Manual No. 103-0024
REV. 1/11

SPANCO® Inc.
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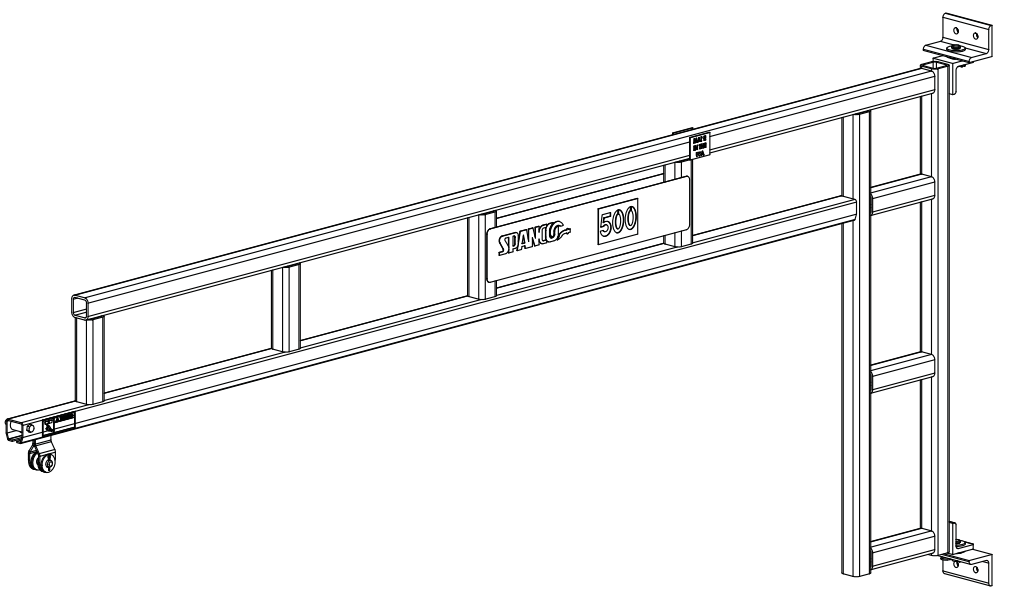
Installation and Maintenance Manual for SPANCO® (WC) Wall Cantilever Jib Cranes



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FORWARD

This manual contains important information to help you install, operate, maintain, and service your new jib crane. Please be sure to read this entire manual before installing or operating your crane. We also recommend that you obtain the latest issue of *ANSI B30.11 Safety Standard for Monorails and Underhung Cranes* and study its contents thoroughly. By practicing the recommended maintenance suggestions, with proper installation, inspections, and application of correct operating procedures you will be assured maximum service from your jib crane and maximum safety for everyone. We also recommend obtaining a copy of the 'CMAA Crane Operator's Manual' and studying its contents thoroughly.

The jibs described in this manual are intended for indoor service. Jib cranes used for outdoor service require special consideration.

Information contained in this manual is subject to change without notice.

Before attempting to install your new jib crane, the following items must be understood:

1. It is the customer's responsibility to ensure that building columns or walls are adequate to support the crane and its rated load.

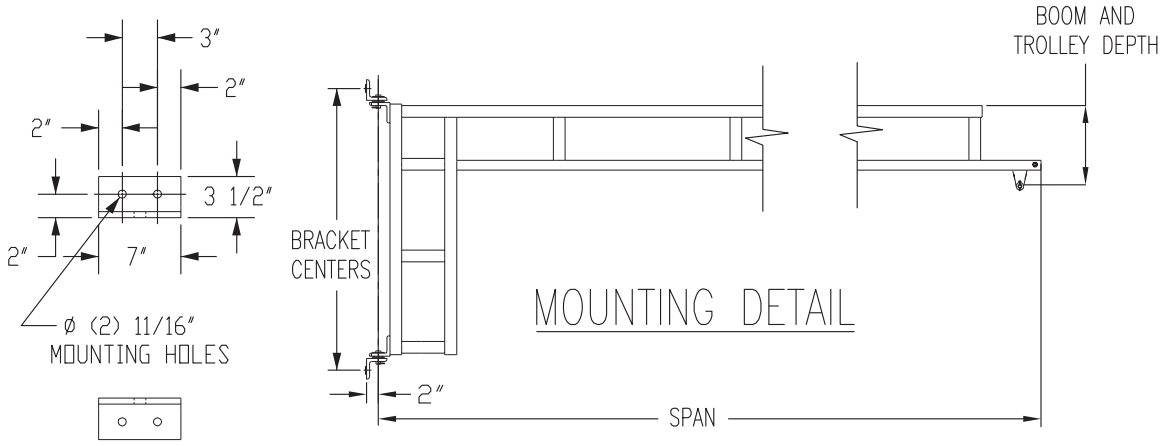
2. Jib cranes should not be hung from any existing building structure without first consulting a qualified architect or engineer for the purpose of determining the structure's adequacy.

⚠ WARNING **Do not mount the jib crane to any structure unless you are sure the structure can safely support the loads imposed upon the structure. Failure to check this item can result in severe bodily injury or death.**

3. The installer is responsible for supplying the correct size, length, number, and type of bolts required to attach the jib crane brackets to the structure. SPANCO recommends that the bolts be ASTM A325 grade.

4. Plan the installation such that the proper clearance as outlined in ANSI B30.11 will be adhered to. In the design of jib crane systems, all factors that influence clearances, such as wheel float and roof truss sag should be considered. WC jib cranes are designed for boom deflection at the tip of the boom to not exceed 1/225 of the span.

INSTALLATION



1. Refer to **Tables (1) and (2)** and locate the dimensions of the specific Model WC jib crane to be installed.

TABLE (1)	Boom and Trolley Depth						
	Span						
Capacity	4’	6’	8’	10’	12’	14’	16’
100	6 1/2”	6 1/2”	11 1/4”	11 1/4”	13 1/4”	13 1/4”	13 1/4”
150	6 1/2”	6 1/2”	11 1/4”	11 1/4”	13 1/4”	17”	17”
250	6 1/2”	11 1/4”	11 1/4”	13 1/4”	17”	17”	17”
500	12 5/8”	12 5/8”	15”	15”	17”	20 3/16”	20 3/16”
1000	14 3/16”	14 3/16”	14 3/16”	17 1/16”	20 3/16”	24 1/8”	24 1/8”

TABLE (2)	Bracket Centers						
	Span						
Capacity	4’	6’	8’	10’	12’	14’	16’
100	36”	36”	36”	36”	48”	48”	48”
150	36”	36”	36”	36”	48”	60”	60”
250	36”	36”	36”	48”	60”	60”	60”
500	36”	36”	48”	48”	60”	72”	84”
1000	36”	36”	48”	48”	60”	72”	84”

INSTALLATION (Continued)

1. Refer to Tables (1) and (2) and locate the dimensions of the specific Model WC Jib crane to be installed.

2. Please note that the bracket centers in the charts are nominal dimensions only. Do not drill holes according to these dimensions! The crane bushings and washers need a more precise fit, so be sure to follow the remaining steps!

3. Note that the upper angles are slotted for adjustment and the lower angles only have holes. The bottom and top bearing assembly's come pre-assembled with the attached angles. Verify that the top and bottom bearing assembly is assembled correct (see figures in this manual). Lift the crane into position using an overhead crane or other means. Place the bottom wall bracket against the supporting column in its proper location with a C-clamp or other supporting method. Drill the first lower hole and put the first bolt through. Level the lower bracket with a level and then drill the second lower hole. Put the second bolt through and then partially tighten the bolts. Do not fully tighten the bolts in case shims are needed (later).

4. Allow crane to rest on lower bracket while still supporting the rest of the crane.

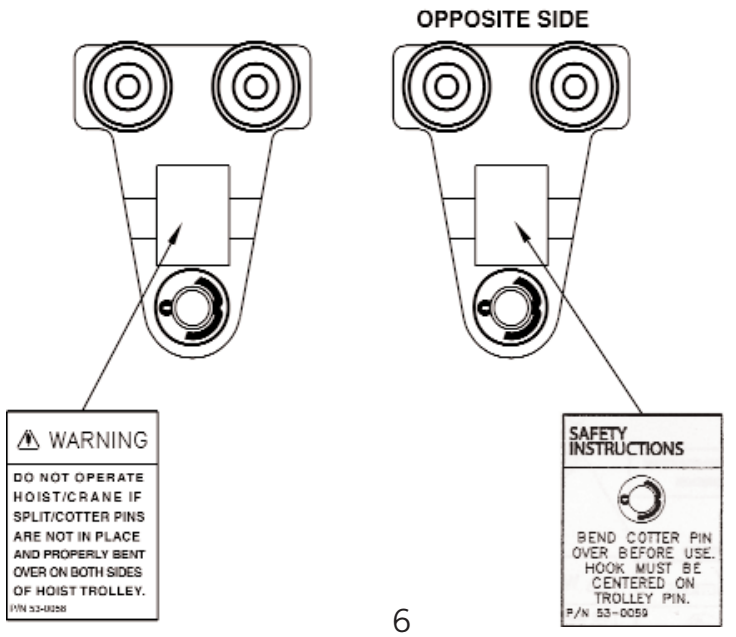
5. Use a 3' or 4' level to level the crane vertically (to within 1/16" if using a plumb bob). Press downward on top of upper pin to ensure the upper bearing assembly is down as far as it goes. Level the upper bracket with a level and drill the two bracket holes into the support structure. Install and tighten the two upper bolts. Do not fully tighten the bolts in case shims are needed (later).

6. Attach the hoist, supplied by others, to the hoist trolley. Use washers on hoist mounting pin to center hoist inside hoist trolley. Replace cotter pin(s) if worn or broken.

⚠ WARNING

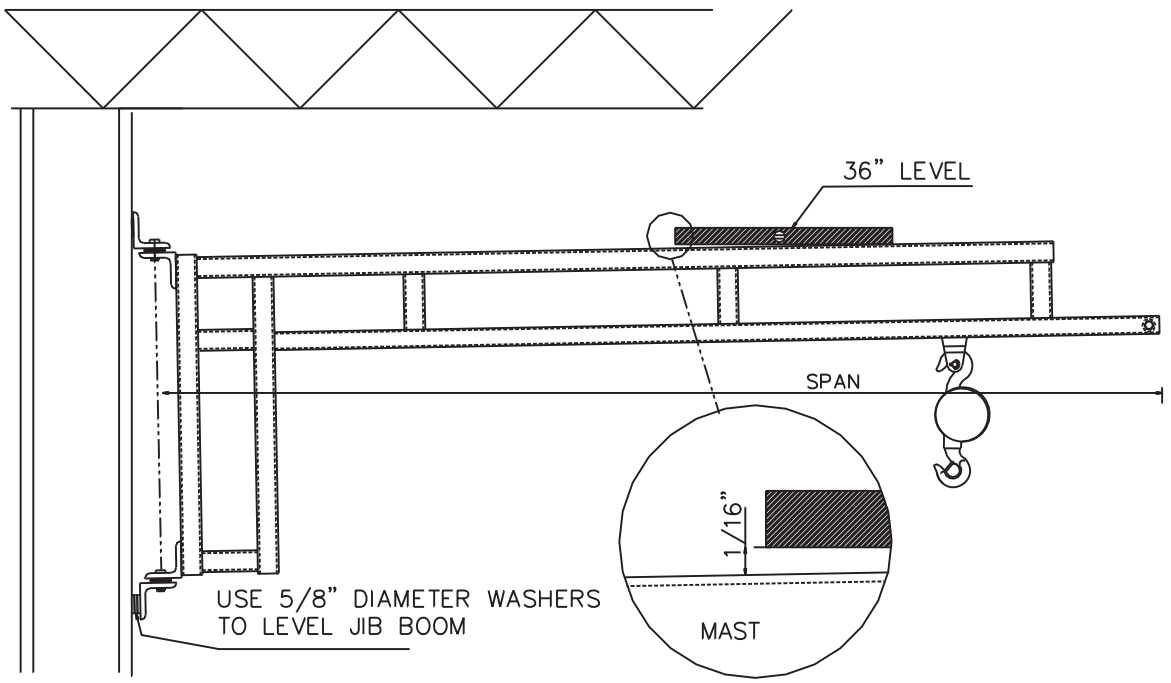
Do not operate hoist or crane if cotter pins are not in place and properly bent over on both sides of hoist trolley. Check regularly that the cotter pins are in place and securing the hoist on the hoist trolley.

NOTE: Some trolley load pins only have one cotter pin.



INSTALLATION (Continued)

7. Position the unloaded hoist and trolley at the extreme tip of the boom. If desired you may install the boom on a slight incline to compensate for anticipated deflection. If a slight incline is used it should be approximately 1/16" using a 36" level (see figure). This will keep the incline from exceeding ½ of the expected total boom tip deflection (1/2 x SPAN ÷ 225). If lower washers (shims) are required to level the boom, leave the upper bolts tightened, support crane as needed, and install bottom washers (shims) as needed, then retighten bottom bolts. If upper washers (shims) are required to level the boom, leave the lower bolts tightened, support crane as needed, and install upper washers (shims) as needed, then retighten upper bolts. In the end be sure all 4 bolts are properly tightened (approximately 154 FT*LBS).



8. Recheck to make sure both upper and lower bearing assemblies will pass the first inspection (see correct figures in this manual). Test jib by rotating back and forth to ensure there is no unusual rubbing or binding or anything else unusual that could compromise the crane, bushings, or pin life. Be sure the crane rotates freely and unimpeded.

9. Connect the hoist to its source of power (either air or electric) if required, as per the hoist manufacturer's manual.

10. Now that the jib crane installation is complete, but before the unit is placed into service, it is important to review and follow the procedures outlined in Chaper 11-2 of ANSI B30.11 regarding inspection, testing, and maintenance.

11. Perform a first inspection (see the following pages titled ('Maintenance and Inspections').

MAINTENANCE AND INSPECTION

1. In order to minimize a potential injury or fatality, be sure every user performs his or her own inspection at the start of each shift, or at the time the crane is first used during each shift, unless the employer or supervisor has assigned this responsibility to another designated person to perform daily (see pages 19 and 20 of the CMAA Crane Operator's Manual). This daily inspection is a visual inspection of the entire system before using it and note is taken of any unusual or abnormal operation of the system while using it. Meticulous, careful operation of the system will help minimize system repair and maintenance.

2. Daily inspection items, according to the CMAA Crane Operator's Manual, include a tagged out crane or hoist. Other daily items to check include control devices, hooks, hook latches, wire rope, oil leakage, unusual sounds, warning and safety labels. SPANCO recommends additional items to add to this daily list. Those items include bearings (bushings), pins, cotter pins, end stops and all nuts and bolts to be checked for tightness. Hoist trolleys should be checked for abnormal wear or breakage. Check that festoon trolleys travel smoothly through the track. Also check that all festoon cables and/or hoses are securely clamped to the festoon trolleys and end clamps. Check daily for anything unusual.

3. The supplied bearings (bushings) are not designed to be lubricated. They are a wear item that will need to be inspected and eventually need to be replaced depending on usage.

3. Refer to the figures in this manual showing correct and incorrect configurations of bearing assemblies. If there is a question concerning bearing assembly or any other item during the inspection, the crane must be tagged out of service immediately until all items are resolved.

4. It is important to note that every system application and use will be different, therefore some conditions of use should require more frequent inspection. Examples of such conditions might be two or three shift operations, high, repetitive or fast movement of the crane, unusual working conditions, corrosive environments, or intended or unintended abuse.

5. Remember end stops are emergency devices only. They are not to be used as an operational means to stop travel of the hoist (page 18 CMAA Crane Operator's Manual).

6. The hoist is not provided by SPANCO. The user should refer to the manual supplied for the hoist for a listing of maintenance points and their suggested frequency.

7. Operating any crane has its potential dangers. To minimize injuries all users of this crane must be properly trained on its use and all users must be able to identify and monitor any potential hazards that may be present in the work environment.

8. Weekly or monthly inspections would be more detailed inspections than what is described above.

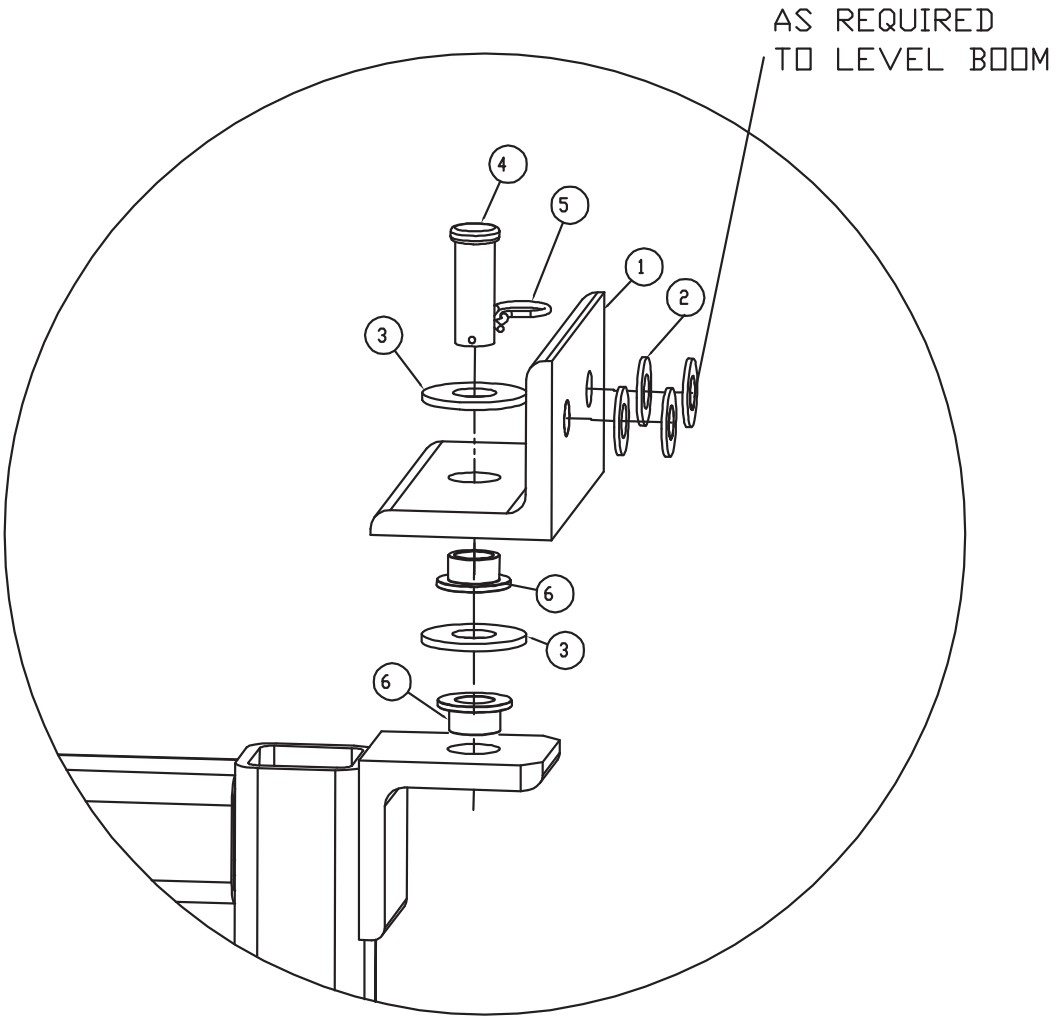
MAINTENANCE AND INSPECTION (Continued)

9. A yearly inspection includes all of the above inspection items plus a partial tear down of the upper and lower bearing assemblies. Properly support the crane by an overhead crane or other means and remove the upper cotter pin and then remove the main pin (refer to the proper figures in this manual). The bearing will need to be removed and checked. It will either be a flanged or non-flanged sleeve bearing (bushing). If flanged, check the flange for any cracks or for any unusual or excessive wear. For any non-flanged bearing, remove and check for any wear. Also visually inspect the pin and cotter pin for any signs of unusual wear. Refer to the proper figures in this manual to be sure that the bearing assemblies go back together properly. After putting the top assembly back together, repeat the same process for the lower bearing assembly, making sure the crane is properly supported at all times. Contact SPANCO immediately concerning any possible replacement parts in question.

TOP BRACKET ASSEMBLY:

JANUARY 2011 AND EARLIER ONLY

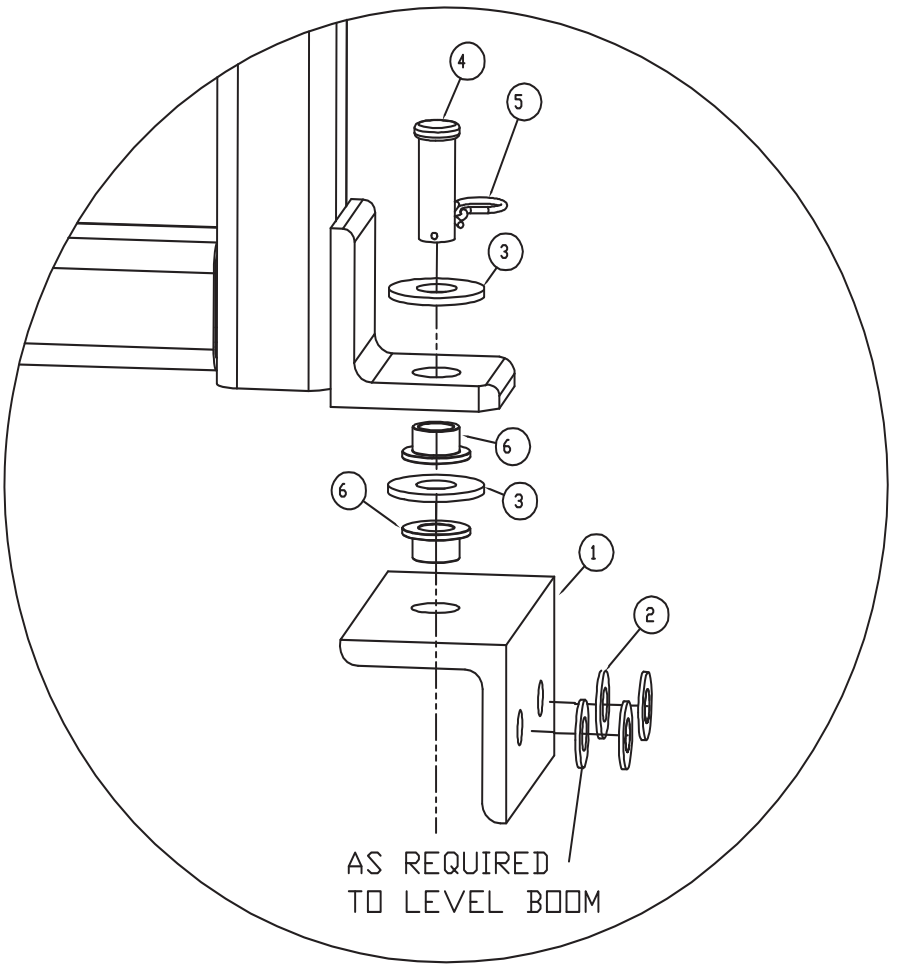
WC 100, 150, 250, 500 & 1000 LBS



K-WC-01

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	WCB1	BRACKET, ANGLE WALL CANTILEVER JIB
2	4	15-0004	5/8" FLAT WASHER
3	2	15-0005	FLAT WASHER, 3/4"
4	1	29-0003	PIN, CLEVIS 3/4 X 2 ZINC PLATED
5	1	29-0006	HAIRPIN COTTERS 5/8 - 3/4
6	2	26-0009	BEARING, FLANGE 3/4ID 841 BRNZ OILITE

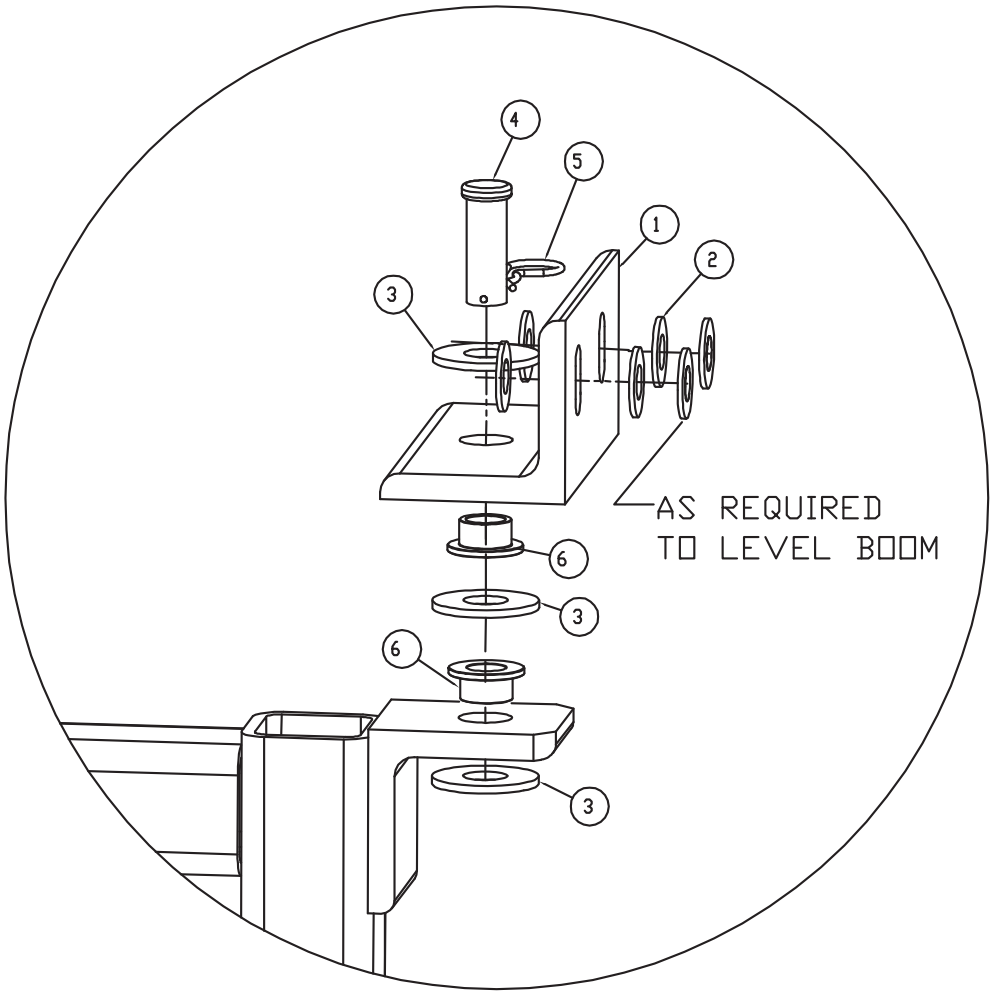
BOTTOM BRACKET ASSEMBLY:
JANUARY 2011 AND EARLIER ONLY
WC 100, 150, 250, 500 & 1000 LBS



K-WC-01

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	WCB1	BRACKET, ANGLE WALL CANTILEVER JIB
2	4	15-0004	5/8" FLAT WASHER
3	2	15-0005	FLAT WASHER, 3/4"
4	1	29-0003	PIN, CLEVIS 3/4 X 2 ZINC PLATED
5	1	29-0006	HAIRPIN COTTERS 5/8 - 3/4
6	2	26-0009	BEARING, FLANGE 3/4ID 841 BRNZ OILITE

TOP BRACKET ASSEMBLY:
JANUARY 2011 AND LATER ONLY
WC 100, 150, 250 & 500 LBS



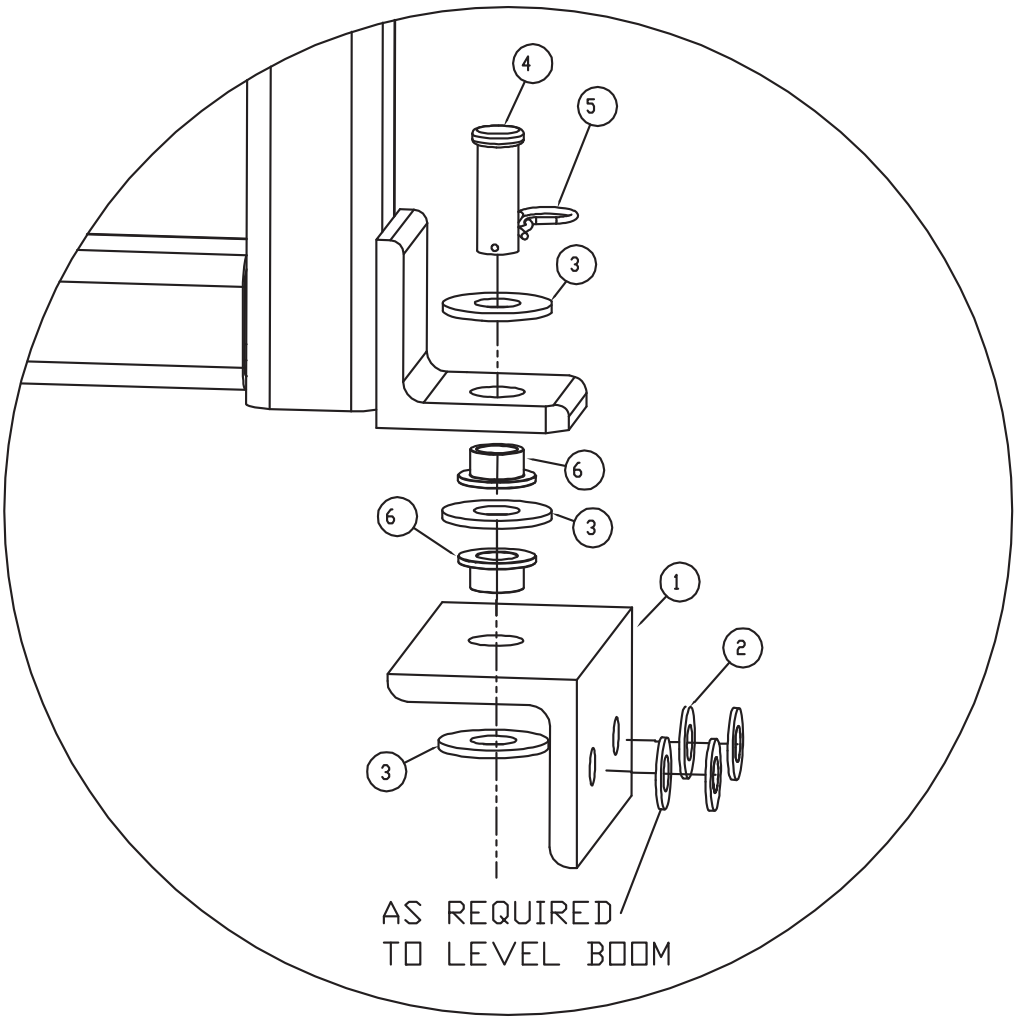
K-WC-02

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	WCB2	BRACKET,SLOTTED ANGLE WALL CANT JIB
2	6	15-0004	5/8" FLAT WASHER
3	3	15-0005	FLAT WASHER, 3/4"
4	1	29-0003	PIN, CLEVIS 3/4 X 2 ZINC PLATED
5	1	29-0006	HAIRPIN COTTERS 5/8 - 3/4
6	2	26-0023	BEARING, FLANGE 1.25,3/4ID,954 BRNZ

BOTTOM BRACKET ASSEMBLY:

JANUARY 2011 AND LATER ONLY

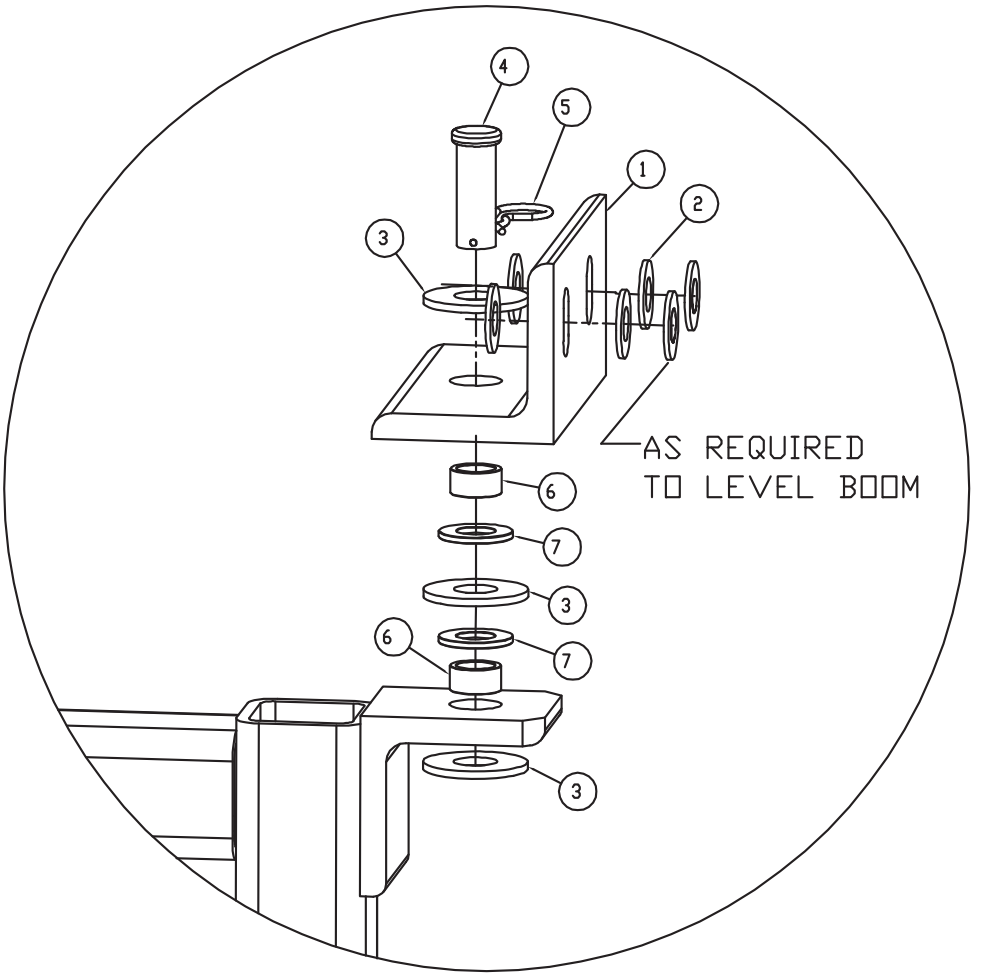
WC 100, 150, 250 & 500 LBS



K-WC-02

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	WCB1	BRACKET, ANGLE WALL CANTILEVER JIB
2	4	15-0004	5/8" FLAT WASHER
3	3	15-0005	FLAT WASHER, 3/4"
4	1	29-0003	PIN, CLEVIS 3/4 X 2 ZINC PLATED
5	1	29-0006	HAIRPIN COTTERS 5/8 - 3/4
6	2	26-0023	BEARING, FLANGE 1.25,3/4ID,954 BRNZ

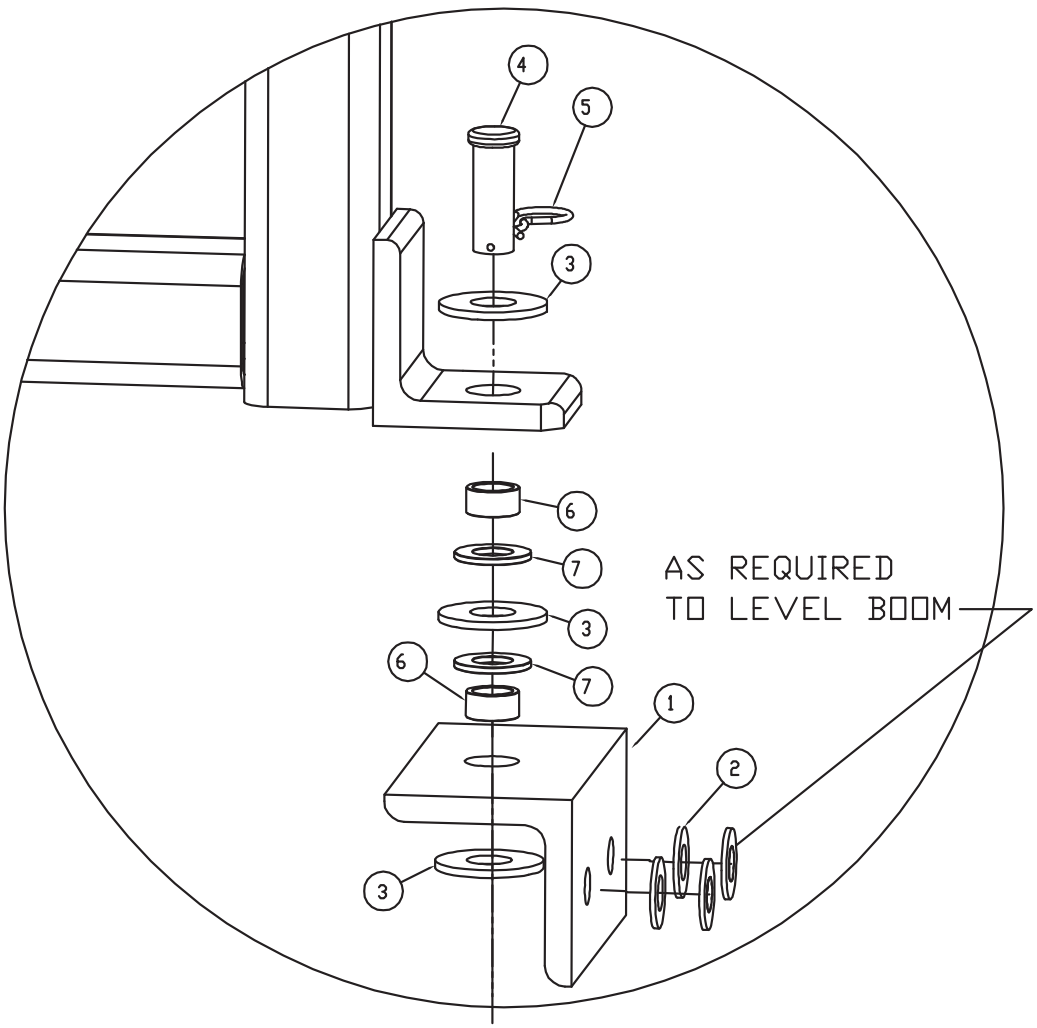
TOP BRACKET ASSEMBLY:
JANUARY 2011 AND LATER ONLY
WC 1000 CONFIGURATION



K-WC-03

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	WCB2	BRACKET,SLOTTED ANGLE WALL CANT JIB
2	6	15-0004	5/8" FLAT WASHER
3	3	15-0005	FLAT WASHER, 3/4"
4	1	29-0003	PIN, CLEVIS 3/4 X 2 ZINC PLATED
5	1	29-0006	HAIRPIN COTTERS 5/8 - 3/4
6	2	26-0025	BEARING,SLEEVE 3/4"ID,1"OD,1/2LNGTH
7	2	26-0024	THRUST WASHER, 3/4" BRONZE SAE 841

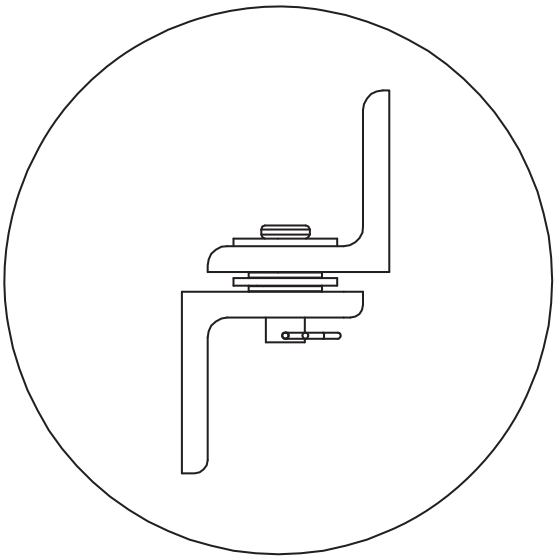
BOTTOM BRACKET ASSEMBLY:
JANUARY 2011 AND LATER ONLY
WC 1000 CONFIGURATION



K-WC-03

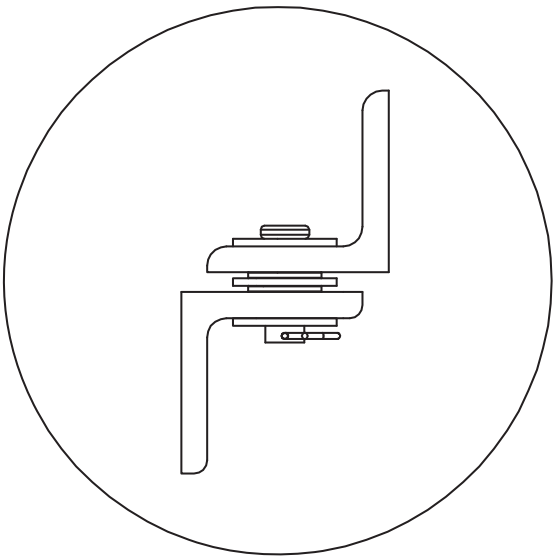
ITEM	QTY.	PART NO.	DESCRIPTION
1	1	WCB1	BRACKET, ANGLE WALL CANTILEVER JIB
2	4	15-0004	5/8" FLAT WASHER
3	3	15-0005	FLAT WASHER, 3/4"
4	1	29-0003	PIN, CLEVIS 3/4 X 2 ZINC PLATED
5	1	29-0006	HAIRPIN COTTERS 5/8 - 3/4
6	2	26-0025	BEARING,SLEEVE 3/4"ID,1"OD,1/2LNGTH
7	2	26-0024	THRUST WASHER, 3/4" BRONZE SAE 841

BEARING ASSEMBLY: CORRECT



CORRECT

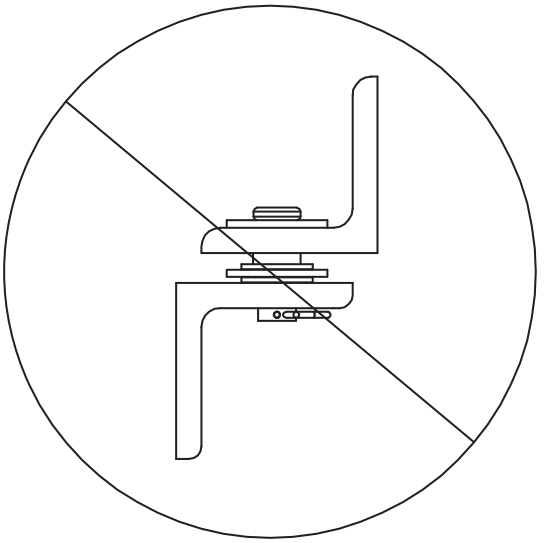
- Configuration for January 2011 and earlier
- All washers are installed and in the correct locations
- Flange bearings are not beginning to pull out and are installed in the correct locations
- Pin is down the whole way
- Cotter pin is present
- Angles and crane are aligned horizontally



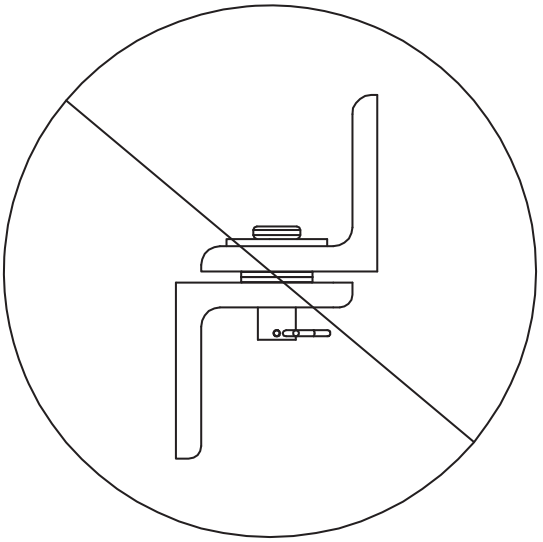
CORRECT

- Configuration for January 2011 and later
- All washers are installed and in the correct locations
- Flange bearings are not beginning to pull out and are installed in the correct locations
- Pin is down the whole way
- Cotter pin is present
- Angles and crane are aligned horizontally

BEARING ASSEMBLY: INCORRECT



INCORRECT



INCORRECT

Inspection Procedure:

– Crane must be taken out of service immediately
– Could result in serious injury or death

Problem:

– The upper flange bearing is beginning to pull out
– Flange bearing may be wearing incorrectly
– Pin may be exposed to wear or failure if flange bearing pulls the entire way out

Possible Cause:

– Bracket centers are too large

Inspection Procedure:

– Crane must be taken out of service immediately
– Could result in serious injury or death

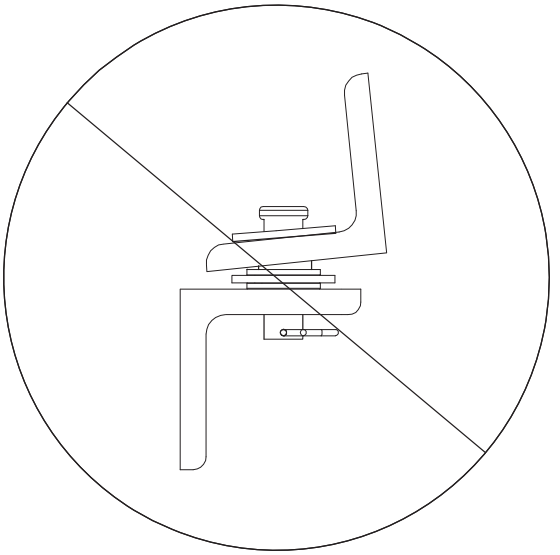
Problem:

– Center washer is missing

Possible Cause:

– Incorrect installation

BEARING ASSEMBLY: INCORRECT



INCORRECT

Inspection Procedure:

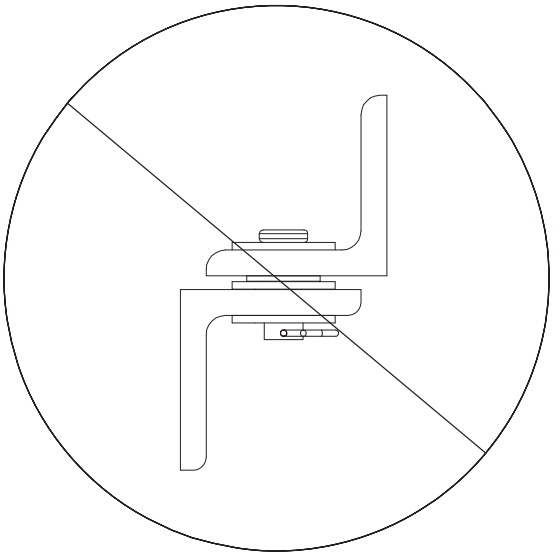
– Crane must be taken out of service immediately
– Could result in serious injury or death

Problem:

– Angles or crane are misaligned
– Pin is beginning to pull out
– Upper flange bearing may be beginning to pull out
– Flange bearing may be wearing incorrectly
– Upper portion of pin may be exposed to wear or failure due to misalignment

Possible Cause:

– Bracket not mounted correctly



INCORRECT

Inspection Procedure:

– Crane must be taken out of service immediately
– Could result in serious injury or death

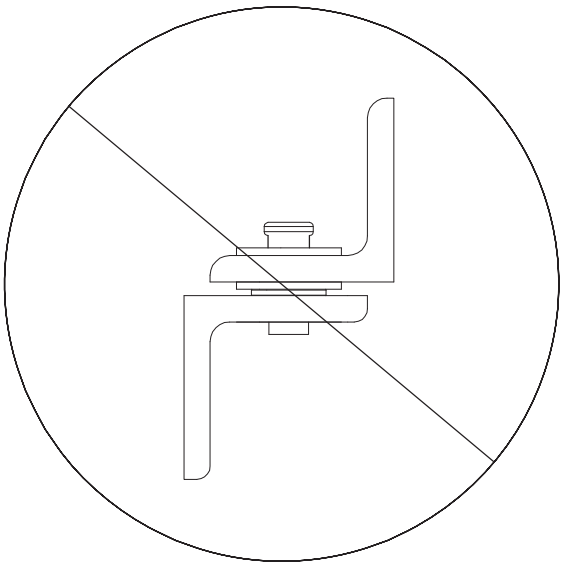
Problem:

– Lower flange bearing is missing entirely
– Angle will be wearing directly on pin without the protection of the bearing
– Pin will prematurely fail

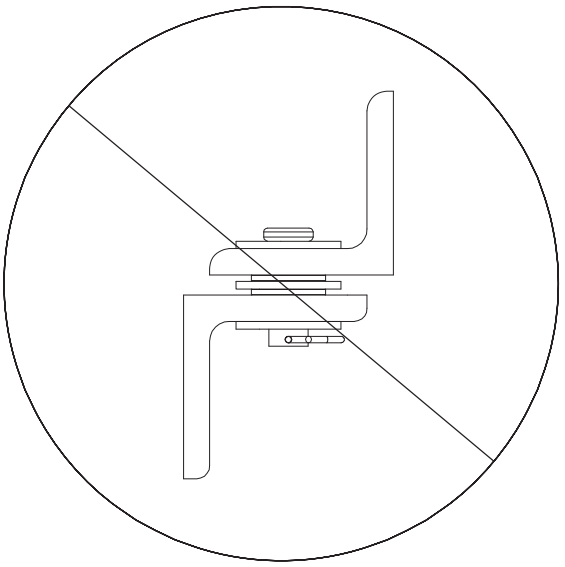
Possible Cause:

– Lower flange bearing is missing entirely (incorrect installation)
– Bracket centers are less than required

BEARING ASSEMBLY: INCORRECT



INCORRECT



INCORRECT

Inspection Procedure:

– Crane must be taken out of service immediately
– Could result in serious injury or death

Problem:

– Upper flange bearing is missing entirely
– Angle will be wearing directly on pin without the protection of the bearing
– Pin will prematurely fail
– The cotter pin is missing entirely
– The pin is beginning to work its way out of its proper location
– Configuration for January 2011 and later
– Although this figure looks identical to the correct configuration, there may be sleeve bearings that are missing for the 1,000 LB crane
– The thrust bearings are obviously here, but the sleeve bearings may or may not be present. A closer inspection would be necessary to determine if the sleeve bearings are present or not

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FIVE-YEAR EQUIPMENT WARRANTY

SPANCO offers this Equipment Warranty (the "Warranty") on the following equipment:

- Manually propelled Free Standing and Ceiling Mounted Workstation Bridge Cranes.
- Manually propelled Monorails.
- Manually propelled ALU-TRACK Bridge Cranes and Monorails.
- Manually rotated Enclosed Track and I-Beam Jib Cranes.
- Manually propelled Gantries.
- Manually propelled Articulating Jib Cranes.
- ALL motorized SPANCO products come with a one year warranty on drive components.

SPANCO warrants the Equipment and wearable end truck and trolley wheels only, to be free from defects in material and workmanship for a period of five (5) years or 10,000 hours (whichever occurs first), commencing on the date of shipment to the first retail purchaser ("Purchaser"). This Warranty does not extend to Equipment which has been subject to misuse, use in excess of rated capacity, negligent operation, use beyond SPANCO's published service factors, improper installation or maintenance, and does not apply to any Equipment which has been repaired or altered without SPANCO's written authorization. Written notice of any claimed defect must be given to SPANCO within thirty (30) days after such defect is discovered. SPANCO's obligation, and Purchaser's sole remedy under this Warranty is limited to, at SPANCO's discretion, the replacement or repair of the Equipment at SPANCO's factory or at a location approved by SPANCO. Purchaser is responsible for all freight and transportation costs relating to the repair or replacement of the Equipment. THE FOREGOING WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES WHATSOEVER WHETHER EXPRESS, IMPLIED, OR STATUTORY. SELLER MAKES NO WARRANTY AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE EQUIPMENT AND MAKES NO OTHER WARRANTY, EITHER EXPRESS OR IMPLIED. SPANCO shall not be liable, under any circumstances, for any indirect, special or consequential damages including, but not limited to, lost profits, increased operating costs or loss of production. This Warranty shall not extend to any components or accessories not manufactured by SPANCO (such as casters), and Purchaser's remedy for such components and accessories shall be determined by the terms and conditions of any warranty provided by the manufacturer of such components and accessories.

SERVICE POLICY

1. Obtain as much information as possible concerning the problem through personal observation by yourself or other authorized personnel familiar with the job and equipment: include model, serial and/or part numbers, voltages, speeds and any other special identifying features. Be prepared to discuss the situation in detail.

2. All authorized labor charges will be based on straight time. Hourly rates, estimated man hours, and not to exceed total dollar amount required for corrections are to be agreed upon before authorization is given. There will be no allowances for overtime except in dire emergencies and then only with prior approval.

3. A verbal agreement may be reached immediately on both the method of correction and the approximate cost. A warranty authorization number will be assigned for the specific incident. A confirming written authorization will be forwarded to the distributor.

4. The distributor must send an itemized invoice, showing our release number or invoice number and warranty authorization number after authorized corrections have been made. A credit memo will be issued by accounting after the invoice has been received and approved. Warranty charges ARE NOT to be deducted from outstanding open account invoices under any circumstances.

5. Any field corrections made prior to an authorization by SPANCO will not be accepted as a warranty charge or the responsibility of SPANCO. Any modification to the equipment made without the prior approval of the seller will void all warranties. A verbal authorization for modification may be obtained, in which event a warranty authorization number will be assigned for the specific modification. A confirming written authorization will be forwarded to the distributor.

This warranty and service policy will be incorporated as a permanent section of the current price book as issued by SPANCO.