



900 SERIES

MODEL 9310A
CRAWLER CRANE

LIFT CRANE RATINGS IN POUNDS

With 77H Tubular Chord Boom with Hammerhead and "T-T" Counterweight (140,000 lbs.)

Table with columns: Boom Length (Feet), Radius in Feet, Boom Angle Degrees, Lift Rating in Pounds (Side Frames Retracted, Side Frames Extended), Feet From Boom Point. Rows include boom lengths from 70 to 120 feet.

Table with columns: Boom Length (Feet), Radius in Feet, Boom Angle Degrees, Lift Rating in Pounds (Side Frames Retracted, Side Frames Extended), Feet From Boom Point. Rows include boom lengths from 130 to 170 feet.

Table with columns: Boom Length (Feet), Radius in Feet, Boom Angle Degrees, Lift Rating in Pounds (Side Frames Retracted, Side Frames Extended), Feet From Boom Point. Rows include boom lengths from 170 to 200 feet.

(continued)













# LIFT CRANE RATINGS IN KILOGRAMS (continued)

With 77H Tubular Chord Boom with Tapered Tip and "T-T" Counterweight (63504 Kgs.)

Boom Length (Meters)	Radius in Meters	Boom Angle Degrees	Lift Rating in Kilograms		Meters From Boom Point
			Side Frames Retracted	Side Frames Extended	
85.3 meters (cont.)	80.0	23.2		1700	35
	82.0	19.5		1530	30
	84.0	14.9		1360	24
88.4 meters	15.4	81.0	25,140 *	25,140 *	89
	16.0	80.6	25,140 *	25,140 *	89
	17.0	79.9	24,970 *	24,970 *	89
	18.0	79.3	24,840 *	24,840 *	88
	19.0	78.6	24,620 *	24,620 *	88
	20.0	77.9	23,160	24,470 *	88
	22.0	76.6	20,180	23,110	88
	24.0	75.3	17,770	20,370	87
	26.0	73.9	15,750	18,100	87
	28.0	72.6	14,340	16,480	86

Boom Length (Meters)	Radius in Meters	Boom Angle Degrees	Lift Rating in Kilograms		Meters From Boom Point
			Side Frames Retracted	Side Frames Extended	
88.4 meters (cont.)	30.0	71.2	12,890	14,850	85
	32.0	69.8	11,630	13,440	85
	34.0	68.5	10,520	12,210	84
	36.0	67.1	9,550	11,130	83
	38.0	65.6	8,690	10,160	82
	40.0	64.2	7,920	9,300	81
	42.0	62.8	7,230	8,540	80
	44.0	61.3	6,600	7,840	79
	46.0	59.8	6,030	7,210	78
	48.0	58.3	5,520	6,640	77
	50.0	56.7	5,040	6,110	75
	52.0	55.2	4,600	5,620	74
	54.0	53.6	4,200	5,180	73

Boom Length (Meters)	Radius in Meters	Boom Angle Degrees	Lift Rating in Kilograms		Meters From Boom Point
			Side Frames Retracted	Side Frames Extended	
88.4 meters (cont.)	56.0	52.0	3,820	4,770	71
	58.0	50.3	3,480	4,380	70
	60.0	48.6	3,160	4,030	68
	62.0	46.8	2,860	3,700	66
	64.0	45.0	2,580	3,390	64
	66.0	43.2	2,320	3,100	62
	68.0	41.3	2,070	2,830	60
	70.0	39.2	1,840	2,570	57
	72.0	37.1	1,620	2,340	55
	74.0	34.9	1,410	2,110	52
	76.0	32.6	1,230	1,900	49
	78.0	30.1		1,700	46
	80.0	27.4		1,510	42

9310A.02M

## CRANE RATING DATA

### WARNING

These lift ratings are invalid if the crane has been modified or altered by use of other than GENUINE AMERICAN PARTS as such modifications or alterations may affect its capacity or safe operation. See American Crane Corporation Service Bulletin #259.

The ratings in this chart are for planning purposes only. Only those ratings specifically assigned to a crane and mounted in the operator's cab or in the Operator's Manual should be used for actual operation.

Ratings in this chart are in POUNDS (KGS) and do not exceed the percentage of tipping specified for this crane by ANSI B30.5. All ratings require that the crane be standing level on a firm uniformly supporting surface.

Do not lift loads in excess of those shown on this chart. Lifting loads in excess of those shown or operation not in accordance with good operating practice, including limitations shown on page 3499 of Operator's Manual, can cause tipping, structural damage or catastrophic failure.

Asterisk(\*) areas on this chart indicate ratings which are limited by strength of material or factors other than stability (tipping).

"RADIUS IN FEET" is the horizontal distance at ground level from the crane centerline of rotation to a vertical line through the center of gravity of the suspended load.

When using the main boom fall with jib in place, the main fall ratings must be reduced by the jib effective weight shown on the jib rating chart, plus twice the weight of all suspended blocks, slings, rope, etc., at the jib fall. See Appendix A.

Blocks, slings, buckets and other load carrying devices are considered part of the load. The weight of standard hoisting ropes for the rating at a given radius has been calculated as part of the boom point load and need not be considered in determining net allowable loads. See Appendix A.

Boom with tapered tip, use hanger block when more than 2 parts of line are required. Reduce ratings 800 pounds when hanger block is in place.

Ratings shown on this chart make no allowance for such factors as out of plumb loads, wind, poor soil conditions, improper inflation of rubber tires and dynamic effects due to excessive operating speeds. The user (operator) must exercise judgement to make allowance for these conditions. See page 3499 of Operator's Manual for detailed information.

No account is taken of the wind force on the load. This effect, which can be substantial for loads with large surface areas, must be considered by the user. In any wind it is strongly recommended that taglines be used to control the load.

BOOM HOIST LINE is 14 parts of .875 inch diameter, 6 x 26, WS, FW, RAL, IWRC, EIPS wire rope with a minimum breaking strength of 79,600 pounds.

PENDANT SUSPENSION LINE is 4 parts of 1.375 inch diameter AAA wire rope with a minimum breaking strength of 211,000 pounds.

MAIN LOAD LINE is 1.125 inch diameter 6 x 25, FW, RRL, IWRC super strength wire rope with a weight of 2.34 lbs/ft and a minimum breaking strength of 143,000 pounds.

Combinations of boom or boom and jib with a total length exceeding 350' can be operated at full rated capacity only in wind speeds of 15 MPH or less. If lifts are to be performed in winds between 15 MPH and 25 MPH, ratings must be reduced 10%. No operation of the above combinations should be attempted in wind speeds over 25 MPH. The above limitations do not take into account loads with excessive surface area which are not restrained by tag lines.

Erection over the idler end with A-Frame raised and idler tumblers blocked. Erection over the side with A-Frame fully raised and Side Frames extended. Blocks, slings and other load carrying devices must be on the ground during erection.



# LOAD HOISTING DATA

Maximum Lifting Capacity In Pounds	Minimum Parts of Load Line	Maximum Hoisting Distance		
		RH Drum With Controlled Load Lowering Feet	LH Drum With Controlled Load Lowering Feet	LH Drum Without Controlled Load Lowering Feet
450,000	12	69	35	53
449,420	11	76	38	58
408,570	10	83	42	64
367,710	9	93	47	71
326,850	8	104	52	80
286,000	7	119	60	92
245,140	6	139	70	107
204,280	5	167	84	129
163,420	4	209	105	161
122,570	3	279	141	215
81,710	2	419	211	323
40,850	1	839	423	647

Based on 1-1/8" Super Grade Rope

Maximum Lifting Capacity In Kgs.	Minimum Parts of Load Line	Maximum Hoisting Distance		
		RH Drum With Controlled Load Lowering Meters	LH Drum With Controlled Load Lowering Meters	LH Drum Without Controlled Load Lowering Meters
204,120	12	21	10	16
203,786	11	23	11	18
185,260	10	25	12	19
166,734	9	28	14	22
148,208	8	32	16	24
129,682	7	36	18	28
111,156	6	42	21	33
92,630	5	51	25	39
74,104	4	64	32	49
55,578	3	85	43	65
39,052	2	128	64	98
18,526	1	256	128	197

Based on 28.6 mm Super Grade Rope

## 77H TAPERED TIP BOOM COMPOSITION

Boom Length		30 Ft. (9.14m) 77S	10 Ft. (3.05m) 77S	20 Ft. (6.10m) 77S	50 Ft. (15.24m) 77S	40 Ft. (12.19m) 77H	30 Ft. (9.2m) 77H
Ft.	Meters	Inner	Center	Center	Center	Outer Base	Outer Base
100	30.5	1	-	-	-	1	1
110	33.5	1	1	-	-	1	1
120	36.6	1	-	1	-	1	1
130	39.6	1	1	1	-	1	1
140	42.7	1	-	2	-	1	1
150	45.7	1	-	-	1	1	1
160	48.8	1	1	-	1	1	1
170	51.8	1	-	1	1	1	1
180	54.9	1	1	1	1	1	1
190	57.9	1	-	2	1	1	1
200	61.0	1	-	-	2	1	1
210	64.0	1	1	-	2	1	1
220	67.1	1	-	1	2	1	1
230	70.1	1	1	1	2	1	1
240	73.2	1	-	2	2	1	1
250	76.2	1	-	-	3	1	1
260	79.2	1	1	-	3	1	1
270	82.3	1	-	1	3	1	1
280	85.3	1	1	1	3	1	1
290	88.4	1	-	2	3	1	1

## 77H HAMMERHEAD BOOM COMPOSITION

Boom Length		30 Ft. (9.14m) 77S	10 Ft. (3.05m) 77S	20 Ft. (6.10m) 77S	50 Ft. (15.24m) 77S	40 Ft. (12.19m) 77H	30 Ft. (9.2m) 77H
Ft.	Meters	Inner	Center	Center	Center	Outer Base	Outer Base
70	21.3	1	-	-	-	1	1
80	24.4	1	1	-	-	1	1
90	27.4	1	-	1	-	1	1
100	30.5	1	1	1	-	1	1
110	33.5	1	-	2	-	1	1
120	36.6	1	-	-	1	1	1
130	39.6	1	1	-	1	1	1
140	42.7	1	-	1	1	1	1
150	45.7	1	1	1	1	1	1
160	48.8	1	-	2	1	1	1
170	51.8	1	-	-	2	1	1
180	54.9	1	1	-	2	1	1
190	57.9	1	-	1	2	1	1
200	61.0	1	1	1	2	1	1
210	64.0	1	-	2	2	1	1
220	67.1	1	-	-	3	1	1
230	70.1	1	1	-	3	1	1
240	73.2	1	-	1	3	1	1
250	76.2	1	1	1	3	1	1
260	79.2	1	-	2	3	1	1

## BOOM AND JIB ERECTION

77H Boom Length	No. 16HL Maximum Jib Length
290' Tapered Tip	100'
260' Hammerhead	100'

77H Boom Length	No. 16HL Maximum Jib Length
88.4m Tapered Tip	30.5m
79.2m Hammerhead	30.5m

# WEIGHTS

	Lbs.	Kg		Lbs.	Kg
Lifting crane with basic 70 ft. (21.3m)			Outer bail assembly .....	2,450	1,110
77H crane boom and 44" (1.118m)			A-frame .....	5,320	2,410
shoes	355,780	161,378	Side frames, 44" (1.118m)		
Components removable for shipment:			shoes (2) .....	71,600	32,480
Counterweight	140,000	63,502	Crawler axles (4) .....	13,100	5,940
Boom outer and hammerhead	7,870	3,570	Torque tubes (2) .....	920	420
Boom inner	2,540	1,150	Carbody .....	28,400	12,880
Telescopic boom stops	300	140			

**NOTE:** In accordance with varying material situations and the Company's policy of constant product improvement these specifications are subject to change without notice and without incurring responsibility to units previously sold.

# GROUND PRESSURE

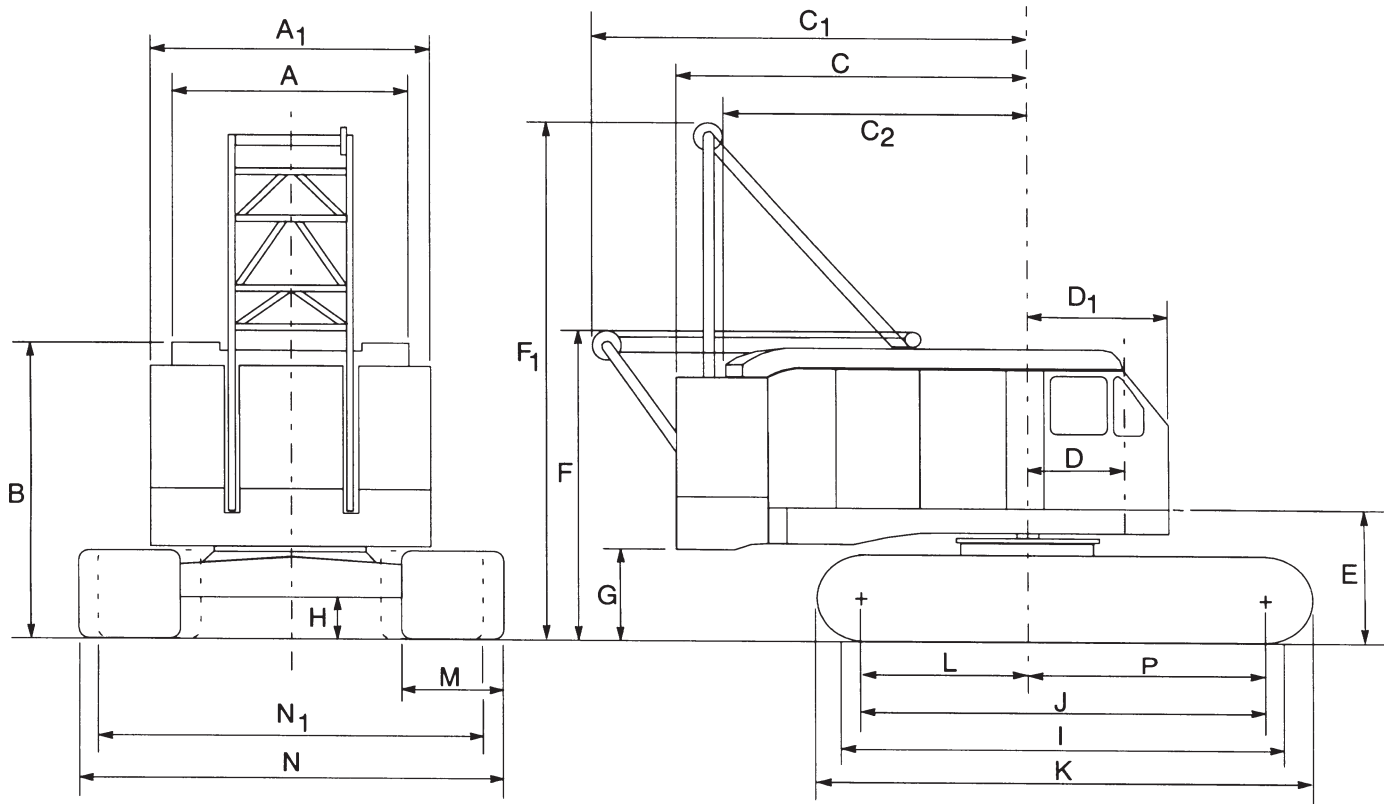
Lifting crane (equipped as above) .....	13.0 Lb.in <sup>2</sup>	.91 Kg/cm <sup>2</sup>
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# PERFORMANCE

TRAVEL SPEED: .....	1.1 MPH	1.77 KPH
Friction Swing .....	2.28 RPM	maximum
Hydrostatic Swing .....	1.9 RPM	maximum
SINGLE LINE SPEED:		
Crane Hoist .....	165 FPM	50.3 MPM
Third Drum .....	192 FPM	58.5 MPM
or .....	142 FPM	43.3 MPM
LINE PULL:		
Crane Hoist SLP .....	40,000 lbs.	18,144 Kg
Third Drum SLP .....	15,000 lbs.	6,804 Kg
or SLP .....	21,000 lbs.	9,526 Kg

Performance figures are based on machine equipped with standard engine.

# AMERICAN MODEL 9310A CRAWLER CRANE

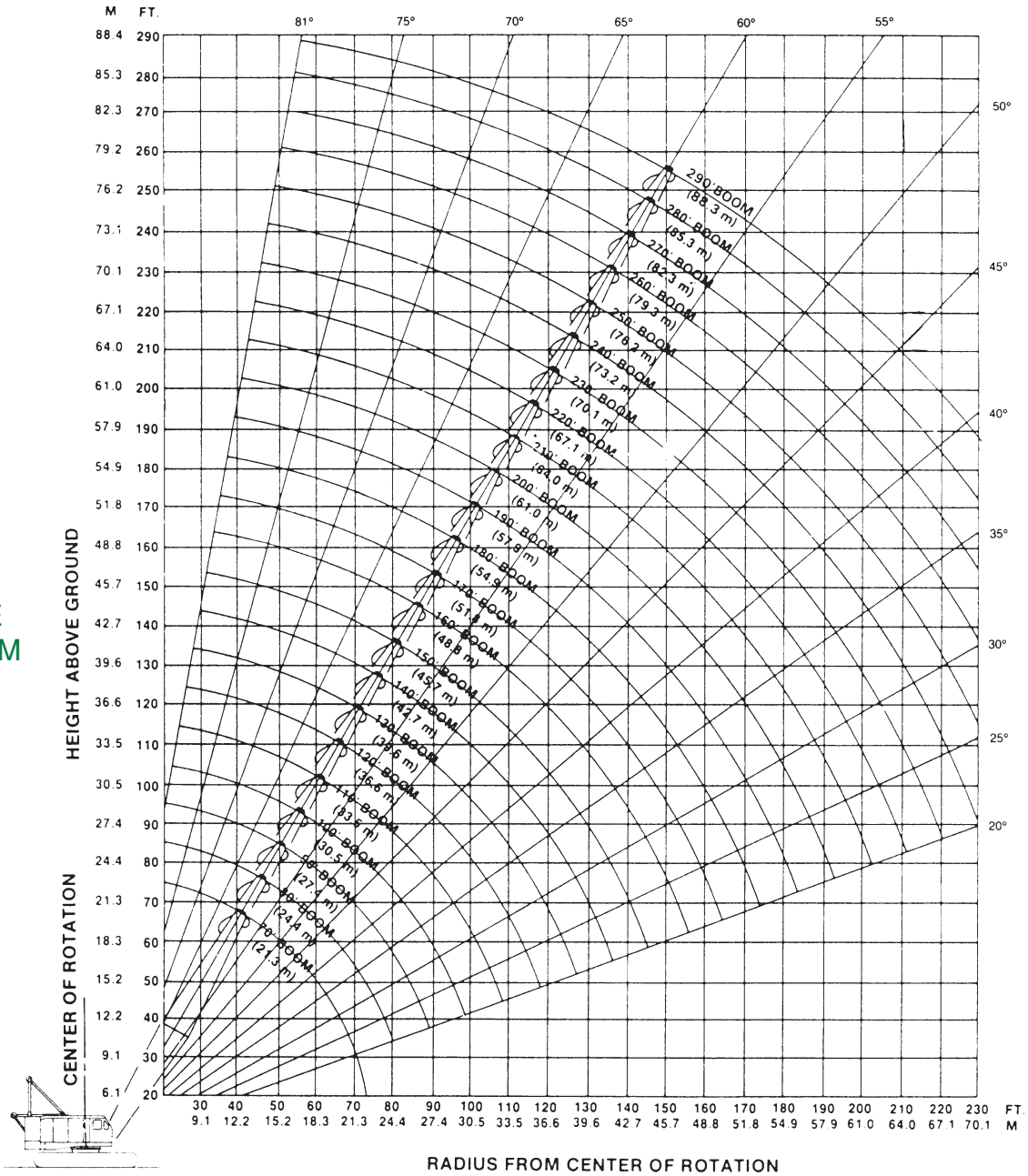


## 9310A GENERAL DIMENSIONS

	FT	MM
A Width of cab	11'-0"	3353
A <sub>1</sub> Width over counterweight	13'-2"	4013
B Height over cab	13'-7 1/8"	4143
C Tailswing	17'-0"	5182
C <sub>1</sub> Tailswing with A-frame, lowered	24'-9"	7544
C <sub>2</sub> Tailswing less A-frame and counterweight	14'-11"	4546
D Center of rotation to center of boom foot	5'-0 3/4"	1544
D <sub>1</sub> Center of pivot to front of cab	6'-10 1/2"	2095
E Ground to center boom foot	6'-9 1/8"	2061
F Height over A-frame, lowered - cwt. on	14'-8 5/8"	4485
F Height over A-frame, lowered - cwt. off	14'-9 7/8"	4518
F <sub>1</sub> Height over A-frame, raised	30'-4 7/8"	9268
G Ground to bottom of counterweight	4'-4 3/8"	1330
H Minimum ground clearance under crawler base	1'-9"	533
I Crawler bearing length	25'-6"	7772
J Center to center crawler tumblers	24'-2"	7366
K Overall length of crawlers	28'-2"	8585
L Center of rotation to center of drive tumbler	11'-0 1/4"	3359
M Width of tread shoes	44'-0"	1118
N Overall width over crawlers - extended	20'-7"	6274
N <sub>1</sub> Overall width over crawlers - retracted	13'-1 3/4"	5511
P Center of rotation to center of idler tumbler	13'-1 3/4"	4007

# AMERICAN MODEL 9310A CRAWLER CRANE WORKING RANGES

BOOM  
ANGLE  
DIAGRAM



FORM No. 9310-A-77H-CR-2

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