GARED PERFORMANCE SPORTS SYSTEMS

UP FOLD WALL MOUNT

Models: 2400

Operation and Maintenance Instructions

Please read all instructions before attempting operation of these units

SAVE THESE INSTRUCTIONS FOR FUTURE USE

Publication No.
501756256 Rev C

Issued
08-29-2023

Table of Contents

Section	Page No.
Introduction	1
Parts List	2
Installation Instructions	3-20
Unit Operation	21
Maintenance	22

Introduction

Thank you for your purchase of a Model 2400 Up Folding Wall Mount Backstop. To ensure that our equipment will provide years of use to you, we are including this operation, and maintenance guide. This guide will provide information on the proper operating procedures, and preventative maintenance of your gymnasium up folding wall mount backstop.

Do not make substitutions for any factory parts. If any parts are missing, do not substitute non-factory parts. Please contact your authorized dealer or manufacturer if any parts are missing or damaged.

It is recommended that an individual who has been properly trained perform operation of the Up Folding wall mount backstop. No one under the age of 18 should operate the backstop, unless properly supervised.

To prevent normal wear and tear from shortening the life of the backstop, preventative maintenance inspections and repairs should be performed at least once per year. If the backstop is subject to high or unusual usage, inspections should be scheduled to occur more frequently. If items are found to be nonconforming, replacements can be ordered from an authorized dealer. When contacting your dealer, please have information regarding the name of the project, and any applicable warranty information.

Please note that manufacturer assumes no responsibility for the building structure to support its products. It is the responsibility of the building designers to determine the correct structure size to support our products. We will provide your structural engineers with all required weight and loading information for the project in order for them to calculate the appropriate structure.

UP FOLDING WALL MOUNT

2400 WALL MOUNT PARTS LIST

ITEM	PART NUMBER	DESCRIPTION	4060 QTY	4064 QTY	6090 QTY	6094 QTY	9120 QTY	9124 QTY
1	504151591	WOOD PAD, 3.5" HC, 48" (NARROW)	2		2		2	
	504151590	WOOD PAD, 3.5" HC, 72" (WIDE)		2		2		2
2	504156224	WOOD PAD, TOP 48" (NARROW)	1		1		1	
	504156223	WOOD PAD, TOP 72" (WIDE)		1		1		1
3	504151600	HINGE WELDMENT, WOOD PAD SHORT	4	4	4	4	4	4
4	504151655	PIPE WELDMENT,FU. OUTER, 4-6 FT (36.25")	4	4				
	504151656	PIPE WELDMENT,FU. OUTER, 6-9 FT (55")			4	4		
	504151657	PIPE WELDMENT,FU. OUTER, 9-12 FT (78")					4	4
5	504151652	PIPE, FU. INNER, 4-6 FT (35.5")	4	4				
	504151653	PIPE, FU. INNER, 6-9 FT (58")			4	4		
	504151654	PIPE, FU. INNER, 9-12 FT (74")					4	4
6	504151706	BUSHING, FOLDING UNITS .500 X .625	16	16	16	16	16	16
7	504156219	BRKT, CHAIN SHORT WOOD BUCK	6	6	6	6	6	6
8	1113-30-00	5/16" QUICK LINK	8	8	8	8	8	8
9	1045-30-00	CHAIN, 5/0 STRAIGHT COIL - ZINC	20 ft	20 ft	30 ft	30 ft	40 ft	40 ft
10	7011-11-00	3/8" TURNBUCKLE	2	2	2	2	2	2
11	504155265	HINGE, UPFOLD, BOARD BRACKET	2	2	2	2	2	2
12	504155260	PLATE, BOARD BRACKET	2	2	2	2	2	2
13	504151790	CROSS TUBE, FOLDUP RECT. NARROW	1		1		1	
	504151791	CROSS TUBE, FOLDUP RECT. WIDE		1		1		1
14	1105-02-08	#105 TEE CLAMP ASSY. 1.9" TO 1.9"	2	2	2	2	2	2
15	504151670	STRAP BRACING 48"	2				4	
	504151671	STRAP BRACING 60"			2			
	504151672	STRAP BRACING 69"		2				4
	504151673	STRAP BRACING 78"				2		
16	1092-02-08	#92 STRAP CLAMP. 1.9"	3	3	3	3	3	3
17	1093-02-08	#93 STRAP CLAMP. 2.38"	2	2	2	2	6	6
18	501651854	SPACER BUSHING, 2-1/8 X 2-3/8	4	4	4	4	12	12
19	1005-07-00	#5 SWIVEL EYE BLOCK (3-1/2" PULLEY)	2*	2*	2*	2*	2*	2*
20	3025-30-00	1/4" GALVANIZED AIRCRAFT CABLE-7X19	52 ft	60 ft	70 ft	78 ft	82 ft	91 ft
21	3225-30-00	1/4" CABLE CLAMP (FORGED CLIP)	2	2	2	2	2	2
22	101651056	WASHER, 3/8 SQ X 1.38 OD X .120	20	20	20	20	20	20
23	501-6-16-20	BOLT, CARRIAGE 3/8-16 UNC X 1.25	8	8	8	8	8	8
24	501-6-16-32	BOLT, CARRIAGE 3/8-16 UNC X 2	20	20	20	20	20	20
25	502-6-16-20	HEX BOLT, 3/8-16 UNC X 1.25	8	8	8	8	8	8
26	502-6-16-40	HEX BOLT, 3/8-16 UNC X 2.5	4	4	4	4	4	4
27	502-8-13-56	HEX BOLT, 1/2-13 UNC X 3.5	8	8	8	8	8	8
28	512-6-16-6	SET SCREW, FLAT POINT 3/8-16 UNC X 0.375	4	4	4	4	4	4
29	545-8-13	HEX NUT, NYLON LOCK 1/2-13	8	8	8	8	8	8
30	548-6-16	HEX NUT, SERRATED FLANGE 3/8-16	32	32	32	32	32	32
31	561-6	FLAT WASHER 3/8	8	8	8	8	8	8
32	571-4-20-14	SELF TAPPING SCREW, 1/4-20 UNC X 0.875	2	2	2	2	2	2
33	3125-30-00	1/4" CABLE THIMBLE	1	1	1	1	1	1
34	501756256	MANUAL, 2400 UP FOLD WALL MOUNT	1	1	1	1	1	1

*QUANTITY MAY BE 1 DEPENDENT ON INCLUSION OF WALL MOUNTED PULLEY

FOR HEIGHT ADJUSTER MODELS 2400-xxxxA

ITEM	PART NUMBER	DESCRIPTION	4060 QTY	4064 QTY	6090 QTY	6094 QTY	9120 QTY	9124 QTY
40	5741	MTG KIT, AAG TO WM 63" (WIDE)		1		1		1
	5742	MTG KIT, AAG TO WM 35" (NARROW	1		1		1	
41	4404	MTG KIT, 63X36 RECT BOARD TO AAG		1		1		1
	4405	MTG KIT, 35X20 FAN TO AAG	1		1		1	

WALL MOUNTED PULLEY PARTS

ITEM	PART NUMBER	DESCRIPTION	4060 QTY	4064 QTY	6090 QTY	6094 QTY	9120 QTY	9124 QTY
42	1001-21-01PC	P/C PULLEY MOUNTING STRAP	1	1	1	1	1	1
43	1115-30-00	3/8" QUICK LINK	1	1	1	1	1	1
44	2440-11-00	EYE NUT 1/2"-13, C185A	1	1	1	1	1	1
45	504151692	WOODPAD, FOLDING UNITS	1	1	1	1	1	1
46	562-8	WASHER, LOCK 1/2"	1	1	1	1	1	1
47	502-8-13-24	BOLT, HEX HEAD 1/2"-13 X 1-1/2"	1	1	1	1	1	1
48	548-8-13	HEX NUT, SERRATED FLANGE 1/2-13	2	2	2	2	2	2
49	501-8-13-32	BOLT, CARRIAGE 1/2-13 UNC X 2	2	2	2	2	2	2

COMPONENTS FOR ADDITIONAL WALL MOUNTED PULLEY MAY NOT BE INCLUDED AT ENGINEERING'S DISCRESION

Optional Accessories Sold Separately:
1123 Manual Winch
1194 Electric Winch
1100WM SAFSTOP

Locate, identify, and count all parts before starting the installation to ensure that all are correct and correspond to the packing list/production drawings. If any parts are missing or damaged, DO NOT SUBSTITUTE. Contact your authorized dealer or the manufacturer for assistance in obtaining the correct part.

Also review production drawings to ensure that building conditions have not changed since the initial field check. Verify overall height and width noted on drawings.

INSTALLATION PREPARATION

Before installing a wall mounted backstop unit, it is imperative the structural integrity of the wall has been evaluated and approved by an architect or structural engineer for the loads that will be imparted to the wall by the backstop.

⚠WARNING

Unit must only be installed on walls approved for its rated loads by architect or structural engineer.

Failure to attach to approved wall structure can cause unit to fall resulting in serious injury or death.

⚠WARNING

Use only anchors rated for minimum of 5 times wall loads listed for the unit.

Incorrect anchors can fail causing unit to fall resulting in damage and serious injury or death.

The best wall construction for use with wall mounted backstops is concrete masonry units (CMU) or solid concrete panel. Further, through bolting of the wood pads to the wall is the recommended method of attachment. However, when through bolting is not possible, the anchors used must be of a type that will provide at least 5 times the load listed for the anchor point of the unit. All anchors, including through bolts, must be minimum ½" diameter and at least SAE Grade 5 equivalent material.

Mounting the wall mounted backstop to a wood or metal stud structure is not recommended or approved by the manufacturer unless the structure has been reinforced as specifically designed by an architect or structural engineer for the desired wall mounted unit.

Please refer to the load charts on the following page for information concerning the specific unit being installed.

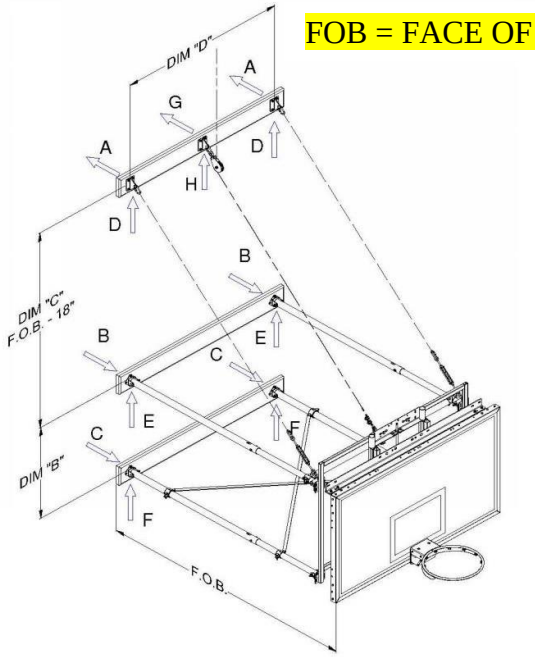
NOTICE

The loads listed for the upper wood pad and chain anchors are based on the wood pad located on the same surface as the lower wood pads. If the upper wood pad is not located on the same vertical surface as the lower wood pads, contact the factory for the correct loads.

UNIT LOADING INFORMATION

2400 WALL MOUNT, W/O HEIGHT ADJUSTER, MODEL	2400-4060 (fan mount)	2400-4064	2400-6090 (fan mount)	2400-6094	2400-9120 (fan mount)	2400-9124
FACE OF BANK (FOB) (ft-in)	4'-0" to 6'-0"	4'-0" to 6'-0"	6'-0" to 9'-0"	6'-0" to 9'-0"	9'-0" to 12'-0"	9'-0" to 12'-0"
DIM 'B' (in)	20	36	20	36	20	36
DIM 'C' (in)	FOB minus 18"	FOB minus 18"	FOB minus 18"	FOB minus 18"	FOB minus 18"	FOB minus 18"
DIM 'D' (in)	35	63	35	63	35	63
Unit Weight (lbs)	292	292	319	319	355	355
STATIC & DYNAMIC						
Force A (lbs)	447	447	422	422	417	417
Force B (lbs)	78	242	53	217	47	212
Force C (lbs)	434	270	434	270	434	270
Force D (lbs)	365	365	372	372	381	381
Force E (lbs)	11	11	14	14	19	19
Force F (lbs)	11	11	14	14	19	19
Force G (lbs)	327	327	310	310	314	314
Force H (lbs)	135	135	129	129	130	130
Force W (winch)	542	542	519	519	525	525

2400 WALL MOUNT, W/ HEIGHT ADJUSTER, MODEL	2400-4060A (fan mount)	2400-4064A	2400-6090A (fan mount)	2400-6094A	2400-9120A (fan mount)	2400-9124A
FACE OF BANK (FOB) (ft-in)	4'-8" to 6'-8"	4'-8" to 6'-8"	6'-8" to 9'-8"	6'-8" to 9'-8"	9'-8" to 12'-8"	9'-8" to 12'-8"
DIM 'B' (in)	20	36	20	36	20	36
DIM 'C' (in)	FOB minus 18"	FOB minus 18"	FOB minus 18"	FOB minus 18"	FOB minus 18"	FOB minus 18"
DIM 'D' (in)	35	63	35	63	35	63
Unit Weight (lbs)	423	423	449	449	486	486
STATIC & DYNAMIC						
Force A (lbs)	445	445	445	445	448	448
Force B (lbs)	-57	166	-57	166	-53	169
Force C (lbs)	566	343	566	343	566	343
Force D (lbs)	426	426	433	433	439	439
Force E (lbs)	13	13	17	17	23	23
Force F (lbs)	13	13	17	17	23	23
Force G (lbs)	444	444	430	430	430	430
Force H (lbs)	184	184	178	178	178	178
Force W (winch)	708	708	688	688	688	688



FOB = FACE OF BANK/ BACKBOARD

Loads shown for Force G and Force H are with the hoist located in the recommended location above the top wood pad.

If the hoist is located other than above the top wood pad, contact the manufacturer for the correct Force G and Force H loads.

When the unit is folding, ONLY G & H loads are acting on the top wood pad.

When the unit is down and in play position, ONLY A & D loads are acting on the top wood pad.

Dynamic loads include a 500 lb dunk load applied on front of goal at 15° from vertical.

Contact manufactuer for loads on custom units or when Dim "C" varies from the FOB-18" standard.

TOOLS REQUIRED

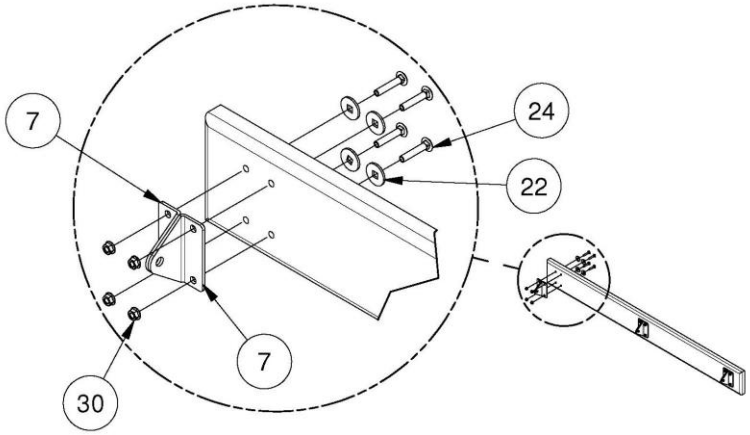
Plumb Bob or Laser Level
Electric Drill
Drill bits – 7/16”, 9/16”, 5/8”
Hammer
Wrenches – 1/2", 9/16”, 11/16, and 3/4"
Ratchet Wrenches with 1/2", 9/16”, 11/16, and 3/4" sockets
File
4’ Level
25’ Tape measure
Duct Tape
Block of wood (for tapping)
Broom
Shop-Vac
Utility Knife
Extra rope or chain
Torque Wrench
Scissor Lift or Scaffolding

RECOMMENDED BOLT TORQUE				
Bolt Size	Wrench Size	In-Lbs	Ft-Lbs	Nm
1/4"	7/16"	66 to 90	5.5 to 7.5	8 to 10
5/16"	1/2"	132 to 180	11 to 15	15 to 20
3/8"	9/16"	234 to 318	19.5 to 26.5	27 to 36
7/16"	11/16"		31 to 42.5	43 to 58
1/2"	3/4"		47 to 65	64 to 88
9/16"	7/8"		68 to 90	93 to 122
5/8"	15/16"		94 to 130	128 to 176
3/4"	1-1/8"		166 to 230	226 to 312
7/8"	1-5/16"		269 to 372	365 to 504
1"	1-1/2"		402 to 566	546 to 767

INSTALLATION

Installation instructions below are general in nature. Your exact installation needs to follow the parts and any specific instruction included in your specific project's production drawings.

1. Before installing the wood pads on the wall, you must first preassemble the hinge brackets and chain brackets onto the wood bucks.

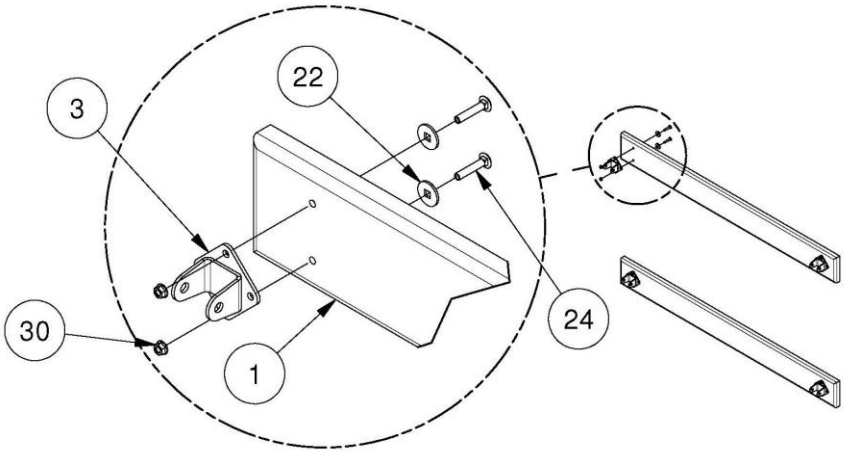


⚠CAUTION

Install flat washer under head of carriage bolt.
Without washer the carriage bolt may pull through the wood if the bolt is over torqued resulting in failure of the attachment.

124151566

2. Install the chain support brackets and pulley support bracket onto the top wood pad using the hardware shown in the above illustration. It will be necessary to drill the holes in the center of the wood pad to mount the center pulley support bracket. Turn the wood pad over and use the counter bored holes as a guide to drill the 7/16" dial holes for mounting the brackets.



3. Install the hinge brackets on the center and lower wood pad using the hardware shown in the above illustrations.

4. The wood pads are now ready to be installed onto the wall.

WOOD PAD LOCATIONS

Always refer to specific dimensions outlined in the production drawings shipped for the specific project. Dimensions of the specific project may vary from the dimensions outlined below.

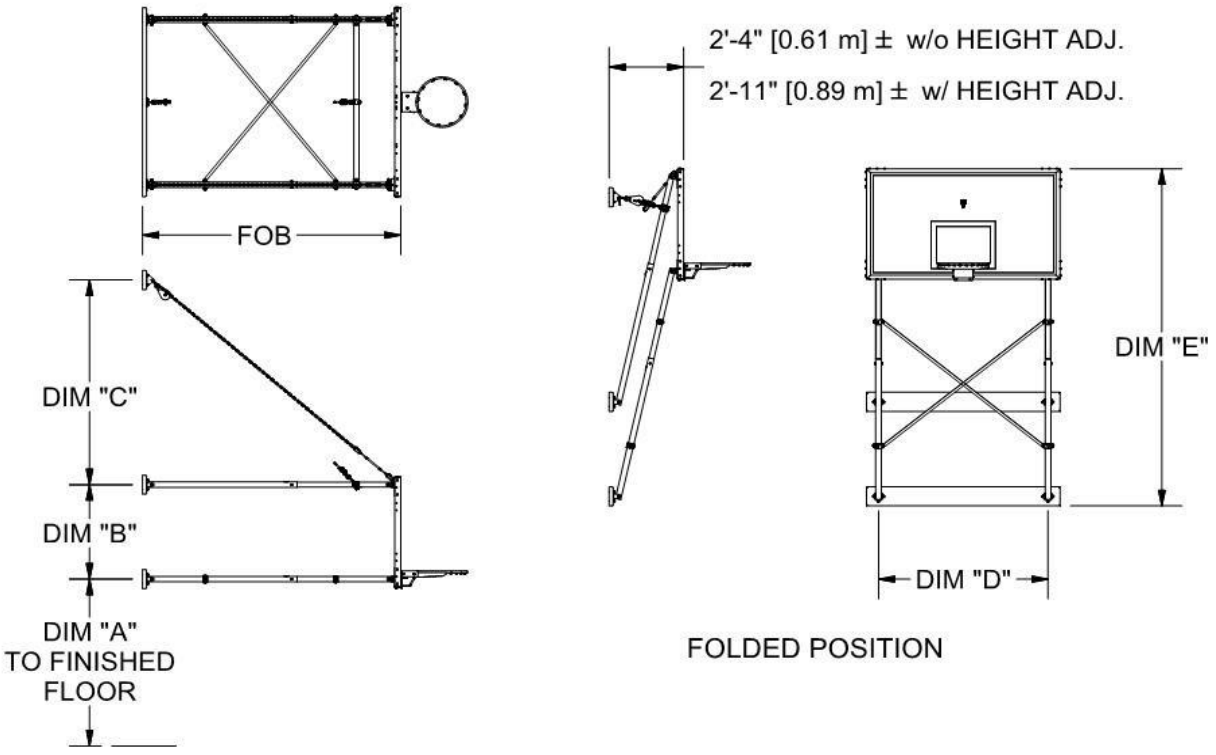
UNITS INSTALLED WITH OR WITHOUT HEIGHT ADJUSTER			
	DIM "A"	DIM "B"	DIM "D"
RECT. STYLE MOUNTING BACKBOARDS			
LXP4200	9'-9 1/8" [2.97 m]	36" [0.91 m]	63" [1.60 m]
AFRG42	9'-9 1/8" [2.97 m]	36" [0.91 m]	63" [1.60 m]
1442B	9'-7 3/4" [2.94 m]	36" [0.91 m]	63" [1.60 m]

ALL UNITS		ALL UNITS	
DIM "C"	FOB minus 18"	DIM "E"	FOB plus 32"

48" BOARD INSTALLED WITHOUT HEIGHT ADJ.			
AFRG48	9'-2 3/4" [2.81 m]	42" [1.07 m]	63" [1.60 m]
RG	9'-2 3/4" [2.81 m]	42" [1.07 m]	63" [1.60 m]

	DIM "A"	DIM "B"	DIM "D"
FAN STYLE MOUNTING BACKBOARDS			
1301B	10'-1 5/8" [3.09 m]	20" [0.51 m]	35" [0.89 m]
1342B	10'-1 5/8" [3.09 m]	20" [0.51 m]	35" [0.89 m]
1750B	9'-9 1/2" [2.98 m]	20" [0.51 m]	35" [0.89 m]
1245T	9'-9 3/4" [2.99 m]	20" [0.51 m]	35" [0.89 m]
1272B	10'-0 1/2" [3.06 m]	20" [0.51 m]	35" [0.89 m]
3050RG	10'-1 7/16" [3.09 m]	20" [0.51 m]	35" [0.89 m]

48" BOARD INSTALLED WITH HEIGHT ADJ.			
AFRG48	9'-7 1/8" [2.92 m]	36" [0.91 m]	63" [1.60 m]
RG	9'-7 1/8" [2.92 m]	36" [0.91 m]	63" [1.60 m]



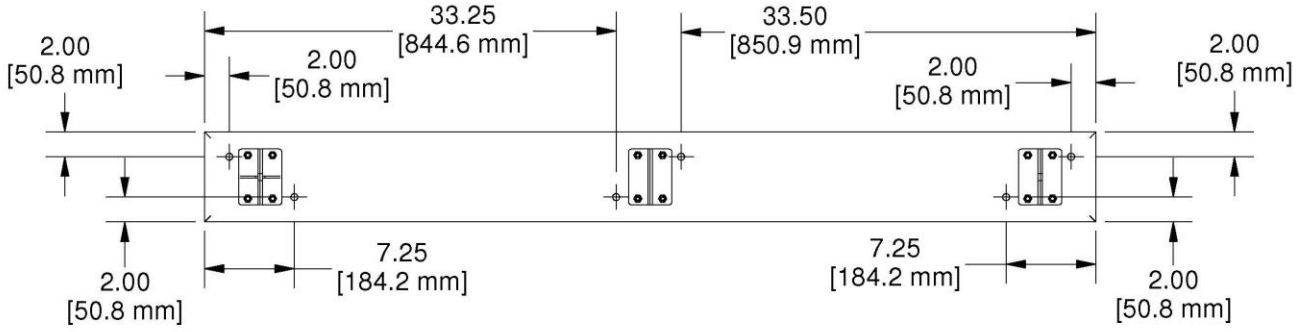
The upper wood pad with the chain anchors should be mounted in the same plane as the two frame mounting wood pads. The load information for the upper chain anchor and pulley are based on the wood pad located in the same plane. Contact the manufacturer for correct reaction loads if there is a wall condition that does not allow the wood pads for the chain anchors to be in the same plane as the frame pads.

WOOD PAD WALL ATTACHMENT

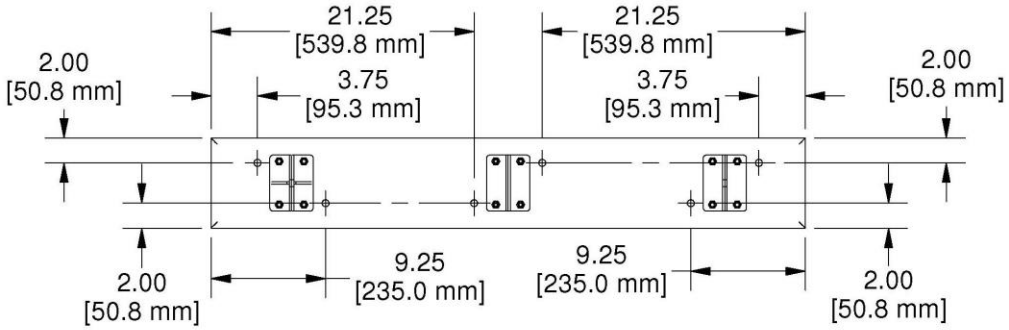
When attaching the wood pads to the wall, it is important to place the anchors in a location that will not reduce the strength of the wood. Anchors should be ½" diameter and the holes in the wood pads should be no larger than 9/16" in diameter. The centerline of the holes should not be closer than 2" from the edge or end of the wood pads.

Refer to the illustration below for the recommended locations of the anchors on the wood pads.

Upper chain mount and cable pulley wood pads are shown in the illustration below. The lower two wood pads (i.e., frame mounting pads) will have two anchors on each end as shown in the illustration and only one anchor located directly in the center of the wood pad.



72 " WOOD PAD



48 " WOOD PAD

⚠WARNING

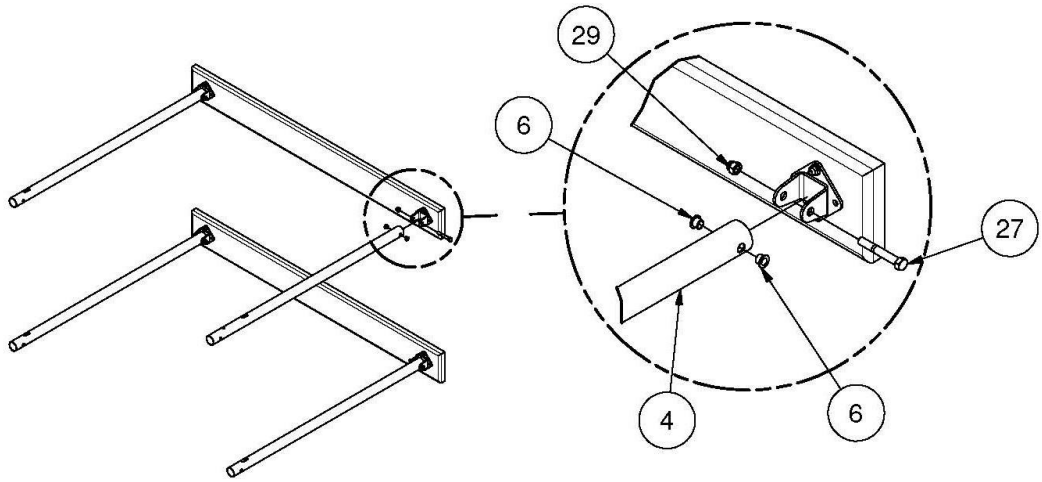
Centerline of anchor holes shall be no closer than 2.0" to the edge or end of wood buck.

Wood buck may fail causing unit to fall resulting in damage to unit and/or serious injury or death.

⚠WARNING

Use only anchors rated for minimum of 5 times wall loads listed for the unit.

Incorrect anchors can fail causing unit to fall resulting in damage and serious injury or death.



Install the outer pipe weldments to the hinge points on the lower two wood pads. Install the bushings (Item 6) into both sides of the pipe before installing the pipe into the hinge bracket.

Once the pipe has been installed into the hinge bracket and the ½" x 3 1/2" bolt is installed, add the ½" nylon lock nut and tighten until the nut just engages the hinge bracket.

Do not overtighten the nut as this will cause binding and excessive wear on the bushings and the outer tube.

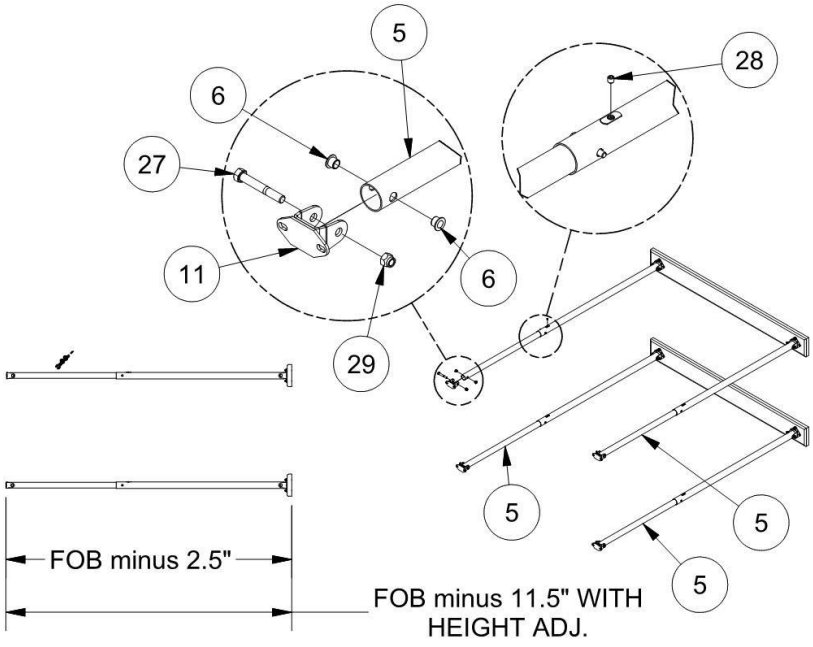
The attachment is the same for all four pipes.

Slide the inner extension pipes into the outer extension pipes. Install a flange bushing (Item 6) on each side of the inner extension tubes.

Install the hinge brackets onto each inner pipe and

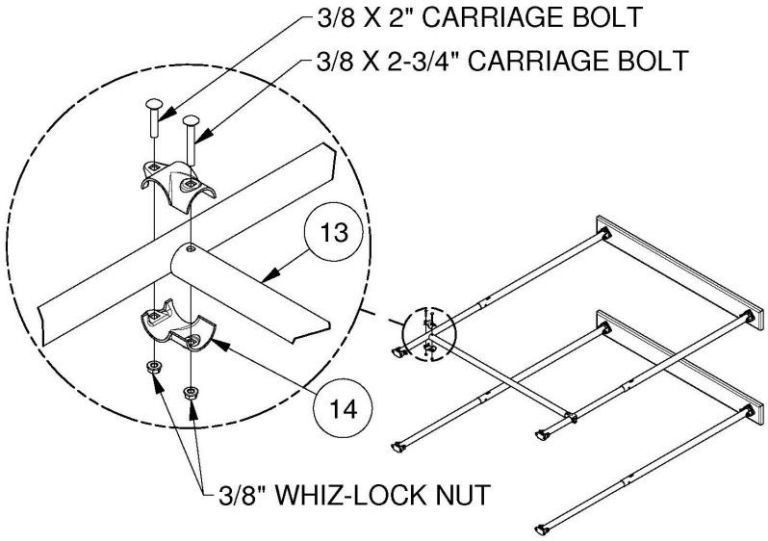
Install the ½" x 3 1/2" bolt and add the ½" nylon lock nut and tighten until the nut just engages the hinge bracket.

Do not overtighten the nut as this will cause binding and excessive wear on the bushings and the inner tube.



Slide the extension tube until the distance from the wall to the face of the hinge bracket is equal to the FOB minus 2.5" or FOB minus 11.5" when a height adjuster is to be used.

Install the set screw (Item 28) into the outer extension tube and lightly tighten the set screw.



Install the pull up cross tube (Item 13) onto the top extension tubes.

Note: the 3/8 x 2”, 3/8 x 2-3/4” carriage bolts, and the 3/8” whiz-lock nuts are supplied with item 14 and are not listed in the parts list.

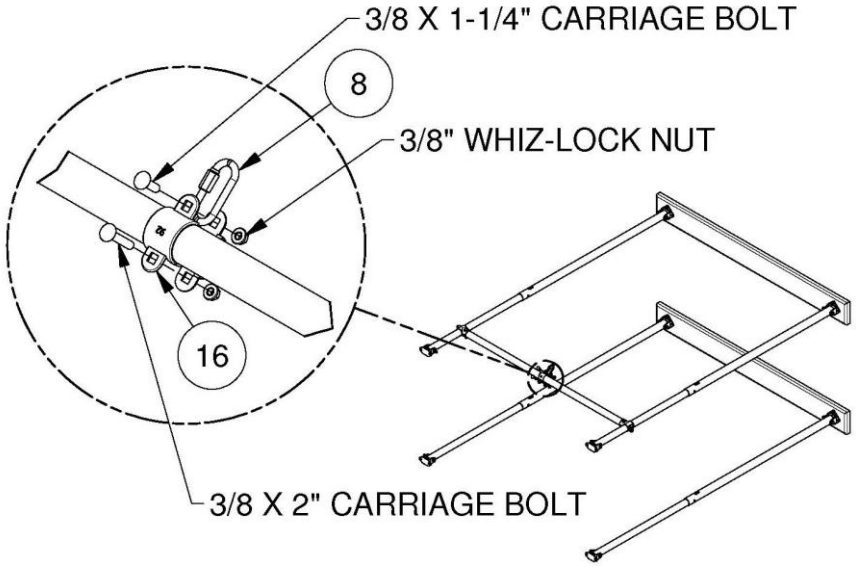
Locate the cross tube approximately 8” from the end of the inner extension tube. DO NOT tighten the clamp nuts at this time. A final adjustment of the location of the tube will be made once the board and goal are installed.

Install the pull up cable connection onto the pull up tube. Locate the clamp and quick link as shown in the illustration at the right and in the center of the pull up tube.

Make sure the quick link is fully closed and tightened.

Note the 3/8 x 2”, 3/8 x 1-1/4” carriage bolts, and the 3/8” whiz-lock nuts are supplied with item 16 and are not listed in the parts list.

Rotate the clamp and quick link on the tube to approximately 45 degrees up from horizontal and tighten the carriage bolt nuts.

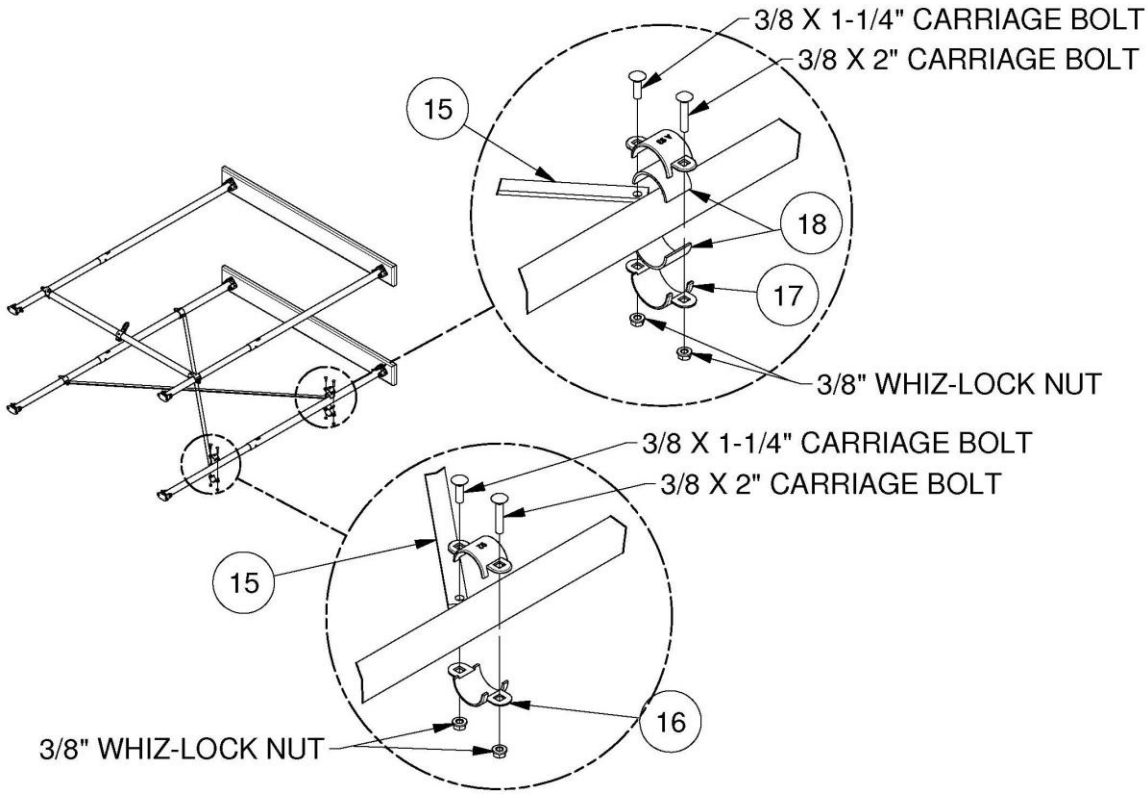


⚠CAUTION

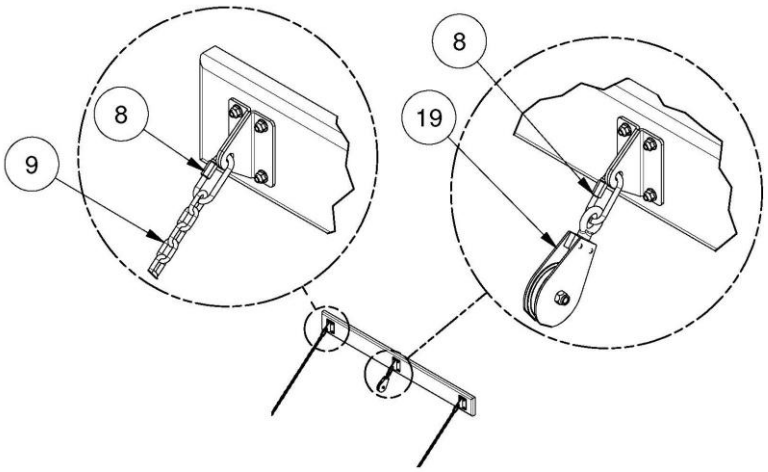
Fully close and tighten Quick Link.
Loose or open Quick Link may fail and cause serious damage to unit.

124151565

Install the cross bracing on the lower extension arms. Refer to the illustration below for the correct attachment method.



Note: the 3/8 x 2", 3/8 x 1-1/4" carriage bolts, and the 3/8" whiz-lock nuts are supplied with item 16 and are not listed in the parts list. DO NOT fully tighten these clamp bolts at this time as it may be necessary to reposition them after the board and goal are installed and the FOB is set.



Install the #5 pulley onto the center bracket of the top wood pad using the 5/16" quick link. Make certain link is fully closed and tightened.

⚠CAUTION

Fully close and tighten Quick Link.
Loose or open Quick Link may fail and cause serious damage to unit.

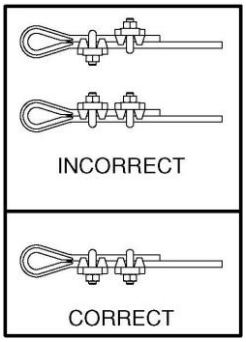
124151565

Install equal length of chain on each side using a 5/16" quick link to connect the chain to the chain anchors. Make sure link is fully closed and tightened.

FOR UNITS WITHOUT HEIGHT ADJUSTER CONTINUE TO PAGE 12

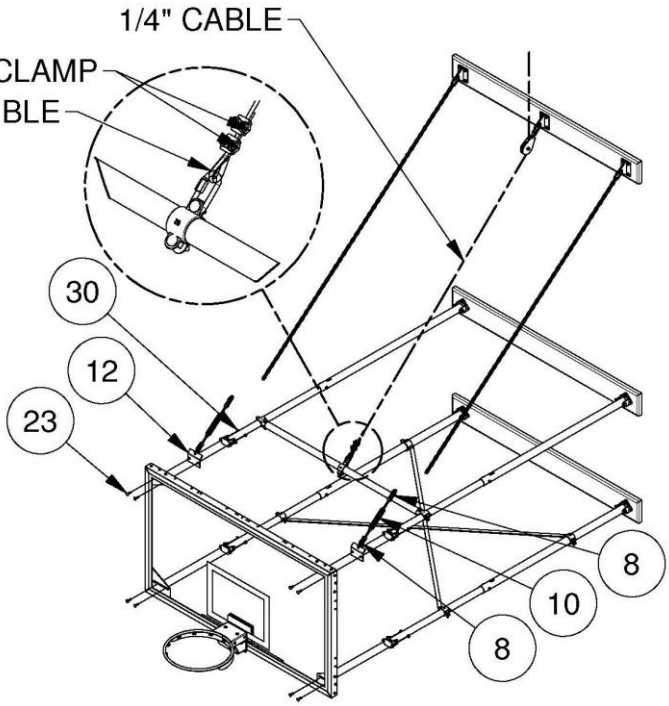
FOR UNITS WITH HEIGHT ADJUSTER PROCEED TO PAGE 14
INSTALLING THE BACKBOARD WITHOUT A HEIGHT ADJUSTER

Raise the arms to as close to level as possible and support the outer portion of the lower extension arms with the scissor lift or scaffolding.



Attach the lower corners of the backboard to the lower extension arms first to help stabilize the backboard while attaching the upper arms.

Attach the back board to the board hinge mounts using the appropriate board mounting hardware. Make sure the chain attach brackets are between the upper board mounting point and the upper hinge bracket.



Note: glass board and carriage bolt hardware are shown. Other style of board may require different hardware.

Attach the turnbuckle to the chain attach plate with a 5/16” quick link. Attach the loose end of the chain to the turnbuckle using a quick link.

⚠CAUTION

Fully close and tighten Quick Link.
Loose or open Quick Link may fail and cause serious damage to unit.

124151565

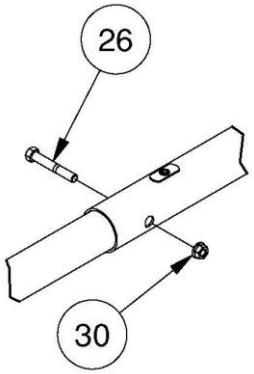
Check to make sure each side of the frame is still square to the wall. Measure the distance from the wall to the face of the back board on each side. Loosen the set screws in the outer tubes and slide the inner extension arm in or out until the face of bank (FOB) is reached. Once both sides of the backboard are at the correct FOB and the frame is still square to the wall, tighten the set screws.

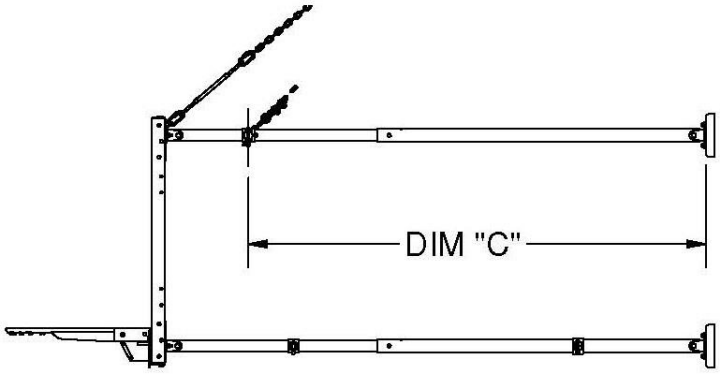
Install the locking bolts on the extension arms the prevent movement of the arms.

Drill a 7/16” hole through the inner extension tube using the hole in the outer tube as a guide.

Install the 3/8” bolt (Item 26), locknut (Item 30) and tighten securely.

Repeat the process on all four extension tubes.





Slide the pull up tube on the upper extension arms until the center of the tube is Dim “C” from the upper wood pad. Make sure the tube is parallel with the face of the backboard.

Tighten the clamp bolts on the tube clamps securely.

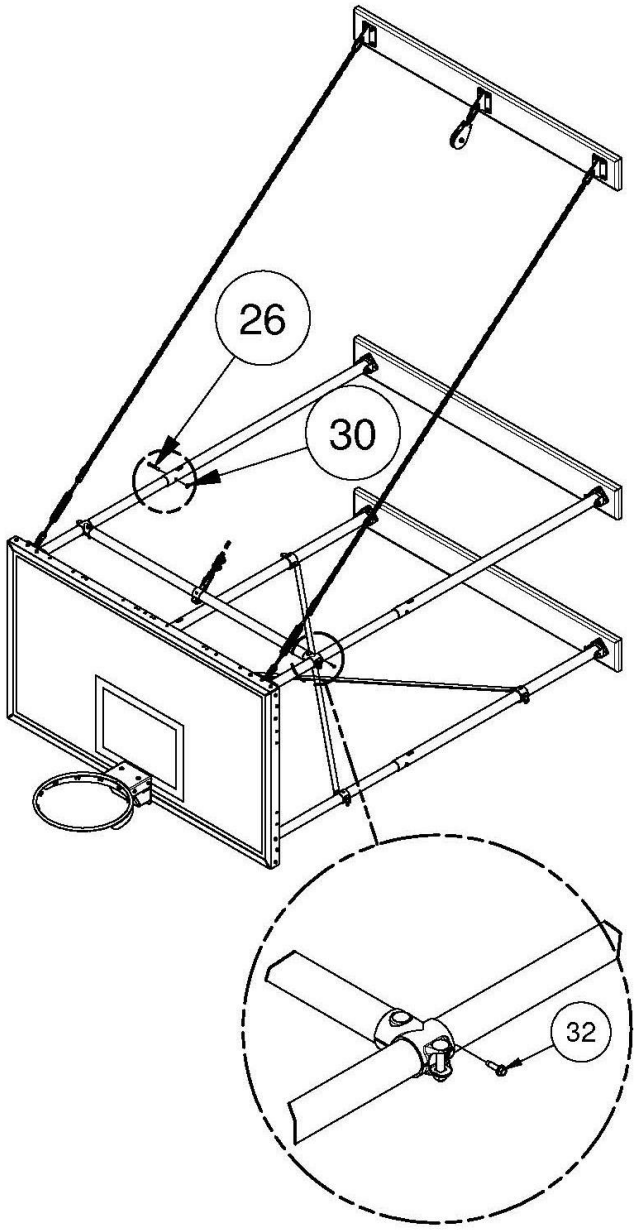
Drill a small pilot hole in the side of the inner extension tube and insert the ¼” self-tapping screw just behind the clamp and on the wood pad side of the clamp. Do this on both sides of the pull up tube.

These self- tapping screws will prevent the pull up tube from slipping back when the unit is being raised.

Route the loose end of the cable through the #5 Pulley and to the hoist. Refer to the hoist installation section of this manual for locating and installing the hoist.

Recheck all fasteners for tightness and security.

The final step of the assembly is to level the frame extension arm by adjusting the chain tension with the turnbuckles. It is important to not over adjust the chains as this causes undue stress on the chain anchor points. Chain tension should be no more than enough to level the side frame tubes.



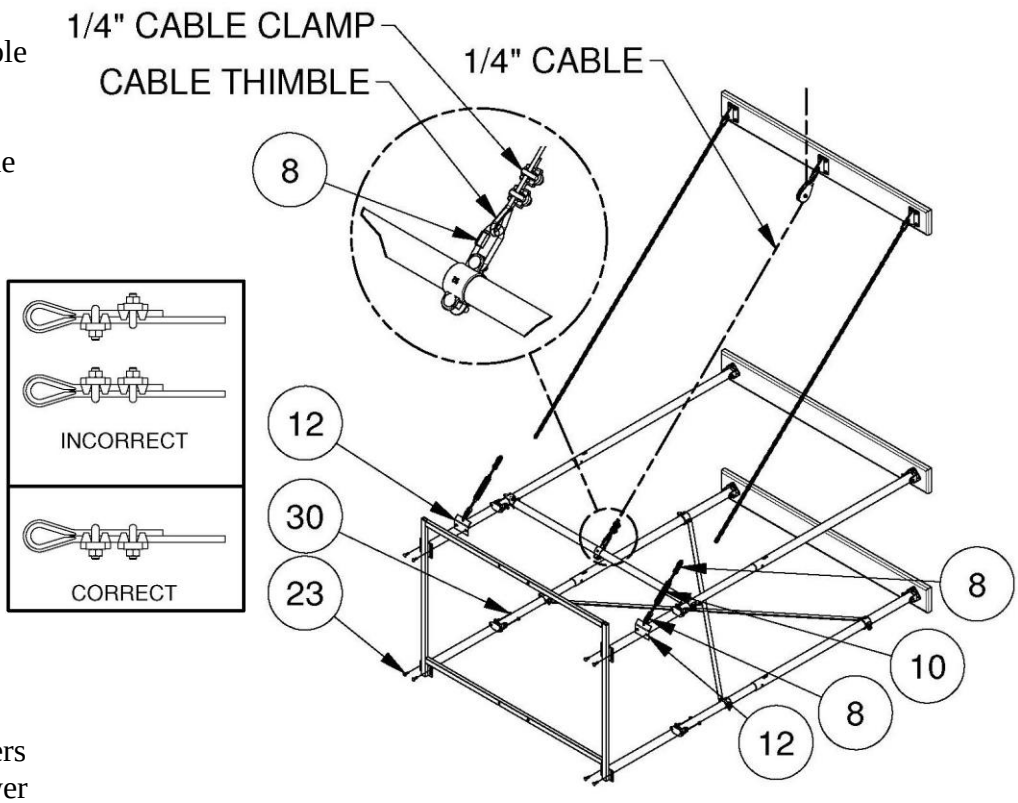
⚠CAUTION

Adjust chains only enough to level the frame extension tubes. DO NOT use chain adjustment to raise or lower goal height.

Improper chain adjustment can cause damage to frame when folding and/or failure of chain anchor

INSTALLING THE BACKBOARD WITH A HEIGHT ADJUSTER

Raise the arms to as close to level as possible and support the outer portion of the lower extension arms with the scissor lift or scaffolding.



Attach the height adjuster frame using the 3/8 x 1 ½" carriage bolts and whizlock nuts
Make sure the chain attach brackets are between the upper board mounting point and the upper hinge bracket.

Attach the lower corners of the frame to the lower extension arms first to help stabilize the frame while attaching the upper arms.

Attach the turnbuckle to the chain attach plate with a 5/16" quick link. Attach the loose end of the chain to the turnbuckle using a quick link.

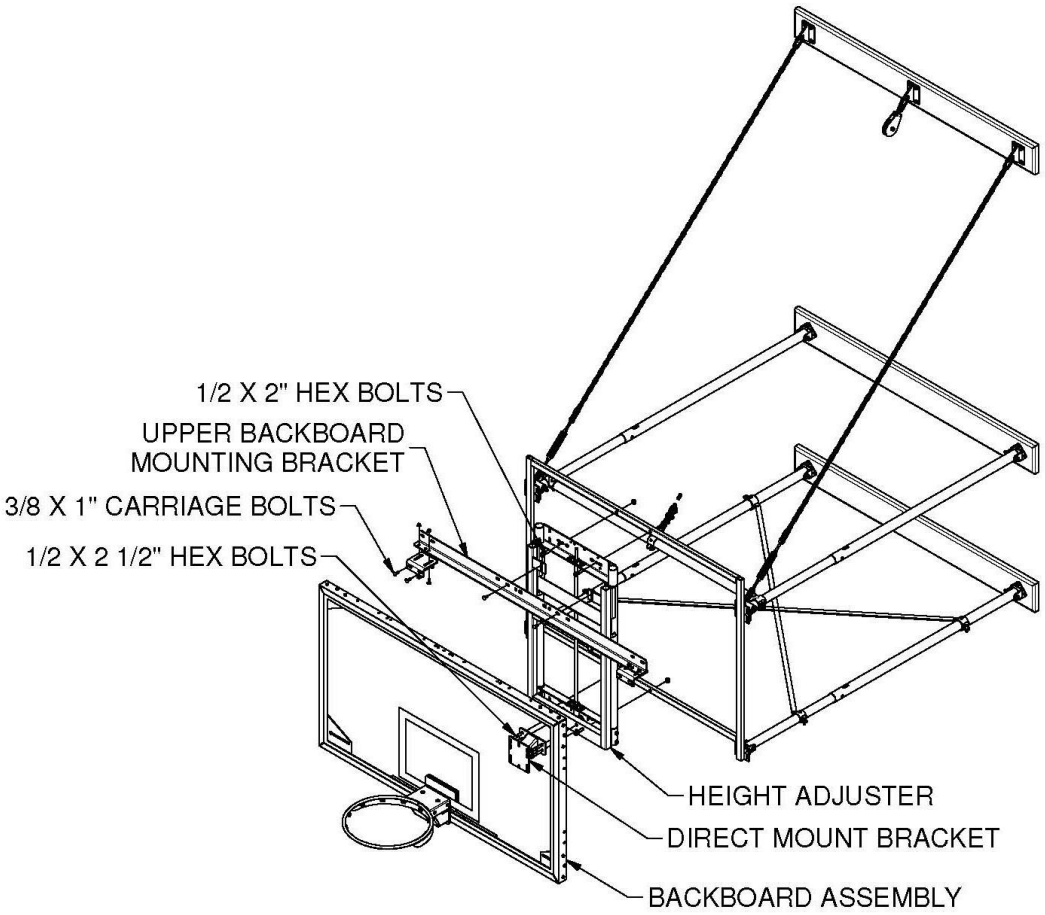
Tighten the turn buckle by hand putting only a light tension on the chain. DO NOT fully tighten at this time. The turnbuckles will need to be readjusted later.
Remove the support from the outer portion of the lower extension arms and allow the unit to hang on its own.

Install one end of the ¼" galvanized aircraft cable onto the quick link in the center of the pull up tube. Use two ¼" cable clamps and the cable thimble and tighten the cable clamps securely.

Because the height adjuster mounting varies with the type of board, and the board to height adjuster mounting varies as well, specific instructions for mounting both the height adjuster and the board are supplied with the mounting kits.

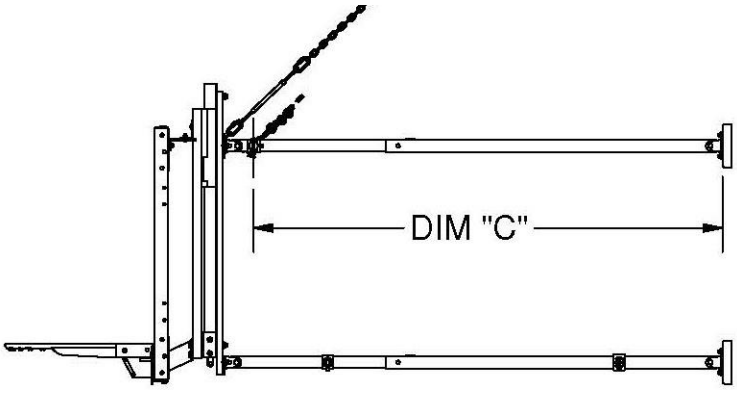
The illustration on the following page is for reference only and may not be the exact representation of the board or wall mount in your application.

Please refer to the specific instructions supplied with the MTG KIT, HEIGHT ADJUSTER TO WM, and the MTG KIT BACKBOARD TO HEIGHT ADJUSTER.



Once the height adjuster and backboard has been installed, final adjustments to the FOB and chain tension can be made.

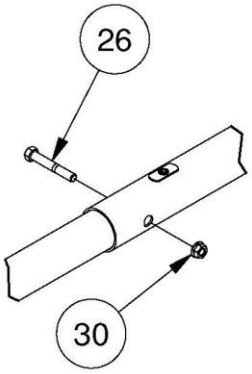
Check to make sure each side of the frame is still square to the wall. Measure the distance from the wall to the face of the back board on each side. Loosen the set screws in the outer tubes and slide the inner extension arm in or out until the correct face of bank (FOB) is reached. Once both sides of the backboard are at the correct FOB and the frame is still square to the wall, tighten the set screws.



Slide the pull up tube on the upper extension arms until the center of the tube is Dim “C” from the upper wood pad. Make sure the tube is parallel with the face of the backboard.

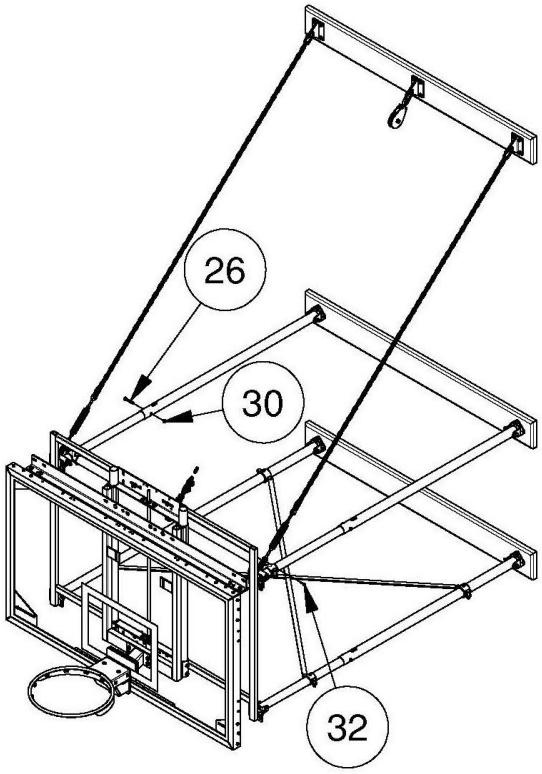
Tighten the clamp bolts on the tube clamps securely.

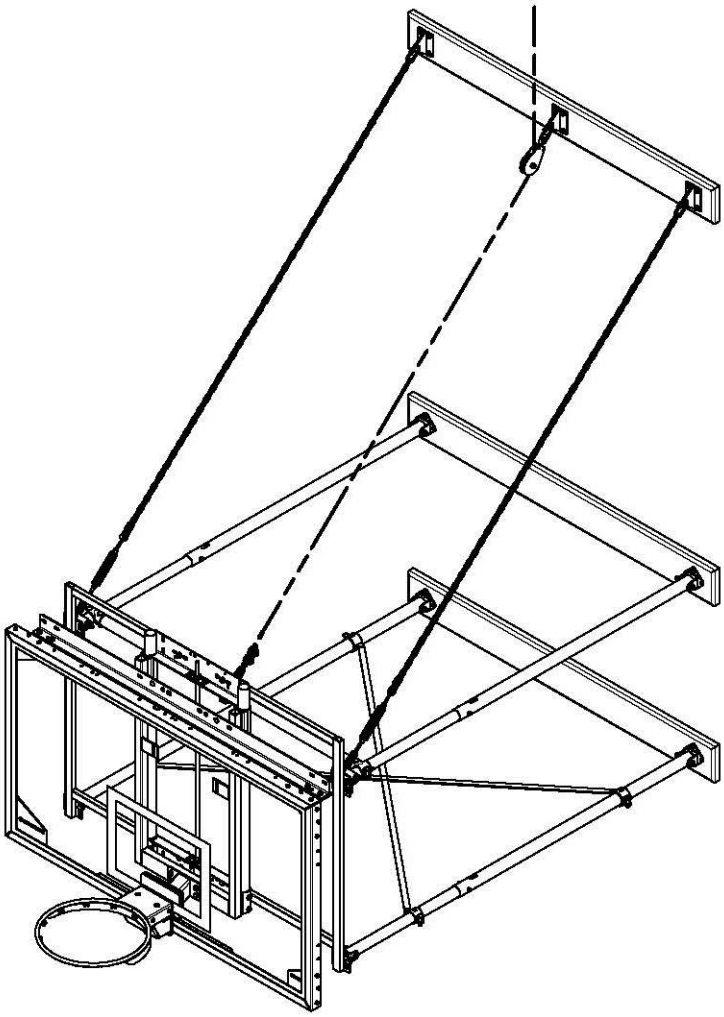
Install the locking bolts on the extension arms the prevent movement of the arms.
Drill a 7/16” hole through the inner extension tube using the hole in the outer tube as a guide.



Install the 3/8” bolt (Item 26), locknut (Item 30) and tighten securely.

Repeat the process on all four extension tubes.





The final step of the assembly is to level the frame extension arm by adjusting the chain tension with the turnbuckles. It is important to not over adjust the chains as this causes undue stress on the chain anchor points. Chain tension should be no more than enough to level the side frame tubes.

⚠CAUTION

Adjust chains only enough to level the frame extension tubes. DO NOT use chain adjustment to raise or lower goal height.

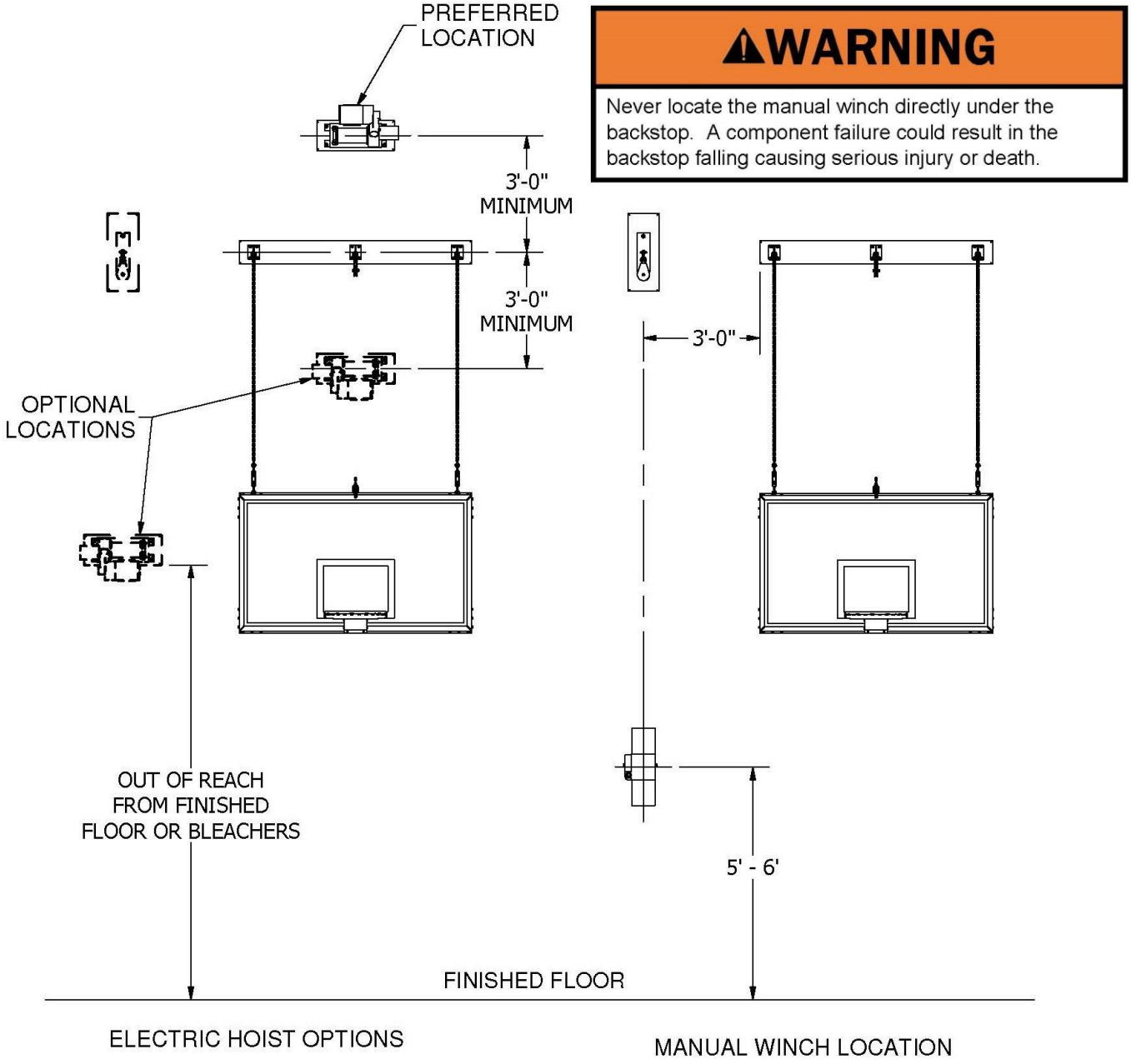
Improper chain adjustment can cause damage to frame when folding and/or failure of chain anchor

Hoist Locations

The hoist locations are dependent upon the building conditions, and customer preference; however, it is important to place the hoist in a location that is best for the operation of the backstop and yet relatively easy access for maintenance. The illustration below will show preferred and suggested locations for the hoists.

Hoist or winch installations are dependent upon building conditions and structure. Follow the installation instructions provided with the hoist or winch and the instructions in the job package drawings for proper installation of the hoist or winch.

Wall mounted pulley assembly is only required with a manual winch or offset electric hoist. If use is not specified, utilize at installer's discretion.



ATTENTION: INSTALLER

To confirm that you have received all the parts, and to better serve you if you contact us, please fill out the following information and fax or mail to the address below.

Please refer to the facility name and/or the installation company below when you contact the factory and include it on any correspondence.

Please complete the checklist on the following page for each unit installed and include them with the fax or letter.

Facility/School Name: _____

Installation Date: _____

Installed by: _____ ASTM #: _____

Signature: _____ Date: _____

Fax to: 1-317-774-9841

Attn: Customer Service

Or

Mail to:

Customer Service

9200 E. 146th St., Ste. A

Noblesville, IN 46060

800-848-8034

Model 2400 Installation Checklist

Date: _____

	Unit Number					
	1	2	3	4	5	6
Building structure has been approved for unit loads.	__	__	__	__	__	__
Attachment anchor system has been approved for the unit loads and installed per the structural engineer's specifications.	__	__	__	__	__	__
Washers have been installed under wood pad's carriage bolts.	__	__	__	__	__	__
Extension arms are level and square to the wall in the play position.	__	__	__	__	__	__
Board and goal are level, plumb and set at appropriate FOB (Face of Bank).	__	__	__	__	__	__
Goal height is correct.	__	__	__	__	__	__
Hardware is tight.	__	__	__	__	__	__
Quick links have been closed and tightened.	__	__	__	__	__	__
Unit folds and unfolds smoothly.	__	__	__	__	__	__
Height adjuster, if so equipped, is lubricated and operates smoothly.	__	__	__	__	__	__

See height adjuster, board, and goal for additional installation instructions and checks.

OPERATING INSTRUCTIONS

For all folding backstops, only trained personnel should operate the units.

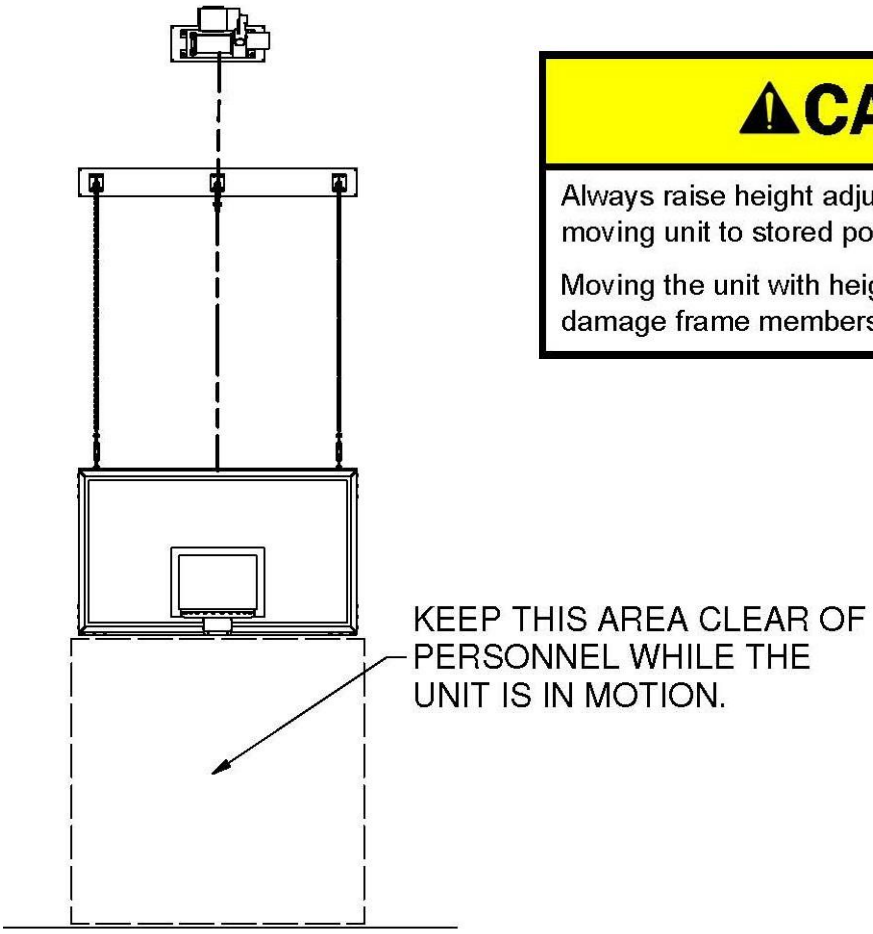
Keep the areas below and around the units clear at all times while the unit is in motion.

Always use the equipment in the manner intended. The manufacturer does not assume any liability for improperly used or improperly maintained equipment.

For manual winch operation, insert the winch crank handle onto the stub shaft of the winch and turn the crank to raise or lower the backstop.

For electric hoists with key switch operation, turn the key switch to either up or down to raise or lower the backstop. Always watch the unit while in motion to make sure it is operating smoothly and there are no obstacles or personnel in the way of the unit.

When the unit is controlled by a keypad controller, refer to the instructions supplied with the controller to operate the backstop.



⚠CAUTION

Always raise height adjuster to full up position before moving unit to stored position.

Moving the unit with height adjuster down can twist and damage frame members.

MAINTENANCE INFORMATION – PLEASE RETAIN FOR FUTURE REFERENCE!!!

MODEL #2400 UP FOLDING WALL MOUNT

MAINTENANCE OVERVIEW

!!!ALWAYS DISCONNECT POWER SOURCE BEFORE PERFORMING ANY MAINTENANCE CHECK OR OPERATION ON THIS EQUIPMENT!!!

STRUCTURE:

We recommend a yearly inspection (or more frequently depending on usage) of the nuts and bolts, checking for tightness. Refer to recommended bolt torque chart at the right.

RECOMMENDED BOLT TORQUE				
Bolt Size	Wrench Size	In-Lbs	Ft-Lbs	Nm
1/4"	7/16"	66 to 90	5.5 to 7.5	8 to 10
5/16"	1/2"	132 to 180	11 to 15	15 to 20
3/8"	9/16"	234 to 318	19.5 to 26.5	27 to 36
7/16"	11/16"		31 to 42.5	43 to 58
1/2"	3/4"		47 to 65	64 to 88
9/16"	7/8"		68 to 90	93 to 122
5/8"	15/16"		94 to 130	128 to 176
3/4"	1-1/8"		166 to 230	226 to 312
7/8"	1-5/16"		269 to 372	365 to 504
1"	1-1/2"		402 to 566	546 to 767

Important Note: The bolts that secure the extension arms to the hinges and the center slide tube to the hinges have nylon locking nuts and these should NOT be torqued to the value in the chart. These nuts should only be tightened until the nut just engages the hinge bracket. Do not overtighten the nut as this will cause binding and excessive wear on the bushings and the tubes.

TURNBUCKLES AND CHAINS:

Check all turnbuckles and support chains for signs of wear or loose connection links.

Confirm all extension arms are level and square to the wall.

BACKSTOP FRAME COMPONENTS

Check for dents, on frame tubes, bent tubes, worn bushings, bent or broken hinge brackets.

Check the wood pads and wood pad wall anchors. Make sure wood pads are not loose to the wall. Make sure wood pads are not cracked or split.

This Model #2400 Up Folding wall mount has been custom manufactured according to the Owner's/Architect's specifications. When operated and maintained with proper care, this backstop should provide years of safe, trouble free service.

ATTENTION: MAINTENANCE DEPARTMENT

To confirm that you have received maintenance and warranty information, and to better serve you if you contact us, please fill out the following information and fax or mail to the address below.

Please refer to the facility name and/or the installation company below when you contact Performance Sports Systems and include it on any correspondence.

I have received the maintenance and warranty information provided by Performance Sports Systems on the 2500 Up Folding wall mount backstop.

Facility/School Name: _____

Installation Date: _____ Installed by: _____

Maintenance Dept. Contact: _____

Signature: _____ Date: _____

Fax to: 1-317-774-9841

Attn: Customer Service

Or

Mail to:

Customer Service

9200 E. 146th St., Ste. A

Noblesville, IN 46060

800-848-8034

Maintenance Check Sheet

Refer to Maintenance Overview (page 21) for recommended inspection frequency.

Date:_____ Unit:_____

Wood Pads / Anchors

-Wood pads, splitting, chipping, etc.	☐ OK	☐ Repair	☐ Replace
-Anchors/Bolts	☐ OK	☐ Repair	☐ Replace

Unit Supports / Brackets / Hinges

-Tubes; dents, stress spots, etc.	☐ OK	☐ Repair	☐ Replace
-Bolts; loose, deformed, etc.	☐ OK	☐ Repair	☐ Replace
-Brackets/Hinges; bent, not rotating, etc.	☐ OK	☐ Repair	☐ Replace

Chains

-Chains; deforming, broken/bent links	☐ OK	☐ Repair	☐ Replace
-Hardware; Quick links	☐ OK	☐ Repair	☐ Replace

Sliding Components; AAG (IF APPLICABLE)

-Lubrication	☐ OK	☐ Repair

Gared Performance Sports Systems
9200 E. 146th Street
Noblesville, IN 46060

800-848-8034
www.garedperfsports.com