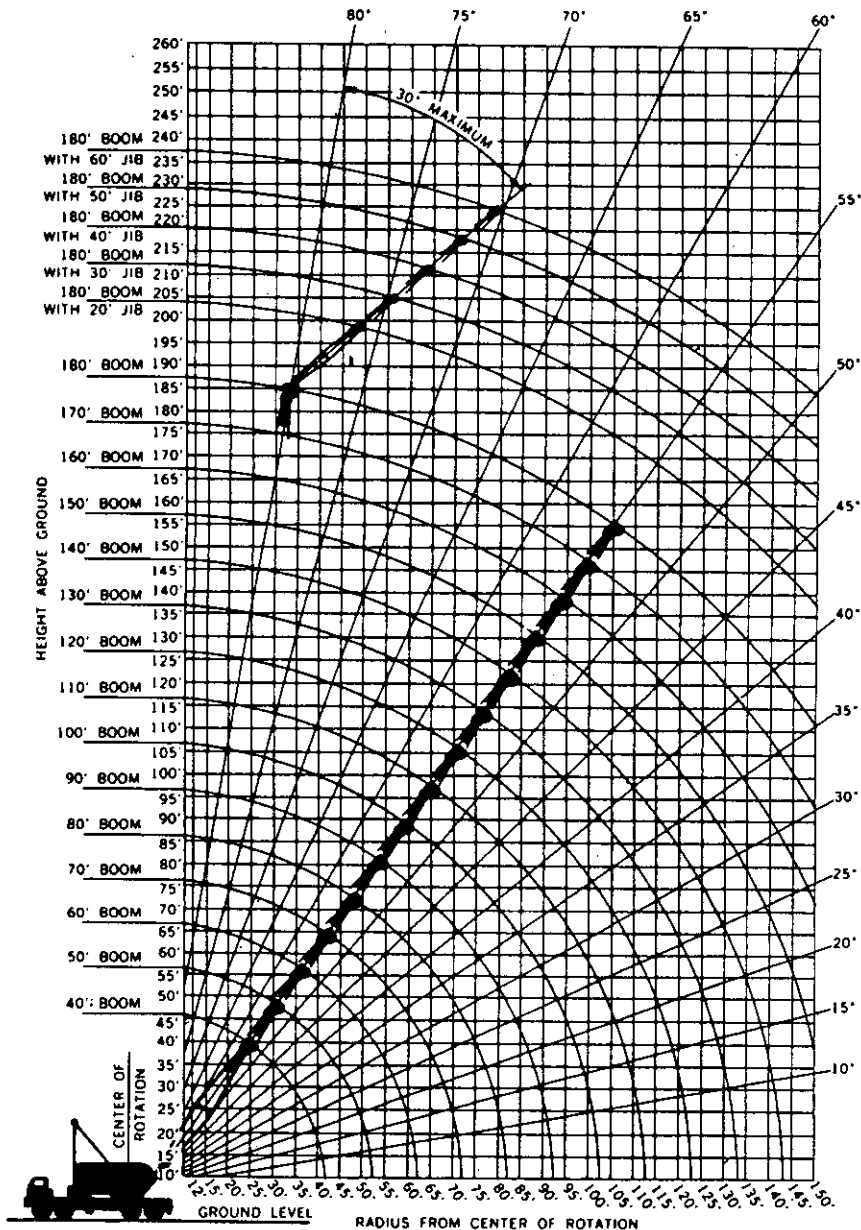


# P&H<sup>®</sup> 670-TC

## 70-ton Truck Crane 180' boom, 60' jib



Your versatile P & H 670-TC adapts readily to your special operating needs. This brochure contains these crane rating charts:

1. 22,500 lbs. counterweight - on outriggers 40 to 180 foot boom lengths
2. 22,500 lbs. counterweight - on rubber 40 to 120 foot boom lengths

**Jib Ratings**  
All boom combinations

This P & H Model 670-TC meets the requirements of ANSI B30.5 1968. Boom structure has been tested per SAE J 987. Machine stability has been tested per SAE J 765.

Standard  
50" wide x 50" deep  
Boom

**crane**

**lifting capacities  
working ranges**

# P&H® 670-TC

## PCSA CLASS 12-381

rated crane loads in pounds — main boom (50" w. x 50" d.) in over side . . . . .

| Oper. Rad. Ft. | Angle | 40 Ft. Boom  |             | Angle   | 50 Ft. Boom   |             | Angle | 60 Ft. Boom  |             | Angle | 70 Ft. Boom  |             | Angle | 80 Ft. Boom  |             | Angle | 90 Ft. Boom  |             | Angle | 100 Ft. Boom |             | Angle | 110 Ft. Boom |             |
|----------------|-------|--------------|-------------|---|---|-------------|-------|--------------|-------------|-------|--------------|-------------|-------|--------------|-------------|-------|--------------|-------------|-------|--------------|-------------|-------|--------------|-------------|
|                |       | Boom Pt. El. | Rating Lbs. |   | Boom Pt. El.  | Rating Lbs. |       | Boom Pt. El. | Rating Lbs. |       | Boom Pt. El. | Rating Lbs. |       | Boom Pt. El. | Rating Lbs. |       | Boom Pt. El. | Rating Lbs. |       | Boom Pt. El. | Rating Lbs. |       | Boom Pt. El. | Rating Lbs. |
| 12             | 79    | 47.5         | 140,000     |   | RATINGS ABOVE HEAVY LINE ARE LIMITED BY STRENGTH OF MATERIALS |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |
| 15             | 74    | 46.8         | 134,000     | 78  | 57.1  | 133,700     |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |
| 20             | 67    | 45.1         | 107,000     | 72  | 55.8  | 106,700     | 75    | 66.2         | 106,400     | 77    | 76.5         | 106,100     |       |              |             |       |              |             |       |              |             |       |              |             |
| 25             | 59    | 42.5         | 80,100      | 66  | 53.8  | 80,100      | 70    | 64.6         | 80,100      | 73    | 75.1         | 80,000      | 75    | 85.5         | 79,900      | 77    | 95.8         | 79,700      | 78    | 106.1        | 79,600      |       |              |             |
| 30             | 50    | 38.8         | 59,100      | 59  | 51.2  | 59,000      | 65    | 62.5         | 58,900      | 68    | 73.4         | 58,800      | 71    | 84.0         | 58,700      | 73    | 94.5         | 58,500      | 75    | 104.9        | 58,300      | 77    | 115.2        | 58,300      |
| 35             | 39    | 33.6         | 46,600      | 52  | 47.7  | 46,400      | 59    | 59.8         | 46,300      | 64    | 71.2         | 46,100      | 67    | 82.2         | 46,000      | 70    | 92.9         | 45,800      | 72    | 103.5        | 45,600      | 74    | 113.9        | 45,600      |
| 40             | 28    | 25.3         | *37,300     | 44  | 43.1  | 38,100      | 53    | 56.5         | 38,000      | 59    | 68.5         | 37,800      | 63    | 79.9         | 37,600      | 67    | 90.9         | 37,400      | 69    | 101.7        | 37,100      | 71    | 112.3        | 37,200      |
| 45             |       |              |             | 35  | 38.8  | 32,200      | 47    | 52.2         | 32,100      | 54    | 65.2         | 31,800      | 59    | 77.2         | 31,600      | 63    | 88.6         | 31,400      | 66    | 99.6         | 31,100      | 68    | 110.5        | 31,200      |
| 50             |       |              |             | 23  | 27.3  | 27,800      | 40    | 46.8         | 27,600      | 49    | 61.2         | 27,400      | 55    | 73.9         | 27,200      | 59    | 85.8         | 26,900      | 63    | 97.2         | 26,700      | 65    | 108.4        | 26,700      |
| 60             |       |              |             |   |   |             | 21    | 29.1         | 21,500      | 37    | 50.3         | 21,200      | 46    | 65.5         | 21,000      | 52    | 78.9         | 20,700      | 56    | 91.3         | 20,400      | 60    | 103.2        | 20,400      |
| 70             |       |              |             |   |   |             |       |              |             | 19    | 30.8         | 17,100      | 34    | 53.4         | 16,800      | 43    | 69.6         | 16,600      | 49    | 83.6         | 16,300      | 53    | 96.5         | 16,300      |
| 80             |       |              |             |   |   |             |       |              |             |       |              |             | 18    | 32.3         | 14,000      | 32    | 56.4         | 13,600      | 41    | 73.3         | 13,300      | 46    | 87.9         | 13,300      |
| 90             |       |              |             |   |   |             |       |              |             |       |              |             |       |              |             | 17    | 33.8         | 11,500      | 31    | 59.1         | 11,200      | 39    | 76.9         | 11,100      |
| 100            |       |              |             |   |   |             |       |              |             |       |              |             |       |              |             |       |              |             | 16    | 35.2         | 9,550       | 29    | 61.7         | 9,450       |
| 110            |       |              |             |   |   |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             | 15    | 36.5         | 8,150       |
| 120            |       |              |             | <b>WARNING:</b>   |   |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |
| 130            |       |              |             | WHEN BOOM IS EQUIPPED WITH JIB, MAIN HOOK RATING MUST BE REDUCED TO COMPENSATE FOR JIB ATTACHMENT WEIGHT. |   |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |
| 140            |       |              |             | Jib Length            20 Ft.   30 Ft.   40 Ft.   50 Ft.   60 Ft.  |   |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |
| 150            |       |              |             | Deduct — Lbs.        1500   1500   2000   2500   3000   |   |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |

32R11-B

rated crane loads in pounds — main boom — without outriggers — tires . . . . .

| Oper. Rad. Ft. | Angle | 40 Ft. Boom |           | Angle | 50 Ft. Boom |           | Angle | 60 Ft. Boom |           | Angle | 70 Ft. Boom |           | Angle | 80 Ft. Boom |           | Angle | 90 Ft. Boom |           | Angle | 100 Ft. Boom |           | Angle | 110 Ft. Boom |           |
|----------------|-------|-------------|-----------|-------|-------------|-----------|-------|-------------|-----------|-------|-------------|-----------|-------|-------------|-----------|-------|-------------|-----------|-------|--------------|-----------|-------|--------------|-----------|
|                |       | Over Side   | Over Rear |       | Over Side   | Over Rear |       | Over Side   | Over Rear |       | Over Side   | Over Rear |       | Over Side   | Over Rear |       | Over Side   | Over Rear |       | Over Side    | Over Rear |       | Over Side    | Over Rear |
| 12             | 79    |             | 76,000    |       |             |           |       |             |           |       |             |           |       |             |           |       |             |           |       |              |           |       |              |           |
| 15             | 74    |             | 64,300    | 78    |             | 63,700    |       |             |           |       |             |           |       |             |           |       |             |           |       |              |           |       |              |           |
| 20             | 67    |             | 46,800    | 72    |             | 46,600    | 75    | 39,100      | 46,500    | 77    | 38,900      | 46,200    |       |             |           |       |             |           |       |              |           |       |              |           |
| 25             | 59    | 29,400      | 35,000    | 66    | 29,100      | 34,800    | 70    | 29,000      | 34,600    | 73    | 28,700      | 34,300    | 75    | 28,500      | 34,100    | 77    | 28,200      | 33,800    | 78    | 27,900       | 33,500    |       |              |           |
| 30             | 50    | 23,100      | 27,700    | 59    | 22,900      | 27,500    | 65    | 22,700      | 27,300    | 68    | 22,400      | 27,000    | 71    | 22,200      | 26,800    | 73    | 21,900      | 26,500    | 75    | 21,600       | 26,200    | 77    | 21,500       | 26,100    |
| 35             | 39    | 19,000      | 22,800    | 52    | 18,700      | 22,500    | 59    | 18,500      | 22,400    | 64    | 18,200      | 22,100    | 67    | 18,000      | 21,800    | 70    | 17,700      | 21,500    | 72    | 17,400       | 21,200    | 74    | 17,300       | 21,100    |
| 40             | 28    | 16,000      | 19,300    | 44    | 15,600      | 19,000    | 53    | 15,500      | 18,800    | 59    | 15,200      | 18,500    | 63    | 14,900      | 18,300    | 67    | 14,600      | 18,000    | 69    | 14,300       | 17,600    | 71    | 14,200       | 17,600    |
| 45             |       |             |           | 35    | 13,400      | 16,300    | 47    | 13,200      | 16,100    | 54    | 12,900      | 15,800    | 59    | 12,600      | 15,600    | 63    | 12,300      | 15,300    | 66    | 12,000       | 14,900    | 68    | 11,900       | 14,900    |
| 50             |       |             |           | 23    | 11,600      | 14,300    | 40    | 11,400      | 14,000    | 49    | 11,100      | 13,700    | 55    | 10,800      | 13,500    | 59    | 10,500      | 13,100    | 63    | 10,200       | 12,800    | 65    | 10,100       | 12,700    |
| 60             |       |             |           |       |             |           | 21    | 8,850       | 11,000    | 37    | 8,500       | 10,600    | 46    | 8,200       | 10,400    | 52    | 7,900       | 10,100    | 56    | 7,600        | 9,750     | 60    | 7,500        | 9,650     |
| 70             |       |             |           |       |             |           |       |             |           | 19    | 6,750       | 8,600     | 34    | 6,450       | 8,250     | 43    | 6,100       | 7,950     | 49    | 5,750        | 7,600     | 53    | 5,650        | 7,500     |
| 80             |       |             |           |       |             |           |       |             |           |       |             |           | 18    | 5,150       | 6,750     | 32    | 4,800       | 6,400     | 41    | 4,450        | 6,050     | 46    | 4,350        | 5,900     |
| 90             |       |             |           |       |             |           |       |             |           |       |             |           |       |             |           | 17    | 3,850       | 5,250     | 31    | 3,450        | 4,900     | 39    | 3,300        | 4,750     |
| 100            |       |             |           |       |             |           |       |             |           |       |             |           |       |             |           |       |             |           | 16    | 2,750        | 4,050     | 29    | 2,550        | 3,800     |

# operating instructions printed throughout this brochure are for your safety and will contribute to the long life of your P&H 670-TC

Operating radius is the horizontal distance from centerline of rotation to a vertical line through the center of gravity of the load.

Ratings shown are based on freely suspended loads and make no allowance for such factors as wind effect on lifted loads, ground conditions, out-of-level, operating speeds or any other condition that could be detrimental to the safe operation of this equipment. The operator, therefore, has the responsibility to judge the existing conditions and

reduce lifted loads and operating speeds accordingly. Ratings do not exceed 85% of tipping load as determined by SAE J 765. Deduct weight of hook block(s), slings, cement bucket, and all other load handling accessories from main boom or jib rating shown. Ratings shown are based on 22,500 lbs. counterweight.

Ratings shown are only for combination of P & H manufactured upper, boom, jib, counterweights, carrier and outriggers. Boom backstops are required for all boom

## ... and over rear work areas with outriggers fully extended and set

| Angle | 120 Ft. Boom |             | Angle | 130 Ft. Boom |             | Angle | 140 Ft. Boom |             | Angle | 150 Ft. Boom |             | Angle | 160 Ft. Boom |             | Angle | 170 Ft. Boom |             | Angle | 180 Ft. Boom |             | Oper. Rad. Ft. |              |
|-------|--------------|-------------|-------|--------------|-------------|-------|--------------|-------------|-------|--------------|-------------|-------|--------------|-------------|-------|--------------|-------------|-------|--------------|-------------|----------------|--------------|
|       | Boom Pt. El. | Rating Lbs. |       | Boom Pt. El. | Rating Lbs. |       | Boom Pt. El. | Rating Lbs. |       | Boom Pt. El. | Rating Lbs. |       | Boom Pt. El. | Rating Lbs. |       | Boom Pt. El. | Rating Lbs. |       | Boom Pt. El. | Rating Lbs. |                | Boom Pt. El. |
|       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             | 12             |              |
|       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |                | 15           |
|       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |                | 20           |
|       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |                | 25           |
|       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |                | 30           |
|       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |                | 35           |
|       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |                | 40           |
|       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |                | 45           |
|       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |                | 50           |
|       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |                | 60           |
|       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |                | 70           |
|       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |                | 80           |
|       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |                | 90           |
|       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |                | 100          |
|       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |                | 110          |
|       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |                | 120          |
|       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |                | 130          |
|       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |                | 140          |
|       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |       |              |             |                | 150          |

NOTE: OPERATION OF THIS EQUIPMENT IN EXCESS OF LOAD RATINGS AND DISREGARD OF INSTRUCTIONS VOIDS THE WARRANTY.

## ... at 100 p.s.i.

## maximum boom length to lift off ground

| Oper. Rad. Ft. | Angle | 120 Ft. Boom |           |
|----------------|-------|--------------|-----------|
|                |       | Over Side    | Over Rear |
| 12             |       |              |           |
| 15             |       |              |           |
| 20             |       |              |           |
| 25             |       |              |           |
| 30             | 78    | 21,300       | 25,900    |
| 35             | 75    | 17,000       | 20,900    |
| 40             | 73    | 14,000       | 17,300    |
| 45             | 70    | 11,700       | 14,600    |
| 50             | 68    | 9,850        | 12,500    |
| 60             | 62    | 7,200        | 9,400     |
| 70             | 57    | 5,400        | 7,250     |
| 80             | 51    | 4,050        | 5,650     |
| 90             | 44    | 3,050        | 4,450     |
| 100            | 37    | 2,250        | 3,550     |

| Maximum Boom Length to Lift Off Ground |                                    |            |                        |            |   |            |
|--|------------------------------------|------------|------------------------|------------|---|------------|
| Boom Over                              | Without Front Bumper Counterweight |            |                        |            | With 14,000 lbs. Front Bumper Counterweight* and Outriggers Set |            |
|  | With Outriggers Set                |            | Without Outriggers Set |            | Boom Only   | Boom & Jib |
|  | Boom Only                          | Boom & Jib | Boom Only              | Boom & Jib |   |            |
| Side                                   | 180                                | 170 + 30   | 120                    | 100 + 30   | 180   | 170 + 30   |
| Rear                                   | 180                                | 180 + 20   | 120                    | 110 + 30   | 180   | 180 + 60   |

\*Front bumper counterweight is not an operating counterweight — is used only to erect boom with jib (30' and longer) over the rear without load.

**WARNING:** When operating crane "without outriggers" loads lifted over rear and swung over side, will increase in radius due to tire deflection. This increase in radius must be compensated for by raising boom, or machine may tip over.

## WARNING

Using this equipment in excess of rated loads, in areas of chart not rated, or with disregard of instructions will result in unsafe operating conditions and is a violation of the U.S. Dept. of Labor, Safety and Health regulations for construction.

lengths. Boom inserts must be arranged as shown in the Boom Make-Up Chart. Standard boom hoist reeving is 10 part line. Eight (8) part boom hoist reeving is approved only for clamshell or dragline operation and "without outrigger" ratings. Gantry must be in raised position for all "with outriggers" ratings. Gantry may be in lowered position only for "without outriggers" ratings. Refer to boom hoist reeving plate 32Q80 for additional information. Refer to diagrams for applicable working area.

**WARNING:** The wind effect on the lifted load can cause sufficient side load to overstress boom or jib structure. When suspended load will not remain in line with boom, derate chart 25%. We recommend stopping operation when wind is above 30 m.p.h. and tying off or lowering boom when wind is above 50 m.p.h. When continued operation under windy conditions is necessary, consult factory for special derated load rating chart.

Maximum approved travel speed with 14,000 pound front bumper counterweight installed is 5 m.p.h. All tires must be evenly inflated to 100 P.S.I. Maximum approved boom length for travel is 120 ft. or 100 ft. boom and 30 ft. jib. Boom must be positioned over rear of carrier. Gantry must be in raised position over rear of carrier.

**WARNING:** When 3/4 inch diameter P & H type 11 wire rope (18 x 7 non-rotating preformed plow steel wire rope fiber core) is used for jib line on rear drum maximum lifted load including hook must not exceed 8,720 lbs. Do not use dead-end swivels with non-rotating wire rope.

**WARNING:** Welding or other repair to tubular steel boom may weaken the structure. See your P&H dealer for authorized boom repair service. Unauthorized repair will void all warranties.

## boom make-up

| BOOM ARRANGEMENT   |                |             |                  |
|--|----------------|-------------|------------------|
| Base Length = 20 ft.; Tip Length = 20 ft.<br>Inserts: A = 10 ft.; B = 20 ft.; C = 30 ft.; D = 50 ft. |                |             |                  |
| Boom Length  | Boom Makeup    | Boom Length | Boom Makeup      |
| 50   | Base A-Tip     | 120         | Base D-C-Tip     |
| 60   | Base B-Tip     | 130         | Base A-C-D-Tip   |
| 70   | Base B-A-Tip   | 140         | Base B-C-D-Tip   |
| 80   | Base C-A-Tip   | 150         | Base A-B-C-D-Tip |
| 90   | Base C-B-Tip   | 160         | Base B-D-D-Tip   |
| 100  | Base A-B-C-Tip | 170         | Base A-D-B-D-Tip |
| 110  | Base D-B-Tip   | 180         | Base A-D-C-D-Tip |

One specified insert may be replaced by two shorter inserts without reducing load ratings.

**WARNING:** When assembling boom inserts, do not cantilever more than 60 ft. of inserts past point of pendant rope attachment to boom. Relocate point of attachment out on boom as additional inserts are added.

## jib ratings

### MAXIMUM JIB (24" W. x 22" D.) RATINGS FOR LIFTING CRANE SERVICE — LBS.

| Three-Quarter Inch Dia. P&H Type 4 Wire Rope        |               |               |               |               |               |
|---|---------------|---------------|---------------|---------------|---------------|
| * Use Two Parts of Line for Loads Above 14,500 Lbs. |               |               |               |               |               |
| Offset Angle<br>Jib to Boom<br>Under Full Load      | 20 Ft.<br>Jib | 30 Ft.<br>Jib | 40 Ft.<br>Jib | 50 Ft.<br>Jib | 60 Ft.<br>Jib |
| 10°   | 22,000*       | 20,000*       | 16,000*       | 12,000        | 8,000         |
| 20°   | 16,000*       | 14,500        | 12,000        | 9,500         | 7,000         |
| 30° Max.  | 13,000        | 11,000        | 8,500         | 7,000         | 6,000         |

### MAXIMUM JIB RATINGS FOR BUCKET SERVICE—LBS.

| * Use Three-Quarter Inch Dia. P&H Type 25 Wire Rope<br>for Loads Above 14,500 Lbs. |         |         |        |        |        |
|--|---------|---------|--------|--------|--------|
| Offset Angle   | 20 Ft.  | 30 Ft.  | 40 Ft. | 50 Ft. | 60 Ft. |
| 10°  | 16,500* | 16,000* | 12,800 | 9,800  | 6,400  |
| 20°  | 12,800  | 11,600  | 9,600  | 7,600  | 5,600  |
| 30° Max.   | 10,400  | 8,800   | 6,800  | 5,600  | 4,800  |

Jib Crane Ratings are based on strength of materials. When main boom load rating at operating radius is less than maximum jib ratings, stability governs and the lower value of main boom load rating must be used. Jibs are intended to increase lifting height — not operating radius — therefore, maximum jib operating radius is limited to maximum rated radius of boom length on which jib is mounted.

P & H type 4 wire rope: 6 x 25 with filler wire, preformed improved plow steel wire rope 7 x 7 I.W.R.C.

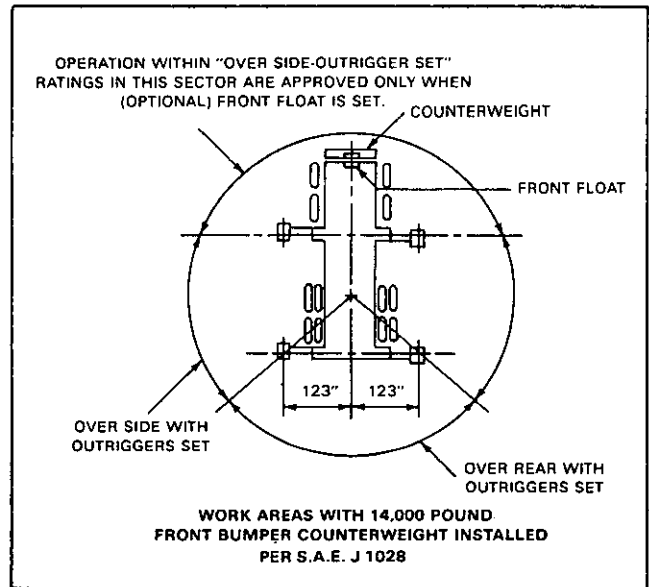
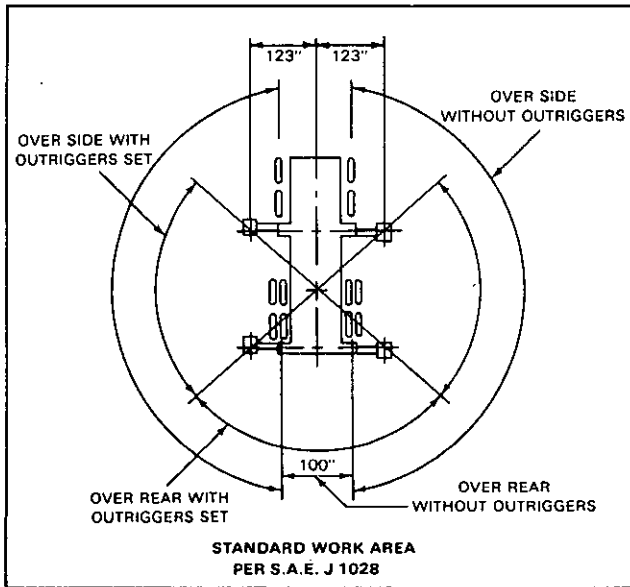
P & H type 25 wire rope: 6 x 25 I.W.R.C., preformed extra improved plow steel wire rope (filler wire).

# reeving data

| RECOMMENDED WIRE ROPE LENGTH<br>FOR DRUMS — FT. |                       |                      |                       |                       |                      |
|---|-----------------------|----------------------|-----------------------|-----------------------|----------------------|
| BOOM<br>LENGTH<br>FT.                           | MAIN<br>HOIST<br>DRUM | JIB<br>HOIST<br>DRUM | BOOM<br>LENGTH<br>FT. | MAIN<br>HOIST<br>DRUM | JIB<br>HOIST<br>DRUM |
| 40  | 415                   | 255                  | 160                   | 670                   | 615                  |
| 50  | 505                   | 285                  | 170                   | 540                   | 645                  |
| 60  | 530                   | 315                  | 180                   | 570                   | 675                  |
| 70  | 610                   | 345                  |                       |                       |                      |
| 80  | 520                   | 375                  |                       |                       |                      |
| 90  | 580                   | 405                  |                       |                       |                      |
| 100   | 640                   | 435                  |                       |                       |                      |
| 110   | 590                   | 465                  |                       |                       |                      |
| 120   | 640                   | 495                  |                       |                       |                      |
| 130   | 550                   | 525                  |                       |                       |                      |
| 140   | 590                   | 555                  |                       |                       |                      |
| 150   | 630                   | 585                  |                       |                       |                      |

| MAIN HOIST DRUM RATED LOADS FOR<br>SEVEN-EIGHTHS INCH DIAMETER P&H TYPE 4 WIRE ROPE |        |        |        |        |        |         |         |         |
|---|--------|--------|--------|--------|--------|---------|---------|---------|
| Number of Parts of<br>Main Hoist Reeving  | 1      | 2      | 3      | 4      | 5      | 6       | 7       | 8       |
| Maximum Load — Lbs.   | 17,500 | 35,000 | 52,500 | 70,000 | 87,500 | 105,000 | 122,500 | 140,000 |

## AREAS OF OPERATION



NOTE: All designs, specifications and components of the equipment described above are subject to change at the manufacturer's sole discretion at any time without advance notice. Data published herein is informational in nature and shall not be construed to warrant suitability of the machine for any particular purpose as performance may vary with the conditions encountered. The only warranty applicable is our standard written warranty for this machine. Manufactured and sold in conformance with U. S. Department of Commerce Commercial Standard CS-90-58.



Address inquiries to:

# P&H<sup>®</sup> 670-TC

## 70-ton Truck Crane

### UPPER MACHINERY



#### POWER PLANT:

| ENGINE                         | STANDARD       | OPTIONAL                        |
|--------------------------------|----------------|---------------------------------|
| Make                           | Cummins        | Detroit Diesel                  |
| Model                          | N-855P         | 6-71<br>(6-71N with Converter)  |
| Type                           | Diesel         | Diesel                          |
| No. of Cylinders               | 6              | 6                               |
| Bore x Stroke, In.             | 5.50 x 6.00    | 4.25 x 5.00                     |
| cm                             | 139.7 x 152.4  | 107.9 x 127                     |
| Displacement, In. <sup>3</sup> | 855            | 426                             |
| liters                         | 14.011         | 6.981                           |
| Cycles                         | 4              | 2                               |
| Air Induction                  | Nat. Aspirated | Super-Charged<br>(Roots Blower) |
| Cooling                        | Liquid         | Liquid                          |
| Starter                        | 24 V.          | 24 V.                           |
| Alternator                     | 24 V. - 50 A.  | 24 V. - 50 A.                   |

| TRANSMISSION: | STANDARD                               | OPTIONAL                               |
|---------------|--|--|
| Make          | Cotta                                  | Cotta                                  |
| Model         | T3U-1771                               | T3U-1771                               |
| Type          | 3-Speed<br>Manual<br>(2nd Gear Normal) | 3-Speed<br>Manual<br>(2nd Gear Normal) |

| RATINGS:                                 | STANDARD                      | OPTIONAL                      |
|--|-------------------------------|-------------------------------|
| Net HP @ RPM<br>(at Flywheel)            | 135 @ 2000                    | 140 @ 1800                    |
| Net HP @ RPM<br>(at Trans. Output Shaft) | 130 @ 1000                    | 134.4 @ 1000                  |
| Altitude Range<br>(m)                    | 0-10,000 ft.<br>(0-3040)      | 0-8500 ft.<br>(0-2584)        |
| Temp. Range in F.<br>(C.)                | -20° to 110°<br>(-28° to 43°) | -20° to 110°<br>(-28° to 43°) |

| TORQUE CONVERTER: | STANDARD  | OPTIONAL  |
|-------------------|-----------|-----------|
| Make              | Twin Disc | Allison   |
| Model             | CO-10066  | TCDOA-475 |
| Type              | 3-Stage   | 2-Stage   |

| RATINGS:                                 | STANDARD                      | OPTIONAL                      |
|--|-------------------------------|-------------------------------|
| Net HP @ RPM<br>(at Flywheel)            | 157.5 @ 2100                  | 175 @ 1800                    |
| Net HP @ RPM<br>(at Trans. Output Shaft) | 125.4 @ 1065                  | 132 @ 1180                    |
| Altitude Range<br>(m)                    | 0-8500 ft.<br>(0 to 2584)     | 0-6000 ft.<br>(0-1824)        |
| Temp. Range in F.<br>(C.)                | -20° to 110°<br>(-28° to 43°) | -20° to 110°<br>(-28° to 43°) |

**Input disconnect clutch** — Transmission: Double plate dry type mechanically engaged. 11.5" dia.  
Torque converter: Twin Disc - 3 stage (opt. with Cummins engines only), or Allison - single stage (opt. with D.D.A. engines only).

**Converter charging hydraulic system** — Gear type pump charges converter. Oil to water heat exchanger cools fluid. Filtered with full flow pressure filters with replaceable paper elements.

**Governor control** — Twist grip (standard) — Twist grip and foot pedal (optional).

**Fuel tank capacity** — 75 gallons (283.9 liters).

|                   | Cummins N-855P  | Detroit 6-71  |
|-------------------|---|---|
| Lube Oil Capacity | Engine-24 qts. (22.7 liters)<br>Filter-16 qts. (15 liters)  | Engine-18 qts. (17.4 liters)<br>Filter-2 qts. (1.9 liters)        |
| Coolant Capacity  | Engine-5 gal. (18.9 liters)<br>Radiator-12 gal. (45 liters) | Engine-5.5 gal. (21.3 liters)<br>Radiator-3.25 gal. (12.6 liters) |
| Air Cleaner       | Farr, 2 stage<br>dry type                                   | Donaldson<br>dry type   |
| Lube Oil Filter   | Full flow - replaceable<br>By-pass - replaceable            | Full flow - replaceable<br>By-pass - none                         |
| Fuel Filter       | Primary - none<br>Secondary - replaceable<br>spin on        | Primary - replaceable<br>Secondary - replaceable                  |

**Starting aid** — Required below 14 F (-10 C.) ether-measured shot standard equipment for all power plants.

**Hydraulic pump** — Flange mounted, constant displacement in-line piston pump. 3000 psi (210 kg/cm<sup>2</sup>), 5 GPM (19 liters per minute).

**Batteries** — (2) - 12 volt H.D. rated, series connected. Disconnect switch prevents start-up while servicing. 215 amp. hours @ 20 hour rate.

**FRAME:** All welded frame and power box constructed of heavy steel plate. Shaft mountings are line bored to insure precise alignment of all parts. Gearing (except swing) is sealed and splash lubricated. Involute splined shafts are used, turn in roller and ball bearings. Gears and roller chains are hardened, sealed in oil bath for long, trouble free operation. Deck covered with non-skid floorplate.

**MACHINERY CAB:** All steel construction, access panels on both sides and roof. Removable panels for main drum brake access. No lines pass through cab. Low profile, recessed center roof. Deck machinery is in compact arrangement, easy to maintain and repair.

**GANTRY:** Two position, telescopic gantry. Raised and lowered by boom hoist ropes — 6 sheaves — 12.75" (32.4 cm) P.D.

**OPERATORS CAB:** Totally enclosed from weather. Full vision cab has safety glass throughout, sliding front window and door. Operators four-way adjustable seat is standard. Cab heater — defroster, signal horn, windshield wiper, drum turn indicator, boom angle indicator and boom hoist kick-out limit switch available.



#### CONTROLS:

In front of operator are foot pedals for front and rear drum brakes, hand levers for swing control, front and rear drum controls, boom hoist control, swing brake and engine speed control. At operators left are console mounted switches for front and rear drum pawls and brake locks, engine start, starting aid, lights and master switch. At operators left are also located levers for front and rear drum brake locks, transmission shifting, and swing brake lock. Included are gauges for upper hydraulic oil pressure, fuel level, engine water temperature, oil pressure, ammeter, hourmeter, drum brake pressure, converter oil charging pressure (on torque converter equipped).

## Specifications

machines only), engine clutch hand lever and trouble light receptacle and drum turn indicators. (optional)

**HYDRAULIC SYSTEM:** Full flow hydraulic system for infinitely variable pressure to front and rear drums and boom hoist brakes and clutches. System at 1500 psi (105 kg/cm<sup>2</sup>) line pressure. Response is instant, positive and smooth to operators touch. Pumped fluid is filtered, stored in an accumulator under pressure, cooled in 15 gal. (57 liter) reservoir and filtered again before returning to pump.



**BOOM HOIST:**

Independent internal expanding band type clutch, with automatic brake and planetary lowering. Twin external safety ratchets for locking main drum or planetary drum. Main drum mounted on anti-friction bearings.

**DRUM:** 13.75" (34.9 cm) P.D. x 7" (17.8 cm) long. Total wire rope length per drum for 3/4" (19 mm) wire rope is 352.2 ft. (107.3 m) storage or 295.4 ft. (90 m) working length.

| Transmission Range | Gear Ratio | Low                       | Normal                  | High                    |
|--------------------|------------|---------------------------|-------------------------|-------------------------|
|                    |            | 3.217 to 1                | 2.000 to 1              | 1.000 to 1              |
| HOISTING           | Line Speed | 80.14 fpm (24.4 m/min.)   | 128.9 fpm (39.2 m/min.) | 257.8 fpm (78.6 m/min.) |
|                    | Line Pull  | 22,519 lbs. (10214.62 kg) | 14000 lbs. (6350.4 kg)  | 7000 lbs. (3175.2 kg)   |
| LOWERING           | Line Speed | 48.98 fpm (14.9 m/min.)   | 78.8 fpm (24 m/min.)    | 157.6 fpm (48 m/min.)   |



**CLUTCH SIZE:** 23" (58.4 cm) dia. x 4" (10.2 cm) wide, band type, internal expanding.



**BRAKE SIZE:** (2) - 25.5" (64.8 cm) dia. 3" (7.6 cm) wide, band type external contracting "full wrap" design.



**LOAD DRUMS:**

**Standard Drums:**

**FRONT:** (Crane & dragline) 18.375" (46.6 cm) P.D. x 13.875" (35.24 cm) long smooth drum for crane — grooved drum for dragline. Total wire rope length of .875" (22 mm) dia. wire rope is 618 ft. (188.3 m) storage or 510 ft. (155.4 m) working length.

**FRONT (Clamshell); REAR (Crane, clamshell & dragline)** 18.25" (46.3 cm) P.D. x 13.875" (35.24 cm) long smooth drum. Total wire rope length of .75" (19 mm) dia. wire rope is 836 ft. (254.8 m) storage or 708 ft. (215.7 m) working length.

**High-Speed Drum: OPTIONAL**

**REAR:** (Crane) 19.75" (50.2 cm) P.D. x 13.875" (35.2 cm) long smooth drum. Total wire rope length per drum for 3/4" (19 m) wire rope is 758 ft. (231 m) storage or 630 ft. (192 m) working length.

| Transmission Range         | Gear Ratio | Low                       | Normal                  | High                     |
|----------------------------|------------|---------------------------|-------------------------|--------------------------|
|                            |            | 3.217 to 1                | 2.000 to 1              | 1.000 to 1               |
| HOISTING: Front clam-shell | Line Speed | 106.3 fpm (32.4 m/min.)   | 171 fpm (52.1 m/min.)   | 342 fpm (104.2 m/min.)   |
|                            | Line Pull  | 36658.3 lbs. (16628.2 kg) | 22150 lbs. (10047.2 kg) | 11075 lbs. (5023.6 kg)   |
| Front Crane & Drag-line    | Line Speed | 106.9 fpm (32.6 m/min.)   | 172 fpm (52.4 m/min.)   | 344 fpm (104.8 m/min.)   |
|                            | Line Pull  | 35387 lbs. (16051.5 kg)   | 22000 lbs. (9979.2 kg)  | 11000 lbs. (4989.6 kg)   |
| LOWERING: Front Clamshell  | Line Speed | 171.0 fpm (52.1 m/min.)   | 275.2 fpm (83.9 m/min.) | 550.4 fpm (167.8 m/min.) |
|                            | Line Speed | 170.9 fpm (52.1 m/min.)   | 275 fpm (83.8 m/min.)   | 550 rpm (167.6 m/min.)   |

continued next column

|                         |            |                            |                         |                          |
|-------------------------|------------|----------------------------|-------------------------|--------------------------|
| HOISTING: Rear Standard | Line Speed | 106.31 fpm (32.4 m/min.)   | 171 fpm (52.1 m/min.)   | 342 fpm (104.2 m/min.)   |
|                         | Line Pull  | 34582.75 lbs. (15686.4 kg) | 21500 lbs. (9752.4 kg)  | 10750 lbs. (4876.2 kg)   |
| High Speed              | Line Speed | 115 fpm (35 m/min.)        | 185 fpm (56.4 m/min.)   | 370 fpm (112.8 m/min.)   |
|                         | Line Pull  | 31930 lb. (14482.8 kg)     | 19850.2 lb. (9004.3 kg) | 9925.1 lb. (4502.1 kg)   |
| LOWERING: Rear Standard | Line Speed | 171 fpm (52.1 m/min.)      | 275.2 fpm (83.9 m/min.) | 550.4 fpm (167.8 m/min.) |
| High Speed              | Line Speed | 185 fpm (56.4 m/min.)      | 298 fpm (90.8 m/min.)   | 596 fpm (181.7 m/min.)   |



**CLUTCH:** 28" (71.1 cm) dia. x 4" (10.2 cm) wide, band type internal expanding.



**BRAKE:** 32.5" (82.5 cm) dia. x 5" (12.7 cm) wide band type, external contracting hydraulic set, with additional spring set hydraulically released brake lock and external ratchet for locking drum.



**POWER CONTROLLED LOAD LOWERING:** Reverse planetary gearing in drum, transmission and engine. External spider brake on drum engages planetary gears.



**THIRD DRUM:**

Mounts on extension of front shaft to left of main drum. Does not interfere with any machine function or front end attachment. (Optional).

**DRUM:** 16.125" (40.9 cm) P.D. x 6" (15.2 cm) long. Total wire rope length of .625" (15.8 mm) wire rope is 269.5 ft. (82.1 m) storage or 217.3 ft. (66.2 m) working.

| Transmission Range | Low                     | Normal              | High                |
|--------------------|-------------------------|---------------------|---------------------|
| Gear Ratio         | 3.217 to 1              | 2.000 to 1          | 1.000 to 1          |
| Line Speed         | 93.87 fpm (28.6 m/min.) | 151 fpm (46 m/min.) | 302 fpm (92 m/min.) |
| Line Pull          | 12868 lbs. (5837 kg)    | 8000 lbs. (3629 kg) | 4000 lbs. (1814 kg) |



**CLUTCH:** (2) - 20" (50.8 cm) dia. x 4" (10.1 cm) wide, band type, internal expanding.



**BRAKE:** 22.5" (57.1 cm) dia. x 3" (7.6 cm) wide, band type, external contracting "full wrap" design.



**SWING:**



**CLUTCH:** (2) - 23.5" (59.7 cm) dia. x 6.25" (15.8 cm) wide, electro-magnetic Magnetorque®. Powered by engine driven alternator.



**BRAKE:** 18" (45.7 cm) dia. x 2.5" (6.3 cm) wide, band type, external contracting, hydraulic release, spring set.

**SWING ROLLERS:** Live roller circle with 28 - 4.875" (12.4 cm) dia. roller bearings (equally spaced) held in place by a retainer. Roller circle has 68" (172.7 cm) P.D.

**SWING GEAR:** 147 internal cut teeth, 58.8" (149.3 cm) P.D.

| Transmission Range | Low        | Normal     | High       |
|--------------------|------------|------------|------------|
| Gear Ratio         | 3.217 to 1 | 2.000 to 1 | 1.000 to 1 |
| Swing Speed        | 3.22 rpm   | 5.18 rpm   | 10.36 rpm  |

**FASTENING TO LOWER:** 6 adjustable hook rollers, one double front, two double rear, bolted to frame and hooked under lip of roller path on carrier.



**COUNTERWEIGHT:** 22,500 lb. (10,193 kg). Removable using 2 hydraulic jacks, set in carrier frame, and hand pump or optional electric hydraulic pump.

**CARRIER: 8 WHEELS, 4 WHEEL DRIVE, 12 TIRES**



**POWER PLANT:**

| ENGINE:                        | STANDARD         | OPTIONAL       |
|--------------------------------|------------------|----------------|
| Make                           | Cummins          | Detroit Diesel |
| Model                          | NTF-255          | 6-71N          |
| Type                           | Diesel           | Diesel         |
| No. of Cylinders               | 6                | 6              |
| Bore x Stroke, In.             | 5.5 x 6.0        | 4.25 x 5.00    |
| Displacement, In. <sup>3</sup> | cm (14.0 x 15.2) | (10.8 x 12.7)  |
| liters                         | 855              | 426            |
| Cycles                         | (14.0)           | (7.0)          |
| Air Induction                  | 4                | 2              |
| Cooling                        | Turbocharged     | Roots blower   |
| Starter                        | Liquid           | Liquid         |
| Charging                       | 24 volt          | 12 volt        |
| Compressor, Air                | 12 v. - 75 amp   | 12 v. - 62 amp |
| Governor, Air                  | 13.2 CFM         | 12 CFM         |
| Horsepower, Gross              | 105 to 120 PSI   | 105 to 120 PSI |
|                                | 255 HP @         | 236 HP @       |
|                                | 2300 rpm         | 2300 rpm       |
| Altitude Range                 | 0-3000           | 0-3000         |
| In Ft. (m)                     | (0-914)          | (0-914)        |
| Temp. Range in F. (C.)         | -20° to 110°     | -20° to 110°   |
|                                | (-28° to 43°)    | (-28° to 43°)  |

**Fuel tank capacity** — 75 gallons (284 liters). Meets FHWA requirements.

**RADIATOR:** Vertical tube and fin type core, rubber mounted thermostat temperature control. Dearthation baffle in top of tank.

**Air cleaner** — Farr dry type.

**Starting aid** — Required below 14°F. (-10°C.) ether-measured shot (optional). (Std. on Detroit Diesel).

**Batteries** — (2) - 12 volt H.D. rated, series connected, 215 amp hours @ 20 hour rate.

| TRANSMISSION | MAIN                             | AUXILIARY |
|--------------|----------------------------------|-----------|
| Make         | Fuller                           | Spicer    |
| Model        | RT-906                           | R-8031-R  |
| Type         | 6 speeds fwd., 2 reverse         | 3 speeds  |
|              | Total of 18 forward gear ratios. |           |

**Clutch** — Lipe-Rollway 14-2 DLB.

**PROP. SHAFTS:** Front, intermediate and interaxle prop. shaft — Spicer 1710 series.

**FRAME:** Front section is fabricated from 18" -58 lb. channel. Rear section is a fabricated box section 19.38 inches deep, crossbraced and reinforced. Front bumper of 0.38 inch bent plate. High strength low alloy steel plate used extensively. Tow loops front and rear.

**BODY:** Cab, engine hood, front and side panels, front skirts, equipment boxes and dirt shields formed from sheet steel. Front and rear fenders, transmission cover, body floor plate, running boards, battery box and cover formed from non-skid floor plate.

**CAB:** 32 inch (81 cm) wide one-man cab offset to left side of engine compartment, all windows safety glass, electric windshield wiper, removable dash panel (with tachometer, speedometer, air pressure gage, voltmeter, coolant temperature gage, engine oil pressure gage, fuel level gage and switches), air horn, dome light, seat assembly with seat belt and West Coast mirror — left side. Crank down door window and slide-by type right side windows. Air vent on left side.

**LIGHTING:** Two headlights with foot operated dimmer switch. Stop, tail, directional, clearance and rear license plate lights. Two weather-proof sockets provided for upper lighting during transit. In cab dome light, illuminated gages, indicator lights for hi-beam, directional, emergency flasher and low air pressure warning.

**STEERING:** Ross worm and roller steering gear 32.5 to 1 ratio. 21 inch (53 cm) diameter steering wheel. Garrison power assist.



**FRONT AXLE:**

Shuler FTC 5½" dia. tube 1" wall axles in tandem. 92.875 inches king pin centers. 102.3 inch (260 cm) track.

**REAR AXLE:** Rockwell Standard SPR-250 planetary drive tandem axle with interaxle differential. 100 inch (254 cm) track. 10.107:1 total ratio. Alternate axle: Clark BD-57000 planetary drive tandem axle with interaxle differential. 100 inch (254 cm) track. 10.281:1 ratio.



**BRAKES:**

**Service** — Dual air brake circuit with front and rear brakes on separate circuits. Front linings: 17.25 in. (43.8 cm) diameter by 4 in. (10.1 cm) wide (500 sq. in. (1270 cm<sup>2</sup>) total front lining area), 16 sq. in. (40.6 cm) air chambers. Rear linings: 17.25 in. (43.8 cm) diameter by 5.5 in. (13.9 cm) wide (808 sq. in. (1244 cm<sup>2</sup>) total rear lining area), 36 sq. in. (91.4 cm) air chambers. Total brake lining area — 1308 sq. in. (3321 cm<sup>2</sup>). (Std. Rockwell Axles.)

**Emergency/Parking** — Air release, spring set brake chambers on all rear wheels controlled from cab. Separate reservoir for emergency release of spring set brakes.

**SUSPENSION:** Front and rear — unsprung box section bogie beam with torque rods. Self-aligning bearings on both ends of bogie beams.

**TIRES:** Twelve 1400 x 20-J load range (18 PR) with non-directional treads on Goodyear 1020 MD rims. On-Off highway tread optional.



**OUTRIGGERS:**

Four (4) fabricated independent boxes of high strength low alloy steel plate. Front and rear boxes are pin connected and removable. Rollers and mechanical stops are provided when manually-operated outriggers are furnished.

**OUTRIGGER BEAMS:** Four (4) fabricated reinforced box section beams of high strength low alloy steel plate. Beams telescope to fully extended position of 123" (312 m) from longitudinal center of carrier to center line of jackscrew.

**HYDRAULIC OUTRIGGER ASSEMBLY:** Eight (8) double acting hydraulic cylinders, provide independent horizontal and vertical movement of each beam. Vertical cylinders have lock check valves. Electric solenoid actuated directional control valves are operated from two control panels. Each panel controls outriggers on control side only. Optional.

**FLOATS:** Four (4) aluminum floats 26.5 x 26.5 inches (67 x 67 cm).

**MISCELLANEOUS EQUIPMENT:** Tire inflation valve and hose, two (2) manual hydraulic jacks, upper lighting cable, hydraulic by-pass hose and special tools.

**OPTIONS:** Hydraulic outriggers, spare rim — 1020 MD, front "fifth" jack float for 360° operation, Jacobs engine brake, 14000 lb. (6250 kg) front bumper counterweight, automatic thermostatically controlled radiator shutters, 30 CFM — two cylinder air compressor, hourmeter, backup alarm and light assembly, power counterweight remover, heater and defroster fan, R.H. West Coast mirror, low profile floats, Bostrom seat.

**ATTACHMENTS**



**STANDARD BOOM:**

Two piece 40' (12.1 m) long, open throat lattice type tubular boom consisting of a 20' (6.1 m) long tapered base section and a 20' long standard tapered tip section. All boom sections are pin connected, have a 50" x 50" (127 cm x 127 cm) cross section and complete

with suspension cable assemblies. Sections are fabricated from seamless tubular T-1 steel and reinforced with contour-cut tubular lacings for strongest welded joints.

**STANDARD TIP:** 20' (6.1 m) long section has 4 offset boom point sheaves 18.625" (47.3 cm) P.D. with roller bearings. Boom extendible to 180' (54.6 m).

**DRAGLINE BOOM POINT EXTENSION:** Single boom point sheave (on center line of boom) 23.75" (60.3 cm) P.D. with roller bearings.

**BOOM INSERT SECTION:** 10' (3.1 m) Boom insert with suspension cable assemblies, pin connections ..... optional  
 20' (6.1 m) insert ..... optional  
 30' (9.1 m) insert ..... optional  
 50' (15.2 m) insert ..... optional

**JIB:** 20' (6.1 m) long jib, open throat lattice type, two equal tapered sections, pin connected, having a 22" x 24" (56 cm x 61 cm) cross section and with single 17.25" (43.8 cm) P.D. jib point sheave, compression strut and guy cables assemblies. Extendible to 60' (18.3 m). Extends reach to 230' (70.1 m). For lifts not exceeding 22,000 lb. (9979 kg). Optional.

**JIB INSERT SECTIONS:**

10' (3.1 m) jib insert with cable assemblies ..... optional  
 20' (6.1 m) jib insert ..... optional

**MID-POINT SUSPENSION:** Required when boom length is 170' (51.8 m) or longer.

**BOOM HOIST REEVING:** 10 parts of line standard — 8 parts optional within rating chart limitations.

**BOOM BACKSTOPS:** Spring loaded, shock absorber type. (Optional).

**WIRE ROPE GUIDE ROLLERS:** Use as required to eliminate cable interference.

**SHEAVE AND DRUM TO WIRE ROPE RATIOS:**

|                     | Boom Hoist | Front Crane  | Front Dragline | Front Clamshell |
|---------------------|------------|--|----------------|-----------------|
| Sheave to Wire Rope | 21.3 to 1  | 21.3 to 1  | ----           | 24.33 to 1      |
| Drum to Wire Rope   | 18.33 to 1 | 21 to 1  | 21 to 1        | 24.33 to 1      |
|                     | Third      | Rear Crane   | Rear Dragline  | Rear Clamshell  |
| Sheave to Wire Rope | ----       | 23 to 1  | 31.83 to 1     | 24.33 to 1      |
| Drum to Wire Rope   | 25.8 to 1  | Standard<br>24.33 to 1<br>High Speed<br>26.33 to 1 | 24.33 to 1     | 24.33 to 1      |

**TOWER CRANE:** Consists of two boom elements, tower and jib.  
**TOWER BOOM —** 110' (32.4 m) long lattice type tubular boom. 56" x 56" (142.2 cm x 142.2 cm) cross section consisting of 20' (6.1 m) base. 30' (9.1 m) insert, two-20' (6.1 m) inserts totalling 40' (12.2 m) and 20' (6.1 m) cap section, pin connected with suspension cable assemblies and strut. Tower extendible to 130' (38.5 m). Optional.

**JIB BOOM —** 60' (18.3 m) long lattice type tubular boom. 42" x 42" (106.7 cm x 106.7 cm) cross section consisting of 20' (6.1 m) base, 20' (6.1 m) insert and 20' (6.1 m) tip section with one boom point sheave 17.25" (43.8 cm) P.D. with roller bearings, pin connected with suspension cable assemblies. Jib extendible to 120' (35.4 m). Optional.

**TOWER INSERT SECTIONS:**

10' (3.1 m) insert with cable assemblies ..... optional  
 20' (6.1 m) insert with cable assemblies ..... optional  
 30' (9.1 m) insert with cable assemblies ..... optional  
 50' (15.2 m) insert with cable assemblies ..... optional

**JIB INSERT SECTIONS:**

10' (3.1 m) jib insert with cable assemblies ..... optional  
 20' (6.1 m) jib insert with cable assemblies ..... optional  
 30' (9.1 m) jib insert with cable assemblies ..... optional

**HOOK BLOCKS:**

| Block Capacity              | Number Sheaves | Wire Rope Size | Weight                 | Wire Rope to Sheave Ratio | Part No.               |
|-----------------------------|----------------|----------------|------------------------|---------------------------|------------------------|
| 22,000 lbs.<br>(9979 kg)    | 1              | 75             | 350 lbs.<br>(158.8 kg) | 16.66 to 1                | 8U7-D4<br>(Jib-Opt.)   |
| 52,500 lbs.<br>(23,814 kg)  | 1              | .875           | 575 lbs.<br>(260.8 kg) | 18.7 to 1                 | 8U7-D10<br>(Std.)      |
| 87,500 lbs.<br>(36,690 kg)  | 2              | 1"             | 840 lbs.<br>(381 kg)   | 18.3 to 1                 | 8U7-D24<br>(Opt.)      |
| 105,000 lbs.<br>(47,628 kg) | 3              | .875           | 2220 lbs.<br>(1007 kg) | 24.4 to 1                 | 8U7-D71<br>(Opt.)      |
| 140,000 lb.<br>(63,504 kg)  | 4              | 1"             | 1820 lb.<br>(825.5 kg) | 18.3 to 1                 | 8U7-D26<br>(Opt.)      |
| 14,500 lbs.<br>(6577 kg)    | Weighted hook  |                | 364 lbs.<br>(165.1 kg) | --                        | 8U7-D503<br>(Jib opt.) |

**WEIGHTS:**

Carrier — Including turret, hydraulic outriggers, floats, roller circle and standard tires — 50,680 lbs. (22,990 kg).

Upper machine — 36,066 lb. (16,359.5 kg)

Gantry — 1742 lbs. (790.2 kg)

Counterweight — 22,500 lbs. (10,193 kg)

**Boom:**

Base — 1840 lbs. (834.6 kg)

Inserts — 10 ft. (3 m) — 625 lbs. (283.5 kg)

20 ft. (6.1 m) — 1000 lbs. (453.6 kg)

30 ft. (9.1 m) — 1405 lbs. (637.3 kg)

50 ft. (15.2 m) — 2180 lb. (988.8 kg)

Tip — 2235 lbs. (1013.8 kg)

**Jib:**

Base — 345 lbs. (156.5 kg)

Inserts — 10 ft. (3 m) — 170 lbs. (77.1 kg)

20 ft. (6.1 m) — 310 lbs. (140.6 kg)

Tip — 395 lbs. (179.2 kg)

**PERFORMANCE**

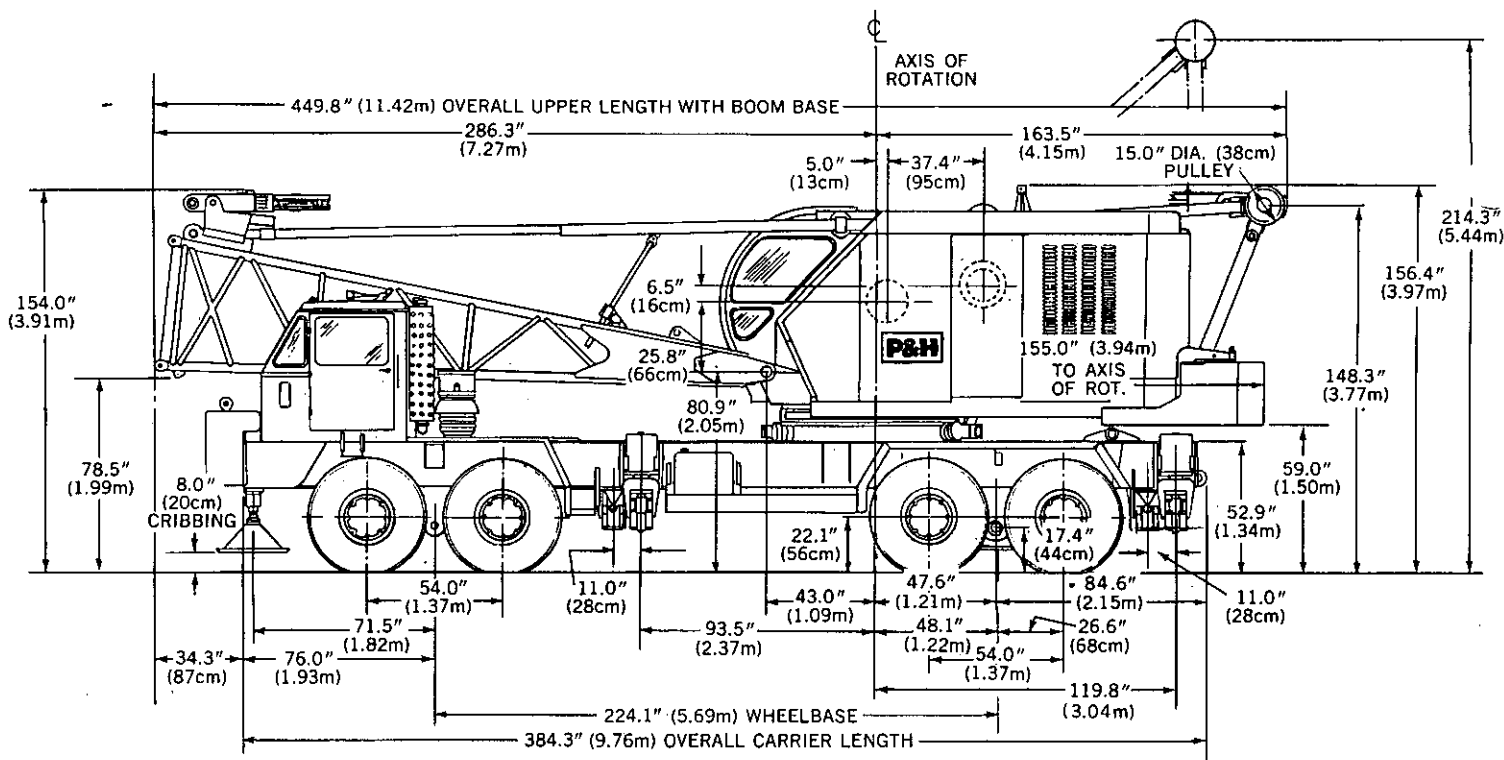
**ON HIGHWAY:**\* 12 forward speeds, 2 reverse speeds. Performance in highest and lowest gear based on engine @ full load rpm and 89,000# (40370 kg) GVW (Class I, good surface road).

Lowest gear: 3.3 MPH (5.3 km/h) to 23.2 percent grade.

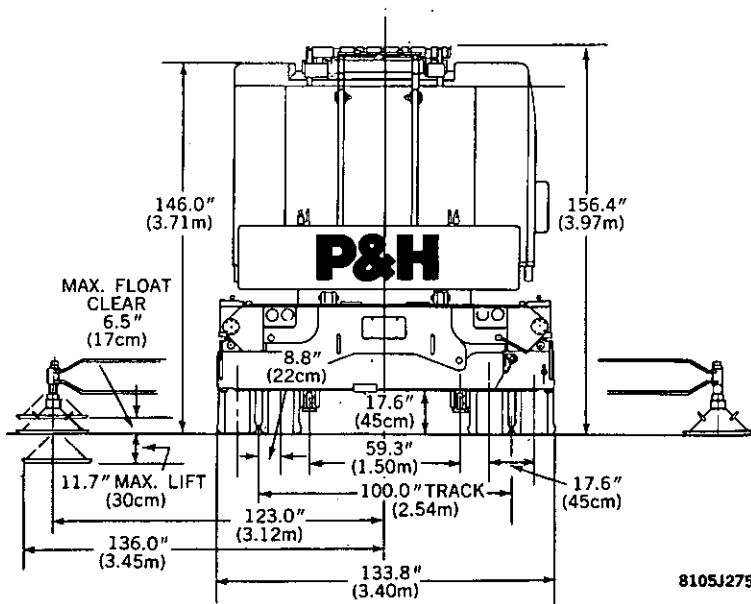
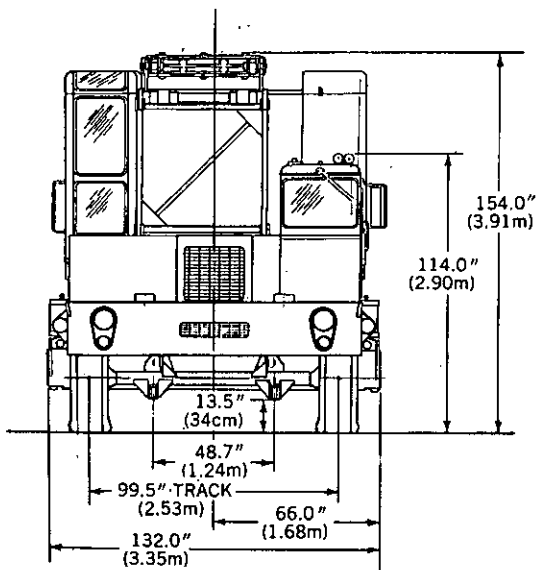
Highest gear: 40.8 MPH (65.7 km/h) to 0.4 percent grade.

**OFF HIGHWAY:**\* 6 forward speeds, 1 reverse speed. Performance in lowest gear ratio based on engine @ max. torque RPM and 89,000# (40370 kg) GVW. (Class II road). 0.9 MPH (1.3 FPS) (1.4 km/h) to 30.0 percent grade.

\* Std. engine and axles.



TURNING CLEARANCE RADIUS—692.4 INCHES (17.6m)



8105J275



**NOTE:** All designs, specifications and components of the equipment described above are subject to change at the manufacturer's sole discretion at any time without advance notice. Data published herein is informational in nature and shall not be construed to warrant suitability of the machine for any particular purpose as performance may vary with the conditions encountered. The only warranty applicable is our standard written warranty for this machine. Manufactured and sold in conformance with U. S. Department of Commerce Commercial Standard CS-90-58.



Address inquiries to:

# P&H<sup>®</sup> 670-TC

## 70-ton Truck Crane

| DESCRIPTION OR ITEM(S)  | TOTAL WEIGHT OR ADJUSTMENT |                            | BOOM OVER FRONT OF CARRIER |       |                    |        | BOOM OVER REAR OF CARRIER |       |                    |       |
|---|----------------------------|----------------------------|----------------------------|-------|--------------------|--------|---------------------------|-------|--------------------|-------|
|   | (lbs)                      | (kgs)                      | FRONT TANDEM WEIGHT        |       | REAR TANDEM WEIGHT |        | FRONT TANDEM WEIGHT       |       | REAR TANDEM WEIGHT |       |
|   |                            |                            | (lbs)                      | (kgs) | (lbs)              | (kgs)  | (lbs)                     | (kgs) | (lbs)              | (kgs) |
| Basic Machine Including:<br>Hyd. Outriggers Assembly<br>w/Floats (4)<br>1400 x 20—18 PR Tires (12)<br>Upper<br>Gantry — Lowered Position<br>Roller Circle<br>Bustle Counterweight<br>No Cable<br>Transmission — Upper<br>75 Gal. Fuel — Upper<br>75 Gal. Fuel — Lower<br>No Crane Attachment *                                      | 107460                     | 48744                      | 9980                       | 4527  | 97480              | 44217  | 52560                     | 23841 | 54900              | 24903 |
| Complete Basic Machine Includ:<br>Carrier<br>Upper<br>40 Ft. Basic Boom<br>( 34'-8" Operating Rad.)<br>Backstop Assembly<br>Bustle Counterweight<br>Gantry — Lowered Position<br>0.750 In. Dia. x 375 Ft.<br>Cable (Boom Hoist)<br>0.875 In. Dia. x 350 Ft.<br>Cable (Load Hoist)<br>75 Gal. Fuel — Upper<br>75 Gal. Fuel — Lower * | 114580                     | 51973                      | 17300                      | 7847  | 97280              | 44126  | 48020                     | 21782 | 66560              | 30192 |
| Effect of Removing:<br>Bustle Counterweight *   | -22560                     | -10233                     | 8800                       | 3992  | -31360             | -14225 | -18340                    | -8319 | -4220              | -1914 |
| O/R Beams — Frt. (2)  | -1820                      | -826                       | -1194                      | -542  | -626               | -284   | -1194                     | -542  | -626               | -284  |
| O/R Beams & Horizontal<br>Cyl. — Frt. (2)   | -2060                      | -934                       | -1352                      | -613  | -708               | -321   | -1352                     | -613  | -708               | -321  |
| O/R Boxes, Beams, & Horiz.<br>Cyl. — Frt. (2)   | -4020                      | -1823                      | -2638                      | -1197 | -1382              | -627   | -2638                     | -1197 | -1382              | -627  |
| O/R Vert. Cyl. & Trunnions<br>— Frt. (2)  | -880                       | -399                       | -578                       | -262  | -302               | -137   | -578                      | -262  | -302               | -137  |
| O/R Beams — Rear (2)  | -1820                      | -826                       | -538                       | -244  | -2358              | -1070  | 538                       | 244   | -2358              | -1070 |
| O/R Beams & Horizontal<br>Cyl. — Rear (2)   | -2060                      | -934                       | 609                        | 276   | -2669              | -1211  | 609                       | 276   | -2669              | -1211 |
| O/R Boxes, Beams & Horiz.<br>Cyl. — Rear (2)  | -4020                      | -1823                      | 1189                       | 539   | -5209              | -2363  | 1189                      | 539   | -5209              | -2363 |
| O/R Vert. Cyl. & Trunnions<br>— Rear (2)  | -880                       | -399                       | 260                        | 118   | -1140              | -517   | 260                       | 118   | -1140              | -517  |
| Complete Removable Rear<br>Housing (Hyd. O/R) *   | -7760                      | -3520                      | 2230                       | 1012  | -9990              | -4531  | 2230                      | 1012  | -9990              | -4531 |
| 20 Ft. Boom Tip Includ:<br>Tip Guy Lines (2)  | -2505                      | -1136                      | -5461                      | -2477 | 2956               | 1341   | 4387                      | 1990  | -6892              | -3126 |
| 20 Ft. Boom Base Includ:<br>Backstop Assembly<br>Upper Spreader   | -3696                      | -1677                      | -3536                      | -1604 | -160               | -73    | 1972                      | 894   | -5668              | -2571 |
| Backstop Assembly<br>Upper Spreader   | -1076                      | -488                       | -560                       | -254  | -516               | -234   | 99                        | 45    | -1175              | -533  |
| Upper Spreader  | -780                       | -354                       | -923                       | -419  | 143                | 65     | 588                       | 267   | -1368              | -621  |
| Basic Upper Includ:<br>Gantry — Lowered Position<br>Lower Spreader<br>No Cable  | -34210                     | -15518                     | 260                        | 118   | -34470             | -15636 | -14921                    | -6768 | -19289             | -8749 |
| Roller Circle   | -300                       | -136                       | -64                        | -29   | -236               | -107   | -64                       | -29   | -236               | -107  |
| Hydr. O/R for Manual O/R  | -2180                      | -989                       | -476                       | -216  | -1704              | -773   | -476                      | -216  | -1704              | -773  |
| Basic Carrier Including:<br>Hyd. O/R Assembly<br>w/Floats (4)<br>1400 x 20—18 PR Tires (12)<br>W/O Roller Circle<br>6 Gal. Fuel *   | 50380                      | 22852                      | 19750                      | 8959  | 30630              | 13894  | 19750                     | 8959  | 30630              | 13894 |
| Basic Carrier Including:<br>Hyd. O/R Assembly<br>w/Floats (4)<br>1400 x 20—18 PR Tires (12)<br>W/O Roller Circle<br>6 Gal. Fuel<br>Less Complete Removable<br>Rear Housing *  | 42620                      | 19332                      | 21980                      | 9970  | 20640              | 9362   | 21980                     | 9970  | 20640              | 9362  |
| Miscellaneous Weights:<br>Cable-0.750 In. Dia. (lb/ft)<br>Kgs/mm  | 1.032                      | 1.536<br>x10 <sup>-3</sup> |                            |       |                    |        |                           |       |                    |       |
| Cable-0.875 In. Dia. (lb/ft)<br>Kgs/mm  | 1.416                      | 2.107<br>x10 <sup>-3</sup> |                            |       |                    |        |                           |       |                    |       |
| Cable-1.000 In. Dia. (lb/ft)<br>Kgs/mm  | 1.848                      | 2.750<br>x10 <sup>-3</sup> |                            |       |                    |        |                           |       |                    |       |
| Float (Std. 26 In. x 26 In.)  | 125                        | 58.7                       |                            |       |                    |        |                           |       |                    |       |
| Bottom Block(1 Sheave-25 T)   | 460                        | 208.6                      |                            |       |                    |        |                           |       |                    |       |
| Bottom Block(2 Sheave-50 T)   | 840                        | 381                        |                            |       |                    |        |                           |       |                    |       |
| Bottom Block(3 Sheave-60 T)   | 1270                       | 576                        |                            |       |                    |        |                           |       |                    |       |
| Bottom Block(4 Sheave-80 T)   | 1820                       | 825.5                      |                            |       |                    |        |                           |       |                    |       |
| Effect of Adding:<br>Front Bumper Counter-<br>weight  | 14000                      | 6350                       | 19135                      | 8680  | -5135              | -2329  | 19135                     | 8680  | -5135              | -2329 |

\* Actual scaled weights from "TRUCK CRANE WEIGHT AND COMPLIANCE TO B30.5-1968 CODE" DATES: 10-20-71, 11-4-71, 5-15-75.

# axle loadings

**BOOM LENGTHS, OVERALL LENGTHS, AND AXLE LOADS (U.S. AND METRIC UNITS) FOR TRAVELING (BOOM NOT FOLDED) MACHINE WITH MANUALLY OPERATED OUTRIGGERS.**

| CRANE ATTACHMENT* |       |                |             |                     | ATTACHMENT |                    | GROSS VEHICLE |                | BOOM OVER FRONT OF CARRIER |              |       |             |       |                | BOOM OVER REAR OF CARRIER |              |       |             |       |                |       |
|-------------------|-------|----------------|-------------|---------------------|------------|--------------------|---------------|----------------|----------------------------|--------------|-------|-------------|-------|----------------|---------------------------|--------------|-------|-------------|-------|----------------|-------|
| BOOM LENGTH       |       | INSERT LENGTHS |             | ATTACHMENT WEIGHT** |            | C. of G. from BASE |               | VEHICLE Wt.*** |                            | FRONT TANDEM |       | REAR TANDEM |       | OVERALL LENGTH |                           | FRONT TANDEM |       | REAR TANDEM |       | OVERALL LENGTH |       |
| (ft)              | (mm)  | (ft)           | (mm)        | (lbs)               | (kgs)      | (in)               | (mm)          | (lbs)          | (kgs)                      | (lbs)        | (kgs) | (lbs)       | (kgs) | (ft)           | (mm)                      | (lbs)        | (kgs) | (lbs)       | (kgs) | (ft)           | (mm)  |
| 40                | 12192 | Basic          |             | 6201                | 2813       | 234.7              | 5961          | 114580         | 51973                      | 18730        | 8496  | 95850       | 43478 | 58.3           | 17770                     | 51120        | 23188 | 63460       | 28785 | 65.9           | 20086 |
| 50                | 15240 | 10             | 305         | 7036                | 3192       | 285.2              | 7244          | 115420         | 52355                      | 21520        | 9761  | 93900       | 42593 | 68.3           | 20818                     | 48670        | 22077 | 66750       | 30278 | 75.9           | 23134 |
| 60                | 18288 | 20             | 610         | 7491                | 3398       | 336.5              | 8547          | 115870         | 152559                     | 23990        | 10882 | 91880       | 41677 | 78.2           | 23835                     | 46390        | 21043 | 69480       | 31516 | 85.9           | 26182 |
| 70                | 21336 | 20-10          | 610-305     | 8326                | 3777       | 393.0              | 9982          | 116710         | 62940                      | 27670        | 12551 | 89040       | 40389 | 88.2           | 26883                     | 43050        | 19527 | 73660       | 33412 | 95.9           | 29230 |
| 80                | 24384 | 30-10          | 915-305     | 8801                | 3992       | 448.8              | 11400         | 117180         | 53153                      | 30880        | 14007 | 86300       | 39146 | 98.2           | 29931                     | 40040        | 18162 | 77140       | 34991 | 105.9          | 32278 |
| 90                | 27432 | 30-20          | 915-610     | 9256                | 4199       | 500.0              | 12700         | 117640         | 53362                      | 34080        | 15459 | 83560       | 37903 | 108.1          | 32949                     | 37020        | 16792 | 80620       | 36569 | 115.9          | 35326 |
| 100               | 30480 | 10-20          | 305-610-915 | 10091               | 4577       | 545.6              | 13858         | 118470         | 53738                      | 38320        | 17382 | 80150       | 36356 | 118.1          | 35997                     | 33120        | 15023 | 85350       | 38715 | 125.9          | 38374 |

**8105N70**

\*\*Crane attachment weights include boom, guy lines, boom backstops and upper spreaders, less hook block.

\*\*\*Component list for gross vehicle weight is found under complete basic machine list. Subsequent tandem loads are calculated for the boom in travel position, less bottom block.

**NOTE(S):**

1. THE STRUCTURAL MATERIAL USED TO FABRICATE THIS MODEL HAS A NOMINAL WEIGHT TOLERANCE OF ± 3%. THEREFORE, THE WEIGHT DATA PROVIDED SHOULD BE USED FOR REFERENCE ONLY. TO INSURE THAT ANY SPECIFIC CONFIGURATION MEETS LOCAL HIGHWAY REGULATIONS, IT IS SUGGESTED THAT THE CALCULATED WEIGHT DISTRIBUTION BE VERIFIED BY ACTUAL SCALED WEIGHTS.
2. TO OBTAIN TOTAL ALLOWABLE AXLE LOAD, MULTIPLY THE ALLOWABLE SINGLE TIRE LOAD BY THE NUMBER OF TIRES PER AXLE.

**TIRE RATING CHART**

| TIRE SIZE | ALLOWABLE LOAD/TIRE — lbs/kgs |       |        |       |           |       |            |       |             |       |             |       |             |       |
|-----------|-------------------------------|-------|--------|-------|-----------|-------|------------|-------|-------------|-------|-------------|-------|-------------|-------|
|           | (mph)                         | (kph) | (mph)  | (kph) | (mph)     | (kph) | (mph)      | (kph) | (mph)       | (kph) | (mph)       | (kph) | (mph)       | (kph) |
|           | 1400 x 20-J (18 PR)           | 0-1.5 | 0-2.41 | 1.5-5 | 2.41-8.05 | 5-10  | 8.05-16.09 | 10-20 | 16.09-32.19 | 20-30 | 32.19-48.28 | 30-40 | 48.28-64.37 | 40-50 |
|           | (lbs)                         | (kgs) | (lbs)  | (kgs) | (lbs)     | (kgs) | (lbs)      | (kgs) | (lbs)       | (kgs) | (lbs)       | (kgs) | (lbs)       | (kgs) |
|           | 28130                         | 11853 | 16700  | 7575  | 14450     | 6555  | 11630      | 5275  | 10860       | 4928  | 10280       | 4663  | 9610        | 4359  |



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Address inquiries to:

# SPECIAL OVER REAR ON RUBBER RATINGS MODEL 670 T.C. — 70 TON TRUCK CRANE PCSA CLASS 12-254 WITH 14,000 LB. FRONT BUMPER COUNTERWEIGHT

THIS P&H MODEL 670 T.C. MEETS THE REQUIREMENTS OF ANSI B30.5-1968. BOOM STRUCTURE HAS BEEN TESTED PER SAE J987. MACHINE STABILITY HAS BEEN TESTED PER SAE J765.

OPERATING RADIUS IS THE HORIZONTAL DISTANCE FROM CENTERLINE OF ROTATION TO A VERTICAL LINE THROUGH THE CENTER OF GRAVITY OF THE LOAD.

RATINGS SHOWN ARE ONLY FOR COMBINATION OF P&H MANUFACTURED UPPER WITH 15 FT. TIP SECTION, JIB, COUNTERWEIGHTS, CARRIER, AND OUTRIGGERS. BOOM BACKSTOPS ARE REQUIRED FOR ALL BOOM LENGTHS. BOOM INSERTS MUST BE ARRANGED AS SHOWN IN THE "OWNER AND OPERATORS MANUAL". STANDARD BOOM HOIST REEVING IS 10 PART LINE. GANTRY MUST BE IN RAISED POSITION FOR ALL OPERATIONS. WHEN BOOM IS EQUIPPED WITH JIB, MAIN HOOK RATING MUST BE REDUCED BY 1500 LBS. FOR 20 FT. JIB; 2000 LBS. FOR 40 FT. JIB; 2500 LBS. FOR 60 FT. JIB; AND 3000 LBS. FOR 80 FT. JIB. REFER TO DIAGRAM FOR APPLICABLE RESTRICTED WORK AREA.

RATINGS SHOWN ARE BASED ON TIRE LOADINGS AND MACHINE STABILITY AND DO NOT EXCEED 85% OF TIPPING LOAD AS DETERMINED BY SAE J765. DEDUCT WEIGHT OF HOOK BLOCK(S) AND ALL OTHER LOAD HANDLING ACCESSORIES FROM MAIN BOOM RATINGS. RATINGS ARE BASED ON MACHINE COUNTERWEIGHT OF 22,500 LBS. AND 14,000 LBS. FRONT BUMPER COUNTERWEIGHT.

**WARNING:** THE WIND EFFECT ON THE LIFTED LOAD CAN CAUSE SUFFICIENT SIDE LOAD TO OVERSTRESS BOOM. WHEN SUSPENDED LOAD WILL NOT REMAIN IN LINE WITH BOOM DERATE CHART 25%. WE RECOMMEND STOPPING OPERATION WHEN WIND IS ABOVE 30 M.P.H. WHEN CONTINUED OPERATION UNDER WINDY CONDITIONS IS NECESSARY, CONSULT FACTORY FOR SPECIAL DERATED LOAD RATING CHART.

MACHINE MUST BE ON A FIRM, LEVEL, SUPPORTING SURFACE. ALL TIRES MUST BE 14'00 x 20-18 PR. INFLATED TO 100 P.S.I. LOAD MUST BE RESTRAINED FROM SWINGING DURING TRAVEL. MAXIMUM APPROVED TRAVEL SPEED: WITH LIFTED LOAD IS 1.5 M.P.H.; WITH FRONT BUMPER COUNTERWEIGHT BUT WITHOUT LOAD IS 5 M.P.H. REMOVE FRONT BUMPER COUNTERWEIGHT FOR TRAVEL SPEEDS ABOVE 5 M.P.H. MAXIMUM TIRE PRESSURE FOR HIGHWAY TRAVEL IS 100 P.S.I.

**WARNING:** USING THIS EQUIPMENT IN EXCESS OF RATED LOADS, IN AREAS OF CHART NOT RATED, OR WITH DISREGARD OF INSTRUCTIONS WILL RESULT IN UNSAFE OPERATING CONDITIONS AND IS A VIOLATION OF THE U. S. DEPT. OF LABOR SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION.

# P&H® 670-TC

## Harnischfeger

# P&H®

milwaukee, wisconsin. 53201

# SPECIAL OVER REAR ON RUBBER RATINGS

| RATED CRANE LOADS IN POUNDS - MAIN BOOM ONLY - OVER REAR WITHOUT OUTRIGGERS |             |      |             |    |             |        |             |      |             |    |             |        |                |      |        |    |    |
|---|-------------|------|-------------|----|-------------|--------|-------------|------|-------------|----|-------------|--------|----------------|------|--------|----|----|
| OPER. RAD. FT.  | 40 FT. BOOM |      | 50 FT. BOOM |    | 60 FT. BOOM |        | 70 FT. BOOM |      | 80 FT. BOOM |    | 90 FT. BOOM |        | OPER. RAD. FT. |      |        |    |    |
|   | W           | Z    | W           | Z  | W           | Z      | W           | Z    | W           | Z  | W           | Z      | W              | Z    |        |    |    |
| 12  | 79          | 47.5 | 100,000     |    |             |        |             |      |             |    |             |        |                |      |        |    | 12 |
| 14  | 76          | 47.0 | 90,900      | 79 | 57.3        | 90,000 |             |      |             |    |             |        |                |      |        |    | 14 |
| 15  | 74          | 46.8 | 81,300      | 78 | 57.1        | 80,900 | 80          | 67.3 | 80,700      |    |             |        |                |      |        |    | 15 |
| 16  | 73          | 46.5 | 75,300      | 76 | 56.7        | 74,900 | 79          | 67.1 | 74,700      | 80 | 74.200      |        |                |      |        |    | 16 |
| 20  | 67          | 45.1 | 57,800      | 72 | 55.8        | 57,400 | 75          | 66.2 | 57,200      | 77 | 76.5        | 56,800 | 79             | 86.8 | 56,600 | 80 | 20 |
| 25  | 59          | 42.5 | 44,500      | 66 | 53.8        | 44,200 | 70          | 64.6 | 44,000      | 73 | 75.1        | 43,600 | 75             | 85.5 | 43,300 | 77 | 25 |
| 30  | 50          | 38.8 | 36,000      | 59 | 51.2        | 35,700 | 65          | 62.5 | 35,500      | 68 | 73.4        | 35,100 | 71             | 84.0 | 34,900 | 73 | 30 |
| 35  | 39          | 33.6 | 30,100      | 52 | 47.7        | 29,800 | 59          | 59.8 | 29,600      | 64 | 71.2        | 29,200 | 67             | 82.2 | 29,000 | 70 | 35 |
| 40  |             |      |             | 44 | 43.1        | 25,400 | 53          | 56.5 | 25,200      | 59 | 68.5        | 24,800 | 63             | 79.9 | 24,600 | 67 | 40 |
| 45  |             |      |             | 35 | 36.8        | 22,100 | 47          | 52.2 | 21,900      | 54 | 65.2        | 21,500 | 59             | 77.2 | 21,300 | 63 | 45 |

32U903

| MAIN HOIST DRUM RATED LOADS FOR SEVEN-EIGHTHS INCH DIA. P&H TYPE 4 WIRE ROPE (6 x 25 WITH FILLER WIRE, PRE-FORMED IMPROVED FLOW STEEL WIRE ROPE, 7 x 7 I.W.R.C.) |  |        |        |        |        |        |         |
|--|--|--------|--------|--------|--------|--------|---------|
| NUMBER OF PARTS OF MAIN HOIST REEVING.   |  | 1      | 2      | 3      | 4      | 5      | 6       |
| MAXIMUM LOADS-LBS.   |  | 17,500 | 35,000 | 52,500 | 70,000 | 87,500 | 100,000 |

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**ALL TIRES MUST BE 14:00 X 20 - 18 PR.**

FOR LOADS OF LESS THAN 57,800 LBS., THE MAXIMUM SWING AREA IS 50 INCHES FROM LONGITUDIAL  $\phi$  OF CARRIER AT ALL OPERATING RADII.

| SWING AREA IS RESTRICTED AS INDICATED BELOW: |     |
|--|-----|
| OPER. RAD.                                   | "A" |
| 12 FT. & 14 FT.                              | 12" |
| 15 FT. & 16 FT.                              | 20" |
| 20 FT. AND GREATER                           | 50" |

**OVER REAR WORK AREA WITH 14,000 POUNDS FRONT BUMPER COUNTERWEIGHT INSTALLED**