

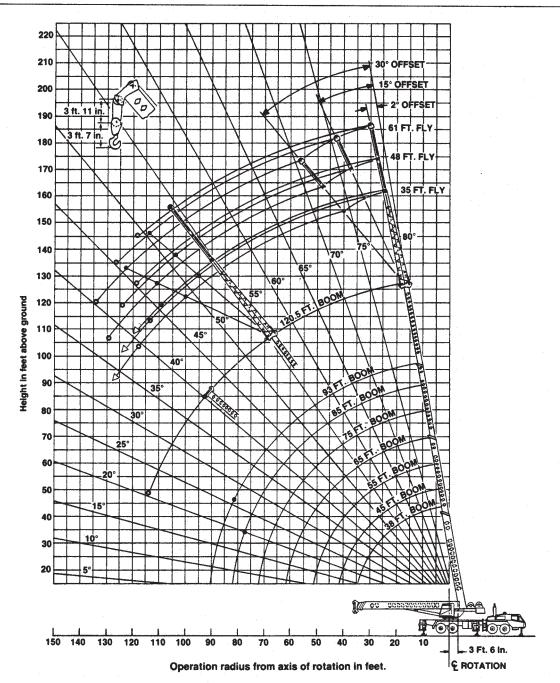
Lifting Capacities Hydraulic Truck Crane

GENERAL INFORMATION ONLY

HTC-1170

70-ton (63.55 metric ton)

4-Section Boom -- power pinned



Note Boom and fly and jib geometry shown are for unloaded condition and machine standing level on firm supporting surface. Boom deflection and subsequent radius and angle change must be accounted for when applying load to hook.

CAUTION: This material is supplied for reference only. Operator MUST refer to in-cab capacity plate to determine allowable machine lifting capacities and operating procedures.



Rated Lifting Capacities in Pounds On Outriggers-Fully Extended With Fifth Front Outrigger Extended

GENERAL INFORMATION ONLY

Carrier Mounted Hydraulic Crane 23.5 Ft. Outrigger Spread, 11 Ft. Wide Carrier

	38	Ft.			45 Ft.			55 Ft.			65 Ft.			75 Ft.			85 Ft.			93 Ft.	
Load Rad. in Feet	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over Rear	Loaded Boom Angle (Deg.)	360°	Over
10	70	140,000	140,000	74	76,200	76,200	77	72,800	72,800	79	72,100	72,100									
12	67	122,400	122,400	71	76,200	76,200	75	72,800	72,800	78	72,100	72,100	80	60,700	60,700						
15	62	96,100	96,100	67	76,200	76,200	72	72,800	72,800	75	71,600	71,600	77	55,900	55,900	79	46,100	46,100	80	34,300	34,30
20	53	69,400	69,400	60	69,400	69,400	66	69,400	69,400	70	61,700	61,700	. 74	49,600	49,600	76	40,900	40,900	77	34,300	34,30
25	43	53,300	53,300	52	53,300	53,300	60	53,300	53,300	66	53,300	53,300	70	44,200	44,200	72	36,900	36,900	74	32,500	32,50
30	29	42,300	42,300	43	42,300	42,300	54	42,300	42,300	61	42,300	42,300	65	39,700	39,700	69	33,400	33,400	71	29,100	29,10
35				32	32,500	34,700	47	32,500	34,700	55	32,500	34,700	61	32,500	34,700	65	30,500	30,500	68	25,400	25,40
40	(See	(See Note 16)	16)	16	24,800	28,700	39	24,800	28,700	49	24,800	28,700	56	24,800	28,700	61	24,800	27,400	64	22,200	22,20
45	(000		,				29	19,700	24,200	43	19,700	24,200	52	19,700	24,200	57	19,700	24,200	61	19,600	19,60
50							15	15,700	19,700	36	15,700	19,700	46	15,700	19,700	53	15,700	19,700	57	15,700	17,40
60										14	10,400	13,800	34	10,400	13,800	44	10,400	13,800	49	10,400	13,80
70				100									13	6,900	9,800	32	6,900	9,800	40	6,900	9,80
80																12	4,400	7,000	28	4,400	7,00
90										L											<u> </u>
100																					
110																					

WARNING AND OPERATING INSTRUCTIONS

READ AND UNDERSTAND THESE OPERATING INSTRUCTIONS AND THE CHART VALUES BEFORE OPERATING CRANE. OPERATION WHICH DOES NOT FOLLOW THESE INSTRUCTIONS MAY RESULT IN AN ACCIDENT.

- Rated lifting capacities in pounds as shown on lift chart pertain to this machine as originally manufactured and normally equipped. Modifications to the machine or use of optional equipment other than that specified can result in a reduction of
- capacity. Construction equipment can be dangerous if improperly operated or maintained. Operation and maintenance of this machine must be in compliance with the information in the operator's, parts and safety manuals supplied with this machine. If these manuals are missing, order replacements through the distributor. The operator and other personnel associated with this machine shall fully acquaint themselves with the latest applicable American National Standards Institute (ANSI) safety standards for cranes.

 The maximum allowable lifting capacities are based on machine standing level on firm supporting surface.
- firm supporting surface.
- The machine shall be leveled on a firm supporting surface. Depending on the nature of the supporting surface, it may be necessary to have structural supports under the outrigger floats or tires to spread the load to a larger bearing surface. When making lifts on outriggers, outrigger beams and front bumper jack cylinder must be fully extended with tires free of supporting surface.

 When making lifts on rubber, tires must be inflated to the recommended pressure.
- e note 22).
- Soom sections must be fully retracted on tires before swinging to over side or over front position as defined on working area plate.

 When installing or removing counterweight, refer to Counterweight Removed
- Chart for lifting capacities.
 For required parts of line, see wire rope strength plate.
- OPERATION:
- Rated lifting capacities at rated radius shall not be exceeded. Do not tip the machine to determine allowable loads. For concrete bucket operation, weight of bucket and load shall not exceed 80% of rated lifting capacities. For clamshell bucket operation, weight of bucket and bucket content is restricted to a maximum pucket operation, weight of bucket and bucket content is restricted to a maximum weight of 8,000 pounds or 80% of rated lifting capacity, whichever is less. For magnet operation, weight of magnet and load is restricted to a maximum weight of 8,000 pounds or 80% of rated lifting capacity, whichever is less. For clamshell and magnet operation, maximum boom length is restricted to 55 feet and the boom angle is restricted to a minimum of 35. Lifts with manual extended, fly or jib erected are prohibited for both clam and magnet operation.

 The crane capacities shown on outriggers so not exceed 85% of the tipping loads

- and crane capacities shown on tires do not exceed 75% of the tipping loads as determined by SAE Crane Stability Test Code J-765a.

 The crane capacities above the bold lines are based on structural strength or
- hydraulic limitations. Rated lifting capacities include the weight of hook block, slings, bucket, magnet and auxiliary lifting devices. Their weights must be subtracted from the listed rated load to obtain the net load to be lifted. See also deductions for auxiliary
- head, fly and lib. Read lifting capacities are based on freely suspended loads. No attempt shall be made to move a load horizontally on the ground in any direction. Rated lifting capacities are for lift crane service only. Do not operate at radii or boom lengths where capacities are not listed. At these

- Do not operate at radii or boom lengths where capacities are not listed. At these positions, the machine can overturn without any load on the hook. The maximum loads which can be telescoped are not definable because of variation in loadings and crane maintenance, but it is permissible to attempt retraction and extension within the limits of the load rating chart. When either boom length or radius or both are between values listed, the smallest load shown at either the next larger radius or boom length shall be used. The user shall operate at reduced ratings to allow for adverse job conditions, such each or unexer propriet out of level conditions, which side loads pendulum.
- the user shall operate at reduced ratings to allow for average do conditions, such as; soft or uneven ground, out of level conditions, wind, side loads, pendulum action, jerking or sudden stopping of loads, hazardous conditions, experience of personnel, two machine lifts, traveling with loads, electrical wires, etc. Side load on boom, fly or jib is extremely dangerous.

 When making lifts with auxiliary head machinery, the effective length of the boom
- Power sections of boom must be extended equally.
- The least stable rated working area on outriggers is over the side. Rated lifting capacities are based on correct reeving. Deduction must be made for excessive reeving. Any reeving over minimum required (see wire rope strength plate) is considered excessive and must be accounted for. Use working range plate to estimate the extra feet of rope then deduct 1 ib. for each foot of wire rope before attempting to lift a load.
- The loaded boom angle combined with the boom length give only an approximation of the operating radius. The boom angle, before loading, should be greater to account for deflection.
- The 38 foot boom length capacities are based on boom fully retracted. If boom is
- not fully retracted, do not exceed ratings shown for the 45 foot boom length. For boom lengths less than 120.5 feet with manual extended, the rated loads are determined by boom angle only in the column headed by 120.5 feet. For angles not shown, use the next lower boom angle to determine allowable capacity Warning, manual extended boom:
- Do not lower manual extended boom below 21 degrees unless main boom length is 110 ft. or less, since loss of stability will occur causing a tipping condition.





GENERAL INFORMATION ONLY

Counterweight: 9050 Lbs.

Manual Extended									
120.5 Ft.									
Loaded Boom Angle (Deg.)	360°	Over Rear	Load Rad. in Feet						
			10						
			12						
			15						
			20						
79	22,200	22,200	25						
77	21,800	21,800	30						
74	18,600	18,600	35						
72	16,100	16,100	40						
69	14,800	14,800	45						
66	13,000	13,000	50						
61	10,400	10,400	60						
55	8,500	8,500	70						
49	6,400	7,000	80						
42	4,500	5,800	90						
34	3,000	4,900	100						
22	1,800	3,600	110						
	21°								

	35 Ft. Offset Fly												
Main	2°	Offset	15°	Offset	30°	Main							
Boom Angle	Ref. Rad.	Load	Ref. Rad.	Load	Ref. Rad.	Load	Boom						
80	29	10,300	38	9,300	46	7,700	80						
75	43	10,000	51	8,400	58	6,900	75						
70	56	9,800	64	7,500	70	6,400	70						
65	68	7,600	76	6,500	81	5,500	65						
60	80	6,400	87	5,500	91	4,800	60						
55	91	5,000	97	4,400	101	3,700	55						
50	101	3,600	107	3,000	110	2,600	50						
45	111	2,400	116	2,100	120	1,800	45						
40	119	1,700	124	1,400	127	1.200	40						

Hydrautic Cl Pressure Set	rcuit lings
Function	Pressure
Winch	2750 PSI
Outriggers	2500 PSI
Boom Hoist	3150 PSI
Boom Telescope	2500 PSI
Swing	1500 PSI
Hydraulic Controls	500 PSI
Steering	1750 PSI
Free Fall Clutch	1500 PSI

						3	5 Ft.	- 61 F	t. Off	set Te	lesco	ping f	ly						
	35 Ft.							48 Ft.						61 Ft.					
Main	2° Offset		15° Offset		30° Offset		2° Offset		15° Offset		30° Offset		2° Offset		15° Offset		30° Offset		Main
Boom Angle	Ref. Red.	Load	Ref. Rad.	Load	Ref. Rad.	Load	Ref. Rad.	Load	Ref. Red.	Load	Ref. Red.	Load	Ref. Red.	Load	Ref. Red.	Load	Ref.	Load	Boom Angle
.80	29	10,300	38	9,000	46	7,300	32	7,600	46	7,600	56	5,600	34	5,400	53	5,400	66	4,500	80
75	43	9,900	51	8,100	-58	6,600	48	7,600	60	6,800	68	5,000	52	5,400	67	5,100	79	3,800	75
70	56	9,500	64	7,200	70	6,100	63	7,600	71	5,700	80	4,300	69	5,400	81	4,300	91	3,300	70
65	68	7,300	76	6,200	81	5,200	76	6,200	84	4,800	92	3,700	84	5,000	95	3,600	104	2,900	65
60	80	6,100	87	5,200	91	4,500	88	5,000	96	4,200	103	3,300	97	4,100	108	3,200	116	2,500	60
55	91	4,600	97	3,900	101	3,200	100	3,900	106	3,200	113	2,700	110	3,100	120	2,800	126	2,100	55
50	101	3,200	107	2,600	110	2,100	111	2,700	116	2,200	123	1,800	121	2,000	130	1,800	136	1,400	50
45	111	2,000	116	1,600	120	1,300	121	1,700	125	1,400	132	1,100		,	100	1,000		1,400	45

The offset fly capacities above the bold lines are based on structural strength of

The offset try capacities above the bold lines are based on structural strength or the boom and fiy. The radius shown is for reference only for fully extended main boom (120.5 ft.) and fly with rated load applied to the fly hook. The offset fly capacities are based on main boom angle regardless of main boom length. For angles not shown, use next lower boom angle to determine allowable capacity. Capacity values are for 360 degrees on outriggers operation. Warning, 35 ft. offset fly:

Do not lower offset fly in working position below 40 degrees unless main boom length is 85 ft. or less, since loss of stability will occur causing a tipping condition.

condition

Warning, 35-61 ft. offset telescoping fly (retracted):

Do not lower offset fly in working position below 45 degrees unless main boom length is 80 ft. or less, since loss of stability will occur causing a tipping

Warning, 35-61 ft. offset telescoping fly (extended):
Do not lower offset fly in working position below 50 degrees unless main boom length is 77 ft. or less, since loss of stability will occur causing a tipping condition.

The tubular jib capacities are based on main boom angle regardless of main boom length. Refer to 45 ft. to 75 ft. Jib Capacity Chart for rated hook loads and additional information when using the tubular jib.

Warning, 45 ft. tubular jib:

Do not lower 45 ft. tubular jib in working position below 45 degrees unless main boom length is 95 ft. or less, since loss of stability will occur causing a

main boom length is 95 ft. or less, since loss of stability will occur causing a tipping condition.

Warning, 60 ft. tubular jib:

Do not lower 60 ft. tubular jib in working position below 50 degrees unless main boom length is 91 ft. or less, since loss of stability will occur causing a tipping condition.

Warning, 75 ft. tubular jib:

Do not lower 75 ft. tubular jib in working position below 55 degrees unless main boom length is 88 ft. or less, since loss of stability will occur causing a tipping condition.

tipping condition. tipping condition.

22. Crane capacities on tires depend on tire capacity, condition of tires, and tire air pressure. On tire picks require lifting from main boom head only on a smooth and level surface. Lifts with manual extended, fly or jib erected are prohibited on tires. The boom sections must be extended equally at all times. For stationary operations, maximum boom length is restricted to 55 feet. For Pick and Carry operations, maximum boom length is restricted to 55 feet and maximum permissible speed is 2.5 MPM. The boom must be centered over the rear of machine with two position travel swinn lock engaged and the load must be machine with two position travel swing lock engaged and the load must be restrained from swinging.

DEFINITIONS:

- Hons:

 Load Radius: Horizontal distance from a projection of the axis of rotation to
 the supporting surface before loading to the center of the vertical hoist line or
 tackle with load applied.

 Loaded Boom Angle: The angle between the boom base section and the
 horizontal after lifting the load at the rated radius.

 Working Area: Area measured in a circular arc about the center line of rotation
 as shown on the working area.

as shown on the working area plate.

Freely Suspended Load: Load hanging free with no direct external force

applied except by the hoist line.
Side Load: Horizontal side force applied to the lifted load either on the ground

or in the air.

Crai	e Capacities (See Note 2								
Tire Pressure for 0 to 2.5 MPH 14.00 R 20 13.00 R 20 - 115 PSI									
Load		entered Rear							
Rad. in Feet	55 Ft. Boom Max.	55 Ft. Boom Max.							
	Stationary	2.5 MPH							
15	26,400	23,700							
20	17,100	17,100							
25	11,600	11,600							
30	8,000	8,000							

5,400

3,500

2.000

5,400

3,500

35

Auxiliary Load Handling Equ	ipment
Picking From Main Boom	With:
Aux. Head Attached	200 Lbs.
35 Ft. Fly Stowed on Base	600 Lbs.
35-61 Ft. Fly Stowed on Based	1000 Lbs.
35 Ft. Fly Erected	4,300 Lbs.
35-61 Ft. Fly Erected (Retracted)	6,800 Lbs.
35-61 Ft. Fly Erected (Extended)	9,200 Lbs.
45 Ft. Tubular Jib Erected	6,000 Lbs.
60 Ft. Tubular Jib Erected	9,000 Lbs.
75 Ft. Tubular Jib Erected	15,000 Lbs.
Picking From Tubular Jib	With:
Aux. Head on Main Boom	200 Lbs.
35 Ft. Fly Stowed on Base	600 Lbs.
35-61 Ft. Fly Stowed on Base	1,000 Lbs.

Capacity Deductions For

