

# Maximum Allowable Travel Specifications

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

**222HD**  
**222HD SERIES B**

## Jobsite Travel

222HD must be equipped with 53,300 Lb. (24 180 kg) crane counterweight; 222HD 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
	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	
30 - 72	40 - 120	12.2 - 36.6	40 - 140	12.2 - 42.7	30 - 72
40 - 72	130 - 150	39.6 - 45.7	150	45.7	40 - 72
2 - 10% Percent Grade					
30 - 72	40 - 110	12.2 - 33.5	40 - 130	12.2 - 39.6	30 - 72
40 - 72	120	36.6	140	42.7	40 - 72
50 - 72	130 - 140	39.6 - 42.7	150	45.7	50 - 72
60 - 72	150	45.7	—	—	60 - 72
11 - 20% Percent Grade					
30 - 72	40 - 100	12.2 - 30.5	40 - 120	12.2 - 36.6	30 - 72
40 - 72	110	33.5	130	39.6	40 - 72
50 - 72	120	36.6	140	42.7	50 - 72
60 - 72	130 - 140	39.6 - 42.7	150	45.7	60 - 72
65 - 72	150	45.7	—	—	65 - 72
21 - 30% Percent Grade					
30 - 72	40 - 90	12.2 - 27.4	40 - 100	12.2 - 30.5	30 - 72
40 - 72	100	30.5	110	33.5	40 - 72
50 - 72	110	33.5	120	36.6	50 - 72
60 - 72	120	36.6	130 - 140	39.6 - 42.7	60 - 72
65 - 72	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
	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	
30 - 66	40 - 120	12.2 - 36.6	40 - 140	12.2 - 42.7	30 - 66
40 - 66	130 - 150	39.6 - 45.7	150	45.7	40 - 66
2 - 10% Percent Grade					
30 - 55	40 - 70	12.2 - 21.3	40 - 50	12.2 - 15.2	30 - 55
30 - 66	50 - 140	15.2 - 42.7	60 - 150	18.3 - 45.7	30 - 66
40 - 66	150	45.7	—	—	40 - 66
11 - 20% Percent Grade					
30 - 35	40	12.2	—	—	30 - 35
30 - 40	50 - 60	15.2 - 18.3	50 - 70	15.2 - 21.3	30 - 40
30 - 60	70 - 140	21.3 - 42.7	80 - 150	24.4 - 45.7	30 - 60
40 - 60	150	45.7	—	—	40 - 60
21 - 30% Percent Grade					
30 - 40	70 - 80	21.3 - 24.4	70 - 110	21.3 - 33.5	30 - 40
30 - 55	90 - 150	27.4 - 45.7	120 - 150	36.6 - 45.7	30 - 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 - 130	21.3 - 39.6	70 - 130	21.3 - 39.6
2 - 10% Percent Grade				
50 - 72	70 - 130	21.3 - 39.6	70 - 130	21.3 - 39.6
11 - 20% Percent Grade				
50 - 72	70 - 100	21.3 - 30.5	70 - 130	21.3 - 39.6
55 - 72	110	33.5	—	—
60 - 72	120 - 130	36.6 - 39.6	—	—
21 - 30% Percent Grade				
50 - 72	70 - 90	21.3 - 27.4	70 - 100	21.3 - 30.5
55 - 72	100	30.5	110	33.5
60 - 72	110	33.5	120 - 130	36.6 - 39.6

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 - 130	21.3 - 39.6	70 - 130	21.3 - 39.6
2 - 10% Percent Grade				
50 - 66	70 - 130	21.3 - 39.6	70 - 130	21.3 - 39.6
11 - 20% Percent Grade				
Not Allowed				
21 - 30% Percent Grade				
Not Allowed				