



# Maximum Allowable Travel Specifications

## 999 SERIES 1, 2, 3

Boom No. 82 or 22EL  
Jib No. 134 With 12 Ft. 6 in. (3 810 mm) Strut

### Jobsite Travel

999 SERIES 1 must be equipped with 149,600 Lb. (67 860 kg) counterweight or 114,600 Lb. (51 980 kg) counterweight; 999 SERIES 2 must be equipped with 184,600 Lb. (83 730 kg) crane counterweight and 44,000 Lb. (19 960 kg) carbody counterweight; and 999 SERIES 3 must be equipped with 219,600 Lb. (99 610 kg) crane counterweight and 80,000 Lb. (36 290 kg) carbody counterweight. Refer to Operator's Manual for maximum wind speed for various boom and jib lengths and capacity charts for maximum boom and jib lengths lifted unassisted.

#### 1. Machine Travel With Load

- A. Machine can swing and travel with 360 degree rating.
- B. Grade in any direction must not exceed 1 percent (0.5 degrees).
- C. Travel surface must be firm, level and uniformly supporting. Capacity charts are based on static conditions; therefore judgment must be used to allow for dynamic effects of traveling with load. Carry load as close to ground as possible. Stabilize load with taglines. Travel slowly and smoothly to avoid shock loading boom, jib and rigging.

#### 2. Machine Travel Without Load

- A. Load blocks and/or hook and weight balls may be suspended beneath lower and upper boom points, jib point or tied off to machine. Total combined suspended weight beneath lower and upper boom points must not exceed 9,000 Lbs. (4 080 kg). Total suspended weight beneath jib point must not exceed 2,000 Lbs. (910 kg).
- B. Machine to travel on a firm and uniformly supporting surface. Travel allowed with 360 degree swing up to 1 percent (0.5 degrees) grade; crane upperworks must be in-line with crawlers and grade when grade exceeds 1 percent. Grade in direction of travel should not exceed 30 percent (16.7 degrees); side-to-side grade must not exceed 2 percent (1.1 degrees) measured at boom hinge pins.
- C. Refer to tables on pages 2 thru 7 for boom angle, boom length and direction for various grades. Adjust boom within boom angle range shown in table, with machine in a level position before traveling onto grade. Do not change boom angle after crane has been traveled onto grade. Boom angle is angle between horizontal and centerline of boom butt and inserts. Refer to table below for grade vs. angle when traveling.
- D. Do not exceed 2 percent (1.1 degrees) side-to-side grade at boom hinge pins when cutting (turning on grade).
- E. Boom lengths shown in tables on page 2 thru 5 do not include jib. Boom lengths shown in tables on pages 6 and 7 include all jib lengths and offset angles. Jib is not to be used with 999 SERIES 1 equipped with 114,600 Lb. (51 980 kg) counterweight.
- F. **Warning:** Travel prohibited for boom lengths not shown in tables on pages 2 thru 7. *Crane could tip.*

Percent Grade Vs. Angle In Degrees	
Percent Grade	Angle
1	0.5
10	5.7
20	11.3
30	16.7



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Machine Travel Without Load - Boom Facing Downhill					
Boom Angle Range in Degrees	Boom Length (not including jib)				Boom Angle Range in Degrees
	999 SERIES 1				
	149,600 Lb. (67 860 kg) Counterweight		114,600 Lb. (51 980 kg) Counterweight		
	Feet	Meters	Feet	Meters	
<b>0 - 1% Percent Grade</b>					
30 - 72	70 - 160	21.3 - 48.8	70 - 140	21.3 - 42.7	30 - 72
40 - 72	170 - 180	51.8 - 54.9	150 - 160	45.7 - 48.8	40 - 72
50 - 72	190 - 210	57.9 - 64.0	170 - 180	51.8 - 54.9	50 - 72
60 - 72	220 - 250	67.1 - 76.2	190 - 210	57.9 - 64.0	60 - 72
<b>2 - 10% Percent Grade</b>					
30 - 72	70 - 150	21.3 - 45.7	70 - 130	21.3 - 39.6	30 - 72
40 - 72	160 - 170	48.8 - 51.8	140	42.7	40 - 72
50 - 72	180 - 190	54.9 - 57.9	150 - 160	45.7 - 48.8	50 - 72
60 - 72	200 - 220	61.0 - 67.1	170 - 180	51.8 - 54.9	60 - 72
65 - 72	230 - 250	70.1 - 76.2	190 - 210	57.9 - 64.0	65 - 72
<b>11 - 20% Percent Grade</b>					
30 - 72	70 - 140	21.3 - 42.7	70 - 120	21.3 - 36.6	30 - 72
40 - 72	150	45.7	130	39.6	40 - 72
50 - 72	160 - 170	48.8 - 51.8	140	42.7	50 - 72
60 - 72	180 - 200	54.9 - 61.0	150 - 160	45.7 - 48.8	60 - 72
65 - 72	210 - 220	64.0 - 67.1	170 - 180	51.8 - 54.9	65 - 72
<b>21 - 30% Percent Grade</b>					
30 - 72	70 - 130	21.3 - 39.6	70 - 100	21.3 - 30.5	30 - 72
40 - 72	140	42.7	110	33.5	40 - 72
50 - 72	150	45.7	120 - 130	36.6 - 39.6	50 - 72
60 - 72	160 - 180	48.8 - 54.9	140	42.7	60 - 72
65 - 72	190	57.9	150	45.7	65 - 72



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## 999 SERIES 1, 2, 3

Boom No. 82 or 22EL

<b>Machine Travel Without Load - Boom Facing Downhill</b>					
Boom Angle Range in Degrees	Boom Length (not including jib)				Boom Angle Range in Degrees
	999 SERIES 2		999 SERIES 3		
	Feet	Meters	Feet	Meters	
<b>0 - 1% Percent Grade</b>					
30 - 72	70 - 190	21.3 - 57.9	70 - 210	21.3 - 64.0	30 - 72
40 - 72	200 - 210	61.0 - 64.0	220 - 230	67.1 - 70.1	40 - 72
50 - 72	220 - 240	67.1 - 73.2	240 - 270	73.2 - 82.3	50 - 72
60 - 72	250 - 290	76.2 - 88.4	280 - 290	85.3 - 88.4	60 - 72
<b>2 - 10% Percent Grade</b>					
30 - 72	70 - 180	21.3 - 54.9	70 - 200	21.3 - 61.0	30 - 72
40 - 72	190	57.9	210 - 220	64.0 - 67.1	40 - 72
50 - 72	200 - 220	61.0 - 67.1	230 - 240	70.1 - 73.2	50 - 72
60 - 72	230 - 260	70.1 - 79.2	250 - 280	76.2 - 85.3	60 - 72
65 - 72	270 - 290	82.3 - 88.4	290	88.4	65 - 72
<b>11 - 20% Percent Grade</b>					
30 - 72	70 - 170	21.3 - 51.8	70 - 180	21.3 - 54.9	30 - 72
40 - 72	180	54.9	190	57.9	40 - 72
50 - 72	190	57.9	200 - 210	61.0 - 64.0	50 - 72
60 - 72	200 - 230	61.0 - 70.1	220 - 250	67.1 - 76.2	60 - 72
65 - 72	240 - 250	73.2 - 76.2	260	79.2	65 - 72
<b>21 - 30% Percent Grade</b>					
30 - 72	70 - 150	21.3 - 45.7	70 - 170	21.3 - 51.8	30 - 72
40 - 72	160	48.8	180	54.9	40 - 72
50 - 72	170 - 180	51.8 - 54.9	190	57.9	50 - 72
60 - 72	190 - 200	57.9 - 61.0	200 - 210	61.0 - 64.0	60 - 72
65 - 72	210 - 220	64.0 - 67.1	220 - 230	67.1 - 70.1	65 - 72



# Maximum Allowable Travel Specifications

## 999 SERIES 1, 2, 3

Boom No. 82 or 22EL

Machine Travel Without Load - Boom Facing Uphill					
Boom Angle Range in Degrees	Boom Length (not including jib)				Boom Angle Range in Degrees
	999 SERIES 1				
	149,600 Lb. (67 860 kg) Counterweight		114,600 Lb. (51 980 kg) Counterweight		
	Feet	Meters	Feet	Meters	
<b>0 - 1% Percent Grade</b>					
30 - 72	70 - 160	21.3 - 48.8	70 - 140	21.3 - 42.7	30 - 72
40 - 72	170 - 180	51.8 - 54.9	150 - 160	45.7 - 48.8	40 - 72
50 - 72	190 - 210	57.9 - 64.0	170 - 180	51.8 - 54.9	50 - 72
60 - 72	220 - 250	67.1 - 76.2	190 - 210	57.9 - 64.0	60 - 72
<b>2 - 10% Percent Grade</b>					
30 - 66	70 - 160	21.3 - 48.8	70 - 140	21.3 - 42.7	30 - 66
40 - 66	170 - 180	51.8 - 54.9	150 - 170	45.7 - 51.8	40 - 66
50 - 66	190 - 210	57.9 - 64.0	180 - 200	54.9 - 61.0	50 - 66
60 - 66	220 - 250	67.1 - 76.2	210	64.0	60 - 66
<b>11 - 20% Percent Grade</b>					
30 - 45	70	21.3	70	21.3	30 - 45
30 - 60	80 - 160	24.4 - 48.8	80 - 150	24.4 - 45.7	30 - 60
40 - 60	170 - 180	51.8 - 54.9	160 - 170	48.8 - 51.8	40 - 60
50 - 60	190 - 210	57.9 - 64.0	180 - 200	54.9 - 61.0	50 - 60
55 - 60	220	67.1	210	64.0	55 - 60
<b>21 - 30% Percent Grade</b>					
30 - 40	70 - 110	21.3 - 33.5	70 - 100	21.3 - 30.5	30 - 40
30 - 55	120 - 160	36.6 - 48.8	110 - 150	33.5 - 45.7	30 - 55
40 - 55	170 - 180	51.8 - 54.9	160 - 170	48.8 - 51.8	40 - 55
50 - 55	190 - 210	57.9 - 64.0	180	54.9	50 - 55



# Maximum Allowable Travel Specifications

## 999 SERIES 1, 2, 3

Boom No. 82 or 22EL

<b>Machine Travel Without Load - Boom Facing Uphill</b>					
Boom Angle Range in Degrees	Boom Length (not including jib)				Boom Angle Range in Degrees
	999 SERIES 2		999 SERIES 3		
	Feet	Meters	Feet	Meters	
<b>0 - 1% Percent Grade</b>					
30 - 72	70 - 190	21.3 - 57.9	70 - 210	21.3 - 64.0	30 - 72
40 - 72	200 - 210	61.0 - 64.0	220 - 230	67.1 - 70.1	40 - 72
50 - 72	220 - 240	67.1 - 73.2	240 - 270	73.2 - 82.3	50 - 72
60 - 72	250 - 290	76.2 - 88.4	280 - 290	85.3 - 88.4	60 - 72
<b>2 - 10% Percent Grade</b>					
30 - 66	70 - 190	21.3 - 57.9	70	21.3	30 - 66
40 - 66	200 - 210	61.0 - 64.0	80 - 260	24.4 - 79.2	40 - 66
50 - 66	220 - 240	67.1 - 73.2	270 - 290	82.3 - 88.4	50 - 66
60 - 66	250 - 290	76.2 - 88.4	—	—	60 - 66
<b>11 - 20% Percent Grade</b>					
30 - 45	70 - 80	21.3 - 24.4	70 - 90	21.3 - 27.4	30 - 45
30 - 60	90 - 190	27.4 - 57.9	100 - 250	30.5 - 76.2	30 - 60
40 - 60	200 - 210	61.0 - 64.0	260 - 290	79.2 - 88.4	40 - 60
50 - 60	220 - 240	67.1 - 73.2	—	—	50 - 60
55 - 60	250 - 260	76.2 - 79.2	—	—	55 - 60
<b>21 - 30% Percent Grade</b>					
30 - 40	90 - 110	27.4 - 33.5	90 - 130	27.4 - 39.6	30 - 40
30 - 55	120 - 190	36.6 - 57.9	140 - 290	42.7 - 88.4	30 - 55
40 - 55	200 - 210	61.0 - 64.0	—	—	40 - 55
50 - 55	220 - 240	67.1 - 73.2	—	—	50 - 55



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Boom No. 82 or 22EL  
Jib No. 134 With 12 Ft. 6 in. (3 810 mm) Strut

Machine Travel Without Load - Boom Facing Downhill							
Boom Angle Range in Degrees	Boom Length (including all jib lengths and offset angles)						Boom Angle Range in Degrees
	999 SERIES 1		999 SERIES 2		999 SERIES 3		
	Feet	Meters	Feet	Meters	Feet	Meters	
<b>0 - 1% Percent Grade</b>							
50 - 72	90 - 170	27.4 - 51.8	90 - 200	27.4 - 61.0	90 - 240	27.4 - 73.2	50 - 72
55 - 72	180	54.9	210 - 220	64.0 - 67.1	250 - 260	76.2 - 79.2	55 - 72
60 - 72	190 - 200	57.9 - 61.0	230 - 240	70.1 - 73.2	270	82.3	60 - 72
65 - 72	210 - 220	64.0 - 67.1	250 - 260	76.2 - 79.2	—	—	65 - 72
<b>2 - 10% Percent Grade</b>							
50 - 72	90 - 150	27.4 - 45.7	90 - 180	27.4 - 54.9	90 - 210	27.4 - 64.0	50 - 72
55 - 72	160	48.8	190	57.9	220	67.1	55 - 72
60 - 72	170	51.8	200 - 210	61.0 - 64.0	230 - 270	70.1 - 82.3	60 - 72
65 - 72	180 - 190	54.9 - 57.9	220 - 230	67.1 - 70.1	—	—	65 - 72
<b>11 - 20% Percent Grade</b>							
50 - 72	90 - 130	27.4 - 39.6	90 - 150	27.4 - 45.7	90 - 180	27.4 - 54.9	50 - 72
55 - 72	140	42.7	160	48.8	190 - 200	57.9 - 61.0	55 - 72
60 - 72	150	45.7	170 - 180	51.8 - 54.9	210	64.0	60 - 72
65 - 72	160	48.8	190	57.9	220 - 230	67.1 - 70.1	65 - 72
<b>21 - 30% Percent Grade</b>							
50 - 72	90 - 100	27.4 - 30.5	90 - 120	27.4 - 36.6	—	—	50 - 72
55 - 72	110	33.5	130	39.6	90 - 160	27.4 - 48.8	55 - 72
60 - 72	120	36.6	140	42.7	170	51.8	60 - 72
65 - 72	130 - 140	39.6 - 42.7	150 - 170	45.7 - 51.8	180 - 200	54.9 - 61.0	65 - 72

999 SERIES 1 must be equipped with 149,600 Lb. (67 860 kg) counterweight when jib is attached.



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Boom No. 82 or 22EL  
 Jib No. 134 With 12 Ft. 6 in. (3 810 mm) Strut

Machine Travel Without Load - Boom Facing Uphill							
Boom Angle Range in Degrees	Boom Length (including all jib lengths and offset angles)						Boom Angle Range in Degrees
	999 SERIES 1		999 SERIES 2		999 SERIES 3		
	Feet	Meters	Feet	Meters	Feet	Meters	
<b>0 - 1% Percent Grade</b>							
50 - 72	90 - 170	27.4 - 51.8	90 - 200	27.4 - 61.0	90 - 240	27.4 - 73.2	50 - 72
55 - 72	180	54.9	210 - 220	64.0 - 67.1	250 - 260	76.2 - 79.2	55 - 72
60 - 72	190 - 200	57.9 - 61.0	230 - 240	70.1 - 73.2	270	82.3	60 - 72
65 - 72	210 - 220	64.0 - 67.1	250 - 260	76.2 - 79.2	—	—	65 - 72
<b>2 - 10% Percent Grade</b>							
50 - 66	90 - 170	27.4 - 51.8	90 - 200	27.4 - 61.0	90 - 270	27.4 - 82.3	50 - 66
60 - 66	180 - 200	54.9 - 61.0	210 - 240	64.0 - 73.2	—	—	60 - 66
<b>11 - 20% Percent Grade</b>							
50 - 60	90 - 170	27.4 - 51.8	90 - 200	27.4 - 61.0	90 - 270	27.4 - 82.3	50 - 60
55 - 60	180	54.9	210 - 220	64.0 - 67.1	—	—	55 - 60
<b>21 - 30% Percent Grade</b>							
45 - 50	—	—	90 - 100	27.4 - 30.5	—	—	45 - 50
45 - 55	90 - 150	27.4 - 45.7	110 - 190	33.5 - 57.9	—	—	45 - 55
50 - 55	160 - 170	48.8 - 51.8	200	61.0	130 - 270	39.6 - 82.3	50 - 55

999 SERIES 1 must be equipped with 149,600 Lb. (67 860 kg) counterweight when jib is attached.