



# Load Rating Chart

***Model 40100SHL***

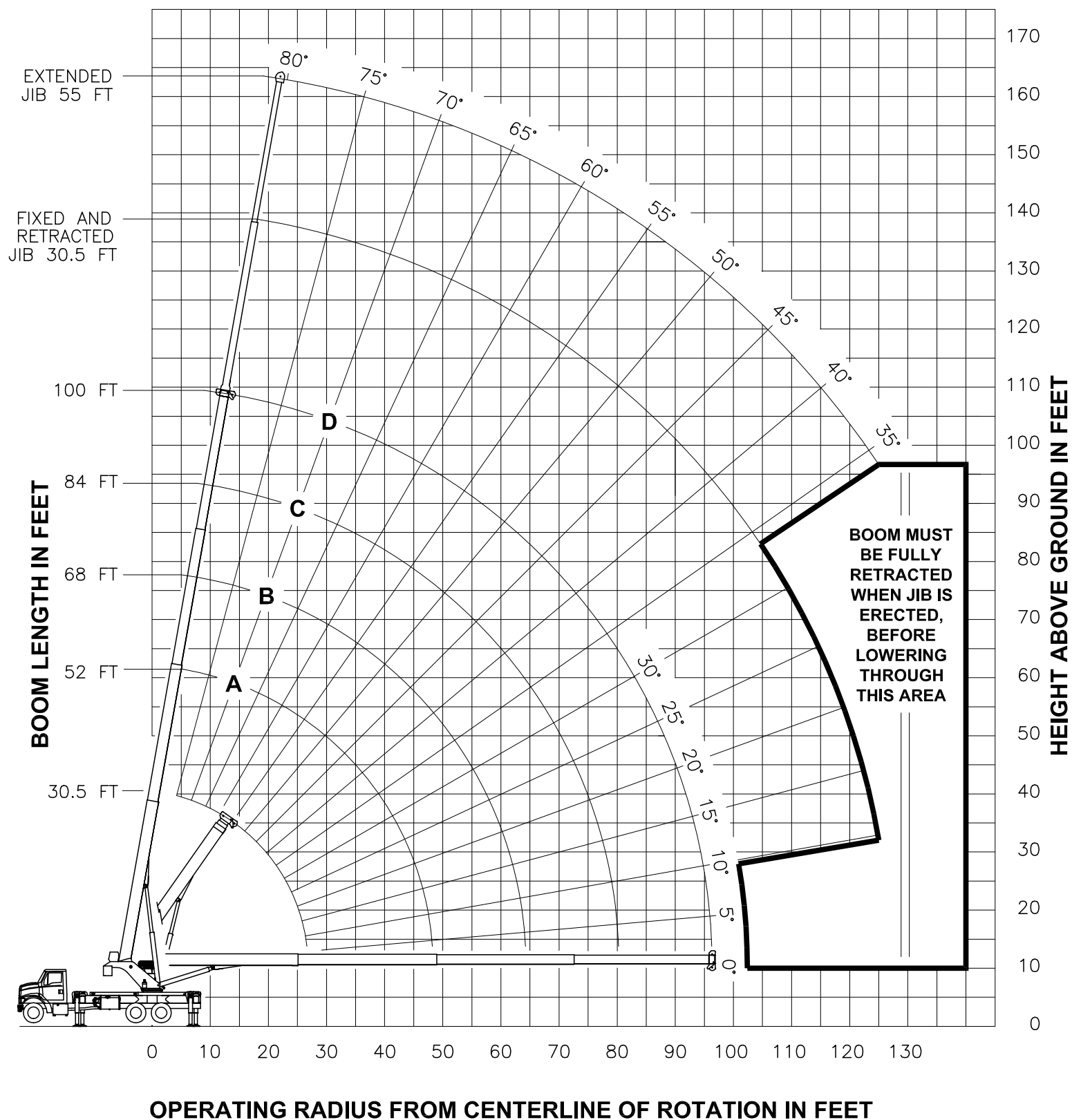


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**NOTE:** Additional copies of this Load Rating Chart can be purchased from your Manitex Distributor. When ordering, use the part number shown in the bottom left corner of this page.

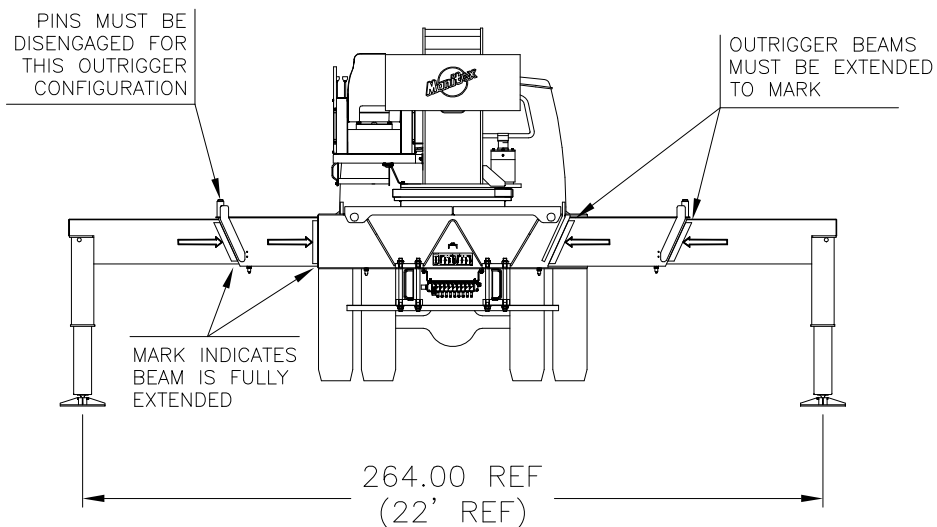


## RANGE DIAGRAM - FULLY EXTENDED OUTRIGGER CONFIGURATION -

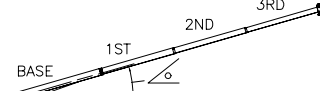




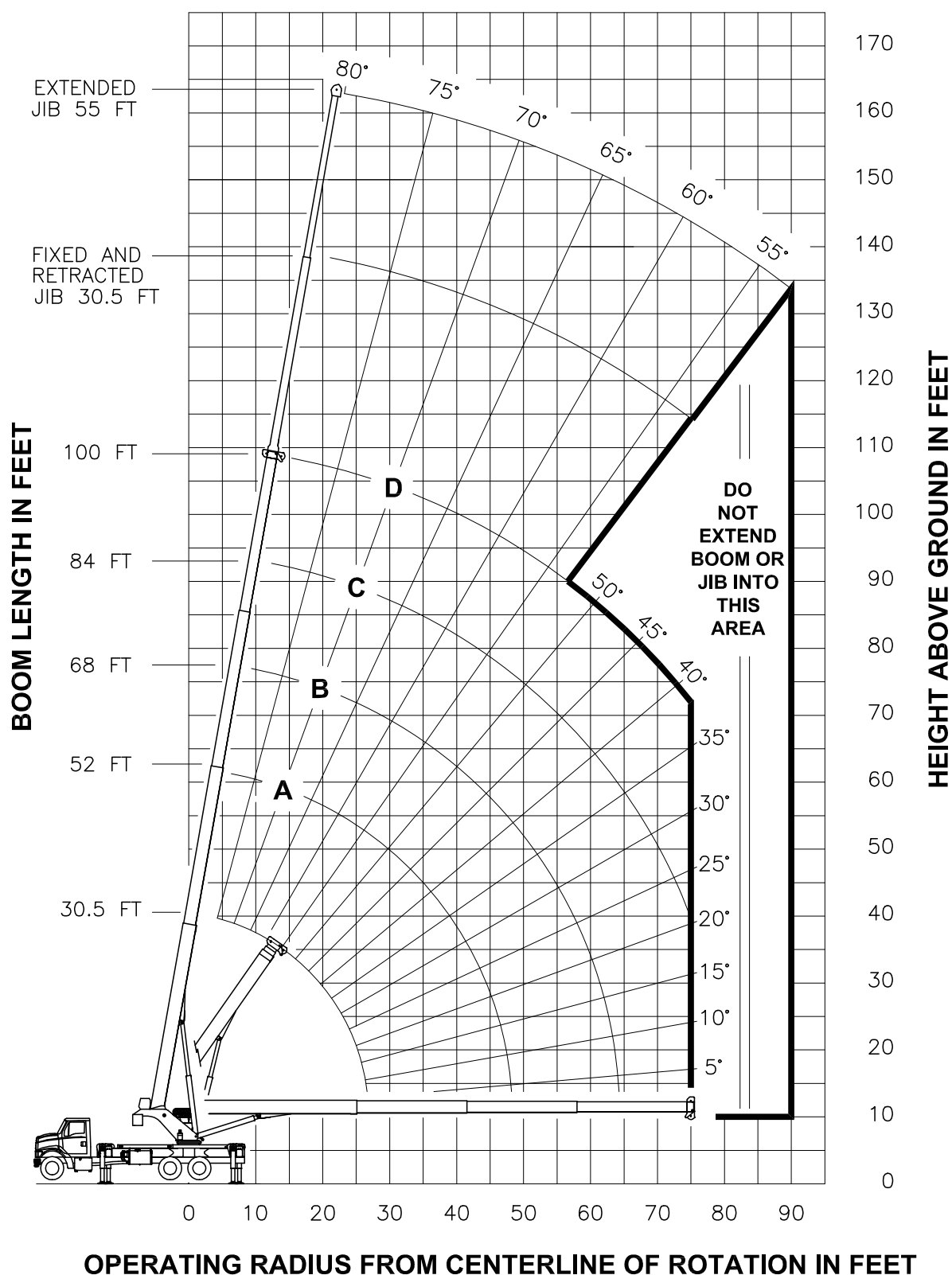
**USE THIS CHART ONLY  
WHEN ALL OUTRIGGERS  
ARE FULLY EXTENDED**



### - 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					
					LMI CODE #2		LMI CODE #3		LMI CODE #4										
	°	30.5 FT	°	52 FT	°	68 FT	°	84 FT	°	100 FT		BOOM LOADING ANG	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4	BOOM LOADING ANG	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4	BOOM LOADING ANG	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4		
	5	74	80000										10						
8	68	61000									12								
10	64	52860	76	31500							15								
12	60	47000	73	31500	78	31500					20								
15	53	40280	70	31500	76	31500	79	23700			25								
20	40	31870	64	28680	71	26820	76	20600	79	14000	30	77	7300	77	7000				
25	20	24430	58	23830	67	22160	72	18300	76	13500	35	75	7100	75	6800	78	4000		
30			51	20400	62	19080	69	15870	73	12820	40	73	6620	73	6240	76	3850		
35			43	15980	57	16200	65	13950	70	11380	45	71	6060	71	5670	74	3700		
40			34	12890	52	13110	61	12350	67	10160	50	69	5550	69	5150	73	3550		
45			22	10610	46	10840	57	10960	64	9370	55	66	5100	66	4690	71	3310		
50					39	9090	52	9220	60	8430	60	64	4680	64	4210	69	3090		
55					32	7710	48	7830	57	7620	65	61	4210	61	3740	67	2900		
60					22	6580	43	6710	53	6790	70	59	3800	59	3330	65	2710		
65							37	5780	49	5860	75	56	3440	56	2970	63	2550		
70							31	5000	45	5070	80	53	3120	53	2660	61	2400		
75							22	4320	40	4410	85	50	2840	50	2370	59	2270		
80							7	3730	35	3830	90	47	2590	47	2120	56	2080		
85									30	3320	95	43	2350	43	1890	54	1890		
90									22	2880	100	40	2150	40	1690	52	1710		
95									11	2470	105	36	1960	36	1500	49	1540		
100											110	32	1760	32	1300	46	1390		
105											115	27	1500	27	1090	43	1250		
110											120	21	1270	21	850	40	1120		
115											125	13	1040	13	630	37	1000		
120																			
125																			
										590 LBS		350 LBS		270 LBS		220 LBS		180 LBS	
										890 LBS		530 LBS		400 LBS		330 LBS		DEDUCTIONS FOR STOWED JIBS	
												FIXED							
												TELESCOPIC							

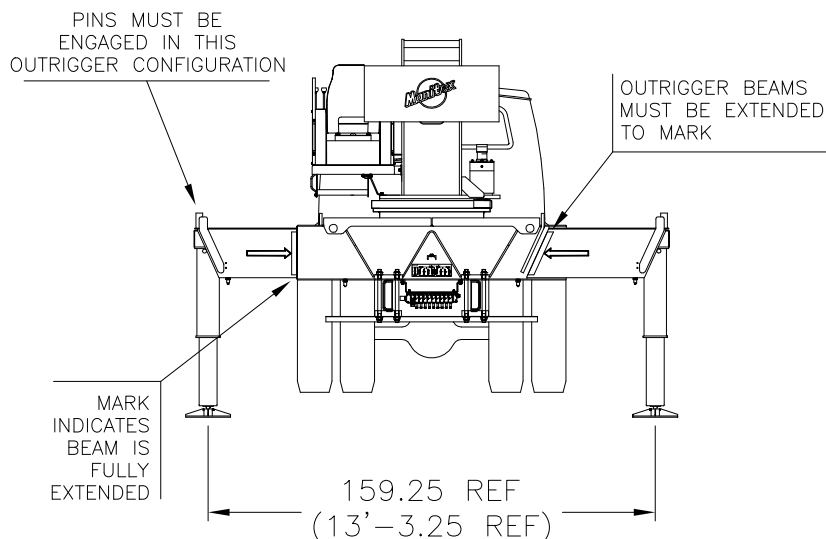
### - INTERMEDIATE OUTRIGGER CONFIGURATION -



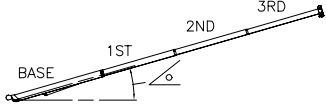
**NOTE : LIFTING PERSONNEL WITH CRANE IN THIS OUTRIGGER CONFIGURATION IS STRICTLY PROHIBITED. USE ONLY FULLY EXTENDED OUTRIGGER CONFIGURATION WHEN LIFTING PERSONNEL.**



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

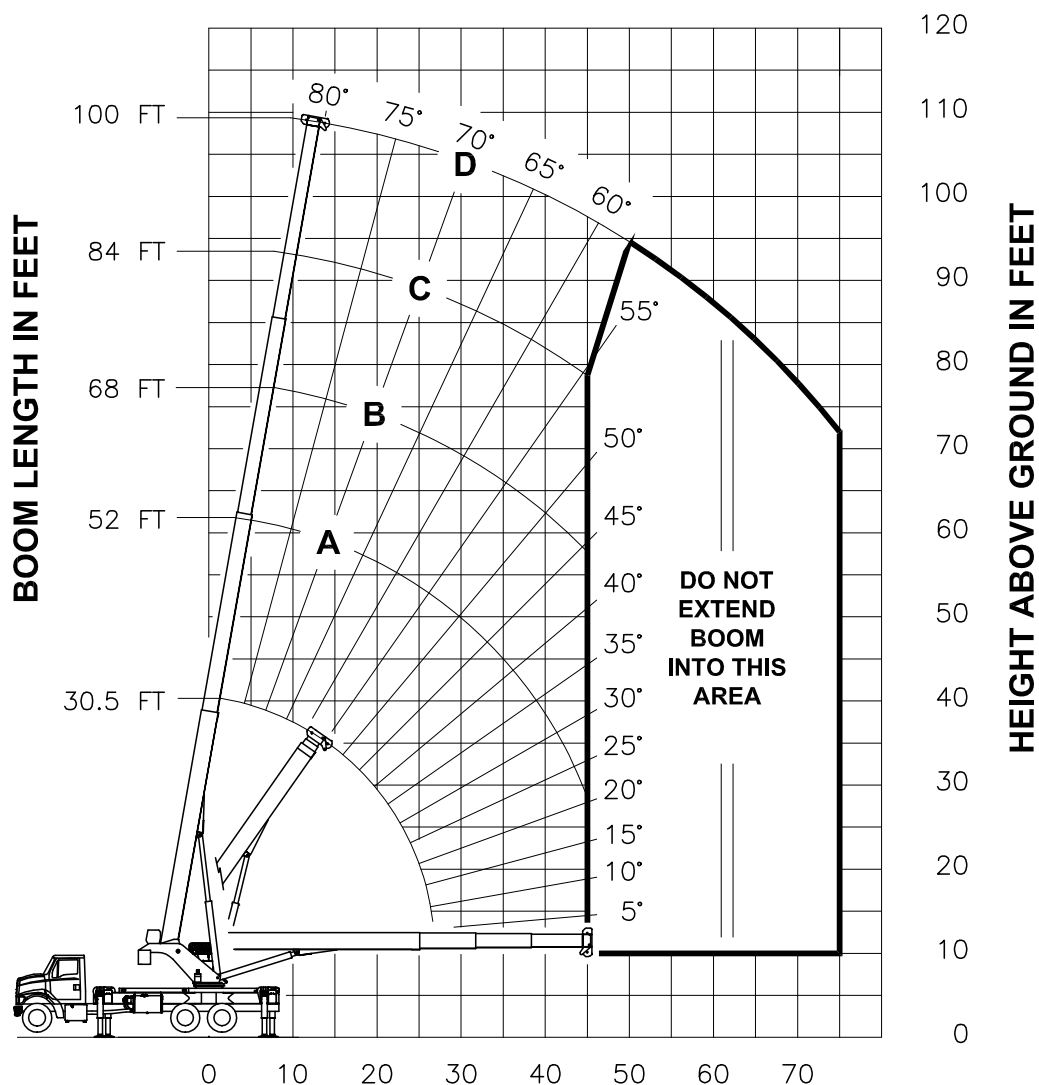


## - INTERMEDIATE OUTRIGGER CONFIGURATION -

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		°	30.5 FT	°	30.5 FT	°	55 FT
5	74	80000															
8	68	61000															
10	64	52860	76	31500							10						
12	60	46980	73	31500	78	31500					12						
15	53	35350	70	31500	76	31500	79	23700			15						
20	40	20280	64	21130	71	21390	76	20600	79	14000	20						
25	20	13360	58	14180	67	14410	72	14560	76	13500	25						
30			51	10200	62	10420	69	10550	73	10640	30	77	7300	77	7000		
35			43	7620	57	7830	65	7960	70	8040	35	75	7100	75	6800	78	4000
40			34	5800	52	6020	61	6140	67	6220	40	73	6520	73	6100	76	3850
45			22	4450	46	4680	57	4790	64	4870	45	71	5150	71	4730	74	3700
50					39	3640	52	3760	60	3830	50	69	4100	69	3680	73	3550
55					32	2810	48	2940	57	3010	55	66	3270	66	2840	71	3310
60					22	2130	43	2270	53	2340	60	64	2590	64	2160	69	2890
65							37	1710	49	1780	65	61	2020	61	1590	67	2320
70							31	1240	45	1310	70	59	1550	59	1120	65	1830
75							22	830	40	910	75	56	1140	56	710	63	1420
80											80					61	1060
85											85					59	750
90											90					56	480
										FIXED		DEDUCTIONS FOR STOWED JIBS					
										TELESCOPIC							
		590 LBS	350 LBS		270 LBS		220 LBS		180 LBS								
		890 LBS	530 LBS		400 LBS		330 LBS		280 LBS								



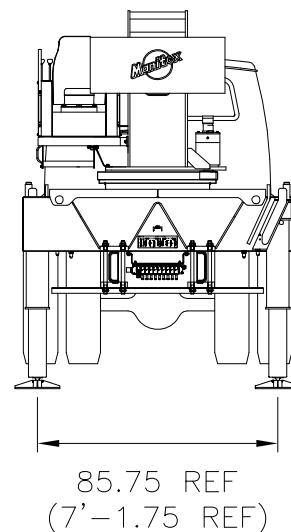
## RANGE DIAGRAM - FULLY RETRACTED OUTRIGGER CONFIGURATION -



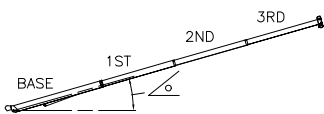
**NOTE :** LIFTING PERSONNEL WITH CRANE IN THIS OUTRIGGER CONFIGURATION IS STRICTLY PROHIBITED. USE ONLY FULLY EXTENDED OUTRIGGER CONFIGURATION WHEN LIFTING PERSONNEL.



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



**- 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		D	
	°	30.5 FT	°	52 FT	°	68 FT	°	84 FT	°	100 FT
5	74	80000								
8	68	44230								
10	64	28970	76	29900						
12	60	20950	73	21770	78	22040				
15	53	14180	70	14910	76	15150	79	15290		
20	40	8360	64	9040	71	9250	76	9380	79	9460
25	20	5210	58	5910	67	6110	72	6220	76	6300
30			51	3960	62	4150	69	4260	73	4330
35			43	2620	57	2810	65	2920	70	2990
40			34	1640	52	1840	61	1950	67	2010
45			22	890	46	1100	57	1210	64	1270
50									60	690
	590 LBS		350 LBS		270 LBS		220 LBS		180 LBS	
	890 LBS		530 LBS		400 LBS		330 LBS		280 LBS	

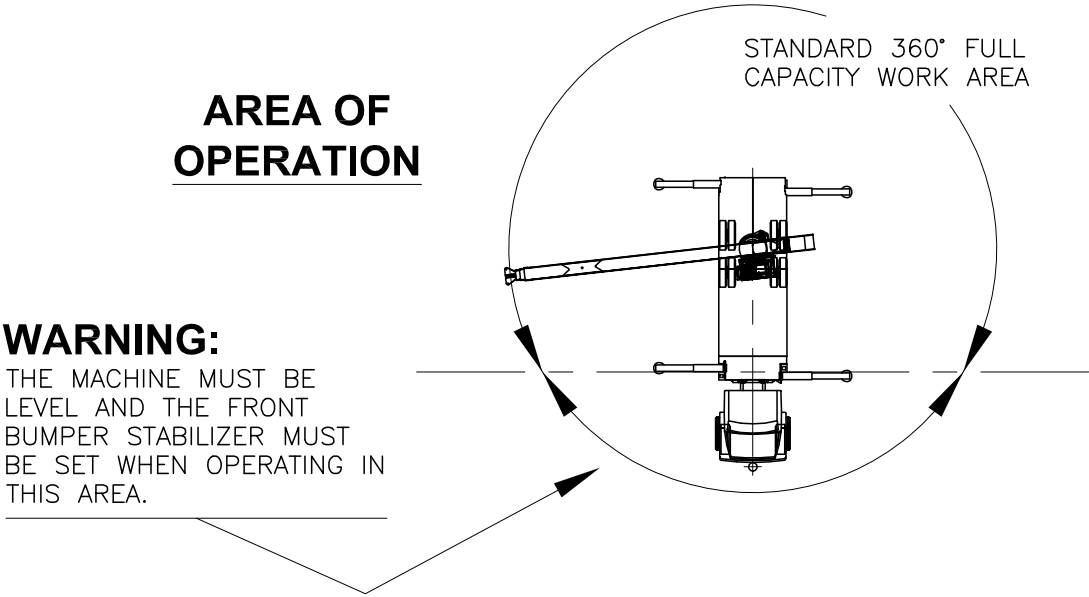
NO JIBS ARE TO BE  
ERECTED IN THIS  
OUTRIGGER  
CONFIGURATION

FIXED	DEDUCTIONS FOR STOWED JIBS
TELESCOPIC	

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



ALLOWABLE LINE PULL								WARNING
1 PART LINE	2 PART LINE	3 PART LINE	4 PART LINE	5 PART LINE	6 PART LINE	7 PART LINE	8 PART LINE	
9080 LBS	18160 LBS	27240 LBS	36320 LBS	45400 LBS	54480 LBS	63560 LBS	72640 LBS	
10000 LBS	20000 LBS	30000 LBS	40000 LBS	50000 LBS	60000 LBS	70000 LBS	80000 LBS	
								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.
								5/8" ROT RESISTANT (5.0:1 SF) – 45400 LBS MIN BREAKING STRENGTH
								5/8" 6 X 25 IWRC (3.5:1 SF) – 35000 LBS MIN BREAKING STRENGTH



DEDUCTIONS FROM RATED LOADS FOR LOAD HANDLING DEVICES SUPPLIED BY MANITEX	
AUXILIARY BLOCK	SEE LOADBLOCK MFRG. NAMEPLATE
OVERHAUL BALL	SEE OVERHAUL BALL MFRG. NAMEPLATE
LOADBLOCK	SEE LOADBLOCK MFRG. NAMEPLATE
HOSE REEL	260 LBS
SWING AROUND JIB (STOWED)	SEE LOAD CHART





**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 TELESKOPED 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 LOAD BLOCKS (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  $\angle$ , IS THE INCLUDED ANGLE BETWEEN THE HORIZONTAL AND LONGITUDINAL AXES OF THE BOOM BASE AFTER LIFTING RATED LOAD AT RATED RADIUS.