

# Load Rating Chart



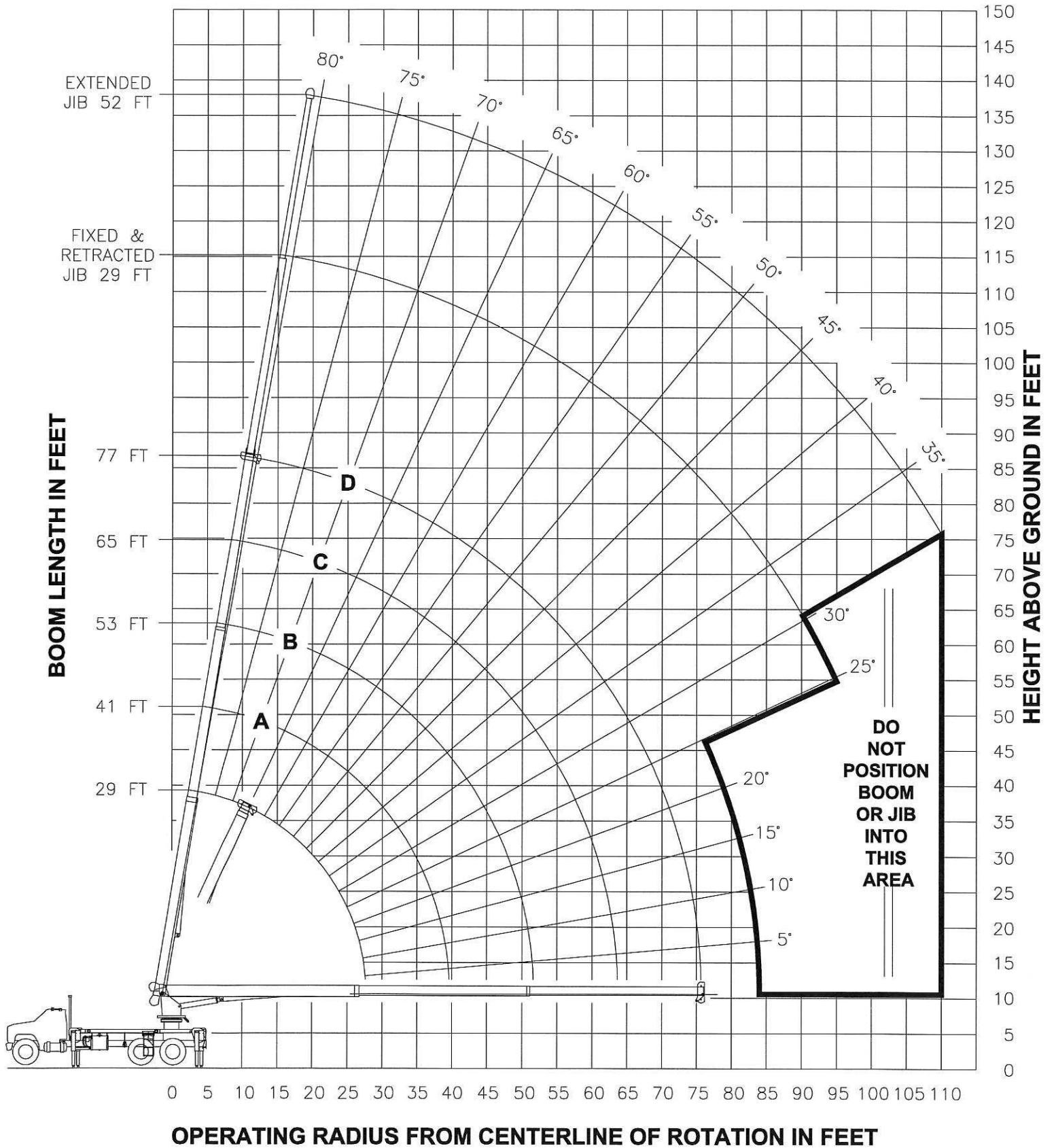
***Model 2277S***



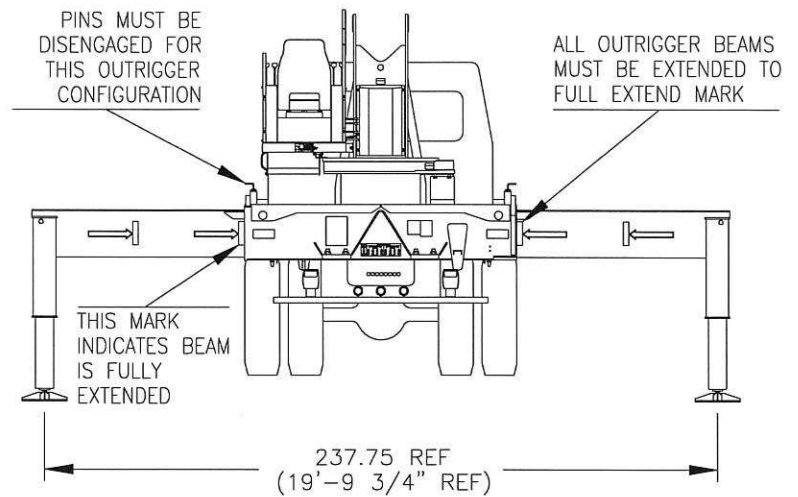
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**NOTE:** Additional copies of this Load Rating Chart can be purchased from your Manitex Distributor. When ordering, use the part number shown in the bottom left corner of this page.

# **RANGE DIAGRAM** **- FULLY EXTENDED OUTRIGGER CONFIGURATION -**



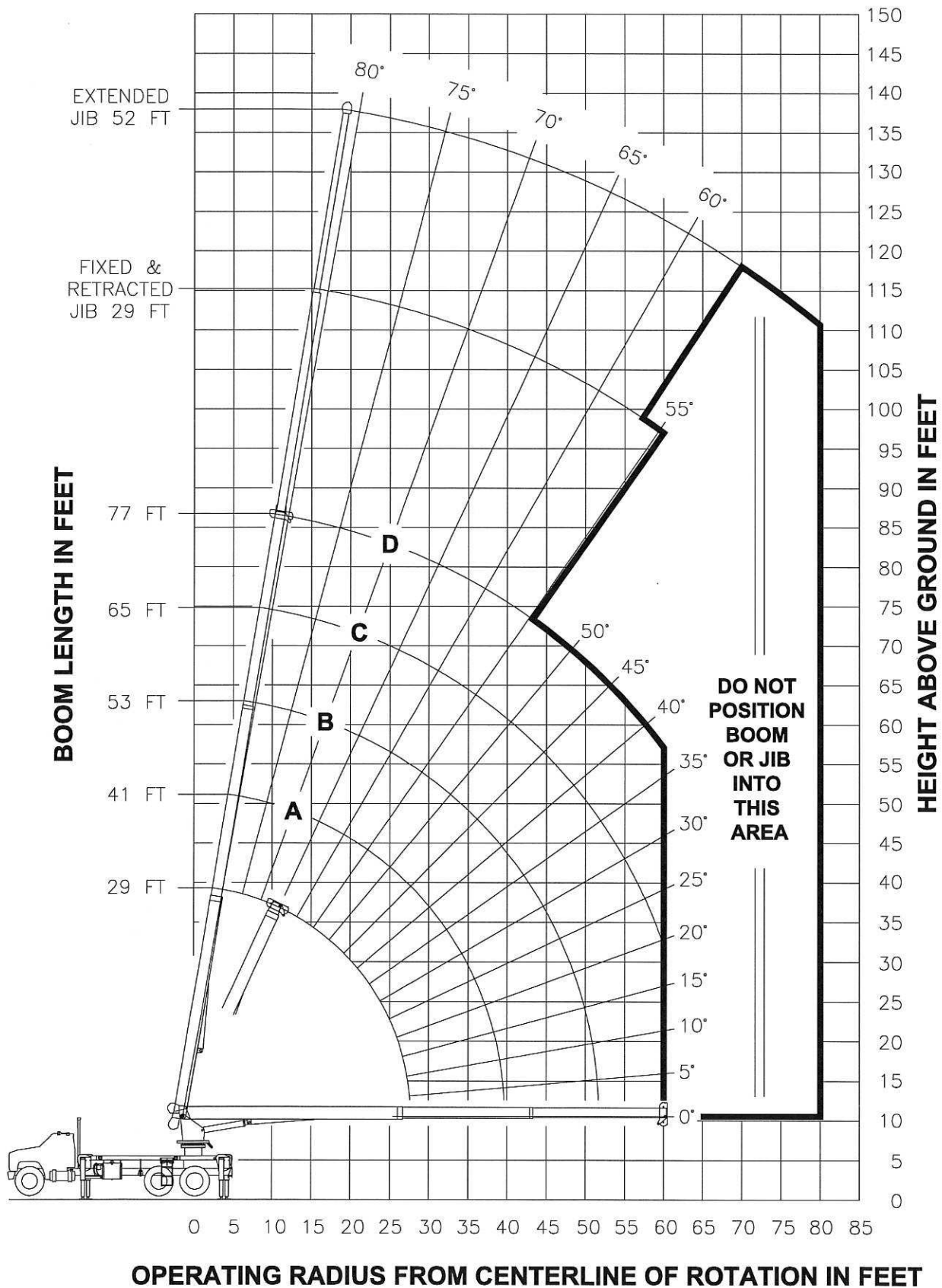
**USE THIS CHART ONLY  
WHEN ALL OUTRIGGERS  
ARE FULLY EXTENDED**



## MAIN BOOM AND JIB LIFTING CAPACITIES

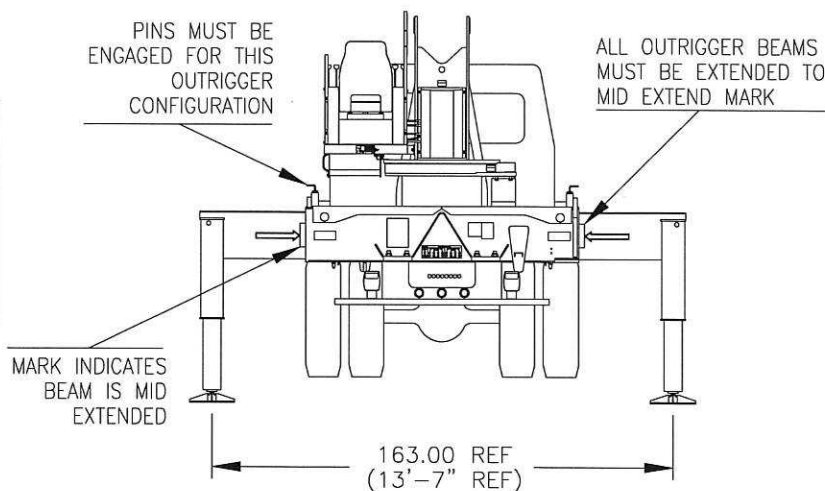
MAIN BOOM RATED LOADS											JIB RATED LOADS FOR ALL BOOM LENGTHS							
LOAD RADIUS (FT)	29 FT (RETR) LMI CODE 1		41 FT (A) LMI CODE 1		53 FT (B) LMI CODE 1		65 FT (C) LMI CODE 1		77 FT (D) LMI CODE 1		LOAD RADIUS (FT)	29 FT FIXED JIB LMI CODE 2		29 FT TELE JIB LMI CODE 3		52 FT TELE JIB LMI CODE 4		
	LOADED BOOM ANGLE (DEG)	LIFTING CAPACITY (LBS)	LOADED BOOM ANGLE (DEG)	LIFTING CAPACITY (LBS)	LOADED BOOM ANGLE (DEG)	LIFTING CAPACITY (LBS)	LOADED BOOM ANGLE (DEG)	LIFTING CAPACITY (LBS)	LOADED BOOM ANGLE (DEG)	LIFTING CAPACITY (LBS)		LOADED BOOM ANGLE (DEG)	LIFTING CAPACITY (LBS)	LOADED BOOM ANGLE (DEG)	LIFTING CAPACITY (LBS)	LOADED BOOM ANGLE (DEG)	LIFTING CAPACITY (LBS)	
5	80	44000									5							
8	74	31040									8							
10	69	26090	76	22000							10							
12	65	22570	73	21220	78	18500					12							
14	60	19910	70	18650	75	16850	79	14340			14							
17	53	16880	66	15800	72	14430	76	12540	79	11500	17							
20	45	14070	61	13710	69	12560	73	11060	77	9800	20							
25	27	10780	52	10970	63	10200	69	9120	73	8270	25	79	5070	79	4820			
30			42	8760	56	8500	64	7840	69	7030	30	77	4530	77	4270	80	3000	
35			30	7120	49	7220	59	6670	65	6050	35	74	4050	74	3790	78	2900	
40					41	5930	53	5750	61	5240	40	71	3640	71	3330	76	2640	
45					31	4850	47	4920	56	4570	45	68	3220	68	2900	74	2410	
50					17	3980	40	4060	51	4010	50	65	2860	65	2540	71	2200	
55							33	3880	46	3430	55	62	2550	62	2220	69	2040	
60							22	2840	40	2890	60	59	2270	59	1940	67	1840	
65									34	2440	65	55	2040	55	1710	64	1670	
70									25	2070	70	51	1830	51	1490	61	1510	
75									13	1750	75	47	1650	47	1300	58	1350	
80											80	43	1480	43	1130	55	1220	
85											85	39	1290	39	970	52	1060	
90											90	34	1080	34	760	49	940	
95											95	29	900	29	580	46	830	
100											100	21	740			43	720	
105											105					39	630	
110											110					35	520	
	430 LBS		310 LBS		240 LBS		190 LBS		170 LBS		DEDUCTIONS FOR STOWED FIXED JIB							
	680 LBS		480 LBS		370 LBS		300 LBS		260 LBS		DEDUCTIONS FOR STOWED TELESCOPIC JIB							

# **RANGE DIAGRAM** **- MID EXTEND OUTRIGGER CONFIGURATION -**



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

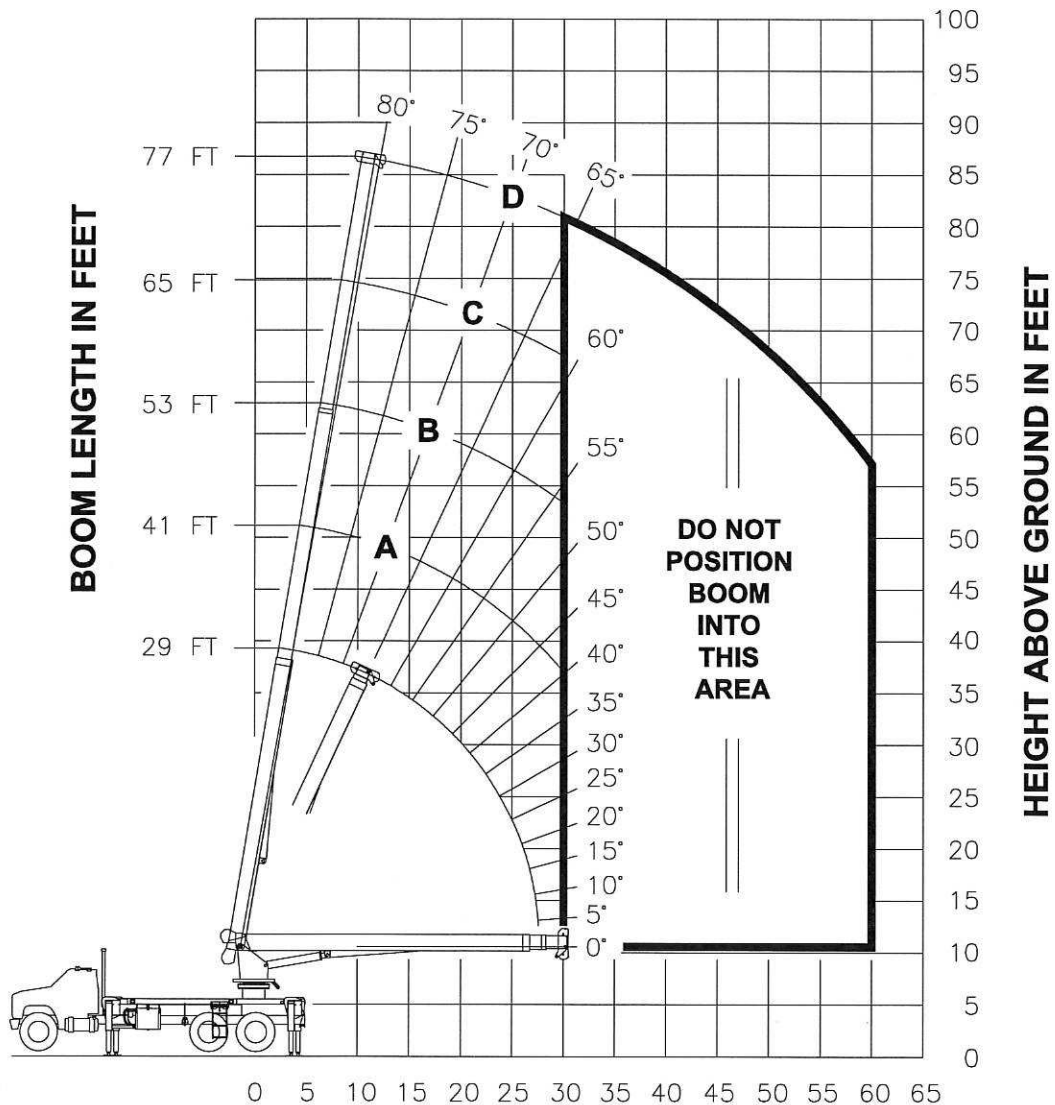
**USE THIS CHART ONLY WHEN  
ALL OUTRIGGERS ARE IN THE  
MID EXTEND POSITION**



## MAIN BOOM AND JIB LIFTING CAPACITIES

MAIN BOOM RATED LOADS											JIB RATED LOADS FOR ALL BOOM LENGTHS						
LOAD RADIUS (FT)	29 FT (RETR) LMI CODE 9		41 FT (A) LMI CODE 9		53 FT (B) LMI CODE 9		65 FT (C) LMI CODE 9		77 FT (D) LMI CODE 9		LOAD RADIUS (FT)	29 FT FIXED JIB LMI CODE 10		29 FT TELE JIB LMI CODE 11		52 FT TELE JIB LMI CODE 12	
	LOADED BOOM ANGLE (DEG)	LIFTING CAPACITY (LBS)	LOADED BOOM ANGLE (DEG)	LIFTING CAPACITY (LBS)	LOADED BOOM ANGLE (DEG)	LIFTING CAPACITY (LBS)	LOADED BOOM ANGLE (DEG)	LIFTING CAPACITY (LBS)	LOADED BOOM ANGLE (DEG)	LIFTING CAPACITY (LBS)		LOADED BOOM ANGLE (DEG)	LIFTING CAPACITY (LBS)	LOADED BOOM ANGLE (DEG)	LIFTING CAPACITY (LBS)	LOADED BOOM ANGLE (DEG)	LIFTING CAPACITY (LBS)
5	80	44000									5						
8	74	31040									8						
10	69	26090	76	22000							10						
12	65	22570	73	21220	78	18500					12						
14	60	19590	70	18650	75	16850	79	14340			14						
17	53	13150	66	13400	72	13540	76	12540	79	11500	17						
20	45	9630	61	9860	69	9980	73	10060	77	9800	20						
25	27	6320	52	6550	63	6660	69	6730	73	6770	25	79	5070	79	4820		
30			42	4660	56	4770	64	4830	69	4870	30	77	4530	77	4270	80	3000
35			30	3440	49	3550	59	3610	65	3650	35	74	3680	74	3350	78	2900
40					41	2690	53	2750	61	2790	40	71	2810	71	2480	76	2640
45					31	2060	47	2120	56	2160	45	68	2170	68	1840	74	2260
50					17	1560	40	1630	51	1670	50	65	1670	65	1340	71	1760
55							33	1240	46	1280	55	62	1280	62	950	69	1360
60							22	920	40	970	60	59	960	59	630	67	1040
65											65	55	700			64	770
70											70					61	540
	430 LBS	310 LBS	240 LBS	190 LBS	170 LBS	DEDUCTIONS FOR STOWED FIXED JIB											
	680 LBS	480 LBS	370 LBS	300 LBS	260 LBS	DEDUCTIONS FOR STOWED TELESCOPIC JIB											

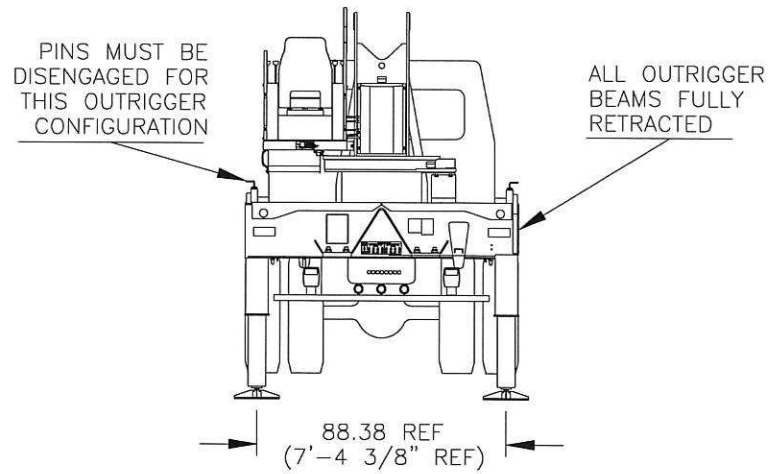
# **RANGE DIAGRAM** **- FULLY RETRACTED OUTRIGGER CONFIGURATION -**



**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**



## MAIN BOOM AND JIB LIFTING CAPACITIES

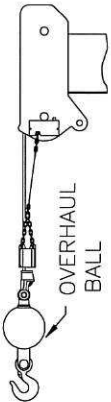
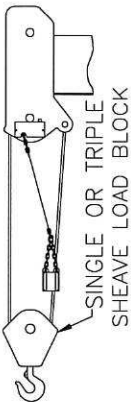
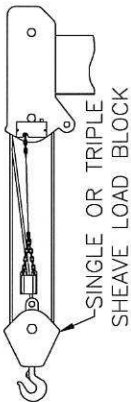
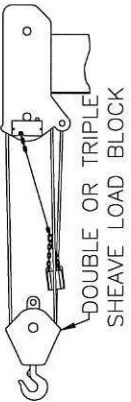
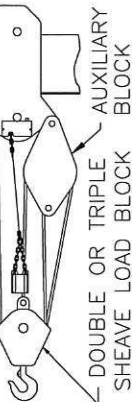

MAIN BOOM RATED LOADS										
	29 FT (RETR) LMI CODE 13		41 FT (A) LMI CODE 13		53 FT (B) LMI CODE 13		65 FT (C) LMI CODE 13		77 FT (D) LMI CODE 13	
	LOADED BOOM ANGLE (DEG)	LIFTING CAPACITY (LBS)	LOADED BOOM ANGLE (DEG)	LIFTING CAPACITY (LBS)	LOADED BOOM ANGLE (DEG)	LIFTING CAPACITY (LBS)	LOADED BOOM ANGLE (DEG)	LIFTING CAPACITY (LBS)	LOADED BOOM ANGLE (DEG)	LIFTING CAPACITY (LBS)
5	80	44000								
8	74	18120								
10	69	11650	76	11890						
12	65	8300	73	8510	78	8620				
14	60	6240	70	6440	75	6540	79	6610		
17	53	4310	66	4500	72	4600	76	4660	79	4700
20	45	3080	61	3270	69	3370	73	3420	77	3460
25	27	1790	52	1990	63	2080	69	2130	73	2170
30			42	1190	56	1280	64	1340	69	1370
	430 LBS		310 LBS		240 LBS		190 LBS		170 LBS	
	680 LBS		480 LBS		370 LBS		300 LBS		260 LBS	

NO JIBS ARE TO  
BE ERECTED IN  
THIS OUTRIGGER  
CONFIGURATION

DEDUCTIONS FOR STOWED FIXED JIB	
DEDUCTIONS FOR STOWED TELESCOPIC JIB	

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

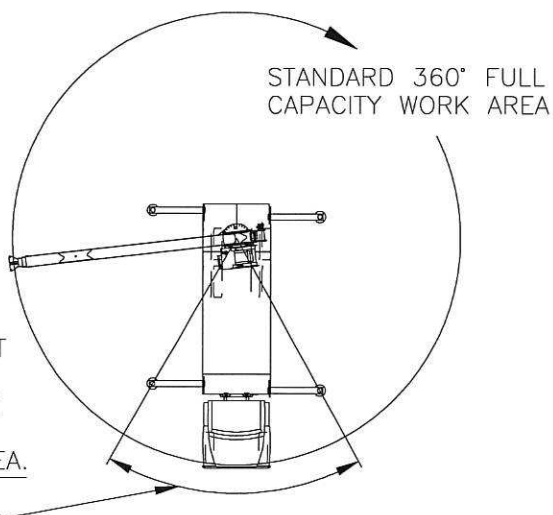


ALLOWABLE LINE PULL						<b>WARNING</b>
1 PART LINE	2 PART LINE	3 PART LINE	4 PART LINE	5 PART LINE	6 PART LINE	
						<p>ANTI-TWO-BLOCK SYSTEM MUST BE IN GOOD OPERATING CONDITION BEFORE OPERATING CRANE. REFER TO OWNER'S MANUAL.</p> <p>KEEP AT LEAST 3 WRAPS OF LOAD LINE ON DRUM AT ALL TIMES.</p>
8500 LBS	17000 LBS	25500 LBS	34000 LBS	42500 LBS	44000 LBS	
7700 LBS	15400 LBS	23100 LBS	30800 LBS	38500 LBS	44000 LBS	
						<p>9/16" - 6X25 IWRC (3.5:1 S.F.) 29750 LBS. BREAKING STRENGTH</p> <p>9/16" ROT RESISTANT (5.0:1 S.F.) 38500 LBS. BREAKING STRENGTH</p>

## 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 MANITEX

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



## 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 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.