

Maximum Allowable Travel Specifications

Boom No. 222 With Open Throat Top
Jib No. 10 With 12 Ft. 6 in. (3 810 mm) Strut

222, 222EX
222 SERIES B
222EX SERIES B

Jobsite Travel

222 and 222EX must be equipped with 28,500 Lb. (12 930 kg) or 53,300 Lb. (24 180 kg) crane counterweight; 222 SERIES B and 222EX SERIES B must be equipped with 63,300 Lb. (28 710 kg) crane counterweight and 14,000 Lb. (6 350 kg) crawler frame counterweight.

1. Machine Travel With Load

- A. Travel with crane upperworks in-line with crawlers. Grade in any direction must not exceed 1 percent (0.5 degrees).
- B. 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 boom point, upper boom point and jib point. Total combined suspended weight beneath lower and upper boom points must not exceed 3,500 Lbs. (1 590 kg) or 2,800 Lbs. (1 270 kg) on lower point when jib is attached. Total suspended weight beneath jib point must not exceed 700 Lbs. (320 kg).
- B. Machine to travel on a firm and uniformly supporting surface with crane upperworks in-line with crawlers and travel drive to rear. 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. See tables on pages 2-4 for boom angle, boom length and direction for various grades. Adjust boom within boom angle range shown in tables on pages 2-4 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. See 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). Travel with crane upperworks in-line with grade at all times.
- E. Boom lengths shown in tables on page 2 and 3 do not include jib. Boom lengths shown in tables on page 4 include all jib lengths and offset angles.
- F. **Warning:** Travel prohibited for boom lengths not shown in tables on pages 2, 3 and 4. *Crane could tip.*

Refer to capacity charts for maximum boom and jib length raising.

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



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Machine Travel Without Load - Boom Facing Downhill							
0 - 1% Percent Grade							
Boom Angle Range in Degrees	Boom Length (not including jib)						Boom Angle Range in Degrees
	28,500 Lb. (12 930 kg) Crane Counterweight		53,300 Lb. (24 180 kg) Crane Counterweight		63,300 Lb. (28 710 kg) Crane Counterweight 14,000 Lb. (6 350 kg) Crawler Frame Cwt.		
	Feet	Meters	Feet	Meters	Feet	Meters	
	30 - 72	40 - 90	12.2 - 27.4	40 - 120	12.2 - 36.6	40 - 140	
40 - 72	100	30.5	130 - 140	39.6 - 42.7	150 - 160	45.7 - 48.8	40 - 72
50 - 72	110 - 120	33.5 - 36.6	150 - 160	45.7 - 48.8	170 - 180	51.8 - 54.9	50 - 72
60 - 72	130 - 190	39.6 - 57.9	170 - 200	51.8 - 61.0	190 - 200	57.9 - 61.0	60 - 72
2 - 10% Percent Grade							
30 - 72	40 - 80	12.2 - 24.4	40 - 110	12.2 - 33.5	40 - 130	12.2 - 39.6	30 - 72
40 - 72	90	27.4	120	36.6	140	42.7	40 - 72
50 - 72	100 - 110	30.5 - 33.5	130 - 140	39.6 - 42.7	150 - 160	45.7 - 48.8	50 - 72
60 - 72	120	36.6	150 - 160	45.7 - 48.8	170 - 190	51.8 - 57.9	60 - 72
65 - 72	130 - 140	39.6 - 42.7	170 - 180	51.8 - 54.9	200	61.0	65 - 72
11 - 20% Percent Grade							
30 - 72	40 - 70	12.2 - 21.3	40 - 100	12.2 - 30.5	40 - 120	12.2 - 36.6	30 - 72
40 - 72	80	24.4	110	33.5	130	39.6	40 - 72
50 - 72	90	27.4	120	36.6	140	42.7	50 - 72
60 - 72	100	30.5	130 - 140	39.6 - 42.7	150 - 160	45.7 - 48.8	60 - 72
65 - 72	110	33.5	150	45.7	170	51.8	65 - 72
21 - 30% Percent Grade							
30 - 72	40 - 60	12.2 - 18.3	40 - 90	12.2 - 27.4	40 - 100	12.2 - 30.5	30 - 72
40 - 72	70	21.3	100	30.5	110	33.5	40 - 72
50 - 72	80	24.4	110	33.5	120	36.6	50 - 72
60 - 72	90	27.4	120	36.6	130 - 140	39.6 - 42.7	60 - 72
65 - 72	100	30.5	130	39.6	150	45.7	65 - 72



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Machine Travel Without Load - Boom Facing Uphill							
0 - 1% Percent Grade							
Boom Angle Range in Degrees	Boom Length (not including jib)						Boom Angle Range in Degrees
	28,500 Lb. (12 930 kg) Crane Counterweight		53,300 Lb. (24 180 kg) Crane Counterweight		63,300 Lb. (28 710 kg) Crane Counterweight 14,000 Lb. (6 350 kg) Crawler Frame Cwt.		
	Feet	Meters	Feet	Meters	Feet	Meters	
	30 - 66 40 - 72 50 - 72	40 - 160 170 180 - 190	12.2 - 48.8 51.8 54.9 - 57.9	40 - 200 — —	12.2 - 61.0 — —	40 - 200 — —	
2 - 10% Percent Grade							
30 - 40 30 - 66 40 - 66	— 40 - 100 110	— 12.2 - 30.5 33.5	50 - 70 80 - 140 150	15.2 - 21.3 24.4 - 42.7 45.7	60 - 70 80 - 150 160 - 170	18.3 - 21.3 24.4 - 45.7 48.8 - 51.8	30 - 40 30 - 66 40 - 66
50 - 66 60 - 66 65 - 66	120 - 140 150 - 180 190	36.6 - 42.7 45.7 - 54.9 57.9	160 - 180 190 - 200 —	48.8 - 54.9 57.9 - 61.0 —	180 - 200 — —	54.9 - 61.0 — —	50 - 66 60 - 66 65 - 66
11 - 20% Percent Grade							
30 - 40 30 - 60 40 - 60 50 - 60 55 - 60	— 40 - 110 120 - 130 140 - 160 170 - 180	— 12.2 - 33.5 36.6 - 39.6 42.7 - 48.8 51.8 - 54.9	70 - 100 110 - 150 160 - 170 180 - 200 —	21.3 - 30.5 33.5 - 45.7 48.8 - 51.8 54.9 - 61.0 —	80 - 110 120 - 170 180 - 190 200 —	24.4 - 33.5 36.6 - 51.8 54.9 - 57.9 61.0 —	30 - 40 30 - 60 40 - 60 50 - 60 55 - 60
21 - 30% Percent Grade							
30 - 40 30 - 55 40 - 55 50 - 55	— 40 - 120 130 - 150 160 - 180	— 12.2 - 36.6 39.6 - 45.7 48.8 - 54.9	100 - 150 160 170 - 190 200	30.5 - 45.7 48.8 51.8 - 57.9 61.0	100 - 160 170 - 180 190 - 200 —	30.5 - 48.8 51.8 - 54.9 57.9 - 61.0 —	30 - 40 30 - 55 40 - 55 50 - 55



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Machine Travel Without Load - Boom Facing Downhill				
0 - 1% Percent Grade				
Boom Angle Range in Degrees	Boom Length (including all jib lengths and offset angles)			
	53,300 Lb. (24 180 kg) Crane Counterweight		63,300 Lb. (28 710 kg) Crane Counterweight 14,000 Lb. (6 350 kg) Crawler Frame Cwt.	
	Feet	Meters	Feet	Meters
50 - 72	70 - 150	21.3 - 45.7	70 - 170	21.3 - 51.8
55 - 72	160	48.8	180 - 190	54.9 - 57.9
60 - 72	170 - 190	51.8 - 57.9	—	—
2 - 10% Percent Grade				
50 - 72	70 - 130	21.3 - 39.6	70 - 150	21.3 - 45.7
55 - 72	140	42.7	160	48.8
60 - 72	150	45.7	170	51.8
65 - 72	160 - 170	48.8 - 51.8	180 - 190	54.9 - 57.9
11 - 20% Percent Grade				
50 - 72	70 - 110	21.3 - 33.5	70 - 130	21.3 - 39.6
55 - 72	120	36.6	140	42.7
60 - 72	130	39.6	150	45.7
65 - 72	140	42.7	160	48.8
21 - 30% Percent Grade				
50 - 72	70 - 90	21.3 - 27.4	70 - 110	21.3 - 33.5
55 - 72	100	30.5	120	36.6
60 - 72	110	33.5	130	39.6
65 - 72	120	36.6	140	42.7

Machine Travel Without Load - Boom Facing Uphill				
0 - 1% Percent Grade				
Boom Angle Range in Degrees	Boom Length (including all jib lengths and offset angles)			
	53,300 Lb. (24 180 kg) Crane Counterweight		63,300 Lb. (28 710 kg) Crane Counterweight 14,000 Lb. (6 350 kg) Crawler Frame Cwt.	
	Feet	Meters	Feet	Meters
50 - 72	70 - 150	21.3 - 45.7	70 - 170	21.3 - 51.8
55 - 72	160	48.8	180 - 190	54.9 - 57.9
60 - 72	170 - 190	51.8 - 57.9	—	—
2 - 10% Percent Grade				
50 - 66	70 - 160	21.3 - 48.8	70 - 190	21.3 - 57.9
60 - 66	170 - 190	51.8 - 57.9	—	—
11 - 20% Percent Grade				
Not Allowed				
21 - 30% Percent Grade				
Not Allowed				