

32 ft. - 80 ft. FULL POWER BOOM

PCSA CLASS 12-99

RATED LIFTING CAPACITIES IN POUNDS

ON OUTRIGGERS FULLY EXTENDED - 360°

Radius in Feet	Main Boom Length in Feet									26 ft. Ext. + 80 ft. (2° Offset)
	*32	38	44	50	56	62	68	74	80	**106
12	50,000 (60.5)	50,000 (65.0)	50,000 (69.0)	44,900 (71.5)	40,500 (74.0)					
15	42,000 (54.0)	42,000 (60.0)	42,000 (64.5)	40,200 (68.0)	36,000 (70.5)	31,000 (73.0)	26,000 (74.5)			
20	30,000 (41.5)	30,000 (50.5)	30,000 (57.0)	30,000 (61.5)	30,000 (65.0)	24,500 (68.0)	23,000 (70.0)	21,500 (72.0)	20,000 (73.5)	
25	22,700 (25.0)	22,700 (39.5)	22,700 (48.5)	22,700 (54.5)	22,700 (59.0)	20,800 (62.5)	19,750 (65.5)	18,200 (68.0)	17,700 (70.0)	11,000 (75.0)
30		17,000 (25.0)	17,000 (39.0)	17,000 (47.0)	17,000 (53.0)	17,000 (57.5)	16,650 (60.5)	15,800 (63.5)	14,950 (66.0)	9,550 (73.0)
35			12,540 (26.5)	12,540 (38.5)	12,540 (46.0)	12,540 (51.5)	12,540 (55.5)	12,540 (59.0)	12,540 (62.0)	8,360 (70.0)
40				9,900 (27.5)	9,900 (38.0)	9,900 (45.0)	9,900 (50.5)	9,900 (54.5)	9,900 (57.5)	7,410 (67.0)
45					8,100 (28.5)	8,100 (38.0)	8,100 (44.5)	8,100 (49.5)	8,100 (53.0)	6,630 (64.0)
50					6,700 (13.5)	6,700 (29.5)	6,700 (38.0)	6,700 (44.0)	6,700 (48.5)	5,980 (61.0)
55						5,600 (17.0)	5,600 (30.0)	5,600 (37.5)	5,600 (43.0)	5,430 (57.5)
60							4,700 (19.5)	4,700 (30.5)	4,700 (37.5)	4,960 (54.0)
65								3,950 (21.0)	3,950 (30.5)	4,550 (50.5)
70									3,230 (22.0)	4,090 (47.0)
74									2,760 (11.0)	3,500 (44.0)
75										3,360 (43.0)
80										2,780 (38.5)
85										2,290 (34.0)
90										1,890 (28.5)
95										1,510 (21.5)
100										1,160 (9.5)
Min. Boom Angle (degrees) for Indicated Length (No Load)									0	0
Max. Boom Length (feet) at 0 degree Boom Angle (No Load)									80	106

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ON OUTRIGGERS FULLY EXTENDED

Radius in Feet	Main Boom Length in Feet					
	*32	38	44	50	56	62
12	50,000 (60.5)	50,000 (65.0)	50,000 (69.0)	44,900 (71.5)	40,500 (74.0)	
15	42,000 (54.0)	42,000 (60.0)	42,000 (64.5)	40,200 (68.0)	36,000 (70.5)	31,000 (73.0)
20	30,000 (41.5)	30,000 (50.5)	30,000 (57.0)	30,000 (61.5)	30,000 (65.0)	24,500 (68.0)
25	22,700 (25.0)	22,700 (39.5)	22,700 (48.5)	22,700 (54.5)	22,700 (59.0)	20,800 (62.5)
30		17,800 (25.0)	17,800 (39.0)	17,800 (47.0)	17,800 (53.0)	17,400 (57.5)
35			14,900 (26.5)	14,900 (38.5)	14,900 (46.0)	14,900 (51.5)
40				12,600 (27.5)	12,600 (38.0)	12,600 (45.0)
45					10,500 (28.5)	10,500 (38.0)
50					9,320 (13.5)	9,320 (29.5)
55						8,120 (17.0)
60						
65						
70						
74						
75						
80						
85						
90						
95						
100						
Min. Boom Angle (degrees) for Indicated Length (No Load)						
Max. Boom Length (feet) at 0 degree Boom Angle (No Load)						

ON RUBBER CAPACITIES

Radius in Feet	Stationary Capacity	Stationary Capacity	Stationary Capacity	2.5 MPH Capacity
	Boom Centered Over Front	Defined Arc (1) ± 6° Over Front	360° Arc	Boom Centered Over Front (6)
10	48,230 (a)	37,400 (a)	23,000 (b)	31,530 (a)
12	41,850 (b)	31,300 (a)	18,000 (c)	27,150 (a)
15	35,680 (b)	25,600 (b)	13,000 (d)	22,980 (a)
20	26,030 (c)	19,500 (e)	7,980 (e)	16,640 (a)
25	17,050 (e)	15,300 (e)	4,630 (h)	12,700 (b)
30	12,270 (e)	11,800 (f)	2,820	10,080 (b)
35	9,570 (f)	9,400 (f)	1,790	8,420 (c)
40	7,640 (f)	7,640 (f)	1,150	6,690 (d)
45	6,010	6,010		5,230 (f)
50	4,800	4,800		4,110 (f)
55	3,970	3,970		3,220 (f)
60	3,240	3,240		2,500 (g)
65	2,670	2,670		1,910 (h)
70	2,300	2,300		1,400
74	2,060	2,060		

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NOTES FOR ON RUBBER CAPACITIES

Maximum Permissible Boom Length:

- (a) 32 ft. (e) 56 ft.
 (b) 38 ft. (f) 62 ft.
 (c) 44 ft. (g) 68 ft.
 (d) 50 ft. (h) 74 ft.

FRONT	Minimum Boom Angle for Indicated Boom Length (No Load)
	Maximum Boom Length at 0° Boom Angle (No Load)
360°	Minimum Boom Angle for Indicated Boom Length (No Load)
	Maximum Boom Length at 0° Boom Angle (No Load)

- Defined Arc - Over front includes ±6° on either side of longitudinal centerline of m
- Capacities appearing above bold line are based on structural strength and tipping upon as a capacity limitation.
- Capacities do not exceed 85% of tipping as determined by test in accordance with Practice - Crane Load Stability Test Code - SAE J-765.
- Capacities are applicable only with machine on firm level surface.
- On rubber lifting with boom extensions not permitted.
- For 2.5 MPH (4 KPH) pick and carry operation, boom must be centered over mechanical swing lock engaged.
- Axle lockouts must be functioning properly before lifting on rubber. (Check out for proper functioning; refer to "Operation and Maintenance Manual" for d functioning axle lockout system).
- All lifting depends on proper tire inflation, capacity and condition. Chart based o ply tires, at 100 PSI cold inflation pressure. Capacities must be reduced for lower

FULL POWER BOOM

SA CLASS 12-99

GROVE®

FULL HYDRAULIC

SELF-PROPELLED CRANE

CAPACITIES IN POUNDS

ON OUTRIGGERS FULLY EXTENDED - OVER FRONT

Radius in Feet	Main Boom Length in Feet									26 ft. Ext. + 80 ft. (2° Offset)
	*32	38	44	50	56	62	68	74	80	**106
12	50,000 (60.5)	50,000 (65.0)	50,000 (69.0)	44,900 (71.5)	40,500 (74.0)					
15	42,000 (54.0)	42,000 (60.0)	42,000 (64.5)	40,200 (68.0)	36,000 (70.5)	31,000 (73.0)	26,000 (74.5)			
20	30,000 (41.5)	30,000 (50.5)	30,000 (57.0)	30,000 (61.5)	30,000 (65.0)	24,500 (68.0)	23,000 (70.0)	21,500 (72.0)	20,000 (73.5)	
25	22,700 (25.0)	22,700 (39.5)	22,700 (48.5)	22,700 (54.5)	22,700 (59.0)	20,800 (62.5)	19,750 (65.5)	18,200 (68.0)	17,700 (70.0)	11,000 (75.0)
30		17,800 (25.0)	17,800 (39.0)	17,800 (47.0)	17,800 (53.0)	17,400 (57.5)	16,650 (60.5)	15,800 (63.5)	14,950 (66.0)	9,550 (73.0)
35			14,900 (26.5)	14,900 (38.5)	14,900 (46.0)	14,900 (51.5)	14,200 (55.5)	13,700 (59.0)	12,900 (62.0)	8,360 (70.0)
40				12,600 (27.5)	12,600 (38.0)	12,600 (45.0)	12,600 (50.5)	12,000 (54.5)	11,400 (57.5)	7,410 (67.0)
45					10,500 (28.5)	10,500 (38.0)	10,500 (44.5)	10,500 (49.5)	10,100 (53.0)	6,630 (64.0)
50					9,320 (13.5)	9,320 (29.5)	9,320 (38.0)	9,320 (44.0)	9,050 (48.5)	5,980 (61.0)
55						8,120 (17.0)	8,120 (30.0)	8,120 (37.5)	8,120 (43.0)	5,430 (57.5)
60							7,120 (19.5)	7,120 (30.5)	7,120 (37.5)	4,960 (54.0)
65								6,260 (21.0)	6,260 (30.5)	4,550 (50.5)
70									5,530 (22.0)	4,200 (47.0)
74									4,800 (11.0)	3,950 (44.0)
75										3,880 (43.0)
80										3,610 (38.5)
85										3,360 (34.0)
90										3,140 (28.5)
95										2,950 (21.5)
100										2,500 (9.5)
Min. Boom Angle (degrees) for Indicated Length (No Load)									0	0
Max. Boom Length (feet) at 0 degree Boom Angle (No Load)									80	106

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NOTES FOR LIFTING CAPACITIES

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 crane operations shall fully acquaint themselves with the standard safety code for cranes, derricks, and hoists, ANSI B30.5.

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.
- Outriggers beams shall be fully extended and jack cylinders set with tires raised free of crane weight before extending the boom or lifting loads. Front jack cylinder shall be set in accordance with written procedure.
- Counterweight shall be fully extended before operation.
- Tires shall be inflated to the recommended pressure before lifting on rubber.

OPERATION:

- Rated loads at rated radius shall not be exceeded. Do not tip the machine to determine allowable loads.
- Rated loads do not exceed 85% of the tipping load as determined by S.A.E. 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.
- Load ratings are based on freely suspended loads. No attempt shall be made to move a load horizontally on the ground in any direction.
- When wind velocity is above 20 MPH (32 Km/h), rated loads shall be reduced.
- Rated loads are for liftcrane service only.
- Do not operate at a radius or boom length where capacities are not listed. At these positions, the machine may over turn 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 bold line are based on structural strength and tipping should not be relied upon as a capacity limitation.
- Do not exceed any rated load when lifting regardless of whether it is based on structural strength or stability.
- Capacities for the 32 ft. (9.9m) 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. (11.6m) boom length.
- For boom lengths less than 106 ft. (32.2m) with 26 ft. (8.0m) boom extension erected, the rated loads are determined by boom angle only in the column headed by 106 ft. (32.2m). For boom angles not shown, use rating of next lower boom angle. (For Krueger L.M.I. option - when using 26 ft. (8.0m) boom extension, the Krueger L.M.I. rating will apply for full boom extension only).

DEFINITIONS:

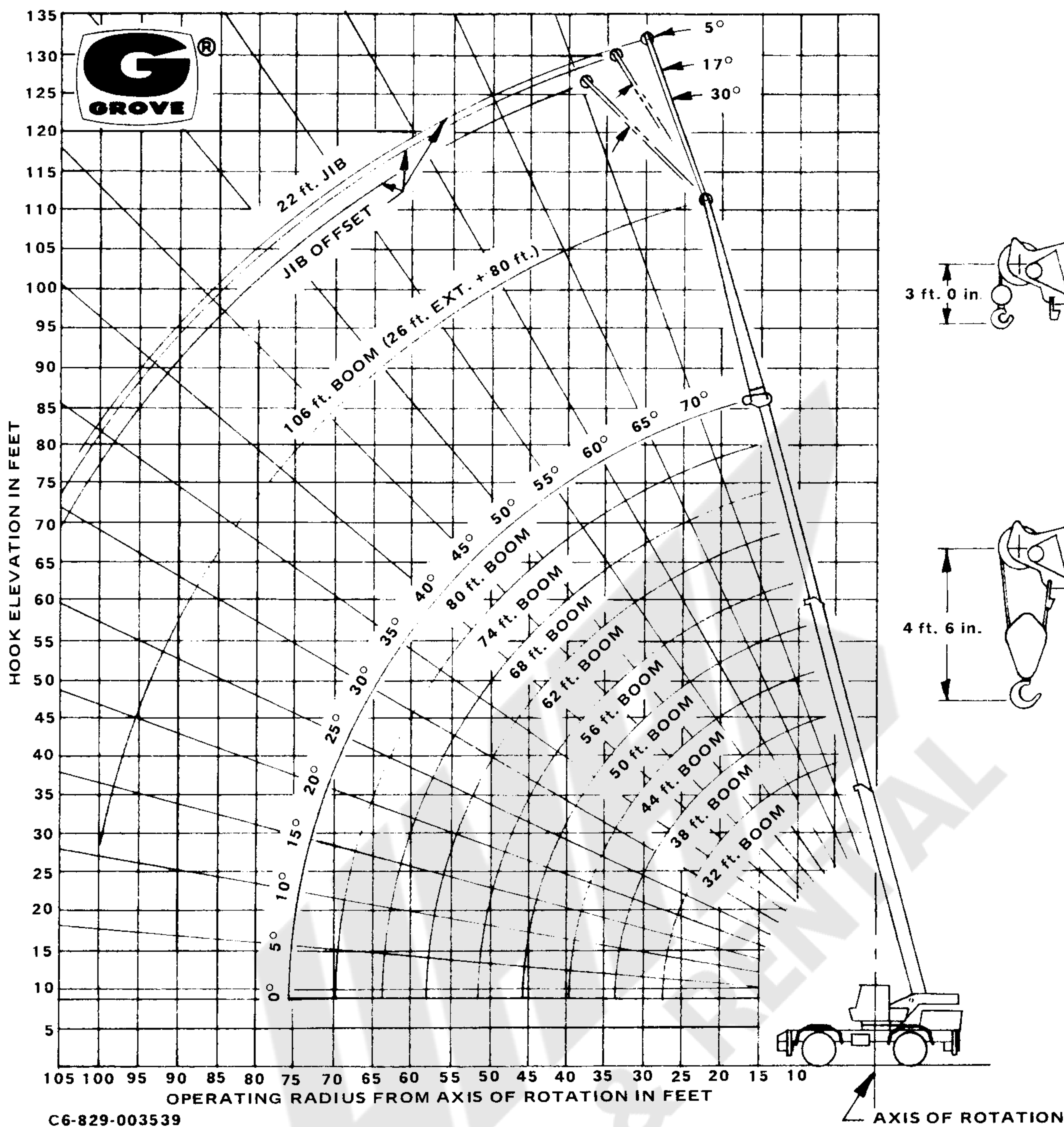
- Operating Radius: Horizontal distance from a projection of the axis of rotation to the supporting surface before loading to the center of the vertical hoist line or tackle with load applied.
- Loaded Boom Angle: is the angle between the boom base section and the horizontal, after lifting the rated 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.

NOTES FOR ON RUBBER CAPACITIES

	Main Boom 80 ft.	Main Boom + 26 ft. Ext.
FRONT		
	Minimum Boom Angle for Indicated Boom Length (No Load)	0°
	Maximum Boom Length at 0° Boom Angle (No Load)	80 ft. 106 ft.
360°		
	Minimum Boom Angle for Indicated Boom Length (No Load)	45°
	Maximum Boom Length at 0° Boom Angle (No Load)	52.3 ft. 65.6 ft.

Over front includes ±6° on either side of longitudinal centerline of machine.
 Bearing above bold line are based on structural strength and tipping should not be relied upon as a capacity limitation.
 Do not exceed 85% of tipping as determined by test in accordance with SAE Recommended Practice Load Stability Test Code - SAE J-765.
 Applicable only with machine on firm level surface.
 Lifting with boom extensions not permitted.
 For 4 KPH pick and carry operation, boom must be centered over front of machine and outrigger lock engaged.
 Outriggers must be functioning properly before lifting on rubber. (Check automatic lockout system before operation; refer to "Operation and Maintenance Manual" for description of a proper automatic lockout system).
 Capacities depend on proper tire inflation, capacity and condition. Chart based on 16 x 25 (28 ply) bias ply tires at 80 PSI cold inflation pressure. Capacities must be reduced for lower tire inflation pressures.

RANGE DIAGRAM



WEIGHT REDUCTION FOR LOAD HANDLING DEVICES

26 ft. BOOM EXTENSION	
† Stowed	- 461 lbs.
† Erected	- 1,850 lbs.
22 ft. Jib & 26 ft. Boom Ext. Combination	
† Stowed	- 704 lbs.
+ Erected	- 4,260 lbs.
†† Erected	- 1,115 lbs.
22 ft. Jib Only Stowed on Base Section	
† Stowed	- 243 lbs.

† Reduction of main boom capacities.
 †† Reduction of 26 ft. Ext. capacities.

HOOK BLOCK	
25 Ton, 3 Sheave 516 lbs.
25 Ton, 4 Sheave 561 lbs.
Auxiliary Boom Head 110 lbs.
5 Ton Headache Ball 150 lbs.
7½ Ton Headache Ball 300 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.



GROVE MANUFACTURING COMPANY
 Division of Walter Kidde & Company Inc.
KIDDE

Box 21 SHADY GROVE, PENNA. 17256

Distributed by:

GROVE®

FULL HYDRAULIC

SELF-PROPELLED CRANE

JIB CAPACITIES IN POUNDS 22 ft. JIB and 26 ft. EXT. Combination ON OUTRIGGERS - 360°

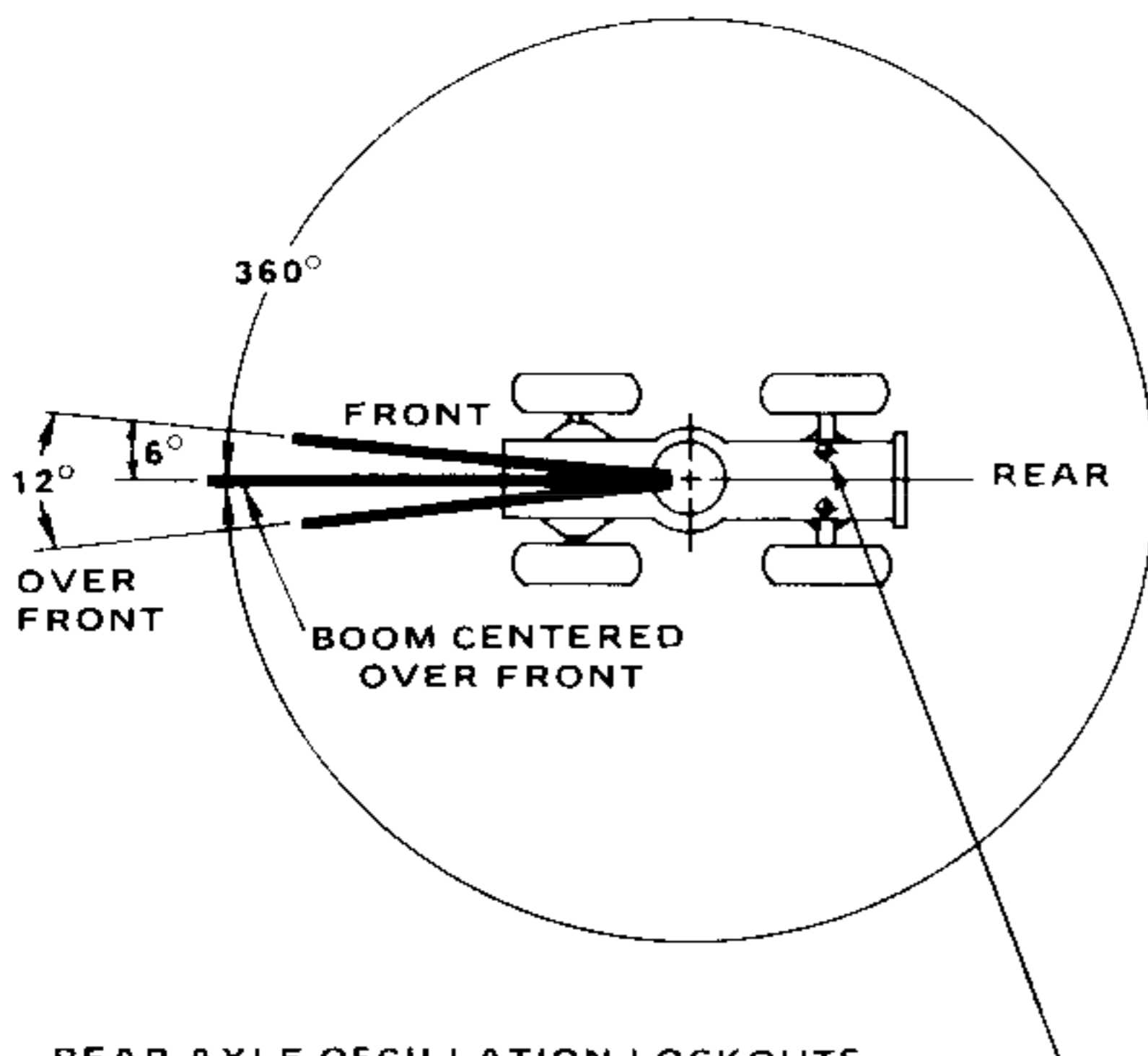
Main Boom Angle	5° OFFSET		17° OFFSET		30° OFFSET	
	Ref. Radius		Ref. Radius		Ref. Radius	
75°	37.4	6,500	41.5	6,000	46.3	5,000
70	44.9	5,200	49.3	4,800	53.5	4,400
65	54.9	4,200	59.1	4,000	62.7	3,700
60	64.4	3,370	68.4	3,300	71.3	3,100
55	73.5	2,690	77.2	2,600	79.5	2,600
50	81.9	2,060	85.3	1,950	87.0	1,850
45	89.8	1,710	92.8	1,610	93.8	1,590
40	96.9	1,300	99.7	1,300	100.0	1,300
35	103.3	1,000	105.7	1,000	105.3	1,000

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NOTES FOR JIB CAPACITIES

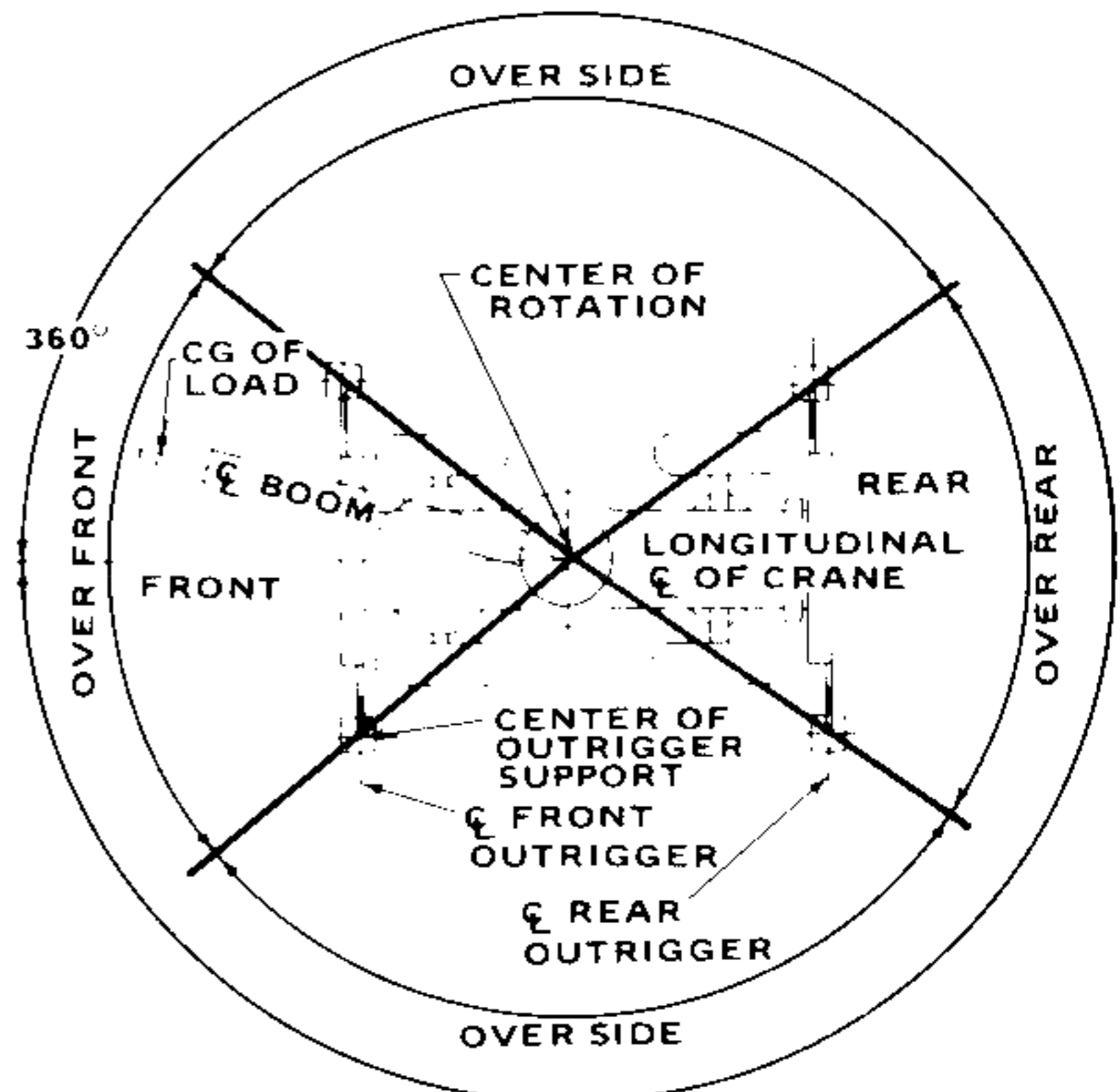
1. All capacities are in pounds. 22 ft. jib and 26 ft. boom extension combination may be used for single line lifting crane service only. Capacities are based on structural strength of 22 ft. and 26 ft. boom extension combination at given main boom angle regardless of main boom length. When lifting with 22 ft. jib and 26 ft. boom extension, capacities must not exceed structural capacity of jib combination at given main boom angle or stability capacity of applicable boom length listed in boom capacity chart for actual working radius, whichever is less.
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. Maximum total length of boom including 26 ft. boom extension for purpose of erecting 22 ft. jib below 10° elevation is 100 ft.
4. **22 ft. JIB WARNING:** For total boom length including 26 ft. boom extension greater than 100 ft. with 22 ft. jib in working position the boom angle must not be less than 30° since loss of stability will occur causing a tipping condition.

LIFTING AREA DIAGRAMS



REAR AXLE OSCILLATION LOCKOUTS MUST BE SET TO MAINTAIN 360° CAPACITIES.

NOTE: BOLD LINES DETERMINE THE LIMITING POSITION OF ANY LOAD FOR OPERATION WITHIN ANY WORKING AREAS INDICATED.



NOTE: BOLD LINES DETERMINE THE LIMITING POSITION OF ANY LOAD FOR OPERATION WITHIN WORKING AREAS INDICATED.

NOTE: OVER SIDE CAPACITIES CAN BE LIFTED IN THE OVER REAR AREA.