

RT875

75 TON CAPACITY

36 ft. - 114 ft. BOOM

(FULL POWER)

PCSA CLASS 10-330

85% OF TIPPING - ON OUTRIGGERS

75% OF TIPPING - ON RUBBER

LIFTING CAPACITIES FOR

33' FIXED OFFSET EXTENSION

(ON OUTRIGGERS - 360°)

Main Boom Angle	2° OFFSET		15° OFFSET		30° OFFSET	
	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.
80°	24.8	23,000	30.4	15,700	37.9	11,500
75	36.9	17,250	42.3	12,150	49.3	9,430
70	48.6	14,300	53.9	9,780	60.3	7,940
65	59.9	11,650	65.1	8,100	70.8	6,810
60	70.8	9,640	75.7	6,860	80.8	5,940
55	81.1	7,940	85.7	5,920	90.1	5,250
50	90.8	6,350	95.1	5,190	98.7	4,700
45	99.8	4,550	103.7	3,860	106.5	3,410
40	108.0	3,210	111.5	2,690	113.4	2,420
35	115.3	2,180	118.4	1,790	119.4	1,650

A6-829-007805

NOTES FOR LIFTING WITH THE

33' FIXED OFFSET EXTENSION OR

33'-58' TELE. BOOM EXTENSION

1.

All capacities above the bold line are based on structural strength of boom extension and do not exceed 85% of tipping loads, in accordance with SAE J-765a.
2.

33 ft. (10.0 m), 48 ft. (14.6 m) and 58 ft. (17.7 m) boom extension lengths may be used for double line lifting service only.
3.

Rated load is based on loaded main boom angle with reference to horizontal, regardless of main boom length. (Ref. radius is for fully extended boom length only).
WARNING: Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.
4.

Capacities listed are with fully extended outriggers only.
5.

WARNING: The Krueger L.M.I. will not compensate for reeving/rigging accessories on the main boom nose or auxiliary boom nose when programmed to monitor the boom extension. Remove all reeving/rigging accessories from main boom when using boom extension.
6.

*WARNING FOR 33 FT. (10.0 m) BOOM EXTENSION: For main boom length greater than 96 ft. (29.3 m) with 33 ft. (10.0 m) fixed length boom extension or tele. boom extension in working position, the boom angle must not be less than 30° 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 96 ft. (29.3 m).
*WARNING FOR 48 FT. (14.6 m) BOOM EXTENSION: For main boom length greater than 87 ft. (26.5 m) with 48 ft. (14.6 m) tele. boom extension in working position, the boom angle must not be less than 33° 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 87 ft. (26.5 m).
*WARNING FOR 58 FT. (17.7 m) BOOM EXTENSION: For main boom length greater than 87 ft. (26.5 m) with 58 ft. (17.7 m) tele. boom extension in working position, the boom angle must not be less than 35° 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 87 ft. (26.5 m).
*This warning also applies for boom extension erection purposes.

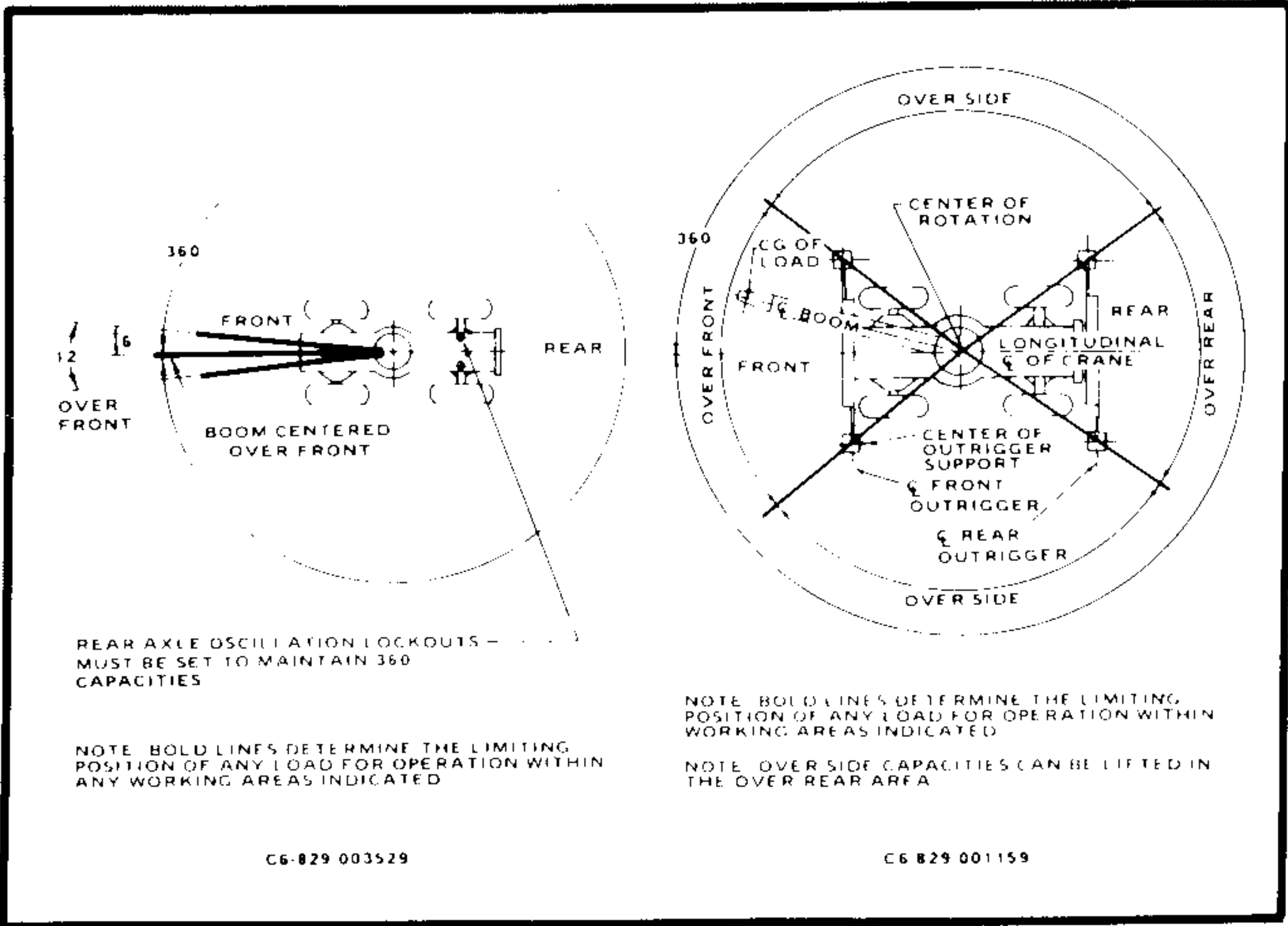
LIFTING CAPACITIES FOR THE 33'-58' TELE. BOOM EXTENSION

(ON OUTRIGGERS - 360°)

Main Boom Angle	33 ft. LENGTH						48 ft. LENGTH						58 ft. LENGTH					
	2° OFFSET		15° OFFSET		30° OFFSET		2° OFFSET		15° OFFSET		30° OFFSET		2° OFFSET		15° OFFSET		30° OFFSET	
	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.	Rad. Ref. ft.	Cap. lbs.
80°	24.8	22,500	30.4	15,150	37.9	10,950	28.1	15,500	37.9	10,000	47.8	7,140	31.0	10,300	43.2	7,780	54.4	5,530
75	36.9	16,700	42.3	11,600	49.3	8,890	41.4	11,250	51.0	7,840	60.3	5,890	45.2	8,840	56.9	6,130	67.4	4,590
70	48.6	13,750	53.9	9,240	60.3	7,400	54.4	8,530	63.6	6,300	72.2	4,950	59.1	6,760	70.2	4,960	79.9	3,870
65	59.9	11,100	65.1	7,560	70.8	6,270	67.0	6,720	75.8	5,190	83.6	4,220	72.5	5,350	82.9	4,100	91.7	3,300
60	70.8	9,100	75.7	6,320	80.8	5,400	79.0	5,440	87.3	4,350	94.3	3,640	85.3	4,340	95.1	3,440	102.9	2,860
55	81.1	7,400	85.7	5,380	90.1	4,710	90.4	4,500	98.2	3,700	104.3	3,190	97.5	3,590	106.4	2,920	113.2	2,500
50	90.8	5,580	95.1	4,650	98.7	3,980	101.2	3,790	108.3	3,200	113.5	2,820	108.9	3,020	117.0	2,520	122.6	2,210
45	99.8	3,780	103.7	3,110	106.5	2,660	111.1	3,240	117.6	2,340	121.7	1,830	119.5	2,580	126.6	2,060	131.0	1,580
40	108.0	2,430	111.5	1,920	113.4	1,660	120.1	2,020	125.9	1,340	129.0	1,000	129.1	1,790	135.2	1,170		
35	115.3	1,410	118.4	1,020			128.2	1,090										

A6-829-007858

LIFTING AREA DIAGRAM





ON OUTRIGGERS FULLY EXTENDED - 360°

Radius in Feet	Main Boom Length in Feet									
	36	42	51	60	69	78	87	96	105	114
10	150,000 (67)	106,700 (70.5)	101,600 (74)	100,000 (77)	96,700 (79)					
12	120,000 (63)	106,700 (67.5)	101,600 (71.5)	96,500 (75)	87,850 (77)	84,700 (79)				
15	103,450 (57.5)	103,450 (63)	95,300 (68)	84,900 (72)	79,200 (74.5)	77,550 (77)	64,500 (79)			
20	80,650 (47)	80,650 (54.5)	80,650 (61.5)	70,550 (66.5)	64,350 (70)	63,800 (73)	55,000 (75.5)	51,900 (77)	48,450 (78.5)	38,750 (80)
25	62,200 (34)	62,200 (45.5)	62,200 (55)	60,150 (61)	54,000 (65.5)	49,700 (69)	45,600 (72)	43,600 (74)	41,300 (76)	34,000 (77)
30		48,450 (34)	48,450 (47.5)	48,450 (55.5)	46,650 (61)	42,750 (65)	39,150 (68.5)	38,400 (71)	35,350 (73)	30,300 (74.5)
35	See Warning Note 16	39,500 (16.5)	39,500 (39)	39,500 (49.5)	39,500 (56)	37,300 (61)	34,050 (64.5)	32,700 (67.5)	30,700 (70)	27,250 (72)
40			33,050 (28.5)	33,050 (42.5)	33,050 (50.5)	32,900 (56.5)	29,550 (61)	28,850 (64.5)	27,000 (67)	24,750 (69)
45				26,350 (34.5)	26,350 (45)	26,350 (51.5)	26,350 (57)	25,650 (61)	23,900 (64)	22,650 (66.5)
50				21,400 (24)	21,400 (38.5)	21,400 (46.5)	21,400 (52.5)	21,400 (57.5)	21,350 (61)	20,800 (63.5)
60					14,900 (20)	14,900 (35)	14,900 (43.5)	14,900 (49.5)	14,900 (54)	14,900 (57.5)
70							10,950 (32)	10,950 (40.5)	10,950 (46.5)	10,950 (51)
80							7,620 (12.5)	7,620 (29.5)	7,620 (38)	7,620 (44)
90									5,150 (27)	5,150 (35.5)
100										3,240 (24.5)
Minimum boom angle (deg.) for indicated length (no load)										0
Maximum boom length (ft.) at 0 deg. boom angle (no load)										114

NOTE: Boom angles are in degrees. A6-829-007493 & -007501

ON RUBBER CAPACITIES
33.25x29 (26PR) 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	88,000 (a)	56,000 (a)	87,000 (a)
12	77,500 (a)	48,000 (a)	76,000 (a)
15	64,300 (a)	38,400 (a)	63,500 (a)
20	49,400 (a)	23,250 (a)	49,400 (a)
25	37,850 (b)	15,550 (b)	37,850 (a)
30	27,500 (b)	10,900 (b)	27,500 (b)
35	20,650 (c)	7,610 (c)	17,750 (b)
40	15,950 (d)	5,300 (d)	14,450 (c)
45	12,500 (d)	3,570 (d)	11,800 (d)
50	9,920 (e)	2,210 (e)	9,670 (d)
60	6,210 (f)		6,210 (e)
70	3,700 (g)		3,700 (g)
80	1,890 (h)		1,890 (h)

A6-829-007815

- Maximum Boom Length
- (a) 36 ft.
(b) 42 ft.
(c) 51 ft.
(d) 60 ft.
1. Capacities do not include weight of boom.
2. Capacities are for tires inflated to 30 psi.
3. Defined Arc is for boom angle of 30°.
4. Capacities are for boom angle of 30°.
5. Axle lockout system must be functioning.
6. All rubber limit switches must be functioning.
7. For pick & carry operation, maximum rated load must be used.
8. On rubber limit switches, creep is not allowed.

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36 ft. - 114 ft. BOOM
(FULL POWER)

PCSA CLASS 10-330
85% OF TIPPING - ON OUTRIGGERS
75% OF TIPPING - ON RUBBER

RATED LIFTING CAPACITIES IN POUNDS

ON OUTRIGGERS FULLY EXTENDED - OVER FRONT

Radius in Feet	Main Boom Length in Feet									
	36	42	51	60	69	78	87	96	105	114
10	150,000 (67)	106,700 (70.5)	101,600 (74)	100,000 (77)	96,700 (79)					
12	120,000 (63)	106,700 (67.5)	101,600 (71.5)	96,500 (75)	87,850 (77)	84,700 (79)				
15	103,450 (57.5)	103,450 (63)	95,300 (68)	84,900 (72)	79,200 (74.5)	77,550 (77)	64,500 (79)			
20	80,650 (47)	80,650 (54.5)	80,650 (61.5)	70,550 (66.5)	64,350 (70)	63,800 (73)	55,000 (75.5)	51,900 (77)	48,450 (78.5)	38,750 (80)
25	62,200 (34)	62,200 (45.5)	62,200 (55)	60,150 (61)	54,000 (65.5)	49,700 (69)	45,600 (72)	43,600 (74)	41,300 (76)	34,000 (77)
30		48,450 (34)	48,450 (47.5)	48,450 (55.5)	46,650 (61)	42,750 (65)	39,150 (68.5)	38,400 (71)	35,350 (73)	30,300 (74.5)
35	See Warning Note 16	39,500 (16.5)	39,500 (39)	39,500 (49.5)	39,500 (56)	37,300 (61)	34,050 (64.5)	32,700 (67.5)	30,700 (70)	27,250 (72)
40			34,400 (28.5)	34,400 (42.5)	34,400 (50.5)	32,900 (56.5)	29,550 (61)	28,850 (64.5)	27,000 (67)	24,750 (69)
45				29,250 (34.5)	29,250 (45)	29,250 (51.5)	26,550 (57)	25,650 (61)	23,900 (64)	22,650 (66.5)
50				25,750 (24)	25,750 (38.5)	25,750 (46.5)	23,750 (52.5)	22,700 (57.5)	21,350 (61)	20,800 (63.5)
60					18,900 (20)	18,900 (35)	18,900 (43.5)	18,400 (49.5)	17,850 (54)	17,450 (57.5)
70							13,800 (32)	13,800 (40.5)	13,800 (46.5)	13,800 (51)
80							10,100 (12.5)	10,100 (29.5)	10,100 (38)	10,100 (44)
90									7,290 (27)	7,290 (35.5)
100										5,070 (24.5)
Minimum boom angle (deg.) for indicated length (no load)										0
Maximum boom length (ft.) at 0 deg. boom angle (no load)										114

NOTE: Boom angles are in degrees.

A6-829-007486 & -007501

NOTES FOR RUBBER CAPACITIES

		Main Boom 114 ft.
Front (No Load)	Min. boom angle (deg.) for indicated length	38
	Max. boom length (ft.) at 0 deg. boom angle	87
360° (No Load)	Min. boom angle (deg.) for indicated length	58
	Max. boom length (ft.) at 0 deg. boom angle	60

not exceed 75% of tipping loads as determined by test in accordance with SAE J-765.
applicable to machines equipped with 33.25x29 (26 PR) bias ply tires, at 65 PSI cold
ure (50 PSI for 2.5 mph pick & carry capacities).
Over front includes +6° on either side of longitudinal centerline of machine.
applicable only with machine on firm level surface.
must be functioning before lifting on rubber. (Check automatic lockout system for proper
refer to "Operation and Maintenance Manual" for description of a proper functioning axle
n.)
ing depends on proper tire inflation, capacity and condition. Capacities must be reduced for
ation pressures. See lifting capacity chart for tire used. Damaged tires are hazardous to safe
ane.
arry operation, boom must be centered over front of machine, mechanical swing lock engaged,
ained from swinging. When handling loads in the structural range with capacities close to
ngs, travel should be reduced to creep speeds.
ing with power pinned fly extended, boom extension or jib is not permitted.
er 200 ft. (61 m) of movement in any 30 minute period, and not exceeding 1 mph (1.6 kph).

GROVE®

FULL HYDRAULIC SELF-PROPELLED CRANE

NOTES FOR LIFTING CAPACITIES

GENERAL:

1. Rated loads as shown on capacity chart pertain to this crane as originally manufactured and equipped. Modifications to the crane or use of optional equipment other than that specified can result in a reduction of capacity. Use only the jib or boom extension supplied with this crane, do not substitute jibs or boom extensions without the written approval of Grove Mfg. Co.
2. Construction equipment can be hazardous if improperly operated or maintained. Operation and maintenance shall be in compliance with the information in the Operator's and Safety Handbooks, Service and Parts Manuals supplied with this crane. If these manuals are missing, order replacements from the manufacturer.
3. The operator and other personnel associated with this crane shall fully acquaint themselves with the latest applicable American National Standards Institute (ANSI) Safety Standards for cranes.

SETUP:

1. The crane shall be leveled on a firm supporting surface. Depending on the nature of the supporting surface, it may be necessary to have structural supports of sufficient strength under the outrigger floats or tires to spread the load to a larger bearing surface.
2. For outrigger operation, outriggers shall be fully extended with tires raised free of crane weight before operating the boom or lifting loads.
3. When equipped with front jack cylinder, the front jack cylinder shall be set in accordance with the written procedure.
4. When equipped with extendable counterweight, the counterweight shall be fully extended before operation.
5. Tires shall be inflated to the recommended pressure before lifting on rubber.
6. With certain boom and hoist tackle combinations, maximum capacities may not be obtainable with standard cable lengths.
7. Rotation resistant wire rope is best suited for single line lifting operations. Consult the wire rope manufacturer for specific recommendations concerning multiple part reeving.
8. Do not transport crane with boom extension or jib erected.

OPERATION:

1. Rated loads at rated radius shall not be exceeded. Do not tip the machine to determine allowable loads. For clamshell operation, weight of load must not exceed 80% of rated lifting capacities.
2. All rated loads have been tested to and meet minimum requirements of SAE J-1063 - Cantilevered Boom Crane Structures - Method of Test, and do not exceed 85% of the tipping load as determined by SAE J-765a Crane Stability Test Code.
3. Rated loads include the weight of hook block, slings and auxiliary lifting devices and their combined weights shall be subtracted from the listed ratings to obtain the net load which may be lifted.
4. Load ratings are based on freely suspended loads. No attempt shall be made to move a load horizontally on the ground in any direction.
5. 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 be appropriately reduced.
6. Rated loads are for lift crane service only.
7. Do not operate at a radius or boom length where capacities are not listed. At these positions, the crane may overturn without any load on the hook.
8. 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.
9. 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.
10. 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.
11. Power telescoping boom sections must be extended equally at all times.
12. Handling of personnel from the boom is not authorized except with equipment furnished and installed by Grove Manufacturing Company.
13. Keep load handling devices a minimum of 18 inches (45.7 cm) below boom head at all times.
14. The boom angle before loading should be greater than the loaded boom angle to account for deflection.
15. Capacities appearing above the bold line are based on structural strength and tipping should not be relied upon as a capacity limitation.
16. Capacities for the 36 ft. (11.0 m) boom length shall be lifted with boom fully retracted. If boom is not fully retracted, capacities shall not exceed those shown for the 42 ft. (12.8 m) boom length.

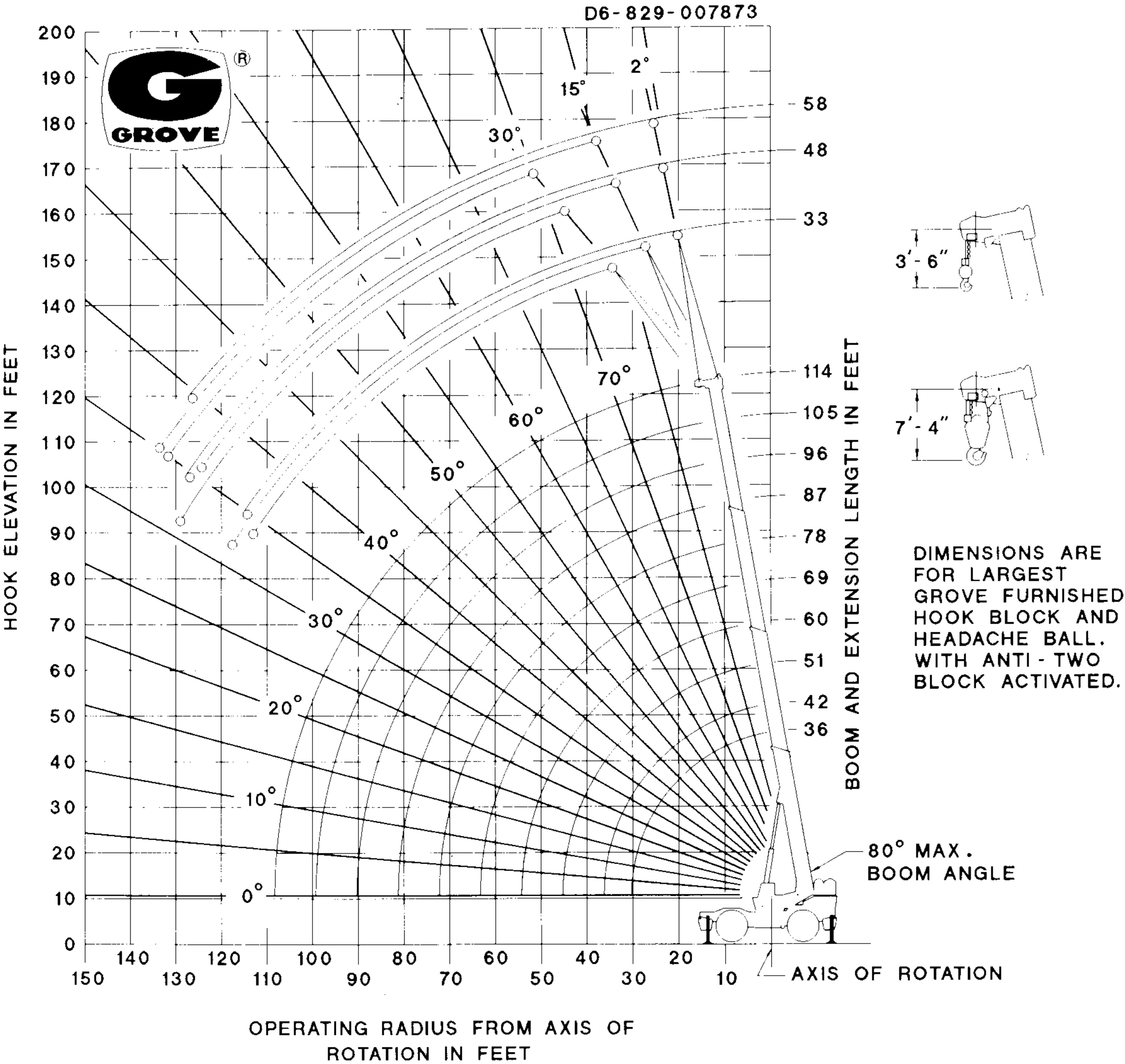
DEFINITIONS:

1. 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.
2. 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 with the rated boom length.
3. Working Area: Areas measured in a circular arc about the center line of rotation as shown on the working area diagram.
4. Freely Suspended Load: Load hanging free with no direct external force applied except by the lift cable.
5. Side Load: Horizontal force applied to the lifted load either on the ground or in the air.

GROVE[®]

RT875

RANGE DIAGRAM



WEIGHT REDUCTION FOR LOAD HANDLING DEVICES

33 ft. Fixed Offset Extension	
†Stowed	785 lbs.
†Erected	6,267 lbs.
33 ft. - 58 ft. Tele. Boom Extension	
†Stowed	1,084 lbs.
†Erected (Retracted)	9,322 lbs.
†Erected (Extended)	12,860 lbs.

HOOKBLOCK	
75 Ton, 6 Sheave	1,930 lbs.
15 Ton, 1 Sheave	580 lbs.
10 Ton Headache Ball	500 lbs.
7-1/2 Ton Headache Ball	300 lbs.
Auxiliary Boom Head	220 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.