



**MASTER COPY**

# **NEW 80-TON** 72.5 METRIC TON **HYDRAULIC CRANE** **GROVE®** **TM800** with **TRAPEZOIDAL† BOOM**



## **HYDRAULIC CRANES**

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

†U. S. Patent applied for





TM800

## SUPERSTRUCTURE SPECIFICATIONS 8 x 4 and 12 x 6 CARRIER MODELS

**BOOM** - Four Section, Full Power Telescoping, Trapezoidal Boom  
36 ft. (10.7m) - Retracted, 114 ft. (34.7m) - Extended,  
Integral Holding Valves on each telescoping cylinder.

**BOOM NOSE** - Six Sheave, with Tapered Roller Bearings. Weld on  
type with integral cable guards.

**\*BOOM EXTENSION** - 32 ft. (9.8m) Swing-away Lattice Fly  
Section.

**\*JIBS** - 28 ft. (8.5m) Jib Section and 32 ft. (9.8m) Swing-away  
Lattice Extension, combine to make-up 60 ft. (18.2m) Jib (not  
stowable)  
(60 ft. [18.2m] Combination may be offset)

**BOOM ELEVATION** - Twin, Double-acting Hydraulic Cylinders  
with Integral Safety Holding Valves. (-4° to 80°) Elevation.  
Full Power Up and Down, combination control lever provided  
for hand or foot operation.

**SWING** - Anti-friction Roller Bearing Swing Circle, 360° continuous  
rotation, Grove "Planetary Glide Swing" gear box. Internal  
Pinion, bull gear integral with swing circle bearing. Foot  
actuated Swing Brake and hand operated House Brake,  
combination control lever provided for hand or foot operation.

**HYDRAULIC SYSTEM** - Pumps, Six Section gear type driven from  
superstructure engine. Combined Capacity 350 GPM. Manual  
Control Pump Disconnect operated from superstructure cab.

**HYDRAULIC POWER DISTRIBUTION** - (Main Hoist - 2365 PSI)  
(Auxiliary Hoist, Inner-mid Telescope - 2250 PSI) (Boom  
Elevation - 2500 PSI) (Fly Telescope - 2250 PSI) (Outer-Mid  
Telescope, Outriggers - 2250 PSI) (Swing - 2250 PSI)  
(Counterweight, Accessory - 1500 PSI)

**CONTROL VALVES** - Four-way, Double-acting type with integral  
load check, main and circuit relief valves, six banks permitting  
multiple control of crane functions.

**RESERVOIR** - 305 gallon, (1154 Liters) all steel welded  
construction with integral baffles and top cleanout hole.

**FILTER** - Twin suction line type, full flow with by-pass protection,  
replaceable cartridges, warning protection indicating hydraulic  
oil contamination.

**OIL COOLER** - Oil to air.

**CAB** - All steel, fully enclosed, laminated safety glass windows,  
sliding right side window, sliding door, hinged skylight. Full  
length control levers, combination hand and foot controls for  
swing and boom elevation. Fully adjustable operator's seat  
with head rest. Full engine instruments and controls, all crane  
function controls and heater. Hinged lower front and rear  
windows.

**OUTRIGGER CONTROLS** - (8 x 4 Carrier Model) Independently  
controlled, in-out-up and down, from superstructure cab and  
from either side of carrier.  
(12 x 6 Carrier Model) Controlled, in-out-up and down, from  
respective sides of carrier.

**COUNTERWEIGHT** - Turntable mounted, power installed and  
removed, hydraulically extended to working position and  
retracted to stowed or travel position.

ENGINE SPECIFICATIONS -		
MAKE	GM6V-53N Diesel	Cummins V504-C210 Diesel
TYPE	6 cylinder, supercharged	8 cylinder, O.H.V.
BORE & STROKE	3.875 in. x 4.50 in.	4.625 in. x 3.750 in.
DISPLACEMENT	318.4 cu. in.	504 cu. in.
NET FLYWHEEL HP	178 @ 2500 RPM	188 @ 3300 RPM
GOVERNED RPM	2500 RPM	3300 RPM
NET FLYWHEEL TORQUE	410 lbs. ft. @ 1200 RPM	362 lbs. ft. @ 1800 RPM
ELECTRICAL SYSTEM	12-volt	12-volt
COMBUSTION SYSTEM	2 Cycle, with blower	4 Cycle
COOLING SYSTEM	Liquid	Liquid

**FUEL CAPACITY** - 78 gallons (295.3 liters)

MAIN HOIST		*AUXILIARY HOIST				
DESCRIPTION: Two Speed Range: Power Up and Down, Equal Speed, Planetary Reduction, with Integral Automatic Brake.		DESCRIPTION: Power Up and Down, Equal Speed, Planetary Reduction with Integral Automatic Brake				
HOIST DATA	MAIN HOIST GROVE MODEL 325-1726	*AUXILIARY HOIST MODEL - 40 SECR				
Drum Dimensions	16 in. diameter (41 cm) 26 in. length (66 cm) 24 in. diameter flange (61 cm)	9 in. diameter (23 cm) 13 in. length (33 cm) 17.5 in. diameter flange (44 cm)				
Performance	<table><tr><th>HIGH SPEED RANGE</th><th>LOW SPEED RANGE</th></tr><tr><td>Single Line Speed 560 FPM (Max.) (170.8 mpm) Single Line Pull 8,500 lbs. (Max.) (3856 kg)</td><td>Single Line Speed 280 FPM (Max.) (85.4 mpm) Single Line Pull 17,000 lbs. (Max.) (7711 kg)</td></tr></table>	HIGH SPEED RANGE	LOW SPEED RANGE	Single Line Speed 560 FPM (Max.) (170.8 mpm) Single Line Pull 8,500 lbs. (Max.) (3856 kg)	Single Line Speed 280 FPM (Max.) (85.4 mpm) Single Line Pull 17,000 lbs. (Max.) (7711 kg)	Single Line Speed 290 FPM (Max.) (88.3 mpm)  Single Line Pull 9,000 lbs. (Max.) (4082.8 kg)
HIGH SPEED RANGE	LOW SPEED RANGE					
Single Line Speed 560 FPM (Max.) (170.8 mpm) Single Line Pull 8,500 lbs. (Max.) (3856 kg)	Single Line Speed 280 FPM (Max.) (85.4 mpm) Single Line Pull 17,000 lbs. (Max.) (7711 kg)					
Cable Capacity	890 ft. of 3/4 in. Cable (271.3 m of 1.9 cm) 640 ft. of 7/8 in. Cable (196 m of 2.2 cm)	680 ft. of 1/2 in. Cable (208.2 m of 1.3 cm)				
Permissible Line Pulls	3/4 in., 6x41 Class Cable - 15,400 lbs. (6985.3 kg) 3/4 in., 19x7 Class Cable - 13,700 lbs. (6215 kg) 7/8 in., 19x7 Class Cable - 15,400 lbs. (6985.3 kg)	1/2 in., 6x37 Class Cable - 7,200 lbs. (3266 kg) 1/2 in., 18x7 Class Cable - 6,150 lbs. (2790 kg)				

### \*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.





### UNIQUE VERTICAL JACK LOCK . . .

provides a positive lock in any position of the vertical stroke. Mechanical spin-lock is quick and easy to use and makes levelling the crane extremely easy.

### EXCELLENT STABILITY!

Hydraulic double-box beam outriggers provide a spread of 23 feet and are independently controlled permitting variable outrigger spread for working in close quarters. On the 8 x 4 carrier model, controls for outrigger beams and jacks are located in the superstructure cab and on either side of the carrier.

On the 12 x 6 carrier model, outrigger controls . . . in, out, up and down . . . are located on the respective sides of the carrier.



### "SWINGAWAY" FLY SECTION AND JIB

The "Swingaway" lattice fly section stores laterally alongside the boom base section and swings easily into working position to provide 152' tip height. An additional 28' lattice jib section may be added to provide a maximum tip height of 180'. Combined fly and jib sections may be offset  $7\frac{1}{2}^\circ$ .



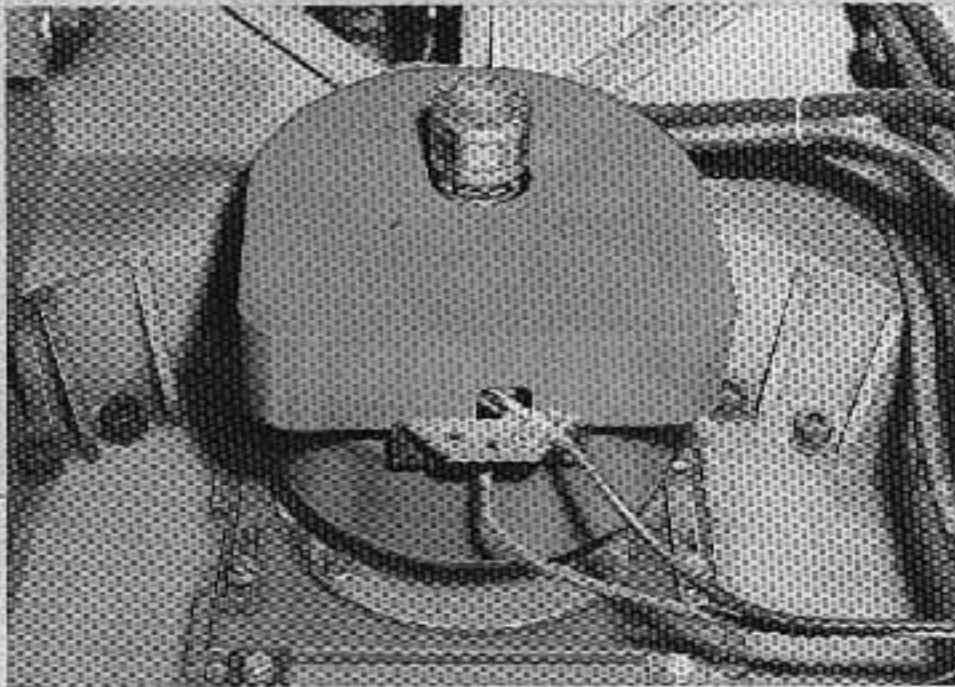
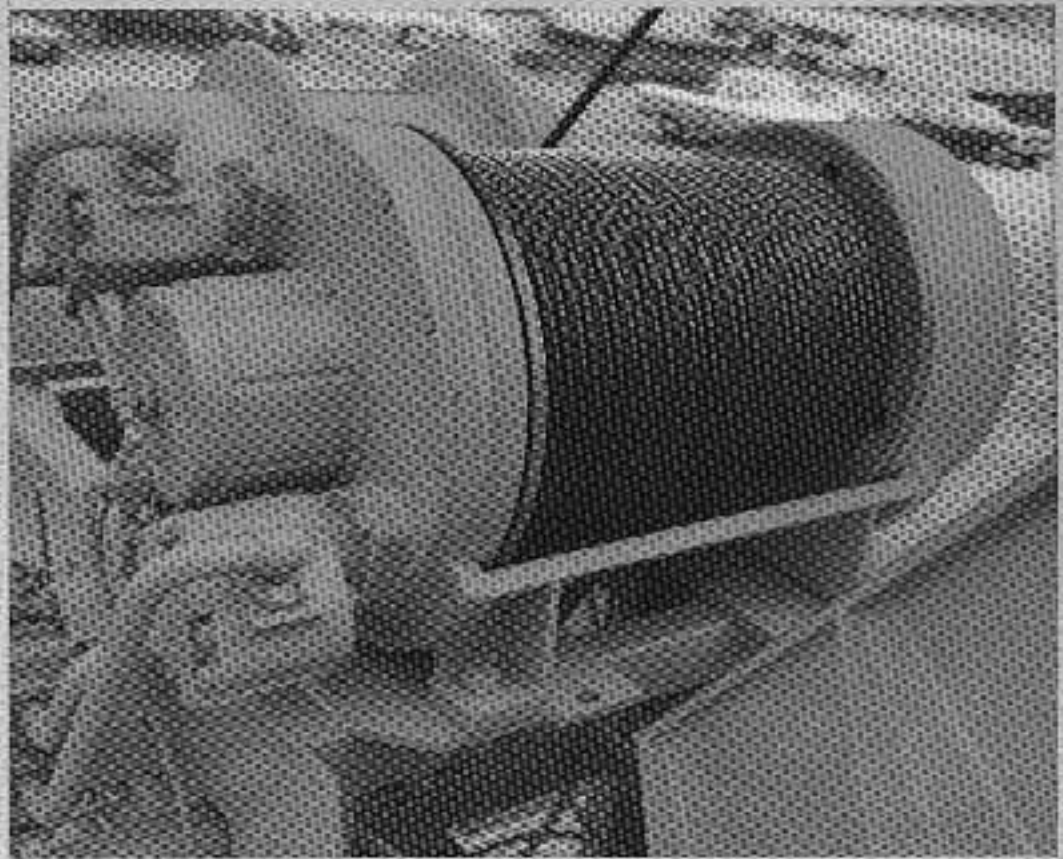




### NEW TWO SPEED HOIST!

This new Grove designed and manufactured hoist is the only hydraulic crane hoist providing both high line pull and high line speed without changes in lagging or gearing. Line speed ranges from 280 fpm at low speed to 560 fpm at high speed. Single line pull is 17,000 lbs. at low speed and 8,500 lbs. at high speed.

All internal parts run in oil and are protected from the weather. Motors and disc brake, while totally enclosed, are easily accessible for service.



### SMOOTH, PRECISE 360° ROTATION!

Smooth, precise continuous swing is assured with a large anti-friction roller bearing swing circle and the new Grove "Planetary Glide Swing" gear box. Swing action is accurate and instantaneous to the touch of the combination hand/foot control lever. Glide swing with foot brake is standard.

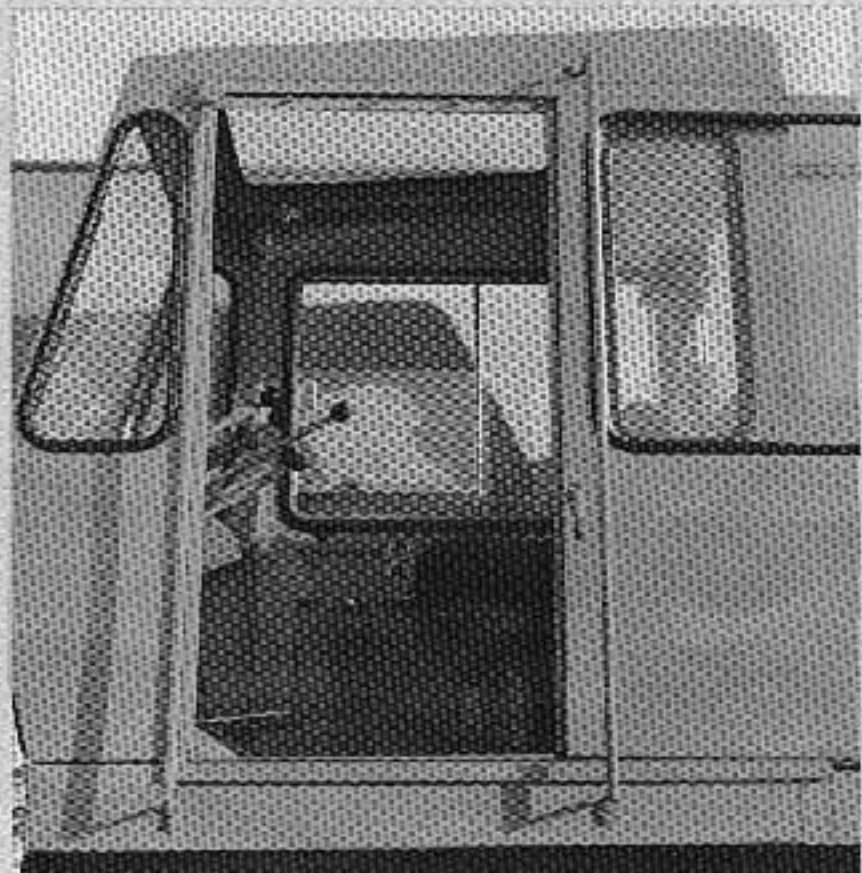
### CAB DESIGNED FOR OPERATOR CONVENIENCE

The interior of the all steel cab is designed for operator convenience and efficiency. Full length control levers are adjustable and combination hand and foot controls are provided for swing and boom elevation. Operator's seat is adjustable and has head rest. Other features include a sliding door, hinged skylight and laminated safety glass windows.



### MOVEABLE COUNTERWEIGHT!

The turntable-mounted counterweight is hydraulically extended to working position to provide improved capacities with a minimum of weight. It is also power installed and removed.







# The **GROVE**<sup>®</sup> **TRAPEZOIDAL BOOM**

***A SUPER-STRENGTH,  
HIGH CAPACITY,  
LONG REACH BOOM***

The Grove trapezoidal boom presents the optimum strength to weight ratio for hydraulic crane operation. It is the strongest, lightest, long-reach telescoping boom in the industry. These features are directly attributable to the trapezoidal design which permits a deeper, wider and lighter boom structure with greater resistance to lateral and vertical deflection than booms of conventional design. The result is a high strength, extremely rigid boom with near-zero deflection . . . more lifting power where you use it most.

**LIFT MORE...  
REACH  
HIGHER...**

IN THE HIGH PROFIT  
RANGE WITH THE

**GROVE<sup>®</sup>  
TRAPEZOIDAL  
BOOM**

**180'** TIP HEIGHT  
WITH JIB

**152'** MAIN BOOM  
TIP HEIGHT  
WITH  
"SWINGAWAY"  
FLY SECTION







8 x 4 CARRIER MODEL

The GROVE TM800 provides a money-making capability you just can't get in any other crane . . . an unique combination of reach, capacity, and job-to-job mobility . . . another EXTRA-VALUE crane from GROVE to increase your profit potential.

AVAILABLE THROUGH:

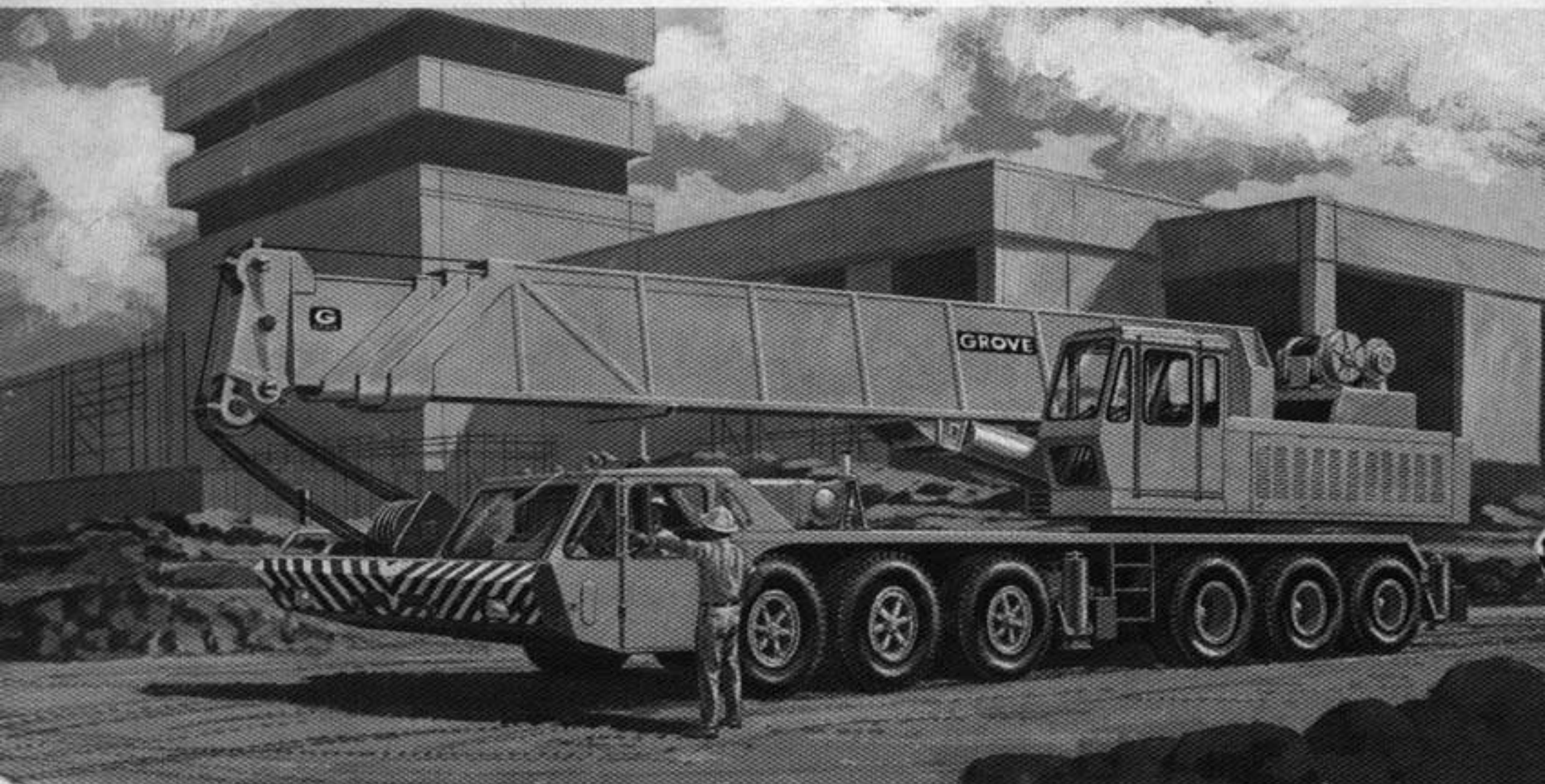


**HYDRAULIC  
CRANES**

GROVE MANUFACTURING COMPANY  
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Shady Grove, Pa. 17256

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12 x 6 CARRIER MODEL





# FULL HYDRAULIC CRANE CARRIER SPECIFICATIONS MODEL 12 x 6 - 80 GCD

# TM800

**OVERALL WIDTH** - 9ft. 10in. **OVERALL LENGTH** - 39ft. 7 $\frac{3}{4}$ in.

**FRAME** - Box Section of T1 and Man Ten Steel - Maximum Depth 24 in., all welded construction.

**STEERING GEAR** - Cam and lever with hydraulic power steering.

**CLUTCH** - Lipe Rollway 14 in., two plate dry disc, Area - 423 sq. in.

**TRANSMISSION** - Main - Fuller TO 905C, 5 Speeds forward and 1 reverse  
Auxiliary - 3G92, 3 Speeds

**UNIVERSAL JOINTS** - Needle bearing type.

**AXLES** - Front - (3) CDL-FTA-22000, 66,000 lbs. capacity  
Rear - (3) Clark BD 50/60 Planetary, 100 in. track, 90,000 lbs. capacity

**SUSPENSION** - Front - CDL Solid Mount Bogie, Equalizer Beams  
Rear - CDL Solid Mount TriDem, Equalizer Beams.

**BRAKES** - Full air on all 12 wheels, 14.5 CFM compressor, internal expanding shoes. Total lining Area - 2370 sq. in.  
Front - 15 in. x 5 in. Rear - 16 $\frac{1}{2}$  in. x 7 in.

**PARKING BRAKE** - MGM spring chambers on last three rear axles with emergency release kit.

## SPEED AND GRADEABILITY

Condition @ Full Load	Speed Ranges	% of Gradeability @ Max. Torque
On Highway *	5.03 to 36.62 MPH	15 to .77%
Off Highway †	2.41 to 17.52 MPH	32.11 to 3.25%

\*Auxiliary Transmission in High Range.

†Auxiliary Transmission in Low Range.

**WHEELBASE** - 220 in.

**TURNING RADIUS** - 53 ft.

**WHEELS** - 20 in. Cast Steel Spoke - 10 in. Rim width.

**TIRES** - Front and Rear - 14.00 x 20, 18 ply N.D. Highway Type.

**OUTRIGGERS** - Removable, Hydraulic double box type, vertical jack cylinders with integral safety holding valves, aluminum floats, Beams extend to 23 ft. centerline to centerline, retract to 11 ft. overall width. Controls on respective sides of carrier. Powered by Carrier Engine.

**CAB** - Low-Profile, two man, left hand drive, safety glass windshield and windows, rearview mirror, heater and defroster, windshield washer, horn and traffic hazard warning switch, four-way flasher, full engine instruments and carrier controls.

**ELECTRICAL SYSTEM** - Two 12 volt, 200 AMP Hour Batteries; 12 volt Lighting, 24 volt Starting, 50 AMP Alternator, Federal Safety Standard Lights and Reflectors.

**MISCELLANEOUS EQUIPMENT** - Wheel nut wrench, channel type front bumper, two front towing loops, two rear towing loops, rear fenders, Lock-up Sling Box, Tire Inflation Kit, Hydraulic Jack.

## ENGINE SPECIFICATIONS -

MAKE & MODEL  
CYLINDERS  
BORE & STROKE  
DISPLACEMENT  
HORSEPOWER  
GOVERNED @  
TORQUE  
(Engine Brake Standard)

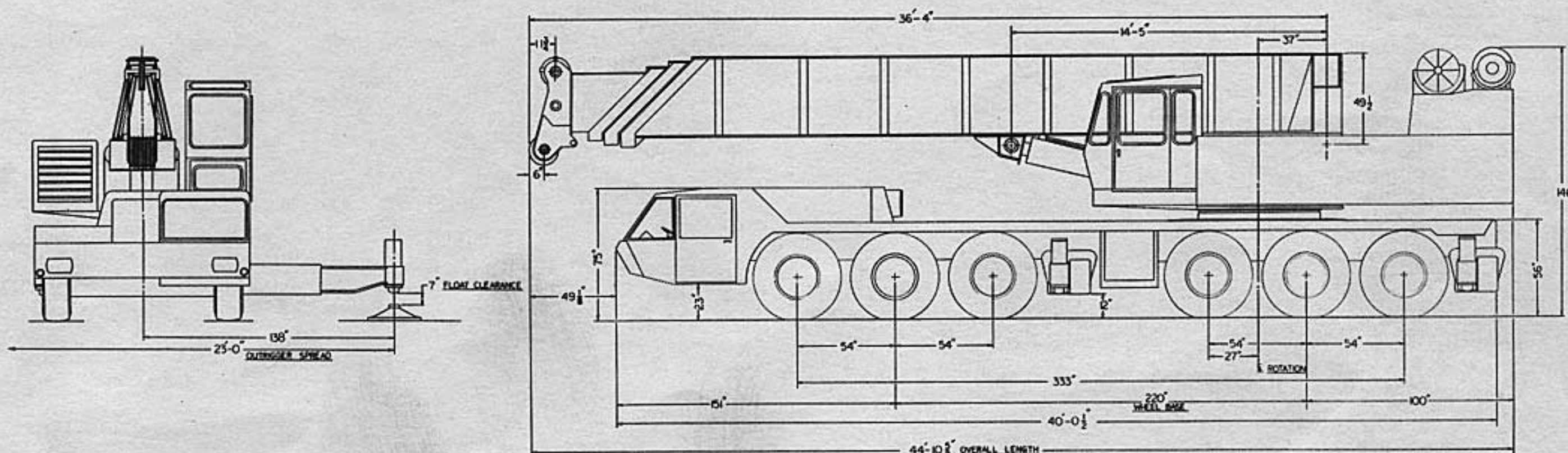
Cummins NTF-365  
6 Valve in Head  
5.5 in. x 6 in.  
855 cu. in.  
365 @ 2300 RPM  
2300 RPM  
930 @ 1650 RPM

## AXLE WEIGHT DISTRIBUTION CHART

ITEM	GROSS LBS.	FRONT LBS.	REAR LBS.
Basic Machine including 36-114 ft. Trapezoidal Boom, Grove Main Hoist, Cummins NTF 365 (Carrier Engine), Cummins V504-C210 (Super-structure Engine)	115,043	47,634	67,409
*11,475 lb. Counterweight (Retracted Position)	+11,475	- 5,232	+16,707
32 ft. Fly Section Extension	+ 1,250	+1,105	+ 145
6 Sheave Hook Block - Stowed	+ 1,600	+2,182	- 582
*Gearmatic Model 11 Auxiliary Hoist	+ 550	- 247	+ 797
Rooster Sheave	+ 230	+ 449	- 219
30 Ton, 3 Sheave Hook Block - Working Position	+ 720	+1,375	- 655
8 Ton, Hook Block - Working Position	+ 190	+ 363	- 173
140 lb. Headache Ball/Hook - Working Position	+ 140	+ 267	- 127
450 lb. Headache Ball/Hook - Working Position	+ 450	+ 860	- 410
Basic Machine with Rear Outrigger Assembly Stowed on Deck	115,043	54,040	61,003
*11,475 lb. Counterweight Stowed on Deck	+11,475	+9,649	+1,826
*11,000 lb. Counterweight Stowed on Deck	+11,000	+9,250	+1,750
*11,000 lb. Counterweight (Retracted Position)	+11,000	- 5,015	+16,015

\*Use 11 000 lb. Counterweight with Auxiliary Hoist  
NOTE: 11,475 lb. Counterweight without Auxiliary Hoist

## DIMENSIONS



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**SHADY GROVE • PENNSYLVANIA 17256**

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