



Read this Owner's Manual thoroughly before operating the equipment. Keep it with the equipment at all times. Replacements are available from Thern, Inc., PO Box 347, Winona, MN 55987, 507-454-2996. www.thern.com

IMPORTANT: Please record product information on page 2. This information is required when calling the factory for service.

ORIGINAL TEXT



Owner's Manual

For
510R and 524R Series
Roll Base for Davit Cranes

Two-Year Limited Warranty

Please record the following:

Date Purchased: _____

Crane Model No.: _____

Crane Serial No.: _____

If sold with a winch:

Winch Model No.: _____

Winch Serial No.: _____

This information is required when calling the factory for service.

Thern, Inc. warrants its products against defects in material or workmanship for two years from the date of purchase by the original using buyer, or if this date cannot be established, the date the product was sold by Thern, Inc. to the dealer. To make a claim under this warranty, contact the factory for an RGA number. The product must be returned, prepaid, directly to Thern, Inc., 5712 Industrial Park Road, Winona, Minnesota 55987. The following information must accompany the product: the RGA number, the date of purchase, the description of the claimed defect, and a complete explanation of the circumstances involved. If the product is found to be defective, it will be repaired or replaced free of charge, and Thern, Inc. will reimburse the shipping cost within the contiguous USA.

This warranty does not cover any damage due to accident, misuse, abuse, or negligence. Any alteration, repair or modification of the product outside the Thern, Inc. factory shall void this warranty. This warranty does not cover any costs for removal of our product, downtime, or any other incidental or consequential costs or damages resulting from the claimed defects. This warranty does not cover brake discs, wire rope or other wear components, as their life is subject to use conditions which vary between applications.

FACTORY AUTHORIZED REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY TO THE CONSUMER. THERN, INC. SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ON THIS PRODUCT. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Note: Thern, Inc. reserves the right to change the design or discontinue the production of any product without prior notice.

About This Manual

The Occupational Safety and Health Act of 1970 states that it is the employer's responsibility to provide a workplace free of hazard. To this end, all equipment should be installed, operated, and maintained in compliance with applicable trade, industrial, federal, state, and local regulations. It is the equipment owner's responsibility to obtain copies of these regulations and to determine the suitability of the equipment to its intended use.

This Owner's Manual, and warning labels attached to the equipment, are to serve as guidelines for hazard-free installation, operation, and maintenance. They should not be understood to prepare you for every possible situation.

The information contained in this manual is applicable only to the Thern 510R and 524R Roll Base for Davit Cranes. Do not use this manual as a source of information for any other equipment.

The following symbols are used for emphasis throughout this manual:

⚠WARNING

Failure to follow 'WARNING!' instructions may result in equipment damage, property damage, and/or serious personal injury.

⚠CAUTION

Failure to follow 'CAUTION!' instructions may result in equipment damage, property damage, and/or minor personal injury.

Important!

Failure to follow 'important!' instructions may result in poor performance of the equipment.



Suggestions for Safe Operation

⚠ WARNING

DO the following:

Read and comply with the guidelines set forth in this supplement and the Owner's Manual supplied with the respective davit crane purchased. Keep this supplement, along with the Owner's Manual designed for the crane purchased and all labels attached to the crane, readable and with the equipment at all times. Contact Thern, Inc. for replacements.

Follow all suggestions in the "Suggestions for Safe Operation" section of the Owner's Manual supplied for the respective davit crane designed for use with this roll base.

Always center the load on the hook so it will remain balanced and not tip or rotate to one side. Avoid side pulls.

DO NOT do the following:

Do not lift people or things over people. Do not walk or work under a load or in the line of force of any load.

Do not exceed the load rating of the roll base or any other component in the system. To do so could result in failure of the equipment. Load ratings of the system change with the position of the boom and the roll base legs.

Do not install non-standard davit cranes onto the roll base without authorization from Thern, Inc.

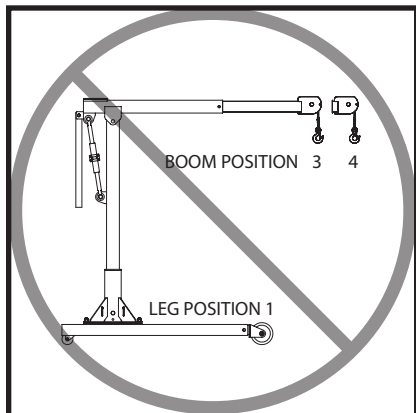
Do not lower the load on to the legs of the roll base. Doing so could result in damage to the legs.

Do not use the roll base under load while on an inclined surface. Doing so could result in loss of control over and/or tipping of crane system.

Do not adjust leg or boom position while under load.

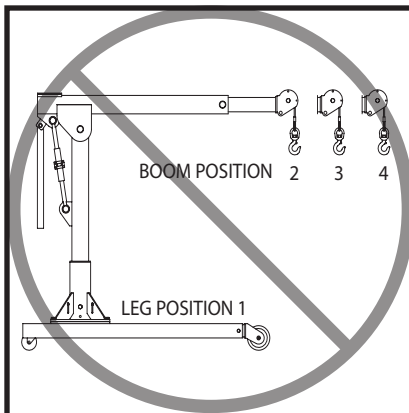
Do not operate with combination of leg and boom positions shown below.

Model 510R



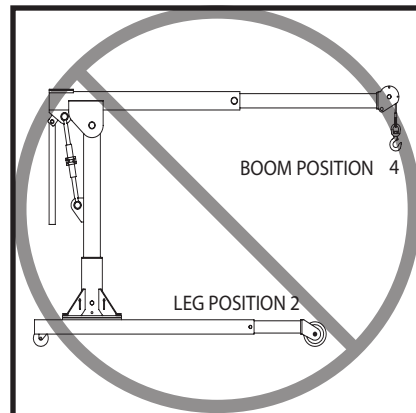
Do not use boom positions 3 or 4 when using leg position 1.

Model 524R



Do not use boom positions 2, 3 or 4 when using leg position 1.

Model 524R



Do not use boom position 4 when using leg position 2.

*This is for standard product referred to in this manual. Non-standard products may vary from original design. Contact Thern, Inc. for this information.

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1.1 Assembling the Roll Base

Important!

- Inspect the roll base during assembly. This will give you a record of the condition of the roll base with which to compare future inspections.
- Save all boxes and crates that the roll base was shipped in, use them again if you need to repackage the roll base.
- Contact the factory immediately if any parts are missing or damaged.
- Do not overtighten fasteners, this may strip threads or cause damage to other parts.

- 1.1.1 STUDY PARTS DRAWINGS to understand how the roll base is assembled. See pages 8-9.
- 1.1.2 FASTEN THE PEDESTAL BASE to the roll base using the 5/8-inch fasteners provided. Recommended torque is 125 ft-lbs.
 - a NON-STANDARD PRODUCTS that vary from the original design may have different fastening requirements. Contact Thern, Inc. for this information.
- 1.1.3 POSITION BOTH LEGS to the same desired operating position.

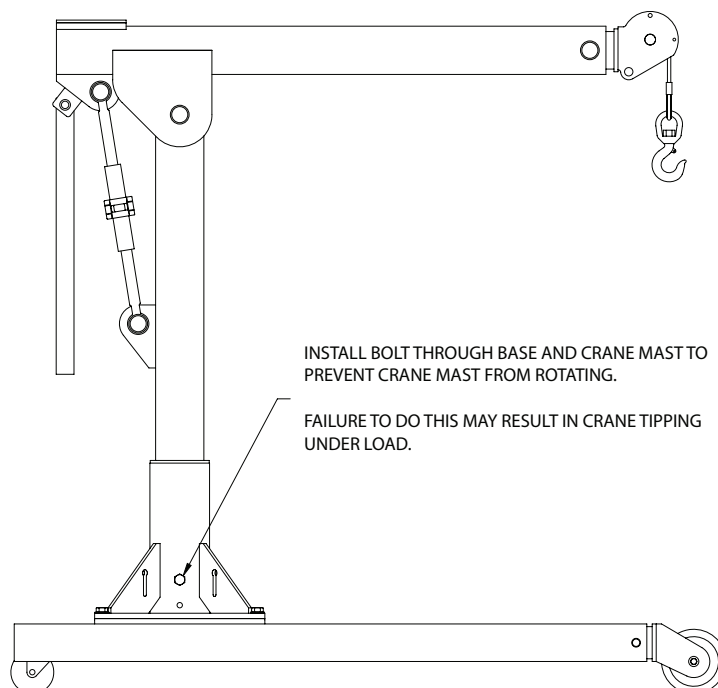
1.2 Installing the Crane into Roll Base

⚠ CAUTION

Install bolt through base and crane to prevent crane from rotating.

- 1.2.1 ASSEMBLE CRANE using Section 1.2 of Owner's Manual provided with respective Thern crane purchased for this roll base.
- 1.2.2 AFTER ASSEMBLY install bolt through base and crane mast to prevent crane mast from rotating. **Failure to do this may result in crane tipping under load.** Crane and roll base are designed to have the boom of the crane and the roll base legs parallel to each other. The load is designed to be centered between the front wheels of the roll base. **See Figure 1.**

Figure 1 - Installing the Crane



2.2 Preparing for Operation

Important!

- When determining whether the load will exceed the load rating, consider the total force required to move the load.

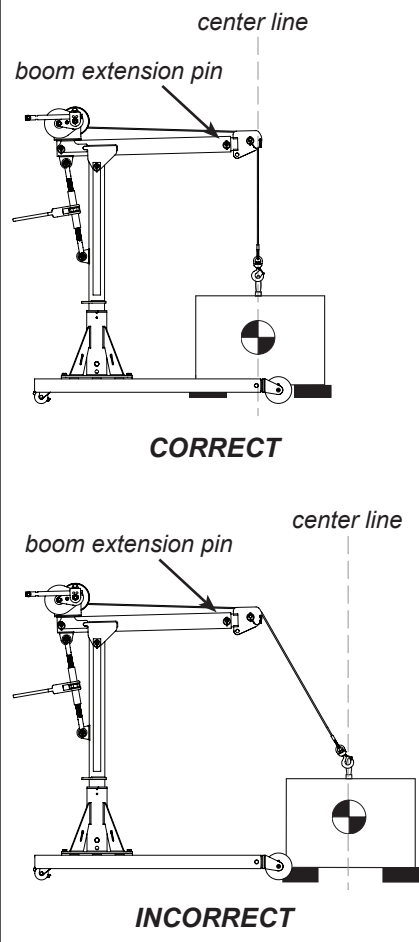
⚠ WARNING

Do not use the crane in an area defined as hazardous by the National Electric Code, unless use in such an area has been thoroughly approved.

Do not use the crane near corrosive chemicals, flammable materials, explosives, or other elements that may damage the crane or injure the operator. Adequately protect the crane and the operator from such elements.

Use the crane on a rigid and level surface that will support the crane and its load under all load conditions, including shock loading.

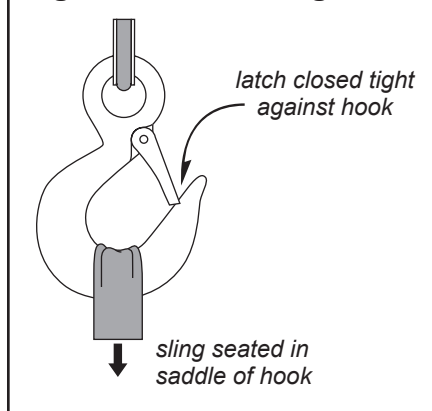
Figure 2 – Positioning the Boom



- 2.2.1 **CONSIDER THE OPERATION.** Do not begin until you are sure you can perform the entire operation without hazard.
- 2.2.2 **INSPECT ALL COMPONENTS** of the system.
 - a **INSPECT THE CRANE** and other equipment according to the Instructions for Frequent Inspection.
 - b **OPERATORS** must be in good health, alert, thoroughly trained in operating the equipment, and properly clothed (hard hat, safety shoes and safety glasses, no loose clothing).
 - c **THE LOAD** must be clear of other objects and free to move. Make sure the load will not tip, spin, roll away, or in any way move uncontrollably.
- 2.2.3 **KNOW YOUR LOAD** and make sure you do not exceed the load rating of the crane or any other equipment in the system.
- 2.2.4 **POSITION THE CRANE AND BOOM** so the load hook is centered over the load. **Avoid side pulls which could damage the crane or cause the load to tip. See Figure 2.**
 - a **LOCK CASTERS** on rear of crane to prevent movement during lifting.
- 2.2.5 **ADJUSTING THE BOOM.** See Figure 2.
 - a **REMOVE ANY LOAD** from the crane and disengage hook from load.
 - b **LOCATE BOOM** in horizontal position to make adjustment easier.
 - c **REMOVE BOOM EXTENSION PIN** and adjust boom extension to desired position, then re-insert pin. The boom extension pin must only be removed when adjustments are being made. It must always be re-installed immediately.

2.3 Attaching the Load

Figure 3 – Attaching Load



- 2.3.1 CLEAR OBJECTS from the path you will travel, so you can move freely and observe the load at all times during the operation.
- 2.3.2 ATTACH THE LOAD using a nylon sling, or other approved lifting device. Follow the recommendations of the sling manufacturer.
- SEAT THE SLING in the saddle of the hook with the hook latch completely closed. See Figure 3.
 - CENTER THE LOAD on the hook so it will remain balanced and not tip or rotate to one side.

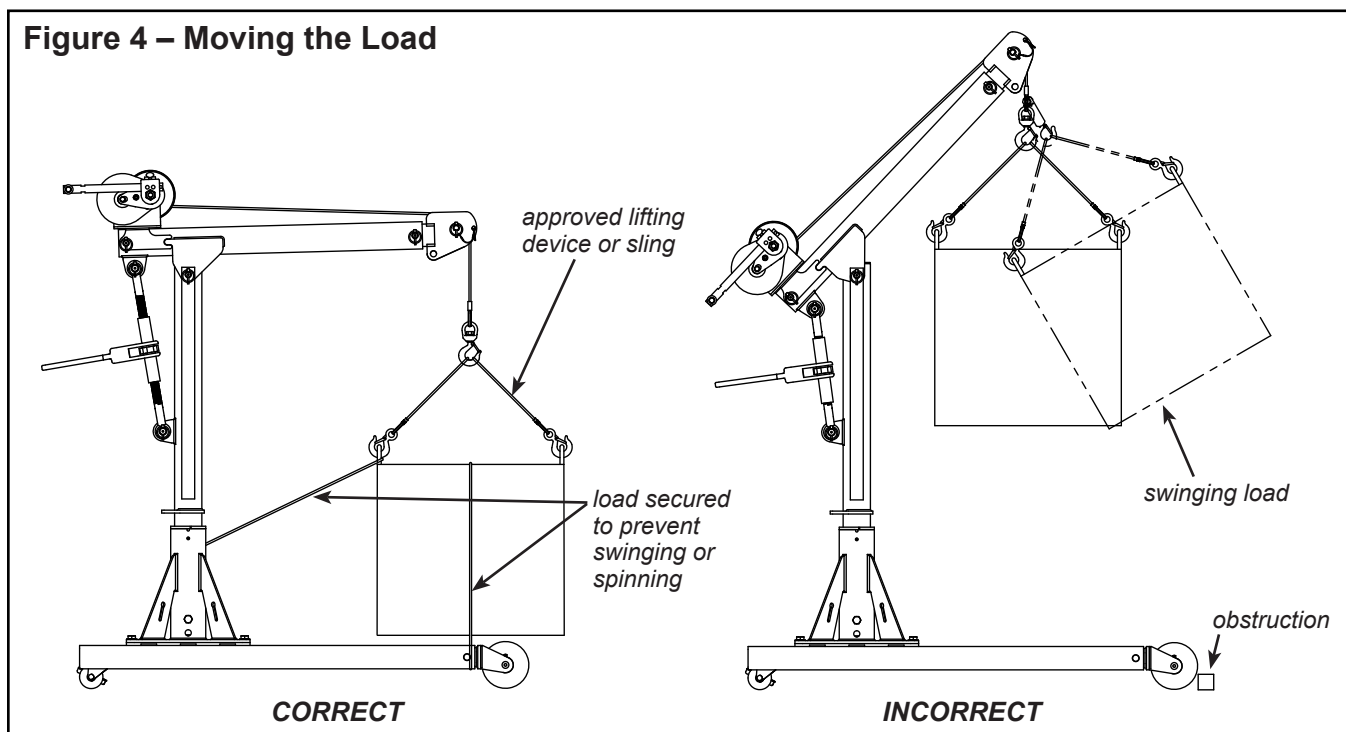
2.4 Moving the Load

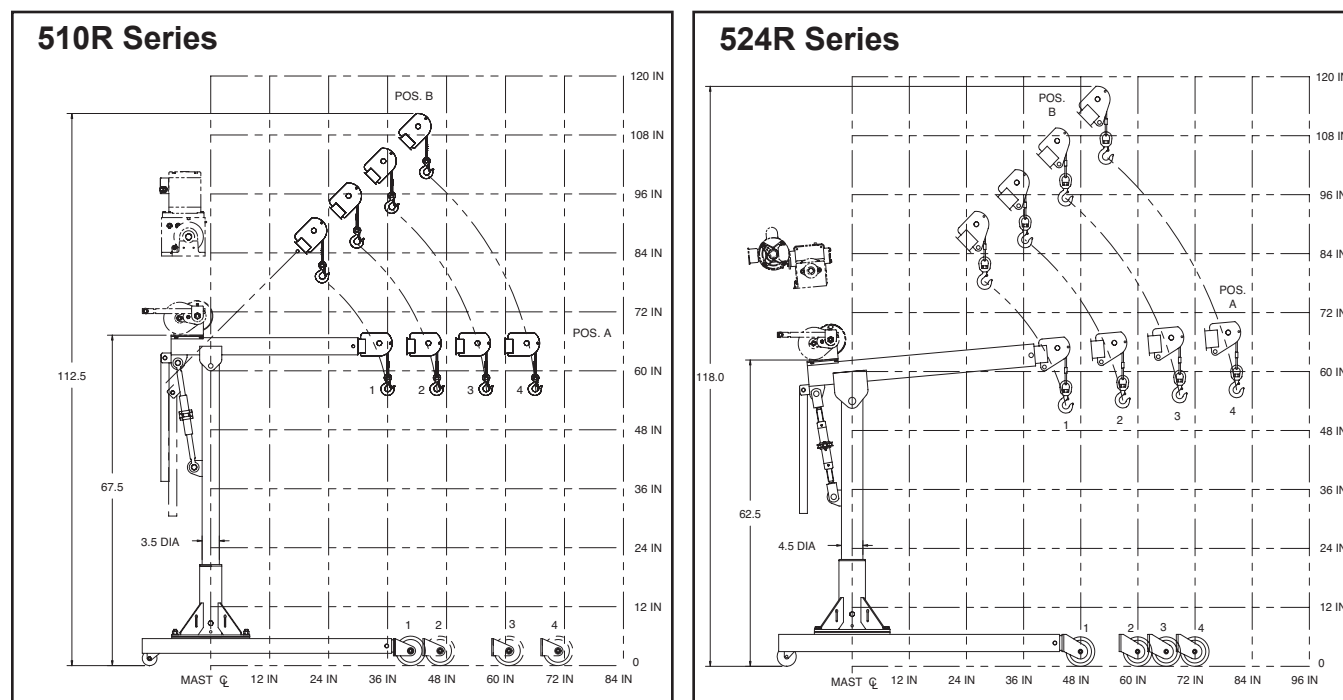
Important!

- Obey a stop signal from anyone.
- Appoint a supervisor if more than one person is involved in the operation. This will reduce confusion and increase safety.
- When lifting or moving the load, use a tag line to keep the load from swinging or twisting, while keeping yourself away from the load.

- 2.4.1 LIFT THE LOAD slowly and smoothly. Make sure the load is balanced and securely attached before lifting. See Figure 4.
- 2.4.2 UNLOCK CASTER at rear of crane.
- 2.4.3 PULL THE CRANE BACKWARD to move the load, with the load close to the floor and tied to the mast and legs to prevent swinging. See Figure 4.
- 2.4.4 MOVE THE LOAD slowly and smoothly, especially when making turns.
- 2.4.5 MOVE THE CRANE BY HAND ONLY. **Do not use powered devices to push or pull the crane.**

Figure 4 – Moving the Load





Load Ratings for 5110 with 510R Wheel Base ^{1,2}

Crane Load Ratings	Leg Position 1	Leg Position 2	Leg Position 3	Leg Position 4
Boom Position 1	1000 lb	1000 lb	1000 lb	1000 lb
Boom Position 2	700 lb	700 lb	700 lb	700 lb
Boom Position 3	Do Not Use	600 lb	600 lb	600 lb
Boom Position 4	Do Not Use	500 lb	500 lb	500 lb

Load Ratings for 5124 with 524R Wheel Base ^{1,2}

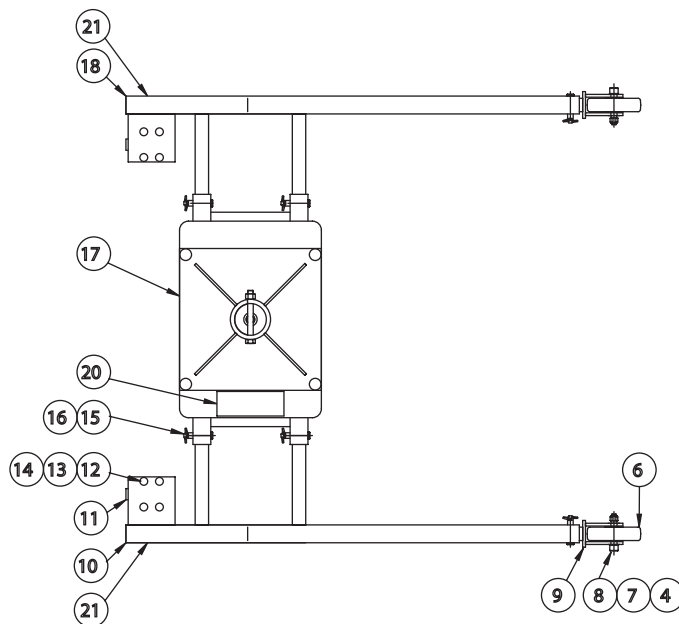
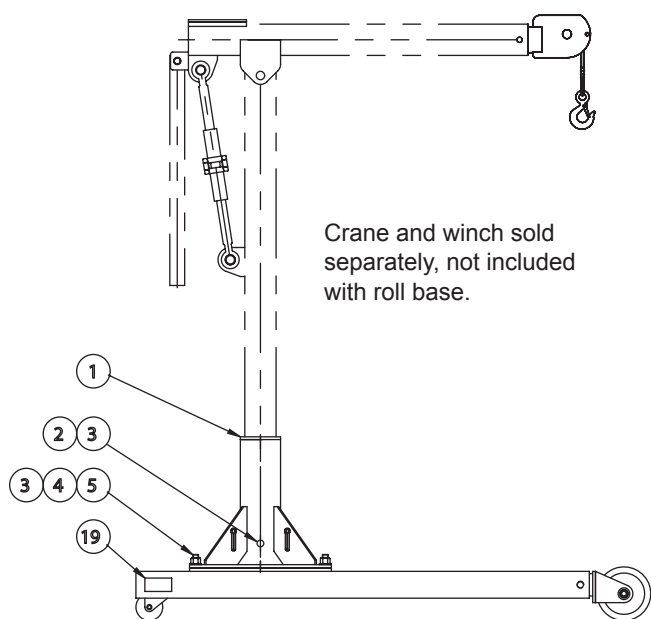
Crane Load Ratings	Leg Position 1	Leg Position 2	Leg Position 3	Leg Position 4
Boom Position 1	2000 lb	2000 lb	2000 lb	2000 lb
Boom Position 2	Do Not Use	1600 lb	1600 lb	1600 lb
Boom Position 3	Do Not Use	1300 lb	1300 lb	1300 lb
Boom Position 4	Do Not Use	Do Not Use	1000 lb	1000 lb

¹ If wheel base was purchased after initial purchase of any crane - the wheel base load ratings take precedence.

² Performance characteristics are for standard products referred to in this manual. Non-standard products may vary from the original design. Contact Thern, Inc. for this information.

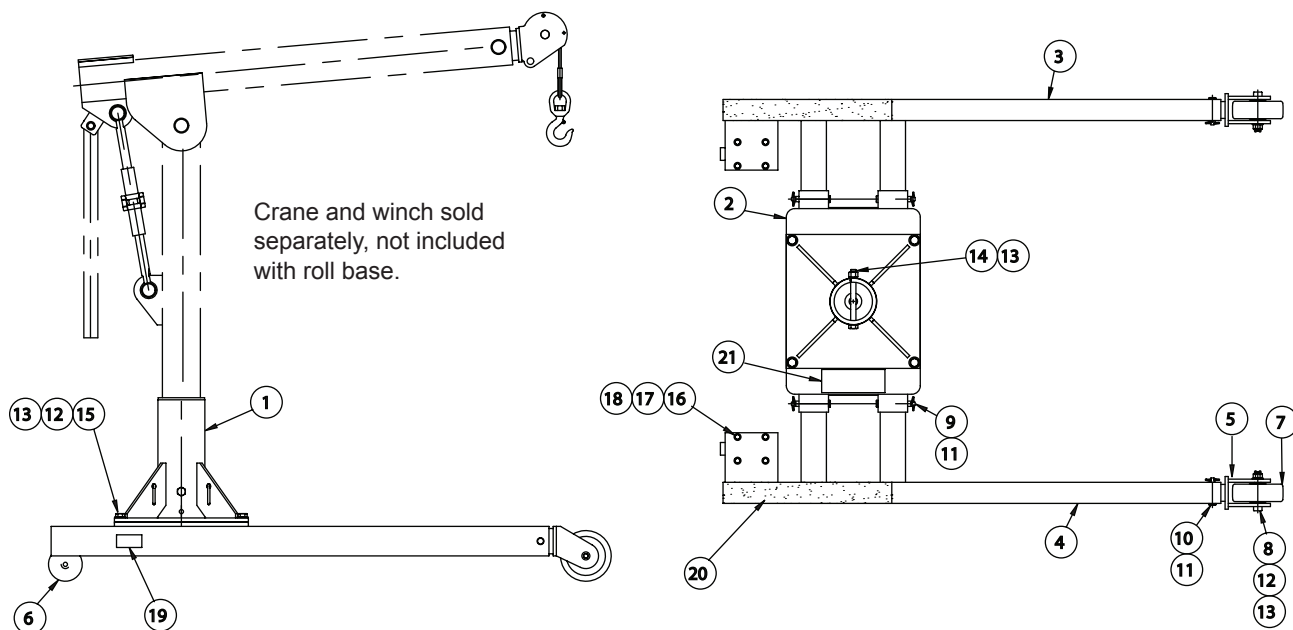
510R Roll Base

item	description	part number	qty.
1	BASE	C4015	1
2	CAPSCR HEXHD .625-11NC X 5.500 ZNPL GR5	A3468	1
3	NUT HEX NYLK .625-11NC ZNPL GR2	A3072	5
4	WASHER FLT SAE .625-11NC X .312 X .095 ZNPL	A4858	12
5	CAPSCR HEXHD .625-11NC X 2.000 ZNPL GR5	A3475	4
6	WHEEL 6 X 1.5 PLASTEX 800 LB .625 BORE	A1698	2
7	SHLDRSCR SOKHD .625 X 2.750 ALYSTL	A8472	2
8	NUT HEX NYLK .500-13NC ZNPL GR2	A2897	2
9	EXTENSION LEG WELDMENT	B4433	2
10	RIGHT LEG WELDMENT	C4017	1
11	CASTER SWVL 3 X 1.25 TEXITE 300 LBS	A2798	2
12	CAPSCR HEDHD .312-18NC X 1.000 ZNPL GR5	A3028	8
13	NUT HEX NYLK .312-18NC ZNPL GR2	A2927	8
14	WASHER FLT STDPLT .312 X .875 X .083 ZNPL	A3575	8
15	LYNCH PIN .188 X 1.562	A7693	6
16	CLEVIS PIN	A7260	6
17	BASE WELDMENT	C4018	1
18	LEFT LEG WELDMENT	C4019	1
19	THORN LOGO	A6889	1
20	LOAD RATING LABEL	A8488	1
21	NON-SKID TAPE 40"	A8490	2



524R Roll Base

item	description	part number	qty.
1	BASE	C4032	1
2	WELDMENT BASE	C4028	1
3	WELDMENT LEFT LEG	C4030	1
4	WELDMENT RIGHT LEG	C4029	1
5	WELDMENT EXTENSION LEG	B4465	2
6	CASTER SWVL 4 X 1.50 TEXITE 600 LBS	A11433	2
7	WHEEL 6 X 2 PLATSEX 1200 LB .750 BORE	A8513	2
8	SHLDRSCR .750 X 3.250 ALYSTL ZNPL	A8514	2
9	PIN CLEVIS .500 X 3.770 EFF LENGTH STL	A8552	4
10	PIN CLEVIS .500 X 2.770 EFF LENGTH STL	A8551	2
11	PIN LYNCH .188 X 1.562	A7693	6
12	WASHER FLT .625 X 1.500 X .075 SST	A5682	6
13	NUT HEX NYLK .625-11NC ZNPL GR 2	A3072	7
14	CAPSCR HEXHD .625-11NC X 6.500 ZNPL GR5	A8512	1
15	CAPSCR HEXHD .625-11NC X 2.000	A3475	4
16	CAPSCR HEXHD .375-16NC X 1.250	A3112	8
17	WASHER FLT STDPLT .375 X 1.000 X .083	A3114	8
18	NUT HEX NYLK .375-16NC ZNPL GR 2	A3113	8
19	TERN LOGO	A6889	2
20	NON-SKID TAPE 40"	A8490	2
21	LOAD RATING LABEL	A8557	1



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