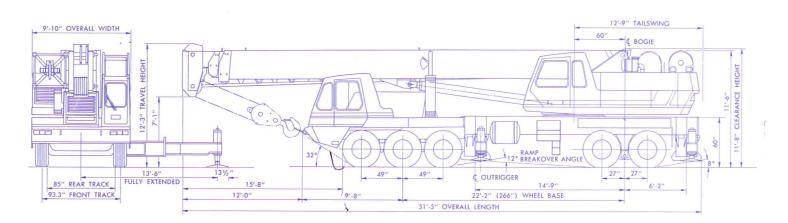


140-211



# 90-XC

# HYDROCRANE® 90 TON HYDRAULIC TRUCK CRANE PRELIMINARY SPECIFICATIONS



883259

						HOIST DI	RUMS						
					Normal	Range			High I	Range			
				Low Line Pull		High Line Pull		Low Line Pull		High Line Pull		Rope Capacity	
Hoist Unit	Lagging	Layer Of Rope	Pitch Diameter (Inches)	Max. Line Pull (Lbs.)	Max. Line Speed (FPM)	Max. Line Pull (Lbs.)	Max. Line Speed (FPM)	Max. Line Pull (Lbs.)	Max. Line Speed (FPM)	Max. Line Pull (Lbs.)	Max. Line Speed (FPM)	With Controlled Free Fall (Feet)	Without Controlled Free Fall (Feet)
Main or Auxiliary* B-E Model 20 34" Rope	Standard	1st 2nd	16.75 18.25	15,800 14,500	195 210	19,200 17,700	95 100	7,900 7,200	390 425	9,600 8,800	185 205	127 265	153 320
		3rd 4th	19.75 21.25	13,400 12,400	230 245	16,300 15,200	110 120	6,700 6,200	460 495	8,100 7,600	220 235	415 576	501 695
	High Speed	1st 2nd	23.50 25.00	11,200 10,600	275 290	13,700 12,900	130 140	5,600 5,300	550 585	6,800 6,400	260 280	186 376	224 453
Auxiliary B-E Model 10 56" Rope	Sidildard	1st 2nd	11.25 12.50	7,800 7,000	395 435	9,500 8,600	190 210	=		=	_	74 157	93 196
		3rd 4th	13.75 15.00	6,400 5,900	480 525	7,800 7,100	230 250	_	_	=	=	248 347	309 433
	High Speed	1st 2nd	17.44 18.69	5,000 4,700	610 650	6,100 5,700	290 315	_	_	_	_	115 238	144 298

ENGINE SPECIFICATIONS - UPPER Max. Altitude (Feet) Bore x Stroke Displacement (Cubic Inches) Horsepower (S. A. E. Gross) Make Model Type Cylinders (Inches) Detroit 6V53N Diesel 6 37/8 x 41/2 197 at 2800 RPM 4,000 Diesel Cummins V-504C Diesel 45/8 x 33/4 185 at 2800 RPM 504 4,000

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# 90-XC HYDROCRANE® 90 TON HYDRAULIC TRUCK CRANE

PCSA. 0-354

Second   S	Boom Po Angle Pi In Hei Degrees (Ft	Boom Point Pin Height (Ft.—In.)	Out- riggers Set* Load In Pounds	Boom Angle In Degrees	Boom Point Pin Height (Ft.—In.)	Out- riggers Set* Load In Pounds	Load Radius In Feet 10 12
Augle   Feet   Boom   Point   Feet   Degrees   Feet   Feet   Feet   Point   Feet	Boom Po Angle Pi In Hei Degrees (Ft	Boom Point Pin Height (Ft.—In.)	riggers Set* Load In	Angle In	Boom Point Pin Height	riggers Set* Load In	Radiu In Feet 10 12
Boom   Point   riggers   Boom   Angle   In   Height   Load In   Pounds   Point   Feet   In   Degrees   In   Pounds   Point   Feet   In   Pounds   In   Pou	Boom Po Angle Pi In Hei Degrees (Ft	Boom Point Pin Height (Ft.—In.)	riggers Set* Load In	Angle In	Boom Point Pin Height	riggers Set* Load In	Radiu In Feet 10 12
Degrees	Boom Po Angle Pi In Hei Degrees (Ft	Point Pin Height (Ft.—In.)	riggers Set* Load In	Angle In	Point Pin Height	riggers Set* Load In	Radit In Feet 10 12
12       71.4       50-1       164,300       76.0       64-5       143,000       99,300       15       66.9       48-10       138,400       72.8       63-5       130,000       76.8       80-3       99,300	75.2 110						12 15
15         66.9         48-10         138,400         72.8         63-5         130,000         76.8         80-3         99,300         99,300         99,500         95.5         69,500         69,500         72.6         78-7         82,700         75.9         95-5         69,500         69,500         75.9         95-5         69,500         75.9         95-5         69,500         75.9         75.9         95-5         69,500         75.9	75.2						1
20         59.0         45-7         105,600         67.2         61.3         105,600         72.6         78-7         82,700         75.9         95-5         69,500           25         50.2         41-5         83,200         61.4         58-5         84,300         68.3         76-7         72,400         72.4         93-10         58,100           30         39.9         35-6         58,400         55.1         54-11         59,400         63.8         74-1         60,000         68.9         91-10         49,000           35         25.6         26-2         43,900         48.3         50-5         44,900         59.2         71-0         45,400         65.3         89-6         42,500           40         40.5         44.8         35,400         54.3         67-5         35,900         61.6         86-9         36,200           50         15.9         22-11         23,700         43.2         57-9         24,300         53.7         79-10         24,500	75.2 110						
25 50.2 41-5 83,200 61.4 58-5 84,300 68.3 76-7 72,400 72.4 93-10 58,100 30 39.9 35-6 58,400 55.1 54-11 59,400 63.8 74-1 60,000 68.9 91-10 49,000 35 25.6 26-2 43,900 48.3 50-5 44,900 59.2 71-0 45,400 65.3 89-6 42,500 40 40.5 44-8 35,400 54.3 67-5 35,900 61.6 86-9 36,200 50 15.9 22-11 23,700 43.2 57-9 24,300 53.7 79-10 24,500	75.2 110						
30 39.9 35.6 58,400 55.1 54.11 59,400 63.8 74.1 60,000 68.9 91.10 49,000 35 25.6 26.2 43,900 48.3 50.5 44,900 59.2 71.0 45,400 65.3 89.6 42,500 40.5 44.8 35,400 54.3 67.5 35,900 61.6 86.9 36,200 50 15.9 22.11 23,700 43.2 57.9 24,300 53.7 79.10 24,500	75.2 110						2
35     25.6     26-2     43,900     48.3     50-5     44,900     59.2     71-0     45,400     65.3     89-6     42,500       0     40.5     44-8     35,400     54.3     67-5     35,900     61.6     86-9     36,200       0     15.9     22-11     23,700     43.2     57-9     24,300     53.7     79-10     24,500		110-8	49,700				- 1
40     40.5     44-8     35,400     54.3     67-5     35,900     61.6     86-9     36,200       50     15.9     22-11     23,700     43.2     57-9     24,300     53.7     79-10     24,500	72.3 109	109-0	41,900	76.4	150-8	29,750	
15.9 22-11 23,700 43.2 57-9 24,300 53.7 79-10 24,500	69.4 107	107-1	36,000	74.3	149-4	25,800	3
20,000	66.4 104	104-10	31,500	72.2	147-10	22,800	4
	60.1 99	99-5	24,400	68.4	144-2	18,700	5
28.7 42.6 17,300 44.8 70.7 17,600	53.9 92	92-4	17,700	64.0	139-7	15,050	6
34.1 57-5 13,000		83-3	13,100	59.5	134-0	12,700	7
19.8 34-8 9,700		71-3	9,900	54.7	127-4	10,650	8
CRANE SERVICE Auxiliary Hoist Unit (Model #10): Hoist Tackle	27.3 53	53-10	7,400	49.6	119-5	8,700	9
				44.2	109-9	7,050	10
Allowable Loads shown apply only to machines with For Loads ents in first class condition built or recommended by Over (lbs.) 7,500 15,000 22,500 30,000 37,500 45,000				38.1	99-0	5,500	11
e Company.  Parts of Line 2 3 4 5 6 7				31.0 21.9	84-3 63-10	4,200 3,150	12

Maximum Allowable Loads are based on freely suspended loads with the 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

Maximum Allowable Loads are based on components and conditions shown under "LIMITATIONS" and "MACHINE EQUIPMENT".

Maximum Allowable Loads are in accordance with P.C.S.A. Standard #2.

Load 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 RATING DEDUCT DATA

Weight of hooks, hook blocks, slings, jibs, and all other load handling devices, except the hoist rope, shall be considered part

Maximum Allowable Loads on main boom sheaves must be reduced 2,650 lbs. when lifting over the main boom with manual swing-around extension attached to boom point; Jibs — Maximum Allowable Loads must be reduced as follows:

Jib	When Lifting Over Main Boom With Swing-Around and Jib Attached	When Lifting Over Swing-Around With Jib Attached
24 Foot	4,500 lbs.	3,250 lbs.
39 Foot	4,950 lbs.	3,550 lbs.
54 Foot	5,400 lbs.	3,900 lbs.

#### LIMITATIONS

#### Main and Aux. Hoist Unit (Model #20): Hoist Tackle

For Loads 15,000 30,000 45,000 60,000 75,000 90,000 Over (lbs.) Parts of Line 2 3 4 5 105,000 120,000 135,000 150,000 165,000 9 10 11

For Loads						
Over (lbs.) Parts of Line	7,500	15,000	22,500	30,000	37,500 6	45,000
		52,500	60,000	67,500	75,000	82,

#### Swing-Around Hoist Tackle

For loads over 15,000 pounds use 2 parts of line.

#### Jib Load Rating

For Maximum Allowable Loads on jibs, refer to separate Jib Load Rating Chart.

#### Boom Telescope

Maximum Allowable Load which may be telescoped is limited by boom angle, hydraulic pressure, and boom lubrication. Boom sections must be extended equally at all times.

#### Machine Weight

Maximum Allowable Load ratings are based on a machine having a minimum front axle loading of 43,000 lbs. and a minimum rear axle of 61,500 lbs. with the boom in the boom rack, and counterweight attached to upper works.

#### MACHINE EQUIPMENT

11,000 lbs. removable counterweight.

#### Carrier

266 in. W.B. — 9 ft. 10 in. wide  $10 \times 4$  semi-low profile cab carrier with hydraulic outriggers to 27 ft. 0 in. spread.

Main and Auxiliary Hoist (Model #20) 3/4" dia., 6 x 25, ir IWRC, 51,200 lbs. minimum breaking strength.

Auxiliary Hoist (Model #10) 5/8" dia., 8 x 19, EIPS, IWRC, 36,200 lbs. minimum breaking strength.

For complete wire rope specifications and reeving, refer to instruction manual for this machine.

# QUADRANT DIAGRAM MACHINE - "OUTRIGGERS SET" NOTE: THESE LINES DETERMINE THE LIMITING

POSITION OF ANY LOAD FOR OPERATION WITHIN WORKING AREAS INDICATED.

#### \*"OUTRIGGERS SET"

See quadrant diagram "OUTRIGGERS SET". These are the Maximum Allowable Loads which can be lifted, Over the Side or Over the Rear. This machine must always be operated with the outriggers fully extended and set to a distance of 27 feet 0 inches between centerlines of the float connections with all tires clear of the ground.

DO NOT lift or swing loads within the quadrant designated Over Front.

Maximum Allowable Loads shown in shaded area are limited by factors other than tipping.

Crane Loads do not exceed 85% of the tipping loads with the machine leveled and standing on a firm, uniform supporting surface.

CAUTION: DO NOT LIFT LOADS, EXTEND BOOM, OR SWING MA-CHINE WITHOUT OUTRIGGERS FULLY SET.\*

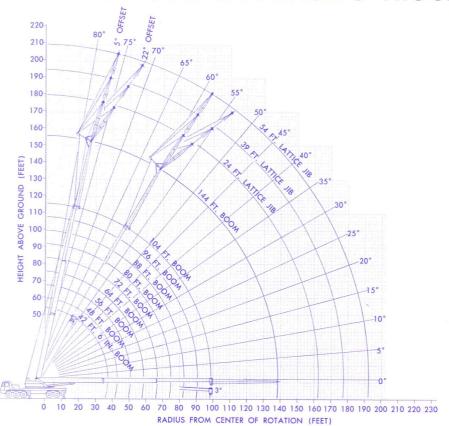
CAUTION: LONG CANTILEVER BOOMS CAN CREATE A TIPPING CONDITION WHEN IN EXTENDED AND LOWERED POSITION. WHERE NO LOAD IS SHOWN ON THE LOAD RATING CHART AT A GIVEN RADIUS, TIPPING CONDITION SHALL BE ASSUMED TO EXIST.

CAUTION: USE OF JIB IS LIMITED TO MACHINES WITH COUNTER-WEIGHT PROPERLY ATTACHED TO REAR OF CRANE.

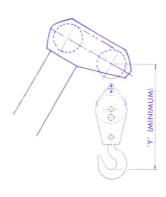


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### 90-XC HYDROCRANE® 90 TON HYDRAULIC TRUCK CRANE



HOOK BLOCKS						
Capacity	No. Sheaves	No. Parts Line	'Y' Dim.			
90 Ton	6	1-12	72 In.			
20 Ton	1	1-3	65 In.			
8.5 Ton	_	1	45 In.			



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# MAXIMUM ALLOWABLE LOADS — JIB SERVICE WITH COUNTERWEIGHT

WEIGHT OF HOOKS, HOOK BLOCKS, SLINGS, AND ALL OTHER LOAD HANDLING DEVICES, EXCEPT THE HOIST ROPE, SHALL BE CONSIDERED PART OF THE LOAD.

#### OUTRIGGERS SET\* - LOAD IN POUNDS

			Jib Lengt	h In Fee	t		
Boom	2	4	3	19	54		
Angle In Degrees	5° Offset	22° Offset	5° Offset	22° Offset	5° Offset	22° Offset	
80	20,000	15,000	15,000	10,000	10,000	7,500	
75	14,500	12,400	12,250	8,300	8,000	6,700	
70	11,750	10,500	10,250	7,200	6,800	5,900	
65	10,000	9,000	8,750	6,200	5,800	5,100	
60	8,500	7,750	7,350	5,300	5,000	4,400	
55	7,000	6,500	6,300	4,500	4,150	3,700	
50	6,000	5,500	5,300	3,800	3,400	3,100	
45	5,100	4,900	4,400	3,100	2,800	2,550	
40	4,000	3,900	3,500	2,550	2,300	2,100	
35	3,150	3,000	2,800	2,150	1,900	1,750	
30	2,500	2,400	2,050	1,800	1,650	1,600	

<sup>\*</sup>See "OUTRIGGERS SET" note, page 6.

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\*\*"Offset" — Angular offset centerline of boom to centerline of jib.

Maximum Allowable Loads shown in shaded area are limited by factors other than tipping.

CAUTION: DO NOT OPERATE MACHINE WITH JIB ON BOOM POINT UNLESS THE MACHINE IS LEVELED AND STANDING ON A FIRM, UNIFORM SUPPORTING SURFACE WITH THE "OUTRIGGERS SET".

CAUTION: LONG CANTILEVER BOOMS CAN CREATE A TIPPING CONDITION WHEN IN EXTENDED AND LOWERED POSITION. DO NOT OPERATE AT BOOM ANGLES LOWER THAN SHOWN ON CHART.

#### JIB SERVICE

Maximum Allowable Loads shown apply only to machine with all components in first class condition built or recommended by Bucyrus-Erie Company.

Maximum Allowable Loads are based on freely suspended loads with the 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.

Maximum Allowable Loads are based on components and conditions shown under "LIMITATIONS" and "MACHINE EQUIPMENT".

Maximum Allowable Loads are in accordance with P.C.S.A. Standard #2.

#### LOAD RATING DEDUCT DATA

Weight of hooks, hook blocks, slings, and all other load handling devices, except the hoist rope, shall be considered part of the load.

39 ft. Jib 54 ft. Jib		1000 lbs. 950 lbs.
oad over the jib 24 ft. Jib 39 ft. Jib	is suspended on swing-around point sheave must be reduced	as follows: 1550 lbs. 1400 lbs.

#### LIMITATIONS

Required length of boom for lattice jib service is 144 feet. The boom must be fully extended, with swing-around section locked into working position on the boom point sheave pins.

Refer to "Crane Load Rating Chart" for other items that apply.

#### MACHINE EQUIPMENT

Alloy steel tubular jib, 11,000 lb. counterweight, and pertinent equipment listed on "Boom Load Rating Chart".