

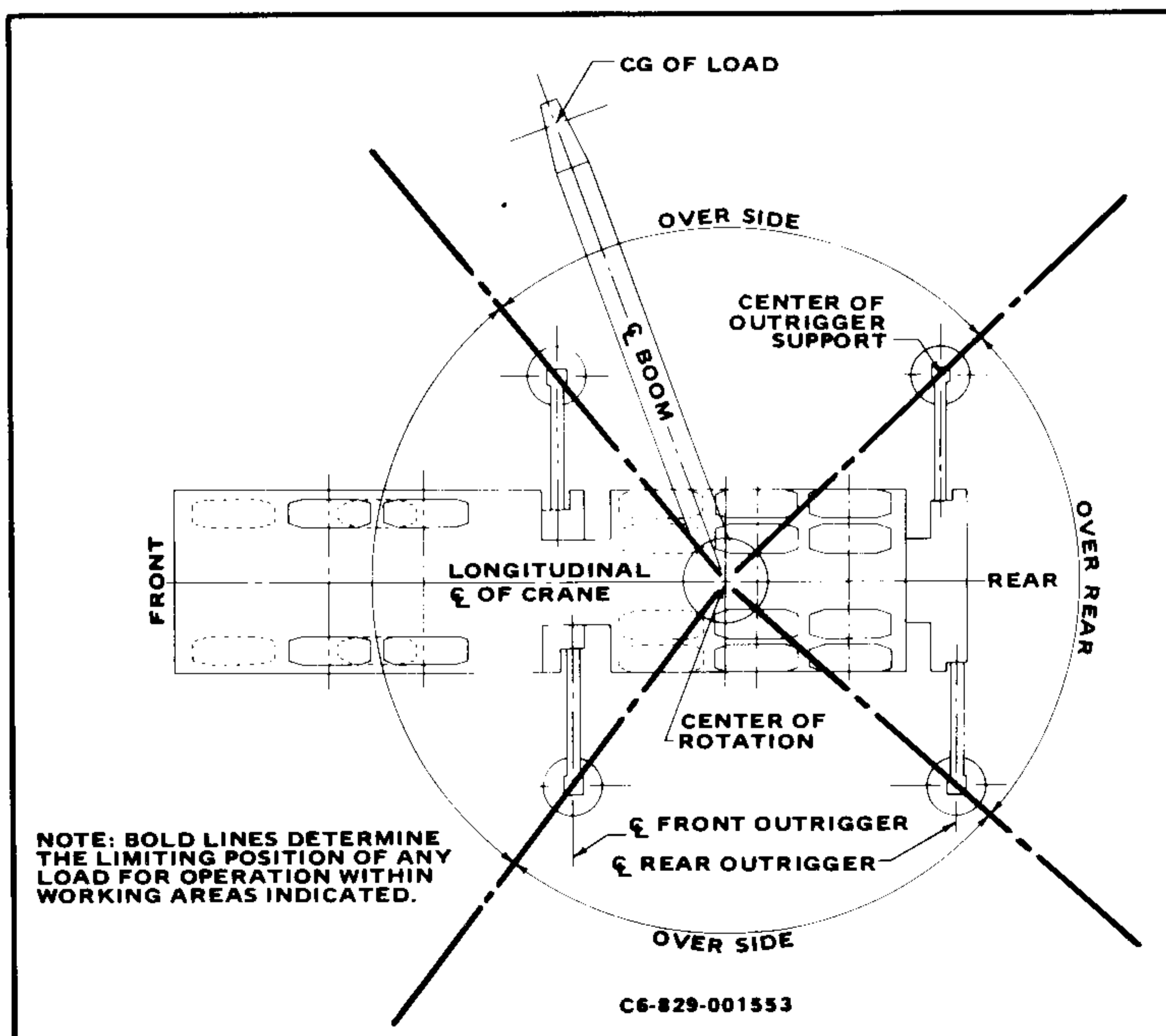
# TM1075

## 44 ft. - 172 ft. BOOM (POWER PINNED FLY)

### LIFTING CAPACITY NOTES

1. Do not exceed any rated lifting capacity. Rated lifting capacities are based on freely suspended loads with the machine leveled and standing on a firm supporting surface. Ratings with outriggers are based on outriggers being extended to their maximum position and tires raised free of crane weight before extending the boom or lifting loads.
2. Practical working loads for each particular job shall be established by the user depending on operating condition to include: the supporting surface, wind and other factors affecting stability, hazardous surroundings, experience of personnel, handling of load, etc. No attempt must be made to move a load horizontally on the ground in any direction.
3. Operating radius is the horizontal distance from the axis of rotation before loading to the centerline of the vertical hoist line or tackle with loads applied.
4. "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 firm and level surface under conditions specified.
5. Jibs may be used for lifting crane service only. Jib capacities are based on structural strength of jib or main boom and on main boom angle.
6. 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.
7. For clamshell or concrete bucket operation, weight of bucket and load must not exceed 80% of rated lifting capacities.
8. 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.
9. 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.
10. With certain boom and hoist tackle combinations, maximum capacities may not be obtainable with standard cable lengths.
11. 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.
12. Keep load handling devices a minimum of 12 inches (30 cm) below boom head when lowering or extending boom.
13. If actual boom length and/or radius is between values listed, use lifting capacity for the next longer rated length and/or radius.
14. All load handling devices and boom attachments are considered part of the load and suitable allowances must be made for their combined weights.
15. Operation of this equipment in excess of rating charts or disregard of the instructions is hazardous and voids the warranty and manufacturer's liability.

### LIFTING AREA DIAGRAM





TM1075 100 TO  
44 ft. - 172  
(POWER PINNED FLY)  
PCSA CLASS

**RATED LIFTING CAPACITY IN POUNDS**  
**ON OUTRIGGERS FULLY EXTENDED OVER SIDE & REAR**

Radius in Feet	Main Boom Length in Feet (Power Pinned Fly Retracted)									Power Pin. Fly & 108 ft. **140	32ft.Ext. (2° Offset) & 140 ft. ***172
	*44	52	60	68	76	84	92	100	108		
12	200,000 (71)	121,500 (74)	118,000 (76.5)	114,000 (78)	108,000 (79.5)						
15	158,500 (67)	121,500 (70.5)	113,700 (73)	106,000 (75.5)	98,400 (77.5)	91,000 (79)					
20	117,000 (59)	100,150 (64.5)	93,450 (68)	87,400 (71)	82,000 (73.5)	77,000 (75.5)	72,600 (77)	66,800 (78.5)	64,600 (80)		
25	91,500 (50.5)	83,800 (57.5)	78,350 (62.5)	73,600 (66.5)	69,600 (69)	65,500 (71.5)	59,100 (73.5)	54,100 (75.5)	52,150 (77)		
30	71,800 (40.5)	70,850 (50.5)	66,700 (57)	63,000 (61.5)	59,950 (65)	56,550 (68)	49,300 (70.5)	44,950 (72.5)	43,200 (74.5)	42,000 (78.5)	
35	53,700 (27)	53,700 (42)	53,700 (50.5)	53,700 (56.5)	52,150 (60.5)	49,400 (64)	41,950 (67)	38,050 (69.5)	36,450 (71.5)	35,200 (76.5)	24,000 (80)
40		43,130 (31.5)	43,130 (43.5)	43,130 (51)	43,130 (56)	43,130 (60)	36,150 (63.5)	32,650 (66)	31,150 (68.5)	30,250 (74.5)	21,750 (78.5)
45		34,960 (12.5)	34,960 (35)	34,960 (44.5)	34,960 (51)	34,960 (56)	31,500 (59.5)	28,300 (63)	26,900 (65.5)	26,250 (72)	19,450 (77)
50			28,290 (24)	28,290 (37.5)	28,290 (45.5)	28,290 (51.5)	27,700 (56)	24,750 (59.5)	23,400 (62.5)	23,000 (70)	17,600 (75)
60				19,620 (16)	19,620 (32.5)	19,620 (41.5)	19,620 (47.5)	19,200 (52)	18,050 (56)	17,950 (65.5)	14,750 (71.5)
70						13,950 (28)	13,950 (37.5)	13,950 (44)	13,950 (49)	14,250 (60.5)	12,700 (68)
80							9,530 (23.5)	9,530 (34)	9,530 (41)	11,400 (55.5)	10,400 (64)
90								6,360 (19)	6,360 (31)	9,160 (50.5)	8,470 (60)
100										6,930 (44.5)	6,890 (56)
110										4,640 (37.5)	5,580 (51.5)
120										2,850 (29)	4,480 (47)
130										1,480 (16.5)	3,100 (41.5)
140											1,720 (36)
145											1,100 (32.5)

NOTE: Boom Angle (degrees) required for given lift appears below the load. A6-829-001956A & - 001962B

**LIFTING CAPACITY NOTES:**  
Capacities appearing above the bold line are based on structural strength and tipping should not be relied upon as a capacity limitation. Capacities do not exceed 85% of tipping loads with counterweight fully extended as determined by test in accordance with SAE recommended practice-crane load stability test code - SAE J-765.  
Do not exceed any rated load when lifting regardless of whether it is based on structural strength or stability.  
\* Capacities for the 44 ft. boom length shall be lifted with boom fully retracted. If boom is not fully retracted, capacities shall not exceed those shown for the 52 ft. boom length.  
\*\* For boom lengths less than 140 ft. with power pinned fly extended, the rated loads are determined by boom angle in the column headed by 140 ft. boom. For boom angles not shown, use rating of next lower boom angle. For this load column, the extended power pinned fly operational mode is to be selected on the Krueger L.M.I.  
**WARNING:** The Krueger L.M.I. rating will apply for full boom extension only.  
\*\*\* For boom lengths less than 172 ft. with power pinned fly extended and 32 ft. boom ext. erected, the rated loads are determined by boom angle only in the column headed by 172 ft. boom. For boom angles not shown, use rating of next lower boom angle. For this load column, the 32 ft. boom extension operational mode is to be selected on the Krueger L.M.I. **CAUTION:** The Krueger L.M.I. rating will apply for full boom extension (power pinned fly extended) only.  
Boom angle is the included angle between horizontal and the longitudinal axis of the boom base section after lifting rated load.

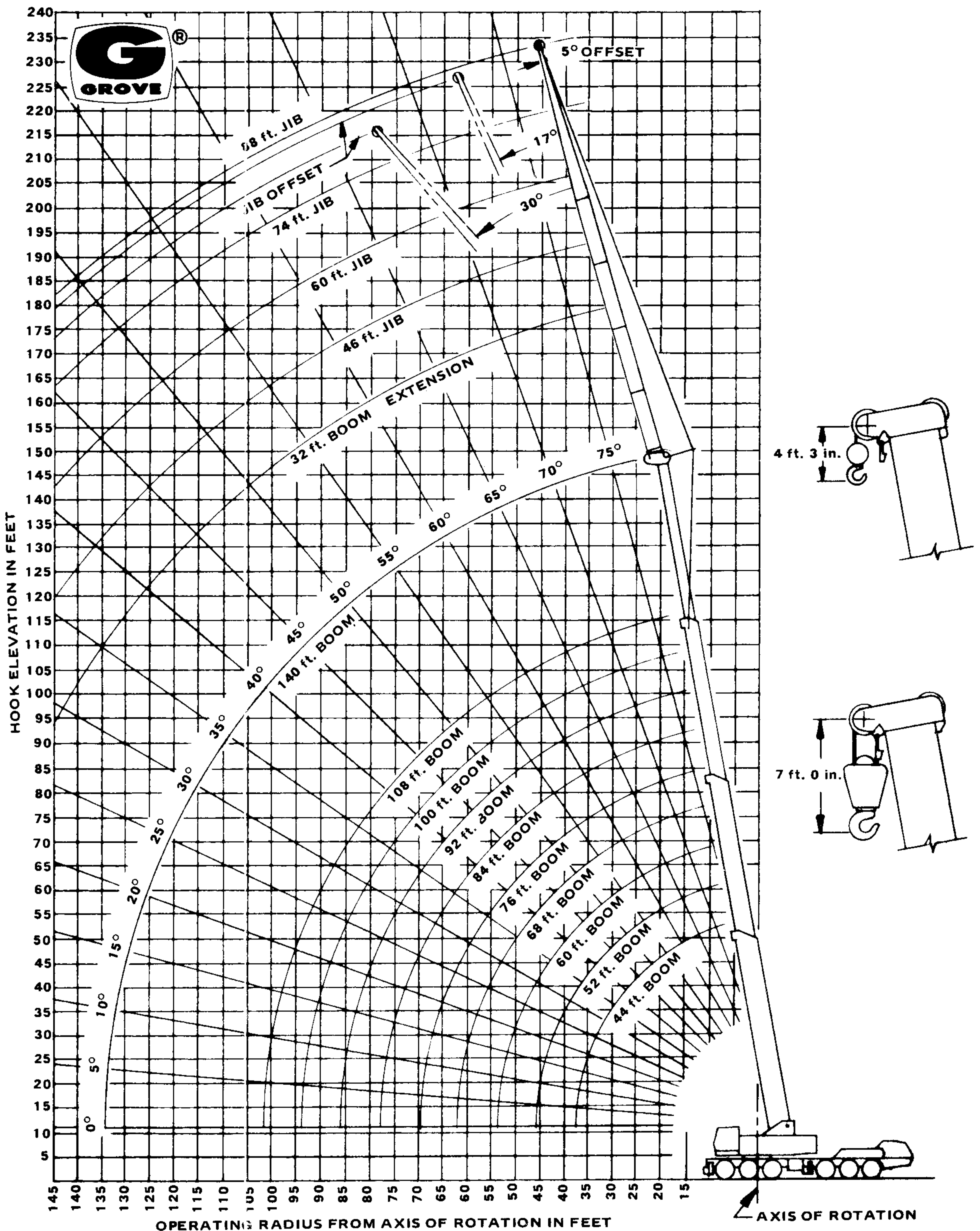


CAPACITY  
 BOOM  
 (ED FLY)  
 12-431

# GROVE®

## FULL HYDRAULIC CARRIER-MOUNTED CRANE

### RANGE DIAGRAM



## JIB CAPACITIES

Main Boom Angle	46 ft. JIB CAPACITIES						60 ft. JIB CAPACITIES						74 ft. JIB CAPACITIES						88 ft. JIB CAPACITIES					
	5° Offset		17° Offset		30° Offset		5° Offset		17° Offset		30° Offset		5° Offset		17° Offset		30° Offset		5° Offset		17° Offset		30° Offset	
	Ref. Radius		Ref. Radius		Ref. Radius		Ref. Radius		Ref. Radius		Ref. Radius		Ref. Radius		Ref. Radius		Ref. Radius		Ref. Radius		Ref. Radius		Ref. Radius	
80°	40	16,500	49	12,800	57	8,460	45	12,500	57	9,220	67	5,570	51	9,600	64	6,640	77	3,840	54	7,630	72	4,680	87	2,680
77.5	48	15,650	57	12,300	64	8,030	54	11,700	65	8,790	75	5,270	60	8,880	73	6,230	85	3,610	64	6,920	81	4,290	95	2,480
75	56	14,900	64	11,900	72	7,650	62	11,050	73	8,390	82	5,010	68	8,250	82	5,860	93	3,400	73	6,290	90	3,930	103	2,310
72.5	63	14,250	71	11,500	79	7,320	70	10,450	81	7,930	90	4,780	77	7,690	90	5,530	101	3,230	83	5,740	98	3,610	112	2,160
70	71	12,610	79	11,000	85	7,030	78	9,890	88	7,440	97	4,570	86	7,180	98	5,230	109	3,070	92	5,240	107	3,320	120	2,030
67.5	78	10,280	86	9,120	92	6,780	86	8,740	96	7,010	104	4,390	94	6,720	106	4,920	116	2,930	100	4,790	115	3,060	127	1,910
65	85	8,470	93	7,620	99	6,550	94	7,180	103	6,350	111	4,240	102	6,140	113	4,630	123	2,810	109	4,390	123	2,820	135	1,810
62.5	92	7,020	99	6,390	105	5,980	101	5,930	110	5,300	117	4,100	110	5,020	121	4,390	130	2,700	118	4,030	131	2,610	142	1,400
60	99	5,850	106	5,370	111	5,070	108	4,900	117	4,430	124	3,980	118	4,110	128	3,300	136	2,100	126	3,530	139	1,800		
55	112	4,060	118	3,780	122	3,620	122	3,320	130	3,040	136	2,250	132	2,700	142	1,400			141	1,500				
50	124	2,780	129	2,620	133	2,530	135	2,180	142	1,400														
45	135	1,830	140	1,700	142	1,350																		

A6-829-001981B    -001982B    -001983B    -001984B    -001985B    -001986B    -001987B    -001988B    -001989B    -001990B    -001991B    -001992C

### JIB CAPACITY NOTES

- All capacities are based on structural strength of jib at given main boom angle and do not exceed 85% of tipping loads with counterweight fully extended in accordance with SAE J-765. (Ref. Radius in feet).
- Jibs may be used for single line lifting crane service only.
- Rated load is based on loaded main boom angle.
- WARNING:** Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with every jib occurs rapidly and without advance warning.
- Lifting with other than fully extended boom (power pinned fly extended - 140 ft. boom length) is strictly prohibited.
- Maximum length of main boom including extended power pinned fly for purpose of erecting jib, over side or over rear, below 30° main boom angle is:

46 ft. Jib - 114 ft.

74 ft. Jib - 97 ft.

60 ft. Jib - 106 ft.

88 ft. Jib - 88 ft.

**WARNING:** Do not attempt to erect jibs over front of machine.

**46 ft. JIB WARNING:** With 46 ft. jib in working position, the boom angle must not be less than 45° (over side & rear) or 60° (over front) since loss of stability will occur causing a tipping condition.

**60 ft. JIB WARNING:** With 60 ft. jib in working position, the boom angle must not be less than 50° (over side & rear) or 62½° (over front) since loss of stability will occur causing a tipping condition.

**74 ft. JIB WARNING:** With 74 ft. jib in working position, the boom angle must not be less than 55° (over side & rear) or 65° (over front) since loss of stability will occur causing a tipping condition.

**88 ft. JIB WARNING:** With 88 ft. jib in working position, the boom angle must not be less than 55° (over side & rear) or 67½° (over front) since loss of stability will occur causing a tipping condition.

### WEIGHT REDUCTION FOR LOAD HANDLING DEVICES

32 ft. BOOM EXTENSION  
with 44 - 140 ft. BOOM

† Stowed - 504 lbs.  
† Erected - 2,366 lbs.

44 - 140 ft. BOOM with

† 46 ft. Jib Erected - 8,216 lbs.  
† 60 ft. Jib Erected - 11,947 lbs.  
† 74 ft. Jib Erected - 16,364 lbs.  
† 88 ft. Jib Erected - 21,468 lbs.

#### HOOK BLOCKS

100 Ton, 6 Sheave . . . 2,380 lbs.  
30 Ton, 1 Sheave . . . 706 lbs.  
Auxiliary Boom Head . . . 245 lbs.  
10 Ton Headache Ball . . . 500 lbs.  
15 Ton Headache Ball . . . 750 lbs.

**NOTE:** All Load Handling Devices and Boom Attachments are Considered Part of the Load and Suitable Allowances MUST BE MADE for Their Combined Weights. Weights are for Grove furnished equipment.

† Reduction of main boom capacities only.