# Load Rating Chart

Model 22101S



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NOTE: Additional copies of this Load Rating Chart can be purchased from your Manitex Distributor. When ordering, use the part number shown in the bottom left corner of this page.

### **RANGE DIAGRAM** 150 145 FIXED & 80° 75. 140 RETRACTED JIB 29.4 FT >0. 135 65. 130 60. 125 55. 120 115 50. 101.4 FT -110 D Zs. 105 100 95 **BOOM LENGTH IN FEET** 85 FT -BOOM C **MUST BE** 90 **FULLY RETRACTED** 85 **WHEN JIB** IS 80 69 FT -ERECTED, В **BEFORE** 75 **LOWERING** 70 **THROUGH** THIS 65 **AREA** 53 FT -Α 60 55 50 45 29.4 FT -40 $\sigma$ 35 30 Ō. 25 20 $\Omega$ 15 10

**HEIGHT ABOVE GROUND IN FEET** 

5

### **OPERATING RADIUS FROM CENTERLINE OF ROTATION IN FEET**

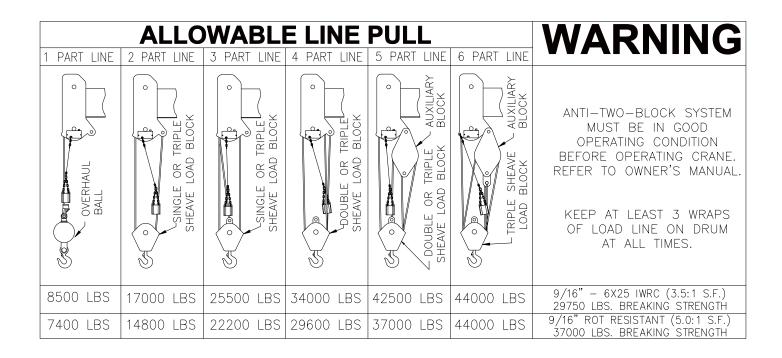
10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110

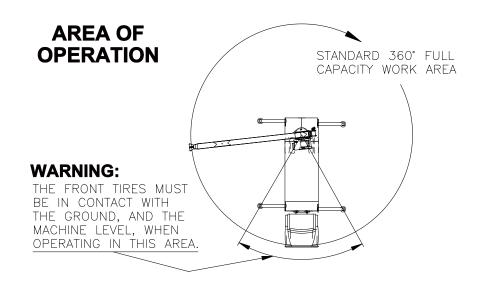
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# LOAD RATINGS WITH OUTRIGGERS FULLY EXTENDED AND SET WITH MACHINE LEVELED

MAIN BOOM LOAD RATINGS IN LBS										JIB LOAD RATINGS IN LBS				
LMI CODE #1										LMI CODE #2				
O R A D I U S F T	ORDE RICH LINE REE				3RD 2ND 1ST 0						RAD-UM-T	BOOMZG	29.4 FT JIB FOR ALL BOOM LENGTHS	
N G		A			В		С		D		i F N G	U	SEE WARNING NOTE 4	
	<u>/</u>	29.4 FT	<u>/</u>	53 FT	<u>/</u>	69 FT	<u>/</u>	85 FT	6	101.4 FT	G		RATED LOAD IN	
5	80	44000										<u> </u>	POUNDS	
8	74	33540									8			
10	70	28140									10			
12	66	24230	78	14000							12			
14	61	20460	76	14000	80	14000					14			
17	54	16400	72	14000	78	12880					17			
20	46	13520	69	13700	75	11430	79	8920			20			
25	29	9910	63	10320	71	9460	75	8000	79	6000	25			
30			56	7870	66	7970	72	7070	76	5500	30	80	3000	
35			49	6200	61	6300	68	6130	73	4980	35	78	2840	
40			41	4990	56	5100	65	5150	70	4490	40	76	2620	
45			31	4000	51	4130	61	4210	67	4000	45	73	2420	
50			17	3180	45	3320	57	3390	64	3440	50	71	2230	
55					38	2680	52	2750	61	2800	55	69	2020	
60					30	2170	47	2240	57	2290	60	67	1840	
65					19	1750	42	1830	54	1870	65	64	1670	
70							36	1480	50	1520	70	62	1520	
75							29	1180	45	1230	75	59	1340	
80							20	920	41	970	80	56	1080	
85									36	750	85	53	860	
90									30	560	90	50	670	
95									22	390	95	47	500	
	340 LBS.		19	190 LBS.		150 LBS.		120 LBS.		100 LBS.		DEDUCTIONS FOR STOWED JIB		

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### DEDUCTIONS FROM RATED LOADS FOR LOAD HANDLING DEVICES SUPPLIED BY MANITOWOC BOOM TRUCKS, INC.

AUXILIARY BLOCK — — — — — — — — 50 LBS
OVERHAUL BALL SEE OVERHAUL BALL MANUFACTURER NAMEPLATE
LOAD BLOCK — — — — — SEE BLOCK MANUFACTURER NAMEPLATE
HOSE REEL — — — — — — — — — — — — 160 LBS
SWING AROUND JIB SEE LOAD CHART

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### **LMI OPERATING CODES**

SETTING CRANE CONFIGURATION

#5— — PERSONNEL LIFTING PLATFORM ON MAIN BOOM #6— — PERSONNEL LIFTING PLATFORM ON FIXED JIB

### **WARNING**

- 1. THE OPERATOR MUST READ AND UNDERSTAND THE OWNER'S MANUAL BEFORE OPERATING THIS CRANE.
- 2. POSITIONING OR OPERATION OF CRANE BEYOND AREAS SHOWN ON THIS CHART IS NOT INTENDED OR APPROVED EXCEPT WHERE SPECIFIED IN OWNER'S MANUAL.
- 3. LOADED BOOM ANGLES AT SPECIFIED BOOM LENGTHS GIVE ONLY AN APPROXIMATION OF THE OPERATING RADIUS. THE BOOM ANGLE BEFORE LOADING SHOULD BE GREATER TO ACCOUNT FOR DEFLECTIONS. DO NOT EXCEED THE OPERATING RADIUS FOR RATED LOADS.
- 4. THE OPERATING RADIUS SHOWN IN THE JIB RATING CHART IS FOR FULLY EXTENDED BOOM ONLY. WHEN BOOM IS NOT FULLY EXTENDED, USE ONLY LOADED BOOM ANGLE TO DETERMINE LOAD RATING OF JIB.
- 5. FOR BOOM ANGLES NOT SHOWN ON JIB LOAD RATING CHART, USE RATING OF NEXT LOWER BOOM ANGLE.
- 6. FOR BOOM LENGTHS NOT SHOWN, USE RATING OF NEXT SHORTER OR LONGER BOOM LENGTH, WHICHEVER IS LESS. FOR RADII NOT SHOWN, USE RATING OF NEXT LONGER RADIUS.
- 7. CRANE LOAD RATINGS ON OUTRIGGERS ARE BASED ON FREELY SUSPENDED LOADS WITH THE MACHINE LEVELED AND STANDING ON A FIRM UNIFORM SUPPORTING SURFACE. NO ATTEMPT SHALL BE MADE TO MOVE A LOAD HORIZONTALLY ON THE GROUND IN ANY DIRECTION.

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## **WARNING (CONTINUED)**

- 8. PRACTICAL WORKING LOADS DEPEND ON SUPPORTING SURFACE, WIND, AND OTHER FACTORS AFFECTING STABILITY SUCH AS HAZARDOUS SURROUNDINGS, EXPERIENCE OF PERSONNEL, AND PROPER HANDLING. ALL OF WHICH MUST BE TAKEN INTO ACCOUNT BY THE OPERATOR.
- 9. THE MAXIMUM LOAD WHICH MAY BE TELESCOPED IS LIMITED BY HYDRAULIC PRESSURE, BOOM ANGLE, AND BOOM LUBRICATION. IT IS SAFE TO ATTEMPT TO TELESCOPE ANY LOAD WITHIN THE LIMITS OF THE LOAD RATING CHART. BOOM MUST BE FULLY RETRACTED AGAINST BOOM STOPS AT ALL TIMES WHEN LIFTING MINIMUM BOOM LENGTH CAPACITY LOADS.
- 10. LIFTING OFF THE MAIN BOOM POINT WHILE THE SWING AROUND JIB IS ERECTED IS NOT INTENDED OR APPROVED.

### **INFORMATION**

- DEDUCTIONS MUST BE MADE FROM RATED LOADS FOR STOWED JIB, OPTIONAL ATTACHMENTS, HOOKS, AND LOADBLOCKS (SEE DEDUCTION CHART). WEIGHTS OF SLINGS AND ALL OTHER LOAD HANDLING DEVICES SHALL BE CONSIDERED A PART OF THE LOAD.
- 2. CRANE LOAD RATINGS ARE BASED ON OUTRIGGERS FULLY EXTENDED AND SET WITH THE MACHINE LEVELED.
- 3. LOAD RATINGS ABOVE THE HEAVY LINE ARE STRUCTURALLY LIMITED CAPACITIES. LOAD RATINGS BELOW THE HEAVY LINE ARE STABILITY LIMITED CAPACITIES AND DO NOT EXCEED 85% OF TIPPING.

### **DEFINITIONS**

- 1. OPERATING RADIUS IS THE HORIZONTAL DISTANCE FROM THE AXIS OF ROTATION TO THE CENTER OF THE VERTICAL HOIST LINE OR TACKLE WITH LOAD APPLIED.
- 2. LOADED BOOM ANGLE AS SHOWN IN THE COLUMN HEADED BY Z, IS THE INCLUDED ANGLE BETWEEN THE HORIZONTAL AND LONGITUDINAL AXES OF THE BOOM BASE AFTER LIFTING RATED LOAD AT RATED RADIUS.

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