

# Lifting Capacities

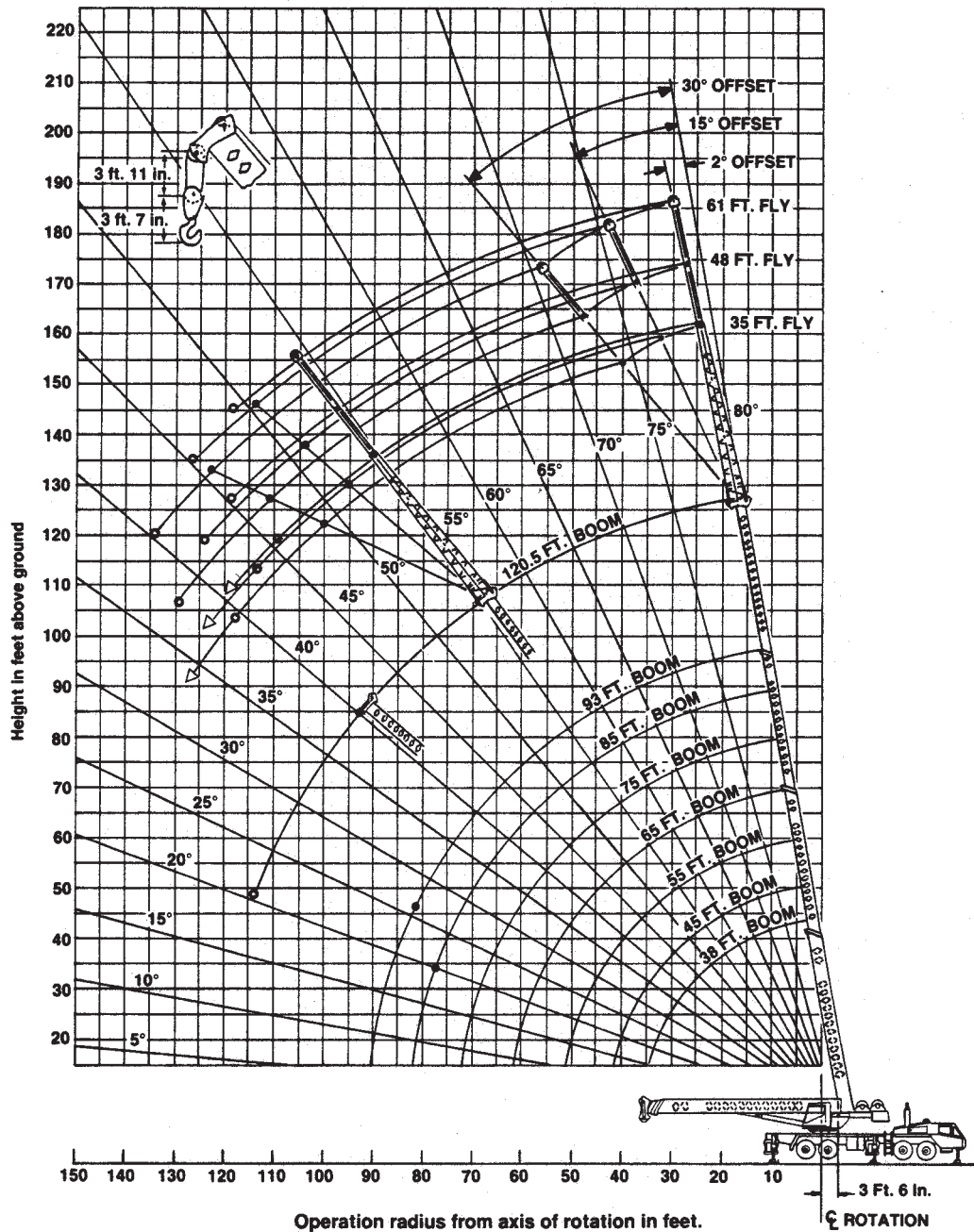
Hydraulic Truck Crane

## HTC-1170

70-ton (63.55 metric ton)

4-Section Boom -- power pinned

GENERAL INFORMATION ONLY



**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.



## 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 Boom Angle
Main Boom Angle	2° Offset		15° Offset		30° Offset		
	Ref. Rad.	Load	Ref. Rad.	Load	Ref. Rad.	Load	
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	7,800	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	3,800	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

Hydraulic Circuit Pressure Settings	
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

35 Ft. - 61 Ft. Offset Telescoping Fly															Main Boom Angle				
Main Boom Angle	35 Ft.						48 Ft.						61 Ft.						
	2° Offset		15° Offset		30° Offset		2° Offset		15° Offset		30° Offset		2° Offset			15° Offset	30° Offset		
	Ref. Rad.	Load	Ref. Rad.	Load	Ref. Rad.	Load	Ref. Rad.	Load	Ref. Rad.	Load	Ref. Rad.	Load	Ref. Rad.	Load	Ref. Rad.	Load			
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	118	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							45

- The offset fly capacities above the bold lines are based on structural strength of the boom and fly. 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.
  - 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 condition.
  - 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 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.
- 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 MPH. The boom must be centered over the rear of machine with two position travel swing lock engaged and the load must be restrained from swinging.

### DEFINITIONS:

- 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 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.

Crane Capacities On Tires (See Note 22)		
Tire Pressure for 0 to 2.5 MPH, 14.00 R 20 - 115 PSI		
Load Rad. in Feet	Boom Centered Over Rear	
	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
35	5,400	5,400
40	3,500	3,500
45	2,000	2,000

Capacity Deductions For Auxiliary Load Handling Equipment	
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.