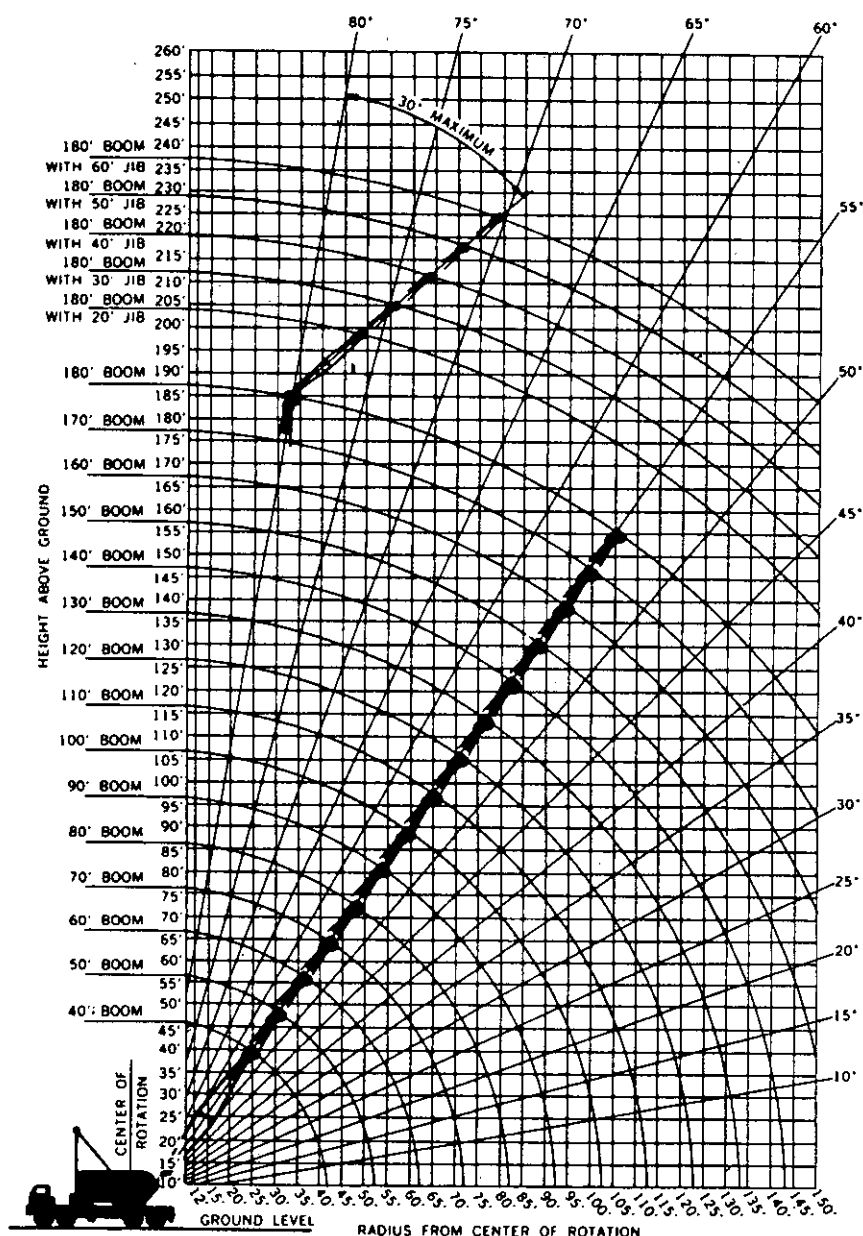




# P&H<sup>®</sup> 670-TC

## 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																					
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	64.8	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																								
130																								
140																								
150																								

**WARNING:**

WHEN BOOM IS EQUIPPED WITH JIB, MAIN HOOK RATING MUST BE REDUCED TO COMPENSATE FOR JIB ATTACHMENT WEIGHT.

Jib Length	20 Ft.	30 Ft.	40 Ft.	50 Ft.	60 Ft.
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.	
																					12
																					15
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																					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  $\frac{3}{4}$  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. 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 Jib to Boom Under Full Load	20 Ft. Jib	30 Ft. Jib	40 Ft. Jib	50 Ft. Jib	60 Ft. 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 for Loads Above 14,500 Lbs.					
10°	16,500*	16,000*	12,800	9,600	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).

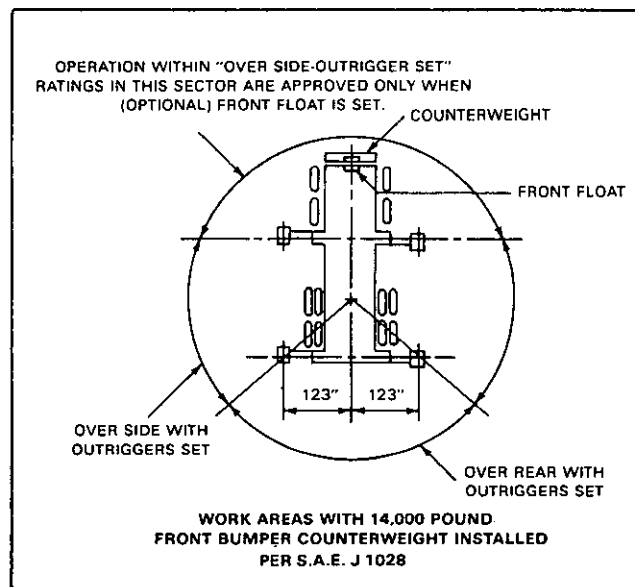
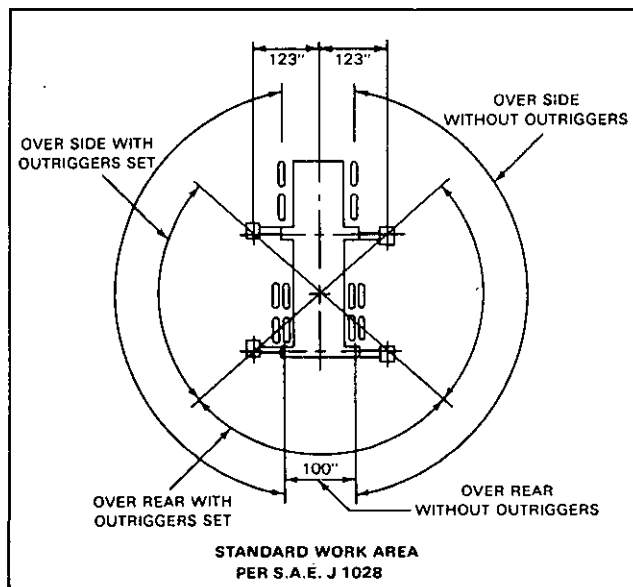


## reeving data

RECOMMENDED WIRE ROPE LENGTH FOR DRUMS — FT.					
BOOM LENGTH FT.	MAIN HOIST DRUM	JIB HOIST DRUM	BOOM LENGTH FT.	MAIN HOIST DRUM	JIB HOIST 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 SEVEN-EIGHTHS INCH DIAMETER P&H TYPE 4 WIRE ROPE								
Number of Parts of 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 (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 (Roots Blower)
Cooling	Liquid	Liquid
Starter	24 V.	24 V.
Alternator	24 V. - 50 A.	24 V. - 50 A.
<b>TRANSMISSION:</b>	<b>STANDARD</b>	<b>OPTIONAL</b>
Make	Cotta	Cotta
Model	T3U-1771	T3U-1771
Type	3-Speed Manual (2nd Gear Normal)	3-Speed Manual (2nd Gear Normal)
<b>RATINGS:</b>		
Net HP @ RPM (at Flywheel)	135 @ 2000	140 @ 1800
Net HP @ RPM (at Trans. Output Shaft)	130 @ 1000	134.4 @ 1000
Altitude Range (m)	0-10,000 ft. (0-3040)	0-8500 ft. (0-2584)
Temp. Range in F. (C.)	-20° to 110° (-28° to 43°)	-20° to 110° (-28° to 43°)

<b>TORQUE CONVERTER:</b>	<b>OPTIONAL</b>	
Make	Twin Disc	Allison
Model	CO-10066	TCDOA-475
Type	3-Stage	2-Stage
<b>RATINGS:</b>		
Net HP @ RPM (at Flywheel)	157.5 @ 2100	175 @ 1800
Net HP @ RPM (at Trans. Output Shaft)	125.4 @ 1065	132 @ 1180
Altitude Range (m)	0-8500 ft. (0 to 2584)	0-6000 ft. (0-1824)
Temp. Range in F. (C.)	-20° to 110° (-28° to 43°)	-20° to 110° (-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) Filter-16 qts. (15 liters)	Engine-18 qts. (17.4 liters) Filter-2 qts. (1.9 liters)
Coolant Capacity	Engine-5 gal. (18.9 liters) Radiator-12 gal. (45 liters)	Engine-5.5 gal. (21.3 liters) Radiator-3.25 gal. (12.6 liters)
Air Cleaner	Farr, 2 stage dry type	Donaldson dry type
Lube Oil Filter	Full flow - replaceable By-pass - replaceable	Full flow - replaceable By-pass - none
Fuel Filter	Primary - none Secondary - replaceable spin on	Primary - replaceable 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		Low	Normal	High
	Gear Ratio	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 mm) wire rope is 758 ft. (231 m) storage or 630 ft. (192 m) working length.

Transmission Range		Low	Normal	High
	Gear Ratio	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.)
	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
cm	(14.0 x 15.2)	(10.8 x 12.7)
Displacement, In. <sup>3</sup>	855	426
liters	(14.0)	(7.0)
Cycles	4	2
Air Induction	Turbocharged	Roots blower
Cooling	Liquid	Liquid
Starter	24 volt	12 volt
Charging	12 v. - 75 amp	12 v. - 62 amp
Compressor, Air	13.2 CFM	12 CFM
Governor, Air	105 to 120 PSI	105 to 120 PSI
Horsepower, Gross	255 HP @ 2300 rpm	236 HP @ 2300 rpm
Altitude Range	0-3000	0-3000
In Ft. (m)	(0-914)	(0-914)
Temp. Range in F.	-20° to 110°	-20° to 110°
(C.)	(-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. Deaeration 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) total rear lining area), 36 sq. in. (91.4 cm) air chambers. Total brake lining area — 1308 sq. in. (3321 cm). (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 24.33 to 1	24.33 to 1	24.33 to 1
		High Speed 26.33 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. (9979 kg)	1	75	350 lbs. (158.8 kg)	16.66 to 1	8U7-D4 (Jib-Opt.)
52,500 lbs. (23,814 kg)	1	.875	575 lbs. (260.8 kg)	18.7 to 1	8U7-D10 (Std.)
87,500 lbs. (36,690 kg)	2	1"	840 lbs. (381 kg)	18.3 to 1	8U7-D24 (Opt.)
105,000 lbs. (47,628 kg)	3	.875	2220 lbs. (1007 kg)	24.4 to 1	8U7-D71 (Opt.)
140,000 lb. (63,504 kg)	4	1"	1820 lb. (825.5 kg)	18.3 to 1	8U7-D26 (Opt.)
14,500 lbs. (6577 kg)	Weighted hook		364 lbs. (165.1 kg)	—	8U7-D503 (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**

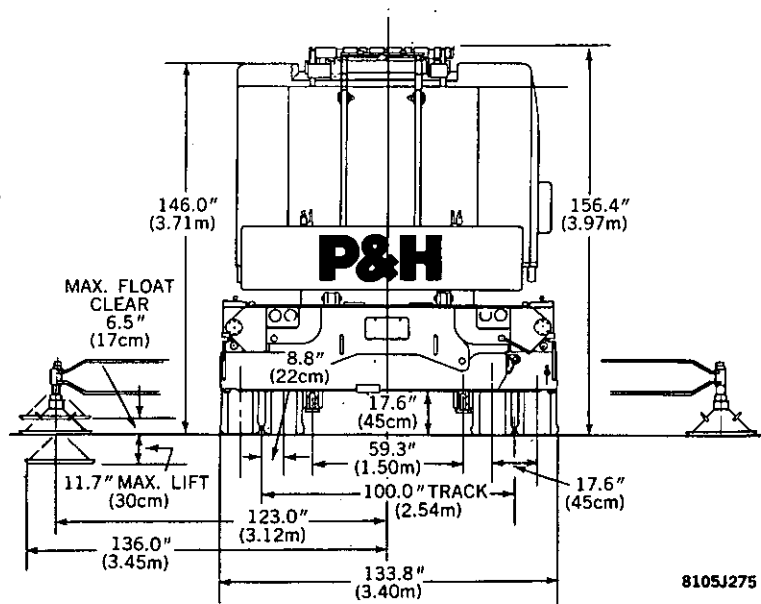
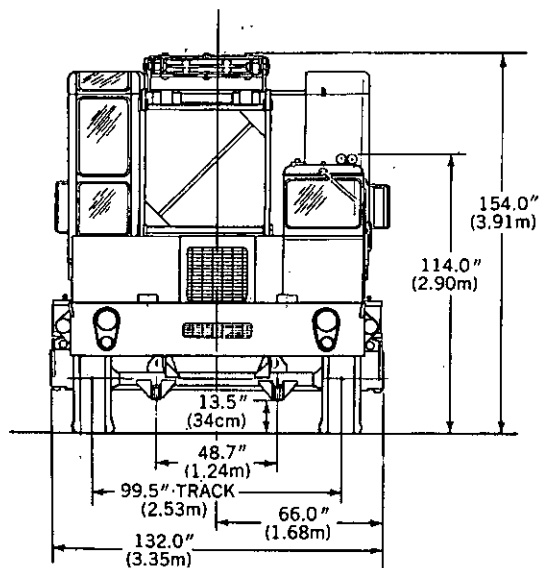
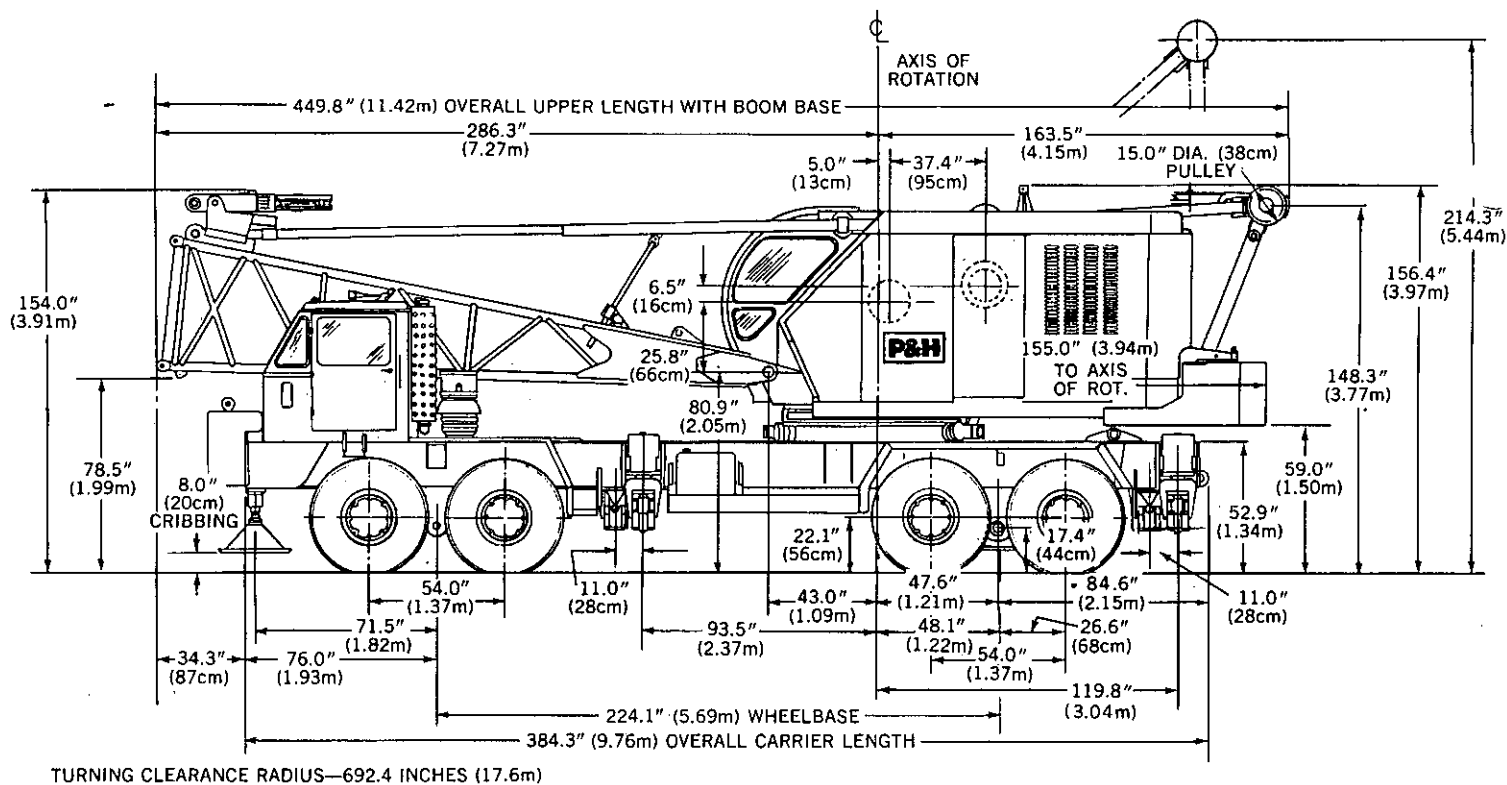
**ON HIGHWAY:**\* 12 forward speeds, 2 reverse speeds. Performance in highest and lowest gear based on engine @ full load rpm and 89,000# (40370 kg) GVW (Class I, good surface road).

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.



**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.



# Harnischfeger



milwaukee, wisconsin. 53201

**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	FRONT TANDEM WEIGHT	REAR TANDEM WEIGHT	FRONT TANDEM WEIGHT	REAR TANDEM WEIGHT
Basic Machine Including: Hyd. Outriggers Assembly w/Floats (4) 1400 x 20—18 PR Tires (12) Upper Gantry — Lowered Position Roller Circle Bustle Counterweight No Cable Transmission — Upper 75 Gal. Fuel — Upper 75 Gal. Fuel — Lower No Crane Attachment *	107460	48744	9980	4527	97480	44217	52560	23841	54900	24903
Complete Basic Machine Inclcd: Carrier Upper 40 Ft. Basic Boom ( 34'-8" Operating Rad.) Backstop Assembly Bustle Counterweight Gantry — Lowered Position 0.750 In. Dia. x 375 Ft. Cable (Boom Hoist) 0.875 In. Dia. x 350 Ft. Cable (Load Hoist) 75 Gal. Fuel — Upper 75 Gal. Fuel — Lower *	114580	51973	17300	7847	97280	44126	48020	21782	66560	30192
Effect of Removing: 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 Cyl. — Frt. (2)	-2060	-934	-1352	-613	-708	-321	-1352	-613	-708	-321
O/R Boxes, Beams, & Horiz. Cyl. — Frt. (2)	-4020	-1823	-2638	-1197	-1382	-627	-2638	-1197	-1382	-627
O/R Vert. Cyl. & Trunnions — 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 Cyl. — Rear (2)	-2060	-934	609	276	-2669	-1211	609	276	-2669	-1211
O/R Boxes, Beams & Horiz. Cyl. — Rear (2)	-4020	-1823	1189	539	-5209	-2363	1189	539	-5209	-2363
O/R Vert. Cyl. & Trunnions — Rear (2)	-880	-399	260	118	-1140	-517	260	118	-1140	-517
Complete Removable Rear Housing (Hyd. O/R) *	-7760	-3520	2230	1012	-9990	-4531	2230	1012	-9990	-4531
20 Ft. Boom Tip Inclcd: Tip Guy Lines (2)	-2505	-1136	-5461	-2477	2956	1341	4387	1990	-6892	-3126
20 Ft. Boom Base Inclcd: Backstop Assembly Upper Spreader	-3696	-1677	-3536	-1604	-160	-73	1972	894	-5668	-2571
Backstop Assembly Upper Spreader	-1076	-488	-560	-254	-516	-234	99	45	-1175	-533
Basic Upper Inclcd: Gantry — Lowered Position Lower Spreader	-780	-354	-923	-419	143	65	588	267	-1368	-621
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: Hyd. O/R Assembly w/Floats (4) 1400 x 20—18 PR Tires (12) W/O Roller Circle 6 Gal. Fuel *	50380	22852	19750	8959	30630	13894	19750	8959	30630	13894
Basic Carrier Including: Hyd. O/R Assembly w/Floats (4) 1400 x 20—18 PR Tires (12) W/O Roller Circle 6 Gal. Fuel Less Complete Removable Rear Housing *	42620	19332	21980	9970	20640	9362	21980	9970	20640	9362
Miscellaneous Weights: Cable-0.750 In. Dia. (lb/ft) Kgs/mm	1.032	1.536 x10 <sup>-3</sup>								
Cable-0.875 In. Dia. (lb/ft) Kgs/mm	1.416	2.107 x10 <sup>-3</sup>								
Cable-1.000 In. Dia. (lb/ft) Kgs/mm	1.848	2.750 x10 <sup>-3</sup>								
Float (Std. 26 In. x 26 In.)	125	56.7								
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: Front Bumper Counter- 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		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	52559	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	52940	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  $\pm 3\%$ . 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)
	(lbs)	(kgs)	(lbs)	(kgs)	(lbs)	(kgs)	(lbs)	(kgs)	(lbs)	(kgs)	(lbs)	(kgs)	(lbs)	(kgs)
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	64.37-80.47
	26130	11853	16700	7575	14450	6555	11630	5275	10860	4928	10280	4663	9610	4359



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Address inquiries to:

**Harnischfeger**  
**P&H**  
milwaukee, wisconsin. 53201





# 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 REEVEING 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.

**Harnischfeger**



milwaukee, wisconsin 53201



## SPECIAL OVER REAR ON RUBBER RATINGS

RATED CRANE LOADS IN POUNDS – MAIN BOOM ONLY – OVER REAR WITHOUT OUTRIGGERS																									
OPER. RAD. FT.	W	40 FT. BOOM			W	50 FT. BOOM			W	60 FT. BOOM			W	70 FT. BOOM			W	80 FT. BOOM			W	90 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.		
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	78.2	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	96.9	56,300					20		
25	59	42.5	44,600	66	53.8	44,200	70	64.6	44,000	73	75.1	43,600	75	85.5	43,300	77	95.8	43,100					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	94.5	34,600					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	92.9	28,700					35		
40				44	43.1	25,400	53	56.5	25,200	59	68.5	24,800	63	79.9	24,600	67	90.9	24,400					40		
45				35	36.8	22,100	47	52.2	21,900	54	65.2	21,500	59	77.2	21,300	63	88.6	21,000					45		

32U903

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 LONGITUDINAL  $\phi$  OF CARRIER AT ALL OPERATING RADII.

14,000 POUNDS  
COUNTERWEIGHTCENTER OF  
ROTATIONLONGITUDINAL  
 $\phi$  OF CARRIER

OVER REAR

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

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"

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 PLOW 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

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.

