

GROVE®
worldwide

LOAD CHARTS
TM890

85% STABILITY

76822
SERIAL NUMBER

NOTES FOR LIFTING CAPACITIES

GENERAL

1. 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.
2. 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 and Safety Handbook, Service Manual and Parts Manual supplied with this machine. If these manuals are missing, order replacements from the manufacturer through the distributor.
3. The operator and other personnel associated with machine shall fully acquaint themselves with the latest American National Safety Standards (ASME/ANSI) for cranes.

SETUP:

1. The machine shall be level and 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.
2. For outrigger operation, outriggers shall be properly extended with tires raised free of crane weight before operating the boom or lifting loads.
3. When machine is equipped with center front stabilizer, the front stabilizer shall be set in accordance with 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. Do not travel with crane 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 or concrete bucket operation, weight of bucket and load must not exceed 80% of rated lifting capacities.
2. All rated loads have been tested to and meet minimum requirements of SAE J1063 OCT80 - Cantilevered Boom Crane Structures - Method of Test, and do not exceed 85% of the tipping load on outriggers as determined by SAE J765 OCT80 Crane Stability Test Code.
3. Rated loads include the weight of hookblock, slings and auxiliary lifting devices and their weights shall be subtracted from the listed rating to obtain the net load to be lifted. When more than the minimum required hoist reeving is used, the additional rope weight shall be considered part of the load to be handled.
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 m.p.h. (32km/h), rated loads and boom lengths shall 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 machine 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 next longer or shorter 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. If machine is equipped with individually controlled powered boom sections, the boom sections must be extended equally at all times.
12. Never handle personnel with this machine without written approval from the crane manufacturer.
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 49 ft. (14.9 m) boom length.
17. If machine is equipped with a front jack cylinder, radii less than 40 ft. or 12 meters not recommended when lifting over front of machine.

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.

**RATED LIFTING CAPACITIES IN POUNDS
36 FT. - 114 FT. FULL POWER BOOM
ON OUTRIGGERS FULLY EXTENDED - 360°**

Radius in Feet	#0001						
	Main Boom Length in Feet						
	36	49	62	75	88	101	114
10.00	180,000 (69)						
11.48	160,000 (66)	103,000 (72.5)	82,990 (76.5)	77,990 (79)			
13.12	133,990 (63.5)	101,990 (71)	82,000 (75)	77,250 (77.5)			
14.76	121,000 (60.5)	100,490 (69)	80,990 (73.5)	76,500 (76.5)	62,990 (79.5)		
16.40	110,990 (57.5)	97,990 (67)	80,600 (72)	75,990 (75)	62,090 (78.5)		
19.68	95,190 (51)	91,090 (62.5)	79,990 (68.5)	69,990 (72.5)	59,990 (76)	53,990 (77.5)	50,000 (80)
22.97	79,990 (44)	79,200 (58)	74,390 (65.5)	65,990 (70)	56,590 (74)	53,190 (75.5)	45,900 (79)
26.25	68,390 (35.5)	68,390 (53.5)	68,000 (62)	59,190 (67)	51,500 (71.5)	51,190 (73.5)	41,190 (77)
29.53	59,150 (25)	59,150 (48.5)	59,150 (58.5)	51,400 (64.5)	44,990 (69)	43,990 (72)	36,890 (75.5)
32.80		51,400 (43)	47,200 (55)	44,990 (61.5)	40,990 (67)	36,000 (70)	33,740 (73.5)
39.37	See Note 16	37,500 (30)	37,500 (47)	35,590 (55.5)	30,600 (62)	29,590 (66)	27,540 (70)
45.93			27,800 (38)	27,800 (49.5)	27,800 (57)	26,400 (62)	24,190 (66)
52.5			21,090 (26.5)	21,090 (42.5)	21,090 (51.5)	21,090 (57.5)	18,490 (62.5)
59.05				16,890 (34.5)	16,890 (45.5)	16,890 (53)	16,890 (58.5)
65.62				13,490 (24)	13,490 (39)	13,490 (48)	13,490 (54.5)
75.46					9,990 (27)	9,990 (40)	9,990 (47.5)
85.3						7,590 (30.5)	7,590 (40)
95.14						5,640 (15)	5,640 (31.5)
104.99							4,100 (19)
Minimum boom angle (deg.) at indicated boom length (no load)							0
Maximum boom length (ft.) at 0 deg. boom angle (no load)							114

Note: () Boom angles are in degrees.

#LMI operating code. Refer to LMI manual for operating instructions.

Lifting Capacities At Zero Degree Boom Angle On Outriggers Fully Extended - 360°							
Boom Angle	Main Boom Length in Feet						
	36	49	62	75	88	101	114
0°	32,460 (32.8)	20,570 (45.9)	13,620 (59.1)	9,160 (71.9)	5,980 (85.0)	3,600 (97.8)	1,760 (110.9)

NOTE: () Reference radii in feet.

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33 FT. - 58 FT. TELE EXTENSION ON OUTRIGGERS FULLY EXTENDED - 360°

Radius in Feet	33 ft. LENGTH			48 ft. LENGTH			58 ft. LENGTH		
	#0021	#0022	#0023	#0031	#0032	#0033	#0041	#0042	#0043
	2° OFFSET	15° OFFSET	30° OFFSET	2° OFFSET	15° OFFSET	30° OFFSET	2° OFFSET	15° OFFSET	30° OFFSET
29.5	*29,590 (80)								
32.8	26,840 (78)	*19,190 (80)		*14,390 (80)			*9,190 (80)		
39.4	23,470 (75.5)	17,070 (77.5)	*13,780 (80)	13,780 (77)	*12,290 (80)		8,950 (78)		
45.9	20,800 (72.5)	14,870 (75)	12,740 (77.5)	13,080 (74.5)	11,620 (78.5)		8,730 (75.5)	*7,890 (80)	
52.5	18,350 (70)	12,980 (72)	11,580 (74.5)	12,030 (72)	10,720 (76)	*8,590 (80)	8,490 (73.5)	7,780 (78)	
59.1	15,980 (67)	11,410 (69.5)	10,320 (72)	10,780 (69.5)	9,710 (73)	8,250 (77)	8,220 (71)	7,610 (75.5)	*6,590 (80)
65.6	13,840 (64)	10,040 (66.5)	9,200 (69)	9,490 (67)	8,650 (70.5)	7,740 (74)	7,820 (68.5)	7,350 (73)	6,200 (77)
75.5	11,260 (59.5)	8,370 (62)	7,790 (64)	7,780 (63)	7,140 (66.5)	6,630 (70)	6,960 (65)	6,590 (69.5)	5,790 (73.5)
85.3	8,360 (54.5)	7,070 (57)	6,490 (59.5)	6,470 (59)	5,980 (62.5)	5,590 (65.5)	5,860 (61.5)	5,460 (65.5)	5,230 (69.5)
95.1	5,960 (49.5)	5,610 (52)	5,630 (54)	5,410 (55)	5,090 (58)	4,720 (61)	4,910 (57.5)	4,610 (61.5)	4,390 (65)
105.0	4,050 (44)	4,050 (46.5)	4,050 (48.5)	4,510 (50.5)	4,310 (53.5)	4,110 (56.5)	4,220 (53.5)	3,900 (57.5)	3,760 (61)
114.8	2,520 (38)	2,520 (40)	2,520 (42)	3,250 (45.5)	3,500 (48.5)	3,510 (51)	3,410 (49.5)	3,290 (53)	3,190 (56)
124.7		1,250 (33)	1,250 (34)	1,380 (40)	2,430 (43)	2,530 (45)	2,460 (44.5)	2,700 (48)	2,670 (51)
134.5							1,310 (39.5)	1,890 (42.5)	2,010 (45.5)

NOTE: () Ref. boom angles are in degrees.

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*This capacity is based upon the maximum boom angle.

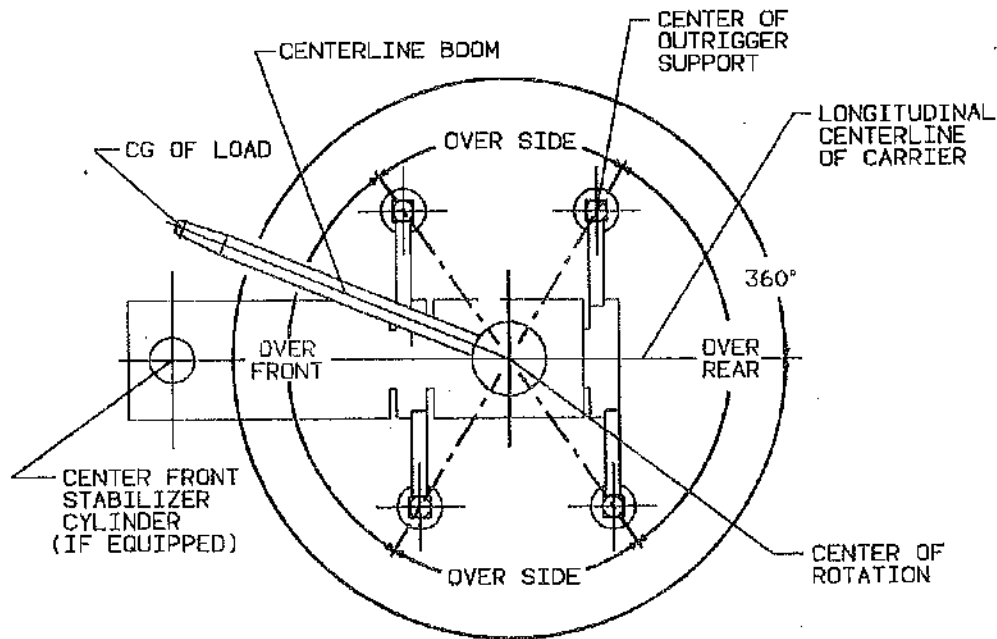
#LMI operating code. Refer to LMI manual for instructions.

1. All capacities above the bold line are based on structural strength of boom extension.
2. 33 ft., 48 ft. and 58 ft. boom extension lengths may be used for double or single line lifting service.
3. For main boom lengths less than fully extended with the boom extension erected, the rated loads are determined by boom angle. Use only the column which corresponds to the boom extension length and offset for which the machine is set up. For boom angles not show, use rating of the next lower boom angle.

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. Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
5. Capacities listed are with outriggers fully extended and vertical jacks set only.
6. NO LOAD STABILITY FOR FULL POWER BOOM: For main boom length greater than 88 ft. with 33 ft. - 58 ft. tele. boom extension in working position, the boom angle must not be less than 32° 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 88 ft. This warning also applies for boom extension erection purposes.

LIFTING AREA DIAGRAM



6-829-005671

BOLD LINES DETERMINE THE LIMITING POSITION OF ANY
LOAD FOR OPERATION WITHIN WORKING AREAS INDICATED
WORKING AREA DIAGRAM

LINE PULLS AND REEVING INFORMATION

HOISTS	CABLE SPECS.	PERMISSIBLE LINE PULLS
Main Model 30	19 mm (3/4") 40x7 Class Rotation Resistant Min. Breaking Str. 75,000 lbs.	15,000 lbs.
Auxiliary Model 30	3/4 in. (19 mm) 18x19 Class or 35x7 Rotation Resistant Min. Breaking Str. 64,600 lbs.	12,920 lbs.

WEIGHT REDUCTIONS FOR LOAD HANDLING DEVICES

33 ft. - 58 ft. TELE EXTENSION	
*Stowed -	933 lbs.
*Erected (retracted) -	9,105 lbs.
*Erected (extended) -	12,528 lbs.

*Reduction of main boom capacities.

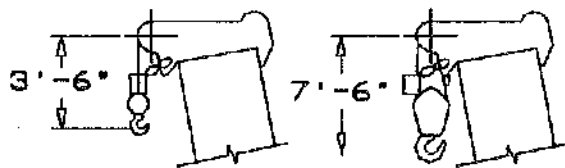
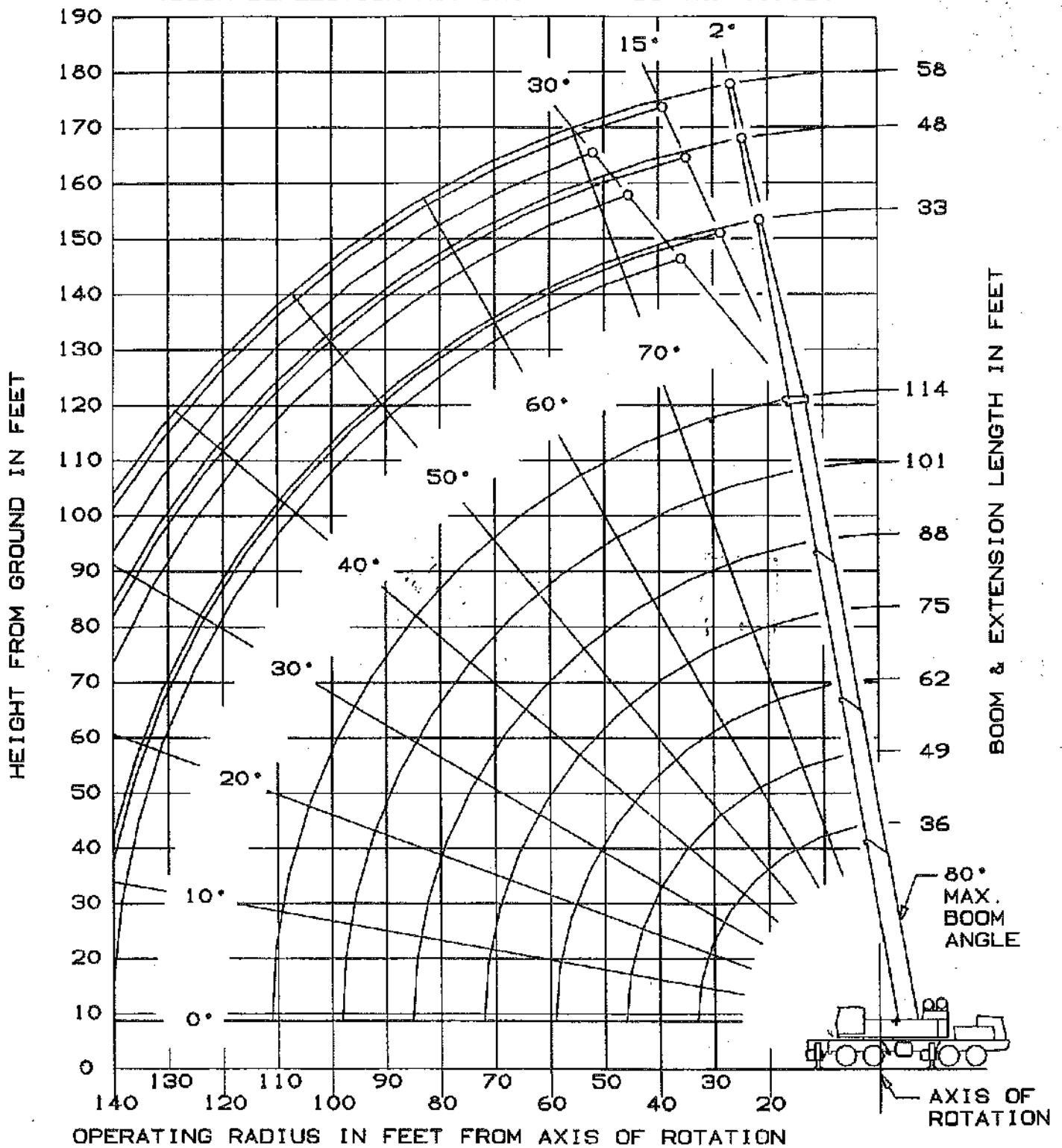
AUXILIARY BOOM HEAD	230 lbs.
HOOKBLOCKS and HEADACHE BALLS:	
15 Ton, 1 Sheave	650 lbs.+
90 Ton, 7 Sheave	2,060 lbs.+
10 Ton Headache Ball	560 lbs.+
7 1/2 Ton Headache Ball	338 lbs.+

+Refer to rating plate for actual weight.

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.

When lifting over swingaway and/or jib combinations, deduct total weight of all load handling devices reeved over main boom nose directly from swingaway or jib capacity.

WORKING RANGE DIAGRAM
 (BOOM DEFLECTION NOT SHOWN) D6-829-009034



DIMENSIONS ARE FOR LARGEST GROVE FURNISHED HOOK BLOCK AND HEADACHE BALL, WITH ANTI-TWO BLOCK ACTIVATED.