

GROVE®

FULL HYDRAULIC CARRIER-MOUNTED CRANE

TM 180

18 TON CAP.

PCSA CLASS NO. 10-69 (28-70 FT. BOOM)
PCSA CLASS NO. 10-60 (24-78 FT. BOOM)

RATED LIFTING CAPACITIES (In Pounds) 8 Ft. WIDE CARRIER WITH 16 Ft. OUTRIGGERS OUTRIGGERS FULLY EXTENDED

OVER SIDE - 28-70 ft. BOOM

Radius in Feet	Boom Length in Feet							
	28	34	40	46	52	58	64	70
10	36,000	34,000	31,900	29,800				
12	32,000	31,000	30,000	29,800	27,800			
15	27,000	27,000	27,000	27,000	27,000	25,750	23,700	
20	21,250	21,250	21,000	21,000	20,750	20,500	20,400	20,250
25		16,500	16,500	16,200	15,900	15,600	15,300	15,000
30		11,850	11,850	11,850	11,850	11,850	11,850	11,700
35			8,900	8,900	8,900	8,900	8,900	8,900
40				6,900	6,900	6,900	6,900	6,900
45					5,600	5,600	5,600	5,600
50						4,500	4,500	4,500
55							3,600	3,600
60							2,900	2,900
65								2,300
66.5								

OVER REAR - 28-70 ft. BOOM

Radius in Feet	Boom Length in Feet							
	28	34	40	46	52	58	64	70
10	36,000	34,000	31,900	29,800				
12	32,000	31,000	30,000	29,800	27,800			
15	27,000	27,000	27,000	27,000	27,000	25,750	23,700	
20	21,250	21,250	21,000	21,000	20,750	20,500	20,400	20,250
25		16,500	16,500	16,200	15,900	15,600	15,300	15,000
30		12,250	12,250	12,250	12,250	12,100	11,900	11,700
35			9,250	9,250	9,250	9,250	9,250	9,250
40				7,400	7,400	7,400	7,400	7,400
45					6,000	6,000	6,000	6,000
50						4,900	4,900	4,900
55							3,950	3,950
60							3,200	3,200
65								2,550

OVER SIDE - 24-78 ft. BOOM

Radius in Feet	Manual Fly Section Retracted Boom Length in Feet							Manual Fly Ext. *78
	24	30	36	42	48	54	60	
10	36,000	34,500	32,700	30,800				
12	32,000	32,000	31,000	29,900	28,000			
15	26,000	26,000	26,000	25,500	24,000	22,000	20,000	
20	20,000	20,000	20,000	20,000	20,000	19,000	17,500	
25		14,000	14,000	14,000	14,000	14,000	14,000	13,000
30			10,500	10,500	10,500	10,500	10,500	11,000
35				7,600	7,600	7,600	7,600	8,500
40					6,000	6,000	6,000	7,000
45						4,500	4,500	5,400
50							3,250	4,200
55							2,600	3,200
60								2,300
65								1,700
70								1,200

OVER REAR - 24-78 ft. BOOM

Radius in Feet	Manual Fly Section Retracted Boom Length in Feet							Manual Fly Ext. *78
	24	30	36	42	48	54	60	
10	36,000	34,500	32,700	30,800				
12	32,000	32,000	31,000	29,900	28,000			
15	26,000	26,000	26,000	25,500	24,000	22,000	20,000	
20	20,000	20,000	20,000	20,000	20,000	19,000	17,500	
25		15,000	15,000	15,000	15,000	14,500	14,000	13,000
30			11,175	11,175	11,175	11,175	11,175	11,000
35				8,450	8,450	8,450	8,450	9,250
40					6,400	6,400	6,400	7,675
45						4,975	4,975	5,975
50							3,850	4,800
55							2,900	3,925
60								3,135
65								2,425
70								1,875

In all charts, capacities appearing in the shaded area are based on machinery strength and tipping should not be relied upon as a capacity limitation.
Capacities do not exceed 85% of tipping loads as determined by test in accordance with SAE J-765.
*Indicates maximum capacity of Extended Fly Section regardless of boom length.

ON RUBBER CAPACITIES

28-70 ft. BOOM

Radius in Feet	Over Rear	Over Side
10	20,000 (a)	15,000 (a)
12	17,500 (a)	12,000 (b)
15	13,750 (b)	8,400 (c)
20	9,250 (c)	5,000
25	6,300 (d)	3,000
30	4,200	1,750
35	2,990	750
40	2,200	
45	1,300	
50	750	

24-78 ft. BOOM

Radius in Feet	Over Side	Over Rear
10	13,000 (b)	20,000 (a)
12	10,500 (c)	16,750 (b)
15	7,000 (d)	12,000 (c)
20	3,800	7,300 (d)
25	2,000	4,800 (e)
30	400	3,100
35		2,000
40		1,200
45		400

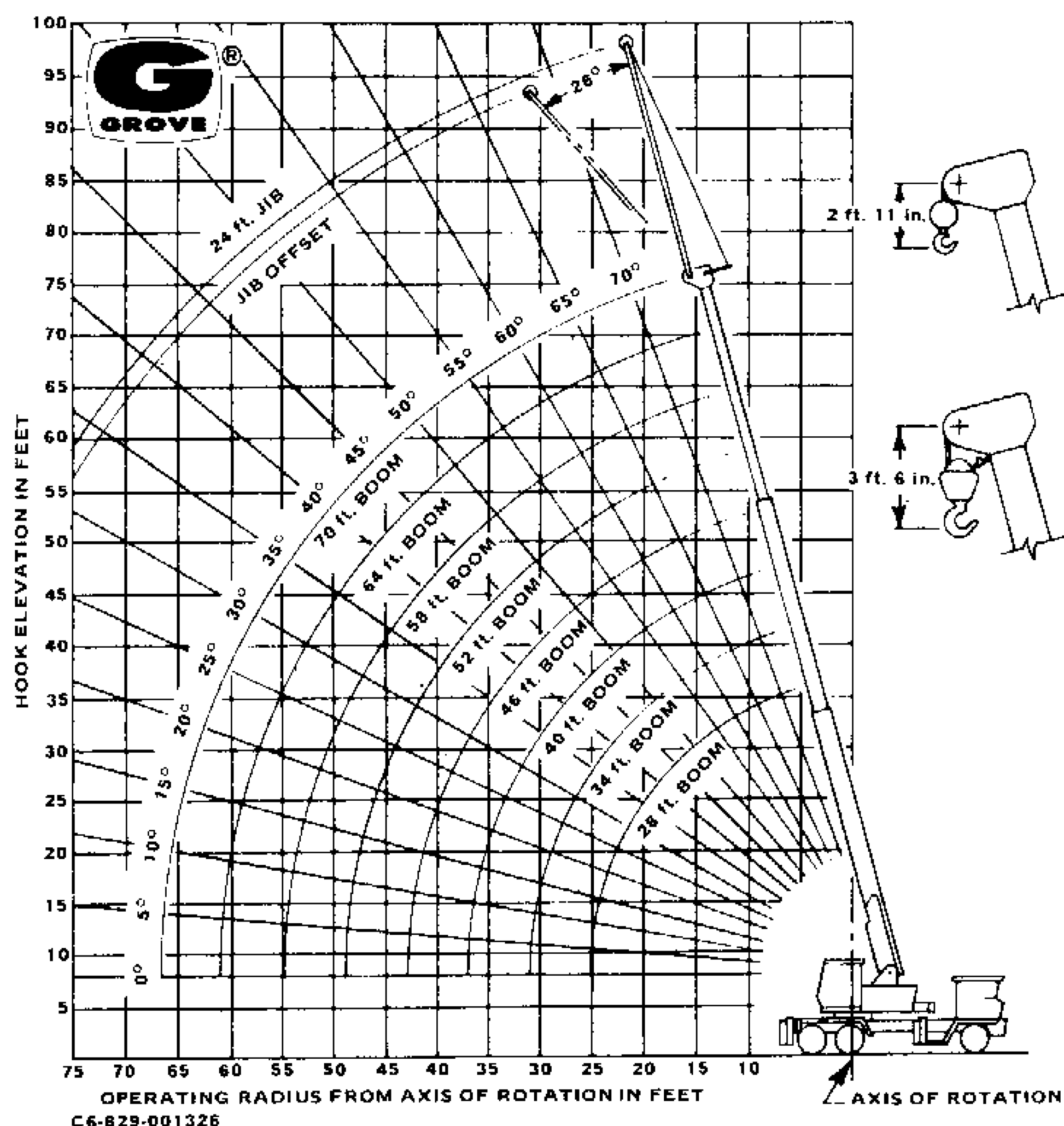
Maximum Permissible Boom Length: (a) 28 ft. (c) 46 ft. (b) 34 ft. (d) 58 ft. (e) 56 ft. (c) 34 ft.
Use of manual fly section not recommended.

NOTES TO LIFTING CAPACITIES

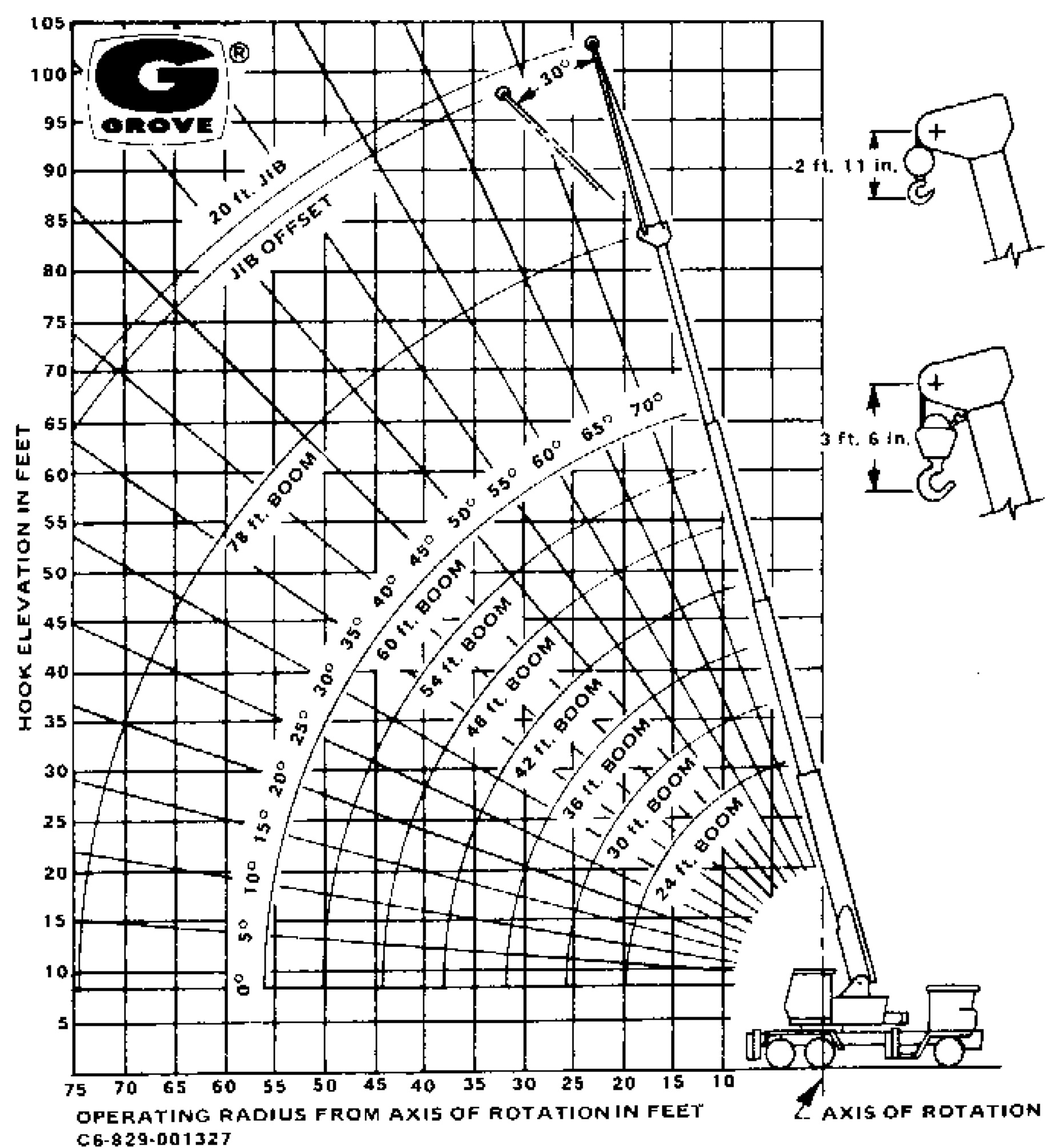
- Rated lifting capacities are based on freely suspended loads. They are the maximum covered by the manufacturer's warranty with the machine leveled and standing on a firm supporting surface. Ratings with outriggers are based on outriggers being extended to their maximum positions.
- Practical working loads for each particular job shall be established by the user depending on operating conditions; including the supporting surface, wind and other factors affecting stability, hazardous surroundings, experience of personnel, handling of load, etc.
- Operating radius is the horizontal distance from the axis of rotation to the centerline of the hoist line or tackle with loads applied.
- "On Rubber" lifting (if permitted) depends on proper tire inflation, capacity, and condition. "On Rubber" loads may be transported at a maximum vehicle speed of 2.5 mi/hr. (4 km./hr.) on a smooth and level surface only.
- Jibs may be used for single line lifting crane service only. Jib capacities are based on structural strength of jib or main boom. Jib loads must not exceed main boom lifting capacities for the actual operating radius.
- Operation is not intended or approved for any conditions outside of those shown hereon. Handling of personnel from the boom is not authorized except with equipment furnished and installed by Grove Manufacturing Company.
- For clamshell or concrete bucket operation, weight of bucket and load must not exceed 90% of rated lifting capacities.
- Power-telescoping boom sections must be extended equally at all times. Long cantilever booms can create a tipping condition when in extended and lowered position.
- The maximum load which may be telescoped is limited by hydraulic pressure, boom angle, boom lubrication, etc. It is safe to attempt to telescope any load within the limits of rated lifting capacity chart.
- With certain boom and hoist tackle combinations, maximum capacities may not be obtainable with standard rope lengths.
- With certain boom and load combinations, raising of load with boom lift cylinders may not be possible. Operational safety is not affected by this condition.
- Keep load handling devices a minimum of 12 inches (30 CM) below boom head when lowering or extending boom.
- For multiple part reeving, use one part of line for each 6,000 lbs. of load.
- All load handling devices and/or boom attachments are considered part of the load and suitable allowances must be made.

RANGE DIAGRAMS

28 ft. - 70 ft. BOOM



24 ft. - 78 ft. BOOM



JIB CAPACITIES

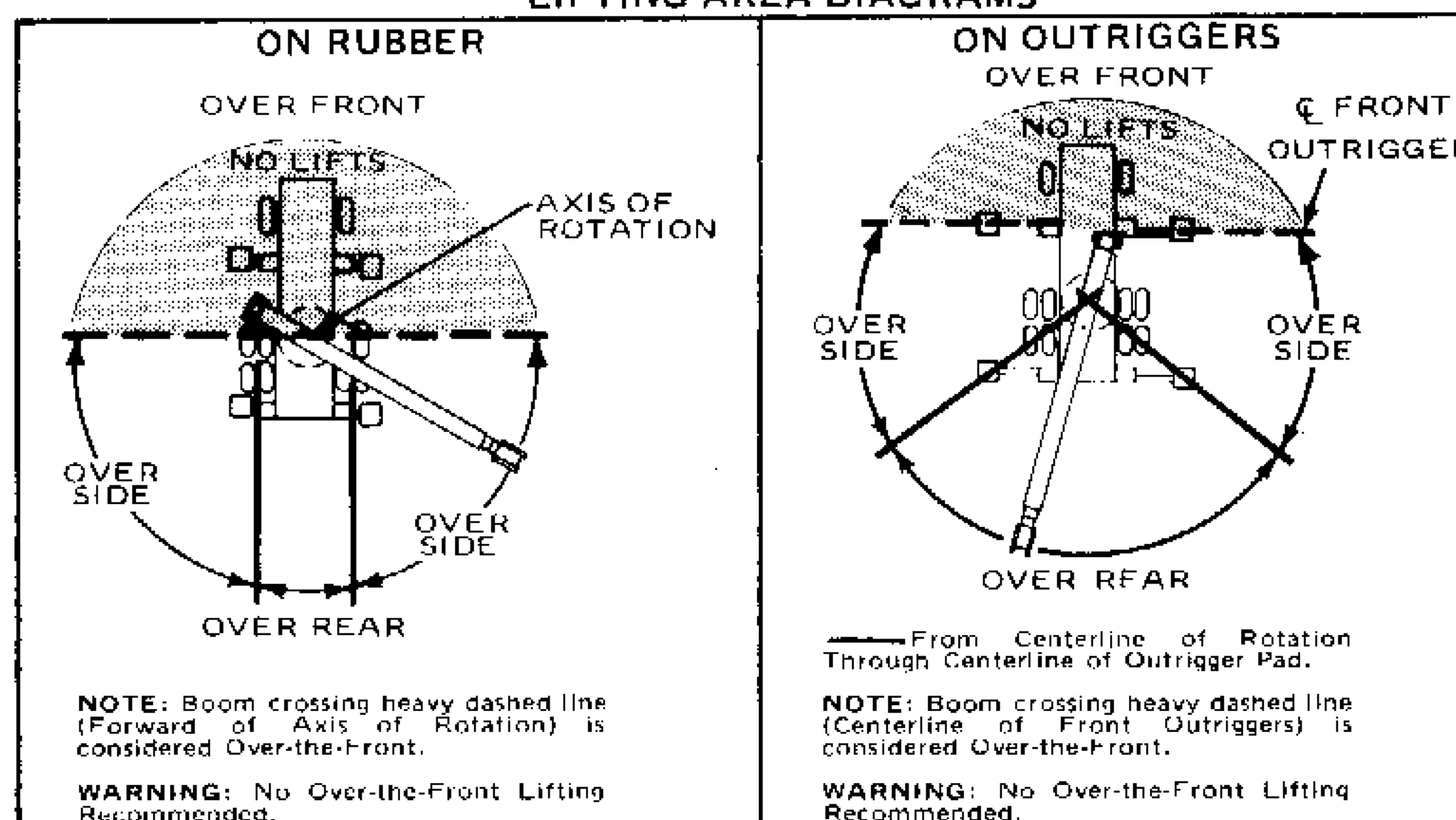
24 ft. JIB

MIN. BOOM ANGLE	NO OFFSET	MAX. OFFSET (26°)
75	6400	3100
70	5150	2850
65	4350	2650
60	3700	2450
55	3300	2275
50	2950	2170
45	2650	2125
40	2550	2085
35	2475	2040
30	2400	2000
26	2300	1950

20 ft. JIB

MIN. BOOM ANGLE	NO OFFSET	MAX. OFFSET (30°)
75	6200	2600
70	5000	2400
65	4300	2300
60	3700	2150
55	3300	2100
50	2800	1850
45	2400	1500
40	2200	1460
30	1900	1200

LIFTING AREA DIAGRAMS



GROVE MANUFACTURING COMPANY

A DIVISION OF WALTER KIDDE & COMPANY, INC.

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MEMBER: POWER CRANE & SHOVEL ASSOCIATION

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