



TM875

80 TON CAPACITY
36 ft. – 146 ft. BOOM
 (POWER PINNED)
 8 x 4 CARRIER and 12 x 6 CARRIER
 PCSA CLASS 12-324 PCSA CLASS 12-399

RATED LIFTING CAPACITIES IN POUNDS ON OUTRIGGERS FULLY EXTENDED OVER SIDE & REAR (360° W/FIFTH FRONT OUTRIGGER JACK)

8 x 4 CARRIER

Radius in Feet	Boom Length in Feet								Power Pin. Fly & 88 ft. **114	32 ft. Ext. & 114 ft. ***146
	*36	44	52	60	68	76	82	88		
12	160,000 (65.5)	125,000 (70.0)	110,000 (73.0)	99,000 (75.5)	92,000 (77.5)	87,000 (79.0)				
15	125,000 (60.0)	112,500 (66.0)	103,000 (69.5)	94,800 (72.5)	88,200 (74.5)	82,300 (76.5)	74,150 (78.0)	63,000 (79.0)		
20	93,500 (50.0)	90,250 (58.5)	86,400 (63.5)	81,900 (67.5)	76,600 (70.5)	70,150 (72.5)	65,900 (74.0)	59,850 (75.5)	50,000 (79.5)	
25	72,500 (39.0)	70,950 (50.5)	68,900 (57.5)	66,200 (62.0)	62,500 (65.5)	57,050 (68.5)	55,250 (70.5)	54,000 (72.0)	45,000 (77.5)	30,000 (79.5)
30	56,000 (23.5)	56,000 (41.5)	56,000 (50.5)	54,900 (56.5)	52,350 (61.0)	47,600 (64.5)	46,000 (66.5)	44,700 (68.5)	39,250 (75.0)	28,400 (78.5)
35		42,090 (30.0)	42,090 (43.0)	42,090 (50.5)	42,090 (56.0)	40,500 (60.0)	39,050 (63.0)	37,850 (65.0)	33,900 (72.0)	25,900 (76.5)
40		32,430 (11.5)	32,430 (34.0)	32,430 (44.0)	32,430 (51.0)	32,430 (56.0)	32,430 (59.0)	32,430 (61.5)	29,650 (69.5)	23,800 (74.5)
45			26,270 (22.5)	26,270 (37.0)	26,270 (45.0)	26,270 (51.0)	26,270 (54.5)	26,270 (57.5)	26,150 (67.0)	21,900 (72.5)
50				21,190 (28.0)	21,190 (39.0)	21,190 (46.0)	21,190 (50.0)	21,190 (53.5)	23,300 (64.0)	20,300 (70.5)
60					14,030 (22.0)	14,030 (34.0)	14,030 (40.0)	14,030 (45.0)	17,230 (58.0)	17,100 (66.0)
70						10,300 (16.0)	10,300 (27.5)	10,300 (34.5)	12,480 (52.0)	14,100 (61.5)
80								6,610 (20.0)	9,160 (45.0)	10,840 (57.0)
90									6,690 (37.0)	8,100 (52.0)
100									4,490 (27.0)	6,060 (46.5)
110									2,830 (9.0)	4,540 (40.5)
120										3,210 (34.0)
130										2,170 (25.5)
140										1,310 (12.5)

NOTE: Boom angles are in degrees.

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& -002169B

12 x 6 CARRIER

Radius in Feet	Main Boom Length in Feet (Power Pinned Fly Retracted)								Power Pin. Fly & 88 ft. **114	32 ft. Ext. & 114 ft. ***146
	*36	44	52	60	68	76	82	88		
12	160,000 (65.5)	125,000 (70)	110,000 (73)	99,000 (75.5)	92,000 (77.5)	87,000 (79)				
15	125,000 (60)	113,000 (66)	103,500 (69.5)	95,700 (72.5)	89,250 (74.5)	83,800 (76.5)	74,150 (78)	63,000 (79)		
20	93,500 (50)	91,550 (58.5)	89,100 (63.5)	86,000 (67.5)	81,750 (70.5)	75,750 (72.5)	67,000 (74)	59,850 (75.5)	50,000 (79.5)	
25	72,500 (39)	72,000 (50.5)	71,250 (57.5)	70,150 (62)	68,100 (65.5)	63,500 (68.5)	58,000 (70.5)	54,000 (72)	45,000 (77.5)	30,000 (79.5)
30	58,000 (23.5)	57,900 (41.5)	57,800 (50.5)	57,550 (56.5)	57,000 (61)	52,950 (64.5)	48,850 (66.5)	44,700 (68.5)	39,250 (75)	28,400 (78.5)
35		48,100 (30)	48,050 (43)	48,000 (50.5)	47,900 (56)	45,200 (60)	41,700 (63)	37,850 (65)	33,900 (72)	25,900 (76.5)
40			39,915 (34)	39,915 (44)	39,915 (51)	39,150 (56)	35,950 (59)	32,500 (61.5)	29,650 (69.5)	23,800 (74.5)
45			32,510 (22.5)	32,510 (37)	32,510 (45)	32,510 (51)	31,250 (54.5)	28,250 (57.5)	26,150 (67)	21,900 (72.5)
50				26,500 (28)	26,500 (39)	26,500 (46)	26,500 (50)	24,750 (53.5)	23,300 (64)	20,300 (70.5)
60					18,600 (22)	18,600 (34)	18,600 (40)	18,600 (45)	18,800 (58)	17,100 (66)
70						12,800 (16)	12,800 (27.5)	12,800 (34.5)	14,785 (52)	14,100 (61.5)
80								9,000 (20)	11,060 (45)	11,800 (57)
90									8,415 (37)	9,600 (52)
100									5,925 (27)	7,230 (46.5)
110									3,590 (9)	5,575 (40.5)
120										4,080 (34)
130										2,835 (25.5)
140										1,700 (12.5)
142.5										1,500 (0)

NOTE: Boom angles are in degrees.

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& -002169B

LIFTING CAPACITY NOTES

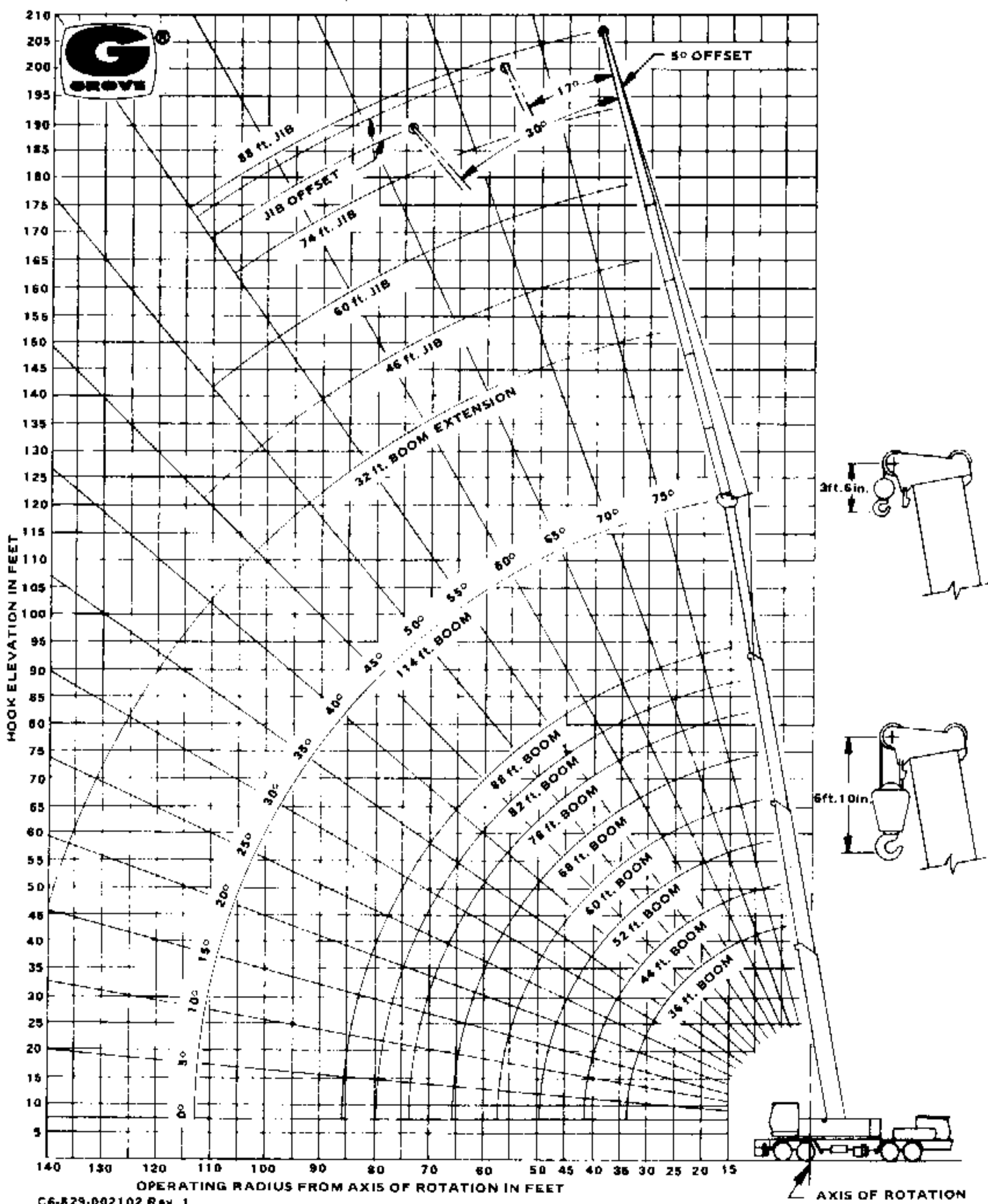
- Capacities appearing above the bold line are based on structural strength and tipping should not be relied upon as a capacity limitation. Capacities do not exceed 85% of tipping loads with counterweight fully extended as determined by test in accordance with SAE J-765.
- Do not exceed any rated load when lifting regardless of whether it is based on structural strength or stability.
- Capacities for the 36' (11.0m) boom length shall be lifted with boom fully retracted. If boom is not fully retracted, capacities shall not exceed those shown for the 44' (13.4m) boom length.
- Radii less than 30 feet or 9 meters not recommended when lifting over front of machine (if equipped with front jack cylinder).
- Capacities listed are with fully extended outriggers and front jack cylinder extended according to proper procedure.
- For boom lengths less than 114' (34.8m) with power pinned fly extended, the rated loads are determined by boom angle in the column headed by 114' (34.8m) boom. For boom angles not shown, use rating of next lower boom angle. For this load column, the extended power pinned fly operational mode is to be selected on the Krueger L.M.I.
WARNING: The Krueger L.M.I. rating will apply for full boom extension only.
- For boom lengths less than 146' (44.5m) with power pinned fly extended and 32' (9.8m) boom ext. erected, the rated loads are determined by boom angle only in the column headed by 146' (44.5m) boom. For boom angles not shown, use rating of next lower boom angle. For this load column, the 32' (9.8m) boom extension operational mode is to be selected on the Krueger L.M.I.
CAUTION: The Krueger L.M.I. rating will apply for full boom extension (power pinned fly extended) only.
- Boom angle is the included angle between horizontal and the longitudinal axis of the boom base section after lifting rated load.

GROVE®

FULL HYDRAULIC

CARRIER-MOUNTED CRANE

RANGE DIAGRAM



JIB CAPACITIES WITH TWO PART LINE ONLY ON OUTRIGGERS FULLY EXTENDED OVER SIDE & REAR (360° W/FIFTH FRONT OUTRIGGER JACK)

Loaded Main Boom Angle	46 ft. JIB CAPACITIES						60 ft. JIB CAPACITIES						74 ft. JIB CAPACITIES						88 ft. JIB CAPACITIES					
	5° OFFSET		17° OFFSET		30° OFFSET		5° OFFSET		17° OFFSET		30° OFFSET		5° OFFSET		17° OFFSET		30° OFFSET		5° OFFSET		17° OFFSET		30° OFFSET	
	Ref. Rad.	Load lbs.**	Ref. Rad.	Load lbs.	Ref. Rad.	Load lbs.	Ref. Rad.	Load lbs.	Ref. Rad.	Load lbs.	Ref. Rad.	Load lbs.	Ref. Rad.	Load lbs.	Ref. Rad.	Load lbs.	Ref. Rad.	Load lbs.	Ref. Rad.	Load lbs.	Ref. Rad.	Load lbs.	Ref. Rad.	Load lbs.
80°	31.5	16,500	40.5	12,800	49	7,980	39	12,250	48	9,020	58	5,180	42.5	9,380	55	6,420	67.5	3,580	46.5	7,390	63	4,450	79	2,370
77.5	38	15,650	47	12,300	55	7,550	45	11,450	54	8,550	63.5	4,890	49	8,660	61.5	6,010	73.5	3,350	53.5	6,680	70	4,010	85	2,160
75	45	14,900	53.5	11,900	61.5	7,170	52.5	10,800	61	7,910	70.5	4,640	57	8,030	69	5,640	80.5	3,140	62	6,050	78	3,610	92.5	1,980
72.5	51.5	14,250	60	11,100	67.5	6,840	59.5	10,200	67.5	7,370	77	4,410	64.5	7,470	76.5	5,280	87.5	2,960	70	5,500	85.5	3,260	100	1,810
70	58	12,610	66	10,400	73.5	6,540	66.5	9,680	74.5	6,900	83	4,210	72.5	6,960	83.5	4,930	94	2,780	78.5	4,950	93.5	2,930	107	1,620
67.5	64.5	10,280	72	9,120	79	6,280	73.5	8,530	81	6,500	89.5	4,030	79.5	6,500	90.5	4,610	101	2,620	86	4,460	101	2,640	113.5	1,450
65	70.5	8,470	78	7,620	84.5	6,050	80	6,970	87.5	6,140	95.3	3,880	87	5,920	97.5	4,330	107	2,490	94	4,020	108	2,370	120.5	1,310
62.5	76.5	7,020	84	6,390	90	5,850	86.5	5,720	93.5	5,100	101	3,740	94	4,800	104	4,080	113	2,370	101.5	3,620	115	2,140	126.5	1,170
60	82.5	5,850	89.5	5,370	95.5	5,070	93	4,690	100	4,230	106.5	3,620	101	3,890	110.5	3,080	119	1,890	109	3,260	122	1,570		
55	94	4,060	100.5	3,780	105.5	3,620	105	3,110	111.5	2,840	117.5	2,050	114	2,480	123	1,180			123	1,260				
50	104.5	2,780	110.5	2,620	114.5	2,530	116.5	1,970	122	1,200														
45	114.5	1,830	119.5	1,700	123	1,350																		

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JIB CAPACITY NOTES

- All capacities are based on structural strength of jib and do not exceed 85% of tipping loads with counterweight fully extended as determined by test in accordance with SAE J-765.
- 46', 60', 74' & 88' (14.0, 18.3, 22.6 & 26.8 Meter) jibs may be used for two-parts line lifting crane service only.
- Rated load is based on loaded main boom angle.
- WARNING:** Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with every jib occurs rapidly and without advance warning.
- Rated load is based on loaded main boom angle with reference to horizontal regardless of main boom length. (Ref. radius in feet (meters) is for fully extended boom and power pinned fly extended 114 ft. (34.8m) boom length only. The Krueger L.M.I. System will give an accurate radius indication for this condition only.)
- 46 FT. (14.0 METER) JIB WARNING:** With 46' (14.0m) jib in working position, the boom angle must not be less than 45° (over side and rear [360° w/front outrigger jack]), or 60° (over front) since loss of stability will occur causing a tipping condition.
60 FT. (18.3 METER) JIB WARNING: With 60' (18.3m) jib in working position, the boom angle must not be less than 50° (over side and rear [360° w/front outrigger jack]), or 62.5° (over front) since loss of stability will occur causing a tipping condition.

- 74 FT. (22.6 METER) JIB WARNING:** With 74' (22.6m) jib in working position, the boom angle must not be less than 55° (over side and rear [360° w/front outrigger jack]), or 65° (over front) since loss of stability will occur causing a tipping condition.
88 FT. (26.8 METER) JIB WARNING: With 88' (26.8m) jib in working position, the boom angle must not be less than 55° (over side and rear [360° w/front outrigger jack]), or 67.5° (over front) since loss of stability will occur causing a tipping condition.
- Capacities listed are with fully extended outriggers and front jack cylinder extended according to proper procedure.

JIB ERECTION NOTES:

- Maximum total length of boom including extended power pinned fly for purpose of erecting jib, over side or over rear, below 30° main boom angle is:
 - 46' (14.0m) Jib — 103 Ft. (31.4 Meters)
 - 60' (18.3m) Jib — 95 Ft. (29.0 Meters)
 - 74' (22.6m) Jib — 86 Ft. (26.2 Meters)
 - 88' (26.8m) Jib — 77 Ft. (23.5 Meters)
- WARNING:** Do not attempt to erect jibs over front of machine.

WEIGHT REDUCTION FOR LOAD HANDLING DEVICES

32 ft. BOOM EXTENSION WITH 36 - 114 ft. BOOM.	
† STOWED	365 lbs.
† ERECTED	2,455 lbs.

36 - 114 ft. BOOM WITH	
† 46 ft. JIB	8,828 lbs.
† 60 ft. JIB	12,962 lbs.
† 74 ft. JIB	17,868 lbs.
† 88 ft. JIB	23,548 lbs.

HOOK BLOCK	
80 Ton, 6 Sheave	1,615 lbs.
15 Ton, 1 Sheave	650 lbs.
Auxiliary Boom Head	230 lbs.
5 Ton Headache Ball	150 lbs.
7½ Ton Headache Ball	300 lbs.
10 Ton Headache Ball	500 lbs.

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.

†Reduction of main boom capacities only.

CARRIER SPECIFICATIONS

GROVE CARRIER 12 x 6, 80 TON



TM875

OUTRIGGERS - Hydraulic double box 2-stage telescoping beam outriggers, integral welded boxes, removable beams, vertical jack cylinders with integral holding valves and 30½ in. (775mm) diameter forged aluminum floats. Beams extend to 25 ft. 5¼ in. (7.75m) centerline to centerline retract to 9 ft. 10 in. (3.00m) overall width. Mechanical spin locks on each vertical jack to secure outriggers at any level. Controls and sight leveling bubble located in superstructure cab and each side of carrier frame. Powered by superstructure engine.

FRAME - High strength steel, all welded construction with box type design and integral welded outrigger boxes.

STEERING GEAR - Ross TE-72740 Cam and lever type with Garrison hydraulic power assist.

CLUTCH - Lipe Rollway 15½ in. (394mm), two plate dry disc.

TRANSMISSION - Fuller Roadranger (RTOO9513) 13 speeds forward and 2 reverse.

UNIVERSAL JOINTS - Needle bearing type.

AXLES - Front: (3) Shuler tubular steering DCB34-L-7, 100 in. (2.54m) track, 66,750 lb. (30,278kgs) capacity.

Rear: (3) Clark BD50-60 Planetary drive, 85 in. (2.16m) track, 108,000 lb. (48,989kgs) capacity.

SUSPENSION - Front: Reyco 21B spring mounted tridem, 66,000 lb. (29,938kgs) capacity.

Rear: Hendrickson Tri-axle equalizing beam with solid steel saddles, 108,000 lb. (48,989kgs) capacity.

FUEL TANK - Single 100 gallon (379 liter) capacity mounted on right side of frame.

TIRES - 14:00 x 20 - 20 ply Tube-type, Hi-way tread front, ND-M&S tread rear.

WHEELS - Steel spoke 10 in. x 20 in. (254mm x 508mm).

BRAKES - Full air on all wheels, Front: 17¼ in. x 4 in. (438mm x 102mm).

Rear: 16½ in. x 7 in. (419mm x 178mm). Total lining area: 2130 sq. in. (13,743cm²).

PARKING BRAKE - Maxi-type, spring set emergency chambers on all rear axles with emergency release kit.

ELECTRICAL SYSTEM - 12 volt lighting, 24 volt starting. Federal safety standard lights and reflectors.

CAB - Two-man, low profile design, all steel with acoustical treatment, laminated safety glass windshield and windows throughout; windshield washer and electric wiper, door and window locks. Bostrom "T" bar drivers seat and Bostrom companion seat, seat belts, heater, defroster fan, dual West Coast mirrors, domelight, dashlight, electric horn, traffic hazard warning switch (4-way flasher), complete instrumentation and driving controls, sliding right side and roll-down left side glass for ventilation, 2¼ lb. (1.25kg) dry type fire extinguisher. (Air conditioning available).

CAB INSTRUMENTATION - Engine oil pressure gauge, speedometer, air pressure gauge, fuel level gauge, engine water temperature gauge, voltmeter, tachometer, low air pressure audio-visual warning device, high beam indicator, ignition-on indicator.

MISCELLANEOUS STANDARD EQUIPMENT - Wheel nut wrench and handle, channel type front bumper, two front and rear towing loops, front and rear fenders, ether injection starting aid (less canister), front bumper mounted tie down, mud flaps, tool storage compartment, counterweight storage brackets mounted on carrier.

CARRIER ENGINE SPECIFICATIONS

Make & Model Type	Cummins NTC350	*GM 8V-71T	*Caterpillar 3406TA
Bore & Stroke	6 Cylinder O.H.V. 5.5 in. x 6 in. (140mm x 152mm)	8 Cylinder O.H.V. 4.25 in. x 5 in. (108mm x 127mm)	6 Cylinder O.H.V. 5.4 in. x 6.5 in. (137mm x 165mm)
Displacement	855 cu. in. (14,013cm ³)	568 cu. in. (9,310cm ³)	893 cu. in. (14,636cm ³)
Horsepower (Net)	315 @ 2100 RPM	315 @ 2100 RPM	325 @ 2100 RPM
Governed RPM	2100	2100	2100
Torque (Net)	903 lbs. ft. @ 1500 RPM	870 lbs. ft. @ 1600 RPM	900 lbs. ft. @ 1400 RPM
Electrical System	12 Volt Neg. Ground	12 Volt Neg. Ground	12 Volt Neg. Ground
Combustion System	4 Cycle Turbocharged	2 Cycle Turbocharged	4 Cycle Turbocharged
Cooling System	Liquid	Liquid	Liquid
Fuel Capacity	100 Gallons (379 liters)	100 Gallons (379 liters)	100 Gallons (379 liters)
Alternator	53 Amp 12 Volt	75 Amp 12 Volt	65 Amp 12 Volt
Battery	(2) 204 A.H. 12 Volt	(2) 204 A.H. 12 Volt	(2) 204 A.H. 12 Volt
Air Cleaner	Dry Type	Dry Type	Dry Type
Air Compressor	15 CFM	12 CFM	12 CFM
Hourmeter	Yes	Yes	Yes
Starting System	24 Volt	24 Volt	24 Volt

NOTE: (1) GM and Cummins engines equipped with Jacobs engine brake. Units with Caterpillar engine equipped with driveline mounted electro-magnetic retarder.
(2) With air conditioning, engine horsepower and performance will be slightly reduced.

SPEED AND GRADEABILITY

ENGINE	SPEED RANGES @ MAX. GOVERNED RPM	% OF GRADEABILITY @ MAX. TORQUE
Cummins NTC350	2.35 to 45.84 MPH (4 to 74 km/h)	36.10 to .43%
*GM8V-71T	2.35 to 45.84 MPH (4 to 74 km/h)	35.26 to .38%
*Caterpillar 3406TA	2.35 to 45.84 MPH (4 to 74 km/h)	36.59 to .45%

NOTE: Performance based on 130,000 lb. (58,968 kg.) GVW and standard SAE engine rating conditions using standard tires, transmissions and axles. Performance data may vary plus or minus 10% due to variations in engine performance and vehicle weights.

*DENOTES OPTIONAL EQUIPMENT.

AXLE WEIGHT DISTRIBUTION CHART

ITEM	POUNDS			KILOGRAMS		
	GROSS	FRONT	REAR	GROSS	FRONT	REAR
Basic Standard Machine to Include: 36 - 114 ft. (10.97 - 34.74 m) trapezoidal boom plus a 32 ft. (9.75 m) Swingaway extension, Grove model 32S-1726A main hoist with 750 ft. (228.60 m) of 3/4 in. (19mm) rope, 12,975 lb. (5,885 kg.) counterweight, Grove model 12x6 - 80 carrier, Cummins NTC350 (Carrier Engine), Cummins V-555 (Superstructure Engine)	131,260	37,239	94,021	59,540	16,892	42,648
* Remove standard 12,975 lb. (5,885 kg.) counterweight	- 12,975	+ 5,702	-18,677	- 5,886	+ 2,586	- 8,472
80 ton (72.56 mt), 6 sheave hook block (stowed)	+ 1,600	+ 2,756	- 1,156	+ 726	+ 1,250	- 524
Auxiliary boom head	+ 230	+ 389	- 159	+ 104	+ 176	- 72
** Model 15S-16A Auxiliary hoist with 550 ft. (167.64 m) of 5/8 in. (16 mm) dia. rope and idler	+ 1,140	- 504	+ 1,644	+ 517	- 229	+ 746
** Model 40 free fall Auxiliary hoist with 550 ft. (167.64 m) of 1/2 in. (13 mm) dia. rope and idler	+ 1,100	- 486	+ 1,586	+ 499	- 220	+ 719
*** Model 32S-1716A Auxiliary hoist with 550 ft. (167.64 m) of 3/4 in. (19 mm) dia. rope and idler	+ 2,469	- 1,092	+ 3,561	+ 1,120	- 495	+ 1,615
** Substitute 12,300 lb. (5,579 kg.) counterweight	- 675	+ 297	- 972	- 306	+ 135	- 441
*** Substitute 11,300 lb. (5,126 kg.) counterweight	- 1,675	+ 736	- 2,411	- 760	+ 334	- 1,094
Substitute GM8V-71T engine (carrier)	- 450	- 502	+ 52	- 204	- 228	+ 24
Substitute Caterpillar 3406TA engine (carrier)	+ 5	+ 5	0	+ 2	+ 2	0
Substitute GM6V-53N engine (superstructure)	- 170	+ 5	- 175	- 77	+ 2	- 79
Substitute Caterpillar 3208 engine (superstructure)	- 410	+ 12	- 422	- 186	+ 5	- 191
Remove standard 32 ft. (9.75 m) Swingaway extension	- 1,550	- 1,606	+ 56	- 703	- 728	+ 25
Remove standard main hoist with rope	- 2,980	+ 956	- 3,936	- 1,351	+ 434	- 1,785
Remove (2) front outrigger beams & jacks	- 5,000	- 2,530	- 2,470	- 2,268	- 1,148	- 1,120
Remove (2) rear outrigger beams & jacks	- 5,000	+ 2,012	- 7,012	- 2,268	+ 913	- 3,181

* Use 12,975 lb. (5,885 kg.) counterweight without auxiliary hoist.

** Use 12,300 lb. (5,579 kg.) counterweight with Grove 15S-16A or Gearmatic model 40 free fall auxiliary hoist.

*** Use 11,300 lb. (5,126 kg.) counterweight with Grove 32S-1716A auxiliary hoist.

DIMENSIONS

Turning Radius 51 ft. (15.55m).

Ground Clearance 10 1/4 in. (with float removed) (260mm)

Tail Swing 12 ft. 1/2 in. (CWT in travel position) (3.67m)

Tail Swing 14 ft. 1/2 in. (CWT in working position) (4.28m)

