

# ProLine

## TOOL & SUPPLY, LLC

### LK4000 MOTOR CITY LIFT KING

#### Main Component Assembly Guide



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(989) 315-8946

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If you have any questions or problems with your product, please call 1 (989) 315-8946.

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# Important Safety Instructions

1. The LK4000 Motor City Lift King and the LK4053 Box Attachment are designed to lift truck beds emptied of cargo.

**IMPORTANT – PLEASE NOTE: *Built in tool boxes or racking must be removed from beds before using the LK4000 Motor City Lift King. Failure to do so may cause the weight distribution to change.***

2. Make sure all 5 handle knobs on the forward slides, rear slides, and the main boom are fully tightened before lifting any weight. **Do not over extend the main boom.** This can result in serious injury to the operator and damage to the LK4000 and/or the attachment being used.
3. It is important that the main boom be centered to the truck bed and that the slides are extended evenly between the sides. This is essential for proper weight distribution of the bed on the LK4000. Failure to do so may result in serious injury to the operator and damage to the LK4000 and/or the attachment being used.
4. Keep hands away from moving parts (e.g. winch, cable, rollerbox, pulleys, etc.). Failure to do so may result in serious injury to the operator.
5. Prior to each use:
  - A. Inspect the cable for damage (i.e. fraying). Replace if needed.
  - B. Make sure the pulleys on the top of the mast are properly secured with the provided hardware.
  - C. Make sure that the locking pins are properly secured (leg pins, turnbuckle pins, etc.).
  - D. Make sure the hook at the end of the lift cable is connected to the LK4016 safety latch and inspect the safety latch for proper operation.
  - E. The winch provided with LK4000 must be securely fastened to the mast. Do not use any cable shorter than 15'. Follow the directions supplied with the winch to ensure that the cable is properly attached.
6. Do not perform any adjustments to the pulleys, winches or any other component of the LK4000 or attachments while the unit is under load.
7. Never get under a detached truck bed while it is on the LK4000.
8. When storing the LK4000, or moving it while in a stored position, always keep the safety chain around the folded legs and turnbuckle. The safety chain connects to the handles on each side of the mast.

**IMPORTANT – *Always use the safety chain when unfolding the LK4000.***
10. The LK4000 is designed to be used on a hard, level surface, capable of withstanding the load. Movement of the LK4000 over uneven or soft surfaces may cause the load to shift and the LK4000 to tip, possibly resulting in severe injury or death.

# LK4000 MAIN COMPONENT

The rugged design of the LK4000 Main Component is safe, simple, and engineered to save you time. When in the stored position, the LK4000 occupies only 3 square feet of floor space, and when used with the available attachments, the LK4000 is a fast, easy, safe way to remove or install a car or truck door, pickup box, topper, or semi hood. The LK4000 is designed to be used by one person quickly and efficiently and features a safety system to protect the product and operator at all times. Each attachment can be installed or removed quickly and easily.

## Benefits:

- One operator removal and installation of car and truck doors, pick-up boxes, toppers, and semi hoods.
- Increases labor productivity and profits.
- Patented manual mechanical tool with rugged design that requires minimum maintenance.
- Superior load stability during the removal or installation process, compared to other tools.
- Fast and easy way to change a fuel pump.
- Tilt the box upward for under box repairs, rust proofing, customizing, restoration and painting.

## Before Assembly

Select the area where you are going to operate your machine. For safe operation, the location must be on a hard, level surface. Refer to the overall dimensions in the Specifications section to determine the size of the area you will need to assemble the unit.

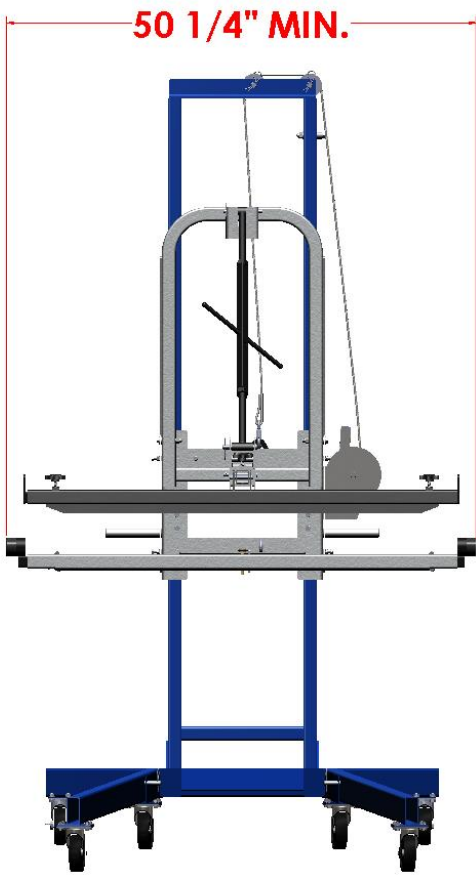
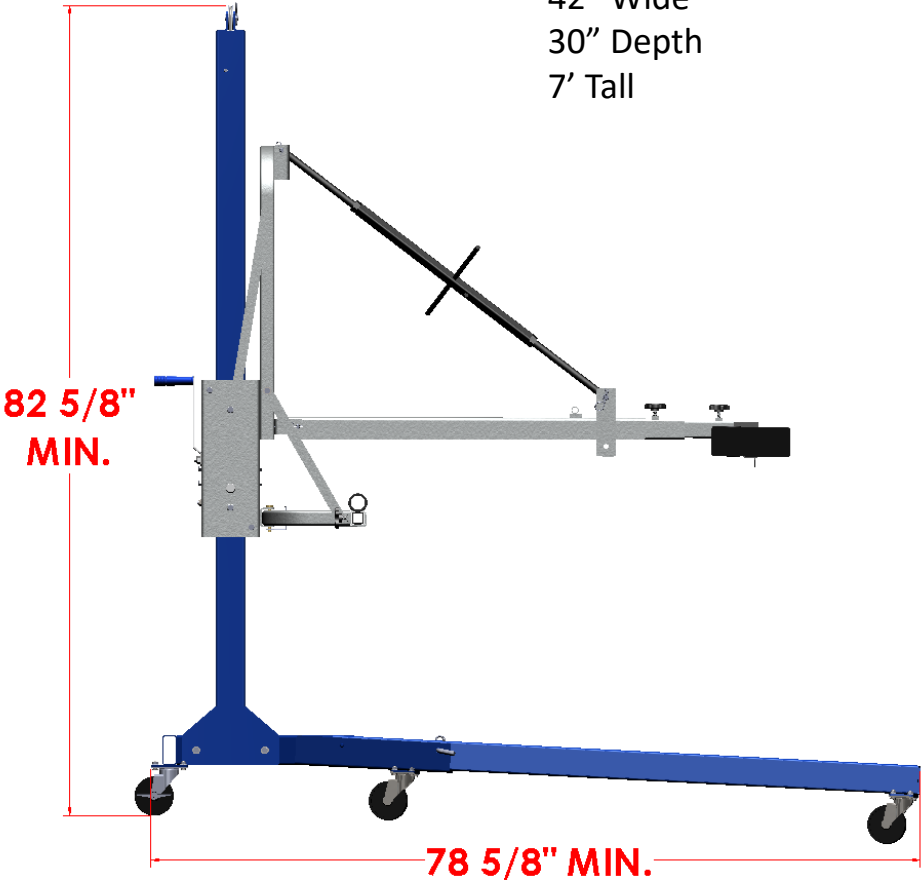
## Basic Assembly Tips

Follow these basic points when assembling your unit.

- Read and understand the “Important Safety Instructions” before assembly.
- The assembly process requires 2 people.

# Specifications

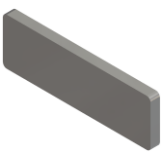
Approximate Dimensions in Stored Position  
42" Wide  
30" Depth  
7' Tall



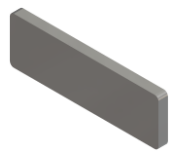
# Parts

PartNo	Description	QTY.
*	SPACER, UHMW, ROLLER BOX, .25 X 1 1/2 X 4 1/2	2
*	SPACER, UHMW, ROLLER BOX, .3 X 1 1/2 X 4 1/2	4
*	5/16-18 x 3/4 HEX BOLT	18
*	5/16-18 X 2 1/2 HEX BOLT	2
*	5/16 FLAT WASHER	4
*	5/16-18 HEX FLANGE NUT	26
*	5/16-18 NYLON INSERT HEX NUT	2
*	5/16-18 EYE BOLT, 3" SHANK, 4 5/8" OVERALL	1
*	3/8-16 X 1 HEX BOLT	12
*	3/8-16 X 2 1/2 HEX BOLT	8
*	3/8-16 X 2 3/4 HEX BOLT	1
*	3/8 FLAT WASHER	24
*	3/8-16 HEX NUT	4
*	3/8-16 HEX JAM NUT	8
*	3/8-16 NYLON INSERT HEX NUT	17
*	3/8-16 THIN NYLON INSERT HEX NUT	2
*	1/2-13 X 6 FLAT SOC. HD. BOLT	2
*	Ø1 1/8" X 5/8" SEALED CAM FOLLOWER	4
*	BUSHING, CAM FOLLOWER, Ø.750 O.D. X Ø.437 I.D.	5
*	3/8 x 3 USABLE LENGTH SQ. BAIL LOCKING PIN	1
*	Ø1/8" HAIR PIN CLIP for Ø1/2" PIN	5
*	3/8 x 5 BENT-PULL HITCH PIN	1
*	3/8 x 3 CLEVIS PIN with CLIP	1
*	CLEVIS PIN, Ø3/8 X 3 1/2	1
*	CLEVIS PIN, 1/2 X 1 1/4	2
*	CLEVIS PIN, 1/2 X 3 1/2	1
*	HAIR PIN CLIP, Ø3/8" PIN	1
*	Ø1/2" BENT PULL HITCH PIN	2
*	Ø2 1/2" PULLEY FOR 3/16" WIRE CABLE	2
*	#70 EXTENSION SPRING	1
*	#29-13 (1.396 x 1.64 x .168) SPLIT RING	2
*	#14 JACK CHAIN	4 ft.
*	STRAP	2
5040-01-HDP	Ø4.00 CASTER	4
5040-01-HDP-TLP	Ø4" CASTER WITH BRAKE	2
EWK-CABLE-16	3/16" X 16' ZINC PLATED with FORGED SAFETY HOOK, 1200lb WLL	1
EWK1500-S-11BL	BRAKE WINCH, 1500lb WLL	1
LK-H006	3/8-16 STAR KNOB	6
LK4001	MAST BASE	1
LK4002	MAST	1
LK4003	LOWER SUPPORT LEG	2
LK4004	ROLLER BOX	1
LK4005	TURNBUCKLE	1
LK4006	MAIN BOOM	1
LK4007-01	BRACKET, MAIN BOOM	1
LK4008	SLIDE BAR 1	1
LK4009-01	SLIDE BAR 2	1
LK4010	FRONT CROSS BAR	1
LK4012-01	SUPPORT, REAR LIFT MOUNT BRACKET ("D" BAR)/ROLLER BOX	2
LK4013	REAR LIFT MOUNT BRACKET ("D" BAR)	1
LK4015-01	HANDLE, ROLLER BOX	2
LK4016	WELDMENT, SAFETY LATCH	1
LK4016-02	SPACER for 1/2-13 X 6, FLAT SOC. HD. MACHINE SCREW	1
LK4016A	INSIDE GUIDE BRACKET, ROLLERBOX	2

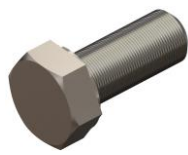
# Parts cont.



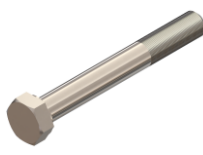
Spacer, UHMW,  
Roller box,  
.3 x 1 1/2 x 4 1/2



Spacer, UHMW,  
Roller box,  
.25 x 1 1/2 x 4 1/2



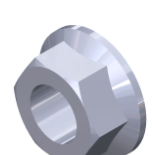
5/16-18 x 3/4  
hex bolt



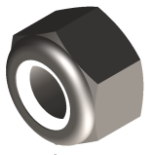
5/16-18 x 2 1/2  
hex bolt



5/16  
flat washer



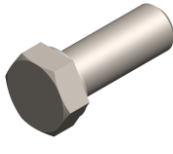
5/16-18  
hex flange nut



5/16-18  
nylon insert  
hex nut



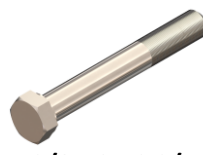
5/16-18 eye bolt,  
3" shank,  
4 5/8 overall



3/8-16 x 1  
hex bolt



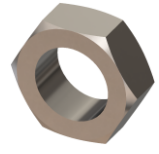
3/8-16 x 2 1/2  
hex bolt



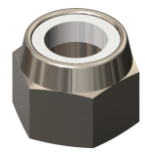
3/8-16 x 2 3/4  
hex bolt



3/8  
flat washer



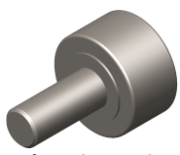
3/8-16  
hex jam nut



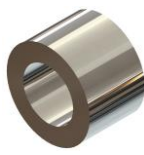
3/8-16  
nylon insert  
hex nut



1/2-13 x 6  
flat socket  
head bolt



Ø1 1/8 x 5/8  
sealed cam  
follower



Bushing, cam  
follower  
Ø.750 O.D. x Ø.437 I.D.



3/8 x 3  
square bail  
locking pin



1/8 Hair pin clip,  
Ø1/2 pin



3/8 x 5  
bent-pull  
hitch pin



Clevis pin,  
Ø3/8 x 3  
with clip



Clevis pin,  
Ø3/8 x 3 1/2



Clevis pin,  
Ø1/2 x 1 1/4



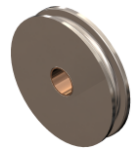
Clevis pin,  
Ø1/2 x 3 1/2



Hair pin clip,  
Ø3/8" pin



Ø1/2  
bent pull  
hitch pin



Ø2 1/2 pulley  
for 3/16  
wire cable



#70  
extension  
spring



Split ring



#14 jack chain



Straps



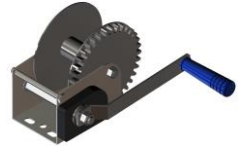
Ø4" caster



Ø4" caster  
with brake



Ø3/16 x 16'  
zinc plated with  
forged safety hook  
1200lb WLL



Brake winch  
1500lb WLL



LK-H006  
3/8-16  
star knob



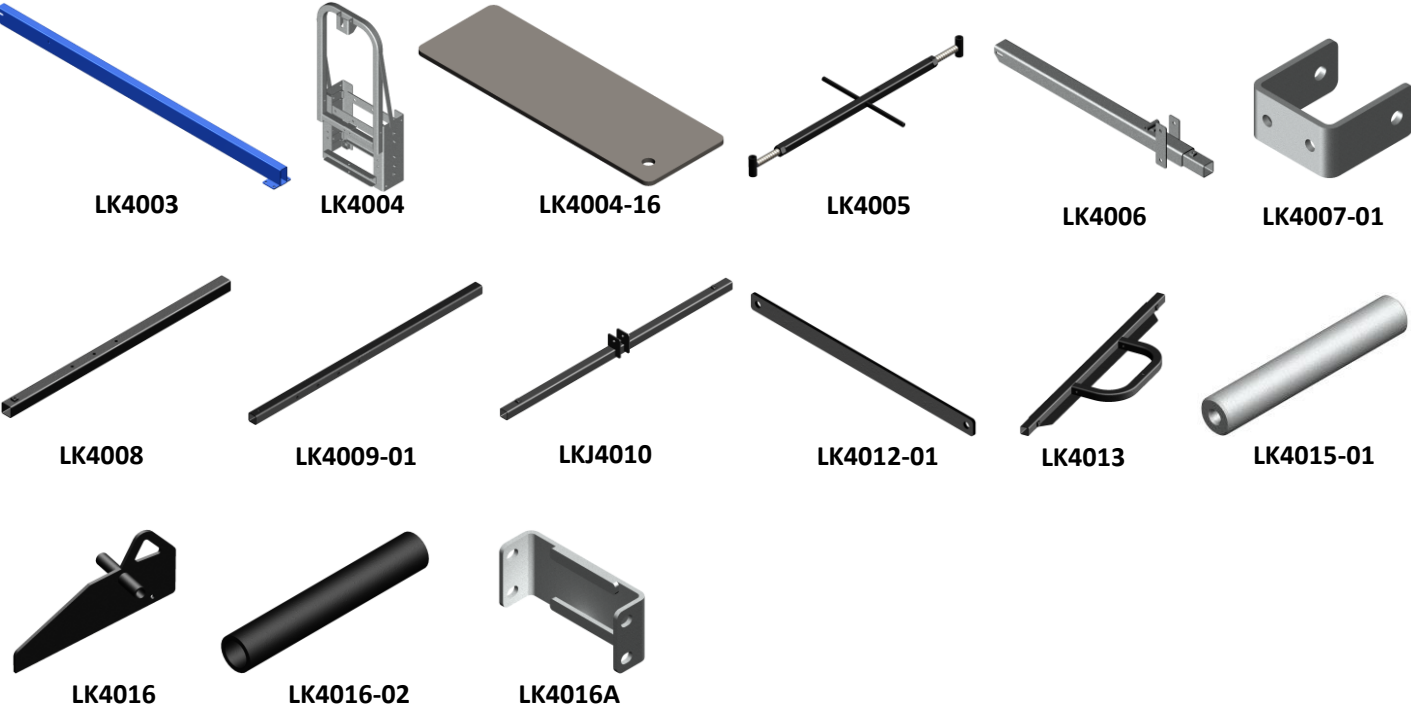
LK4001



LK4002



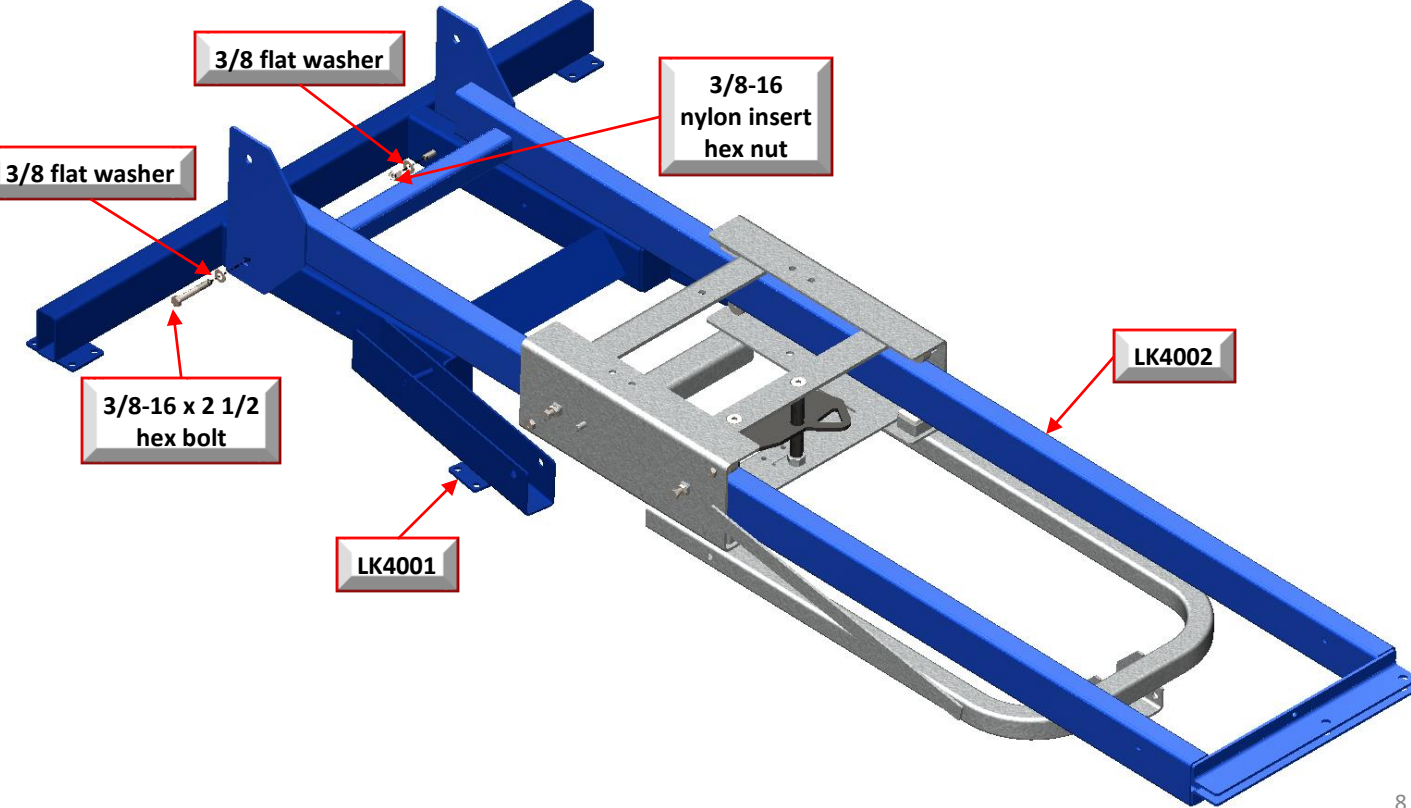
# Parts cont.



# Assembly

## PREASSEMBLY

For packaging, the LK4001 Base & LK4002 Mast are attached with (2) 3/8-16 x 2 1/2 hex bolts, (4) 3/8 flat washers and (2) 3/8-16 nylon insert hex nuts. **REMOVE AND SAVE THESE FASTENERS FOR LATER USE IN THE ASSEMBLY PROCESS.** Set the LK4001 Base aside for now.

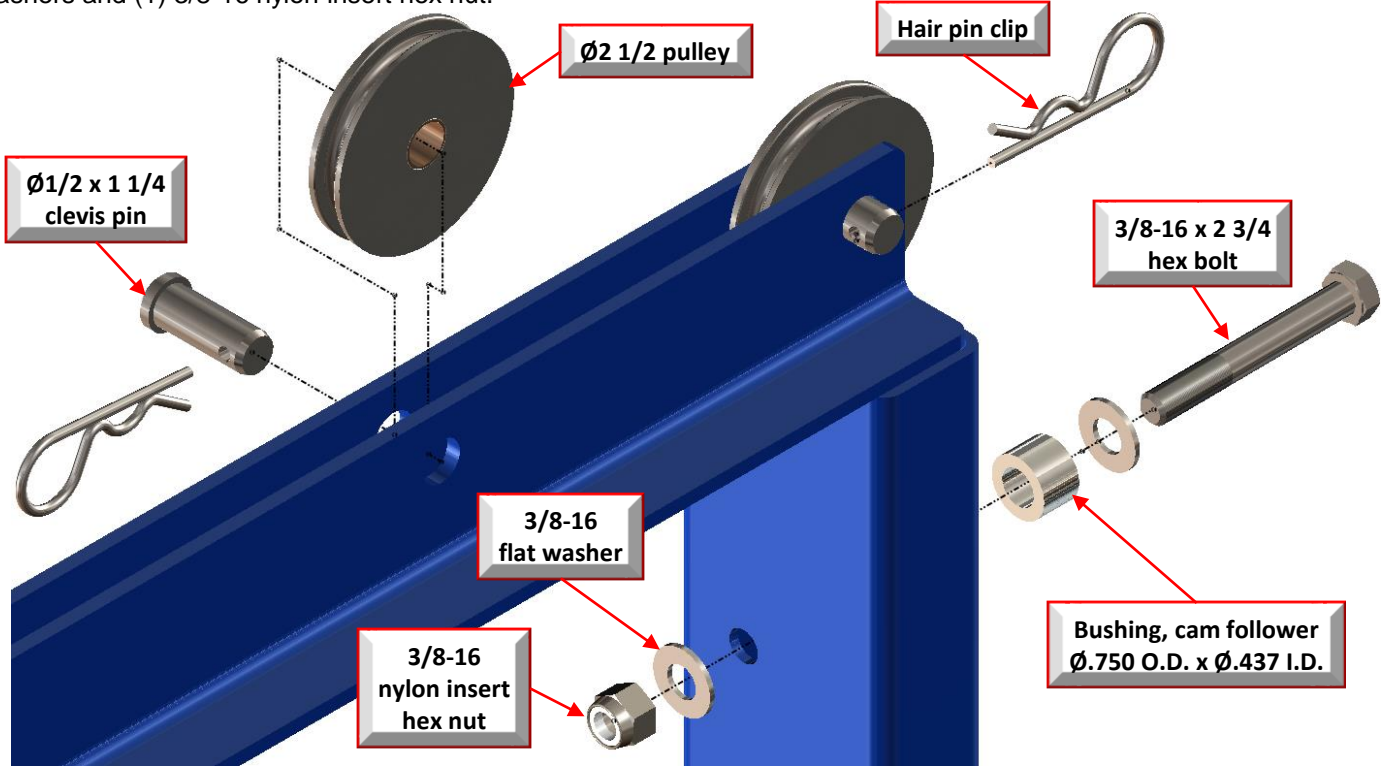




# Assembly

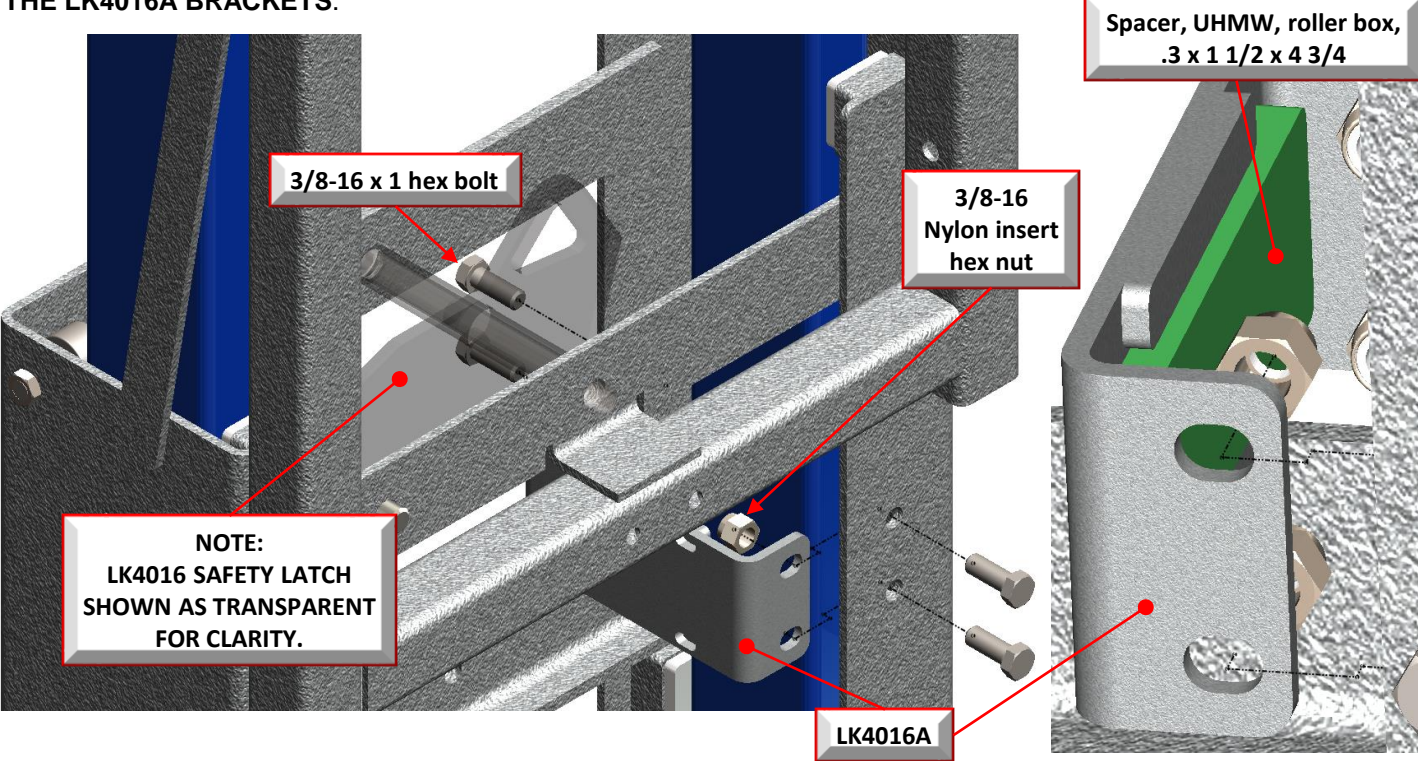
## STEP 1 (If possible, lay the Mast on a bench for the following assembly steps)

Attach the (2)  $\text{\O}2\ 1/2$  pulleys to the LK4002 Mast as shown, using the (2)  $\text{\O}1/2 \times 1\ 1/4$  clevis pins and (2) of the hair pin clips for a  $\text{\O}1/2$  pin. Attach  $\text{\O}.750$  O.D. x  $\text{\O}.437$  I.D. Bushing to the Mast using (1)  $3/8\text{-}16 \times 2\ 3/4$  hex bolt, (2)  $3/8$  flat washers and (1)  $3/8\text{-}16$  nylon insert hex nut.



## STEP 2

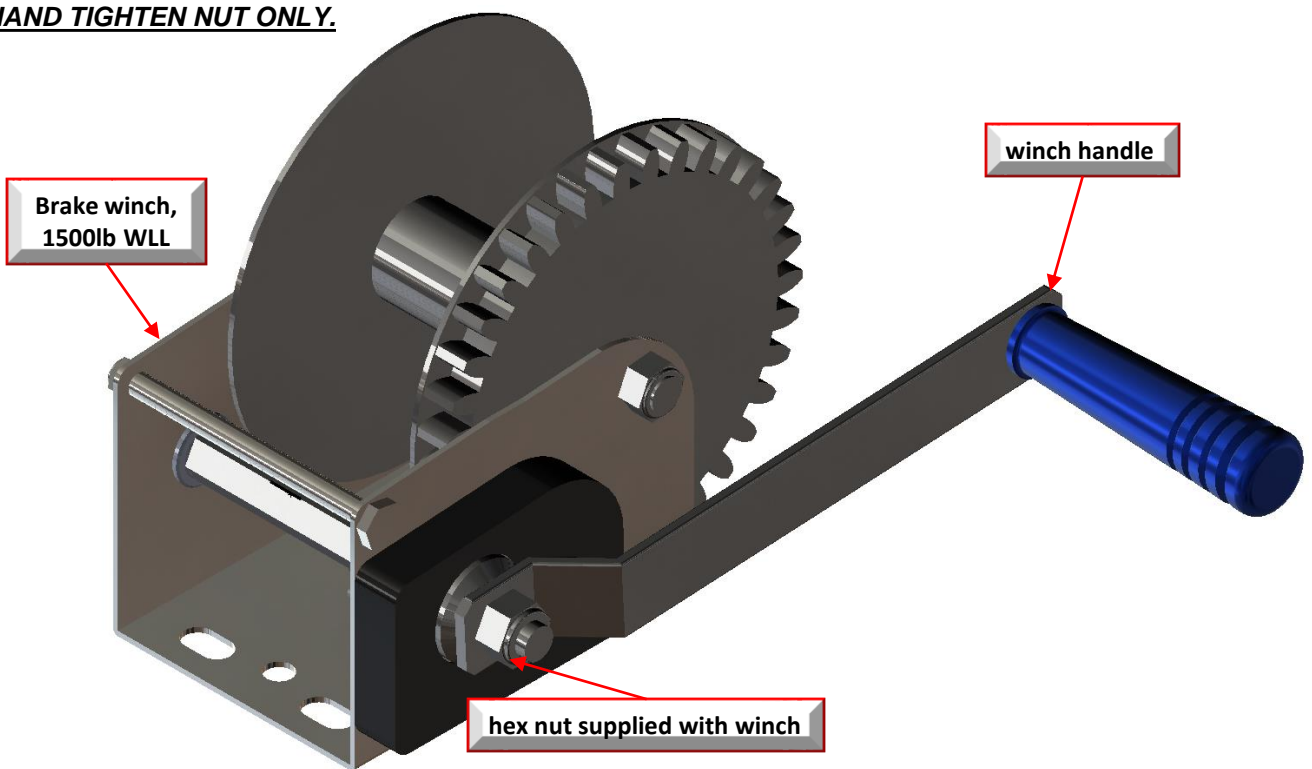
Attach the (2) LK4016A Inside Guide Brackets to the LK4004 Roller Box as shown, using the (8)  $3/8\text{-}16 \times 1$  hex bolts and (8)  $3/8\text{-}16$  nylon insert hex nuts. **MAKE SURE THERE ARE UHMW SPACERS ATTACHED TO THE INSIDE OF THE LK4016A BRACKETS.**



# Assembly

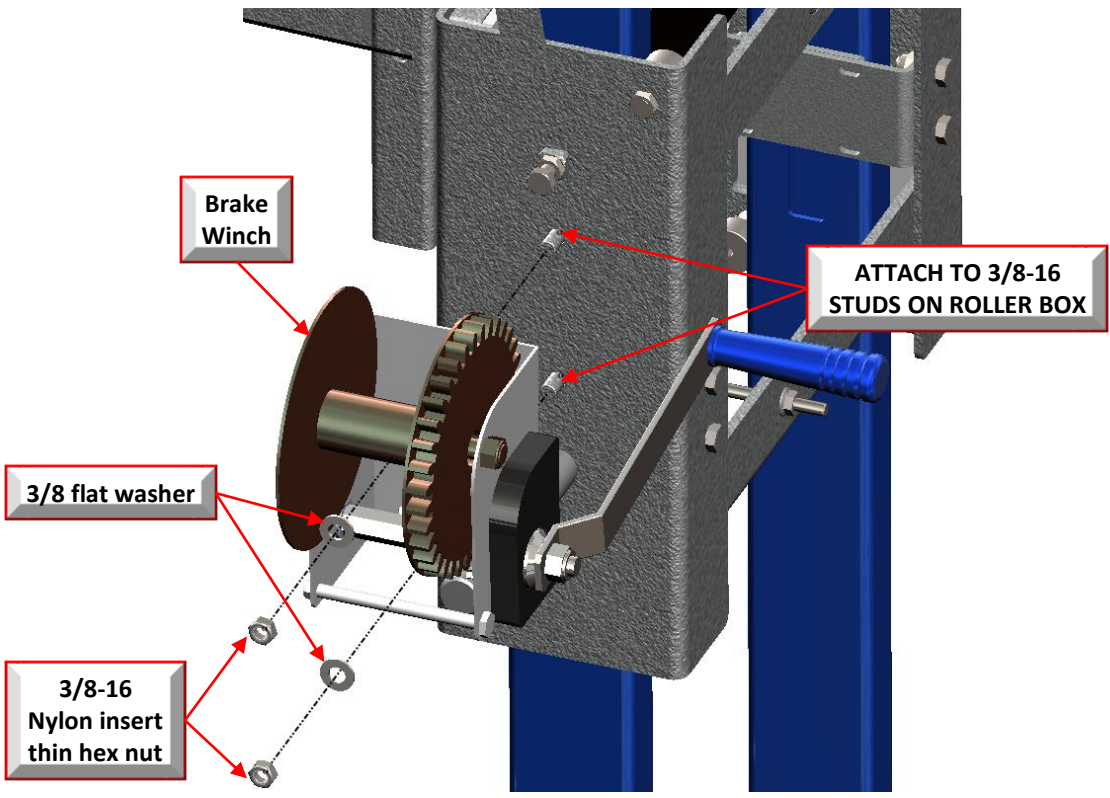
## STEP 3

Attach the handle to the Brake Winch as shown below, using the hardware supplied with the winch. **IMPORTANT! DO NOT OVER TIGHTEN THE NUT ON THE WINCH HANDLE. THIS WILL LOOSEN THE BRAKE IN THE WINCH. HAND TIGHTEN NUT ONLY.**



## STEP 4

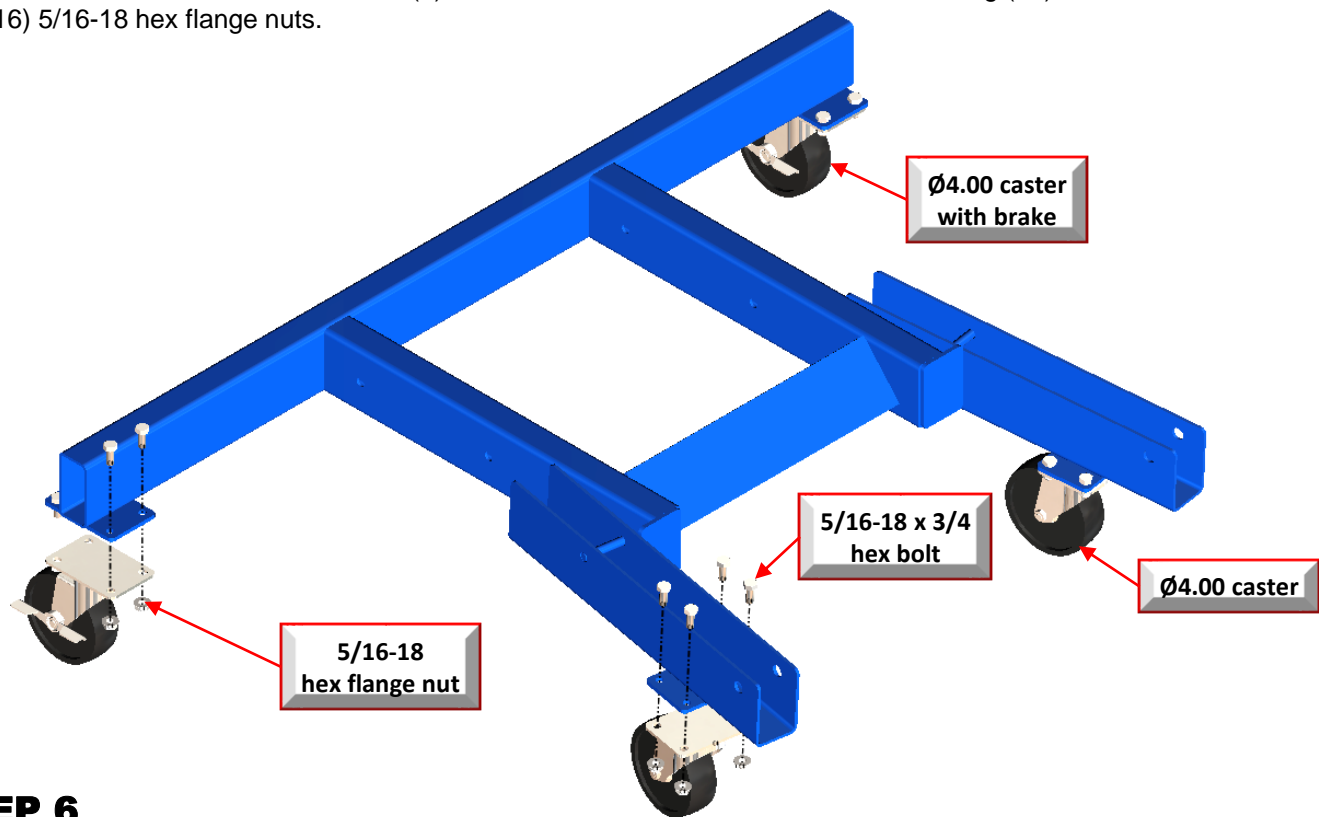
Attach the Brake Winch to the LK4004 Roller Box using (2) 3/8-16 nylon insert thin hex nuts and (2) 3/8 flat washers. **NOTE ORIENTATION OF WINCH HANDLE TO ROLLER BOX.**



# Assembly

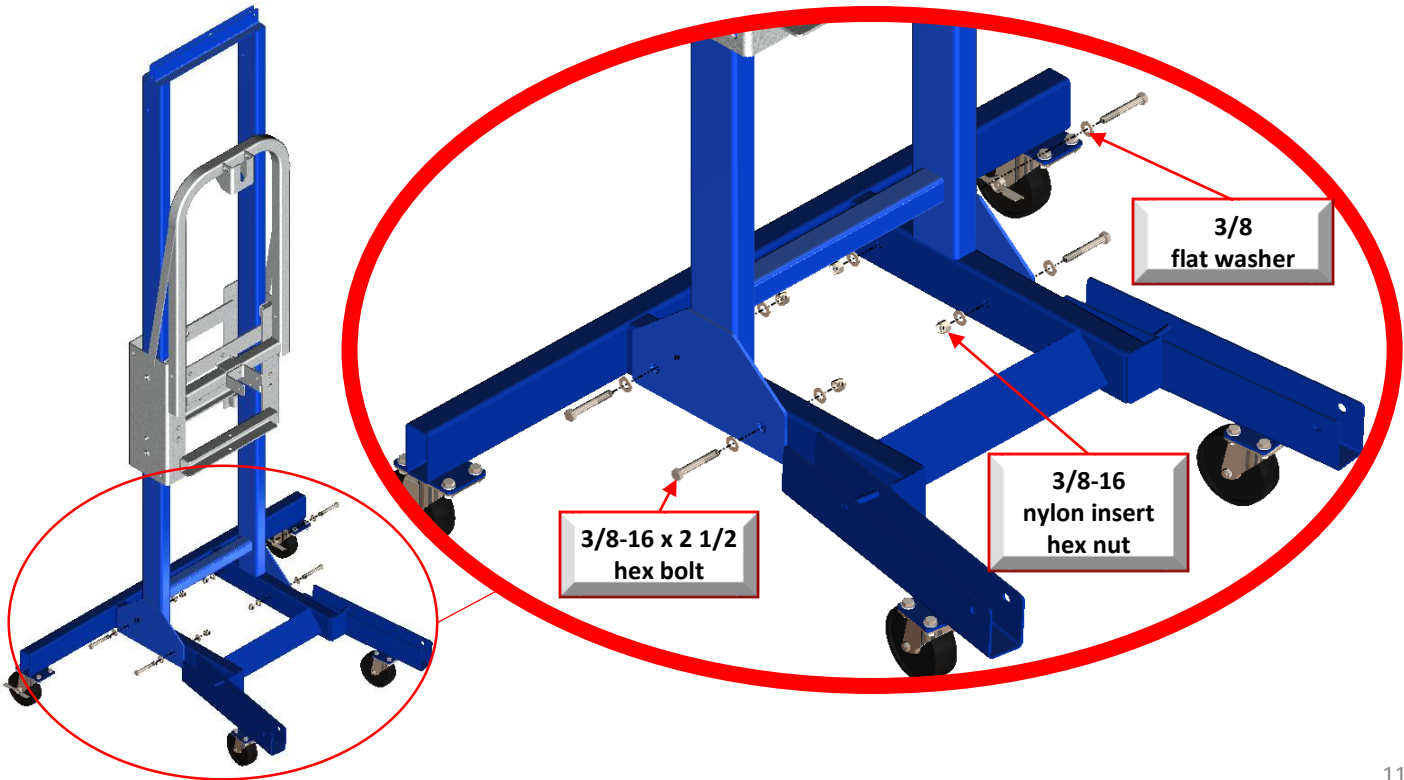
## STEP 5

Attach the Ø4.00 casters with brake and (2) of the Ø4.00 casters to the LK4001 Base using (16) 5/16-18 x 3/4 hex bolts and (16) 5/16-18 hex flange nuts.



## STEP 6

**Make sure the brakes on the casters are locked** and stand the LK4002 Mast upright on the LK4001 Base. Attach the Mast using the 3/8-16 fasteners saved when the unit was unpacked (see the PREASSEMBLY step on page 8). In addition, use (2) 3/8-16 x 2 1/2 hex bolts, (4) 3/8 flat washers and (2) 3/8-16 hex nuts to completely fasten the LK4002 Mast to the LK4001 Base.

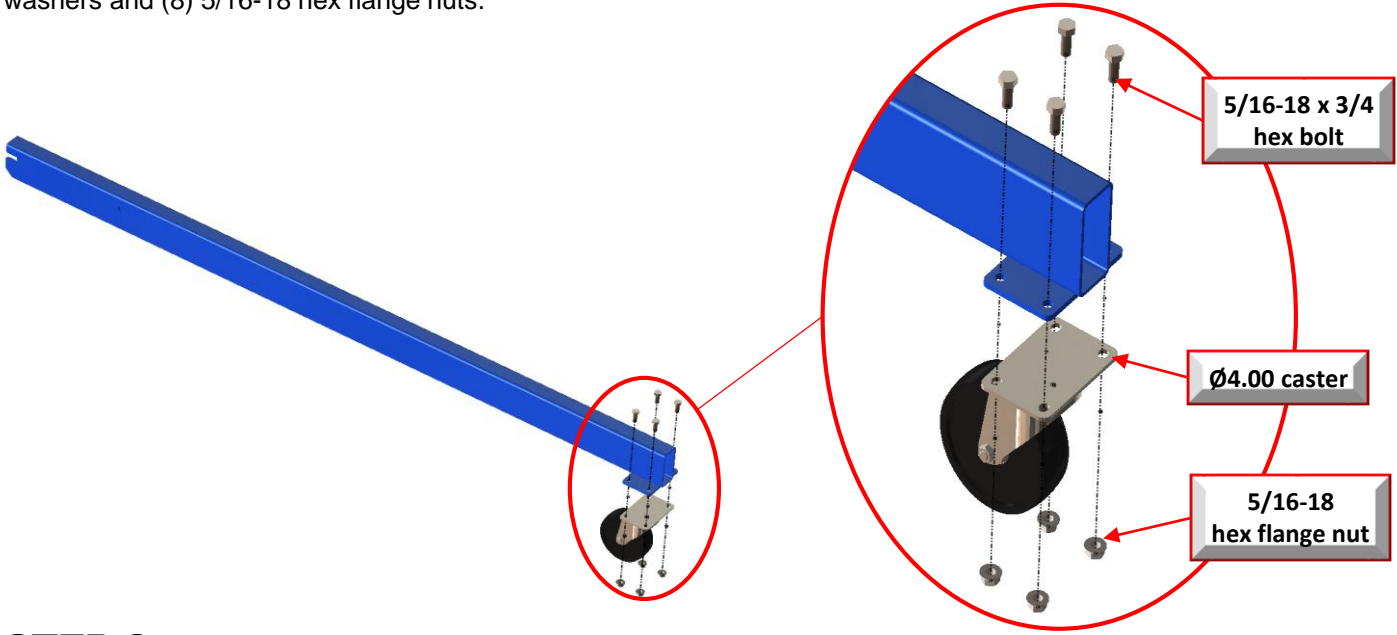




# Assembly

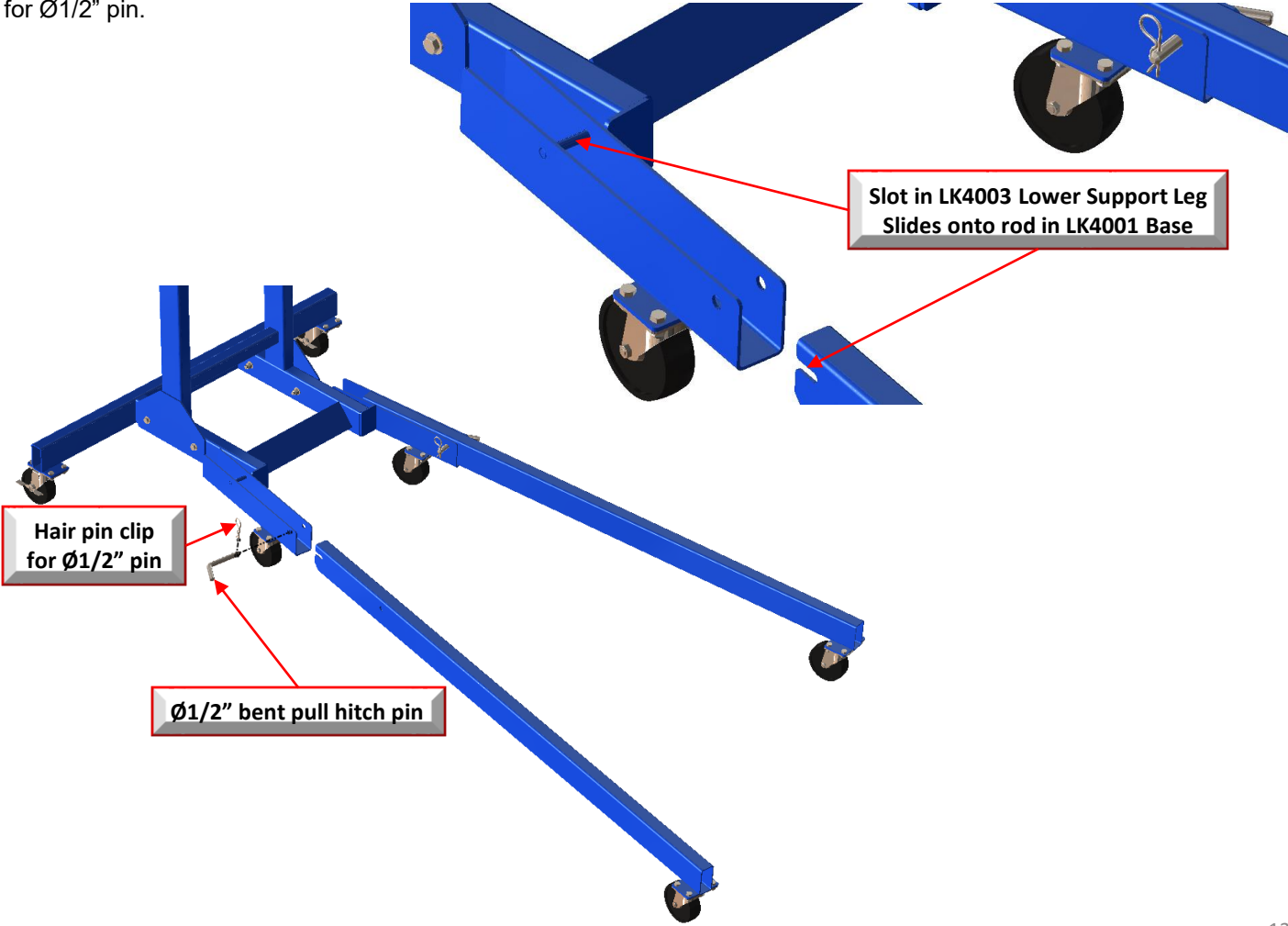
## STEP 7

Attach (2) of the  $\varnothing 4.00$  casters to the (2) LK4003 Lower Support Legs using (8) 5/16-18 x 3/4 hex bolts, (8) 5/16 flat washers and (8) 5/16-18 hex flange nuts.



## STEP 8

Attach the LK4003 Lower Support Legs to the LK4001 Base using (2)  $\varnothing 1/2$ " Bent Pull Hitch Pins and (2) Hair Pin Clips for  $\varnothing 1/2$ " pin.



# Assembly

## STEP 9

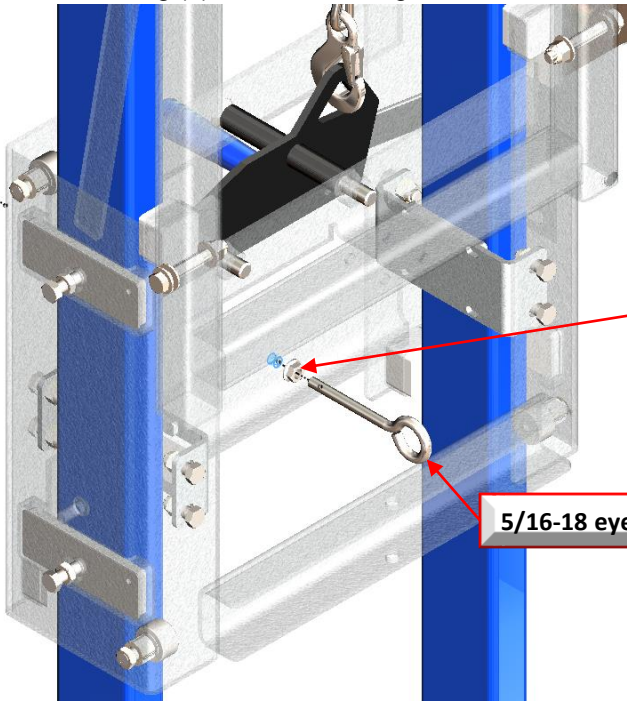
Attach 3/8-16 Eye Bolt to the LK4004 Roller Box using (2) 3/8-16 hex flange nuts.

5/16-18  
hex flange nut

**NOTE:**  
LK4004 ROLLER BOX  
SHOWN AS TRANSPARENT  
FOR CLARITY.

5/16-18  
hex flange nut

5/16-18 eye bolt



## STEP 10

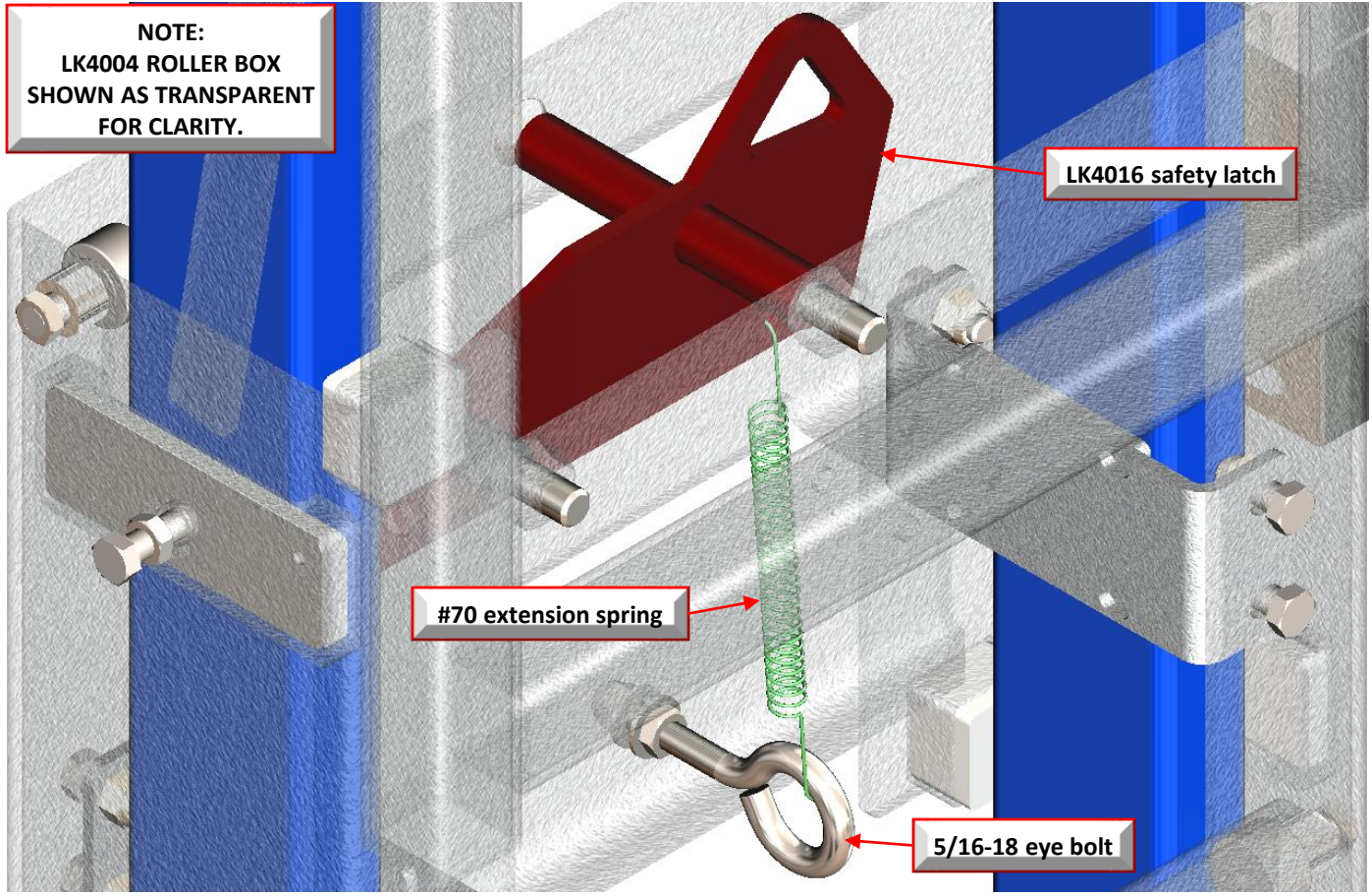
Attach the #70 Extension Spring to the 3/8-16 Eye Bolt and the LK4016 Safety Latch as shown.

**NOTE:**  
LK4004 ROLLER BOX  
SHOWN AS TRANSPARENT  
FOR CLARITY.

LK4016 safety latch

#70 extension spring

5/16-18 eye bolt

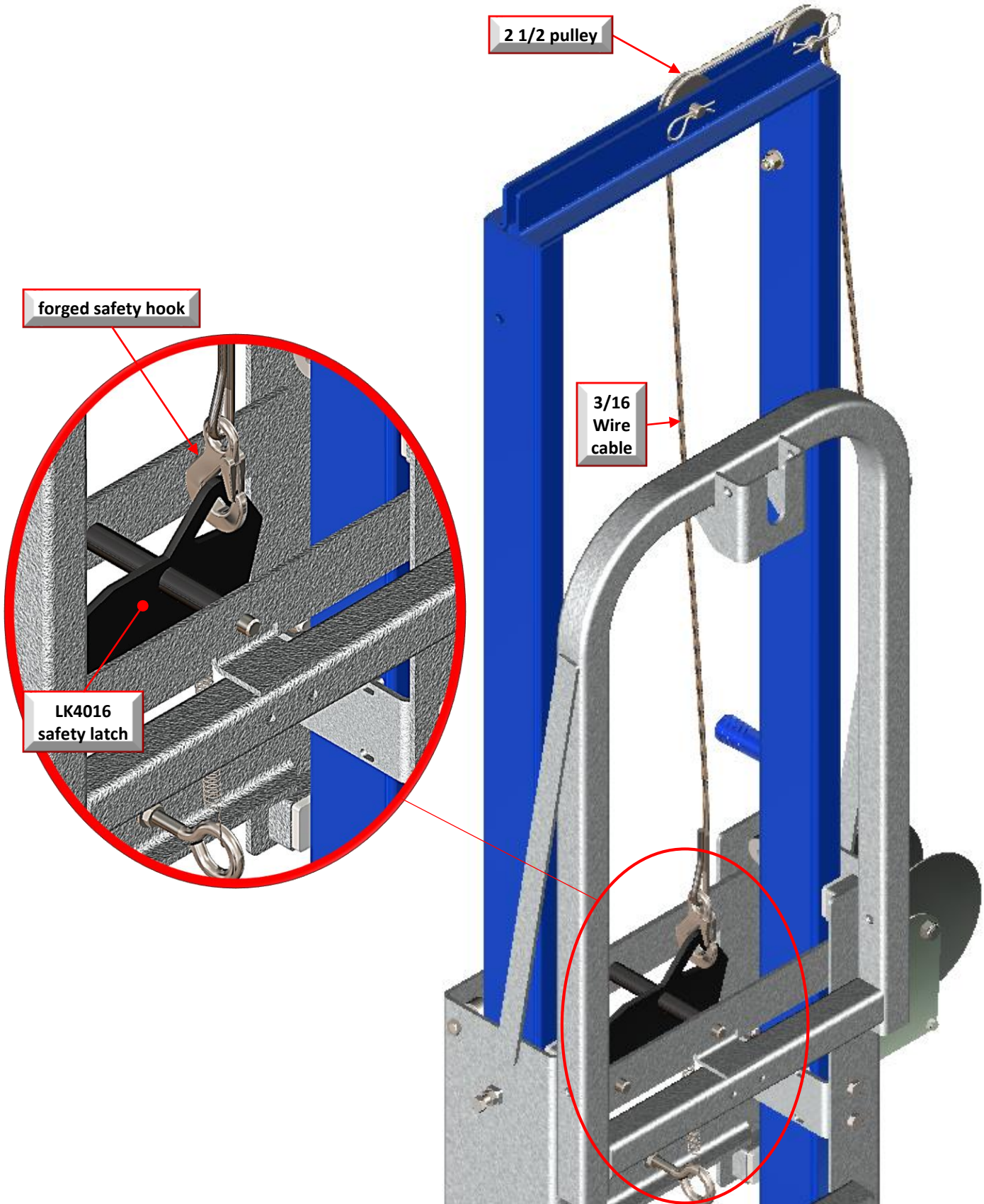




# Assembly

## STEP 11

Attach Forged Safety Hook to the LK4016 Safety Latch and thread 3/16 Wire Cable through the Pulleys.

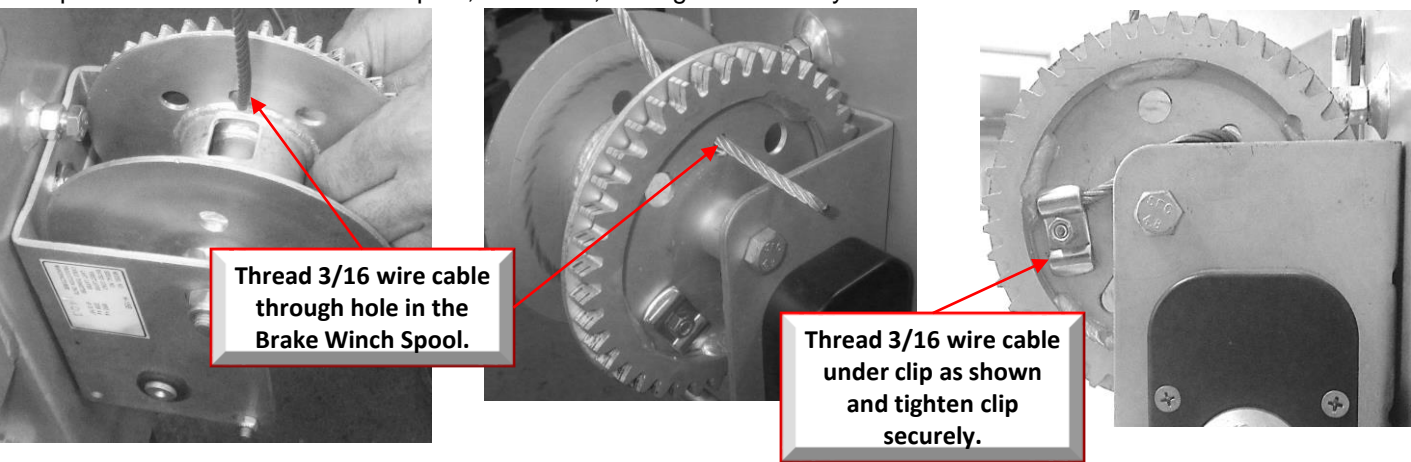




# Assembly

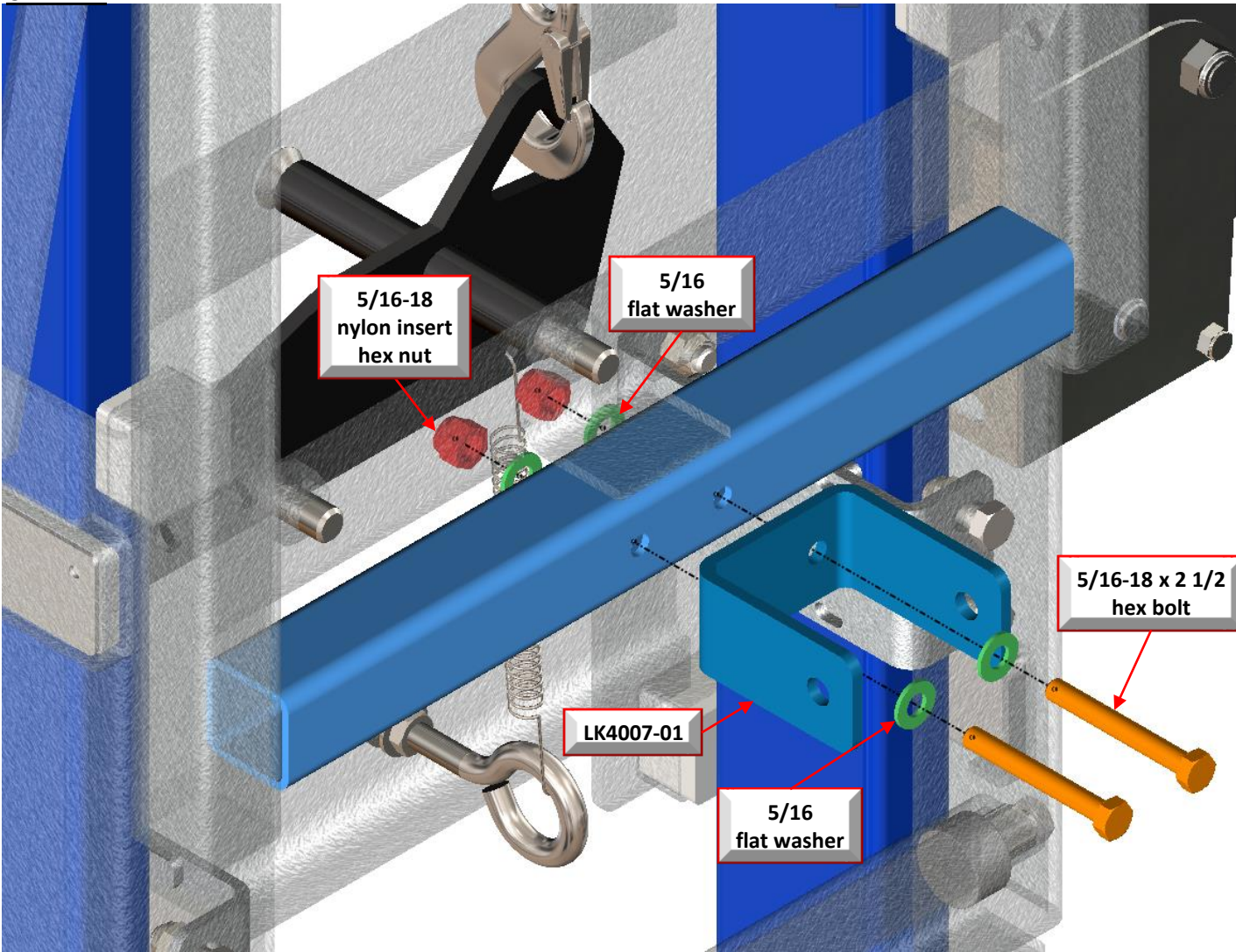
## STEP 12

Thread the 3/16 Wire Cable through the hole in the winch spool as shown below. Place the 3/16 wire cable under the clamp on the outside of the winch spool, as shown, and tighten securely.



## STEP 13

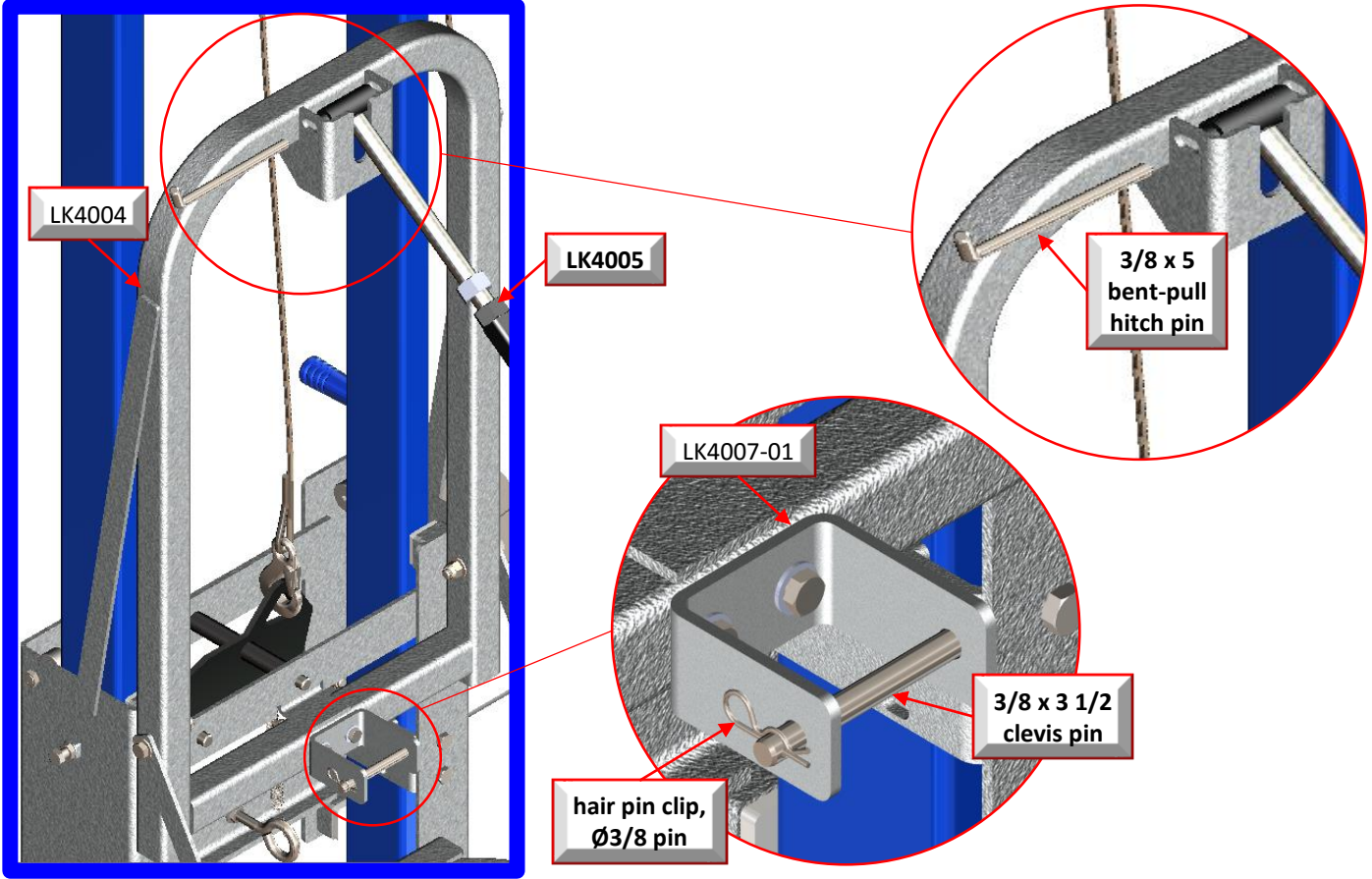
Attach the LK4007-01 Main Boom Bracket to the LK4004 Roller Box using (2) 5/16-18 x 2 1/2 hex bolts, (4) 5/16 flat washers and (2) 5/16-18 nylon insert hex nuts. **NOTE: PARTS ARE TRANSPARENT OR SHOWN IN COLOR FOR CLARITY.**



# Assembly

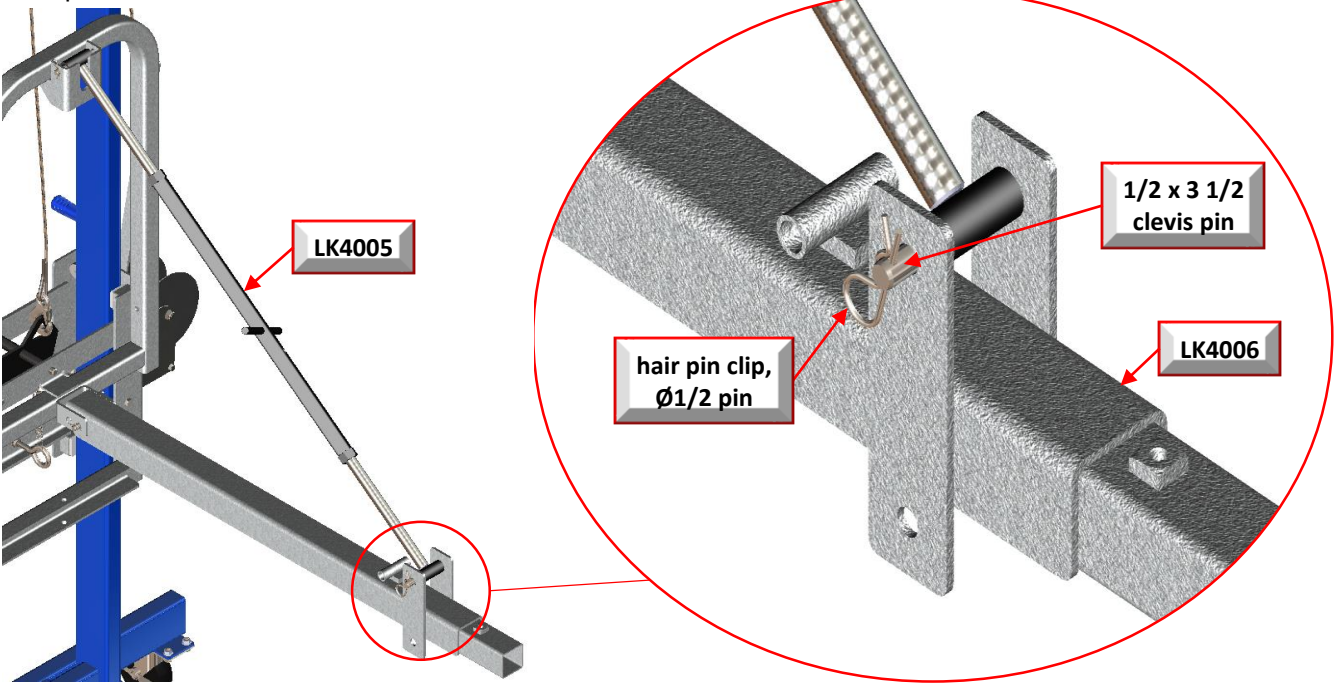
## STEP 14

Attach the LK4005 Turnbuckle to the LK4004 Roller Box using (1)  $\text{\O}3/8 \times 4$  bent-pull hitch pin. Attach the  $3/8 \times 3 \frac{1}{2}$  clevis pin to LK4007-01, as shown below.



## STEP 15

Attach the LK4005 Turnbuckle to the LK4006 Main Boom using (1)  $\text{\O}1/2 \times 3 \frac{1}{2}$  clevis pin and (1) hair pin clip for a  $\text{\O}1/2$  pin.

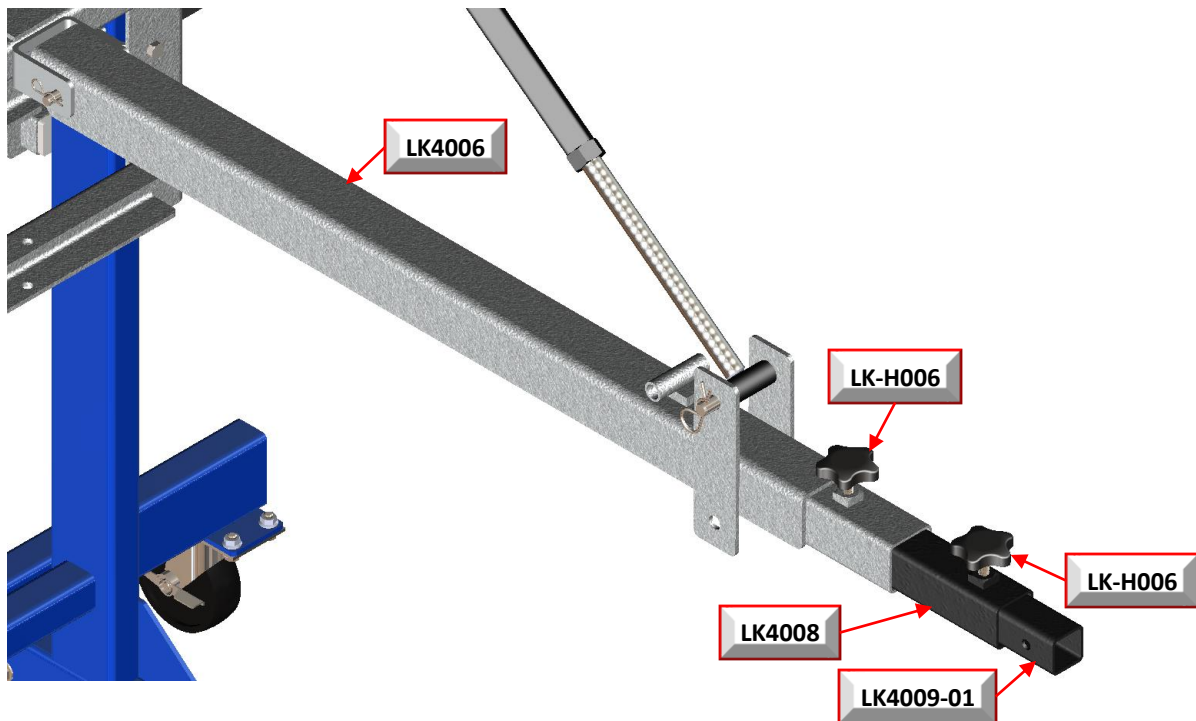




# Assembly

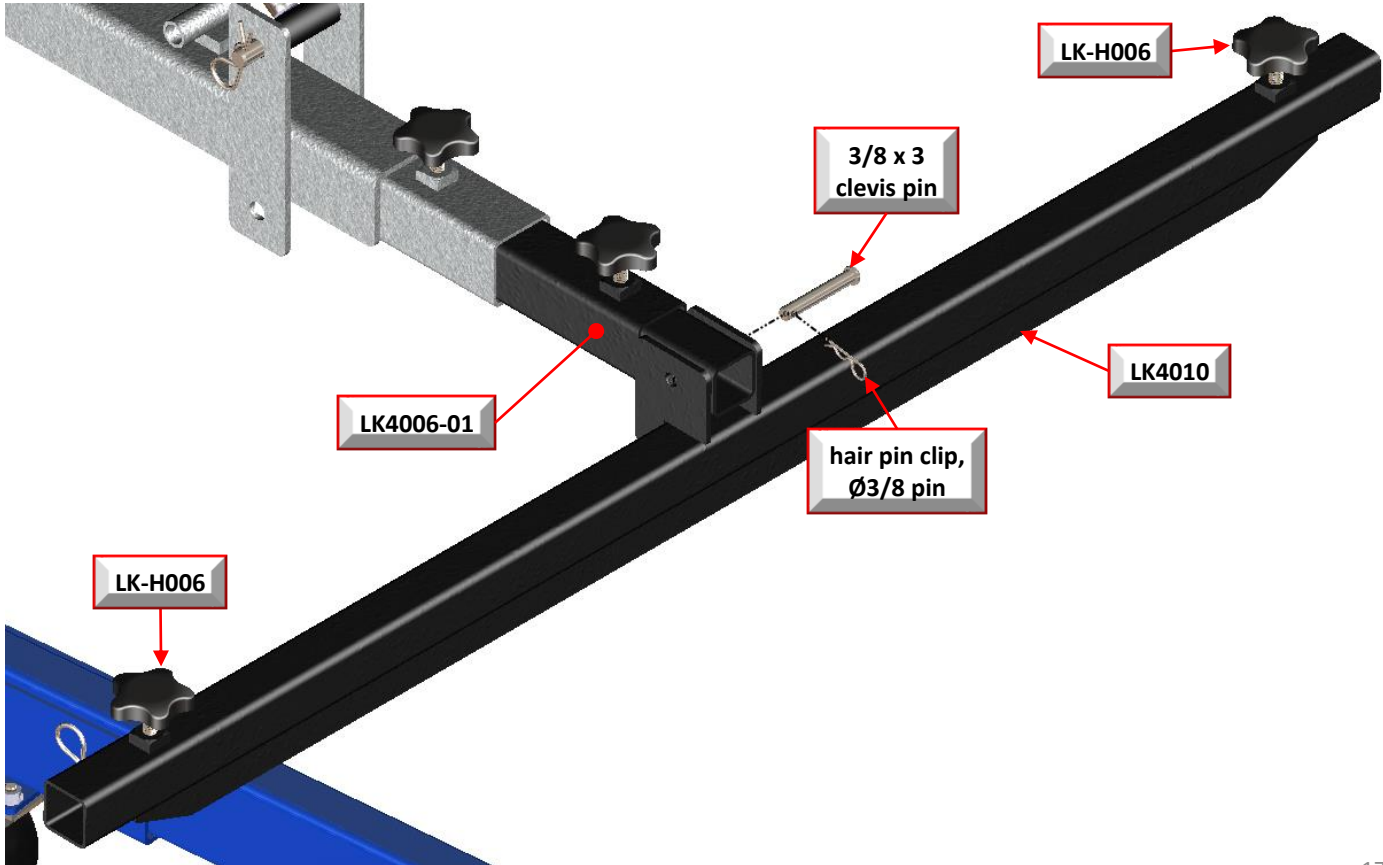
## STEP 16

Slide LK4008 into LK4006. Slide LK4009-01 into LK4008. Thread (2) LK-H006 5 handle knobs into LK4008 & LK4009-01 as shown.



## STEP 17

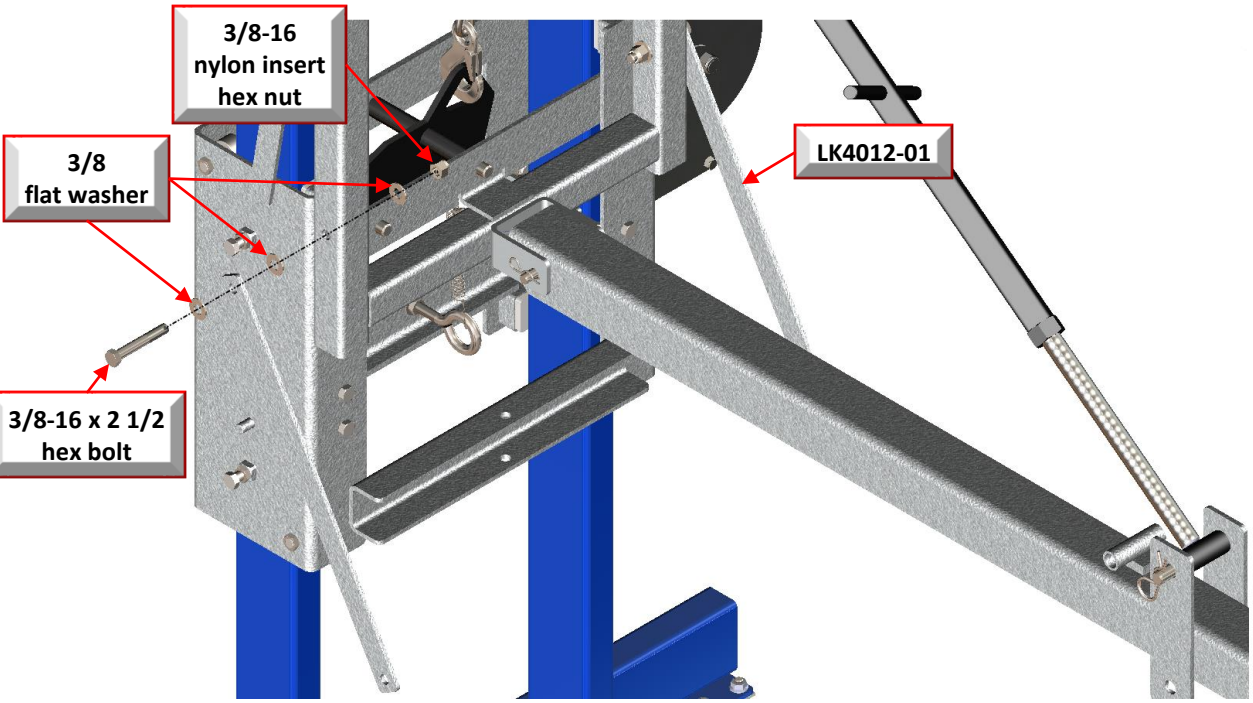
Attach the LK4010 "T" Bar to LK4009-01 using (1)  $\text{Ø}3/8 \times 2 \text{ 3/8}$  clevis pin and (1) hair pin clip for a  $\text{Ø}3/8$  pin. Thread (2) LK-h006 5 handle knobs into LK4010 as shown.



# Assembly

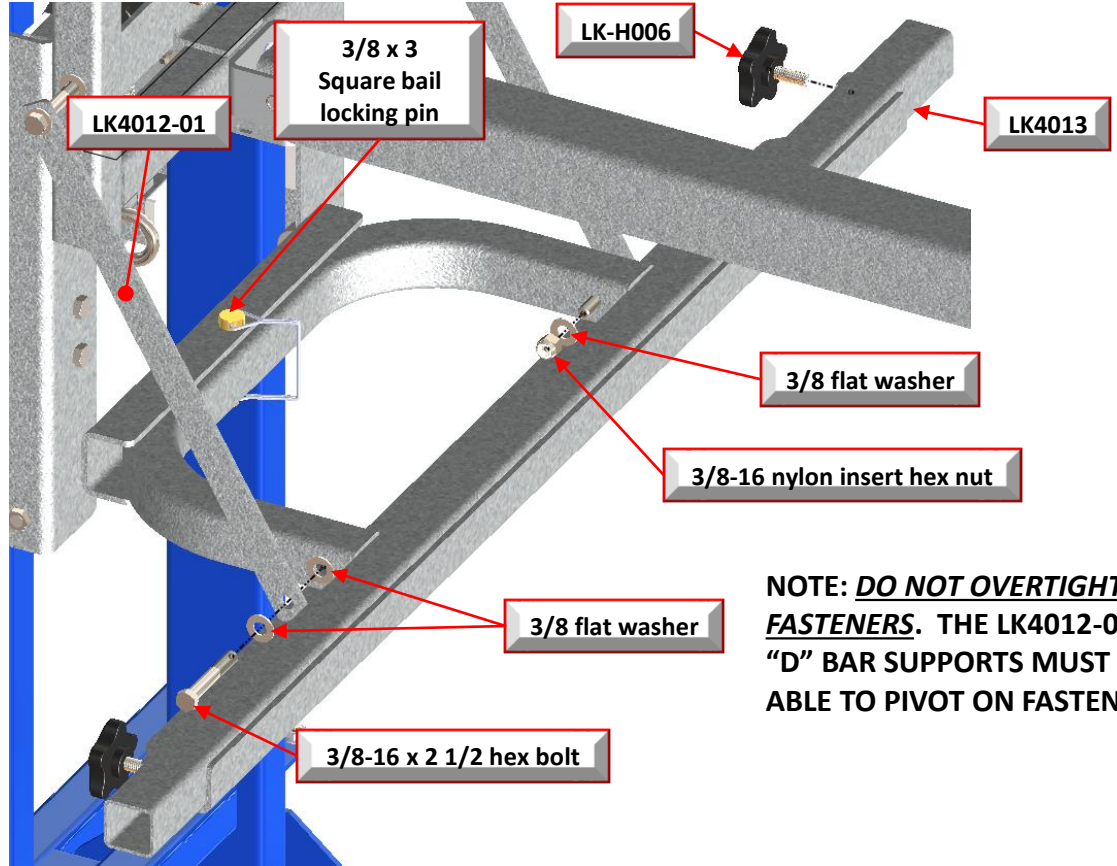
## STEP 18

Attach the (2) LK4012-01 "D" Bar supports to the LK4004 Roller Box using (2) 3/8-16 x 2 1/2 hex bolts, (6) 3/8 flat washers and (2) 3/8-16 nylon insert hex nuts.



## STEP 19

Attach the LK4012-01 "D" Bar supports to the LK4013 "D" Bar using (2) 3/8-16 x 2 1/2 hex bolts, (6) 3/8 flat washers and (2) 3/8-16 nylon insert hex nuts. Attach the LK4013 "D" Bar to the LK4004 Roller Box using (1) 3/8 x 3 square bail locking pin as shown. Thread (2) LK-H006 star knobs into the LK4013 "D" Bar as shown.

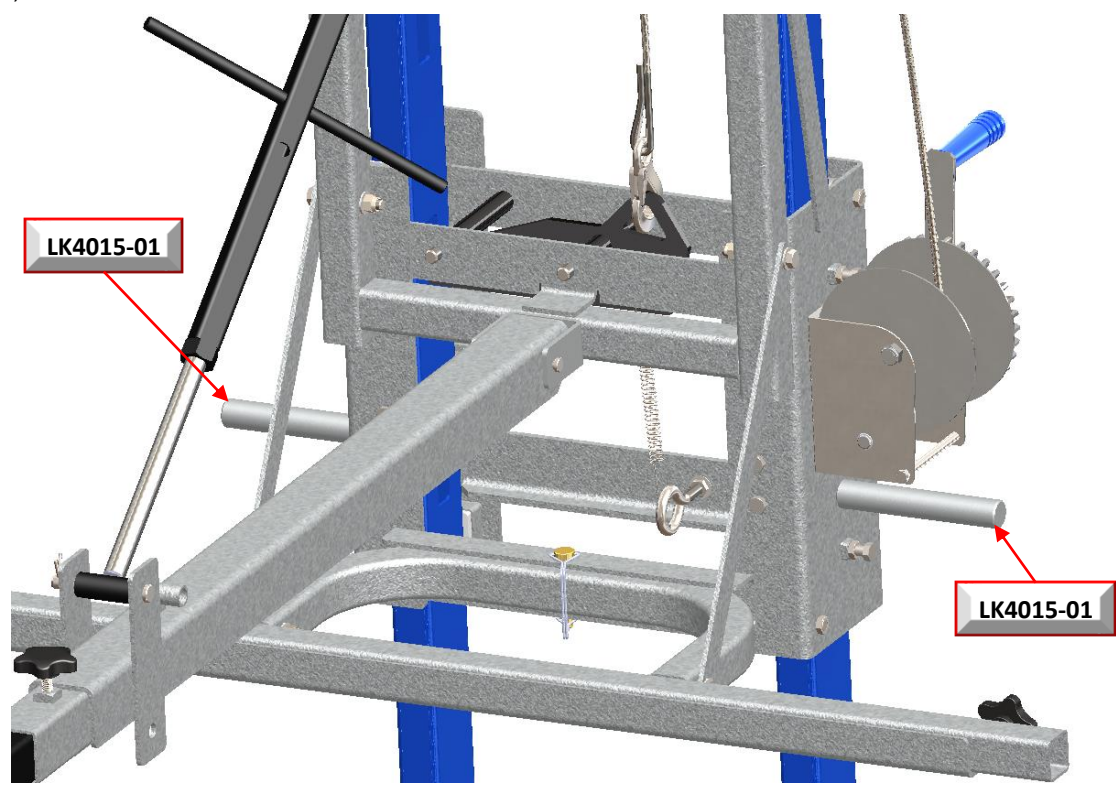


**NOTE: DO NOT OVERTIGHTEN FASTENERS. THE LK4012-01 "D" BAR SUPPORTS MUST BE ABLE TO PIVOT ON FASTENERS.**

# Assembly

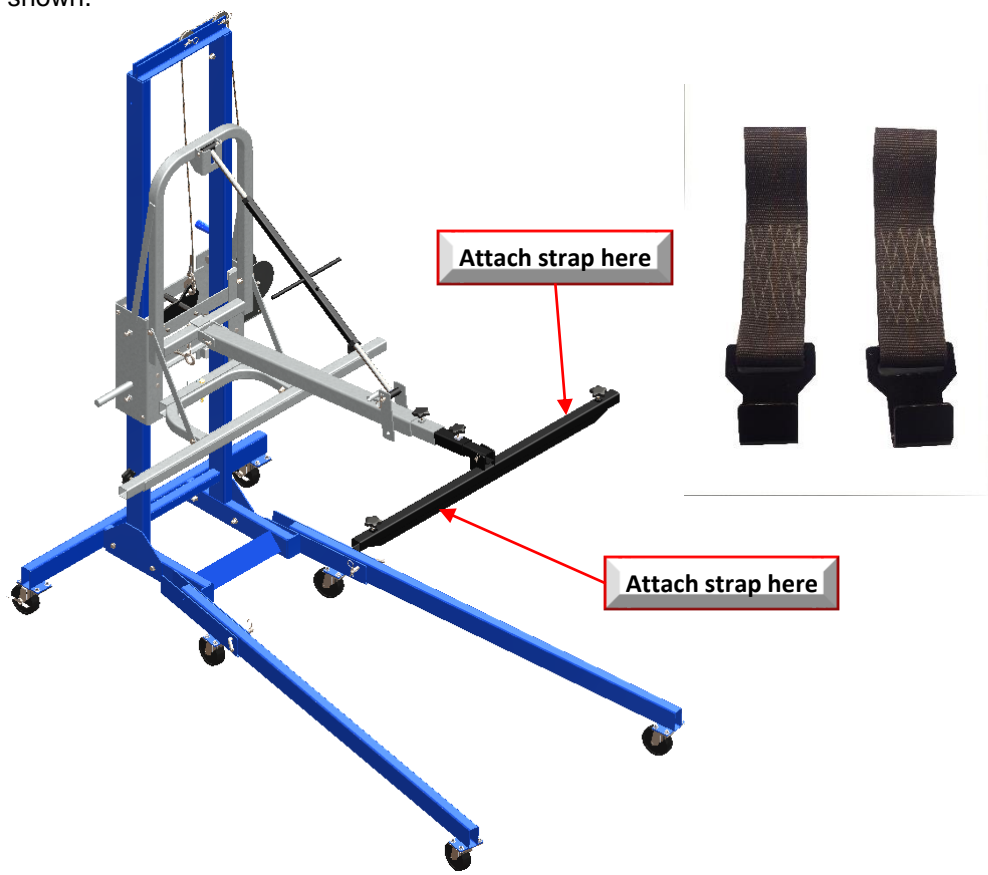
## STEP 20

Attach the (2) LK4015-01 handles as shown.



## STEP 21

Attach the (2) Straps as shown.

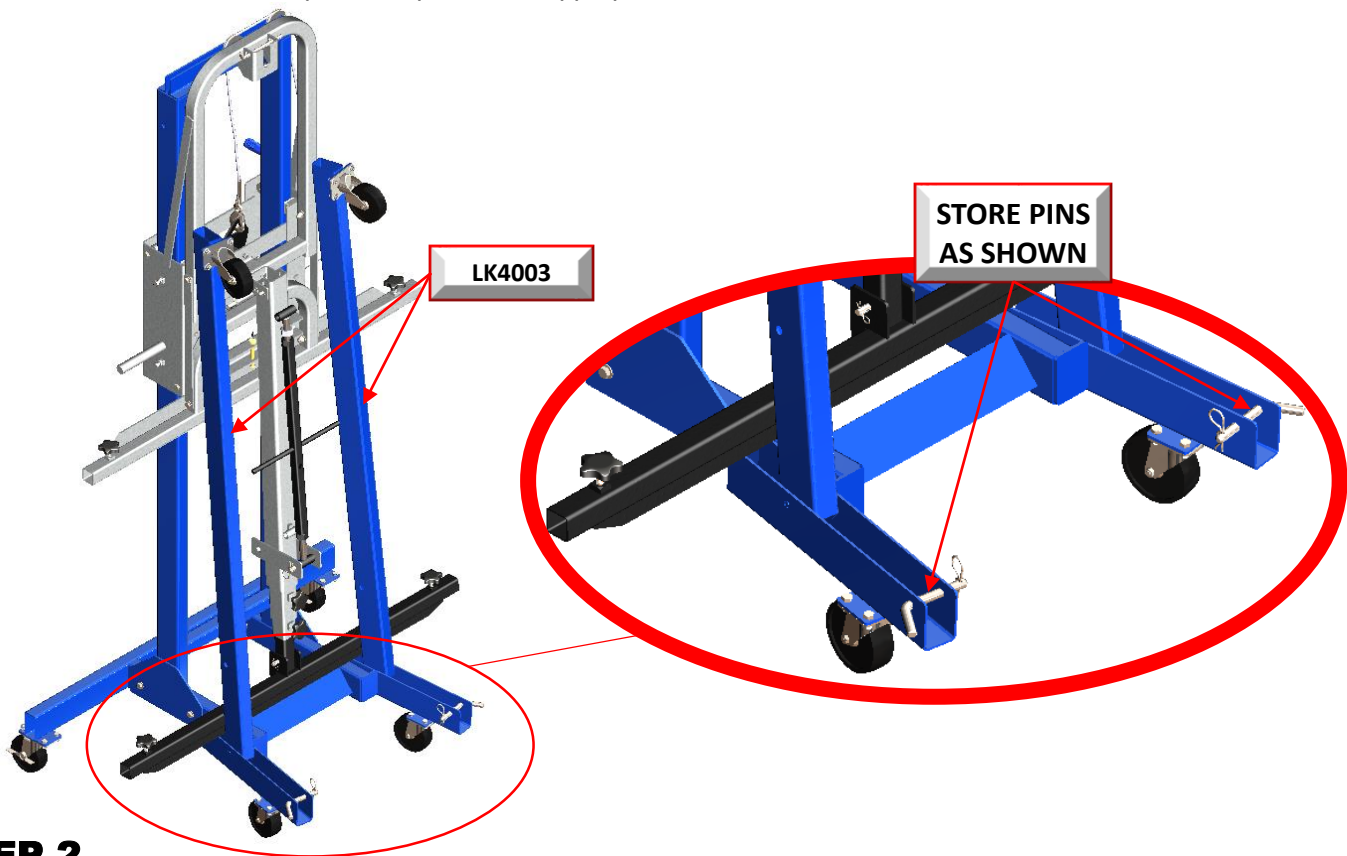




# Storage

## STEP 1

Unpin the LK4005 turnbuckle from the top of the LK4004 Roller Box. Raise the Roller Box until the Main Boom is perpendicular to the floor, as shown below. Unpin the LK4003 Lower Support Legs and rotate up into the position shown below. Store Ø1/2 bent pull hitch pins in the appropriate holes on the LK4001 Base.



## STEP 2

Assemble Split Rings and #14 Jack Chain. Attach to the LK4015-01 Handles on the LK4004 Roller Box as shown.

