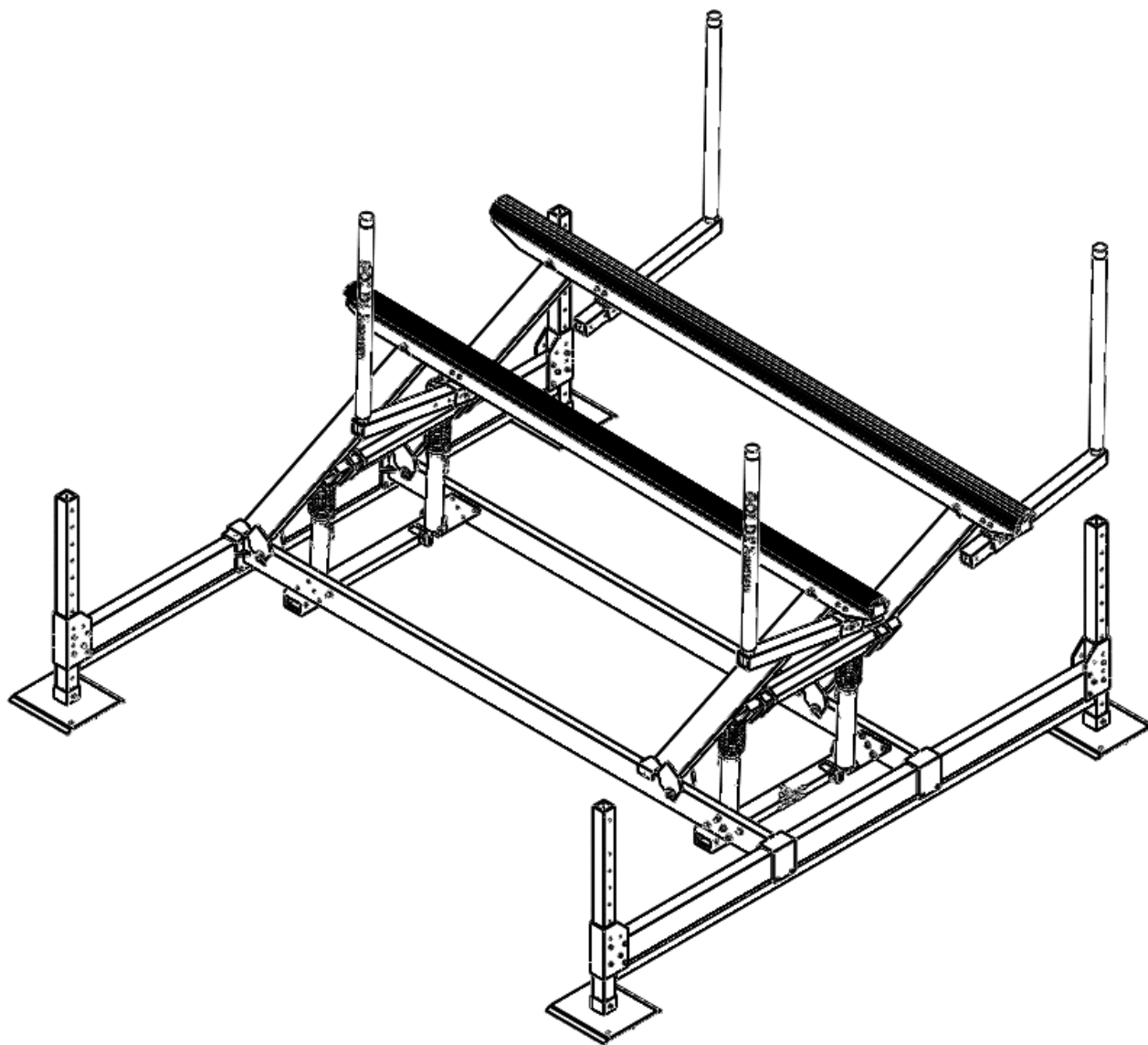


4-CYLINDER TORNADO LIFT INSTALLATION MANUAL

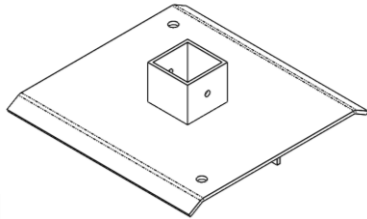
Models: T-8, T-10, & T-12



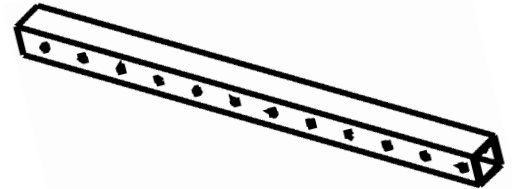
2018 Edition

GOLDEN
Boat Lifts

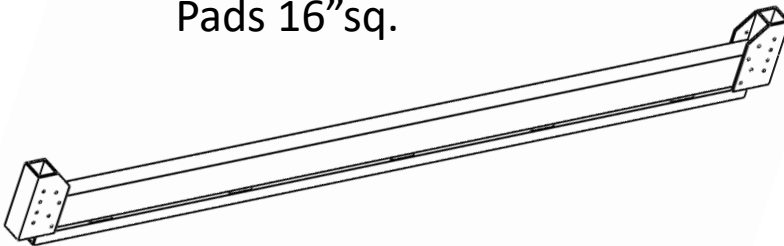
PROVIDED FOR ASSEMBLY



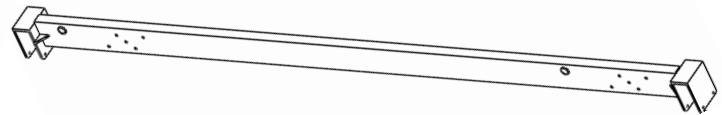
(4) Foot Pads 16"sq.



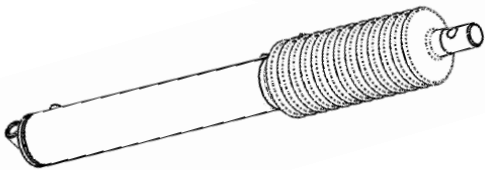
(4) Square Tube Legs (optional)



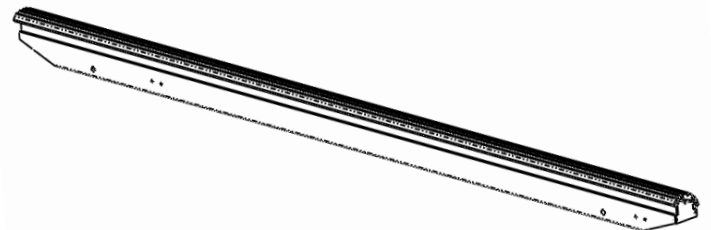
(2) Cross Beams



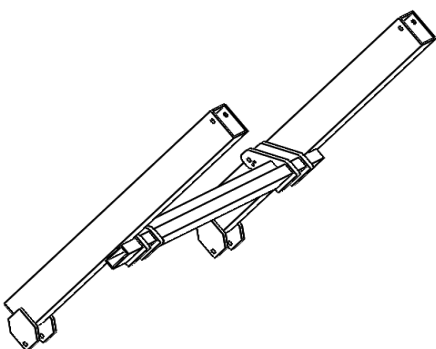
(2) Side Beams



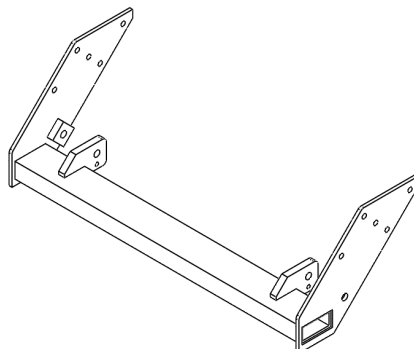
(4) 2.5" Dia. Cylinders (with hoses attached)



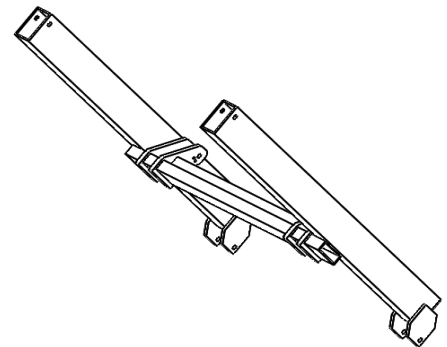
(2) Aluminum Multi-Bunks



(1) Bow Side H-Frame 79-1/2"

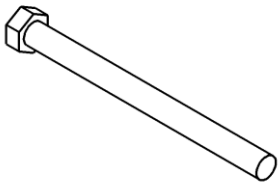


(2) Lower Cylinder Mount

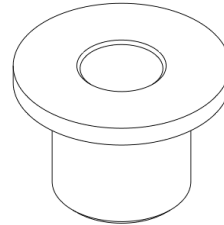


(1) Stern Side H-Frame 77"

PROVIDED FOR ASSEMBLY



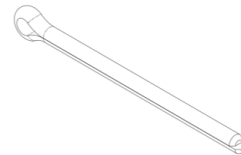
(8) 3/8" x 1-1/2" L HEX BOLT
(36) 3/8" x 4-1/2" L HEX BOLT
(8) 3/8" x 5" L HEX BOLT
(20) 1/2" x 3-1/2" L HEX BOLT



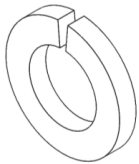
(8) Hinge Bearings



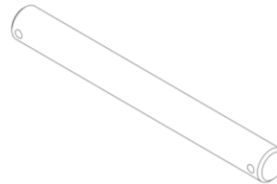
(40) 1/2" SS Flat Washer
(88) 3/8" SS Flat Washer
(8) 3/4" SS Flat Washer



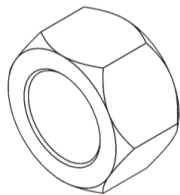
(16) 1/8" Cotter Pins



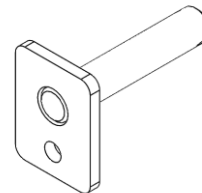
(20) 1/2" Lock Washer
(52) 3/8" Lock Washer



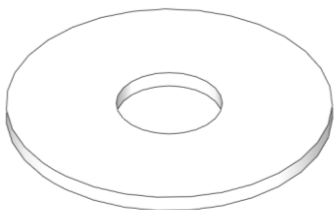
(8) Hinge Pins:
3/4" x 5-3/8" L



(20) 1/2" Hex Nut
(52) 3/8" Hex Nut

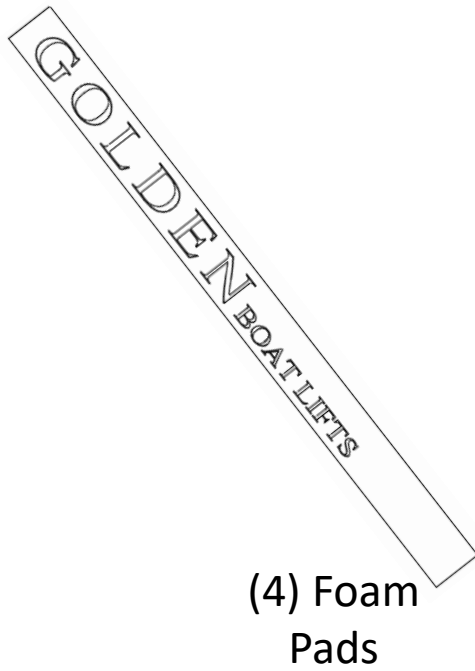
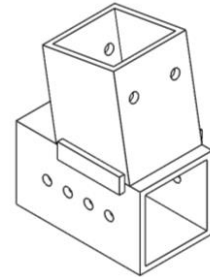
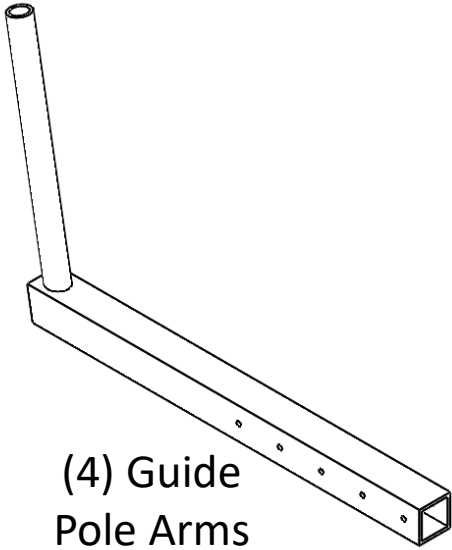


(4) Tractor Pins for Cylinder
Top: 3/4" x 3-3/4" L
(4) Tractor Pins for Cylinder
Bottom: 3/4" x 5-3/8" L



(16) 3/16" X 1-3/4"
Nylon Washers

OPTIONAL ACCESSORIES



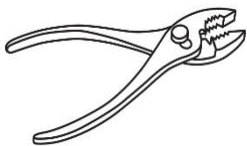
REQUIRED INSTALLATION TOOLS



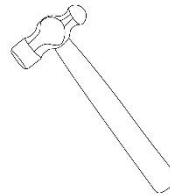
9/16" Open End Box Wrench
3/4" Open End Box Wrench



3/8" Drive Ratchet
9/16" Socket
3/4" Socket



Pliers



Ball Ping Hammer



Pry Bar

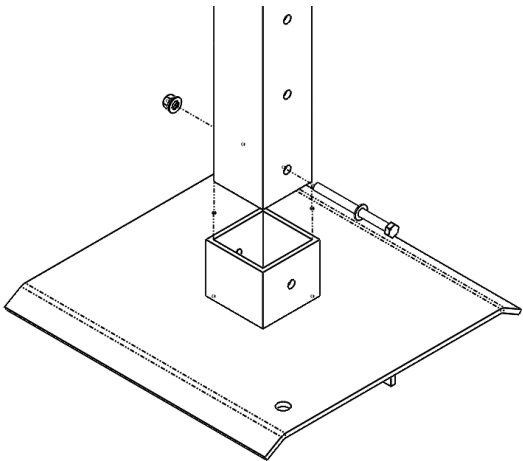
General Assembly Instructions

1. **READ** all instructions before starting installation.
2. **CHECK** to see if the installation crew is properly licensed, insured, and qualified. If this is a first time installation, a company representative will assist for the installation and initial lifting.
3. **CLEAR** a moderate area of space to lay out all of the components necessary in constructing the Tornado Lift.

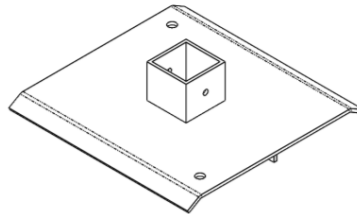
Step 1:

ATTACH a foot pad to the bottom of a leg tubes; align as shown in the diagram. Next, slip a 3/8" flat washer over two 3/8" x 4-1/2"L hex bolts. Insert the bolts into the corresponding holes and fasten with a 3/8" lock washer and nut. Using the 9/16" wrench and socket, tighten the nut to lock foot pad into place. Repeat this step three more times, once for each remaining foot pad.

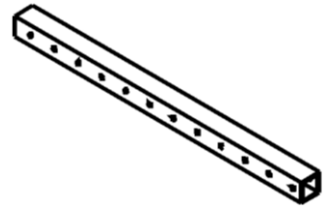
PARTS REQUIRED FOR THIS STEP



(4) FOOT
PAD



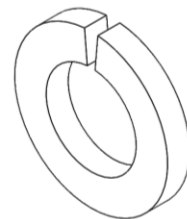
(4)
LEG



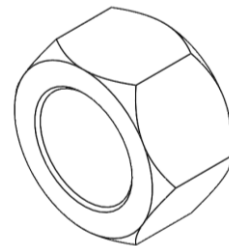
(4)
3/8" FW



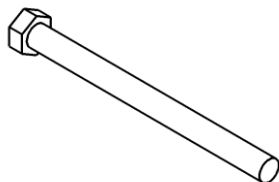
(4)
3/8" LW



(4)
3/8" NUT



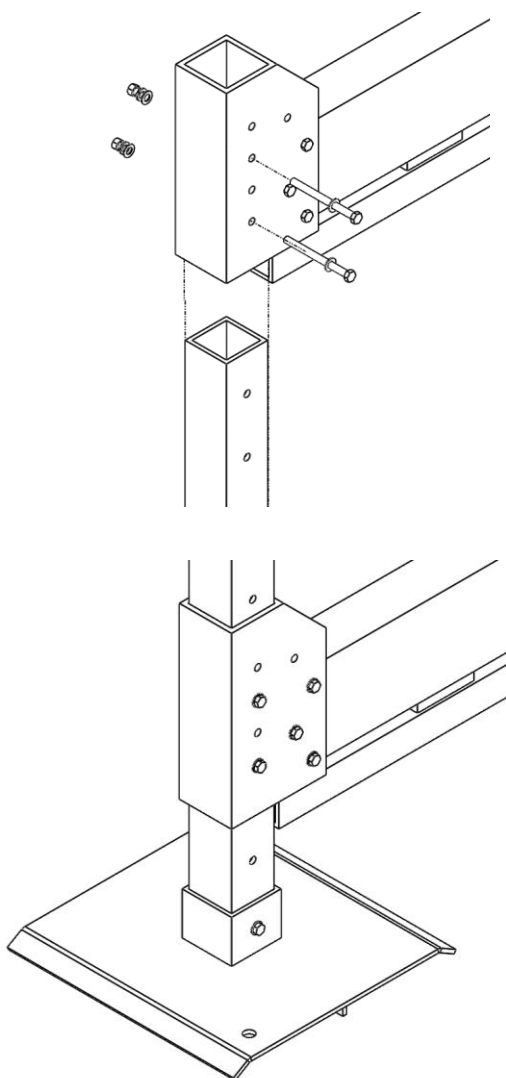
(4)
3/8" x 4-1/2" L



Step 2:

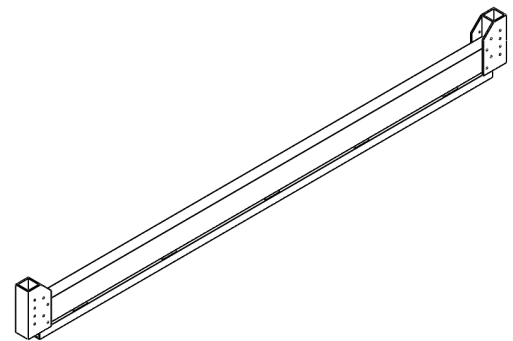
INSERT a leg tube into a cross beam pocket and adjust to the desired height. Once the height is determined, slip a 3/8" flat washer over two 3/8" x 4-1/2"L hex bolts. Insert the bolts into the corresponding holes and fasten with a 3/8" lock washer and nut. Using the 9/16" wrench and socket, tighten the nut to lock the leg into place. Repeat this step three more times, once for the opposite end and twice for the other cross beam.

NOTE: Cross beams will ship with leg pockets pre-assembled.



PARTS REQUIRED FOR THIS STEP

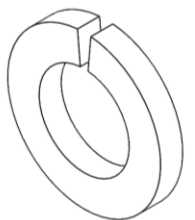
(2)
CROSSBEAM



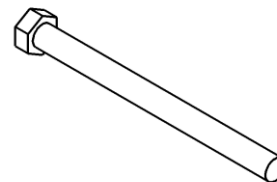
(40)
3/8" FW



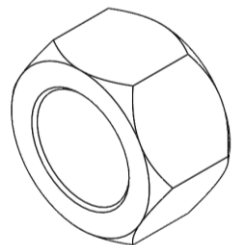
(20)
3/8" LW



(20)
3/8" x 4-1/2" L

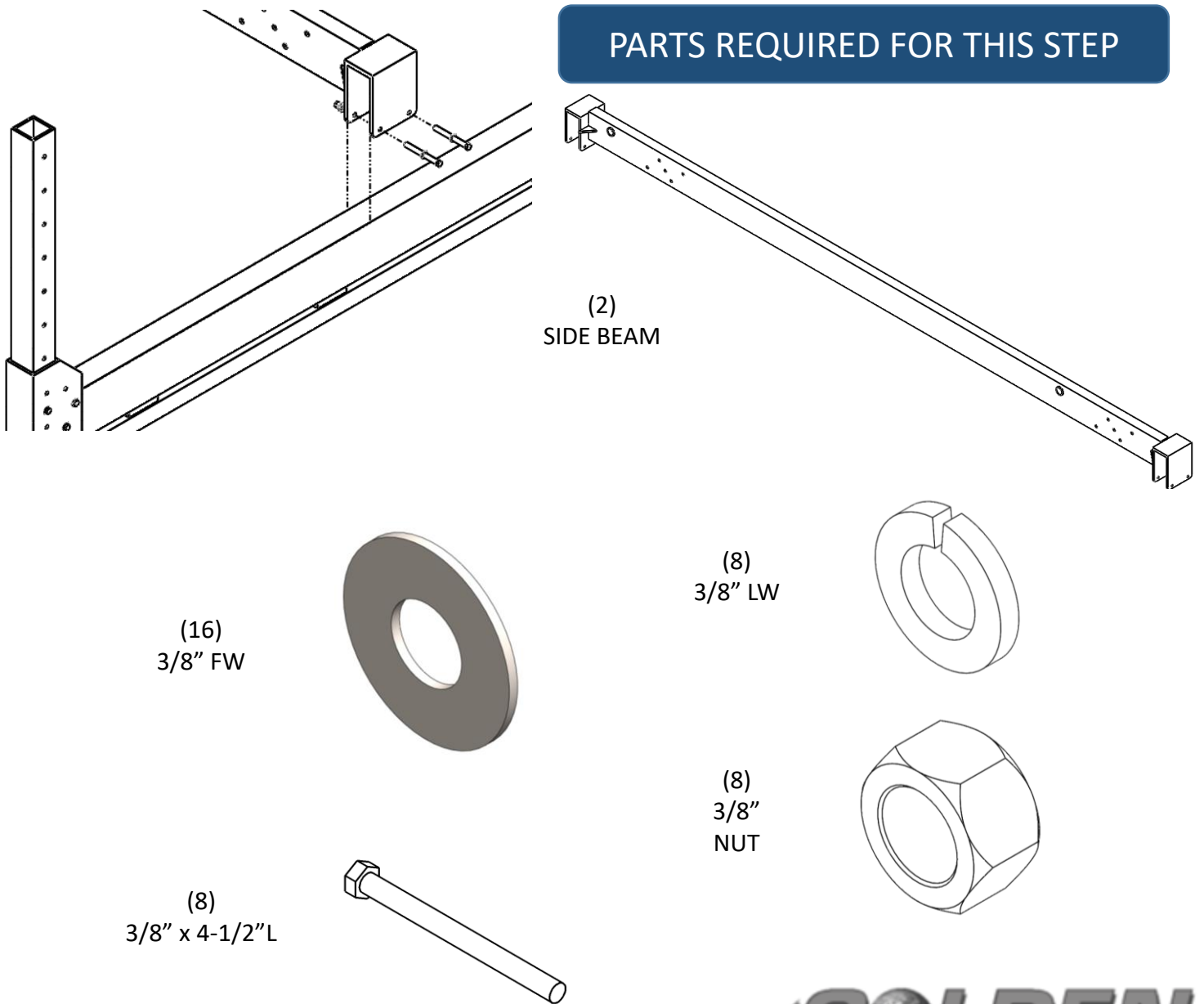


(20)
3/8"
NUT



Step 3:

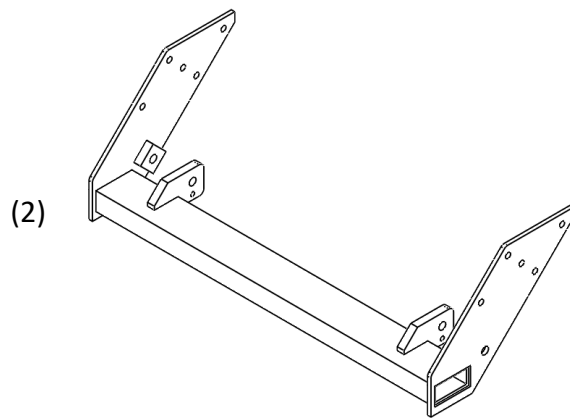
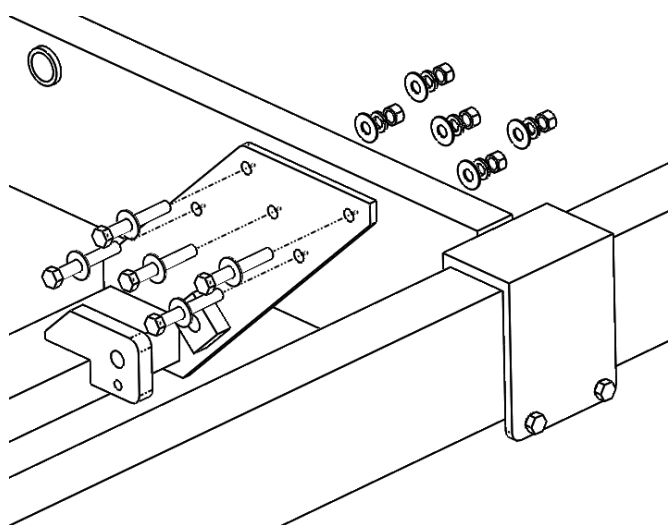
Slide the side beam saddle down over the cross beam as shown in the diagram. Next, slip a 3/8" flat washer over two 3/8" x 4-1/2"L hex bolts. Insert the bolts into corresponding holes and fasten with a 3/8" lock washer and nut. Finger tighten the nut to allow adjustability. Repeat this step three more times, once for the opposite end and twice for the other side beam.



Step 4:

ALIGN the holes of the lower cylinder mount with the corresponding holes in the side beam, as shown in the diagram. Next, slip a 1/2" flat washer over five 1/2" x 3-1/2"L hex bolts. Insert the bolts into the corresponding holes and fasten with one 1/2" lock washer and nut. Finger tighten nut to allow adjustability. Repeat this step three more times, once for the opposite end of the mount and twice for the second mount.

PARTS REQUIRED FOR THIS STEP

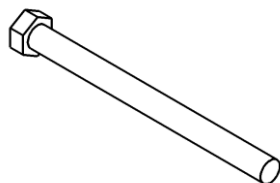


(2)

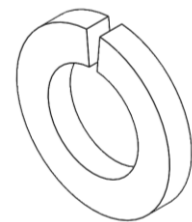
(40)
1/2" FW



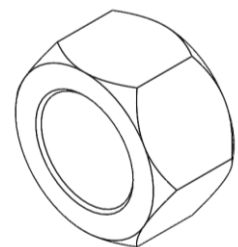
(20)
1/2" x 3-1/2"L



(20)
1/2" LW



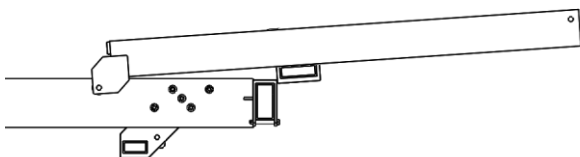
(20)
1/2"
NUT



Step 5:

Beginning with the stern side 77" H-Frame. Align holes of the H-frame hinge plates with the hinge bushings located at the cylinder mounting end of the side beam. The H-frame should be orientated so the cylinder mounting cross support overhangs the stern side cross beam (fig.1). Next, insert a 1/8" cotter pin into the hole located at either end of a 3/4" x 5-3/8" L hinge pin. Using the pliers, bend the tines of the cotter pin outward away from one another securing it to the hinge pin. Slip a 3/4" Nylon flat washer over hinge pin and insert into the corresponding hole connecting the H-frame to the side beam (fig.2). Slip a 3/4" Nylon flat washer over the other end of the hinge pin and secure with one more cotter pin. Repeat this step three more times, once for the other side and twice for the bow side H-frame.

Fig.1



PARTS REQUIRED FOR THIS STEP

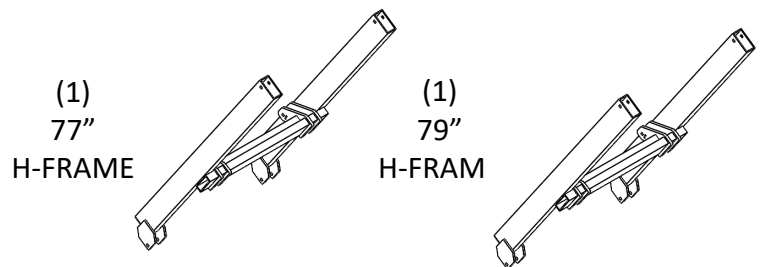
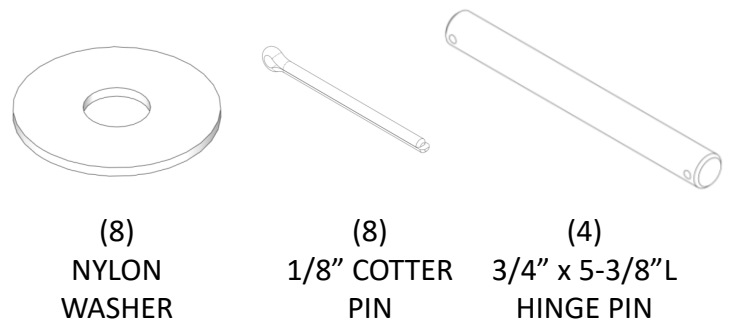
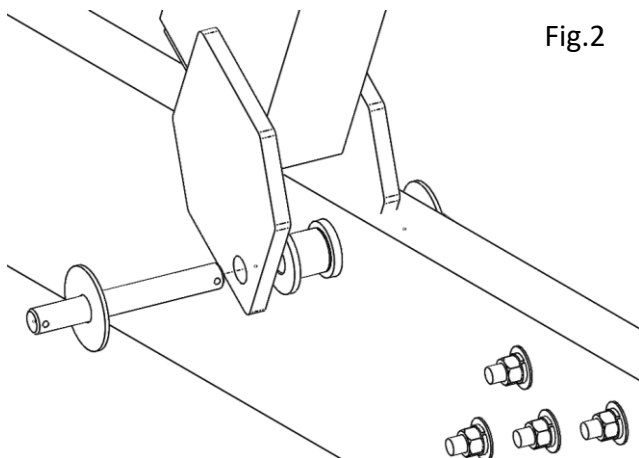


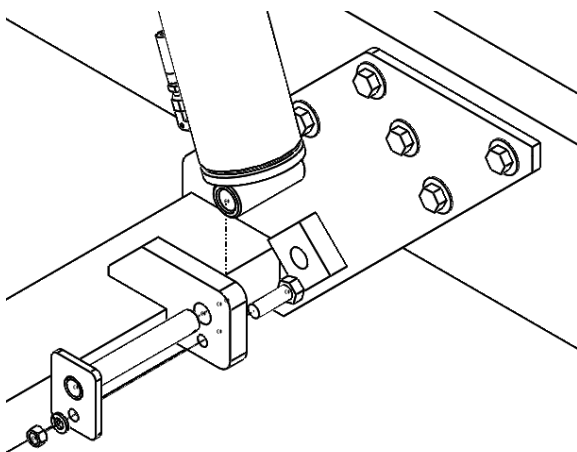
Fig.2



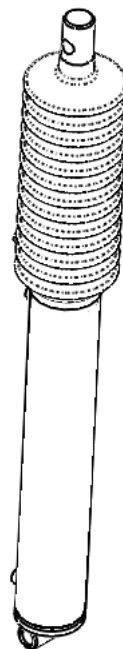
Step 6:

ALIGN the lower cylinder mounting tube with the corresponding holes of the lower cylinder mounting cross member, as shown in the diagram. Insert a 3/4" x 5-3/8"L tractor pin into the cylinder hinge plate and through the lower mount tube located at the bottom of the cylinder. Next, from the inside of the lower hinge plate, insert a 3/8" x 1-1/2"L hex bolt through the hinge plate and tractor pin plate and fasten with a 3/8" lock washer and nut. Using the 9/16" wrench and socket, tighten the nut to lock into place. Repeat this step three more times for the other cylinders.

PARTS REQUIRED FOR THIS STEP



(4)
HYDRAULIC
CYLINDER



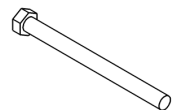
(4)
3/8 LW



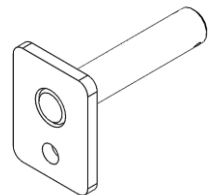
(4)
3/8
NUT



(4)
3/8 x 1-1/2"L



(4)
3/4" x 5-3/8"L
TRACTOR PINS



Step 7:

ALIGN upper cylinder mounting hole with the corresponding hole in the cylinder mount of the H-frame. This task may require the H-frame to be pivoted upward and then lowered down on top of the air bellow so the mounting plates surround the cylinder ram. Insert a 3/4" x 3-3/4"L tractor pin into the corresponding hole in the cylinder mounting plate and through the cylinder ram. Next, from the inside of the mounting plate, insert a 3/8" x 1-1/2"L hex bolt through the hinge plate and tractor pin plate and fasten with a 3/8" lock washer and nut. Using the 9/16" wrench and socket, tighten the nut to lock into place. Repeat this step three more time for the other cylinders.

Fig.1

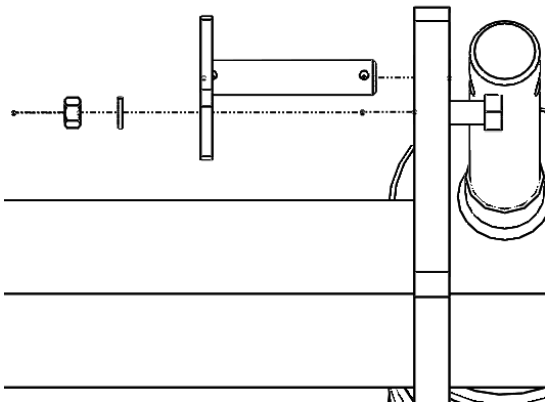
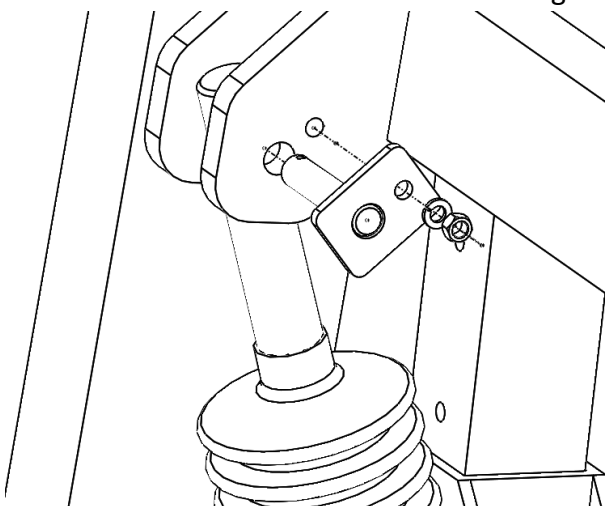
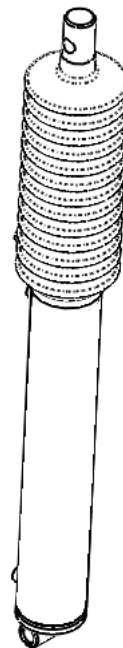


Fig.2



PARTS REQUIRED FOR THIS STEP

(4)
HYDRAULIC
CYLINDER



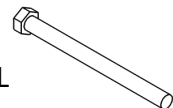
(4)
3/8



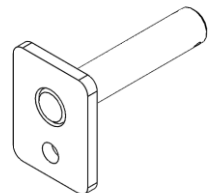
(4)
3/8



(4)
3/8 x 1-1/2"L



(4)
3/4" x 3-3/4"
TRACTOR PINS



BEFORE CONTINUING TO STEP 8:

**REVISIT STEPS 3-4
MAKING SURE ALL
FASTENERS ARE
TIGHTENED AND
LOCKED INTO PLACE
USING THE REQUIRED
TOOLS.**

Step 8:

ALIGN the 3/4" hole in the **Aluminum Multi-Bunk** with the corresponding hole in the top of the stern side H-frame. Next, insert a 1/8" cotter pin into the hole located at either end of a 3/4" x 5-3/8" L hinge pin. Using the pliers, bend the tines of the cotter pin outward away from one another securing it to the hinge pin. Slip a 3/4" SS flat washer over hinge pin and insert into the bunk support (fig.1). Before continuing through the H-frame, slide a 3/4" nylon washer between the H-frame and the bunk support, align holes and continue through with the hinge pin. Insert another 3/4" nylon washer as before and fasten with a 3/4" SS flat washer and 1/8" cotter pin remembering to bend the tines to secure. Repeat this step three more times, once for the other bunk and twice for the opposite end of each bunk.

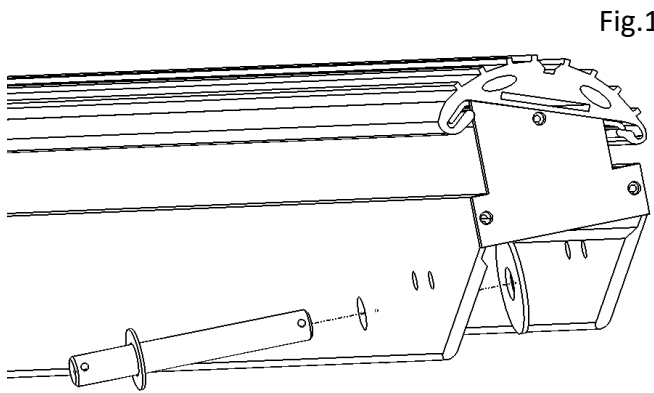
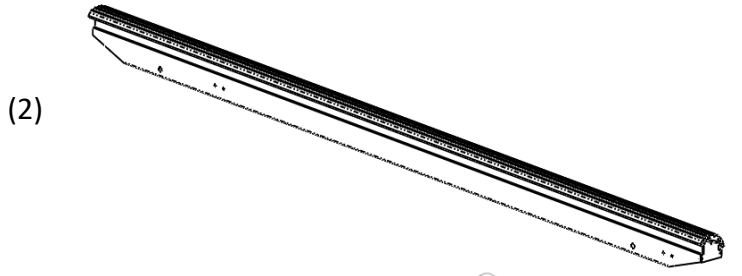


Fig.1

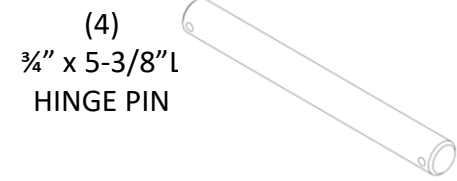
PARTS REQUIRED FOR THIS STEP



(2)



(8)
3/4" NYLON
WASHER



(4)
3/4" x 5-3/8" L
HINGE PIN

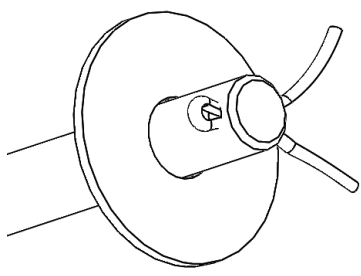
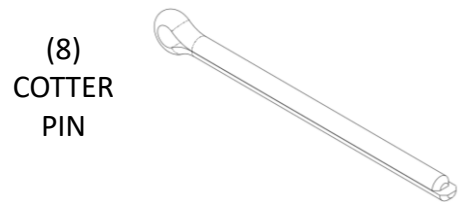


Fig.2



(8)
3/4" SS FW

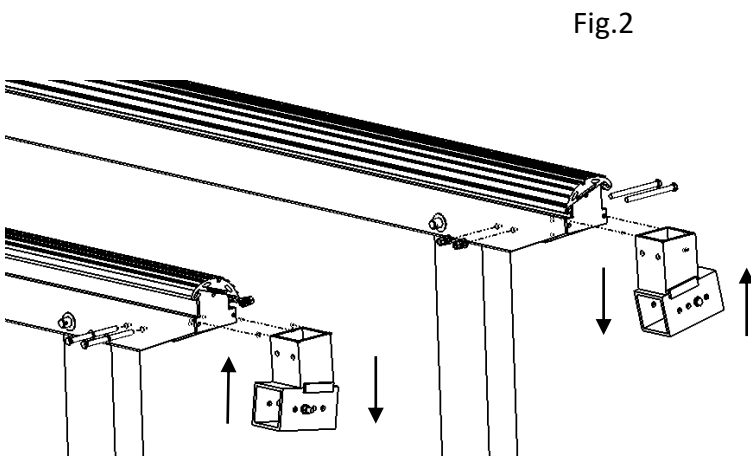
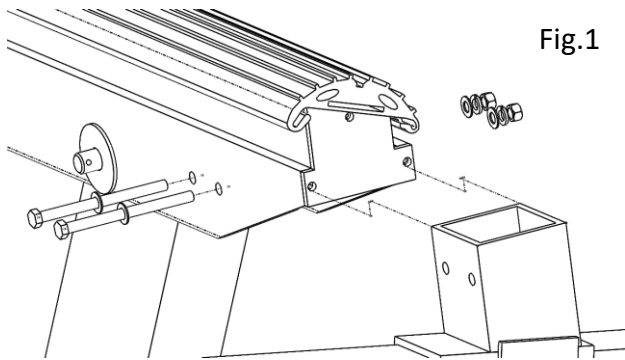


(8)
COTTER
PIN

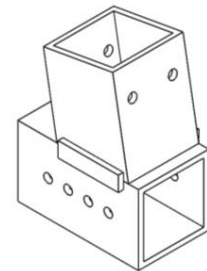
Step 9-1:

INSERT the guide pole mounting bracket into the bottom of the bunk support (fig.1). Align the holes, making sure that the lower guide adjustment tube is angled upward toward the outside of the lift and downward toward the inside (fig.2). Slip a 3/8" FW over the two 3/8" x 5"L hex bolts. Insert the hex bolts into the corresponding holes in the bunk support and fasten with a 3/8" LW and nut. Tighten to lock into place using the 9/16" wrench and ratchet. Repeat this step three more times, once for the opposite end of the bunk support and twice for the other bunk.

PARTS REQUIRED FOR THIS STEP



(4) GUIDE
POLE
MOUNTING
BRACKET



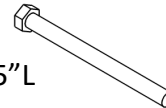
(16)
3/8"
FW



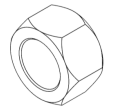
(8)
3/8"
LW



(8)
3/8 x 5"L



(8)
3/8"
NUT



Step 9-2:

INSERT the guide pole arm into the lower tube of the guide pole mounting bracket so the vertical tube is facing outward and up (fig.1). Adjust the guide arms in and out to desired location and align holes. Slip a 3/8" FW over a 3/8" x 4-1/2"L hex bolt and insert into the corresponding hole. Fasten with a 3/8" LW and nut and tighten using the 9/16" wrench and ratchet. Repeat this step three more times, once for the opposite end of the bunk support and twice for the other bunk. Lastly, slide PVC pipes and foam pads over each of the guide pole support tubes (fig.2).

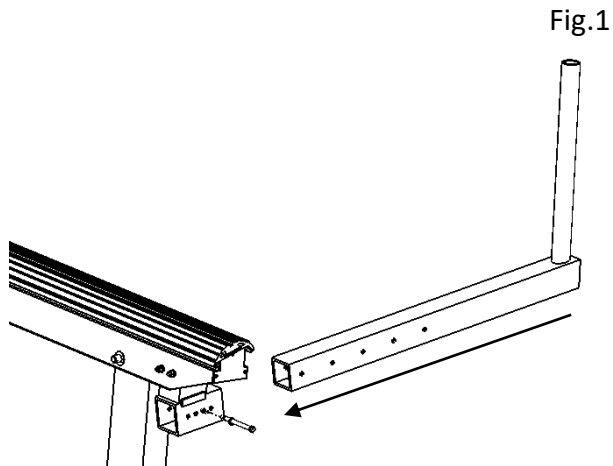


Fig.1

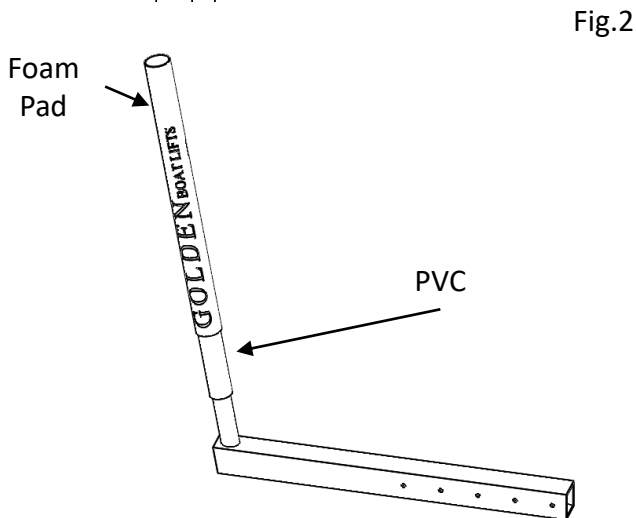
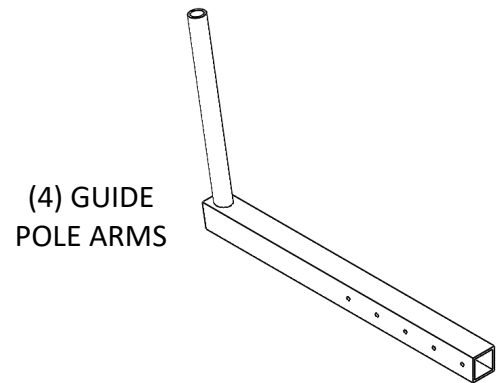
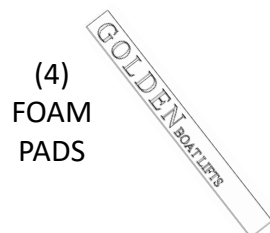


Fig.2

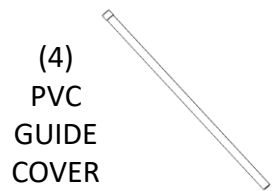
PARTS REQUIRED FOR THIS STEP



(4) GUIDE POLE ARMS



(4) FOAM PADS



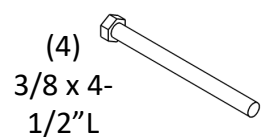
(4) PVC GUIDE COVER



(8) 3/8" FW



(4) 3/8" LW



(4) 3/8 x 4-1/2" L



(4) 3/8" NUT



Tornado Lift 8K Specifications

Lift Capacity: 8,000 lbs
3628 kgs

of Cylinders: 4 cyl.

Weight: ~ 1062 lbs
482 kgs

Height Adjustment Range: ~ 55 inches-117 inches
1.4 meters-3 meters

Frame Size: ~ 144 inches long & 132 inches wide
3.65 meters long & 3.35 meters wide

Bunk Length: ~ 144 inches
3.65 meters

12 Volt DC H.D. Pump and solar package enclosed in fiberglass lock box
Gem remote control with 2 transmitters

Golden Manufacturing Contact Information

Address:

17611 East Street, North Fort Myers, FL 33917

Hours:

Mon-Thu 8AM-5PM

Friday 8AM-4PM

Phone: (239) 337-4141

Fax: (239) 337-4482

TF: (888) 909-5438

www.goldenboatlifts.com



Tornado Warranty

1. This Warranty Covers:

A. The company warrants that the Tornado lifts purchased for personal, family, or household purposes shall be free from any manufacturer's defects in material or workmanship for a period of 3 years from date of delivery by seller to the original purchaser of the property where the lift was installed as set forth in the order form. The batteries supplied by company that are properly maintained by the purchaser are warranted for (1) year.

2. What is not covered by this Warranty:

A. If product is used in brackish or salt water sacrificial anodes must be maintained. If not the warranty will be null and void. Under no circumstances will the warranty coverage extend to damage caused by electrolysis.

B. Growth from the marine environment, electrolysis, heat, deterioration or any other product changes caused by age or the environment shall not constitute a defect.

C. The company makes no implied warranties with respect to lifts purchased for commercial purposes.

D. All repairs after the applicable warranty period are the owner's responsibility.

E. Damage that is not the company's fault such as but not limited to: damage caused by accidents, hurricanes, tropical storms, high winds, high water or tides, any acts of God, misuse, over loading, negligence, alteration, modification or abusive operation, is NOT covered by this limited warranty.



Tornado Warranty Continued

G. Damage which is caused by improper product selection, improper installation, failure to follow applicable installation and maintenance recommendations, or failure to follow applicable instructions or warnings is not covered by this limited warranty.

H. All routine maintenance and periodic service is the Owner's responsibility and is not covered by this limited warranty.

I. Company or any employee of said company will not determine weight or dimension of Purchasers boat. Purchaser should be aware that not all published boat specifications are accurate.

3. Warranty Disclaimers

A. The owner's remedies under thus limited warranty are limited exclusively to repair or replacement of components, which fail due to manufacturer's defects in materials or workmanship during normal operations.

B. The company shall not be responsible for incidental or consequential damages, included, bur not limited to, damages to property, loss of use, lost profits, or expenses for inconvenience.

