

# Load Rating Chart

***Model 50155SHL***



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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.

## LMI OPERATING CODES

CODE	CRANE CONFIGURATION	OUTRIGGER CONFIGURATION	AREA OF OPERATION
#1	— MAIN BOOM — — — — —	FULLY EXTENDED — — — — —	OVER REAR
#3	— MAIN BOOM — — — — —	FULLY EXTENDED — — — — —	FULL 360°
#4	— MAIN BOOM — — — — —	MID POSITION — — — — —	FULL 360°
#7	— FIXED JIB 0° OFFSET — — — — —	FULLY EXTENDED — — — — —	OVER REAR
#8	— FIXED JIB 0° OFFSET — — — — —	FULLY EXTENDED — — — — —	FULL 360°
#9	— FIXED JIB 15° OFFSET — — — — —	FULLY EXTENDED — — — — —	OVER REAR
#10	— FIXED JIB 15° OFFSET — — — — —	FULLY EXTENDED — — — — —	FULL 360°
#11	— FIXED JIB 30° OFFSET — — — — —	FULLY EXTENDED — — — — —	OVER REAR
#12	— FIXED JIB 30° OFFSET — — — — —	FULLY EXTENDED — — — — —	FULL 360°
#25	— PERSONNEL LIFTING MAIN BOOM — — — — —	FULLY EXTENDED — — — — —	FULL 360°
#26	— PERSONNEL LIFTING FIXED JIB 0° OFFSET — — — — —	FULLY EXTENDED — — — — —	FULL 360°
#27	— PERSONNEL LIFTING FIXED JIB 15° OFFSET — — — — —	FULLY EXTENDED — — — — —	FULL 360°
#28	— PERSONNEL LIFTING FIXED JIB 30° OFFSET — — — — —	FULLY EXTENDED — — — — —	FULL 360°

### 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 THE LOAD 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.

## **WARNING (CONTINUED)**

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.
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**

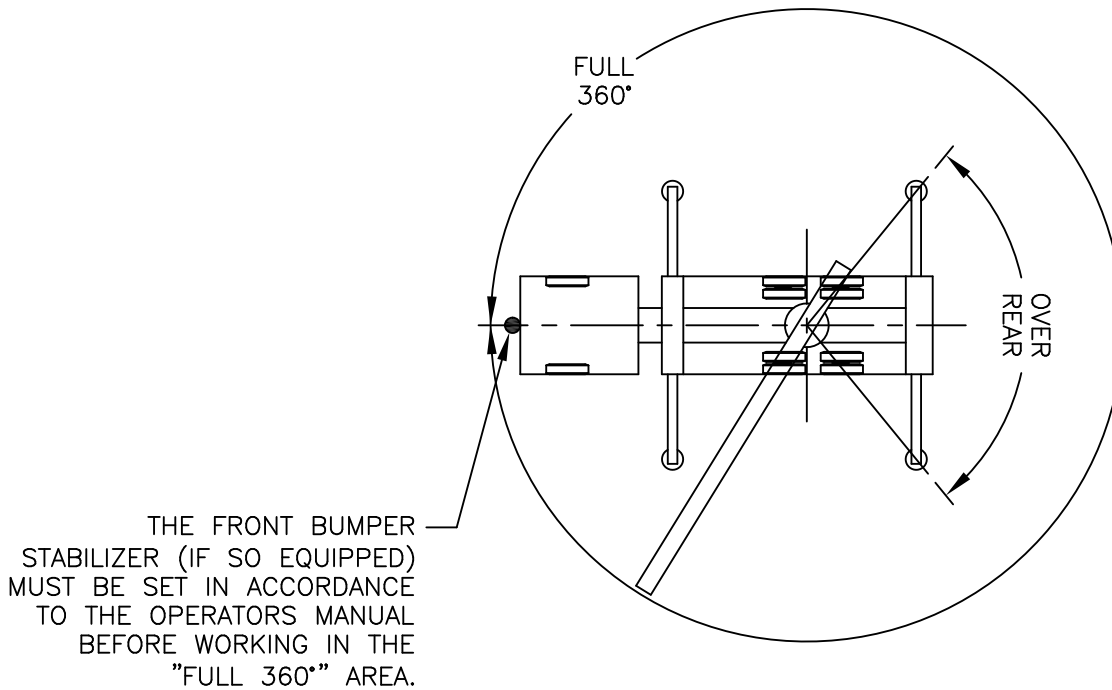
1. DEDUCTIONS MUST BE MADE FROM RATED LOADS FOR JIB, OPTIONAL ATTACHMENTS, HOOKS AND LOADBLOCKS (SEE DEDUCTION CHART). WEIGHTS OF SLINGS AND ALL OTHER LOAD HANDLING DEVICES SHALL BE CONSIDERED A PART OF THE LOAD.
2. LOAD RATINGS ABOVE THE HEAVY LINE ARE STRUCTURALLY LIMITED CAPACITIES. LOAD RATINGS BELOW 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 IS THE INCLUDED ANGLE BETWEEN THE HORIZONTAL AND LONGITUDINAL AXES OF THE BOOM BASE AFTER LIFTING RATED LOAD AT RATED RADIUS.

ALLOWABLE LINE PULL										<b>WARNING</b>  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.
1 PART LINE	2 PART LINE	3 PART LINE	4 PART LINE	5 PART LINE	6 PART LINE	7 PART LINE	8 PART LINE	9 PART LINE	10 PART LINE	
10000 LBS	20000 LBS	30000 LBS	40000 LBS	50000 LBS	60000 LBS	70000 LBS	80000 LBS	90000 LBS	100000 LBS	
										5/8" XLT4 LOW-TORQUE (3.5:1 SF) - 35000 LBS MIN BREAKING STRENGTH

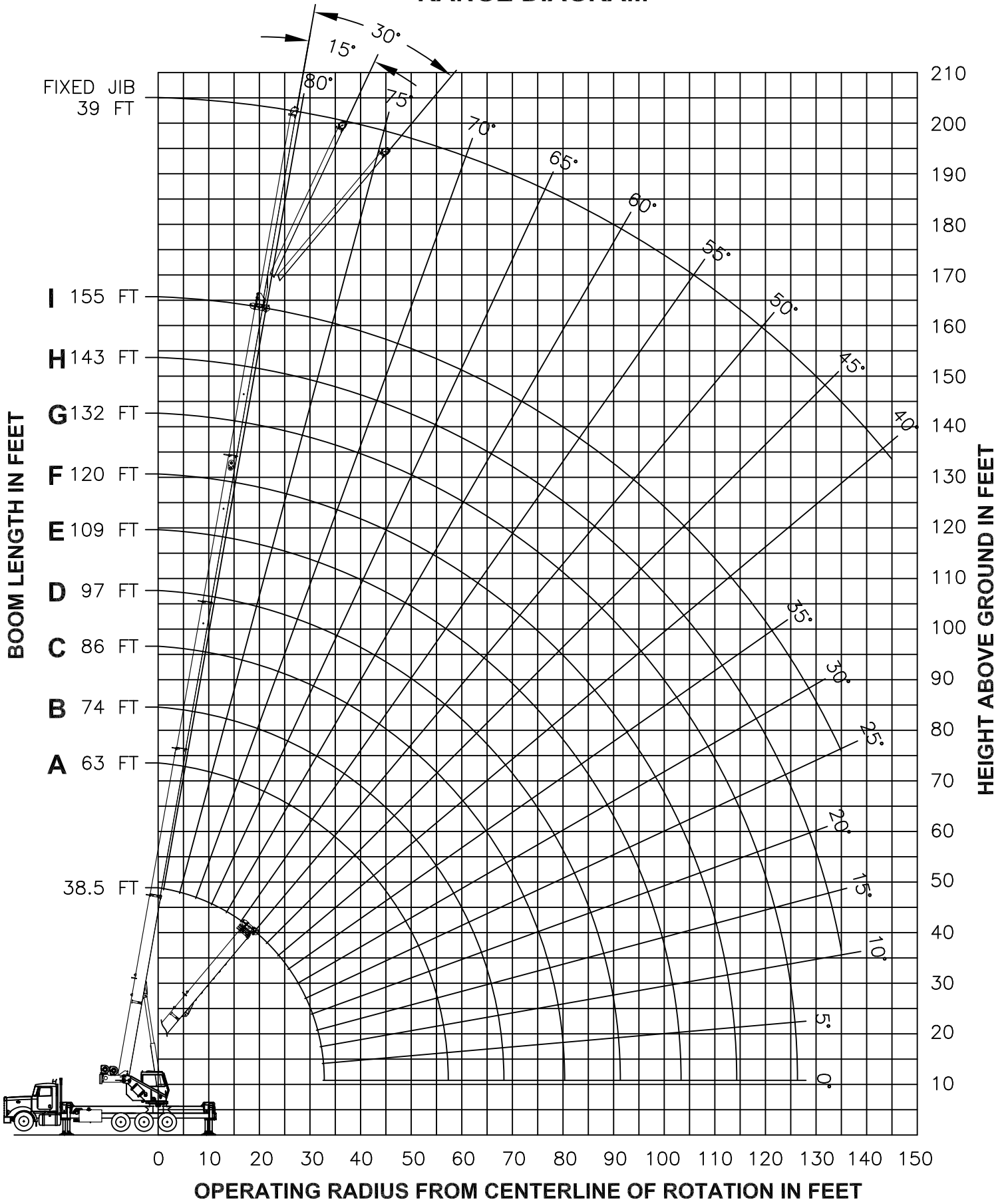
## AREA OF OPERATION



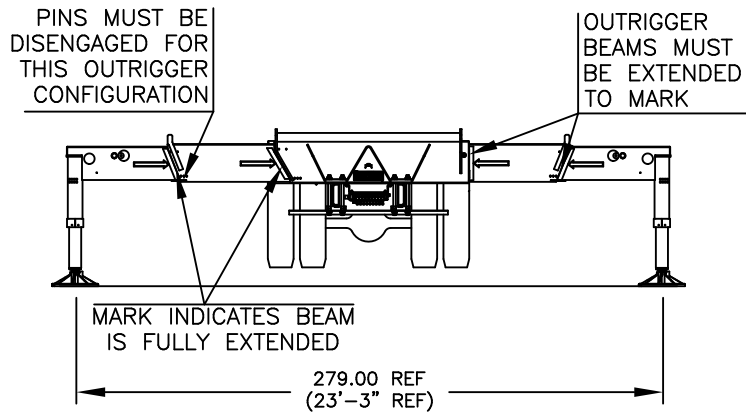
### DEDUCTIONS FROM RATED LOADS FOR LOAD HANDLING DEVICES SUPPLIED BY MANITEX

AUXILIARY BLOCK	-----	50 LBS
ROOSTER SHEAVE	-----	70 LBS
LIFTING FROM MAIN BOOM WITH JIB STOWED OR ERECTED	-----	SEE LOAD CHART
OVERHAUL BALL	-----	SEE MANUFACTURER NAMEPLATE
LOAD BLOCK	-----	SEE MANUFACTURER NAMEPLATE

# - RANGE DIAGRAM -



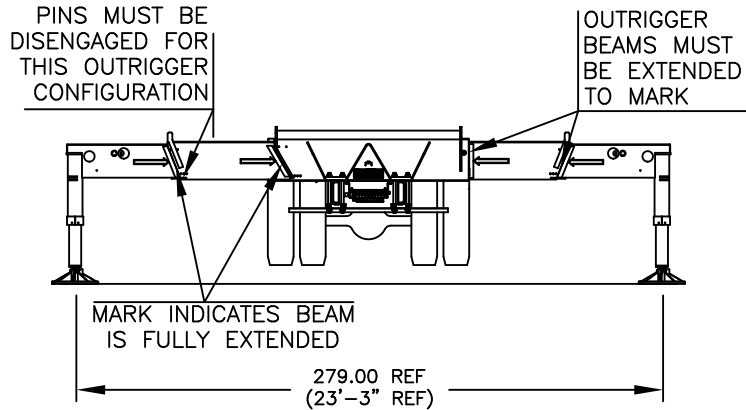
**USE THIS CHART ONLY WHEN  
ALL OUTRIGGER BEAMS ARE  
FULLY EXTENDED**



**MAIN BOOM LIFTING CAPACITIES**

LOAD RADIUS (FT)	BOOM LENGTH 38.5 FT			BOOM LENGTH 63 FT (A)			BOOM LENGTH 74 FT (B)			BOOM LENGTH 86 FT (C)			BOOM LENGTH 97 FT (D)			LOAD RADIUS (FT)
	LOADED BOOM ANGLE (DEG)	CODE 1 OVER REAR (LBS)	CODE 3 FULL 360° (LBS)	LOADED BOOM ANGLE (DEG)	CODE 1 OVER REAR (LBS)	CODE 3 FULL 360° (LBS)	LOADED BOOM ANGLE (DEG)	CODE 1 OVER REAR (LBS)	CODE 3 FULL 360° (LBS)	LOADED BOOM ANGLE (DEG)	CODE 1 OVER REAR (LBS)	CODE 3 FULL 360° (LBS)	LOADED BOOM ANGLE (DEG)	CODE 1 OVER REAR (LBS)	CODE 3 FULL 360° (LBS)	
6	73.5	100000	100000													6
8	70.5	85400	85400													8
10	67	75100	75100	77	40000	40000										10
12	64	67100	67100	75	40000	40000	78	37700	37700							12
15	58.5	57700	57700	72.5	40000	40000	75.5	36340	36340	78.5	31000	31000				15
20	49	46200	46200	67.5	38250	38250	72	33380	33380	75	28200	28200	77.5	24120	24120	20
25	38	37290	37290	62.5	35040	35040	67.5	30620	30620	71.5	25970	25970	74.5	22200	22200	25
30	22.5	28580	28580	57	30700	30700	63	28020	28020	68	23950	23950	71	20480	20480	30
35				51.5	25340	25140	58.5	25580	25470	64	22080	22080	68	18670	18670	35
40				45	21000	19460	54	21440	19780	60.5	20370	20010	65	17210	17210	40
45				38	17940	15470	48.5	18200	15780	56.5	18380	16010	61.5	15920	15920	45
50				29.5	15320	12500	43	15590	12820	52	15780	13040	58	14720	13190	50
55				17	12420	10180	37	13440	10530	47.5	13640	10760	54	13620	10900	55
60							29	11640	8700	42.5	11850	8940	50	11980	9090	60
65							19	10030	7200	37	10330	7460	46	10460	7610	65
70										30.5	9010	6220	41.5	9150	6380	70
75										22.5	7860	5170	36.5	8020	5340	75
80										7.5	4360	4230	30.5	7020	4450	80
85													23.5	6120	3670	85
90													12	4140	2970	90
95																95
STOWED JIB		960 LBS			590 LBS			500 LBS			430 LBS			390 LBS		
ERECTED JIB		2620 LBS			2270 LBS			2190 LBS			2130 LBS			2080 LBS		
DEDUCTIONS FOR JIB FROM MAIN BOOM CAPACITIES																

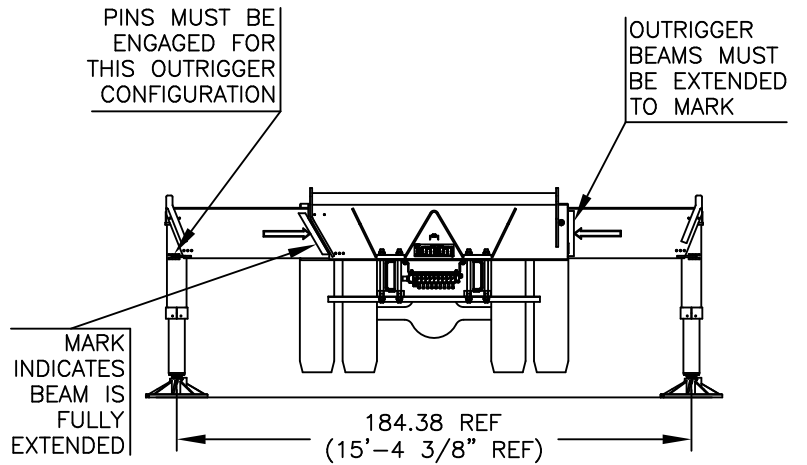
**USE THIS CHART ONLY WHEN  
ALL OUTRIGGER BEAMS ARE  
FULLY EXTENDED**



**MAIN BOOM LIFTING CAPACITIES**

LOAD RADIUS (FT)	BOOM LENGTH 109 FT (E)			BOOM LENGTH 120 FT (F)			BOOM LENGTH 132 FT (G)			BOOM LENGTH 143 FT (H)			BOOM LENGTH 155 FT (I)			LOAD RADIUS (FT)
	LOADED BOOM ANGLE (DEG)	CODE 1 OVER REAR (LBS)	CODE 3 FULL 360° (LBS)	LOADED BOOM ANGLE (DEG)	CODE 1 OVER REAR (LBS)	CODE 3 FULL 360° (LBS)	LOADED BOOM ANGLE (DEG)	CODE 1 OVER REAR (LBS)	CODE 3 FULL 360° (LBS)	LOADED BOOM ANGLE (DEG)	CODE 1 OVER REAR (LBS)	CODE 3 FULL 360° (LBS)	LOADED BOOM ANGLE (DEG)	CODE 1 OVER REAR (LBS)	CODE 3 FULL 360° (LBS)	
25	77	18000	18000	79	16260	16260										25
30	74	17000	17000	76.5	15280	15280	78	13500	13500	79.5	11500	11500				30
35	71.5	15920	15920	74	14270	14270	76	12900	12900	77.5	11300	11300	79	9000	9000	35
40	68.5	14700	14700	71.5	13310	13310	74	12000	12000	75.5	11000	11000	77	9000	9000	40
45	65.5	13570	13570	69	12410	12410	71.5	11300	11300	73.5	10460	10460	75.5	9000	9000	45
50	62.5	12540	12540	66	11600	11600	69	10550	10550	71.5	9460	9460	73.5	8800	8800	50
55	59.5	11580	11020	63.5	10840	10840	67	9610	9610	69.5	8880	8880	71.5	8320	8320	55
60	56	10690	9210	60.5	9960	9290	64.5	9000	9000	67.5	8330	8330	69.5	7820	7820	60
65	53	9870	7730	57.5	9230	7810	62	8430	7880	65	7800	7800	67.5	7340	7340	65
70	49	9150	6500	54.5	8550	6580	59	7880	6650	62.5	7300	6700	65.5	6880	6750	70
75	45.5	8130	5460	51.5	7930	5540	56.5	7390	5610	60.5	6820	5660	63.5	6410	5710	75
80	41.5	7130	4570	48	7210	4660	53.5	6880	4730	58	6360	4780	61.5	5980	4820	80
85	37	6250	3800	44.5	6330	3890	50.5	6360	3960	55.5	5940	4010	59	5560	4050	85
90	32	5470	3130	41	5550	3220	47.5	5620	3290	52.5	5540	3340	57	5170	3380	90
95	25.5	4750	2530	36.5	4850	2630	44.5	4920	2700	50	4960	2750	54.5	4780	2790	95
100	17	3830	1990	32	4210	2100	41	4280	2180	47	4330	2230	52	4370	2270	100
105				26	3630	1620	37	3710	1710	44	3760	1760	49.5	3800	1800	105
110				19	3030	1190	33	3190	1280	40.5	3240	1340	47	3280	1380	110
115							28	2700	900	37	2760	950	44	2800	1000	115
120							22	2260		33	2320		41	2370		120
125							12	860		28.5	1910		37.5	1960		125
130										23	1530		34	1590		130
135										14.5	1170		29.5	1240		135
140																140
STOWED JIB		340 LBS			310 LBS			280 LBS			260 LBS			240 LBS		
ERECTED JIB		2050 LBS			2020 LBS			1990 LBS			1970 LBS			1950 LBS		
DEDUCTIONS FOR JIB FROM MAIN BOOM CAPACITIES																

**USE THIS CHART ONLY WHEN  
ALL OUTRIGGER BEAMS ARE  
IN THE MID POSITION**

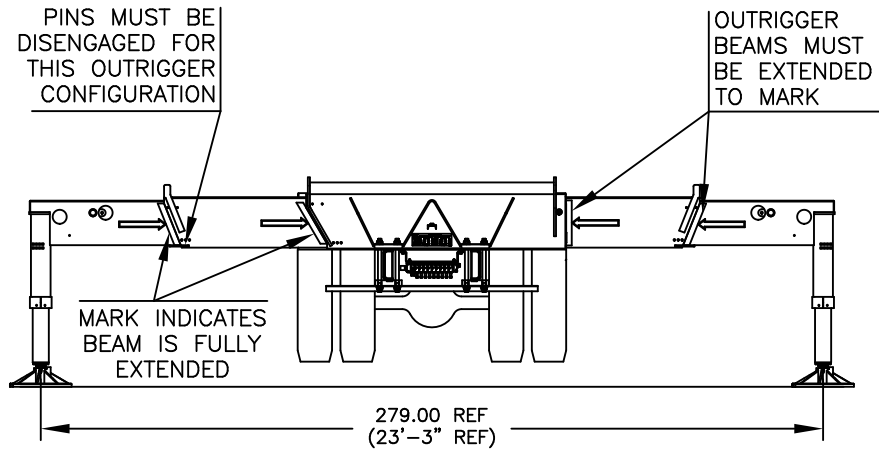


### MAIN BOOM LIFTING CAPACITIES

LMI OPERATING CODE 4																					
RAD (FT)		BOOM LENGTH																		RAD (FT)	
		38.5 FT		63 FT		74 FT		86 FT		97 FT		109 FT		120 FT		132 FT		143 FT			155 FT
BOOM ANGLE (DEG)	FULL 360° (LBS)	BOOM ANGLE (DEG)	FULL 360° (LBS)	BOOM ANGLE (DEG)	FULL 360° (LBS)	BOOM ANGLE (DEG)	FULL 360° (LBS)	BOOM ANGLE (DEG)	FULL 360° (LBS)	BOOM ANGLE (DEG)	FULL 360° (LBS)	BOOM ANGLE (DEG)	FULL 360° (LBS)	BOOM ANGLE (DEG)	FULL 360° (LBS)	BOOM ANGLE (DEG)	FULL 360° (LBS)	BOOM ANGLE (DEG)	FULL 360° (LBS)	BOOM ANGLE (DEG)	FULL 360° (LBS)
6	73.5	100000																			6
8	70.5	85400																			8
10	67	75100	77	40000																	10
12	64	67100	75	40000	78	37700															12
15	58.5	57700	72.5	40000	75.5	36340	78.5	31000													15
20	49	33300	67.5	34930	72	33380	75	28200	77.5	24120											20
25	38	21280	62.5	22740	67.5	23060	71.5	23300	74.5	22200	77	18000	79	16260							25
30	22.5	14570	57	16010	63	16300	68	16520	71	16670	74	16800	76.5	15280	78	13500	79.5	11500			30
35			51.5	11730	58.5	12010	64	12220	68	12360	71.5	12480	74	12570	76	12650	77.5	11300	79	9000	35
40			45	8770	54	9040	60.5	9240	65	9380	68.5	9490	71.5	9580	74	9650	75.5	9700	77	9000	40
45			38	6590	48.5	6860	56.5	7060	61.5	7200	65.5	7310	69	7390	71.5	7450	73.5	7510	75.5	7550	45
50			29.5	4910	43	5190	52	5390	58	5530	62.5	5630	66	5710	69	5780	71.5	5830	73.5	5870	50
55			17	3550	37	3870	47.5	4080	54	4210	59.5	4310	63.5	4390	67	4450	69.5	4500	71.5	4540	55
60					29	2790	42.5	3010	50	3140	56	3240	60.5	3320	64.5	3380	67.5	3430	69.5	3470	60
65					19	1880	37	2120	46	2250	53	2360	57.5	2430	62	2500	65	2540	67.5	2580	65
70							30.5	1360	41.5	1510	49	1620	54.5	1690	59	1750	62.5	1800	65.5	1840	70
75													51.5	1060	56.5	1120	60.5	1160	63.5	1200	75
80																					80
STOWED		960		590		500		430		390		340		310		280		260		240	
ERECTED		2620		2270		2190		2130		2080		2050		2020		1990		1970		1950	
DEDUCTIONS FOR JIB FROM MAIN BOOM CAPACITIES (LBS)																					



**USE THIS CHART ONLY WHEN  
ALL OUTRIGGER BEAMS ARE  
FULLY EXTENDED**



### 39 FT FIXED JIB LIFTING CAPACITIES

LOAD RADIUS (FT)	LOADED BOOM ANGLE (DEG)	0° OFFSET		15° OFFSET			30° OFFSET		
		CODE 7 OVER REAR (LBS)	CODE 8 FULL 360° (LBS)	LOADED BOOM ANGLE (DEG)	CODE 9 OVER REAR (LBS)	CODE 10 FULL 360° (LBS)	LOADED BOOM ANGLE (DEG)	CODE 11 OVER REAR (LBS)	CODE 12 FULL 360° (LBS)
40	80	4000	4000						
45	78	4000	4000						
50	77.5	4000	4000	80	4000	4000			
55	75.5	4000	4000	78	4000	4000			
60	74	4000	4000	76.5	4000	4000	80	4000	4000
65	72.5	4000	4000	75	4000	4000	78	4000	4000
70	71	4000	4000	73.5	4000	4000	76	4000	4000
75	69.5	4000	4000	72	4000	4000	74.5	3880	3880
80	68	4000	4000	71	3940	3940	73	3730	3730
85	66.5	3860	3860	69.5	3780	3780	71.5	3570	3570
90	65	3720	3720	67.5	3630	3630	70	3430	3430
95	63.5	3430	3240	66	3480	3480	68	3290	3290
100	61.5	3150	2700	64.5	3340	3210	66.5	3160	3160
105	60	2880	2230	62.5	3180	2700	65	3030	3030
110	58	2610	1800	61	2880	2230	63	2920	2590
115	56	2360	1410	59	2610	1810	61	2800	2140
120	54.5	2130	1060	57	2350	1430	59	2570	1730
125	52.5	1900		55	2110	1080	57	2290	1350
130	50.5	1690		53	1880		55	2040	1000
135	48.5	1490		51	1660		53	1810	
140	46	1230		48.5	1460		50.5	1590	
145	43.5	930		46.5	1200		48	1380	
150				44	890		45.5	1050	
155									