



# Swing and Travel Specifications

## 16000 MAX-ER

Boom No. 58 HL with 98.4 ft (30,0 m) Mast No. 59A  
Wheeled Counterweight

### Jobsite Travel

16000 MAX-ER must be equipped with 332,000 lb (150 590 kg) crane counterweight, 120,000 lb (54 430 kg) carbody counterweight and 0 lb (0 kg) thru 511,400 lb (231 970 kg) wheeled counterweight. Refer to Wind Conditions chart for maximum wind speed for various boom lengths and capacity charts for maximum boom lengths lifted unassisted.

NOTE: 0 lb (0 kg) wheeled counterweight is equivalent to machine equipped with 332,000 lb (150 590 kg) crane counterweight and 120,000 lb (54 430 kg) carbody counterweight with 98.4 ft (30,0 m) mast No. 59A.

### 1. Machine Swing and Travel With Load and Wheeled Counterweight

- A. Grade in any direction must not exceed 1 percent (0.5 degrees).
- B. **Warning:** For travel with crane upperworks in-line to crawlers, swing brake and swing lock must be free (released).  
For travel with crane upperworks 90 degrees to crawlers, wheeled counterweight **must be in the air**, free of ground support. Swing brake and swing lock must be free (released).
- 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.
- D. Machine can swing and travel in normal manner when wheeled counterweight assembly is free of ground support or removed.
- E. Counterweight wheels must be properly positioned before swinging or traveling machine when wheeled counterweight is contacting ground. Refer to Operator's Manual for instructions.

### 2. Machine Swing and Travel Without Load and With Wheeled Counterweight

- A. Load blocks and/or hook and weight balls may be suspended beneath boom points or tied off to machine. Total combined suspended weight beneath boom points must not exceed 25,000 Lbs. (11 340 kg).
- B. **Travel with crane upperworks in-line to crawlers.** Do not exceed 1 percent (0.5 degrees) grade at boom hinge pins when cutting (turning on grade) or swinging.
- C. **Warning:** Swing brake and swing lock must be free (released).
- D. Machine to travel on a firm and uniformly supporting surface. Travel may be limited depending upon ground conditions.
- E. Refer to tables 1 thru 4 on pages 2 thru 5 for boom angle, boom length and direction for various grades. Adjust boom within boom angle range shown in tables 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.
- F. **Warning:** Change in grade must not exceed 2 percent (1.1 degrees) in 50 ft (15 m).
- G. Counterweight wheels must be properly positioned before swinging or traveling machine when wheeled counterweight is contacting ground. Refer to operators manual for instructions.
- H. **Warning:** Travel prohibited for boom angle range not shown in tables 1 thru 4 on pages 2 thru 5. *Crane could tip.*

Percent Grade vs. Angle in Degrees	
Percent Grade	Angle
1	0.5
5	3.0
10	5.7
20	11.3



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Table 1: Boom No. 58 HL, 0 lb (0 kg) Wheeled Counterweight

MACHINE TRAVEL WITHOUT LOAD				
Boom Length (not including jib)		Boom Angle Range in Degrees		
		Percent Grade		
Feet	Meters	0 - 1%	2 - 10%	11 - 20%
BOOM FACING DOWNHILL OR UPHILL				
137.8	42,0	30 - 72	30 - 65	30 - 50
157.5	48,0	30 - 72	30 - 66	30 - 55
177.2	54,0	30 - 72	30 - 66	30 - 60
196.9	60,0	30 - 72	30 - 66	45 - 60
216.5	66,0	30 - 72	40 - 66	50 - 60
236.2	72,0	40 - 72	50 - 66	—
255.9	78,0	45 - 72	55 - 66	—
275.6	84,0	50 - 72	60 - 66	—
295.3	90,0	55 - 72	65 - 66	—
315.0	96,0	60 - 72	65 - 66	—

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Wheeled Counterweight

Table 2: Boom No. 58 HL, Wheeled Counterweight at 36.1 ft (11 m) Position

MACHINE TRAVEL WITHOUT LOAD				
Boom Length (not including jib)		Boom Angle Range in Degrees		
		159,400 Lb. (72 300 kg) Counterweight	335,400 Lb. (152 140 kg) Counterweight	511,400 Lb. (231 970 kg) Counterweight
Feet	Meters			
BOOM FACING DOWNHILL OR UPHILL — 0 - 1% Grade				
137.8	42,0	30 - 72	30 - 72	30 - 72
157.5	48,0	30 - 72	30 - 72	30 - 72
177.2	54,0	30 - 72	30 - 72	30 - 72
196.9	60,0	30 - 72	30 - 72	30 - 72
216.5	66,0	30 - 72	30 - 72	30 - 72
236.2	72,0	30 - 72	30 - 72	30 - 72
255.9	78,0	30 - 72	30 - 72	30 - 72
275.6	84,0	30 - 72	30 - 72	30 - 72
295.3	90,0	30 - 72	30 - 72	30 - 72
315.0	96,0	40 - 72	30 - 72	30 - 72
334.6	102,0	45 - 72	30 - 72	30 - 72
354.3	108,0	50 - 72	30 - 72	30 - 72
374.0	114,0	55 - 72	35 - 72	30 - 72
393.7	120,0	—	40 - 72	30 - 72
BOOM FACING DOWNHILL OR UPHILL — 2 - 10% Grade				
137.8	42,0	30 - 55	30 - 50	30 - 45
157.5	48,0	30 - 65	30 - 60	30 - 55
177.2	54,0	30 - 66	30 - 66	30 - 60
196.9	60,0	30 - 66	30 - 66	30 - 66
216.5	66,0	30 - 66	30 - 66	30 - 66
236.2	72,0	30 - 66	30 - 66	30 - 66
255.9	78,0	30 - 66	30 - 66	30 - 66
275.6	84,0	35 - 66	30 - 66	30 - 66
295.3	90,0	40 - 66	30 - 66	30 - 66
315.0	96,0	50 - 66	30 - 66	30 - 66
334.6	102,0	55 - 66	30 - 66	30 - 66
354.3	108,0	60 - 66	35 - 66	30 - 66
374.0	114,0	60 - 66	45 - 66	30 - 66
393.7	120,0	—	50 - 66	30 - 66

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Boom No. 58 HL with 98.4 ft (30,0 m) Mast No. 59A  
Wheeled Counterweight

Table 3: Boom No. 58 HL, Wheeled Counterweight at 42.6 ft (13 m) Position

MACHINE TRAVEL WITHOUT LOAD				
Boom Length (not including jib)		Boom Angle Range in Degrees		
		159,400 Lb. (72 300 kg) Counterweight	335,400 Lb. (152 140 kg) Counterweight	511,400 Lb. (231 970 kg) Counterweight
Feet	Meters			
BOOM FACING DOWNHILL OR UPHILL — 0 - 1% Grade				
137.8	42,0	30 - 72	30 - 72	30 - 72
157.5	48,0	30 - 72	30 - 72	30 - 72
177.2	54,0	30 - 72	30 - 72	30 - 72
196.9	60,0	30 - 72	30 - 72	30 - 72
216.5	66,0	30 - 72	30 - 72	30 - 72
236.2	72,0	30 - 72	30 - 72	30 - 72
255.9	78,0	30 - 72	30 - 72	30 - 72
275.6	84,0	30 - 72	30 - 72	30 - 72
295.3	90,0	30 - 72	30 - 72	30 - 72
315.0	96,0	35 - 72	30 - 72	30 - 72
334.6	102,0	40 - 72	30 - 72	30 - 72
354.3	108,0	45 - 72	30 - 72	30 - 72
374.0	114,0	50 - 72	30 - 72	30 - 72
393.7	120,0	55 - 72	35 - 72	30 - 72
BOOM FACING DOWNHILL OR UPHILL — 2 - 10% Grade				
137.8	42,0	30 - 50	30 - 45	30 - 40
157.5	48,0	30 - 60	30 - 55	30 - 50
177.2	54,0	30 - 66	30 - 60	30 - 55
196.9	60,0	30 - 66	30 - 66	30 - 60
216.5	66,0	30 - 66	30 - 66	30 - 66
236.2	72,0	30 - 66	30 - 66	30 - 66
255.9	78,0	30 - 66	30 - 66	30 - 66
275.6	84,0	30 - 66	30 - 66	30 - 66
295.3	90,0	35 - 66	30 - 66	30 - 66
315.0	96,0	45 - 66	30 - 66	30 - 66
334.6	102,0	50 - 66	30 - 66	30 - 66
354.3	108,0	55 - 66	30 - 66	30 - 66
374.0	114,0	60 - 66	35 - 66	30 - 66
393.7	120,0	60 - 66	45 - 66	30 - 66

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Wheeled Counterweight

Table 4: Boom No. 58 HL, Wheeled Counterweight at 49.2 ft (15 m) Position

MACHINE TRAVEL WITHOUT LOAD				
Boom Length (not including jib)		Boom Angle Range in Degrees		
		159,400 Lb. (72 300 kg) Counterweight	335,400 Lb. (152 140 kg) Counterweight	511,400 Lb. (231 970 kg) Counterweight
Feet	Meters			
BOOM FACING DOWNHILL OR UPHILL — 0 - 1% Grade				
137.8	42,0	30 - 72	30 - 72	30 - 72
157.5	48,0	30 - 72	30 - 72	30 - 72
177.2	54,0	30 - 72	30 - 72	30 - 72
196.9	60,0	30 - 72	30 - 72	30 - 72
216.5	66,0	30 - 72	30 - 72	30 - 72
236.2	72,0	30 - 72	30 - 72	30 - 72
255.9	78,0	30 - 72	30 - 72	30 - 72
275.6	84,0	30 - 72	30 - 72	30 - 72
295.3	90,0	30 - 72	30 - 72	30 - 72
315.0	96,0	30 - 72	30 - 72	30 - 72
334.6	102,0	40 - 72	30 - 72	30 - 72
354.3	108,0	45 - 72	30 - 72	30 - 72
374.0	114,0	50 - 72	30 - 72	30 - 72
393.7	120,0	55 - 72	30 - 72	30 - 72
BOOM FACING DOWNHILL OR UPHILL — 2 - 10% Grade				
137.8	42,0	30 - 50	30 - 40	—
157.5	48,0	30 - 55	30 - 50	30 - 45
177.2	54,0	30 - 66	30 - 60	30 - 50
196.9	60,0	30 - 66	30 - 65	30 - 60
216.5	66,0	30 - 66	30 - 66	30 - 60
236.2	72,0	30 - 66	30 - 66	30 - 66
255.9	78,0	30 - 66	30 - 66	30 - 66
275.6	84,0	30 - 66	30 - 66	30 - 66
295.3	90,0	30 - 66	30 - 66	30 - 66
315.0	96,0	40 - 66	30 - 66	30 - 66
334.6	102,0	45 - 66	30 - 66	30 - 66
354.3	108,0	55 - 66	30 - 66	30 - 66
374.0	114,0	55 - 66	30 - 66	30 - 66
393.7	120,0	60 - 66	40 - 66	30 - 66