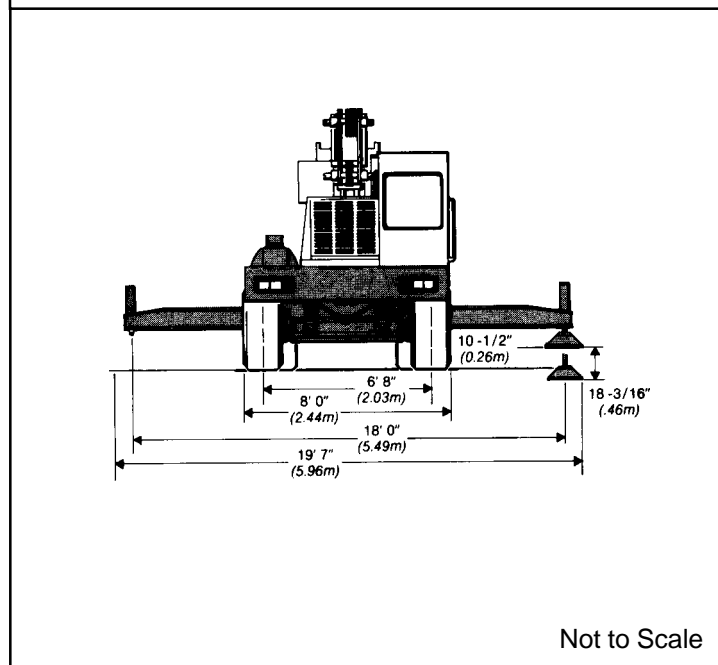
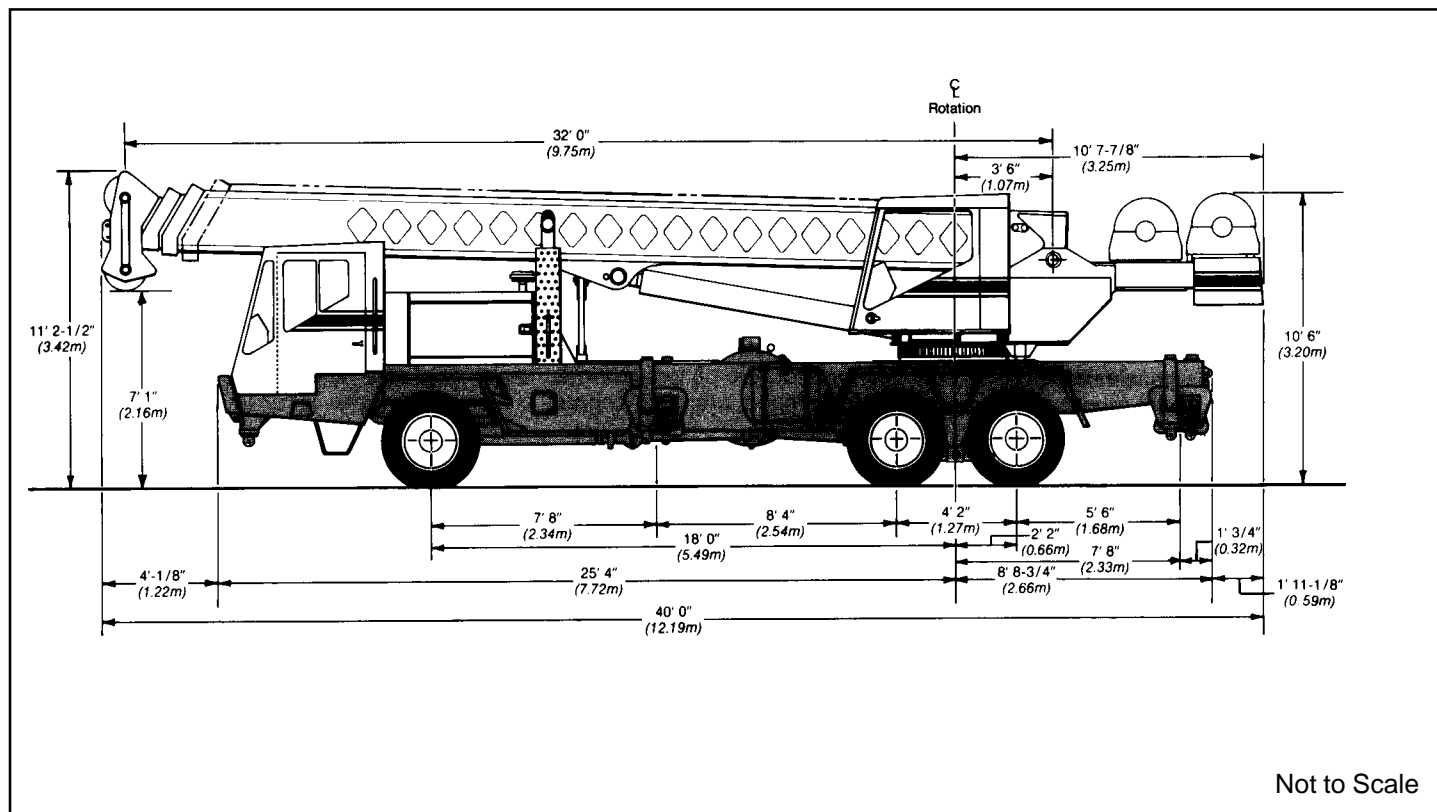


# Specifications

Hydraulic Truck Crane

## HTC-814

14-ton (12.70 metric ton)



| General dimensions                                   | feet      | meters |
|--|-----------|--------|
| Tailswing of counterweight                           | 10'-11.5" | 3.34   |
| Ground clearance - Standard Tires                    | 9.0"      | .23    |
| Ground clearance - Optional Tires                    | 9.6"      | .24    |
| Turning radius C/L of tire - Std. tires              | 46' 11"   | 14.30  |
| Turning radius - wall to wall (outside front bumper) | 50' 7"    | 15.42  |

# Upperstructure

## ■ Boom

Link-Belt patented design. 32' 0" - 80' 0" (9.75 m - 24.38 m) three-section boom with two power sections. Boom side plates have diamond shaped impressions for superior strength to weight ratio and are offset welded to carefully machined 100,000 p.s.i. (689.5 MPa) steel angle chords for maximum integrity and strength. Boom telescope sections are supported by wear shoes both vertically and horizontally. Anti-two block device, electronic boom length/angle indicator and function kickout.

**Load Moment Indicator** — Audio-visual warning system with anti-two block and function kickouts. Constant display of boom length and angle, tip height, radius of load, machine configuration, allowed load, actual load and % of allowed load. Presettable alarms for maximum and minimum boom angles, maximum tip height and maximum boom length.

**Optional boom** — 32' 0" - 101' 0" (9.75 m - 30.78 m) four-section boom includes base section, two power sections, and manual fourth section. Fourth section is power pinned by manually activating a cylinder locking system.

**Boom head** — Standard; three 14.5" (0.37 m) root diameter head sheaves with four 14.5" (0.37 m) root diameter head sheaves available to handle up to 8 parts of 5/8" (16 mm) wire rope. Two removable wire rope guards and rope dead end lugs are provided on each side of the boom head. Meets 24:1 ratio European safety code with 5/8" (16 mm) wire rope.

**Auxiliary lifting sheave** — *Optional*; Single 14.5" (0.37 m) root diameter head sheave with removable wire rope guards, mounted to boom. For use with one or two parts of line off the optional auxiliary winch. Does not affect erection of jib or use of main head sheaves for multiple reeving.

**Boom elevation** — One Link-Belt designed hydraulic boom hoist cylinder with holding valves. Hand or optional foot controls for boom elevation from -3° to 80°.

## ■ Fly

**Optional** — 29' 0" (8.84 m) stowable one-piece lattice type, with 2° offset.

## ■ Jib

**Optional** — 21' 0" (6.40 m) stowable A-frame. Attaches to fly only. Can be offset 5°, 17.5° and 30°.

## ■ Cab and Controls

Environmental cab; isolated from sound and vibration by rubber mounts. All tinted and tempered safety glass windows. For maximum visibility and ventilation, sliding right side and rear windows and swing up roof window supported with two gas cylinders. Slide-by-door opens to 3' 0" (0.91 m) width. Six-way adjustable operator's seat. Control levers for swing, boom telescope, winch and boom hoist, with foot control for swing brake and optional boom hoist. Outrigger controls, sight level bubble.

**Cab instrumentation** — Dash mounted gauges for hydraulic oil temperature, fuel, water temperature, and oil pressure.

## ■ Swing

Bi-directional hydraulic swing motor mounted to a planetary reducer for 360° continuous smooth swing at 2.05 r.p.m.

**Swing brake** — Standard; Foot operated, spring released disc brake mounted on the speed reducer.

**Swing lock** — Standard; 360° position pin-type controlled from the operator's cab. Two position house lock for travel and pick and carry modes.

**Counterweight** — Pinned to upperstructure frame.

## ■ Hydraulic System

**Main pump** — Three-section gear-type pump. Combined pump capacity of 133 gpm (503.4 lpm). Powered by carrier engine with pump disconnect. Pump disconnect is a jaw-type clutch engaged/disengaged from carrier cab. Maximum pressure at 2900 p.s.i. (200 Bars). Hydraulic oil cooler is standard.

**Reservoir** — Link-Belt, 110 gallon (416 L) capacity. Diffusers for deaeration.

**Filtration** — One six-micron filter located inside the hydraulic reservoir.

**Control valves** — Six separate control valves allow simultaneous operation of all crane functions.

## ■ Load Hoist System

**Standard** — Model 2M main winch with two-speed motor and automatic brake, power up/power down mode of operation. Bi-directional, gear-type hydraulic motor.

**Optional** — Model 2M auxiliary winch with two-speed motor and automatic brake, power up/power down mode of operation. Bi-directional, gear-type hydraulic motor.

**Optional** — Model 3M winch with two-speed motor and automatic brake; power up/power down mode and exclusive controlled true gravity free fall. Available on main or both winches.

**Line pulls and speeds** — Maximum line pull is 11,700 lbs. (5 307 kgs.) and maximum line speed is 414 f.p.m. (129.19 m/min) on 10-5/8" (0.27 m) root diameter smooth drum.

## ■ Additional Upperstructure Equipment - Optional

Boom hoist foot control, drum rotation indicators, propane heater, diesel heater, 25 ton (22.70 metric ton) or 35 ton (31.77 metric ton) hook block, roof window windshield wiper, 8-1/2 ton (7.72 metric ton) ball and swivel, flood lights, lifting lug package, hand throttle, windshield washer, amber rotating beacon, cab mounted spotlight, tachometer and engine monitoring system.

# Carrier

## ■ Type

Link-Belt 8' 0" (2.44 m) wide, 216" (5.49 m) wheelbase.

**Standard** — 6 X 4 drive

**Optional** — 6 X 6 drive

**Frame** — All-welded high strength alloy steel plate construction with box-type design and integral 100,000 p.s.i. (689.5 MPa) steel outrigger boxes.

## ■ Outriggers

**Standard** — Power hydraulic, double box, single beam outriggers, front and rear. Vertical jack cylinders, each equipped with integral holding valve. Beams extend to 18' 0" (5.49 m) centerline-to-centerline and retract to within 8' 0" (2.44 m) overall width. Equipped with stowable, 19" (.48 m) square lightweight floats. Controls and sight level bubble located in upperstructure cab.

**Front bumper outrigger** — Standard; Front center vertical jack mounted under bumper with 19" (.48 m) square lightweight float. Provides 360° lifting capacities.

## ■ Axles

**Front-** Standard; Single axle, 81" (2.06 m) track.

**Optional;** Single drive axle, 79.75" (2.03 m) track.

**Rear-** Tandem axle, 71.77" (1.82 m) track. 6.14 to 1 ratio with interaxle differential.

## ■ Suspension

**Front-** Spring suspension.

**Rear-** Solid mount 50" (1.27 m) bogie beam.

## ■ Wheels

**Front-** Cast six spoke

**Rear-** Cast six spoke

## ■ Tires

**Standard Front** — 16.5 x 22.5 (16 PR) transport type tubeless.

**Standard Rear** — 10.0 x 20.0 (12 PR) transport type with tube.

**Optional Rear** — 10.0 X 20.0 (12 PR) or 11.0 x 20.0 (12-PR) lug type.

**Optional Front** — 425/65R22.5 XZY lug type radials.

**Optional Rear** — 11R20 XZY lug type radials.

## ■ Brakes

Full air on all wheels. Air dryer is standard.

### Service

**Front** — Standard; 6 x 4 Cam-type 17-1/4" x 6" (.44 m x .10 m) shoe diameter.

**Front** — *Optional*; 6 x 6, 15" x 5" (.38 m x .13 m) shoe diameter.

**Rear** — Cam-type 16-1/2" X 7" (.42 m X .18 m) shoe diameter.

**Parking & emergency** — One spring set, air released chamber per rear axle end. Parking brake applied with valve mounted on carrier dash. Emergency brakes apply automatically when air pressure drops below 40 p.s.i. (2.76 Bars) in both systems.

## ■ Steering

Sheppard Steering, rack-and-pinion design. Provides wall-to-wall turning radius of 50' 7" (15.42 m).

**Optional;** Remote steering control system. Operated from upperstructure cab instrumentation includes toggle switch steering control, wheel position indicator, brake and transmission controls and parking brake control.

**Clutch** — Lipe-Rollway 14" (0.36 m) diameter, spring loaded, single plate dry disc.

**Universals** — Rockwell or spicer; easy service type.

## ■ Transmission

**Standard** — Fuller Roadranger RT-6613; 13 speeds forward, 3 reverse.

**Optional** — Allison MT-653DR; 5-speed automatic with lock-up converter.

## ■ Electrical System

Two 12-volt batteries; 1,950 cold cranking amps available, 105 amp alternator.

**Lights** — Four dual-beam sealed headlights, front and rear directional signals, stop and tail lights, four-way emergency flashers, back-up lights, front, rear and side clearance lights with integral reflectors, and license plate light.

## Carrier Cab

One-man cab. Acoustical insulation with vinyl covering. Equipped with electric windshield wiper and washer, horn, four-way adjustable seat with seat belt, dome and dash lights, cigar lighter, ashtray, 22,400 BTU capacity heater, defroster, door and window locks, fire extinguisher, LH/RH rear view mirrors, tilt/telescoping steering wheel and sliding LH/RH and rear tinted windows.

**Cab instrumentation** — Standard; illuminated instrument panel with speedometer, odometer, tachometer, voltmeter, hourmeter, front and rear air pressure gauges, low air pressure light and warning buzzer, automotive-type ignition (common with upper), engine oil pressure gauge, water temperature gauge, fuel gauge, turn signal indicator, high beam light switch, adjustable defroster vents and circuit breakers.

## ■ Additional Equipment - Standard

Front and rear fenders, air dryer, back-up warning alarm, cab steps, access ladder to rear carrier deck with hand grab rails, front/rear tow loops, skid-resistant finish on carrier deck, mud flaps, and 120 volt 1000 watt engine coolant heater.

## ■ Additional Equipment - Optional

Propane engine block heater, ether injection starting package, spare tire and rim assemblies, towing shackles and engine monitoring system.

Travel Speeds and Gradeability ?

## Travel speeds and gradeability <sup>①</sup>

| Engine          | Maximum Speed |       | Maximum Gradeability at Peak Torque |                           |
|-----------------|---------------|-------|-------------------------------------|---------------------------|
|                 | mph           | km/h  |                                     |                           |
| Cummins 6CTA8.3 | 47.3          | 76.12 | Manual — 60.4%                      | Automatic — 70.9% (stall) |

① Maximum speed based on full load r.p.m. Gradeability is based on peak torque of the engine and machine equipped with standard tires and G.V.W.

## Engine specifications

| Engine             | Cummins 6CTA8.3                        |
|--------------------|--|
| Cylinders -- cycle | 6 -- 4                                 |
| Bore               | 4.49" (.11 m)                          |
| Stroke             | 5.32" (.13 m)                          |
| Displacement       | 504.5 cu. in. (8 269 cm <sup>3</sup> ) |
| Gross engine power | 210 hp @ 2,400 rpm                     |
| Peak torque        | 605 ft. lbs. (820 J)                   |
| Electric system    | 12 volt negative ground                |
| Fuel capacity      | 60 gallons (227 L)                     |
| Alternator         | 105 amp                                |
| Crankcase capacity | 25.2 qts. (23.8 L)                     |
| Air compressor     | 12 c.f.m. (.34 m <sup>3</sup> /min)    |
| Coolant capacity   | 10.8 gal. (40.9 L)                     |

## Axle loads

| Base machine with 32' 0" - 80' (9.75 m - 24.38 m) 3-section boom, 450' (137.16 m) of 5/8" (16 mm) wire rope, two-speed main winch, 6x4 carrier with Cummins 6CTA8.3 diesel engine, full fuel, front bumper outrigger, 16.5x22.5 front tires, 10x20 highway rear tires, full hydraulic oil, pontoons stored, 2,700 lbs. (1 224 kg) counterweight and Roadranger transmission | G.V.W. <sup>①</sup> |        | Upper facing front |       |           |        | Upper facing rear |       |           |        |
|---|---------------------|--------|--------------------|-------|-----------|--------|-------------------|-------|-----------|--------|
|   |                     |        | Front axle         |       | Rear axle |        | Front axle        |       | Rear axle |        |
|   | lbs.                | kg     | lbs.               | kg    | lbs.      | kg     | lbs.              | kg    | lbs.      | kg     |
|   | 48,543              | 22 019 | 16,174             | 7 337 | 32,369    | 14 682 | 7,242             | 3 285 | 41,301    | 18 734 |
| 32'-101' (9.75 m - 30.78 m) 4-section boom with 4,500 lb. (2 041 kg) counterweight  | 4,220               | 1 914  | 565                | 256   | 3,655     | 1 658  | -565              | -256  | 4,785     | 2 171  |
| 3M freefall rear winch with 450' (137.16 m) rope  | 41                  | 19     | -20                | -9    | 61        | 28     | 20                | 9     | 21        | 10     |
| Power up/down front winch with 350' (106.68 m) rope   | 516                 | 234    | -80                | -36   | 596       | 270    | 80                | 36    | 436       | 198    |
| (2) 3M freefall winches with 350' (106.68 m) rope on front and 450' (137.16 m) on rear  | 491                 | 223    | -44                | -20   | 535       | 243    | 44                | 20    | 447       | 203    |
| 29' (8.84 m) lattice fly, stowed  | 1,080               | 490    | 629                | 285   | 451       | 205    | -629              | -285  | 1,709     | 775    |
| 21' (6.40 m) A-frame jib, stowed  | 970                 | 440    | 490                | 222   | 480       | 218    | -490              | -222  | 1,460     | 662    |
| Hookblock at bumper   | 650                 | 295    | 903                | 410   | -253      | -115   | 903               | 410   | -253      | -115   |
| Heedache ball at bumper   | 325                 | 147    | 481                | 218   | -156      | -71    | 481               | 218   | -156      | -71    |
| Auxiliary lifting sheave  | 125                 | 57     | 205                | 93    | -80       | -36    | -205              | -93   | 330       | 150    |
| 11 x 20 optional rear tires & rims  | 128                 | 58     | -                  | -     | 128       | 58     | -                 | -     | 128       | 58     |
| 11R20 rear radials  | 400                 | 181    | -                  | -     | 400       | 181    | -                 | -     | 400       | 181    |
| 6 x 6 drive   | 786                 | 356    | 602                | 273   | 184       | 83     | 602               | 273   | 184       | 83     |

① Adjust gross vehicle weight & axle loading according to component weight. **NOTE:** All weights are ± 3%.

② When selecting a tire & drive combination, the front axle load with upper facing front should not exceed the limits in the table below.

## Maximum FrontAxle Load Table

| Drive | Tire          | Maximum Axle Load @ 50 mph (80.45 km/h)* |
|-------|---------------|--|
| 6 x 4 | 16.5 x 22.5 H | 19,700 lbs. (8 935 kg)                   |
| 6 x 6 | 16.5 x 22.5 H | 19,700 lbs. (8 935 kg)                   |

\* For speeds exceeding 50 mph (80.45 km/h) see Operator's Manual

Link-Belt Construction Equipment Company Lexington, Kentucky

A unit of Sumitomo Construction Machinery Co., Ltd.

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# Lifting Capacities

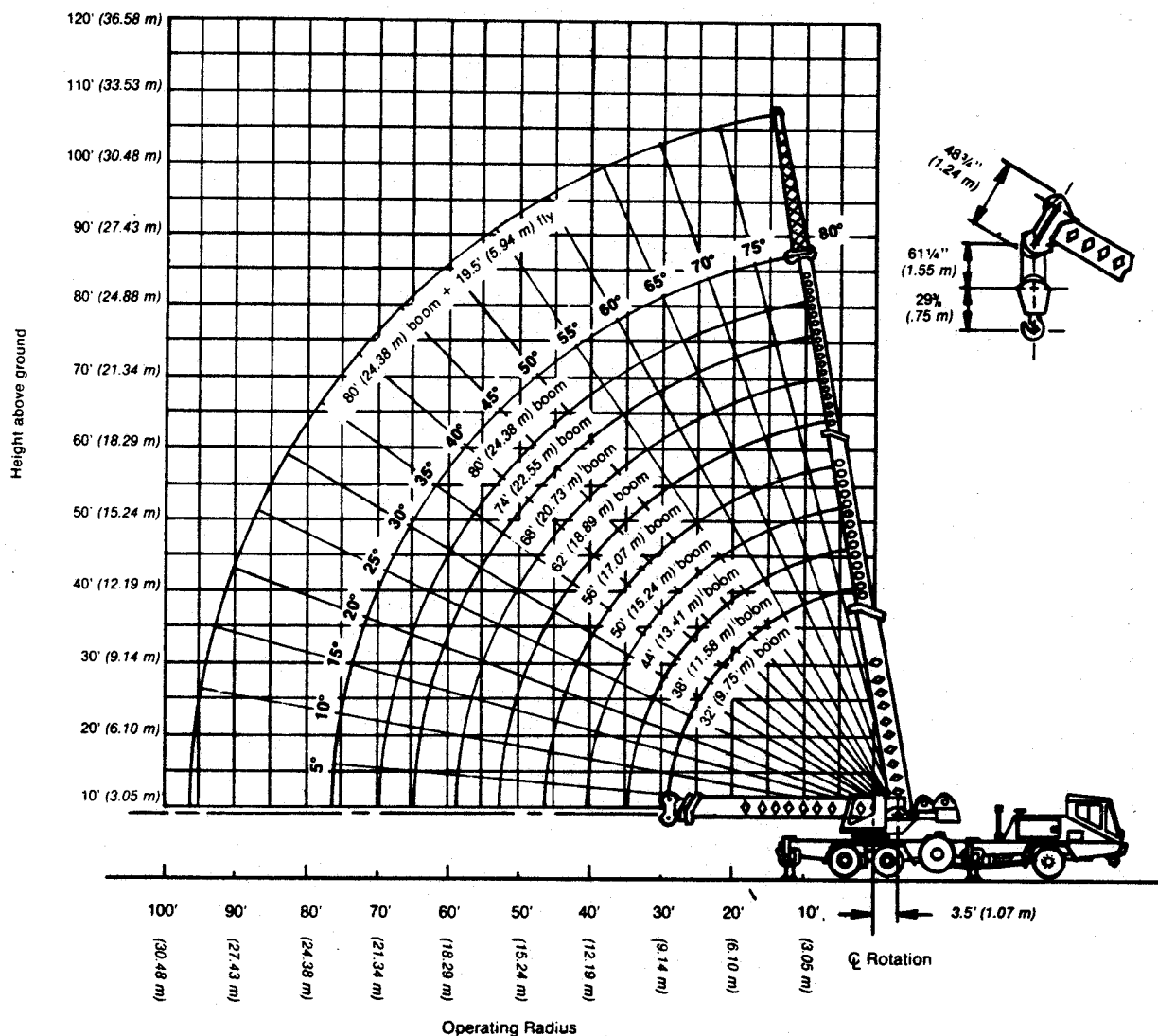
## Hydraulic Crane

PCSA Class 10-83

### HTC-814 14-ton (12.70 metric ton)

GENERAL INFORMATION ONLY

#### 3-Section Boom



**Note:** Boom and fly and jib geometry shown are for unloaded condition and machine standing level on firm supporting surface. Boom deflection and subsequent radius and angle change must be accounted for when applying load to hook.

# HTC - 814 Lifting Capacities

GENERAL INFORMATION ONLY Refer to Operating Instructions page 4

8' (2.44 m) carrier

32' - 80' (9.75 - 24.38 m) 3-section boom

## Capacities On Outriggers — 3-Section Boom

| Load radius   | 32' (9.75 m)     |                  | 38' (11.58 m)    |                  | 44' (13.41 m)    |                  | 50' (15.24 m)    |                  | 56' (17.07 m)    |                  | 62' (18.89 m)    |                  | 68' (20.73 m)    |                  | 74' (22.55 m)    |                  | 80' (24.38 m)    |                 |
|---------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------------|
|               | Side             | Rear             | Side             | Rear             | Side             | Rear             | Side             | Rear             | Side             | Rear             | Side             | Rear             | Side             | Rear             | Side             | Rear             | Side             | Rear            |
| 10'<br>3.05m  | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 |                  |                  |                  |                  |                  |                 |
| 12'<br>3.66m  | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 |                  |                  |                  |                 |
| 15'<br>4.57m  | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 26,500<br>12 020 | 26,500<br>12 020 | 21,500<br>9 752  | 21,500<br>9 752 |
| 20'<br>6.10m  | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 24,100<br>10 932 | 24,100<br>10 932 | 22,100<br>10 024 | 20,300<br>9 208 |
| 25'<br>7.62m  | 19,600<br>8 890  | 24,600<br>11 158 | 19,600<br>8 890  | 24,600<br>11 158 | 19,600<br>8 890  | 24,600<br>11 158 | 19,600<br>8 890  | 24,600<br>11 158 | 19,600<br>8 890  | 24,600<br>11 158 | 19,600<br>8 890  | 22,900<br>10 387 | 19,600<br>9 299  | 20,500<br>9 299  | 18,800<br>8 528  | 18,800<br>8 528  | 17,300<br>7 847  | 17,300<br>7 847 |
| 30'<br>9.14m  |                  |                  | 14,000<br>6 350  | 18,200<br>8 255  | 14,000<br>6 350  | 18,200<br>8 255  | 14,000<br>6 350  | 18,200<br>8 255  | 14,000<br>6 350  | 18,200<br>8 255  | 14,000<br>6 350  | 18,200<br>8 255  | 14,000<br>6 350  | 17,800<br>8 074  | 14,000<br>6 350  | 16,200<br>7 348  | 14,000<br>6 350  | 15,000<br>6 804 |
| 35'<br>10.67m |                  |                  |                  |                  | 10,600<br>4 808  | 14,200<br>6 441  | 10,600<br>4 808  | 14,200<br>6 441  | 10,600<br>4 808  | 14,200<br>6 441  | 10,600<br>4 808  | 14,200<br>6 441  | 10,600<br>4 808  | 14,200<br>6 441  | 10,600<br>4 808  | 14,200<br>6 441  | 10,600<br>4 808  | 13,100<br>5 942 |
| 40'<br>12.19m |                  |                  |                  |                  |                  |                  | 8,300<br>3 765   | 11,400<br>5 171  | 8,300<br>3 765   | 11,400<br>5 171  | 8,300<br>3 765   | 11,400<br>5 171  | 8,300<br>3 765   | 11,400<br>5 171  | 8,300<br>3 765   | 11,400<br>5 171  | 8,300<br>3 765   | 11,400<br>5 171 |
| 45'<br>13.72m |                  |                  |                  |                  |                  |                  |                  |                  | 6,600<br>2 993   | 9,400<br>4 264   | 6,600<br>2 993   | 9,400<br>4 264   | 6,600<br>2 993   | 9,400<br>4 264   | 6,600<br>2 993   | 9,400<br>4 264   | 6,600<br>2 993   | 9,400<br>4 264  |
| 50'<br>15.24m |                  |                  |                  |                  |                  |                  |                  |                  | 5,200<br>2 359   | 7,700<br>3 493   | 5,200<br>2 359   | 7,700<br>3 493   | 5,200<br>2 359   | 7,700<br>3 493   | 5,200<br>2 359   | 7,700<br>3 493   | 5,200<br>2 359   | 7,700<br>3 493  |
| 55'<br>16.76m |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | 4,200<br>1 905   | 6,500<br>2 948   | 4,200<br>1 905   | 6,500<br>2 948   | 4,200<br>1 905   | 6,500<br>2 948   | 4,200<br>1 905   | 6,500<br>2 948  |
| 60'<br>18.29m |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | 3,500<br>1 588   | 5,500<br>2 495   | 3,500<br>1 588   | 5,500<br>2 495   | 3,500<br>1 588   | 5,500<br>2 495  |
| 65'<br>19.81m |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | 2,800<br>1 270   | 4,700<br>2 132   | 2,800<br>1 270   | 4,700<br>2 132  |
| 70'<br>21.34m |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | 2,300<br>1 043   | 4,000<br>1 814  |
| 75'<br>22.86m |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | 1,800<br>816     | 3,400<br>1 542  |
| 80'<br>24.38m |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                 |
| 85'<br>25.90m |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                 |
| 90'<br>27.43m |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                 |
| 95'<br>28.95  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                 |

© All capacities are based on outriggers fully extended with boom sections extended equal distance.  
Note: For 360° capacities, use the over side capacities with the bumper outrigger set in proper working position.

## Main Boom Capacities<sup>①</sup> On Tires

| Load radius |        | 1.0 m.p.h. (1.61 km/hr)<br>over rear only |           | Crane capacities on tires depend<br>on tire capacity, condition of tires,<br>and tire pressures. |            |                                      |
|-------------|--------|---|-----------|--|------------|--------------------------------------|
| Feet        | meters | Pounds                                    | kilograms | Tires  | Ply rating | 1.0 m.p.h. (1.61 km/hr)<br>inflation |
| 10          | 3.05   | 18,900                                    | 8 573     |  |            |                                      |
| 12          | 3.66   | 15,000                                    | 6 804     |  |            |                                      |
| 15          | 4.57   | 11,100                                    | 5 035     |  |            |                                      |
| 20          | 6.10   | 7,100                                     | 3 220     | 10.0 x 20.0  | 12         | 65 p.s.i. (4.48 Bars)                |
| 25          | 7.62   | 4,700                                     | 2 132     | 11.0 x 20.0  | 12         | 55 p.s.i. (3.79 Bars)                |
| 30          | 9.14   | 3,100                                     | 1 406     | 16.5 x 22.5  | 16         | 90 p.s.i. (6.21 Bars)                |
| 35          | 10.67  | 2,100                                     | 952       |  |            |                                      |
| 40          | 12.19  | 1,400                                     | 635       |  |            |                                      |

① See Operating Instructions; Set-Up Number 3 and 4.

## Wire rope size and type

| Wire rope application    | Size and type used              | Wire rope description   |
|--------------------------|---------------------------------|---|
| Main winch               | 5/8" (16 mm) diameter, Type "N" | Type "N" - 6 x 25 (6 x 19 class) filler wire, extra improved plow steel, preformed, independent wire rope core, right lay, regular lay. |
| Auxiliary winch          | 5/8" (16 mm) diameter, Type "N" |   |
| Jib frontstay pendants ① | 1/2" (13 mm) diameter, Type "N" |   |
| Jib backstay pendants ②  | 1/2" (13 mm) diameter, Type "N" |   |

① Jib frontstay pendants - 24' 3-5/8" (7.45 m)

② Jib backstay pendants - 32' 3/4" (9.77 m)

# HTC - 814 Lifting Capacities

8' (2.44m) carrier

32' - 80' (9.75 - 24.38 m) 3-section boom

Refer to Operating Instructions page 4

## Capacities<sup>①</sup> On Outriggers

| Load radius     | 99.5' (30.32 m) <sup>②</sup><br>80' (24.38 m) boom<br>plus<br>19.5' (5.94 m) fly |                 |                 |
|-----------------|--|-----------------|-----------------|
|                 | Boom angle   | Side            | Rear            |
| 20'<br>6.10 m   | 79°  | 12,200<br>5 533 | 12,200<br>5 533 |
| 25'<br>7.62 m   | 76°  | 12,200<br>5 533 | 12,200<br>5 533 |
| 30'<br>9.14 m   | 73°  | 12,200<br>5 533 | 12,200<br>5 533 |
| 35'<br>10.67 m  | 70°  | 10,800<br>4 899 | 10,800<br>4 899 |
| 40'<br>12.19 m  | 67°  | 9,100<br>4 128  | 9,600<br>4 354  |
| 45'<br>13.72 m  | 64°  | 7,300<br>3 311  | 8,500<br>3 856  |
| 50'<br>15.24 m  | 61°  | 5,900<br>2 676  | 7,600<br>3 447  |
| 55'<br>16.76 m  | 57°  | 4,800<br>2 177  | 6,900<br>3 130  |
| 60'<br>18.29 m  | 53°  | 4,000<br>1 814  | 6,000<br>2 721  |
| 65'<br>19.81 m  | 49°  | 3,300<br>1 497  | 5,100<br>2 313  |
| 70'<br>21.34 m  | 45°  | 2,700<br>1 225  | 4,400<br>1 996  |
| 75'<br>22.86 m  | 41°  | 2,200<br>998    | 3,800<br>1 724  |
| 80'<br>24.38 m  | 36°  | 1,700<br>771    | 3,300<br>1 497  |
| 85'<br>25.90 m  | 30°  | 1,400<br>635    | 2,800<br>1 270  |
| 90'<br>27.43 m  | 22°  | 1,000<br>453    | 2,400<br>1 089  |
| 95'<br>28.95 m  | 10°  |                 | 2,000<br>907    |
| 100'<br>30.48 m |  |                 |                 |

### Deductions For Auxiliary Load Handling Equipment

#### Picking From Main Boom With

|                   |           |
|-------------------|-----------|
| Aux. Head         | 200 Lbs.  |
| Jib Stowed        | 600 Lbs.  |
| Fly Stowed        | 600 Lbs.  |
| Fly Erected       | 1500 Lbs. |
| Fly & Jib Stowed  | 1200 Lbs. |
| Fly & Jib Erected | 4200 Lbs. |

#### Picking From 28 Ft. Fly With

|             |           |
|-------------|-----------|
| Jib Erected | 1300 Lbs. |
| Jib Stowed  | 600 Lbs.  |

## Drum wire rope capacities

| Wire rope layer | Main and auxiliary drum<br>10 1/2" (.27 m) root diameter<br>smooth lagging |        |                 |        |
|-----------------|--|--------|-----------------|--------|
|                 | 5/8" (16 mm) wire rope   |        |                 |        |
|                 | Rope per layer   |        | Total wire rope |        |
|                 | Feet   | meters | Feet            | meters |
| 1               | 74   | 22.55  | 74              | 22.55  |
| 2               | 85   | 25.91  | 159             | 48.46  |
| 3               | 90   | 27.43  | 249             | 75.89  |
| 4               | 98   | 29.87  | 347             | 105.76 |
| 5               | 106  | 32.31  | 453             | 138.07 |
| 6               | 115  | 35.05  | 568             | 173.13 |

| Wire rope layer | Main and auxiliary drum<br>15 1/2" (.38 m) root diameter<br>grooved lagging |        |                 |        |
|-----------------|---|--------|-----------------|--------|
|                 | 5/8" (16 mm) wire rope  |        |                 |        |
|                 | Rope per layer  |        | Total wire rope |        |
|                 | Feet  | meters | Feet            | meters |
| 1               | 103   | 31.39  | 103             | 31.39  |
| 2               | 111   | 33.83  | 214             | 65.23  |
| 3               | 120   | 36.58  | 334             | 101.80 |
| 4               | 128   | 39.01  | 462             | 140.82 |
| 5               | 136   | 41.52  | 598             | 182.27 |
| 6               | 144   | 43.89  | 742             | 226.16 |

① All capacities are based on outriggers fully extended with boom sections extended equal distance.

② Calculating capacities for extended or retracted boom plus fly must be based on boom angle only; see Operating Instructions Number 15.

GENERAL INFORMATION ONLY

## Line speeds and pulls

| Layer | Speed | Main or auxiliary winch - 10½" (.27 m) drum |        |            |       |             |       | Main or auxiliary winch - 15½" (.38 m) drum |        |            |       |             |       |
|-------|-------|---|--------|------------|-------|-------------|-------|---|--------|------------|-------|-------------|-------|
|       |       | Line speeds                                 |        | Line pulls |       |             |       | Line speeds                                 |        | Line pulls |       |             |       |
|       |       |   |        | Available* |       | Permissible |       |   |        | Available* |       | Permissible |       |
|       |       | F.p.m.                                      | m/min. | Lbs.       | kgs.  | Lbs.        | kgs.  | F.p.m.                                      | m/min. | Lbs.       | kgs.  | Lbs.        | kgs.  |
| 1st   | Low   | 133   | 40.54  | 12 970     | 5 883 | 11 700      | 5 307 | 186   | 56.69  | 9 260      | 4 200 | 8 420       | 3 819 |
|       | High  | 266   | 81.08  | 6 480      | 2 939 | 5 890       | 2 672 | 372   | 113.38 | 4 630      | 2 100 | 4 210       | 1 910 |
| 2nd   | Low   | 148   | 45.11  | 11 670     | 5 207 | 10 610      | 4 812 | 201   | 61.26  | 8 570      | 3 887 | 7 790       | 3 533 |
|       | High  | 296   | 90.22  | 5 840      | 2 649 | 5 300       | 2 404 | 402   | 122.52 | 4 290      | 1 945 | 3 900       | 1 769 |
| 3rd   | Low   | 163   | 49.68  | 10 610     | 4 812 | 9 640       | 4 372 | 216   | 65.83  | 7 980      | 3 619 | 7 260       | 3 293 |
|       | High  | 325   | 99.06  | 5 310      | 2 408 | 4 820       | 2 186 | 432   | 131.67 | 3 990      | 1 809 | 3 630       | 1 646 |
| 4th   | Low   | 177   | 53.94  | 9 730      | 4 413 | 8 840       | 4 009 | 231   | 70.40  | 7 470      | 3 388 | 6 790       | 3 079 |
|       | High  | 355   | 108.20 | 4 860      | 2 204 | 4 420       | 2 004 | 462   | 140.81 | 3 730      | 1 691 | 3 390       | 1 537 |
| 5th   | Low   | 192   | 58.52  | 8 980      | 4 073 | 8 160       | 3 701 | 246   | 74.98  | 7 020      | 3 184 | 6 380       | 2 893 |
|       | High  | 384   | 117.04 | 4 490      | 2 036 | 4 080       | 1 850 | 492   | 149.96 | 3 510      | 1 592 | 3 190       | 1 446 |
| 6th   | Low   | 207   | 63.09  | 8 340      | 3 783 | 7 580       | 3 438 | 261   | 79.55  | 6 620      | 3 003 | 6 010       | 2 726 |
|       | High  | 413   | 125.88 | 4 170      | 1 891 | 3 790       | 1 719 | 522   | 159.11 | 3 310      | 1 501 | 3 010       | 1 365 |

| HTC-814 hydraulic circuit pressure settings |  |
|---|--|
| Function                                    | Pressure                                     |
| Boom hoist                                  | 2,900 p.s.i.<br>(200.0 Bars)                 |
| Wire rope hoist                             | 2,500 p.s.i.<br>(172.41 Bars)                |
| Swing                                       | 1,500 p.s.i.<br>(103.45 Bars) at port relief |
| Innermid telescope                          | 2,500 p.s.i.<br>(172.41 Bars)                |
| Outermid telescope                          | 2,500 p.s.i.<br>(172.41 Bars)                |
| Steering                                    | 2,100 p.s.i.<br>(144.79 Bars)                |
| Outriggers                                  | 2,500 p.s.i.<br>(172.41 Bars)                |
| Winch brake and clutch                      | 1,500 p.s.i.<br>(103.45 Bars)                |

# HTC - 814 Warning and Operating Instructions

Read and understand these operating instructions and the values before operating crane. Operation which does not follow these instructions may result in an accident.

## General:

1. Rated lifting capacities in pounds as shown on lift chart pertain to this machine as originally manufactured and normally equipped by Link-Belt Construction Equipment Company. Modifications to the machine or use of optional equipment other than
2. Construction equipment can be dangerous if improperly operated or maintained. Operation and maintenance of this machine must be in compliance with the information in the operator's parts and safety manuals supplied with this machine. If these manuals are missing, order replacements through the distributor.
3. The operator and other personnel associated with this machine shall fully acquaint themselves with the latest applicable American National Standards Institute (ANSI) Safety Standards for cranes.
4. The maximum allowable lifting capacities are based on machine standing level on firm supporting surface.

## Set-Up:

1. The machine shall be leveled on a firm supporting surface. Depending on the nature of the supporting surface, it may be necessary to have structural supports under the outrigger floats or tires to spread the load to a larger bearing surface.
2. When making lifts on outriggers, outrigger beams must be fully extended with tires free of supporting surface.
3. Crane capacities on tires depend on tire capacity, condition of tires, and tire pressure. On-tire picks require lifting from main boom head only on a smooth and level surface. Boom sections must be extended equally. Pick and carry operations are restricted to 1 m.p.h. (1.61 km/hr) maximum speed. The boom must be centered over rear with swinglock engaged and the load must be restrained from swinging. Lifts with fly erected are prohibited on tires.
4. When making lifts on rubber, tires must be inflated to the recommended pressure.

5. For machine equipped with front bumper outrigger, the front bumper outrigger must be set in proper working position before swinging boom lengths greater than 32' (9.75 m) 360°.
6. Outriggers must be set before swinging boom to over side position as defined on working area plate No 59P0009.
7. When installing or removing counterweight, use fully retracted boom only. Do not swing counterweight beyond a 25' (7.62 m) radius. Machine must be on outriggers during this operation.
8. For required parts of line see wire rope strength plate.

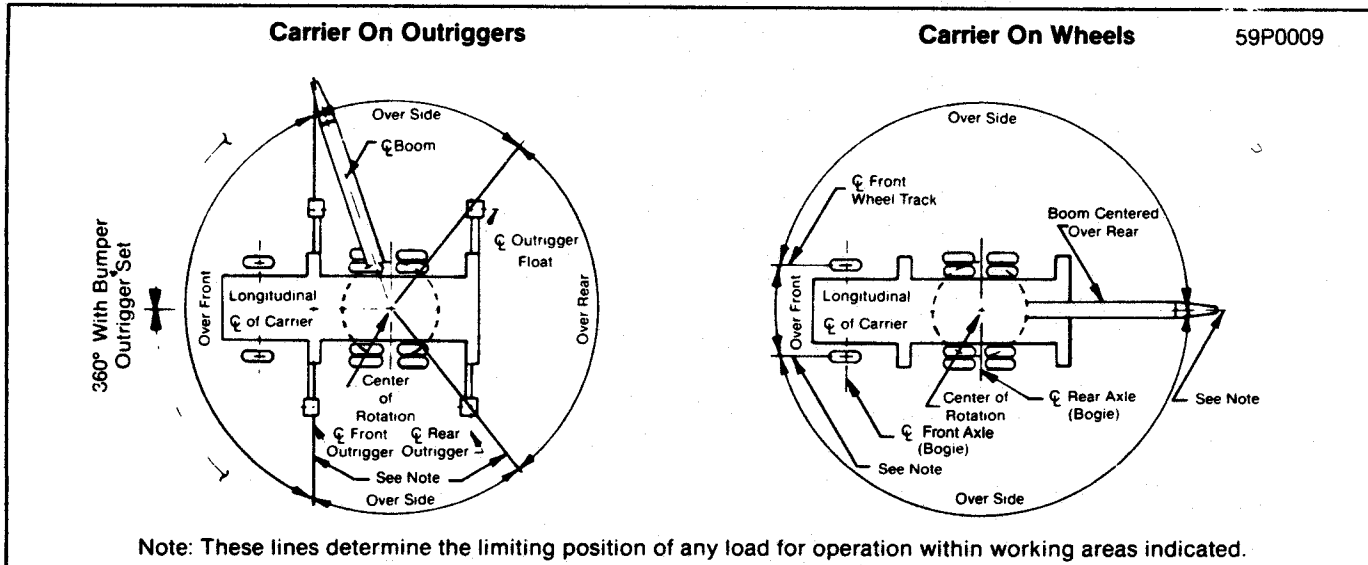
## Operation:

1. Rated lifting capacities at rated radius shall not be exceeded. Do not tip machine to determine allowable load. For concrete bucket operation, weight of bucket and load shall not exceed 80% of rated lifting capacity. For clamshell bucket operation, weight of bucket and bucket content is restricted to a maximum of 6,000 lbs. (2722 kg) or 80% of rated lifting capacity, whichever is less. For magnet operation, weight of magnet and load is restricted to a maximum of 6,000 lbs. (2722 kg) or 80% of rated lifting capacity, whichever is less. For clamshell and magnet operation, maximum boom length is restricted to 50' (15.24 m) and the boom angle is restricted to a minimum of 35°. Manual extended, fly or fly-jib combinations are prohibited for both clam and magnet operations.
2. The crane capacities shown on outriggers do not exceed 85% of the tipping loads and crane capacities shown on tires do not exceed 85% of the tipping loads as determined by SAE crane stability test code J-765a.
3. The crane capacities above the bold lines are based on structural strength or hydraulic limitations.
4. Rated lifting capacities include the weight of hook block, slings, bucket, magnet and auxiliary lifting devices and their weights must be subtracted from the listed rated load to obtain the net load to be lifted. Also see in-cab capacity chart for deductions for auxiliary head and fly.
5. Rated lifting capacities are based on freely suspended loads. No attempt shall be made to move a load horizontally on the ground in any direction.
6. Rated lifting capacities are for lift crane service only.
7. Do not operate at radii or boom lengths where capacities are not listed. At these positions, the machine can overturn without any load on the hook.

8. The maximum loads which can be telescoped are not definable because of variation in loadings and crane maintenance, but it is permissible to attempt retraction and extension within the limits of the load rating chart.
9. When either boom length or radius or both are between values listed, the smallest load shown at either the next larger radius or boom length shall be used.
10. The user shall operate at reduced ratings to allow for adverse job conditions, such as: soft or uneven ground, out of level conditions, wind, side loads, pendulum action, jerking or sudden stopping of loads, hazardous conditions, experience of personnel, two machine lifts, traveling with loads, electrical wires, etc. Side load on boom or fly is extremely dangerous.
11. When making lifts with auxiliary head machinery, the effective length of the boom increases by 2' (61 m). Effective length of boom is length shown on boom length indicator plus 2' (61 m).
12. Power sections must be extended equally.
13. The least stable rated working area on outriggers is over the side.
14. Rated lifting capacities are based on correct reeving. Deduction must be made for excessive reeving. Any reeving over minimum required (see wire rope strength plate) is considered excessive and must be accounted for. Use working range plate to estimate the extra feet of rope then deduct 72 lb (33 kg) for each foot of wire rope before attempting to lift a load.
15. For boom lengths plus fly less than 99' (30.32 m) the rated loads are determined by boom angle only in the column headed 99' (30.32 m). For angles not shown, use the next lower boom angle to determine allowable capacity.
16. With front bumper outrigger set, use over side capacity values for 360° working area.
17. Do not lower 80' (24.38 m) boom with 19' (5.94 m) fly below 10°. Failure to follow note 17 will result in a tipping condition.
18. The 32' (9.76 m) boom length capacities are based on boom fully retracted. If not fully retracted, do not exceed ratings for the 38' (11.59 m) boom length.

## GENERAL INFORMATION ONLY

## HTC - 814 Working Areas



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**Link-Belt Construction Equipment Company Lexington, Kentucky**





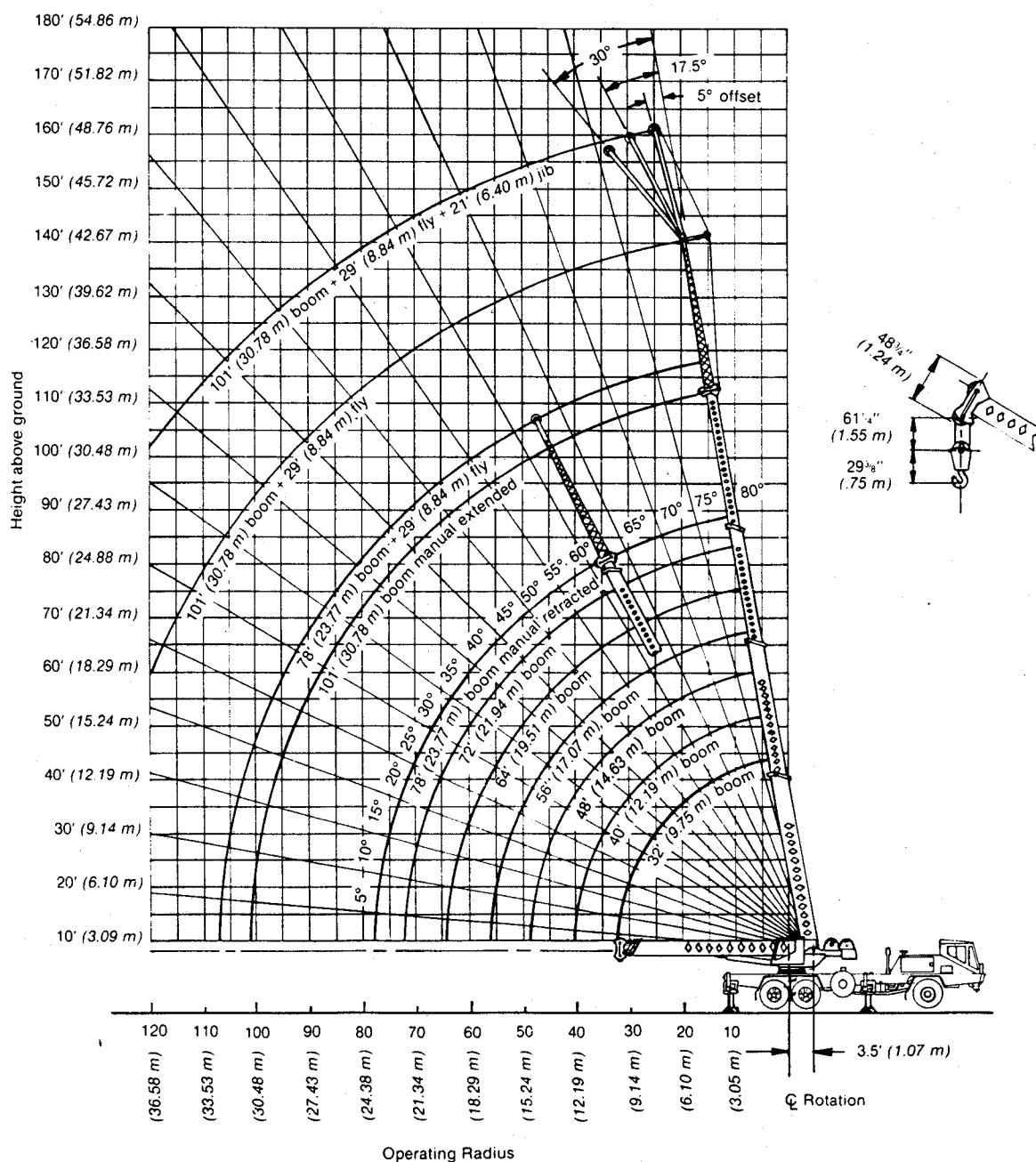
# Lifting Capacities

## Hydraulic Crane

PCSA Class 10-84

### HTC-814 14-ton (12.70 metric ton)

#### 4-Section Boom



# HTC-814 Lifting Capacities

Refer to Operating Instructions page 4

8' (2.44 m) carrier

32'-101' (9.75 - 30.78 m) 4-section boom

| Capacities On Outriggers Manual Section Retracted |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | 78' (23.77 m) boom<br>plus<br>29' (2.84 m) fly |                  |                 |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--|------------------|-----------------|
| Load<br>radius                                    | 32' (9.75 m)     |                  | 40' (12.19 m)    |                  | 48' (14.63 m)    |                  | 56' (17.07 m)    |                  | 64' (19.50 m)    |                  | 72' (21.95 m)    |                  | 78' (23.77 m)    |                  | Boom<br>angle                                  | Side             | Rear            |
|   | Side             | Rear             | Side             | Rear             | Side             | Rear             | Side             | Rear             | Side             | Rear             | Side             | Rear             | Side             | Rear             |  |                  |                 |
| 10'<br>3.05m                                      | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 |                  |                  |                  |                  | See Note ①                                     |                  |                 |
| 12'<br>3.66m                                      | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 |                  |  |                  |                 |
| 15'<br>4.57m                                      | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 24,700<br>11 204 |  | 24,700<br>11 204 |                 |
| 20'<br>6.10m                                      | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 28,000<br>12 700 | 25,000<br>11 340 | 25,000<br>11 340 | 22,600<br>10 251 | 22,600<br>10 251 |  | 79°              | 14,500<br>6 577 |
| 25'<br>7.62m                                      | 21,500<br>9 752  | 26,100<br>11 839 | 21,500<br>9 752  | 26,100<br>11 839 | 21,500<br>9 752  | 26,100<br>11 839 | 21,500<br>9 752  | 26,100<br>11 839 | 21,500<br>9 752  | 25,200<br>11 431 | 21,400<br>9 707  | 21,400<br>9 707  | 19,400<br>8 800  | 19,400<br>8 800  | 77°  | 13,600<br>6 168  | 13,600<br>6 168 |
| 30'<br>9.14m                                      |                  |                  | 15,100<br>6 849  | 19,100<br>8 664  | 15,100<br>6 849  | 19,100<br>8 664  | 15,100<br>6 849  | 19,100<br>8 664  | 15,100<br>6 849  | 19,100<br>8 664  | 15,100<br>6 849  | 18,900<br>8 573  | 15,100<br>6 849  | 17,100<br>7 756  | 74°  | 12,100<br>5 488  | 12,100<br>5 488 |
| 35'<br>10.67m                                     |                  |                  |                  |                  | 11,200<br>5 080  | 14,600<br>6 622  | 11,200<br>5 080  | 14,600<br>6 622  | 11,200<br>5 080  | 14,600<br>6 622  | 11,200<br>5 080  | 14,600<br>6 622  | 11,200<br>5 080  | 14,600<br>6 622  | 72°  | 11,500<br>5 216  | 11,500<br>5 216 |
| 40'<br>12.19m                                     |                  |                  |                  |                  | 8,400<br>3 810   | 11,500<br>5 216  | 8,400<br>3 810   | 11,500<br>5 216  | 8,400<br>3 810   | 11,500<br>5 216  | 8,400<br>3 810   | 11,500<br>5 216  | 8,400<br>3 810   | 11,500<br>5 216  | 69°  | 10,000<br>4 536  | 10,500<br>4 762 |
| 45'<br>13.72m                                     |                  |                  |                  |                  |                  |                  | 6,500<br>2 948   | 9,200<br>4 173   | 6,500<br>2 948   | 9,200<br>4 173   | 6,500<br>2 948   | 9,200<br>4 173   | 6,500<br>2 948   | 9,200<br>4 173   | 66°  | 7,900<br>3 583   | 8,700<br>3 946  |
| 50'<br>15.24m                                     |                  |                  |                  |                  |                  |                  | 5,000<br>2 268   | 7,400<br>3 357   | 5,000<br>2 268   | 7,400<br>3 357   | 5,000<br>2 268   | 7,400<br>3 357   | 5,000<br>2 268   | 7,400<br>3 357   | 63°  | 6,400<br>2 903   | 7,900<br>3 583  |
| 55'<br>16.76m                                     |                  |                  |                  |                  |                  |                  |                  |                  | 3,900<br>1 769   | 6,100<br>2 767   | 3,900<br>1 769   | 6,100<br>2 767   | 3,900<br>1 769   | 6,100<br>2 767   | 60°  | 5,100<br>2 313   | 7,200<br>3 265  |
| 60'<br>18.29m                                     |                  |                  |                  |                  |                  |                  |                  |                  | 2,900<br>1 315   | 4,900<br>2 223   | 2,900<br>1 315   | 4,900<br>2 223   | 2,900<br>1 315   | 4,900<br>2 223   | 56°  | 4,200<br>1 905   | 6,100<br>2 766  |
| 65'<br>19.81m                                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | 2,200<br>998     | 4,000<br>1 814   | 2,200<br>998     | 4,000<br>1 814   | 53°  | 3,400<br>1 542   | 5,200<br>2 358  |
| 70'<br>21.34m                                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | 1,600<br>726     | 3,300<br>1 497   | 49°  | 2,700<br>1 224   | 4,400<br>1 995  |
| 75'<br>22.86m                                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | 45°  | 2,100<br>952     | 3,700<br>1 678  |
| 80'<br>24.38m                                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | 41°  | 1,600<br>725     | 3,100<br>1 406  |
| 85'<br>25.90m                                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | 36°  | 1,200<br>544     | 2,600<br>1 179  |
| 90'<br>27.43m                                     |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | 30°  |                  | 2,100<br>952    |

Note: For 360° capacities, use the over side capacities with the bumper outrigger set in proper working position.

① Capacities for boom plus fly can be extended or retracted, but are based on boom angle only. See Operating Instructions Number 16.

| Main Boom Capacities① On Tires |        |  |           |  |            |                                   |
|--------------------------------|--------|--|-----------|--|------------|-----------------------------------|
| Load radius                    |        | 1.0 m.p.h. (1.61 km/hr) over rear only |           | Crane capacities on tires depend on tire capacity, condition of tires, and tire pressures. |            |                                   |
|                                |        | Pounds                                 | kilograms |  |            |                                   |
| Feet                           | meters |  |           | Tires  | Ply rating | 1.0 m.p.h. (1.61 km/hr) Inflation |
| 10                             | 3.05   | 19,500                                 | 8 845     |  |            |                                   |
| 12                             | 3.66   | 16,000                                 | 7 257     |  |            |                                   |
| 15                             | 4.57   | 11,700                                 | 5 171     |  |            |                                   |
| 20                             | 6.10   | 7,300                                  | 3 311     | 10.0 x 20.0  | 12         | 65 p.s.i. (4.48 Bars)             |
| 25                             | 7.62   | 4,600                                  | 2 086     | 11.0 x 20.0  | 12         | 55 p.s.i. (3.79 Bars)             |
| 30                             | 9.14   | 2,800                                  | 1 270     | 16.5 x 22.5  | 16         | 90 p.s.i. (6.21 Bars)             |
| 35                             | 10.67  | 1,600                                  | 725       |  |            |                                   |

① See Operating Instructions; Set-Up Number 3 and 4

| Deductions For Auxiliary Load Handling Equipment |           |
|--|-----------|
| Picking From Main Boom With                      |           |
| Aux. Head  | 200 Lbs.  |
| Jib Stowed                                       | 600 Lbs.  |
| Fly Stowed                                       | 600 Lbs.  |
| Fly Erected                                      | 1500 Lbs. |
| Fly & Jib Stowed                                 | 1200 Lbs. |
| Fly & Jib Erected                                | 4200 Lbs. |
| Picking From 29 Ft. Fly With                     |           |
| Jib Erected                                      | 1300 Lbs. |
| Jib Stowed                                       | 600 Lbs.  |

## Wire rope size and type

| Wire rope application    | Size and type used              | Wire rope description   |
|--------------------------|---------------------------------|---|
| Main winch               | 5/8" (16 mm) diameter, Type "N" | Type "N" - 6 x 25 (6 x 19 class) filler wire, extra improved plow steel, preformed, independent wire rope core, right lay, regular lay. |
| Auxiliary winch          | 5/8" (16 mm) diameter, Type "N" |   |
| Jib frontstay pendants ① | 1/2" (13 mm) diameter, Type "N" |   |
| Jib backstay pendants ②  | 1/2" (13 mm) diameter, Type "N" |   |

① Jib frontstay pendants - 24' 3-5/8" (7.45 m)

② Jib backstay pendants - 32' 3/4" (9.77 m)

# HTC-814 Lifting Capacities

8' (2.44m) carrier

32' - 101' (9.75 - 30.78 m) 4-section boom

Refer to Operating Instructions page 4

Capacities On Outriggers Manual Section Extended

| Load radius     | 101' (30.78 m) |                 |                 | 101' (30.78 m) plus 29' (8.84 m) fly |                |                |
|-----------------|----------------|-----------------|-----------------|--------------------------------------|----------------|----------------|
|                 | Boom angle     | Side            | Rear            | Boom angle                           | Side           | Rear           |
|                 |                | See Note ①      |                 |                                      | See Note ②     |                |
| 20'<br>6.10 m   | 79°            | 14,800<br>6 713 | 14,800<br>6 713 |                                      |                |                |
| 25'<br>7.62 m   | 76°            | 14,300<br>6 486 | 14,300<br>6 486 |                                      |                |                |
| 30'<br>9.14 m   | 74°            | 13,800<br>6 259 | 13,800<br>6 259 | 78°                                  | 7,000<br>3 175 | 7,000<br>3 175 |
| 35'<br>10.67 m  | 71°            | 12,500<br>5 670 | 12,500<br>5 670 | 76°                                  | 7,000<br>3 175 | 7,000<br>3 175 |
| 40'<br>12.19 m  | 68°            | 9,800<br>4 445  | 11,100<br>5 034 | 74°                                  | 7,000<br>3 175 | 7,000<br>3 175 |
| 45'<br>13.72 m  | 65°            | 7,700<br>3 492  | 9,900<br>4 490  | 72°                                  | 7,000<br>3 175 | 7,000<br>3 175 |
| 50'<br>15.24 m  | 61°            | 6,200<br>2 812  | 8,600<br>3 900  | 70°                                  | 6,800<br>3 084 | 6,800<br>3 084 |
| 55'<br>16.76 m  | 58°            | 5,000<br>2 268  | 7,200<br>3 265  | 67°                                  | 5,600<br>2 540 | 6,200<br>2 812 |
| 60'<br>18.29 m  | 54°            | 4,100<br>1 859  | 6,000<br>2 721  | 65°                                  | 4,600<br>2 086 | 5,700<br>2 585 |
| 65'<br>19.81 m  | 50°            | 3,300<br>1 496  | 5,100<br>2 313  | 62°                                  | 3,800<br>1 723 | 5,200<br>2 358 |
| 70'<br>21.34 m  | 46°            | 2,600<br>1 179  | 4,300<br>1 950  | 60°                                  | 3,100<br>1 406 | 4,700<br>2 131 |
| 75'<br>22.86 m  | 42°            | 2,000<br>907    | 3,600<br>1 632  | 57°                                  | 2,600<br>1 179 | 4,100<br>1 859 |
| 80'<br>24.38 m  | 37°            | 1,600<br>725    | 3,100<br>1 406  | 54°                                  | 2,100<br>952   | 3,500<br>1 587 |
| 85'<br>25.90 m  | 31°            | 1,200<br>544    | 2,500<br>1 134  | 51°                                  | 1,600<br>725   | 3,000<br>1 360 |
| 90'<br>27.43 m  | 27°            |                 | 2,100<br>952    | 48°                                  | 1,300<br>589   | 2,600<br>1 179 |
| 95'<br>28.95 m  |                |                 |                 | 44°                                  |                | 2,200<br>997   |
| 100'<br>30.48 m |                |                 |                 | 40°                                  |                | 1,800<br>816   |

Note: For 360° capacities, use the over side capacities with the bumper outrigger set in proper working position.

① Calculating capacities for extended or retracted boom with manual section extended must be based on boom angle only; see Operating Instructions Number 15.

② Capacities for boom plus fly can be extended or retracted, but are based on boom angle only; see Operating Instructions Number 16.

Jib Capacities

| 29' (8.84 m) fly plus 21' (6.40 m) jib |                |                |                |
|--|----------------|----------------|----------------|
| Boom angle                             | Jib Offset     |                |                |
|  | 5°             | 17.5°          | 30°            |
| 80°                                    | 4,000<br>1 814 | 4,000<br>1 814 | 4,000<br>1 814 |
| 75°                                    | 4,000<br>1 814 | 4,000<br>1 814 | 3,600<br>1 632 |
| 70°                                    | 3,800<br>1 723 | 3,300<br>1 496 | 2,900<br>1 315 |
| 65°                                    | 2,500<br>1 134 | 2,200<br>997   | 1,900<br>861   |
| 60°                                    | 1,500<br>680   | 1,300<br>589   | 1,200<br>544   |

Drum wire rope capacities

| Wire rope layer | Main and auxiliary drum 10 1/2" (.27 m) root diameter smooth lagging |        |                 |        |
|-----------------|--|--------|-----------------|--------|
|                 | 5/8" (16 mm) wire rope   |        |                 |        |
|                 | Rope per layer   |        | Total wire rope |        |
|                 | Feet   | meters | Feet            | meters |
| 1               | 74   | 22.55  | 74              | 22.55  |
| 2               | 85   | 25.91  | 159             | 48.46  |
| 3               | 90   | 27.43  | 249             | 75.89  |
| 4               | 98   | 29.87  | 347             | 105.76 |
| 5               | 106  | 32.31  | 453             | 138.07 |
| 6               | 115  | 35.05  | 568             | 173.13 |

| Wire rope layer | Main and auxiliary drum 15 1/2" (.38 m) root diameter grooved lagging |        |                 |        |
|-----------------|---|--------|-----------------|--------|
|                 | 5/8" (16 mm) wire rope  |        |                 |        |
|                 | Rope per layer  |        | Total wire rope |        |
|                 | Feet  | meters | Feet            | meters |
| 1               | 103   | 31.39  | 103             | 31.39  |
| 2               | 111   | 33.83  | 214             | 65.23  |
| 3               | 120   | 36.58  | 334             | 101.80 |
| 4               | 128   | 39.01  | 462             | 140.82 |
| 5               | 136   | 41.52  | 598             | 182.27 |
| 6               | 144   | 43.89  | 742             | 226.16 |

## Line speeds and pulls

| Layer | Speed       | Main or auxiliary winch - 10%" (.27 m) drum |        |            |       |             |       | Main or auxiliary winch - 15%" (.38 m) drum |        |            |       |             |       |
|-------|-------------|---|--------|------------|-------|-------------|-------|---|--------|------------|-------|-------------|-------|
|       |             | Line speeds                                 |        | Line pulls |       |             |       | Line speeds                                 |        | Line pulls |       |             |       |
|       |             |   |        | Available* |       | Permissible |       |   |        | Available* |       | Permissible |       |
|       |             | F.p.m.                                      | m/min. | Lbs.       | kgs.  | Lbs.        | kgs.  | F.p.m.                                      | m/min. | Lbs.       | kgs.  | Lbs.        | kgs.  |
| 1st   | Low<br>High | 133   | 40.54  | 12,970     | 5 883 | 11,700      | 5 307 | 186   | 56.69  | 9,260      | 4 200 | 8,420       | 3 819 |
|       |             | 266   | 81.08  | 6,480      | 2 939 | 5,890       | 2 672 | 372   | 113.38 | 4,630      | 2 100 | 4,210       | 1 910 |
| 2nd   | Low<br>High | 148   | 45.11  | 11,670     | 5 207 | 10,610      | 4 812 | 201   | 61.26  | 8,570      | 3 887 | 7,790       | 3 533 |
|       |             | 296   | 90.22  | 5 840      | 2 649 | 5,300       | 2 404 | 402   | 122.52 | 4,290      | 1 945 | 3,900       | 1 769 |
| 3rd   | Low<br>High | 163   | 49.68  | 10,610     | 4 812 | 9,640       | 4 372 | 216   | 65.83  | 7,980      | 3 619 | 7,260       | 3 293 |
|       |             | 325   | 99.06  | 5,310      | 2 408 | 4,820       | 2 186 | 432   | 131.67 | 3,990      | 1 809 | 3,630       | 1 646 |
| 4th   | Low<br>High | 177   | 53.94  | 9,730      | 4 413 | 8,840       | 4 009 | 231   | 70.40  | 7,470      | 3 388 | 6,790       | 3 079 |
|       |             | 355   | 108.20 | 4,860      | 2 204 | 4,420       | 2 004 | 462   | 140.81 | 3,730      | 1 691 | 3,390       | 1 537 |
| 5th   | Low<br>High | 192   | 58.52  | 8,980      | 4 073 | 8,160       | 3 701 | 246   | 74.98  | 7,020      | 3 184 | 6,380       | 2 893 |
|       |             | 384   | 117.04 | 4,490      | 2 036 | 4,080       | 1 850 | 492   | 149.96 | 3,510      | 1 592 | 3,190       | 1 446 |
| 6th   | Low<br>High | 207   | 63.09  | 8,340      | 3 783 | 7,580       | 3 438 | 261   | 79.55  | 6,620      | 3 003 | 6,010       | 2 726 |
|       |             | 413   | 125.88 | 4,170      | 1 891 | 3,790       | 1 719 | 522   | 159.11 | 3,310      | 1 501 | 3,010       | 1 365 |

\* Developed by machinery with first layer of wire rope, but not based on wire rope strength.

HTC-814 hydraulic circuit pressure settings

| Function               | Pressure  |
|------------------------|---|
| Boom hoist             | 2,900 p.s.i.<br>(200.0 Bars)                    |
| Wire rope hoist        | 2,500 p.s.i.<br>(172.45 Bars)                   |
| Swing                  | 1,500 p.s.i.<br>(103.45 Bars)<br>at port relief |
| Innermid telescope     | 2,500 p.s.i.<br>(172.41 Bars)                   |
| Outermid telescope     | 2,500 p.s.i.<br>(172.41 Bars)                   |
| Steering               | 2,100 p.s.i.<br>(144.79 Bars)                   |
| Outriggers             | 2,500 p.s.i.<br>(172.41 Bars)                   |
| Winch brake and clutch | 1,500 p.s.i.<br>(103.45 Bars)                   |

# HTC-814 Warning and Operating Instructions

Read and understand these operating instructions and the chart values before operating crane. Operation which does not follow these instructions may result in an accident.

## General:

- 1 Rated lifting capacities in pounds as shown on lift chart pertain to this machine as originally manufactured and normally equipped by Link-Belt Construction Equipment Company. Modifications to the machine or use of optional equipment other than that specified can result in a reduction of capacity.
- 2 Construction equipment can be dangerous if improperly operated or maintained. Operation and maintenance of this machine must be in compliance with the information in the operator's parts and safety manuals supplied with this machine. If these manuals are missing, order replacements through the distributor.
- 3 The operator and other personnel associated with this machine shall fully acquaint themselves with the latest applicable American National Standards Institute (ANSI) Safety Standards for cranes.
- 4 The maximum allowable lifting capacities are based on machine standing level on firm supporting surface.

## Set-Up:

- 1 The machine shall be leveled on a firm supporting surface. Depending on the nature of the supporting surface, it may be necessary to have structural supports under the outrigger floats or tires to spread the load to a larger bearing surface.
- 2 When making lifts on outriggers, outrigger beams must be fully extended with tires free of supporting surface.
- 3 Crane capacities on tires depend on tire capacity, condition of tires, and tire pressure. On-tire picks require lifting from main boom head only on a smooth and level surface. Boom sections must be extended equally. Pick and carry operations are restricted to 1 m.p.h. (1.61 km/hr) maximum speed. The boom must be centered over rear with swinglock engaged and the load must be restrained from swinging. Lifts with manual extended, fly or fly-jib combination erected are prohibited on tires.
- 4 When making lifts on rubber, tires must be inflated to the recommended pressure.
- 5 For machine equipped with front bumper outrigger, the front bumper outrigger must be set in proper working position before swinging boom lengths greater than 32' (9.75 m) 360.
- 6 Outriggers must be set before swinging boom to over side position as defined on working area

plate No. 59P0009.

- 7 When installing or removing counterweight, use fully retracted boom only. Do not swing counterweight beyond a 25' (7.62 m) radius. Machine must be on outriggers during this operation.
- 8 For required parts of line see wire rope strength plate.

## Operation:

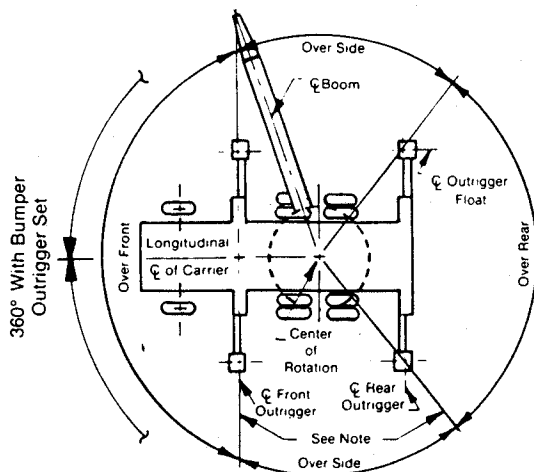
- 1 Rated lifting capacities at rated radius shall not be exceeded. Do not tip machine to determine allowable load. For concrete bucket operation, weight of bucket and load shall not exceed 80% of rated lifting capacity. For clamshell bucket operation, weight of bucket and bucket content is restricted to a maximum of 6,000 lbs. (2722 kg) or 80% of rated lifting capacity, whichever is less. For magnet operation, weight of magnet and load is restricted to a maximum of 6,000 lbs. (2722 kg) or 80% of rated lifting capacity, whichever is less. For clamshell and magnet operation, maximum boom length is restricted to 50' (15.24 m) and the boom angle is restricted to a minimum of 35°. Manual extended, fly or fly-jib combinations are prohibited for both clam and magnet operations.
- 2 The crane capacities shown on outriggers do not exceed 85% of the tipping loads and crane capacities shown on tires do not exceed 85% of the tipping loads as determined by SAE crane stability test code J-765a.
- 3 The crane capacities above the bold lines are based on structural strength or hydraulic limitations.
- 4 Rated lifting capacities include the weight of hook block, slings, bucket, magnet and auxiliary lifting devices and their weights must be subtracted from the listed rated load to obtain the net load to be lifted. Also see in-cab capacity chart for deductions for auxiliary head, fly and jib.
- 5 Rated lifting capacities are based on freely suspended loads. No attempt shall be made to move a load horizontally on the ground in any direction.
- 6 Rated lifting capacities are for lift crane service only.
- 7 Do not operate at radii or boom lengths where capacities are not listed. At these positions, the machine can overturn without any load on the hook.
- 8 The maximum loads which can be telescoped are not definable because of variation in loadings and crane maintenance, but it is permissible to attempt retraction and extension within the limits of the load rating chart.
- 9 When either boom length or radius or both are between values listed, the smallest load shown at

either the next larger radius or boom length shall be used.

- 10 The user shall operate at reduced ratings to allow for adverse job conditions, such as: soft or uneven ground, out of level conditions, wind, side loads, pendulum action, jerking or sudden stopping of loads, hazardous conditions, experience of personnel, two machine lifts, traveling with loads, electrical wires, etc. Side load on boom, fly or jib is extremely dangerous.
- 11 When making lifts with auxiliary head machinery, the effective length of the boom increases by 2' (.61 m). Effective length of boom is length shown on boom length indicator plus 2' (.61 m).
- 12 Power sections must be extended equally.
- 13 The least stable rated working area on outriggers is over the side.
- 14 Rated lifting capacities are based on correct reeving. Deduction must be made for excessive reeving. Any reeving over minimum required (see wire rope strength plate) is considered excessive and must be accounted for. Use working range plate to estimate the extra feet or rope then deduct .72 lb. (.33 kg) for each foot of wire rope before attempting to lift a load.
- 15 For boom lengths less than 101' (32.61 m) with manual extended, the rated loads are determined by boom angle only in the column headed 101' (30.78 m). For angles not shown, use next lower boom angle to determine allowable capacity.
- 16 For boom lengths plus fly less than 107' (32.62 m) with manual retracted or less than 130' (39.62 m) with manual extended the rated loads are determined by boom angle only in the respective column. For angles not shown, use next lower boom angle to determine allowable capacity.
- 17 With front bumper outrigger set, use over side capacity values for 360 degree working area. Do not lower 78' (23.77 m) boom below 12 degrees. Do not lower 78' (23.77 m) boom with fly below 30 degrees. Do not lower 101' (30.78 m) boom with manual extended below 27 degrees. Do not lower 101' (30.78 m) boom with 29' (8.84 m) fly below 40 degrees. Failure to follow Note 18 will result in a tipping condition.
- 18 The 21' (6.40 m) jib capacities are based on main boom angle regardless of main boom length. For angles not shown use next lower boom angle to determine allowable capacity. Capacity values can be used to operate over rear or over side. Warning: do not lower 21' (6.40 m) jib in working position below 60 degrees unless boom is fully retracted.
- 19 The 32' (9.75 m) boom length capacities are based on boom fully retracted. If not fully retracted, do not exceed ratings for the 40' (12.19 m) boom length.

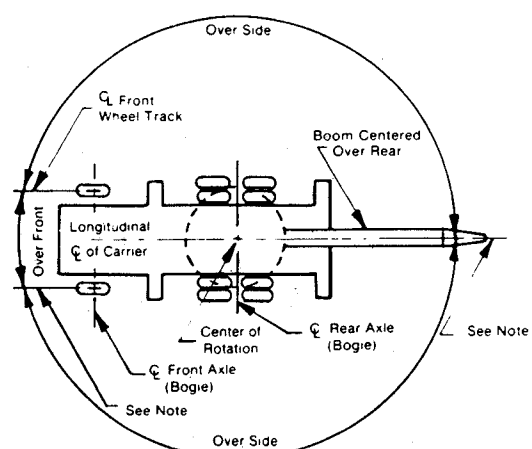
## HTC-814 Working Areas

Carrier On Outriggers



Carrier On Wheels

59P0009



Note: These lines determine the limiting position of any load for operation within working areas indicated.

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We are constantly improving our products and therefore reserve the right to change designs and specifications.

Link-Belt Construction Equipment Company Lexington, Kentucky

