

# RT740



**40 TON CAPACITY**  
**34 ft. - 136 ft. BOOM**  
 (POWER PINNED FLY)  
 PCSA CLASS 10-192  
 85% OF TIPPING

# GROVE®

**FULL HYDRAULIC**  
**SELF-PROPELLED CRANE**

**RATED LIFTING CAPACITIES IN POUNDS**  
**36 ft. - 136 ft. BOOM**

### ON RUBBER CAPACITIES

#### 21.00x25 TIRES

Radius in Feet	Stationary Capacity	Stationary Capacity	Pick & Carry Cap. Up to 2.5 MPH
	Defined Arc (3) Over Front	360 Degree Arc	Boom Centered (7) Over Front
10	54,800 (a)	42,500 (a)	51,820 (a)
12	49,400 (a)	37,200 (a)	45,230 (a)
15	43,100 (a)	28,310 (a)	36,370 (a)
20	33,200 (a)	17,850 (b)	29,300 (a)
25	23,210 (b)	10,980 (c)	23,210 (a)
30	17,210 (c)	7,630 (d)	15,970 (b)
35	12,700 (c)	5,280 (e)	12,700 (c)
40	9,800 (d)	3,570 (f)	9,800 (d)
45	7,530 (f)	2,270 (g)	7,530 (e)
50	5,950 (g)	1,400 (h)	5,950 (f)
55	4,530 (g)		4,530 (f)
60	3,500 (h)		3,500 (g)
65	2,550 (h)		2,550 (h)
70	1,780 (i)		1,780 (h)

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#### 26.5x25 TIRES

Radius in Feet	Stationary Capacity	Stationary Capacity	Pick & Carry Cap. Up to 2.5 MPH
	Defined Arc (3) Over Front	360° Arc	Boom Centered (7) Over Front
10	55,810 (a)	43,040 (a)	48,220 (a)
12	52,230 (a)	37,470 (a)	42,060 (a)
15	47,480 (a)	29,910 (a)	35,010 (a)
20	36,170 (a)	18,670 (b)	30,320 (a)
25	24,260 (b)	11,930 (c)	23,930 (a)
30	17,610 (c)	7,960 (d)	17,610 (b)
35	13,130 (c)	5,540 (e)	10,260 (c)
40	10,010 (d)	3,800 (f)	8,150 (d)
45	7,840 (f)	2,520 (f)	6,580 (e)
50	6,100 (g)	1,450 (h)	5,230 (e)
55	4,510 (g)		3,900 (f)
60	3,430 (h)		2,970 (g)
65	2,550 (h)		2,200 (h)
70	1,700 (i)		1,170 (i)

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#### 29.5x25 TIRES

Radius in Feet	Stationary Capacity	Stationary Capacity	Pick & Carry Cap. Up to 2.5 MPH
	Defined Arc (3) Over Front	360 Degree Arc	Boom Centered (7) Over Front
10	58,980 (a)	46,600 (a)	52,100 (a)
12	55,200 (a)	40,810 (a)	45,410 (a)
15	50,170 (a)	30,700 (a)	37,780 (a)
20	37,860 (a)	18,700 (b)	30,540 (a)
25	25,780 (b)	12,530 (c)	24,310 (a)
30	18,100 (c)	8,440 (d)	18,100 (b)
35	13,100 (c)	5,850 (e)	11,500 (c)
40	10,340 (d)	4,100 (f)	9,560 (d)
45	8,010 (f)	2,600 (g)	7,750 (e)
50	6,260 (g)	1,560 (h)	6,260 (f)
55	4,850 (g)		4,850 (f)
60	3,640 (h)		3,640 (g)
65	2,680 (h)		2,680 (h)
70	1,930 (i)		1,930 (h)

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### NOTES FOR RUBBER CAPACITIES

Maximum Permissible Boom Length:  
 (Power Pinned Fly Retracted)

- |            |            |
|------------|------------|
| (a) 34 ft. | (f) 62 ft. |
| (b) 38     | (g) 68     |
| (c) 44     | (h) 74     |
| (d) 50     | (i) 81     |
| (e) 56     |            |

- Capacities are in pounds and do not exceed 85% of tipping loads as determined by test in accordance with SAE J-765.
- Capacities are applicable to machine equipped with:

	Cold Inflation	2.5 MPH
21.00x25 (24 ply)	85 PSI	70 PSI
26.5x25 (26 ply)	80 PSI	65 PSI
29.5x25 (22 ply)	60 PSI	50 PSI

- Defined Arc - Over front includes  $\pm 6^\circ$  on either side of longitudinal centerline of machine (ref. drawing C6-829-003529.)
- Capacities are applicable only with machine on firm level surface.
- Axle lockouts must be functioning before lifting on rubber. (Check automatic lockout system for proper functioning: refer to "Operation and Maintenance Manual" for description of a proper functioning axle lockout system.)
- All rubber lifting depends on proper tire inflation, capacity and condition. Capacities must be reduced for lower tire inflation pressures. See lifting capacity chart for tire used. Damaged tires are hazardous to safe operation of crane.
- For pick and carry operation, boom must be centered over front of machine, mechanical swing lock engaged, and load restrained from swinging. When handling loads in the structural range with capacities close to maximum ratings, travel should be reduced to creep speeds.
- On rubber lifting with power pinned fly extended, boom extension, or jib is not permitted.
- Creep - not over 200 feet (61 meters) of movement in any 30-minute period, and not exceeding 1 mph (1.6 kph).

	Main Boom Fly Ext.	32 ft. Ext. & 104 ft.
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	Min. boom angle (deg.) for indicated length	0	0
Front (no load)	Max. boom length (ft.) at 0 deg. boom angle	104	136
360 deg. (no load)	Min. boom angle (deg.) for indicated length	51	62
	Max. boom length (ft.) at 0 deg. boom angle	68	80.5

### NOTES FOR LIFTING CAPACITIES

- Load ratings are based on freely suspended loads. No attempt shall be made to move a load horizontally on the ground in any direction.
- Rated loads do not account for wind on lifted load or boom. It is recommended when wind velocity is above 20 mph (32 km/h), rated loads and boom lengths shall be appropriately reduced.
- Rated loads are for lift crane service only.
- Do not operate at a radius or boom length where capacities are not listed. At these positions, the machine may overturn without any load on the hook.
- The maximum load which can be telescoped is not definable because of variations in loadings and crane maintenance, but it is safe to attempt retraction and extension within the limits of the capacity 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.
- For safe operation, the user shall make due allowances for his particular job conditions, such as: soft or uneven ground, out of level conditions, high winds, side loads, pendulum action, jerking or sudden stopping of loads, hazardous conditions, experience of personnel, two machine lifts, traveling with loads, electric wires, etc. Side pull on boom or jib is extremely dangerous.
- Power telescoping boom sections must be extended equally at all times.
- Handling of personnel from the boom is not authorized except with equipment furnished and installed by Grove Manufacturing Company.
- Keep load handling devices a minimum of 12 inches (30 cm) below boom head when lowering or extending boom.
- Loaded boom angles give an approximation of the operating radius at specified boom lengths. The boom angle before loading should be greater to account for deflection.
- Capacities appearing above the bold line are based on structural strength and tipping should not be relied upon as a capacity limitation.
- Capacities for the 34 ft. (10.3 m) boom length shall be lifted with boom fully retracted. If boom is not fully retracted, capacities shall not exceed those shown for the 38 ft. (11.6 m) boom length.
- For boom lengths less than 104 ft. (31.7 m) with power pinned fly extended, the rated loads are determined by boom angle in the column headed by 104 ft. (31.7 m) boom (power fly extended). For boom angles not shown, use rating of next lower boom angle. For this load column, the extended power pinned operational mode is to be selected on the Krueger L.M.I.\*
- For boom lengths less than 112 ft. (34.3 m) with power pinned fly retracted and 32 ft. (9.8 m) boom extension erected, the rated loads are determined by boom angle only in the column headed by 112 ft. (34.3 m) boom (power pinned fly retracted). For this load column the retracted power pinned fly plus 32 ft. (9.8 m) boom extension operational mode is to be selected on the Krueger L.M.I.\*
- For boom lengths less than 136 ft. (41.4 m) with power pinned fly extended and 32 ft. (9.8 m) boom extension erected the rated loads are determined by boom angle only in the column headed by 136 ft. (41.4 m) boom. For boom angles not shown use rating of next lower boom angle. For this load column, the 32 ft. (9.8 m) boom extension operational mode is to be selected on the Krueger L.M.I.\*

\*WARNING The Krueger L.M.I. readings are accurate only if all powered boom sections are fully extended.

#### DEFINITIONS:

- Operating 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 (Shown in Parenthesis on Main Boom Capacity Chart): is the angle between the boom base section and the horizontal, after lifting the rated load at the rated radius.
- Working Area: Areas measured in a circular arc about the center line of rotation as shown on the working area diagram.
- Freely Suspended Load: Load hanging free with no direct external force applied except by the lift cable.
- Side Load: Horizontal force applied to the lifted load either on the ground or in the air.



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**ON OUTRIGGERS FULLY EXTENDED - 360°**

Radius in Feet	Main Boom Length in Feet (Power Pinned Fly Retracted)										Power Pin. Fly & 81 ft.	32 ft. Ext. & 81 ft.	32 ft. Ext. & 104 ft.
	34	38	44	50	56	62	68	74	81	104			
10	80,000 (63.5)	73,750 (67)	69,950 (70.5)	68,200 (73)	63,350 (75)						See Warning Note 17	See Warning Note 18	See Warning Note 19
12	75,000 (60)	73,750 (63.5)	66,700 (67.5)	61,600 (70.5)	57,150 (73)	53,750 (75)							
15	62,000 (53.5)	62,000 (58.5)	58,050 (63.5)	54,000 (67)	51,000 (70)	46,650 (72)	43,850 (74)	40,850 (75.5)					
20	47,300 (42)	47,300 (49)	47,300 (55.5)	43,950 (60.5)	40,550 (64)	38,000 (67)	35,700 (69.5)	33,100 (71.5)	30,000 (74)				
25	36,000 (26)	36,000 (37.5)	36,000 (47)	36,000 (53.5)	34,050 (58)	31,800 (62)	29,900 (65)	27,500 (67)	25,200 (70)	21,800 (75.5)		17,500 (75.5)	
30		29,000 (21.5)	29,000 (37)	29,000 (46)	29,000 (52)	27,100 (56.5)	25,600 (60)	23,500 (63)	21,500 (66)	18,800 (72.5)	15,000 (74)		
35			23,800 (23.5)	23,800 (37)	23,800 (45)	23,500 (50.5)	22,250 (55)	20,350 (58.5)	18,650 (62)	16,400 (69.5)	13,200 (71.5)	10,050 (75.5)	
40	See Warning Note 18			19,200 (25.5)	19,200 (37)	19,200 (44)	19,200 (49.4)	17,800 (53.5)	16,200 (58)	14,500 (66.5)	12,300 (69)	9,010 (73.5)	
45					15,900 (26.5)	15,900 (36.5)	15,900 (43.5)	15,750 (48.5)	14,250 (53.5)	12,750 (63.5)	11,400 (66)	8,120 (71)	
50					13,150 (8)	13,150 (27.5)	13,150 (36.5)	13,150 (43)	12,600 (48.5)	11,300 (60.5)	10,200 (63)	7,370 (68.5)	
55						11,200 (13)	11,200 (28.5)	11,200 (36.5)	11,200 (43.5)	10,000 (57)	9,110 (60)	6,710 (66.5)	
60							9,560 (16.5)	9,560 (29)	9,560 (37.5)	9,060 (53.5)	8,200 (57)	6,150 (64)	
65								8,000 (19)	8,000 (31)	8,150 (50)	7,400 (54)	5,660 (61.5)	
70									6,670 (22.5)	7,360 (46)	6,700 (50.5)	5,230 (59)	
75										6,660 (42)	6,120 (47)	4,850 (56.5)	
80										6,040 (37)	5,600 (43)	4,500 (54)	
85										5,380 (32)	5,060 (39)	4,200 (51)	
90										4,450 (25.5)	4,500 (34.5)	3,900 (48)	
95										3,580 (17)	3,890 (29)	3,600 (45)	
100											3,260 (23.5)	3,300 (42)	
105											2,350 (16)	2,990 (38.5)	
110												2,700 (34.5)	
115												2,420 (30)	
120												2,160 (25)	
125												1,780 (18.5)	
Min. boom angle (deg.) for indicated length (no load)										0	0	0	0
Max. boom length (ft.) at 0 degree boom angle (no load)										81	104	112	136

NOTE: Boom angles are in degrees.

AG-829-004814B & -002135C

**GENERAL:**

- Rated loads 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 hazardous if improperly operated or maintained. Operation and maintenance of this machine shall 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 from the manufacturer 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.

**SETUP:**

- 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.
- For outrigger operation, outriggers shall be fully extended with tires raised free of crane weight before operating the boom or lifting loads.
- If machine is equipped with front jack cylinder, the front jack cylinder shall be set in accordance with written procedure.
- If machine is equipped with extendable counterweight, the counterweight shall be fully extended before operation.
- Tires shall be inflated to the recommended pressure before lifting on rubber.
- With certain boom and hoist tackle combinations, maximum capacities may not be obtainable with standard cable lengths.

**OPERATION:**

- Rated loads at rated radius shall not be exceeded. Do not tip the machine to determine allowable loads. For clamshell or concrete bucket operation, weight of bucket and load must not exceed 80% of rated lifting capacities.
- Rated loads do not exceed 85% of the tipping load as determined by SAE Crane Stability Test Code J-765a.
- Rated loads include the weight of hook block, slings and auxiliary lifting devices and their weights shall be subtracted from the listed ratings to obtain the net load to be lifted.

# RT740

40 TON CAPACITY  
34 ft. - 136 ft. BOOM  
(POWER PINNED FLY)  
PCSA CLASS 10-192  
85% OF TIPPING



## JIB CAPACITIES IN POUNDS

### 24 ft. "A" FRAME JIB

ON OUTRIGGERS - 360°

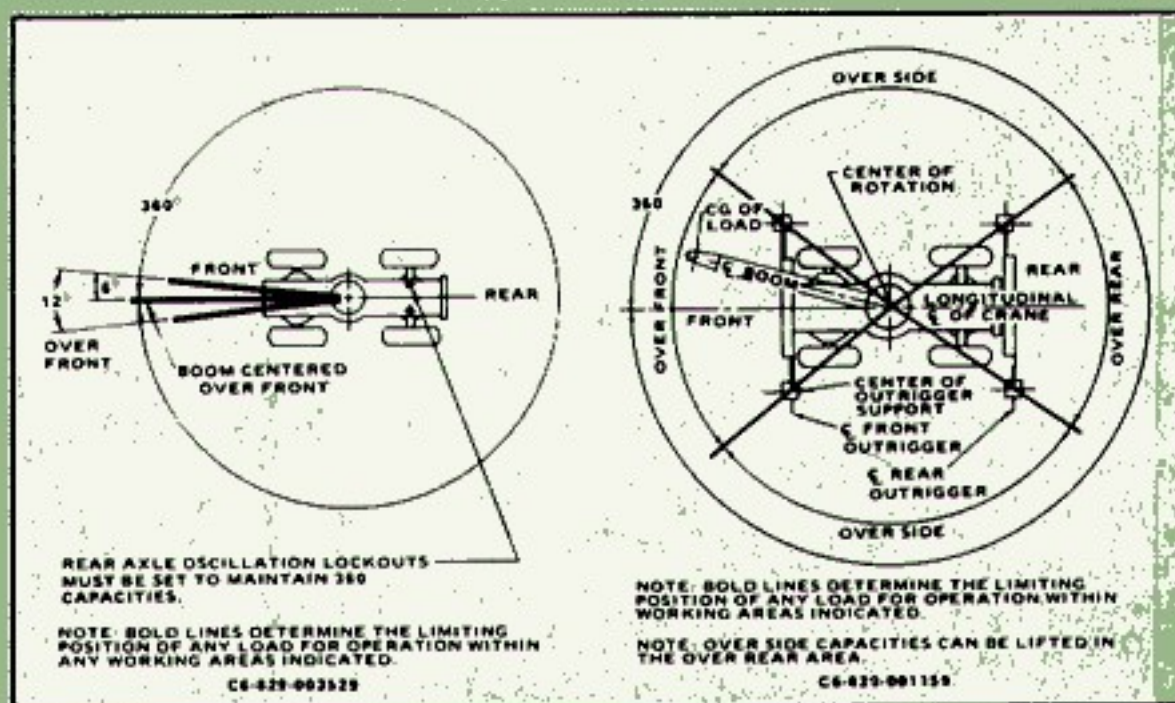
Boom Angle	5° Offset	17° Offset	30° Offset
76°	6,000	5,200	4,600
70	4,300	3,940	3,650
65	3,670	3,380	3,100
60	3,100	2,900	2,700
55	2,600	2,500	2,400
50	2,200	2,100	2,000

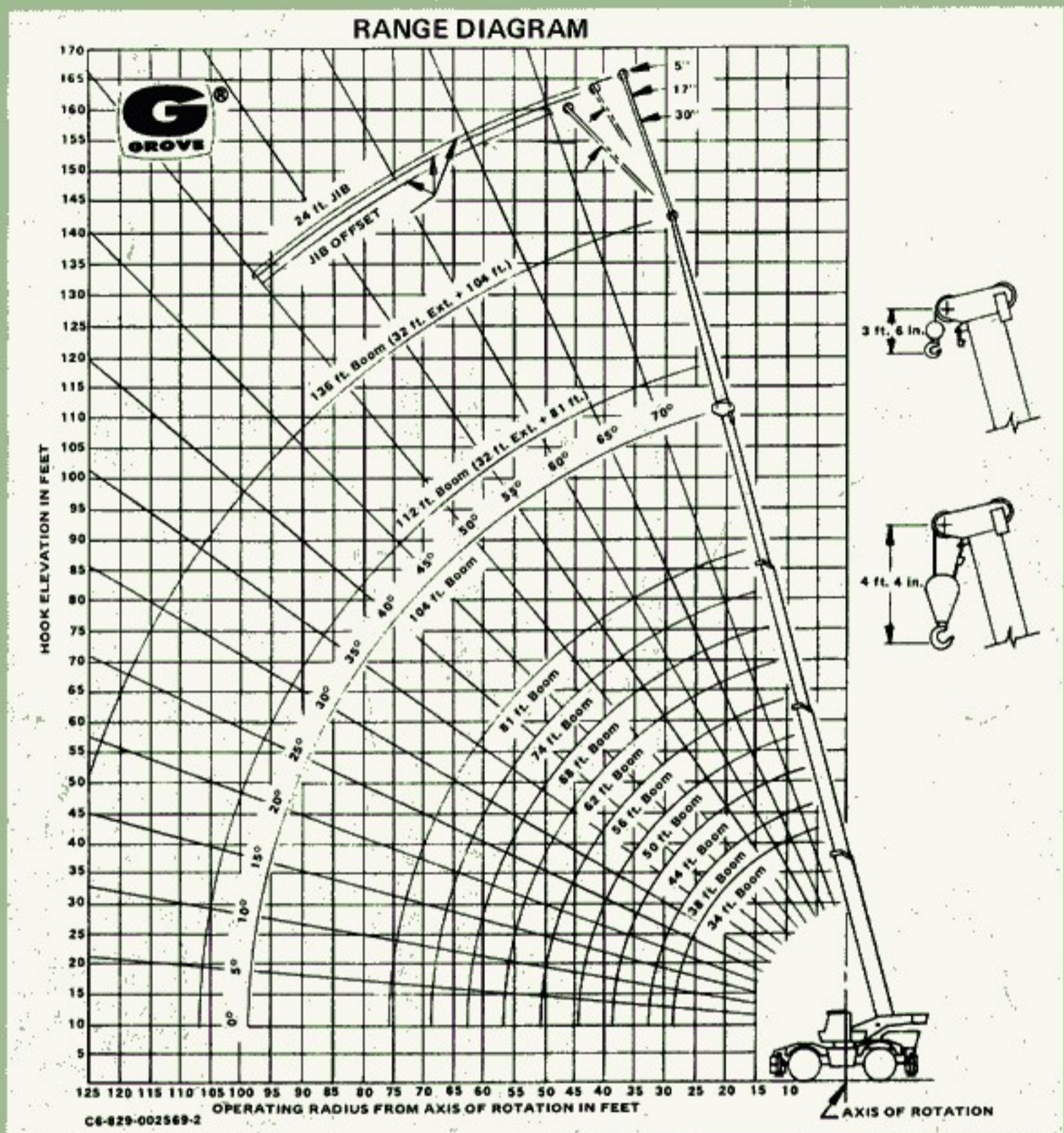
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## NOTES FOR JIB CAPACITIES

1. All capacities are in pounds. Capacities are based on structural strength of 24 ft. jib and 32 ft. boom extension combination at given main boom angle regardless of main boom length.
2. **WARNING:** Operation of machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with jib occurs rapidly and without advance warning.
3. **24 FT. JIB WARNING:** For main boom length greater than 80 ft. with 32 ft. boom extension and 24 ft. jib in working position, the boom angle must not be less than 45° since loss of stability will occur causing a tipping condition. The boom angle is not restricted for main boom length equal to or less than 80 ft. This warning applies for jib erection purposes also.
4. **WARNING:** Lifting on rubber with 32 ft. boom extension or 24 ft. jib and 32 ft. boom extension combination is prohibited.

## LIFTING AREA DIAGRAMS





### WEIGHT REDUCTION FOR LOAD HANDLING DEVICES

32 ft. BOOM EXTENSION	
†Stowed	475 lbs.
†Erected	2,888 lbs.
24 ft. Jib & 32 ft. Boom Ext. Combination	
†Stowed	602 lbs.
†Erected	6,922 lbs.
††Erected	1,682 lbs.

†Reduction of main boom capacities.  
 ††Reduction of 32 ft. Ext. capacities.

HOOK BLOCKS	
40 Ton, 3 Sheave	915 lbs.
15 Ton, 1 Sheave	310 lbs.
Auxiliary Boom Head	220 lbs.
5 Ton Headache Ball	150 lbs.
7 1/2 Ton Headache Ball	300 lbs.
10 Ton Headache Ball	500 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.



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