Manitowoc Cranes, Inc.
Manitowoc, Wisconsin 54220 U.S.A.

Maximum Allowable Travel Specifications

Boom No. 78
Luffing Jib No. 139

777 SERIES 1
777 SERIES 2

Jobsite Travel

777 SERIES 1 must be equipped with 105,000 lb (47 630 kg) crane counterweight and 0 lb (0 kg) carbody counterweight; 777 SERIES 2 must be equipped with 142,000 lb (64 410 kg) crane counterweight and 44,000 lb (19 960 kg) carbody counterweight. Refer to Operator's Manual for maximum wind speed for various boom and luffing jib lengths. Refer to luffing jib raising procedure for maximum boom and luffing 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 ½ in. in 10 Ft. (13 mm in 3 m).

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, luffing jib and rigging.

2. Machine Travel Without Load

A. Position **boom to 75 degree** boom angle (plus or minus 1 degree) and position **luffing jib at 35 to 50 degrees** above horizontal. Grade in direction of travel should not exceed 15 percent (8.5 degrees).

B. Load blocks and/or hook and weight balls may be suspended beneath boom and luffing jib points, or tied off to machine. Total suspended weight beneath boom point must not exceed 5,750 lb (2 610 kg). Total suspended weight beneath luffing jib point must not exceed 3,000 lb (1 360 kg).

C. 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. Side-to-side grade must not exceed 1 percent (0.5 degrees) measured at boom hinge pins.

D. Refer to tables on page 2 for travel without load on various grades. When traveling on **uphill grade, lower boom** the corresponding degrees for grade to be traveled. When traveling on **downhill grade, raise boom** the corresponding degrees for grade to be traveled. Refer to table below for grade vs. angle and boom angle setting.

E. Do not exceed 1 percent (0.5 degrees) side-to-side grade at boom hinge pins when cutting (turning on grade).

Percent Grade Vs. Angle In Degrees and Boom Angle Setting

Percent Grade	Angle	Uphill Boom Angle	Downhill Boom Angle
1	0.5°	74.5°	75.5°
3	1.7°	73.3°	76.7°
6	3.4°	71.6°	78.4°
9	5.1°	69.9°	80.1°
12	6.8°	68.2°	81.8°
15	8.5°	66.5°	83.5°

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777 SERIES 1
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Machine Travel Without Load –777 Series 1 Boom Facing Uphill 105,000 Lb. (47 630 kg) Counterweight			
1%–15% Grade 74.5°–66.5° Boom Angle			
Maximum Boom Length		Maximum Luffing Jib Length	
Ft.	Meters	Ft.	Meters
130	39.6	170	51.8
140	42.7	150	45.7

Machine Travel Without Load –777 Series 2 Boom Facing Uphill 142,000 Lb. (64 410 kg) Crane Counterweight 44,000 Lb. (19 960 kg) Carbody Counterweight			
1%–15% Grade 74.5°–66.5° Boom Angle			
Maximum Boom Length		Maximum Luffing Jib Length	
Ft.	Meters	Ft.	Meters
180	54.9	170	51.8

Machine Travel Without Load – 777 Series 1 Boom Facing Downhill 105,000 Lb. (47 630 kg) Counterweight																			
15% Grade 83.5° Boom Angle				12% Grade 81.8° Boom Angle				9% Grade 80.1° Boom Angle				6% Grade 78.4° Boom Angle				1–3% Grade 75.5°–76.7° Boom Angle			
Maximum Boom Length		Maximum Luffing Jib Length		Maximum Boom Length		Maximum Luffing Jib Length		Maximum Boom Length		Maximum Luffing Jib Length		Maximum Boom Length		Maximum Luffing Jib Length		Maximum Boom Length		Maximum Luffing Jib Length	
Ft.	Meters	Ft.	Meters	Ft.	Meters	Ft.	Meters	Ft.	Meters	Ft.	Meters	Ft.	Meters	Ft.	Meters	Ft.	Meters	Ft.	Meters
100	30.5	170	51.8	110	33.5	170	51.8	120	36.6	170	51.8	120	36.6	170	51.8	130	39.6	170	51.8
110	33.5	160	48.8	120	36.6	160	48.8	130	39.6	150	45.7	130	39.6	160	48.8	140	42.7	150	45.7
120	36.6	150	45.7	130	39.6	150	45.7	140	42.7	140	42.7	140	42.7	150	45.7				
130	39.6	140	42.7	140	42.7	140	42.7												
140	42.7	130	39.6																

Machine Travel Without Load – 777 Series 2 Boom Facing Downhill 142,000 Lb. (64 410 kg) Crane Counterweight 44,000 Lb. (19 960 kg) Carbody Counterweight											
15% Grade 83.5° Boom Angle				12% Grade 81.8° Boom Angle				1–9% Grade 75.5°–80.1° Boom Angle			
Maximum Boom Length		Maximum Luffing Jib Length		Maximum Boom Length		Maximum Luffing Jib Length		Maximum Boom Length		Maximum Luffing Jib Length	
Ft.	Meters	Ft.	Meters	Ft.	Meters	Ft.	Meters	Ft.	Meters	Ft.	Meters
160	48.8	170	51.8	170	51.8	170	51.8	180	54.9	170	51.8
170	51.8	160	48.8	180	54.9	160	48.8				
180	54.9	150	45.7								