

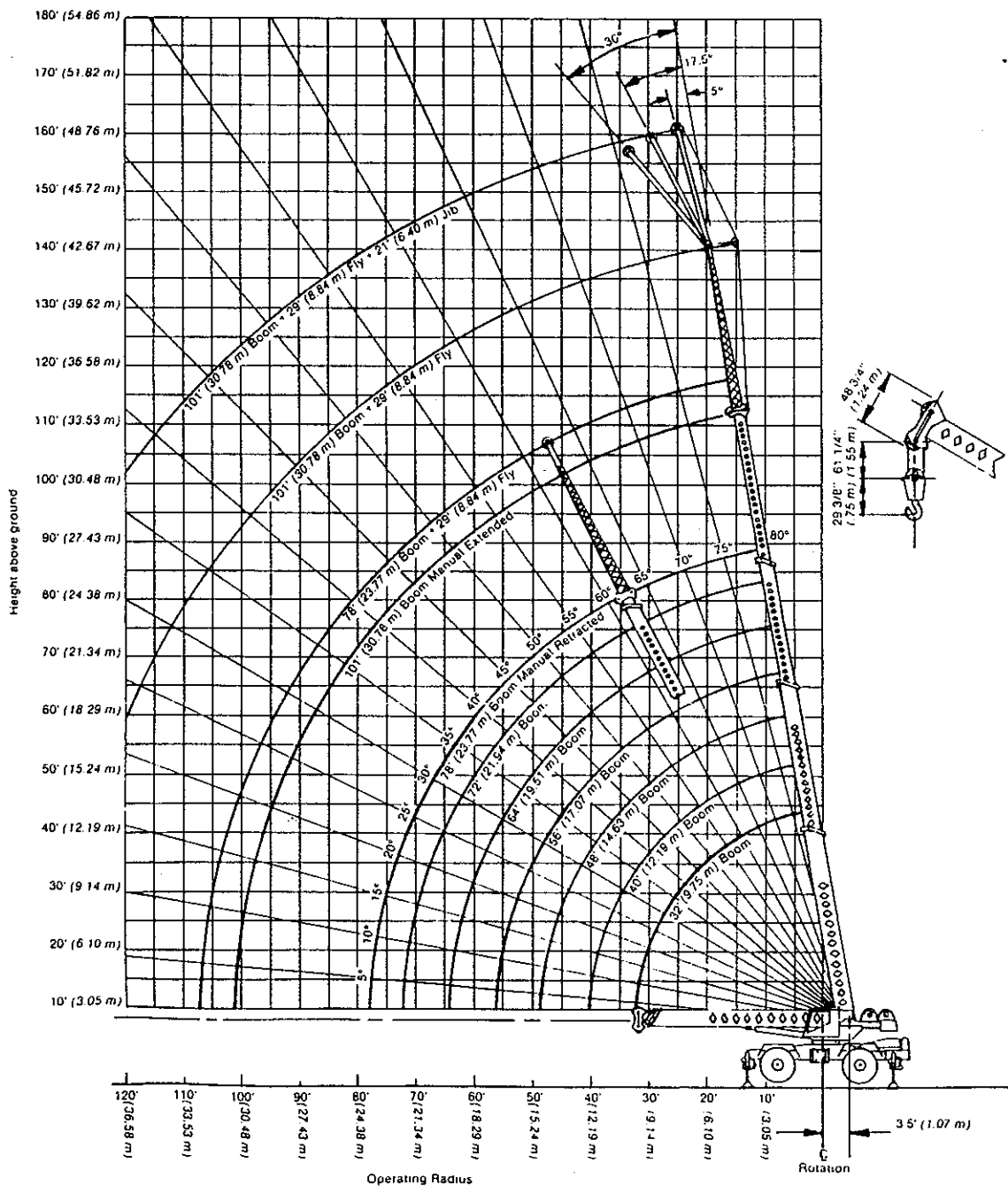
Lifting Capacities

PCSA Class 10-111

Hydraulic Rough Terrain Crane

HSP-8030 30-ton (27.22 metric ton)

4-Section Boom



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 boom angle change must be accounted for when applying load to hook.

HSP-8030

maximum allowable lifting capacities

Serial Number

5810 1029

Carrier Mounted Hydraulic Crane
20 Ft. Outrigger Spread, 9 Ft. Wide Carrier

Rated Lifting Capacities in Pounds
On Outriggers-Fully Extended

Counterweight: 6,300 Lbs.

32 Ft. - 78 Ft. Boom With Manual Section Retracted																		23 Ft. Manual Extended			29 Ft. Fly With Manual Retracted			29 Ft. Fly With Manual Extended												
32 Ft.				40 Ft.				48 Ft.				56 Ft.				64 Ft.				72 Ft.				78 Ft.				101 Ft.			107 Ft.			130 Ft.		
Load Rad. In Feet	Loaded Boom Angle (Deg.)	360°	Over Front	Loaded Boom Angle (Deg.)	360°	Over Front	Loaded Boom Angle (Deg.)	360°	Over Front	Loaded Boom Angle (Deg.)	360°	Over Front	Loaded Boom Angle (Deg.)	360°	Over Front	Loaded Boom Angle (Deg.)	360°	Over Front	Loaded Boom Angle (Deg.)	360°	Over Front	Loaded Boom Angle (Deg.)	360°	Over Front	Loaded Boom Angle (Deg.)	360°	Over Front	Loaded Boom Angle (Deg.)	360°	Over Front	Load Rad. In Feet					
10	67	80,000	80,000	72	51,800	51,800	75	50,900	50,900	78	50,400	50,400	80	41,700	41,700	(See Note 15)			(See Note 16)			(See Note 17)									10					
12	63	57,300	60,000	69	51,800	51,800	73	50,900	50,900	76	50,400	50,400	78	38,600	38,600																			12		
15	57	48,900	53,200	64	48,900	51,100	69	48,400	48,400	73	45,900	45,900	75	34,600	34,600	77	29,200	29,200	79	24,700	24,700										15					
20	45	36,300	38,300	56	36,300	38,300	63	36,300	38,300	67	36,300	37,000	71	29,200	29,200	73	25,000	25,000	75	22,600	22,600	79	14,800	14,800	79	14,500	14,500				20					
25	29	27,800	29,300	46	27,800	29,300	55	27,800	29,300	62	27,800	29,300	66	25,200	25,200	69	21,400	21,400	71	19,400	19,400	76	14,300	14,300	77	13,600	13,600				25					
30				35	18,800	23,400	48	19,800	23,400	55	19,800	23,400	61	19,600	22,100	65	18,900	18,900	67	17,100	17,100	74	13,800	13,800	74	12,100	12,100	78	7,000	7,000	30					
35							38	14,600	19,200	49	14,600	19,200	55	14,600	16,800	60	14,600	16,800	63	14,600	15,200	71	12,500	12,500	72	11,500	11,500	78	7,000	7,000	35					
40							27	11,100	15,700	41	11,100	15,700	49	11,100	15,000	59	11,100	13,600	68	11,100	11,100	69	10,500	10,500	74	7,000	7,000	74	7,000	7,000	40					
45										32	8,800	12,600	43	8,800	12,600	50	8,800	12,600	54	8,800	12,200	65	8,800	8,900	66	8,700	8,700	72	7,000	7,000	45					
50										19	7,000	10,100	35	7,000	10,100	44	7,000	10,100	49	7,000	10,100	61	8,200	8,900	63	7,900	7,900	70	6,800	6,800	50					
55													26	5,600	8,300	38	5,600	8,300	44	5,600	8,300	58	6,700	8,100	60	6,900	7,200	67	6,200	6,200	55					
60																30	4,500	6,900	38	4,500	6,900	54	5,600	7,300	56	5,700	6,600	65	5,700	5,700	60					
65																20	3,500	5,700	31	3,500	5,700	51	4,600	6,700	53	4,700	6,100	62	5,200	5,200	65					
70																			22	2,800	4,700	47	3,900	5,900	49	4,000	5,600	60	4,400	4,700	70					
75																						42	3,200	5,000	45	3,300	5,100	57	3,700	4,200	75					
80																						37	2,600	4,300	41	2,700	4,400	54	3,100	3,800	80					
85																						32	2,100	3,700	37	2,200	3,800	51	2,600	3,500	85					
90																						25	1,700	3,100	31	1,800	3,200	48	2,200	3,100	90					
95																						18	1,300	2,600	25	1,400	2,700	45	1,800	2,800	95					
100																									16	1,000	2,300	41	1,500	2,500	100					
110																												33	-	2,000	110					

Minimum Boom Angle (Deg.) For Indicated Length With No Load. See Warning Note 18

0°

0°

0°

28°

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.

GENERAL:

- Rated lifting capacities in pounds as shown on lift chart pertain to this machine as originally manufactured and 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.

SET UP:

- 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 must be fully extended with tires free of supporting surface.
- 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. Boom sections must be extended equally. Pick and carry operations (creep) are restricted to a maximum speed of 1 MPH and not exceeding 200 ft. in a 30 minute period, the boom must be centered over front with swinglock engaged and the load must be restrained from swinging. Lifts with manual extended, fly or fly-jib combination erected are prohibited on tires.
- When making lifts on rubber, tires must be inflated to the recommended pressure.
- 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 capacity. For clamshell bucket operation, weight of bucket and bucket content is restricted to a maximum weight of 6,000 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 6,000 pounds or 80% of rated lifting capacity, whichever is less. For clamshell and magnet operation, maximum boom length is restricted to 48 feet and the boom angle is restricted to a minimum of 35°. Manual extended, fly or fly-jib combinations are prohibited for both clam and magnet operation.

- The crane capacities shown on outriggers do 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-785a.
- 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 jib.
- Rated 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 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 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 increases by 2 feet.
- Power sections must be extended equally.

- For definition of working area, see plate no. 47P0052. The least stable rated working area on outriggers is over the rear. The least stable rated working area on tires 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 .72 lb. for each foot of wire rope before attempting to lift a load.
- For boom lengths less than 101 ft. with manual extended, the rated loads are determined by boom angle only in the column headed by 101 feet. For angles not shown, use the next lower boom angle to determine allowable capacity.
- For boom lengths with fly less than 107 ft. with manual retracted, the rated loads are determined by boom angle only in the column headed by 107 ft. For angles not shown, use the next lower boom angle to determine allowable capacity.
- For boom lengths with fly less than 130 ft. with manual extended, the rated loads are determined by boom angle only in the column headed by 130 ft. For angles not shown, use the next lower boom angle to determine allowable capacity.
- Do not lower 101 ft. boom with 29 ft. fly below 29 degrees. Failure to follow Note 18 will result in a tipping condition.
- The 21 foot jib 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 310 degrees operation. Warning: Do not lower 21 ft. jib in working position below 55 degrees unless boom is fully retracted.
- The 32 ft. boom length capacities are based on boom fully retracted. If not fully retracted, do not exceed ratings for the 40 ft. boom length.

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. The boom angle, before loading, should be greater to account for deflections. The loaded boom angle, combined with the boom length, give only an approximation of the operating radius.
- Working Area: Area measured in a circular arc about the centerline of rotation as shown on the working area diagram.

Jib Capacities 21 Ft. Jib and 29 Ft. Fly Combination (See Note 19)			
Min. Main Boom Angle	Jib Offset Angle		
	5°	17.5°	30°
80°	4,000	4,000	4,000
75°	4,000	4,000	3,600
70°	4,000	3,700	3,100
65°	3,400	3,000	2,600
60°	2,300	2,100	1,900
55°	1,500	1,400	1,300

Hydraulic Circuit Pressure Settings		
Circuit	Function	Pressure
Main	Boom Hoist	2900 PSI
	Wire Rope Hoist	2500 PSI
Secondary	Inner Mid-Telescope	2500 PSI
	Swing	1500 PSI at Port Relief
	Outrigger Outer Mid-Telescope	2500 PSI
Charge Pump	Winch Brake And Clutch	1500 PSI

Tire Pressure (0-1 MPH)		
Size	Ply	Pressure
18.00 x 25	20	85 PSI
20.5 x 25	24	80 PSI
23.5 x 25	20	70 PSI

Deductions For Auxiliary Load Handling Equipment		
Picking From Main Boom With		
Aux. Head	200 Lbs.	
Jib Stowed	600 Lbs.	
Fly Stowed	600 Lbs.	
Fly Erected	1500 Lbs.	
Fly & Jib Stowed	1200 Lbs.	
Fly & Jib Erected	4200 Lbs.	
Picking From 29 Ft. Fly With		
Jib Erected	1300 Lbs.	
Jib Stowed	600 Lbs.	

Crane Capacities On Tires (See Set Up Notes No. 3 & 4)				
Load Rad. (Ft.)	Max. Boom Length (Ft.)	Stationary		Creep Boom Centered Over Front
		360°	Over Front	
10	32	18,200	35,500	28,100
12	32	15,400	31,500	24,500
15	32	12,000	26,500	20,000
20	32	7,900	20,600	14,700
25	32	5,100	15,600	11,100
30	40	3,100	11,200	8,500
35	40	1,800	8,300	6,600
40	48		6,300	5,100
45	56		4,800	4,000
50	56		3,600	3,000
55	64		2,700	2,200
60	64		2,000	1,600