

# Job Safety Analysis

Use These Forms Before You Begin Any Job to Alert You of Any Hazards That May Exist

Page 1 of 12

## 11000 Crawler Crane Assembly

Customer Name:	Job Location:	Unit #:	Job#:
----------------	---------------	---------	-------

<b>REQUIRED PERSONAL PROTECTION EQUIPMENT:</b>	<b>MSDS(s) ASSOCIATED WITH THE JOB:</b>
Hard hat, safety glasses, gloves, steel toed boots, fall protection & all other required site specific personal protective equipment.	Chemicals normally used on the crane or stored on Service trucks on the MSDS Online database on al Company issued cell phones

To improve readability and comprehension of this field document, we have detailed all common hazards and the recommendations for safe work at the beginning of this JSA. It is understood and assumed that any time during the assembly of this crane, any or all of these hazards may become relevant. **This JSA is to be used in conjunction with the operator's manual. If there is ever a discrepancy between the two the operator's manual takes precedence.**

Common Hazards	Safe Job Practices
<ul style="list-style-type: none"> <li>• <b>Slips, Trips and Falls</b></li> </ul>	<ul style="list-style-type: none"> <li>• Use of personal fall protection system is mandated when working where employees are exposed to falls greater than 4 feet.</li> <li>• To reduce the risk of slipping, non-skid material (sand in paint) has been applied to painted walkways and platforms. However, walkways and platforms can be slippery when wet and when oil or grease is spilled on them. <b>Keep walkways and platforms clean and dry to prevent slipping on them.</b> When non-skid material wears out, reapply it</li> <li>• Wear shoes with a highly slip-resistant sole material. Clean any mud or debris from shoes before entering the crane cab or climbing onto crane.</li> <li>• Do not use top of mast, boom, or jib as walkways (unless they have optional catwalks).</li> <li>• Use <b>both hands</b> and handrails, steps and ladders provided to climb onto and off crane.</li> <li>• Lift tools and other equipment which cannot be carried in pockets or tool belts onto and off crane with hand lines or hoists.</li> <li>• Boom and gantry are not intended as ladders. <b>DO NOT</b> attempt to climb lattice work of boom or gantry to get to maintenance points.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Crushing Injury Hazard</b></li> </ul>	<ul style="list-style-type: none"> <li>• Barricade all accessible areas to crane so personnel cannot be struck or crushed when upper works is swung.</li> <li>• Do not climb on or off crane while upper works is being swung or crane is being traveled.</li> <li>• Signal operator that you need to climb on or off crane.</li> <li>• Operator: do not swing or travel while personnel are climbing on or off crane. Stop swing and travel motions. Apply swing brake and turn on Travel Brake.</li> <li>• Use of dedicated spotters and signal persons when flying objects with cranes.</li> <li>• Use of tag lines when a rotating load may become a hazard.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Struck By/ Caught Between/Pinch Point Hazards</b></li> </ul>	<ul style="list-style-type: none"> <li>• Hard Hats and Safety Glasses shall be worn at all times during the assembly/disassembly of this crane.</li> <li>• Never handle wire rope with bare hands. Always wear heavy-duty gloves to prevent being cut by broken wires.</li> <li>• Use extreme care when handling coiled pendants. Stored energy can cause coiled pendants to uncoil quickly with considerable force.</li> <li>• Do not attempt to maintain or repair any part of crane while engine is running, unless absolutely necessary.</li> <li>• If engine must be run, keep your clothing and all parts of your body away from moving parts. <b>Maintain constant verbal communication between person at controls and person performing maintenance or repair procedure.</b></li> <li>• Do not use your hands to check for air and hydraulic oil leaks</li> <li>• Relieve pressure before disconnecting air, coolant, and hydraulic lines and fittings.</li> <li>• Do not attempt to lift heavy components by hand. Use a hoist, jacks, or blocking to lift components.</li> </ul>

# Job Safety Analysis

Use These Forms Before You Begin Any Job to Alert You of Any Hazards That May Exist

## 11000 Crawler Crane Assembly

	<ul style="list-style-type: none"> <li>• Store tools, oil cans, spare parts, and other necessary equipment in toolboxes. Do not allow these items to lie around loose in operator's cab or on walkways and stairs.</li> <li>• Use of dedicated spotters to direct and signal all vehicle traffic.</li> <li>• Before a crew member goes to a location that is out of view of the operator and is either in, on, or under the equipment, or near the equipment (or load) where the crew member could be injured by movement of the equipment (or load), the crew member must inform the operator that he/she is going to that location. Where the operator knows that a crew member went to a location covered by the above sentence, the operator must not move any part of the equipment (or load) until the operator is informed in accordance with a prearranged system of communication that the crew member is in a safe position.</li> </ul>	
<ul style="list-style-type: none"> <li>• <b>Collapsing Boom Hazard</b></li> </ul>	<ul style="list-style-type: none"> <li>• Select a suitable location for boom disassembly. It must be firm, level, and be free of obstructions. It should have enough open space to accommodate the crane, the length of boom, and - if required - movement of an assist crane or other equipment. If possible, secure the area to keep unauthorized personnel and vehicles away.</li> <li>• Do not remove bottom connecting pins from any boom section when boom is supported by straps as shown in Figure</li> </ul>	<p>View A WRONG - DANGEROUS!</p> <p>2-101</p> <p>2 and there is No Blocking Under Boom Sections...</p> <p>3 Boom will COLLAPSE when Lower Pins are Removed!</p> <p>1 If Boom is Off Ground and Supported by Straps...</p>
	<ul style="list-style-type: none"> <li>• Do not remove bottom connecting pins from any boom section when boom point is resting on ground and handling pendants are slack as shown in Figure</li> </ul>	<p>View B WRONG - DANGEROUS!</p> <p>2-102</p> <p>2 Handling Pendants are Slack...</p> <p>3 and there is No Blocking Under Boom Sections...</p> <p>4 Boom will COLLAPSE when Lower Pins are Removed!</p> <p>1 if Boom Point is on Ground...</p>
	<ul style="list-style-type: none"> <li>• Do not remove strap connecting pins until straps are fully lowered into supports as shown in Figure Below.</li> <li>• Never work or stand inside boom unless it is lowered and securely blocked as shown in Figure.</li> </ul>	<p>View C RIGHT - SAFE</p> <p>2-103</p> <p>1 Handling Pendants Taut and Supporting Boom...</p> <p>2 before Removing Bottom Pins!</p> <p>3 Boom Sections Lowered and Securely Blocked!</p> <p>Straps Fully Lowered onto Supports Before Removing Pins</p> <p>FIGURE 2-5</p>

# Job Safety Analysis

Use These Forms Before You Begin Any Job to Alert You of Any Hazards That May Exist

Page 3 of 12

## 11000 Crawler Crane Assembly

<ul style="list-style-type: none"><li>• <b>Designate Assembly Area</b></li></ul>	<ul style="list-style-type: none"><li>• Select a good location to assemble the crane</li><li>• Ensure ground conditions are firm, level and uniformly supportive in compliance with engineer's soil data.</li><li>• Select an area large enough and free of any underground or overhead obstructions or hazards to accommodate the crane, assist crane, selected boom and jib length, and the movement of trailers.</li><li>• Erection area should not interfere or pose a hazard to other onsite personnel. Erection area to be clearly marked and barricaded.</li><li>• There should be at least 2 feet of clearance between the counterweights and nearest obstacle.</li><li>• Ensure there is enough timber blocking to support the boom when it is being assembled.</li><li>• Ground support as specified in the erection drawings is complete and in compliance with the stated requirements.</li></ul>
<ul style="list-style-type: none"><li>• <b>Assist Crane Overload</b></li></ul>	<ul style="list-style-type: none"><li>• The assist crane shall be sized in accordance with site restrictions and manufacturers specifications.</li><li>• Site conditions and matting must be suitable for maximum loading of the assist crane.</li><li>• Assist crane will assembled in accordance with manufacturer's instructions.</li></ul>
<ul style="list-style-type: none"><li>• <b>Rigging Failure</b></li></ul>	<ul style="list-style-type: none"><li>• Rigging shall be inspected per applicable OSHA/ASME standards, at a minimum, daily and prior to use. Examples of unserviceable rigging would be bird caging, kinks, and broken wires.</li></ul>
<ul style="list-style-type: none"><li>• <b>Electrical Shock Hazard</b></li></ul>	<ul style="list-style-type: none"><li>• Ensure adequate clearance from power lines is continuously maintained per ASME B30.5.</li></ul>

***Note: At no time will a trainee, apprentice, or an oiler operate any crane during the assembly, reconfiguration, and/or disassembly process or while the crane is in bypass.***

# Job Safety Analysis

Use These Forms Before You Begin Any Job to Alert You of Any Hazards That May Exist

Page 4 of 12

## 11000 Crawler Crane Assembly

### Crane Assembly

BASIC JOB STEPS	POTENTIAL HAZARDS	SAFE JOB PRACTICES
<ul style="list-style-type: none"> <li>● <b>Remove Rotating Bed from Trailer</b> <ul style="list-style-type: none"> <li>○ Remove Wind Deflectors</li> <li>○ Deploy Rotating Bed Jacks</li> <li>○ Deploy Operator's Cab</li> <li>○ Jack Upper works Off Trailer</li>   <li>○ Connect Rotating Bed to Car body</li> </ul> </li> </ul>	<p>See Common Hazards Above</p> <p>Rotating bed must not be more than 4-1/2" out of level while jacking. Take extreme care not to hit jacks with trailer.</p> <p><i>NOTE Rotating bed must not be more than 4-1/2" out of level when extending or retracting rotating bed jacks.</i></p>	<p>See Safe Job Practices Above <i>Refer to operator's manual for detailed procedures.</i></p> <p>Monitor levels. Ensure cribbing and base are is level.</p> <p>Use of designated spotter to direct truck drivers.</p>
<ul style="list-style-type: none"> <li>● <b>Remove Car body and Adapter Frame from Trailer</b> <ul style="list-style-type: none"> <li>○ Position trailer carrying adapter frame and car body directly under rotating bed</li> <li>○ Connect Rotating Bed to Car body</li> <li>○ Fully extend jacks to lift upper works, adapter frame, and car body off trailer</li> </ul> </li> </ul>	<p>Do not hit jacks with trailer. Do not hit swing motors with rotating bed.</p> <p><i>NOTE Rotating bed must not be more than 4-1/2" out of level when extending or retracting rotating bed jacks.</i></p> <p>Do not hit jacks with trailer.</p>	<p><i>Refer to operator's manual for detailed procedures.</i> Use of designated spotter to direct truck drivers</p> <p>Monitor levels. Ensure cribbing and base are is level.</p>
<ul style="list-style-type: none"> <li>● <b>Lower Crane onto Car body Pedestals</b> <ul style="list-style-type: none"> <li>○ Install Rotating Bed Catwalks and Steps</li> <li>○ Connect Hydraulic Hoses and Electric Cables</li>   <li>○ Install Drum 3 (Whip Line Drum)</li> </ul> </li> </ul>	<p>See Common Hazards Above</p> <p><i>NOTE On current production cranes, hoses and corresponding couplers are tagged with numbers. Match numbers to ensure proper hose connection.</i></p>	<p>See Safe Job Practices Above <i>Refer to operator's manual for detailed procedures.</i></p>
<ul style="list-style-type: none"> <li>● <b>Raise Live Mast to Operating Position</b></li> </ul>	<p>See Common Hazards Above</p> <p>Falling Mast Hazard!</p>	<p>See Safe Job Practices Above <i>Refer to operator's manual for detailed procedures.</i> Read and thoroughly understand mast raising instructions.</p> <p>Select and confirm <b>SETUP MODE</b> before raising mast and using it as a boom. Mast operating limits remain off until this step is performed.</p> <p>Make sure mast angle indicator is properly installed and calibrated prior to raising gantry and mast. Mast can be</p>

# Job Safety Analysis

Use These Forms Before You Begin Any Job to Alert You of Any Hazards That May Exist

Page 5 of 12

## 11000 Crawler Crane Assembly

BASIC JOB STEPS	POTENTIAL HAZARDS	SAFE JOB PRACTICES
	<p><b>Mast Damage!</b></p> <p><b>Swinging Straps Hazard!</b></p> <p><b>Falling Mast Hazard!</b></p>	<p><i>damaged if angle indicator is not properly installed. Unpin mast straps from rotating bed before raising mast past 11".</i></p> <p><i>Mast straps will swing to rear when unpinned from rotating bed. Stand to side when unpinning links.</i></p> <p><i>Do not use limit bypass to lower mast below 160". Mast will fall suddenly. Connect an assist crane to end of live mast when it is necessary to lower it below 160". Do not lower mast assist arms until live mast is connected to fixed mast rigging. Mast will fall backwards if raised to vertical when arms are down. Do not use limit bypass to lower mast below 160" until mast is supported with slings from assist crane.</i></p>
<ul style="list-style-type: none"> <li>• <b>Install Crawler Tracks</b></li> </ul>	<p>See Common Hazards Above</p> <p><b>Tipping Hazard!</b></p> <p><b>Rotating Drive Shaft Hazard!</b> Crawler drive shaft rotates at high speed.</p>	<p><i>See Safe Job Practices Above</i></p> <p><i><b>Refer to operator's manual for detailed procedures.</b></i></p> <p><i>Do not exceed 120,000 lb (54 430 kg) capacity at 26 ft (7,9 m) radius when handling crawlers with mast. Crane will tip forward.</i></p> <p><i>Make sure crane is level. Adjust pedestals as required.</i></p> <p><i>Make sure crawler drive shaft is securely attached at both ends.</i></p> <p><i>Make sure guards are in place and securely attached at both ends during operation.</i></p> <p><i>Do not attempt to service drive shaft until crane has been parked and engine stopped.</i></p>
<ul style="list-style-type: none"> <li>• <b>Install Counterweight</b> <ul style="list-style-type: none"> <li>○ <i>Refer to the Counterweight Assembly Drawings at the end of this section for the total number car body and upperworks boxes required for each counterweight arrangement.</i></li> <li>○ <i>For luffing jib prepared cranes, counterweight boxes with links must be installed on top of stack. These boxes are used for raising and lowering luffing jib struts.</i></li> </ul> </li> </ul>	<p>See Common Hazards Above</p> <p><b>Tipping Hazard!</b></p>	<p><i>See Safe Job Practices Above</i></p> <p><i><b>Refer to operator's manual for detailed procedures.</b></i></p> <p><i>Install car body counterweight before installing crane counterweight.</i></p> <p><i>Remove crane counterweight before removing car body counterweight.</i></p>

# Job Safety Analysis

Use These Forms Before You Begin Any Job to Alert You of Any Hazards That May Exist

Page 6 of 12

## 11000 Crawler Crane Assembly

BASIC JOB STEPS	POTENTIAL HAZARDS	SAFE JOB PRACTICES
<ul style="list-style-type: none"> <li>● <b>Assemble Fixed Mast</b> <ul style="list-style-type: none"> <li>○ <i>Install Mast Butt and Top</i></li> <li>○ <i>Assemble Mast Inserts</i></li> <li>○ <i>Connect Mast Inserts to Mast Butt</i></li> <li>○ <i>Raise Mast Stops</i></li> <li>○ <i>Lower Wire Rope Guide</i></li> <li>○ <i>Attach Mast Top to Inserts</i></li> <li>○ <i>Connect Mast Straps</i></li> <li>○ <i>Connect Live Mast Straps to Fixed Mast Straps</i></li> </ul> </li> </ul>	<p>See Common Hazards Above An assist crane is required to assemble and install the fixed mast.</p> <p>Grab hooks must be toward mast butt. Shorten both rear legs of sling by 13 links to provide proper lifting balance.</p> <p>Do not support entire weight of mast butt and top on alignment pins. Damage may result.</p> <p>Lift against chords only - never lift against lacings.</p> <p>Perform this procedure only if Drum 3 will be used for an additional load line.</p>	<p>See Safe Job Practices Above <i>Refer to operator's manual for detailed procedures.</i></p> <p><i>Adjust slings so inserts lift level.</i></p>
<ul style="list-style-type: none"> <li>● <b>Perform Mast Pre-Raising Checks</b></li> </ul>		<ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Crane on firm, level surface.</i></li> <li><input type="checkbox"/> <i>Rotating bed jacks fully retracted and pinned in stored position.</i></li> <li><input type="checkbox"/> <i>Rotating bed jack pads properly stored</i></li> <li><input type="checkbox"/> <i>Car body pedestals properly stored.</i></li> <li><input type="checkbox"/> <i>Mast hinge pins fully engaged.</i></li> <li><input type="checkbox"/> <i>Mast inserts installed in proper sequence.</i></li> <li><input type="checkbox"/> <i>Mast straps pinned in working position.</i></li> <li><input type="checkbox"/> <i>If equipped, MAX-ER counterweight straps pinned in working position.</i></li> <li><input type="checkbox"/> <i>All insert connector pins installed and properly retained. Setup mode selected and confirmed.</i></li> <li><input type="checkbox"/> <i>Live mast arms fully lowered.</i></li> <li><input type="checkbox"/> <i>All blocking, tools, and other items removed from mast. Mast and boom hoist wire rope spooled tightly onto drums and engaged with proper sheaves.</i></li> <li><input type="checkbox"/> <i>Equalizer securely attached to proper size assist crane and positioned at proper distance from end of mast.</i></li> <li><input type="checkbox"/> <i>Wind within allowable limits for operation.</i></li> </ul> <p><i>Refer to operator's manual for detailed procedures.</i></p>

# Job Safety Analysis

Use These Forms Before You Begin Any Job to Alert You of Any Hazards That May Exist

Page 7 of 12

## 11000 Crawler Crane Assembly

BASIC JOB STEPS	POTENTIAL HAZARDS	SAFE JOB PRACTICES
<ul style="list-style-type: none"> <li>● <b>Raise Fixed Mast</b> <ul style="list-style-type: none"> <li>○ <i>Raise Mast</i></li> <li>○ <i>Check Mast Stop Pressure If your crane is prepared for a MAX-ER attachment, each mast stop has a hydraulic pressure gauge</i></li> </ul> </li> </ul>	<p>See Common Hazards Above</p> <p><b>Mast Holdback Requirements when Using 18000 Boom</b></p> <p><b>Holdback Requirements when an Using Assist Crane</b></p> <p><b>Wire Rope Damage!</b></p> <p><b>Mast Damage!</b></p> <p><b>Explosion Hazard!</b></p>	<p><i>See Safe Job Practices Above</i></p> <p><b><i>Refer to operator's manual for detailed procedures.</i></b></p> <p><i>A qualified operator is required to raise the mast. The operator must be experienced with the 18000 and thoroughly familiar with its operation.</i></p> <p><i>A qualified signal person is required to give signals to the operator(s). A holdback is required to raise the fixed mast.</i></p> <p><i>Either the assembled 18000 boom or an assist crane can be used.</i></p> <p><i>Boom hoist equalizer will tip if it is not properly supported, possibly resulting in damage to wire rope. Support boom hoist equalizer properly during mast raising.</i></p> <p><i>Lower live mast arms before raising fixed mast. Mast can collapse if arms are up when live mast is lowered. Avoid mast or equalizer damage. Do not proceed to raise mast until fixed mast straps are unpinned from strap brackets.</i></p> <p><i>Mast raising cylinders must be lowered using set-up remote before lifting loads with fixed mast.</i></p> <p><i>Mast stop cylinders are equipped with nitrogen pre-charged accumulators. Do not tamper with accumulators unless authorized and trained to do so.</i></p>

# Job Safety Analysis

Use These Forms Before You Begin Any Job to Alert You of Any Hazards That May Exist

Page 8 of 12

## 11000 Crawler Crane Assembly

BASIC JOB STEPS	POTENTIAL HAZARDS	SAFE JOB PRACTICES
<ul style="list-style-type: none"> <li>• <b>Boom Ladder Assembly</b></li> </ul>	<p>See Common Hazards Above</p> <p>Fall Hazards!</p> <p>Falling Load Hazard!</p>	<p>See Safe Job Practices Above</p> <p><i>Refer to operator's manual for detailed procedures.</i></p> <p>Limit load on ladder to 300 lb (136 kg).</p> <p>Avoid improper use. Ladder is intended for use only on Manitowoc #79A and #55 boom inserts. Any other use is prohibited.</p> <p>Use ladder for boom assembly/disassembly and maintenance only when boom is horizontal.</p> <p>Make sure ladder is properly secured to insert.</p> <p>Keep hands free of any objects while climbing ladder. Objects which cannot be carried in pockets or tool belts shall be lifted into place onto ladder platform prior to climbing ladder.</p> <p>Stand only on platform. Do not stand on cross braces.</p> <p>Ladders must be properly stored to prevent them from falling out of butt when boom is raised.</p>
<ul style="list-style-type: none"> <li>• <b>Boom And Jib Rigging</b></li> </ul>	<p>See Common Hazards Above</p> <p>Tipping Hazard</p> <p>Falling Load Hazard!</p> <p>Collapsing Boom Hazard!</p>	<p>See Safe Job Practices Above</p> <p><i>Refer to operator's manual for detailed procedures.</i></p> <p>Block ends of crawlers, if required, before you attempt to raise or lower boom from or to ground.</p> <p>Lift against chords only never against lacings. Use nylon lifting slings.</p> <p>If wire rope or chain slings are used, install protective covering (such as sections of rubber tire) between slings and chords.</p> <p>Boom will collapse if medium inserts are installed in incorrect assembly sequence. Follow the assembly Sequence indicated in the Boom Rigging Assembly Drawings</p>
<ul style="list-style-type: none"> <li>• <b>Boom Installation</b></li> </ul>	<p>See Common Hazards Above</p> <p>Crushing Injury Hazard!</p>	<p>See Safe Job Practices Above</p> <p><i>Refer to operator's manual for detailed procedures.</i></p> <p>Never work under or inside boom sections that are not securely blocked.</p>



# Job Safety Analysis

Use These Forms Before You Begin Any Job to Alert You of Any Hazards That May Exist

Page 10 of 12

## 11000 Crawler Crane Assembly

BASIC JOB STEPS	POTENTIAL HAZARDS	SAFE JOB PRACTICES
		<p>sockets at boom points or at load block and weight ball.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> All blocking, tools, and other items removed from boom.</li> <li><input type="checkbox"/> Electronic boom angle indicator properly installed and adjusted.</li> <li><input type="checkbox"/> Block-up limit control properly installed and operational.</li> <li><input type="checkbox"/> Rated Capacity Indicator Limiter properly installed and operational.</li> <li><input type="checkbox"/> Automatic boom stop properly installed. Must be adjusted after boom is raised.</li> <li><input type="checkbox"/> Physical boom stop operating properly.</li> <li><input type="checkbox"/> Crane and attachment properly lubricated.</li> <li><input type="checkbox"/> Wind within allowable limits for operation.</li> <li><input type="checkbox"/> <b>Refer to operator's manual for detailed procedures.</b></li> </ul>
<ul style="list-style-type: none"> <li>● <b>Fixed Jib Installation</b> <ul style="list-style-type: none"> <li>○ Prepare Crane, Boom, and Mast</li> <li>○ Install Boom Backstay Straps</li> <li>○ Assemble Jib</li> <li>○ Install Jib Butt</li> <li>○ Install Jib Strap Support Brackets</li> <li>○ Install Jib Inserts and Top</li> <li>○ Install Upper Jib Point</li> <li>○ Connect Remaining Jib Straps</li> <li>○ Connect Jib Straps to Equalizers</li> <li>○ Attach Jib Stop to Boom Top</li> <li>○ Install Jib Strut</li>   <li>○ Connect Adjustable Links</li> <li>○ Raise Jib Strut</li>   <li>○ Install Jib Load Line</li> <li>○ Connect Electric Cords</li> <li>○ Install Wind Speed Indicator Assembly</li> </ul> </li> </ul>	<p>See Common Hazards Above</p> <p>This procedure applies only to jibs 70 ft (21, 3 m) and longer.</p> <p><b>Collapsing Strut Hazard!</b></p> <p><b>Strut Bracket Damage!</b></p>	<p>See Safe Job Practices Above</p> <p><b>Refer to operator's manual for detailed procedures.</b></p> <p>To prevent death or serious injury, do not stand on, inside, or under jib strut during assembly. Always stand outside strut when installing connecting pins.</p> <p>Strut butt (8) will strike strap brackets (9) when strut is fully raised. Store strap brackets to prevent damage.</p>

# Job Safety Analysis

Use These Forms Before You Begin Any Job to Alert You of Any Hazards That May Exist

Page 11 of 12

## 11000 Crawler Crane Assembly

<ul style="list-style-type: none"><li>• <b>Boom and Jib Pre-Raising Checks</b></li></ul>		<ul style="list-style-type: none"><li><input type="checkbox"/> <i>Boom and jib inserts installed in proper sequence.</i></li><li><input type="checkbox"/> <i>Boom, jib, and backstay straps installed in proper sequence and unpinned from storage positions.</i></li><li><input type="checkbox"/> <i>All connecting pins installed and properly retained.</i></li><li><input type="checkbox"/> <i>Crawlers blocked, if required. See Crawler Blocking Diagram in Capacity Chart Manual for blocking procedure.</i></li><li><input type="checkbox"/> <i>Jib strut raised and strut stops pinned in operating position.</i></li><li><input type="checkbox"/> <i>Load lines anchored properly to drums, spooled tightly onto drums, and engaged with proper sheaves. Make sure rope guard pins, bars, or rollers are installed to retain wire rope on sheaves.</i></li><li><input type="checkbox"/> <i>All blocking, tools, and other items removed from boom and jib.</i></li><li><input type="checkbox"/> <i>All safety devices installed, electric cords connected, and limits adjusted.</i></li><li><input type="checkbox"/> <i>Proper amount of crane counterweight and, if required, MAX-ER counterweight installed.</i></li><li><input type="checkbox"/> <i>Wind within allowable limits for raising boom and jib.</i></li><li><input type="checkbox"/> <i>All lubrication points greased.</i></li><li><input type="checkbox"/> <i>Refer to operator's manual for detailed procedures.</i></li></ul>
--	--	---

# Job Safety Analysis

Use These Forms Before You Begin Any Job to Alert You of Any Hazards That May Exist

## 11000 Crawler Crane Assembly

**Additional Comments (include any additional observations or comments on this job task below)**

All personnel shall review the job safety analysis prior to work activity and sign below. Perimeter of work area shall have yellow caution or red warning tape installed to prevent any unnecessary jobsite personnel being exposed to these hazards.

SAMPLE

PRINT

SIGNATURE

PRINT	SIGNATURE

Assembly/Disassembly Director: \_\_\_\_\_ Date: \_\_\_\_\_