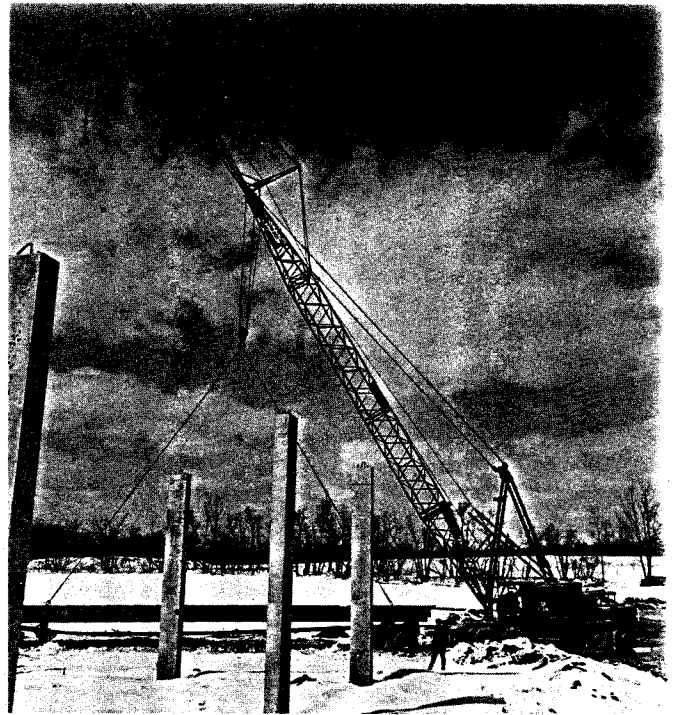




HC-218 FLYSHEET

CARRIER MOUNTED CRANE

*Dimensions — Working ranges —
Specifications — Lifting capacities*

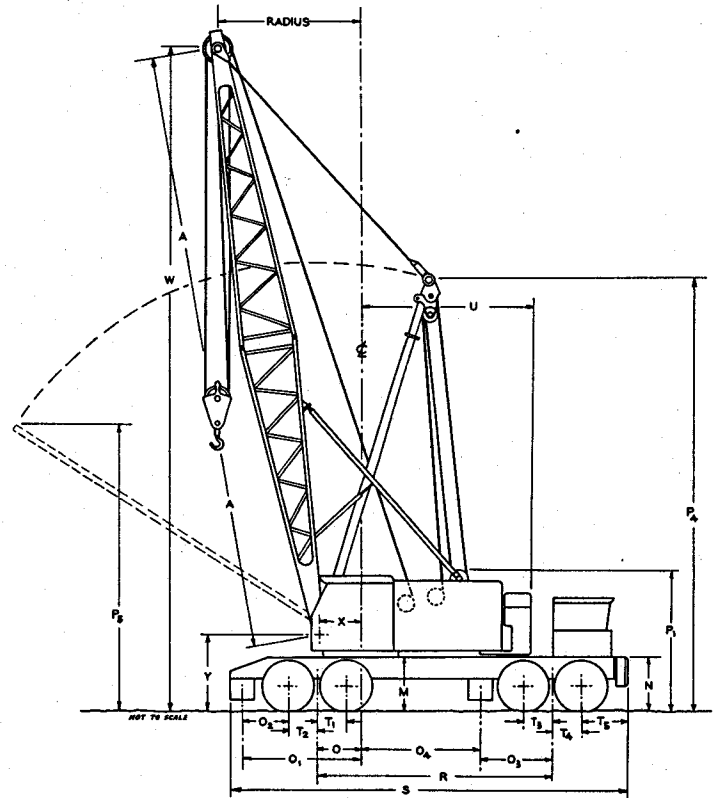


DIMENSIONS AND WORKING RANGES

Carrier — 8 x 4, 11' 0" Wide

| | | |
|--|---------------------------------|------------|
| Basic boom length | A | 40' 0" |
| Overall height, top of turntable bearing plate | M | 4' 8" |
| Ground clearance under counterweight | N | 4' 11" |
| Centerline rotation to rear axle bogie pivot | O | 3' 8" |
| Centerline rotation to center rear outrigger | O _i | 10' 0" |
| Center rear rear axle to center rear outrigger | O ₂ | 3' 11" |
| Center front axle bogie to center front outrigger | O ₃ | 6' 0" |
| Centerline rotation to center front outrigger | O ₄ | 10' 0" |
| Overall height, boomhoist bail sheave | P ₁ | 11' 6" |
| Height, over vertical extended boom live mast | P ₄ | 31' 5" |
| Height, over extended boom live mast with basic 40' boom horizontal over rear of carrier | P ₅ | 17' 0" |
| Minimum ground clearance under carrier | Q | 0' 11" |
| Wheelbase (236") | R | 19' 8" |
| Overall length over rear outrigger box — with front bumper counterweight | S | 33' 4" |
| without front bumper counterweight | S | 32' 9" |
| Center rear axles to pivot of rear bogie | T ₁ & T ₂ | 2' 5" |
| Center front axles to pivot of front bogie | T ₃ & T ₄ | 2' 5" |
| Center front front axle to front bumper | T ₅ | 3' 4" |
| Center front front axle to front bumper cwt. | T ₅ | 3' 11" |
| Tailswing of counterweight | U | 14' 0" |
| Radius of boom hinge pin | X | 3' 6" |
| Height of boom hinge pin | Y | 6' 7" |
| Overall height, basic 40' boom in travel position with boom live mast retracted and linked to boom — Boom over front end of carrier (boom 1" above boom guide) | — | — |
| Boom over rear end of carrier (boom horizontal) | — | 14' 6 1/2" |
| Overall length*, basic 40' boom in travel position with boom live mast retracted and linked to boom — Boom over front end of carrier (boom 1" above boom guide) | — | 11' 6" |
| Boom over rear end of carrier (boom horizontal) | — | 60' 5" |
| Overall width outriggers retracted (floats removed) | — | 67' 9" |
| Width, outriggers extended (C/L to C/L of jacks) | — | 11' 0" |
| Overall width, outriggers extended (over jacks) | — | 20' 0" |
| Center rear rear axle to center front front axle | — | 20' 11" |
| Center front rear axle to center rear front axle | — | 24' 6" |
| Centers rear tandem axles | — | 14' 10" |
| Centers front tandem axles | T ₁ + T ₂ | 4' 10" |
| Overall cab width | T ₃ + T ₄ | 4' 10" |
| | — | 10' 6" |

*Overall length is figured without bumper counterweight.



This machine as manufactured conforms with the requirements of:
ANSI B30.5-1968
and, when equipped with suitable load and angle indicating devices, conforms with
THE DEPARTMENT OF LABOR
SAFETY AND HEALTH REGULATIONS
as listed in the:
FEDERAL REGISTER
Vol. 36 Nos. 75 and 105 (OSHA)

GENERAL INFORMATION ONLY

GENERAL SPECIFICATIONS

CARRIER—Truck-type—8x4

CARRIER — Standard, Link-Belt Speeder, 236" wheel-base, 8 x 4 drive, 11' 0" wide.

FRAME — Main members alloy steel, welded box section. Machined turntable bearing mounting surface.

FRONT AXLES — Tandem, bogie mounted, Shuler tubular type, 104" track.

REAR AXLES — Tandem, Clark Planetary Model BD65000, double reduction, bogie beam mounted, 100⁵/₈" track.

WHEELS AND RIMS — Front, cast spoke type. Rear, integral with planetary hub. Goodyear type MD 10:00 x 24 diameter rims.

SUSPENSION — Hendrickson equalizer beams. Front, rubber bushed — rear, bronze bushed.

TIRES — Single tires front, dual rear tires.

Standard — 14:00 x 24-J (18-ply) rating, transport type tread.

Optional — 14:00 x 24-L (20-ply) rating, General Nygen HCT rock type tread. 14:00 x 24-J (18-ply) rating, Goodyear Super Road lug tread.

OUTRIGGERS — Full width, double-box front and rear, pin connected to carrier frame. Hydraulically operated beam and jack cylinders are individually controlled from either side of carrier. Hydraulic power supplied by carrier engine driven hydraulic pump. Check valve at each hydraulic outrigger jack cylinder. Optional controls, in addition to standard, can be furnished in either carrier cab or crane upper cab.

FLOATS — Low profile, alloy steel, lightweight floats.

BRAKES —

Service — Eight wheel air brakes standard. Dual diaphragm on rear wheels, single diaphragm air chambers on front wheels. Internal expanding type.

Size and Area —

Rear wheels — 20" x 7"; total effective lining area, 1,148 sq. in.

Front wheels — 17¹/₄" x 4"; total effective lining area, 496 sq. in.

Digging — Eight wheel service brakes applied with air control valve on carrier dash.

Parking — Four wheel rear brakes applied with air control valve on carrier dash.

Emergency — Brakes on four rear wheels apply when air pressure drops below 40 p.s.i. in the system. Emergency brake may be manually applied at any time by hand control of dash mounted air valve.

STEERING — Power hydraulic, Ross Model HPS70; 20" diameter wheel.

VEHICLE CLEARANCE CIRCLE — Over outside of front bumper, 111' 4" (turning radius, 55' 8"); over outside of "A" front bumper counterweight, 112' 0" (turning radius, 56' 0").

ENGINES — Diesel, 12-volt alternator, starter, manual control cable shut down or electrical shut down, pressure lubrication, radiator, air cleaner, 15 c.f.m. air compressor, hydraulic pump.

Standard — GM 8V-71N diesel, eight cylinder, two cycle, 4¹/₄" bore, 5" stroke, 568 cu. in. displacement, 280 max. brake horsepower @ 2,300 r.p.m. governed load speed. Peak torque, 760 ft. lbs. @ 1,200 r.p.m.

Optional — Cummins NTF-295 diesel, six cylinder, four cycle, 5¹/₂" bore, 6" stroke, 855 cu. in. displacement, 295 max. brake horsepower @ 2,300 r.p.m. governed load speed. Peak torque, 760 ft. lbs. @ 1,500 r.p.m.

CLUTCH — Lipe-Rollway, 14", 2-plate.

TRANSMISSIONS —

Main — Fuller RTO-915; fifteen speeds forward, three reverse.

Auxiliary — Fuller 2A92, two speed, midship mounted — low range for creeping only.

UNIVERSALS — Mechanics needle bearing.

CAB — One-man, fully enclosed. Rubber suspension mounted bucket seats with seat belts. Rolled and pleated interior upholstery, sound absorbent headliner and carpet floor mat. Instrument panel and dash includes speedometer, odometer, ammeter; gauges for fuel, engine temperature, air and oil pressures. Low air pressure warning buzzer, key start/locking switch, throttle control, tachometer, fire extinguisher, heater and defroster. Two-speed electric windshield wiper, and windshield washer.

ELECTRICAL SYSTEM — 12-volt, including dual sealed beam headlights, directional signals with four-way flashing system, stop and tail lights, clearance and back-up lights, back-up alarm, horn, cab dome light, headlight dimmer switch, lighted instrument panel, and two 12-volt, 220 ampere hour batteries.

BUMPER COUNTERWEIGHT — Mounts on front bumper cwt. hooks, easily removable — 10,800#.

WEIGHT — Approximate carrier weight, less turntable bearing;

without bumper cwt. — 52,000#

with 10,800# front bumper cwt. — 62,800#

STANDARD AUXILIARY EQUIPMENT — Bus type rear view mirrors, boom guide, lug wrench, two-way reading bubble levels at four positions on carrier, tire gauge and tire inflation hose. High pressure lube fittings at all bearing points. Dual fuel tanks — one mounted on each side of carrier and interconnected by large diameter hose to equalize fuel level — 80 gallons total capacity of tanks. Rear fenders, storage-type running boards, and hand grab rails.

SPEEDS — All speeds for HC-218 are with engines at governed full load r.p.m. (2,300).

| GEAR | | MAIN-FULLER RTO-915 | AUXILIARY—Fuller 2A92 | |
|----------------|------|---------------------|--------------------------------------|--|
| | | | GM 8V-71N or Cummins NTF-295 Engines | |
| | | | 1:00 to 1:00 | |
| HIGH | 10th | .81 | 40.5 m.p.h. | |
| | 9th | 1.00 | 32.8 m.p.h. | |
| | 8th | 1.26 | 26.1 m.p.h. | |
| | 7th | 1.59 | 20.6 m.p.h. | |
| | 6th | 2.04 | 16.1 m.p.h. | |
| | Rev. | 2.21 | 14.8 m.p.h. | |
| LOW | 5th | 2.59 | 12.7 m.p.h. | |
| | 4th | 3.20 | 10.3 m.p.h. | |
| | 3rd | 4.04 | 8.1 m.p.h. | |
| | 2nd | 5.10 | 6.4 m.p.h. | |
| | 1st | 6.51 | 5.0 m.p.h. | |
| | Rev. | 7.06 | 4.6 m.p.h. | |
| DEEP REDUCTION | 5th | 3.87 | 8.5 m.p.h. | |
| | 4th | 4.78 | 6.9 m.p.h. | |
| | 3rd | 6.03 | 5.4 m.p.h. | |
| | 2nd | 7.62 | 4.3 m.p.h. | |
| | 1st | 9.73 | 3.4 m.p.h. | |
| | Rev. | 10.55 | 3.1 m.p.h. | |

The deep reduction low (1st) and all reverse speeds are based on engine speed of 1,200 r.p.m. Low range of auxiliary transmission (2.298 to 1.00 ratio) provides deep reduction creep speeds of .77 m.p.h. in 1st gear and .70 m.p.h. in reverse.

UPPER

UPPER FRAME — All-welded, stress relieved, precision machined unit. Machinery side housings welded integral with upper frame.

TURNTABLE BEARING WITH INTEGRAL SWING GEAR — Outer race with integral, external swing gear is bolted to carrier; inner race is bolted to upper revolving frame. A machined surface is provided for mounting turntable bearing.

TRANSMISSION — Link-Belt quadruple roller chain enclosed in oil tight chain case with integral lubricant sump. Pump driven oil stream lubrication. Engine pinion and chain wheel have machine cut teeth.

REDUCTION SHAFT — Consists of two shafts with drive pinions. Shafts mounted in line bores on anti-friction bearings. Pinions have machine cut teeth.

CLUTCHES — Speed-o-Matic power hydraulic actuated for swing, front and rear main operating drums, boom-hoist, third drum (optional), and power load lowering clutches. Internal expanding, 2-shoe type, aluminum alloy shoes; 20" diameter, 5" face. Power load lowering clutch standard on rear drum, optional on front drum. Optional third drum installation includes required power load lowering (reversing) clutch and gear assembly on front drum. A power load lowering clutch is optional for the third drum.

DRUMS — Front and rear main, and optional third, operating drums.

Shafts — Mounted in line bores on anti-friction bearings. Extended length front and rear drum shafts to accommodate power load lowering clutches. Special shaft required to accommodate optional planetary

drive units on front and rear main operating drum shafts.

Spur Gears — Machine cut teeth, mounted on anti-friction bearings on shafts.

Clutch Drums — Bolted to spur gears.

Brakes — Two-piece, external contracting band, mechanically foot pedal operated for front and rear drum, and optional third drum. Front and rear drums — 34" dia., 5" face width; third drum — 28" dia., 5" face width.

Drum Laggings — One piece, smooth, involute splined to shafts.

Drum Rotation Indicators — Standard for both front and rear main operating drums. Dials, mounted on front of control stand, actuated by flexible shaft drives attached to drum shafts.

Planetary Drive Units for Front and Rear Main Operating Drums — Optional for either or both drums. Planetary driven hoist or lowering mechanisms. Planetary unit mounts between spur gear and 2-shoe clutch drum on extended shaft. Available for either 70% increase or 40% decrease of standard load hoist or lowering rope speeds. Two-shoe clutches control standard rope speeds. Planetary controlled by external contracting band brake through push-button switch located on clutch control lever.

HORIZONTAL SWING SHAFT — Mounted in line bore on anti-friction bearings.

Spur Gears — Machine cut teeth, mounted on shaft on anti-friction bearings.

Bevel Gear — Machine cut teeth, involute splined to shaft, fully enclosed and running in oil.

Swing Brake — Two-directional, external contracting band, 20" dia., 3 1/4" face width. Spring applied, power hydraulically released.

Swing Brake Drum — Involute splined to shaft, 20" dia., 3 1/2" face width.

VERTICAL SWING SHAFT — Mounted in line bore on anti-friction bearings.

Bevel Gear — Machine cut teeth, involute splined to shaft, fully enclosed and running in oil.

Swing Pinion — Involute splined to shaft; teeth mesh with external teeth of swing gear which is integral with outer race of turntable bearing.

SWING LOCK — Mechanically controlled pawl engages with external teeth of turntable bearing swing gear.

SWING SPEED — 2.98 r.p.m.

INDEPENDENT BOOMHOIST — Spur gear driven with precision boom raising through 2-shoe clutch, and boom lowering through planetary drive. A boomhoist rope drum locking pawl, manually controlled from operator's position, is standard.

Shaft — Mounted in line bore on anti-friction bearings.

Spur Gear — Machine cut teeth, mounted on shaft on anti-friction bearings.

Wire Rope Drum — Involute splined to shaft. Ratchet wheel for locking pawl is cast integral with drum.

Brake — External contracting band, 28" dia., 4 1/2" face width. Spring applied, power hydraulically released.

Brake Drum — Involute splined to shaft, 28" dia., 5" face width.

Planetary Boom Lowering — Standard. Unit mounts on outer end of boomhoist shaft. Planetary controlled by external contracting band brake through push-button switch located on boom control lever.

Boom Lowering Clutch — Optional, in addition to standard planetary boom lowering unit. Two-shoe power hydraulic clutch permits higher speed boom lowering. Mounts on shaft outside the planetary unit. Clutch drum bolted to outer face of planetary housing.

Boomhoist Limiting Device — When boom is raised above pre-determined minimum radius, boom actuates a mechanical cam device. Boomhoist control lever is automatically returned to neutral disengaging boom raising clutch allowing boomhoist brake to be spring-applied.

BAIL — Pinned to upper frame, supports boom suspension system. Contains 7 sheaves, mounted on anti-friction bearings, for 14-part boomhoist rope.

CAB — Operator door hinged, rear double doors roll on ball bearing rollers, and other machinery access doors are hinged. Operator cab door and windows equipped with safety glass panels. Dry chemical fire extinguisher, electric horn warning device, hand grab rails, roof-top access ladder, and skid-resistant paint on roof — standard. Cab heater and fan-type defroster — optional.

COUNTERWEIGHT — 21,000#; held in position on two hydraulically controlled frustums, power hydraulically lowered to carrier deck or raised to operating position in seconds. Frustum control valves at rear of upper cab.

CONTROL SYSTEM — Speed-o-Matic power hydraulics; an open system. Operating pressure is transmitted through oil to all operating 2-shoe clutch cylinders, swing brake and boomhoist drum brake cylinders. The system includes a pump to provide a constant flow of oil, an accumulator to maintain operating pressure and variable pressure operator-controlled valves to regulate this pressure to the cylinders.

Pump — Vickers; rated at 5 g.p.m. at 1,200 r.p.m.

Oil Filter — Link-Belt Speeder; replaceable Skinner ribbon-type filter element.

Relief Valve — Link-Belt Speeder; set to operate at 1,250 p.s.i.

Unloader Valve — Link-Belt Speeder; set to unload pump at a maximum 1,050 p.s.i. and to load pump when pressure drops below 900 p.s.i.

Accumulator — Link-Belt Speeder; piston-type, pre-charged with nitrogen gas to 650 p.s.i.

Sump Tank — Link-Belt Speeder; 7 gal. capacity with filter and strainer assembly.

Control Valves — Link-Belt Speeder; variable pressure type.

ENGINES

| | GM 6-71N with Torque Converter (1) | GM 6-71N with Torque Converter (2) | Cummins N-743 with Torque Converter (2) |
|-------------------------------|--|--|--|
| Number of cylinders | 6 | 6 | 6 |
| Bore and stroke (inches) | 4 1/4 x 5 | 4 1/4 x 5 | 5 1/8 x 6 |
| Piston displacement (cu. in.) | 425.6 | 425.6 | 743 |
| High idle speed r.p.m. | 1940 | 1750 | 1730 |
| Engine r.p.m., F.L.S. | 1800 | 1700 | 1700 |
| Net engine h.p. @ F.L.S. | 165 | 160 | 160 |
| Peak torque; lbs. ft. | 1,400 | 2,360 | 2,360 |
| Peak torque r.p.m. | (output shaft stall) | (output shaft stall) | (output shaft stall) |
| Electrical system | 12 volt | 12 volt | 12 volt |
| Batteries | 1-12 volt | 1-12 volt | 2-12 volt |
| Clutch-Type | Disconnect between engine - converter | Disconnect between engine - converter | Disconnect between engine - converter |
| Transmission — | | | |
| No. chain wheel teeth | 161 | 161 | 161 |
| No. engine pinion teeth | 28 | 28 | 28 |

(1) Allison TCDO 475 single stage converter

(2) Twin Disc Model CO-10066 TC1 three stage converter

CRANE BOOM, JIB & AUXILIARY EQUIPMENT

BOOM — Hi-Lite tubular, two-piece, basic 40' total length — 20' long top and base sections, 50" deep, 60" wide at connections, open throat top section. Alloy steel, round tubular chords, 3" O.D. with round steel tubular lattice bracing fully coped to fit chords.

Boomfoot — 2 1/2" wide on 60" centers; 3 1/2" dia. boomfoot pin.

Boompoint Machinery — Five heat treated, 21" root diameter sheaves mounted on anti-friction bearings on boom peak shaft.

Connections — In-line pin connections. Taper end connecting pins, with latch pins, for fast, easy boom pin-up. Extended hub on female connection serves as anchor for jib stay lines, midpoint suspension, and boom suspension pendants when assembling boom.

BOOM EXTENSIONS — Available in 10', 15', 20', 30' and 40' lengths with appropriate length pairs of suspension pendants with each extension.

BOOM STOPS — Dual, lever-type with spring-loaded bumpers.

MID-POINT BOOM SUSPENSION PENDANTS — Required on all boom lengths 160' thru 210'.

BOOMHOIST BRIDLE — Serves as a connection between boom suspension pendants and boomhoist rope. Bridle contains seven 12" root diameter sheaves, mounted on anti-friction bearings, for 14-part boomhoist; two auxiliary load hoist sheaves, mounted on bronze bushings, to facilitate using boom live mast as a short boom.

BOOM LIVE MAST — Mounts on front of upper frame. Supports boomhoist bridle and midpoint suspension pendants. Required for all boom lengths. Can be used as a

short boom for machine dismantling. Hydraulically extends from 20' to 24' long working position; retracts mechanically to 20'. Controlled by hand valve located on control panel.

BOOM ANGLE INDICATOR — Mounted on base section of boom.

HOIST ROPE DEFLECTOR ROLLERS — To deflect load hoist ropes over top side of boom. Rollers mounted on anti-friction bearings; one roller furnished as standard with each boom extension.

BOOM FOLDING EQUIPMENT — Optional. Includes special 10' pin-connected tubular boom extension with lifting lugs and suspension pendants, folding brackets, and dual wheels on boom peak with 4:00 x 18-B (4-ply) rating tires. Upper portion of folded boom must be 15' or 20' shorter than lower folded portion. Folding brackets connected to pendant ropes serve to support folded boom as well as to eliminate necessity of disconnecting pendants when boom is folded. The special 10' extension for folding, and the folding brackets, can remain in place in the boom at all times if desired.

JIB — 30' two-piece tubular with 15' long top and base sections. Jib 32" wide and 24" deep at connections.

Connections — In-line pin connections permit easy removal or addition of extensions.

Jib Mast — 12' 1" high, mounted on jib base section. Two deflector sheaves within the mast, mounted on anti-friction bearings for jib load hoist rope; two equalizer sheaves at top of mast for jib frontstay and jib backstay pendants.

Jib Stops — Telescoping type, spring loaded, pinned from jib mast to boom top section and from jib mast to jib base section.

Peak Sheave — Supports jib load hoist rope (whipline); mounted on anti-friction bearings.

line); mounted on anti-friction bearings.

Peak Shaft — Anchor is provided at peak of jib for 2-part load hoist rope. Jib frontstay pendants anchor to jib peak shaft.

Jib Load Hoist Rope (whipline) — Furnished only on request — unless new machine is ordered with jib.

WIRE ROPE

TYPE AND SIZE USED

Boomhoist — Type "T", 3/4" dia.

Main Load Hoist — Type "N", 3/4" dia.

Jib Load Hoist — Type "K", 3/4" dia. (1-part); Type "N", 3/4" dia. (2-part).

Jib Staylines — Type "N", 3/4" dia.

Boom Suspension Pendants — Type "N", 1 1/4" dia.

Mid-point Suspension Pendants — Type "N", 7/8" dia.

Third Drum — Type "N", 3/4" dia.

WIRE ROPE TYPES —

Type "N" — 6 x 25 (6 x 19 class), filler wire, extra improved plow steel preformed, independent wire rope center, right lay, regular lay.

Type "T" — 6 x 25 flattened strand; extra improved plow steel, independent wire rope center, right lay, lang lay.

Type "K" — 19 x 7 non-rotating, improved plow steel, preformed, wire rope center.

JIB MAST STAYLINES —

Backstay — 53' long (43' plus two each 5' long) for 30° jib to boom angle; removal of one 5' length allows 15° jib to boom angle; removal of both 5' lengths allows in-line jib to boom alignment.

Frontstay — 63' 5" long for basic 30' jib. Two 14' 4" long furnished with each 15' jib extension.

MAIN LOAD HOIST WIRE ROPE LENGTHS (Feet)

| Parts of Line | BOOM LENGTH | | | | | | | | | | | | | | | | | |
|---------------|-------------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|
| | 40' | 50' | 60' | 70' | 80' | 90' | 100' | 110' | 120' | 130' | 140' | 150' | 160' | 170' | 180' | 190' | 200' | 210' |
| 1 | 125 | 145 | 165 | 185 | 205 | 225 | 245 | 265 | 285 | 305 | 325 | 345 | 365 | 385 | 405 | 425 | 445 | 465 |
| 2 | 170 | 200 | 230 | 260 | 290 | 320 | 350 | 380 | 410 | 440 | 470 | 500 | 530 | 560 | 590 | 620 | 650 | 680 |
| 3 | 215 | 255 | 295 | 335 | 375 | 415 | 455 | 495 | 535 | 575 | 615 | 655 | 695 | 735 | 775 | 815 | 855 | 895 |
| 4 | 260 | 310 | 360 | 410 | 460 | 510 | 560 | 610 | 660 | 710 | 760 | 810 | 860 | 910 | 960 | | | |
| 5 | 305 | 365 | 425 | 485 | 545 | 605 | 665 | 725 | 785 | 845 | 905 | 965 | | | | | | |
| 6 | 350 | 420 | 490 | 560 | 630 | 700 | 770 | 840 | 910 | 980 | | | | | | | | |
| 7 | 395 | 475 | 555 | 635 | 715 | 795 | 875 | 955 | | | | | | | | | | |
| 8 | 440 | 530 | 620 | 710 | 800 | 890 | 980 | | | | | | | | | | | |
| 9 | 485 | 585 | 685 | 785 | 885 | 985 | | | | | | | | | | | | |
| 10 | 530 | 640 | 750 | 860 | 970 | | | | | | | | | | | | | |

BOOMHOIST WIRE ROPE LENGTH 465'

JIB LOAD HOIST WIRE ROPE LENGTHS (Feet)

| Jib Length | Parts of Line | BOOM LENGTH | | | | | | | | | | | | | | | |
|------------|---------------|-------------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|--|
| | | 40' | 50' | 60' | 70' | 80' | 90' | 100' | 110' | 120' | 130' | 140' | 150' | 160' | 170' | 180' | |
| 30' | 1 | 185 | 225 | 225 | 245 | 265 | 285 | 305 | 325 | 345 | 365 | 385 | 405 | 425 | 445 | 465 | |
| | 2 | 260 | 290 | 320 | 350 | 380 | 410 | 440 | 470 | 500 | 530 | 560 | 590 | 620 | 650 | 680 | |
| 45' | 1 | 215 | 235 | 255 | 275 | 295 | 315 | 335 | 355 | 375 | 395 | 415 | 435 | 455 | 475 | 495 | |
| | 2 | 305 | 335 | 365 | 395 | 425 | 455 | 485 | 515 | 545 | 575 | 605 | 635 | 665 | 695 | 725 | |
| 60' | 1 | 245 | 265 | 285 | 305 | 325 | 345 | 365 | 385 | 405 | 425 | 445 | 465 | 485 | 505 | 525 | |
| | 2 | 350 | 380 | 410 | 440 | 470 | 500 | 530 | 560 | 590 | 620 | 650 | 680 | 710 | 740 | 770 | |

DRUM WIRE ROPE CAPACITIES, LINE SPEED AND PULL — (Available line pull — not based on wire rope strength)

| FRONT DRUM | | | | | | | | | |
|----------------|-----------|--------|-------------------|---------|----------------|--------|---------|---------------|-----------|
| Wire Rope Dia. | Lagging | | Line Speed & Pull | | | | | Drum Capacity | |
| | Root Dia. | Type | 1st Layer Rope | | Full Drum Rope | | | 1st Layer | 7th Layer |
| | | | F.P.M. | Pull | Layer | F.P.M. | Pull | | |
| 3/4" | 17 1/4" | Smooth | 179 | 21,500# | 7th | 268 | 14,300# | 118' | 1,008' |
| | | | 304 | 10,944# | 7th | 455 | 7,944# | — | — |

| REAR DRUM | | | | | | | | | |
|----------------|-----------|--------|-------------------|---------|----------------|--------|---------|---------------|-----------|
| Wire Rope Dia. | Lagging | | Line Speed & Pull | | | | | Drum Capacity | |
| | Root Dia. | Type | 1st Layer Rope | | Full Drum Rope | | | 1st Layer | 7th Layer |
| | | | F.P.M. | Pull | Layer | F.P.M. | Pull | | |
| 3/4" | 17 1/4" | Smooth | 179 | 21,500# | 7th | 268 | 14,300# | 118' | 1,008' |
| | | | 304 | 10,944# | 7th | 455 | 7,944# | — | — |

NOTE: Shaded figures indicate line pull and speed on machine equipped with planetary drive unit for high speed hoist.

| BOOMHOIST DRUM | | | | | | | | | |
|----------------|-----------|--------|-------------------|---------|----------------|--------|---------|---------------|-----------|
| Wire Rope Dia. | Lagging | | Line Speed & Pull | | | | | Drum Capacity | |
| | Root Dia. | Type | 1st Layer Rope | | Full Drum Rope | | | 1st Layer | 7th Layer |
| | | | F.P.M. | Pull | Layer | F.P.M. | Pull | | |
| 3/4" | 11 1/4" | Smooth | 132 | 25,900# | 5th | 198 | 17,200# | 81' | 495' |
| | | | — | — | — | — | — | — | — |

| THIRD DRUM | | | | | | | | | |
|----------------|-----------|--------|-------------------|---------|----------------|--------|---------|---------------|-----------|
| Wire Rope Dia. | Lagging | | Line Speed & Pull | | | | | Drum Capacity | |
| | Root Dia. | Type | 1st Layer Rope | | Full Drum Rope | | | 1st Layer | 7th Layer |
| | | | F.P.M. | Pull | Layer | F.P.M. | Pull | | |
| 3/4" | 11 1/4" | Smooth | 132 | 25,900# | 5th | 198 | 17,200# | 81' | 495' |
| | | | — | — | — | — | — | — | — |

All drums are over-winding. Line speed and pull are based on engine full load speed. Front and rear drums are interchangeable; boomhoist and third drum laggings have interchangeable parts.

MAXIMUM HI-LITE TUBULAR BOOM (OPEN THROAT TOP SECTION) AND BOOM/JIB MACHINE CAN LIFT OFF GROUND UNASSISTED — WITHOUT LOAD

| Standard Upper and Carrier — 21,000# Upper Cwt. "A" 10,800# Bumper Cwt. "A" | ON OUTRIGGERS | | | | ON TIRES ^① | | | |
|---|---------------|------------|-----------|------------|-----------------------|------------|-----------|------------|
| | OVER REAR | | OVER SIDE | | OVER REAR | | OVER SIDE | |
| | Boom | Boom + Jib | Boom | Boom + Jib | Boom | Boom + Jib | Boom | Boom + Jib |
| With both upper and bumper cwt. | 210' | 180' + 60' | 200' | 170' + 60' | 170' | 130' + 60' | 130' | 100' + 60' |
| Without bumper cwt. | 210' | 170' + 60' | 190' | 160' + 60' | 150' | 110' + 60' | 130' | 90' + 60' |

Limited to 95% of available stability with machine standing level on firm supporting surface.

① Air pressure in tires to be 100 p.s.i.

GENERAL INFORMATION ONLY

MAXIMUM HI-LITE TUBULAR BOOM^② (OPEN THROAT TOP SECTION) AND BOOM/JIB^② MACHINE CAN TRAVEL WITH AT 5 M.P.H. — WITHOUT LOAD

| Standard Upper and Carrier — 21,000# Upper Cwt. "A" 10,800# Bumper Cwt. "A" | ON TIRES ^③ OVER REAR | |
|---|------------------------------------|------------|
| | Boom | Boom + Jib |
| With both upper and bumper cwt. | 150' ^④ | 120' + 45' |
| Without bumper cwt. | 120' | 100' + 45' |

Limited to 85% of available stability with machine on smooth, firm and level surface.

② Boom and boom/jib horizontal.

③ Air pressure in tires to be 95 p.s.i.

④ Maximum folded boom 100' over 80'.

NOTE: Travel with boom or boom/jib over side is not recommended.

GENERAL INFORMATION ONLY

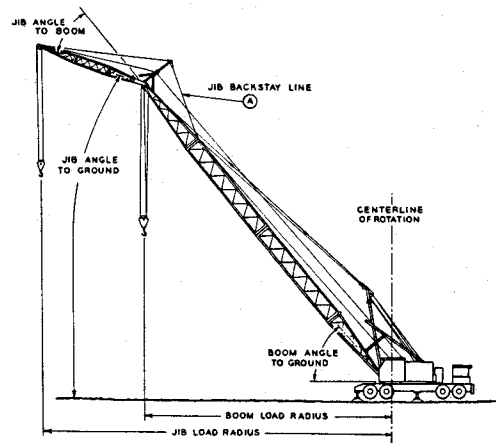
HC-218 AXLE LOADINGS — Approximate (Pounds)

| Basic upper machinery with 21,000# upper cwt. "A", boom lowering planetary, rear drum load lowering clutch, GM 6-71N diesel engine. Mounted on std. 236" wheelbase carrier 11' 0" wide with 14:00 x 24-J, (18-ply) rating tires, hydraulic outriggers front and rear with 4 floats in storage racks, GM 8V-71N diesel engine, and no bumper cwt. | BASIC MACHINE WEIGHT | UPPER FACING FRONT | | UPPER FACING REAR | |
|--|----------------------|--------------------|---------|-------------------|---------|
| | | Front | Rear | Front | Rear |
| UPPER: 53,200# | | -10,840 | 64,040 | 30,600 | 22,600 |
| CARRIER: 52,000# | | 20,000 | 32,000 | 20,000 | 32,000 |
| TOTAL: 105,200# | | 9,160 | 96,040 | 50,600 | 54,600 |
| Adjust axle loadings accordingly for these components: | Component Weight | Front | Rear | Front | Rear |
| Boom lowering clutch | + 200 | - 30 | + 230 | + 100 | + 100 |
| Boomhoist rope — 465' Type "T", 3/4" dia. | + 500 | - 60 | + 560 | + 250 | + 250 |
| Rear drum planetary | + 450 | - 0 | + 450 | + 180 | + 270 |
| Rear drum rope — 1,008' Type "N", 3/4" dia. (jib load hoist rope) | + 1,040 | - 20 | + 1,060 | + 410 | + 630 |
| Front drum load lowering clutch and gear | + 400 | + 50 | + 350 | + 100 | + 300 |
| Front drum planetary | + 450 | + 60 | + 390 | + 110 | + 340 |
| Front drum rope — 1,008' Type "N", 3/4" dia. (main load hoist rope) | + 1,040 | + 130 | + 910 | + 260 | + 780 |
| Third drum (without lowering clutch but with front drum lowering clutch and gear required to power third drum) | + 2,100 | + 450 | + 1,650 | + 350 | + 1,750 |
| Third drum — as above — and with load lowering clutch | + 2,500 | + 540 | + 1,960 | + 400 | + 2,100 |
| Third drum rope — 494' Type "N", 3/4" dia. | + 520 | + 120 | + 400 | + 70 | + 450 |
| Upper counterweight "A" | -21,000 | + 9,800 | -30,800 | -17,600 | - 3,400 |
| 40' Hi-Lite tubular boom w/open throat top section and accessories (Includes boom stops and boom live mast) | + 9,800 | +11,750 | - 1,950 | - 8,170 | +17,970 |
| 20' Hi-Lite tubular boom open throat top section only and accessories | - 2,910 | - 6,450 | + 3,540 | + 5,360 | - 8,270 |
| Boom stops | + 730 | + 280 | + 450 | - 10 | + 740 |
| Boom live mast with bridle — retracted at 30° above horizontal | + 3,820 | + 3,740 | + 80 | - 2,310 | + 6,130 |
| Boom live mast with bridle — removed from machine | - 3,820 | - 3,740 | - 80 | + 2,310 | - 6,130 |
| Front outrigger box, beams and jacks | - 5,600 | - 3,860 | - 1,740 | - 3,860 | - 1,740 |
| Rear outrigger box, beams and jacks | - 5,600 | + 1,790 | - 7,390 | + 1,790 | - 7,390 |
| Four floats | - 500 | - 160 | - 340 | - 160 | - 340 |
| Bumper counterweight "A" | +10,800 | +14,100 | - 3,300 | +14,100 | - 3,300 |
| Optional Cummins NTF-295 diesel engine — carrier | + 300 | + 300 | - 0 | + 300 | - 0 |
| Tag axle | + 3,500 | + 6,500 | -19,000 | + 6,500 | -19,000 |

HC-218 MAXIMUM JIB CAPACITIES — Machine equipped with Hi-Lite tubular boom with open throat top section and tubular jib.

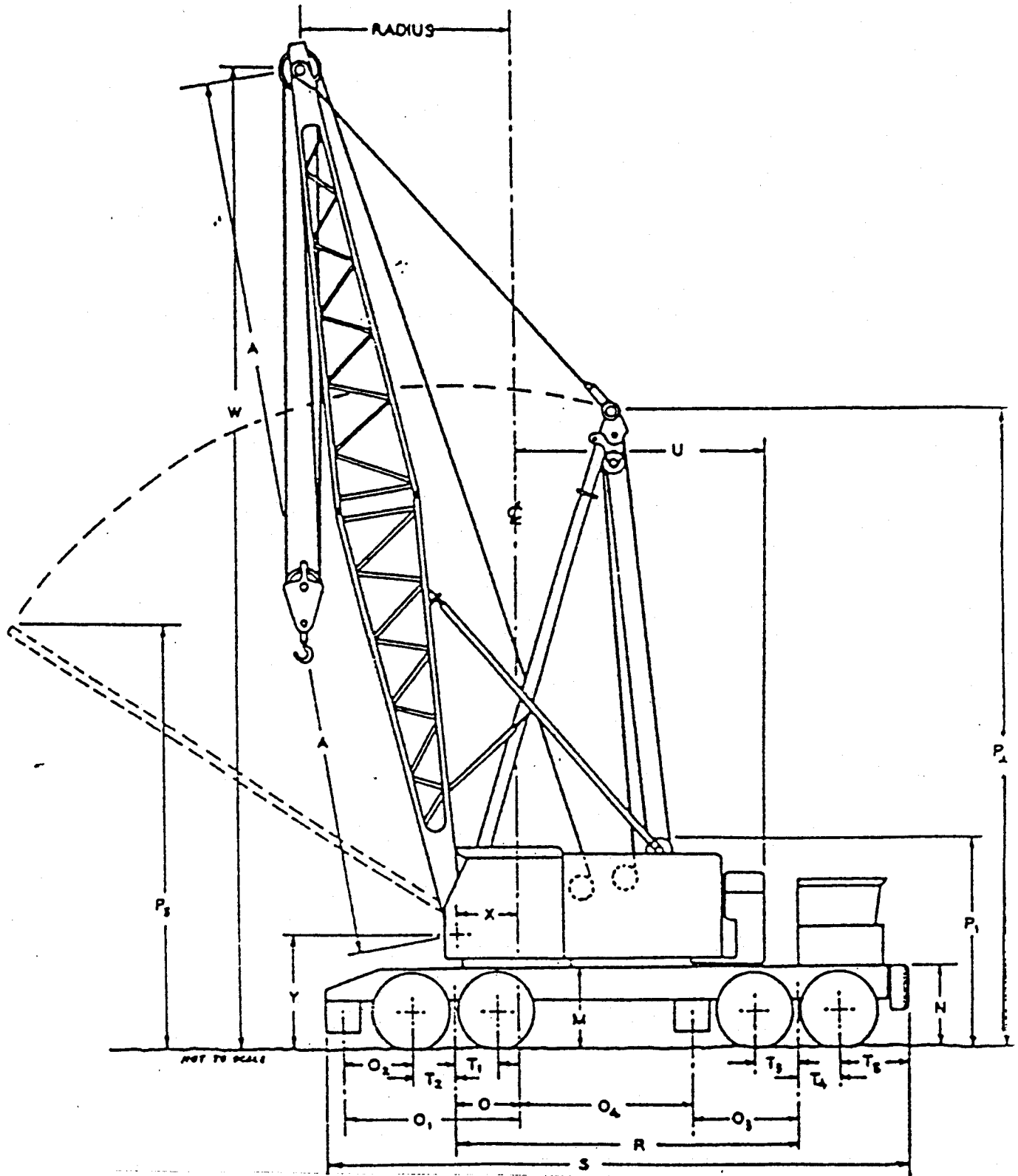
| JIB ANGLE TO GROUND | JIB LENGTH | | |
|---------------------|------------|---------|---------|
| | 30' | 45' | 60' |
| 80° | 24,000# | 17,000# | 14,000# |
| 65° | 17,000# | 13,000# | 10,000# |
| 50° | 13,000# | 8,000# | 6,000# |
| 35° | 11,500# | 7,000# | 5,000# |
| 20° | 10,000# | 5,000# | 3,000# |

- Capacities shown are in pounds and are based on a Link-Belt Speeder tubular jib 32" wide and 24" deep and used with a 12' 1" high jib mast in proper working position.
- Note lifting crane capacity chart. Boom radius and angle dimensions have been extended to include maximum boom/jib length combinations for use in determining jib radius and angle to ground when jib is mounted "in-line" (zero degree offset from boom), with boom. When jib is mounted at 15° or 30° offset from boom, to determine jib angle to ground, deduct jib angle to boom from the boom angle to ground.
- Jib angle to boom must not exceed 30°.
- Determining jib capacities —
 - Add length of boom plus length of jib used.
 - Determine jib load radius — refer to step 2.
 - Refer to lifting crane capacity chart and select the boom length that corresponds to the total length of boom and jib in (4-a) and the radius in (4-b) — not to exceed 180' boom.
 - Jib capacity is equal to the equivalent lifting crane capacity unless restricted by the maximum jib capacities shown in the above chart.



- If total length boom and jib exceeds 180' boom length listed in the lifting crane capacity chart, deduct 100 lbs. from the capacity shown for the 180' boom length for the radius required in (4-b).
 - Jib capacity is the resulting figure unless restricted by the maximum jib capacities shown in the above chart.
- Boom live mast is required for all boom lengths.
- Determining lifting crane capacities with jib mounted on boom —
 - When handling loads off the main boompoint sheaves, with a jib on the boom, the following reductions in machine lifting capacities must be made:
 - 30' jib — deduct 2,000 lbs.
 - 45' jib — deduct 2,400 lbs.
 - 60' jib — deduct 3,200 lbs.
- Jib cannot be used on boom longer than 180'.

HC-218



DIMENSIONS AND WORKING RANGES

| Carrier — 8 x 4, 11' 0" Wide | | |
|---|---------------------------------|------------|
| Basic boom length | A | 40' 0" |
| Overall height, top of turntable bearing plate | M | 4' 8" |
| Ground clearance under counterweight | N | 4' 11" |
| Centerline rotation to rear axle bogie pivot | O | 3' 8" |
| Centerline rotation to center rear outrigger | O ₁ | 10' 0" |
| Center rear rear axle to center rear outrigger | O ₂ | 3' 11" |
| Center front axle bogie to center front outrigger | O ₃ | 6' 0" |
| Centerline rotation to center front outrigger | O ₄ | 10' 0" |
| Overall height, boomhoist bail sheave | P ₁ | 11' 6" |
| Height, over vertical extended boom live mast | P ₄ | 31' 5" |
| Height, over extended boom live mast with basic 40' boom horizontal over rear of carrier | — | — |
| Minimum ground clearance under carrier | P ₅ | 17' 0" |
| Wheelbase (236") | Q | 0' 11" |
| Overall length over rear outrigger box — with front bumper counterweight | R | 19' 8" |
| Overall length over rear outrigger box — without front bumper counterweight | — | — |
| Center rear axles to pivot of rear bogie | S | 33' 4" |
| Center front axles to pivot of front bogie | S | 32' 9" |
| Center front front axle to front bumper | T ₁ & T ₂ | 2' 5" |
| Center front front axle to front bumper ctwt. | T ₃ & T ₄ | 2' 5" |
| Tailswing of counterweight | T ₅ | 3' 4" |
| Radius of boom hinge pin | T ₅ | 3' 11" |
| Height of boom hinge pin | U | 14' 0" |
| Overall height, basic 40' boom in travel position with boom live mast retracted and linked to boom — Boom over front end of carrier (boom 1" above boom guide) | X | 3' 6" |
| Boom over rear end of carrier (boom horizontal) | Y | 6' 7" |
| Overall length*, basic 40' boom in travel position with boom live mast retracted and linked to boom — Boom over front end of carrier (boom 1" above boom guide) | — | — |
| Boom over rear end of carrier (boom horizontal) | — | — |
| Overall width outriggers retracted (floats removed) | — | — |
| Width, outriggers extended (C/L to C/L of jacks) | — | 14' 6 1/2" |
| Overall width, outriggers extended (over jacks) | — | 11' 6" |
| Center rear rear axle to center front front axle | — | — |
| Center front rear axle to center rear front axle | — | 60' 5" |
| Centers rear tandem axles | — | 67' 9" |
| Centers front tandem axles | — | 11' 0" |
| Overall cab width | — | 20' 0" |
| | — | 20' 11" |
| | — | 24' 6" |
| | — | 14' 10" |
| | T ₁ + T ₂ | 4' 10" |
| | T ₃ + T ₄ | 4' 10" |
| | — | 10' 6" |

*Overall length is figured without bumper counterweight.

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