



# Load Rating Chart

***Model 4077SHL***

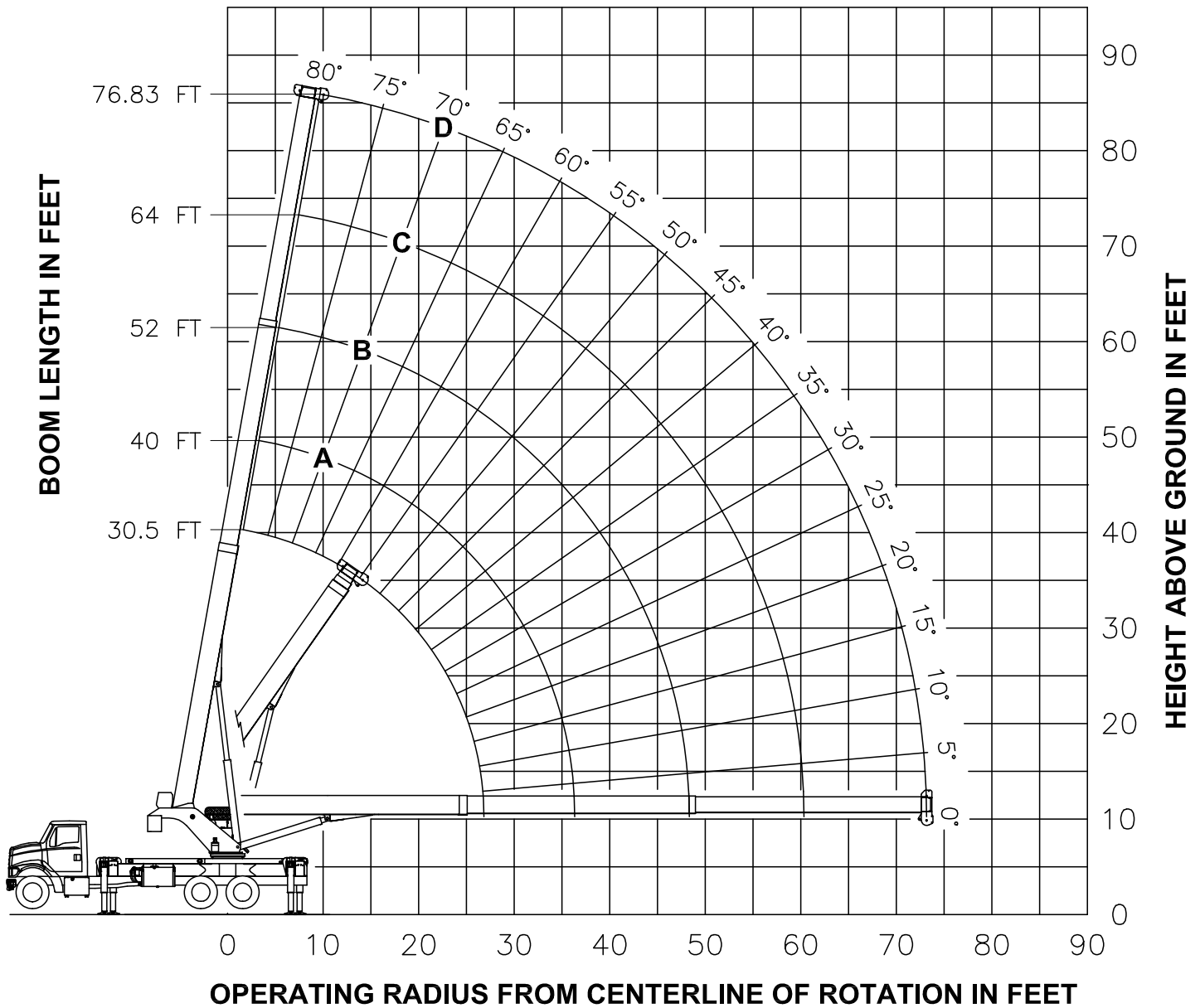


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**NOTE:** Additional copies of this Load Rating Chart can be purchased from your Manitex Distributor. When ordering, use the part number shown in the bottom left corner of this page.

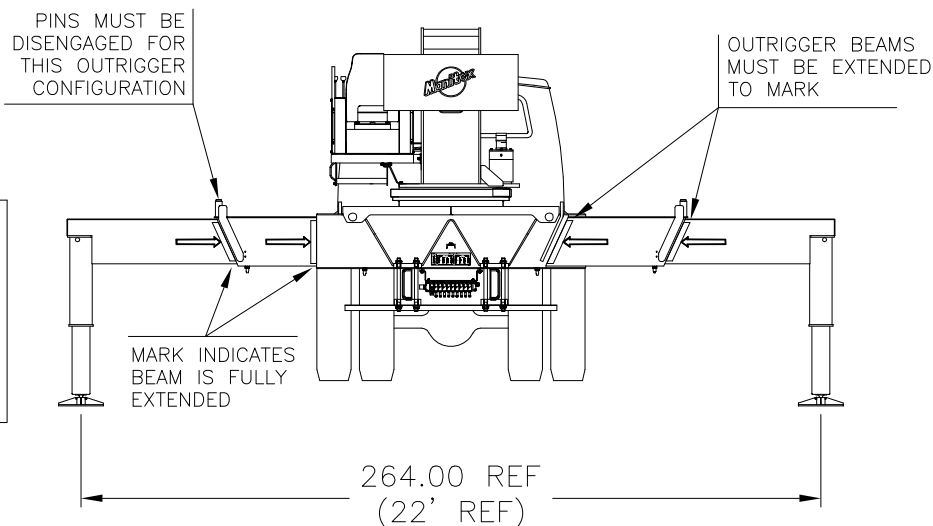


## RANGE DIAGRAM - FULLY EXTENDED OUTRIGGER CONFIGURATION -

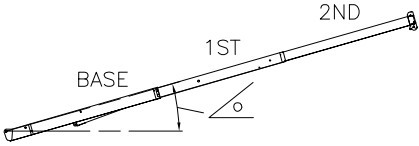




**USE THIS CHART ONLY  
WHEN ALL OUTRIGGERS  
ARE FULLY EXTENDED**

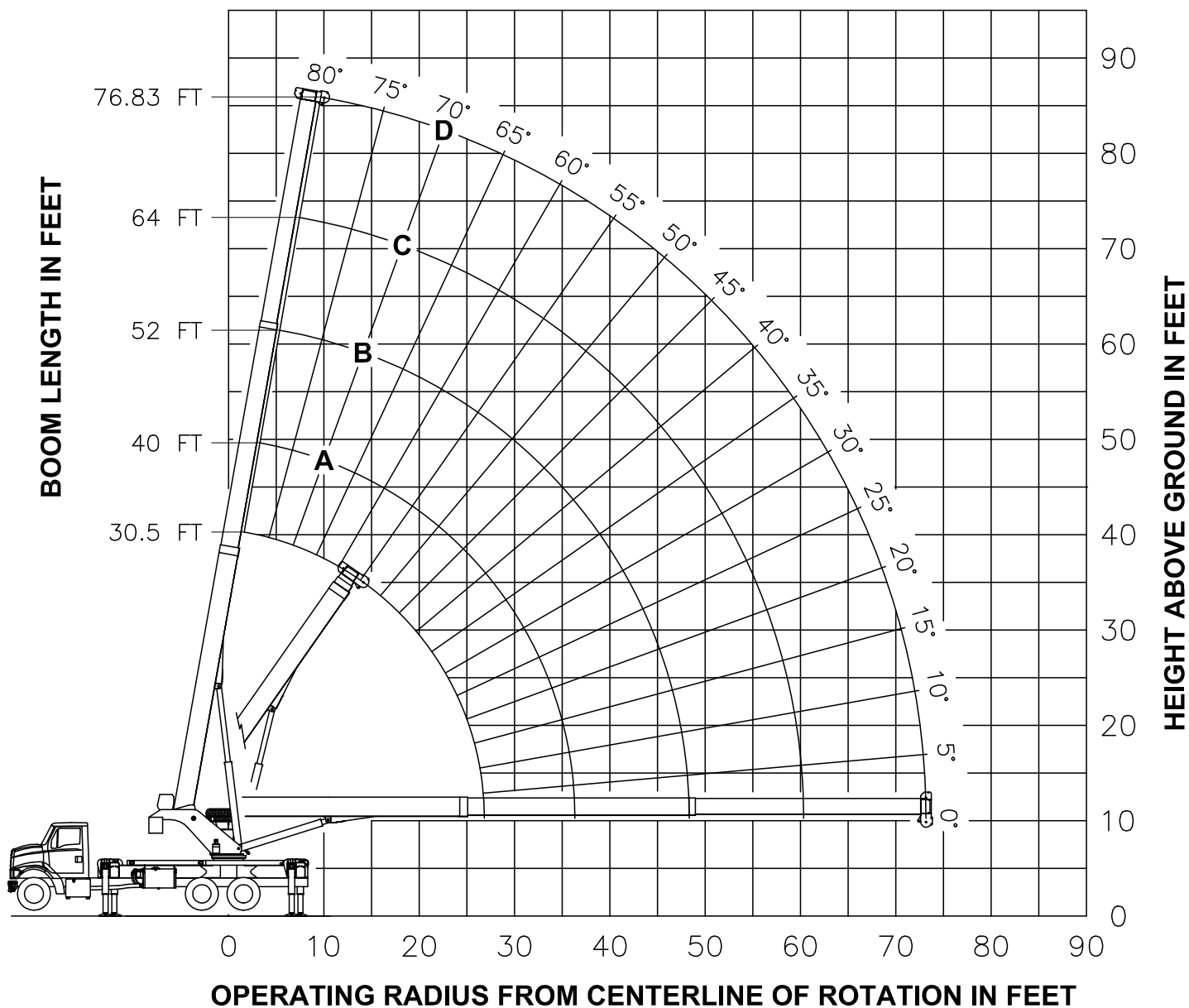


**- FULLY EXTENDED OUTRIGGER CONFIGURATION -**

MAIN BOOM LOAD RATINGS IN LBS WITH OUTRIGGERS PLACED AS SHOWN AND THE CRANE LEVEL										
LMI CODE #1										
O P E R A T I N G  R A D I U S  F T	LOADED BOOM ANGLE		BOOM LENGTH AND MARKER							
					A		B		C	
	°	30.5 FT	°	40 FT	°	52 FT	°	64 FT	°	76.83 FT
5	75	80000								
8	69	61760	74	55500	79	47500				
10	65	53930	71	50920	76	47500	80	38000		
12	61	48090	68	45240	74	42760	78	35050	80	28410
15	54	41110	64	38890	71	36570	75	30890	78	25500
20	41	33020	55	31330	65	29590	70	25850	74	21670
25	21	25700	46	26330	58	24750	65	21930	70	18870
30			34	20490	51	20730	60	19000	66	16470
35			16	16100	44	16380	55	16500	62	14540
40					34	13340	49	13470	58	12950
45					22	11090	42	11230	53	11300
50							35	9510	48	9590
55							25	8140	43	8230
60							7	7000	36	7120
65									29	6200
70									19	5420



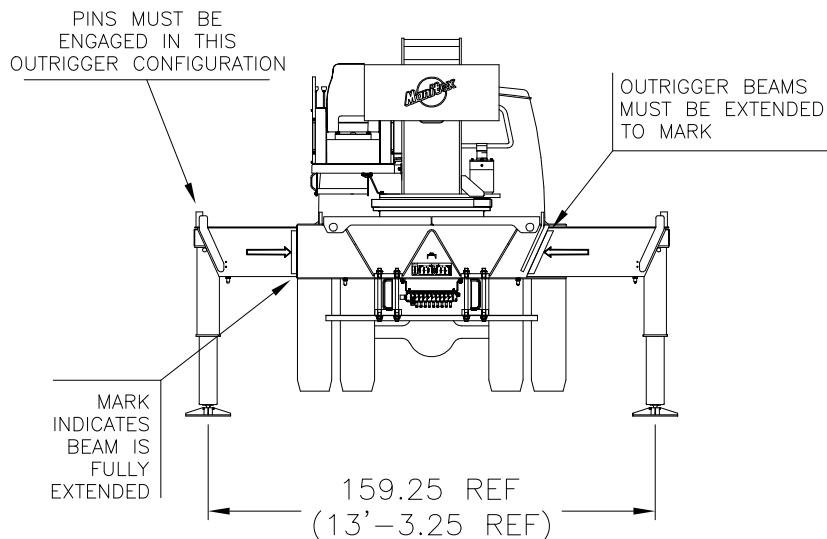
## RANGE DIAGRAM - INTERMEDIATE SPREAD CONFIGURATION - (MID EXTEND)



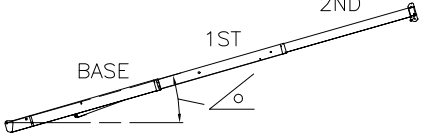
**NOTE :** LIFTING PERSONNEL WITH CRANE IN THIS OUTRIGGER CONFIGURATION IS STRICTLY PROHIBITED. USE ONLY FULLY EXTENDED OUTRIGGER CONFIGURATION WHEN LIFTING PERSONNEL.



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

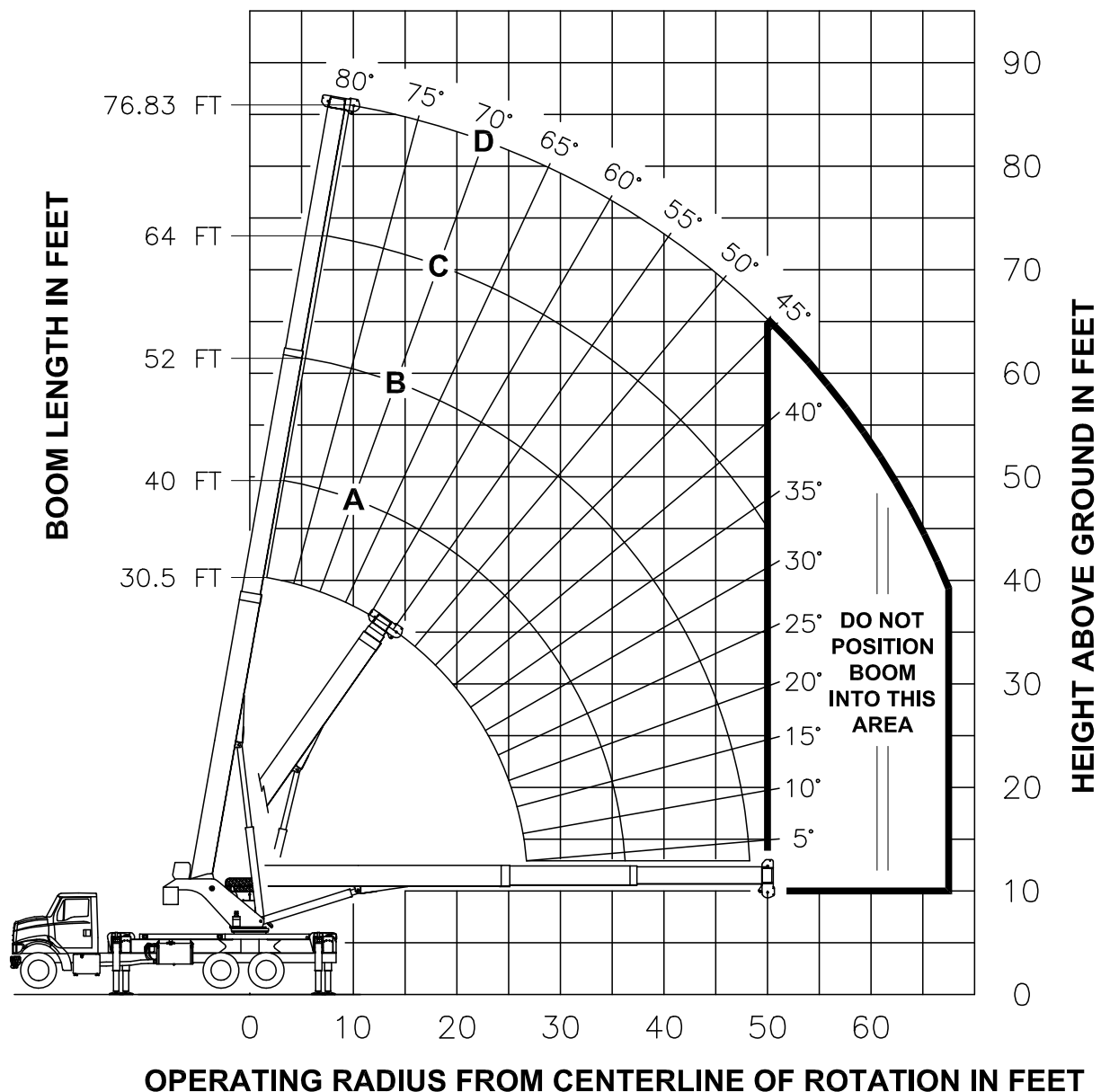


## - INTERMEDIATE OUTRIGGER CONFIGURATION -

MAIN BOOM LOAD RATINGS IN LBS WITH OUTRIGGERS PLACED AS SHOWN AND THE CRANE LEVEL										
LMI CODE #9										
OPERATING RADIUS FT	LOADED BOOM ANGLE		BOOM LENGTH AND MARKER							
					A		B		C	
	°	30.5 FT	°	40 FT	°	52 FT	°	64 FT	°	76.83 FT
5	75	80000								
8	69	61760	74	55500	79	47500				
10	65	53930	71	50920	76	47500	80	38000		
12	61	48090	68	45240	74	42760	78	35050	80	28410
15	54	35420	64	35840	71	36140	75	30890	78	25500
20	41	20660	55	21030	65	21270	70	21410	74	21510
25	21	13880	46	14270	58	14490	65	14620	70	14700
30			34	10380	51	10610	60	10730	66	10800
35			16	7830	44	8090	55	8210	62	8280
40					34	6320	49	6440	58	6510
45					22	4990	42	5130	53	5200
50							35	4110	48	4190
55							25	3300	43	3380
60							7	2610	36	2730
65									29	2180
70									19	1710



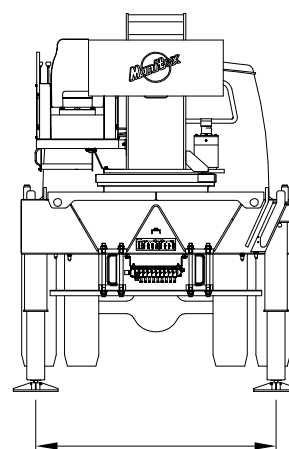
## RANGE DIAGRAM - FULLY RETRACTED OUTRIGGER CONFIGURATION -



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

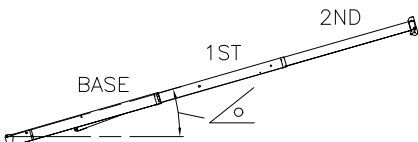


**USE THIS CHART ONLY  
WHEN ALL OUTRIGGERS  
ARE FULLY RETRACTED**



85.75 REF  
(7'-1.75 REF)

### - FULLY RETRACTED OUTRIGGER CONFIGURATION -

MAIN BOOM LOAD RATINGS IN LBS WITH OUTRIGGERS PLACED AS SHOWN AND THE CRANE LEVEL										
LMI CODE #13										
O P E R A T I N G R A D I U S F T	LOADED BOOM ANGLE		BOOM LENGTH AND MARKER							
				<b>A</b>		<b>B</b>		<b>C</b>		<b>D</b>
	°	30.5 FT	°	40 FT	°	52 FT	°	64 FT	°	76.83 FT
	5	75	80000							
8	69	44100	74	44560	79	44890				
10	65	29170	71	29550	76	29810	80	29980		
12	61	21330	68	21660	74	21890	78	22030	80	22130
15	54	14690	64	15000	71	15200	75	15320	78	15410
20	41	9000	55	9290	65	9480	70	9590	74	9650
25	21	5900	46	6240	58	6420	65	6520	70	6580
30			34	4320	51	4520	60	4610	66	4670
35			16	2980	44	3210	55	3310	62	3370
40					34	2260	49	2360	58	2420
45					22	1520	42	1640	53	1700
50							35	1070	48	1130
55										

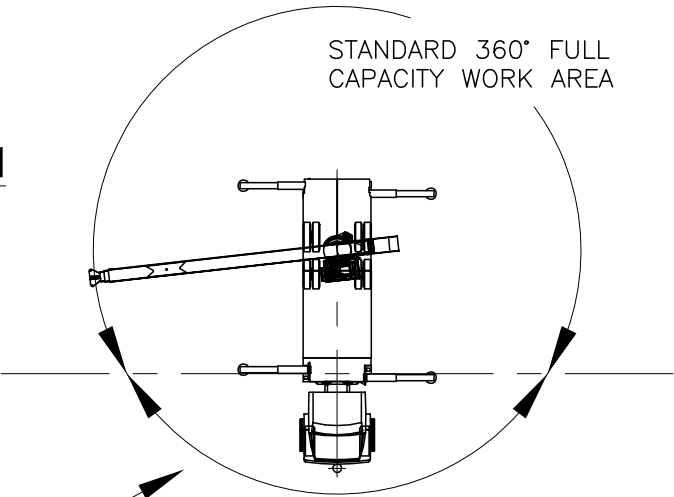


ALLOWABLE LINE PULL								WARNING
1 PART LINE	2 PART LINE	3 PART LINE	4 PART LINE	5 PART LINE	6 PART LINE	7 PART LINE	8 PART LINE	
9080 LBS	18160 LBS	27240 LBS	36320 LBS	45400 LBS	54480 LBS	63560 LBS	72640 LBS	
10000 LBS	20000 LBS	30000 LBS	40000 LBS	50000 LBS	60000 LBS	70000 LBS	80000 LBS	ANTI-TWO-BLOCK 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

**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
#5	— PERSONNEL LIFTING PLATFORM ON MAIN BOOM — — — — —	FULLY EXTENDED
#9	— MAIN BOOM — — — — —	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. 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.
5. 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.
6. 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.
7. 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.



## **INFORMATION**

1. DEDUCTIONS MUST BE MADE FROM RATED LOADS FOR 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.