



Load Rating Chart

Model 28102S

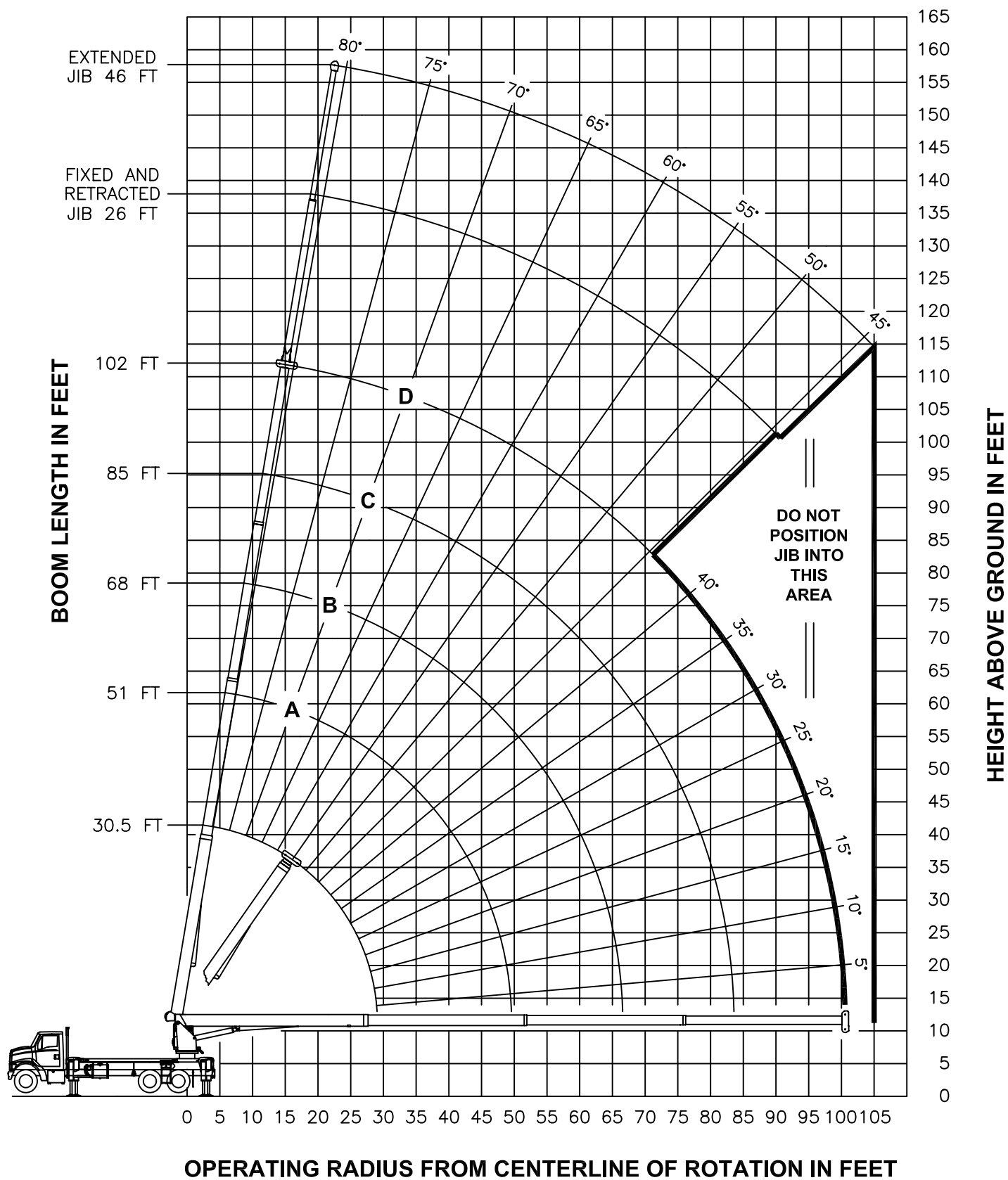


©Manitex 2003

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 -



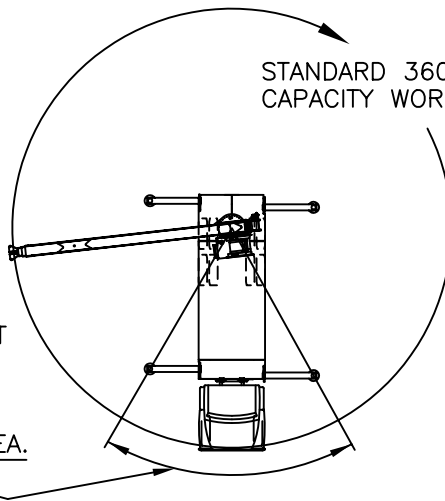
ALLOWABLE LINE PULL							WARNING
1 PART LINE	2 PART LINE	3 PART LINE	4 PART LINE	5 PART LINE	6 PART LINE	7 PART LINE	
OVERHAUL BALL	SINGLE SHEAVE BLOCK	SINGLE SHEAVE BLOCK	TRIPLE SHEAVE BLOCK	TRIPLE SHEAVE BLOCK AUXILIARY BLOCK	TRIPLE SHEAVE BLOCK AUXILIARY BLOCK	AUXILIARY SHEAVE TRIPLE SHEAVE BLOCK AUXILIARY BLOCK	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.
8500 LBS	17000 LBS	25500 LBS	34000 LBS	42500 LBS	51000 LBS	56000 LBS	9/16" 6X25 IWRC (3.5:1 SF) – 29750 LBS MIN BREAKING STRENGTH
7400 LBS	14800 LBS	22200 LBS	29600 LBS	37000 LBS	44400 LBS	51800 LBS	9/16" ROT RESISTANT (5.0:1 SF) – 37000 LBS MIN BREAKING STRENGTH

AREA OF OPERATION

STANDARD 360° FULL
CAPACITY WORK AREA

WARNING:

THE FRONT TIRES MUST
BE IN CONTACT WITH
THE GROUND, AND THE
MACHINE LEVEL, WHEN
OPERATING IN THIS AREA.

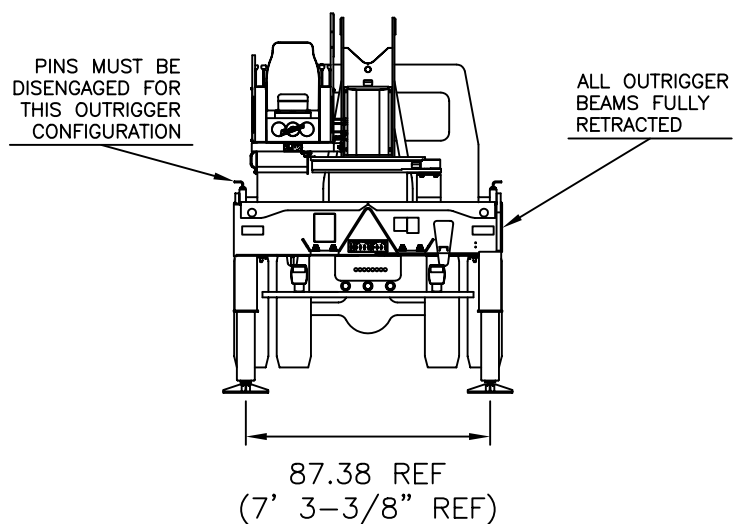


DEDUCTIONS FROM RATED LOADS FOR LOAD HANDLING DEVICES SUPPLIED BY MANITOWOC BOOM TRUCKS, INC.

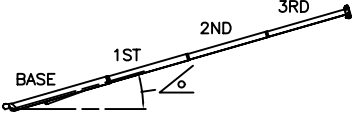
[illegible]



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



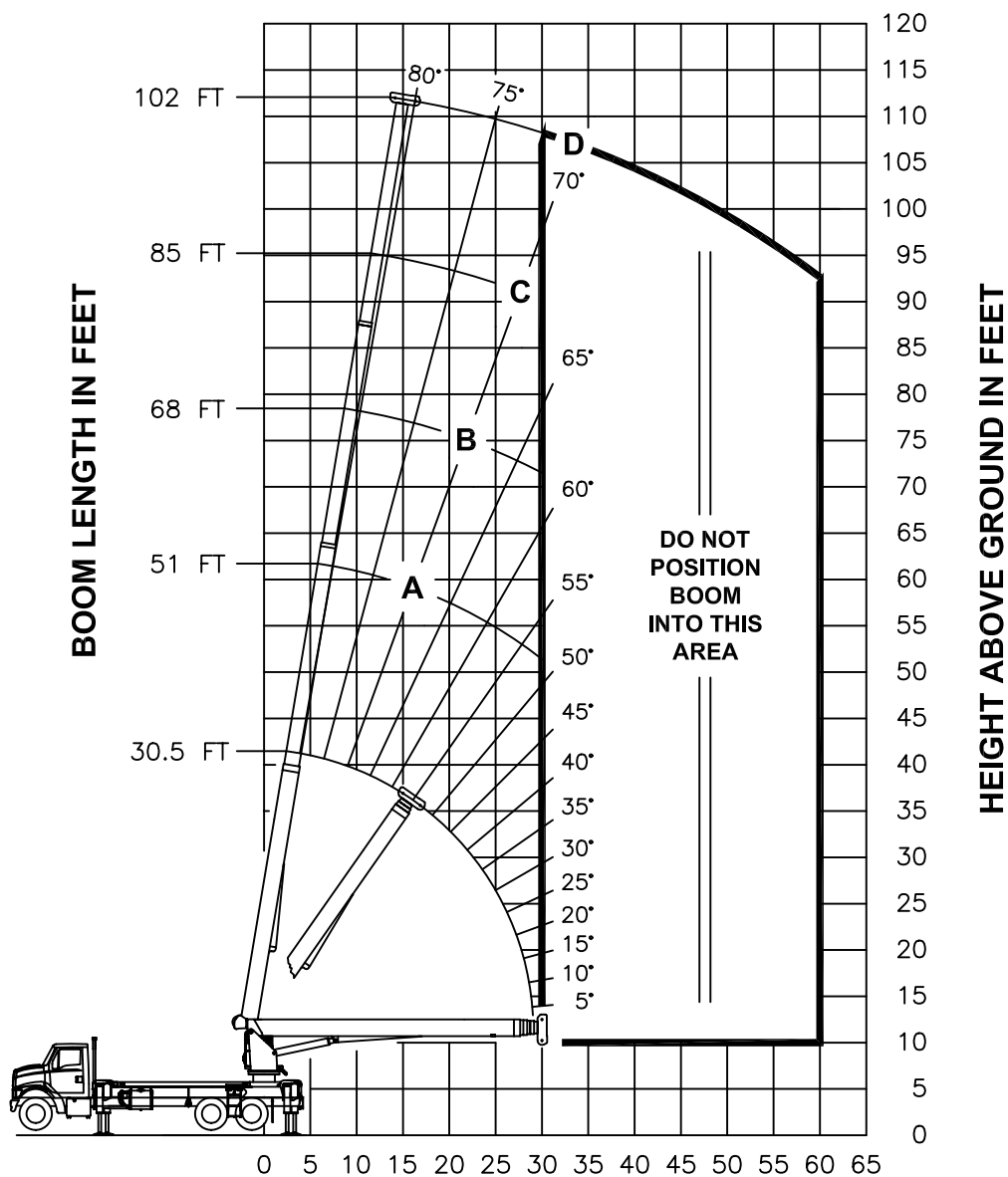
- FULLY RETRACTED OUTRIGGER CONFIGURATION -

MAIN BOOM LOAD RATINGS IN LBS										
LMI CODE #13										
OPERATING RADIUS FT	LOADED BOOM ANGLE BOOM LENGTH AND MARKER									
			A		B		C		D	
	°	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	DEDUCTIONS FOR STOWED FIXED JIB				
	730 LBS	440 LBS	330 LBS	260 LBS	220 LBS	DEDUCTIONS FOR STOWED TELESCOPIC JIB				

NO JIBS ARE TO
BE ERECTED IN
THIS
OUTRIGGER
CONFIGURATION



RANGE DIAGRAM - FULLY RETRACTED OUTRIGGER CONFIGURATION -

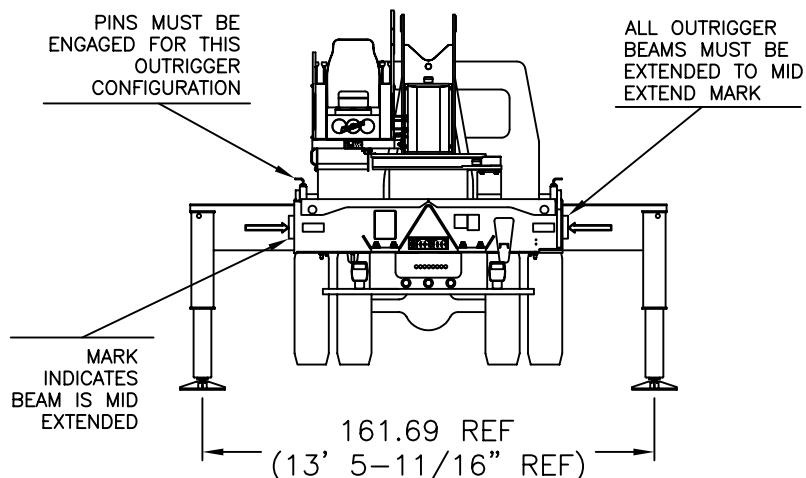


OPERATING RADIUS FROM CENTERLINE OF ROTATION IN FEET

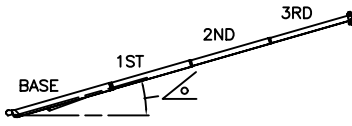
NOTE : LIFTING PERSONNEL WITH CRANE IN THIS OUTRIGGER CONFIGURATION IS STRICTLY PROHIBITED. USE ONLY FULLY EXTENDED OUTRIGGER CONFIGURATION WHEN LIFTING PERSONNEL.



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

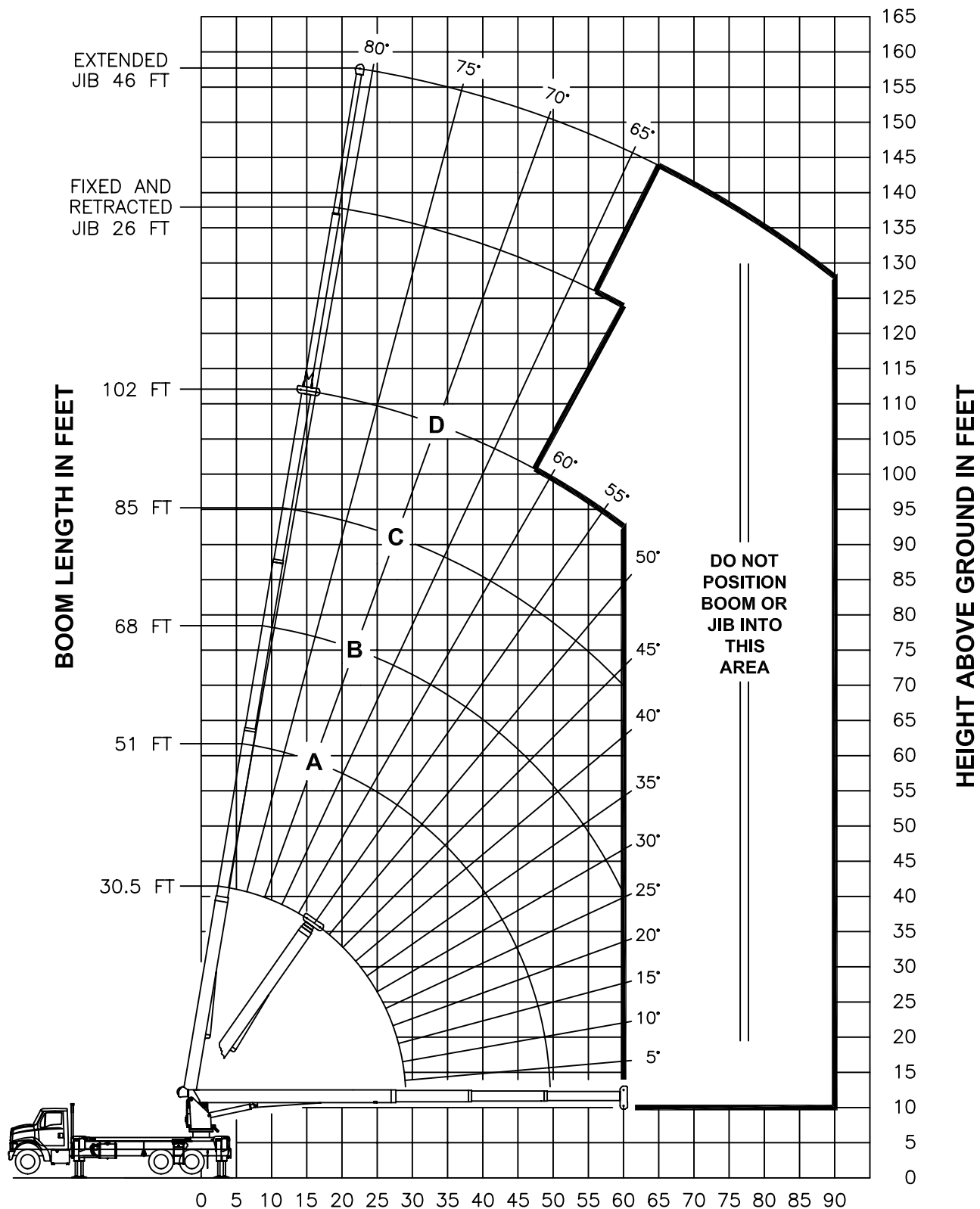


- INTERMEDIATE OUTRIGGER CONFIGURATION - (MID EXTEND)

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	
			A		B		C		D								
	∠	30.5 FT	∠	51 FT	∠	68 FT	∠	85 FT	∠	102 FT		∠	26 FT	∠	26 FT	∠	46 FT
	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							
30			54	5550	65	5720	72	5820	76	5880							
35			47	3950	60	4120	68	4210	73	4270							
40			38	2820	55	3000	64	3090	70	3150							
45			27	1980	50	2160	60	2260	66	2310							
50					43	1520	56	1620	63	1670							
55					36	1010	51	1110	60	1170							
60					28	600	47	700	56	750							
65																	



RANGE DIAGRAM - INTERMEDIATE OUTRIGGER CONFIGURATION - (MID EXTEND)

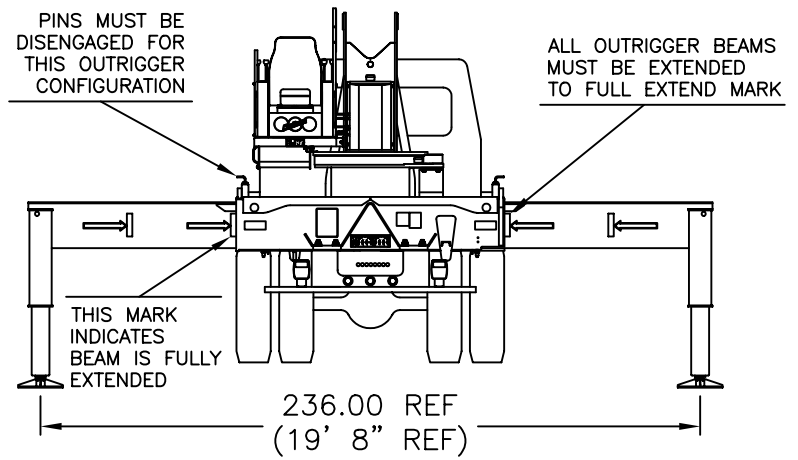


OPERATING RADIUS FROM CENTERLINE OF ROTATION IN FEET

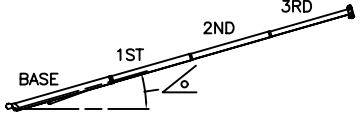
NOTE : LIFTING PERSONNEL WITH CRANE IN THIS OUTRIGGER CONFIGURATION IS STRICTLY PROHIBITED. USE ONLY FULLY EXTENDED OUTRIGGER CONFIGURATION WHEN LIFTING PERSONNEL.



**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										OPERATING RADIUS FT	FIXED JIB		TELESCOPIC JIB			
LOADED BOOM ANGLE BOOM LENGTH AND MARKER 											LMI CODE #2		LMI CODE #3		LMI CODE #4	
											BOOM LOADED ANG	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4	BOOM LOADED ANG	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4	BOOM LOADED ANG	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4
OPERATING RADIUS FT	30.5 FT	51 FT	68 FT	85 FT	102 FT	26 FT	26 FT	46 FT								
5	80	56000								10						
8	75	39690								12						
10	71	33510	79	22500						15						
12	67	29120	77	22500						20						
15	60	23260	73	21710	79	20590				25	81	5300	81	5100		
20	48	16530	67	16910	74	15830	78	14420	81	10500	79	5300	79	5100	81	
25	33	12410	61	12870	70	12840	75	12180	78	9650	77	4990	77	4730	79	
30			54	10110	65	10260	72	10140	76	8670	75	4580	75	4310	77	
35			47	8130	60	8280	68	8360	73	7670	72	4190	72	3910	76	
40			38	6630	55	6790	64	6870	70	6490	70	3830	70	3550	74	
45			27	5450	50	5610	60	5690	66	5590	68	3480	68	3110	72	
50					43	4670	56	4750	63	4800	65	3020	65	2670	70	
55					36	3820	51	3920	60	3980	63	2630	63	2280	68	
60					28	3110	47	3220	56	3280	60	2310	60	1950	66	
65					15	2520	41	2640	53	2700	75	1910	57	1620	63	
70							36	2150	49	2220	80	1560	54	1270	61	
75							29	1740	45	1810	85	1250	51	960	59	
80							19	1390	40	1460	90	990	48	690	56	
85									36	1150	95	750			54	
90									29	880	100				51	
95									22	640	105				48	
100																
105																
	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 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 $\angle$, IS THE INCLUDED ANGLE BETWEEN THE HORIZONTAL AND LONGITUDINAL AXES OF THE BOOM BASE AFTER LIFTING RATED LOAD AT RATED RADIUS.