

GROVE[®]

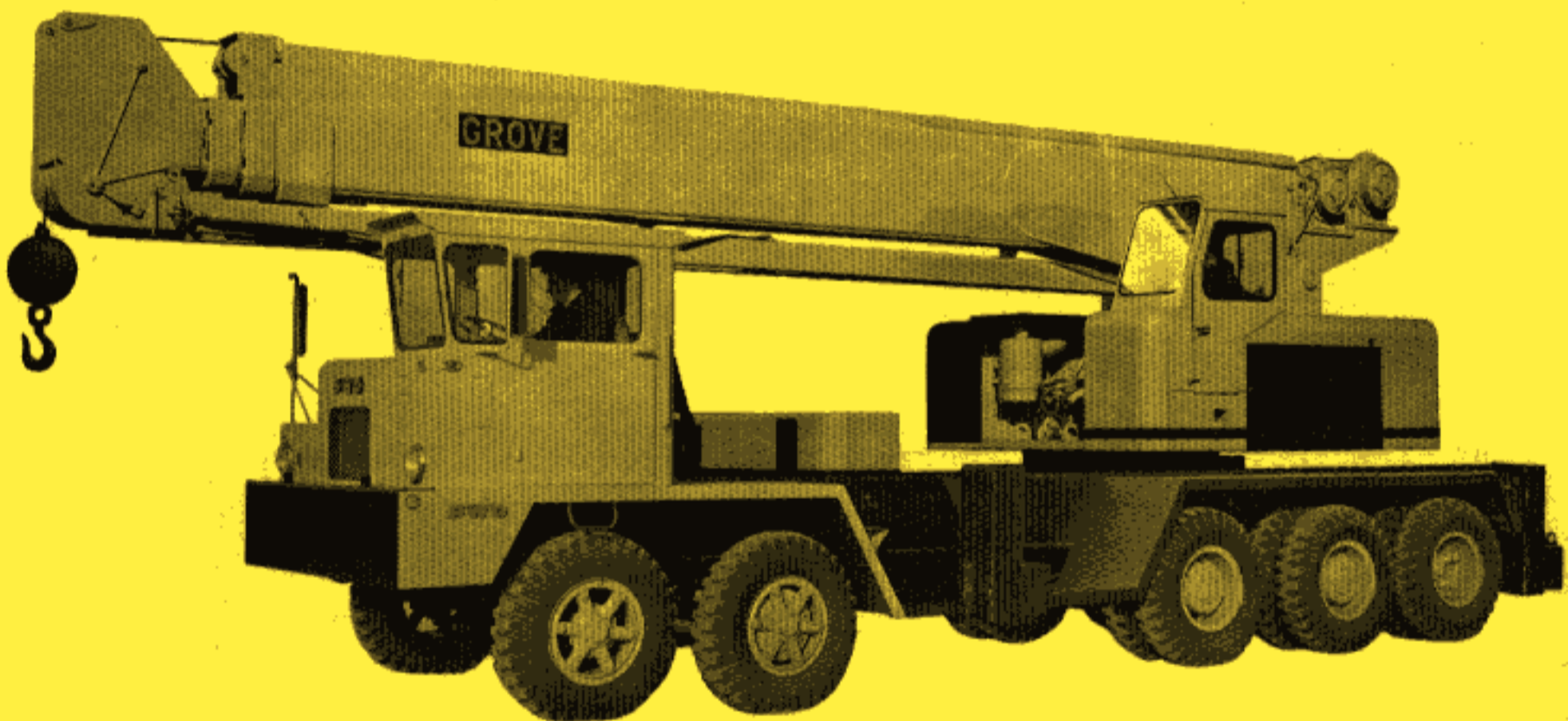
Specifications

**45-TON
Capacity**

FULL
HYDRAULIC
TRUCK CRANE

MODEL
TM425T

10 X 4 CARRIER



★ 90,000 lbs. Capacity

★ 4-Section Full-Power
Telescoping Boom
33' Retracted
105' Extended

★ 27' "StowAway" Jib

★ 12,000-lb. Single Line
Pull on Main Hoist

★ Hoist Speeds 350 FPM
Power Up and Down

★ 360° Continuous Swing,
Swing Glide & Brake

GROVE MANUFACTURING COMPANY
SHADY GROVE • PENNSYLVANIA

10 X 4 CARRIER

LIFTING CAPACITIES — OVER REAR (WITH OUTRIGGERS)

OPERATING RADIUS (FT.)	BOOM LENGTH							
	33	40	48	56	64	72	80	100
10	90,000	80,000	65,000	55,000				
12	80,000	70,000	57,000	50,000	45,000			
15	70,000	60,000	52,000	44,000	39,500	35,000		
20	57,000	49,500	44,000	39,000	34,000	28,500	25,000	
25	45,000	39,000	36,000	33,000	29,000	25,000	22,000	18,500
30		30,000	26,000	25,000	23,500	21,500	19,000	17,100
35			23,000	20,000	18,300	17,500	16,800	15,800
40			20,100	18,000	17,100	16,000	15,000	14,000
45				16,500	16,100	14,500	13,300	12,800
50					13,500	13,050	11,300	11,000
60						10,500	9,400	8,800
70							7,500	6,800
80								5,000
90								3,500

ALL CAPACITIES OVER REAR ARE BASED ON MACHINERY STRENGTH AND TIPPING MUST NOT BE RELIED UPON AS A CAPACITY LIMITATION.

LIFTING CAPACITIES — OVER SIDE (WITH OUTRIGGERS)

OPERATING RADIUS (FT.)	BOOM LENGTH							
	33	40	48	56	64	72	80	100
10	90,000	80,000	65,000	55,000				
12	80,000	70,000	57,000	50,000	45,000			
15	70,000	60,000	52,000	44,000	39,500	35,000		
20	57,000	49,500	44,000	39,000	34,000	28,500	25,000	
25	41,000	39,000	36,000	33,000	29,000	25,000	22,000	18,500
30		29,000	26,000	25,000	23,500	21,500	19,000	17,100
35			21,000	20,000	18,300	17,500	16,800	15,800
40			17,000	16,000	15,000	14,000	13,000	12,800
45				13,000	13,000	11,000	11,000	10,000
50					10,000	9,000	9,000	8,000
60						7,000	7,000	6,000
70							4,000	4,000
80								3,000
90								1,600

CAPACITIES APPEARING IN SHADED AREA ABOVE ARE BASED ON MACHINERY STRENGTH AND TIPPING SHOULD NOT BE RELIED UPON AS A 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. Capacities do not exceed 85% of tipping.
- For certain conditions, capacities are controlled by machinery strength. In these cases, machine tipping must not be relied upon as the capacity limitation.
- 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.
- Boom jib extensions may be used as straight or gooseneck extensions, and for lifting crane service only.
- With jib installed, lifting capacities over main boomhead must be reduced as follows:

JIB LENGTH	REDUCED CAPACITY
27 ft.	1,000 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 12000#. For larger capacities, as a safety factor, one additional line should be used for each 9000# 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.

Superstructure Specifications - - TM425T

BOOM		BOOM HEAD — 5 sheave		*4 sheave			
BOOM LENGTH		NO. OF SECTIONS		FEET OF TELESCOPE		HOOK HEIGHT (†)	
Retracted	Extended					Retracted	Extended
33'	105'	4		72'		37'	106'

(†) Using 5-sheave, 45-ton Hook Block

*JIB EXTENSION — 27' Stow-Away type.

BOOM ELEVATION — Twin double-acting hydraulic cylinders with pilot check valve, 0° to 75°.

HOIST (Main) — Boom mounted.

MODEL — 5090 HECR, power up and down, self-contained power pack including hydraulic motor, planetary gear reduction, and automatic brake.

DRUM — 16" diameter — with 500' (5/8") cable. DRUM CAPACITY — 570' Maximum (5/8" cable).

SINGLE LINE PULL — 12,000 pounds maximum. SINGLE LINE SPEED — No load — 350 FPM maximum.

*HOIST (Auxiliary) [Less 5/8" cable] Tandem-mounted on boom.

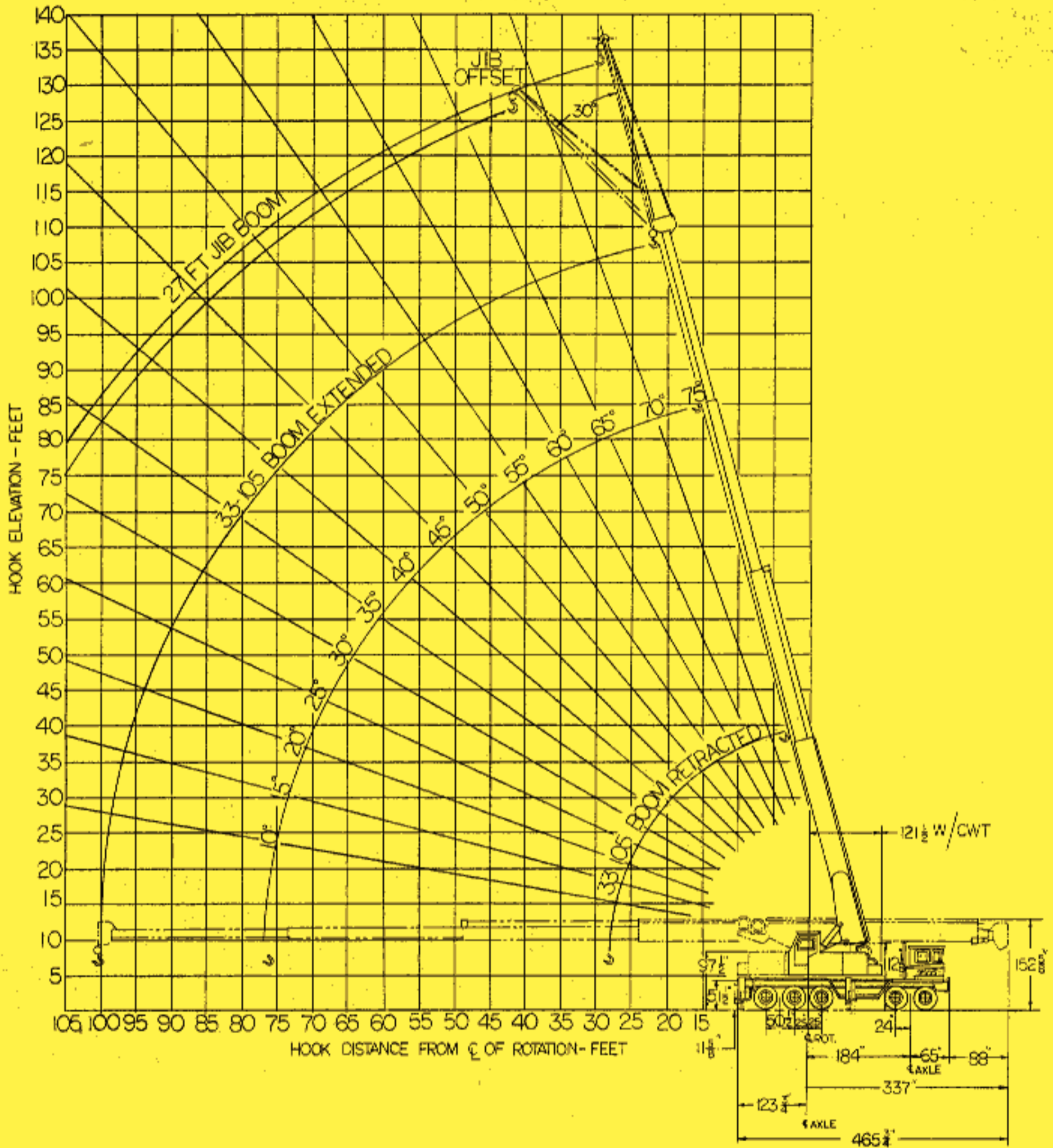
MODEL — 4065 HECR, power up and down, self-contained power pack including hydraulic motor, planetary gear reduction, and automatic brake.

DRUM — 16" diameter. DRUM CAPACITY — 570' (5/8" cable)

SINGLE LINE PULL — 7000 pounds maximum. SINGLE LINE SPEED — No load — 350 FPM maximum.

SWING — 360° continuous rotation, ball bearing swing circle.

DRIVE — Floating, with brake and swing lock. GEAR — External. SPEED — 2.5 RPM.



10 X 4

LOAD CAPACITIES — 27' JIB			
MIN. BOOM ANGLE	NO OFFSET	15° OFFSET	30° OFFSET
75°	9000#	6400#	4850#
73	8600	6154	4800
70	8050	5846	4700
67	7500	5585	4600
64	7000	5385	4500
60	6400	5185	4370
56	5950	5000	4260
52	5600	4846	4180
47	5270	4677	4100
42	5050	4538	4050
37	4850	4415	4000
30	4600	4308	

CAPACITIES ARE BASED ON STRUCTURAL STRENGTH OF JIB. ACTUAL LIFTED LOADS AT OPERATING RADIUS MUST NOT EXCEED CAPACITIES GIVEN IN MAIN BOOM CHART FOR SAME RADIUS.

GROVE *Hydraulic* CRANES

HYDRAULIC PUMPS — Quadruple pump system — 195 GPM.

[BOOM ELEVATION, INNER-MID TELESCOPE] [MAIN HOIST, *AUXILIARY HOIST] [MAIN HOIST BOOSTER, BOOM ELEVATION BOOSTER, OUTER-MID TELESCOPE] [FLY TELESCOPE, OUTRIGGERS, SWING].

CONTROLS — Hydraulic valves, 4-way, double-acting

OIL COOLER — Oil to air.

COUNTERWEIGHT — Turntable mounted, power removed.

ENGINE	GAS	* DIESEL
MAKE	Ford 391	GM6V-53
TYPE	8 Cyl. O.H.V.	6 Cyl. O.H.V.
BORE AND STROKE	4.05" X 3.79"	3-7/8" X 4-1/2"
GROSS B.H.P.	193 @ 2800 RP	195 @ 2800 RPM
GROSS TORQUE (Lbs. Ft.)	372 @ 2000 RPM	423 @ 1500 RPM
GOVERNOR (Mechanical)	2800 RPM	2800 RPM
ELECTRICAL SYSTEM	12 Volt	12 Volt HD Battery

Carrier Specifications 10 X 4 MODEL 104-45-GF

WHEELBASE — 184".

FRAME — 18" deep box type, Man-Ten Steel, reinforced top & bottom.

OUTRIGGERS — Removable, hydraulic double box type, with box type totally-enclosed vertical jacks, steel floats; beams extended to 17' wide center to center, retracted to 9' overall, full hydraulic in, out, up, & down outrigger controls from crane operator's position in Superstructure; pilot check valves and mechanical pinlock for vertical jack cylinders.

Outrigger controls on carrier for operation from ground.

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

ENGINE gasoline — Waukesha 817G

Cylinders — Six, valve-in-head.

Horsepower — 263 BHP @ 2400 RPM.

Torque — 709 lbs. feet @ 1000 RPM.

Displacement — 817 cu. in.

Governed at 2200 RPM full load.

Radiator — Fin and tube type.

FUEL CAPACITY — 60 gallons.

CLUTCH — 13" 2DPB two plate, dry disc type.

TRANSMISSION — Fuller 5H-75; Speeds — 5 forward, 1 reverse. Direct in 5th.

AUXILIARY — Fuller 3A-92; 3 speeds.

OVERALL GEAR RATIOS AND SPEEDS — Using standard tires, transmissions, axles and engine at governed speed.

Gear	HIGH RANGE		INTERMEDIATE		LOW RANGE	
	Ratio	Speed (MPH)	Ratio	Speed (MPH)	Ratio	Speed (MPH)
5th	5.55:1	48	7.40:1	36	15.47:1	17
4th	8.66:1	31	11.54:1	23	24.13:1	11
3rd	13.49:1	20	17.98:1	15	37.59:1	7
2nd	21.70:1	12	28.93:1	9	60.49:1	4
1st	36.63:1	7	48.84:1	5	102.10:1	3
Rev.	36.13:1	7	48.17:1	5	100.71:1	3

*ENGINE, Diesel, Optional — GMC6-71 or Cummins NH220: Consult Factory for Performance Data.

UNIVERSAL JOINTS — Needle Bearing Type.

AXLES AND SUSPENSION

FRONT — Two (2) FWD ND15 non driving tubular high clearance axles in tandem.

SUSPENSION — Spring loaded tandem axle walking beams.

REAR — 2 — Timken SSHD, Hypoid single reduction. RATIO 7.4 to 1 with INTERAXLE DIFFERENTIAL

SUSPENSION — Tandem axle with walking beams, rubber bushed with steel saddles, and air suspended tag axle.

BRAKES — (Service) Full air, 8 wheels (Brakes omitted on lead axle of front tandem) internal expanding shoes with 12 cu. ft. compressor. Size — Front 16" X 4" on one axle. Rear — 16-1/2" X 7.

(Parking, mechanical) Tru-stop 16" 4-shoe mounted on rear of aux. transmission.

WHEELS: 20" TIRES: 11.00 X 20, 12-ply rating; Highway Tread singles front, non-directional M&S duals rear.

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

ELECTRICAL SYSTEM — 12 volt starting and lighting system, 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.

WEIGHT — Crane with 33' -105 boom — Approx. 96,000 lbs.

* 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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