HTC-8670
70-ton (63.50 mt)
Hydraulic Truck Crane

- 70-ton (63.50 mt) at 9' (2.74 m) radius
- 115’ (35.05 m) four-section, full power boom with quick-reeve boom head
- 182’ (55.47 m) maximum tip height
- Optional 61’ (18.59 m) two-piece (bi-fold) lattice fly, stowable, offsettable to 2°, 20° and 40°
- No deducts for stowed attachments
- Full-deck aluminum fenders
- Pilot-operated hydraulic controls
- On-highway 365 hp electronic Cummins engine with Jake brake
- 16,000 lb (7,258 kg) counterweight

HTC-8670 Long Boom
70-ton (63.50 mt)
Hydraulic Truck Crane

The HTC-8670 Long Boom boasts all of the outstanding features of the HTC-8670, in addition to:
- 127’ (38.71 m) four-section, full power boom with quick reeve boom head
- 200’ (60.96 m) maximum tip height
- Optional 67’ (20.42 m) two-piece (bi-fold) lattice fly, stowable, offsettable to 2°, 20° and 40°
Specifications
Telescopic Boom Truck Crane

HTC–8670 70–ton (63.5 metric tons)

General Dimensions

<table>
<thead>
<tr>
<th>Description</th>
<th>feet</th>
<th>meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turning radius (wall to wall)</td>
<td>49' 1.5&quot;</td>
<td>14.97</td>
</tr>
<tr>
<td>Turning radius (curb to curb)</td>
<td>41' 10.5&quot;</td>
<td>12.76</td>
</tr>
<tr>
<td>Ground clearance</td>
<td>13.25&quot;</td>
<td>0.34</td>
</tr>
<tr>
<td>Tailswing</td>
<td>13' 8.125&quot;</td>
<td>4.17</td>
</tr>
</tbody>
</table>

Not To Scale
Upper Structure

■ Boom

Patented Design
- Boom side plates have diamond shaped impressions for superior strength to weight ratio and 100,000 p.s.i. (689.5 MPa) steel angle chords for lateral stiffness.
- Boom telescope sections are supported by top, bottom and adjustable side shoe shear shoes to prevent metal to metal contact.

Boom
- 38 – 115’ (11.58 – 35.05 m) four-section full power boom.
- Two mode boom extension
- The basic mode is the full power, synchronized mode of telescoping all sections proportionally to 115’ (35.05 m).
- The exclusive “A–max” mode (or mode ‘A’) extends only the inner mid section to 63’ 6” (19.39 m) offering increased capacities for in–close, maximum capacity picks.

Boom Head
- Five 16–1/2” (0.42 m) root diameter nylon sheaves with a fifth nylon sheave available to handle up to 10 parts of wire rope.
- Easily removable wire rope guards
- Rope dead end lugs provided on each side of boom head.
- Boom head designed for quick reeve of hook block.
- Fly pinning alignment tool.

Boom Elevation
- One Link–Belt designed hydraulic cylinder with holding valve and bushing in each end.
- Hand control for controlling boom elevation from –3° to +78°.

Optional Auxiliary Lifting Sheave
- Single 16–1/2” (0.42 m) root diameter nylon sheave with removable wire rope guard, mounted to boom.
- Use with one or two parts of line off the optional front winch.
- Does not affect erection of fly or use of main head sheaves for multiple reeving.

Optional
- 70–ton (63.5 mt) quick reeve hook block.
- 8–1/2 ton (7.7 mt) hook ball.
- Boom floodlight.
- Mechanical Boom Angle Indicator

■ Fly

Optional
- 36’ 6” (11.13 m) One piece lattice fly, stowable, offsettable to 2°, 20° and 40°.
- Lugs to allow for second section.
- 36’ 6” – 61’ (11.13 – 18.59 m) Two piece (bifold) lattice fly, stowable, offsettable to 2°, 20° or 40°.

■ Cab and Controls

Environmental Ultra–CAB™
- Laminated fibrous composite material; isolated from sound with acoustical fabric insulation.
- Windows are tinted and tempered safety glass.
- Sliding rear and right side windows and sliding–up roof window for maximum visibility and ventilation.
- Slide–by–door opens to 3’ (0.91 m) width.
- Six–way adjustable seat, with seat belt, for maximum operator comfort.
- Hand–held outrigger controls and sight level bubble located on left side of cab.
- Diesel cab heater
- Pull–out Cabwalk™
- Audible swing alarm
- Backup alarm
- Fire extinguisher
- 12–volt accessory outlet
- Electric windshield wiper
- Windshield washer
- Top hatch window wiper
- Foot controls for:
  - Boom telescope
  - Engine throttle
- Optional
  - Single axis controls
  - Auxiliary winch

Cab Instrumentation
Cornerpost–mounted gauges for:
- Hydraulic oil temperature
- Tachometer
- Oil pressure
- Voltmeter
- Fuel
- Water temperature

■ Rated Capacity Limiter
- Microguard 434 Graphic audio–visual warning system built into dash with anti–two block and function limiters.
- Operating data available includes:
  - Machine configuration.
  - Boom length
  - Head height
  - Radius of load
  - Actual load
- Presettable alarms include:
  - Maximum and minimum boom angles.
  - Maximum tip height.
  - Maximum boom length.
  - Swing left/right positions.
  - Operator defined area alarm is standard.
  - Anti–two block weight designed for quick reeve of hookblock.

Optional
- Internal RCL light bar: Visually informs operator when crane is approaching maximum load capacity with a series of green, yellow and red lights.
- External RCL light bar: Visually informs ground crew when crane is approaching maximum load capacity kickouts and presettable alarms with a series of three lights; green, yellow and red.

■ Swing

Bi–directional hydraulic swing motor mounted to a planetary reducer for 360° continuous smooth swing at 1.7 r.p.m.

- Swing park brake – 360°, electric over hydraulic (spring applied, hydraulic released) multi–disc brake mounted on the speed reducer. Operated by toggle switch in overhead control console.
- Swing brake – 360°, foot operated, hydraulic applied disc brake mounted on the speed reducer.
- Swing lock – Standard; two position travel lock operated from the operator’s cab.
- Counterweight
  - Standard – Pinned to upper structure frame. 12,000 lbs. (5,443 kg) three–piece design (4,000 lbs. each).
  - Optional – 16,000 lbs. (7,258 kg) five piece design. (Dolly required for five piece arrangement).
  - Hydraulically controlled counterweight removal, standard. Counterweight sections may be lowered on and pinned to carrier deck to balance axle loadings for travel.

Optional
- 360° (Pawl–in–Gear) swing lock. Meets New York City requirements.

■ Hydraulic System

Main Pump
- Two gear pump with a total of five sections.
- Combined pump capacity of 152 gpm (575 lpm). Powered by carrier engine with pump disconnect.
- Spline type pump disconnect, engaged / disengaged from carrier cab.
- Maximum system operating pressure is 3,500 psi (24 133 kPa).

Pilot Pressure / Counterweight Removal Pump
- Pressure compensated piston pump powered by carrier engine with pump disconnect. Operates at 1,500 psi (10 343 kPa) maximum.

Steering / Fifth Outrigger Pump
- Single gear type pump, 8 gpm (30 lpm). Powered by carrier engine through front gear housing. Max. pump operating pressure is 2,000 psi (13 790 kPa).
- Reservoir – 169 gallon (639.7 L) capacity. One diffuser for deaeration.
Filtration
- One, 10–micron filter located inside hydraulic reservoir
- Accessible for easy replacement

Control valves
- Six separate pilot operated control valves allow simultaneous operation of all crane functions.

Load Hoist System

Standard
- 2M main winch with grooved lagging.
- Two–speed motor and automatic brake.

Optional
- Carrier mounted storage boxes
- Pintle hook
- Electric and air connections for trailers and boom dollies

Carrier

Type
- 8’ 6” (2.59 m) wide, 231” (5.87 m) wheelbase. 8 x 4 drive – standard

Frame
- 100,000 p.s.i. (689.5 MPa) steel, double walled construction with integral 100,000 p.s.i. steel outrigger boxes

Optional
- Carrier mounted storage boxes
- Pintle hook
- Electric and air connections for trailers and boom dollies

Axles

Front
- Tandem, 84.38” (2.14 m) track.

Rear
- Tandem, 72.8” (1.85 m) track. 6.17 to 1.0 ratio with interaxle differential with lockout.

Suspension

Front axle
- Leaf spring suspension

Rear axle
- Solid mount, bogie beam type

Wheels

Standard
- Front and rear hub piloted aluminum disc

Optional
- Spare tire and wheel assemblies

Tires

Standard Front
- 445/65R22.5 (Load range “L”) single tubeless radials

Standard Rear
- 12R22.5 (Load range “L”) dual tubeless radials

Brakes

Service
- Full air brakes on all wheel ends with automatic slack adjusters. Dual circuit with modulated emergency brakes.
  - Front = 16.5 x 6 S–Cam brakes.
  - Rear = 16.5 x 7 S–Cam brakes.

Power up/down mode of operation.
- Hoist drum cable followers.
- Bi–directional piston–type hydraulic motor driven through planetary reduction unit for positive control under all load conditions.
- Asynchronous parallel double crossover grooved drums minimize rope harmonic motion.
- Winch circuit control provides balanced oil flow to both winches for smooth, simultaneous operation.
- Rotation resistant wire rope.
- Drum Rotation Indicators.

Line Pulls and Speeds
- Maximum available line pull 16,506 lbs. (7,484 kg) and maximum line speed of 513 f.p.m. (156 m/min) on 16” (0.41 m) root diameter grooved drum.

Optional
- 2M auxiliary winch with two–speed motor, automatic brake, and winch function lockout. Power up/down modes.
- Hoist drum cable followers.
- Third wrap indicators.

The three outrigger positions are:
- Full extension – 24’ 0” (7.32 m).
- Intermediate position – 14’ 7” (4.45 m).
- Full retraction – 7’ 9” (2.36 m).
- Capacities are available with the outrigger beams in the intermediate and full retraction positions.
- When the outrigger position levers (located on the outrigger beams) are engaged, the operator can set the crane in the intermediate or full retraction outrigger position without having to leave the cab.

Carrier Cab

- One–man cab of laminated fibrous composite material acoustic insulation with cloth covering.

Equipped with:
- Air–ride adjustable operator’s seat with seat belt.
- Tilting and locking steering wheel.
- Door and windows locks.
- Left–hand and right–hand rear view mirrors.
- Sliding right–hand and rear tinted windows.
- Roll up/down left–hand tinted window.
- Desiccant–type air dryer.
- Steps to upper, lower cab and rear carrier.
- 120–volt electric engine block heater.
- Back–up warning alarm.
- Tow hooks and shackles.
- Aluminum fenders and mud flaps.
- Carrier mounted outrigger controls with throttle control.
- Electric windshield wiper and washer.
- Rotating beacon
- Horn
- Fire extinguisher
- 36,000 BTU heater
- Dome light
- High beam light switch
- Travel lights
- Mud flaps
- Ashtray
- Defroster
- Cruise control

Cab instrumentation
- Illuminated instrument panel speedometer.
- Tachometer
- Fuel gauge
- Oil pressure gauge
- Turn signal indicator
- Water temperature gauge.
- Front and rear air pressure gauges.
- Audio/visual warning system.
- Check engine and stop engine lights.
- Automotive type ignition.
- Optional – Amber strobe light.
- Optional – Air conditioning

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 drops below 40 psi (275.8 kPa) in both systems.

Steering
- Sheppard rack and pinion design.

Transmission

Standard – Eaton RTO–14709MLL; 11 speeds forward, 3 reverse.

Electrical
- Four, 12–volt batteries provide 12–volt starting.
- 2,800 cold cranking amps available.
- 12–volt operating system, 130–amp alternator.

Lights
- Four dual beam sealed headlights.
- Stop, tail and license plate lights.
- Rear and side clearance lights.
- Front, side, and rear directional signals.

Outriggers
- Three position operation capability.
- Four hydraulic, telescoping beam and jack outriggers.
- Vertical jack cylinders equipped with integral holding valve.
- Beams extend to 24’ (7.32 m) centerline–to–centerline and retract to within 8’ 6” (2.59 m) overall width.
- Equipped with stowable, lightweight 24” (0.61 m) diameter aluminum floats.
- Standard fifth outrigger, 14 3/4” (0.37 m) self storing steel pad is operable from ground or operator’s cab.
- Hand–held controls and sight level bubble located on carrier deck.

Confined Area Lifting Capacities (CALC ®) System
- The crane is operational in one of the three outriggers positions and operational in confined areas in two positions (intermediate and full retraction).
### Carrier Speeds

**Manual Transmission – Standard tires**

<table>
<thead>
<tr>
<th>Gear</th>
<th>High</th>
<th>Low</th>
<th>Deep reduction</th>
<th>Hi rev.</th>
<th>Lo rev.</th>
<th>Deep reduction</th>
<th>Deep reduction @ 600 rpm</th>
<th>Deep reduction @ 600 rpm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratio</td>
<td>0.73</td>
<td>1.00</td>
<td>1.38</td>
<td>1.95</td>
<td>2.77</td>
<td>3.79</td>
<td>5.23</td>
<td>7.41</td>
</tr>
<tr>
<td>Speed mph</td>
<td>58.20</td>
<td>42.49</td>
<td>30.79</td>
<td>21.79</td>
<td>15.34</td>
<td>11.21</td>
<td>8.12</td>
<td>5.73</td>
</tr>
<tr>
<td>Speed km/hr</td>
<td>93.65</td>
<td>68.36</td>
<td>49.54</td>
<td>35.06</td>
<td>24.68</td>
<td>18.04</td>
<td>13.07</td>
<td>9.23</td>
</tr>
</tbody>
</table>

### Engine

**Detroit Diesel Series 60 12.7 L**

- **Cylinders – cycle**: 6 / 4
- **Bore**: 5.12” (0.13 m)
- **Stroke**: 6.30” (0.16 m)
- **Displacement**: 776 cu. in. (12.751 cm³)
- **Maximum brake hp.**: 985 @ 1,800 rpm; 350 @ 2,100 rpm
- **Peak torque**: 1,350 ft. lbs. (1831 J) @ 1,200 rpm
- **Electric system**: 12-volt neg. ground / 12 volt starting
- **Fuel capacity**: 100 gallons (378 L)
- **Alternator**: 12 volt, 130 amps
- **Crankcase capacity**: 32 qts. (30 L)

- **Engine brake – standard**
- **Ether injection starting package – optional**

### Axle Loads

**Base machine with standard 38.5” – 115” (97.3 – 292.13 m) four–section boom, 2M main winch with 2–speed hoisting and power up/down, 630’ (192.02 m), 3/4” (19.05 mm) wire rope, 8 x 4, 8.5” (213.36 mm) counterweight, 68.36”, 68.36% fuel and no counterweight.**

#### G.V.W. (lbs. / kg)

<table>
<thead>
<tr>
<th>Upper Facing Front</th>
<th>Front Axle</th>
<th>Rear Axle</th>
</tr>
</thead>
<tbody>
<tr>
<td>lbs.</td>
<td>kg.</td>
<td>lbs.</td>
</tr>
<tr>
<td>76,118</td>
<td>34,527</td>
<td>34,542</td>
</tr>
</tbody>
</table>

- **Cold weather starting aids – propane and ether**: 40 lb / 18 kg
- **Aluminum storage box**: 57 lb / 26 kg
- **Air brake system**: 100 lb / 45 kg
- **Auxiliary winch**: 855 lb / 388 kg
- **Hydraulic system**: 170 lb / 77 kg
- **Air conditioner in upper cab**: 120 lb / 54 kg
- **One slab of counterweight on upper**: 4,000 lb / 1,814 kg
- **Two slabs of counterweight on upper**: 8,000 lb / 3,628 kg
- **Three slabs of counterweight on upper**: 12,000 lb / 5,443 kg
- **Three slabs of counterweight on upper plus two cheek weights**: 16,000 lb / 7,257 kg
- **Flybracks on boom base section for fly options**: 160 lb / 72 kg
- **36.5” (92.71 m) offsettable fly with tip lugs – stowed**: 1,542 lb / 700 kg
- **40-ton (36.3 mt) hookblock at front bumper**: 720 lb / 327 kg
- **Hookball to front bumper**: 360 lb / 163 kg
- **Auxiliary arm**: 125 lb / 57 kg

<table>
<thead>
<tr>
<th>Front axle</th>
<th>Rear axle</th>
</tr>
</thead>
<tbody>
<tr>
<td>5,333</td>
<td>2,419</td>
</tr>
<tr>
<td>–5,333</td>
<td>–2,419</td>
</tr>
<tr>
<td>10,666</td>
<td>4,828</td>
</tr>
<tr>
<td>–10,666</td>
<td>–4,838</td>
</tr>
<tr>
<td>15,999</td>
<td>7,257</td>
</tr>
<tr>
<td>–15,999</td>
<td>–7,257</td>
</tr>
</tbody>
</table>

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

#### Max Load @ 65 mph (105 km/h)

<table>
<thead>
<tr>
<th>Axle</th>
<th>Front</th>
<th>Rear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Load</td>
<td>46,400 lbs. (21,047 kg) – Aluminum disc wheels with 445/65R22.5 tires</td>
<td>50,350 lbs. (22,838 kg) – Aluminum disc wheels with 12R22.5 tires</td>
</tr>
</tbody>
</table>

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Lifting Capacities
Telescopic Hydraulic Truck Crane

HTC–8670 70–ton (63.5 metric ton)

Boom and fly capacities for this machine are listed by the following sections:

**Fully Extended Outriggers**
- Working Range Diagram (16,000 lbs. Counterweight)
- 38 to 63.5 ft. (11.58 – 19.39 m) main boom capacities, **A–max** mode
- 38 to 115 ft. (11.58 – 35.05 m) main boom capacities, Basic Mode “B”
- 36.5 (11.13 m) ft. offset fly capacities, Basic Mode “B”
- 36.5 to 61 ft. (11.13 – 18.59 m) two–piece offset fly capacities, Basic mode “B”

CAUTION: This material is supplied for reference use only. Operator must refer to in–cab Crane Rating Manual to determine allowable machine lifting capacities and operating procedures.
OPERATING INSTRUCTIONS

GENERAL:
1. Rated lifting capacities in pounds as shown on lift charts pertain to this crane as originally manufactured and normally equipped. Modifications to the crane 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 crane must be in compliance with the information in the Operator’s, Parts, and Safety Manuals supplied with this crane. If these manuals are missing, order replacements through the distributor.
3. The operator and other personnel associated with this crane shall read and fully understand the latest applicable American National Standards (ASME B30.5) safety standards for cranes.
4. The rated lifting capacities are based on crane standing level on firm supporting surface.

SET UP:
1. The crane 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 pontoons or tires to spread the load to a larger bearing surface.
2. When making lifts on outriggers, all tires must be free of supporting surface. All outrigger beams must be extended to the same length; fully retracted, intermediate extended, or fully extended. The front bumper outrigger must be properly extended.
3. When operating on fully retracted outriggers, do not exceed 64° maximum boom angle with 16,000 lb. counterweight or 71° maximum boom angle with 12,000 lb. counterweight. Loss of backward stability will occur causing a backward tipping condition.
4. When making lifts on tires, they must be inflated to the recommended pressure. (See Operation note 19 and Tire Inflation.)
5. Before swinging boom to over side position on tires, or on fully retracted outriggers where capacities are not published, boom sections must be fully retracted and 45° boom angle maintained.
6. For required parts of line, see Wire Rope Capacity and Winch Performance.
7. Before setting up on intermediate outriggers, retracted outriggers, or tires, refer to Working Range Diagrams and rated lifting capacities to determine allowable crane configurations.

OPERATION:
1. Rated lifting capacities at rated radius shall not be exceeded. Do not tip the crane to determine allowable loads. For concrete bucket operation, weight of bucket and load shall not exceed 80% of rated lifting capacities. For clamshell bucket operation, weight of bucket and bucket contents is restricted to a maximum weight of 7,000 pounds or 80% of rated lifting capacity, whichever is less. For magnet operation, weight of magnet and load is restricted to a maximum weight of 7,000 pounds or 80% of rated lifting capacity, whichever is less. For clamshell and magnet operation, maximum boom length is restricted to 55 ft. and the boom angle is restricted to a minimum of 35 degrees. Lifts with either fly erected is prohibited for both clam and magnet operation.
2. Rated lifting capacities shown on fully extended outriggers do not exceed 85% of the tipping loads. Rated lifting capacities shown on intermediate extended or fully retracted outriggers are determined by the formula, rated load = (tipping load – 0.1 X load factor)/1.25. Rated lifting capacities shown on tires do not exceed 75% of the tipping loads. Tipping loads are determined by SAE crane stability test code J–765.
3. Rated lifting capacities in the shaded areas above the bold lines, are based on structural strength or hydraulic limitations and have been tested to meet minimum requirements of SAE J–1063 cantilevered boom crane structures— method of test. The rated lifting capacities below the bold lines are based on stability ratings. Some capacities are limited by a maximum obtainable 78° boom angle.
4. Rated lifting capacities include the weight of the hook block, hook ball, slings, bucket, magnet, and auxiliary lifting devices. Their weights must be subtracted from the listed rated capacity to obtain the net load which can be lifted. Rated lifting capacities include the deduct for either fly stowed on the base of the boom. For deducts of either fly erected, but not used, see Capacity Deductions For Auxiliary Load Handling Equipment.
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 (minimum or maximum) where capacities are not listed. At these positions, the crane can tip or cause boom failure.
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 applicable load rating chart.
9. For main boom capacities when either boom length or radius or both are between values listed, proceed as follows:
   a. For boom lengths not listed, use rating for next longer boom length or next shorter boom length, whichever is smaller.
   b. For load radii not listed, use rating for next larger radius.
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, traveling with loads, electrical wires, etc. Side load on boom or fly is dangerous and shall be avoided.

11. Rated lifting capacities do not account for wind on suspended load or boom. Rated capacities and boom length shall be appropriately reduced as wind velocity approaches or exceeds 20 mph.

12. When making lifts with auxiliary head machinery, the effective length of the boom increases by 2 ft.

13. Power sections of boom must be extended in accordance with boom mode “A” or “B”. In boom mode “B” all power sections must be extended or retracted equally.

14. Rated lifting capacities are based on correct reeving. Deduction must be made for excessive reeving. Any reeving over minimum required (see Wire Rope Capacity) is considered excessive and must be accounted for when making lifts. Use working range diagram to estimate the extra feet of rope then deduct 1 lb. for each extra foot of wire rope before attempting to lift a load.

15. The loaded boom angle combined with the boom length give only an approximation of the operating radius. The boom angle, before loading, should be greater to account for deflection. For main boom capacities, the loaded boom angle is for reference only. For fly capacities, the loaded radius is for reference only.

16. For fly capacities with main boom length less than 115 ft. and greater than 95 ft., the rated capacities are determined by the boom angle using the 115 ft. boom and fly chart. For angles not shown use the next lower boom angle to determine the rated capacity.

17. For fly capacities with main boom length less than 95 ft., the rated capacities are determined by the boom angle only using the 95 ft. boom and fly chart. For angles not shown, use the next lower boom angle to determine the rated capacity.

18. The 38 ft. boom length rated lifting capacities are based on boom fully retracted. If the boom is not fully retracted, do not exceed capacities shown for the 45 ft. boom length.

19. Rated lifting capacities on tires depend on tire capacity, condition of tires, and tire air pressure. On tire capacities require lifting from main boom head only on a smooth and level surface. Pick and carry operations are restricted to maximum speed of 1 mph. The boom must be centered over the rear of the crane with two position travel swing lock engaged and the load must be restrained from swinging. For correct tire pressure, see “Tire Inflation”.

DEFINITIONS:

1. Load Radius: Horizontal distance from a projection of the axis of rotation to the supporting surface before loading to the center of the vertical hoist line or tackle with load applied.

2. Loaded Boom Angle: The angle between the boom base section and horizontal with freely suspended load at the rated radius.

3. Working Area: Area measured in a circular arc about the center line of rotation as shown on the Working Area Diagram.

4. Freely Suspended Load: Load hanging free with no direct external force applied except by the hoist line.

5. Side Load: Horizontal side force applied to the lifted load either on the ground or in the air.

6. No Load Stability Limit: The radius or boom angle beyond which it is not permitted to position the boom because the crane can overturn without any load on the hook.

7. Load Factor: Load applied at the boom tip which gives the same moment effect as the boom mass.
BOOM EXTENSION

Boom Mode “A”  
Only inner mid section telescopes  

Boom Length (ft.)  
Inner Mid Section  308° Stroke  
Base Section  

38  
45  
55  
63.5  

Boom Mode “B”  
Inner mid, outer mid and tip sections telescope simultaneously.  

Boom Length (ft.)  
Inner Mid Section  308° Stroke  
Base Section  
Outer Mid Section  308° Stroke  
Tip Section  308° Stroke  

38  
45  
55  
65  
75  
85  
95  
105  
115  

TIRE INFLATION

<table>
<thead>
<tr>
<th>Tire Size</th>
<th>Operation</th>
<th>Tire Pressure (psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 R 22.5</td>
<td>1 MPH</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>Stationary</td>
<td>120</td>
</tr>
</tbody>
</table>

PONToon LOADINGS

Maximum Pontoon Load: 97,400 lbs.  
Maximum Pontoon Ground Bearing Pressure: 215 psi

CAPACITY DEDUCTIONS FOR AUXILIARY LOAD HANDLING EQUIPMENT

<table>
<thead>
<tr>
<th>Load Handling Equipment</th>
<th>(lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auxiliary Head Attached</td>
<td>150</td>
</tr>
<tr>
<td>70-ton quick reeve 5 sheave hook block</td>
<td>1,400</td>
</tr>
<tr>
<td>40-ton quick reeve 4 sheave hook block</td>
<td>720</td>
</tr>
<tr>
<td>8.5-ton hook ball (see hook block for actual weight)</td>
<td>360</td>
</tr>
</tbody>
</table>

Lifting From Main Boom With:  

<table>
<thead>
<tr>
<th>Lifting From Main Boom With</th>
<th>(lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>36.5 ft. or 61 ft. fly stowed on base (see operation note 4)</td>
<td>0</td>
</tr>
<tr>
<td>36.5 ft. offset fly erected but not used</td>
<td>6,100</td>
</tr>
<tr>
<td>61 ft. offset fly erected but not used</td>
<td>7,600</td>
</tr>
</tbody>
</table>

Lifting From 36.5 ft. Offset Fly With:  

<table>
<thead>
<tr>
<th>Lifting From 36.5 ft. Offset Fly With</th>
<th>PROHIBITED</th>
</tr>
</thead>
<tbody>
<tr>
<td>24.5 ft. fly tip erected but not used</td>
<td>PROHIBITED</td>
</tr>
<tr>
<td>24.5 ft. fly tip stowed on 36.5 ft. offset fly</td>
<td></td>
</tr>
</tbody>
</table>

Note: Capacity deductions are for Link-Belt supplied equipment only.

WINCH PERFORMANCE

Winch Line Pulls  

<table>
<thead>
<tr>
<th>Wire Rope Layer</th>
<th>Drum Rope Capacity (ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Available lbs.</td>
</tr>
<tr>
<td>Low Speed</td>
<td>High Speed</td>
</tr>
<tr>
<td>1</td>
<td>16,805</td>
</tr>
<tr>
<td>2</td>
<td>15,620</td>
</tr>
<tr>
<td>3</td>
<td>14,590</td>
</tr>
<tr>
<td>4</td>
<td>13,690</td>
</tr>
<tr>
<td>5</td>
<td>12,890</td>
</tr>
<tr>
<td>6</td>
<td>12,190</td>
</tr>
</tbody>
</table>

Maximum Lifting Capacities Based On Wire Rope Strength

<table>
<thead>
<tr>
<th>Parts of Line</th>
<th>3/4 Type RB</th>
<th>3/4 Type ZB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12,920</td>
<td>15,600</td>
</tr>
<tr>
<td>2</td>
<td>25,840</td>
<td>31,200</td>
</tr>
<tr>
<td>3</td>
<td>38,760</td>
<td>46,800</td>
</tr>
<tr>
<td>4</td>
<td>51,680</td>
<td>62,400</td>
</tr>
<tr>
<td>5</td>
<td>64,600</td>
<td>78,000</td>
</tr>
<tr>
<td>6</td>
<td>77,520</td>
<td>93,600</td>
</tr>
<tr>
<td>7</td>
<td>90,440</td>
<td>109,200</td>
</tr>
<tr>
<td>8</td>
<td>103,360</td>
<td>124,800</td>
</tr>
<tr>
<td>9</td>
<td>116,280</td>
<td>140,400</td>
</tr>
<tr>
<td>10</td>
<td>129,200</td>
<td>156,000</td>
</tr>
</tbody>
</table>

HYDRAULIC CIRCUIT PRESSURE SETTINGS

<table>
<thead>
<tr>
<th>Function</th>
<th>Pressure (PSI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front and Rear Winch</td>
<td>3,500</td>
</tr>
<tr>
<td>Outriggers</td>
<td>3,000</td>
</tr>
<tr>
<td>Boom Hoist</td>
<td>3,500</td>
</tr>
<tr>
<td>Telescope</td>
<td>3,000</td>
</tr>
<tr>
<td>Swing</td>
<td>1,500</td>
</tr>
<tr>
<td>Steering</td>
<td>1,600</td>
</tr>
<tr>
<td>Bumper Outtrigger</td>
<td>650</td>
</tr>
<tr>
<td>Pilot Control</td>
<td>500</td>
</tr>
<tr>
<td>Counterweight Removal</td>
<td>1,700</td>
</tr>
<tr>
<td>Swing Park Brake Release</td>
<td>250</td>
</tr>
</tbody>
</table>

WORKING AREAS

Note: These Lines Determine The Limiting Position Of Any Load For Operation Within Working Areas Indicated.
WORKING RANGE DIAGRAM

Working Range Diagram
On Fully Extended Outriggers

16,000# Counterweight

○ Denotes Main Boom + 61’ Fly—Boom Mode “B”

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

WARNING
Do Not Lower The Boom Below The Minimum Boom Angle For No Load As Shown In The Lift Charts For The Boom Lengths Given. Loss Of Stability Will Occur Causing A Tipping Condition.
## Rated Lifting Capacities In Pounds On Fully Extended Outriggers

**See Set Up Note 2.**

### Boom Mode “A”

<table>
<thead>
<tr>
<th>Load Radius (ft)</th>
<th>Loaded Boom Angle (Deg.)</th>
<th>360° Over Rear</th>
<th>Loaded Boom Angle (Deg.)</th>
<th>360° Over Rear</th>
</tr>
</thead>
<tbody>
<tr>
<td>38 Ft.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>69.0</td>
<td>140,000</td>
<td>71.0</td>
<td>87,400</td>
</tr>
<tr>
<td>10</td>
<td>70.0</td>
<td>132,000</td>
<td>72.0</td>
<td>87,400</td>
</tr>
<tr>
<td>12</td>
<td>72.0</td>
<td>116,900</td>
<td>75.6</td>
<td>75,500</td>
</tr>
<tr>
<td>15</td>
<td>85.6</td>
<td>100,200</td>
<td>84.0</td>
<td>87,400</td>
</tr>
<tr>
<td>20</td>
<td>87.9</td>
<td>75,900</td>
<td>75.5</td>
<td>75,500</td>
</tr>
<tr>
<td>25</td>
<td>70.0</td>
<td>58,700</td>
<td>48.0</td>
<td>58,300</td>
</tr>
<tr>
<td>30</td>
<td>17.5</td>
<td>45,400</td>
<td>38.0</td>
<td>45,100</td>
</tr>
<tr>
<td>35</td>
<td>24.5</td>
<td>34,500</td>
<td>34,500</td>
<td></td>
</tr>
<tr>
<td>Min.Bm. Ang./Cap.</td>
<td>(31.0)</td>
<td>25,200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45 Ft.</td>
<td></td>
<td>25,200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>55 Ft.</td>
<td></td>
<td>0</td>
<td>(38.0)</td>
<td>20,200</td>
</tr>
</tbody>
</table>

### Boom Mode “B”

<table>
<thead>
<tr>
<th>Load Radius (ft)</th>
<th>Loaded Boom Angle (Deg.)</th>
<th>360° Over Rear</th>
<th>Loaded Boom Angle (Deg.)</th>
<th>360° Over Rear</th>
</tr>
</thead>
<tbody>
<tr>
<td>38 Ft.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>38.0</td>
<td>132,000</td>
<td>75.5</td>
<td>29,700</td>
</tr>
<tr>
<td>10</td>
<td>43.0</td>
<td>132,000</td>
<td>68.0</td>
<td>23,800</td>
</tr>
<tr>
<td>12</td>
<td>55.0</td>
<td>116,900</td>
<td>68.0</td>
<td>20,100</td>
</tr>
<tr>
<td>15</td>
<td>64.0</td>
<td>100,200</td>
<td>48.0</td>
<td>20,100</td>
</tr>
<tr>
<td>20</td>
<td>71.0</td>
<td>75,900</td>
<td>56.5</td>
<td>13,100</td>
</tr>
<tr>
<td>25</td>
<td>75.8</td>
<td>58,700</td>
<td>57.5</td>
<td>13,100</td>
</tr>
<tr>
<td>30</td>
<td>45.4</td>
<td>45,400</td>
<td>38.0</td>
<td>45,100</td>
</tr>
<tr>
<td>35</td>
<td>24.5</td>
<td>34,500</td>
<td>34,500</td>
<td></td>
</tr>
<tr>
<td>Min.Bm. Ang./Cap.</td>
<td>(31.0)</td>
<td>25,200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45 Ft.</td>
<td></td>
<td>25,200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>55 Ft.</td>
<td></td>
<td>0</td>
<td>(38.0)</td>
<td>20,200</td>
</tr>
</tbody>
</table>

### Note:

Refer to Page 4 for “Capacity Deductions” Caused By Auxiliary Load Handling Equipment.

### Load Radius (ft)

<table>
<thead>
<tr>
<th>60.3 Ft.</th>
<th>Loaded Boom Angle (Deg.)</th>
<th>360° Over Rear</th>
<th>Loaded Boom Angle (Deg.)</th>
<th>360° Over Rear</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>75.0</td>
<td>85,600</td>
<td>75.5</td>
<td>56,300</td>
</tr>
<tr>
<td>12</td>
<td>73.0</td>
<td>85,600</td>
<td>73.0</td>
<td>56,300</td>
</tr>
<tr>
<td>15</td>
<td>69.5</td>
<td>85,600</td>
<td>68.0</td>
<td>53,000</td>
</tr>
<tr>
<td>20</td>
<td>64.0</td>
<td>75,000</td>
<td>63.0</td>
<td>44,900</td>
</tr>
<tr>
<td>25</td>
<td>57.5</td>
<td>57,900</td>
<td>57.5</td>
<td>38,700</td>
</tr>
<tr>
<td>30</td>
<td>51.0</td>
<td>44,400</td>
<td>51.5</td>
<td>33,700</td>
</tr>
<tr>
<td>35</td>
<td>43.0</td>
<td>34,100</td>
<td>45.5</td>
<td>26,700</td>
</tr>
<tr>
<td>40</td>
<td>34.5</td>
<td>27,000</td>
<td>45.5</td>
<td>26,700</td>
</tr>
<tr>
<td>45</td>
<td>22.0</td>
<td>21,800</td>
<td>38.0</td>
<td>21,600</td>
</tr>
<tr>
<td>50</td>
<td>29.0</td>
<td>17,700</td>
<td>37.0</td>
<td>17,700</td>
</tr>
<tr>
<td>55</td>
<td>16.0</td>
<td>14,600</td>
<td>16.0</td>
<td>14,600</td>
</tr>
</tbody>
</table>

### Min.Bm. Ang./Cap.

| 0               | (48.0)                   | 14,100         | 0                         | 14,100         |
| 0               | (48.6)                   | 10,400         | 0                         | 10,400         |