



GROVE
CRANE

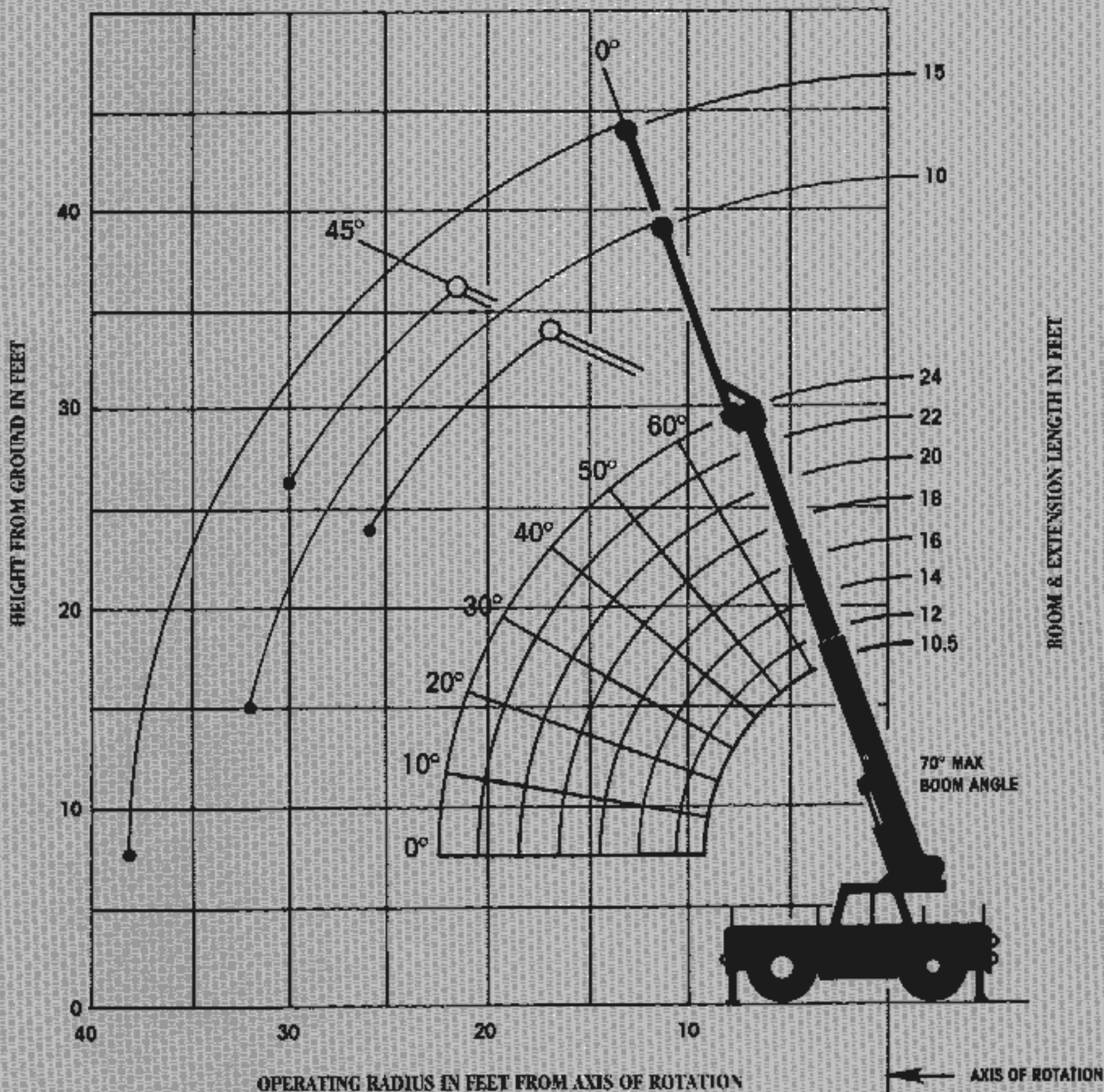
A GROVE WORLDWIDE COMPANY

AP410

Material Handling Hydraulic Crane/85% Domestic

10.5 ft. - 24 ft. full power boom

WORKING RANGE DIAGRAM
(BOOM DEFLECTION NOT SHOWN)



10.5 FT. - 24 FT. FULL POWER MAIN BOOM

ON RUBBER

Radius in Feet	#05		#06
	Stationary Capacity Defined Arc (3) Over Front	Stationary Capacity 360 Degree Arc	Pick & Carry Cap. Up to 2.5 MPH Boom Centered (6) Over Front
4	17,000	14,700	15,000
5	17,000	10,600	13,800
6	15,000	9,260	12,450
7	14,000	7,380	11,100
8	12,700	5,920	10,000
10	7,920	4,170	7,920
12	5,680	3,160	5,680
14	4,450	2,500	4,450
16	3,520	2,040	3,520
18	2,920	1,700	2,920
20	2,480	1,430	2,480
22	2,130	1,220	2,130

46-829-007981B

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

ON OUTRIGGERS FULLY EXTENDED

Radius in Feet	#01			
	10.5 FT. (Fully Retracted)		10.5 - 24 FT. BOOM	
	Over Front	360°	Over Front	360°
5	20,000	20,000	17,000	17,000
6	18,000	18,000	15,000	15,000
8	13,750	13,750	13,000	13,000
10			11,000	11,000
12			9,500	9,500
14			8,100	7,180
16			6,900	5,740
18			5,900	4,750
20			5,150	4,040
22			4,590	3,500

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

46-829-012326A

10 FT. FIXED AND 10 FT. - 15 FT. TELE BOOM EXTENSION ON OUTRIGGERS

Radius in Feet	360 Degrees				Over Front			
	*10 ft. Tele. Ext.		15 ft. Tele. Ext.		*10 ft. Tele. Ext.		15 ft. Tele. Ext.	
	#21	#24	#31	#34	#21	#24	#31	#34
	0°	45°	0°	45°	0°	45°	0°	45°
8	7,000				7,000			
10	6,500		4,150		6,500		4,150	
12	6,000		3,800		6,000		3,800	
14	5,500	4,500	3,400		5,500	4,500	3,400	
16	5,000	4,200	3,150		5,000	4,200	3,150	
18	4,500	3,900	2,950	2,600	4,500	3,900	2,950	2,600
20	4,110	3,600	2,800	2,550	4,200	3,600	2,800	2,550
22	3,480	3,350	2,650	2,500	3,700	3,350	2,650	2,500
24	2,990	2,990	2,550	2,450	3,500	3,150	2,550	2,450
26	2,590	2,590	2,500	2,400	3,250	3,000	2,500	2,400
28	2,260		2,450	2,250	3,000		2,450	2,250
30	1,980		2,170	2,100	2,760		2,350	2,100
32	1,750		1,930		2,480		2,200	
34			1,720				2,000	
36			1,540				1,900	
38			1,380				1,800	

46-829-009831A

46-829-009911A

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

* 10 ft. capacities applicable to both the 10 ft. fixed and 10 ft. tele. boom extension.

10 FT. FIXED AND 10 FT. - 15 FT. TELE. BOOM EXTENSION ON RUBBER

Radius in Feet	360 Degrees				**Defined Arc (3) Over Front			
	*10 ft. Tele. Ext.		15 ft. Tele. Ext.		*10 ft. Tele. Ext.		15 ft. Tele. Ext.	
	#25	#28	#35	#38	#25	#28	#35	#38
	0°	45°	0°	45°	0°	45°	0°	45°
8	6,110				7,000			
10	4,260		4,150		6,500		4,150	
12	3,190		3,430		6,000		3,800	
14	2,490	2,490	2,700		4,570	4,500	3,400	
16	2,010	2,010	2,180		3,630	3,630	3,150	
18	1,640	1,640	1,790	1,790	2,970	2,970	2,950	2,600
20	1,360	1,360	1,500	1,500	2,480	2,480	2,550	2,550
22	1,140	1,140	1,260	1,260	2,100	2,100	2,180	2,180
24	960	960	1,070	1,070	1,800	1,800	1,890	1,890
26	810	810	910	910	1,560	1,560	1,650	1,650
28	690		780	780	1,360		1,450	1,450
30	580		660	660	1,180		1,280	1,280
32	480		560	560	1,040		1,140	1,140
34			480				1,020	
36			400				910	
38			330				810	

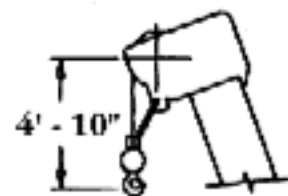
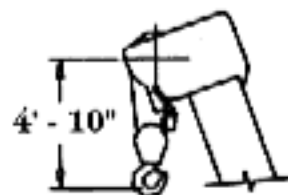
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46-829-009917B

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

* 10 ft. capacities applicable to both the 10 ft. fixed and 10 ft. tele. boom extension.

**Refer to rubber capacity notes.



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

NOTES FOR LIFTING CAPACITIES

WARNING: THIS CHART IS ONLY A GUIDE. The notes below are for illustration only and should not be relied upon to operate the crane. The individual crane's load chart, operating instructions and other instruction plates must be read and understood prior to operating the crane.

- 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 (75% of tipping load on rubber) as determined by SAE J765 OCT80 Crane Stability Test Code.
- Capacities given do not include the weight of hookblocks, slings, auxiliary lifting equipment and load handling devices. Their weights MUST be added to the load to be lifted. When more than minimum required reeving is used, the additional rope weight shall be considered part of the load.
- Defined Arc $\pm 6^\circ$ on either side of longitudinal centerline of machine.
- Capacities appearing above the hold line are based on structural strength and tipping should not be relied upon as a capacity limitation.
- All capacities are for crane on firm, level 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 pick and carry operation, the boom, using the shortest practical boom length, must be centered over front of machine. When handling loads in the structural range with capacities close to maximum ratings, travel should be reduced to creep speed*. 2.5 MPH capacities are permissible on main boom only, NOT on boom extension.
*Creep not over 200 ft. of movement in any 30 min. period and not exceeding 1 mph.
- 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 outrigger operation, ALL outriggers shall be fully extended with tires raised free of ground before raising the boom or lifting loads.
- Tires shall be inflated to the recommended pressure before lifting on rubber.
- When lifting loads with the tele-boom extension, the minimum allowable boom angle is: 3° with 0° offset and 48° with 45° offset.

Constant improvement and engineering progress make it necessary that we reserve the right to make specification, equipment, and price changes without notice. Illustrations shown may include optional equipment and accessories and may not include all standard equipment.

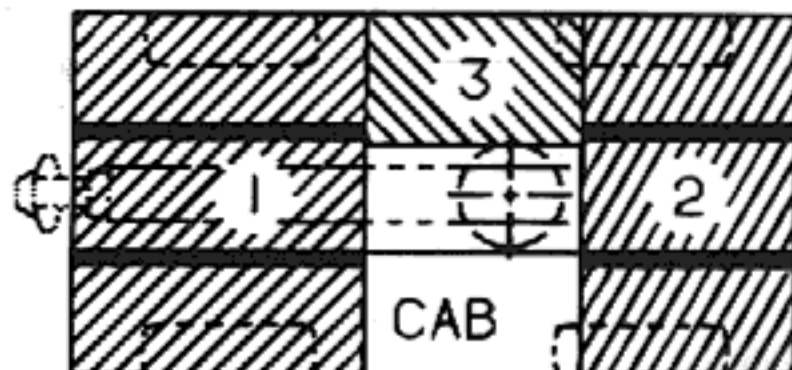


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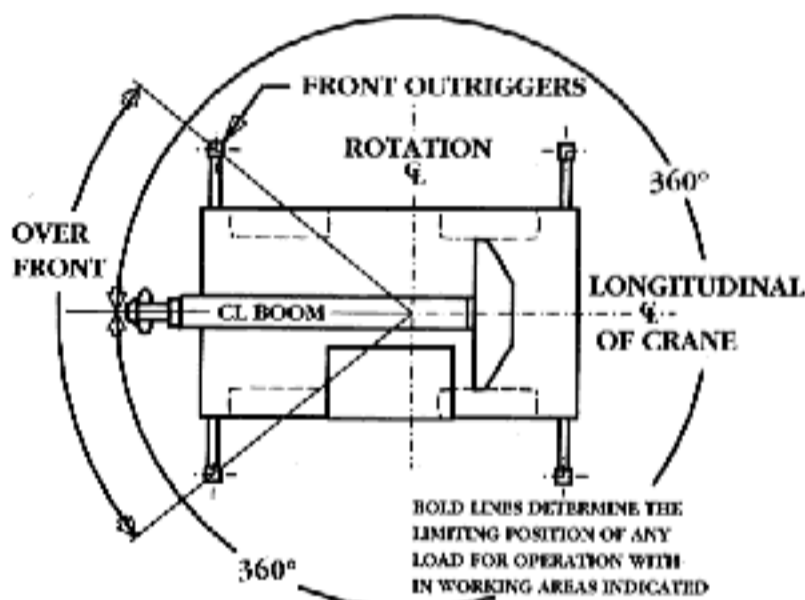
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LOAD DISTRIBUTION CHART FOR CARRY DECK



MAXIMUM ALLOWABLE LOAD

AREA 1	35.0 SQ. FT.	8,750 LBS.
AREA 2	25.9 SQ. FT.	6,475 LBS.
AREA 3	8.5 SQ. FT.	2,125 LBS.
TOTAL	69.4 SQ. FT.	17,350 LBS.



LIFTING ON OUTRIGGERS

WEIGHT REDUCTIONS FOR LOAD HANDLING DEVICES

10 FT. FIXED I.G. EXTENSION	
* Stowed65 lbs.
* Erected775 lbs.

10 - 15 FT. TELE. BOOM EXT.
w/10.5 - 24 FT. BOOM

* Stowed80 lbs.
* Erected (Ret.)1,125 lbs.
* Erected (Ext.)1,380 lbs.

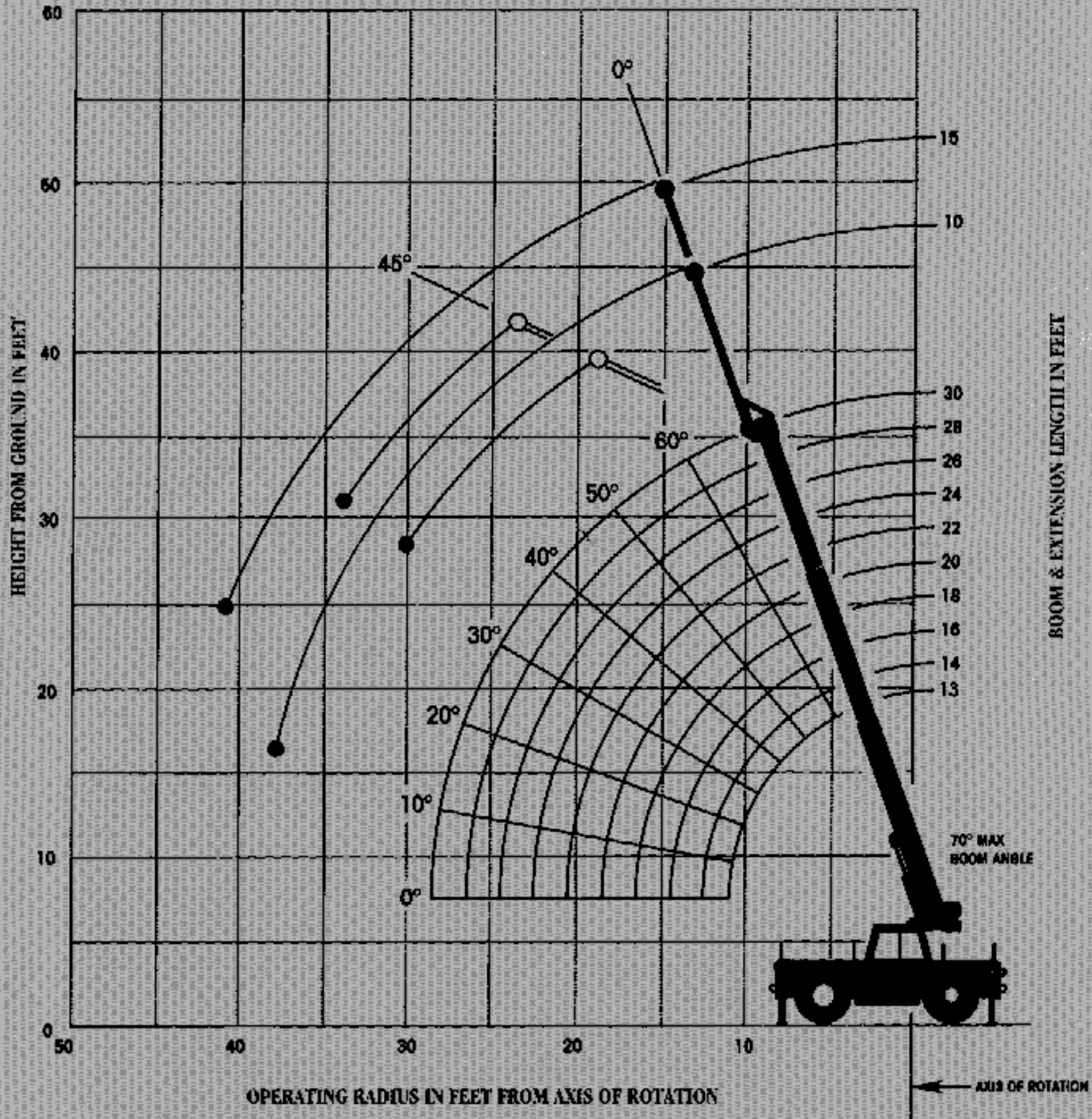
*Reduction of main boom capacities.

HOOKBLOCKS & HEADACHE BALL	
10 Ton, 1 Sheave304 lbs.
10 Ton, 2 Sheave314 lbs.
5 Ton Headache Ball172 lbs.
Searcher Hook55 lbs.

NO LOAD STABILITY ON OUTRIGGERS AND RUBBER

	No Load Stability Data	Main Boom 30 ft.
Front (No Load)	Min. boom angle (deg.) for indicated length	0
	Max. boom length (ft.) at 0 deg. boom angle	30
360 Deg. (No Load)	Min. boom angle (deg.) for indicated length	0
	Max. boom length (ft.) at 0 deg. boom angle	30

WORKING RANGE DIAGRAM
(BOOM DEFLECTION NOT SHOWN)



13 FT. - 30 FT. FULL POWER MAIN BOOM

ON RUBBER

Radius in Feet	#05		#06
	Stationary Capacity Defined Arc (3) Over Front	Stationary Capacity 360 Degree Arc	Pick & Carry Cap. Up to 2.5 MPH Boom Centered (6) Over Front
5	17,000	10,300	15,000
6	15,000	7,310	13,200
8	13,000	4,820	10,550
10	11,000	3,140	8,720
12	8,080	2,390	7,390
14	6,050	1,860	6,050
16	4,790	1,410	4,790
18	3,920	1,150	3,920
20	3,290	930	3,290
22	2,810	790	2,810
24	2,430	650	2,430
26	2,130	510	2,130
28	1,880	400	1,880

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

A6-829-012538

ON OUTRIGGERS FULLY EXTENDED

Radius in Feet	#01			
	13 FT. (Fully Retracted)		13 - 30 FT. BOOM	
	Over Front	360°	Over Front	360°
5	20,000	20,000	17,000	17,000
6	18,000	18,000	15,000	15,000
8	13,750	13,750	13,000	13,000
10			11,000	11,000
12			9,500	9,500
14			8,100	7,990
16			6,900	6,820
18			5,900	5,190
20			5,150	4,370
22			4,590	3,740
24			4,225	3,250
26			3,870	2,850
28			3,520	2,530

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

A6-829-012512

10 FT. FIXED AND 10 FT. - 15 FT. TELE BOOM EXTENSION ON OUTRIGGERS

Radius in Feet	360 Degrees				Over Front			
	*10 ft. Tele. Ext.		15 ft. Tele. Ext.		*10 ft. Tele. Ext.		15 ft. Tele. Ext.	
	#21	#24	#31	#34	#21	#24	#31	#34
	0°	45°	0°	45°	0°	45°	0°	45°
8	7,000				7,000			
10	6,500		4,150		6,500		4,150	
12	6,000		3,800		6,000		3,800	
14	5,500	4,500	3,400		5,500	4,500	3,400	
16	5,000	4,200	3,150		5,000	4,200	3,150	
18	4,500	3,900	2,950	2,600	4,500	3,900	2,950	2,600
20	4,200	3,600	2,800	2,550	4,200	3,600	2,800	2,550
22	3,700	3,350	2,650	2,500	3,700	3,350	2,650	2,500
24	3,310	3,150	2,550	2,450	3,350	3,150	2,550	2,450
26	2,850	2,850	2,500	2,400	3,250	3,000	2,500	2,400
28	2,480	2,480	2,450	2,250	3,000	2,850	2,450	2,250
30	2,170	2,170	2,350	2,100	2,800	2,700	2,350	2,100
32	1,900		2,110	2,050	2,600		2,200	2,050
34	1,670		1,880	1,880	2,450		2,000	1,950
36	1,470		1,690		2,200		1,900	
38	1,300		1,510		2,200		1,800	
40			1,360				1,700	
42			1,220				1,600	

NOTE: No load stability on rubber 360° with 10 ft. or 10-15 ft. tele. extension installed:

- a. Minimum boom angle for 30 ft. main boom = 45° with 10' fixed or 10' tele., and 49° with 15' tele. ext.
- b. Maximum main boom length at 0° main boom angle = 19 ft. with 10' fixed or 10' tele., and 15 ft. with 15' tele. ext.

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

* 10 ft. capacities applicable to both the 10 ft. fixed and 10 ft. tele. boom extension.

A6-829-012515

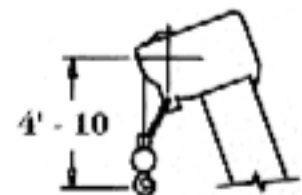
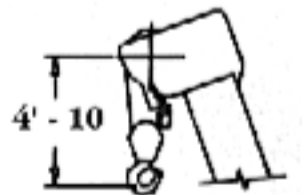
10 FT. FIXED AND 10 FT. - 15 FT. TELE. BOOM EXTENSION ON RUBBER

Radius in Feet	360 Degrees				** Defined Arc (3) Over Front			
	*10 ft. Tele. Ext.		15 ft. Tele. Ext.		*10 ft. Tele. Ext.		15 ft. Tele. Ext.	
	#25	#28	#35	#38	#25	#28	#35	#38
	0°	45°	0°	45°	0°	45°	0°	45°
8	5,740				7,000			
10	3,780		4,150		6,500		4,150	
12	2,730		2,930		6,000		3,800	
14	2,080	2,080	2,210		5,500	4,500	3,400	
16	1,630	1,630	1,730		5,000	4,200	3,150	
18	1,310	1,310	1,390	1,390	4,100	3,900	2,950	2,600
20	1,070	1,070	1,130	1,130	3,400	3,400	2,800	2,550
22	880	880	930	930	2,860	2,860	2,650	2,500
24	720	720	770	770	2,450	2,450	2,550	2,450
26	590	590	640	640	2,110	2,110	2,360	2,360
28	490	490	530	530	1,830	1,830	2,060	2,060
30					1,600	1,600	1,820	1,820
32					1,400		1,610	1,610
34					1,230		1,430	1,430
36					1,080		1,270	
38					950		1,130	
40							1,010	
42							900	

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

* 10 ft. capacities applicable to both the 10 ft. fixed and 10 ft. tele. boom extension.

** Refer to rubber capacity notes.



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

A6-829-012539A