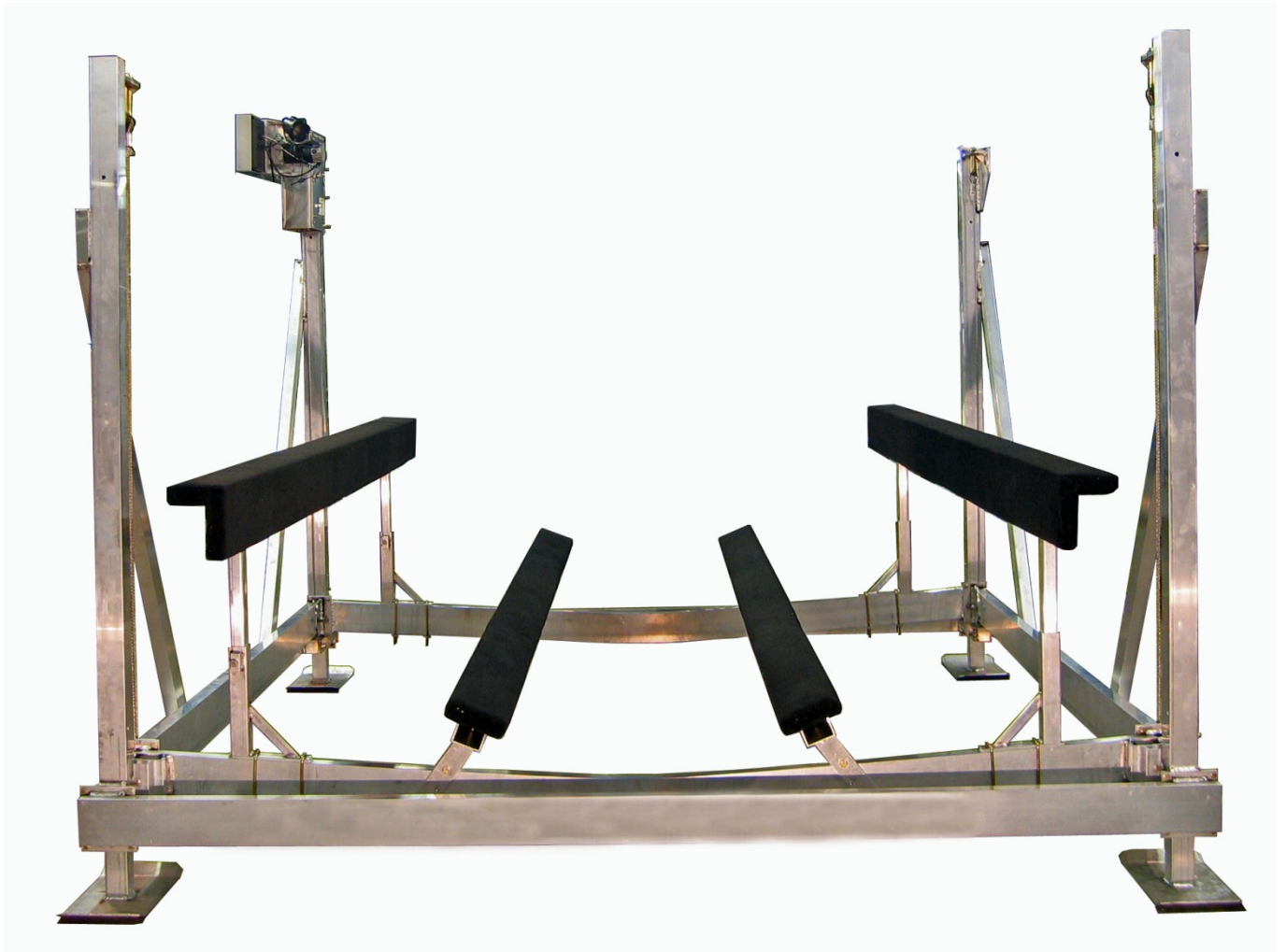


Assembly and Installation Manual Model 4000 Vertical LIFT

MCD p/n 1630-01





A. Parts Description

1. Check the following parts to ensure you have all the items necessary to assemble your new Metal Craft Vertical Boat LIFT:

Qty Needed	Part No.	Description	Weight
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MODEL 4000-110 Only

1	1650-01	4000-110 Frame Assembly, Base, Front	20 lbs.
1	1655-01	4000-110 Frame Assembly, Base, Rear	20 lbs.
1	1670-01	4000-110 Cradle, Front, "V" Assembly	51 lbs.
1	1675-01	4000-110 Cradle, Rear, "V" Assembly	52.5 lbs.

MODEL 4000-122 Only

1	1660-01	4000-122 Frame Assembly, Base, Front	21 lbs.
1	1665-01	4000-122 Frame Assembly, Base, Rear	21 lbs.
1	1680-01	4000-122 Cradle, Front, "V" Assembly	55.5 lbs.
1	1685-01	4000-122 Cradle, Rear, "V" Assembly	57 lbs.

MODELS 4000-110 & 4000-122

1	1635-01	4000 Parts Box, Sealed	11 lbs.
1	1625-01	Lorenz Winch Box (Model 4000)	43 lbs.
1	3761-03	42" Winch Wheel, Black, Boxed	21 lbs.
4	1500-01	2-1/2" sq. x 1/8" x 54"L Leg with 10"W x 18"L x 1/4" Pads.	42 lbs.
1	1640-01	4000 Lift Side / Post Assembly, Left w/Winch Block	72 lbs.
1	1645-01	4000 Lift Side / Post Assembly, Right	77 lbs.
1	1690-01	4000 Cradle, Side Assembly, Left	22 lbs.
1	1695-01	4000 Cradle, Side Assembly, Right	22 lbs.

Total Weight, 4000-110 454 lbs.

Total Weight, 4000-122 465 lbs.

The "Front" of the LIFT is determined by the Winch location, which is placed on the Left Front. "Left" and "Right" are determined as you drive onto the lift from the "Rear" of the lift forward to the "Front."

2. Check the Winch Box and identify the following items:

Qty Needed	Part No.	Description
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1	3750-02	Lorenz Brake Winch (Model 4000) w/Operator's Manual & MCD Mounting Plates
1	3752-01	Winch Hardware, Bag, Lorenz w/Wrench, Nut, Washer

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3. Check the Parts Box and identify the following items:

Qty Needed	Part No.	Description
1	1510-01	4000/5000 Fasteners Kit (Sealed Bag).
1	1615-01	4000-110/122 Decals, Sealed Package
	1 - #3768-03	4000 lb. Lifting Capacity
	1 - #3769-01	Safety Guide
	1 - #3769-02	Caution Stop Here
	1 - #3770-03	MCD Model 4000-110
	1 - #3770-04	MCD Model 4000-122
1	1630-02	4000-110/122 Assembly & Installation Manual.

4. Check the Fasteners Kit (sealed plastic bag) and identify the following items:

Qty Needed	Part No.	Description	Used
32	3700-01	3/8-16" x 1" Hex Head C/S Zinc Yellow (ZY)	(16) Bottom Frame; (16) Cradle
8	3700-04	3/8-16" x 2 1/4" Hex Head C/S ZY	(2) Rollers x 4
8	3797-01	UHMW Roller, 1.5"OD x 1.275"L	(2) Rollers x 4
3	3700-09	3/8-16" x 4-1/2" Hex Head C/S ZY	(3) Winch
35	0076-11	3/8-16" Nylon Insert Locknut SS	(32) Frame; (3) Winch
6	3700-15	3/8" USS Flat washer ZY	(6) Winch
8	3700-16	3/8" External Tooth Lock washer ZY	(2) Rollers x 4
4	3703-01	3/8" x 3 1/2" Clevis Pin SS	(1) Post x 4
4	3703-02	1/8" x 2 1/2" Hairpin Cotter Pin SS	(1) Post x 4
4	3706-07	1/2-13" x 6" Hex Head C/S ZY	(1) Cable Tie downs x 4
10	3706-08	1/2-13" Nylon Insert Locknut ZY	(2) U-Bolts x 5
4	3706-09	1/2-13" Finished Hex Nut ZY	(1) Cable Tie downs x 4
14	3706-10	1/2" USS Flat washer ZY	(2) U-Bolts x 5; (1) Cable Tie down x 4
5	3709-05	Round U-Bolt, 1/2-13" 4-3/4"Lx1-1/4"IDx1-1/2"T ZY	(5) Cable Attachment, Post
4	3815-01	Cap Plug, Black, 3" Sq. (SQR 80mm)	(1) Post x 4
1	1000-01	Spinner Knob Kit (preassembled in sealed bag)	Winch Wheel Knob
	1 - #3765-01	Spinner Knob,	
	1 - #3700-06	3/8-16" x 3" HHCS ZY	
	1 - #3700-11	3/8-16" Nylon Insert Locknut ZY	
	1 - #3700-12	3/8-16" Finished Hex Nut ZY	
	3 - #3700-15	3/8" USS Flat washer ZY	

Note: The primary difference between the Model 4000-110 and Model 4000-122 is the width of the Frame and Cradle members, and the length of their associated cables.

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The (5) cables, (8) pulleys and (4) cable stops used in the four Cradle members (2-Side, 1-Front, 1-Rear) have been factory installed. They are taped in place for shipment and are ready for installation.

If any problems are found, do not proceed.

Call your Metal Craft Dealer.

Or, reach Metal Craft at **800-989-3625** or at **www.metalcraftlifts.com**

B. Assembly Instructions

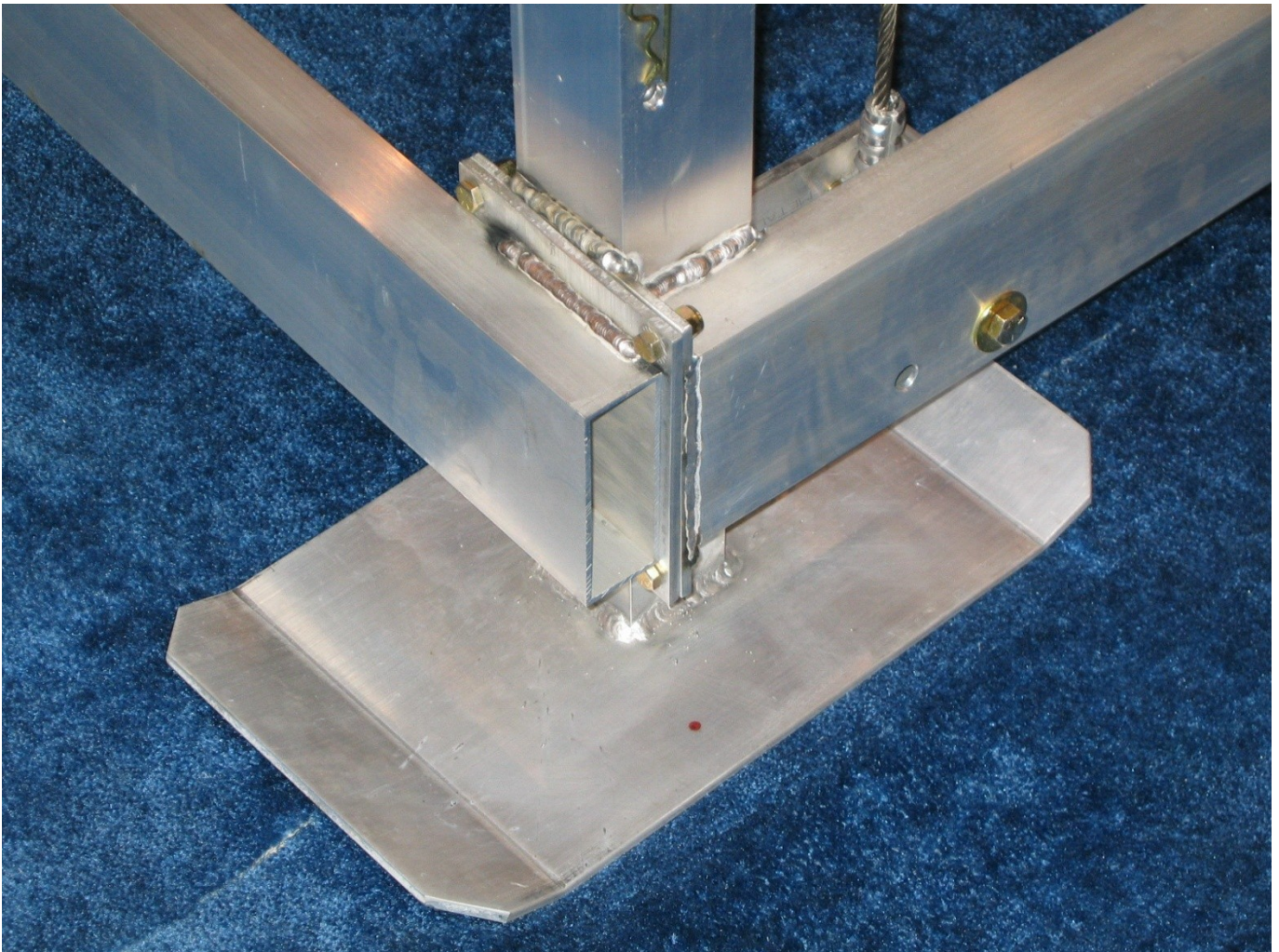
Step #1 -

Assemble and Fasten following **Foot Pad/Leg** items to the **Side / Post** Assemblies by sliding them inside the Posts:

4	1500-01	2-1/2" sq. x 1/8" x 54"L Leg with 10"W x 18"L x 1/4" Pads.
1	1640-01	4000 Lift Side / Post Assembly, Left w/Winch Block
1	1645-01	4000 Lift Side / Post Assembly, Right

Secure in place with these fasteners:

4	3703-01	3/8" x 3 1/2" Clevis Pin SS
4	3703-02	1/8" x 2 1/2" Hairpin Cotter Pin SS



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Step #2 -

Bolt the following two **Side / Post Frame Assemblies** together:

- | | | |
|----------|----------------|----------------------------------------------------|
| 1 | 1640-01 | 4000 Lift Side / Post Assembly, Left w/Winch Block |
| 1 | 1645-01 | 4000 Lift Side / Post Assembly, Right |

With the following **Front and Rear Frame Assemblies**

MODEL 4000-110 Only

- | | | |
|----------|----------------|--------------------------------------|
| 1 | 1650-01 | 4000-110 Frame Assembly, Base, Front |
| 1 | 1655-01 | 4000-110 Frame Assembly, Base, Rear |

MODEL 4000-122 Only

- | | | |
|----------|----------------|--------------------------------------|
| 1 | 1660-01 | 4000-122 Frame Assembly, Base, Front |
| 1 | 1665-01 | 4000-122 Frame Assembly, Base, Rear |

With these fasteners:

- | | | |
|-----------|----------------|--------------------------------------------|
| 16 | 3700-01 | 3/8-16" x 1" Hex Head C/S Zinc Yellow (ZY) |
| 16 | 0076-11 | 3/8-16" Nylon Insert Locknut SS |

True the frame members and tighten the Bolts.

Step #3 -

Install the eight **UHMW Rollers**

- | | | |
|----------|----------------|-------------------------------|
| 8 | 3797-01 | UHMW Roller, 1.5"OD x 1.275"L |
|----------|----------------|-------------------------------|

in the Roller Brackets preinstalled on the following Cradle members:

MODEL 4000-110 Only

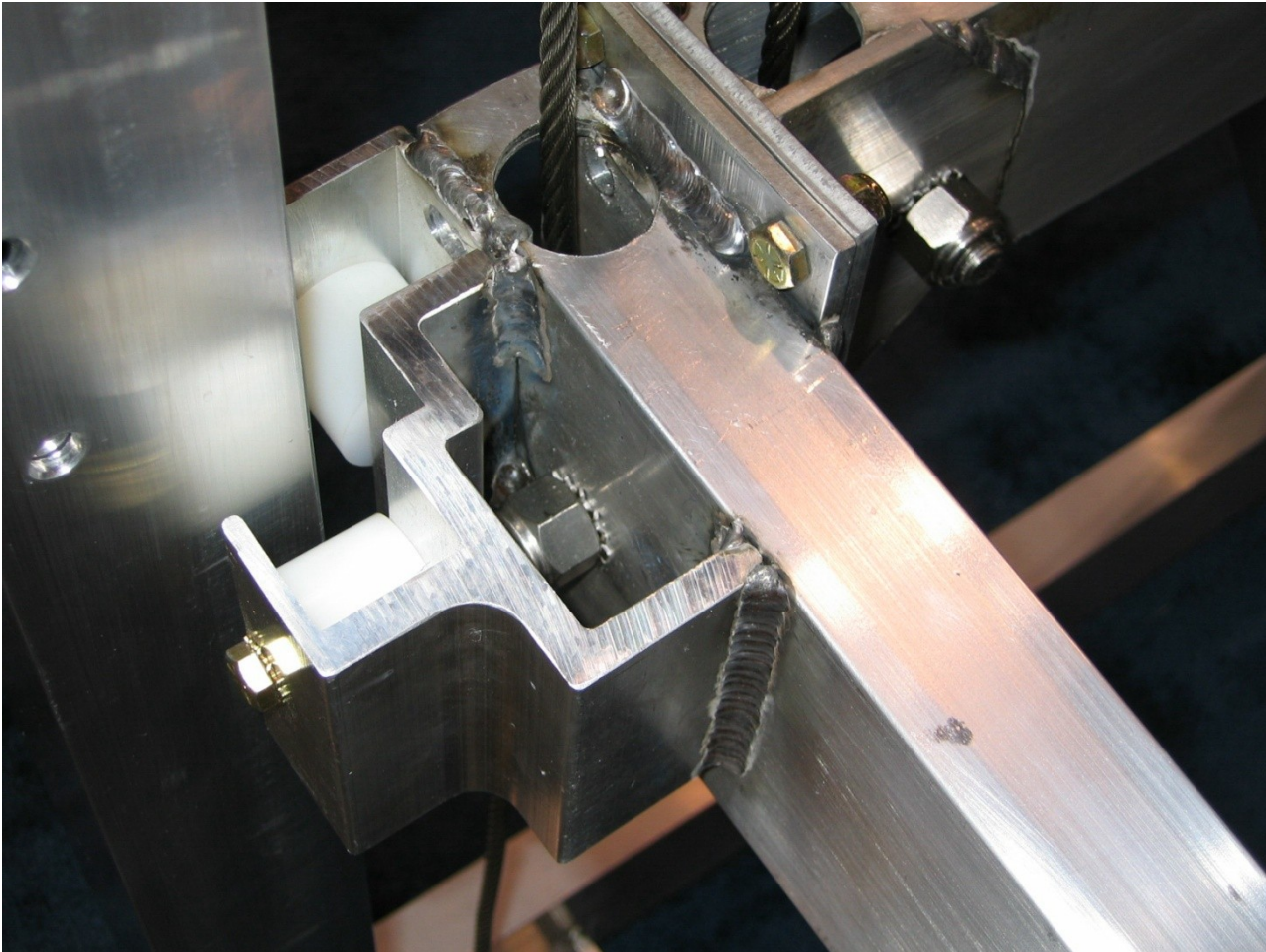
- | | | |
|----------|----------------|--------------------------------------|
| 1 | 1670-01 | 4000-110 Cradle, Front, "V" Assembly |
| 1 | 1675-01 | 4000-110 Cradle, Rear, "V" Assembly |

MODEL 4000-122 Only

- | | | |
|----------|----------------|--------------------------------------|
| 1 | 1680-01 | 4000-122 Cradle, Front, "V" Assembly |
| 1 | 1685-01 | 4000-122 Cradle, Rear, "V" Assembly |

Use these fasteners:

- | | | |
|----------|----------------|------------------------------------|
| 8 | 3700-04 | 3/8-16" x 2 1/4" Hex Head C/S ZY |
| 8 | 3700-16 | 3/8" External Tooth Lock washer ZY |



Step #4 -

On the ground, outside the Lift, bolt the following two **Cradle Side Assemblies** together:

- | | | |
|----------|----------------|-----------------------------------|
| 1 | 1690-01 | 4000 Cradle, Side Assembly, Left |
| 1 | 1695-01 | 4000 Cradle, Side Assembly, Right |

With the following **Cradle Front and Rear Assemblies**

MODEL 4000-110 Only

- | | | |
|----------|----------------|--------------------------------------|
| 1 | 1670-01 | 4000-110 Cradle, Front, "V" Assembly |
| 1 | 1675-01 | 4000-110 Cradle, Rear, "V" Assembly |

MODEL 4000-122 Only

- | | | |
|----------|----------------|--------------------------------------|
| 1 | 1680-01 | 4000-122 Cradle, Front, "V" Assembly |
| 1 | 1685-01 | 4000-122 Cradle, Rear, "V" Assembly |

With these fasteners:

- | | | |
|-----------|----------------|--------------------------------------------|
| 16 | 3700-01 | 3/8-16" x 1" Hex Head C/S Zinc Yellow (ZY) |
| 16 | 0076-11 | 3/8-16" Nylon Insert Locknut ZY |

True the frame members and tighten the Bolts.

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Step #5 -

Lift the assembled **Cradle** inside the Lift Frame.

Be certain that the Front and Rear of the Cradle assembled in Step #4 above are oriented with Front and Rear of the Frame Assembled in Step #2 above. The Front Cradle member has only one cable. The Rear Cradle member has two.

Step #6 -

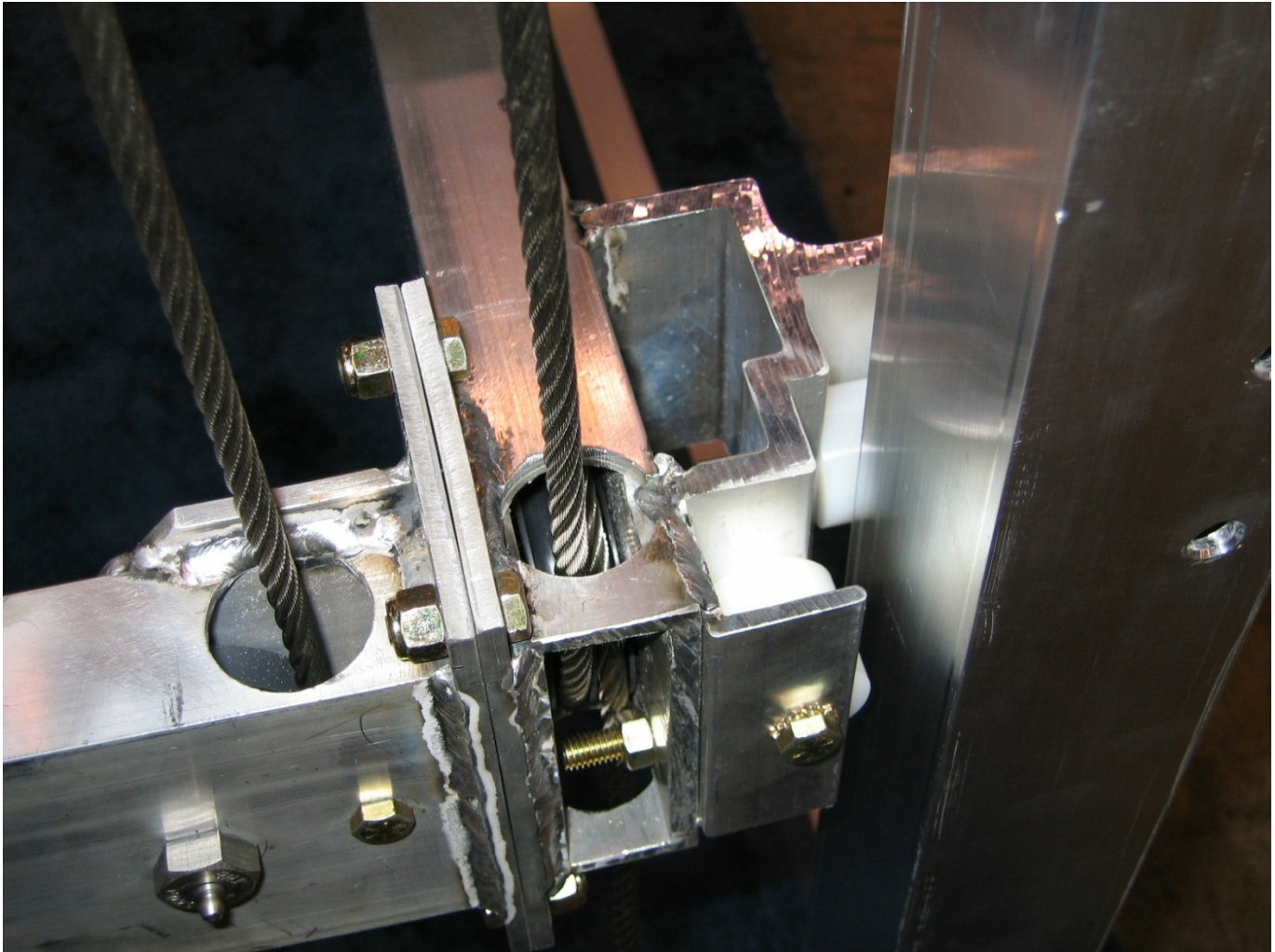
Note the position of the cables. Install the five **(5) Cables** exiting **Upwards** into U-Bolts at the top of the Posts. Use these fasteners.

10	3706-08	1/2-13" Nylon Insert Locknut ZY
10	3706-10	1/2" USS Flat washer ZY
5	3709-05	Round U-Bolt, 1/2-13" 4-3/4"Lx1-1/4"IDx1-1/2"T ZY

These (5) Upward Cables are:

- 1** Right Front - Front Cradle Member.
- 1** Right Rear - Rear Cradle Member.
- 1** Right Rear - Side Cradle Member.
- 1** Left Rear - Rear Cradle Member.
- 1** Left Rear - Side Cradle Member.





Step #7 -

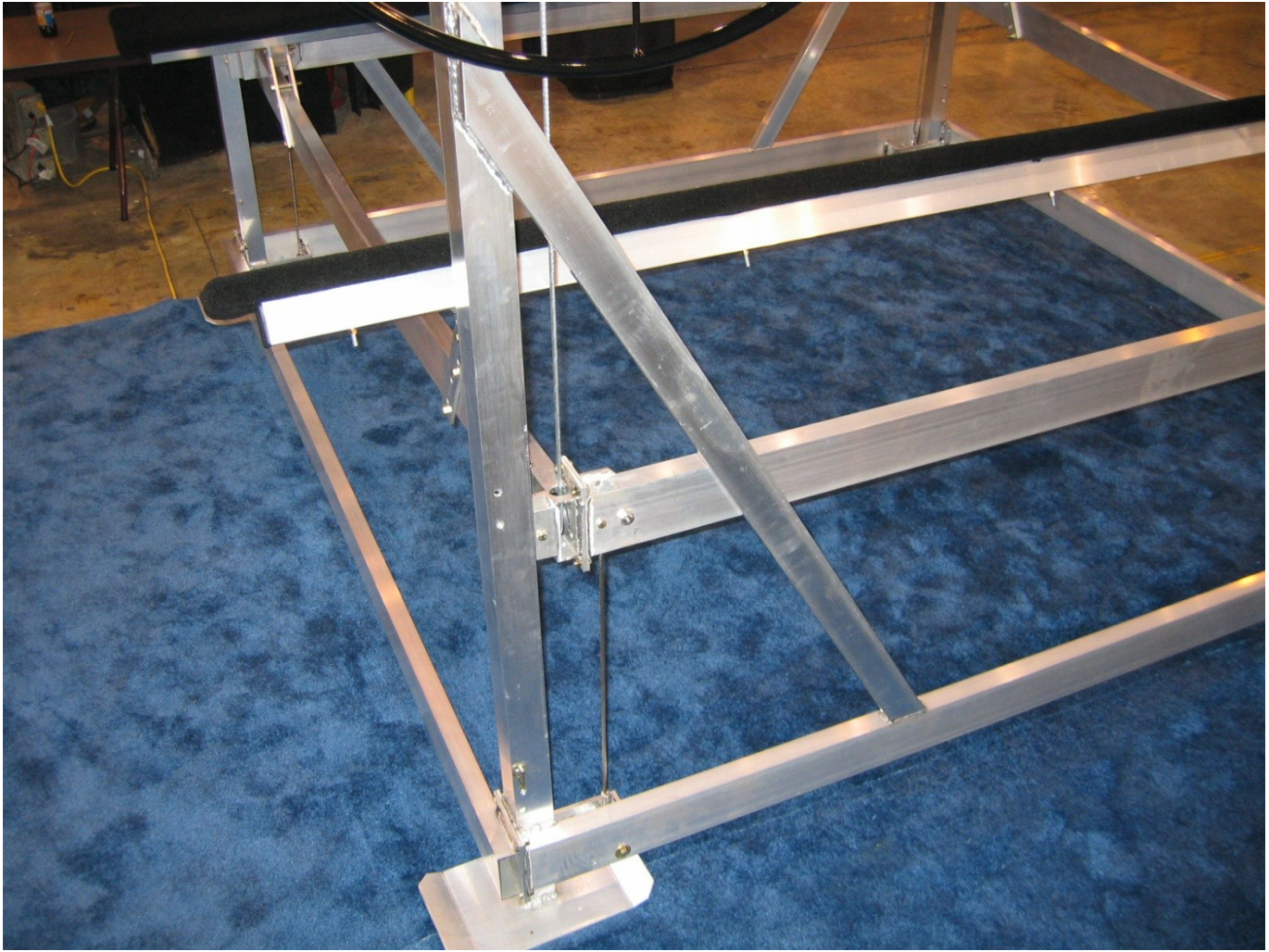
Note the position of the cables. Install the four (4) **Cables** exiting **Downwards** into straight bolts at the bottom of the frame. Use these fasteners.

4	3706-07	1/2-13" x 6" Hex Head C/S ZY
4	3706-08	1/2-13" Nylon Insert Locknut ZY
4	3706-10	1/2" USS Flat washer ZY

These (4) Downward Cables are:

- 1 Right Front - Side Cradle Member.
- 1 Right Rear - Rear Cradle Member.
- 1 Left Rear - Rear Cradle Member.
- 1 Left Front - Side Cradle Member.

CAUTION! -- Snug locknuts only -- Do not over tighten.



Step #8 -

Install the following fasteners into the three (3) **Winch** Mounting Frame predrilled holes.

3	3700-09	3/8-16" x 4-1/2" Hex Head C/S ZY
3	0076-11	3/8-16" Nylon Insert Locknut SS
6	3700-15	3/8" USS Flat washer ZY
1	3750-02	Lorenz 4000# Brake Winch w/Operator's Manual and MCD Mounting Plates

Install the **Winch** onto the Left Front Post by sliding in down over the post until it rests on the welded stop plate. Tighten the Bolts.

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Step #9 -

Install the **Black Winch Wheel**:

- 1 **3761-03** 42" Winch Wheel, Black
- 1 **3752-01** Winch Hardware, Bag, Lorenz w/Wrench, Nut, Washer

Follow instructions provided with Winch.

Step #10 -

Install the **Spinner Knob** on the Winch Wheel:

- 1 **1000-01** Spinner Knob Kit (preassembled in sealed bag)
 - 1 - #3765-01 Spinner Knob
 - 1 - #3700-06 3/8-16" x 3" HHCS ZY
 - 1 - #0076-11 3/8-16" Nylon Insert Locknut SS
 - 1 - #3700-12 3/8-16" Finished Hex Nut ZY
 - 3 - #3700-15 3/8" USS Flat washer ZY

Place a washer on each side of hole. Tighten Locknut.

Step #11 -

Install the **Galvanized Cable** onto the **Winch Drum**. Attach Cable to **Winch Drum** using the following parts:

- 1 **3752-01** Winch Hardware, Bag, Lorenz w/Wrench, Nut, Washer

Follow instructions provided with Winch.

Wind cable onto drum until all slack is removed.



Step #12 -

Install Black Plastic Plugs in (4) Posts

4 **3815-01** Cap Plug, Black, 3" Sq. (SQR 80mm)

Step #13 -

Install the **Labels**.

1 **1615-01** 4000-110/122 Decals, Sealed Package
1 - #3768-03 4000 lb. Lifting Capacity
1 - #3769-01 Safety Guide
1 - #3769-02 Caution Stop Here
1 - #3770-03 MCD Model 4000-110
1 - #3770-04 MCD Model 4000-122

Place the "*Lifting Capacity*", and "*Safety Guide*" labels on post close to Winch. Place the "*Caution Stop Here*" label on left upright Posts where Cradle reaches the Winch in the upright raised position.

Pick appropriate "*MCD Model*" label for this Lift (two are provided - (1) Model 4000-110 and (1) Model 4000-122). Install label on Winch Post. Discard unused model label.

Step #14 -

Set Front Legs to desired height. Adjust Rear Legs to level lift.

Check level of the Cradle relative to the rest of the Lift.

If needed, adjust the four (4) rear U-Bolts to level the Cradle:

- **To raise or lower the cradle at the rear of the lift relative to the front** -- adjust the two(2) inboard U-Bolts equally up to raise the cradle, or adjust the two(2) inboard U-Bolts equally down to lower the cradle.
- **To raise or lower one side of the cradle at the back** -- adjust the two (2) outside rear U-Bolts individually up or down until cradle is level side-to-side.

Adjusting the single front U-Bolt does not have any effect. It only serves to hold the end of the Winch cable in place.

Test **operation** of LIFT. Make adjustments as necessary until Cradle raises and lowers easily.

End of Assembly and Installation of Lift.

Proceed next with installation of Bunks and Guides. See instructions provided with the Bunks and Guides.

Product warranty information is available at www.metalcraftdocks.com, or by writing to Metal Craft Docks 156 Burton St. Painesville, OH 44024. Failure to perform and maintain accurate maintenance records regarding you Metal Craft Lift may void or limit product warranty.

Annual maintenance:

- Grease all pulley fittings / 8 places see fig 13A below.
- Inspect all cables for ware and proper alignment. Replace as needed
- Inspect all rollers and pulleys for ware. Replace as needed
- The above inspections should be completed by an authorized Metal Craft Dealer. When an authorized dealer is not available, contact Metal Craft Docks for additional information.

FIG: 13-A

