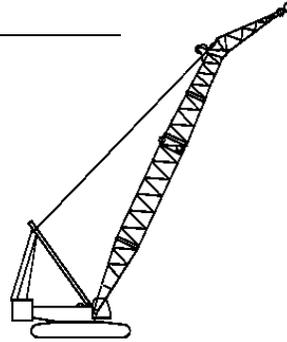


# Liftcrane Boom Extended Upper Point Capacities

**Boom No. 58WA with 24.9 ft Extended  
Upper Boom Point  
368,000 lb Crane Counterweight  
41,300 lb Auxiliary Counterweight  
120,000 lb Carbody Counterweight  
360 Degree Rating**



## 16000 SERIES 5



**LIFTING CAPACITIES:** Lifting capacities for various boom lengths and operating radii are for freely suspended loads and do not exceed 75% of a static tipping load. Capacities based on structural competence are denoted by an asterisk (\*).

Upper boom point (upper sheave) capacity for liftcrane service with single part whip line is 30,000 lb or 60,000 lb with two part line. In all cases, upper boom point capacities cannot exceed those listed for extended upper boom point (lower sheave) capacity.

Weight of all load blocks, hooks, weight ball, slings, hoist lines, etc., beneath upper boom point sheaves, is considered part of extended upper boom point load. Boom is not to be lowered beyond radii where combined weights are greater than rated capacity. Where no capacity is shown, operation is not intended or approved.

**OPERATING CONDITIONS:** Machine to operate in a level position on a firm uniformly supporting surface. Refer to boom rigging **No. 81018003**, Wire Rope Specification chart **No. 8889-A**, Counterweight Arrangement chart **No. 8682-A** and Wind Conditions chart **No. 8688-A**. Crane operator judgment must be used to allow for dynamic load effects of swinging, hoisting or lowering, travel, wind conditions, as well as adverse operating conditions and physical machine depreciation. Refer to Operator's Manual for operating guidelines.

### MACHINE TRAVEL WITH LOAD:

- Machine can swing and travel with 360 degree rating.
- Grade in any direction must not exceed 1 percent (0.5 degrees).
- 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.

### MACHINE TRAVEL WITHOUT LOAD:

- Load blocks and/or hook and weight balls may be suspended beneath upper boom points or tied off to machine. Total combined suspended weight beneath upper boom points must not exceed 14,500 lb.

- 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 10 percent (5.7 degrees); side-to-side grade must not exceed 2 percent (1.1 degrees) measured at boom hinge pins.

- Refer to table 1 for boom angle, boom length and direction 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.

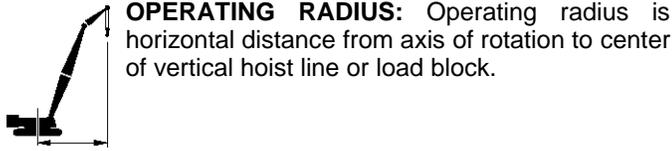
- Do not exceed 2 percent (1.1 degrees) side-to-side grade at boom hinge pins when cutting (turning on grade).

- Warning:** Travel prohibited for boom angle range not shown in table 1. *Crane could tip.*

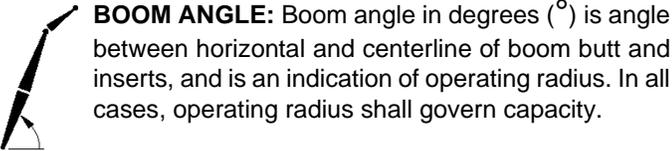
Percent Grade Vs. Angle In Degrees	
Percent Grade	Angle
1	0.5
5	2.8
10	5.7

Table 1

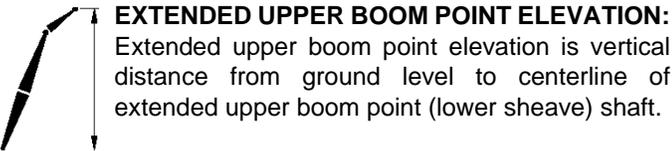
MACHINE TRAVEL WITHOUT LOAD			
Boom Length	Boom Angle Range in Degrees		
	Percent Grade		
Feet	0 - 1%	2 - 5%	6 - 10%
BOOM FACING UPHILL OR DOWNHILL			
311.7	55 - 72	60 - 66	60 - 63



**OPERATING RADIUS:** Operating radius is horizontal distance from axis of rotation to center of vertical hoist line or load block.



**BOOM ANGLE:** Boom angle in degrees ( $^{\circ}$ ) is angle between horizontal and centerline of boom butt and inserts, and is an indication of operating radius. In all cases, operating radius shall govern capacity.



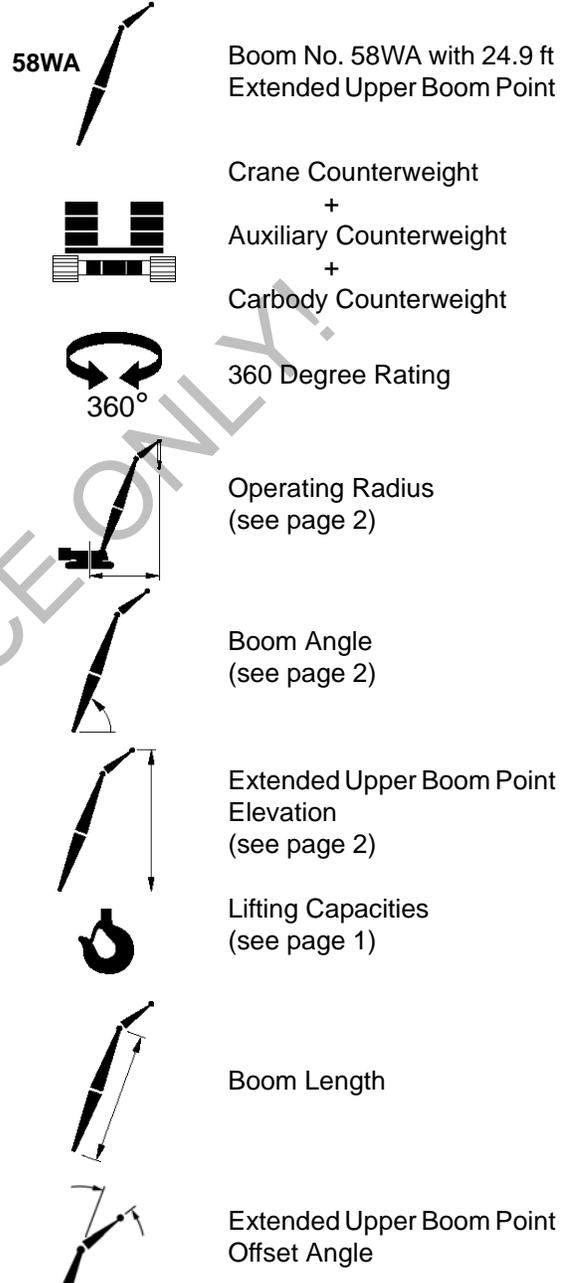
**EXTENDED UPPER BOOM POINT ELEVATION:** Extended upper boom point elevation is vertical distance from ground level to centerline of extended upper boom point (lower sheave) shaft.

**MACHINE EQUIPMENT:** Machine equipped with 34 ft crawlers, 60 in. treads, 32 ft live mast, 26 part boom hoist reeving, boom support straps, 368,000 lb crane counterweight, auxiliary counterweight tray and two 17,500 lb counterweights, two 30,000 lb and four 15,000 lb carbody counterweights.

WITH OR WITHOUT BOOM CATWALKS	
<b>Maximum Boom Length Lifted Unassisted</b>	
Over End of Blocked Crawlers	
Boom Length	
	311.7 ft (a)
Load block, hook and weight ball on ground at start.	
(a) When equipped with boom catwalks, boom must be rigged with one load hoist lead line and luffing jib hoist drum must be removed from boom butt.	

Optional Block Reeving
When block is reeved with optional 6 or 8 part reeving with wire rope dead end on upper boom point (upper sheave), deduct 3,500 lb from capacities. Refer to reeving diagram No. 81022461 for optional reeving.

## Explanation of Symbols



# 16000 S-5

ANSI B30.5



368,000 lb  
+  
41,300 lb  
+  
120,000 lb



	28°			35°			
	ft	ft	lb	ft	lb	ft	
60	82.6	339.7	222,300 *				60
65	81.7	338.8	219,500 *	82.1	337.8	204,800 *	65
70	80.9	337.9	215,600 *	81.3	336.9	201,500 *	70
75	80.0	336.9	196,900 *	80.4	335.8	198,300 *	75
80	79.1	335.8	180,200	79.5	334.7	181,800	80
85	78.2	334.6	164,400	78.6	333.5	165,900	85
90	77.4	333.3	150,600	77.8	332.3	152,000	90
95	76.5	331.9	138,500	76.9	330.9	139,800	95
100	75.6	330.5	127,800	76.0	329.5	129,000	100
105	74.7	329.0	118,200	75.1	327.9	119,300	105
110	73.8	327.4	109,600	74.2	326.3	110,700	110
115	72.9	325.7	101,800	73.3	324.6	102,800	115
120	72.0	323.9	94,800	72.4	322.8	95,700	120
125	71.1	322.0	88,400	71.5	321.0	89,300	125
130	70.2	320.1	82,500	70.5	319.0	83,300	130
135	69.2	318.0	77,000 *	69.6	316.9	77,900	135
140	68.3	315.9	71,700 *	68.7	314.8	72,600 *	140
145	67.4	313.6	66,800 *	67.7	312.5	67,700 *	145
150	66.4	311.3	62,200 *	66.8	310.2	63,100 *	150
155	65.5	308.8	58,000 *	65.8	307.7	58,800 *	155
160	64.5	306.3	54,000 *	64.9	305.2	54,800 *	160
165	63.6	303.6	50,300 *	63.9	302.5	51,000 *	165
170	62.6	300.9	46,700 *	62.9	299.7	47,400 *	170
175	61.6	298.0	43,400 *	61.9	296.8	44,100 *	175
180	60.6	295.0	40,300 *	60.9	293.8	40,900 *	180
185	59.6	291.9	37,300 *	59.9	290.7	37,900 *	185
190	58.6	288.6	34,500 *	58.9	287.4	35,100 *	190
195	57.5	285.3	31,800 *	57.9	284.0	32,400 *	195
200	56.5	281.7	29,300 *	56.8	280.5	29,800 *	200
205	55.4	278.1	26,900 *	55.8	276.9	27,400 *	205
210	54.4	274.3	24,600 *	54.7	273.1	25,100 *	210
215	53.3	270.4	22,400 *	53.6	269.1	22,800 *	215
220	52.2	266.3	20,300 *	52.5	265.0	20,700 *	220
225	51.1	262.0	18,300 *	51.3	260.7	18,700 *	225
230	49.9	257.6	16,400 *	50.2	256.2	16,700 *	230
235	48.8	253.0	14,500 *	49.0	251.6	14,900 *	235
240	47.6	248.2	12,700 *	47.8	246.8	13,100 *	240
245	46.4	243.2	11,000 *	46.6	241.7	11,300 *	245