



# Load Rating Chart

***Model 28102S***

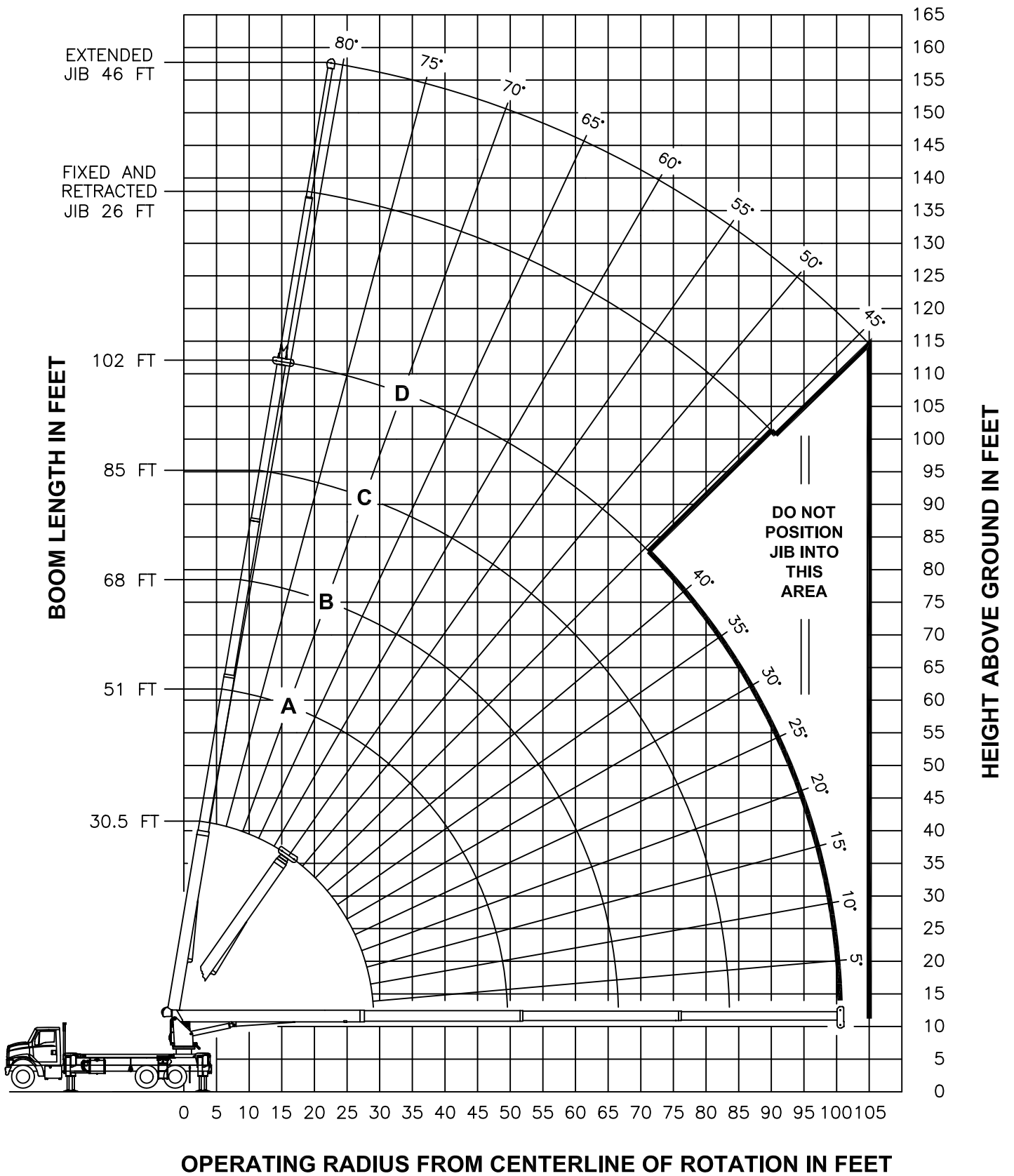


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**NOTE:** Additional copies of this Load Rating Chart can be purchased from your Manitex Distributor. When ordering, use the part number shown in the bottom left corner of this page.



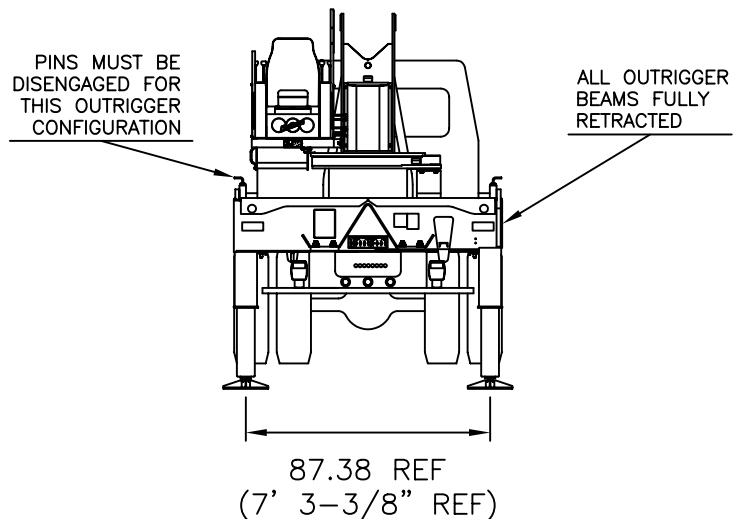
### RANGE DIAGRAM - FULLY EXTENDED OUTRIGGER CONFIGURATION -







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



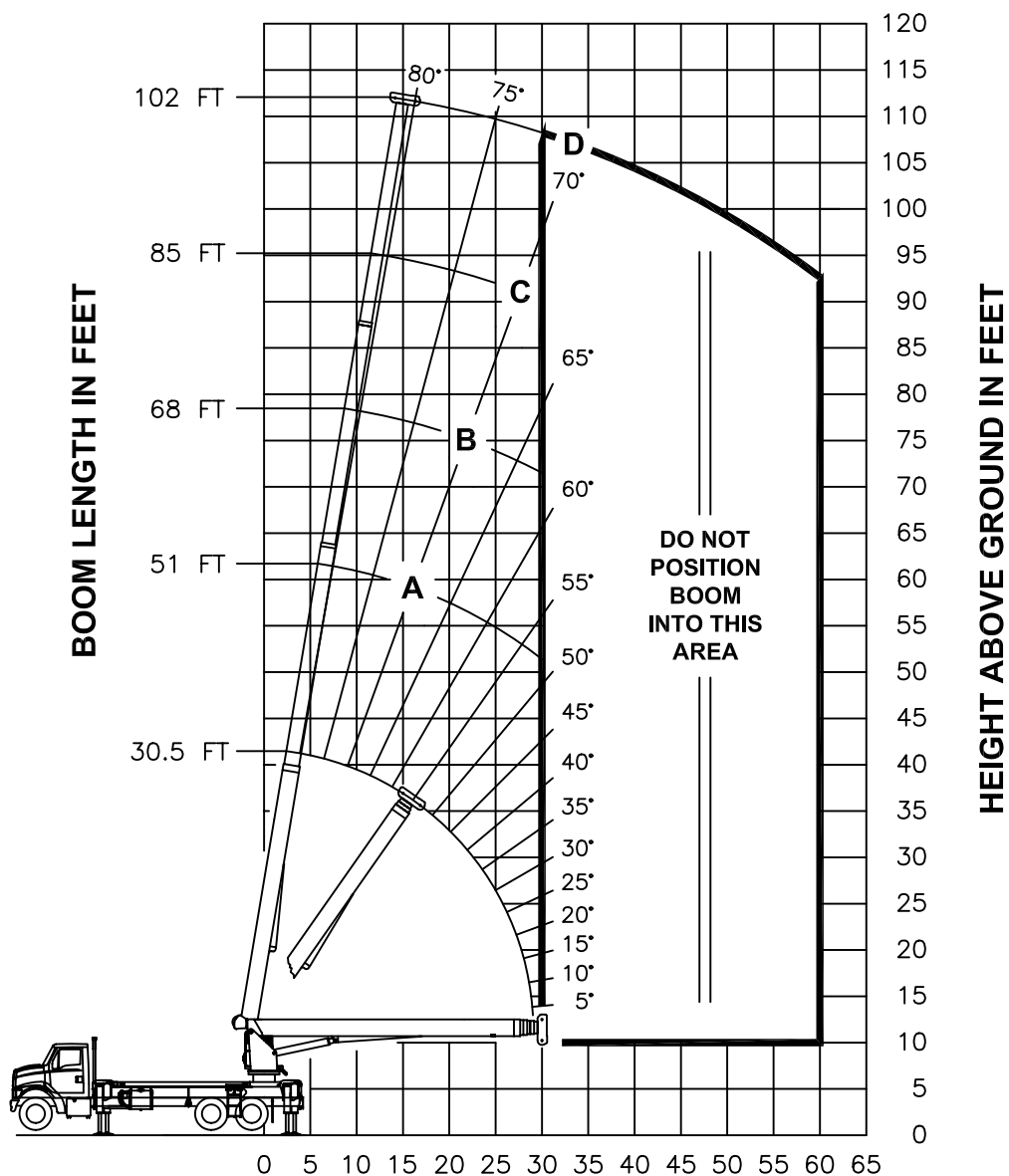
**- FULLY RETRACTED OUTRIGGER CONFIGURATION -**

MAIN BOOM LOAD RATINGS IN LBS										
LMI CODE #13										
OPERATING RADIUS FT	LOADED BOOM ANGLE		BOOM LENGTH AND MARKER							
	30.5 FT	51 FT	68 FT	85 FT	102 FT					
5	80	56000								
8	75	23010								
10	71	14590	79	15150						
12	67	10190	77	10700						
15	60	6490	73	6970	79	7140				
20	48	3330	67	3790	74	3950	78	4040	81	4090
25	33	1620	61	2090	70	2250	75	2330	78	2380
30			54	1040	65	1190	72	1270	76	1320
		490 LBS		290 LBS		220 LBS		180 LBS		150 LBS
		730 LBS		440 LBS		330 LBS		260 LBS		220 LBS
DEDUCTIONS FOR STOWED FIXED JIB										
DEDUCTIONS FOR STOWED TELESCOPIC JIB										

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



### RANGE DIAGRAM - FULLY RETRACTED OUTRIGGER CONFIGURATION -

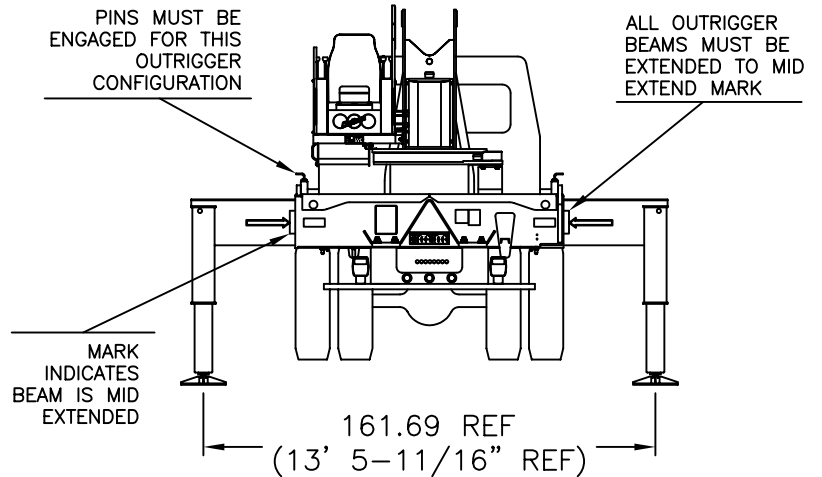


**OPERATING RADIUS FROM CENTERLINE OF ROTATION IN FEET**

**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 IN THE INTERMEDIATE POSITION**

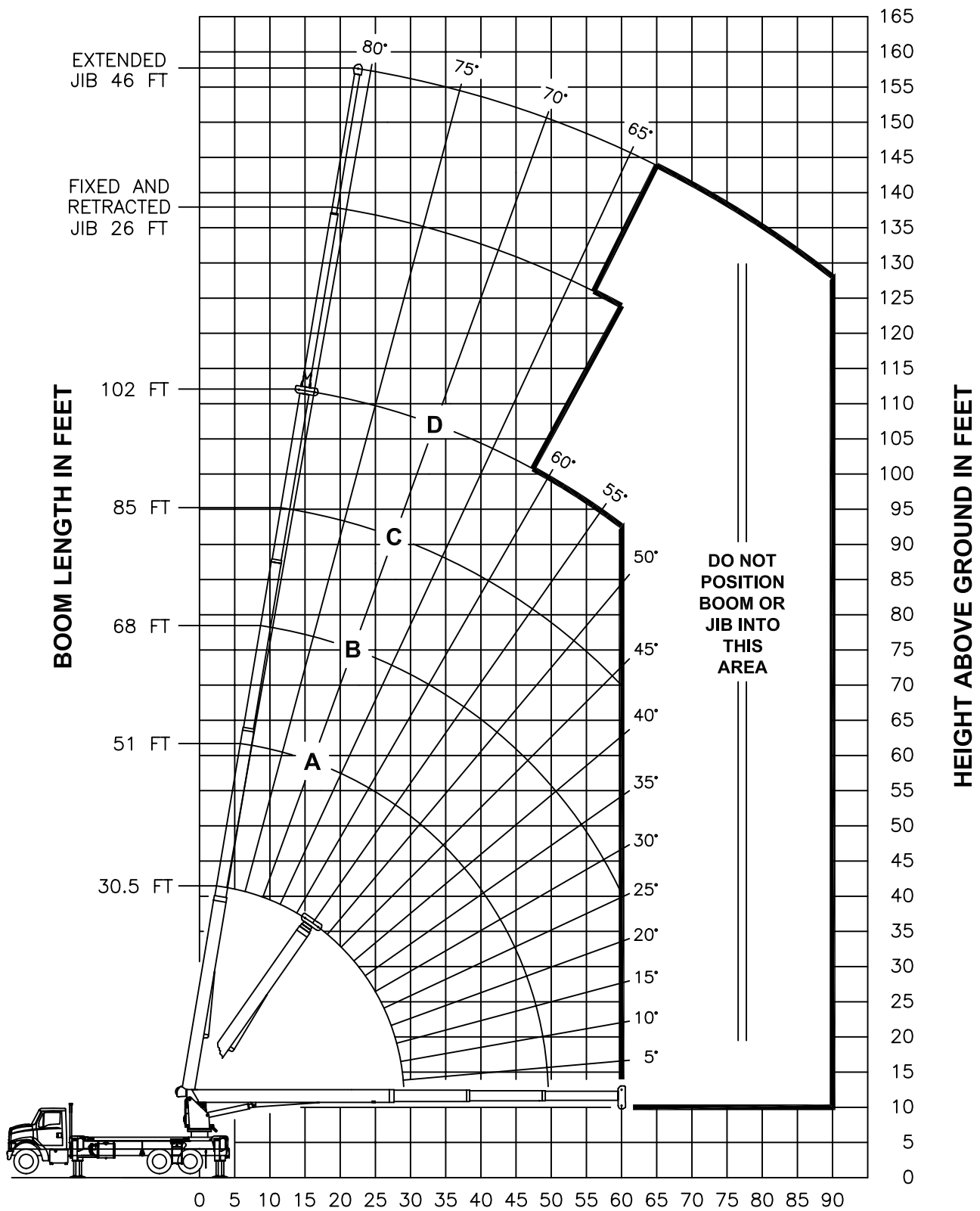


**- INTERMEDIATE OUTRIGGER CONFIGURATION -  
(MID EXTEND)**

MAIN BOOM LOAD RATINGS IN LBS										JIB LOAD RATINGS IN LBS						
LMI CODE #9										FIXED JIB		TELESCOPIC JIB				
OPERATING RADIUS FT	LOADED BOOM ANGLE				BOOM LENGTH AND MARKER				OPERATING RADIUS FT	LMI CODE #10		LMI CODE #11		LMI CODE #12		
	30.5 FT	51 FT	68 FT	85 FT	102 FT	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4		JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4						
	A	B	C	D												
5	80	56000														
8	75	39690														
10	71	33510	79	22500												
12	67	29120	77	22500												
15	60	21230	73	21710	79	20590										
20	48	11770	67	12340	74	12540	78	12660	81	10500						
25	33	7460	61	8020	70	8200	75	8300	78	8370	81	5300	81	5100		
30			54	5550	65	5720	72	5820	76	5880	79	5300	79	5100	81	3050
35			47	3950	60	4120	68	4210	73	4270	77	4360	77	4050	79	3050
40			38	2820	55	3000	64	3090	70	3150	75	3230	75	2920	77	3050
45			27	1980	50	2160	60	2260	66	2310	72	2390	72	2080	76	2590
50					43	1520	56	1620	63	1670	70	1750	70	1440	74	1930
55					36	1010	51	1110	60	1170	68	1240	68	930	72	1410
60					28	600	47	700	56	750	65	820	65	510	70	990
65															68	640
	490 LBS	290 LBS	220 LBS	180 LBS	150 LBS	DEDUCTIONS FOR STOWED FIXED JIB										
	730 LBS	440 LBS	330 LBS	260 LBS	220 LBS	DEDUCTIONS FOR STOWED TELESCOPIC JIB										



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

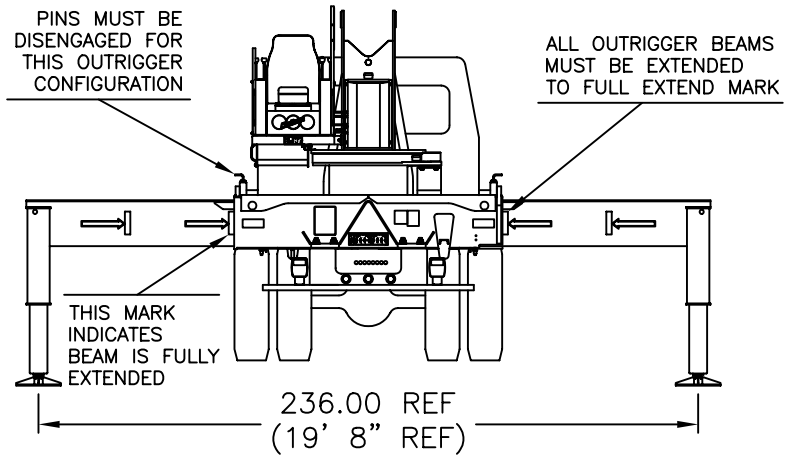


**OPERATING RADIUS FROM CENTERLINE OF ROTATION IN FEET**

**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 EXTENDED**



**- FULLY EXTENDED OUTRIGGER CONFIGURATION -**

MAIN BOOM LOAD RATINGS IN LBS											JIB LOAD RATINGS IN LBS									
LMI CODE #1											LMI CODE #2									
OPERATING RADIUS FT	LOADED BOOM ANGLE		BOOM LENGTH AND MARKER		LMI CODE #1						FIXED JIB		TELESCOPIC JIB							
					A		B		C		D		LMI CODE #2		LMI CODE #3		LMI CODE #4			
					30.5 FT		51 FT		68 FT		85 FT		102 FT		BOOM LOADING ANGLE		BOOM LOADING ANGLE		BOOM LOADING ANGLE	
														JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4		JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4		JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4		
5	80	56000																		
8	75	39690																		
10	71	33510	79	22500																
12	67	29120	77	22500																
15	60	23260	73	21710	79	20590														
20	48	16530	67	16910	74	15830	78	14420	81	10500										
25	33	12410	61	12870	70	12840	75	12180	78	9650	25	81	5300	81	5100					
30			54	10110	65	10260	72	10140	76	8670	30	79	5300	79	5100	81	3050			
35			47	8130	60	8280	68	8360	73	7670	35	77	4990	77	4730	79	3050			
40			38	6630	55	6790	64	6870	70	6490	40	75	4580	75	4310	77	3050			
45			27	5450	50	5610	60	5690	66	5590	45	72	4190	72	3910	76	3050			
50					43	4670	56	4750	63	4800	50	70	3830	70	3550	74	2910			
55					36	3820	51	3920	60	3980	55	68	3480	68	3110	72	2740			
60					28	3110	47	3220	56	3280	60	65	3020	65	2670	70	2590			
65					15	2520	41	2640	53	2700	65	63	2630	63	2280	68	2410			
70							36	2150	49	2220	70	60	2310	60	1950	66	2130			
75							29	1740	45	1810	75	57	1910	57	1620	63	1880			
80							19	1390	40	1460	80	54	1560	54	1270	61	1610			
85									36	1150	85	51	1250	51	960	59	1400			
90									29	880	90	48	990	48	690	56	1150			
95									22	640	95	45	750			54	910			
100											100					51	700			
105											105					48	510			
		490 LBS		290 LBS		220 LBS		180 LBS		150 LBS		DEDUCTIONS FOR STOWED FIXED JIB								
		730 LBS		440 LBS		330 LBS		260 LBS		220 LBS		DEDUCTIONS FOR STOWED TELESCOPIC JIB								





### 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 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.