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INTRODUCTION

Thank you for choosing **Met-Track®** Work Station Jib Cranes for your material handling needs. The innovative design and heavy duty construction of **Met-Track®** Work Station Jib Cranes will provide a superior quality product that will offer years of long term value. **Met-Track®** Work Station Jib Cranes will provide many years of dependable service by following the procedures detailed within this installation and maintenance manual.

Dimensions contained in this installation manual are for reference only and may differ for your particular application. Please refer to the General Arrangement Drawing for actual dimensions.

Normal safety precautions: These include, but are not limited to:

- Checking for obstructions in crane rotation
- Checking that all bolts are tight and have lock washers
- Making sure that the end stops are in place
- Making sure that festooning cannot be snagged or pinched

PREPARATION

- 1 Read the complete manual before installing the crane.
- 2 Check packing list to ensure no parts have been lost prior to initiating assembly of crane.
- 3 Tools and materials typically needed to assemble crane:
 - Torque wrench
 - Hand tools
 - Ladders/man lifts
 - Heavy duty drill
 - Levelling tools (plumb bob, plumb fixture)
 - Lifting device for heavy masts and booms
 - Resin anchors (SAE Grade 5 or better) plus suitable resin
 - Non shrink precision grout

Consult a qualified structural engineer to determine that your support structure is adequate to support the loads generated by anchor bolt force, overturning moment and axial load of your crane.

WALL/COLUMN MOUNTED CRANE

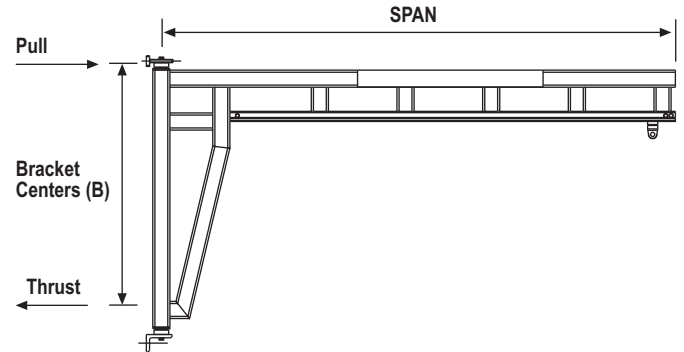


Fig. 1 Wall / Column Mounted Jib Crane

FREE STANDING CRANE IDENTIFICATION

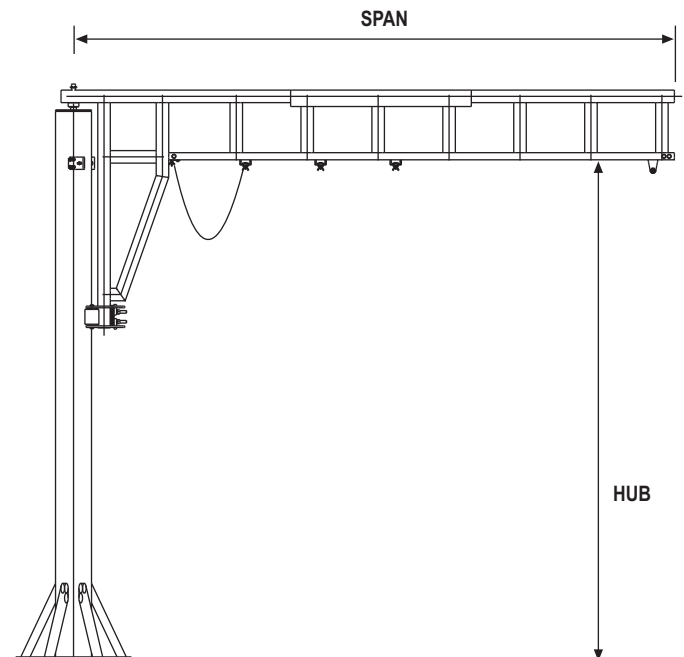


Fig. 2 Free Standing Jib Crane

FLOOR & WALL MOUNT WORKSTATION JIB CRANE INSTALLATION & MAINTENANCE MANUAL



**Table. 1a. Wall Mount Jib Cranes
Thrust, Pull & Mounting Center Data**

Capacity LBS	Span	Model Number	Profile	B*	Thrust & Pull (lbs)
250	8'	JWA96	400	44	3749
	10'	JWA120	400	54	3919
	12'	JWA144	400	54	3989
	14'	JWA168	400	70	4889
	16'	JWA192	400	56	5165
500	8'	JWB96	500	56	7424
	10'	JWB120	500	56	8743
	12'	JWB144	500	70	9397
	14'	JWB168	500	70	10638
	16'	JWB192	500	70	12369
1000	8'	JWC96	600	60	14958
	10'	JWC120	600	60	15245
	12'	JWC144	600	70	17645
	14'	JWC168	600	70	17823
	16'	JWC192	600	70	19655

* This column provides the distance between pivot mounting assembly (bracket) centers

**Table. 1b Floor Mount Jib Cranes
Footer Depth, Width & Anchor Bolt Load Data**

Capacity	HUB	Span	Model Number	Profile	Footer			Anchor Bolt Load (lbs)	
					Depth (L)	Width (M)	Bolt Size		
250 LBS CAPACITY	8'	8'	JFA9696	400	6"	48"	1"	3124	
		10'	JFA12096	400	6"	48"	1"	2390	
		12'	JFA14496	400	6"	48"	1"	3008	
		14'	JFA16896	400	6"	48"	1"	3912	
		16'	JFA19296	400	6"	48"	1"	4625	
	10'	8'	JFA96120	400	6"	48"	1"	3124	
		10'	JFA120120	400	6"	48"	1"	2390	
		12'	JFA144120	400	6"	48"	1"	3008	
		14'	JFA168120	400	6"	48"	1"	3912	
		16'	JFA192120	400	6"	48"	1"	4625	
	12'	8'	JFA96144	400	6"	48"	1"	3124	
		10'	JFA120144	400	6"	48"	1"	2390	
		12'	JFA144144	400	6"	48"	1"	3008	
		14'	JFA168144	400	6"	48"	1"	3912	
		16'	JFA192144	400	6"	48"	1"	4625	
	500 LBS CAPACITY	8'	8'	JFB9696	500	6"	60"	1"	3207
			10'	JFB12096	500	6"	60"	1"	3203
			12'	JFB14496	500	6"	60"	1"	4094
			14'	JFB16896	500	6"	60"	1"	5019
			16'	JFB19296	500	6"	60"	1"	5963
		10'	8'	JFB96120	500	6"	60"	1"	3207
			10'	JFB120120	500	6"	60"	1"	3203
			12'	JFB144120	500	6"	60"	1"	4094
			14'	JFB168120	500	6"	60"	1"	5019
16'			JFB192120	500	6"	60"	1"	5963	
12'		8'	JFB96144	500	6"	60"	1"	3207	
		10'	JFB120144	500	6"	60"	1"	3203	
		12'	JFB144144	500	6"	60"	1"	4094	
		14'	JFB168144	500	6"	60"	1"	5019	
		16'	JFB192144	500	6"	60"	1"	5963	
1000 LBS CAPACITY		8'	8'	JFC9696	600	10"	66"	1"	4222
			10'	JFC12096	600	10"	72"	1"	5982
			12'	JFC14496	600	10"	72"	1"	7617
			14'	JFC16896	600	10"	72"	1"	8741
			16'	JFC19296	600	10"	72"	1"	10836
		10'	8'	JFC96120	600	10"	66"	1"	4222
			10'	JFC120120	600	10"	72"	1"	5982
			12'	JFC144120	600	10"	72"	1"	7617
			14'	JFC168120	600	10"	72"	1"	8741
	16'		JFC192120	600	10"	72"	1"	10836	
	12'	8'	JFC96144	600	10"	66"	1"	4222	
		10'	JFC120144	600	10"	72"	1"	5982	
		12'	JFC144144	600	10"	72"	1"	7617	
		14'	JFC168144	600	10"	72"	1"	8741	
		16'	JFC192144	600	10"	72"	1"	10836	

**MET-TRACK® WORKSTATION JIB CRANE
(WALL/COLUMN MOUNTED) BOOM
INSTALLATION**

Please ensure your supporting structure meets or exceeds the loading requirements prior to installation.

- 1 Position upper mounting bracket assembly on support structure, and drill suitable holes, according to bolt size required (refer to GA Drawing). Temporarily secure mounting bracket assembly to support structure with bolts (not supplied).
- 2 Position lower mounting assembly on support structure using a "plumb bob" (not supplied) through pivot holes (fig.3).
- 3 Drill holes and secure lower mounting bracket assembly to support structure with bolts (not supplied). Do not torque bolts until boom has been completely installed.
- 4 Remove upper mounting bracket assembly from support structure.
- 5 To prepare for a smooth seating clean the pivot pins with clean dry cloth.
- 6 Ensuring the correct orientation slide bearings on pivot pins (fig.4). Ensure bearings are greased (for more information see page 6).
- 7 Raise jib arm weldment and insert lower pivot pin into lower mounting bracket assembly (fig.5).
- 8 Place upper mounting bracket assembly on upper pivot pin of jib arm weldment (fig.6). Secure upper mounting bracket assembly to support structure using bolts (not supplied).
- 9 Rotate the jib arm through its full travel and check at each 45° position that the pivot pins are plumb. Use shims to adjust if necessary (by others).
- 10 Once jib arm is plumb and shimmed, tighten all mounting bolts to manufacturer's specification.
- 11 Insert cotter pins through holes in upper and lower pivot pins. Warning! Fully bend both legs of cotter pin as shown. If cotter pin is cracked or fatigued it must be replaced.
- 12 Swing jib arm through entire travel to ensure boom is clear of obstructions and does not drift. If boom drifts, support structure may be inadequate and/or pivot mounting assemblies may not be aligned.
- 13 Proceed to Hoist Trolley Installation.

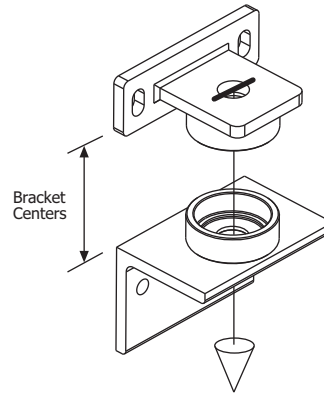


Fig. 3 Plumbing pivot mounting assemblies

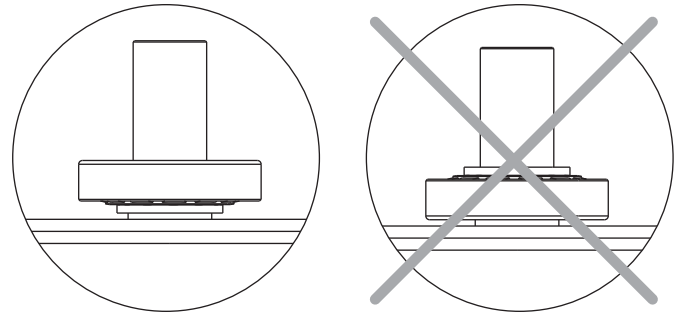


Fig. 4 Orienting Bearings

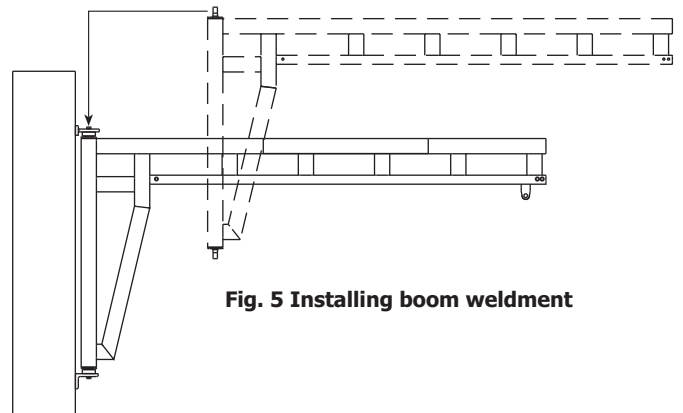


Fig. 5 Installing boom weldment

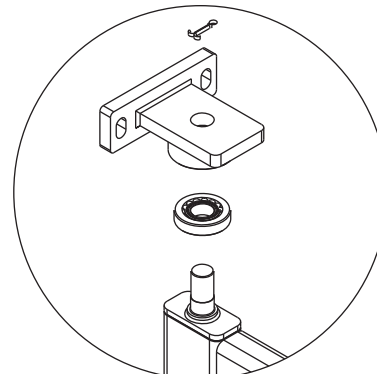


Fig. 6 Installing upper pivot mounting assembly

**MET-TRACK® WORKSTATION JIB CRANE
(FREE STANDING) MAST INSTALLATION**

1 Installing Resin Anchors

a) Resin Anchor Bolts must:

- Resin anchors (SAE Grade 5 or better) plus suitable resin
- be 1" in diameter
- be embedded at least 4-1/2" into floor, not to exceed 3/4 of floor depth (fig.7)
- have minimum of two threads above nut after installation
- have the minimum required depth of concrete as required (refer to drawing). Jibs may also be mounted to 6" deep concrete providing certain guidelines are adhered to, (refer to drawing for more information).

b) Using pre-drilled holes in base plate as a guide, drill holes in concrete floor (fig.7). Use drill bit size recommended by resin anchor manufacturer.

c) Install resin anchors and hardware (by others) according to manufacturer's installation specifications.

d) The concrete base should extend to at least the dimensions specified from the center of the jib crane post (table 3) and must be free from seams, cracks, expansion joints, other fixtures and walls. If there is any doubt about the integrity of the concrete floor to which you are proposing the installation of this jib then we advise that you should consult a qualified structural engineer. Metreel is not responsible for floor quality.

e) Metreel Jib Cranes must be installed on grouted floor. Metreel do not recommend shims are used.

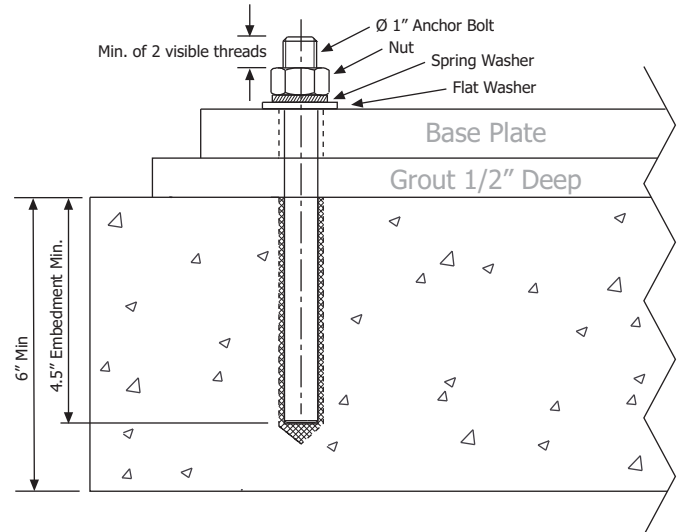
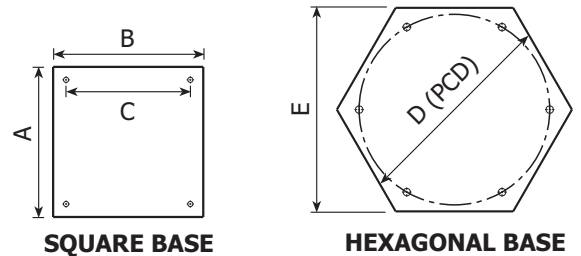


Fig. 7 Anchor Bolt Embedment



	Style	A	B	C	D	E
Base A	Square	15"	15"	11.5"	-	-
Base B	Hexagonal	-	-	-	22"	24"
Base C	Hexagonal	-	-	-	28"	30"

Table. 2 Base Plate Detail

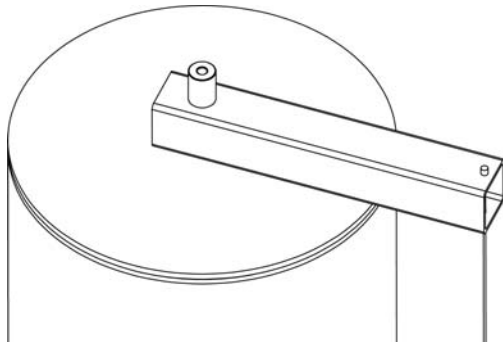


Fig. 8 Plumbing Fixture

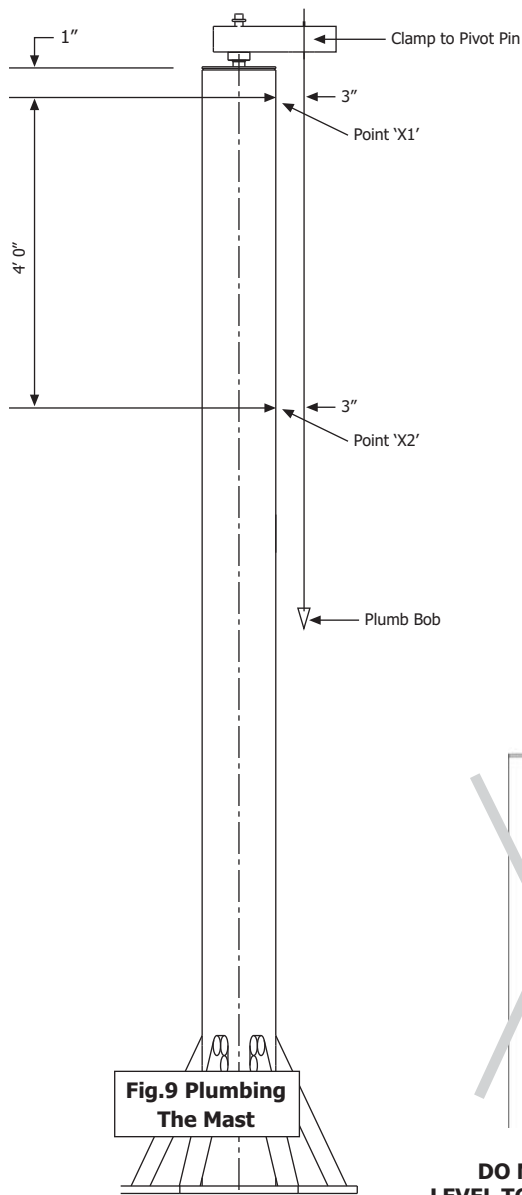


Fig.9 Plumbing The Mast

**DO NOT USE A
 LEVEL TO PLUMB MAST**

- 2 Installing and Plumbing the Mast
 - a) Cover the entire base plate seating area with 1/2" of non-shrink precision grout.
 - b) Set mast into place and make sure that the base plate is completely seated in the grout.
 - c) Drop plumb line (not included) from top of the mast, using fixture (not included) or equivalent (fig 8).
 - d) At point 'X1' 1" below top mast plate, set plumb line a distance of 3" from surface of mast (fig 9).
 - e) At point 'X2' where rollers will contact mast pipe, distance between plumb line and face of mast should also be 3".
 - f) Repeat steps 'd' through 'e' every 60° around the mast to ensure that the mast is plumb throughout. Be sure to fasten plumb line securely to the plumb fixture so that it will not move. Movement will result in an inaccurate plumb measurement.
 - g) Once mast is plumb and grout has cured, fully tighten anchor bolt hardware.
 - h) Verify mast is still plumb.

MET-TRACK® WORKSTATION JIB CRANE (FREE STANDING) BOOM INSTALLATION

1 Install Roller Box Assembly

- a) Fit a washer on to each of the two screws supplied and insert the screws in to the two holes in the back of the jib arm. Where the screws protrude from the front of the arm add the fixings in the following order: -

Flat washer, spring washer, jam nut and tighten.

Add a further jam nut, spring washer and flat washer in that order before building up the roller box as shown (fig.10).

- b) Ensure the roller box is level.

2 Install the Jib Arm

- a) Position the Pivot Bearing on the pivot pin, ensuring the correct rotation (fig 11).Ensure before bearing assembly that the bearing cone surface is coated with heavy bearing grease (fig 11).
- b) Raise the Jib Arm assembly over the pivot pin on mast and lower down, taking care not to damage bearing, pivot pin or jib arm. A clearance of approximately 6" is required for this operation.
- c) Fit retaining washer over pivot pin and secure with socket head capscrew (fig 11).
- d) Level jib arm by shimming between roller box housing and main jib arm base plate (fig 10).
- e) Check to make sure that both rollers have full face contact with mast.
- f) Carefully swing boom through entire travel to ensure jib arm is clear of obstructions and does not drift.

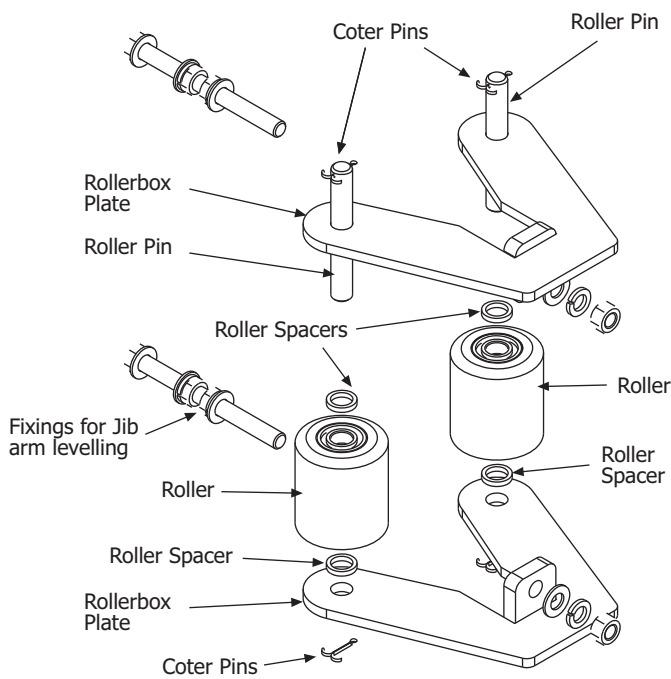
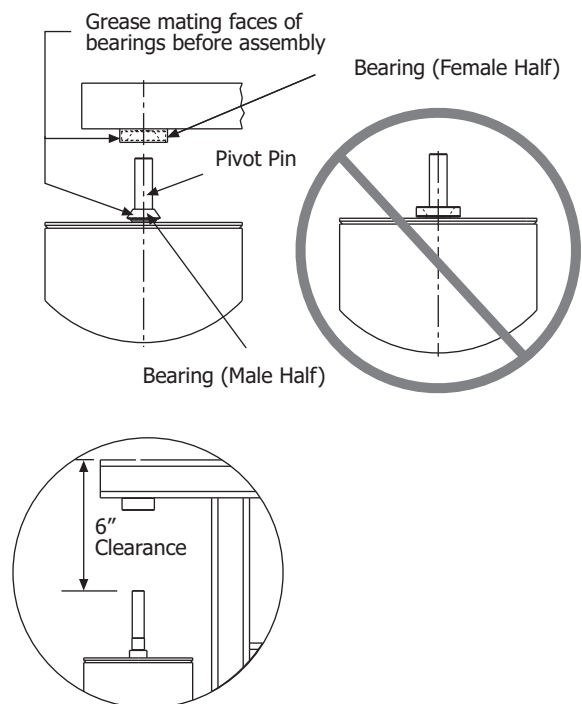


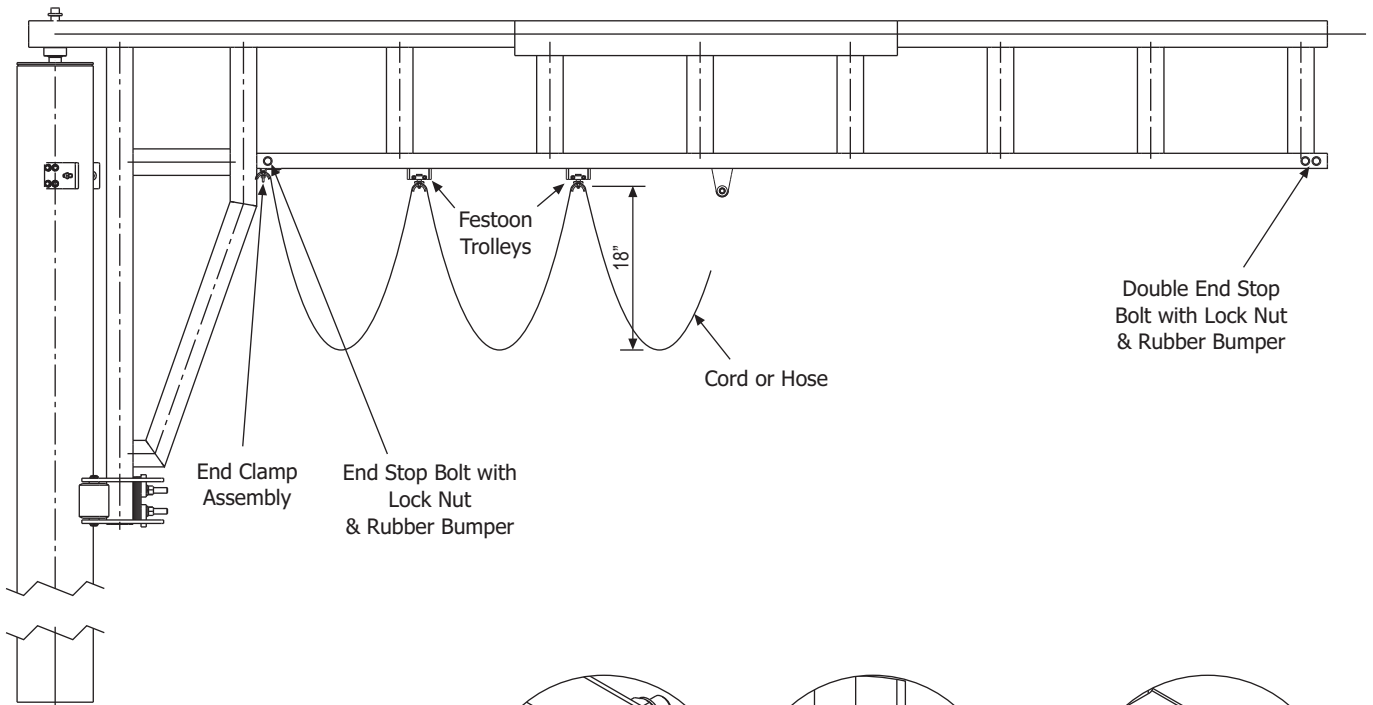
Fig.10 Roller Installation

Fig.11 Orienting bearings



HOIST TROLLEY, FESTOON TROLLEYS & END STOP INSTALLATION

Fig. 12



- 1 Install Hoist Trolley, In Track Festoon and End Stop.
- a) Secure one of the two end stops bolts through the holes in the track profile closest to the mast or supporting structure (fig 13-a).
- b) If required install the festoon end clamp directly under the end stop bolt just installed (fig 16).
- c) If In-track festoon system selected install the festoon trolleys (fig 15).
- d) Install the hoist trolley (fig 14).
- e) Finish by securing the remaining end stop bolts and redundant end stops at the other end of the track (fig 13b).

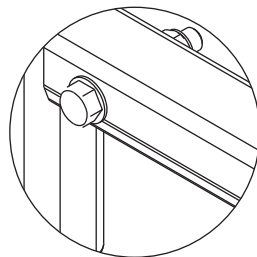


Fig. 13a End Stop Kit

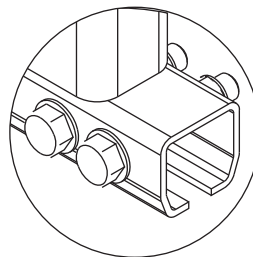


Fig. 13b End Stop Kit

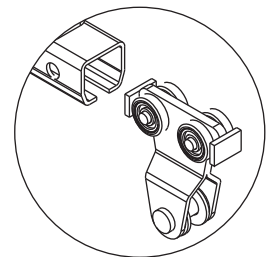


Fig. 14 Hoist Trolley

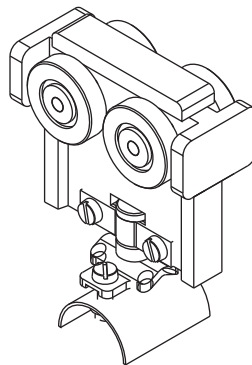


Fig. 15 Festoon Trolley

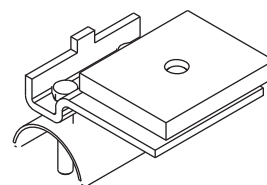


Fig. 16 End Clamp

TAGLINE FESTOON (OPTIONAL)

- 2 Optional Tagline Festoon (fig.17).
- a) Secure the angle brackets at each end of the Jib Arm.
- b) Attach eyebolts onto tagline brackets.
- c) Loop cable through eyebolts and overlap by approximately 6".
- d) Use cable clamps to secure cable leaving a few inches doubled up.
- e) Open festoon trolleys, attach to wire and secure again (fig 14).

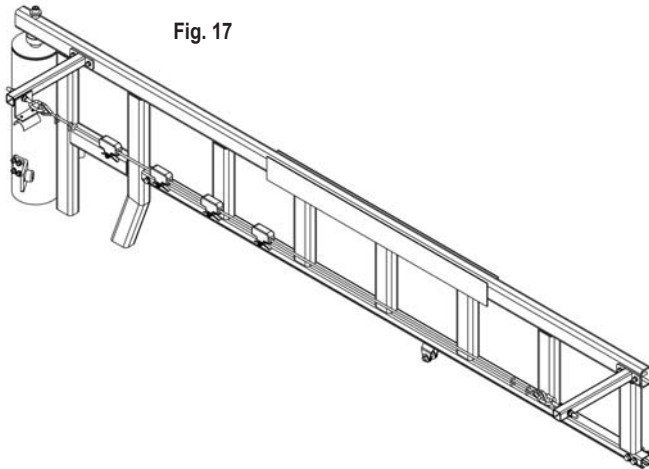


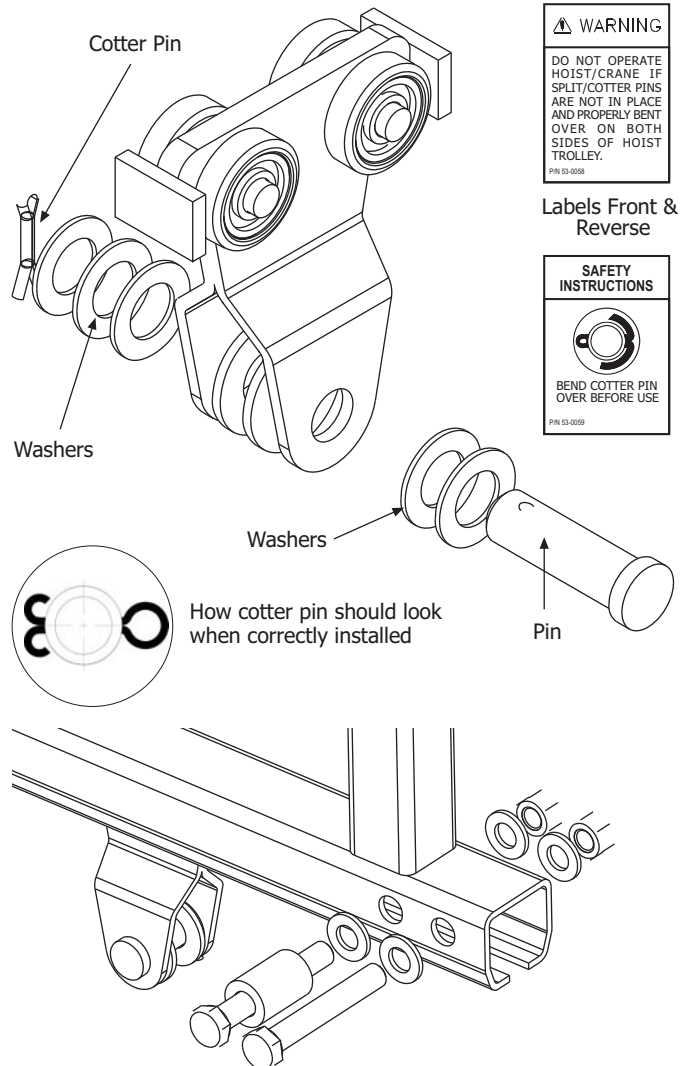
Fig. 17

HOIST INSTALLATION

Attach hoist to hoist trolley. Use washers on hoist mounting pin to center hoist inside hoist trolley. Reinstall washer on outside of hoist trolley before installing or reinstalling cotter pin to secure hoist mounting pin. Replace cotter pin if worn or broken. Bend cotter pin around mounting pin (Fig. 18).

WARNING: Do not operate hoist or crane if cotter pin is not in place and properly bent over. Check regularly that the cotter pin is in place and securing the hoist on the hoist trolley.

Fig. 18



WARNING
 DO NOT OPERATE HOIST/CRANE IF SPLIT/COTTER PINS ARE NOT IN PLACE AND PROPERLY BENT OVER ON BOTH SIDES OF HOIST TROLLEY.
 PIN 03-0098

Labels Front & Reverse

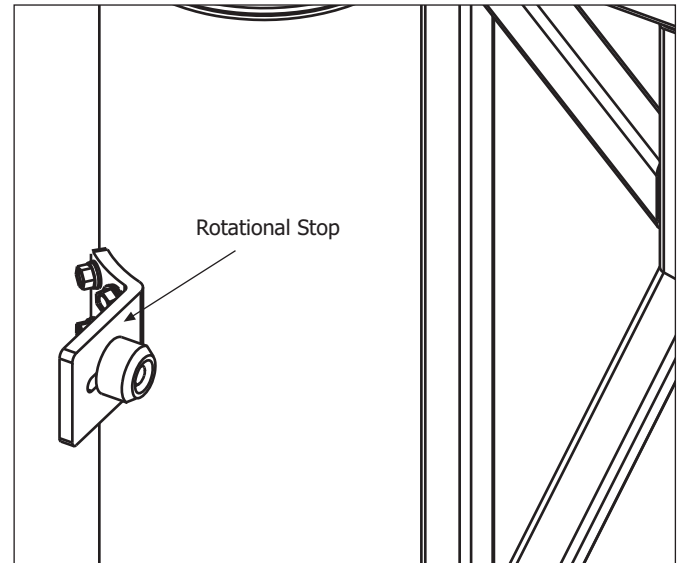
SAFETY INSTRUCTIONS

 BEND COTTER PIN OVER BEFORE USE
 PIN 03-0098

ROTATIONAL STOPS INSTALLATION - FREE STANDING (OPTIONAL)

- a. Swing boom to its desired maximum rotation in one direction. Locate rotation stop in line with the track.
- b. Drill pilot holes with Drill Size 'T'. This will produce a hole of 0.3580" diameter to accept the thread cutting screw as supplied with the rotational stop kits. Please refer to the GA drawing for correct height of stops.

NOTE: Rotational stops should not be used for load positioning. If contact is to be made between jib arm & rotational stop then it must be gentle and controlled.



SERVICE CONNECTIONS

It is the responsibility of the customer to provide a suitable power supply. If a festoon system has been chosen we will supply a 6' tail for connection to an isolator.

For air supply it is the responsibility of the customer to provide a suitable clean air supply at the required rating to accommodate the working pressure.

FINAL STEPS

- a. Check to make sure all bolts are tight and lock washers are compressed.
- b. If necessary, touch up crane with paint provided.
- c. Keep Packing List, Installation Manual, General Arrangement Drawing, and any other documents filed together in a safe place.

WARNING, SAFETY, OR CAPACITY LABELS

If at any time these labels are lost, stolen, removed or become illegible, contact Metreel sales team on sales@metreel.com for replacements.

LOAD TESTING

After the **Met-Track®** Workstation Jib crane system has been installed, you should load test the equipment before operating and also after any modifications.

INSPECTION AND MAINTENANCE SCHEDULE

The table below covers suggested inspection procedure of a **Met-Track®** Workstation Jib crane system in order to guarantee trouble free operation and running.

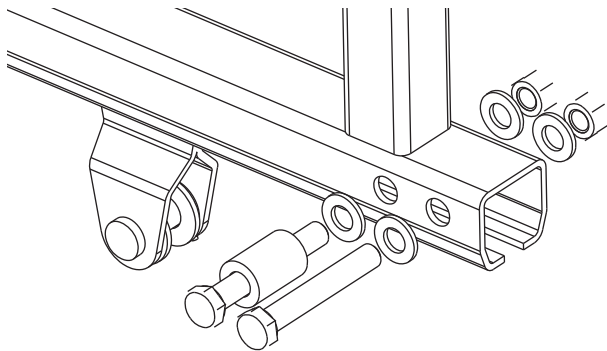
It is strongly recommended to check all of the criteria listed below one month after the initial installation of the system to ensure that all fixings are correctly tightened after the system has settled following installation.

Following this initial inspection the frequency can revert to the frequency listed below.

Note that the frequencies specified are suggested; however federal, state or local codes may stipulate a tighter frequency rate. Please refer to federal, state and local codes in your location territory.

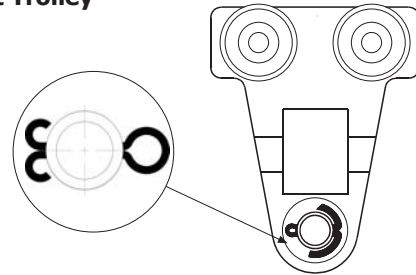
Note that any concerns highlighted during any inspection or highlighted at any other time on the system **MUST** be addressed immediately and corrected and the JIB system not used until the corrective work has been carried out. Failure to do this will pose a serious safety risk.

End Stop Kit



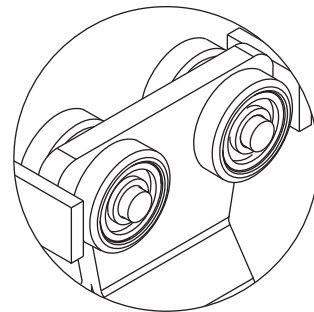
Frequency:	Every 12 months
Maintenance Procedure:	Check full compression of lock washer.

Hoist Trolley



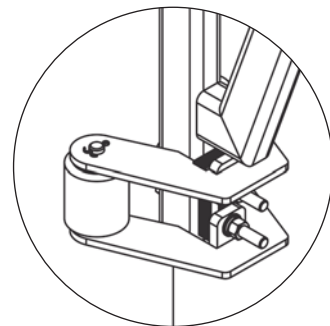
Frequency:	Every 12 months
Maintenance Procedure:	Check clevis pin for wear. Cotter pin should be fully wrapped around clevis. Replace cotter pin if cracked or fatigued.

All Running Wheels



Frequency:	Every 12 months
Maintenance Procedure:	Check for cracks, pits, and/or grooves. All of these increase pull forces. If any of these conditions exist, wheels should be replaced.

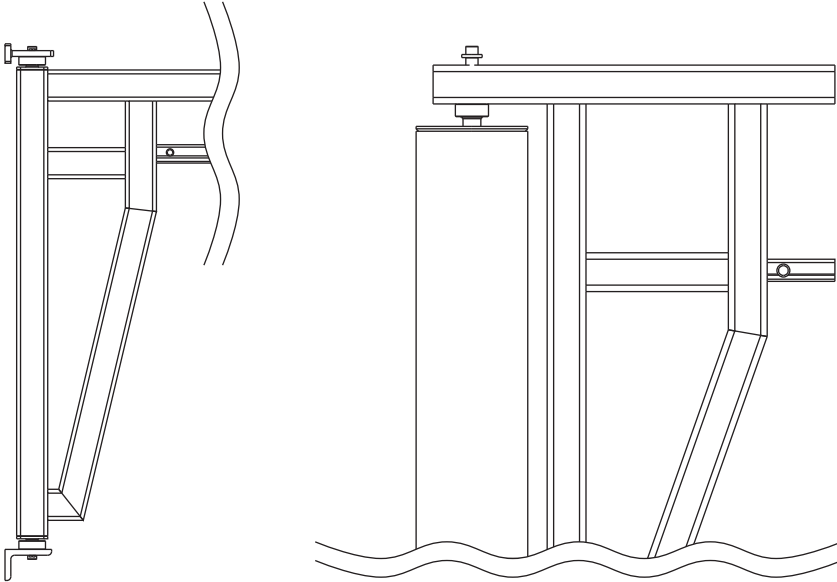
Roller Box



Frequency:	Every 12 months
Maintenance Procedure:	Check to make sure both rollers have full face contact with pipe and lockwashers are compressed. Replace cotter pin if cracked or fatigued.

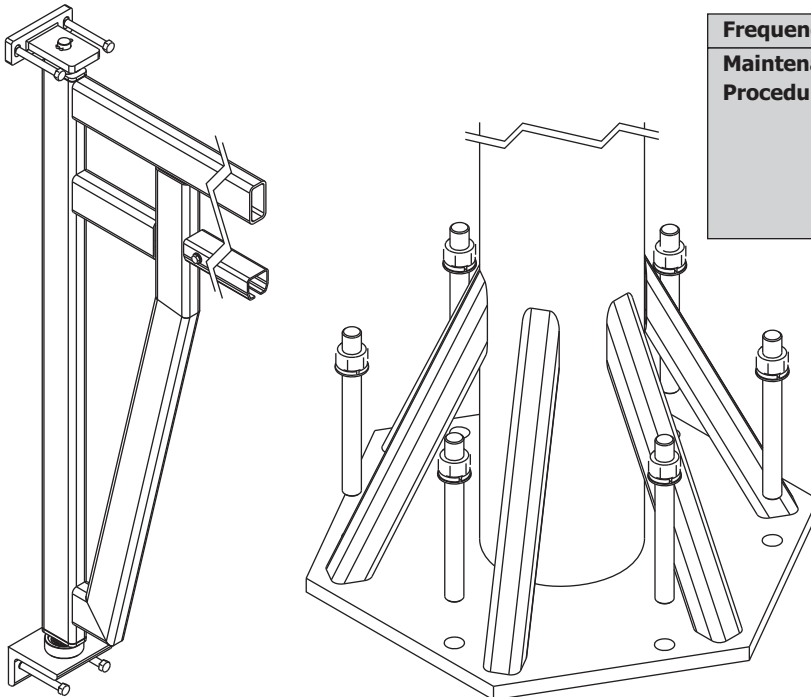


Pivot Pins



Frequency:	Every 12 months
Maintenance Procedure:	Check that cotter pin or retaining pin and o-rings are properly installed so that boom cannot dislodge.

Mounting Bolts or Anchor Bolts



Frequency:	Every 3 months
Maintenance Procedure:	Check that lock washers are compressed and nuts tightened to manufacturers specifications. Ensure the anchor bolts are tightened to a torque to suit the resin used and also to the full compression of the lock washer.



WARRANTY STATEMENT

Metreel, Inc. warrants that the Goods that it manufactures shall at the time of delivery be free from defects in workmanship and materials and/or the Services will be carried out with reasonable care and skill. If any Goods or Services do not conform to this warranty **Metreel, Inc.** will at its option:-

- replace the Goods or repeat the Services found not to conform to the warranty;
- take such steps as **Metreel, Inc.** thinks necessary to bring the Goods into a state where they are free from such defects; or
- take back the Goods found not to conform to the warranty and refund the appropriate part of the purchase price; or
- refund the appropriate part of the charge for the Services
- Or any combination of the above which, in the opinion of **Metreel, Inc.**, shall be reasonable.

Provided that **Metreel, Inc.'s** liability shall in no event exceed the price of the Goods or Services and performance of any one of the above options shall constitute an entire discharge of **Metreel, Inc.'s** liability under this warranty.

The above warranty is subject to the following conditions:-

- the Buyer must give written notice to **Metreel, Inc.** of the alleged defect in the Goods or Services within seven days of the time when the Buyer discovers or ought to have discovered the defect, and in any event within twelve months of delivery or supply of the Goods or Services; and
- the Buyer must give **Metreel, Inc.** a reasonable opportunity to inspect the Goods and, if requested by **Metreel, Inc.**, return the allegedly defective Goods to **Metreel, Inc.'s** works, carriage pre-paid, for inspection to take place there; and
- the Goods have not been altered or modified in any way whatsoever, other than by **Metreel, Inc.** or on its instructions, and have not been subjected to misuse or unauthorised repair; and
- the Goods have been properly installed and connected to such systems as advised to **Metreel, Inc.**;
- and the Buyer has complied with its obligations under this or any other contract made with **Metreel, Inc.**

It is agreed that the equipment detailed in paragraphs below is subject to the following LIMITED warranty and no other.

- **Metreel, Inc.** warrants the manual **MET-TRACK®** Workstation Crane and Workstation Jib products to be free from defects in material and workmanship for a period of 10 years, or 20,000 hours of use, from the date of shipment by **Metreel, Inc.**
- **Metreel, Inc.** warrants the motorised **MET-TRACK®** Workstation Crane and Workstation Jib products to be free from defects in material and workmanship for a period of 2 years, or 4,000 hours of use, from the date of shipment by **Metreel, Inc.**
- This warranty shall not cover failure or defective operation caused by use in excess of recommended capacities or frequencies nor misuses, negligent use, accident or following any alteration or modification to these products not previously agreed in writing by **Metreel, Inc.**

Any such actions shall void this extended warranty.

Metreel, Inc. shall not under any circumstances be liable in contract, tort, statute or otherwise for any direct, indirect or consequential loss or for increased costs or expenses, or loss of profit, business, contracts, revenues or savings howsoever arising which may be suffered by the Buyer (except in respect of death or personal injury caused by **Metreel, Inc.'s** negligence).

If, notwithstanding the above provisions of this Condition, **Metreel, Inc.** is found liable for any loss or damage suffered by the Buyer, that liability shall in no event exceed the unit price of the Goods or Services so affected.

Metreel, Inc. reserves the right to make any changes to the Specification of the Goods or to the components within the Goods provided that these do not materially affect the quality or performance of the Goods other than to the extent that **Metreel, Inc.** advises of such an affect.

Where the completion of the contract requires the cooperation of the buyer and/or the timely submission of information, data or agreement to proposals by the buyer, **Metreel, Inc.** shall not be liable for the consequences of the buyer's failure to so act or respond on time, in full or in part.