lc p1 (4584x6266x2 bmp)

RT518

16 METRIC TON CAPACITY
7.5m - 18.2m BOOM (25 - 60 ft.)
(FULL POWER)
85% and 75% OF TIPPING

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, parts, and safety manuals 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 this machine shall fully acquaint themselves with the latest applicable American National Standards Institute (ANSI) Safety Standards for cranes.

SETUP:

1. 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.
2. For outrigger operation, outriggers shall be fully extended with tires raised free of crane weight before operating the boom or lifting loads.
3. If machine is equipped with front jack cylinder, the front jack cylinder shall be set in accordance with written procedure.
4. If machine is 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.

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. Rated loads do not exceed 85% or 75%, as applicable, of the tipping load as determined by SAE Crane Stability Test Code J-765a.
3. 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.
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 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 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 12 inches (30 cm) below boom head when lowering or extending boom.
14. 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.
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 25 ft. (7.5m) boom length shall be lifted with boom fully retracted. If boom is not fully retracted, capacities shall not exceed those shown for the 30 ft. (9.1m) 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.
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.

lc p2 (4568x6493x2 bmp)

GROVE®

RT!

16 METRIC T
7.5m - 18.2m B
(FULL
85% and 75

RATED LIFTING CAPA
7.5m - 18.2 m B

85% OF TIPPING

ON OUTRIGGERS FULLY EXTENDED -

360°

Radius in Meters	Boom Length in Meters						
	7.5	9.1	11.0	12.8	14.6	16.5	18.2
3	16,000 (60.5)	16,000 (66.5)	16,000 (71)	16,000 (74.5)			
3.5	16,000 (56)	16,000 (63)	16,000 (68)	16,000 (72)	15,195 (75)		
4	15,690 (51)	15,240 (59)	14,740 (65.5)	14,420 (69.5)	14,195 (72.5)		
4.5	14,125 (46)	14,015 (55.5)	13,470 (62.5)	13,060 (67)	12,880 (70.5)	12,515 (73.5)	11,335 (75.5)
5	12,745 (40)	12,745 (51.5)	12,745 (59.5)	12,065 (64.5)	11,610 (68.5)	11,610 (71.5)	10,795 (74)
6	10,610 (25)	10,610 (42.5)	10,610 (53)	10,430 (59.5)	10,250 (64)	10,065 (68)	9,840 (70.5)
7		9,160 (32)	9,160 (45.5)	9,160 (54)	8,980 (59.5)	8,750 (64)	8,660 (67)
8	See Warning Note 16	7,505 (14.5)	7,505 (37.5)	7,505 (48)	7,505 (55)	7,505 (60)	7,505 (63.5)
9			6,120 (27.5)	6,120 (41.5)	6,120 (49.5)	6,120 (55.5)	6,120 (60)
10				5,030 (33.5)	5,030 (44)	5,030 (51)	5,030 (56)
12					3,670 (30.5)	3,670 (41)	3,670 (47.5)
14						2,885 (27.5)	2,885 (38)
16							2,305 (24.5)
Min. Boom Angle (deg.) for indicated length [No Load]							0
Max. Boom Length (m) at 0 degree boom angle [No Load]							18.2

NOTE: Boom Angles are in Degrees. A6-829-003864A & -003592C

OVER FRONT

Radius in Meters	Boom Length in Meters						
	7.5	9.1	11.0	12.8	14.6	16.5	18.2
3	16,000 (60.5)	16,000 (66.5)	16,000 (71)	16,000 (74.5)			
3.5	16,000 (56)	16,000 (63)	16,000 (68)	16,000 (72)	15,195 (75)		
4	15,690 (51)	15,240 (59)	14,740 (65.5)	14,420 (69.5)	14,195 (72.5)		
4.5	14,125 (46)	14,015 (55.5)	13,470 (62.5)	13,060 (67)	12,880 (70.5)	12,515 (73.5)	11,335 (75.5)
5	12,745 (40)	12,745 (51.5)	12,745 (59.5)	12,065 (64.5)	11,610 (68.5)	11,610 (71.5)	10,795 (74)
6	10,610 (25)	10,610 (42.5)	10,610 (53)	10,430 (59.5)	10,250 (64)	10,065 (68)	9,840 (70.5)
7		9,160 (32)	9,160 (45.5)	9,160 (54)	8,980 (59.5)	8,750 (64)	8,660 (67)
8	See Warning Note 16	7,890 (14.5)	7,890 (37.5)	7,890 (48)	7,890 (55)	7,890 (60)	7,620 (63.5)
9			6,935 (27.5)	6,935 (41.5)	6,935 (49.5)	6,935 (55.5)	6,845 (60)
10				6,105 (33.5)	6,105 (44)	6,105 (51)	6,105 (56)
12					4,410 (30.5)	4,410 (41)	4,410 (47.5)
14						3,450 (27.5)	3,450 (38)
16							2,740 (24.5)
Min. Boom Angle (deg.) for indicated length [No Load]							0
Max. Boom Length (m) at 0 degree boom angle [No Load]							18.2

NOTE: Boom Angles are in Degrees. A6-829-003858A & -003592C

75% OF TIPPING

ON OUTRIGGERS FULLY EXTENDED -

360°

Radius in Meters	Boom Length in Meters						
	7.5	9.1	11.0	12.8	14.6	16.5	18.2
3	16,000 (60.5)	16,000 (66.5)	16,000 (71)	16,000 (74.5)			
3.5	16,000 (56)	16,000 (63)	16,000 (68)	16,000 (72)	15,195 (75)		
4	15,690 (51)	15,240 (59)	14,740 (65.5)	14,420 (69.5)	14,195 (72.5)		
4.5	14,125 (46)	14,015 (55.5)	13,470 (62.5)	13,060 (67)	12,880 (70.5)	12,515 (73.5)	11,335 (75.5)
5	12,745 (40)	12,745 (51.5)	12,745 (59.5)	12,065 (64.5)	11,610 (68.5)	11,610 (71.5)	10,795 (74)
6	10,610 (25)	10,610 (42.5)	10,610 (53)	10,430 (59.5)	10,250 (64)	10,065 (68)	9,840 (70.5)
7		8,695 (32)	8,695 (45.5)	8,695 (54)	8,695 (59.5)	8,695 (64)	8,660 (67)
8	See Warning Note 16	6,620 (14.5)	6,620 (37.5)	6,620 (48)	6,620 (55)	6,620 (60)	6,620 (63.5)
9			5,400 (27.5)	5,400 (41.5)	5,400 (49.5)	5,400 (55.5)	5,400 (60)
10				4,435 (33.5)	4,435 (44)	4,435 (51)	4,435 (56)
12					3,240 (30.5)	3,240 (41)	3,240 (47.5)
14						2,545 (27.5)	2,545 (38)
16							2,035 (24.5)
Min. Boom Angle (deg.) for indicated length [No Load]							0
Max. Boom Length (m) at 0 degree boom angle [No Load]							18.2

NOTE: Boom Angles are in degrees. A6-829-003866A & -003592C

OVER FRONT

Radius in Meters	Boom Length in Meters						
	7.5	9.1	11.0	12.8	14.6	16.5	18.2
3	16,000 (60.5)	16,000 (66.5)	16,000 (71)	16,000 (74.5)			
3.5	16,000 (56)	16,000 (63)	16,000 (68)	16,000 (72)	15,195 (75)		
4	15,690 (51)	15,240 (59)	14,740 (65.5)	14,420 (69.5)	14,195 (72.5)		
4.5	14,125 (46)	14,015 (55.5)	13,470 (62.5)	13,060 (67)	12,880 (70.5)	12,515 (73.5)	11,335 (75.5)
5	12,745 (40)	12,745 (51.5)	12,745 (59.5)	12,065 (64.5)	11,610 (68.5)	11,610 (71.5)	10,795 (74)
6	10,610 (25)	10,610 (42.5)	10,610 (53)	10,430 (59.5)	10,250 (64)	10,065 (68)	9,840 (70.5)
7		9,160 (32)	9,160 (45.5)	9,160 (54)	8,980 (59.5)	8,750 (64)	8,660 (67)
8	See Warning Note 16	7,890 (14.5)	7,890 (37.5)	7,890 (48)	7,890 (55)	7,890 (60)	7,620 (63.5)
9			6,525 (27.5)	6,525 (41.5)	6,525 (49.5)	6,525 (55.5)	6,525 (60)
10				5,385 (33.5)	5,385 (44)	5,385 (51)	5,385 (56)
12					3,890 (30.5)	3,890 (41)	3,890 (47.5)
14						3,045 (27.5)	3,045 (38)
16							2,415 (24.5)
Min. Boom Angle (deg.) for indicated length [No Load]							0
Max. Boom Length (m) at 0 degree boom angle [No Load]							18.2

NOTE: Boom Angles are in degrees. A6-829-003860A - & -003592C

lc p3 (4584x6454x2 bmp)

518

ON CAPACITY
OOM (25 - 60 ft.)
POWER)
% OF TIPPING

GROVE®

FULL HYDRAULIC
SELF-PROPELLED CRANE

CITIES IN KILOGRAMS
OOM (25 - 60 ft.)

ON RUBBER CAPACITIES - 85% OF TIPPING

20.5 x 25 TIRES

Radius in Meters	Stationary Capacity		Pick & Carry Capacity Up to 4.0 Km/h
	Defined Arc (3) Over Front	360° Arc	Boom Centered (7) Over Front
3	15,420 (a)	10,250 (a)	12,995 (a)
3.5	12,970 (a)	8,255 (a)	11,510 (a)
4	11,335 (a)	7,120 (a)	10,295 (a)
4.5	10,115 (a)	5,410 (a)	9,305 (a)
5	9,115 (b)	4,590 (c)	8,475 (a)
6	6,385 (c)	3,325 (c)	6,385 (a)
7	5,115 (c)	2,490 (c)	3,890 (b)
8	4,160 (c)	1,915 (c)	3,355 (b)
9	3,465 (c)	1,510 (d)	2,925 (c)
10	2,880 (d)	1,195 (d)	2,520 (c)
12	2,050 (e)	765 (e)	1,900 (e)
14	1,485 (f)		1,430 (f)
16	1,120 (g)		1,115 (g)

A6-829-003939

16:00 x 25 TIRES

Radius in Meters	Stationary Capacity		Pick & Carry Capacity Up to 4.0 Km/h
	Defined Arc (3) Over Front	360° Arc	Boom Centered (7) Over Front
3	15,560 (a)	10,295 (a)	13,990 (a)
3.5	13,095 (a)	7,950 (a)	12,405 (a)
4	11,440 (a)	6,490 (a)	11,110 (a)
4.5	10,210 (a)	5,435 (a)	10,200 (a)
5	9,200 (b)	4,590 (c)	9,500 (a)
6	6,540 (c)	3,255 (c)	6,540 (a)
7	4,995 (c)	2,415 (c)	4,470 (b)
8	4,050 (c)	1,890 (c)	3,860 (b)
9	3,355 (c)	1,490 (d)	3,355 (c)
10	2,840 (d)	1,170 (d)	2,840 (c)
12	2,070 (e)	775 (e)	2,070 (e)
14	1,505 (f)	470 (f)	1,505 (f)
16	1,160 (g)		1,160 (g)

A6-829-003943

14.00 x 24 TIRES

Radius in Meters	Stationary Capacity		Pick & Carry Capacity Up to 4.0 Km/h
	Defined Arc (3) Over Front	360° Arc	Boom Centered (7) Over Front
3	13,880 (a)	9,300 (a)	10,685 (a)
3.5	11,660 (a)	7,150 (a)	10,115 (a)
4	10,170 (a)	6,200 (a)	8,410 (a)
4.5	9,060 (a)	5,315 (a)	7,565 (a)
5	8,150 (b)	4,485 (c)	7,105 (a)
6	6,220 (c)	3,075 (c)	5,865 (a)
7	4,890 (c)	2,250 (c)	4,890 (b)
8	3,980 (c)	1,795 (c)	3,435 (b)
9	3,235 (c)	1,425 (d)	2,935 (c)
10	2,775 (d)	1,120 (d)	2,610 (c)
12	2,000 (e)	780 (e)	2,000 (e)
14	1,470 (f)	535 (f)	1,470 (f)
16	1,045 (g)		1,045 (g)

A6-829-003947

Maximum Permissible Boom Length:
(a) 7.5 m
(b) 9.1 m
(c) 11.0 m
(d) 12.8 m
(e) 14.6 m
(f) 16.5 m
(g) 18.2 m

		Main Boom 18.2 m	Main Boom w/6.1mJib
Front (No Load)	Minimum boom angle for indicated length	0°	0°
	Maximum boom length at 0° boom angle	18.2 m	24.3 m
360° (No Load)	Minimum boom angle for indicated length	0°	45°
	Maximum boom length at 0° boom angle	18.2 m	17.8 m

NOTES FOR RUBBER CAPACITIES

1. Capacities do not exceed 85% or 75%, as applicable, of tipping loads as determined by test in accordance with SAE J-765a.
2. Capacities are applicable to machines equipped with:

	Cold Inflation	2.5 MPH
14:00x24 (20 ply)	115 PSI	110 PSI
16.00x25 (20 ply)	95 PSI	80 PSI
20.5x25 (20 ply)	80 PSI	65 PSI

3. Defined Arc - Over front includes ±6° on either side of longitudinal centerline of machine.
4. Capacities appearing above bold line are based on structural strength and tipping should not be relied upon as a capacity limitation.
5. Capacities are applicable only with machine on a firm level surface.
6. On rubber lifting with jib not permitted.
7. For pick and carry operation, boom must be centered over front of machine and mechanical swing lock engaged. When handling loads in the structural range with capacities close to maximum ratings, travel should be reduced to creep speed.
8. 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).
9. All 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.

ON RUBBER CAPACITIES - 75% OF TIPPING

20.5 x 25 TIRES

Radius in Meters	Stationary Capacity		Pick & Carry Capacity Up to 4.0 Km/h
	Defined Arc (3) Over Front	360° Arc	Boom Centered (7) Over Front
3	15,420 (a)	10,140 (a)	12,995 (a)
3.5	12,970 (a)	7,820 (a)	11,510 (a)
4	11,335 (a)	6,375 (a)	10,295 (a)
4.5	9,650 (a)	4,770 (a)	9,305 (a)
5	8,070 (b)	4,050 (c)	8,070 (a)
6	5,635 (c)	2,935 (c)	5,635 (a)
7	4,510 (c)	2,200 (c)	3,890 (b)
8	3,670 (c)	1,690 (c)	3,355 (b)
9	3,060 (c)	1,335 (d)	2,925 (c)
10	2,545 (d)	1,055 (d)	2,520 (c)
12	1,810 (e)	675 (e)	1,810 (e)
14	1,310 (f)		1,310 (f)
16	990 (g)		990 (g)

A6-829-003941

16:00 x 25 TIRES

Radius in Meters	Stationary Capacity		Pick & Carry Capacity Up to 4.0 Km/h
	Defined Arc (3) Over Front	360° Arc	Boom Centered (7) Over Front
3	15,560 (a)	9,085 (a)	13,990 (a)
3.5	13,095 (a)	7,015 (a)	12,405 (a)
4	11,440 (a)	5,725 (a)	11,110 (a)
4.5	9,450 (a)	4,795 (a)	9,450 (a)
5	8,410 (b)	4,050 (c)	8,410 (a)
6	5,770 (c)	2,870 (c)	5,770 (a)
7	4,410 (c)	2,130 (c)	4,410 (b)
8	3,570 (c)	1,665 (c)	3,570 (b)
9	2,960 (c)	1,315 (d)	2,960 (c)
10	2,505 (d)	1,035 (d)	2,505 (c)
12	1,825 (e)	680 (e)	1,825 (e)
14	1,325 (f)	415 (f)	1,325 (f)
16	1,020 (g)		1,020 (g)

A6-829-003945

14.00 x 24 TIRES

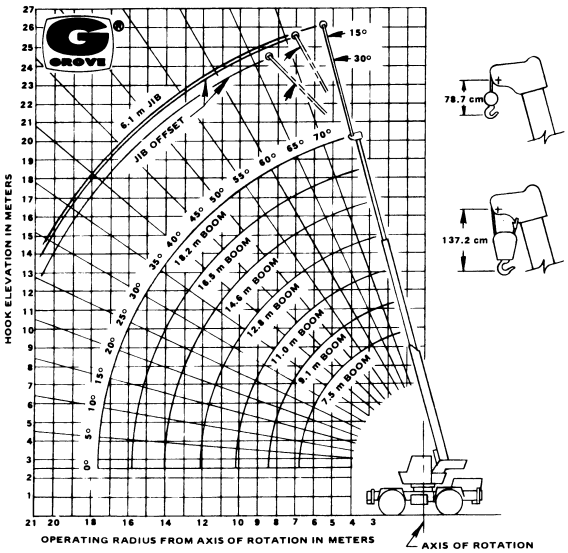
Radius in Meters	Stationary Capacity		Pick & Carry Capacity Up to 4.0 Km/h
	Defined Arc (3) Over Front	360° Arc	Boom Centered (7) Over Front
3	13,880 (a)	9,005 (a)	10,685 (a)
3.5	11,660 (a)	7,000 (a)	10,115 (a)
4	10,170 (a)	5,915 (a)	8,410 (a)
4.5	8,675 (a)	4,940 (a)	7,565 (a)
5	7,580 (b)	3,955 (c)	7,105 (a)
6	5,490 (c)	2,715 (c)	5,490 (a)
7	4,315 (c)	1,985 (c)	4,315 (b)
8	3,510 (c)	1,580 (c)	3,435 (b)
9	2,855 (c)	1,260 (d)	2,855 (c)
10	2,445 (d)	990 (d)	2,445 (c)
12	1,765 (e)	685 (e)	1,765 (e)
14	1,300 (f)	470 (f)	1,300 (f)
16	920 (g)		920 (g)

A6-829-003949

lc p4 (4680x5546x2 bmp)

GROVE® RT518

RANGE DIAGRAM



C6-829-004218

JIB CAPACITIES IN KILOGRAMS

6.1m "A" FRAME JIB

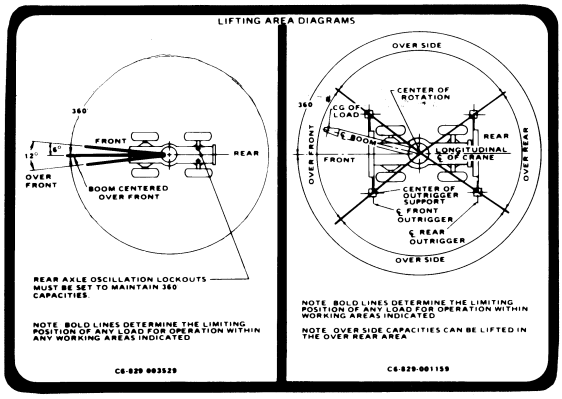
MAIN BOOM ANGLE	0° OFFSET		15° OFFSET		30° OFFSET	
	Radius (Ref) m	Cap. kg	Radius (Ref) m	Cap. kg	Radius (Ref) m	Cap. kg
75°	6.2	4,305	7.8	2,765	8.8	1,905
70	8.0	3,810	9.5	2,470	10.5	1,755
65	9.9	3,235	11.3	2,200	12.2	1,660
60	11.7	2,825	13.1	1,995	13.8	1,585
55	13.5	2,490	14.7	1,880	15.4	1,510
50	15.1	2,005	16.2	1,765	16.8	1,450
45	16.6	1,650	17.6	1,625	18.1	1,395
40	18.0	1,400	18.8	1,380	19.3	1,325
35	19.2	1,235	19.9	1,190	20.2	1,175
30	20.3	1,120	20.8	1,070	21.1	1,065

A6-829-004058A

Notes for Jib Capacities

1. All capacities are in kilograms. 20 ft. (6.1 m) jib may be used for double line lifting service. Capacities are based on structural strength of 20 ft. (6.1 m) jib at a given main boom angle regardless of main boom length.
2. WARNING: Operation of machine with heavier loads than the capacities listed strictly prohibited. Machine tipping with jib occurs rapidly and without advance warning.
3. Capacities listed are with fully extended outriggers only.
4. WARNING: Lifting on rubber with jib is prohibited.
5. Reference radii listed are for fully extended main boom only.
6. No load stability on outriggers with 20 ft. (6.1 m) jib installed.
   a. Minimum boom angle for fully extended main boom = 0°.
   b. Maximum boom length at 0° main boom angle = 80 ft. (24.3 m).

LIFTING AREA DIAGRAM



WEIGHT REDUCTIONS FOR LOAD HANDLING DEVICES

6.1m "A" Frame JIB 7.5m - 18.2m BOOM	
†STOWED	112 kg
†ERECTED	624 kg

†Reduction of main boom capacities.

HOOKBLOCKS:	
22MT, 3 sheave	206 kg
15MT, 2 sheave	132 kg
10.9MT, 1 sheave (40.3cm)	122 kg
10.9MT, 1 sheave (30.8cm)	129 kg
Aux. Boom Head	45 kg
4.5MT Headache Ball	78 kg

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