



Maximum Allowable Travel Specifications

999 SERIES 1 & 2

Boom No. 22E With Light Tapered Top

Jobsite Travel

999 SERIES 1 must be equipped with 149,600 Lb. (67 860 kg) counterweight and 999 SERIES 2 must be equipped with 184,600 Lb. (83 730 kg) crane counterweight and 44,000 Lb. (19 960 kg) carbody counterweight. Refer to Operator's Manual for maximum wind speed for various boom lengths and capacity chart for maximum boom 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 and rigging.

2. Machine Travel Without Load

- A. Load blocks and/or hook and weight balls may be suspended beneath lower and upper boom point or tied off to machine. Total combined suspended weight beneath lower and upper boom points must not exceed 7,500 lb (3 400 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 1 and 2 on pages 2 and 3 for boom angle and boom lengths 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. **Warning:** Travel prohibited for boom angle range not shown in tables 1 and 2 on pages 2 and 3. *Crane could tip.*

Percent Grade Vs. Angle In Degrees	
Percent Grade	Angle
1	0.5
5	2.8
10	5.7
15	8.5
20	11.3
25	14.0
30	16.7



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Table 1: Boom No. 22E With Light Tapered Top SERIES 1

MACHINE TRAVEL WITHOUT LOAD								
Boom Length		Boom Angle Range in Degrees						
		Percent Grade						
Feet	Meters	0 - 1%	2 - 5%	6 - 10%	11 - 15%	16 - 20%	21 - 25%	26 - 30%
BOOM FACING DOWNHILL OR UPHILL								
110	33,5	30 - 72	30 - 69	30 - 65	30 - 56	30 - 50	30 - 43	30 - 35
120	36,6	30 - 72	30 - 69	30 - 66	30 - 62	30 - 54	30 - 48	30 - 41
130	39,6	30 - 72	30 - 69	30 - 66	30 - 63	30 - 57	30 - 52	30 - 46
140	42,7	30 - 72	30 - 69	30 - 66	30 - 63	30 - 60	30 - 55	30 - 49
150	45,7	30 - 72	30 - 69	30 - 66	30 - 63	30 - 60	30 - 58	30 - 53
160	48,8	30 - 72	30 - 69	30 - 66	30 - 63	30 - 60	30 - 58	30 - 55
170	51,8	30 - 72	30 - 69	30 - 66	30 - 63	30 - 60	35 - 58	41 - 55
180	54,9	30 - 72	30 - 69	30 - 66	31 - 66	37 - 60	44 - 58	49 - 55
190	57,9	30 - 72	30 - 69	33 - 66	38 - 66	45 - 60	51 - 58	—
200	61,0	30 - 72	35 - 69	40 - 66	46 - 66	50 - 60	55 - 58	—
210	64,0	36 - 72	41 - 69	45 - 66	50 - 66	56 - 60	—	—
220	67,1	42 - 72	46 - 69	49 - 66	54 - 66	59 - 60	—	—
230	70,1	45 - 72	50 - 69	55 - 66	58 - 66	—	—	—
240	73,2	49 - 72	53 - 69	58 - 66	62 - 66	—	—	—
250	76,2	52 - 72	55 - 69	59 - 66	63 - 66	—	—	—
260	79,2	54 - 72	58 - 69	62 - 66	65 - 66	—	—	—
270	82,3	57 - 72	60 - 69	64 - 66	—	—	—	—
280	85,3	59 - 72	63 - 69	66	—	—	—	—

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Table 2: Boom No. 22E With Light Tapered Top SERIES 2

MACHINE TRAVEL WITHOUT LOAD								
Boom Length		Boom Angle Range in Degrees						
		Percent Grade						
Feet	Meters	0 - 1%	2 - 5%	6-10%	11- 15%	16-20%	21 - 25%	26 - 30%
BOOM FACING DOWNHILL OR UPHILL								
110	33,5	30 - 72	30 - 69	30 - 62	30 - 56	30 - 47	30 - 39	30
120	36,6	30 - 72	30 - 69	30 - 66	30 - 60	30 - 51	30 - 44	30 - 37
130	39,6	30 - 72	30 - 69	30 - 66	30 - 62	30 - 57	30 - 49	30 - 43
140	42,7	30 - 72	30 - 69	30 - 66	30 - 63	30 - 60	30 - 52	30 - 47
150	45,7	30 - 72	30 - 69	30 - 66	30 - 63	30 - 60	30 - 55	30 - 50
160	48,8	30 - 72	30 - 69	30 - 66	30 - 63	30 - 60	30 - 57	30 - 53
170	51,8	30 - 72	30 - 69	30 - 66	30 - 63	30 - 60	30 - 58	30 - 53
180	54,9	30 - 72	30 - 69	30 - 66	30 - 63	30 - 60	30 - 58	30 - 55
190	57,9	30 - 72	30 - 69	30 - 66	30 - 63	30 - 60	30 - 58	36 - 55
200	61,0	30 - 72	30 - 69	30 - 66	30 - 63	30 - 60	37 - 58	46 - 55
210	64,0	30 - 72	30 - 69	30 - 66	34 - 63	39 - 60	45 - 58	52 - 55
220	67,1	30 - 72	30 - 69	36 - 66	40 - 63	46 - 60	51 - 58	—
230	70,1	30 - 72	37 - 69	41 - 66	46 - 63	51 - 60	56 - 58	—
240	73,2	36 - 72	42 - 69	45 - 66	50 - 63	55 - 60	—	—
250	76,2	41 - 72	44 - 69	49 - 66	54 - 63	58 - 60	—	—
260	79,2	44 - 72	48 - 69	52 - 66	57 - 63	—	—	—
270	82,3	47 - 72	51 - 69	55 - 66	60 - 63	—	—	—
280	85,3	50 - 72	54 - 69	58 - 66	63	—	—	—
290	88,4	53 - 72	57 - 69	60 - 72	—	—	—	—
300	91,4	55 - 72	59 - 69	63 - 66	—	—	—	—
310	94,5	57 - 72	62 - 69	65 - 66	—	—	—	—