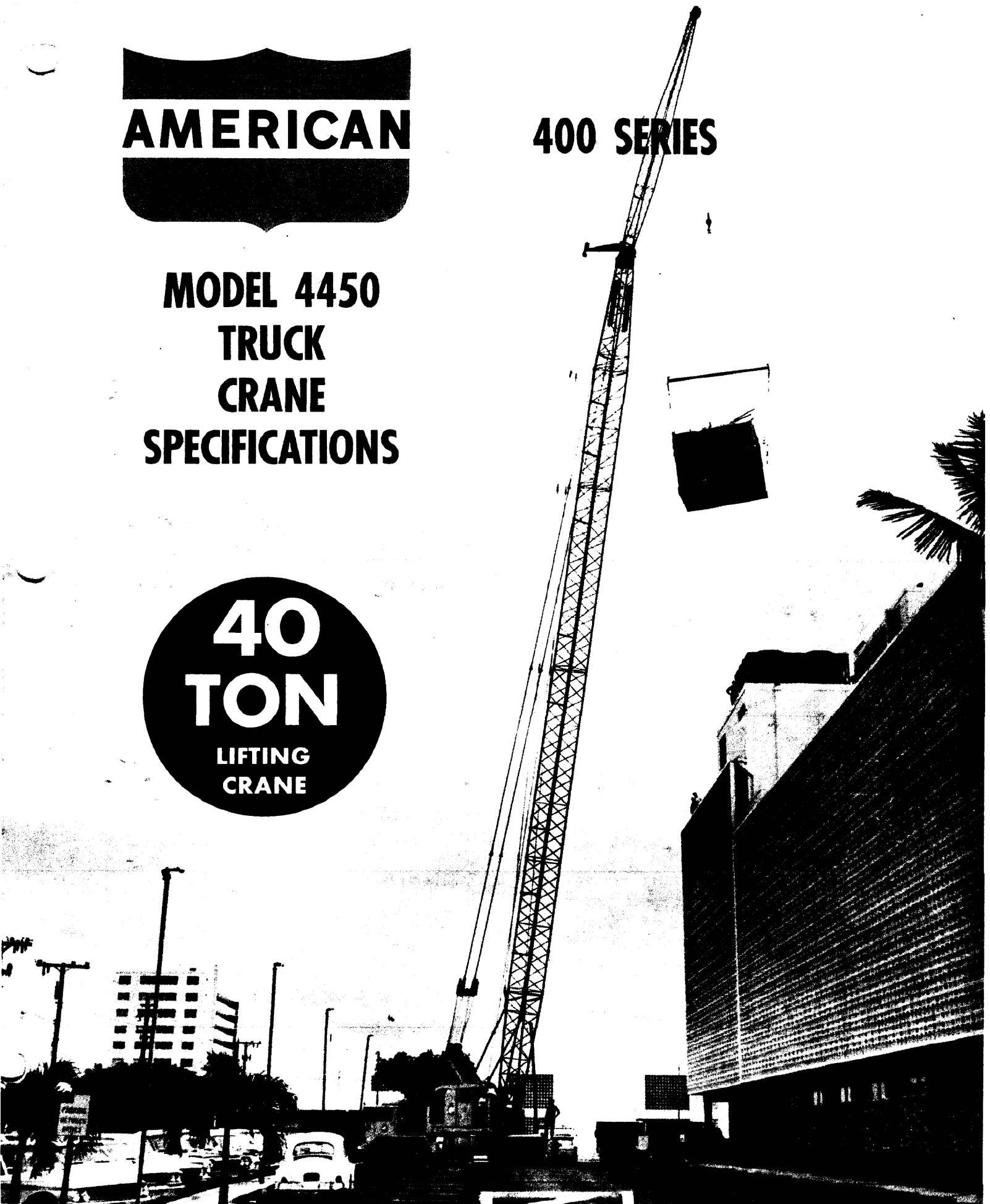


AMERICAN

400 SERIES

**MODEL 4450
TRUCK
CRANE
SPECIFICATIONS**

**40
TON**
LIFTING
CRANE



AMERICAN MODEL 4450 LIFTING CRAN

Boom Length in Feet	Radius in Feet	Boom Angle Degrees	Free Over Side	Free Over Rear	Outriggers Extended and Set
40'	12	77	45,900	58,150	80,000
	15	74	33,850	42,500	70,000
	20	66	23,300	29,050	52,300
	25	58	17,550	21,850	39,800
	30	49	13,950	17,400	*32,800
	35	38	11,500	14,350	*26,400
	40	25	9,700	12,100	*21,800
50'	12	80	41,160	54,100	80,000
	15	77	33,600	42,250	70,000
	20	71	23,050	28,800	52,050
	25	65	17,300	21,600	39,550
	30	58	13,700	17,150	32,550
	35	51	11,250	14,100	26,150
	40	43	9,450	11,850	21,550
50	22	7,000	8,950	*16,000	
60'	13	80	38,240	51,400	76,000
	15	78	33,350	42,000	70,000
	20	74	22,800	28,550	51,800
	25	69	17,050	21,350	39,300
	30	64	13,450	16,900	32,300
	35	58	11,000	13,850	25,900
	40	52	9,200	11,600	21,300
	50	39	6,750	8,700	15,750
	60	20	5,200	6,800	*12,300
70'	15	80	33,150	41,750	66,000
	20	76	22,550	28,300	51,550
	25	72	16,800	21,100	39,050
	30	67	13,200	16,650	32,050
	35	63	10,750	13,600	25,650
	40	58	8,950	11,350	21,050
	50	48	6,500	8,450	15,500
	60	36	4,950	6,550	12,050
	70	18	3,900	5,200	* 9,700

Boom Length in Feet	Radius in Feet	Boom Angle Degrees	Free Over Side	Free Over Rear	Outriggers Extended and Set
80'	16	80	30,200	37,950	57,800
	20	79	22,400	28,050	51,300
	25	74	16,550	20,850	38,800
	30	70	12,950	16,400	31,800
	35	67	10,500	13,350	25,400
	40	63	8,750	11,100	20,800
	50	54	6,250	8,200	15,250
	60	45	4,700	6,300	11,800
	70	34	3,650	4,950	9,450
	80	17	2,850	4,000	* 7,800
	90'	18	81	25,400	32,050
20		80	22,050	27,800	48,500
25		77	16,300	20,600	38,550
30		73	12,700	16,150	31,550
35		70	10,250	13,100	25,150
40		67	8,450	10,850	20,550
50		59	6,000	7,950	15,000
60		52	4,450	6,050	11,550
70		43	3,400	4,700	9,200
80		32	2,600	3,750	7,550
90		17	2,000	3,000	* 6,300
*100'	20	81	21,800	27,550	43,700
	25	77	16,050	20,350	38,300
	30	75	12,450	15,900	31,300
	35	72	10,000	12,850	24,900
	40	69	8,200	10,600	20,300
	50	63	5,750	7,700	14,750
	60	56	4,200	5,800	11,300
	70	49	3,150	4,450	8,950
	80	41	2,350	3,500	7,300
	90	31	1,750	2,750	6,050
	100	16	—	2,200	5,100

RATINGS—ANGLE CHORD BOOM

Boom Length in Feet	Radius in Feet	Boom Angle Degrees	Free Over Side	Free Over Rear	Outriggers Extended and Set
*110'	22	81	18,900	23,950	37,200
	25	79	15,800	20,100	35,400
	30	77	12,200	15,650	31,050
	35	74	9,750	12,600	24,650
	40	71	7,950	10,350	20,050
	50	65	5,500	7,450	14,500
	60	60	3,950	5,550	11,050
	70	53	2,900	4,200	8,700
	80	46	2,100	3,250	7,050
	90	39	1,500	2,500	5,800
	100	29	—	1,950	4,850
110	15	—	—	4,100	
*120'	23	81	17,500	22,300	32,100
	25	80	15,550	19,850	31,000
	30	78	11,950	15,400	29,000
	35	75	9,500	12,350	24,400
	40	73	7,700	10,100	19,800
	50	68	5,250	7,200	14,250
	60	62	3,700	5,300	10,800

Boom Length in Feet	Radius in Feet	Boom Angle Degrees	Free Over Side	Free Over Rear	Outriggers Extended and Set
*120'	70	57	2,650	3,950	8,450
	80	51	1,850	3,000	6,800
	90	44	—	2,250	5,550
	100	37	—	1,700	4,600
	110	28	—	—	3,850
	120	14	—	—	3,250
*130'	25	82	15,300	19,600	27,200
	30	79	11,700	15,150	25,000
	35	76	9,250	12,100	24,050
	40	74	7,450	9,850	19,550
	50	69	5,000	6,950	14,000
	60	65	3,450	5,050	10,550
	70	60	2,400	3,700	8,200
	80	54	1,600	2,750	6,550
	90	49	—	2,000	5,300
	100	43	—	1,450	4,350
	110	35	—	—	3,600
	120	27	—	—	3,000
	130	14	—	—	2,500

Load ratings do not exceed 85% of tipping with crane standing level on firm, uniformly supporting surface. Outrigger ratings at radii of 28 feet or less are based on strength, not stability. Safe loads depend on ground conditions, boom length, radius of operation, condition and inflation (100 psi) of tires, and proper handling, all of which must be taken into consideration by user.

“Radius in feet” is the horizontal distance at crane base level from center pin to a vertical line through the center of gravity of the suspended load. Blocks, slings, buckets and other load carrying devices are considered part of the load. Ratings marked (*) require retractable A-frame fully raised.

Crane with K-M counterweight and outriggers extended and set, will self-erect 130 ft. main boom plus 40 ft. No. 6 or No. 7HL jib with tackle not suspended.

Duty cycle ratings with reduced counterweight are shown on page 11.

AMERICAN MODEL 4450 LIFTING CRANE

Boom Length in Feet	Radius in Feet	Boom Angle Degrees	Free Over Side	Free Over Rear	Outriggers Extended and Set
40'	12	78	46,100	58,350	80,000
	15	75	34,050	42,700	70,000
	20	67	23,500	29,250	52,500
	25	59	17,750	22,050	40,000
	30	50	14,150	17,600	*33,000
	35	39	11,700	14,550	*26,600
	40	26	9,900	12,300	*22,000
50'	12	80	43,510	60,720	80,000
	13	80	41,050	51,800	70,000
	15	78	33,800	42,450	70,000
	20	72	23,250	29,000	52,250
	25	66	17,500	21,800	39,750
	30	59	13,900	17,350	32,750
	35	52	11,450	14,300	26,350
	40	44	9,650	12,050	21,750
50	23	7,200	9,150	*16,200	
60'	13	80	37,510	53,940	76,000
	14	80	36,850	46,400	70,000
	15	79	33,550	42,200	70,000
	20	75	23,000	28,750	52,000
	25	70	17,250	21,550	39,500
	30	65	13,650	17,100	32,500
	35	59	11,200	14,050	26,100
	40	53	9,400	11,800	21,500
50	40	6,950	8,850	15,950	
60	21	5,400	7,000	*12,500	
70'	14	81	34,820	48,400	73,000
	15	81	33,350	41,950	70,000
	20	77	22,750	28,500	51,750
	25	73	17,000	21,300	39,250
	30	68	13,400	16,850	32,250
	35	64	10,950	13,800	25,850
	40	59	9,150	11,550	21,250
	50	49	6,700	8,600	15,700
	60	37	5,150	6,750	12,250
70	19	4,100	5,400	* 9,900	

Boom Length in Feet	Radius in Feet	Boom Angle Degrees	Free Over Side	Free Over Rear	Outriggers Extended and Set
80'	16	81	30,400	38,150	67,000
	20	80	22,500	28,250	51,500
	25	75	16,750	21,050	39,000
	30	71	13,150	16,600	32,000
	35	68	10,700	13,550	25,600
	40	64	8,900	11,300	21,000
	50	55	6,450	8,350	15,450
	60	46	4,900	6,500	12,000
90'	70	35	3,850	5,150	9,650
	80	18	3,050	4,200	* 8,000
	18	81	25,600	32,250	57,750
	20	80	22,250	28,000	51,250
	25	77	16,500	20,800	38,750
	30	73	12,900	16,350	31,750
	35	70	10,450	13,300	25,350
	40	67	8,650	11,050	20,750
100'	50	59	6,200	8,100	15,200
	60	52	4,650	6,250	11,750
	70	43	3,600	4,900	9,400
	80	32	2,800	3,950	7,750
	90	17	2,200	3,200	* 6,500
	20	81	22,000	27,750	51,000
	25	77	16,250	20,550	38,500
	30	75	12,650	16,100	31,500
	35	72	10,200	13,050	25,100
	40	69	8,400	10,800	20,500
*110'	50	63	5,950	7,850	14,950
	60	56	4,400	6,000	11,500
	70	49	3,350	4,650	9,150
	80	41	2,550	3,700	7,500
	90	31	1,950	2,950	6,250
	100	16	—	2,400	* 5,300
	22	81	19,100	24,150	45,250
25	79	16,000	20,300	38,250	
30	77	12,400	15,850	31,250	
35	74	9,950	12,800	24,850	
40	71	8,150	10,550	20,250	
50	65	5,700	7,600	14,700	

RATINGS — TUBULAR CHORD BOOM

Boom Length in Feet	Radius in Feet	Boom Angle Degrees	Free Over Side	Free Over Rear	Outriggers Extended and Set
*110'	60	60	4,150	5,750	11,250
	70	53	3,100	4,400	8,900
	80	46	2,300	3,450	7,250
	90	39	1,700	2,700	6,000
	100	29	—	2,150	5,050
	110	15	—	1,700	4,300
*120'	23	81	17,700	22,500	42,700
	25	80	15,750	20,050	38,000
	30	78	12,150	15,600	31,000
	35	75	9,700	12,550	24,600
	40	73	7,900	10,300	20,000
	50	68	5,450	7,350	14,450
	60	62	3,900	5,500	11,000
	70	57	2,850	4,150	8,650
	80	51	2,050	3,200	7,000
	90	44	1,450	2,450	5,750
	100	37	—	1,900	4,800
	110	28	—	—	4,050
*130'	25	82	15,500	19,800	37,750
	30	79	11,900	15,350	30,750
	35	76	9,450	12,300	24,350
	40	74	7,650	10,050	19,750
	50	69	5,200	7,100	14,200
	60	65	3,650	5,250	10,750
	70	60	2,600	3,900	8,400
	80	54	1,900	2,950	6,750
	90	49	—	2,200	5,500
	100	43	—	1,650	4,550

Boom Length in Feet	Radius in Feet	Boom Angle Degrees	Free Over Side	Free Over Rear	Outriggers Extended and Set
*130'	110	35	—	—	3,800
	120	27	—	—	3,200
	130	14	—	—	2,700
*140'	26	81	14,400	18,500	36,400
	30	79	11,650	15,100	30,500
	35	77	9,200	12,050	24,100
	40	75	7,400	9,800	19,500
	50	71	4,950	6,850	13,950
	60	67	3,400	5,000	10,500
	70	62	2,350	3,650	8,150
	80	57	1,650	2,700	6,500
	90	52	—	1,950	5,250
	100	47	—	—	4,300
	110	41	—	—	3,550
	120	34	—	—	2,950
*150'	130	26	—	—	2,450
	140	13	—	—	2,000
	28	81	12,650	16,400	33,500
	30	80	11,400	14,850	30,250
	35	78	8,950	11,800	23,850
	40	76	7,150	9,550	19,250
	50	72	4,700	6,600	13,700
	60	68	3,150	4,750	10,250
	70	64	2,100	3,400	7,900
	80	60	1,400	2,450	6,250
	90	55	—	1,700	5,000
	100	50	—	—	4,050
	110	45	—	—	3,300
	120	39	—	—	2,700
130	33	—	—	2,200	
140	25	—	—	1,750	

Load ratings do not exceed 85% of tipping with crane standing level on firm, uniformly supporting surface. Outrigger ratings at radii of 28 feet or less are based on strength, not stability. Safe loads depend on ground conditions, boom length, radius of operation, condition and inflation (100 psi) of tires, and proper handling, all of which must be taken into consideration by user.

“Radius in feet” is the horizontal distance at crane base level from center pin to a vertical line through the center of gravity of the suspended load. Blocks, slings, buckets and other load carrying devices are considered part of the load. Ratings marked (*) require retractable A-frame fully raised.

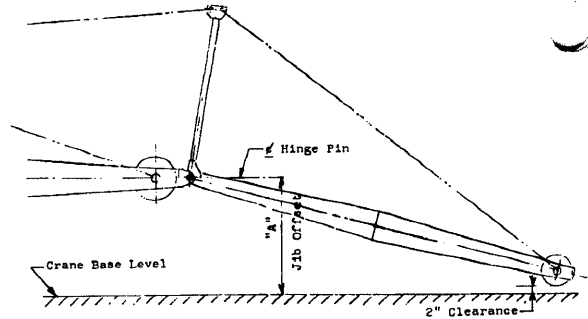
Duty cycle ratings with reduced counterweight are shown on page 11.

Crane will self-erect 150 ft. main boom plus 40 ft. No. 6 jib or 50 ft. No. HL7 jib with tackle not suspended.

JIB RATINGS

NO. 6 JIB RATINGS			
Jib Offset "A"	Maximum Jib Ratings in Pounds		
	20 Ft. Jib	30 Ft. Jib	40 Ft. Jib
0 to 6 ft.	13,500	10,500	7,200
9 ft.	11,500	9,500	6,750
12 ft.	10,000	8,200	6,300
15 ft.	—	7,600	5,900
18 ft.	—	—	5,500
Effective Jib Weight at Boom Point	1,030	1,580	2,310

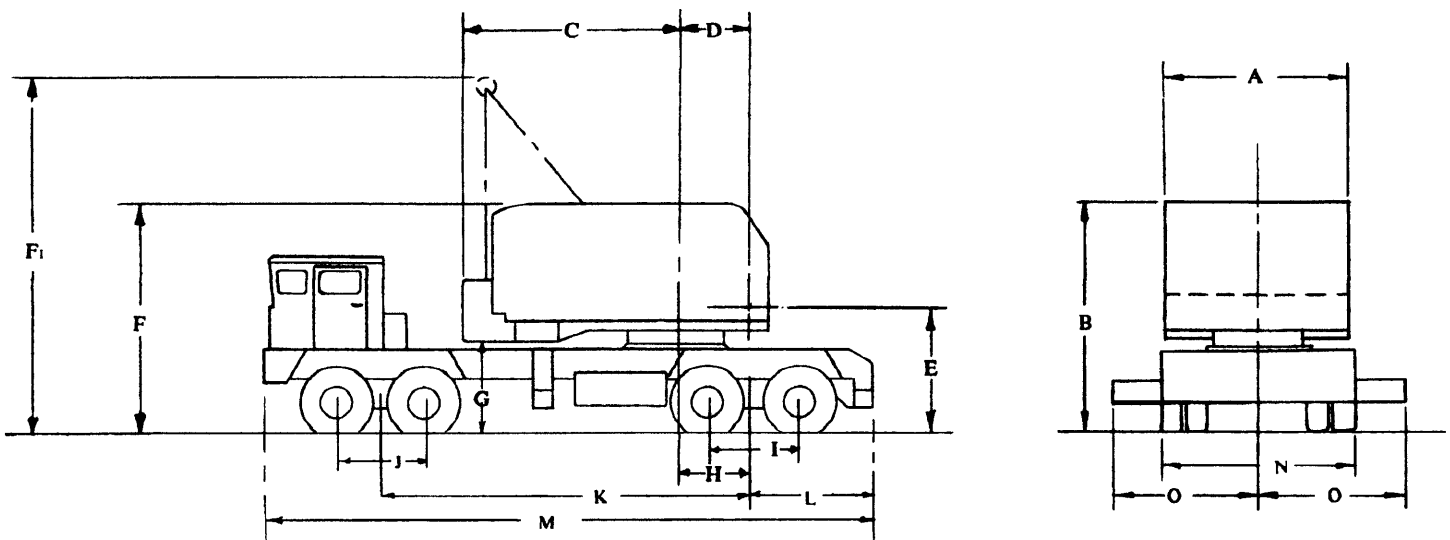
NO. 7HL JIB RATINGS			
	30 Ft. Jib	40 Ft. Jib	50 Ft. Jib
0 to 6 ft.	16,000	14,000	11,000
9 ft.	16,000	12,000	9,300
12 ft.	14,000	10,800	8,000
15 ft.	—	9,500	7,000
18 ft.	—	—	6,000
Effective Jib Weight at Boom Point	1,400	1,950	2,630



Maximum jib length with angle chord boom is 40 ft.

Jib ratings are based on 70 ft. minimum boom length. For ratings on shorter booms consult factory. The jib load rating is the lesser of: (a) the maximum jib rating, or (b) the main boom rating at the jib working radius, reduced by the effective jib weight and by the weight of all suspended load-carrying devices. The main boom rating with jib in place must be reduced by the effective jib weight, the weight of main fall blocks and slings, and twice the weight of jib tackle.

GENERAL DIMENSIONS



- | | | | |
|--|--------------------------------------|---|-------------------------------------|
| A. Width of cab..... | 9' 0" | K. Centerline of rear bogie to centerline of front bogie | 16' 8" |
| B. Height to top of cab..... | 11' 5 ³ / ₄ " | L. Centerline of rear bogies to rear outrigger... .. | 6' 3 ¹ / ₄ " |
| C. Tail swing | 11' 5" | M. Over-all length | 28' 9 ³ / ₄ " |
| D. Centerline to pivot to centerline of boom foot | 3' 0" | N. Over-all width | 9' 11 ¹ / ₄ " |
| E. Ground to centerline of boom foot..... | 5' 3" | N ¹ . Over-all width with hydraulic outriggers... .. | 10' 0" |
| F. Height over A-frame (lowered)..... | 11' 11 ¹ / ₂ " | O. Center of carrier to center line of extended Screwjack | 9' 0" |
| F ¹ . Height over A-frame (raised)..... | 16' 10" | O ¹ . Center of carrier to center line of extended Hydraulic Jack..... | 8' 8" |
| G. Ground to bottom counterweight..... | 4' 3 ¹ / ₄ " | LH Turning radius (over front bumper)..... | 52' 2 ³ / ₄ " |
| H. Centerline of pivot to centerline of rear bogie | 3' 6" | RH Turning radius (over front bumper)..... | 47' 7 ¹ / ₂ " |
| I. Distance between rear axles..... | 4' 6" | Ground clearance | 12 ³ / ₄ " |
| J. Distance between front axles..... | 4' 2" | | |

GENERAL SPECIFICATIONS

UPPER MACHINERY:

POWER: Standard:

Waukesha Model 135 GZU gasoline engine with Cotta two-speed transmission; 6 cylinder, 4 $\frac{3}{8}$ " bore, 5" stroke, 451 cu. in. displacement; rated 93 HP at 1635 RPM full load; 12 volt electric starting.

Alternate Engines with Cotta Two-Speed Transmission:

General Motors 4-71-N diesel engine; 4 cylinder, 4 $\frac{1}{4}$ " bore, 5" stroke, 284 cu. in. displacement; rated 93 HP at 1700 RPM full load; 12 volt electric starting.

Cummins Model NHC-4-IP diesel engine, 4 cylinder, 5 $\frac{1}{8}$ " bore, 6" stroke, 495 cu. in. displacement; rated 93 HP at 1700 RPM full load; 24 volt electric starting.

Caterpillar Model D-330-A-T diesel engine; 4 cylinder, turbo-charged, 4 $\frac{1}{2}$ " bore, 5 $\frac{1}{2}$ " stroke, 350 cu. in. displacement; rated 93 HP at 1700 RPM full load; 24 volt electric starting.

Plate clutch power take-off in lieu of 2-speed transmission is optional.

Alternate Engines with Single Stage Torque Converter:

Waukesha Model 135GZU gasoline engine; 6 cylinder, 4 $\frac{3}{8}$ " bore, 5" stroke, 451 cu. in. displacement, rated 109 HP at 2000 RPM converter input; 12 volt electric starting. Recommended for lift crane service only.

General Motors Model 4-71-N diesel engine; 4 cylinder, 4 $\frac{1}{4}$ " bore, 5" stroke, 284 cu. in. displacement; 114 HP at 1850 RPM converter input; 12 volt electric starting.

Cummins Model NHC-4-IP diesel engine; 4 cylinder, 5 $\frac{1}{8}$ " bore, 6" stroke, 495 cu. in. displacement; 109 HP at 1900 RPM converter input; 24 volt electric starting.

Cummins Model C-160-IP diesel engine; 6 cylinder, 4 $\frac{7}{16}$ " bore, 5" stroke, 464 cu. in. displacement; 114 HP at 1900 RPM converter input; 12 volt electric starting.

Caterpillar Model D-330-A-TA diesel engine; 4 cylinder, turbo-charged and after-cooled, 4 $\frac{1}{2}$ " bore, 5 $\frac{1}{2}$ " stroke, 350 cu. in. displacement; 112 HP at 1800 RPM converter input; 24 volt electric starting.

Alternate Engines with Three Stage Hydraulic Torque Converter:

Waukesha Model 135GZU gasoline engine; 6 cylinder, 4 $\frac{3}{8}$ " bore, 5" stroke, 451 cu. in. displacement, rated 109 HP at 2000 RPM converter input; 12 volt electric starting. Recommended for lift crane service only.

General Motors Model 4-71-N diesel engine; 4 cylinder, 4 $\frac{1}{4}$ " bore, 5" stroke, 284 cu. in. displacement; 114 HP at 1850 RPM converter input; 12 volt electric starting.

Cummins Model NHC-4-IP diesel engine; 4 cylinder, 5 $\frac{1}{8}$ " bore, 6" stroke, 495 cu. in. displacement; 109 HP at 1900 RPM converter input; 24 volt electric starting.

Cummins Model C-160-IP diesel engine; 6 cylinder, 4 $\frac{7}{16}$ " bore, 5" stroke, 464 cu. in. displacement; 114 HP at 1900 RPM converter input; 12 volt electric starting.

POWER TRANSMISSION: Power is transmitted from engine to operating machinery by $\frac{3}{8}$ " pitch quadruple roller chain enclosed in oil tight case and running in oil bath.

FUEL TANK: 65 gallon capacity.

ROTATING MACHINERY BASE: Electric welded steel plate and alloy steel casting unit; tapered deep girder construction with integral walkways; accurate milling, boring and drilling insure perfect alignment of machinery under most severe operating conditions; all machining done with jigs and fixtures to insure fit of replacement parts.

COUNTERWEIGHT: Hollow basic Type "K" casting; removable type "M" inserts make total counterweight 15,700 lbs. Complete counterweight removed easily and quickly without assistance, through use of retractable A-frame and counterweight removal attachment; two alloy cast steel arms are pivoted from rear of machinery deck; alloy steel hooks suspend the counterweight from these arms and machined cast steel latches secure the arms; counterweight is further secured by two over-center locking arms; no bolts are employed; counterweight is removed in less than three minutes; attaching counterweight is an equally simple procedure, requiring no more than five minutes.

ROLLER PATH AND BULLGEAR: Single unit casting; internal tooth bullgear; outer surface has double tapered roller paths accurately machined to roller contour; welded to chassis of carrier with suitable reinforcement and bracing.

CENTER PIVOT TUBE: Cast integral with roller path and bullgear; pressure grease lubricated bronze pivot bushings in rotating machinery base; horizontal loads only — no uplift.

LOAD AND HOOK ROLLERS: Tapered load rollers transmit downward loads to machined upper roller path on carrier; tapered hook rollers transmit uplift loads to lower path; two sets double equalizing load rollers and two single hook rollers in front; two sets double equalizing hook rollers and two single load rollers in rear; all rollers mounted on anti-friction bearings; hook rollers easily adjustable by eccentric shaft take-up.

DRIVE SHAFT ASSEMBLY: Independent primary drive shaft is forged alloy steel with integral cut steel spur pinion; roller chain sprocket is ductile iron, splined to shaft; shaft is mounted on anti-friction bearings; has single purpose of speed reduction.

SWING ASSEMBLY: Main clutch shaft is heat treated alloy steel, mounted in anti-friction bearings; clutch spiders and cut tooth driving spur gear are splined to the shaft; bevel pinions are cut tooth hardened alloy steel, oil lubricated, bevel pinions mounted in anti-friction bearings in the case; swing clutches are air controlled, tandem band, internal expanding with moulded liners; variable pressure air control.

Vertical reversing shaft is heat treated alloy steel, pressed into main swing clutch housing with lower end supported by bore in machinery base; hardened alloy steel integral cut tooth bevel gear and spur pinion is mounted on roller bearings and runs in oil.

Vertical swing shaft is alloy steel, mounted in heavy bronze bushings in machinery base; swing pinion is cut

AMERICAN MODEL 4450 TRUCK

tooth alloy steel, accurately matched with revolving bull-gear; alloy cast iron brake wheel and cast steel cut tooth spur gear are splined to shaft; swing brake is spring set, air released; swing brake has dual control; control on lever stand permits variable pressure from "released" to "set"; in addition, side motion of swing lever applies variable air pressure to swing brake.

MAIN DRUM ASSEMBLY: Twin alloy cast iron drums with integral brake and clutch surfaces are mounted in anti-friction bearings; drums skeleton type with split cast steel laggings bolted in place; alloy steel drum shaft mounted on anti-friction bearings in bearing blocks bolted to machinery base; clutch spiders splined to drum shaft; air controlled full wrap internal expanding clutches with thick moulded liners, smooth operation assured by highly responsive variable pressure air controls; large external contracting band drum brakes with extra thick moulded liners; raised cooling flange on brake drum dissipates heat; brake foot pedal operated from operator's position; brake shafts and pins mounted on anti-friction bearings for responsive operation with minimum effort; brake and clutch surfaces stress relieved for smooth operation without scoring.

CONTROLLED LOAD LOWERING: Available for either main drum; drum is roller chain driven from clutch shaft forward of and below main drums; air operated internal expanding tandem band clutch controlled by forward motion of drum clutch lever; clutches and clutch shaft mounted on anti-friction bearings; loads are lowered through over-running friction torque of engine; can be mounted on either drum by simply bolting chain sprocket to desired lagging; jaw clutch shifter provided when used with third drum to utilize same clutch for both operations; not recommended with single stage torque converter.

THIRD DRUM: (Optional) Forward and below main drums, bronze bushed drum; shaft mounted on anti-friction bearings; air controlled; can be installed with but cannot be used simultaneously with controlled load lowering.

STANDARD BOOM: Basic crane boom is 40', 2-piece, 37" heavy duty with three 20" dia. sheaves mounted on anti-friction bearings in the boom point; chord angles are alloy steel with tubular lattice; boom point is open throat design; sheave axle is alloy steel, available in extended length for hanging pile driver leads; pendant type boom suspension is standard; maximum boom length 130' plus 40' jib; safety boom stops standard.

TUBULAR CHORD BOOM (Optional): 40 ft., 2-piece, 47" cross section, with three 20" dia. sheaves mounted on anti-friction bearings in offset boom point; chords are T-1 tubular alloy steel with tubular lattice; pendant suspension; boom sections and pendants are pin connected for quick, easy removal or replacement; center boom sections are available in 10 ft., 20 ft., and 30 ft. lengths with matching pendants; maximum boom length is 150' plus jib.

JIBS: Two jibs are available. No. 7HL jib is 30 ft., 2-piece with T-1 tubular alloy steel chords and tubular lattice; 10 ft. inner, 20 ft. outer section; 24" AFB aluminum sheave, single part load line, 10 ft. and 20 ft. center sections with matching pendants are available to extend total jib length to 40 ft. or 50 ft.

No. 6 jib is 20 ft., 2-piece with alloy steel chord angles and tubular lattice; 17" AFB sheave is grooved for 3/4" rope for single part whip line; jib length can be extended to 30 ft. or 40 ft. with addition of 10 ft. center sections with matching pendants.

Jibs are furnished with A-frame, front stay and back stay lines for boom length ordered; optional back stay connection for insertion at mid-boom splice is also available.

SAFETY BOOM STOPS: Telescoping safety boom stops for any length boom prevent overhoisting and backward boom motion due to failure of hoisting line or hoisting tackle. Boom hoist safety shut off is optional.

RETRACTABLE A-FRAME: Raised or lowered by means of bail rigging with no special equipment required; standard on all machines, the counterweight is easily removed without outside assistance; A-frame rests neatly in recess of cab roof when lowered to provide low overhead clearance.

BOOM HOIST: Boom hoist drum is of ductile iron with integral cut tooth spur gear at one end and brake ring at opposite end of drum; mounted on bronze bushings; drum-shaft is high carbon steel mounted in bored holes in machinery base; spring set, air released locking pawl is provided to engage drum gear and lock boom in position; brake is full wrap, spring set, air released with single control valve for both hoisting and lowering; brake sets in neutral position. Boom hoist clutch assembly is a separate pre-assembled unit; integral cut tooth spur gear and clutch ring are mounted on anti-friction bearings on the clutch shaft; shaft is high carbon steel mounted on anti-friction bearings; clutch spider and pinion are splined to clutch shaft; boom hoist clutch is air controlled, full wrap internal expanding band.

CONTROLLED BOOM LOWERING: Boom lowering speed limited by speed of engine; rapid, safe boom handling, slower boom lowering by reduced engine speed; overrunning sprag clutch mechanism mounted on independent shaft engages positively and smoothly, disconnect provided for reverse gear operations, shifter interlocked with boom pawl to prevent "live boom".

CAB: Fully enclosed 9 ft. wide; all safety glass windows, mounted in rubber; removable windows in operator's cab; sliding doors on sides and rear; hinged door on operator's cab roof; ladder to roof at left front; operator located at right hand forward corner to provide unobstructed visibility; graduated air controls pioneered by AMERICAN put "feel" at every operator's finger-tips, insure higher production, more accurate control.

CRANE GENERAL SPECIFICATIONS

MATERIALS: Gears and pinions are heat-treated alloy or high carbon steel; cut teeth on all gears except rotating ring gear which has accurately moulded teeth.

Involute splines are used throughout machine for maximum tooth strength through minimum diameter where needed; self centering; equalized bearing and stresses among all teeth; smooth tooth surface; easy interchangeability of parts.

Anti-friction bearings are used on all main or high speed shafts and wherever practical to provide friction-free, smooth operation with minimum maintenance.

LUBRICATION: All anti-friction bearings and bronze bushings requiring short period lubrication are provided with pressure grease fittings; certain anti-friction bearings are provided with means to insure infrequent lubrication where frequent lubrication would result in faulty clutch or brake operation; swing deck gears are provided with oil bath lubrication; drum gear train and the swing bullgear are arranged for grease lubrication.

CARRIER

8 x 4 carrier with gasoline engine; 200" wheelbase; 9' 11 1/4" over-all width; 28' 9 3/4" over-all length.

ENGINE: Waukesha Model F554G gasoline engine, 6 cylinder, 4 5/8" bore, 5 1/2" stroke, 554 cu. in. displacement; 179.5 HP at 2600 RPM.

ELECTRICAL: 12 volt electric starting and lights; 20 amp. generator.

CLUTCH: Lipe Rollway 14" double plate.

MAIN TRANSMISSION: Fuller Model 5C-65, Five speeds forward; one reverse.

AUXILIARY TRANSMISSION: Fuller Model 3A-65; three speeds.

STEERING GEAR: Ross TE72592; Garrison Hydraulic booster.

FRONT TANDEM: Two Shuler Model FE15B-34LHD tubular; 15,000 lbs. capacity each; front axle suspension solid mounted to frame.

REAR TANDEM: Two Clark Model BD-45-60 planetary drive; 50,000 lbs. capacity each; 93" track; rear axle suspension solid mounted to frame; non-spin differential on forward rear axle.

BRAKES: Bendix-Westinghouse air service brakes with 12 cu. ft. compressor; air on all eight wheels; 17 1/4" x 4" front; 16 1/2" x 7" rear; spring loaded parking brake on forward rear axle with extra air reservoir to reset brake.

WHEELS: Front Dayton F-8221-AZ, 8:00 x 20; rear integral with rear axles.

TIRES: Twelve 12:00 x 20, 14 ply non-directional tread.

FUEL TANK: 50 gallons capacity.

PROPELLER SHAFT: Spicer 1600 and 1700 Series.

FRAME: Boxed frame members; front and rear removable outriggers, complete with beams and rollers; screw jacks and aluminum floats; front and rear towing hooks.

CAB: 108" sheet metal front with 32" wide one man cab, fully enclosed, offset to LH side; two bus type mirrors; air windshield wiper; dual electric horn; boom guide; leatherette cushioned seat; instrument panel with full complement of instruments.

FENDERS: No. 12 gauge tread plate front and rear with non-skid walking surfaces.

TOOLS: Complete tool box included.

PERFORMANCE

Fully equipped machine (81,000 lbs. gross weight):

Maximum Speed 40.3 MPH
Maximum gradeability 46% grade at 0.81 MPH

Stripped machine (53,000 lbs. gross weight):

Maximum Speed 40.3 MPH
Maximum gradeability 68% grade at 0.81 MPH

SWING SPEED: 3.88 RPM

SINGLE LINE SPEED (Based on Standard Engine and Transmission):

Crane, Clam, Drag—Hoist 156 FPM
Magnet—Hoist 206 FPM
Drag—Pull in 150 FPM
Third Drum 209 FPM

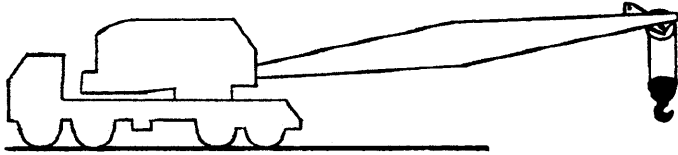
SINGLE LINE PULL (Based on Standard Engine and Transmission):

Crane, Clam, Drag—Hoist 17,300 lbs. SLP
Magnet—Hoist 13,100 lbs. SLP
Drag—Pull in 18,000 lbs. SLP
Third Drum 5,000 lbs. SLP

NOTE: Line pull and line speed ratings apply to standard engine and transmission and may vary with alternate engine arrangements.

NOTE: In accordance with our established policy of constant product improvement and varying material situations, these specifications are subject to change without notice and without incurring responsibility for machines previously sold.

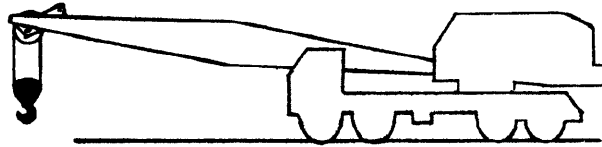
4450 TRAVELING WEIGHTS



X = IN PLACE
O = REMOVED

Boom Rearward

LOAD BLOCK	BOOM OUTER	BOOM INNER	COUNTER-WEIGHT	REAR OUTRIGGER	FRONT OUTRIGGER BEAMS	FRONT OUTRIGGER HOUSING	FRONT BOGIE	REAR BOGIE	GROSS WEIGHT
X	X	X	X	X	X	X	30,200	52,600	82,800
X	X	X	O	X	X	X	17,800	49,300	67,100
X	X	X	O	O	X	X	19,300	43,300	62,600
X	X	X	O	X	O	X	16,600	48,700	65,300
X	X	X	O	O	O	X	18,100	42,700	60,800
X	X	X	O	O	O	O	16,700	42,000	58,700
O	X	X	X	X	X	X	32,600	49,250	81,850
O	X	X	O	X	X	X	20,200	45,950	66,150
O	X	X	O	O	X	X	21,700	39,950	61,650
O	X	X	O	X	O	X	19,000	45,350	64,350
O	X	X	O	O	O	X	20,500	39,350	59,850
O	X	X	O	O	O	O	19,100	38,650	57,750
O	O	X	X	X	X	X	36,100	44,000	80,100
O	O	X	O	X	X	X	23,700	40,700	64,400
O	O	X	O	O	X	X	25,200	34,700	59,900
O	O	X	O	X	O	X	22,500	40,100	62,600
O	O	X	O	O	O	X	24,000	34,100	58,100
O	O	X	O	O	O	O	22,600	33,400	56,000
O	O	O	X	X	X	X	37,300	40,900	78,200
O	O	O	O	X	X	X	24,900	37,600	62,500
O	O	O	O	O	X	X	26,400	31,600	58,000
O	O	O	O	X	O	X	23,700	37,000	60,700
O	O	O	O	O	O	X	25,200	31,000	56,200
O	O	O	O	O	O	O	23,800	30,300	54,100



Boom Forward

LOAD BLOCK	BOOM OUTER	BOOM INNER	COUNTER-WEIGHT	REAR OUTRIGGER	FRONT OUTRIGGER BEAMS	FRONT OUTRIGGER HOUSING	FRONT BOGIE	REAR BOGIE	GROSS WEIGHT
X	X	X	X	X	X	X	17,400	65,400	82,800
X	X	X	O	X	X	X	24,100	43,000	67,100
X	X	X	O	O	X	X	25,600	37,000	62,600
X	X	X	O	X	O	X	22,900	42,400	65,300
X	X	X	O	O	O	X	24,400	36,400	60,800
X	X	X	O	O	O	O	23,000	35,700	58,700
O	X	X	X	X	X	X	14,950	66,900	81,850
O	X	X	O	X	X	X	21,650	44,500	66,150
O	X	X	O	O	X	X	23,150	38,500	61,650
O	X	X	O	X	O	X	20,450	43,900	64,350
O	X	X	O	O	O	X	21,950	37,900	59,850
O	X	X	O	O	O	O	20,550	37,200	57,750
O	O	X	X	X	X	X	11,000	69,100	80,100
O	O	X	O	X	X	X	17,700	46,700	64,400
O	O	X	O	O	X	X	19,200	40,700	59,900
O	O	X	O	X	O	X	16,500	46,100	62,600
O	O	X	O	O	O	X	18,000	40,100	58,100
O	O	X	O	O	O	O	16,600	39,400	56,000
O	O	O	X	X	X	X	9,000	69,200	78,200
O	O	O	O	X	X	X	15,700	46,800	62,500
O	O	O	O	O	X	X	17,200	40,800	58,000
O	O	O	O	X	O	X	14,500	46,200	60,700
O	O	O	O	O	O	X	16,000	40,200	56,200
O	O	O	O	O	O	O	14,600	39,500	54,100

NOTE: Because of variable manufacturing tolerances a variance of $\pm 3\%$ should be allowed on the above weights.

AMERICAN 4450 CRANE RATINGS AND DUTY CYCLE RATINGS

With Type "K" Duty Cycle Counterweight

Boom Length	Radius in Feet	Boom Angle Degrees	Crane Ratings			Duty Cycle Ratings
			Free Over Side	Free Over Rear	Outriggers Set	
40'	12	77	43,000	55,150	70,000	8,700
	15	74	31,700	40,250	64,700	8,700
	20	66	21,750	27,300	48,700	8,700
	25	58	16,400	20,700	37,300	8,700
	30	49	13,000	16,400	31,300	8,700
	35	38	10,650	13,500	25,050	8,700
	40	25	8,950	11,400	20,100	7,600
50'	13	79	38,250	48,900	67,500	8,700
	15	77	31,450	40,000	64,700	8,700
	20	71	21,500	27,050	48,450	8,700
	25	65	16,150	20,350	37,050	8,700
	30	58	12,750	16,150	31,050	8,700
	35	51	10,400	13,250	24,800	8,700
	40	43	8,700	11,150	19,850	7,400
50	22	6,500	8,400	15,150	5,400	
60'	14	79	34,300	43,800	66,000	8,700
	15	78	31,200	39,750	64,700	8,700
	20	74	21,500	26,800	48,200	8,700
	25	69	15,900	20,100	36,800	8,700
	30	64	12,500	15,900	30,800	8,700
	35	58	10,150	13,000	24,550	8,700
	40	52	8,450	10,900	19,600	7,200
	50	39	6,250	8,150	14,900	5,200
60	20	4,800	6,350	11,600	4,000	
70'	15	80	30,850	39,500	64,450	8,700
	20	76	21,000	26,550	47,950	8,700
	25	72	15,650	19,850	36,550	8,700
	30	67	12,250	15,650	30,550	8,700
	35	63	9,900	12,750	24,300	8,500
	40	58	8,200	10,650	19,350	7,000
	50	48	6,000	7,900	14,650	5,000
	60	36	4,550	6,100	11,350	3,800
70	18	3,500	4,800	9,150	2,900	
80'	16	80	28,100	35,900	57,800	8,700
	20	79	20,750	26,300	47,700	8,700
	25	74	15,400	19,600	36,300	8,700
	30	70	12,000	15,400	30,300	8,700
	35	67	9,650	12,500	24,050	8,300
	40	63	7,950	10,400	19,100	6,800
	50	54	5,750	7,650	14,400	4,800
	60	45	4,300	5,850	11,100	3,600
70	34	3,250	4,550	8,900	2,700	
80	17	2,500	3,650	7,300	2,100	
90'	18	81	23,700	30,300	50,200	8,700
	20	80	20,500	26,050	47,450	8,700
	25	77	15,150	19,350	36,050	8,700
	30	73	11,750	15,150	30,050	8,700
	35	70	9,400	12,250	23,800	8,100
	40	67	7,700	10,150	18,850	6,600
	50	59	5,500	7,400	14,150	4,600
	60	52	4,050	5,600	10,850	3,400
	70	43	3,000	4,300	8,650	2,500
80	32	2,250	3,400	7,050	1,900	
90	17	1,700	2,700	5,850	1,450	

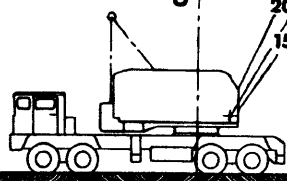
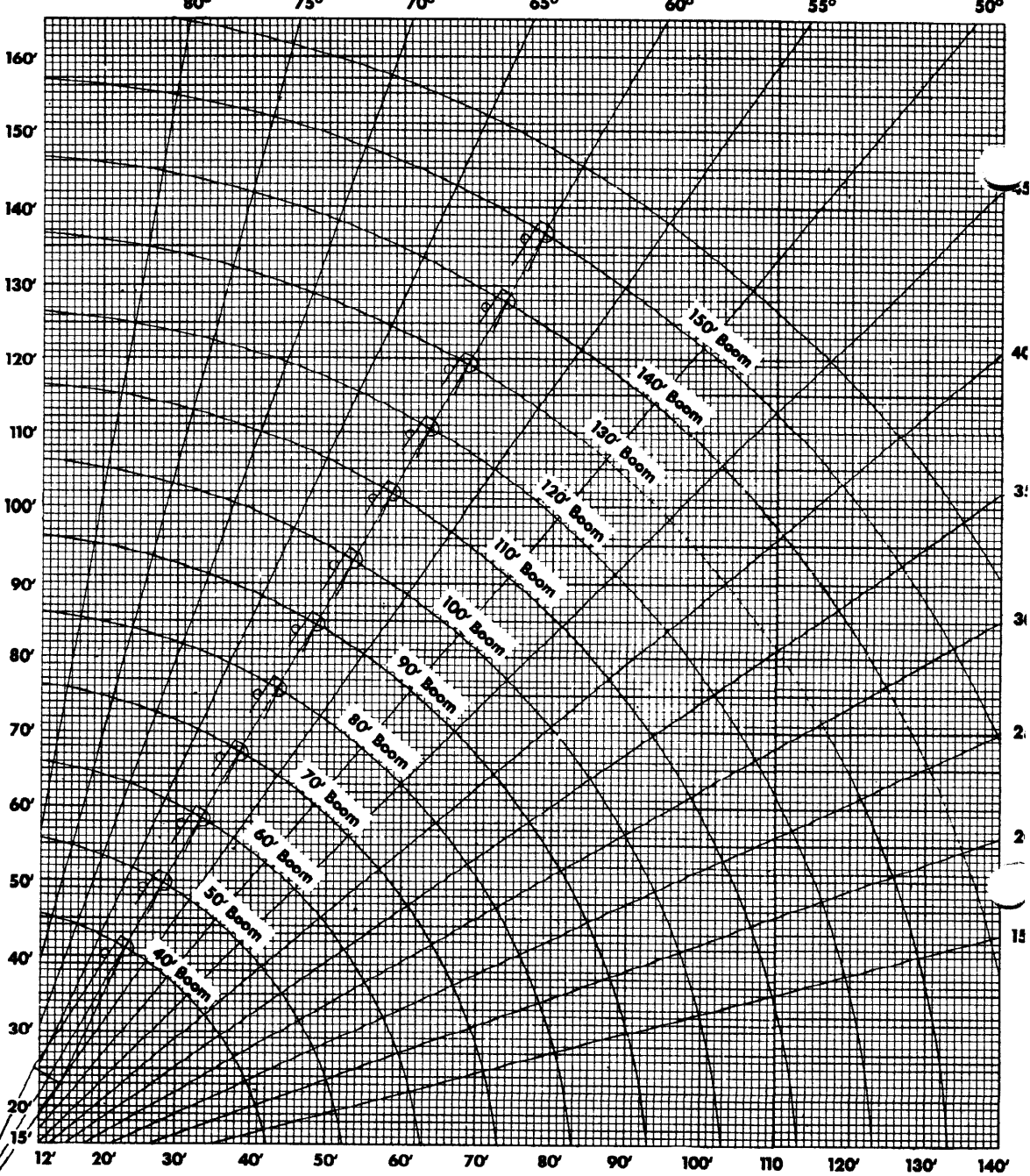
Boom Length	Radius in Feet	Boom Angle Degrees	Crane Ratings			Duty Cycle Ratings
			Free Over Side	Free Over Rear	Outriggers Set	
*100'	20	81	20,250	25,800	43,700	8,700
	25	77	14,900	19,100	35,800	8,700
	30	75	11,500	14,900	29,800	8,700
	35	72	9,150	12,000	23,550	7,900
	40	69	7,450	9,900	18,600	6,400
	50	63	5,250	7,150	13,900	4,400
	60	56	3,800	5,350	10,600	3,200
	70	49	2,750	4,050	8,400	2,300
	80	41	2,000	3,150	6,800	1,700
	90	31	1,450	2,450	5,600	1,250
	100	16	1,900	1,900	4,700	
*110'	22	81	17,550	22,550	37,200	
	25	79	14,650	18,850	35,400	
	30	77	11,250	14,650	29,550	
	35	74	8,900	11,750	23,300	
	40	71	7,200	9,650	18,350	
	50	65	5,000	6,900	13,650	
	60	60	3,550	5,100	10,350	
	70	53	2,500	3,800	8,150	
	80	46	1,750	2,900	6,550	
	90	39	1,200	2,200	5,350	
	100	29	1,650	1,650	4,450	
110	15			3,700		
*120'	23	81	16,200	21,000	32,100	
	25	80	14,400	18,600	31,000	
	30	78	11,000	14,400	29,000	
	35	75	8,650	11,500	23,050	
	40	73	6,950	9,400	18,100	
	50	68	4,750	6,650	13,400	
	60	62	3,300	4,850	10,100	
	70	57	2,250	3,550	7,900	
	80	51	1,500	2,650	6,300	
	90	44	1,950	1,950	5,100	
	100	37	1,400	1,400	4,200	
110	28			3,450		
120	14			2,850		
*130'	25	82	14,150	18,350	27,200	
	30	79	10,750	14,150	25,000	
	35	76	8,400	11,250	22,800	
	40	74	6,700	9,150	17,850	
	50	69	4,500	6,400	13,150	
	60	65	3,050	4,600	9,850	
	70	60	2,000	3,300	7,650	
	80	54	1,250	2,400	6,050	
	90	49		1,700	4,850	
	100	43		1,150	3,950	
	110	35			3,200	
120	27			2,600		
130	14			2,150		

Crane ratings do not exceed 85% of tipping load. "Radius in feet" is the horizontal distance at crane base level from center pin to a vertical line through the center of gravity of the suspended load. Blocks, slings, buckets and other load carrying devices are considered part of the load. Outrigger ratings at radii of 18 ft. or less are based on strength, not stability.

Ratings marked (*) require retractable A-frame in fully raised position. For duty cycle service (dragline, clamshell, grapple, magnet, etc.) counterweight must be reduced to 13,500 lbs. by removing type "M" corner inserts. Duty cycle ratings are as above. Maximum recommended dragline boom length is 60 ft.

HEIGHT ABOVE GROUND

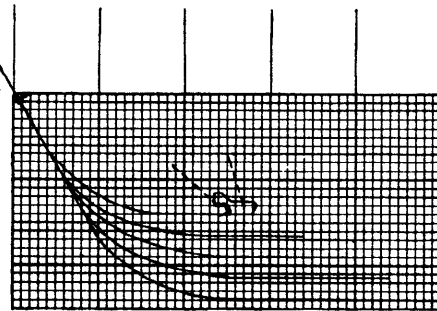
CENTER OF ROTATION



AMERICAN CRANE AND DRAGLINE ON 8 x 4 CARRIER

RADIUS FROM CENTER OF ROTATION

DIGGING DEPTH



40' Boom
50' Boom
60' Boom

AMERICAN HOIS[®]
 & DERRICK COMPANY
 ST. PAUL, MINNESOTA 55107

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