



**GROVE<sup>®</sup>**  
**CRANE**

A GROVE WORLDWIDE COMPANY

# TM1500

**Carrier-Mounted Hydraulic Crane**





## Carrier specifications

<b>Frame</b>	High strength alloy steel all welded box-type construction with integral outrigger housings and front/rear lifting, towing and tie down lugs.
<b>Outrigger System</b>	Hydraulic double stage, double box telescopic beam and jack outriggers with integral holding valves. All steel fabricated quick release type outrigger floats. 30 1/2 in. (775mm) diameter. Maximum outrigger pad load 282,825 lbs. (92000 kg). Standard fifth front stabilizer for 360° duties.
<b>Outrigger Controls</b>	Located in the superstructure cab and on both sides of the carrier frame. Push button controls requiring two-handed operation. Crane level indicator (sight-bubble) adjacent to each set of controls.
<b>Engine</b>	Cummins NTC 450C, six-cylinder turbo-charged after-cooled diesel. 450 bhp (335 kw) (gross) @ 2,100 RPM. Maximum net torque 1500 ft. lbs. (194 kg/m) @ 1,400 RPM.
<b>Fuel Tank Capacity</b>	(1) 100 gallons (378.5L)
<b>Electrical System</b>	Two 12 volt - maintenance free batteries, 12 volt starting.
<b>Drive</b>	12 x 6
<b>Steering</b>	Front axle steering, cam and lever type with hydraulic assist.
<b>Transmission</b>	Fuller Roadranger, 9 speeds forward, 2 reverse.
<b>Axles</b>	Front: (3) Rockwell tubular steering FL951, 100 in. (2540mm) track. Rear: (3) Rockwell EPRC 1735 planetary drive, 85 in. (2159mm) track.
<b>Suspension</b>	Front axles (3) spring mounted tridem. Rear axles (3) solid mounted tridem with equalizing beams.
<b>Tires</b>	Michelin 14.00X20-22PR(G20 X ZA4) radial ply tires front and back.
<b>Brakes</b>	Full air on all wheels. Air dryer provided to preclude moisture accumulation. Spring set emergency brake on all rear axles with emergency release.
<b>Lights</b>	Full lighting including head, tail, braking, reversing, directional and hazard warning lights.
<b>Cab</b>	Two man design, all-steel fabricated with acoustical lining and tinted safety glass throughout. Deluxe fabric covered fully adjustable seat. Complete driving controls and engine instrumentation including tachometer, speedometer, voltmeter, water temp. oil pressure, fuel level, air pressure gauge with A/V warning. Other standard items include hot water heater/defroster, electric windshield washer and wiper, fire extinguisher, seat belt, door and window locks.
<b>Maximum Speed</b>	42.1 MPH (67.3 kph).

	BASIC STANDARD MACHINE
<b>Gross Vehicle Weight &amp; Axle Loads</b>	Front: 57,939 lbs. (26281 kg) Rear: 135,646 lbs. (61529 kg) G.V.W. 193,585 lbs. (87810 kg)
<b>Miscellaneous Standard Equipment</b>	Dual rear view mirrors, hookblock stowage trough, electronic back-up alarm, light package. Jacobs engine brake and tire inflation kit.
<b>Optional Equipment</b>	Immersion engine block heater, engine low oil pressure/high water temperature audio visual warning.

*\*Denotes optional equipment*



# Superstructure specifications

<b>Boom</b>	46 ft. to 173 ft. (14m -53m) five section Trapezoidal boom, including remote-controlled aerial pinned section. Telescope sections are supported on replaceable graphite impregnated low friction wear pads. Maximum Tip Height: 182 ft. (55m).
<b>Swingaway Extension</b>	33 ft. (10.1m) lattice swingaway boom extension stows alongside base boom section when not in use. Offsettable at 2°, 15° or 30°. Maximum Tip Height: 215 ft. (66m).
<b>*Optional Telescopic Swingaway</b>	33 ft. to 58 ft. (10m-18m) telescopic lattice swingaway extension with offset links, offsettable at 2°, 15° or 30°. Stows alongside base boom when not in use. Maximum Tip Height: 240 ft. (73m).
<b>*Optional Jib Extension</b>	60 ft. (18m) or 88 ft. (27m) fixed offset jib. Also available are 60 ft. and 88 ft. power luffing jibs. Maximum Tip Height: 270 ft. (82m).
<b>Boom Nose</b>	Eight nylatron sheaves mounted on heavy duty tapered roller bearings with removable pin-type rope guards. Standard removable auxiliary boom nose with removable pin-type rope guard.
<b>Boom Elevation</b>	Dual double acting hydraulic cylinders with integral holding valve provides elevation from -3° to 80°.
<b>Load Moment &amp; Anti-Two Block System</b>	Standard load moment and anti-two block system with audio-visual warning and control lever lockout. These systems provide electronic display of boom angle, length, radius, tip height, relative load moment, maximum permissible load, load indication and warning of impending two-block condition.
<b>Cab</b>	Full vision, all-steel fabricated with acoustical lining and tinted safety glass throughout. Dash panel incorporates gauges for all engine functions. Other standard features include: hinged skylight, sliding left side door and sliding right side window, electric windshield washer and wiper, circulating air fan, heater and defroster, swing horn, fire extinguisher, and seat belt. *Optional items: electric skylight wiper and air conditioning.
<b>Swing</b>	Roller bearing swing circle with 360° continuous rotation. Grove planetary "glide-swing" with foot actuated disc brake, spring applied hydraulically released park brake and 360° position positive turntable lock. Combination controls provided for hand or foot operation. Swing speed 1.9 RPM.
<b>Counterweight</b>	Turntable mounted, power installed and removed, hydraulically extended to working position and retracted to stowed or travel position. 15,700 lbs. (7122 kg) with auxiliary hoist; 17,400 lbs. (7892 kg) without auxiliary hoist.
<b>Engine</b>	Cummins 6CTA8.3 six cylinder turbo-charged after-cooled diesel, 250 bhp (186 kw) (gross) @ 2500 RPM. Maximum torque: 650 ft. lbs. (90 kg/m) @ 1800 RPM.

## HYDRAULIC SYSTEM

<b>Pumps</b>	Six main gear pumps powered by superstructure engine. Manual pump disconnect. Combined capacity 349 GPM (1321 LPM).
<b>Valves</b>	Precision four way double acting control valves, six individual valve banks permit simultaneous control of multiple crane functions.
<b>Filter</b>	Return line type, full flow with by-pass protection and filter by-pass indicator, replaceable cartridge, 25 micron filtration rating.
<b>Reservoir</b>	420 gallons (1590 liters) with spin-on breather filter, external sight gauge, clean out access, strap mounted to frame.
<b>Oil Cooler</b>	Full flow, fin and tube, oil to air.

## HOIST SPECIFICATIONS

Series parallel circuitry and two motors provide both high line pull and speed ranges. Power up and down, equal speed, planetary reduction with integral automatic brake and electronic hoist drum rotation indicator.

### Main Hoist Gearmatic Model 44-26(H) and Grove Auxiliary Hoist HO30B-26(H)

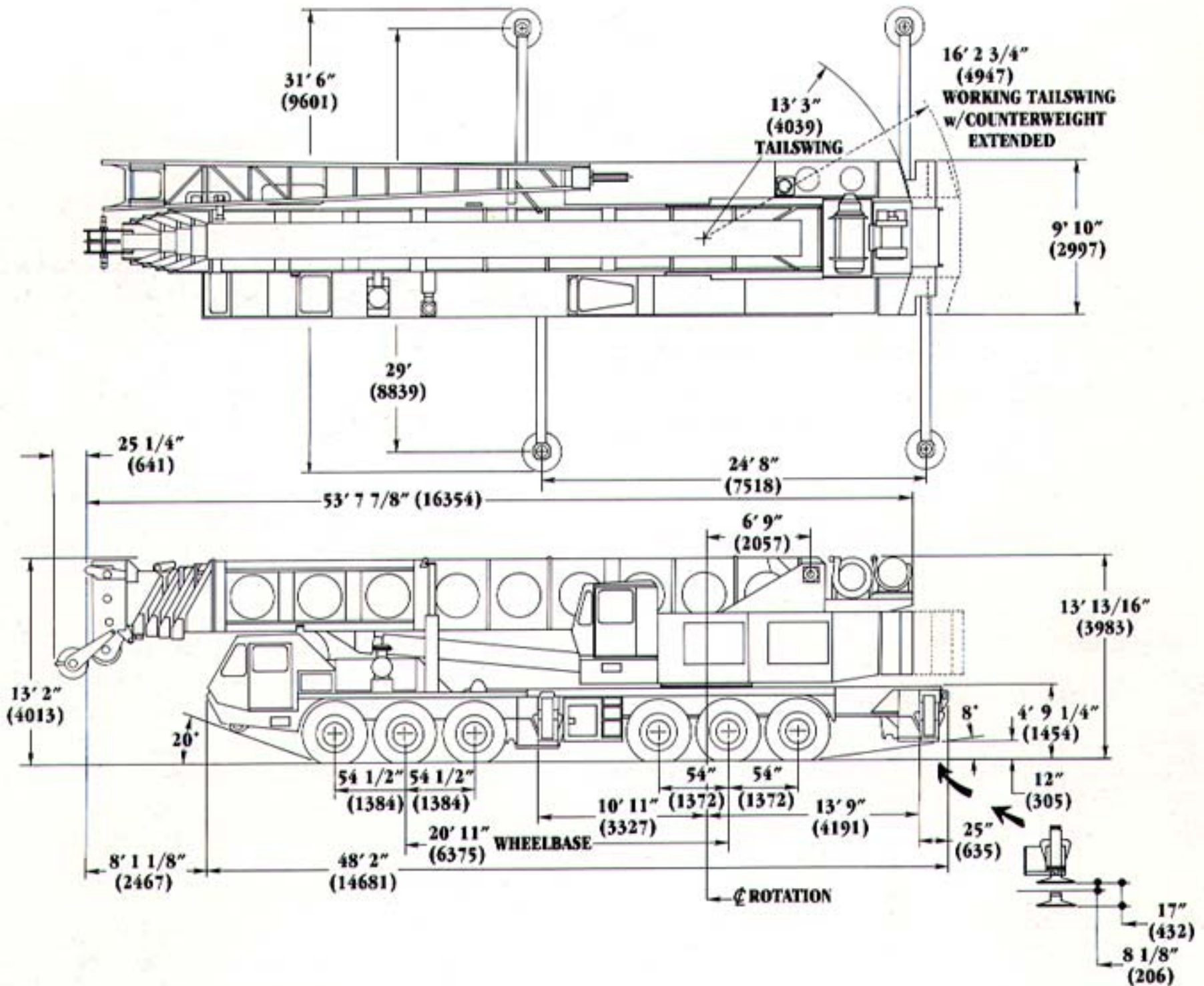
Make/Model		Main	Auxiliary
<b>Maximum single line speed</b>	Bottom Layer	314 FPM (96m/min)	454 FPM (138m/min)
	Intermediate Layer	366 FPM (112m/min)	528 FPM (161m/min)
	Top Layer	419 FPM (128m/min)	601 FPM (183m/min)
<b>Maximum single line pull</b>	Bottom Layer	24,900 lbs. (11295 kg)	16,322 lbs. (7404 kg)
	Intermediate Layer	21,327 lbs. (9674 kg)	14,056 lbs. (6376 kg)
	Top Layer	18,650 lbs. (8460 kg)	12,344 lbs. (5599 kg)
<b>Maximum permissible line pull w/5:1 strength factor</b>		22,760 lbs. (10324 kg)	12,920 lbs. (5861 kg)
<b>Maximum rope stowage</b>		950 ft. of 1 in. dia. rope (290m of 25.4mm)	830 ft. of 3/4 in. dia. rope (253m of 19.1mm)

\*Denotes optional equipment



# Dimensions

# TM1500



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