



KD VERTICAL BOAT LIFT ASSEMBLY MANUAL

Models: KDV315, KDV415, KDV515



DAKA Corporation

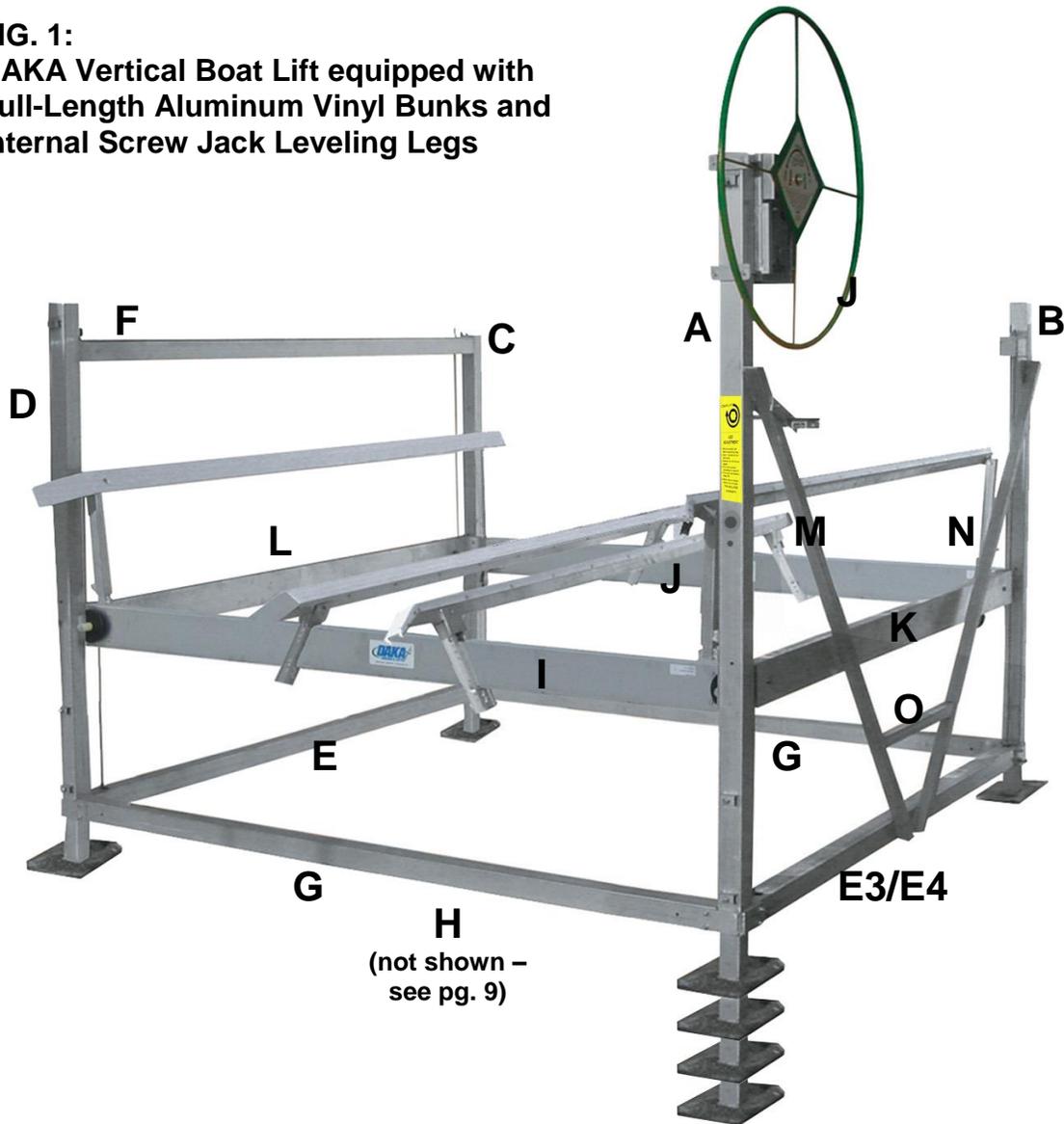
955 Industrial St. N.E. • Pine City, Minnesota 55063

Phone: 320-629-6737 • Fax 320-629-3677

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FIG. 1:
DAKA Vertical Boat Lift equipped with
Full-Length Aluminum Vinyl Bunks and
Internal Screw Jack Leveling Legs



(not shown –
 see pg. 9)

KD VERTICAL LIFT COMPONENTS

A Winch Corner Post (R)	E Lake Side Bottom Tube	H Cross Bottom Tube Brace Angle	L Side Bunk Tube (LH)
B Corner Post RH (F)	E3/E4 Dockside Bottom Tube	I Rear Bunk Assembly	M Brace Tube with Hole
C Corner Post LH (R)	F Lake Side Top Tube	J Front Bunk Assembly	N Brace Tube – No Hole
D Corner Post LH (R)	G Cross Bottom Tube	K Side Bunk Tube (RH)	O Dock Side Brace Angle

ASSEMBLY TIPS

A good understanding of part names & shapes will greatly speed the assembly process.

- Locate a level surface (preferably concrete or paved) and unpack items from truck/trailer.
- Review part identification from **FIG.1** above.
- Take bolt bag contents and lay out on a table, separating them by size and length.
- Winch corner post **A** is longer than the other 3 corners posts (**B, C, D**).
- Dockside bottom tube **E3**: 3,000 lb. capacity lift / **E4**: 4,000 lb. capacity lift.

Don't proceed with assembly until you have a good understanding of part identification.

POSITION WINCH

On the vertical lift, the winch and crank wheel can only be mounted on the winch corner post **A** as shown in FIG. 1. When the lift is placed into the water, the winch and crank wheel need to be next to the dock. The lift may need to be rotated before placing into the water to position the winch next to the dock. Refer to FIG. 2 & 3 and note the position of the winch corner post in relationship to the dock.

NOTE:

The **PREFERRED POSITION** of the lift is on the right side of the dock when viewed from the shore (FIG. 2). When the lift is installed in this position, the winch and lifting cable are at the rear of the boat where most of the weight load is concentrated. The lift may be installed on either side of the dock but, keep in mind, if you have a choice, install it as shown in FIG. 2.

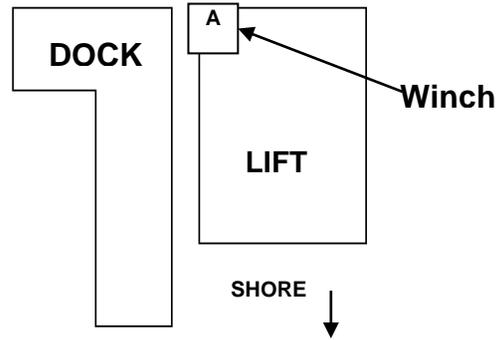


FIG. 2 – PREFERRED POSITION ABOVE

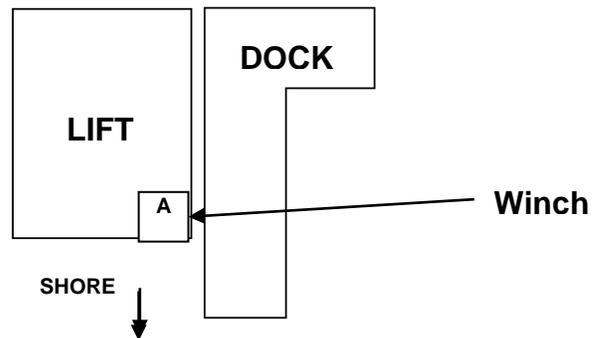


FIG. 3

LIFT LEGS – MUST INSERT IN CORNER POSTS BEFORE ASSEMBLING ANY PART OF LIFT

OPTION 1:

- INTERNAL SCREW JACK LEVELING LEGS:

(Leg only hardware in leg assembly bundle; footpad hardware in Parts Box)

1. Insert screw jack leg assembly into corner post making sure that the top portion of the leg assembly is turned so that the pin will line up with the top mounting hole in the corner post. The head of the $\frac{3}{4}$ " drive bolt faces outward on the side with 3 holes and is accessible through the middle hole in the corner post.
2. Insert mounting pin so that head of pin is to the inside of the lift and the flat washer and hair pin are on the outside.
3. Attach foot pads to bottom of screw jack leg assembly (footpad hardware in Parts Box).
4. Place yellow warning sticker above the top hole on each corner post.

OPTION 2:

- STANDARD MANUAL ADJUSTMENT LEGS:

(Hardware in Parts Box)

1. Place one (1) leg into each corner post.
2. Secure with $\frac{1}{2}$ " x $1\frac{1}{2}$ " hex bolt and one (1) $\frac{1}{2}$ " square nut.
3. Make sure to extend each leg equally from bottom of corner post (approx. 4").
4. With leg assemblies in all corner posts, attach foot pad to bottom of each leg.
5. Secure using $1\frac{1}{2}$ " hex bolt & $\frac{1}{2}$ " flange nut.

NOTE: Refer to Fig. 36 on page 14.

ASSEMBLE DOCK SIDE FRAME

1. Locate **winch** corner post **A** and corner post **B** shown in FIG. 4. (The winch post is the longest post.)
2. Connect winch corner post **A** & corner post **B** using three tubes: **E3/E4**, **M**, and **N** as shown in FIG. 5 & FIG. 11. Lay winch corner post **A** & corner post **B** down on ground as shown in FIG. 5. Install dockside bottom tube **E3/E4** into channels on bottom of corner post, shown in FIG. 5, 6 & 7, using four $\frac{1}{2}$ " bolts/nuts.

NOTE: When installing tube **E3/E4** into channels, line up holes in tube with holes in the channel before inserting tube into channel.

3. Connect both diagonal brace tubes **M** & **N** to winch corner post **A** & corner post **B** as shown in FIG. 8,9,10 & 11 using $\frac{3}{8}$ " bolts/nuts.

NOTE: Diagonal brace tube **M** has an extra hole. Mount tube **M** onto winch corner post **A** as shown in FIG. 8.

4. Connect dockside frame brace angle **O** in between diagonal brace tubes **M** & **N** as shown in FIG. 10.

NOTE: Angle brace **O** needs to be mounted on outside of tubes **M** & **N**. To allow for proper clearance, all bolts used to attach diagonal brace tubes **M** & **N** and angle brace **O** are to be installed so that the head of the bolt is on the **INSIDE** of the lift side frame and nut is towards the **OUTSIDE** as shown in FIG. 10.

5. With all bolts in place, firmly tighten to 25 lb. of torque.

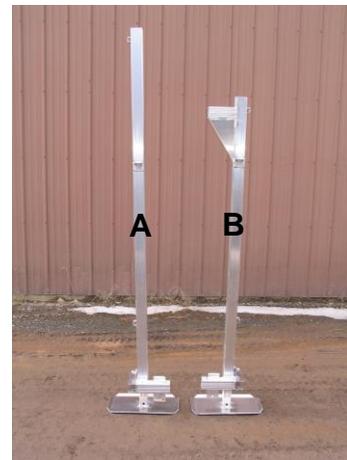


FIG. 4
(Winch Corner Post A is the longest)

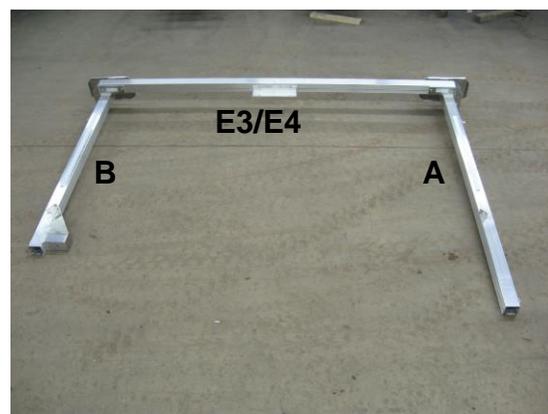


FIG. 5



FIG. 6

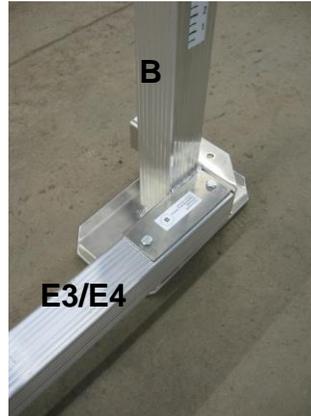


FIG. 7

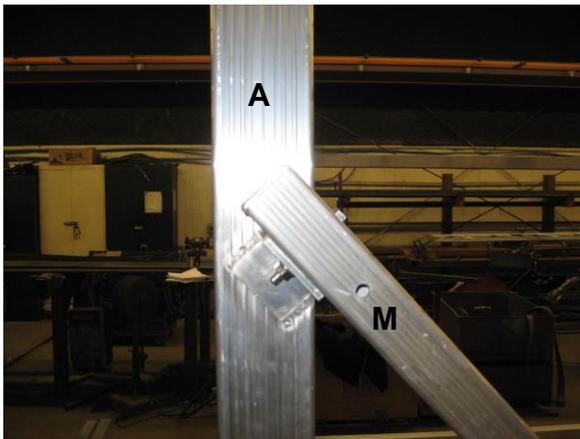


FIG. 8 - Note hole on diagonal brace tube M

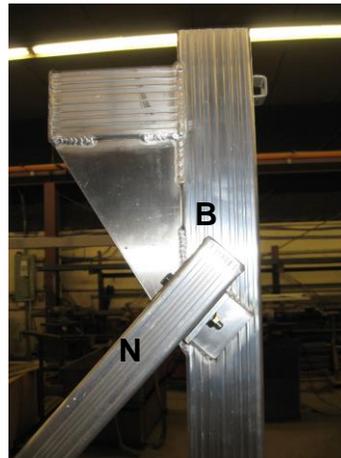


FIG. 9

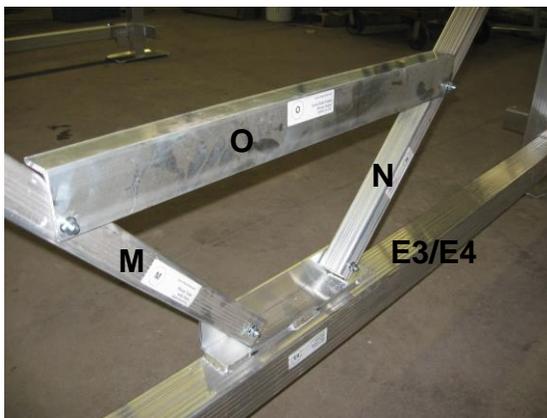


FIG. 10

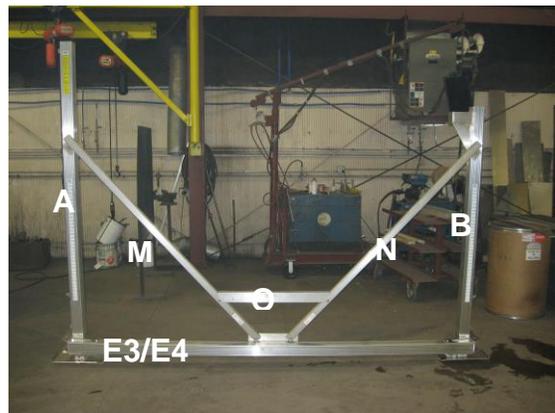


FIG. 11

ASSEMBLE FAR SIDE FRAME

1. Locate corner posts **C & D** shown in FIG. 12.
2. Connect corner posts **C & D** using two tubes, **E & F**, as shown in FIG. 13. Lay corner posts **C & D** down on ground as shown in FIG. 13. Install top lakeside tube **F** in sleeve pockets first, as shown in FIG. 14 & 15. Secure with one ½" bolt in each sleeve pocket. Install lakeside bottom tube **E** into channels on bottom of corner post, shown in FIG. 16 & 17, using four ½" bolts/nuts.

NOTE: When installing tube **E** into channels, line up holes in tube with holes in the channel before inserting tube into channel.

3. With all bolts in place, firmly tighten to 25 lb. of torque.



FIG. 12

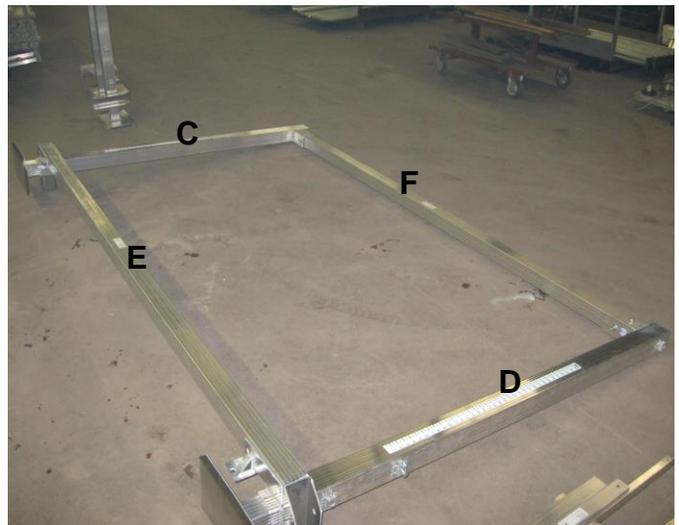


FIG. 13

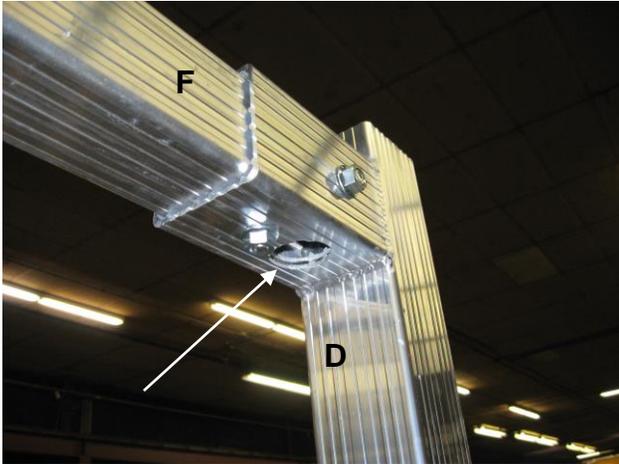


FIG. 14

This hole is used for cable attachment found in later step.

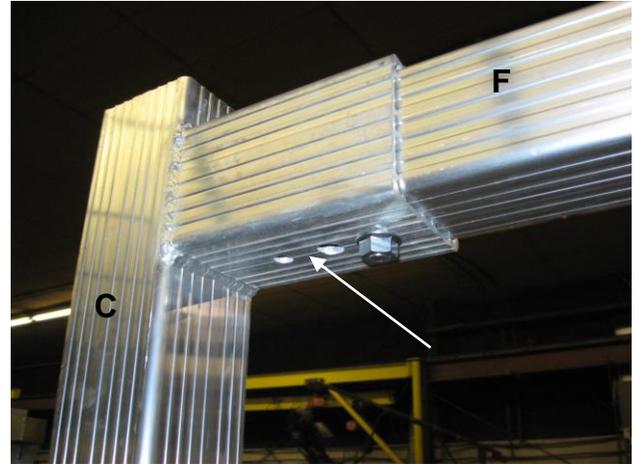


FIG. 15

These two holes are used for cable attachment found in later step.

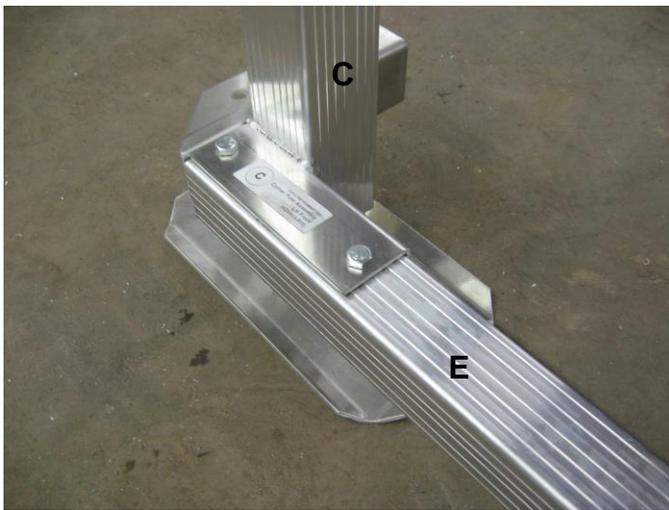


FIG. 16

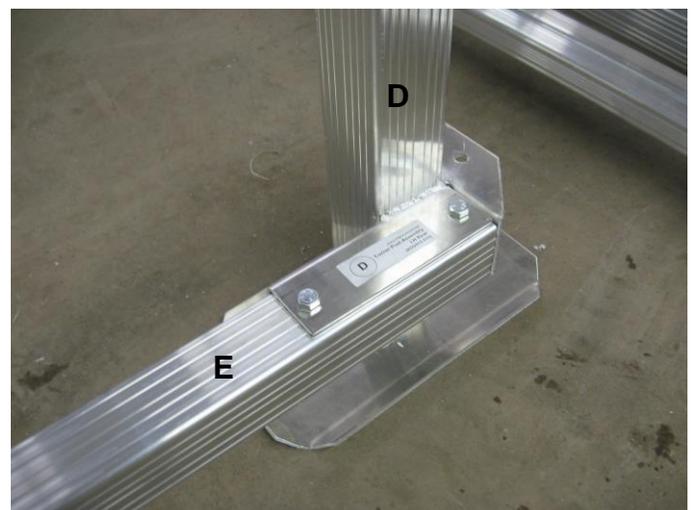


FIG. 17

CONNECT SIDE FRAMES

1. Locate one cross bottom support angle **H** and two cross bottom tubes **G** as shown in FIG. 18 and FIG. 19.

NOTE: The cross bottom support angle **H** will be attached to the underside of the cross bottom tube **G** at the winch end of the lift only. *Only one cross bottom support angle is needed per lift.*

2. Stand side frames up onto footpads and square up to each other.
3. Install one cross bottom tube **G** in between corner post **A & D** and the other cross bottom tube **G** in between corner posts **B & C**.
4. When installing cross bottom tube **G** into channels, line up holes in tube with holes in the channel before inserting tube into channel. *For ease of assembly, insert one bolt per end of tube before inserting remaining bolts.*
5. With both cross bottom tubes in place, firmly tighten all bolts and nuts to 25 lb. of torque.

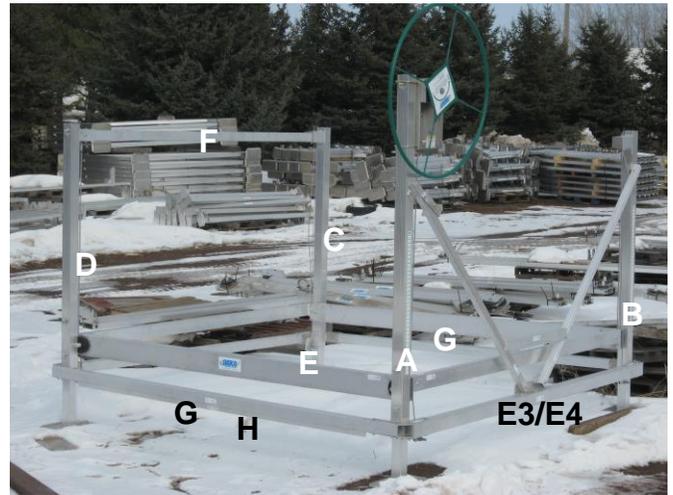


FIG. 18

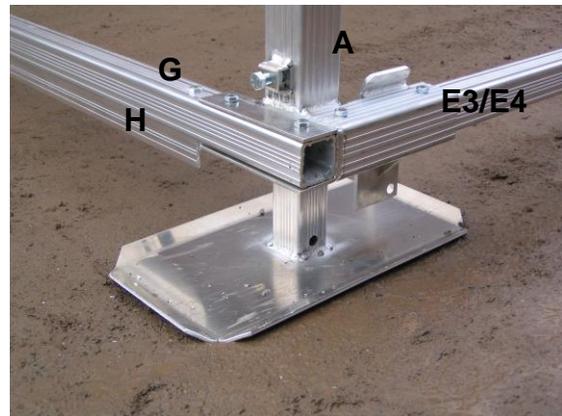


FIG. 19

NOTE: Cross Bottom Tube Brace Angle (H) is found only on winch end of lift.

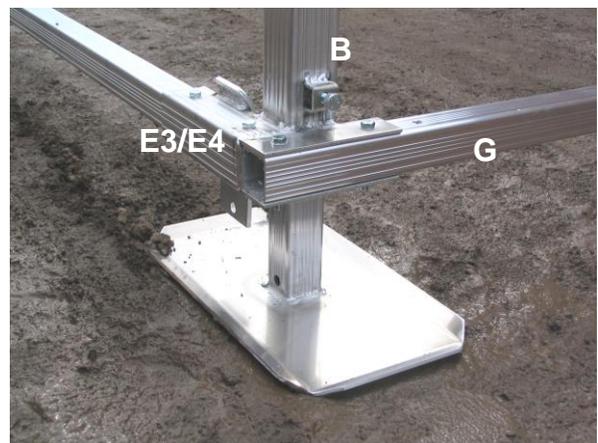


FIG. 20 – View of end opposite winch end of lift

NOTE: No Cross Bottom Tube Brace Angle Needed.

INSTALL BUNK TUBE ASSEMBLIES

There are 2 side bunk tube assemblies:

- **K** (winch side): label at one end indicates winch corner (FIG. 21)
- **L** (lakeside) (FIG. 22)

NOTE: Also see FIG. 1 on page 2 for overall view and location of tubes **K & L**.

1. Place side bunk assemblies into position. **K** should lie between corner posts **A & B** on dockside of lift (See FIG. 21). **L** should lie between corner posts **C & D** on lakeside of lift. (See FIG. 22).
2. Once side bunk assemblies are in position, attach bolt, washer and bushing assembly through looped end of cable (See FIG. 23). Attach to cable tie-off plate found on corner post assembly **A & D** (See FIG. 21 & 22). **Leave stud end of cables loose for now.**
3. Locate front bunk assembly **J** (2 cables protruding from each end) and rear bunk assembly **I** (one cable protruding from each end).
4. Position front bunk assembly **J** (2 cables) at end of lift in between corner posts **B & C**. Attach looped end of cables to cable tie-off plate (See FIG. 23). **Leave stud end of cables loose for now.**

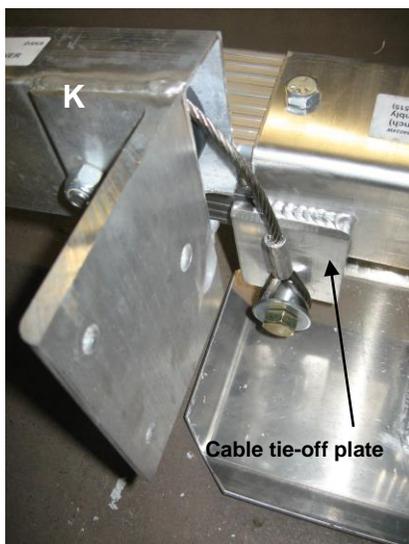


FIG. 21 – Winch side (K)

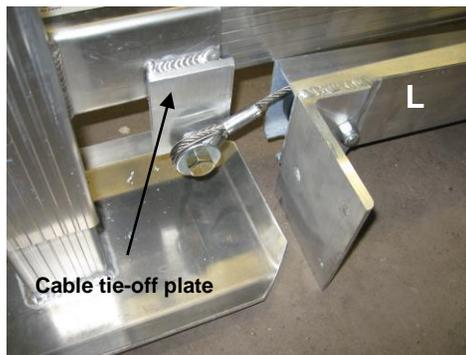


FIG. 22 Lake Side (L)

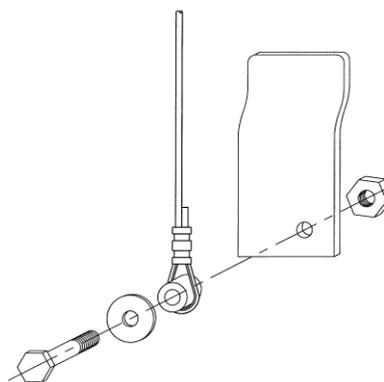


FIG. 23



FIG. 24 – view from inside of lift of Post B



FIG. 25 – view from inside of lift of Post C

INSTALL BUNK TUBE ASSEMBLIES (continued)

1. Position rear bunk assembly I (1 cable) at end of lift in between the winch corner post **A** and lakeside corner post **D** as shown in FIG 27.
2. Insert looped end of rear bunk assembly cable into lakeside top tube **F**. Secure using 5/8" bolt and nut, as shown in FIG 26.
Leave winch end of cable loose for now.

3. With side, front and rear bunk tube assemblies in place, bolt together in all four corners as shown in FIG. 28. Remove 1/2" nylock nut from the bolt in the rear bunk assembly.

Do not remove the bolt. (See FIG. 27).

NOTE: This bolt will need to be pulled back an inch or so, so that the threaded end is flush with the outside of the tube. The bolt holds together a pulley and cable assembly inside the front and rear bunk assembly beam that is difficult to get back together once the bolt has been removed.

4. Once side bunk tube assemblies are in position, push bolt through hole and re-install nuts as shown in FIG. 29. **NOTE:** Side bunk tube assemblies and bunk assemblies should be level with each other in the corners. (See FIG. 28 & 29).
5. Insert 3/8" bolts/nuts through front and rear bunk assembly and through angle of side bunk tube assemblies (FIG. 29). Repeat same step in the other 3 corners. Tighten all bolts/nuts in all 4 corners. **NOTE:** Before installing nuts and washers on studs, remove all weight from cables by lifting the carriage up and blocking it approximately 6" off the ground. Do not stand on carriage and try to tighten nuts. **Do not use an impact wrench to tighten.**
6. On end of side bunk tube assemblies, attach stud end of cable to the upper corner post cable holders. Place the threaded ends through the mounting holes (See FIG. 24 & 25). Attach nut and washer to threaded stud end on topside of cable holder tube.
7. Attach front bunk tube stud cable ends to the upper corner post cable holders. Place the threaded ends through the mounting holes (See FIG. 24 & 25). Attach nut and washer to threaded stud end on topside of cable holder tube.
8. Tighten nuts so that the cable closest to the post has approximately 1 1/2" of exposed thread. The other cable end should have approximately 3 full inches of exposed thread.

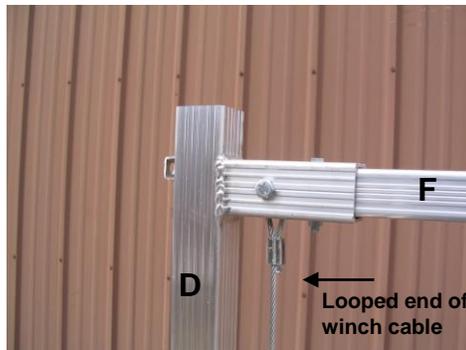


FIG. 26



FIG. 27



FIG. 28



FIG. 29

SEE CABLE REFERENCE ON PAGE 15.

INSTALL WINCH

MODEL KDV 315

Remove top cover plate and install top 3/8" U-Bolt with 3/8" nuts onto winch as shown in FIG. 30. Lift winch into position, sliding U-bolt over side frame tube. Install lower U-bolt with 3/8" nuts onto winch post. Tighten 3/8" nuts using a 9/16" wrench. See FIG. 30. Re-install top cover plate.

Feed one end of cable up through bottom of winch frame and into the hole in cable spool, but not protruding beyond the spool hole. Firmly tighten the cable to the winch spool using the 5/32" Allen wrench provided. The setscrew is located through hole in backside of winch (See FIG 31). *You may have to rotate cable spool to line up setscrew with Allen wrench.*

MODEL KDV 415 AND KDV515

Remove top cover plate and install 7/16" U-Bolt with 7/16" nuts onto winch as shown in FIG. 30. Lift winch into position, sliding U-bolt over side frame tube. Install lower U-bolt with 7/16" nuts onto winch post. Tighten 7/16" nuts using an 11/16" wrench. See FIG. 30. Re-install top cover plate.

The cable is fastened to the drum with a pinch plate on the inside of the drum. It must be accessed from the underside of winch box once in place.

NOTES:

Winch is always mounted on inside edge of the winch corner post (See FIG. 1).

All winches must have at least three full wraps of cable on drum when lifting starts.

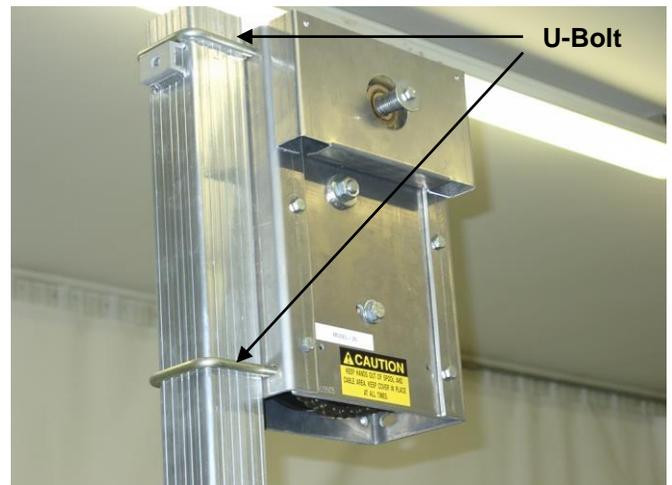


FIG. 30

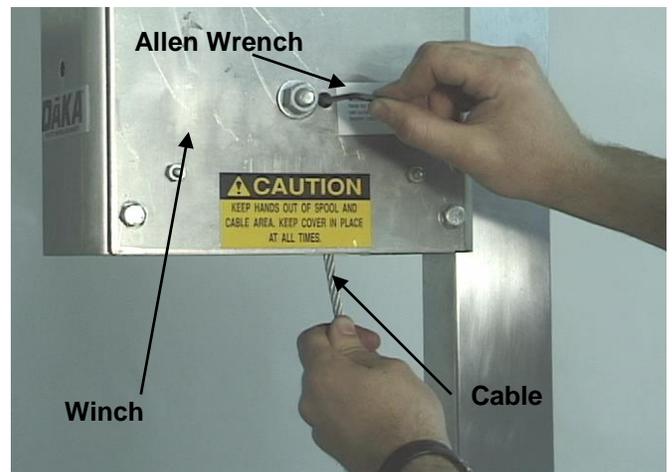


FIG. 31



FIG. 32

ATTACH CRANK WHEEL

1. Remove tape protecting the threaded shaft and remove the 5/16" bolt and washers.
2. Mount crank wheel onto the threaded shaft until you hear the break clicker engage.
3. Firmly lock in place using a 5/16" x 1" bolt, 5/16" lock washer and 5/16" fender washer (See FIG. 33 & 34).

NOTE: You should keep a slight amount of tension on winch cable and be sure it is winding evenly on winch drum until the carriage is traveling upward.

CAUTION: NEVER ATTEMPT TO REMOVE CRANK WHEEL FROM WINCH WITH LIFT IN THE RAISED POSITION. LOWER CARRIAGE COMPLETELY BEFORE SERVING LIFT.



FIG. 33

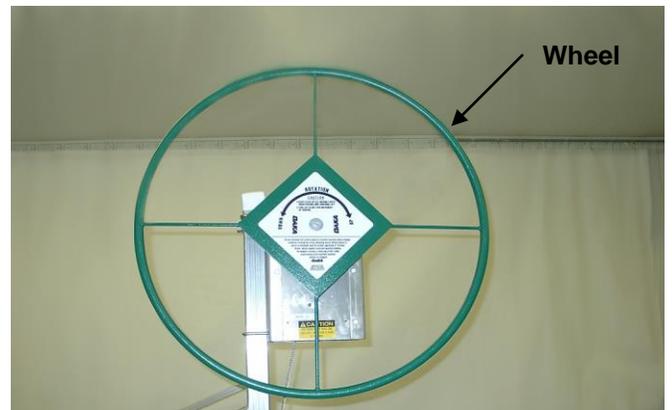


FIG. 34

INSTALL WHEEL STOP

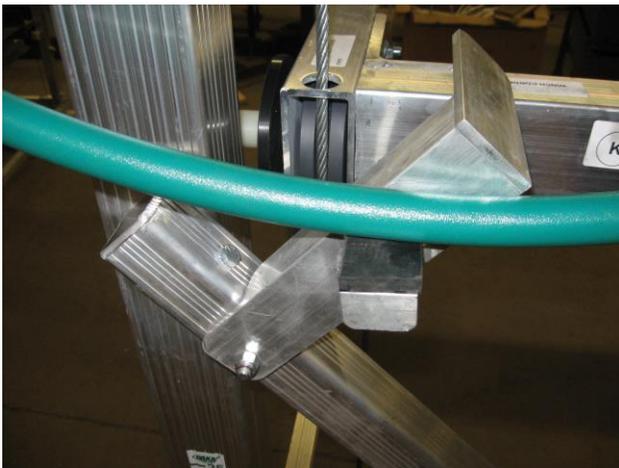


FIG. 35

DOUBLE-CHECK ALL ASSEMBLIES

Once lift is fully assembled:

1. Double-check bolt tightness.
Torque all bolts to 25 lb.
2. Fully lower and raise lift.
3. Correct all problems before placing lift in water.

PLACE LIFT IN LAKE

Place lift in lake and complete the following steps:

1. Place lift in minimum of 24" of water at lake end of lift.
2. When lift is placed into the water, the winch needs to be positioned next to the dock (See FIG. 37 and 38). Position lift accordingly before placing lift into water.

NOTE: The **PREFERRED POSITION** of the lift is on the right side of the dock when viewed from the shore (See FIG.37). When the lift is installed in this position, the winch and lifting cable are at the rear of the boat where most of the weight load is concentrated. The lift may be installed on either side of the dock but, keep in mind, if you have a choice, install it as shown in FIG. 37.

3. Level the lift by adjusting the footpads accordingly.
See FIG. 36.

NOTE:

For the lift to operate properly, it ***must be level side-to-side and front-to-back***. Leveling labels are affixed to all four lift legs. Make sure that the lift is level when first installed. The lift may settle into the lake bottom and need to be re-leveled once it has been loaded with weight. Check and re-level if necessary. Remove weight before attempting to re-level.

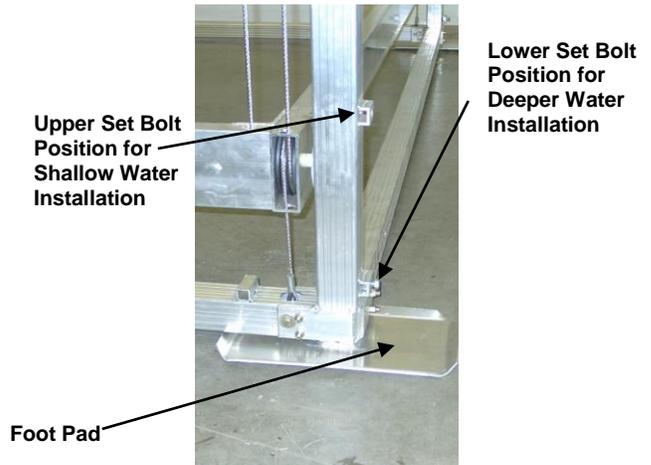


FIG. 36

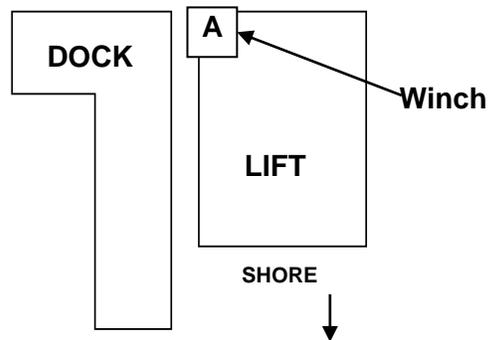


FIG. 37 – PREFERRED POSITION ABOVE

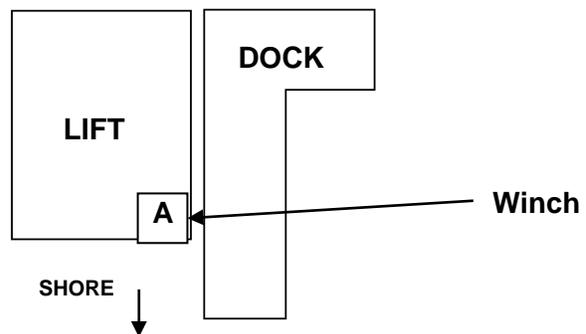
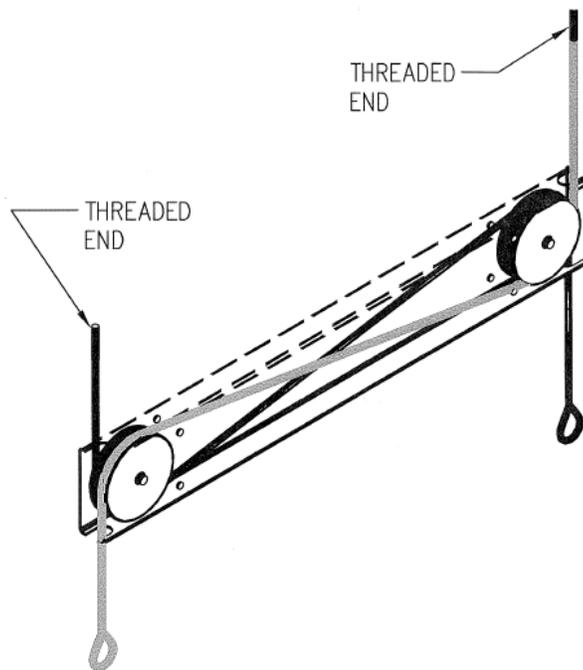
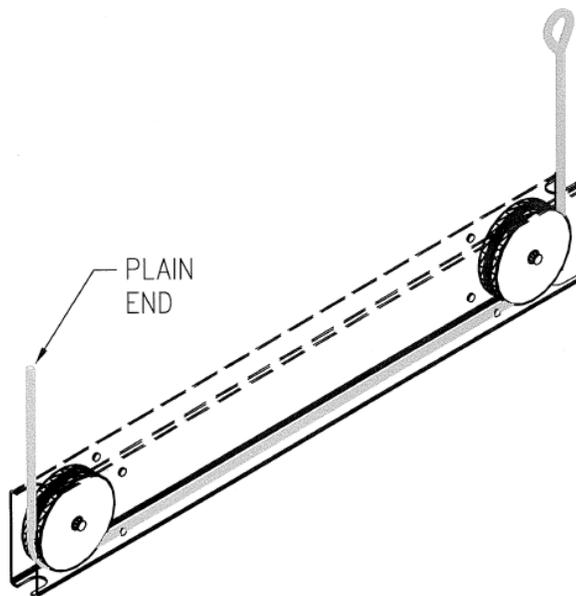


FIG. 38

CABLE REFERENCE



LEVELING CABLE – FRONT BUNK TUBE



WINCH CABLE – REAR BUNK TUBE



BOAT & PWC LIFT MAINTENANCE & OPERATION

ALUMINUM BOAT LIFTS

1. Check all nuts & bolts for tightness.
2. Visually inspect cables and sheaves for wear.
3. Spray Nylatron bearings with white lithium grease.
4. Reattach loose carpet on bunks (if applicable).

INTERNAL SCREW JACK LIFT LEGS

1. Annually: Grease threaded rod with lithium grease.
2. Annually: Fully extend & retract each leg to distribute grease. **DO NOT USE A CORDED DRILL.**

PERSONAL WATERCRAFT LIFTS

1. Check all nut & bolts for tightness.
2. Visually inspect cables and sheaves for wear.
3. Grease gears or chains with white lithium grease.
4. Reattach loose carpet on bunks (if applicable).

CABLES

1. Visually inspect the lifting cables regularly for any broken strands (cable fray).
 - a. If cable fray is noticed, notify your dealer. Spray cables periodically with WD-40.
2. Rinse cables and boat lift with fresh water after removing lift from water.
 - a. Cable has a limited operating life and may need to be periodically replaced.
 - b. If signs of wear or damage appear, replace immediately.

CRANK WHEEL

1. Run lift all the way down and remove bolt & washer.
2. Remove crank wheel.
3. Before reassembly, grease shaft with anti-seize or marine grease (do NOT overdo & get grease on winch brake pad).

DRIVE UNITS/WINCH BOXES

1. Lubricate drive gear, chains and all bushings, on a monthly basis, with white lithium grease.

PULLEYS

1. Inspect pulleys on a monthly basis for wear.
2. Make sure all nuts and bolts are tight.
3. Pulleys should turn when weight is on lift (reasonable "squealing" noise from plastic pulleys is normal).

OTHER

1. Visually inspect all working parts for signs of excessive wear.

SAFETY

THINGS TO REMEMBER

1. Always turn off 110V power at main breaker to prevent others from using your lift.
2. Keep all people away from lift while in operation.
3. Inspect all cables and pulleys before operating.

WARNING!

This product is not a toy. It is capable of lifting very heavy objects. The lift should be respected as power equipment. High forces are created when using a lift, creating potential safety hazards. *Never allow children, or anyone who is unfamiliar with lift operation, use the lift.*

1. Your boat lift is not a hoist. It is NOT intended to lift or move people. Never use in an application where persons could be positioned on or under a load.
2. For use by adults only.
3. Do not let children play on or around lift.
4. Keep the lift area free of all persons. Never stand between load and lift.
5. Do not exceed Maximum Lifting Capacity.
6. Lower boat to water level before entering boat.
7. Do NOT enter boat when lift carriage is in raised position.
8. Do NOT ride in boat while using lift.
9. Keep hands away from all moving parts (i.e., winch crank wheel, cables).
10. Never leave lift running unattended.
11. When not in use, turn off your power supply damage or injury could result if lift is left running.
12. **Death or bodily injury could result if you ignore any of the above warnings and operations.**

LIFT OPERATION

LOWERING YOUR BOAT LIFT

After inspecting your lift (*remember to insert drain plug in your boat*):

1. Turn main power on to your lift.
2. Lower your lift into the water.
3. Do not ride in boat while lowering or raising your lift.

DRIVING BOAT ONTO LIFT

1. Lower lift sufficiently so your boat will float over the bunks.
2. Slowly position your boat over the bunks to desired position. Use your guide posts to center your boat on the lift.
3. Raise lift until the weight of the boat is on the bunks. Inspect the boat to insure proper alignment.
4. Make necessary adjustments.
5. Once the boat is in position, continue to lift the boat for storage. Do not ride in boat while lowering or raising your lift.
6. Remove drain plug to prevent excess weight from water accumulation.
7. Turn power off at main breaker after each use.

STORAGE

1. When boat is completely ready for storing, make sure the boat is positioned properly on the lift.
2. Turn the electrical power to the lift OFF.

 **Caution:**

Do Not Exceed Maximum Lifting Capacity!!

 **Caution:**

Do Not Enter Boat When In Raised Position!!
Lower Boat Lift Before Entering Boat!!

 **Caution:**

Do Not Let Children Play On Or Around Lift!!

 **Caution:**

This product is not a toy. It is capable of lifting very heavy objects. The lift should be respected as power equipment. High forces are created when using a lift, creating potential safety hazards. Never allow children or anyone who is not familiar with the operation of the lift to use it.

 **Caution:**

Not for moving of humans. This product is not a hoist. Never use in an application where persons could be positioned on or under the load.

 **Caution:**

Keep the lift area free of all persons. Never stand between load and lift.

 **Caution:**

Keep hands and fingers clear of all moving parts.
(i.e. winch, crank wheel, cables)

Boat lift should be placed in a minimum of 24" of water at lake end of the lift.

- Maintenance -

Before installing lift in the spring and after removing lift in the fall, lightly oil cables and pulleys. Check all cables and bolts for deterioration. Replace if necessary.

Note: If winch wheel is hard to turn when trying to lower lift, place hand on winch wheel and quickly jerk wheel in a counter clockwise direction to loosen brake mechanism.



LIMITED WARRANTY

DAKA Corporation warrants its boat docks and boat lift components purchased new by the original owner to be free of defects in material or workmanship, from the date of sale for the periods of time set forth below:

New DAKA built aluminum boat docks and lifts carry a 15 year conditional warranty on all aluminum and aluminum welds, and a 5 year pro-rated warranty on canopy tops, excluding fading.

New DAKA built steel boat docks carry a 10-year conditional warranty on steel and steel welds. There is no warranty on paint and/or finish.

DAKA Corporation further warrants all other parts, excluding wood, used on DAKA built lifts, boat docks and accessories, purchased new by original owner, to be free from defects in the material and workmanship under normal use for a period of 24 months from the date of purchase (excluding components and options which carry their own manufacturer's warranty, wherein that warranty will apply). Excluded from this warranty are all paint and/or finishes, and wood decking. There is no other express warranty. DAKA Corporation is not liable for incidental or consequential damages or injuries of any kind due to installation, removal, use, misuse, snow or ice, electrolysis, severe weather, acts of God, misapplication, or improper selection of one of our purchased or displayed products. DAKA agrees to repair or replace only defective parts returned to the factory (prepaid) and deemed defective by DAKA. Warranty is void when misuse or neglect is the cause. Specifications are subject to change without notice.

DAKA is not responsible for removal, dismantling or reinstallation cost. This warranty is void if the boatlift or dock is used in other than normal residential service, or installed in salt water. *For commercial boat dock and lift warranty, see Commercial Warranty.*

For services under this warranty, contact selling dealer or DAKA Corporation, Customer Services Department, 955 Industrial Street, N.E., Pine City, Minnesota 55063; Telephone (320) 629-6737.

Implied warranties including that of merchantability are expressly limited in duration of this warranty. DAKA Corporation disclaims any liability for incidental or improper selection, removal, use, misuse, misapplication, neglect or improper selection of our product. Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages so this limitation and exclusion may not apply to you.

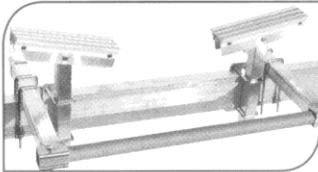
This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

This is our exclusive written warranty.

Effective 09/03
Revision 1: 11/1/07

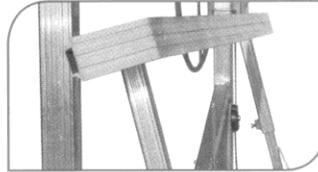


Lift Accessories



Motor Stop

The adjustable Motor Stop helps land the boat perfectly every time, so the weight is centered on the lift carriage. (2015)



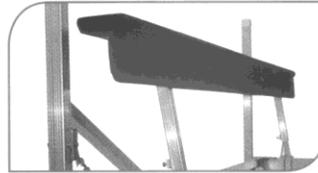
Vinyl Guide-ons

Full-length Vinyl Guide-ons center a boat as you drive onto the lift, while providing a non-marring vinyl surface that protects the boat from the lift uprights. (2075)



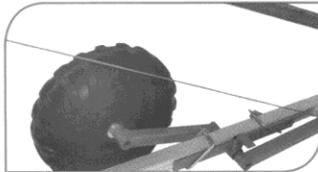
Stationary Wheel Kit

Add a bolt-on Stationary Wheel Kit to make moving your lift easy. Just clamp the polyethylene wheels to the lift frame. (2020)



Carpeted Guide-ons

Protect your boat from damage by the lift uprights with Full-Length Carpeted Wood Guide-ons that keep the boat centered as you drive on. (2075WC)



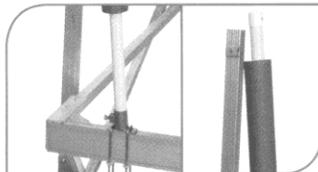
Lifting Wheel Kit

Installation is made simple with a Lifting Wheel Kit. Polyethylene wheels attach to the cantilever lift frame without inhibiting the lift carriage. (2022)



Electric Lift Motor

Eliminate the manual labor of raising and lowering a lift by adding the 12V or 110V Electric Lift Motor to do the cranking for you.



PVC Guide-ons

Land a boat perfectly with foamed-covered PVC Guide-ons. Even in rough water, guide-ons align your boat over the bunks and guide it into place. (2070)



Canopy Cargo Net

Avoid the clutter of water toys and equipment. Add a Canopy Cargo Net to stow and protect skis, ropes and lifejackets. (2090/2095)



DAKA Corporation

955 Industrial St. N.E. • Pine City, MN 55063

Phone 320-629-6737 • Fax 320-629-3677

www.dakadock.com