

# Load Rating Chart

***Model 45155S***

***Manitex***

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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**

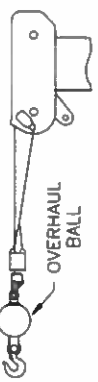

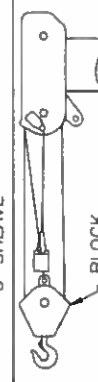
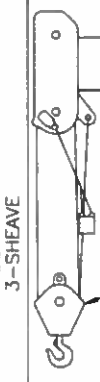
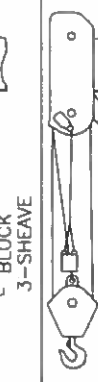

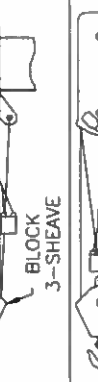

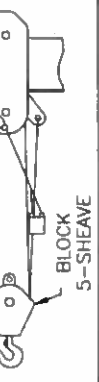

1. DEDUCTIONS MUST BE MADE FROM RATED LOADS FOR STOWED JIB, OPTIONAL ATTACHMENTS, HOOKS, AND LOADBLOCKS (SEE DEDUCTION CHART). WEIGHTS OF SLINGS AND ALL OTHER LOAD HANDLING DEVICES SHALL BE CONSIDERED A PART OF THE LOAD.
2. LOAD RATINGS ABOVE THE HEAVY LINE ARE STRUCTURALLY LIMITED CAPACITIES. LOAD RATINGS BELOW THE HEAVY LINE ARE STABILITY LIMITED CAPACITIES AND DO NOT EXCEED 85% OF TIPPING.

## **DEFINITIONS**

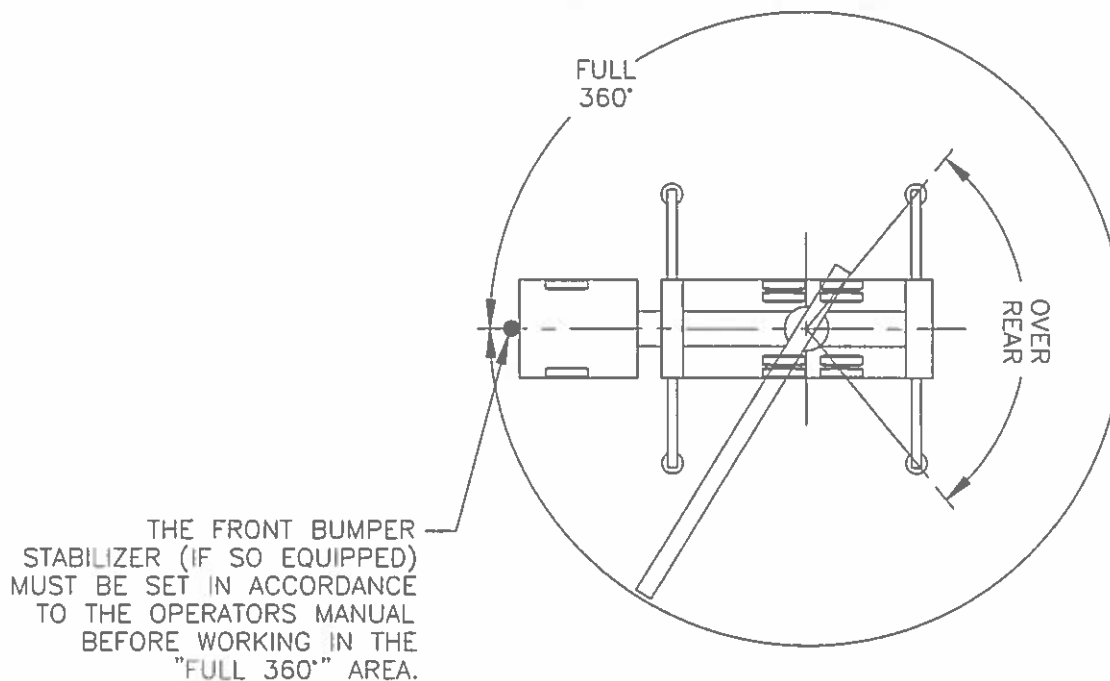
1. OPERATING RADIUS IS THE HORIZONTAL DISTANCE FROM THE AXIS OF ROTATION TO THE CENTER OF THE VERTICAL HOIST LINE OR TACKLE WITH LOAD APPLIED.
2. LOADED BOOM ANGLE IS THE INCLUDED ANGLE BETWEEN THE HORIZONTAL AND LONGITUDINAL AXES OF THE BOOM BASE AFTER LIFTING RATED LOAD AT RATED RADIUS.

## 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   | 9 PART LINE  | 10 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> |
|--|---|---|---|---|---|---|---|--|---|--|
|  |  |  |  |  |  |  |  |  |  |  |
| 10000 LBS  | 20000 LBS   | 30000 LBS   | 40000 LBS   | 50000 LBS   | 60000 LBS   | 70000 LBS   | 80000 LBS   | 90000 LBS  | <b>90000 LBS</b>  |  |

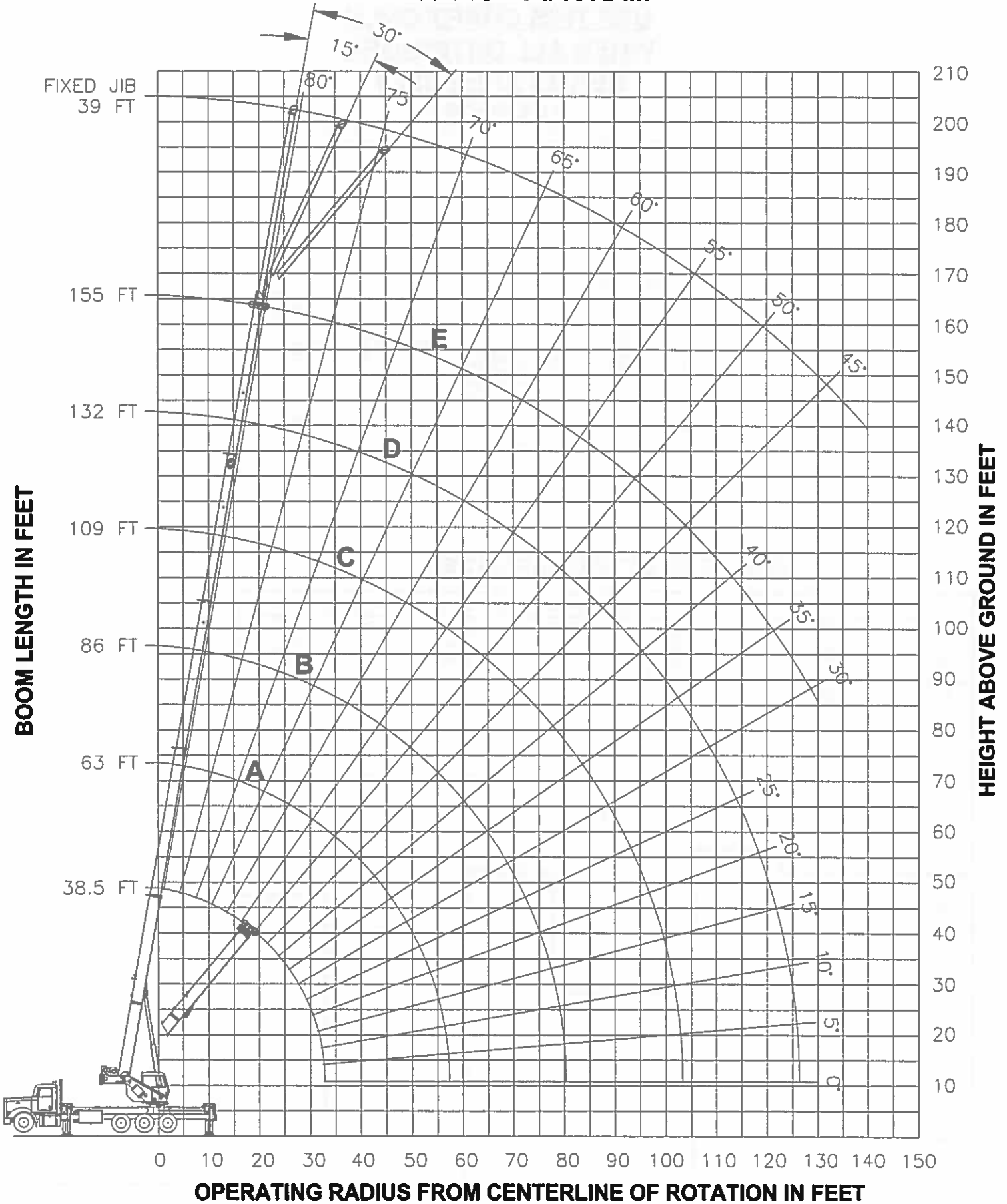
## AREA OF OPERATION



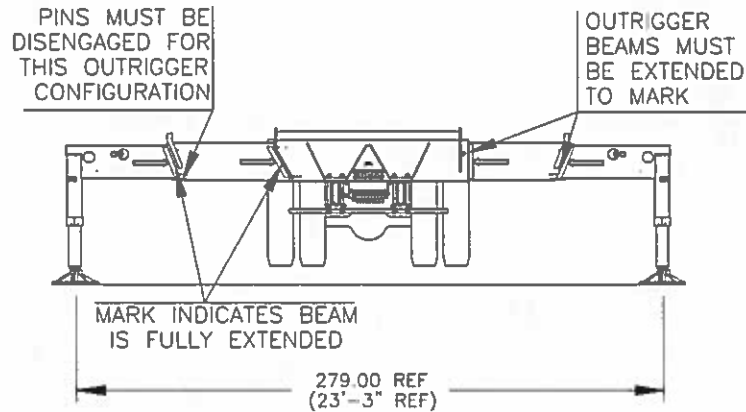
### DEDUCTIONS FROM RATED LOADS FOR LOAD HANDLING DEVICES SUPPLIED BY MANITEX

|   |     |                            |
|---|-----|----------------------------|
| 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 -



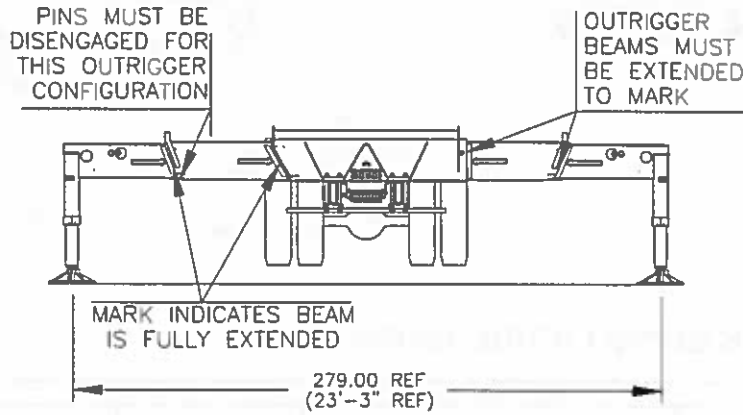
**USE THIS CHART ONLY  
WHEN ALL OUTRIGGER  
BEAMS ARE FULLY  
EXTENDED**



**MAIN BOOM LIFTING CAPACITIES**

| LOAD RADIUS (FT) | BOOM LENGTH 38.5 FT     |                        |                        | BOOM LENGTH 63 FT (A)   |                        |                        | BOOM LENGTH 86 FT (B)   |                        |                        |  |
|------------------|-------------------------|------------------------|------------------------|-------------------------|------------------------|------------------------|-------------------------|------------------------|------------------------|--|
|                  | 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                    | 90000                  | 90000                  |                         |                        |                        |                         |                        |                        |  |
| 8                | 70.5                    | 85400                  | 85400                  |                         |                        |                        |                         |                        |                        |  |
| 10               | 67                      | 75100                  | 75100                  | 77                      | 40000                  | 40000                  |                         |                        |                        |  |
| 12               | 64                      | 67100                  | 67100                  | 75                      | 40000                  | 40000                  |                         |                        |                        |  |
| 15               | 58.5                    | 57700                  | 57700                  | 72.5                    | 40000                  | 40000                  | 78.5                    | 31000                  | 31000                  |  |
| 20               | 49                      | 46070                  | 46070                  | 67.5                    | 38250                  | 38250                  | 75                      | 28200                  | 28200                  |  |
| 25               | 38                      | 35280                  | 35280                  | 62.5                    | 35040                  | 35040                  | 71.5                    | 25970                  | 25970                  |  |
| 30               | 22.5                    | 27920                  | 27490                  | 57                      | 29140                  | 29140                  | 68                      | 23950                  | 23950                  |  |
| 35               |                         |                        |                        | 51.5                    | 23890                  | 21500                  | 64                      | 22080                  | 22080                  |  |
| 40               |                         |                        |                        | 45                      | 19920                  | 16460                  | 60.5                    | 20350                  | 17010                  |  |
| 45               |                         |                        |                        | 38                      | 16810                  | 12920                  | 56.5                    | 17250                  | 13460                  |  |
| 50               |                         |                        |                        | 29.5                    | 14290                  | 10280                  | 52                      | 14760                  | 10820                  |  |
| 55               |                         |                        |                        | 17                      | 12200                  | 8210                   | 47.5                    | 12710                  | 8790                   |  |
| 60               |                         |                        |                        |                         |                        |                        | 42.5                    | 11000                  | 7180                   |  |
| 65               |                         |                        |                        |                         |                        |                        | 37                      | 9540                   | 5860                   |  |
| 70               |                         |                        |                        |                         |                        |                        | 30.5                    | 8280                   | 4760                   |  |
| 75               |                         |                        |                        |                         |                        |                        | 22.5                    | 7170                   | 3830                   |  |
| 80               |                         |                        |                        |                         |                        |                        | 7.5                     | 4370                   | 2990                   |  |
| 85               |                         |                        |                        |                         |                        |                        |                         |                        |                        |  |
|                  |                         | 960 LBS                |                        |                         | 590 LBS                |                        |                         | 430 LBS                |                        | DEDUCTIONS FOR JIB FROM MAIN BOOM CAPACITIES |
|                  |                         | 2620 LBS               |                        |                         | 2270 LBS               |                        |                         | 2130 LBS               |                        | STOWED JIB                                   |
|                  |                         |                        |                        |                         |                        |                        |                         |                        |                        | ERECTED JIB                                  |

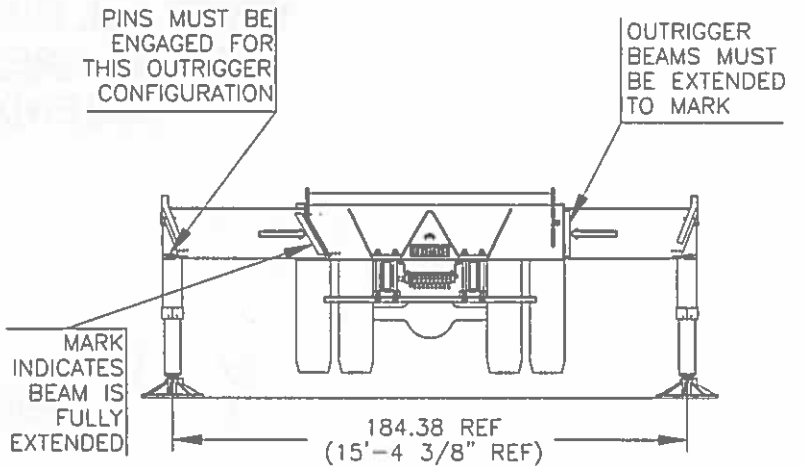
**USE THIS CHART ONLY  
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BEAMS ARE FULLY  
EXTENDED**



**MAIN BOOM LIFTING CAPACITIES**

| LOAD RADIUS (FT) | BOOM LENGTH 109 FT (C)  |                 |                 |                 | BOOM LENGTH 132 FT (D) |                         |                 |                 | BOOM LENGTH 155 FT (E) |                 |  |                 |                 |                 |                 |
|------------------|-------------------------|-----------------|-----------------|-----------------|------------------------|-------------------------|-----------------|-----------------|------------------------|-----------------|--|-----------------|-----------------|-----------------|-----------------|
|                  | LOADED BOOM ANGLE (DEG) | CODE 1          |                 | CODE 3          |                        | LOADED BOOM ANGLE (DEG) | CODE 1          |                 | CODE 3                 |                 | LOADED BOOM ANGLE (DEG)                      | CODE 1          |                 | CODE 3          |                 |
|                  |                         | OVER REAR (LBS) | FULL 360' (LBS) | OVER REAR (LBS) | FULL 360' (LBS)        |                         | OVER REAR (LBS) | FULL 360' (LBS) | OVER REAR (LBS)        | FULL 360' (LBS) |  | OVER REAR (LBS) | FULL 360' (LBS) | OVER REAR (LBS) | FULL 360' (LBS) |
| 25               | 77                      | 18000           | 18000           |                 |                        |                         |                 |                 |                        |                 |  |                 |                 |                 |                 |
| 30               | 74                      | 17000           | 17000           | 78              | 13500                  | 13500                   |                 |                 |                        |                 |  |                 |                 |                 |                 |
| 35               | 71.5                    | 15920           | 15920           | 76              | 12900                  | 12900                   | 79              | 9000            | 9000                   |                 |  |                 |                 |                 |                 |
| 40               | 68.5                    | 14700           | 14700           | 74              | 12000                  | 12000                   | 77              | 9000            | 9000                   |                 |  |                 |                 |                 |                 |
| 45               | 65.5                    | 13570           | 13570           | 71.5            | 11300                  | 11300                   | 75.5            | 9000            | 9000                   |                 |  |                 |                 |                 |                 |
| 50               | 62.5                    | 12540           | 11100           | 69              | 10550                  | 10550                   | 73.5            | 8800            | 8800                   |                 |  |                 |                 |                 |                 |
| 55               | 59.5                    | 11580           | 9060            | 67              | 9610                   | 9220                    | 71.5            | 8320            | 8320                   |                 |  |                 |                 |                 |                 |
| 60               | 56                      | 10690           | 7450            | 64.5            | 9000                   | 7600                    | 69.5            | 7820            | 7700                   |                 |  |                 |                 |                 |                 |
| 65               | 53                      | 9780            | 6130            | 62              | 8430                   | 6280                    | 67.5            | 7340            | 6380                   |                 |  |                 |                 |                 |                 |
| 70               | 49                      | 8530            | 5040            | 59              | 7880                   | 5190                    | 65.5            | 6880            | 5290                   |                 |  |                 |                 |                 |                 |
| 75               | 45.5                    | 7440            | 4120            | 56.5            | 7390                   | 4270                    | 63.5            | 6410            | 4360                   |                 |  |                 |                 |                 |                 |
| 80               | 41.5                    | 6490            | 3330            | 53.5            | 6630                   | 3480                    | 61.5            | 5980            | 3570                   |                 |  |                 |                 |                 |                 |
| 85               | 37                      | 5650            | 2640            | 50.5            | 5790                   | 2800                    | 59              | 5560            | 2890                   |                 |  |                 |                 |                 |                 |
| 90               | 32                      | 4890            | 2040            | 47.5            | 5040                   | 2200                    | 57              | 5130            | 2300                   |                 |  |                 |                 |                 |                 |
| 95               | 25.5                    | 4210            | 1510            | 44.5            | 4370                   | 1680                    | 54.5            | 4460            | 1770                   |                 |  |                 |                 |                 |                 |
| 100              | 17                      | 3590            | 1030            | 41              | 3770                   | 1210                    | 52              | 3850            | 1310                   |                 |  |                 |                 |                 |                 |
| 105              |                         |                 |                 | 37              | 3220                   |                         | 49.5            | 3310            | 890                    |                 |  |                 |                 |                 |                 |
| 110              |                         |                 |                 | 33              | 2720                   |                         | 47              | 2810            |                        |                 |  |                 |                 |                 |                 |
| 115              |                         |                 |                 | 28              | 2260                   |                         | 44              | 2360            |                        |                 |  |                 |                 |                 |                 |
| 120              |                         |                 |                 | 22              | 1830                   |                         | 41              | 1940            |                        |                 |  |                 |                 |                 |                 |
| 125              |                         |                 |                 | 12              | 860                    |                         | 37.5            | 1550            |                        |                 |  |                 |                 |                 |                 |
| 130              |                         |                 |                 |                 |                        |                         | 34              | 1190            |                        |                 |  |                 |                 |                 |                 |
| 135              |                         |                 |                 |                 |                        |                         |                 |                 |                        |                 |  |                 |                 |                 |                 |
|                  |                         | 340 LBS         |                 |                 | 280 LBS                |                         |                 | 240 LBS         |                        |                 | DEDUCTIONS FOR JIB FROM MAIN BOOM CAPACITIES |                 |                 |                 |                 |
|                  |                         | 2050 LBS        |                 |                 | 1990 LBS               |                         |                 | 1950 LBS        |                        |                 | STOWED JIB                                   |                 |                 |                 |                 |
|                  |                         |                 |                 |                 |                        |                         |                 |                 |                        |                 | ERECTED JIB                                  |                 |                 |                 |                 |

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

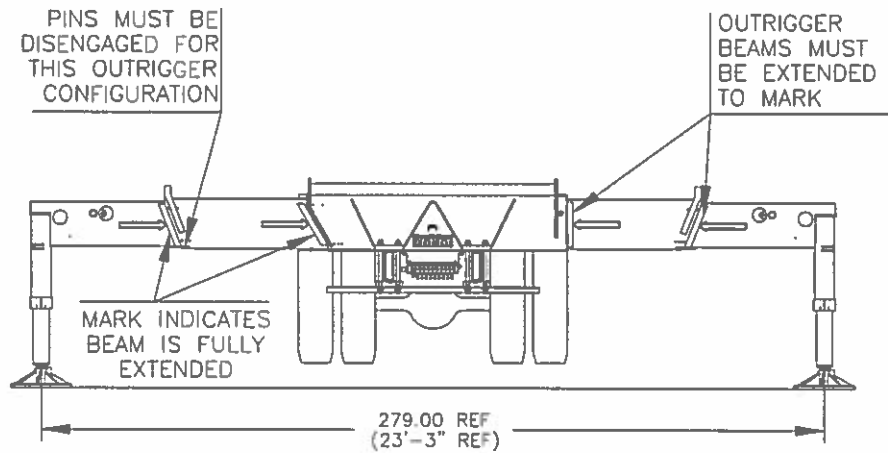


**MAIN BOOM LIFTING CAPACITIES**

| LMI CODE 4       |                         |                 |                         |                 |                         |                 |  |                 |                         |                 |                         |                 |
|------------------|-------------------------|-----------------|-------------------------|-----------------|-------------------------|-----------------|--|-----------------|-------------------------|-----------------|-------------------------|-----------------|
| LOAD RADIUS (FT) | BOOM LENGTH 38.5 FT     |                 | BOOM LENGTH 63 FT (A)   |                 | BOOM LENGTH 86 FT (B)   |                 | BOOM LENGTH 109 FT (C)                       |                 | BOOM LENGTH 132 FT (D)  |                 | BOOM LENGTH 155 FT (E)  |                 |
|                  | LOADED BOOM ANGLE (DEG) | FULL 360° (LBS) | LOADED BOOM ANGLE (DEG) | FULL 360° (LBS) | LOADED BOOM ANGLE (DEG) | FULL 360° (LBS) | LOADED BOOM ANGLE (DEG)                      | FULL 360° (LBS) | LOADED BOOM ANGLE (DEG) | FULL 360° (LBS) | LOADED BOOM ANGLE (DEG) | FULL 360° (LBS) |
| 6                | 73.5                    | 90000           |                         |                 |                         |                 |  |                 |                         |                 |                         |                 |
| 8                | 70.5                    | 85400           |                         |                 |                         |                 |  |                 |                         |                 |                         |                 |
| 10               | 67                      | 75100           | 77                      | 40000           |                         |                 |  |                 |                         |                 |                         |                 |
| 12               | 64                      | 67100           | 75                      | 40000           |                         |                 |  |                 |                         |                 |                         |                 |
| 15               | 58.5                    | 52390           | 72.5                    | 40000           | 78.5                    | 31000           |  |                 |                         |                 |                         |                 |
| 20               | 49                      | 27810           | 67.5                    | 29440           | 75                      | 28200           |  |                 |                         |                 |                         |                 |
| 25               | 38                      | 17380           | 62.5                    | 18840           | 71.5                    | 19400           | 77   | 18000           |                         |                 |                         |                 |
| 30               | 22.5                    | 11540           | 57                      | 12980           | 68                      | 13490           | 74   | 13780           | 78                      | 13500           |                         |                 |
| 35               |                         |                 | 51.5                    | 9260            | 64                      | 9740            | 71.5   | 10010           | 76                      | 10170           | 79                      | 9000            |
| 40               |                         |                 | 45                      | 6680            | 60.5                    | 7150            | 68.5   | 7400            | 74                      | 7560            | 77                      | 7660            |
| 45               |                         |                 | 38                      | 4780            | 56.5                    | 5250            | 65.5   | 5500            | 71.5                    | 5640            | 75.5                    | 5740            |
| 50               |                         |                 | 29.5                    | 3310            | 52                      | 3800            | 62.5   | 4040            | 69                      | 4180            | 73.5                    | 4270            |
| 55               |                         |                 | 17                      | 2130            | 47.5                    | 2650            | 59.5   | 2890            | 67                      | 3020            | 71.5                    | 3110            |
| 60               |                         |                 |                         |                 | 42.5                    | 1710            | 56   | 1950            | 64.5                    | 2090            | 69.5                    | 2180            |
| 65               |                         |                 |                         |                 |                         |                 | 53   | 1180            | 62                      | 1320            | 67.5                    | 1400            |
| 70               |                         |                 |                         |                 |                         |                 |  |                 |                         |                 |                         |                 |
| 75               |                         |                 |                         |                 |                         |                 |  |                 |                         |                 |                         |                 |
| 80               |                         |                 |                         |                 |                         |                 |  |                 |                         |                 |                         |                 |
|                  | 960 LBS                 | 590 LBS         | 430 LBS                 | 340 LBS         | 280 LBS                 | 240 LBS         | DEDUCTIONS FOR JIB FROM MAIN BOOM CAPACITIES |                 |                         |                 |                         |                 |
|                  | 2620 LBS                | 2270 LBS        | 2130 LBS                | 2050 LBS        | 1990 LBS                | 1950 LBS        | STOWED JIB                                   |                 |                         |                 |                         |                 |
|                  |                         |                 |                         |                 |                         |                 | ERECTED JIB                                  |                 |                         |                 |                         |                 |



**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          | CODE 8          | LOADED BOOM ANGLE (DEG) | CODE 9          | CODE 10         | LOADED BOOM ANGLE (DEG) | CODE 11         | CODE 12         |
|                  |                         | OVER REAR (LBS) | FULL 360° (LBS) |                         | OVER REAR (LBS) | FULL 360° (LBS) |                         | OVER REAR (LBS) | 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            | 3360            | 69.5                    | 3780            | 3780            | 71.5                    | 3570            | 3570            |
| 90               | 65                      | 3720            | 2750            | 67.5                    | 3630            | 3350            | 70                      | 3430            | 3430            |
| 95               | 63.5                    | 3430            | 2210            | 66                      | 3480            | 2760            | 68                      | 3290            | 3230            |
| 100              | 61.5                    | 3150            | 1740            | 64.5                    | 3340            | 2250            | 66.5                    | 3160            | 2670            |
| 105              | 60                      | 2880            | 1310            | 62.5                    | 3180            | 1780            | 65                      | 3030            | 2170            |
| 110              | 58                      | 2610            | 930             | 61                      | 2880            | 1370            | 63                      | 2920            | 1720            |
| 115              | 56                      | 2360            |                 | 59                      | 2610            | 990             | 61                      | 2800            | 1310            |
| 120              | 54.5                    | 2130            |                 | 57                      | 2350            |                 | 59                      | 2570            | 940             |
| 125              | 52.5                    | 1840            |                 | 55                      | 2110            |                 | 57                      | 2290            |                 |
| 130              | 50.5                    | 1490            |                 | 53                      | 1830            |                 | 55                      | 2040            |                 |
| 135              | 48.5                    | 1160            |                 | 51                      | 1480            |                 | 53                      | 1710            |                 |
| 140              | 46                      | 860             |                 | 48.5                    | 1150            |                 | 50.5                    | 1350            |                 |
| 145              |                         |                 |                 | 46.5                    | 840             |                 | 48                      | 1020            |                 |
| 150              |                         |                 |                 |                         |                 |                 |                         |                 |                 |

