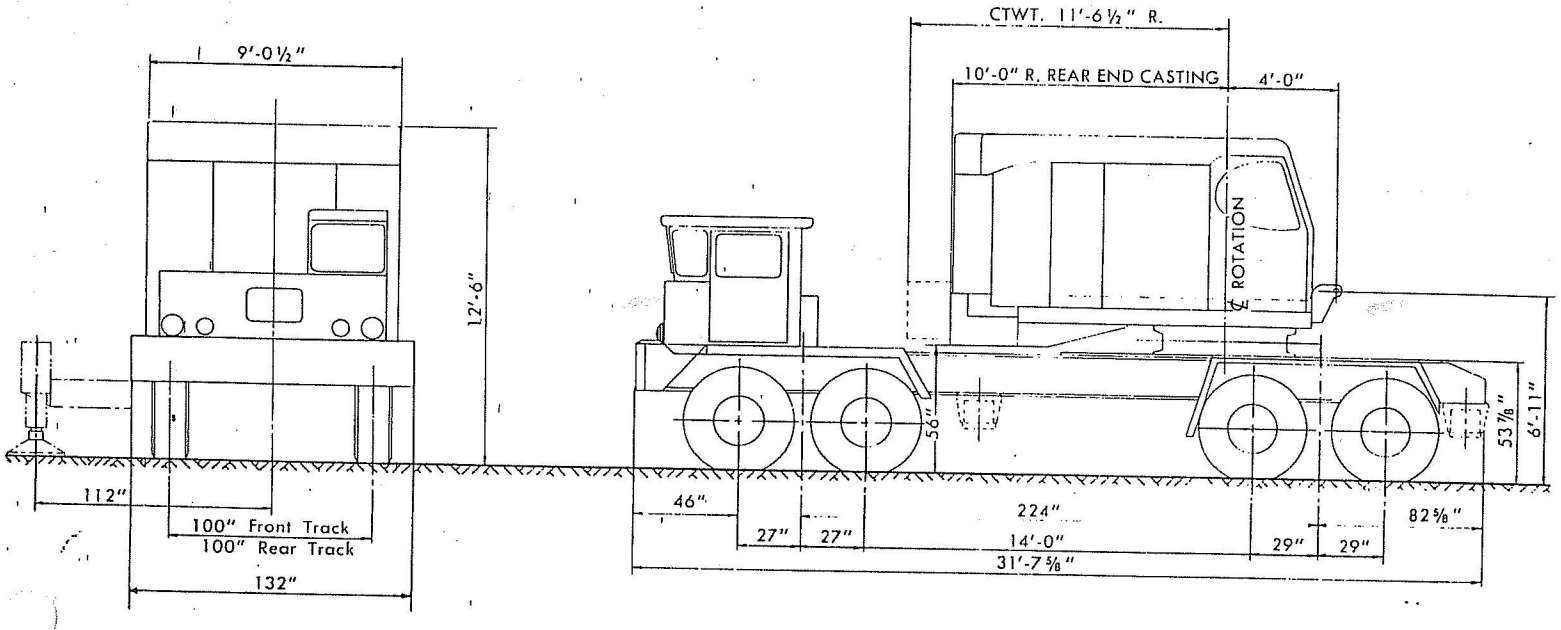
BUCYRUS-ERIE

60-T
SERIES FOUR
60 TON TRUCK CRANE SPECIFICATIONS



CRANE	
Hoisting, front drum, plain	17½ in. P. Dia.
Hoist rope	⅞ in. Dia.
Hoisting, rear drum, grooved	18½ in. P. Dia.
Hoist rope	¾ in. Dia.
Boom point sheaves (3)	18⅛ in. P. Dia.

CLAMSHELL	
Closing drum, plain	17½ in. P. Dia.
Closing rope, 1-part	¾ in. Dia.
Holding drum, grooved	18½ in. P. Dia.
Holding rope, 1-part	¾ in. Dia.
Boom point sheaves (3)	18 in. P. Dia.

DRAGLINE	
Hoist drum, grooved	18½ in. P. Dia.
Hoist rope	¾ in. Dia.
Drag drum, grooved	17½ in. P. Dia.
Drag rope	1 in. Dia.
Tubular boom point sheaves (3)	18 in. P. Dia.
Angle boom point sheave (1)	30 in. P. Dia.

WEIGHTS IN POUNDS	40 Ft. Angle or Tubular Boom		
	Crane	Dragline	Clamshell
Net domestic, approx.	100,900	101,200	100,950
Working, approx.	101,950	103,450	103,750
Export shipping, approx.	103,050	104,450	104,750
Ships option tons	133	135	136

Hook block and buckets included in working weight and export shipping weight, but not in domestic net weight.

POWER SPECIFICATIONS			
Make Model Type	GM* 6-71N Diesel	Caterpillar* 3306T Diesel	Cummins N-855P Diesel
Type of Drive	Tor. Conv.	Tor. Conv.	Tor. Conv.
Cylinders	6	6	6
Bore x stroke, inches	4¼ x 5	4¾ x 6	5½ x 6
Displacement, cu. in.	426	638	855
Net engine H.P. at governed speed	144	145	149
Governed speed	2000	2100	2000
Fuel tank capacity, gals.	70	70	70
Crankcase capacity, qts.	28	24	32
Cooling system capacity, gals.	11	12	21
Starting	12V-Elec.	12V-Elec.	12V-Elec.
Altitude Range, Feet	0-12,000	0-12,500	0-9,000

*TWO SPEED TRANSMISSIONS: (Optional — Instead of Tor. Conv.)
1) Overdrive Gear Box Ratios: 1:1 and 1:1.48
2) Underdrive Gear Box Ratios: 1:1 and 1:0.67

LINE PULLS AND SPEEDS						
Drum Pitch Diameter (Inches)	Direct Drive 1.0 to 1.0		Overdrive 1.0 to 1.48		Underdrive 1.0 to 0.67	
	Pull In Lbs.	Speed F.P.M.	Pull In Lbs.	Speed F.P.M.	Pull In Lbs.	Speed F.P.M.
17½	23,300	154	15,700	228	34,600	104
18½	22,000	162	14,800	240	32,800	110

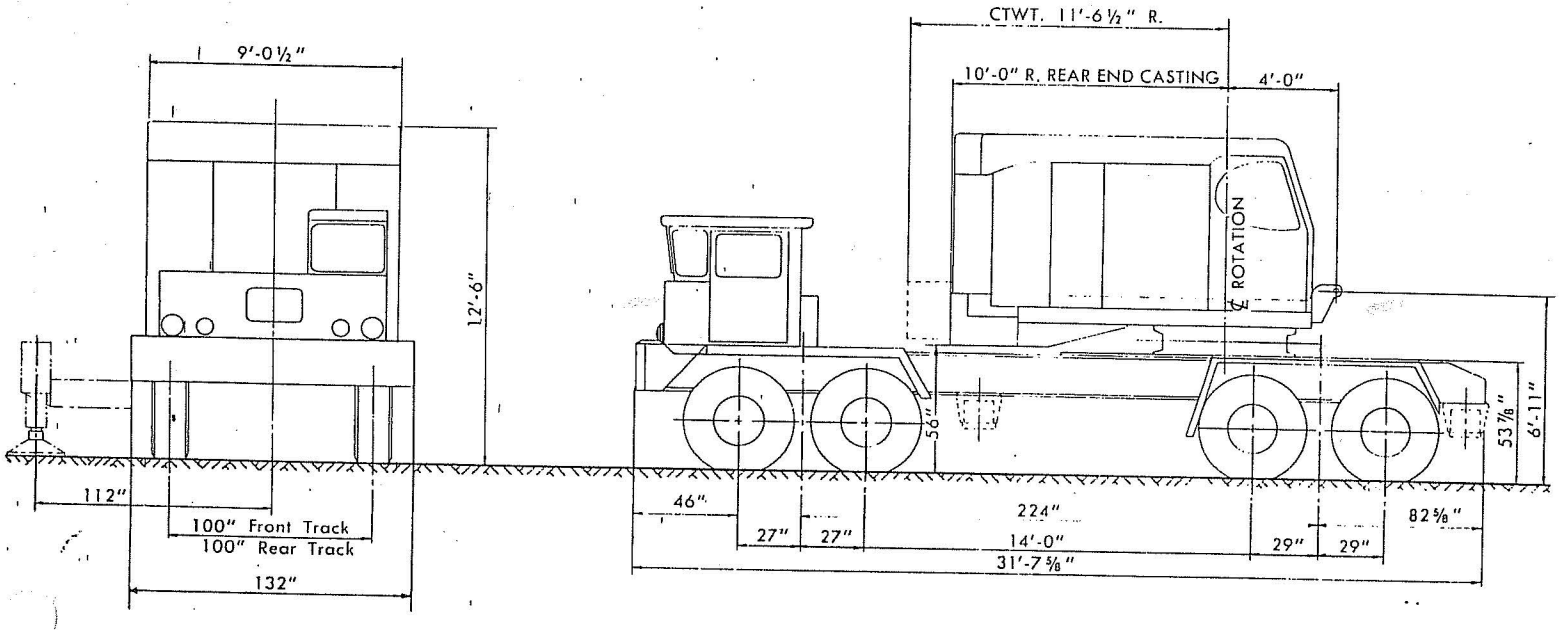
Swing Speed 3.9 R.P.M.

Direct Drive:
Speeds and pulls based on engine operating at full load speed; direct drive.

Torque Converter Drive:
When torque converter is operating at full stall, line pulls are approximately 240 percent of those shown for direct drive.

BUCYRUS-ERIE

60-T
SERIES FOUR
60 TON TRUCK CRANE SPECIFICATIONS



CRANE	
Hoisting, front drum, plain	17½ in. P. Dia.
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Hoist rope	¾ in. Dia.
Boom point sheaves (3)	18⅛ in. P. Dia.

CLAMSHELL	
Closing drum, plain	17½ in. P. Dia.
Closing rope, 1-part	¾ in. Dia.
Holding drum, grooved	18½ in. P. Dia.
Holding rope, 1-part	¾ in. Dia.
Boom point sheaves (3)	18 in. P. Dia.

DRAGLINE	
Hoist drum, grooved	18½ in. P. Dia.
Hoist rope	¾ in. Dia.
Drag drum, grooved	17½ in. P. Dia.
Drag rope	1 in. Dia.
Tubular boom point sheaves (3)	18 in. P. Dia.
Angle boom point sheave (1)	30 in. P. Dia.

WEIGHTS IN POUNDS	40 Ft. Angle or Tubular Boom		
	Crane	Dragline	Clamshell
Net domestic, approx.	100,900	101,200	100,950
Working, approx.	101,950	103,450	103,750
Export shipping, approx.	103,050	104,450	104,750
Ships option tons	133	135	136

Hook block and buckets included in working weight and export shipping weight, but not in domestic net weight.

POWER SPECIFICATIONS			
Make Model Type	GM* 6-71N Diesel	Caterpillar* 3306T Diesel	Cummins N-855P Diesel
Type of Drive	Tor. Conv.	Tor. Conv.	Tor. Conv.
Cylinders	6	6	6
Bore x stroke, inches	4¼ x 5	4¾ x 6	5½ x 6
Displacement, cu. in.	426	638	855
Net engine H.P. at governed speed	144	145	149
Governed speed	2000	2100	2000
Fuel tank capacity, gals.	70	70	70
Crankcase capacity, qts.	28	24	32
Cooling system capacity, gals.	11	12	21
Starting	12V-Elec.	12V-Elec.	12V-Elec.
Altitude Range, Feet	0-12,000	0-12,500	0-9,000

*TWO SPEED TRANSMISSIONS: (Optional — Instead of Tor. Conv.)
1) Overdrive Gear Box Ratios: 1:1 and 1:1.48
2) Underdrive Gear Box Ratios: 1:1 and 1:0.67

LINE PULLS AND SPEEDS						
Drum Pitch Diameter (Inches)	Direct Drive 1.0 to 1.0		Overdrive 1.0 to 1.48		Underdrive 1.0 to 0.67	
	Pull In Lbs.	Speed F.P.M.	Pull In Lbs.	Speed F.P.M.	Pull In Lbs.	Speed F.P.M.
17½	23,300	154	15,700	228	34,600	104
18½	22,000	162	14,800	240	32,800	110

Swing Speed 3.9 R.P.M.

Direct Drive:
Speeds and pulls based on engine operating at full load speed; direct drive.

Torque Converter Drive:
When torque converter is operating at full stall, line pulls are approximately 240 percent of those shown for direct drive.

60-T —TUBULAR BOOM
60 TON TRUCK CRANE

60 TON TRANSIT CRANE (P. C. & S. A. CLASS 12-297)

MAXIMUM ALLOWABLE LOADS — CRANE SERVICE

Boom Lgth. In Feet	Load Rad. In Feet	Boom Angle In Deg.	Boom Point Pin Hght. (Ft. In.)	Outriggers Set † Load In Pounds Over Side	Outriggers Set † Load In Pounds Over Rear	On Tires Load In Pounds Over Side	On Tires Load In Pounds Rear Over
40	10	81	46-6	*120,000	*120,000	*88,000	*94,700
	12	78	46-0	*120,000	*120,000	*65,300	*72,000
	15	74	45-3	*105,000	*105,000	48,200	54,400
	20	66	43-6	* 81,000	* 81,000	32,500	37,400
	25	58	41-0	60,300	* 65,500	24,300	28,300
	30	49	37-3	45,300	51,000	19,300	22,700
	35	39	32-0	36,200	40,800	15,900	18,800
	40	25	24-3	30,000	34,000	13,400	16,000
50	12	80	56-3	*120,000	*120,000	*65,000	*71,700
	15	77	55-6	*105,000	*105,000	47,900	54,000
	20	71	54-3	* 81,000	* 81,000	32,100	37,000
	25	66	52-3	* 60,000	* 66,000	23,900	28,000
	30	58	49-6	45,000	50,800	18,900	22,300
	40	43	41-6	29,700	33,700	13,100	15,600
	50	23	26-6	21,900	24,000	9,800	11,800
60	15	79	65-9	*105,000	*105,000	47,700	53,800
	20	74	64-9	* 80,000	* 80,000	32,000	36,900
	25	69	63-0	59,900	* 65,000	23,800	27,800
	30	64	61-0	44,900	* 50,000	18,700	22,100
	35	58	58-3	35,700	40,400	15,300	18,300
	40	53	54-9	29,500	33,500	12,900	15,500
	50	39	45-3	21,800	24,800	9,600	11,700
	60	21	28-3	17,000	19,500	7,500	9,200
70	15	81	76-0	*102,500	*102,500	47,500	53,600
	20	76	75-0	* 79,800	* 79,800	31,700	36,600
	25	72	73-6	* 59,700	* 64,500	23,500	27,500
	30	68	71-9	44,700	50,400	18,500	21,800
	40	59	66-9	29,300	33,300	12,700	15,200
	50	48	59-6	21,500	24,600	9,400	11,400
	60	36	48-9	16,800	19,300	7,200	9,000
80	20	78	85-3	* 79,500	* 79,500	31,400	36,300
	25	74	84-0	* 59,500	* 63,500	23,200	27,200
	30	71	82-6	44,500	49,500	18,200	21,600
	40	63	78-3	29,100	33,000	12,400	14,900
	50	54	72-3	21,300	24,300	9,100	11,100
	60	45	64-0	16,500	19,000	7,000	8,700
	70	34	52-0	13,400	15,400	5,500	7,000
	80	18	31-9	11,100	12,900	4,500	5,700
90	20	80	95-6	* 79,000	* 79,000	31,200	36,100
	25	77	94-6	* 59,000	* 60,500	23,000	27,000
	30	73	93-0	44,400	* 49,500	18,000	21,400
	40	66	89-3	28,900	32,900	12,200	14,700
	50	59	84-3	21,100	24,100	8,900	10,900
	60	52	77-3	16,300	18,800	6,750	8,450
	70	43	68-0	13,200	15,300	5,300	6,750
	80	32	55-0	10,900	12,700	4,200	5,500
100	25	77	104-6	* 57,500	* 57,500	22,800	26,800
	30	75	103-6	44,200	* 49,000	17,800	21,100
	40	69	100-0	28,700	32,700	11,900	14,500
	50	62	95-6	20,900	23,800	8,700	10,700
	60	56	89-9	16,100	18,500	6,600	8,200
	70	48	82-0	13,000	15,000	5,200	6,500
	80	40	71-9	10,700	12,500	4,100	5,300
	90	30	57-9	9,000	10,500	3,300	4,300
110	25	79	114-9	* 52,000	* 52,000	22,600	26,500
	30	76	113-9	* 43,900	* 45,000	17,500	20,900
	40	71	110-9	28,500	32,500	11,700	14,200
	50	65	106-9	20,600	23,700	8,400	10,400
	60	59	101-6	15,900	18,400	6,300	8,000
	70	53	95-0	12,700	14,800	4,800	6,250
	80	46	86-6	10,500	12,300	3,700	5,000
	90	39	75-6	8,700	10,300	2,900	4,000
	100	30	60-6	7,400	8,800	2,250	3,250
120	25	80	125-0	* 45,200	* 45,200	21,800	26,300
	30	77	124-0	* 42,000	* 42,000	16,900	20,600
	40	72	121-3	28,300	32,300	12,200	14,000
	50	67	117-9	20,500	23,500	8,000	10,200
	60	62	113-0	15,700	18,200	5,900	7,800
	70	56	107-0	12,600	14,600	4,500	6,050
	80	50	99-9	10,300	12,000	3,400	4,800
	90	44	90-6	8,550	10,100	2,600	3,850
	100	36	78-9	7,200	8,600	1,950	3,050
	110	28	63-0	6,100	7,400	1,400	2,450
130	30	78	134-3	*35,600	*35,600		
	40	74	131-9	*28,200	*28,200		
	50	69	128-6	20,300	23,300		
	60	64	124-3	15,500	18,000		
	70	59	118-9	12,300	14,400		
	80	54	112-3	10,000	11,800		
	90	49	104-6	8,300	9,900		
	100	42	94-6	7,000	8,400		
	110	35	82-0	5,900	7,200		
	120	27	65-6	5,000	6,200		
INTERMEDIATE SUSPENSION REQUIRED 140	30	79	144-6	*32,000	*32,000		
	40	75	142-0	*27,000	*27,000		
	50	70	139-0	20,000	23,100		
	60	66	135-0	15,200	17,700		
	70	61	130-9	12,100	14,100		
	80	57	124-6	9,500	11,500		
	90	52	117-3	8,050	9,600		
	100	46	108-9	6,700	8,100		
	110	40	98-3	5,650	6,900		
	120	34	85-3	4,750	5,900		
INTERMEDIATE SUSPENSION REQUIRED 150	30	80	154-6	*27,000	*27,000		
	40	76	152-6	*23,000	*23,000		
	50	72	149-6	*19,900	*20,500		
	60	68	146-0	15,100	17,600		
	70	64	141-6	11,900	14,000		
	80	60	136-3	9,600	11,400		
	90	55	129-9	7,900	9,500		
	100	50	122-3	6,550	7,950		
	110	45	113-0	5,450	6,750		
	120	39	102-0	4,600	5,750		
INTERMEDIATE SUSPENSION REQUIRED 160	30	80	164-9	*25,200	*25,200		
	40	76	162-9	*21,900	*21,900		
	50	73	160-0	*19,000	*19,000		
	60	69	156-9	14,900	*16,600		
	70	65	152-6	11,700	13,700		
	80	61	147-6	9,400	11,200		
	90	57	141-9	7,650	9,200		
	100	53	134-9	6,300	7,700		
	110	48	126-9	5,200	6,500		
	120	43	117-0	4,350	5,500		

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*Maximum Allowable Crane Loads are limited by factors other than tipping.

†Outriggers Set — Maximum Allowable Crane Loads are those loads which can be lifted within the included angles between the outrigger supports when beams are fully extended, as shown in quadrant diagram "Outriggers Set" (see page 7). DO NOT lift or swing any loads within the included angle between the front outrigger supports designated over front.

On Tires — maximum allowable crane loads are those loads which can be lifted within the areas as shown in the quadrant diagram "On Tires" (see page 7). DO NOT lift or swing any loads within the included angle designated over front.

Maximum allowable loads are in accordance with PCSA Standard #1.

CRANE SERVICE

Load Ratings are based on freely suspended loads with machine leveled and standing on a firm, uniform supporting surface. Practical working loads depend on supporting ground, the effect of shock or side loading, wind and other factors affecting stability, hazardous surroundings, experience of personnel and proper handling, all of which must be taken into account by the operator.

Operating Radius is the horizontal distance from the axis of rotation before loading, to the center of the vertical hoist line or tackle with load applied.

Load Ratings "Outriggers Set" are based on outriggers fully extended and set to a distance of 18 feet 8 inches between the centerline of the float connections. All wheels shall be relieved of all weight.

Load Ratings "On Tires" depend on tire capacity, condition of tires, and tire air pressure. Load Ratings are based on crane components and conditions shown under MACHINE EQUIPMENT. Weights of hooks, hook blocks, slings, jibs, and all other load handling devices, except the hoist rope, shall be considered part of the load.

RECOMMENDED HOIST TACKLE

Loads over	20,000 lbs.	40,000 lbs.	60,000 lbs.
Parts of line	2	3	4
		80,000 lbs.	100,000 lbs.
		5	6

The maximum allowable load for a single part line on the auxiliary hoist is 13,000 lbs.

LOAD RATING DEDUCT DATA

Deduct weight of optional equipment from crane load rating.

Jibs (when lifting over main boom with jib attached):

Tubular Jib

20 ft. — 900 lbs. 40 ft. — 1200 lbs.
30 ft. — 1000 lbs. 50 ft. — 1500 lbs.

LIMITATIONS

Mast and pendant suspension required on all booms.

Intermediate suspension required on booms 140 ft. and longer.

Booms can be raised to a maximum angle of 82 degrees.

Maximum booms that can be lifted off the ground unassisted are:

Boom	With Outriggers	Without Outriggers
Over Side	160 ft.	120 ft.
Over Rear	160 ft.	120 ft.

Maximum boom-jib combination that can be lifted off the ground unassisted are:

Boom plus Jib	With Outriggers	Without Outriggers
Over Side	140 ft. + 50 ft.	100 ft. + 50 ft.
Over Rear	160 ft. + 50 ft.	120 ft. + 50 ft.

Maximum boom that can be carried, below the cab height, to the rear when traveling is 80 ft.

Maximum boom-jib combination that can be carried in a lowered position (15 ft. 6 in. to top of jib mast) is 80 ft. of boom plus 50 ft. jib.

Tire pressure shall not be less than 85 psi when lifting loads "On Tires".

MACHINE EQUIPMENT

Alloy steel tubular boom.

17 ft. 6 in. mast.

13,800 lbs. outside counterweight.

(8 x 4) 11 ft. wide carrier.

Hydraulic outriggers with 18 ft. 8 in. spread (outrigger beams fully extended).

⅞ in. diameter main hoist cable — 79,600 lbs. breaking strength.

¾ in. diameter auxiliary hoist cable — 58,800 lbs. breaking strength.

60-T SERIES FOUR
60 TON TRUCK CRANE

MAXIMUM ALLOWABLE LOADS (LBS.) — TUBULAR BOOM — TUBULAR JIB

Boom Length In Feet	Boom Angle In Degrees	Jib Length (in Feet) and Offset (in Degrees)†											
		20 Ft. Jib			30 Ft. Jib			40 Ft. Jib			50 Ft. Jib		
		0°	15°	30°	0°	15°	30°	0°	15°	30°	0°	15°	30°
40 to 100	82	20,000	20,000	12,000	16,000	14,000	7,000	16,000	10,000	5,000	14,000	8,000	3,000
	78	20,000	20,000	12,000	16,000	12,000	7,000	16,000	10,000	5,000	14,000	8,000	3,000
	74	20,000	18,000	12,000	16,000	12,000	6,000	16,000	9,000	5,000	13,000	6,000	3,000
	72	20,000	17,000	11,000	16,000	10,000	6,000	14,000	8,000	4,000	12,000	5,000	3,000
	70	18,000	16,000	10,000	14,000	10,000	6,000	12,000	7,000	4,000	10,000	5,000	3,000
	68	17,000	15,000	10,000	12,000	10,000	6,000	12,000	7,000	4,000	10,000	5,000	3,000
	66	16,000	14,000	10,000	10,000	9,000	6,000	10,000	6,000	4,000	8,000	4,000	3,000
	64	15,000	14,000	10,000	10,000	9,000	6,000	10,000	6,000	4,000	8,000	4,000	3,000
	62	13,000	12,000	10,000	9,000	8,000	6,000	8,000	5,000	4,000	6,000	4,000	3,000
	60	12,000	12,000	10,000	9,000	8,000	6,000	8,000	5,000	4,000	6,000	4,000	3,000
	50	10,000	10,000	8,000	8,000	6,000	5,000	7,000	4,000	3,500	5,000	3,500	—
	40	8,000	8,000	7,000	6,000	5,000	5,000	5,000	—	—	4,000	—	—
	30	6,000	6,000	6,000	—	—	—	—	—	—	—	—	—
110 to 160	82	16,000	16,000	12,000	14,000	12,000	6,000	10,000	8,000	4,500	5,000	4,000	3,000
	78	14,000	14,000	12,000	14,000	12,000	6,000	10,000	8,000	4,500	5,000	4,000	3,000
	74	13,000	13,000	12,000	12,000	12,000	6,000	10,000	7,000	4,500	5,000	4,000	3,000
	72	12,000	12,000	11,000	10,000	10,000	6,000	9,000	7,000	4,500	5,000	4,000	3,000
	70	11,000	11,000	10,000	8,000	8,000	6,000	8,000	6,000	4,500	5,000	4,000	3,000
	68	10,000	10,000	10,000	8,000	8,000	6,000	7,000	6,000	4,500	5,000	4,000	—
	66	8,000	8,000	8,000	7,000	7,000	6,000	6,000	5,000	4,000	5,000	3,000	—
	64	8,000	8,000	8,000	7,000	7,000	6,000	6,000	5,000	4,000	4,000	3,000	—
	62	6,000	6,000	6,000	6,000	6,000	6,000	5,000	4,500	4,000	4,000	3,000	—
	60	6,000	6,000	6,000	6,000	6,000	6,000	5,000	4,500	4,000	4,000	3,000	—
	50	5,000	4,000	—	5,000	4,000	—	—	—	—	—	—	—

The above jib ratings are based on factors other than tipping, and do not exceed 75% tipping.

†Maximum offset (angular) from centerline of boom to centerline of jib.

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JIB SERVICE

Allowable loads shown in table are for general jib service with machine level and standing on hard level supporting surface on fully extended outriggers. Allowable loads are the same "over the side" and "over the rear" at any specified boom angle. Loads must be freely suspended. Weights of hooks, hook blocks, slings, grabs, and all other load handling devices, except the hoist rope, shall be considered part of the load. Proper care must be exercised by the operator at all times to avoid shock and side loadings on the boom and jib. Loads apply only to machines carrying booms and jibs in first class condition built and recommended by Bucyrus-Erie Company. Mast and multiple pendant suspension required on all booms. Intermediate suspension required on booms of 140 feet and longer. Booms can be raised to a maximum boom angle of 82 degrees.

Load ratings shown on this chart makes no allowances for such factors as the effect of freely falling and side loads, wind, ground conditions, and operating speeds. Loads shall be reduced to take these conditions into account.

RECOMMENDED JIB HOIST TACKLE

Loads over 13,000 pounds require two parts of line. Deduct weight of hook blocks, hooks and slings from allowable load.

WARNING: The information contained in this specification is to be used only as a guide in evaluating the performance of a machine. For operation of a machine always refer to the capacity plate on the machine (since this specification may apply to a different model or series).