

# Load Rating Chart

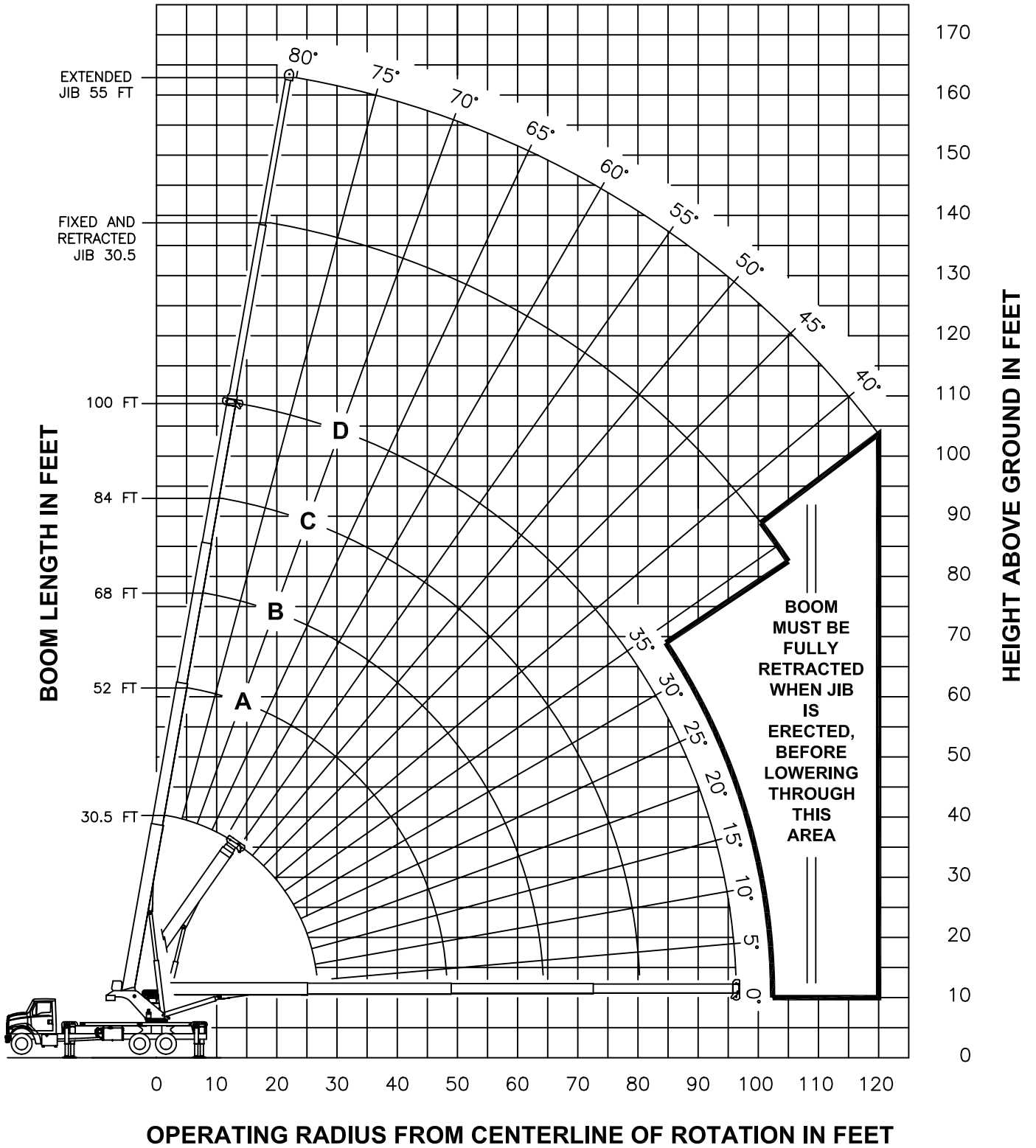
***Model 38100S***



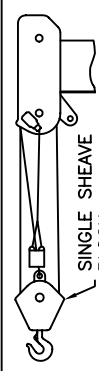
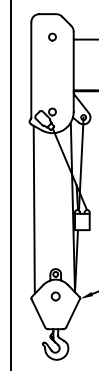
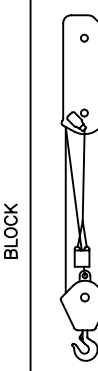

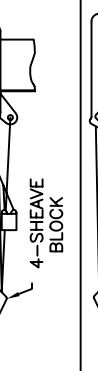



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**NOTE:** Additional copies of this Load Rating Chart can be purchased from your Manitex Distributor. When ordering, use the part number shown in the bottom left corner of this page.

# RANGE DIAGRAM - FULLY EXTENDED OUTRIGGER CONFIGURATION -

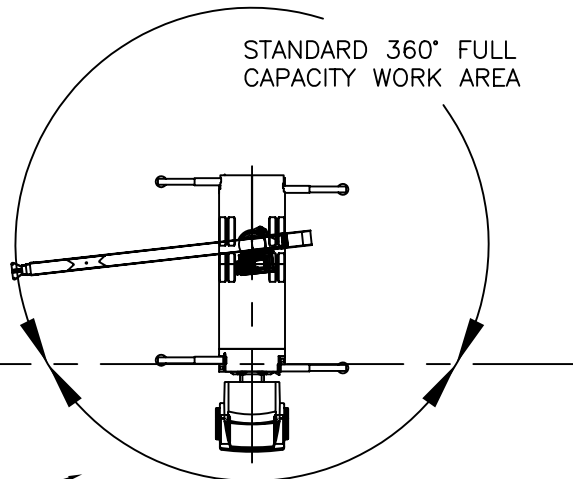


ALLOWABLE LINE PULL								<b>WARNING</b>
1 PART LINE	2 PART LINE	3 PART LINE	4 PART LINE	5 PART LINE	6 PART LINE	7 PART LINE	8 PART LINE	
								ANTI-TWO-BLOCK SYSTEM MUST BE IN GOOD OPERATING CONDITION BEFORE OPERATING CRANE.  REFER TO THE OWNER'S MANUAL.  KEEP AT LEAST 3 WRAPS OF LOAD LINE ON THE DRUM AT ALL TIMES.
9080 LBS	18160 LBS	27240 LBS	36320 LBS	45400 LBS	54480 LBS	63560 LBS	72640 LBS	5/8" ROT RESISTANT (5.0:1 SF) - 45400 LBS MIN BREAKING STRENGTH
9500 LBS	19000 LBS	28500 LBS	38000 LBS	47500 LBS	57000 LBS	66500 LBS	76000 LBS	5/8" 6 X 25 IWRC (3.5:1 SF) - 33250 LBS MIN BREAKING STRENGTH

## AREA OF OPERATION

### WARNING:

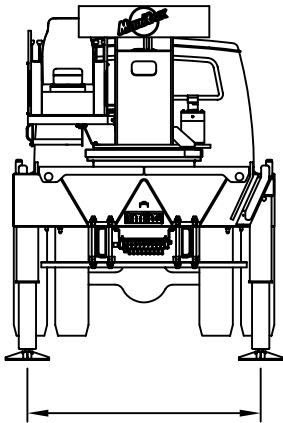
THE FRONT TIRES MUST BE IN CONTACT WITH THE GROUND, AND THE MACHINE LEVEL, WHEN OPERATING IN THIS AREA.



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

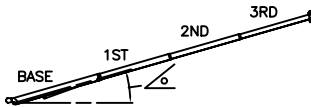
AUXILIARY BLOCK	-----	50 LBS
OVERHAUL BALL	-----	SEE OVERHAUL BALL MANUFACTURER NAMEPLATE
LOAD BLOCK	-----	SEE BLOCK MANUFACTURER NAMEPLATE
HOSE REEL	-----	260 LBS
SWING AROUND JIB (STOWED)	-----	SEE LOAD CHART

**USE THIS CHART ONLY  
WHEN ALL OUTRIGGERS  
ARE FULLY RETRACTED**



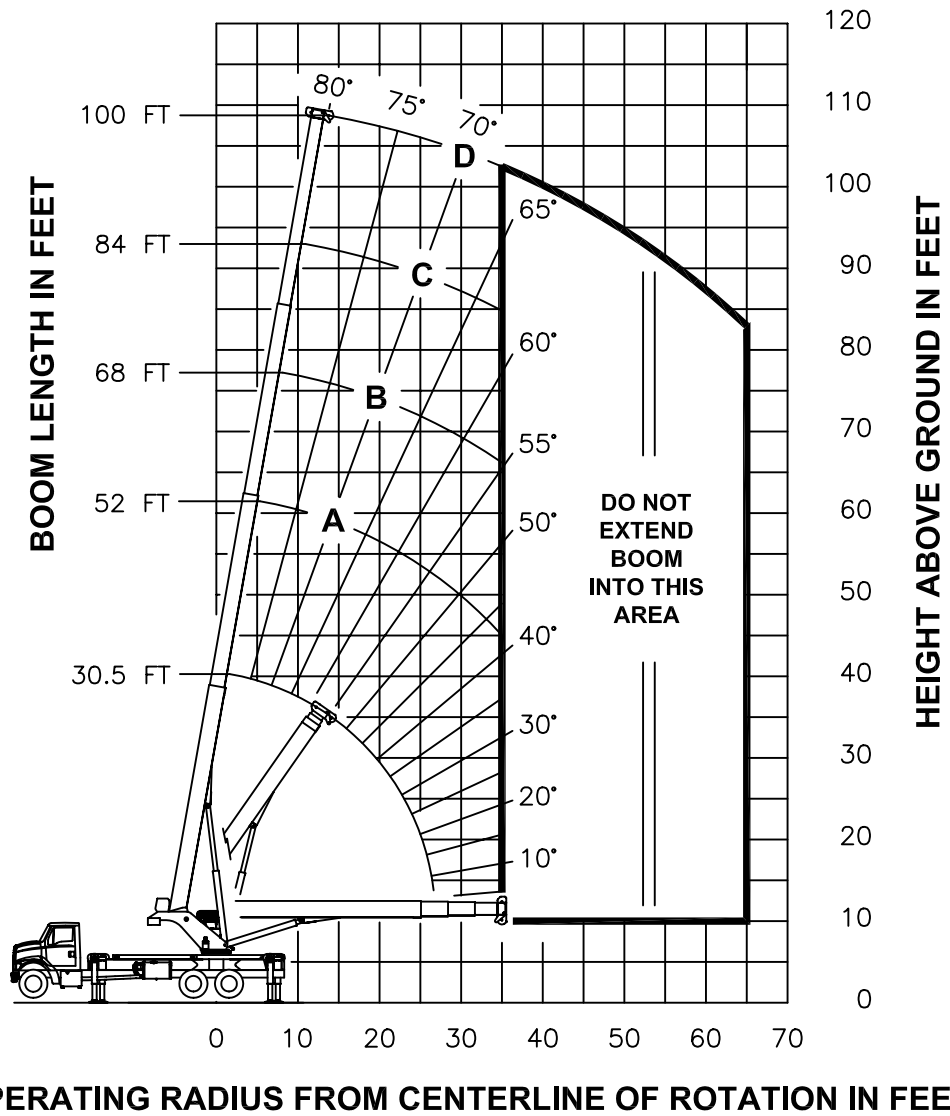
85.75 REF  
(7'-1.75 REF)

**- FULLY RETRACTED OUTRIGGER CONFIGURATION -**

LOAD RATINGS IN LBS WITH ALL OUTRIGGERS FULLY RETRACTED LMI CODE #13										
OPERATING RADIUS FT	LOADED BOOM ANGLE		BOOM LENGTH AND MARKER							
					A		B		C	
	°	30.5 FT	°	52 FT	°	68 FT	°	84 FT	°	100 FT
5	74	76000								
8	68	31150								
10	64	19970	76	20890						
12	60	14080	73	14900	78	15170				
15	53	9110	70	9850	76	10080	79	10230		
20	40	4840	64	5520	71	5730	76	5850	79	5940
25	20	2510	58	3210	67	3400	72	3520	76	3590
30			51	1770	62	1960	69	2070	73	2140
35			43	780	57	970	65	1080	70	1140
		590 LBS		350 LBS		270 LBS		220 LBS		180 LBS
		890 LBS		530 LBS		400 LBS		330 LBS		280 LBS
									FIXED	DEDUCTIONS FOR STOWED JIBS
									TELESCOPIC	

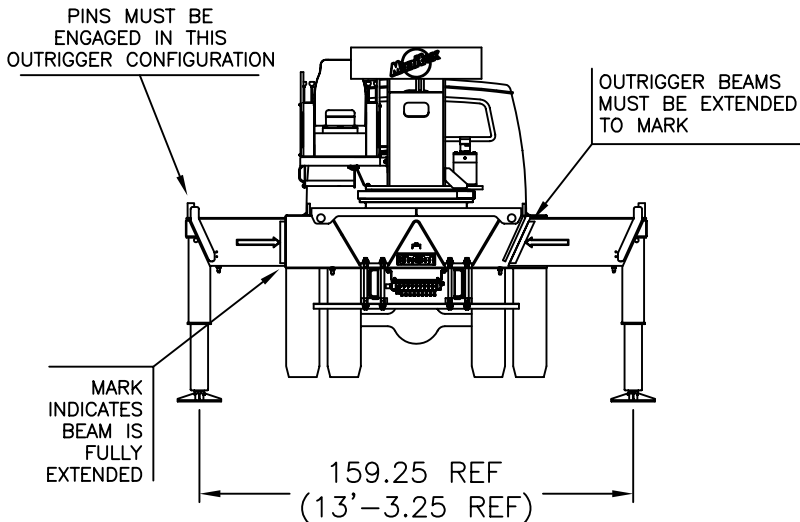
**NO JIBS ARE TO  
BE ERECTED IN  
THIS OUTRIGGER  
CONFIGURATION**

## RANGE DIAGRAM - FULLY RETRACTED OUTRIGGER CONFIGURATION -



**NOTE :** LIFTING PERSONNEL WITH CRANE IN THIS OUTRIGGER CONFIGURATION IS STRICTLY PROHIBITED. USE ONLY FULLY EXTENDED OUTRIGGER CONFIGURATION WHEN LIFTING PERSONNEL.

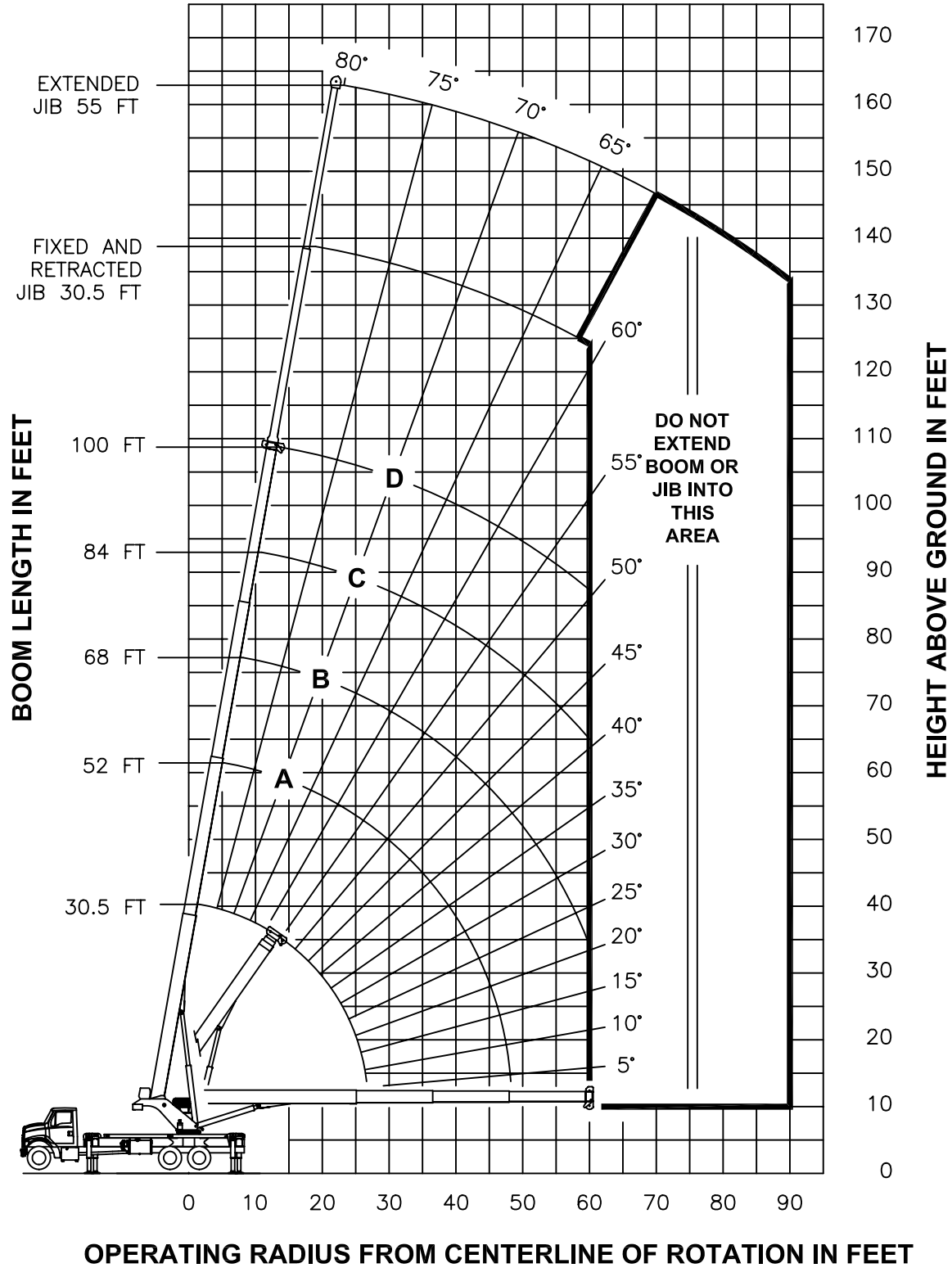
**USE THIS CHART ONLY WHEN ALL OUTRIGGERS ARE IN THE INTERMEDIATE POSITION**



**- INTERMEDIATE OUTRIGGER CONFIGURATION -**

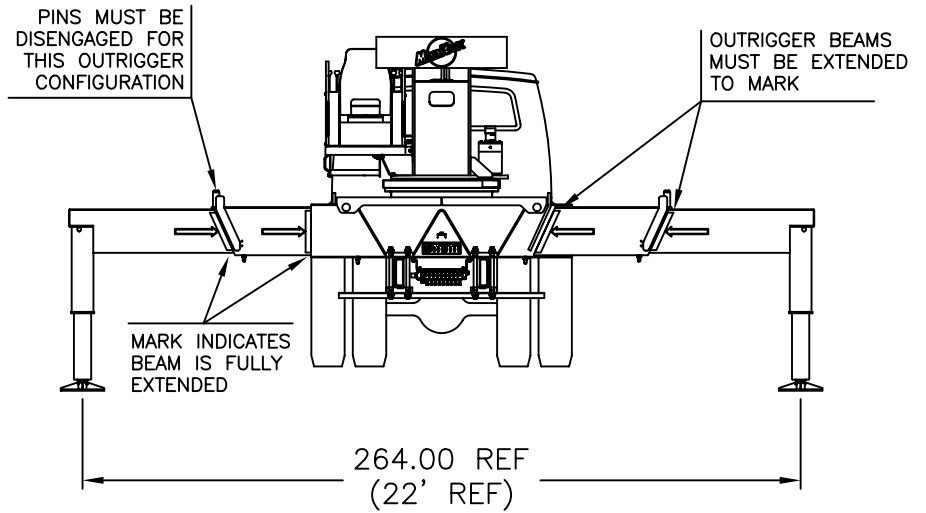
LOAD RATINGS IN LBS WITH ALL OUTRIGGERS IN THE INTERMEDIATE POSITION LMI CODE #9						JIB LOAD RATINGS IN LBS WITH ALL OUTRIGGERS IN THE INTERMEDIATE POSITION													
OPERATING RADIUS FT	LOADED BOOM ANGLE	BOOM LENGTH AND MARKER					OPERATING RADIUS FT	FIXED JIB		TELESCOPIC JIB									
			A	B	C	D		LMI CODE #10	LMI CODE #11	LMI CODE #12									
	30.5 FT	52 FT	68 FT	84 FT	100 FT		BOOM ANGLE	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4	BOOM ANGLE	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4	BOOM ANGLE	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4							
5	74	76000																	
8	68	61000																	
10	64	52860	76	31500															
12	60	43730	73	31500	78	31500													
15	53	26300	70	27320	76	27650	79	23700											
20	40	14620	64	15460	71	15730	76	15890	79	14000									
25	20	9240	58	10060	67	10290	72	10430	76	10530									
30			51	6960	62	7180	69	7310	73	7400	30	77	7300	77	7000				
35			43	4950	57	5170	65	5290	70	5370	35	75	5710	75	5290	78	4000		
40			34	3530	52	3750	61	3870	67	3950	40	73	4250	73	3830	76	3850		
45			22	2470	46	2700	57	2820	64	2900	45	71	3180	71	2760	74	3540		
50					39	1890	52	2010	60	2090	50	69	2360	69	1930	73	2690		
55					32	1250	48	1370	57	1440	55	66	1700	66	1270	71	2020		
60					22	720	43	850	53	920	60	64	1170	64	740	69	1470		
65											65					67	1020		
70											70					65	640		
			590 LBS			350 LBS			270 LBS			220 LBS			180 LBS			FIXED	
			890 LBS			530 LBS			400 LBS			330 LBS			280 LBS			TELESCOPIC	
												DEDUCTIONS FOR STOWED JIBS							

# RANGE DIAGRAM - INTERMEDIATE OUTRIGGER CONFIGURATION -



**NOTE :** LIFTING PERSONNEL WITH CRANE IN THIS OUTRIGGER CONFIGURATION IS STRICTLY PROHIBITED. USE ONLY FULLY EXTENDED OUTRIGGER CONFIGURATION WHEN LIFTING PERSONNEL.

**USE THIS CHART ONLY  
WHEN ALL OUTRIGGERS  
ARE FULLY EXTENDED**



**- FULLY EXTENDED OUTRIGGER CONFIGURATION -**

LOAD RATINGS IN LBS WITH ALL OUTRIGGERS FULLY EXTENDED LMI CODE #1										JIB LOAD RATINGS IN LBS WITH ALL OUTRIGGERS FULLY EXTENDED							
OPERATING RADIUS FT	LOADED BOOM ANGLE BOOM LENGTH AND MARKER										OPERATING RADIUS FT	FIXED JIB		TELESCOPIC JIB			
			A		B		C		D			LMI CODE #2	LMI CODE #3	LMI CODE #4			
	BOOM ANGLE	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4	BOOM ANGLE	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4	BOOM ANGLE	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4	BOOM ANGLE	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4	BOOM ANGLE	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4		BOOM ANGLE	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4	BOOM ANGLE	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4	BOOM ANGLE	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4
	30.5 FT		52 FT		68 FT		84 FT		100 FT								
5	74	76000															
8	68	61000															
10	64	52860	76	31500						10							
12	60	47000	73	31500	78	31500				12							
15	53	40280	70	31500	76	31500	79	23700		15							
20	40	30660	64	28680	71	26820	76	20600	79	14000	20						
25	20	22380	58	23230	67	22160	72	18300	76	13500	25						
30			51	17230	62	17450	69	15870	73	12820	30	77	7300	77	7000		
35			43	13370	57	13590	65	13720	70	11380	35	75	7100	75	6800	78	4000
40			34	10660	52	10910	61	11030	67	10160	40	73	6620	73	6240	76	3850
45			22	8440	46	8710	57	8850	64	8940	45	71	6060	71	5670	74	3700
50					39	7060	52	7200	60	7290	50	69	5550	69	5150	73	3550
55					32	5790	48	5930	57	6010	55	66	5100	66	4690	71	3310
60					22	4760	43	4910	53	4990	60	64	4680	64	4210	69	3090
65							37	4080	49	4160	65	61	4210	61	3740	67	2900
70							31	3390	45	3470	70	59	3800	59	3330	65	2710
75							22	2800	40	2890	75	56	3200	56	2800	63	2550
80							7	2280	35	2390	80	53	2690	53	2290	61	2400
85									30	1960	85	50	2250	50	1850	59	2270
90									22	1580	90	47	1870	47	1460	56	2080
95									11	1230	95	43	1530	43	1120	54	1820
100											100	40	1230	40	820	52	1510
105											105	36	960	36	550	49	1240
110											110					46	990
115											115					43	770
120											120					40	560
			590 LBS	350 LBS	270 LBS	220 LBS	180 LBS					FIXED		DEDUCTIONS FOR STOWED JIBS			
			890 LBS	530 LBS	400 LBS	330 LBS	280 LBS					TELESCOPIC					



## LMI OPERATING CODES

SETTING	CRANE CONFIGURATION	OUTRIGGER CONFIGURATION
#1	— MAIN BOOM	FULLY EXTENDED
#2	— FIXED JIB	FULLY EXTENDED
#3	— TELESCOPIC JIB—RETRACTED	FULLY EXTENDED
#4	— TELESCOPIC JIB—EXTENDED	FULLY EXTENDED
#5	— PERSONNEL LIFTING PLATFORM ON MAIN BOOM	FULLY EXTENDED
#6	— PERSONNEL LIFTING PLATFORM ON FIXED JIB	FULLY EXTENDED
#7	— PERSONNEL LIFTING PLATFORM ON TELESCOPIC JIB—RETRACTED	FULLY EXTENDED
#8	— PERSONNEL LIFTING PLATFORM ON TELESCOPIC JIB—EXTENDED	FULLY EXTENDED
#9	— MAIN BOOM	INTERMEDIATE
#10	— FIXED JIB	INTERMEDIATE
#11	— TELESCOPIC JIB—RETRACTED	INTERMEDIATE
#12	— TELESCOPIC JIB—EXTENDED	INTERMEDIATE
#13	— MAIN BOOM	FULLY RETRACTED

### 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.


## **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.
10. LIFTING OFF THE MAIN BOOM POINT WHILE THE SWING AROUND JIB IS ERECTED IS NOT INTENDED OR APPROVED.

## **INFORMATION**

1. 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. 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 , IS THE INCLUDED ANGLE BETWEEN THE HORIZONTAL AND LONGITUDINAL AXES OF THE BOOM BASE AFTER LIFTING RATED LOAD AT RATED RADIUS.