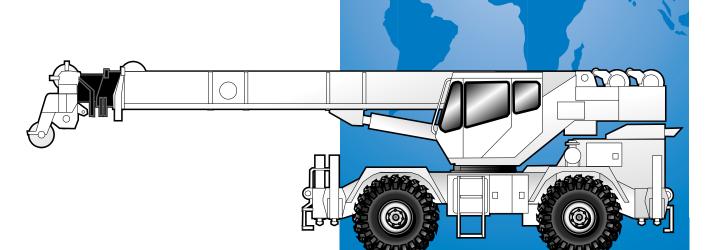
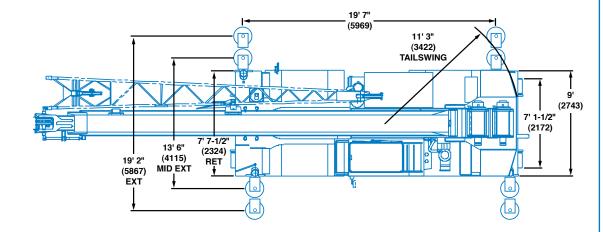


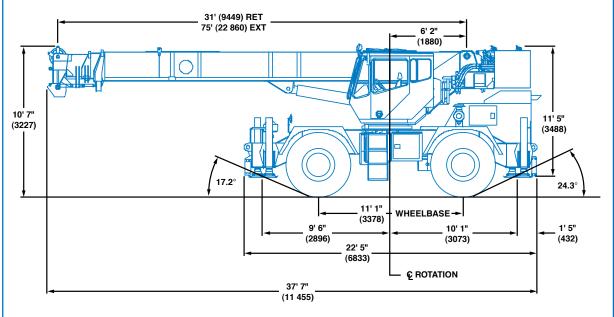
RT500D



Rough Terrain Hydraulic Crane

Dimensions





Note: () Reference dimensions in mm

Turning Radius..... 18' 2" (5532 mm)

Front Axle Load 26,400 lbs. (11 975 kg)

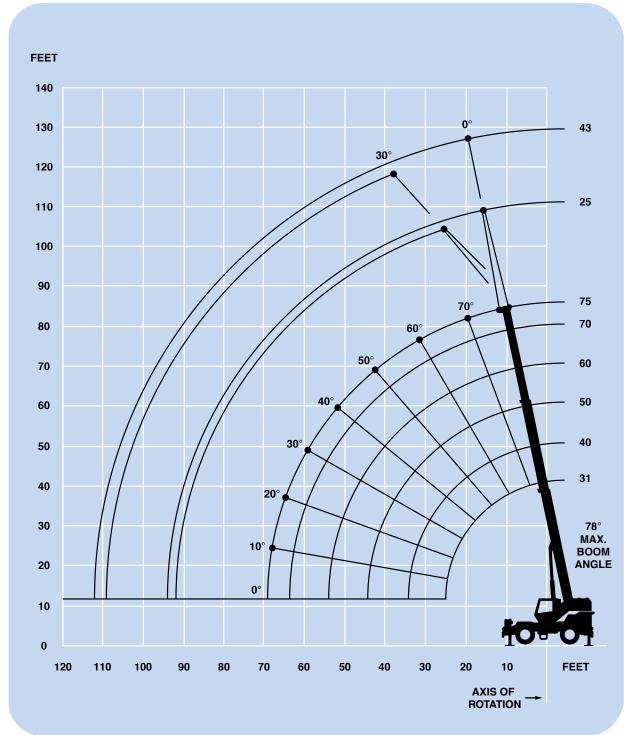
Rear Axle Load............ 28,633 lbs. (12 988 kg)

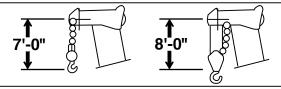
Gross Vehicle Weight 55,033 lbs. (24 963 kg)

2 RT500D

Working range







DIMENSIONS ARE FOR LARGEST GROVE FURNISHED HOOK BLOCK AND HEADACHE BALL, WITH ANTI-TWO BLOCK ACTIVATED.

Superstructure specifications

Boom

31 ft. - 75 ft. (9.5 m - 22.8 m) three-section, full power boom. Maximum tip height: 83 ft. 8 in. (25.5 m).

Fixed Swingaway Extension

25 ft. (7.6 m) lattice swingaway extension. Non-offsettable. Stows alongside base boom section. Maximum tip height: 108 ft. (33 m).

*Optional Fixed Swingaway Extension

25 ft. (7.6 m) lattice swingaway extension. Offsettable at 0° and 30°. Stows alongside base boom section. Maximum tip height: 108 ft. (33 m).

*Optional Telescopic Swingaway Extension

25 ft. - 43 ft. (7.6 m - 13 m) telescoping lattice swingaway extension. Offsettable at 0° and 30°. Stows alongside base boom section.

Maximum tip height: 126 ft. 10 in. (38.7 m).

Boom Nose

Four steel sheaves mounted on heavy duty tapered roller bearings with removable pin-type rope guards. Quick reeve type boom nose.*Optional removable auxiliary boom nose with removable pin type rope guard.

Boom Elevation

One double acting hydraulic cylinder with integral holding valve provides elevation from -1° to 78°.

Load Moment & Anti-Two Block System

Standard load moment and anti-two block system with audio-visual warning and control lever lockout. These systems provide electronic display of boom angle, length, radius, tip height, relative load moment, maximum permissible load, load indication and warning of impending two-block condition.

Cab

Full vision, all steel fabricated with acoustical lining and tinted safety glass throughout. Deluxe seat incorporates armrest mounted hydraulic single-axis controllers. Dash panel incorporates gauges for all engine functions. Other standard features include: hot water heater, cab circulating air fan, telescoping tilt wheel, sliding side and rear windows, opening skylight, skylight sunscreen, electric windshield wash/wipe, electric skylight wiper, fire extinguisher, seat belt and ashtray/cupholder.

Swing

Planetary swing with foot applied multi-disc brake. Spring applied, hydraulically released swing brake and plunger-type, one position, mechanical house lock operated from cab. 360° mechanical swing lock. Maximum speed: 3.0 RPM.

Counterweight

5,600 lbs. (2540 kg) integral with superstructure. 910 lbs. (413 kg) slab in place of auxiliary hoist.

Hydraulic System

Five main gear pumps with a combined capacity of 172.4 GPM (652 LPM). Pump disconnect with engine jogging switch.

Maximum operating pressure: 3500 psi (241 bar).

Three individual valve banks.

Return line type filter with full flow by-pass protection and service indicator. Replaceable cartridge with micron filtration rating of 5/12/16.

120 gallon (454 L) reservoir.

Remote mounted oil cooler with thermostatically controlled electric motor driven fan/air to oil.

System pressure test ports with quick release type fittings for each circuit.

Hoist Specifications Main and Auxiliary Hoist

Planetary reduction with automatic spring applied multi-disc brake. Grooved drum. Electronic hoist drum rotation indicator and hoist drum cable followers.

| 10,591 lbs. (4804 kg) |
|--------------------------|
| 450 FPM (137 m/min) |
| 9,080 lbs. (4118 kg) |
| 5/8" (16 mm) |
| 450 ft. (137 m) |
| 534 ft. (163 m) |
| |

^{*}Denotes optional equipment

4 RT500D

Carrier specifications

Chassis

Box section frame fabricated from high-strength, low alloy steel. Integral outrigger housings and front/rear towing and tie down lugs. Built in hookblock and headache ball stowage.

Outrigger System

Four hydraulic telescoping single-stage double box beam outriggers with inverted jacks and integral holding valves. Three position setting. All steel fabricated, quick release type square outrigger floats, 16.5 in. (419 mm) diameter.

Maximum outrigger pad load: 49,100 lbs. (24 630 kg).

Outrigger Controls

Controls and crane level indicator located in cab.

Engine

Cummins 6BT 5.9 L diesel, six cylinders, turbocharged, 145 bhp (108 kW) (Gross) @ 2,200 RPM.

Maximum torque: 400 ft. lbs. (542 Nm) @ 1,600 RPM.

*Optional Engine

Caterpillar 3116TA diesel, six cylinders, turbocharged, 145 bhp (108 kW) (Gross) @ 2,200 RPM. Maximum torque: 442 ft. lbs. (599 Nm) @ 1,450 RPM.

Fuel Tank Capacity

60 gallons (227 L)

Transmission

Full powershift with 8 forward and 4 reverse speeds. Rear axle disconnect for 4 x 2 travel.

Electrical System

Two 12 V - maintenance free batteries. 24 V starting and lighting. Battery disconnect switch and power slave receptacle (jump start aid).

Drive

4 x 4.

Steering

Fully independent power steering:

Front: Full hydraulic steering wheel controlled.
Rear: Full hydraulic switch controlled.
Provides infinite variations of 4 main steering modes: front only, rear only, crab and coordinated.
Rear steer indicating gauge and automatic steering reversal.

Axles

RT500D

Front: Drive/steer with differential and planetary

reduction hubs rigid mounted to frame.

Rear: Drive/steer with differential and planetary reduction hubs pivot mounted to frame.

*Denotes optional equipment

Oscillation Lockouts

Automatic full hydraulic lockouts on rear axle permit oscillation only with boom centered over the front.

Brakes

Full hydraulic split circuit disc-type brakes operating on all wheels. Spring-applied, hydraulically released transmission-mounted parking brake.

Tires

20.5 x 25 - 24PR bias earthmover type.

*20.5R25 Michelin radials.

*16.00 x 25 - 28PR bias earthmover type.

Lights

Full lighting package including turn indicators, head, tail, brake and hazard warning lights.

Maximum Speed

24 MPH (39 kph).

Gradeability (Theoretical)

74% (Based on 54,962 lbs. [24 930 kg] GVW) 20.5 x 25 tires, pumps disengaged, 75 ft. (22.8 m) boom, and 25 ft. (7.6 m) swingaway.

Miscellaneous Standard Equipment

Full width steel fenders, dual rear view mirrors, hookblock tiedown, electronic back-up alarm, headache ball stowage, tool box compartment, light package, front stowage well, tachometer, cold start aid (less canister), rear wheel position indicator, hot water heater, hoist mirrors, engine distress A/V warning system. Auxiliary hoist control valve arrangement (less hoist), 360° positive swing lock and automatic steering reversal.

*Optional Equipment

*Auxiliary hoist

*Boom mounted worklights

*360° flashing light

*Cab spotlight

*Engine block heater

*Hookblocks (quick reeve

type)

*Tow winch - front mounted maximum pull: 15,000 lbs. (6804 kg); maximum speed: 92 ft/min. (28 m/min).

*Spare wheel assembly

*Tool kit
*Pintle hook front/rear

*High speed glide system

*Air conditioning

*Dual axis joystick controllers

*LMI light bar (internal or

external)
*Emergency steer pump

*Automatic steering control system

*Headache ball

*Automatic grease system for turntable bearing

*3rd wrap indicators (main or auxiliary)

*Worklight, hoist mounted

*Aluminum fender decking

5



31 - 75 ft. (9.5 - 22.8 m)



5,600 lbs. (2540 kg)





| | | | | | Pounds | | |
|---------|---------------------|--------------------|-------------------|------------------|------------------|------------------|-----------------------------|
| Feet | 31 | 40 | 50 | 60 | 70 | 75 | 25 ft. Ext. & 75 ft. 100 |
| 10 | 60,000 (63.5) | 53,850 (70) | 45,500 (74.5) | | | | |
| 12 | 52,150 (59) | 48,950 (67) | 41,950 (72.5) | 36,300 (76) | | | |
| 15 | 45,150 (52) | 43,250 (62) | 37,450 (68.5) | 34,200 (73) | 32,100 (76) | 30,000 (77.5) | |
| 20 | 32,950 (38) | 32,950 (53) | 31,850 (62) | 28,100 (67.5) | 27,000 (71.5) | 27,000 (73.5) | *15,000 (78) |
| 25 | 24,800 (10) | 24,800 (43) | 24,800 (55) | 23,500 (62.5) | 23,500 (67) | 23,500 (69) | 13,300 (75.5) |
| 30 | | 19,600 (29.5) | 19,600 (47) | 19,600 (56.5) | 19,600 (62.5) | 19,600 (65) | 11,850 (72) |
| 35 | | | 15,850 (38) | 15,850 (50.5) | 15,850 (57.5) | 15,850 (60.5) | 10,700 (69) |
| 40 | | | 12,650 (26) | 12,650 (43.5) | 12,650 (52.5) | 12,650 (55.5) | 9,730 (66) |
| 45 | | | | 10,300 (35) | 10,300 (46.5) | 10,300 (50.5) | 9,080 (62.5) |
| 50 | | | | 8,610 (24.5) | 8,610 (40.5) | 8,610 (45) | 8,630 (59.5) |
| 55 | | | | | 7,260 (33) | 7,260 (39) | 7,930 (55.5) |
| 60 | | | | | 6,170 (23) | 6,170 (32) | 6,900 (52) |
| 65 | | | | | | 5,290 (22) | 5,940 (48) |
| 70 | | | | | | | 5,130 (44) |
| 75 | | | | | | | 4,420 (39) |
| 80 | | | | | | | 3,800 (34) |
| 85 | | | | | | | 3,270 (27.5) |
| 90 | | | | | | | 2,810 (19.5) |
| Minimum | boom angle (deg. |) for indicated le | ngth (no load) | | | 0 | 0 |
| Maximum | n boom length (ft.) | at 0 degree boor | n angle (no load) | | | 75 | 100 |

A6-829-013067A

| Boom Angle | 31 | 40 | 50 | 60 | 70 | 75 |
|---------------|--------|--------|--------|--------|--------|--------|
| 0 ° | 24,700 | 16,650 | 10,800 | 7,550 | 5,480 | 4,710 |
| | (25) | (33.8) | (43.8) | (53.8) | (63.8) | (68.8) |

NOTE: () Reference radii are in feet.

6

NOTE: () Boom angles are in degrees. *This capacity is based upon maximum boom angle.



31 - 75 ft. (9.5 - 22.8 m)



5,600 lbs. (2540 kg)



50% 13' 6" Spread



360

| | | | | | Pounds | | |
|---------------|--|---------------------|-------------------|------------------|------------------|------------------|----------------------------|
| Feet | 31 | 40 | 50 | 60 | 70 | 75 | 25 ft. Ext. & 75 ft 100 |
| 10 | 60,000 (63.5) | 53,850 (70) | 45,500 (74.5) | 00 | 70 | 73 | 100 |
| 12 | 50,950 (59) | 48,950 (67) | 41,950 (72.5) | 36,300 (76) | | | |
| 15 | 41,050 (52) | 38,850 (62) | 36,800 (68.5) | 34,200 (73) | 32,100 (76) | 30,000 (77.5) | |
| 20 | 25,300 (38) | 25,250 (53) | 24,250 (62) | 23,300 (67.5) | 22,500 (71.5) | 22,100 (73.5) | *15,000 (78) |
| 25 | 17,200 (10) | 17,200 (43) | 17,200 (55) | 17,000 (62.5) | 16,500 (67) | 16,250 (69) | 13,300 (75.5) |
| 30 | | 12,700 (29.5) | 12,700 (47) | 12,700 (56.5) | 12,700 (62.5) | 12,550 (65) | 11,850 (72) |
| 35 | | | 9,810 (38) | 9,810 (50.5) | 9,810 (57.5) | 9,810 (60.5) | 10,050 (69) |
| 40 | | | 7,780 (26) | 7,780 (43.5) | 7,780 (52.5) | 7,780 (55.5) | 8,260 (66) |
| 45 | | | | 6,280 (35) | 6,280 (46.5) | 6,280 (50.5) | 6,870 (62.5) |
| 50 | | | | 5,120 (24.5) | 5,120 (40.5) | 5,120 (45) | 5,770 (59.5) |
| 55 | | | | | 4,210 (33) | 4,210 (39) | 4,870 (55.5) |
| 60 | | | | | 3,470 (23) | 3,470 (32) | 4,130 (52) |
| 65 | | | | | | 2,850 (22) | 3,450 (48) |
| 70 | | | | | | | 2,880 (44) |
| 75 | | | | | | | 2,400 (39) |
| 80 | | | | | | | 1,980 (34) |
| 85 | | | | | | | 1,620 (27.5) |
| 90 | | | | | | | 1,300 (19.5) |
| Minimum | boom angle (deg. | .) for indicated le | ngth (no load) | | | 0 | 0 |
| Maximum | n boom length (ft.) | at 0 degree boor | n angle (no load) | | | 75 | 100 |
| *This cap | Boom angles are pacity is based upo | | m angle. | | | | |
| Boom Angle | 31 | 40 | 50 | 60 | 70 | 75 | |
| 0° | 17,150 (25) | 10,350 (33.8) | 6,590 (43.8) | 4,400 (53.8) | 2,980 (63.8) | 2,450 (68.8) | |

NOTE: () Reference radii in feet.



31 - 75 ft. (9.5 - 22.8 m)



5,600 lbs. (2540 kg)



0% 7' 7-1/2" Spread



360

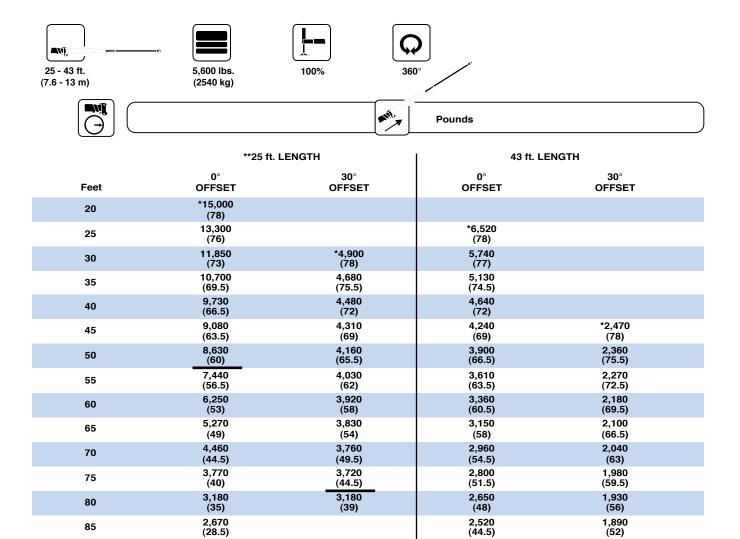
| | | | | Pounds | | | |
|---|------------------|-----------------|------------------|------------------|------------------|------------------|--|
| Feet | 31 | 40 | 50 | 60 | 70 | 75 | |
| 10 | 33,950 (63.5) | 31,950 (70) | 29,950 (74.5) | | | | |
| 12 | 25,800 (59) | 25,200 (67) | 23,850 (72.5) | 22,650 (76) | | | |
| 15 | 17,800 (52) | 17,800 (62) | 17,800 (68.5) | 17,200 (73) | 16,450 (76) | 16,150 (77.5) | |
| 20 | 11,050 (38) | 11,050 (53) | 11,050 (62) | 11,050 (67.5) | 11,050 (71.5) | 11,050 (73.5) | |
| 25 | 7,470 (10) | 7,470 (43) | 7,470 (55) | 7,470 (62.5) | 7,470 (67) | 7,470 (69) | |
| 30 | | 5,450 (29.5) | 5,450 (47) | 5,450 (56.5) | 5,450 (62.5) | 5,450 (65) | |
| 35 | | | 4,070 (38) | 4,070 (50.5) | 4,070 (57.5) | 4,070 (60.5) | |
| 40 | | | 3,080 (26) | 3,080 (43.5) | 3,080 (52.5) | 3,080 (55.5) | |
| 45 | | | | 2,330 (35) | 2,330 (46.5) | 2,330 (50.5) | |
| 50 | | | | 1,740 (24.5) | 1,740 (40.5) | 1,740 (45) | |
| 55 | | | | | 1,260 (33) | 1,260 (39) | |
| Minimum boom angle (deg.) for indicated length (no load) | | | | | | | |
| Maximum boom length (ft.) at 0 degree boom angle (no load) 70 | | | | | | | |

NOTE: () Boom angles are in degrees.

| Boom Angle | 31 | 40 | 50 | 60 |
|---------------|-------|--------|--------|--------|
| 0 ° | 7,440 | 4,350 | 2,490 | 1,360 |
| | (25) | (33.8) | (43.8) | (53.8) |

NOTE: () Reference radii in feet.

A6-829-013134A



2,400 (40.5)

2,300 (36)

2,200

(31) 2,070 (24.5)

1,740 (15)

NOTE: () Boom angles are in degrees.

90

95

100

105

110

2,220 (20.5)

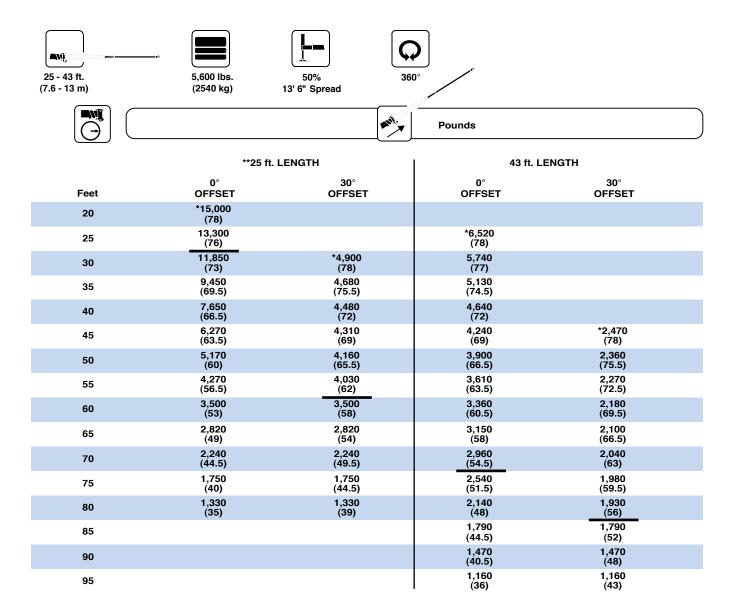
However, the LMI codes will change for 0° and 30° offset, respectively.

A6-829-013068A

1,860 (48)

1,840 (43)

^{*}This capacity is based upon maximum boom angle.
**25 ft. capacities are also applicable to fixed offsettable ext.



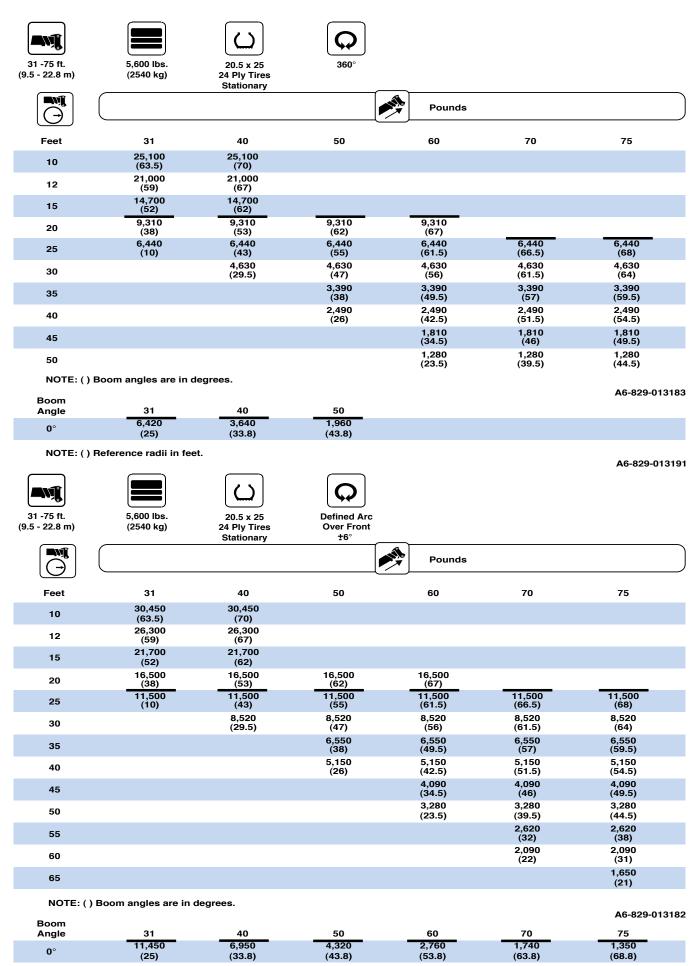
NOTE: () Boom angles are in degrees.

However, the LMI codes will change for 0° and 30° offset, respectively.

A6-829-013196A

^{*}This capacity is based upon maximum boom angle.

^{**25} ft. capacities are also applicable to fixed offsettable ext.



NOTE: () Reference radii in feet.



31 -75 ft. (9.5 - 22.8 m)

65



5,600 lbs. (2540 kg)



Pick & Carry Up to 2.5 MPH



Boom Centered Over Front

| | | | | Pounds | | |
|------|------------------|-----------------|------------------|------------------|------------------|------------------|
| Feet | 31 | 40 | 50 | 60 | 70 | 75 |
| 10 | 26,150 (63.5) | 26,150 (70) | 26,150 (74.5) | | | |
| 12 | 22,750 (59) | 22,750 (67) | 22,750 (72) | 22,750 (75.5) | | |
| 15 | 18,800 (52) | 18,800 (62) | 18,800 (68.5) | 18,800 (72.5) | | |
| 20 | 14,300 (38) | 14,300 (53) | 14,300 (62) | 14,300 (67) | 14,300 (71) | 14,300 (72.5) |
| 25 | 11,250 (10) | 11,250 (43) | 11,250 (55) | 11,250 (61.5) | 11,250 (66.5) | 11,250 (68) |
| 30 | | 8,520 (29.5) | 8,520 (47) | 8,520 (56) | 8,520 (61.5) | 8,520 (64) |
| 35 | | | 6,550 (38) | 6,550 (49.5) | 6,550 (57) | 6,550 (59.5) |
| 40 | | | 4,490 (26) | 4,490 (42.5) | 4,490 (51.5) | 4,490 (54.5) |
| 45 | | | | 3,620 (34.5) | 3,620 (46) | 3,620 (49.5) |
| 50 | | | | 2,920 (23.5) | 2,920 (39.5) | 2,920 (44.5) |
| 55 | | | | | 2,320 (32) | 2,320 (38) |
| 60 | | | | | 1,820 (22) | 1,820 (31) |

NOTE: () Boom angles are in degrees

A6-829-013184

1,390

(21)

| Boom Angle | 31 | 40 | 50 | 60 | 70 | 75 |
|---------------|--------|--------|--------|--------|--------|--------|
| 0 ° | 11,250 | 6,950 | 3,810 | 2,450 | 1,480 | 1,100 |
| | (25) | (33.8) | (43.8) | (53.8) | (63.8) | (68.8) |

NOTE: () Reference radii in feet.

Rated lifting capacities

NOTES FOR LIFTING CAPACITIES

WARNING: THIS CHART IS ONLY A GUIDE.
The notes below are for illustration only and should not be relied upon to operate the crane.
The individual crane's load chart, operating instructions and other instruction plates must be read and understood prior to operating the crane.

- 1. All rated loads meet ANSI/ASME B30.5, Mobile and Locomotive Cranes. Testing and development were performed to SAEJ1063, Cantilevered Boom Crane Structures Method of Test and SAEJ765 Crane Stability Test Code.
- 2. Rated loads include the weight of hookblock, slings and auxiliary lifting devices and their weights shall be subtracted from the listed rating to obtain the net load to be lifted. When more than the minimum required hoist reeving is used, the additional rope weight shall be considered part of the load to be handled.
- 3. Defined Arc +/-6° on either side of longitudal centerline of machine.
- 4. Capacities appearing above the bold line are based on structural strength and tipping should not be relied upon as a capacity limitation.
- 5. 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.
- 6. When either boom length or radius or both are between values listed, the smallest load shown at either the next larger radius or next longer or shorter boom length shall be used.
- 7. Tires shall be inflated to the recommended pressure before lifting on rubber.
- 8. For outrigger operation, outriggers shall be properly extended with tires raised free of crane weight before operating the boom or lifting loads.

Symbols Glossary Steering Frame Outriggers **Transmission Outrigger Controls Axles Engine Brakes Fuel Tank Capacity Tires Electrical System** Suspension Rotation Drive **Boom Elevation** Lights Swing Cab Counterweight **Boom** Fixed Swingaway Oil Tele-Swingaway **Hydraulic System** Jib Hoist Radius **Boom Nose Boom Extension Boom Length** Speed Hookblock Grade Gear **Luffing Jib** Lattice Extension















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