

# Load Rating Chart

***Model 38124SHL***

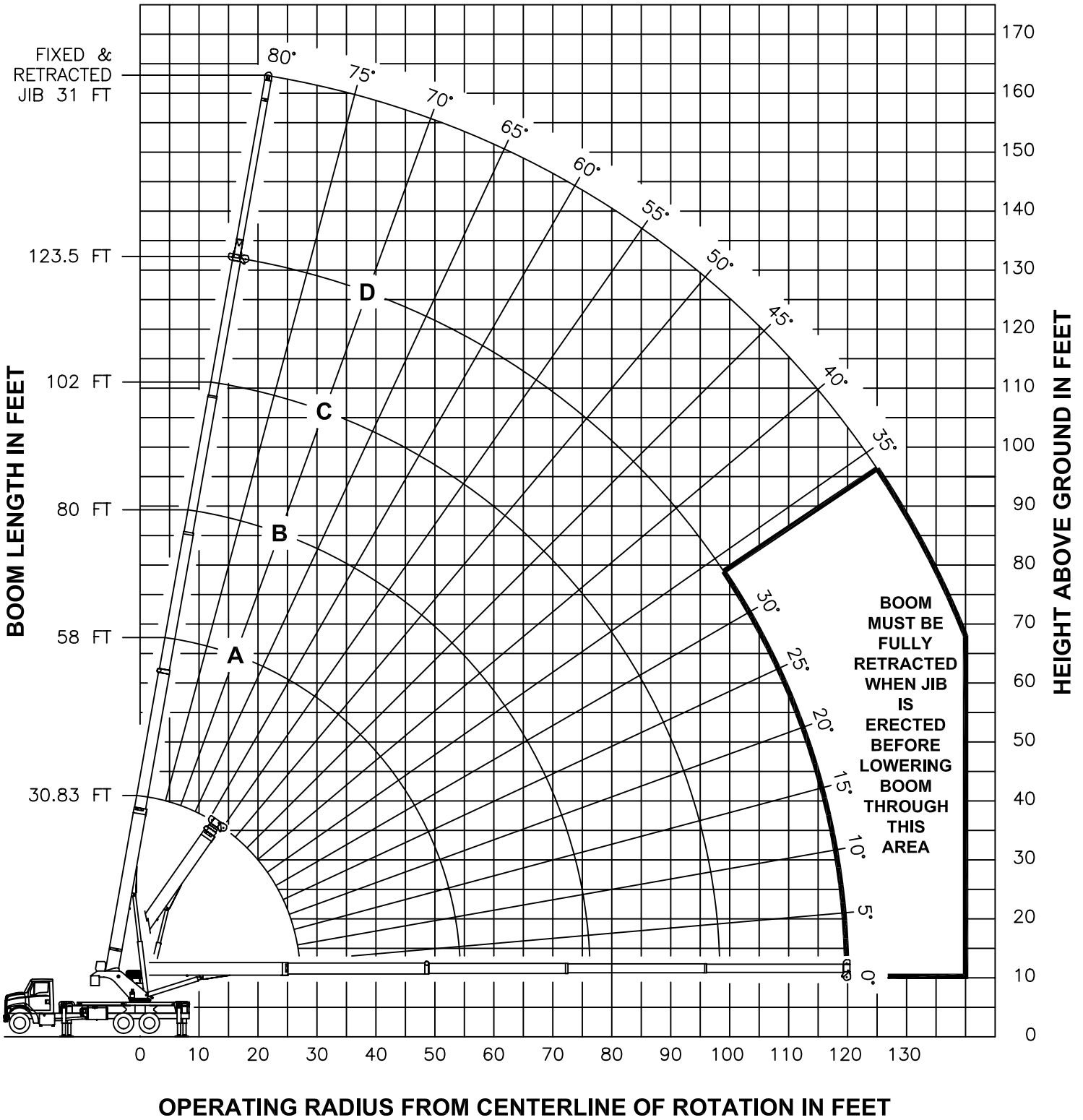



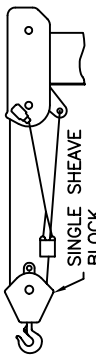
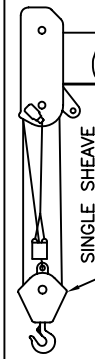
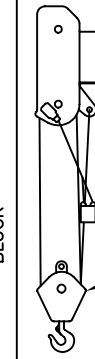


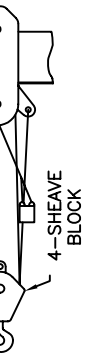

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**NOTE:** Additional copies of this Load Rating Chart can be purchased from your Manitex Distributor. When ordering, use the part number shown in the bottom left corner of this page.

# RANGE DIAGRAM - FULLY EXTENDED OUTRIGGER CONFIGURATION -

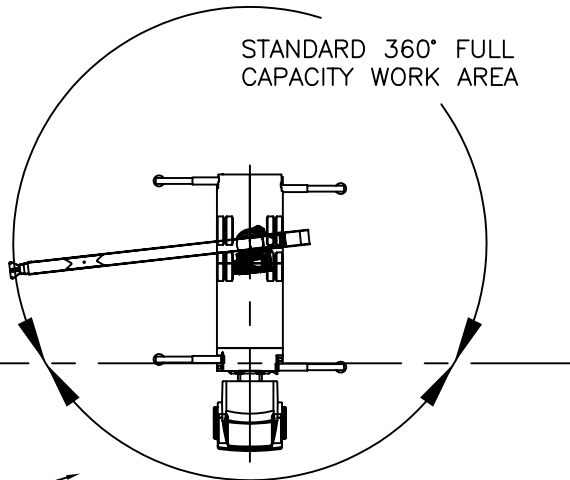


| ALLOWABLE LINE PULL   |   |   |   |   |   |   |   | WARNING  |
|---|---|---|---|---|---|---|---|--|
| 1 PART LINE   | 2 PART LINE   | 3 PART LINE   | 4 PART LINE   | 5 PART LINE   | 6 PART LINE   | 7 PART LINE   | 8 PART LINE   |  |
|  |  |  |  |  |  |  |  | <p>ANTI-TWO-BLOCK SYSTEM MUST BE IN GOOD 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> |
| 9080 LBS  | 18160 LBS   | 27240 LBS   | 36320 LBS   | 45400 LBS   | 54480 LBS   | 63560 LBS   | 72640 LBS   | 5/8" ROT RESISTANT (5.0:1 SF) - 45400 LBS MIN BREAKING STRENGTH  |
| 9500 LBS  | 19000 LBS   | 28500 LBS   | 38000 LBS   | 47500 LBS   | 57000 LBS   | 66500 LBS   | 76000 LBS   | 5/8" 6 X 25 IWRC (3.5:1 SF) - 33250 LBS MIN BREAKING STRENGTH  |

### AREA OF OPERATION

**WARNING:**

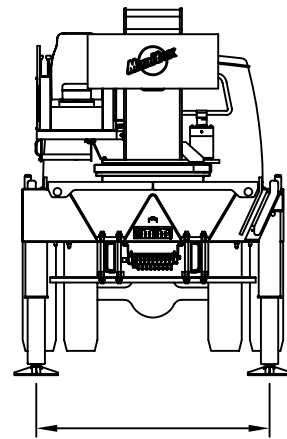
THE FRONT TIRES MUST BE IN CONTACT WITH THE GROUND, AND THE MACHINE LEVEL, WHEN OPERATING IN THIS AREA.



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

- AUXILIARY BLOCK ----- 50 LBS
- OVERHAUL BALL ----- SEE OVERHAUL BALL MFRG. NAMEPLATE
- LOADBLOCK ----- SEE LOADBLOCK MFRG. NAMEPLATE
- HOSE REEL ----- 260 LBS
- SWING AROUND JIB (STOWED) ----- SEE LOAD CHART

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



85.75 REF  
(7'-1.75 REF)

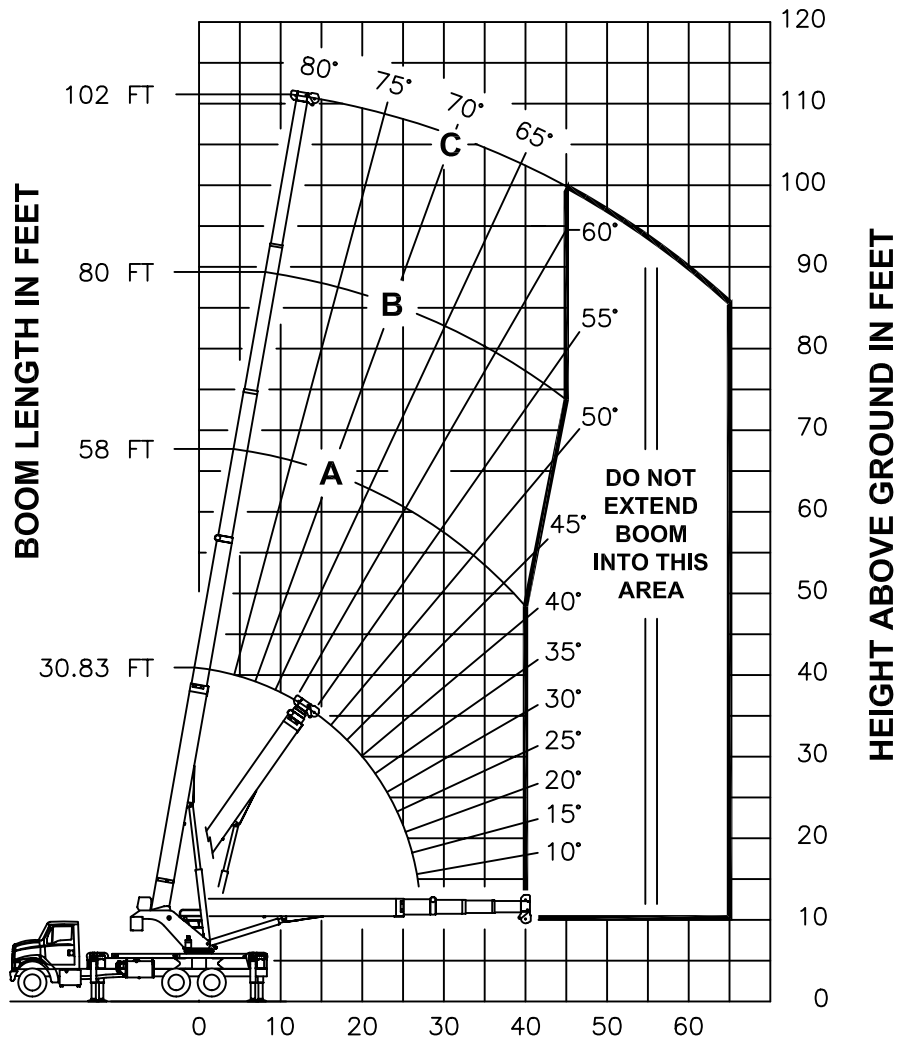
**- FULLY RETRACTED OUTRIGGER CONFIGURATION -**

| LOAD RATINGS IN LBS WITH ALL OUTRIGGERS FULLY RETRACTED<br>LMI CODE #13 |                      |                           |         |       |         |       |         |      |
|---|----------------------|---------------------------|---------|-------|---------|-------|---------|------|
| OPERATING<br>RADIUS<br>FT   | LOADED<br>BOOM ANGLE | BOOM LENGTH<br>AND MARKER |         |       |         |       |         |      |
|   |                      |                           | A       | B     | C       |       |         |      |
|   | 30.83 FT             |                           | 58 FT   | 80 FT | 102 FT  |       |         |      |
| 5   | 75                   | 76000                     |         |       |         |       |         |      |
| 8   | 69                   | 45710                     |         |       |         |       |         |      |
| 10  | 64                   | 29790                     |         |       |         |       |         |      |
| 12  | 60                   | 21410                     | 75      | 22420 |         |       |         |      |
| 15  | 53                   | 14330                     | 73      | 15250 | 79      | 15500 |         |      |
| 20  | 40                   | 8240                      | 67      | 9110  | 75      | 9340  | 80      | 9460 |
| 25  | 22                   | 4930                      | 62      | 5830  | 71      | 6050  | 77      | 6160 |
| 30  |                      |                           | 56      | 3790  | 67      | 4000  | 74      | 4110 |
| 35  |                      |                           | 49      | 2390  | 63      | 2610  | 71      | 2710 |
| 40  |                      |                           | 42      | 1370  | 59      | 1590  | 68      | 1690 |
| 45  |                      |                           |         |       | 54      | 820   | 65      | 920  |
|   |                      |                           |         |       |         |       |         |      |
|   | 450 LBS              |                           | 240 LBS |       | 180 LBS |       | 140 LBS |      |

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

DEDUCTIONS FOR  
STOWED JIBS

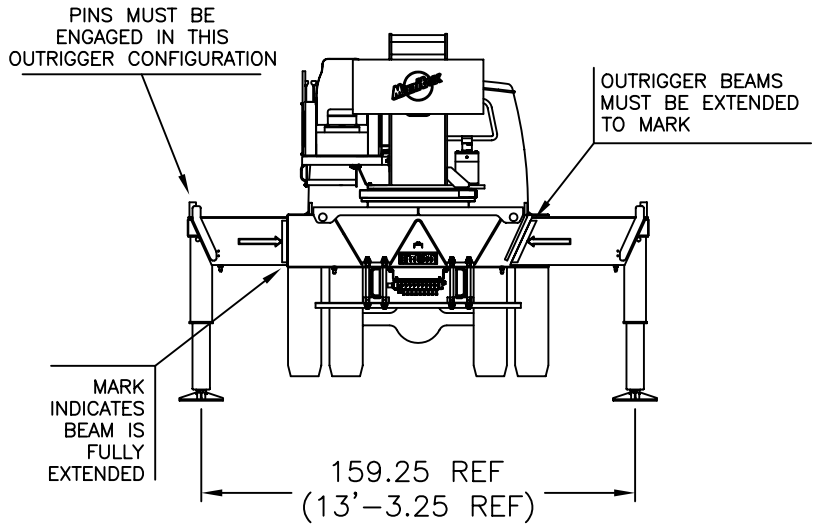
## RANGE DIAGRAM - FULLY RETRACTED OUTRIGGER CONFIGURATION -



**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.

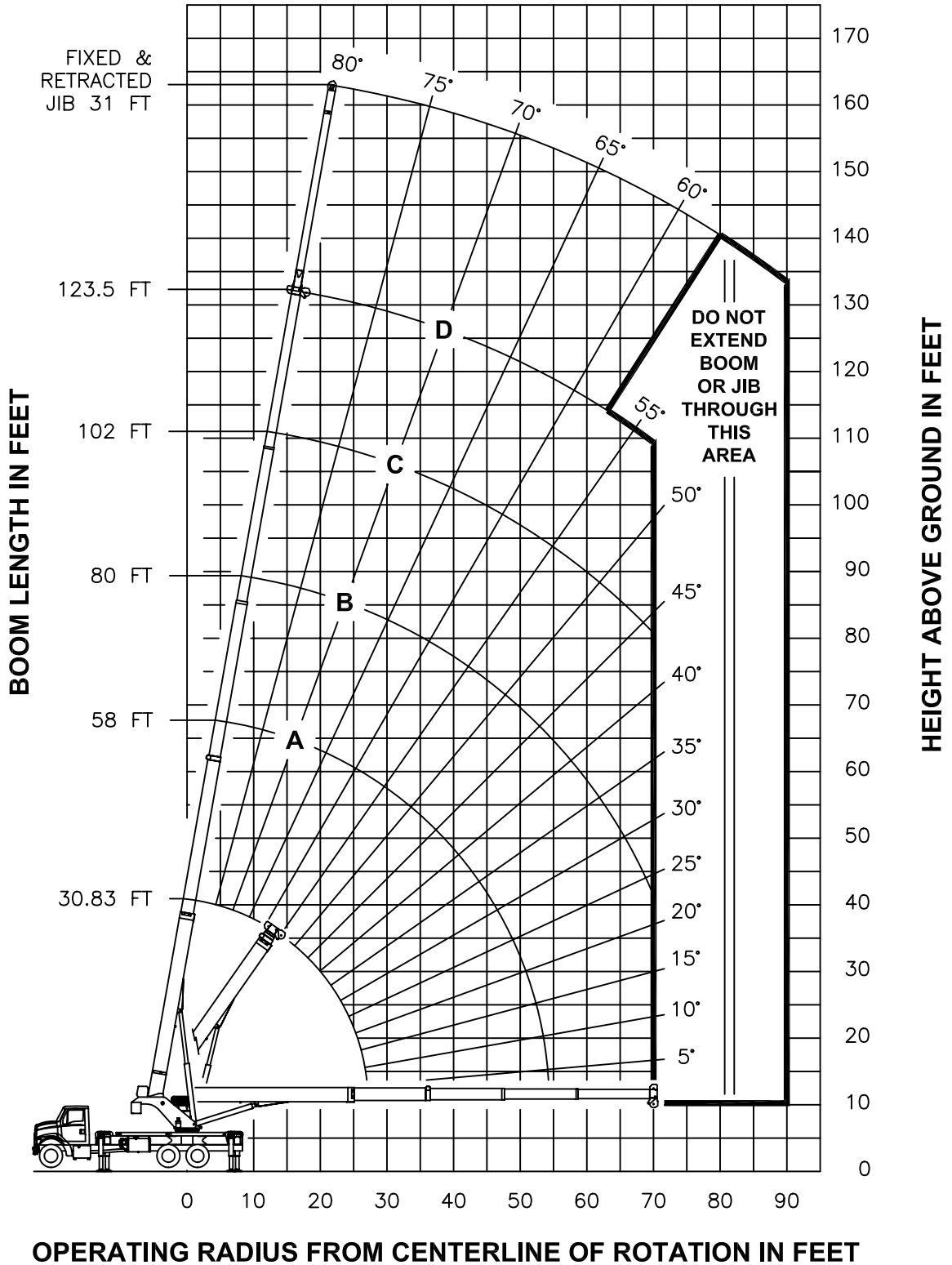
**USE THIS CHART ONLY  
WHEN ALL  
OUTRIGGERS ARE IN  
THE INTERMEDIATE  
POSITION**



**- INTERMEDIATE OUTRIGGER CONFIGURATION -**

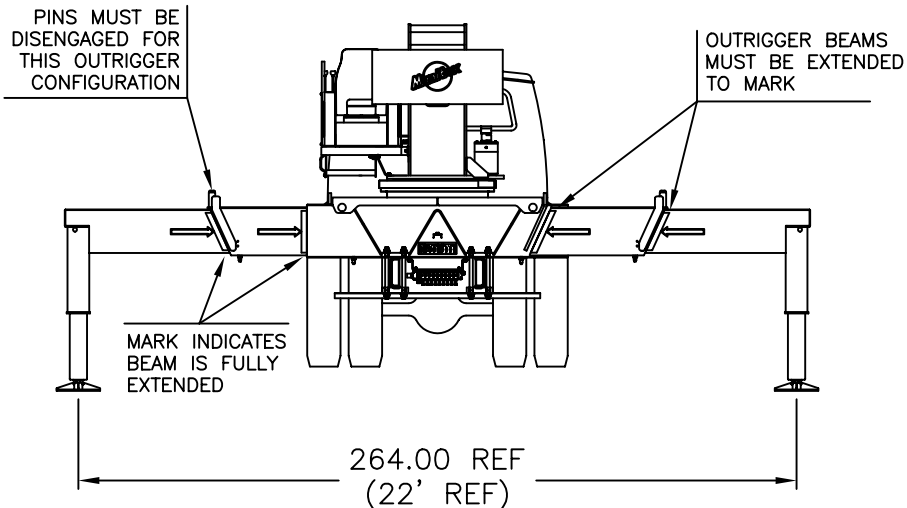
| LOAD RATINGS IN LBS WITH ALL OUTRIGGERS IN THE INTERMEDIATE POSITION |   |          |         |         |         |         |         |                           |    | JIB LOAD RATINGS IN LBS WITH ALL OUTRIGGERS IN THE INTERMEDIATE POSITION |                           |                      |   |
|--|---|----------|---------|---------|---------|---------|---------|---------------------------|----|--|---------------------------|----------------------|---|
| LMI CODE #9  |   |          |         |         |         |         |         |                           |    | LMI CODE #10   |                           |                      |   |
| OPERATING<br>RADIUS<br>FT  | LOADED<br>BOOM ANGLE<br>BOOM LENGTH<br>AND MARKER |          | A       |         | B       |         | C       |                           | D  |  | OPERATING<br>RADIUS<br>FT | LOADED<br>BOOM ANGLE | 31 FT JIB<br>FOR ALL<br>BOOM<br>LENGTHS<br><br>SEE<br>WARNING<br>NOTE 4 |
|  | °   | 30.83 FT | °       | 58 FT   | °       | 80 FT   | °       | 102 FT                    | °  | 123.5 FT   |                           |                      |   |
| 5  | 75  | 76000    |         |         |         |         |         |                           |    |  |                           |                      |   |
| 8  | 69  | 60500    |         |         |         |         |         |                           |    |  |                           |                      |   |
| 10   | 64  | 52550    |         |         |         |         |         |                           |    |  | 10                        |                      |   |
| 12   | 60  | 46600    | 75      | 25000   |         |         |         |                           |    |  | 12                        |                      |   |
| 15   | 53  | 36000    | 73      | 25000   | 79      | 21500   |         |                           |    |  | 15                        |                      |   |
| 20   | 40  | 20410    | 67      | 21480   | 75      | 19700   | 80      | 14500                     |    |  | 20                        |                      |   |
| 25   | 22  | 13230    | 62      | 14290   | 71      | 14550   | 77      | 13500                     | 80 | 8450   | 25                        |                      |   |
| 30   |   |          | 56      | 10170   | 67      | 10420   | 74      | 10540                     | 78 | 8150   | 30                        | 80                   | 4000  |
| 35   |   |          | 49      | 7490    | 63      | 7740    | 71      | 7860                      | 75 | 7800   | 35                        | 78                   | 3850  |
| 40   |   |          | 42      | 5610    | 59      | 5860    | 68      | 5980                      | 72 | 6040   | 40                        | 76                   | 3700  |
| 45   |   |          | 34      | 4220    | 54      | 4470    | 65      | 4580                      | 70 | 4650   | 45                        | 74                   | 3550  |
| 50   |   |          | 23      | 3120    | 50      | 3390    | 61      | 3510                      | 67 | 3570   | 50                        | 72                   | 3400  |
| 55   |   |          |         |         | 44      | 2540    | 58      | 2660                      | 65 | 2720   | 55                        | 70                   | 3110  |
| 60   |   |          |         |         | 39      | 1840    | 54      | 1970                      | 62 | 2030   | 60                        | 68                   | 2410  |
| 65   |   |          |         |         | 32      | 1260    | 50      | 1390                      | 59 | 1450   | 65                        | 66                   | 1830  |
| 70   |   |          |         |         | 24      | 770     | 46      | 900                       | 56 | 970  | 70                        | 64                   | 1340  |
| 75   |   |          |         |         |         |         |         |                           |    |  | 75                        | 62                   | 920   |
| 80   |   |          |         |         |         |         |         |                           |    |  | 80                        | 60                   | 560   |
|  |   |          | 450 LBS | 240 LBS | 180 LBS | 140 LBS | 120 LBS | DEDUCTIONS FOR STOWED JIB |    |  |                           |                      |   |

# 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  
FULLY EXTENDED**



**- FULLY EXTENDED OUTRIGGER CONFIGURATION -**

| LOAD RATINGS IN LBS WITH ALL OUTRIGGERS FULLY EXTENDED |                   |          |                        |         |         |         |                           |        |    | JIB LOAD RATINGS IN LBS WITH ALL OUTRIGGERS FULLY EXTENDED |            |  |          |
|--|-------------------|----------|------------------------|---------|---------|---------|---------------------------|--------|----|--|------------|--|----------|
| LMI CODE #1  |                   |          |                        |         |         |         |                           |        |    | LMI CODE #2  |            |  |          |
| OPERATING RADIUS FT                                    | LOADED BOOM ANGLE |          | BOOM LENGTH AND MARKER |         |         |         |                           |        |    | OPERATING RADIUS FT  | BOOM ANGLE | 31 FT JIB FOR ALL BOOM LENGTHS<br>SEE WARNING NOTE 4 |          |
|  | °                 | 30.83 FT | °                      | 58 FT   | °       | 80 FT   | °                         | 102 FT | °  |  |            |  | 123.5 FT |
| 5  | 75                | 76000    |                        |         |         |         |                           |        |    |  |            |  |          |
| 8  | 69                | 60500    |                        |         |         |         |                           |        |    |  |            |  |          |
| 10   | 64                | 52550    |                        |         |         |         |                           |        |    |  | 10         |  |          |
| 12   | 60                | 46600    | 75                     | 25000   |         |         |                           |        |    |  | 12         |  |          |
| 15   | 53                | 39600    | 73                     | 25000   | 79      | 21500   |                           |        |    |  | 15         |  |          |
| 20   | 40                | 31330    | 67                     | 25000   | 75      | 19700   | 80                        | 14500  |    |  | 20         |  |          |
| 25   | 22                | 24100    | 62                     | 22840   | 71      | 18200   | 77                        | 13500  | 80 | 8450   | 25         |  |          |
| 30   |                   |          | 56                     | 19550   | 67      | 16250   | 74                        | 12820  | 78 | 8150   | 30         | 80   | 4000     |
| 35   |                   |          | 49                     | 16100   | 63      | 14540   | 71                        | 11380  | 75 | 7800   | 35         | 78   | 3850     |
| 40   |                   |          | 42                     | 12900   | 59      | 13070   | 68                        | 10160  | 72 | 7280   | 40         | 76   | 3700     |
| 45   |                   |          | 34                     | 10540   | 54      | 10800   | 65                        | 9370   | 70 | 6780   | 45         | 74   | 3550     |
| 50   |                   |          | 23                     | 8720    | 50      | 9000    | 61                        | 8430   | 67 | 6160   | 50         | 72   | 3400     |
| 55   |                   |          |                        |         | 44      | 7570    | 58                        | 7620   | 65 | 5540   | 55         | 70   | 3250     |
| 60   |                   |          |                        |         | 39      | 6400    | 54                        | 6530   | 62 | 5000   | 60         | 68   | 3080     |
| 65   |                   |          |                        |         | 32      | 5430    | 50                        | 5570   | 59 | 4520   | 65         | 66   | 2910     |
| 70   |                   |          |                        |         | 24      | 4610    | 46                        | 4760   | 56 | 4090   | 70         | 64   | 2750     |
| 75   |                   |          |                        |         | 12      | 3900    | 42                        | 4060   | 53 | 3700   | 75         | 62   | 2600     |
| 80   |                   |          |                        |         |         |         | 37                        | 3470   | 50 | 3350   | 80         | 60   | 2460     |
| 85   |                   |          |                        |         |         |         | 32                        | 2940   | 47 | 3020   | 85         | 58   | 2320     |
| 90   |                   |          |                        |         |         |         | 25                        | 2480   | 43 | 2560   | 90         | 55   | 2170     |
| 95   |                   |          |                        |         |         |         | 17                        | 2060   | 40 | 2150   | 95         | 53   | 1930     |
| 100  |                   |          |                        |         |         |         |                           |        | 35 | 1790   | 100        | 51   | 1720     |
| 105  |                   |          |                        |         |         |         |                           |        | 31 | 1460   | 105        | 48   | 1530     |
| 110  |                   |          |                        |         |         |         |                           |        | 25 | 1160   | 110        | 45   | 1350     |
| 115  |                   |          |                        |         |         |         |                           |        | 18 | 880  | 115        | 43   | 1200     |
| 120  |                   |          |                        |         |         |         |                           |        |    |  | 120        | 40   | 1020     |
| 125  |                   |          |                        |         |         |         |                           |        |    |  | 125        | 36   | 800      |
|  |                   | 450 LBS  | 240 LBS                | 180 LBS | 140 LBS | 120 LBS | DEDUCTIONS FOR STOWED JIB |        |    |  |            |  |          |



## LMI OPERATING CODES

| SETTING | CRANE CONFIGURATION                       | OUTRIGGER CONFIGURATION |
|---------|---|-------------------------|
| #1      | — MAIN BOOM                               | FULLY EXTENDED          |
| #2      | — FIXED JIB                               | FULLY EXTENDED          |
| #5      | — PERSONNEL LIFTING PLATFORM ON MAIN BOOM | FULLY EXTENDED          |
| #6      | — PERSONNEL LIFTING PLATFORM ON FIXED JIB | FULLY EXTENDED          |
| #9      | — MAIN BOOM                               | INTERMEDIATE            |
| #10     | — FIXED JIB                               | 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.