

# GROVE

FULL  
**HYDRAULIC**  
TRUCK CRANE

MODEL  
**TMI50**



## *Specifications*

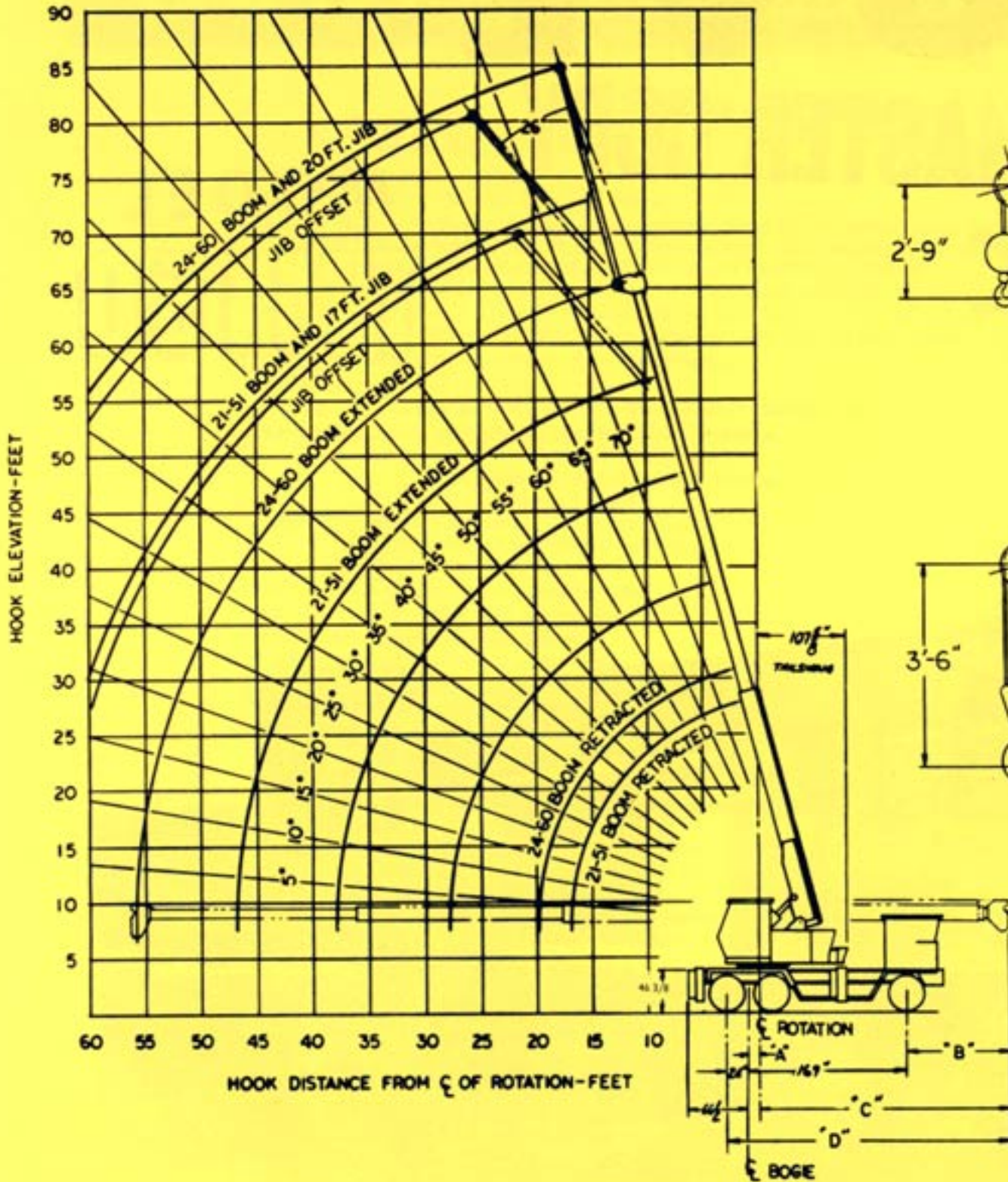
- ★ 30,000 lbs. Capacity
- ★ 24-60 ft. Full-Power Telescoping Boom
- ★ TWIN Boom Elevation Cylinders [0° to 75°]
- ★ 360° Continuous Rotation with Glide Swing
- ★ 20 ft. "Stowaway" Jib
- ★ 6 x 4 and 6 x 6 Carriers Available

**GROVE MANUFACTURING COMPANY**

A DIVISION OF WALTER KIDDE & CO., INC.

SHADY GROVE

PENNSYLVANIA



DIMENSIONAL CHART

BOOM	"A"	"B"	"C"	"D"
24-60	11"	89 3/16"	247 3/16"	282 3/16"
21-51	11"	53 3/16"	211 3/16"	246 3/16"

RATED LIFTING CAPACITIES

Radius In Feet	Over Rear		Over Side	
	With Outriggers	Without Outriggers	With Outriggers	Without Outriggers
*10	30,000#	11,000#	30,000#	10,250#
*12	30,000	9,600	30,000	8,800
**15	26,000	7,800	26,000	7,000
20	18,250	4,750	18,250	4,200
25	12,500	3,100	12,500	2,300
30	9,500	1,950	9,200	1,200
35	7,500	1,100	7,200	600
40	6,000	500	5,700	
45	4,800		4,500	
50	3,800		3,500	
55	3,150		2,700	

\*For 30,000 lbs. Lifting Capacity Max. Boom Length - 45 Ft.

\*\*For 26,000 lbs. Lifting Capacity Max. Boom Length - 50 Ft.

JIB CAPACITIES

Min. Boom Angle	No Offset	Max. Offset
75°	8500#	6300#
70°	5750	4300
65°	4500	3400
60°	3700	2800
50°	2200	1650
40°	1750	1460
30°	1500	1200

Jibs are to be used for SINGLE-LINE OPERATIONS ONLY.

NOTE: Maximum Rated Jib Capacity is based on Structural Strength of the Jib.

## SUPERSTRUCTURE SPECIFICATIONS Model TM150

**BOOM** — 3-Section Full Power Telescope with integral safety holding valves.

BOOM RETRACTED	BOOM EXTENDED	NUMBER OF BOOM SECTIONS	TOTAL LENGTH OF TELESCOPE	HOOK HEIGHT @ 75°	
				RETRACTED	EXTENDED
24'	60'	3	36'	28'	62'
*21'	51'	3	30'	25'	53'

ABOVE BOOM LENGTHS ARE CALCULATED FROM CENTER LINE OF FULCRUM TO CENTER LINE OF SHEAVE PIN.

- \* **JIB EXTENSIONS** — 17' and 20' stowaway type with adjustable single cable self-equalizing suspension adjustable to 30° offset.
- BOOM ELEVATION** — Twin double-acting hydraulic cylinders with integral safety holding valves 0° to 75° elevation angle. Combination control lever provided for hand or foot operation.
- BOOM HEAD** — 3 sheave with integral cable guards.
- HOIST** — (Main) - Model 40 SECR - Power up and down, equal speed, planetary reduction with integral automatic brake.
  - DRUM** — 9" diameter, 8" long, 1 1/2" diameter flanges.
  - CABLE** — 400' 1/2" diameter maximum.
  - SINGLE LINE PULL** — 8100 lbs. maximum. **SINGLE LINE SPEED** — 200 FPM maximum.
- \* **HOIST (Main)** Model 40 SCR, high speed power down. Line speed down — 1000 FPM maximum.
- \* **HOIST (Main)** — Model 4065 HECR — Power up and down, equal speed, planetary reduction with integral automatic brake; includes hydraulic booster circuit controls integral with control lever.
  - SINGLE LINE PULL** — 7000 lbs. maximum. **SINGLE LINE SPEED** — 350 FPM maximum.
- \* **HOIST (Auxiliary)** — 40 SECR or 40 SCR, less cable.
- CABLE SPECIFICATIONS** — 1/2" diameter 18 x 7 no-spin; improved plow steel, fiber center; 250' furnished as standard equipment with main hoist.
- SWING** — 360° continuous rotation, ball-bearing swing circle; "glide" swing with foot actuated swing brake; external pinion, bull gear integral with the swing circle bearing; speed 3 RPM; combination control lever provided for hand or foot operation.
- HYDRAULIC SYSTEM** —
  - PUMPS** — 3-Section gear type driven from superstructure engine. 106 GPM capacity.
  - CONTROL VALVES** — 4-Way double-acting type with integral load check, main and circuit relief valves; 3 banks permitting multiple control of crane functions; 2250 PSI maximum relief setting.
  - HYDRAULIC POWER DISTRIBUTION** — (Swing-outrigger-fly telescope) (Mid telescope - \*accessory-boom elevation) (\*Auxiliary hoist-main hoist).
  - RESERVOIR** — 124 gallon all-steel with integral baffles, shut-off valve, and top clean-out hole.
  - FILTER** — Return line type; full flow with by-pass protection; replaceable cartridge.
  - OIL COOLER** — Oil to air.
- 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 operators seat, full engine instruments, heater, windshield wiper.

### ENGINE SPECIFICATIONS:

	GAS	*DIESEL
<b>MAKE</b>	Ford 300	GM 3-53-N
<b>TYPE</b>	6 Cyl. O. H. V.	3 Cyl. O. H. V.
<b>BORE AND STROKE</b>	4.00" x 3.98"	3.875" x 4.50"
<b>MAXIMUM BHP</b>	149 @ 2800 RPM	101 @ 2800 RPM
<b>MAXIMUM TORQUE</b>	284 lbs. ft. @ 2000 RPM	216 lbs. ft. @ 1500 RPM
<b>ELECTRICAL SYSTEM</b>	12 Volt	12-Volt HD Battery

**OUTRIGGER CONTROL** — Remote operation from superstructure cab. Each outrigger independently controlled. (In-out-up-down).

\* DENOTES OPTIONAL EQUIPMENT

## NOTES

1. Rated lifting capacities, with or without outriggers, are the maximum loads covered by the manufacturer's warranty with the machine standing on a firm, level and uniform supporting surface. Capacities do not exceed 85% of tipping.
2. For certain conditions, capacities are controlled by machinery strength. In these cases machine tipping must not be relied upon as the capacity limitation.
3. For clamshell and concrete bucket operation, weight of bucket and load should not exceed 90% of outrigger lifting capacities.
4. The weights of all load-handling devices are considered part of the load lifted and suitable allowances for them should be made.
5. Jib extensions are to be used for lifting crane service only.
6. With jib installed, lifting capacities over main boomhead must be reduced as follows:
 

JIB LENGTH	REDUCED CAPACITY
17 ft.	600 lbs.
20 ft.	700 lbs.
7. The maximum boom length, including jib extension, may be raised from horizontal with outriggers set.
8. Long cantilever booms can create a tipping condition when in extended and lowered positions. Boom should be retracted proportionate to the capacity of the load chart.
9. Single line capacity 6000#. For larger capacities use multiple part reeving. (one additional line for each 6000# of capacity.)
10. Each power-telescoping boom section should be extended equally at all times. Do not operate one fully extended and another fully retracted.

# GROVE Hydraulic CRANES

## TM150 CARRIER SPECIFICATIONS

Model 64-15GF (6x4)

\*Model 66-15GF (6x6)

WHEELBASE — 169", \*187".

FRAME — 12" x 12", ManTen Steel, "H" Beam.

OUTRIGGERS — Hydraulic double-box, integral with carrier frame; vertical jacks, floats; beams extend to 15' wide, retract to 8' full hydraulic in, out, up, and down, integral safety holding valves; outrigger controls on crane superstructure; steel covers for vertical outrigger jacks with mechanical pin-lock.

STEERING GEAR — Ross TE-71 cam and lever, roller-mounted, with hydraulic power steering.

ENGINE — IHC RD-450, 6-cylinder valve-in-head; Bore & Stroke - - 4-3/8" x 5", Piston Displacement - - 450.99 cu. in. Horsepower - - 199 BHP @ 3000 RPM, governed at 2600 RPM full load. Torque - - 418 pounds feet @ 1600 RPM.

FUEL CAPACITY — 40 gallon tank, right side of frame.

RADIATOR — Fin and Tube type.

CLUTCH — 14" single plate, dry disc type. Lining Area - - 201.86 sq. in.

TRANSMISSION — (6x4) Main: 5 speeds forward, 1 reverse.

Aux.: 3 speed.

(6x6) Main: 5 speeds forward, 1 reverse.

Transfer: 2 speed.

AXLES — (6x4) Front non-driving; Rear - hypoid single reduction with inter-axle differential; Ratio 6.167 to 1.

(6x6) Front hypoid single reduction; Rear - hypoid single reduction with inter-axle differential; Ratio 6.167 to 1.

UNIVERSAL JOINTS — Needle Bearing type.

SPRINGS — Front - Alloy steel semi-elliptic with overload. Main - - 50" x 3", 7-leaf. Overload - - 27" x 3", 5-leaf.

SHOCK ABSORBERS — Front axle only.

REAR SUSPENSION — Tandem axle walking beams, rubber bushed with steel saddles.

BRAKES — Service - Full air, 6 wheel internal expanding shoes with 12 cu. ft. piston compressor. Size - Front - - 16" x 4". Rear 16-1/2" x 4". Maxi Brake, on one rear axle, with release kit.

WHEELS — 20", 10 Hole Steel Disc. Rim 7.5".

TIRES — 10.00 x 20, 12-ply rating; singles front, duals rear.

CAB — All-steel, one-man-beside-the-engine type. Safety glass windshield and windows, ventilators, rear-view mirror, instrument panel consisting of heat indicator, fuel gauge, ammeter, oil pressure gauge and speedometer; heater and defroster.

ELECTRICAL SYSTEM — 12-volt starting and lighting, 90 AH Battery, 37 AMP Alternator, instrument panel light, sealed beam tilt-ray headlights, tail and stop lights, windshield wiper, horn and turn signals, front and rear; ICC clearance lights.

MISCELLANEOUS EQUIPMENT — Wheel nut wrench, channel type front bumper, two front towing loops.

OVERALL SPEEDS AND GRADEABILITY — Using standard engine, tires, transmission, auxiliary and transfer case, and axles. Engine at governed speed:

For Speeds and Gradeability for optional Engines, CONSULT FACTORY.

### Model 64-15GF (6x4)

GEAR	HIGH RANGE		INTERMEDIATE		LOW RANGE	
	SPEED (MPH)	% GRADEABILITY	SPEED (MPH)	% GRADEABILITY	SPEED (MPH)	% GRADEABILITY
5th	49.41	1.15	37.43	2.00	22.66	4.29
4th	35.04	2.24	26.55	3.44	16.07	6.66
3rd	20.00	5.06	15.15	7.15	9.18	12.79
2nd	10.72	10.74	8.12	14.65	4.92	25.18
1st	6.15	19.84	4.66	26.67	2.82	45.03
Rev.	6.18	19.74	4.68	26.53	2.83	44.79

### \*Model 66-15GF (6x6)

GEAR	HIGH RANGE		LOW RANGE	
	SPEED (MPH)	% GRADEABILITY	SPEED (MPH)	% GRADEABILITY
5th	50.93	1.07	15.63	6.89
4th	36.12	2.13	11.09	10.33
3rd	20.62	4.86	6.33	19.22
2nd	11.05	10.37	3.39	37.17
1st	6.34	19.20	1.94	65.94
Rev.	6.37	19.10	1.95	65.60

### AXLE WEIGHT DISTRIBUTION

BASIC SUPERSTRUCTURE and 6x4 Carrier

FRONT 11,560

REAR 31,620

BASIC SUPERSTRUCTURE and 6x6 Carrier

FRONT 11,870

REAR 31,900

Axle weight distribution shown above is for the basic machine, and may vary slightly due to manufacturing tolerances or the addition of optional equipment.

\* 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.

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