

# GROVE®

## *Specifications*

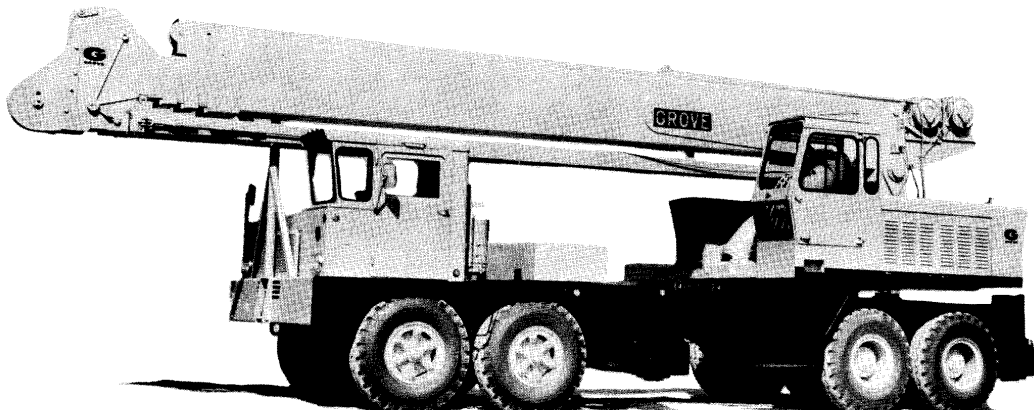
**55-Ton  
Capacity**

FULL  
**HYDRAULIC**  
TRUCK CRANE

MODEL

**TM550**

**8 X 4 CARRIER**



★ 110,000 LBS. CAPACITY

★ 4-SECTION FULL-POWER  
TELESCOPING BOOM

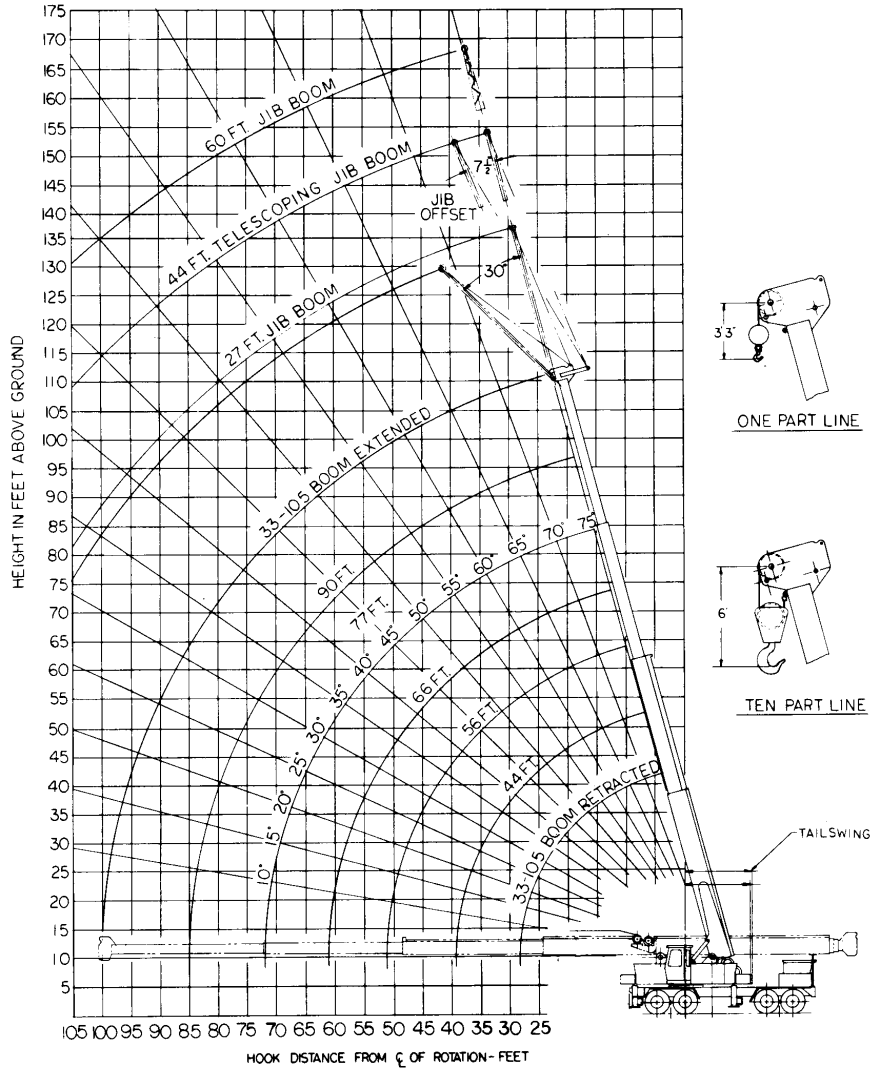
★ 33' RETRACTED  
105' EXTENDED

★ JIBS AVAILABLE TO 60'

★ 14,300 LB. SINGLE LINE  
PULL ON MAIN HOIST

★ HOIST SPEEDS 325 FPM  
POWER UP AND DOWN

★ 360° CONTINUOUS SWING,  
GLIDE SWING & BRAKE



JIB CAPACITIES								
27' STOWAWAY JIB				44' STOWAWAY JIB			60' JIB	
Minimum Boom Angle	No Offset	15° Offset	30° Offset	Minimum Boom Angle	No Offset	7 1/2° Offset	Minimum Boom Angle	No Offset
75°	9000#	6450#	4850#	75°	4500#	3000#	75°	4000#
73	8600	6150	4800	73	4300	2950	70	3500
70	8050	5845	4700	70	4025	2900	65	3000
67	7500	5585	4600	67	3750	2750	60	2500
64	7000	5385	4500	64	3500	2690	55	2000
60	6400	5185	4370	60	3200	2500	50	1500
56	5950	5000	4260	56	2875	2400		
52	5600	4845	4180	52	2500	2300		
47	5270	4675	4100	47	2635	2200		
42	5050	4535	4050	42	2525	2150		
37	4850	4415	4000	37	2425	2050		
30	4600	4305		30	2300			

27' JIB CAPACITIES APPEARING ABOVE ARE APPLICABLE TO BOTH THE 27' FIXED LENGTH JIB AND THE 27' - 44' TELESCOPING JIB WHEN THE 17' PINNED SECTION OF THE TELESCOPING JIB IS IN THE RETRACTED POSITION.

ALL JIB CAPACITIES ARE BASED ON STRUCTURAL STRENGTH OF THE JIB. ACTUAL LOADS LIFTED MUST NOT EXCEED CAPACITIES GIVEN IN MAIN BOOM CAPACITY CHART FOR THE SAME WORKING RADIUS.

## RATED LIFTING CAPACITIES - OVER SIDE AND REAR (WITH OUTRIGGERS)

OPERATING RADIUS (FT.)	BOOM LENGTH (FT.)						
	33	44	56	66	77	90	105
12	110,000	80,000	63,000	54,600			
15	92,000	71,600	58,600	50,800	46,000		
20	75,500	61,600	52,000	45,200	40,100	35,400	
25	55,100	53,800	45,800	40,100	35,200	30,500	25,000
30		41,600	40,500	35,500	31,000	26,800	23,000
35		32,600	32,600	31,100	27,100	23,700	21,000
40			26,500	26,500	23,700	21,000	18,500
45			21,500	21,500	20,700	18,700	16,000
50			18,000	18,000	18,000	16,700	15,000
60				12,400	12,400	12,400	12,400
70					8,400	8,400	8,400
80						6,400	6,400
90							4,540
100							3,000

THE RATED LIFTING CAPACITIES APPEARING ABOVE DO NOT EXCEED 85% OF TIPPING. THOSE CAPACITIES APPEARING IN THE SHADED AREA ARE LIMITED BY MACHINERY STRENGTH, AND MACHINE STABILITY CANNOT BE RELIED UPON AS THE CAPACITY LIMITATION.

### NOTES

- Rated lifting capacities are the maximum loads covered by the manufacturer's warranty with the machine standing on a firm, level and uniform supporting surface.
- For clamshell and concrete bucket operation, weight of bucket and load should not exceed 90% of lifting capacities.
- The weights of all load-handling devices are considered part of the load lifted and suitable allowances for them should be made.
- Jib extensions may be used for lifting crane service only.
- With jib installed, lifting capacities over main boom-head must be reduced as follows:

JIB LENGTH	REDUCED CAPACITY
27 ft.	1,100 lbs.
27 - 44 ft.	2,400 lbs.
60 ft.	1,800 lbs.

- The maximum boom length, including jib extension, may be raised from horizontal, over rear, with outriggers set.
- Long cantilever booms can create a tipping condition when in extended and lowered positions over the side. Boom should be retracted proportionate to the capacity of the load chart.
- Single line capacity 14000#. For larger capacities, one additional line should be used for each 10700# of load to be lifted.
- Each power-telescoping boom section should be extended equally at all times. Do not operate one fully extended and another fully retracted.

### AXLE WEIGHT DISTRIBUTION - TM550

BASIC MACHINE WITH FULL TANKS, COUNTERWEIGHT STORED, NO DRIVER	GROSS	FRONT	REAR
	101,000 lb.	38,811	62,976
1. REMOVE COUNTERWEIGHT	10,000 lb.	-7,433	-2,567
2. REMOVE REAR OUTRIGGER	5,845 lb.	+1,781	-7,626
3. REMOVE FRONT OUTRIGGER	5,845 lb.	-3,516	-2,313
4. ADD 27' JIB	942 lb.	+709	+233
5. ADD 27' - 44' JIB	2,200 lb.	+2,007	+193
6. ADD 4065 AUXILIARY HOIST (LESS CABLE)	845 lb.	-261	+1,106
7. ADD 55 TON 5 SHEAVE BLOCK (UNDER BOOM NOSE)	1,270 lb.	+2,212	-942
8. ADD 7 TON BALL & HOOK (UNDER BOOM NOSE)	300 lb.	+553	-253
9. SUBSTITUTE FORD 391 GAS ENGINE (UPPER)	-679 lb.	-44	-635
10. SUBSTITUTE CUMMINS CS-464C DIESEL (UPPER)	+280 lb.	+18	+262
11. SUBSTITUTE CUMMINS N-743C DIESEL (CARRIER)	+320 lb.	+320	0
12. ADD AUTO SAFELOAD DEVICE	+60 lb.	0	+60
13. EFFECT OF TELESCOPING BOOM 2 FT.		+1,450	-1,450
14. EFFECT OF TELESCOPING BOOM 4 FT.		+2,900	-2,900
15. EFFECT OF TELESCOPING BOOM 6 FT.		+4,350	-4,350

NOTE: Axle weight distribution shown above may vary slightly due to manufacturing tolerances.

## SUPERSTRUCTURE SPECIFICATIONS MODEL TM550

**BOOM** — 4 Section full power telescoping, 33 ft. retracted length, 105 ft. extended length, 72 ft. of full power extension. Each telescoping section independently controlled. 5 Sheave boom head. Each telescoping cylinder equipped with integral safety holding valve.

**\*JIB EXTENSION** — 27 ft. Stow-Away type with adjustable single cable self-equalizing suspension. Max. offset 30°.

**\*JIB EXTENSION** — 27 ft - 44 ft. telescoping Stow-Away type with adjustable dual cable self-equalizing suspension. Max. offset 7½°.

**\*JIB EXTENSION** — 60 ft. Lattice type with self-equalizing suspension and accessory equipment.

**BOOM ELEVATION** — Twin double-acting hydraulic cylinders with integral safety holding valves. 0-75° boom elevation. Full power up and down. Combination control lever provided for hand or foot operation.

**HOIST** — (Main) — Boom mounted.

Model — 5090 SECR, full hydraulic power up and down, planetary gear reduction with integral automatic brake.

Drum Dimensions — 12" diameter x 22.3" flange diameter x 16" long.

Performance —

Single Line Speed — 325 FPM maximum. Single Line Pull — 14,300 lbs. maximum. Cable Capacity — 490 ft. of ¾" cable.

**\*HOIST** — (Auxiliary) — Boom mounted.

Model — 4065 HEGR, full hydraulic power up and down, planetary gear reduction with integral automatic brake.

Drum Dimensions — 16" diameter x 22.3" flange diameter x 16" long.

Performance —

Single Line Speed — 385 FPM maximum. Single Line Pull — 7,400 lbs. maximum. Cable Capacity — 570 ft. of ¾" cable.

**CABLE SPECIFICATIONS** — (Main Hoist) — ¾" diameter 6 x 37 extra improved plow steel, steel center, 500 ft. furnished as standard equipment with main hoist.

(Auxiliary Hoist) — ¾" diameter 18 x 7 non-spin; improved plow steel, fiber center. (Cable not furnished with auxiliary hoist).

**SWING** — 360° continuous rotation, ball bearing swing circle, glide swing, foot actuated swing brake. External pinion; bull gear integral with the swing circle bearing. Swing speed 2.5 RPM. Combination control lever provided for hand or foot operation.

### HYDRAULIC SYSTEM —

Pump — 4 Section gear type driven from superstructure engine 195 GPM. capacity.

Control Valves — 4 Way double-acting type with integral load check, main and circuit relief valves, 4 banks permitting multiple control of crane functions.

Reservoir — 200 Gallon, all steel welded construction with integral baffles and top clean-out hole.

Filters — Twin return line type. Full flow with by-pass protection. Replaceable cartridges.

Oil Cooler — Oil to air.

Hydraulic Power Distribution — (Swing, inner-mid-telescope, boom elevation booster)

(Main hoist booster, fly telescope) (Boom elevation, outer-mid-telescope)

(Main hoist, \*auxiliary hoist, outriggers)

**CAB** — All steel, fully enclosed, removable front and rear laminated safety glass windows with hinged skylight for additional ventilation; full length control levers with combination hand and foot control for swing and boom elevation; fully adjustable operator's seat, full engine instruments, heater.

**COUNTERWEIGHT** — Turntable mounted, power installed and removed. Special provisions for stowing counterweight on the carrier for highway travel.

### ENGINE —

MAKE

TYPE

BORE & STROKE

GROSS BHP

GROSS TORQUE

GOVERNOR

ELECT. SYSTEM

### DIESEL

GM 6V-53

6 cyl. OHV

3.875 x 4.50

195 @ 2800 RPM

423 @ 1500 RPM

2800 RPM

HD 12 VDC

### \*DIESEL

Cummins CS-464

6 cyl. OHV

4.375 x 5.00

180 @ 2500 RPM

423 @ 1700 RPM

2500 RPM

HD 12 VDC

### \*GAS

Ford 391

V8

4.05 x 3.79

193 @ 2800 RPM

372 @ 2000 RPM

2800 RPM

12 VDC

**FUEL CAPACITY** — 75 gallons.

\*Denotes optional equipment.

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

## CARRIER SPECIFICATIONS MODEL 8x4 - 55 GF

**WHEELBASE** — 224"

**FRAME** — Deep box type Man-Ten or equal. Total Depth 21¼".  
Construction — All welded with top and bottom reinforcing.

**OUTRIGGERS** — Removable, hydraulic double box type, with totally-enclosed box-type vertical jacks, steel floats; beams extend to 20' wide center to center, retract to 10' overall width, full hydraulic in, out, up and down; Outrigger controls from crane operator's position on superstructure; (And both sides of carrier for operation from ground) safety check valves and mechanical pinlock for vertical jack cylinders.

**STEERING GEAR** — Ross TE-71 cam and lever with Garrison power assist.

**ENGINE** —

Std.:	General Motors 6-7IN	*Cummins - N743C	*Waukesha F817G
Cylinders	6	6	6
Bore & Stroke	4¼ x 5	5½ x 6	5¾ x 6
Displacement	425.6 cu. in.	743 cu. in.	817 cu. in.
Horsepower	252 @ 2300 RPM	220 @ 2100 RPM	212 @ 2400 RPM
Torque	604 @ 1200 RPM	606 @ 1600 RPM	712 @ 1200 RPM

**FUEL CAPACITY** — 60 gallons.

**CLUTCH** — Lipe, 13-2 DPB; Area: 355.6 sq. in.

**TRANSMISSION** —

Main - Fuller; Speeds - 5 forward, 1 reverse.  
Auxiliary - Fuller; 3-speed.

**UNIVERSAL JOINTS** — Needle bearing type.

**AXLES** —

Front — (2) FWD; Tubular; Track — 93½"  
Rear — (2) Clark; Planetary; Track — 90"  
Overall width: 122.0".

**SUSPENSION** —

Front — Hendrickson 365 spring suspension.  
Rear — Hendrickson 900 solid mount.

**BRAKES** — Type — Full air on all wheels, 12 CFM piston compressor.

Size — Front — 17¼ x 4. Area — 608 sq. in. Total 1740 sq. in.  
Rear — 16½" x 7. Area — 1132.5 sq. in.

**EMERGENCY BRAKE** — Maxi type 30 on both rear axles with emergency release kit.

**WHEELS** — Goodyear 10.00 wide x 20 type MD.  
Cast Construction, lug mounting.

**TIRES** — Front — (4) 14.00 x 20 18 ply Highway tread.  
Rear — (8) 14.00 x 20 18 ply non-directional mud and snow.

**CAB** — All steel one-man-beside-the engine type; safety glass windshield and windows, ventilators, rear-view mirror; instruments — heat indicator, fuel gauge, ammeter, oil pressure gauge, speedometer, tachometer, air gauge, low pressure warning buzzer, LH and RH mirror, heater and defroster.

**ELECTRIC SYSTEM** — 12 volt starting and lighting system, 60 ampere generator, instrument panel light, sealed beam tilt-ray headlights, tail and stop light, clearance lights, windshield wiper, horn, turn signals, cab light, and reflectors.

**MISCELLANEOUS EQUIPMENT** — Rim lug wrench, channel type front bumper, two front towing loops, rear fenders.

**WEIGHT** — Crane with 33' - 105' boom — Approx. 101,000 lbs.

\*Denotes Optional Equipment.

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# GROVE *Hydraulic* CRANES

**PERFORMANCE DATA FOR BASIC MACHINE WITH GM DIESEL ENGINE BASED ON MAXIMUM RPM.**

Trans.	Aux. (2.64)		Aux. (1.00)		Aux. (0.75)	
	MPH	Percent Gradeability	MPH	Percent Gradeability	MPH	Percent Gradeability
1st	1.6	44.8	4.3	16.0	5.7	11.6
2nd	3.0	23.8	7.8	8.1	10.4	5.7
3rd	5.4	12.3	14.2	3.8	19.0	2.4
4th	9.1	6.7	24.0	1.6	32.0	+ 0.80
5th	10.7	5.5	28.0	1.2	37.5	+ 0.50
Rev.	1.6	44.2	4.3	15.8	5.0	13.5

**PERFORMANCE FOR OPTIONAL WAUKESHA GASOLINE ENGINE BASED ON MAXIMUM RPM.**

Trans.	Aux. (2.64)		Aux. (1.00)		Aux. (0.75)	
	MPH	Percent Gradeability	MPH	Percent Gradeability	MPH	Percent Gradeability
1st	1.9	47.3	4.9	17.0	6.5	12.4
2nd	3.4	25.2	9.0	8.6	12.0	5.1
3rd	6.2	13.0	16.2	4.1	21.9	2.6
4th	10.4	7.2	27.5	1.8	36.7	1.0
5th	12.2	5.9	32.1	1.3	43.0	+ 0.60
Rev.	1.9	46.6	5.0	16.8	5.7	14.3

**PERFORMANCE FOR OPTIONAL CUMMINS DIESEL ENGINE BASED ON MAXIMUM RPM.**

Trans.	Aux. (2.64)		Aux. (1.00)		Aux. (0.75)	
	MPH	Percent Gradeability	MPH	Percent Gradeability	MPH	Percent Gradeability
1st	1.6	45.6	4.3	16.4	5.7	11.9
2nd	3.0	24.3	7.8	8.3	10.4	5.8
3rd	5.4	12.5	14.2	3.9	19.0	2.5
4th	9.1	6.9	24.0	1.7	32.0	+ 0.90
5th	10.7	5.7	28.0	1.2	37.5	+ 0.52
Rev.	1.6	45.1	4.3	16.1	5.0	13.7

