



GUAY

GROVE[®] RT75S

**SELF-PROPELLED
HYDRAULIC
CRANE with
TRAPEZOIDAL[†]
LATTICE BOOM**

**50 TON
CAPACITY**

45-TONS METRIC

Meets requirements of P.C.S.A. Standard No. 2

[†] Patented Grove Feature



**HYDRAULIC
CRANES**

GROVE MANUFACTURING COMPANY
Division of Walter Kidde & Company, Inc.
Shady Grove, Pa. USA 17256

6,000 lbs. @ **170'**
(2 722kg) TIP HEIGHT
(51.8m)

Jib offsets **5°, 17° or 30°**

9,600 lbs. @ **147'** TIP HEIGHT
(4 355kg) (44.8m)

17,500 lbs. @ **121'** TIP HEIGHT
(7 938kg) (36.9m)

20,000 lbs. @ **115'** TIP HEIGHT
(9 072kg) (35.1m)

31,000 lbs. @ **90'** TIP HEIGHT
(14 062kg) (27.4m)

THE GROVE **LATTICE** **TRAPEZOIDAL** † **BOOM**

More reach...
more long boom capacity
through a new concept
in boom design

Unquestionably, the introduction of the Grove Trapezoidal Boom revamped a lot of thinking about the reach and capacity possible with a telescoping boom. The RT75S introduces another example of fresh and imaginative design to improve the capabilities of Grove cranes.

We've taken the superior advantages of the Trapezoidal design and combined them with lattice construction and very high strength steel to provide an extremely light high strength boom. This bridging of the gap between the conventional lattice boom and the most modern concept in cantilever, power-telescoping booms results in an exceptionally light, highly maneuverable rough terrain crane. Two booms are available for the RT75S: the standard boom consists of a base section, two power-telescoping sections and a SwingAway lattice boom extension. The optional boom consists of a base section, two power-telescoping sections, a power pinned fourth section and a SwingAway lattice boom extension. Boom elevation is from -4° to 76°.

†Patented Grove feature





SPECIFICATIONS

RT75S

MAKE & MODEL	Detroit Diesel 6V-53N	*Cummins Diesel V555-C200	*Caterpillar 3160 Diesel
TYPE	6 Cylinder O.H.V.	8 Cylinder O.H.V.	8 Cylinder O.H.V.
BORE & STROKE	3.875 in. x 4.50 in.	4.625 in. x 4.125 in.	4.5 in. x 5.0 in.
DISPLACEMENT	318 cu.in.	555 cu.in.	636 cu.in.
HORSEPOWER (NET)	173 (at 2500 RPM)	176 (at 2600 RPM)	174 (at 2600 RPM)
GOVERNED RPM	2500	2600	2600
TORQUE (NET)	396 lbs. ft. (at 1500 RPM)	391 lbs. ft. (at 1800 RPM)	449 lbs. ft. (at 1280 RPM)
ELECTRICAL SYSTEM	12-Volt, Negative Ground	12-Volt, Negative Ground	12-Volt, Negative Ground
COMBUSTION SYSTEM	2 Cycle with blower, Naturally Aspirated	4 Cycle, Naturally Aspirated	4 Cycle, Naturally Aspirated
COOLING SYSTEM	Liquid	Liquid	Liquid
FUEL CAPACITY	60 Gallon	60 Gallon	60 Gallon
ALTERNATOR	60 Amp, 12-volt	58 Amp, 12-volt	55 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	7.25 CFM	13.2 CFM	12 CFM
HOURLY METER	Yes	Yes	Yes

*Denotes Optional Equipment

SPEED AND GRADEABILITY

Forward Drive	Transmission Range	Gear Shift	Maximum Speed (MPH)	Gradeability At Stall (%)	Tractive Effort At Stall (lbs.)
4 Wheel Drive	Low	1st	2.1	68.4	45,033
4 Wheel Drive	Low	2nd	3.9	30.2	23,791
4 Wheel Drive	Low	3rd	10.0	9.3	8,706
2 Wheel Drive	High	1st	4.8	23.2	18,907
2 Wheel Drive	High	2nd	8.8	11.1	10,003
2 Wheel Drive	High	3rd	21.8	2.8	3,658

NOTE: Performance based on 72,000 lb. 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.

WORKING WEIGHTS

Standard Machine With	Total Weight (lbs.)	Axle Weight Distribution	
		Front	Rear
34-116 Boom	71,565	38,010	33,555
35-142 Boom	73,890	41,902	31,988

DIMENSIONS

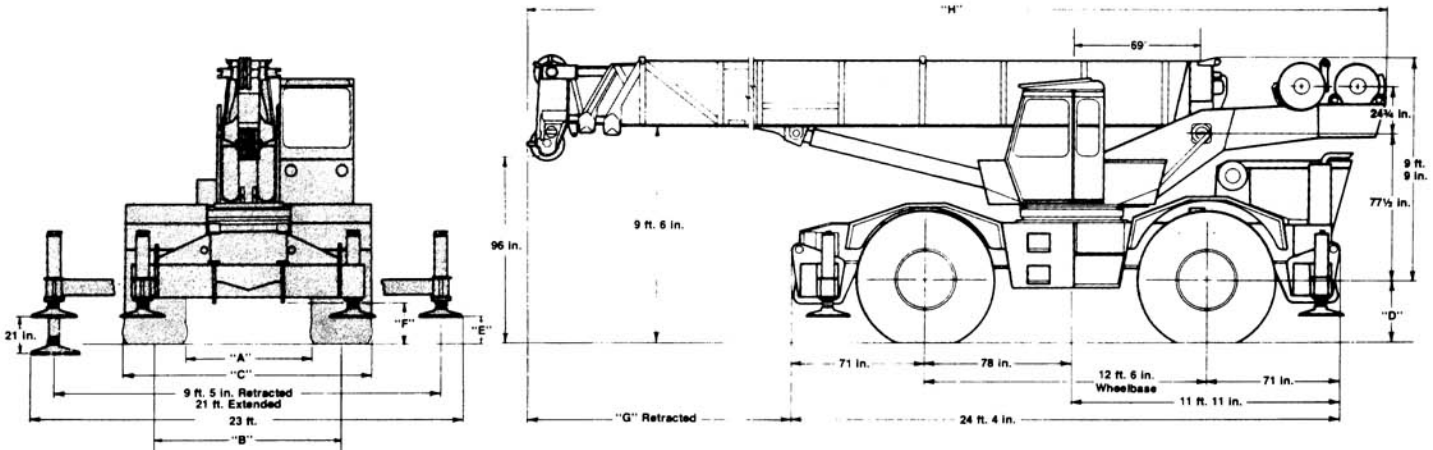
TAIL SWING - 14 ft.
TURNING RADIUS - 23 ft. 4 in.
OVERALL HEIGHT WITH STANDARD TIRES 12'6"

TIRE SIZE	"A"	"B"	"C"	"D"	"E"	"F"
29.5 x 25	66 in.	98½ in.	10 ft. 11 in.	33 in.	14¼ in.	21 in.
26.5 x 25	67 in.	97½ in.	10 ft. 8 in.	31 in.	12¼ in.	19 in.

BOOM LENGTH	"G"	"H"
• 34 ft. - 84 ft.	16 ft. 11 in.	43 ft. 2¼ in.
• 35 ft. - 110 ft.	18 ft. 1 in.	44 ft. 4 in.

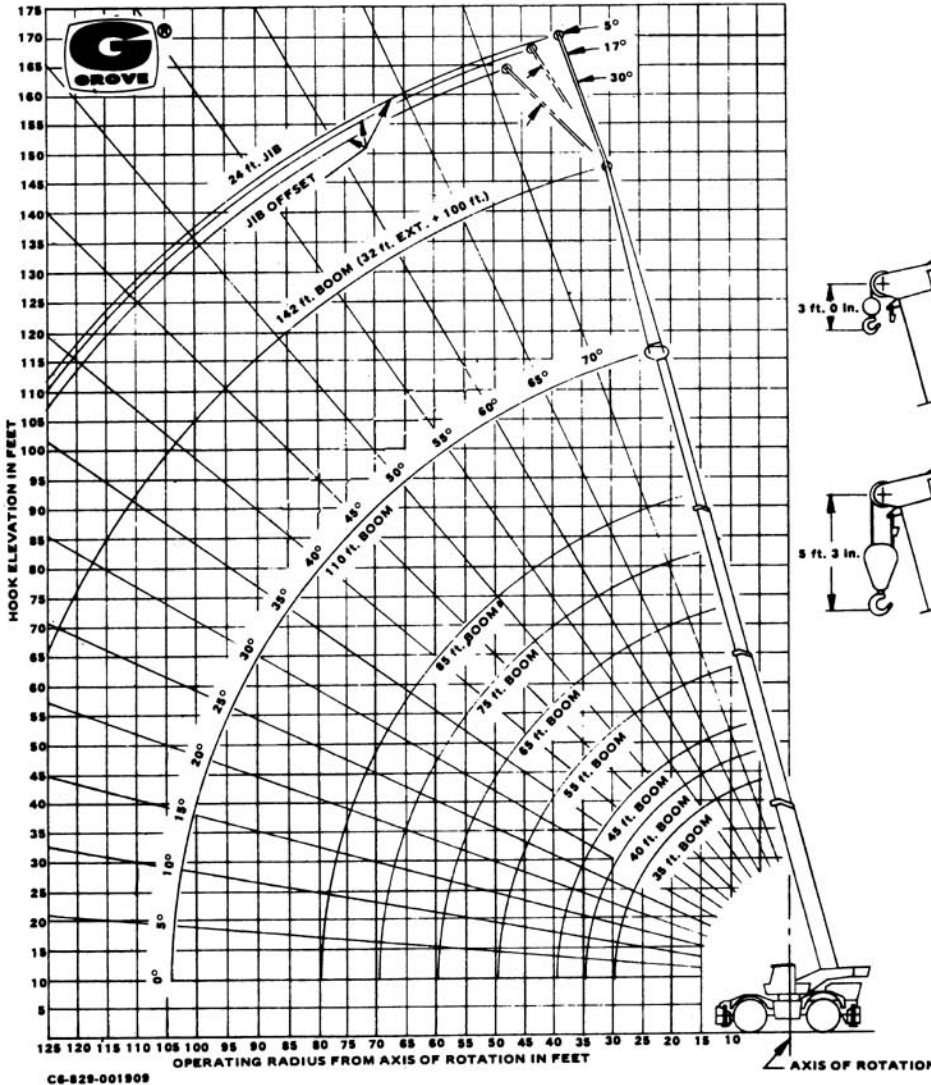
FENDER WIDTH - 10 ft. 11 in.

• 32 ft. Extension Stowed



Constant improvement and engineering progress make it necessary that we reserve the right to make specification, equipment, and price changes without notice.

RANGE DIAGRAM



JIB CAPACITIES IN POUNDS 24 ft. JIB and 32 ft. Boom Extension Combination

Min. Main Boom Angle	Min. 5° Offset	17° Offset	Max. 30° Offset
76°	6,000	5,280	4,800
70	4,300	3,940	3,660
65	3,430	3,200	3,010
60	2,780	2,600	2,470
55	2,220	2,110	2,020

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- 24 ft. jib and 32 ft. boom extension combination may be used for single line lifting crane service only. Capacities are based on structural strength of 24 ft. jib and 32 ft. boom extension combination at given main boom angle. When lifting with 24 ft. and 32 ft. boom extension, capacities must not exceed structural capacity of jib combination at given main boom angle or stability capacity of applicable boom length listed in boom capacity chart for actual working radius, whichever is less.
- Maximum total length of boom including 32 ft. boom extension for purpose of erecting 24 ft. jib below 10° is 92 ft.
- WARNING:** Operation of machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with jib occurs rapidly and without advance warning.
- 24 FT. JIB WARNING:** For total boom length including 32 ft. boom extension greater than 92 ft. with 24 ft. jib in working position the boom angle must not be less than 50° since loss of stability will occur causing a tipping condition.

NOTES TO LIFTING CAPACITIES

- Rated lifting capacities are based on freely suspended loads. They are the maximum covered by the manufacturer's warranty with the machine leveled and standing on a firm supporting surface. Ratings with outriggers are based on outriggers being extended to their maximum positions.
- Practical working loads for each particular job shall be established by the user depending on operating conditions; including the supporting surface, wind and other factors affecting stability, hazardous surroundings, experience of personnel, handling of load, etc.
- Operating radius is the horizontal distance from the axis of rotation to the centerline of the hoist line or tackle with loads applied.
- "On Rubber" lifting (if permitted) depends on proper tire inflation, capacity, and condition. "On Rubber" loads may be transported at a maximum vehicle speed of 2.5 mi/hr. (4 km/hr.) on a smooth and level surface only.
- Operation is not intended or approved for any conditions outside of those shown hereon. Handling of personnel from the boom is not authorized except with equipment furnished and installed by Grove Manufacturing Company.
- For clamshell or concrete bucket operation, weight of bucket and load must not exceed 90% of rated lifting capacities.
- Power-telescoping boom sections must be extended equally at all times. Long cantilever booms can create a tipping condition when in extended and lowered position.
- The maximum load which may be telescoped is limited by hydraulic pressure, boom angle, boom lubrication, etc. It is safe to attempt to telescope any load within the limits of rated lifting capacity chart.
- With certain boom and hoist tackle combinations, maximum capacities may not be obtainable with standard rope lengths.
- With certain boom and load combinations, raising of load with boom lift cylinders may not be possible. Operational safety is not affected by this condition.
- Keep load handling devices a minimum of 12 inches (30 CM) below boom head when lowering or extending boom.
- For multiple part reeving, use one part of line for each 12,500 lbs. of load.
- All load handling devices and/or boom attachments are considered part of the load and suitable allowances must be made.

GROVE®

FULL HYDRAULIC SELF-PROPELLED CRANE

RT75S

50 TON CAP.

PCSA CLASS 10-151

RATED LIFTING CAPACITIES IN POUNDS
35 ft. - 142 ft. BOOM
OUTRIGGERS FULLY EXTENDED

ON OUTRIGGERS - 360°

Radius in Feet	Trapezoidal Boom Length in Feet Power Pinned Section Retracted							Power Pin. Sec. & 85 ft.	32 ft. Ext. & 85 ft.	32 ft. Ext. & 110 ft.	
	*35	40	45	55	65	75	85				
10	100,000	74,000	72,000	64,000				**110	**117	**142	
12	80,000	69,800	65,500	58,000	44,700						
15	70,000	61,000	57,000	50,300	43,500						
20	53,000	50,300	46,800	40,800	37,400	35,000	31,000				
*25	37,550	37,550	37,550	34,200	31,200	29,200	27,000	20,000	17,500		
30		26,200	26,200	26,200	26,200	24,700	23,500	17,000	15,600		
35			19,620	19,620	19,620	19,620	19,620	14,550	13,500	9,600	
40				15,120	15,120	15,120	15,120	12,720	11,900	8,550	
45				11,850	11,850	11,850	11,850	11,300	10,600	7,680	
50					9,650	9,650	9,650	10,000	9,600	6,940	
55						7,680	7,680	8,850	8,700	6,280	
60							6,120	7,900	7,950	5,760	
65							4,810	6,730	6,900	5,230	
70								3,830	5,660	4,800	
75								2,930	4,580	4,490	
80									3,760	3,890	4,140
85									2,970	3,230	3,670
90									2,400	2,590	3,080
95									1,860	2,030	2,560
100									1,360	1,520	2,100
105										1,020	1,680
110											1,300

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ON OUTRIGGERS - OVER FRONT

Radius in Feet	Trapezoidal Boom Length in Feet Power Pinned Section Retracted							Power Pin. Sec. & 85 ft.	32 ft. Ext. & 85 ft.	32 ft. Ext. & 110 ft.	
	*35	40	45	55	65	75	85				
10	100,000	74,000	72,000	64,000				**110	**117	**142	
12	80,000	69,800	65,500	58,000	44,700						
15	70,000	61,000	57,000	50,300	43,500						
20	53,000	50,300	46,800	40,800	37,400	35,000	31,000				
25	41,000	41,000	39,600	34,200	31,200	29,200	27,000	20,000	17,500		
30		32,700	32,700	29,300	26,500	24,700	23,500	17,000	15,600		
35			24,680	24,680	23,000	21,300	20,100	14,550	13,500	9,600	
40				18,390	18,390	18,390	17,500	12,720	11,900	8,550	
45				13,580	13,580	13,580	13,580	11,300	10,600	7,680	
50					10,860	10,860	10,860	10,000	9,600	6,940	
55						8,890	8,890	8,850	8,700	6,280	
60							7,420	7,420	7,900	7,950	5,760
65							6,190	6,190	7,100	7,350	5,230
70								5,040	6,400	6,800	4,800
75								4,300	5,720	5,890	4,490
80									4,880	4,990	4,140
85									4,090	4,150	3,880
90									3,340	3,570	3,620
95									2,680	3,040	3,360
100									2,140	2,510	2,970
105										1,950	2,460
110										1,420	2,000
115											1,650
120											1,330
125											1,020

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ON RUBBER CAPACITIES

Radius in Feet	Stationary Capacity	2.5 MPH Capacity	Stationary Capacity
	(1) Defined Arc Over Front	Boom Centered (2) Over Front	360° Arc
10	45,550 (a)	36,540 (a)	40,650 (a)
12	37,650 (a)	32,150 (a)	30,000 (b)
15	30,750 (a)	26,470 (a)	21,500 (b)
20	24,250 (b)	19,910 (b)	12,460 (c)
25	19,150 (c)	15,340 (c)	7,840 (c)
30	13,190 (c)	11,720 (c)	4,840 (c)
35	9,310 (c)	9,020 (c)	2,640 (c)
40	6,840 (c)	6,520 (c)	1,270 (c)
45	5,200 (c)	4,790 (c)	

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Maximum Permissible Boom Length:

- (a) 35 ft.
- (b) 45 ft.
- (c) 55 ft.

(1) Defined Arc - Left front track CL to right front track CL.
(2) Mechanical swing lock pin must be engaged.

Chart based on 29.5x25 (22 ply)/26.5x25 (26 ply) tires and 50/65 PSI cold inflation pressure. Loads must be reduced for lower inflation pressures.

Capacities in the shaded area are based on structural strength and tipping should not be relied upon as a capacity limitation.

Capacities do not exceed 85% of tipping loads in accordance with SAE J-765.

Capacities are applicable with machine on a firm level surface only.

32 ft. boom extension and extended power pinned section not permitted for on rubber lifts.

WEIGHT REDUCTION FOR LOAD HANDLING DEVICES

32 ft. BOOM EXTENSION	
†STOWED	402 lbs.
†ERECTED	2,567 lbs.
24 ft. JIB & 32 ft. EXT. COMB.	
†ERECTED	5,800 lbs.
††ERECTED	1,200 lbs.

†Reduction of main boom capacities.
††Reduction of 32 ft. Ext. capacities.

HOOK BLOCK	
50 Ton, 3 Sheave	700 lbs.
15 Ton, 1 Sheave	310 lbs.
Auxiliary Boom Head	190 lbs.
5 Ton, Headache Ball	190 lbs.
7½ Ton, Headache Ball	300 lbs.
10 Ton, Headache Ball	500 lbs.

Capacities appearing in the shaded area are based on structural strength and tipping should not be relied upon as a capacity limitation.

*Capacities in the shaded area for 35 ft. boom length shall be lifted with boom fully retracted. If boom is not fully retracted, capacities shall not exceed those shown for 40 ft. boom length.

**Boom must be fully extended when lifting with extended power pinned section or with 32 ft. ext.

Capacities do not exceed 85% of tipping loads as determined by test in accordance with SAE