO**-Per ricevere una copia della garanzia in italiano, inviare una busta riportante il proprio indirizzo a: Dutton-Lainson Company, P.O. Box 729, Hastings NE 68902-0729 USA.

**NORSK**-En kopi av denne garantien på norsk fås ved å sende en konvolutt med eget navn og adresse, til Dutton-Lainson Company, P.O. Box 729, Hastings NE 68902-0729, USA

**PORTUGUÊS**-Para obter uma cópia da garantia em português, envie um envelope com a sua morada para: Dutton-Lainson; P. O. Box 729; Hastings NE 68902-0729; E.U.A.

**ESPAÑOL**-Para obtener una copia de la garantía en español, envíe un sobre con su dirección impresa a: Dutton-Lainson Company, P.O. Box 729; Hastings NE 68902-0729 EE.UU.

**SVENSKA**-För att erhålla ett exemplar av garantin på svenska skicka ett adresserat kuvert till: Dutton-Lainson Company, P.O.Box 729, Hastings NE 68902-0729 U.S.A.

**ΕΛΛΗΝΙΚΑ**-Για να λάβετε ένα αντίγραφο της εγγύησης στα Ελληνικά, στείλτε ένα φάκελο εσωκλείοντας τα ταχυδρομικά τέλη αποστολής στην εξής διεύθυνση: Dutton-Lainson Company, P.O.Box 729, Hastings NE 68902-0729 U.S.A..

**DANSK**-Man kan få garantibeviset på dansk ved at sende en svarkuvert til: Dutton-Lainson Company, P.O. Box 729, Hastings NE 68902-0729, USA.

**SUOMI**-Takuutodistuksesta saa suomenkielisen kopion lähettämällä riittävällä postmaksulla ja vastaanottajan osoitteella varustetun kirjekuoren osoitteeseen Dutton-Lainson Company, P.O. Box 729, Hastings NE 68902-0729, USA.

**NEDERLANDS**-Voor een exemplaar van de garantie in het Nederlands dient u een aan u zelf geadresseerde enveloppe te zenden naar: Dutton-Lainson Company; P.O. Box 729; Hastings NE 68902-0729; U.S.A.

**FRANÇAIS**-Pour obtenir une copie de la garantie en français, envoyer une enveloppe à votre nom et adresse à : Dutton-Lainson Company; P.O. Box 729; Hastings NE 68902-0729; U.S.A.