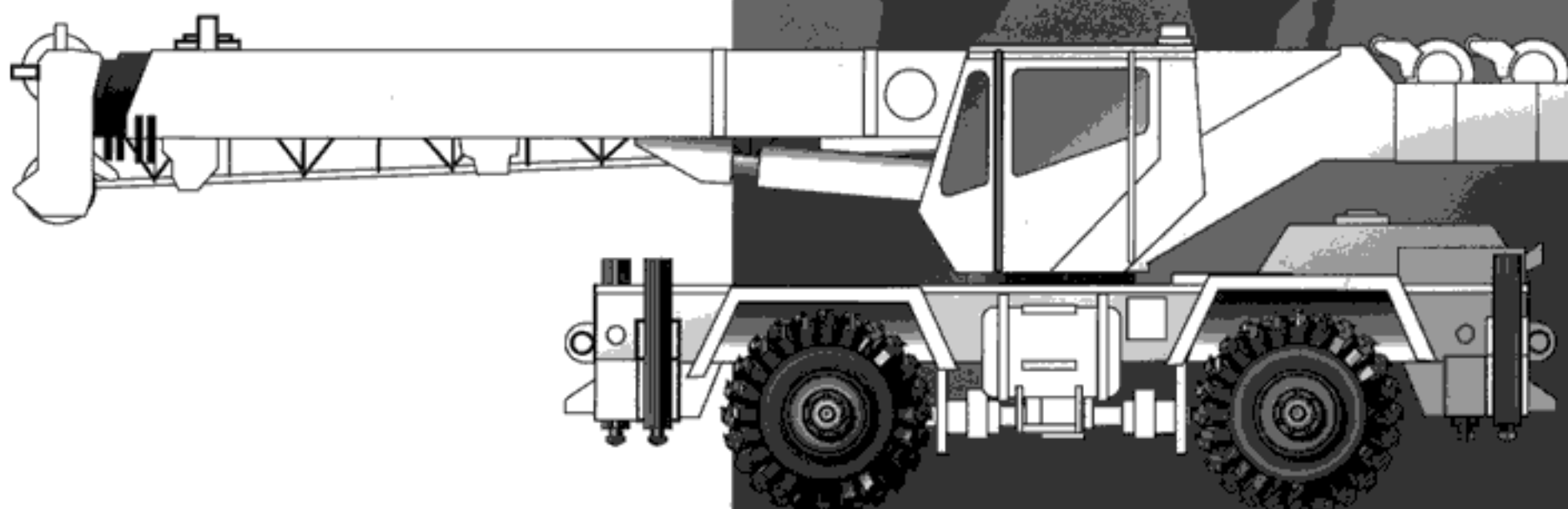




**GROVE<sup>®</sup>**  
**CRANE**

A GROVE WORLDWIDE COMPANY

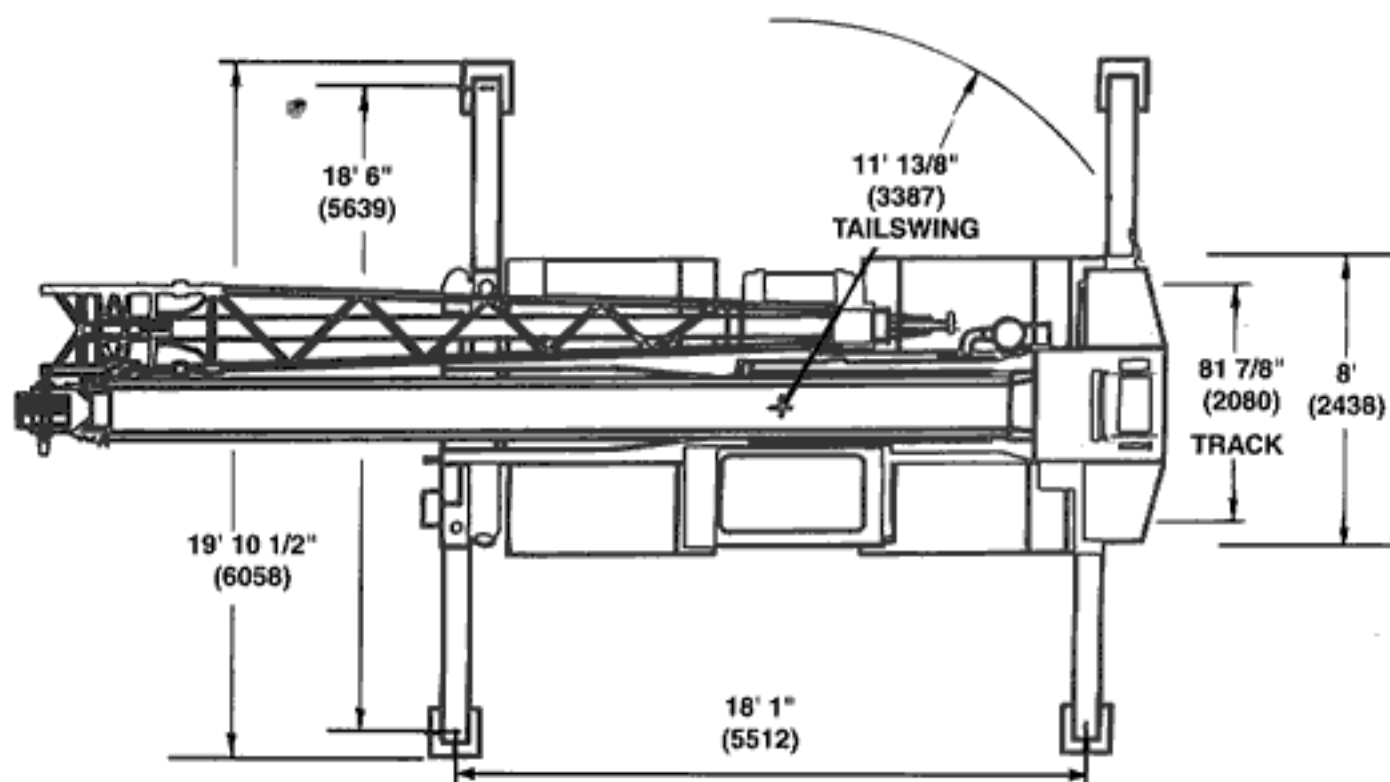
# RT400 Series



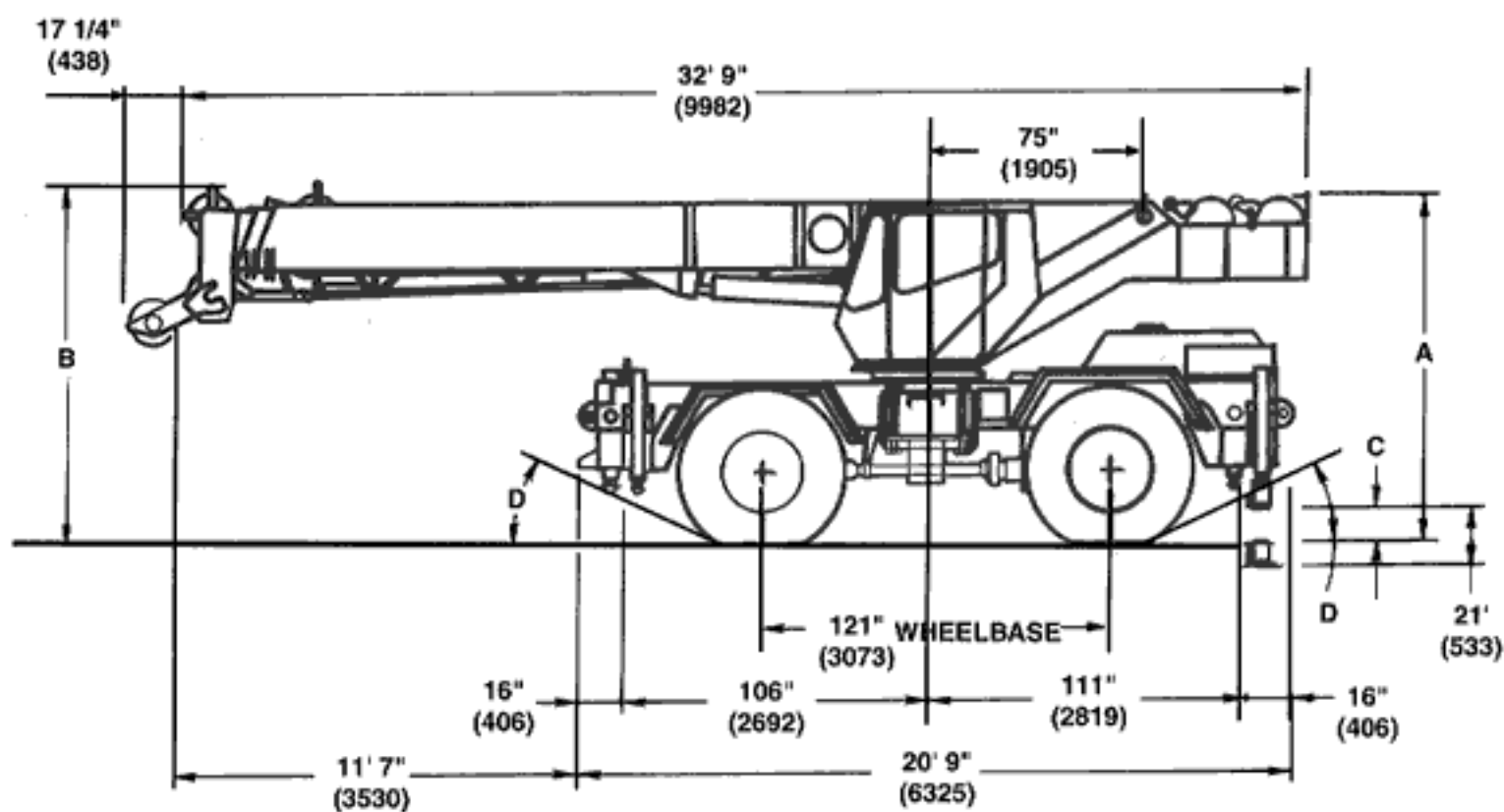
**Rough Terrain Hydraulic Cranes**



## Dimensions



| TIRE SIZE        | 16:00 X 25        | 17.5 X 25         |
|------------------|-------------------|-------------------|
| A                | 10' 1 1/4" (3080) | 9' 11 1/2" (3035) |
| B                | 10' 5 1/2" (3188) | 9' 11 1/2" (3035) |
| C                | 11' 1/2" (292)    | 9' 3/4" (248)     |
| D                | 25°               | 24°               |
| GROUND CLEARANCE | 18" (457)         | 16 1/2" (650)     |



Turning Radius . . . . . 16' 2" (4928 mm)

Front Axle Load . . . . . 18,000 lbs. (8165 kg)

Rear Axle Load . . . . . 19,200 lbs. (8709 kg)

Gross Vehicle Weight . . . . . 37,200 lbs. (16 874 kg)

# Working Range



27-70 ft.  
(8.3-21.4 m)



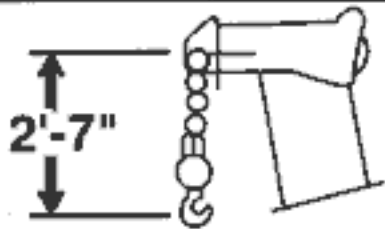
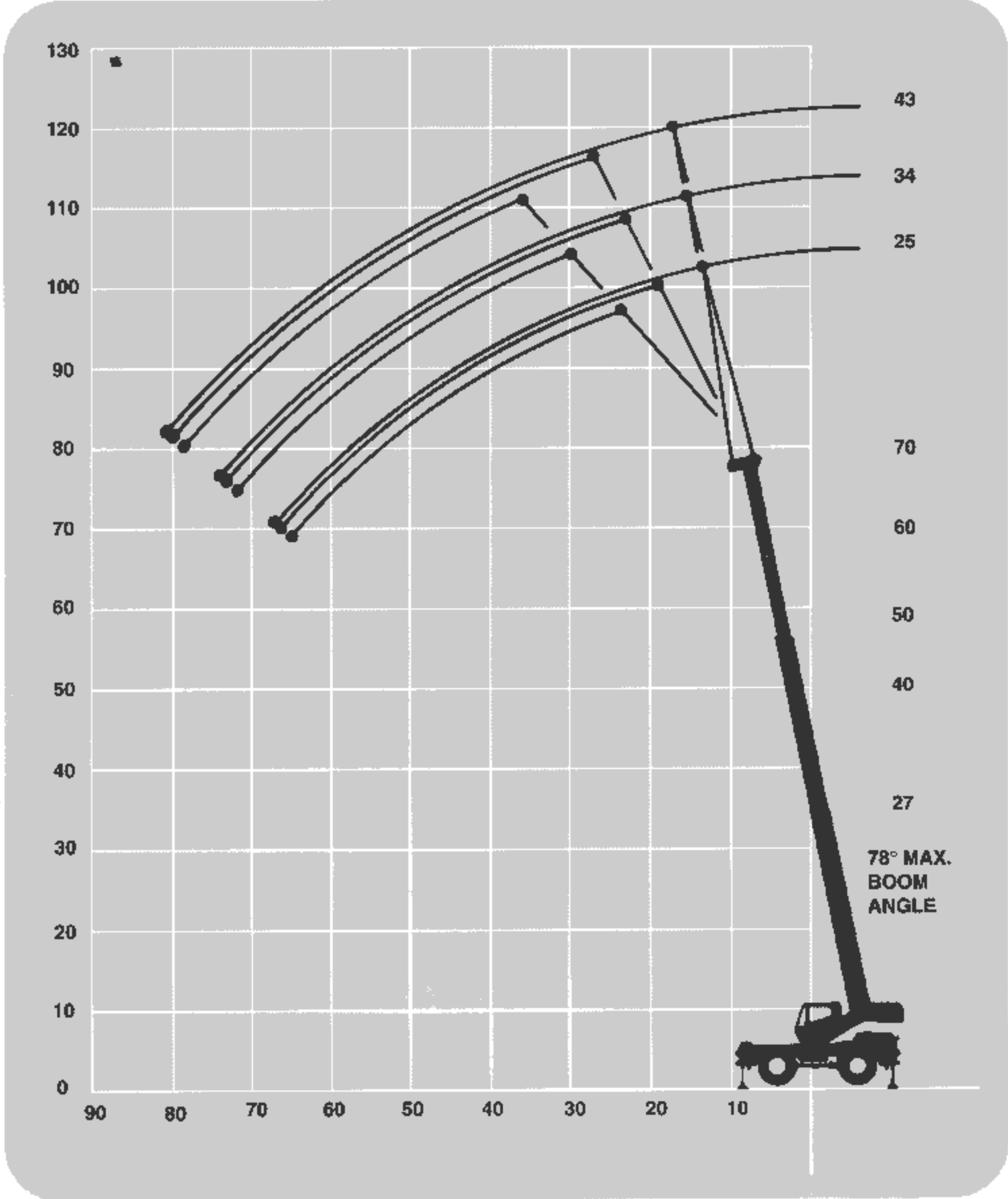
25-43 ft.  
(7.6-13.1 m)



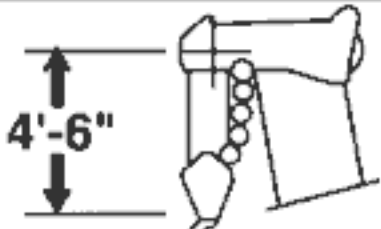
3,925 lbs.  
(1780 kg)



360°



2'-7"



4'-6"

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

# Superstructure specifications

## Boom

27 ft. - 70 ft. ( 8.3 m - 21.4 m) three-section full power boom. Maximum tip height: 78 ft. (23.8 m).

## Fixed Swingaway Extension

25 ft. (7.6 m) lattice swingaway extension. Non-offsettable. Stows alongside base boom section. Maximum tip height: 103 ft. (31.4 m).

## \*Optional Telescopic Swingaway Extension

25 ft. - 43 ft. (7.6 m - 13.1 m) telescoping lattice swingaway extension. Offsettable at 0°, 15° or 30°. Stows alongside base boom section. Maximum tip height: 121 ft. (36.9 m).

## Boom Nose

Three steel sheaves mounted on heavy duty tapered roller bearings with removable pin-type rope guards. \*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 -3° 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 and 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: cab circulating air fan, sliding side and rear windows, electric windshield wash/wipe, manual skylight wiper, swing horn, fire extinguisher and seat belt.

## Swing

Planetary swing with foot applied multi-disc brake. Spring applied, hydraulically released swing brake and plunger-type, 1 position, mechanical house lock, and a 360° positive swing lock, operated from cab. 360° continuous rotation. Maximum speed: 2.4 RPM.

## Counterweight

3,925 lbs. (1780 kg) integral with superstructure. 955 lbs. (433 kg) slab in place of auxiliary hoist.

## Hydraulic System

Two main gear pumps with a combined capacity of 53.5 GPM (202.5 LPM). \*Optional pump disconnect with engine jogging switch. Maximum operating pressure: 3500 PSI (241 bar).

Two individual valve banks.

Return line type filter with full flow by-pass protection and service indicator. 10 micron rated replaceable cartridge.

66 gallon (250 L) reservoir.

Remote-mounted oil cooler with thermostatically controlled electric motor driven fan.

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.

|                                |                         |
|--------------------------------|-------------------------|
| Maximum Single Line Pull:      | 8,074 lbs.<br>(3662 kg) |
| Maximum Single Line Speed:     | 254 FPM<br>(74 m/min)   |
| Maximum Permissible Line Pull: | 8,074 lbs.<br>(3662 kg) |
| Rope Diameter:                 | 5/8 in.<br>(16 mm)      |
| Rope Length:                   | 360 ft.<br>(110 m)      |
| Maximum Rope Stowage:          | 360 ft.<br>(110 m)      |

*\*Denotes optional equipment*





# Carrier specifications

## Chassis

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

## 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. (429 mm) square. Maximum outrigger pad load: 32,100 lbs. (14 561 kg).

## Outrigger Controls

Controls and crane level indicator located in cab.

## Engine

Cummins 4BT3.9 L diesel, six cylinders, turbocharged, 105 bhp (78 kW) (Gross) @ 2,800 RPM. Maximum torque 260 ft. lbs. (353 Nm) @ 1,700 RPM.

## Fuel Tank Capacity

40 gallons (151 L)

## Transmission

Full powershift with 6 forward and 6 reverse speeds. Rear axle disconnect for 4x2 travel.

## Electrical System

12-V - maintenance free battery.

\*Dual batteries optional.

## Drive

4x4

## Steering

Full independent power steering.

Front: Full hydraulic steering wheel controlled.

Rear: Full hydraulic hand lever controlled.

Provides infinite variations of 4 main steering modes: front only, rear only, crab and coordinated. Rear steer indicating gauge.

\*Optional no-spin differential on rear axle (4x4).

## Axles

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.

## Oscillation Lockouts

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

\*Optional oscillation lockout override control.

## Brakes

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

## Tires

16.00x24-16PR grader type tubeless, or

\*17.5x25-20PR earthmover type, tubeless.

## Lights

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

## Maximum Speed

25.9 MPH (41.7 kph)

## Maximum Gradeability

141.2% (Theoretical based on 38,300 lbs. [17 373 kg] GVW), 16.00x24 tires, pumps disengaged, 70 ft. (21.4 m) boom and 25-43 ft. (7.6-13.1 m) swingaway.

## Miscellaneous Standard Equipment

Full width steel fenders, dual rear view mirrors, hook-block tiedown, electronic back-up alarm, light package, front stowage well.

## \*Optional Equipment

- \* Auxiliary hoist
- \* Boom mounted worklights
- \* 360° flashing light
- \* Cab spotlight
- \* Tachometer
- \* Engine block heater
- \* Cold start aid (less canister)
- \* Hookblocks
- \* Electric skylight wiper
- \* Propane/diesel heater/defroster
- \* Tool kit
- \* Pintle hook front/rear
- \* High Speed Glide system
- \* Dual axis joystick controller
- \* Headache ball

*\*Denotes optional equipment*



27 -70 ft.  
(8.3-21.4 m)



3,925 lbs.  
(1780 kg)



100%



360°



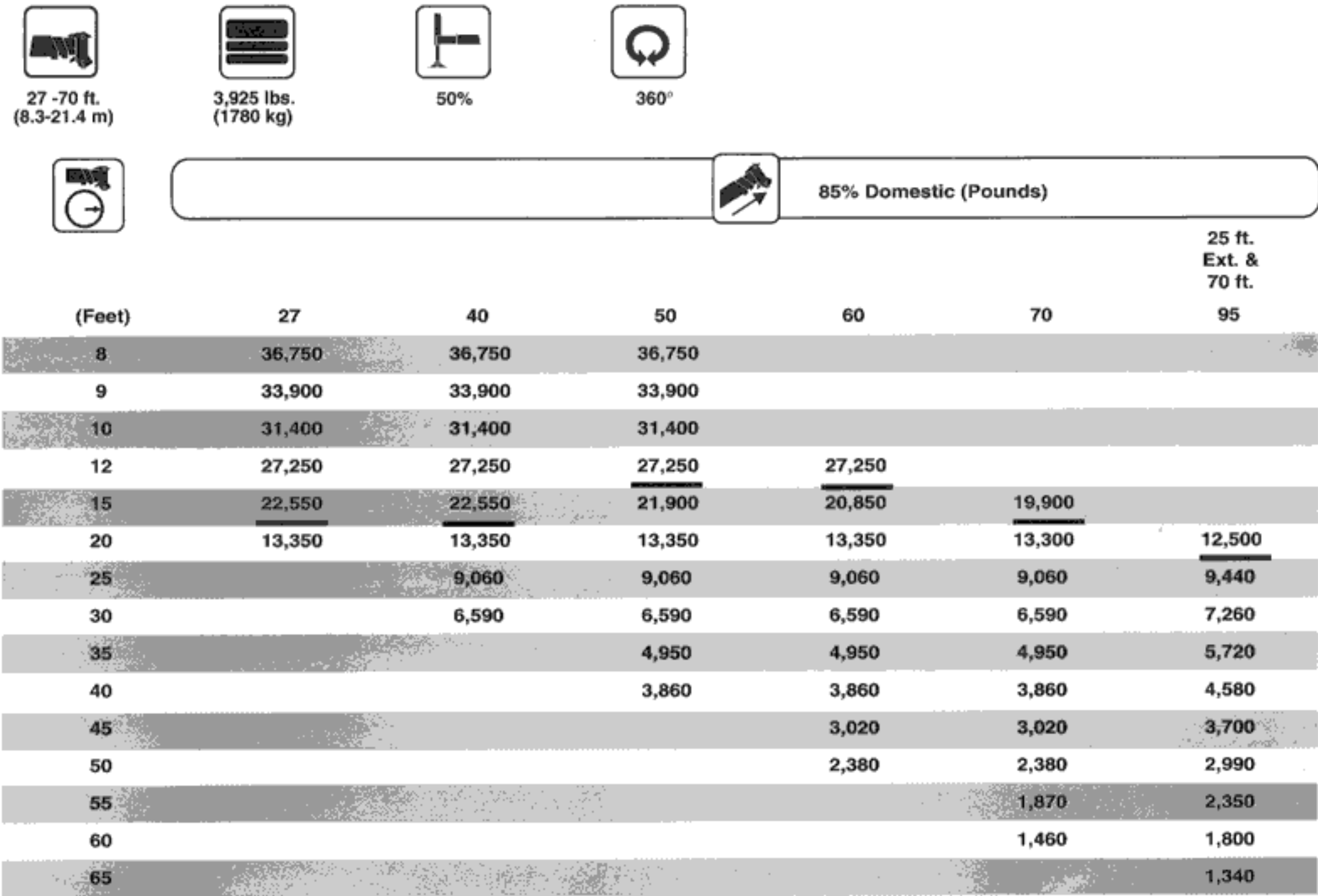
85% Domestic (Pounds)

25 ft. Ext.  
& 70 ft.

| (Feet) | 27            | 40            | 50            | 60            | 70            | 95           |
|--------|---------------|---------------|---------------|---------------|---------------|--------------|
| 8      | 44,000        | 43,650        | 42,450        |               |               |              |
| 9      | 41,000        | 41,000        | 39,850        |               |               |              |
| 10     | 38,000        | 38,000        | 37,550        |               |               |              |
| 12     | 31,450        | 31,450        | 31,450        | 31,450        |               |              |
| 15     | 24,300        | 24,300        | 24,300        | 24,300        | 22,000        |              |
| 20     | <u>18,000</u> | 17,650        | 17,650        | 17,650        | 17,650        | 12,500       |
| 25     |               | 13,300        | 13,300        | 13,300        | 13,300        | 10,750       |
| 30     |               | <u>10,400</u> | <u>10,400</u> | <u>10,400</u> | <u>10,400</u> | 9,810        |
| 35     |               |               | 8,370         | 8,370         | 8,370         | <u>8,930</u> |
| 40     |               |               | 6,630         | 6,630         | 6,630         | 7,820        |
| 45     |               |               |               | 5,370         | 5,370         | 6,210        |
| 50     |               |               |               | 4,410         | 4,410         | 5,040        |
| 55     |               |               |               |               | 3,660         | 4,140        |
| 60     |               |               |               |               | 3,060         | 3,430        |
| 65     |               |               |               |               |               | 2,860        |

A6-829-008252 & -008259B

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A6-829-013333



27 -70 ft.  
(8.3-21.4 m)



3,925 lbs.  
(1780 kg)



0%



360°




85% Domestic (Pounds)

| (Feet) | 27     | 40     | 50     | 60     | 70    |
|--------|--------|--------|--------|--------|-------|
| 8      | 26,750 | 26,200 | 24,250 |        |       |
| 9      | 21,200 | 21,200 | 20,900 |        |       |
| 10     | 17,400 | 17,400 | 17,400 |        |       |
| 12     | 12,600 | 12,600 | 12,600 | 12,600 |       |
| 15     | 8,660  | 8,660  | 8,660  | 8,660  | 8,660 |
| 20     | 5,290  | 5,290  | 5,290  | 5,290  | 5,290 |
| 25     |        | 3,510  | 3,510  | 3,510  | 3,510 |
| 30     |        | 2,410  | 2,410  | 2,410  | 2,410 |
| 35     |        |        | 1,670  | 1,670  | 1,670 |
| 40     |        |        | 1,120  | 1,120  | 1,120 |


A6-829-012059









25-43 ft.  
(7.6-13.1 m)




3,925 lbs.  
(1780 kg)




100%



360°






85% Domestic (Pounds)


| (Feet) | 25 ft. LENGTH |            |            | 34 ft. LENGTH |            |            | 43 ft. LENGTH |            |            |
|--------|---------------|------------|------------|---------------|------------|------------|---------------|------------|------------|
|        | 0° OFFSET     | 15° OFFSET | 30° OFFSET | 0° OFFSET     | 15° OFFSET | 30° OFFSET | 0° OFFSET     | 15° OFFSET | 30° OFFSET |
| 20     | *12,500       |            |            | *8,500        |            |            | *5,000        |            |            |
| 25     | 10,750        | 7,500      |            | 8,030         |            |            | 4,750         |            |            |
| 30     | 9,810         | 6,870      | *5,500     | 7,170         | *5,500     |            | 4,360         |            |            |
| 35     | 8,930         | 6,330      | 5,110      | 6,390         | 4,910      | *3,600     | 4,020         | 3,000      |            |
| 40     | 7,200         | 5,880      | 4,770      | 5,680         | 4,540      | 3,290      | 3,710         | 2,800      | *2,300     |
| 45     | 5,670         | 5,450      | 4,490      | 5,040         | 4,180      | 2,930      | 3,420         | 2,650      | 2,210      |
| 50     | 4,510         | 4,510      | 4,260      | 4,590         | 3,840      | 2,650      | 3,170         | 2,510      | 2,160      |
| 55     | 3,600         | 3,600      | 3,600      | 4,010         | 3,510      | 2,430      | 2,940         | 2,400      | 2,100      |
| 60     | 2,860         | 2,860      | 2,860      | 3,260         | 3,200      | 2,250      | 2,730         | 2,300      | 2,030      |
| 65     | 2,260         | 2,260      | 2,260      | 2,650         | 2,650      | 2,100      | 2,540         | 2,210      | 1,970      |
| 70     |               |            |            | 2,130         | 2,130      | 1,970      | 2,360         | 2,130      | 1,890      |
| 75     |               |            |            |               |            |            | 2,140         | 2,060      | 1,820      |
| 80     |               |            |            |               |            |            | 1,780         | 1,780      | 1,730      |

\*This capacity is based upon maximum boom angle.


A6-829-008268A




25-43 ft.  
(7.6-13.1 m)




3,925 lbs.  
(1780 kg)




50%



360°





85% Domestic (Pounds)

| Feet | 25 ft. LENGTH |            |            | 34 ft. LENGTH |            |            | 43 ft. LENGTH |            |            |
|------|---------------|------------|------------|---------------|------------|------------|---------------|------------|------------|
|      | 0° OFFSET     | 15° OFFSET | 30° OFFSET | 0° OFFSET     | 15° OFFSET | 30° OFFSET | 0° OFFSET     | 15° OFFSET | 30° OFFSET |
| 20   | *12,100       |            |            | *8,500        |            |            | *5,000        |            |            |
| 25   | 8,760         | 7,500      |            | 8,030         |            |            | 4,750         |            |            |
| 30   | 6,570         | 6,570      | *5,500     | 6,820         | *5,500     |            | 4,360         |            |            |
| 35   | 5,020         | 5,020      | 5,020      | 5,300         | 4,910      | *3,600     | 4,020         | 3,000      |            |
| 40   | 3,870         | 3,870      | 3,870      | 4,170         | 4,170      | 3,290      | 3,710         | 2,800      | *2,300     |
| 45   | 2,990         | 2,990      | 2,990      | 3,290         | 3,290      | 2,930      | 3,420         | 2,650      | 2,210      |
| 50   | 2,280         | 2,280      | 2,280      | 2,590         | 2,590      | 2,590      | 2,840         | 2,510      | 2,160      |
| 55   | 1,680         | 1,680      | 1,680      | 2,030         | 2,030      | 2,030      | 2,280         | 2,280      | 2,100      |
| 60   | 1,170         | 1,170      | 1,170      | 1,540         | 1,540      | 1,540      | 1,810         | 1,810      | 1,810      |
| 65   |               |            |            | 1,100         | 1,100      | 1,100      | 1,410         | 1,410      | 1,410      |
| 70   |               |            |            |               |            |            | 1,070         | 1,070      | 1,070      |

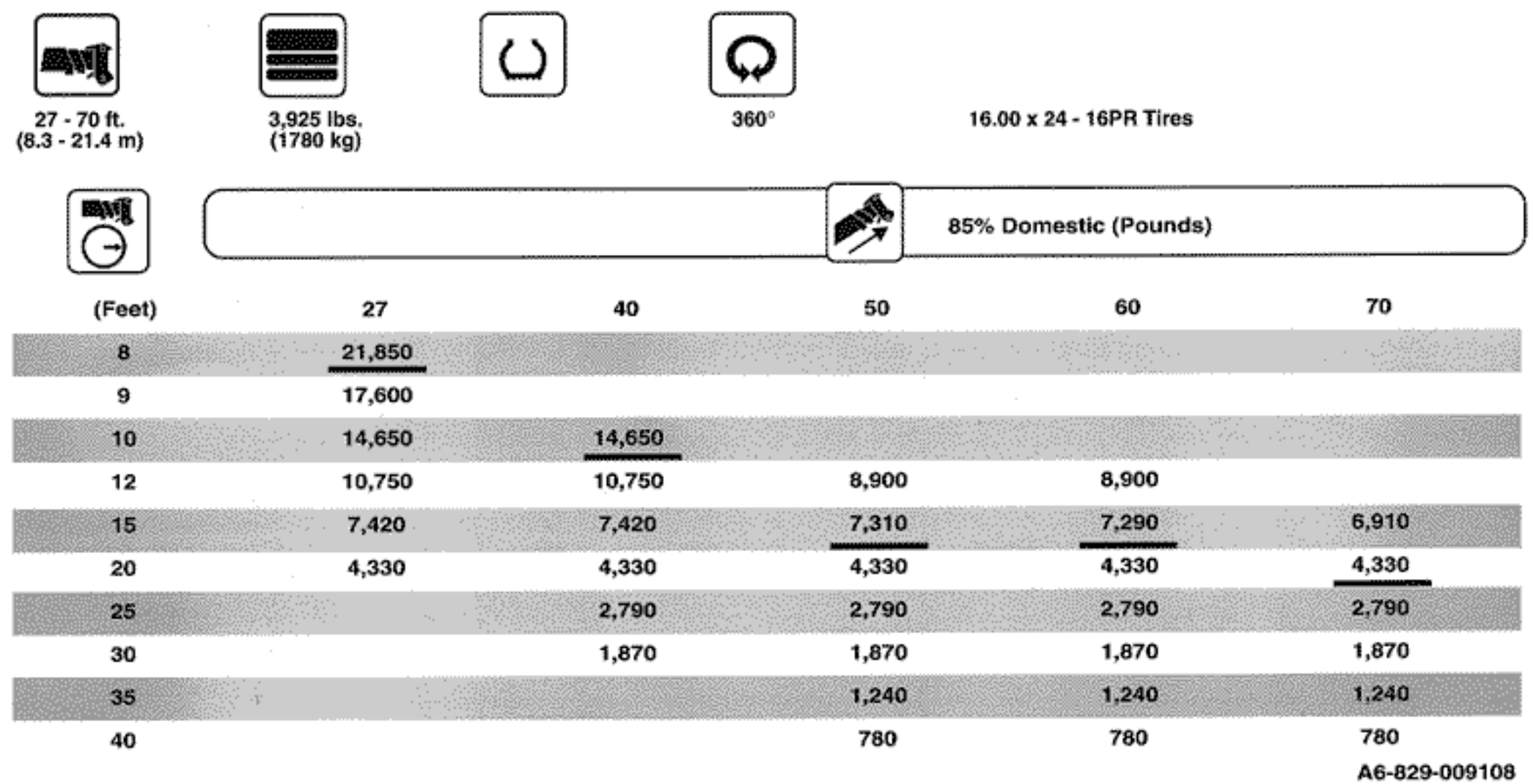
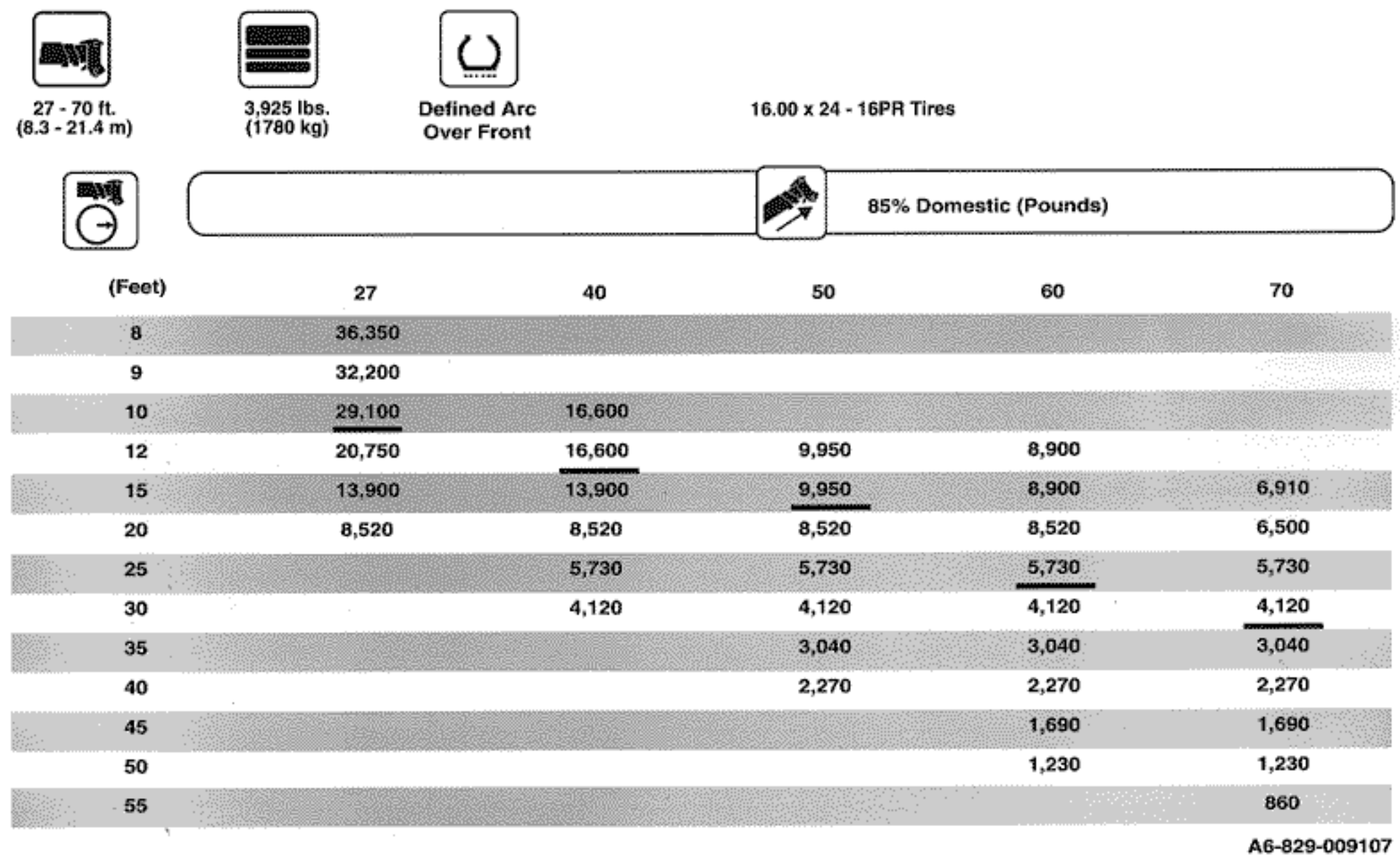
\*This capacity is based upon maximum boom angle.

A6-829-012069

THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE. The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane.

RT400 Series

9







27 - 70 ft.  
(8.3 - 21.4 m)



3,925 lbs.  
(1780 kg)



Pick & Carry  
Up to 2.5 MPH



360°

16.00 x 24 - 16PR Tires



85% Domestic (Pounds)

| (Feet) | 27     | 40     | 50     | 60    | 70    |
|--------|--------|--------|--------|-------|-------|
| 8      | 31,750 |        |        |       |       |
| 9      | 30,000 |        |        |       |       |
| 10     | 28,200 |        |        |       |       |
| 12     | 20,750 |        |        |       |       |
| 15     | 13,900 | 13,000 | 12,950 |       |       |
| 20     | 8,520  | 8,520  | 8,520  | 8,520 |       |
| 25     |        | 5,730  | 5,730  | 5,730 | 5,730 |
| 30     |        | 4,120  | 4,120  | 4,120 | 4,120 |
| 35     |        |        | 3,040  | 3,040 | 3,040 |
| 40     |        |        | 2,270  | 2,270 | 2,270 |
| 45     |        |        |        | 1,690 | 1,690 |
| 50     |        |        |        | 1,230 | 1,230 |
| 55     |        |        |        |       | 860   |

A6-829-009109



27 - 70 ft.  
(8.3 - 21.4 m)



3,925 lbs.  
(1780 kg)



Defined Arc  
Over Front

17.5 x 25 - 20PR Tires




85% Domestic (Pounds)


| (Feet) | 27     | 40     | 50     | 60     | 70     |
|--------|--------|--------|--------|--------|--------|
| 8      | 36,300 | 33,000 | 29,150 |        |        |
| 9      | 31,950 | 28,650 | 25,650 |        |        |
| 10     | 27,900 | 25,250 | 22,850 |        |        |
| 12     | 20,750 | 20,200 | 18,550 | 17,150 |        |
| 15     | 13,900 | 13,900 | 13,900 | 13,350 | 12,500 |
| 20     | 8,520  | 8,520  | 8,520  | 8,520  | 8,520  |
| 25     |        | 5,730  | 5,730  | 5,730  | 5,730  |
| 30     |        | 4,120  | 4,120  | 4,120  | 4,120  |
| 35     |        |        | 3,040  | 3,040  | 3,040  |
| 40     |        |        | 2,270  | 2,270  | 2,270  |
| 45     |        |        |        | 1,690  | 1,690  |
| 50     |        |        |        | 1,230  | 1,230  |
| 55     |        |        |        |        | 860    |

A6-829-008932


THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE. The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane.




27 - 70 ft.  
(8.3- 21.4 m)




3,925 lbs.  
(1780 kg)






360°

17.5 x 25 - 20 PR Tires







85% Domestic (Pounds)

| (Feet) | 27     | 40     | 50     | 60    | 70    |
|--------|--------|--------|--------|-------|-------|
| 8      | 21,850 | 20,300 | 14,300 |       |       |
| 9      | 17,600 | 17,600 | 12,800 |       |       |
| 10     | 14,650 | 14,650 | 11,550 |       |       |
| 12     | 10,750 | 10,750 | 9,520  | 9,470 |       |
| 15     | 7,420  | 7,420  | 7,310  | 7,290 | 6,910 |
| 20     | 4,330  | 4,330  | 4,330  | 4,330 | 4,330 |
| 25     |        | 2,790  | 2,790  | 2,790 | 2,790 |
| 30     |        | 1,870  | 1,870  | 1,870 | 1,870 |
| 35     |        |        | 1,240  | 1,240 | 1,240 |
| 40     |        |        | 780    | 780   | 780   |


A6-829-008933




27 - 70 ft.  
(8.3 - 21.4 m)



3,925 lbs.  
(1780 kg)





Pick & Carry  
Up to 2.5 MPH



360°

17.5 x 25 - 20 PR Tires

85% Domestic (Pounds)

| (Feet) | 27     | 40     | 50     | 60     | 70     |
|--------|--------|--------|--------|--------|--------|
| 8      | 28,400 | 22,000 | 21,800 |        |        |
| 9      | 26,200 | 20,150 | 20,000 |        |        |
| 10     | 24,250 | 18,600 | 18,450 |        |        |
| 12     | 20,750 | 15,950 | 15,850 | 14,200 |        |
| 15     | 13,900 | 13,000 | 12,950 | 11,500 | 11,500 |
| 20     | 8,520  | 8,520  | 8,520  | 8,520  | 8,500  |
| 25     |        | 5,730  | 5,730  | 5,730  | 5,730  |
| 30     |        | 4,120  | 4,120  | 4,120  | 4,120  |
| 35     |        |        | 3,040  | 3,040  | 3,040  |
| 40     |        |        | 2,270  | 2,270  | 2,270  |
| 45     |        |        |        | 1,690  | 1,690  |
| 50     |        |        |        | 1,230  | 1,230  |
| 55     |        |        |        |        | 860    |

A6-829-008934





# Rated Lifting Capacities

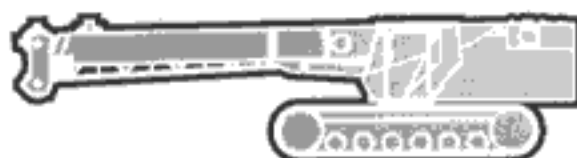
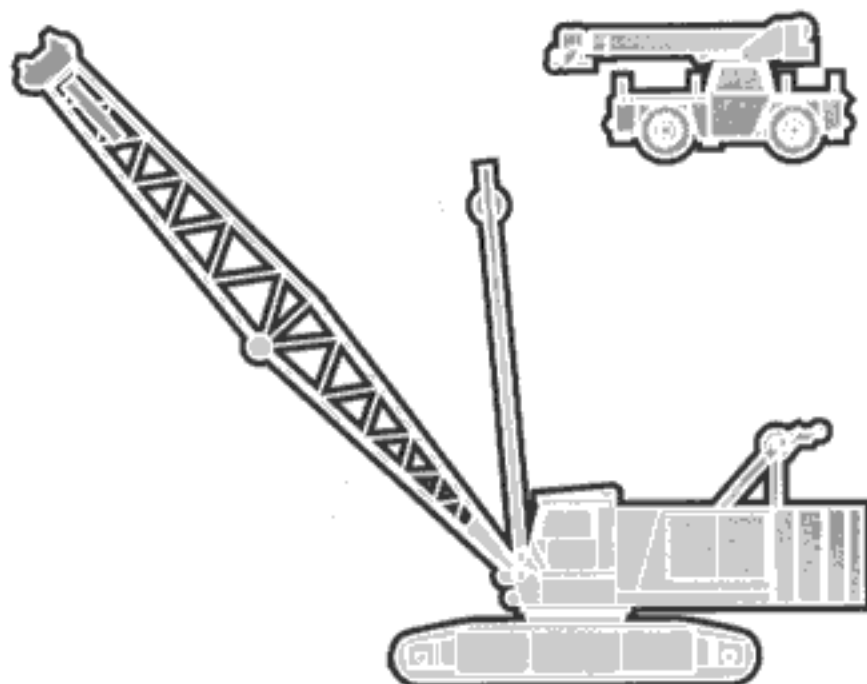
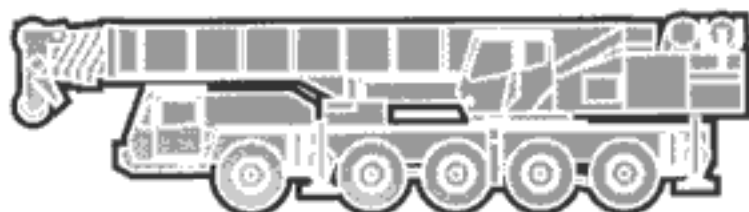
## IMPORTANT NOTES:

**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 have been tested to and meet minimum requirements of SAE J1063 OCT90 - Cantilevered Boom Crane Structures - Method of Test, and do not exceed 85% of the tipping load on outriggers full extended and 50% extended, and 75% of the tipping load on outriggers 0% extended (fully retracted) and rubber, as determined by SAE J765 OCT90 Crane Stability Test Code.
2. Capacities given do not include the weight of hookblocks, slings, auxiliary lifting equipment and load handling devices. Their weights must be added to the load to be lifted. When more than minimum required reeving is used, the additional rope weight shall be considered part of the load.
3. Defined Arc  $\pm 6^\circ$  on either side of longitudinal 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. All capacities are for crane on firm, level 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 boom length shall be used.
7. Tires shall be inflated to the recommended pressure before lifting on rubber.

# Symbols Glossary

|   |                    |   |                  |
|---|--------------------|---|------------------|
|    | Frame              |    | Steering         |
|    | Outriggers         |    | Transmission     |
|    | Outrigger Controls |    | Axles            |
|    | Engine             |    | Brakes           |
|    | Fuel Tank Capacity |    | Tires            |
|  | Electrical System  |  | Suspension       |
|  | Drive              |  | 360° Rotation    |
|  | Lights             |  | Boom Elevation   |
|  | Cab                |  | Swing            |
|  | Boom               |  | Counterweight    |
|  | Fixed Swingaway    |  | Oil              |
|  | Tele-Swingaway     |  | Hydraulic System |
|  | Jib                |  | Hoist            |
|  | Boom Nose          |  | Radius           |
|  | Boom Extension     |  | Boom Length      |
|  | Speed              |  | Hookblock        |
|  | Grade              |  | Gear             |
|  | Lattice Extension  |   |                  |



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