

# Load Rating Chart

***Model TC45142***

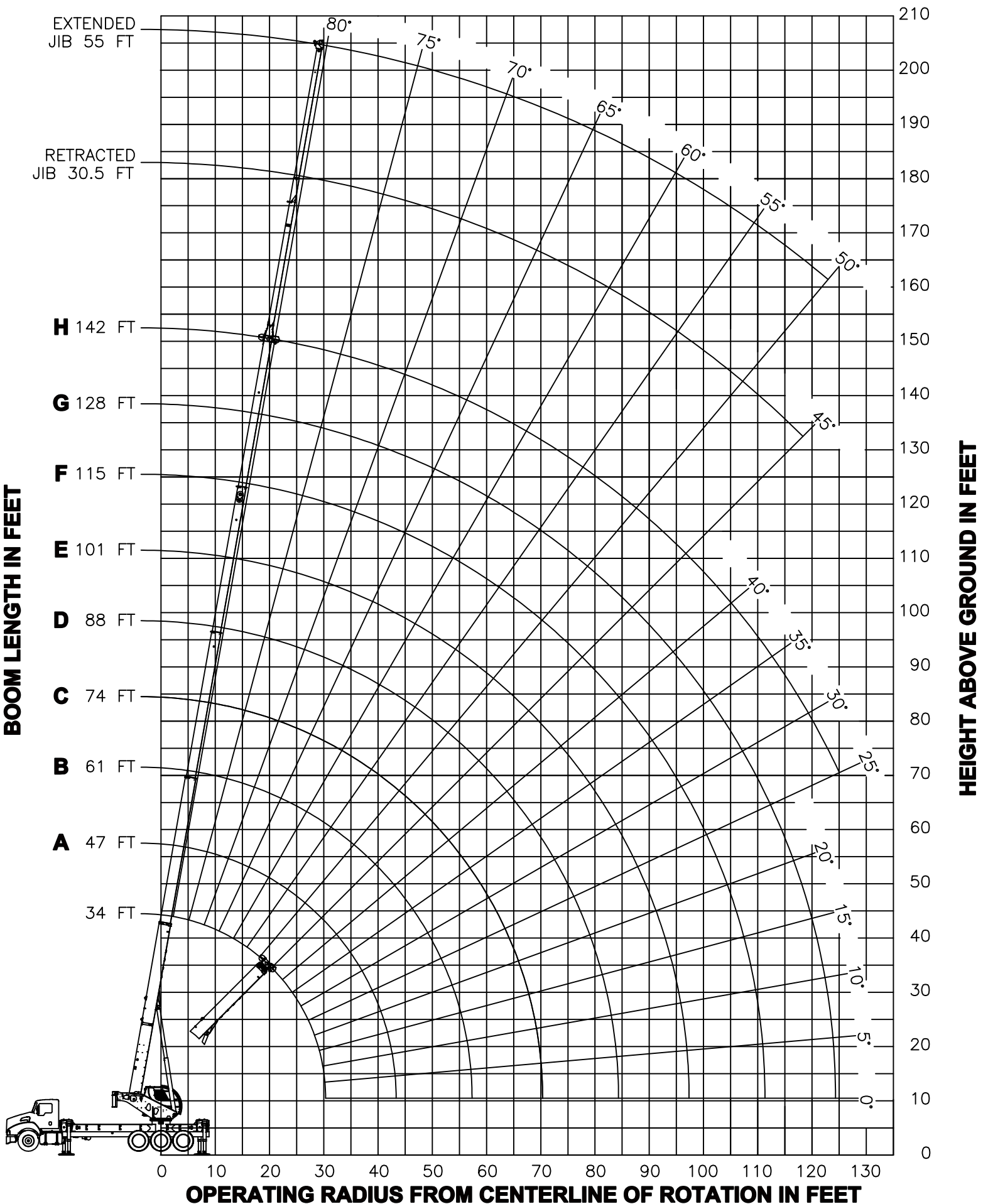


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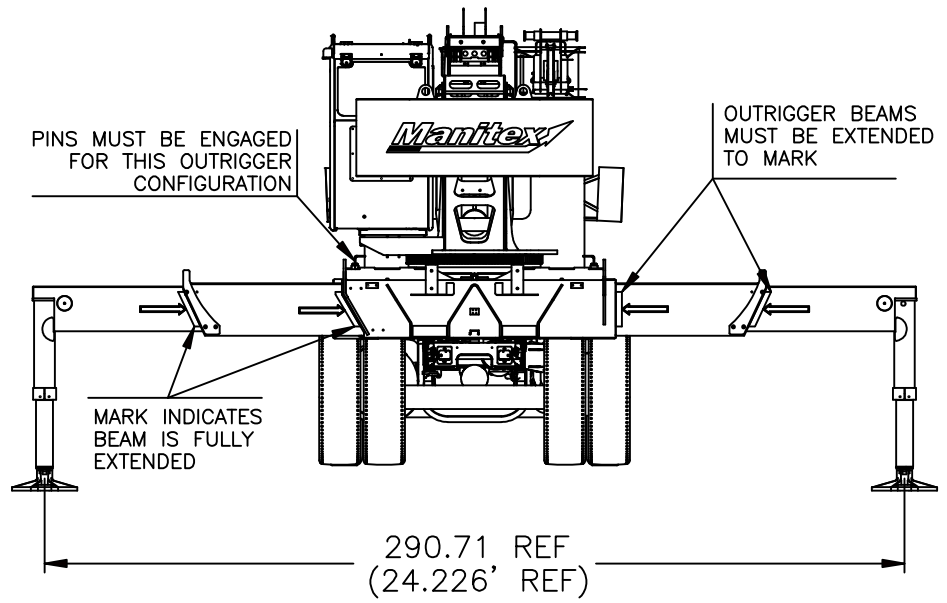
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**NOTE:** Additional copies of this Load Rating Chart can be purchased from your Manitex Distributor. When ordering, use the part number shown in the bottom left corner of this page.

# RANGE DIAGRAM - FULLY EXTENDED OUTRIGGER CONFIGURATION -



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

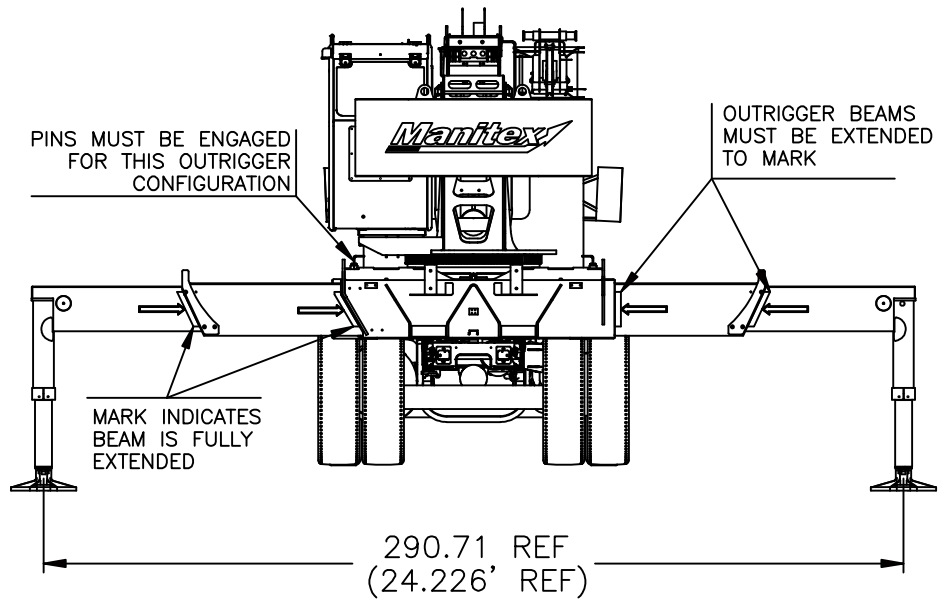


**- FULLY EXTENDED OUTRIGGER CONFIGURATION -**

MAIN BOOM LMI CODE 3																			
LOAD RADIUS (FT)	34 FT		47 FT (A)		61 FT (B)		74 FT (C)		88 FT (D)		101 FT (E)		115 FT (F)		128 FT (G)		142 FT (H)		LOAD RADIUS (FT)
	∠	LOAD CAPACITY (LBS)	∠	LOAD CAPACITY (LBS)	∠	LOAD CAPACITY (LBS)	∠	LOAD CAPACITY (LBS)	∠	LOAD CAPACITY (LBS)	∠	LOAD CAPACITY (LBS)	∠	LOAD CAPACITY (LBS)	∠	LOAD CAPACITY (LBS)	∠	LOAD CAPACITY (LBS)	
7	73	90000																	7
8	71	80000	77	42000															8
10	67	70500	74	42000	79	42000													10
12	64	62100	72	42000	77	42000	80	34060											12
15	58	49450	68	42000	74	40960	78	32860	80	23430									15
20	47	35640	61	36240	69	36570	74	30970	77	21610	79	16510							20
25	33	27160	54	27810	64	28140	70	28310	74	19730	76	15160	79	13500					25
30	9	19390	46	22100	58	22450	65	22630	70	18300	74	13960	77	12420	79	10000	80	8000	30
35			36	17980	52	18350	61	18530	67	17060	71	12860	74	11420	76	9800	78	7800	35
40			23	14840	46	15250	56	15440	63	15570	68	11860	71	10540	74	9400	76	7600	40
45					39	12820	51	13020	59	13150	64	10990	69	9550	72	8800	74	7350	45
50					30	10850	46	11070	55	11210	61	10200	66	8870	69	8300	72	7050	50
55					18	8870	40	9170	51	9340	58	9430	63	8260	67	7900	70	6800	55
60							33	7610	47	7790	54	7890	60	7680	64	7450	68	6500	60
65							24	6330	42	6520	50	6630	57	6710	62	6770	66	6100	65
70									36	5480	46	5590	54	5670	59	5720	64	5700	70
75									30	4590	42	4700	51	4790	56	4840	61	4880	75
80									21	3820	37	3950	47	4030	54	4090	59	4130	80
85											32	3300	43	3380	51	3440	56	3480	85
90											25	2720	39	2810	47	2870	54	2910	90
95											17	2200	35	2310	44	2370	51	2410	95
100													30	1870	40	1930	48	1970	100
105													23	1460	36	1530	45	1580	105
110													12	1090	32	1170	42	1220	110
115															26	840	38	900	115
120																			120
	840 LBS		560 LBS		450 LBS		380 LBS		330 LBS		290 LBS		260 LBS		230 LBS		210 LBS		

**DEDUCTIONS FROM MAIN BOOM CAPACITIES FOR STOWED TELESCOPIC JIB**

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

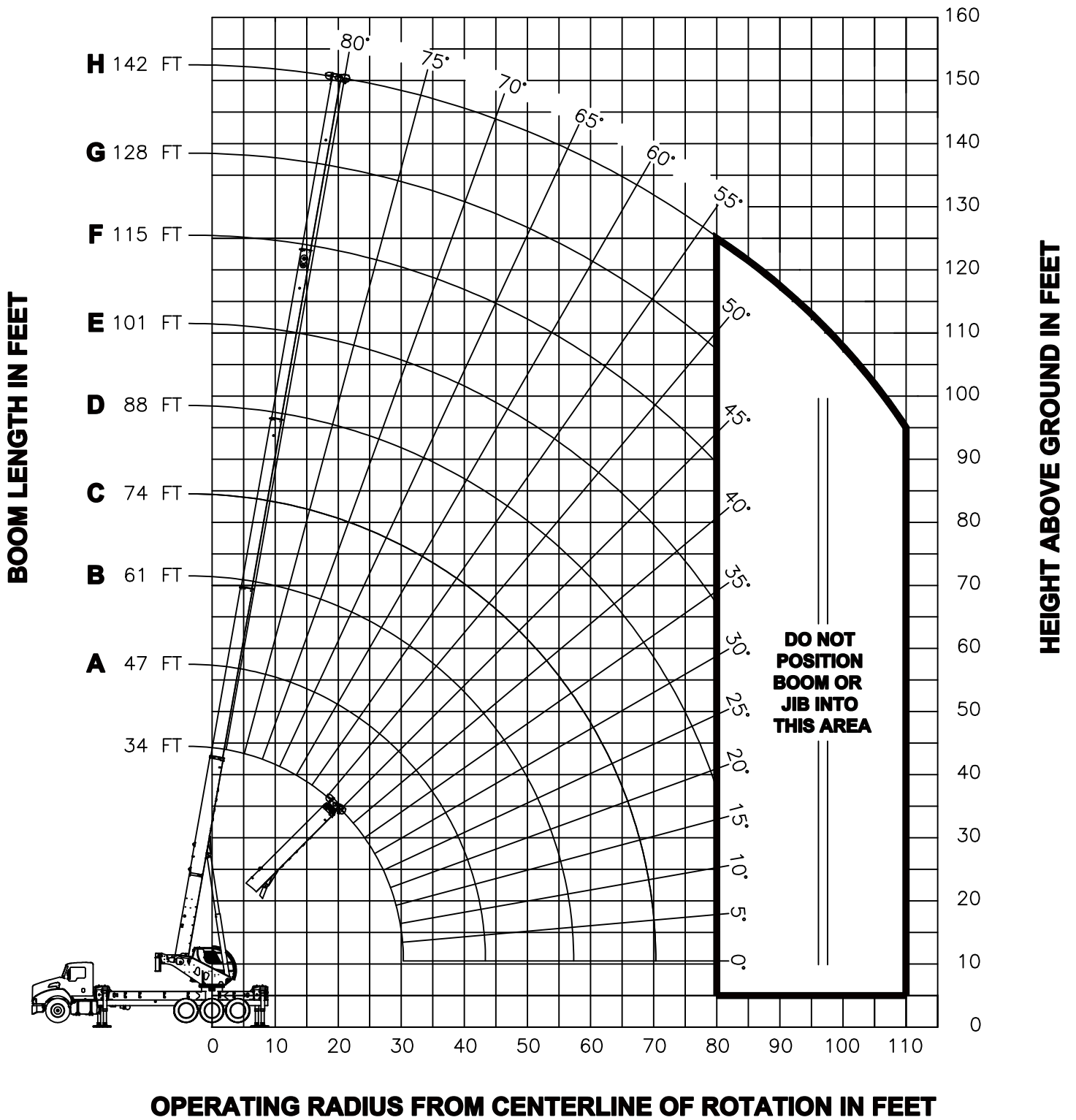


**- FULLY EXTENDED OUTRIGGER CONFIGURATION -**

**JIB LOAD CAPACITIES**

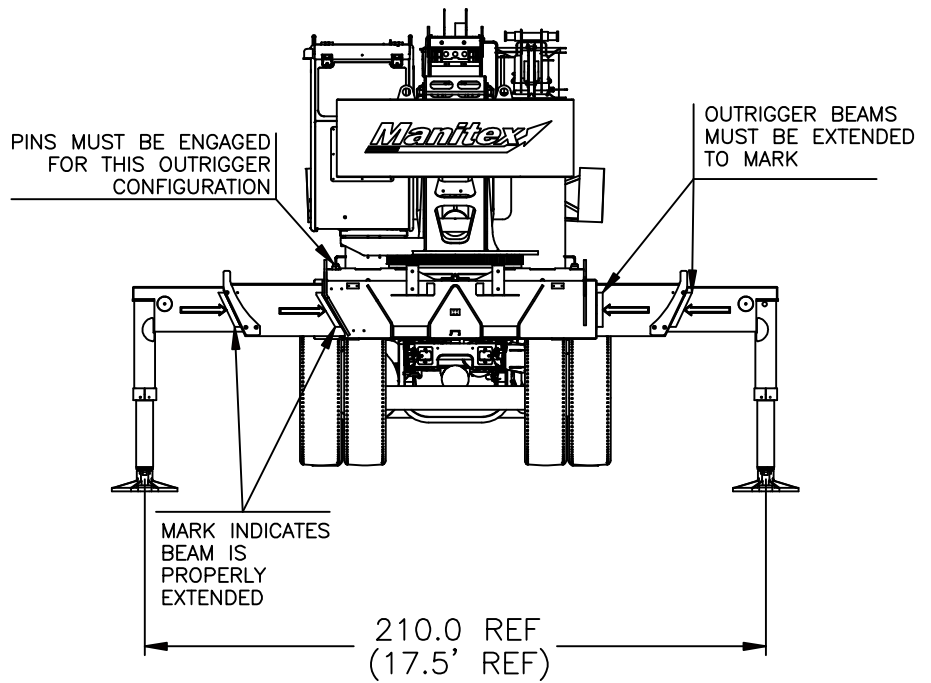
LOAD RADIUS (FT) REF	30.5 FT TELE JIB LMI CODE 7		55 FT TELE JIB LMI CODE 13		LOAD RADIUS (FT) REF
	LOADED BOOM ANGLE (DEG)	LOAD CAPACITY (LBS)	LOADED BOOM ANGLE (DEG)	LOAD CAPACITY (LBS)	
30					30
35	79.0	3450			35
40	77.2	3400	79.4	2500	40
45	76.1	3350	78.0	2250	45
50	74.7	3300	76.7	2250	50
55	73.2	3180	75.6	2250	55
60	71.5	2920	74.5	2250	60
65	69.4	2760	73.1	2100	65
70	68.0	2610	72.1	1970	70
75	66.3	2470	70.5	1860	75
80	64.5	2340	68.7	1760	80
85	62.9	2220	67.1	1670	85
90	61.1	2110	66.1	1590	90
95	59.4	2010	64.6	1530	95
100	57.4	1920	62.9	1460	100
105	54.5	1550	61.4	1400	105
110	52.7	1190	60.2	1340	110
115					115
120					120
125					125
130					130

# 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**




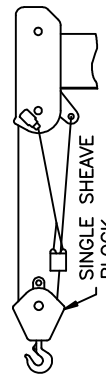


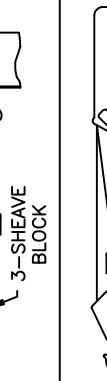

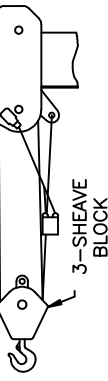

**- INTERMEDIATE OUTRIGGER CONFIGURATION -**

MAIN BOOM LMI CODE 4																			
LOAD RADIUS (FT)	34 FT		47 FT (A)		61 FT (B)		74 FT (C)		88 FT (D)		101 FT (E)		115 FT (F)		128 FT (G)		142 FT (H)		LOAD RADIUS (FT)
	∠	LOAD CAPACITY (LBS)	∠	LOAD CAPACITY (LBS)	∠	LOAD CAPACITY (LBS)	∠	LOAD CAPACITY (LBS)	∠	LOAD CAPACITY (LBS)	∠	LOAD CAPACITY (LBS)	∠	LOAD CAPACITY (LBS)	∠	LOAD CAPACITY (LBS)	∠	LOAD CAPACITY (LBS)	
7	73	90000																	7
8	71	80000	77	42000															8
10	67	70500	74	42000	79	42000													10
12	64	62100	72	42000	77	42000	80	34060											12
15	58	49450	68	42000	74	40960	78	32860	80	23430									15
20	47	33130	61	34900	69	34630	74	30970	77	21610	79	16510							20
25	33	20810	54	21690	64	22150	70	22420	74	19730	76	15160	79	13500					25
30	9	14120	46	15100	58	15540	65	15780	70	15960	74	13960	77	12420	79	10000	80	8000	30
35			36	11010	52	11440	61	11670	67	11830	71	11940	74	11420	76	9800	78	7800	35
40			23	8180	46	8650	56	8870	63	9030	68	9130	71	9210	74	9260	76	7600	40
45					39	6610	51	6840	59	6990	64	7090	69	7170	72	7220	74	7260	45
50					30	5060	46	5300	55	5450	61	5550	66	5620	69	5670	72	5710	50
55					18	3820	40	4080	51	4240	58	4330	63	4410	67	4450	70	4490	55
60							33	3100	47	3260	54	3360	60	3430	64	3480	68	3510	60
65							24	2280	42	2450	50	2550	57	2620	62	2670	66	2710	65
70									36	1780	46	1880	54	1950	59	2000	64	2030	70
75									30	1190	42	1300	51	1380	56	1420	61	1460	75
80											37	800	47	880	54	930	59	970	80
85																			85
90																			90
	840 LBS		560 LBS		450 LBS		380 LBS		330 LBS		290 LBS		260 LBS		230 LBS		210 LBS		

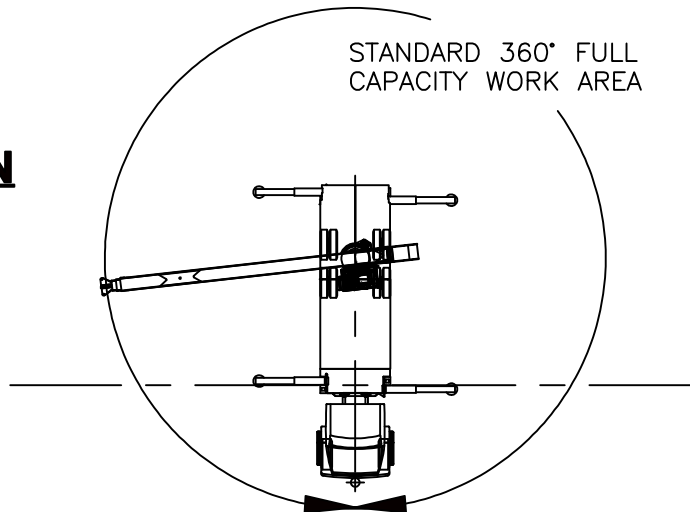
**DEDUCTIONS FROM MAIN BOOM CAPACITIES FOR STOWED TELESCOPIC JIB**

## 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	<p>ANTI-TWO-BLOCK SYSTEM MUST BE IN GOOD OPERATING CONDITION BEFORE OPERATING CRANE.</p> <p>REFER TO THE OWNER'S MANUAL.</p> <p>KEEP AT LEAST 3 WRAPS OF LOAD LINE ON THE DRUM AT ALL TIMES.</p>
								
9500 LBS	19000 LBS	28500 LBS	38000 LBS	47500 LBS	57000 LBS	66500 LBS	76000 LBS	
10000 LBS	20000 LBS	30000 LBS	40000 LBS	50000 LBS	60000 LBS	70000 LBS	80000 LBS	<p>5/8" ROT RESISTANT (5.0:1 SF) – 47500 LBS MIN BREAKING STRENGTH</p> <p>5/8" 6 X 25 IWRC (3.5:1 SF) – 35000 LBS MIN BREAKING STRENGTH</p>

### AREA OF OPERATION



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

- AUXILIARY BLOCK ----- 50 LBS
- OVERHAUL BALL ----- SEE OVERHAUL BALL MFRG. NAMEPLATE
- LOAD BLOCK ----- SEE LOADBLOCK MFRG. NAMEPLATE
- SWING AROUND JIBS (STOWED) ----- SEE LOAD CHART

## LMI OPERATING CODES

SETTING	CRANE CONFIGURATION	OUTRIGGER CONFIGURATION
#3	— MAIN BOOM	FULLY EXTENDED
#7	— TELESCOPIC JIB—RETRACTED	FULLY EXTENDED
#13	— TELESCOPIC JIB—EXTENDED	FULLY EXTENDED
#25	— PERSONNEL LIFTING PLATFORM ON MAIN BOOM	FULLY EXTENDED
#26	— PERSONNEL LIFTING PLATFORM ON TELESCOPIC JIB—RETRACTED	FULLY EXTENDED
#29	— PERSONNEL LIFTING PLATFORM ON TELESCOPIC JIB—EXTENDED	FULLY EXTENDED
#4	— MAIN BOOM	INTERMEDIATE

### **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.