

# Load Rating Chart

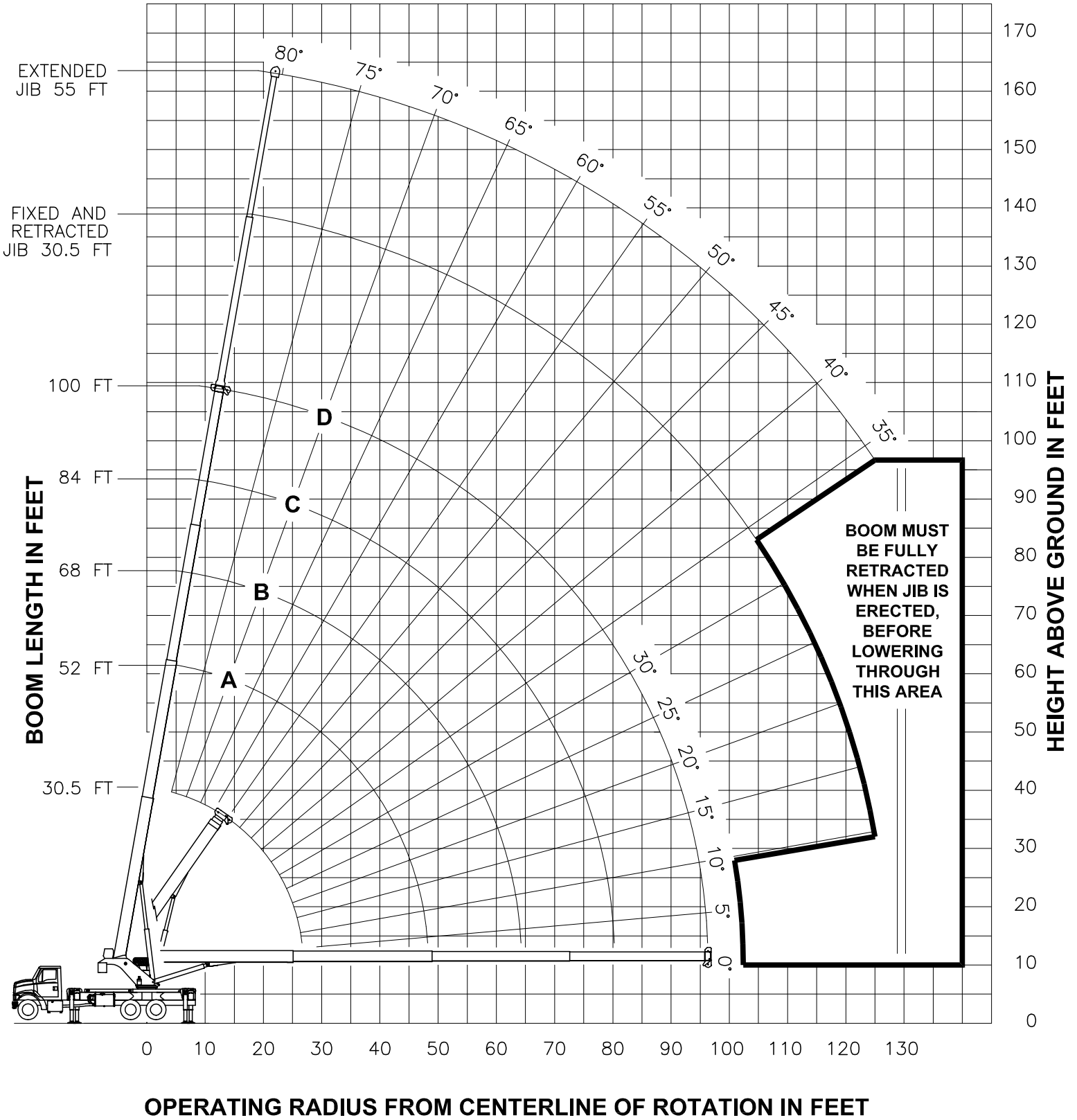
***Model 40100SHL***



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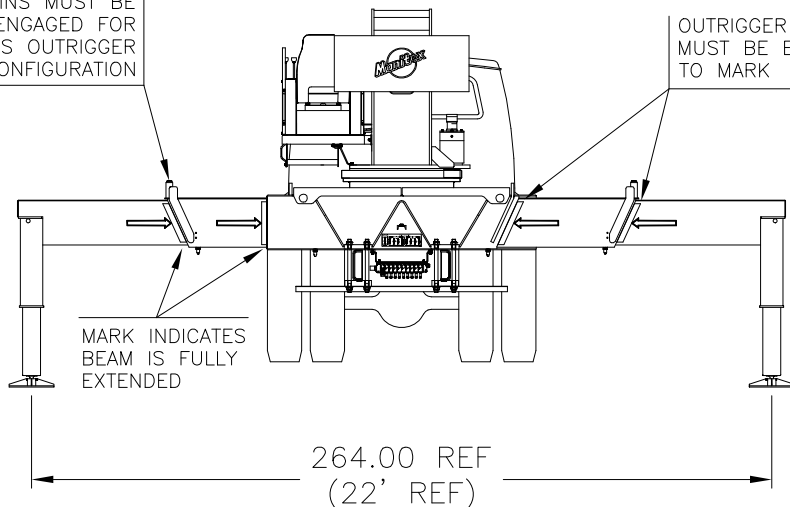
**NOTE:** Additional copies of this Load Rating Chart can be purchased from your Manitex Distributor. When ordering, use the part number shown in the bottom left corner of this page.

# RANGE DIAGRAM - FULLY EXTENDED OUTRIGGER CONFIGURATION -



PINS MUST BE  
DISENGAGED FOR  
THIS OUTRIGGER  
CONFIGURATION

OUTRIGGER BEAMS  
MUST BE EXTENDED  
TO MARK

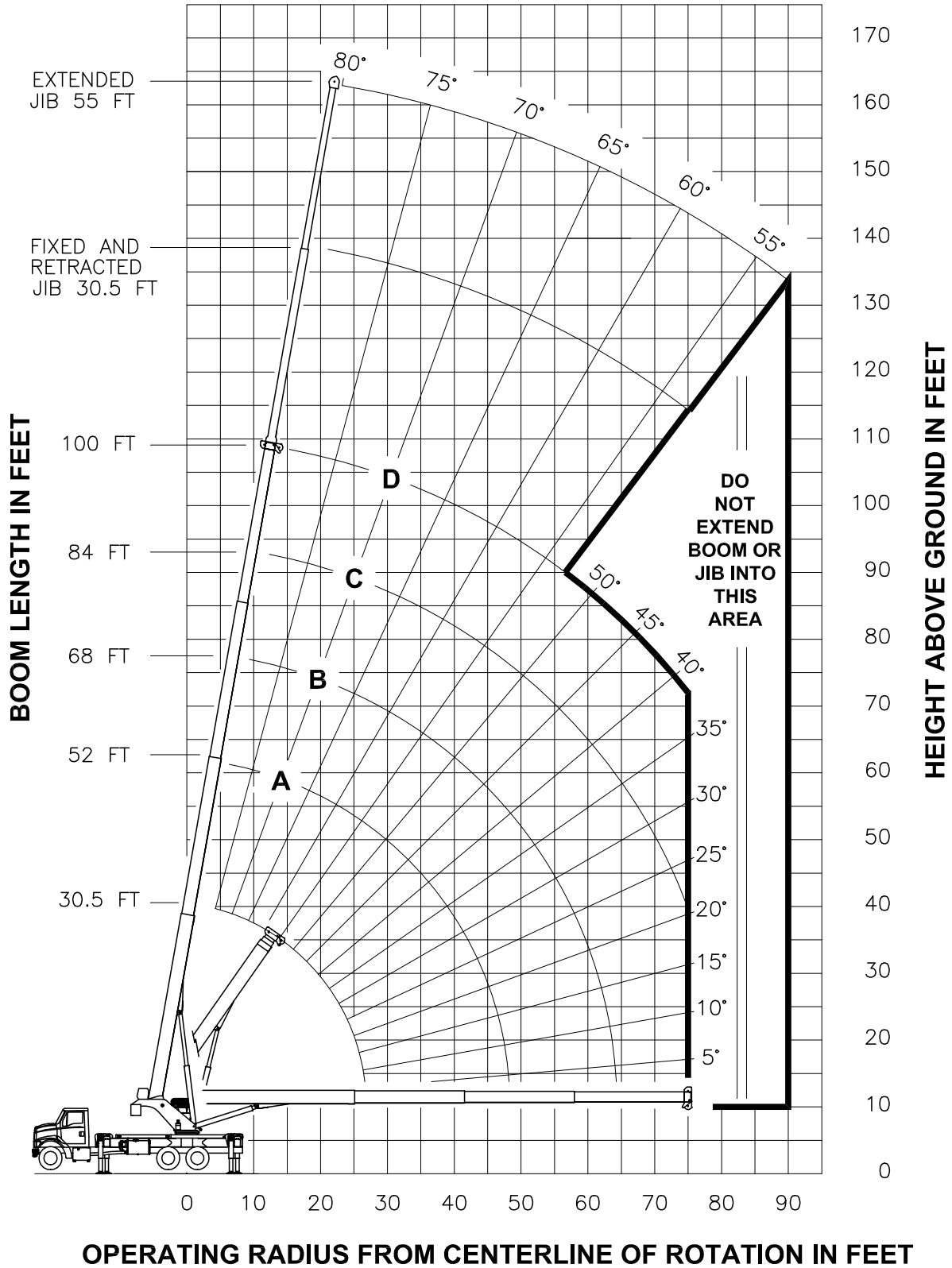


**USE THIS CHART ONLY  
WHEN ALL OUTRIGGERS  
ARE FULLY EXTENDED**

**- FULLY EXTENDED OUTRIGGER CONFIGURATION -**

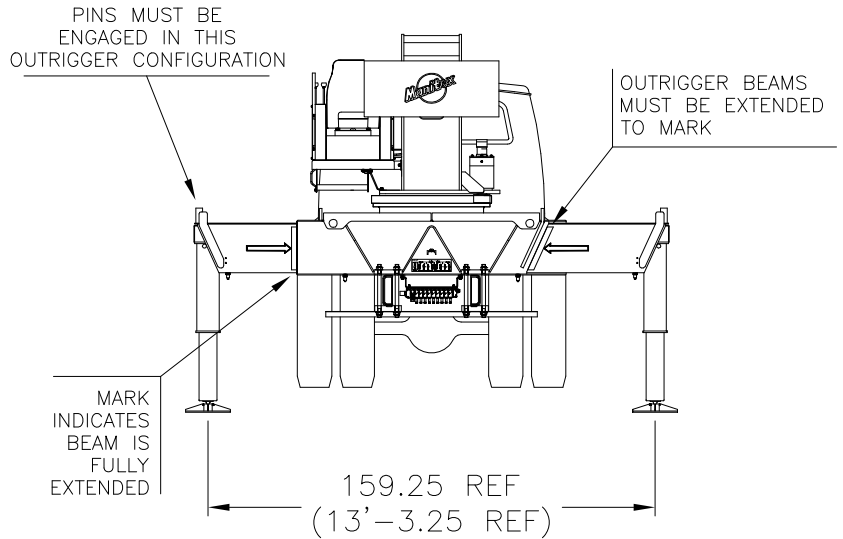
LOAD RATINGS IN LBS WITH ALL OUTRIGGERS FULLY EXTENDED LMI CODE #1										JIB LOAD RATINGS IN LBS WITH ALL OUTRIGGERS FULLY EXTENDED								
OPERATING RADIUS FEET	LOADED BOOM ANGLE BOOM LENGTH AND MARKER									FIXED JIB		TELESCOPIC JIB						
			A	B	C	D	LMI CODE #2	LMI CODE #3	LMI CODE #4									
	°	30.5 FT	°	52 FT	°	68 FT	°	84 FT	°	100 FT	BOOM LOADING ANGLE	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4	BOOM LOADING ANGLE	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4	BOOM LOADING ANGLE	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4		
5	74	80000																
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	31870	64	28680	71	26820	76	20600	79	14000	20							
25	20	24430	58	23830	67	22160	72	18300	76	13500	25							
30			51	20400	62	19080	69	15870	73	12820	30	77	7300	77	7000			
35			43	15980	57	16200	65	13950	70	11380	35	75	7100	75	6800	78	4000	
40			34	12890	52	13110	61	12350	67	10160	40	73	6620	73	6240	76	3850	
45			22	10610	46	10840	57	10960	64	9370	45	71	6060	71	5670	74	3700	
50					39	9090	52	9220	60	8430	50	69	5550	69	5150	73	3550	
55					32	7710	48	7830	57	7620	55	66	5100	66	4690	71	3310	
60					22	6580	43	6710	53	6790	60	64	4680	64	4210	69	3090	
65							37	5780	49	5860	65	61	4210	61	3740	67	2900	
70							31	5000	45	5070	70	59	3800	59	3330	65	2710	
75							22	4320	40	4410	75	56	3440	56	2970	63	2550	
80							7	3730	35	3830	80	53	3120	53	2660	61	2400	
85										30	3320	85	50	2840	50	2370	59	2270
90										22	2880	90	47	2590	47	2120	56	2080
95										11	2470	95	43	2350	43	1890	54	1890
100												100	40	2150	40	1690	52	1710
105												105	36	1960	36	1500	49	1540
110												110	32	1760	32	1300	46	1390
115												115	27	1500	27	1090	43	1250
120												120	21	1270	21	850	40	1120
125												125	13	1040	13	630	37	1000
										FIXED		DEDUCTIONS FOR STOWED JIBS						
										TELESCOPIC								

# 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.

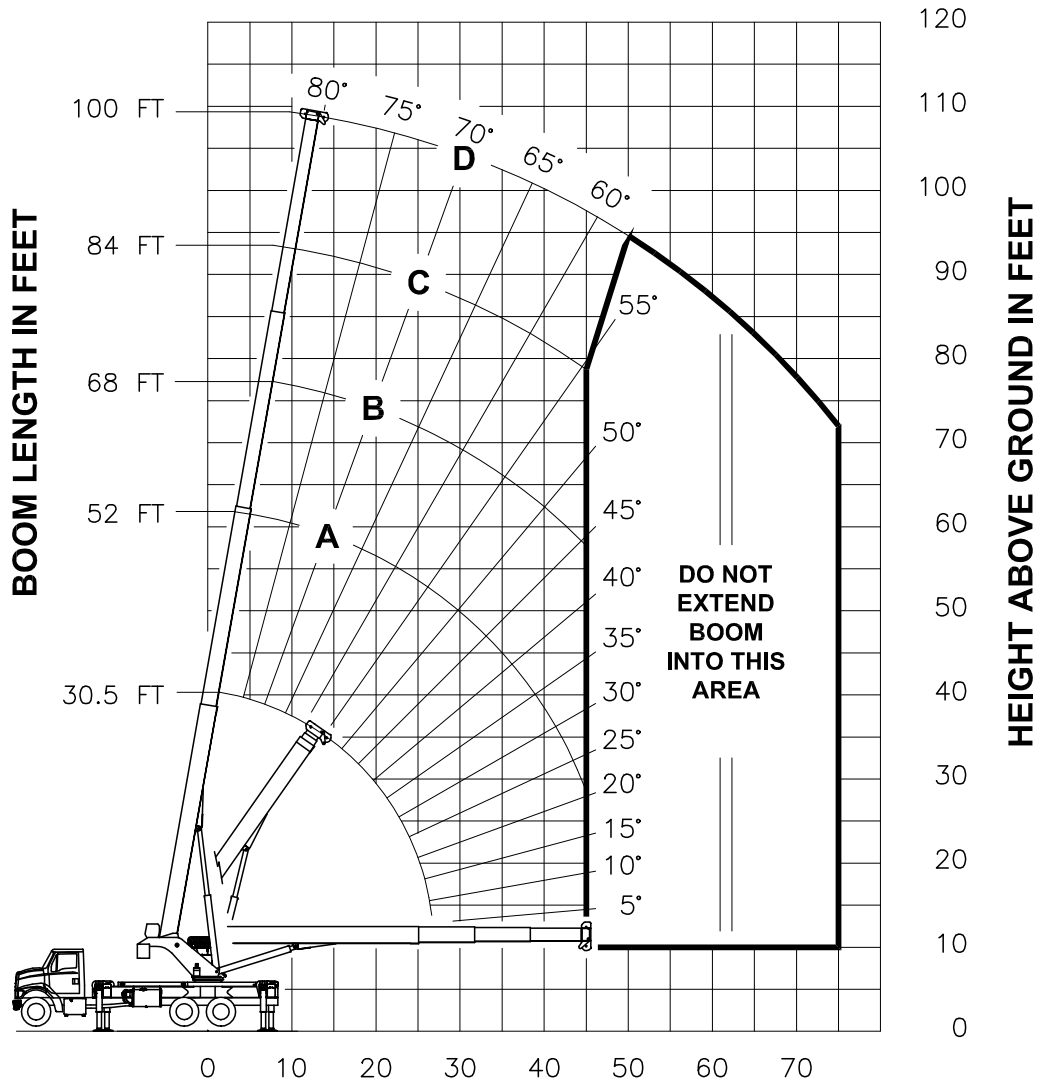
**USE THIS CHART ONLY WHEN ALL OUTRIGGERS ARE IN THE INTERMEDIATE POSITION**



**- 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		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 LOADED ANG	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4	BOOM LOADED ANG	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4	BOOM LOADED ANG	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4		
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		
								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			

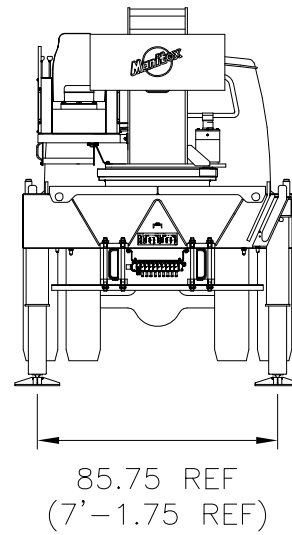
**RANGE DIAGRAM  
- FULLY RETRACTED OUTRIGGER CONFIGURATION -**



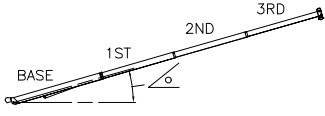
**OPERATING RADIUS FROM CENTERLINE OF ROTATION IN FEET**

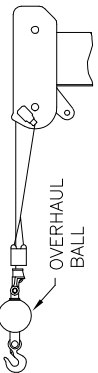
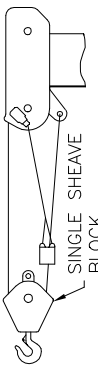

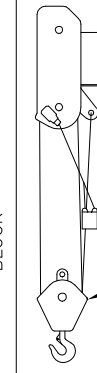


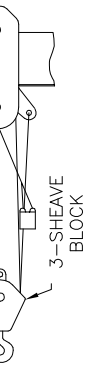

**NOTE :** LIFTING PERSONNEL WITH CRANE IN THIS OUTRIGGER CONFIGURATION IS STRICTLY PROHIBITED. USE ONLY FULLY EXTENDED OUTRIGGER CONFIGURATION WHEN LIFTING PERSONNEL.

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



**- FULLY RETRACTED OUTRIGGER CONFIGURATION -**

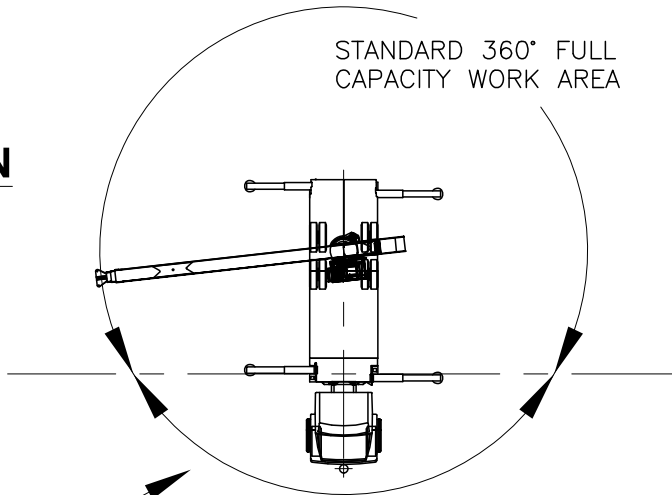
LOAD RATINGS IN LBS WITH ALL OUTRIGGERS FULLY RETRACTED LMI CODE #13												
OPERATING RADIUS FT	LOADED BOOM ANGLE		BOOM LENGTH AND MARKER									
					A		B		C		D	
	°	30.5 FT	°	52 FT	°	68 FT	°	84 FT	°	100 FT		
5	74	80000										
8	68	44230										
10	64	28970	76	29900								
12	60	20950	73	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	FIXED		<p style="text-align: center;"><b>NO JIBS ARE TO BE ERECTED IN THIS OUTRIGGER CONFIGURATION</b></p>				
	890 LBS	530 LBS	400 LBS	330 LBS	280 LBS	TELESCOPIC						DEDUCTIONS FOR STOWED JIBS

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	
								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
10000 LBS	20000 LBS	30000 LBS	40000 LBS	50000 LBS	60000 LBS	70000 LBS	80000 LBS	5/8" 6 X 25 IWRC (3.5:1 SF) - 35000 LBS MIN BREAKING STRENGTH

## AREA OF OPERATION

### WARNING:

THE MACHINE MUST BE LEVEL AND THE FRONT BUMPER STABILIZER MUST BE SET WHEN OPERATING IN THIS AREA.



### 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 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 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.