

GROVE TMM 875

HYDRAULIC CRANE
with
TRAPEZOIDAL[†] BOOM

30 TON
CAPACITY

72.5-TONS METRIC

[†] Patented Grove feature



GUAY

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GROVE[®]

TM875

80 TON CAP.

PCSA CLASS 12-399

RATED LIFTING CAPACITIES IN POUNDS
36 ft. - 146 ft. BOOM
12 x 6 CARRIER
OVER SIDE AND REAR WITH OUTRIGGERS FULLY EXTENDED

| Radius in Feet | Main Boom Length in Feet (Power Pinned Fly Retracted) | | | | | | | | Power Pin. Fly & 88 ft. | 32 ft. Ext. & 114 ft. |
|----------------|--|------------------|-------------------|------------------|------------------|------------------|------------------|------------------|-------------------------|-----------------------|
| | *36 | 44 | 52 | 60 | 68 | 76 | 82 | 88 | **114 | **146 |
| 12 | 160,000 (65.5) | 125,000 (70) | 110,000 (73) | 99,000 (75.5) | 92,000 (77.5) | 87,000 (79) | | | | |
| 15 | 125,000 (60) | 113,000 (66) | 103,500 (69.5) | 95,700 (72.5) | 89,250 (74.5) | 83,800 (76.5) | 74,150 (78) | 63,000 (79) | | |
| 20 | 93,500 (50) | 91,550 (58.5) | 89,100 (63.5) | 86,000 (67.5) | 81,750 (70.5) | 75,750 (72.5) | 67,000 (74) | 59,850 (75.5) | 50,000 (79.5) | |
| 25 | 72,500 (39) | 72,000 (50.5) | 71,250 (57.5) | 70,150 (62) | 68,100 (65.5) | 63,500 (68.5) | 58,000 (70.5) | 54,000 (72) | 45,000 (77.5) | 30,000 (79.5) |
| 30 | 58,000 (23.5) | 57,900 (41.5) | 57,800 (50.5) | 57,550 (56.5) | 57,000 (61) | 52,950 (64.5) | 48,850 (66.5) | 44,700 (68.5) | 39,250 (75) | 28,400 (78.5) |
| 35 | | 48,100 (30) | 48,050 (43) | 48,000 (50.5) | 47,900 (56) | 45,200 (60) | 41,700 (63) | 37,850 (65) | 33,900 (72) | 25,900 (76.5) |
| 40 | | | 39,915 (34) | 39,915 (44) | 39,915 (51) | 39,150 (56) | 35,950 (59) | 32,500 (61.5) | 29,650 (69.5) | 23,800 (74.5) |
| 45 | | | 32,510 (22.5) | 32,510 (37) | 32,510 (45) | 32,510 (51) | 31,250 (54.5) | 28,250 (57.5) | 26,150 (67) | 21,900 (72.5) |
| 50 | | | | 26,500 (28) | 26,500 (39) | 26,500 (46) | 26,500 (50) | 24,750 (53.5) | 23,300 (64) | 20,300 (70.5) |
| 60 | | | | | 18,600 (22) | 18,600 (34) | 18,600 (40) | 18,600 (45) | 18,800 (53) | 17,100 (66) |
| 70 | | | | | | 12,800 (16) | 12,800 (27.5) | 12,800 (34.5) | 14,785 (52) | 14,100 (61.5) |
| 80 | | | | | | | | 9,000 (20) | 11,060 (45) | 11,800 (57) |
| 90 | | | | | | | | | 8,415 (37) | 9,600 (52) |
| 100 | | | | | | | | | 5,925 (27) | 7,230 (46.5) |
| 110 | | | | | | | | | 3,590 (9) | 5,575 (40.5) |
| 120 | | | | | | | | | | 4,080 (34) |
| 130 | | | | | | | | | | 2,835 (25.5) |
| 140 | | | | | | | | | | 1,700 (12.5) |
| 142.5 | | | | | | | | | | 1,500 (0) |

NOTE: Boom Angle (degrees) in reference for given lift appears below the load. A6-829-002153 & 002169

TRAPEZOIDAL BOOM and 32 FT. EXT. NOTES

Capacities appearing in the shaded area are based on structural strength and tipping should not be relied upon as a capacity limitation.
 *Capacities for 36 ft. boom length shall be lifted with boom fully retracted. If boom is not fully retracted, capacities shall not exceed those shown for 44 ft. boom length.
 **Boom must be fully extended when lifting with extended power pinned fly or with 32 ft. boom ext.
 Capacities do not exceed 85% of tipping loads with counterweight fully extended as determined by test in accordance with SAE J-765.
 Do not exceed any rated load when lifting regardless of whether it is based on structural strength or stability.

GROVE®

FULL HYDRAULIC

CARRIER-MOUNTED CRANE

TM875

JIB CAPACITIES WITH 36 ft. - 114 ft. BOOM OUTRIGGERS FULLY EXTENDED (Capacities applicable to all carriers)

| Main Boom Angle | 46 ft. JIB CAPACITIES | | | | | | 60 ft. JIB CAPACITIES | | | | | | 74 ft. JIB CAPACITIES | | | | | | 88 ft. JIB CAPACITIES | | | | | |
|-----------------|-----------------------|----------|-------------|----------|-------------|----------|-----------------------|----------|-------------|----------|-------------|----------|-----------------------|----------|-------------|----------|-------------|----------|-----------------------|----------|-------------|----------|-------------|----------|
| | 5° Offset | | 17° Offset | | 30° Offset | | 5° Offset | | 17° Offset | | 30° Offset | | 5° Offset | | 17° Offset | | 30° Offset | | 5° Offset | | 17° Offset | | 30° Offset | |
| | Ref. Radius | Capacity | Ref. Radius | Capacity | Ref. Radius | Capacity | Ref. Radius | Capacity | Ref. Radius | Capacity | Ref. Radius | Capacity | Ref. Radius | Capacity | Ref. Radius | Capacity | Ref. Radius | Capacity | Ref. Radius | Capacity | Ref. Radius | Capacity | Ref. Radius | Capacity |
| 80° | 31.5 | 16,500 | 40.5 | 12,800 | 49 | 7,980 | 39 | 12,500 | 48 | 9,220 | 58 | 5,570 | 42.5 | 9,600 | 55 | 6,640 | 67.5 | 3,840 | 46.5 | 7,630 | 63 | 4,680 | 79 | 2,590 |
| 77.5 | 38 | 15,650 | 47 | 12,300 | 55 | 7,550 | 45 | 11,700 | 54 | 8,790 | 63.5 | 5,270 | 49 | 8,880 | 61.5 | 6,230 | 73.5 | 3,590 | 53.5 | 6,920 | 70 | 4,240 | 85 | 2,380 |
| 75 | 45 | 14,900 | 53.5 | 11,900 | 61.5 | 7,170 | 52.5 | 11,050 | 61 | 8,390 | 70.5 | 5,010 | 57 | 8,250 | 69 | 5,860 | 80.5 | 3,360 | 62 | 6,290 | 78 | 3,840 | 92.5 | 2,200 |
| 72.5 | 51.5 | 14,250 | 60 | 11,100 | 67.5 | 6,840 | 59.5 | 10,450 | 67.5 | 7,930 | 77 | 4,770 | 64.5 | 7,690 | 76.5 | 5,500 | 87.5 | 3,170 | 70 | 5,740 | 85.5 | 3,490 | 100 | 2,030 |
| 70 | 58 | 12,610 | 66 | 10,400 | 73.5 | 6,540 | 66.5 | 9,890 | 74.5 | 7,440 | 83 | 4,540 | 72.5 | 7,180 | 83.5 | 5,160 | 94 | 2,990 | 78.5 | 5,190 | 93.5 | 3,160 | 107 | 1,840 |
| 67.5 | 64.5 | 10,280 | 72 | 9,120 | 79 | 6,280 | 73.5 | 8,740 | 81 | 7,010 | 89.5 | 4,340 | 79.5 | 6,720 | 90.5 | 4,850 | 101 | 2,830 | 86 | 4,700 | 101 | 2,870 | 113.5 | 1,670 |
| 65 | 70.5 | 8,470 | 78 | 7,620 | 84.5 | 6,050 | 80 | 7,180 | 87.5 | 6,350 | 95.3 | 4,160 | 87 | 6,140 | 97.5 | 4,570 | 107 | 2,700 | 94 | 4,260 | 108 | 2,600 | 120.5 | 1,530 |
| 62.5 | 76.5 | 7,020 | 84 | 6,390 | 90 | 5,850 | 86.5 | 5,930 | 93.5 | 5,300 | 101 | 4,010 | 94 | 5,020 | 104 | 4,320 | 113 | 2,580 | 101.5 | 3,860 | 115 | 2,370 | 126.5 | 1,390 |
| 60 | 82.5 | 5,850 | 89.5 | 5,370 | 95.5 | 5,070 | 93 | 4,900 | 99 | 4,430 | 106.5 | 3,870 | 101 | 4,110 | 110.5 | 3,300 | 119 | 2,100 | 109 | 3,500 | 122 | 1,800 | | |
| 55 | 94 | 4,060 | 100.5 | 3,780 | 105.5 | 3,620 | 105 | 3,320 | 111.5 | 3,040 | 117.5 | 2,250 | 114 | 2,700 | 123 | 1,400 | | | 123 | 1,500 | | | | |
| 50 | 104.5 | 2,780 | 110.5 | 2,620 | 114.5 | 2,530 | 116.5 | 2,180 | 122 | 1,400 | | | | | | | | | | | | | | |
| 45 | 114.5 | 1,830 | 119.5 | 1,700 | 123 | 1,350 | | | | | | | | | | | | | | | | | | |

A6-829-002055B -002056B -002057B -002058B -002059B -002060B -002061B -002062B -002063B -002064B -002065B -002066B

JIB CAPACITY NOTES

- All capacities are based on structural strength and do not exceed 85% of tipping loads with counterweight fully extended in accordance with SAE J-765.
- 60 ft., 74 ft., & 88 ft. jibs may be used for single line lifting crane service only. Two parts or single line may be used with 46 ft. jib.
- Rated load is based on loaded main boom angle.
- WARNING:** Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with every jib occurs rapidly and without advance warning.
- Lifting with other than fully extended boom (power pinned fly extended - 114 ft. boom length) is strictly prohibited.
- Maximum length of main boom including extended power pinned fly for purpose of erecting jib, over side or over rear, below 30° main boom angle is:

| | | |
|------------|---|---------|
| 46 ft. Jib | - | 103 ft. |
| 60 ft. Jib | - | 95 ft. |
| 74 ft. Jib | - | 86 ft. |
| 88 ft. Jib | - | 77 ft. |

WARNING: Do not attempt to erect jibs over front of machine.

- 46 ft. JIB WARNING:** With 46 ft. jib in working position, the boom angle must not be less than 45° (over side & rear) or 60° (over front) since loss of stability will occur causing a tipping condition.
- 60 ft. JIB WARNING:** With 60 ft. jib in working position, the boom angle must not be less than 50° (over side & rear) or 62½° (over front) since loss of stability will occur causing a tipping condition.
- 74 ft. JIB WARNING:** With 74 ft. jib in working position, the boom angle must not be less than 55° (over side & rear) or 65° (over front) since loss of stability will occur causing a tipping condition.
- 88 ft. JIB WARNING:** With 88 ft. jib in working position, the boom angle must not be less than 55° (over side & rear) or 67½° (over front) since loss of stability will occur causing a tipping condition.

WEIGHT REDUCTION FOR LOAD HANDLING DEVICES

| 32 ft. BOOM EXTENSION WITH 36 - 114 ft. BOOM | |
|--|--------------|
| STOWED | - 365 lbs. |
| ERECTED | - 2,455 lbs. |

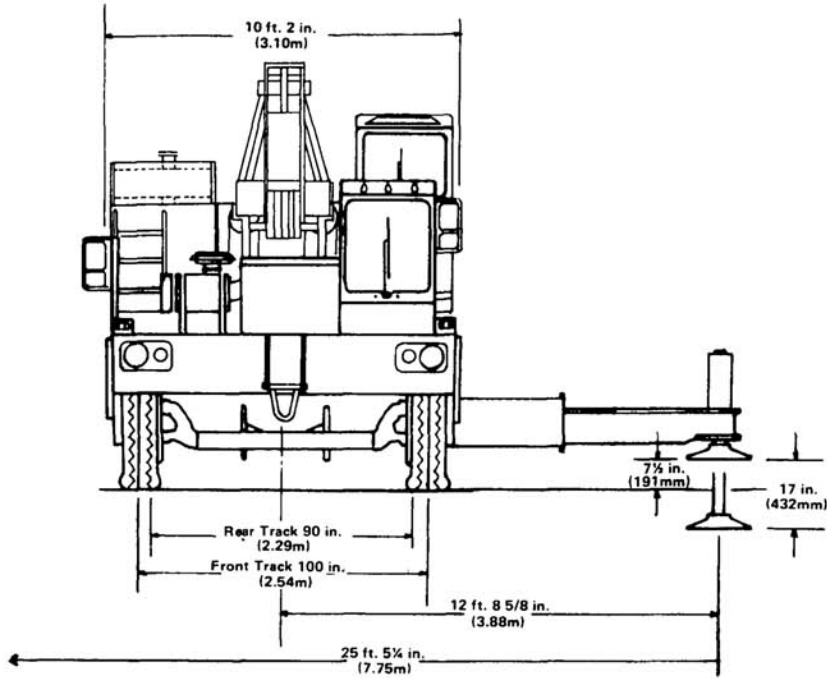
| 36 - 114 ft. BOOM WITH | |
|------------------------|---------------|
| 46 ft. JIB | - 8,828 lbs. |
| 60 ft. JIB | - 12,962 lbs. |
| 74 ft. JIB | - 17,868 lbs. |
| 88 ft. JIB | - 23,548 lbs. |

| HOOK BLOCK | |
|----------------------|------------------|
| 80 Ton, 6 Sheave | . . . 1,615 lbs. |
| 15 Ton, 1 Sheave | . . . 310 lbs. |
| Auxiliary Boom Head | . . . 230 lbs. |
| 5 Ton Headache Ball | . . . 150 lbs. |
| 7½ Ton Headache Ball | . . . 300 lbs. |
| 10 Ton Headache Ball | . . . 500 lbs. |

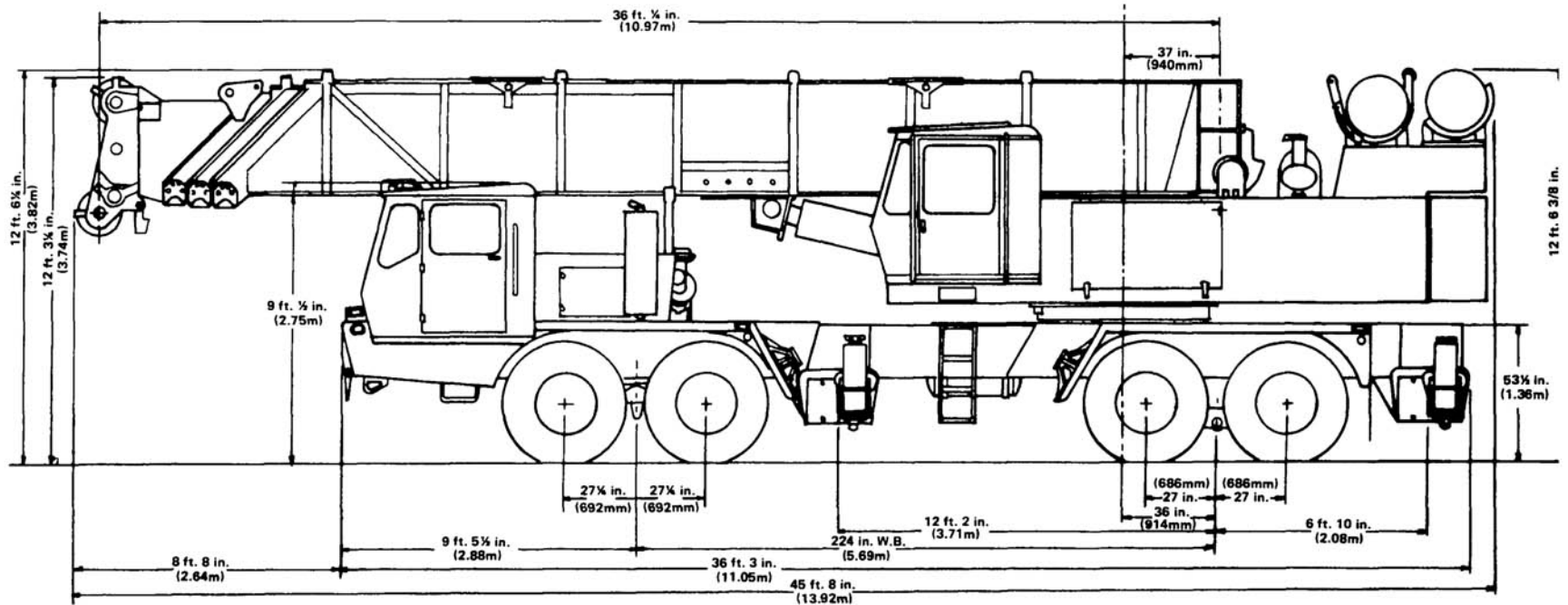
NOTE: All Load Handling Devices and Boom Attachments are Considered Part of the Load and Suitable Allowances MUST BE MADE for Their Combined Weight. Weights are for Grove furnished equipment.

DIMENSIONS

TM875



Turning Radius 42 ft. 2 1/2 in. (12.87m)
Ground Clearance 12 in. (with float removed) (305mm)
Tail Swing 12 ft. 1/2 in. (CWT in travel position) (3.67m)
Tail Swing 14 ft. 1/2 in. (CWT in working position) (4.28m)



CARRIER SPECIFICATIONS GROVE CARRIER 8 x 4, 80 TON



TM875

OUTRIGGERS - Hydraulic double box, 2-stage telescoping beam outriggers, integral welded boxes, removable beams. Vertical jack cylinders with integral holding valves and 30½ in. (775mm) diameter aluminum floats. Beams extend to 25 ft. 5¼ in. (7.75m) centerline to centerline, retract to 9 ft. 10 in. (3.00m) overall width. Mechanical spin locks on each vertical jack to secure outriggers at any level. Outrigger controls and sight leveling bubble located in superstructure cab and each side of carrier frame. Powered by carrier engine.

FRAME - High strength steel, all welded construction. Box type design with integral outrigger boxes.

STEERING GEAR - Ross TE72740 cam and lever with Garrison hydraulic power assist.

CLUTCH - Lipe Rollway 14 in. (356mm) two plate dry disc. Total area: 428 sq. in.

TRANSMISSION - Fuller Roadranger (RTOO9513), 13 speeds forward and 2 reverse.

UNIVERSAL JOINTS - Needle bearing type.

AXLES - Front: (2) Shuler tubular steering DCB34-L-7, 100 in. (2.54m) track, 44,500 lb. (20,185kgs) capacity.

Rear: (2) Clark BD-57000 planetary, 90 in. (2.29m) track, 85,000 lb. (38,556kgs) capacity.

SUSPENSION - Front: Reyco 21B, spring mounted tandem, 44,000 lb. (19,958kgs) capacity.

Rear: Hendrickson solid mount tandem with equalizing beam and solid steel saddles, 85,000 lb. (38,556kgs) capacity.

FUEL TANK - Single 100 (379 liter) gallon capacity mounted on right side of frame.

TIRES - 14:00x20-20 ply tube-type, Hi-way tread front. ND-M&S rear.

WHEELS - Steel spoke 10 in. x 20 in. (254mm x 508mm)

BRAKES - Full air on all wheels.

Front: 17¼ in. x 4 in. (438mm x 102mm)

Rear: 16½ in. x 7 in. (419mm x 178mm). Total lining area: 1,520 sq. in. (9807cm²)

PARKING BRAKE - Maxi-type, spring set emergency chambers on both rear axles with emergency release kit.

ELECTRICAL SYSTEM - 12 volt lighting, 12 volt starting, federal safety standard lights, and reflectors.

CAB - One man, all steel, with acoustical treatment, laminated safety glass windshield and windows; windshield washer and electric wiper, door and window locks, Bostrom "T" bar seat, seat belt, dual West Coast mirrors, domelight, dashlight, hot water heater, defroster fan, electric horn, traffic hazard warning switch (four-way flasher), full engine instruments and carrier controls, 2½ lb. (1.25kg) dry type fire extinguisher. (Air conditioning available).

CAB INSTRUMENTATION - Engine oil pressure gauge, tachometer, voltmeter, speedometer, air pressure gauge, fuel level gauge, engine water temperature gauge, high beam indicator, low air pressure audio-visual warning, ignition on indicator.

MISCELLANEOUS STANDARD EQUIPMENT - Wheel nut wrench and handle, channel type front bumper, two front and rear towing loops, front and rear fenders, ether injection starting aid (less canister) front bumper mounted tie down, mud flaps, tool storage compartment.

CARRIER ENGINE SPECIFICATIONS

| Make & Model | Cummins NTC 335 | *GM 8V-71N | *Caterpillar 3406T |
|-------------------|---|--|---|
| Type | 6 Cylinder Diesel | 8 Cylinder Diesel | 6 Cylinder Diesel |
| Bore & Stroke | 5.5 in. x 6.0 in. (140mm x 152mm) | 4.25 in. x 5.0 in. (108mm x 127mm) | 5.4 in. x 6.5 in. (137mm x 165mm) |
| Displacement | 855 cu. in. (14,013cm ³) | 568 cu. in. (9,310cm ³) | 893 cu. in. (14,636cm ³) |
| Horsepower (Net) | 302 @ 2100 RPM | 287 @ 2100 RPM | 293 @ 2100 RPM |
| Governed RPM | 2100 | 2100 | 2100 |
| Torque (Net) | 837 lbs. ft. @ 1500 RPM | 733 lbs. ft. @ 1400 RPM | 878 lbs. ft. @ 1400 RPM |
| Electrical System | 12 Volt Neg. Ground | 12 Volt Neg. Ground | 12 Volt Neg. Ground |
| Combustion System | 4 Cycle turbocharged | 2 Cycle w/blower | 4 Cycle turbocharged |
| Cooling System | Liquid | Liquid | Liquid |
| Fuel Capacity | 100 Gallons (379 liters) | 100 Gallons (379 liters) | 100 Gallons (379 liters) |
| Alternator | 80 Amp 12 Volt | 62 Amp 12 Volt | 65 Amp 12 Volt |
| Battery | (2) 204 A.H. 12 Volt | (2) 204 A.H. 12 Volt | (2) 204 A.H. 12 Volt |
| Air Cleaner | Dry Type | Dry Type | Dry Type |
| Air Compressor | 13.2 CFM | 12 CFM | 12 CFM |
| Hourmeter | Yes | Yes | Yes |
| Starting System | 12 Volt | 12 Volt | 12 Volt |

NOTE: (1) Engine brake (GM & Cummins engines) or driveline retarder (Caterpillar engine) are optional.
(2) With air conditioning, engine horsepower and performance will be slightly reduced.

SPEED AND GRADEABILITY

| ENGINE | SPEED RANGES @ MAX. GOVERNED RPM | % OF GRADEABILITY @ MAX. TORQUE |
|--------------------|-------------------------------------|------------------------------------|
| Cummins NTC335 | 2.33 to 45.51 MPH (4 to 73 km/h) | 40.58 to .66% |
| *GM8V-71N | 2.33 to 45.51 MPH (4 to 73 km/h) | 35.33 to .39% |
| *Caterpillar 3406T | 2.33 to 45.51 MPH (4 to 73 km/h) | 43.75 to .82% |

NOTE: Performance based on 117,000 lb. (53,071 kg.) GVW and standard SAE engine rating conditions using standard tires, transmissions and axles. Performance data may vary plus or minus 10% due to variations in engine performance and vehicle weights.

*DENOTES OPTIONAL EQUIPMENT.

AXLE WEIGHT DISTRIBUTION CHART

| ITEM | POUNDS | | | KILOGRAMS | | |
|---|----------|---------|---------|-----------|---------|---------|
| | GROSS | FRONT | REAR | GROSS | FRONT | REAR |
| Basic Standard Machine to Include: 36 - 114 ft. (10.97 - 34.75 m) trapezoidal boom plus a 32 ft. (9.75 m) Swingaway extension, Grove model 32S-1726A main hoist with 750 ft. (228.60 m) of 3/4 in. (19 mm) rope, 12,975 lb. (5,885 kg.) counter- weight, Grove model 8x4 - 80 carrier, Cummins NTC 335 (Carrier Engine), Cummins V555-C230 (Super- structure Engine) | 117,450 | 39,605 | 77,845 | 53,275 | 17,965 | 35,310 |
| *Remove standard 12,975 lb. (5,885 kg.) counterweight | - 12,975 | + 5,288 | -18,263 | - 5,885 | + 2,399 | - 8,284 |
| 80 ton (72.56 mt), 6 sheave hook block (stowed) | + 1,600 | + 2,571 | - 971 | + 726 | + 1,166 | - 440 |
| Auxiliary boom head | + 230 | + 455 | - 225 | + 104 | + 206 | - 102 |
| **Model 15S-16A Auxiliary hoist with 550 ft. (167.64 m) of 5/8 in. (16 mm) dia. rope | + 1,140 | - 468 | + 1,608 | + 517 | - 212 | + 729 |
| **Model 40 free fall Auxiliary hoist with 550 ft. (167.64 m) of 1/2 in. (13 mm) dia. rope | + 1,100 | - 452 | + 1,552 | + 499 | - 205 | + 704 |
| ***Model 32S-1716A Auxiliary hoist with 550 ft. (167.64 m) of 3/4 in. (19 mm) dia. rope and idler | + 2,469 | - 1,014 | + 3,483 | + 1,120 | - 460 | + 1,580 |
| **Substitute 12,300 lb. (5,579 kg.) counterweight | - 675 | + 275 | - 950 | - 306 | + 125 | - 431 |
| ***Substitute 11,300 lb. (5,126 kg.) counterweight | - 1,675 | + 683 | - 2,358 | - 760 | + 310 | - 1,070 |
| Substitute GM8V-71N engine (carrier) | - 365 | - 409 | + 44 | - 166 | - 186 | + 20 |
| Substitute Caterpillar 3406T engine (carrier) | + 90 | + 101 | - 11 | + 41 | + 46 | - 5 |
| Substitute GM6V-53N engine (superstructure) | - 170 | - 9 | - 161 | - 77 | - 4 | - 73 |
| Substitute Caterpillar 3208 engine (superstructure) | - 410 | - 22 | - 388 | - 186 | - 10 | - 176 |
| Remove standard 32 ft. (9.75 m) Swingaway extension | - 1,550 | - 1,557 | + 7 | - 703 | - 706 | + 3 |
| Remove standard main hoist with rope | - 2,980 | + 818 | - 3,798 | - 1,352 | + 371 | - 1,723 |
| Remove (2) front outrigger beams & jacks | - 5,000 | - 3,259 | - 1,741 | - 2,268 | - 1,478 | - 790 |
| Remove (2) rear outrigger beams & jacks | - 5,000 | + 1,830 | - 6,830 | - 2,268 | + 830 | - 3,098 |

*Use 12,975 lb. (5,885 kg.) counterweight without auxiliary hoist.

**Use 12,300 lb. (5,579 kg.) counterweight with Grove 15S-16A or Gearmatic model 40 free fall auxiliary hoist.

***Use 11,300 lb. (5,126 kg.) counterweight with Grove 32S-1716A auxiliary hoist.